



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: WPX ENERGY

CH090685 FEDERAL NER 424-32

API No: RULISON

05045217660000 GARFIELD State COLORADO

Location Other Services

32 6S 93W SHL: 117' FWL x 2583' FWL SEC 5 7S 93W RPM

RU 23-5 PAD BHL: 649' FSL x 2229' FWL SEC 32 6S 93W

NABORS 676 SEC 32 TWP 6S RGE 93W

Permanent Datum GL Elevation 7603 ft

Log Measured From KB 26 ft Above P. D.

Drill Measured From KELLY BUSHING KB 7629 ft DF GL 7603 ft

Date	22/SEP/14	
Run	ONE	
Service Order	US090685	
Depth Driller	10043 ft	
Depth Logger	10031 ft	
Bottom Logged Interval	10021 ft	
Top Logged Interval	26 ft	
Time Started	1600	
Time Finished	2000	
Operator Rig Time	4 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	105 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	65 fpm	
Maximum Recorded Temperature	250 degF	
Reference Log	NONE	
Reference Log Date	NA	
Equipment No.	44271	GRAND JCT
Recorded By	FLOYD RENEAU	
Witnessed By	JEFF DUCY	

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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	1106 ft
8.75 in	1106 ft	10043 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			26 ft	1106 ft
4.5 in	11.6 lbm/ft	I-80	26 ft	10043 ft

Remarks
All data on this log is shifted using the CCL curve to put the wellhead (top CCL mark) on depth with ground level elevation at the client's request.
The amount of linear shift is -1.5 feet.
Logged with zero PSI at wellhead.
BHT = 250°F
SJ = 6527'-6550'

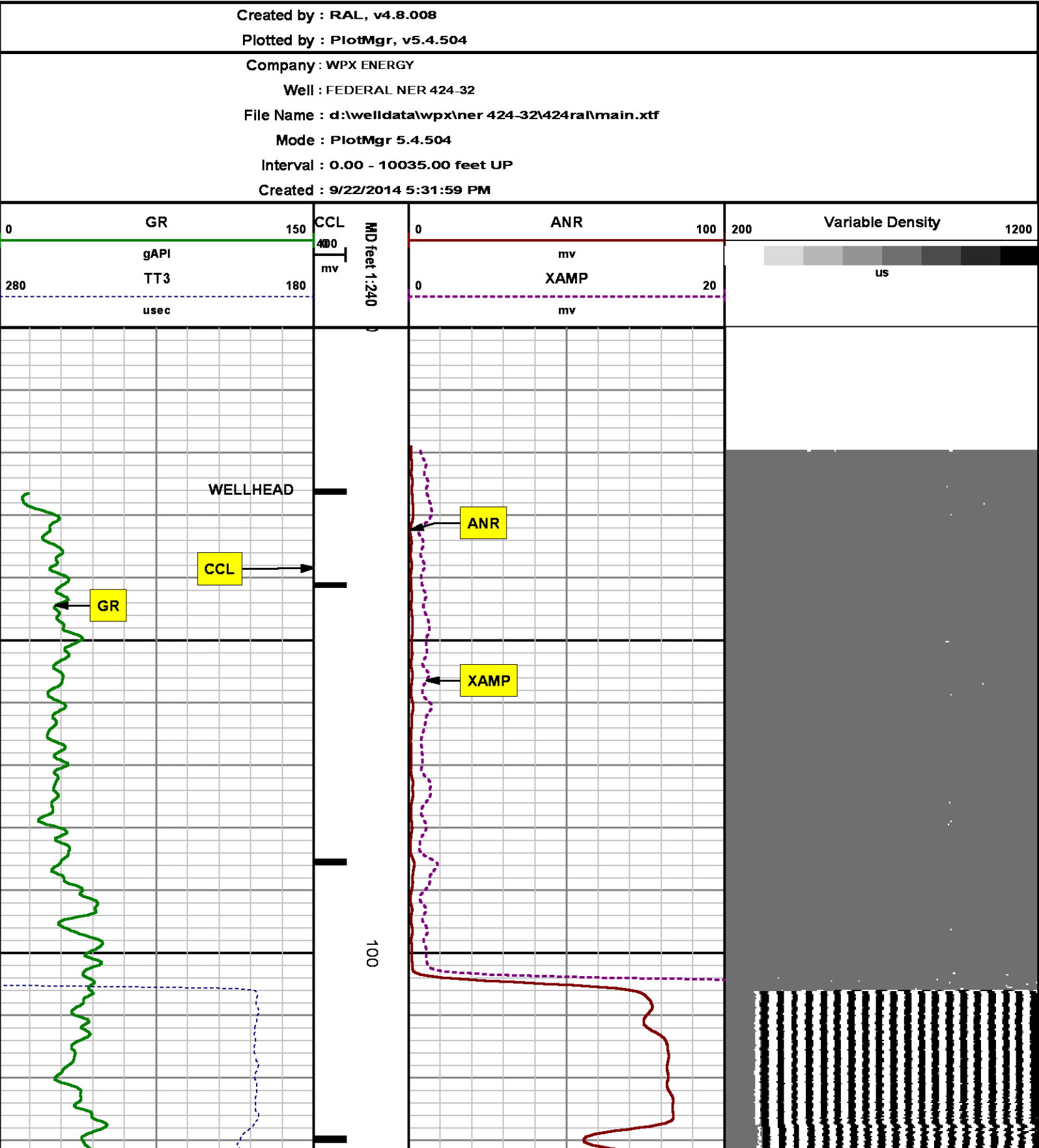
Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10218496	CENT
1	1	GR/CCL	2459XA	10417457	CENT

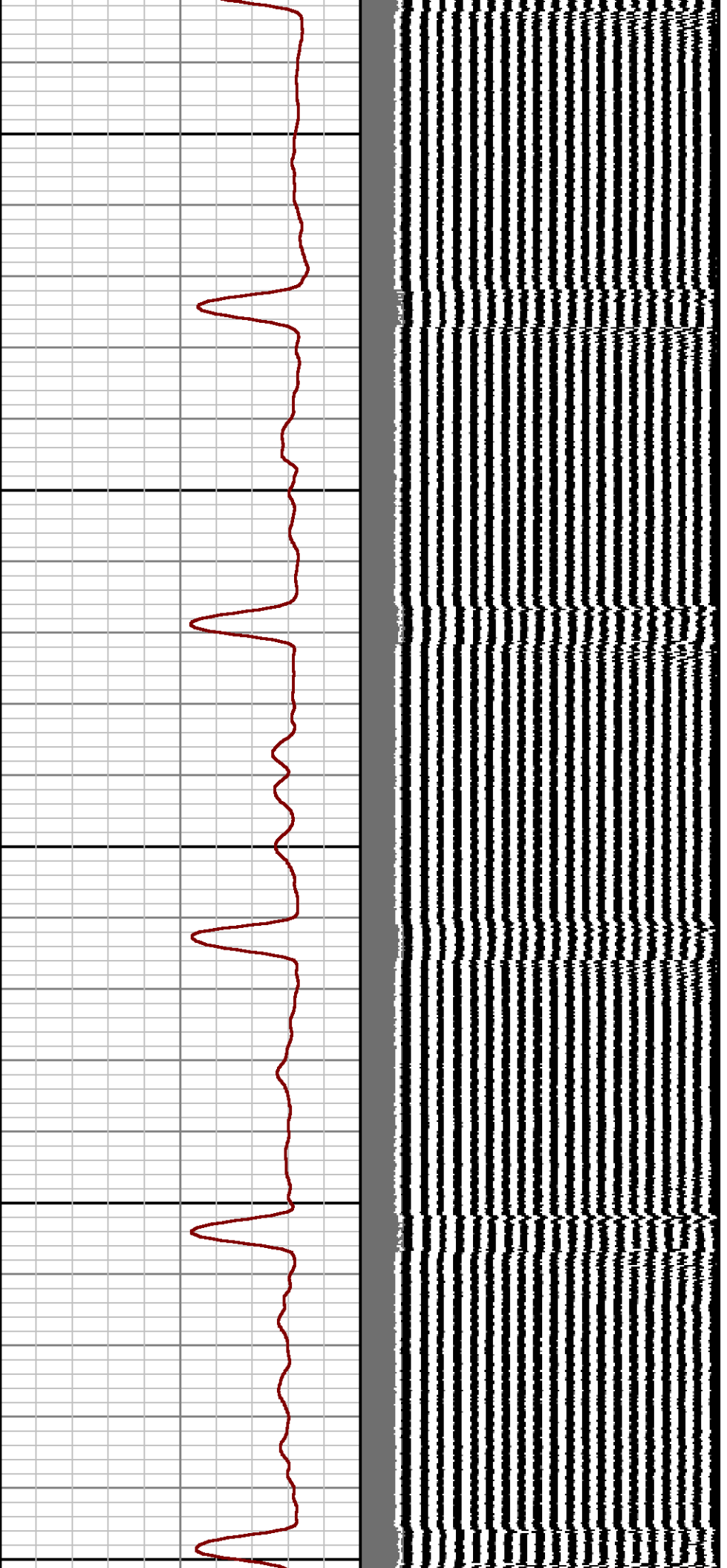
PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	35.312	10032.500
RAL	Amp Gate Start Near	195.000	usec	35.312	10032.500
RAL	Amp Gate Start Radial	195.000	usec	35.312	10032.500
RAL	Amp Gate Width Far	25.000	usec	35.312	10032.500
RAL	Amp Gate Width Near	25.000	usec	35.312	10032.500
RAL	Amp Gate Width Radial	25.000	usec	35.312	10032.500
RAL	casing od	4.500	inches	35.312	10032.500
RAL	casing wt	11.600	lbm/ft	35.312	10032.500
RAL	FB Start Far	291.900	usec	35.312	10032.500
RAL	FB Start Near	180.000	usec	35.312	10032.500
RAL	FB Start Radial	180.000	usec	35.312	10032.500
RAL	FB Thresh Far	10.000	mv	35.312	10032.500
RAL	FB Thresh Near	4.000	mv	35.312	10032.500
RAL	FB Thresh Radial	4.000	mv	35.312	10032.500
RAL	Fluid Travel Time	200.000	usec/ft	35.312	10032.405

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

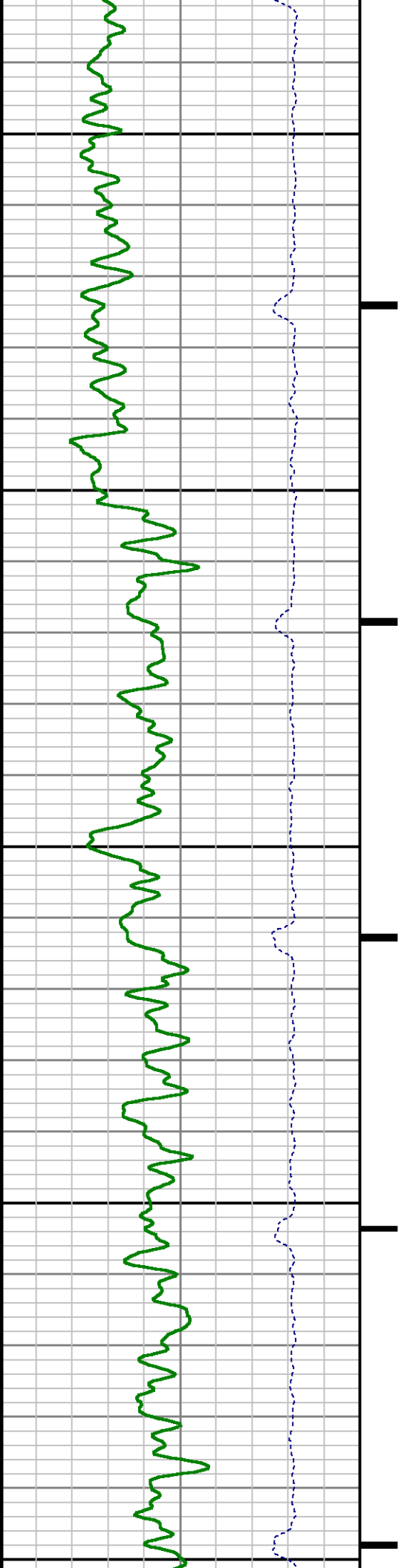
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-11.360	AFAR	SIG	TT5			
2459XA	-7.250	CCL					
2459XA	-5.390	GR					
2459XA	0.000	NEU					

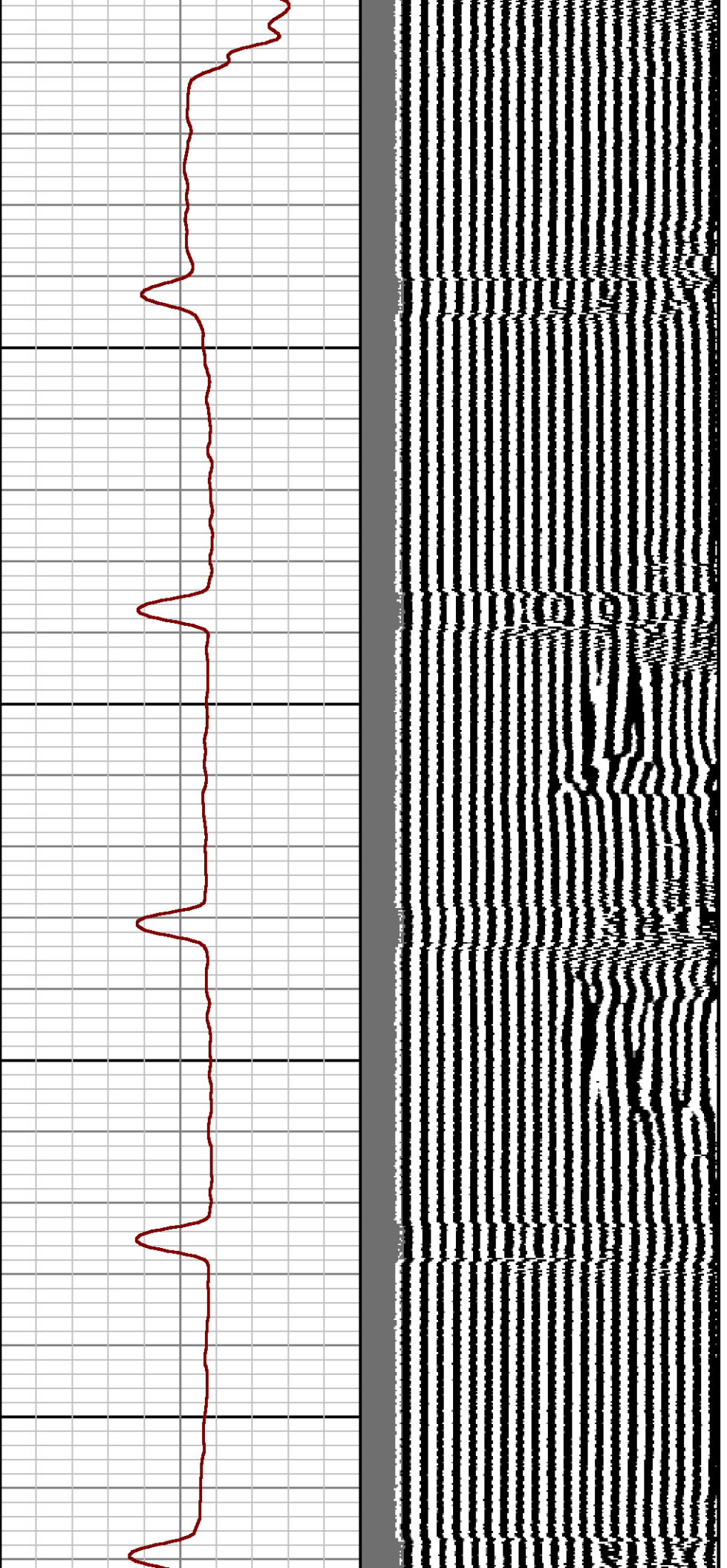




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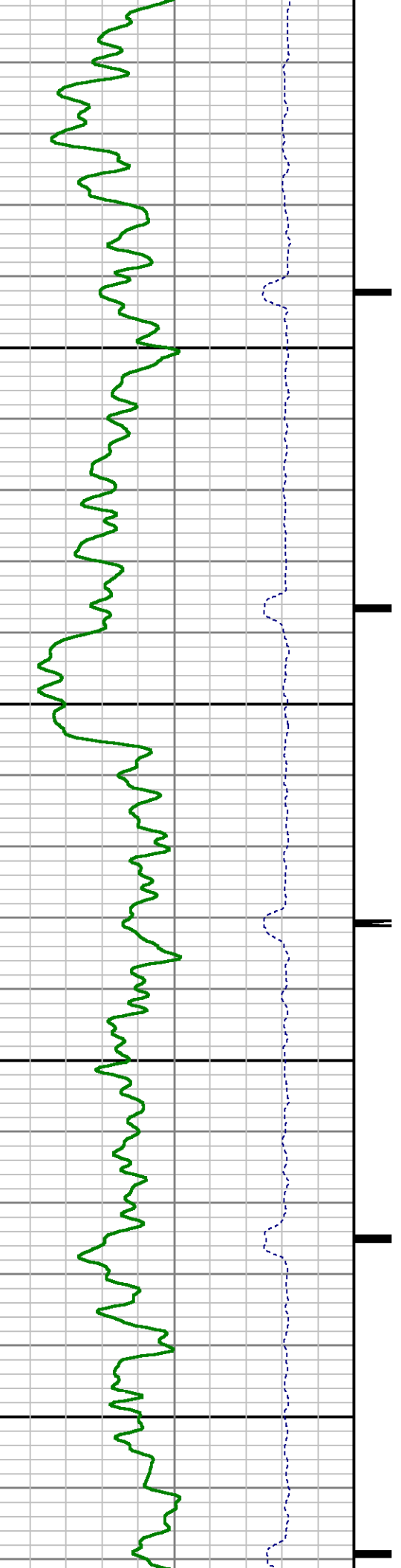
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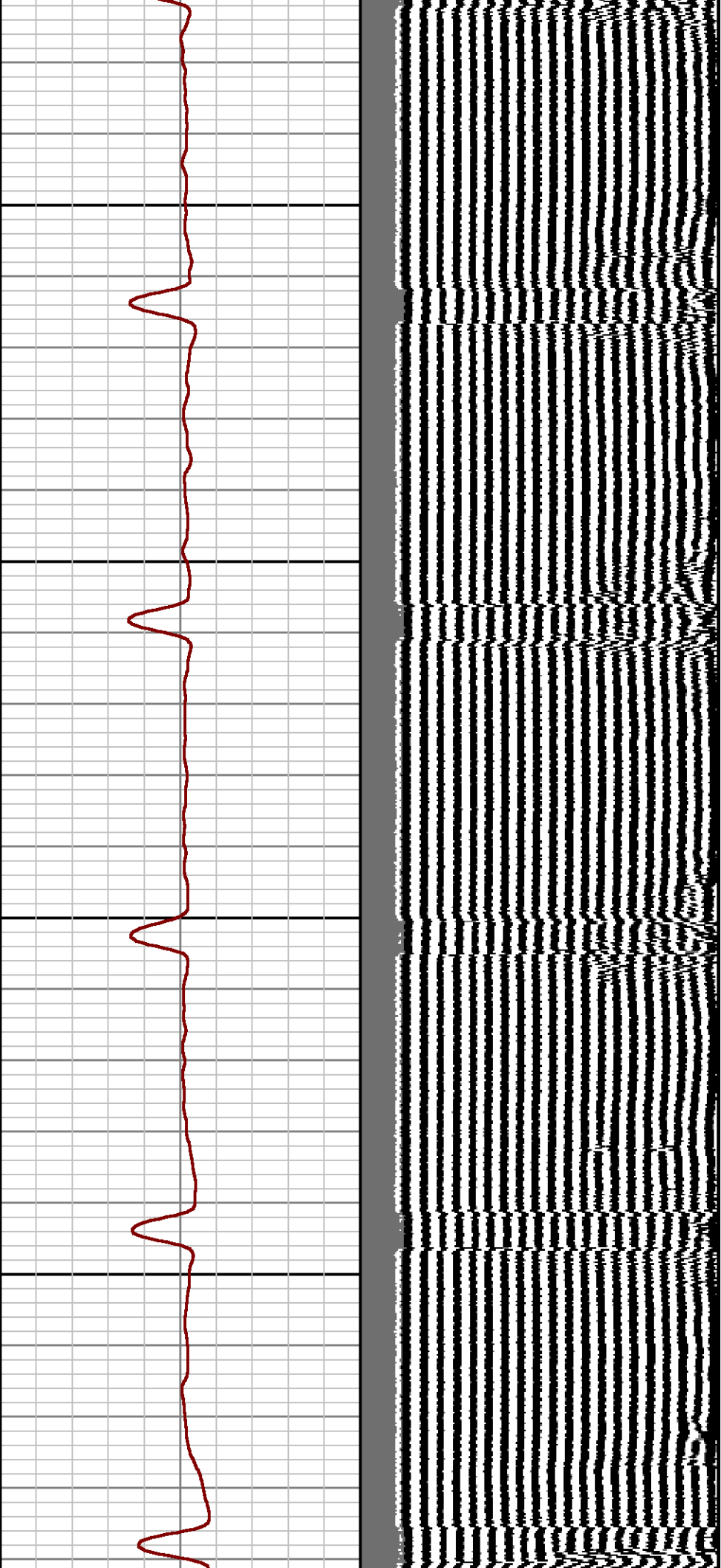




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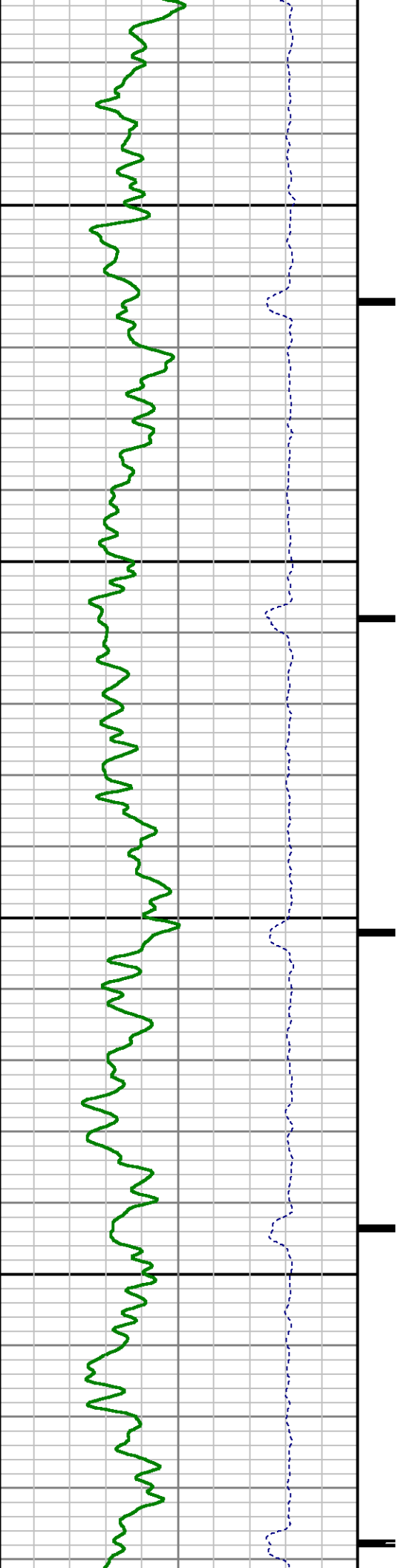
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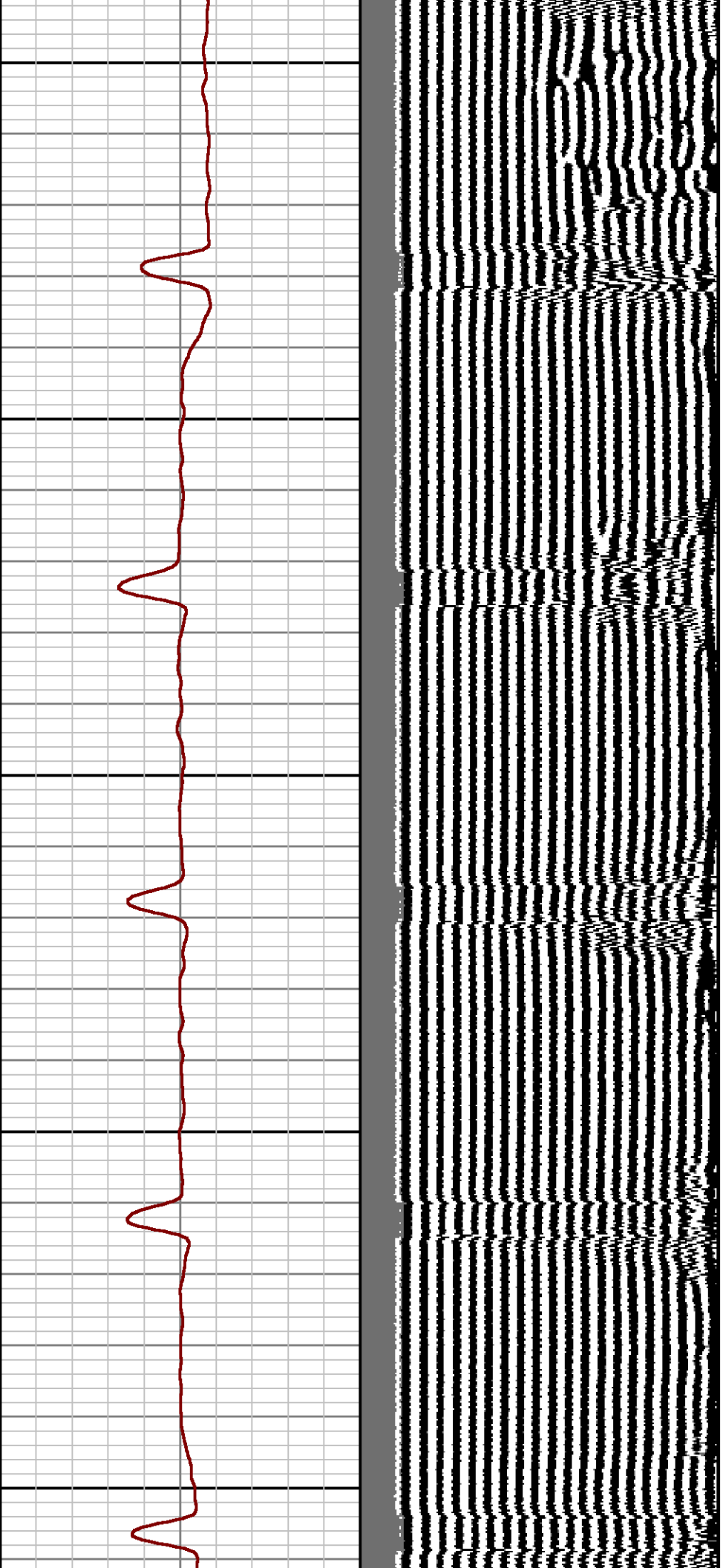




600

700

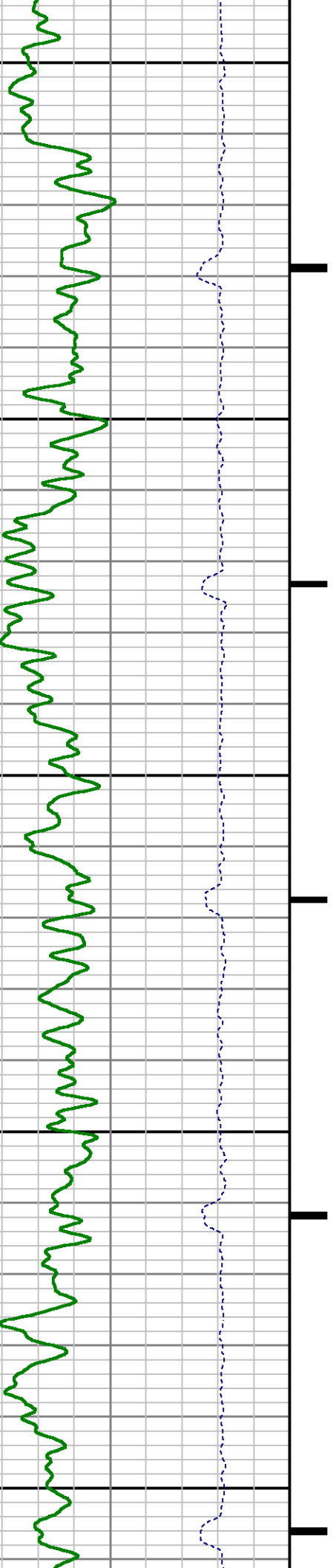


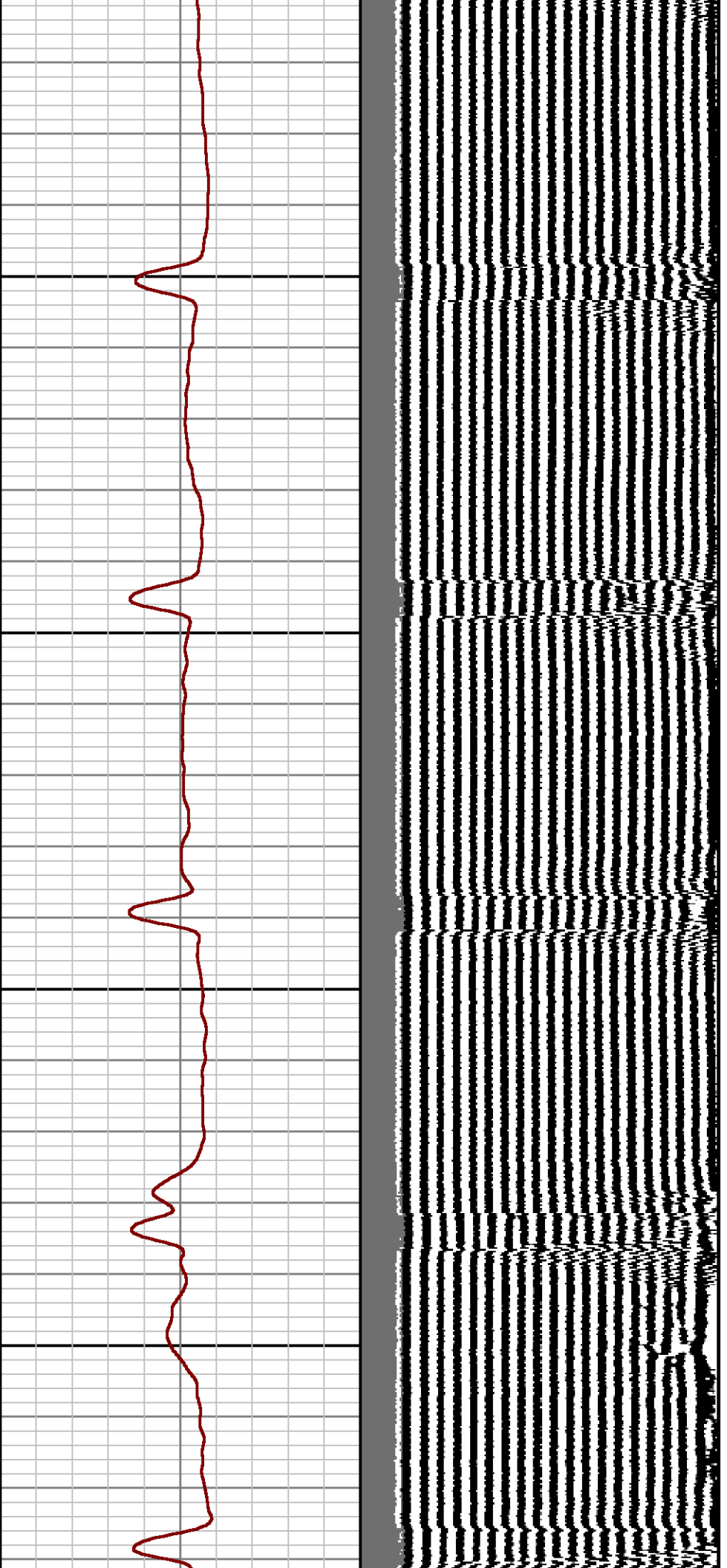


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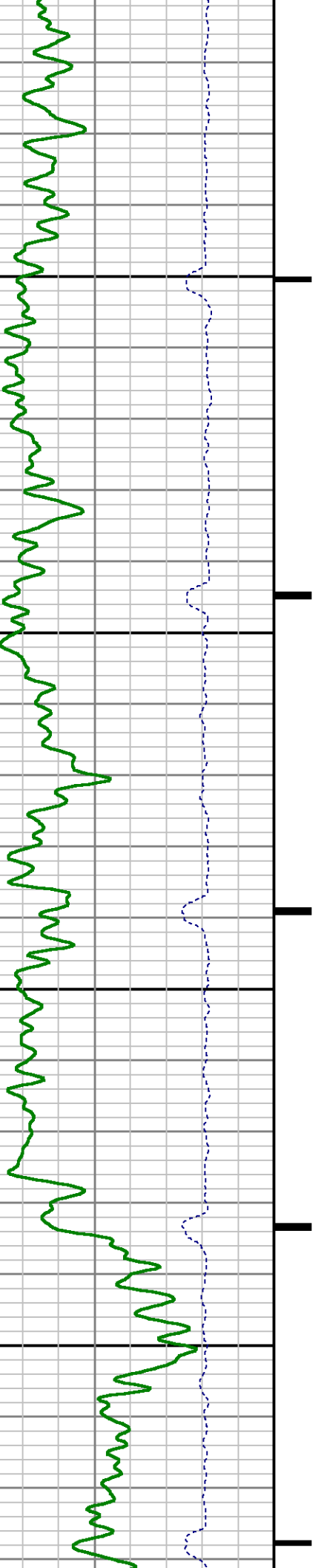
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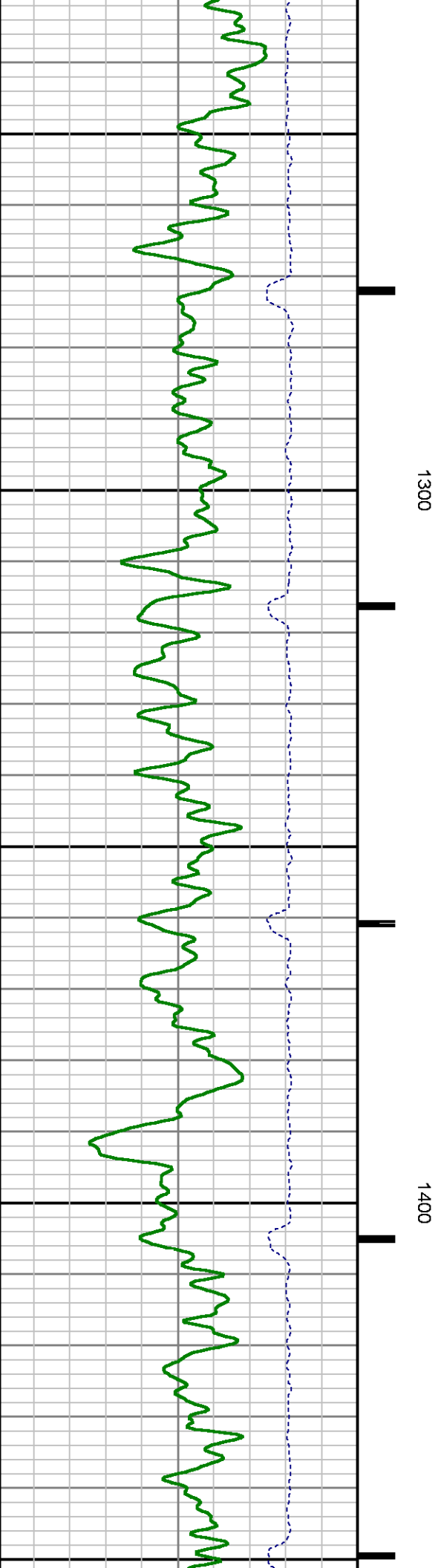
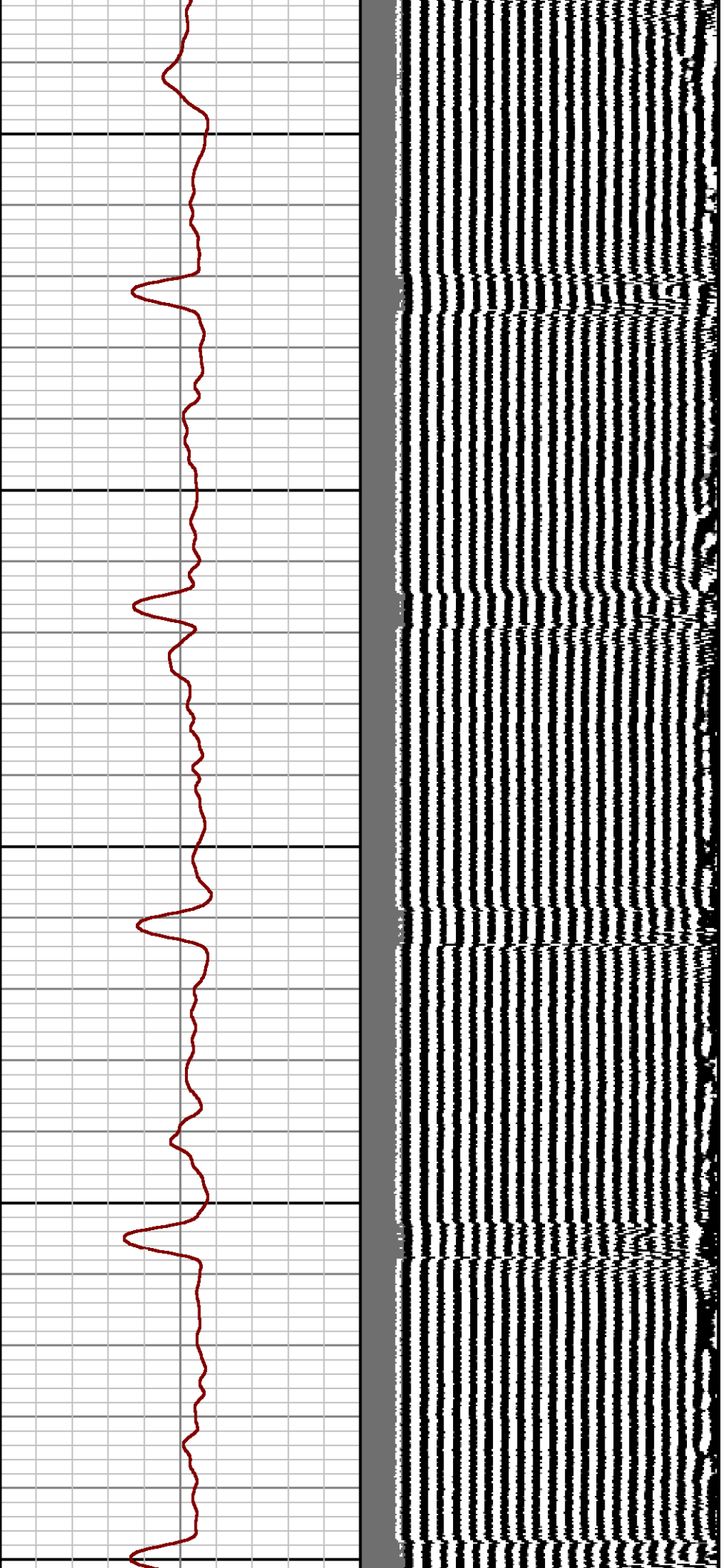


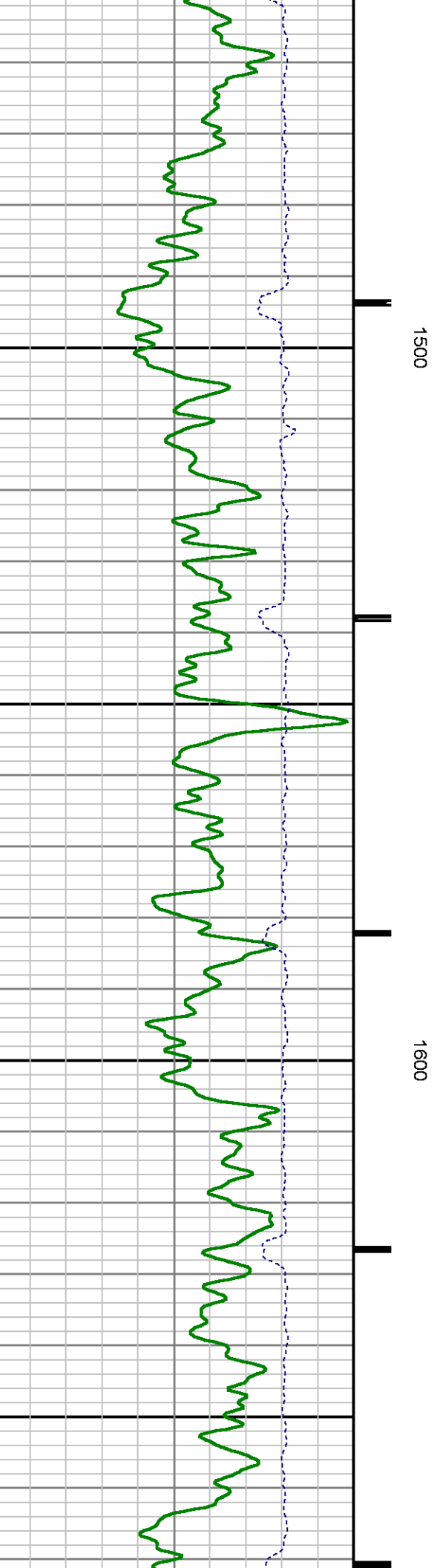
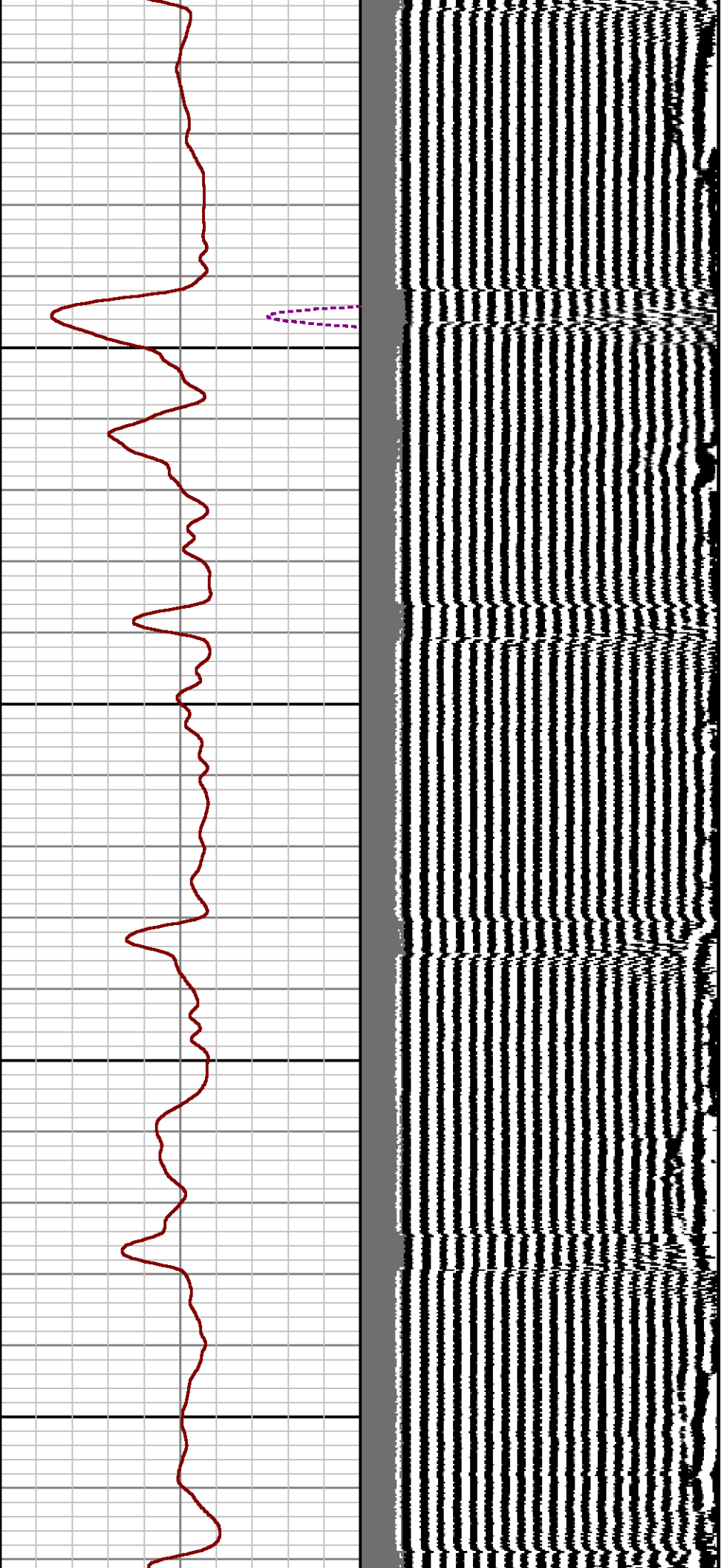


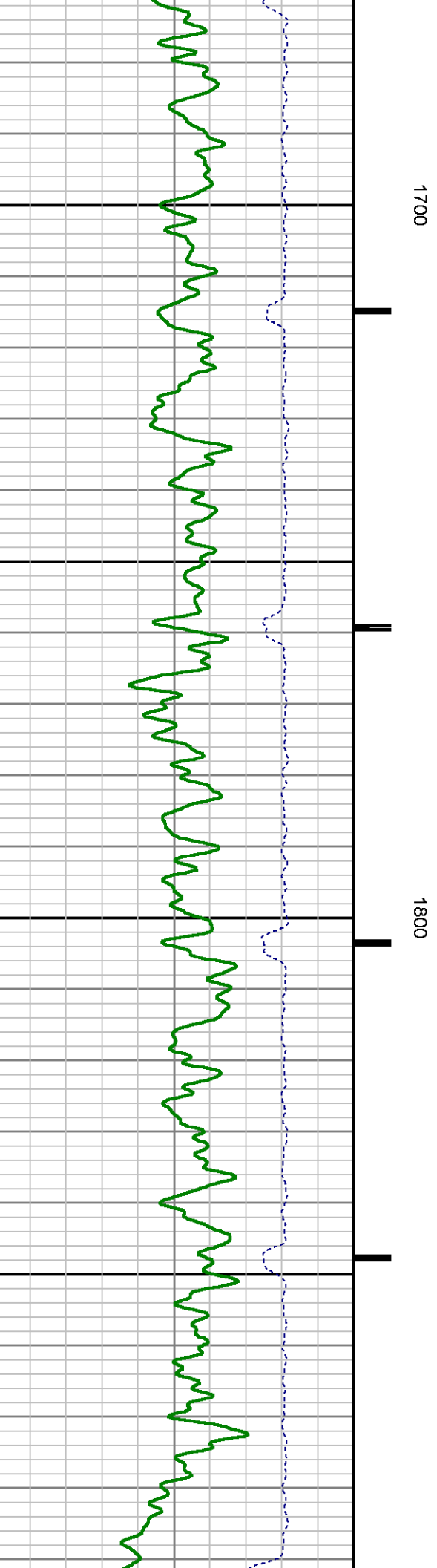
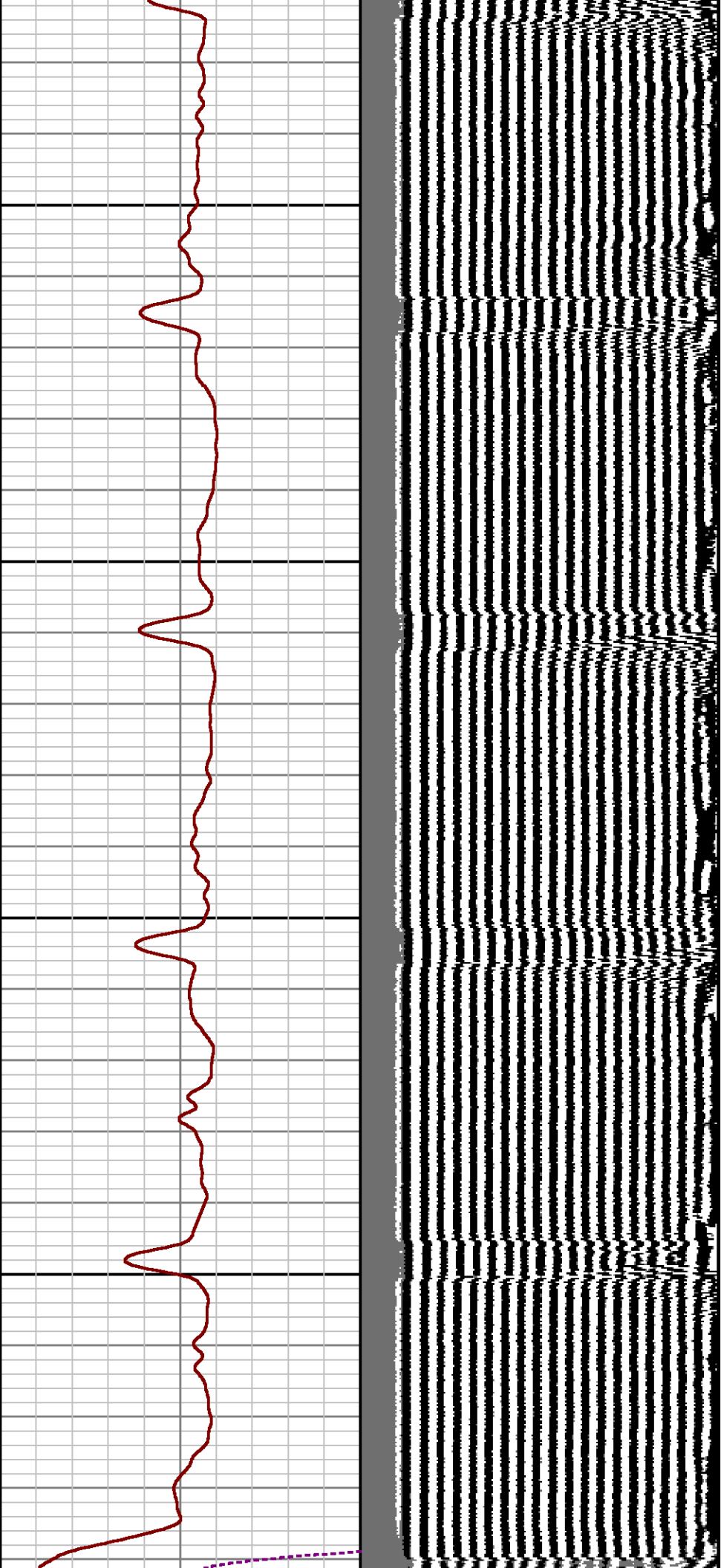
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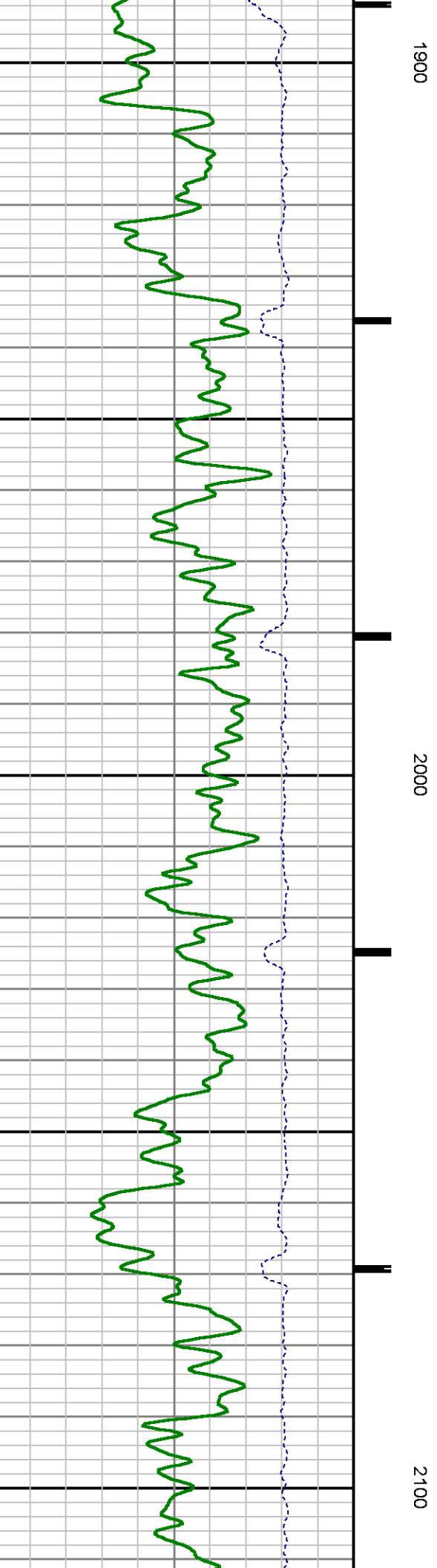
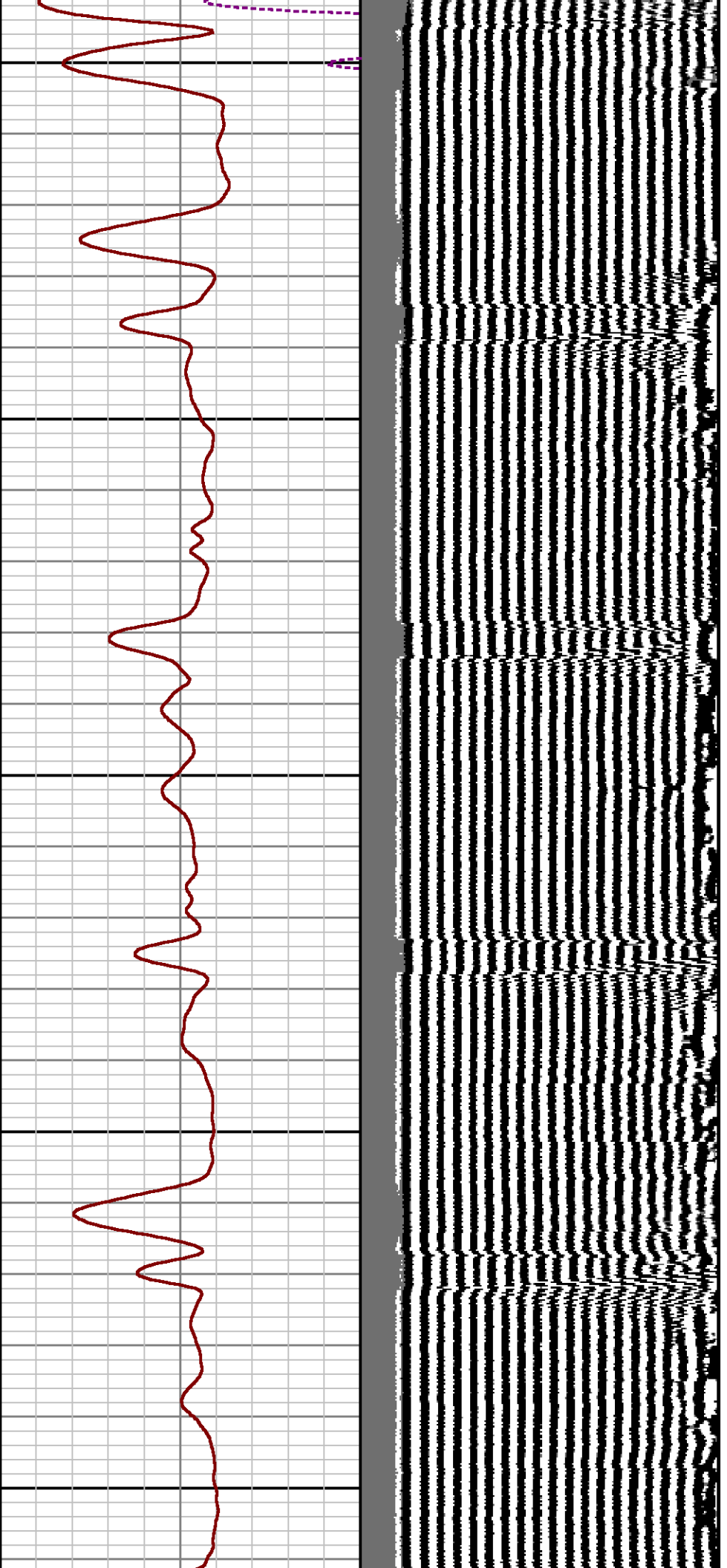
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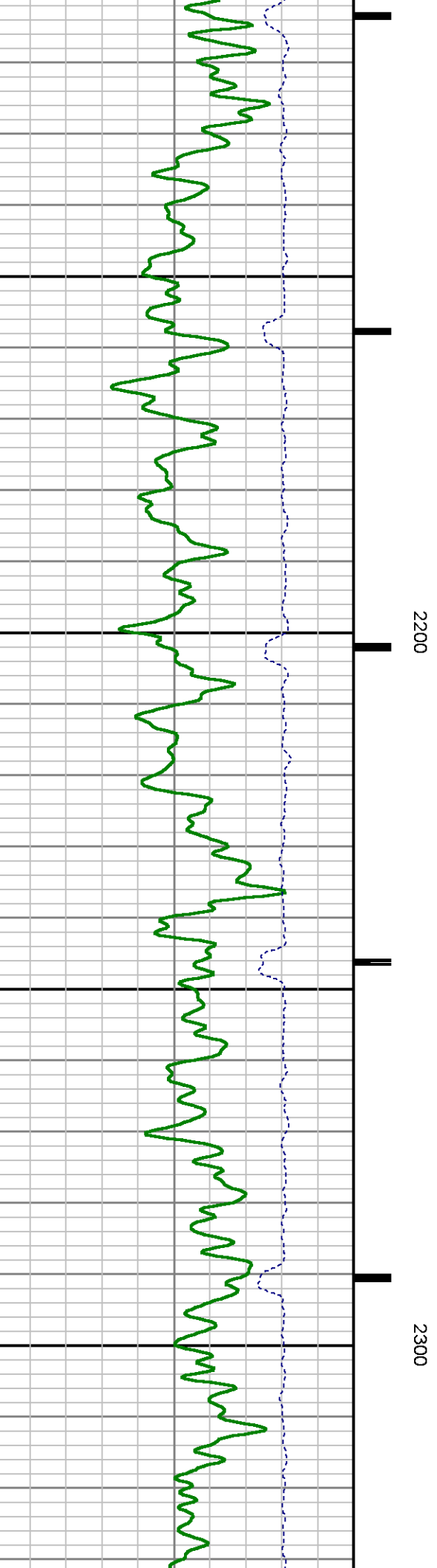
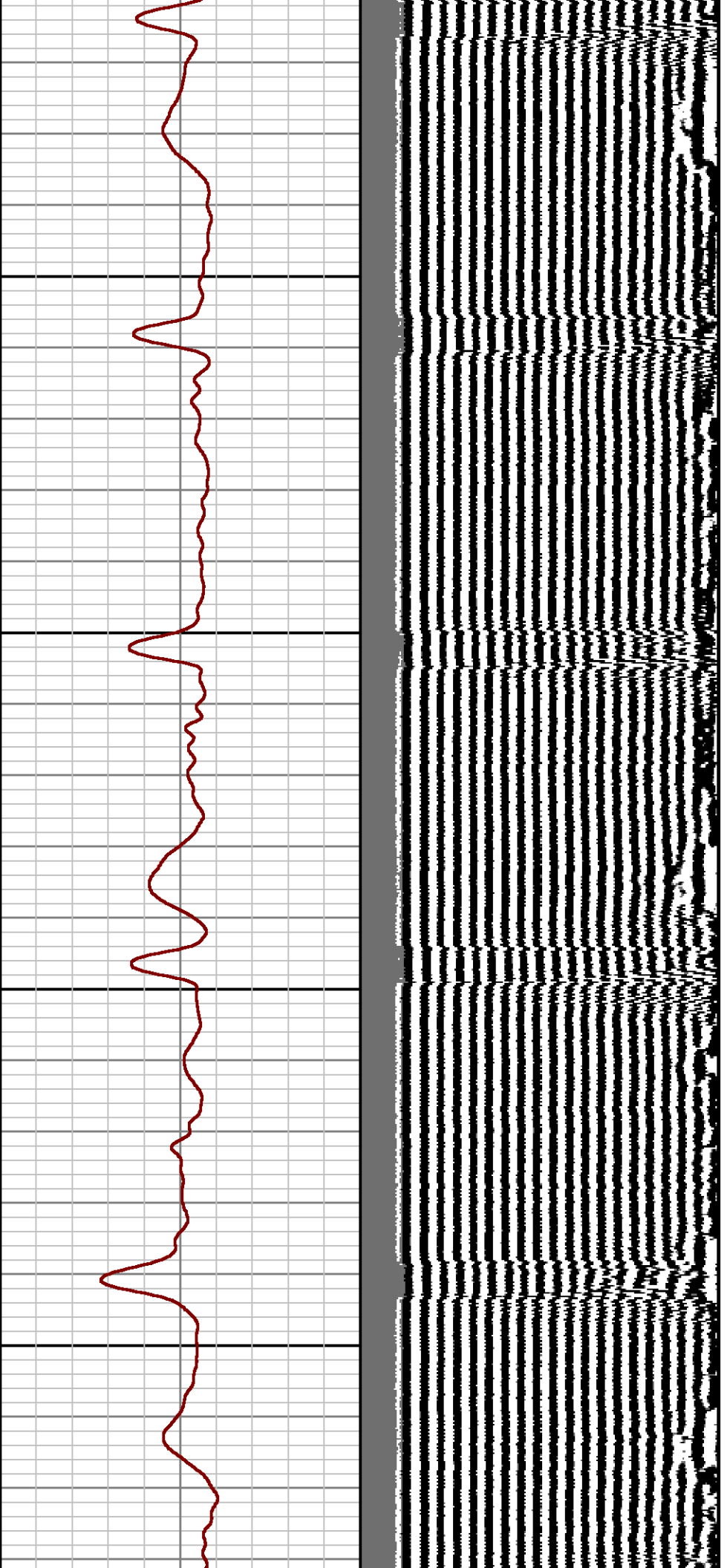


