



RADIAL ANALYSIS BOND LOG

Baker Atlas

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

CH089884 **Well** **SAVAGE RWF 344-25**

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

05045219980000 **County** **GARFIELD** **State** **COLORADO**

Location

25 6S 94W **SHL: 1147' FSL & 1381' FEL**

RWF 43-25 PAD **BHL: 840' FSL & 917' FEL (SESE)**

NABORS 677 **SEC 25 TWP 6S RGE 94S**

Other Services

NONE

Permanent Datum **GL Elevation 6234 ft**

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

Drill Measured From **KELLY BUSHING**

Elevations

KB 6260 ft

DF

GL 6234 ft

Date	29/AUG/14	
Run	ONE	
Service Order	US089884J	
Depth Driller	8846 ft	
Depth Logger	8777 ft	
Bottom Logged Interval	8767 ft	
Top Logged Interval	26 ft	
Time Started	1200	
Time Finished	1630	
Operator Rig Time	4.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	70 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	66 fpm	
Maximum Recorded Temperature	190 degF	
Reference Log	BAKER HUGHES OPEN LOG	
Reference Log Date	26/AUG/14	
Equipment No.	4271	GRAND LUTION
Recorded By	FLYOD RENEAU	
Witnessed By	BOB CADY	

- FOLD HERE

In making interpretations of logs, our employees will give the customer the benefit of their best judgement. But since all interpretations are opinions based on inferences from electrical or other measurements, we cannot, and we do not guarantee the accuracy or correctness of any interpretation. We shall not be liable or responsible for any loss, cost, damages, or expenses whatsoever incurred or sustained by the customer resulting from any interpretation made by any of our employees.

Borehole Record		
Bit Size	From	To
13.5 in	26 ft	1104 ft
8.75 in	1104 ft	8846 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			26 ft	1104 ft
4.5 in	11.6 lbm/ft	1-80	26 ft	8846 ft

Remarks

All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes HDIL/ZDL/CN/GR open hole log dated 8/25/2014 at the clients request.

The amount of linear shift is 12.5 feet.

The depth matching process creates potential for collar lengths to vary from those recorded on other cased hole wireline units without a Gamma Ray reference.

Logged with zero PSI at wellhead.

BHT = 190°F FROM OPEN HOLE LOG

SJ = 5421'- 5442'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10218496	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	31.862	4602.000
RAL	Amp Gate Start Near	195.000	usec	31.862	4602.000
RAL	Amp Gate Start Radial	195.000	usec	31.862	4602.000
RAL	Amp Gate Width Far	25.000	usec	31.862	4602.000
RAL	Amp Gate Width Near	25.000	usec	31.862	4602.000
RAL	Amp Gate Width Radial	25.000	usec	31.862	4602.000
RAL	casing od	4.500	inches	31.862	4602.000
RAL	casing wt	11.600	lbm/ft	31.862	4602.000
RAL	FB Start Far	291.900	usec	31.862	4602.000
RAL	FB Start Near	180.000	usec	31.862	4602.000
RAL	FB Start Radial	180.000	usec	31.862	4602.000
RAL	FB Thresh Far	10.000	mv	31.862	4602.000
RAL	FB Thresh Near	4.000	mv	31.862	4602.000
RAL	FB Thresh Radial	4.000	mv	31.862	4602.000
RAL	Fluid Travel Time	200.000	usec/ft	31.862	4602.000
RAL	Amp Gate Start Far	305.000	usec	4602.000	8768.000
RAL	Amp Gate Start Near	195.000	usec	4602.000	8768.000
RAL	Amp Gate Start Radial	195.000	usec	4602.000	8768.000
RAL	Amp Gate Width Far	25.000	usec	4602.000	8768.000
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RAL	FB Start Radial	180.000	usec	4602.000	8768.000
RAL	FB Thresh Far	10.000	mv	4602.000	8768.000
RAL	FB Thresh Near	4.000	mv	4602.000	8768.000
RAL	FB Thresh Radial	4.000	mv	4602.000	8768.000
RAL	Fluid Travel Time	200.000	usec/ft	4602.000	8768.000

RAL	FB Start Near	180.000	usec	4602.000	8768.000
RAL	FB Start Radial	180.000	usec	4602.000	8768.000
RAL	FB Thresh Far	10.000	mv	4602.000	8768.000
RAL	FB Thresh Near	4.000	mv	4602.000	8768.000
RAL	FB Thresh Radial	4.000	mv	4602.000	8768.000
RAL	Fluid Travel Time	200.000	usec/ft	4602.000	8768.000

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 by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

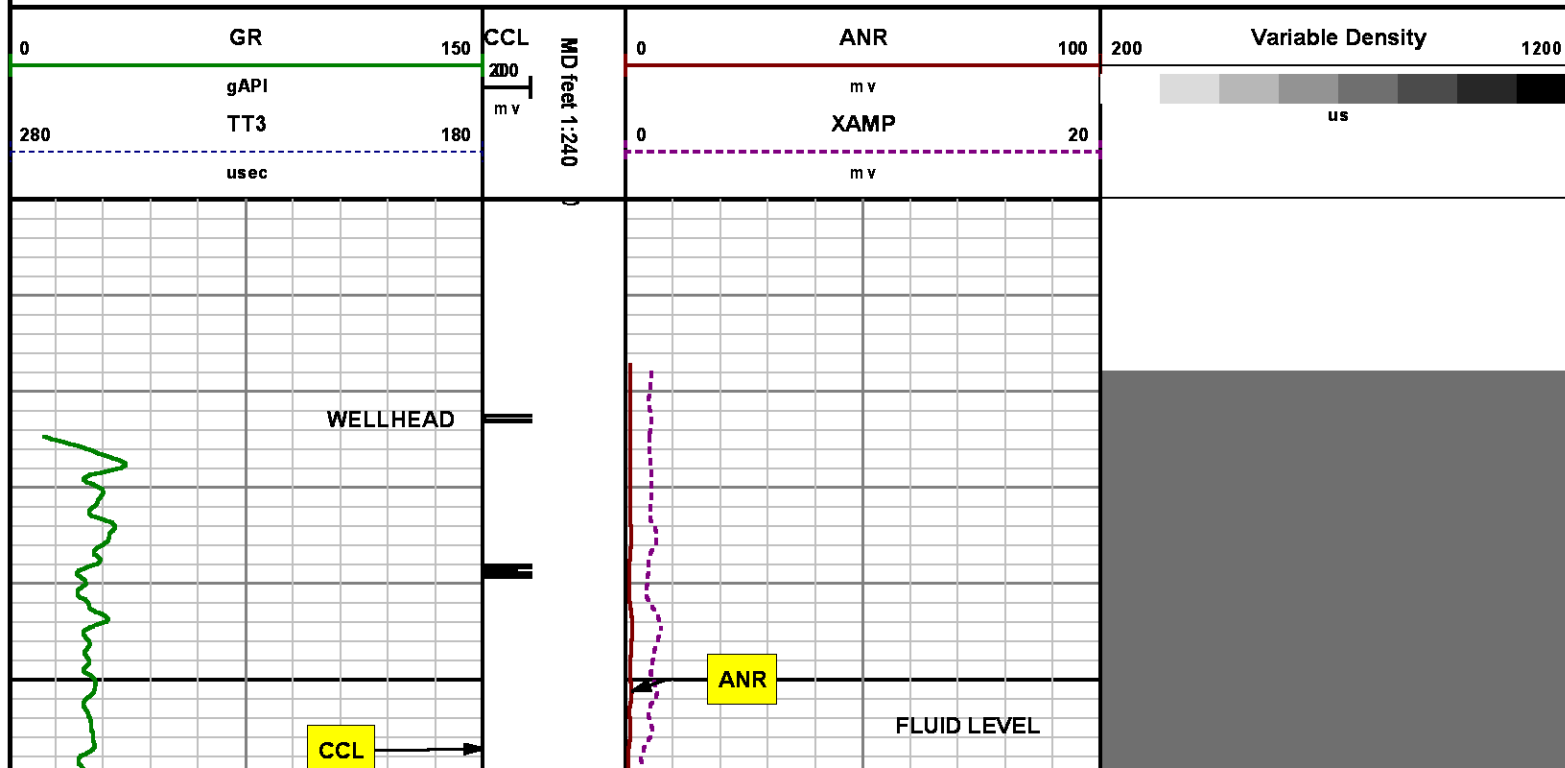
Well : SAVAGE RWF 344-25

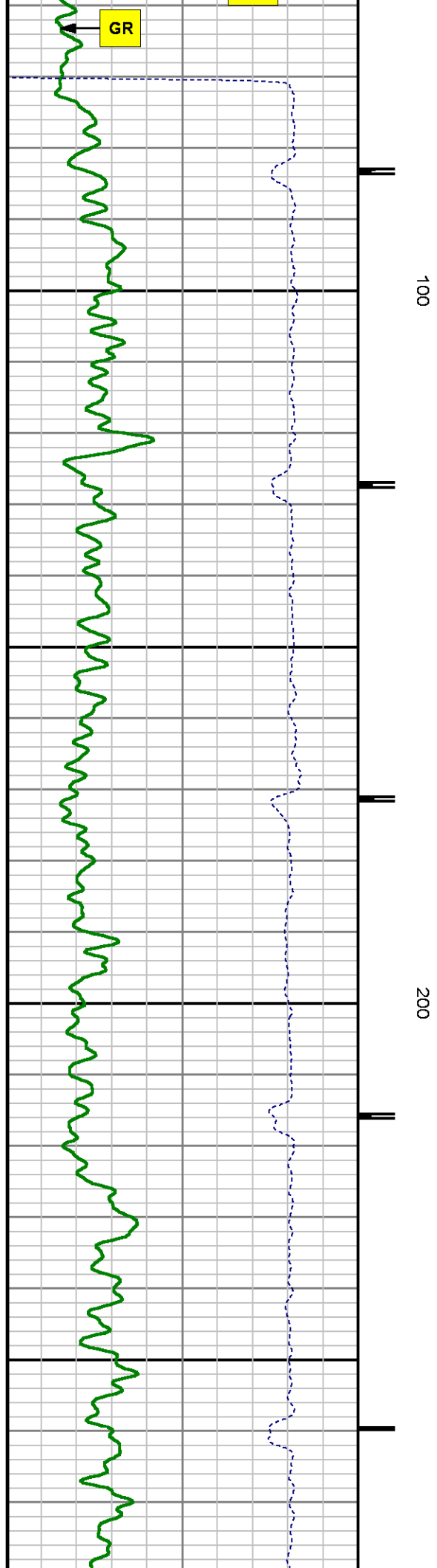
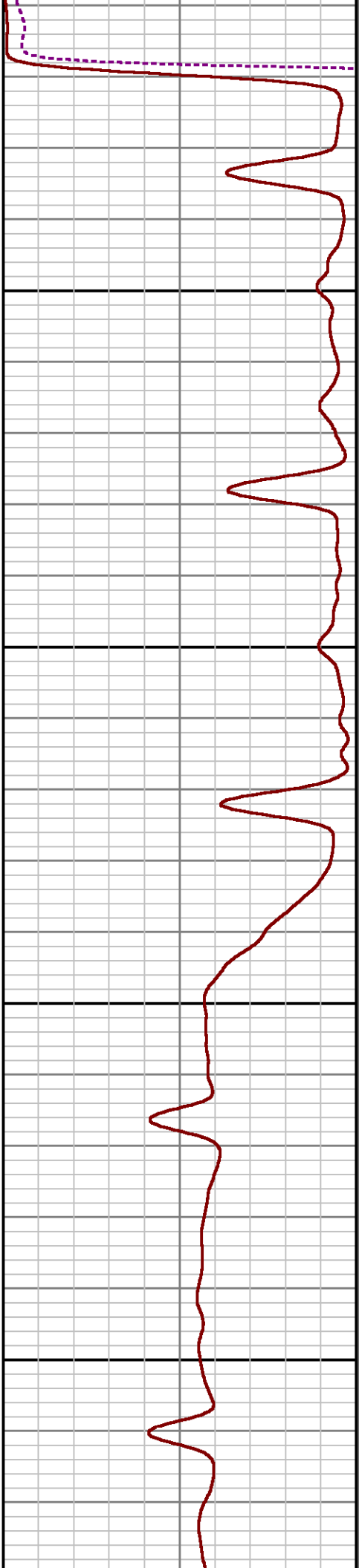
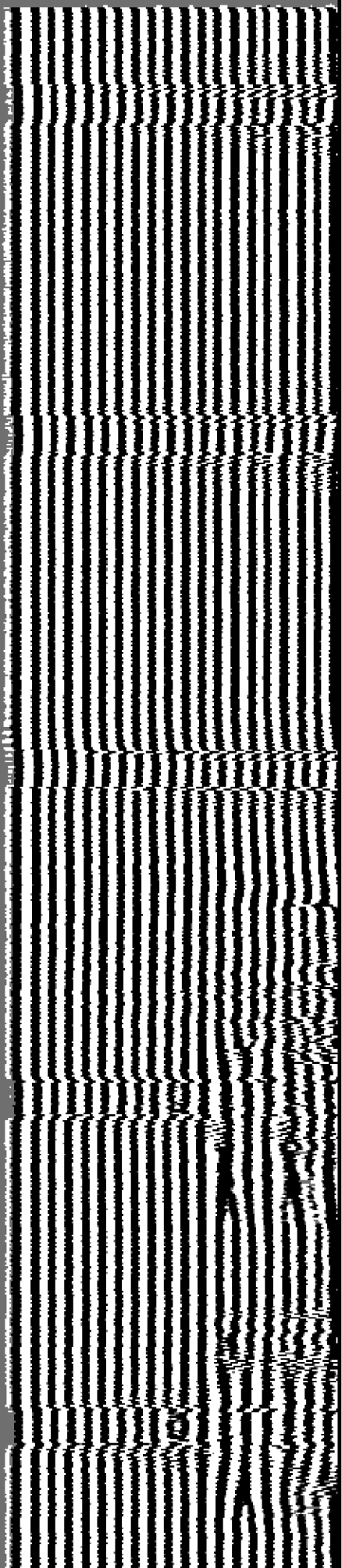
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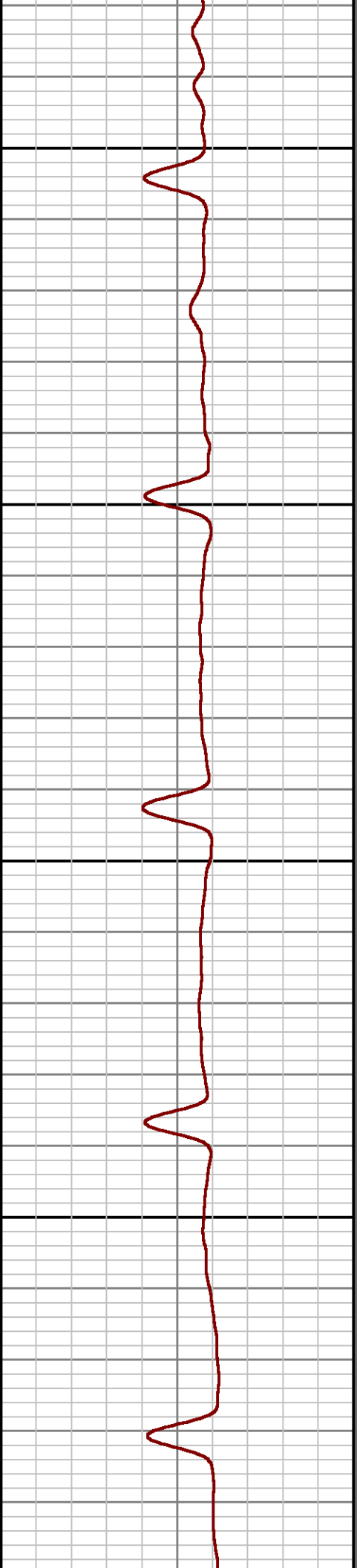
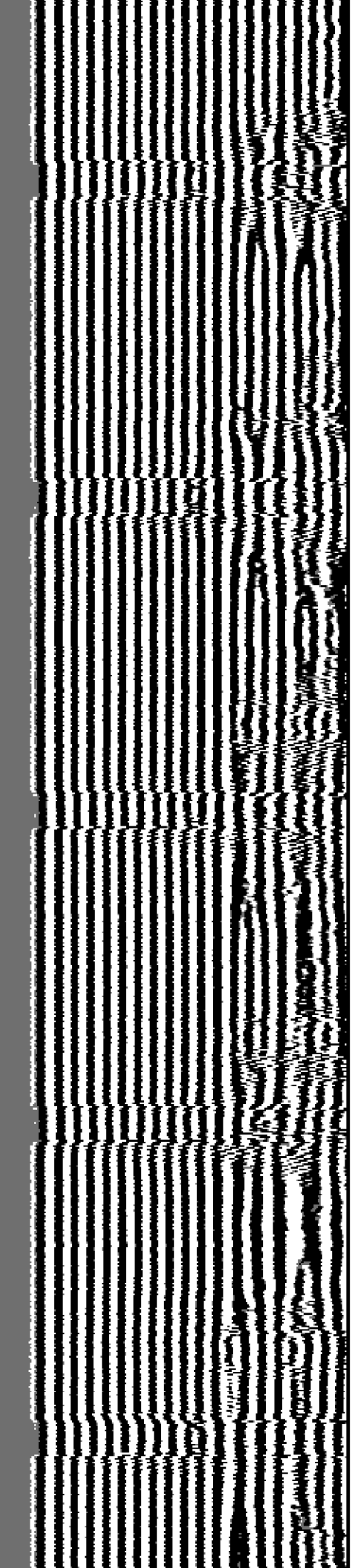
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Interval : 0.00 - 8780.00 feet UP

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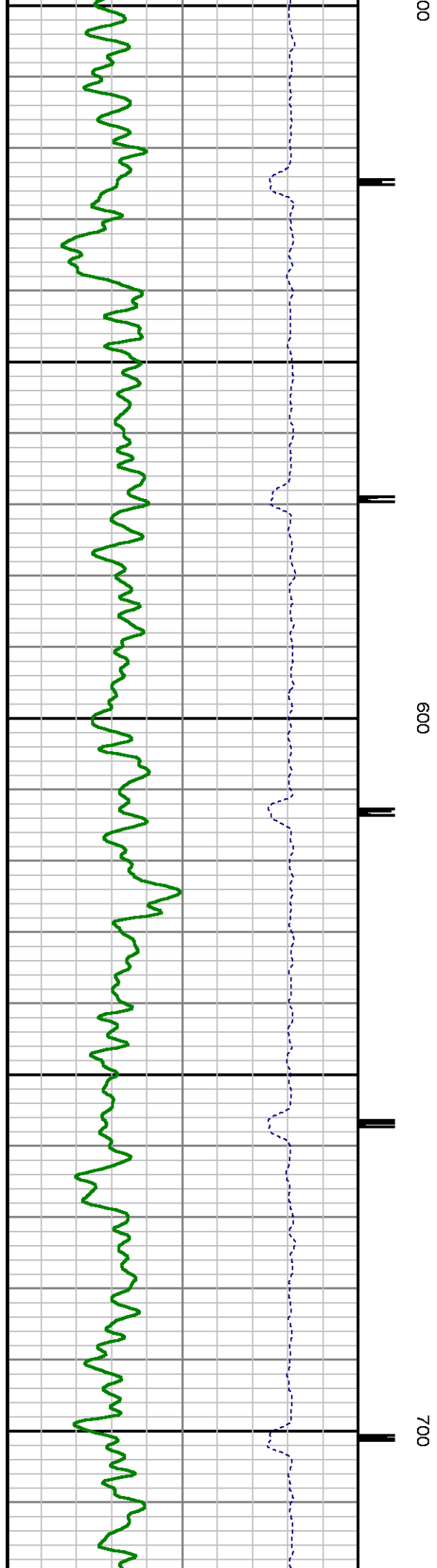
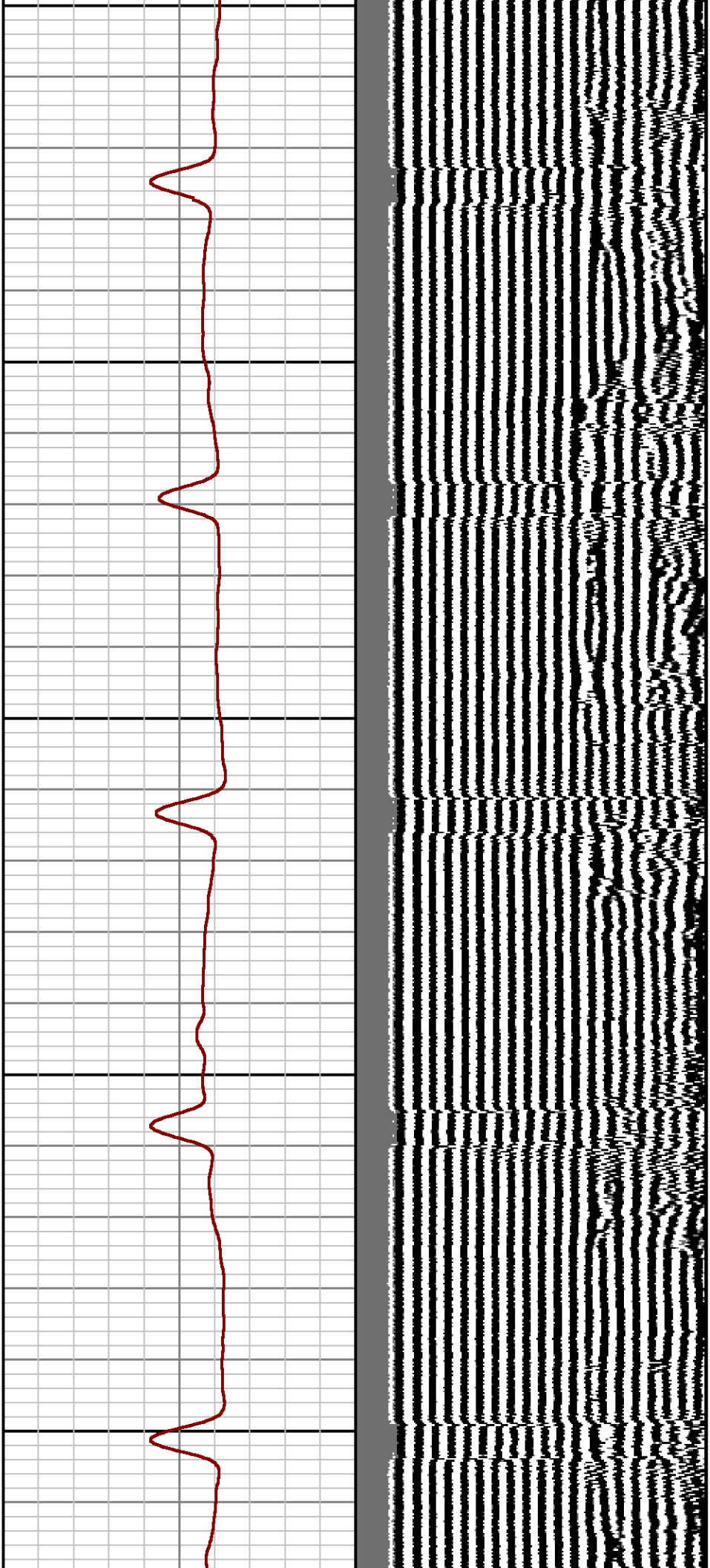


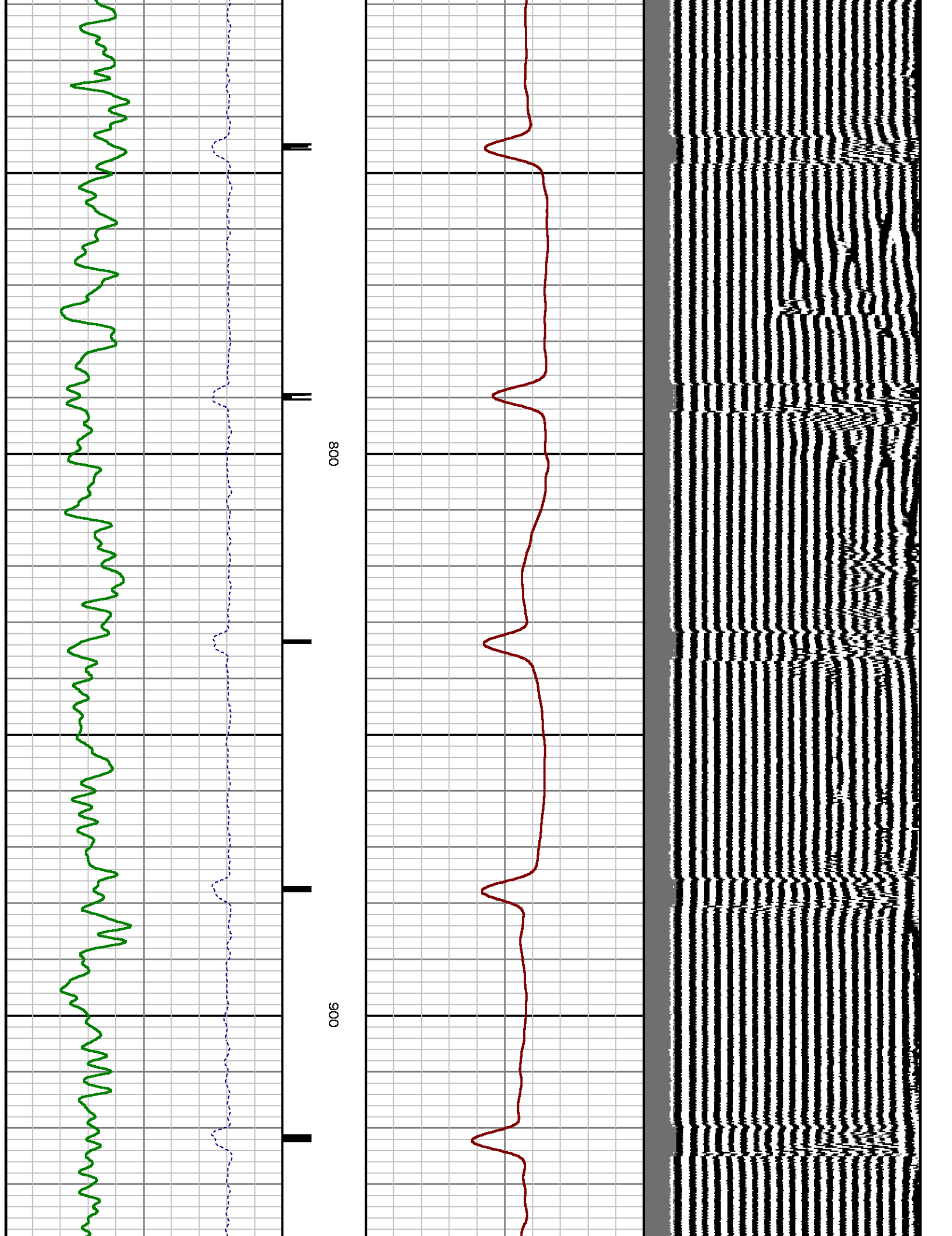


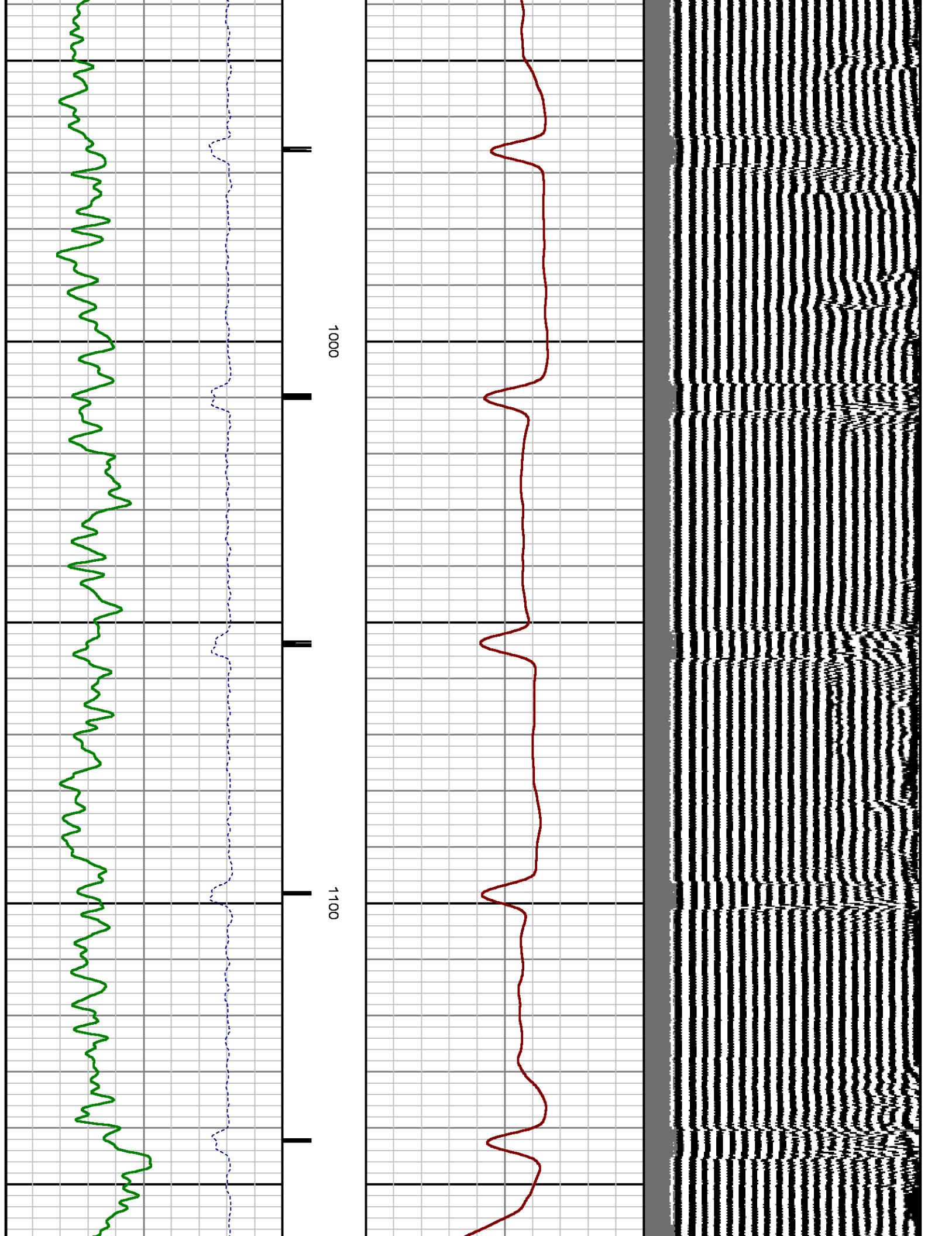
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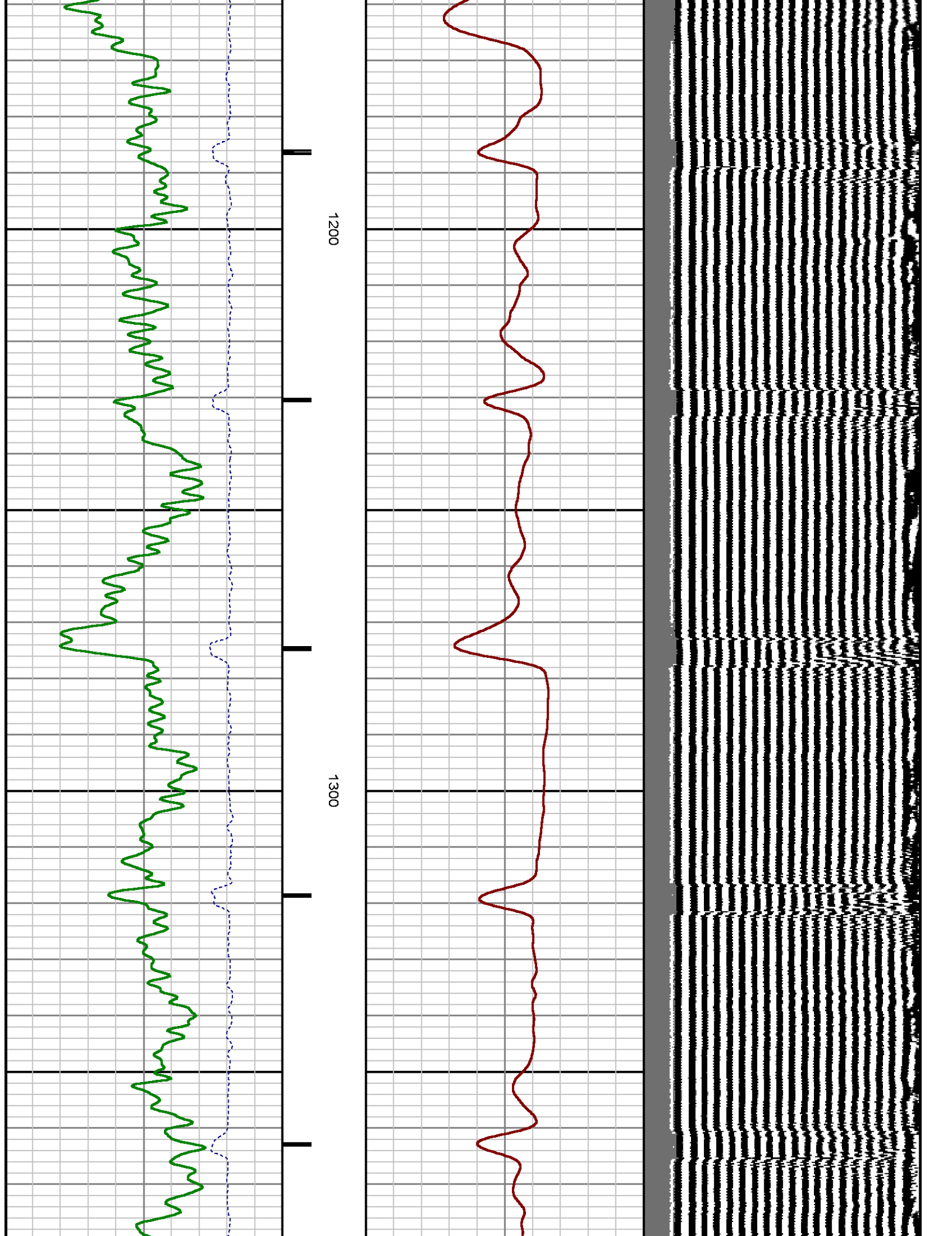
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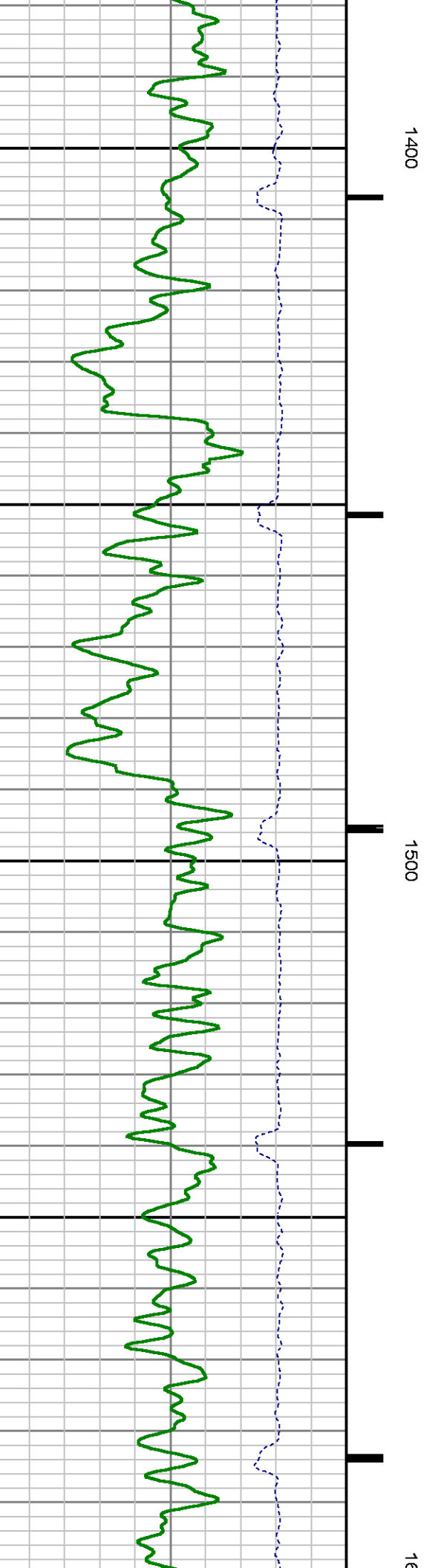
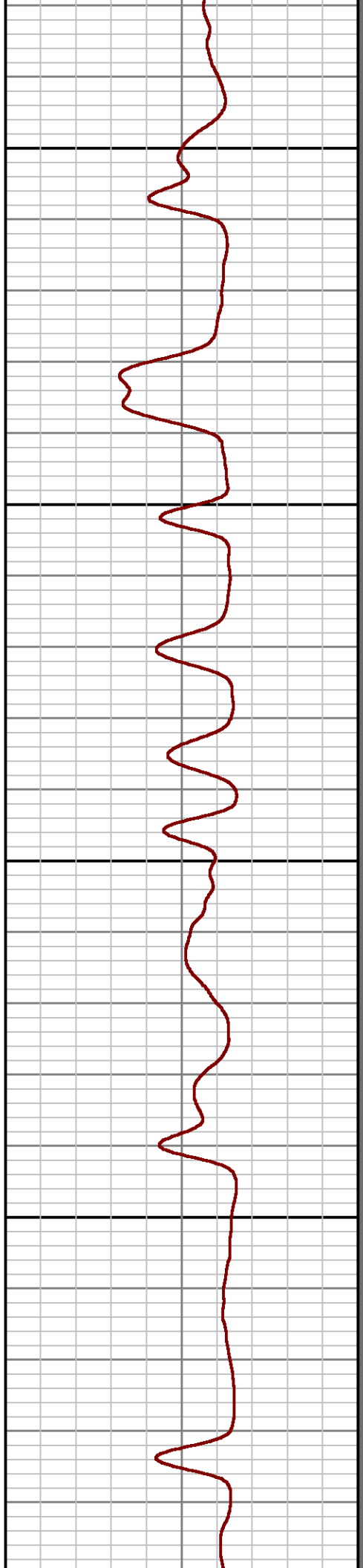
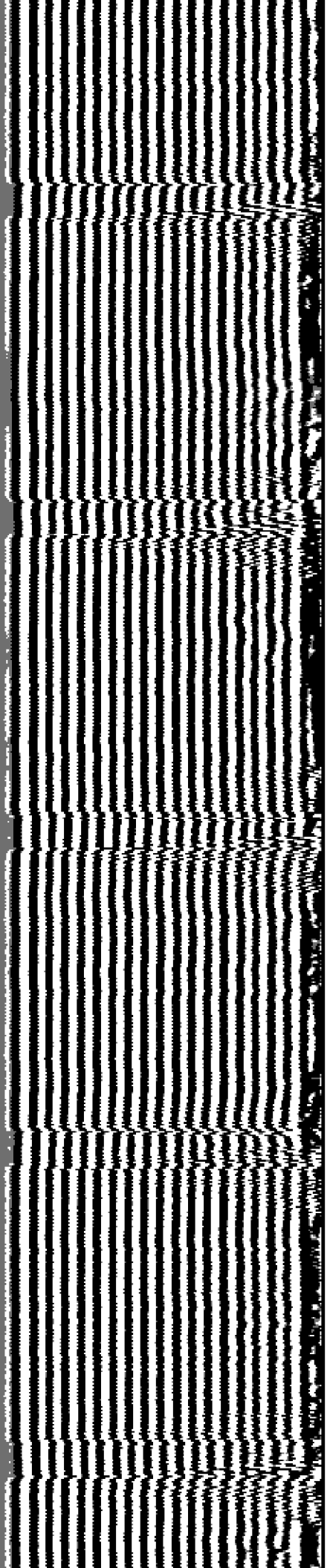
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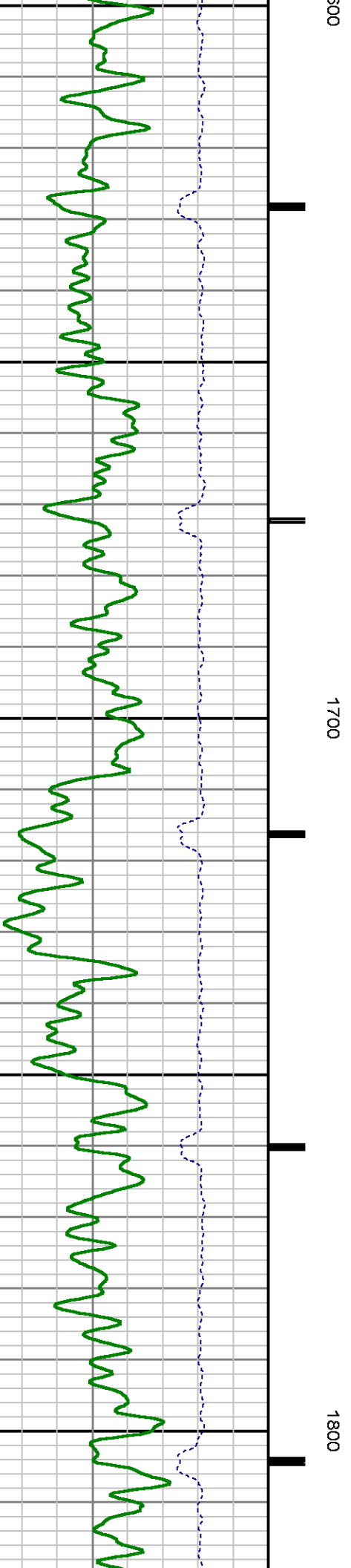
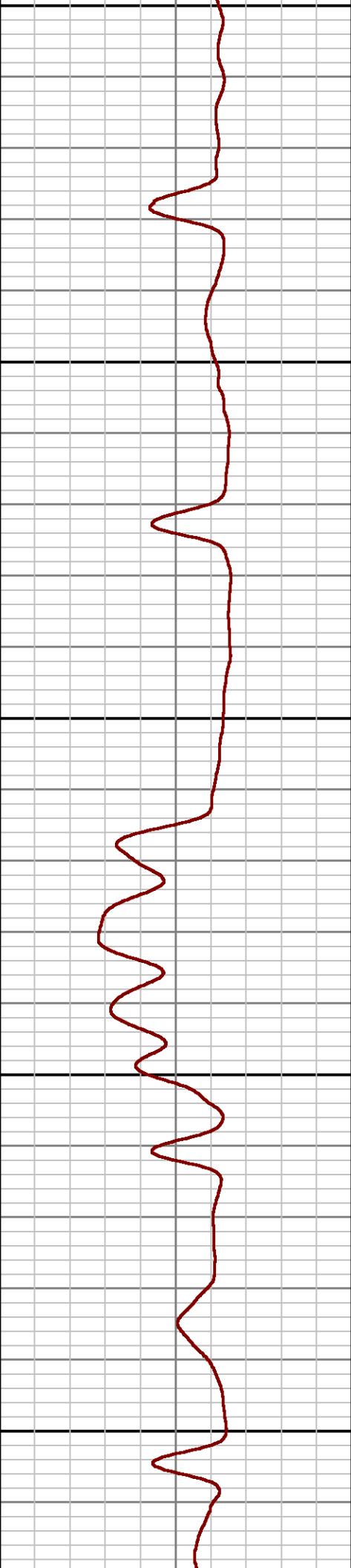
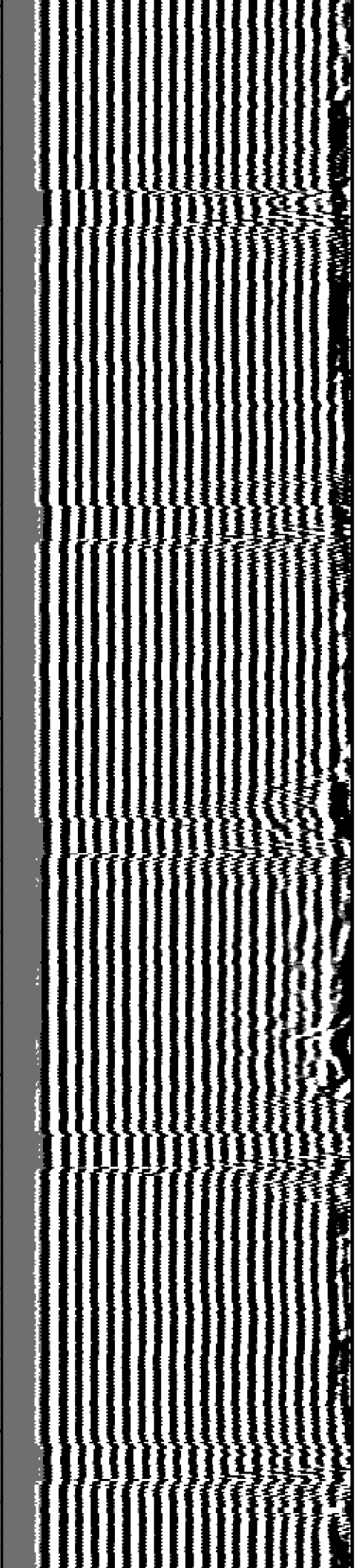


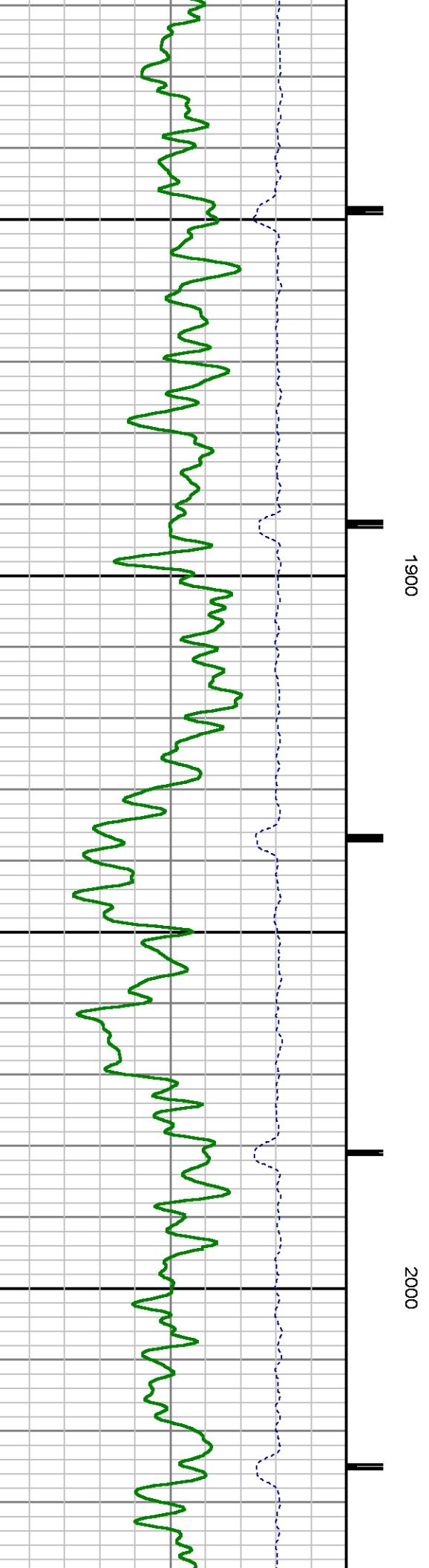
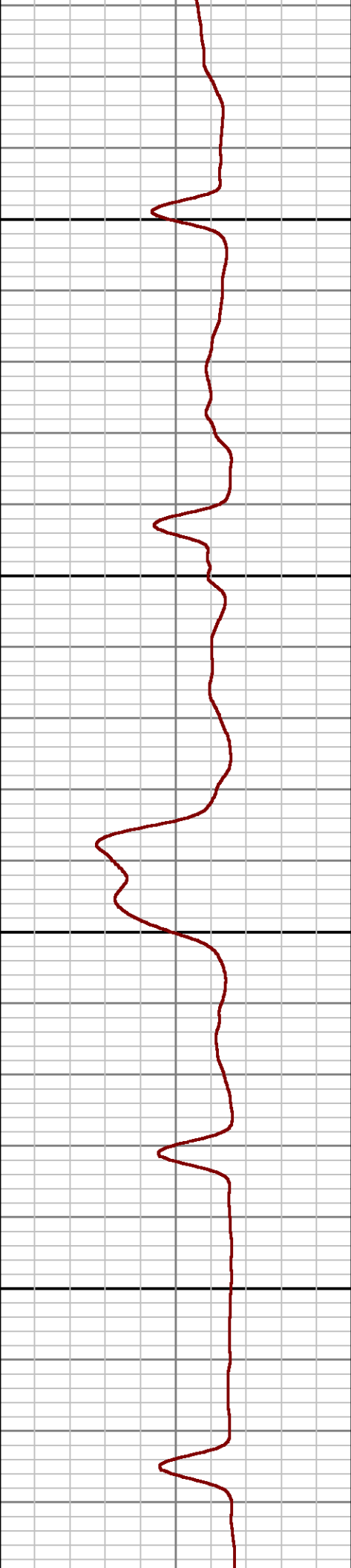
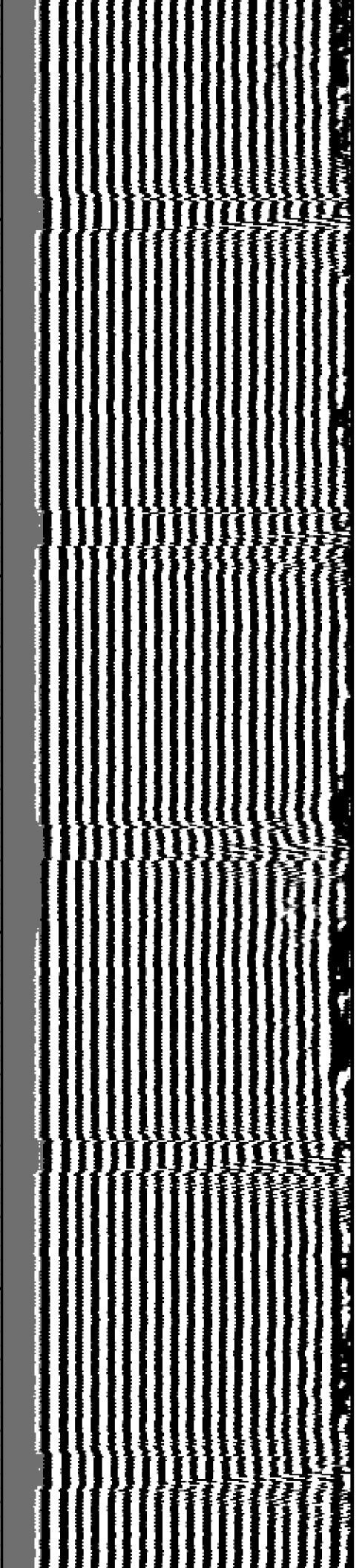


