



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH085886 Company WPX ENERGY

Well FEDERAL PA 524-16

API No: PARACHUTE

County GARFIELD State COLORADO

05045220420000

Location

SHL: 2600' FNL & 1396' FWL SEC 21

BHL: 1030' FSL & 2326' FWL (SESW) SEC 16

SEC 16 TWP 6S RGE 9SW

RPM

Other Services

Permanent Datum

GL Elevation 6030 ft
KB 26 ft Above P. D.

Elevations

KB 6056 ft
DF
GL 6030 ft

Log Measured From

KELLY BUSHING

GL 6030 ft

Date 22/MAY/14

Run ONE

Service Order US085886J

Depth Driller 10040 ft

Depth Logger 10008 ft

Bottom Logged Interval 9998 ft

Top Logged Interval 26 ft

Time Started 0700

Time Finished 1100

Operator Rig Time 4 HRS

Type of Fluid in Hole WATER

Fluid Density NA

Salinity NA

Fluid Level 80 ft

Logged Cement Top NA

Wellhead Pressure 0 psi

Maximum Hole Deviation NA

Nominal Logging Speed 66 fpm

Maximum Recorded Temperature 260 degF

Reference Log NONE

Reference Log Date NA

Equipment No. 4271 Location GRAND JCT

Recorded By FLOYD RENEAU

Witnessed By GRAN JACOBS

- FOLD HERE

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

Borehole Record

Bit Size	From	To
13.5 in	26 ft	1171 ft
8.75 in	1171 ft	10040 ft

Casing Record

Size	Weight	Grade	From	To
9.625 in			26 ft	1171 ft
4.5 in	11.6 lbm/ft	I-80	26 ft	10040 ft

Remarks

All data on this log is shifted using the CCL curve to put the wellhead (top CCL mark) on depth with ground level elevation at the client's request.
The amount of linear shift is 12 feet.
Logged with zero PSI at wellhead.

BHT = 260 °F

SJ = 6400'-6420'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10124106	CENT
1	1	GR/CCL	2459XA	10417456	CENT

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	35.812	10014.000
RAL	Amp Gate Start Near	195.000	usec	35.812	10014.000
RAL	Amp Gate Start Radial	195.000	usec	35.812	10014.000
RAL	Amp Gate Width Far	25.000	usec	35.812	10014.000
RAL	Amp Gate Width Near	25.000	usec	35.812	10014.000
RAL	Amp Gate Width Radial	25.000	usec	35.812	10014.000
RAL	casing od	4.500	inches	35.812	10014.000
RAL	casing wt	11.600	lbm/ft	35.812	10014.000
RAL	FB Start Far	291.900	usec	35.812	10014.000
RAL	FB Start Near	180.000	usec	35.812	10014.000
RAL	FB Start Radial	180.000	usec	35.812	10014.000
RAL	FB Thresh Far	10.000	mv	35.812	10014.000
RAL	FB Thresh Near	4.000	mv	35.812	10014.000
RAL	FB Thresh Radial	4.000	mv	35.812	10014.000
RAL	Fluid Travel Time	200.000	usec/ft	35.812	10014.000

DEPTH OFFSETS							
(for Acquired Curves)							
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2

FPR3	FPR5	TT3	TTR1	TTR2	TTR3
TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
AFAR	SIG	TT5			
CCL					
GR					
NEU					

Plotted by : PlotMgr, v5.4.504

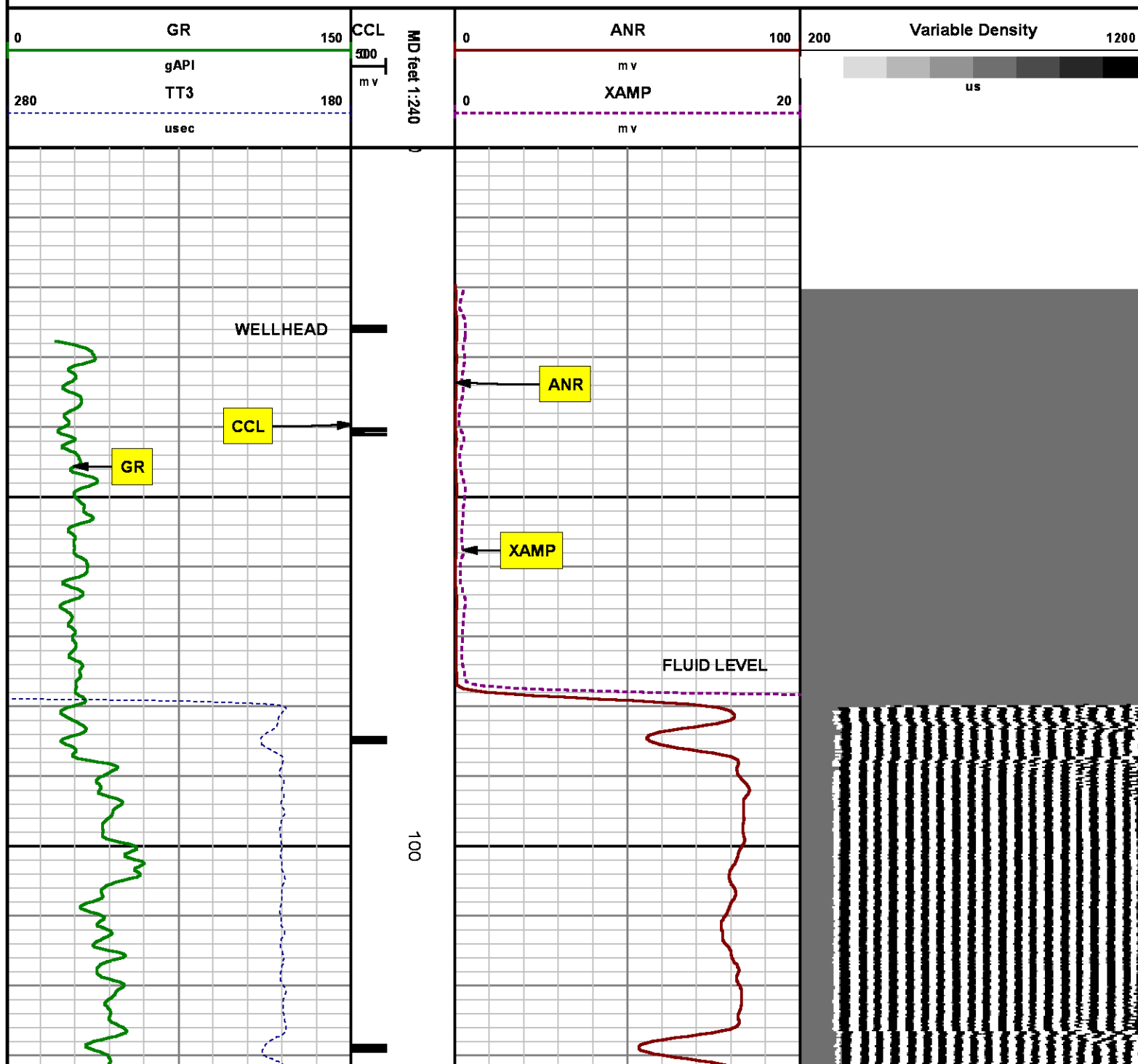
Well : FEDERAL PA 524-16

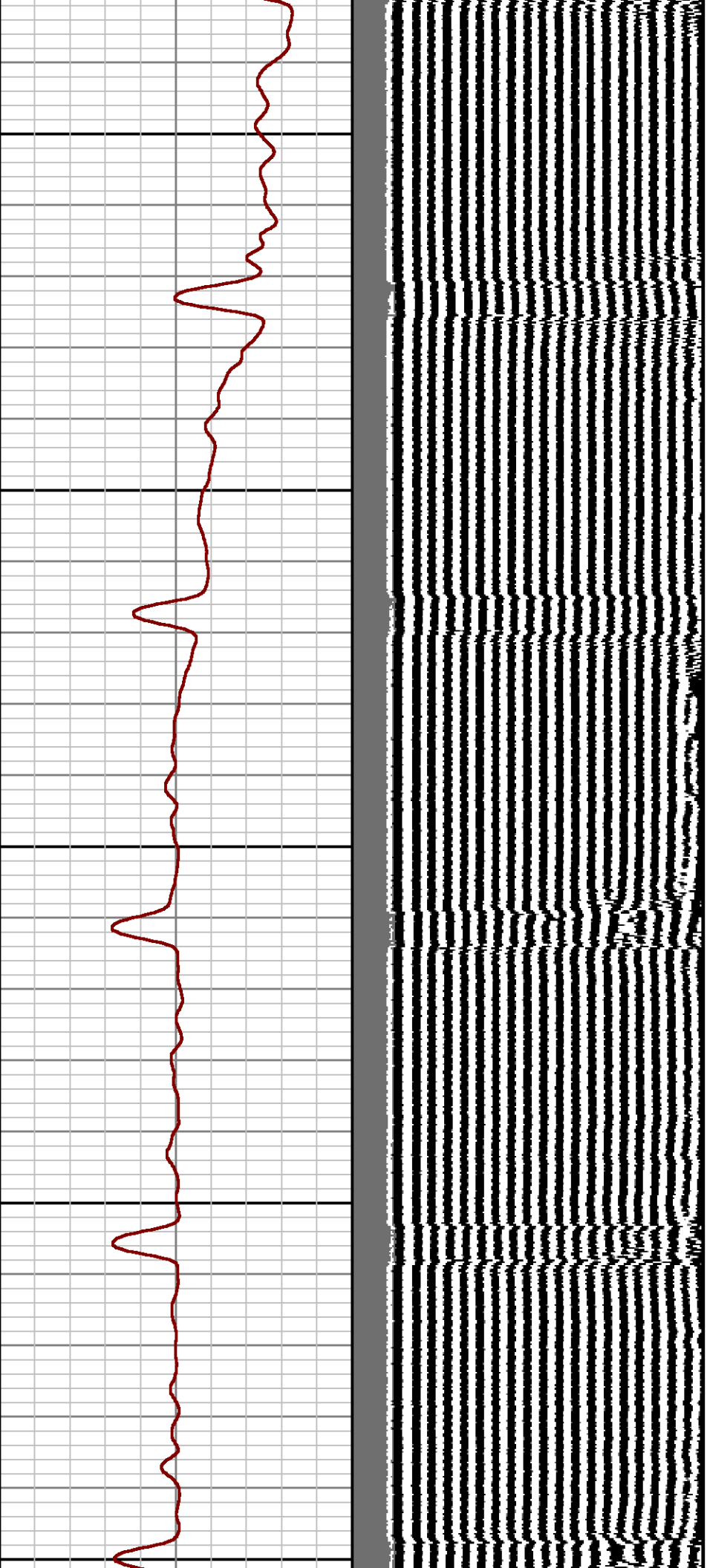
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Interval : 0.00 - 10014.00 feet UP

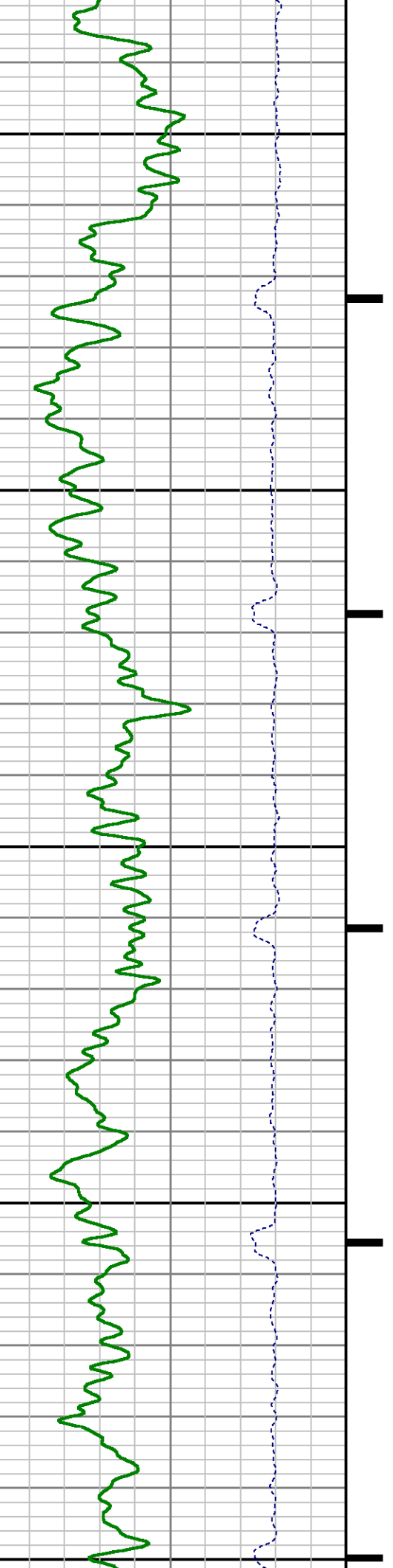
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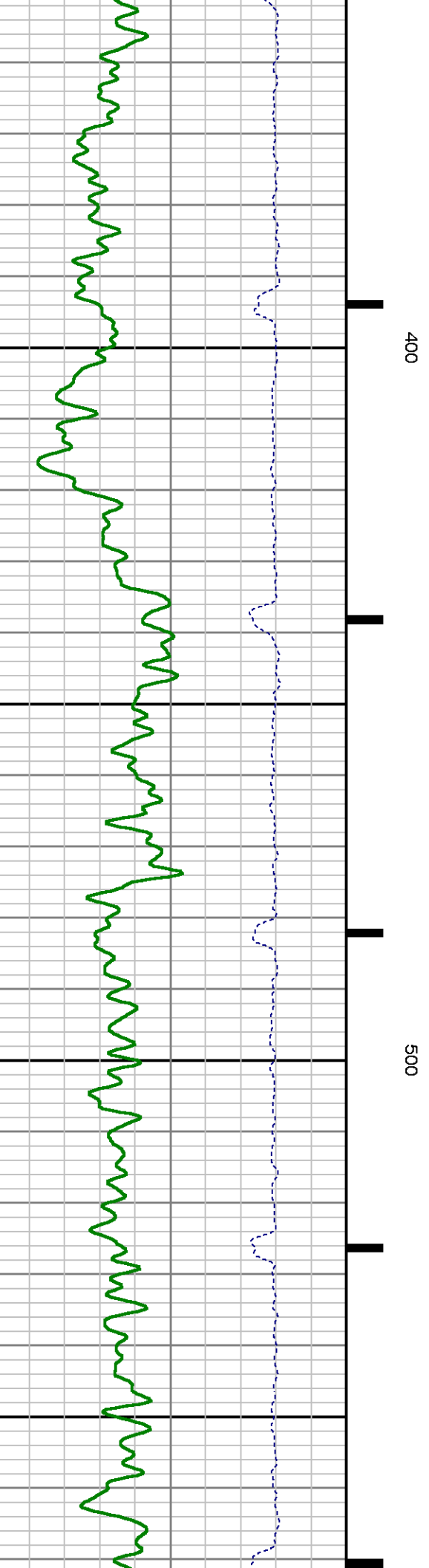
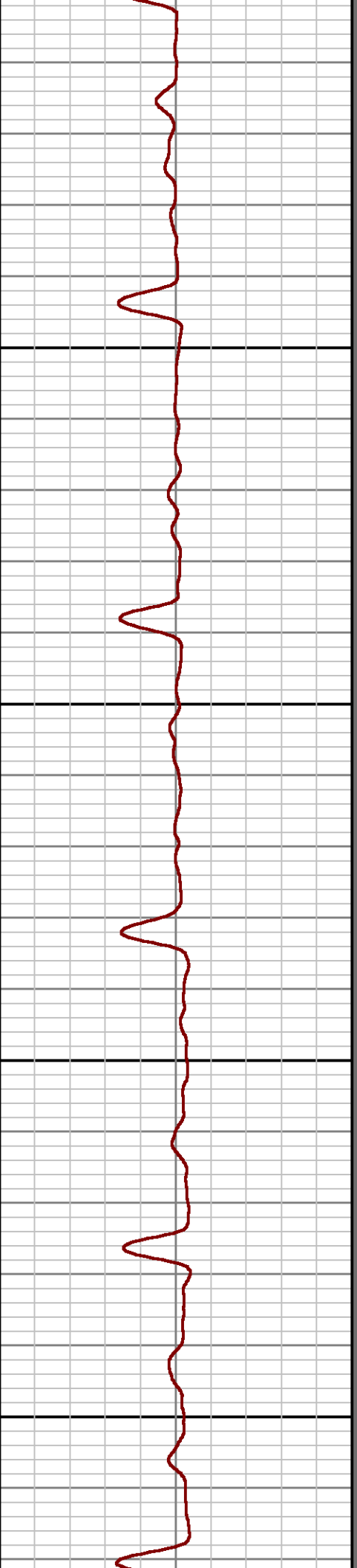
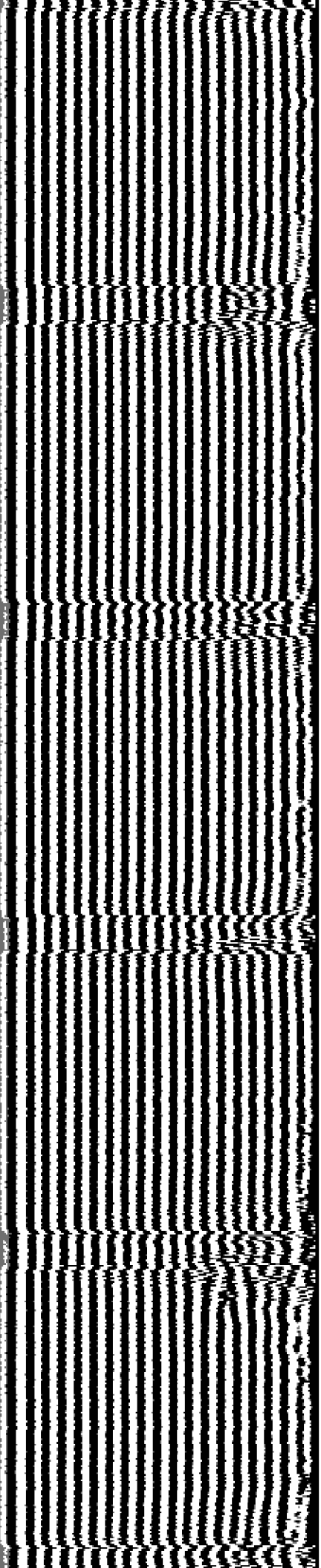


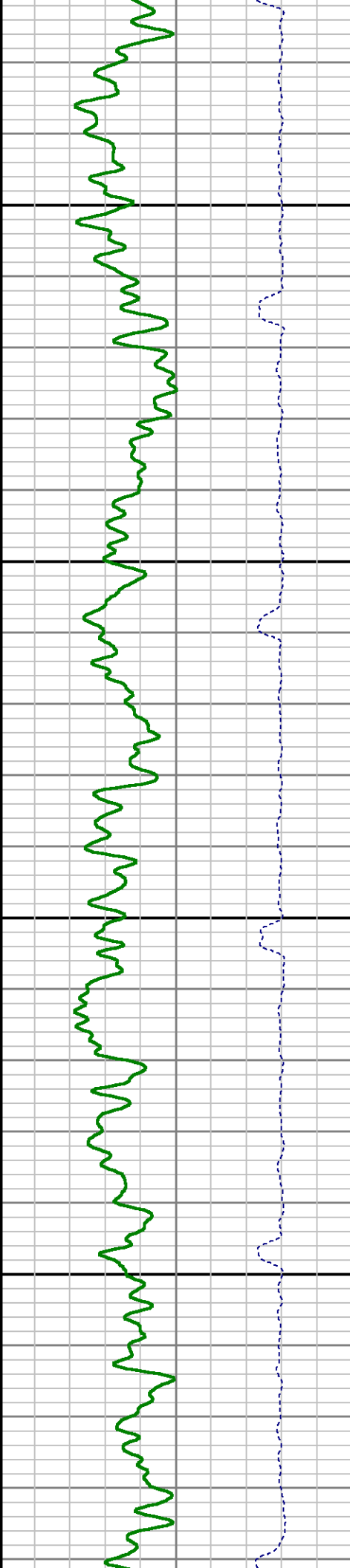
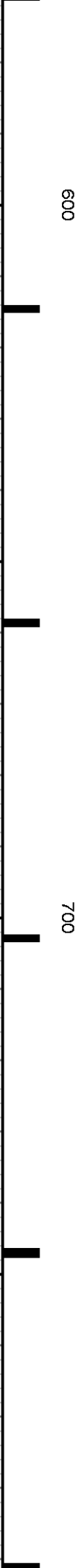
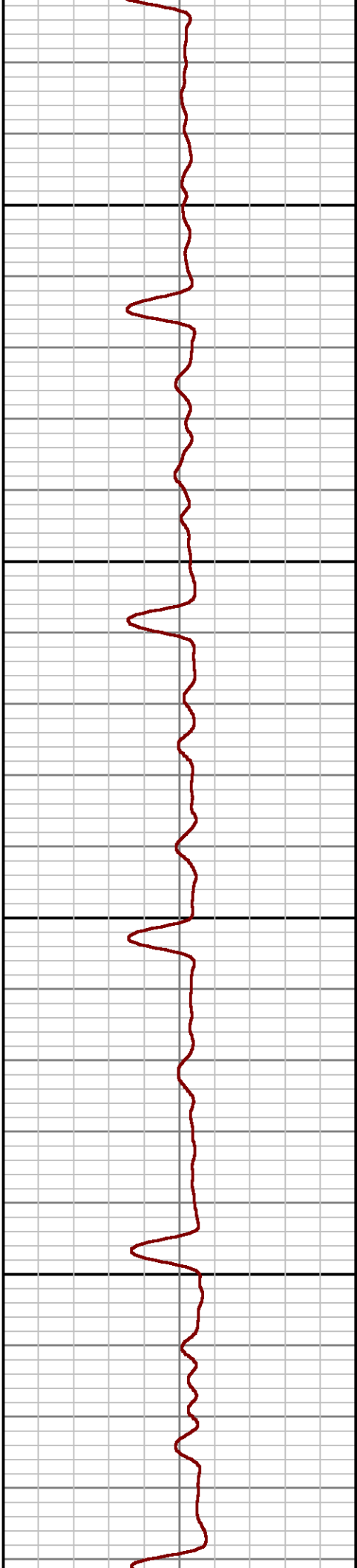
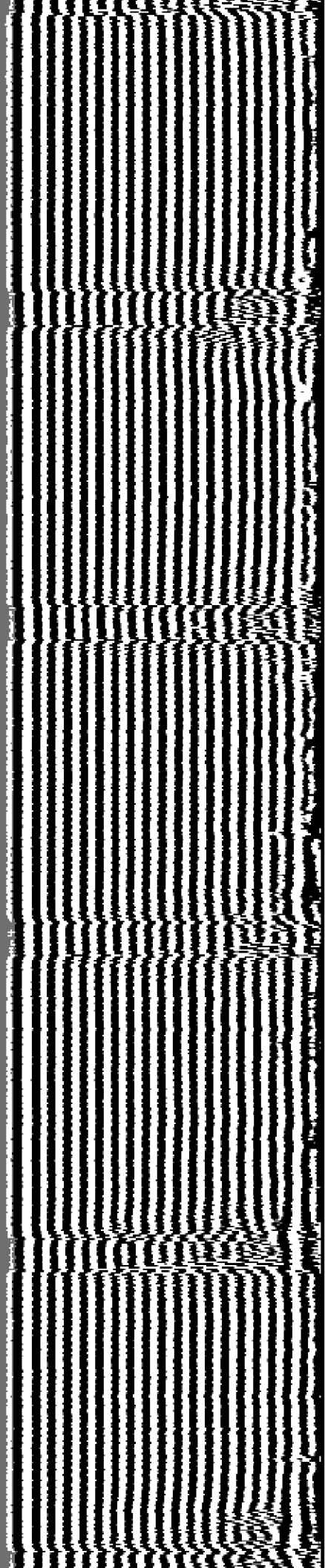


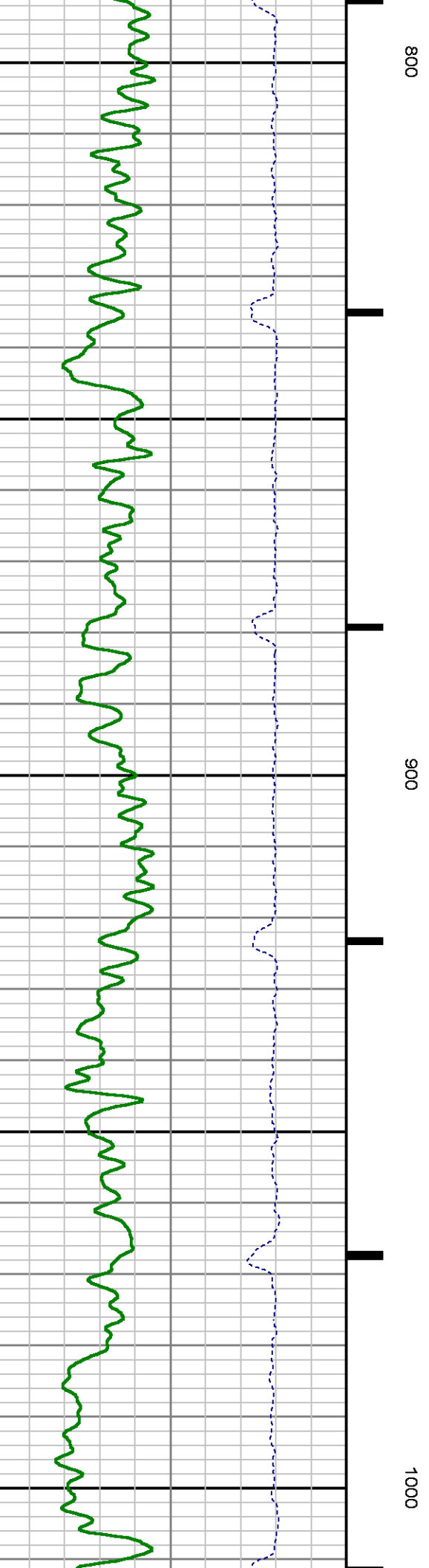
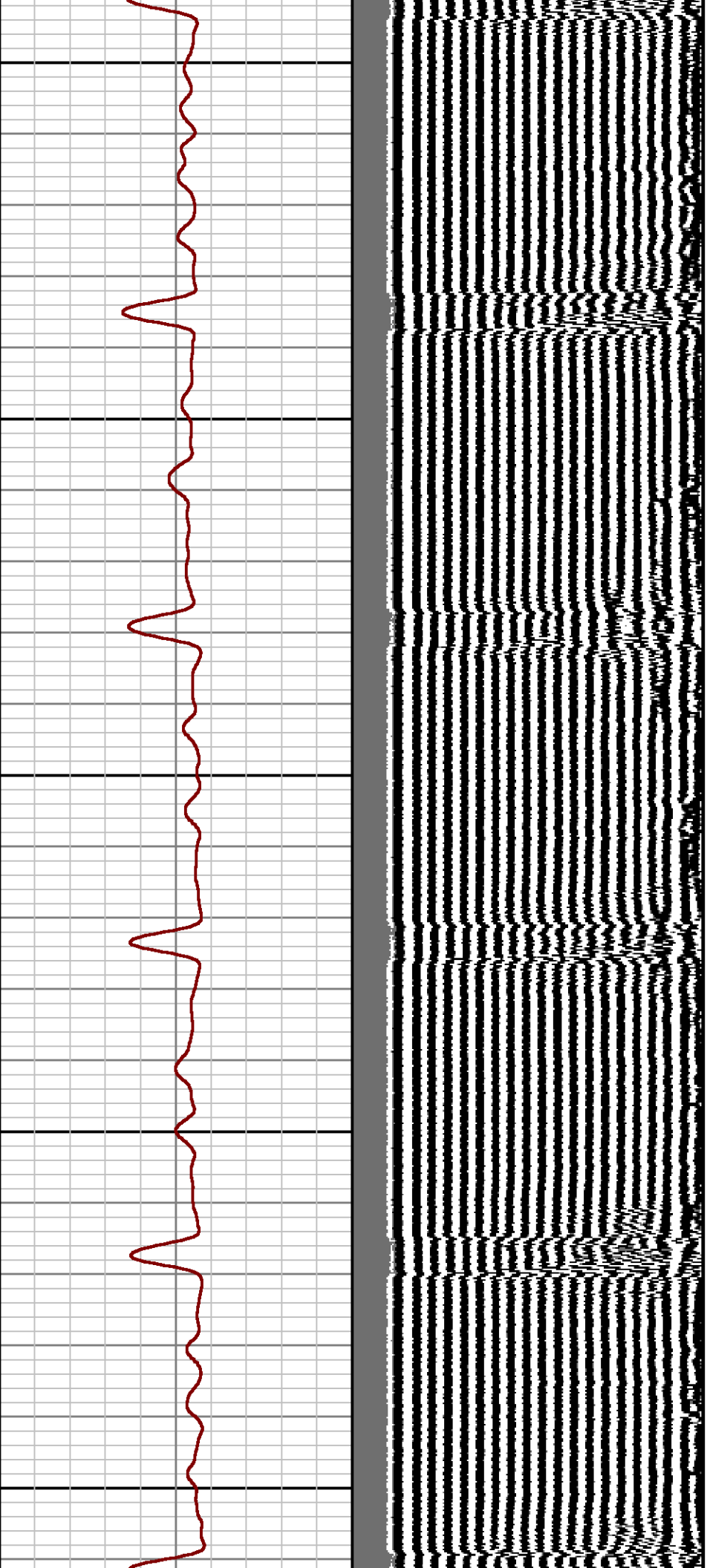
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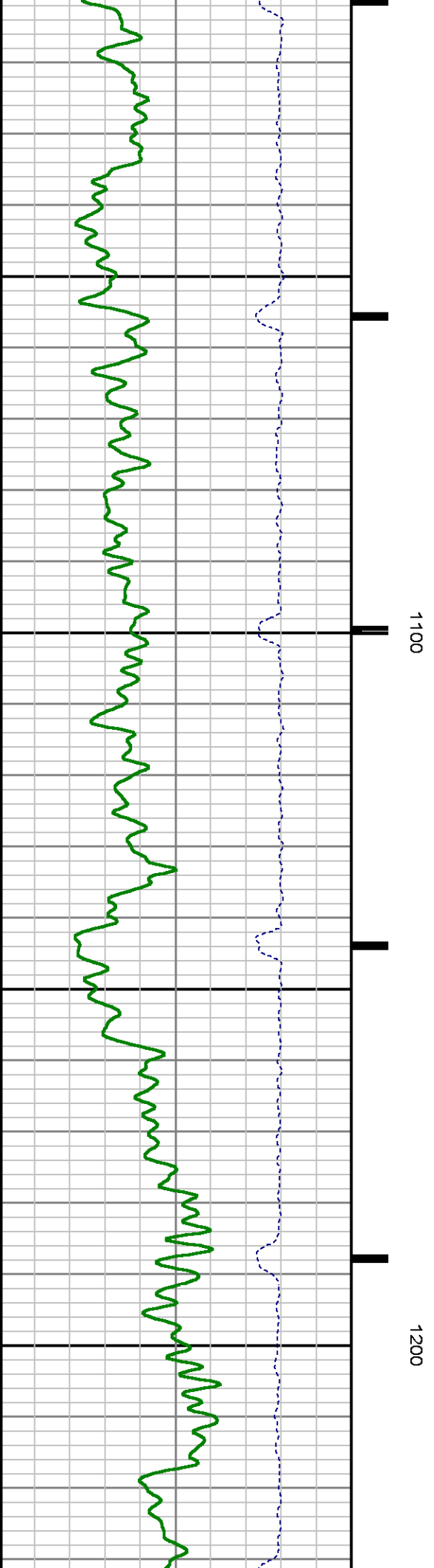
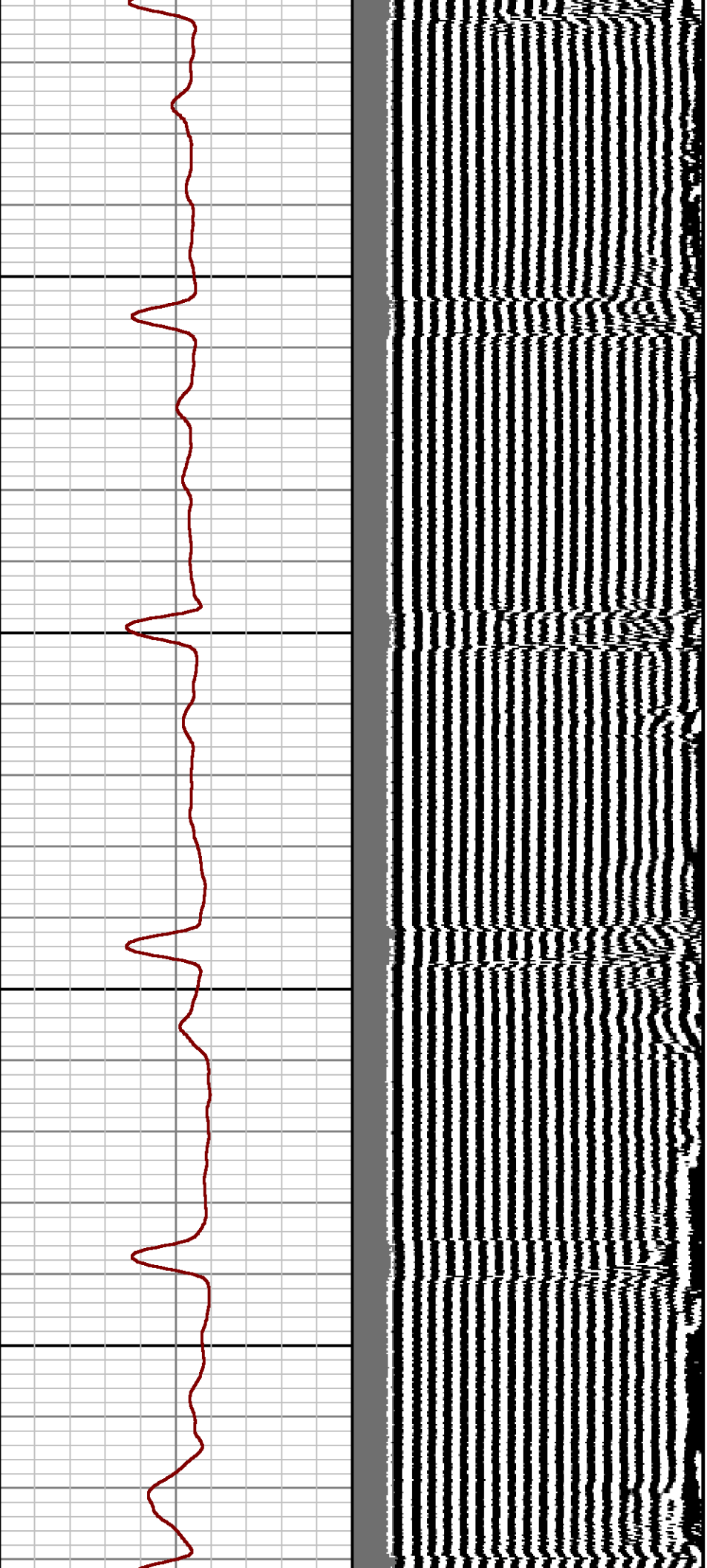
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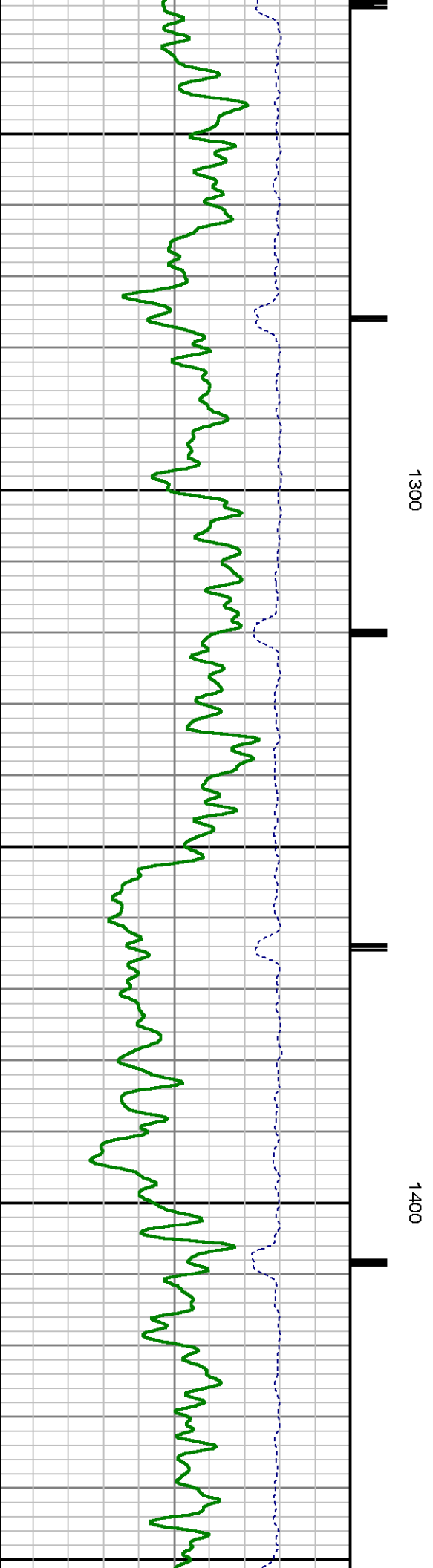
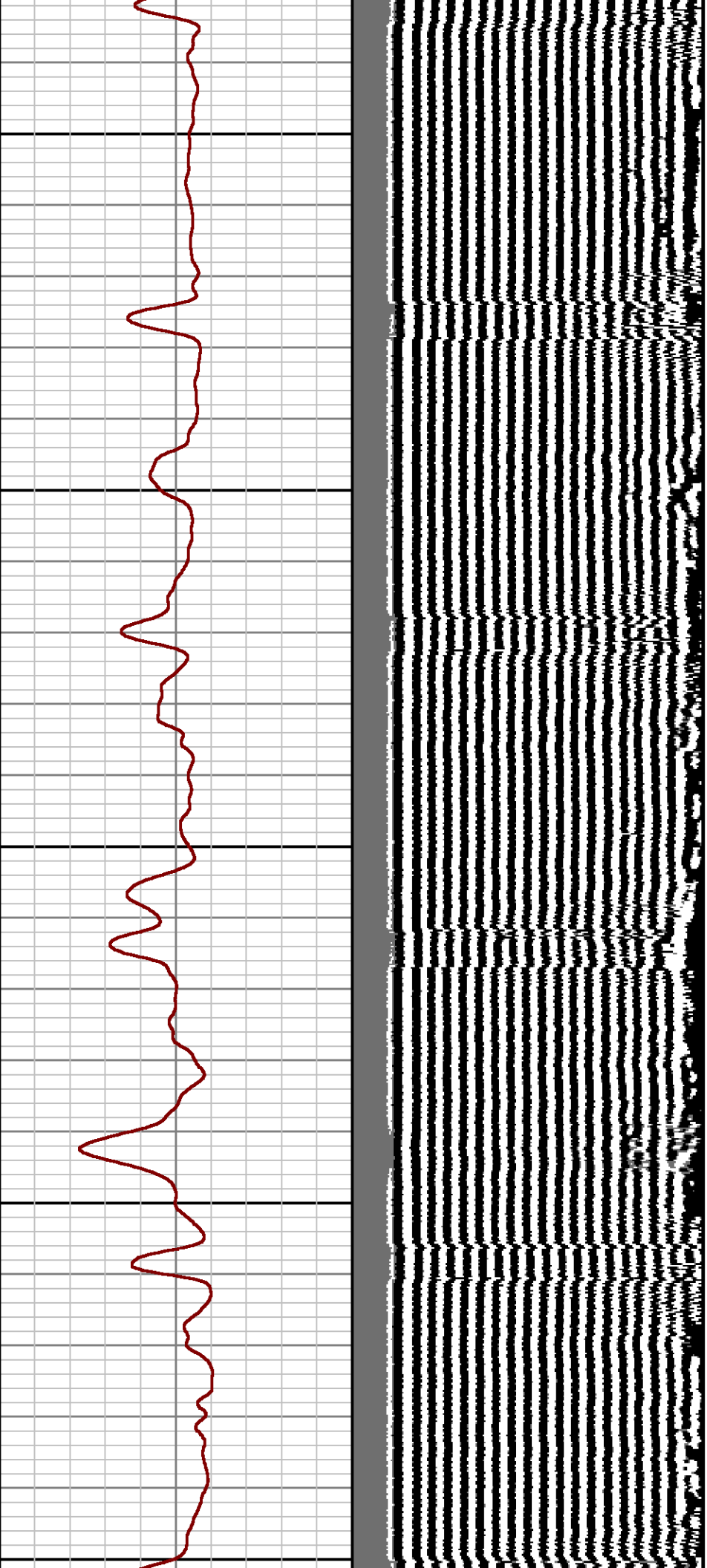


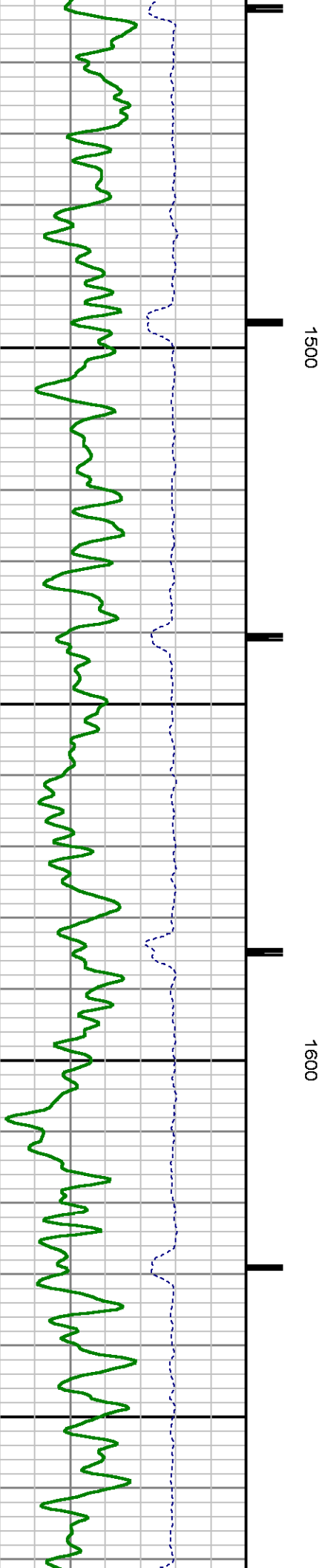
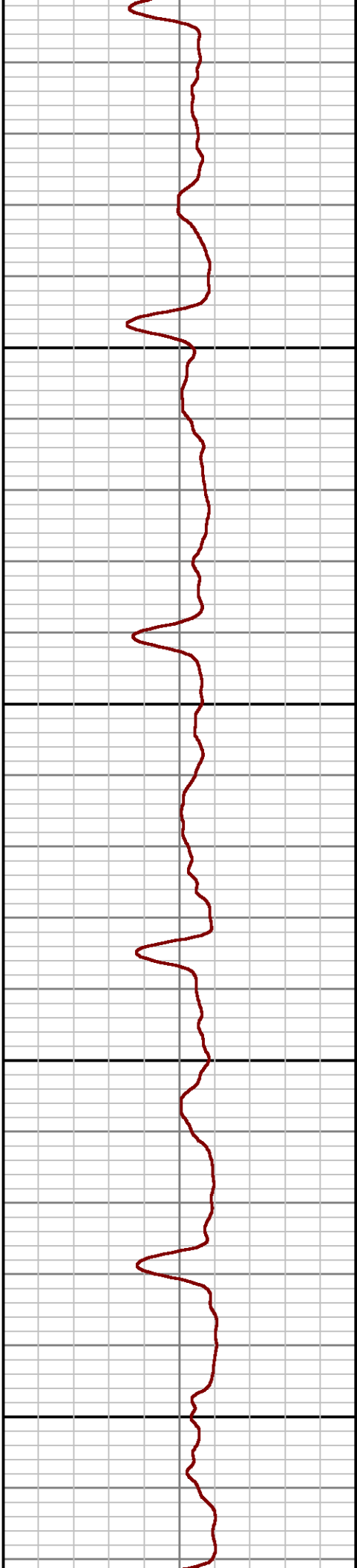
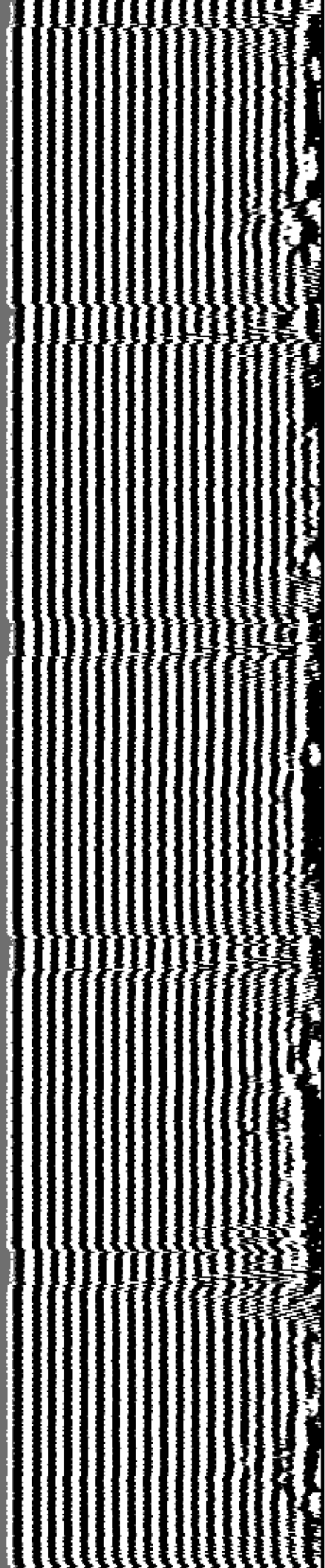


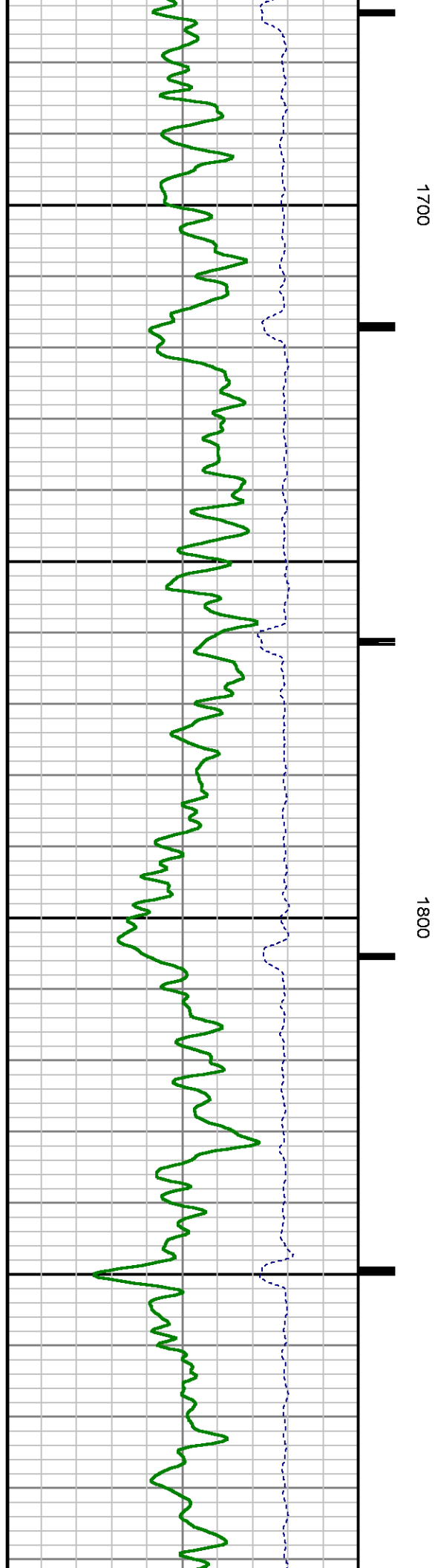
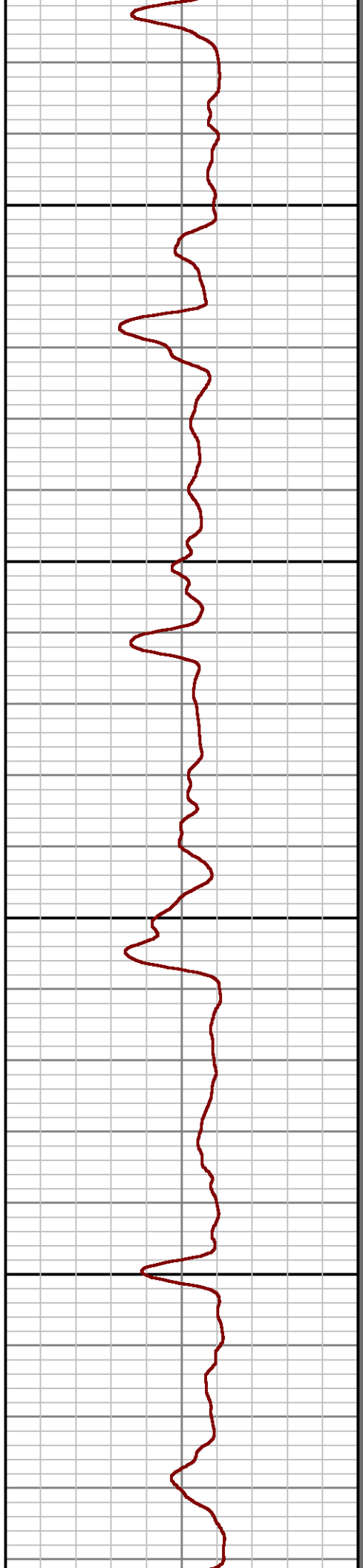
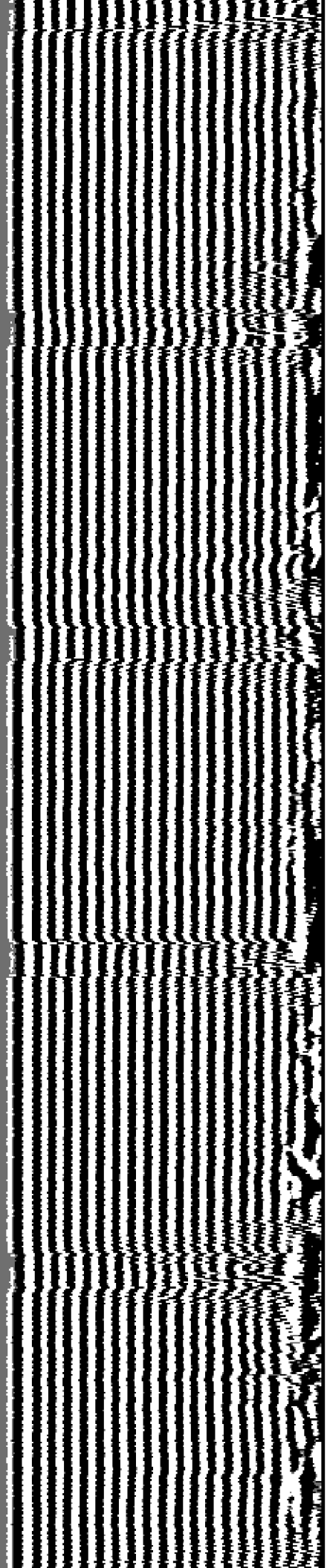


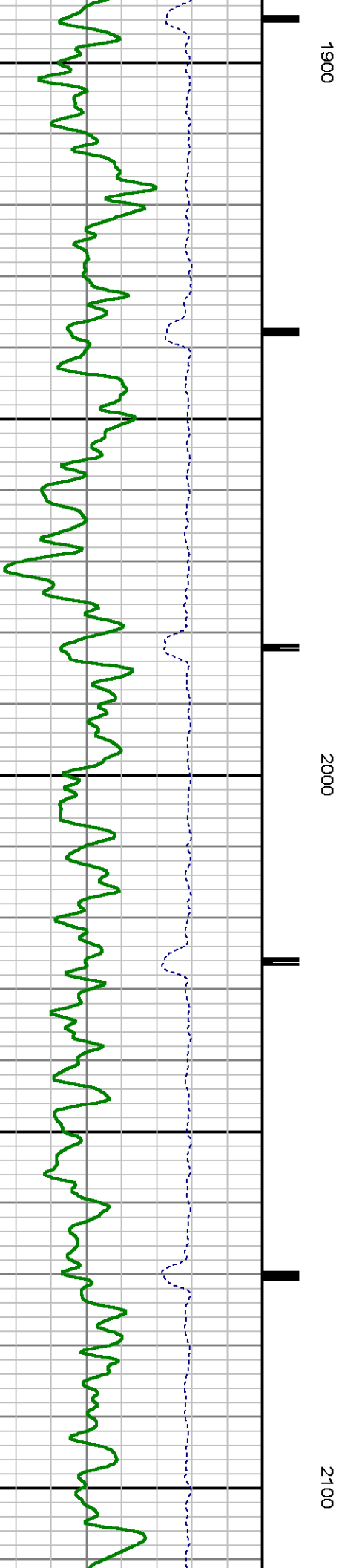
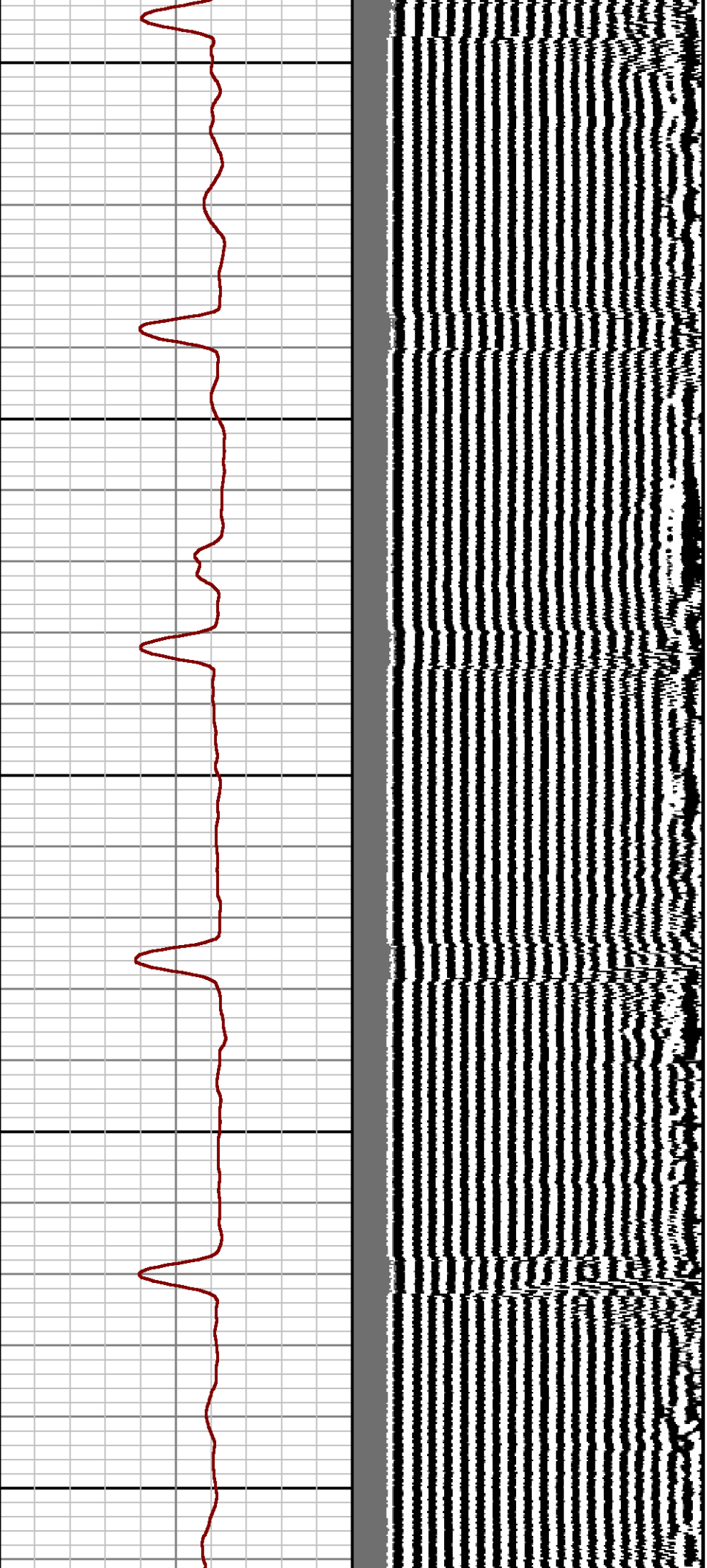


