



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: _____ Company _____ WPX ENERGY

CH083164 _____ Well _____ FEDERAL PA 31-21

API No: _____ Field _____ PARACHUTE

0504520390000 _____ County _____ GARFIELD State _____ COLORADO

21 6S 95W _____ Location _____

PA 22-21 PAD _____ SHL: 2600' FNL & 1441' FWL

NABORS 673 _____ BHL: 252' FNL & 1685' FEL (NWNE)

SEC 21 TWP 6S RGE 95W

Other Services

RPM

Permanent Datum _____ GL _____ Elevation _____ 6030 ft

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

Drill Measured From _____ KELLY BUSHING

Elevations

KB 6056 ft

DF

GL 6030 ft

Date _____ 21/MAR/14

Run _____ ONE

Service Order _____ US62E298

Depth Driller _____ 9660 ft

Depth Logger _____ 9608 ft

Bottom Logged Interval _____ 9598 ft

Top Logged Interval _____ 26 ft

Time Started _____ 0630

Time Finished _____ 1300

Operator Rig Time _____ 6.5 HRS

Type of Fluid in Hole _____ WATER

Fluid Density _____ NA

Salinity _____ NA

Fluid Level _____ FULL

Logged Cement Top _____ NA

Wellhead Pressure _____ 2600 psi

Maximum Hole Deviation _____ NA

Nominal Logging Speed _____ 66 fpm

Maximum Recorded Temperature _____ 265 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	938 ft
8.75 in	938 ft	9690 ft

Casing Record

Size	Weight	Grade	From	To
9.625 in			26 ft	938 ft
4.5 in	11.6 lbm/ft	I-80	26 ft	9690 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.
Top ccl mark is 8' above ground level (height of flange on production tree).
The amount of linear shift is 13 feet.
Logged with 2500PSI at wellhead.

BHT = 255°F

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10218496	CENT
1	1	GR	2459XA	10124121	CENT

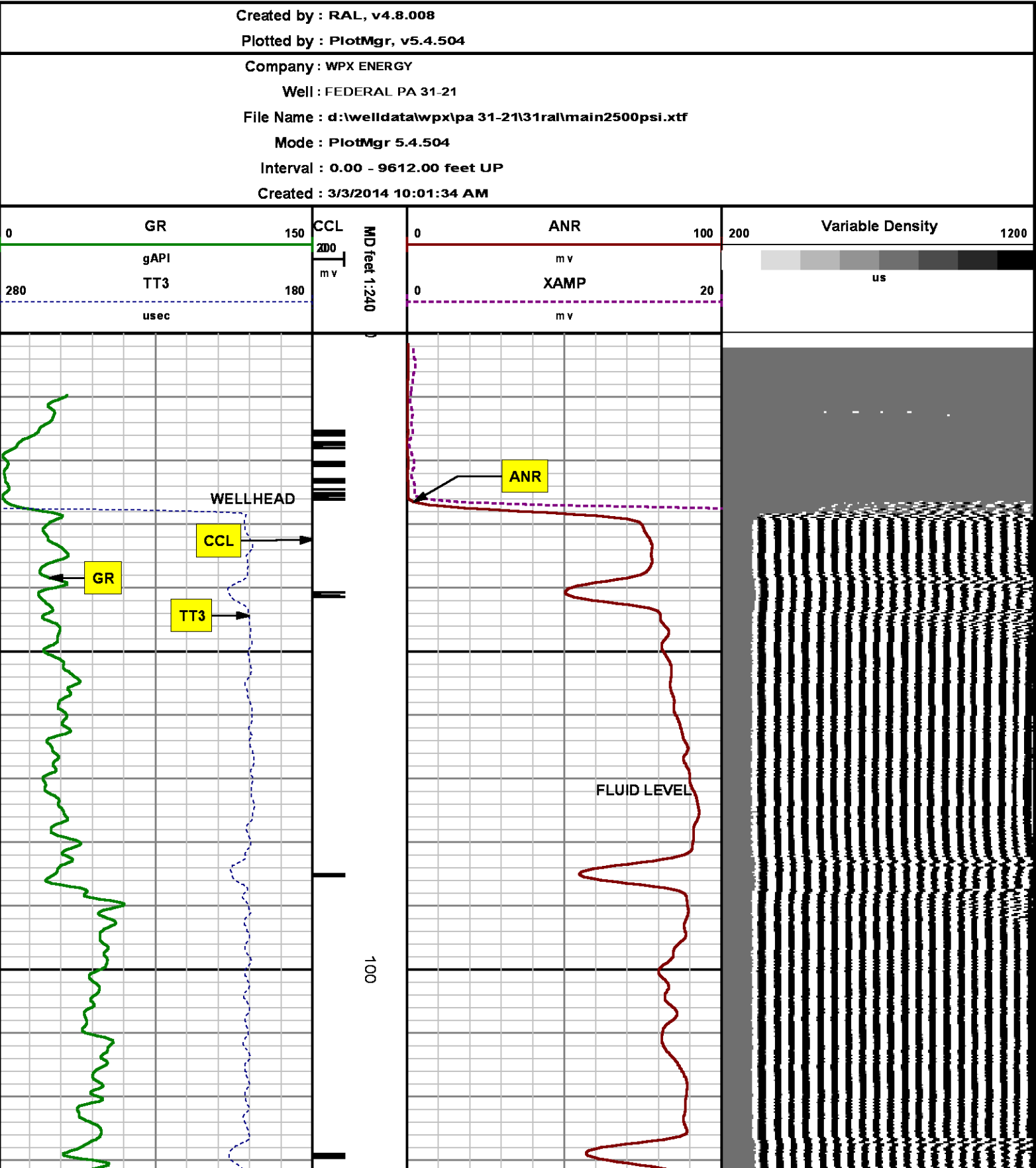
PRIMARY PRESENTATION
2500 PSI

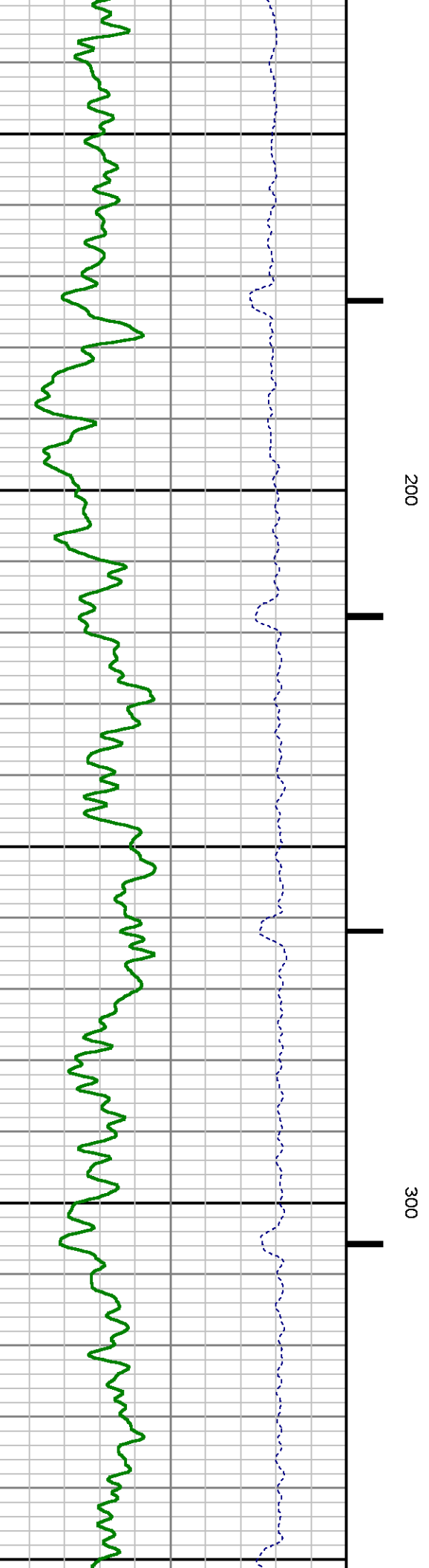
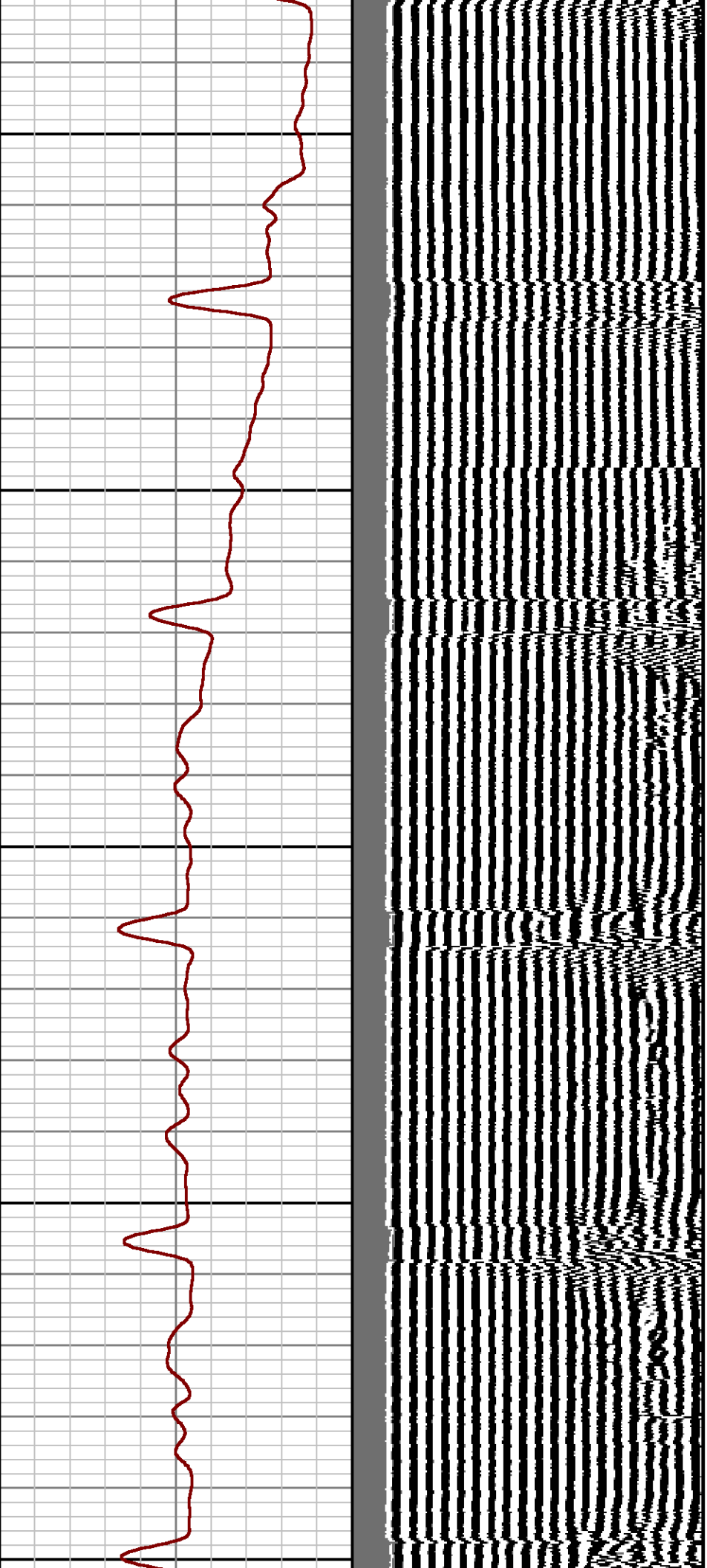
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	17.879	9612.000
RAL	Amp Gate Start Near	195.000	usec	17.879	9612.000
RAL	Amp Gate Start Radial	195.000	usec	17.879	9612.000
RAL	Amp Gate Width Far	25.000	usec	17.879	9612.000
RAL	Amp Gate Width Near	25.000	usec	17.879	9612.000
RAL	Amp Gate Width Radial	30.000	usec	17.879	9612.000
RAL	casing od	4.500	inches	17.879	9612.000
RAL	casing wt	11.600	lbm/ft	17.879	9612.000
RAL	FB Start Far	291.900	usec	17.879	9612.000
RAL	FB Start Near	175.391	usec	17.879	9612.000
RAL	FB Start Radial	180.000	usec	17.879	9612.000
RAL	FB Thresh Far	10.000	mv	17.879	9612.000
RAL	FB Thresh Near	4.000	mv	17.879	9612.000
RAL	FB Thresh Radial	4.000	mv	17.879	9612.000
RAL	Fluid Travel Time	200.000	usec/ft	17.879	9612.000

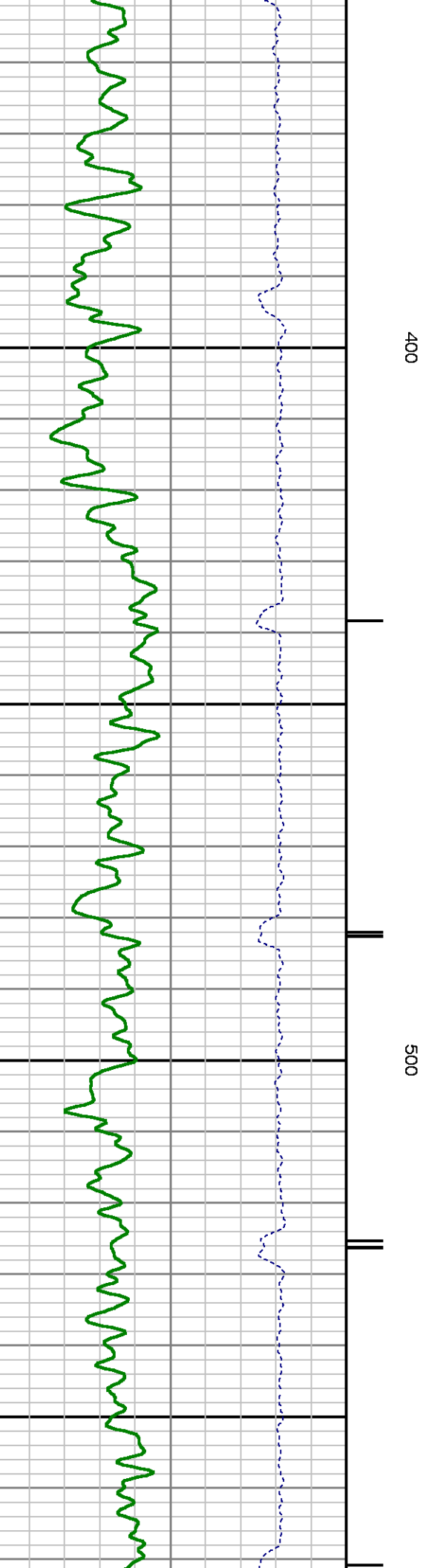
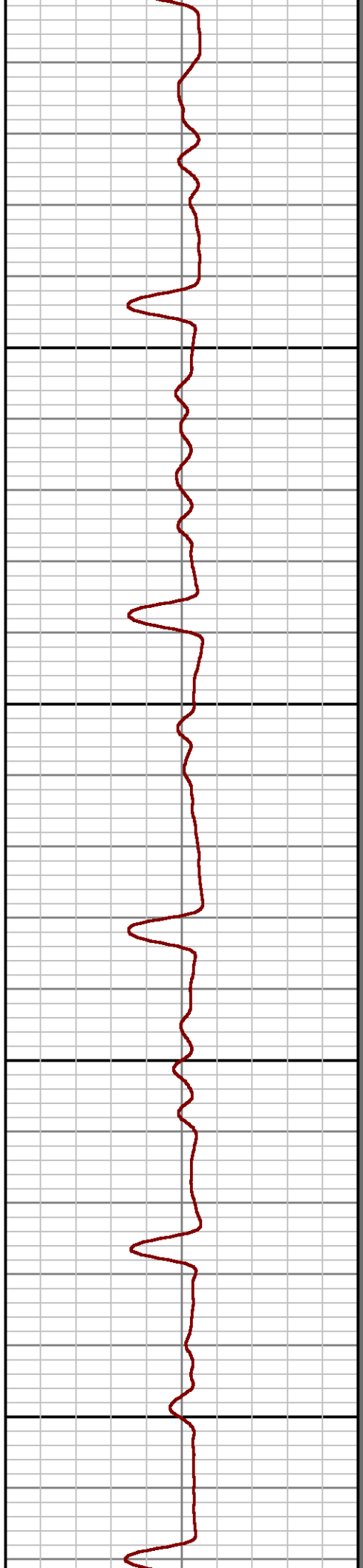
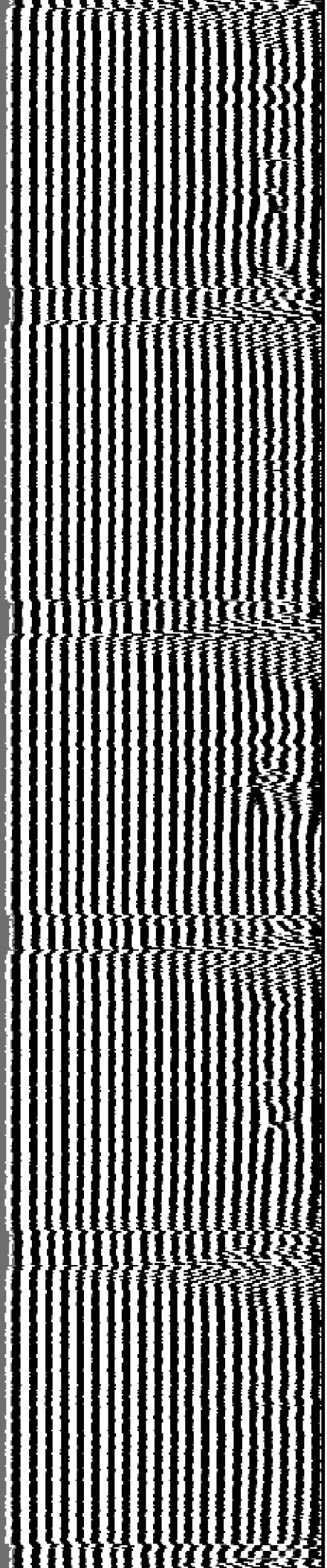
DEPTH OFFSETS
(for Acquired Curves)

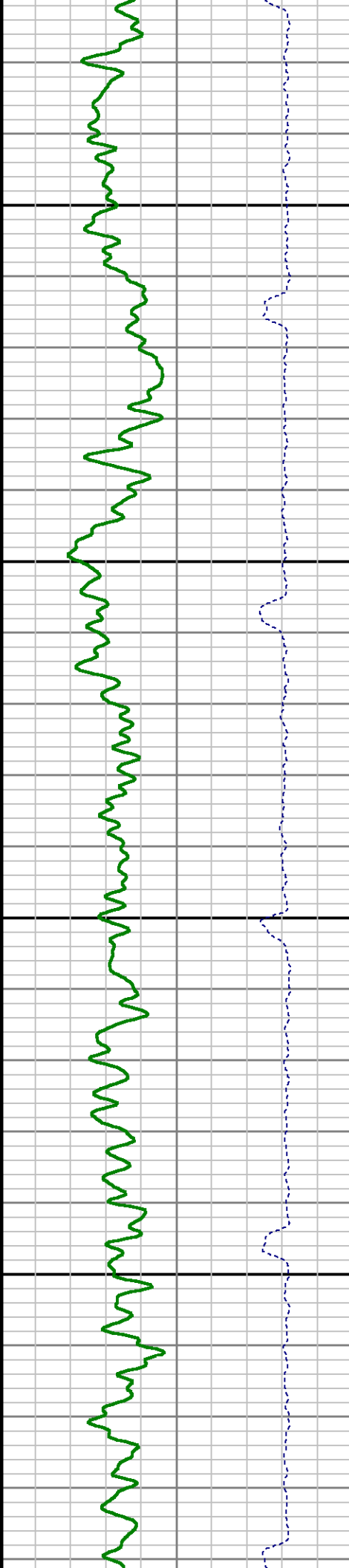
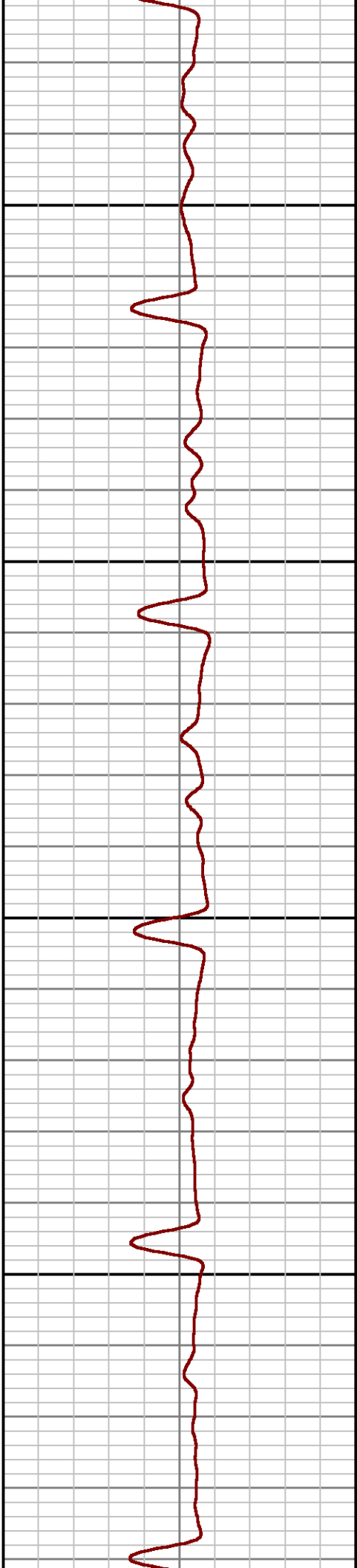
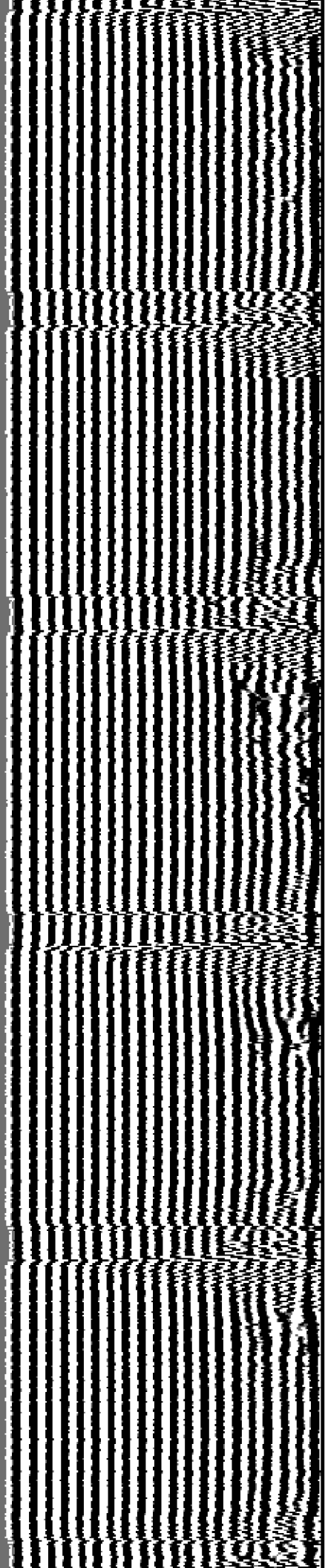
SERIES	DEPTH OFFSET	ACQUIRED CURVES							
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3	AR4		
		AR5	AR6	AR7	AR8	CHV	FPR2		

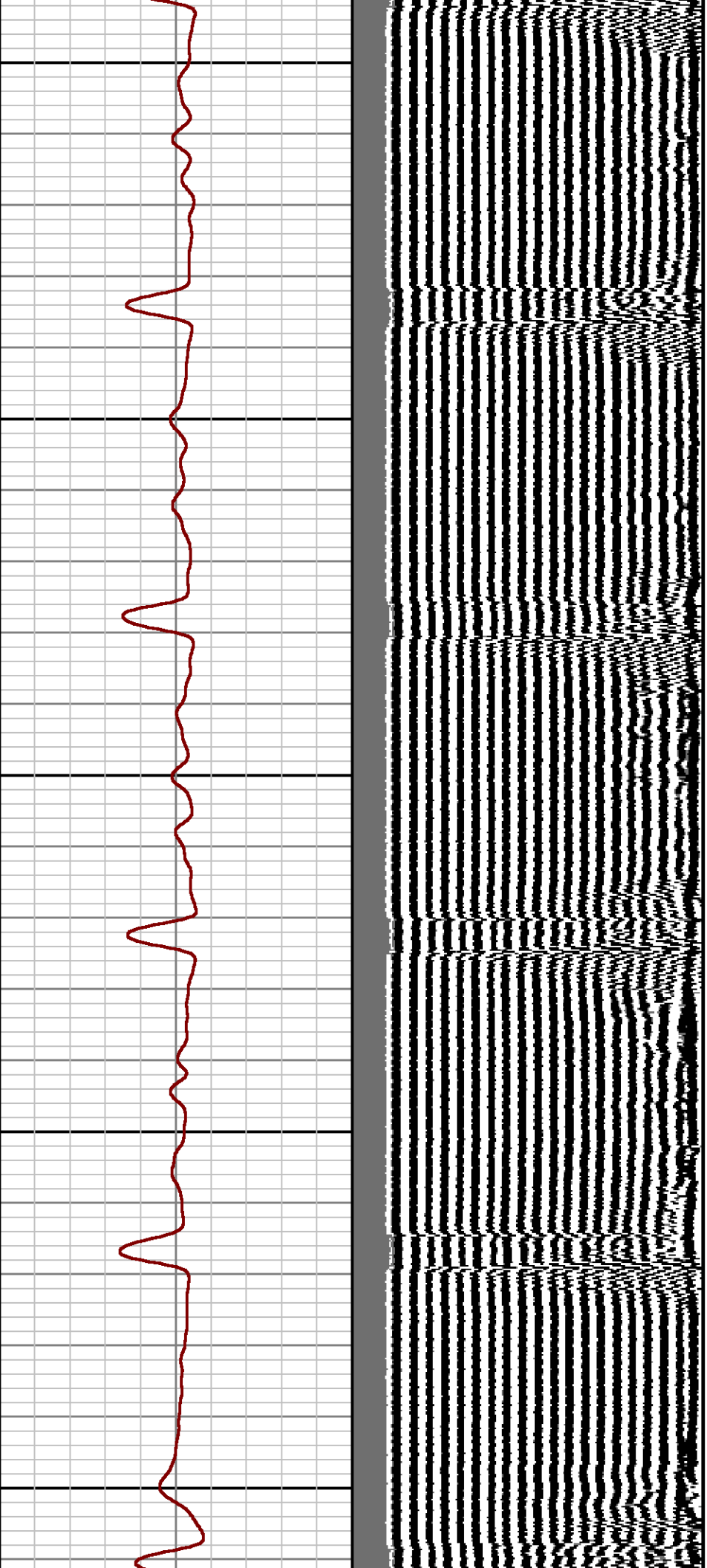
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-15.750	AFAR	SIG	TT5			
2459XA	-11.340	CCL					
2459XA	-9.490	GR					
2459XA	-4.090	NEU					







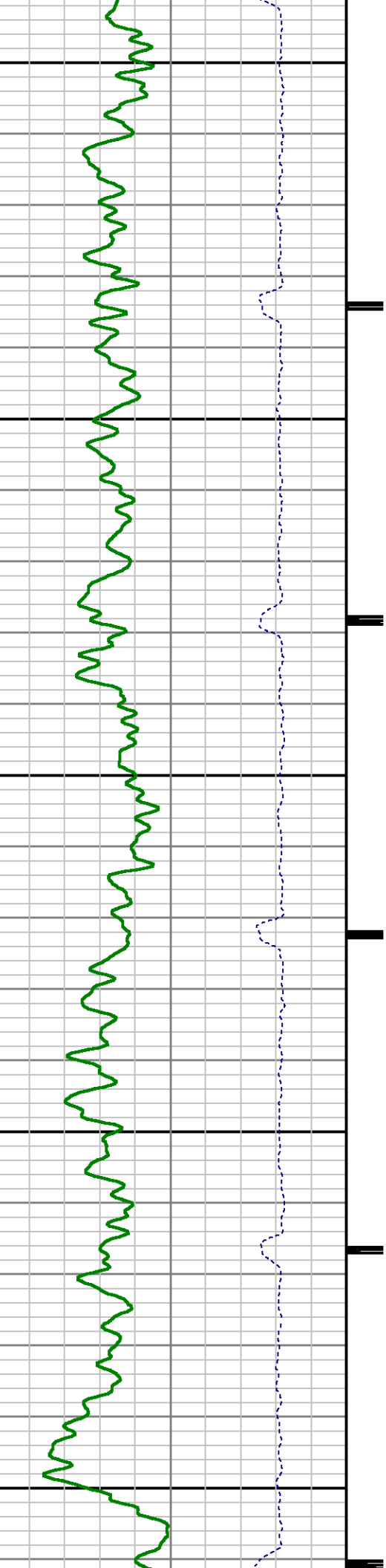


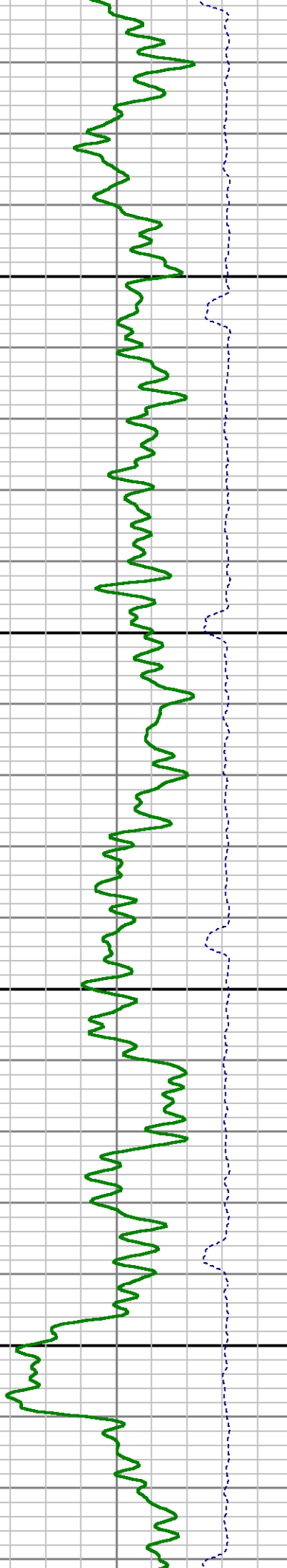
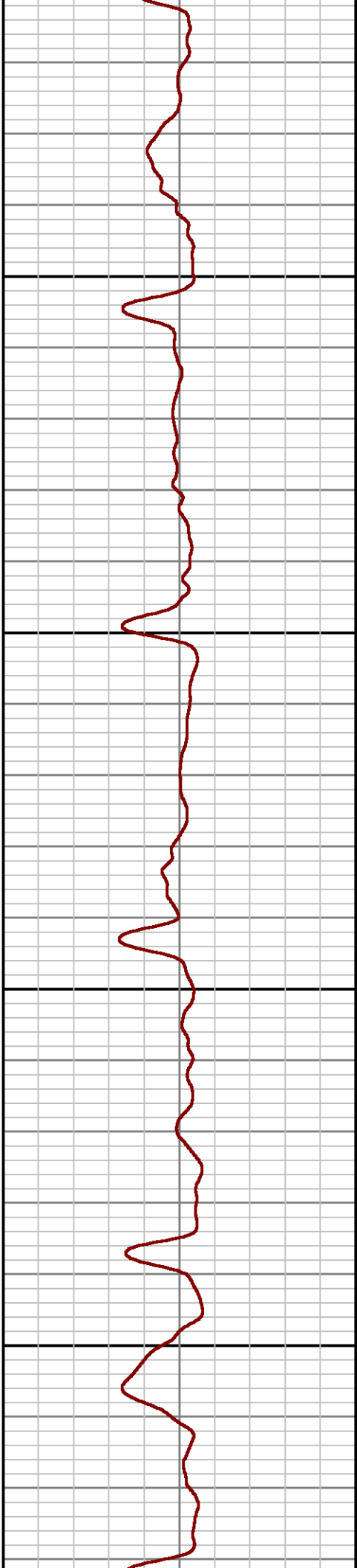
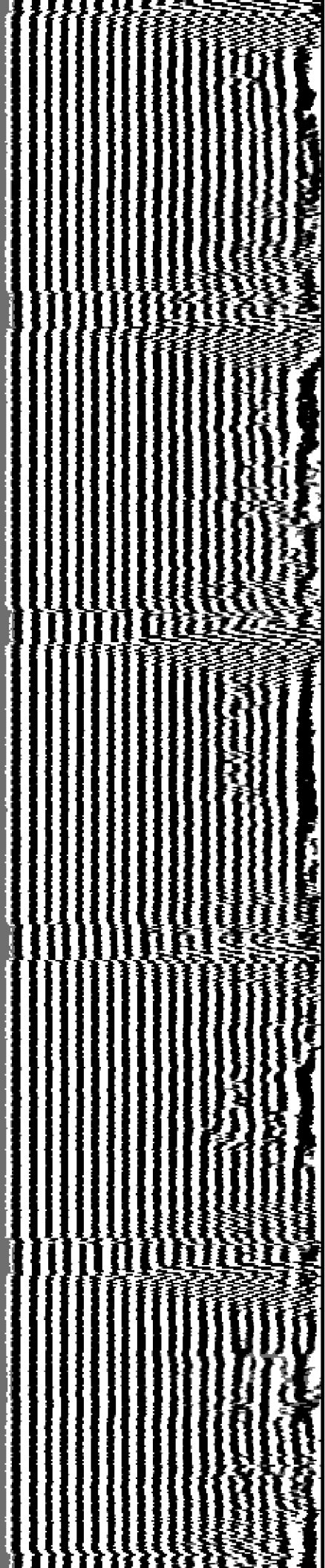


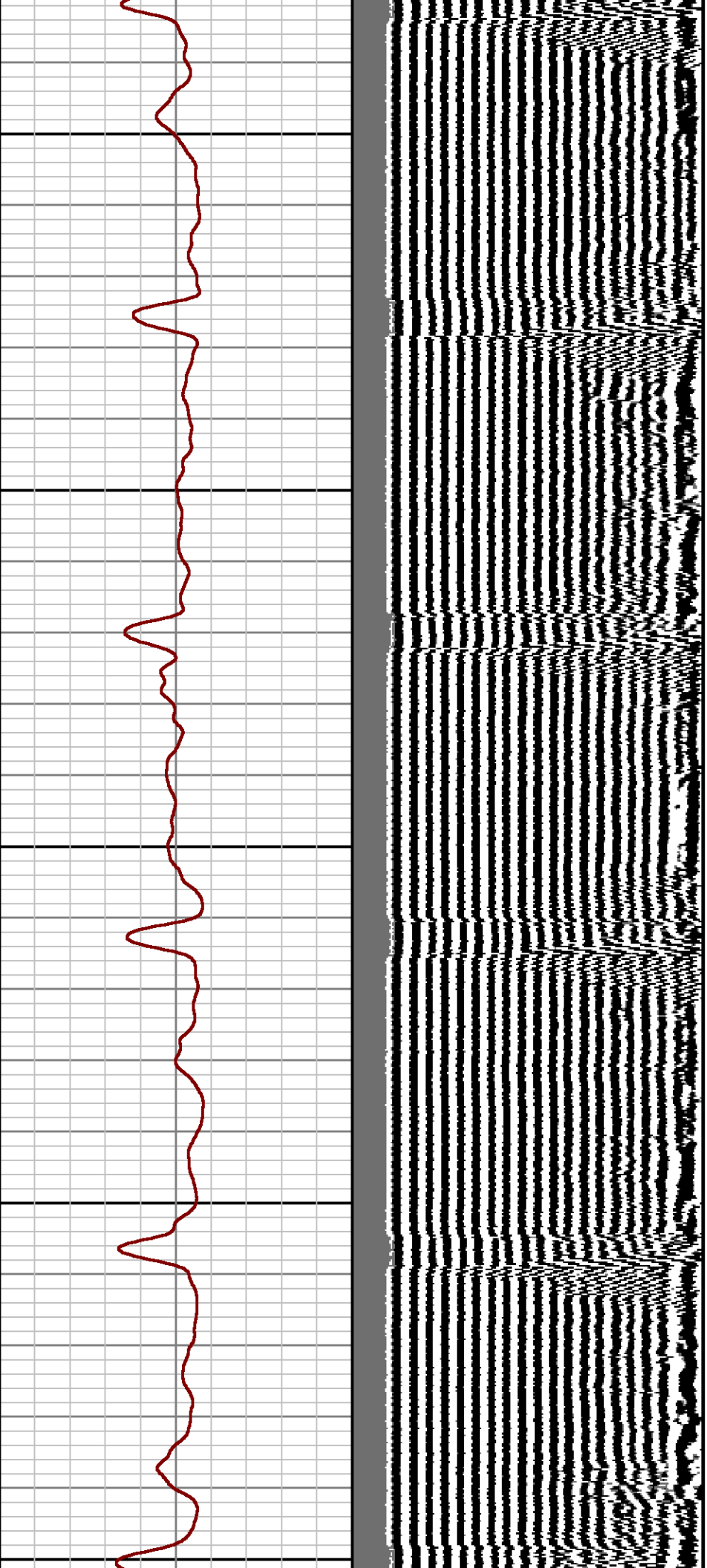
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900

1000

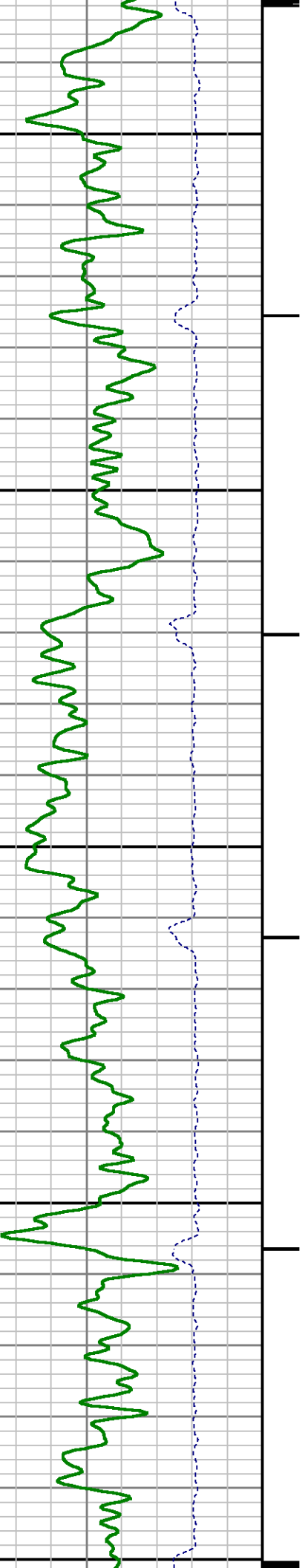


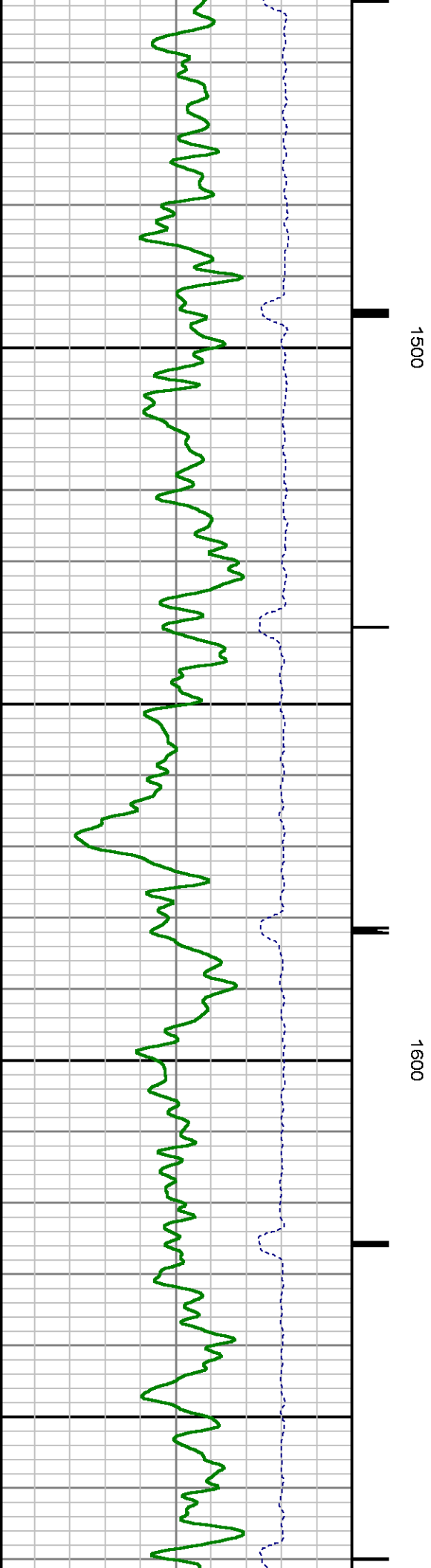
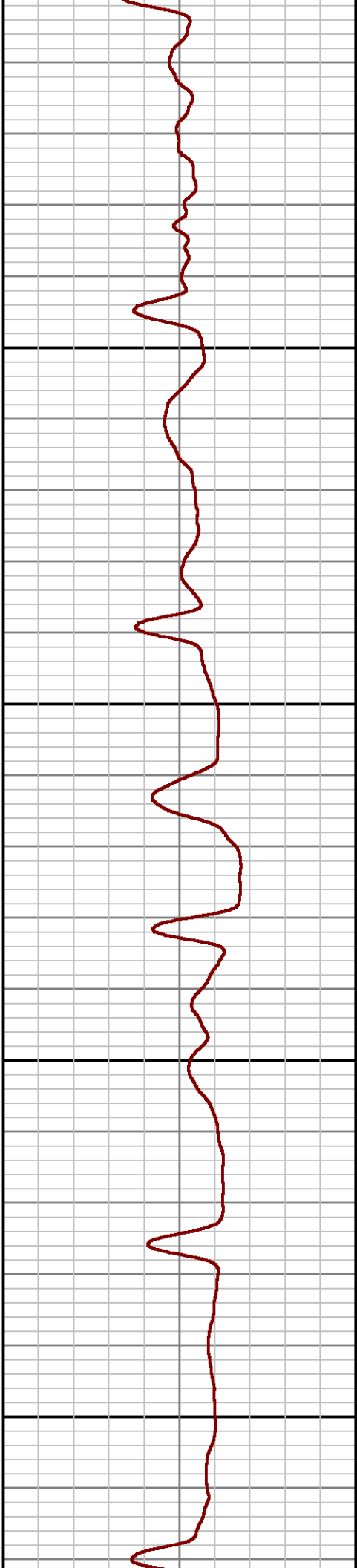
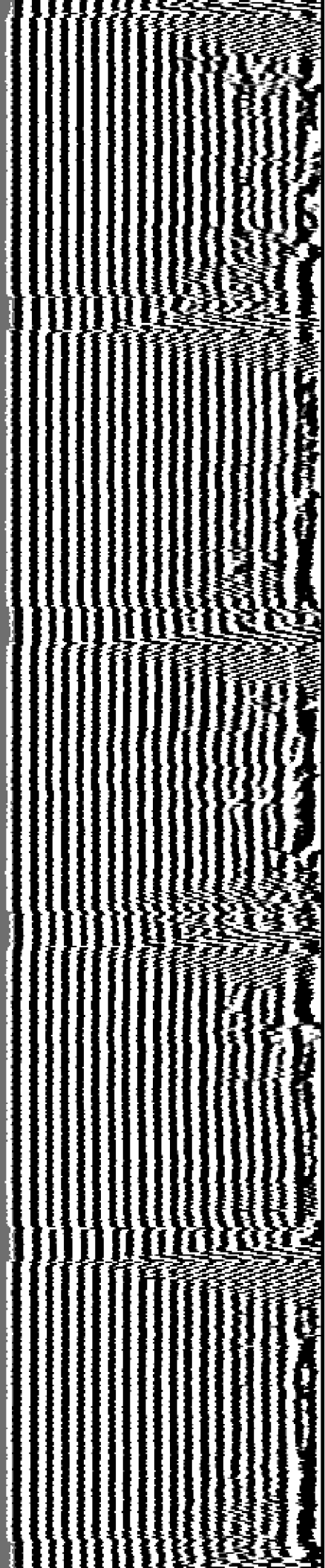


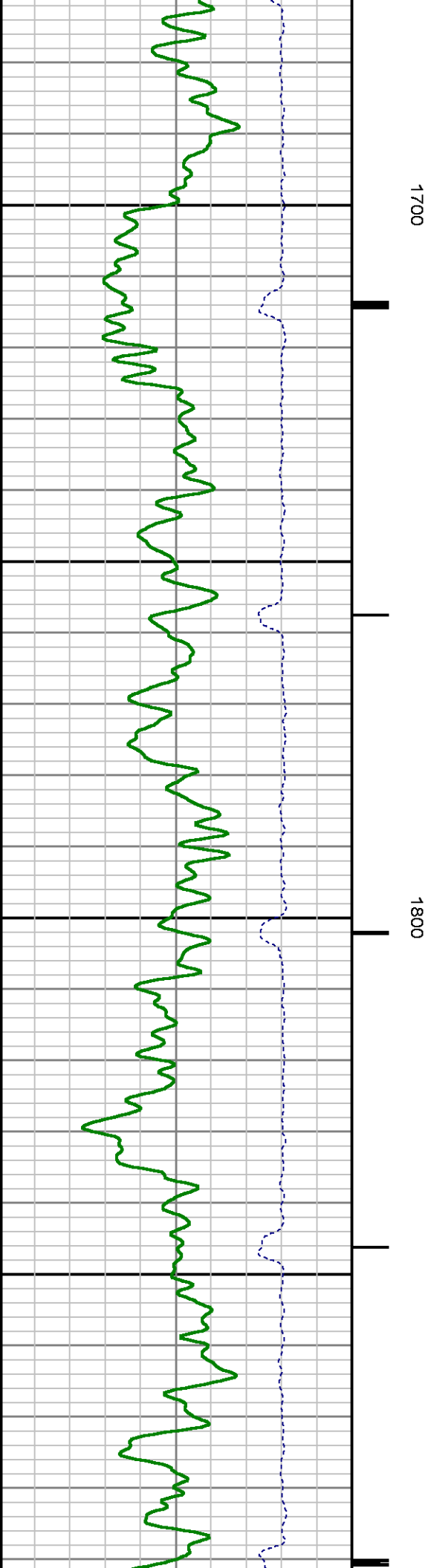
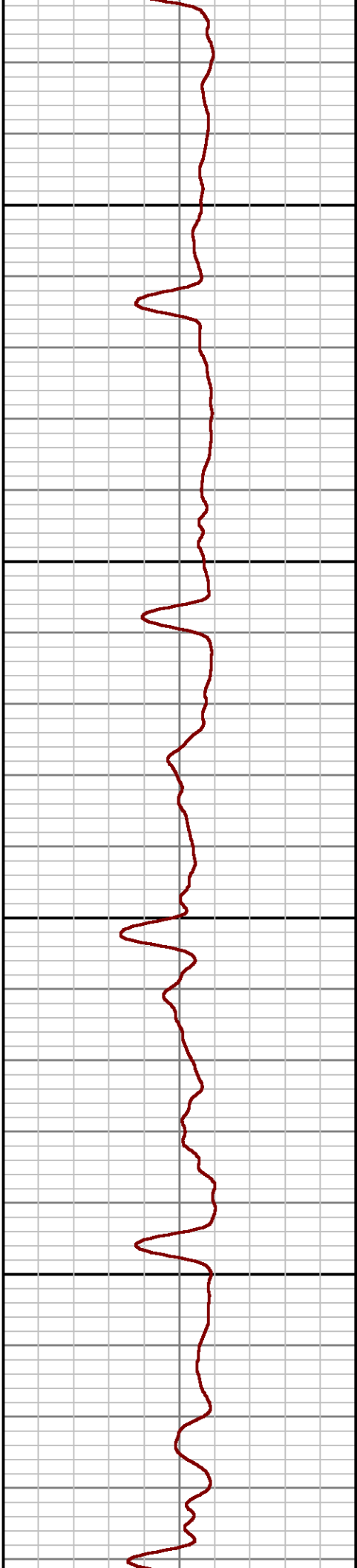
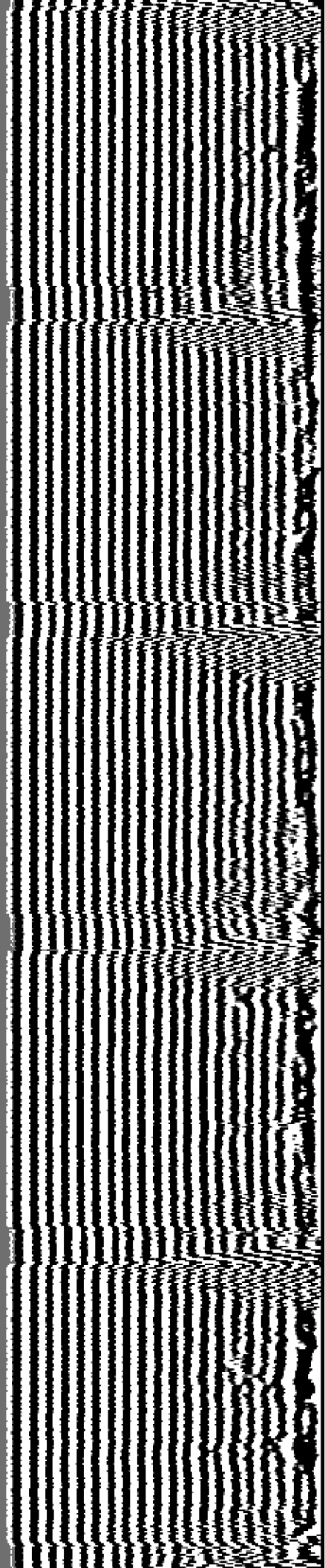


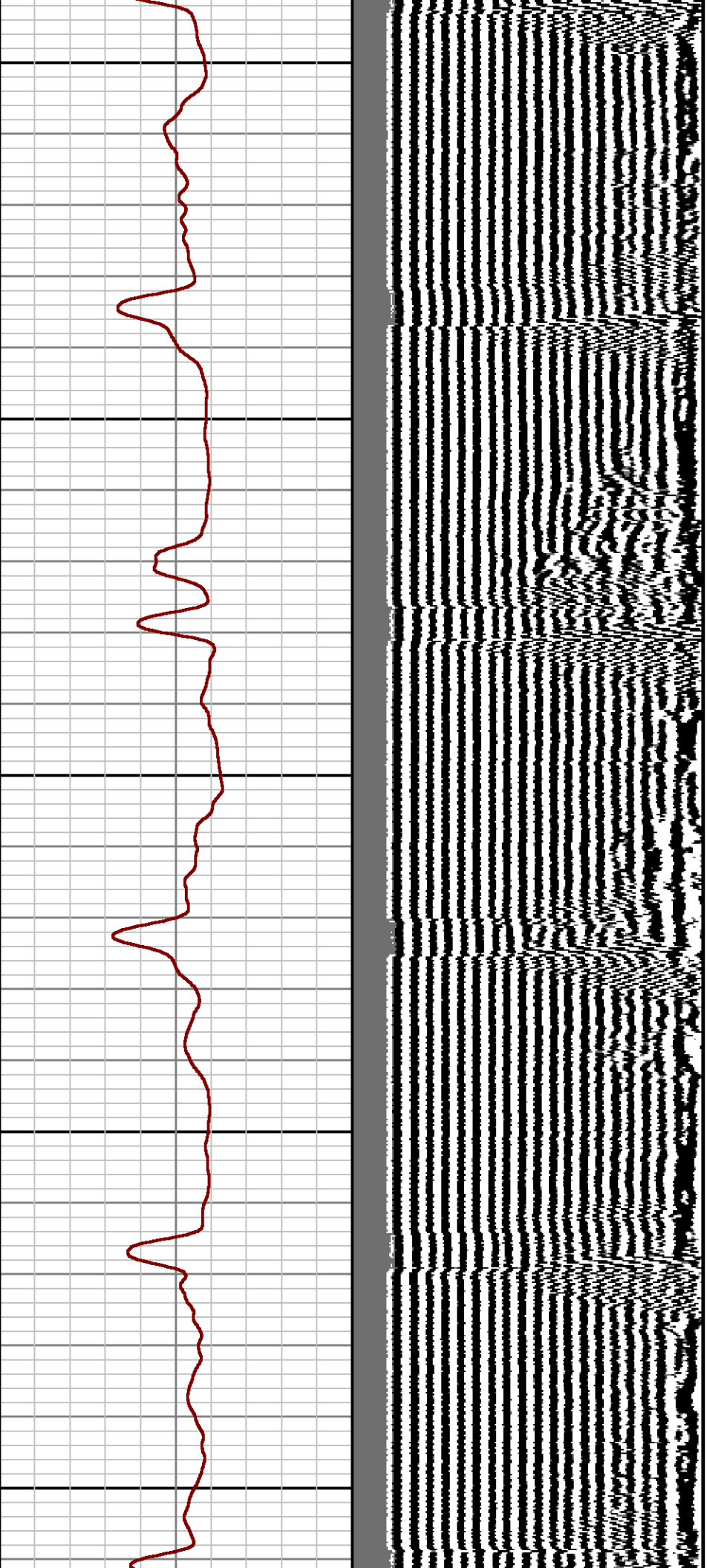
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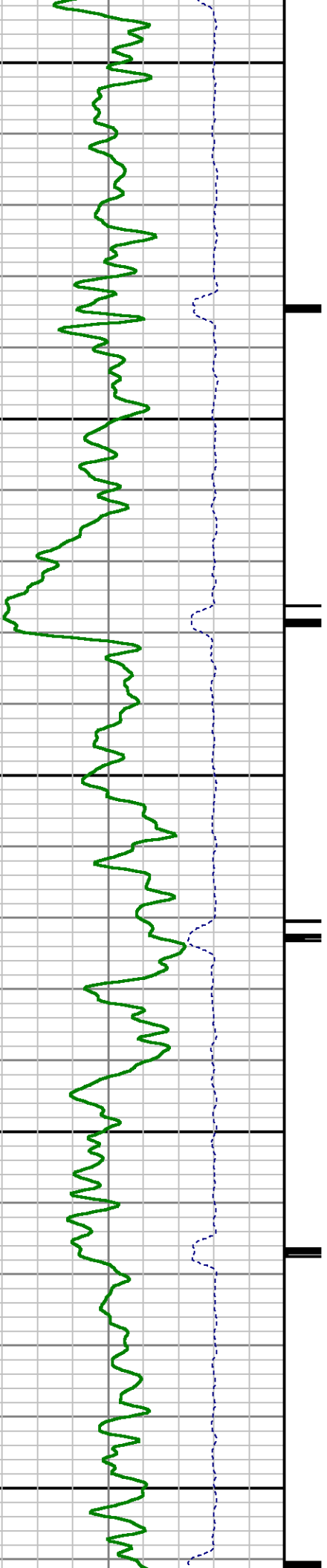