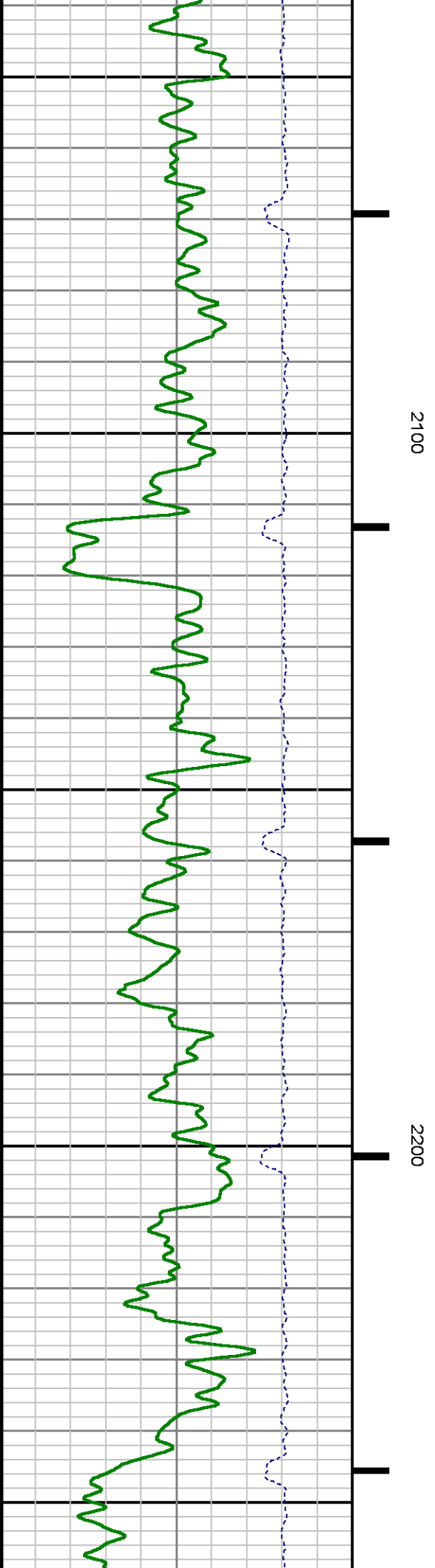
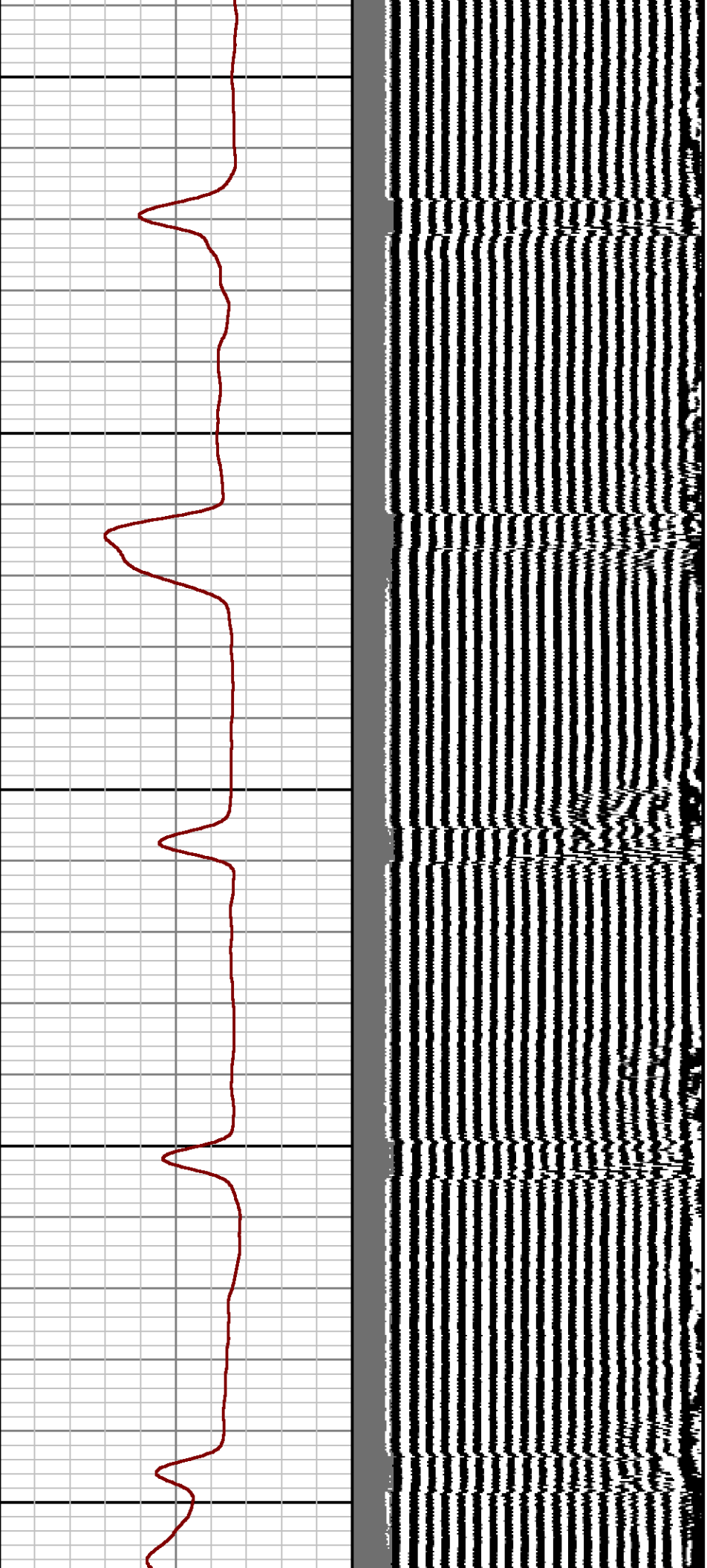


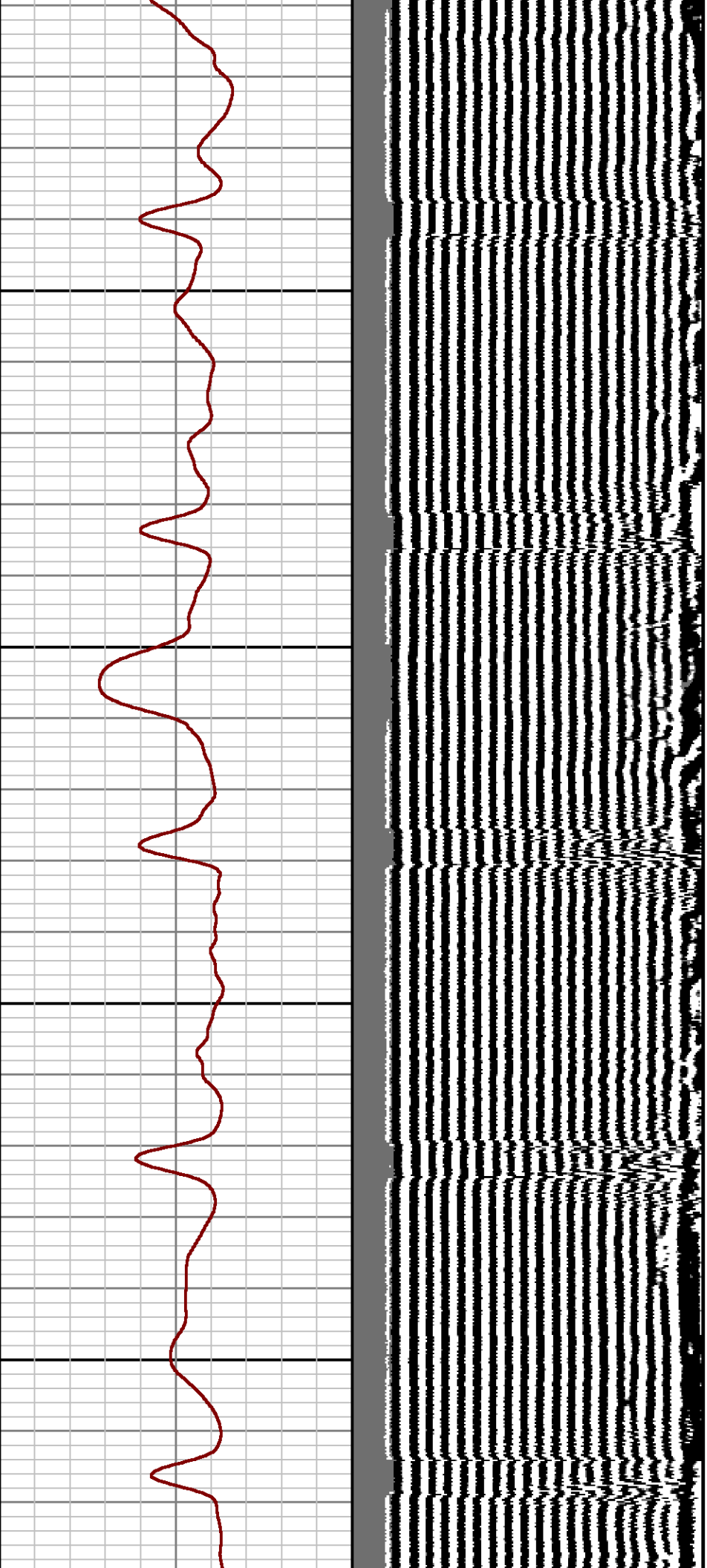






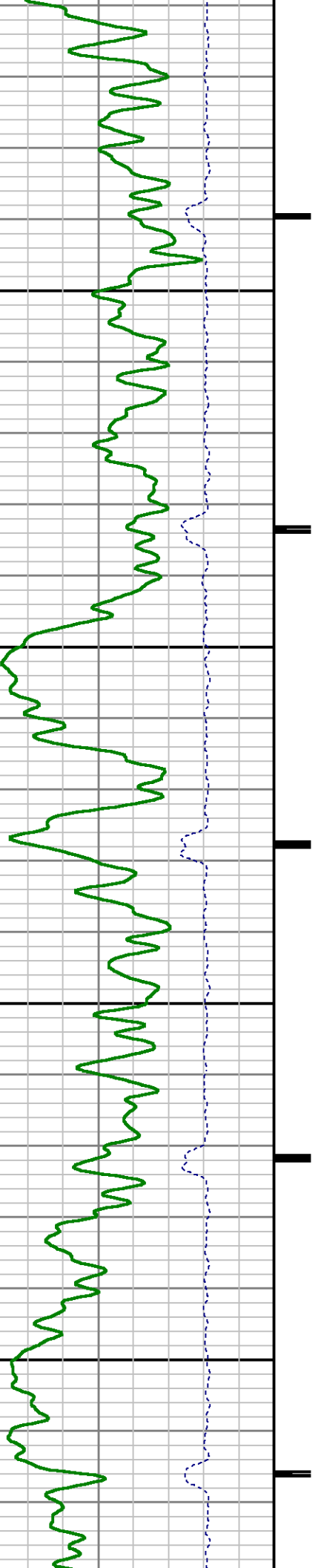


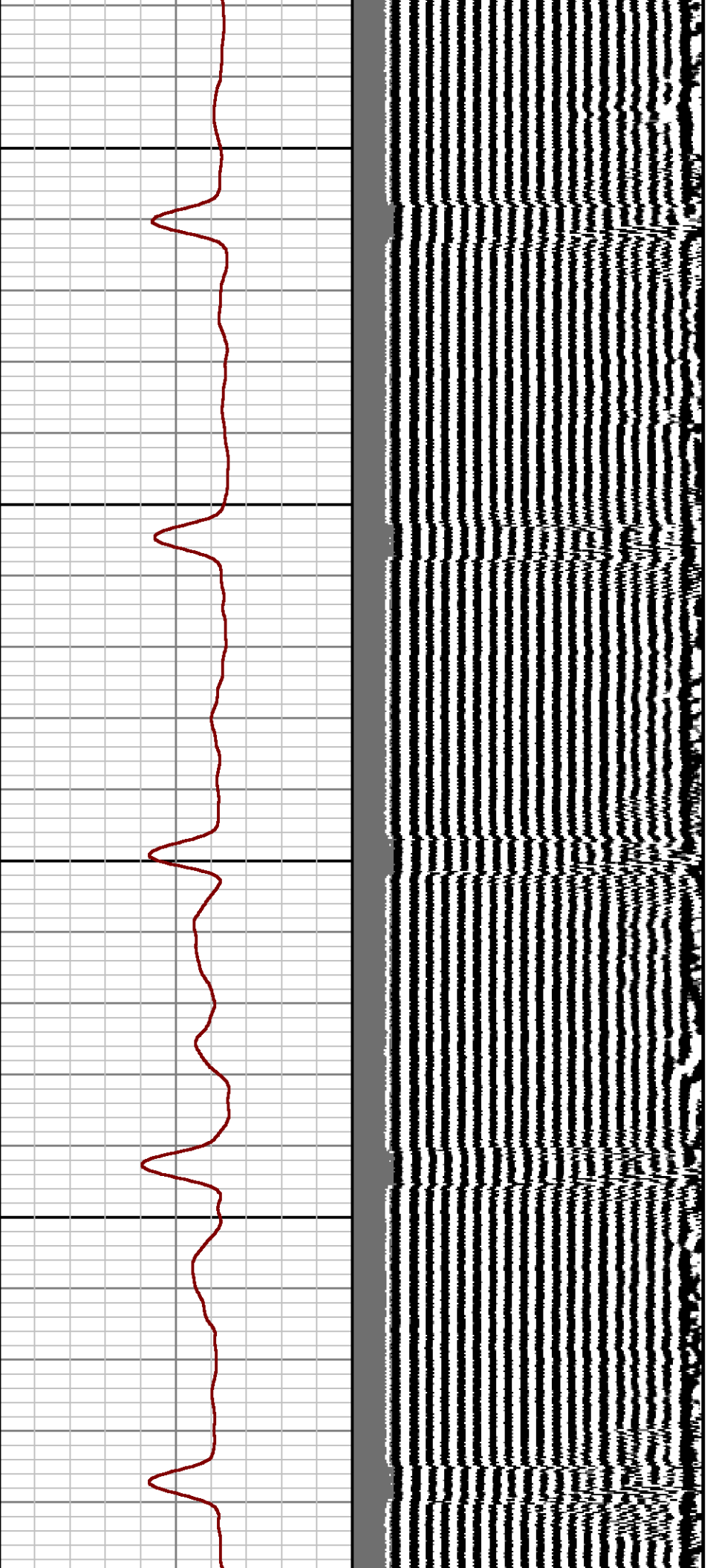




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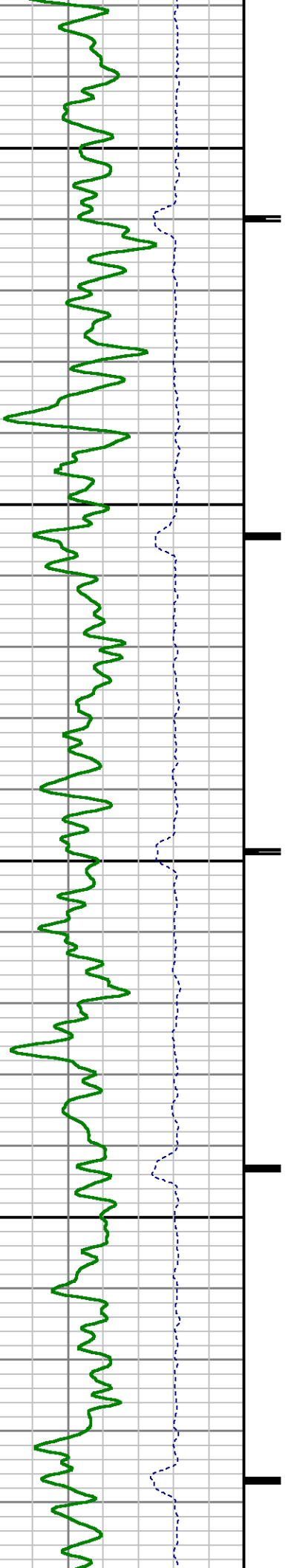


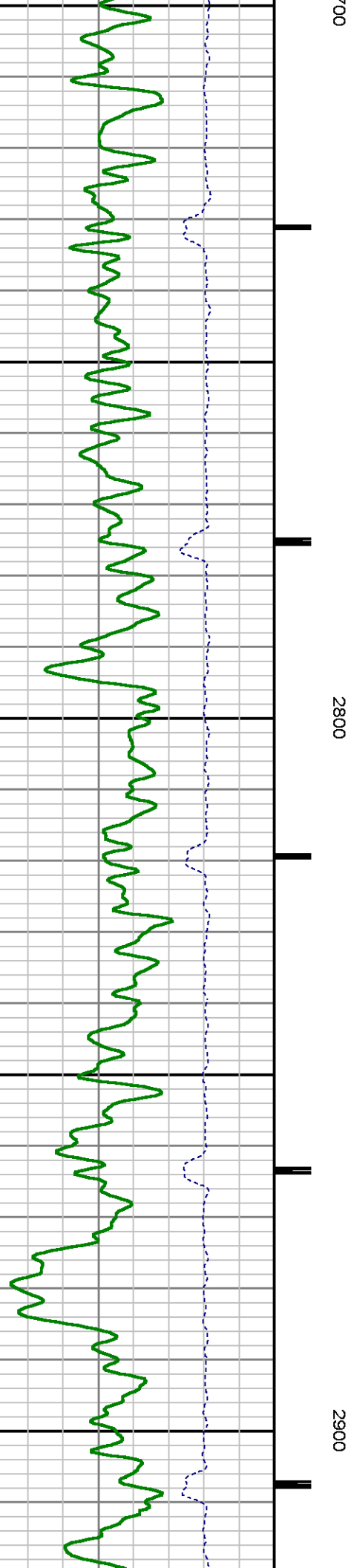
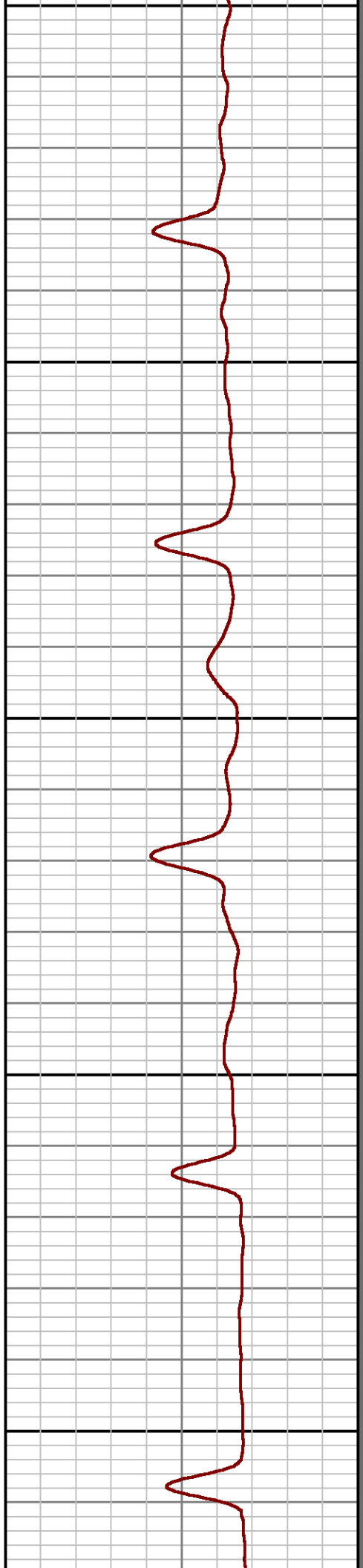
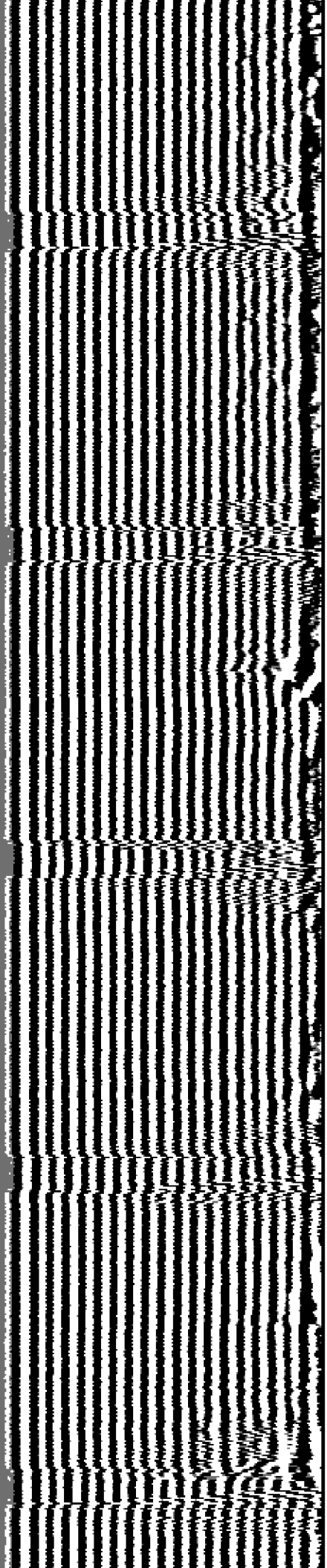


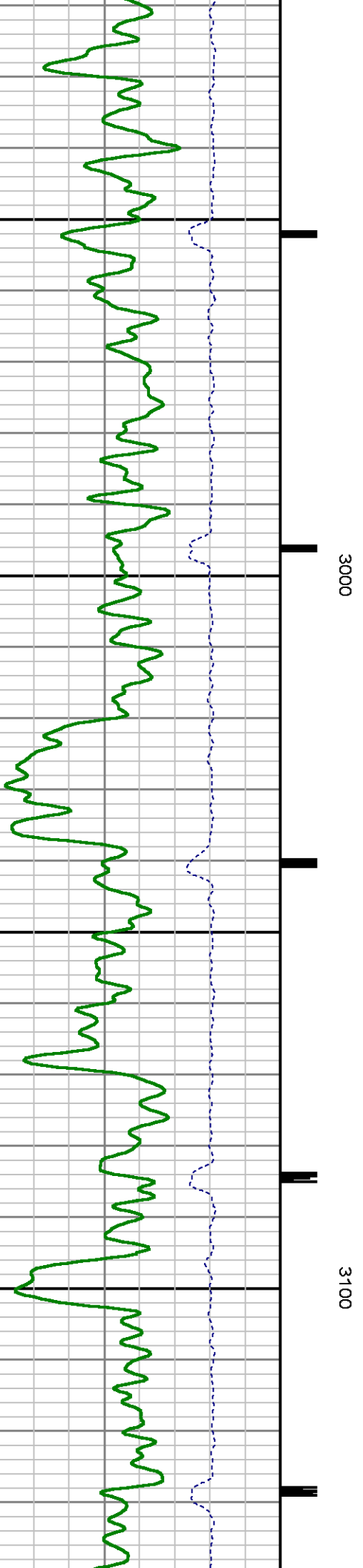
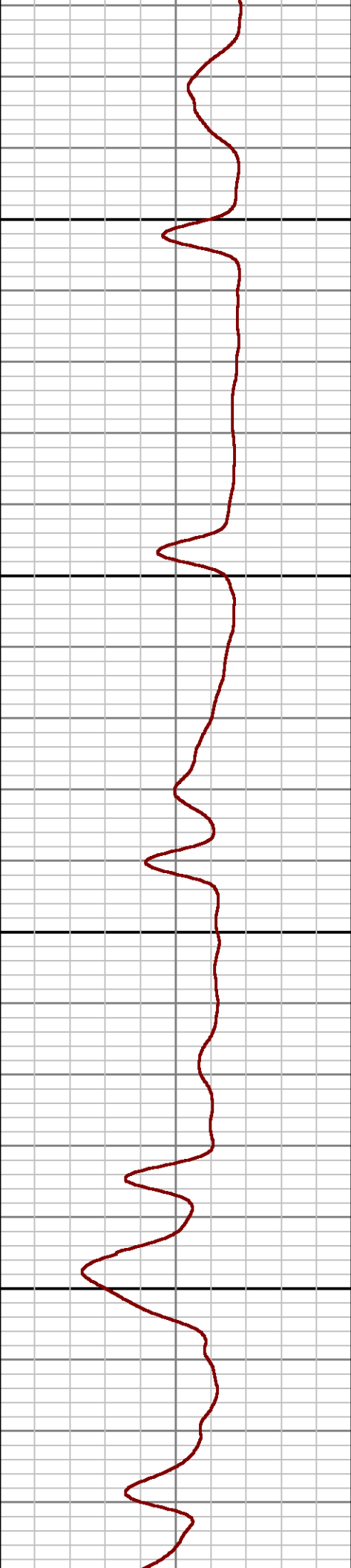
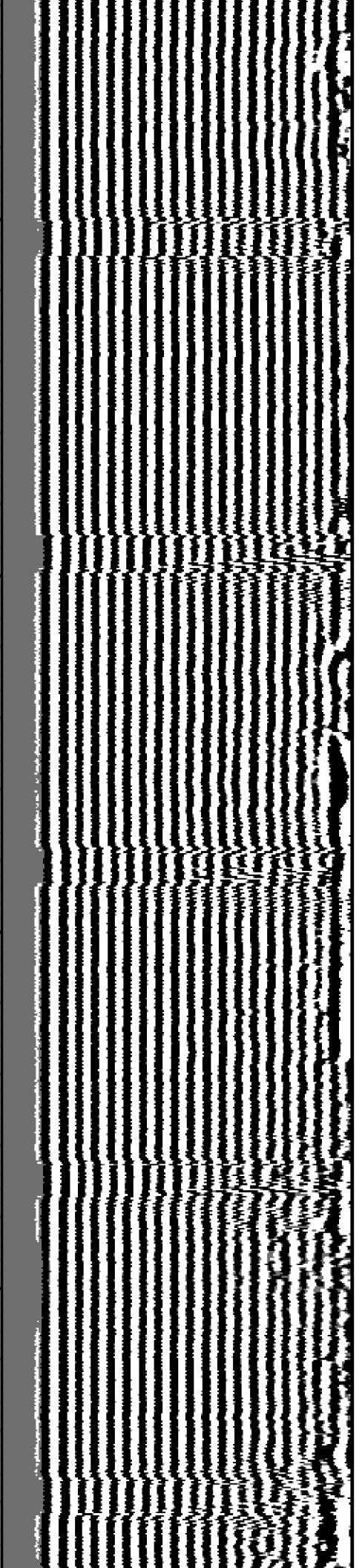
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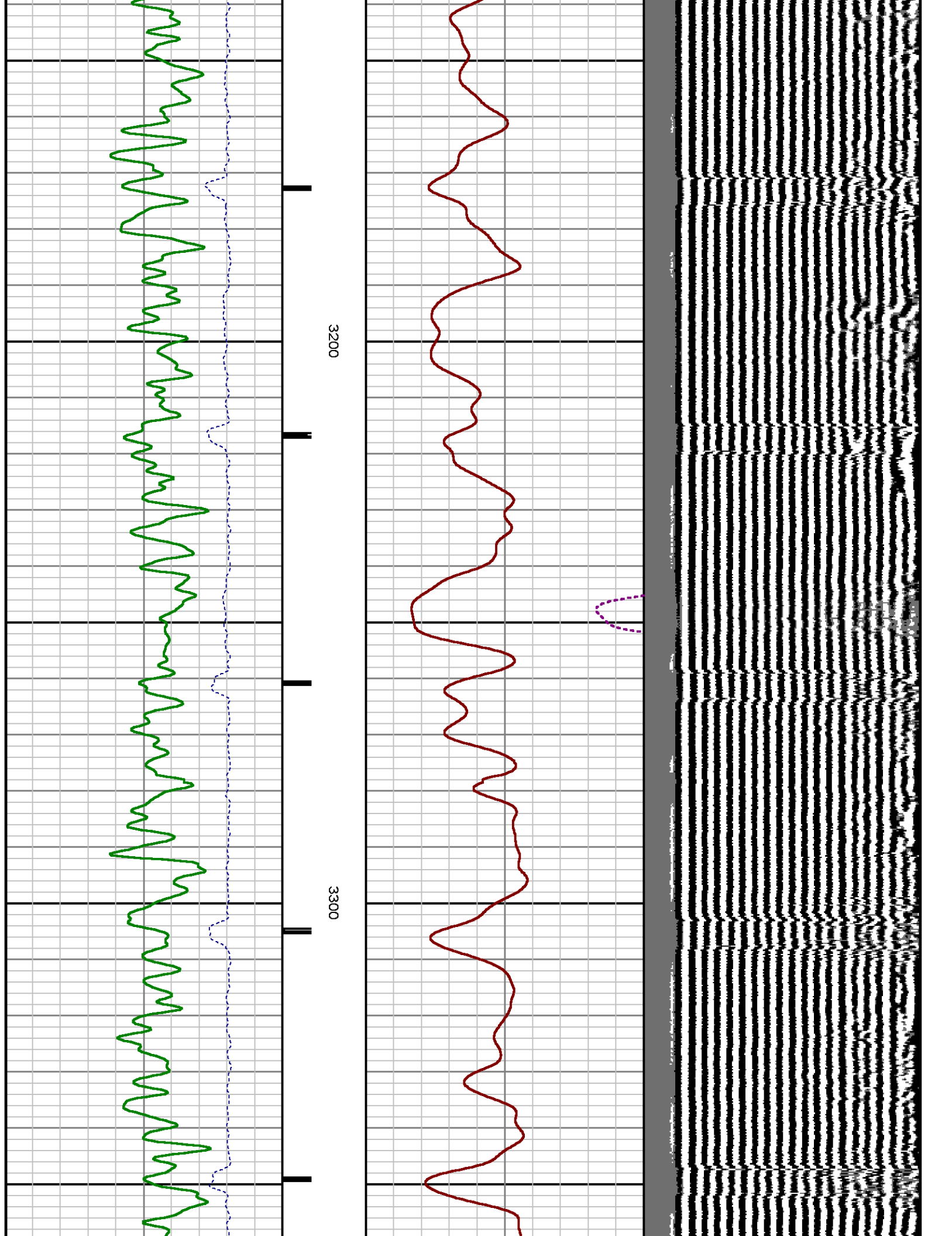
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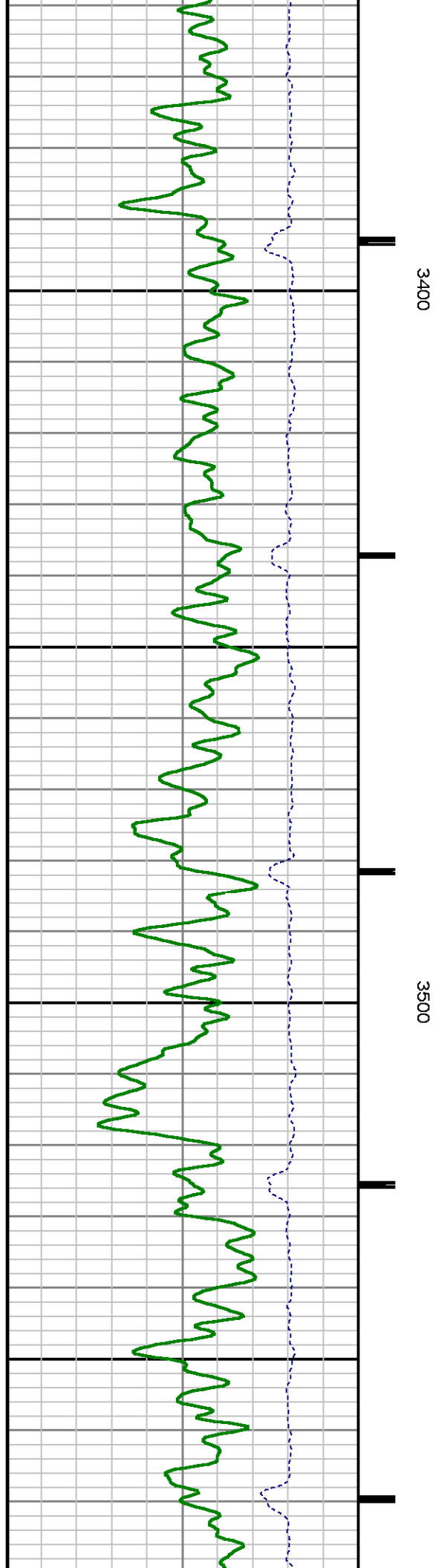
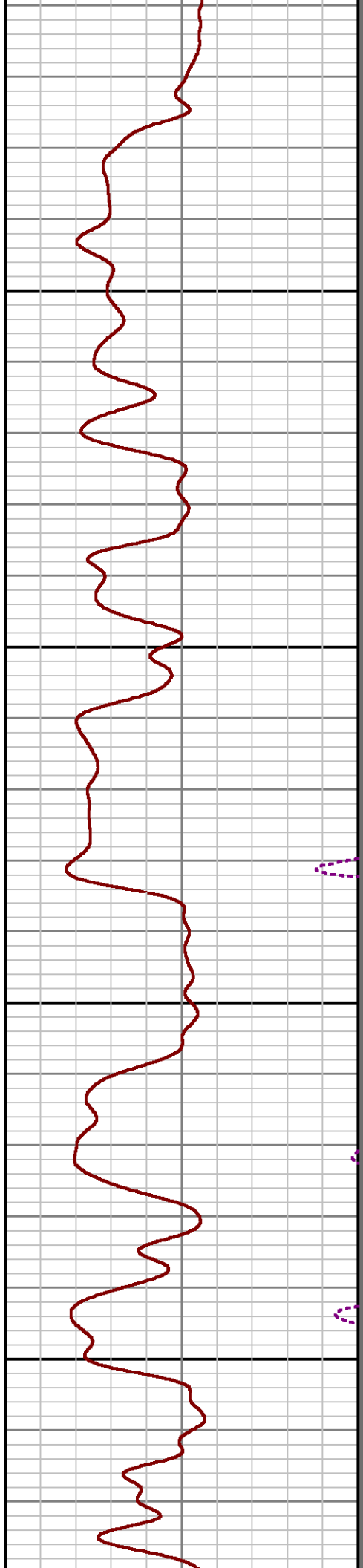
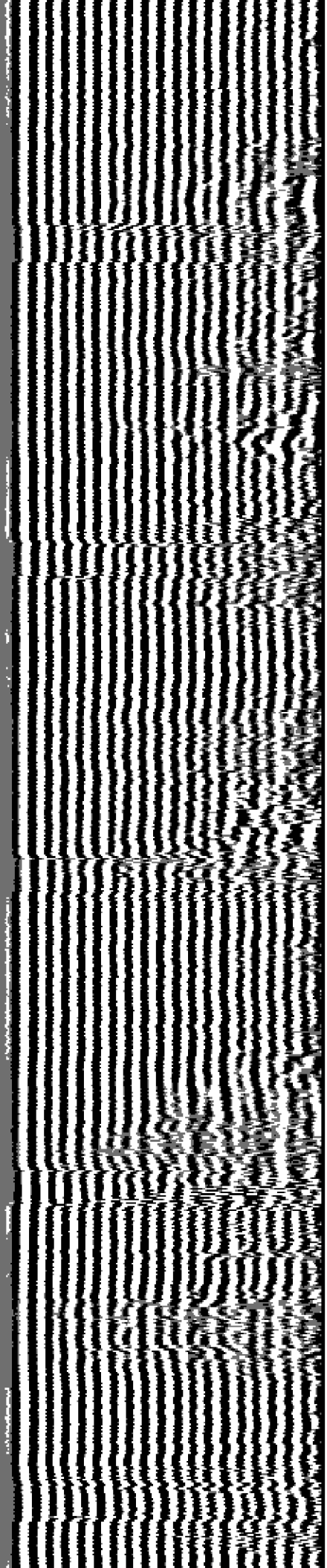
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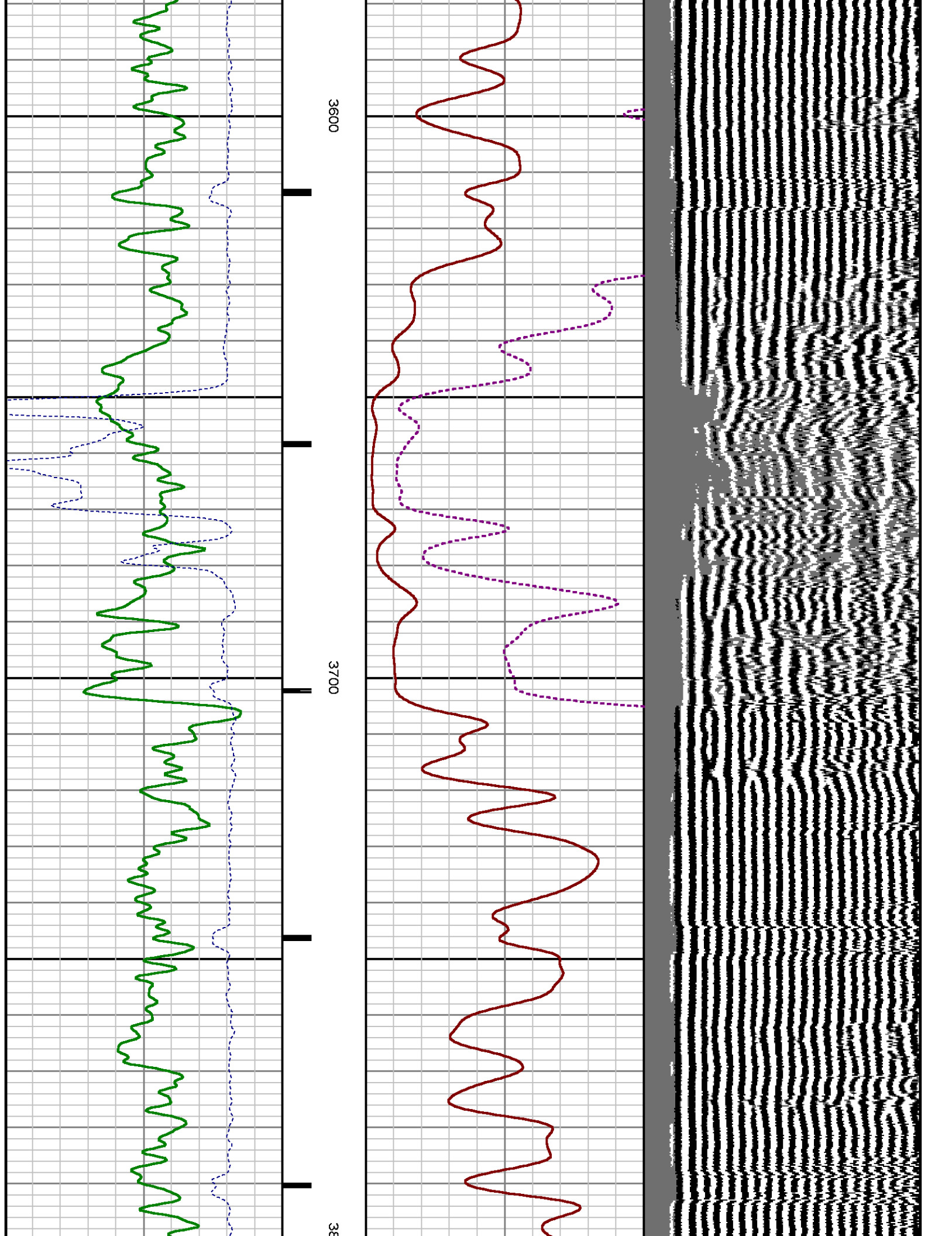