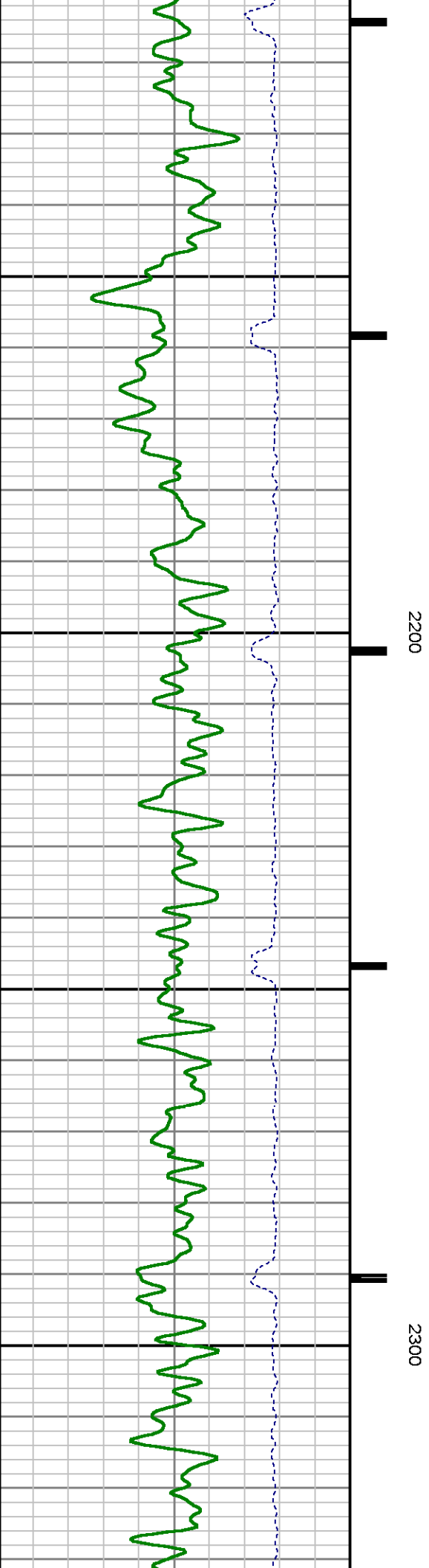
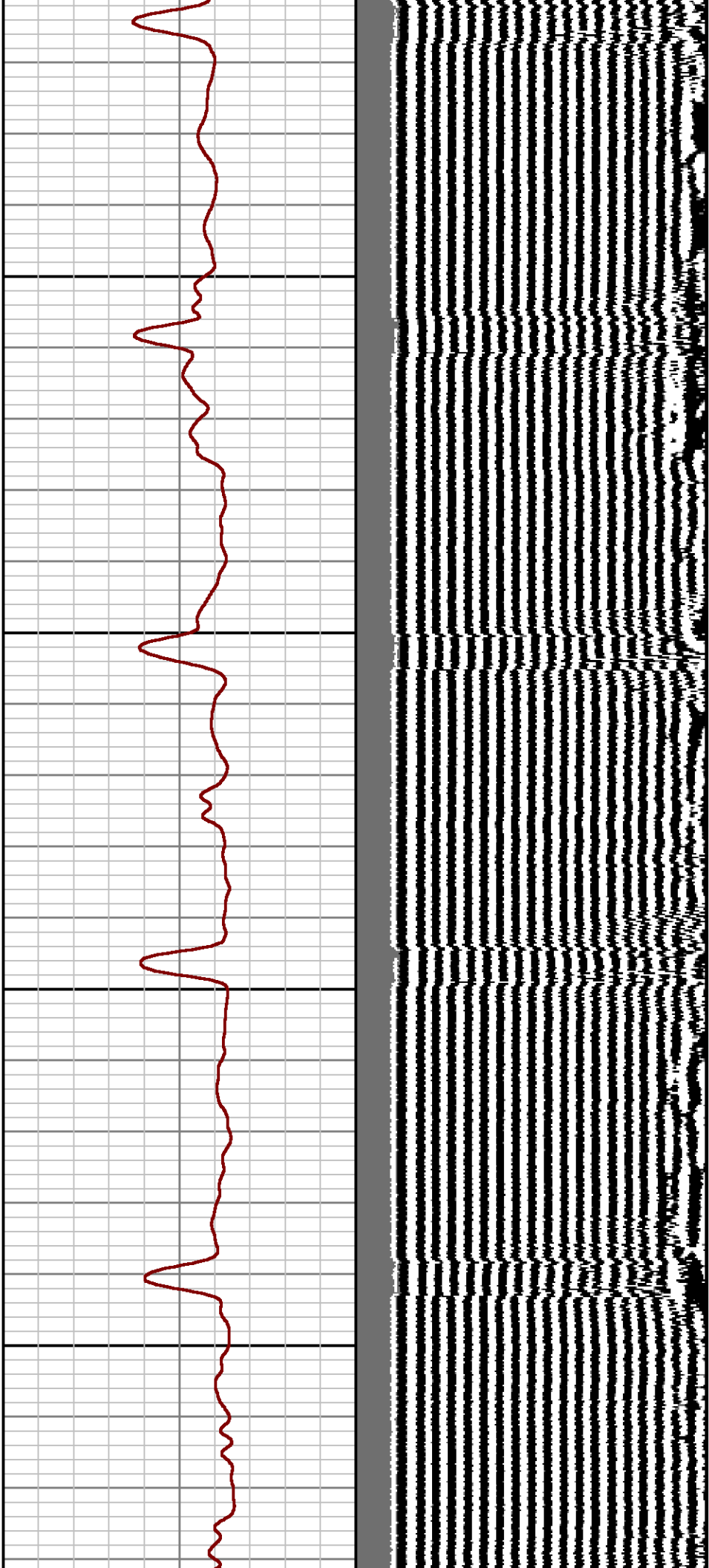


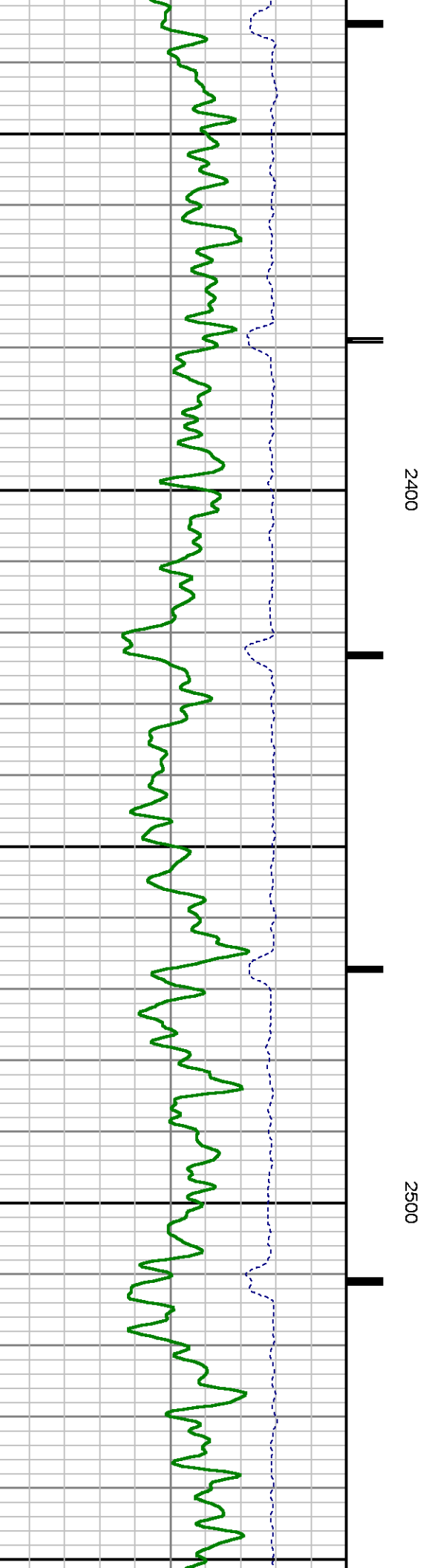
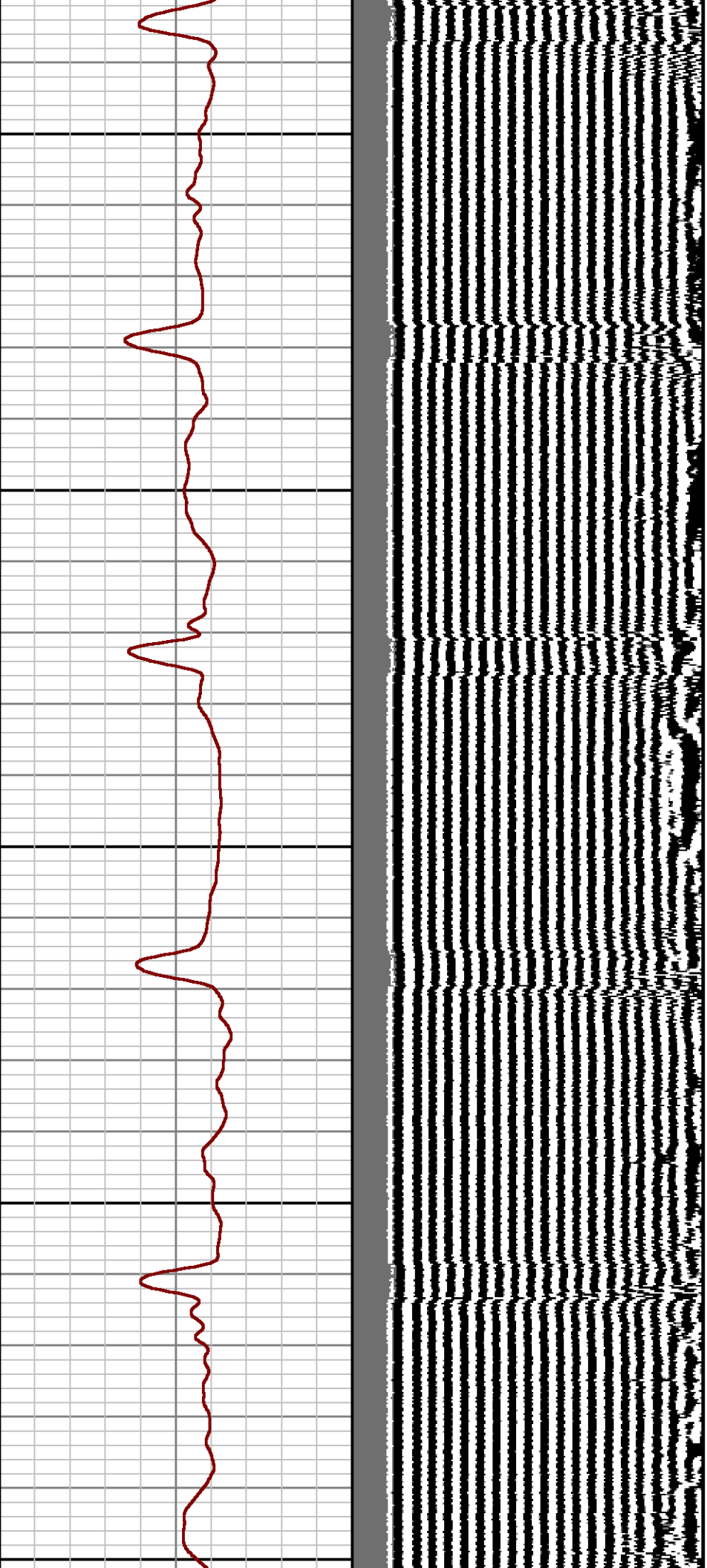


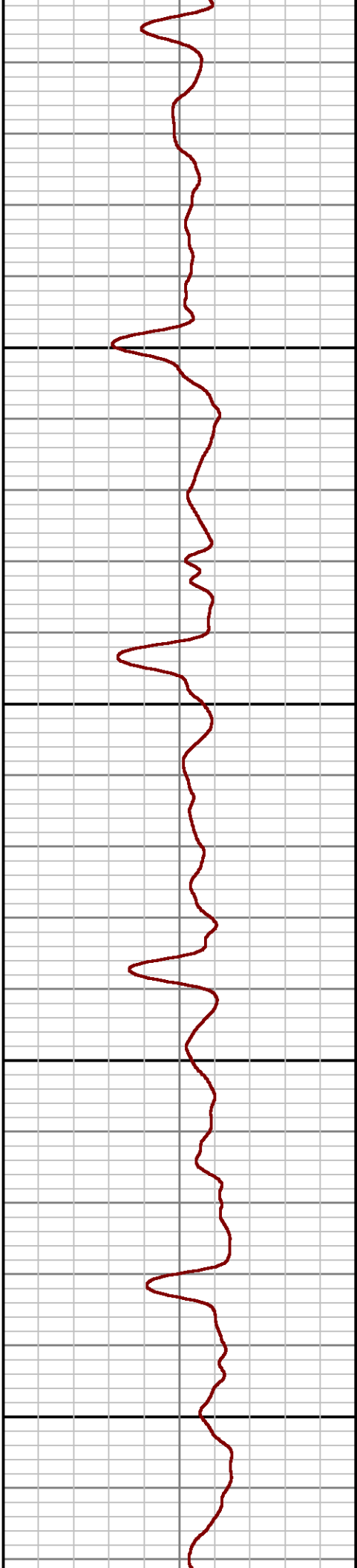
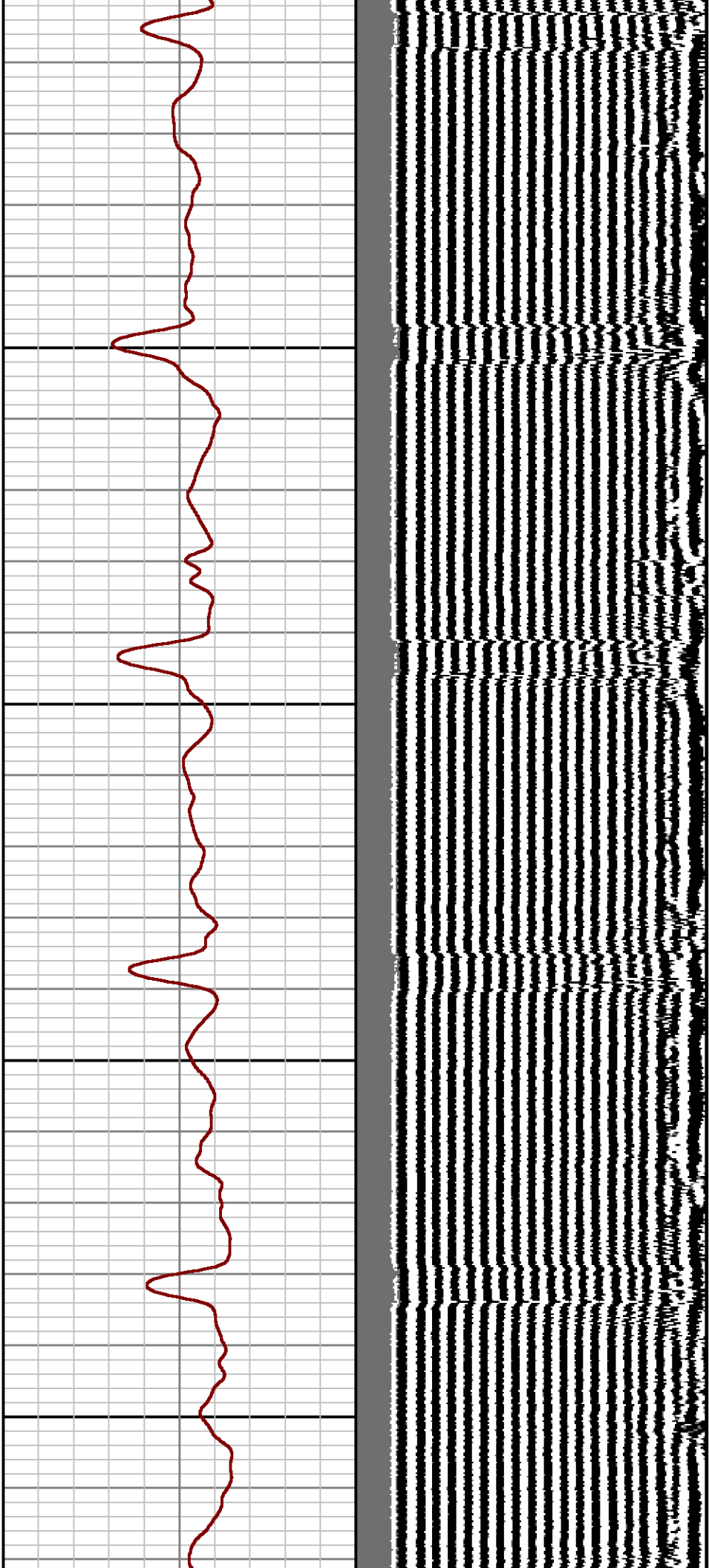






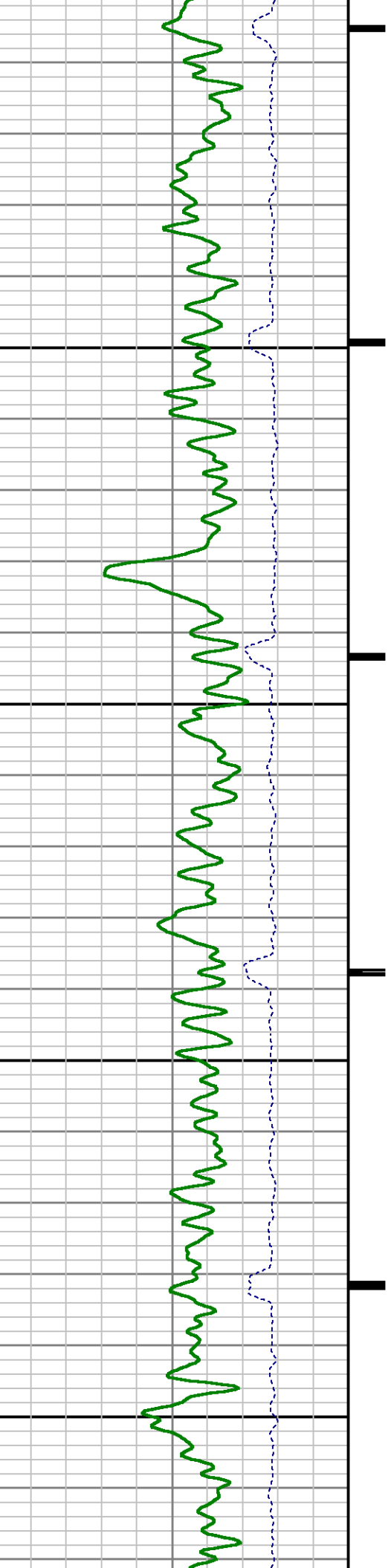


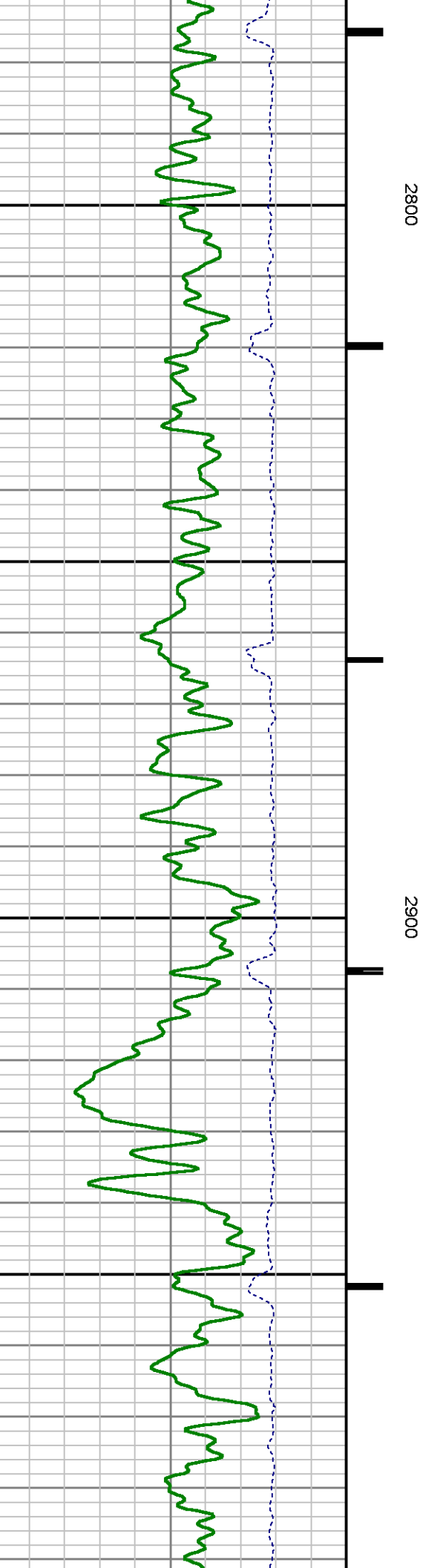
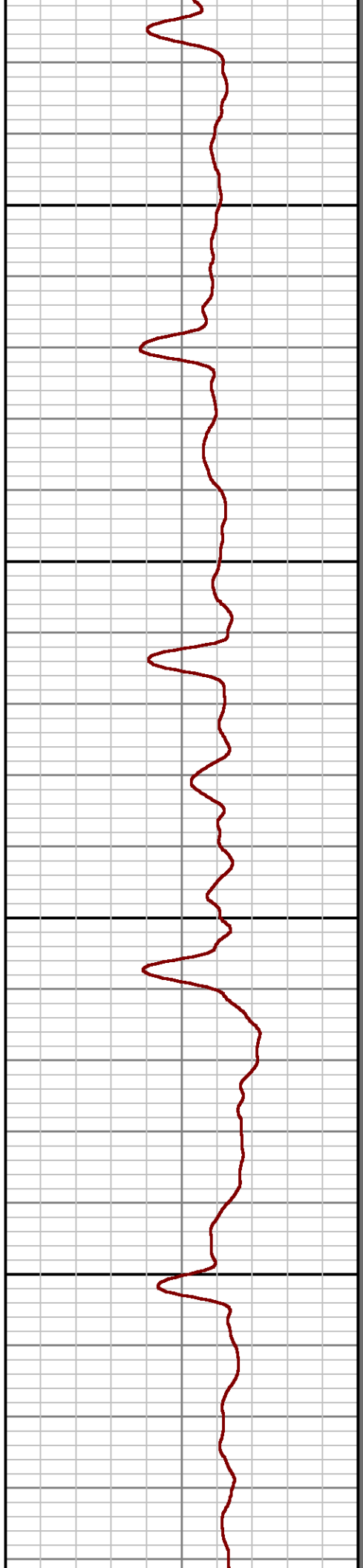
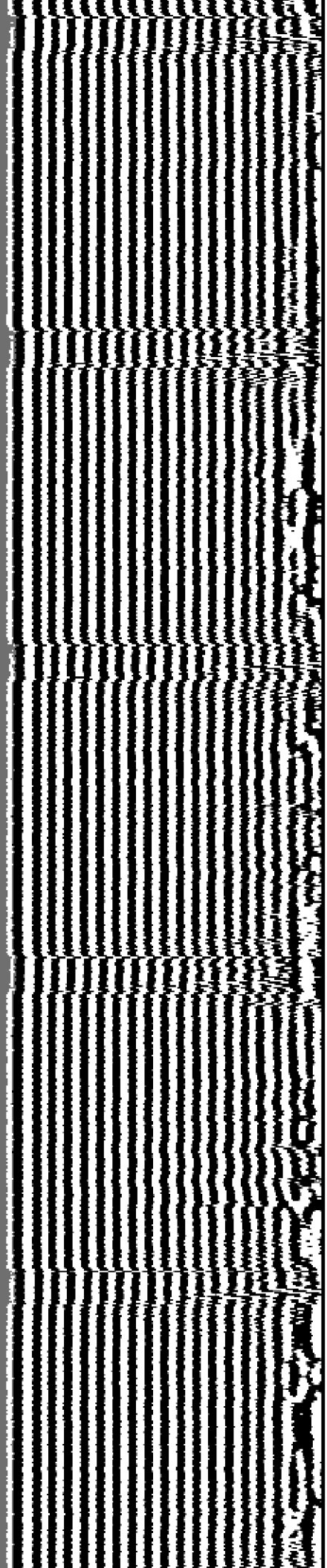


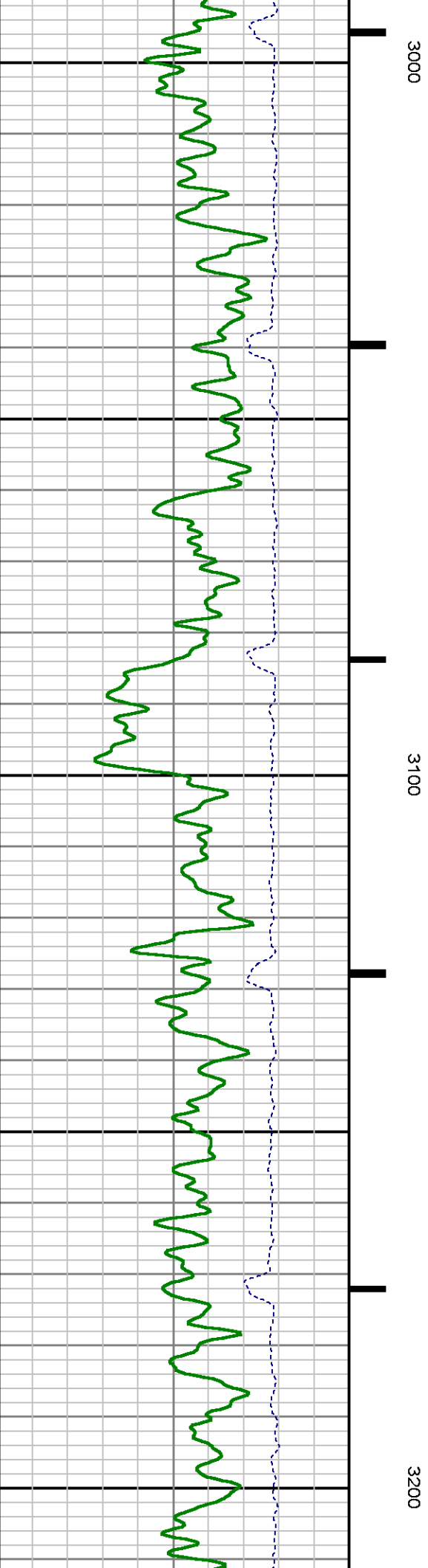
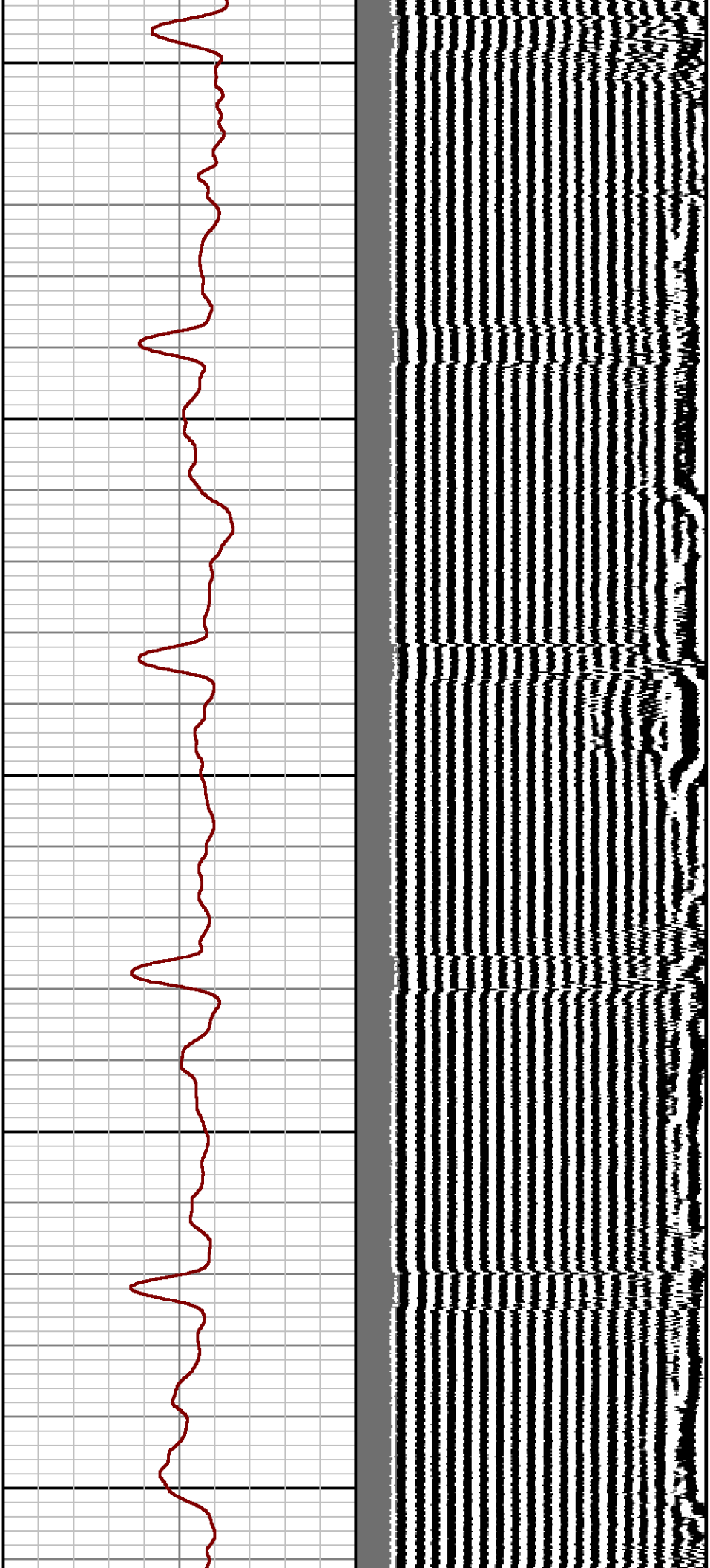


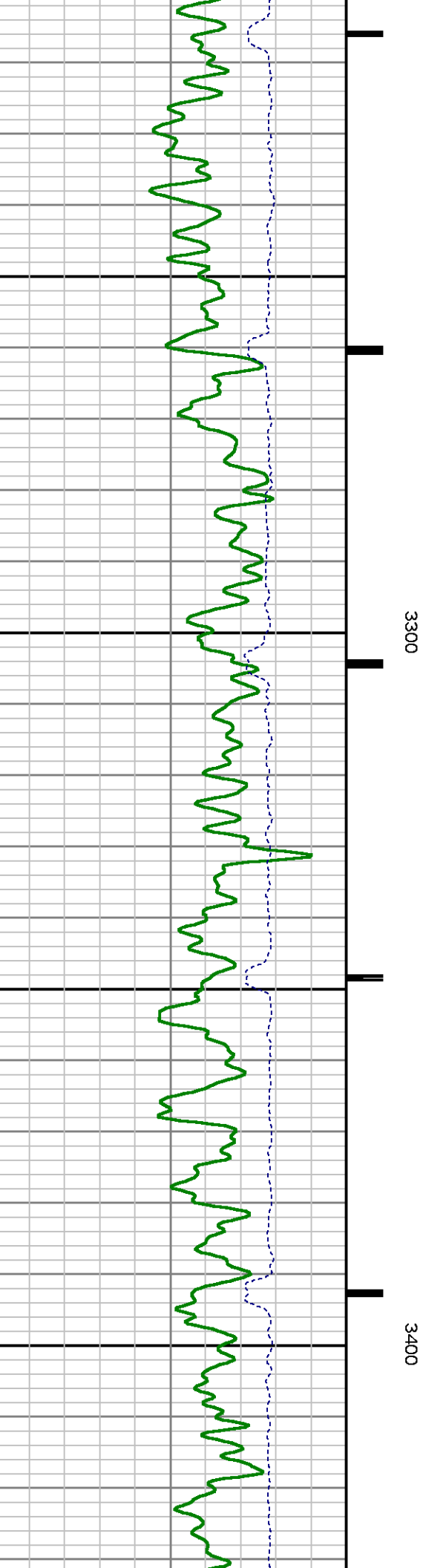
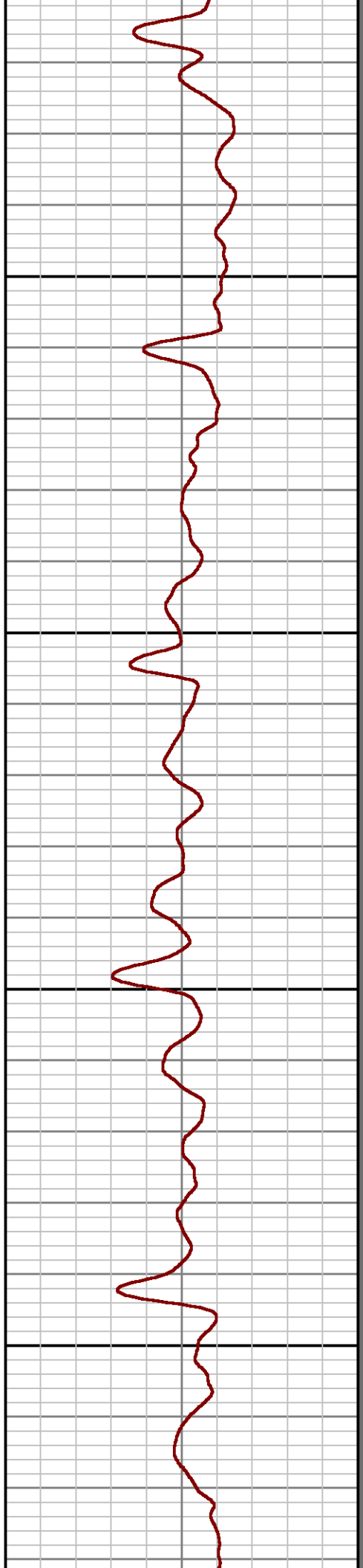
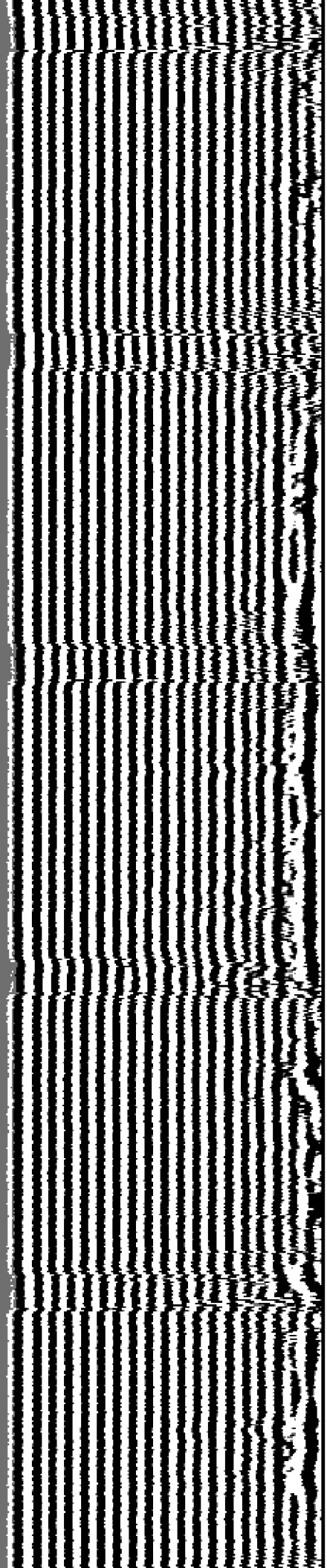
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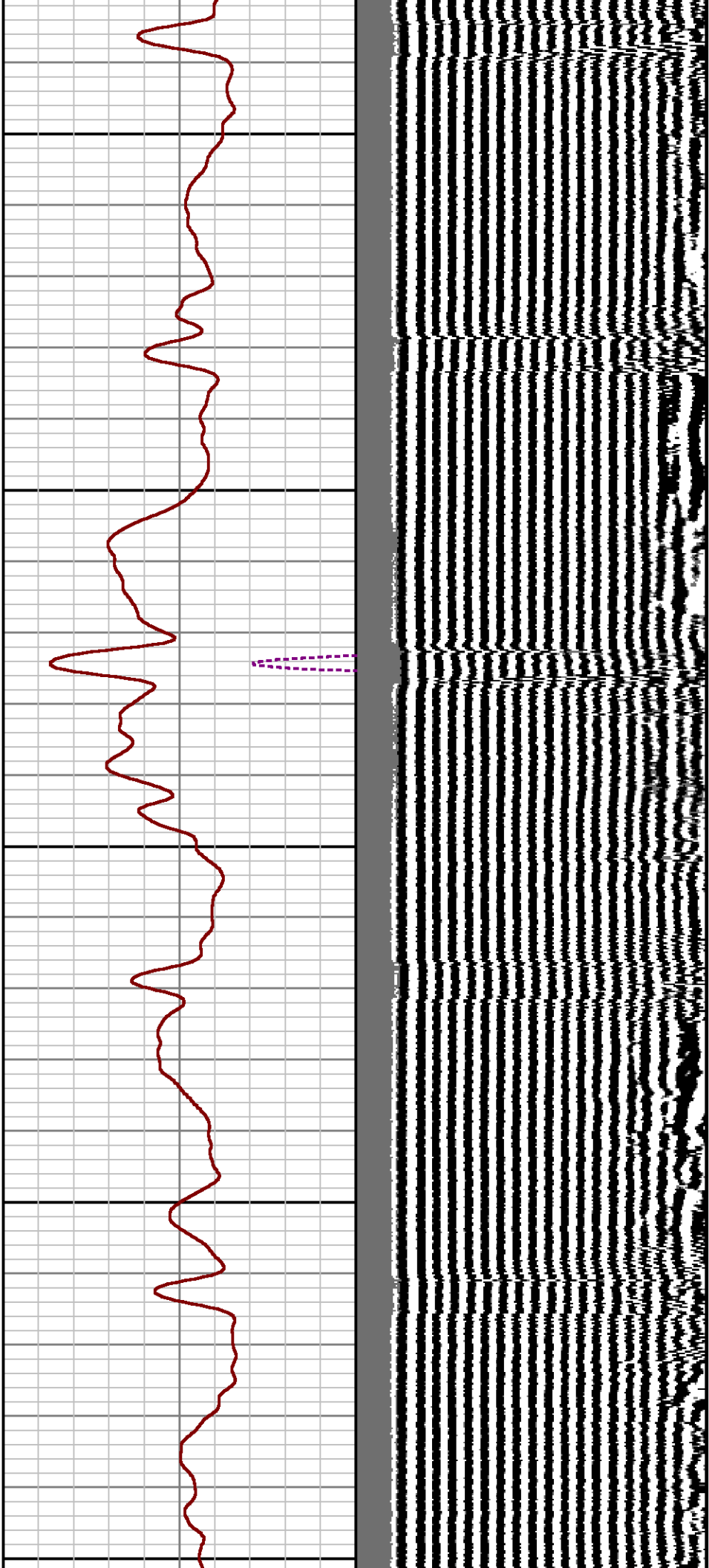
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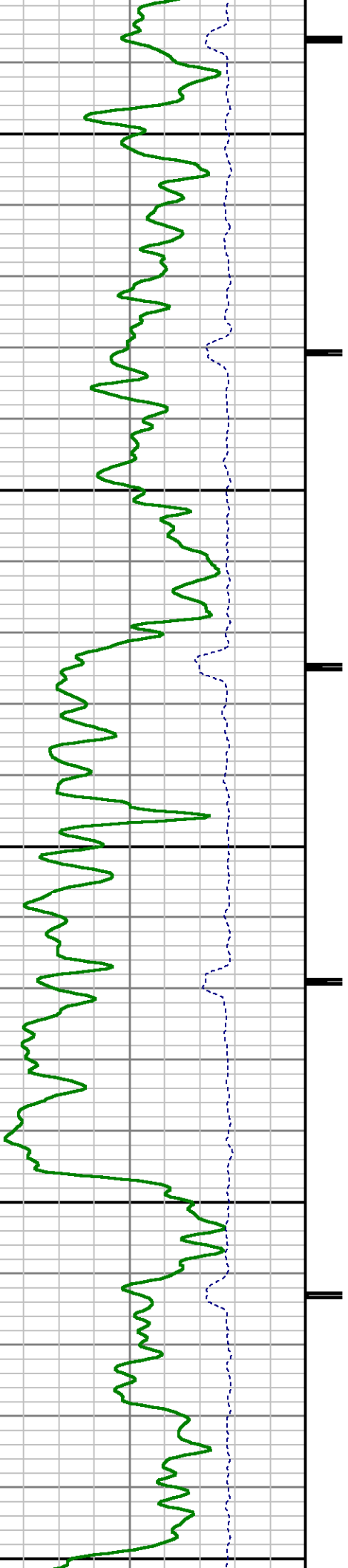


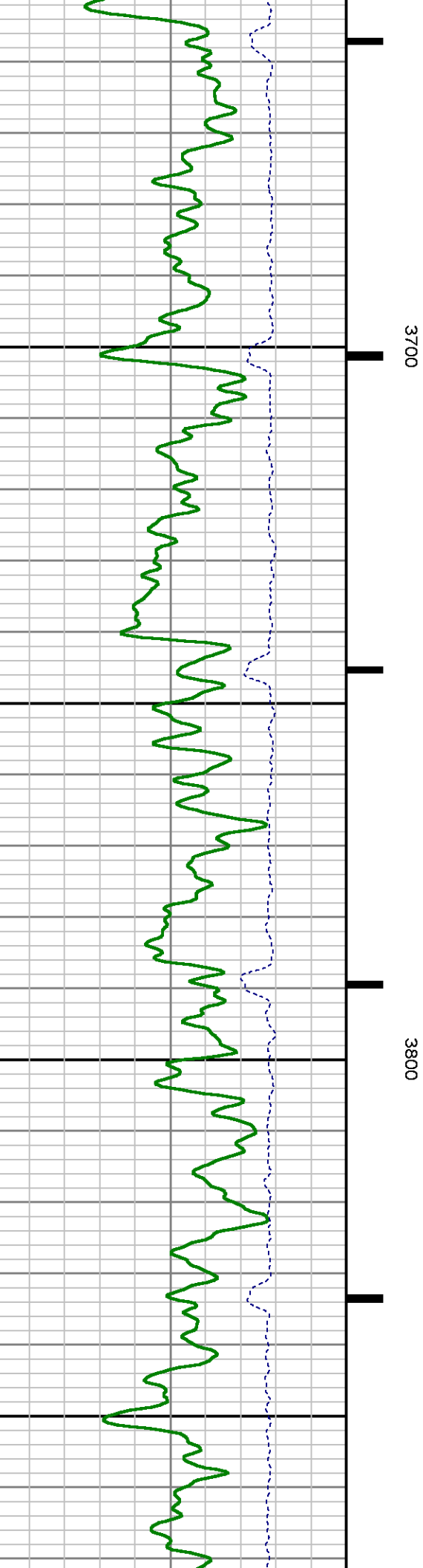
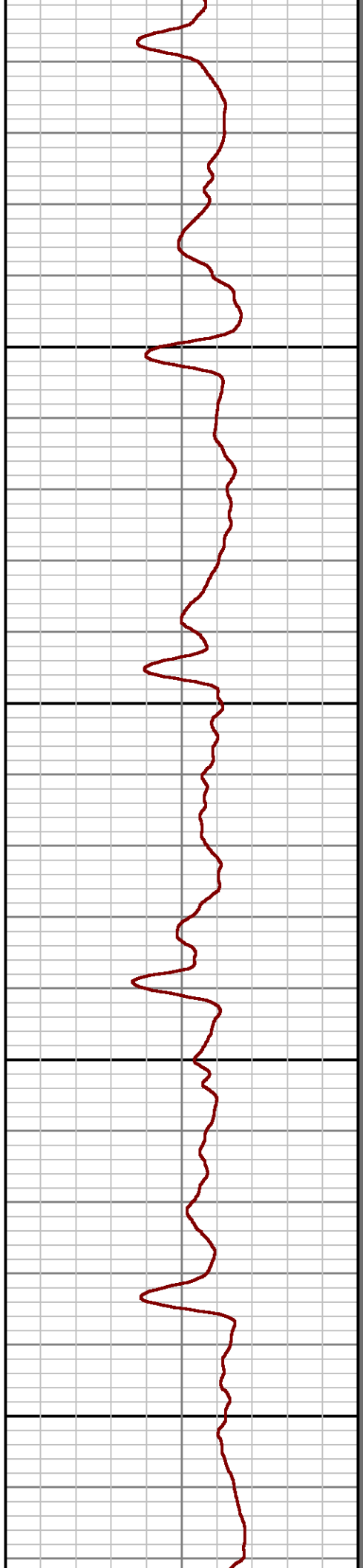
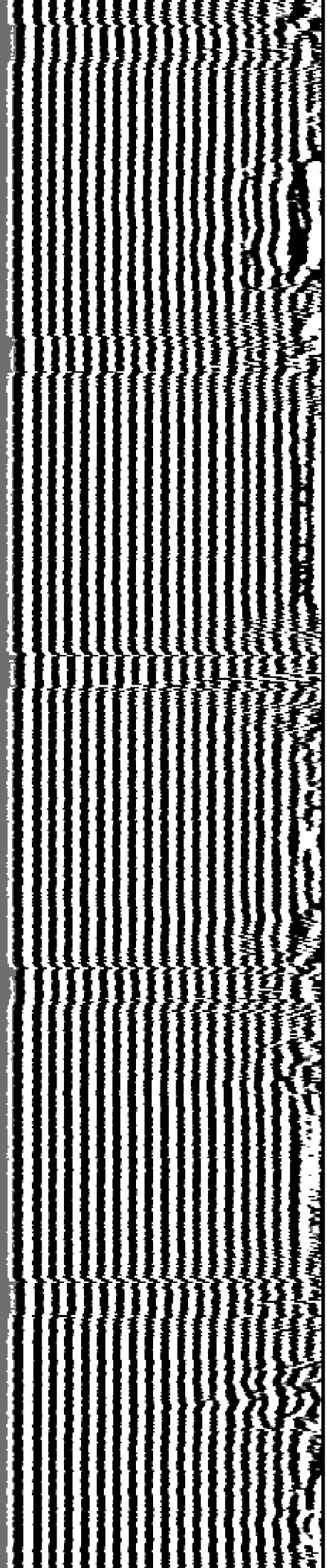


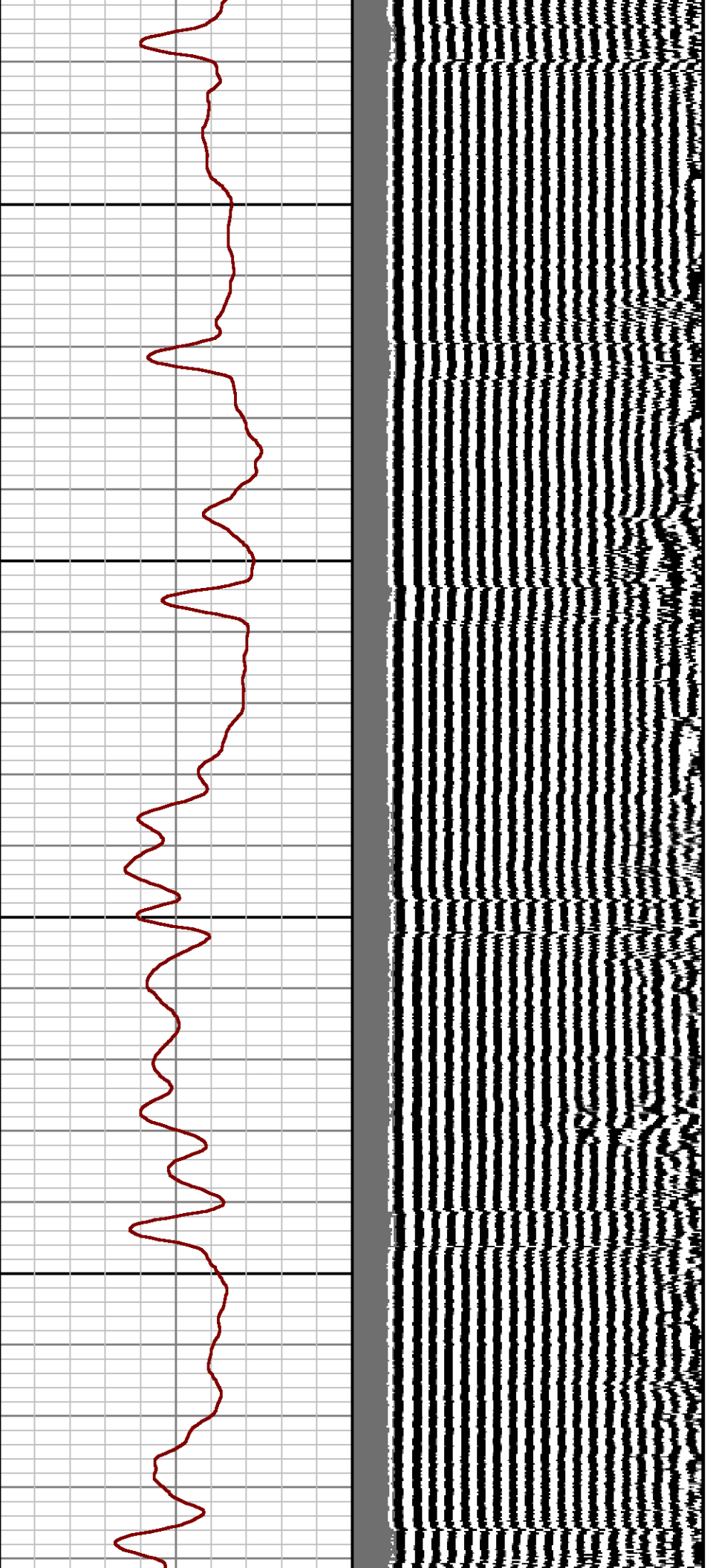


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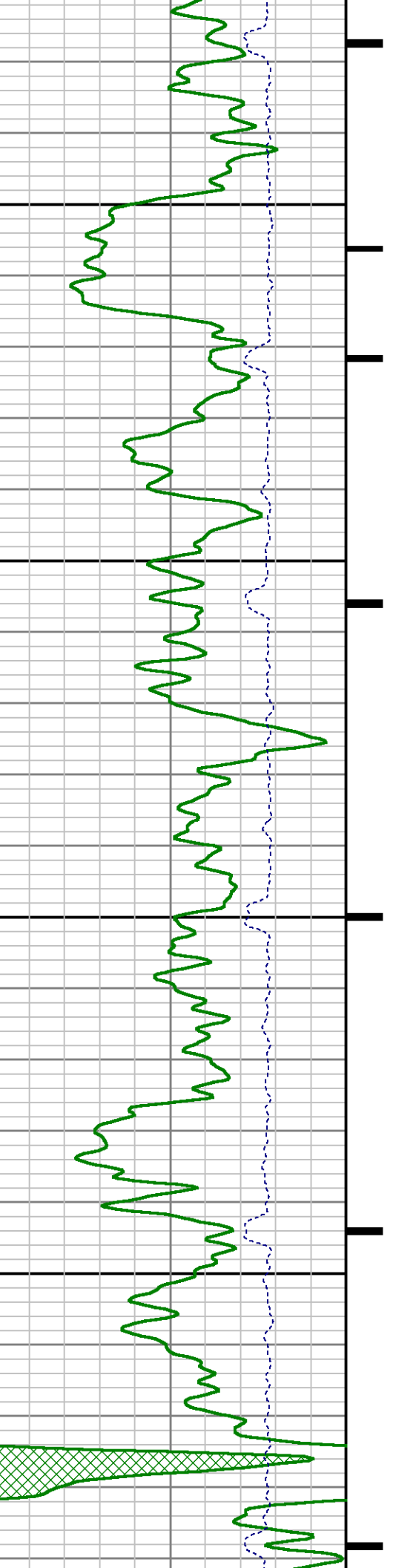


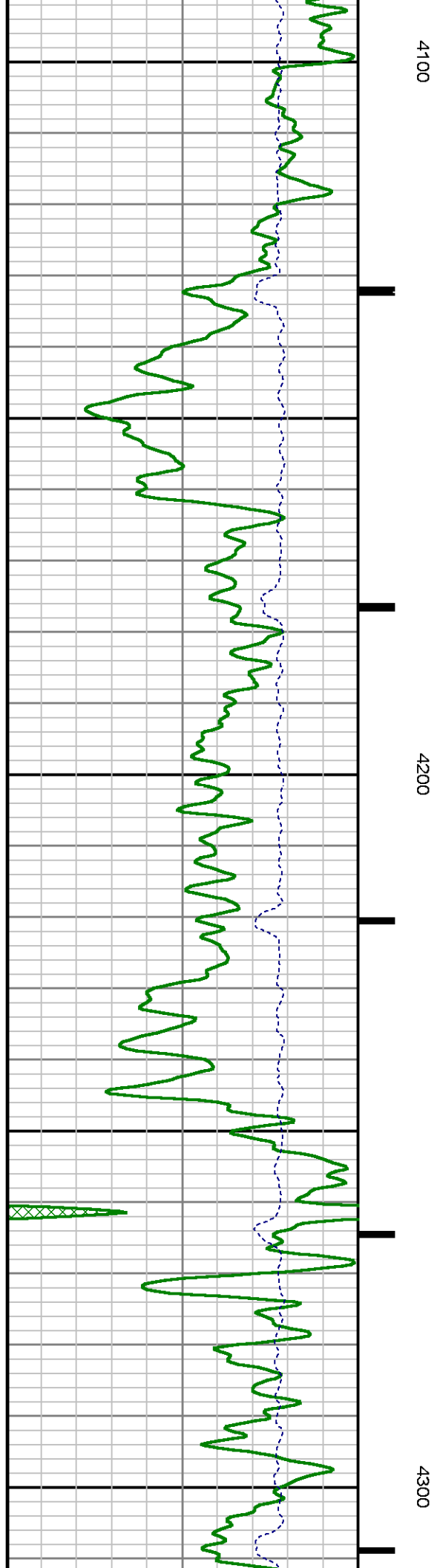
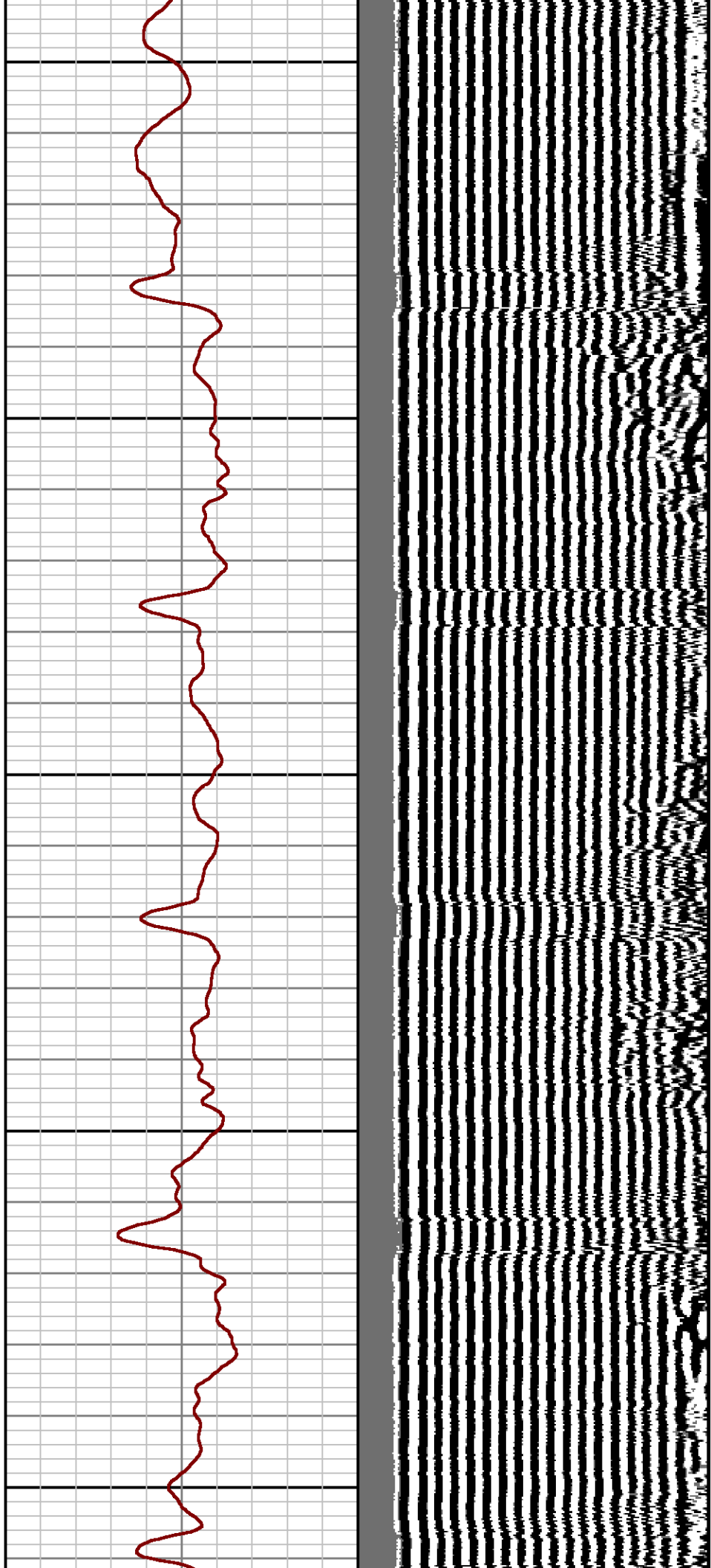