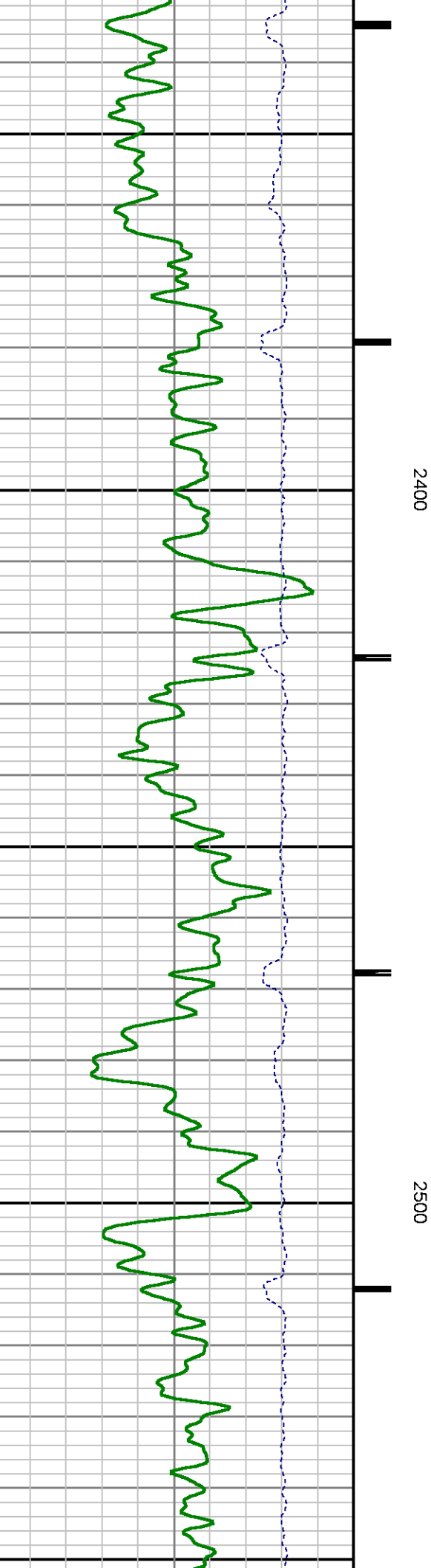
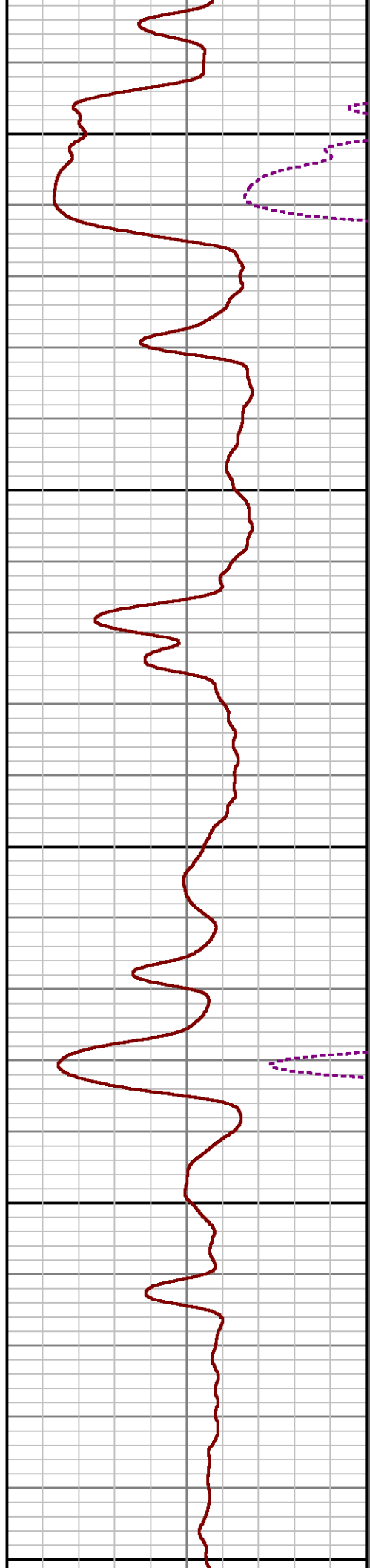
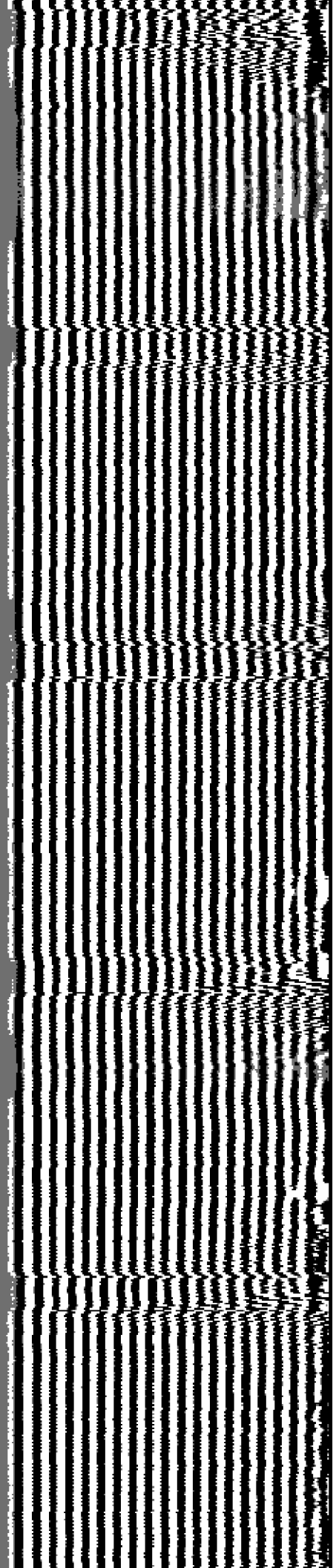


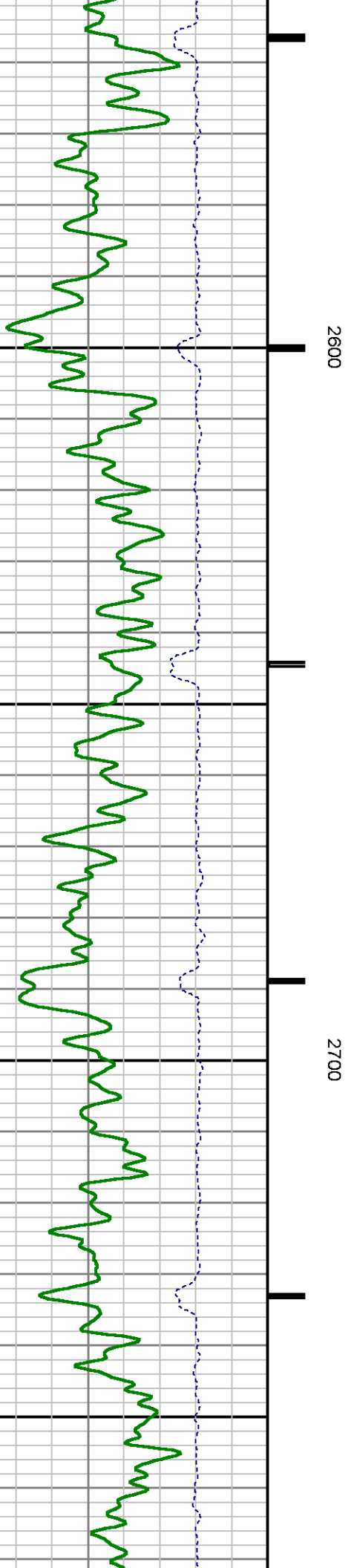
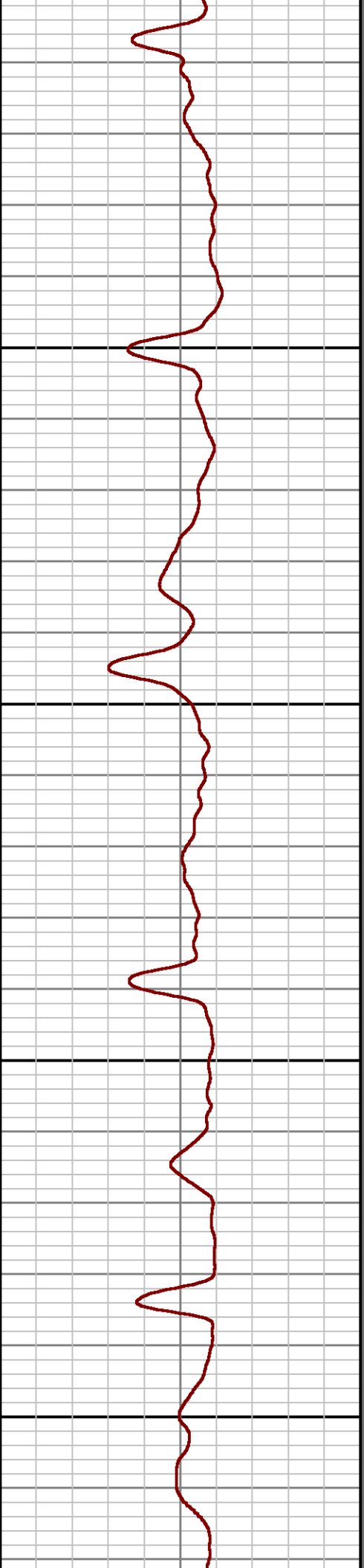
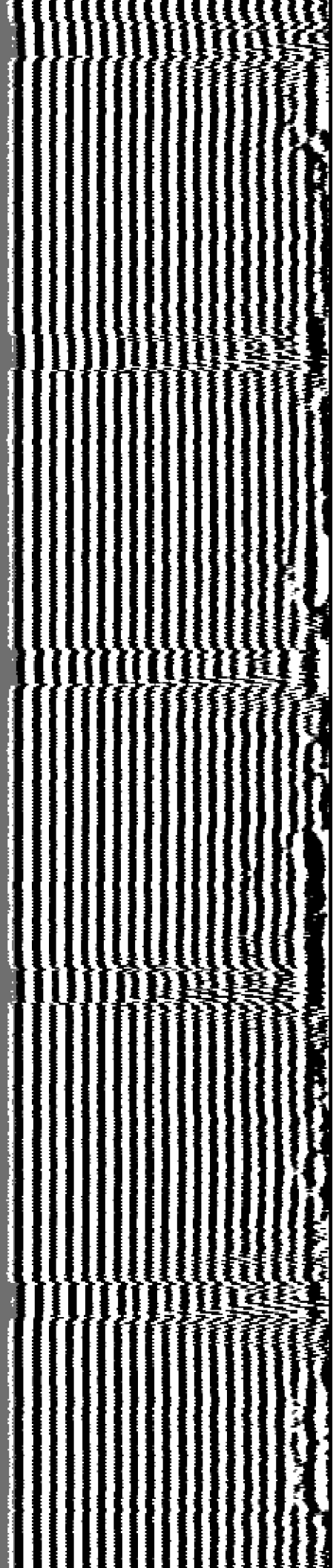


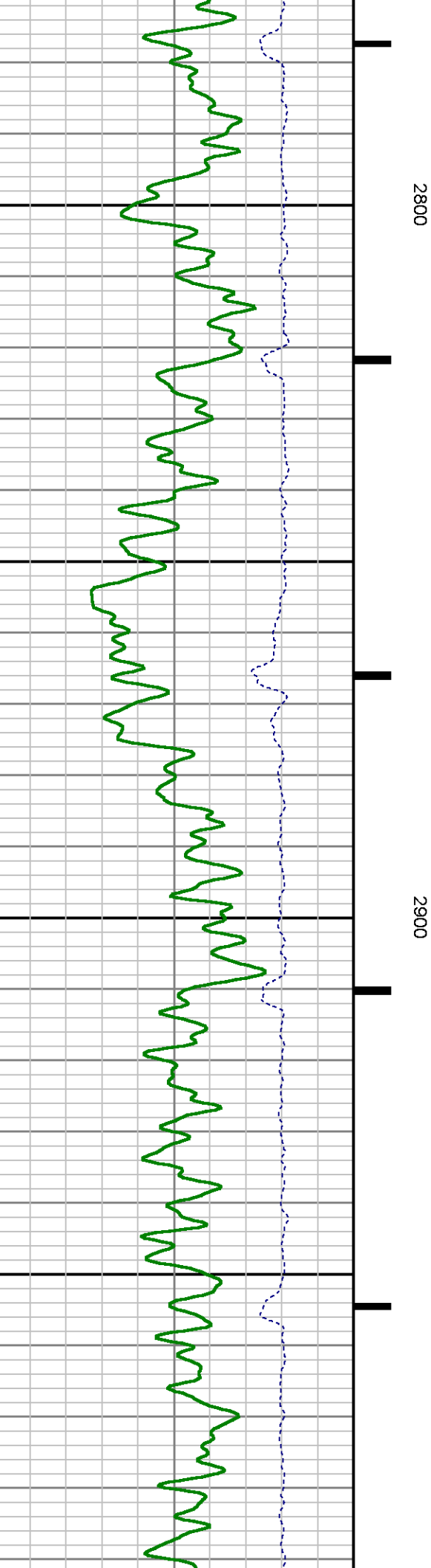
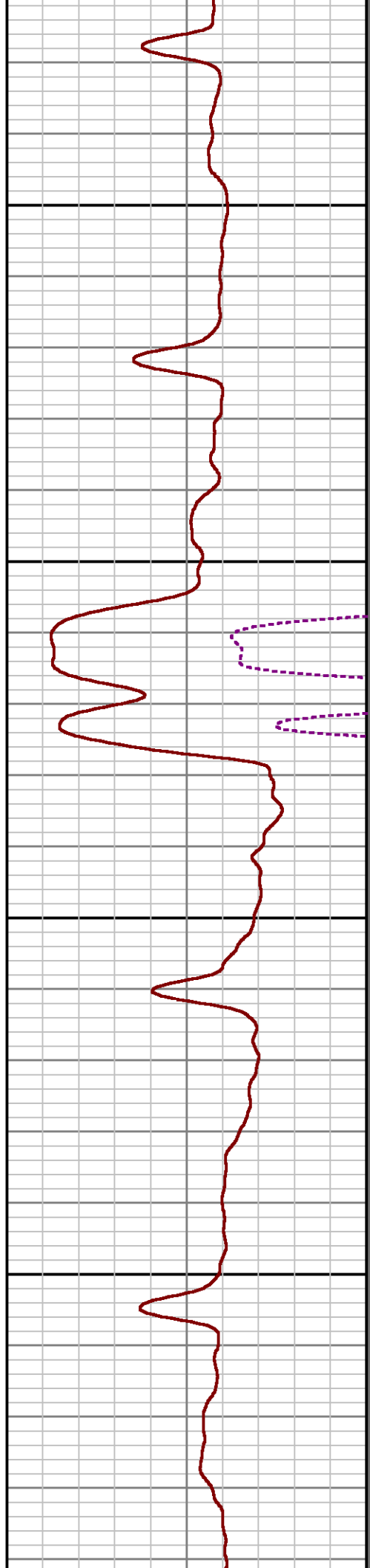
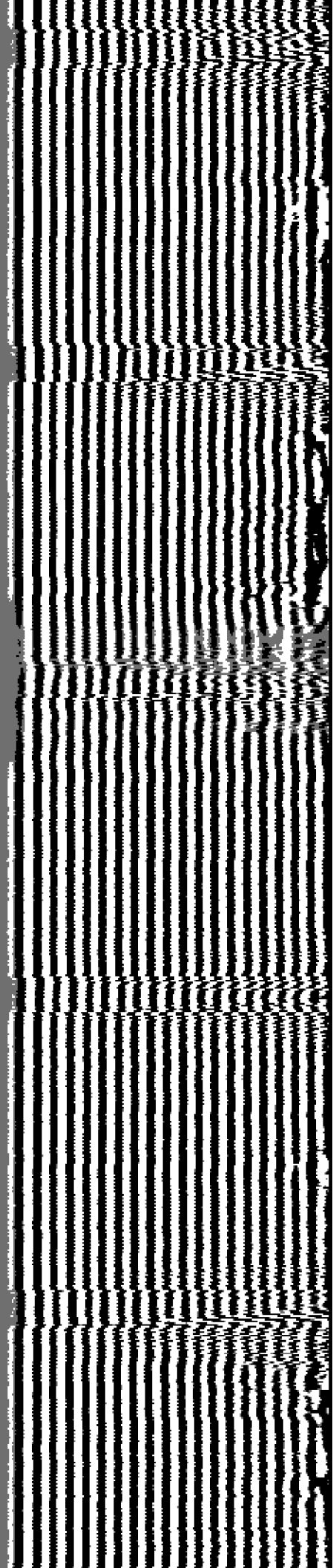


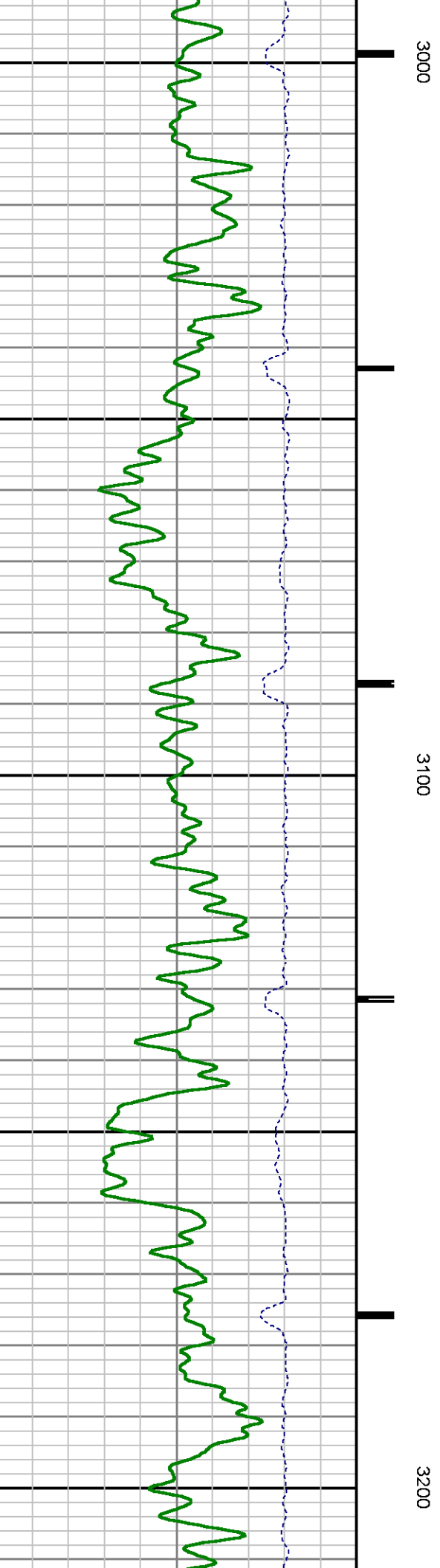
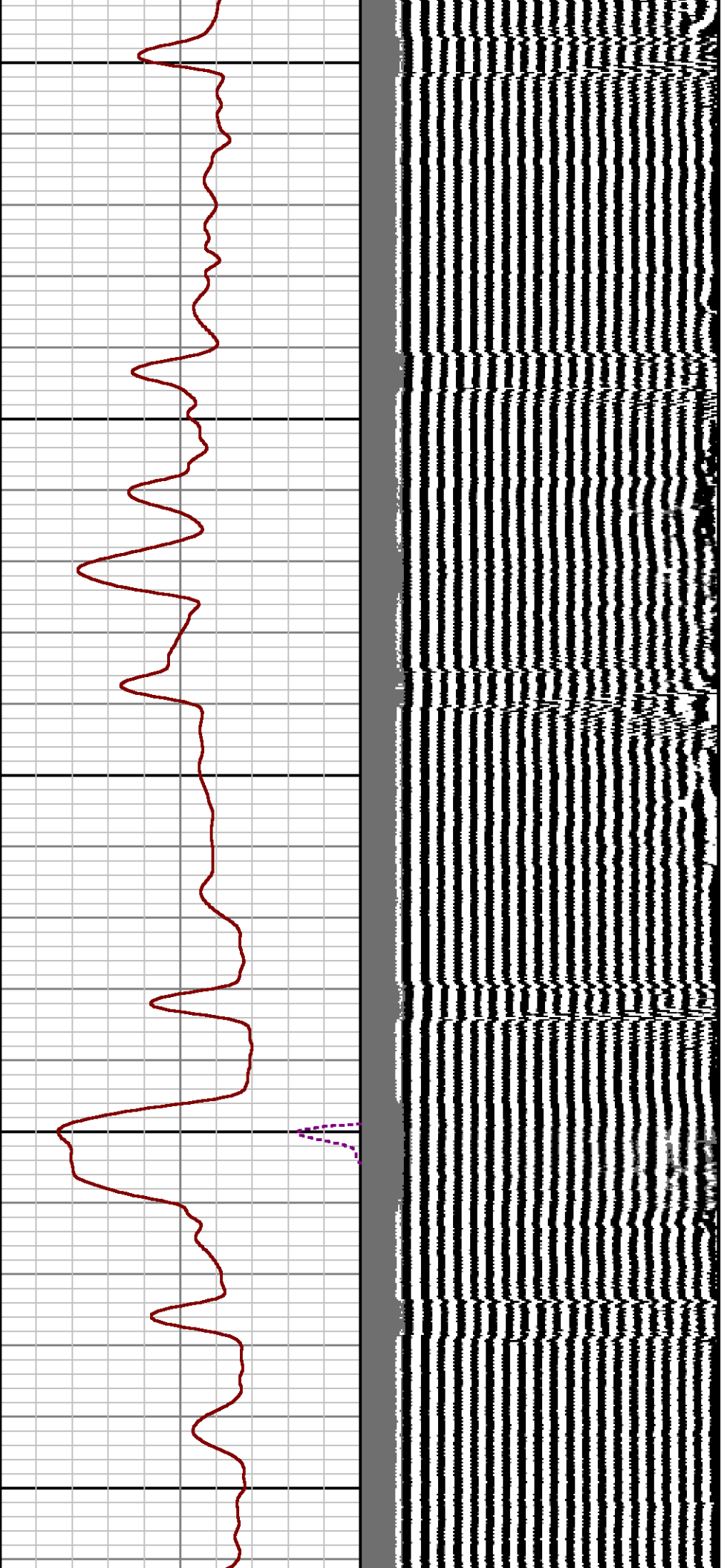


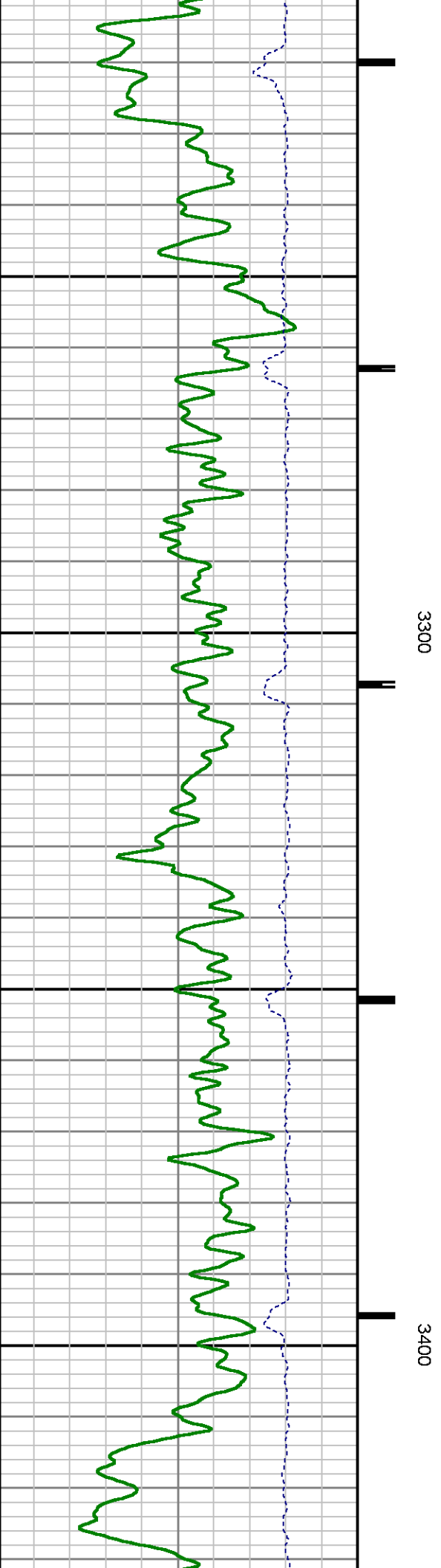
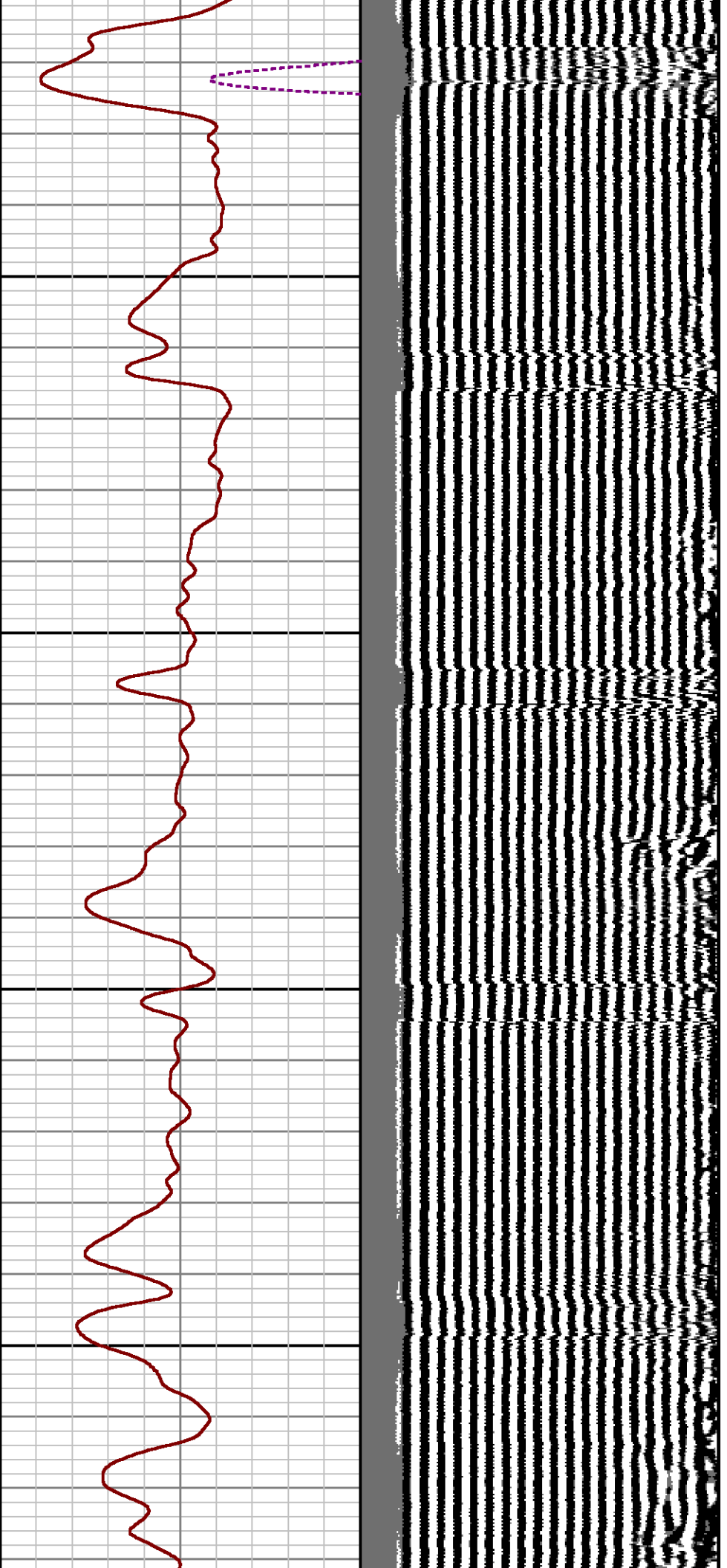


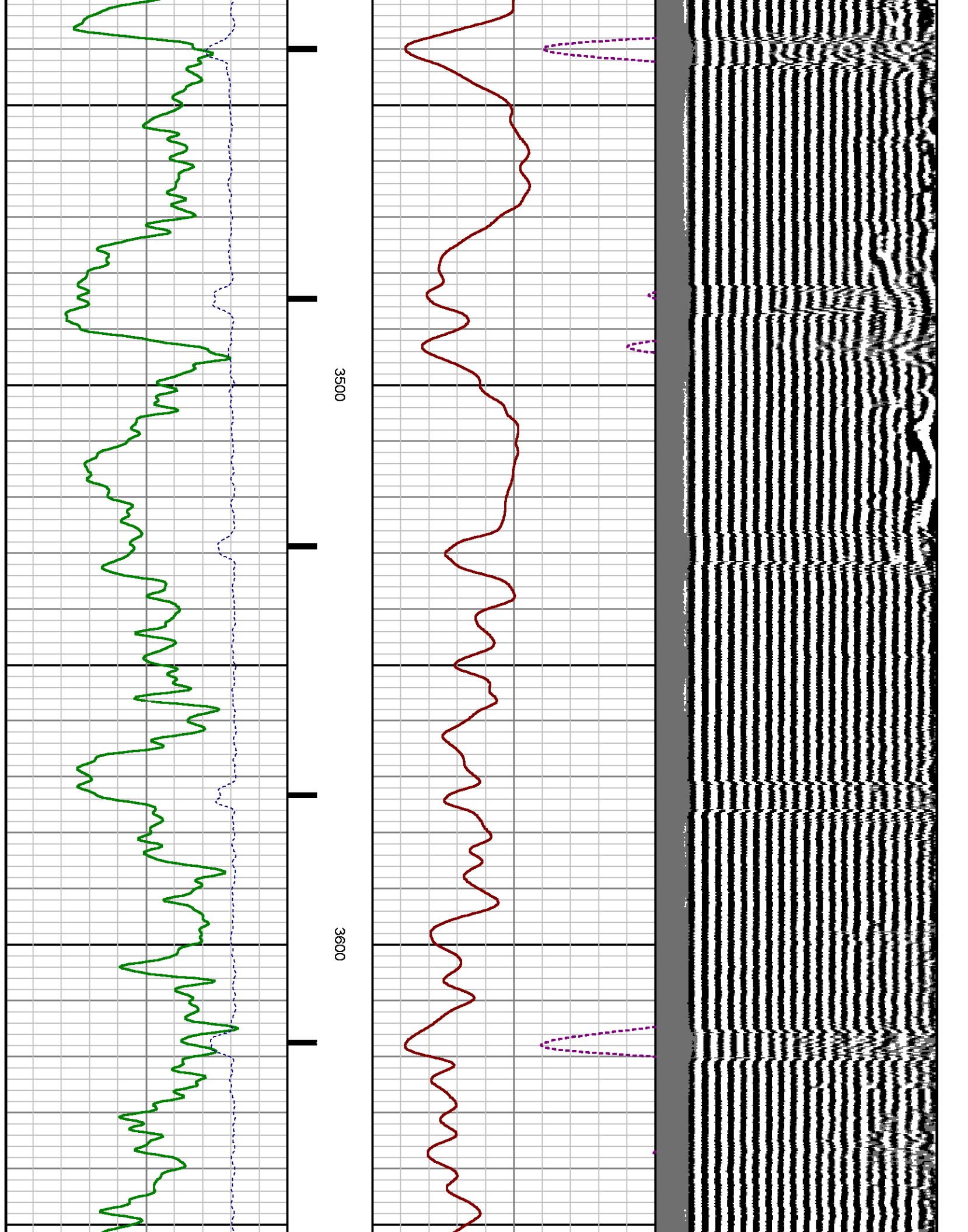


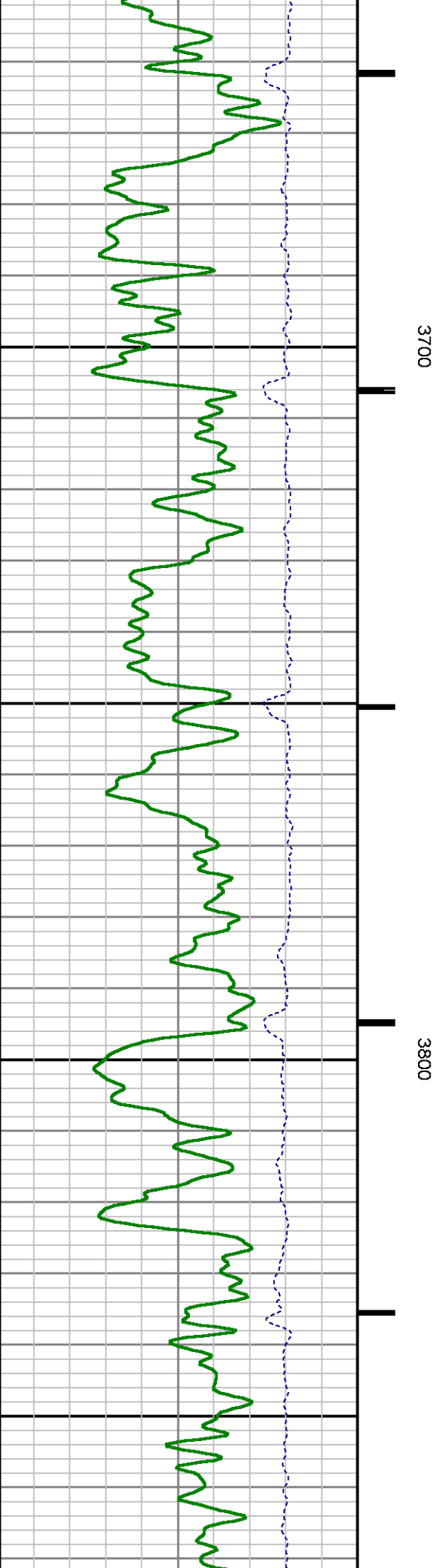
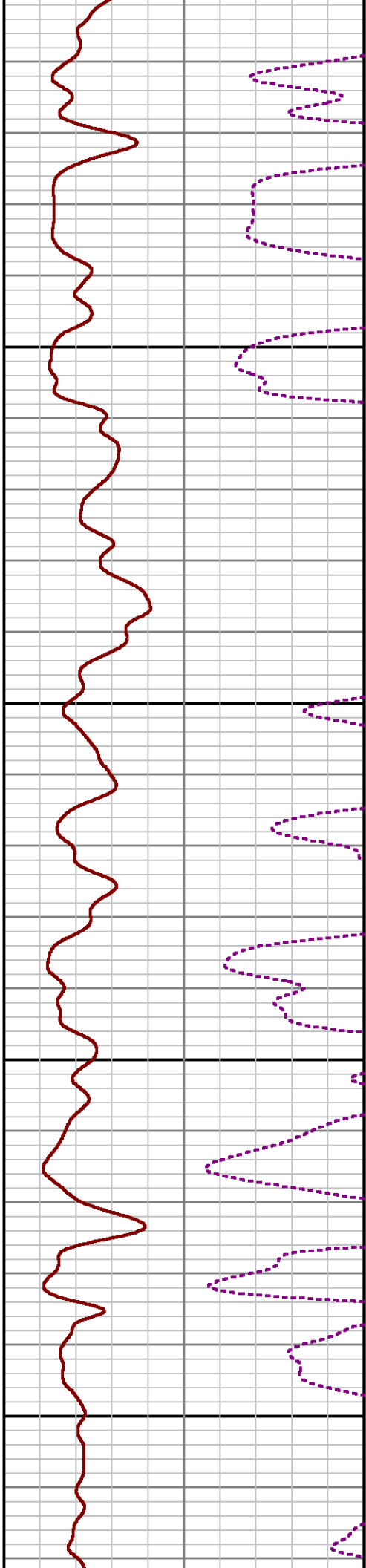
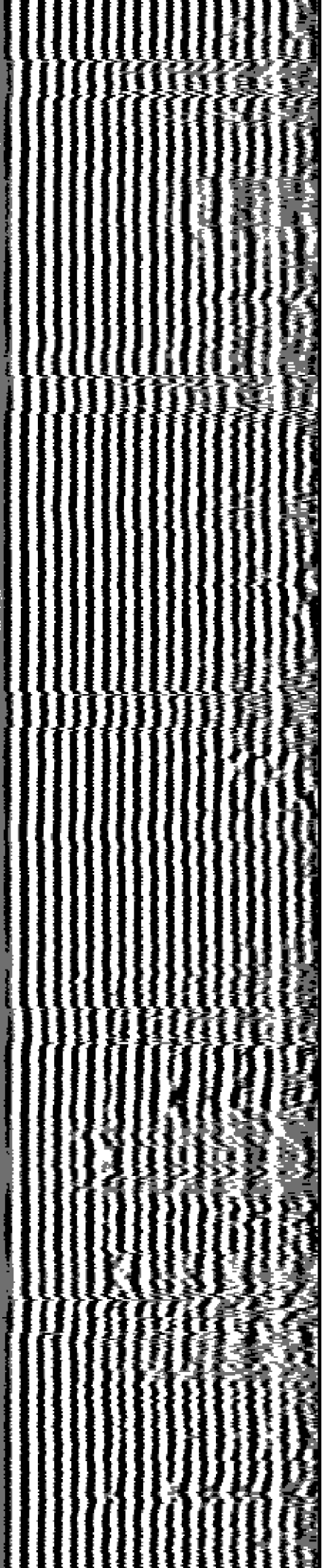


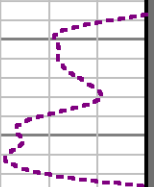
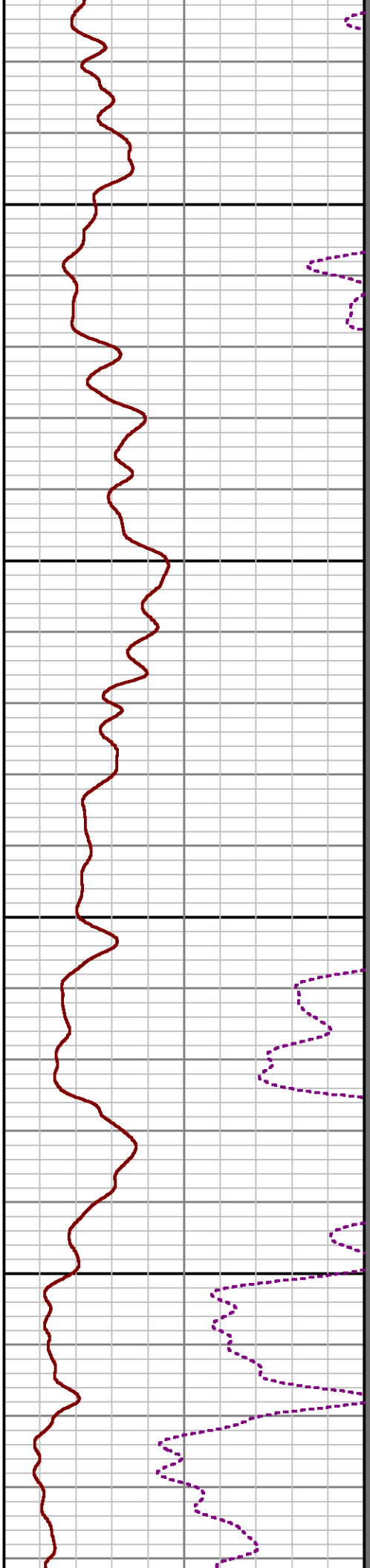
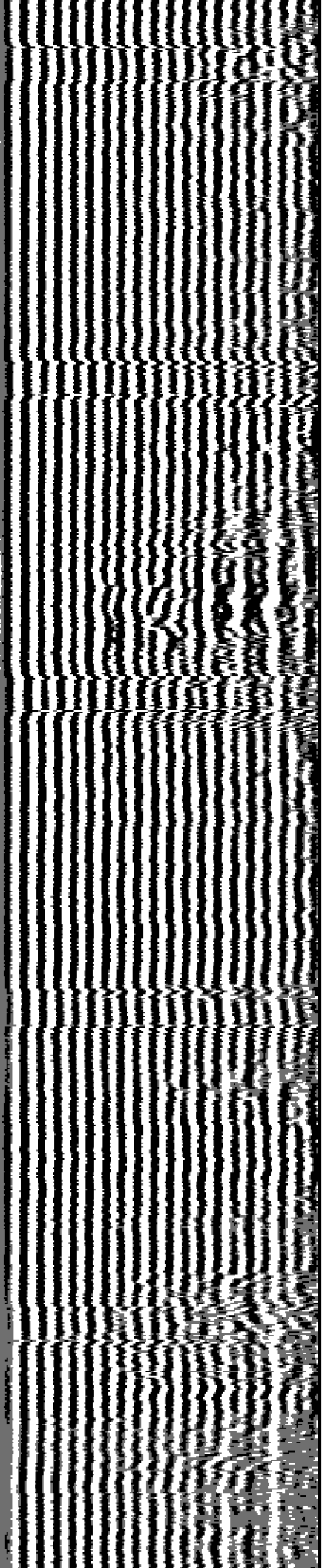






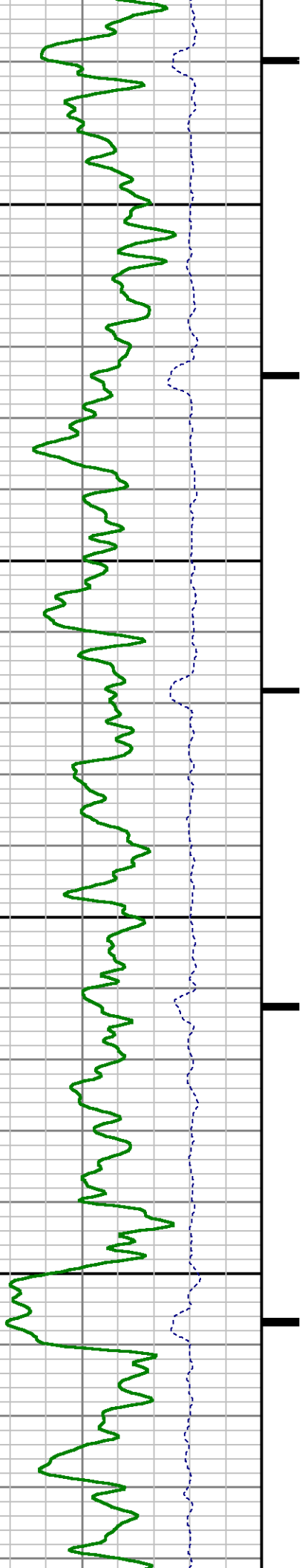


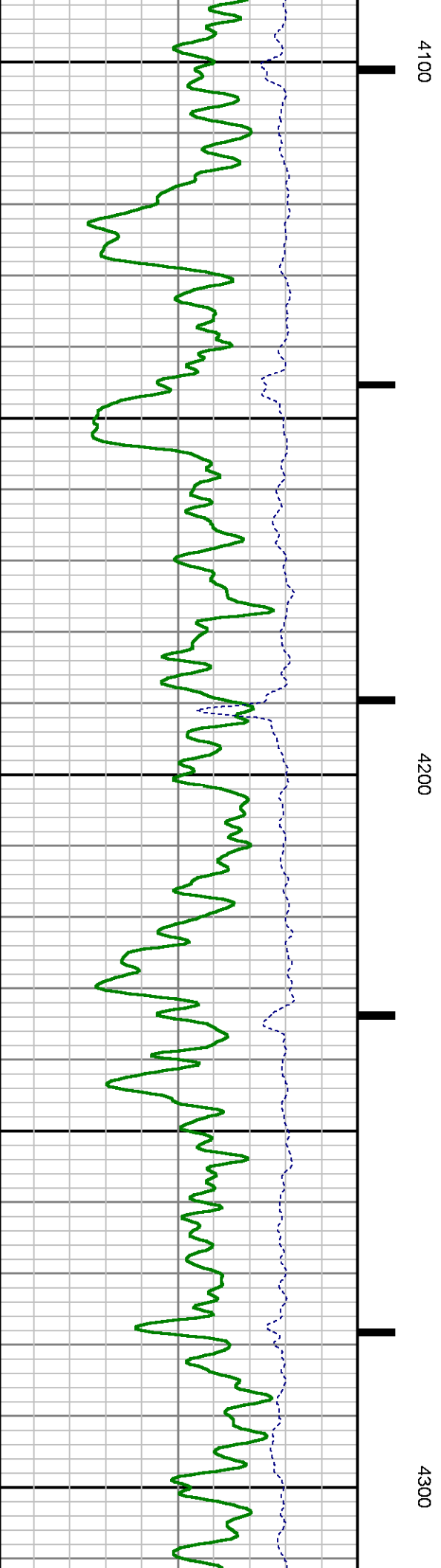
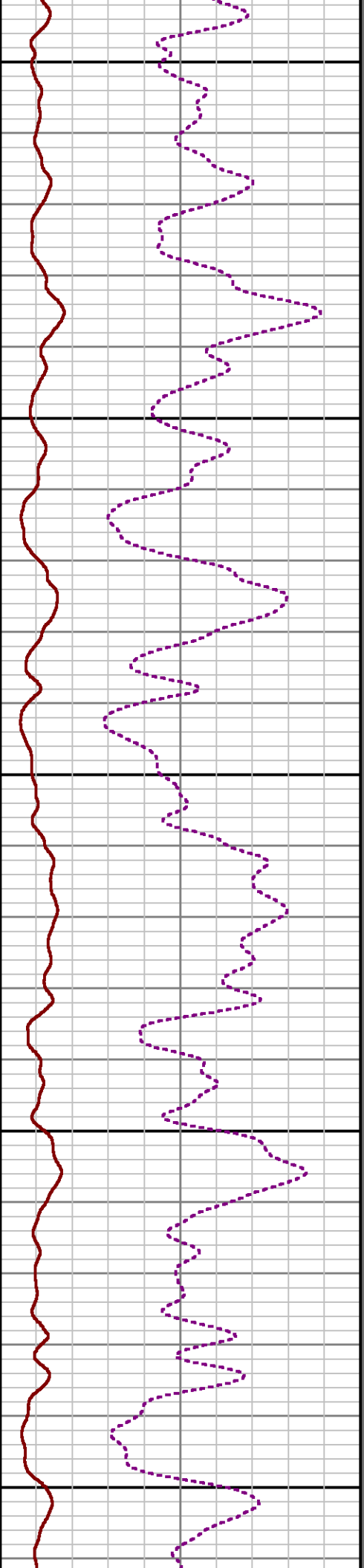
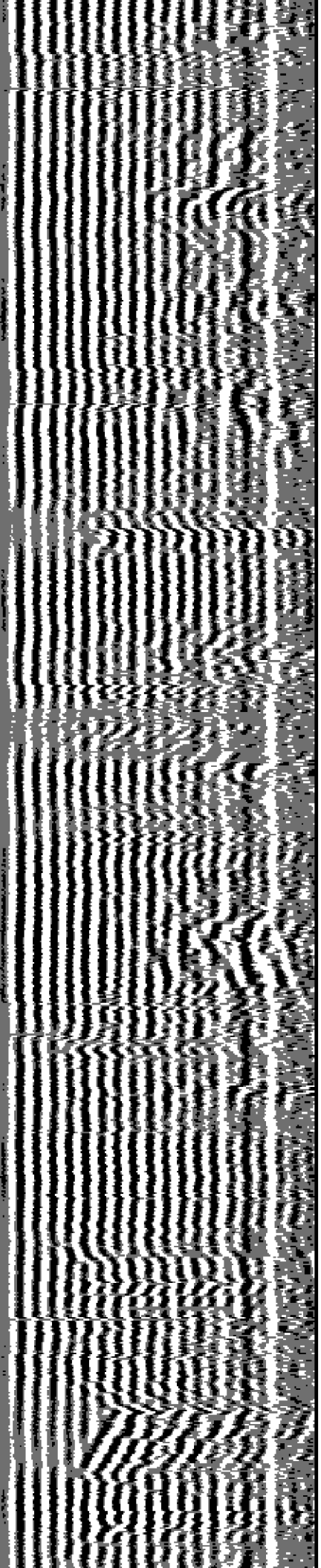


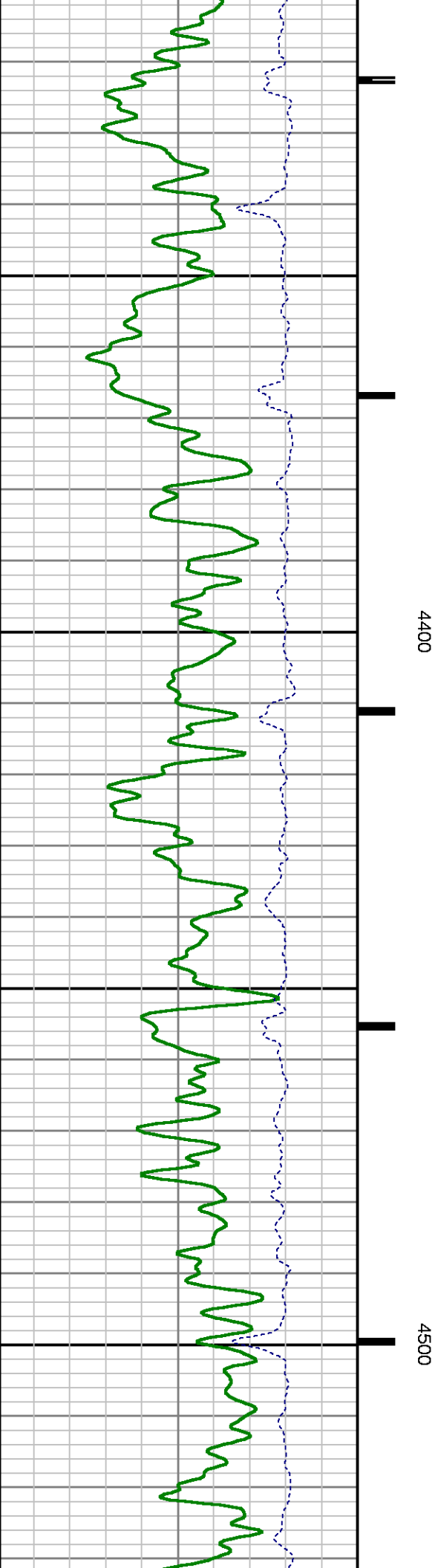
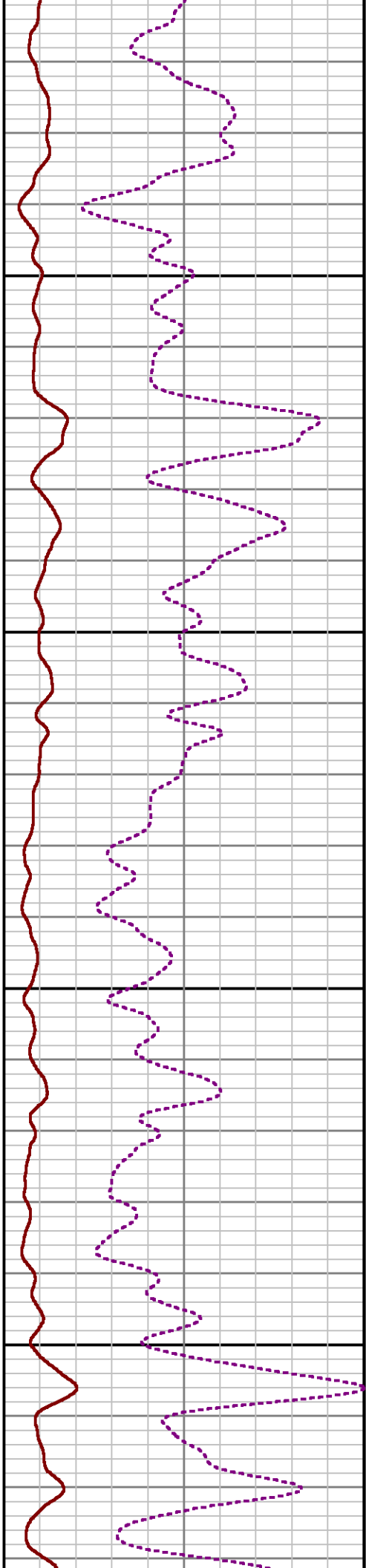
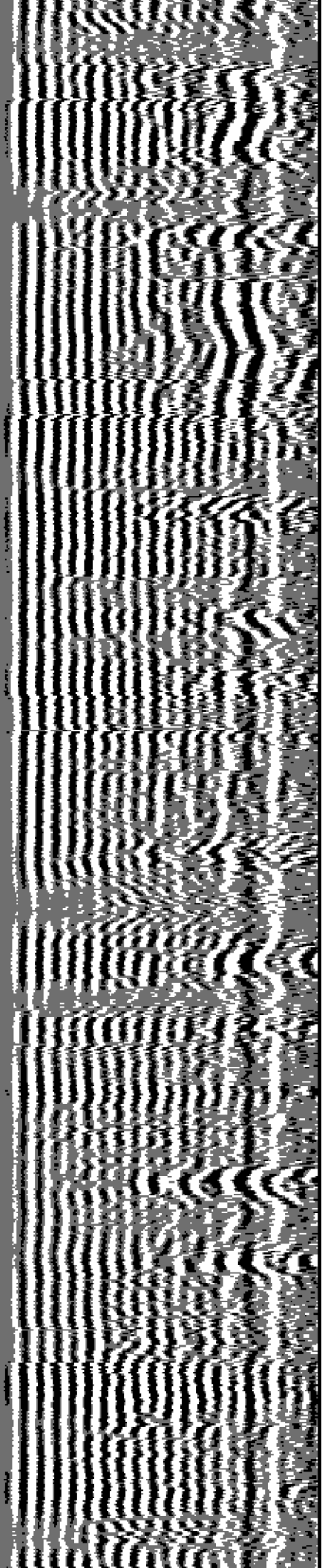