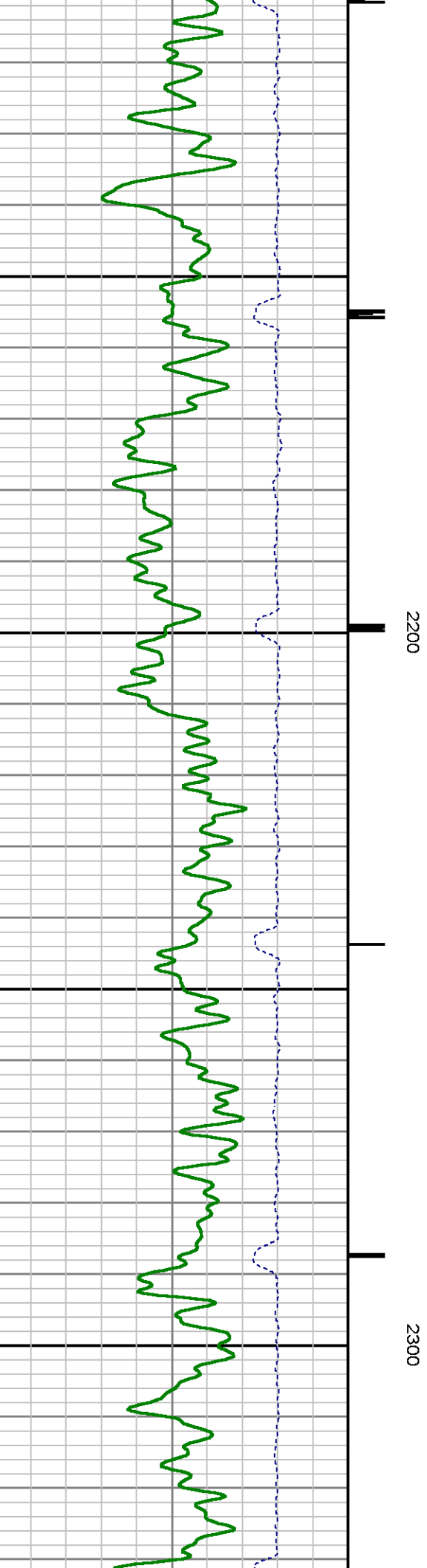
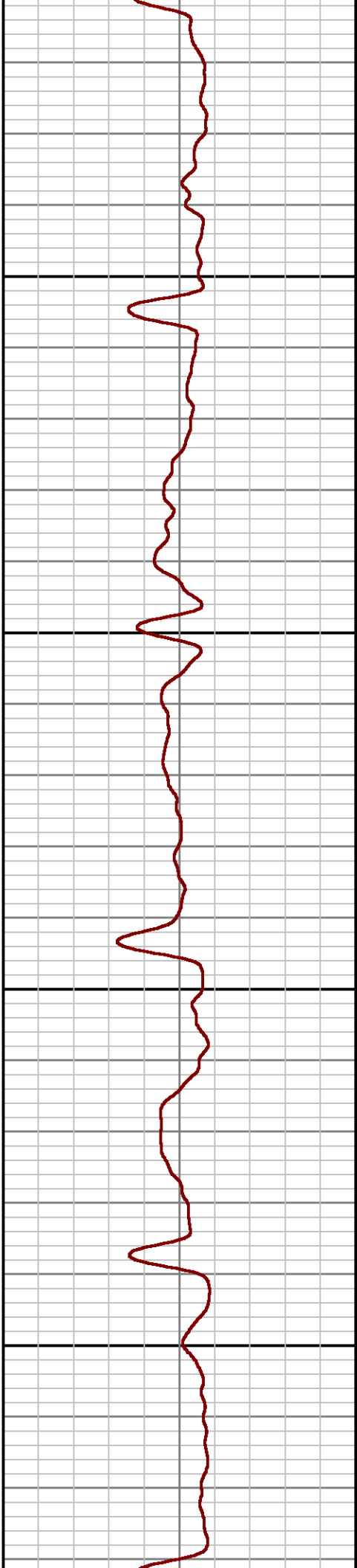
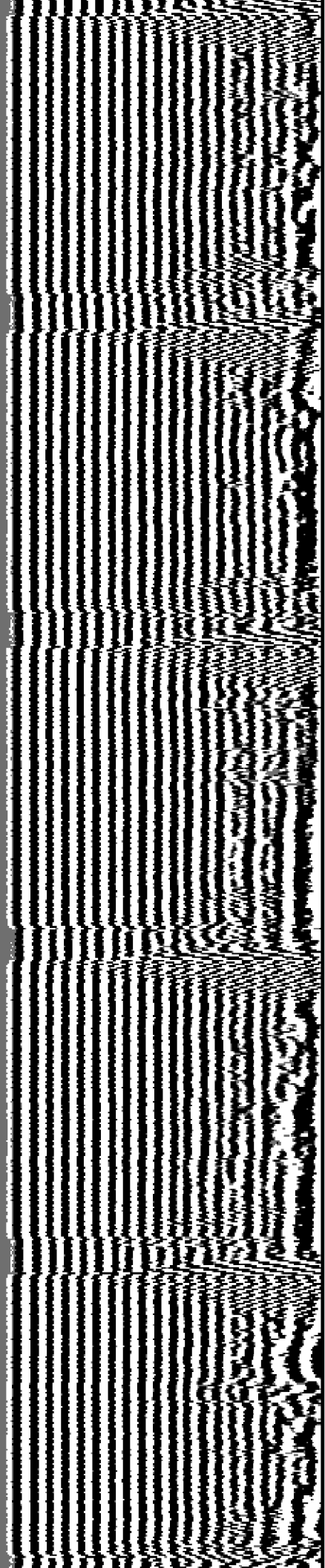


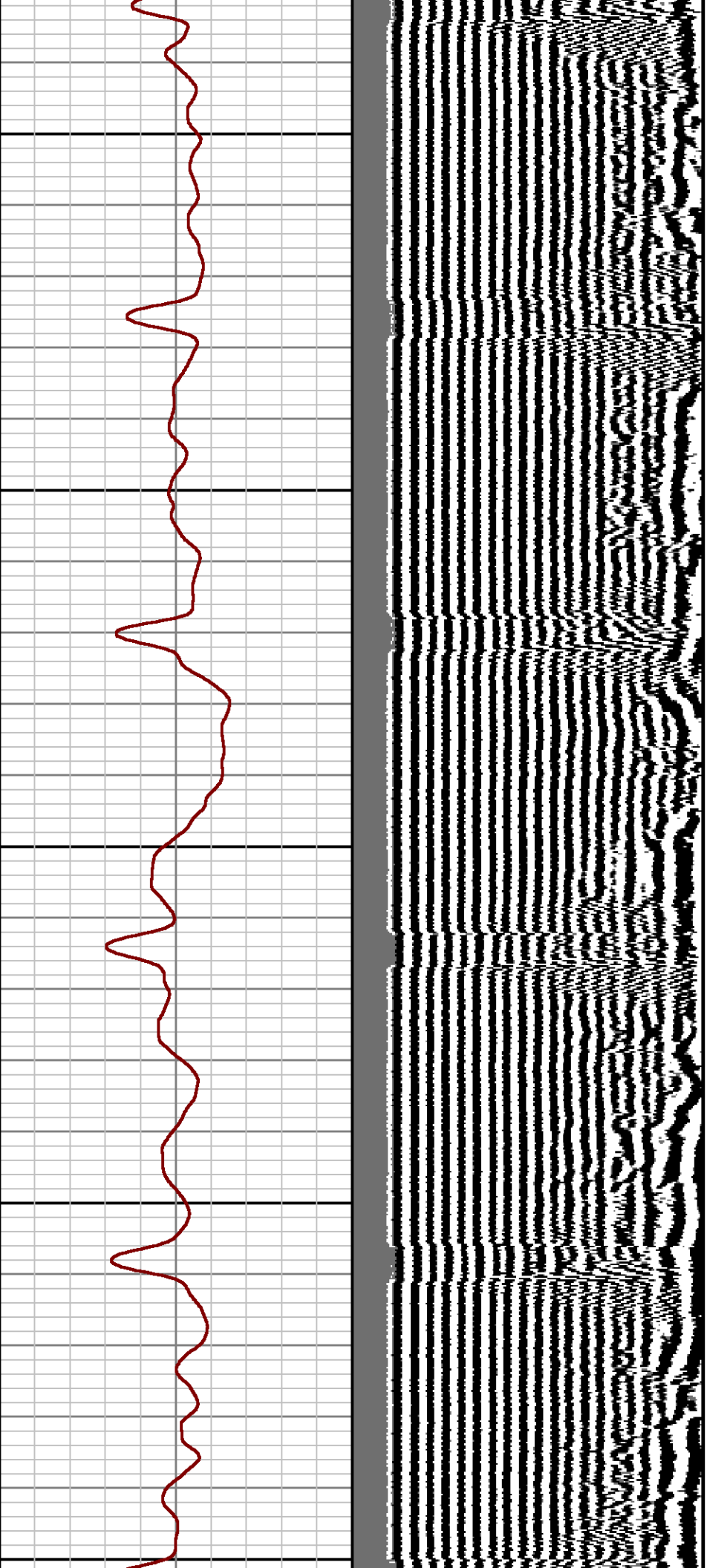
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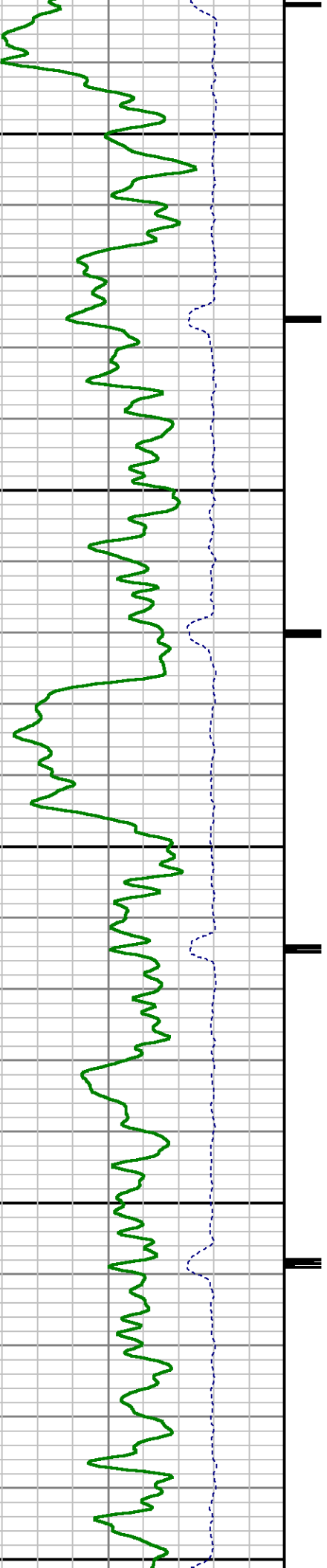


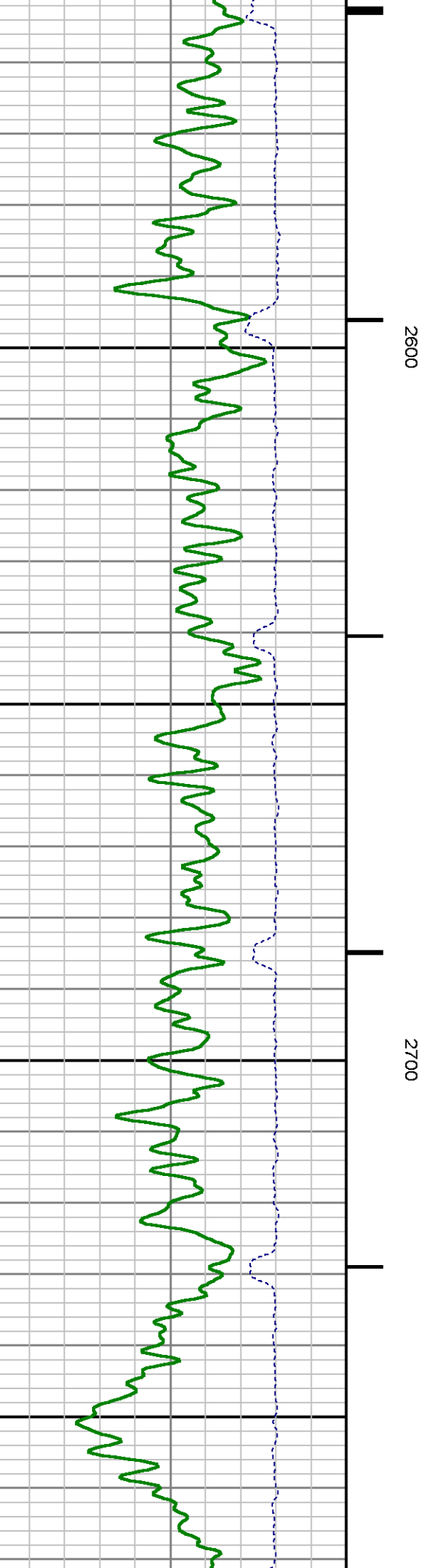
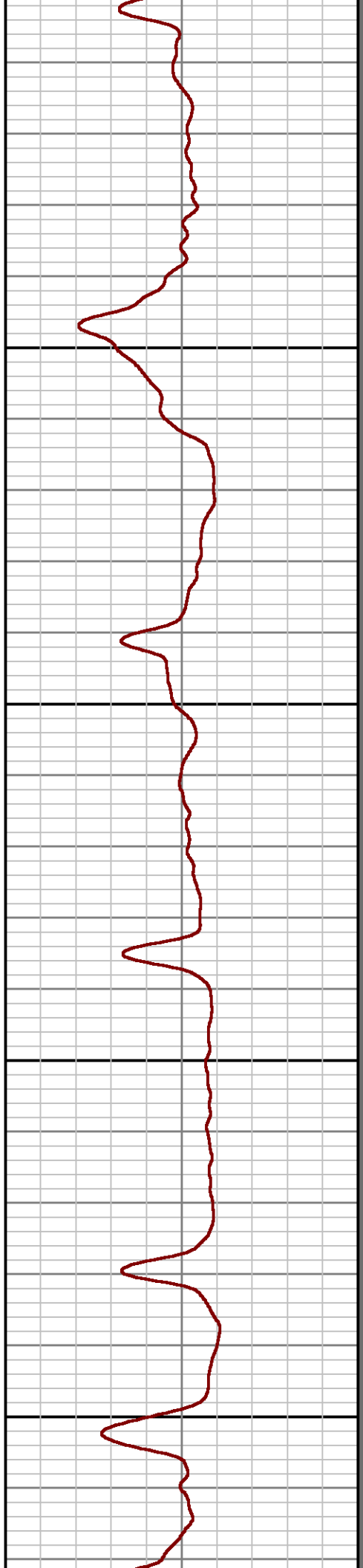
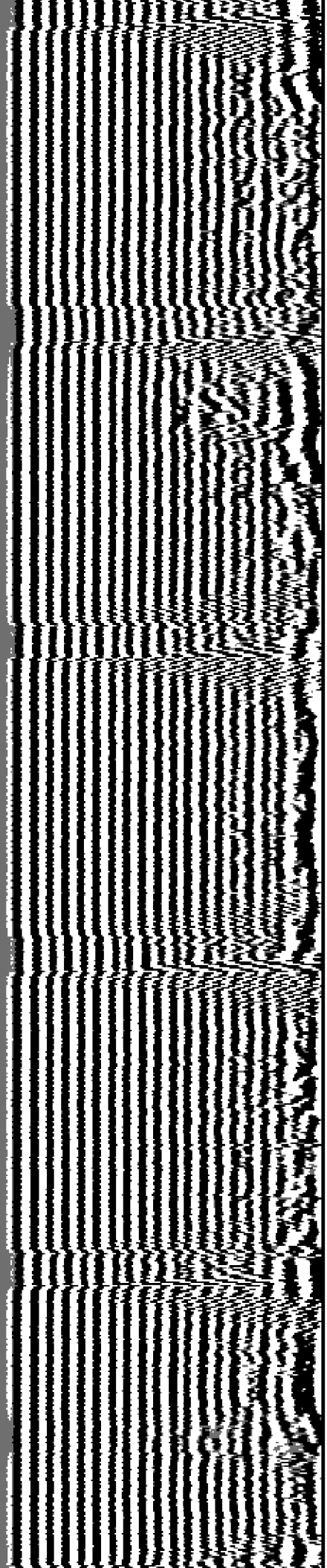


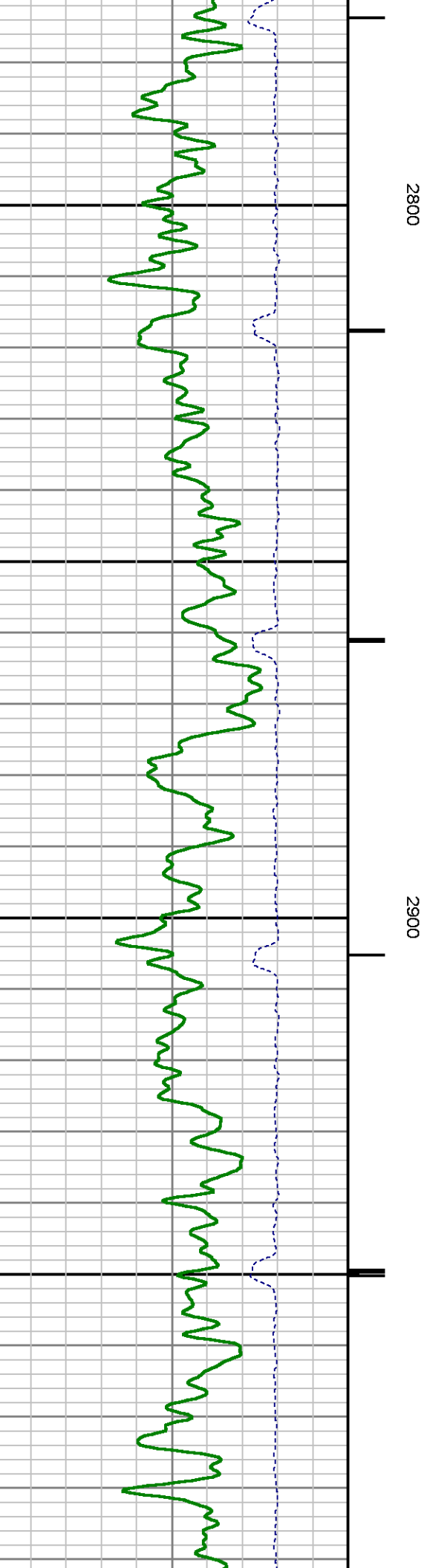
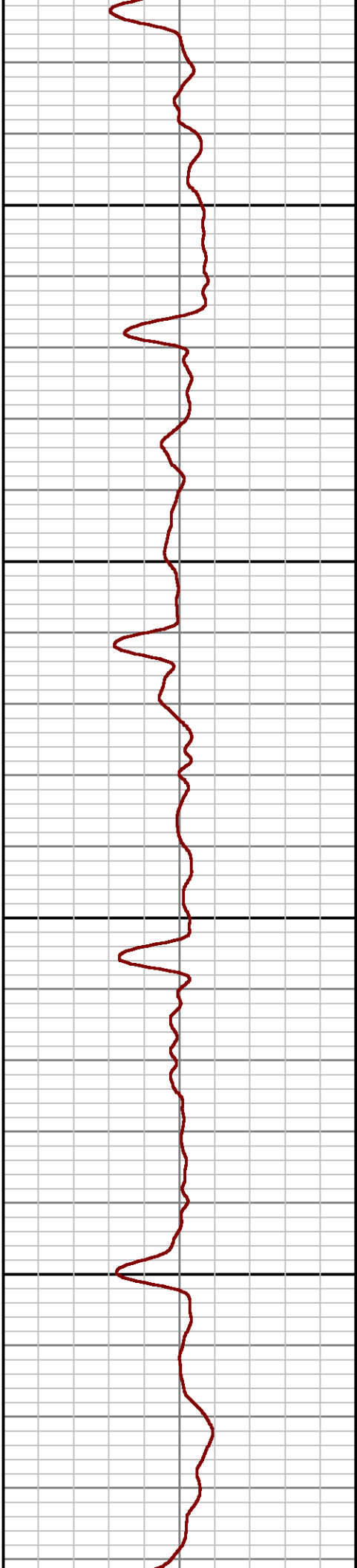
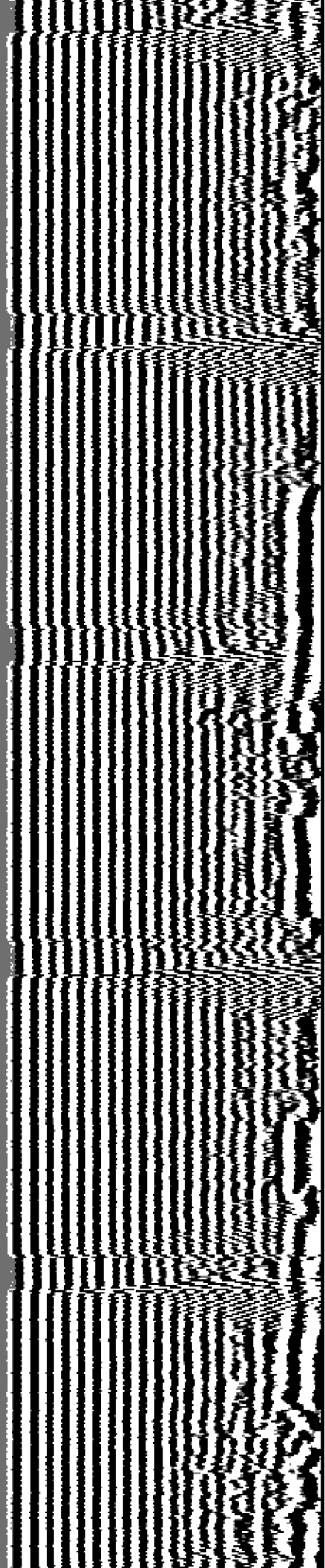


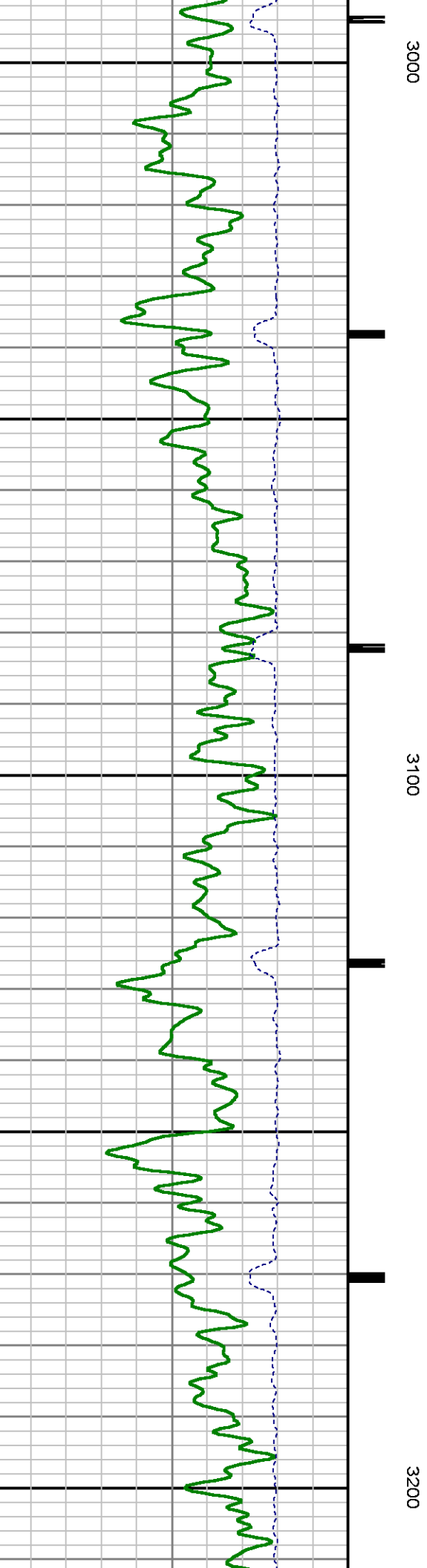
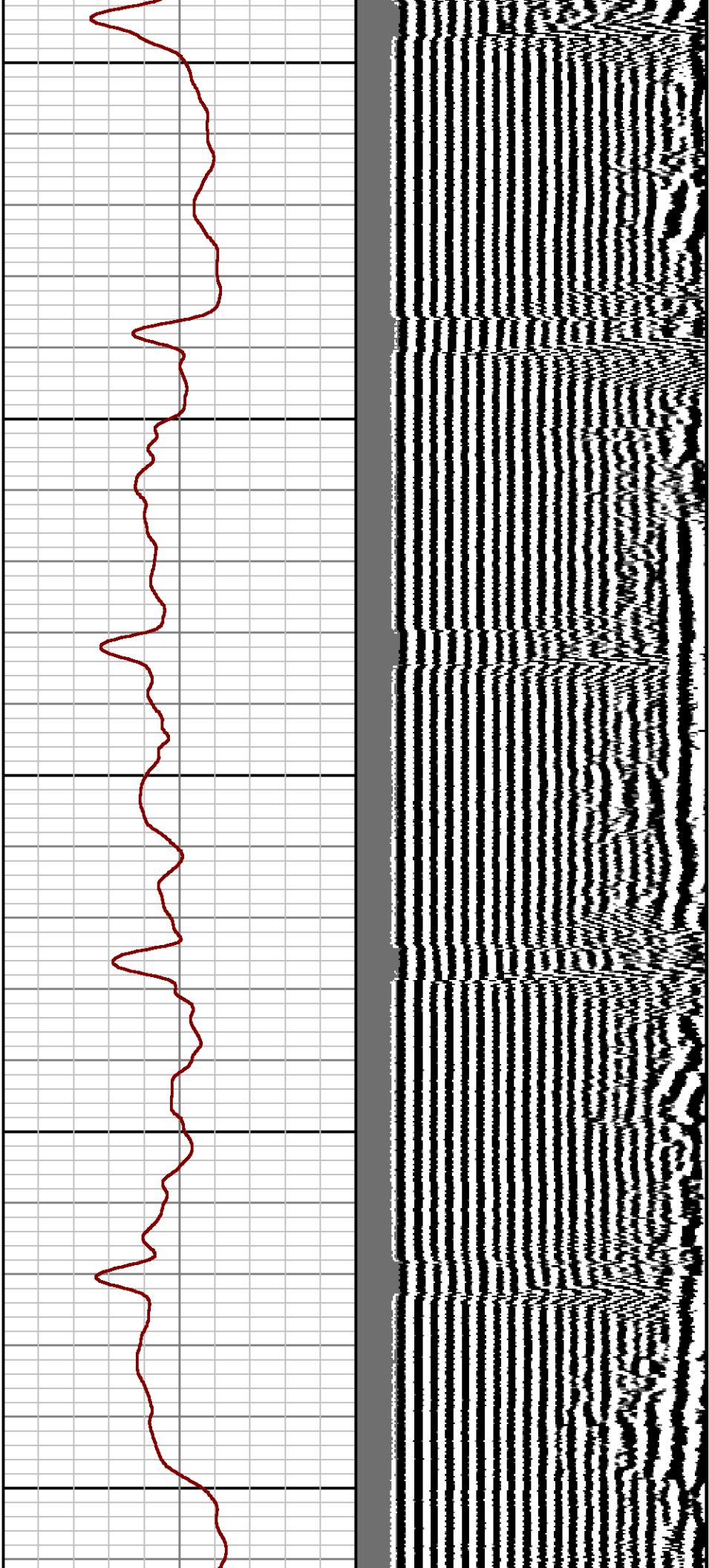
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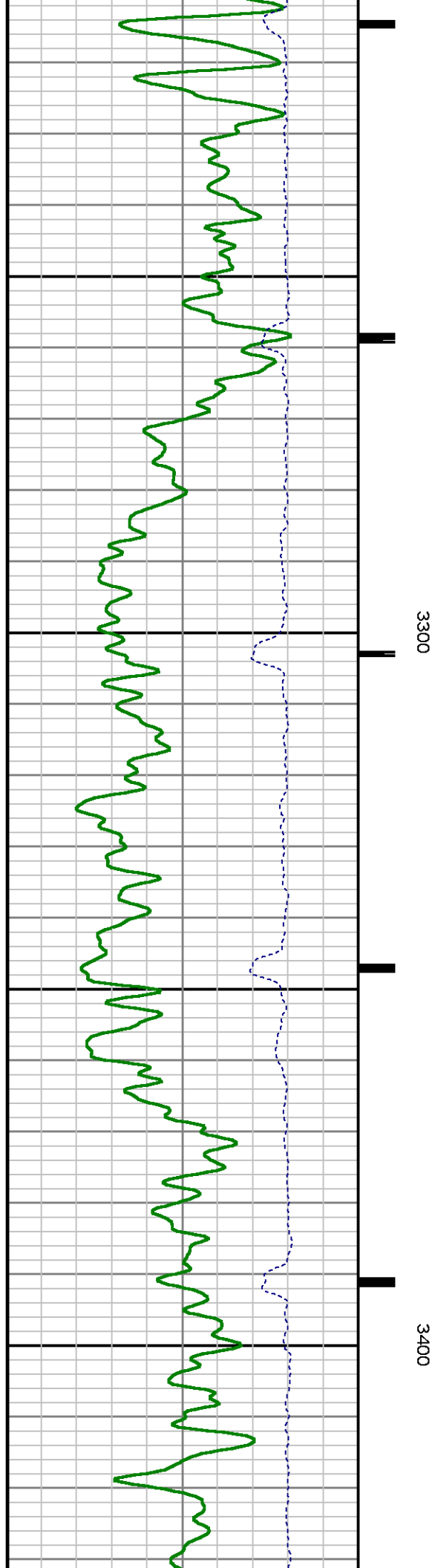
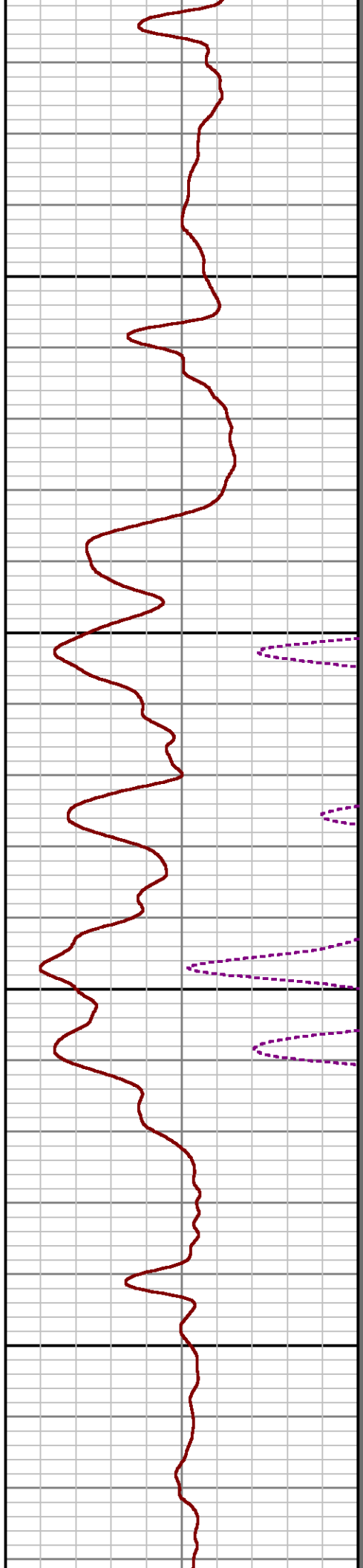
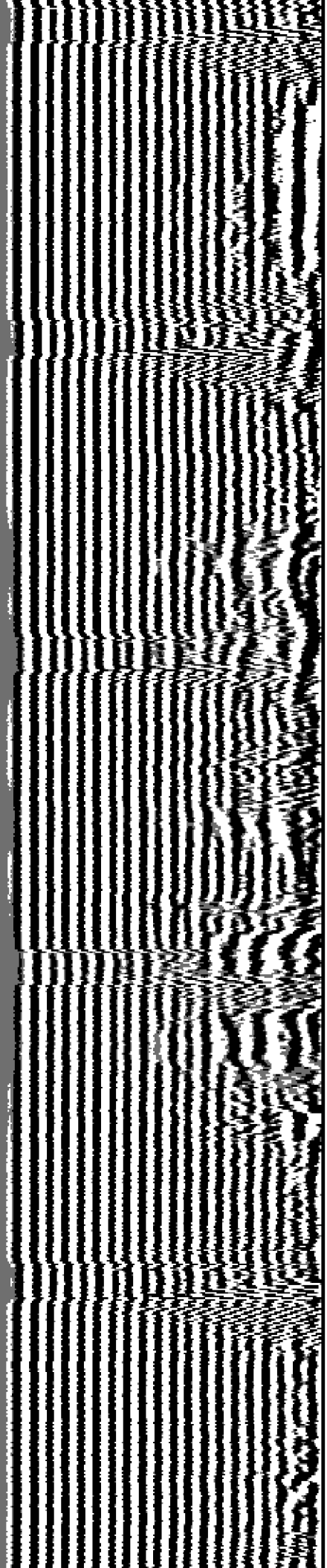
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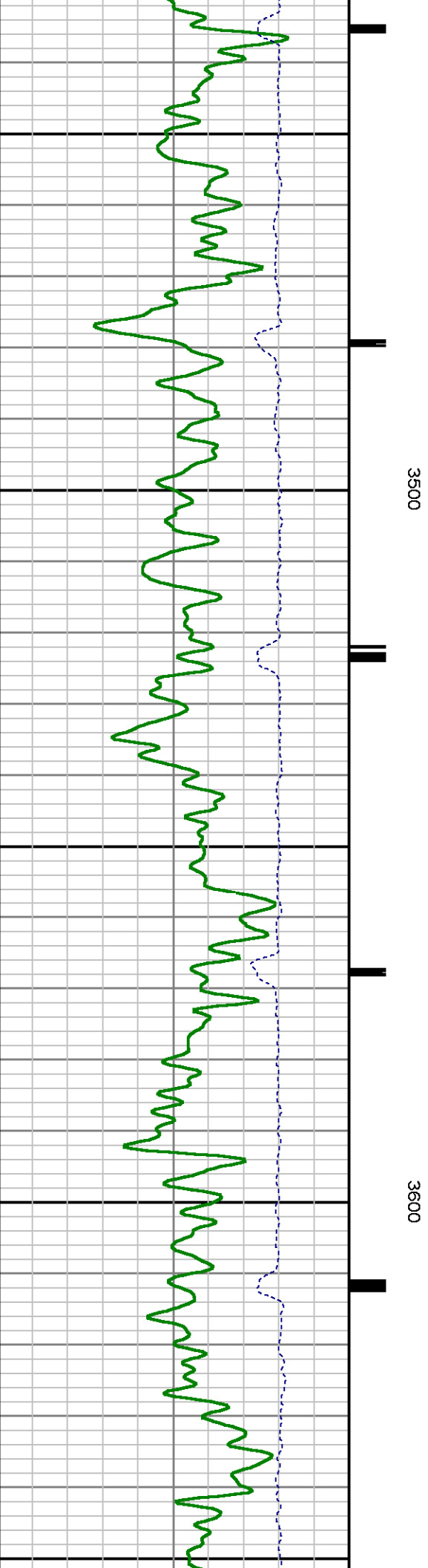
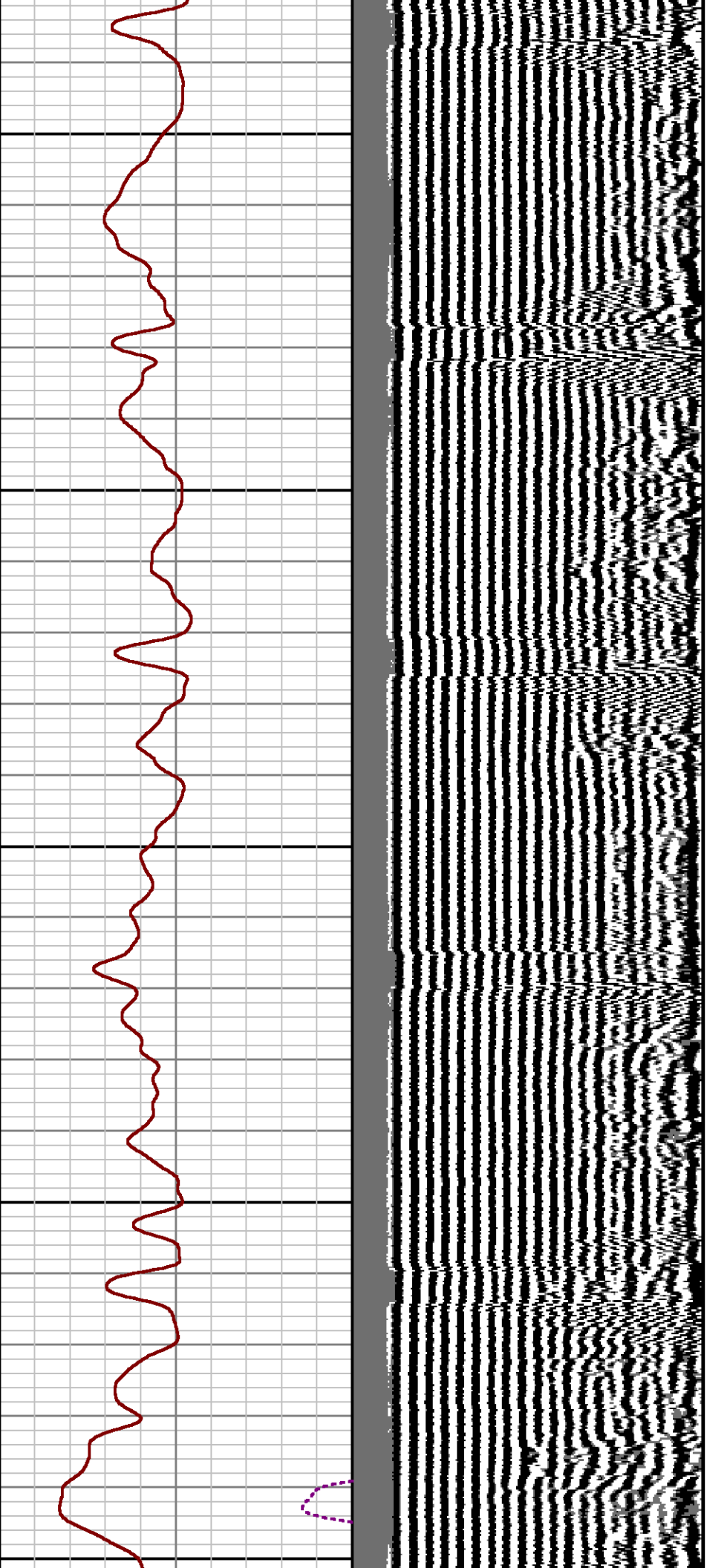


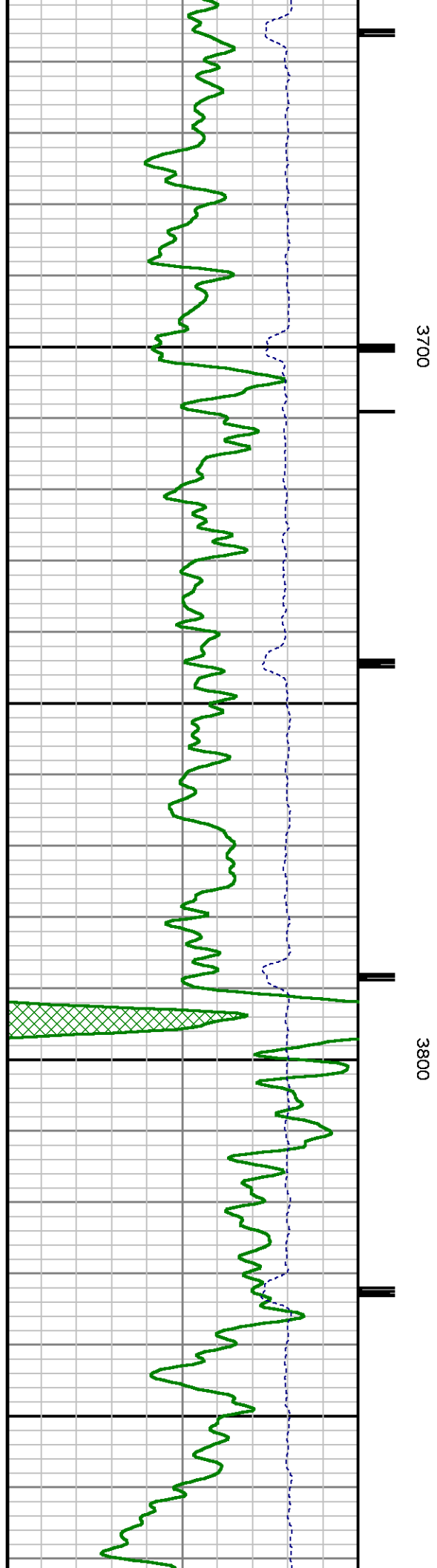
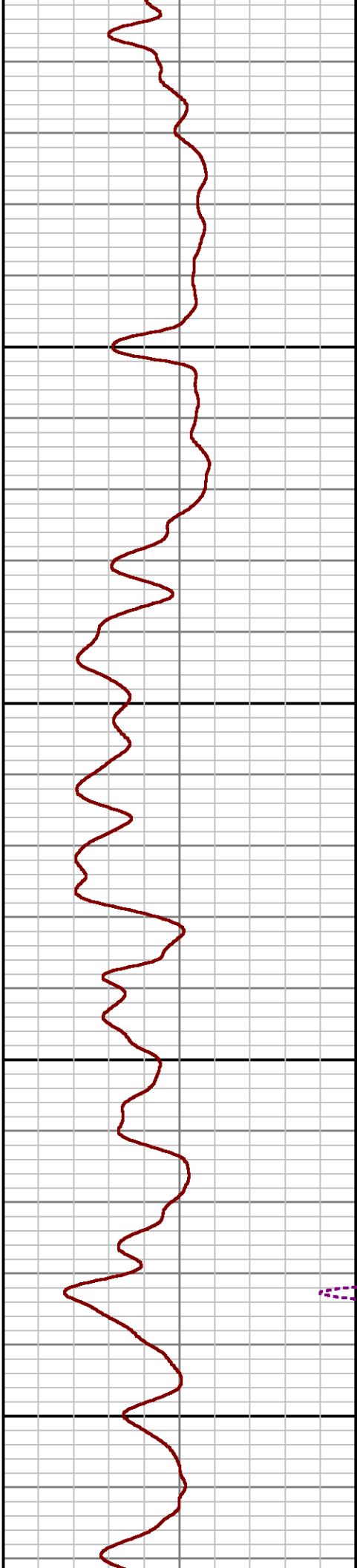
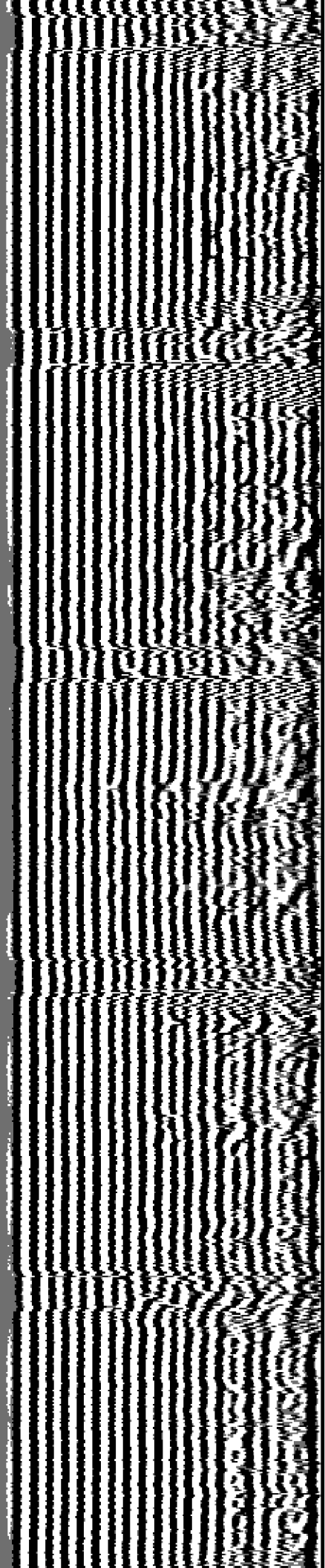


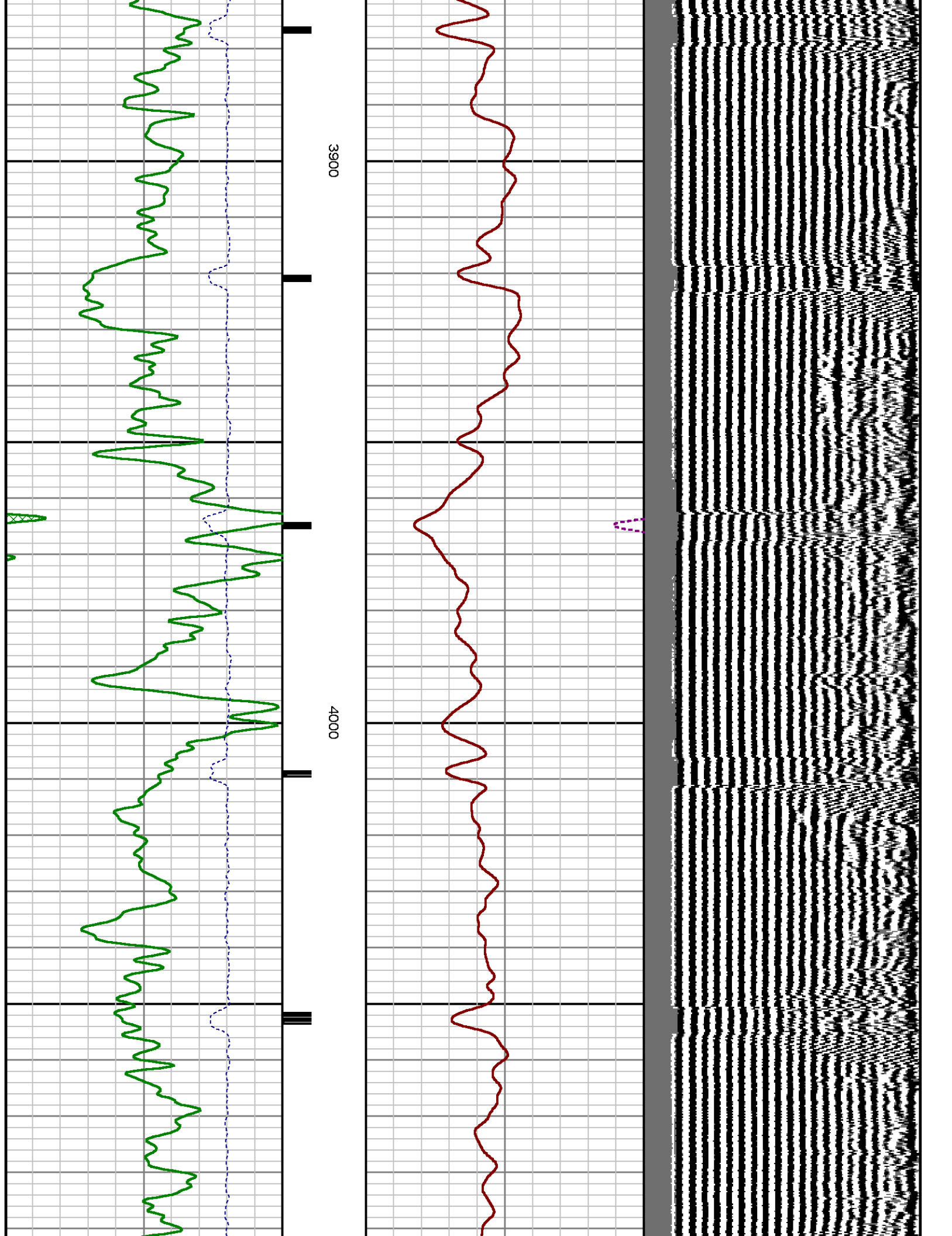


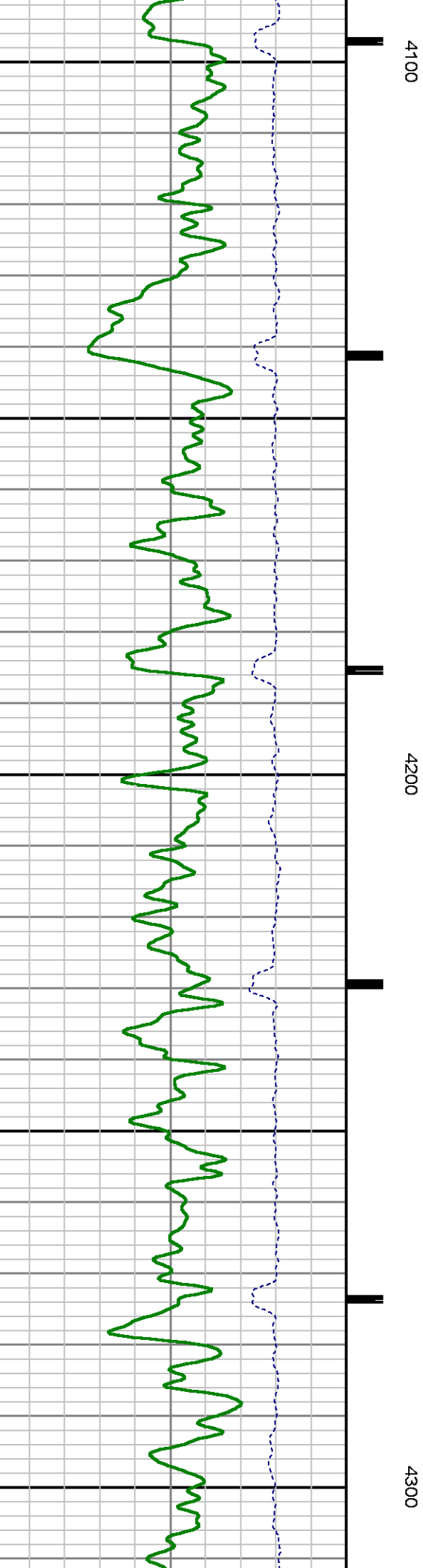
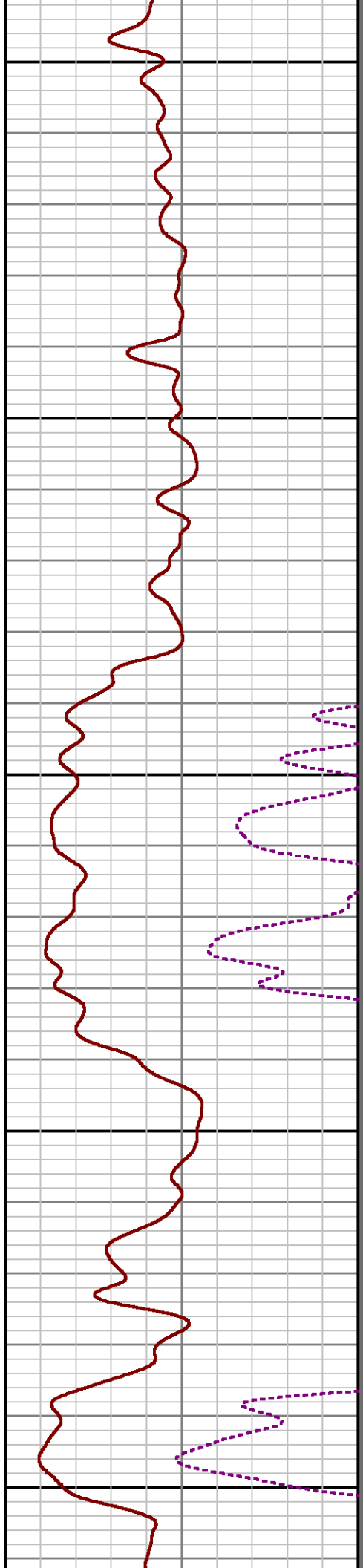
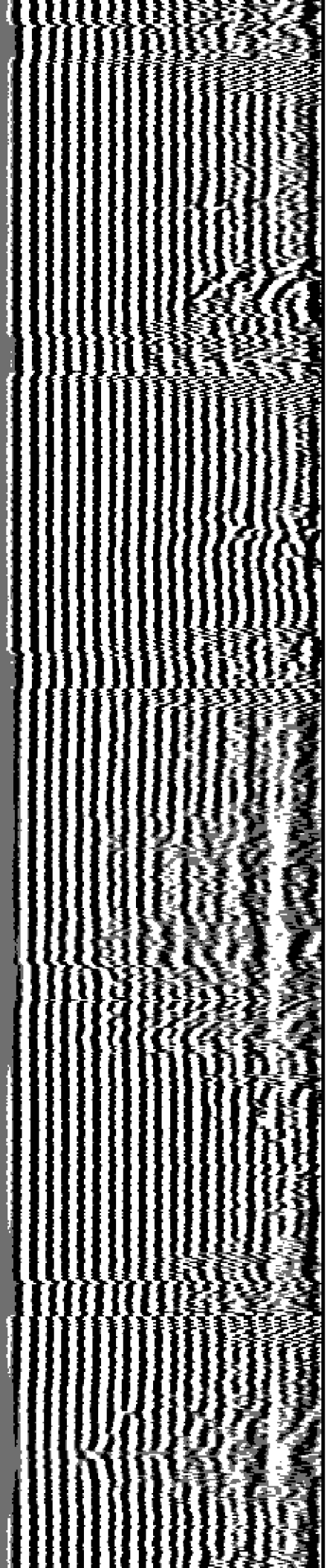