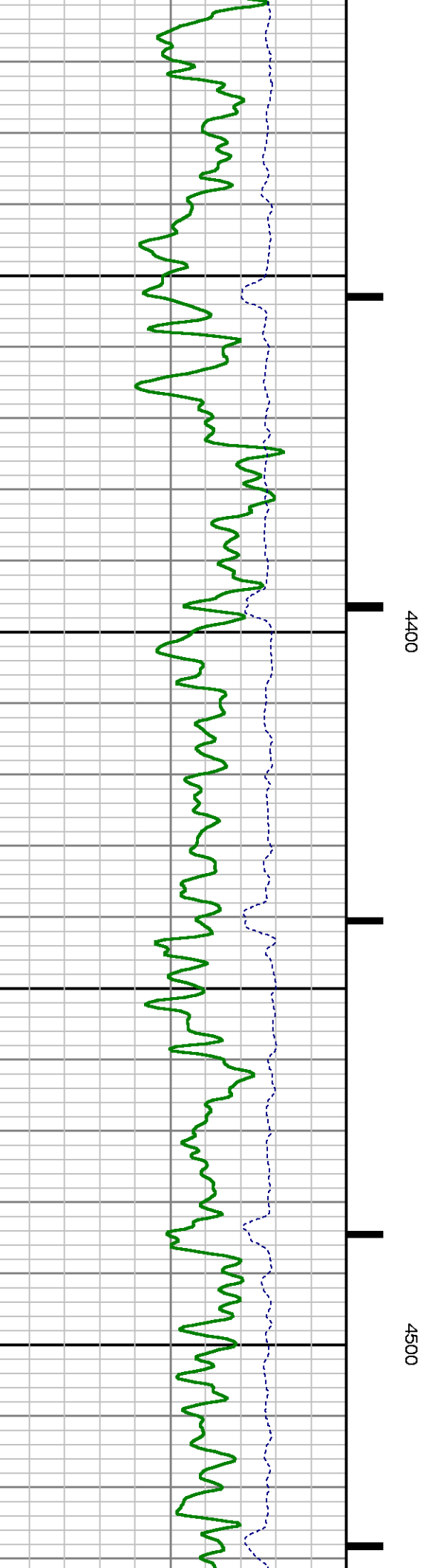
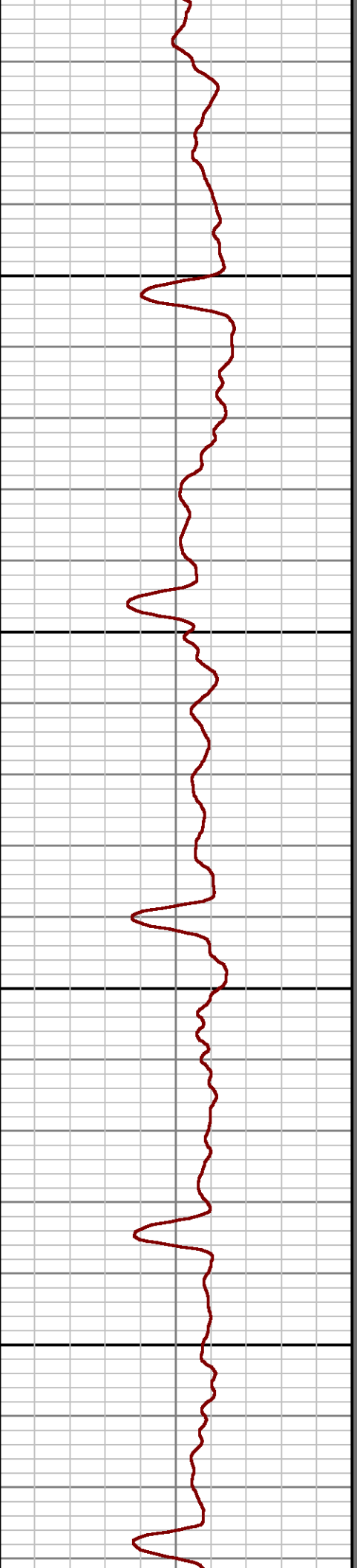
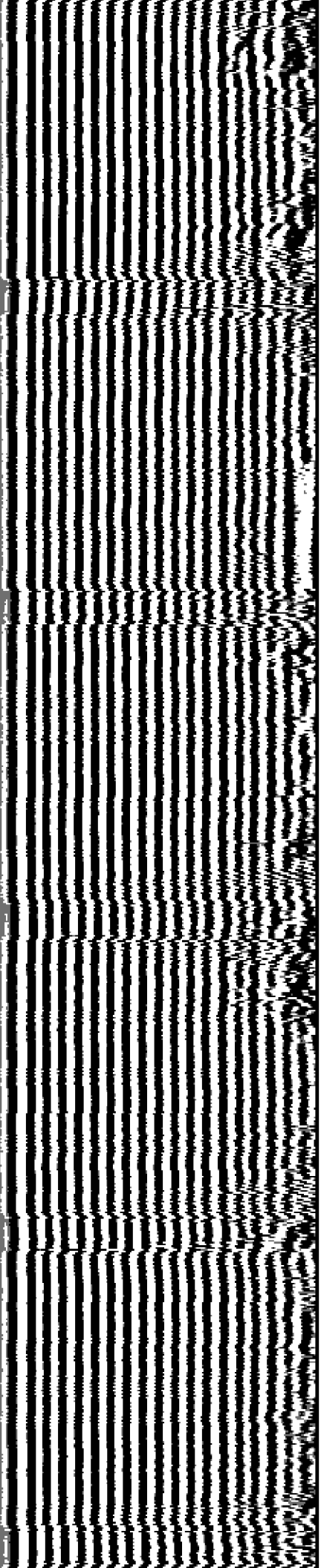


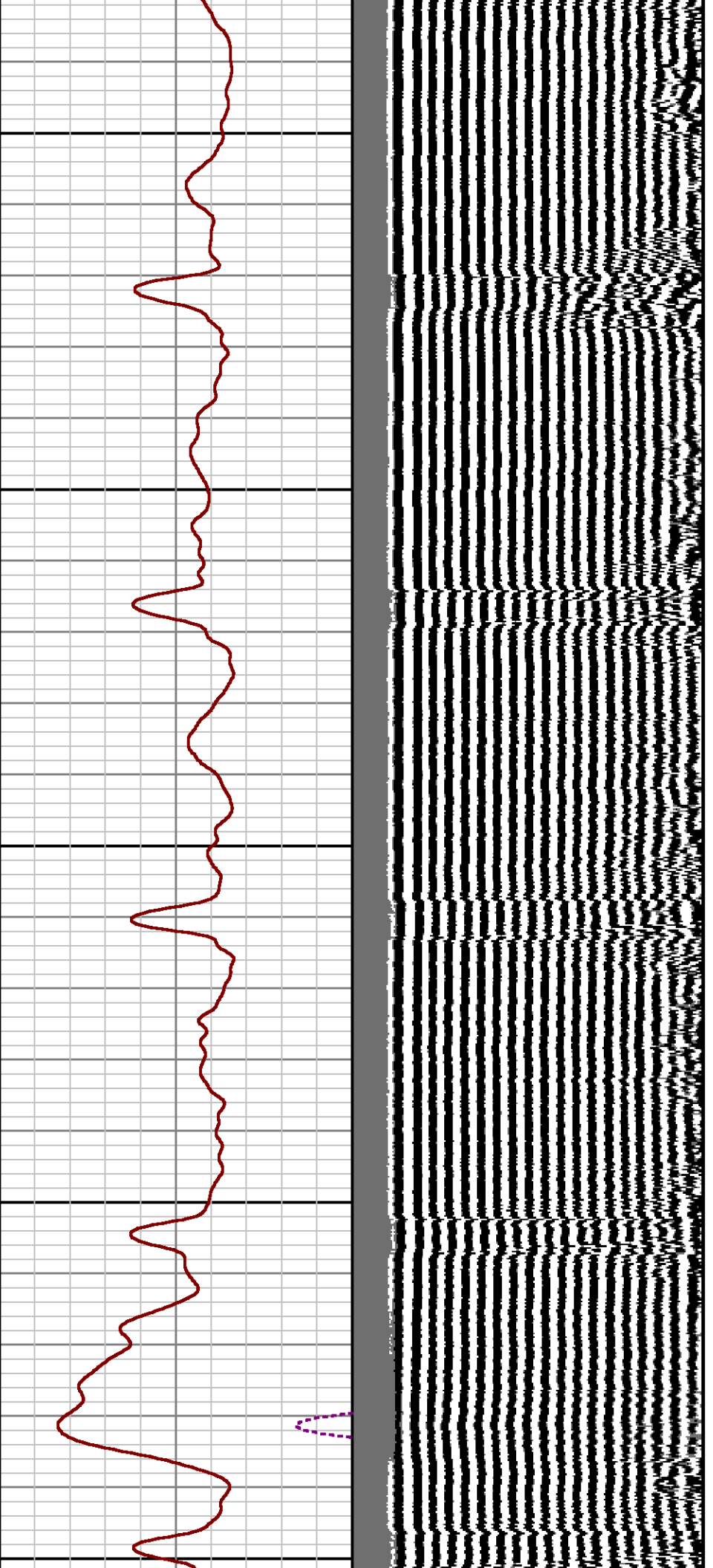
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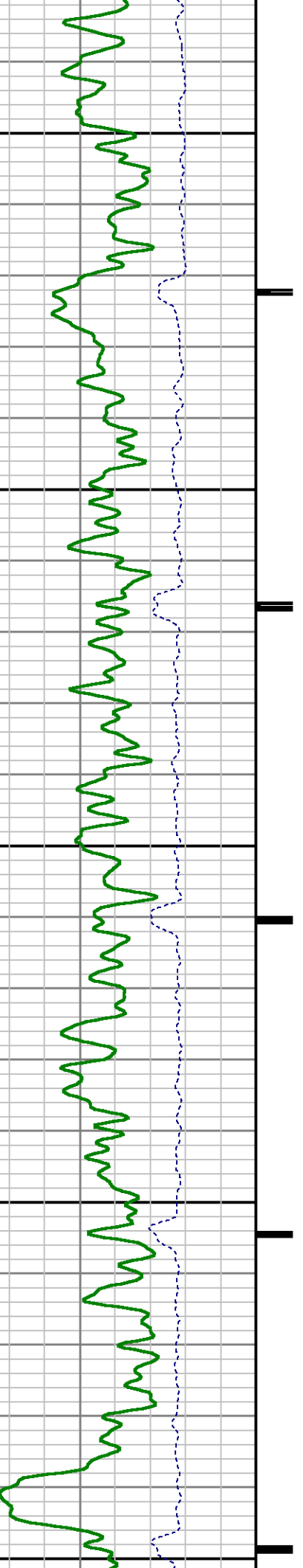


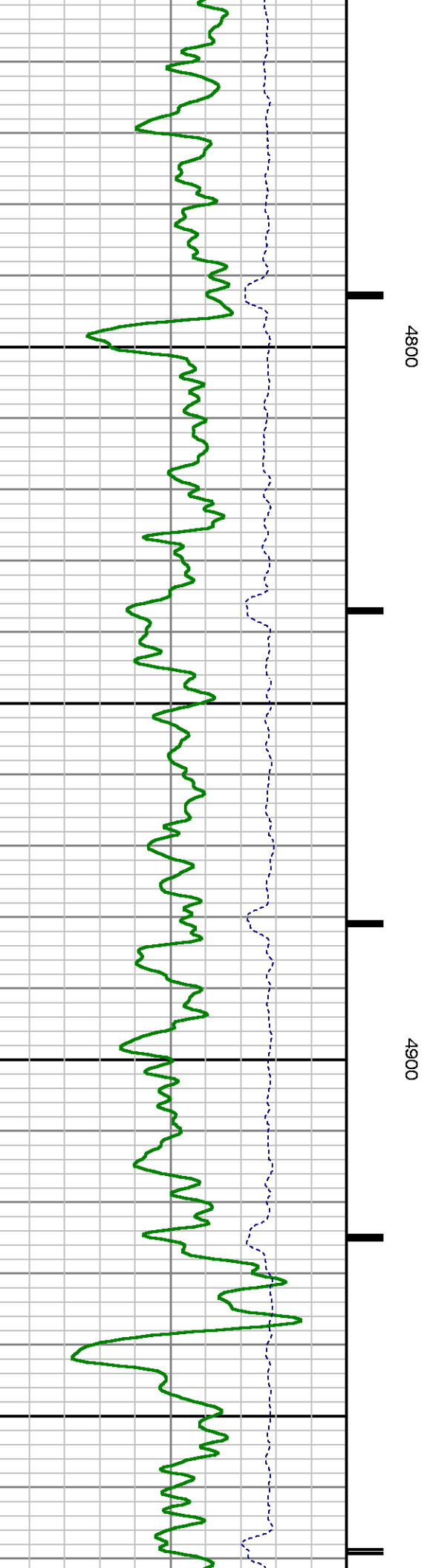
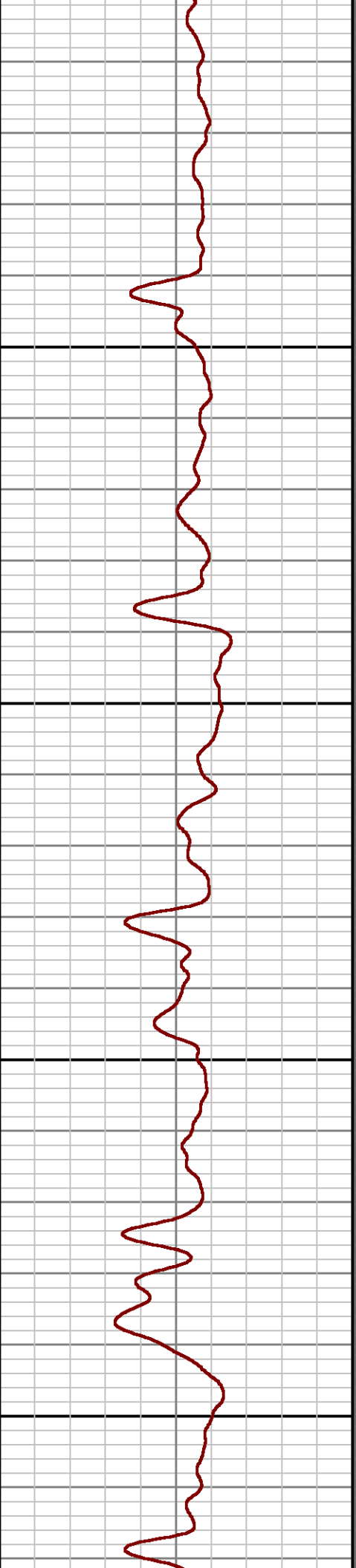
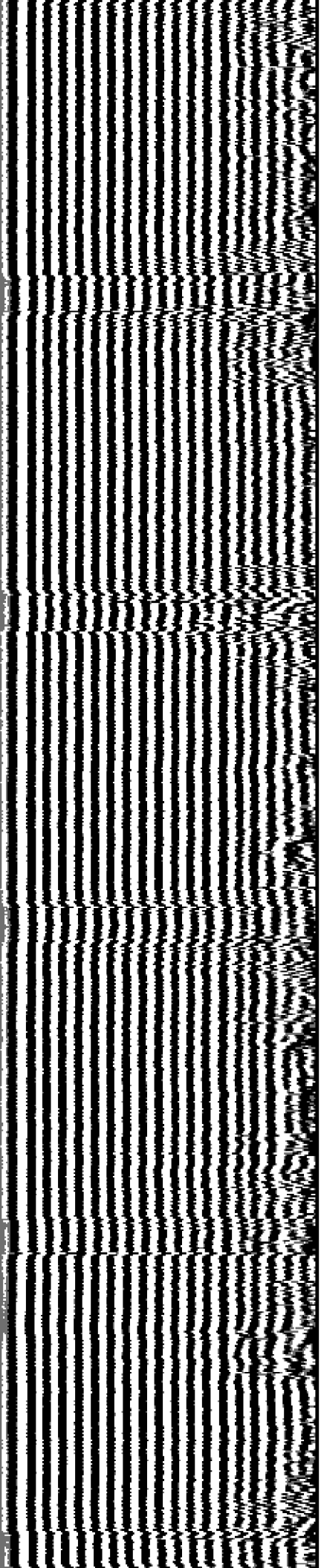


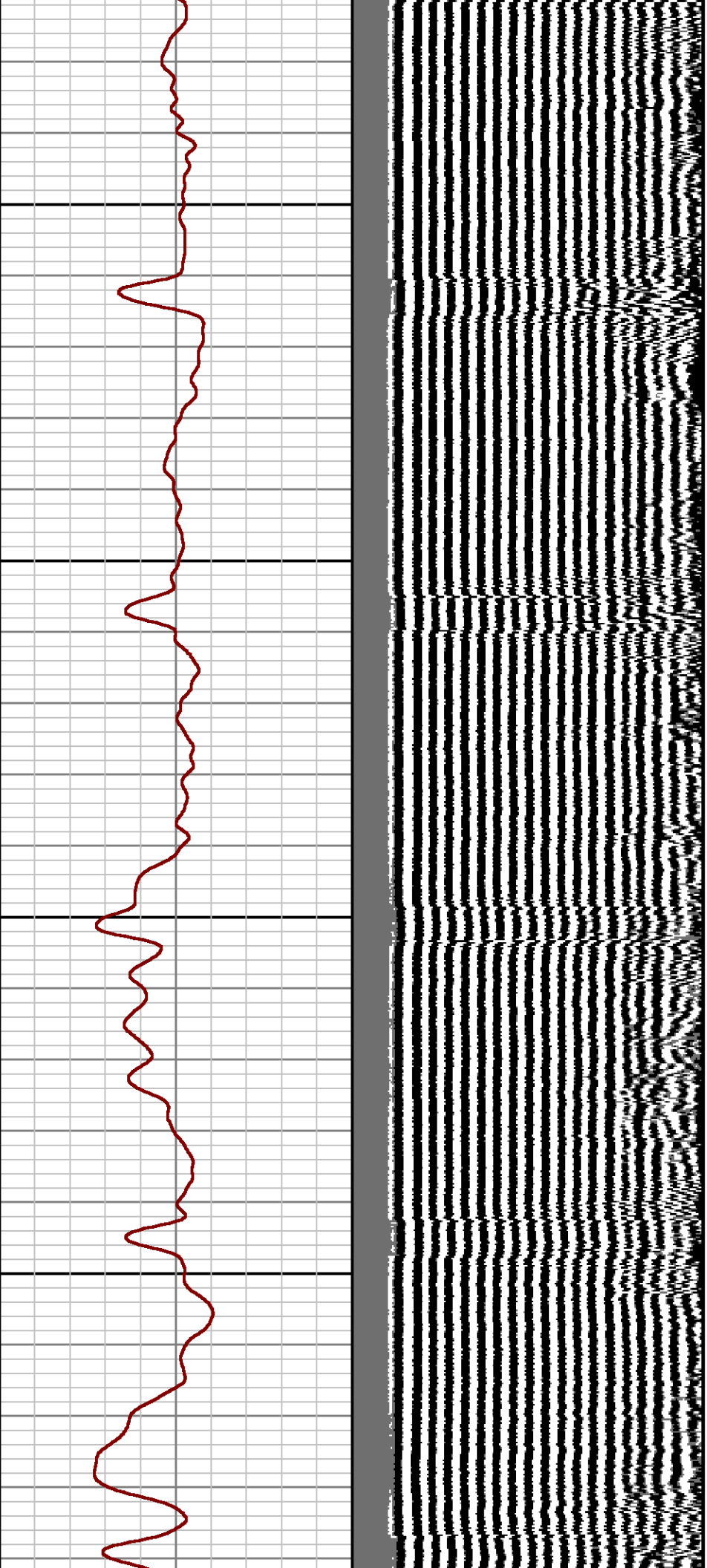


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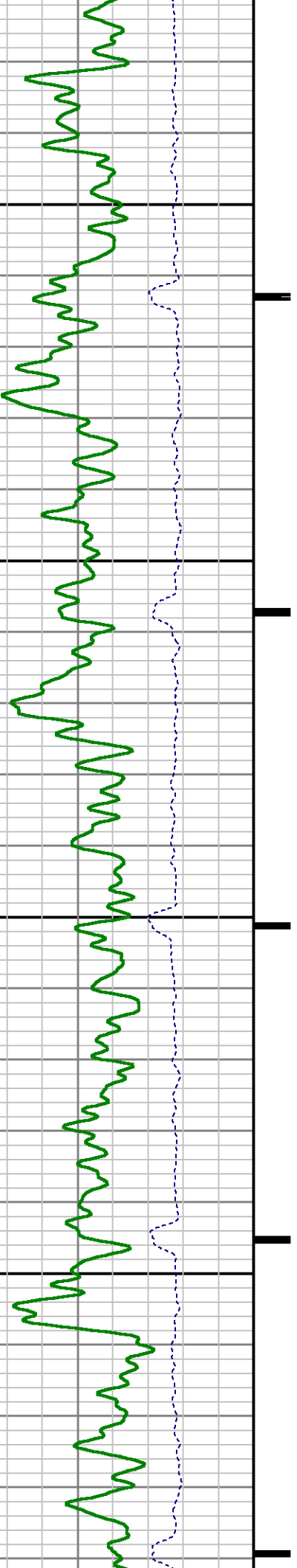


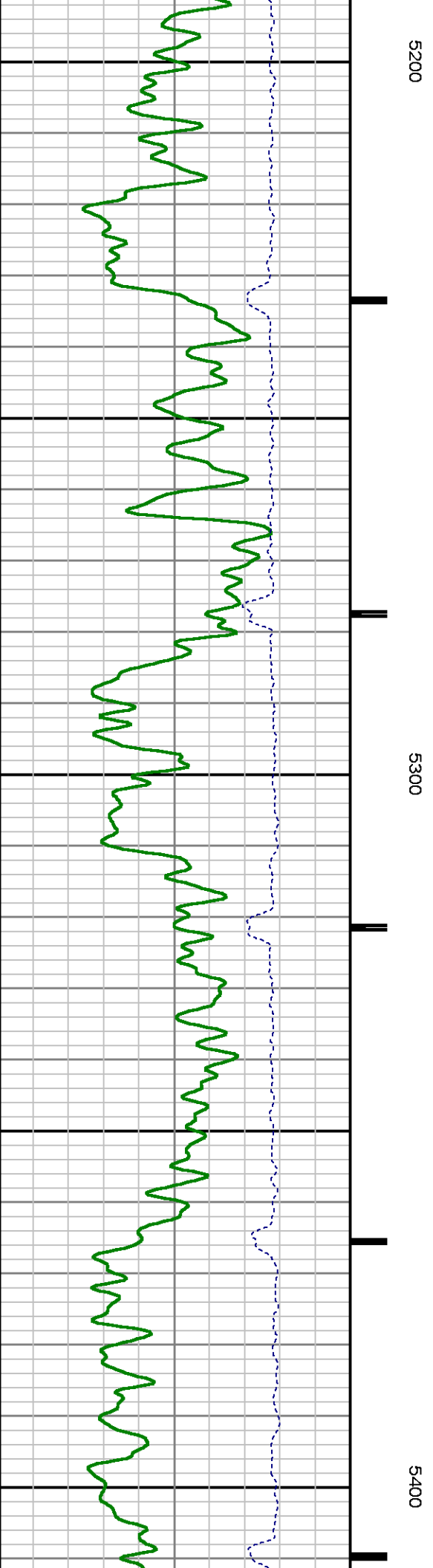
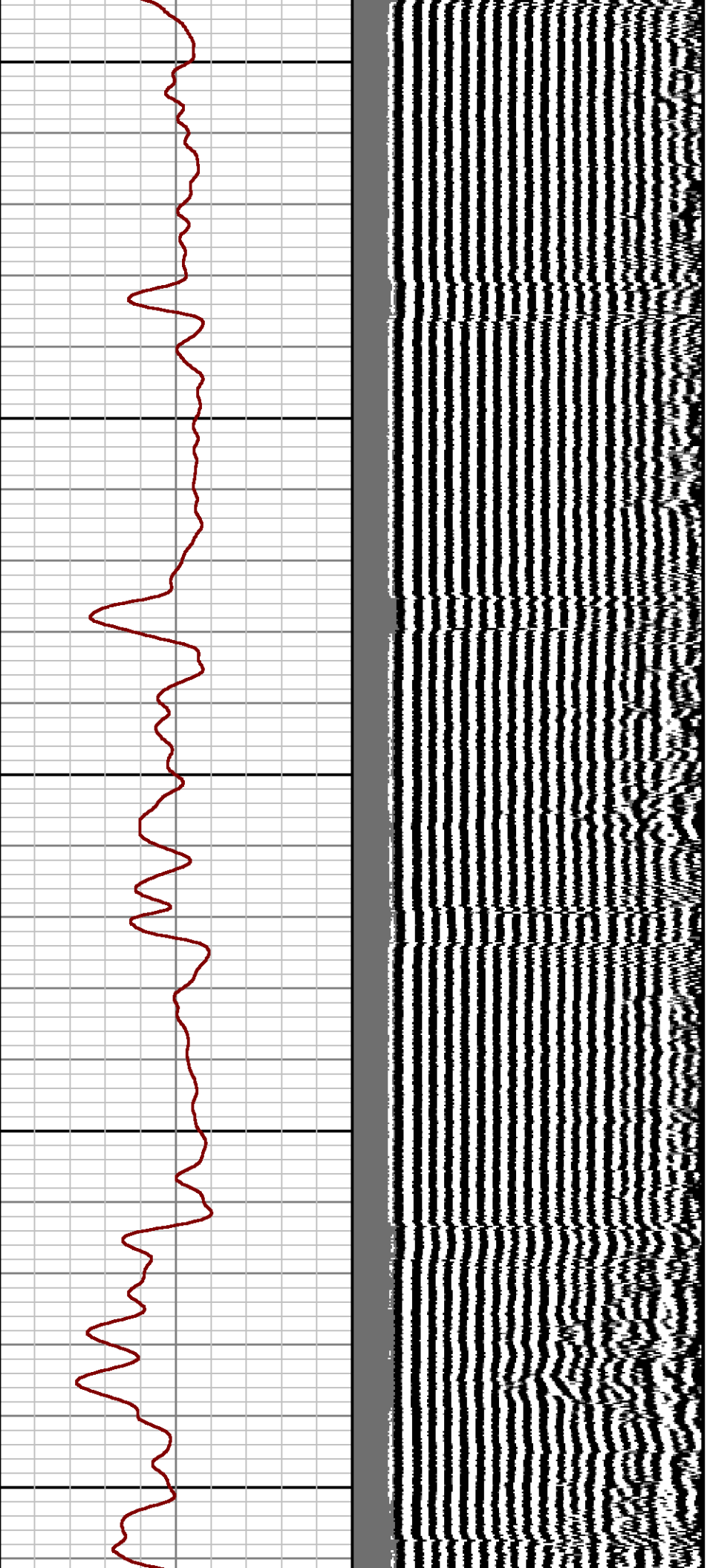


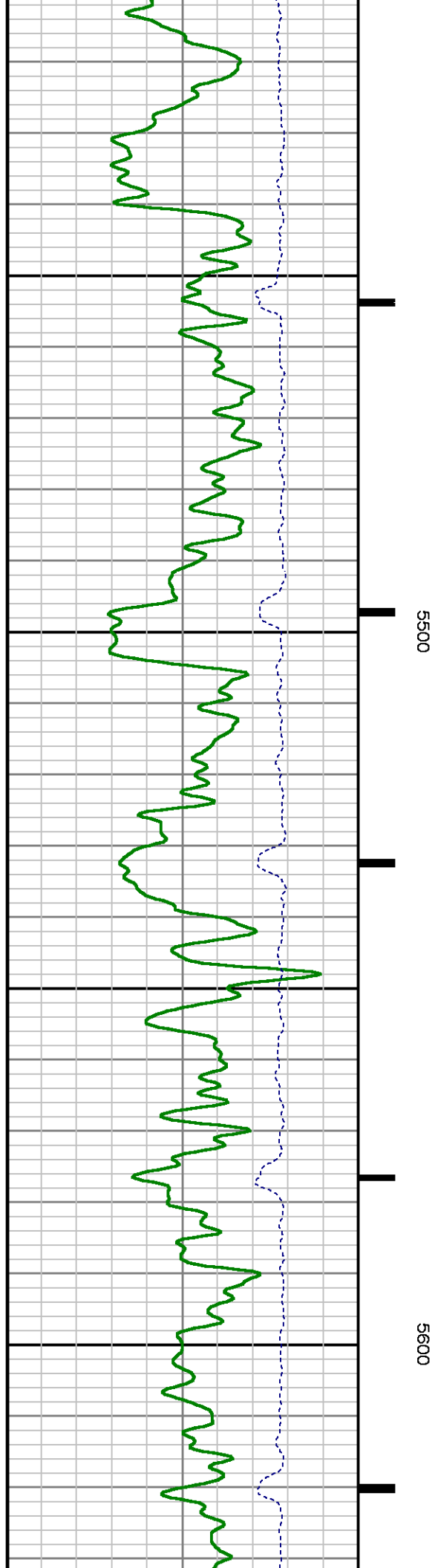
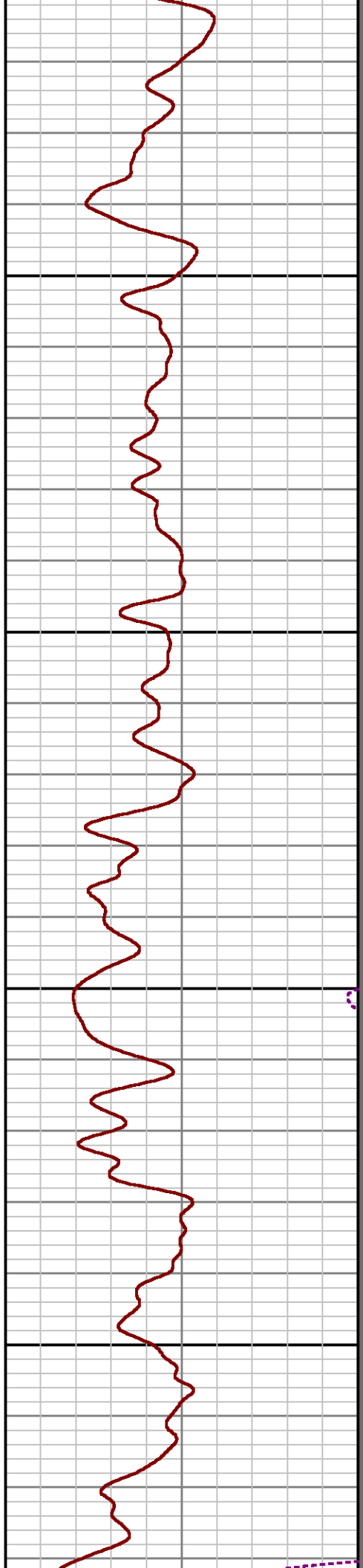
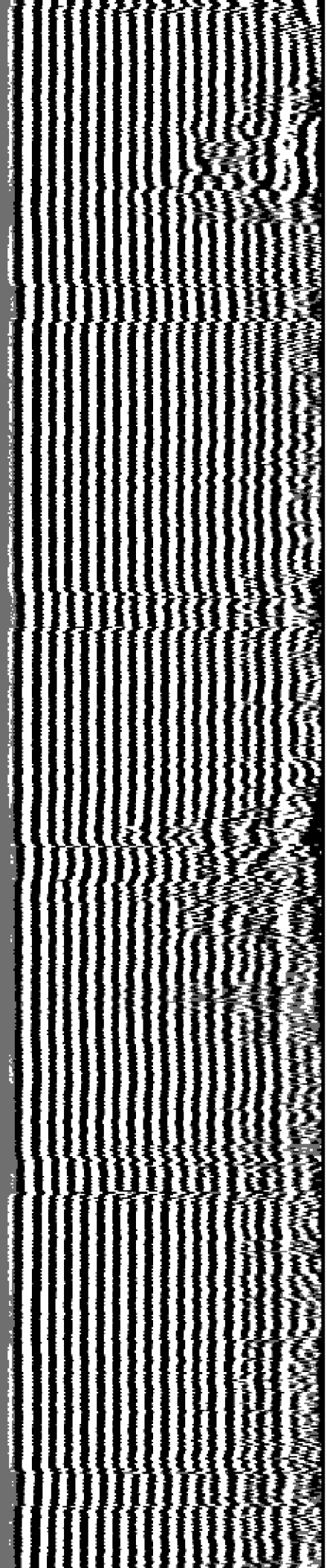


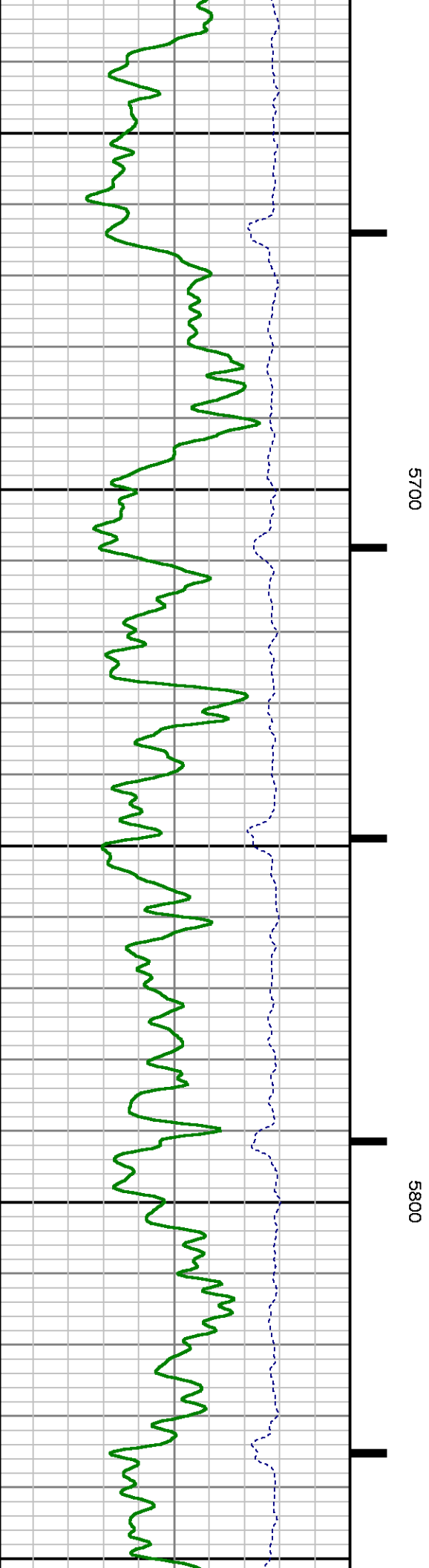
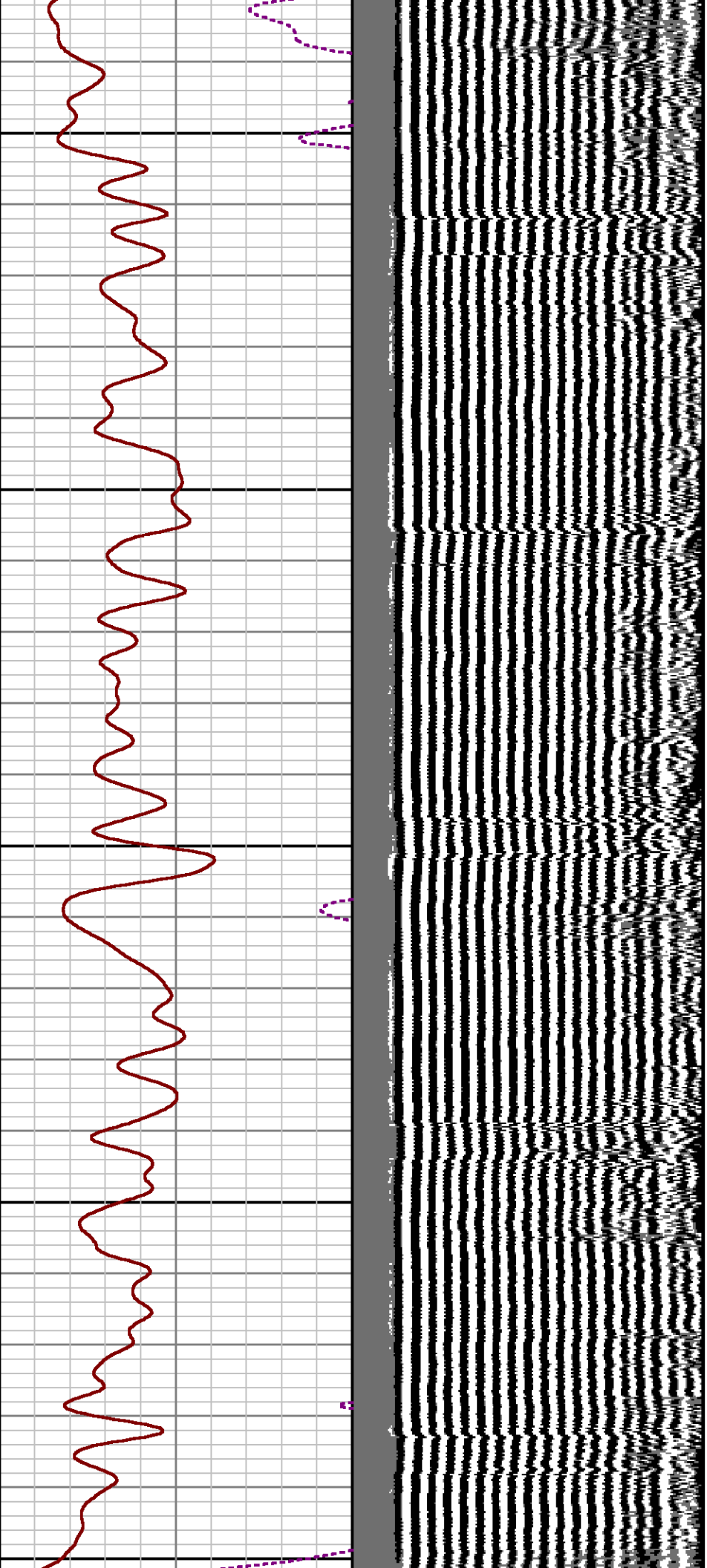
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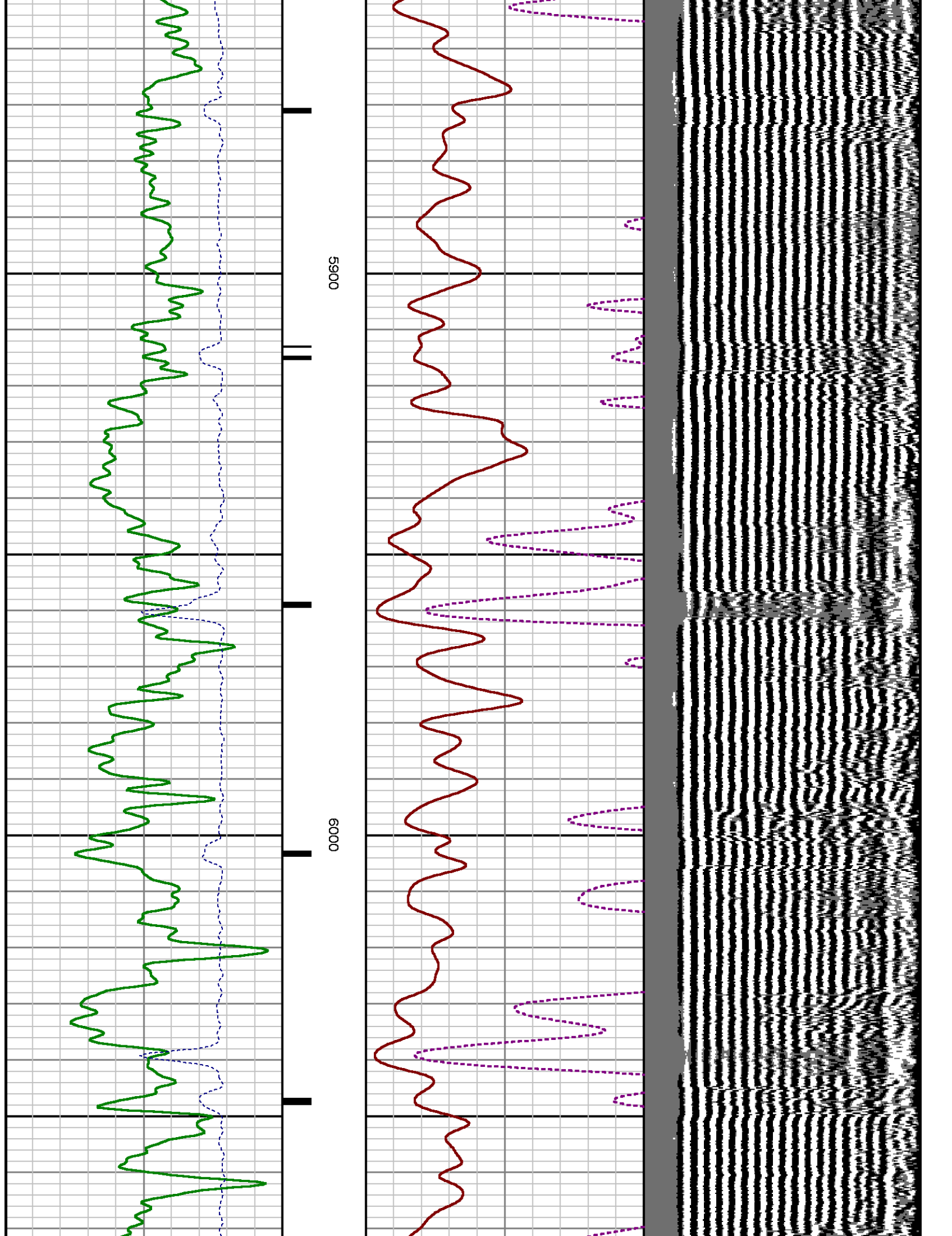
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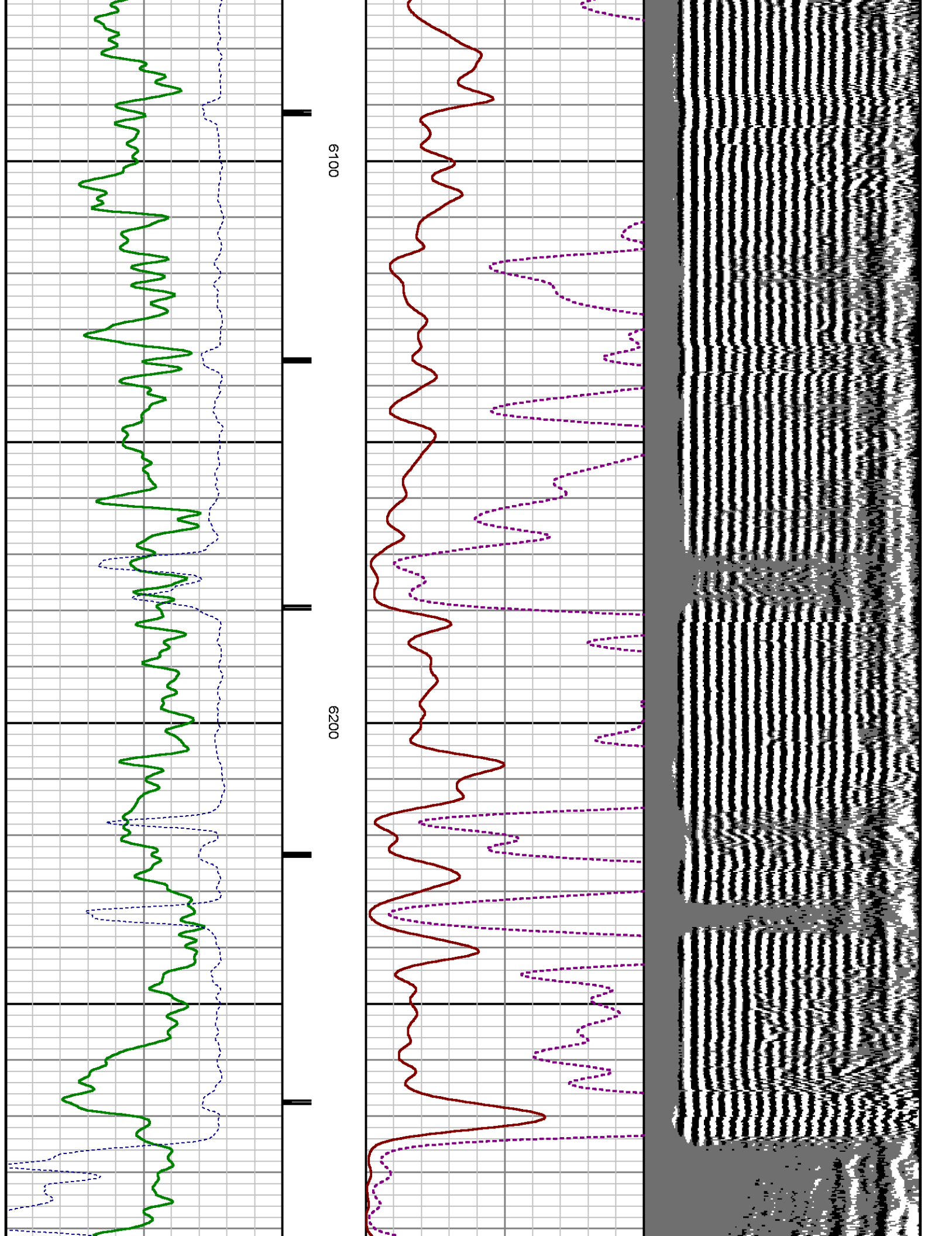


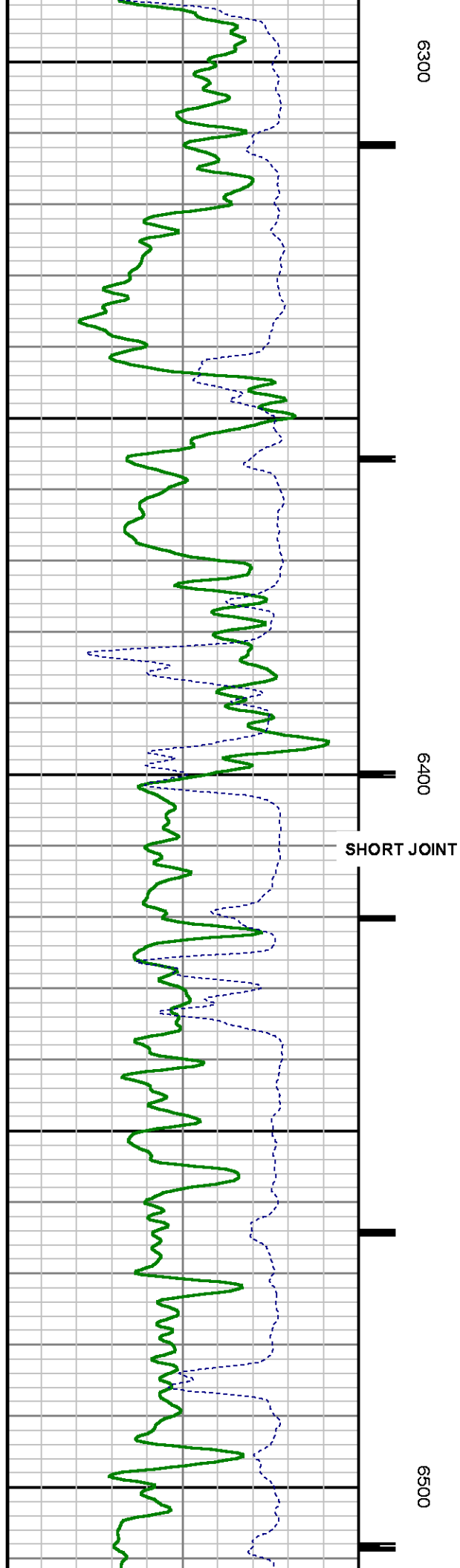
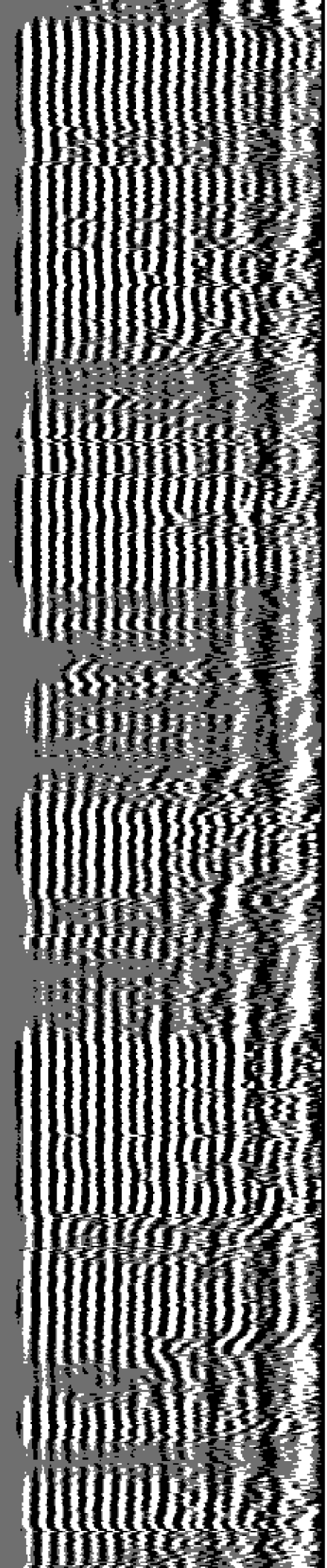
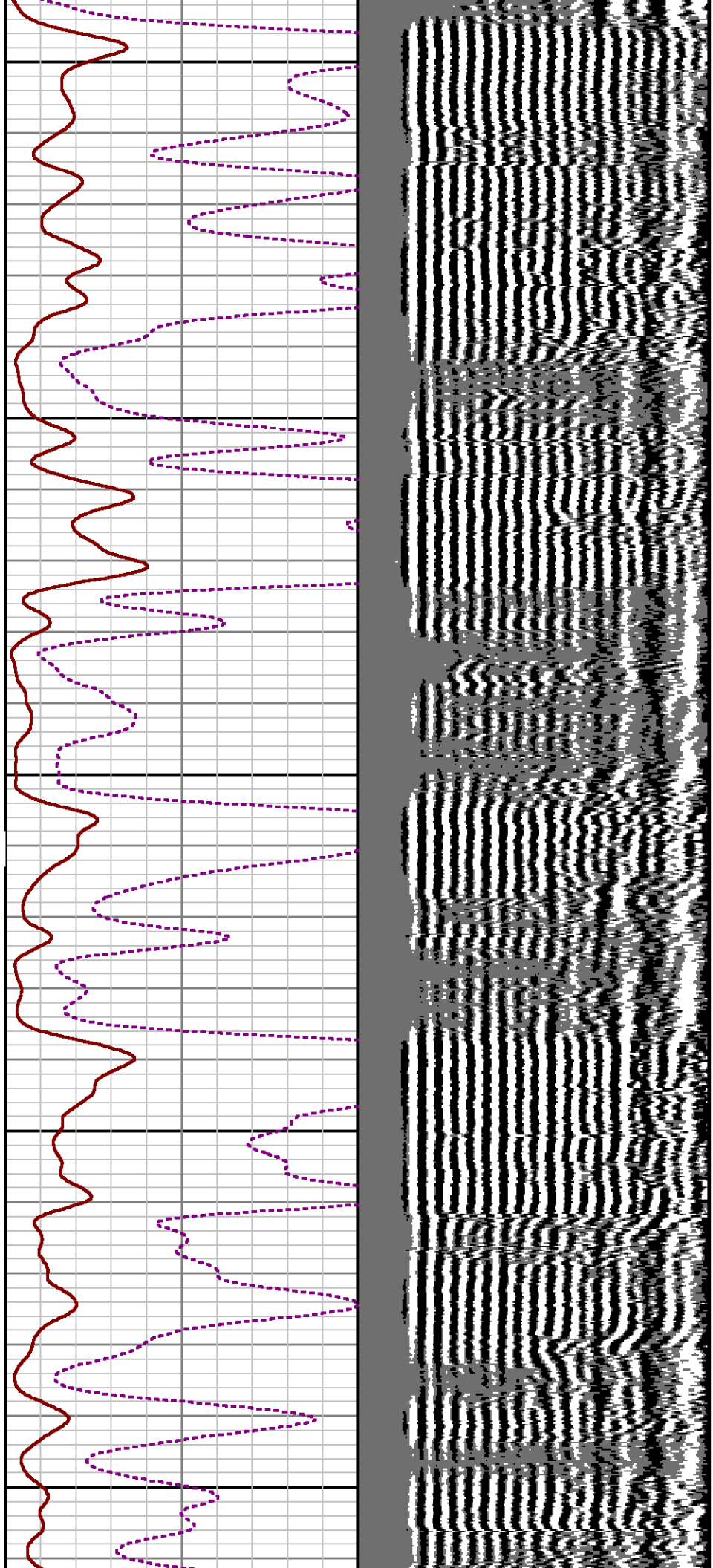


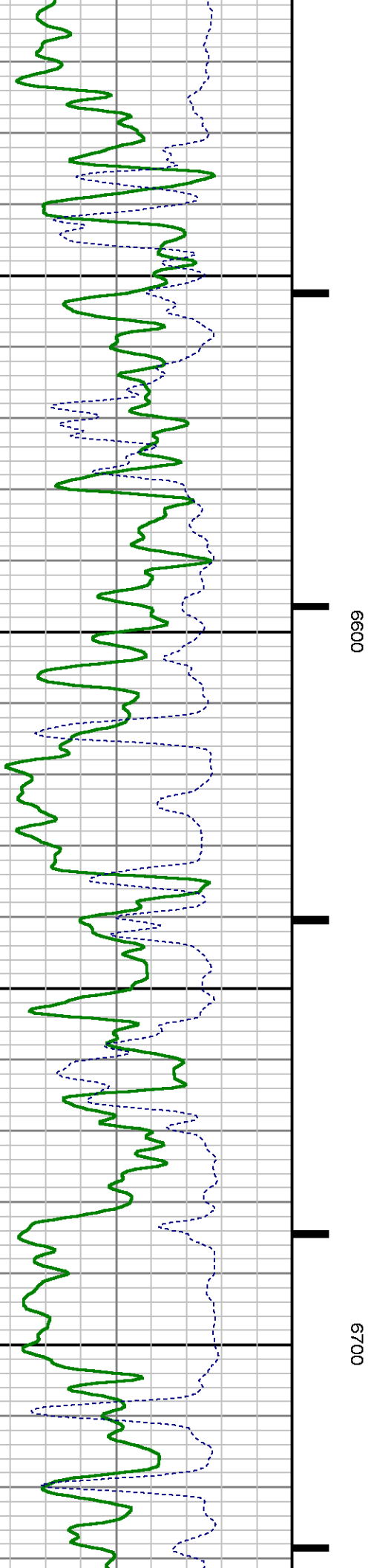
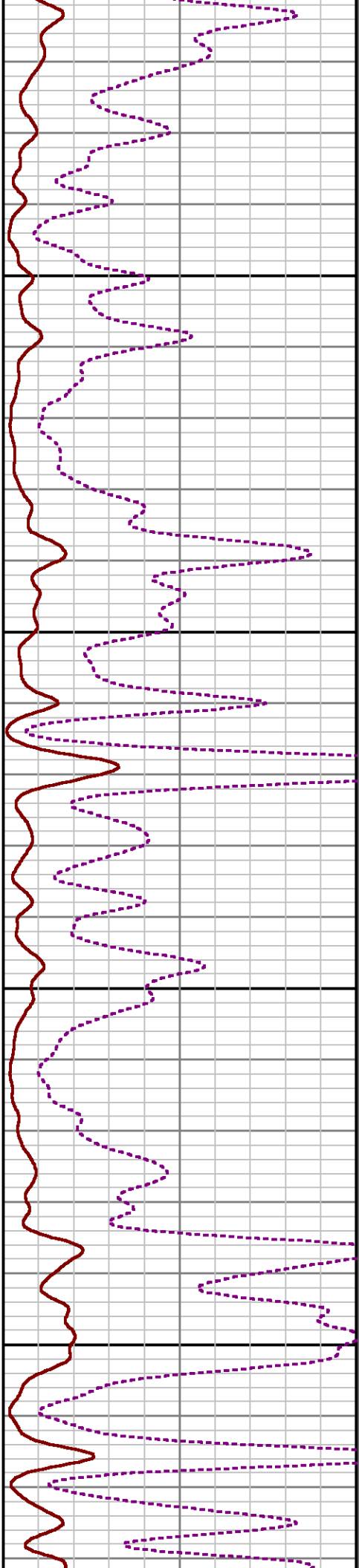
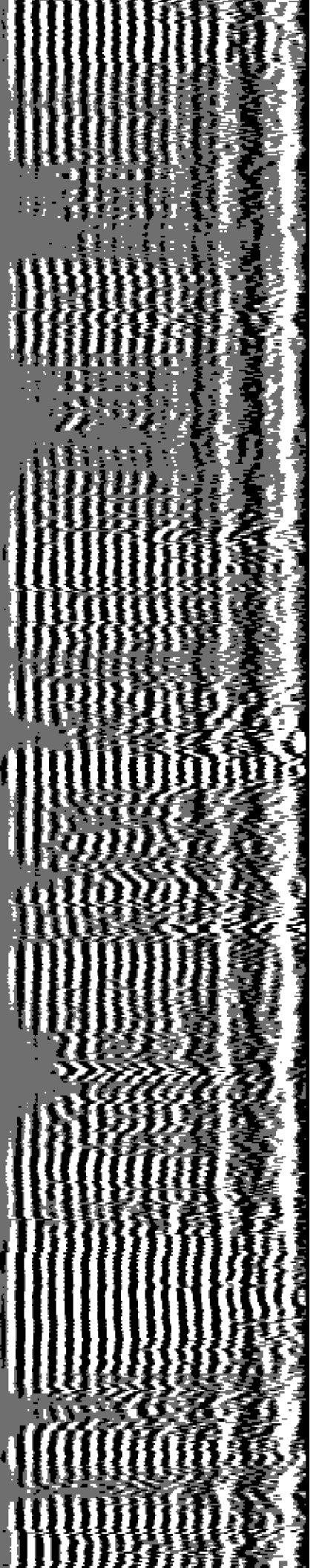


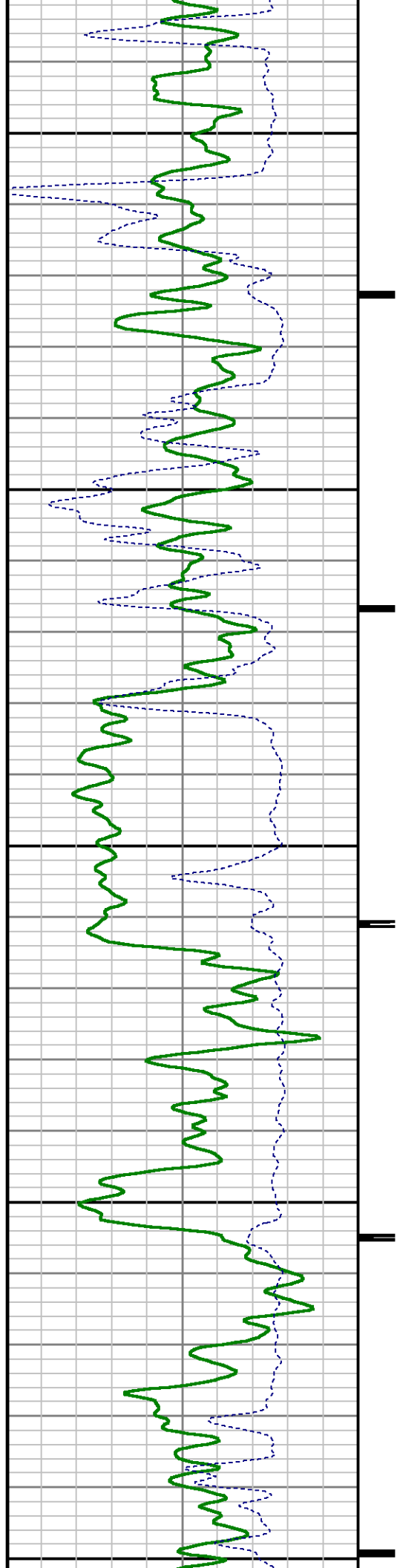






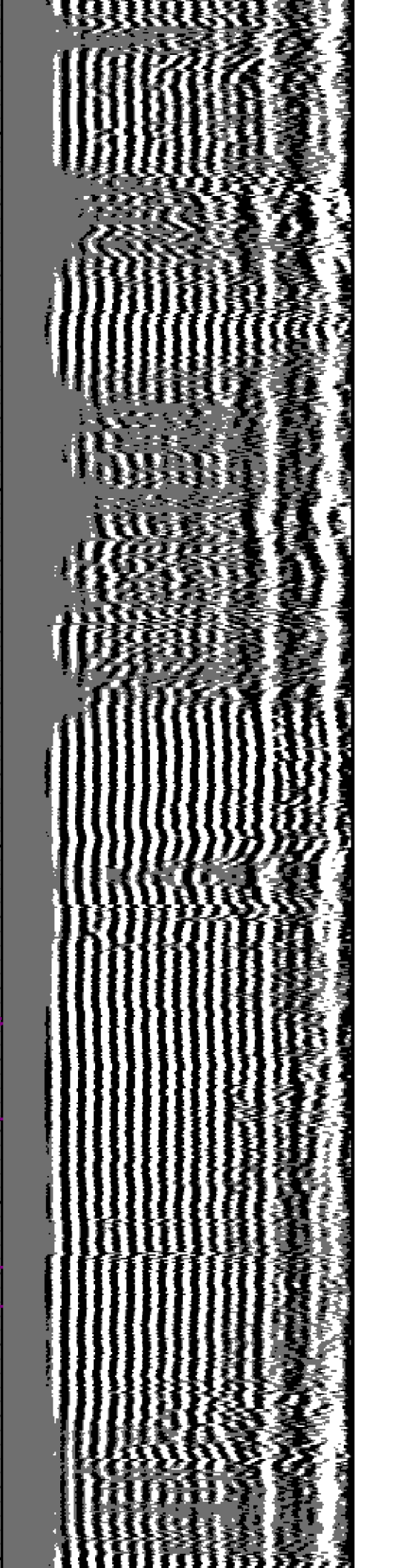
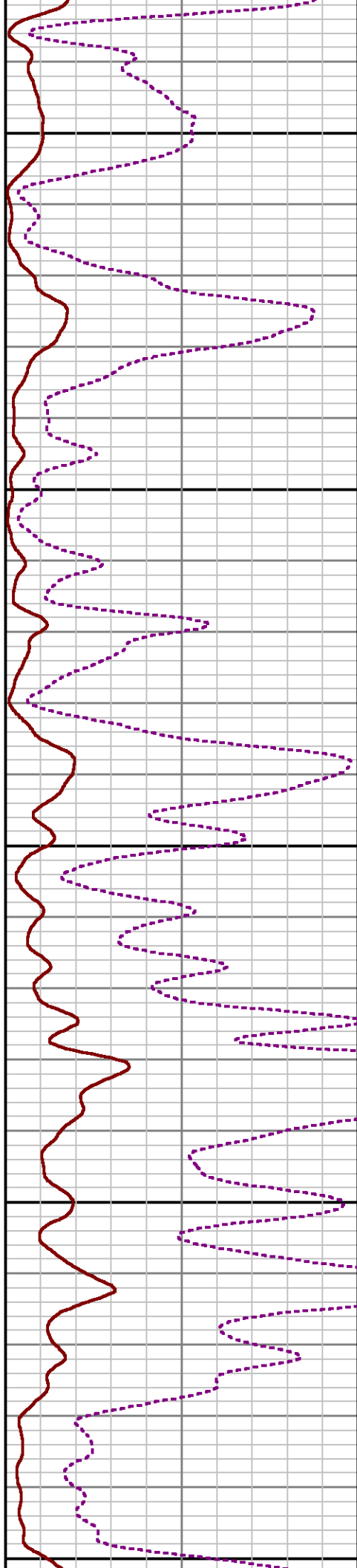


