



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: _____

CH091652

Company
Well
Field
County

WPX ENERGY

FEDERAL SG 432-28

GRAND VALLEY

GARFIELD

State CO

Location

SHL: 2279' FSL & 499' FEL

BHL: 2248' FNL & 2323' FEL

SEC 28 TWP 7S RGE 96W

Other Services

NONE

H&P 318

Permanent Datum

Log Measured From

Drill Measured From

GL

KB

Elevation

KB

24

Above P. D.

Elevations

KB

5143

DF

GL

5119

Date

28/OCT/14

Run

ONE

Service Order

US091652

Depth Driller

5730

Depth Logger

5694

Bottom Logged Interval

5684

Top Logged Interval

24

Time Started

17:30

Time Finished

20:00

Operator Rig Time

2.5 HOURS

Type of Fluid in Hole

WATER

Fluid Density

NA

Salinity

NA

Fluid Level

53

Logged Cement Top

NA

Wellhead Pressure

0

Maximum Hole Deviation

NA

Nominal Logging Speed

65

Maximum Recorded Temperature

190

Reference Log

BAKER HUGHES OPEN HOLE LOG

Reference Log Date

07/OCT/2014

Equipment No. Location

4271

GRAND JUNCTION

Recorded By

NEWELL

Witnessed By

JEFF BRADY

- 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	0	1609
8.75	1609	5735

Casing Record

Size	Weight	Grade	From	To
9.625			0	1609
4.5	11.6	1-80	0	5735

Remarks

All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes HDIL/CN/GR open hole log dated 07/OCT/2014 at the clients request.

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

The amount of linear shift is 9 feet.

Logged with zero PSI at wellhead.

BHT = 190 °F

SJ = 3475' - 3497'

The VDL data is invalid at 3549' and 4189' due to tool spiking.

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CBL	1426XA	10218495	CENTRALIZED
1	1	GRICCL	2459XA	10218503	CENTRALIZED

PRIMARY PRESENTATION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	24.910	5689.500
RAL	Amp Gate Start Near	195.000	usec	24.910	5689.500
RAL	Amp Gate Start Radial	195.000	usec	24.910	5689.500
RAL	Amp Gate Width Far	25.000	usec	24.910	5689.500
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RAL	FB Start Radial	175.391	usec	24.910	5689.500
RAL	FB Thresh Far	10.000	mv	24.910	5689.500
RAL	FB Thresh Near	4.000	mv	24.910	5689.500
RAL	FB Thresh Radial	4.000	mv	24.910	5689.500
RAL	Fluid Travel Time	200.000	usec/ft	24.910	5690.254

DEPTH OFFSETS

(for Acquired Curves)