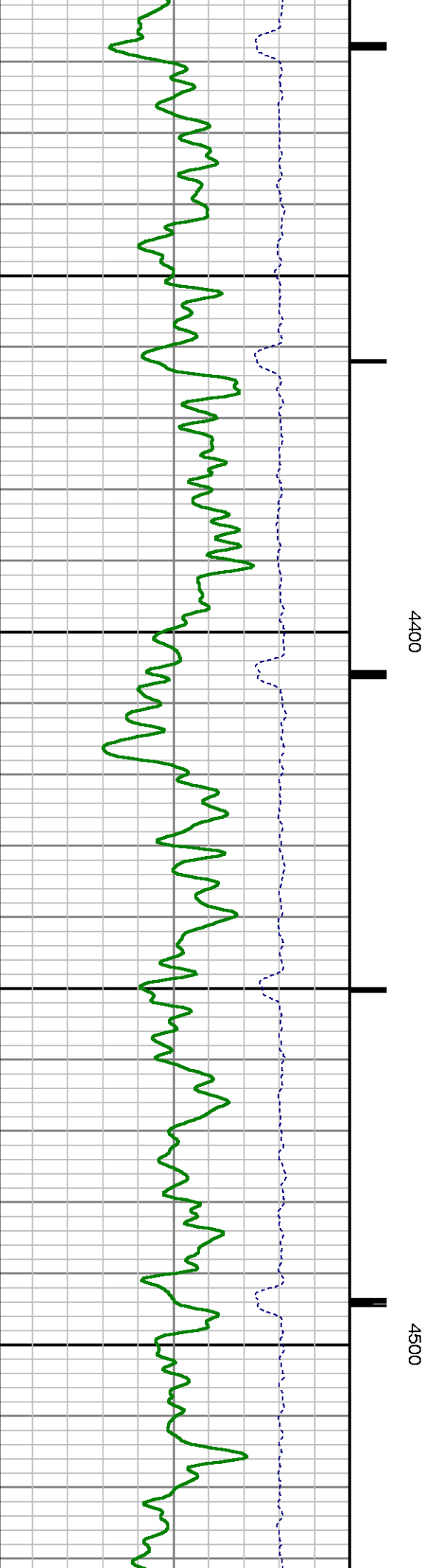
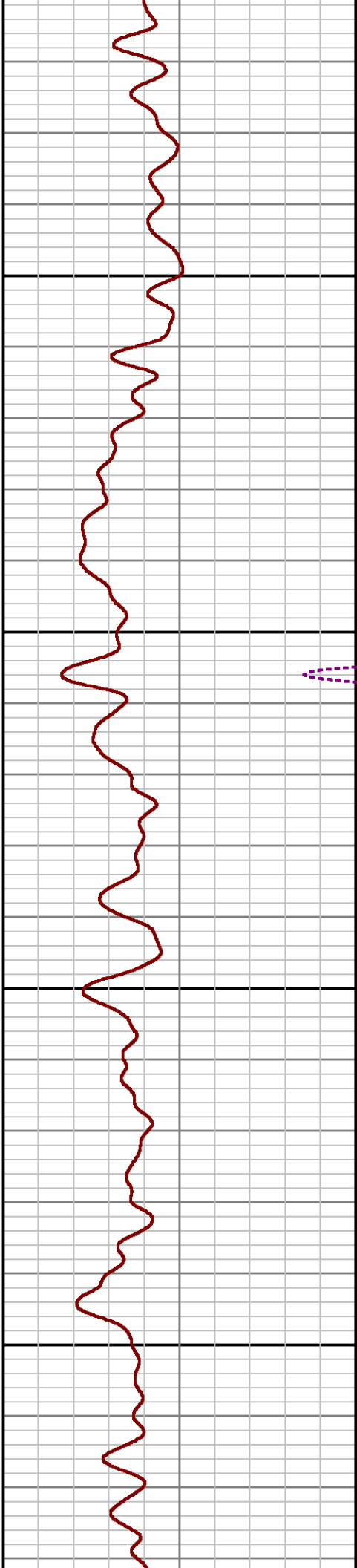
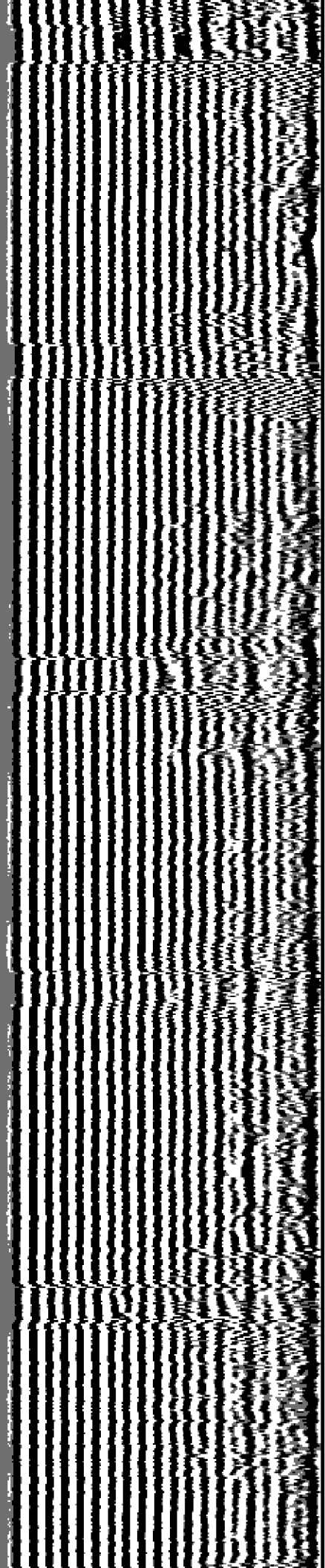


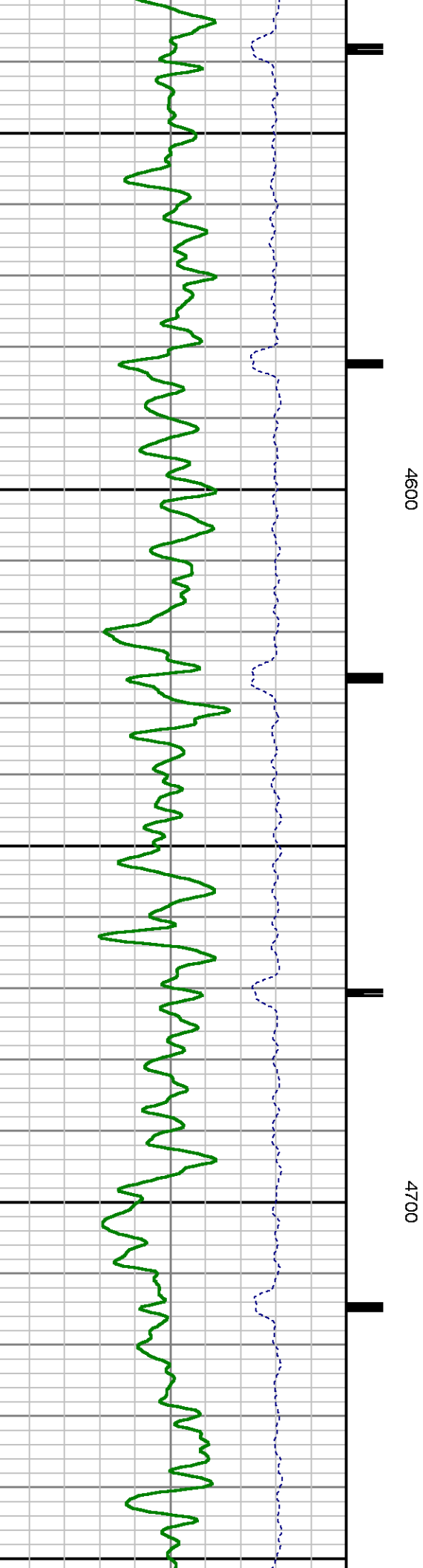
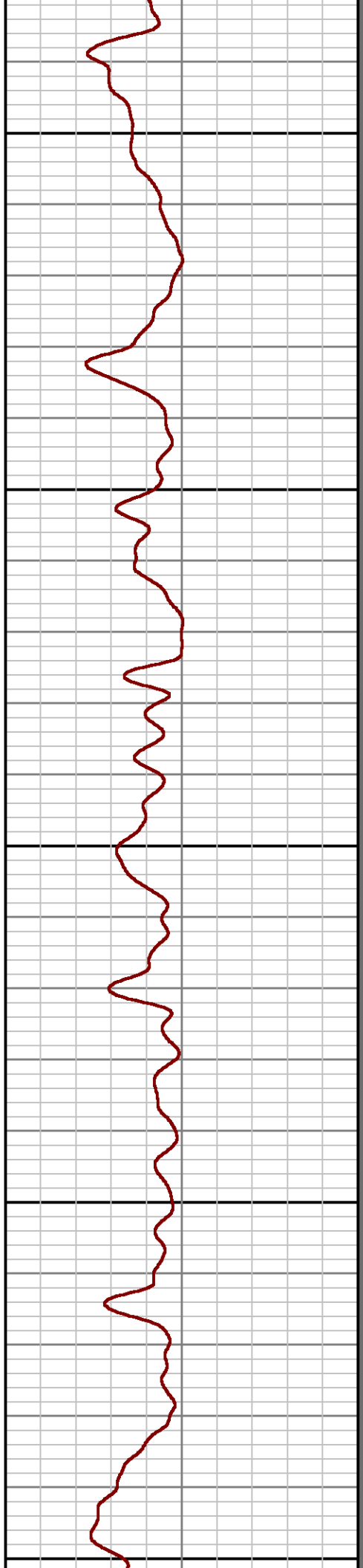
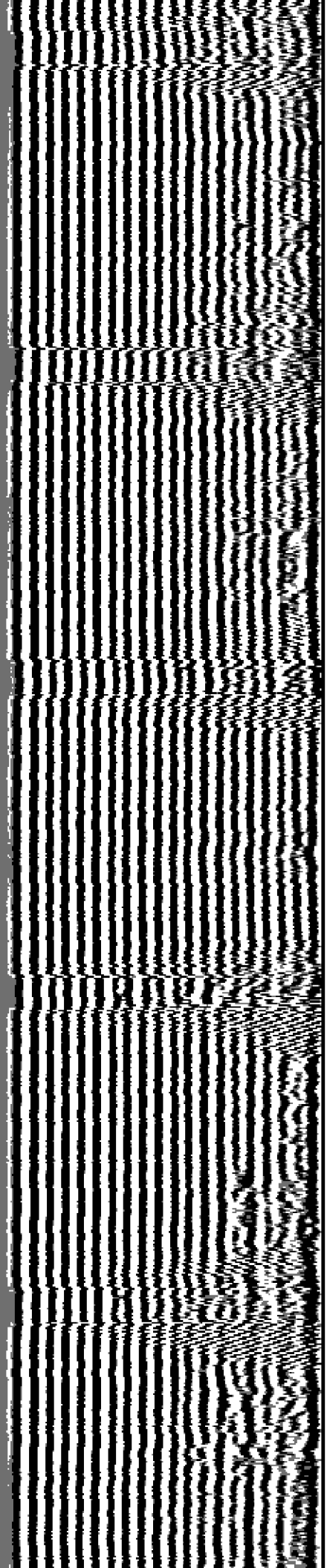


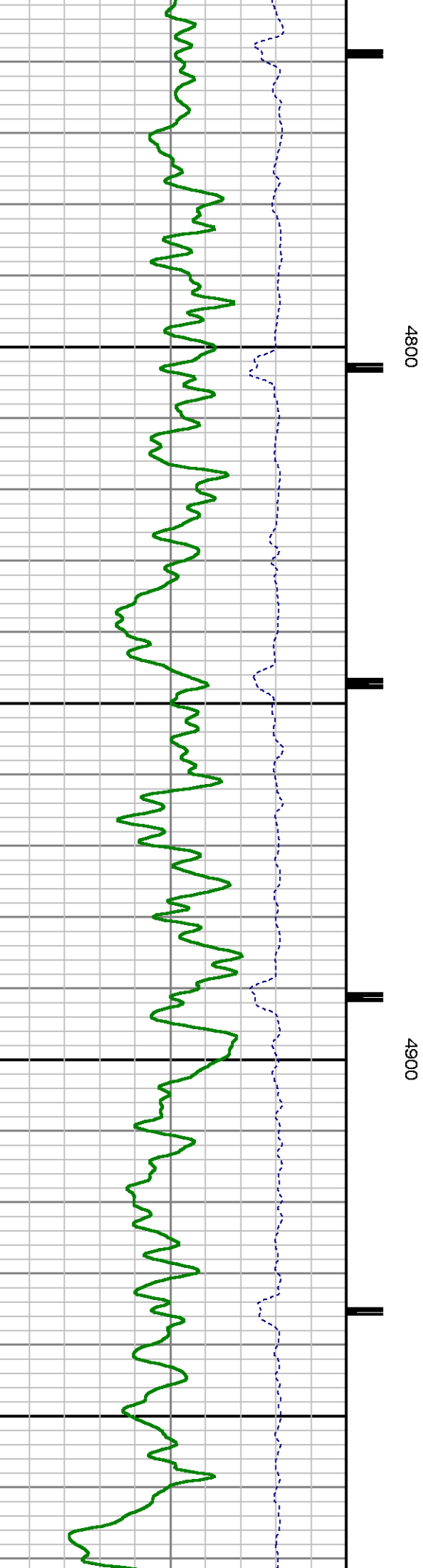
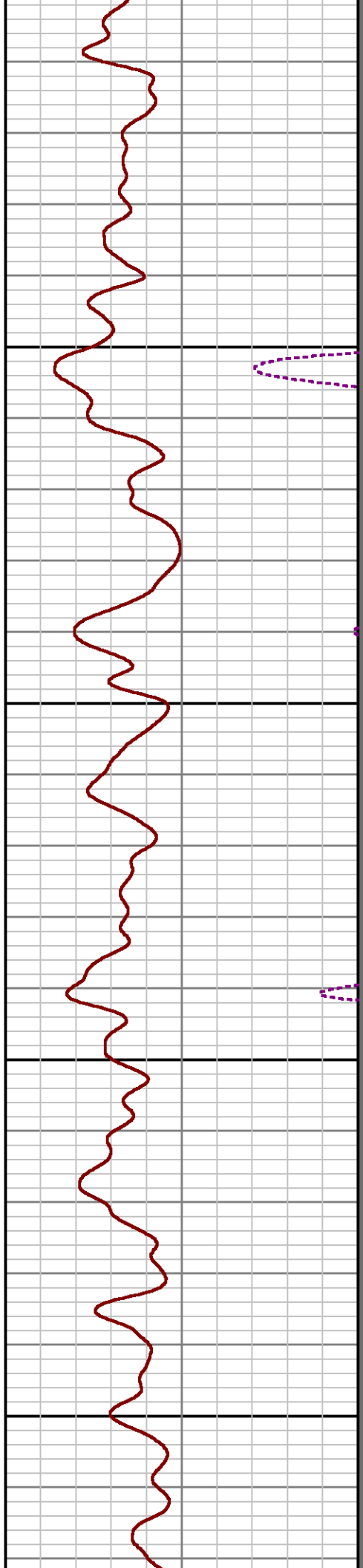
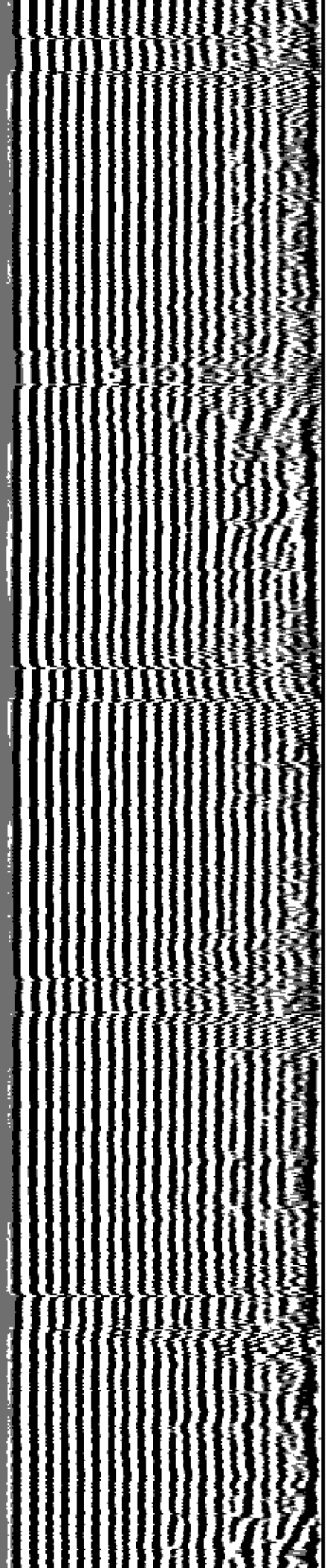


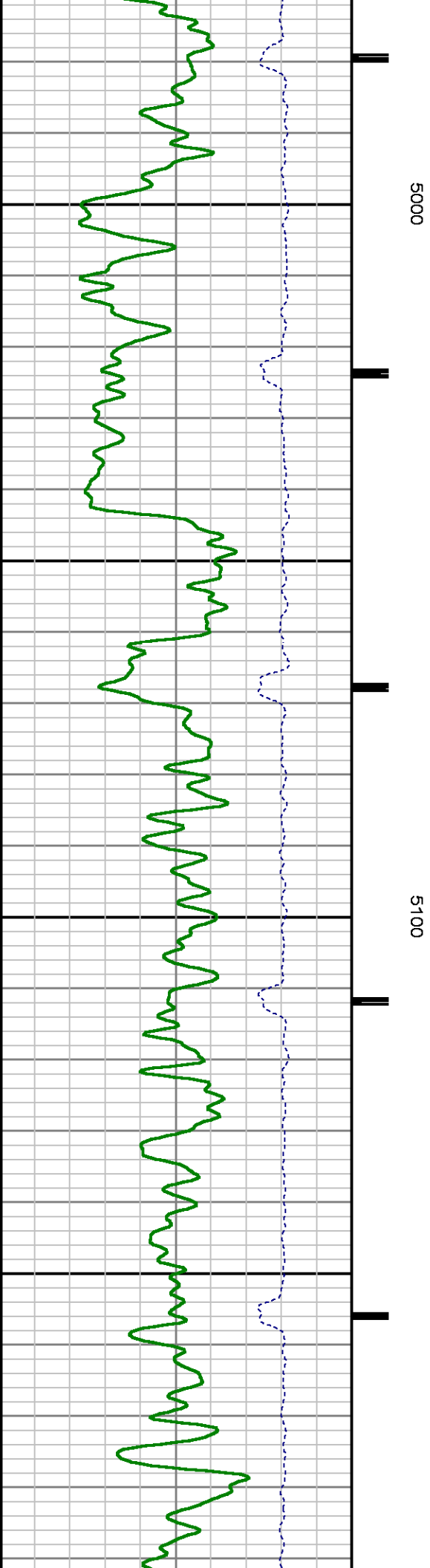
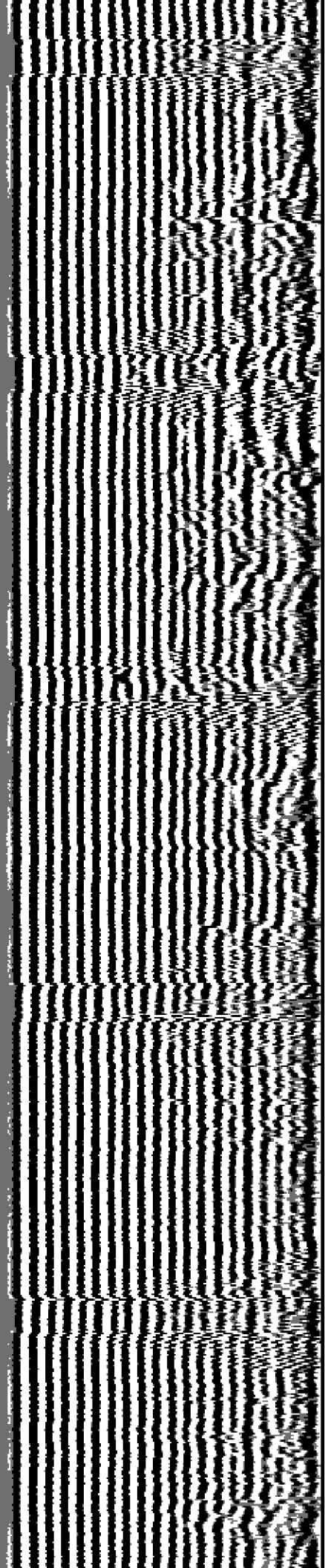


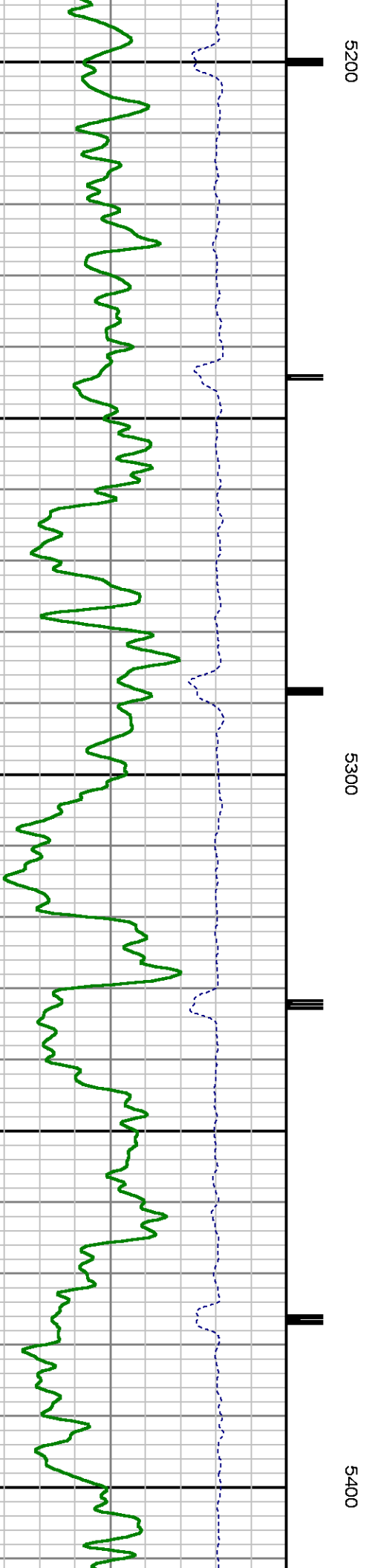
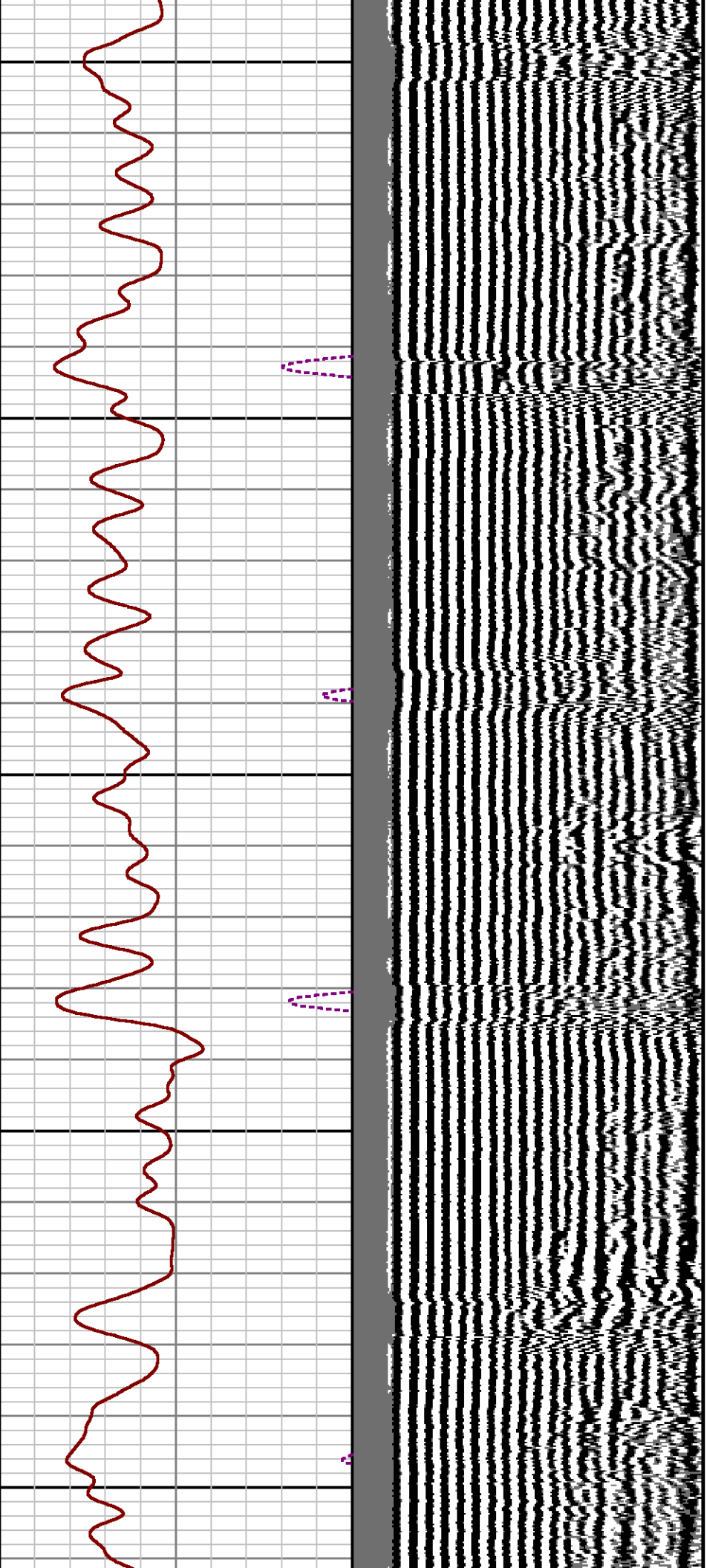


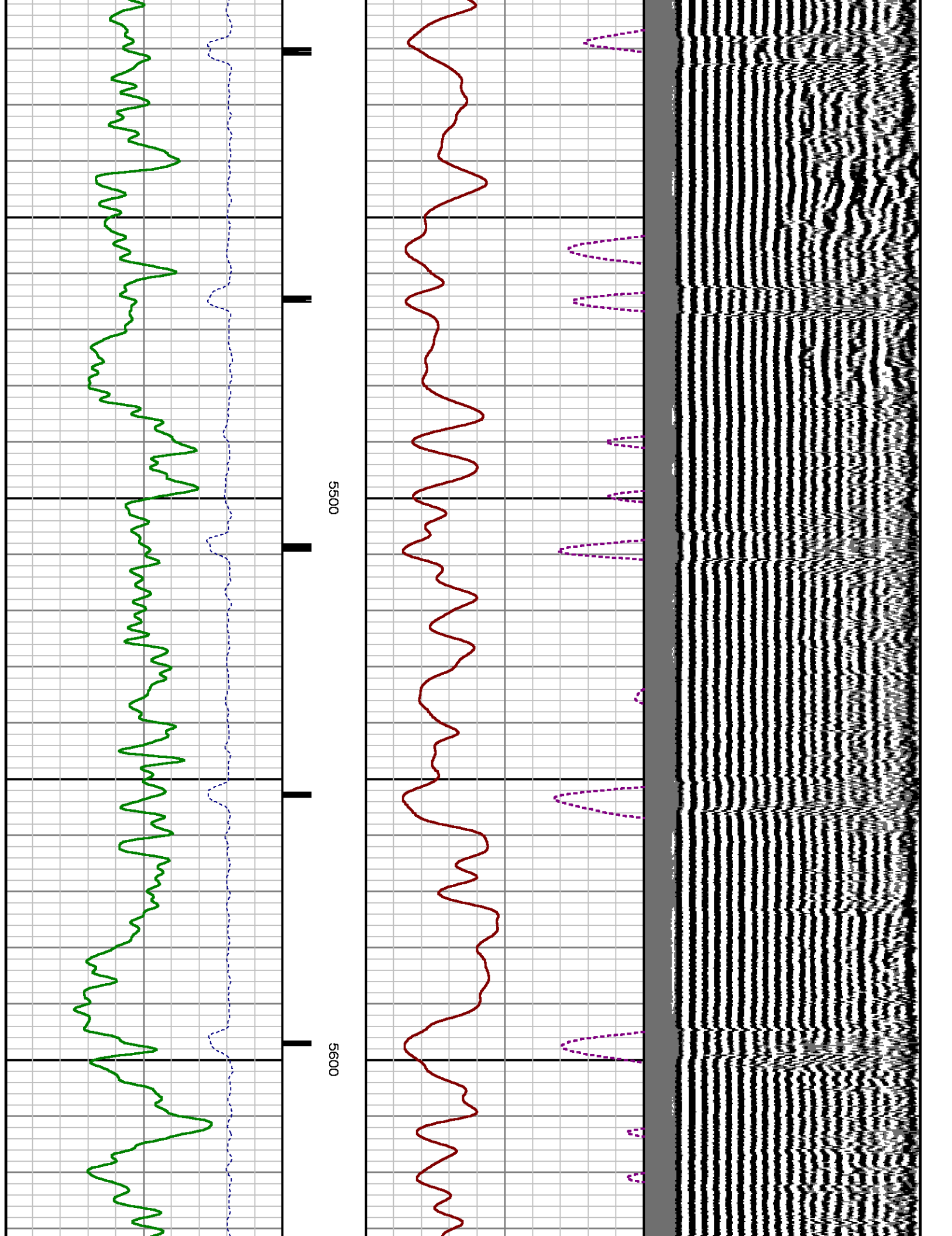


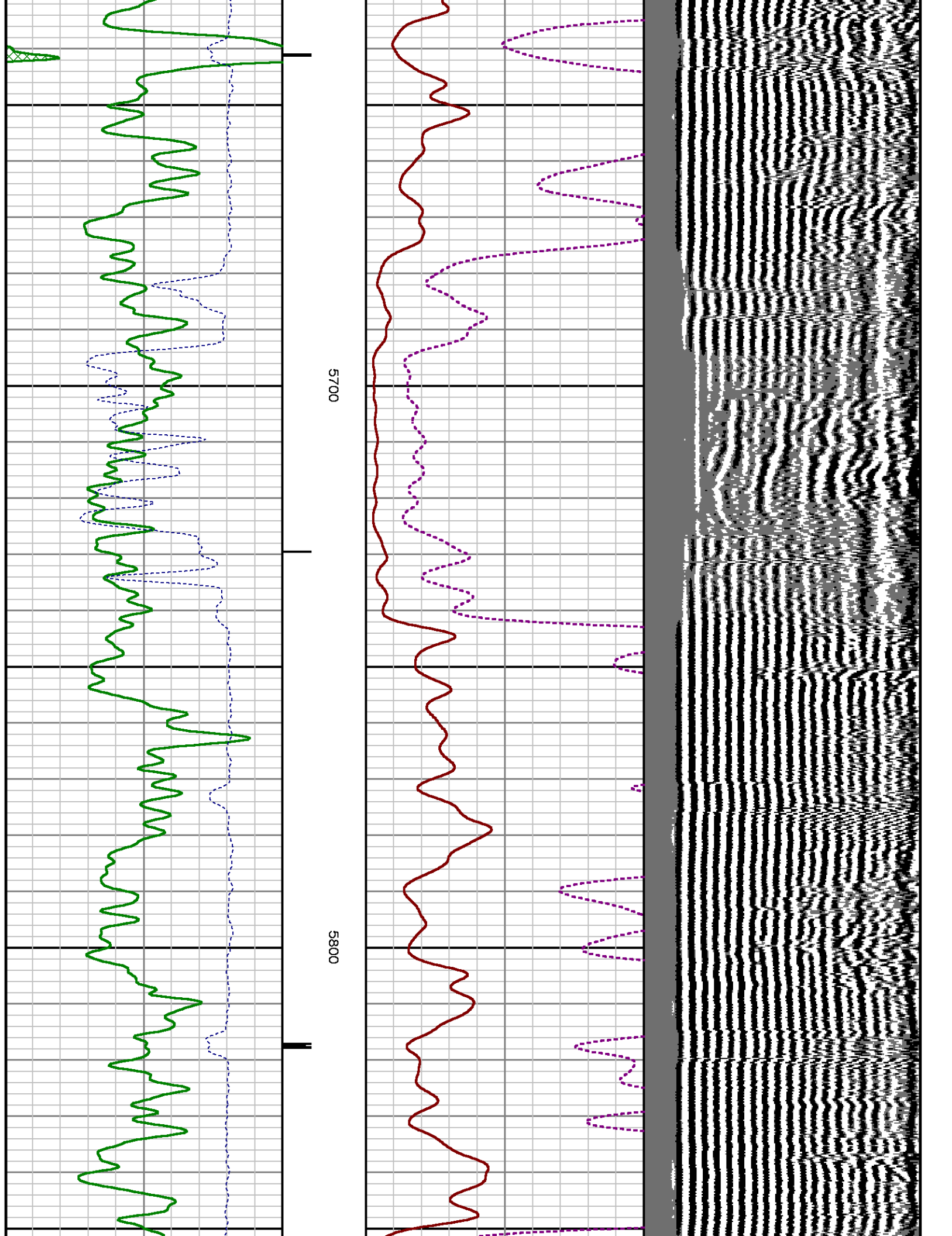


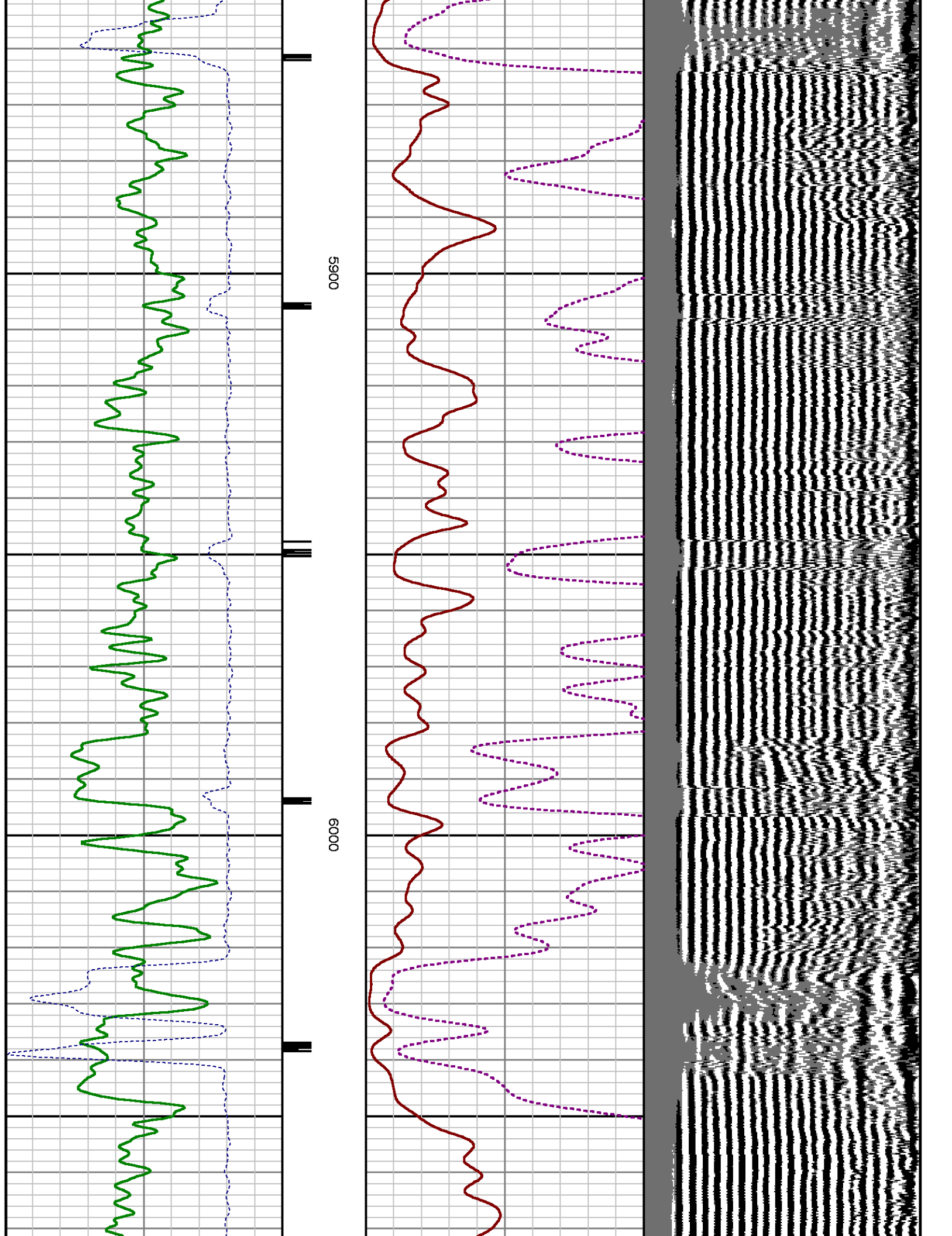


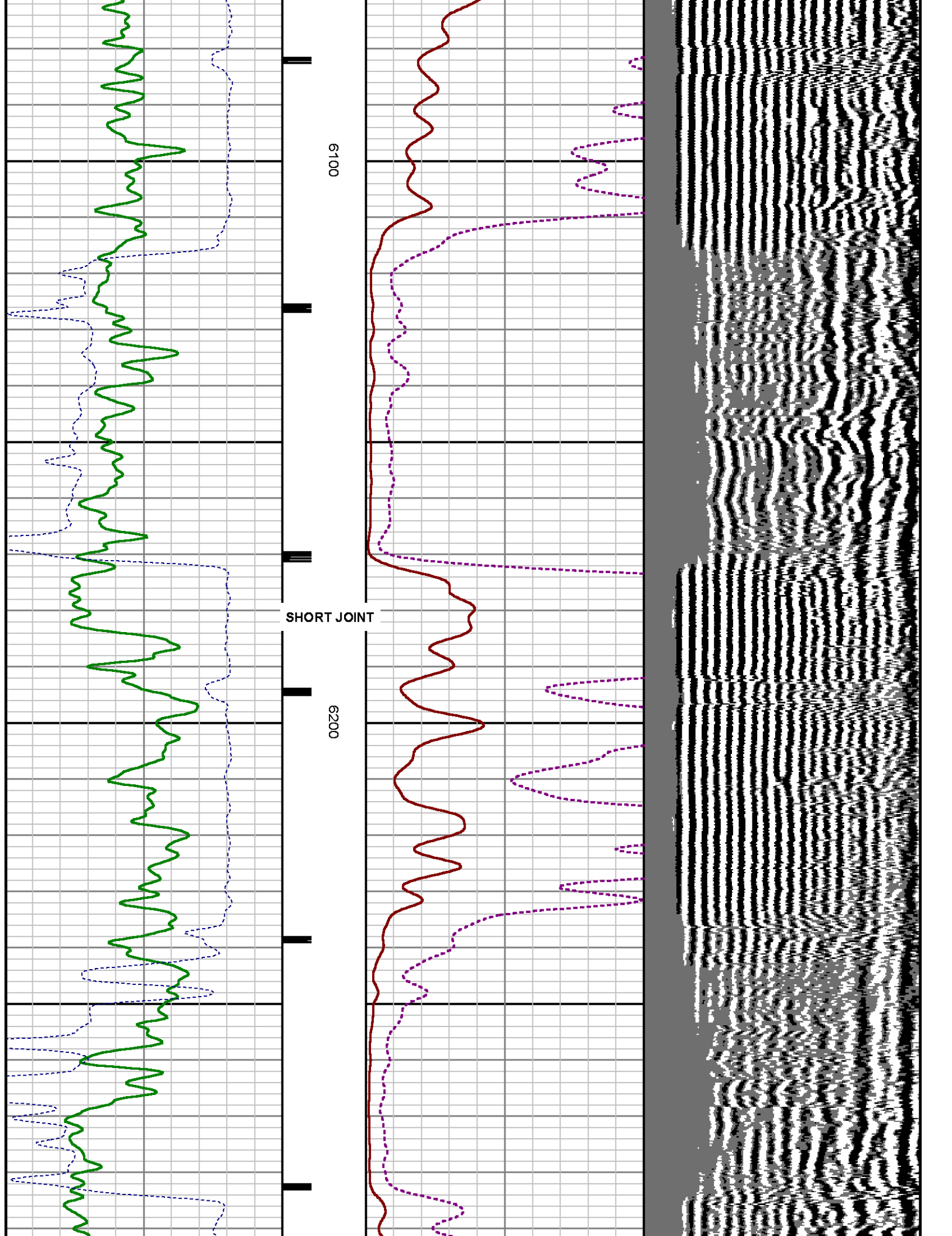


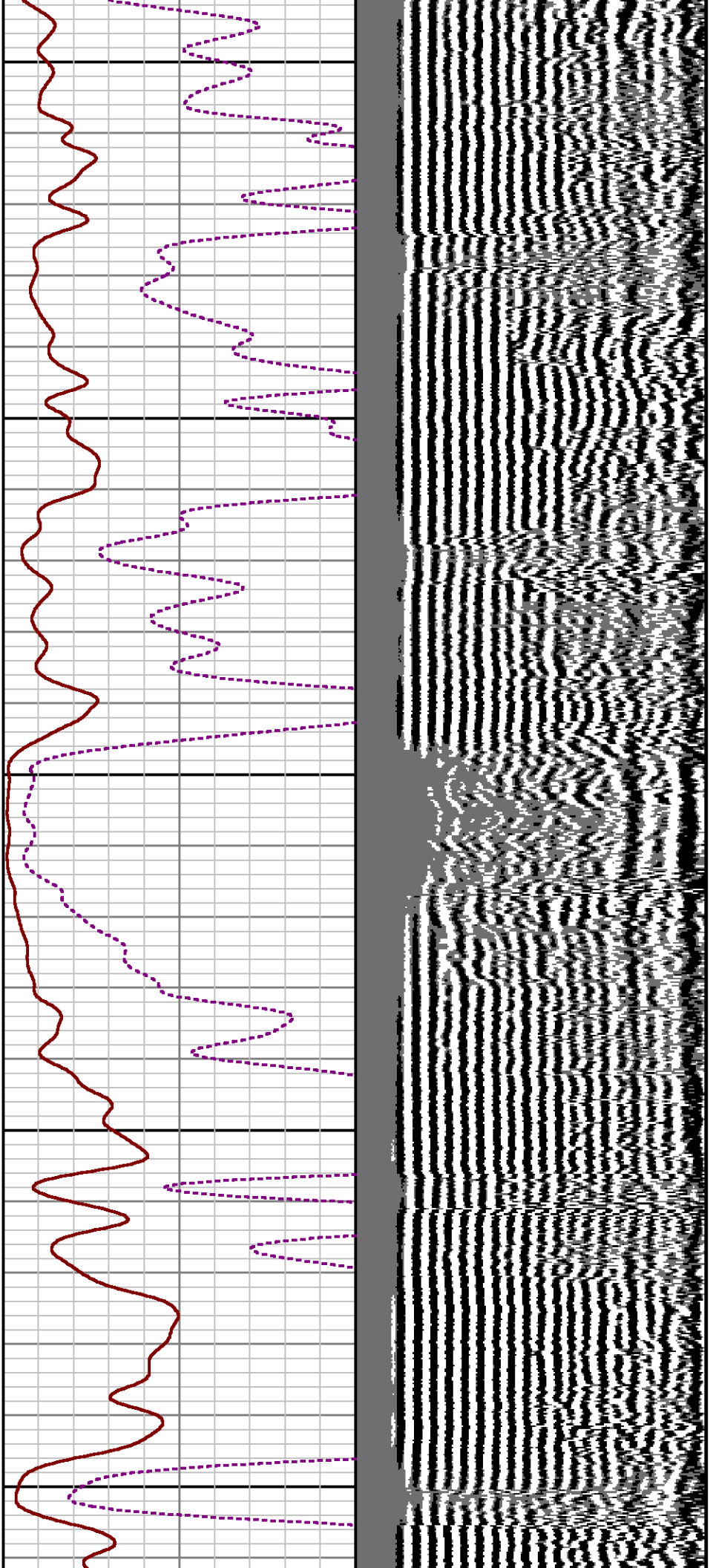




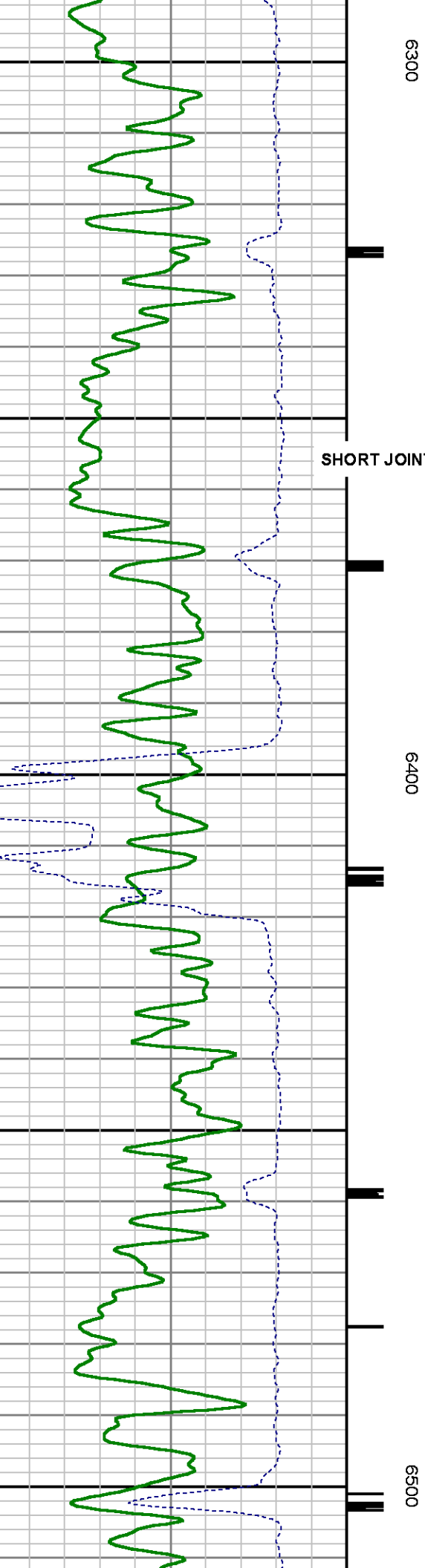


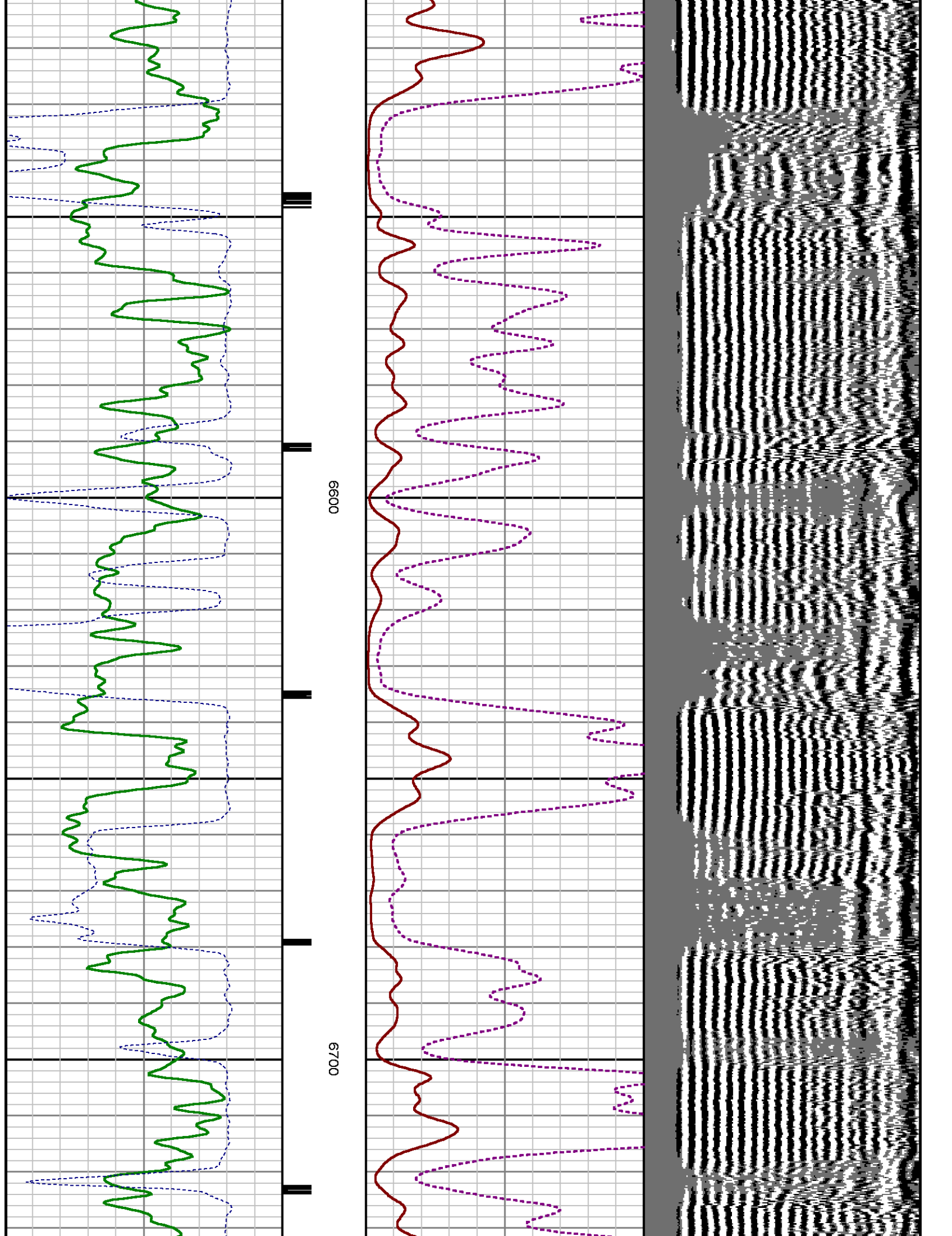


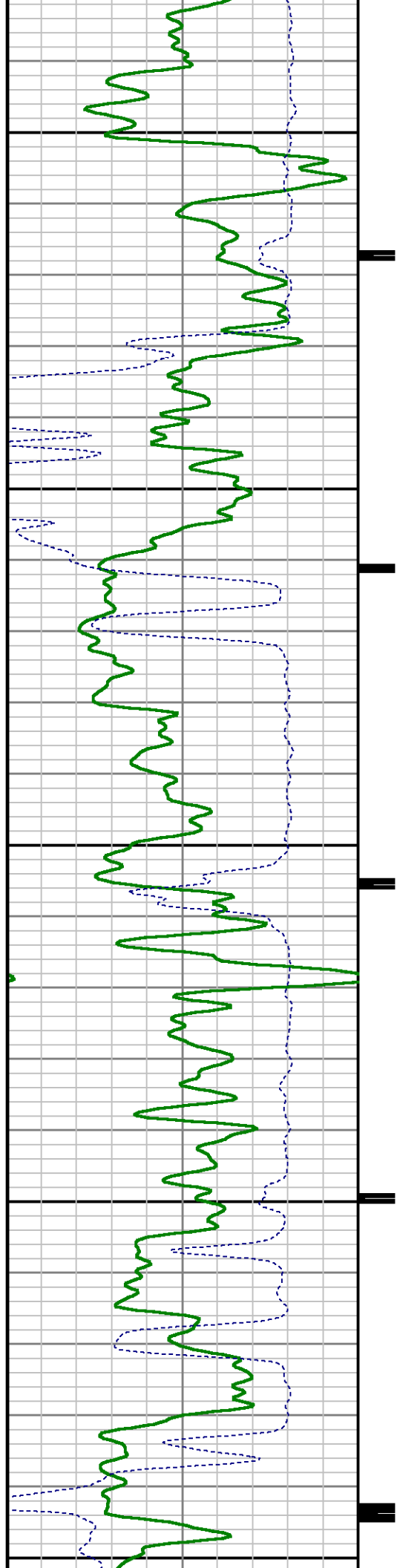




SHORT JOINT

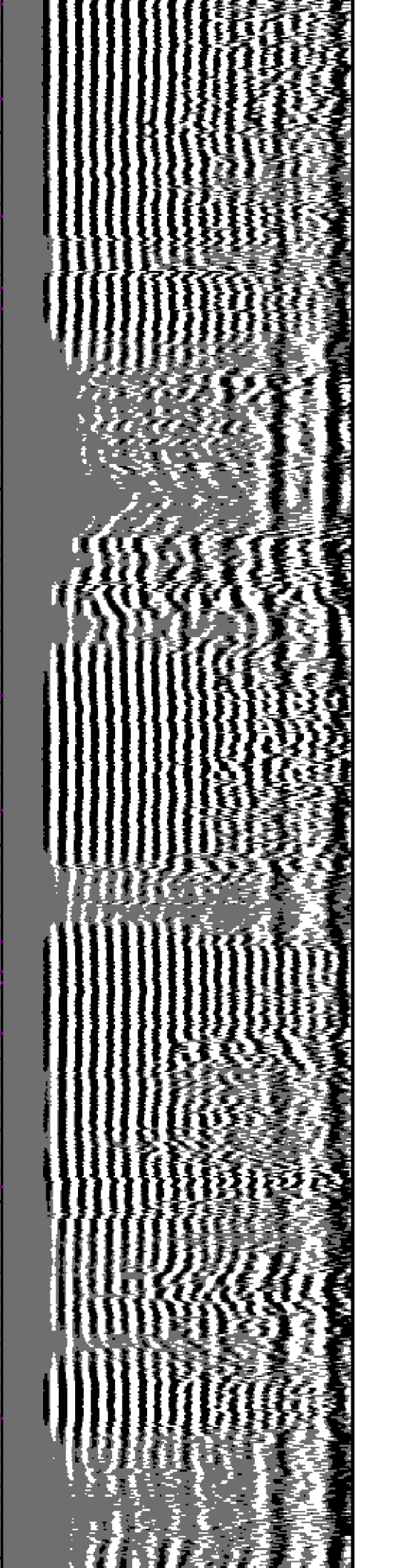
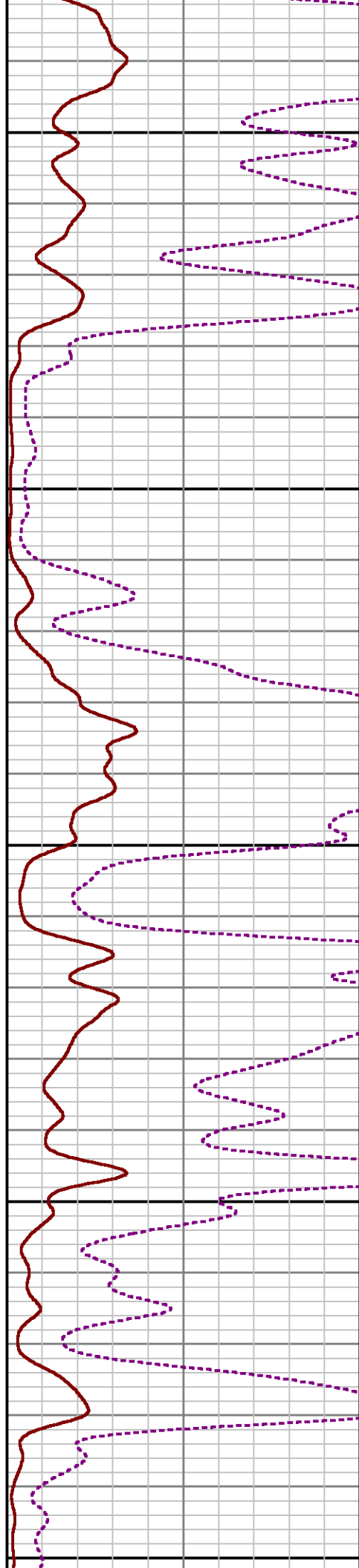