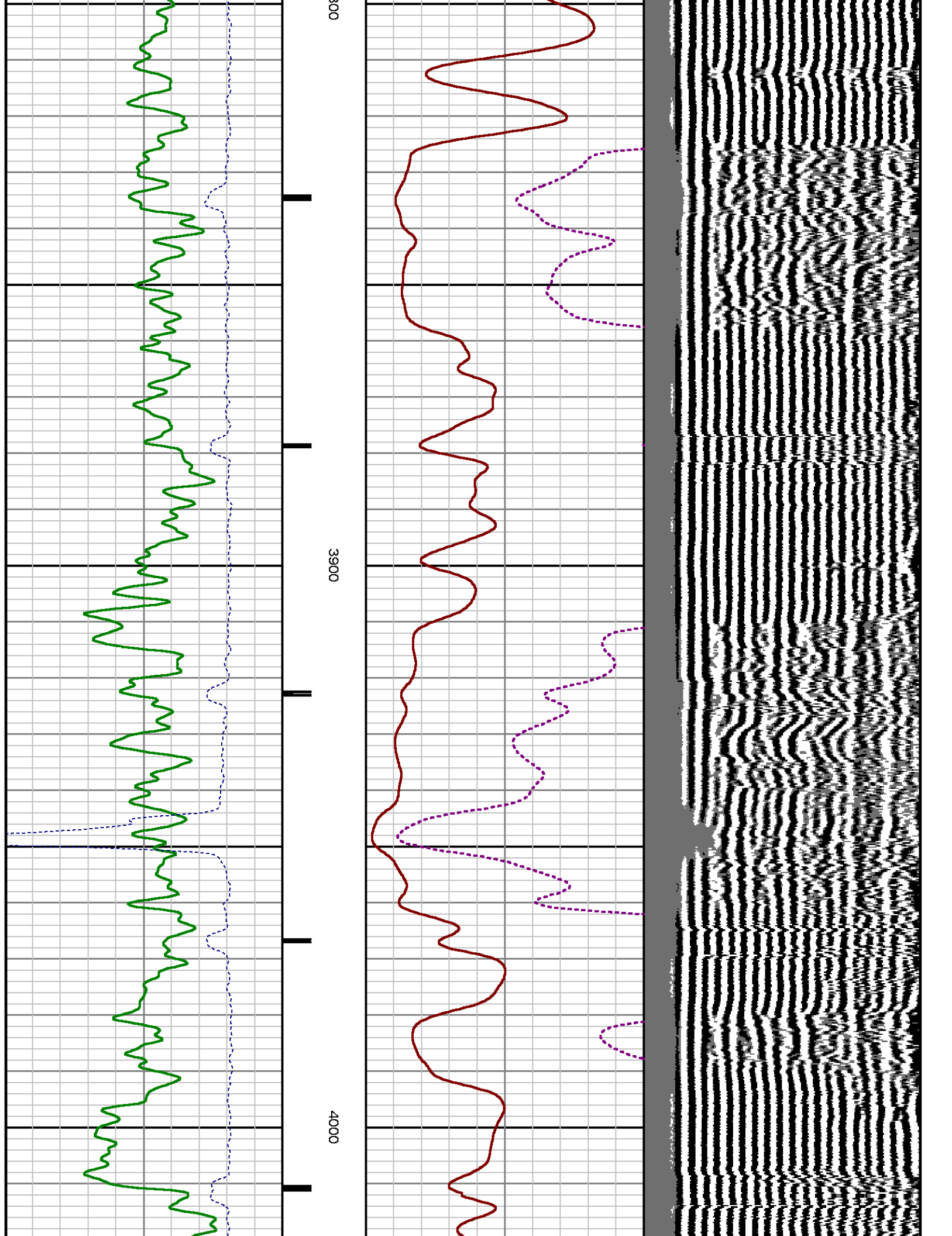


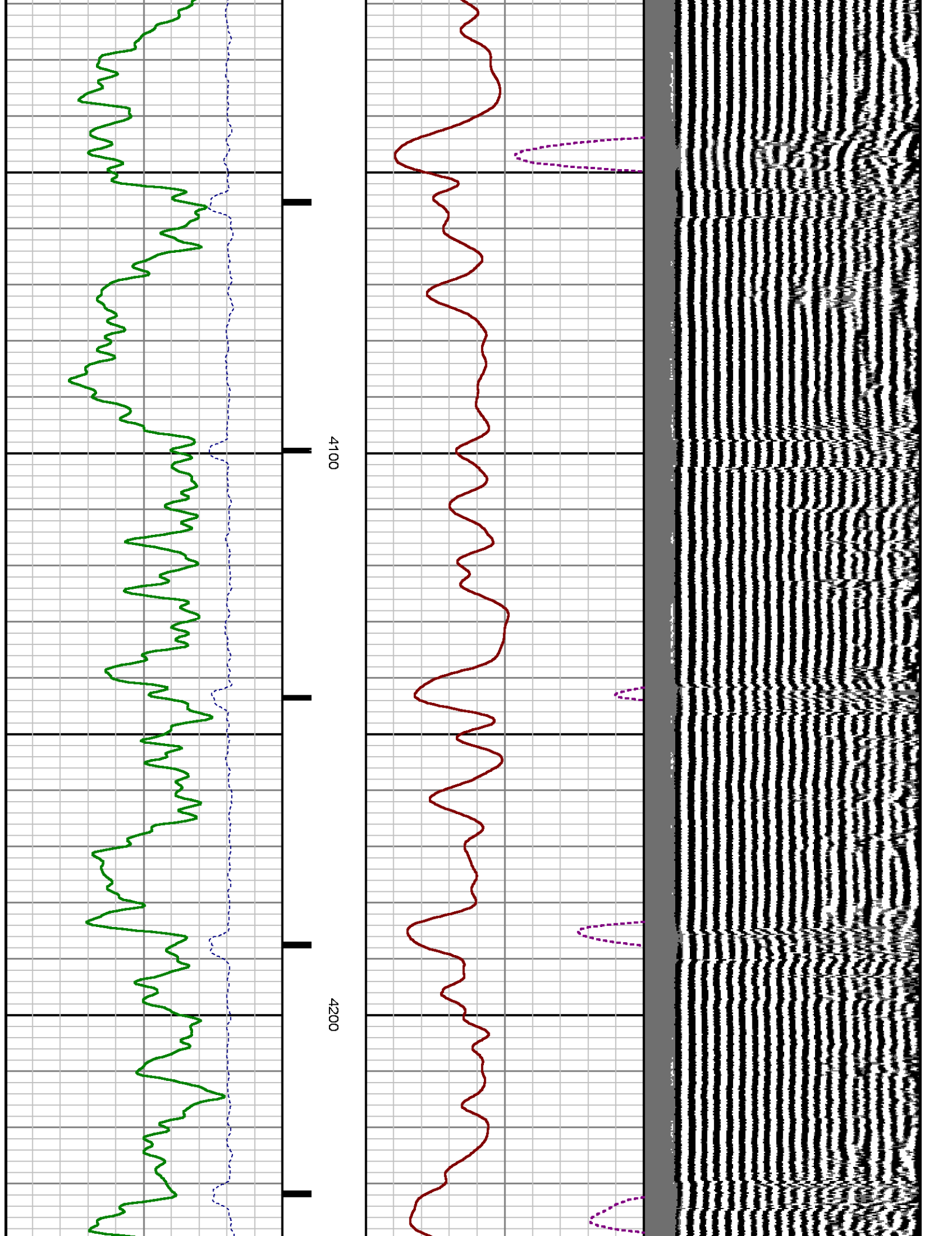


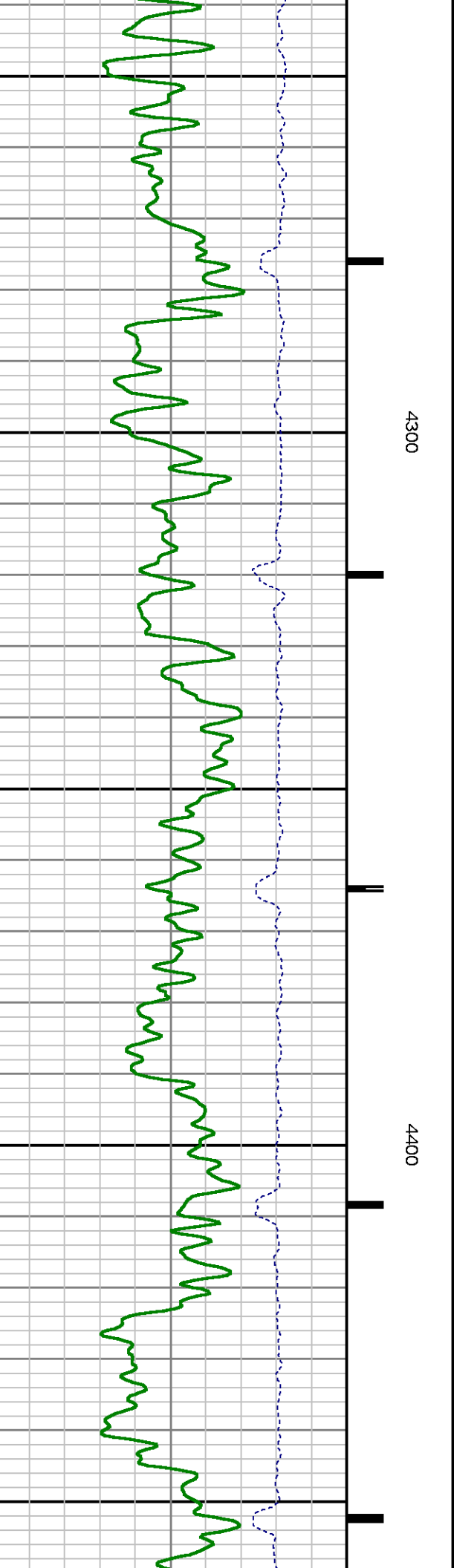
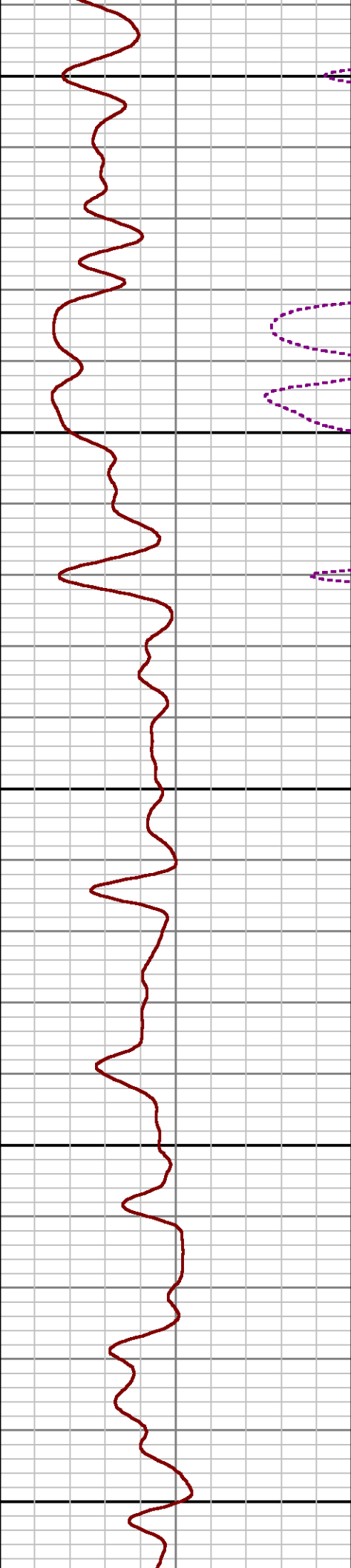
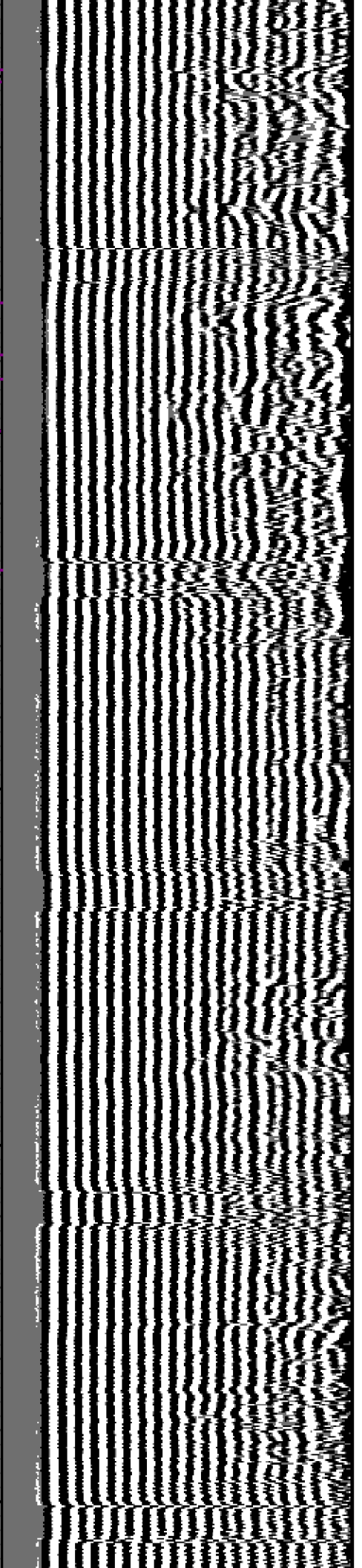


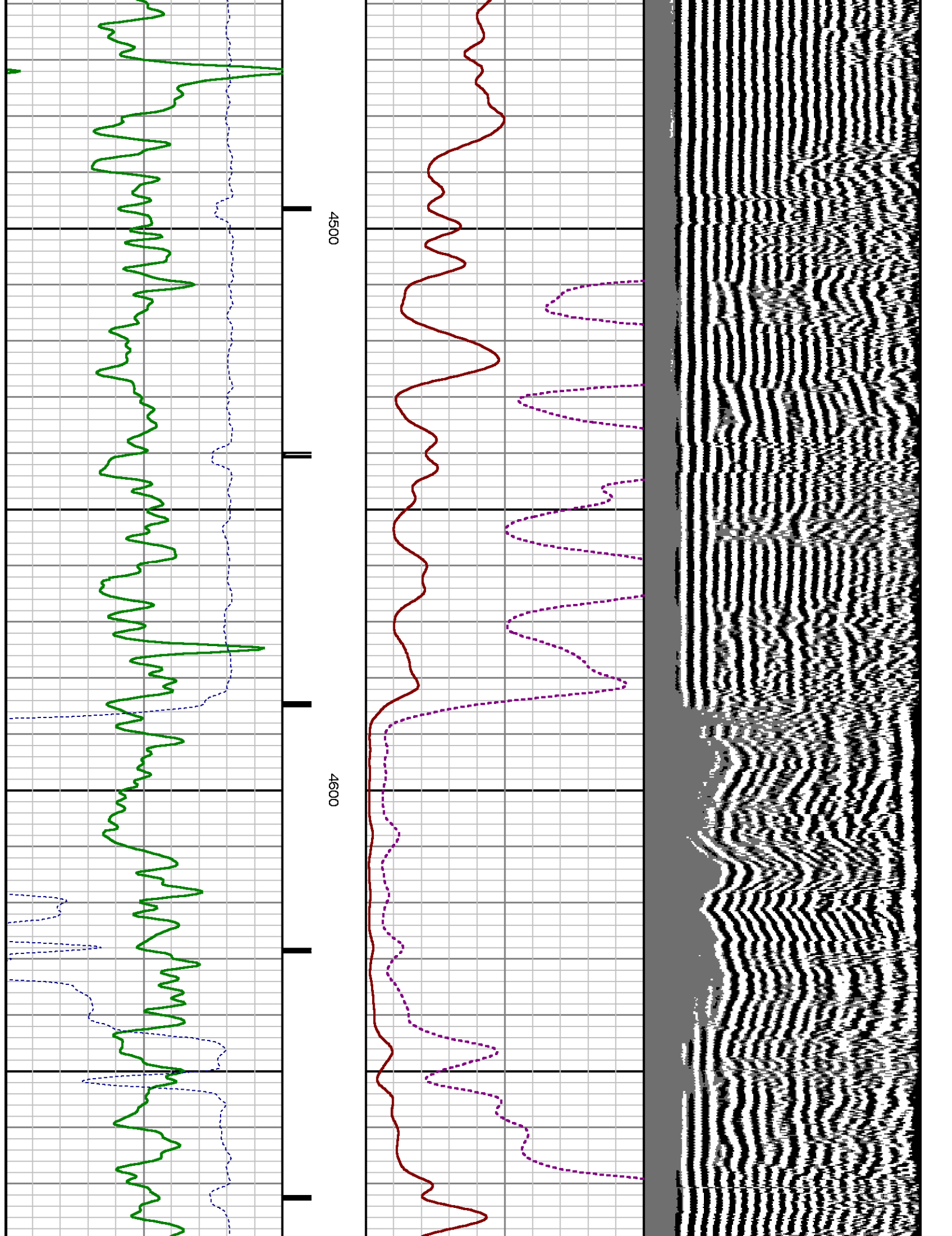


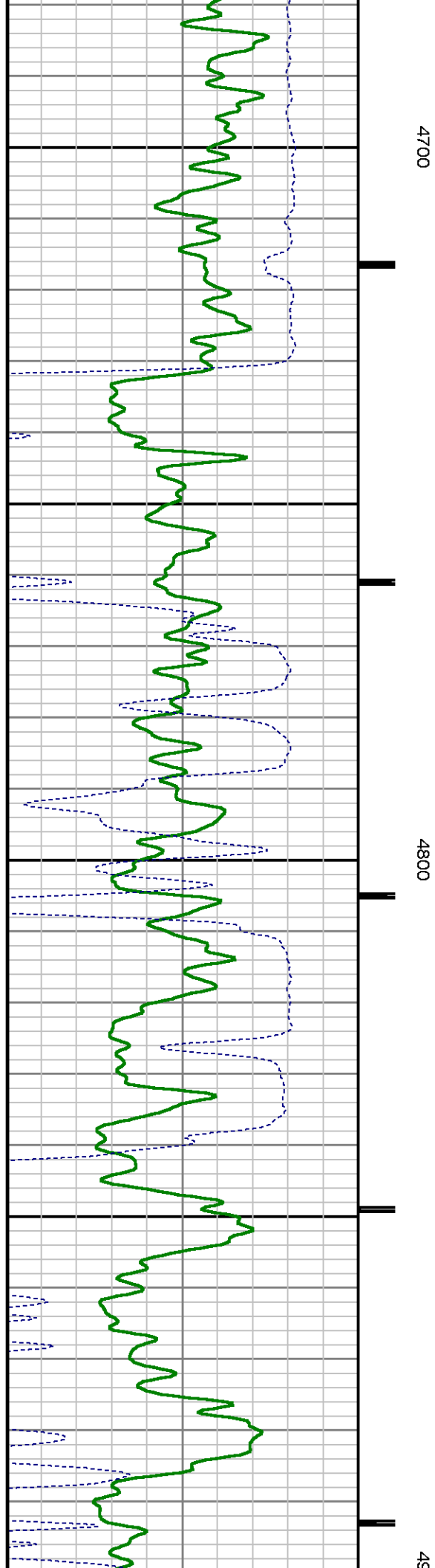
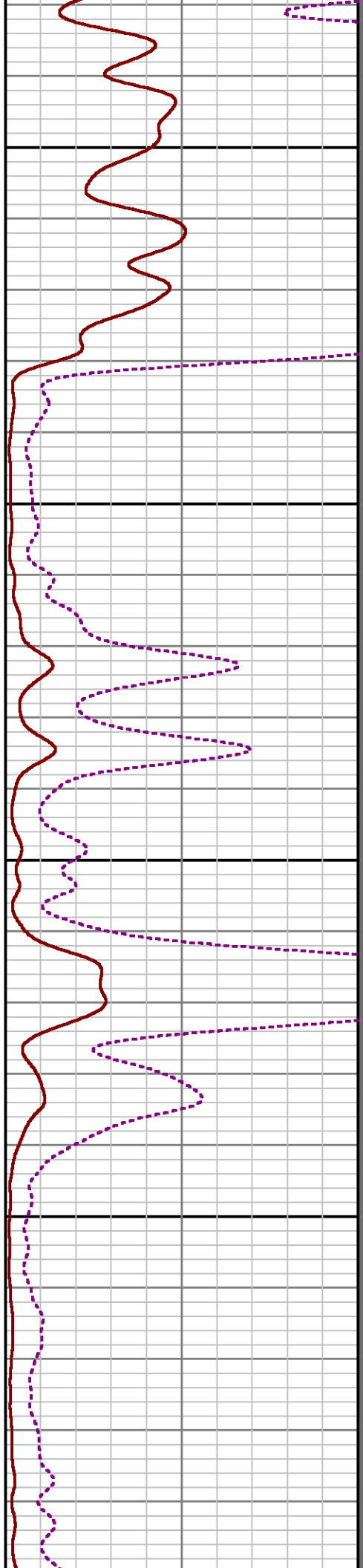
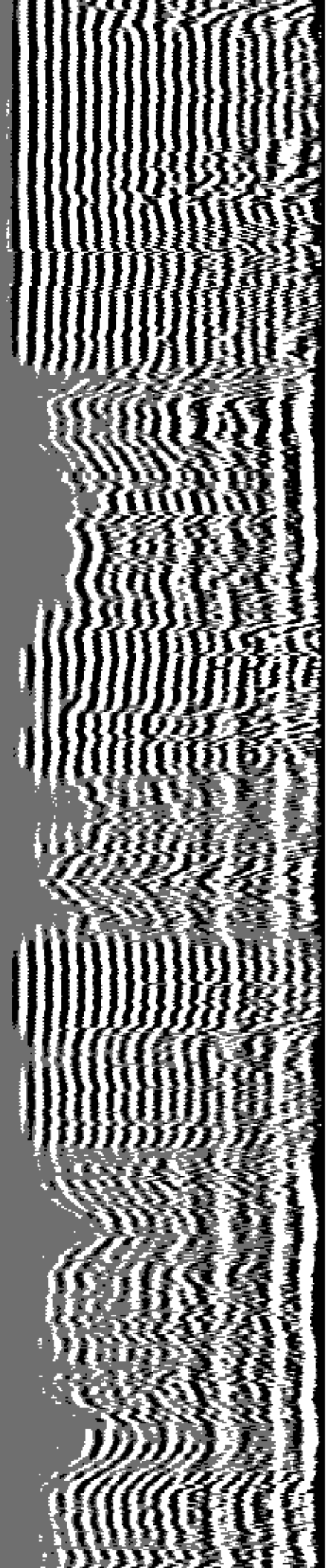


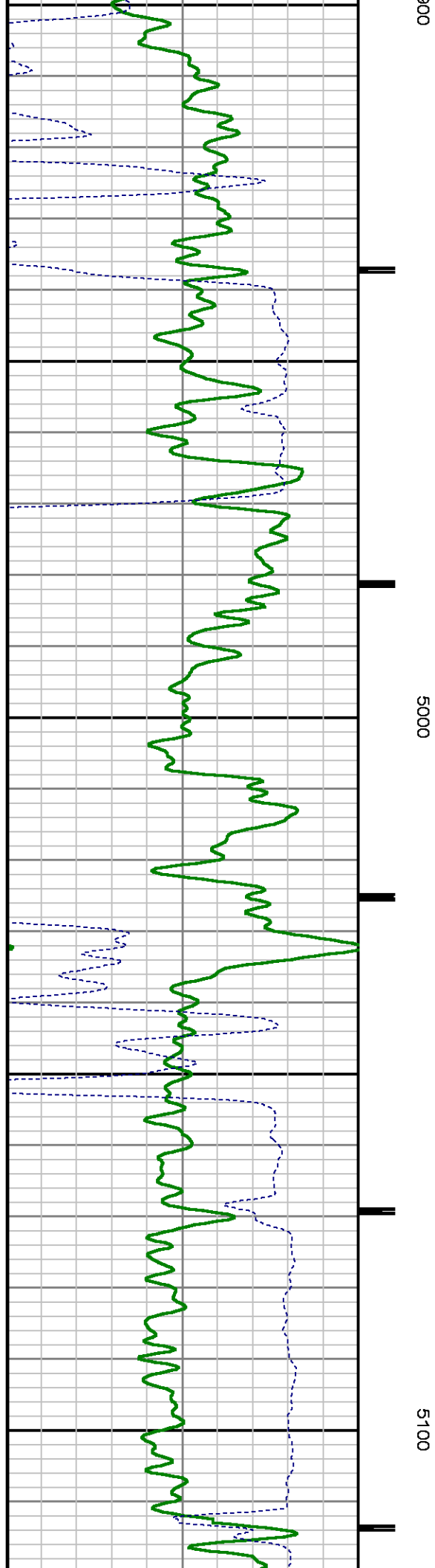
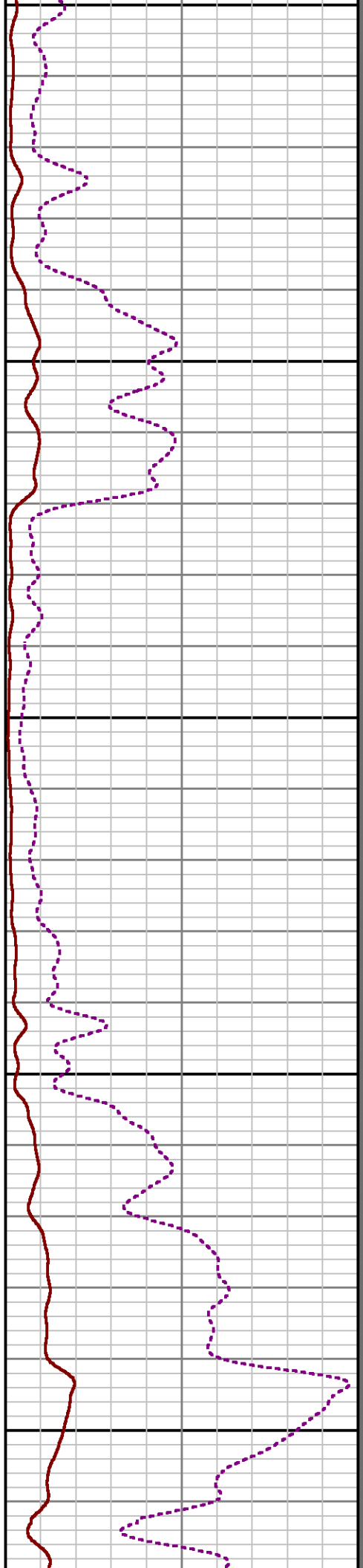
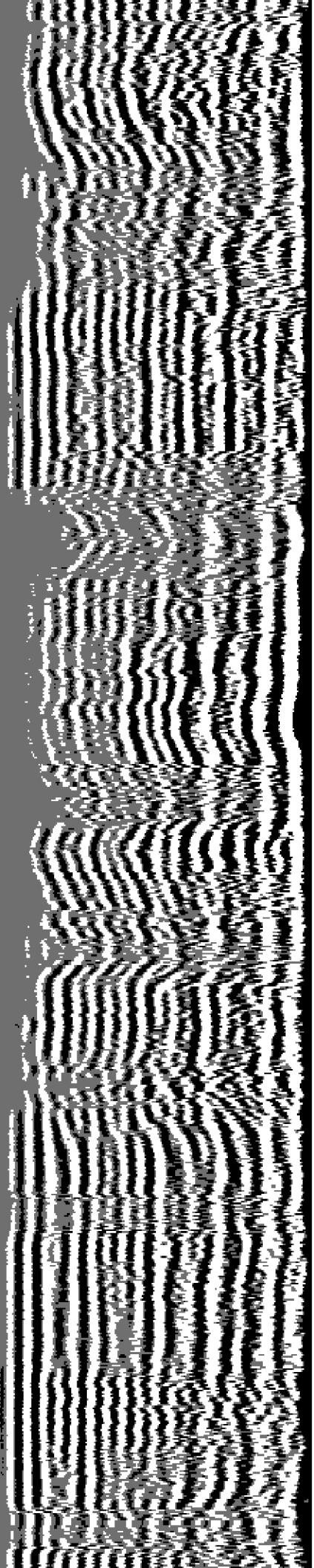


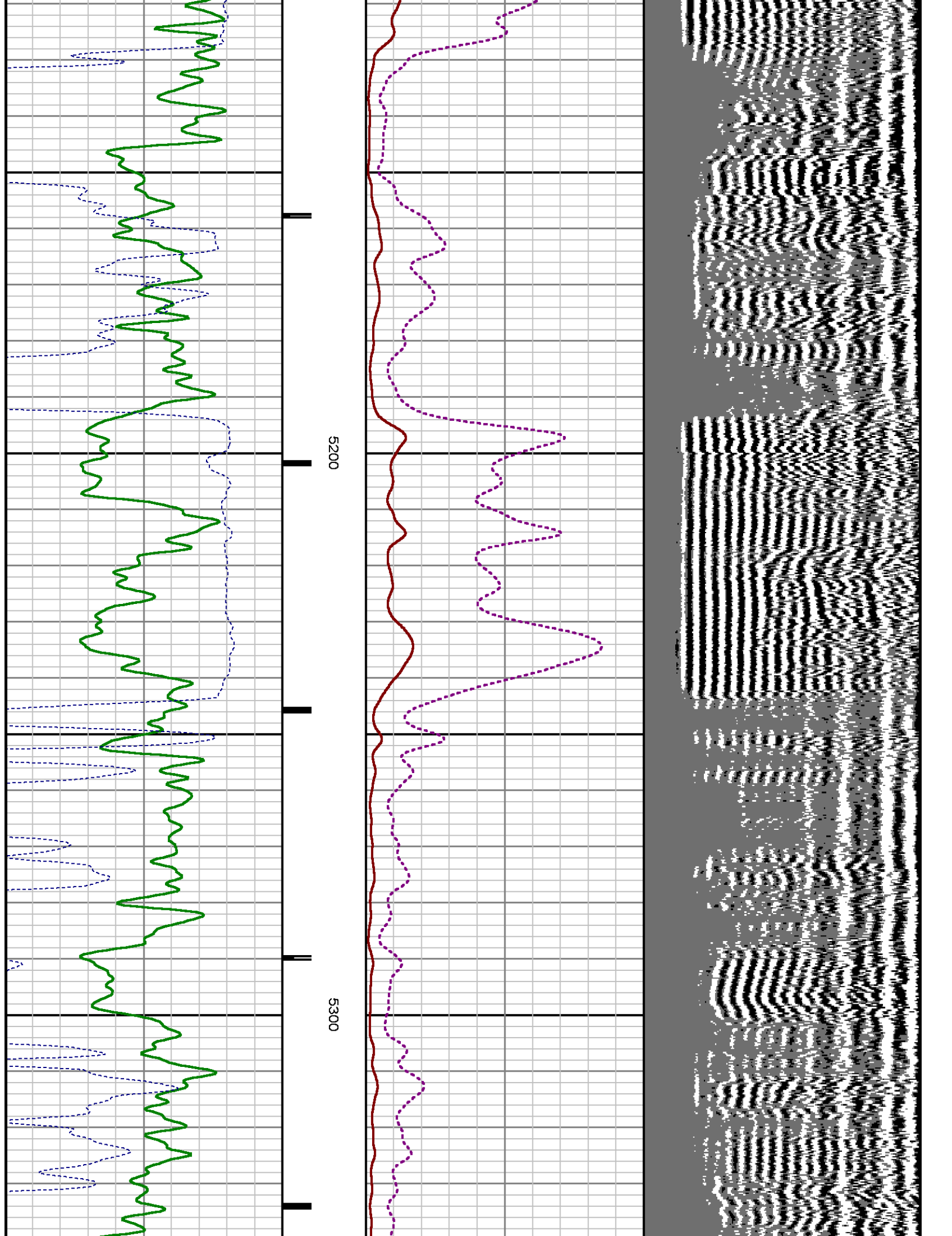


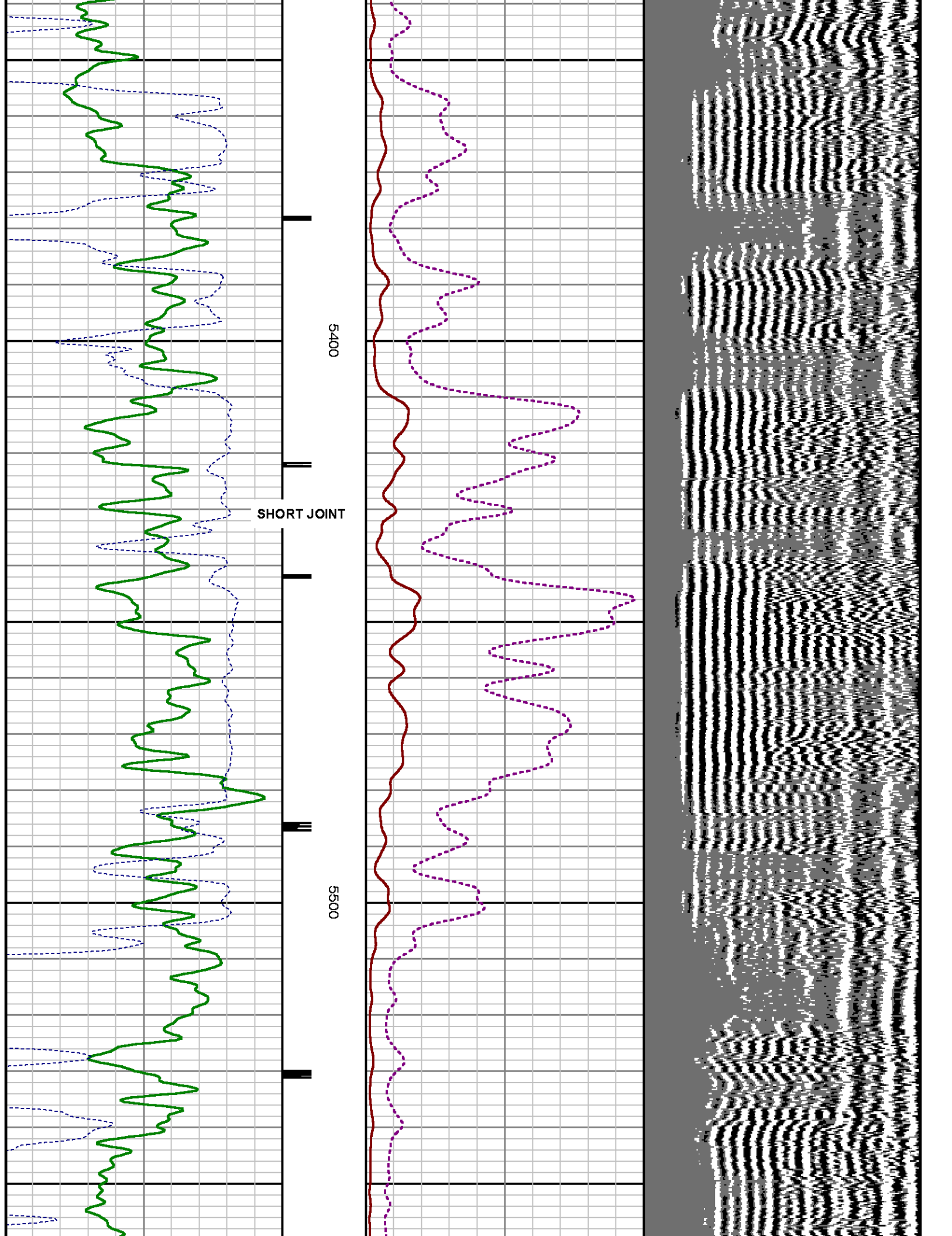


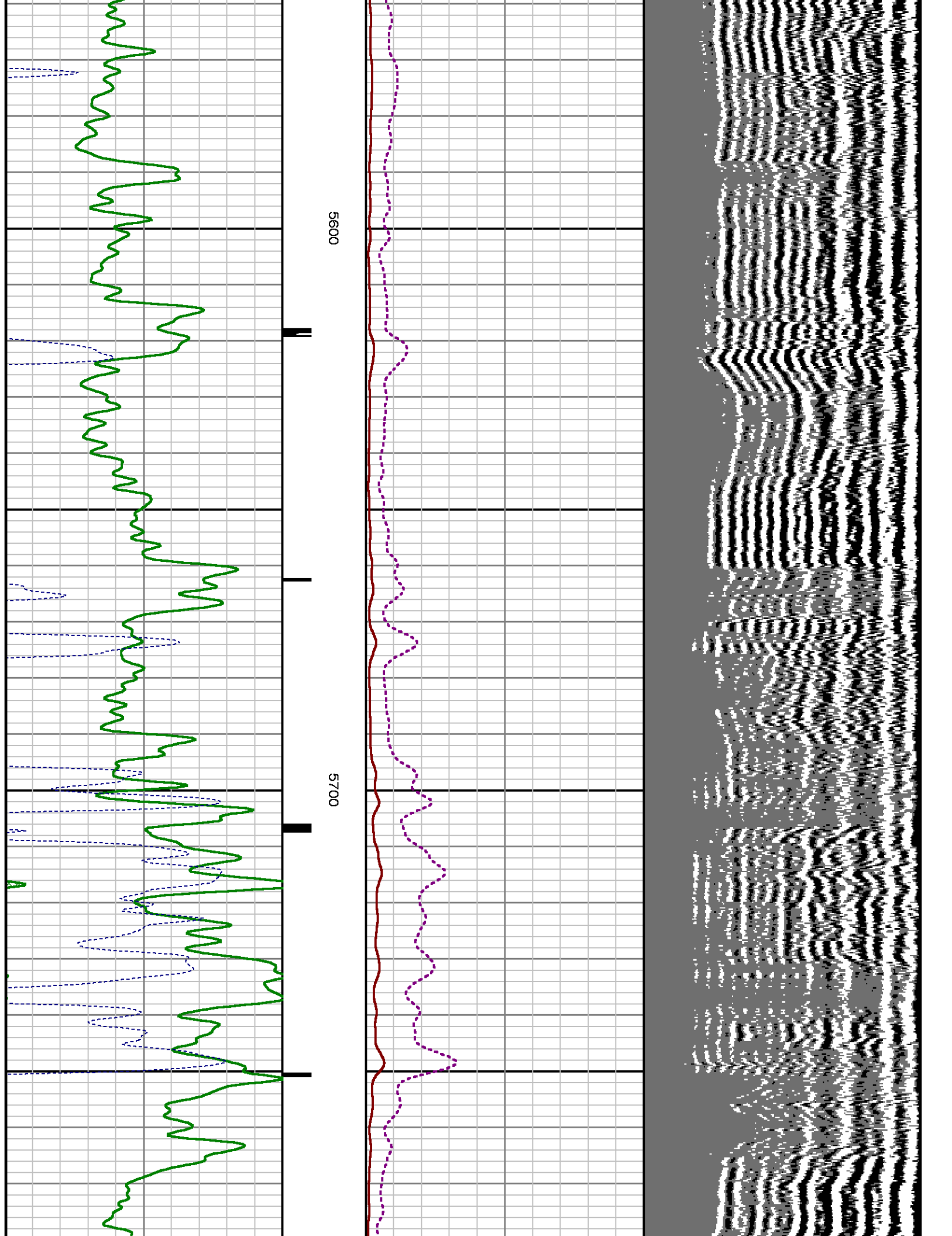


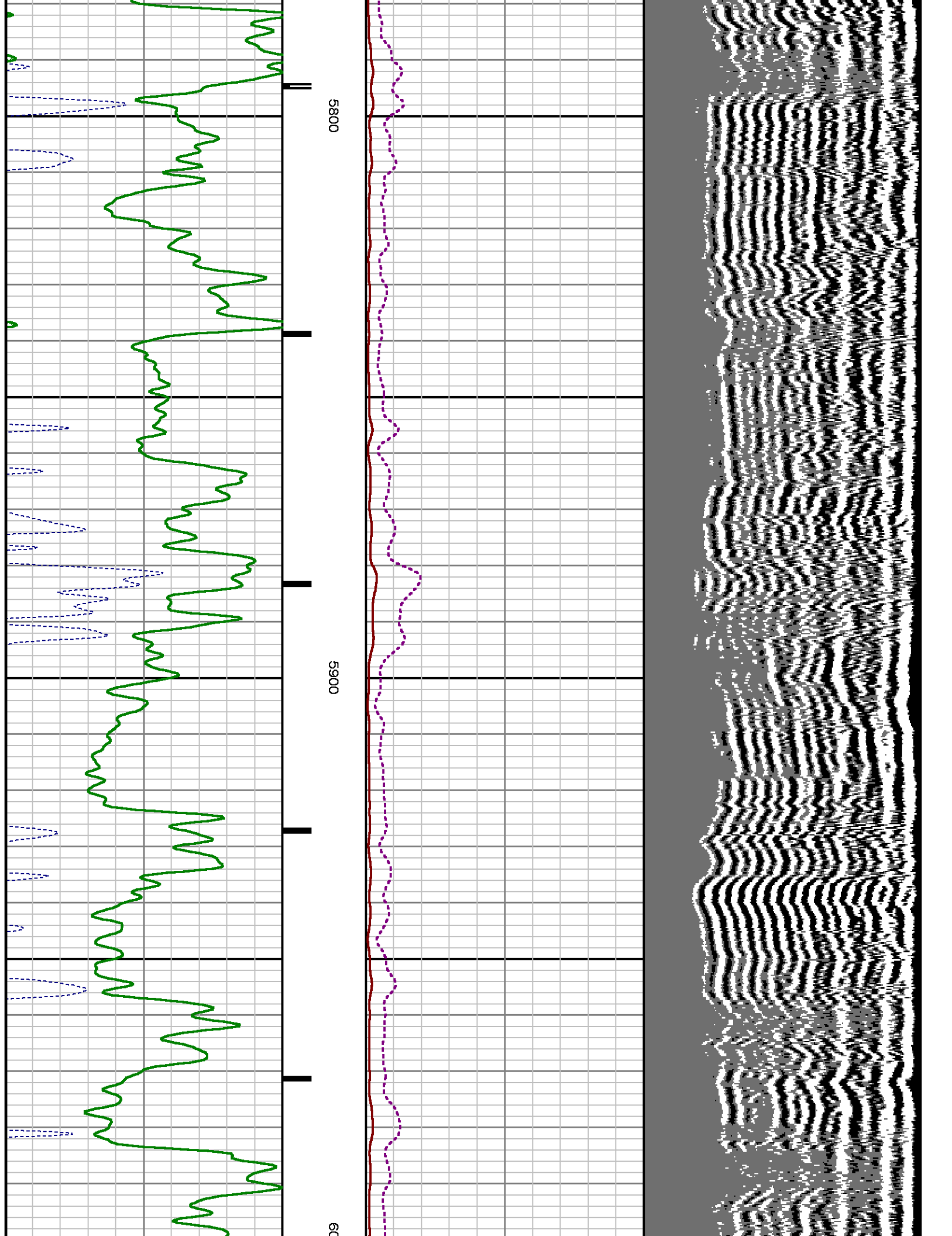


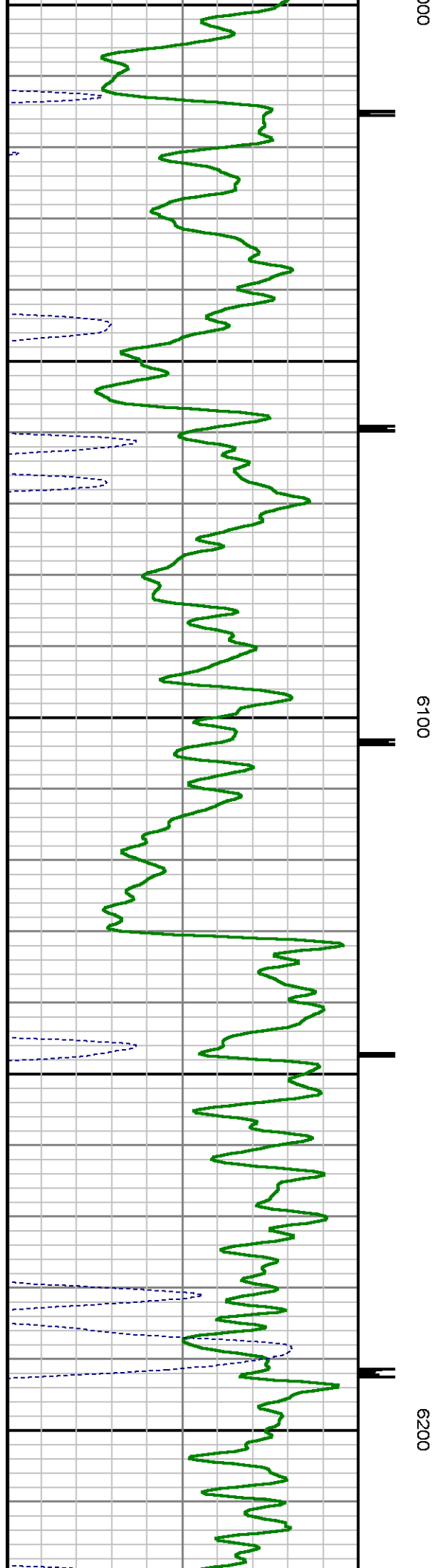
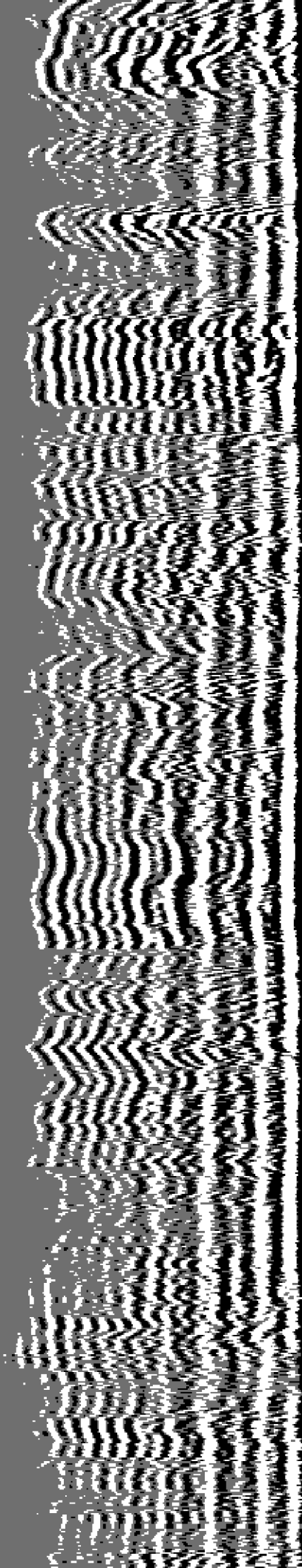


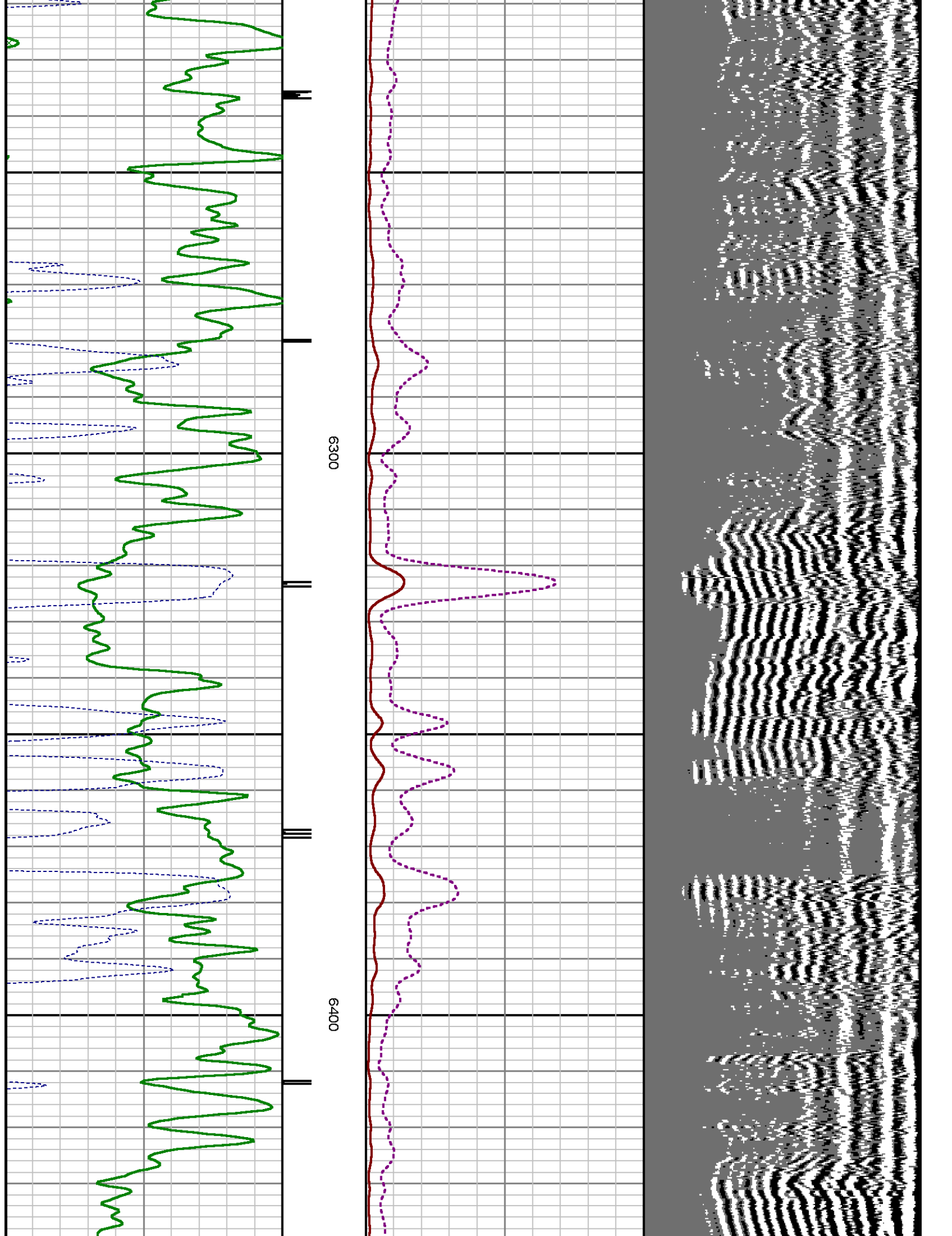


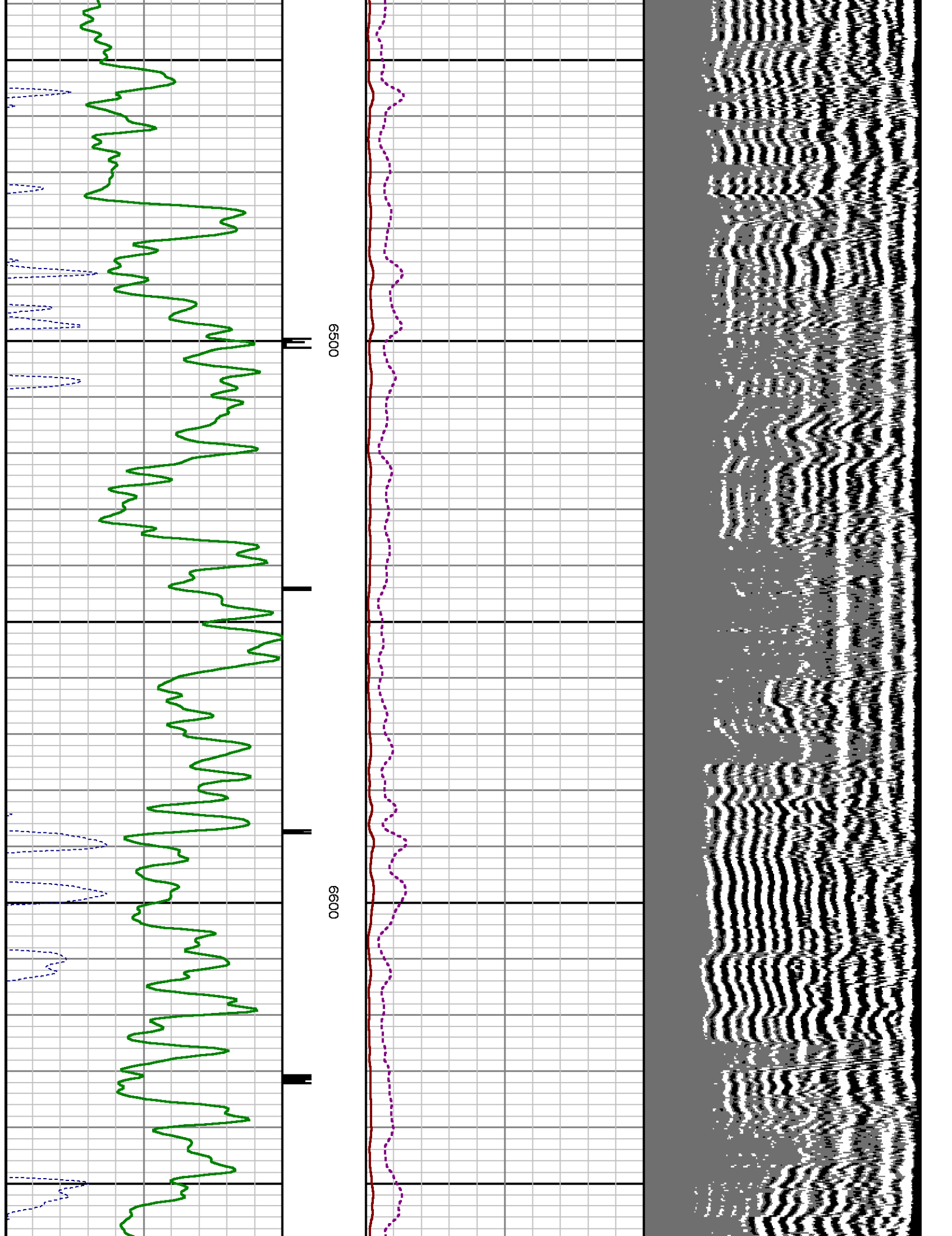


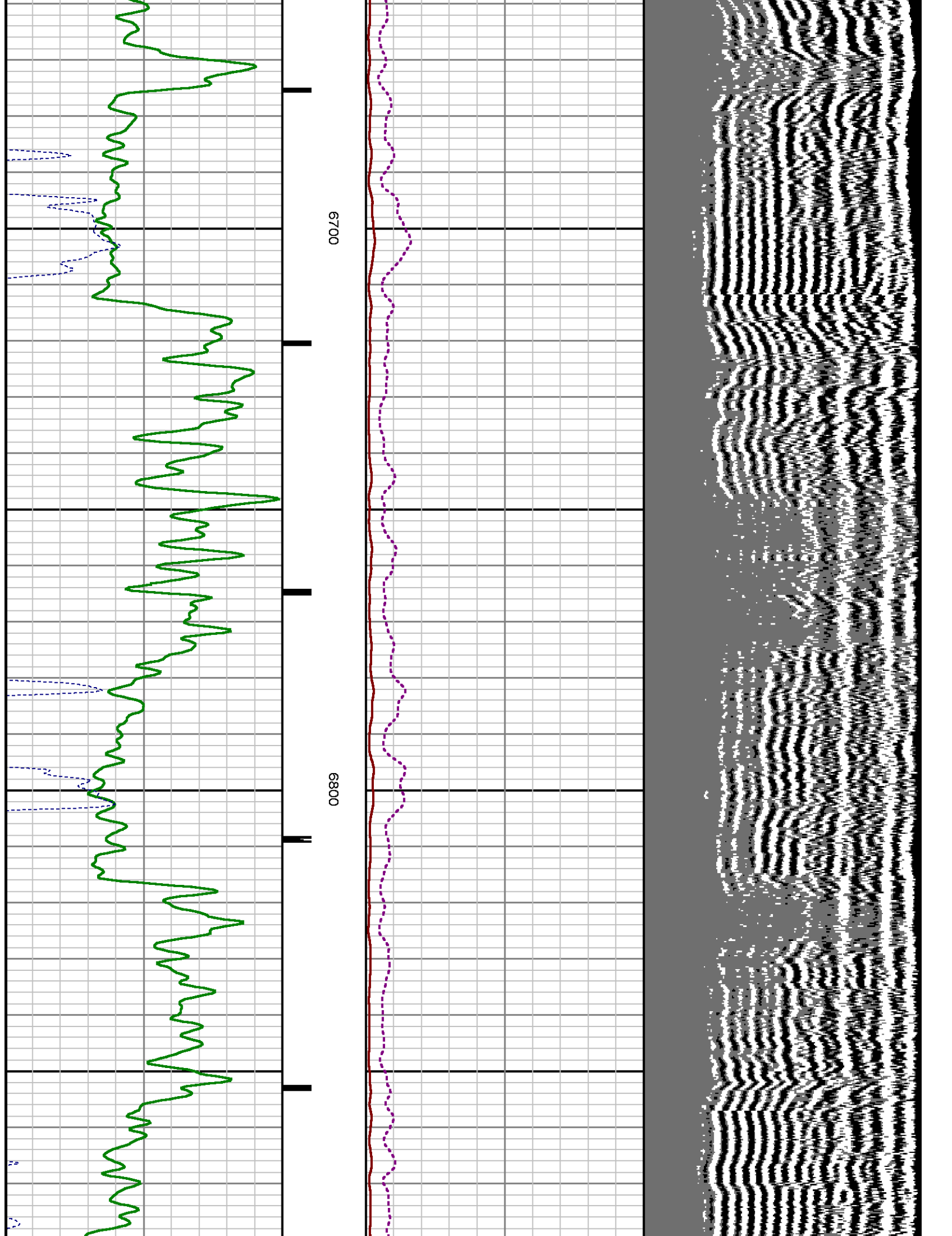


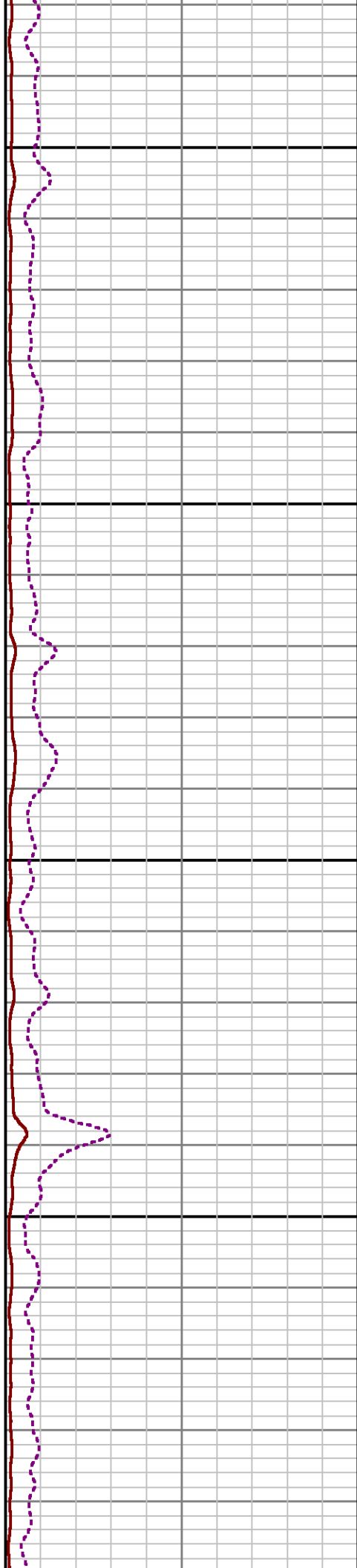
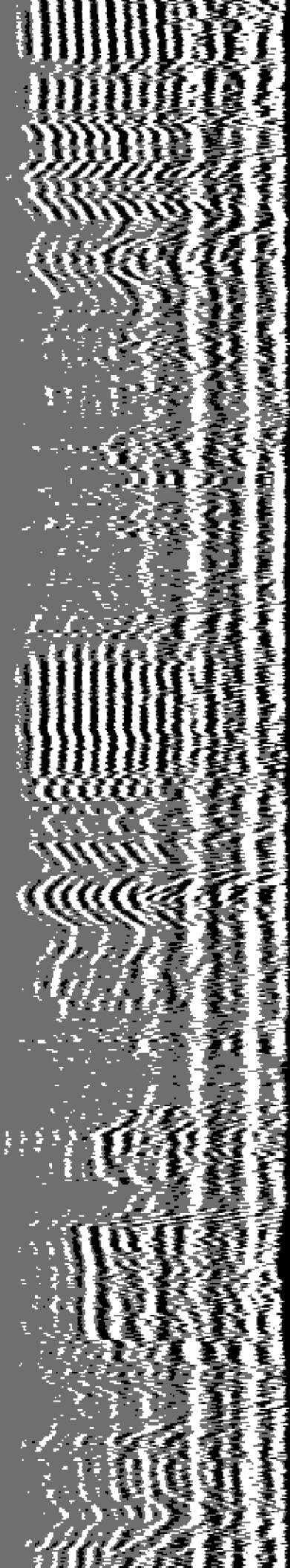