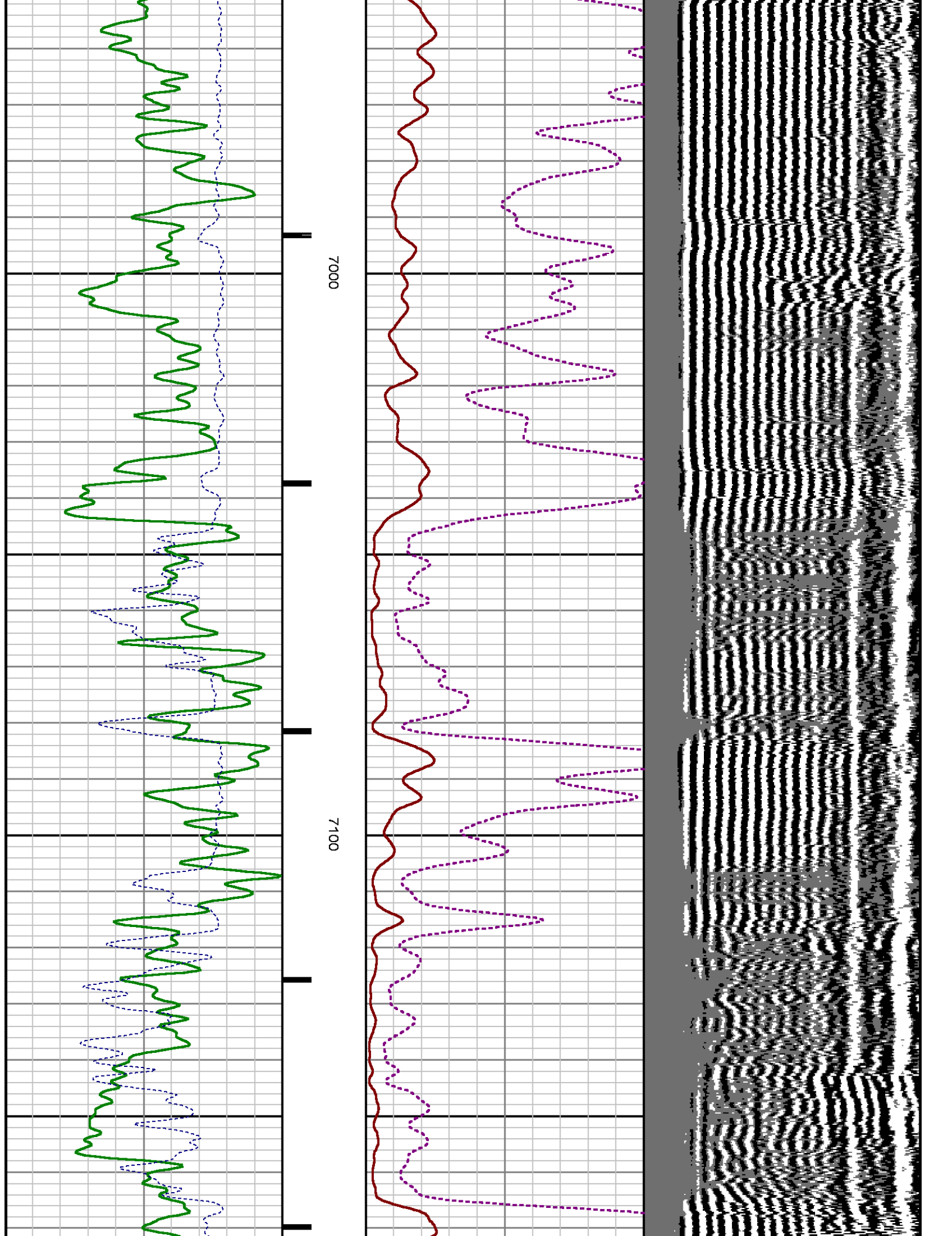


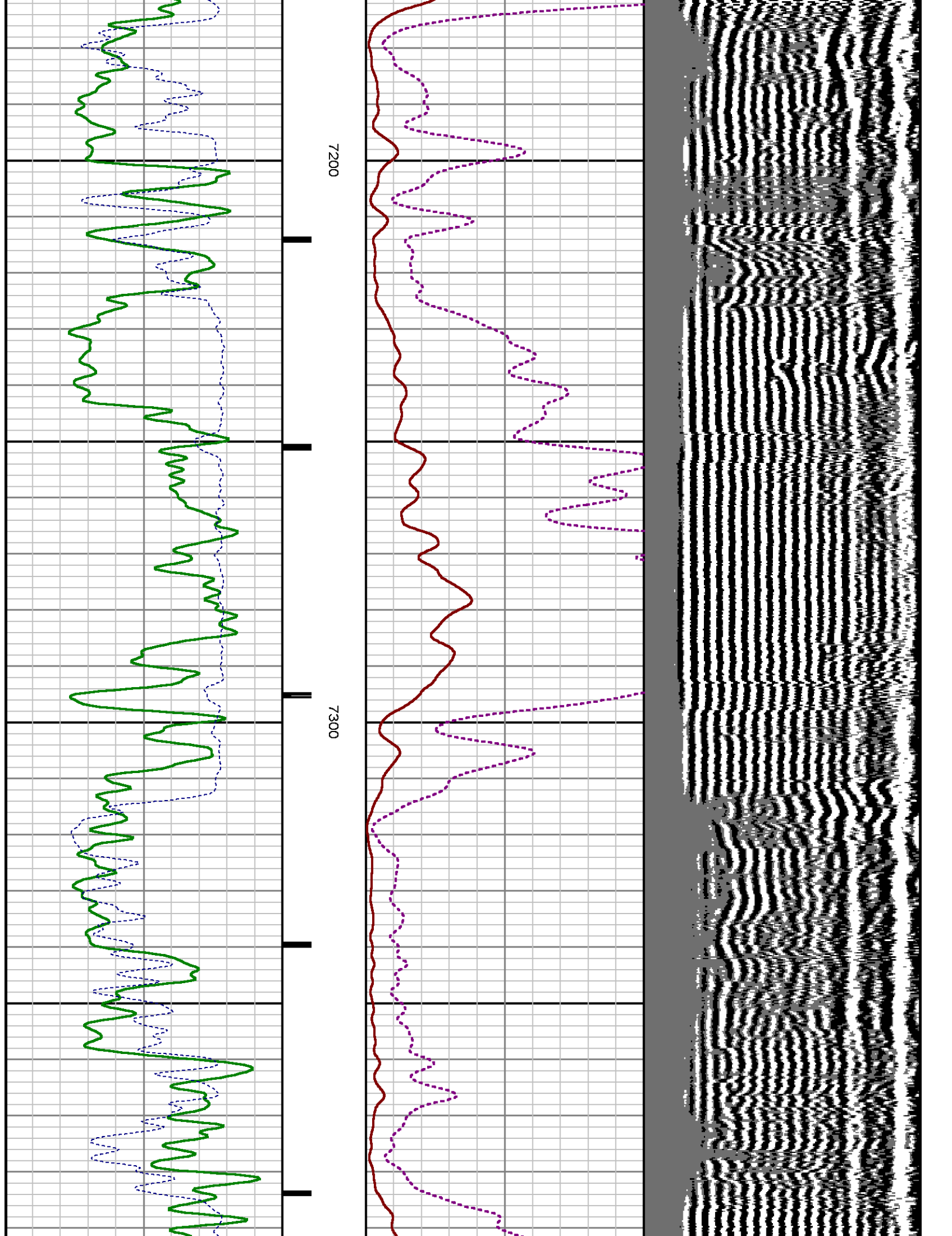


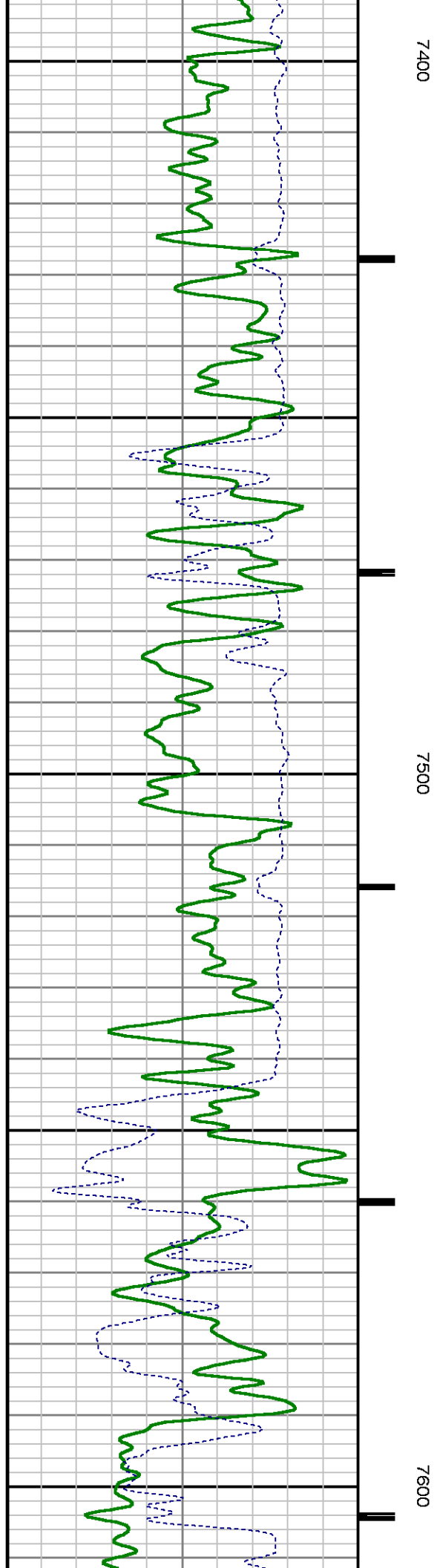
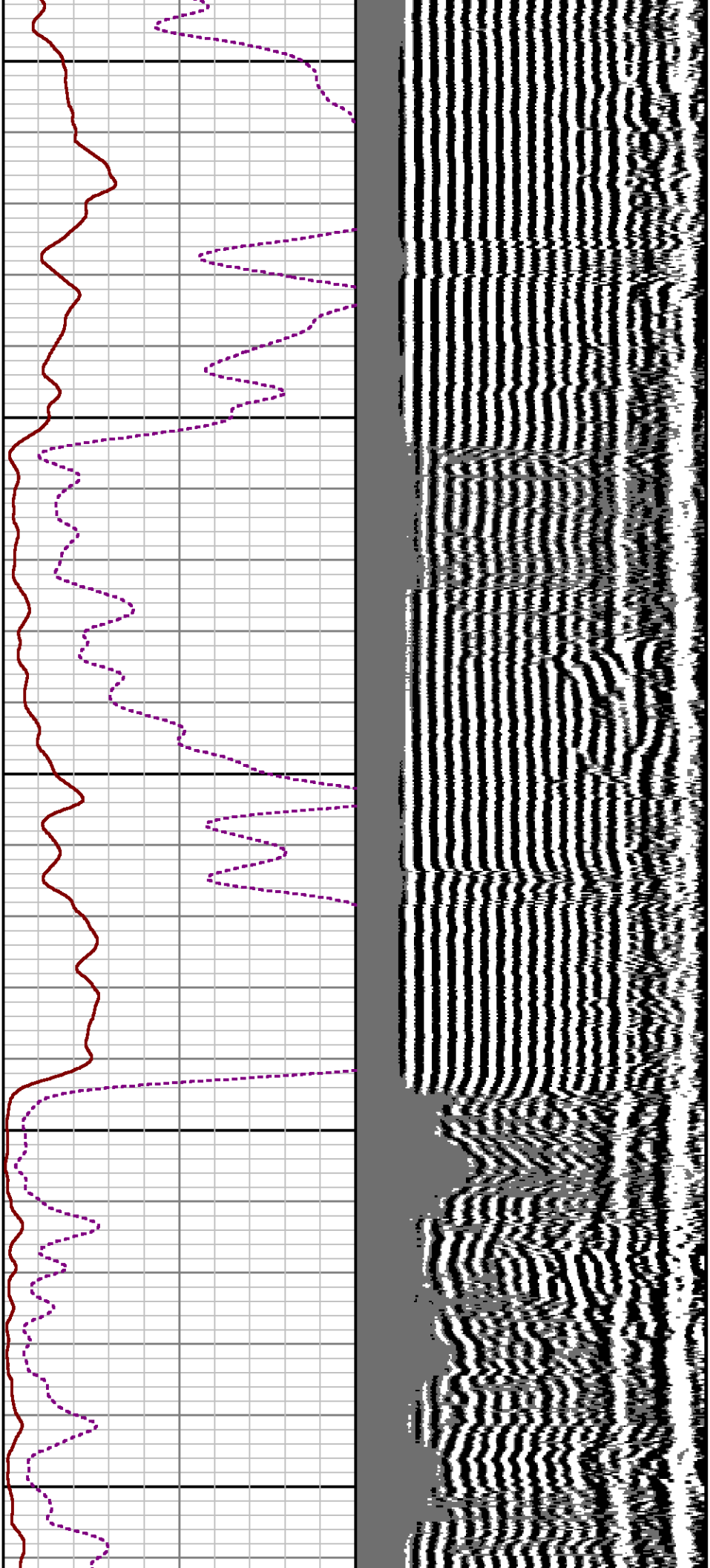
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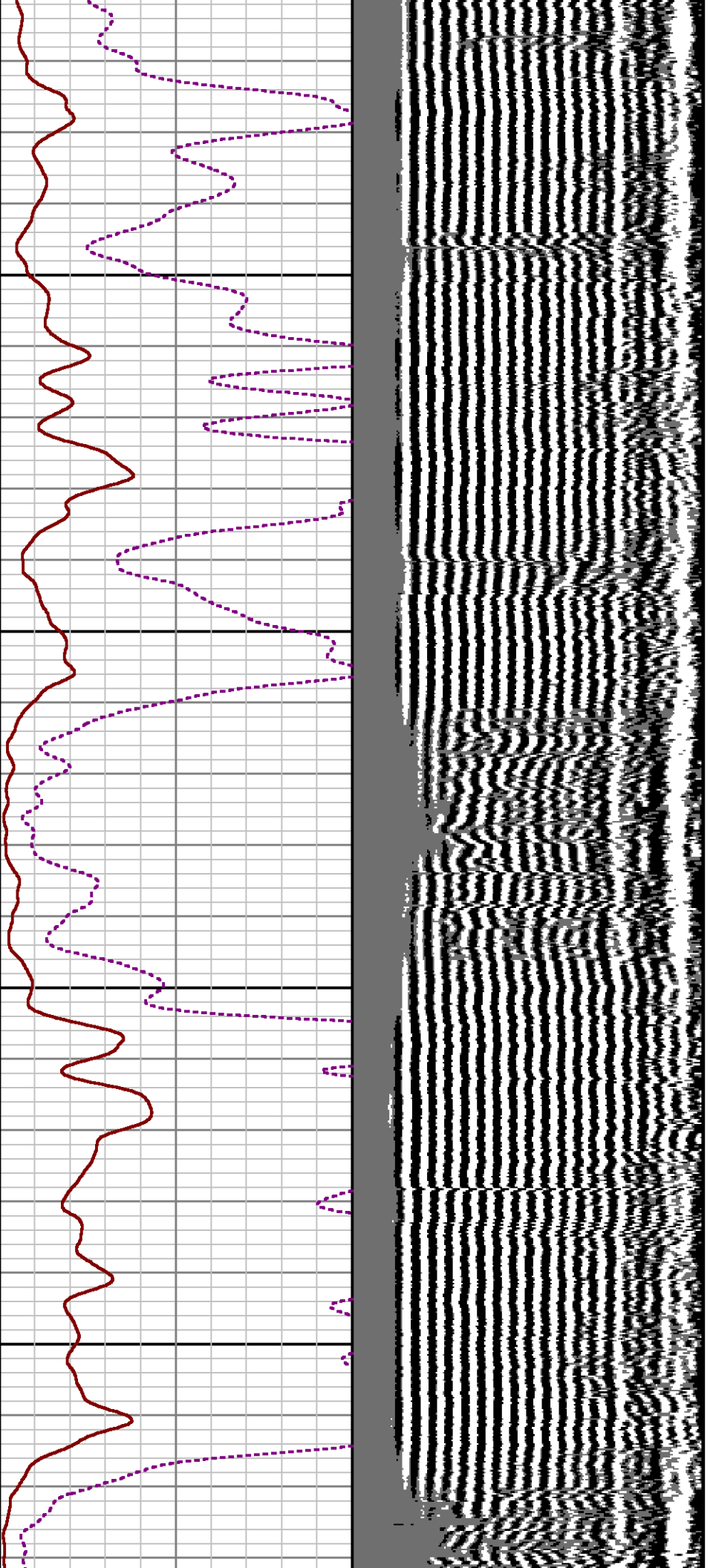
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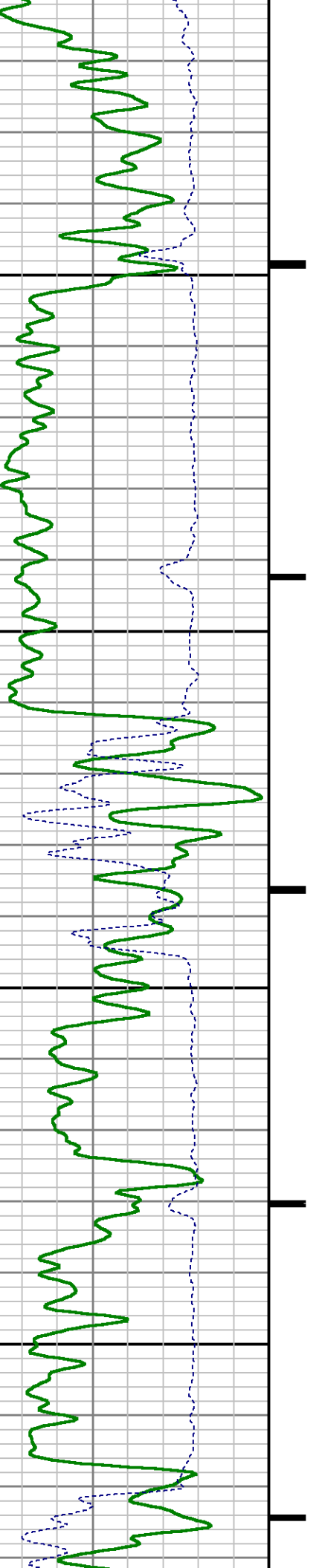


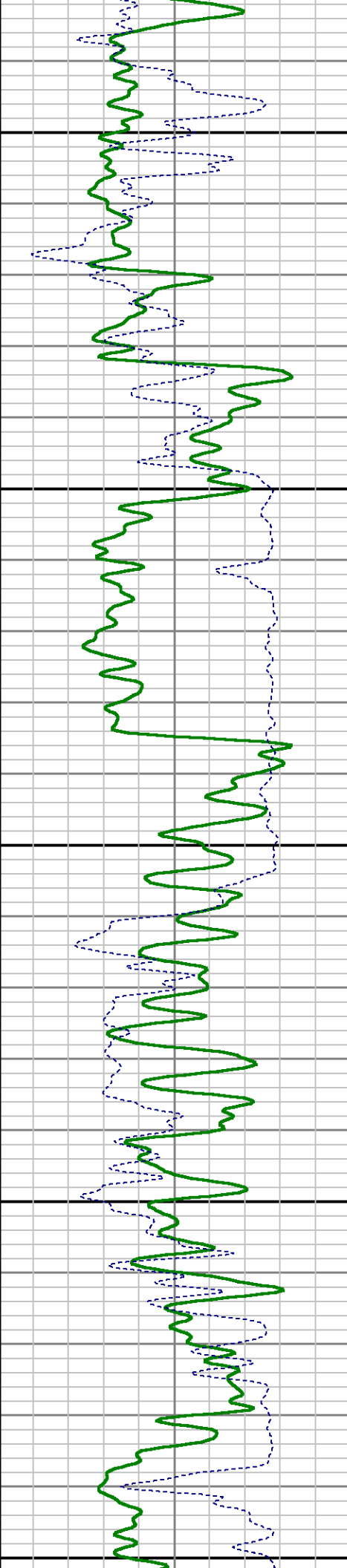
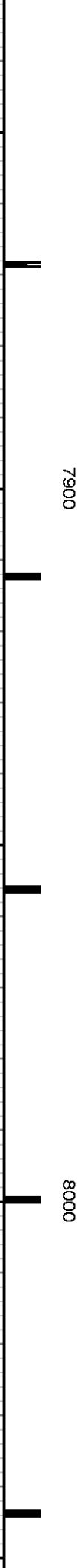
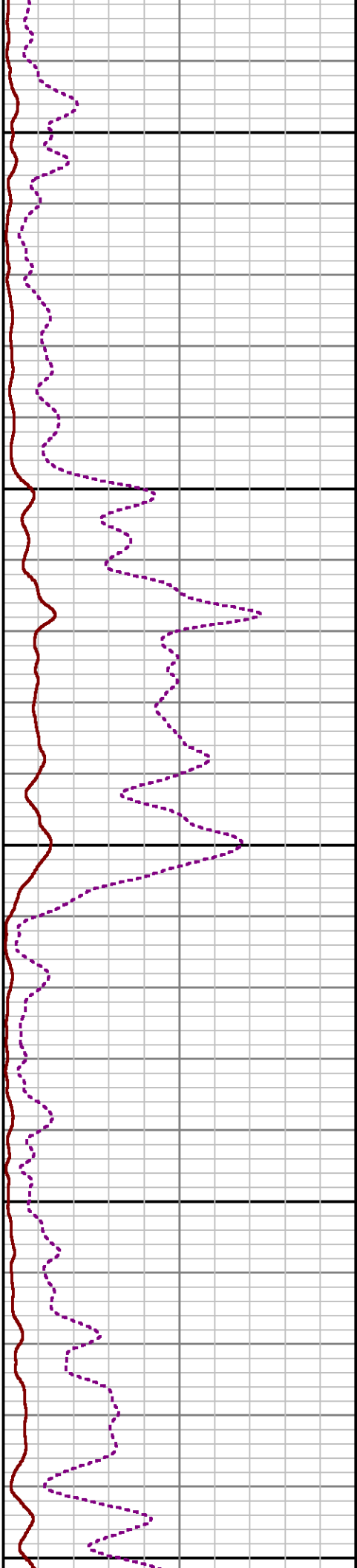
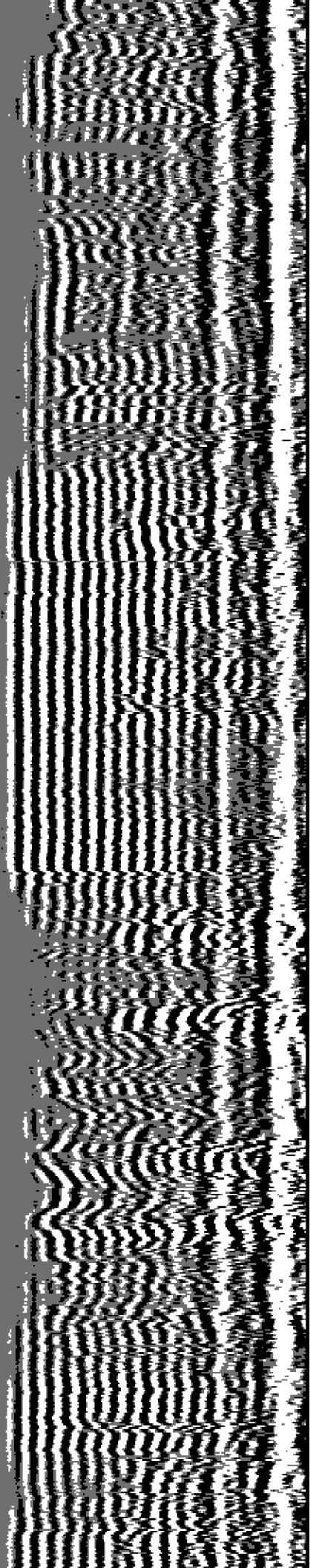


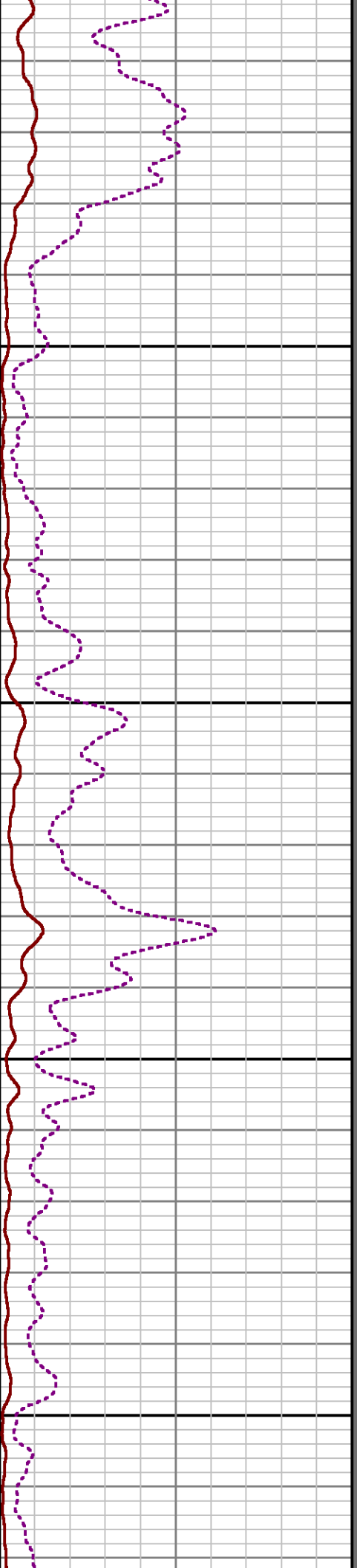
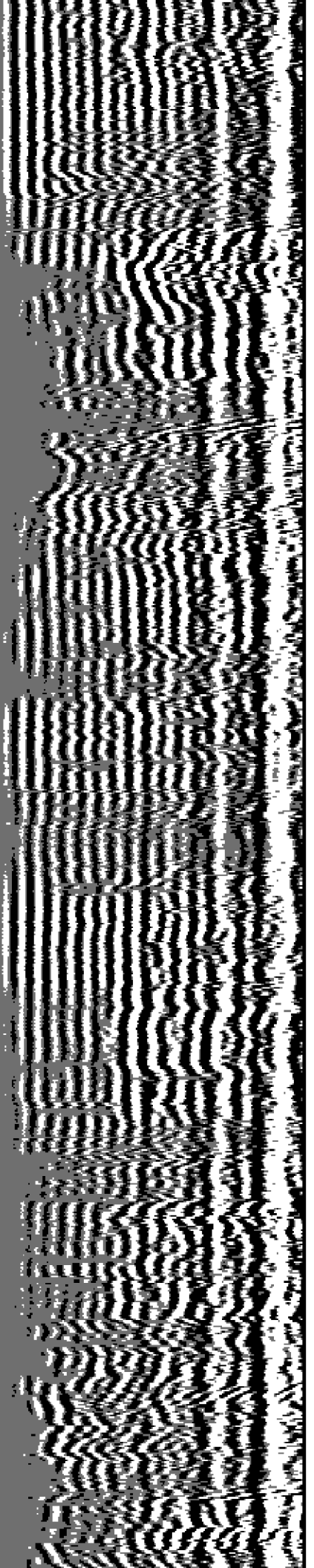


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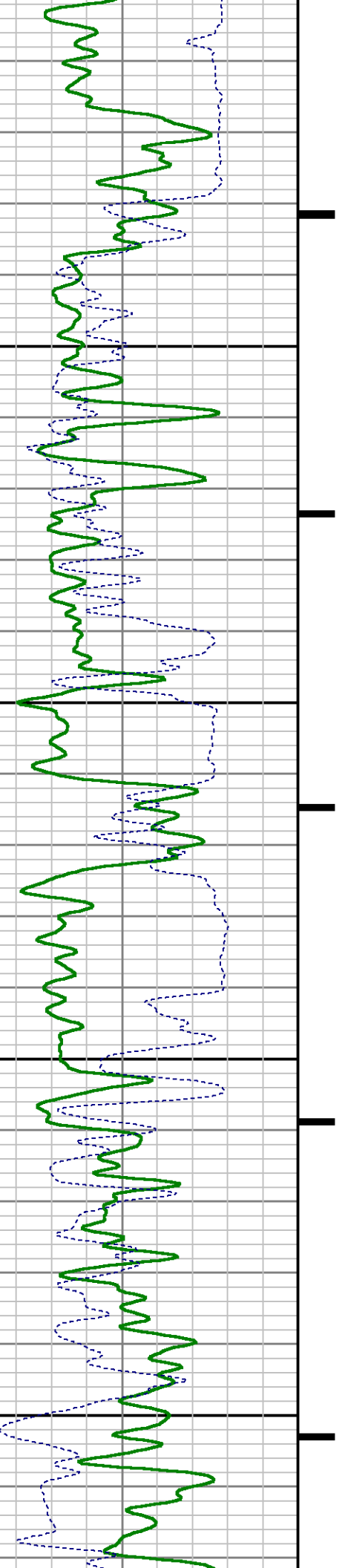


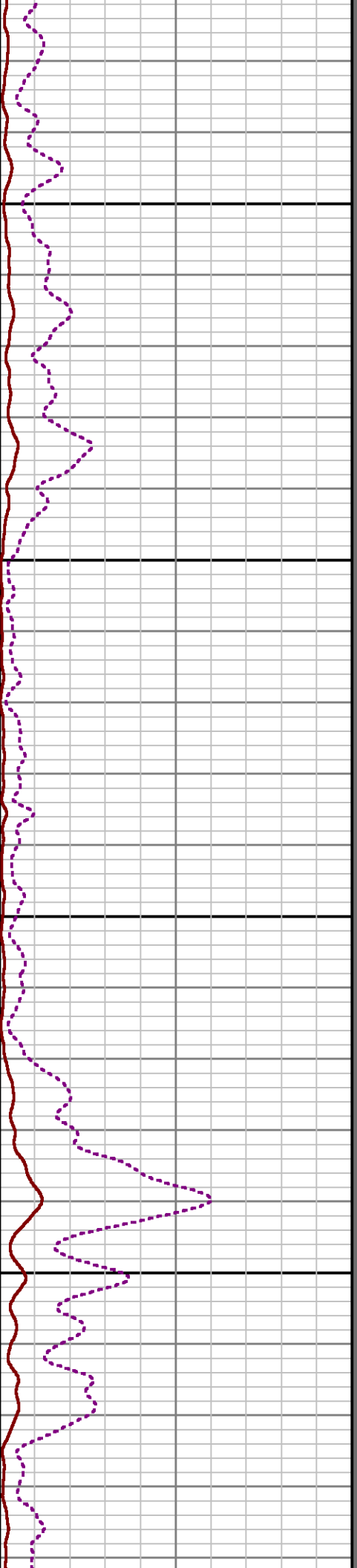
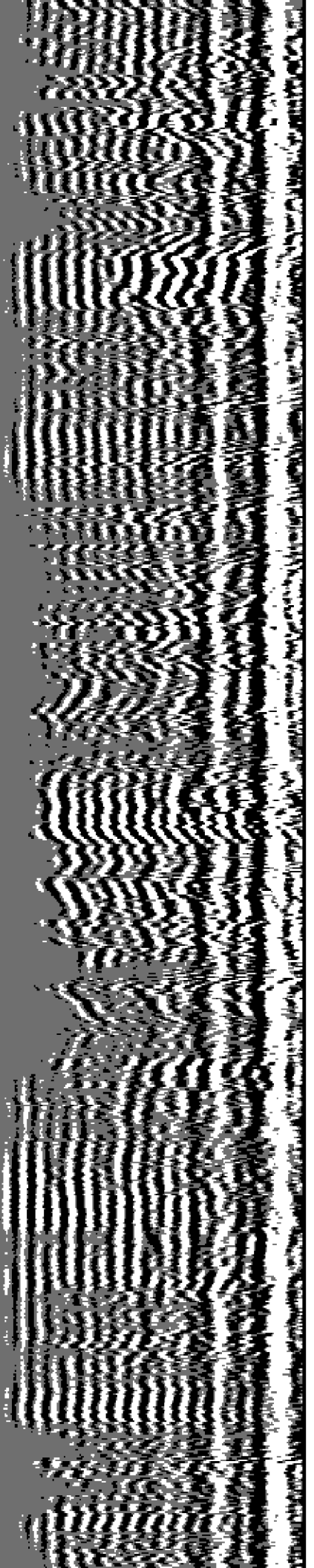




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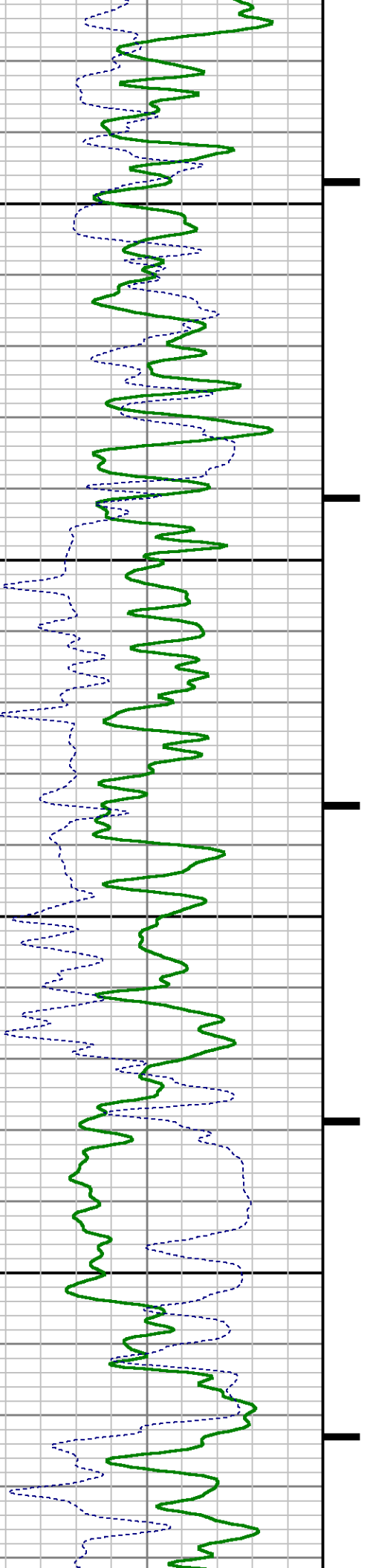
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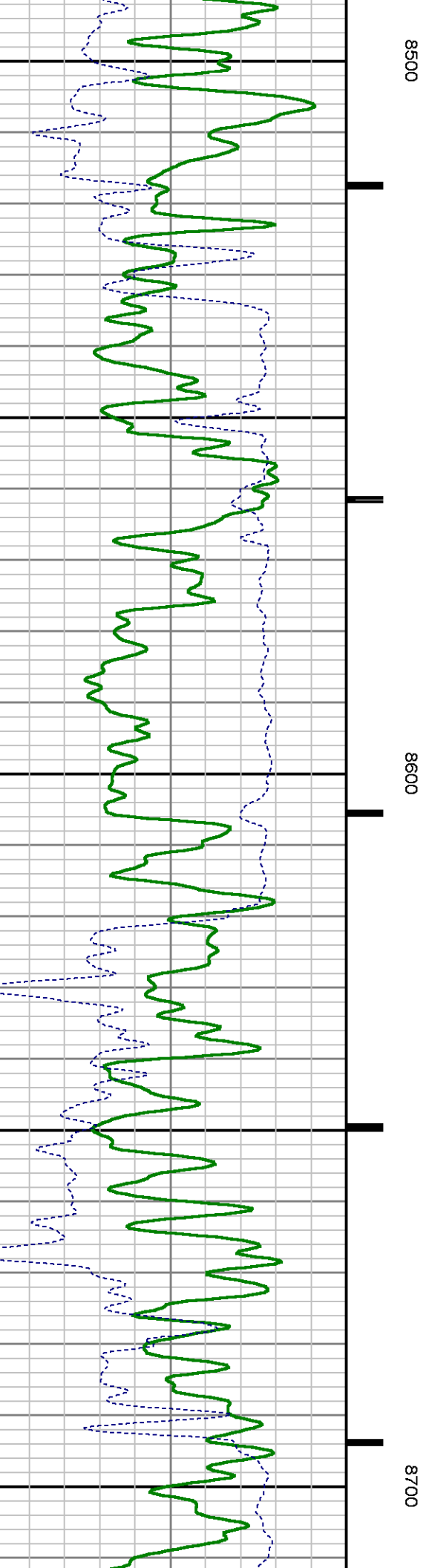
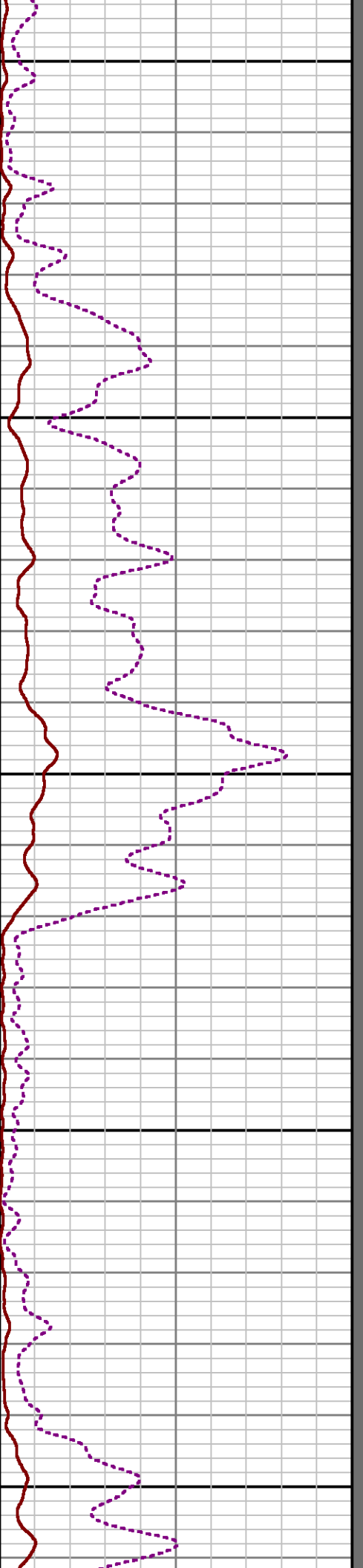
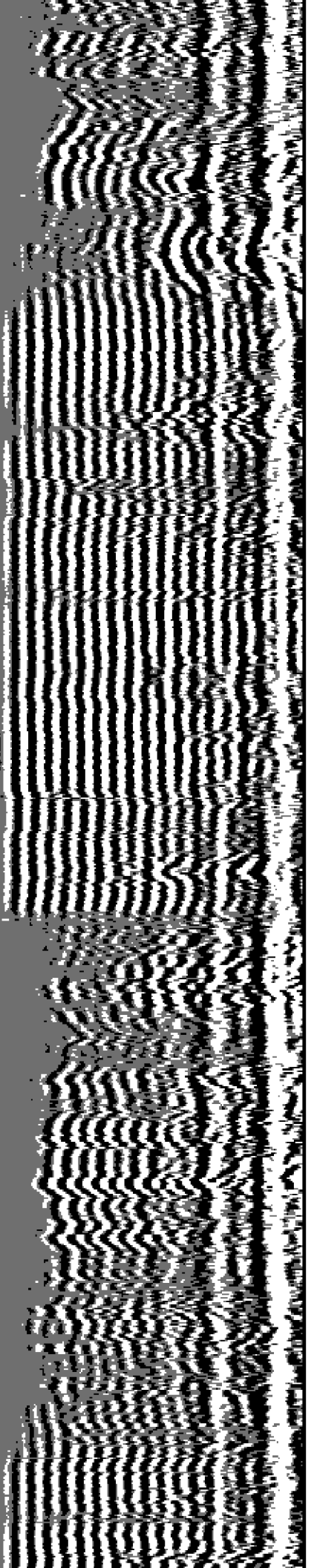


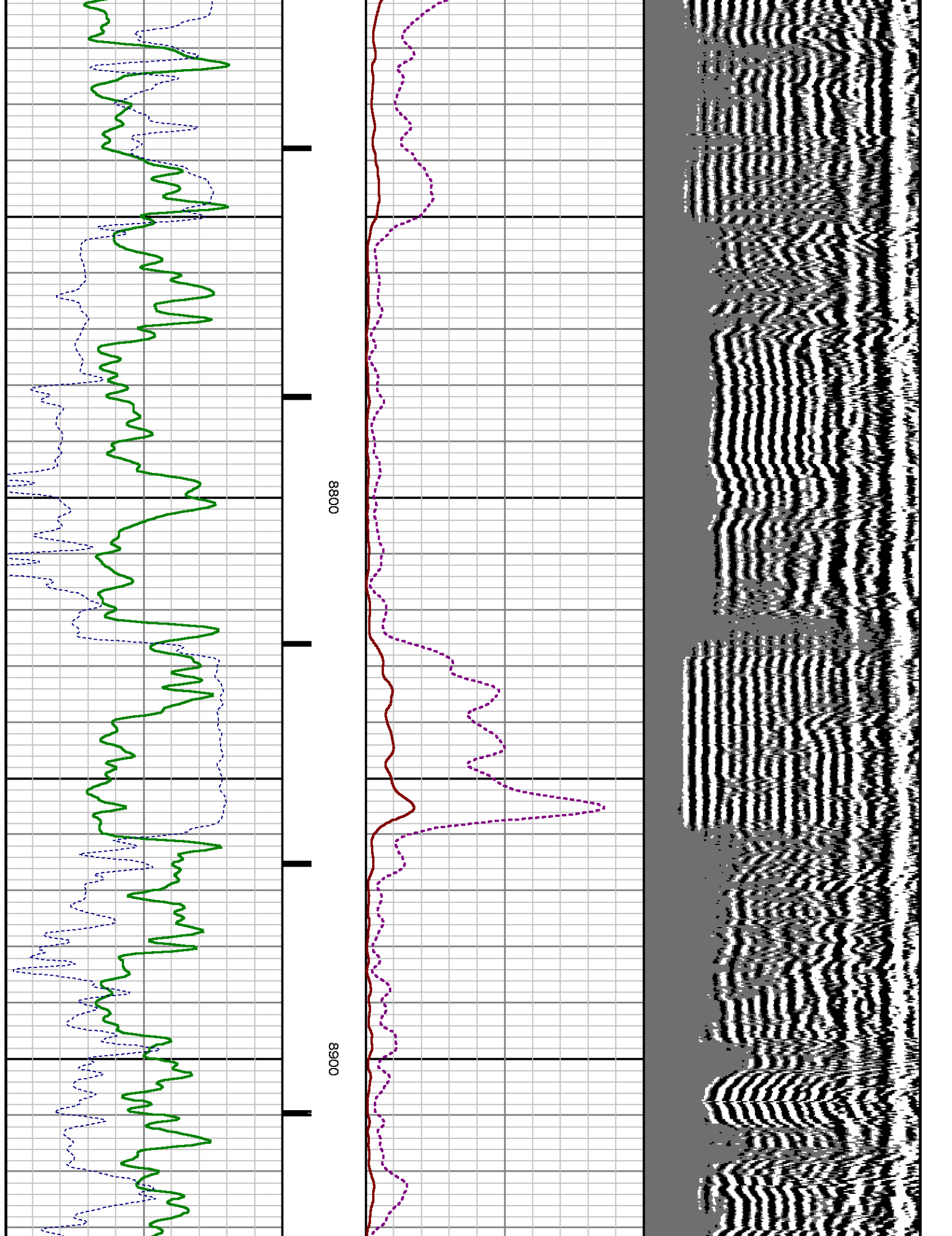


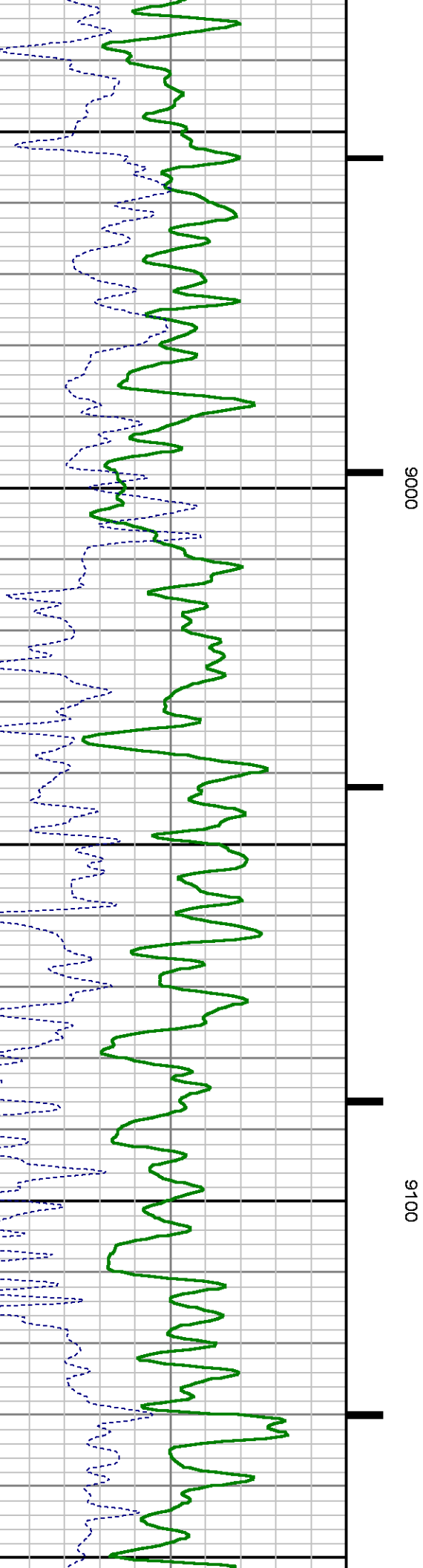
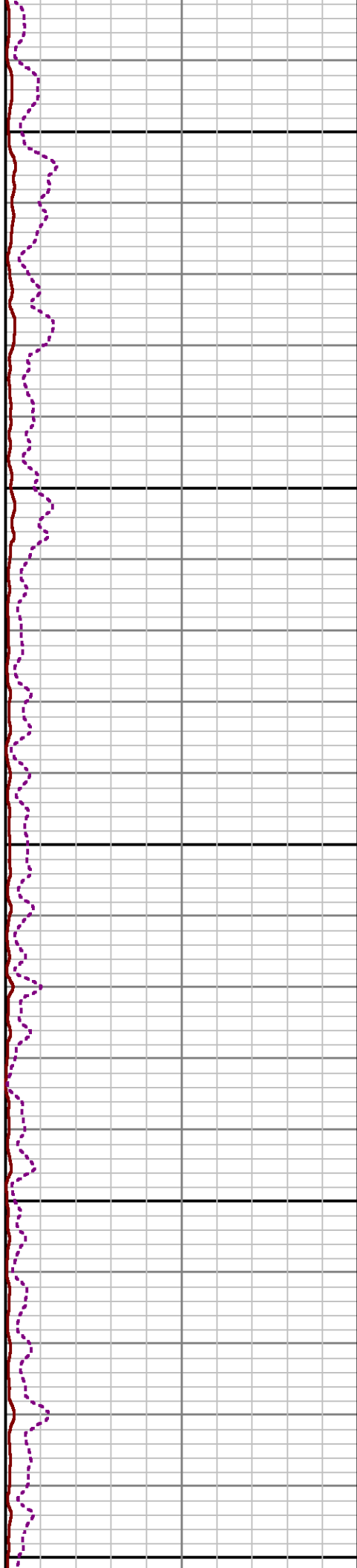
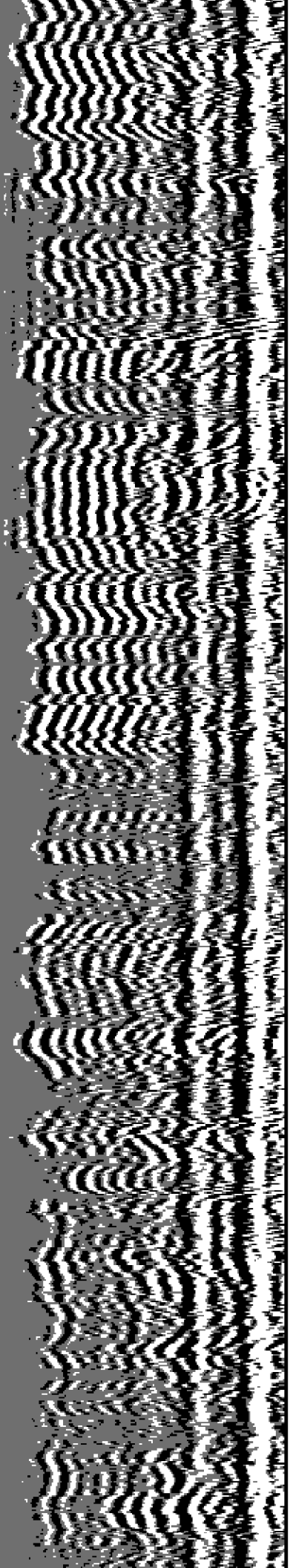
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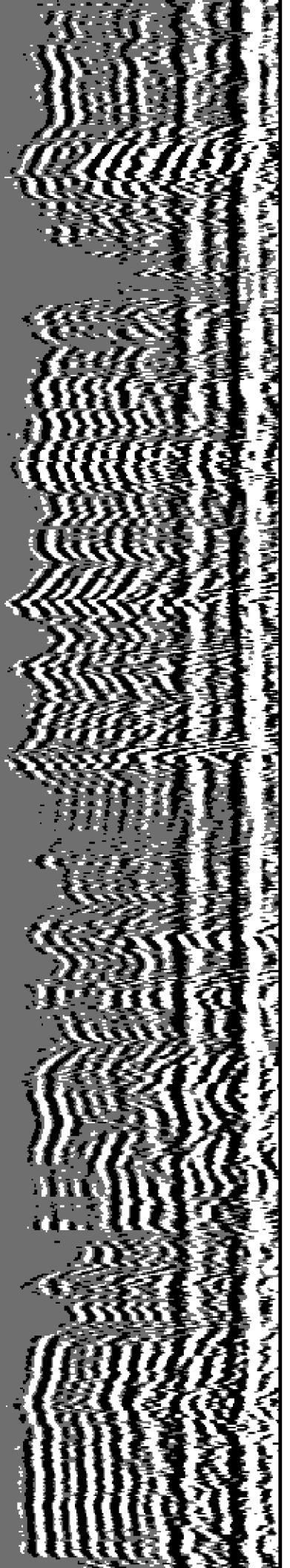
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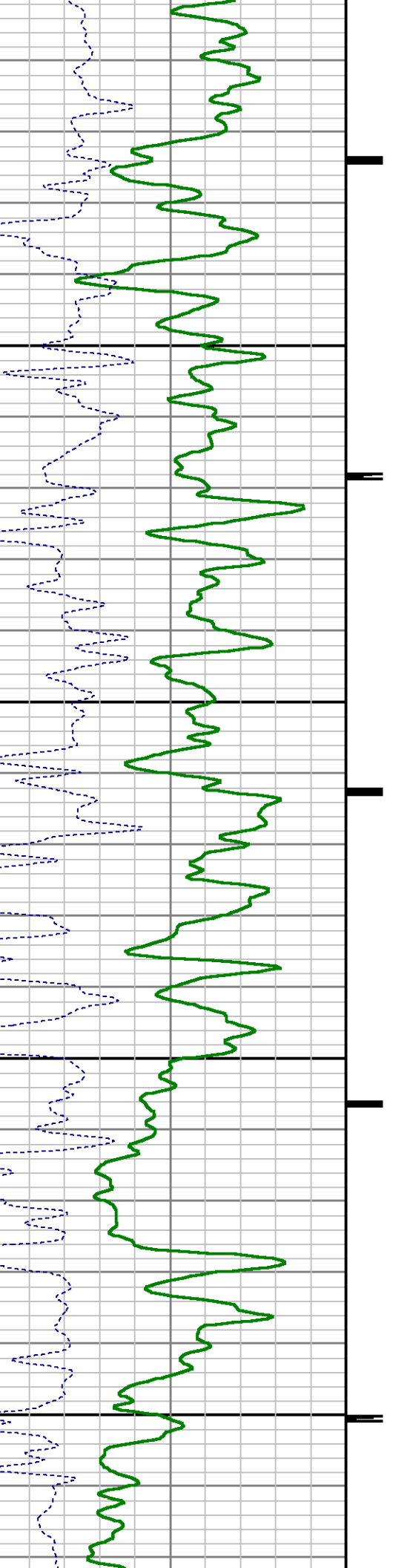


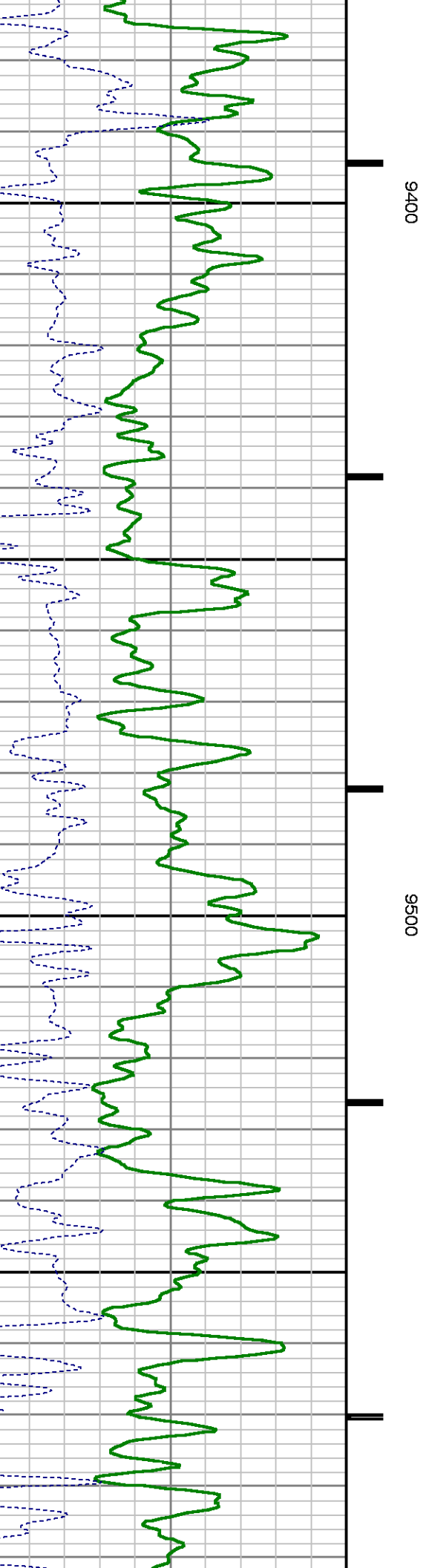
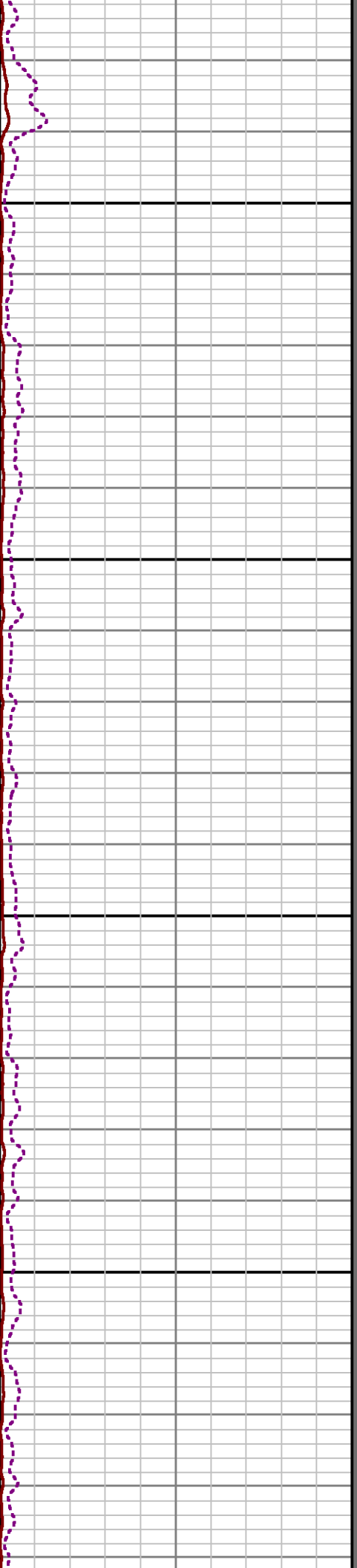
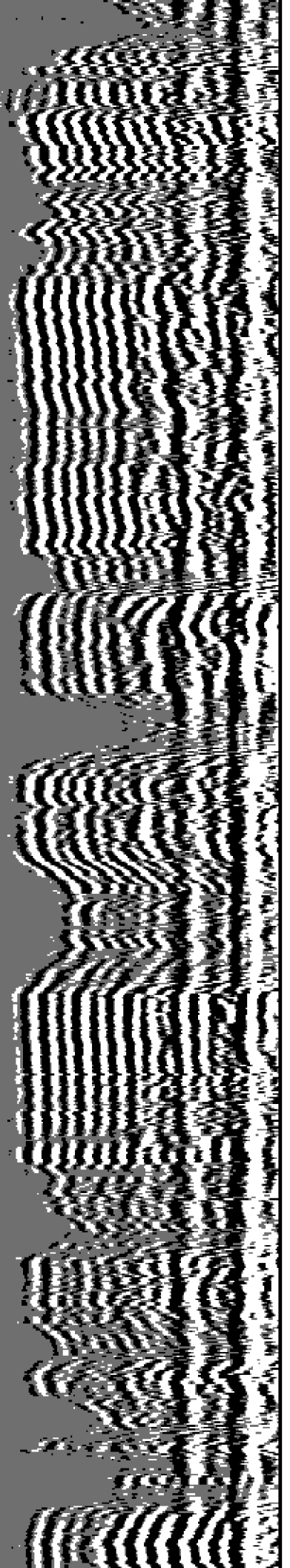