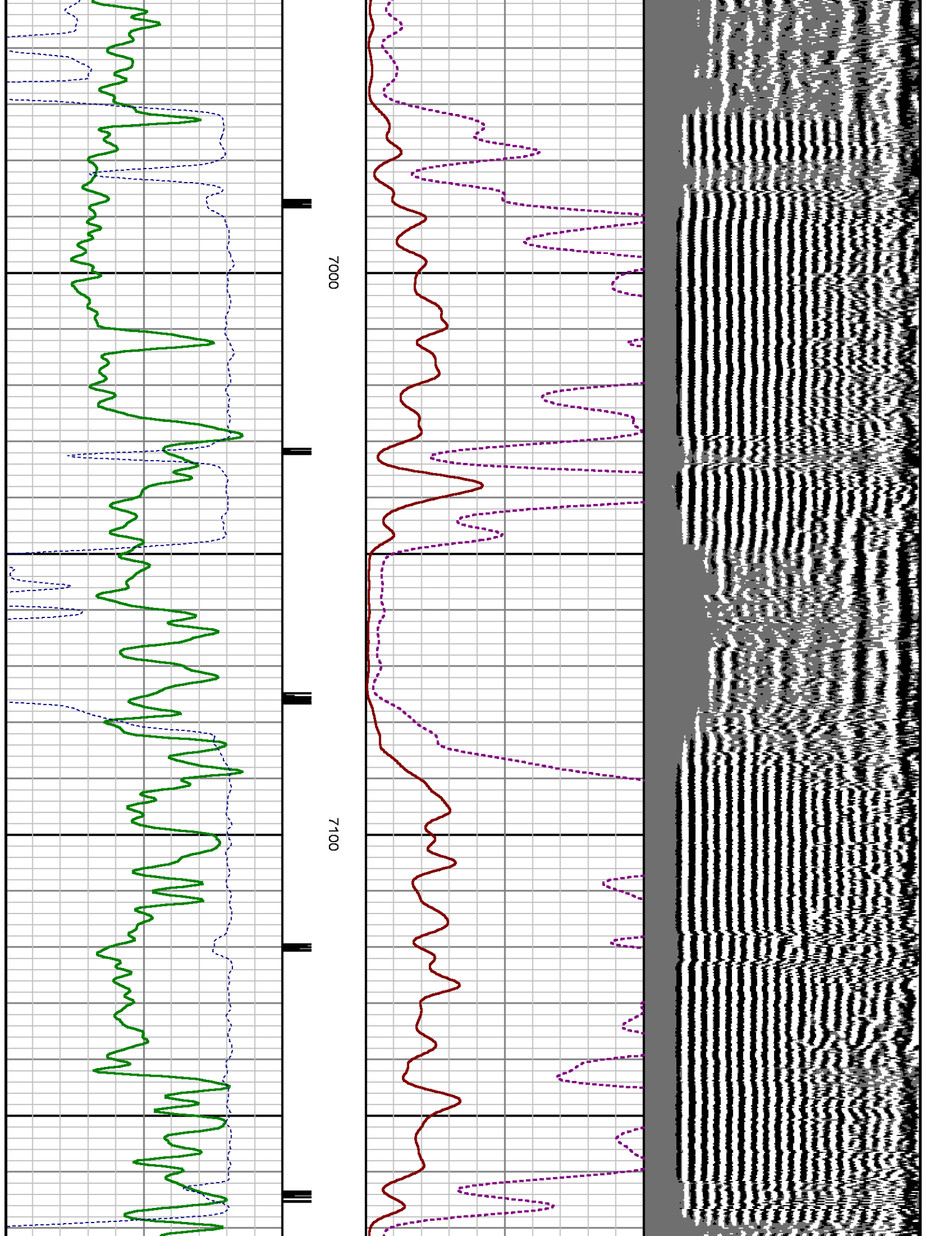


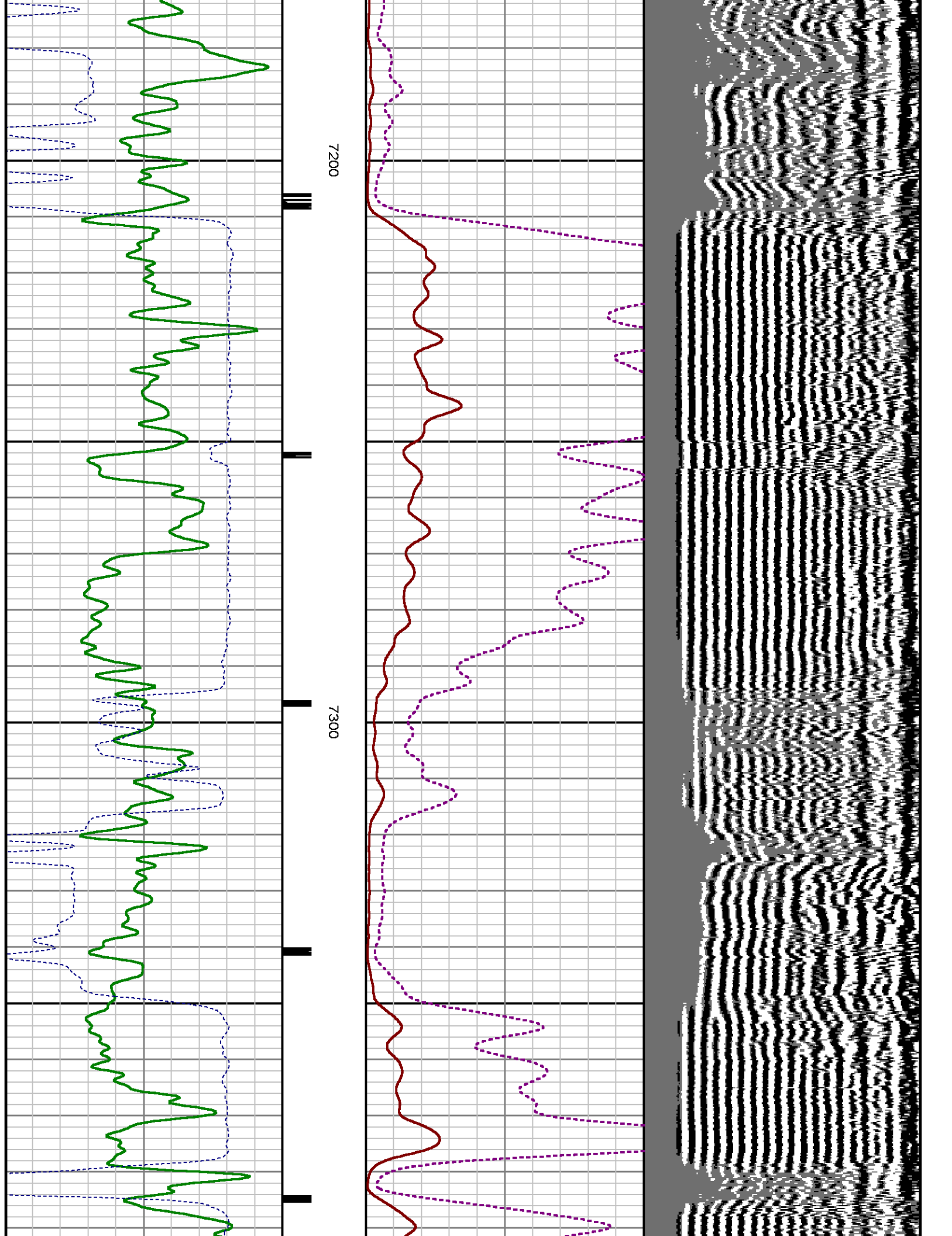


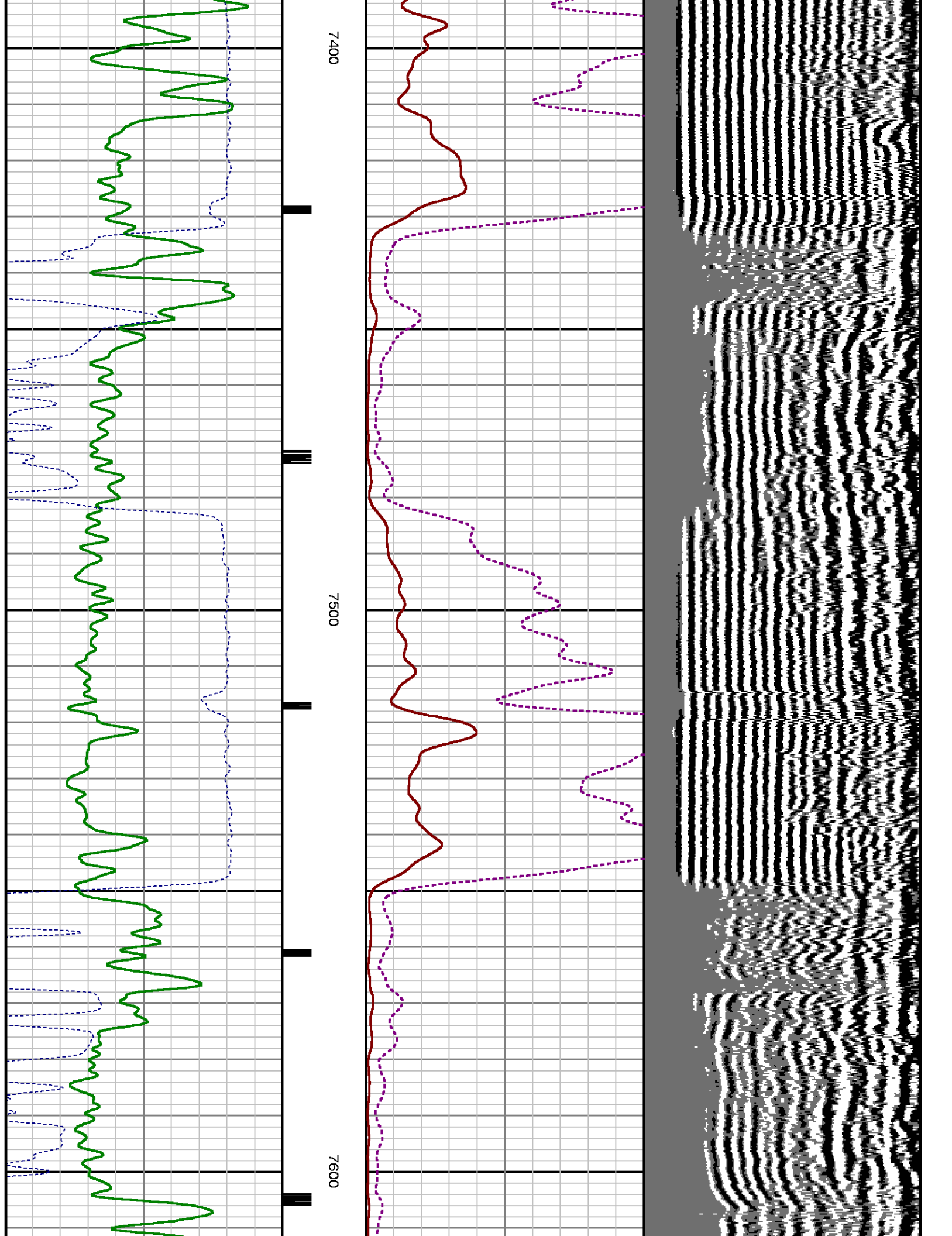
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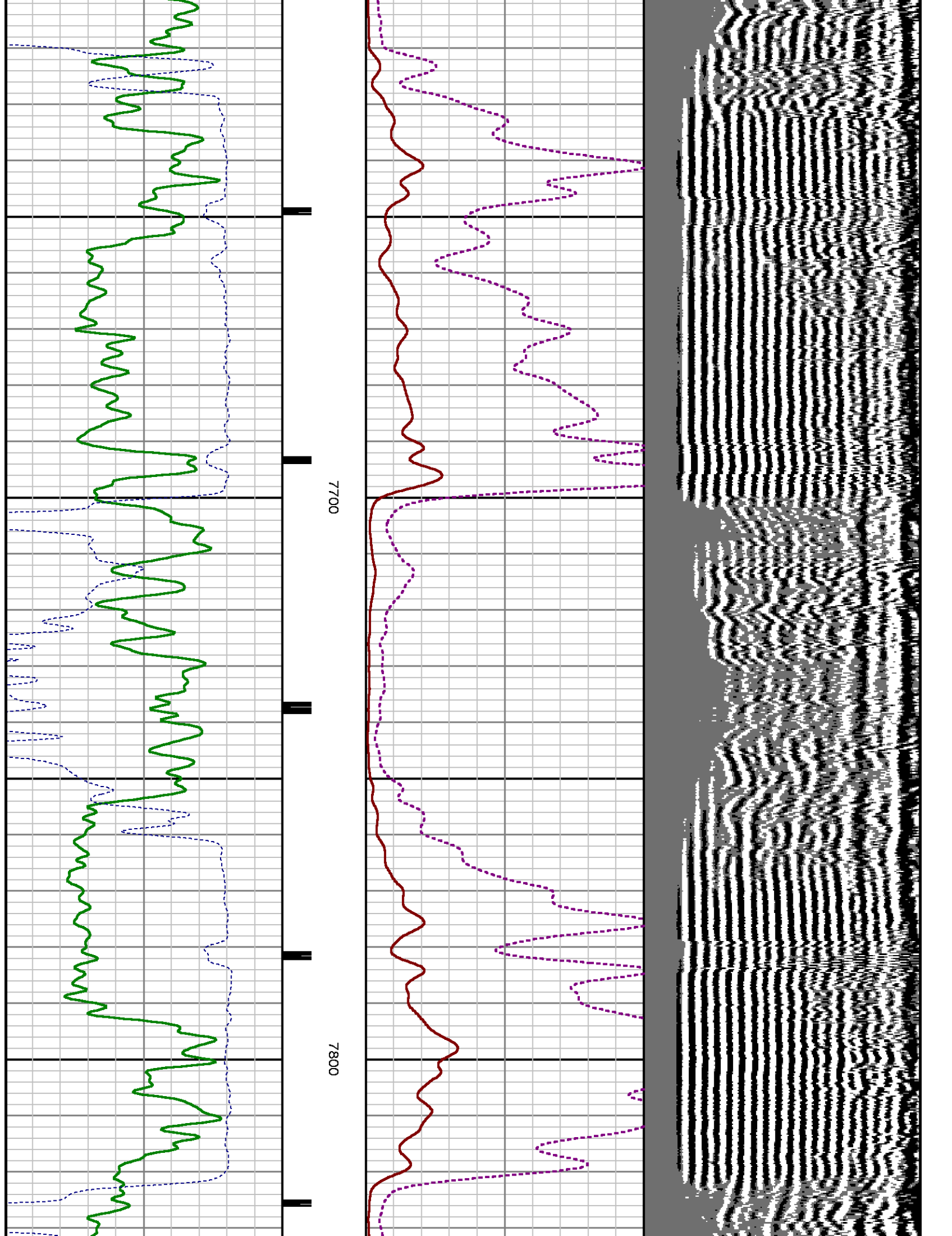
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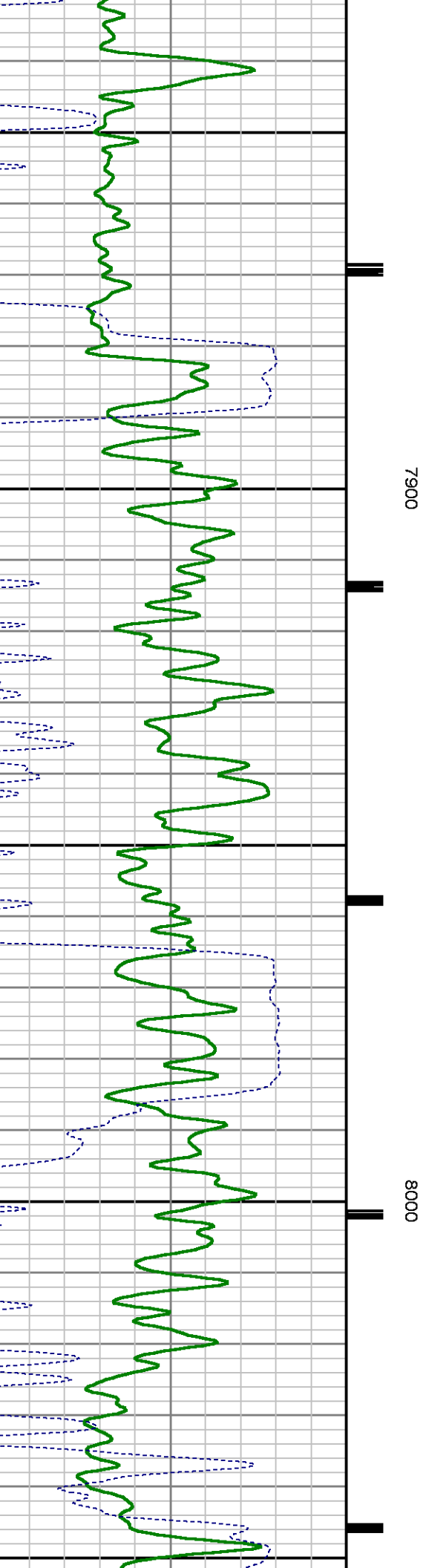
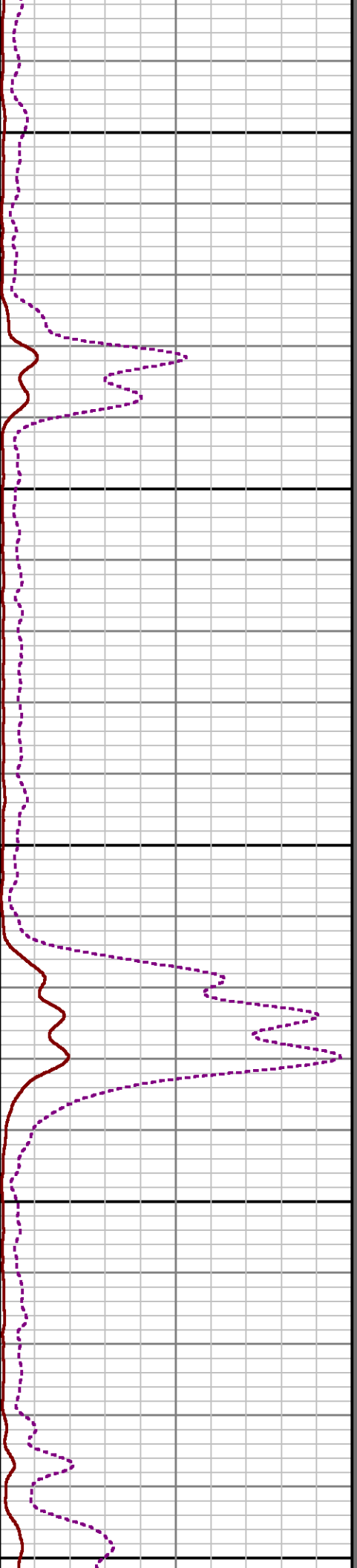
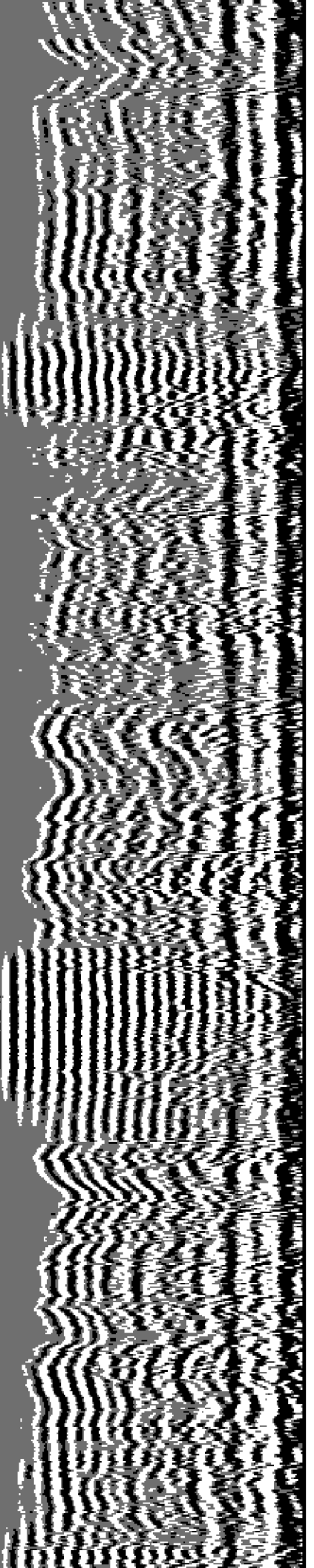


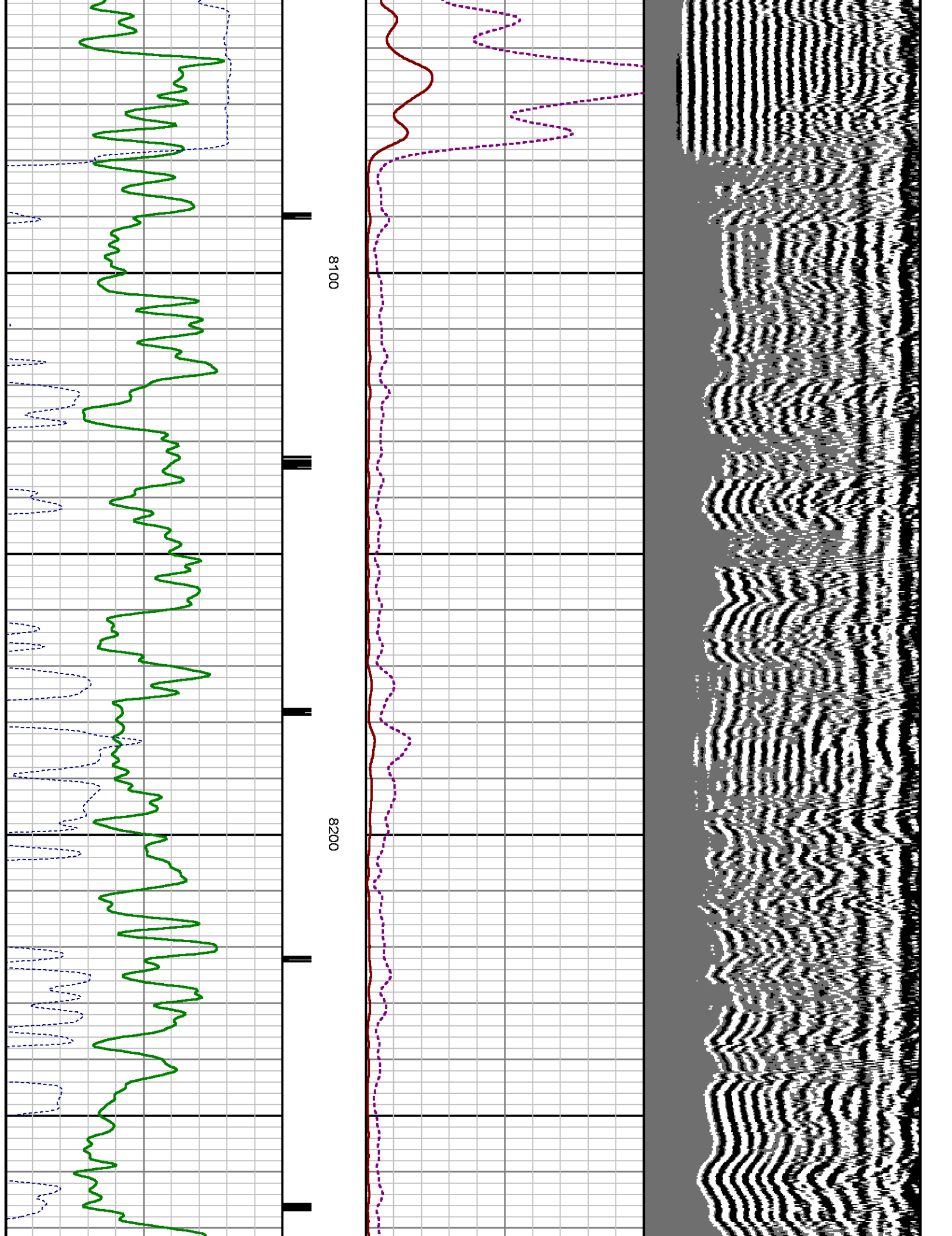


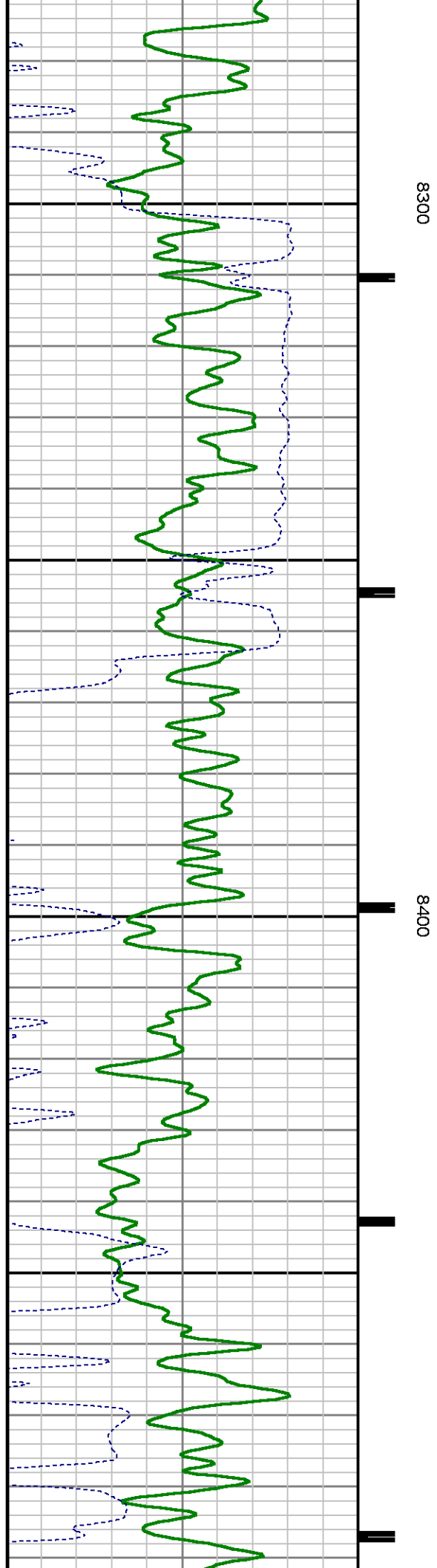
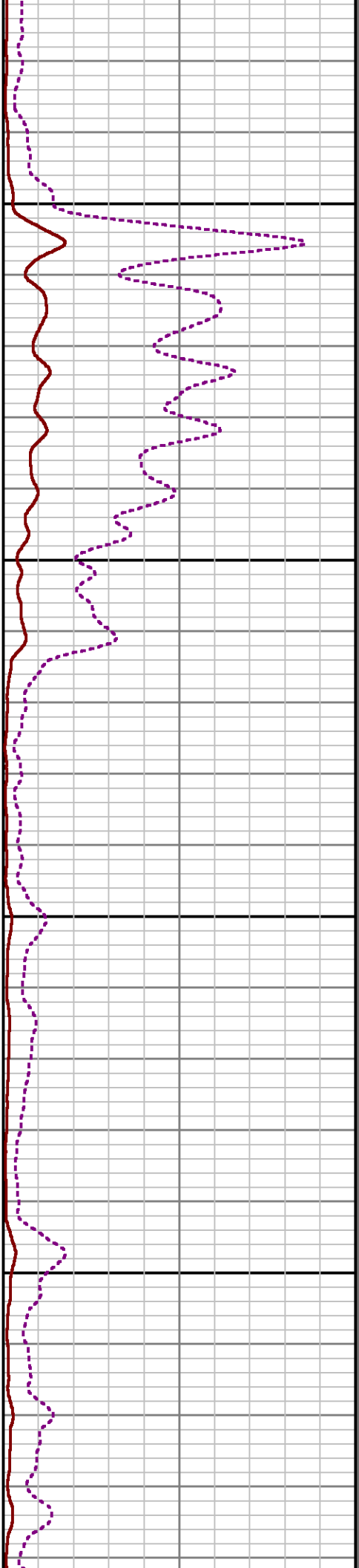
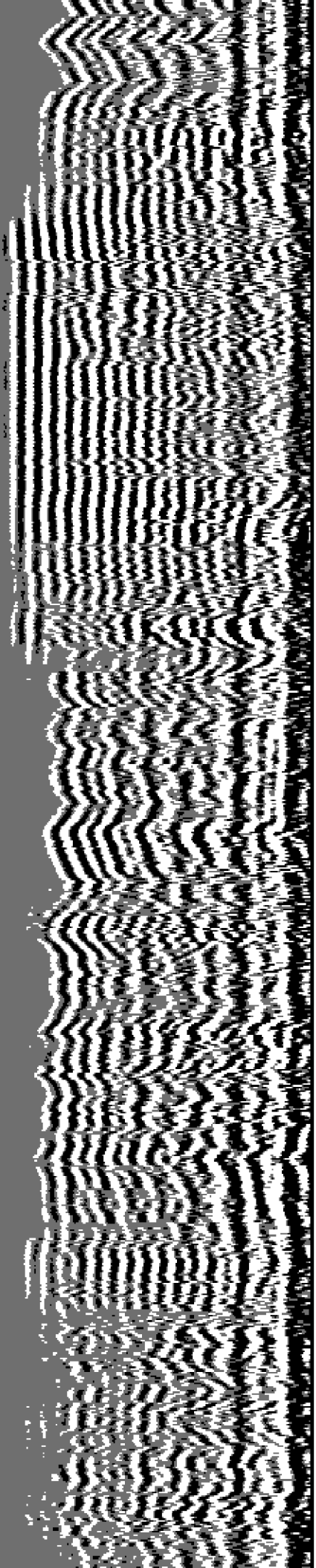


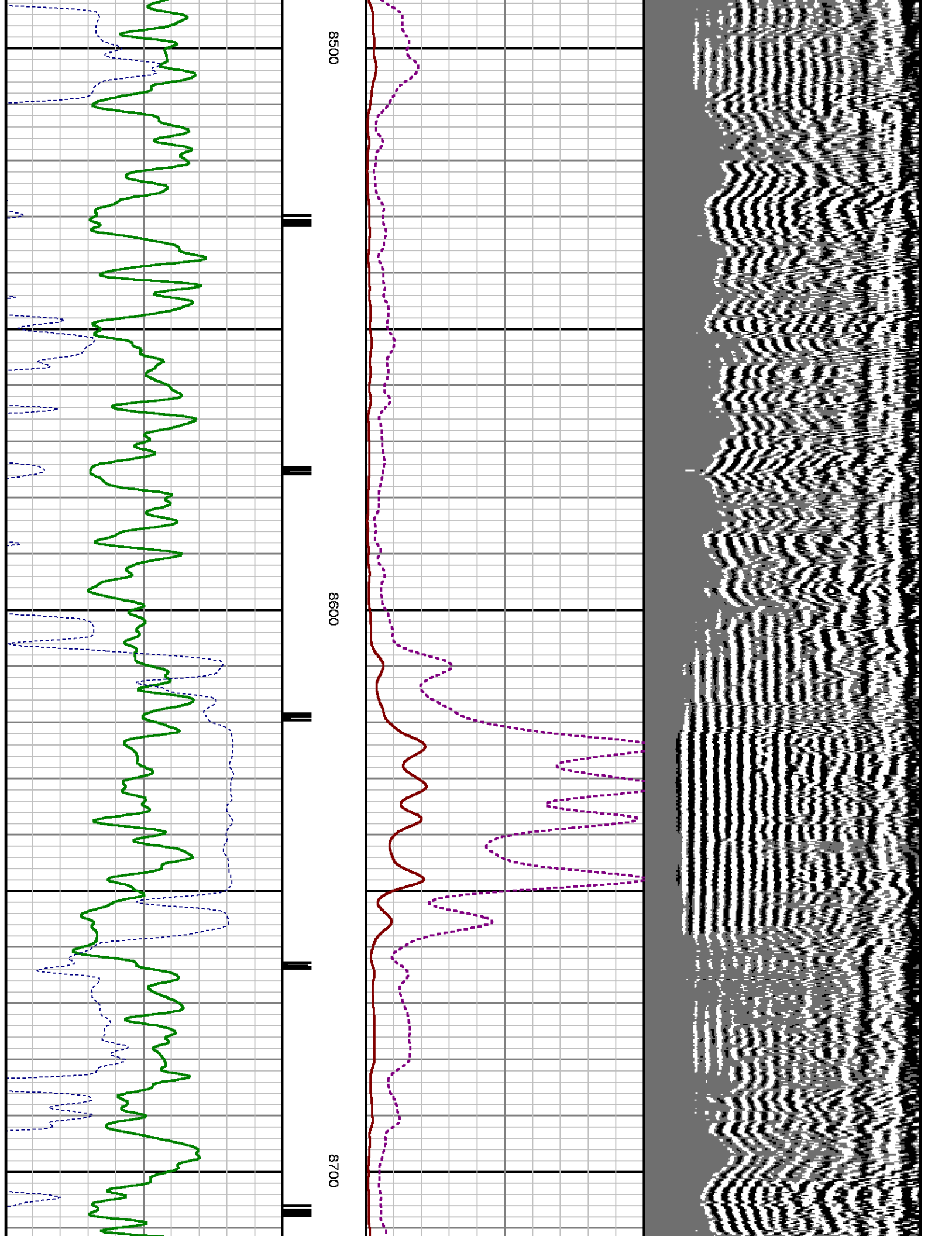


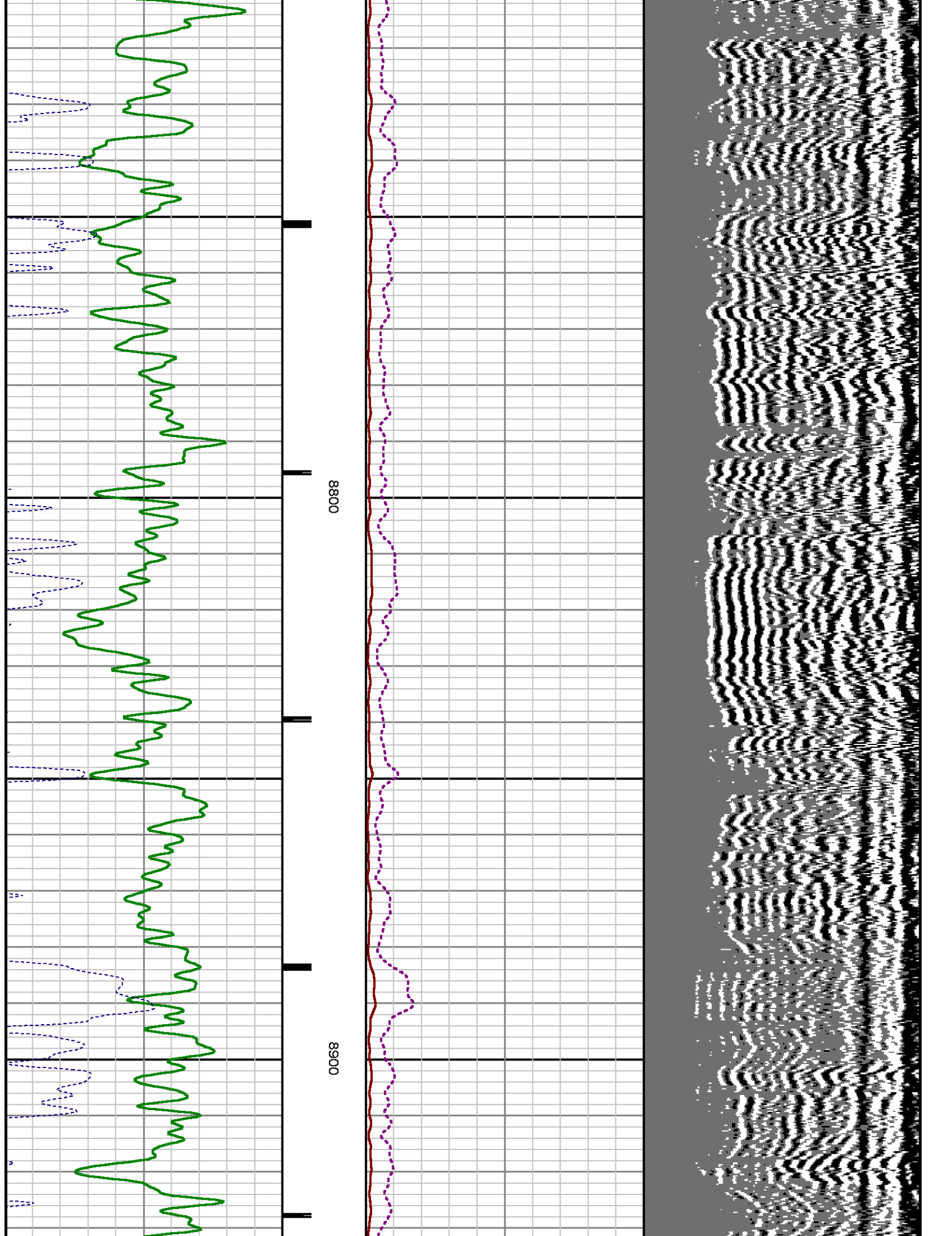


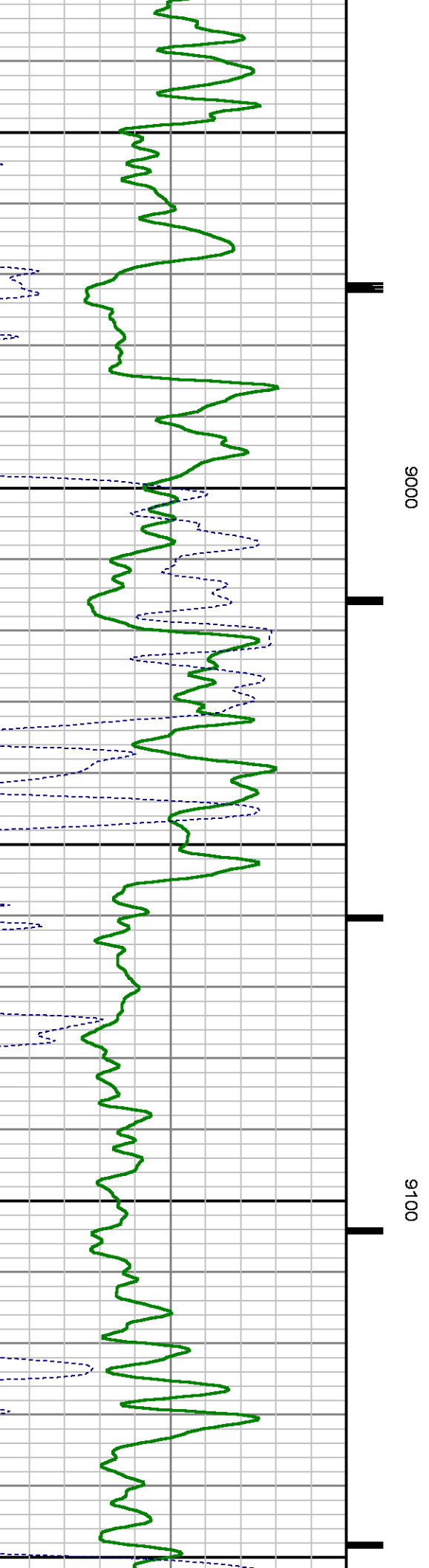
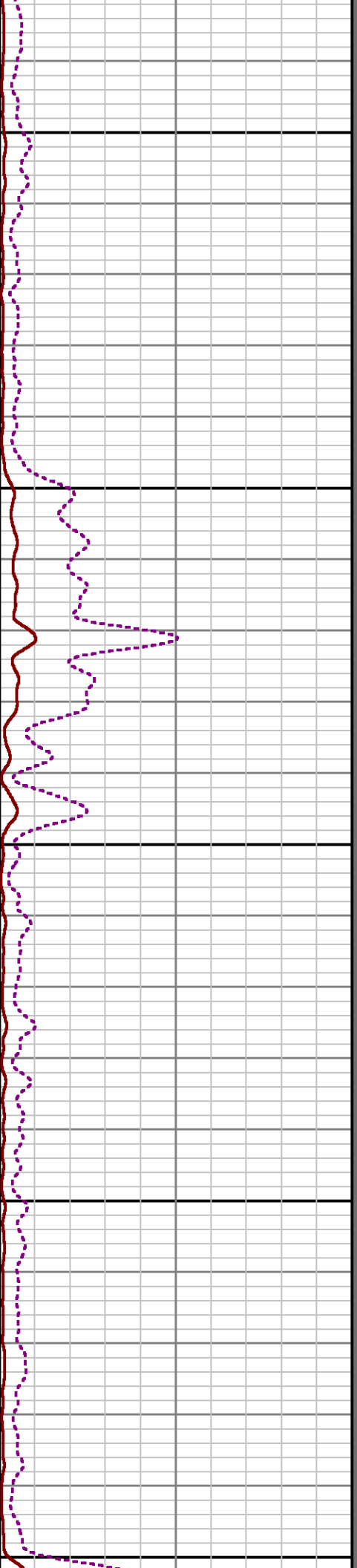
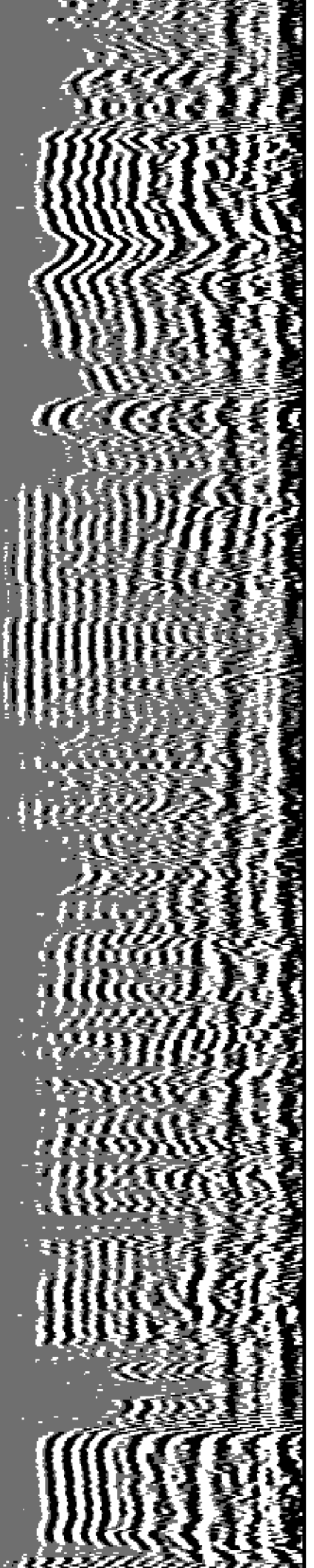


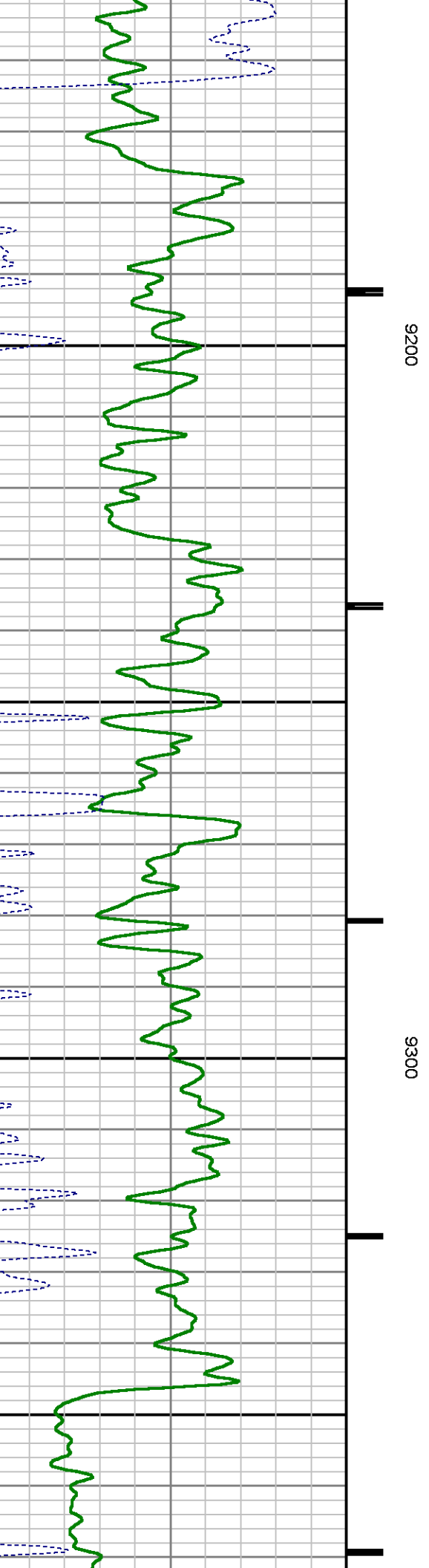
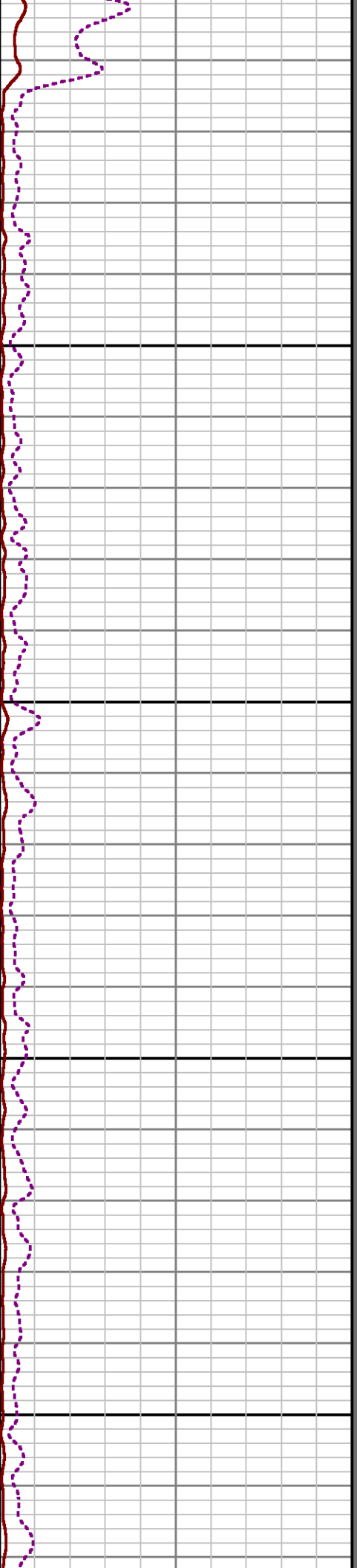
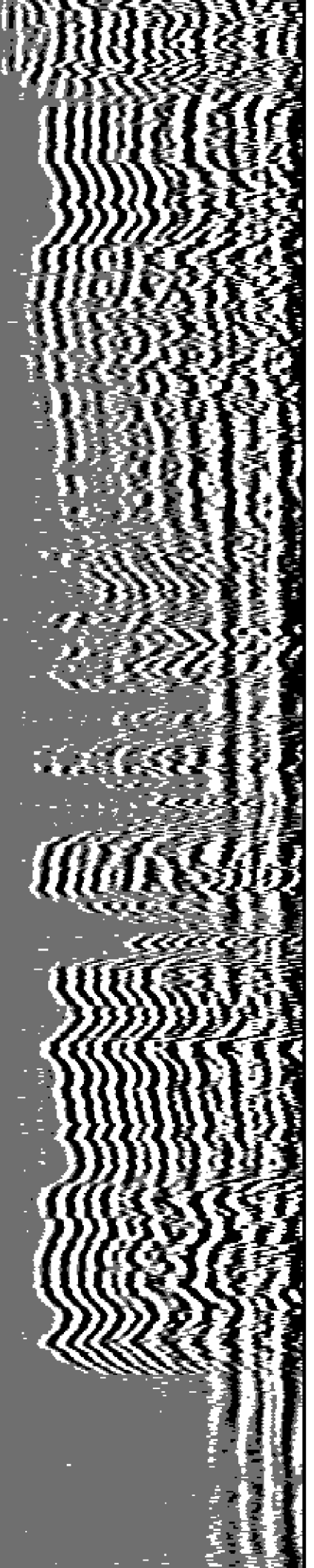


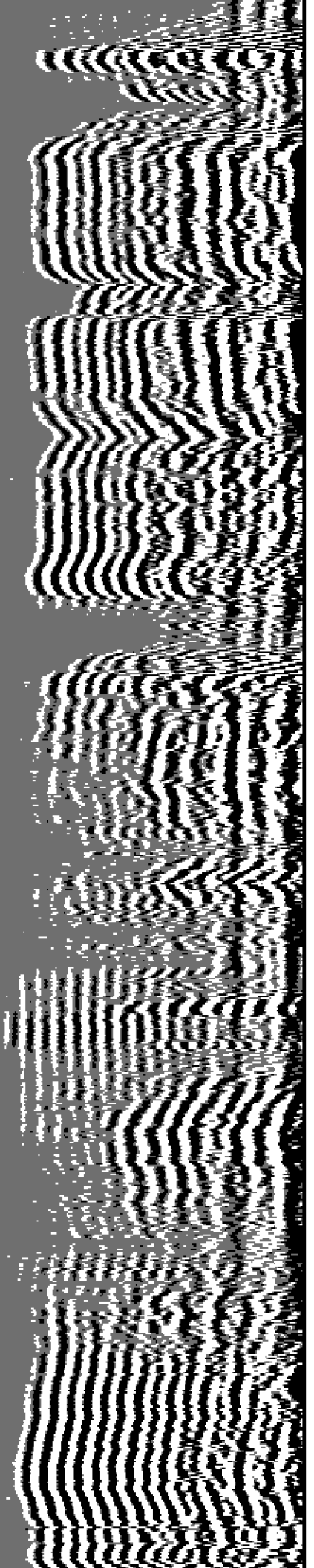












9400

9500

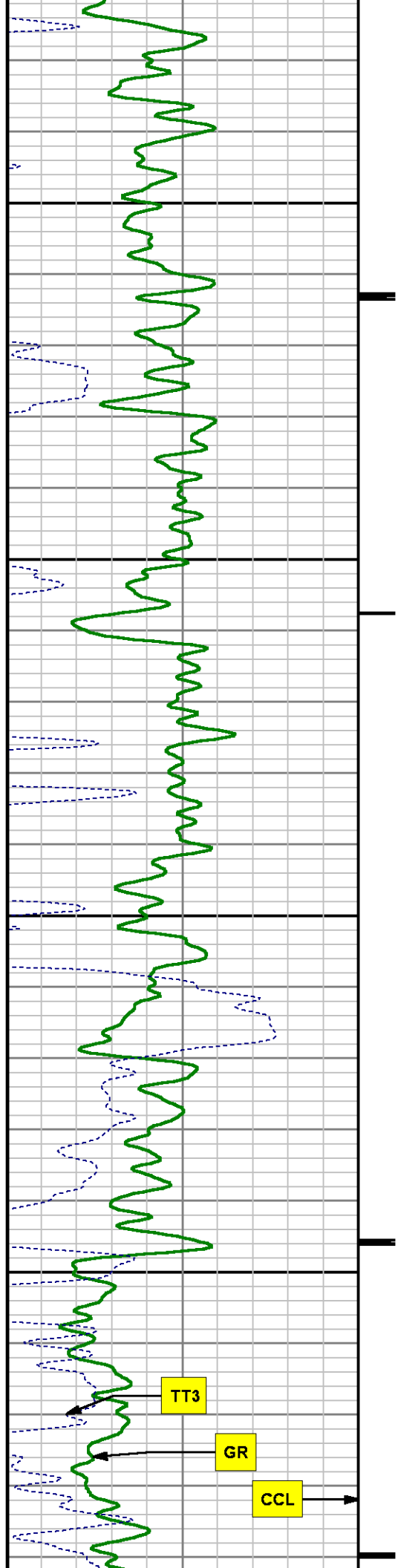
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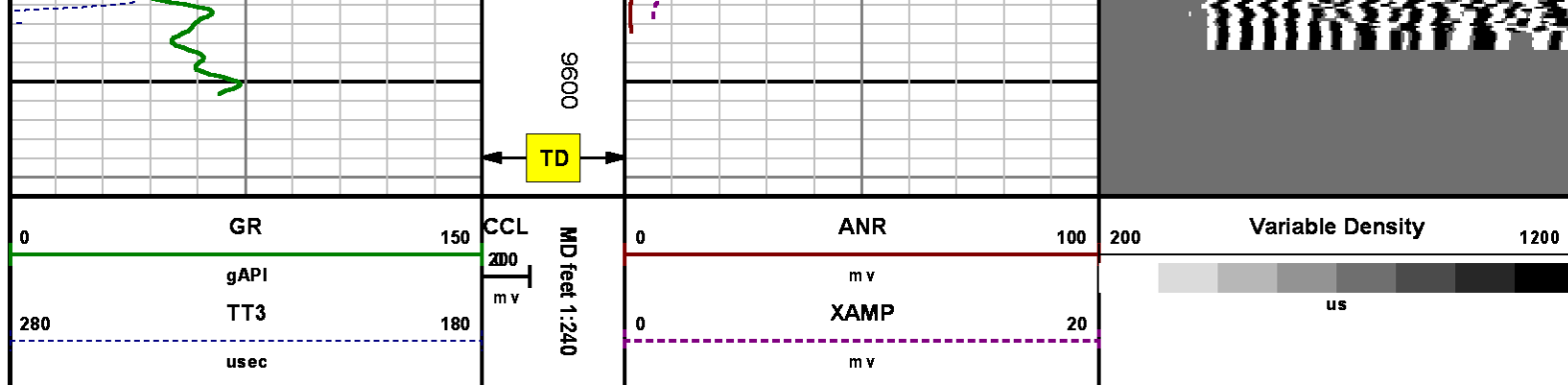
ANR