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

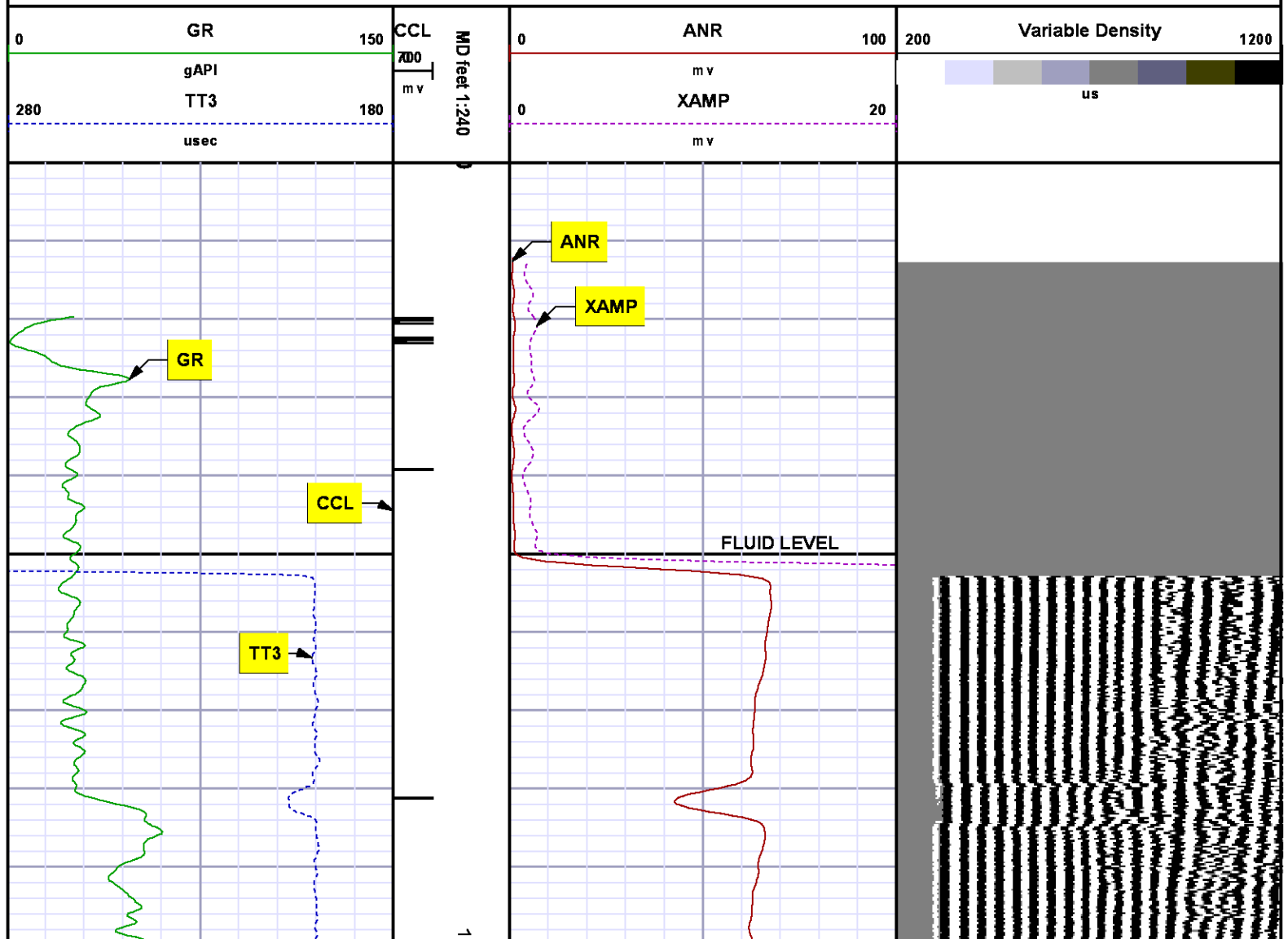
Well : FEDERAL SG 432-28

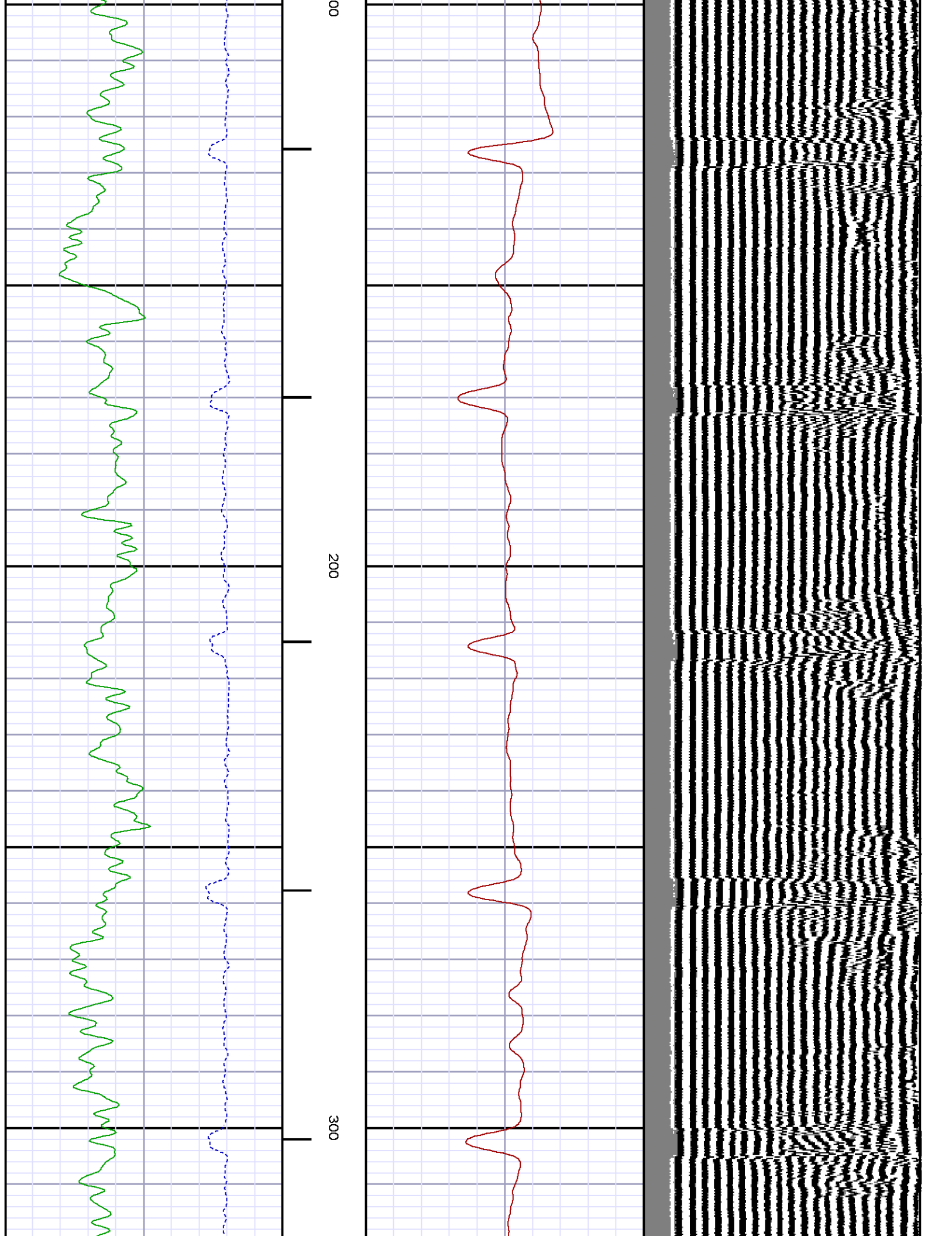
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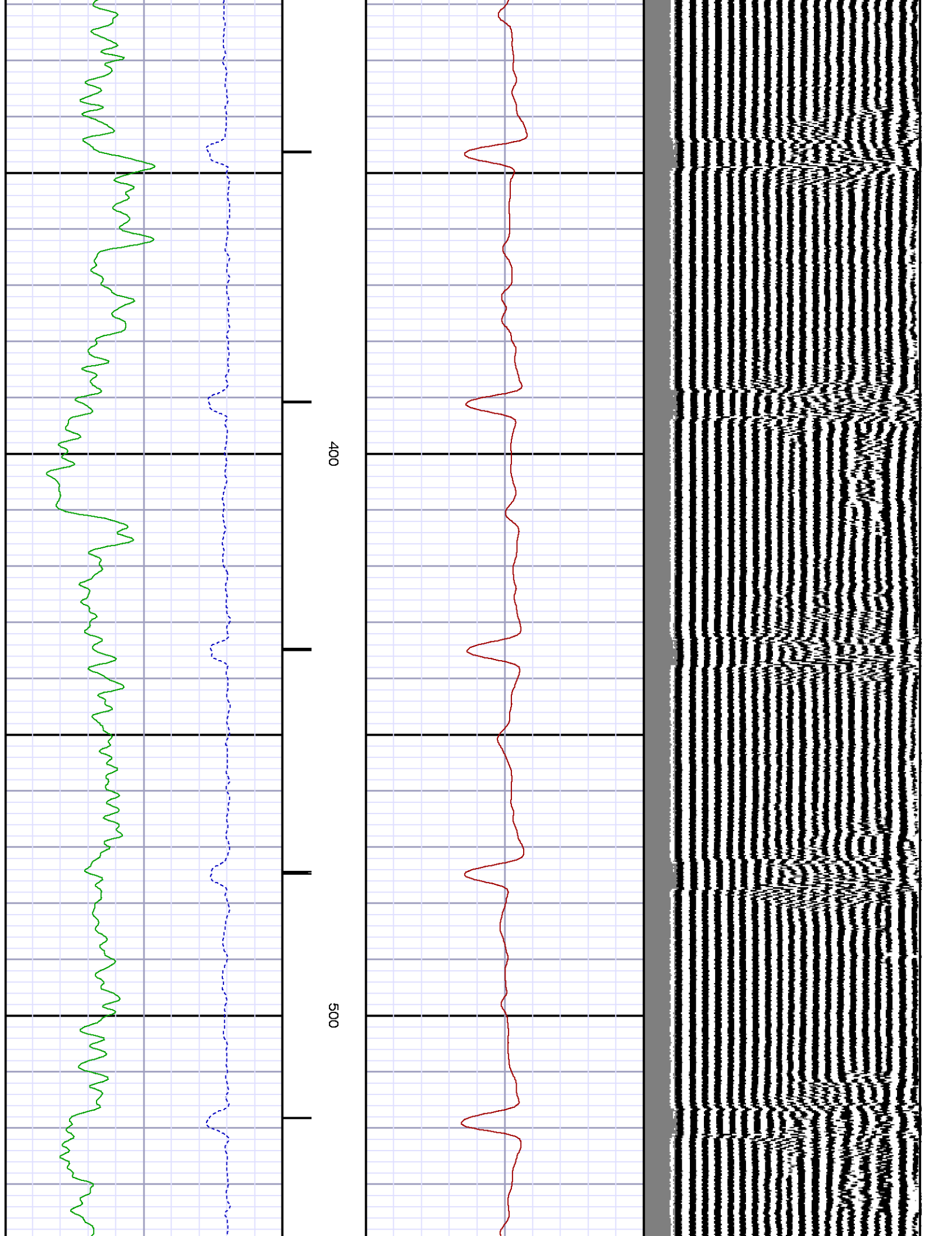
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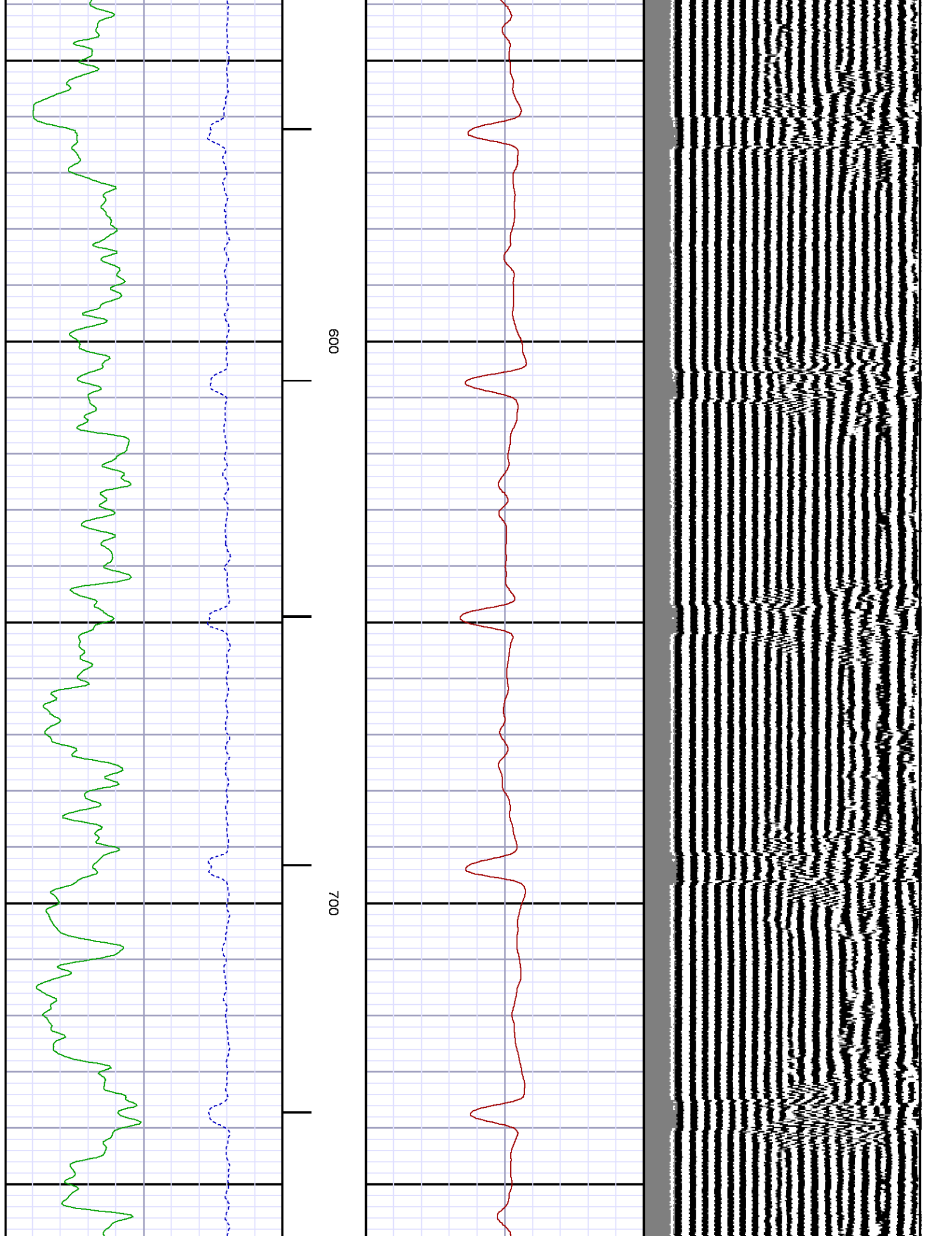
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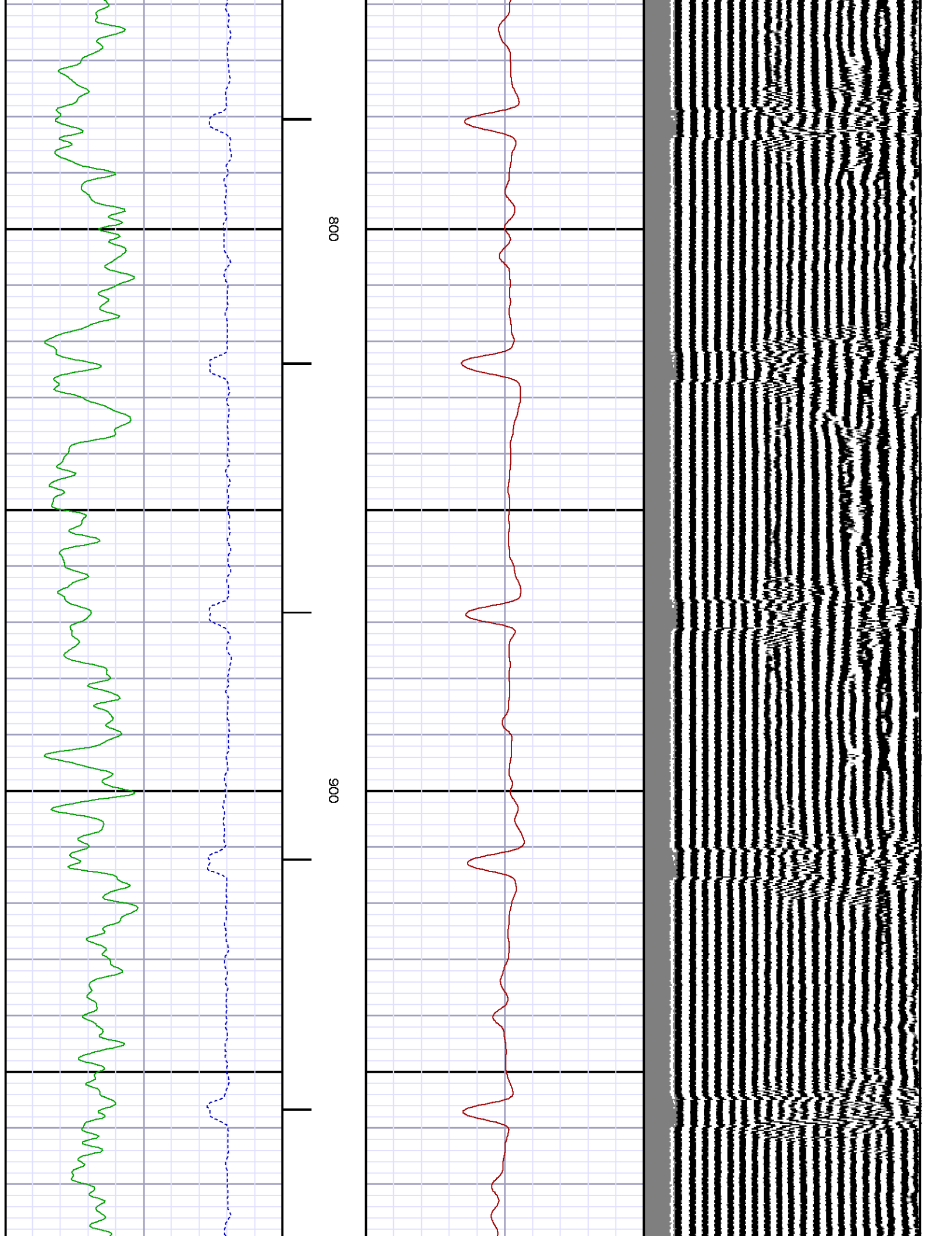
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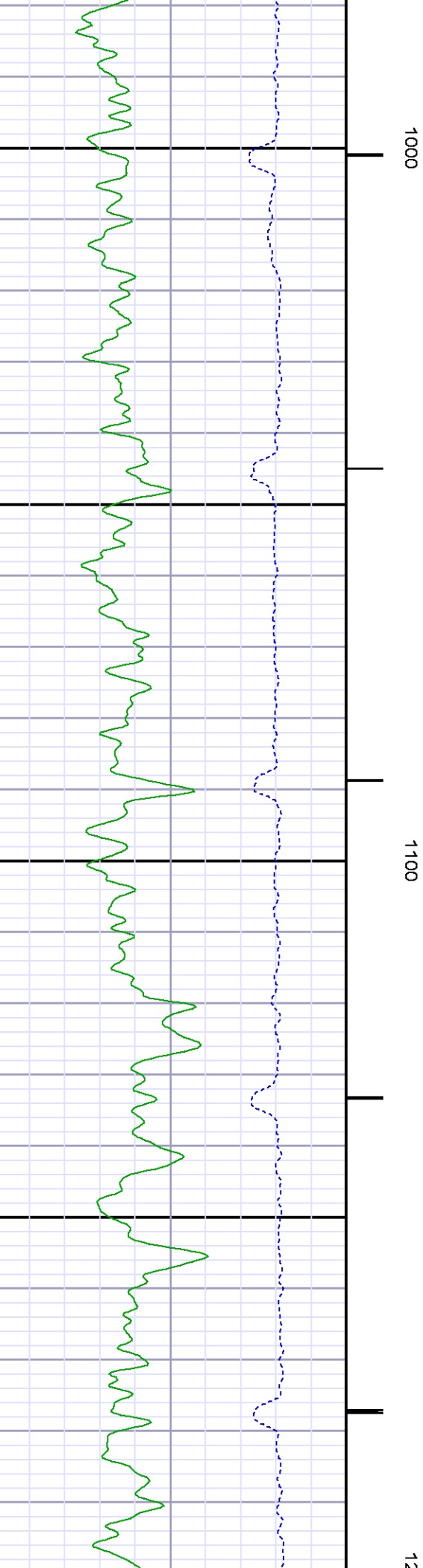
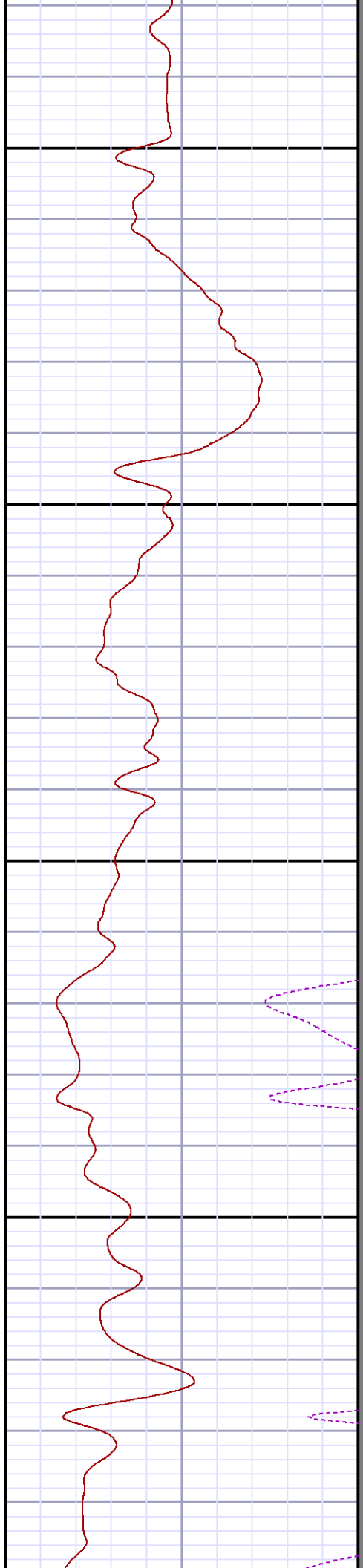
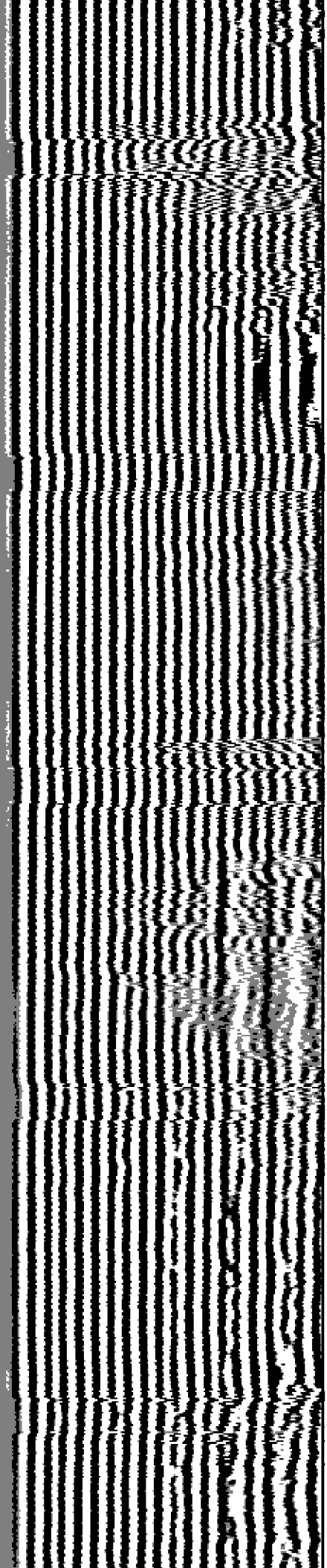