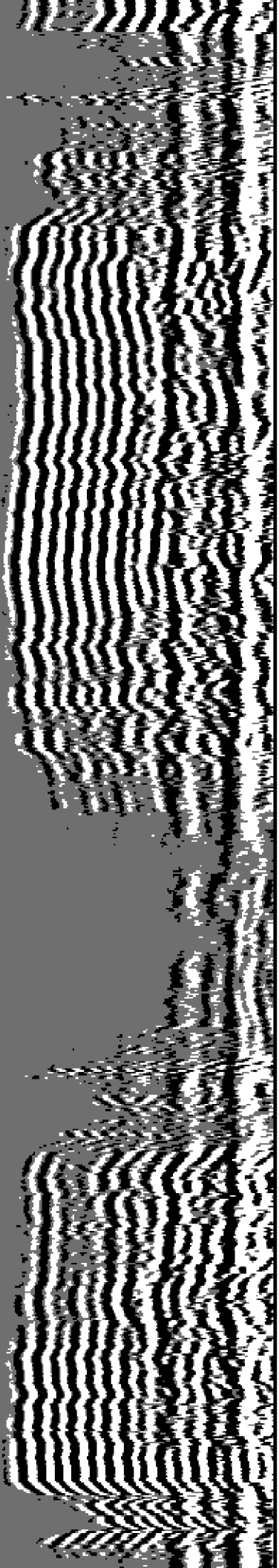


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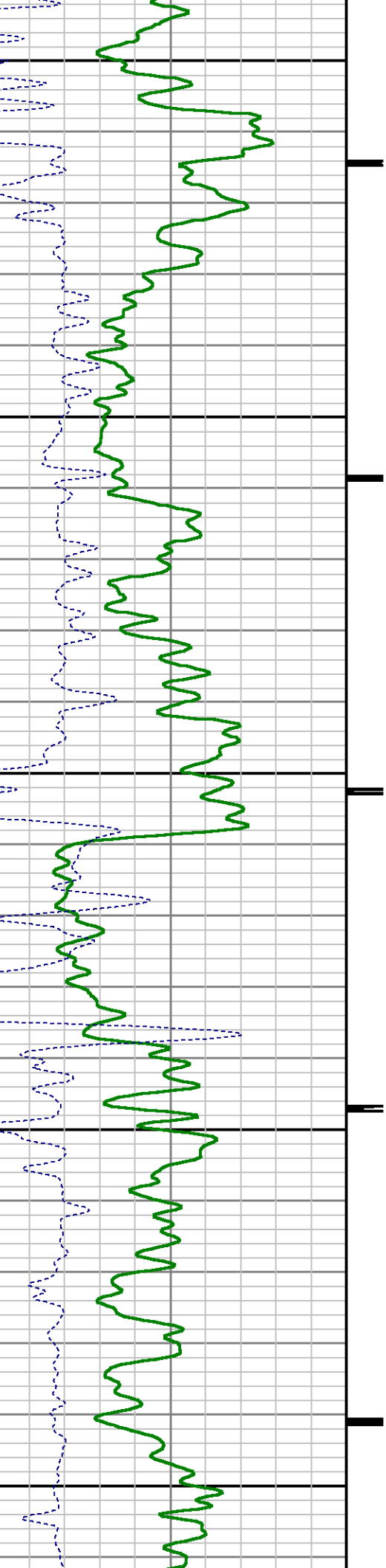


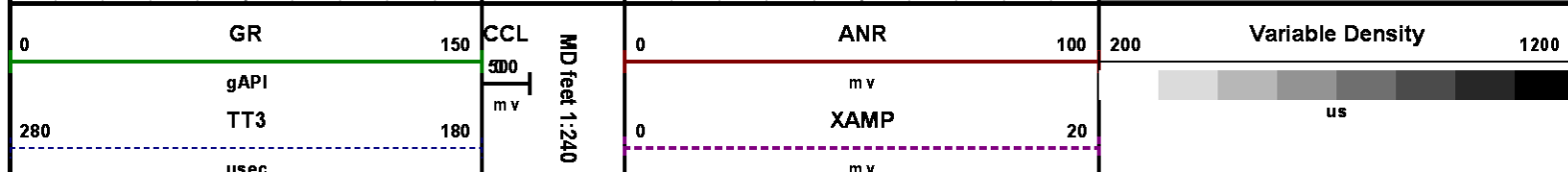
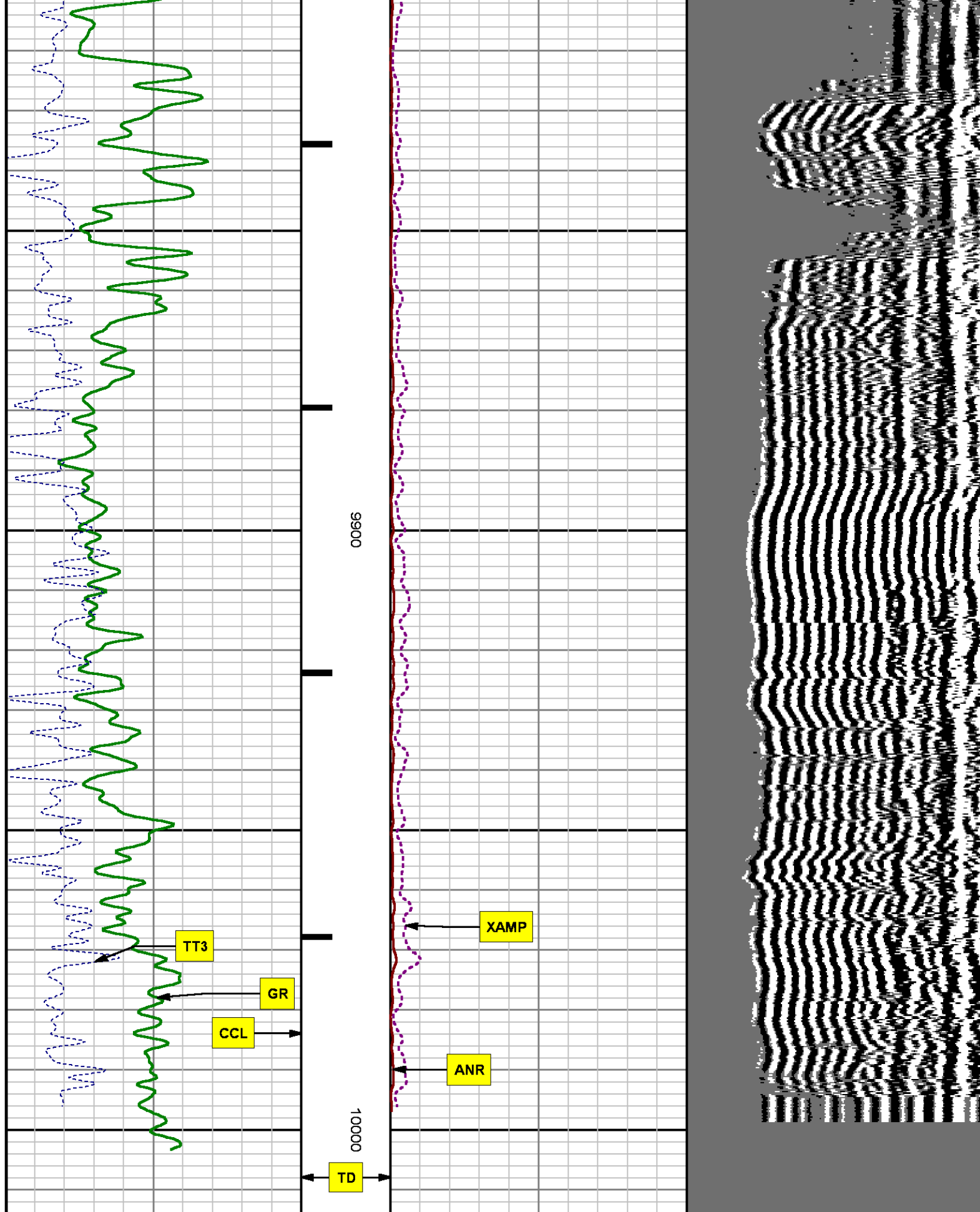


9600

9700

9800





SECONDARY PRESENTATION

O PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	35.812	10014.000
RAL	Amp Gate Start Near	195.000	usec	35.812	10014.000
RAL	Amp Gate Start Radial	195.000	usec	35.812	10014.000
RAL	Amp Gate Width Far	25.000	usec	35.812	10014.000
RAL	Amp Gate Width Near	25.000	usec	35.812	10014.000
RAL	Amp Gate Width Radial	25.000	usec	35.812	10014.000
RAL	casing od	4.500	inches	35.812	10014.000
RAL	casing wt	11.600	lbm/ft	35.812	10014.000
RAL	FB Start Far	291.900	usec	35.812	10014.000
RAL	FB Start Near	180.000	usec	35.812	10014.000
RAL	FB Start Radial	180.000	usec	35.812	10014.000
RAL	FB Thresh Far	10.000	mv	35.812	10014.000
RAL	FB Thresh Near	4.000	mv	35.812	10014.000
RAL	FB Thresh Radial	4.000	mv	35.812	10014.000
RAL	Fluid Travel Time	200.000	usec/ft	35.812	10014.000

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-15.750	AFAR	SIG	TT5			
2459XA	-11.340	CCL					
2459XA	-9.490	GR					
2459XA	-4.090	NEU					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

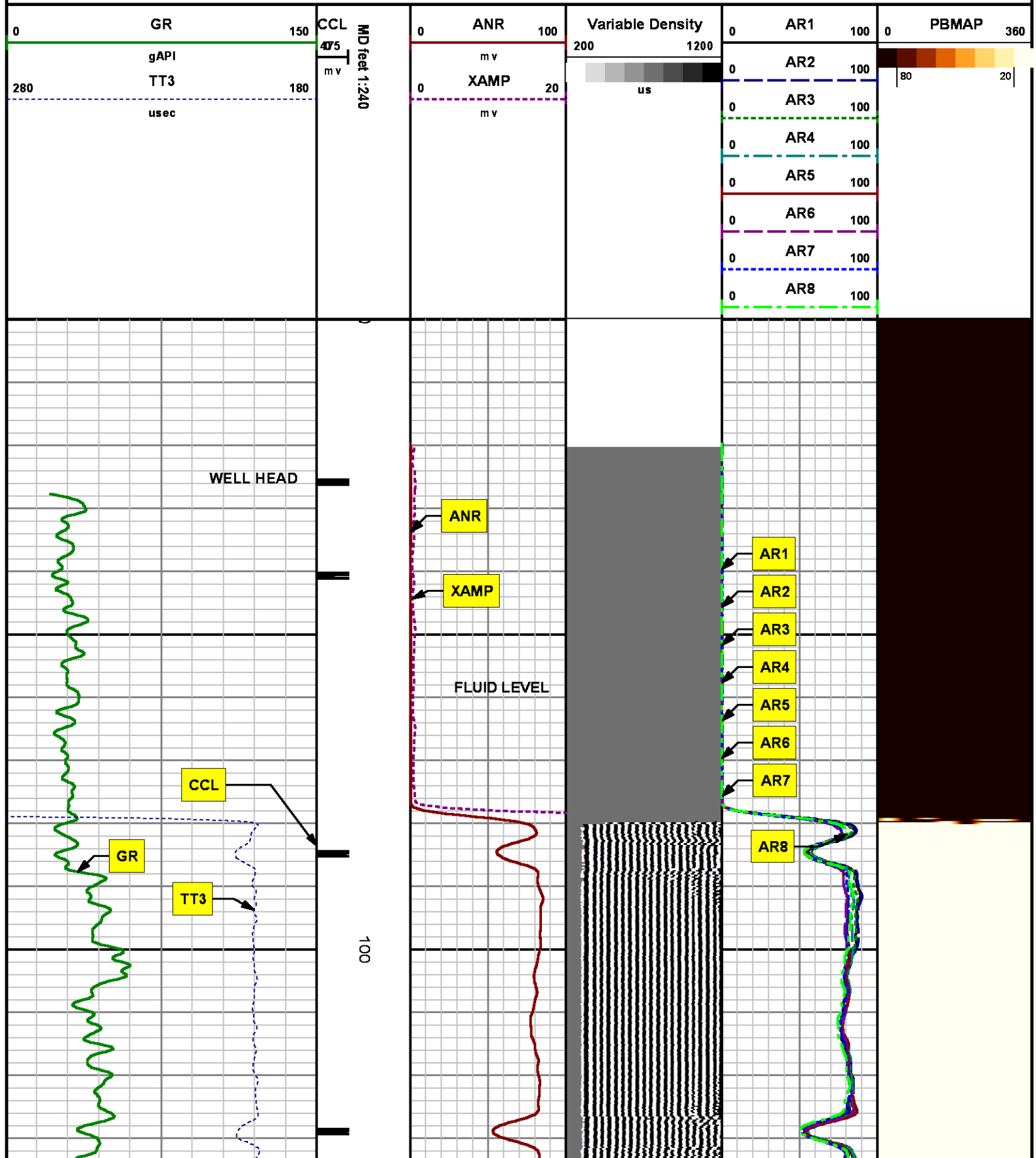
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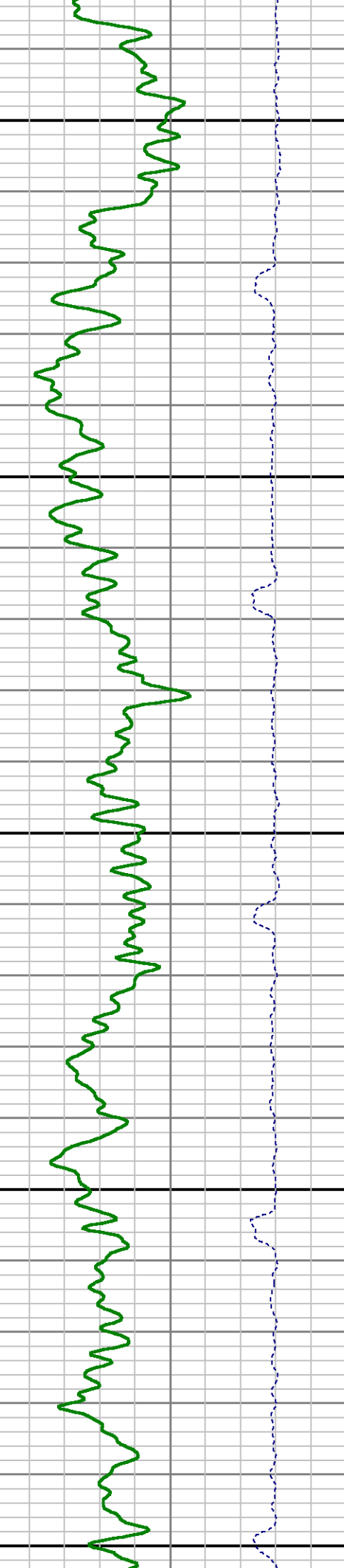
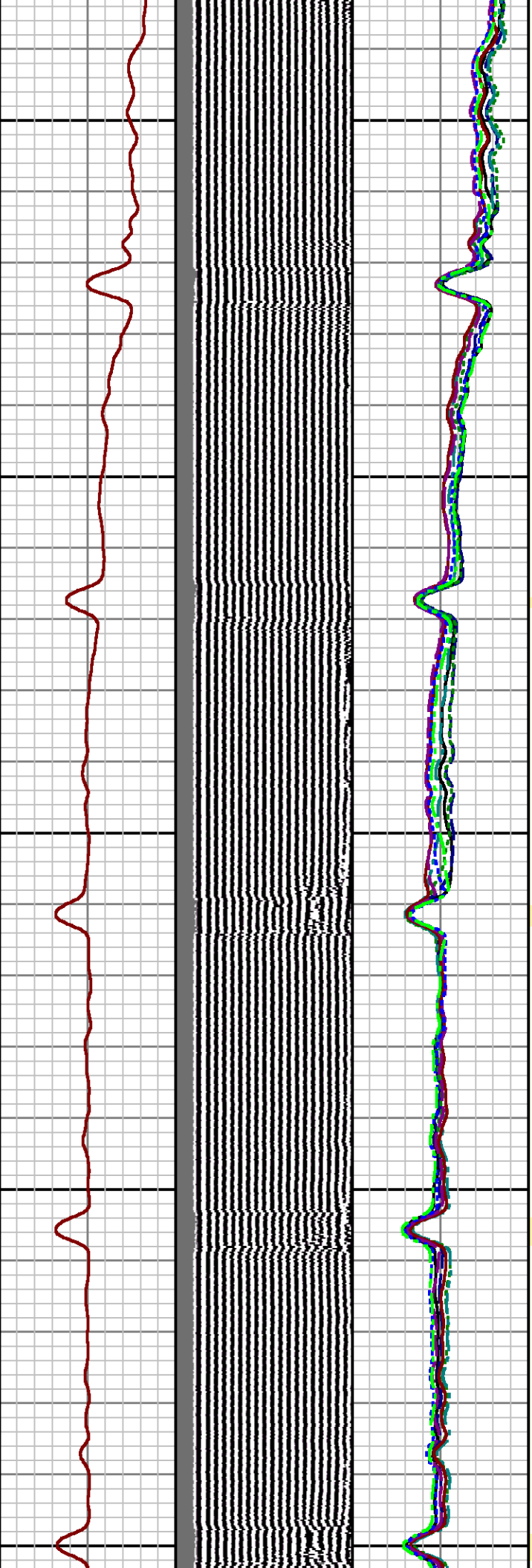
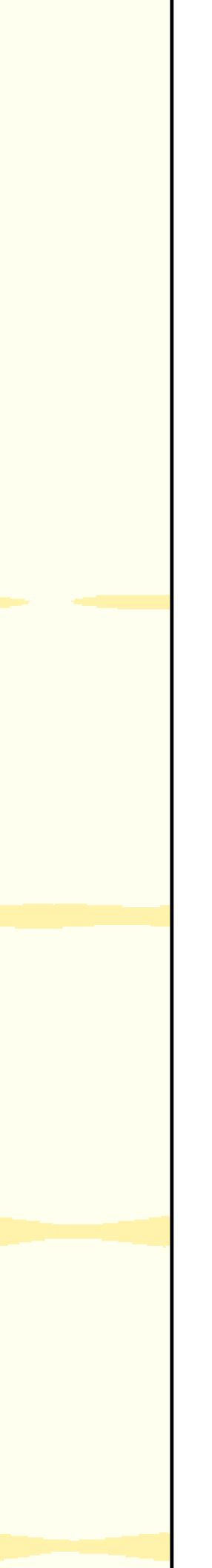
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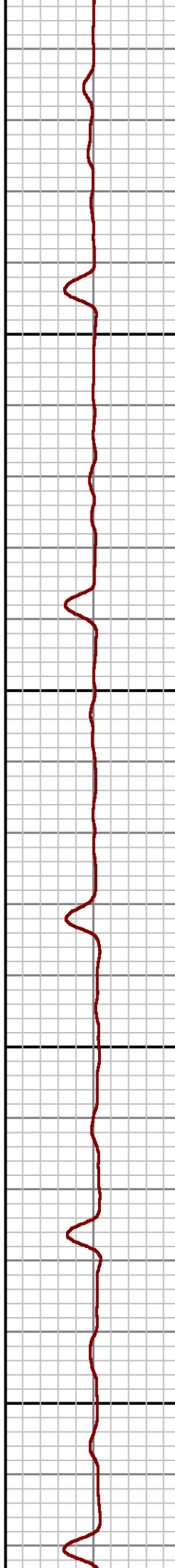
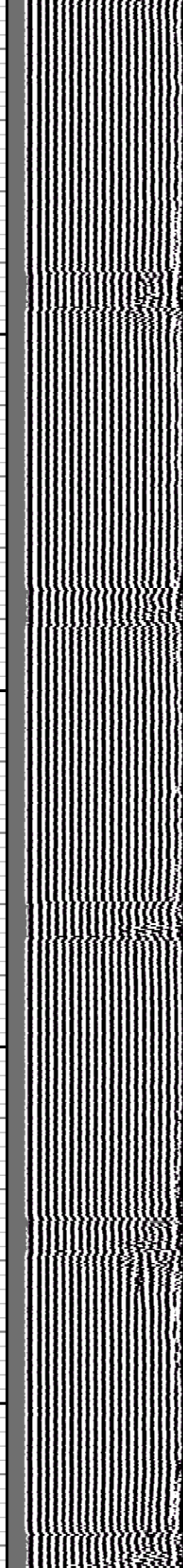
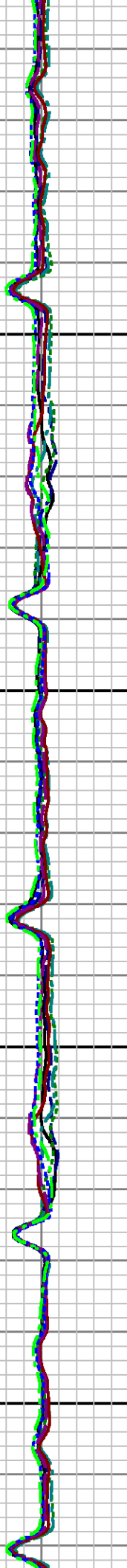
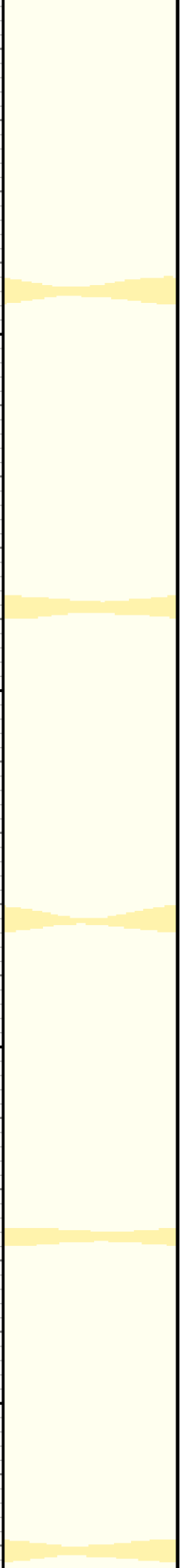
Mode : PlotMgr 5.4.504

Interval : 0.00 - 10014.00 feet UP

Created : 5/22/2014 8:22:43 AM

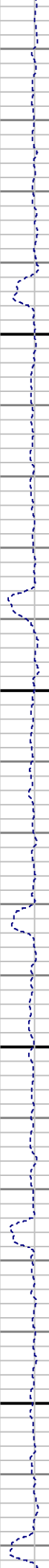


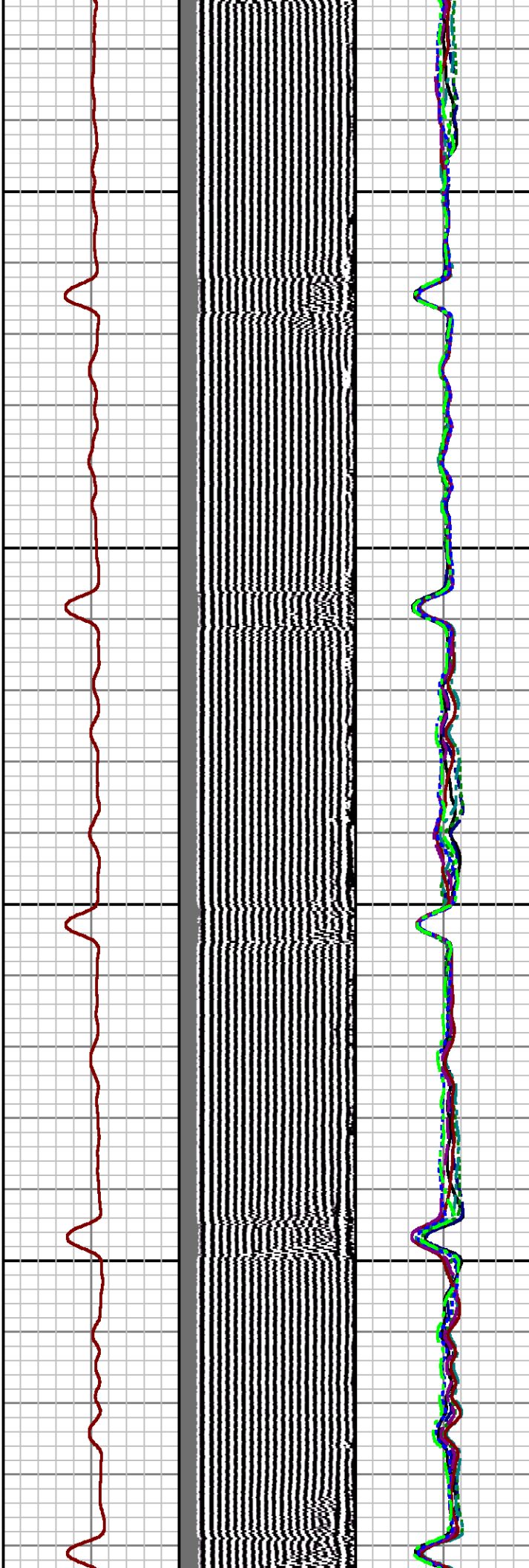
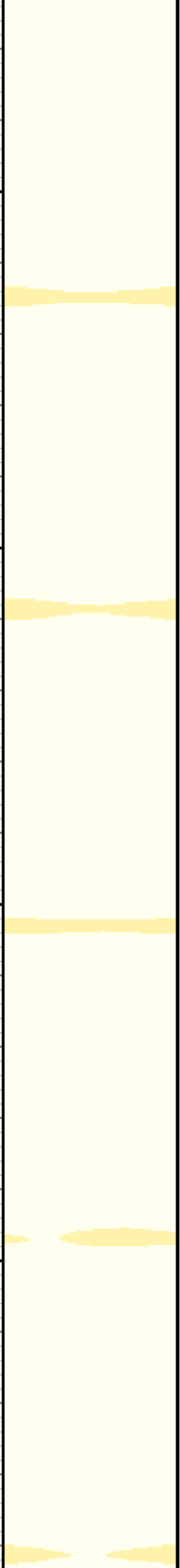




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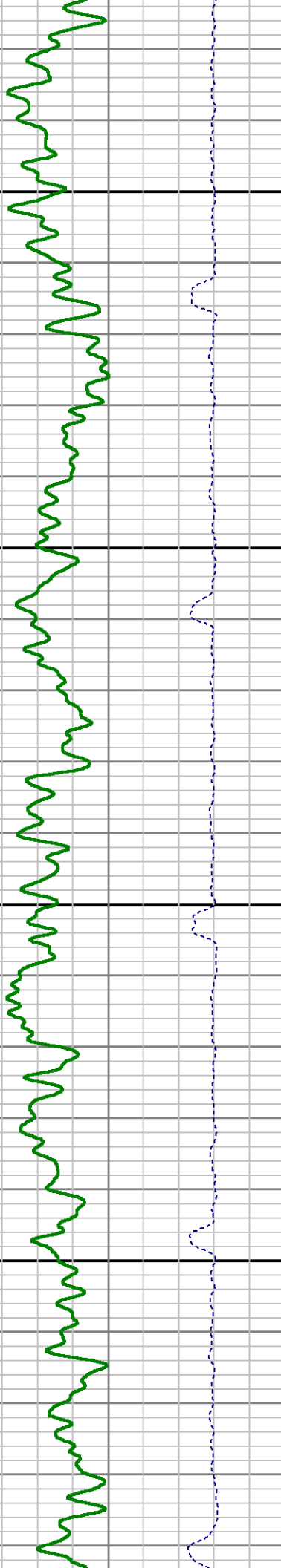
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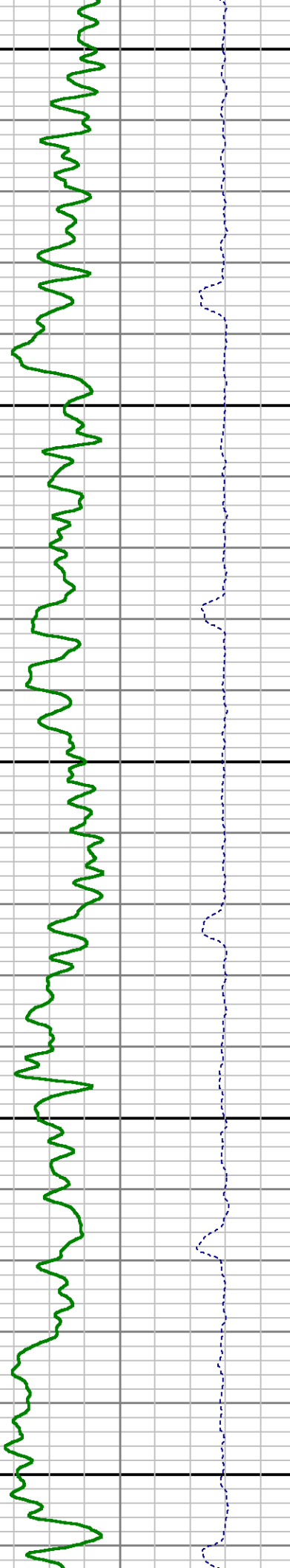
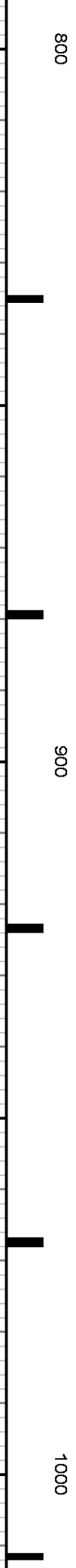
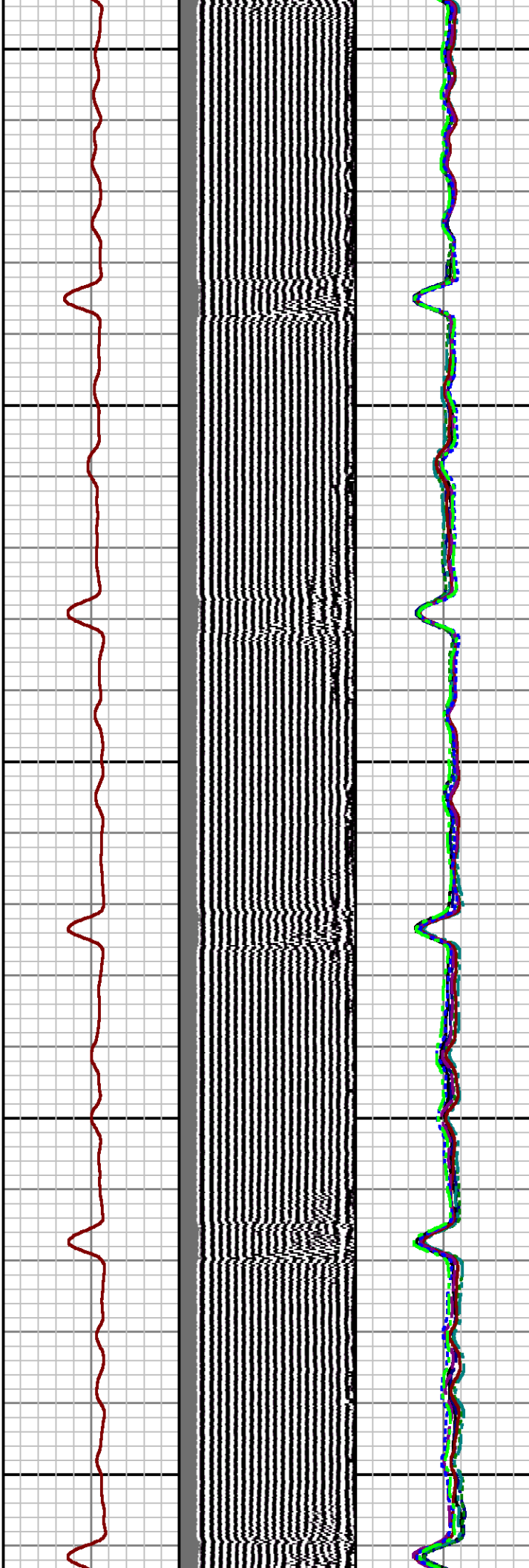
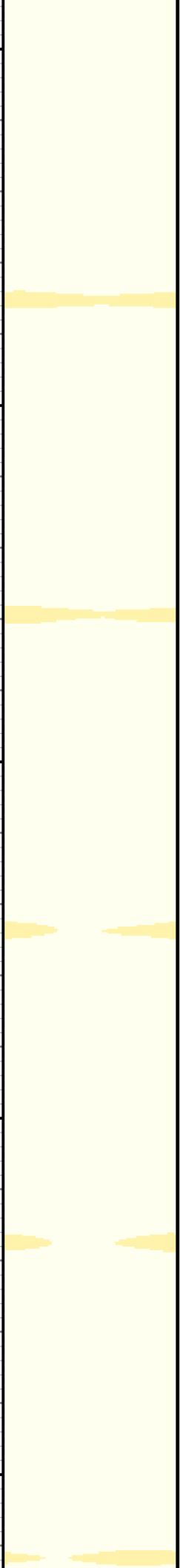


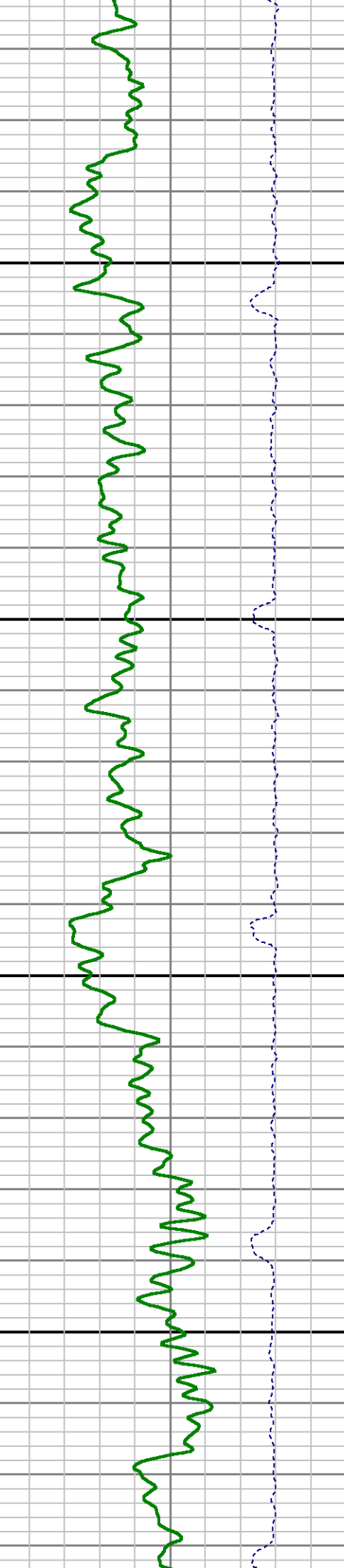
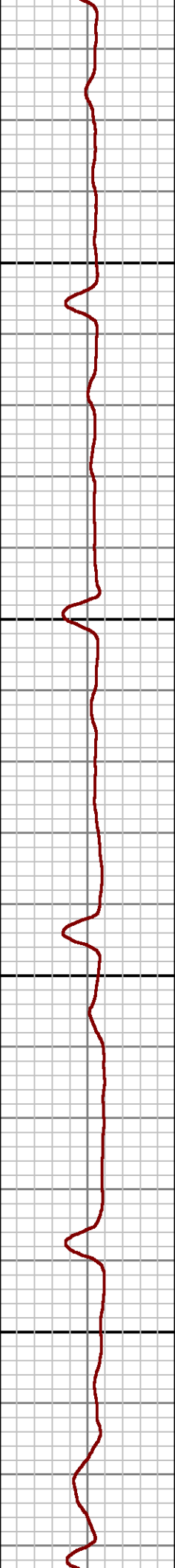
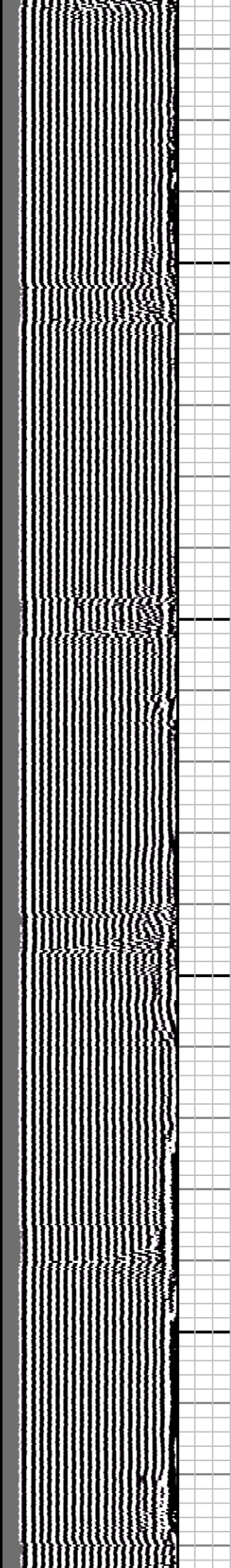
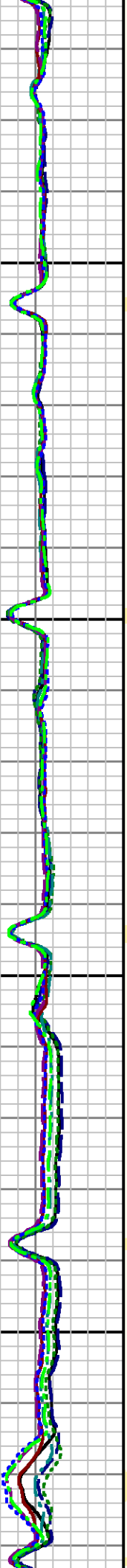
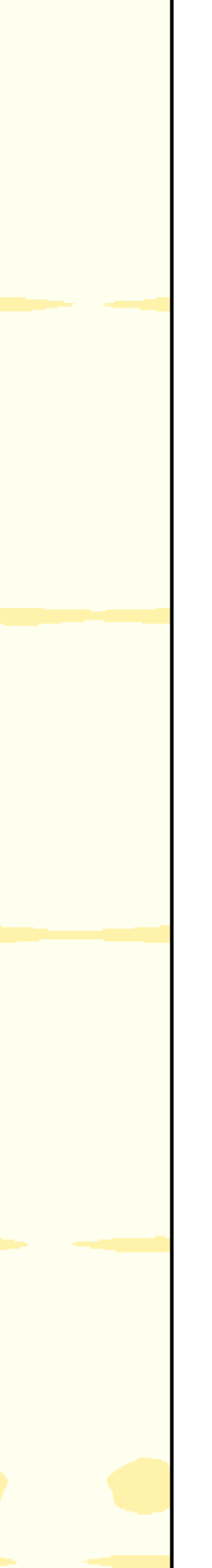


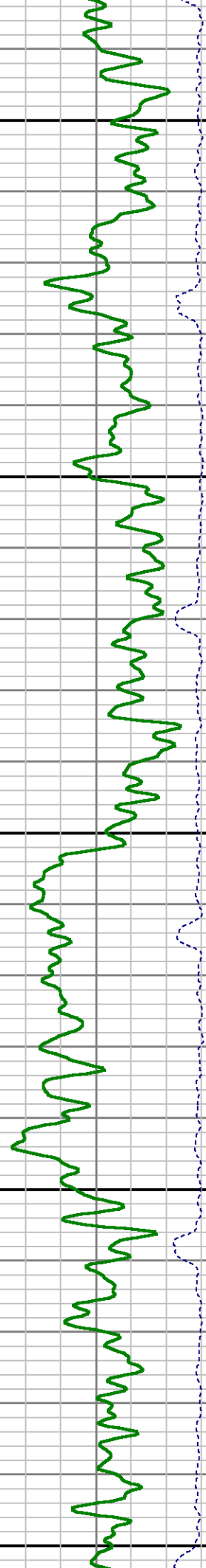
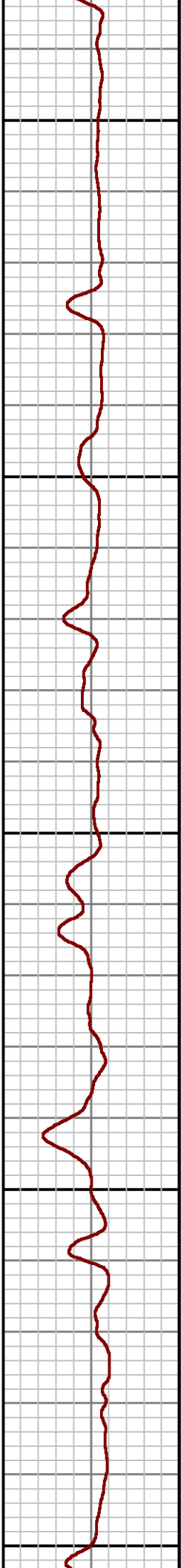
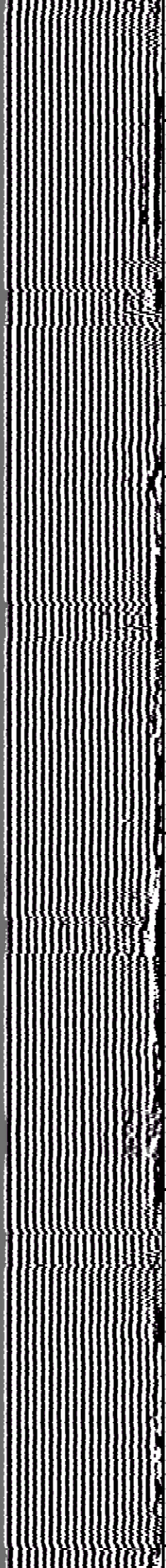
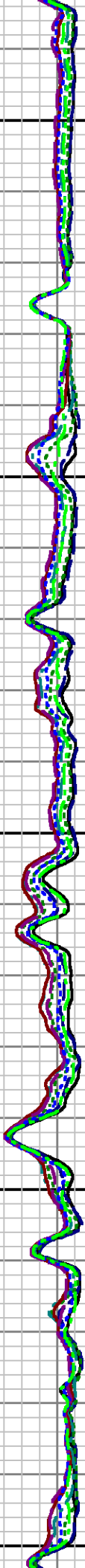
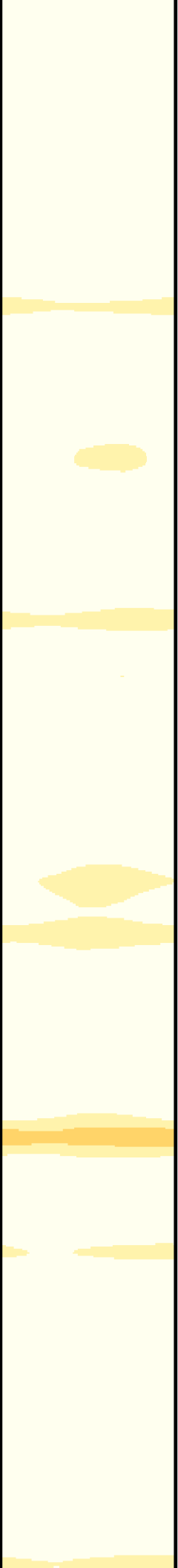
600

700



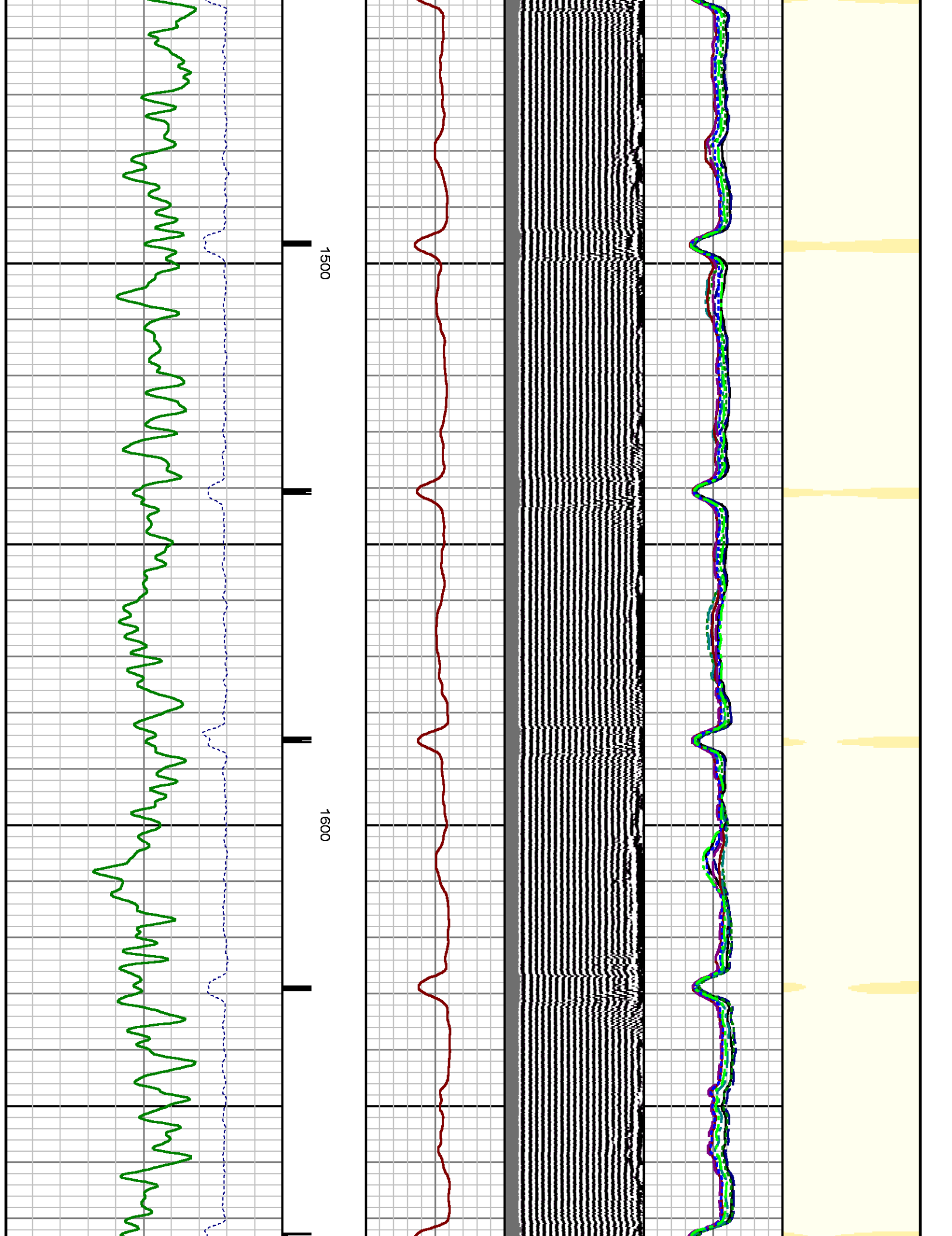


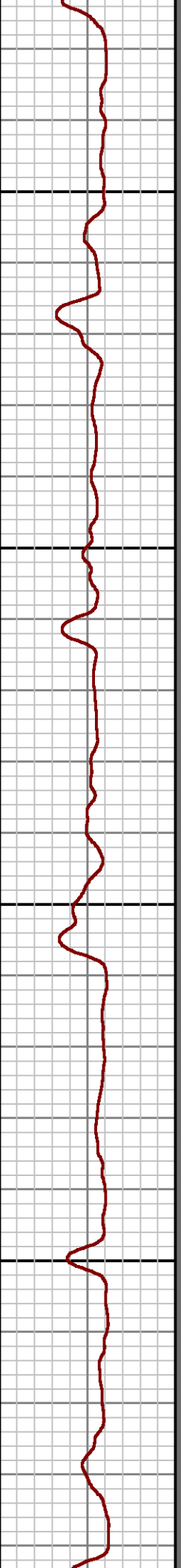
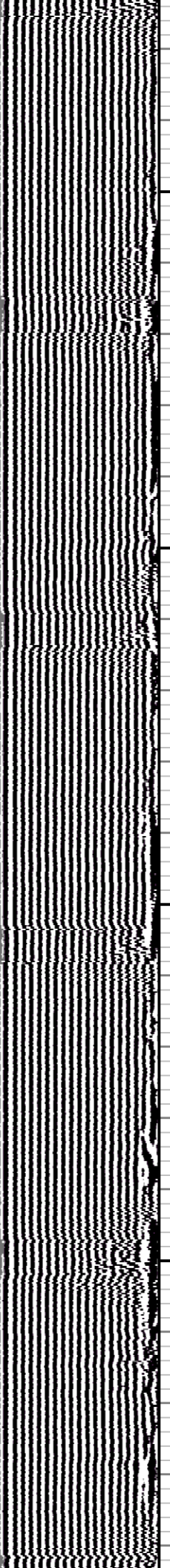
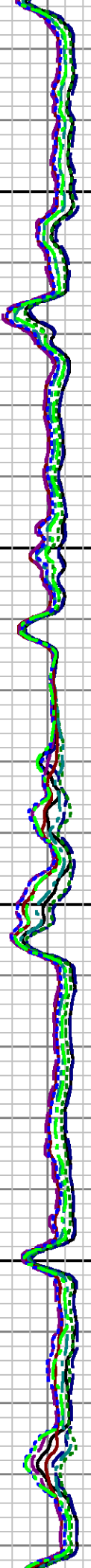
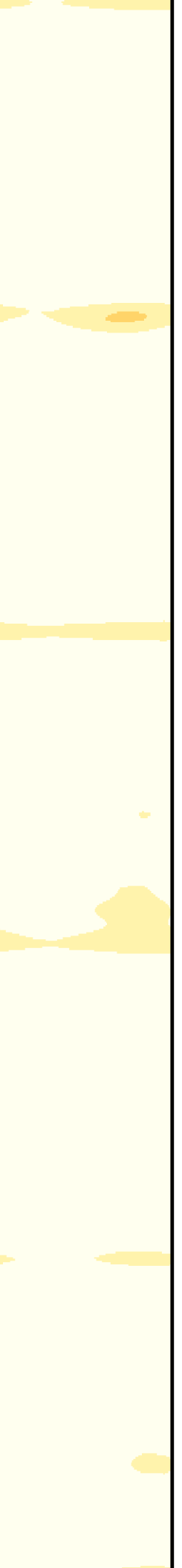




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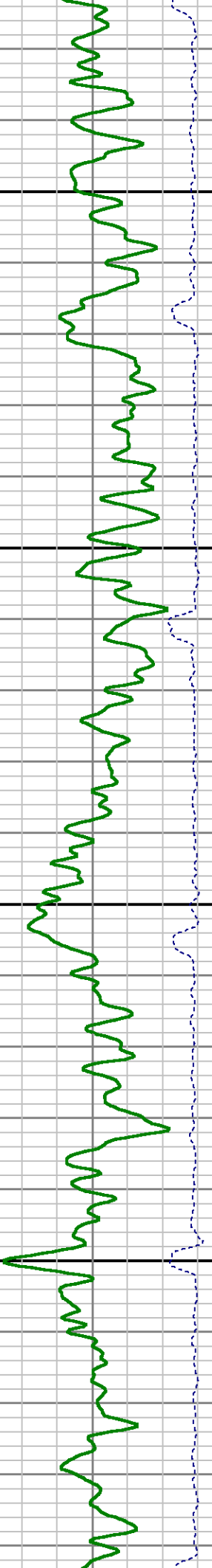
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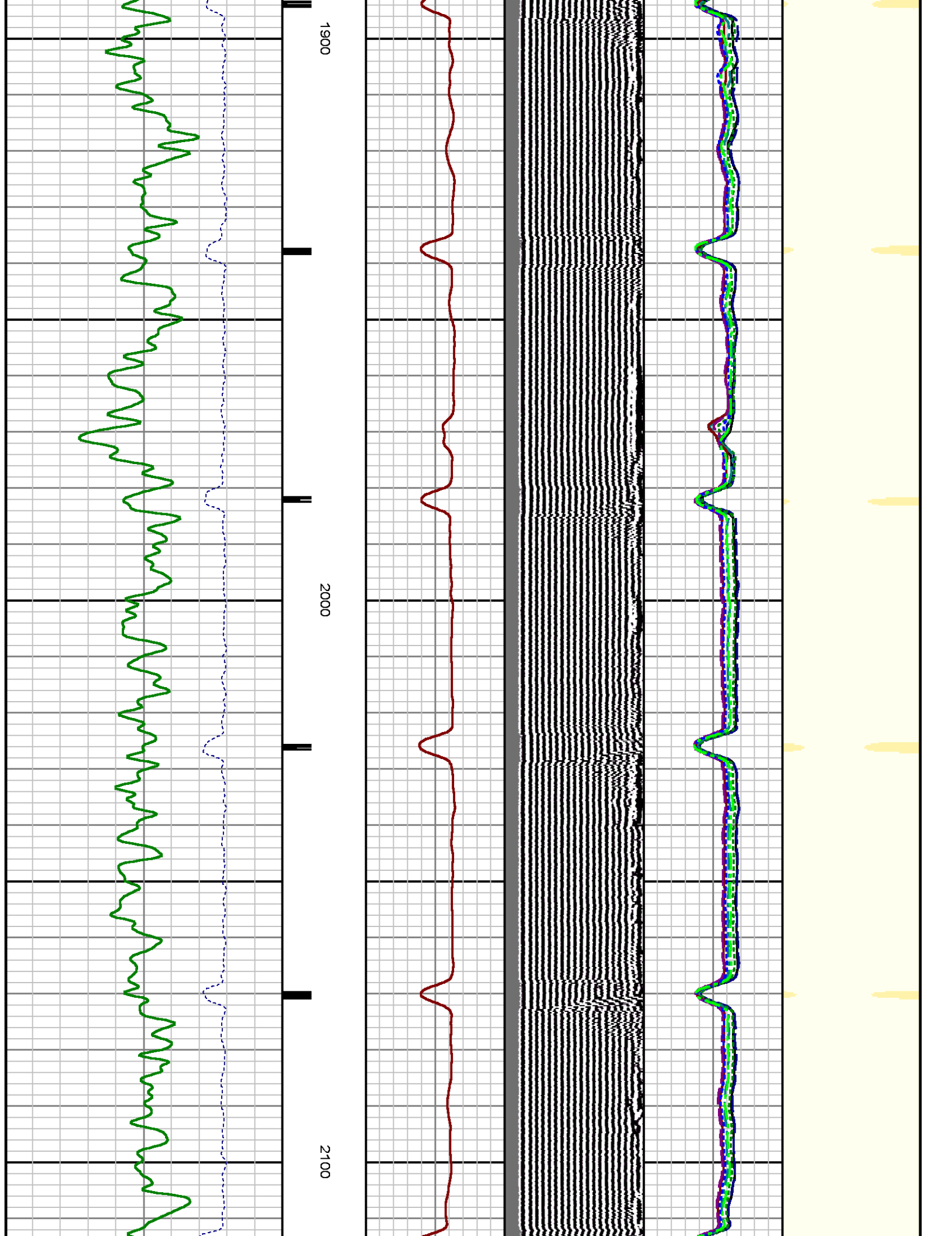