TT3

GR

CCL





SECONDARY PRESENTATION

2500 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	17.879	9612.000
RAL	Amp Gate Start Near	195.000	usec	17.879	9612.000
RAL	Amp Gate Start Radial	195.000	usec	17.879	9612.000
RAL	Amp Gate Width Far	25.000	usec	17.879	9612.000
RAL	Amp Gate Width Near	25.000	usec	17.879	9612.000
RAL	Amp Gate Width Radial	30.000	usec	17.879	9612.000
RAL	casing od	4.500	inches	17.879	9612.000
RAL	casing wt	11.600	lbm/ft	17.879	9612.000
RAL	FB Start Far	291.900	usec	17.879	9612.000
RAL	FB Start Near	175.391	usec	17.879	9612.000
RAL	FB Start Radial	180.000	usec	17.879	9612.000
RAL	FB Thresh Far	10.000	mv	17.879	9612.000
RAL	FB Thresh Near	4.000	mv	17.879	9612.000
RAL	FB Thresh Radial	4.000	mv	17.879	9612.000
RAL	Fluid Travel Time	200.000	usec/ft	17.879	9612.000

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3	AR4

1426XA -15.750
 2459XA -11.340
 2459XA -9.490
 2459XA -4.090

AR5	AR6	AR7	AR8	CHV	FPR2
FPR3	FPR5	TT3	TTR1	TTR2	TTR3
TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
AFAR	SIG	TT5			
CCL					
GR					
NEU					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

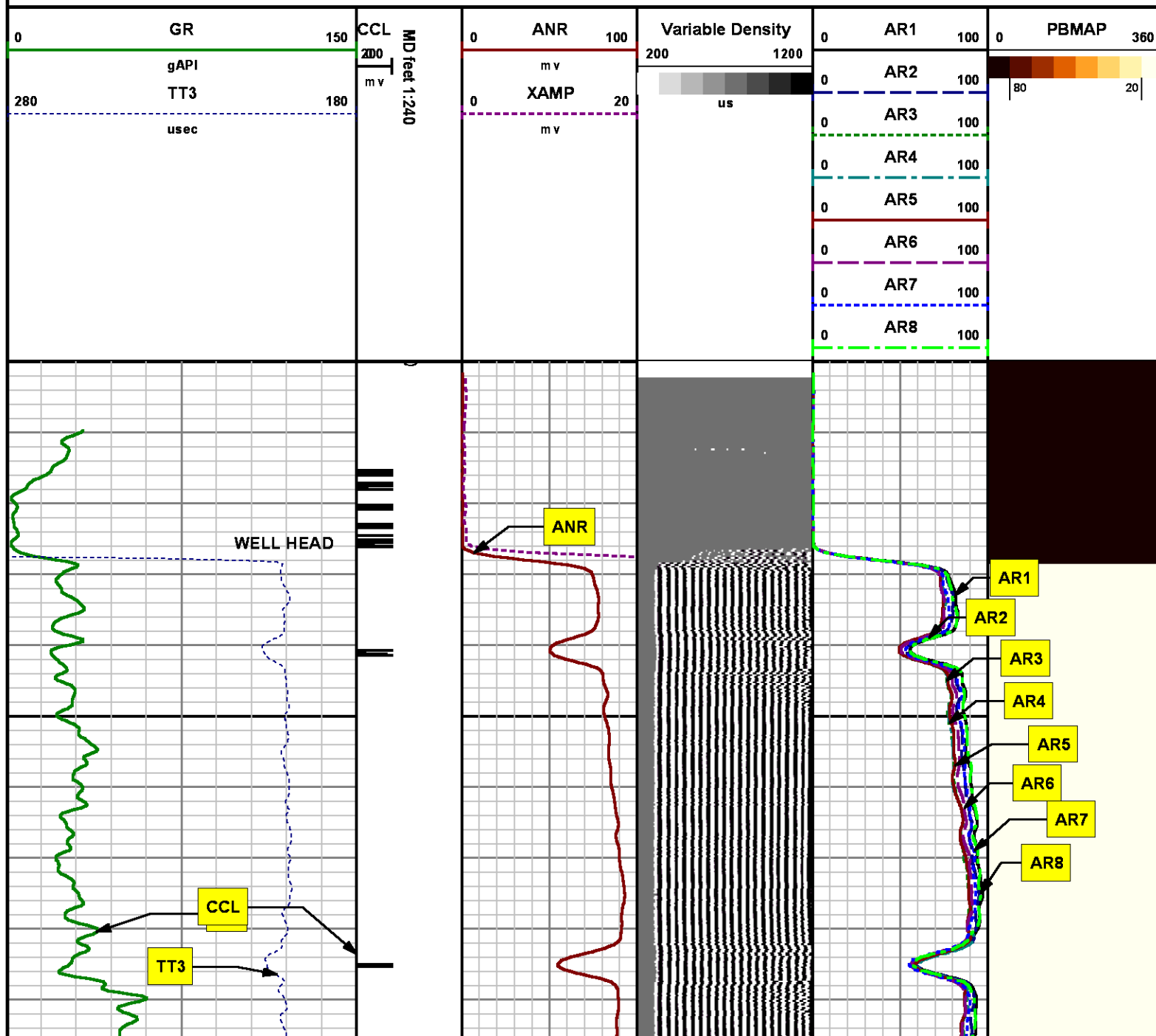
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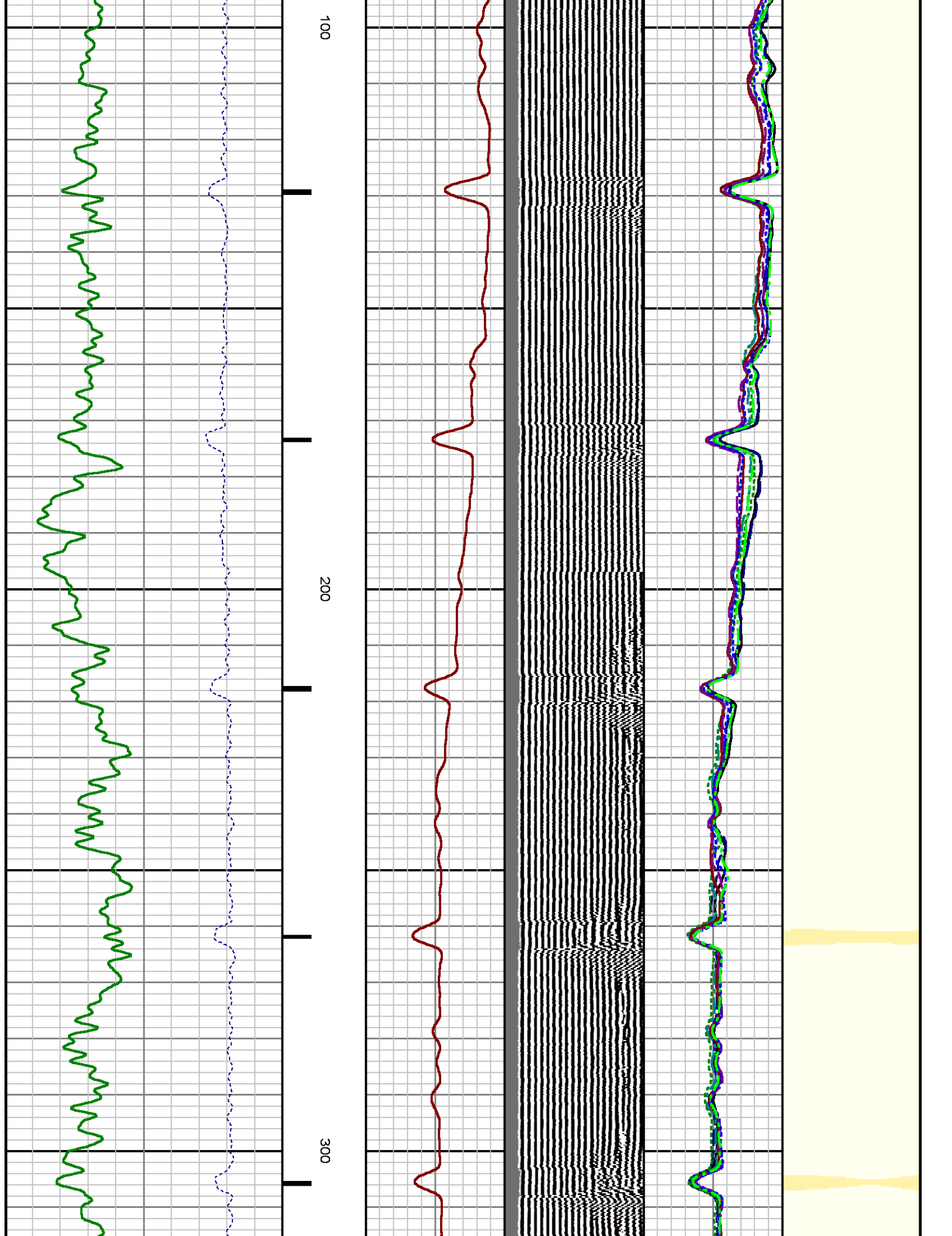
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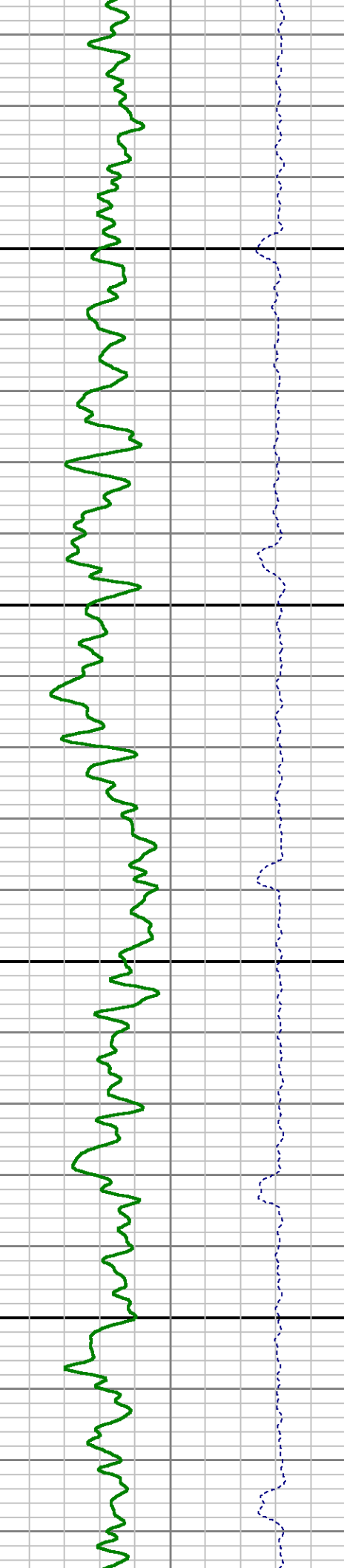
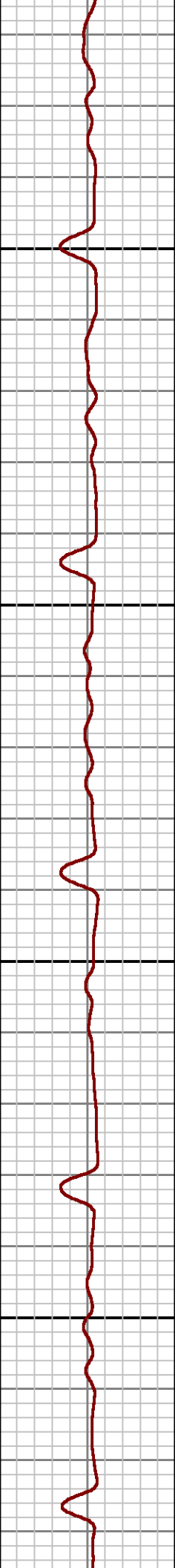
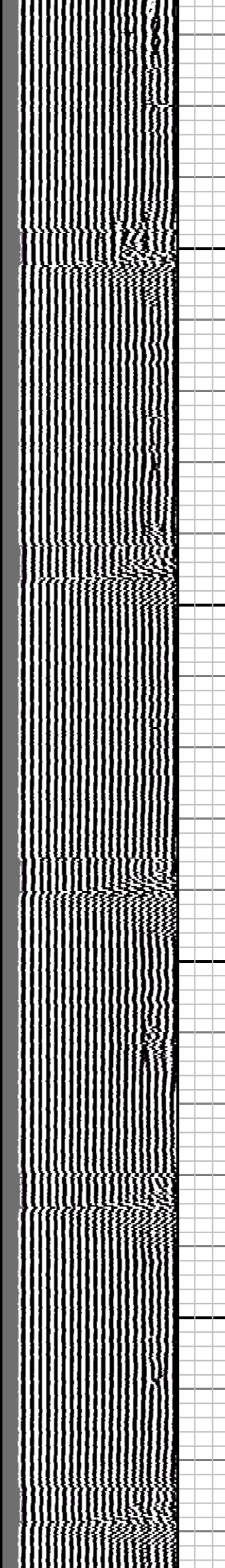
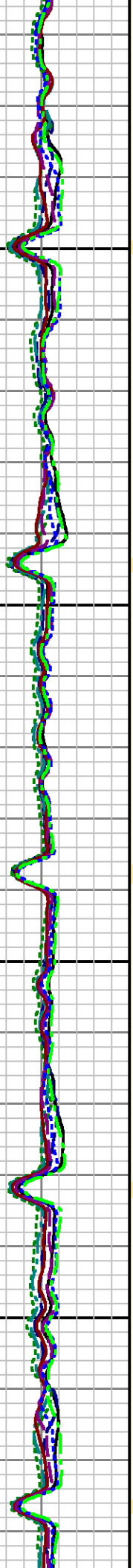
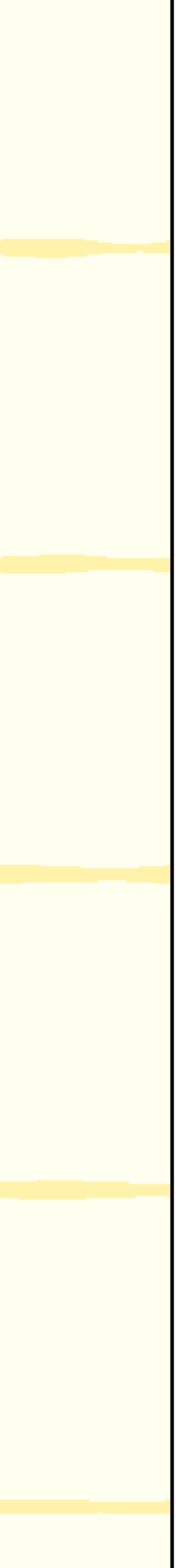
Mode : PlotMgr 5.4.504

Interval : 0.00 - 9612.00 feet UP

Created : 3/3/2014 10:01:34 AM

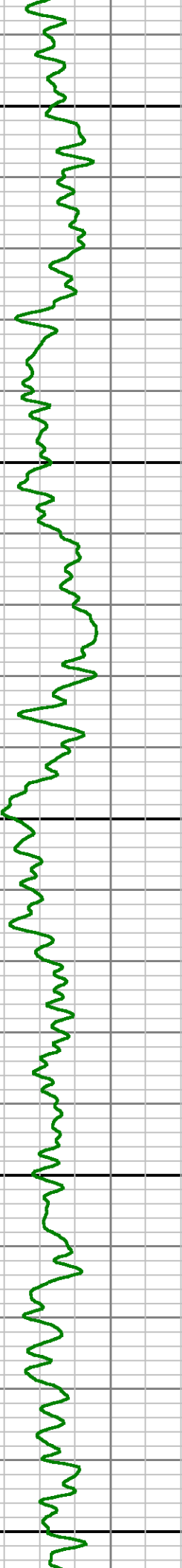
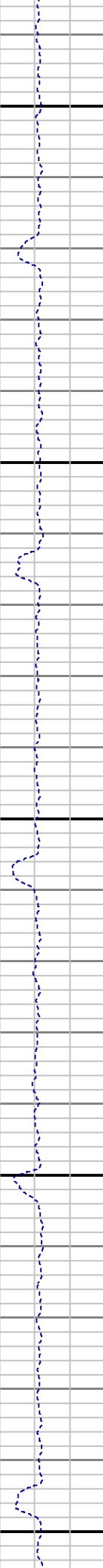
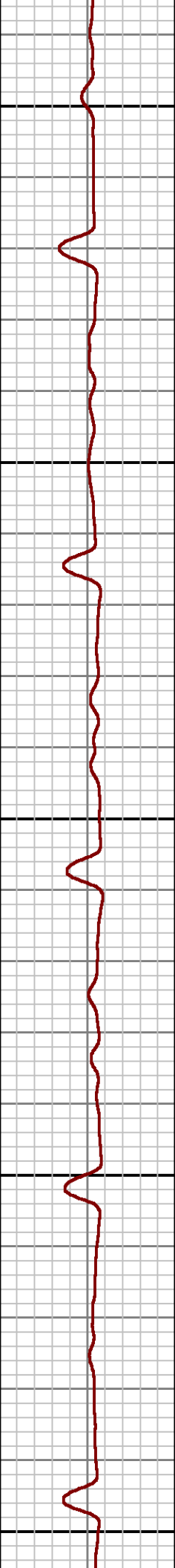
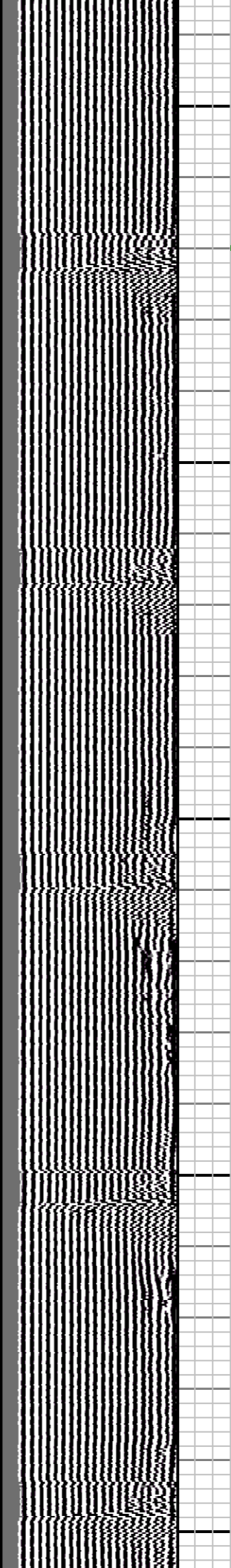
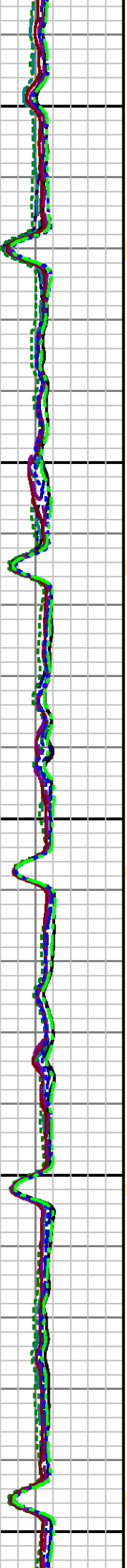


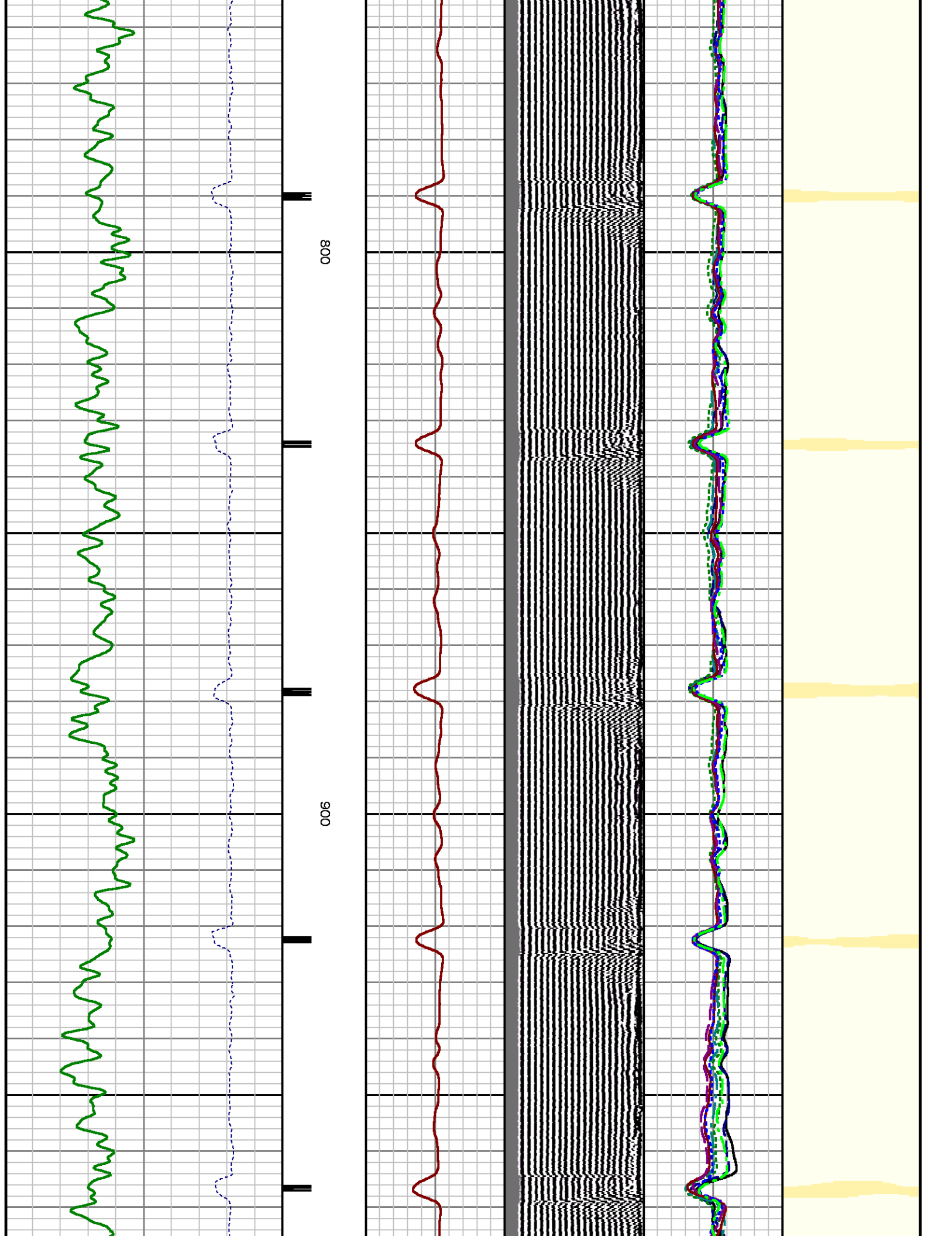


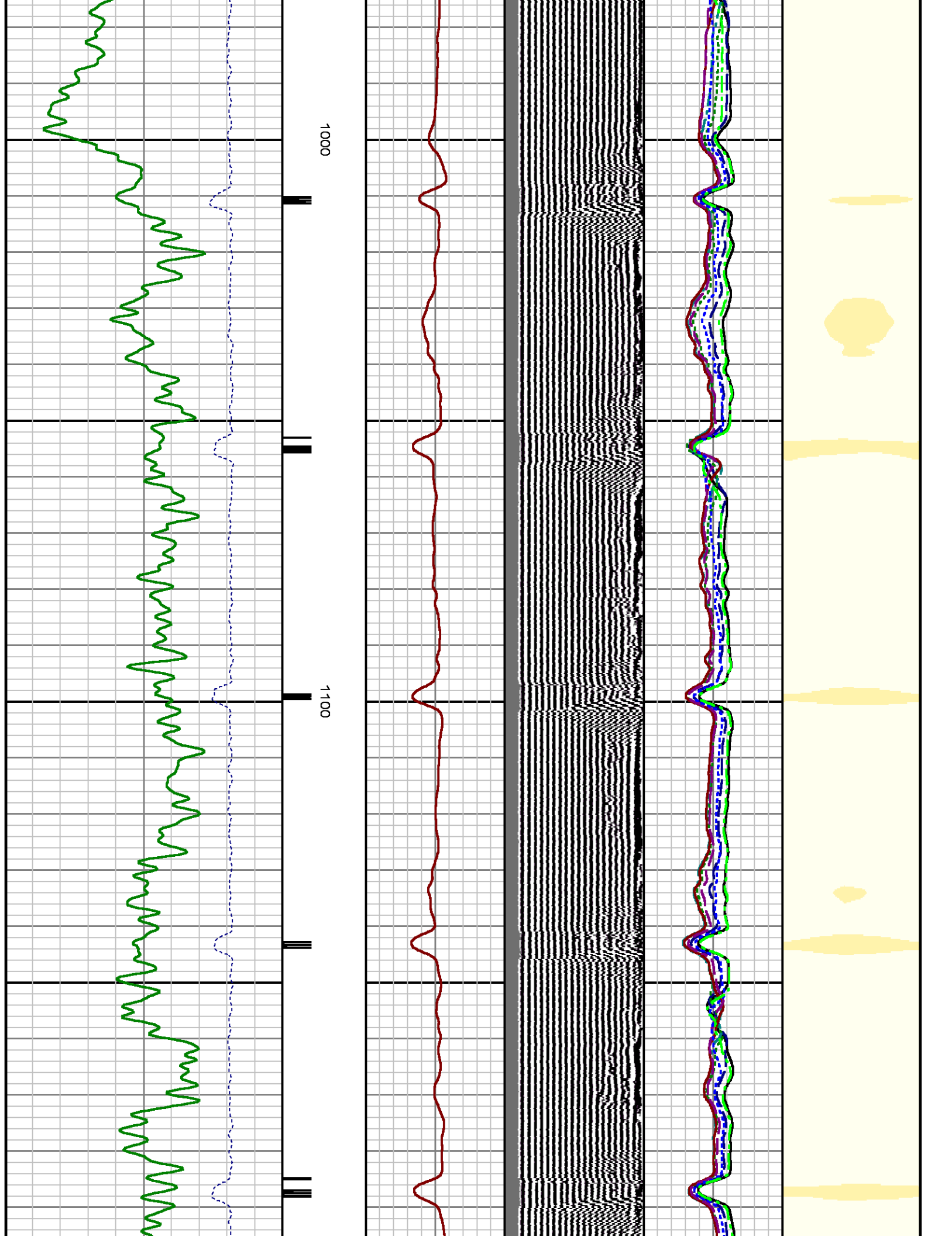


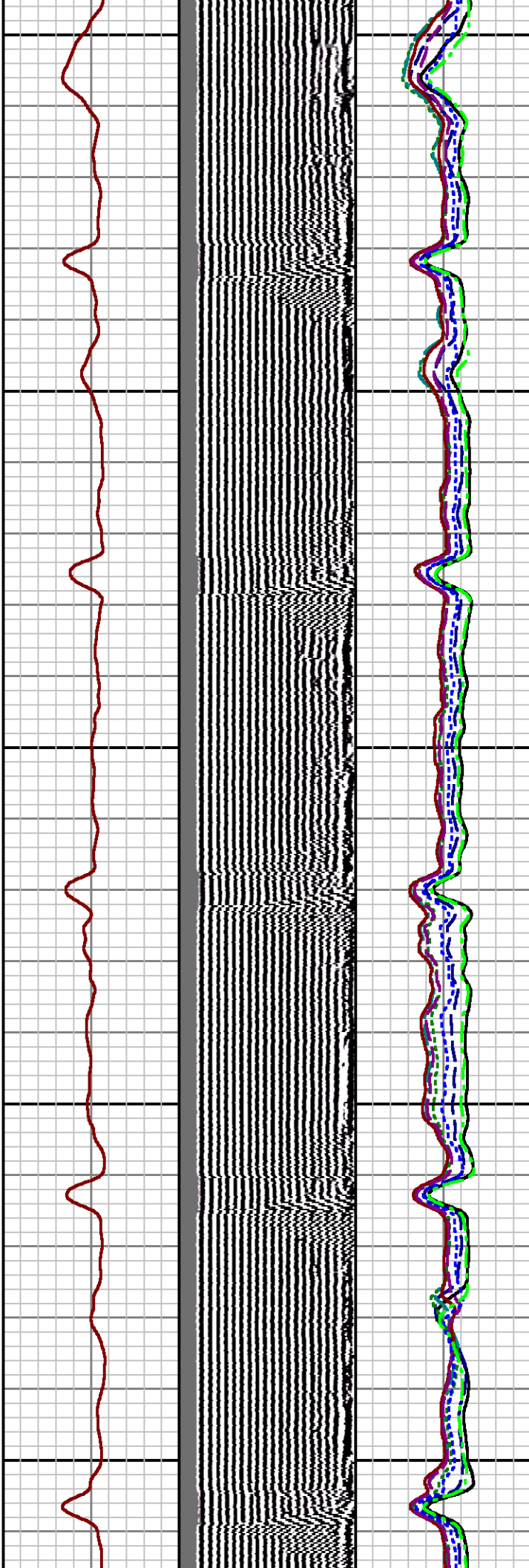
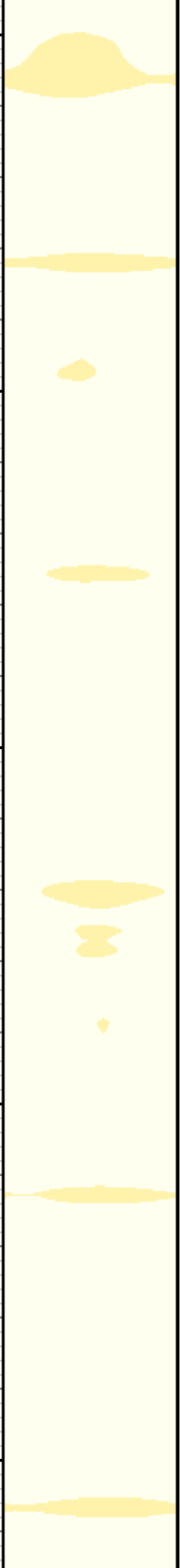
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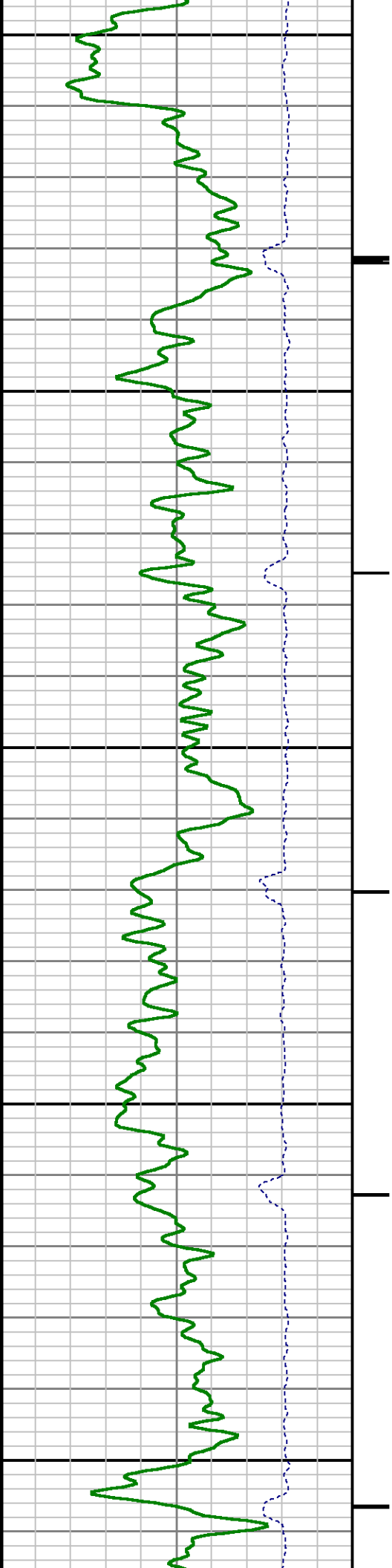


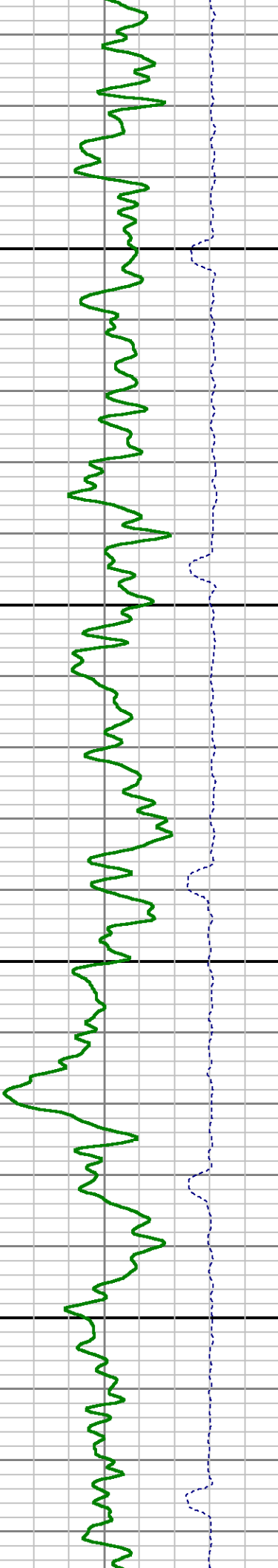
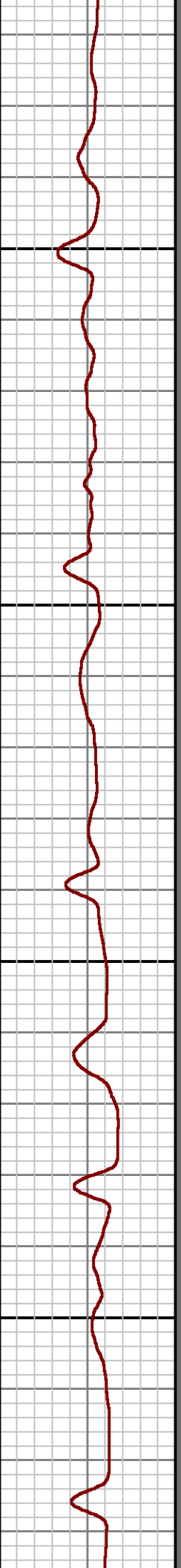
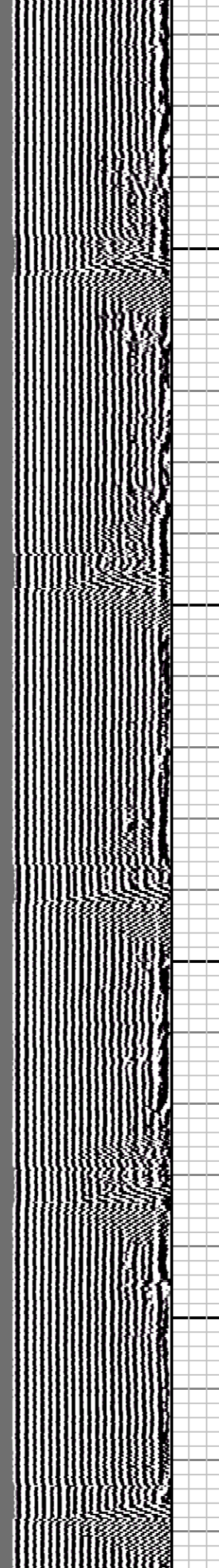
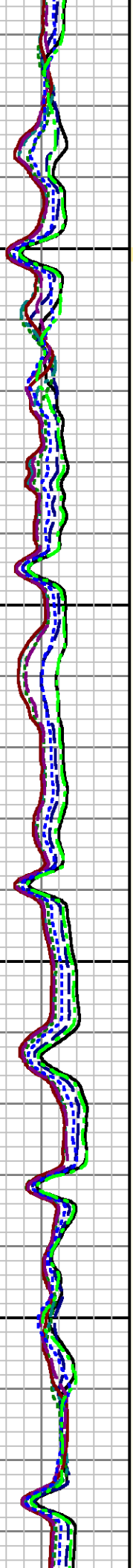


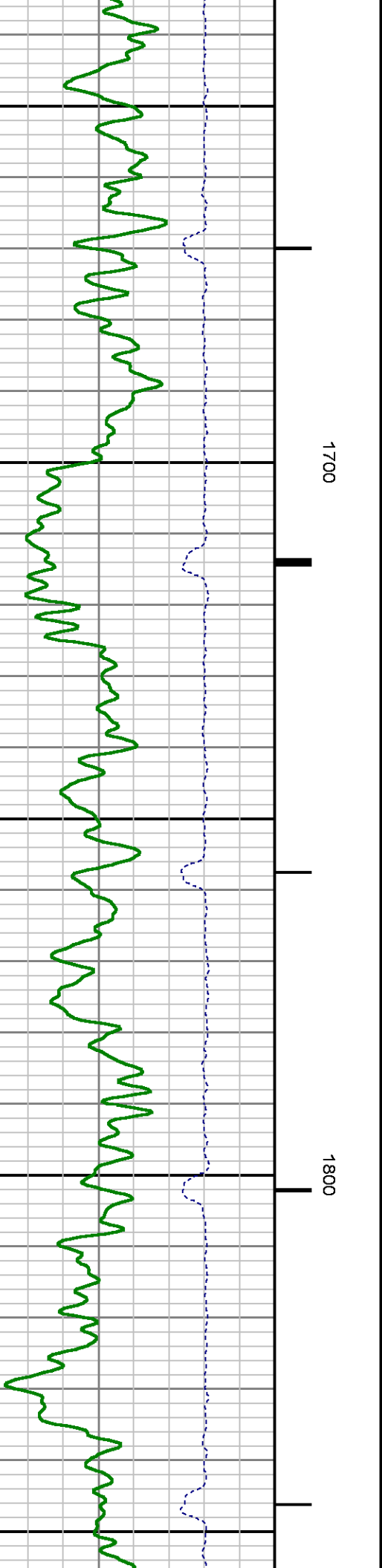
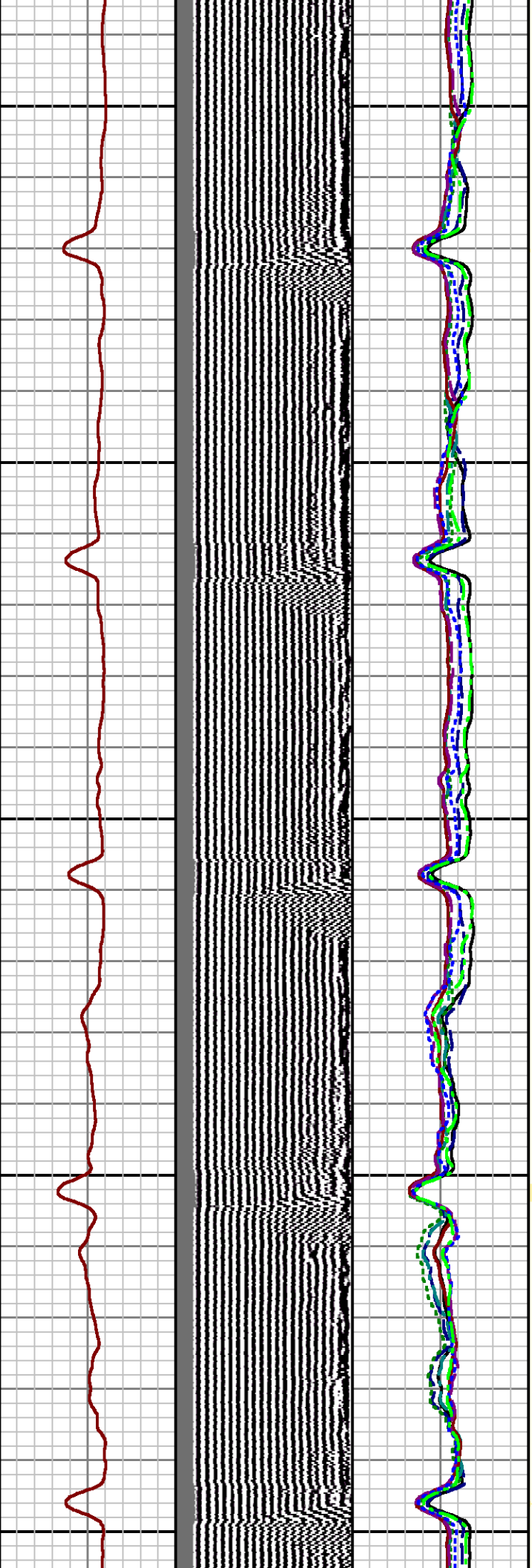
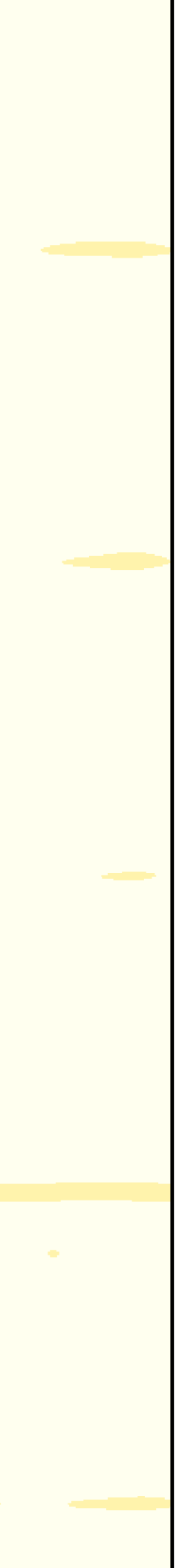
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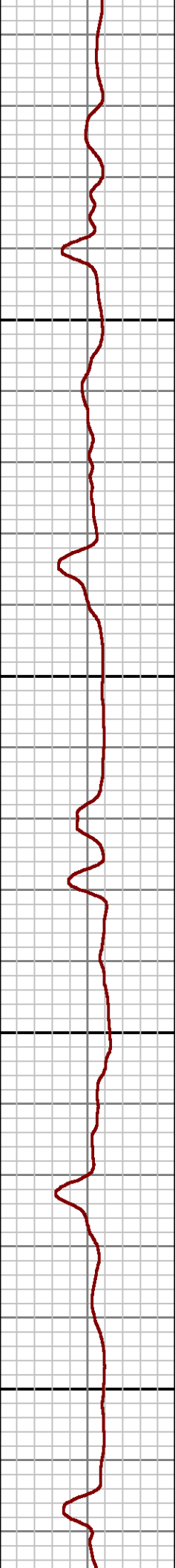
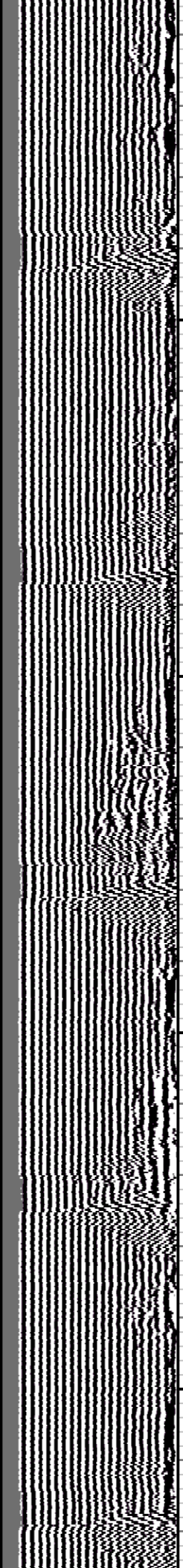
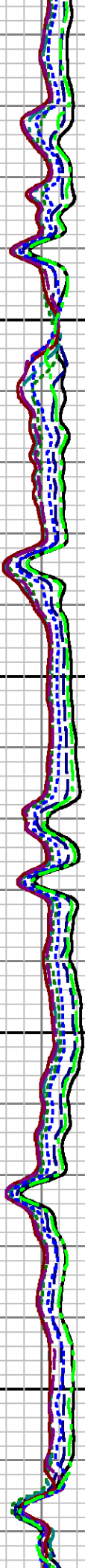
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1400



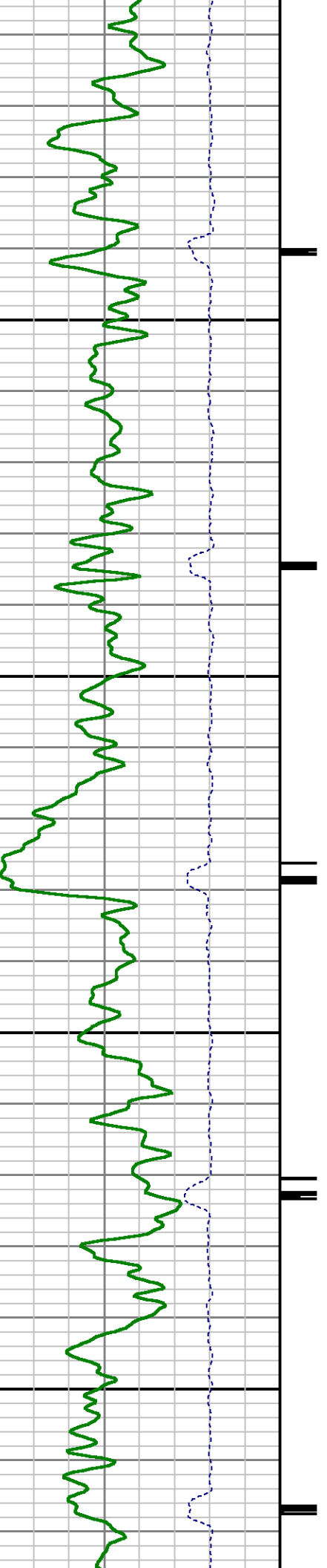


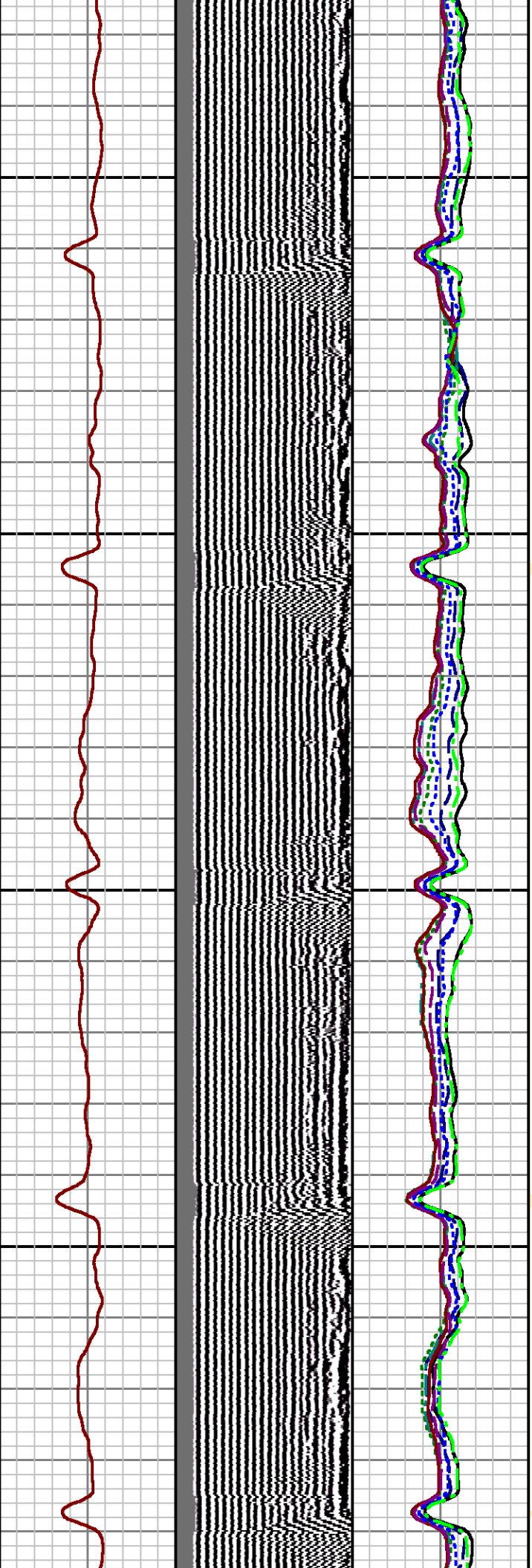
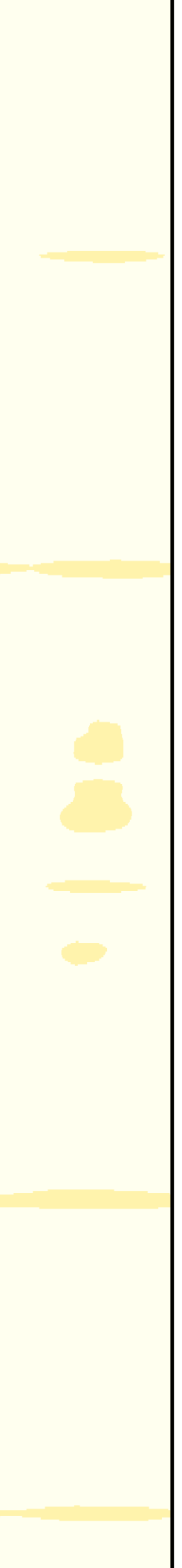




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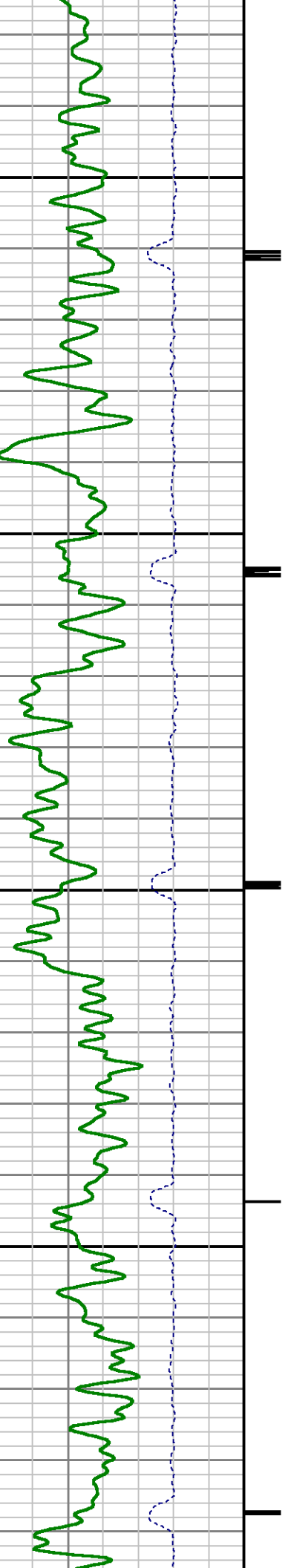
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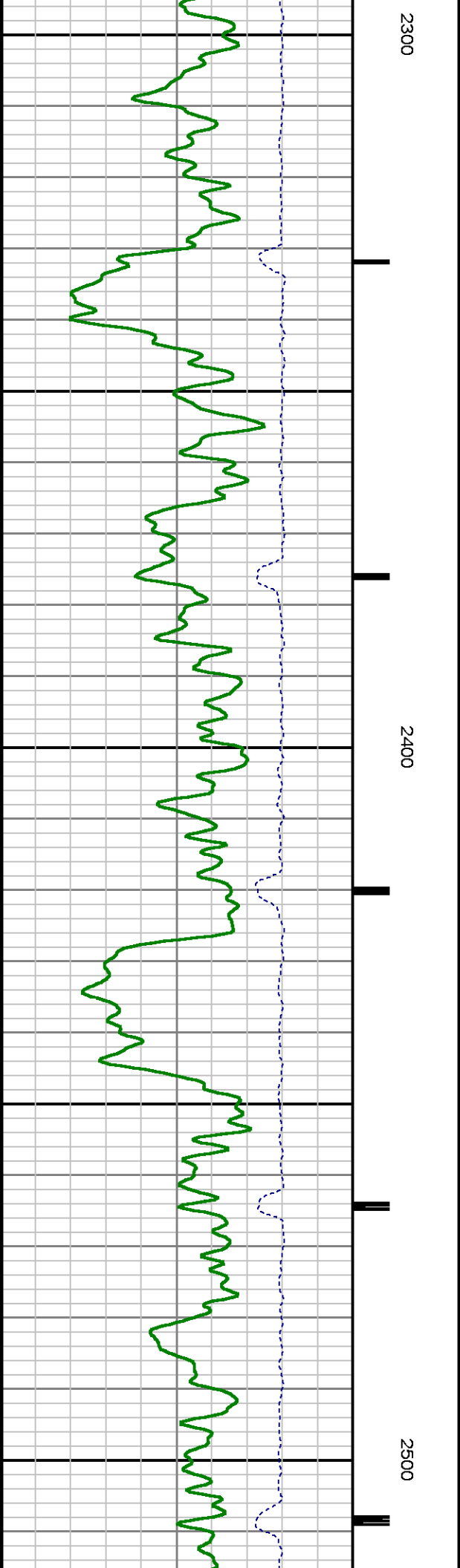
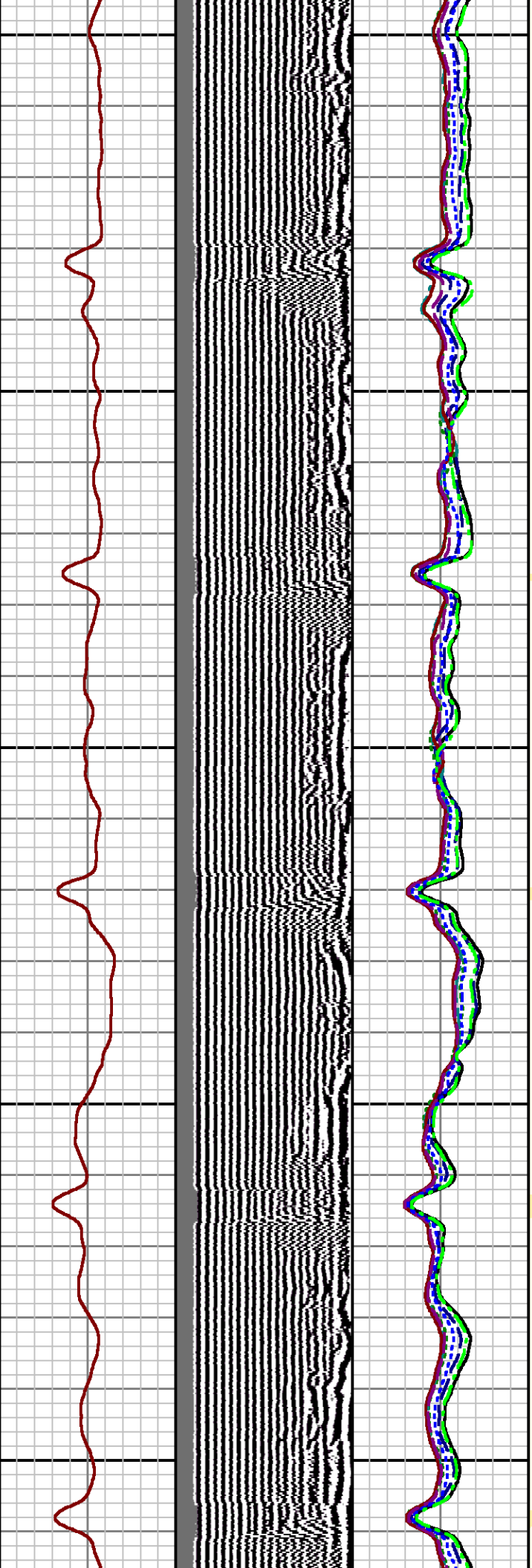