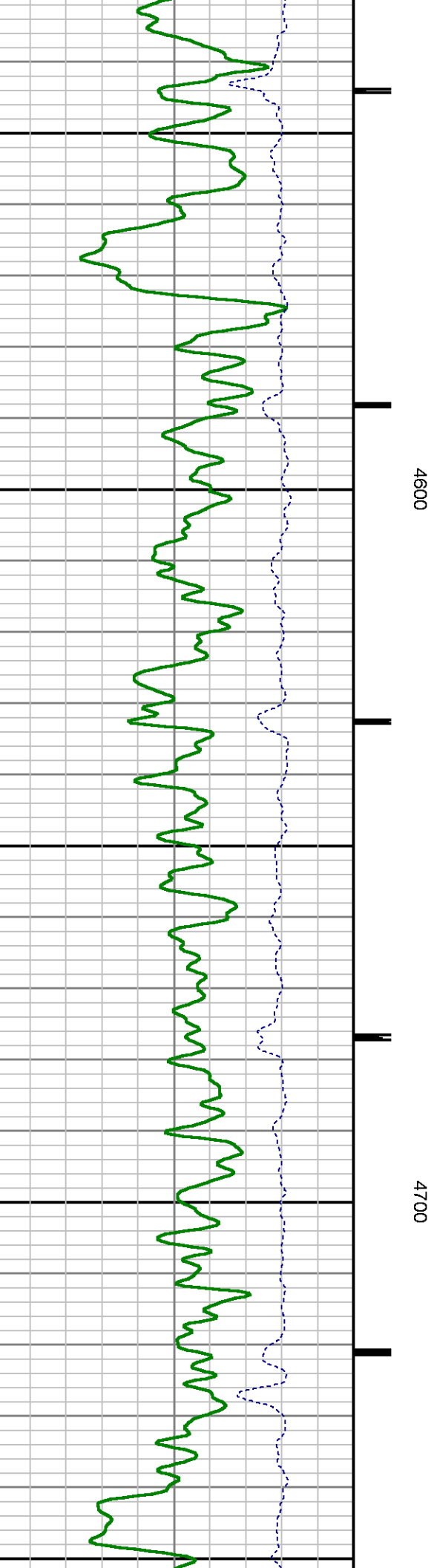
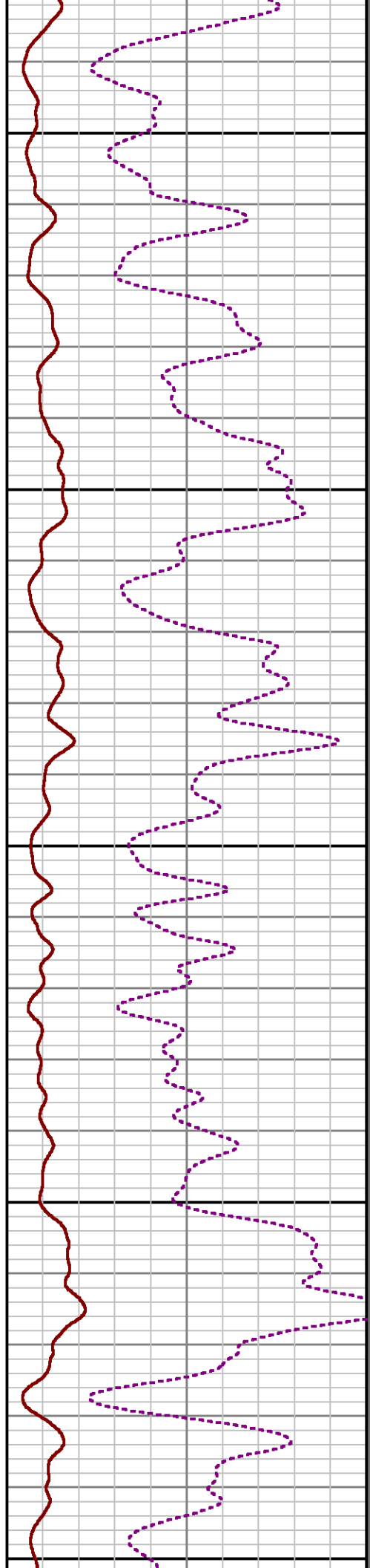
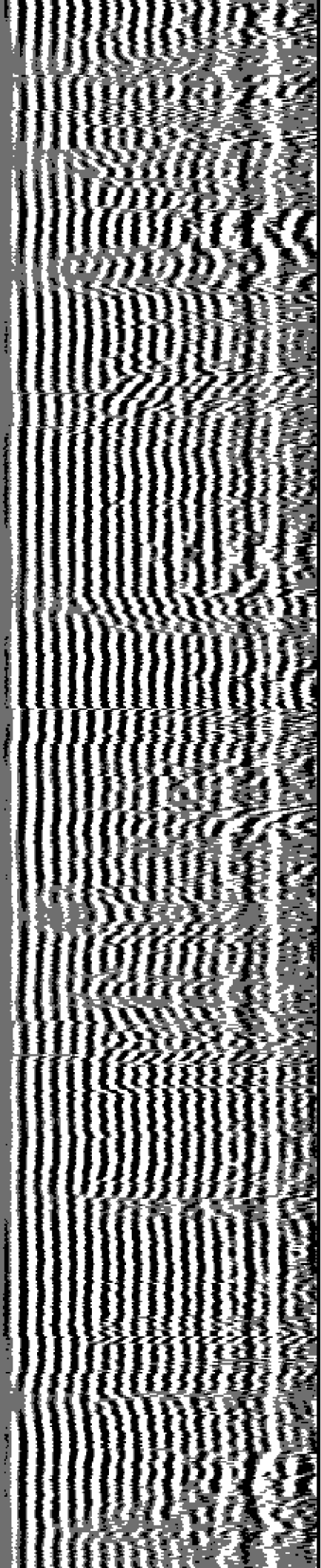
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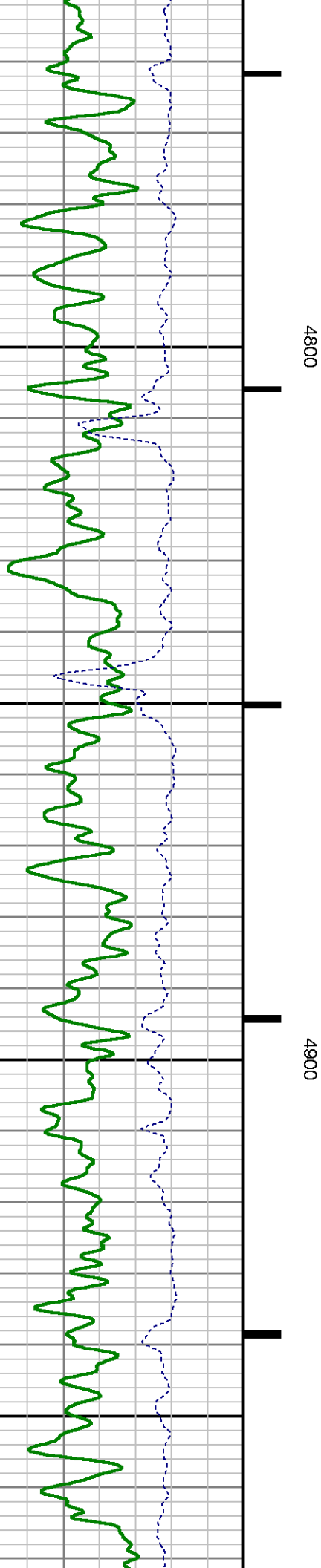
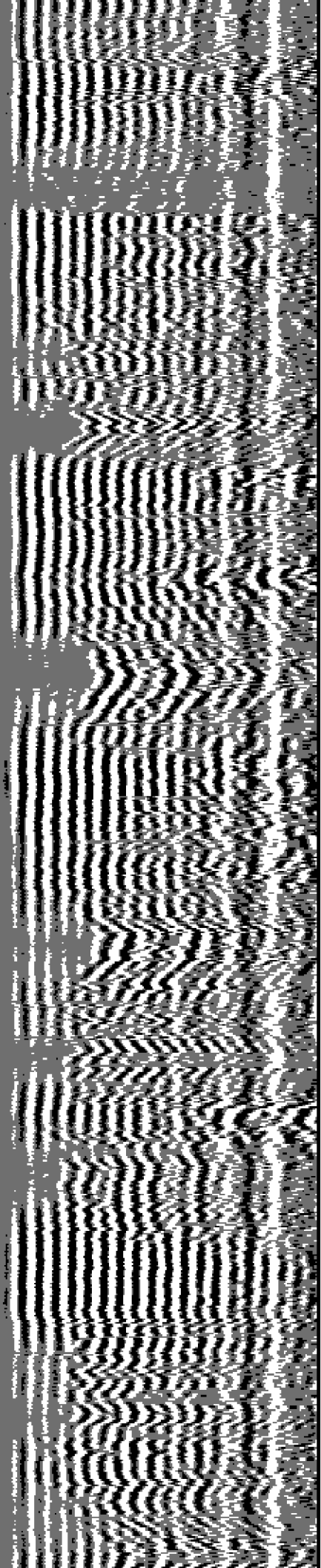
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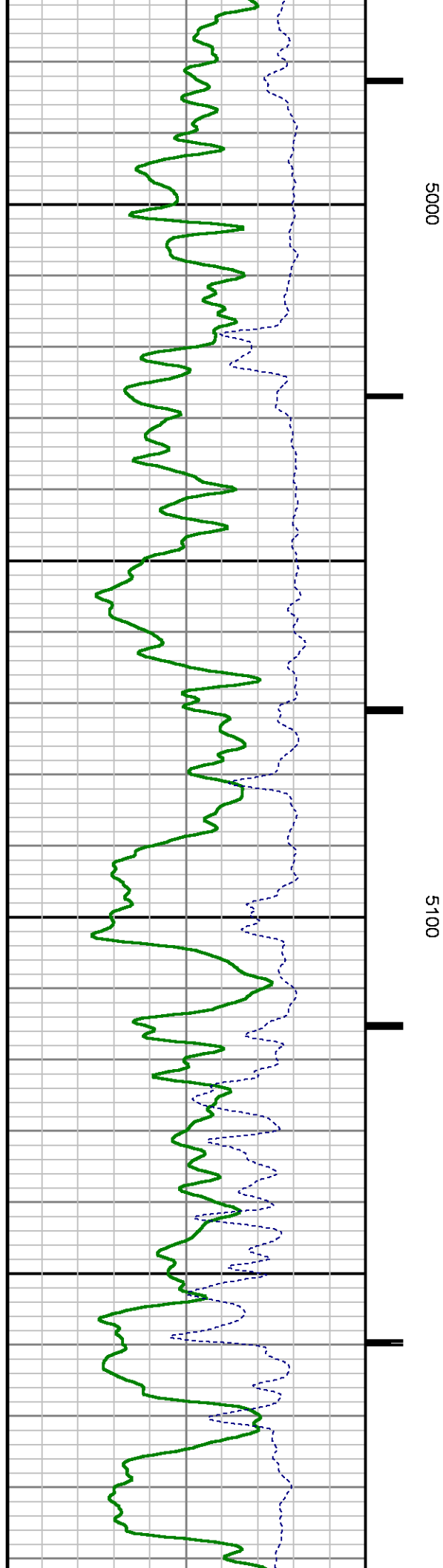
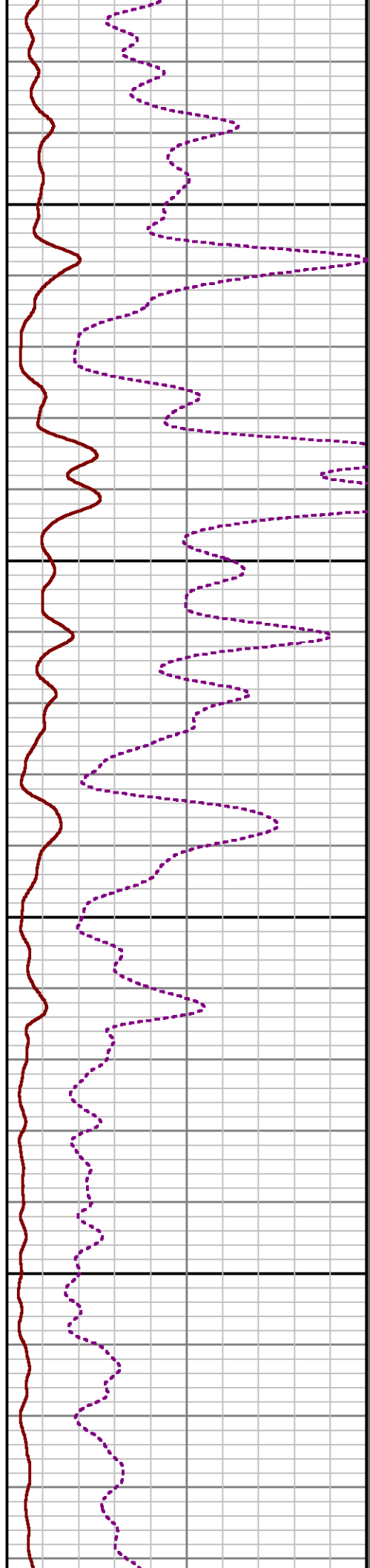
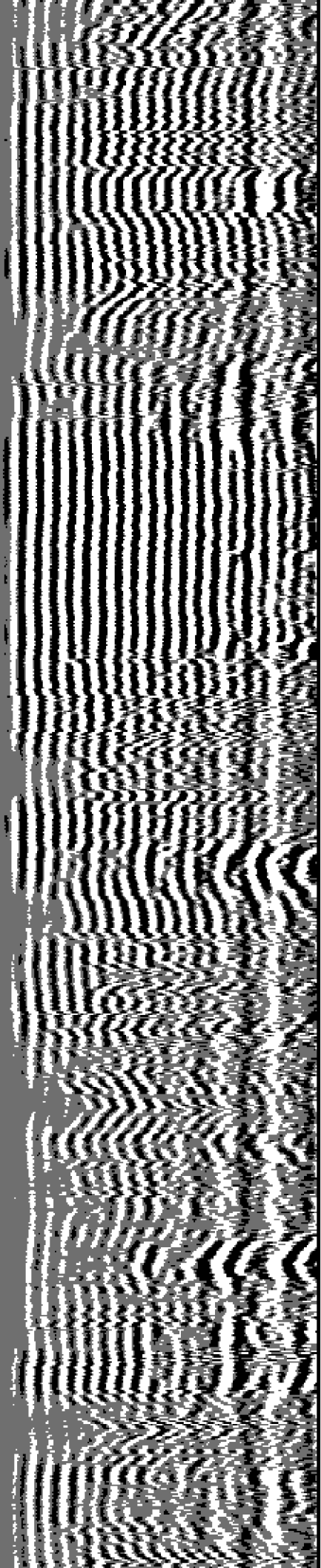


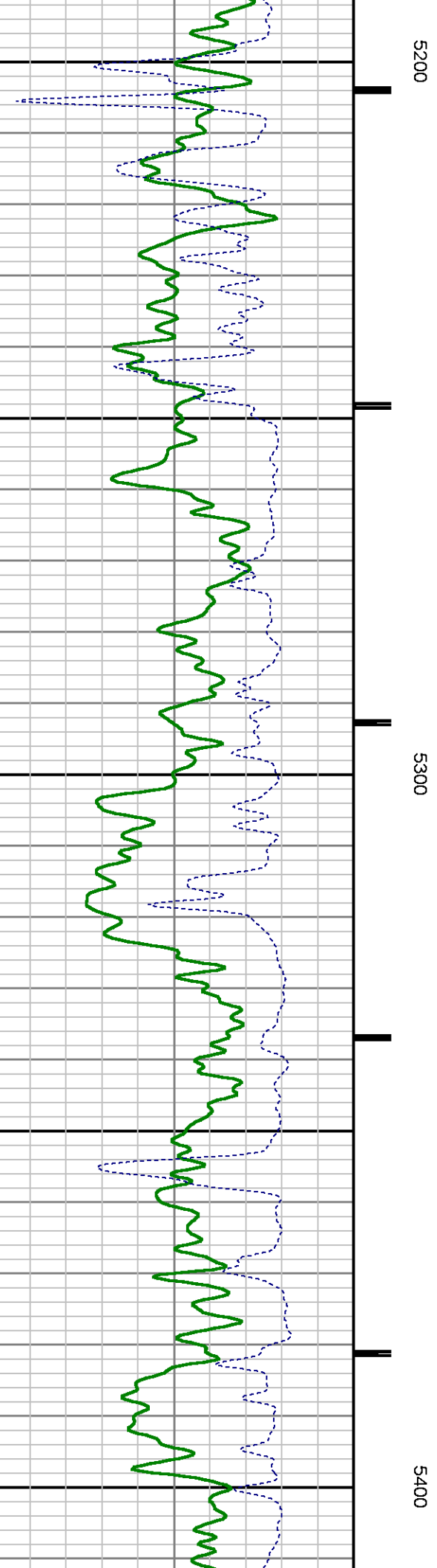
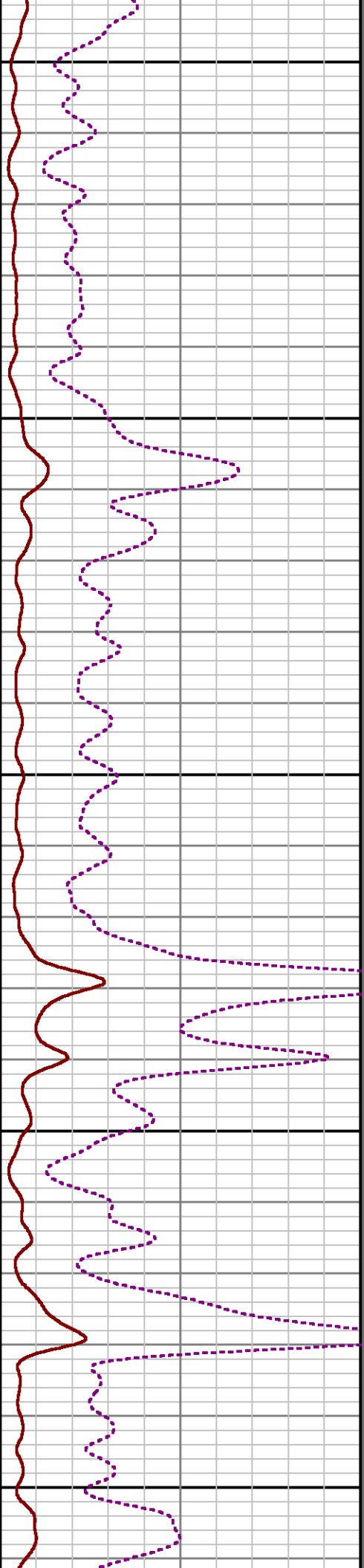
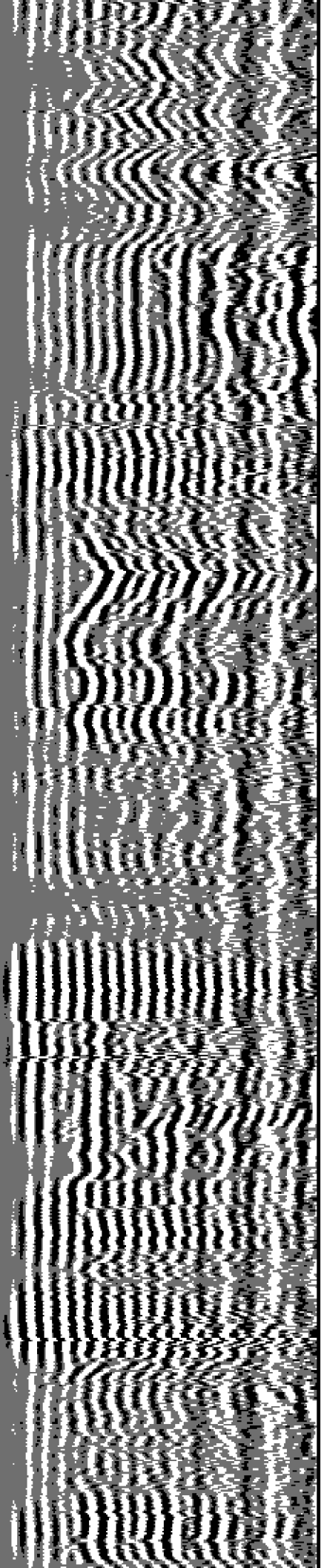


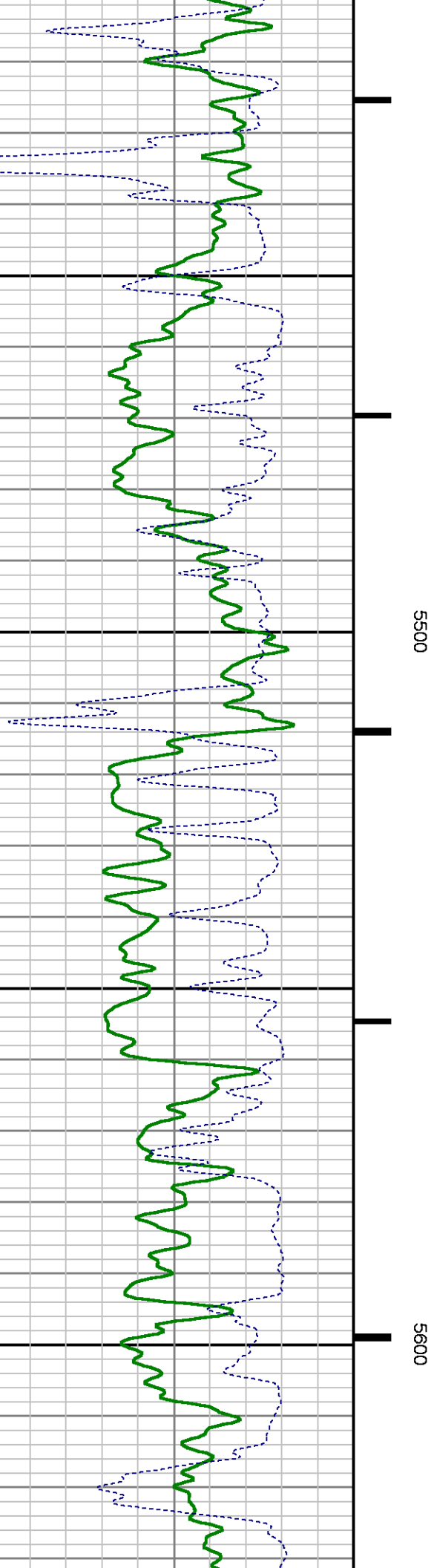
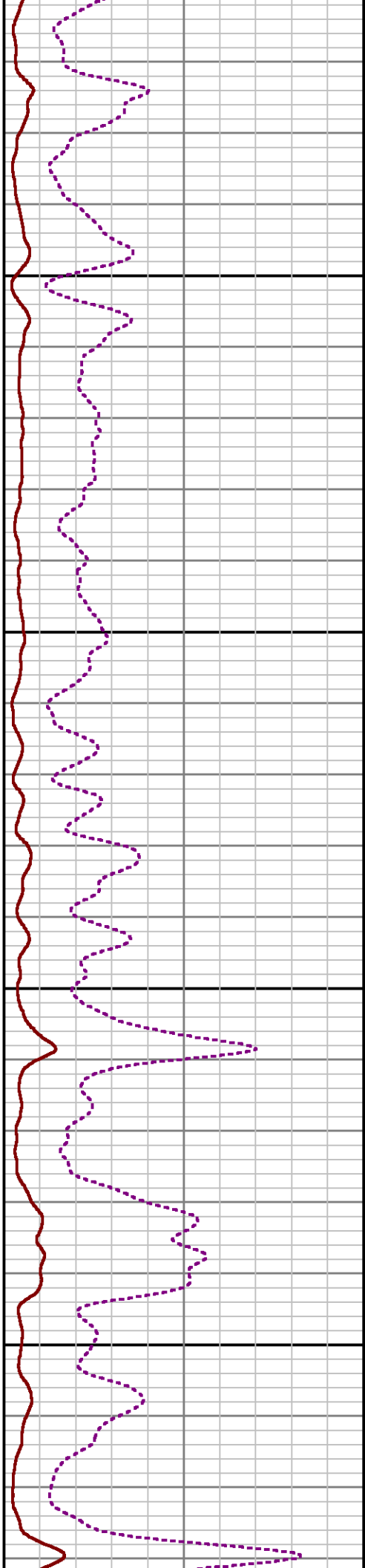
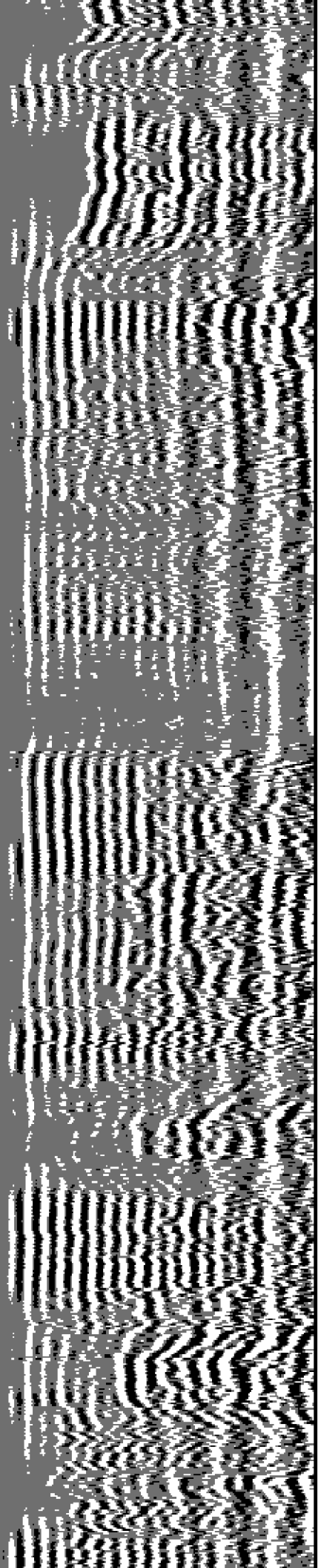


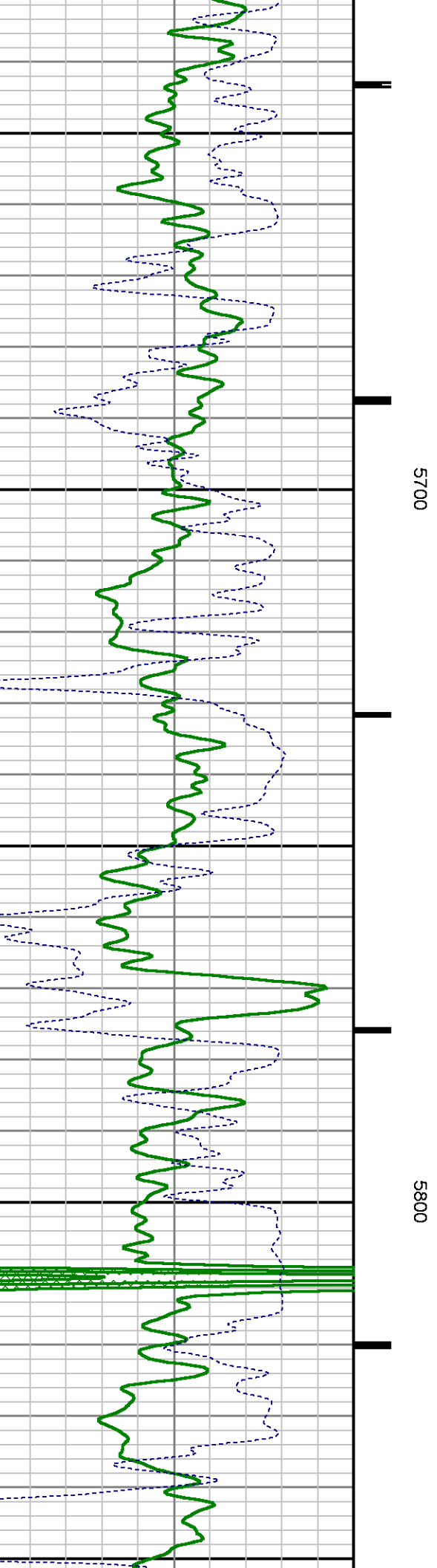
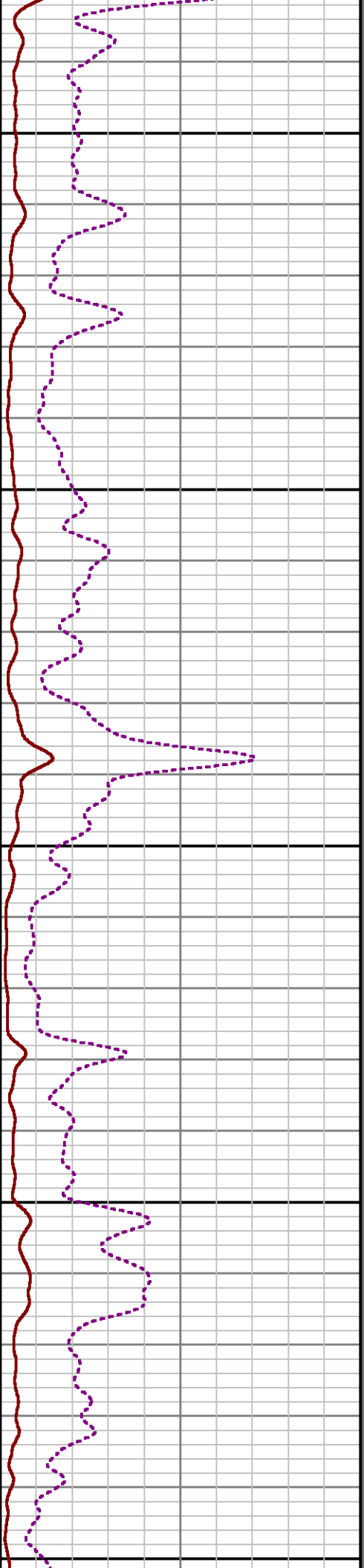
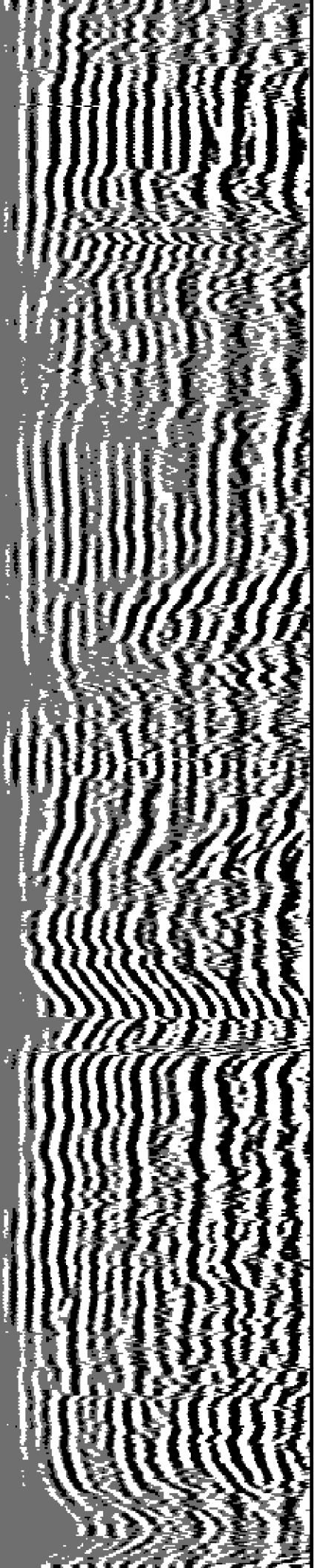


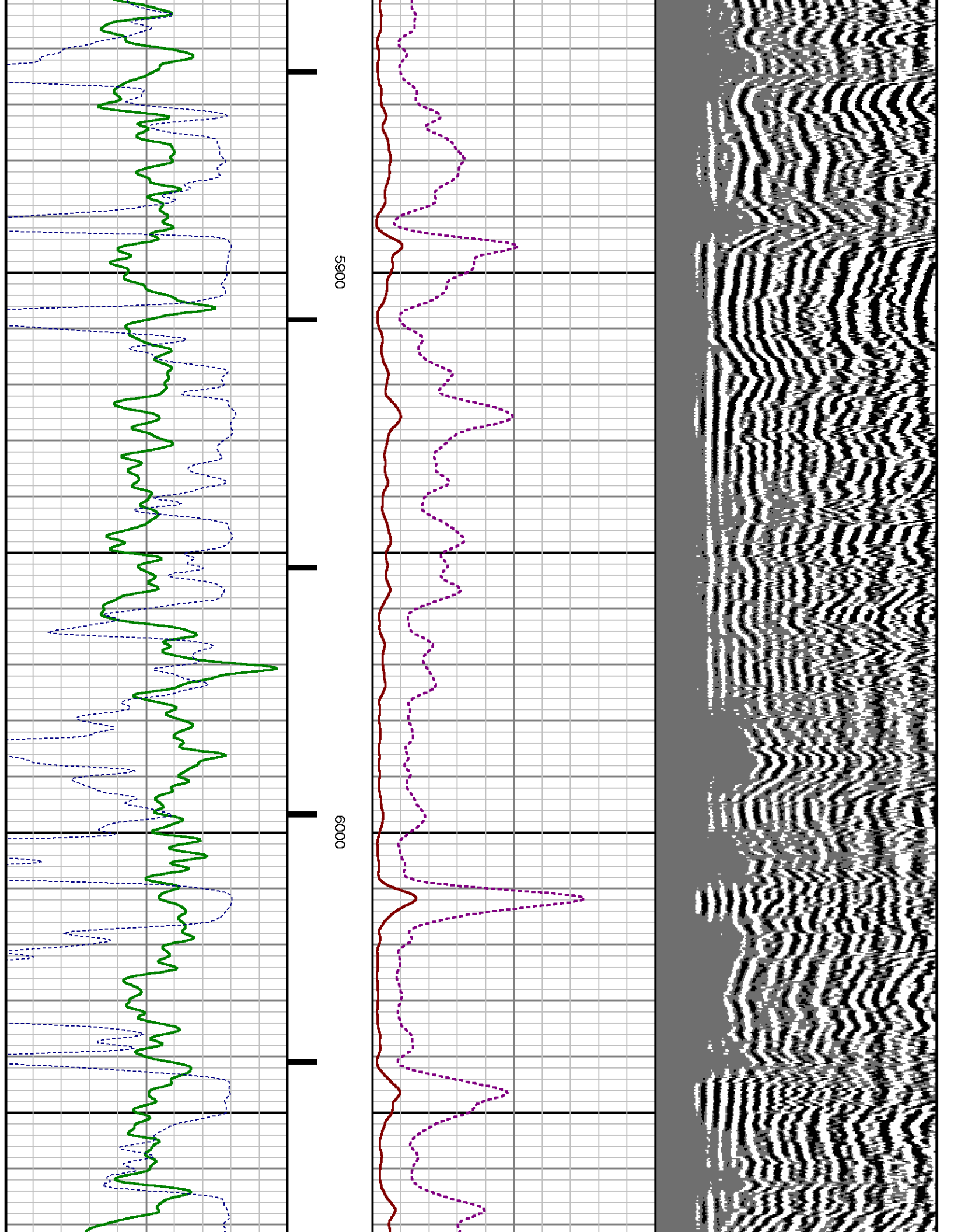


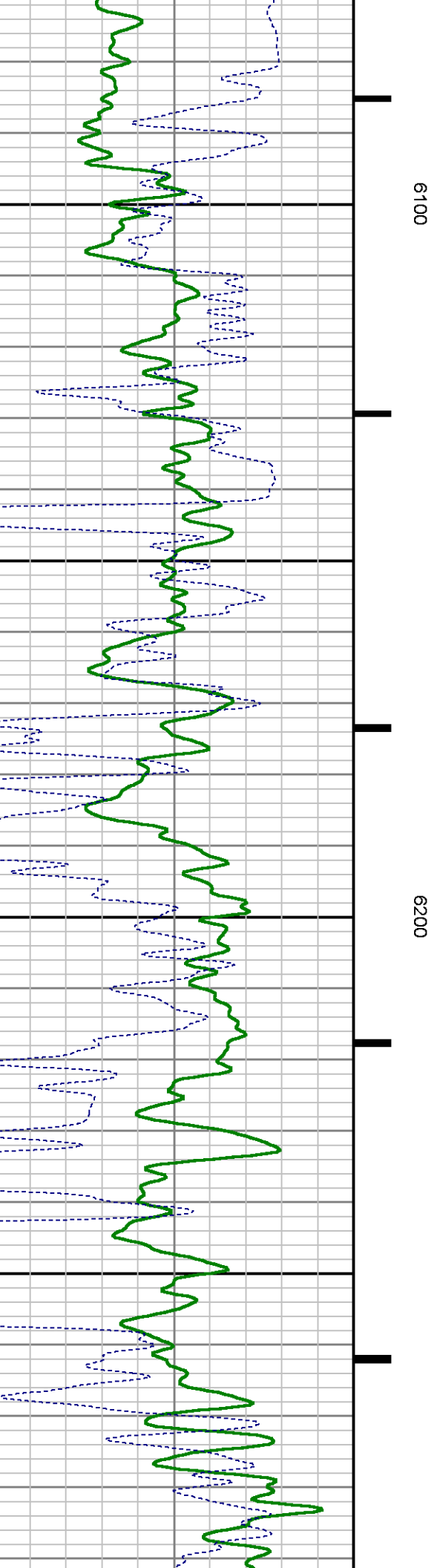
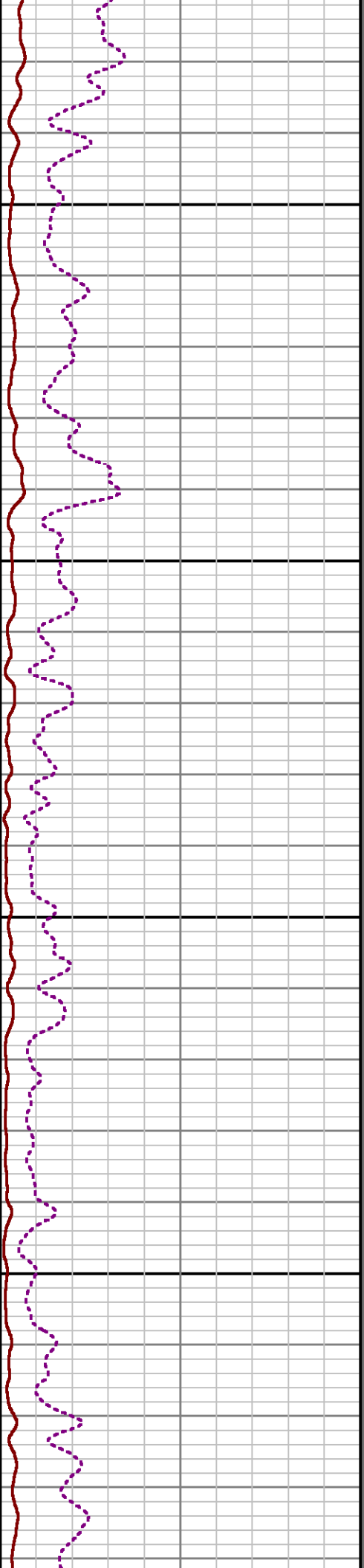
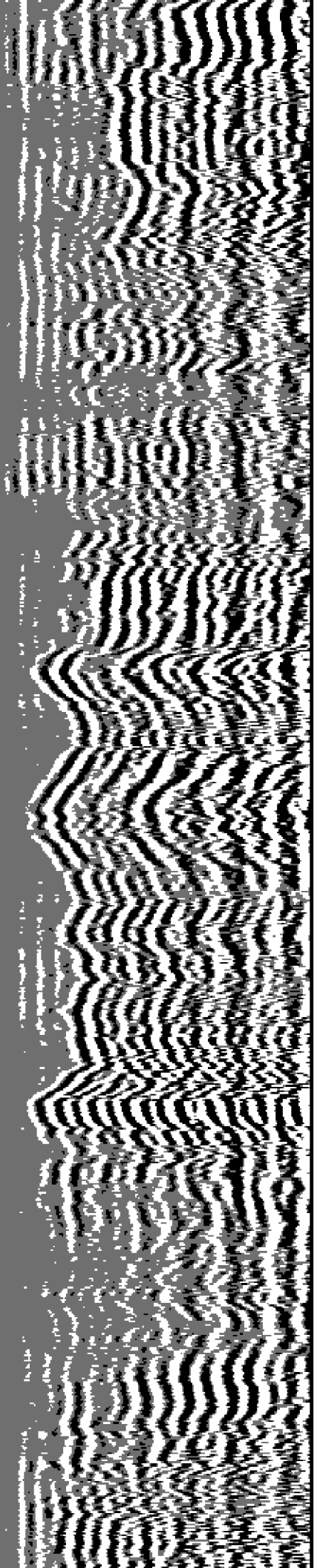


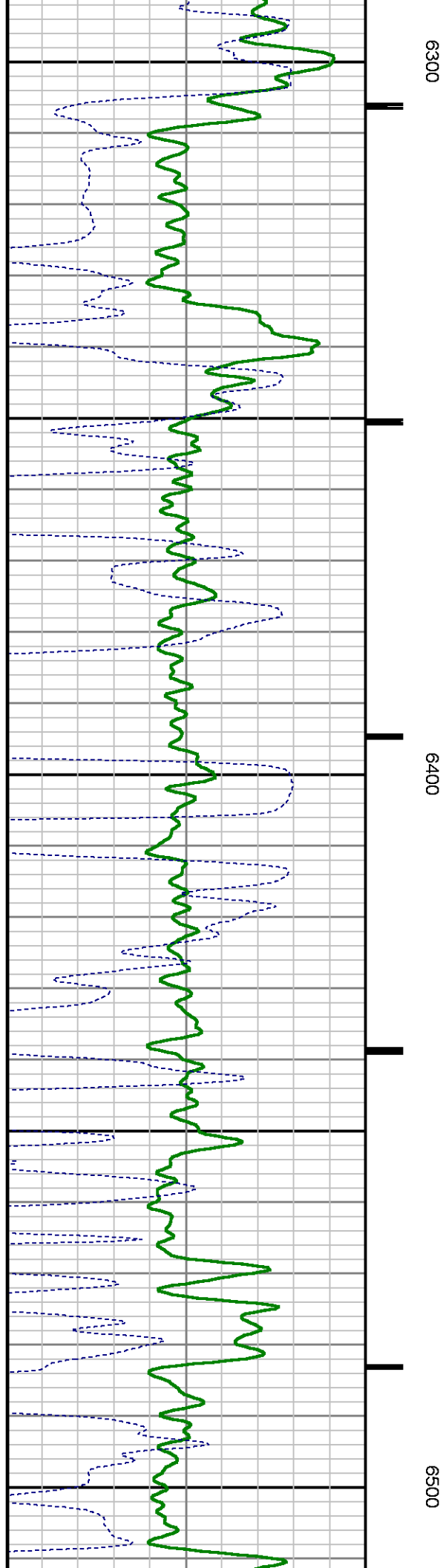
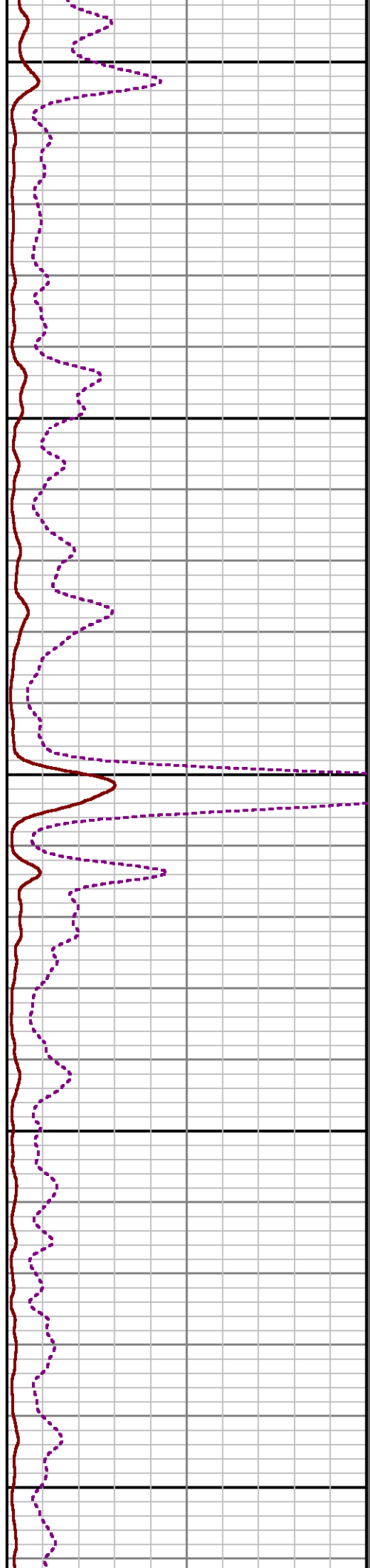
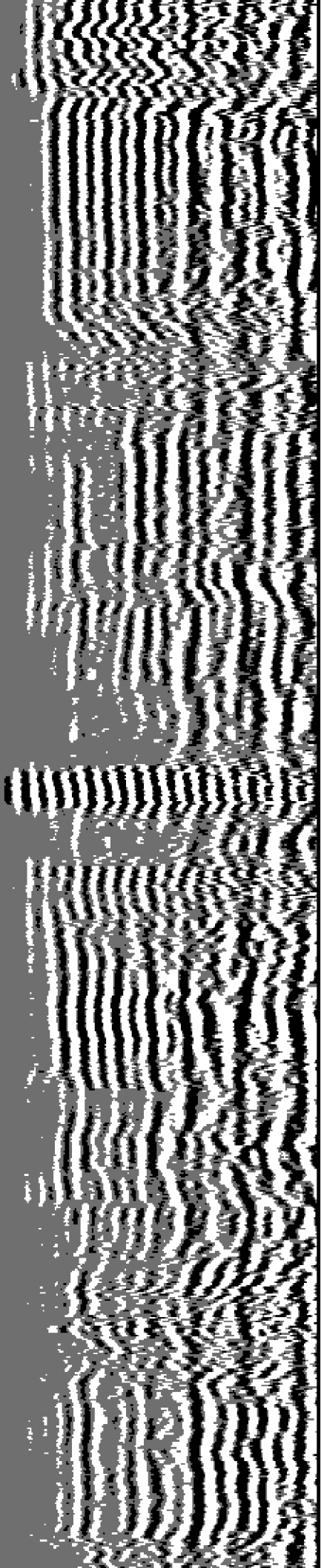


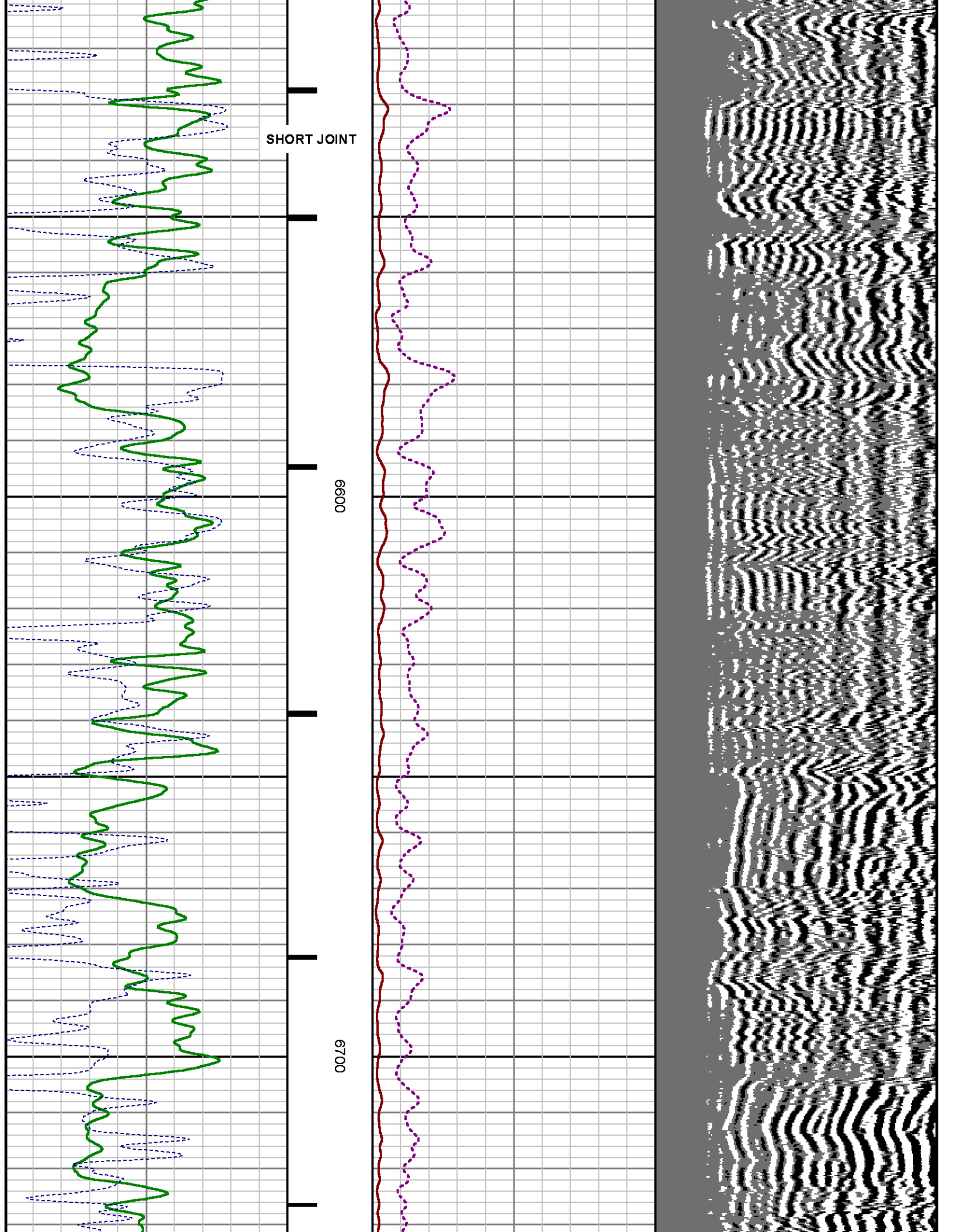


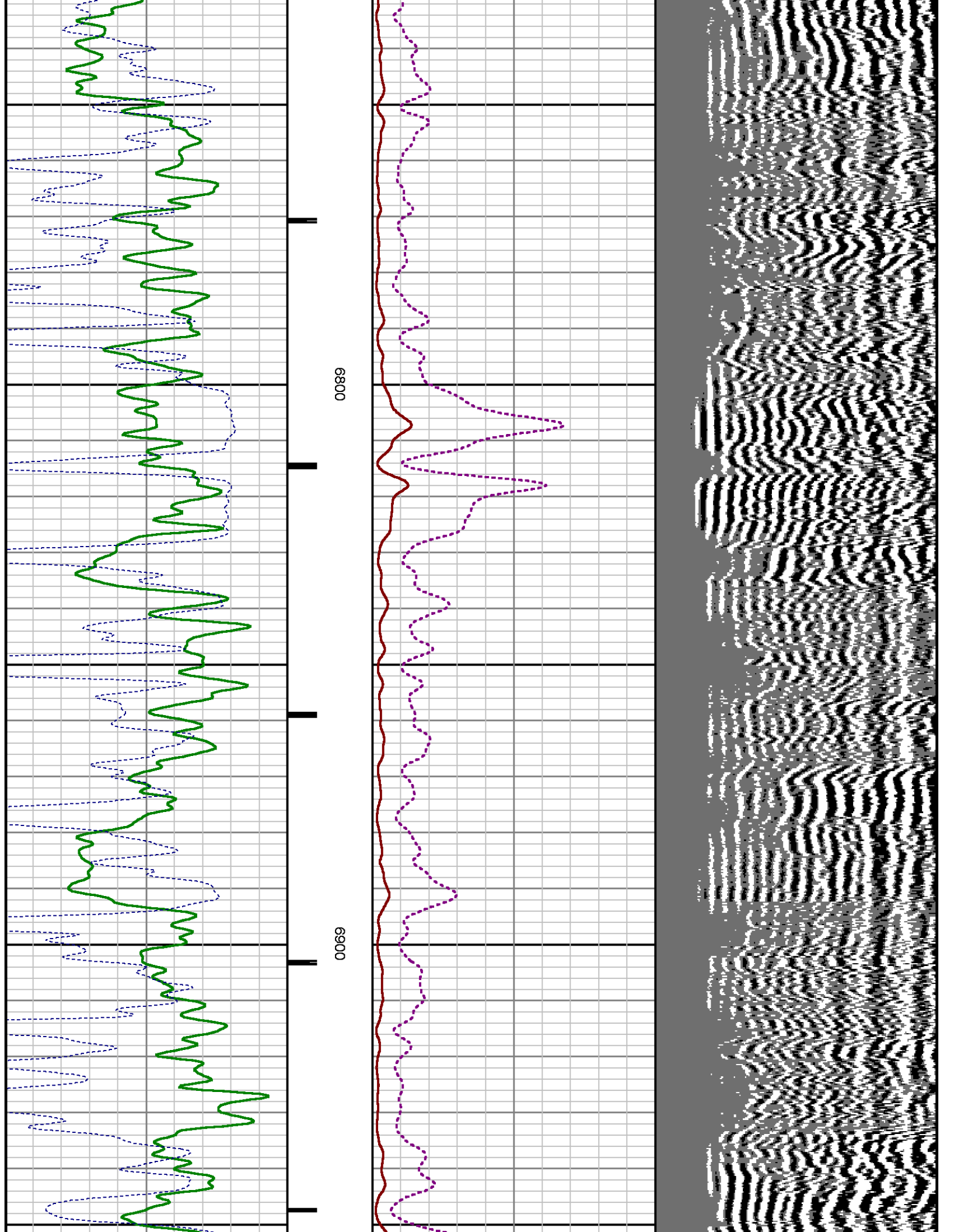


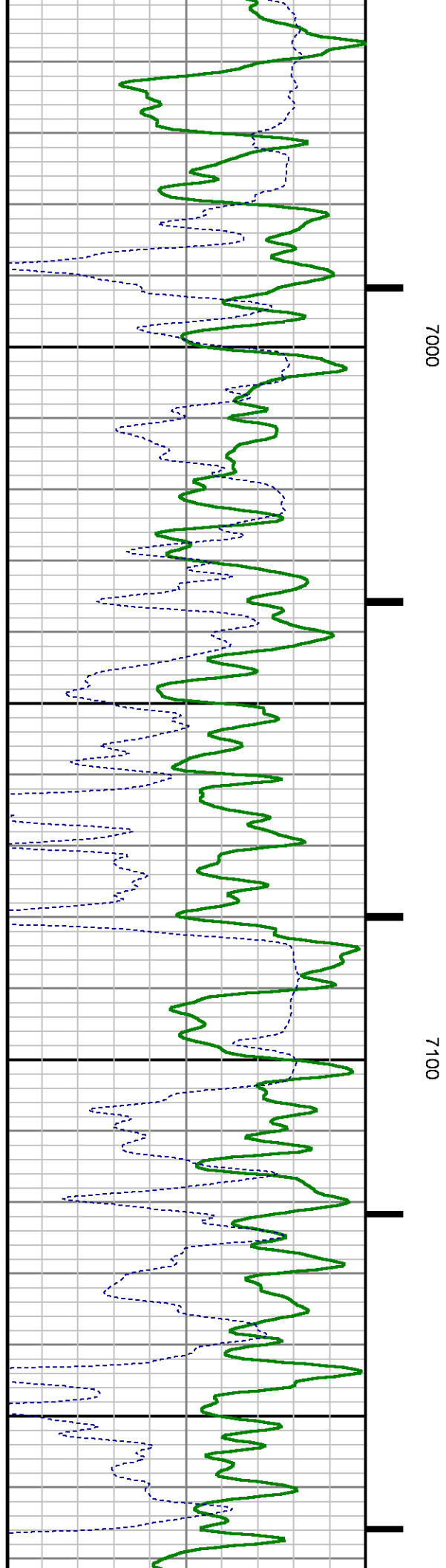
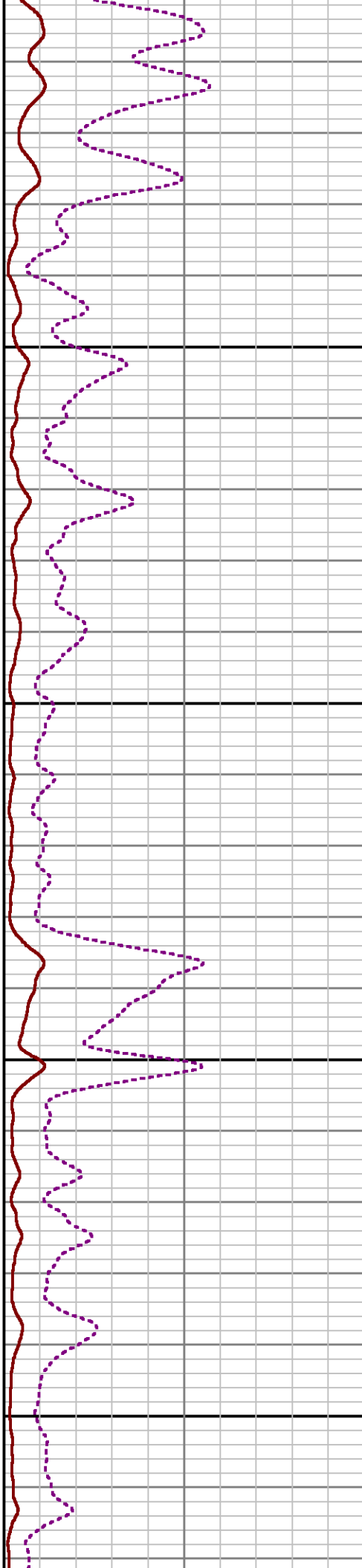
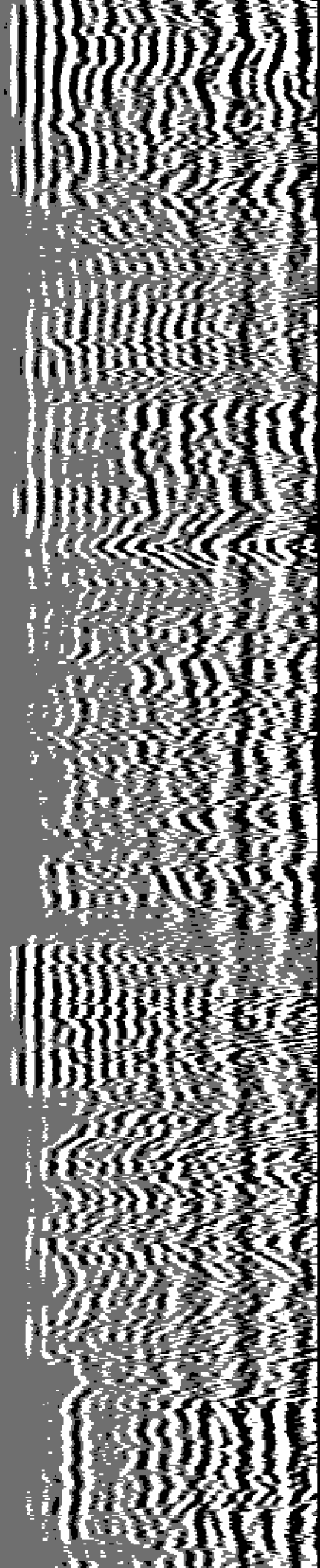