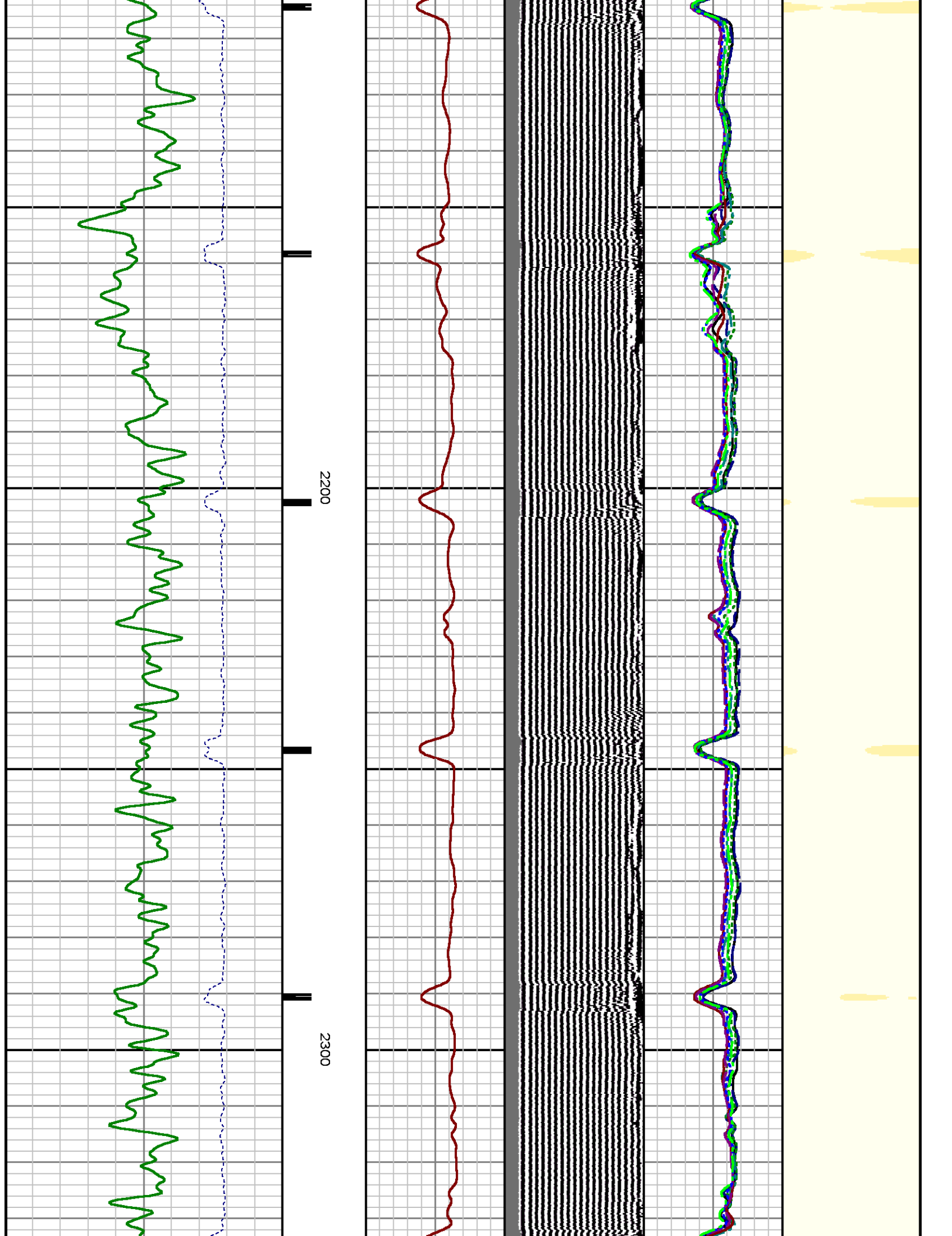


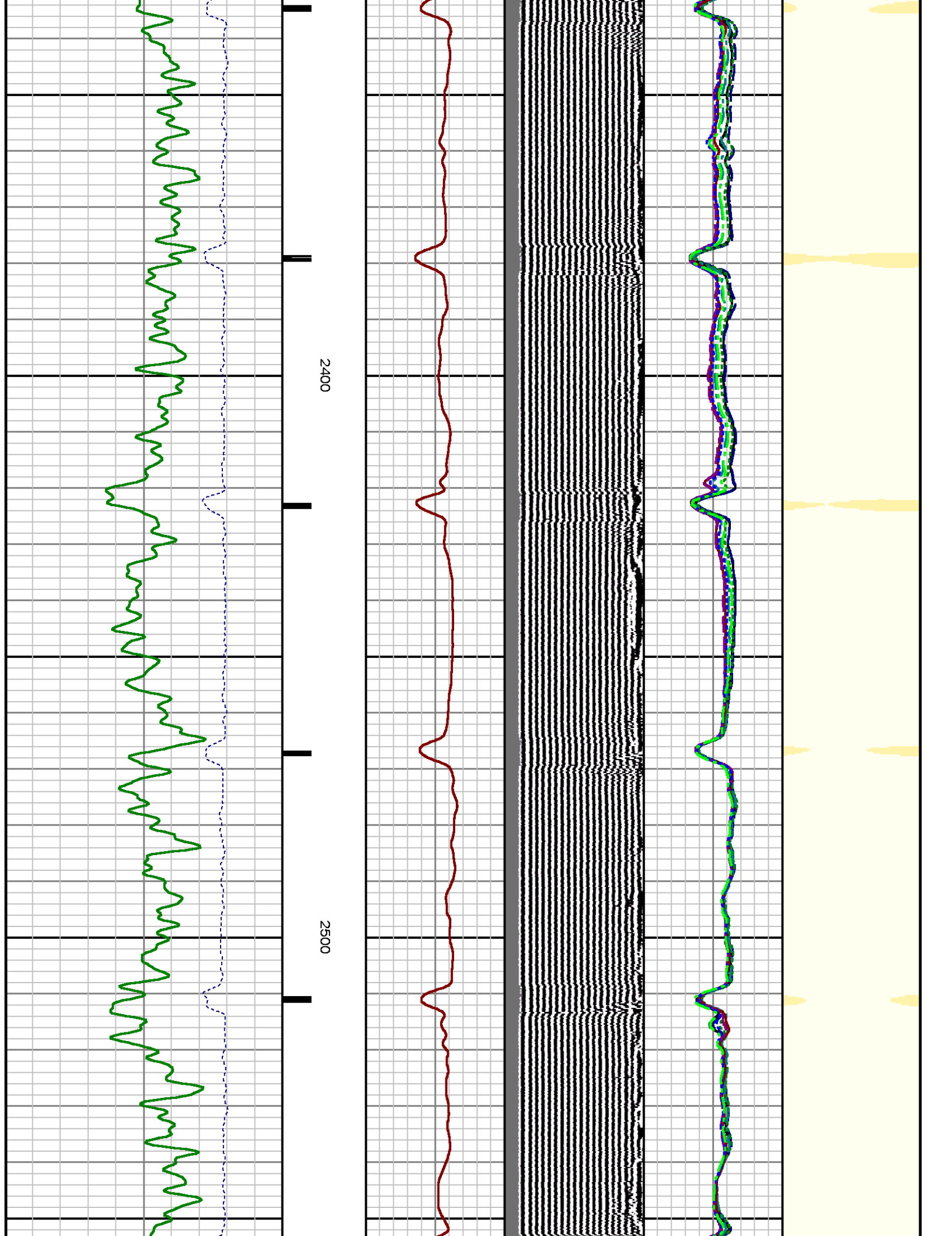
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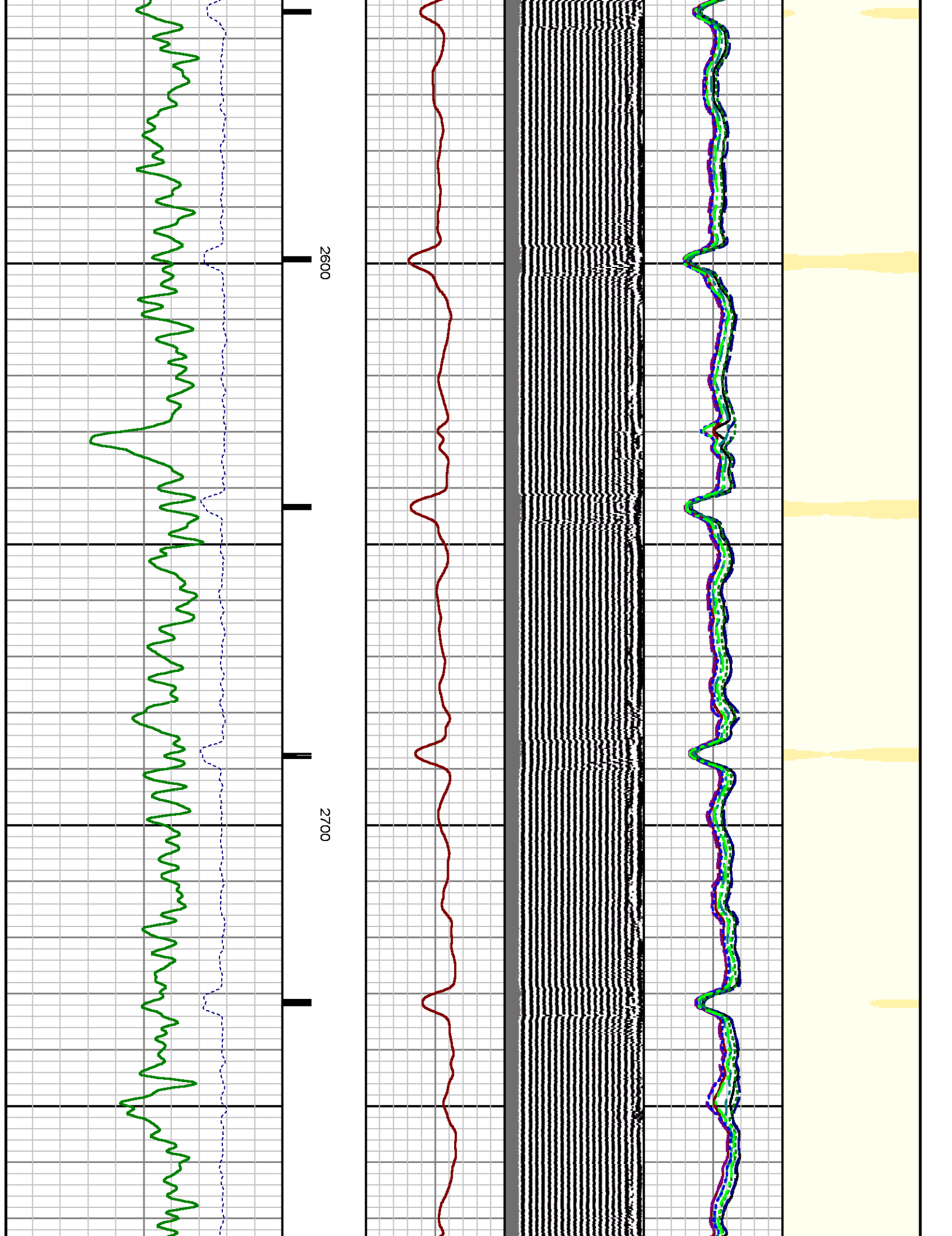
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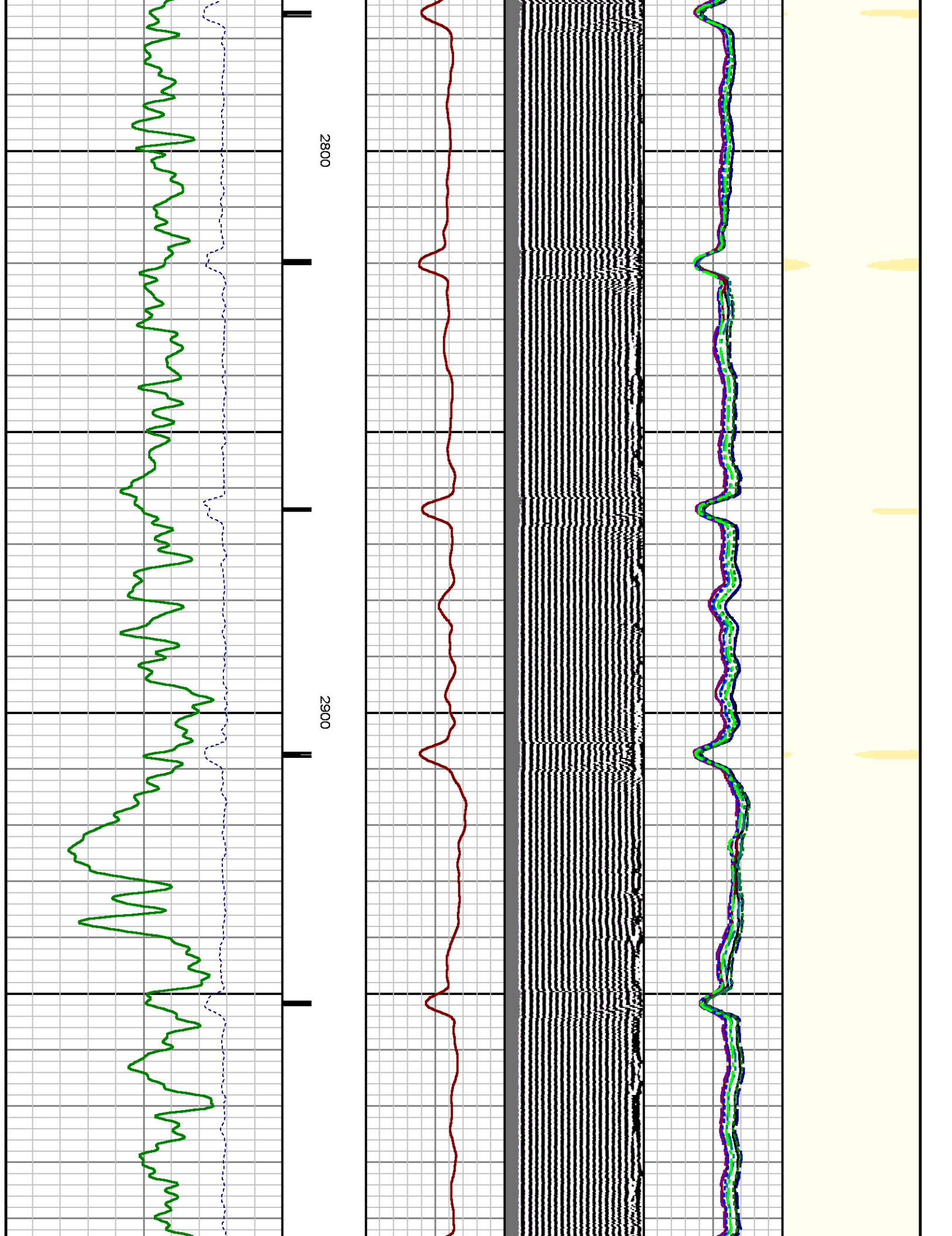


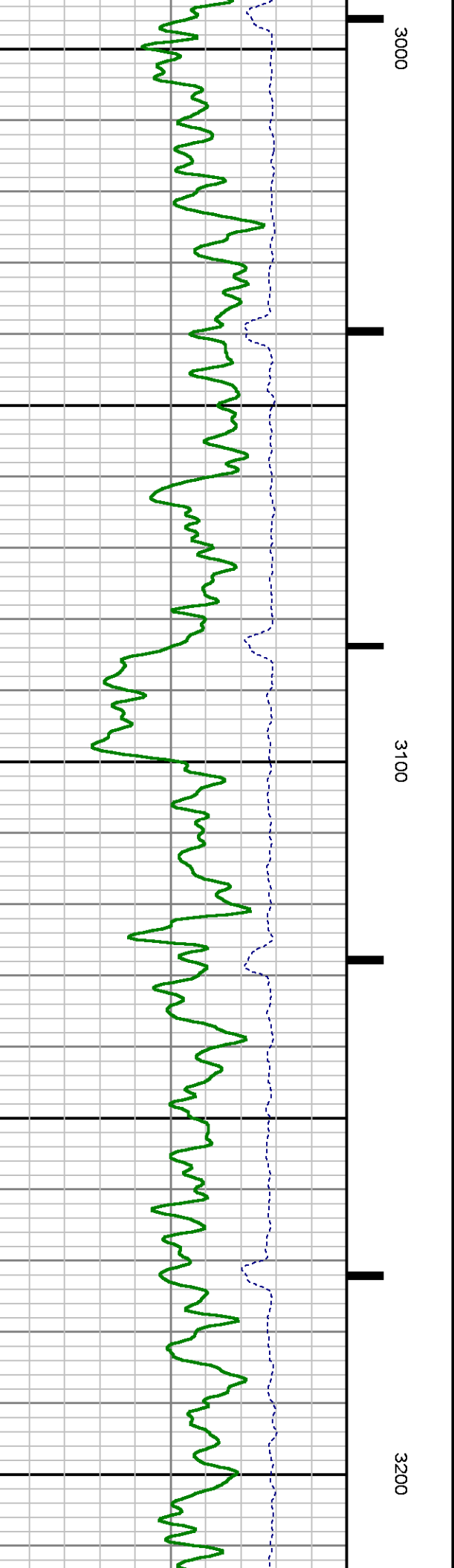
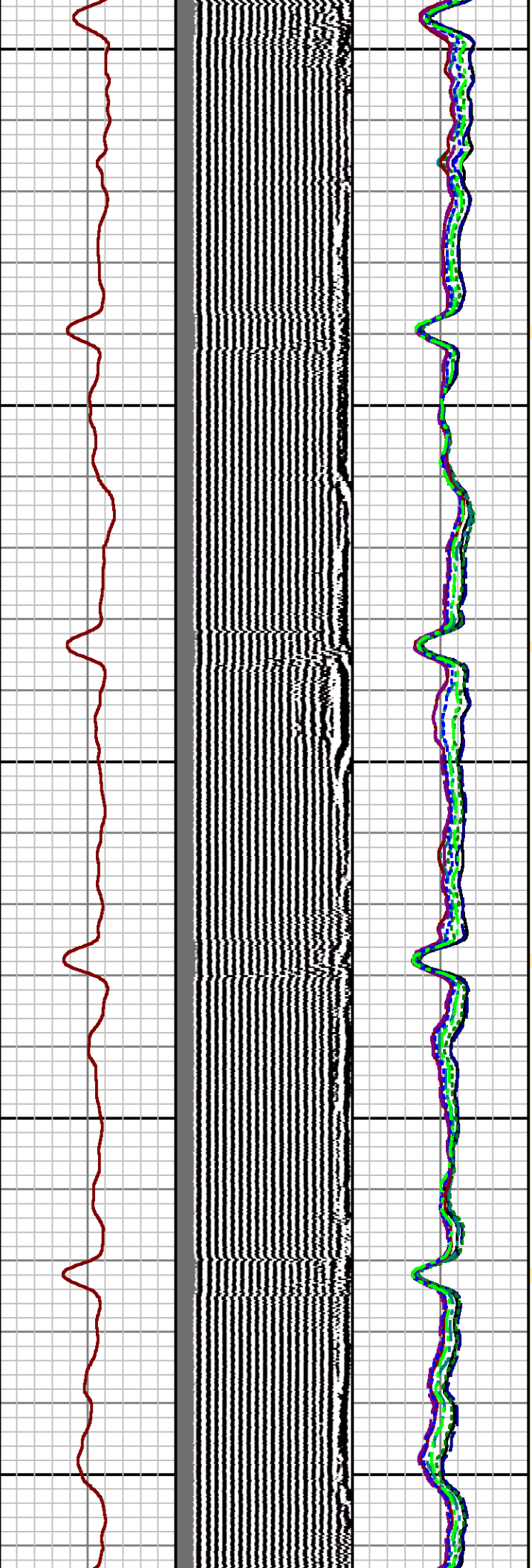
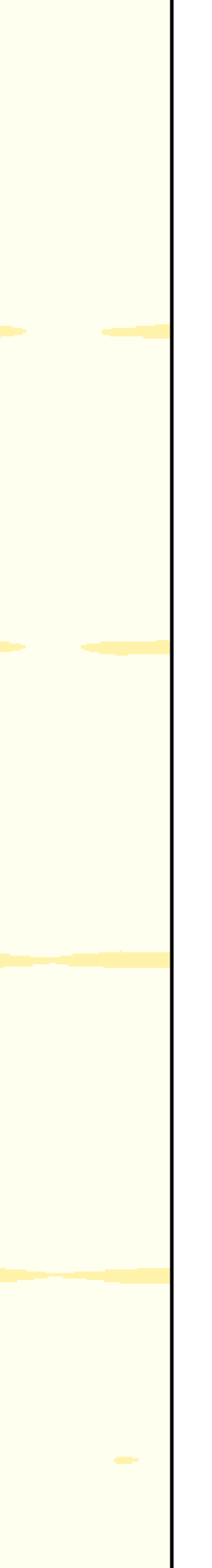


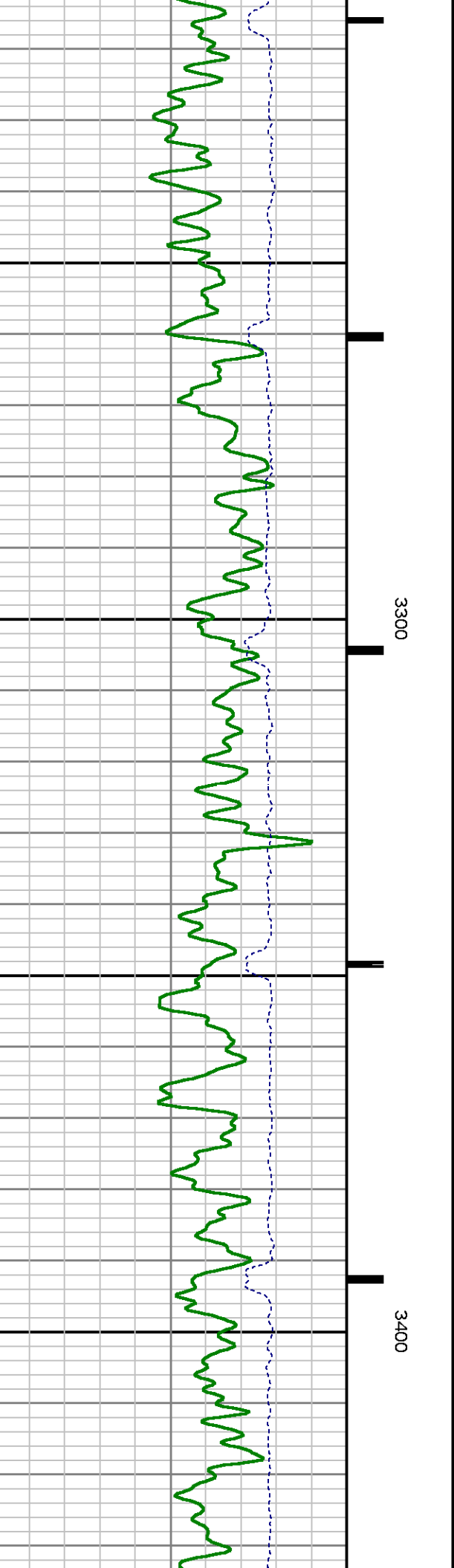
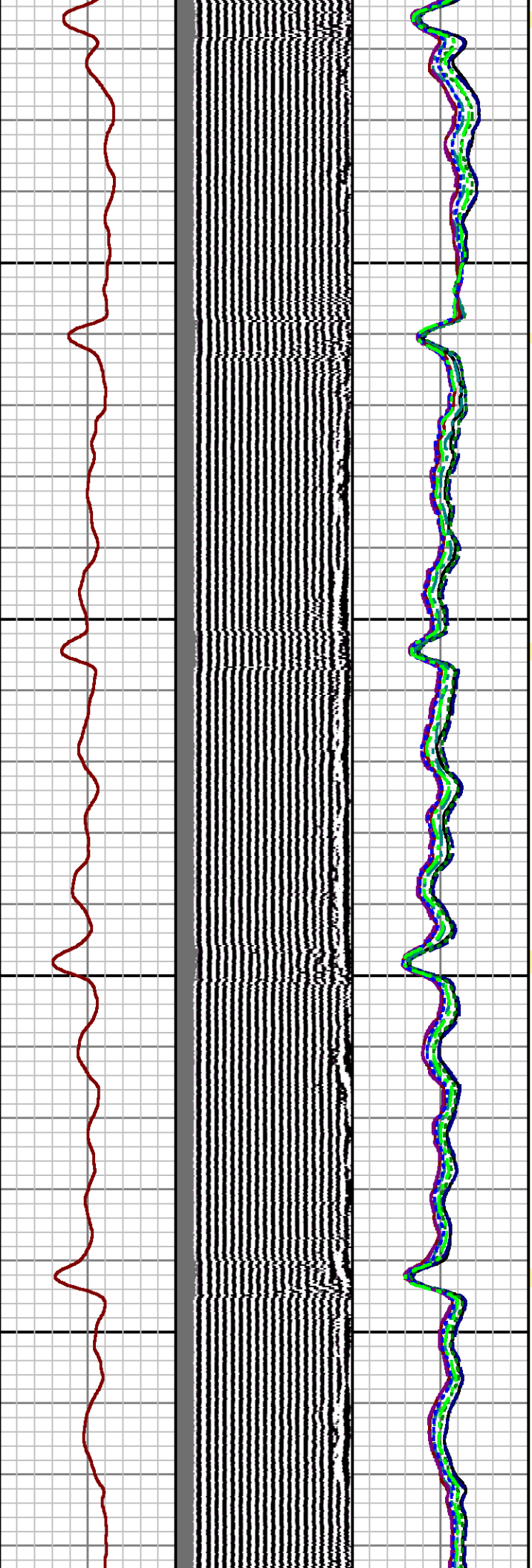
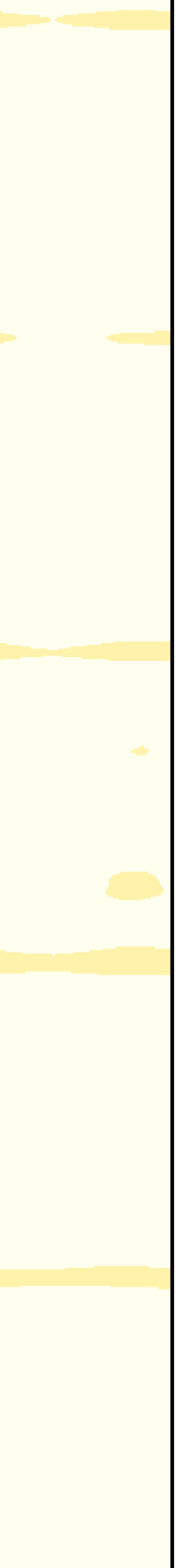


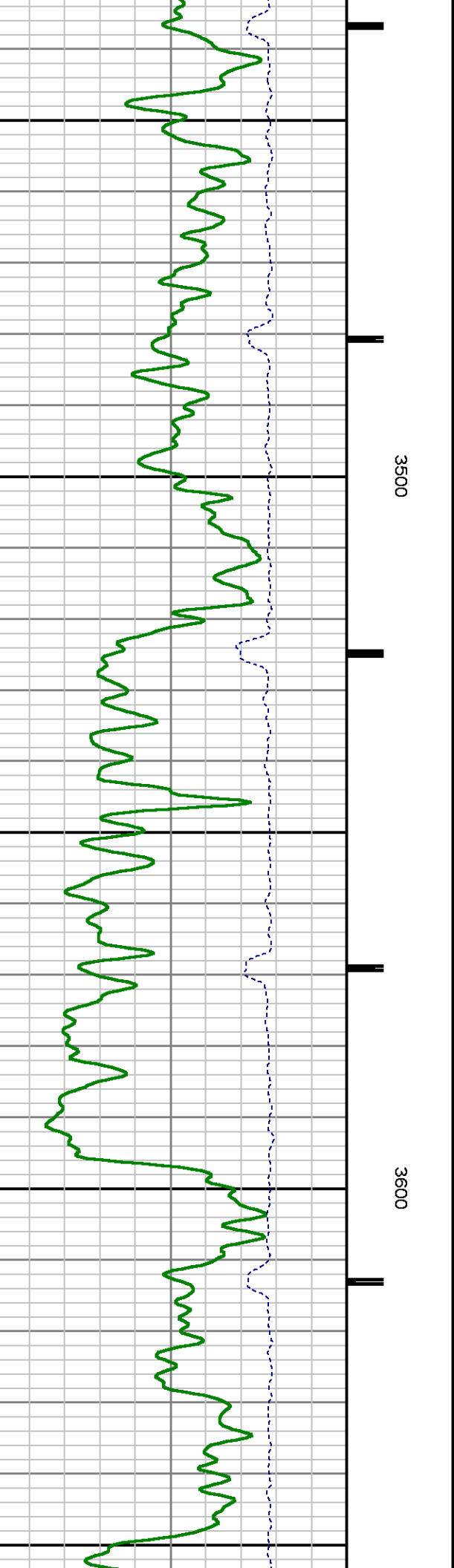
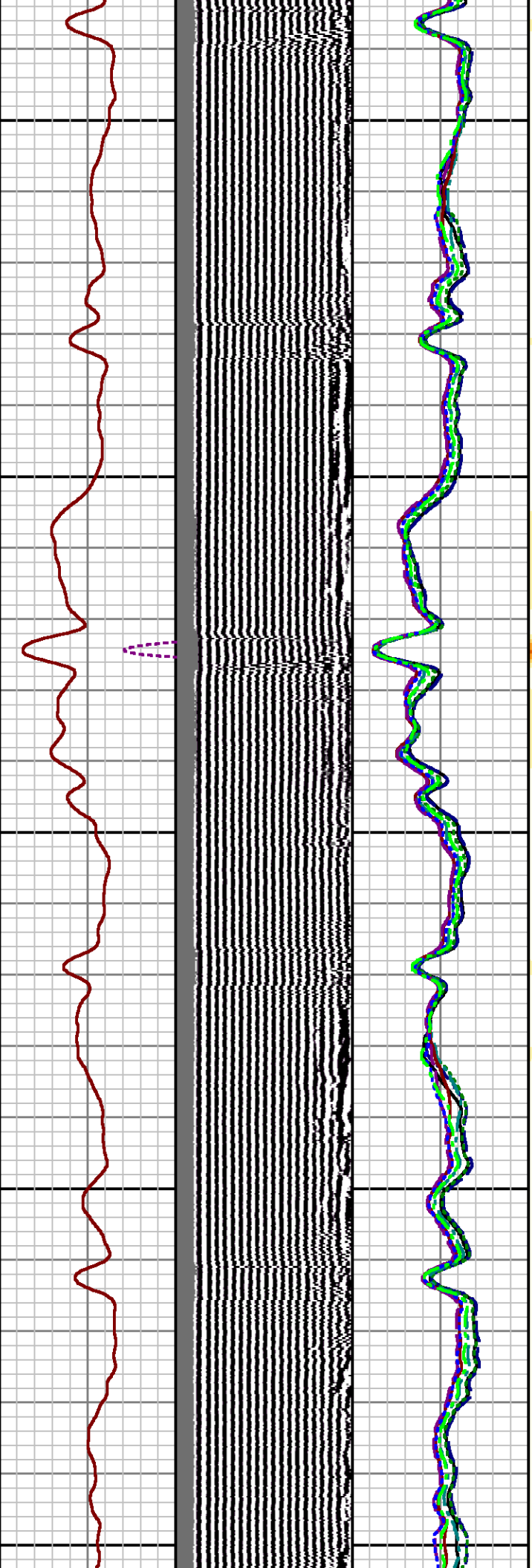


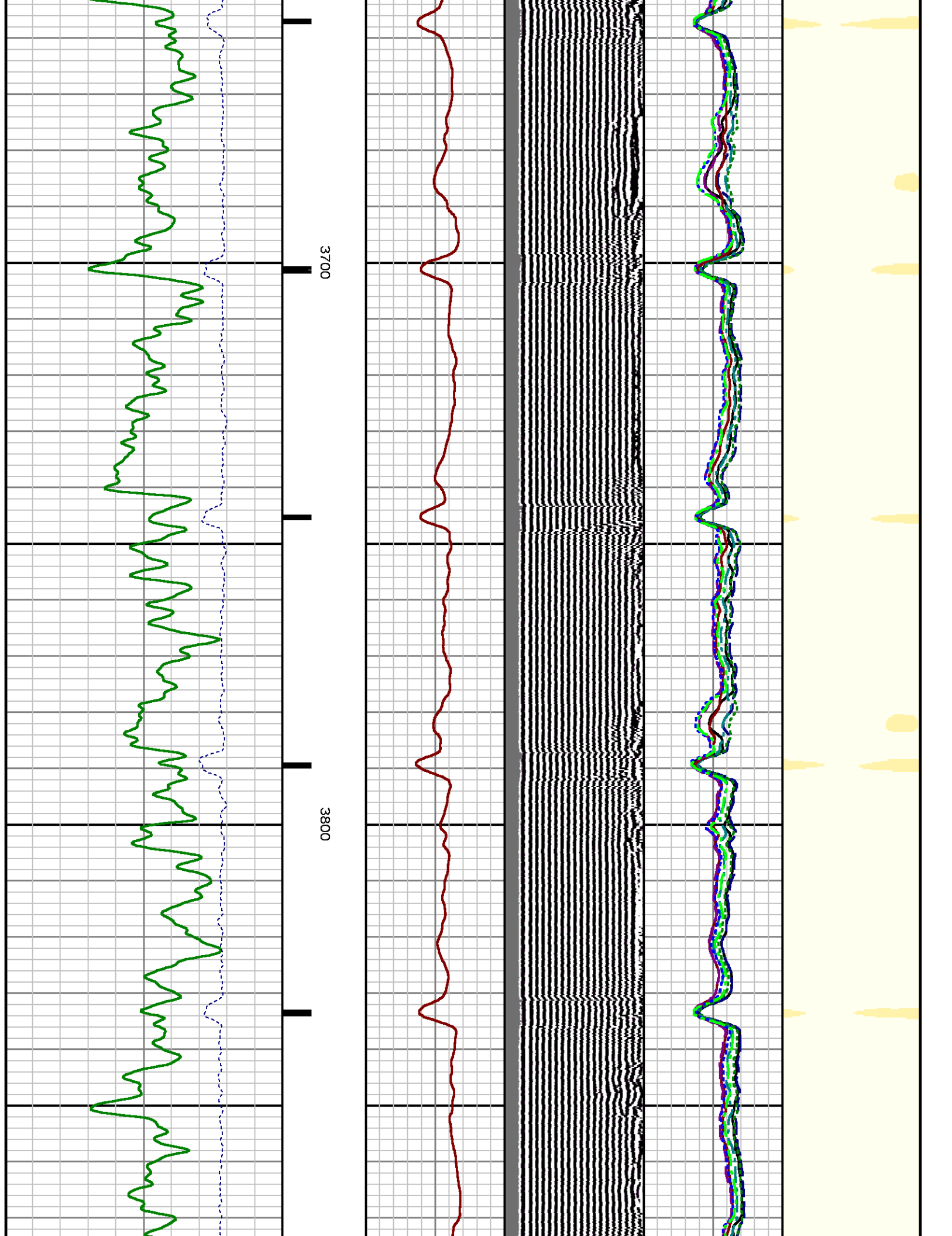


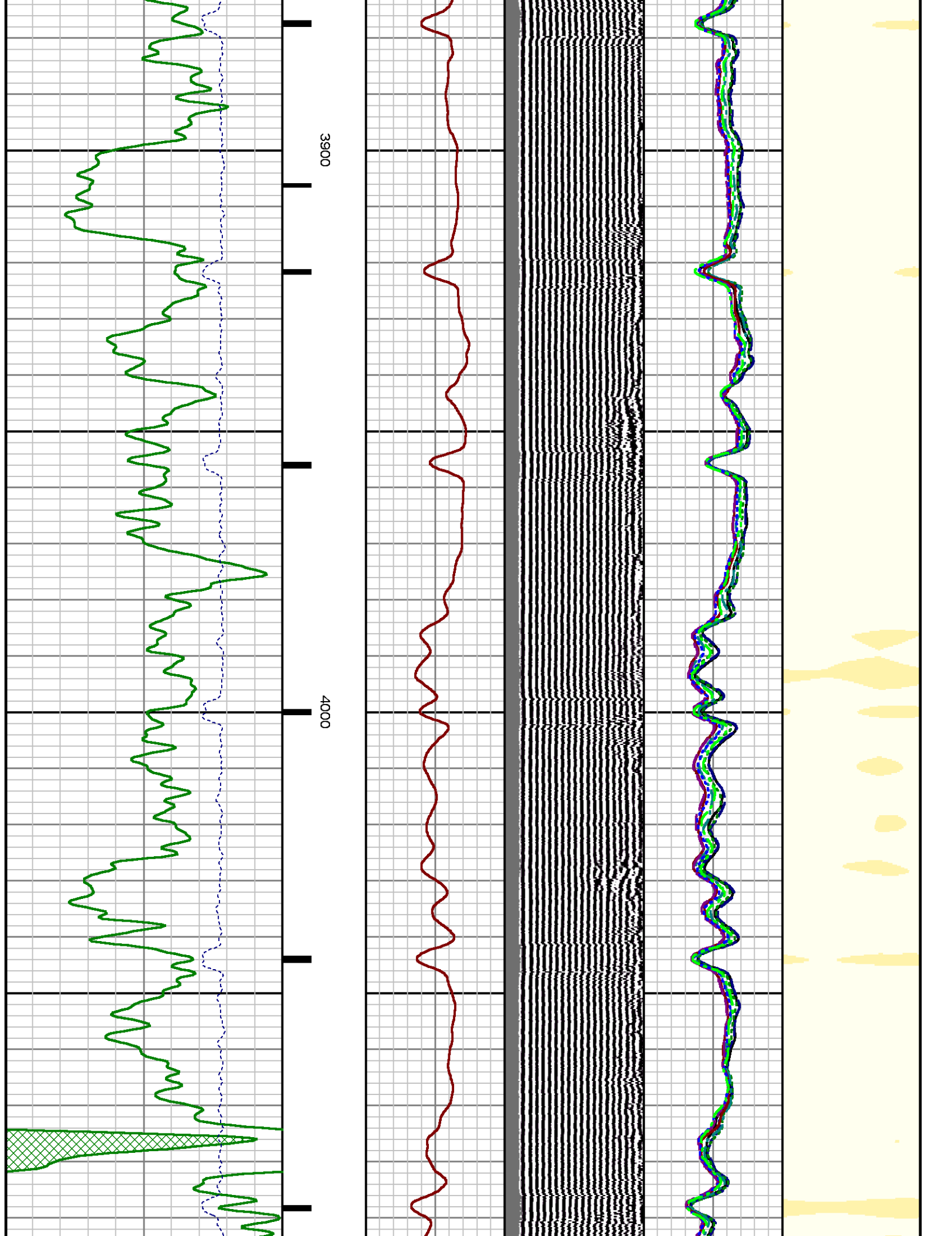


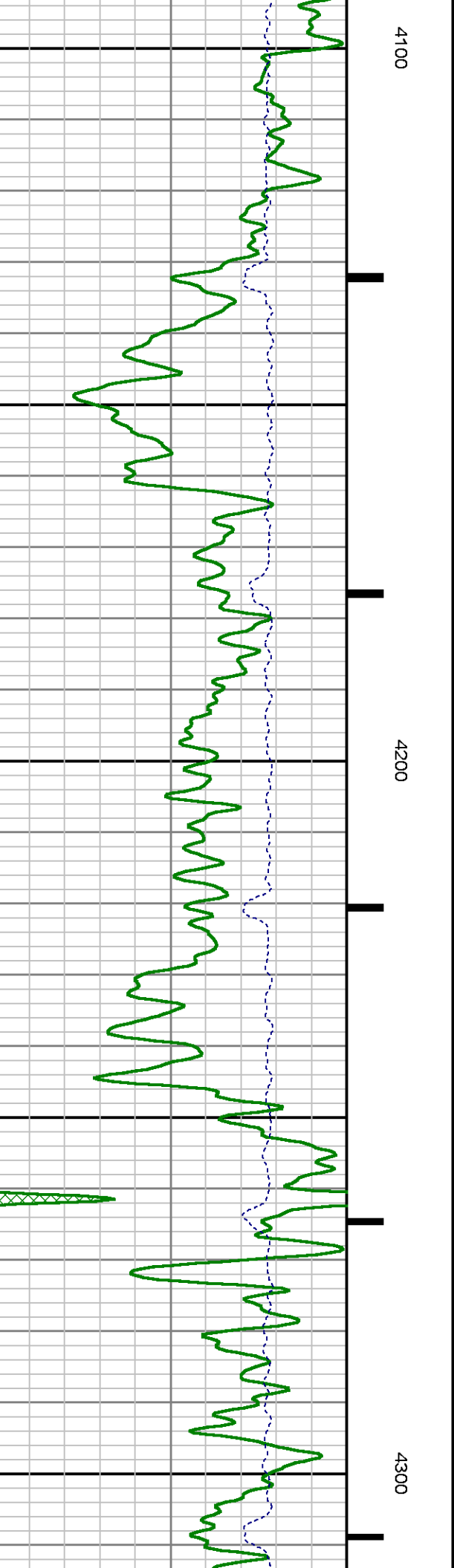
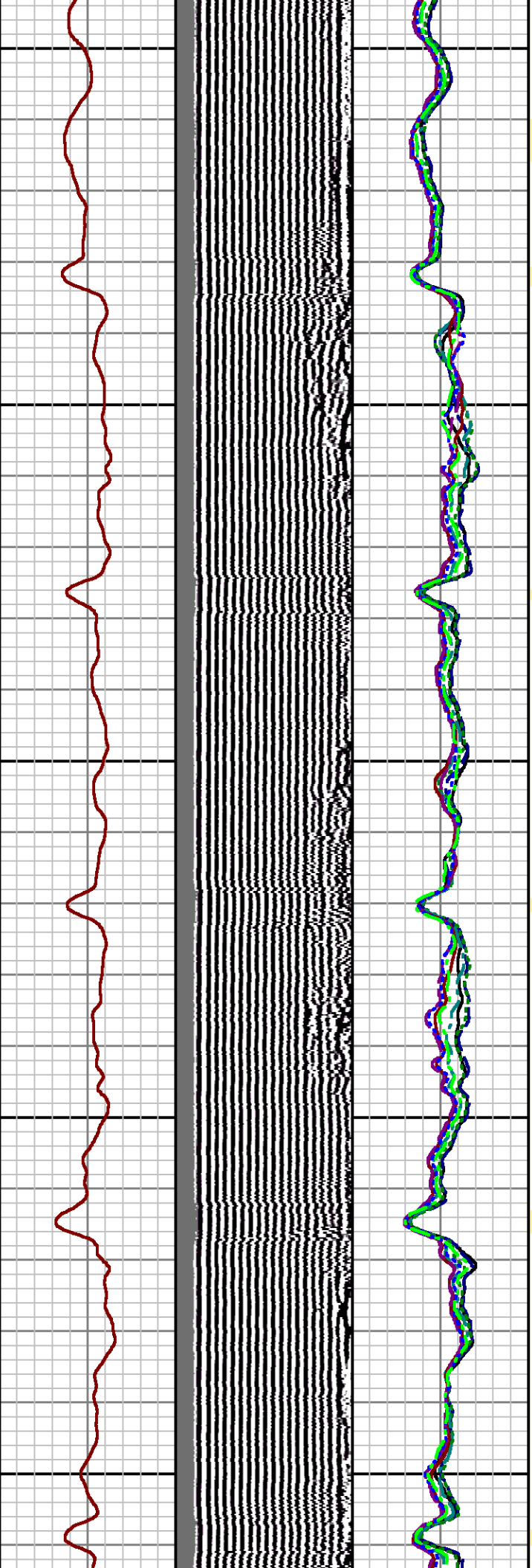


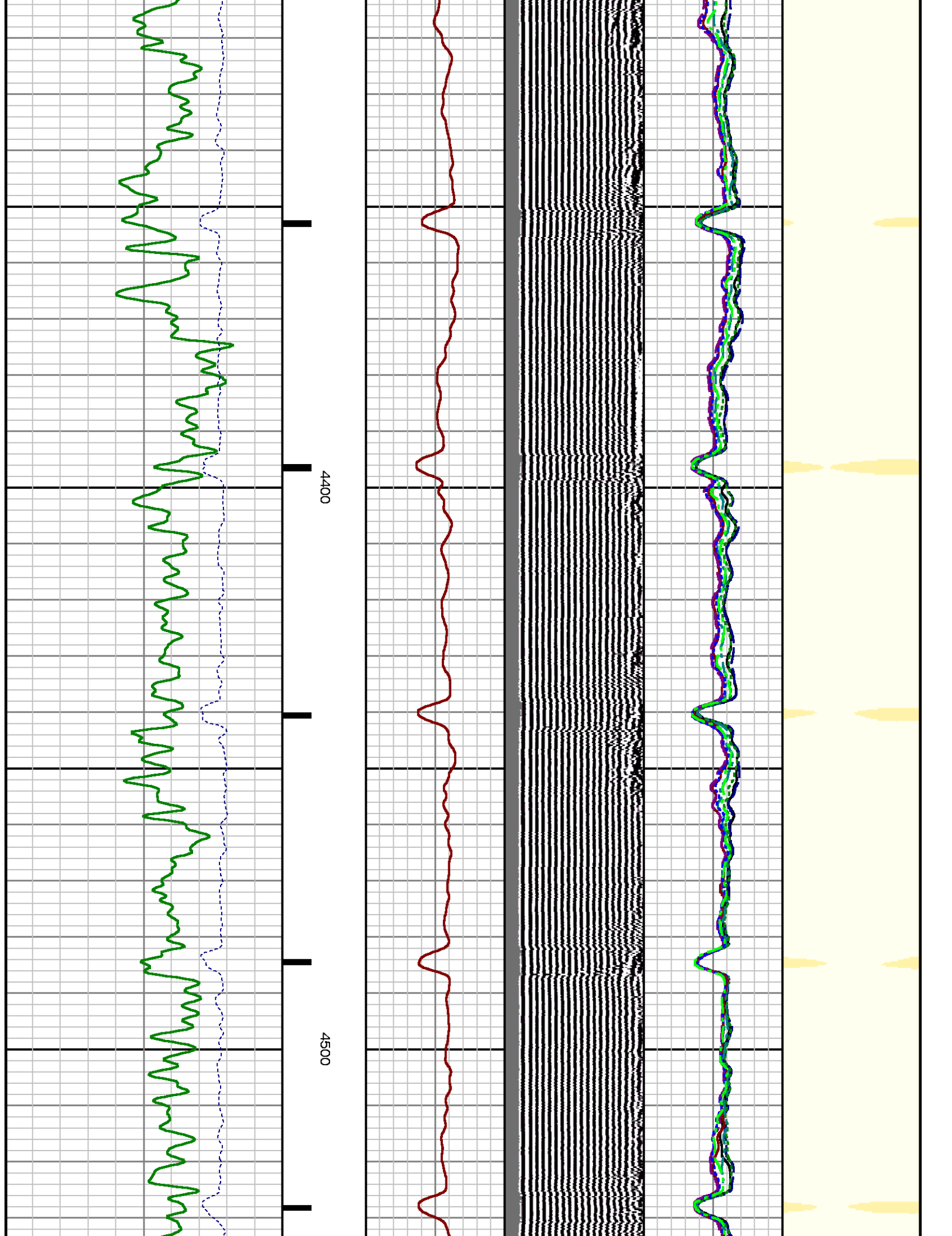


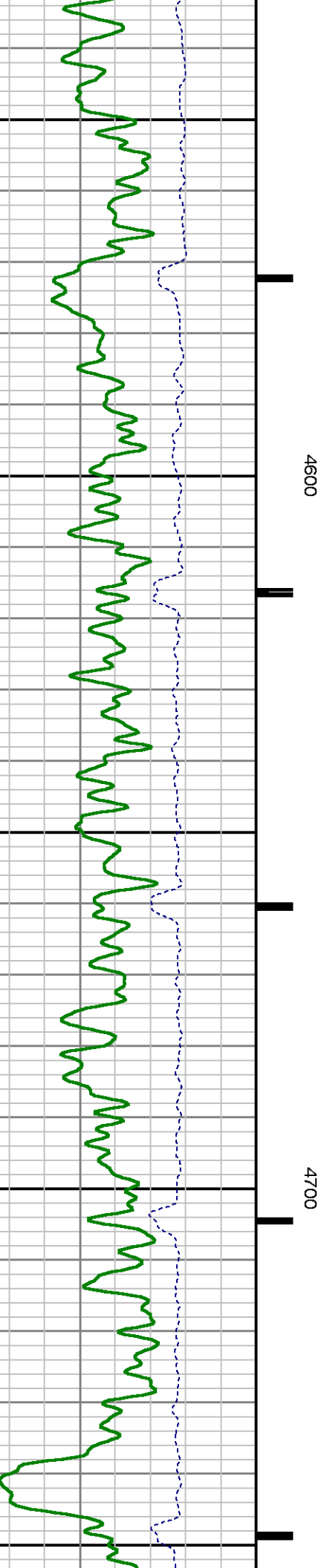
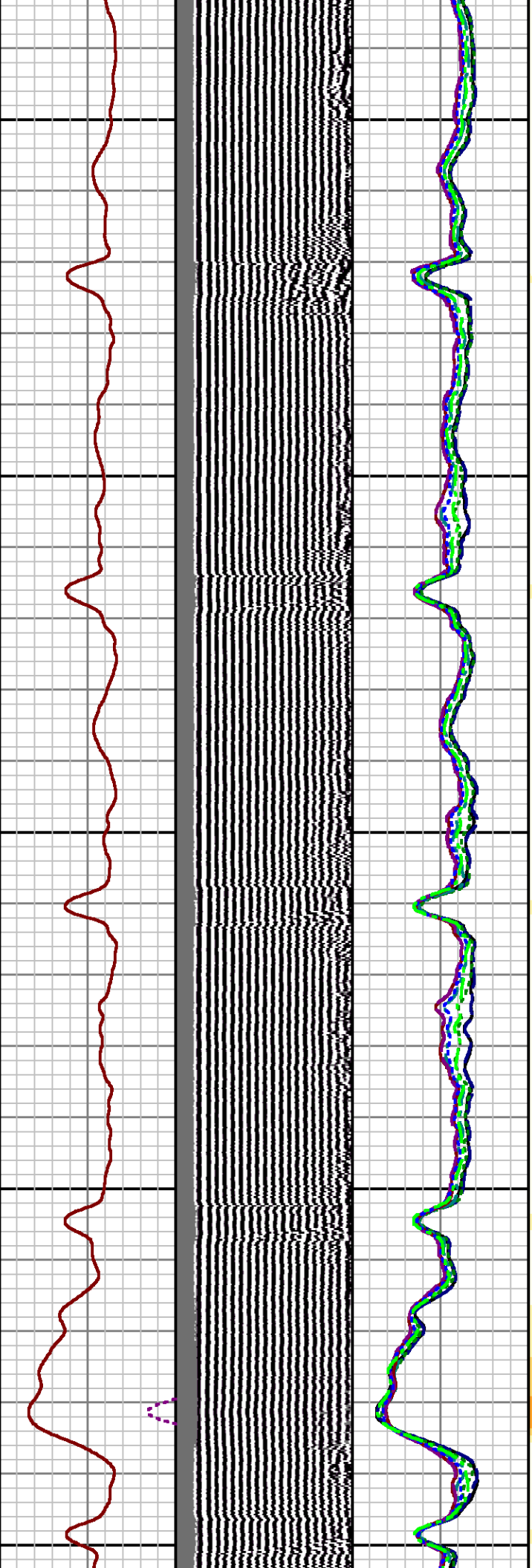
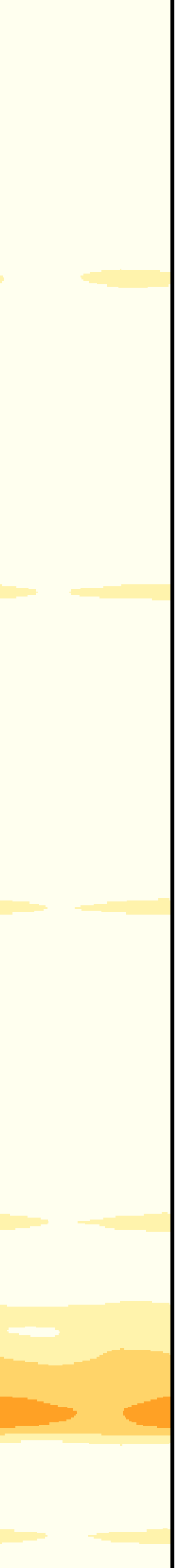


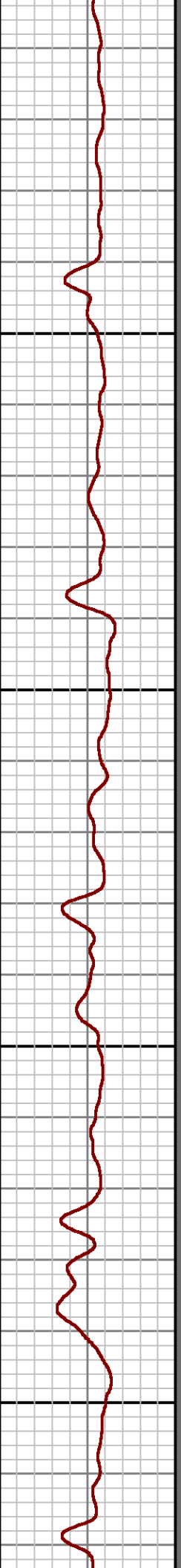
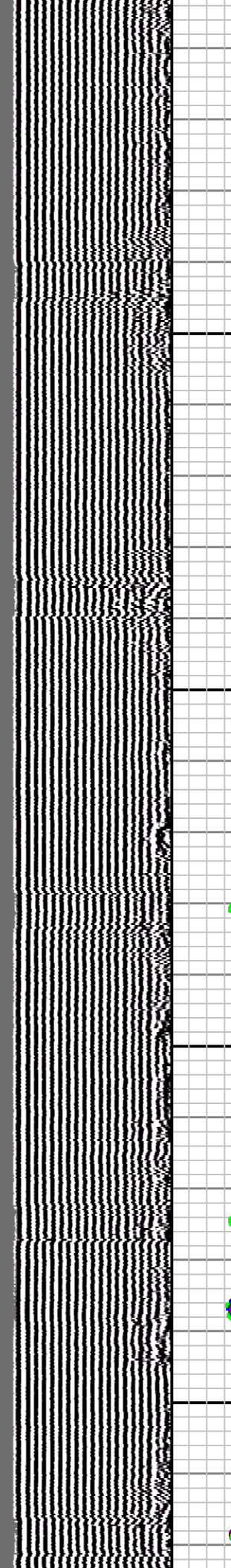
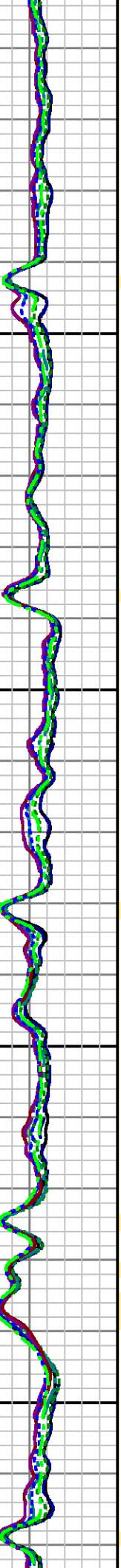
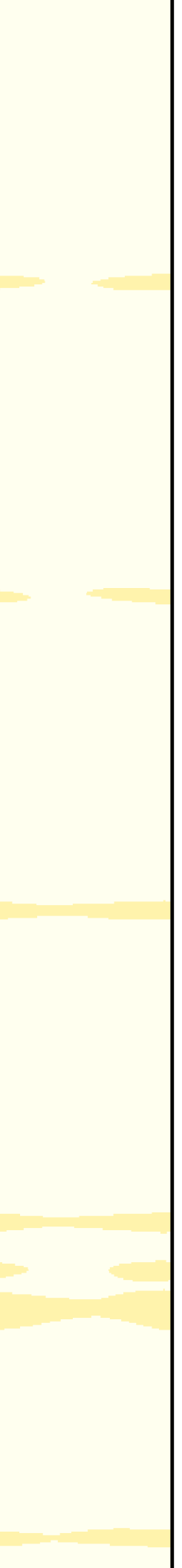






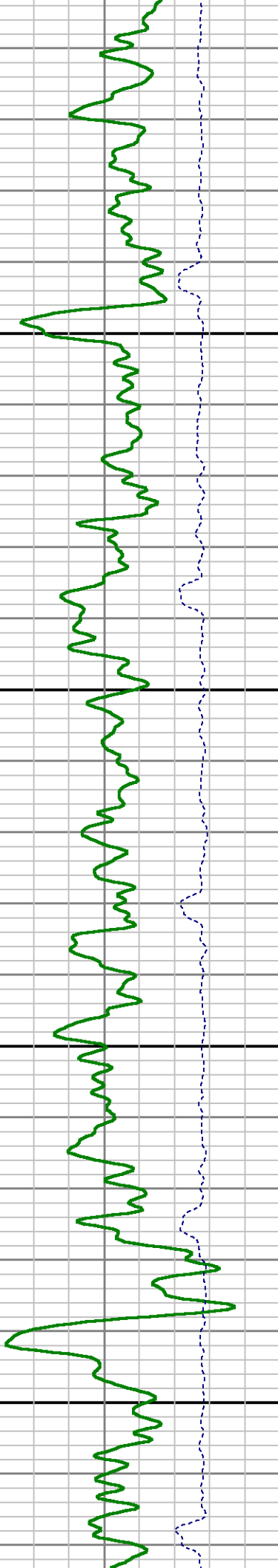


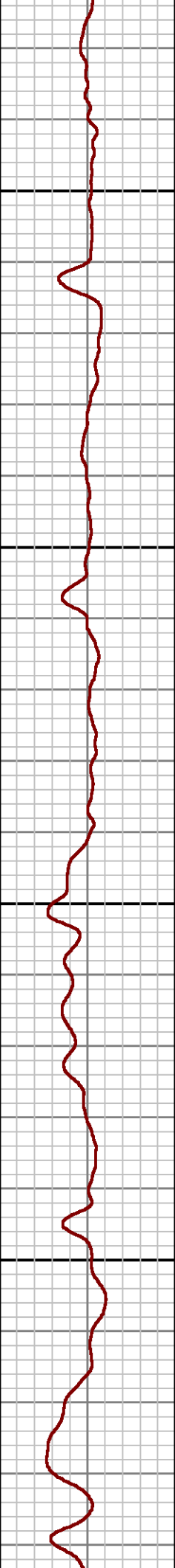
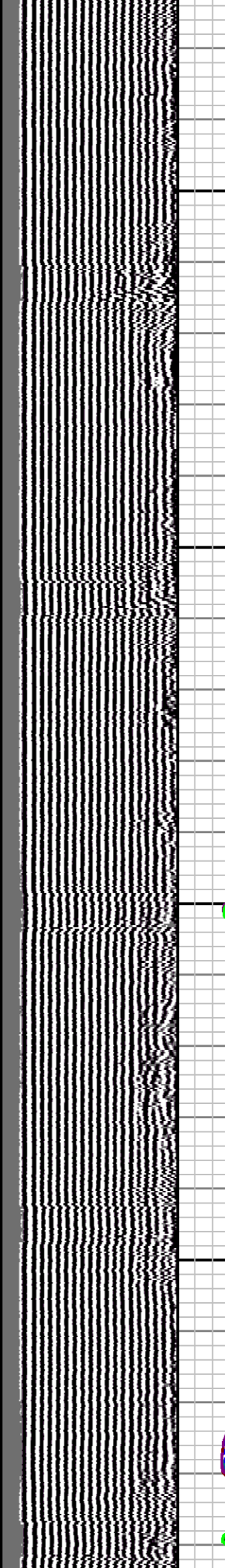
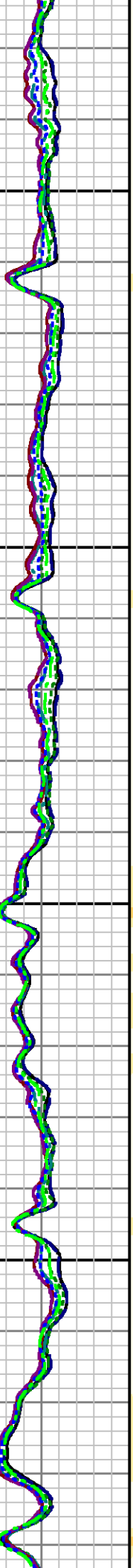