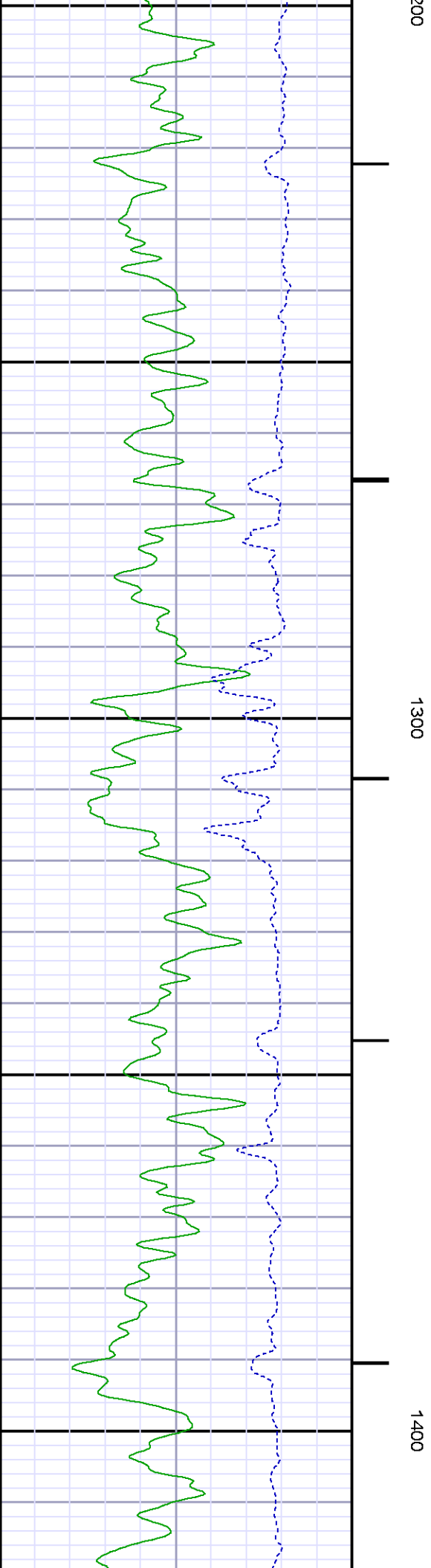
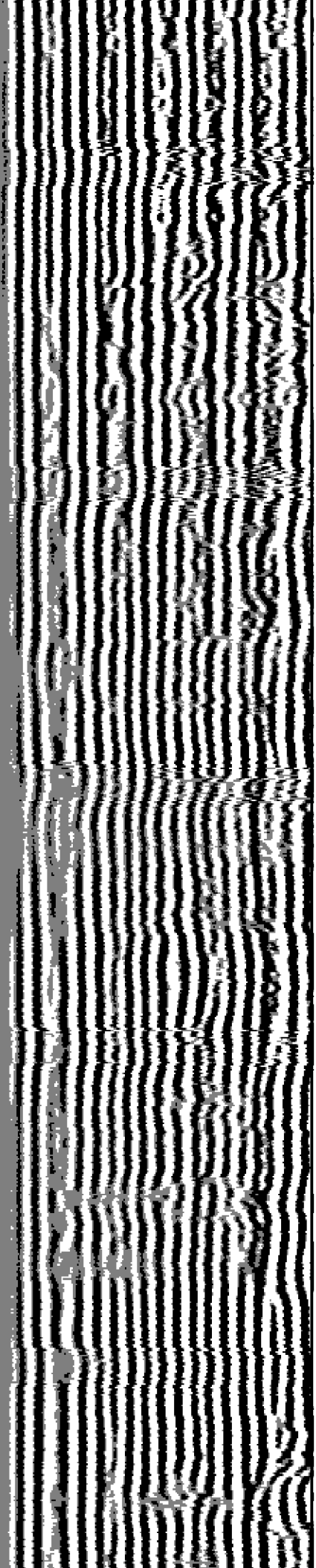


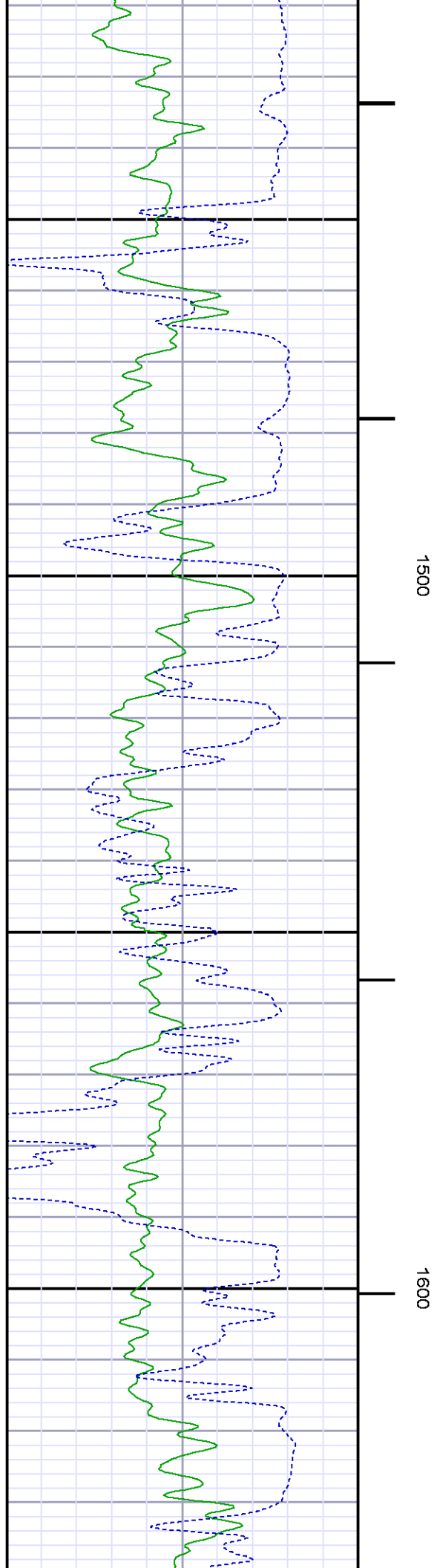
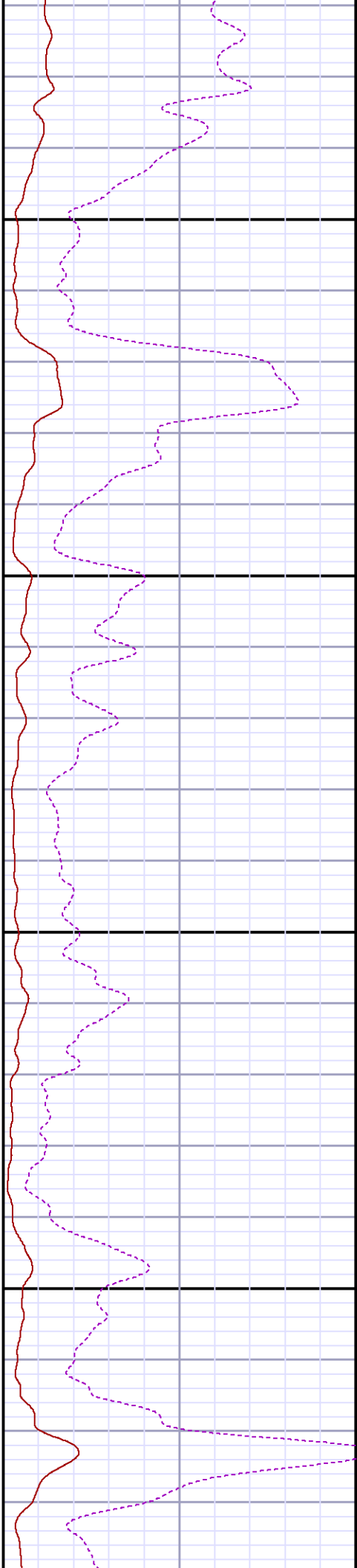
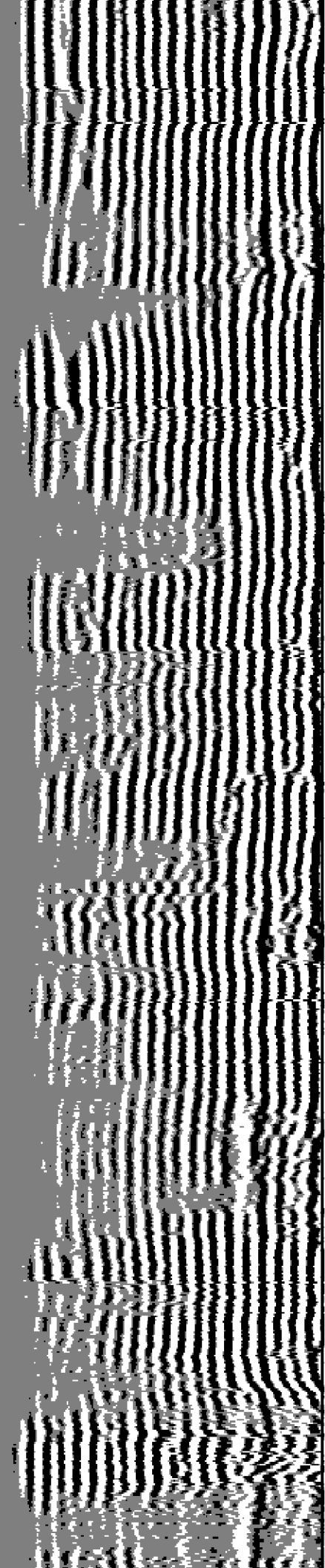


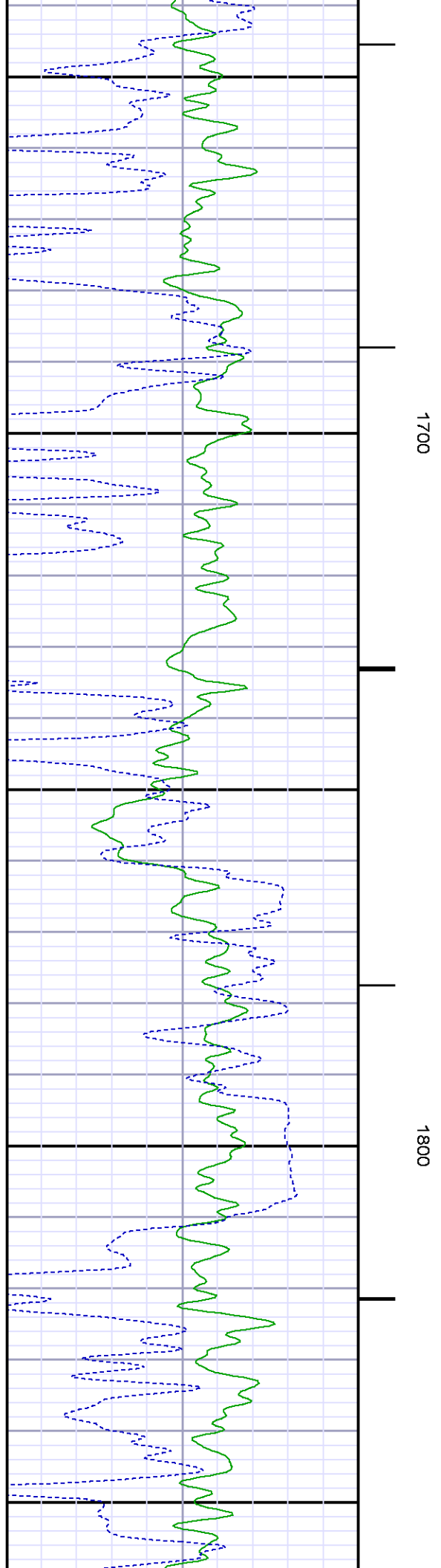
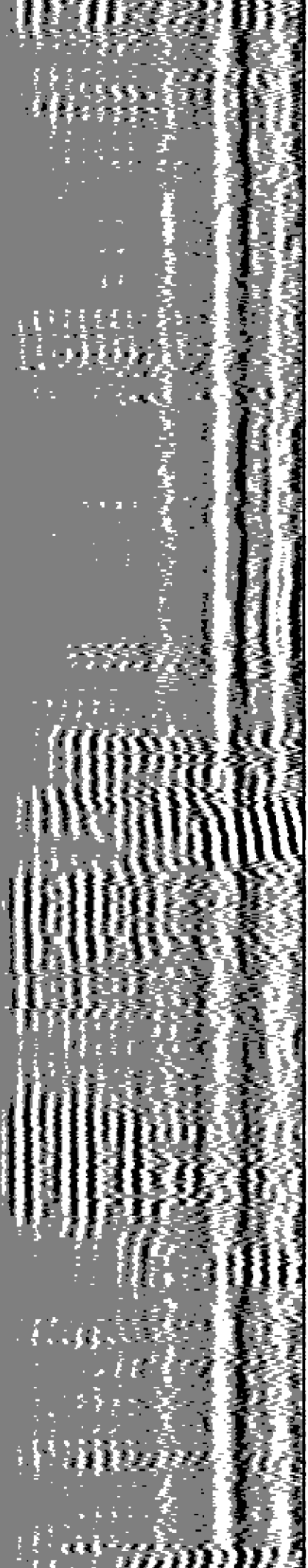