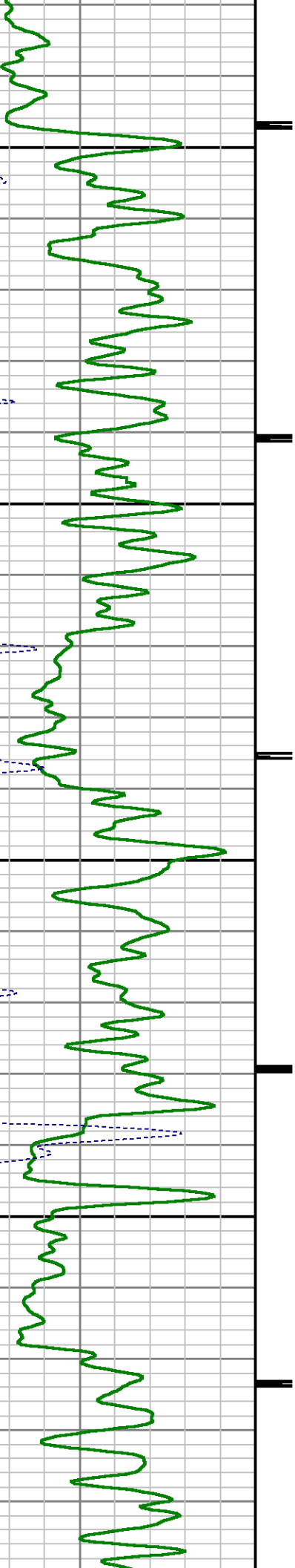


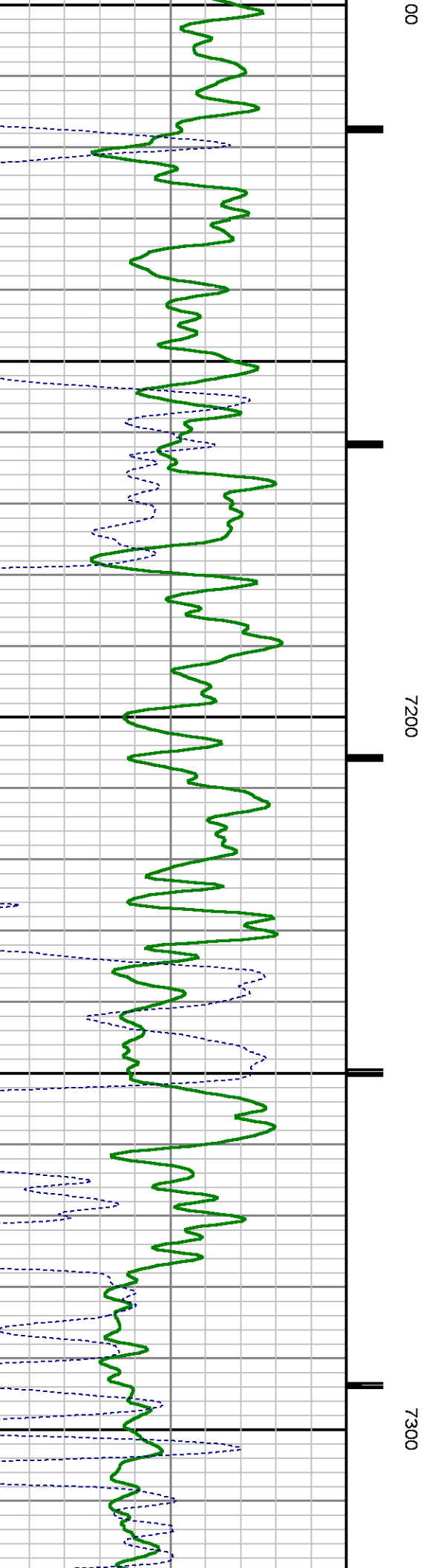
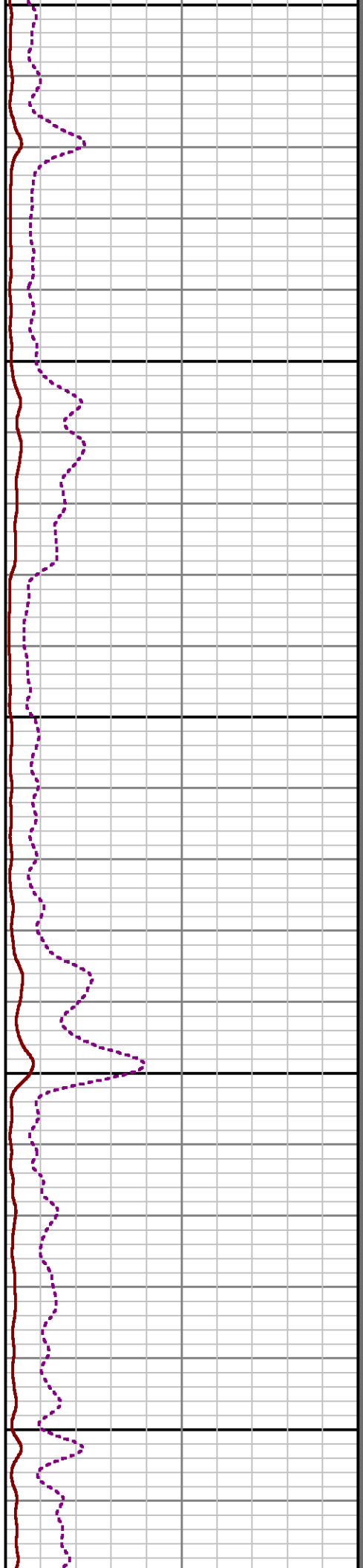
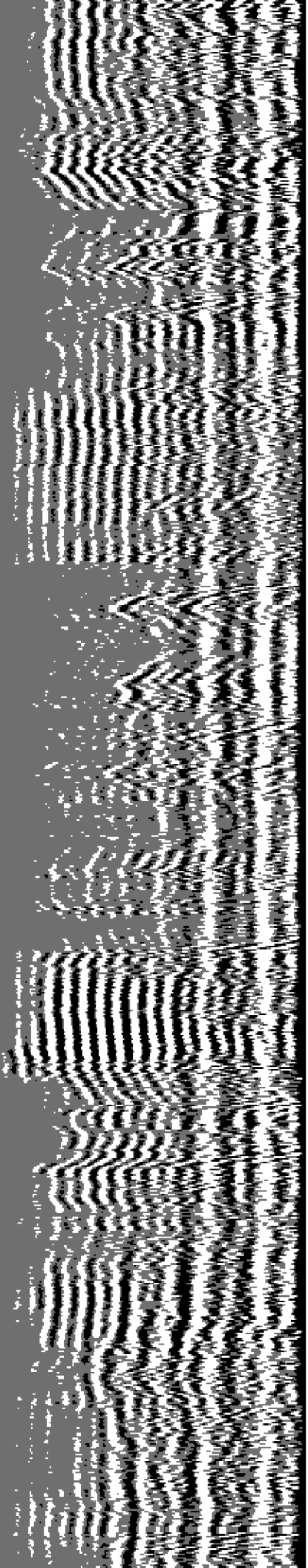


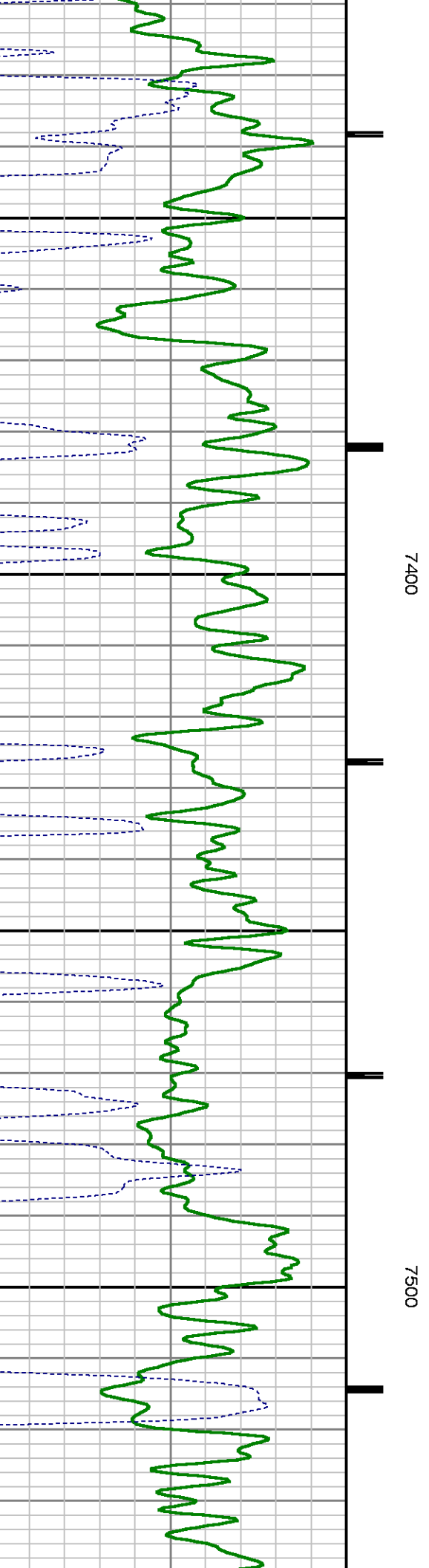
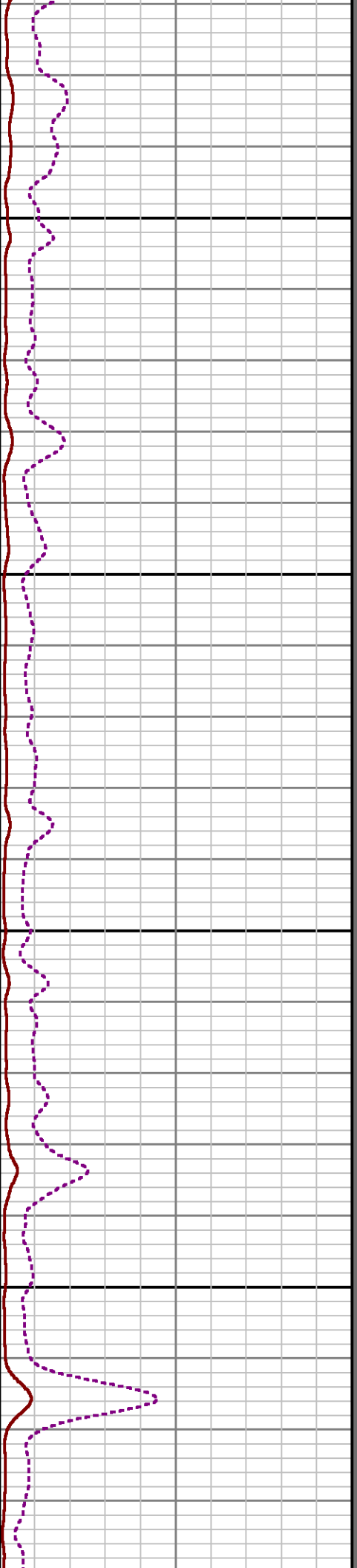
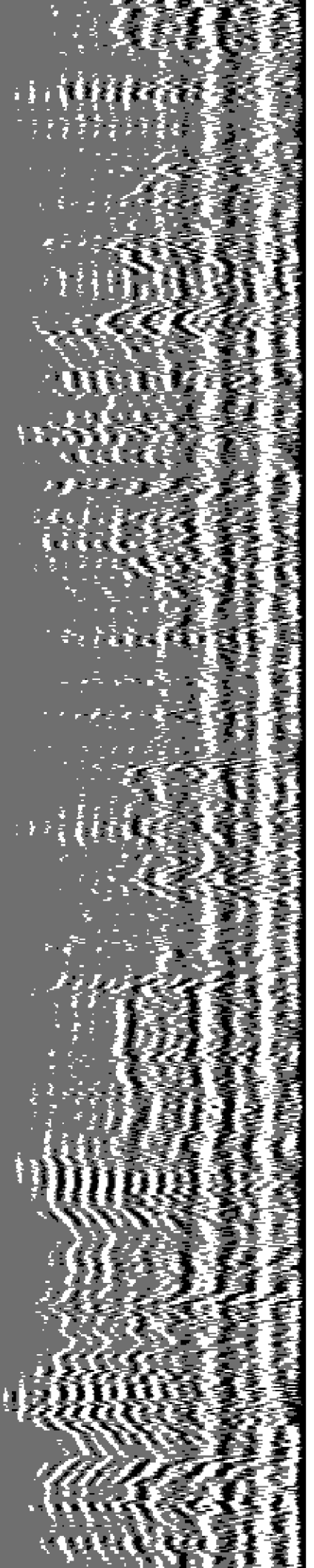
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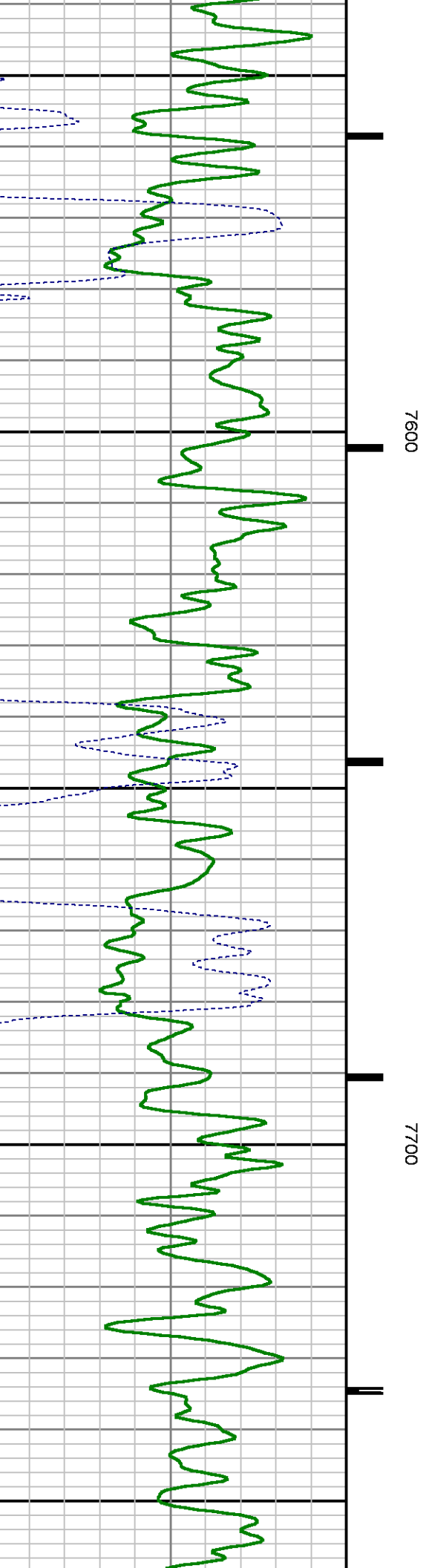
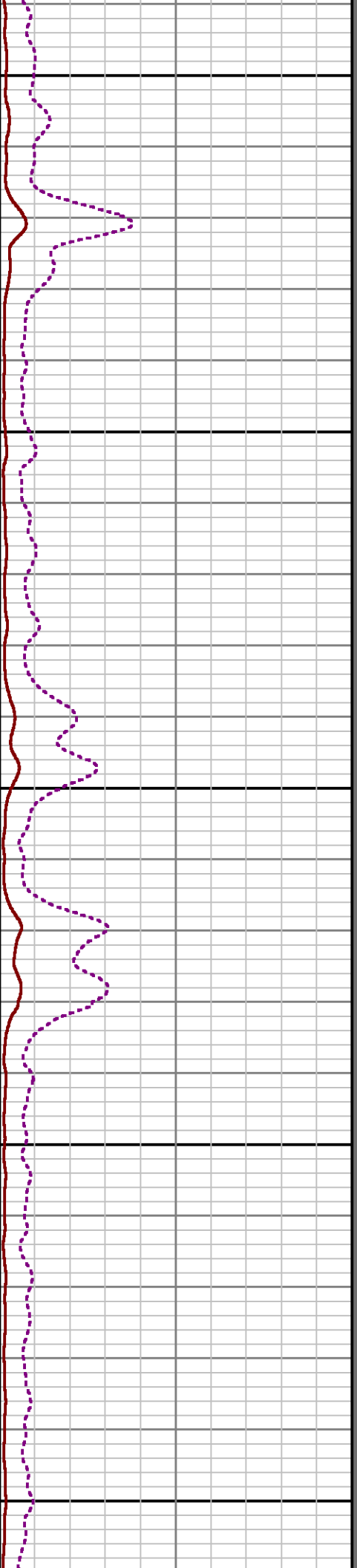
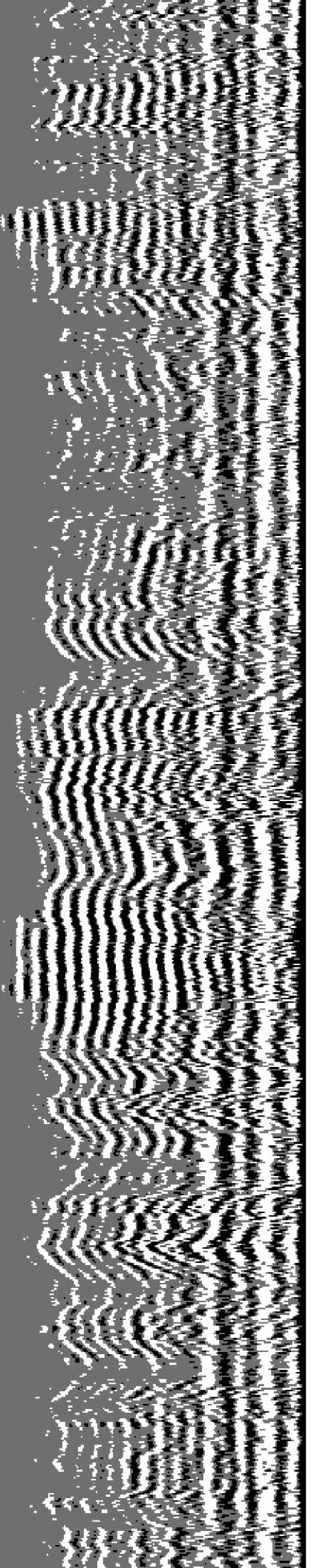
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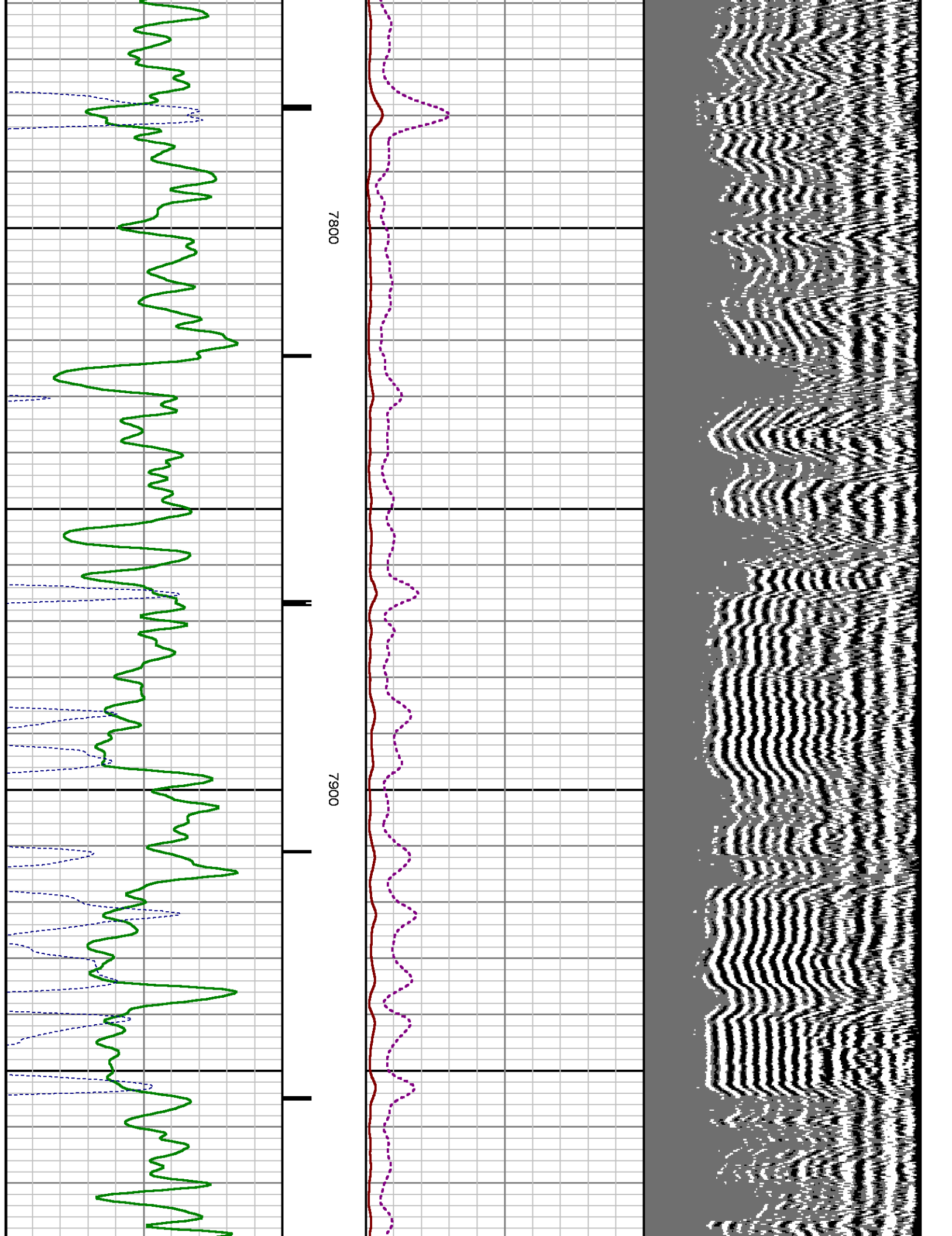
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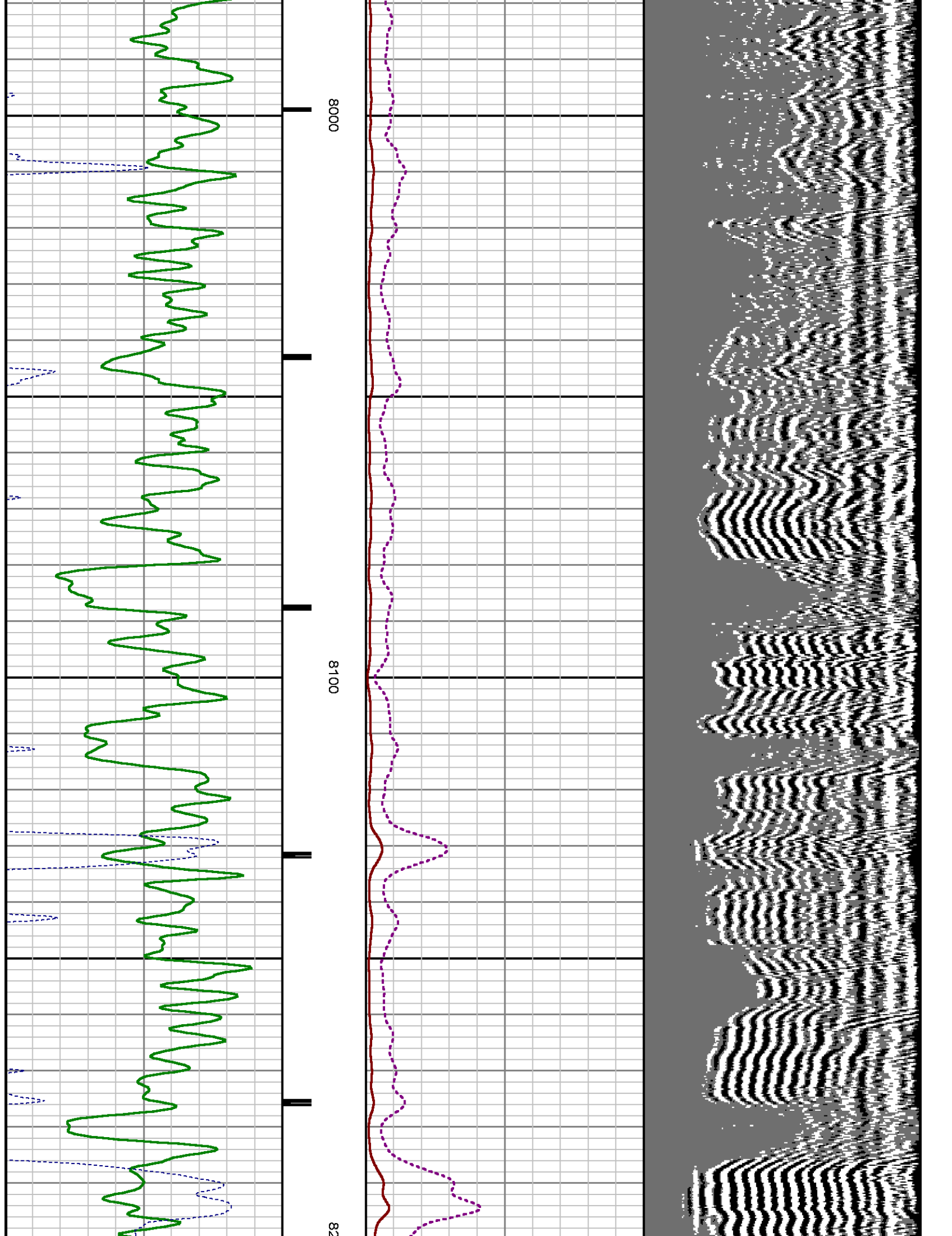


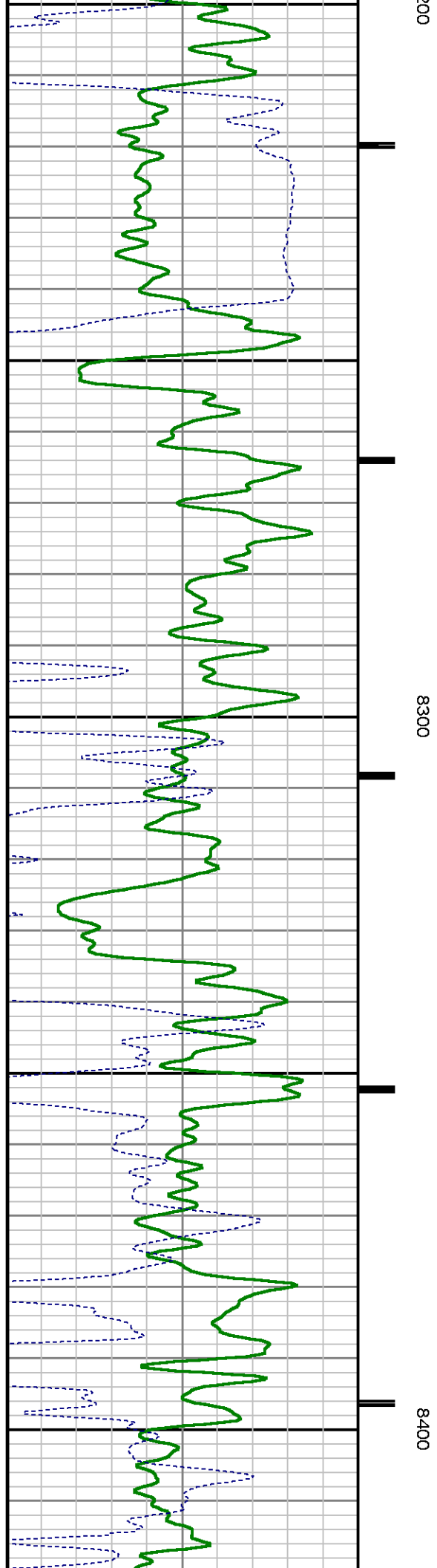
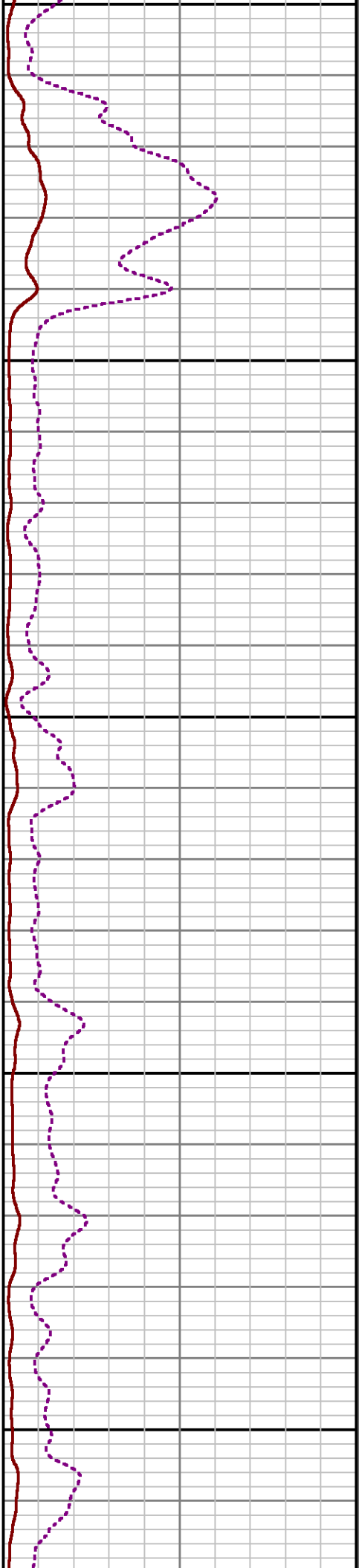
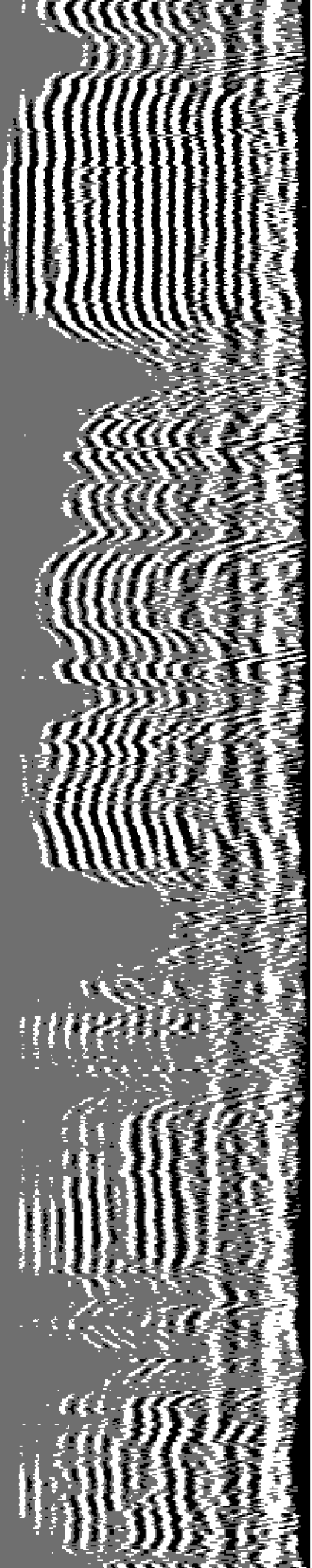


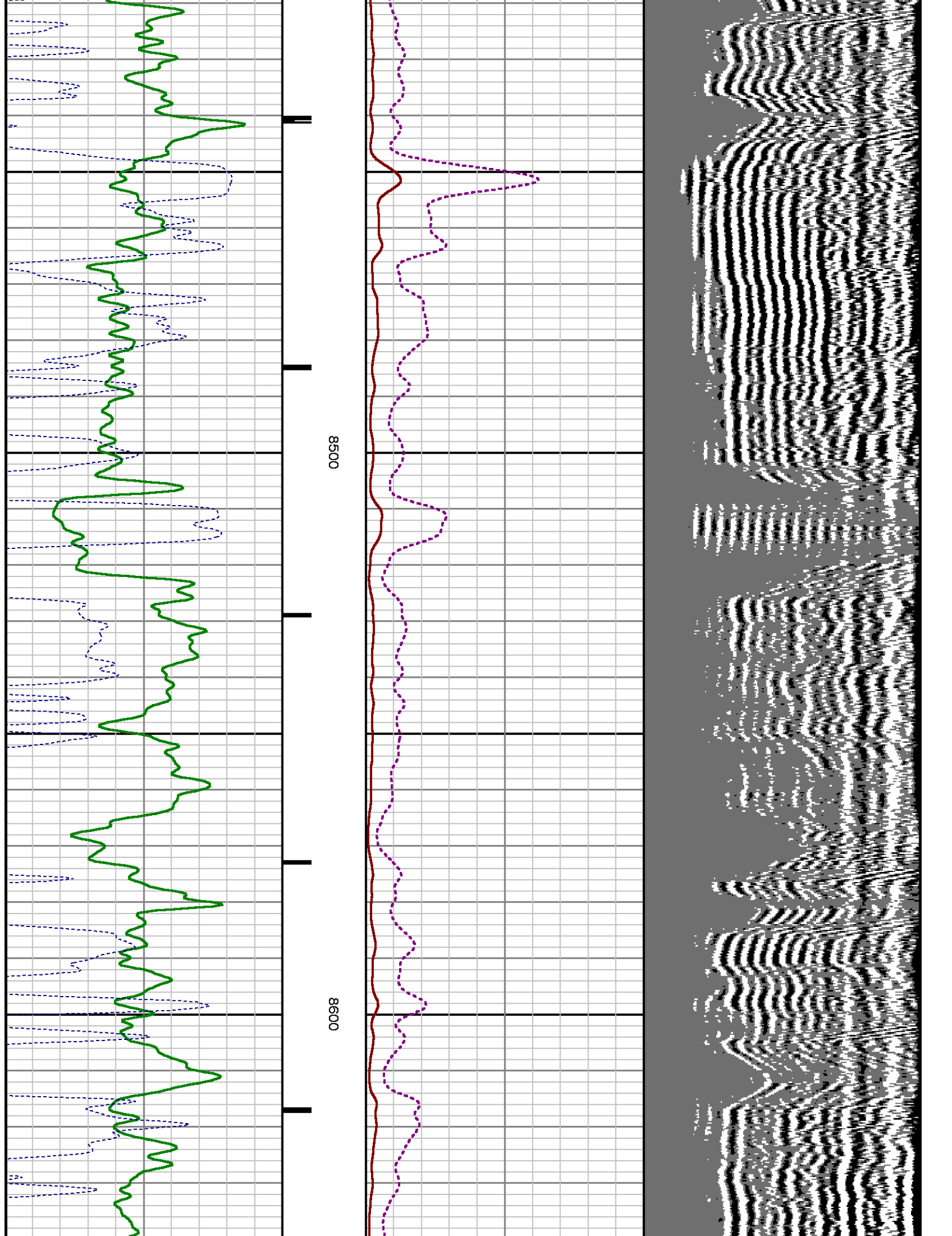


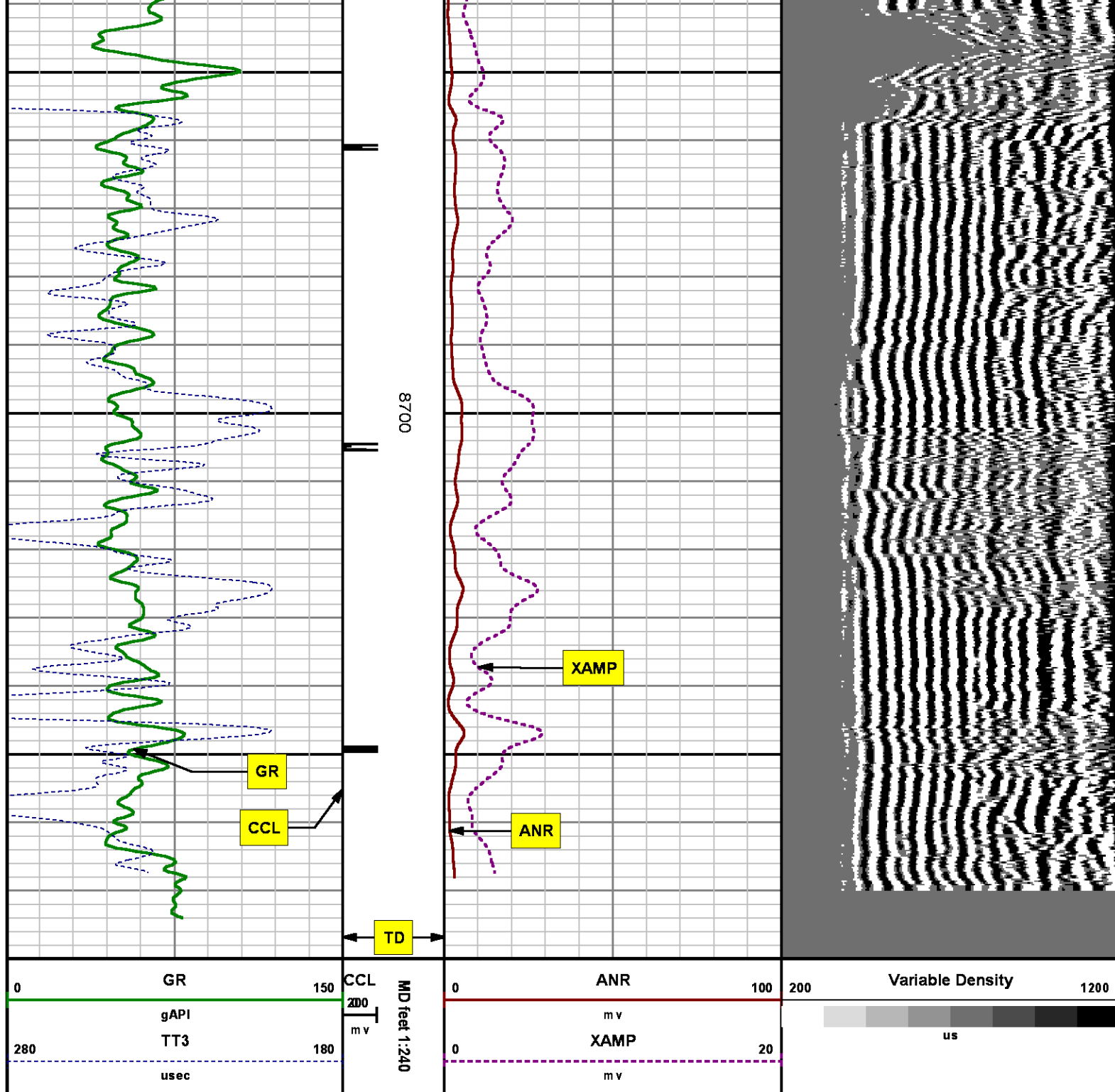












SECONDARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	31.862	4602.000
RAL	Amp Gate Start Near	195.000	usec	31.862	4602.000
RAL	Amp Gate Start Radial	195.000	usec	31.862	4602.000
RAL	Amp Gate Width Far	25.000	usec	31.862	4602.000
RAL	Amp Gate Width Near	25.000	usec	31.862	4602.000
RAL	Amp Gate Width Radial	25.000	usec	31.862	4602.000
RAL	casing od	4.500	inches	31.862	4602.000
RAL	casing wt	11.600	lbm/ft	31.862	4602.000
RAL	FB Start Far	291.900	usec	31.862	4602.000
RAL	FB Start Near	180.000	usec	31.862	4602.000
RAL	FB Start Radial	180.000	usec	31.862	4602.000
RAL	FB Thresh Far	10.000	mv	31.862	4602.000
RAL	FB Thresh Near	4.000	mv	31.862	4602.000
RAL	FB Thresh Radial	4.000	mv	31.862	4602.000
RAL	Fluid Travel Time	200.000	usec/ft	31.862	4602.000
RAL	Amp Gate Start Far	305.000	usec	4602.000	8768.000
RAL	Amp Gate Start Near	195.000	usec	4602.000	8768.000
RAL	Amp Gate Start Radial	195.000	usec	4602.000	8768.000
RAL	Amp Gate Width Far	25.000	usec	4602.000	8768.000
RAL	Amp Gate Width Near	25.000	usec	4602.000	8768.000
RAL	Amp Gate Width Radial	25.000	usec	4602.000	8768.000
RAL	casing od	4.500	inches	4602.000	8768.000
RAL	casing wt	11.600	lbm/ft	4602.000	8768.000
RAL	FB Start Far	291.900	usec	4602.000	8768.000
RAL	FB Start Near	180.000	usec	4602.000	8768.000
RAL	FB Start Radial	180.000	usec	4602.000	8768.000
RAL	FB Thresh Far	10.000	mv	4602.000	8768.000
RAL	FB Thresh Near	4.000	mv	4602.000	8768.000
RAL	FB Thresh Radial	4.000	mv	4602.000	8768.000
RAL	Fluid Travel Time	200.000	usec/ft	4602.000	8768.000