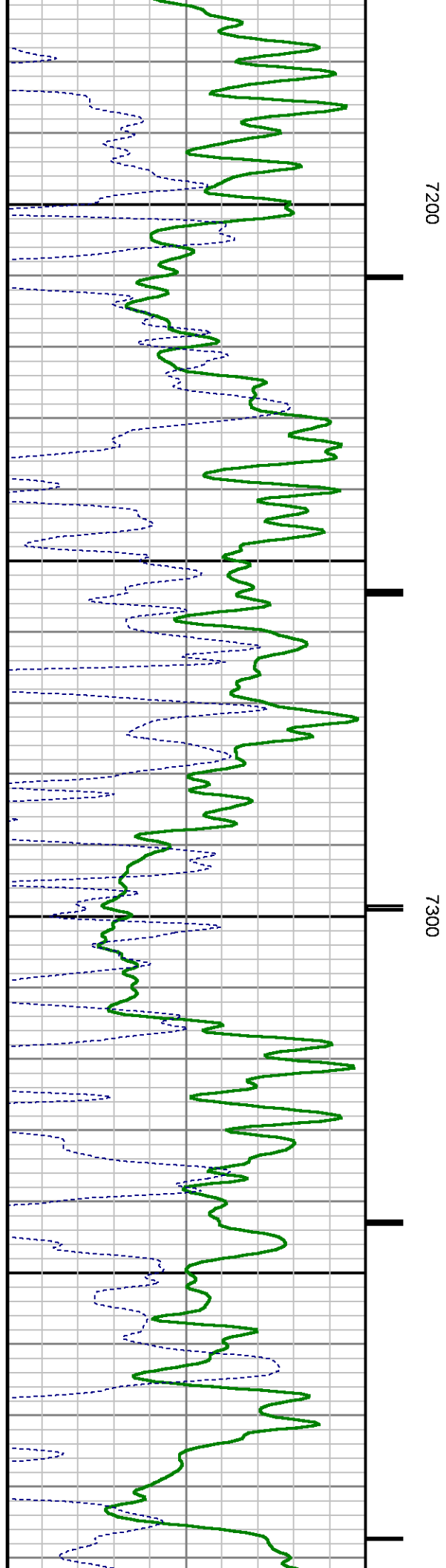
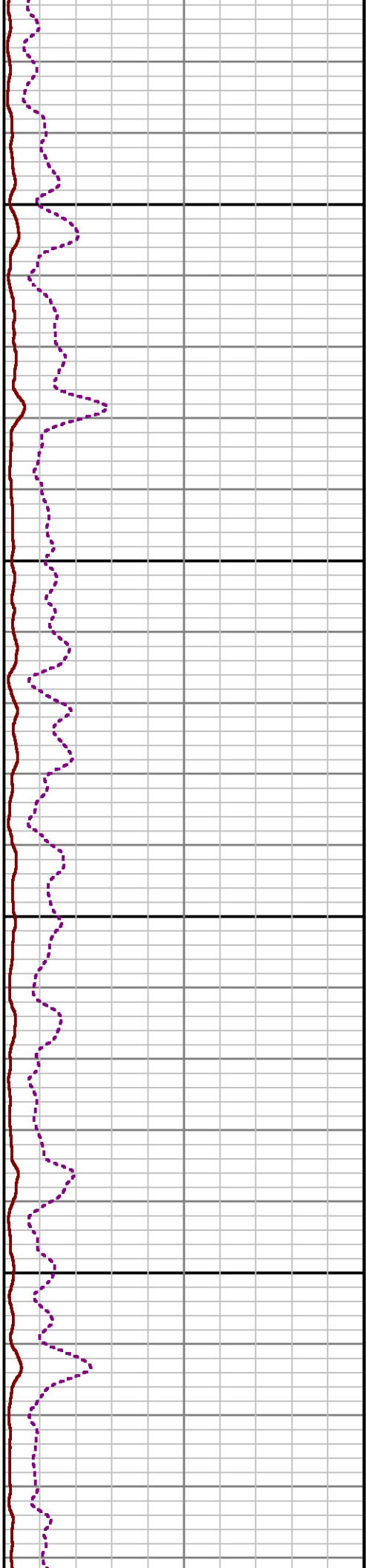
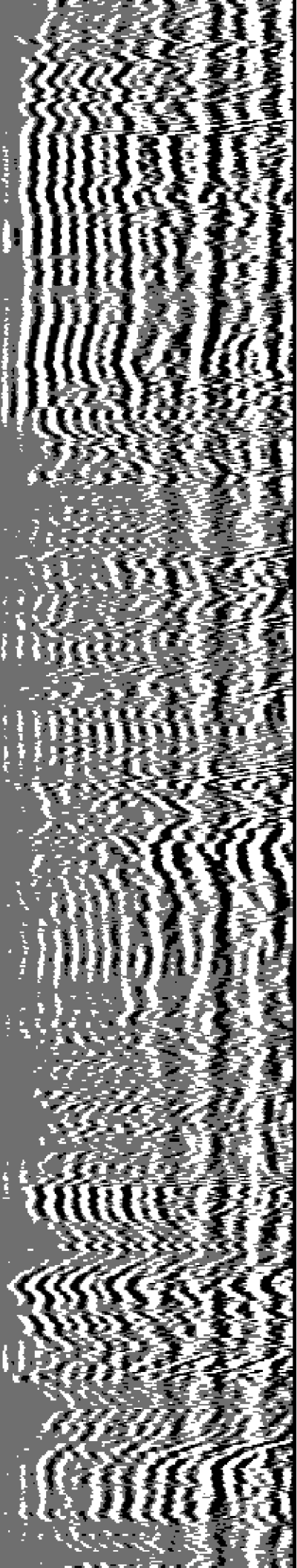


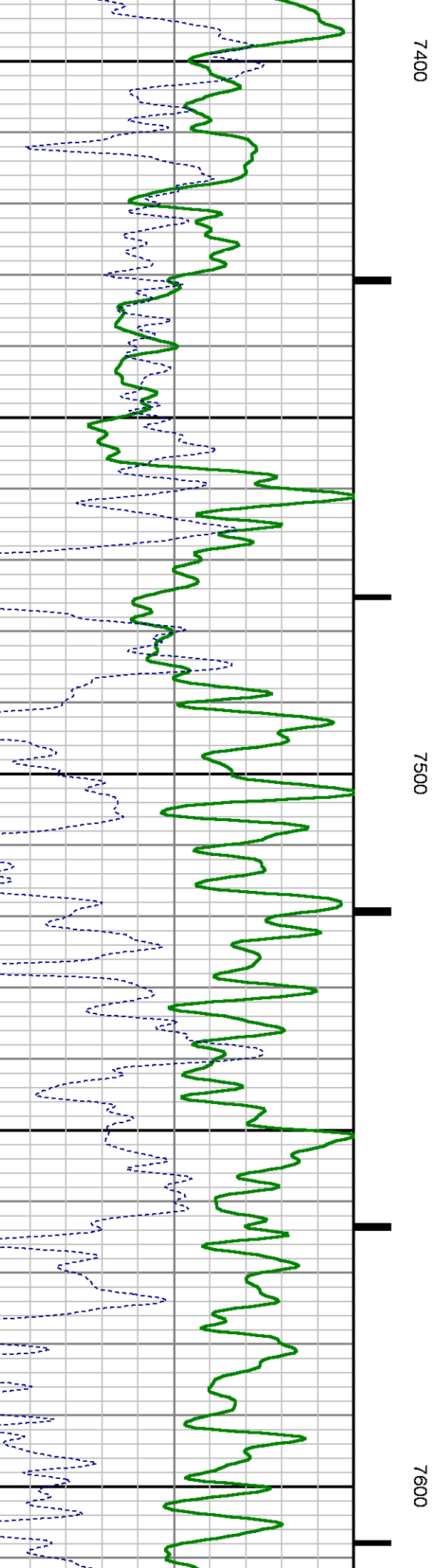
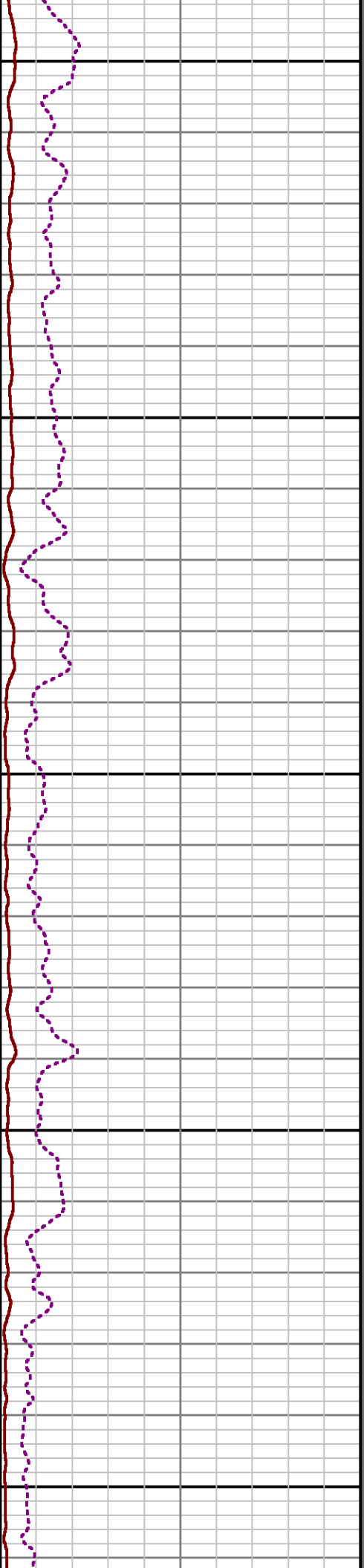
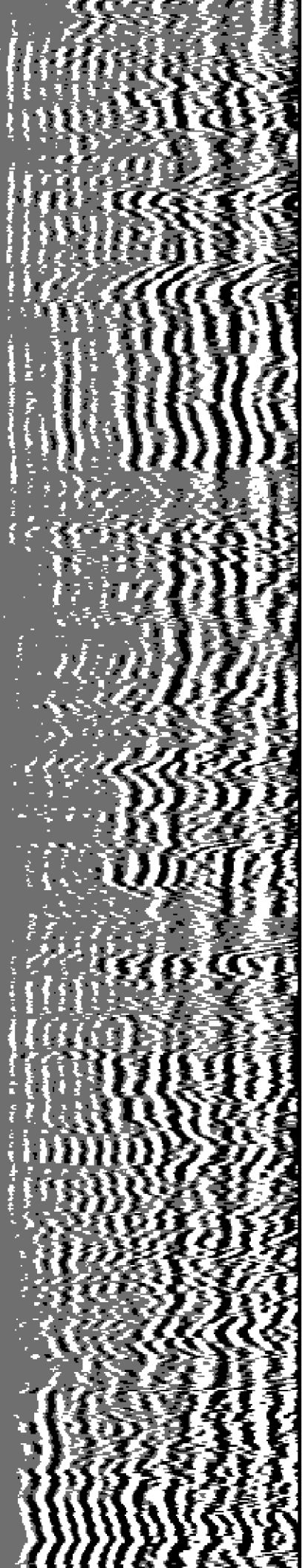


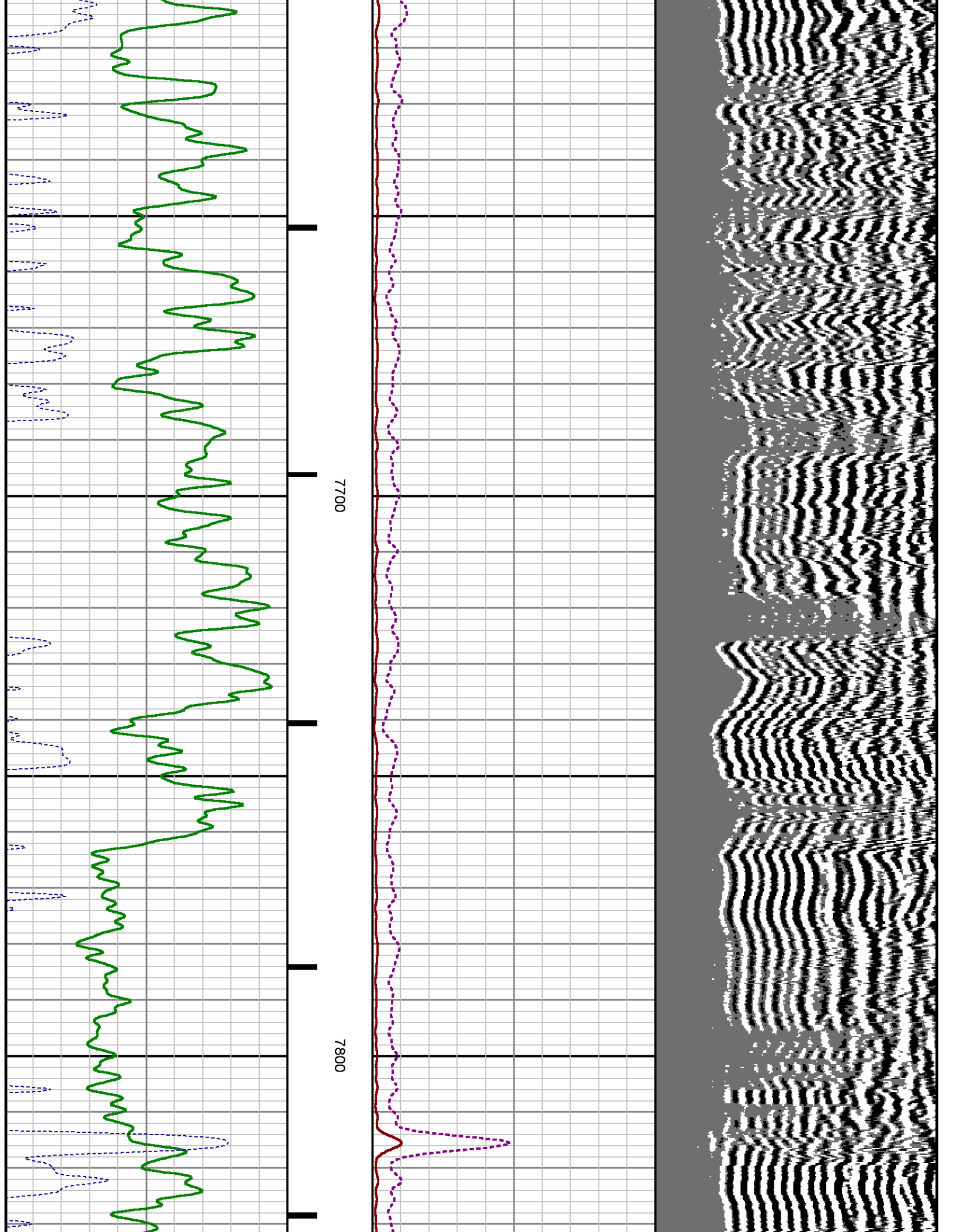


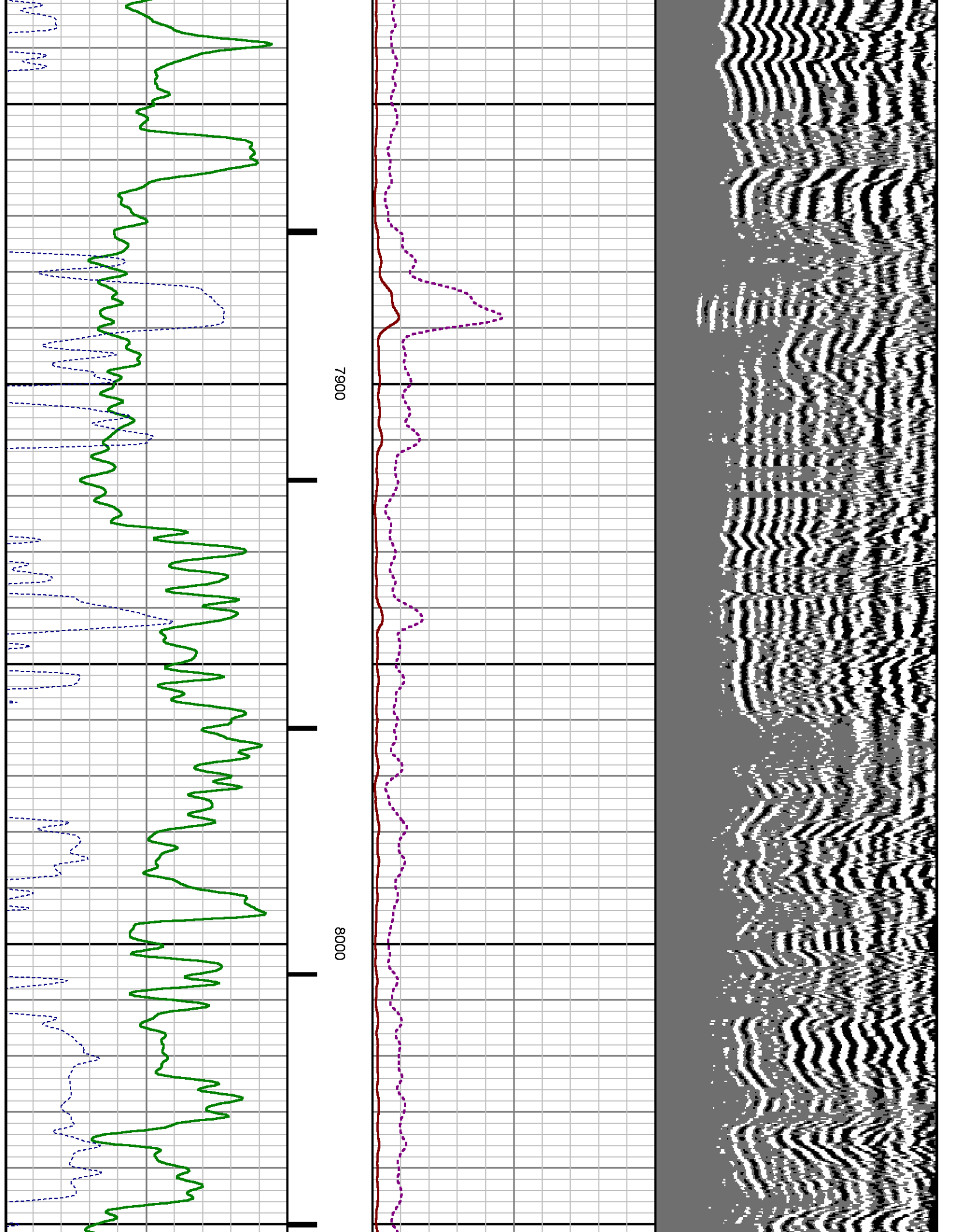


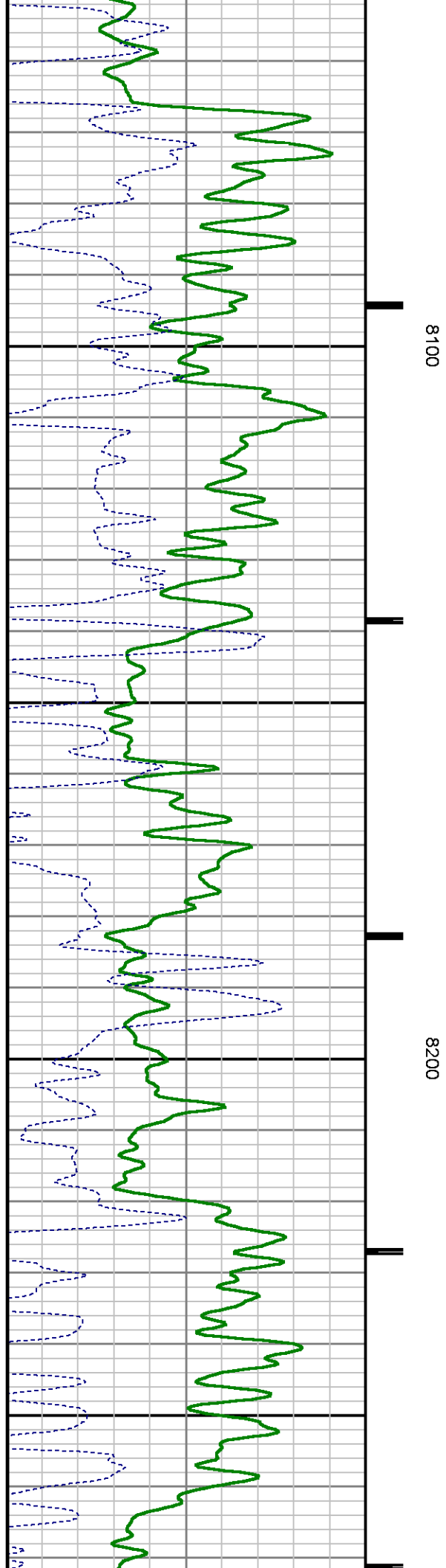
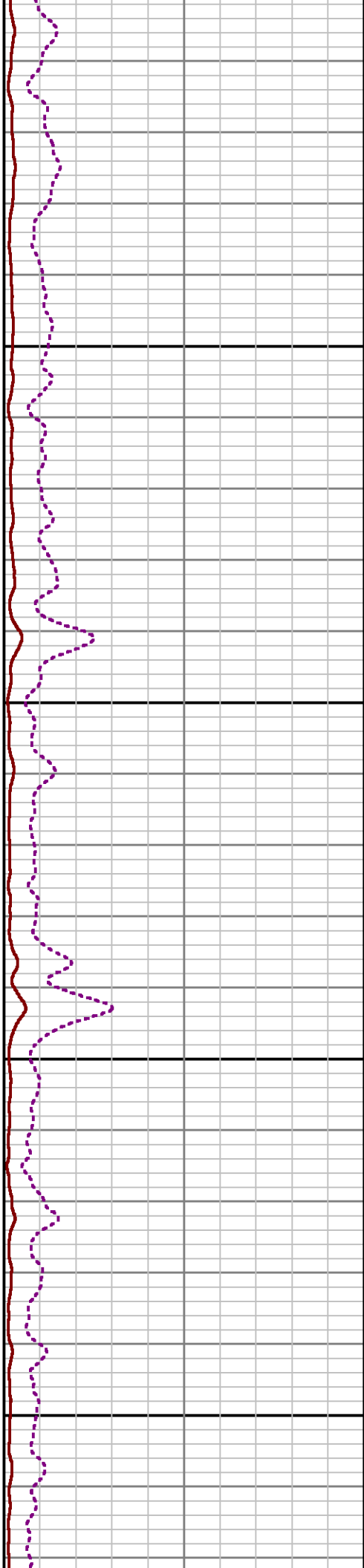
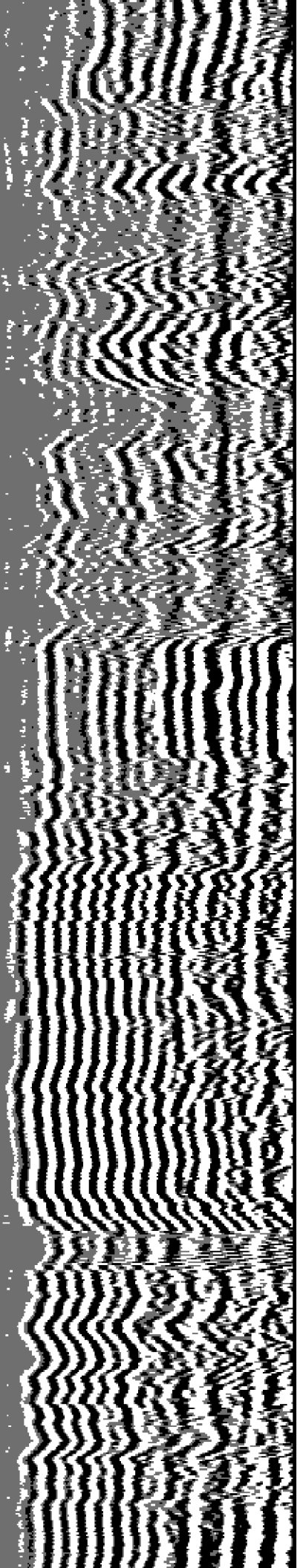


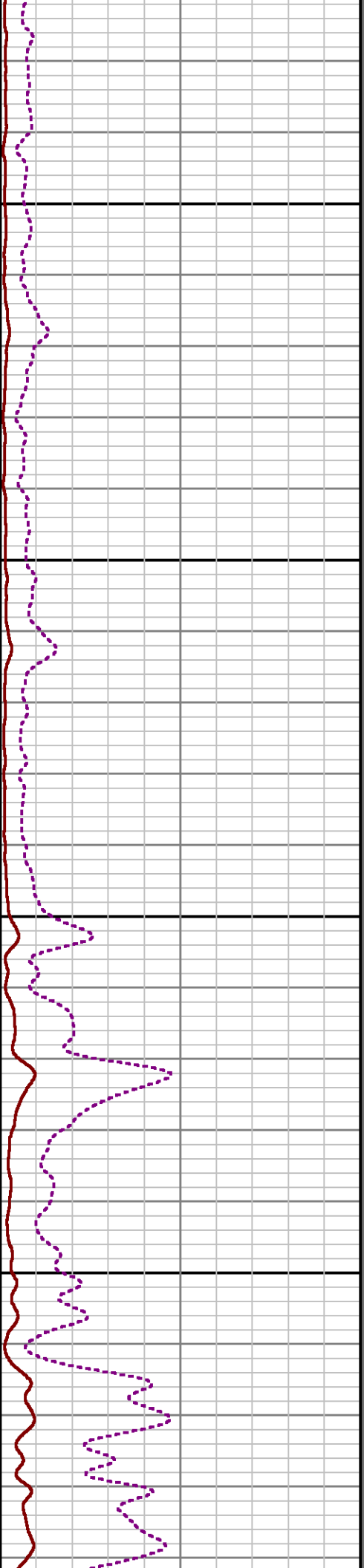
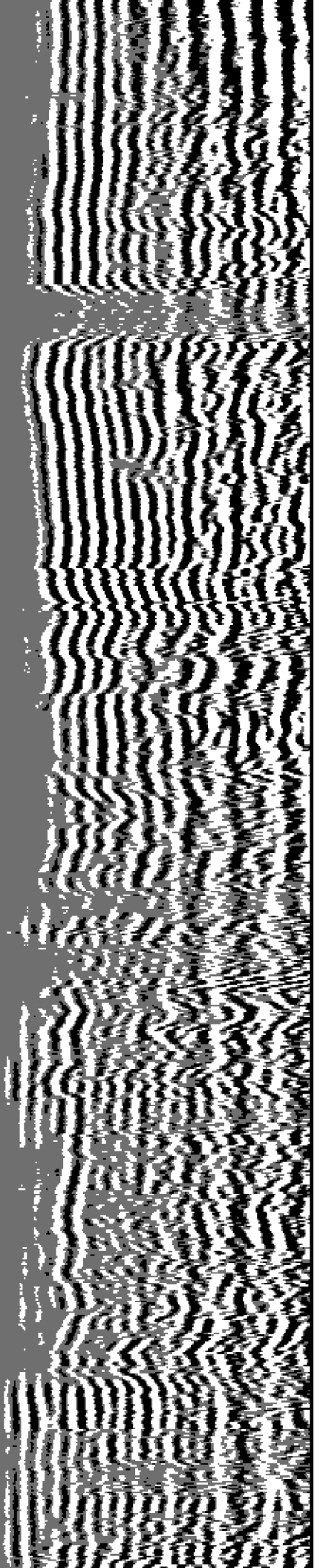






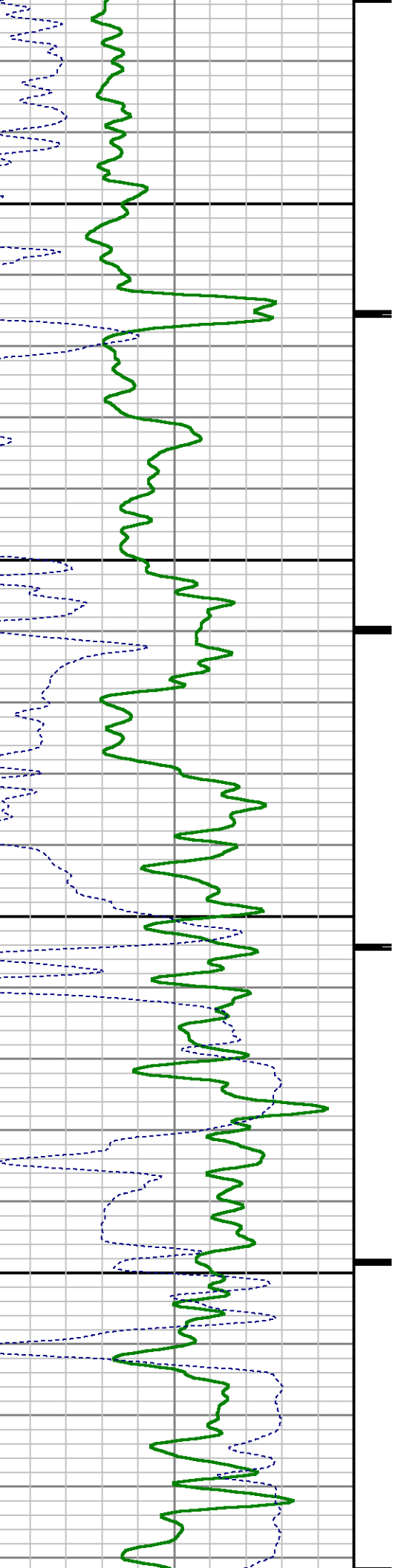


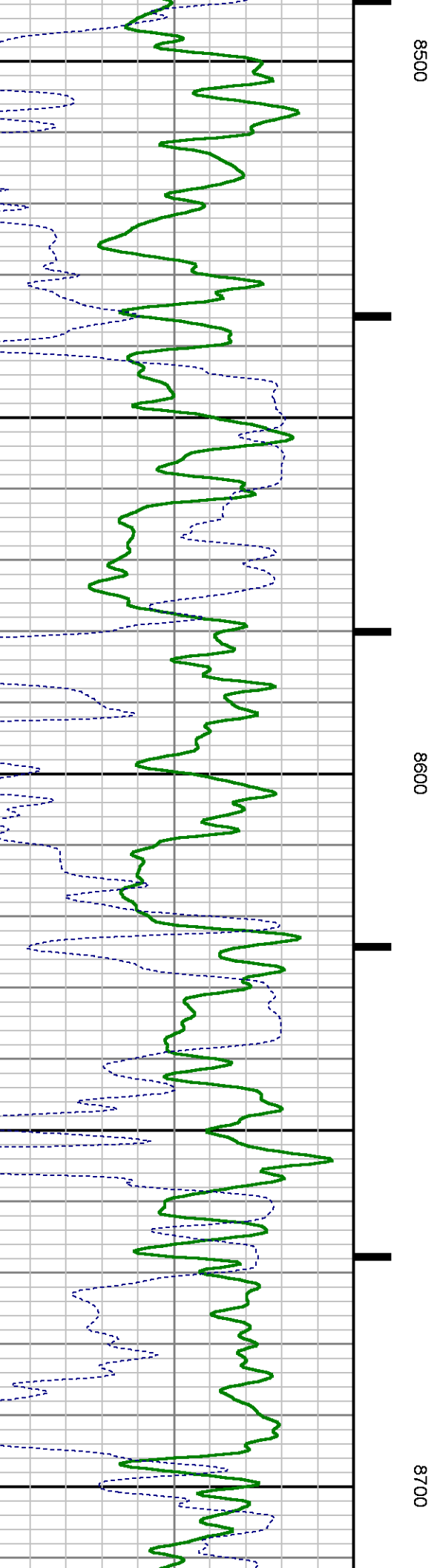
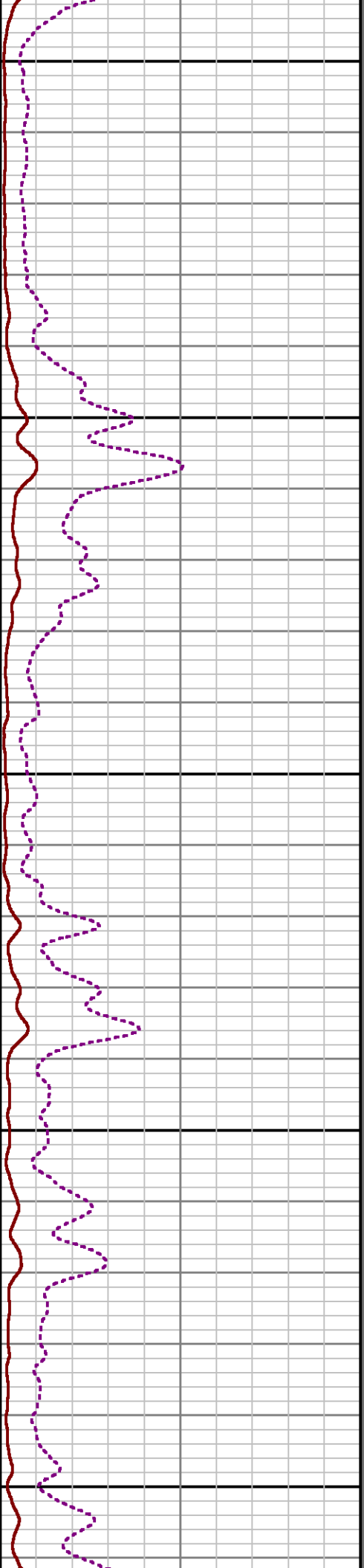
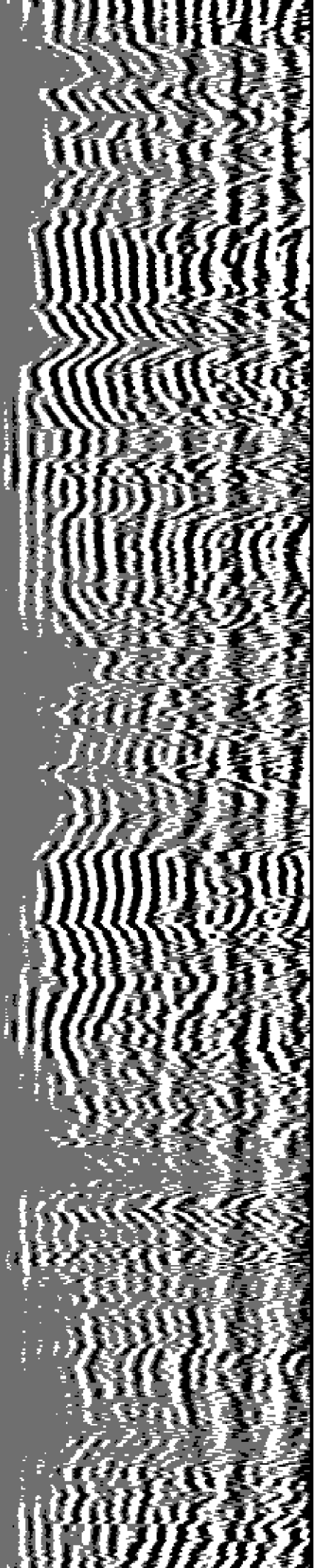


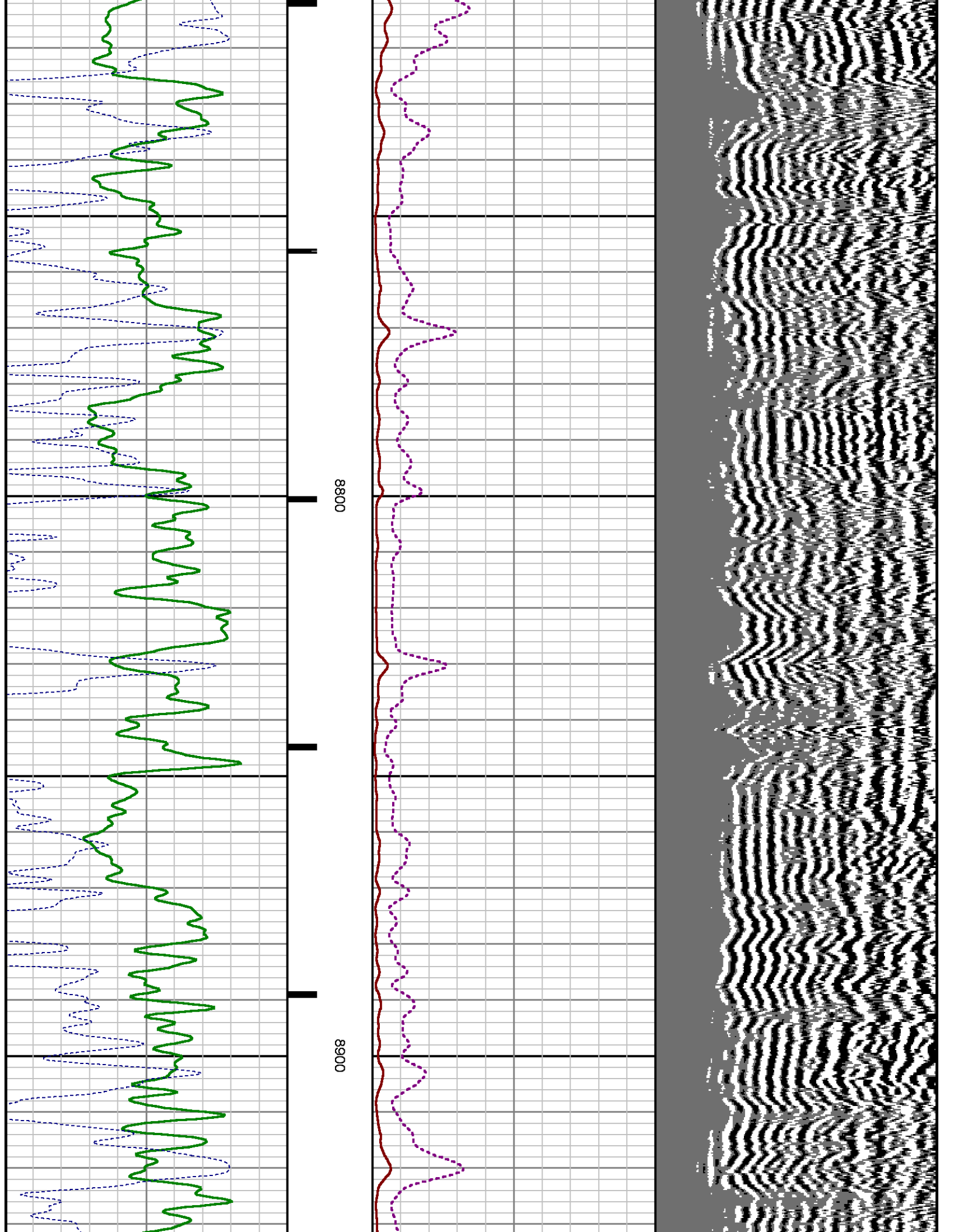


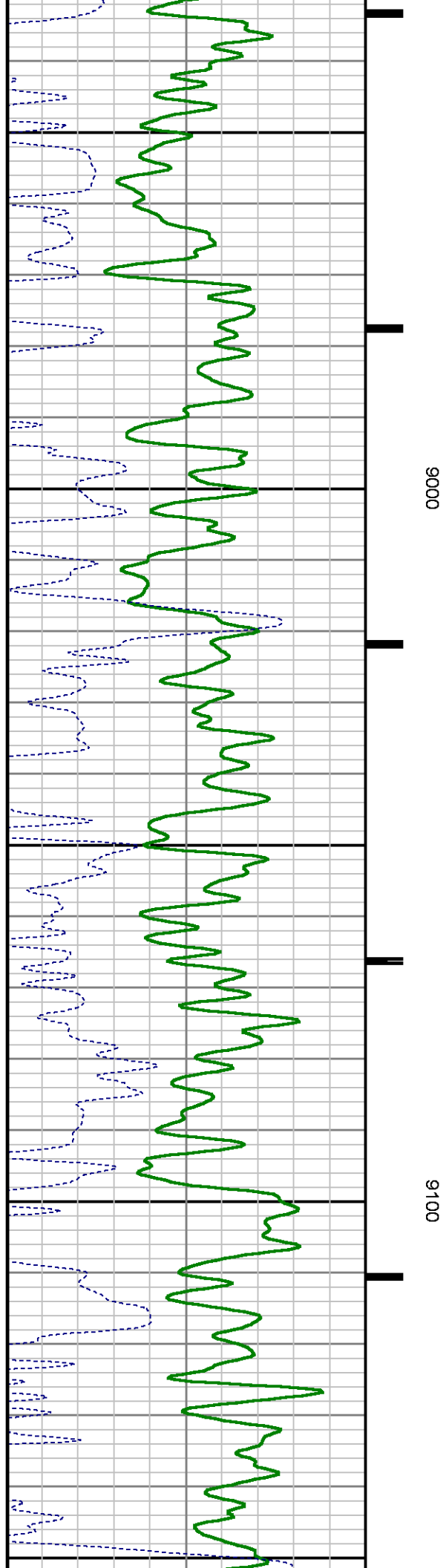
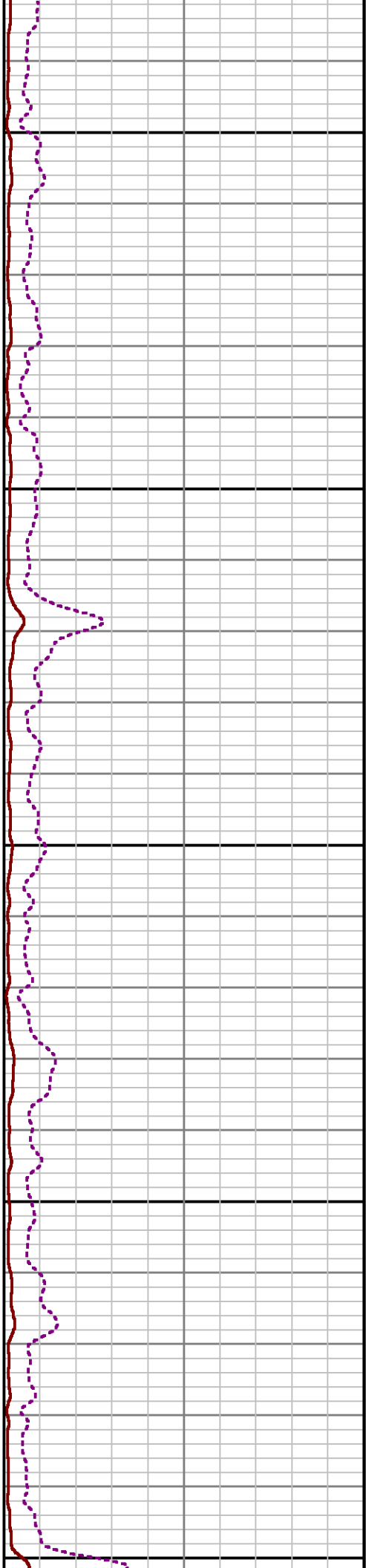
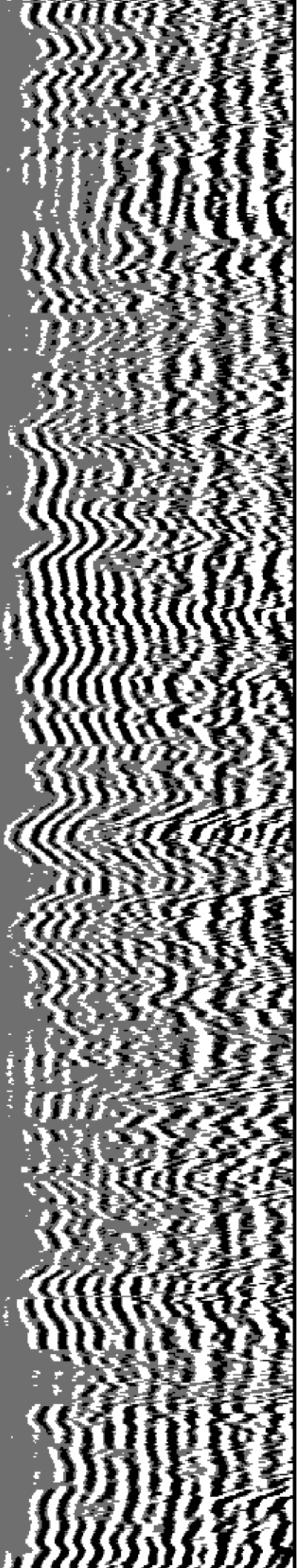
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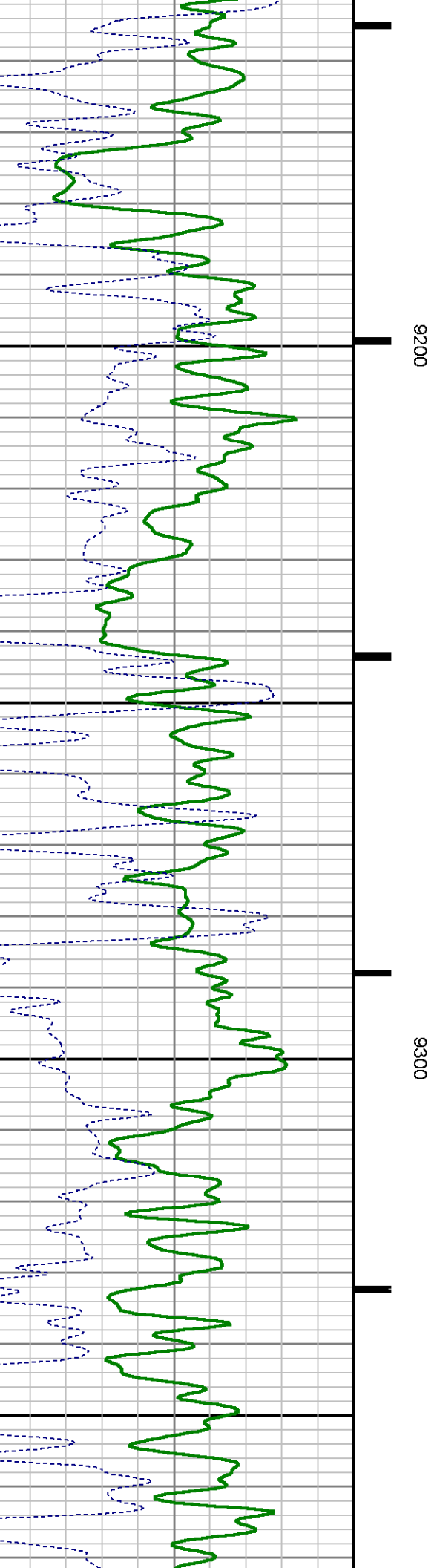
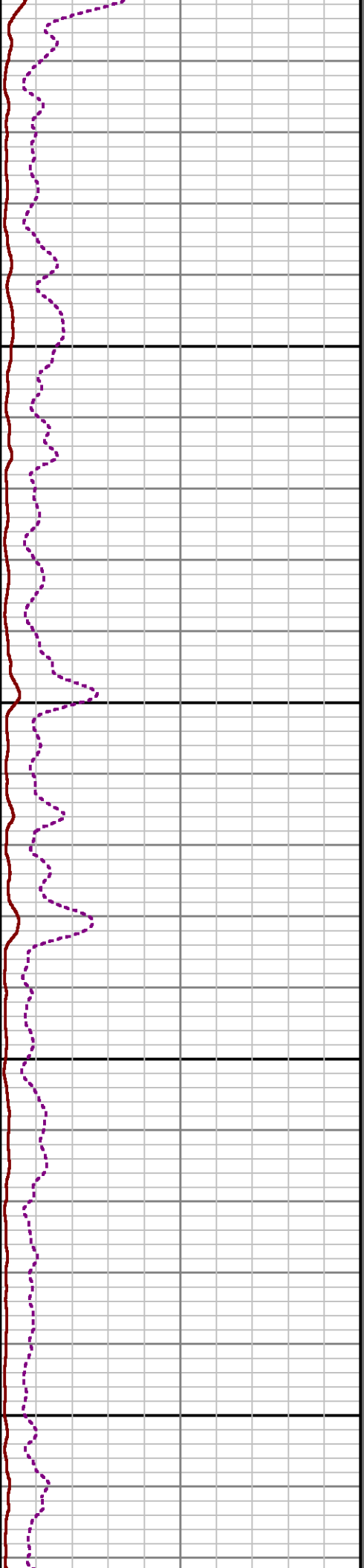
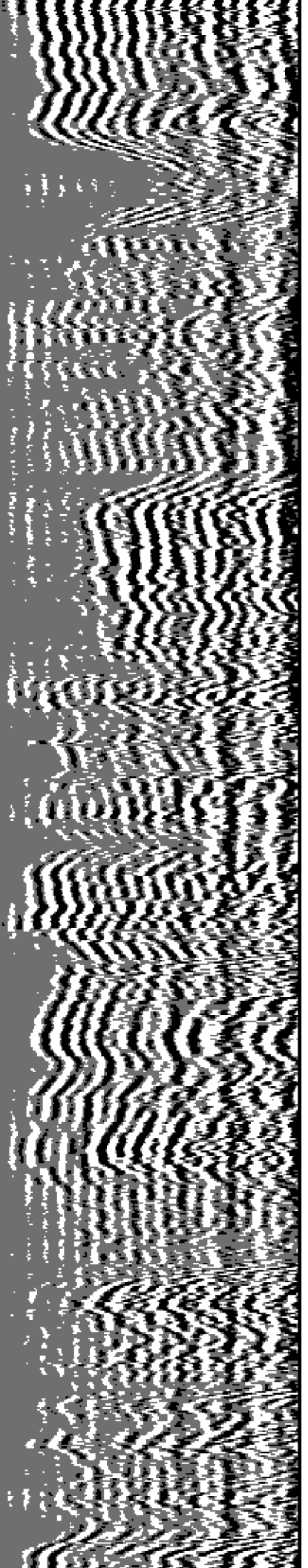
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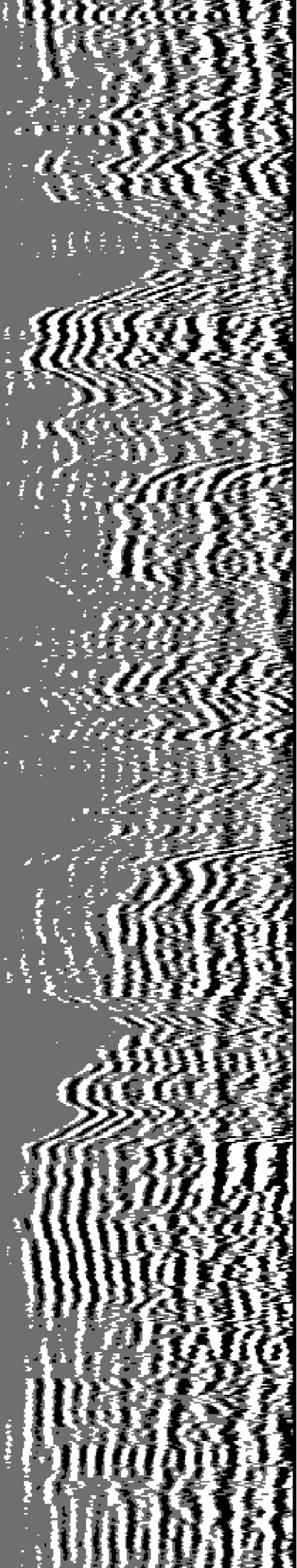






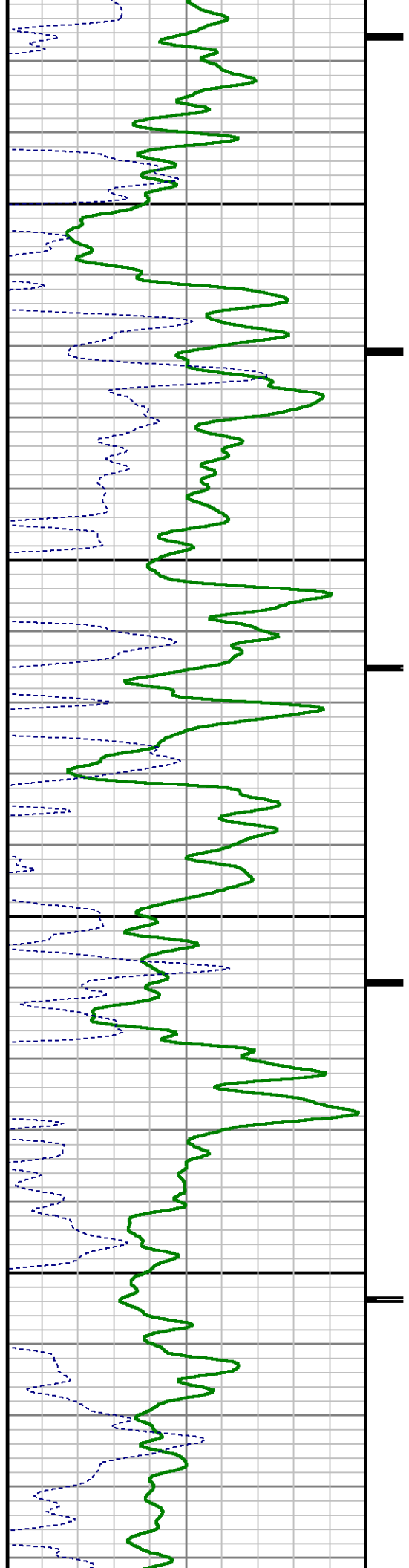


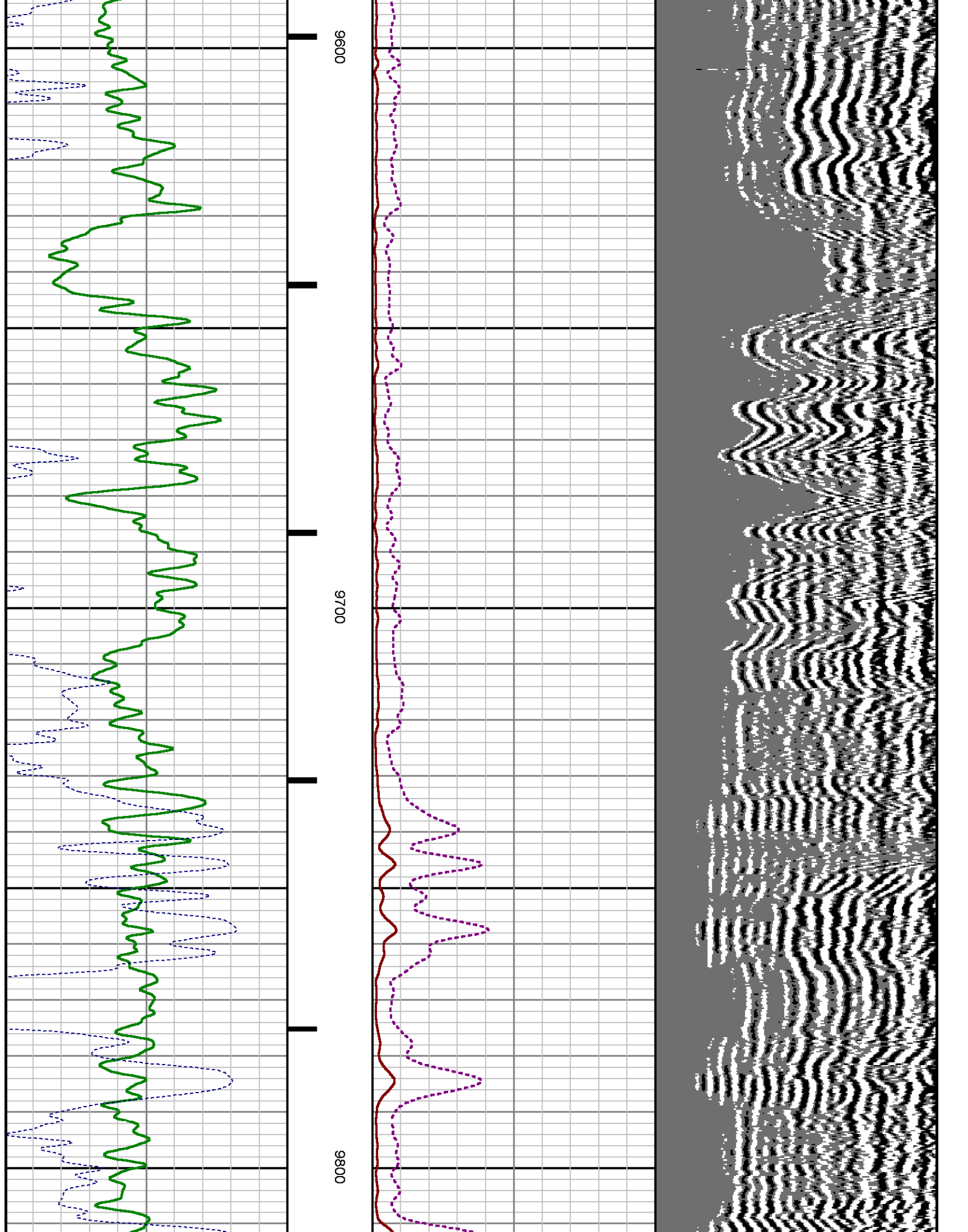


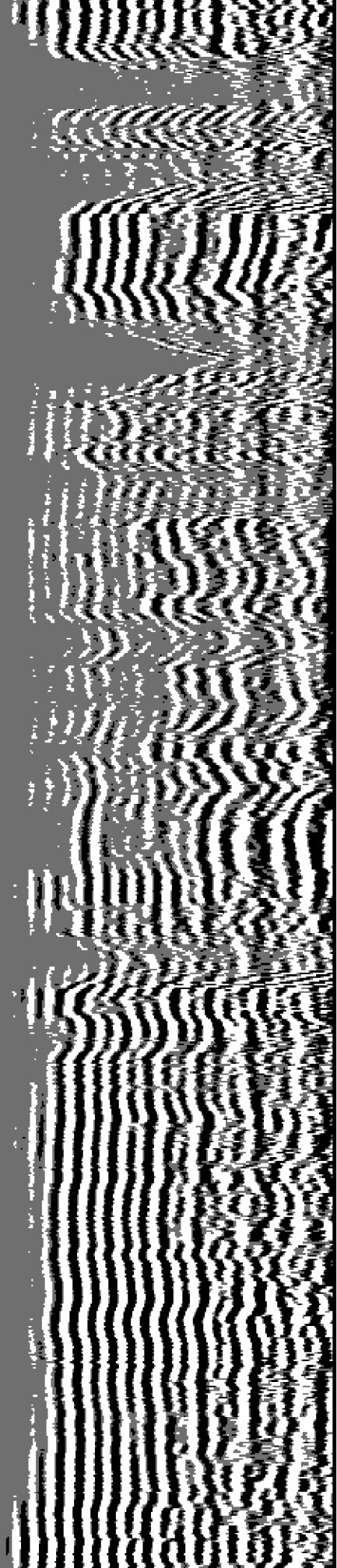


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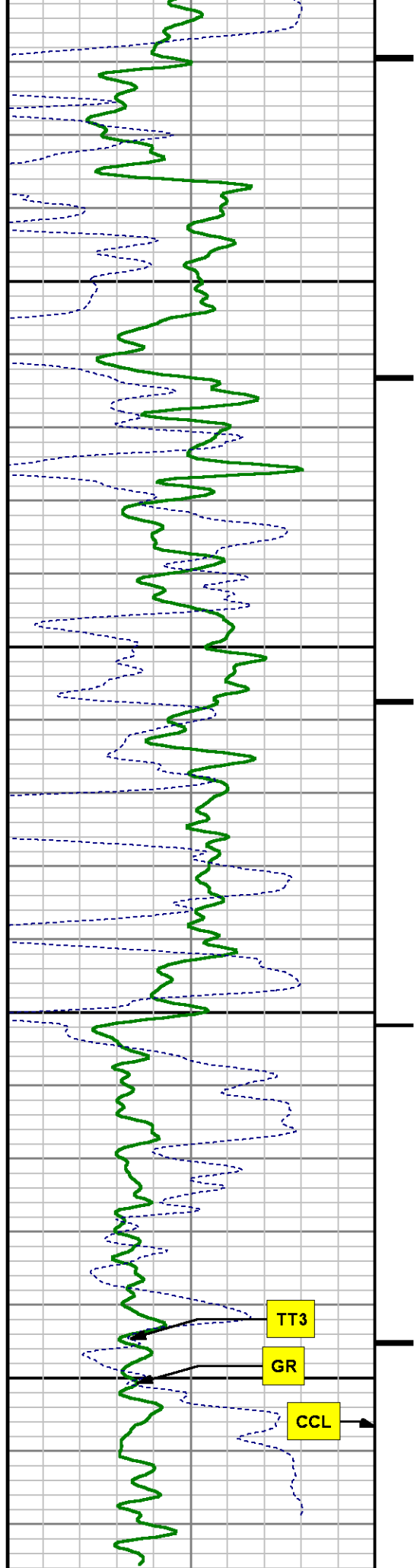
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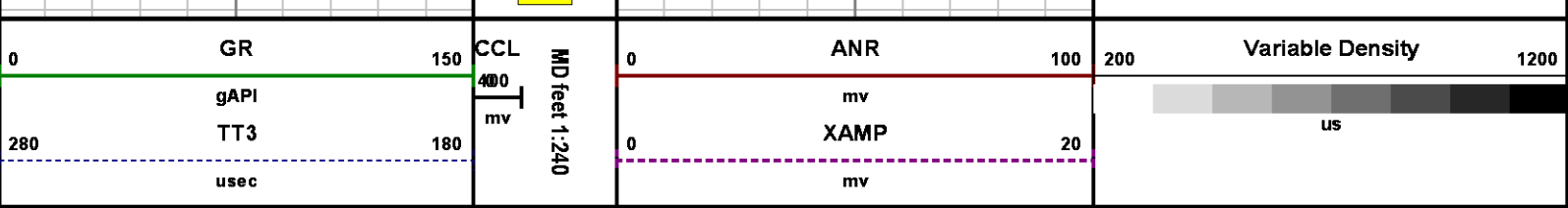
TT3