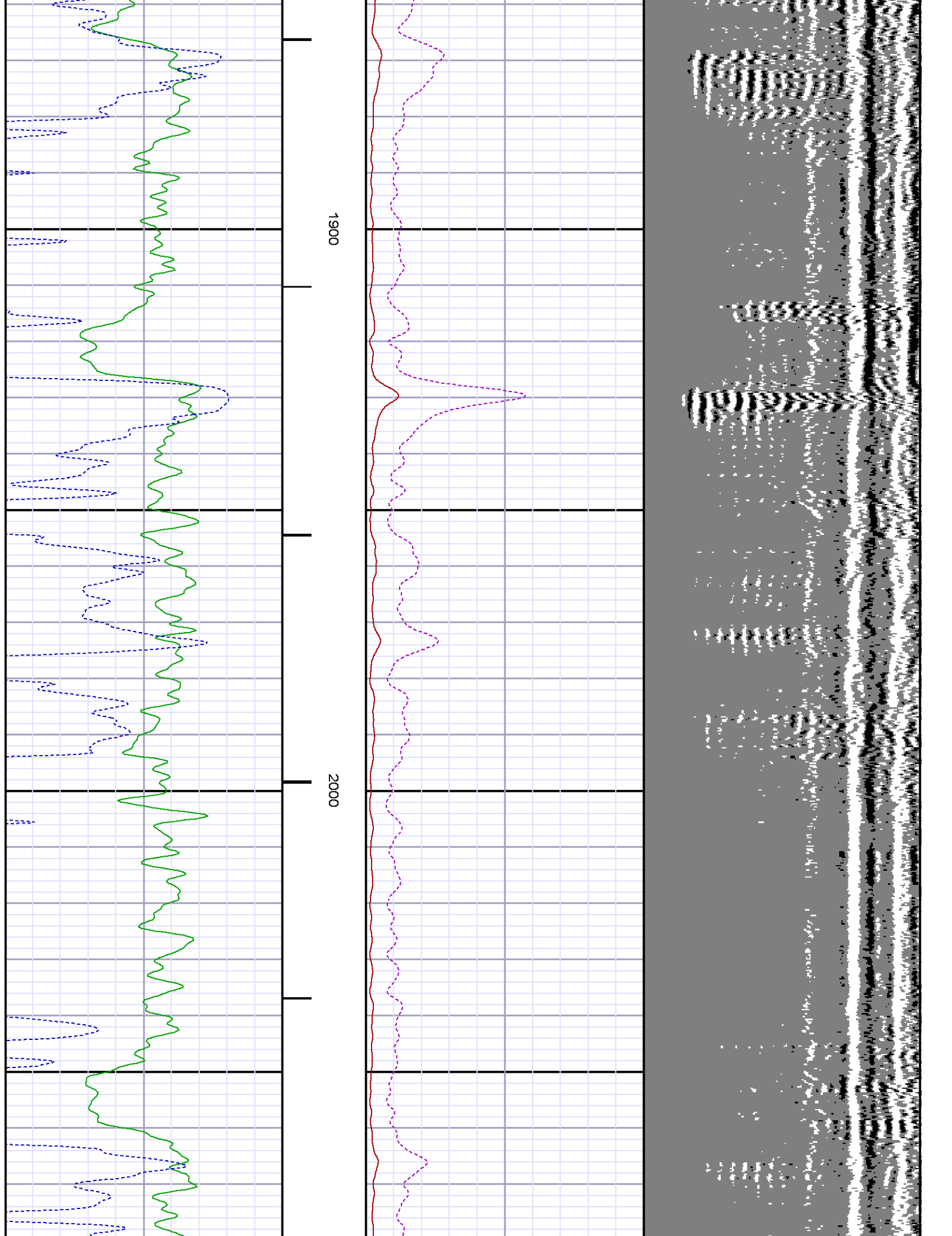


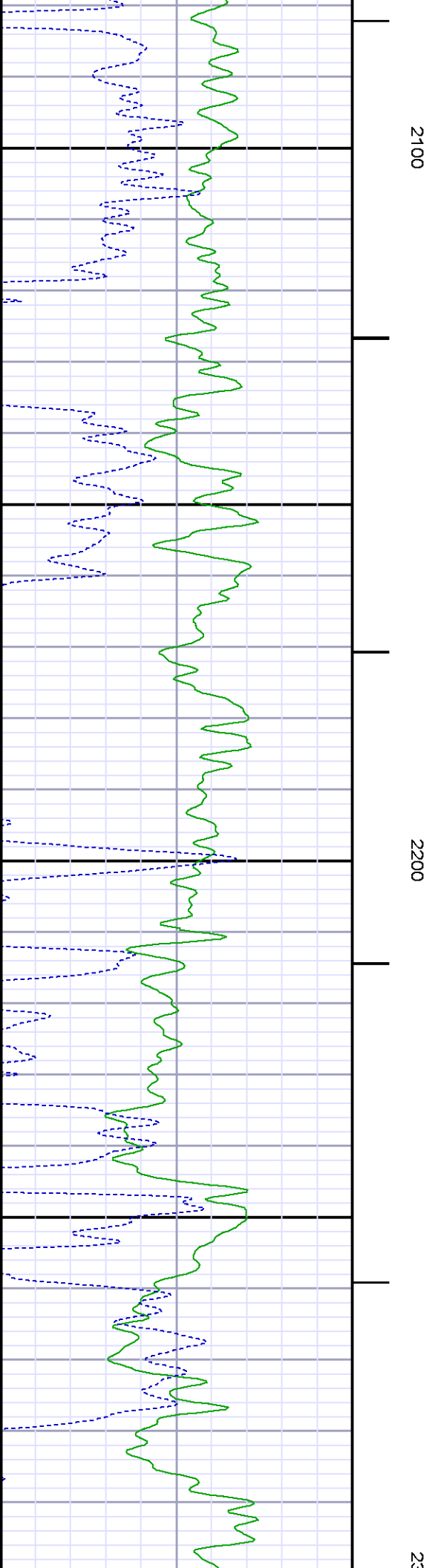
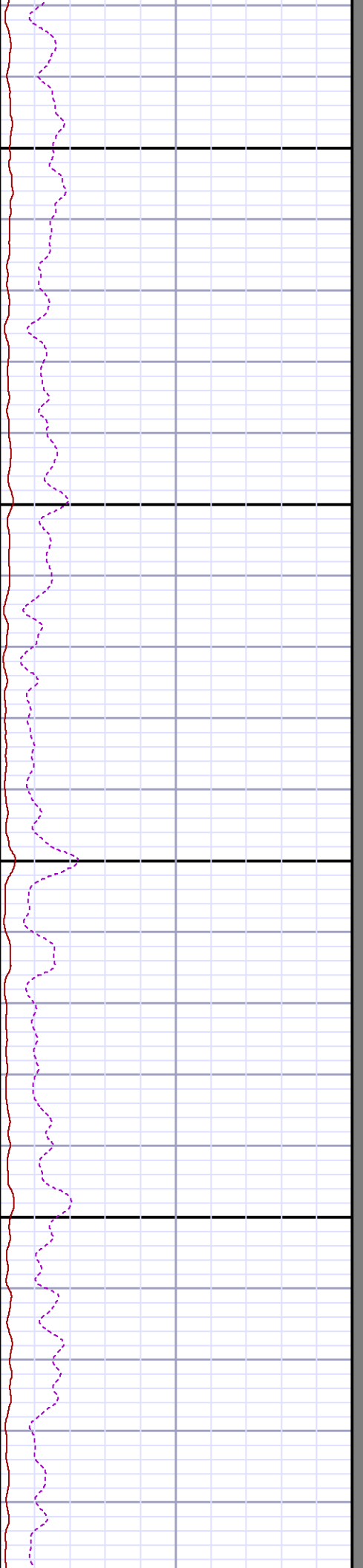
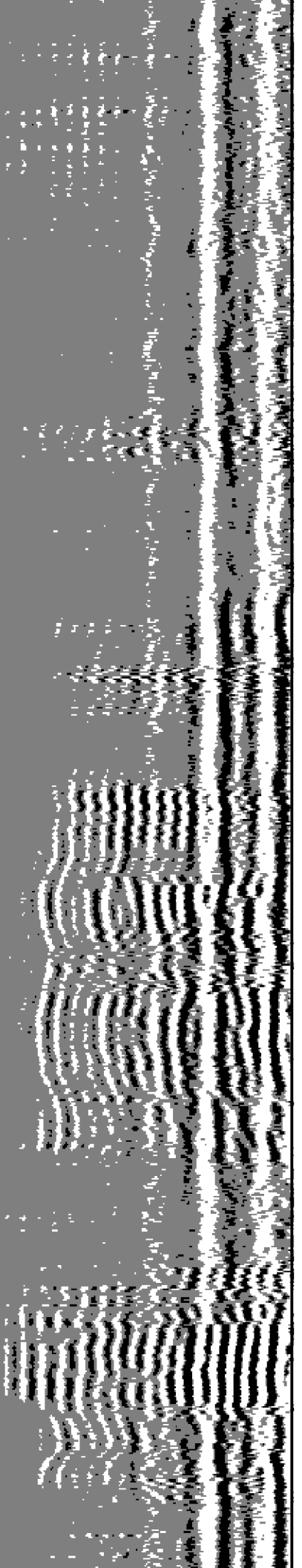