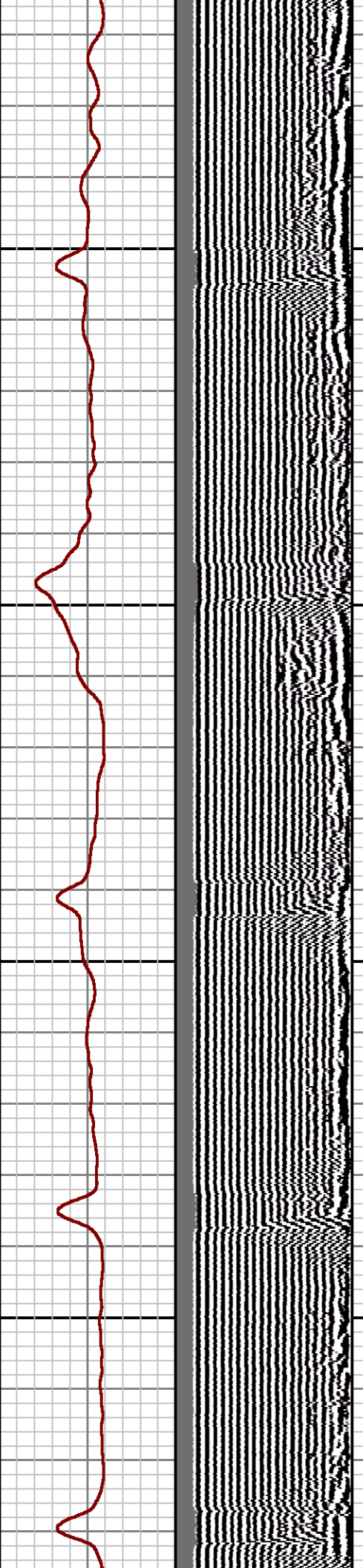
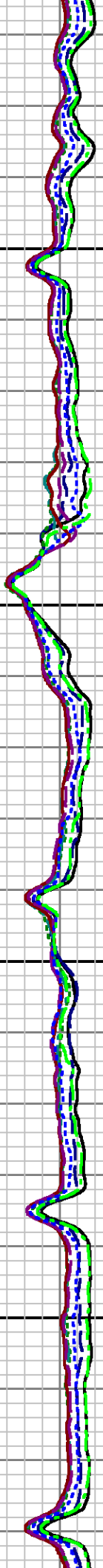


2100

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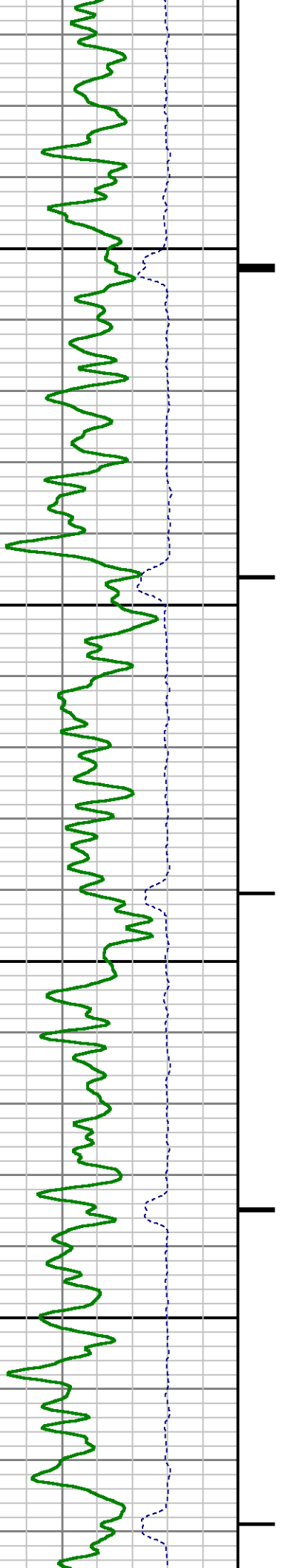


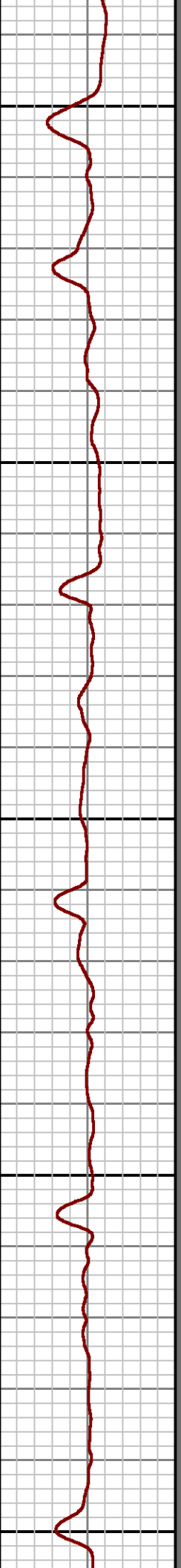
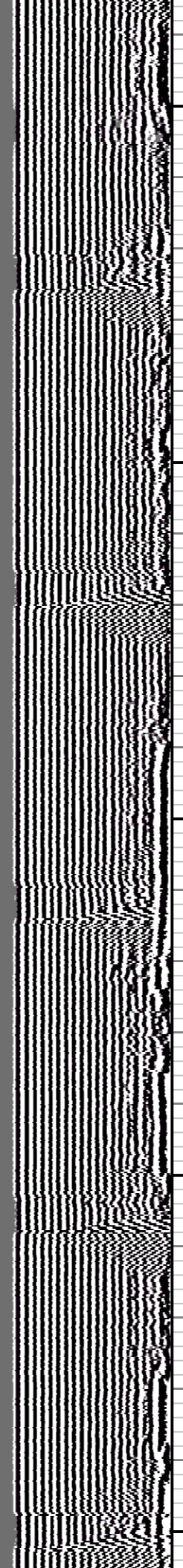
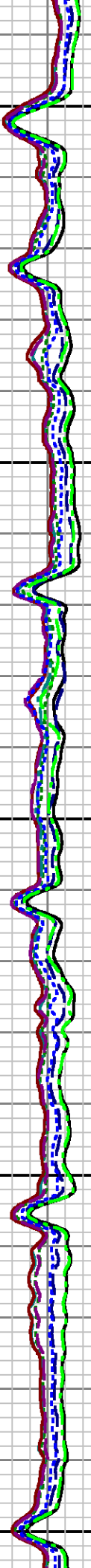
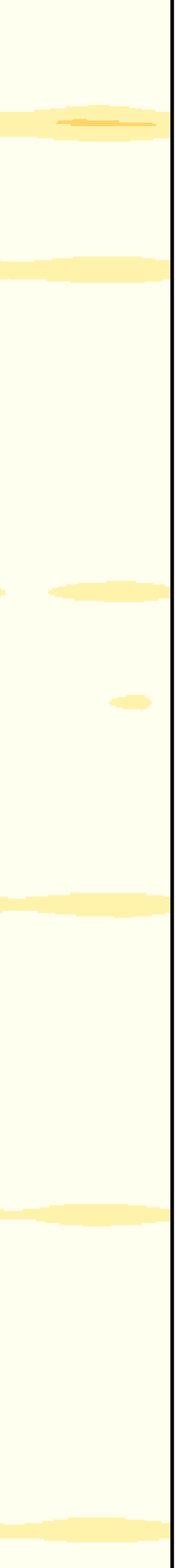




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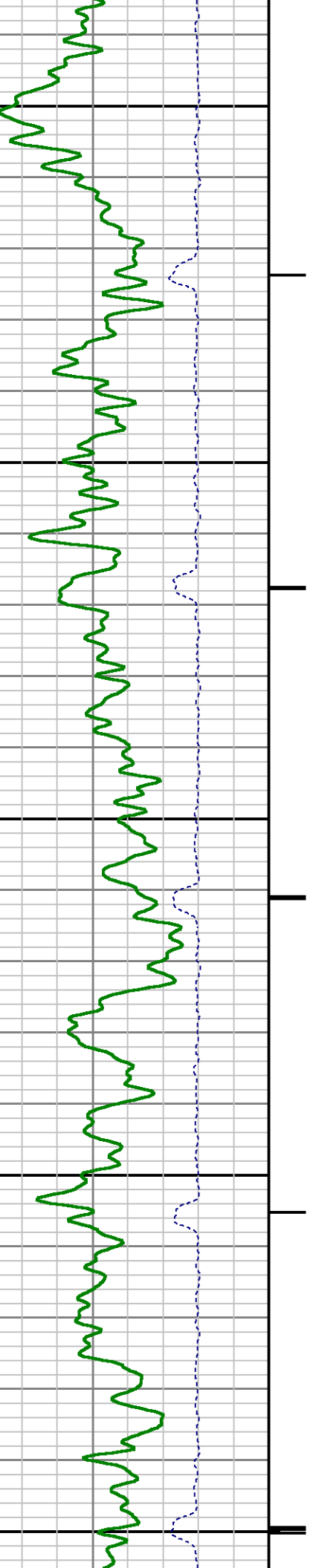
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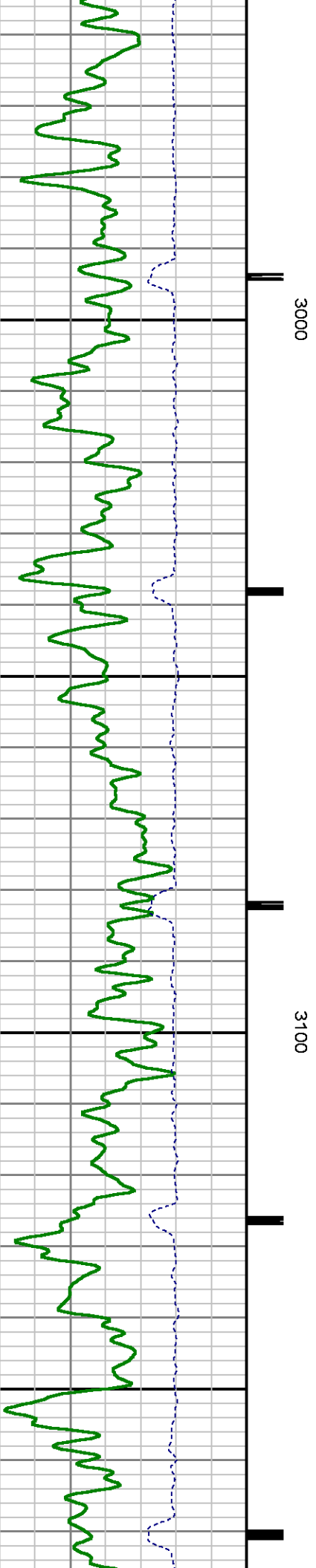
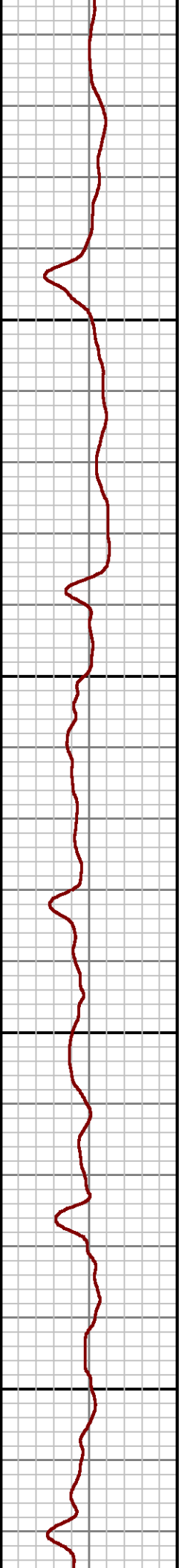
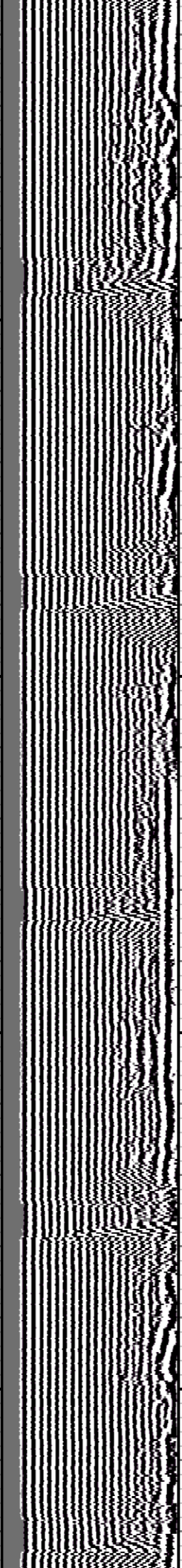
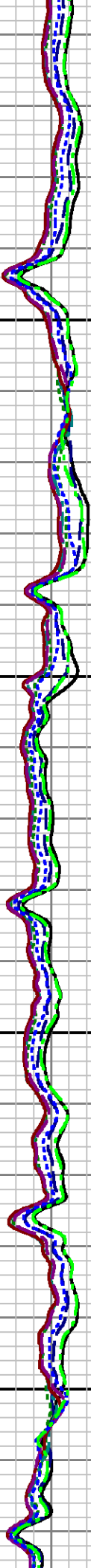
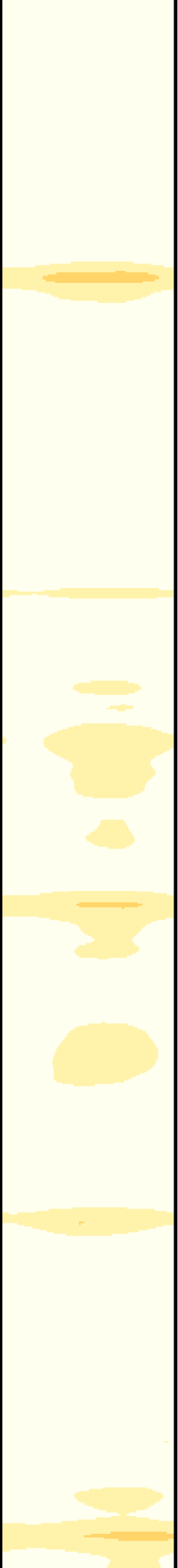


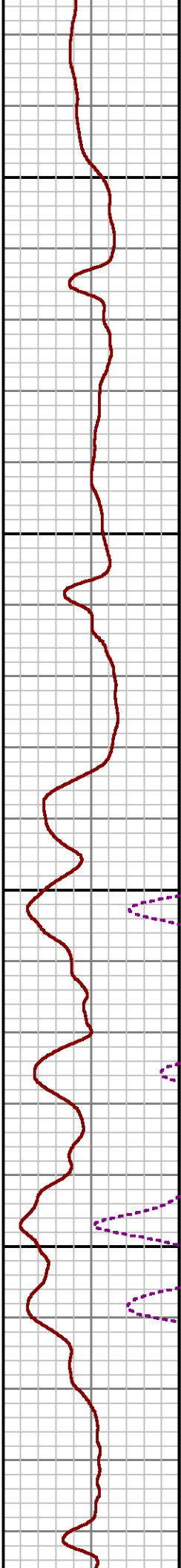
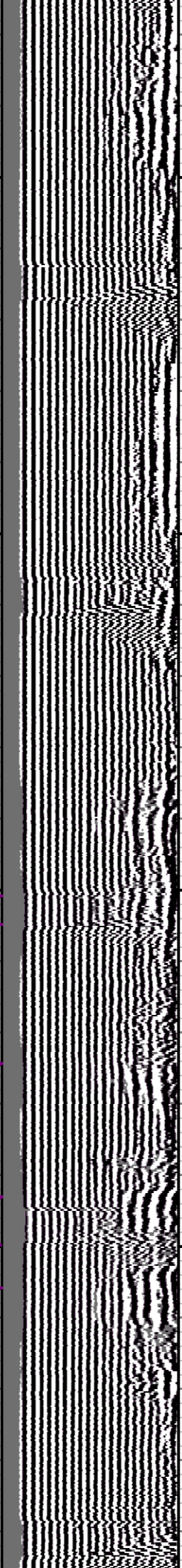
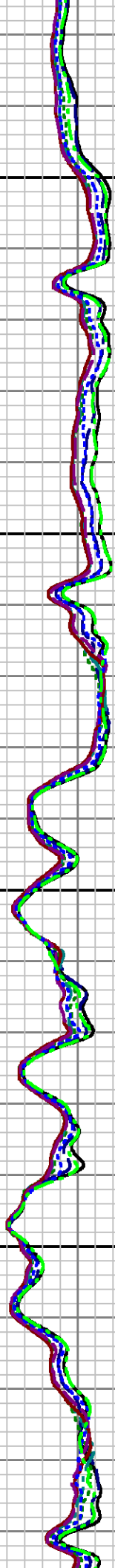
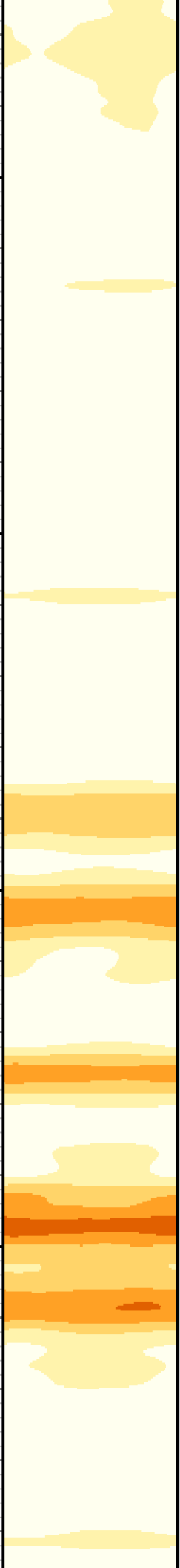


2800

2900

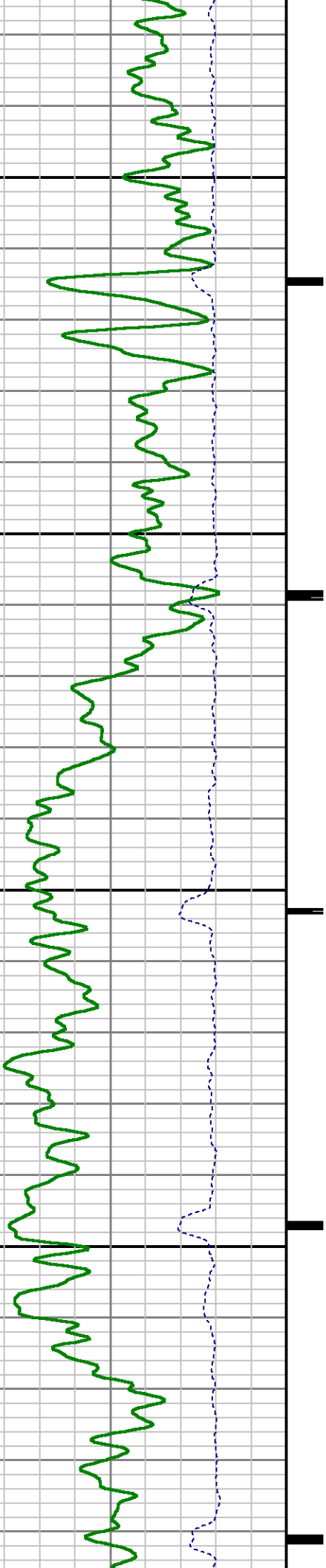


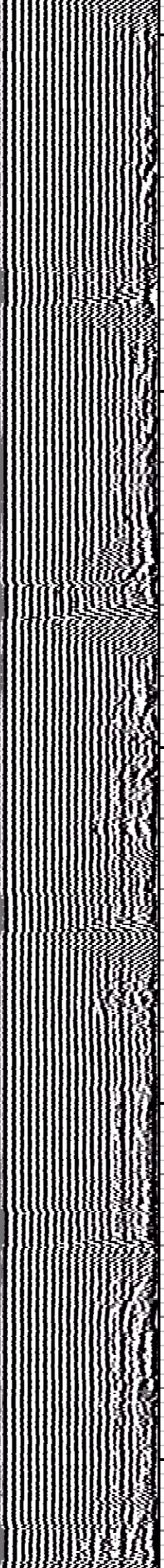
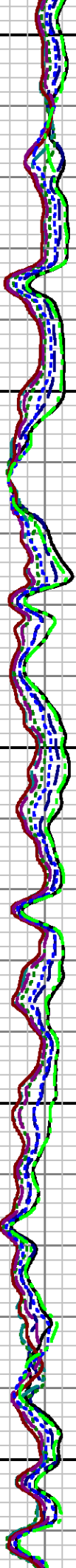
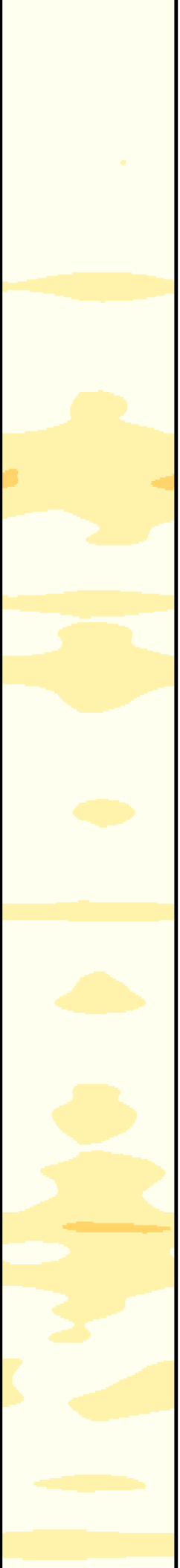




3200

3300

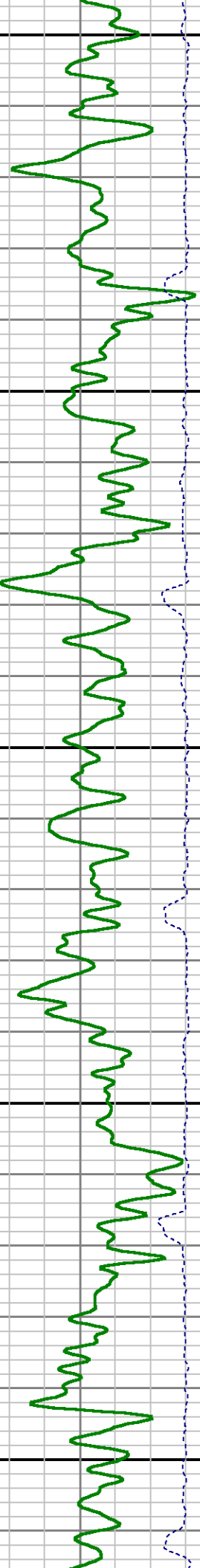


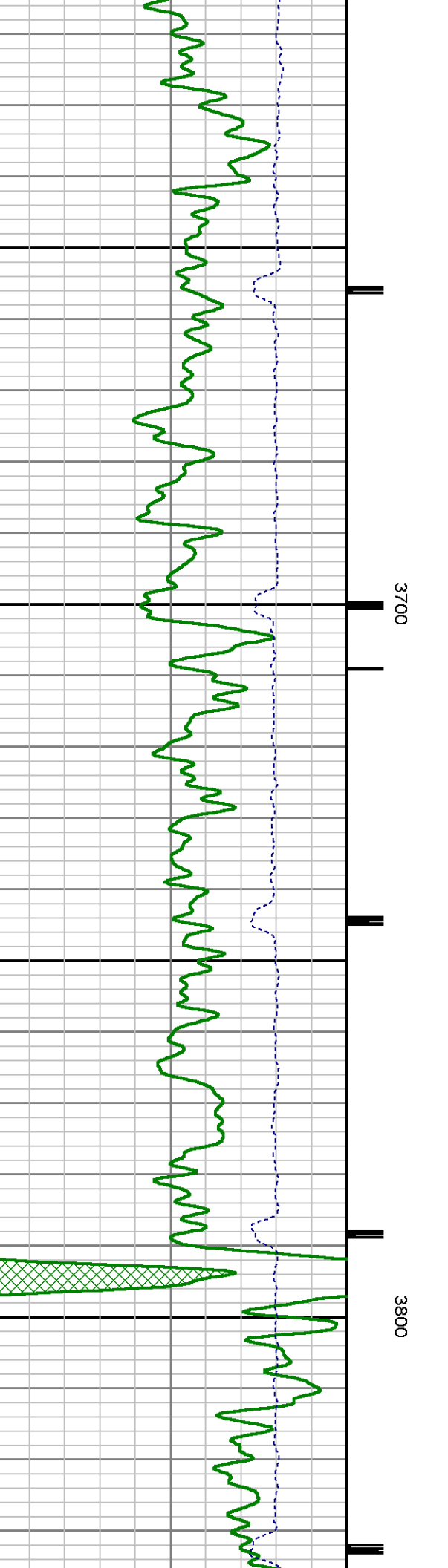
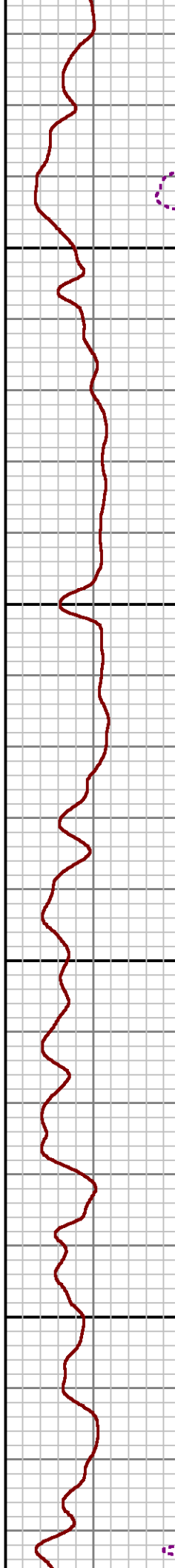
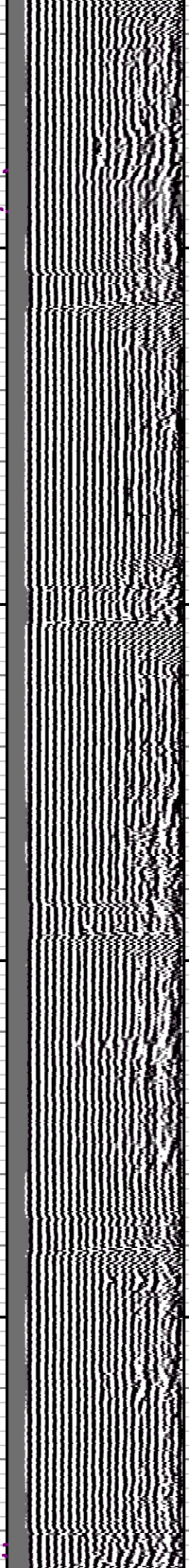
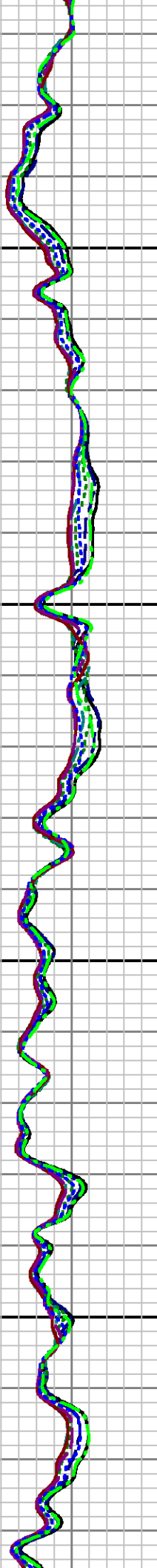
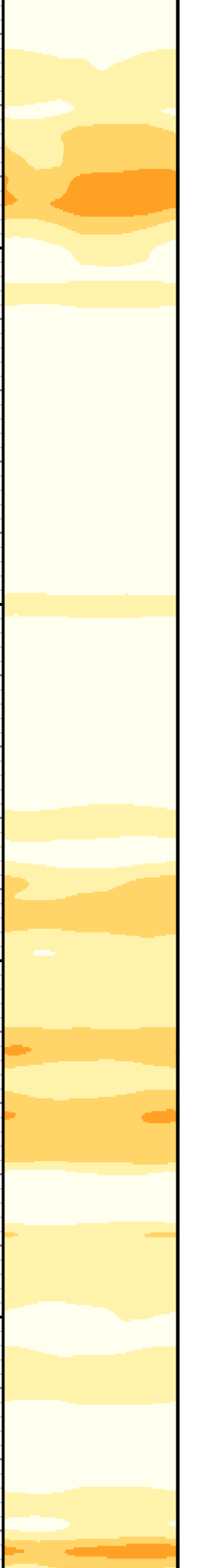


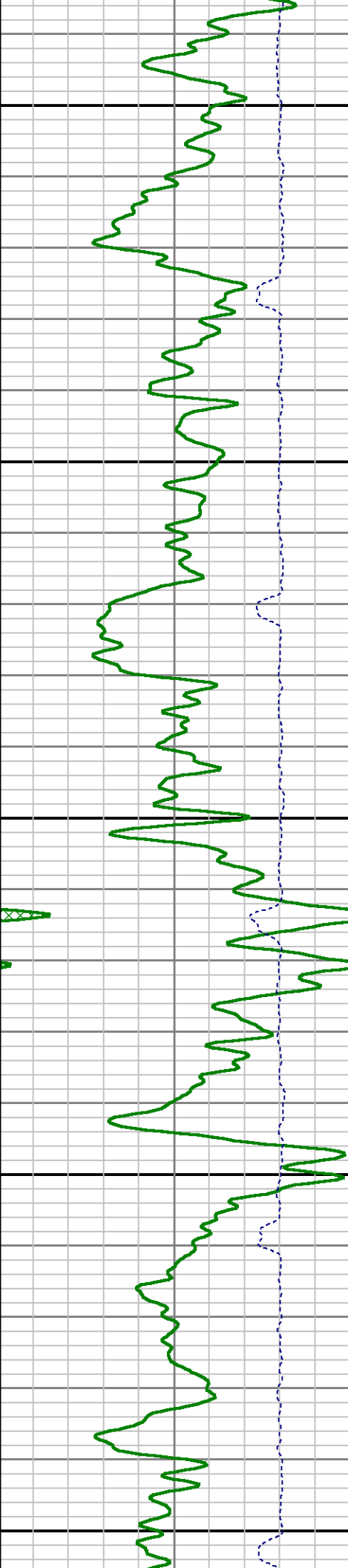
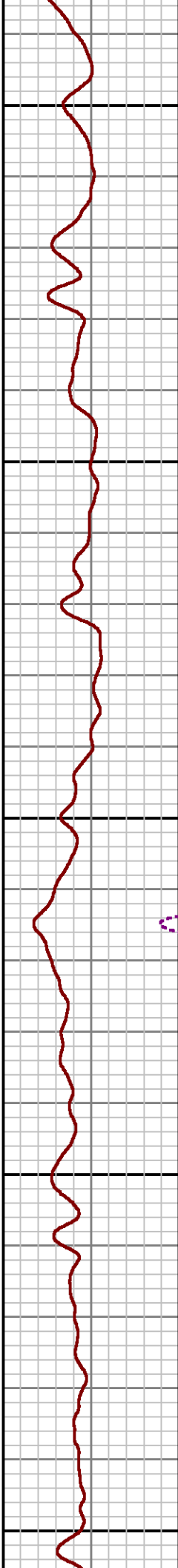
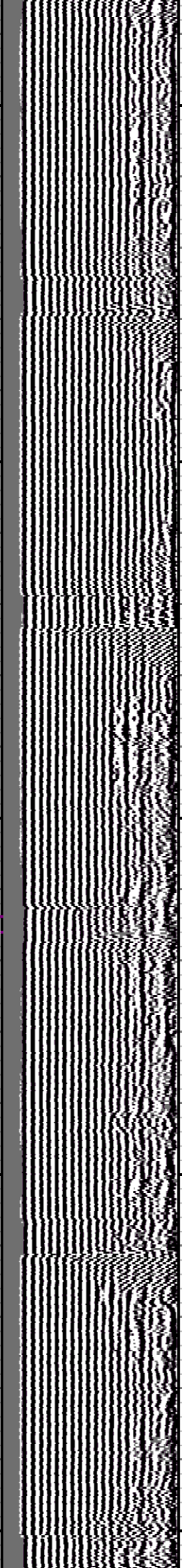
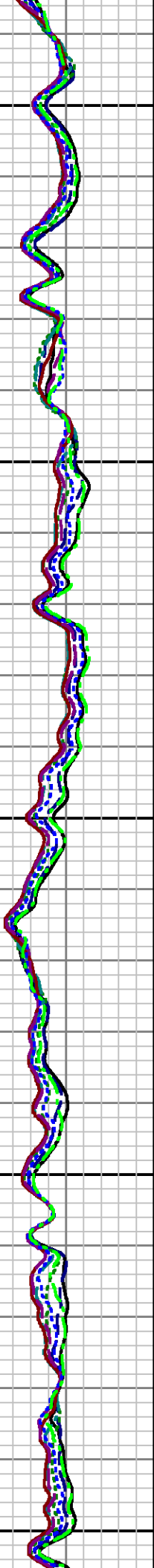
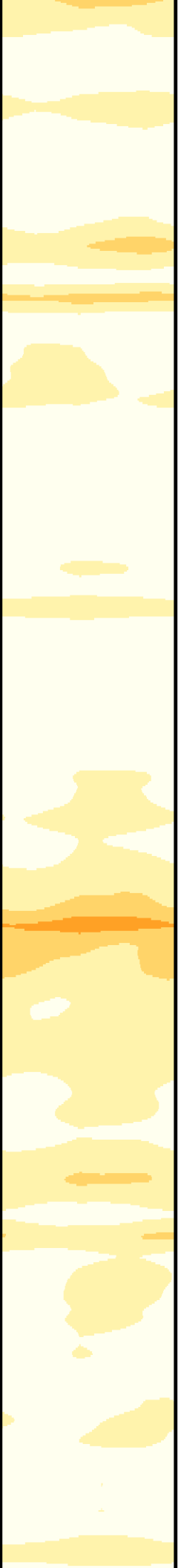
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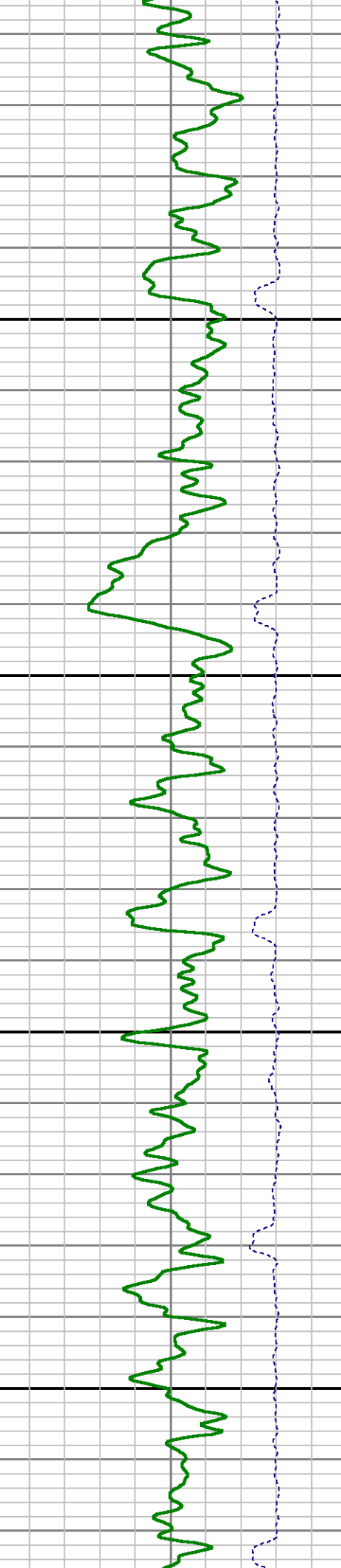
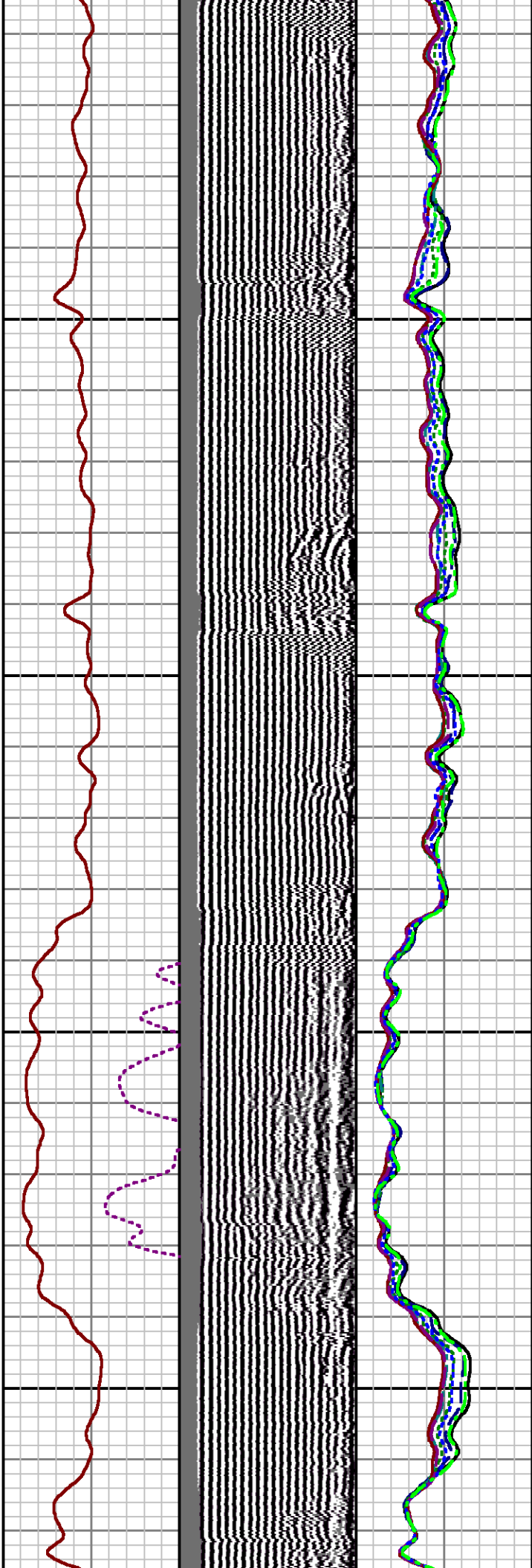
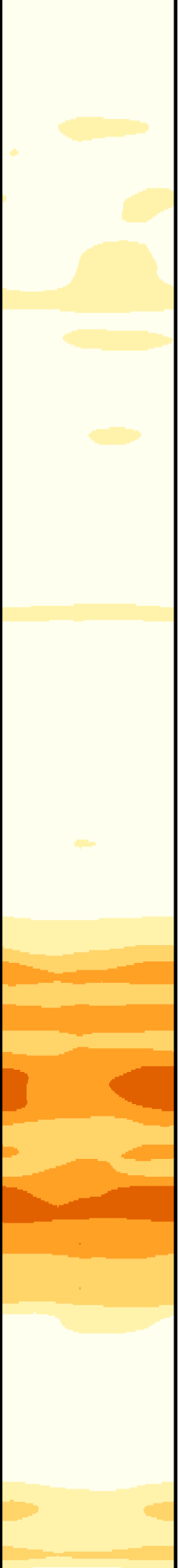
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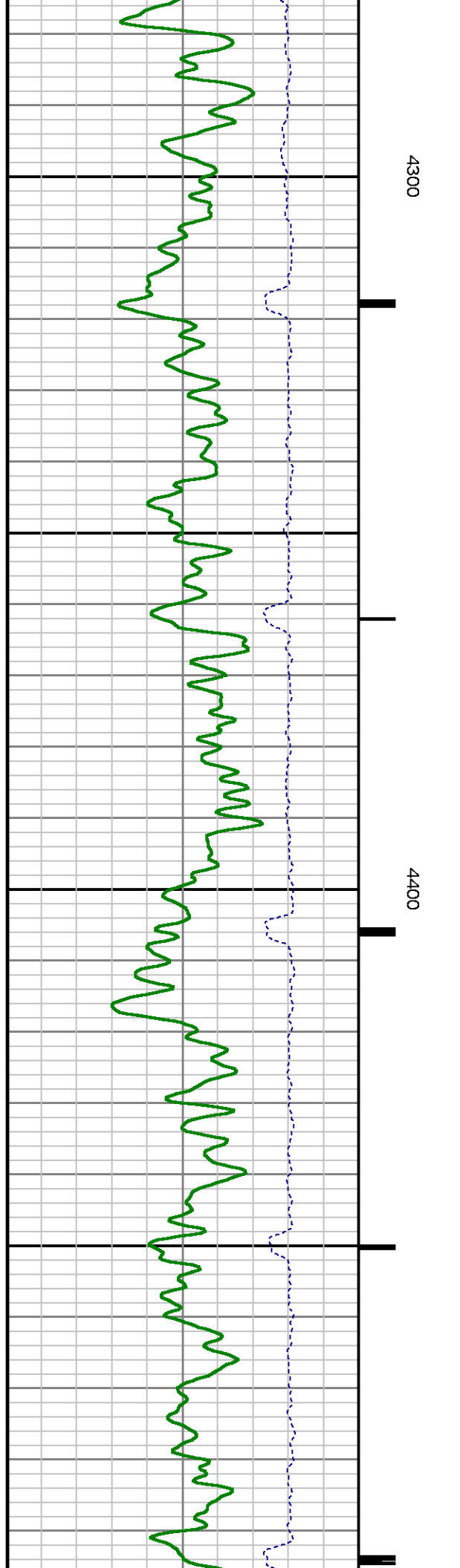
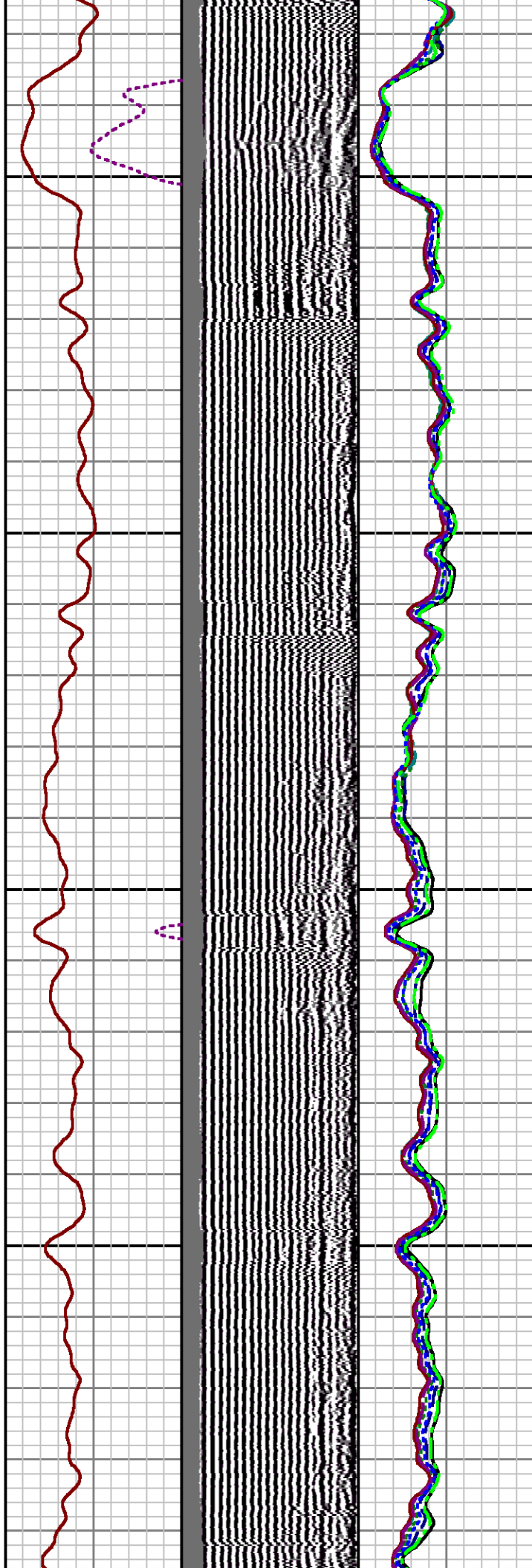
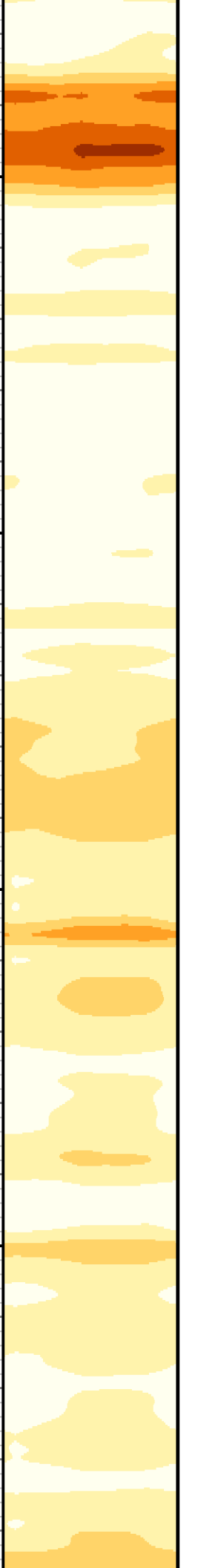
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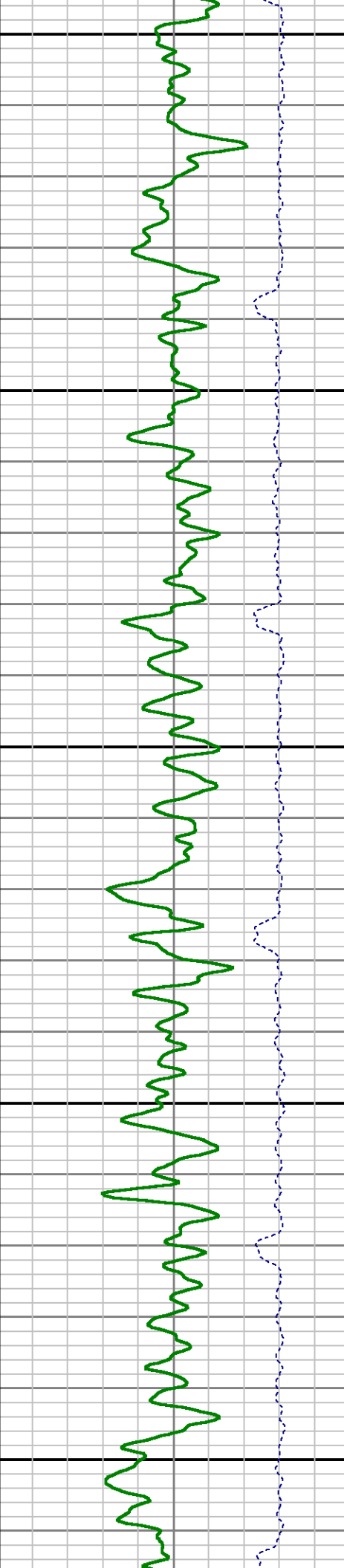
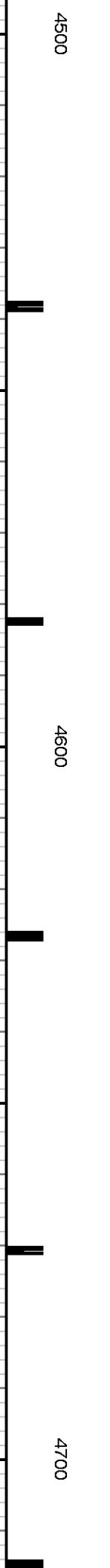
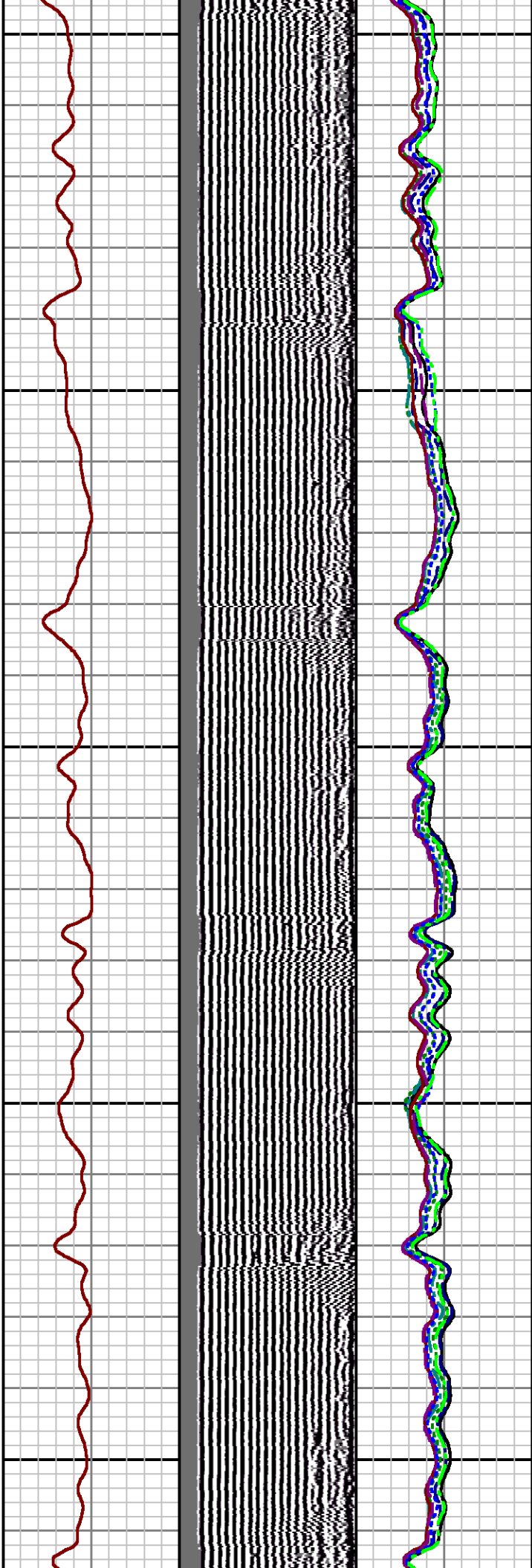
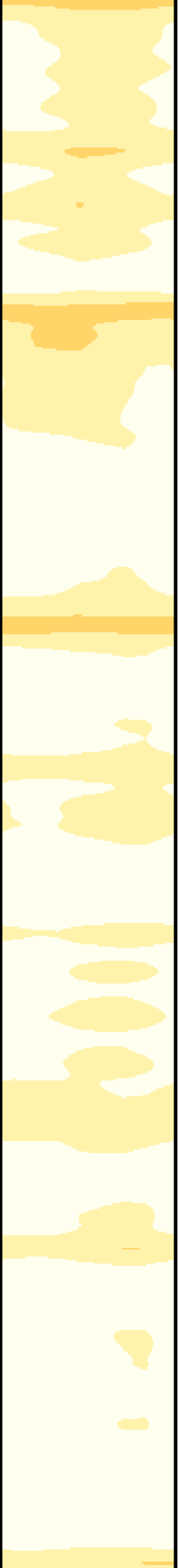