GR

CCL

TD





SECONDARY PRESENTATION
O PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	u sec	35.312	10032.500
RAL	Amp Gate Start Near	195.000	u sec	35.312	10032.500
RAL	Amp Gate Start Radial	195.000	u sec	35.312	10032.500
RAL	Amp Gate Width Far	25.000	u sec	35.312	10032.500
RAL	Amp Gate Width Near	25.000	u sec	35.312	10032.500
RAL	Amp Gate Width Radial	25.000	u sec	35.312	10032.500
RAL	casing od	4.500	inches	35.312	10032.500
RAL	casing wt	11.600	lbm/ft	35.312	10032.500
RAL	FB Start Far	291.900	u sec	35.312	10032.500
RAL	FB Start Near	180.000	u sec	35.312	10032.500
RAL	FB Start Radial	180.000	u sec	35.312	10032.500
RAL	FB Thresh Far	10.000	mv	35.312	10032.500
RAL	FB Thresh Near	4.000	mv	35.312	10032.500
RAL	FB Thresh Radial	4.000	mv	35.312	10032.500
RAL	Fluid Travel Time	200.000	u sec/ft	35.312	10032.405

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
		AFAR	SIG	TT5			
1426XA	-11.360						

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

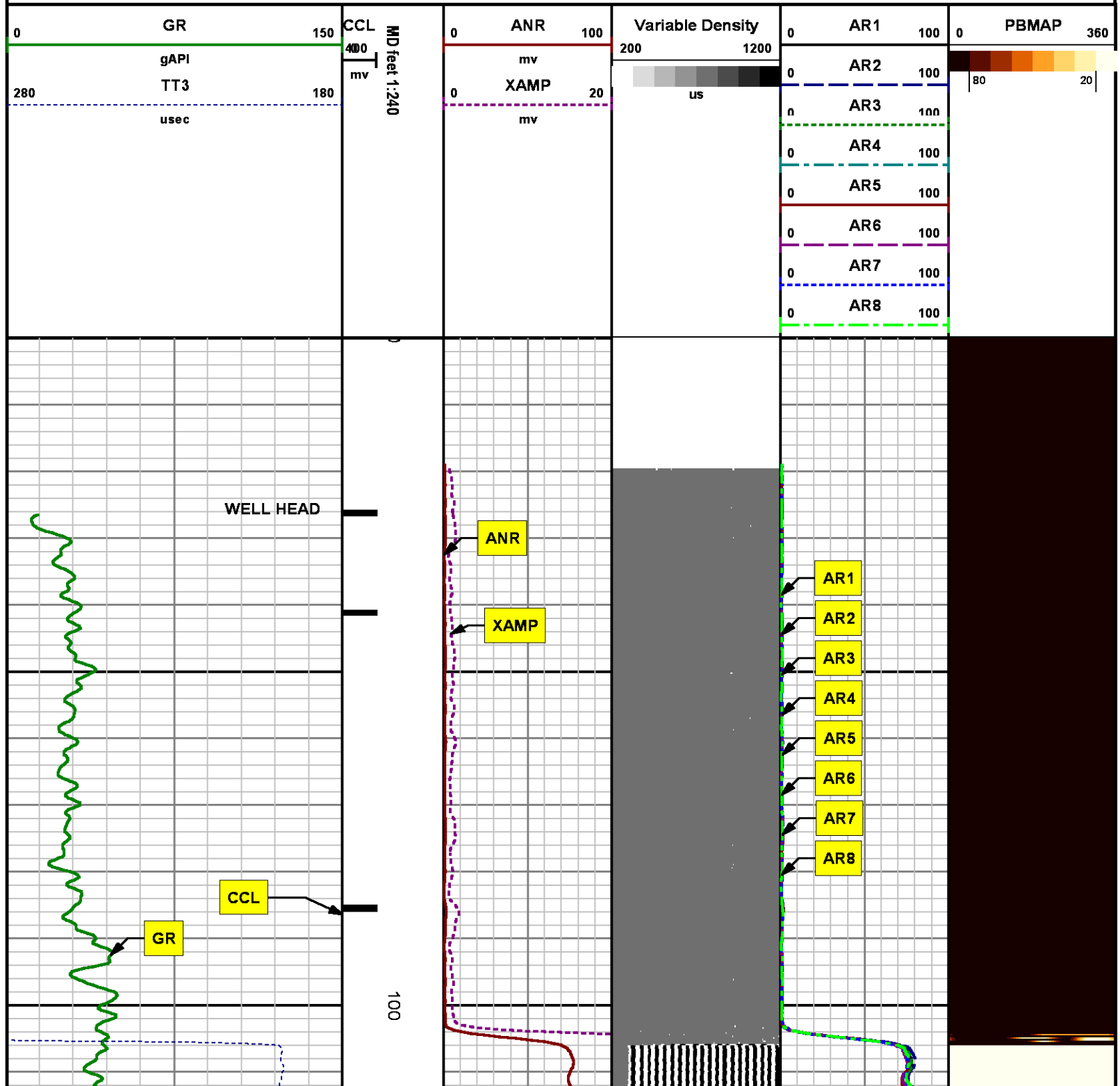
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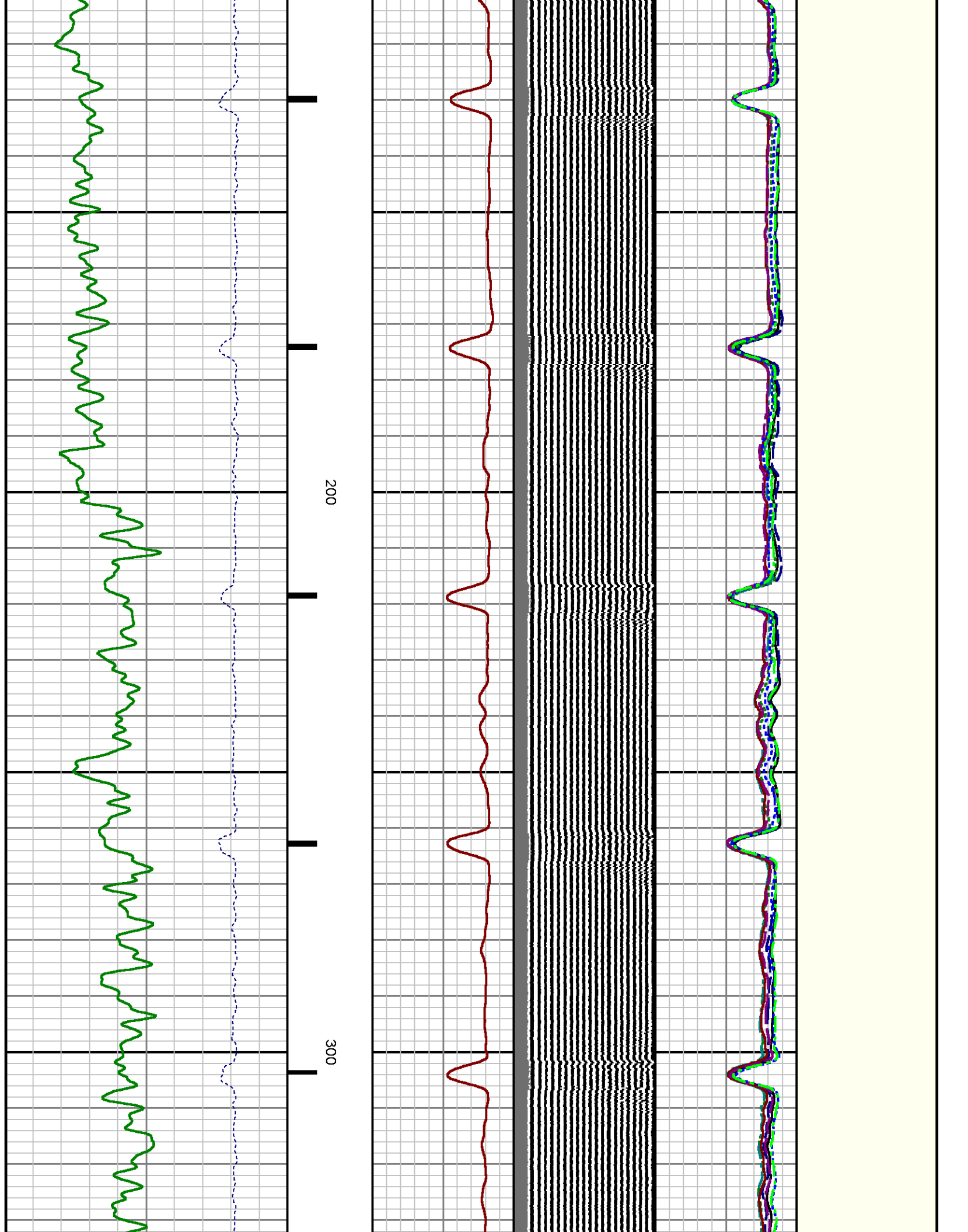
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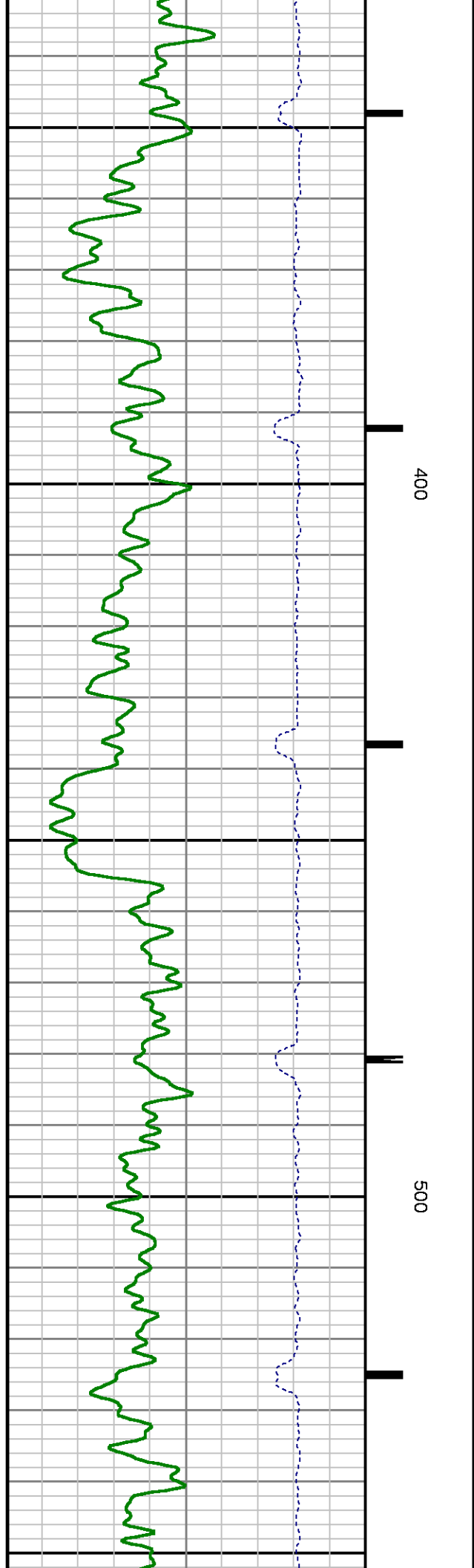
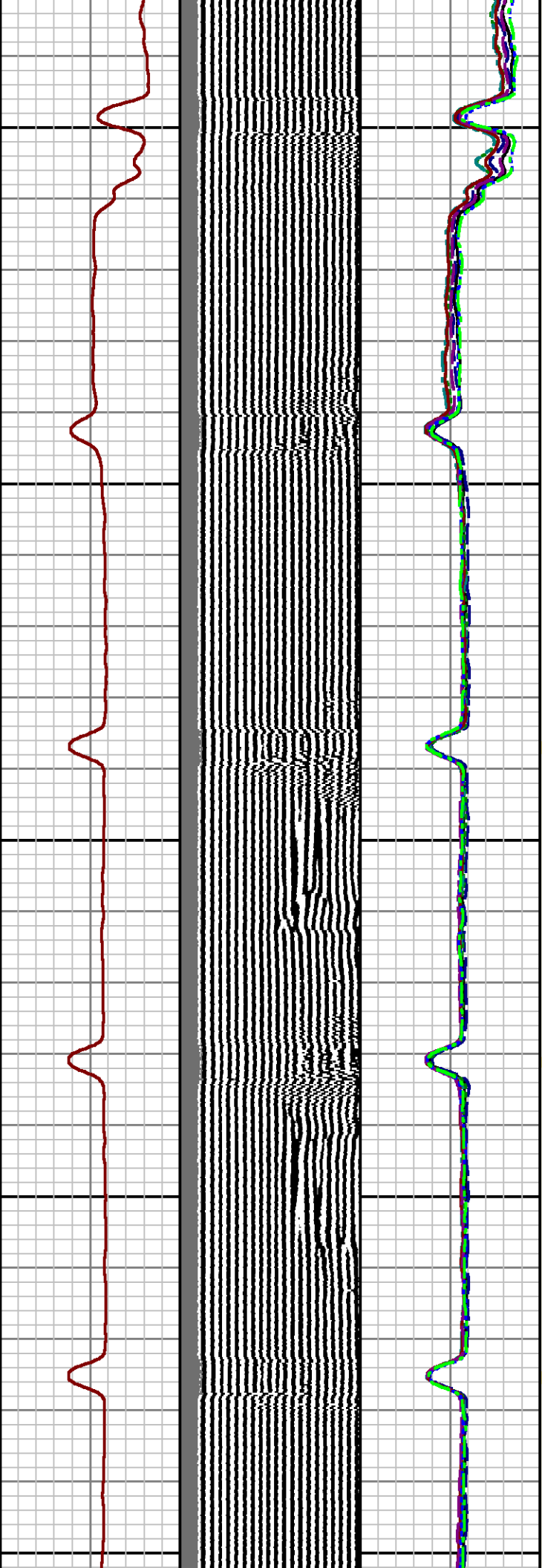
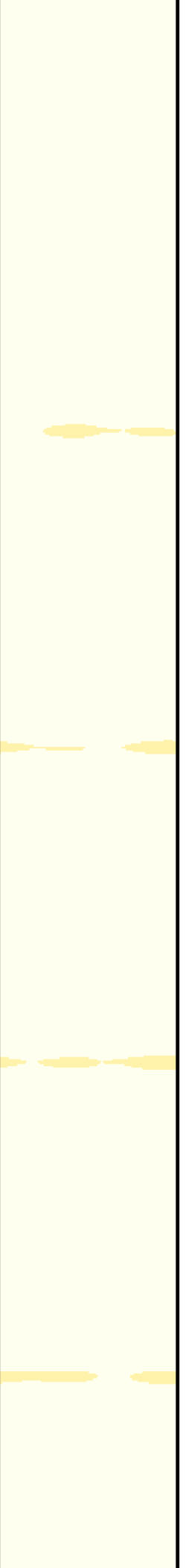
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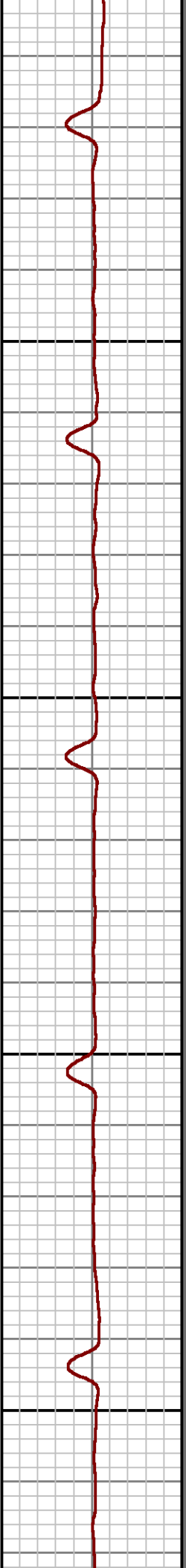
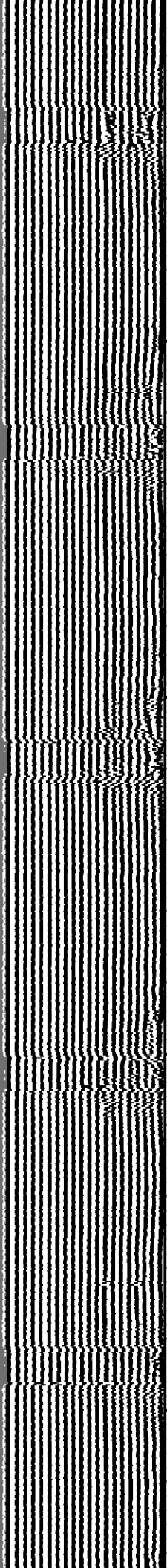
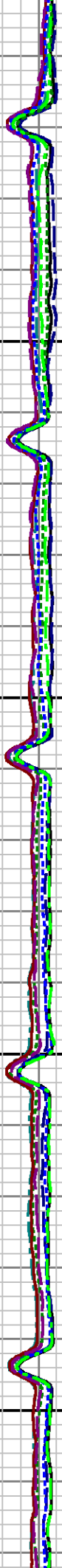
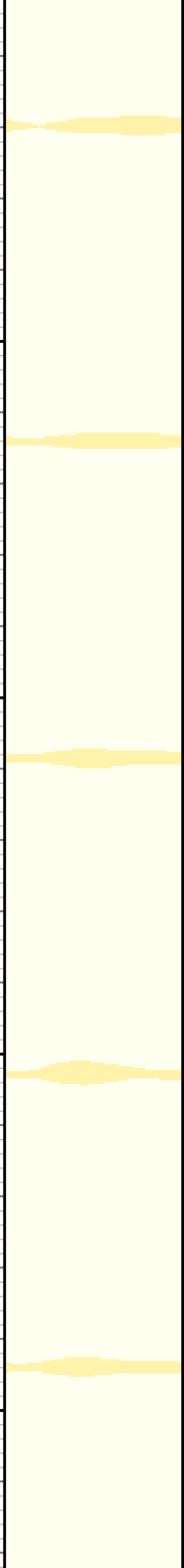
Interval : 0.00 - 10035.00 feet UP

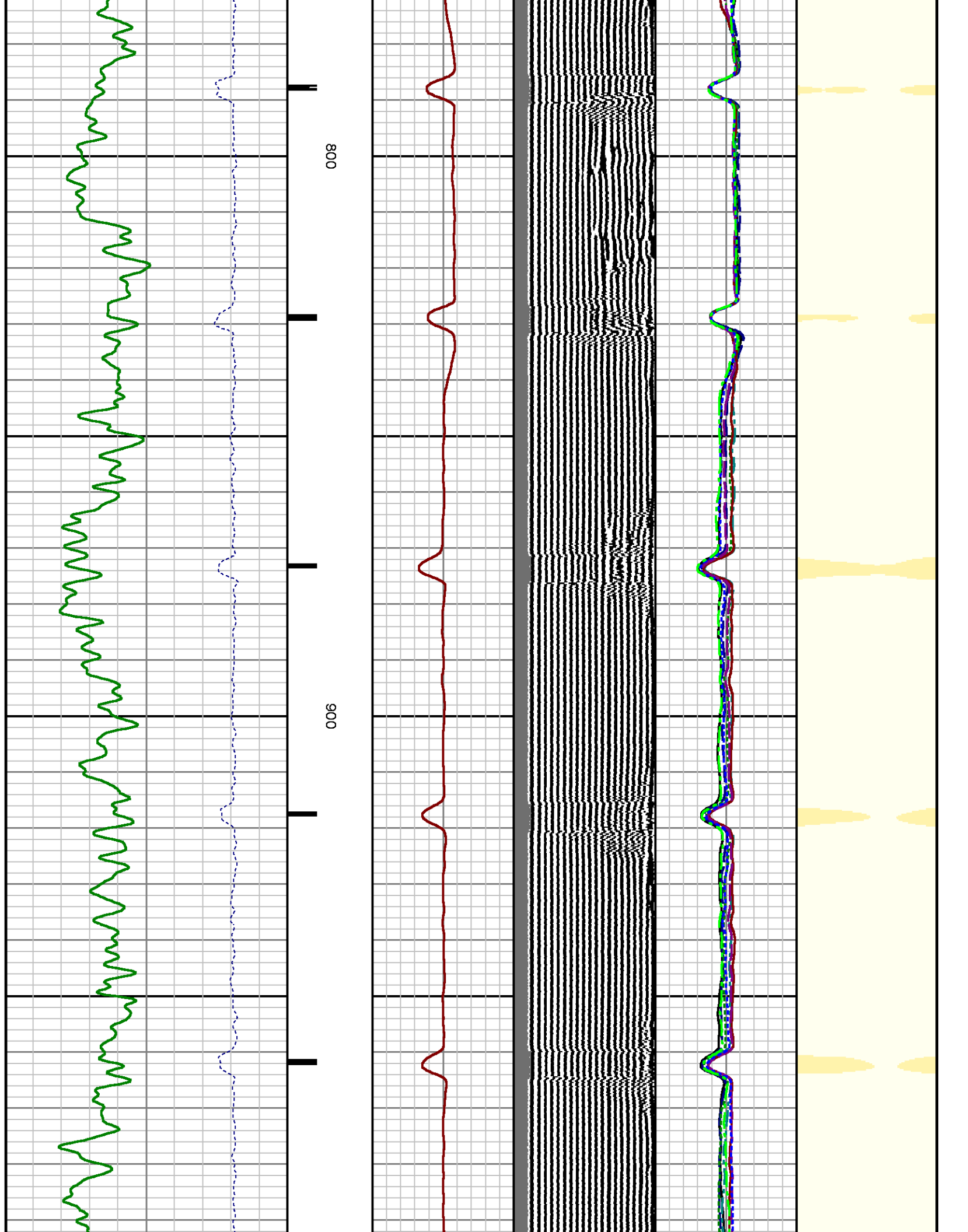
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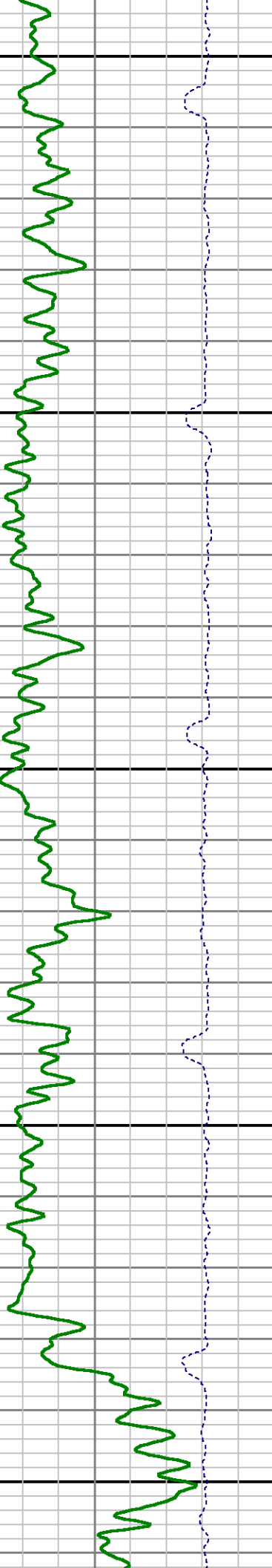
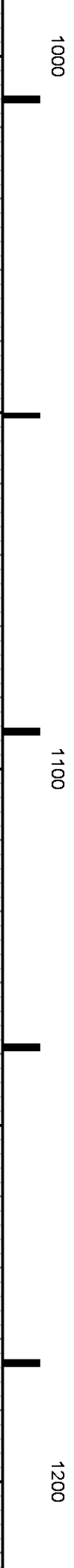
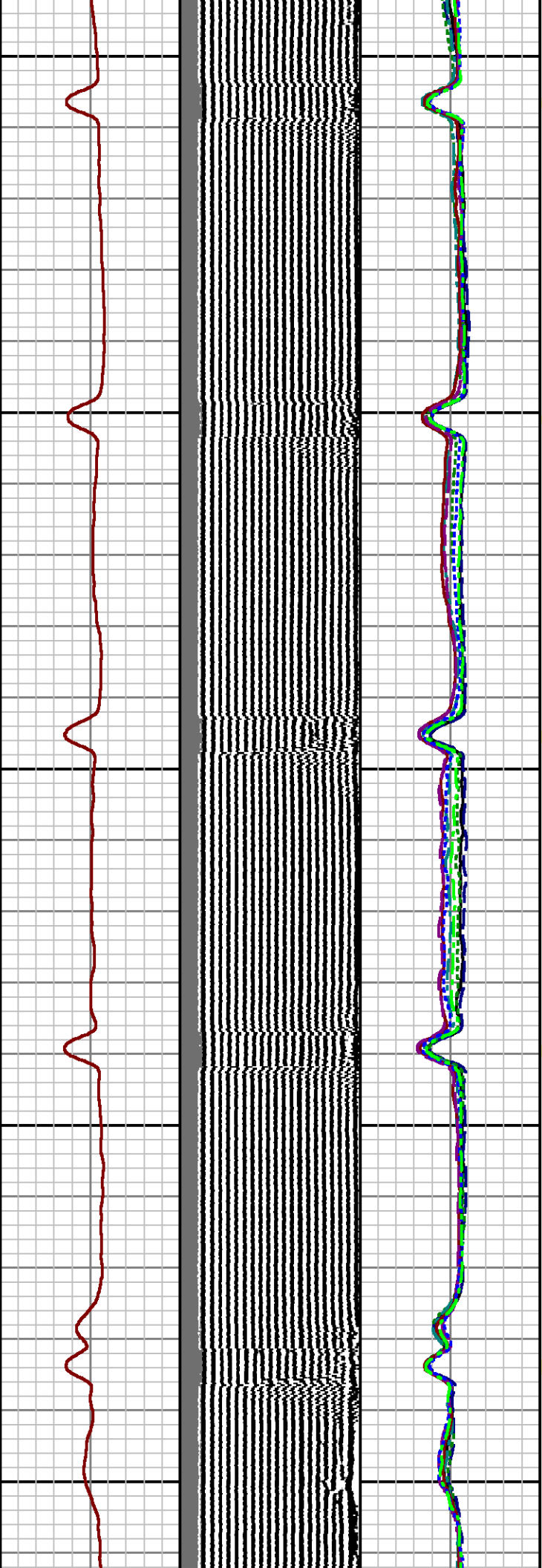
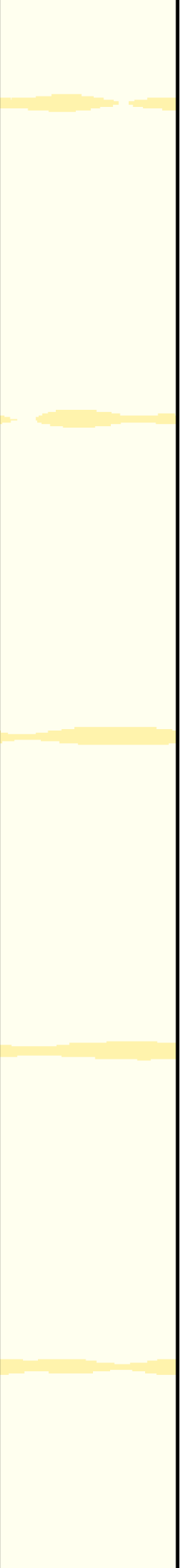


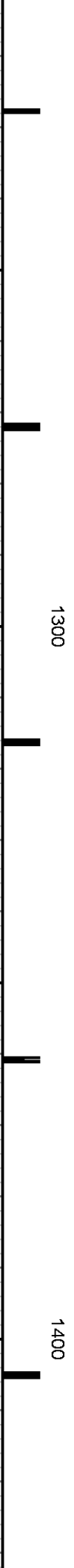
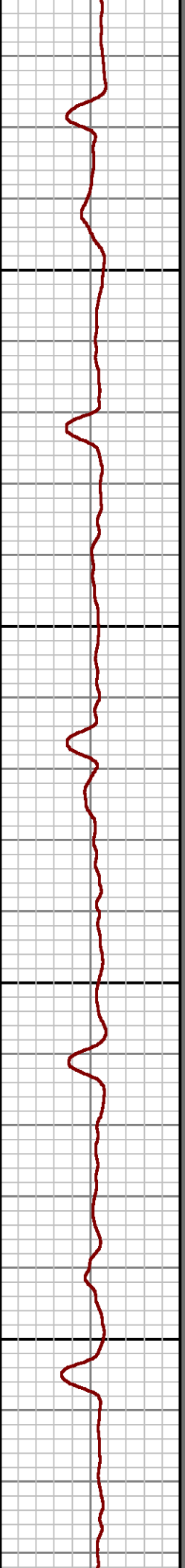
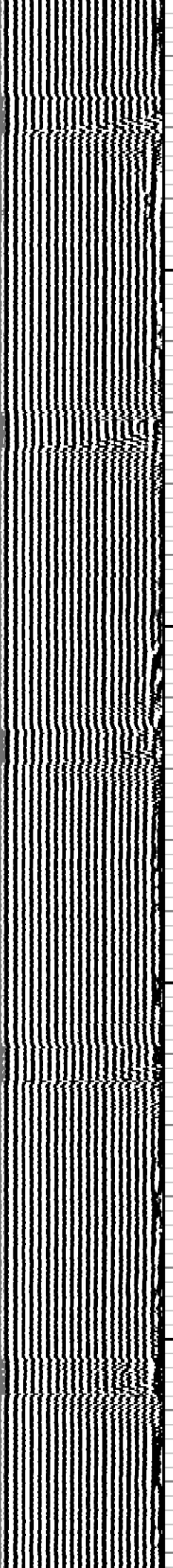
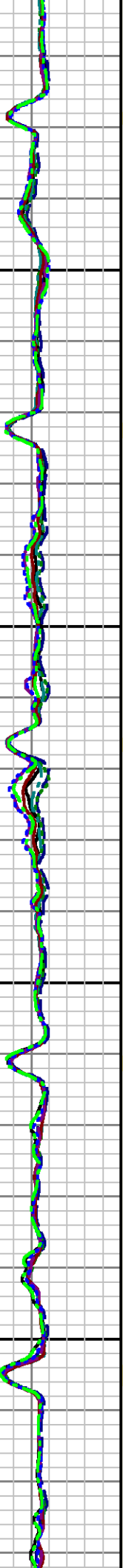
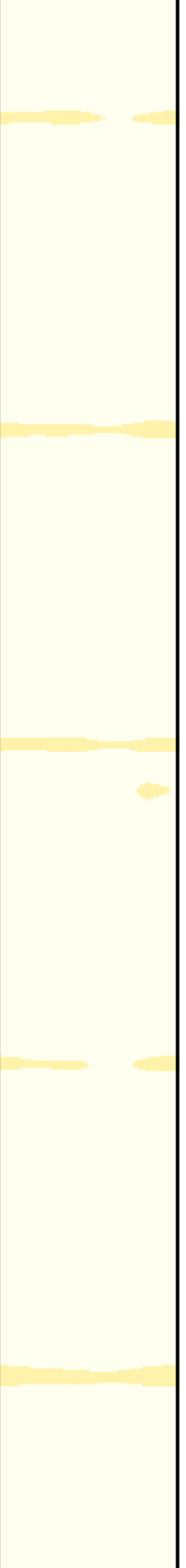






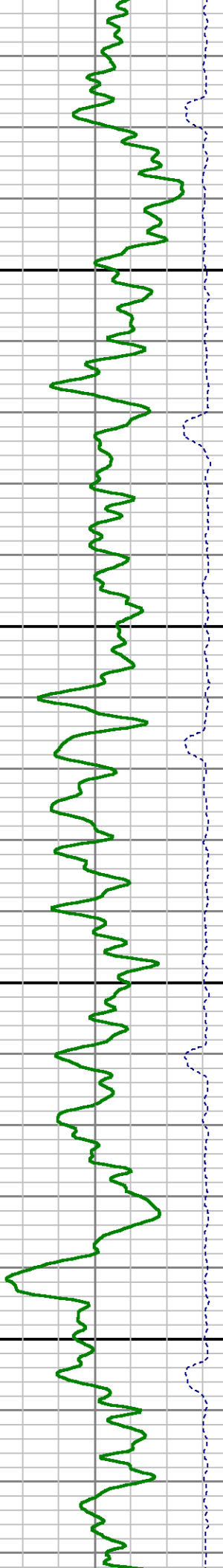


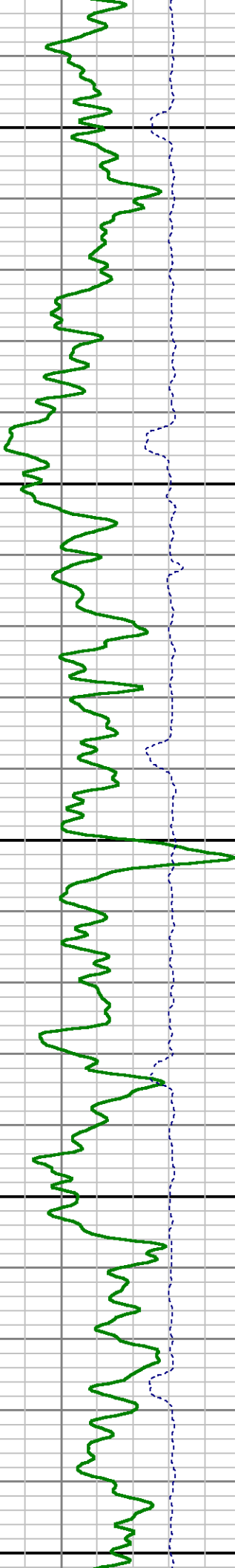
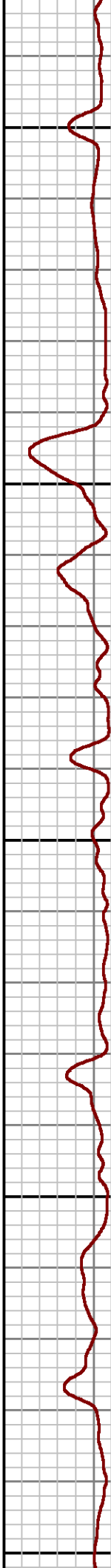
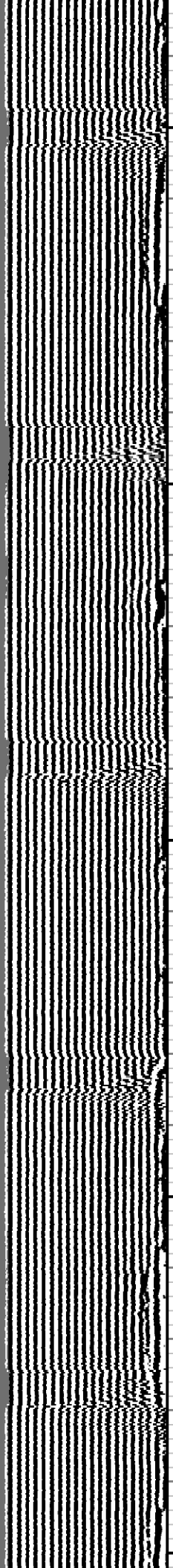
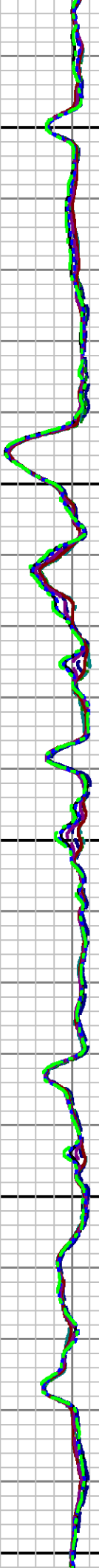
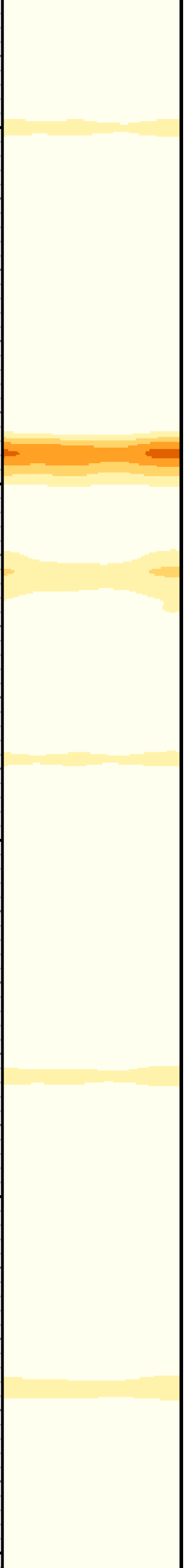


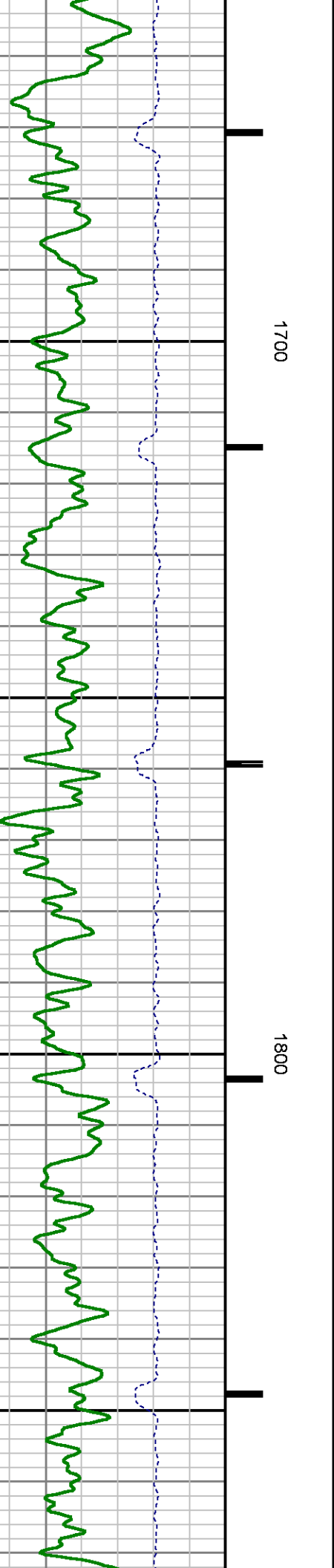
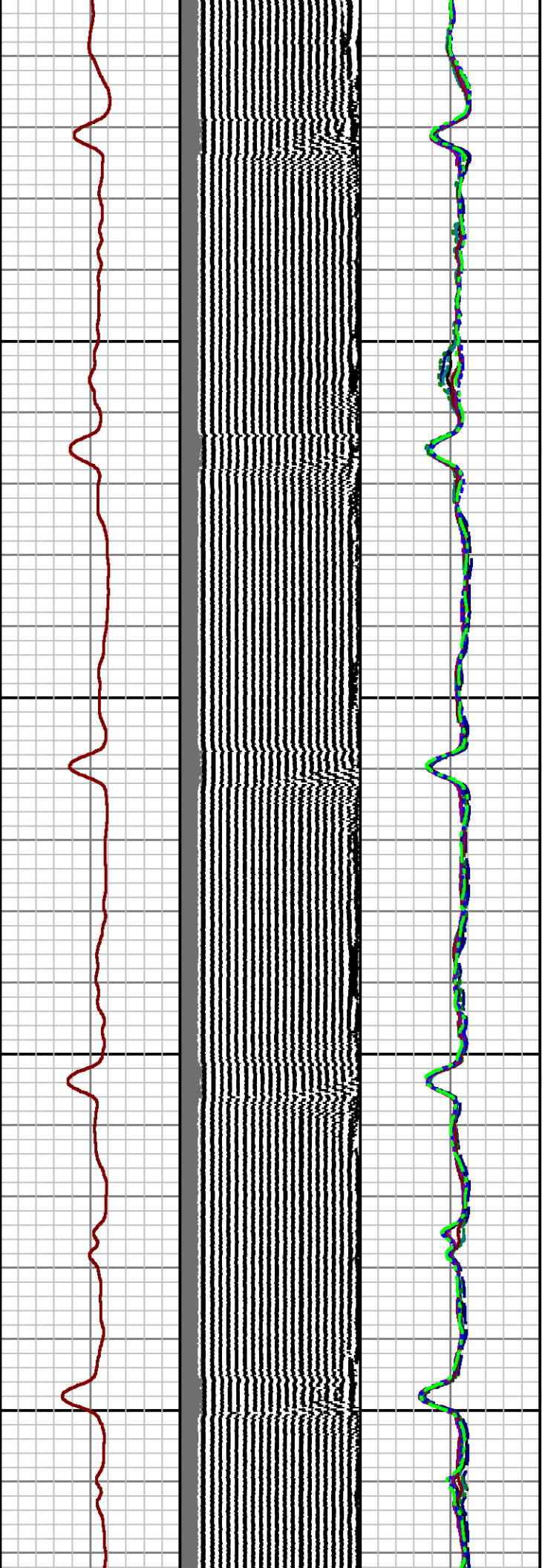
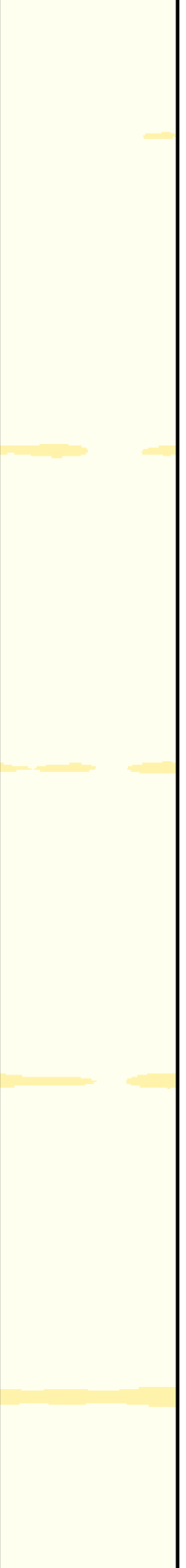


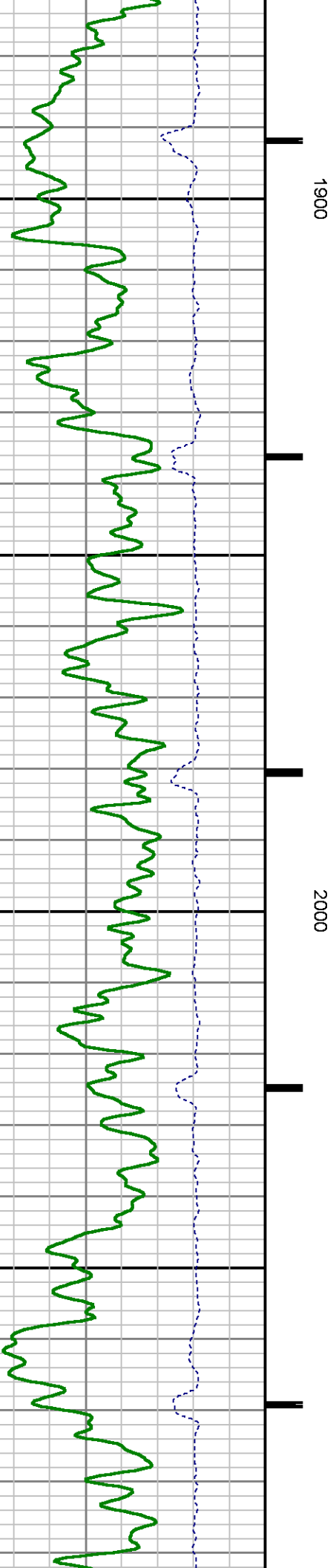
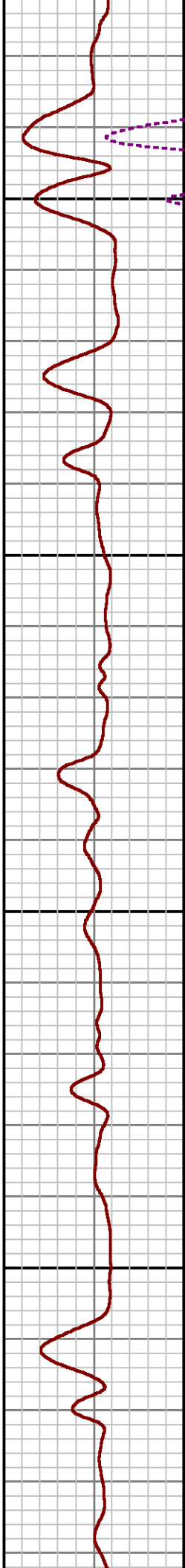
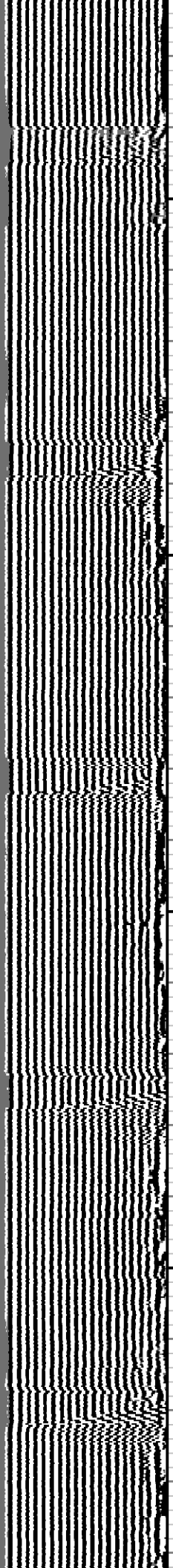
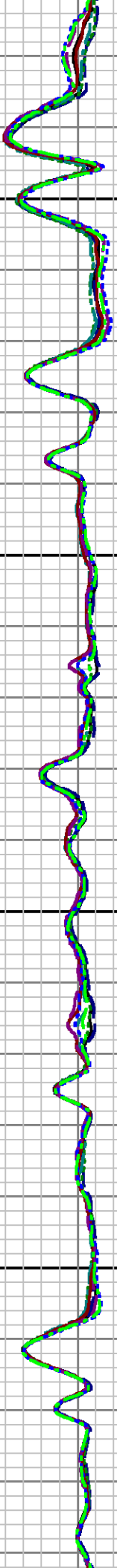
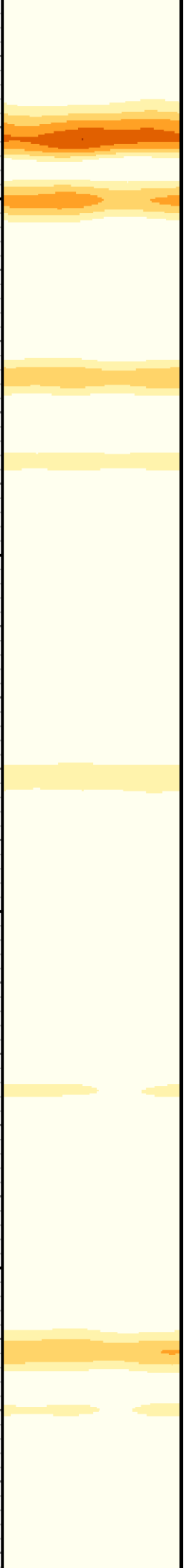
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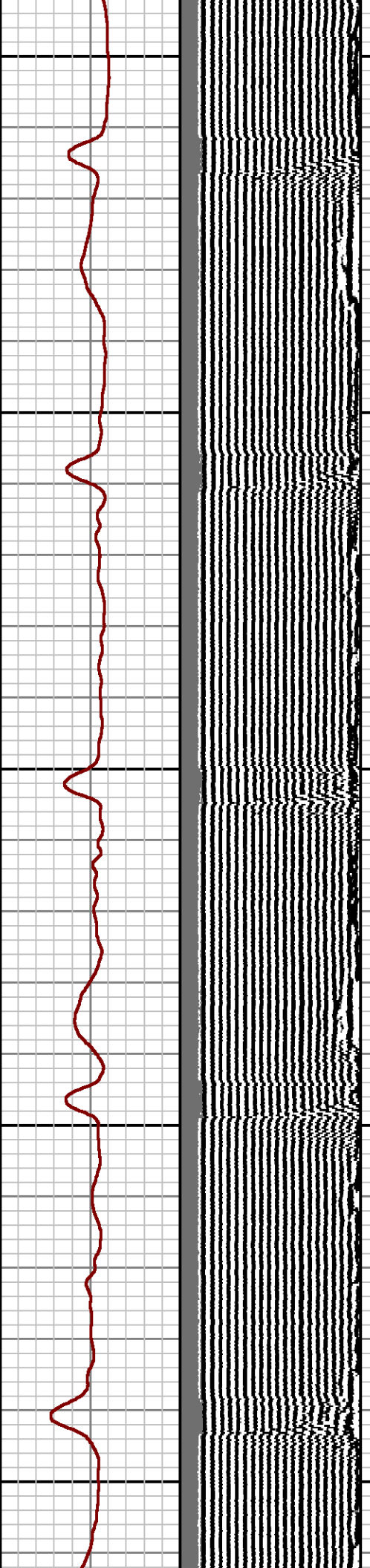
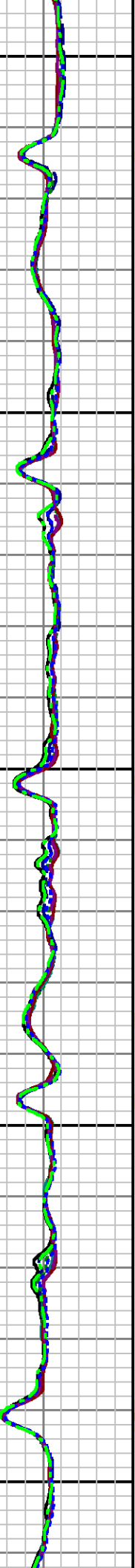
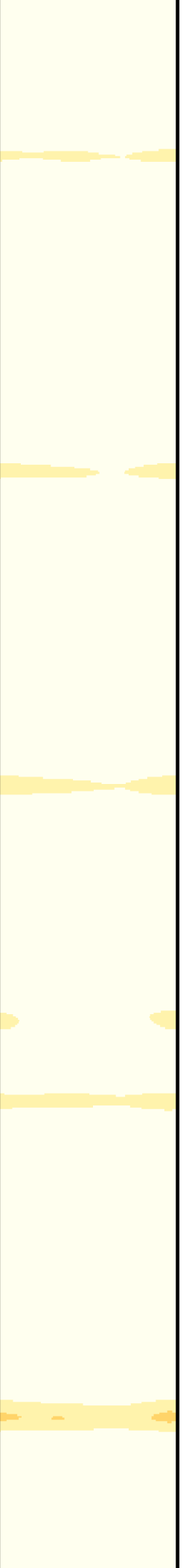
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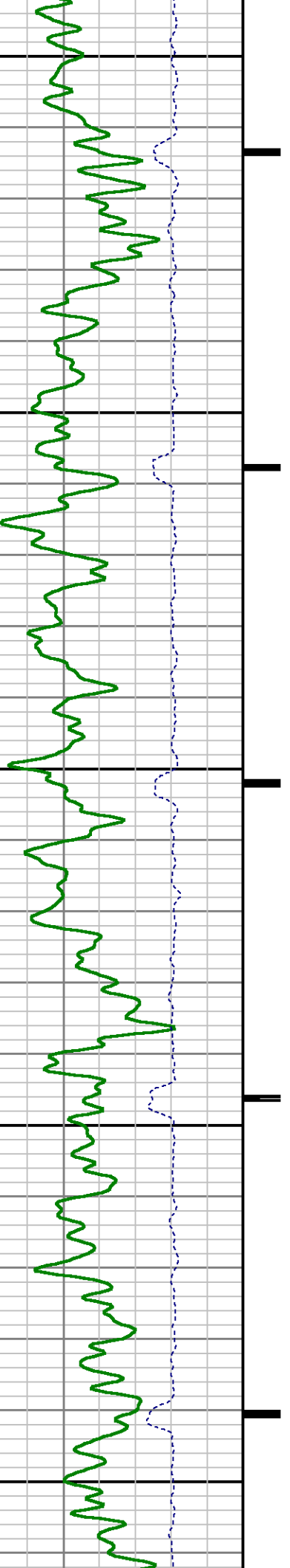


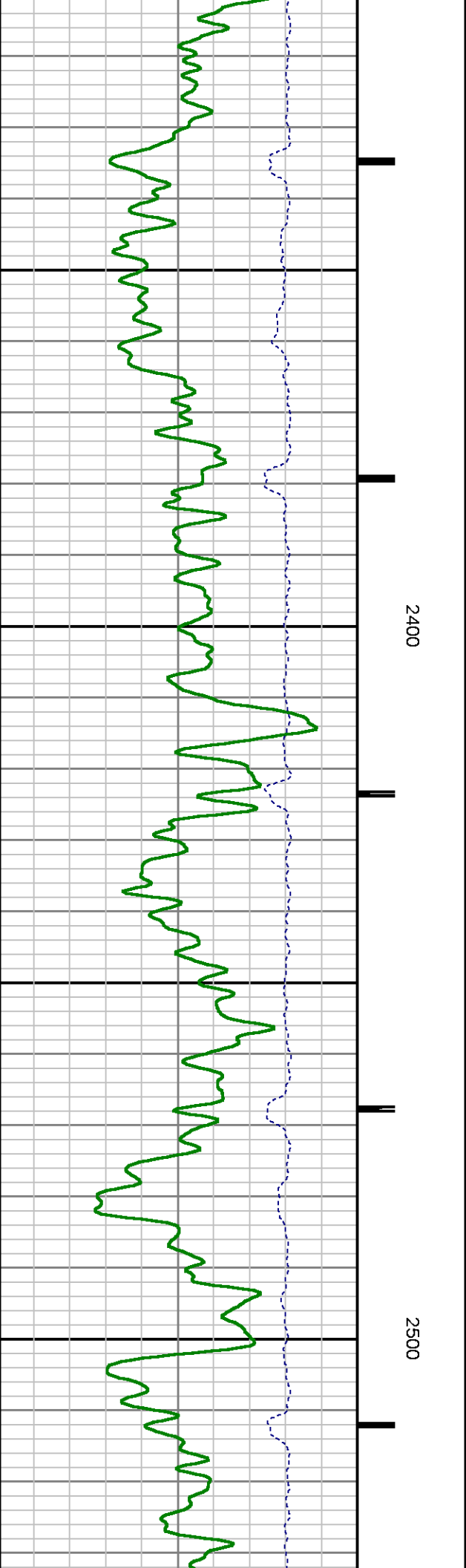
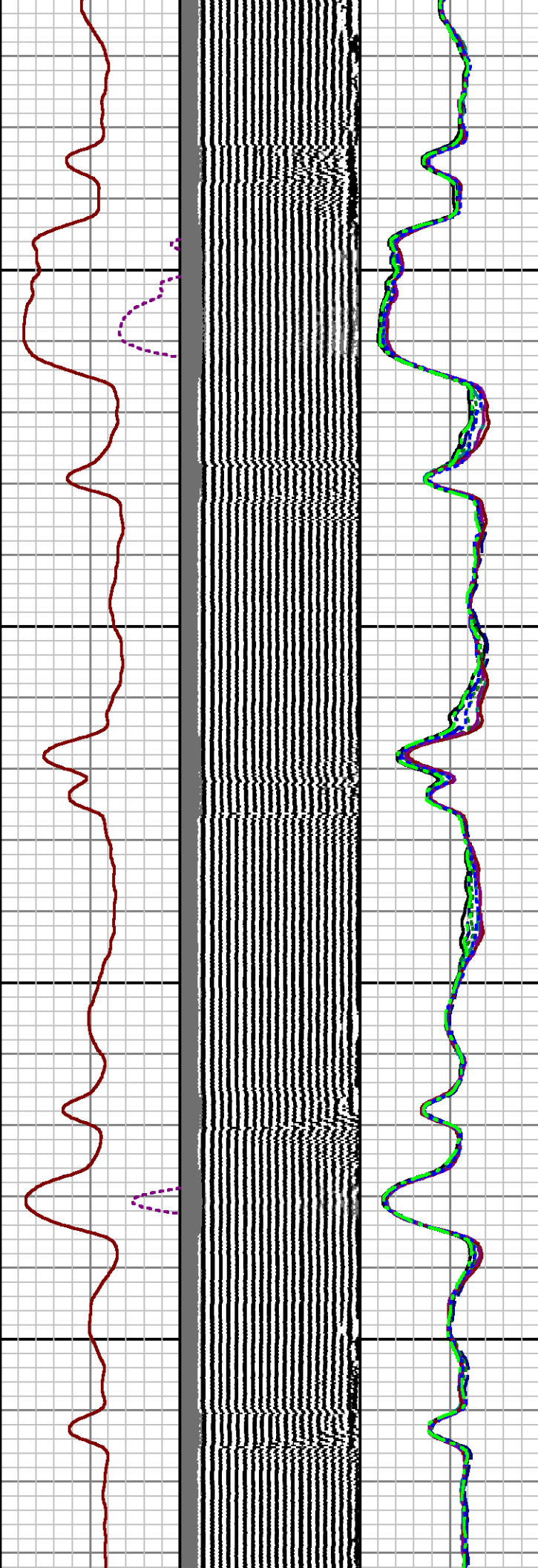
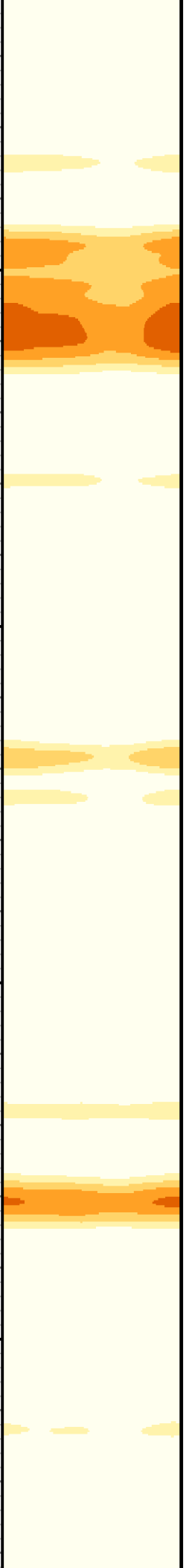