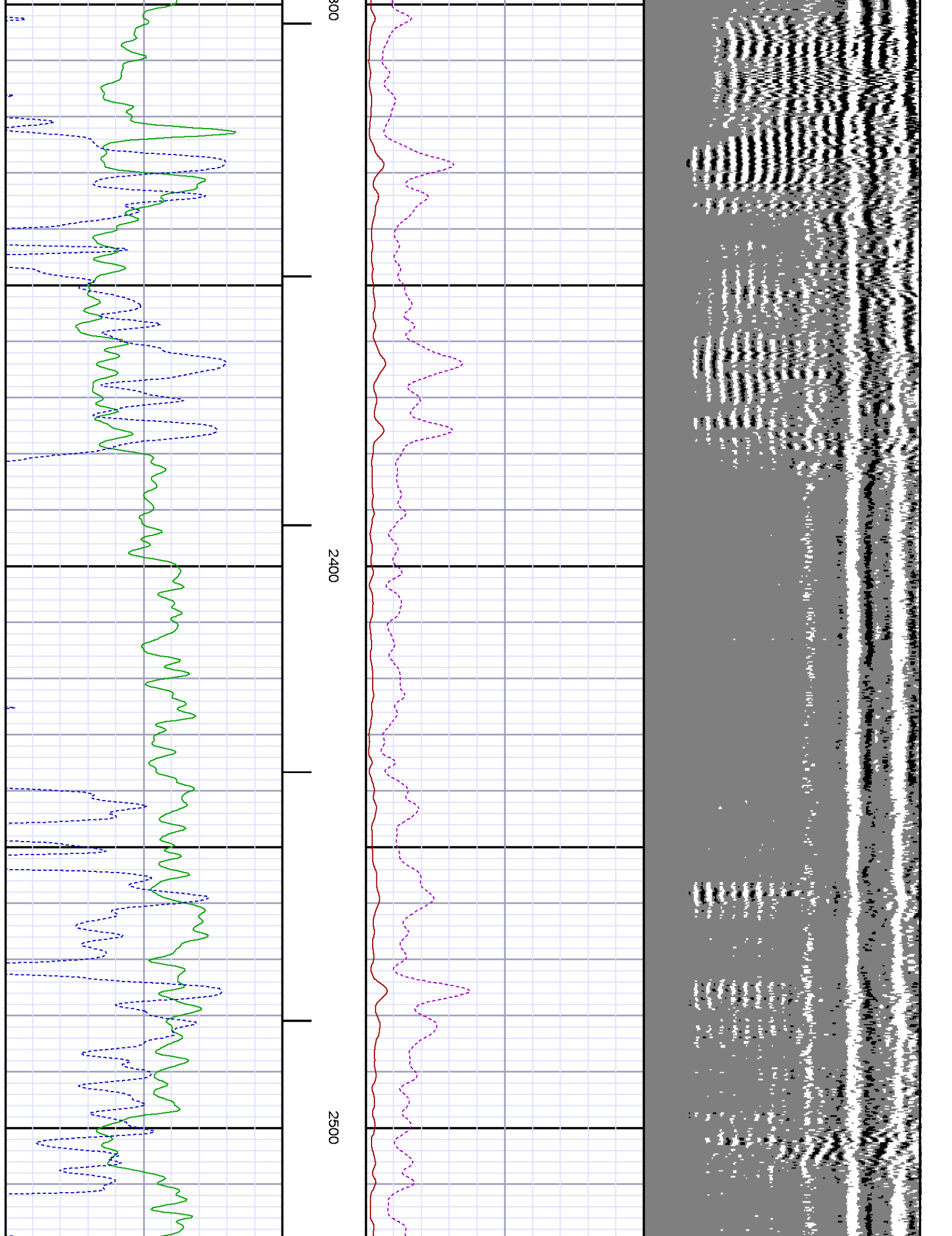


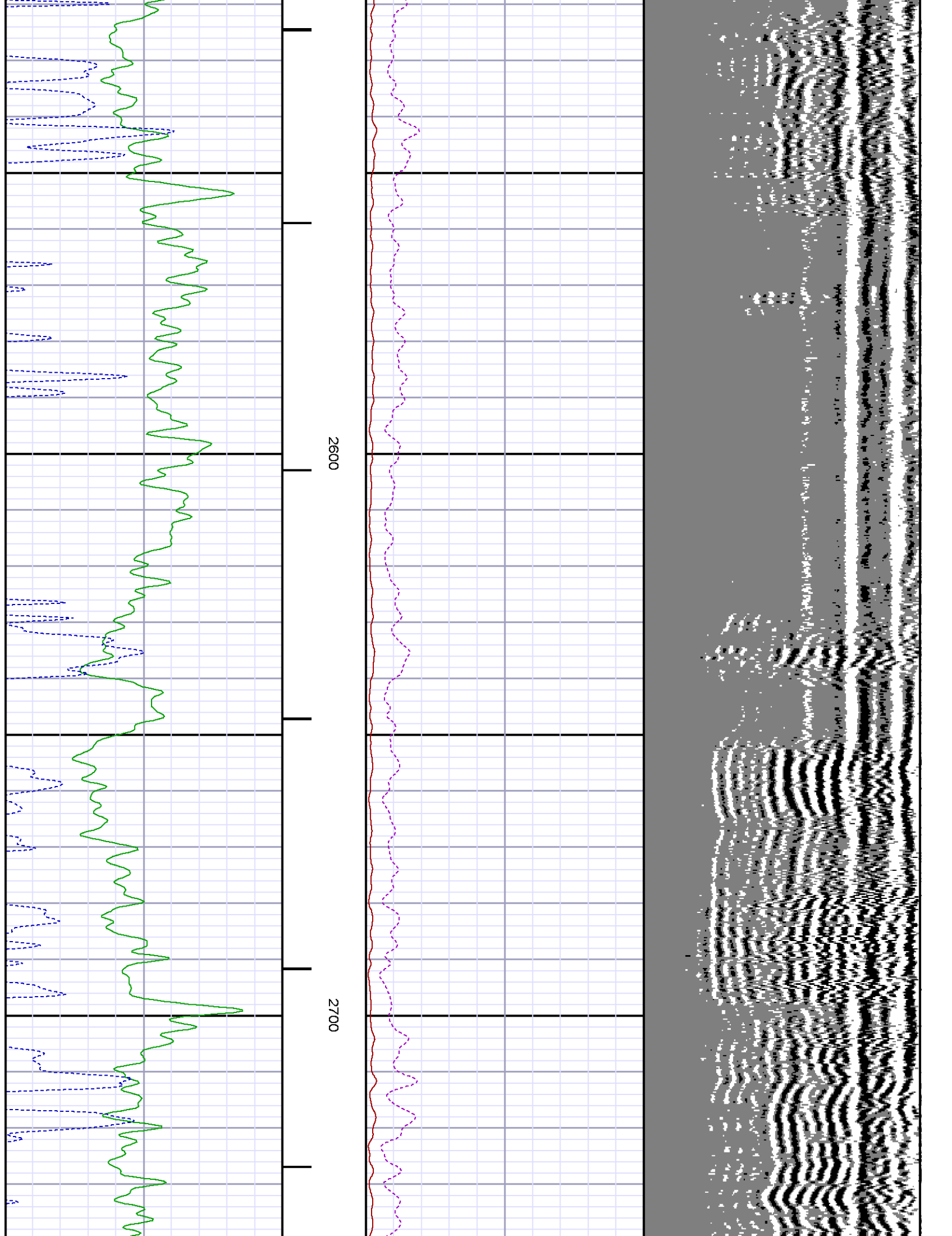


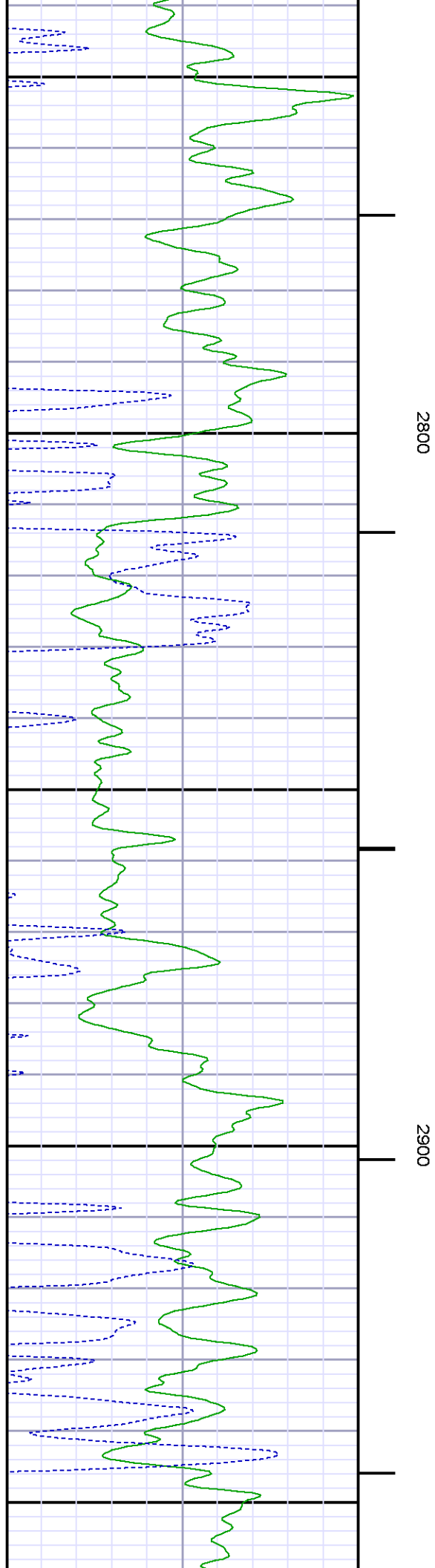
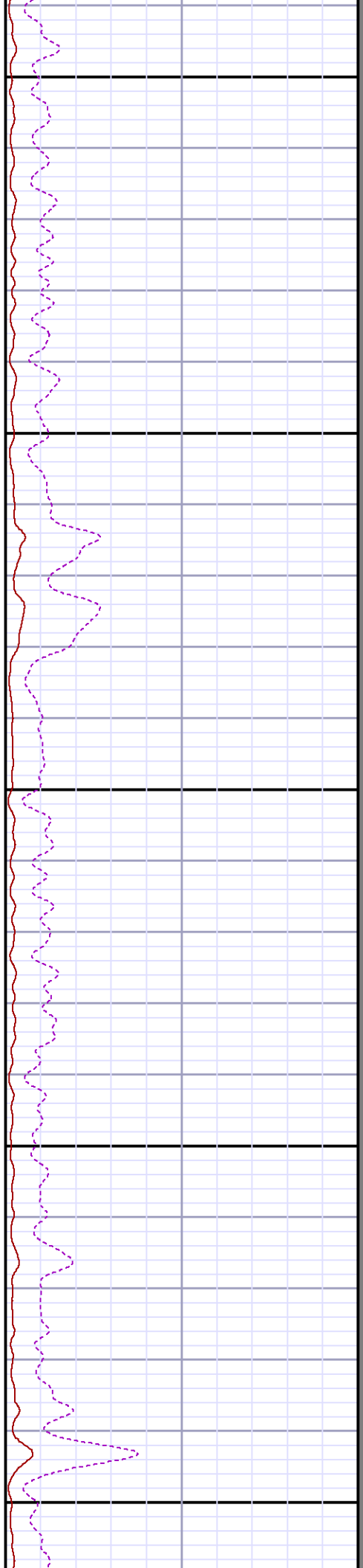
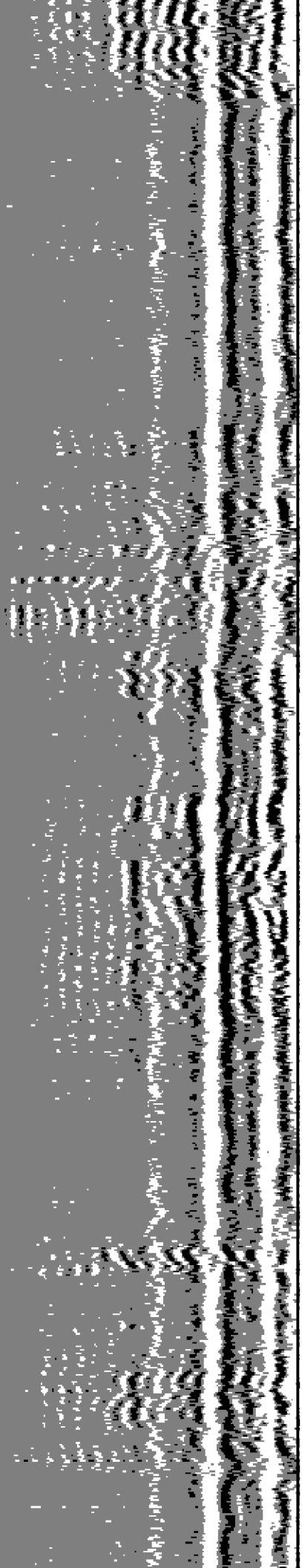


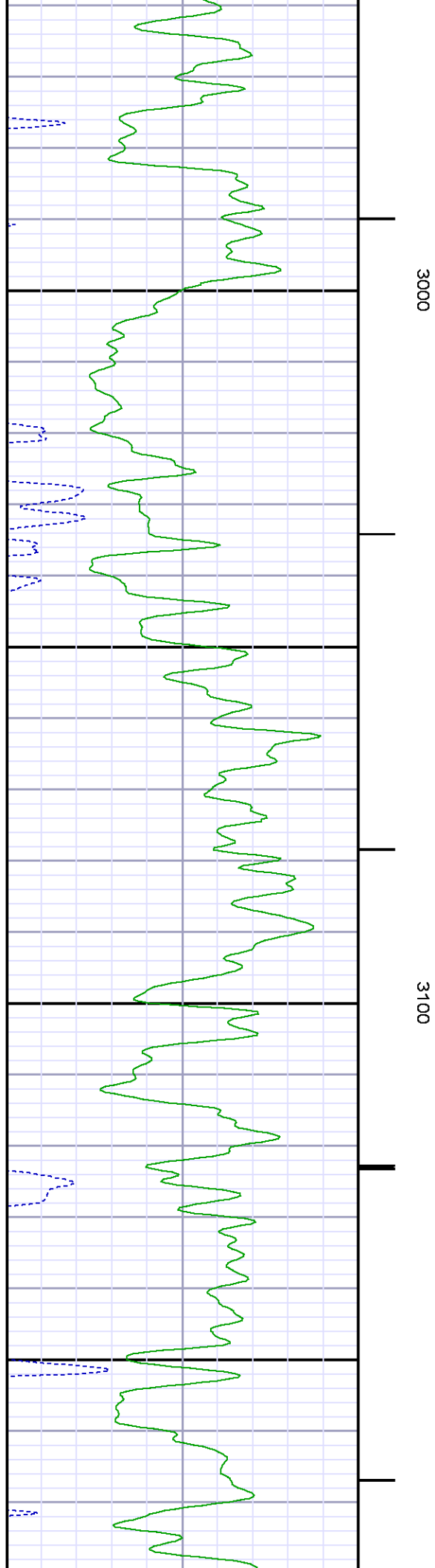
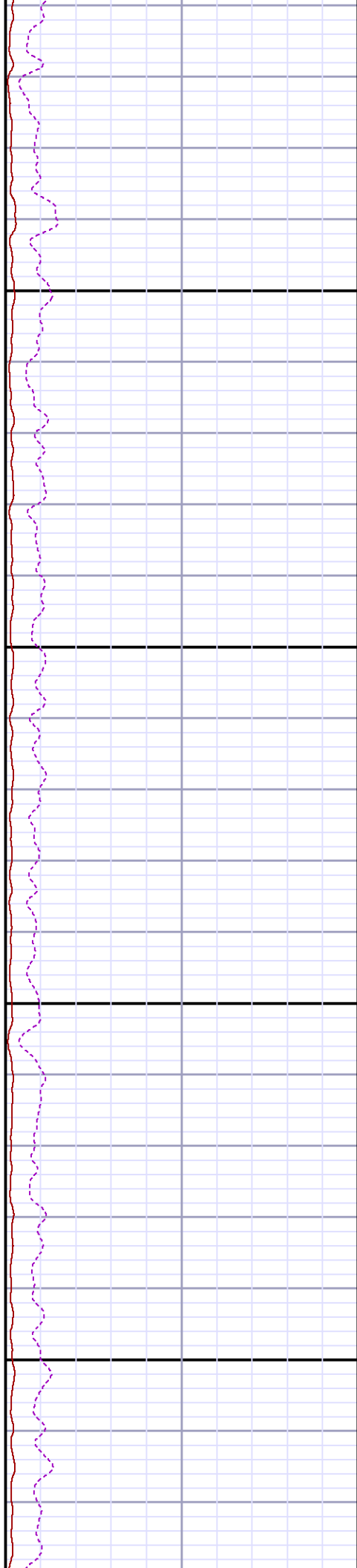
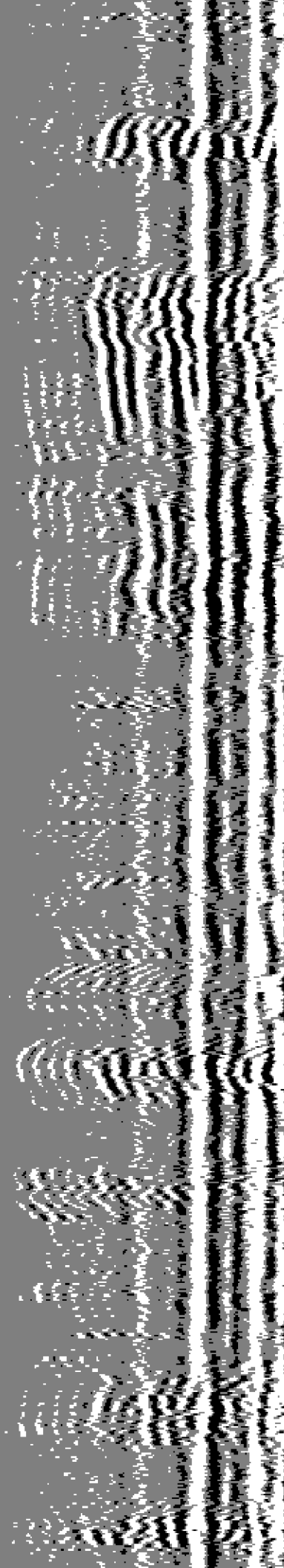