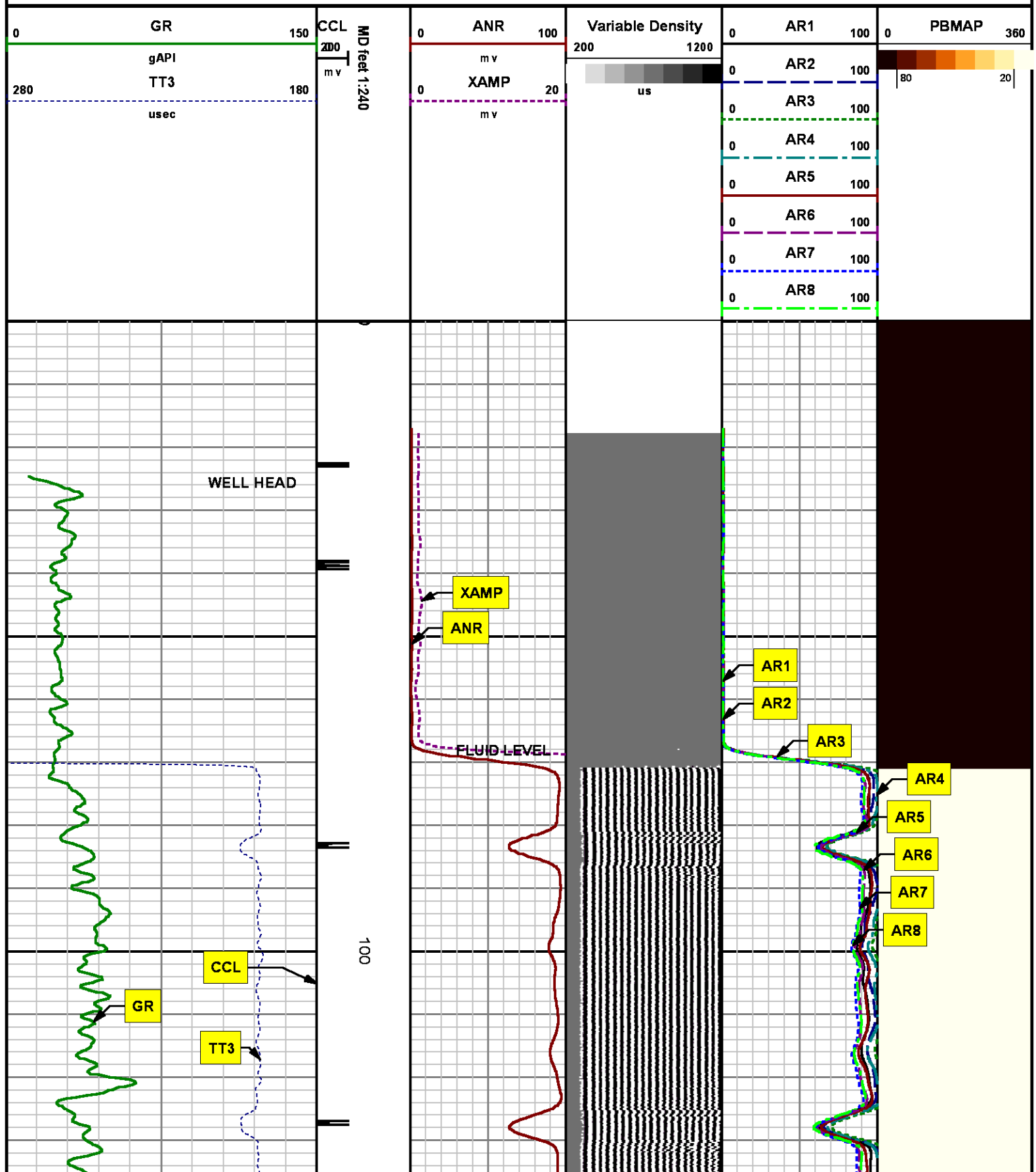
DEPTH OFFSETS

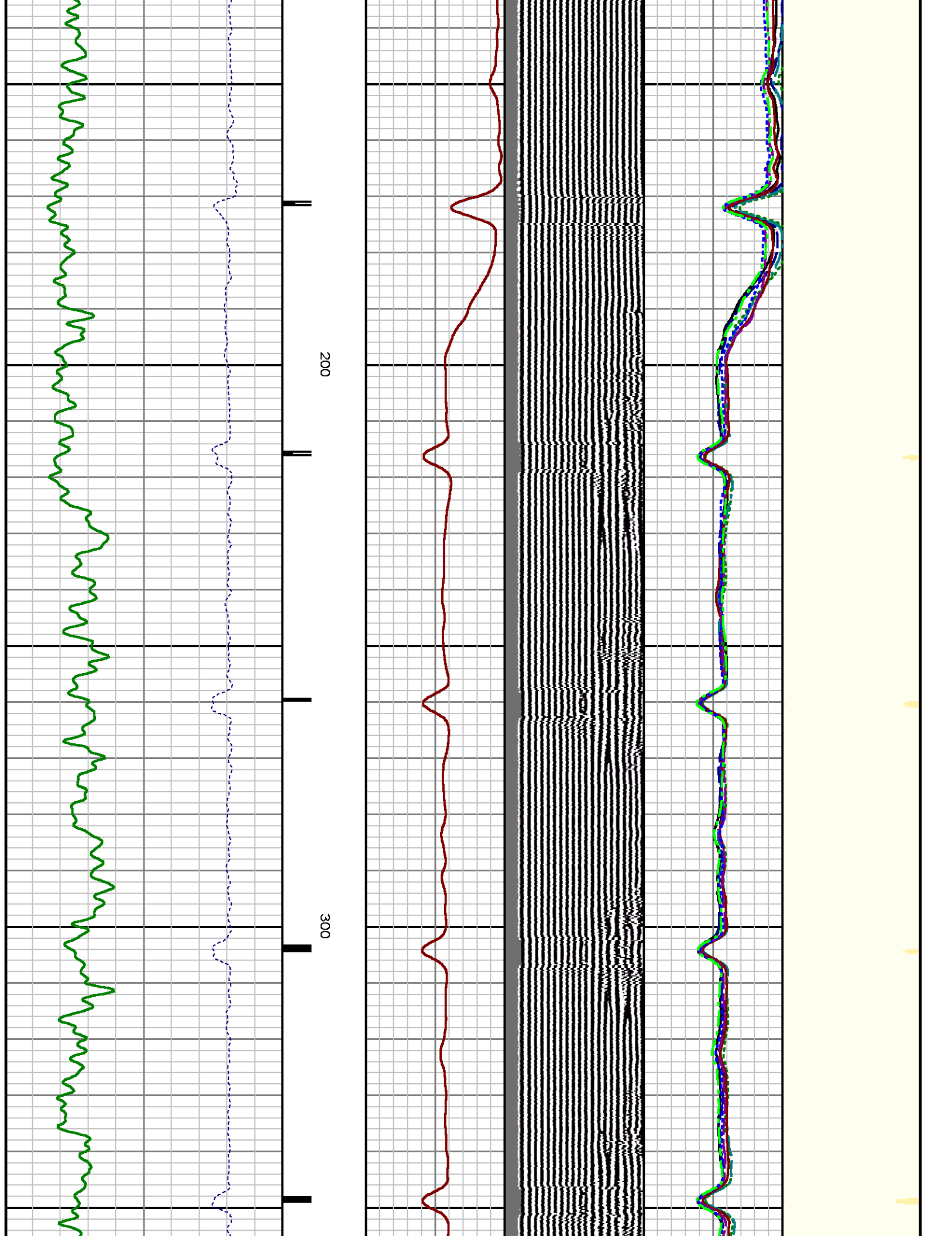
(for Acquired Curves)

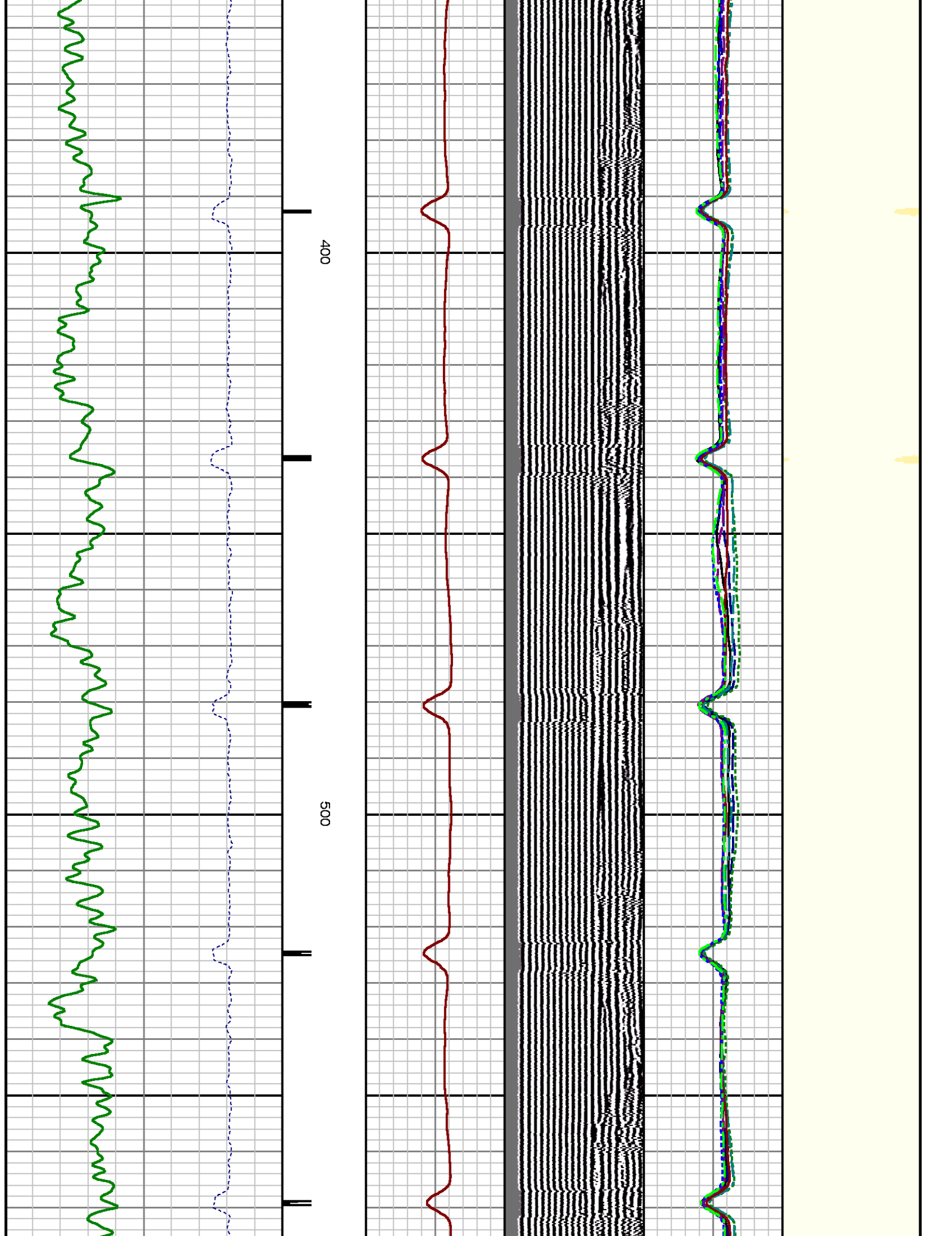
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-11.360	AFAR	SIG	TT5			
2459XA	-7.250	CCL					
2459XA	-5.390	GR					
2459XA	0.000	NEU					

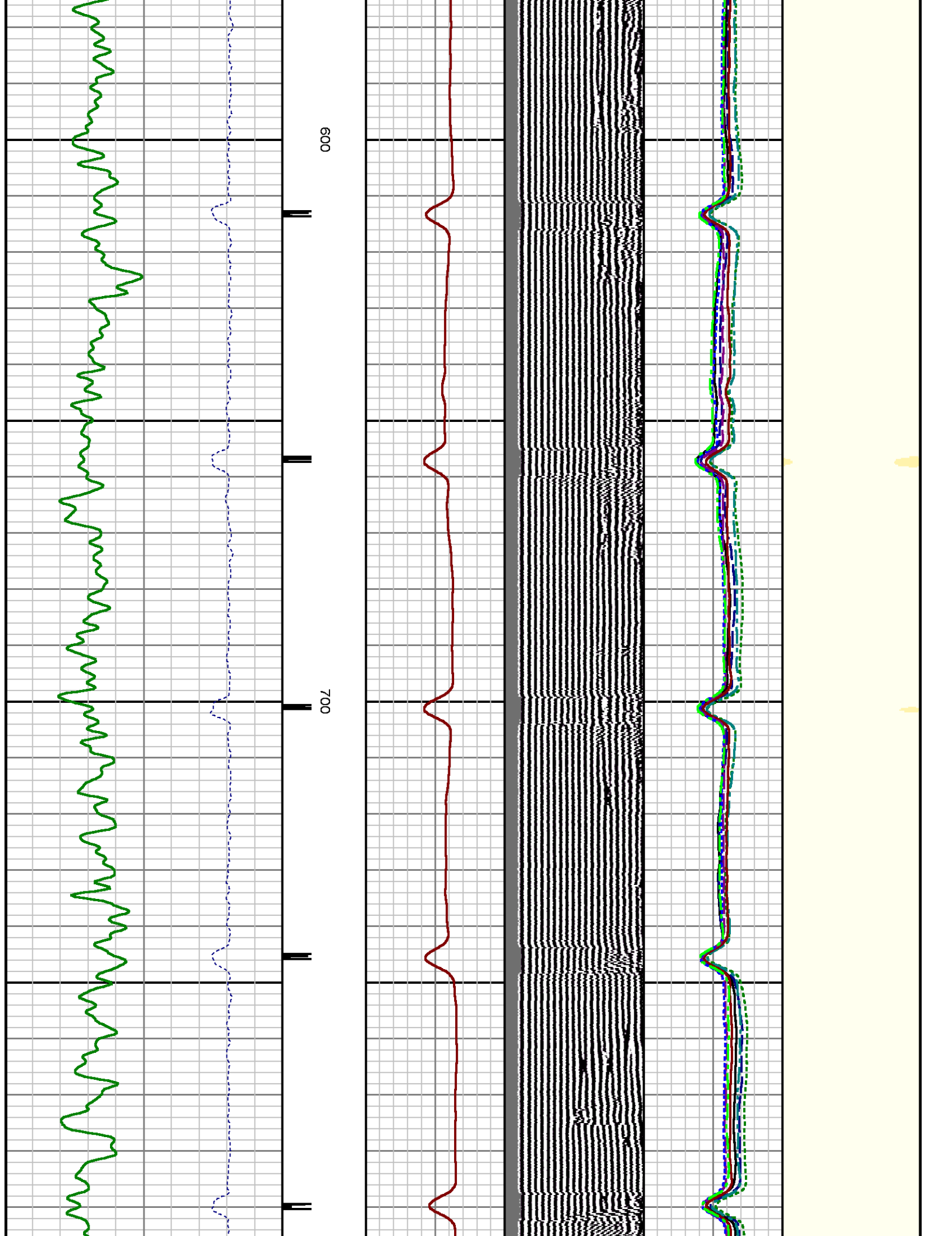
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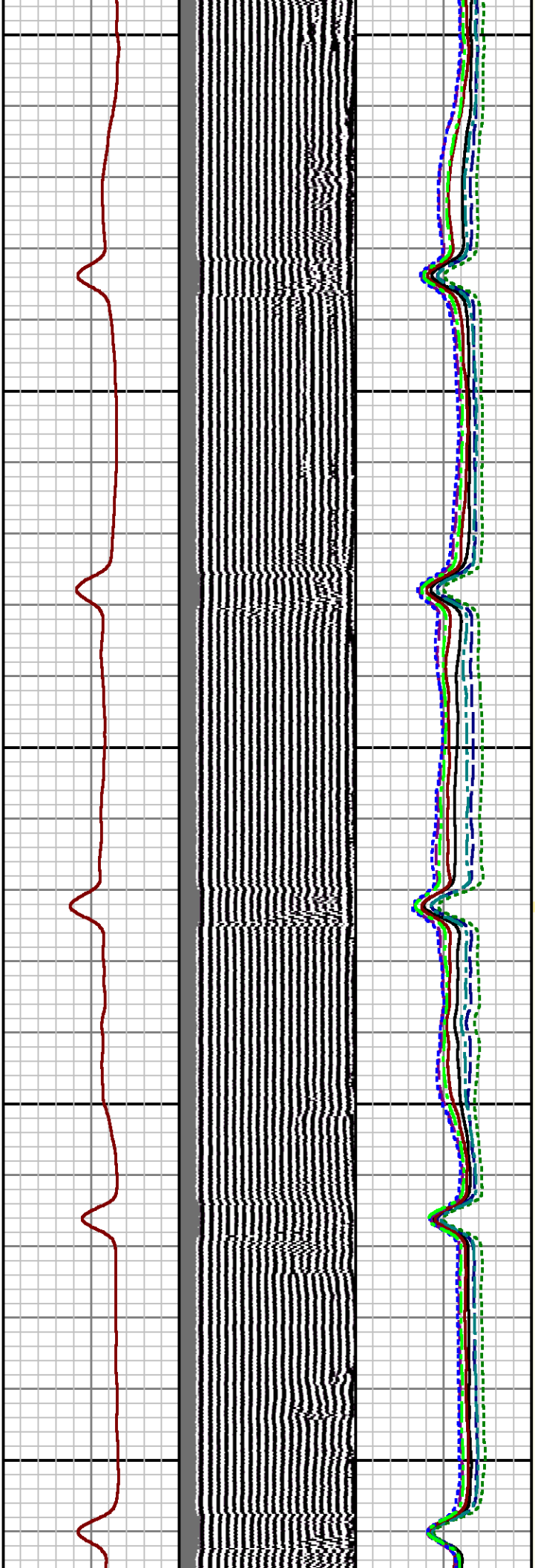
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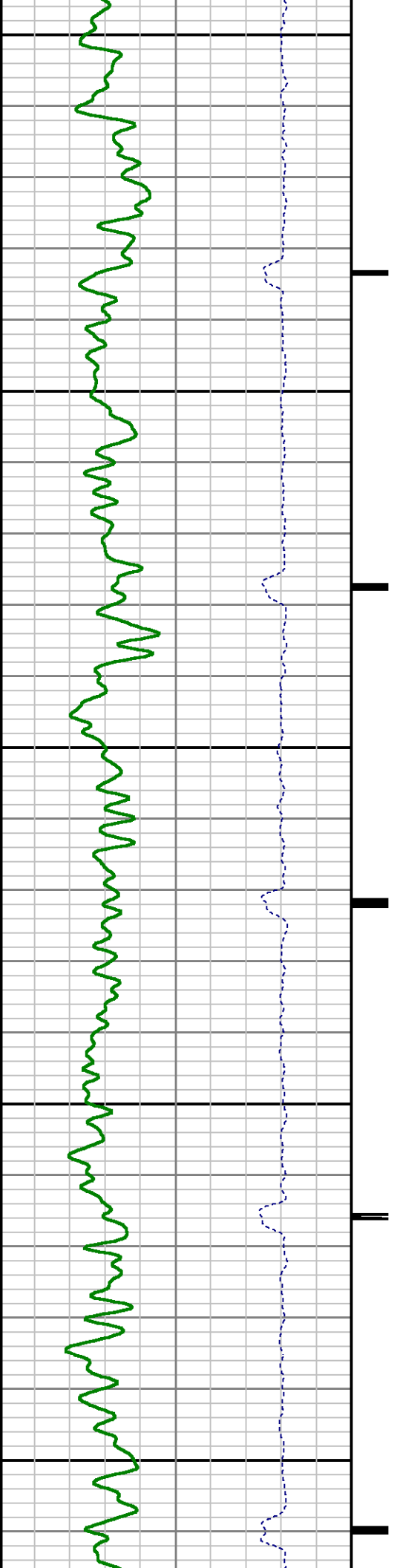


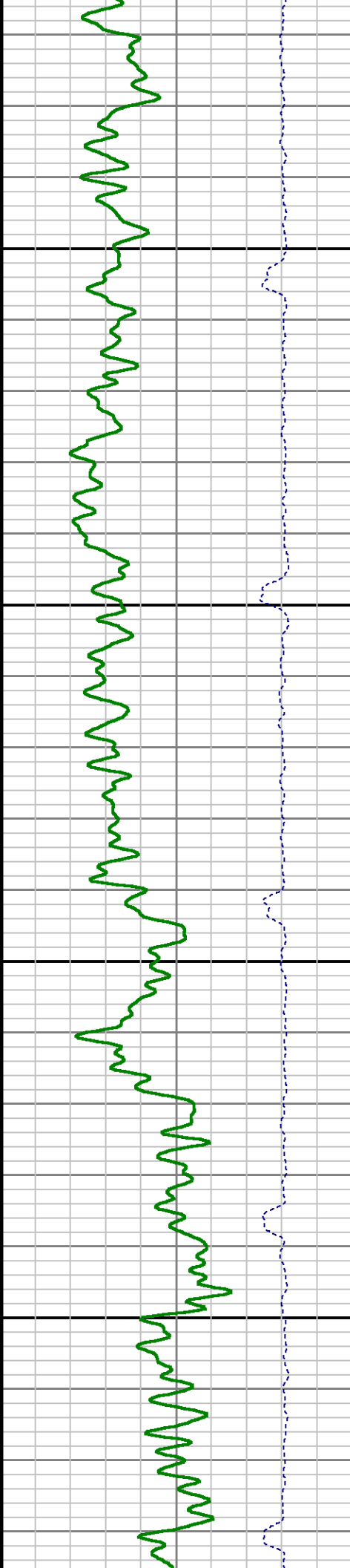
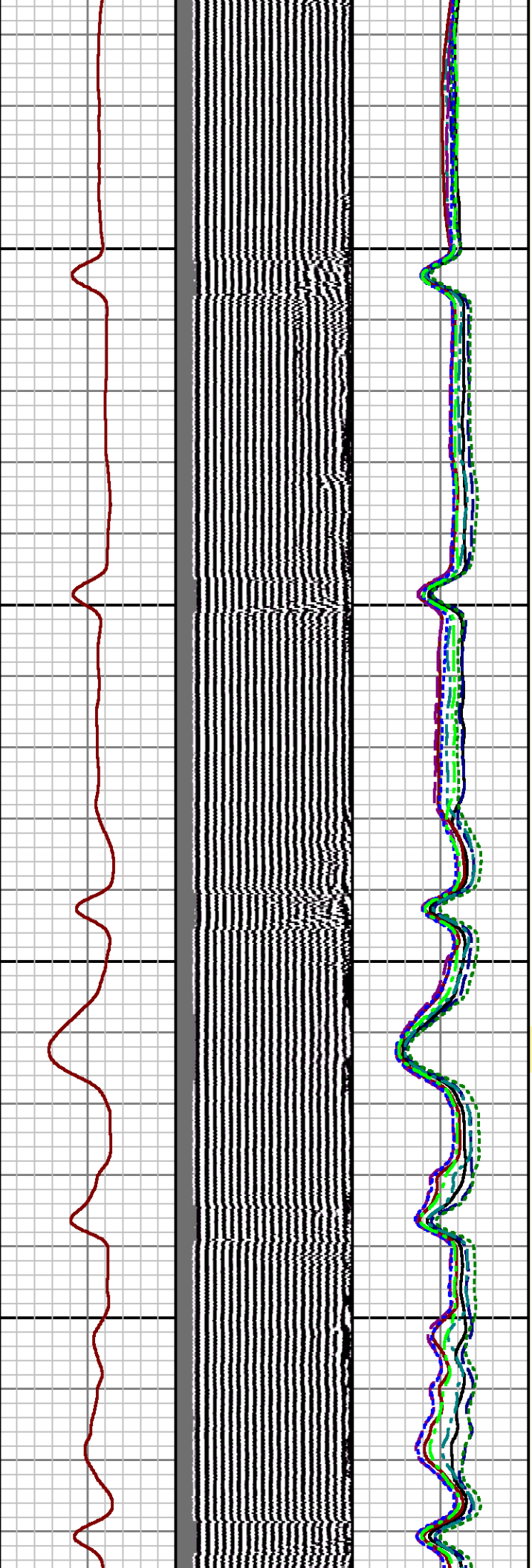


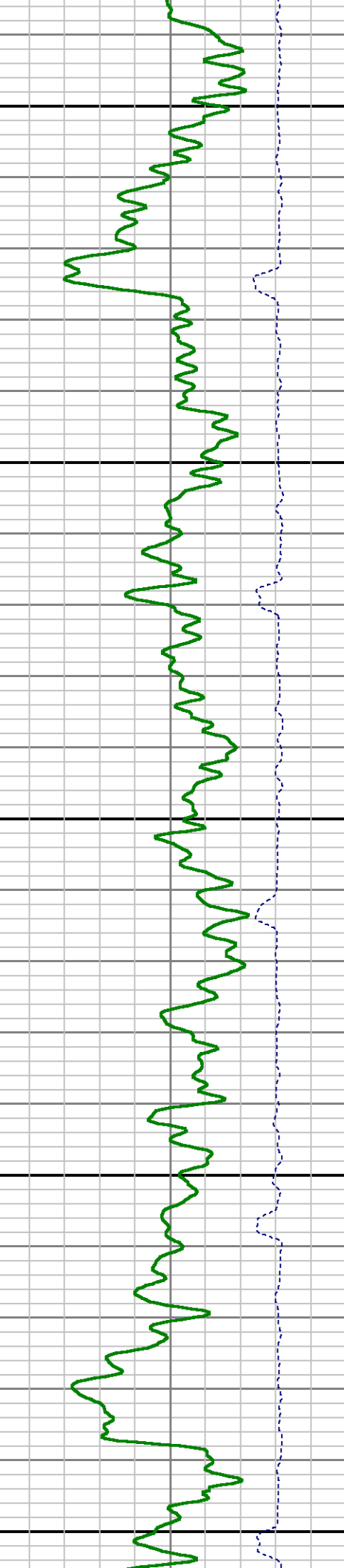
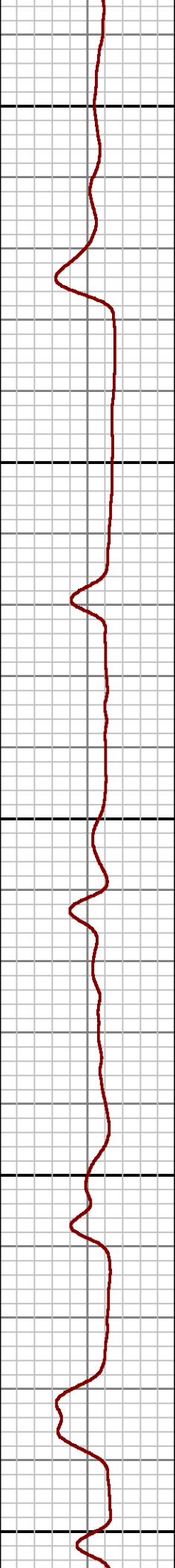
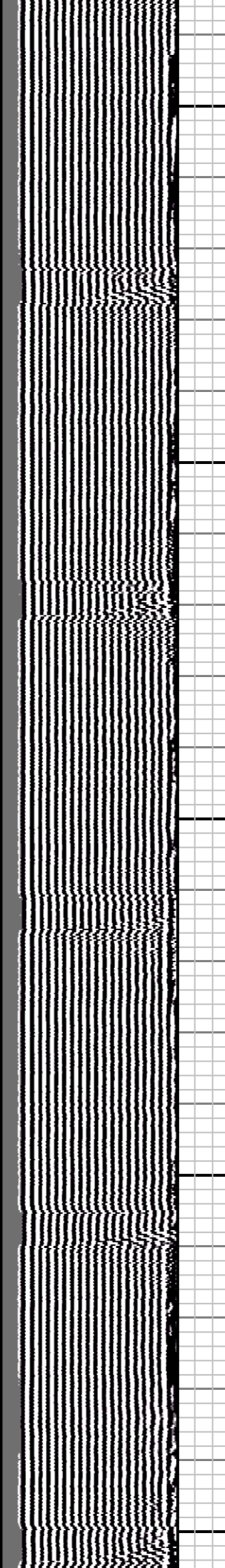
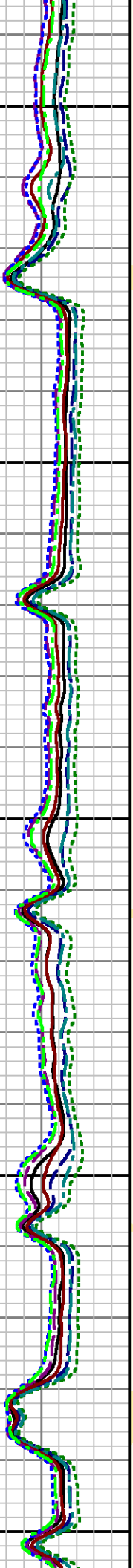
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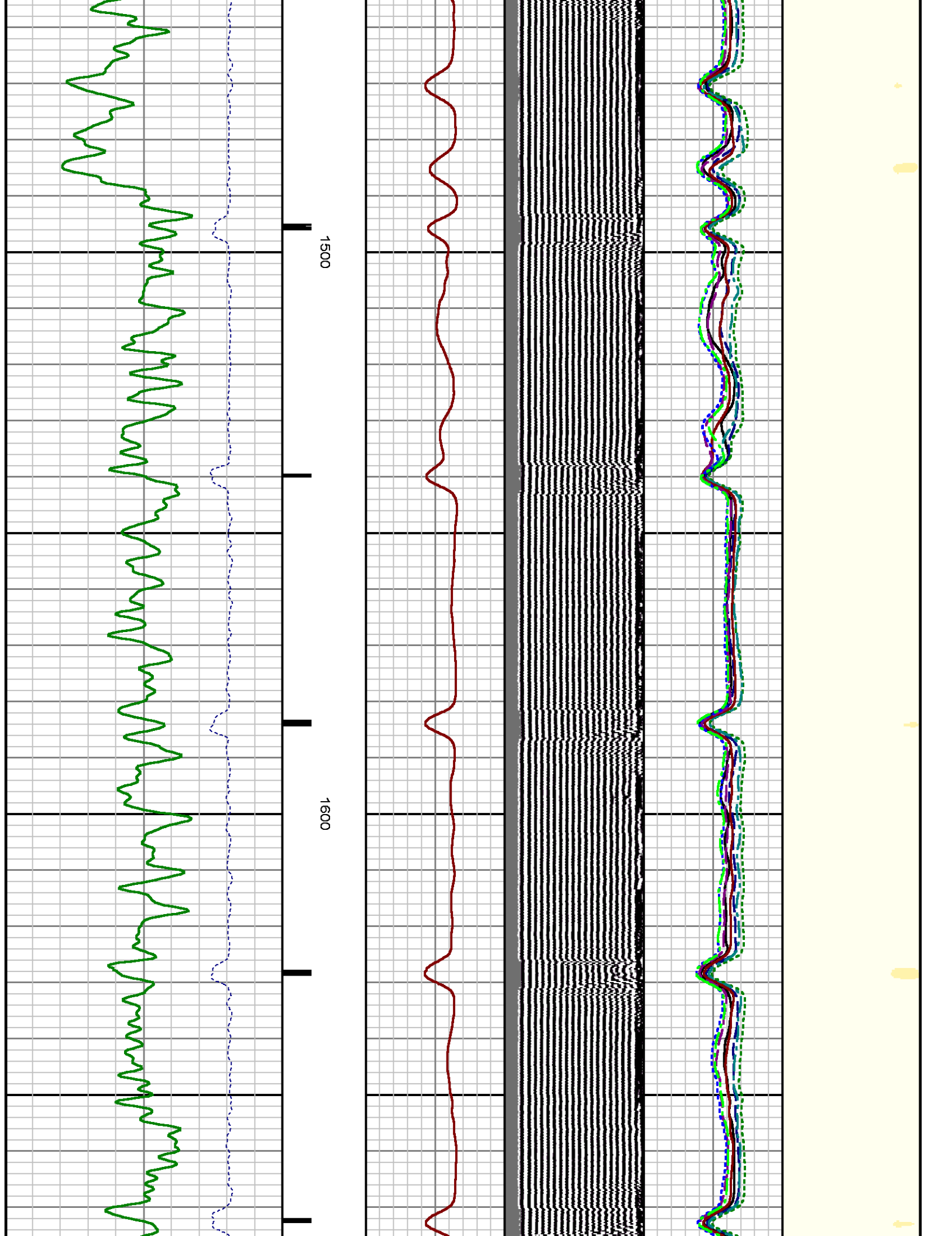
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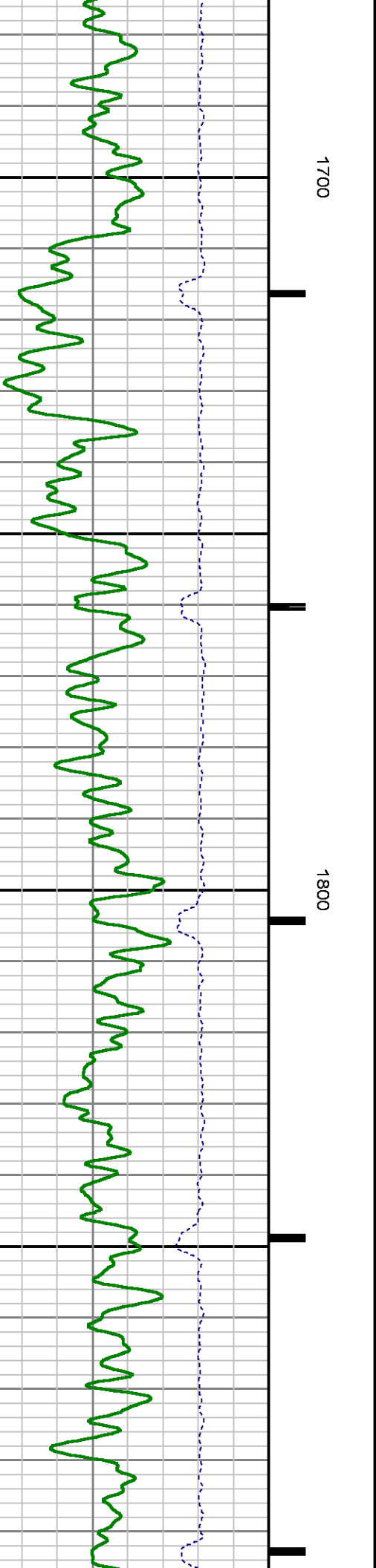
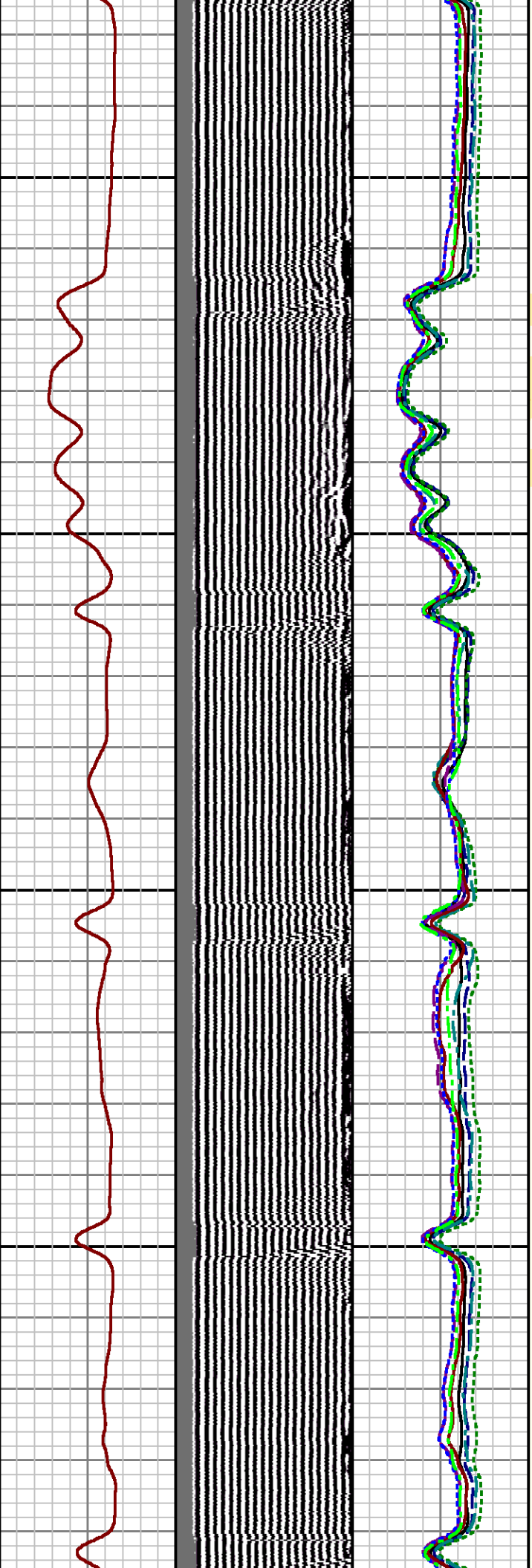
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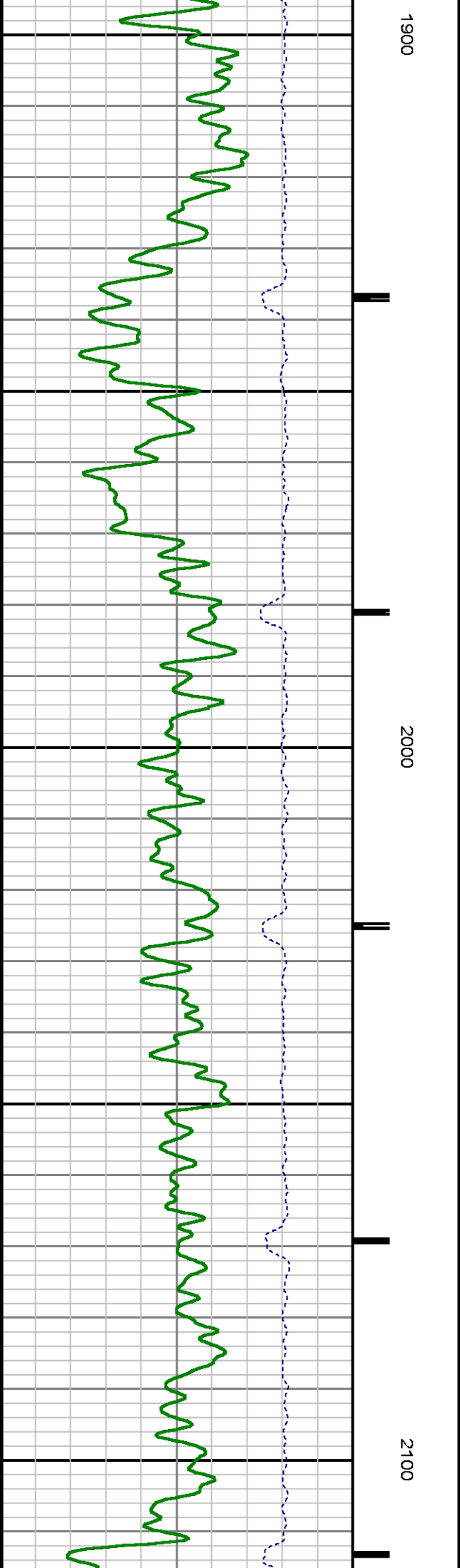
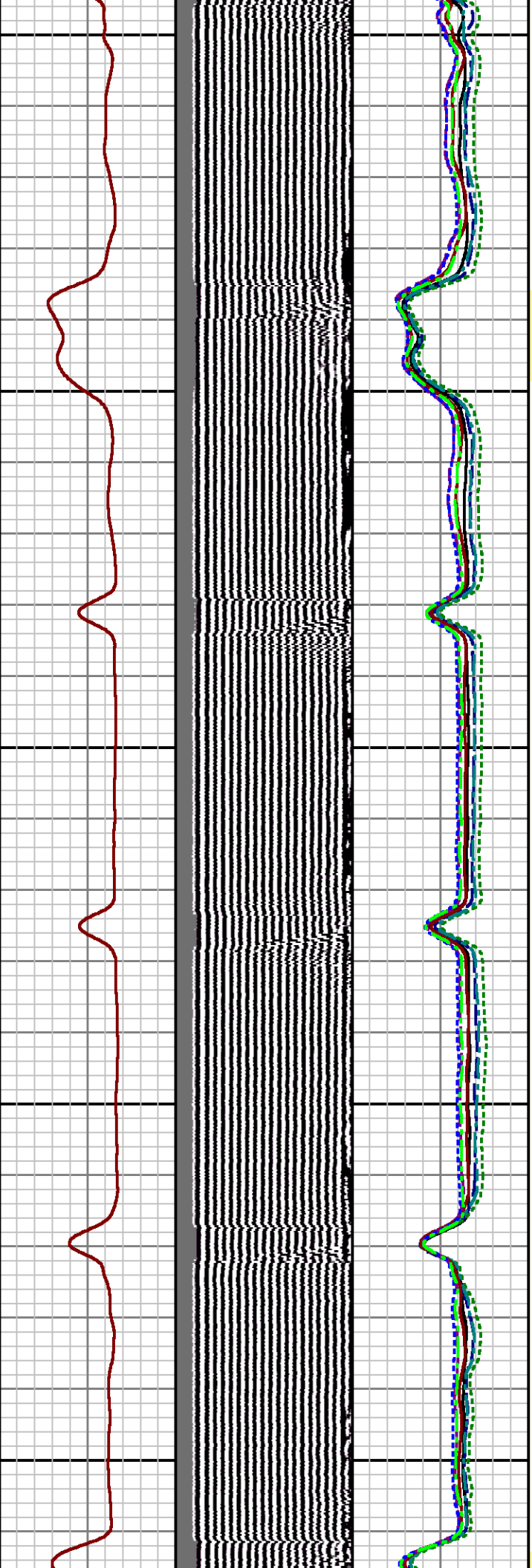


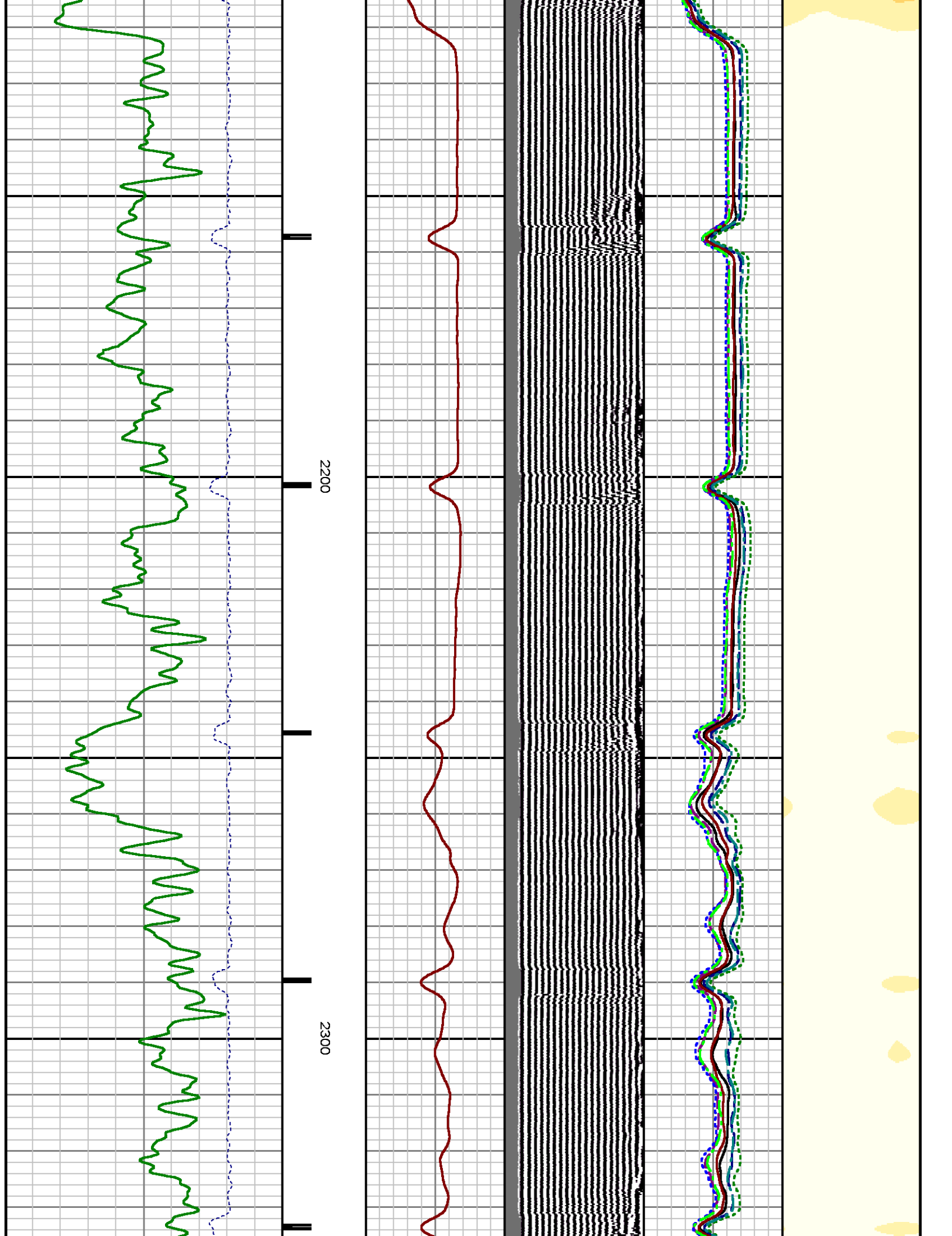


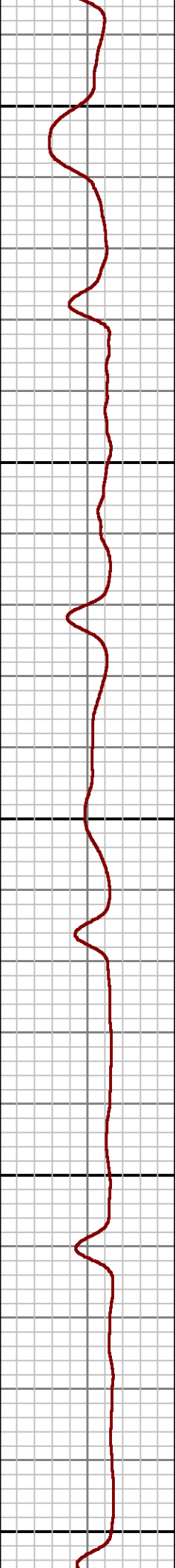
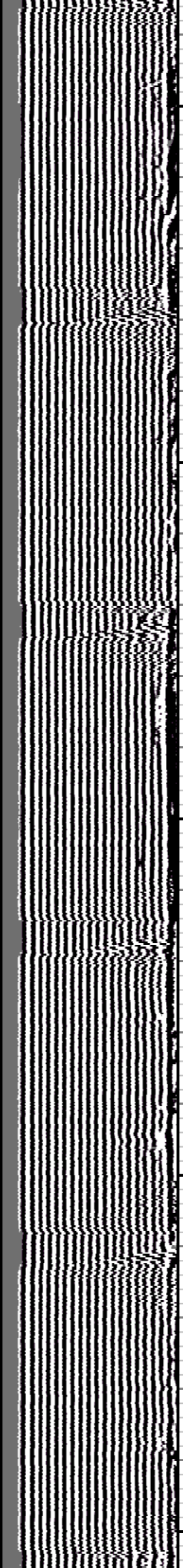
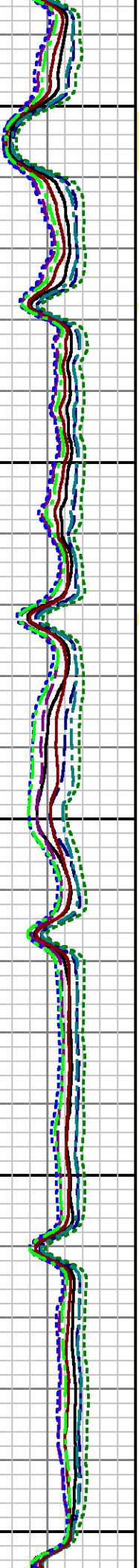
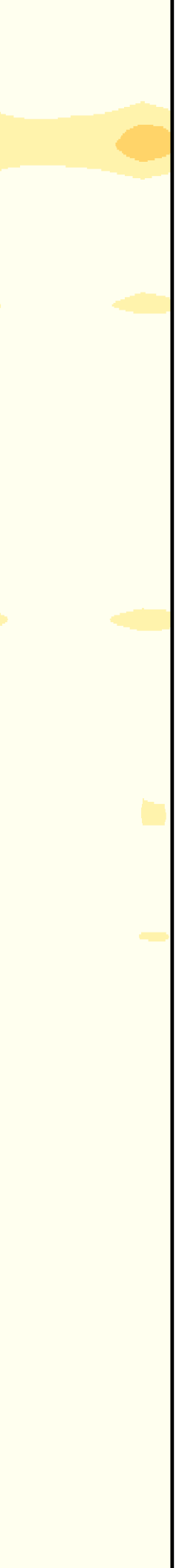