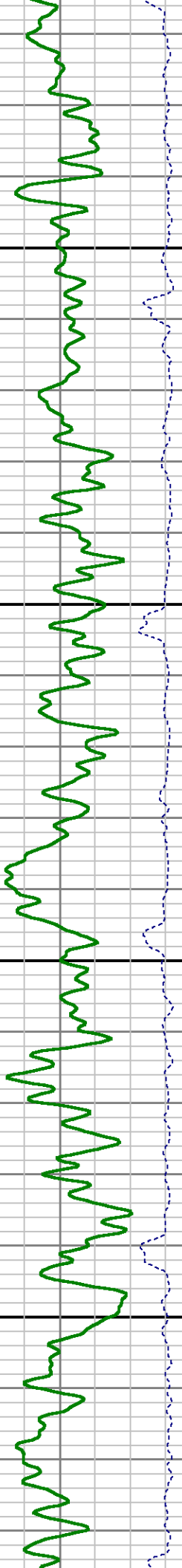
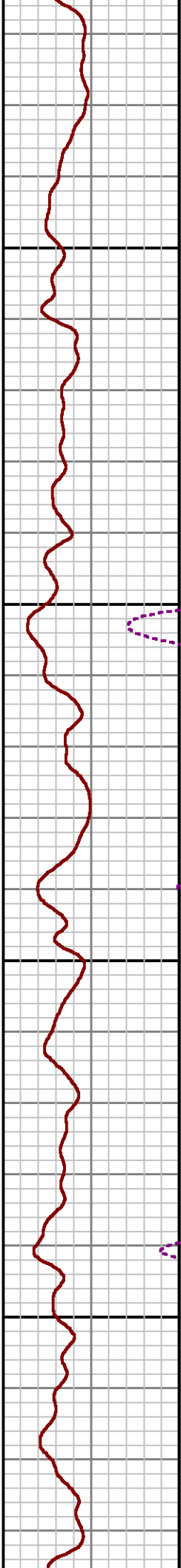
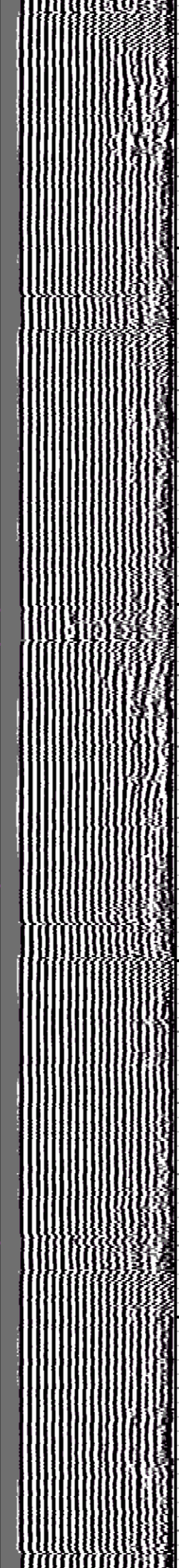
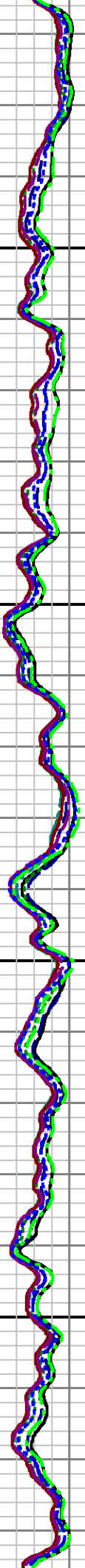
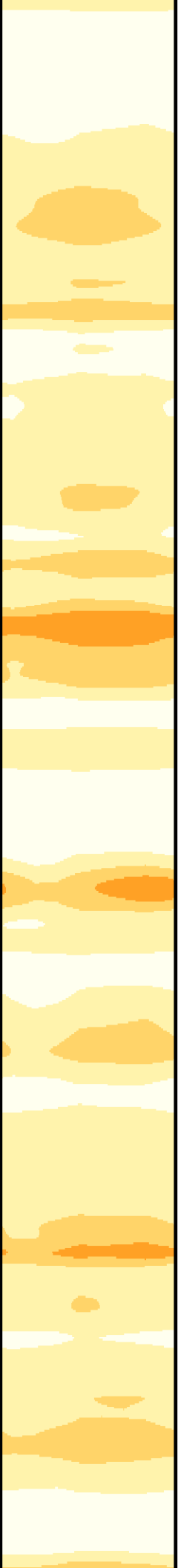


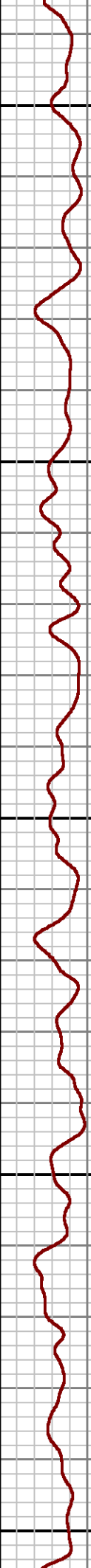
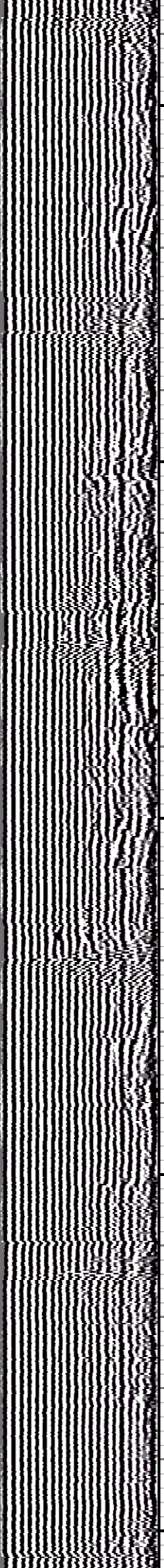
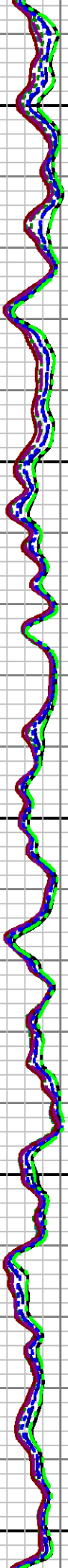
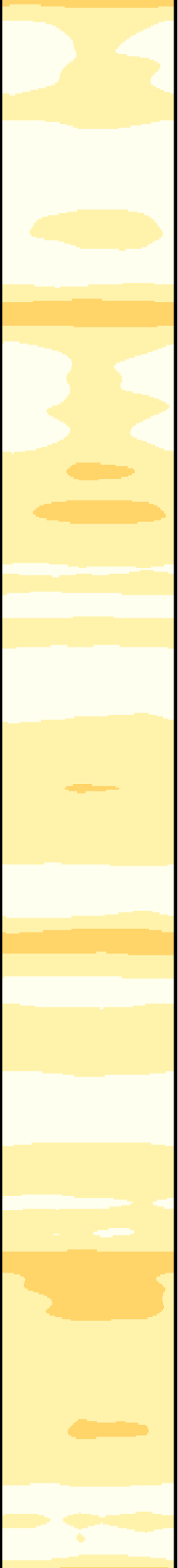


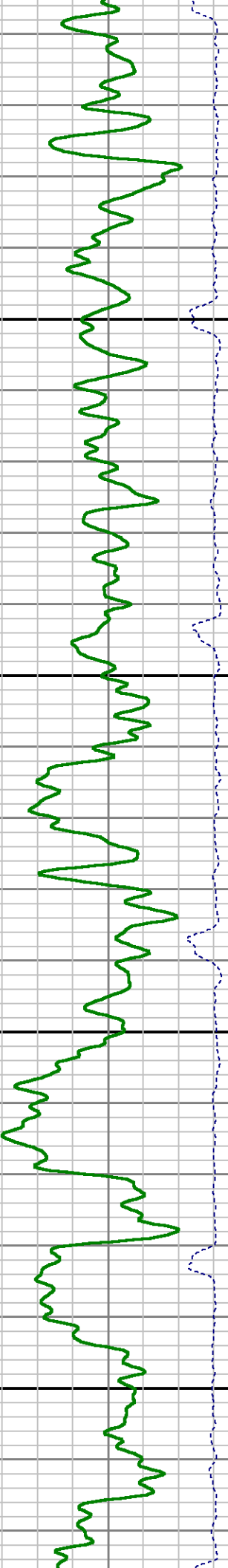
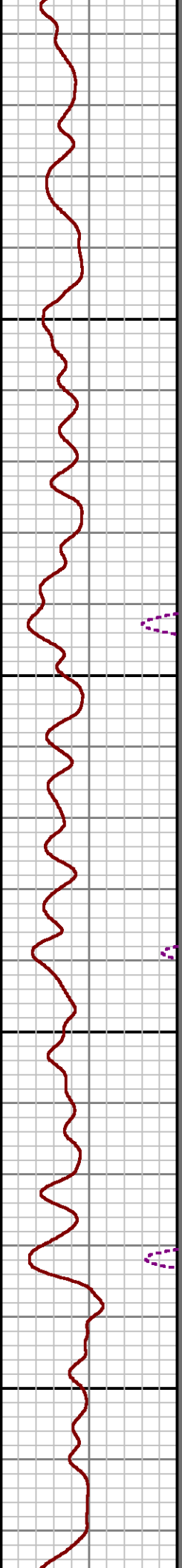
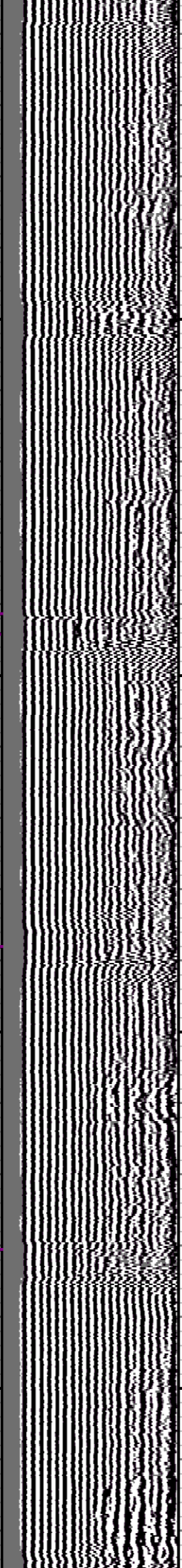
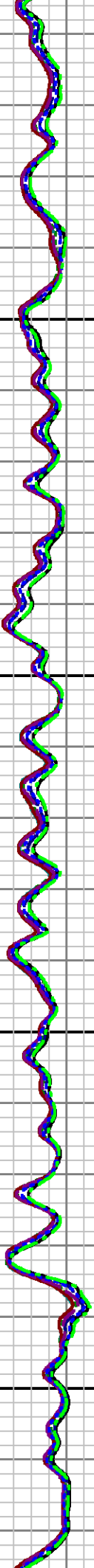
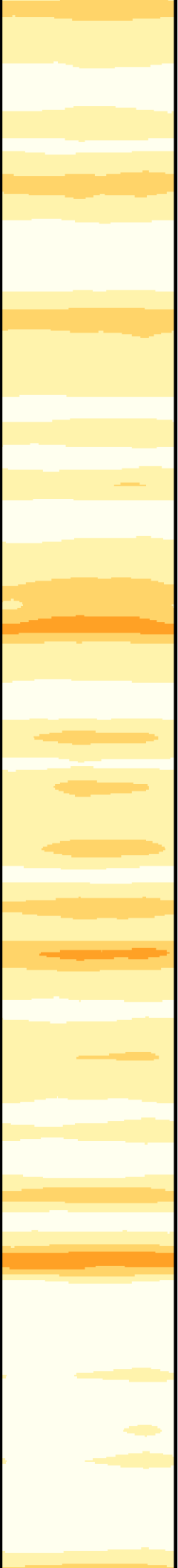


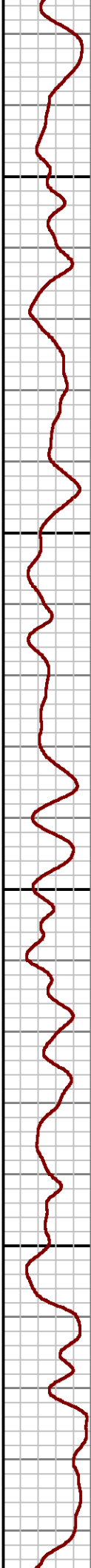
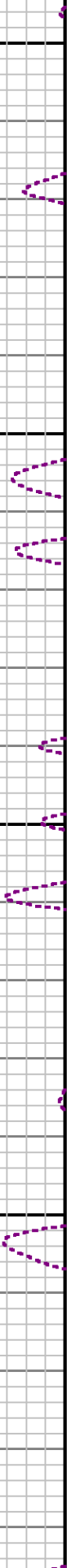
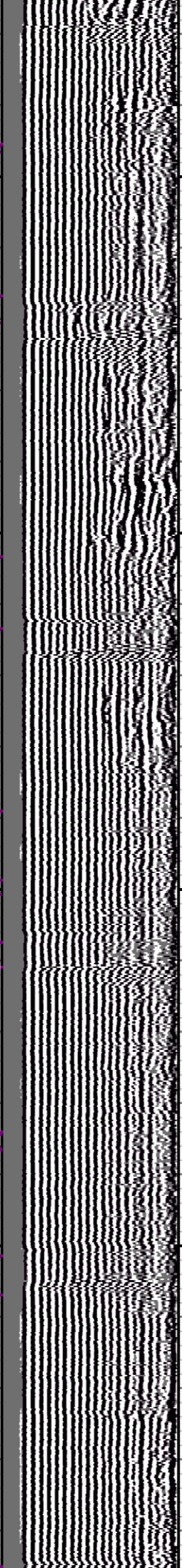
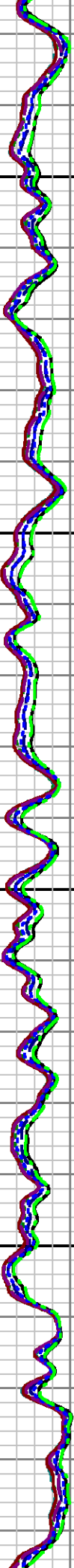
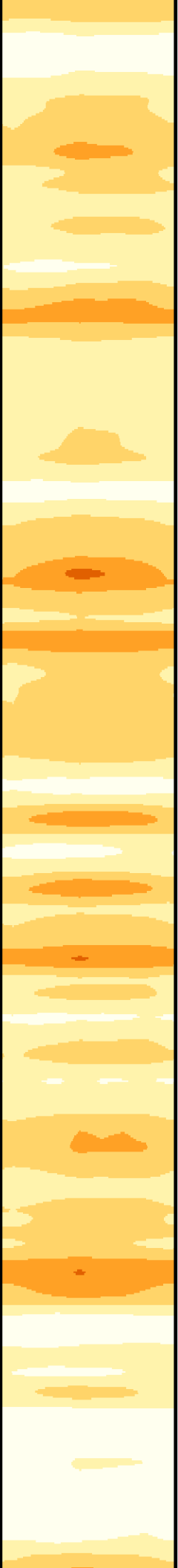






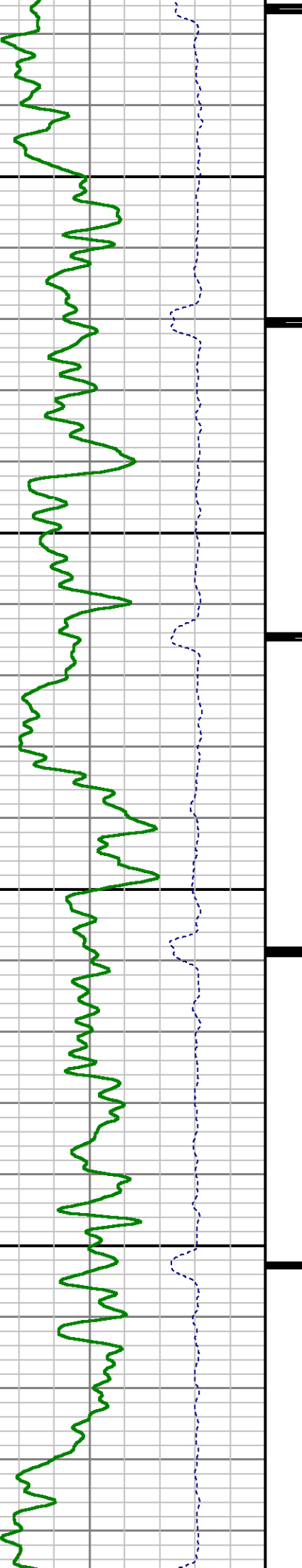


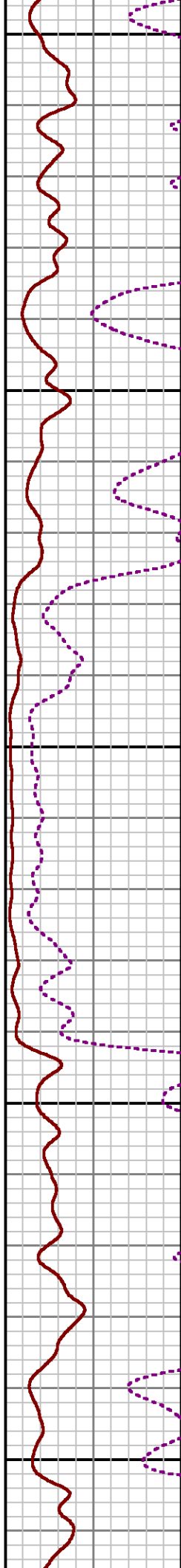
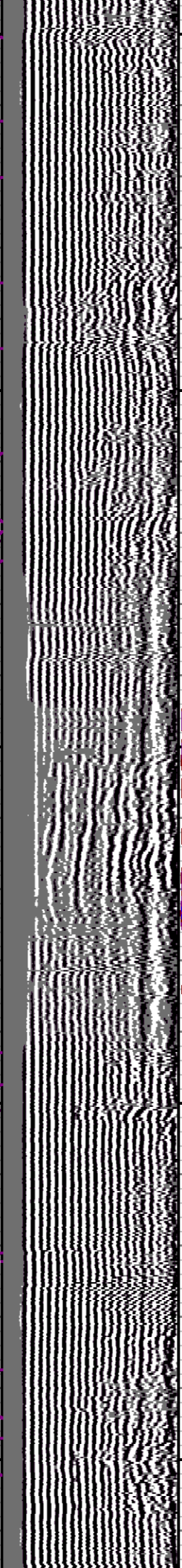
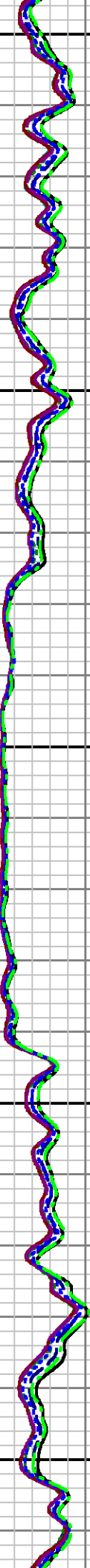




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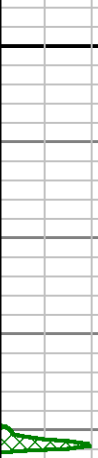
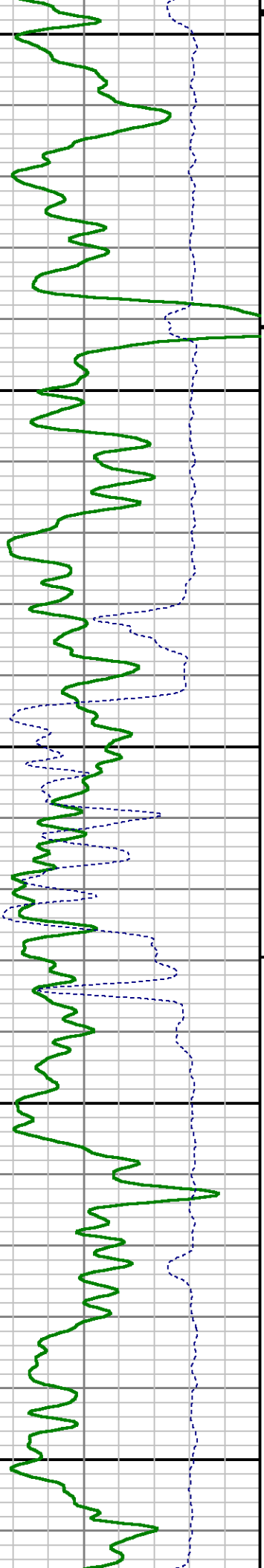


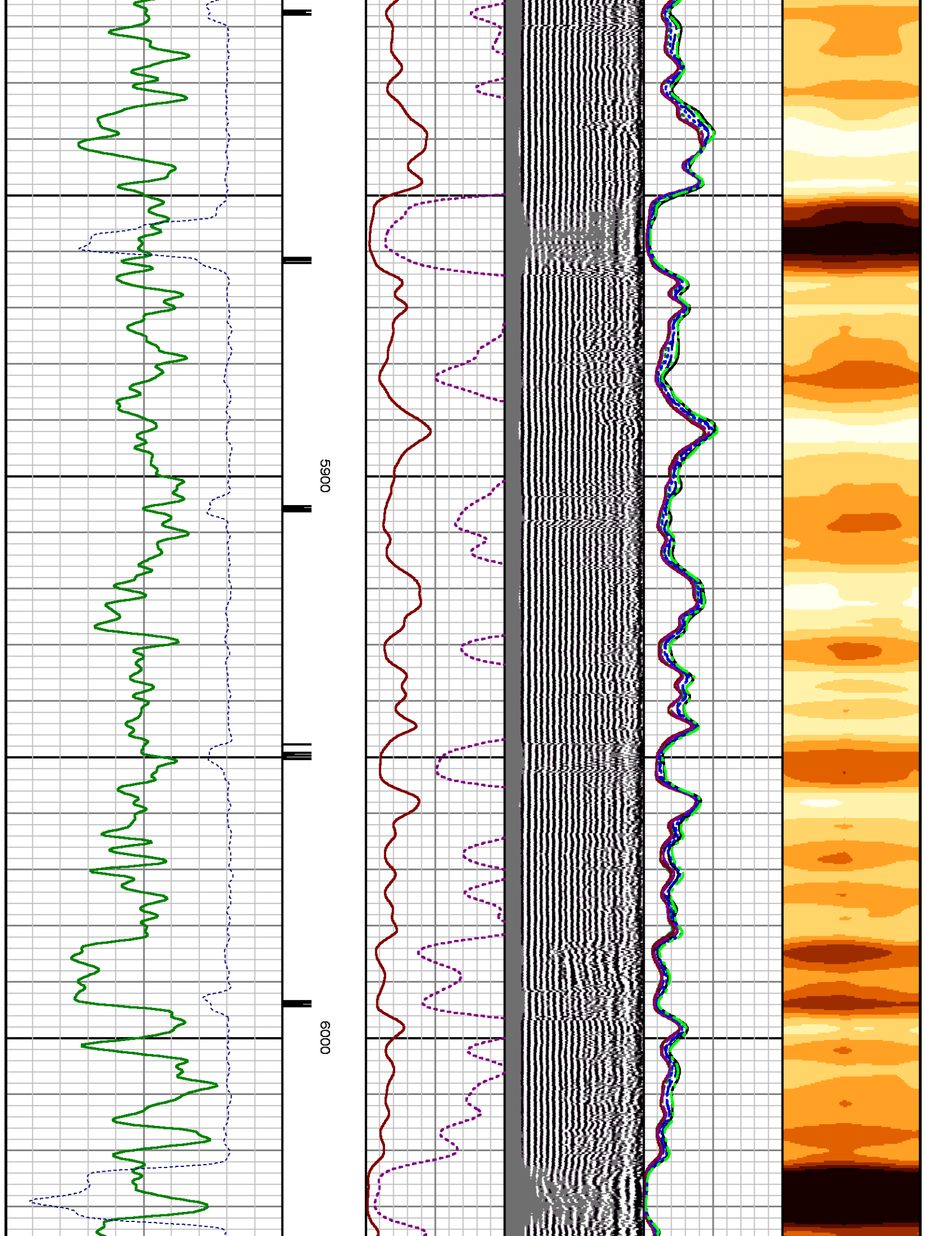


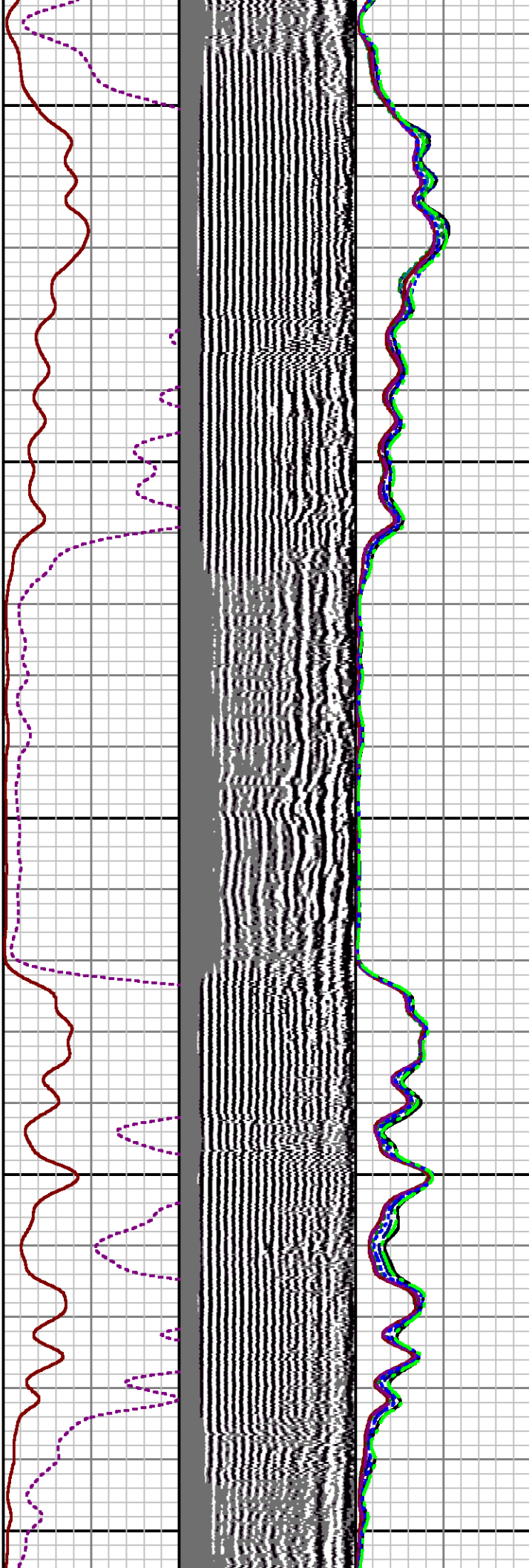
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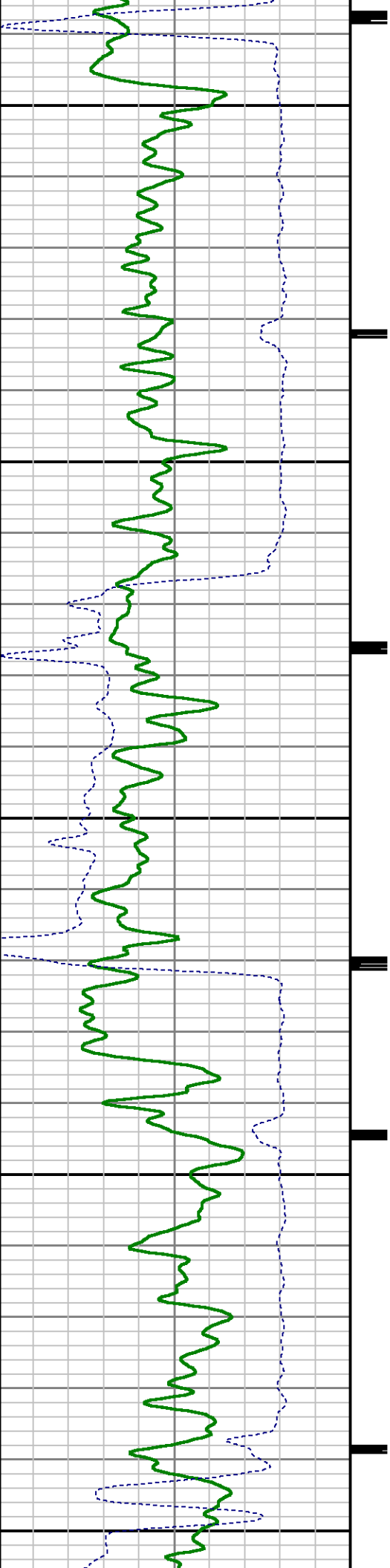


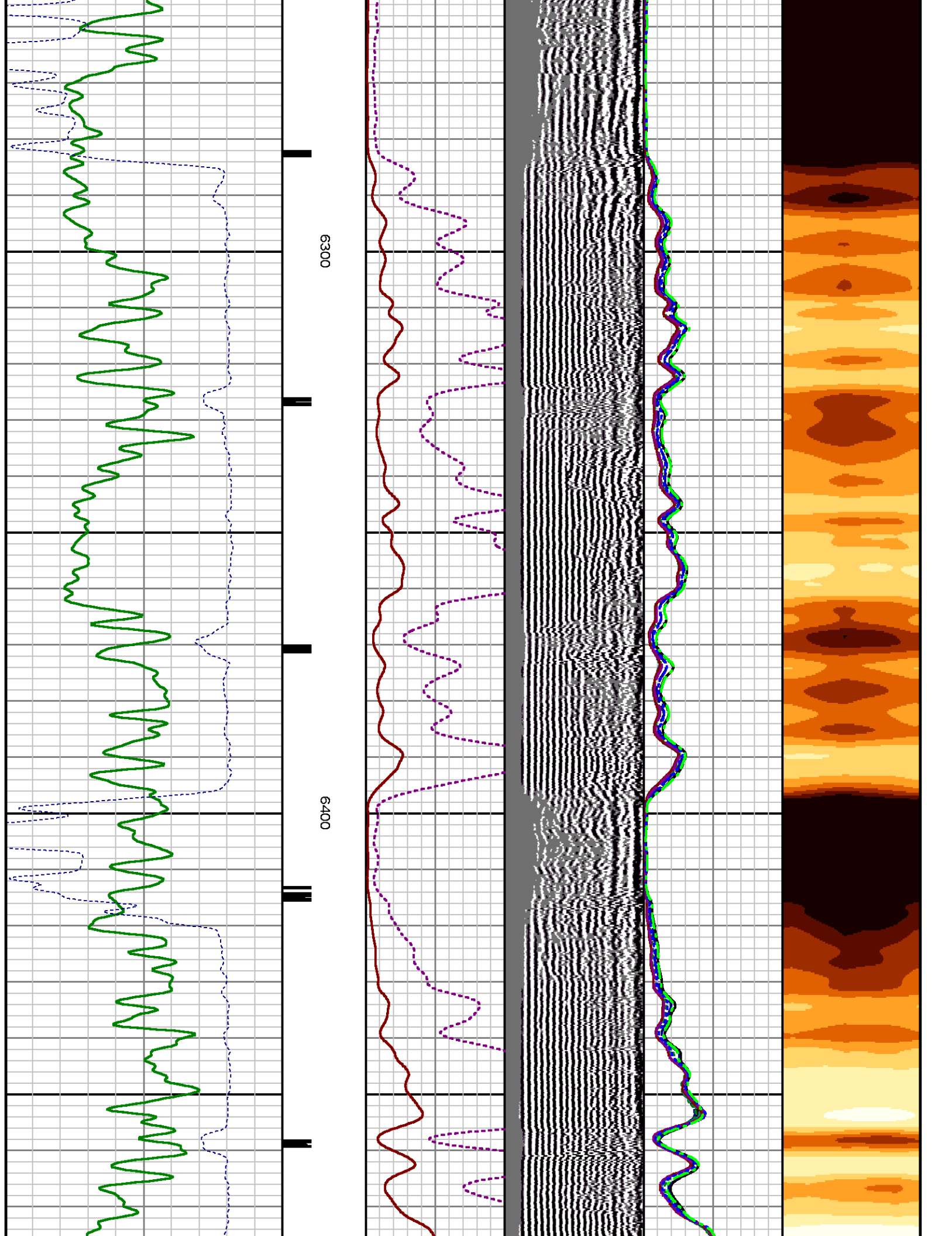


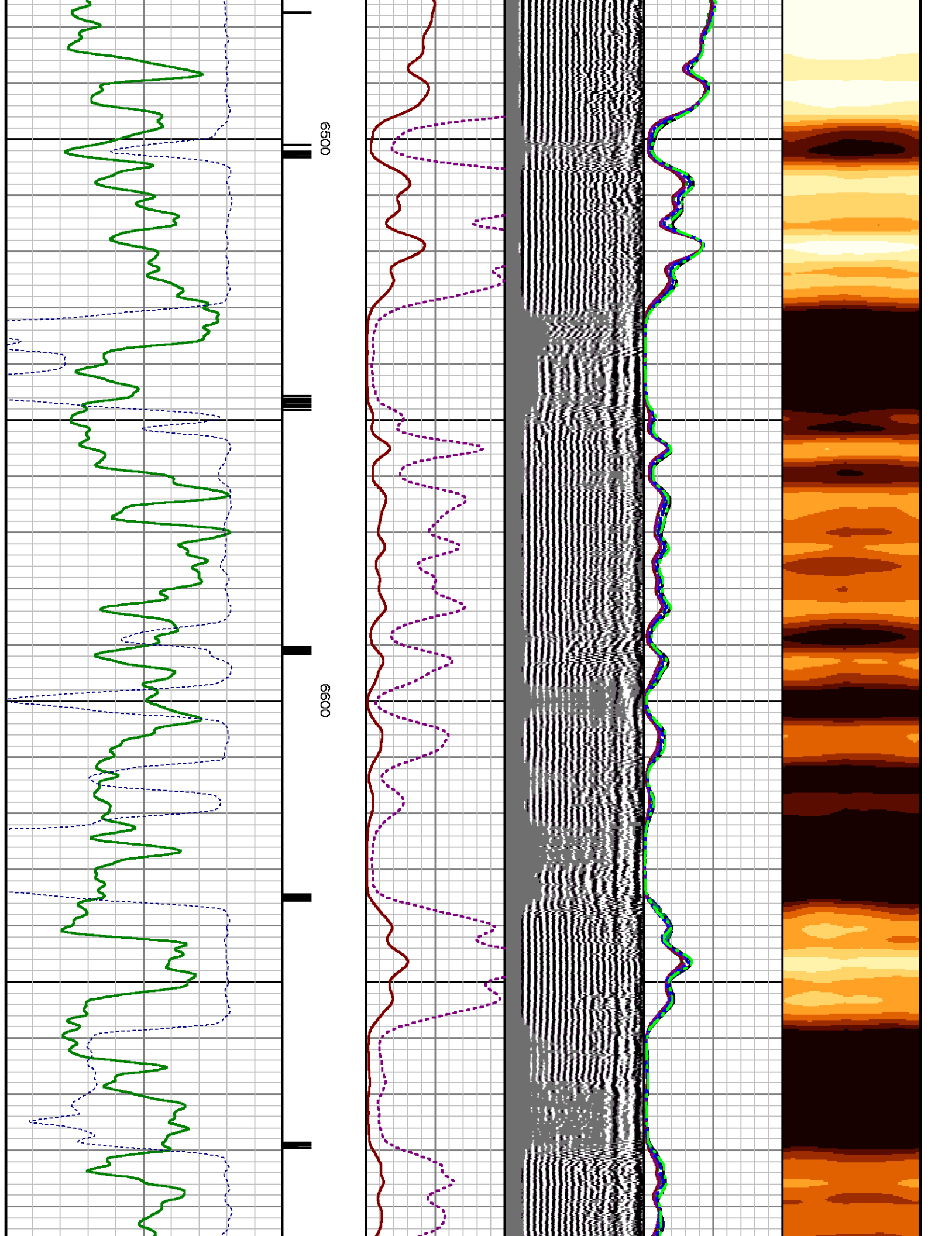


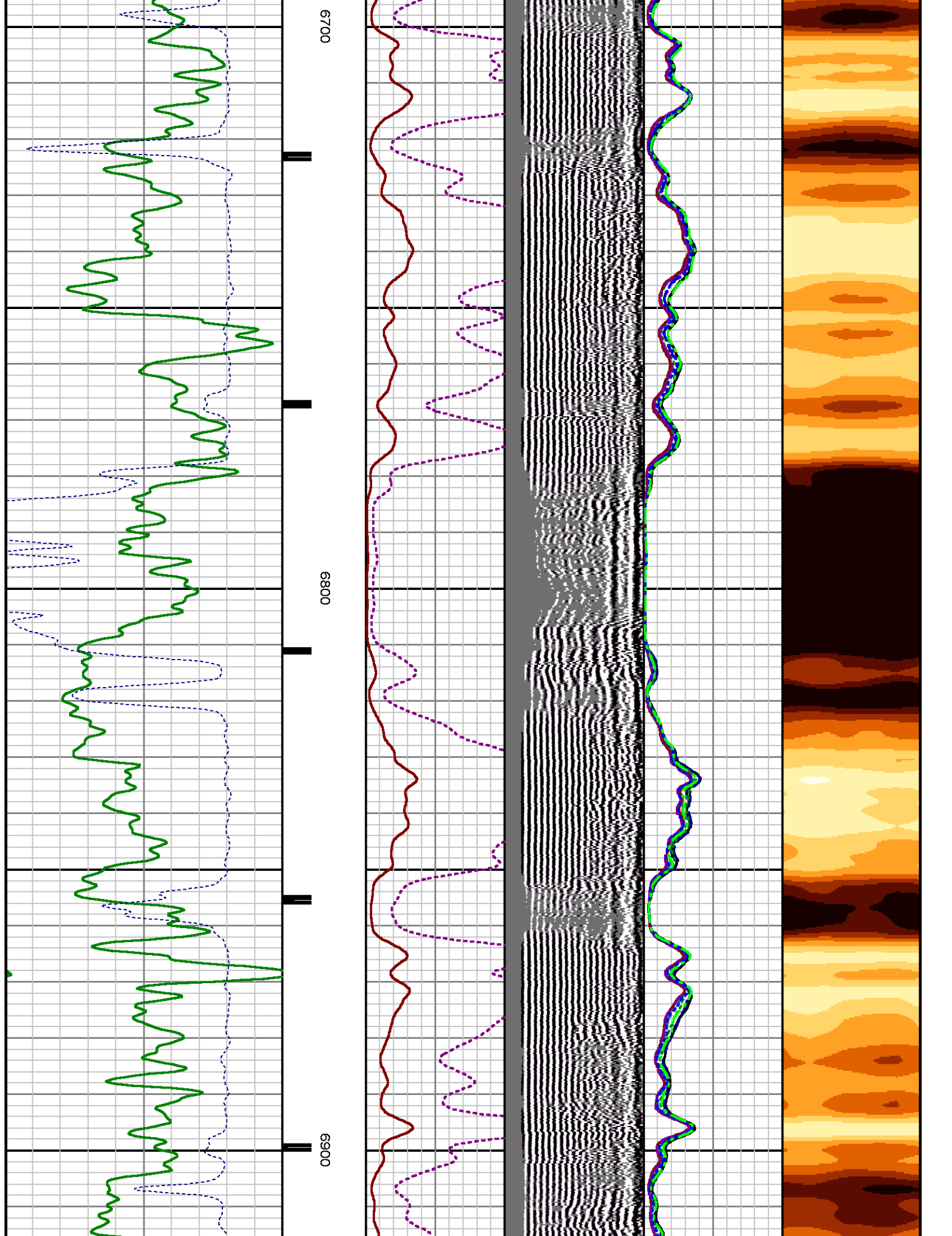
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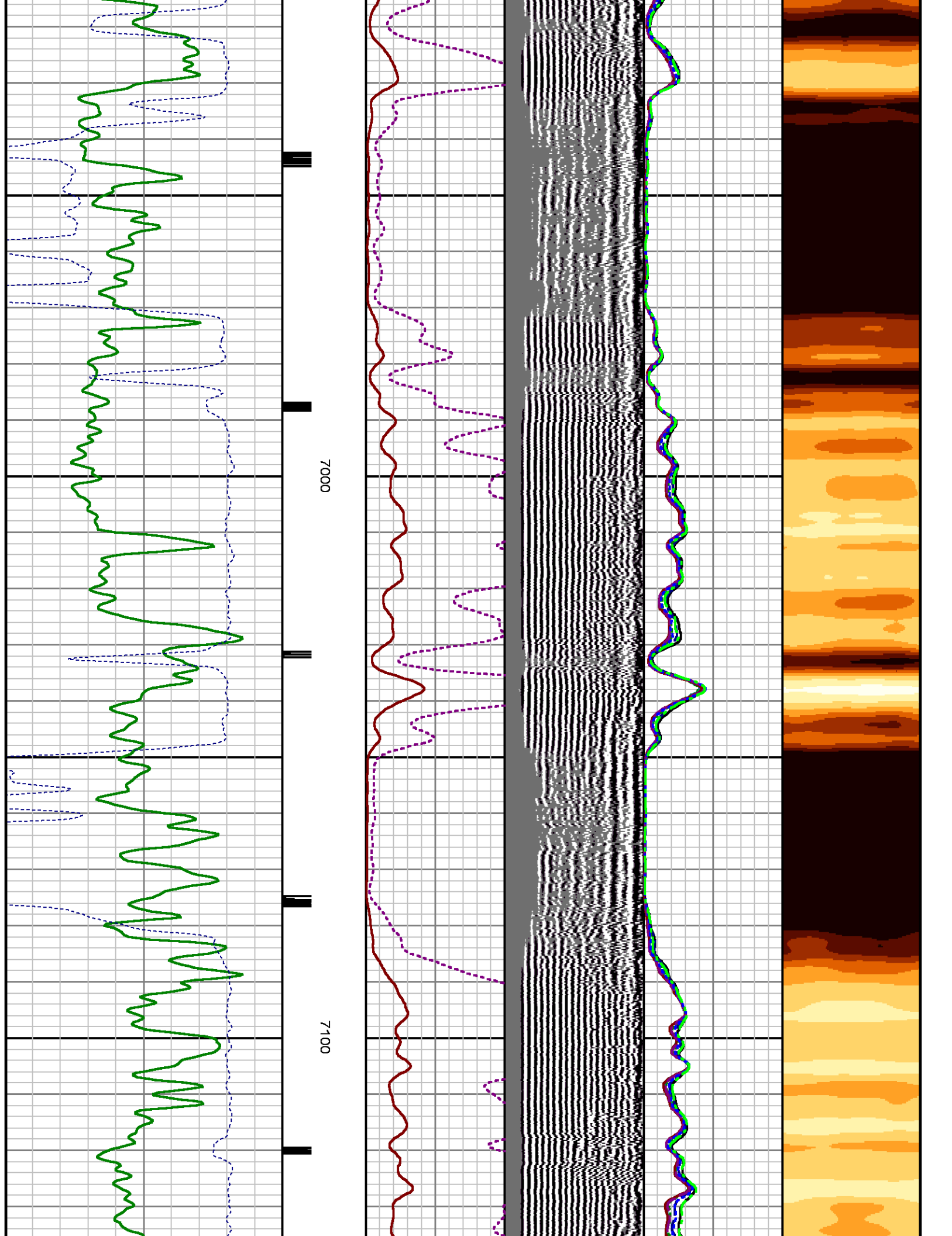
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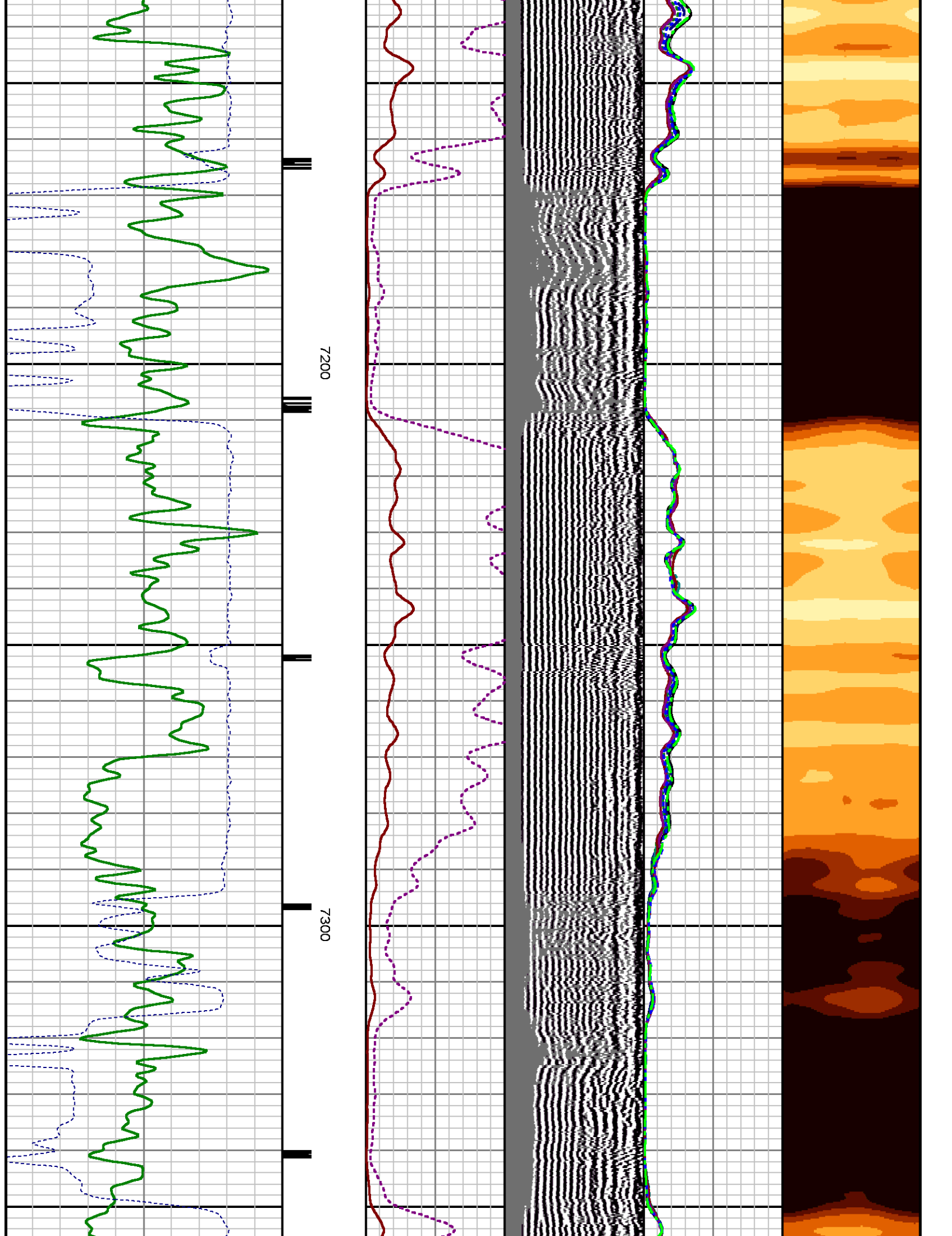


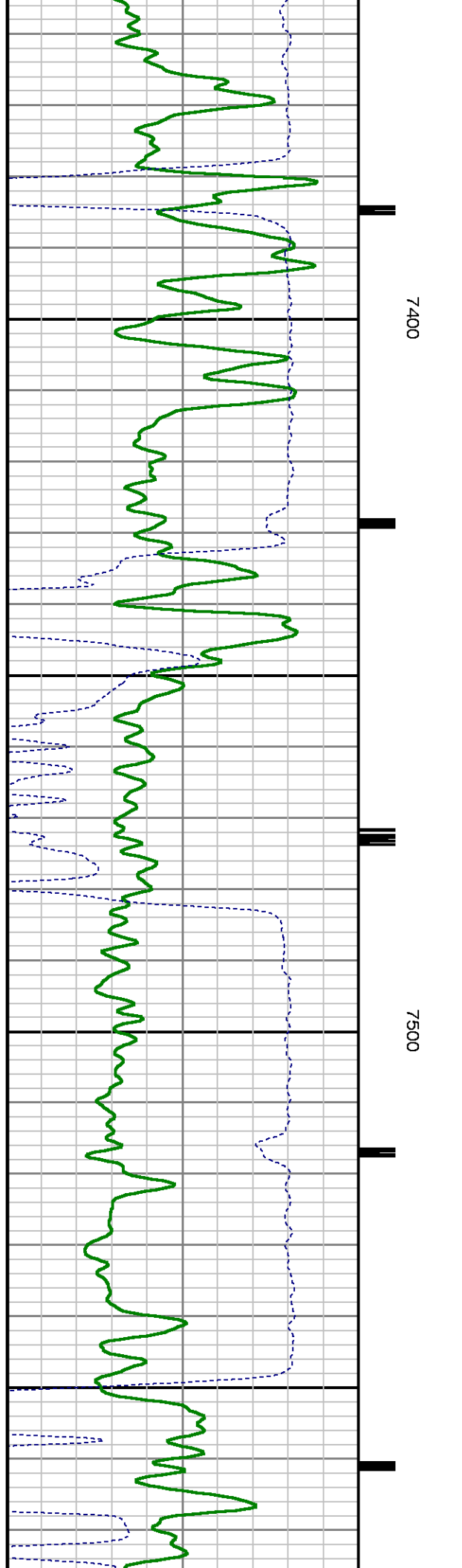
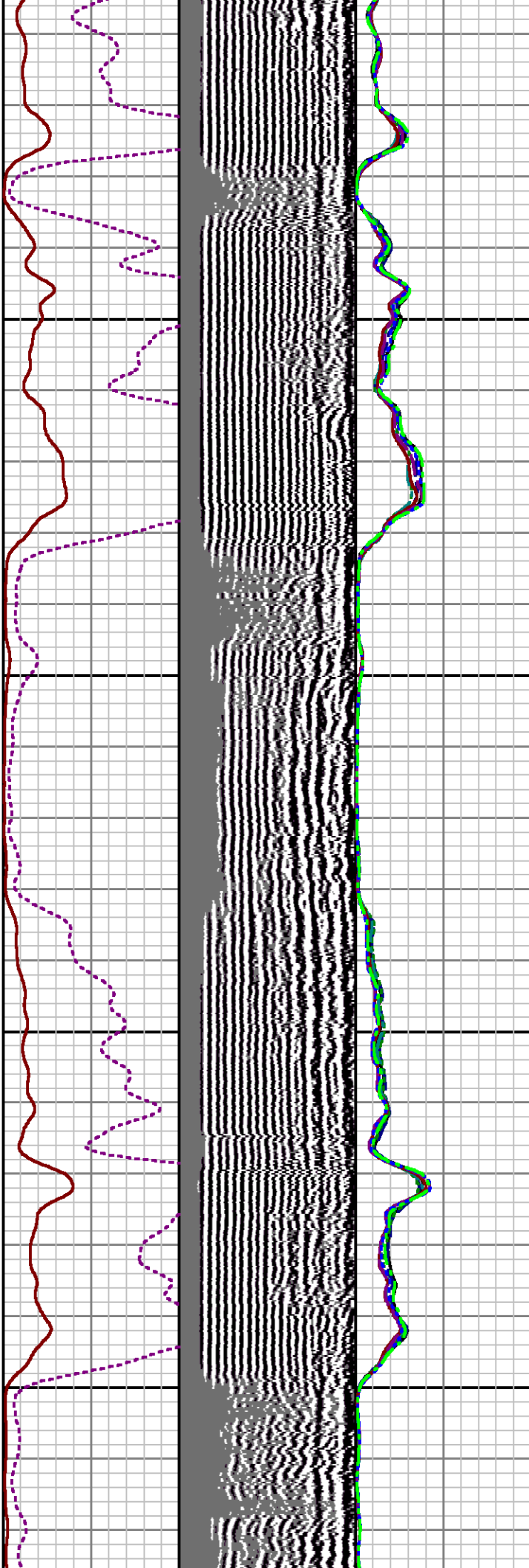