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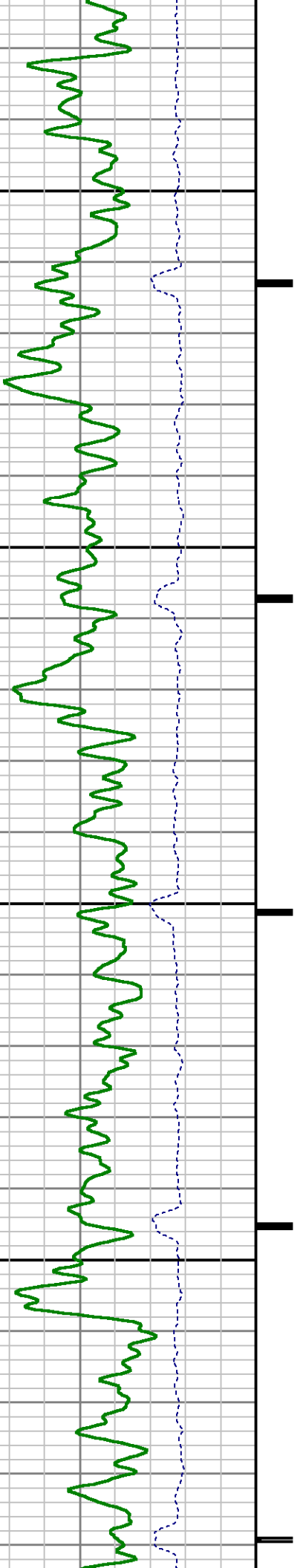
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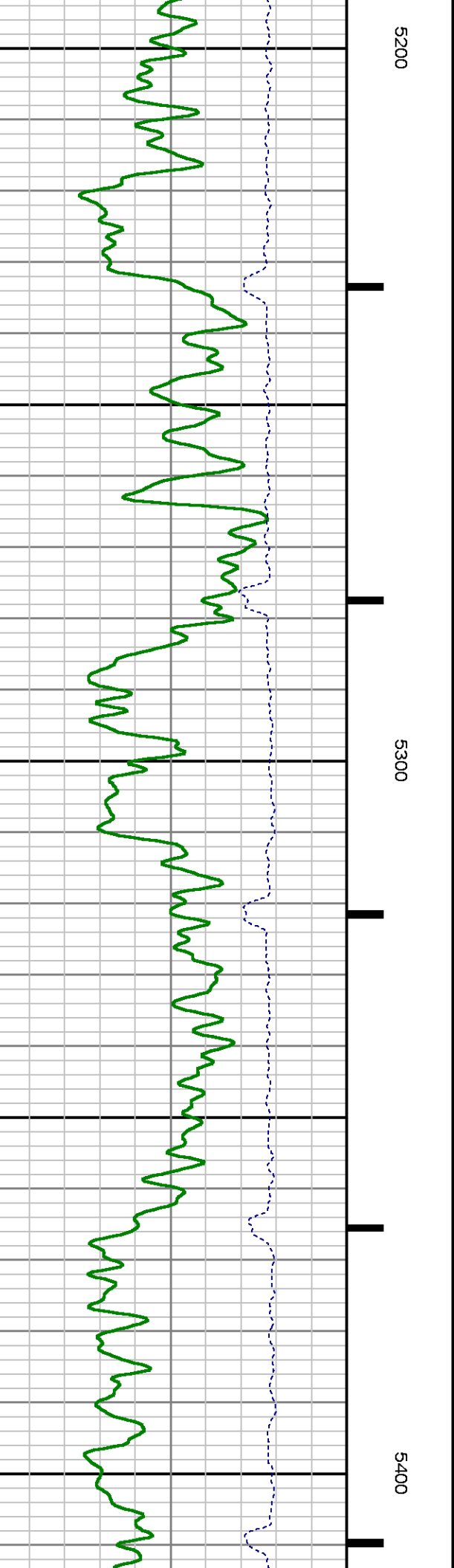
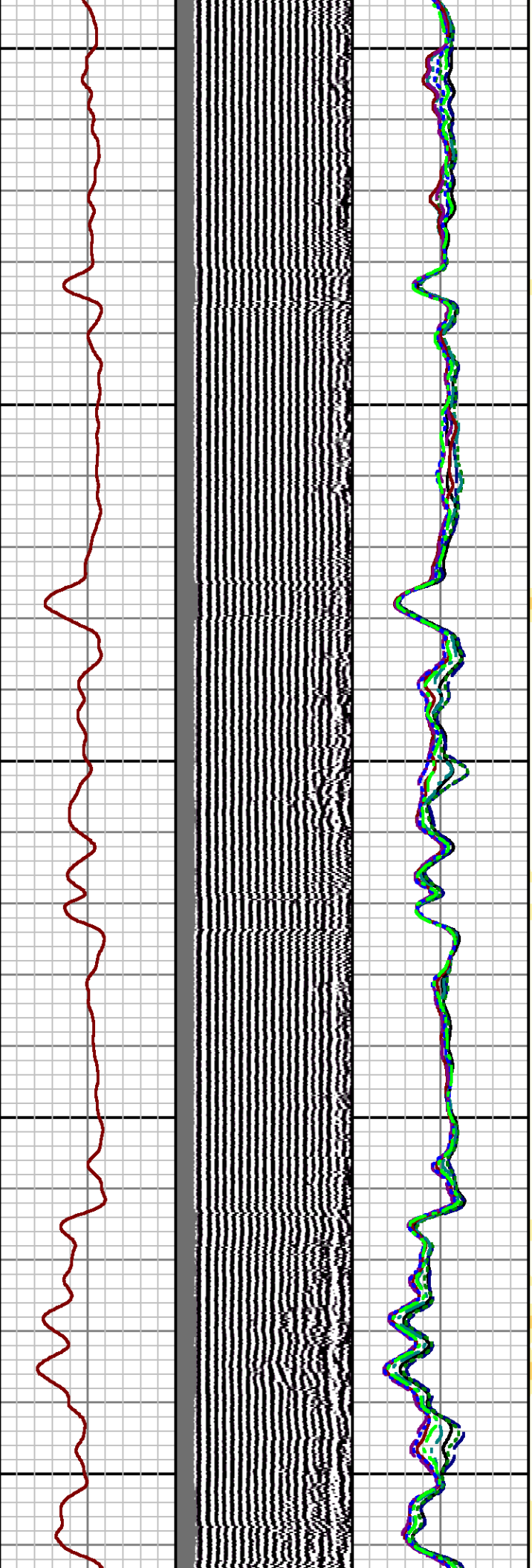


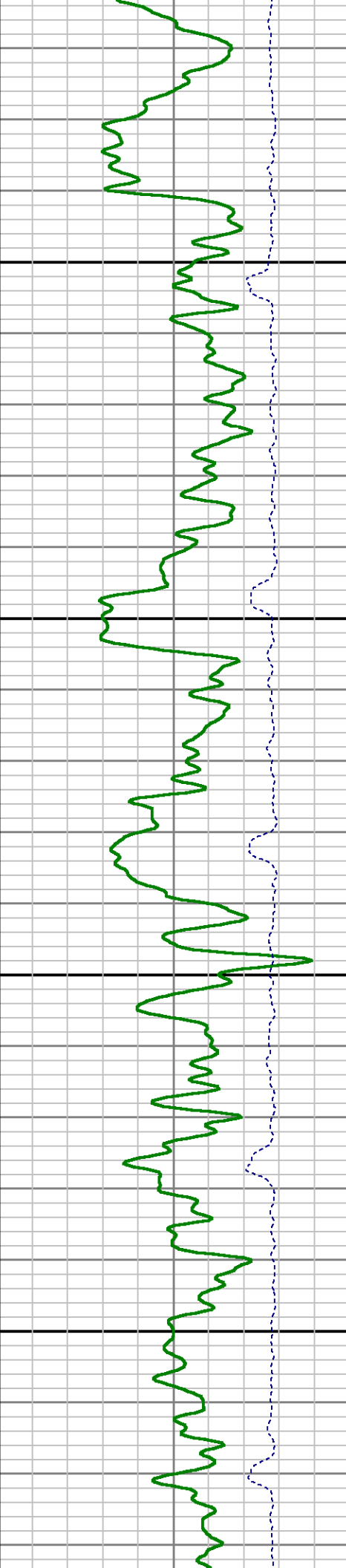
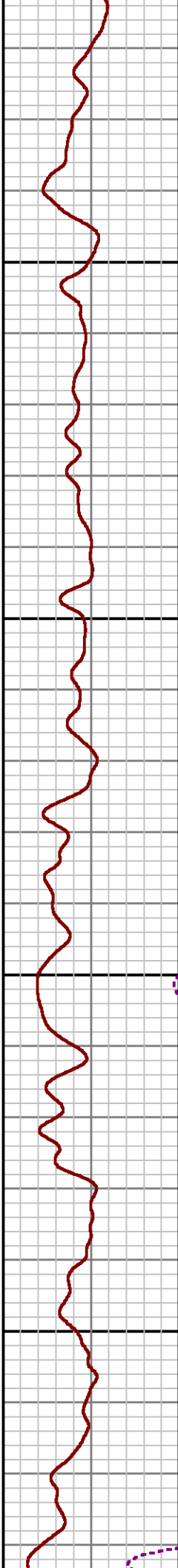
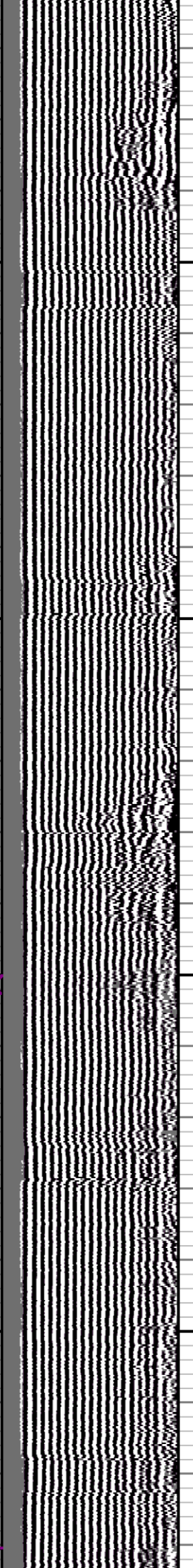
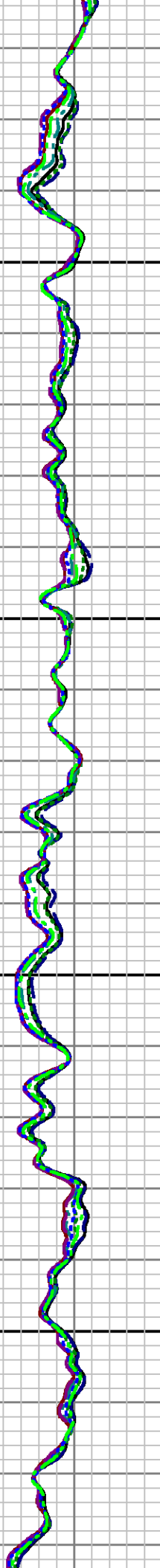
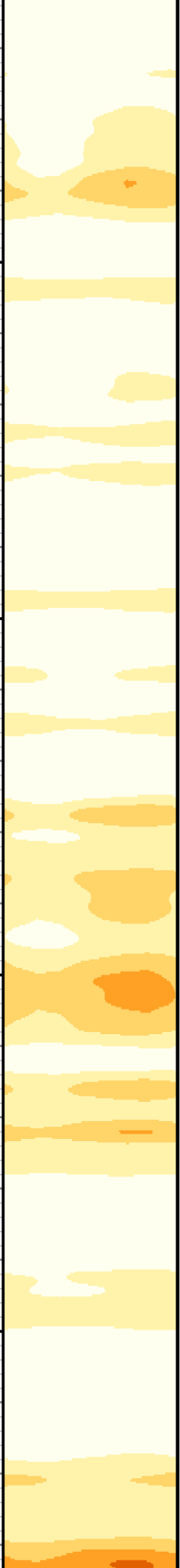


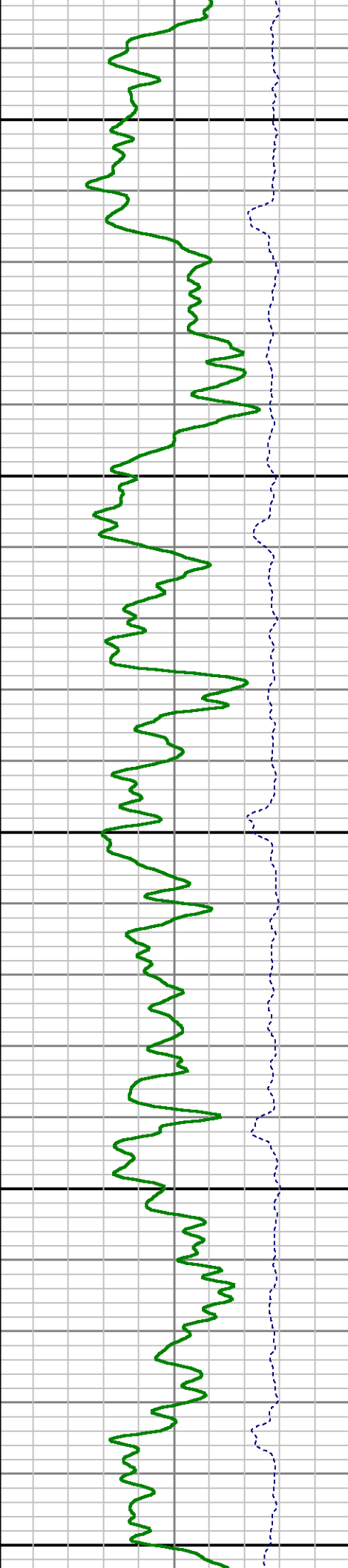
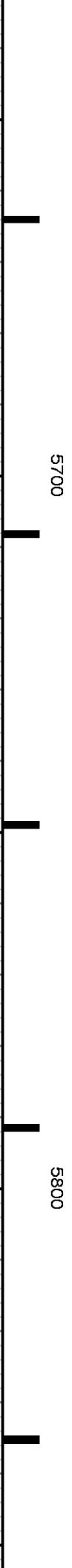
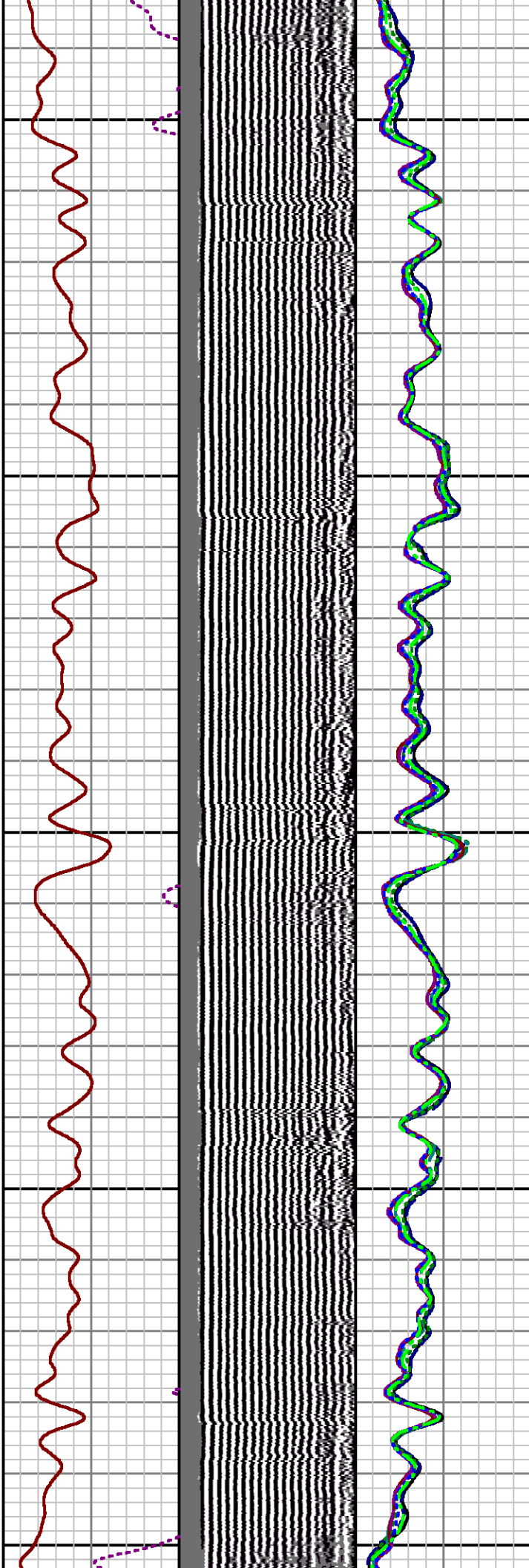
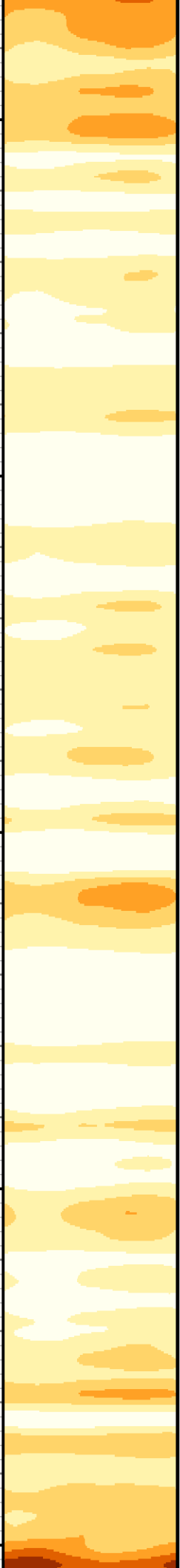
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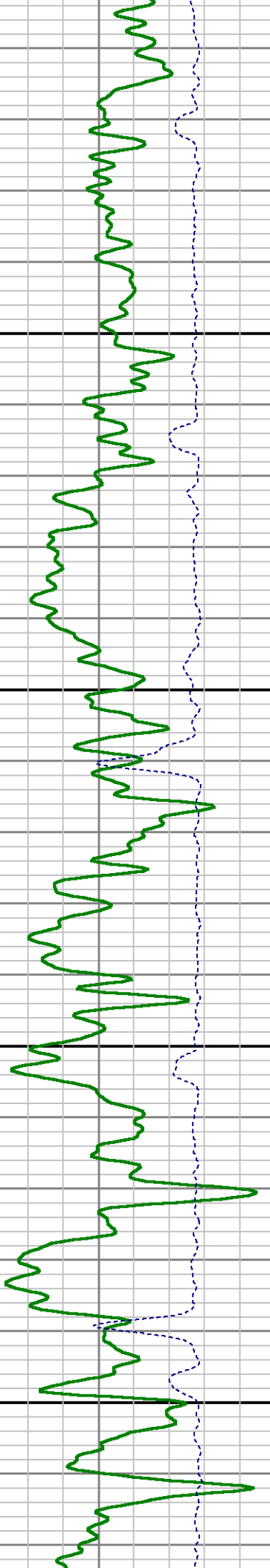
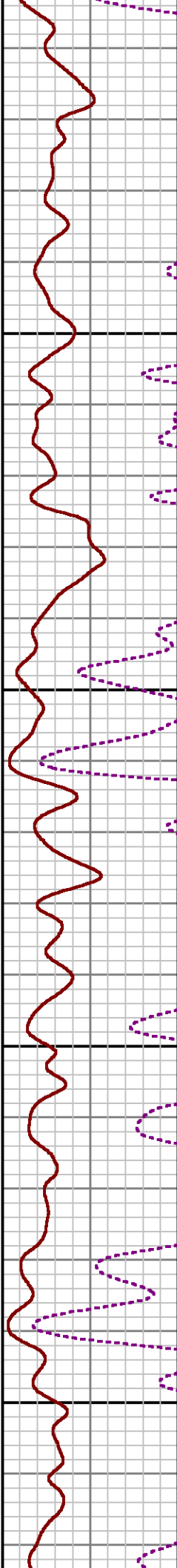
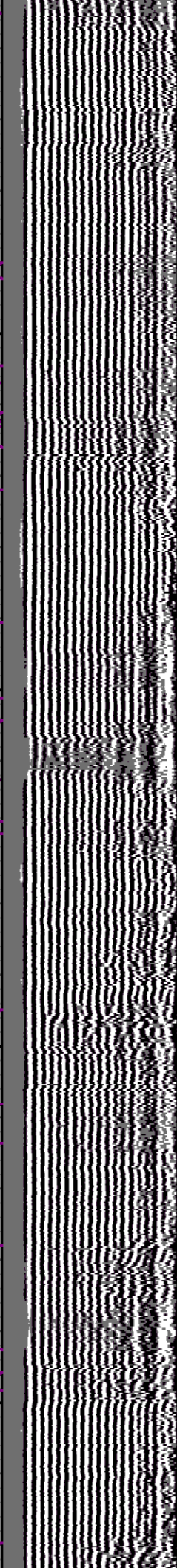
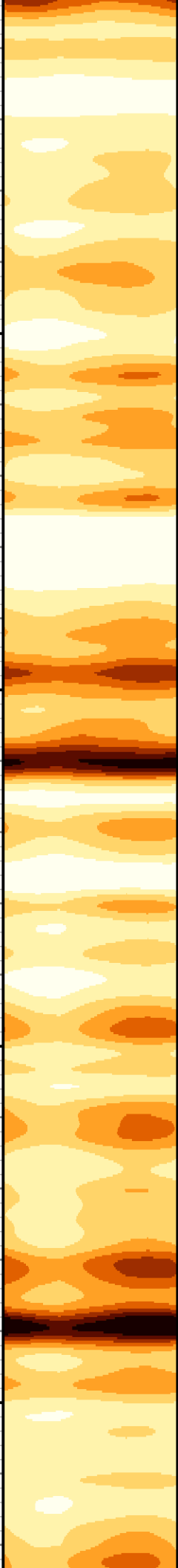
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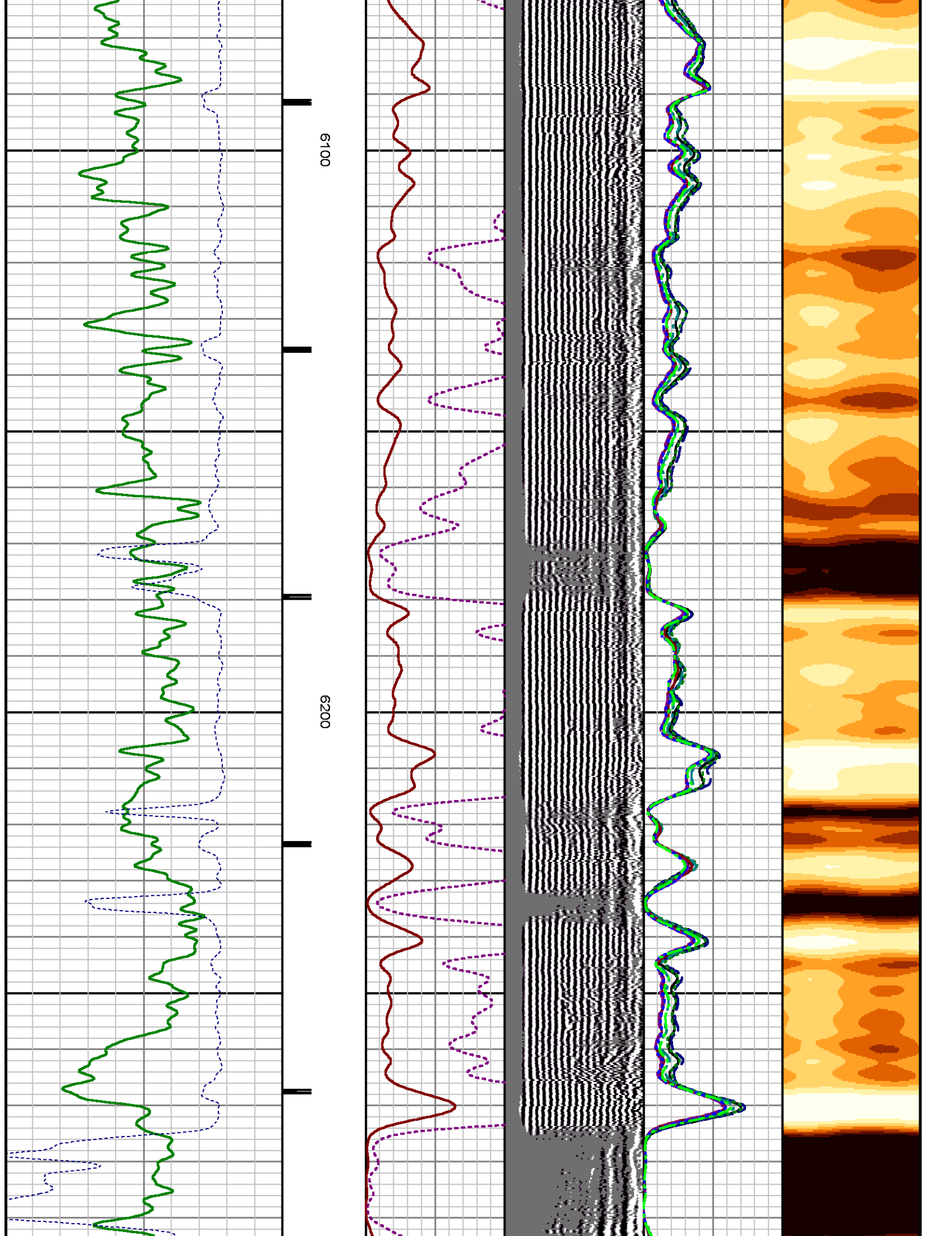


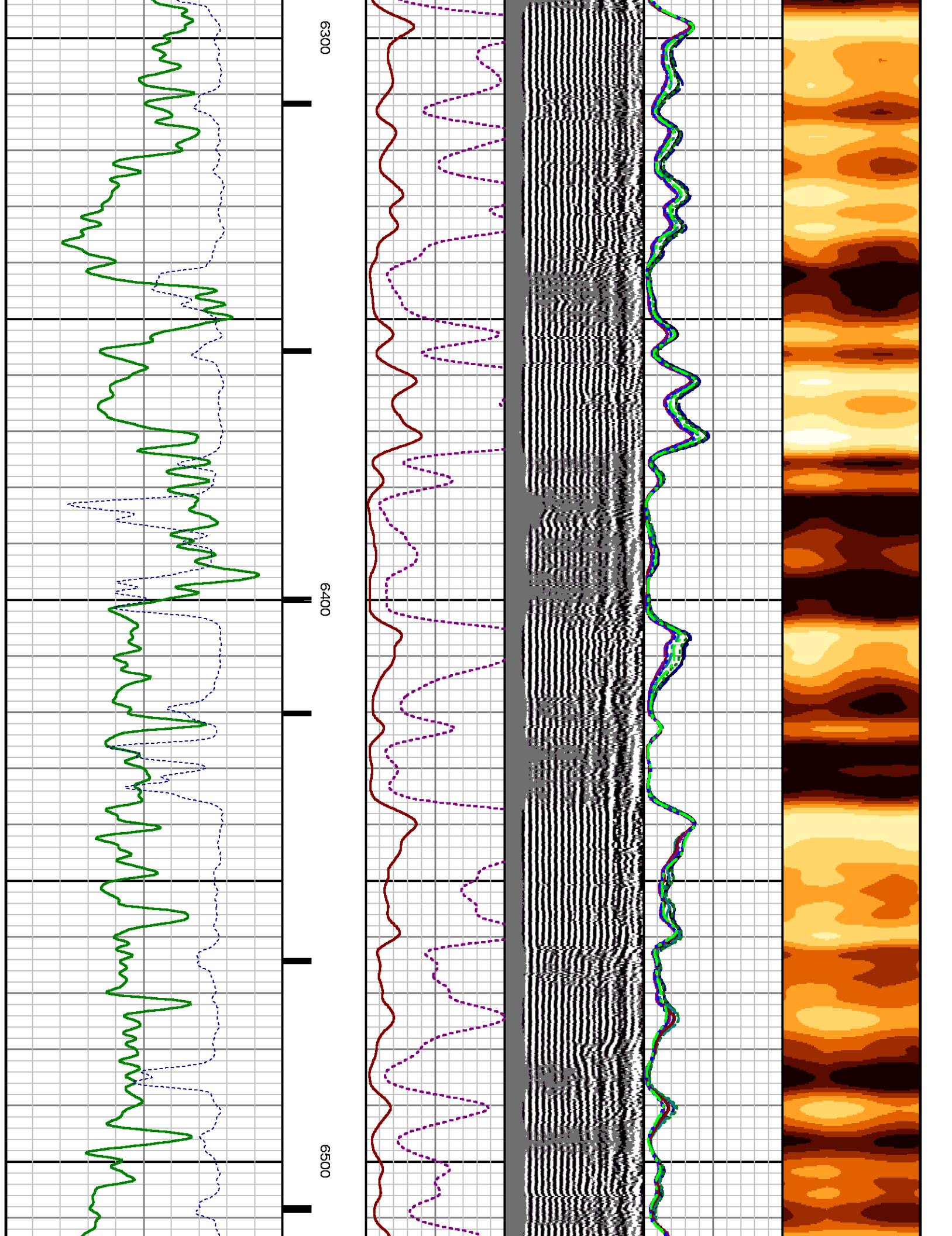


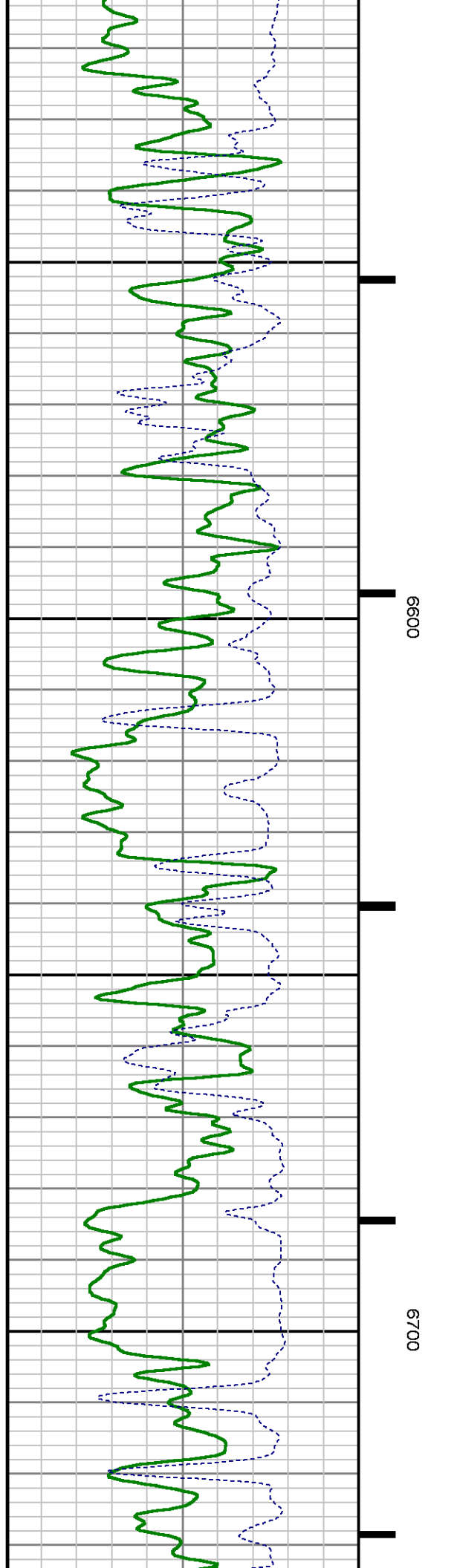
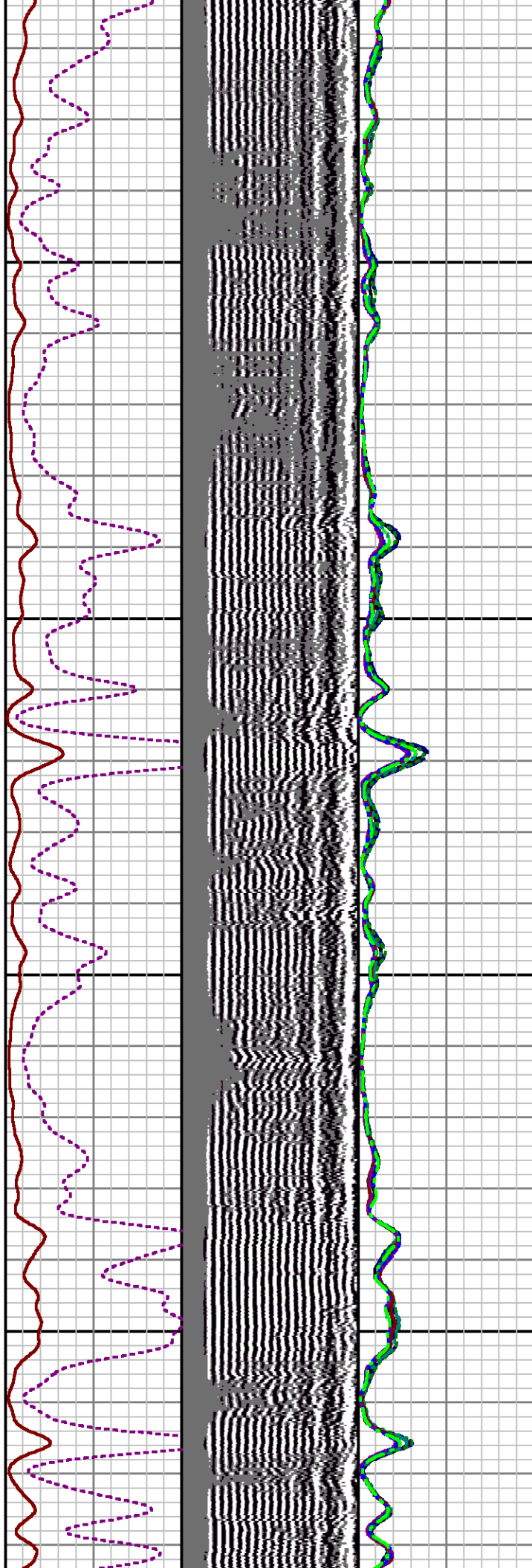
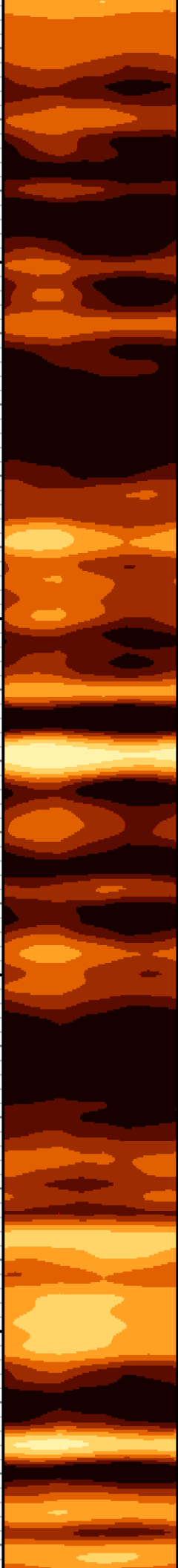


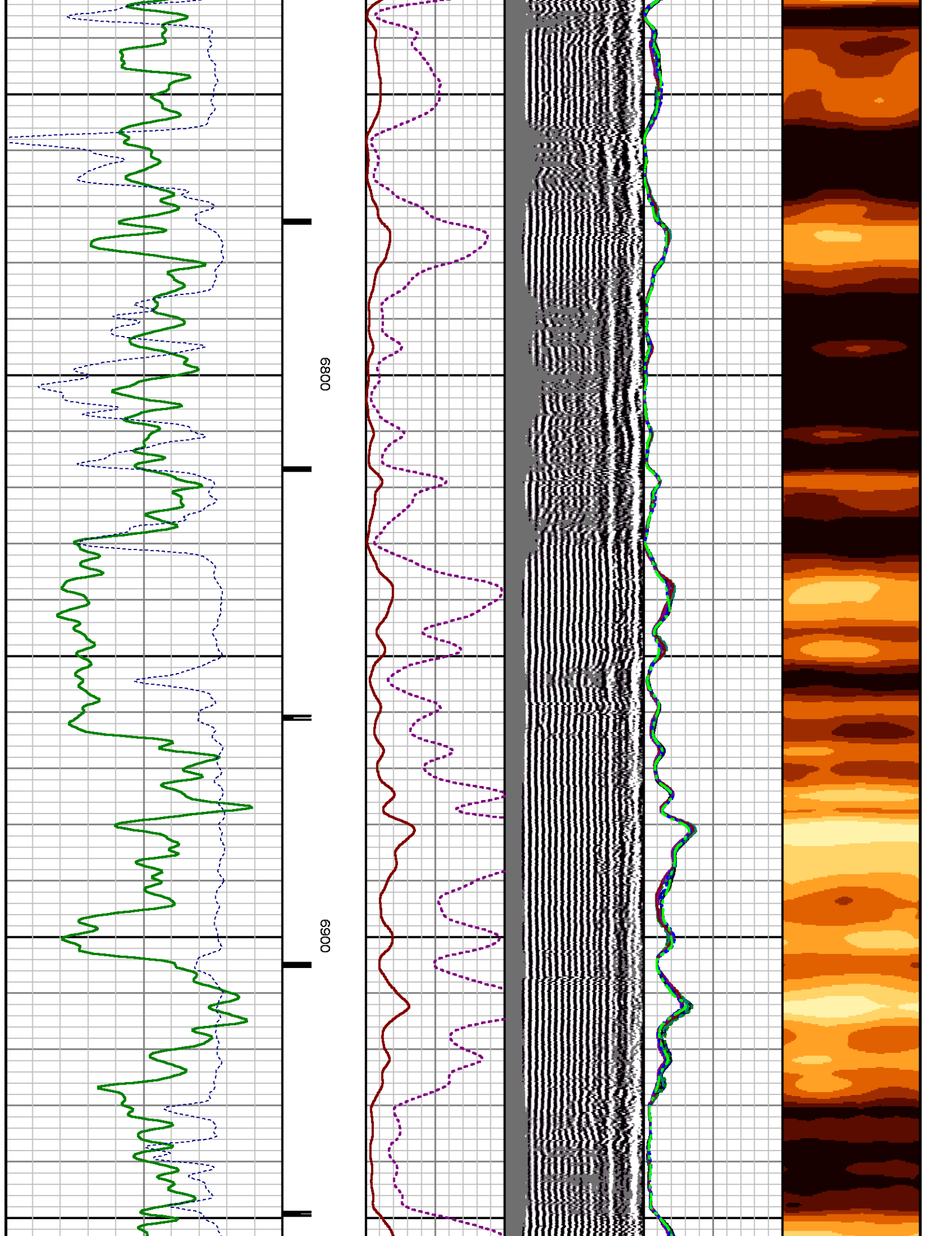


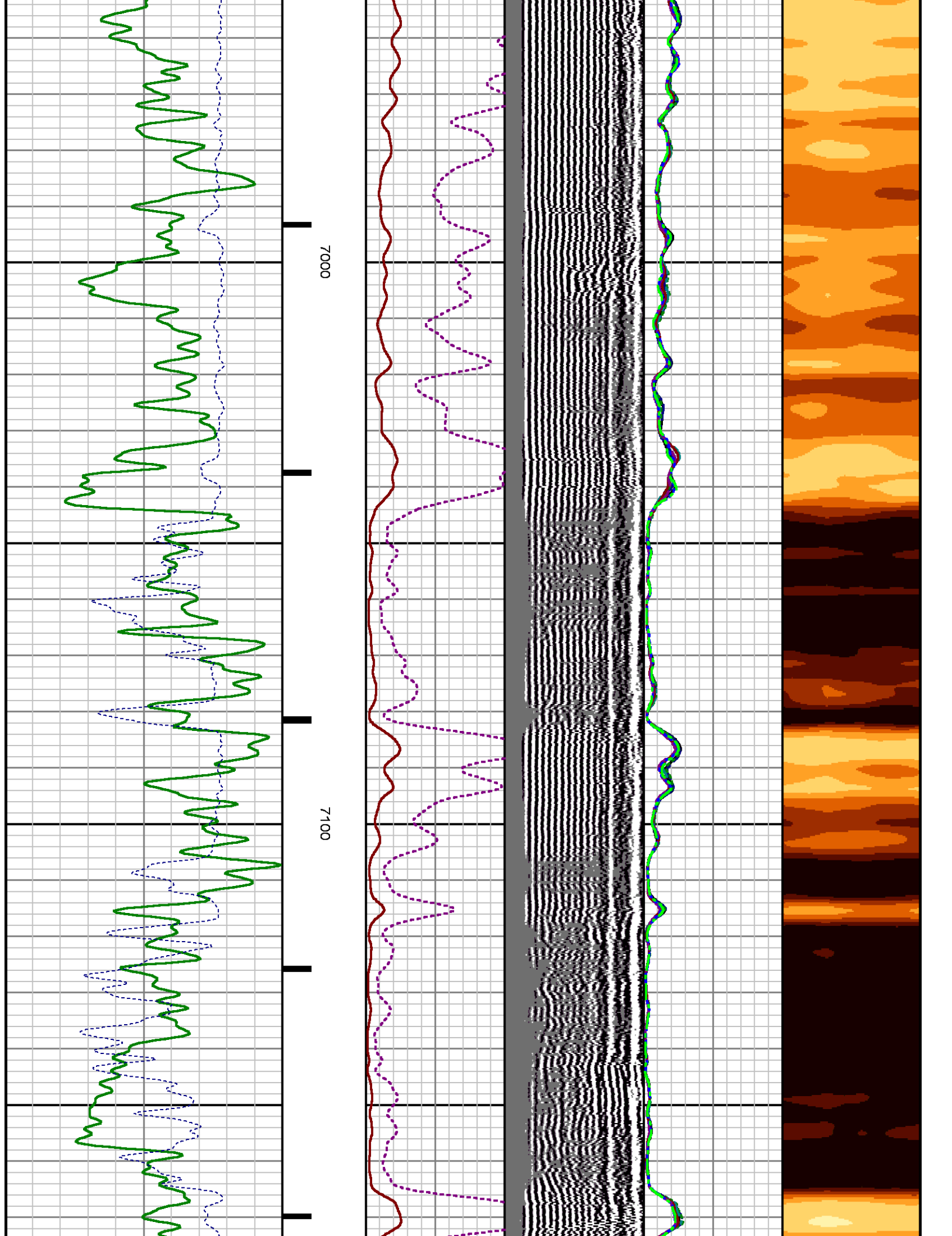


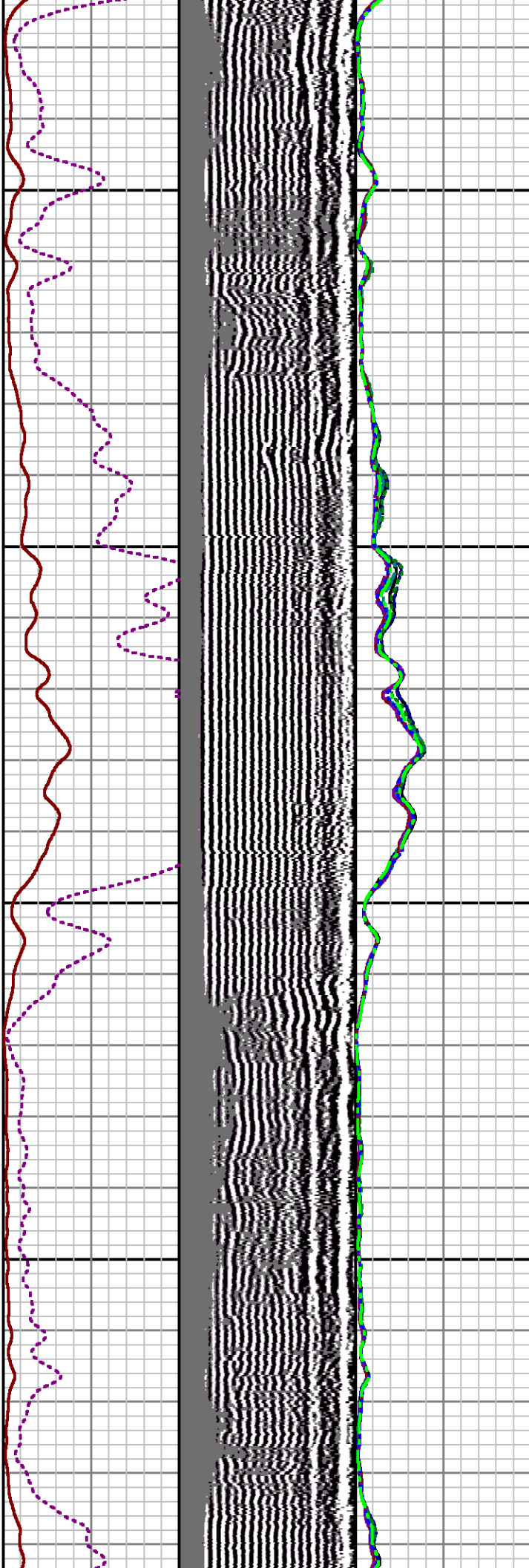
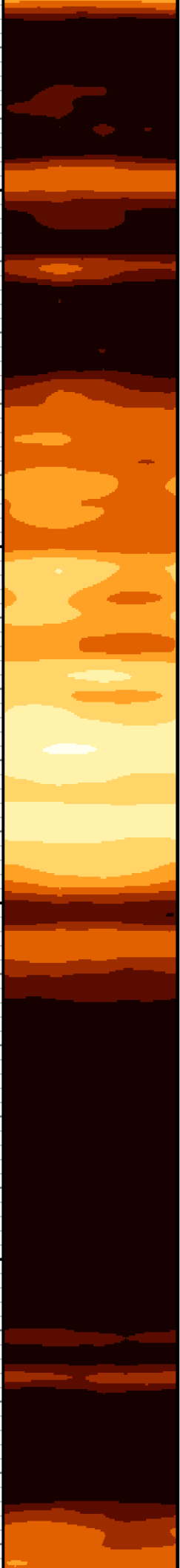






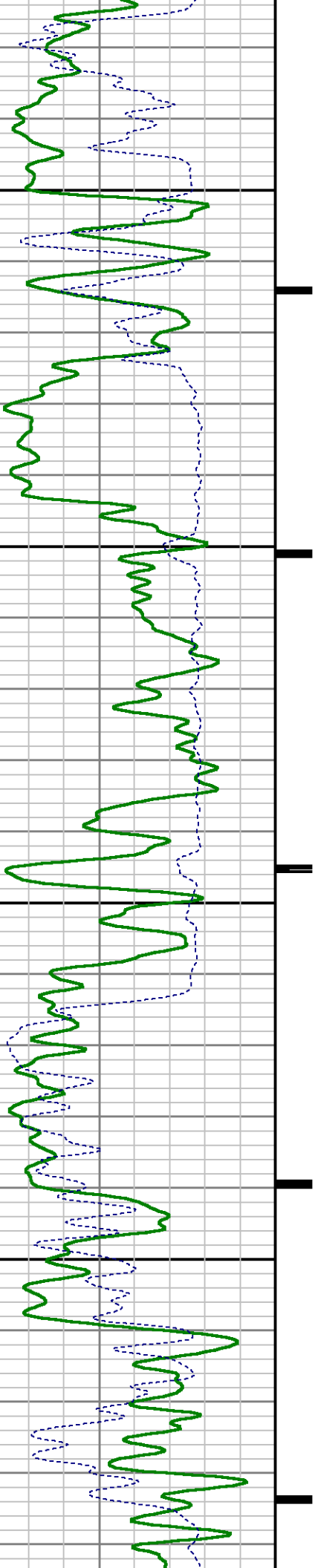


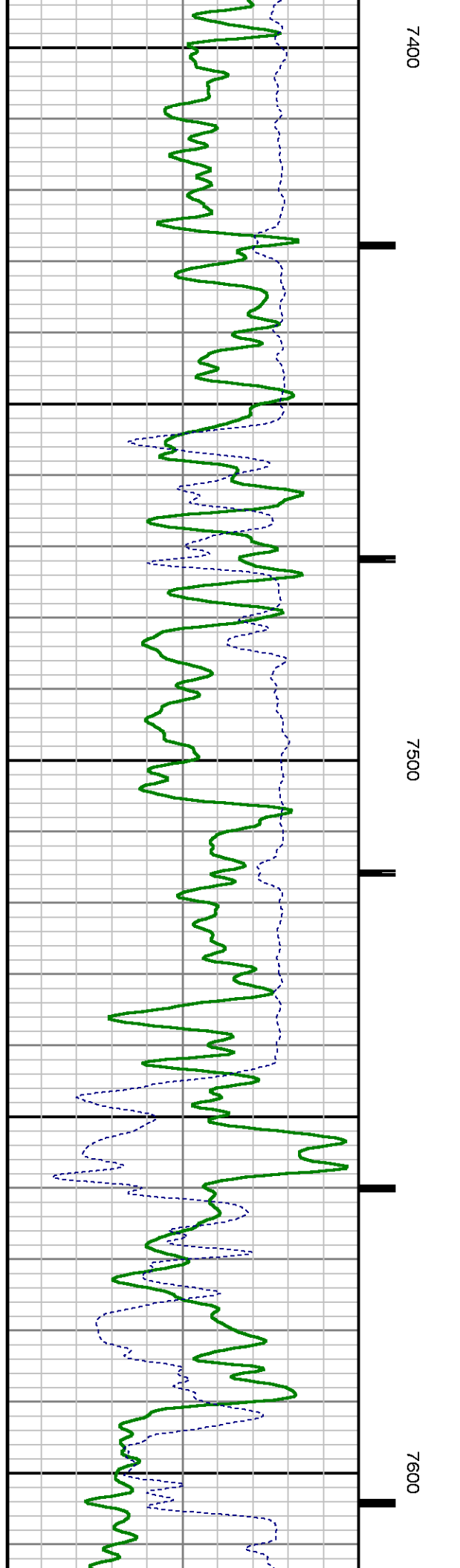
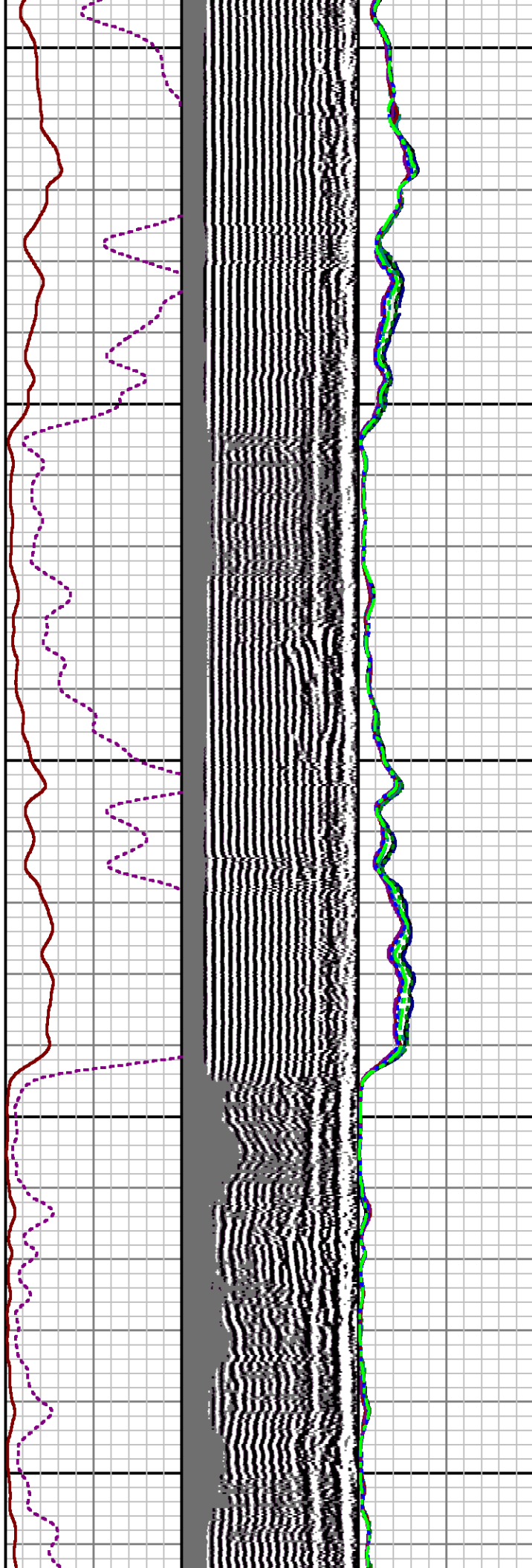
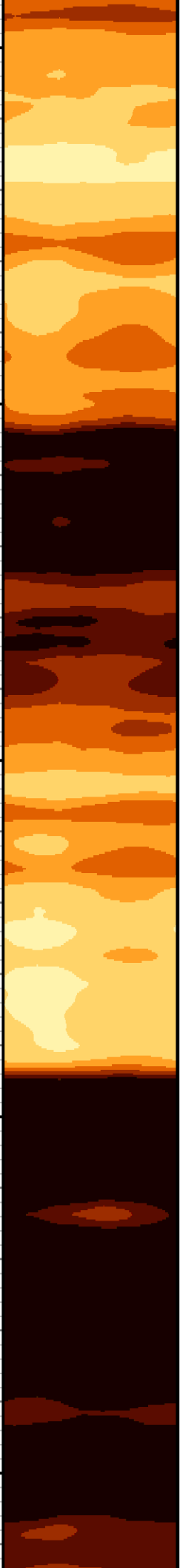


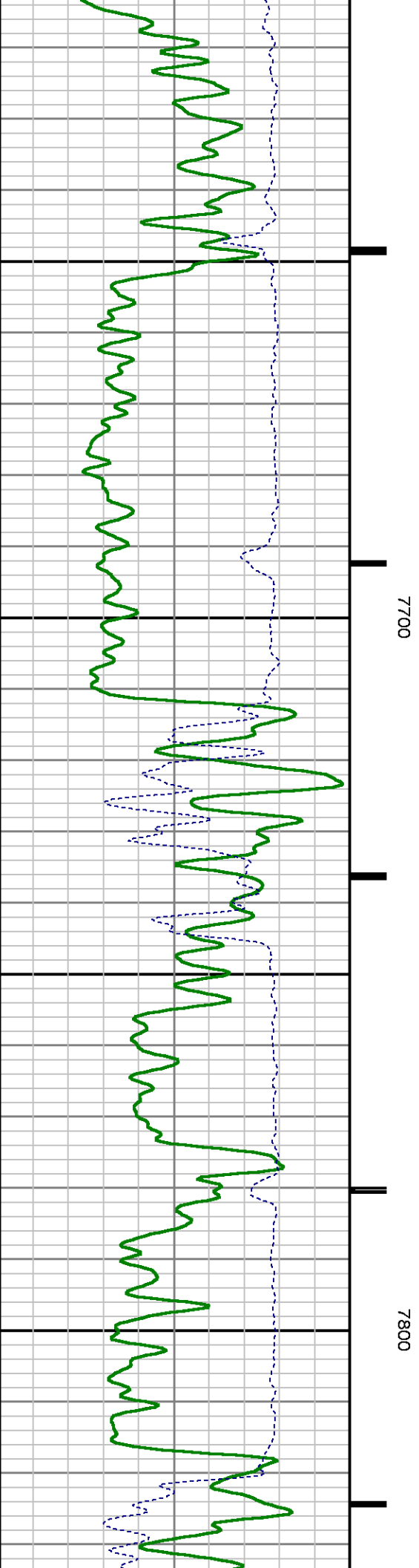
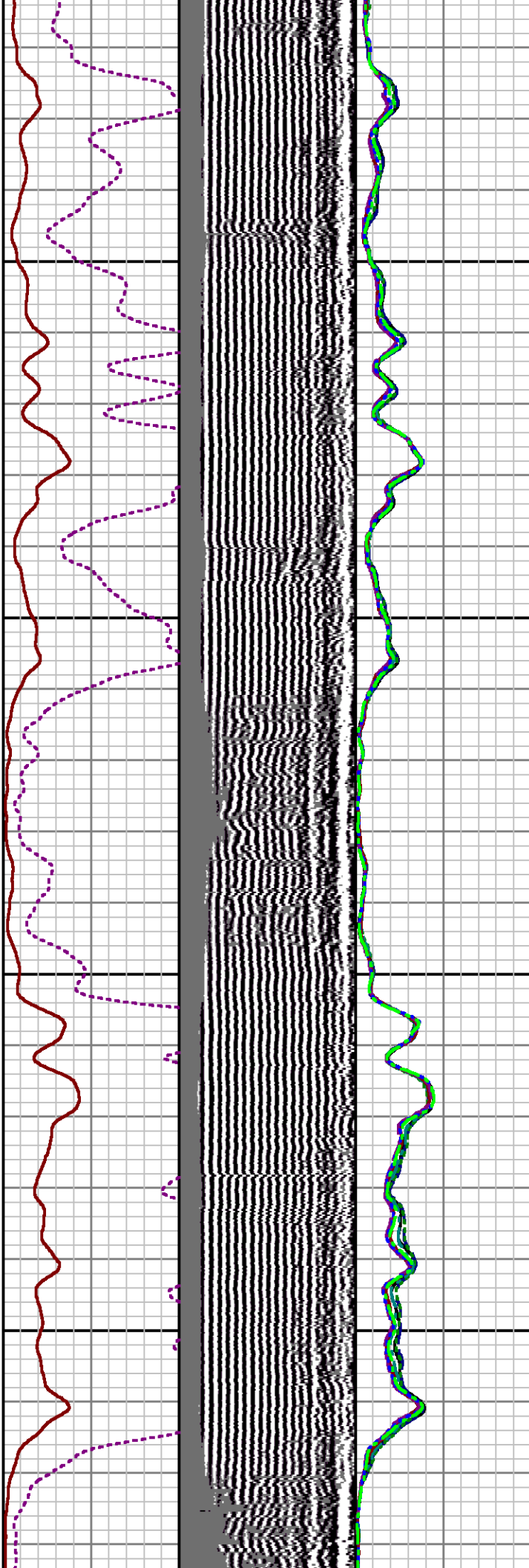