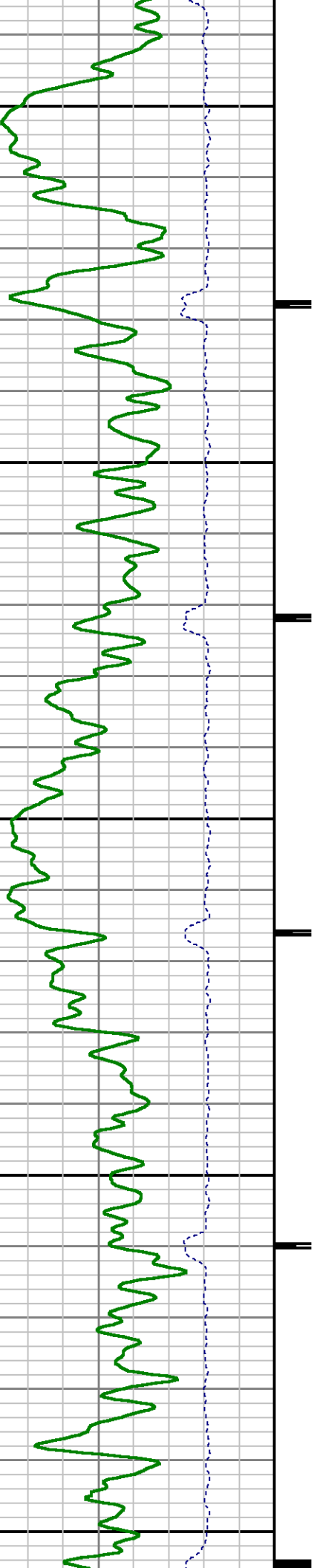


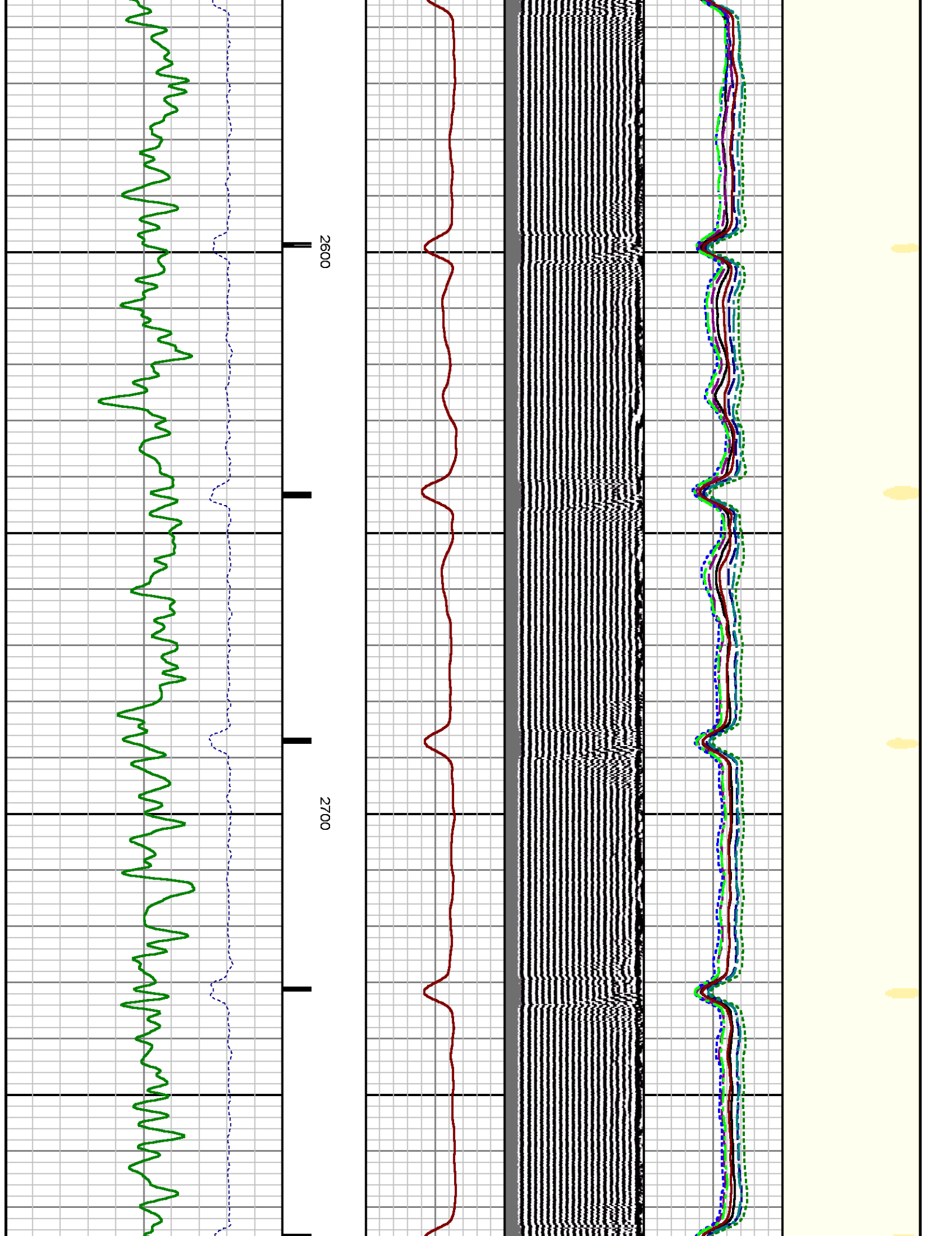


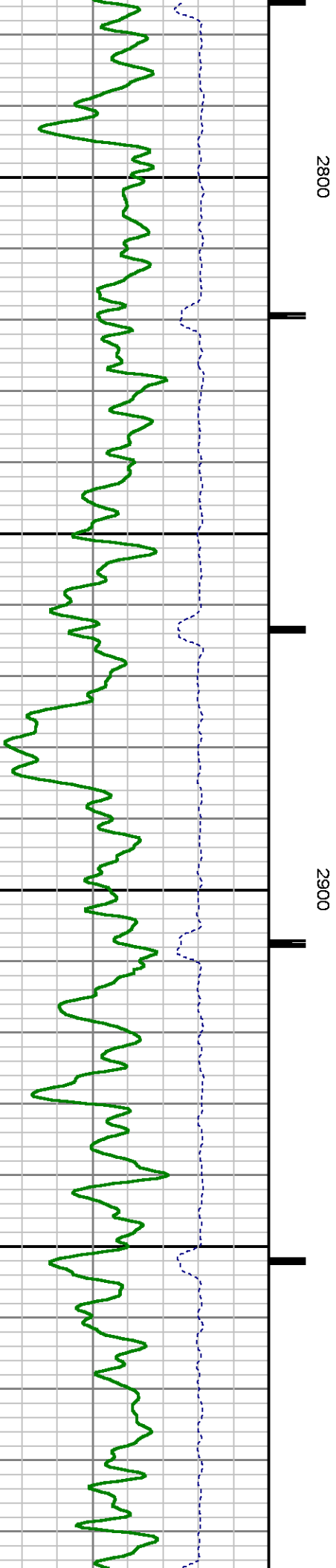
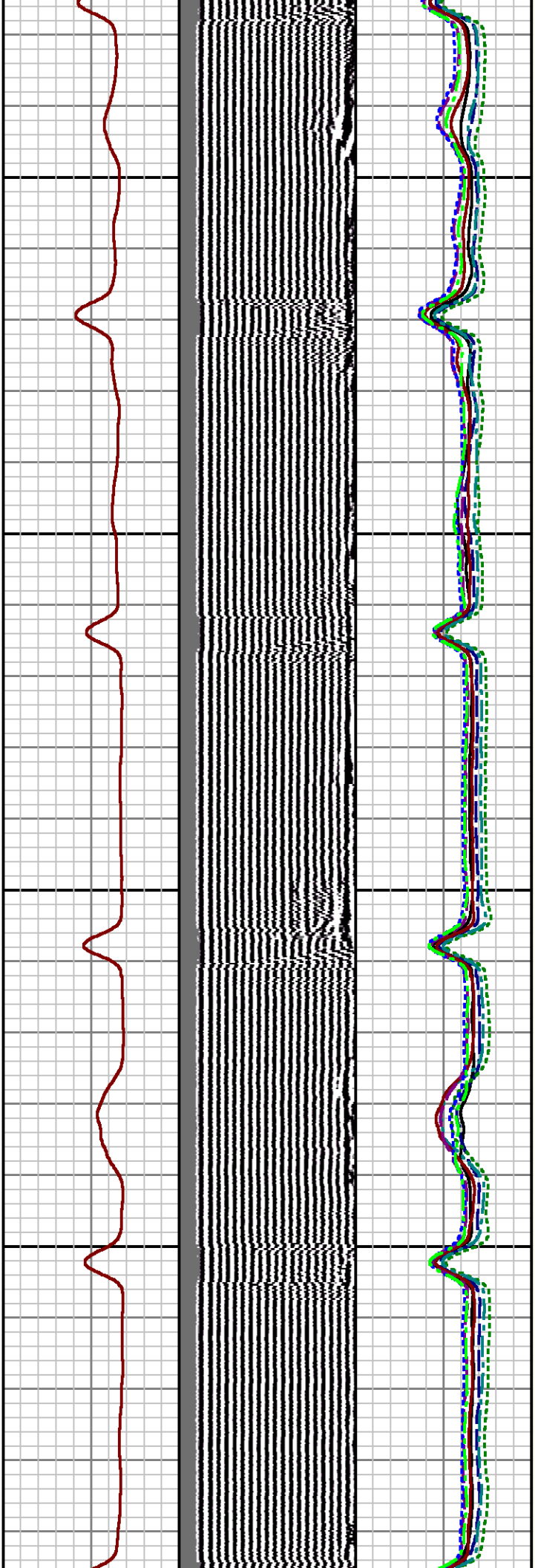


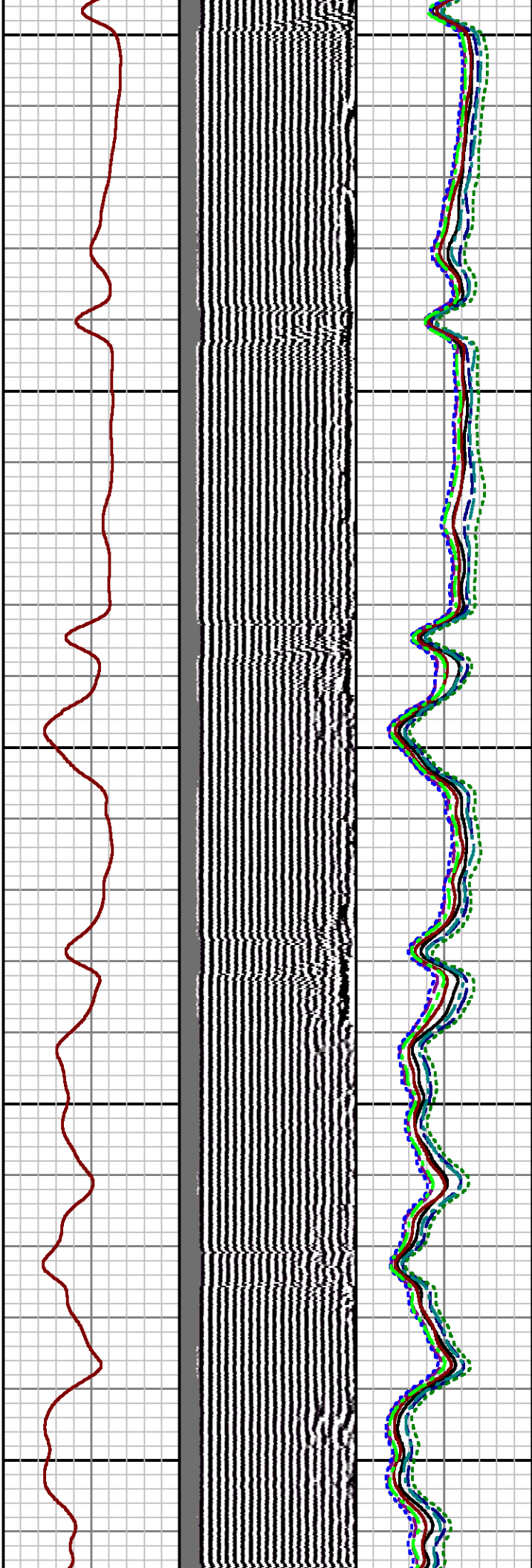
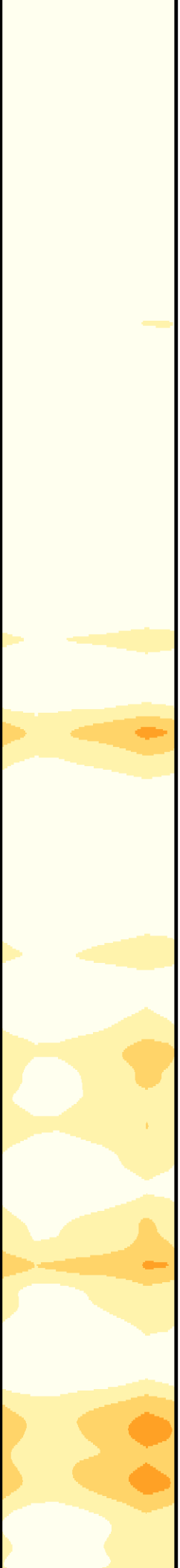
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2500





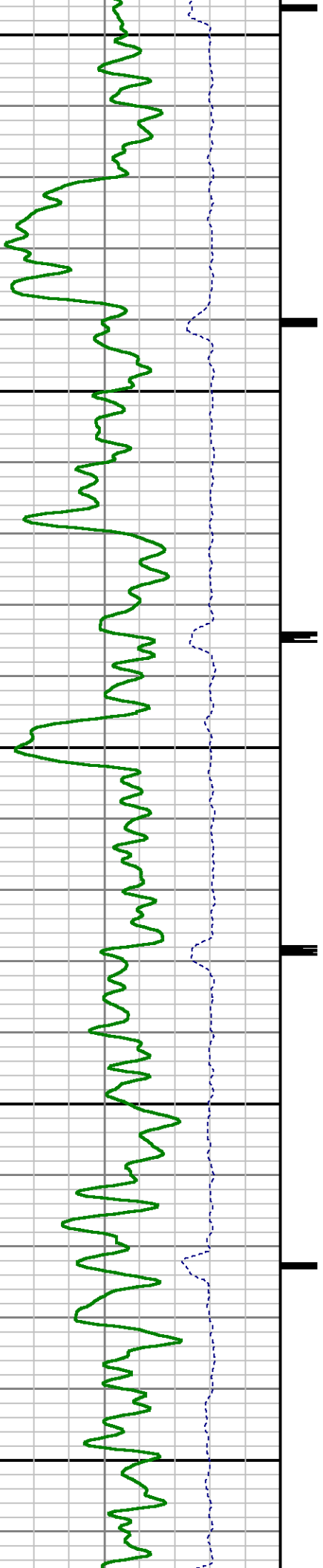


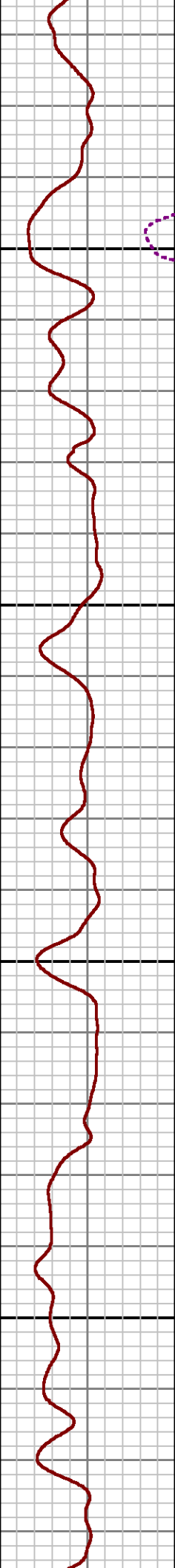
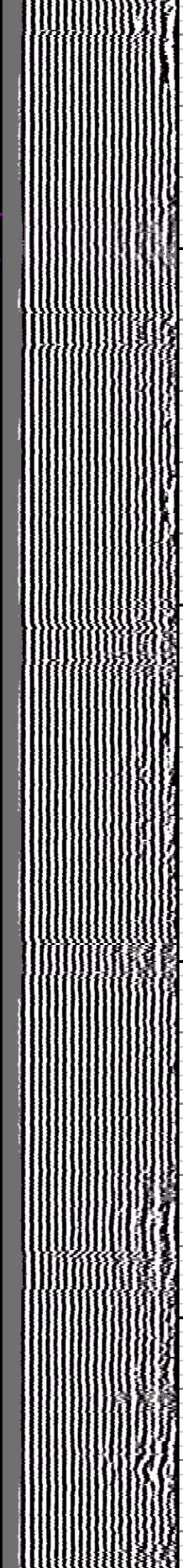
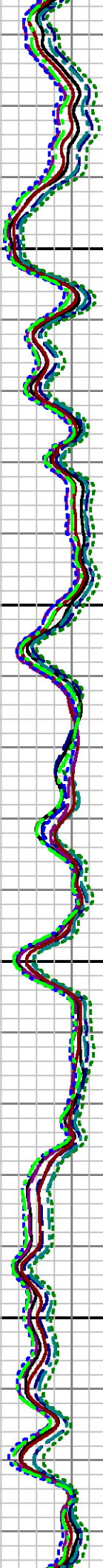
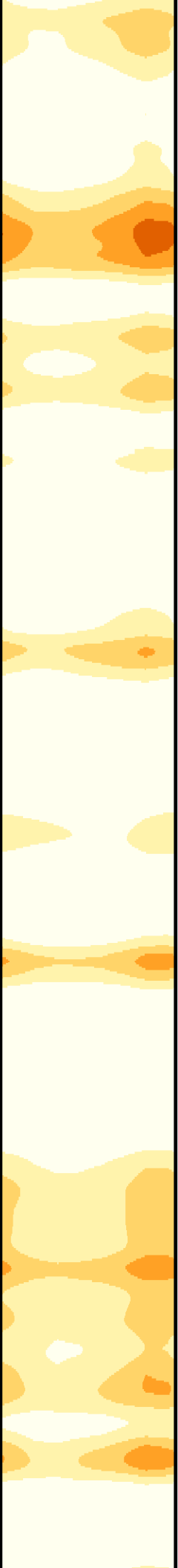


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3100

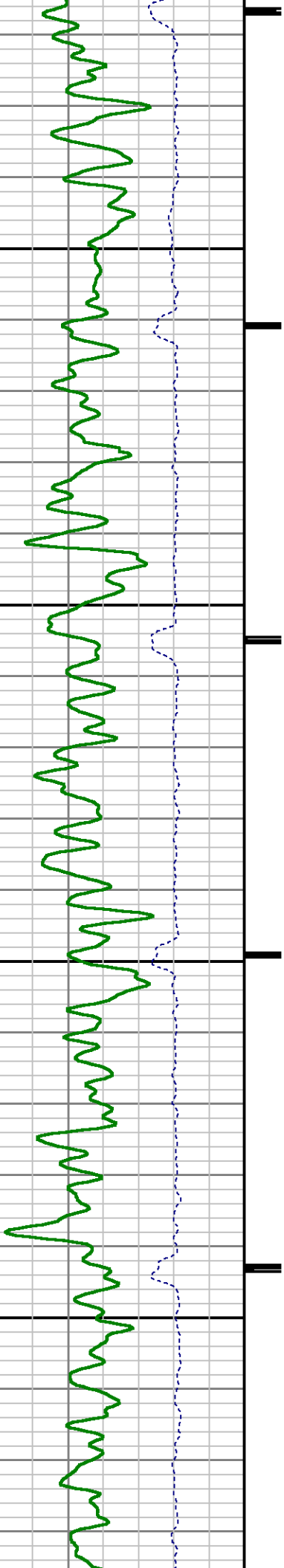
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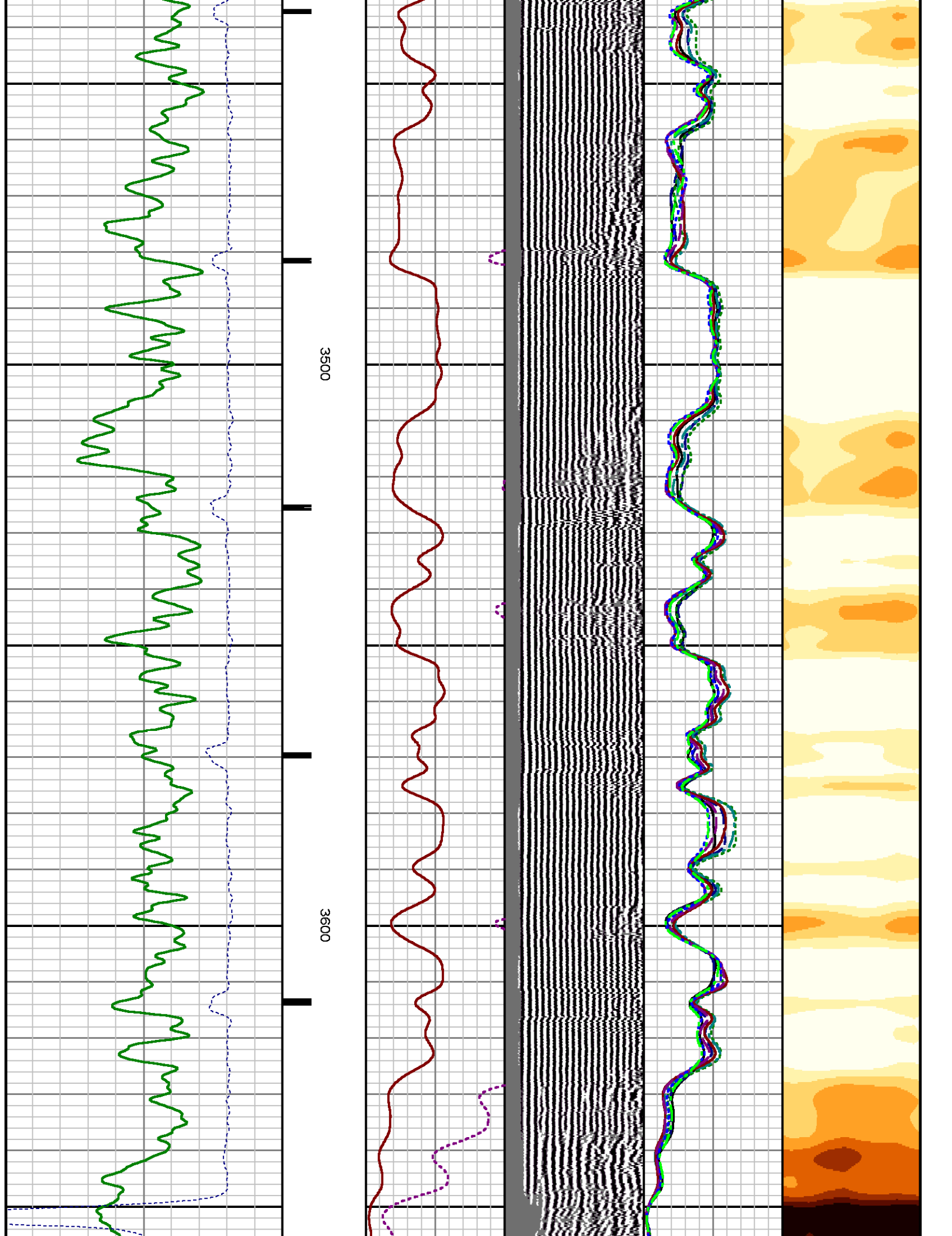


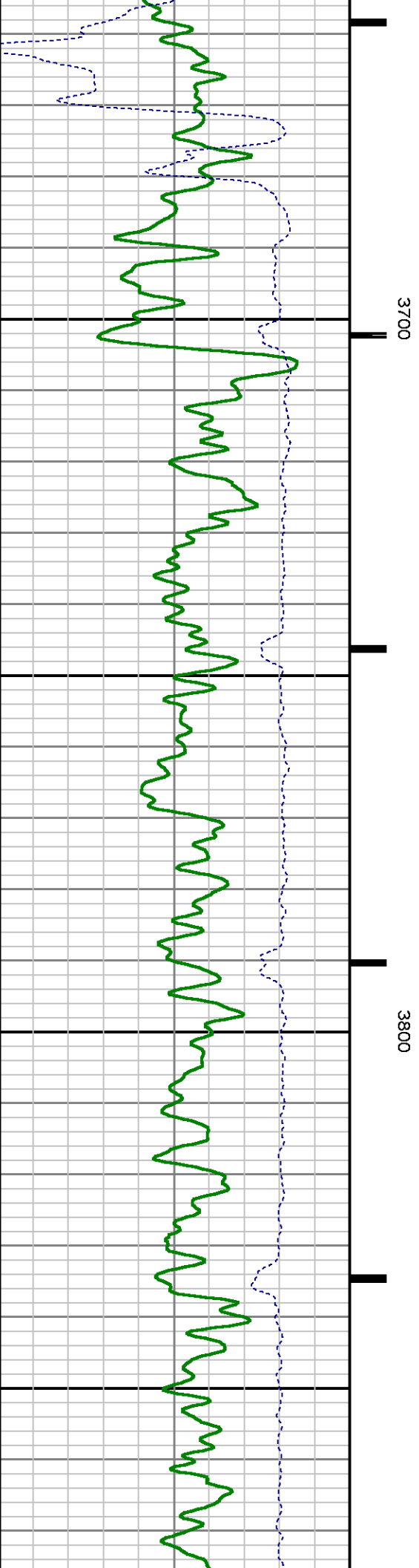
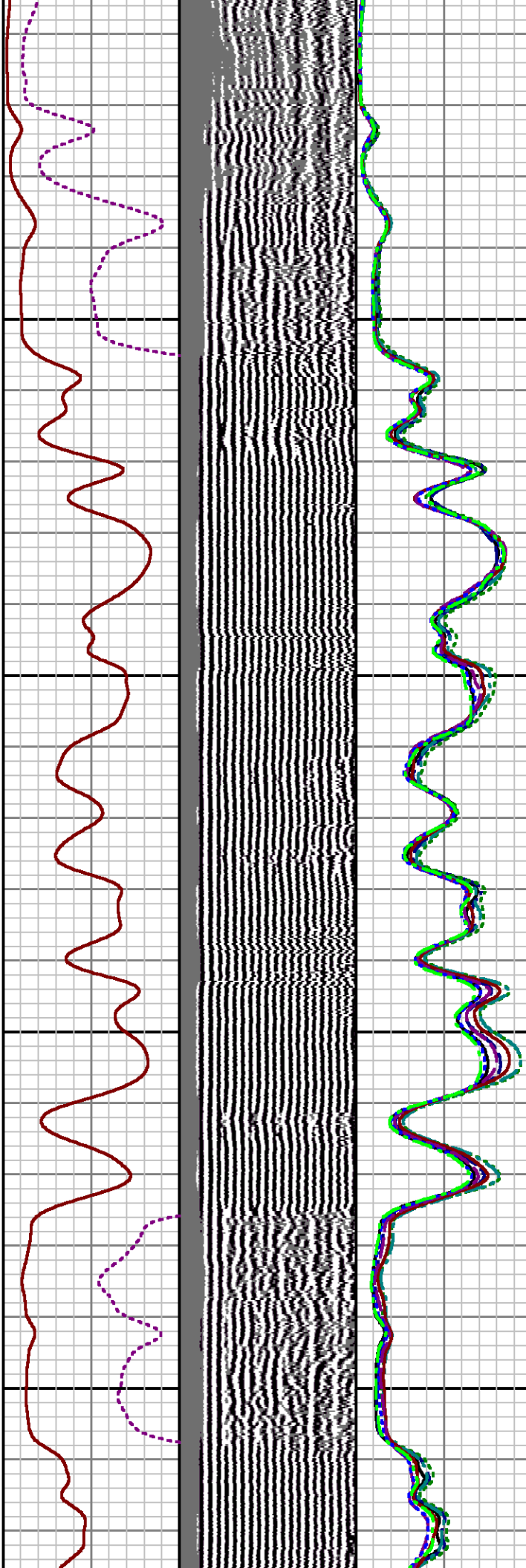
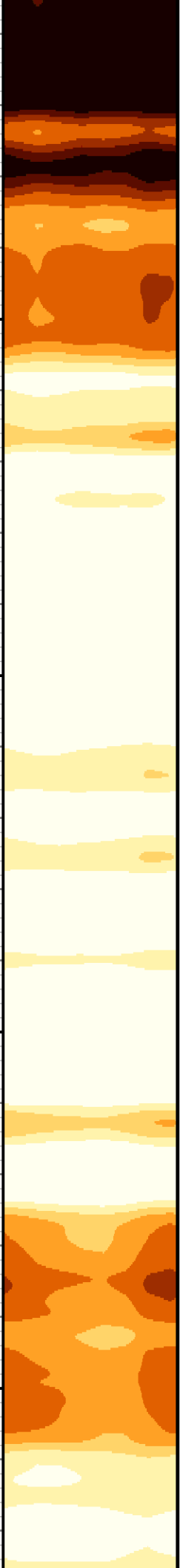


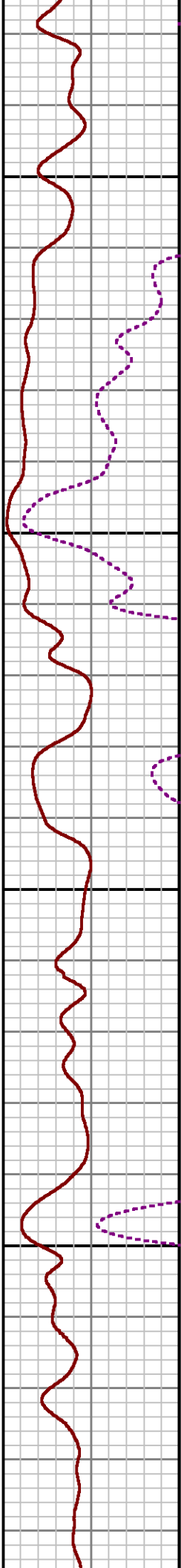
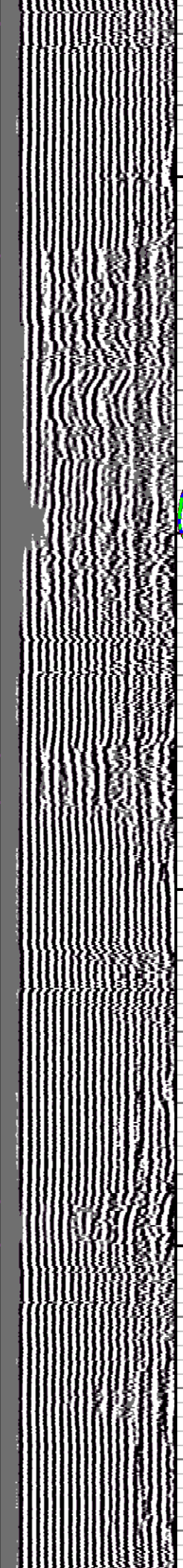
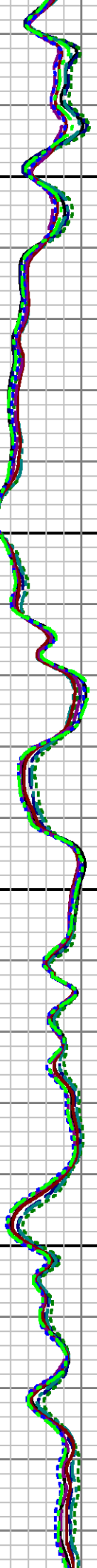
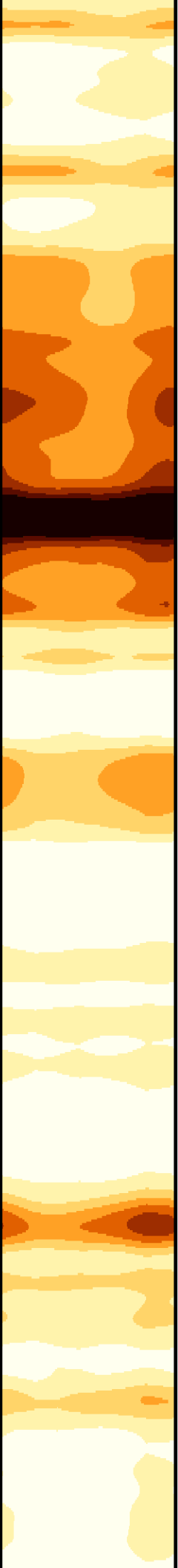
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3400



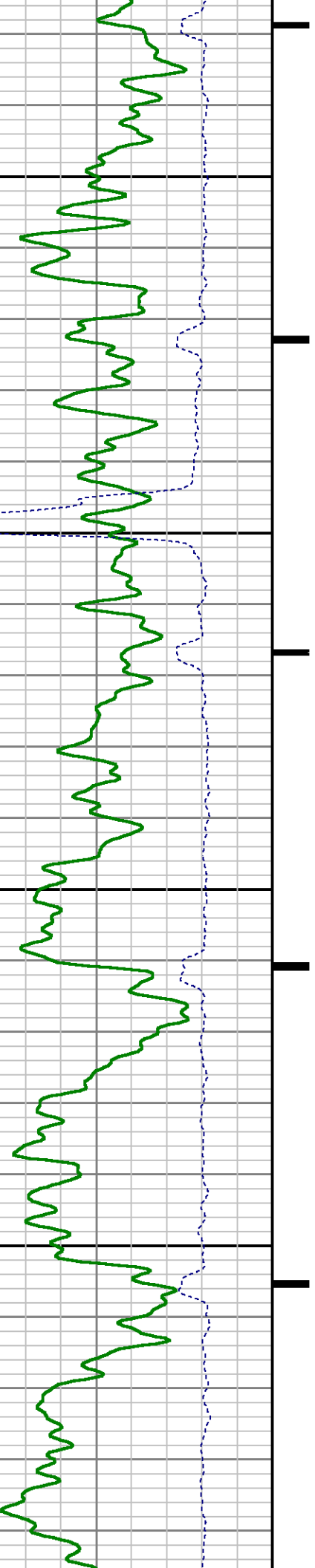


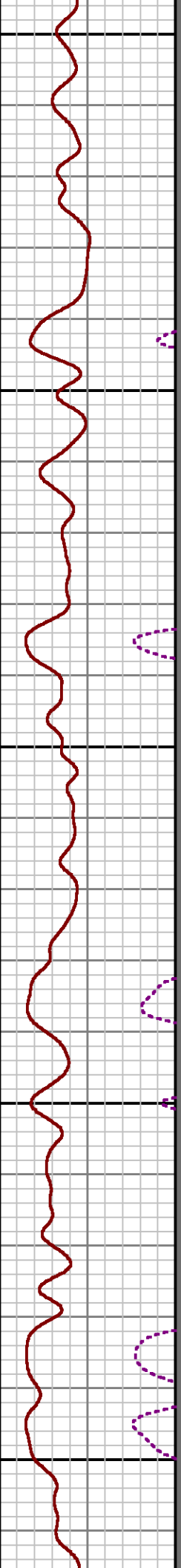
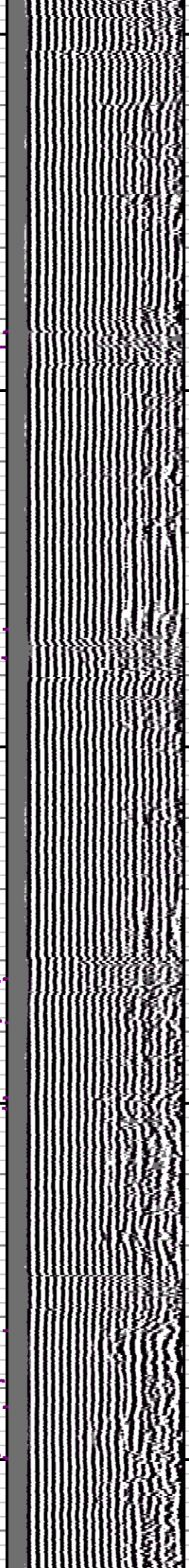
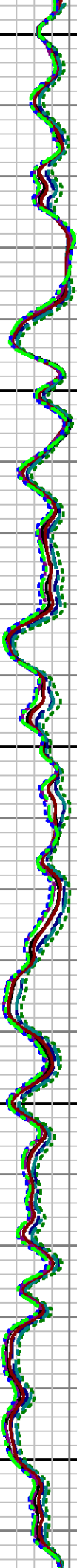
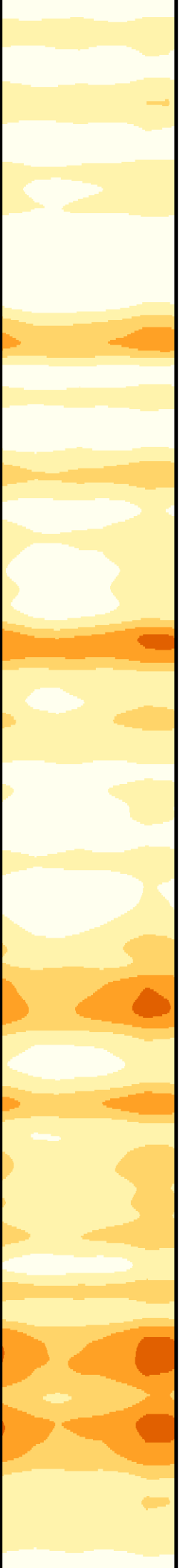




3900

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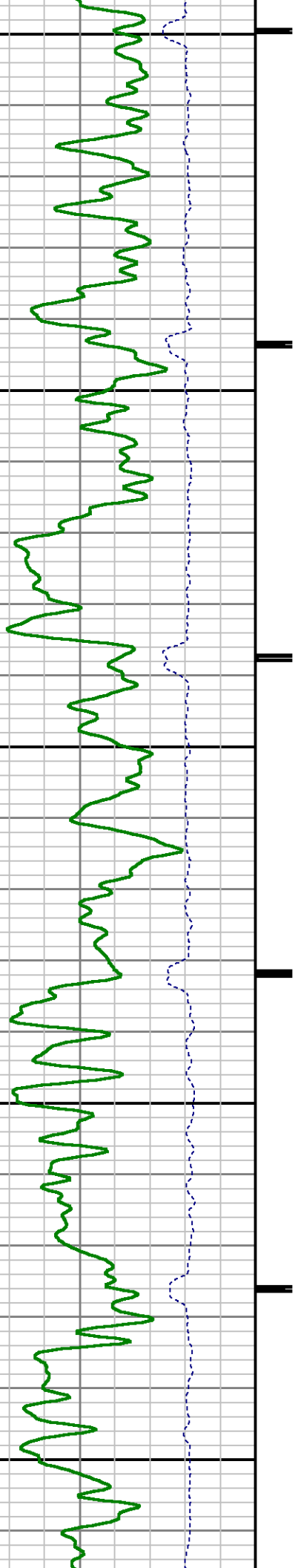