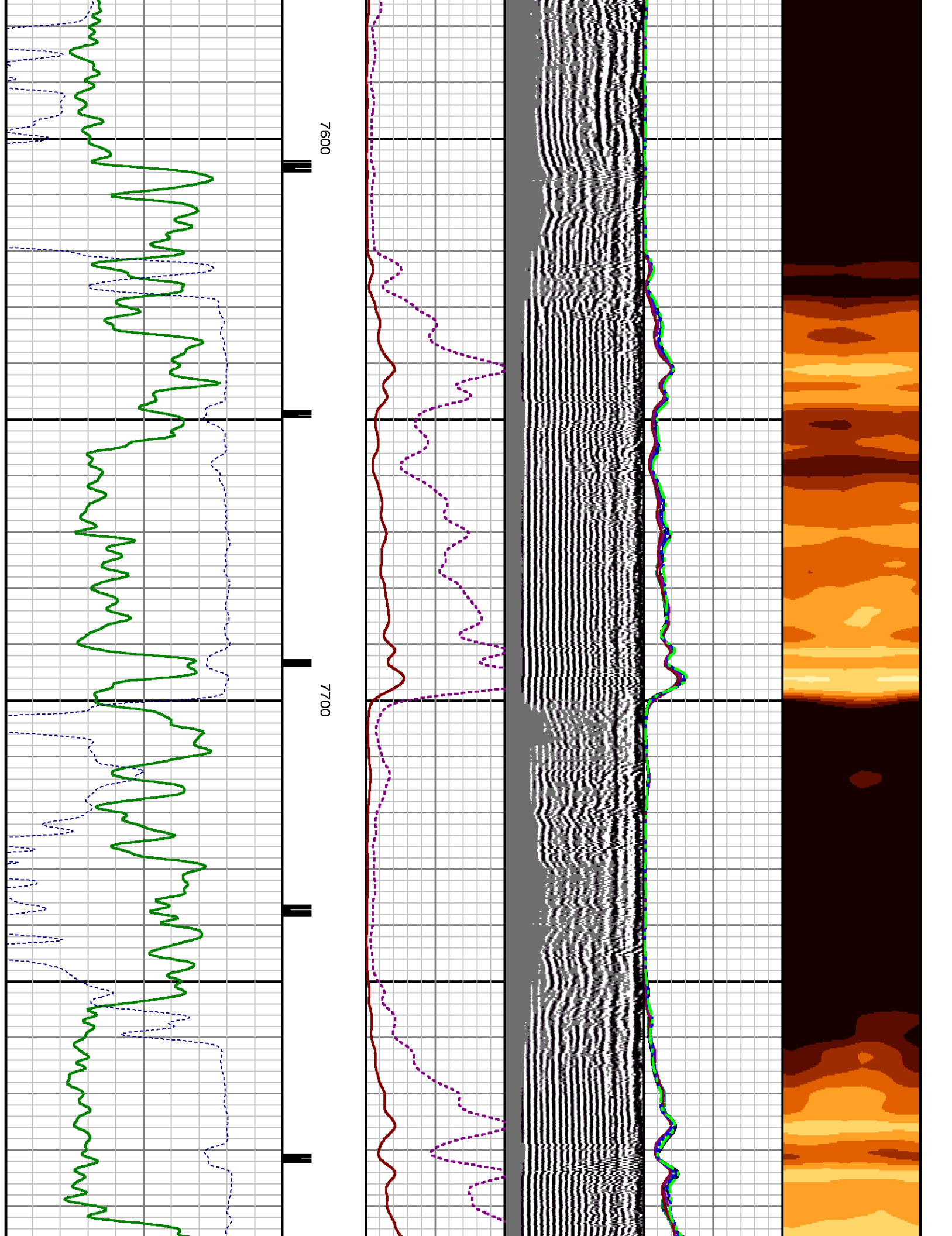


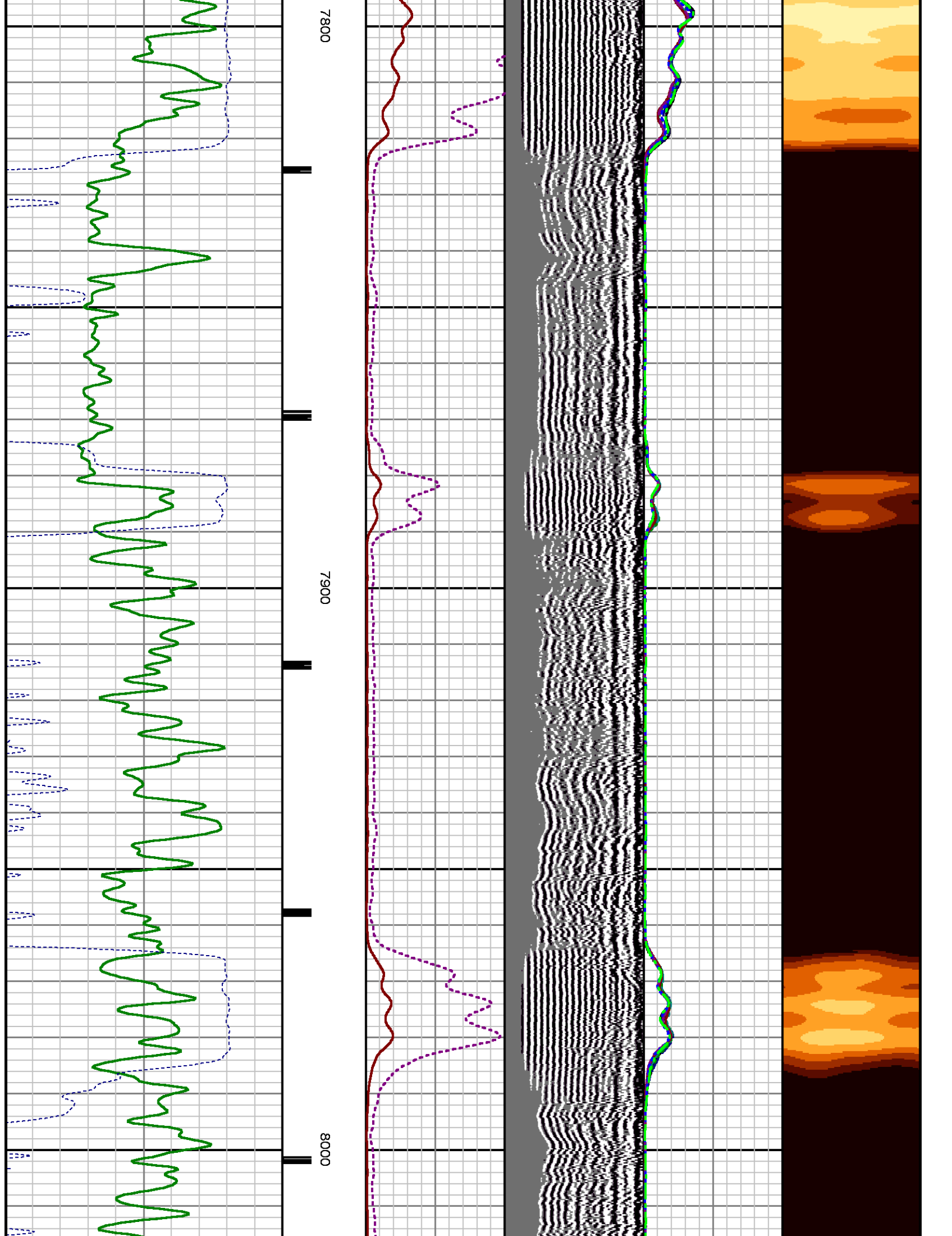


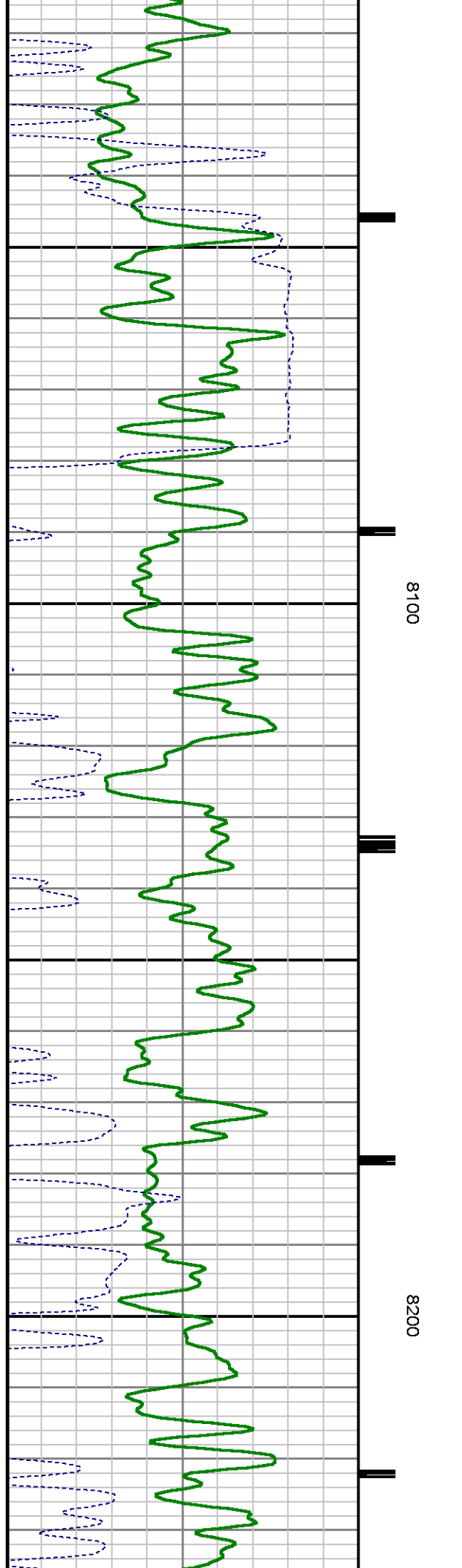
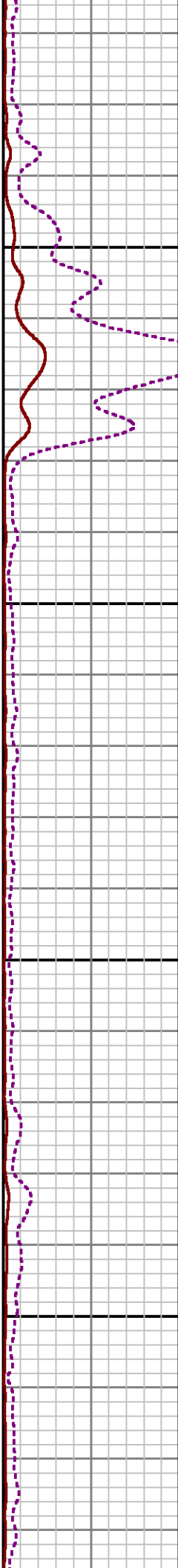
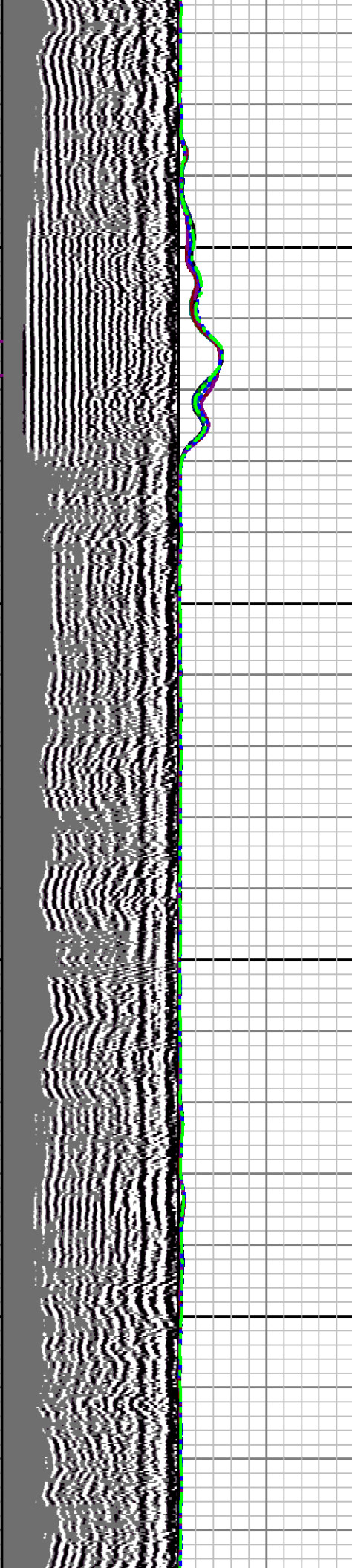
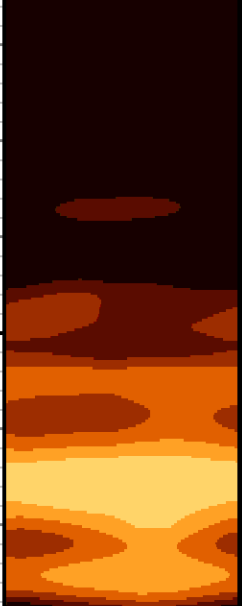


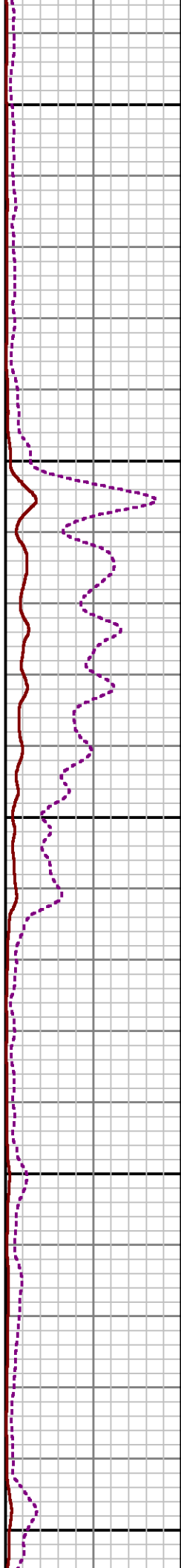
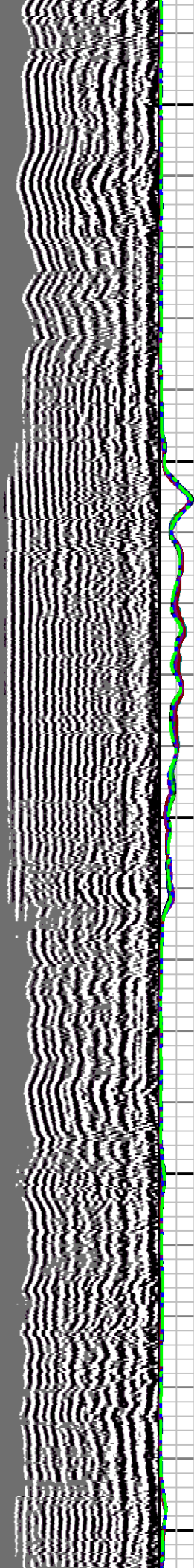






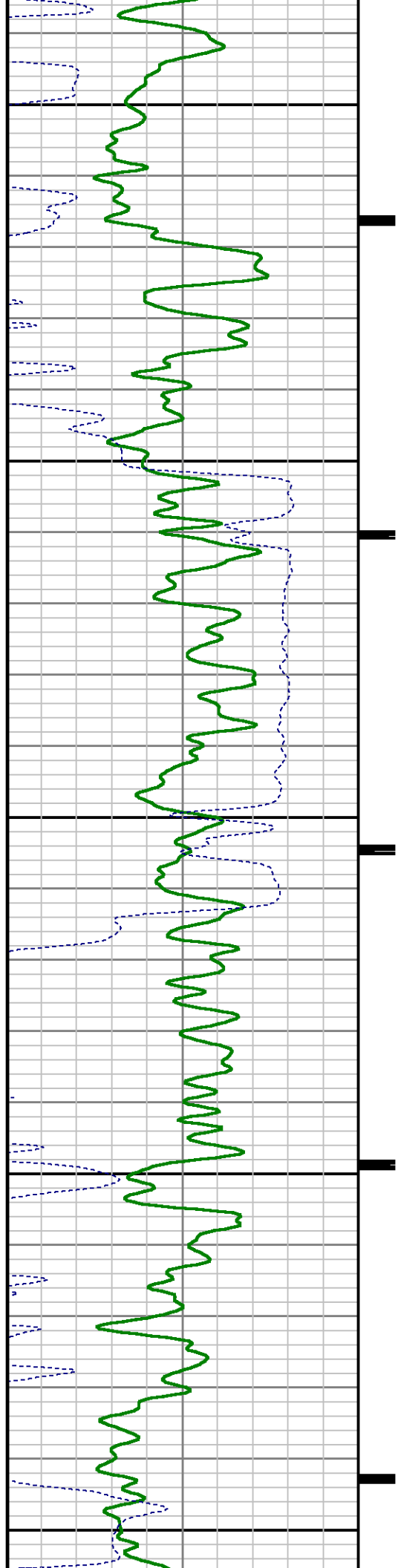


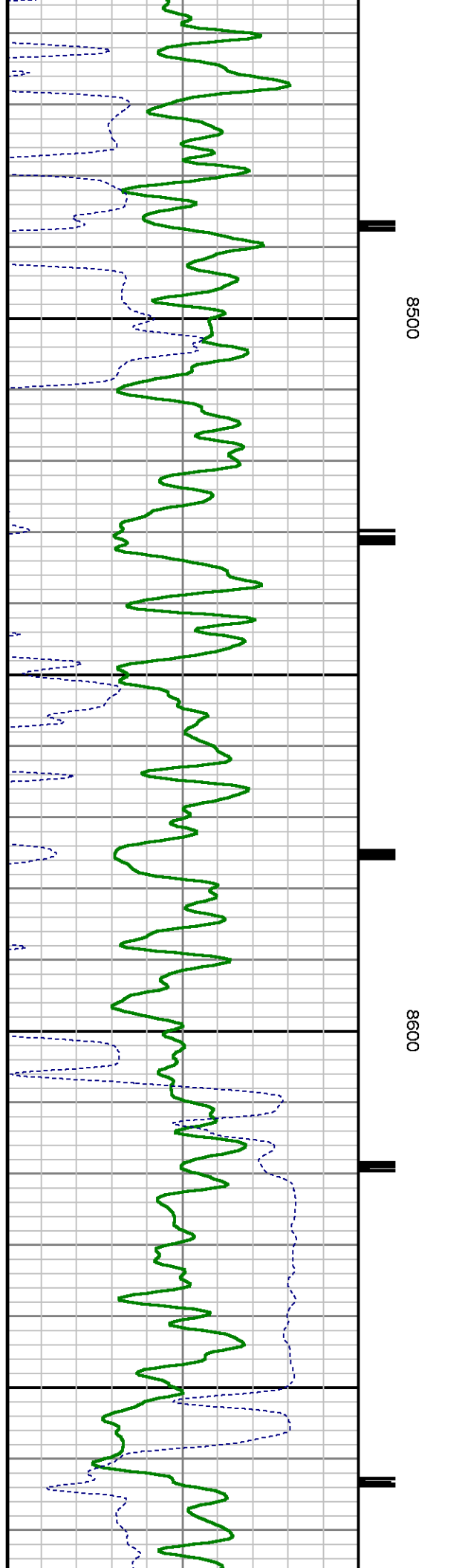
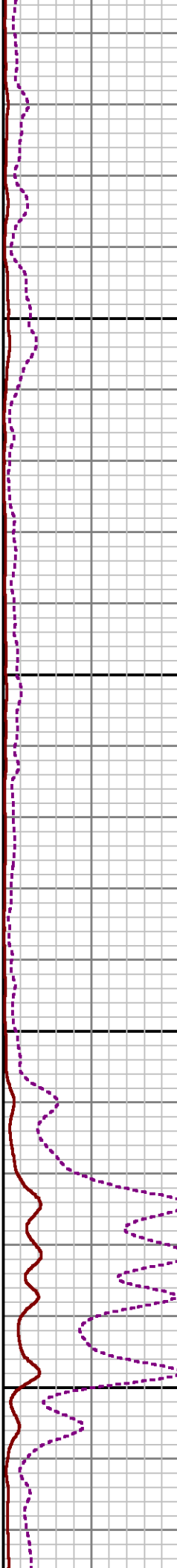
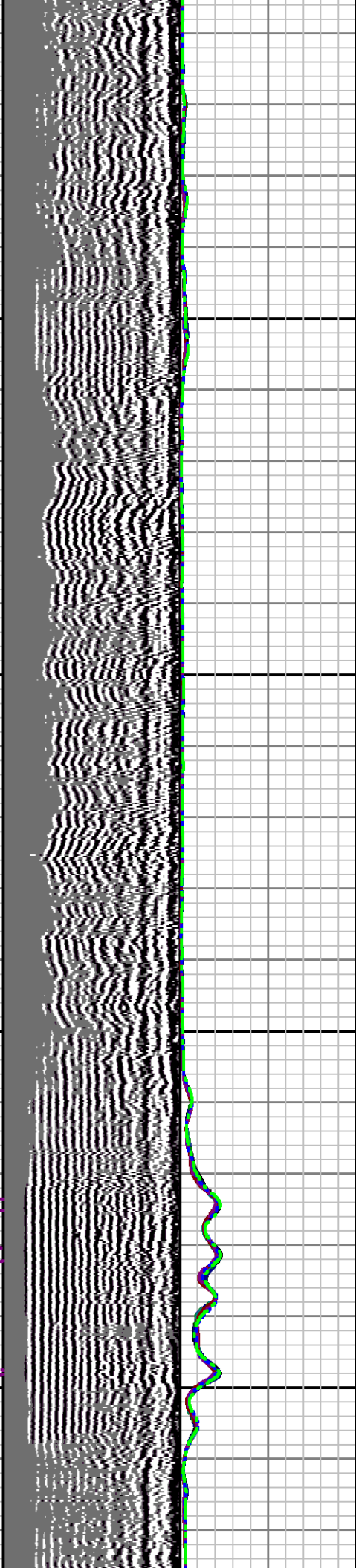


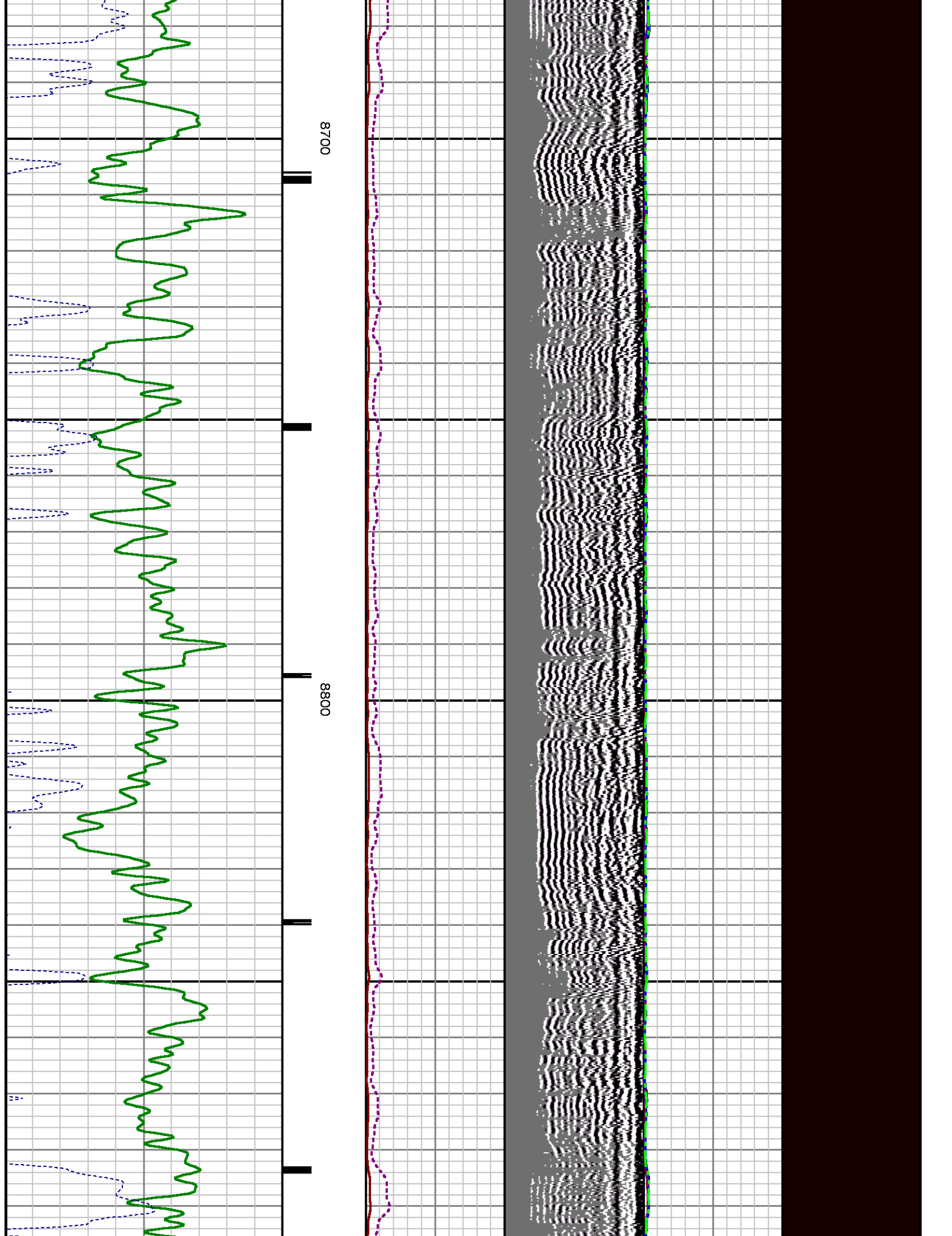


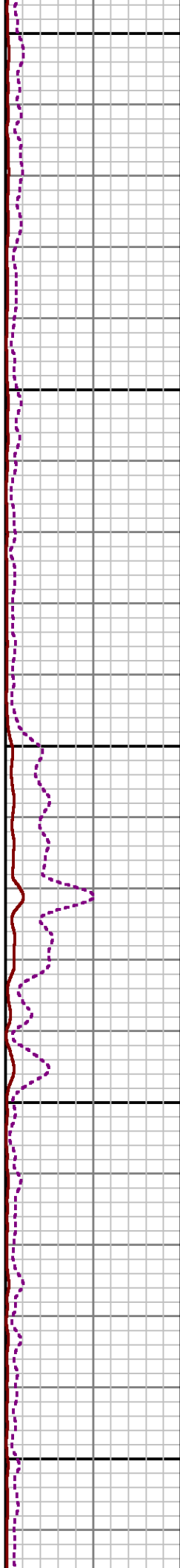
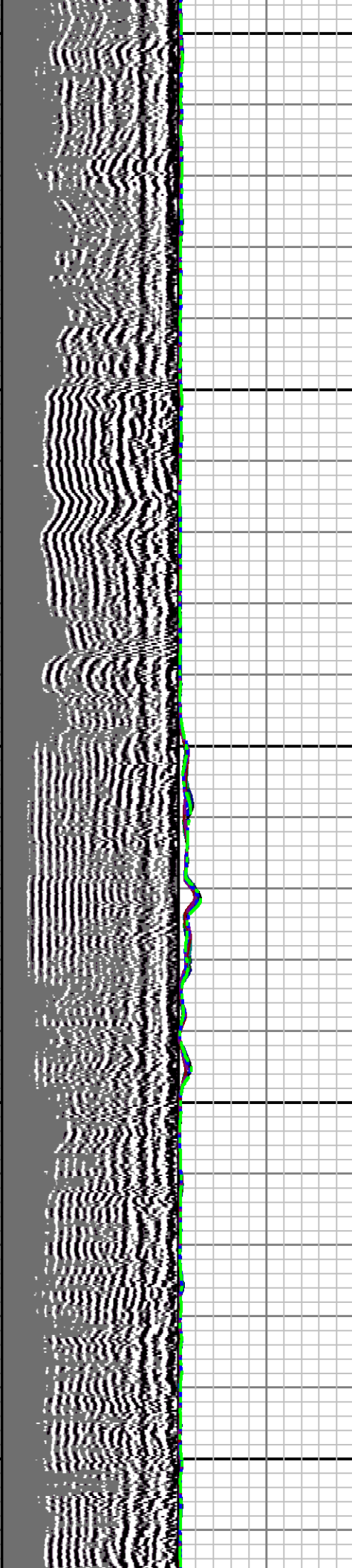
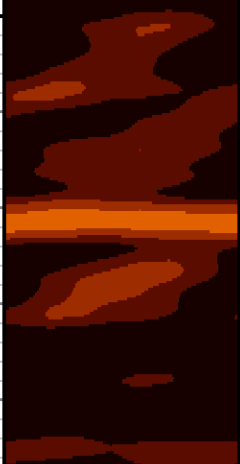
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8400





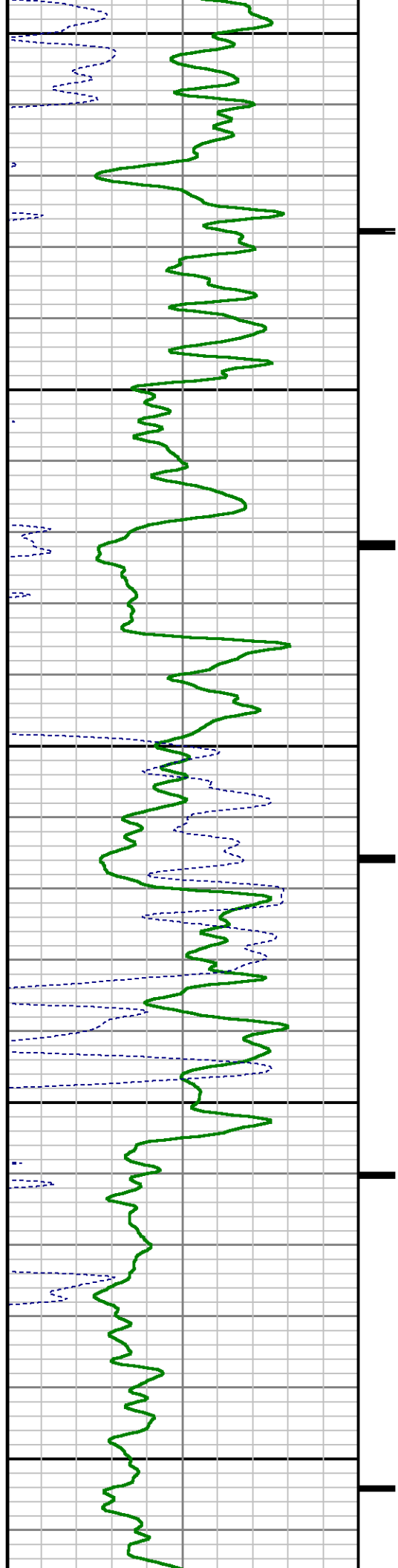


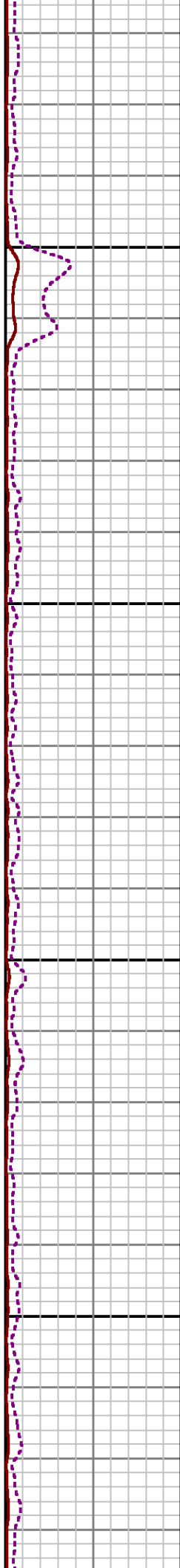
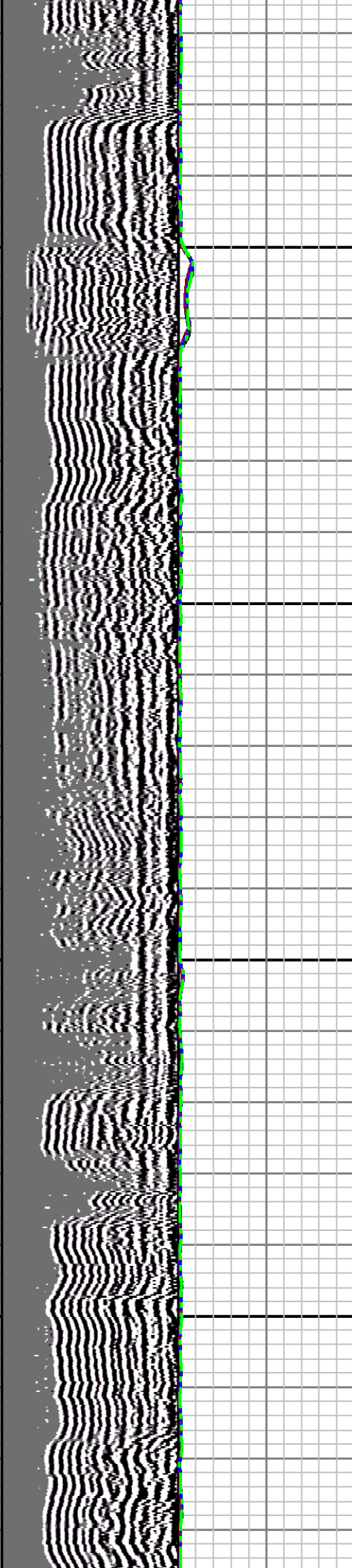


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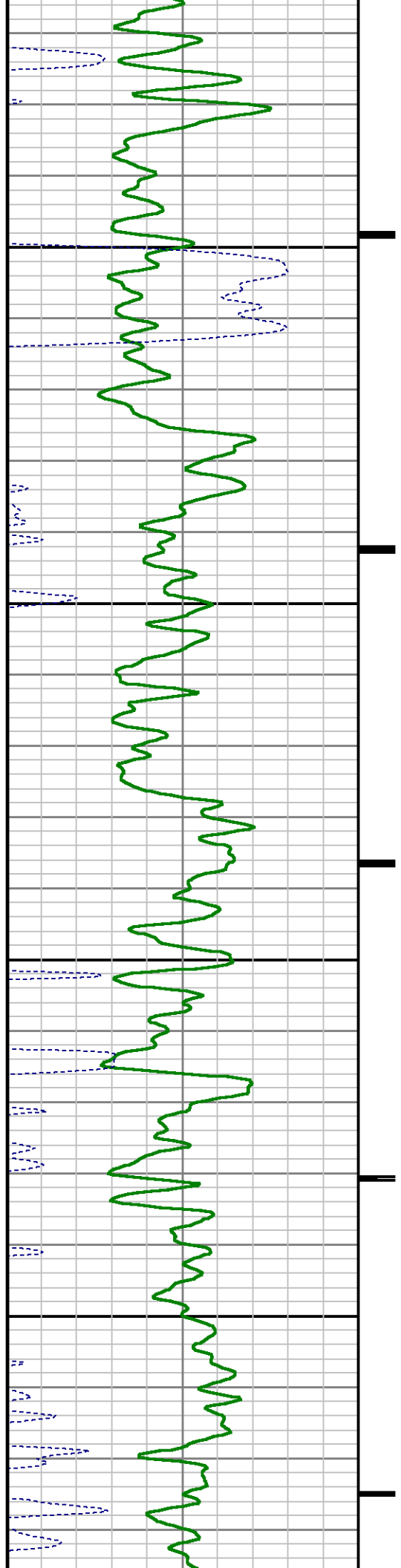
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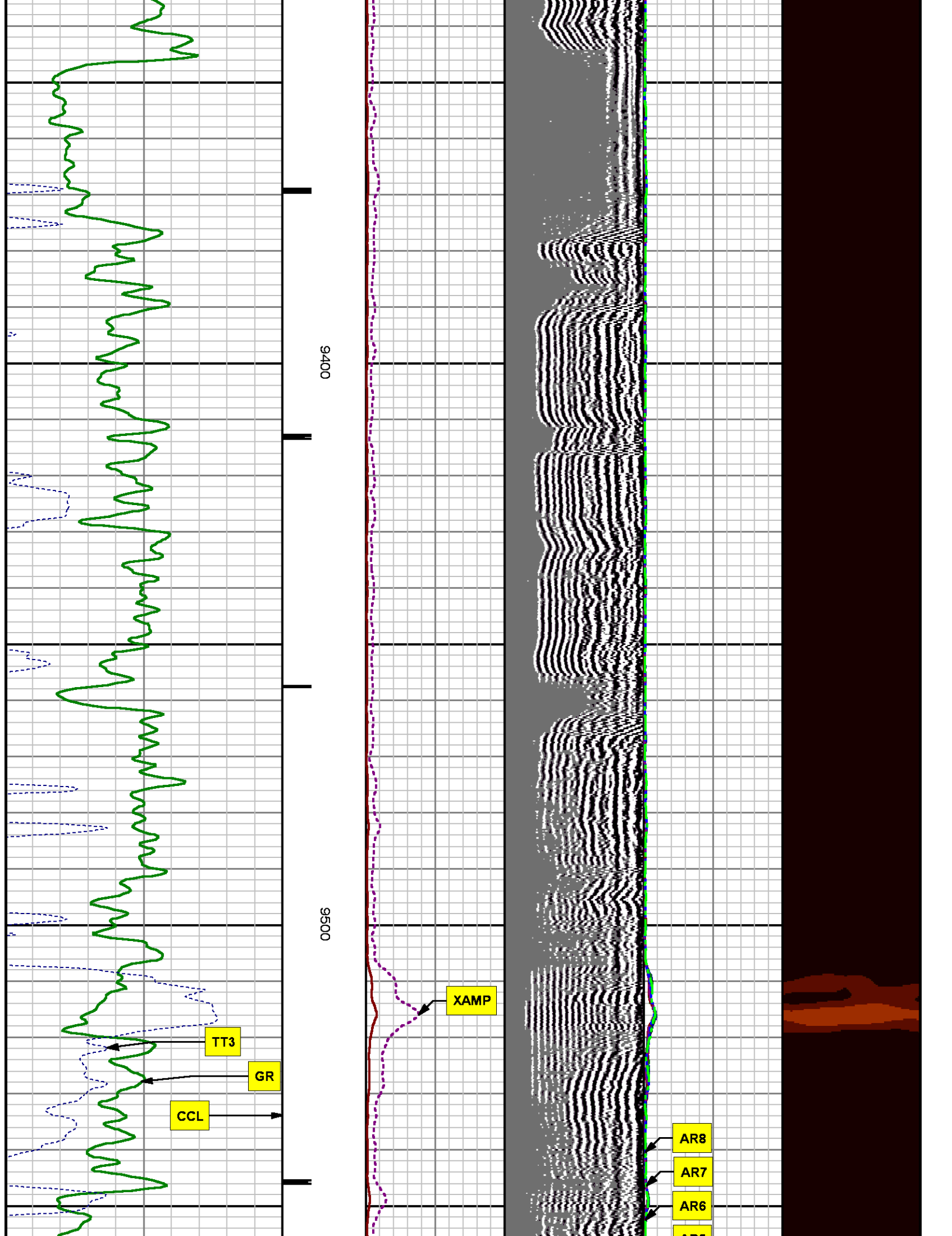


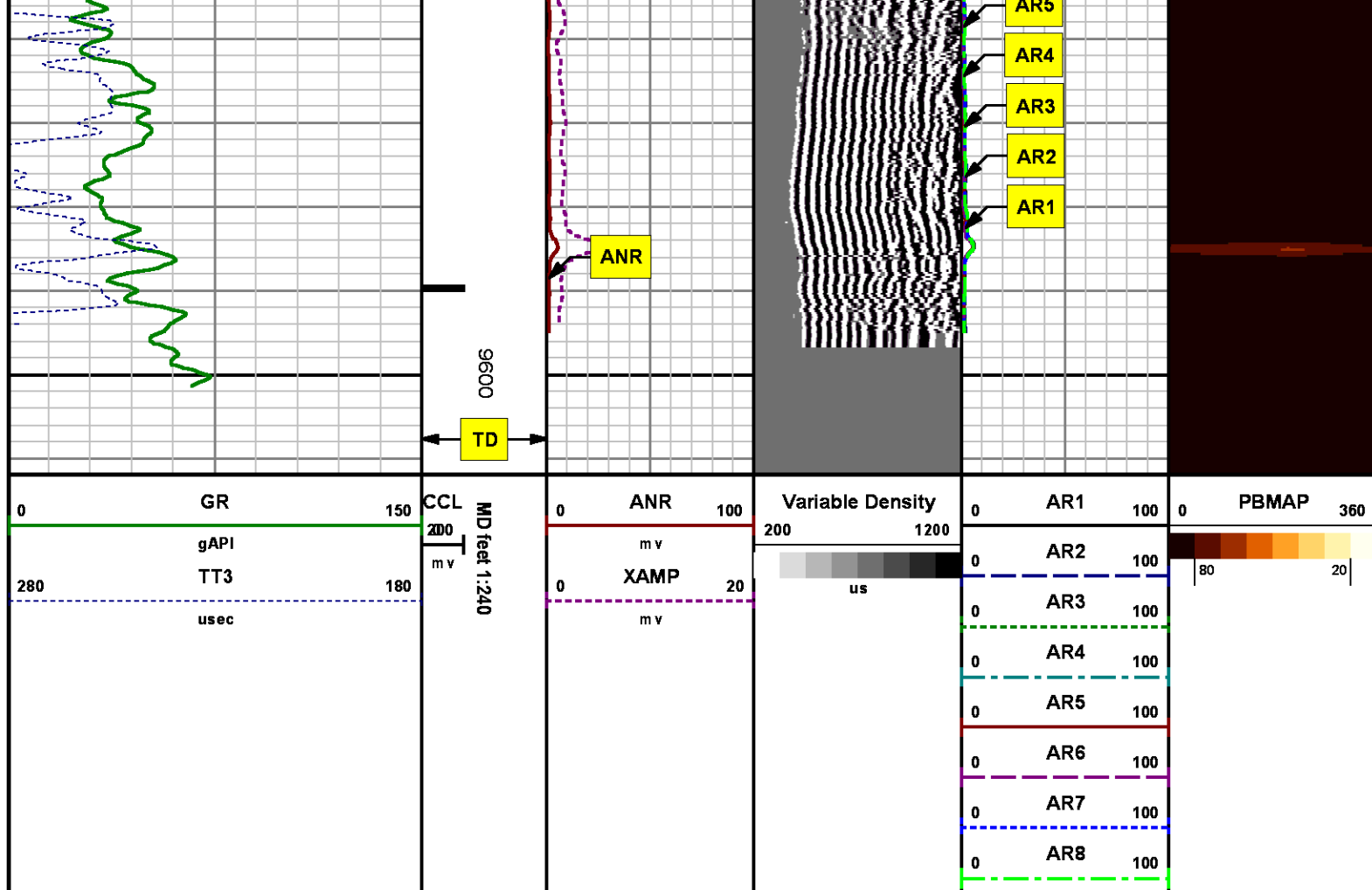


9200

9300







*REPEAT SECTION
0 PSI*

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	9260.300	9360.300
RAL	Amp Gate Start Near	195.000	usec	9260.300	9360.300
RAL	Amp Gate Start Radial	195.000	usec	9260.300	9360.300
RAL	Amp Gate Width Far	25.000	usec	9260.300	9360.300
RAL	Amp Gate Width Near	25.000	usec	9260.300	9360.300
RAL	Amp Gate Width Radial	30.000	usec	9260.300	9360.300
RAL	casing od	4.500	inches	9260.300	9360.300
RAL	casing wt	11.600	lbm/ft	9260.300	9360.300
RAL	FB Start Far	291.900	usec	9260.300	9360.300

RAL	FB Start Near	175.391	u sec	9260.300	9360.300
RAL	FB Start Radial	180.000	u sec	9260.300	9360.300
RAL	FB Thresh Far	10.000	m v	9260.300	9360.300
RAL	FB Thresh Near	4.000	m v	9260.300	9360.300
RAL	FB Thresh Radial	4.000	m v	9260.300	9360.300
RAL	Fluid Travel Time	200.000	u sec/ft	9260.300	9361.210

DEPTH OFFSETS

(for Acquired Curves)

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

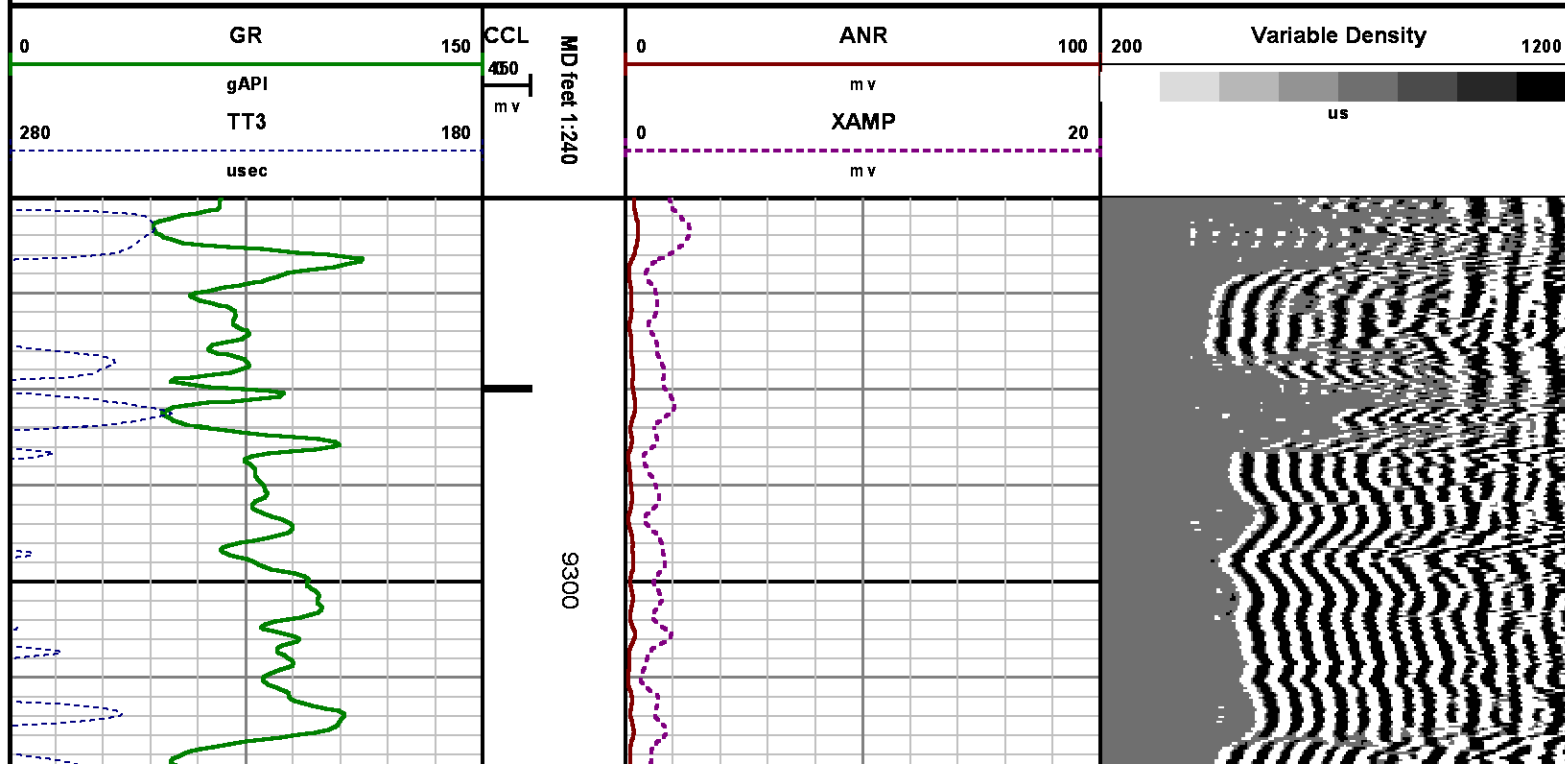
Well : FEDERAL PA 31-21

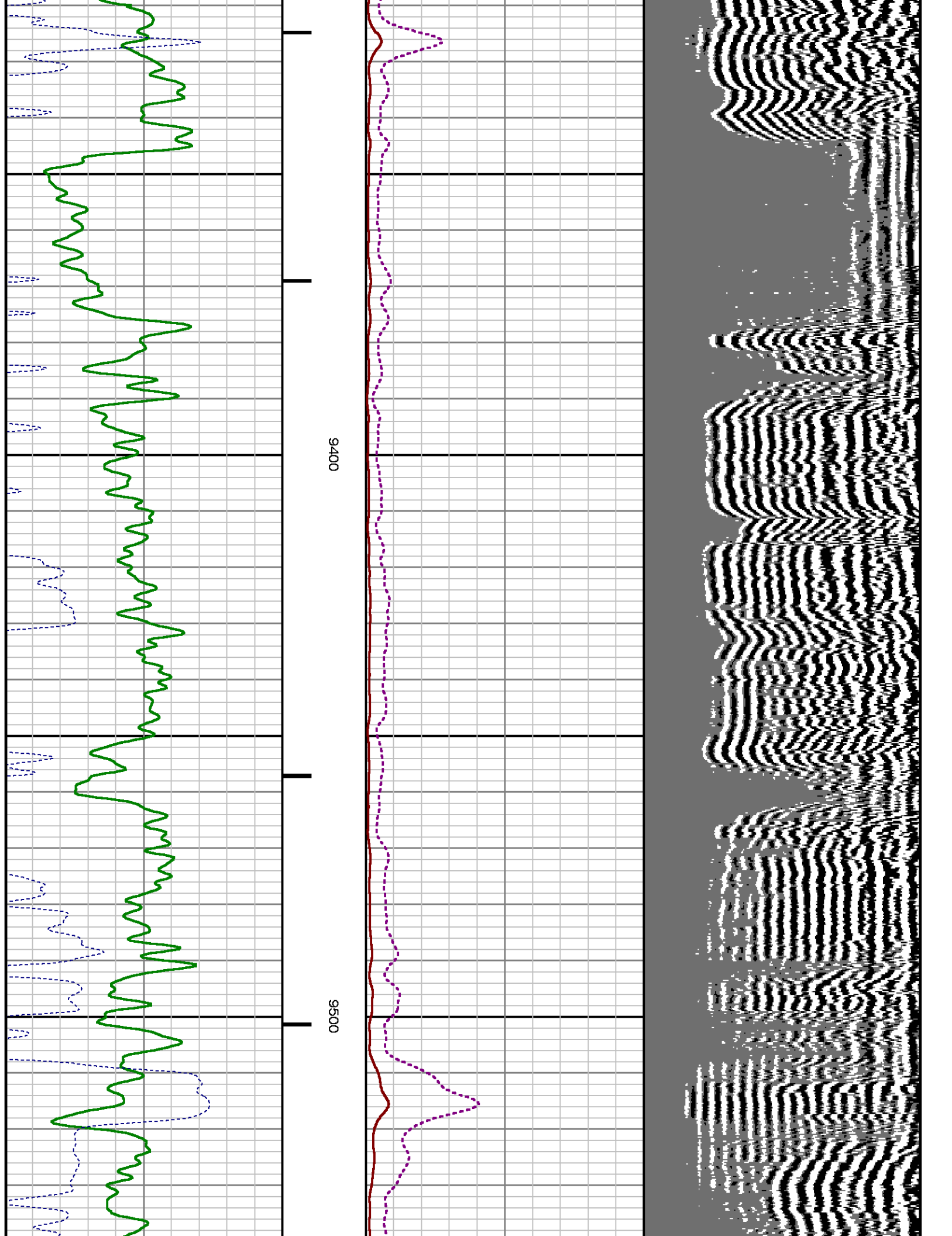
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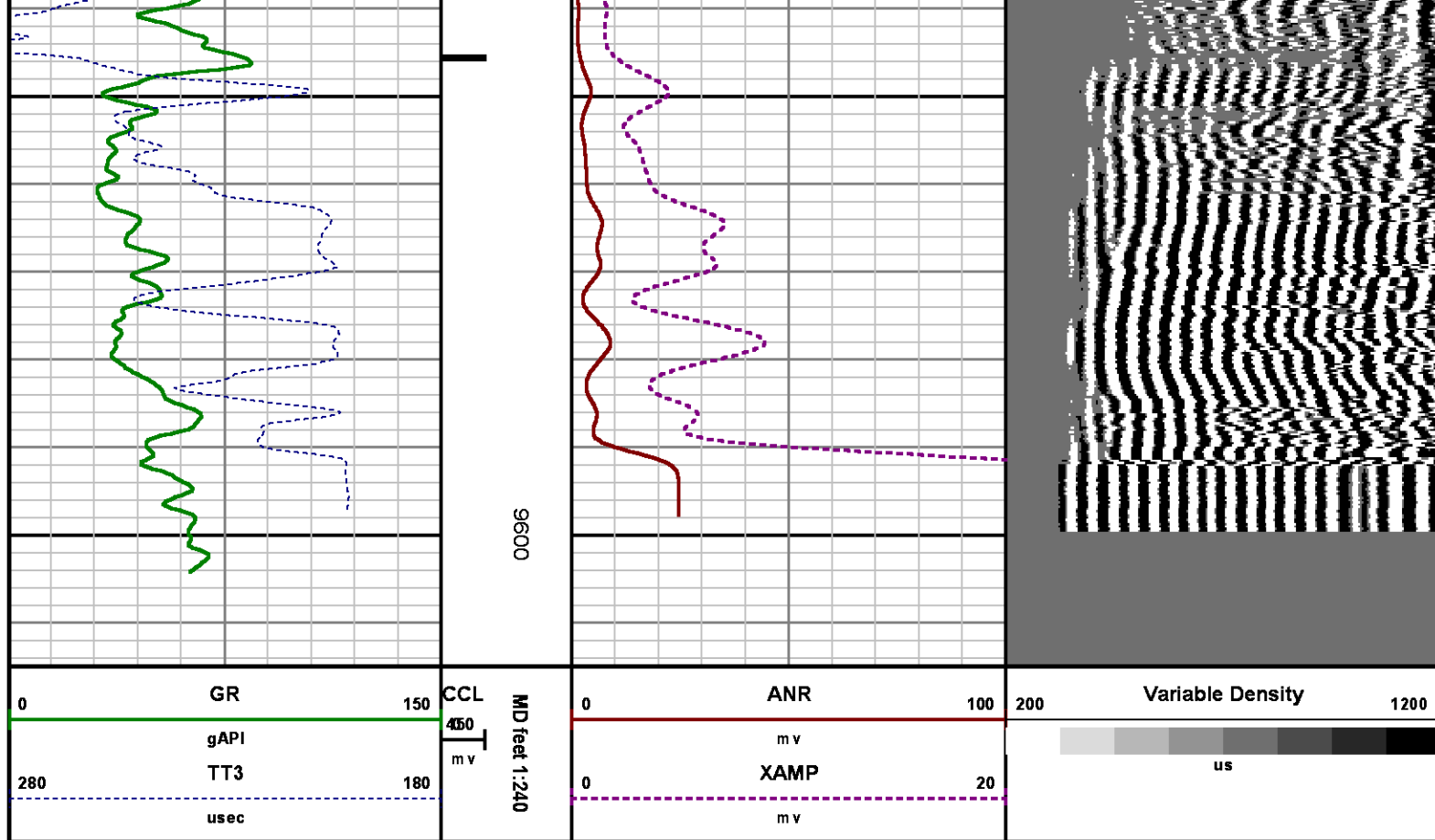
Mode : PlotMgr 5.4.504

Interval : 9260.05 - 9615.05 feet UP

Created : 3/2/2014 12:57:05 PM







CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\496M2_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Mar 02 12:24:48 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: M2

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	217	216	30	166	25	-0.169	100.00	0.21
3 Ft. Receiver	217	216	30	151	25	-0.354	100.00	0.20
5 Ft. Receiver	327	325	30	211	25	0.249	150.00	0.24
Radial #1	217	216	30	151	25	-0.117	100.00	0.20
Radial #2	217	216	30	151	25	-0.583	100.00	0.20
Radial #3	217	216	30	151	25	-0.406	100.00	0.20
Radial #4	217	216	30	151	25	-0.505	100.00	0.21

Radial #5	217	216	30	151	25	-0.437	100.00	0.21
Radial #6	216	216	30	151	25	-0.200	100.00	0.21
Radial #7	216	216	30	151	25	-0.521	100.00	0.20
Radial #8	217	216	30	151	25	-0.351	100.00	0.20

GAMMA RAY

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

CALIBRATION SUMMARY

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

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

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

PRIMARY LOG VERIFICATION

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

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

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496M2_fid.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Mar 02 12:26:47 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: M2

Tool Delay [usec]	-53.00	Casing OD in	4.50	Casing Wt lbm/ft	11.60	Casing ID in	4.00
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RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	0.036	0.000	0.79	100.000
3 Ft. Receiver	195	25	2.401			
5 Ft. Receiver	305	25	3.054			
Radial #1	195	30	1.579			
Radial #2	195	30	1.515			
Radial #3	195	30	1.733			
Radial #4	195	30	1.835			
Radial #5	195	30	2.059			
Radial #6	195	30	2.218			
Radial #7	195	30	1.767			
Radial #8	195	30	1.695			

TOOL DIAGRAM

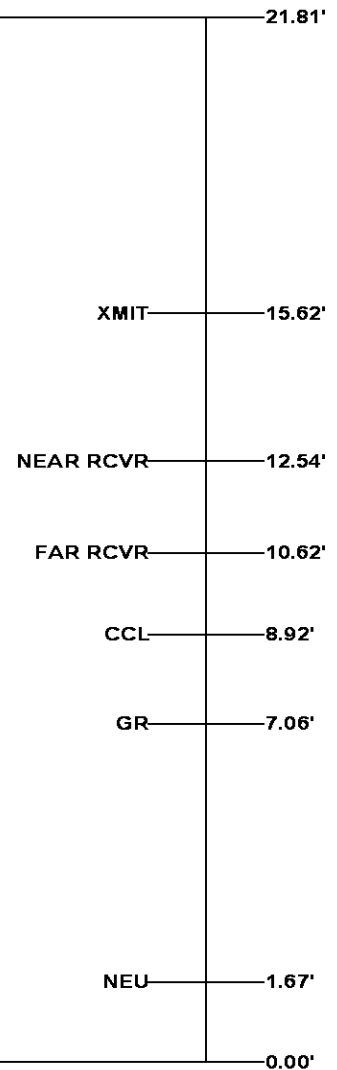
OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII

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

Probe GR/CCL/NEU

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



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



Baker Atlas

Company

WPX ENERGY

Well

FEDERAL PA 31-21

Field

PARACHUTE

County

GARFIELD

State

COLORADO

Location

SHL: 2600' FNL & 1441' FWL

Elevations

KR 6056 ft

File No:

CH083164

API No:

05045220390000

21 GS 95W

CASE

BHL: 252' FNL & 1685' FEL (NWNE)

SEC 21 TWP 6S RGE 95W

RE 11000
DF
GL 6030 ft

PA 22-21 PAD
NABORS 573