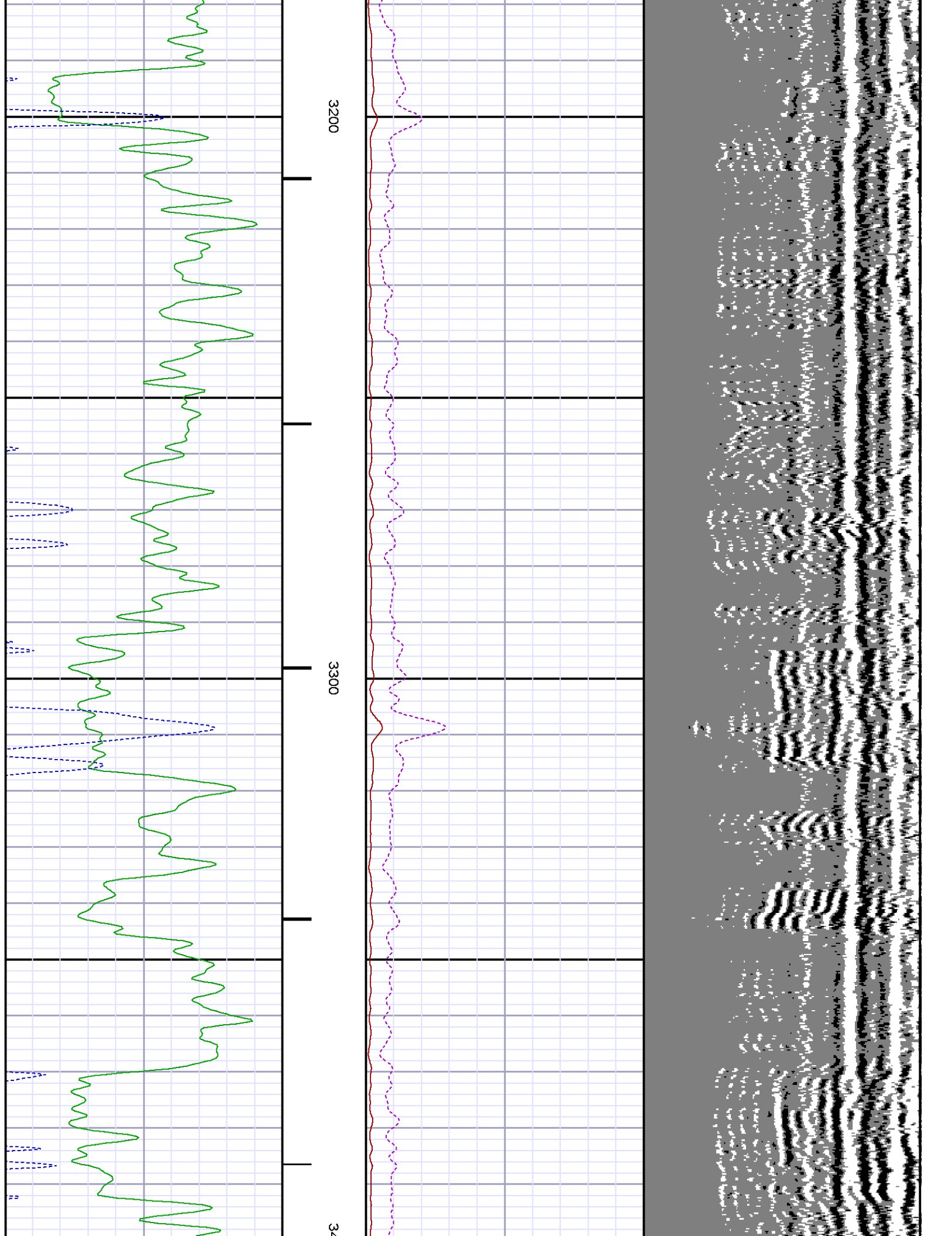


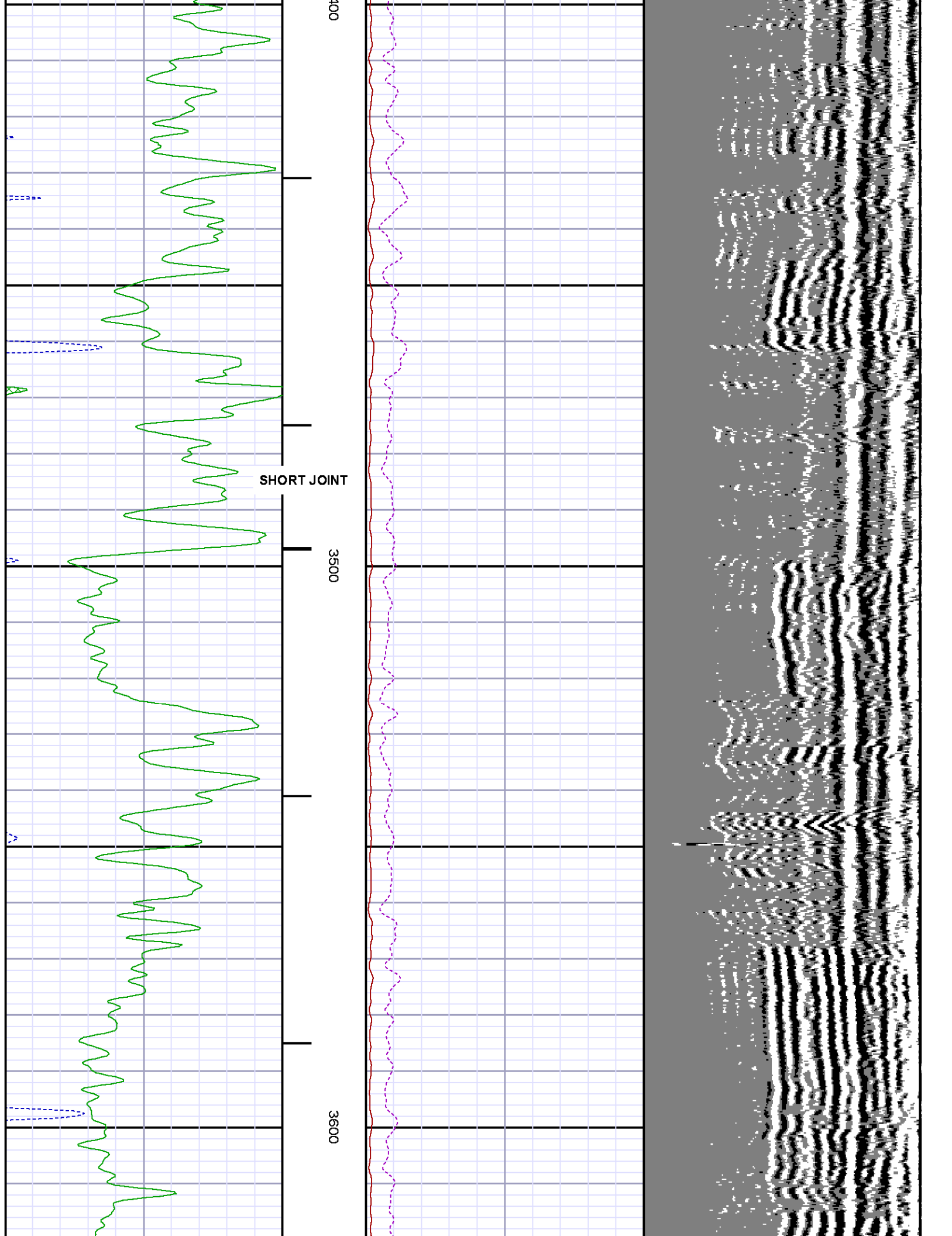


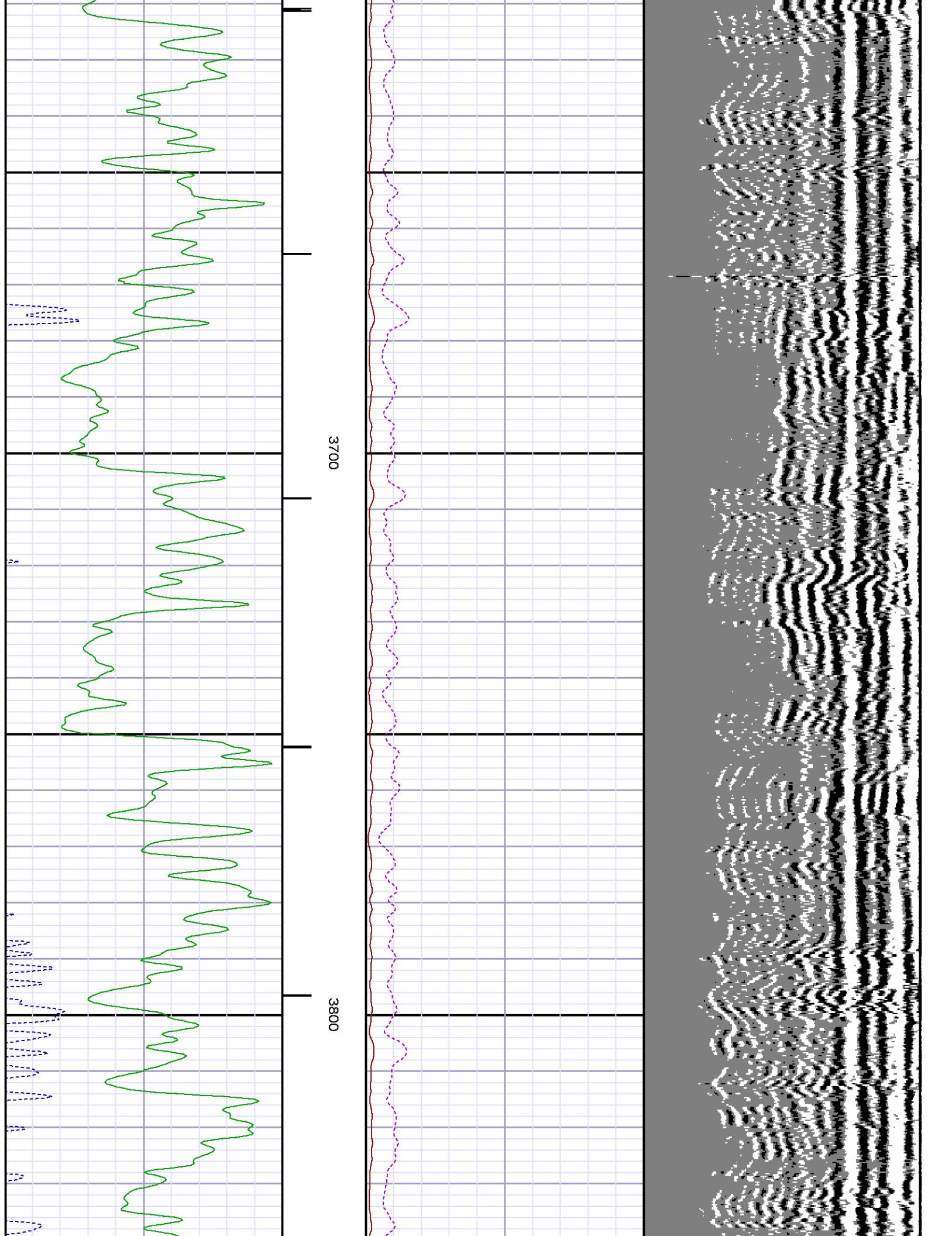


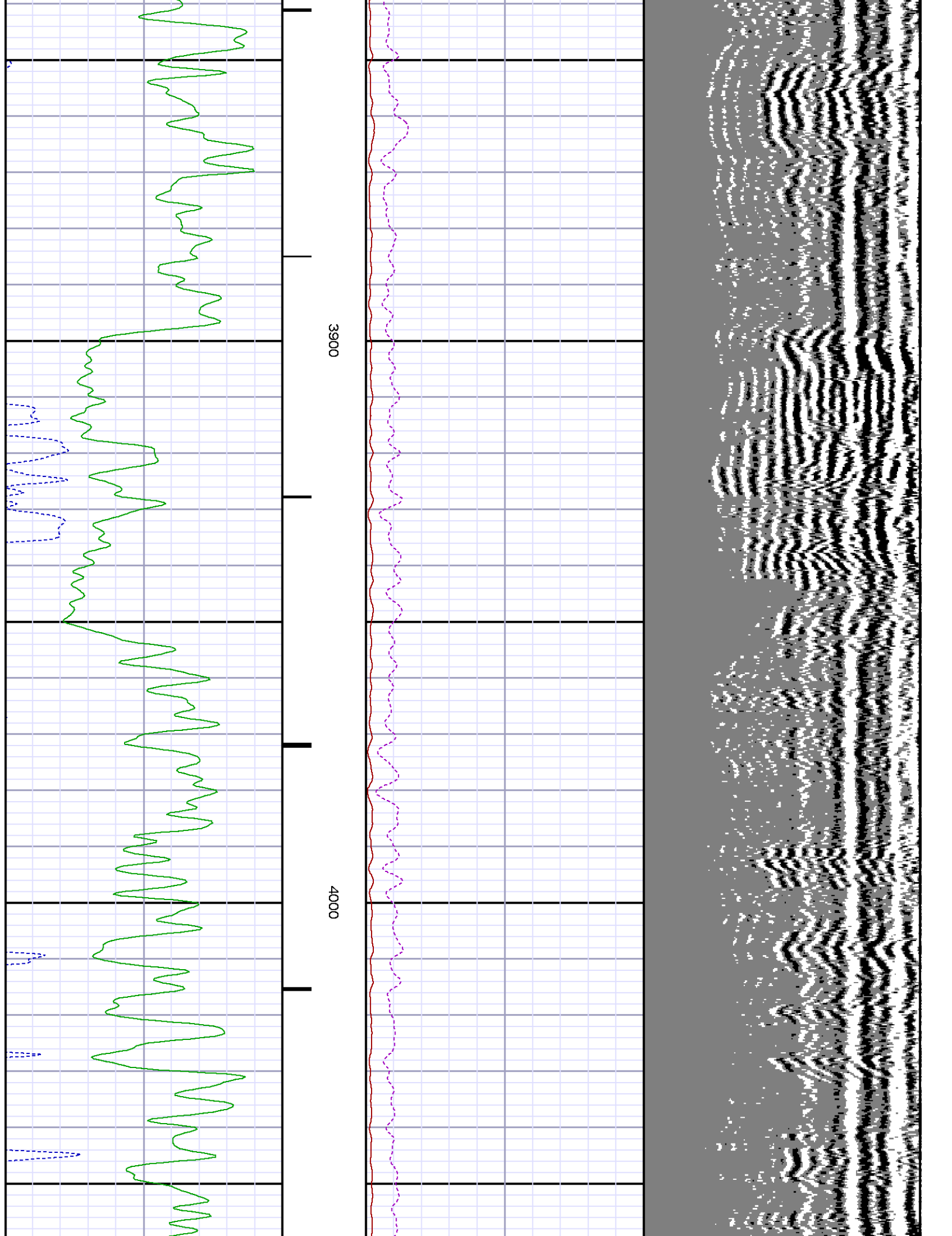


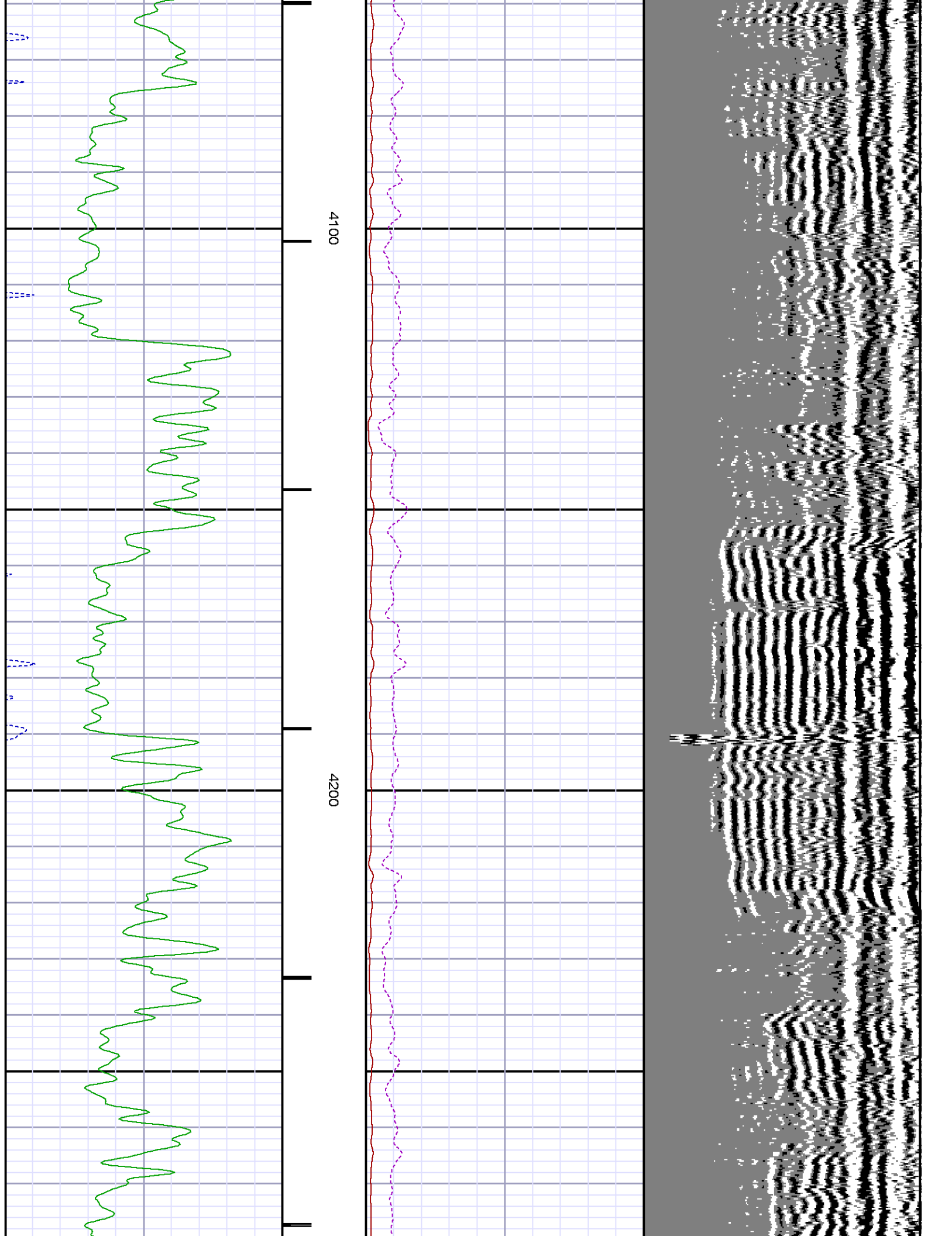


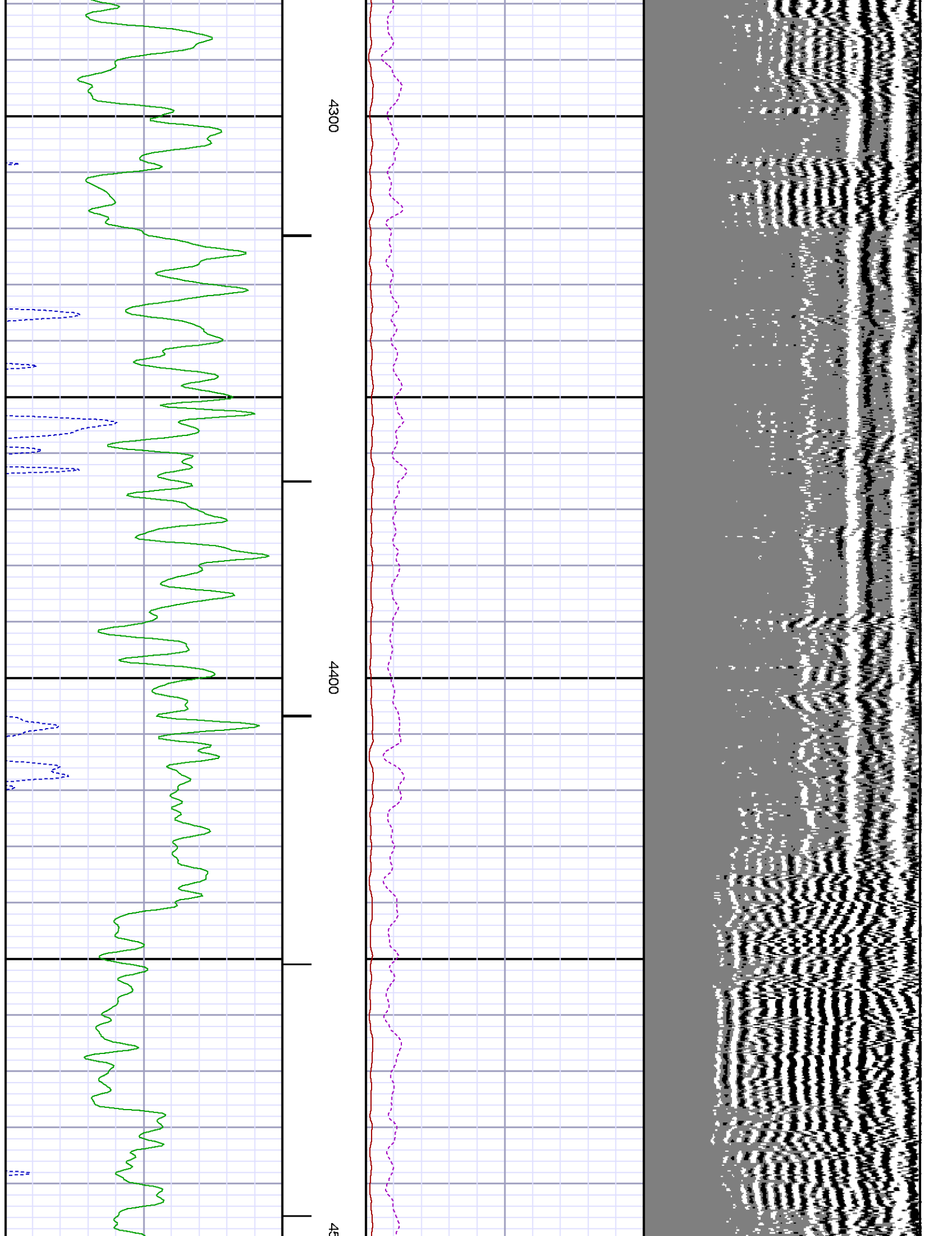


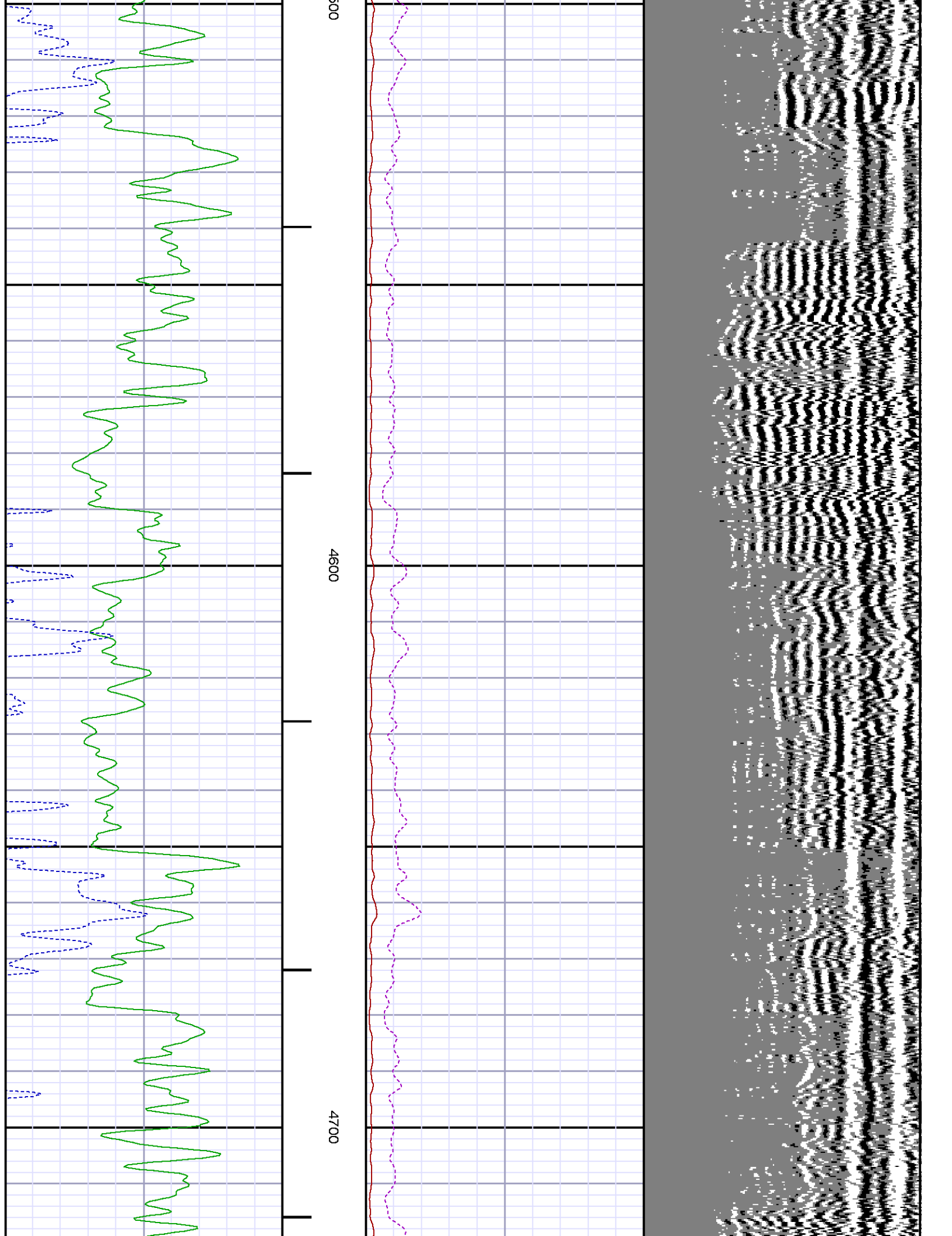


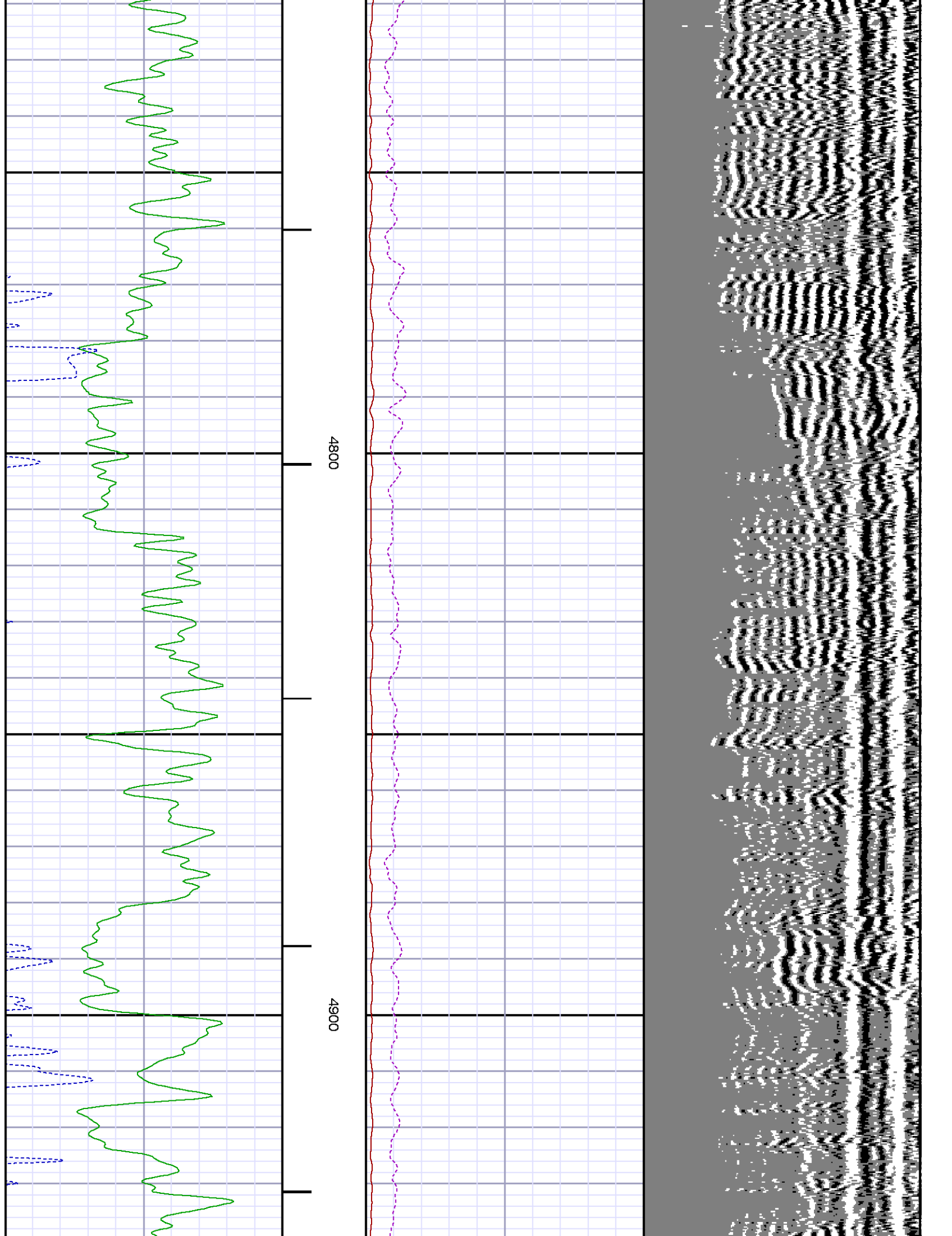


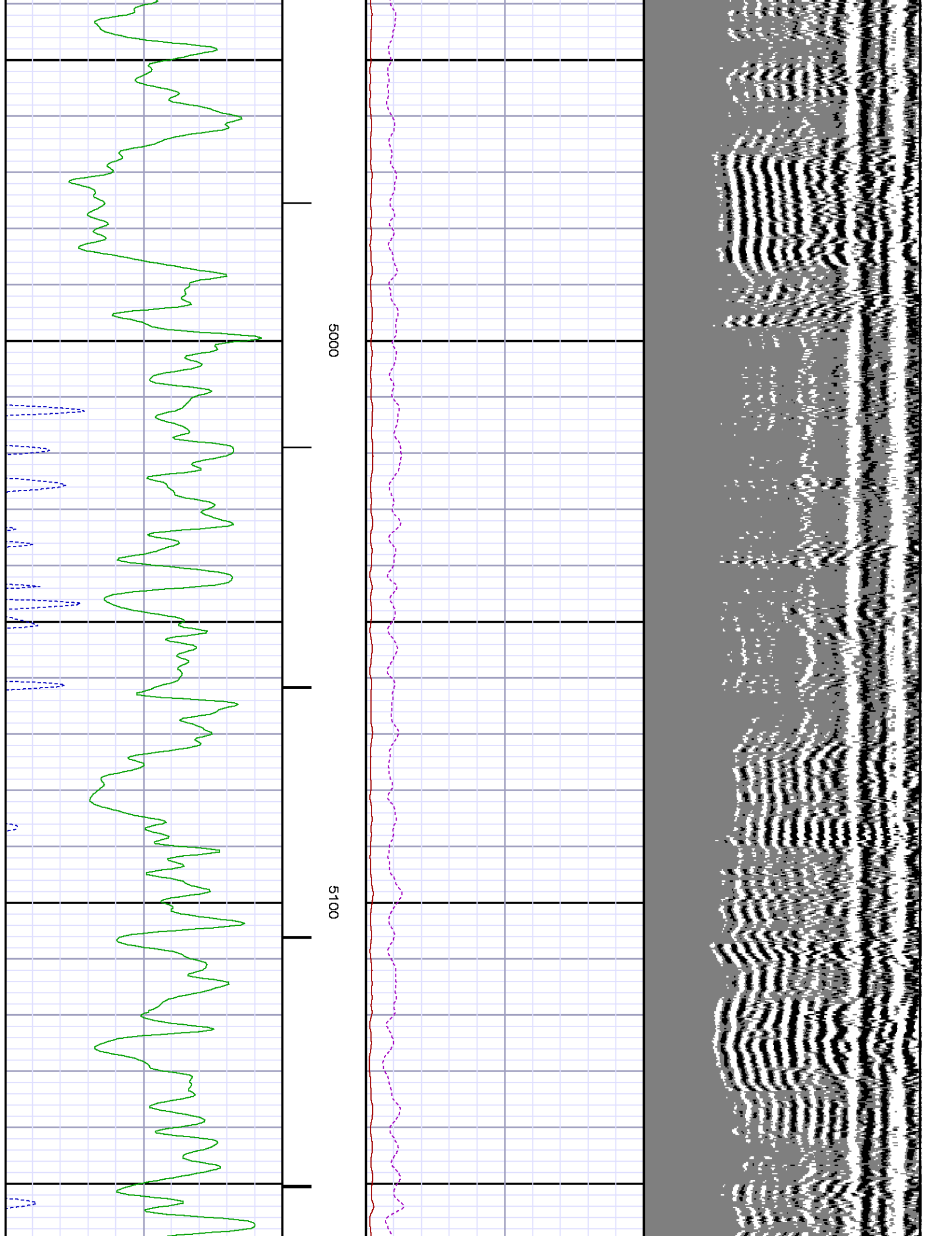


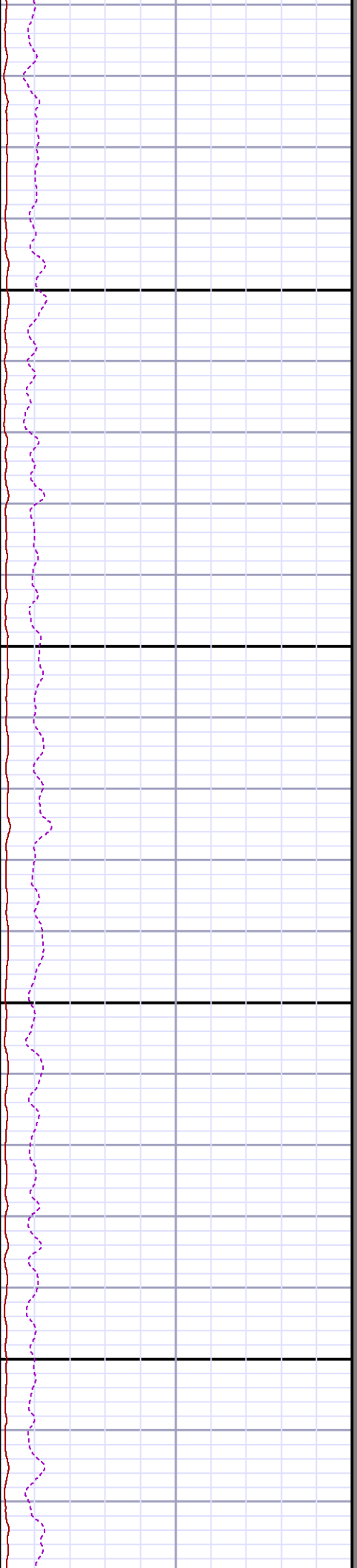
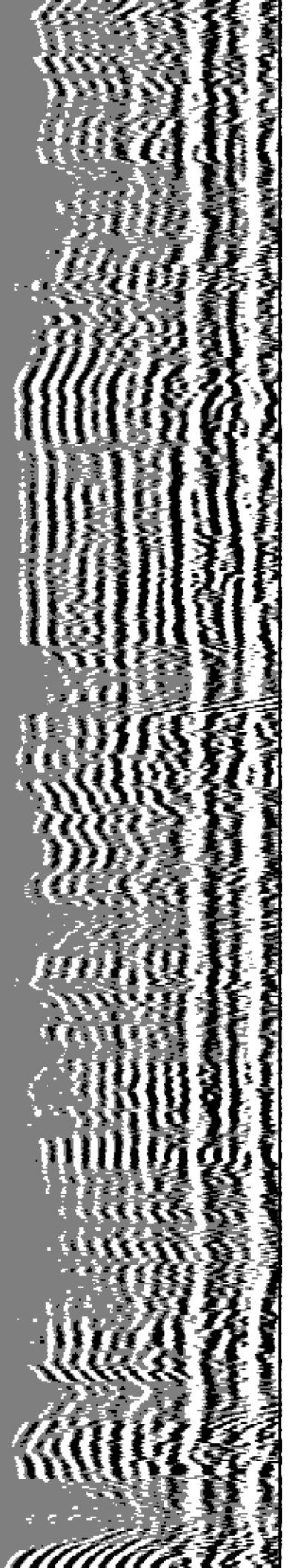