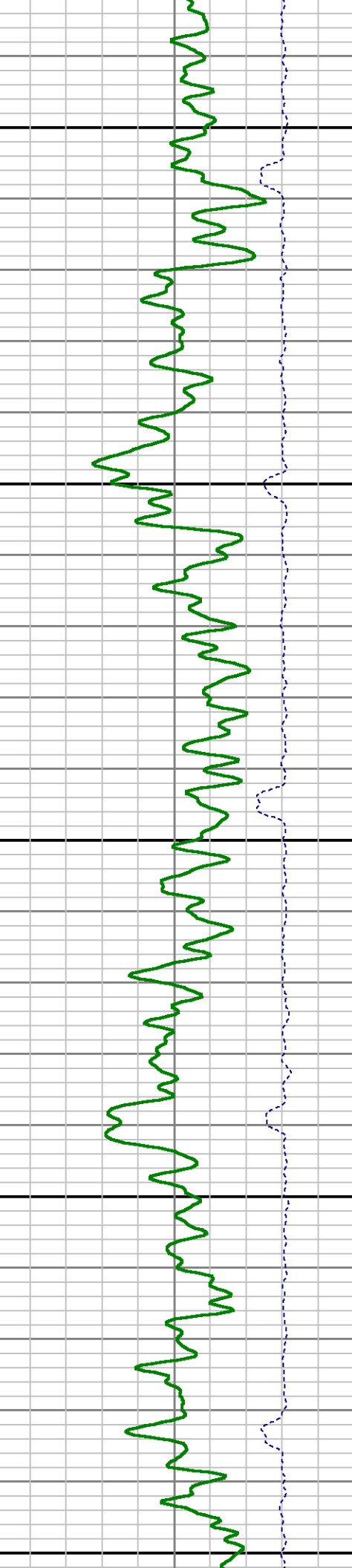
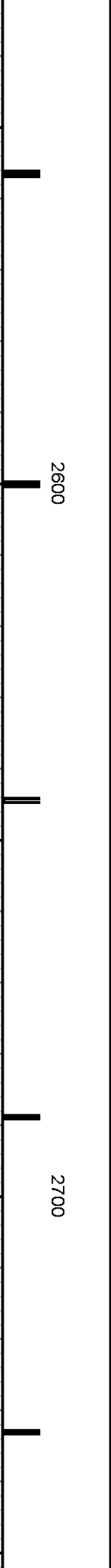
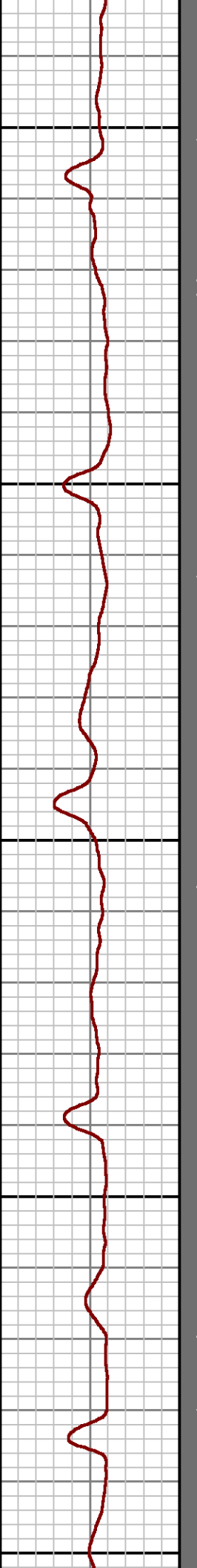
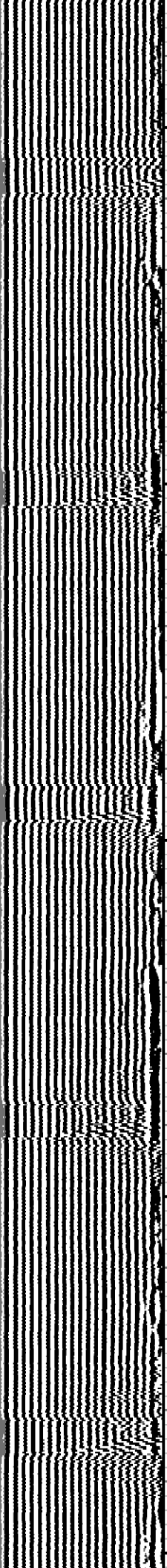
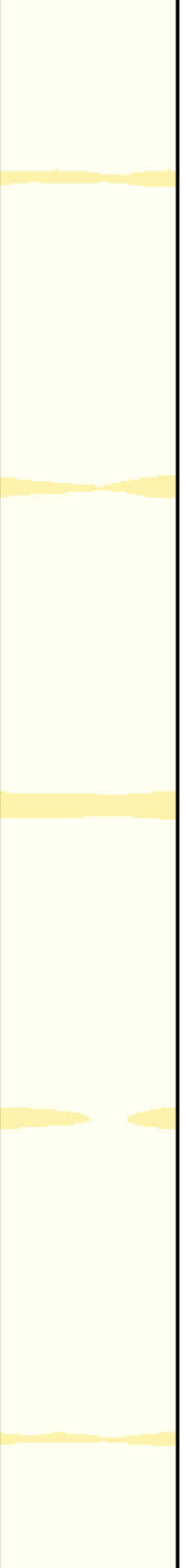
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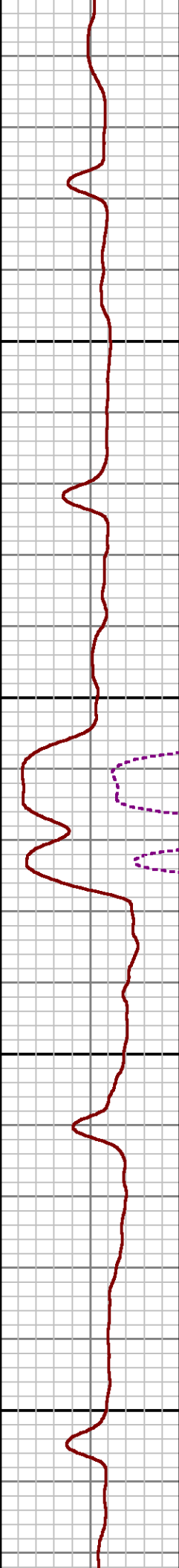
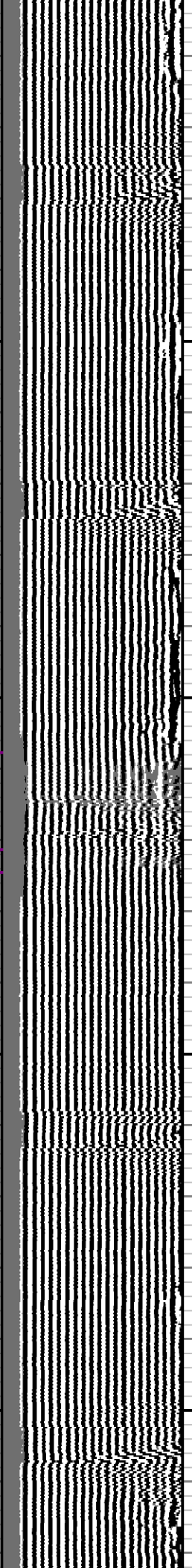
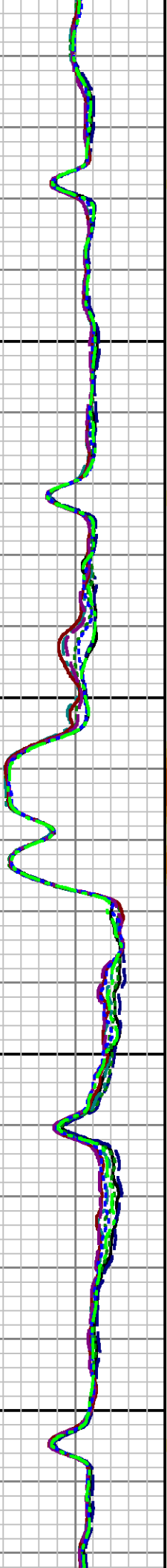
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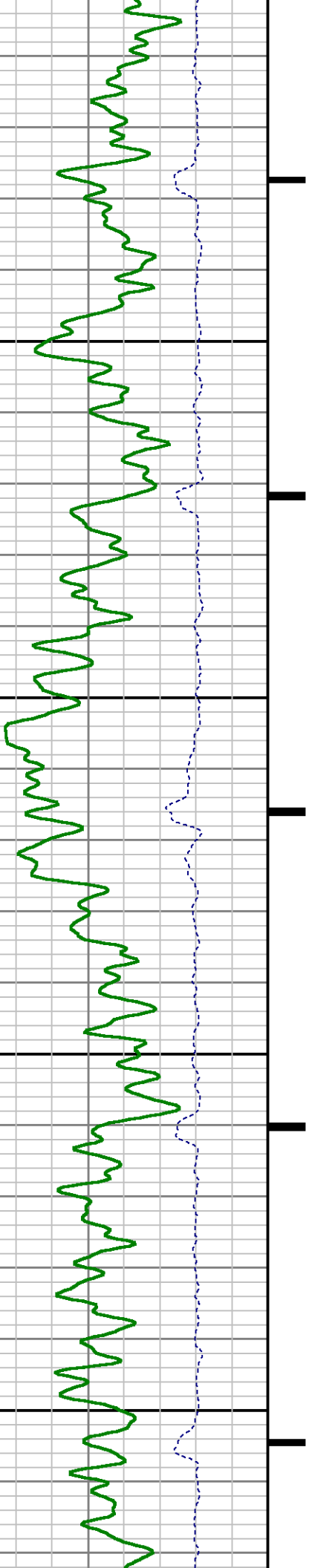


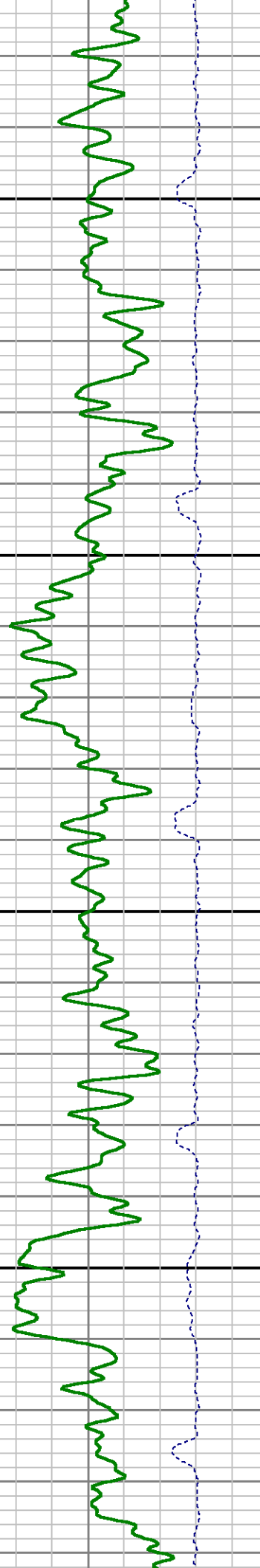
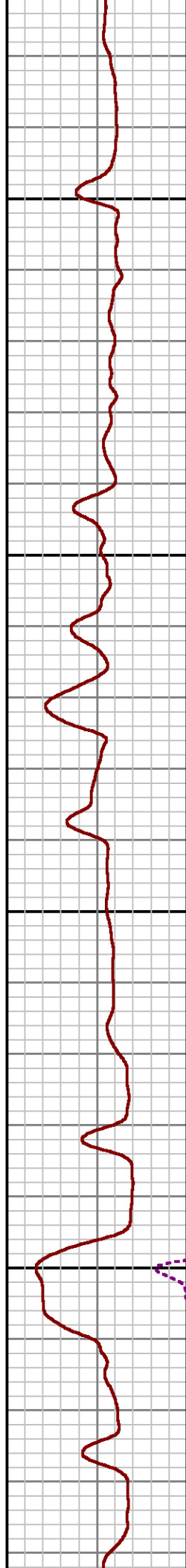
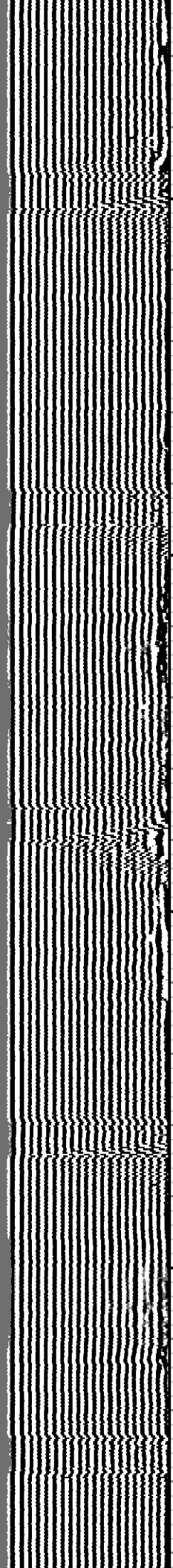
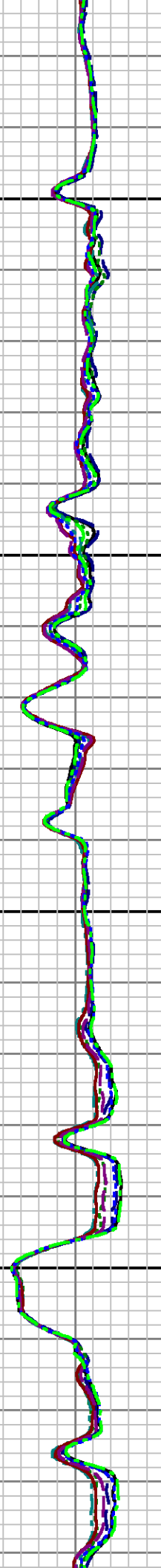
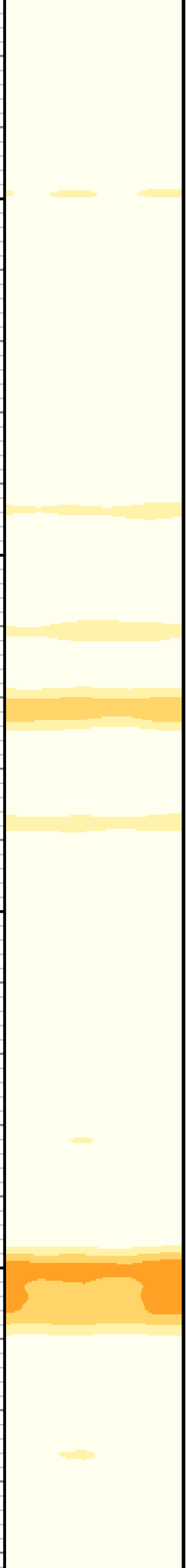




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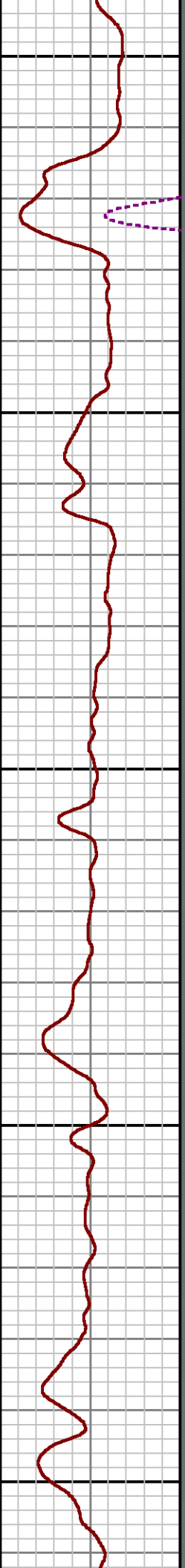
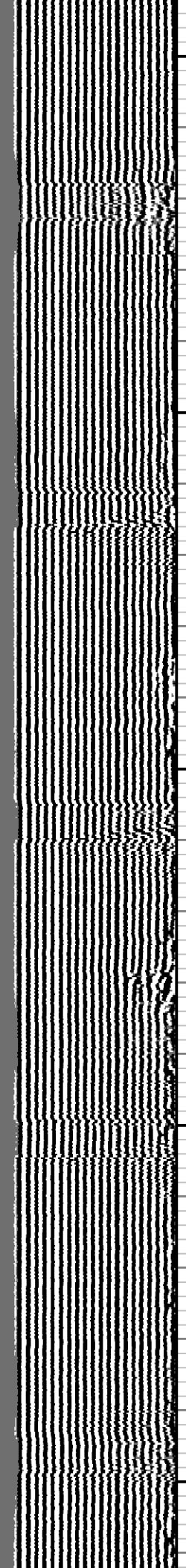
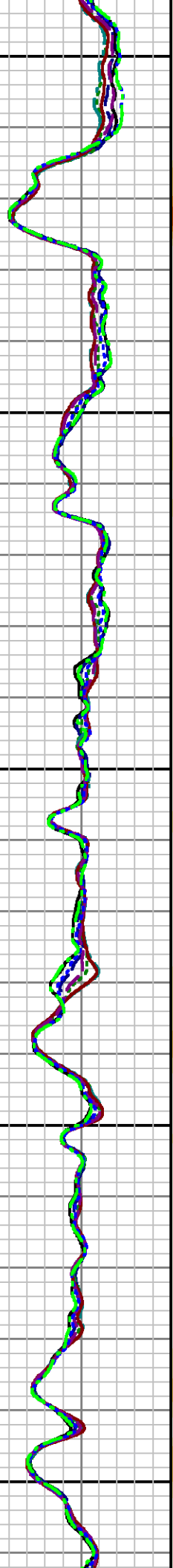
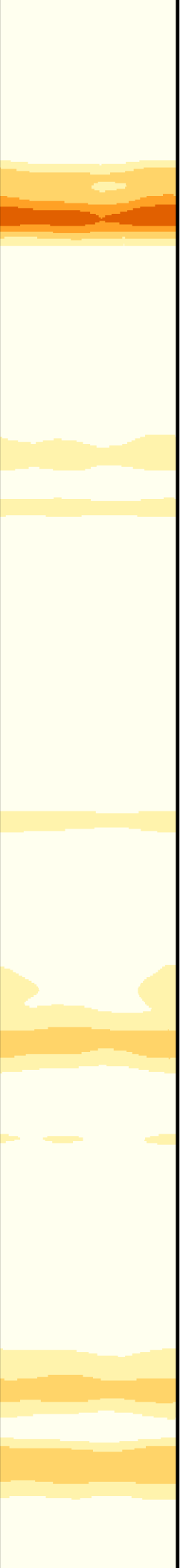
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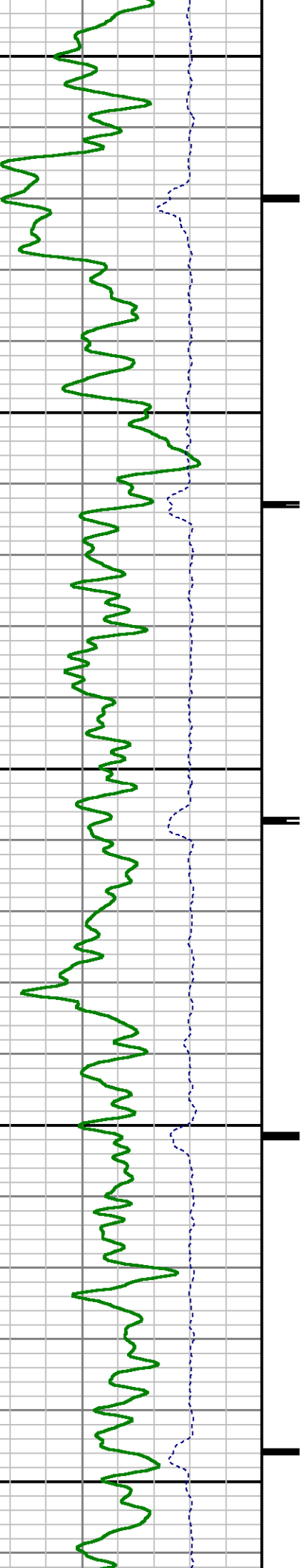
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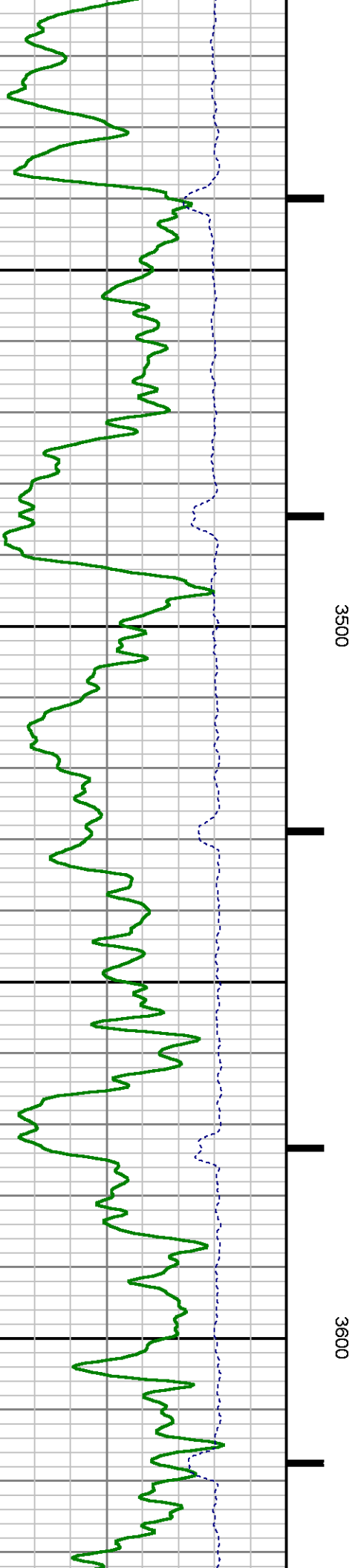
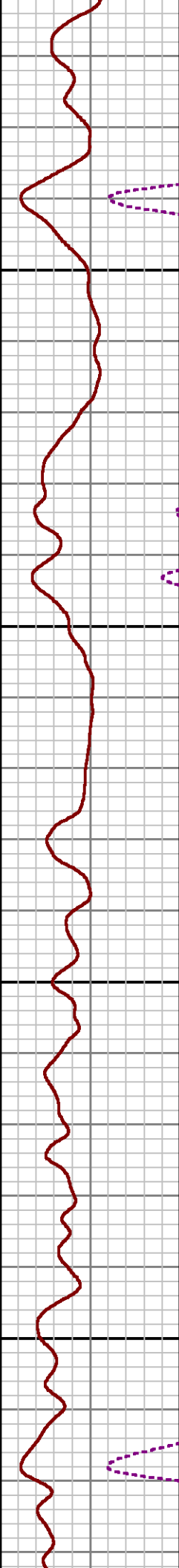
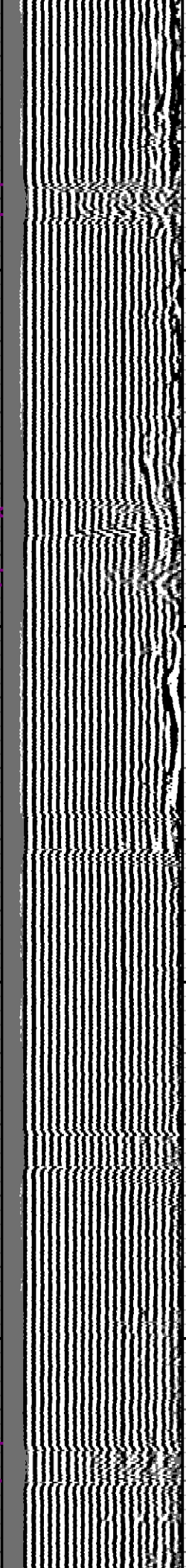
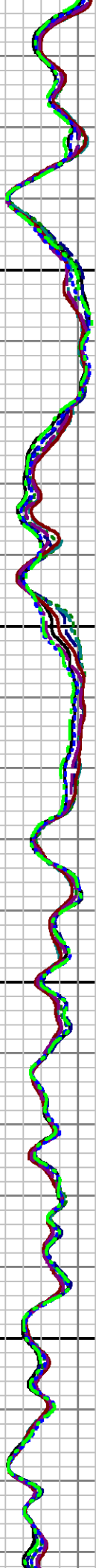
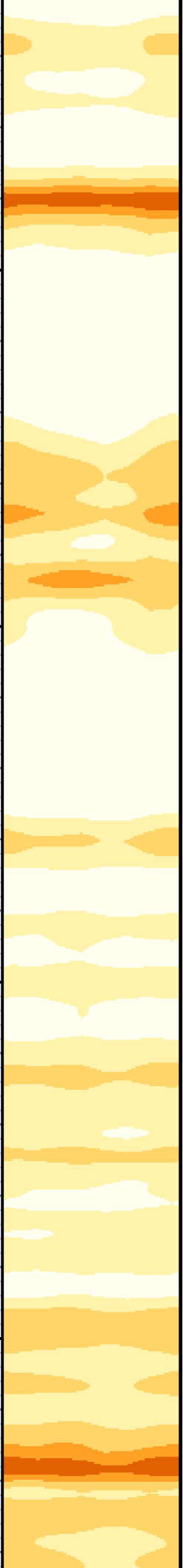


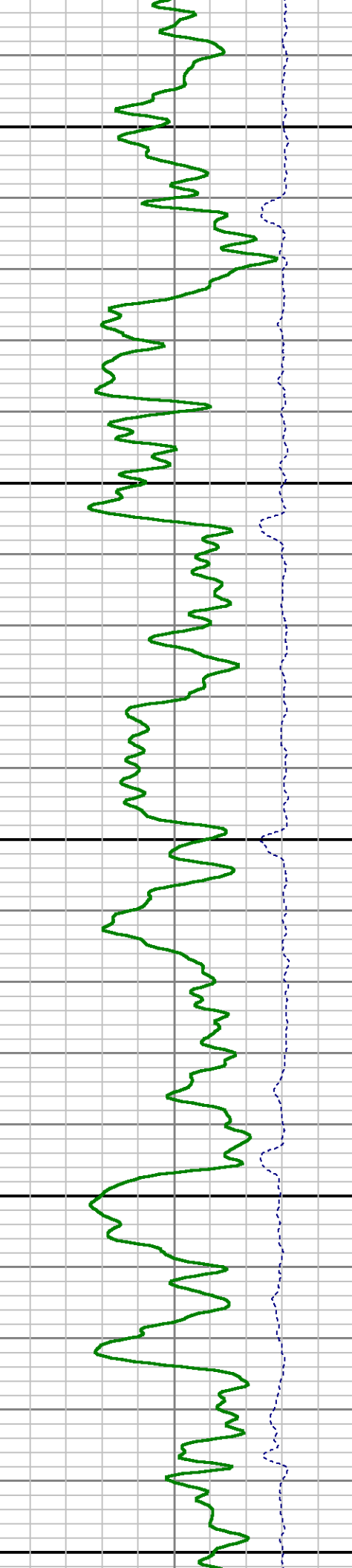
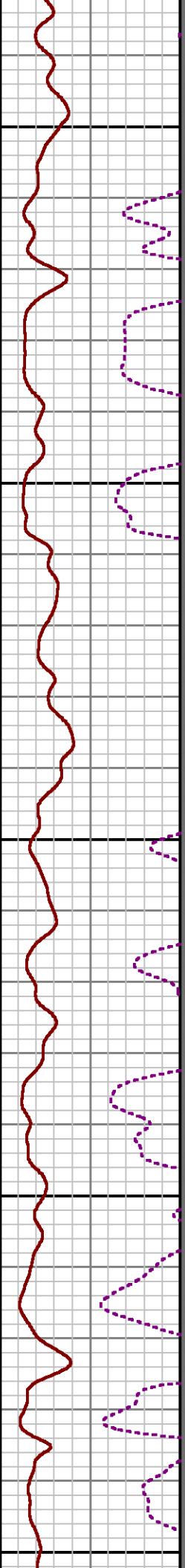
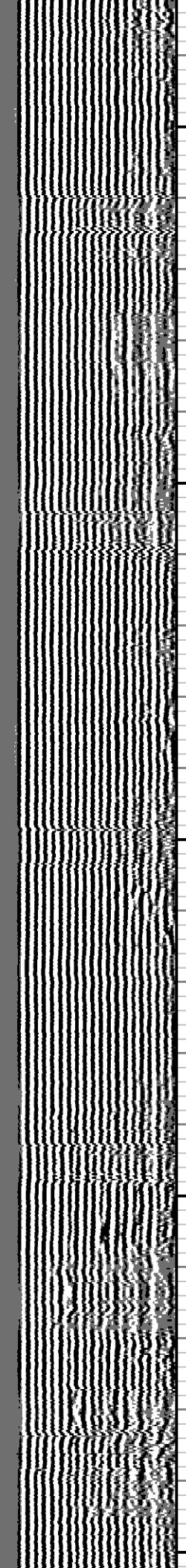
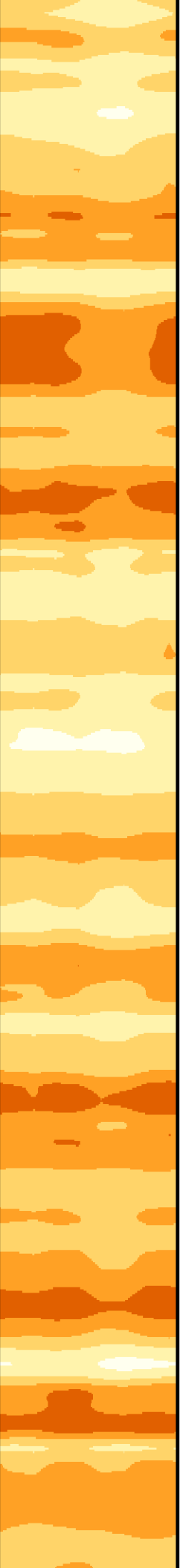
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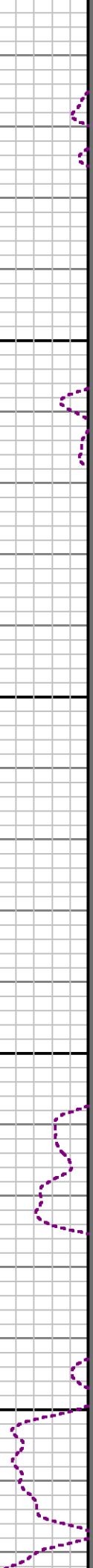
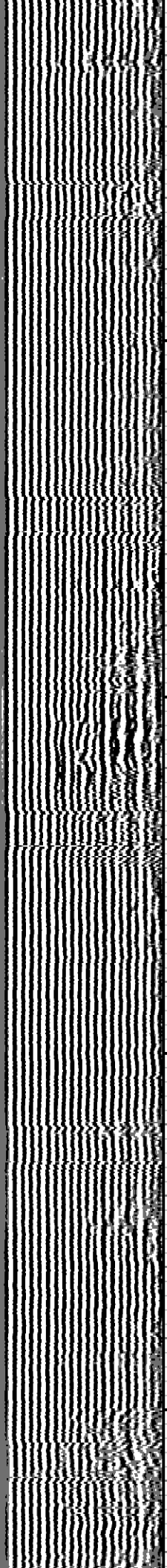
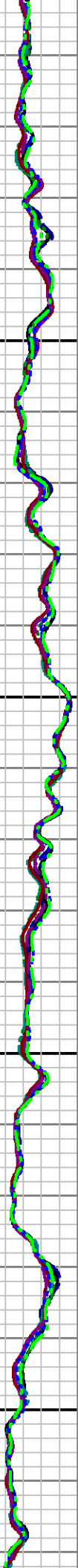
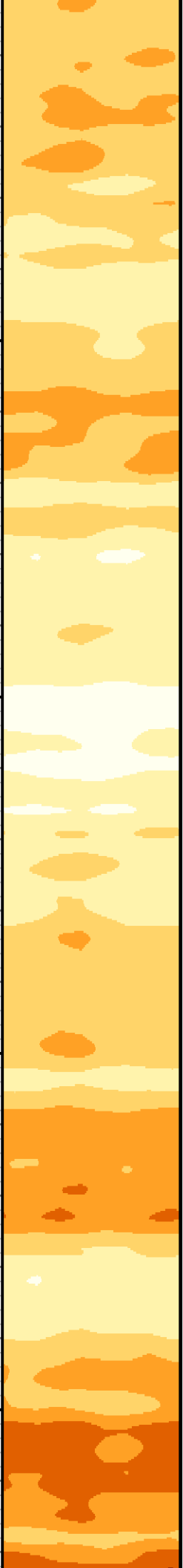
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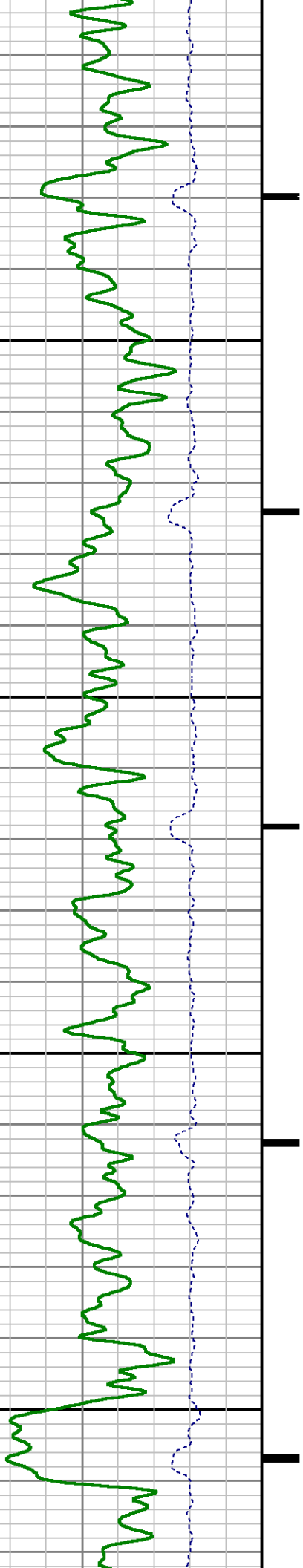


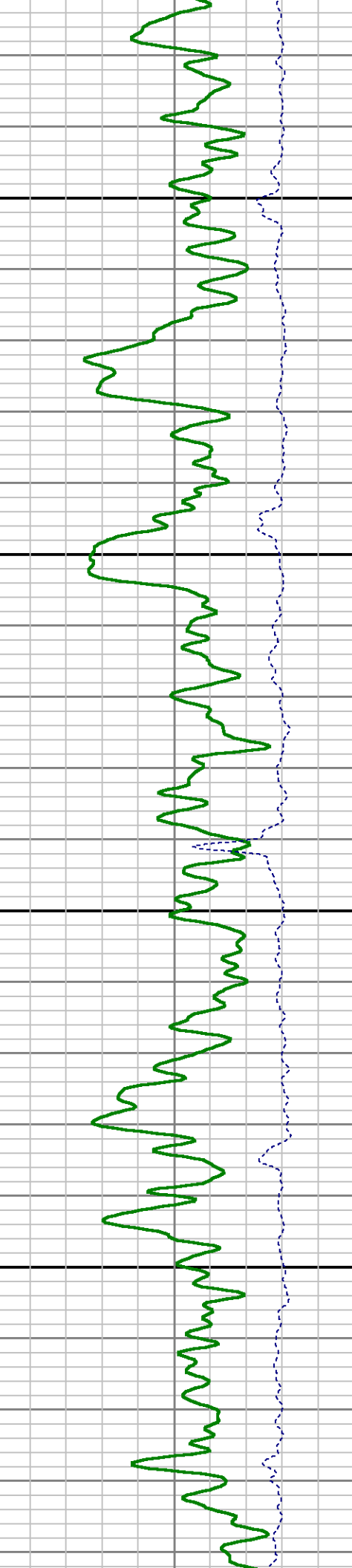
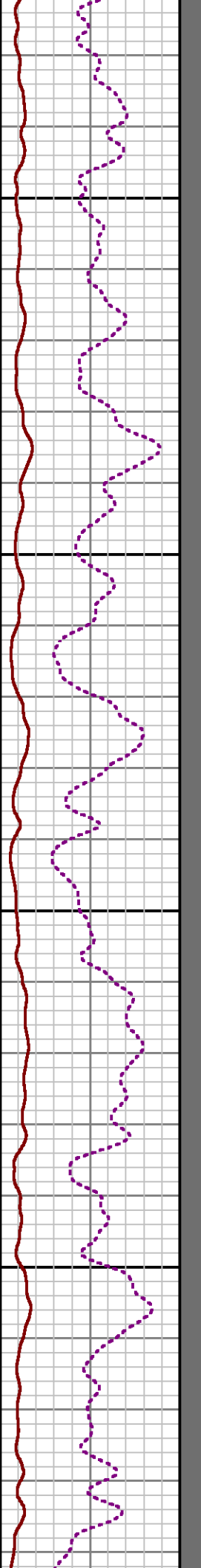
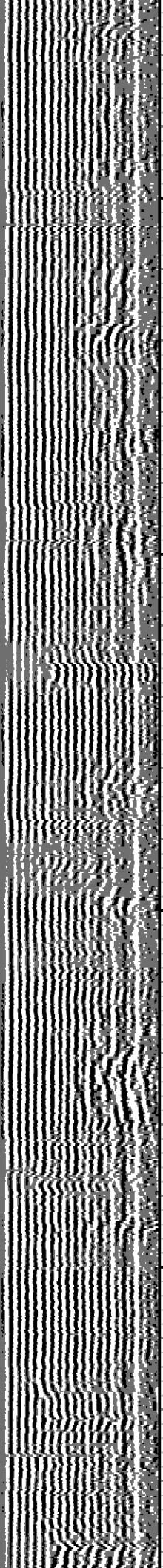
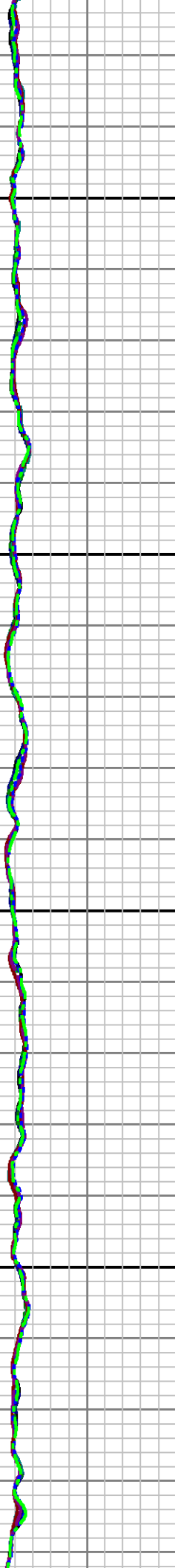


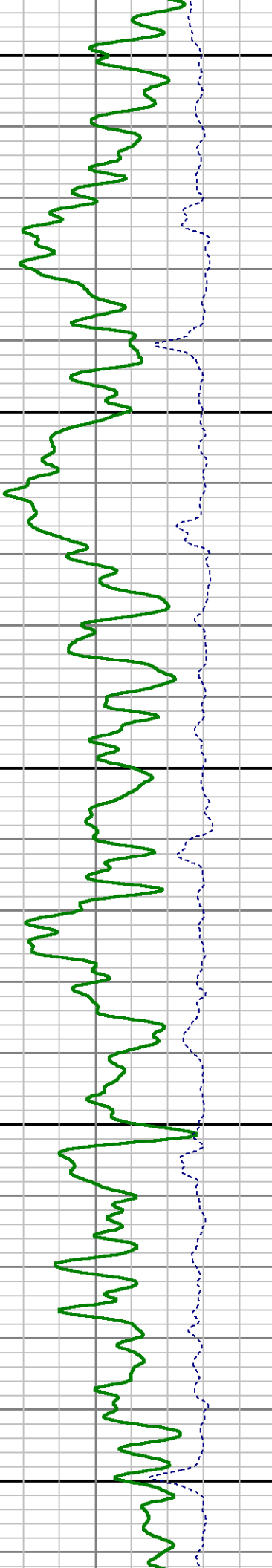
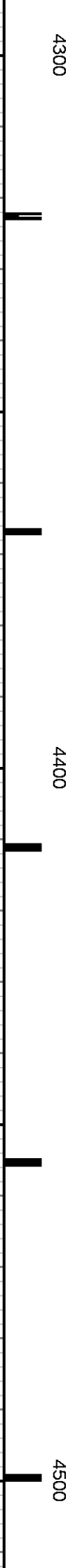
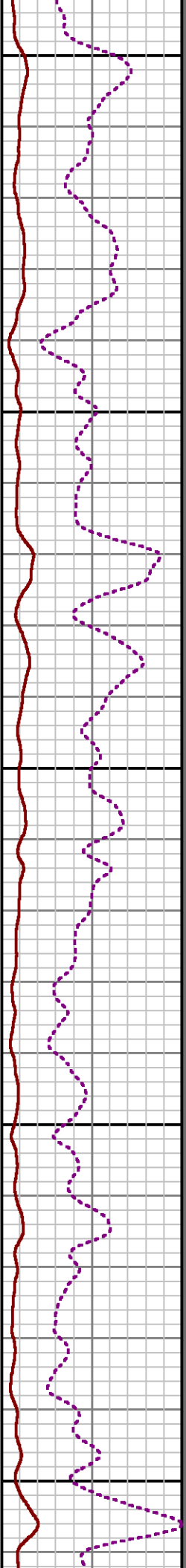
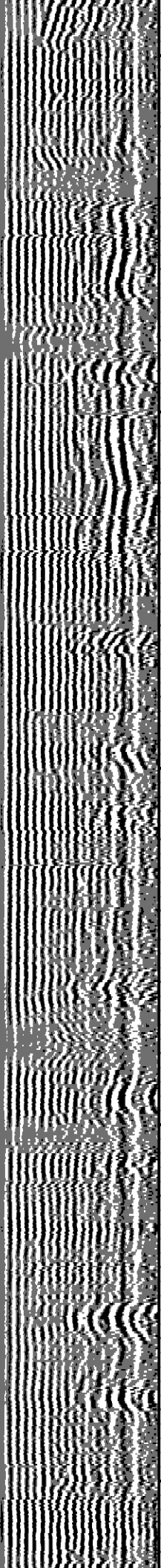
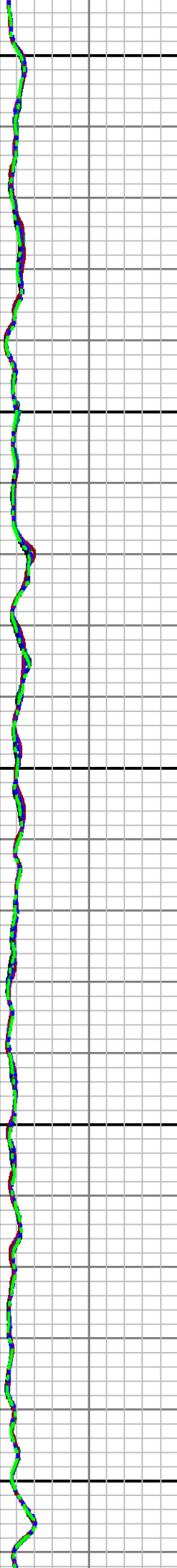
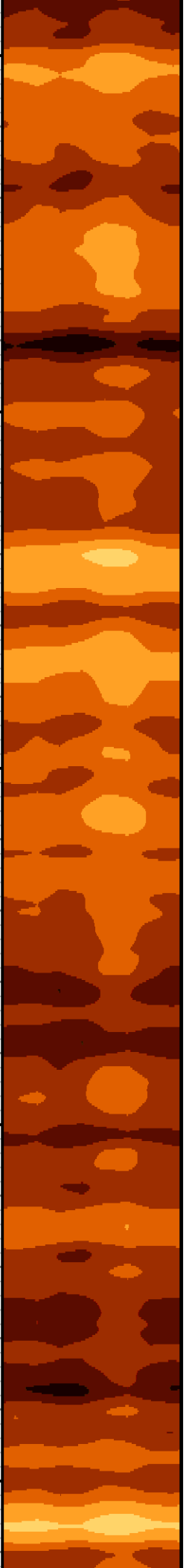


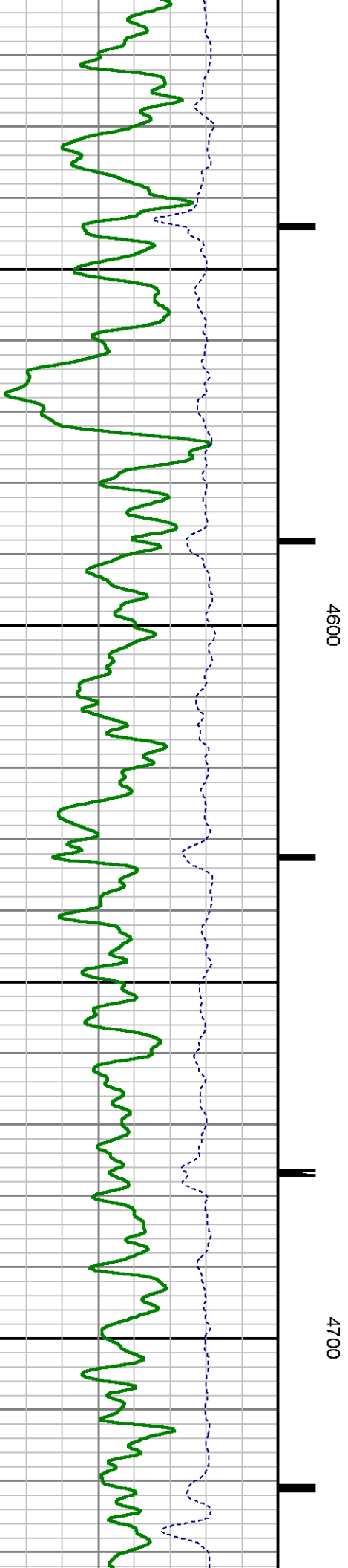
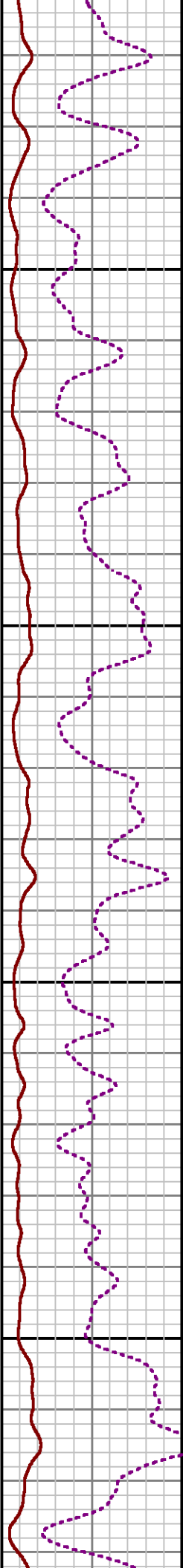
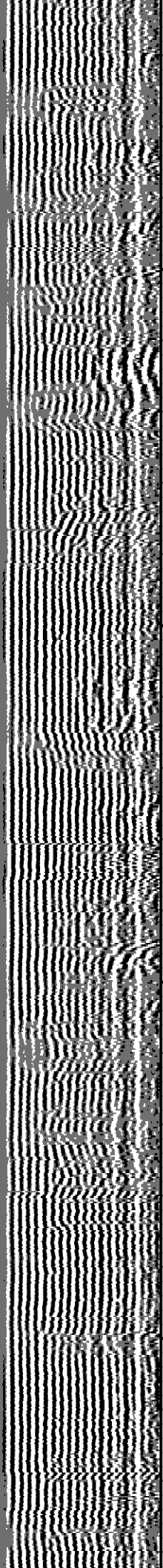
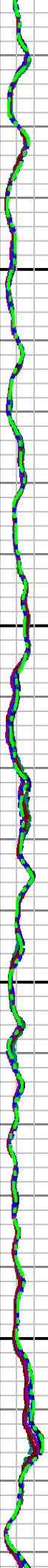
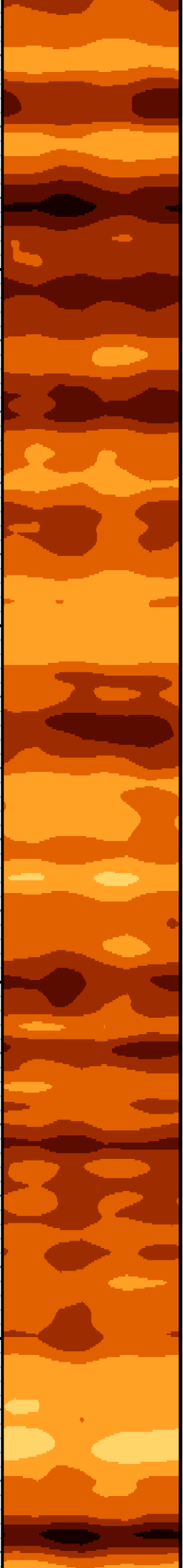
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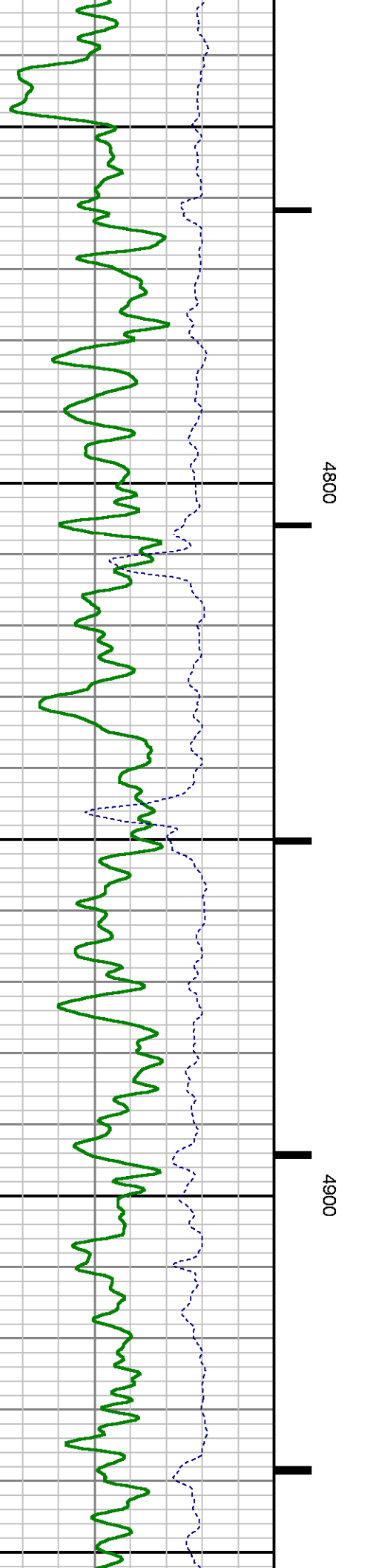
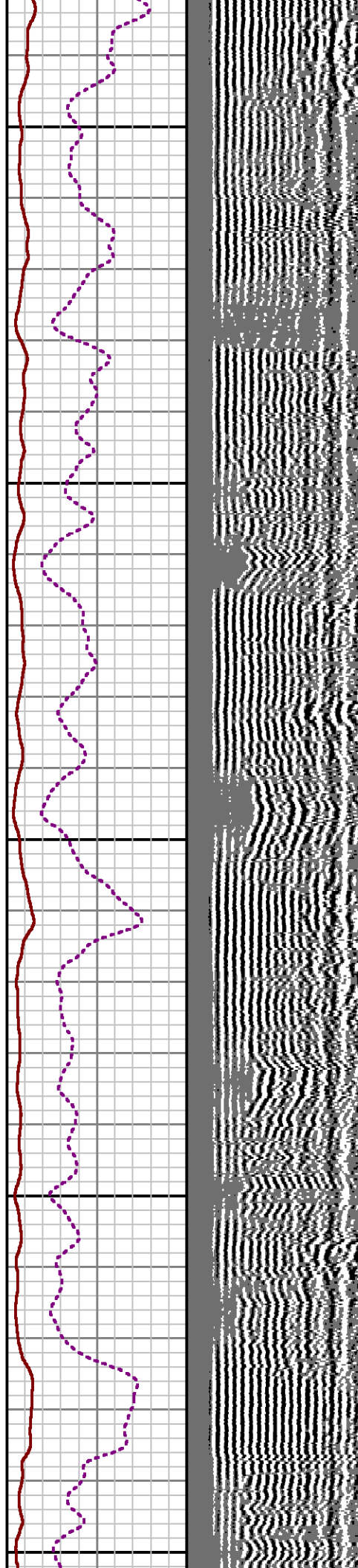
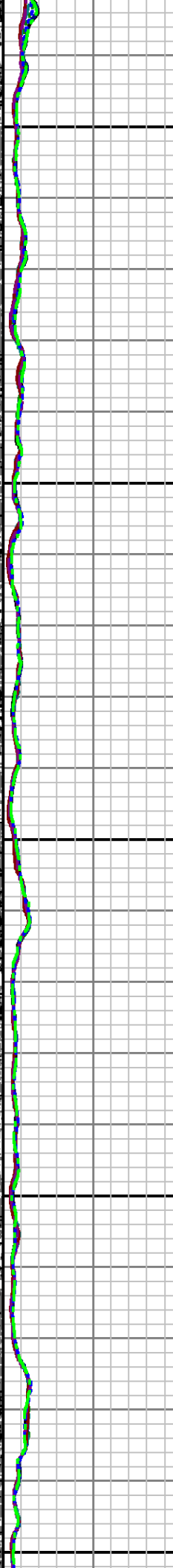
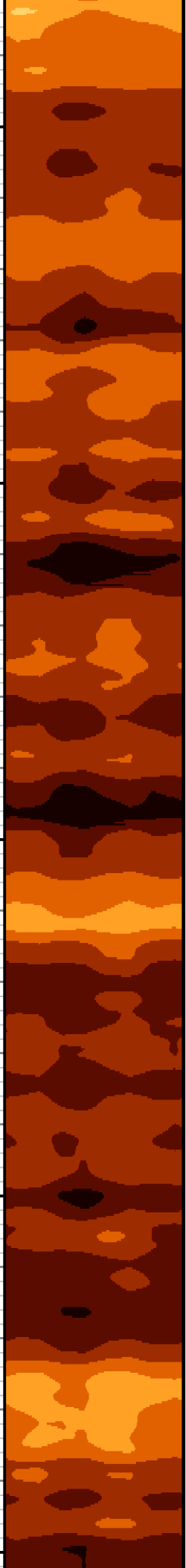
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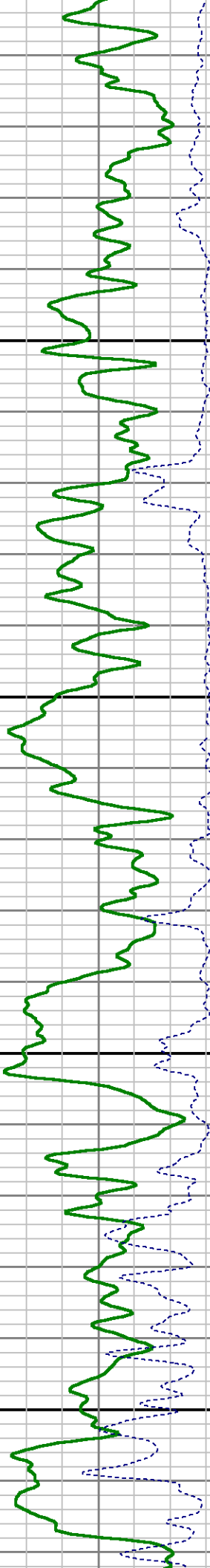
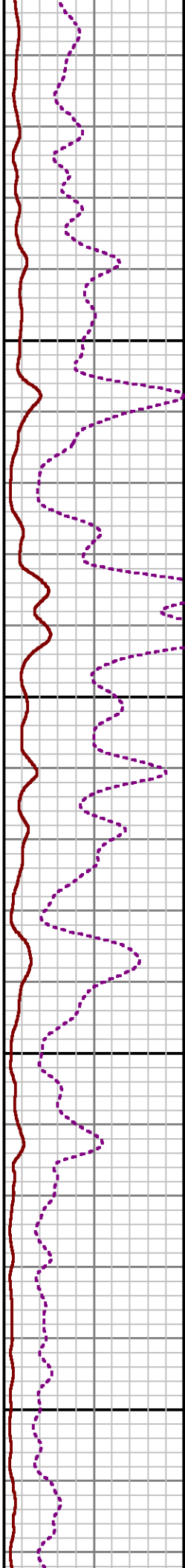
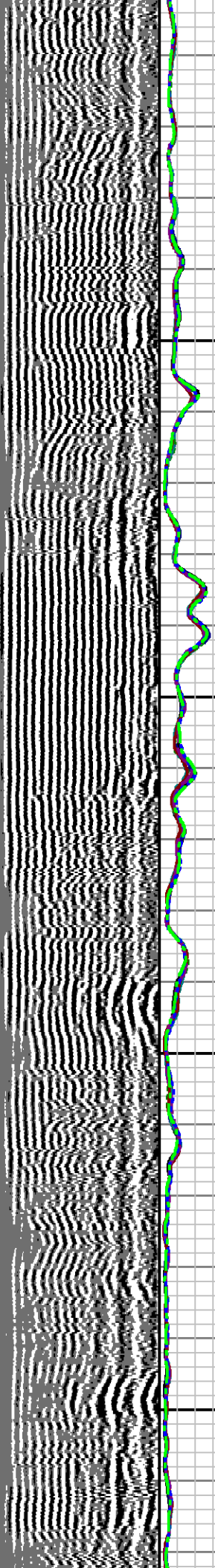
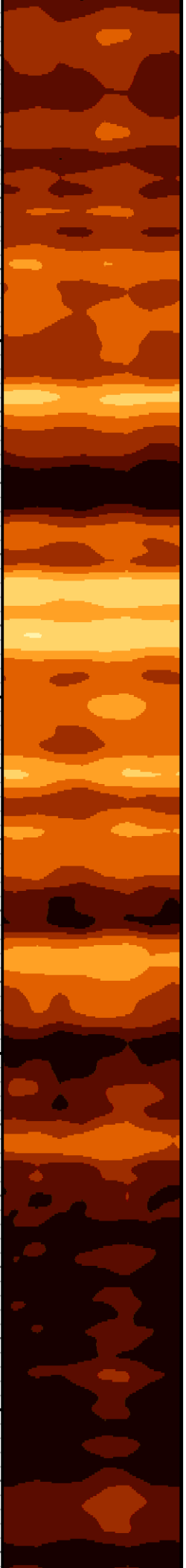