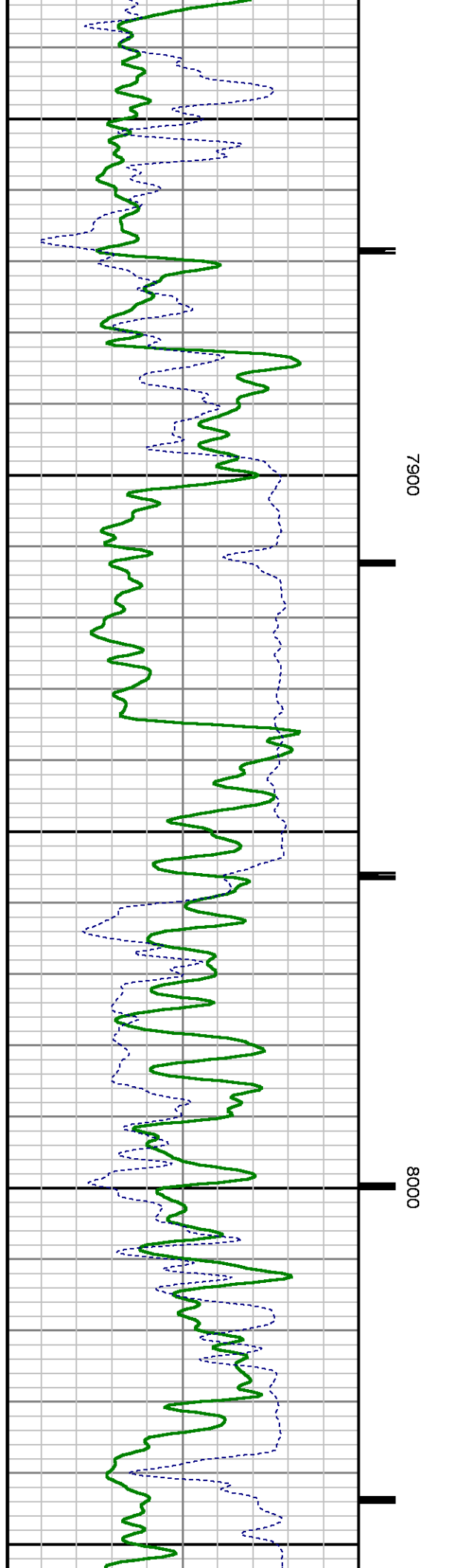
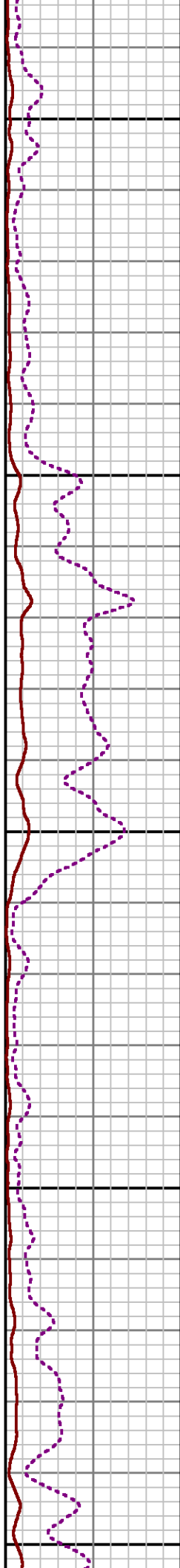
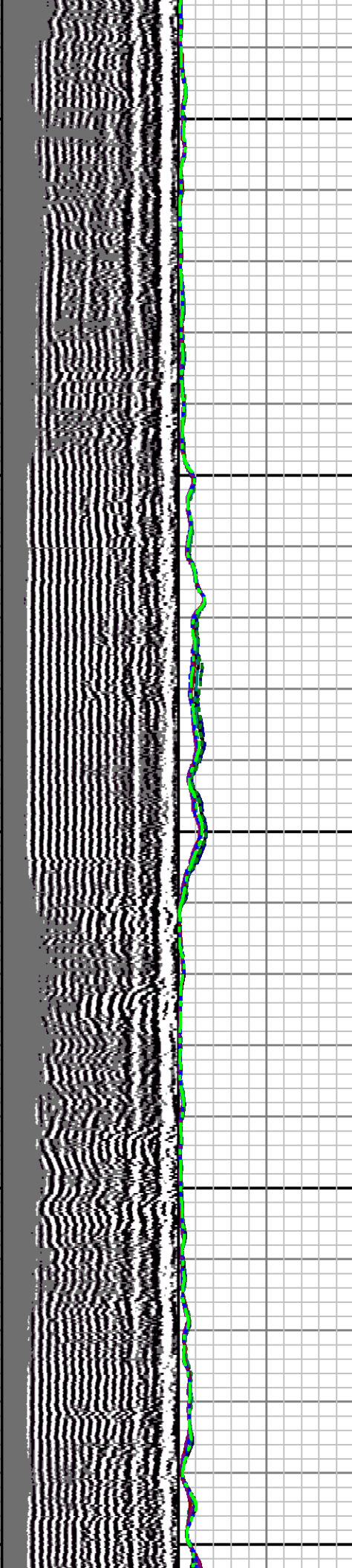
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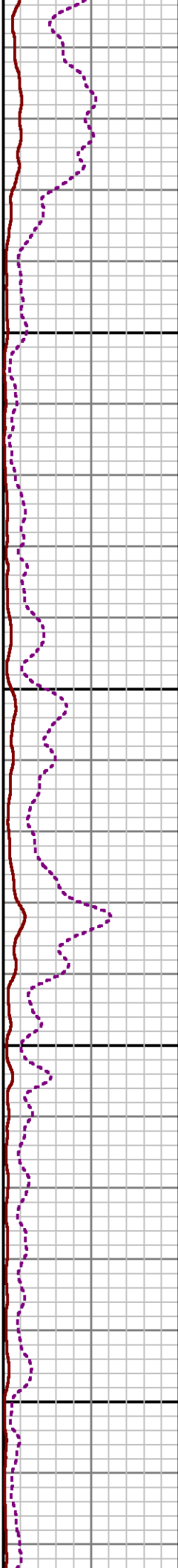
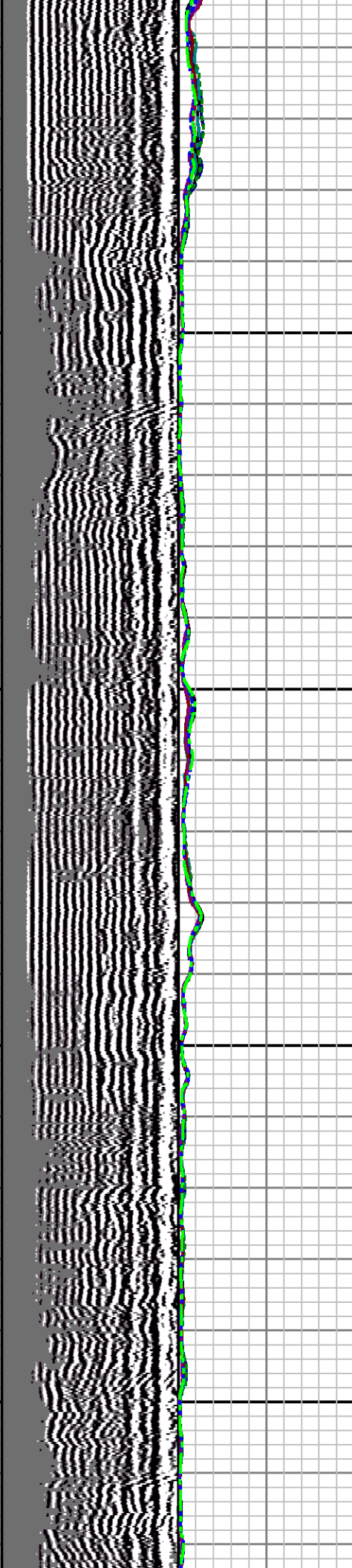
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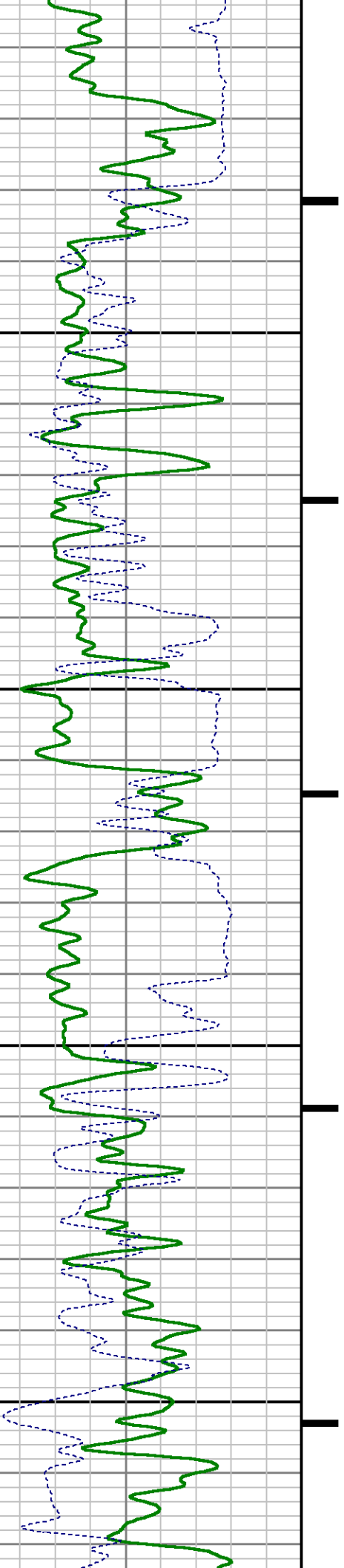


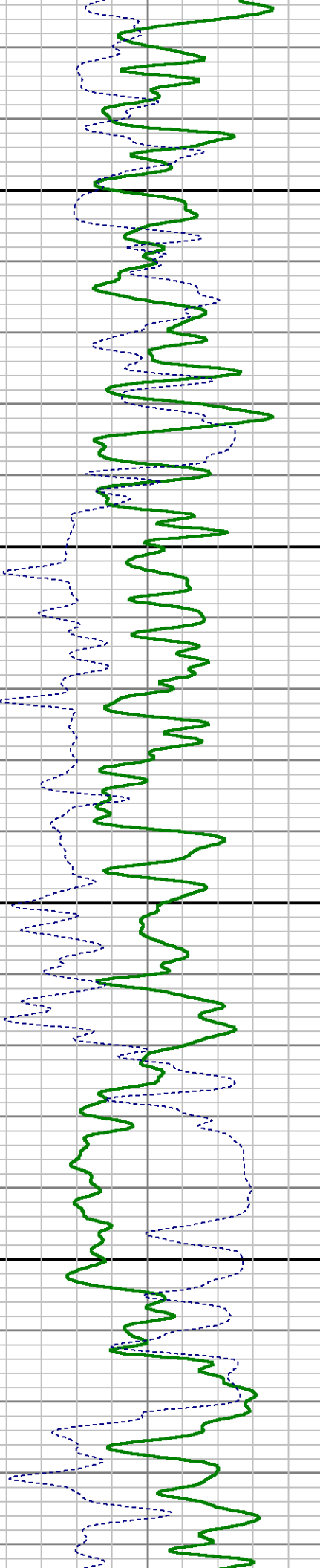
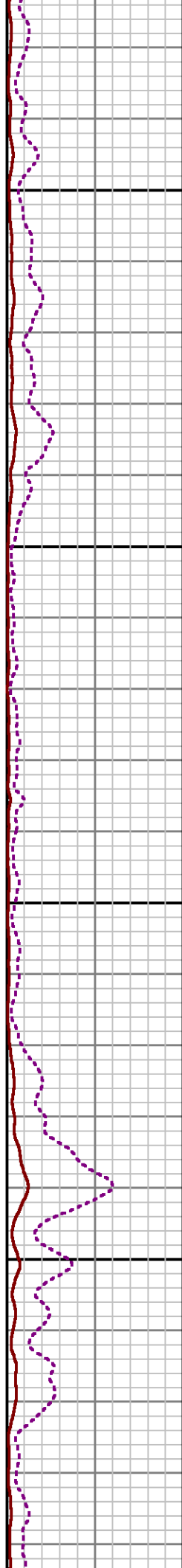
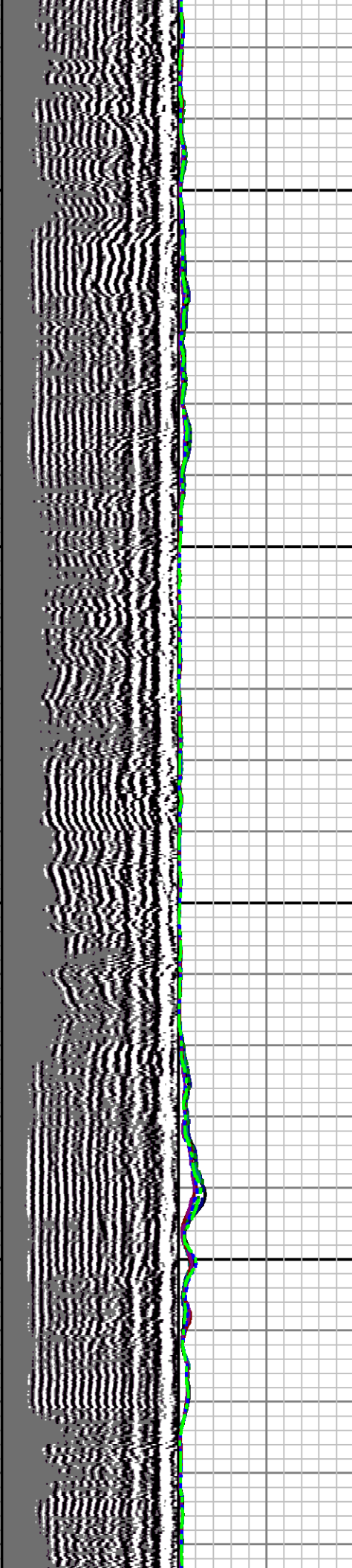


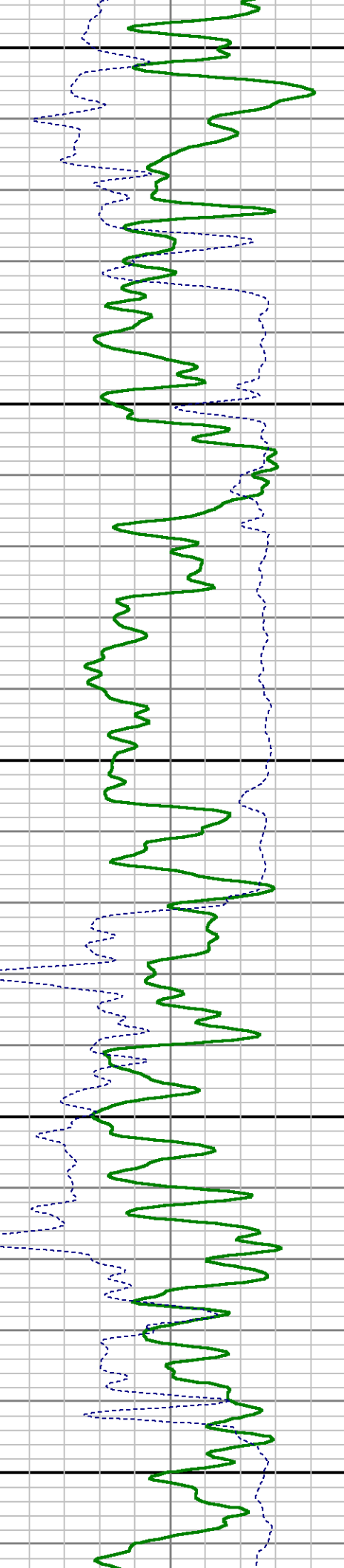
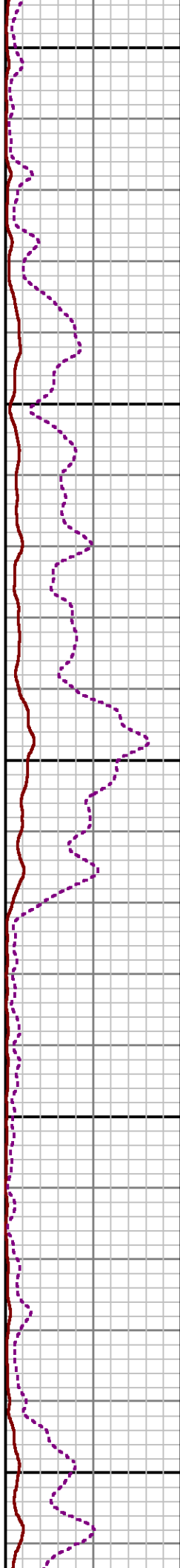
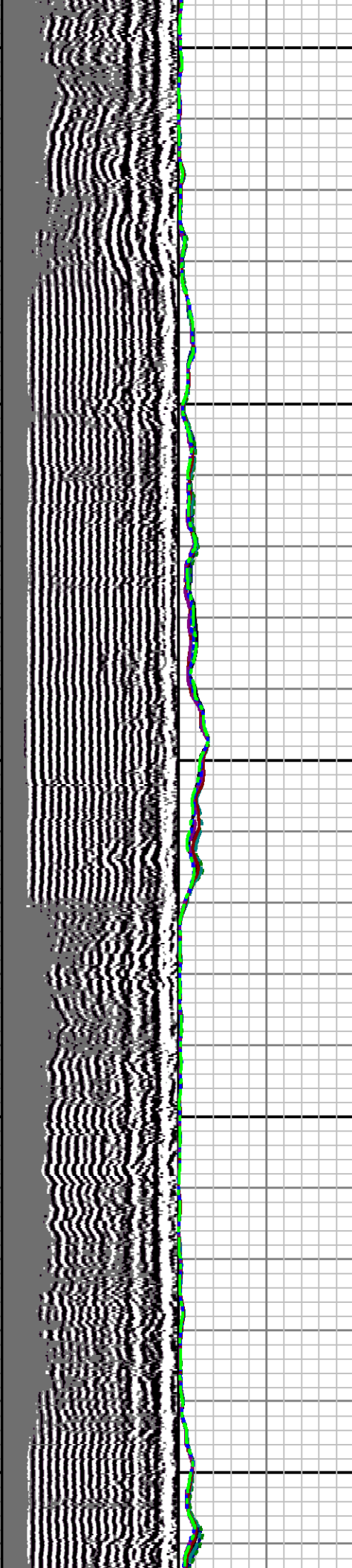
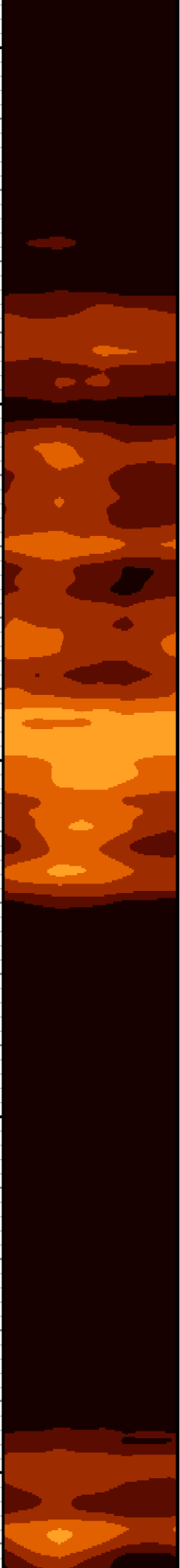


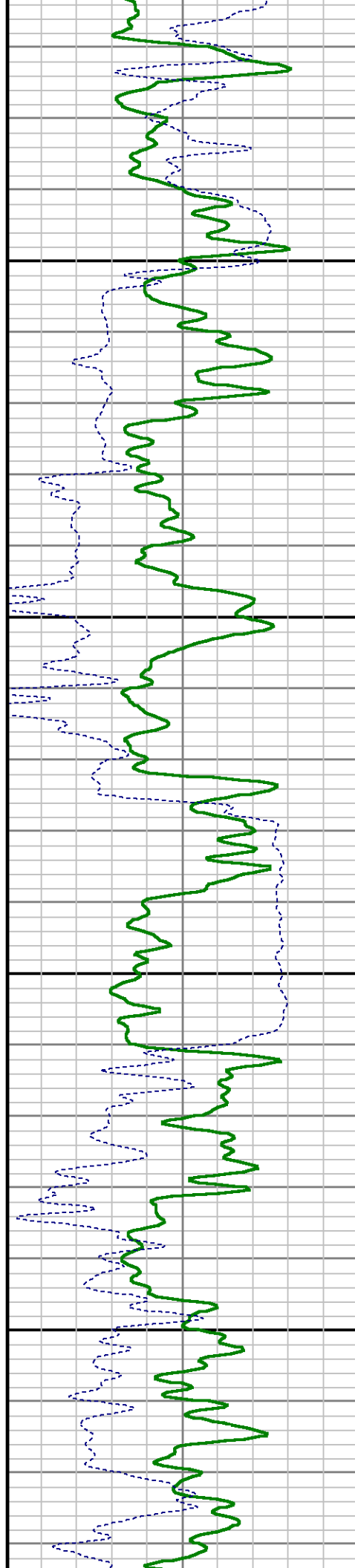
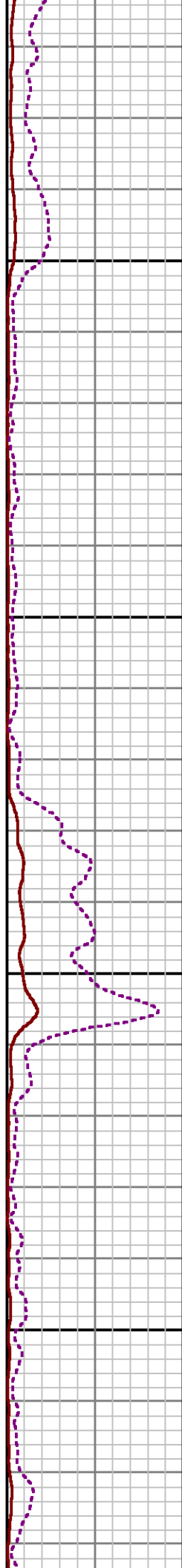
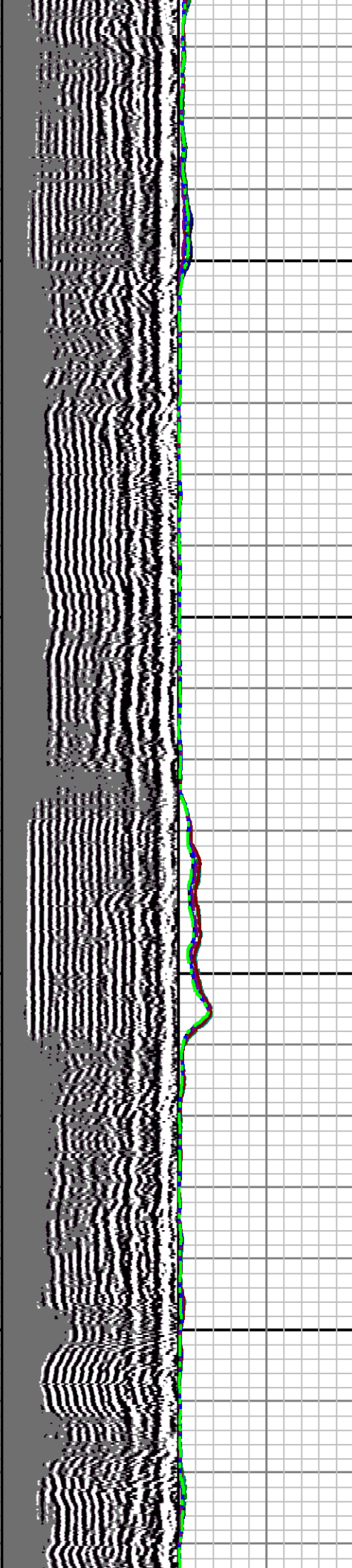
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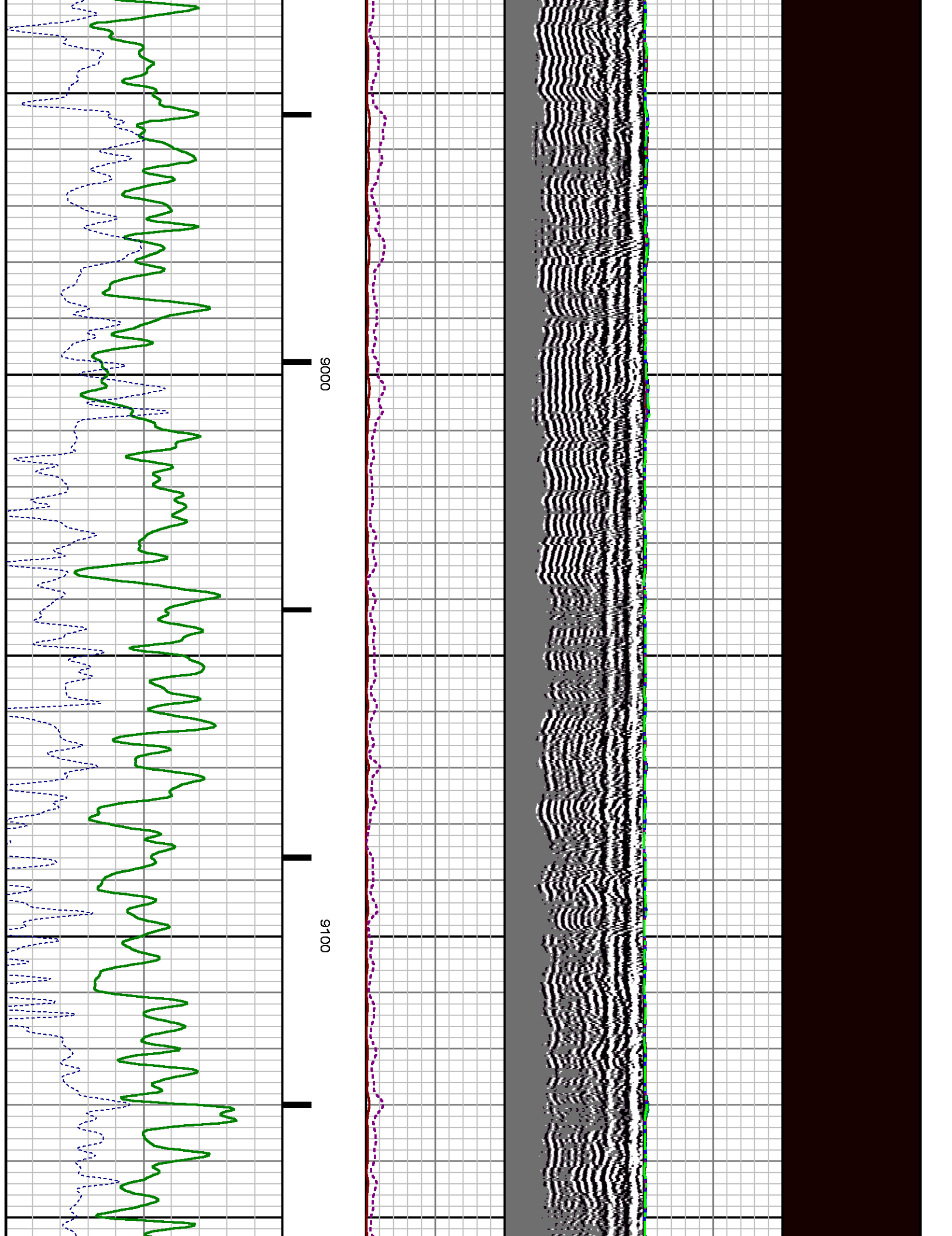
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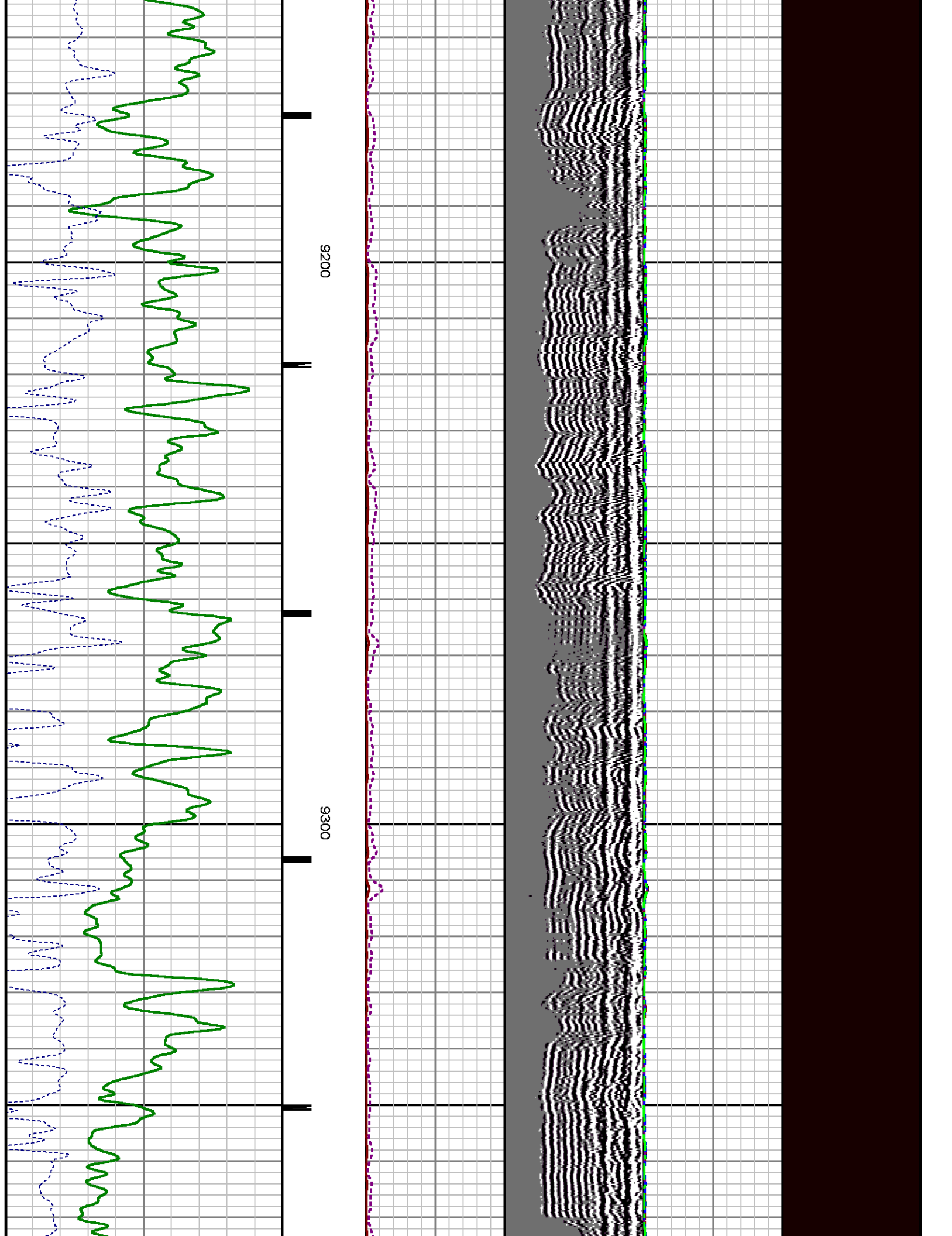


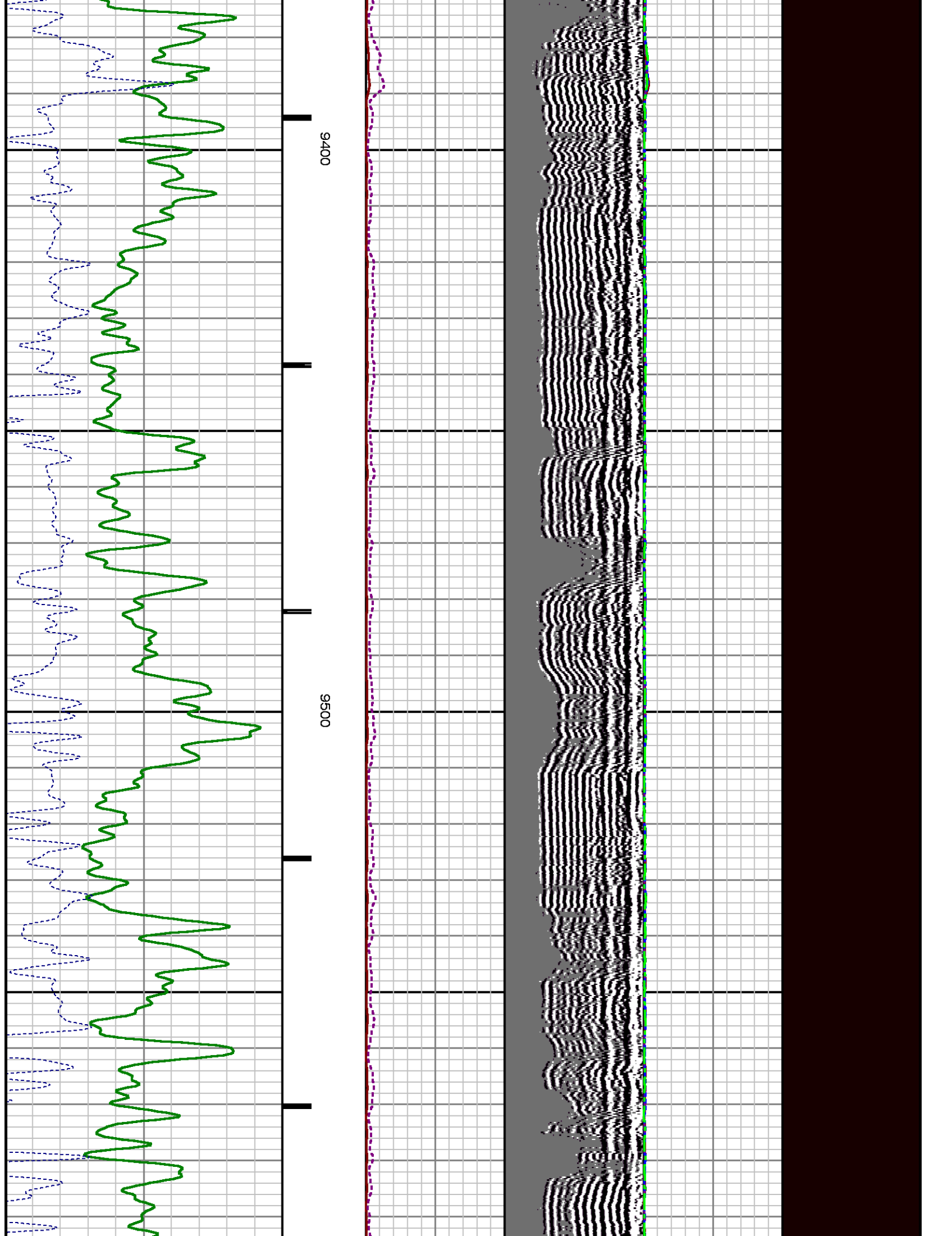


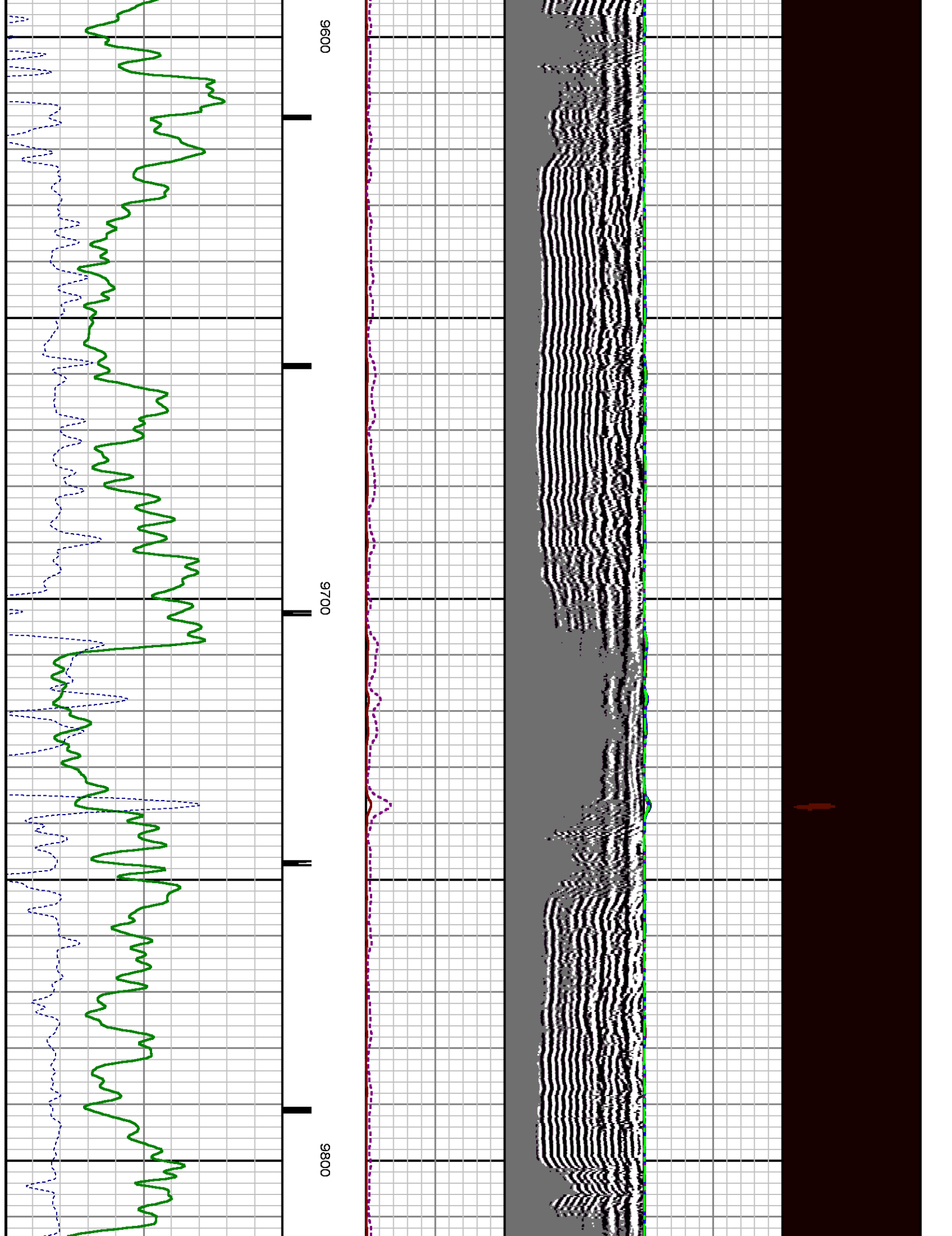


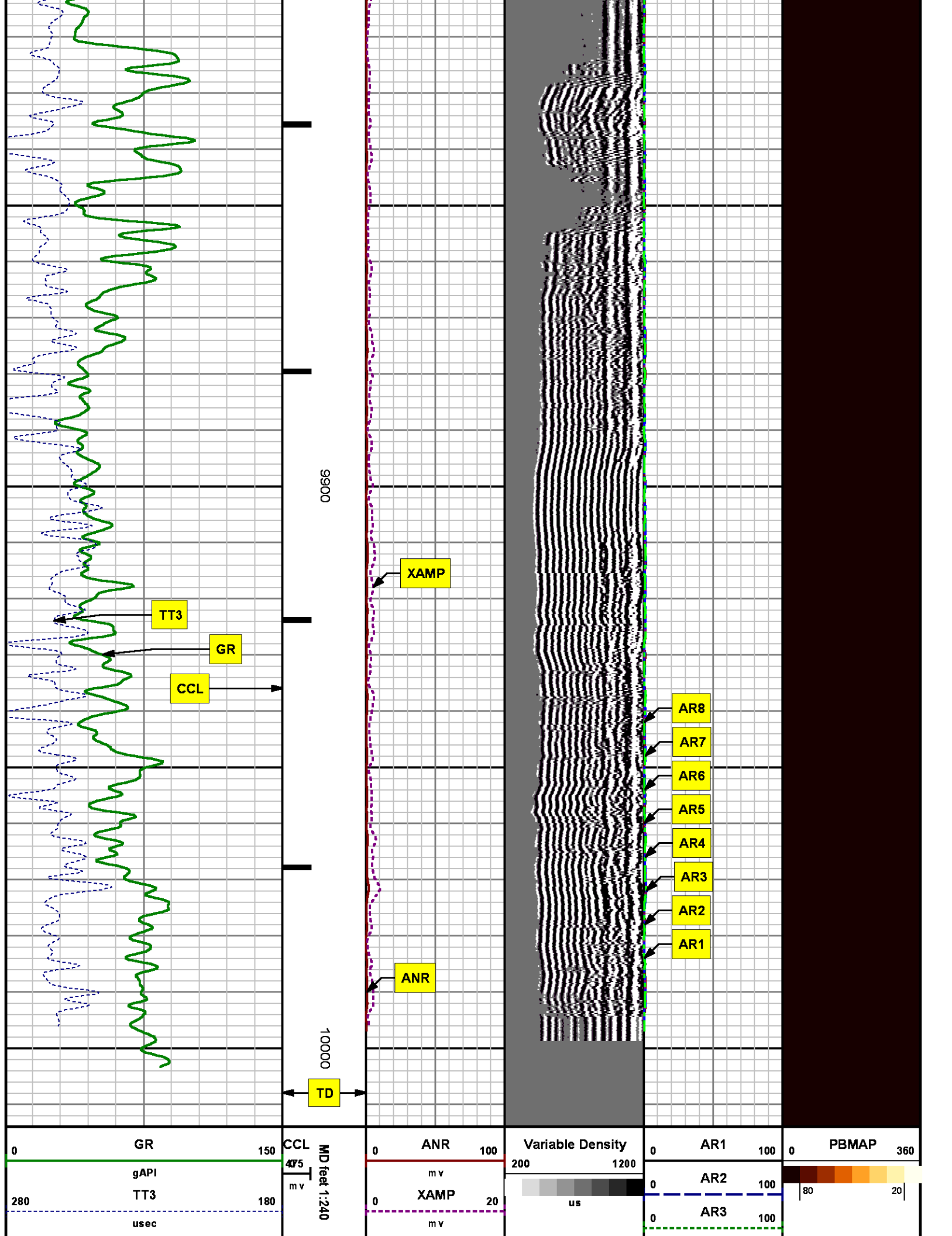












0	AR4	100
0	AR5	100
0	AR6	100
0	AR7	100
0	AR8	100

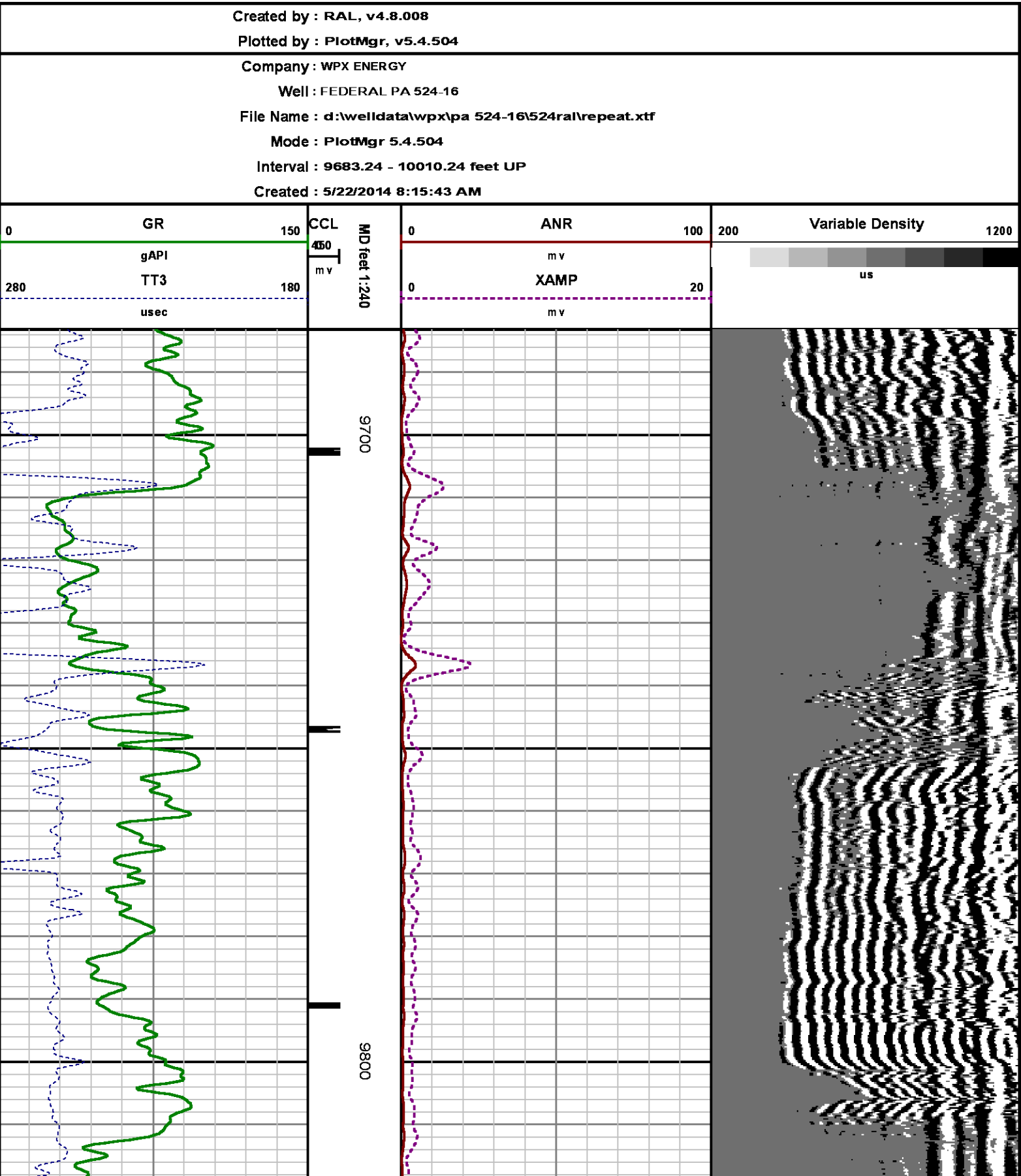
REPEAT SECTION
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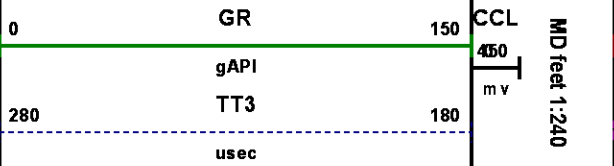
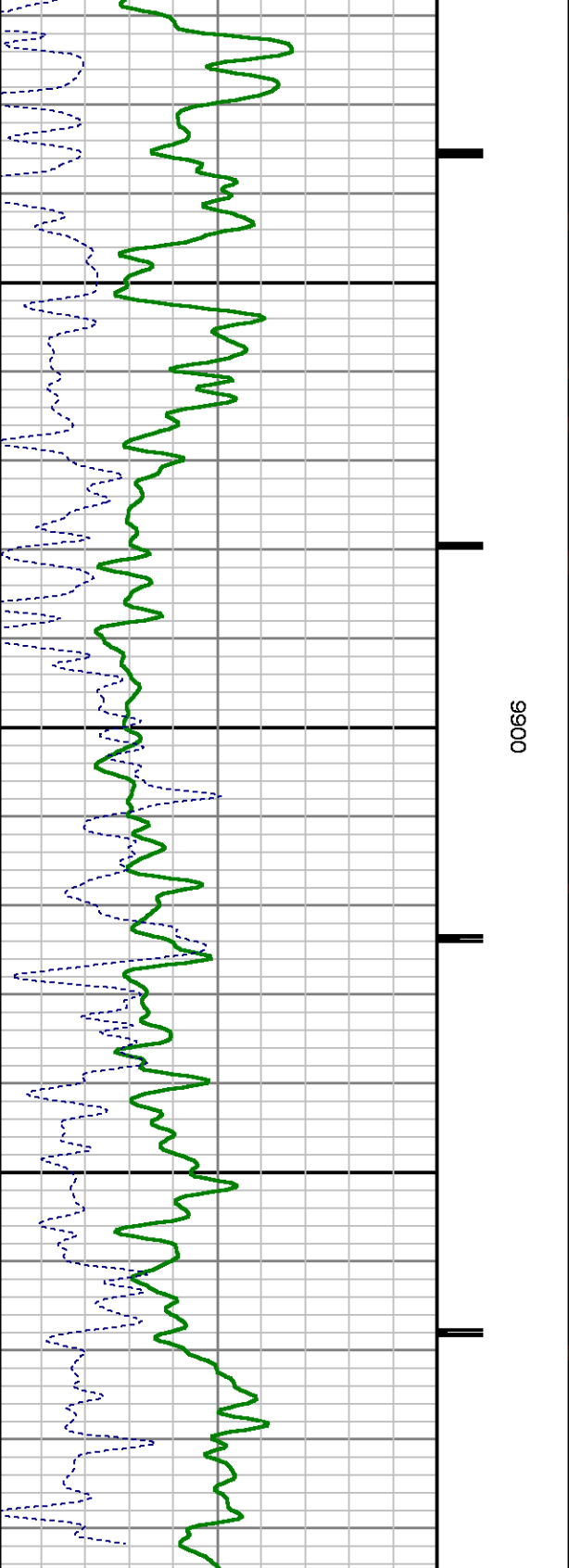
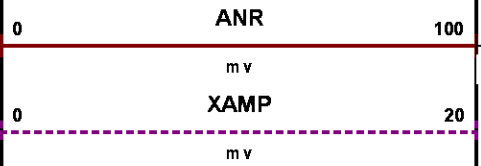
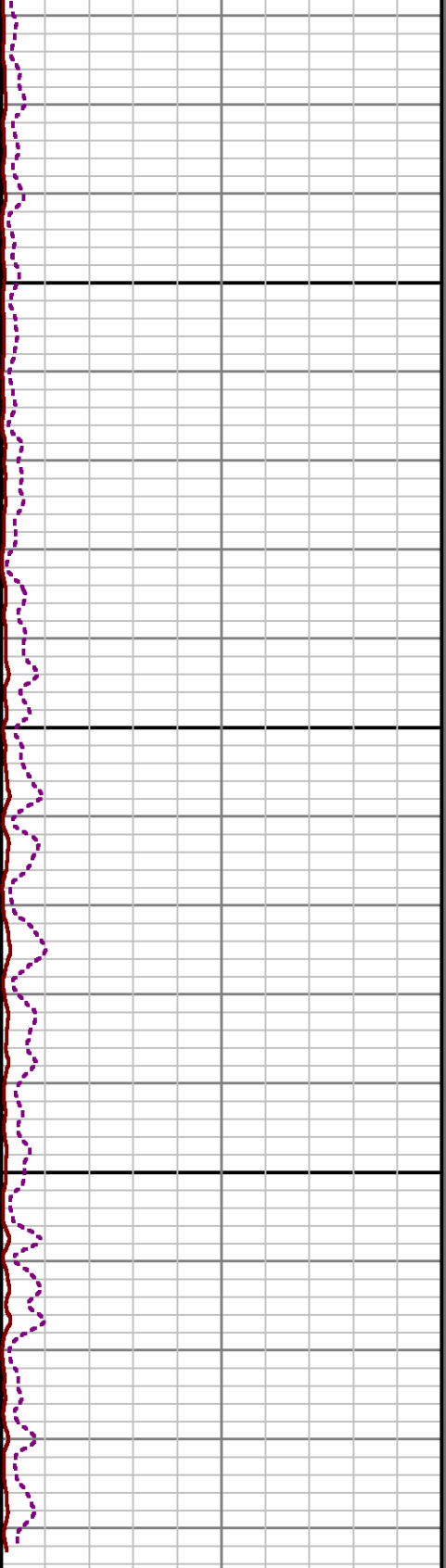
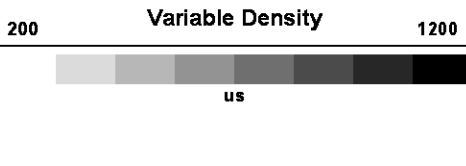
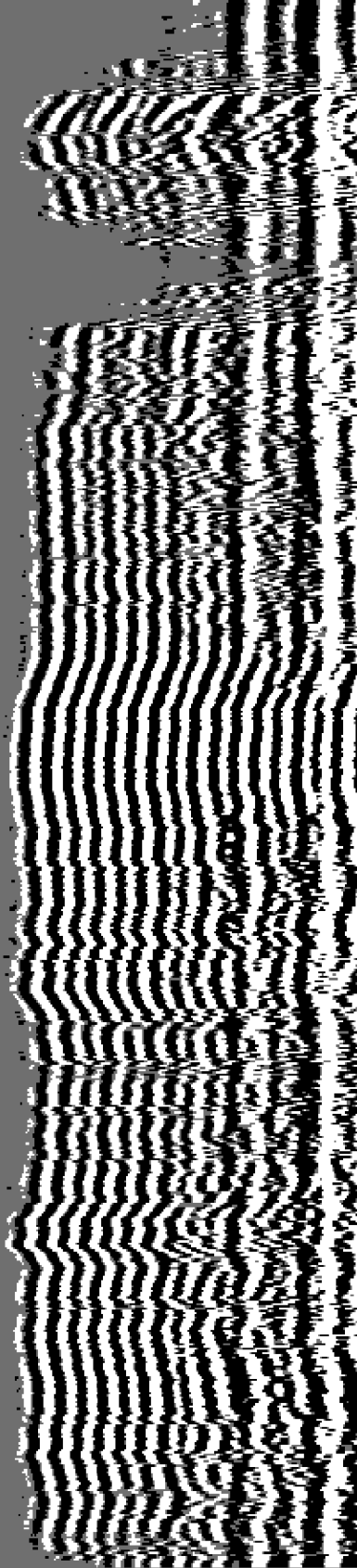
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	9682.990	10010.240
RAL	Amp Gate Start Near	195.000	usec	9682.990	10010.240
RAL	Amp Gate Start Radial	195.000	usec	9682.990	10010.240
RAL	Amp Gate Width Far	25.000	usec	9682.990	10010.240
RAL	Amp Gate Width Near	25.000	usec	9682.990	10010.240
RAL	Amp Gate Width Radial	25.000	usec	9682.990	10010.240
RAL	casing od	4.500	inches	9682.990	10010.240
RAL	casing wt	11.600	lbm/ft	9682.990	10010.240
RAL	FB Start Far	291.900	usec	9682.990	10010.240
RAL	FB Start Near	180.000	usec	9682.990	10010.240
RAL	FB Start Radial	180.000	usec	9682.990	10010.240
RAL	FB Thresh Far	10.000	mv	9682.990	10010.240
RAL	FB Thresh Near	4.000	mv	9682.990	10010.240
RAL	FB Thresh Radial	4.000	mv	9682.990	10010.240
RAL	Fluid Travel Time	200.000	usec/ft	9682.990	10010.052

DEPTH OFFSETS
 (for Acquired Curves)

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

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





9900

10000

MD feet 1:240

CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\106MAY21_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed May 21 07:40:54 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: MAY21

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	215	216	30	166	25	-0.561	100.00	0.45
3 Ft. Receiver	217	216	30	166	25	-0.390	100.00	0.45
5 Ft. Receiver	324	325	30	248	25	0.070	150.00	0.48
Radial #1	217	216	30	166	25	-1.017	100.00	0.45
Radial #2	215	216	30	166	25	-0.629	100.00	0.45
Radial #3	215	216	30	166	25	-0.699	100.00	0.45
Radial #4	215	216	30	166	25	-0.619	100.00	0.45
Radial #5	217	216	30	166	25	-0.533	100.00	0.45
Radial #6	217	216	30	166	25	-0.237	100.00	0.46
Radial #7	216	216	30	166	25	-0.613	100.00	0.46
Radial #8	217	216	30	166	25	-0.484	100.00	0.45

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\106MAY21 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed May 21 07:43:42 2014 TOOL SERIES: 1426XA ASSET: 106 SEQ: MAY21

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

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	-0.273	0.000	1.00	100.000
3 Ft. Receiver	195	25	-1.296			
5 Ft. Receiver	305	25	-1.355			
Radial #1	195	25	-2.265			
Radial #2	195	25	-1.665			
Radial #3	195	25	-1.222			

Radial #3	195	25	-1.368
Radial #4	195	25	-1.645
Radial #5	195	25	-1.233
Radial #6	195	25	-1.276
Radial #7	195	25	-0.983
Radial #8	195	25	-1.033

GAMMA RAY

Calibration File: C:\case\calver\GR\45608.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu May 08 09:48:12 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: 08

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	97.82	367.47	0.686	67.11	252.11	185.00

Verification File: C:\case\calver\GR\45608.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu May 08 09:49:43 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: 08

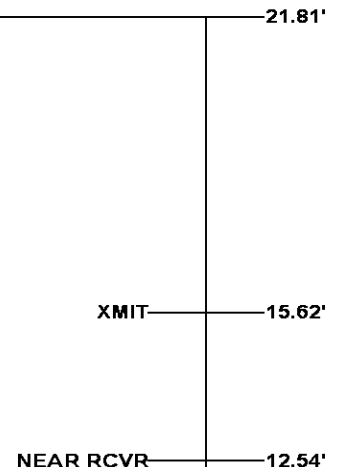
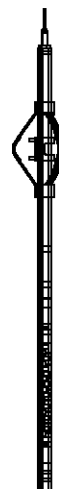
Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	98.76	372.44	0.686	67.76	255.53	187.77

TOOL DIAGRAM

OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII

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



Probe GR/CCL/NEU

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

FAR RCVR	10.62'
CCL	8.92'
GR	7.06'
NEU	1.67'
	0.00'

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

**Baker Atlas***CASE***Company****WPX ENERGY****Well****FEDERAL PA 524-16****Field****PARACHUTE****County****GARFIELD****State****COLORADO****File No:****CH085886****API No:****05045220420000****Location****SHL: 2600' FNL & 1396' FWL SEC 21****BHL: 1030' FSL & 2326' FWL (SESW) SEC 16****Elevations****KB 6056 ft****DF****GL 6030 ft****16 6S 95W****PA 22-21 PAD****NABORS 573****SEC 16 TWP 6S RGE 95W**