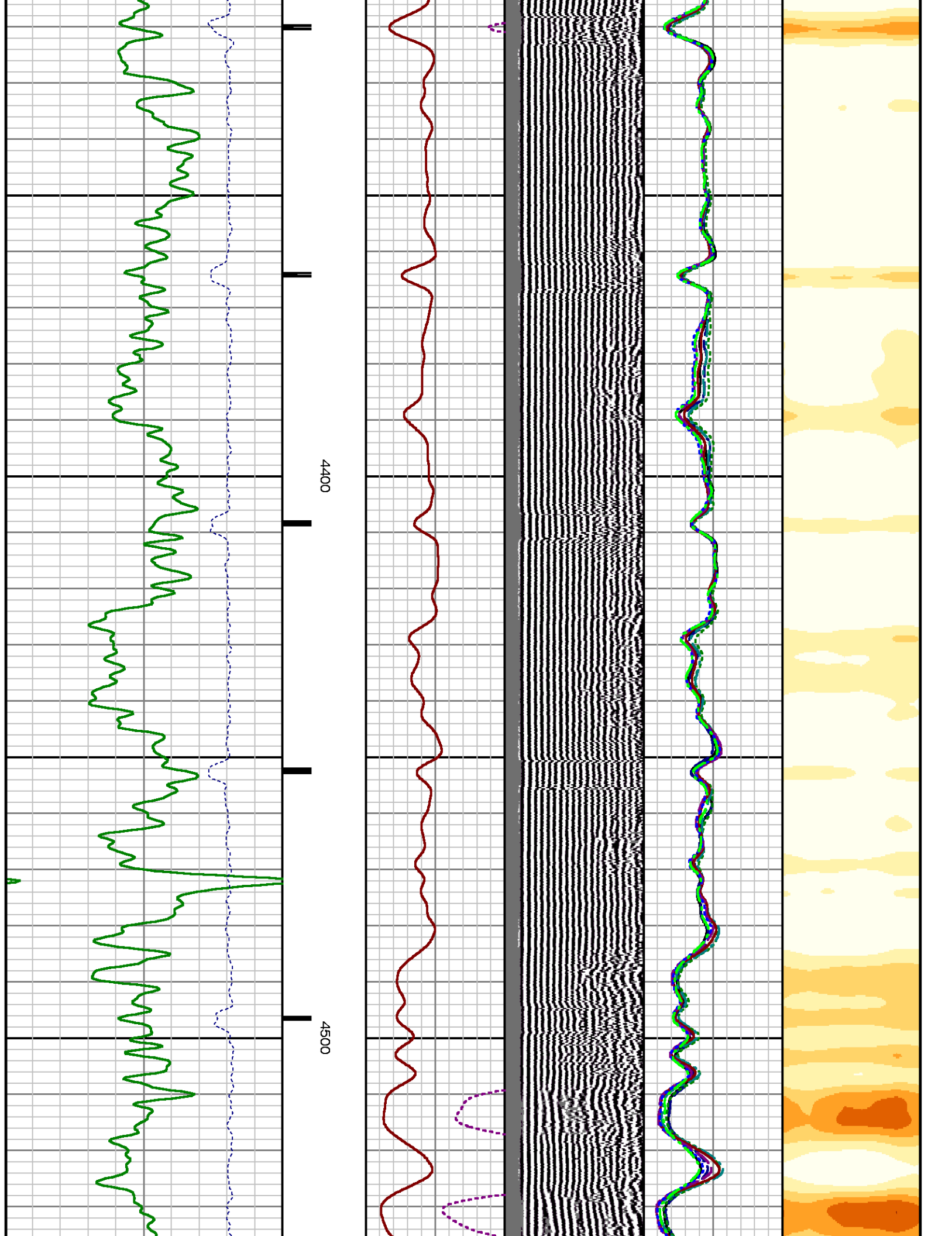


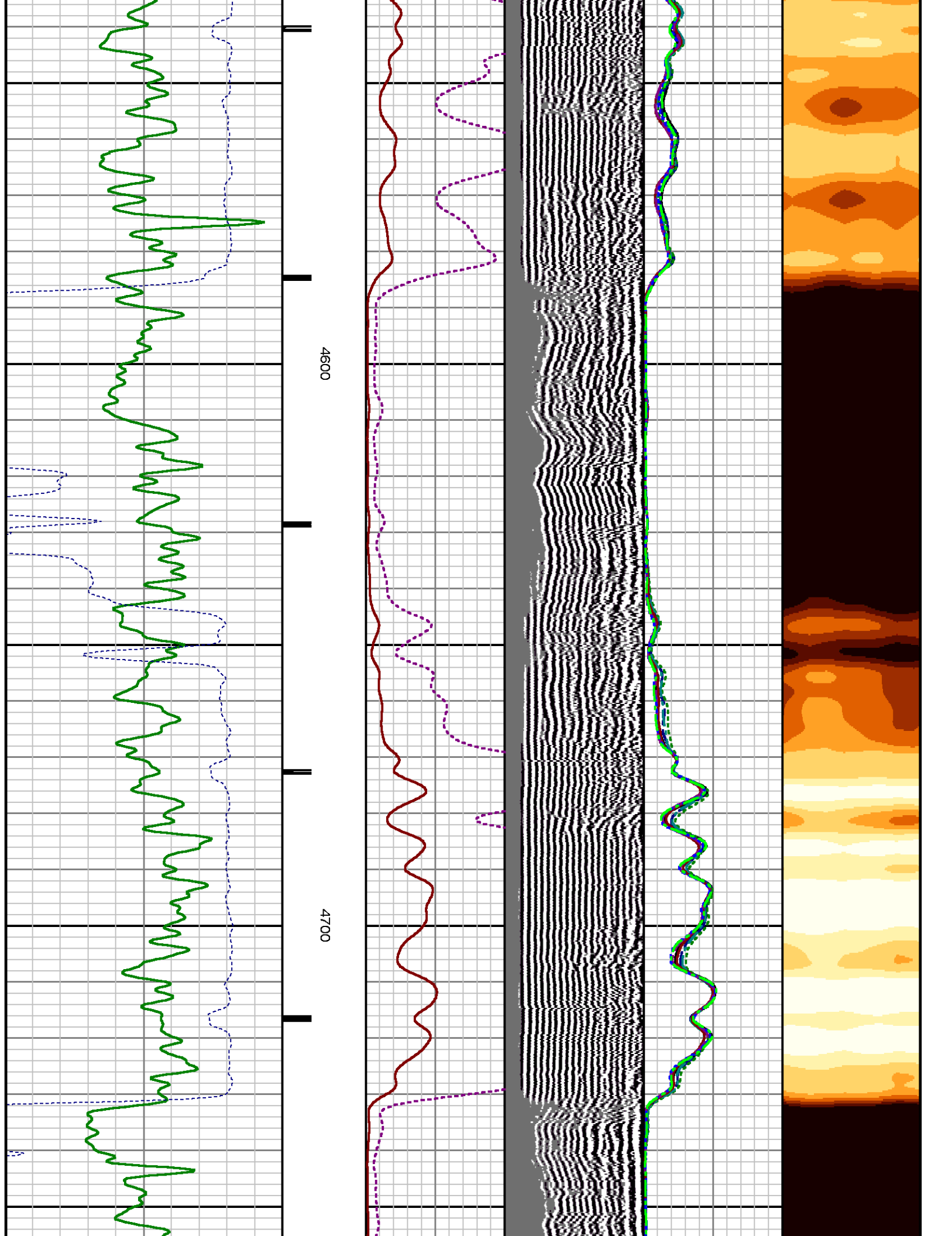
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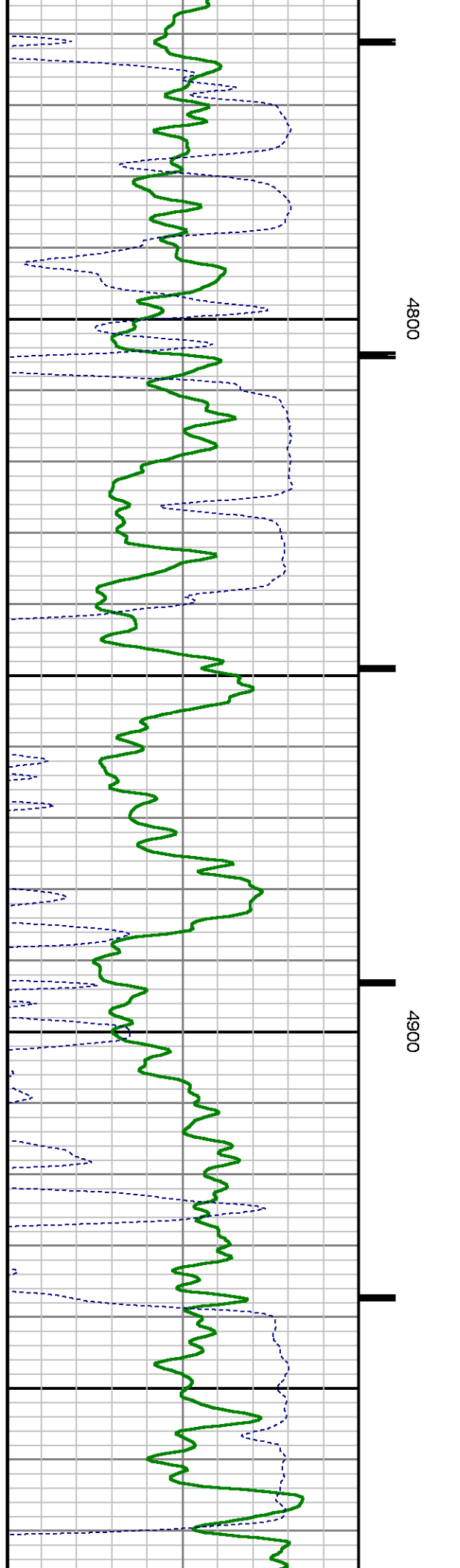
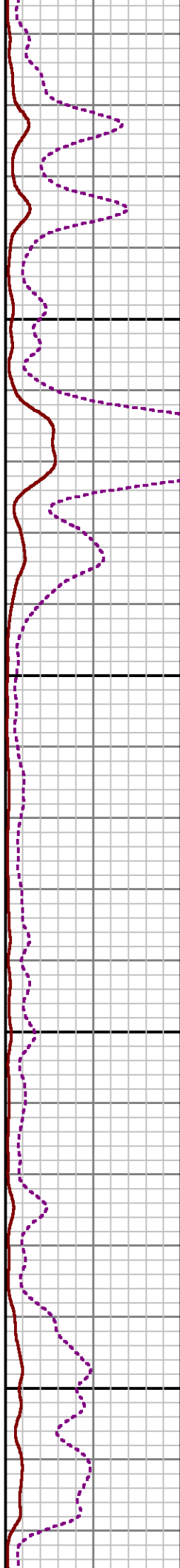
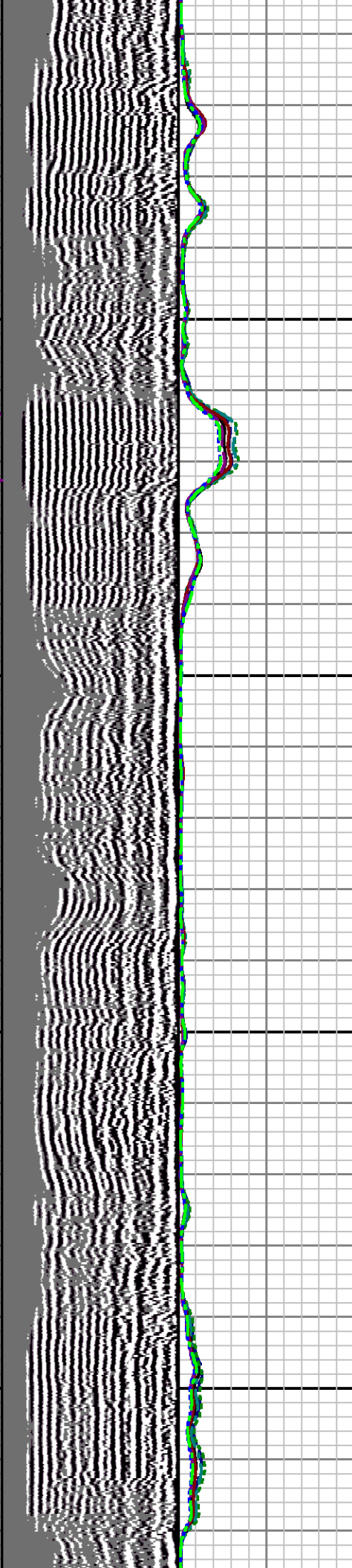
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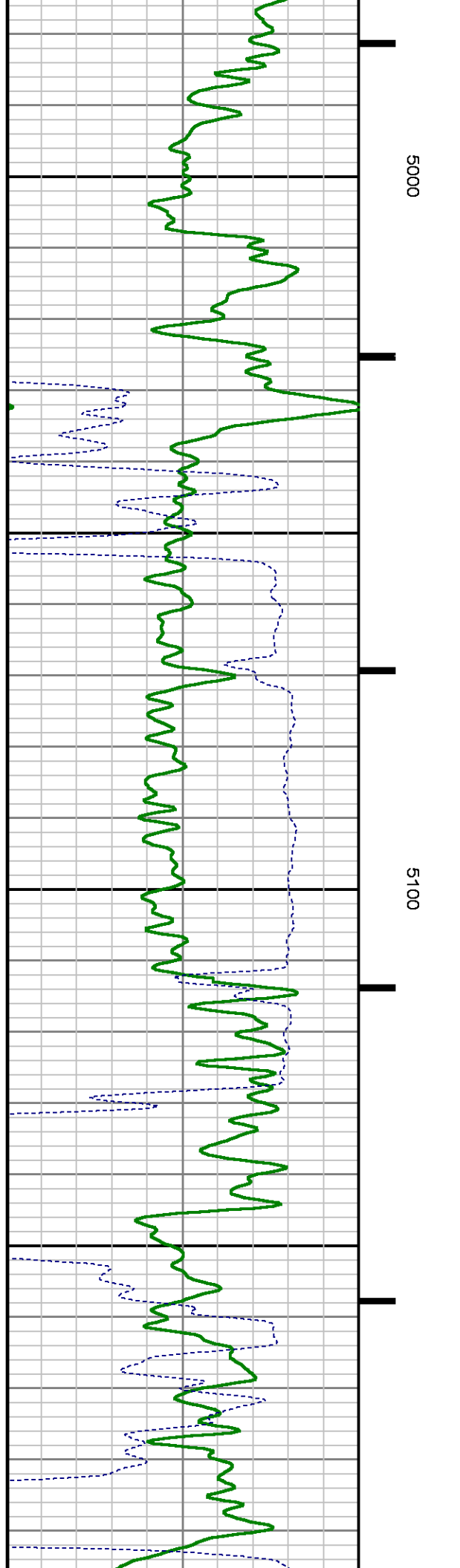
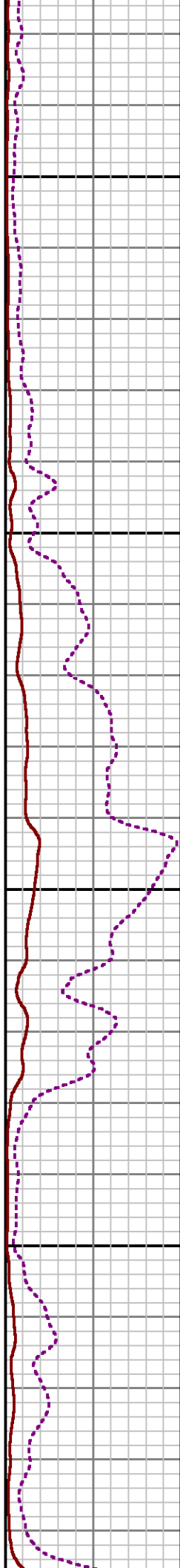
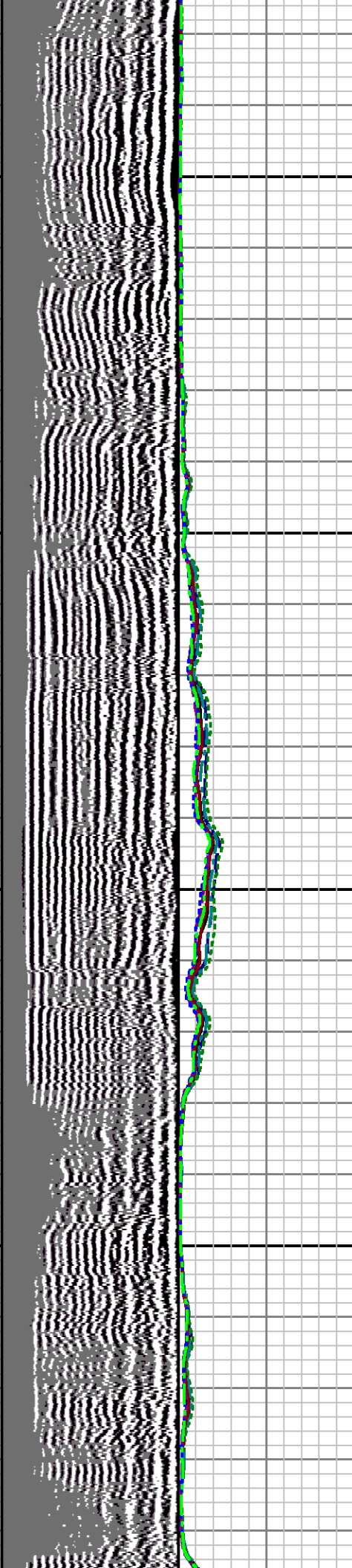
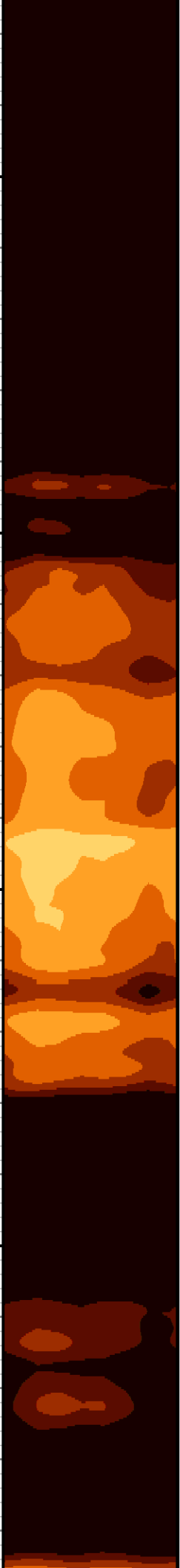
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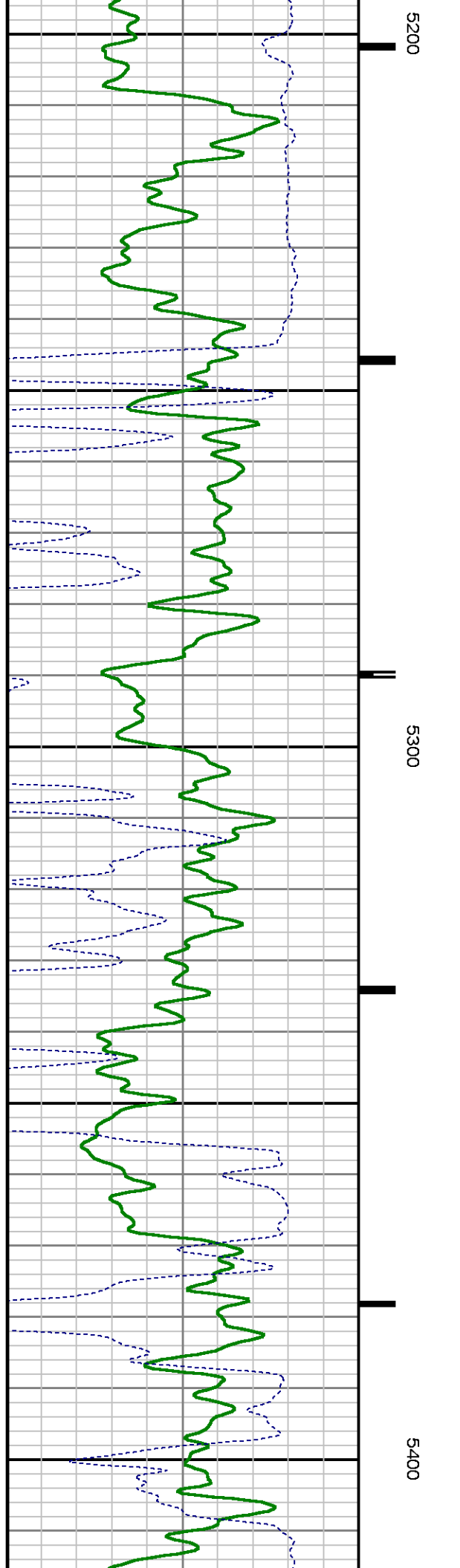
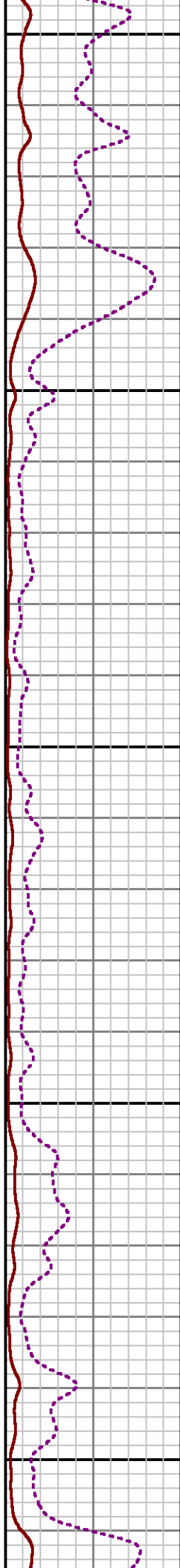
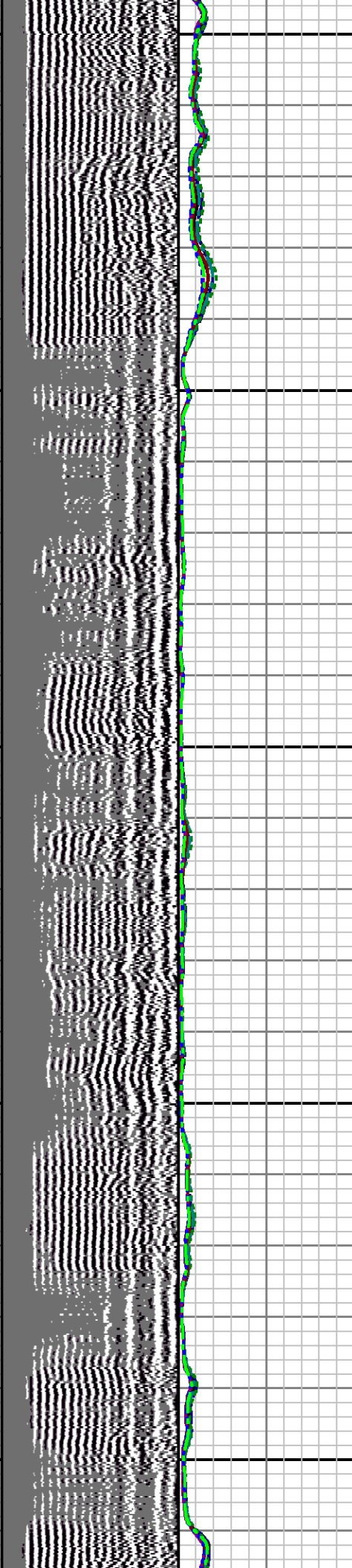
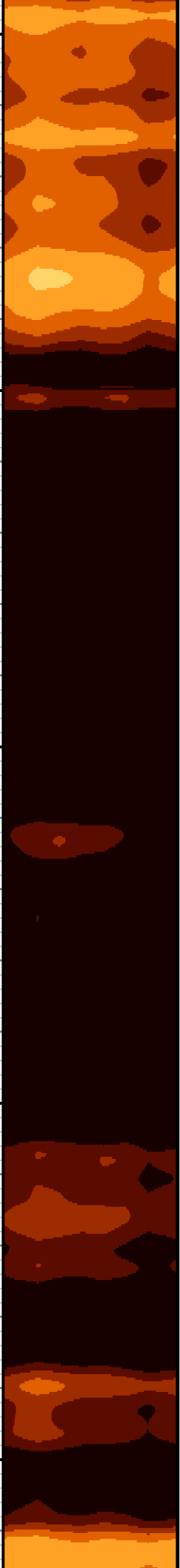








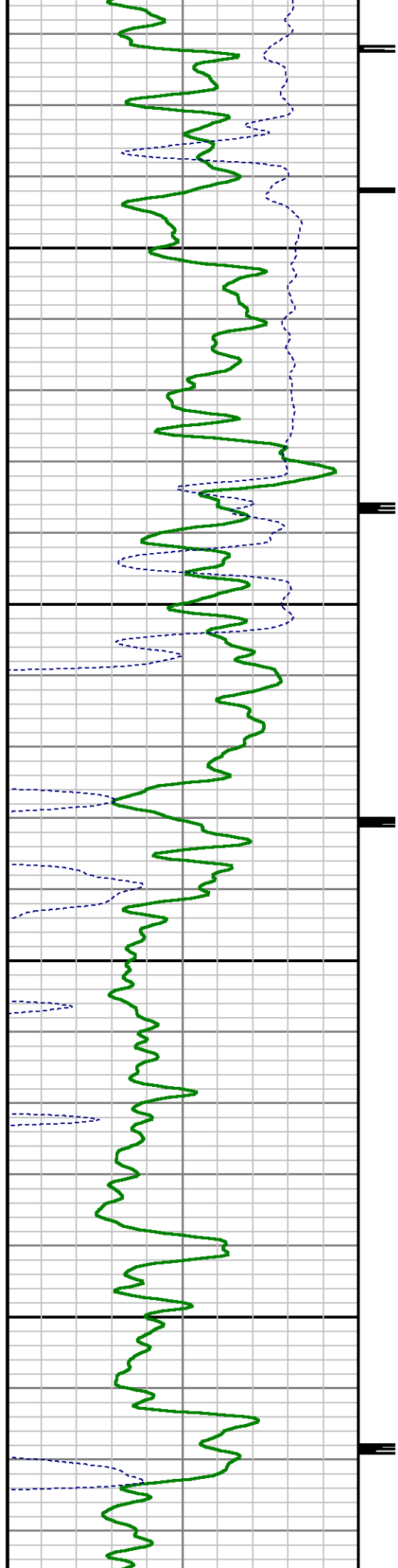




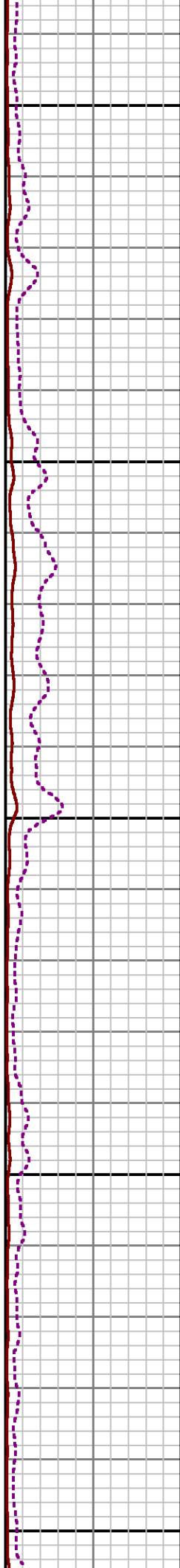
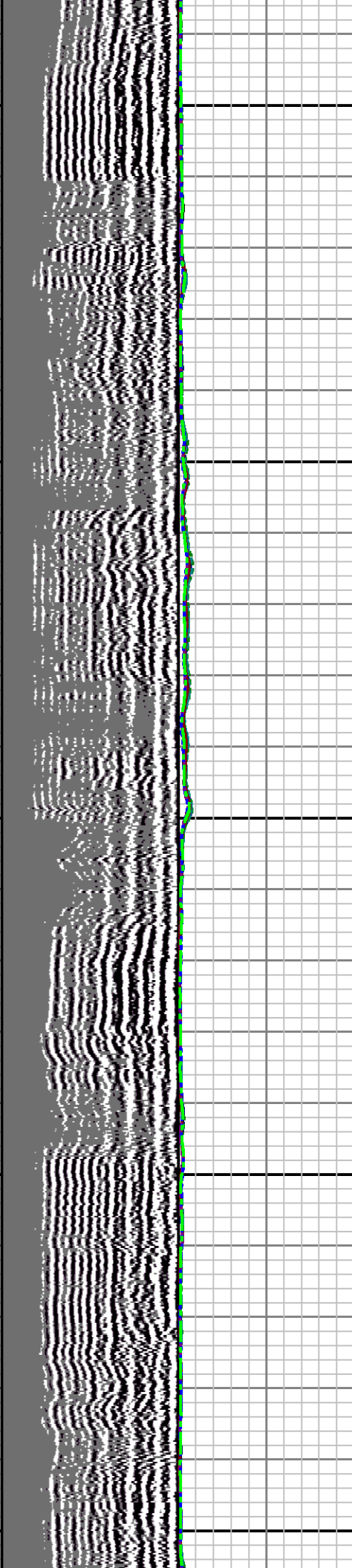


5500

5600

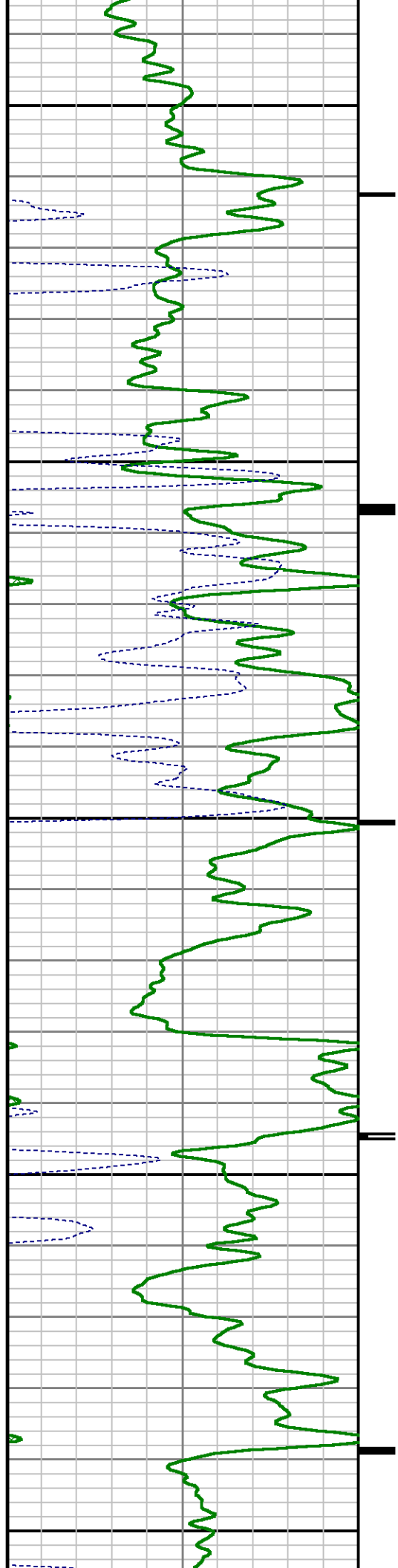


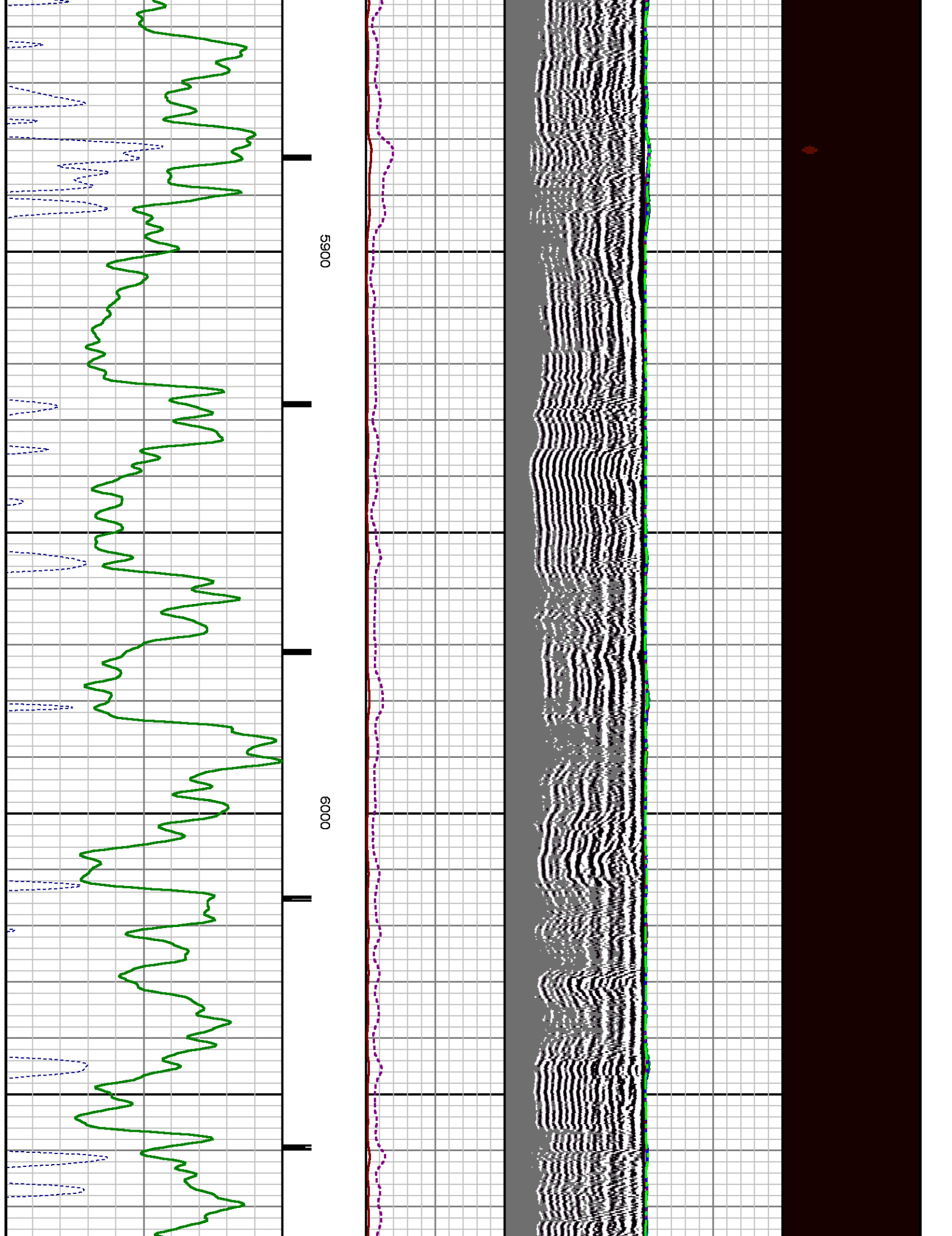
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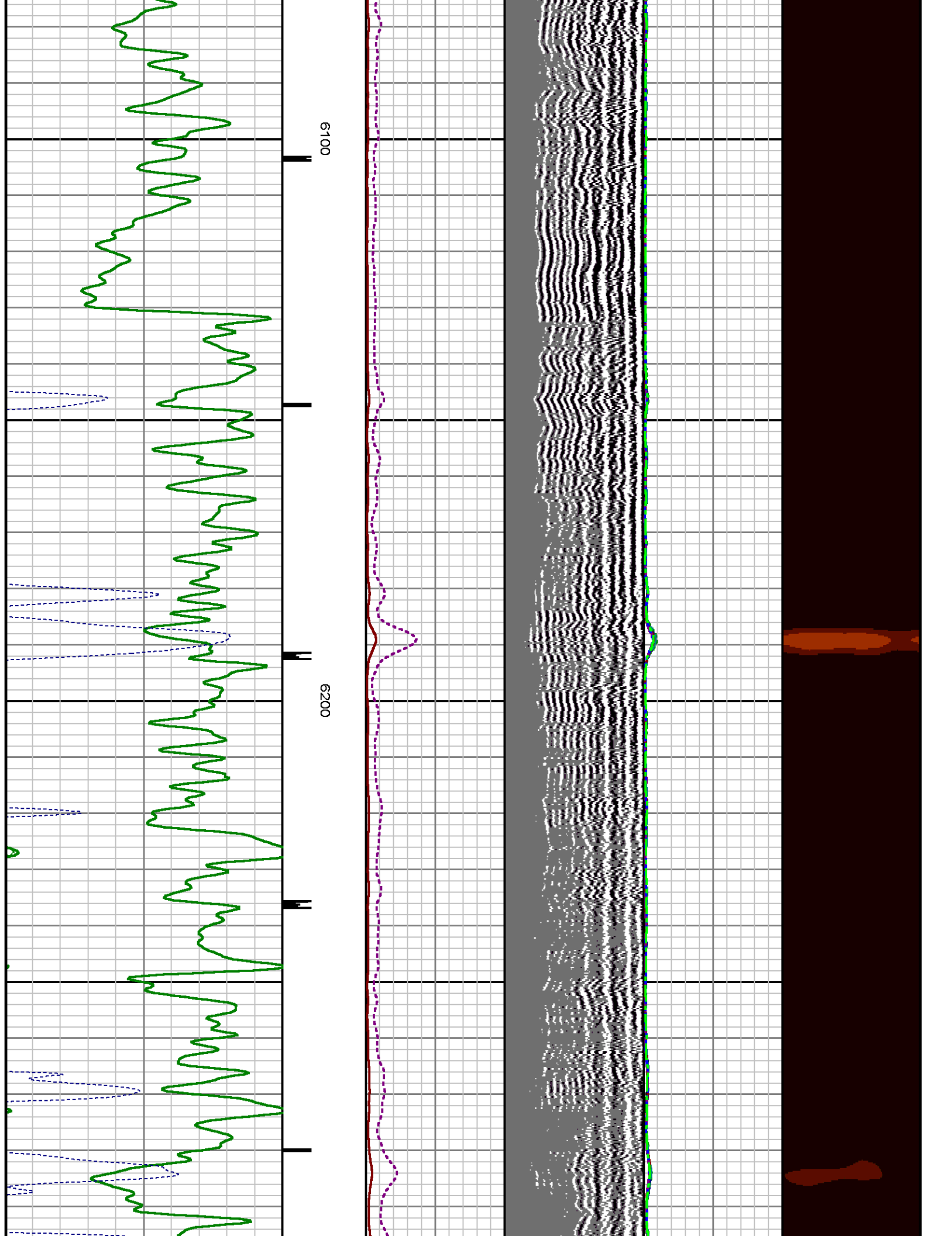


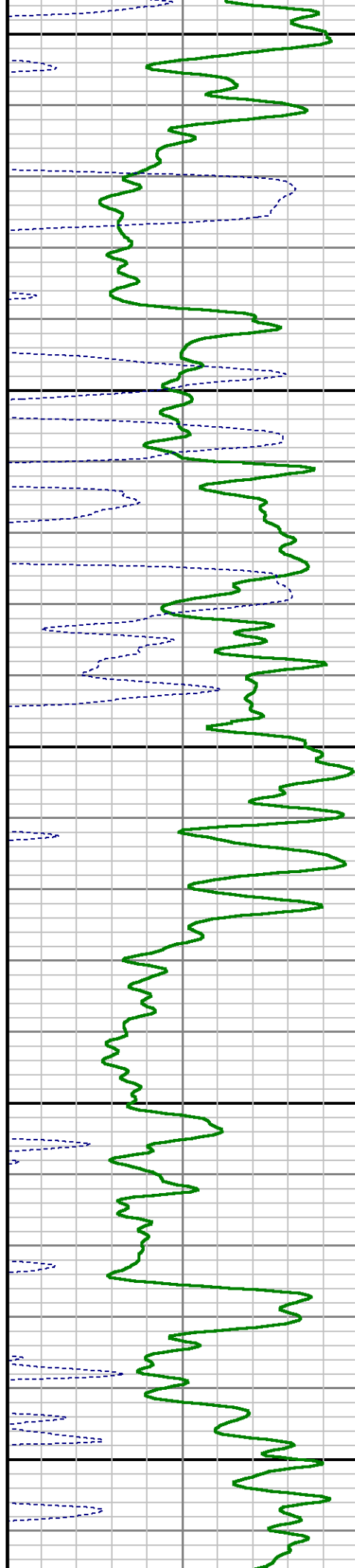
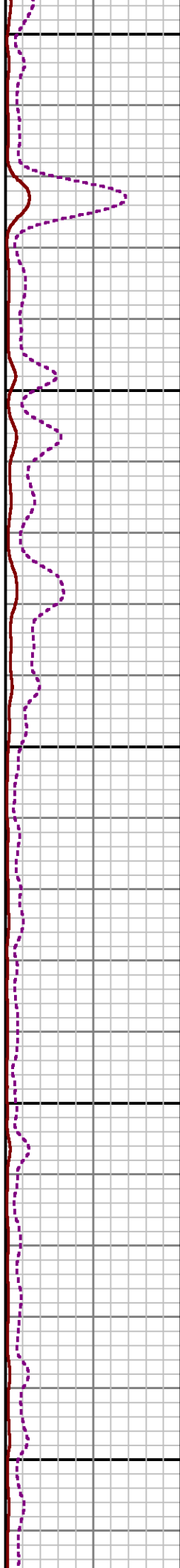
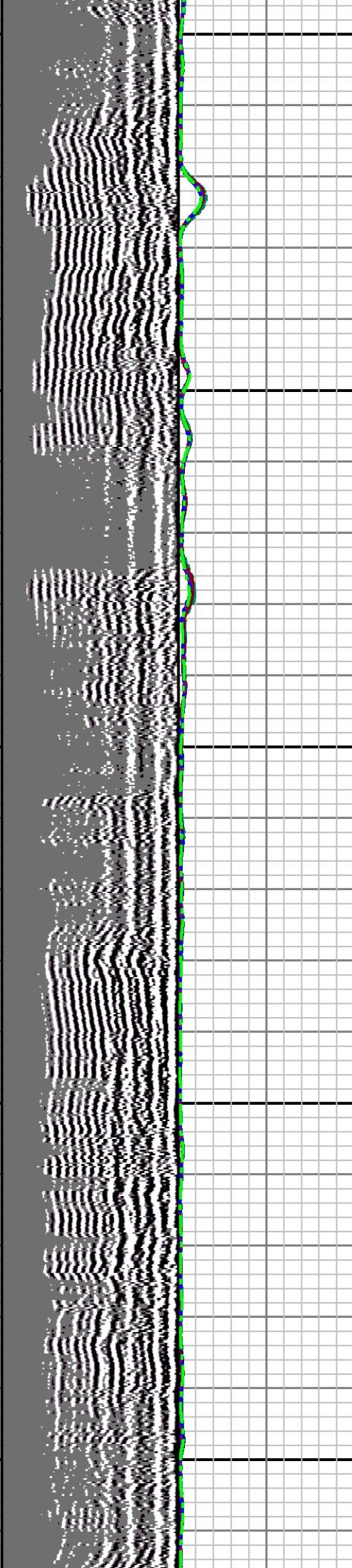
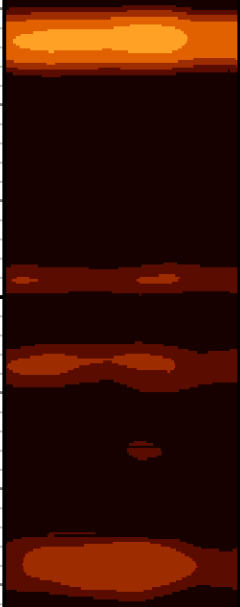
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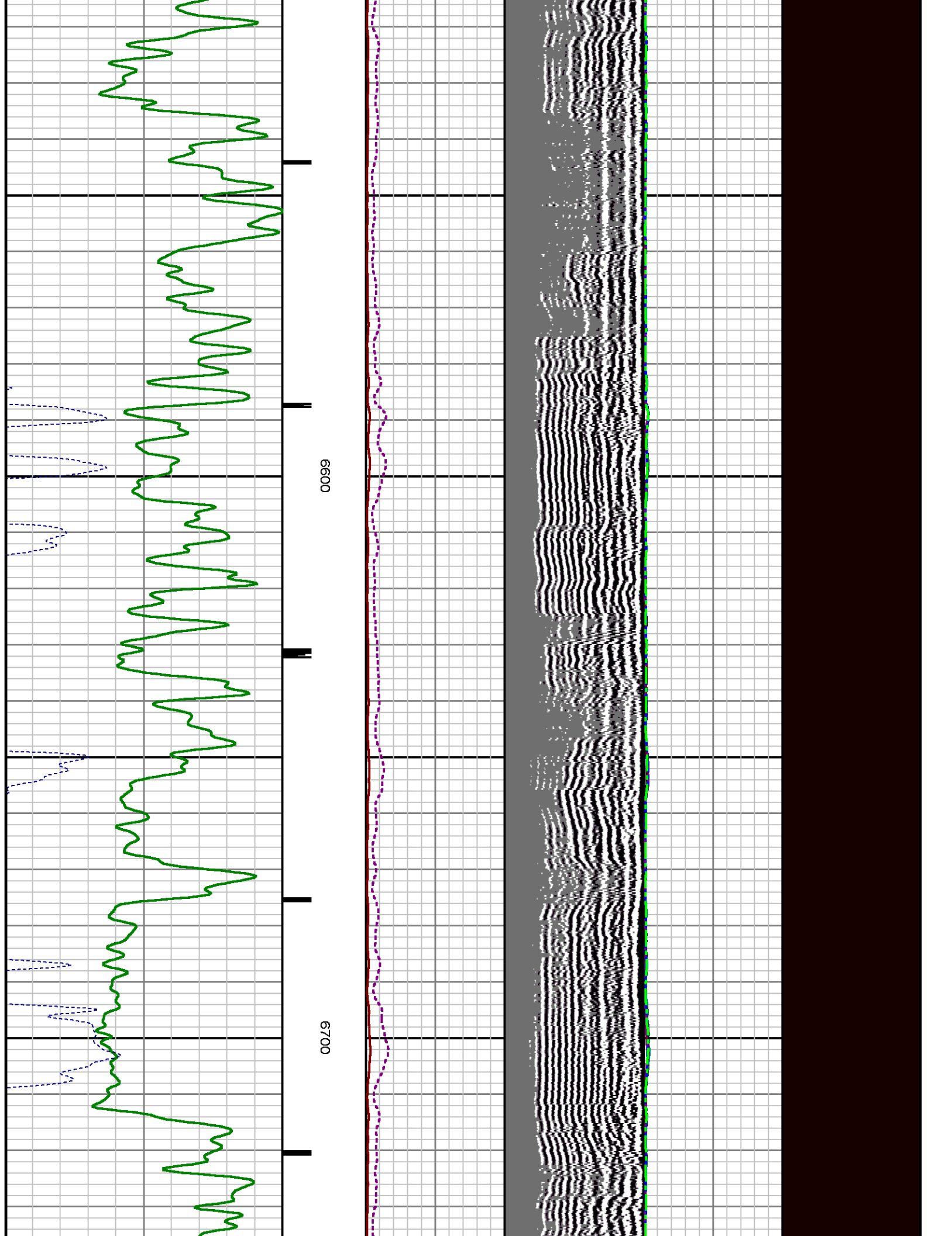
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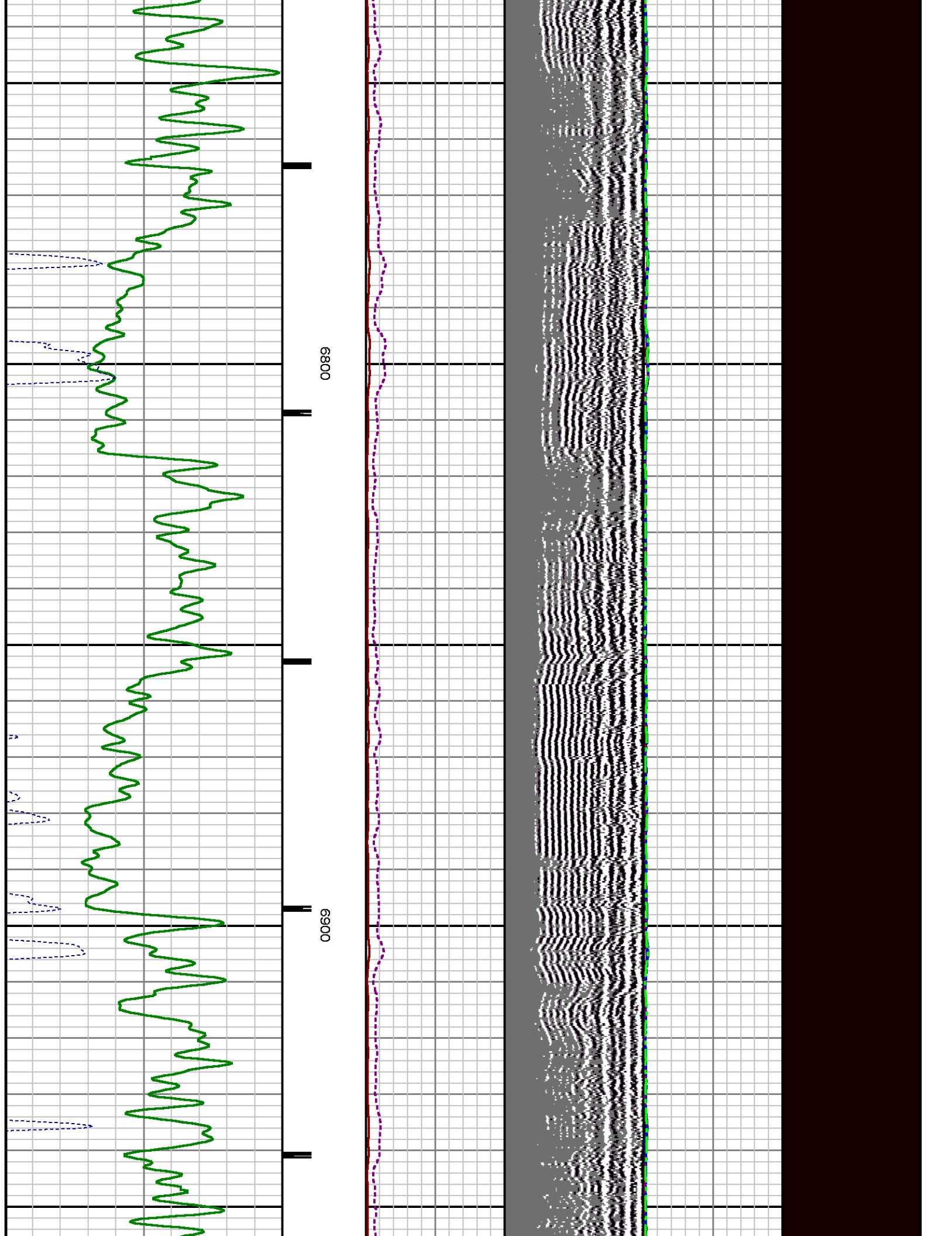


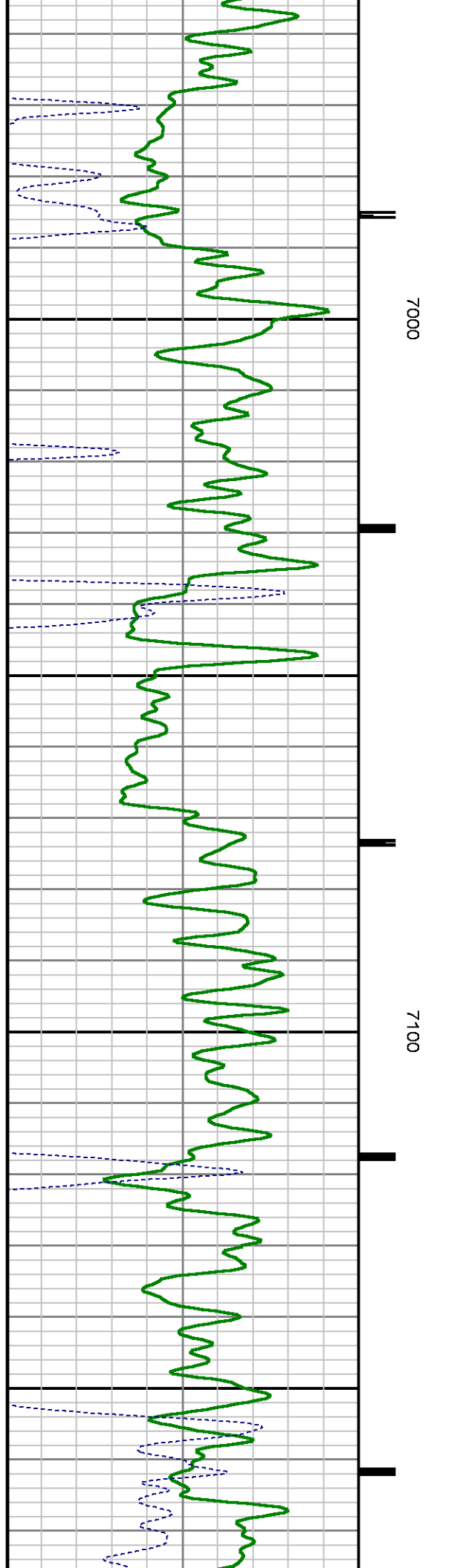
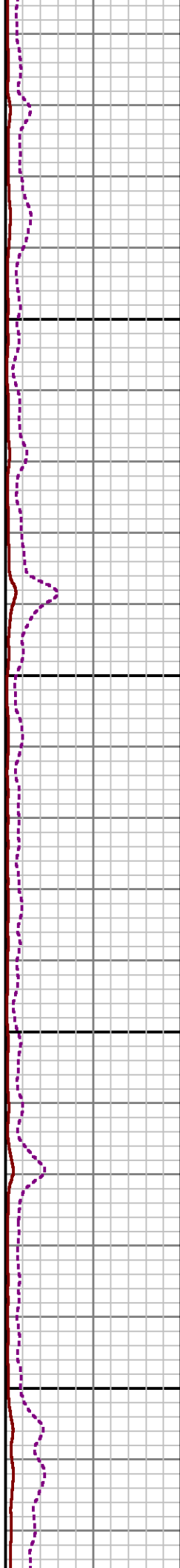
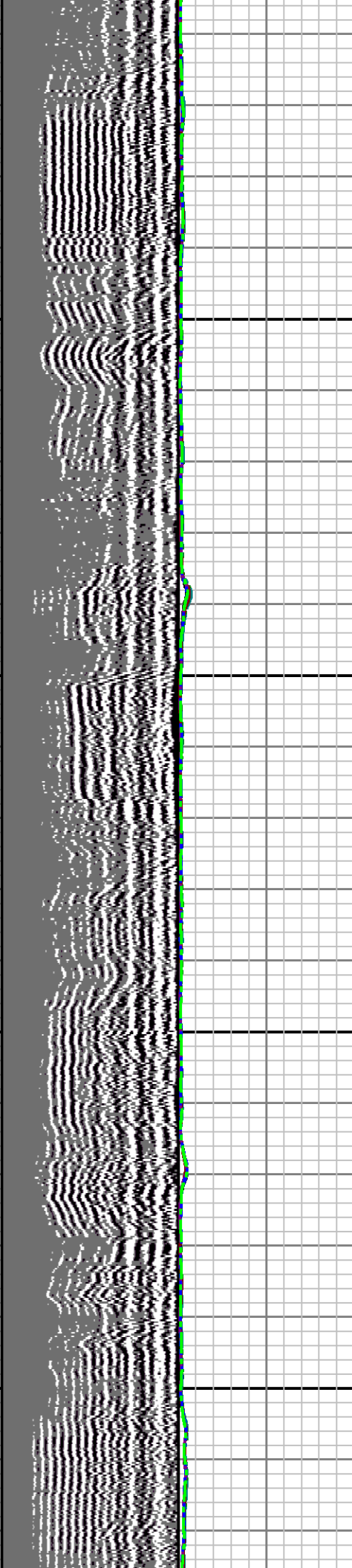