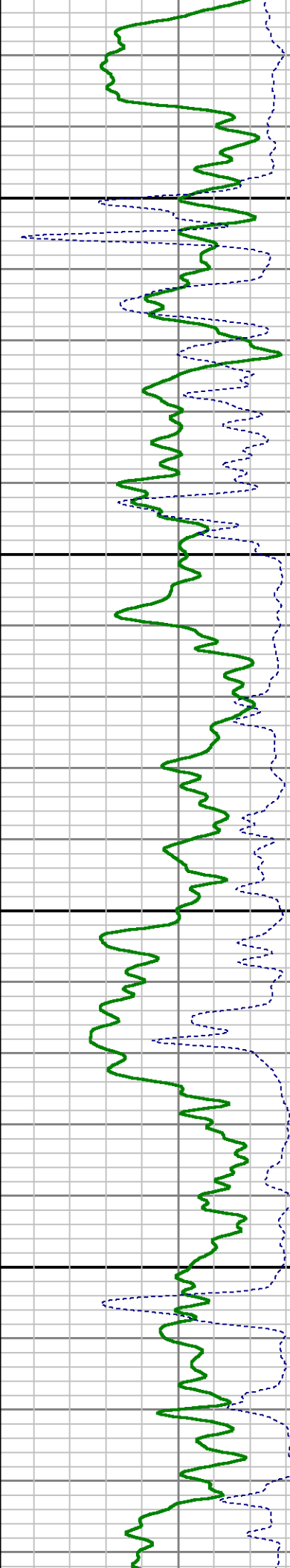
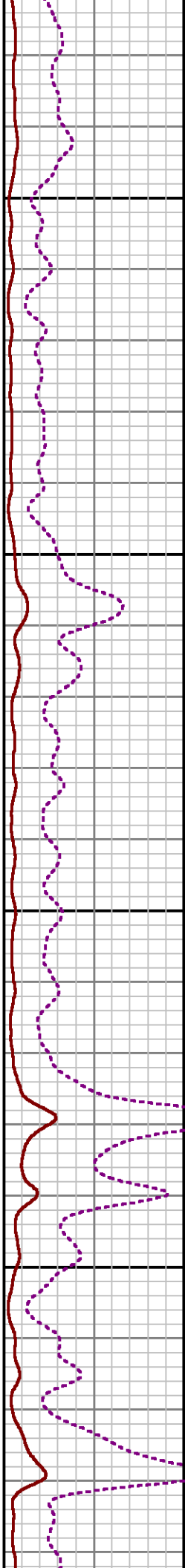
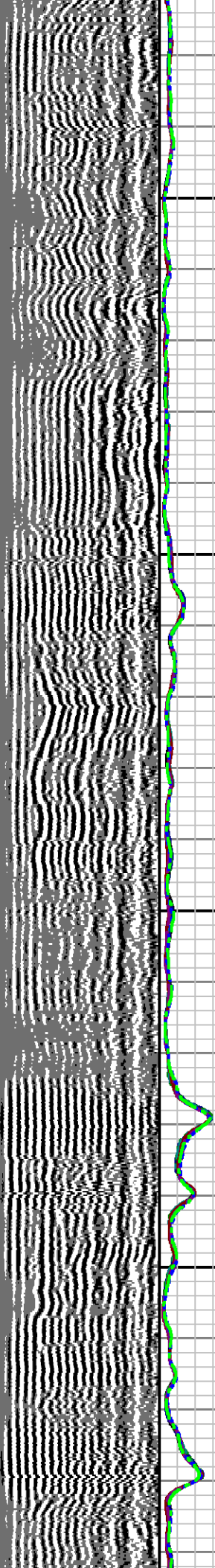
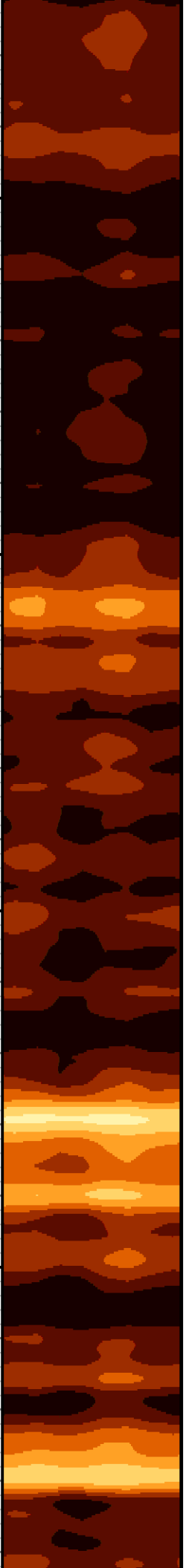


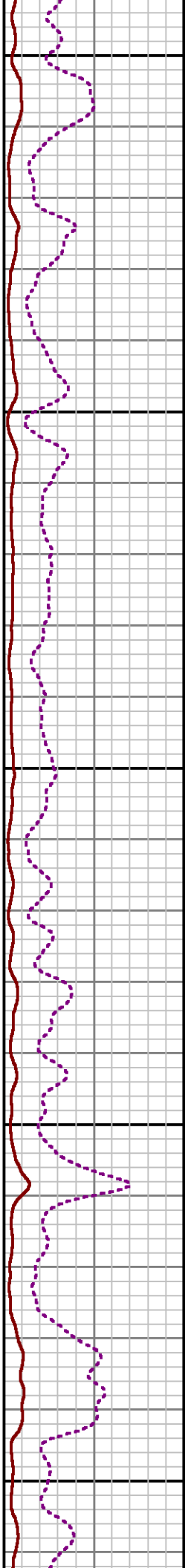
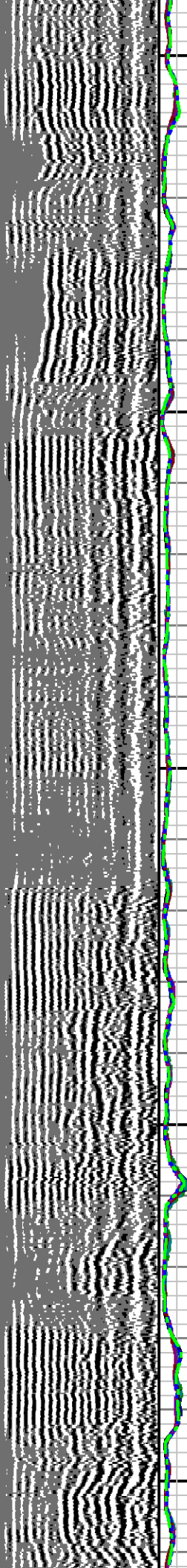
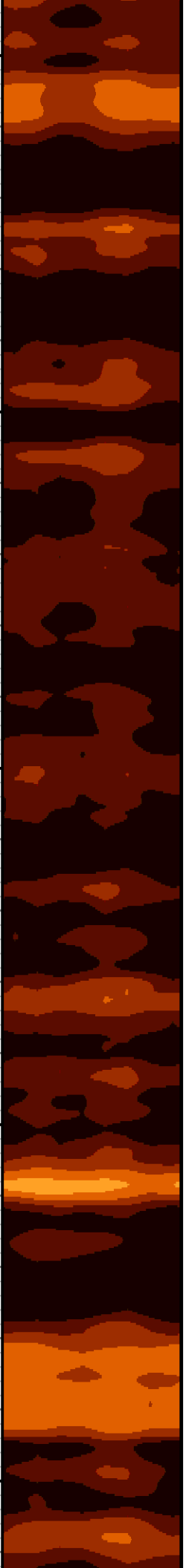








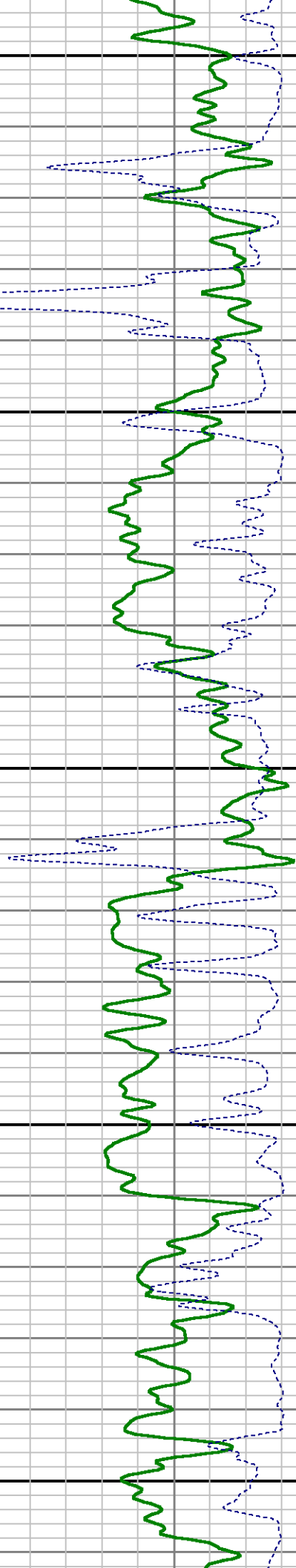


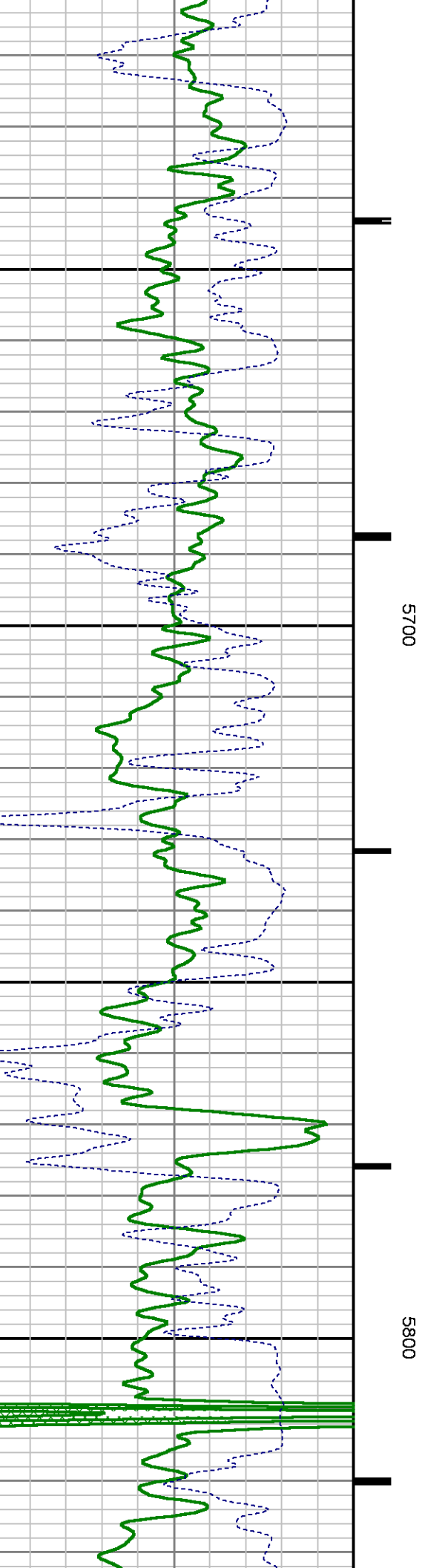
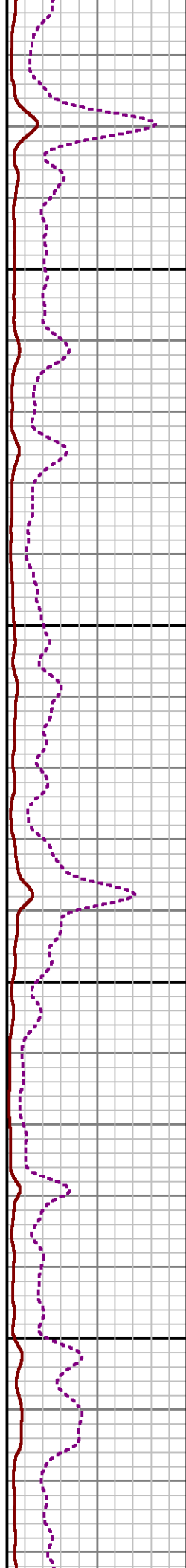
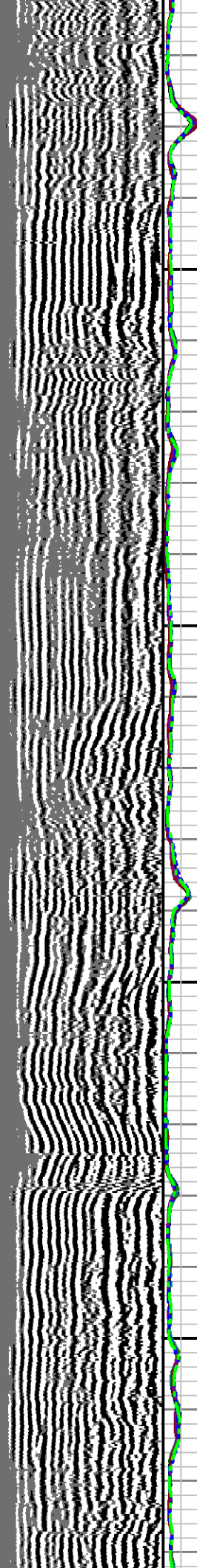
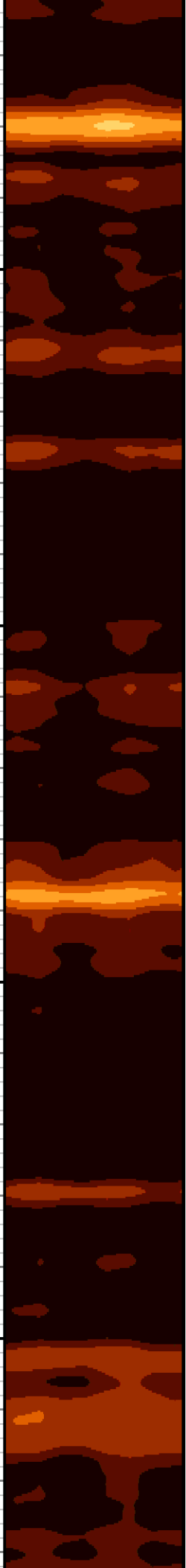


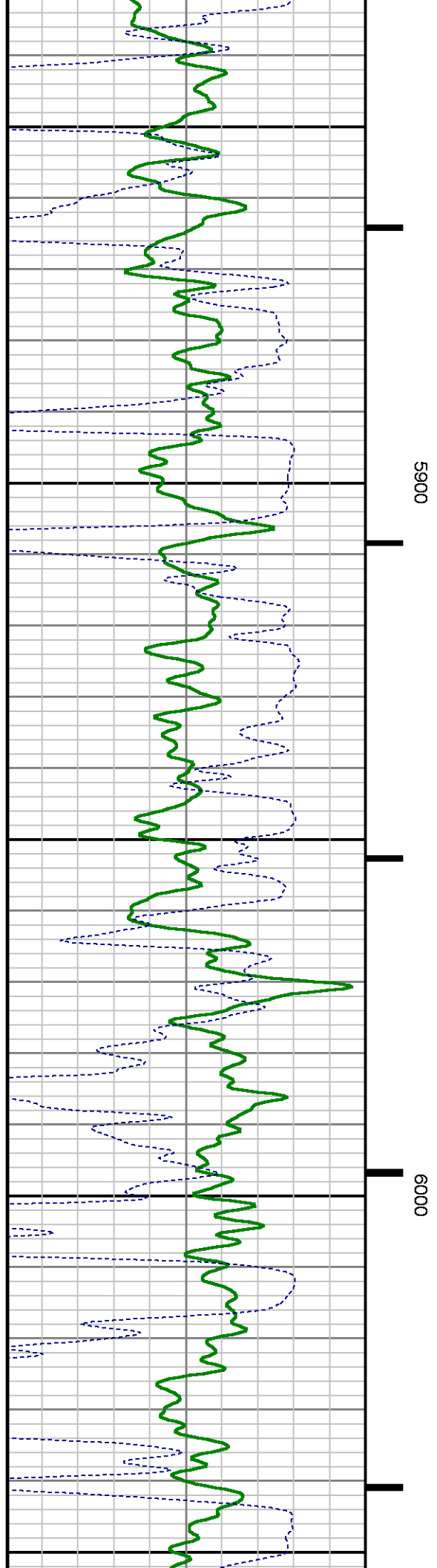
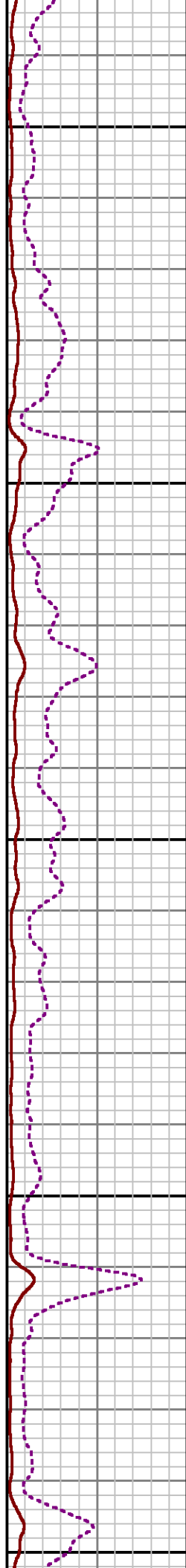
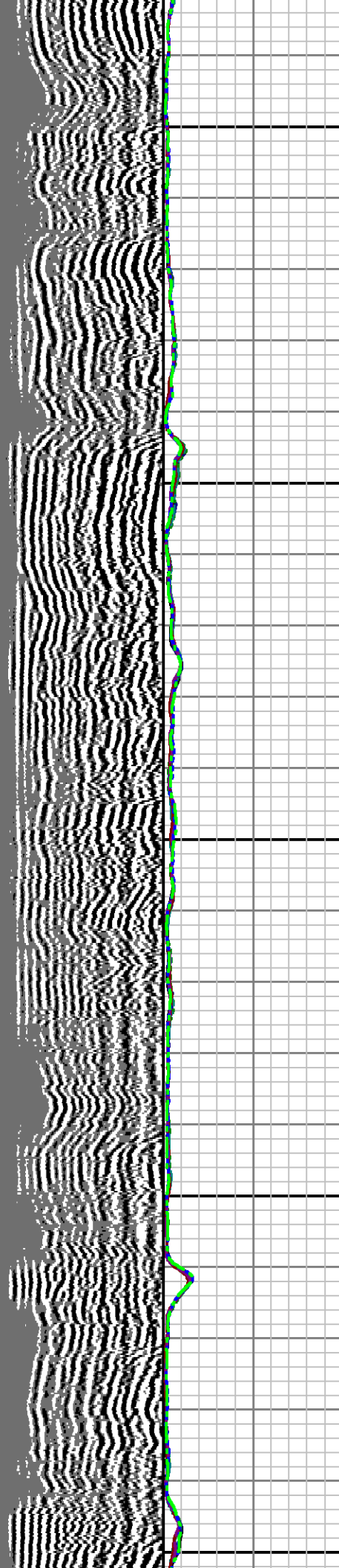
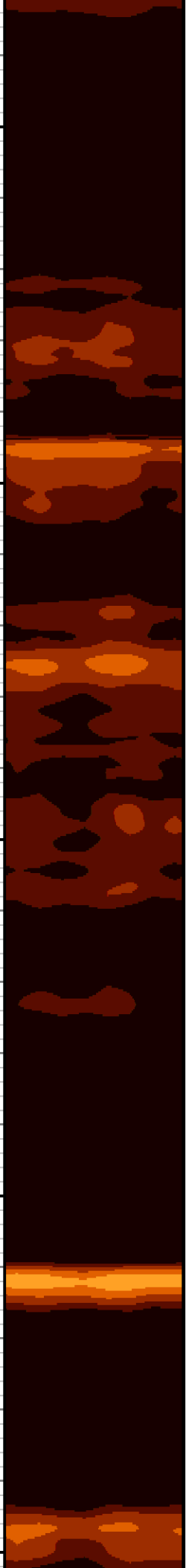
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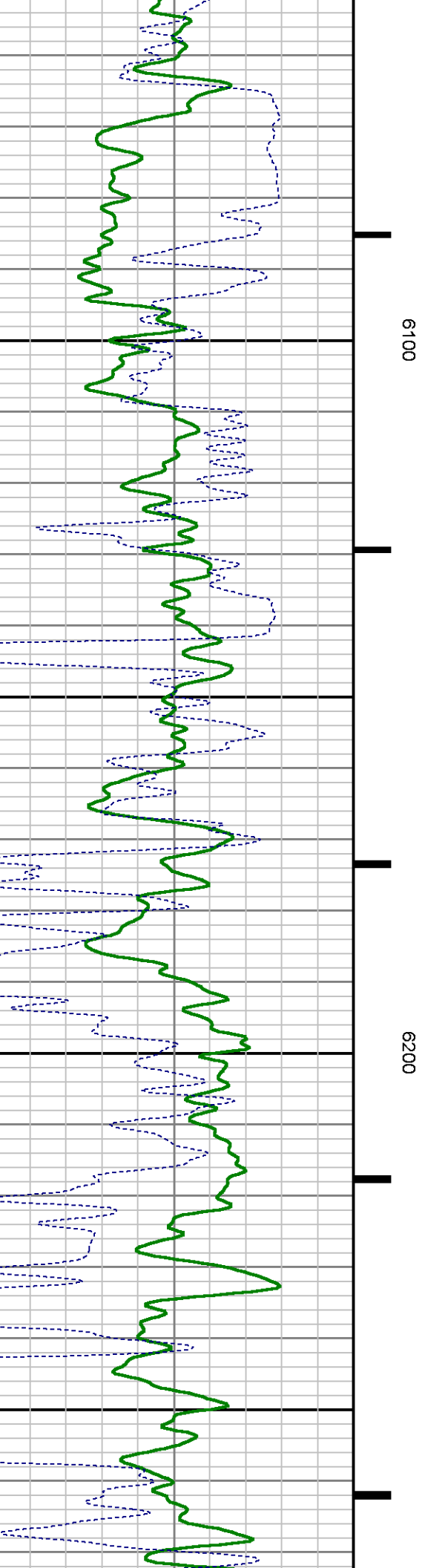
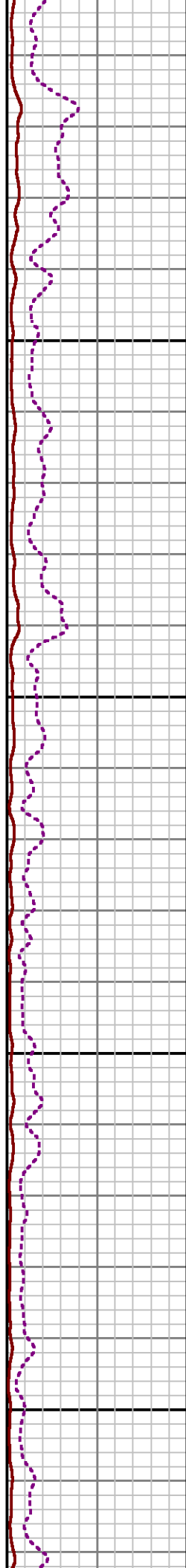
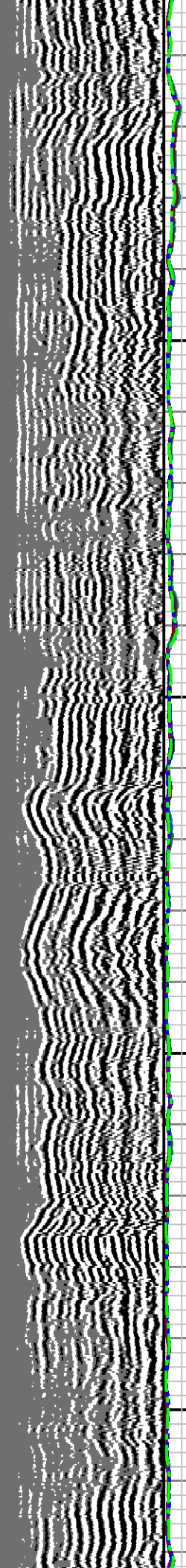
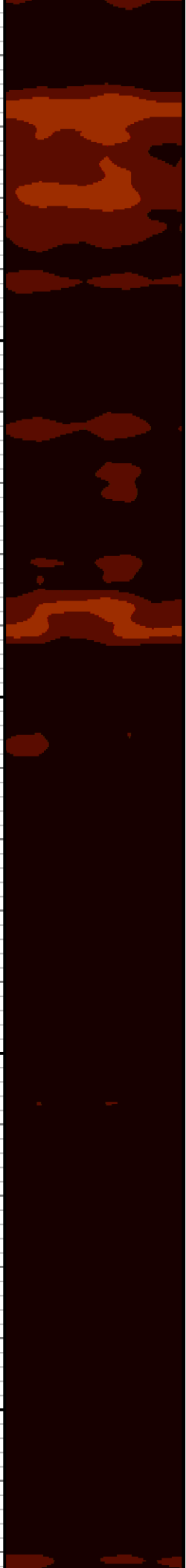
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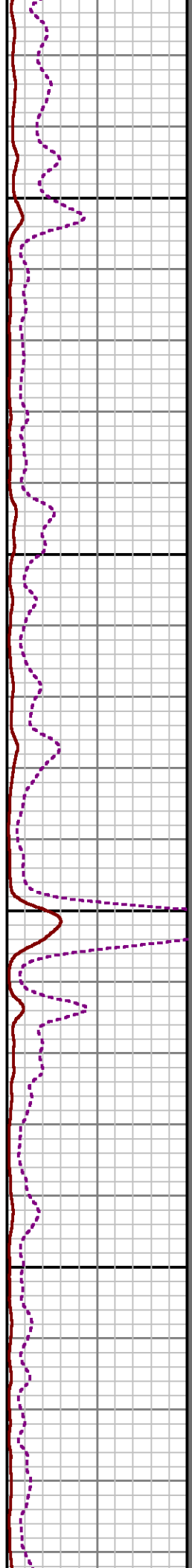
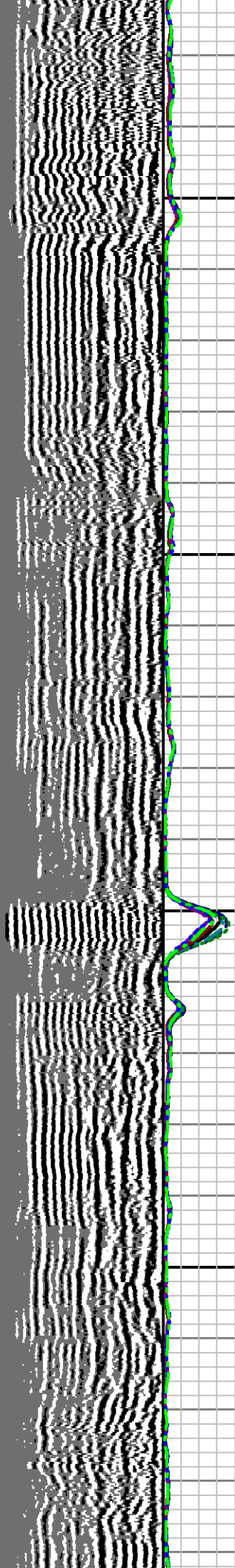
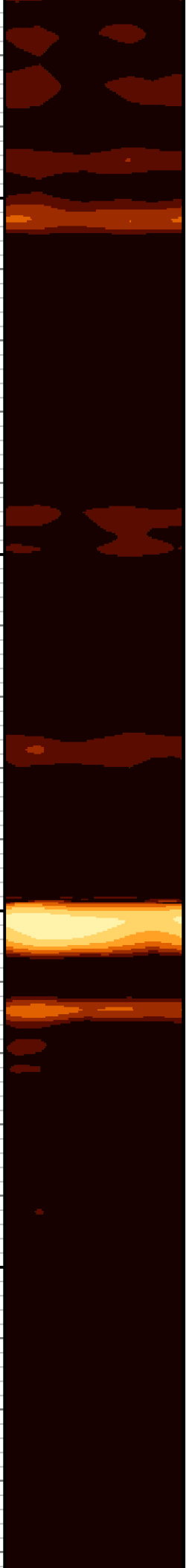
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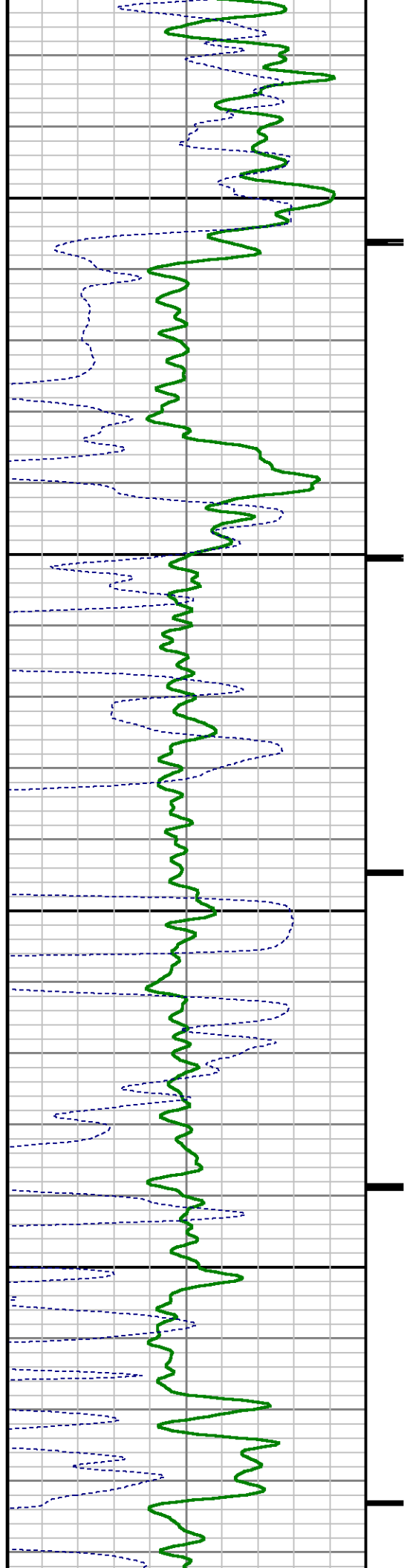


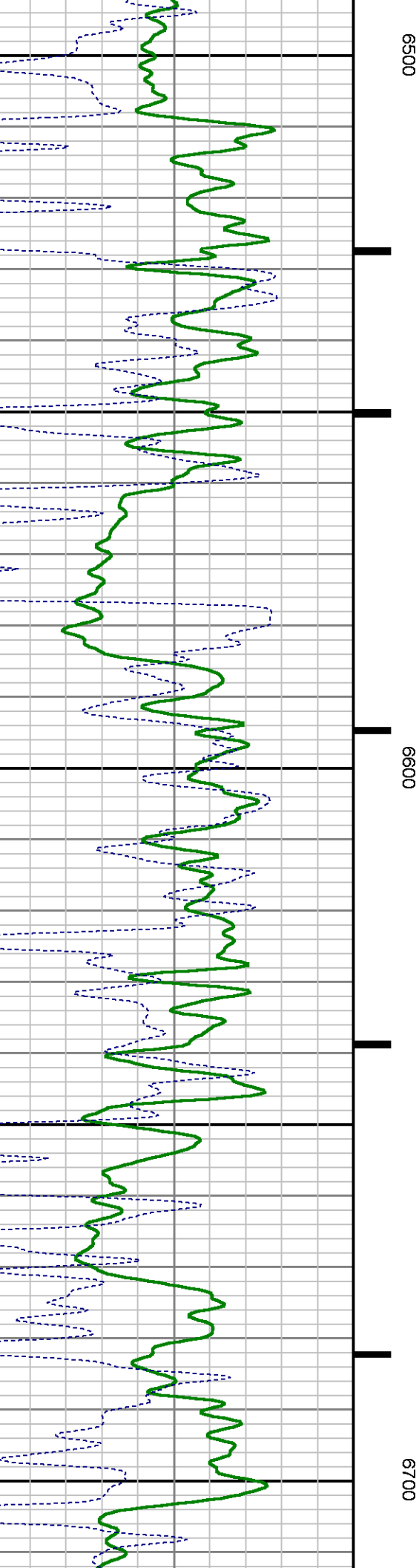
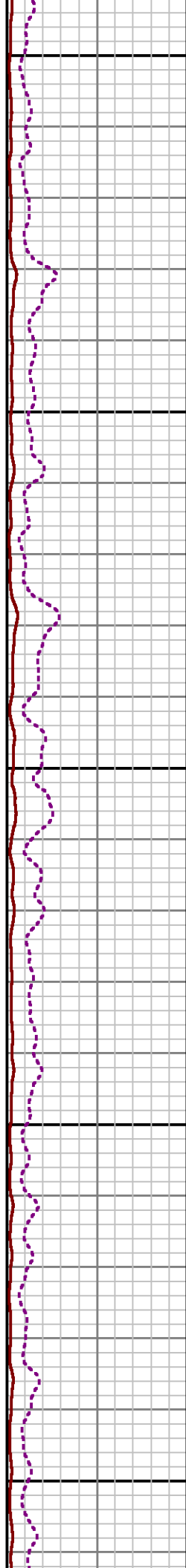
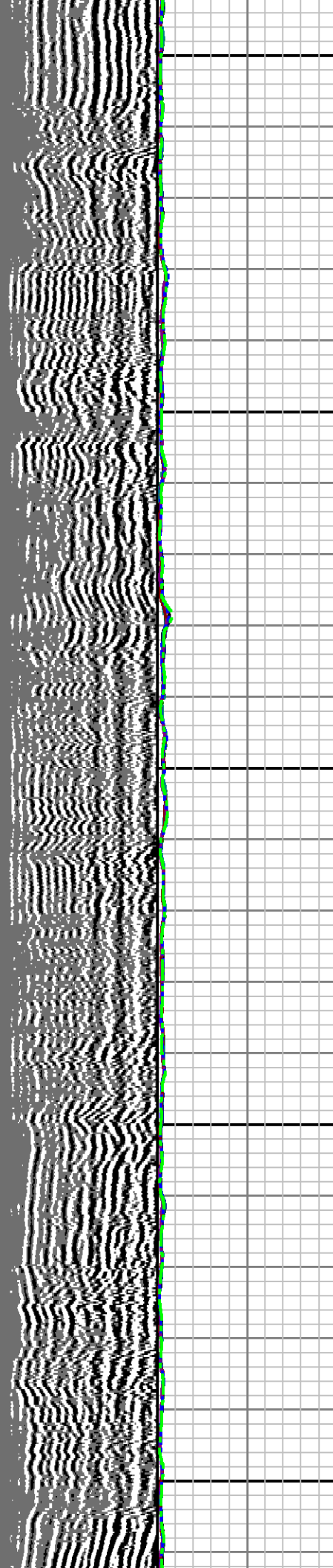
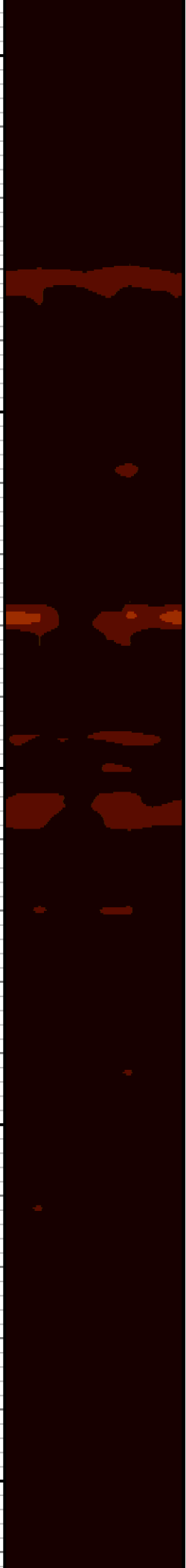


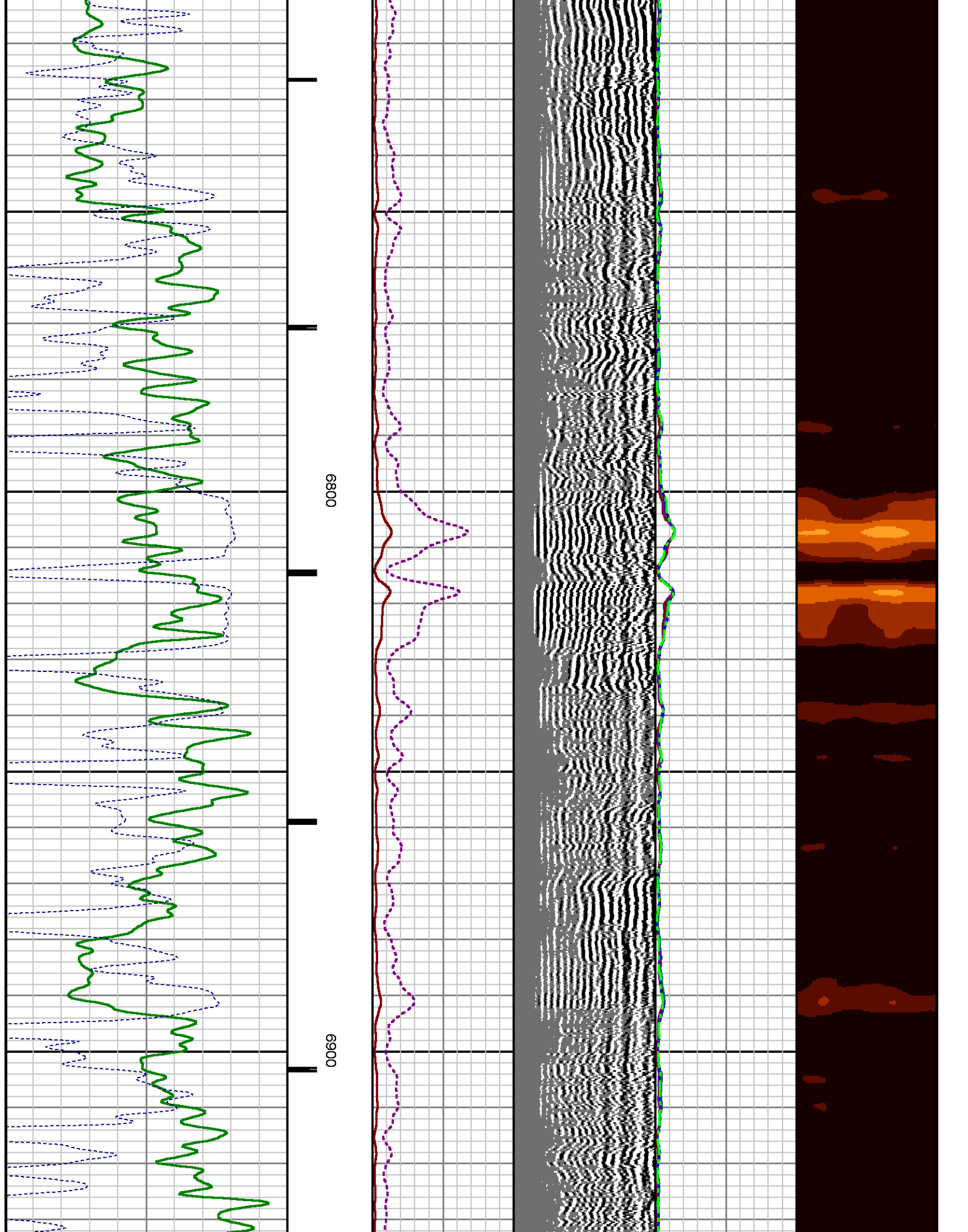


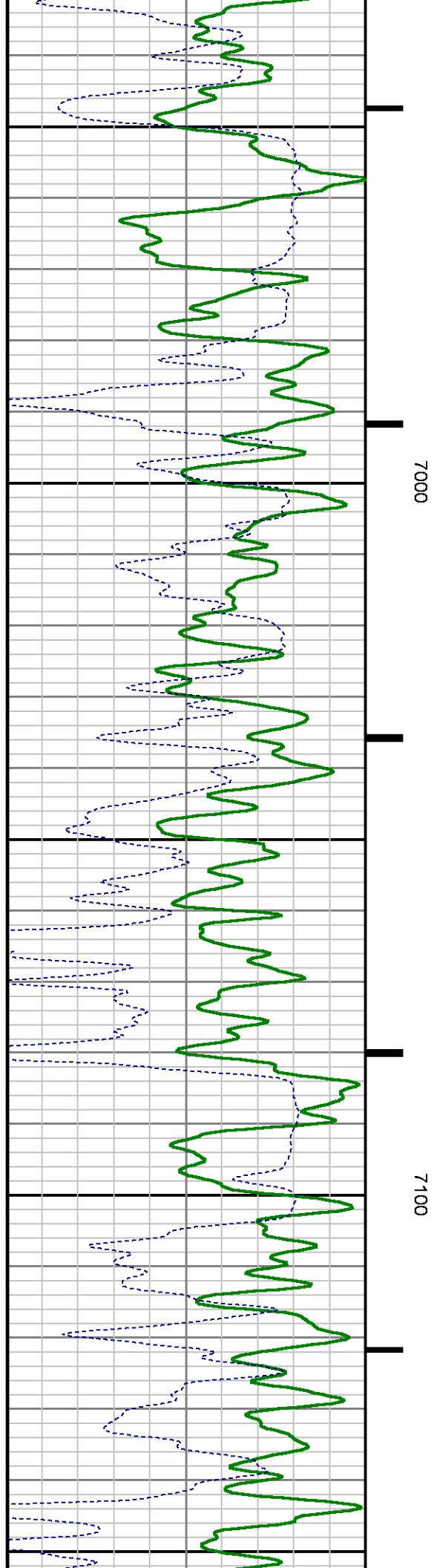
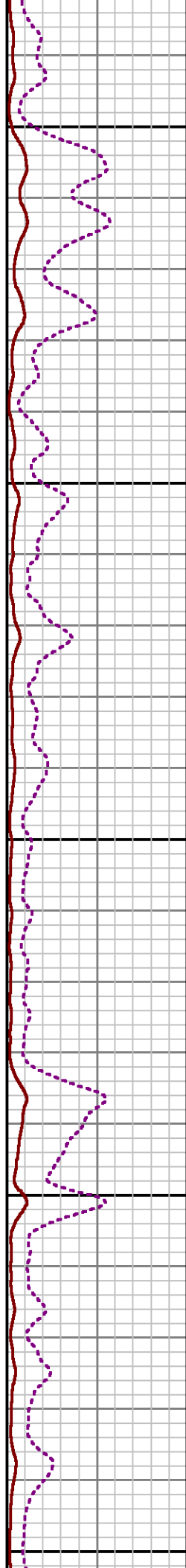
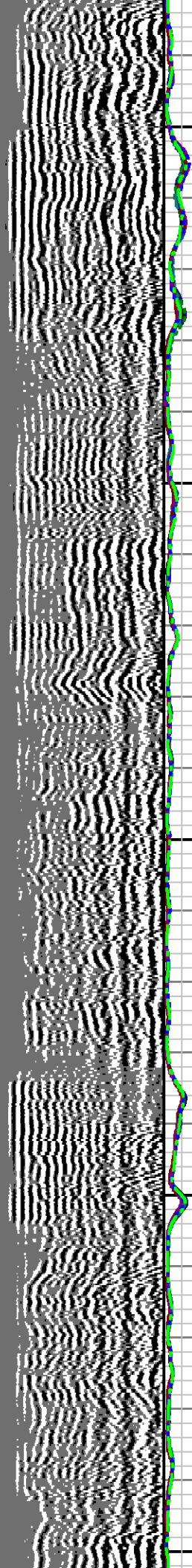
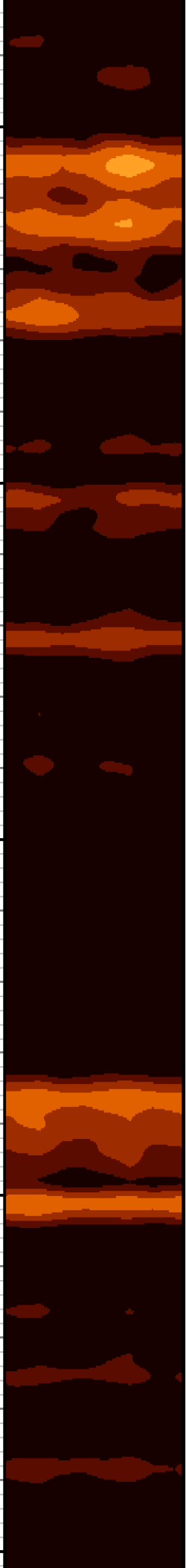
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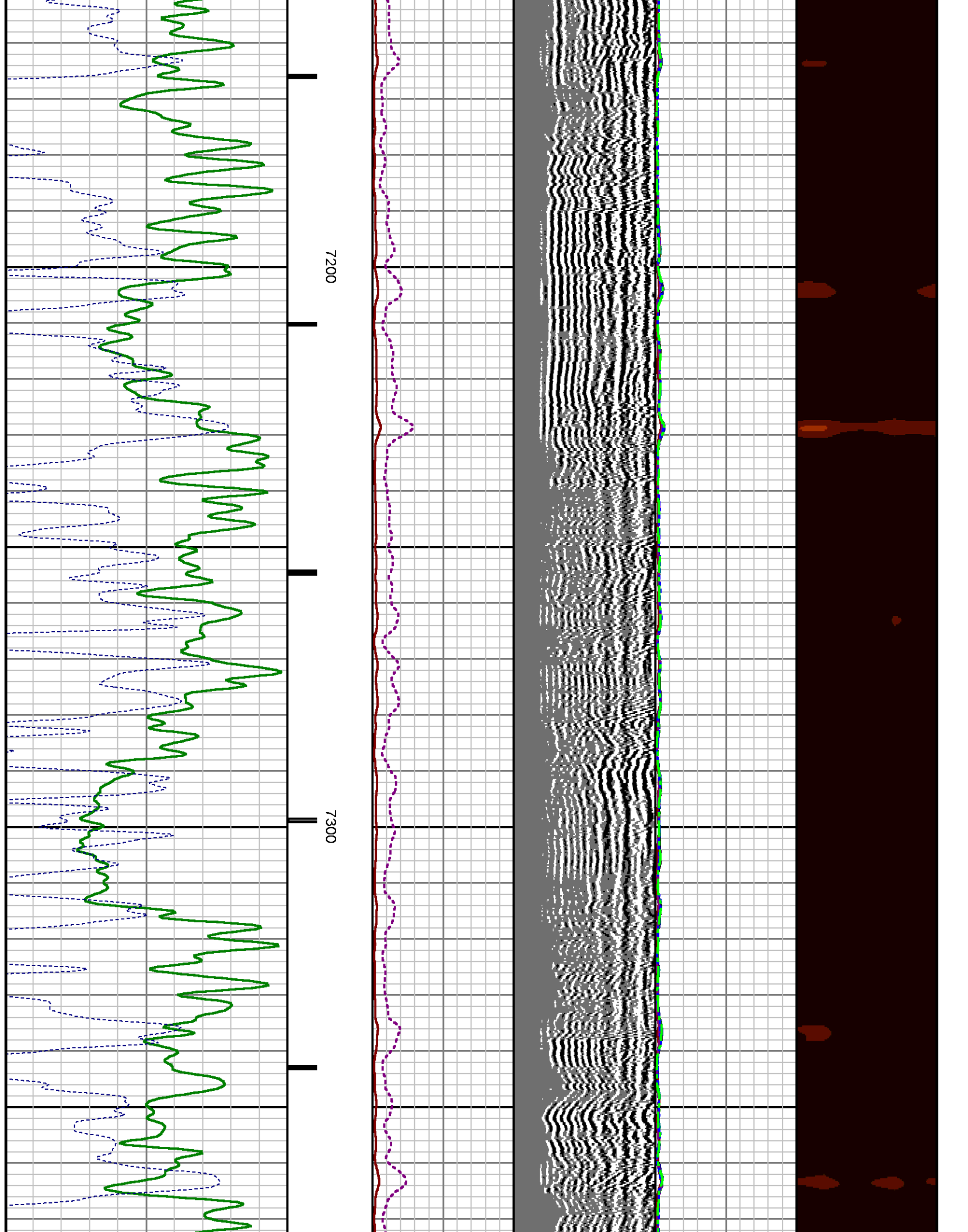
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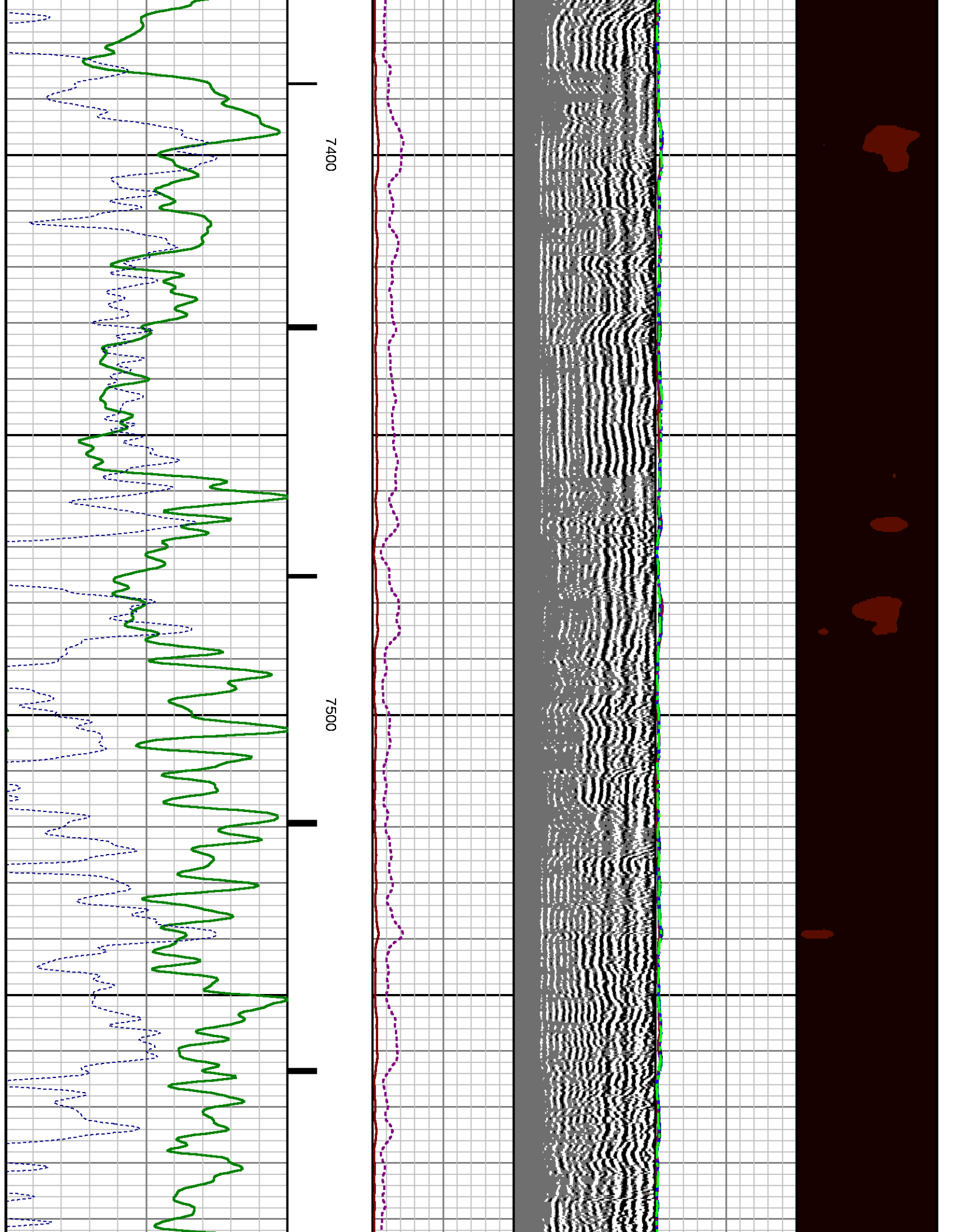


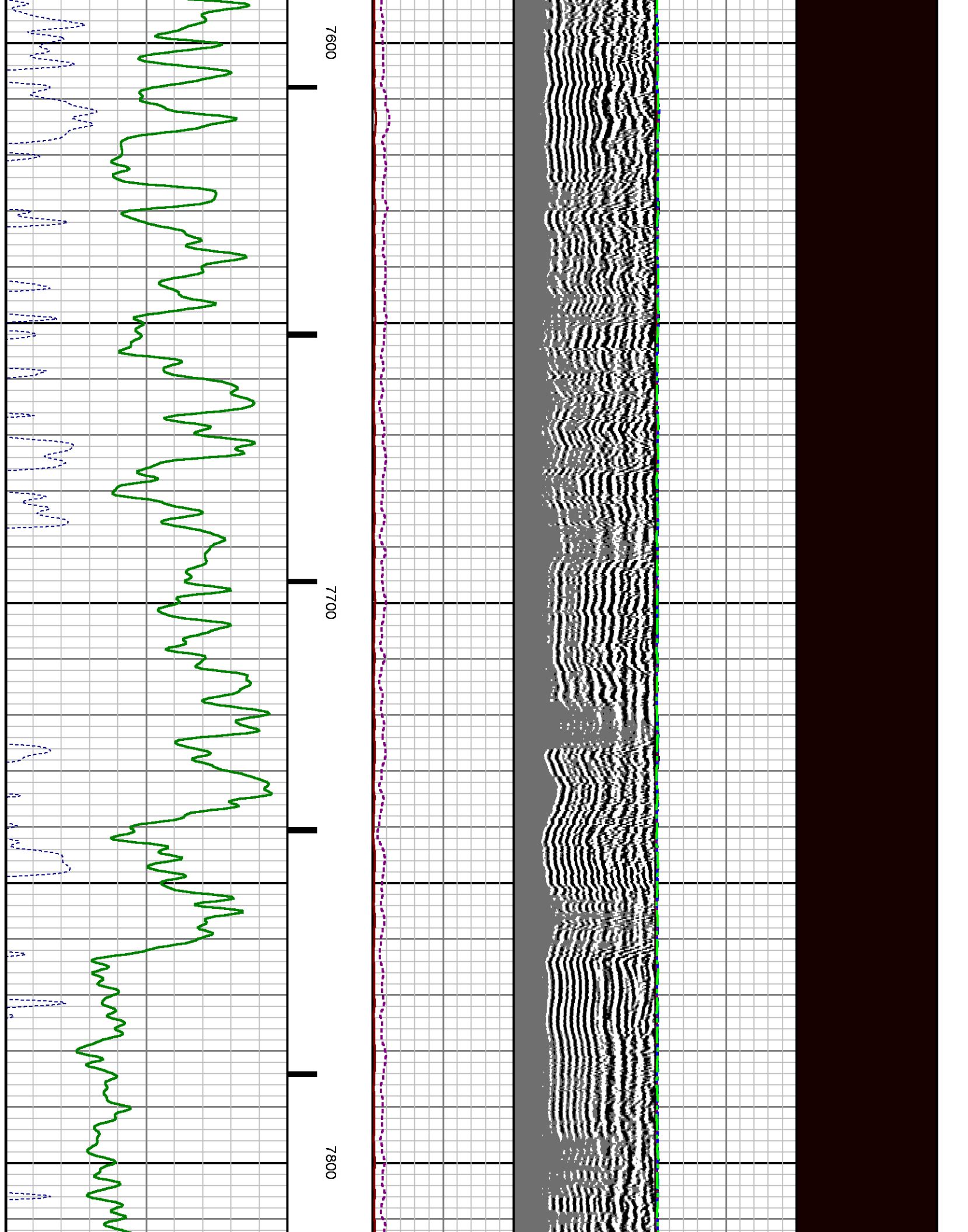


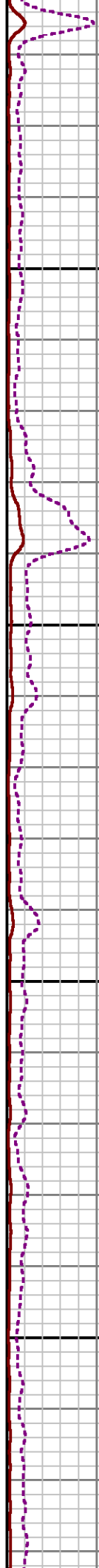
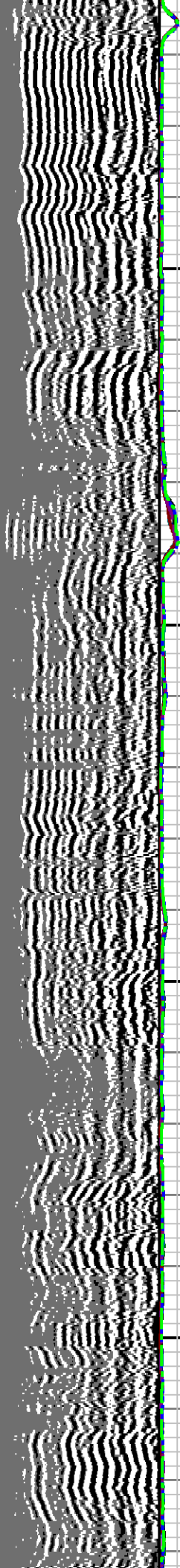
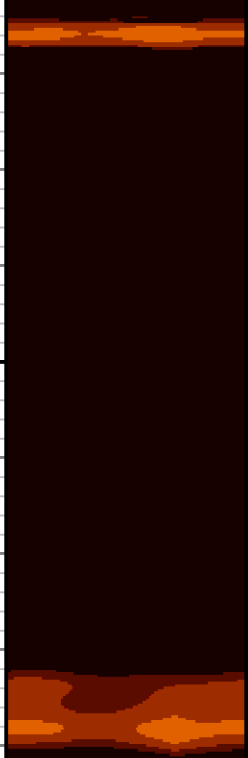






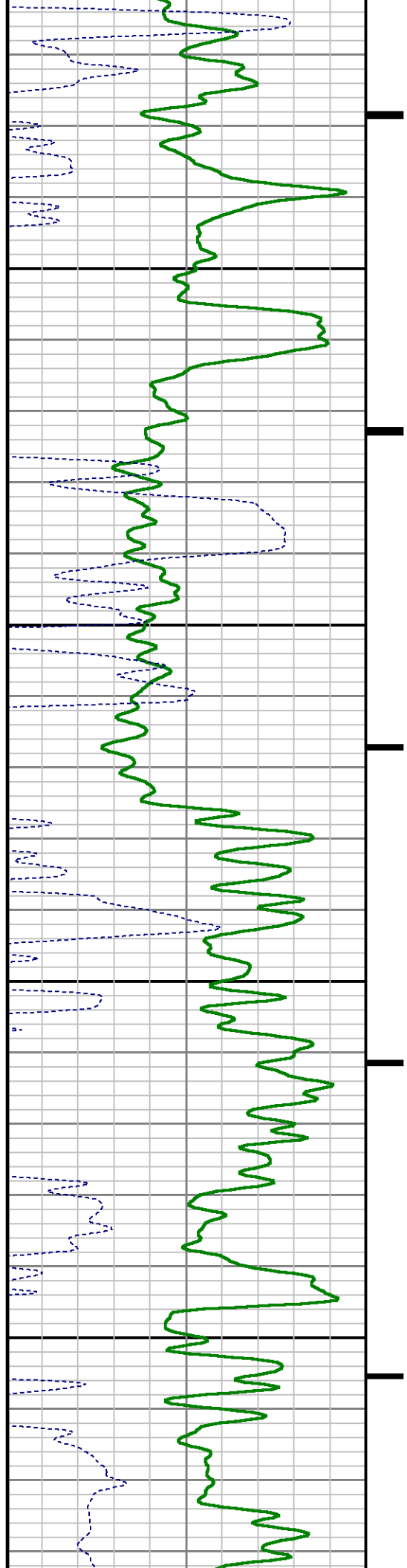


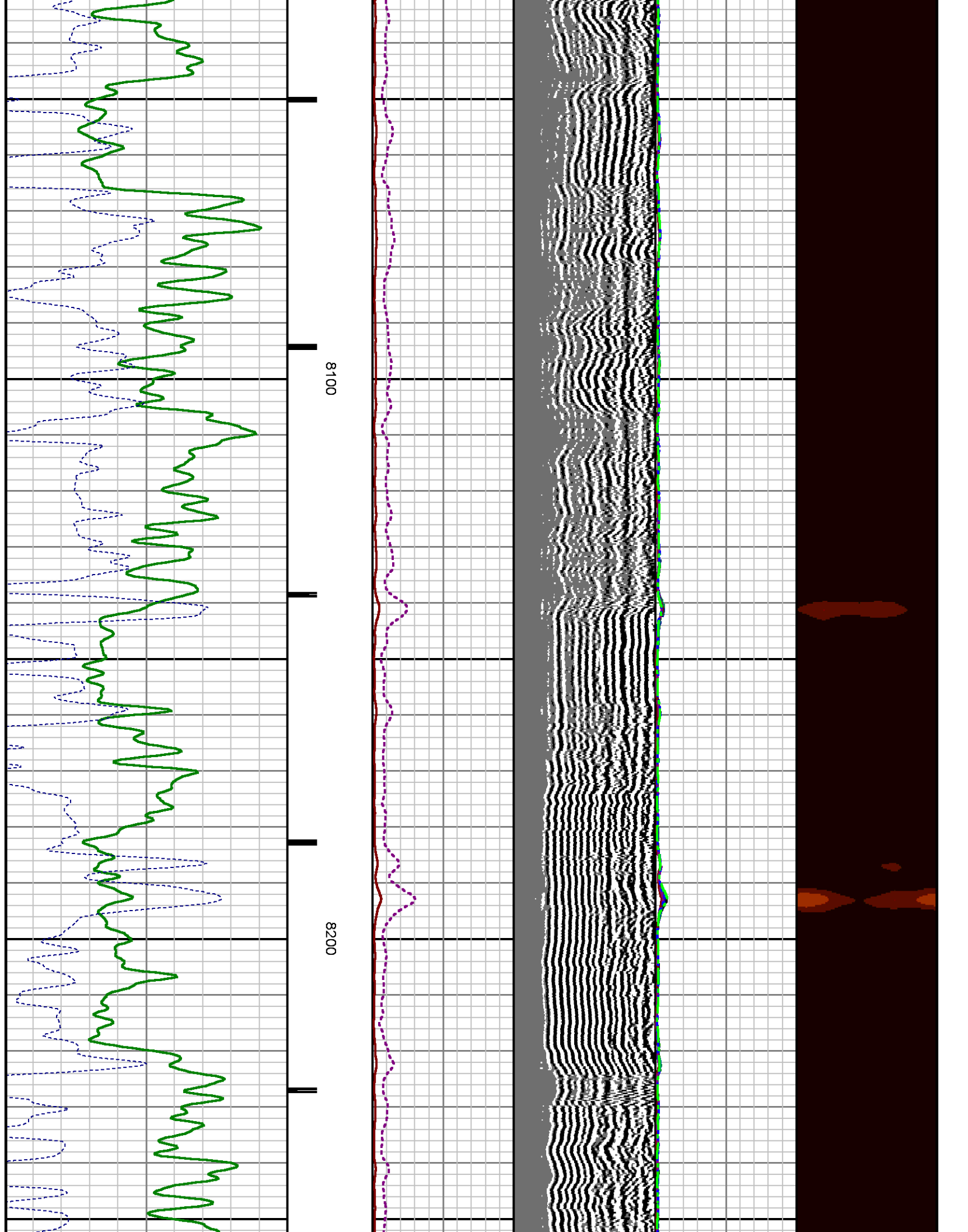


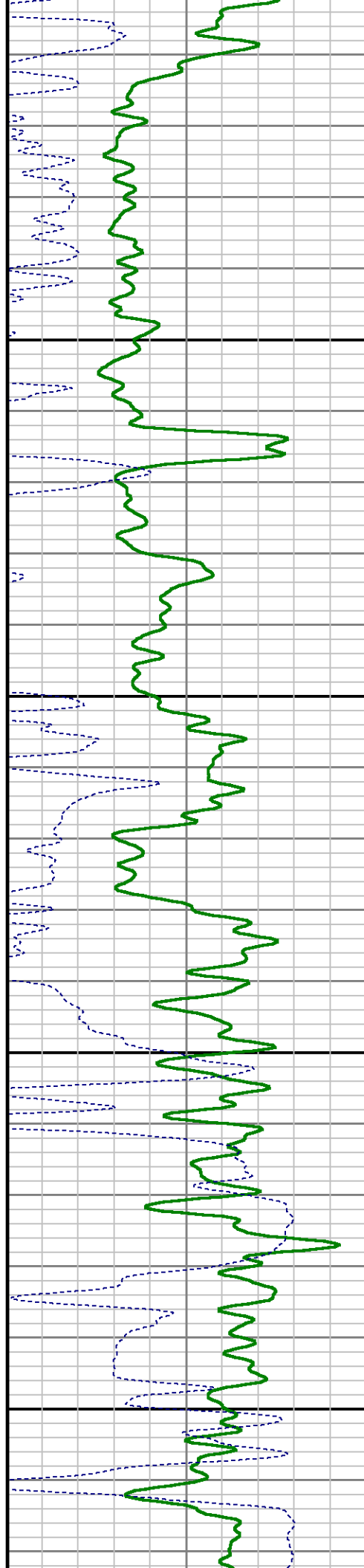
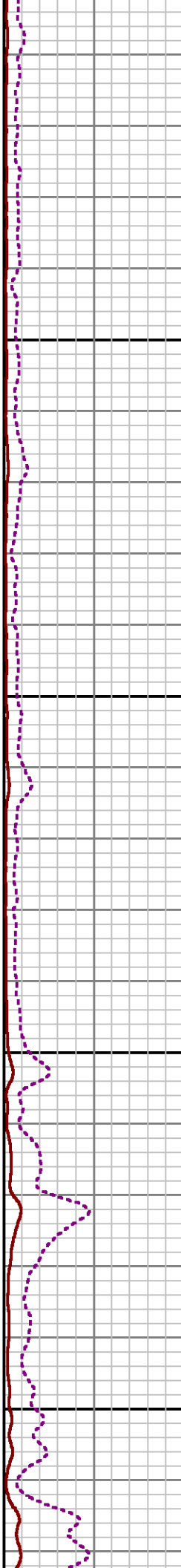
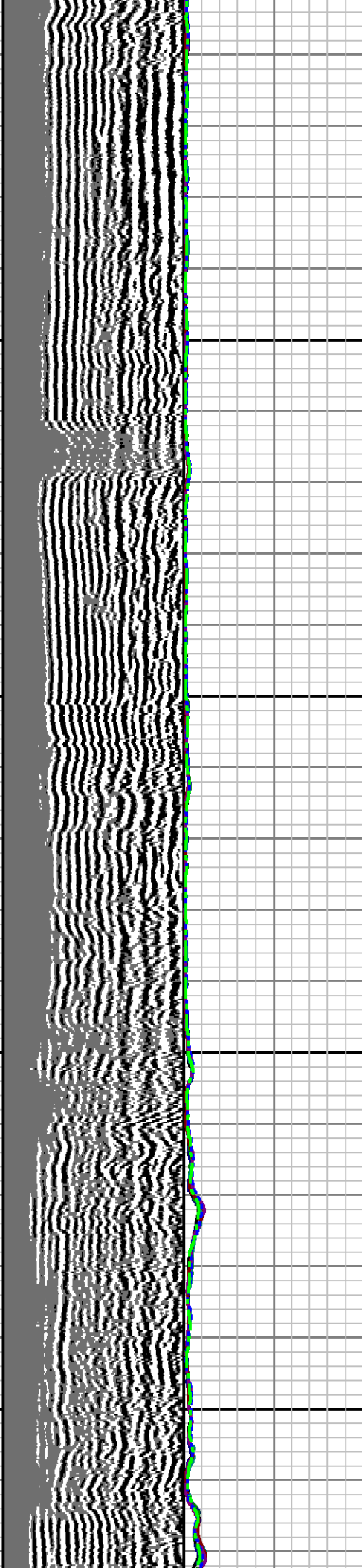
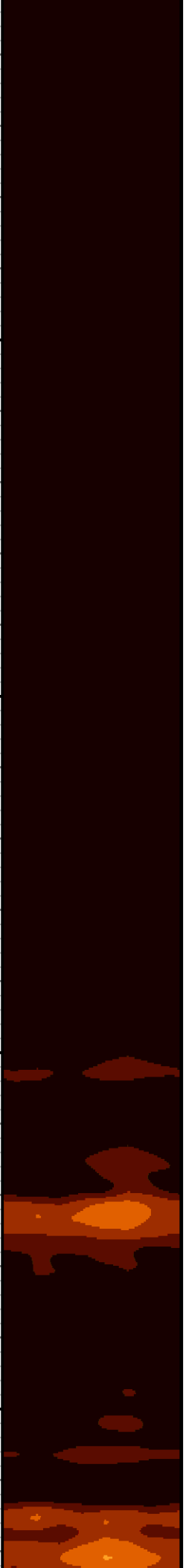


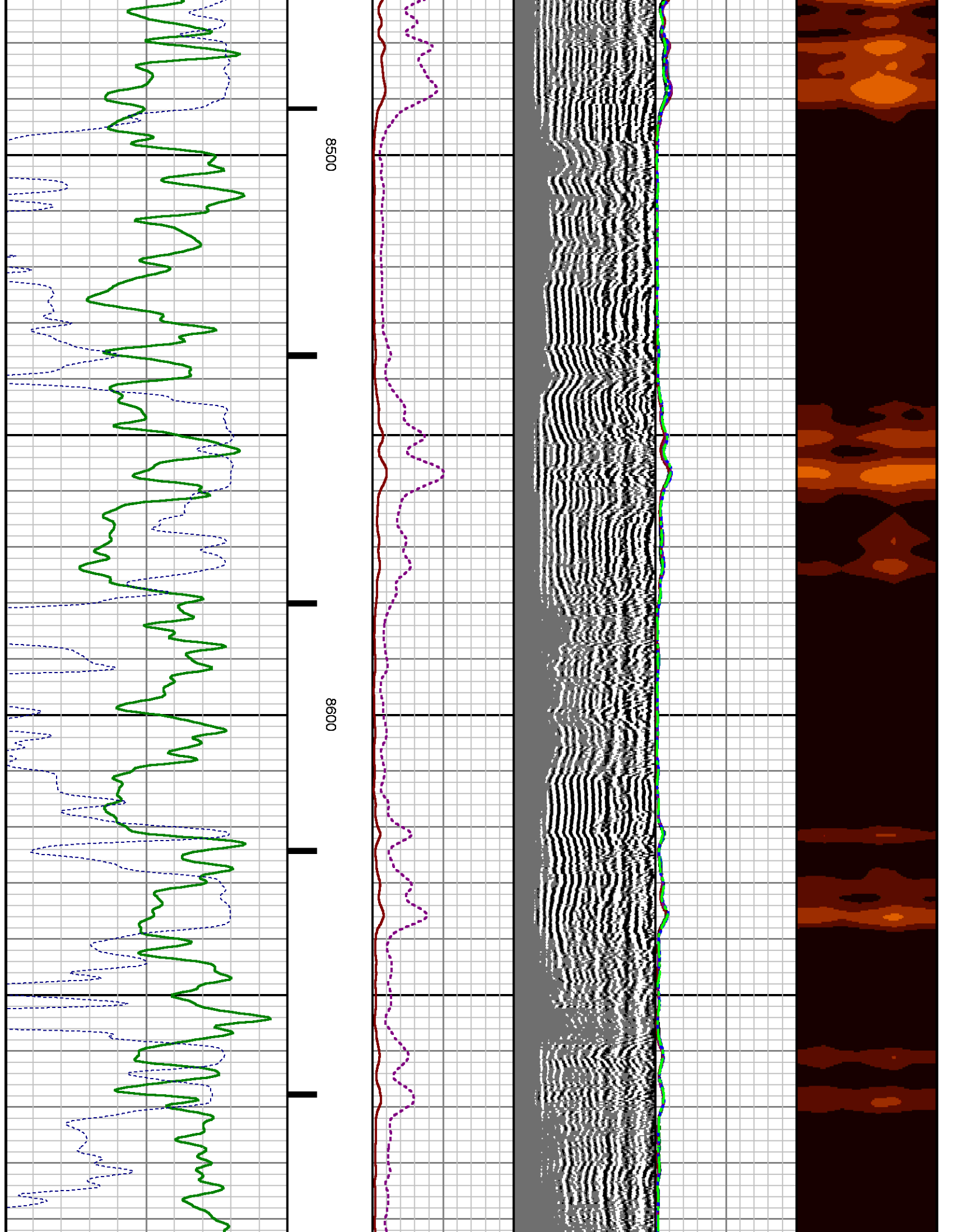
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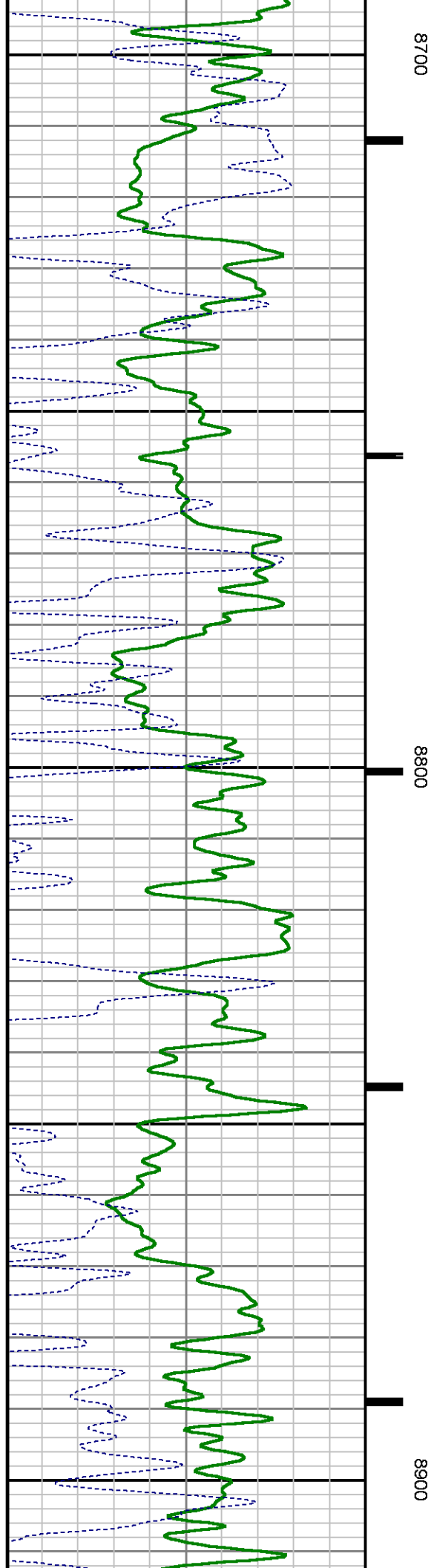
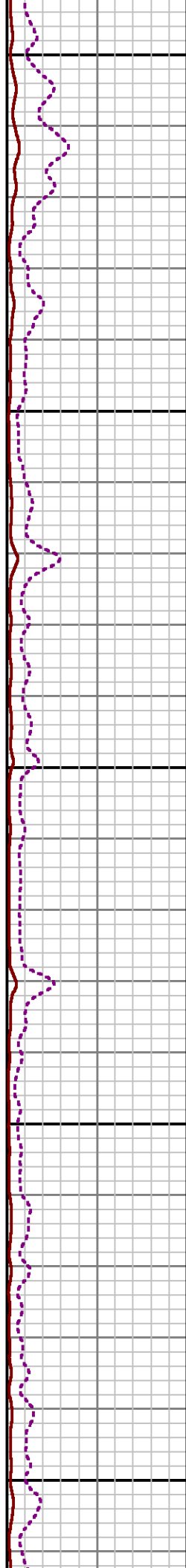
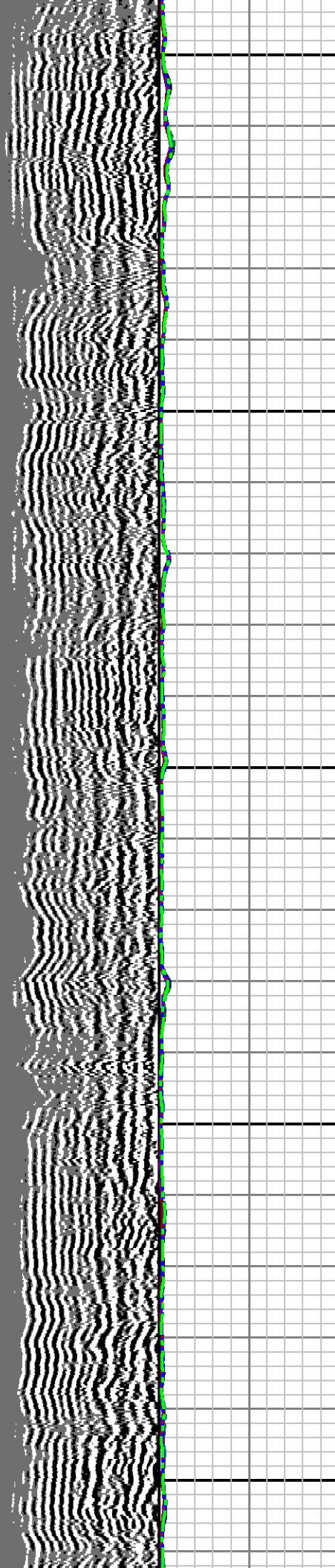
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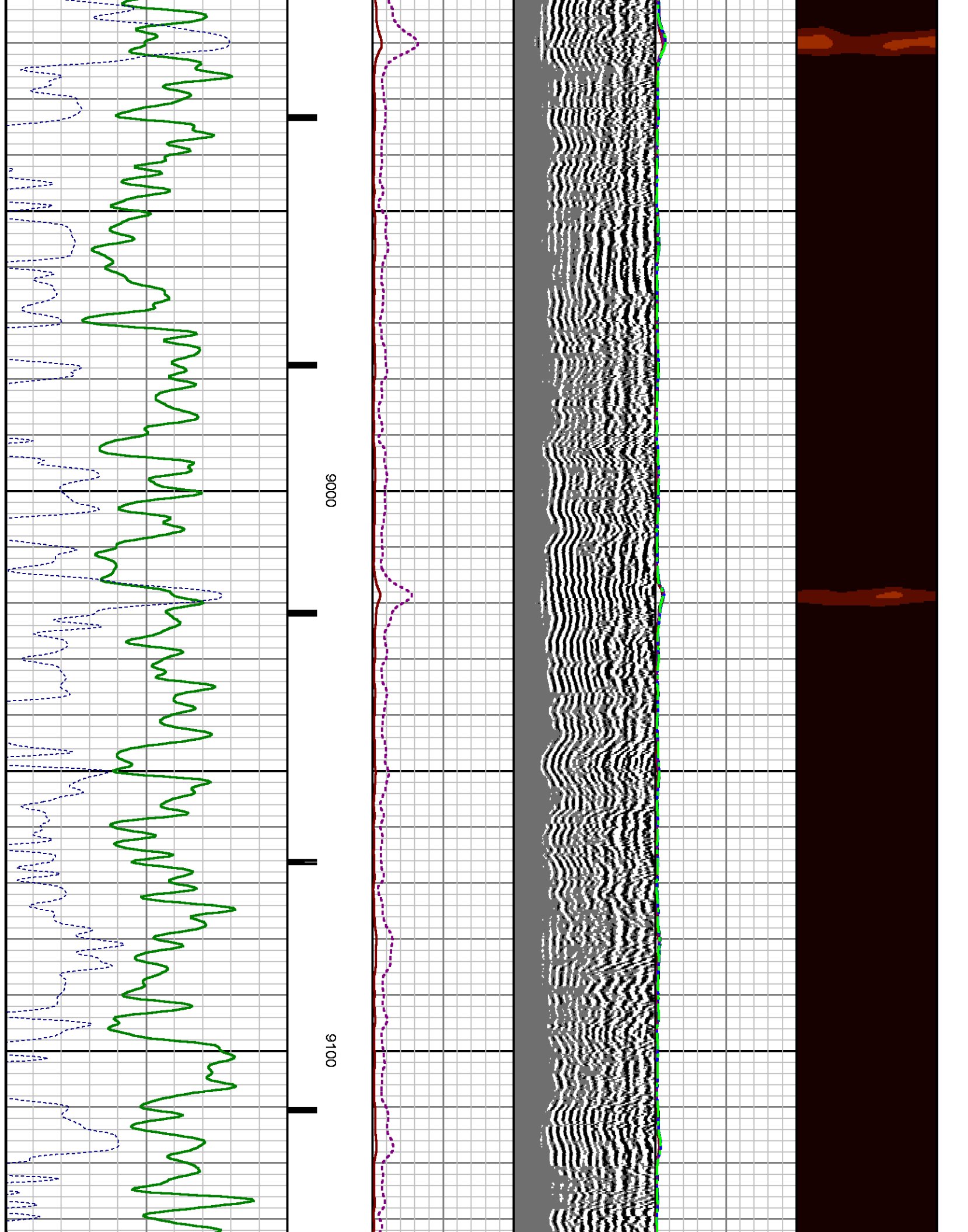


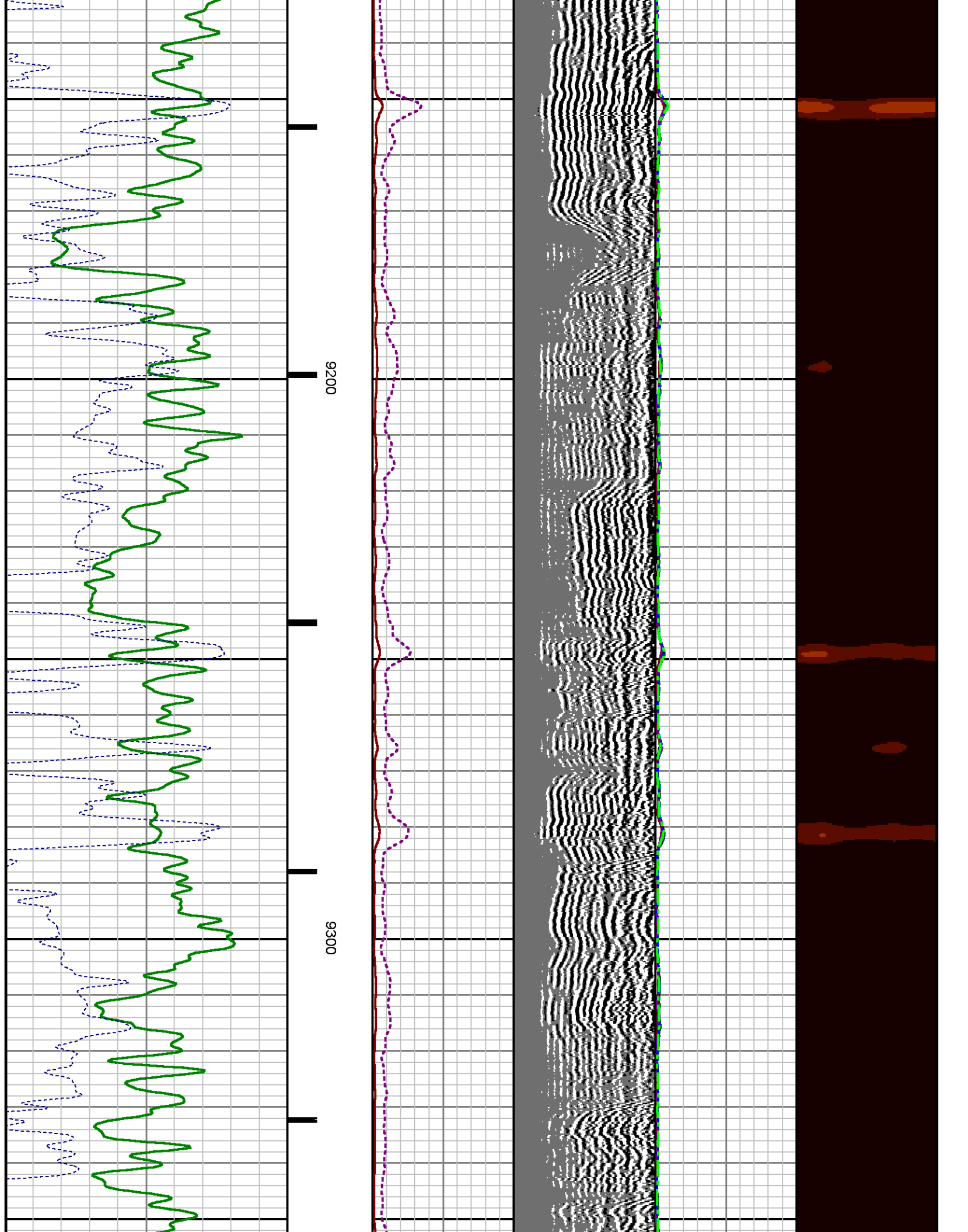


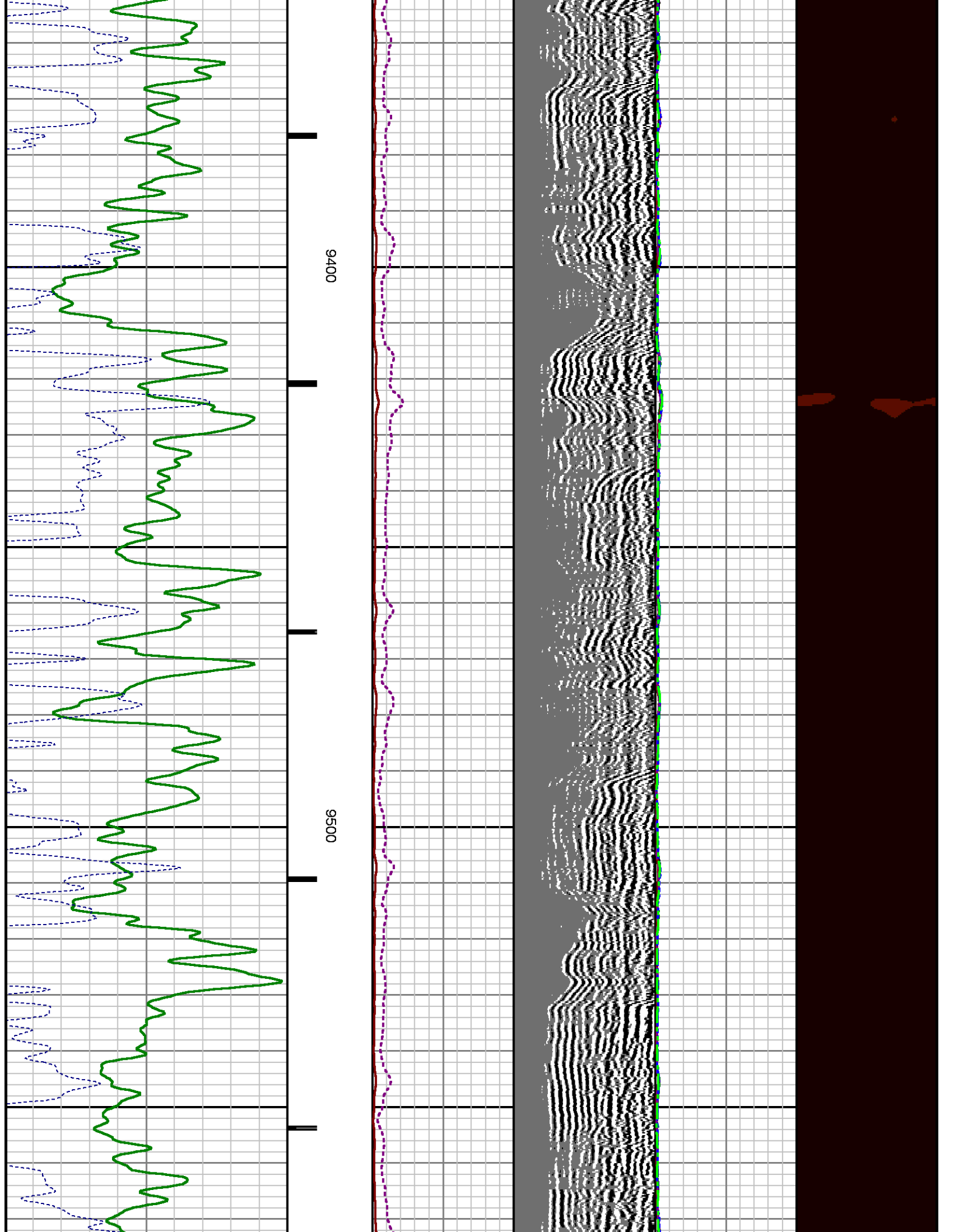


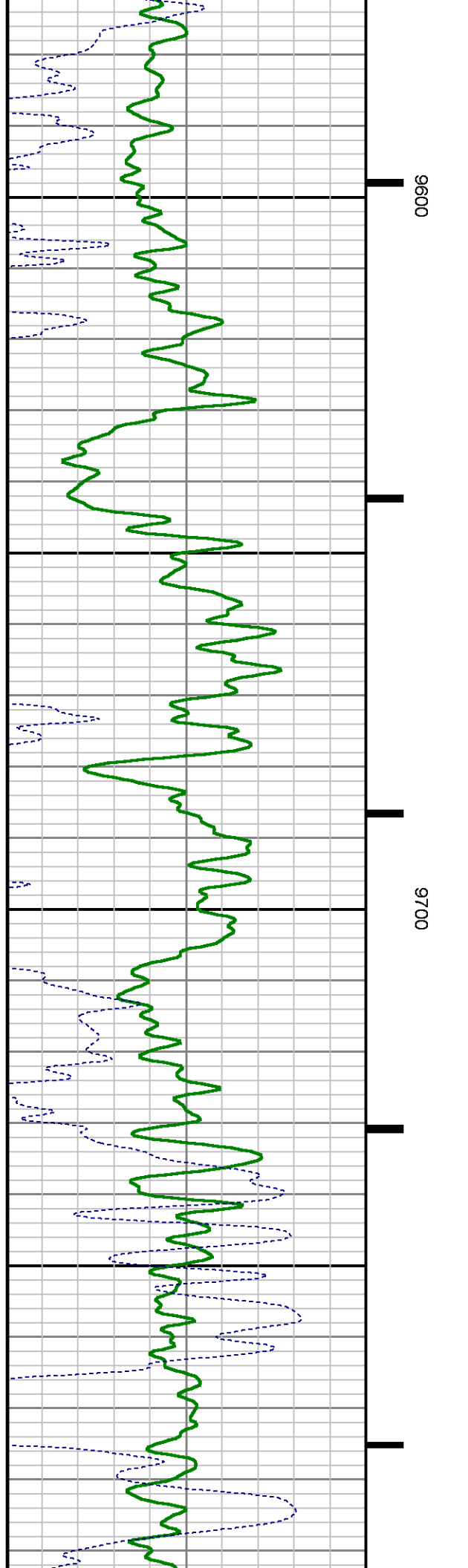
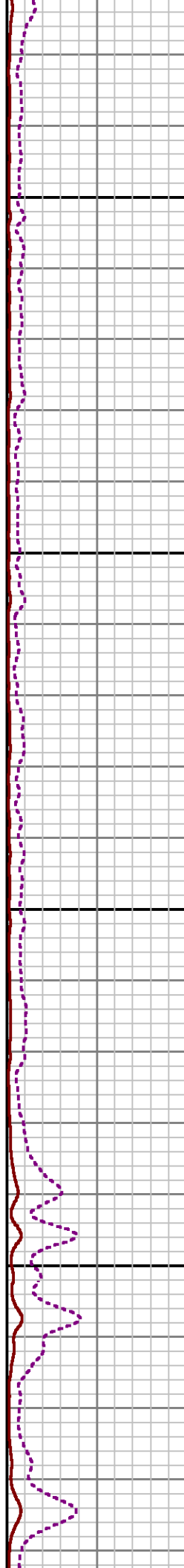
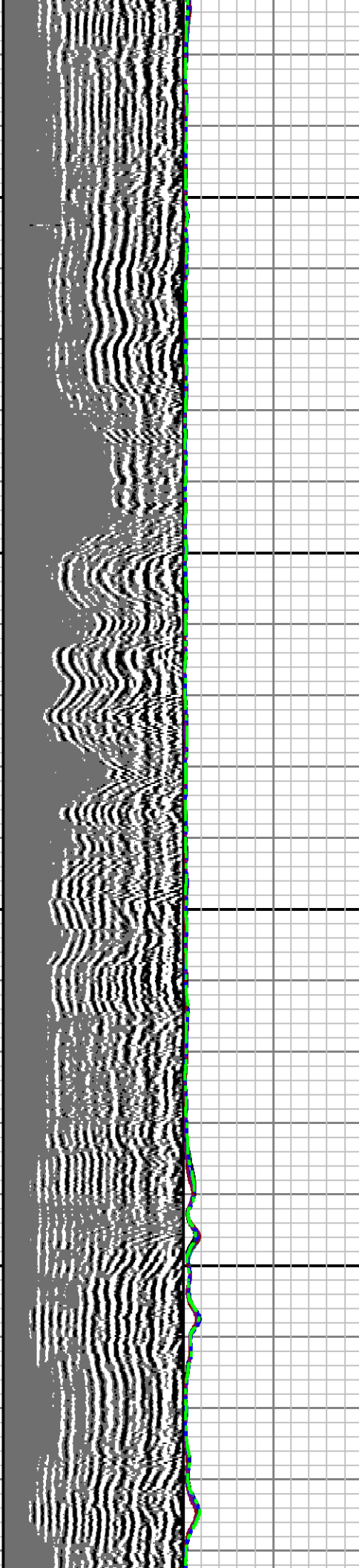


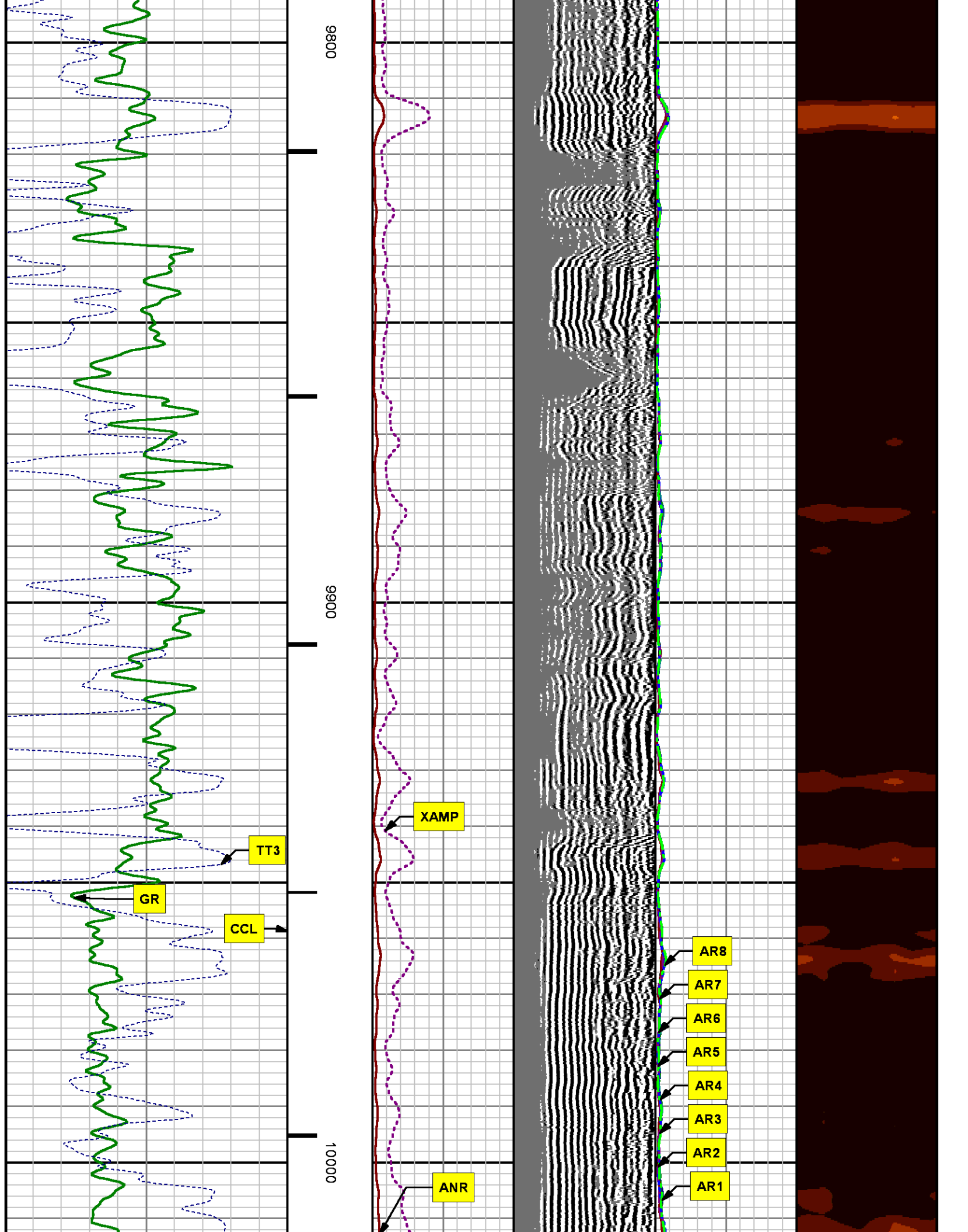


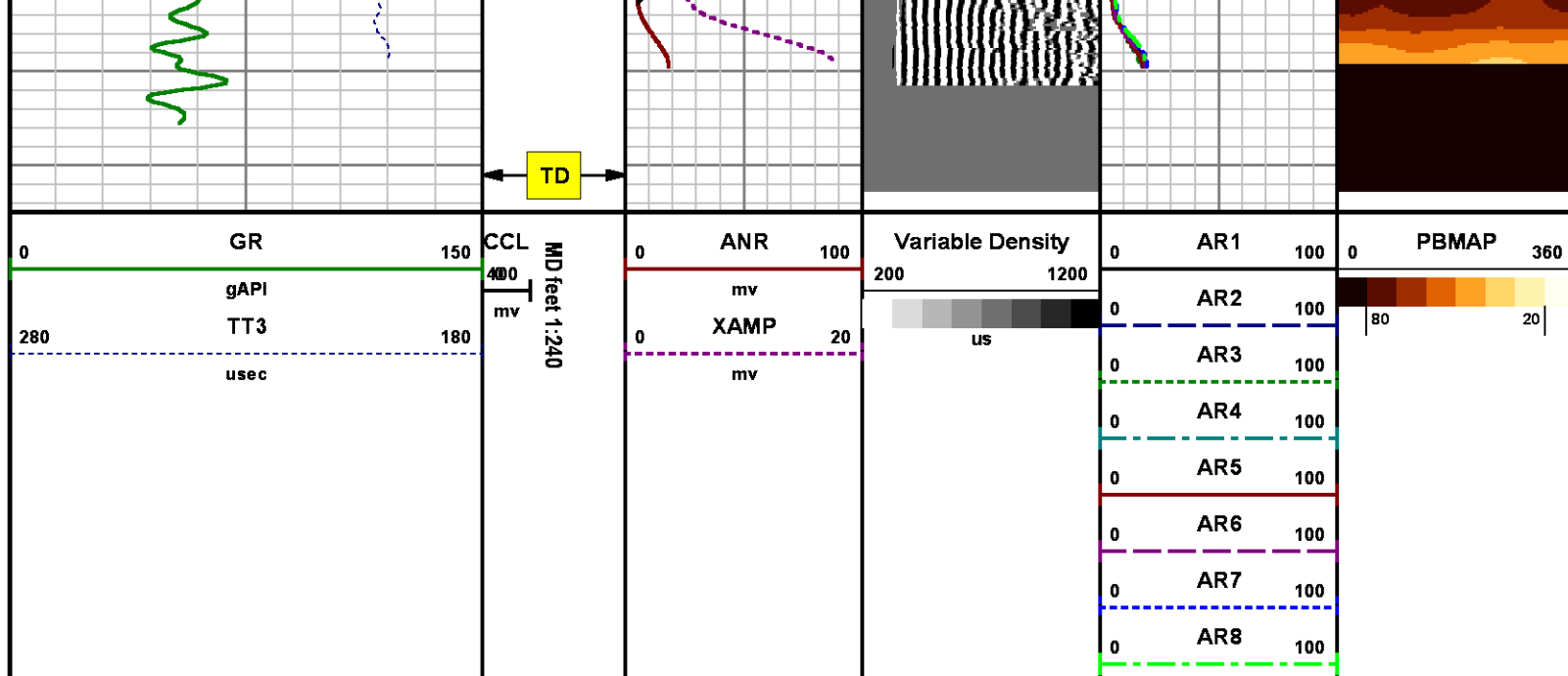












REPEAT SECTION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	u sec	9698.200	10032.450
RAL	Amp Gate Start Near	195.000	u sec	9698.200	10032.450
RAL	Amp Gate Start Radial	195.000	u sec	9698.200	10032.450
RAL	Amp Gate Width Far	25.000	u sec	9698.200	10032.450
RAL	Amp Gate Width Near	25.000	u sec	9698.200	10032.450
RAL	Amp Gate Width Radial	25.000	u sec	9698.200	10032.450
RAL	casing od	4.500	inches	9698.200	10032.450
RAL	casing wt	11.600	lbm/ft	9698.200	10032.450
RAL	FB Start Far	291.900	u sec	9698.200	10032.450
RAL	FB Start Near	180.000	u sec	9698.200	10032.450
RAL	FB Start Radial	180.000	u sec	9698.200	10032.450
RAL	FB Thresh Far	10.000	mv	9698.200	10032.450
RAL	FB Thresh Near	4.000	mv	9698.200	10032.450
RAL	FB Thresh Radial	4.000	mv	9698.200	10032.450
RAL	Fluid Travel Time	200.000	u sec/ft	9698.200	10032.387

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

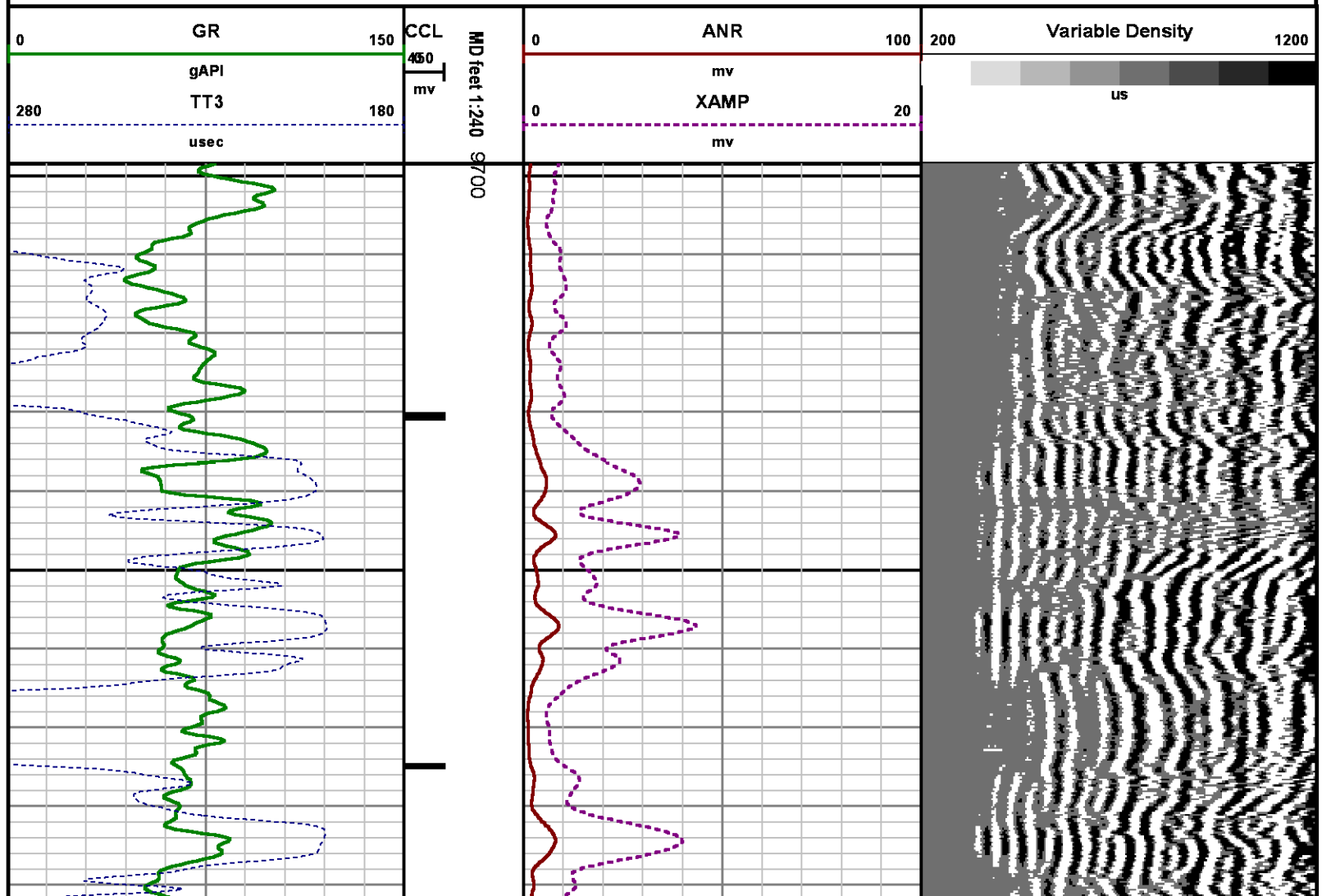
Well : FEDERAL NER 424-32

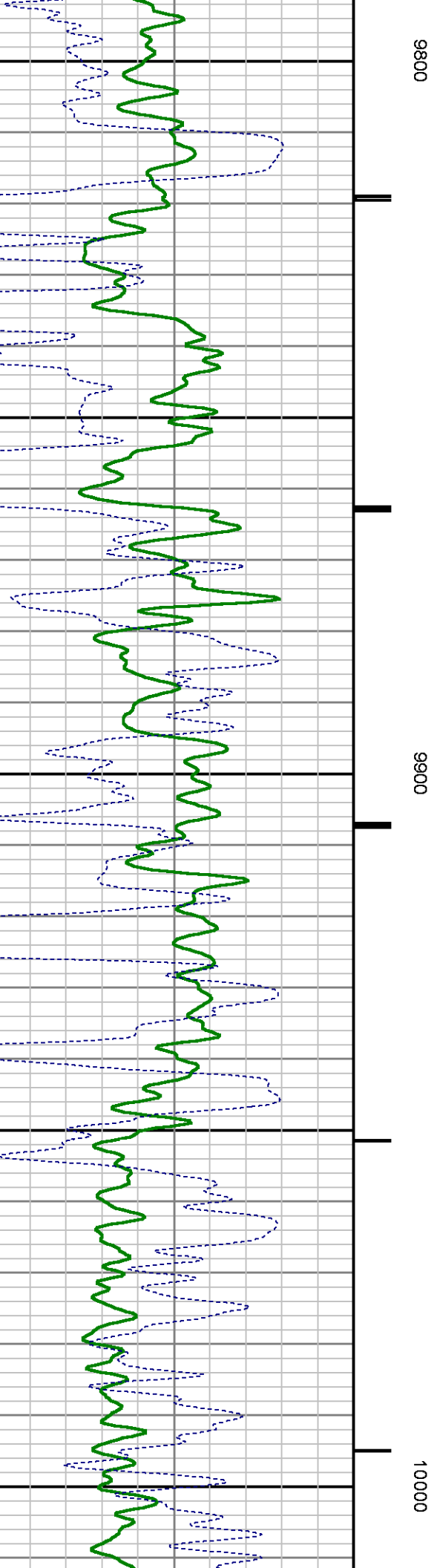
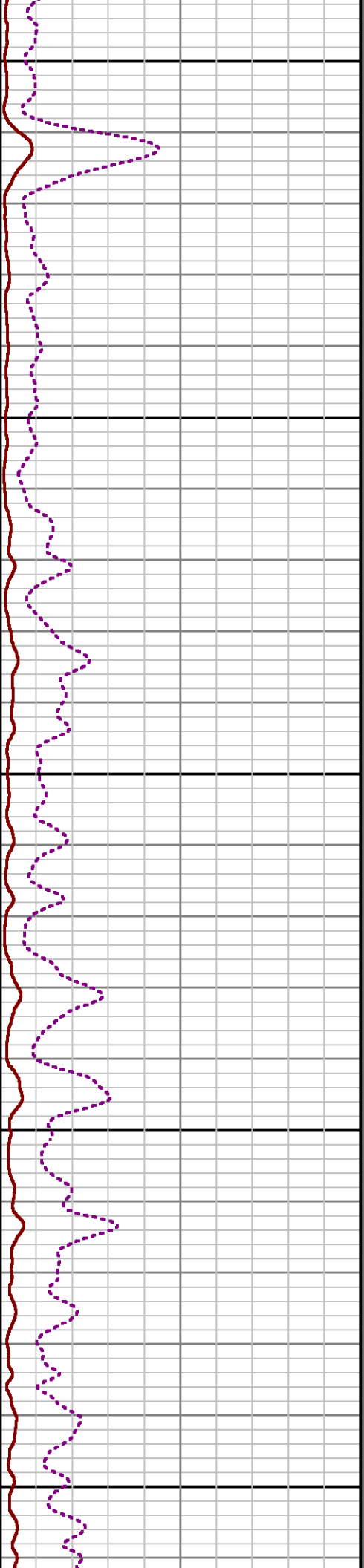
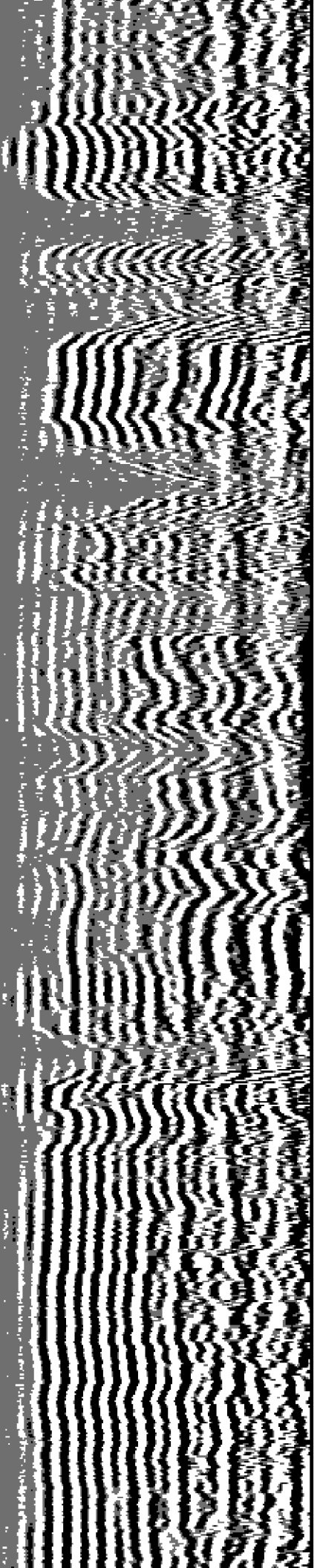
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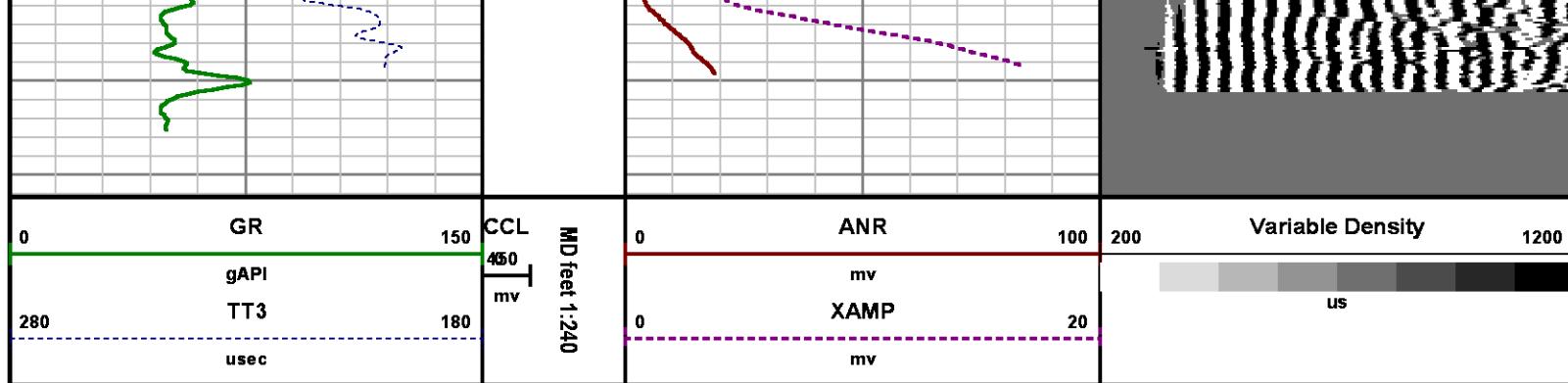
Mode : PlotMgr 5.4.504

Interval : 9698.45 - 10032.45 feet UP

Created : 9/22/2014 5:23:38 PM







CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\45712.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Sep 12 08:49:06 2014

TOOL SERIES: 2459XA ASSET: 457 SEQ: 12

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	92.09	359.07	0.693	63.81	248.81	185.00

Verification File: C:\case\calver\GR\45712.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Fri Sep 12 08:50:21 2014

TOOL SERIES: 2459XA ASSET: 457 SEQ: 12

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	92.31	353.73	0.693	63.97	245.12	181.15

RALSHP

Shop Calibration: C:\case\calver\RALSHP\496SEP22_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Sep 22 16:38:52 2014

TOOL SERIES: 1426XA ASSET: 496 SEQ: SEP22

Tool Delay [u sec]	-54.00	Tank OD in	5.50	Tank Wt lbm/ft	15.50	Tank ID in	4.95
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RECEIVER Travel Time Amp Gate Amp Gate Zero Gate Zero Gate Zero Amp Amp Ref Shop Factor

RECEIVER	Travel Time [usec]	Start [usec]	Width [usec]	Start [usec]	Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	218	216	30	166	25	-0.162	100.00	0.31
3 Ft. Receiver	217	216	30	166	25	1.362	100.00	0.31
5 Ft. Receiver	326	325	30	260	25	0.815	150.00	0.35
Radial #1	217	216	30	166	25	1.090	100.00	0.31
Radial #2	217	216	30	166	25	1.335	100.00	0.31
Radial #3	217	216	30	166	25	1.174	100.00	0.31
Radial #4	217	216	30	166	25	0.943	100.00	0.31
Radial #5	218	216	30	166	25	1.761	100.00	0.31
Radial #6	218	216	30	166	25	1.699	100.00	0.31
Radial #7	216	216	30	166	25	1.284	100.00	0.31
Radial #8	218	216	30	166	25	0.954	100.00	0.31

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496SEP22_fid.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Sep 22 16:40:47 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: SEP22

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	166	25	-0.002	0.000	0.99	100.000
3 Ft. Receiver	195	25	2.281			
5 Ft. Receiver	305	25	3.765			
Radial #1	195	25	1.793			
Radial #2	195	25	1.920			
Radial #3	195	25	1.873			
Radial #4	195	25	1.842			
Radial #5	195	25	2.294			
Radial #6	195	25	2.416			
Radial #7	195	25	1.954			
Radial #8	195	25	1.942			

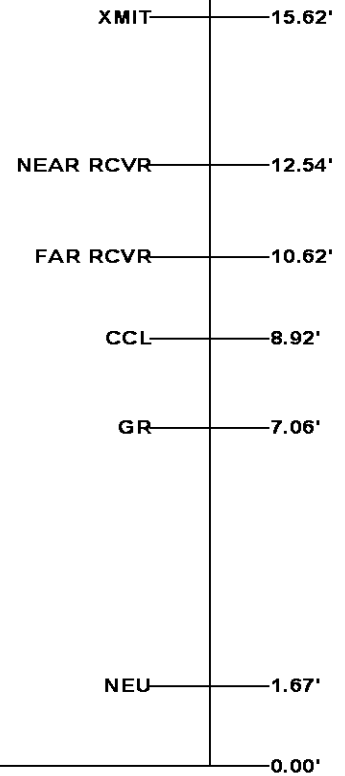
TOOL DIAGRAM

PROBE 2 3/4 DUAL RECEIVER RADII

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

Probe GR/CCL/NEU

Series 2459XA
 Mnemonic PROB
 Diameter 2.75"
 Length 9.42'
 Measure Point 1.21' NEU
 Measure Point 6.60' GR
 Measure Point 8.46' CCL



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



Baker Atlas

CASE

Company

WPX ENERGY

Well

FEDERAL NER 424-32

Field

RULISON

County

GARFIELD

State

COLORADO

Location

SHL: 117' FNL x 2583' FWL SEC 5 7S 93W

BHL: 649' FSL x 2229' FWL SEC 32 6S 93W

SEC

32

TWP

6S

RGE

93W

Elevations

KB 7629 ft

DF

GL 7603 ft

File No:

CH090685

API No:

05045217660000

32 6S 93W

RU 23-5 PAD

NABORS 576