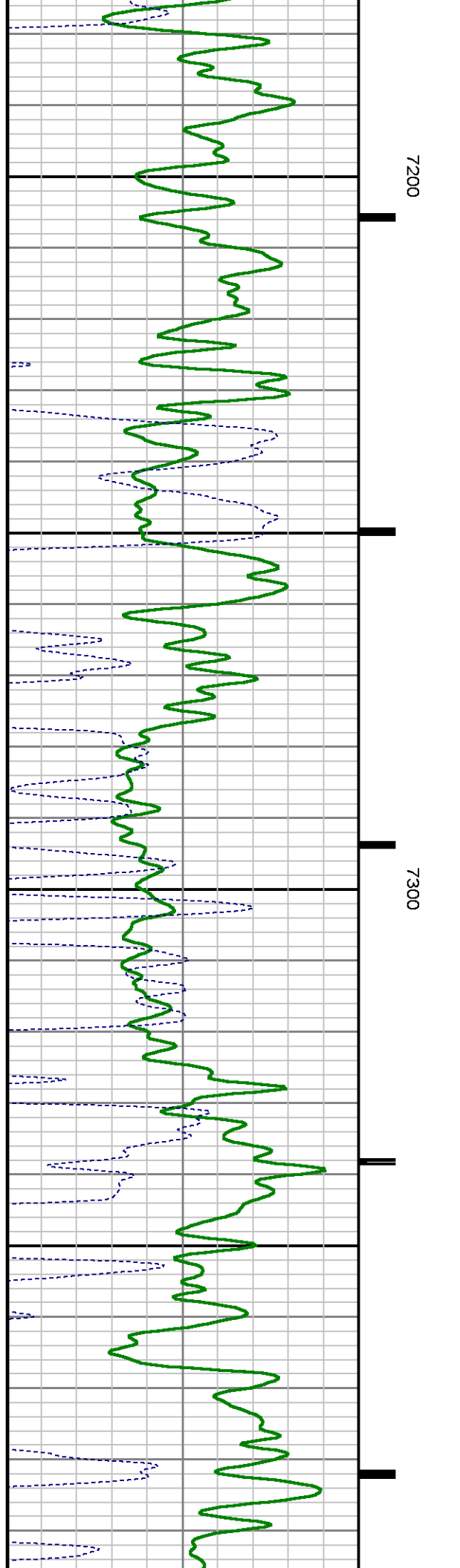
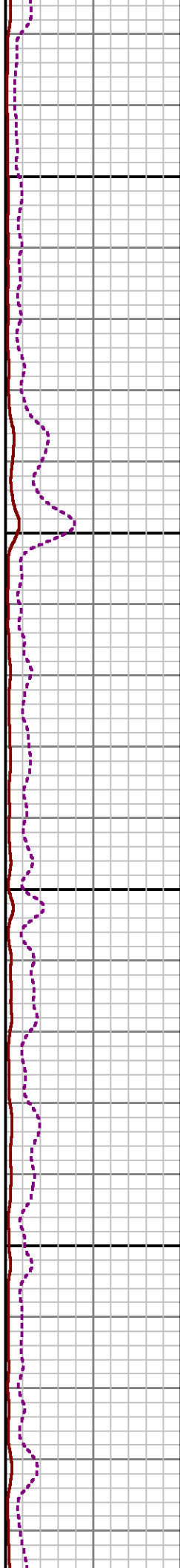
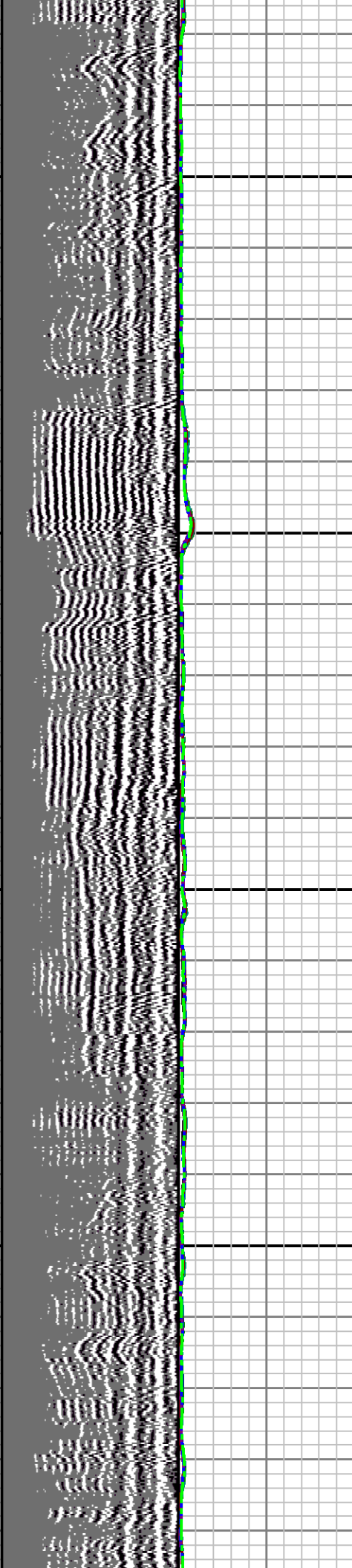


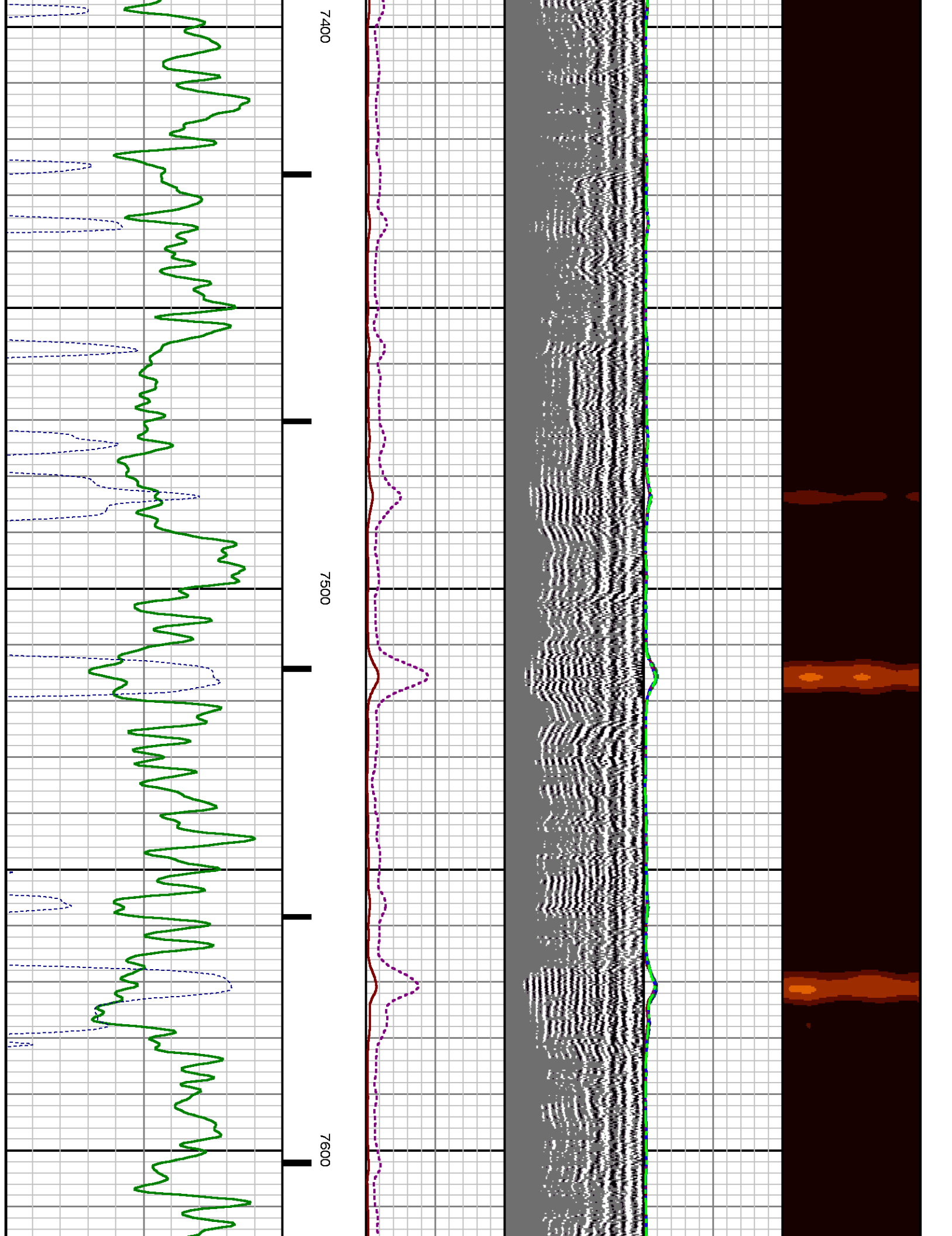


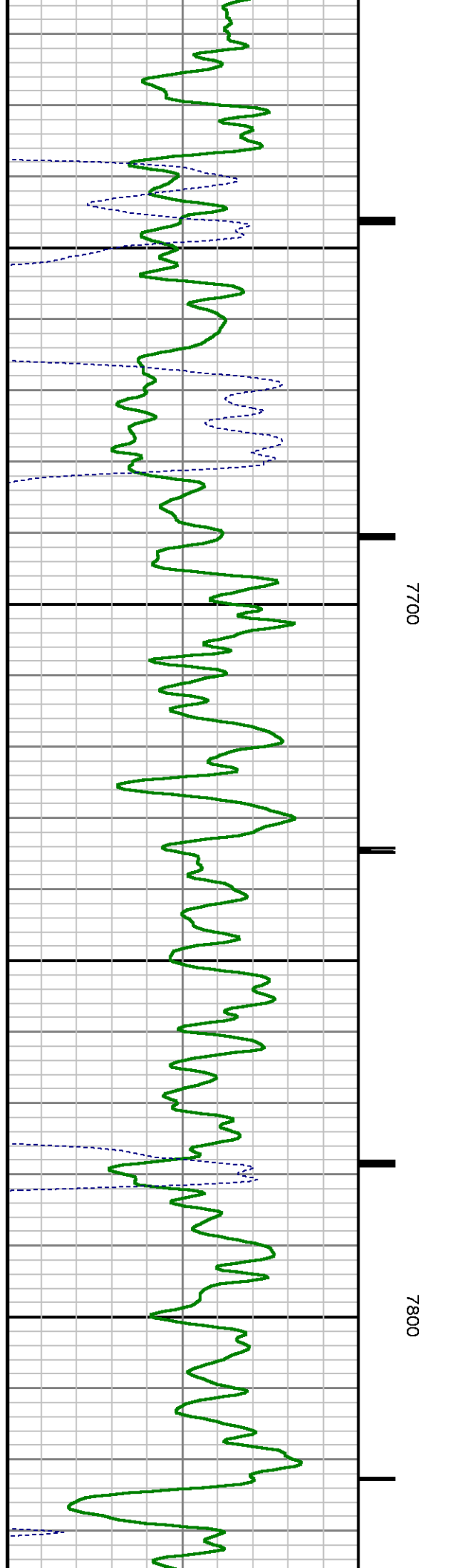
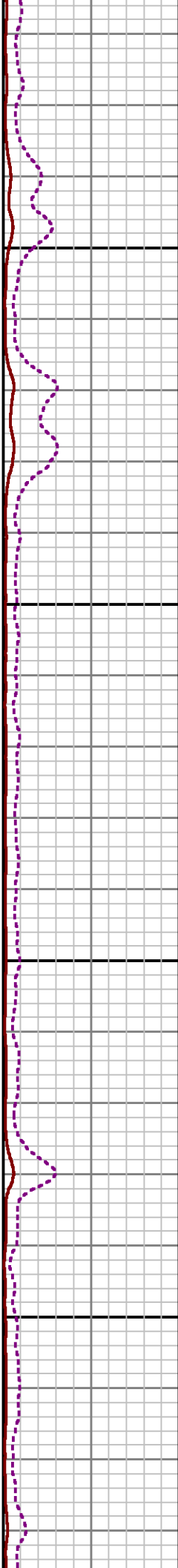
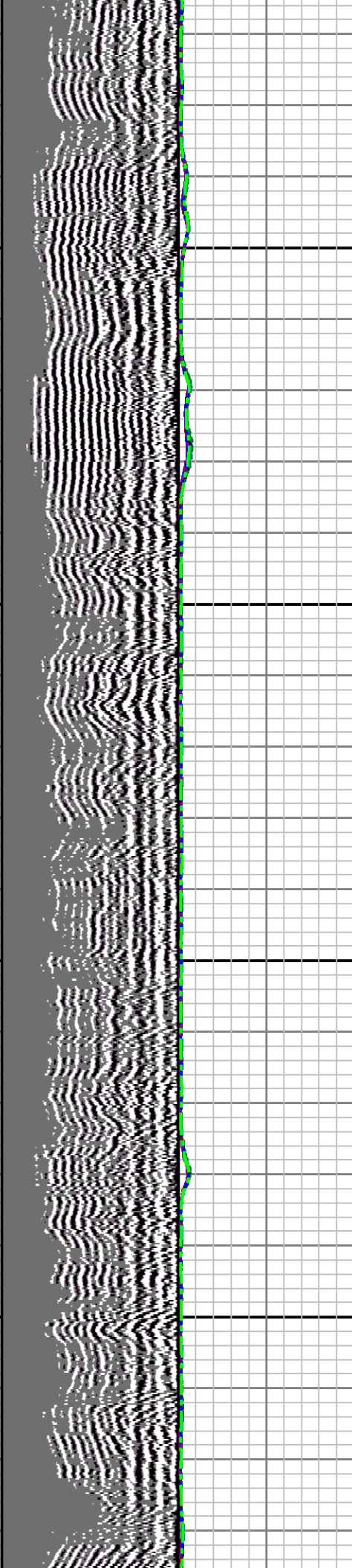


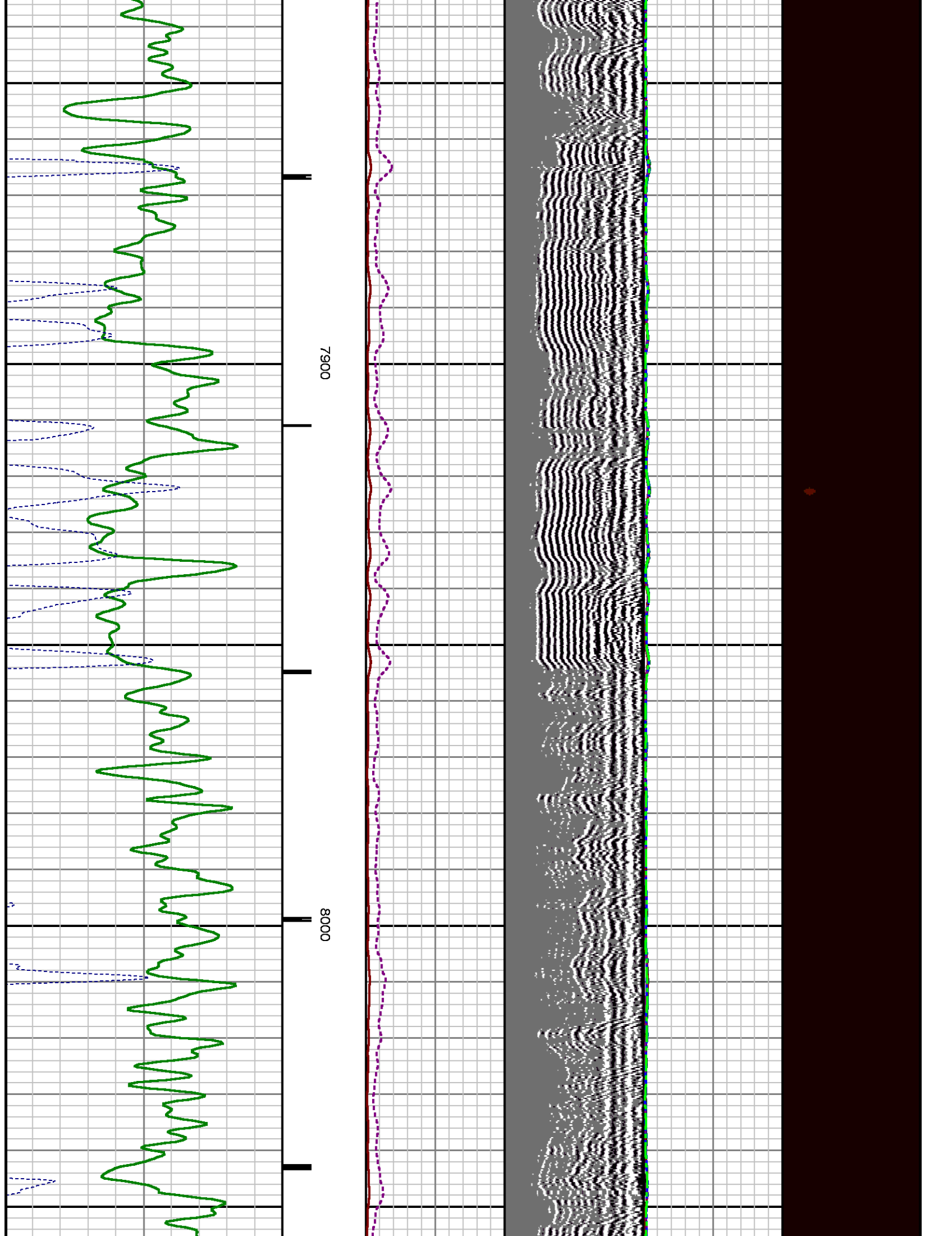


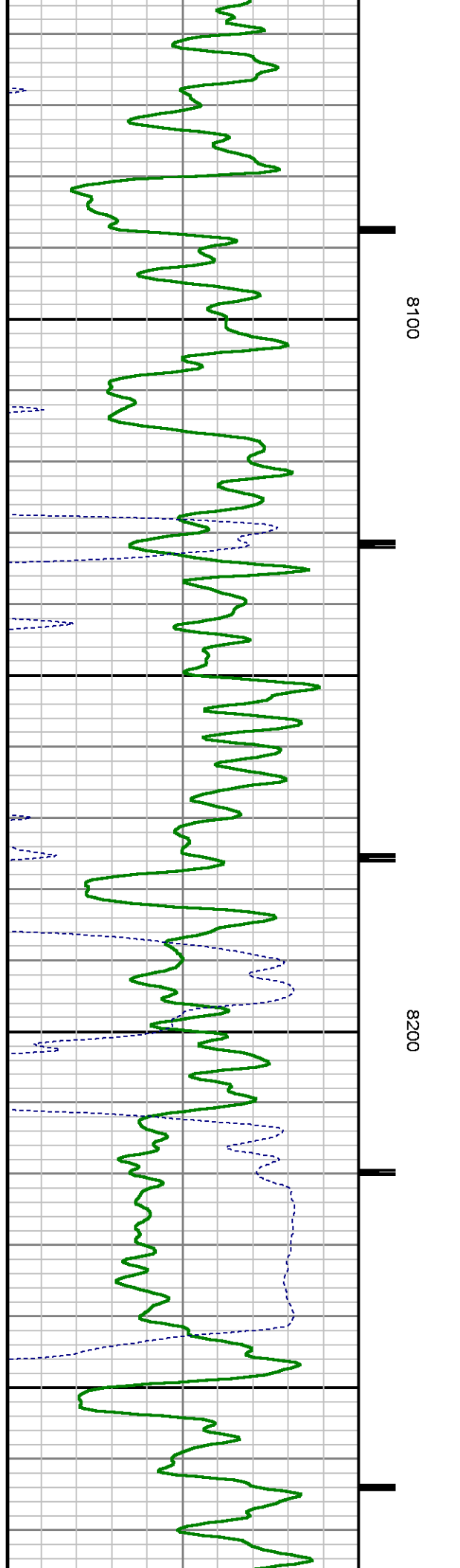
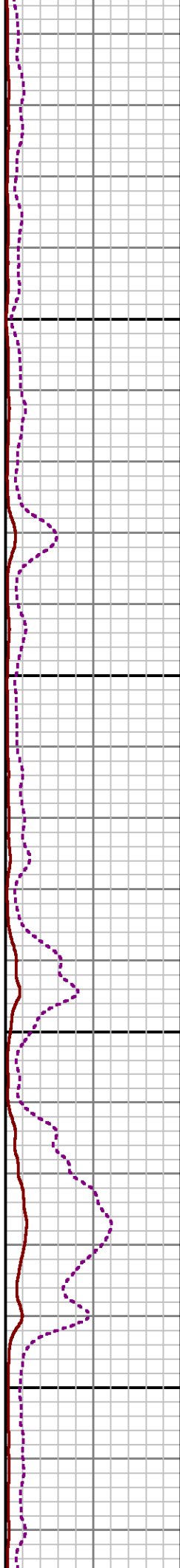
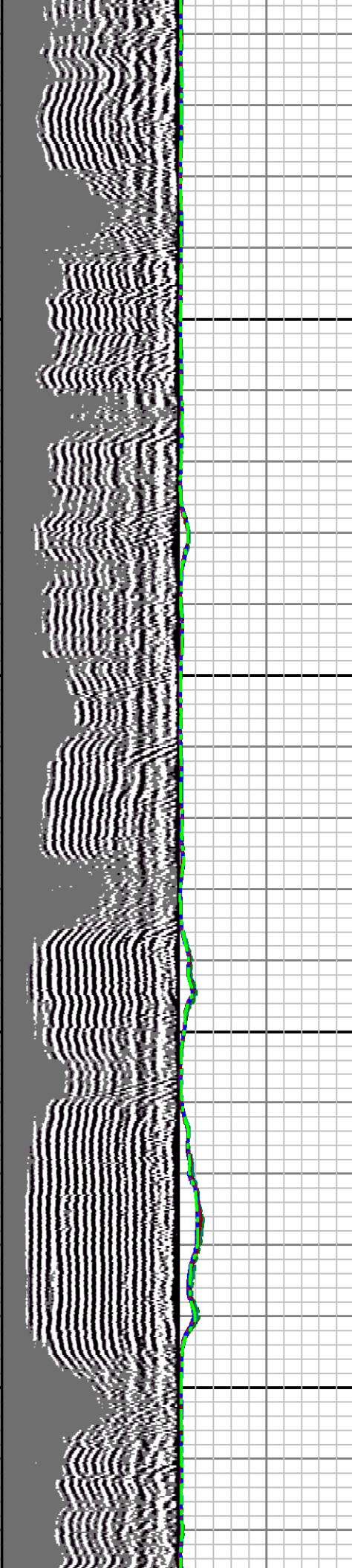


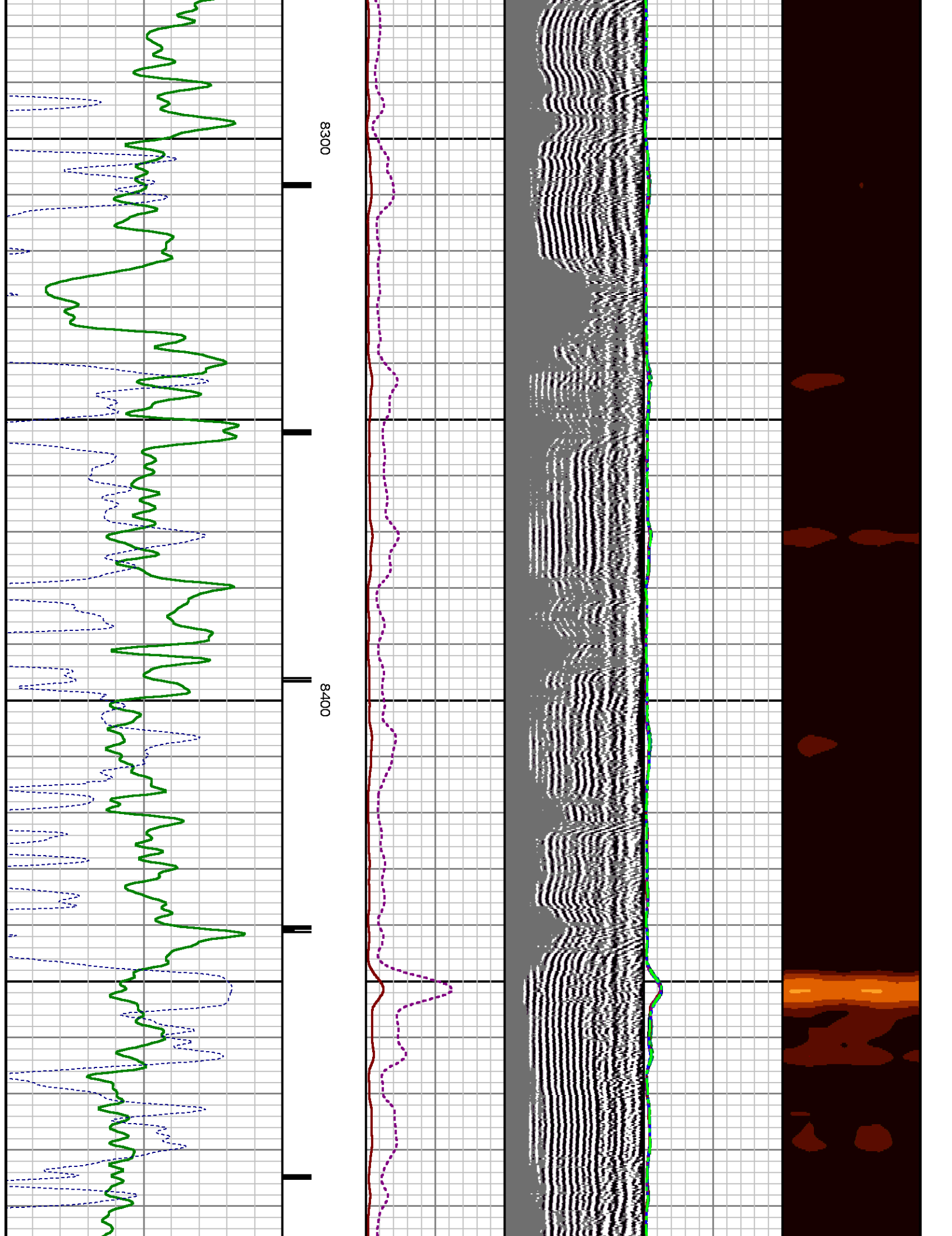


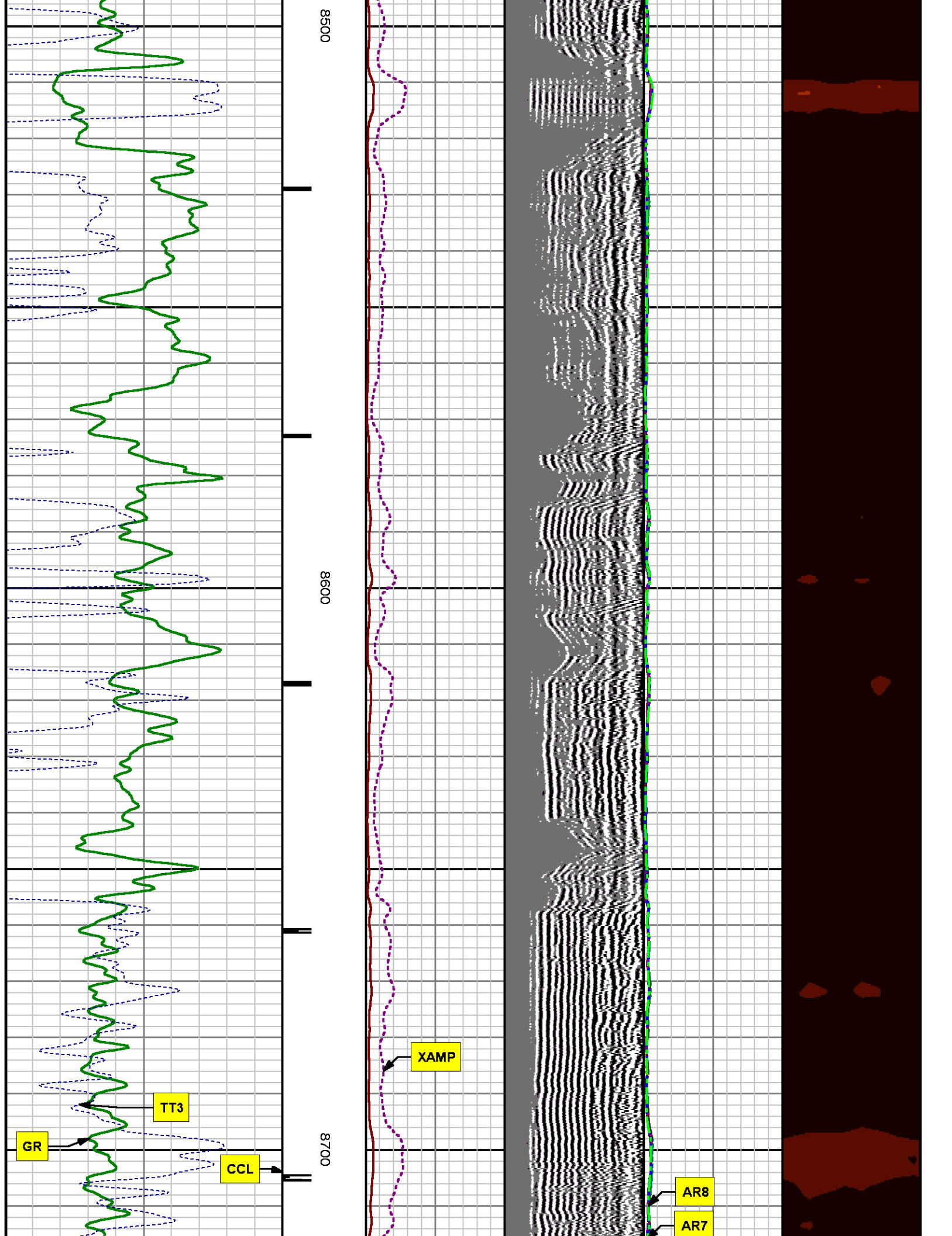


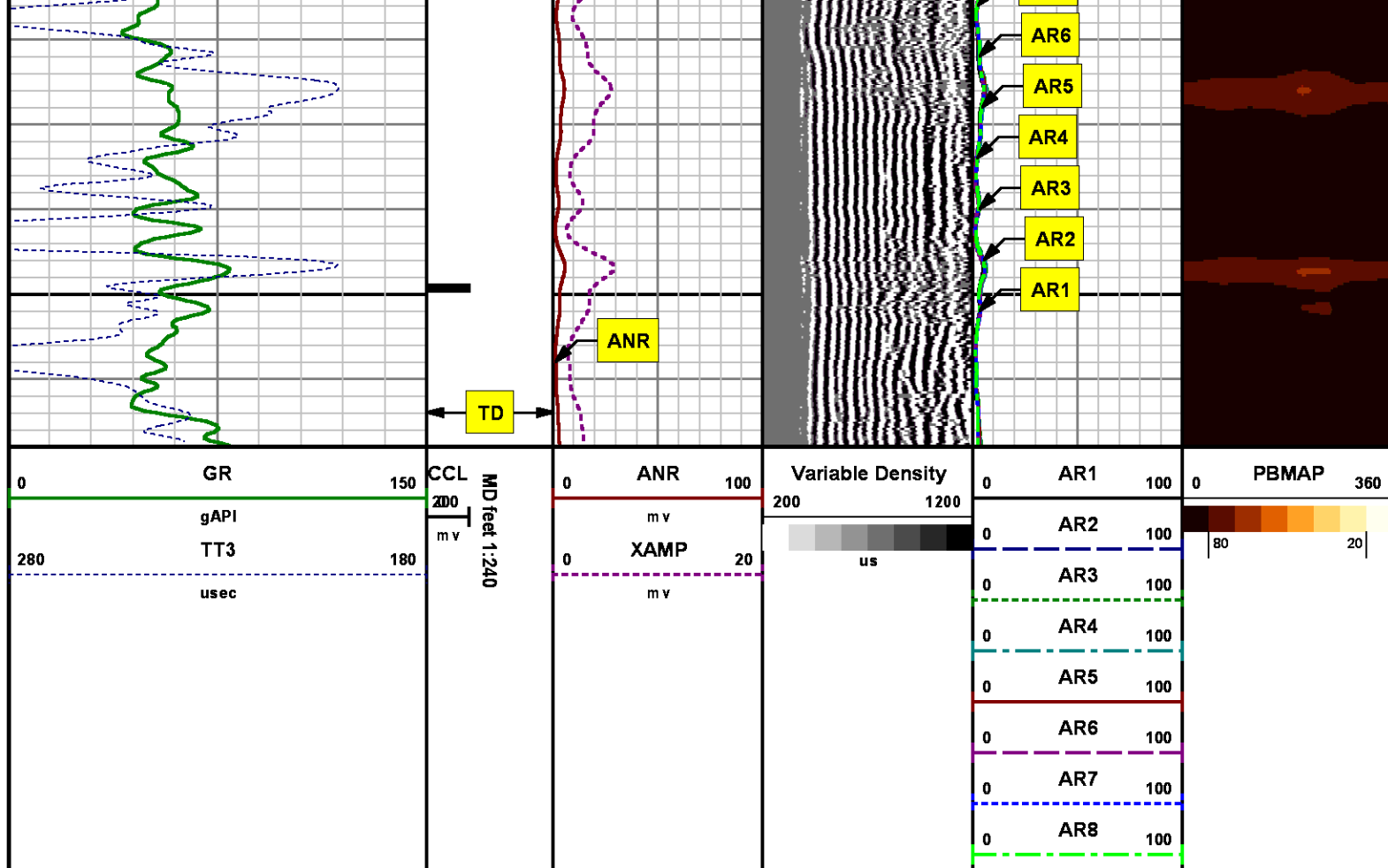












*REPEAT SECTION
0 PSI*

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	8462.409	8787.659
RAL	Amp Gate Start Near	195.000	usec	8462.409	8787.659
RAL	Amp Gate Start Radial	195.000	usec	8462.409	8787.659
RAL	Amp Gate Width Far	25.000	usec	8462.409	8787.659
RAL	Amp Gate Width Near	25.000	usec	8462.409	8787.659
RAL	Amp Gate Width Radial	25.000	usec	8462.409	8787.659
RAL	casing od	4.500	inches	8462.409	8787.659
RAL	casing wt	11.600	lbm/ft	8462.409	8787.659
RAL	FB Start Far	291.900	usec	8462.409	8787.659
RAL	FB Start Near	180.000	usec	8462.409	8787.659

RAL	FB Start Radial	180.000	usec	8462.409	8787.659
RAL	FB Thresh Far	10.000	mv	8462.409	8787.659
RAL	FB Thresh Near	4.000	mv	8462.409	8787.659
RAL	FB Thresh Radial	4.000	mv	8462.409	8787.659
RAL	Fluid Travel Time	200.000	usec/ft	8462.409	8787.659

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
		ACAL	ANR	AR1	AR2	AR3	AR4
1426XA	-12.360	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 by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

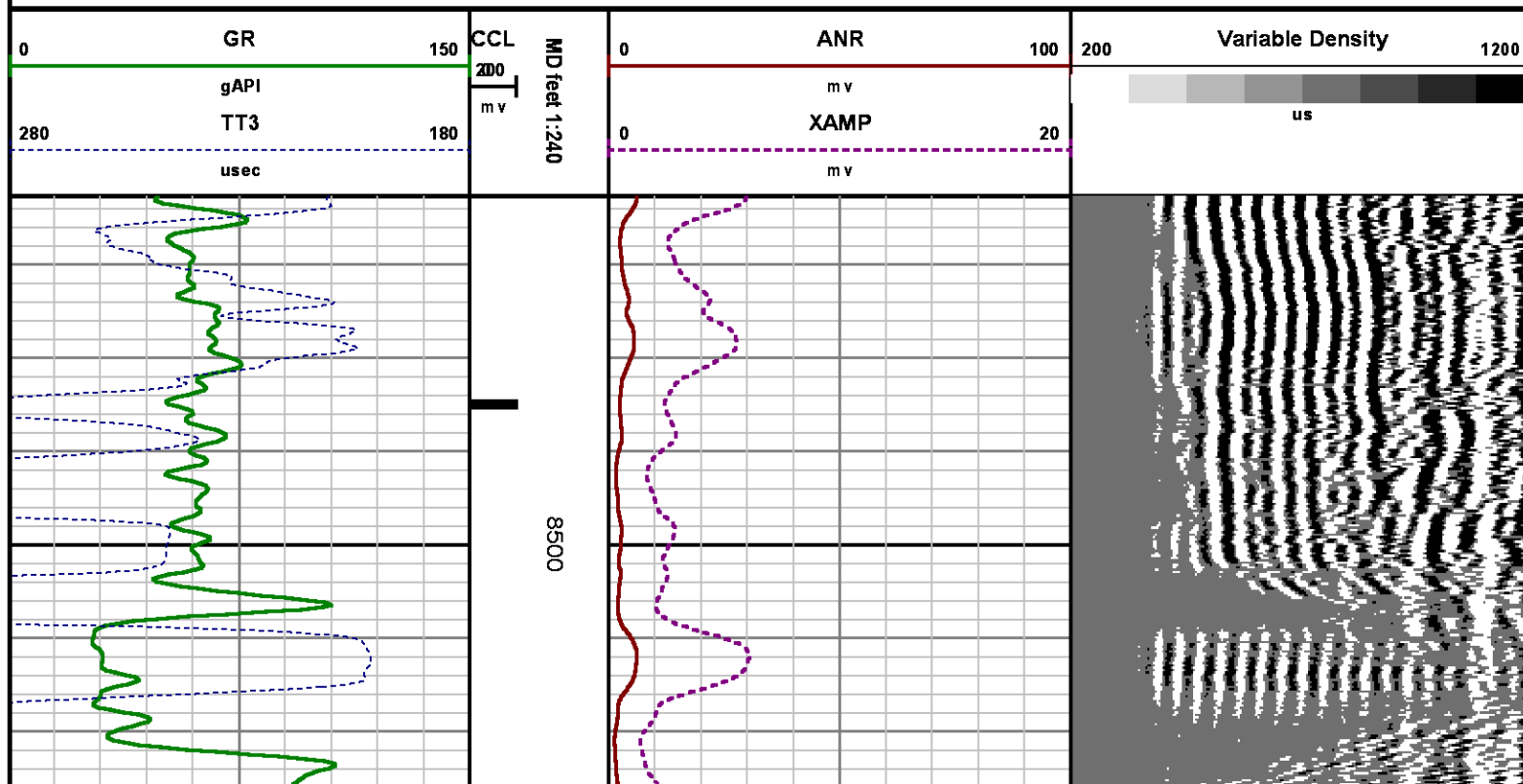
Well : SAVAGE RWF 344-25

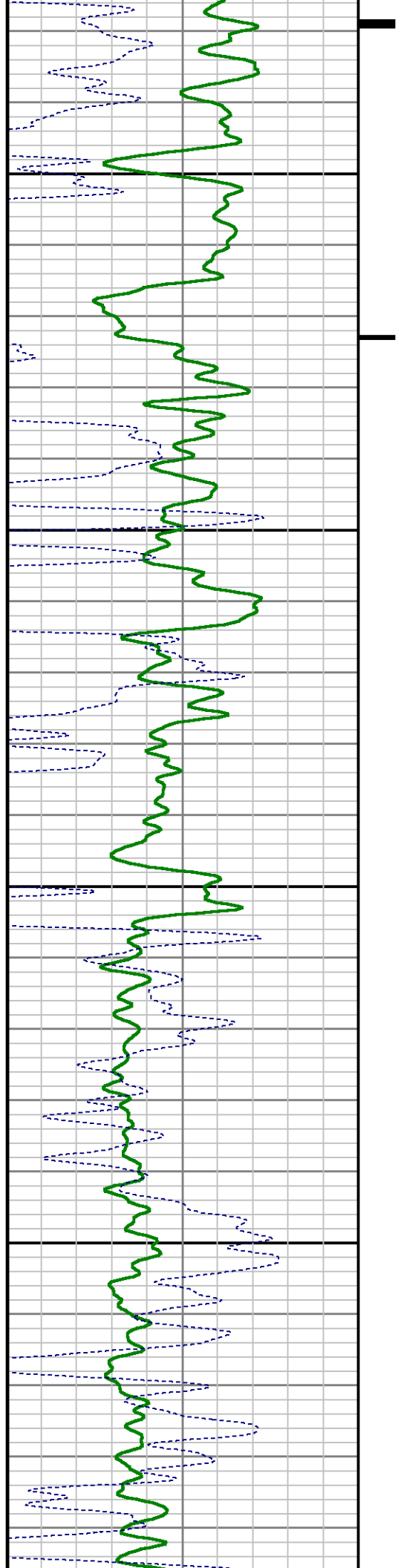
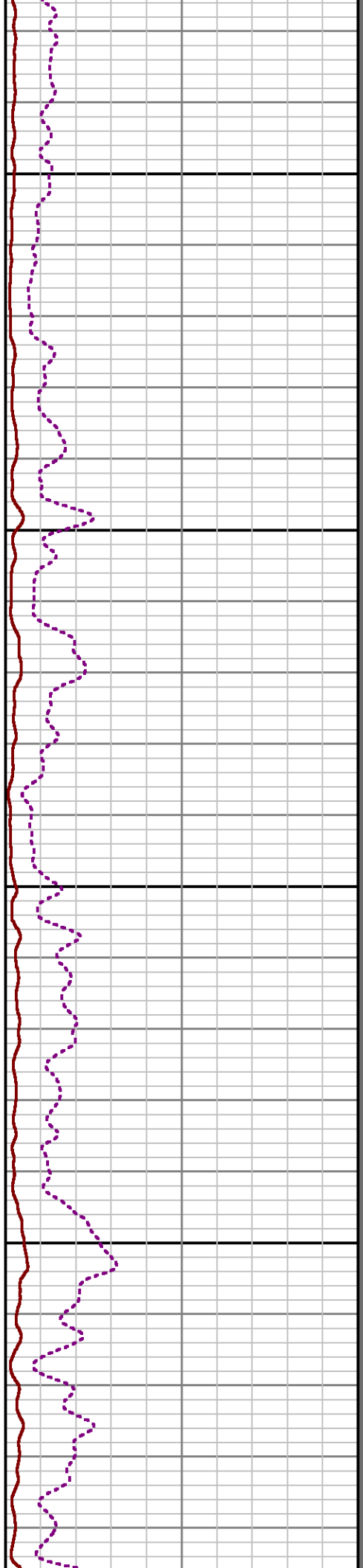
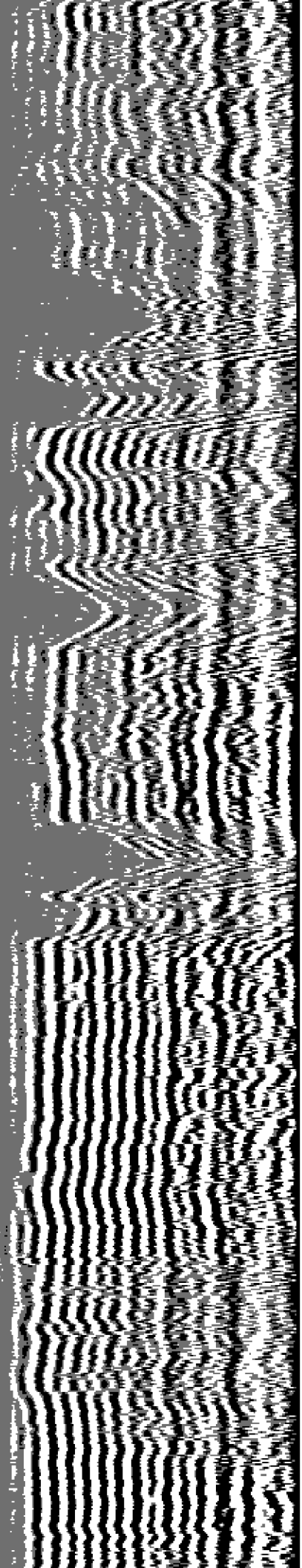
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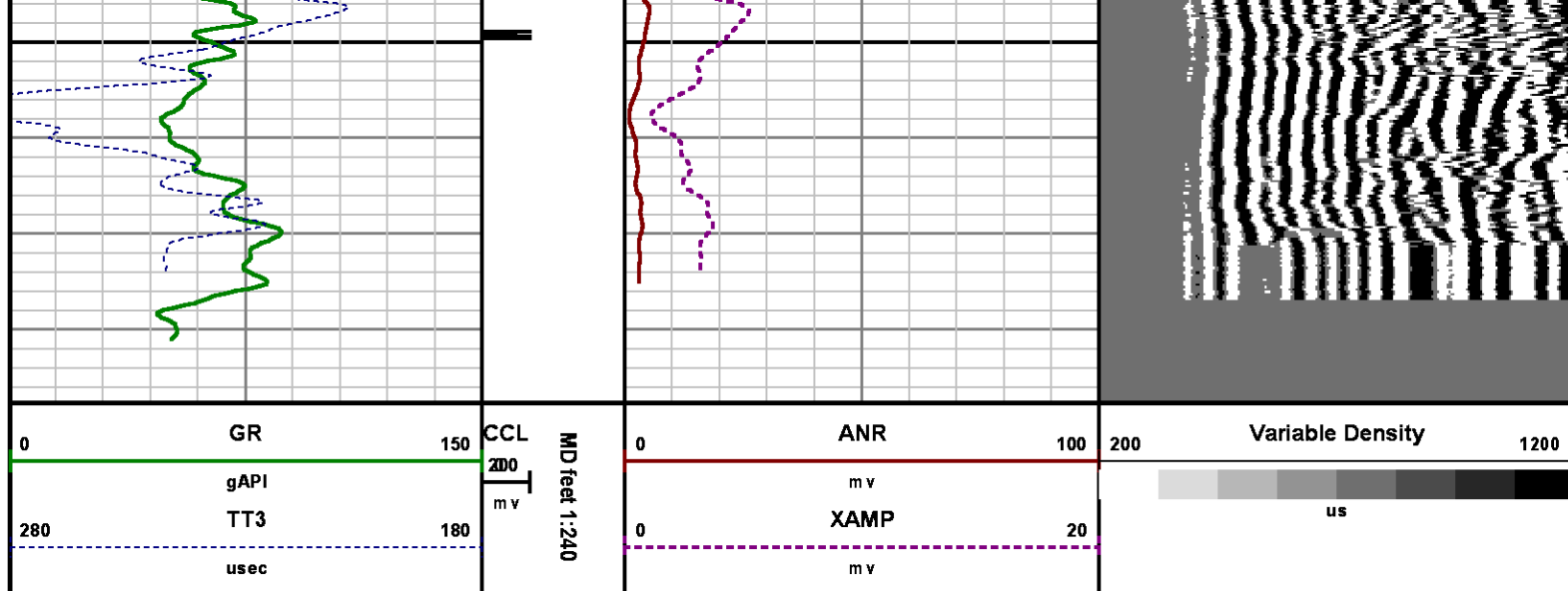
Mode : PlotMgr 5.4.504

Interval : 8462.66 - 8787.66 feet UP

Created : 8/29/2014 1:39:58 PM







CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\496AU29_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Aug 29 13:06:57 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: AU29

Tool Delay [usec] -53.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	218	216	30	166	25	-0.157	100.00	0.31
3 Ft. Receiver	217	216	30	166	25	2.432	100.00	0.30
5 Ft. Receiver	326	325	30	244	25	0.126	150.00	0.34
Radial #1	217	216	30	166	25	1.708	100.00	0.31
Radial #2	216	216	30	166	25	1.524	100.00	0.30
Radial #3	216	216	30	166	25	2.506	100.00	0.30
Radial #4	216	216	30	166	25	2.286	100.00	0.30
Radial #5	216	216	30	166	25	2.035	100.00	0.30
Radial #6	217	216	30	166	25	2.053	100.00	0.31
Radial #7	217	216	30	166	25	1.714	100.00	0.31
Radial #8	219	216	30	166	25	2.058	100.00	0.31

RALSHP

Wellsite Calibration: C:\case\calver\RALFLD\496AU29 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Aug 29 13:08:50 2014

TOOL SERIES: 1426XA

ASSET:

496

SEQ: AU29

Tool Delay
[usec] -53.00Casing OD
in 4.50Casing Wt
lbm/ft 11.60Casing ID
in 4.00

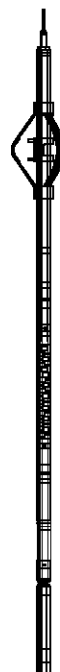
RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	0.047	0.000	1.00	100.000
3 Ft. Receiver	195	25	2.335			
5 Ft. Receiver	305	25	3.409			
Radial #1	195	25	1.727			
Radial #2	195	25	1.700			
Radial #3	195	25	2.083			
Radial #4	195	25	2.143			
Radial #5	195	25	2.273			
Radial #6	195	25	2.310			
Radial #7	195	25	1.810			
Radial #8	195	25	1.744			

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



21.81'
 XMIT 15.62'
 NEAR RCVR 12.54'
 FAR RCVR 10.62'
 CCL 8.92'

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



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 344-25		
Field	RULISON		
County	GARFIELD	State	COLORADO

File No:	CH089884
API No:	05045219980000

Location		Elevations	
SHL: 1147' FSL & 1381' FEL		KB	6260 ft
BHL: 840' FSL & 917' FEL (SESE)		DF	
		GL	6234 ft
SEC	25	TWP	6S
		RGE	94S

25 6S 94W
RWF 43-25 PAD
NABORS 577