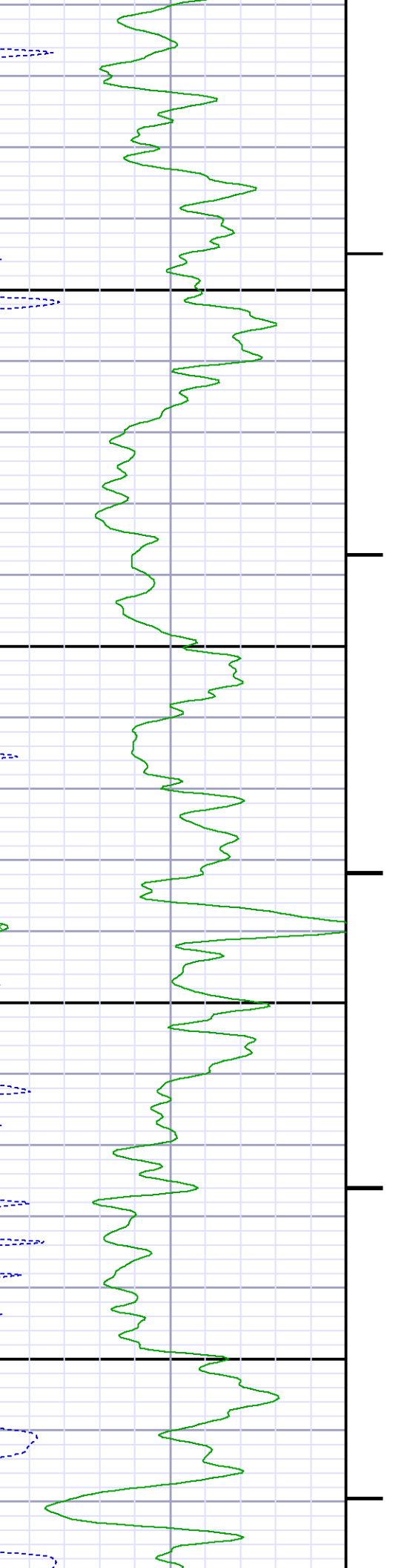


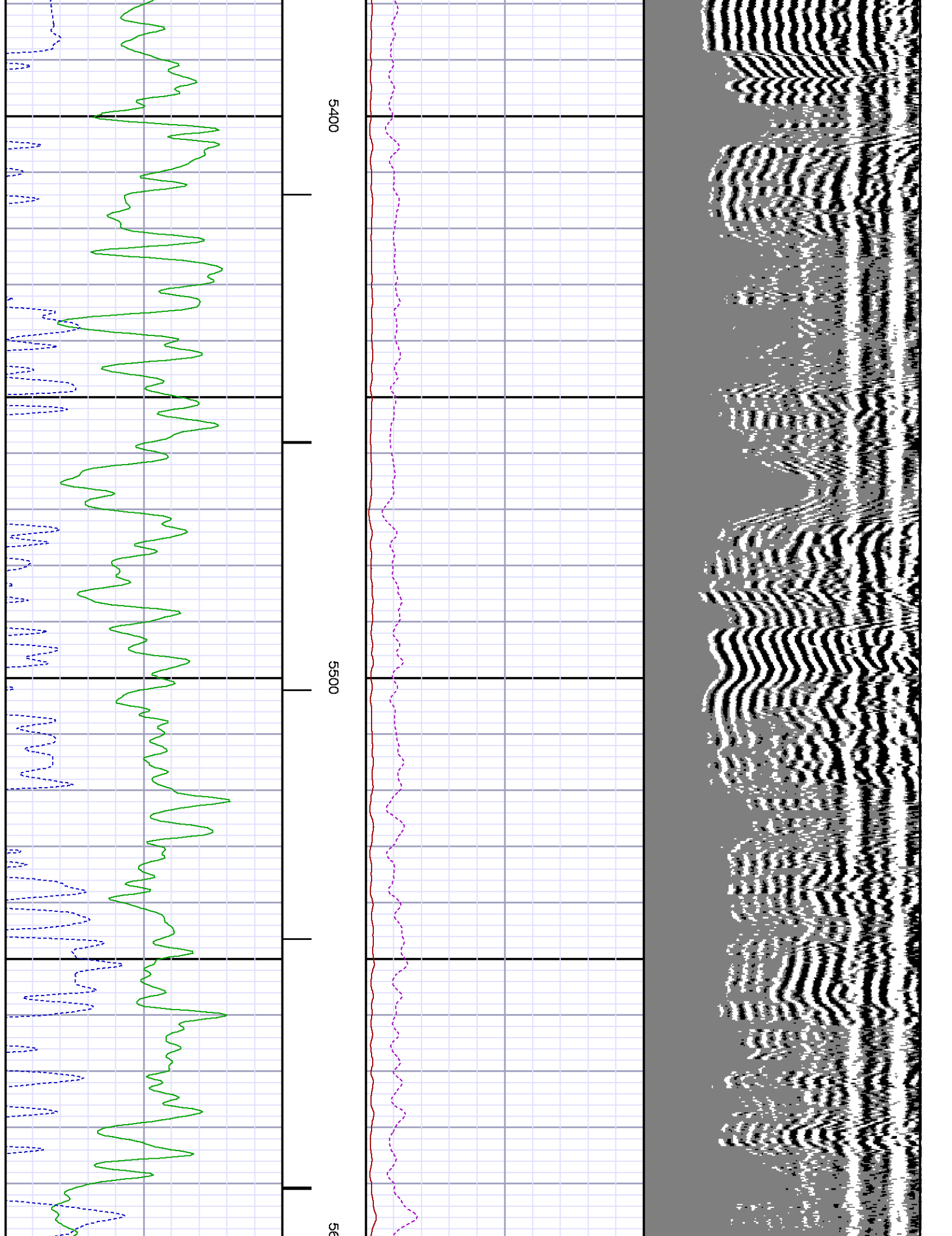


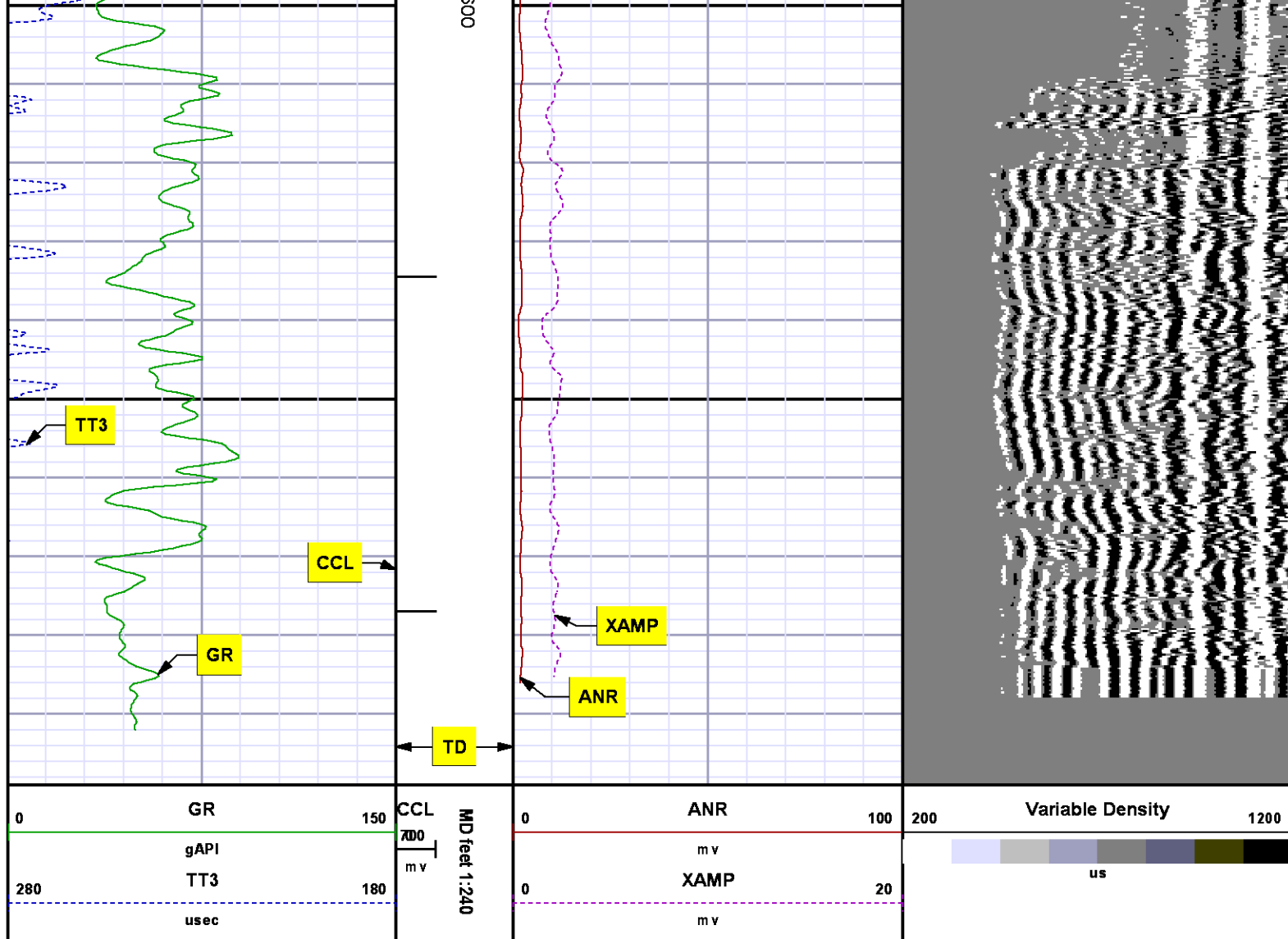


5200

5300







SECONDARY PRESENTATION 0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	24.910	5689.500
RAL	Amp Gate Start Near	195.000	usec	24.910	5689.500
RAL	Amp Gate Start Radial	195.000	usec	24.910	5689.500
RAL	Amp Gate Width Far	25.000	usec	24.910	5689.500
RAL	Amp Gate Width Near	25.000	usec	24.910	5689.500
RAL	Amp Gate Width Radial	25.000	usec	24.910	5689.500

RAL	casing od	4.500	inches	24.910	5689.500
RAL	casing wt	11.600	lbm/ft	24.910	5689.500
RAL	FB Start Far	291.900	usec	24.910	5689.500
RAL	FB Start Near	175.391	usec	24.910	5689.500
RAL	FB Start Radial	175.391	usec	24.910	5689.500
RAL	FB Thresh Far	10.000	mv	24.910	5689.500
RAL	FB Thresh Near	4.000	mv	24.910	5689.500
RAL	FB Thresh Radial	4.000	mv	24.910	5689.500
RAL	Fluid Travel Time	200.000	usec/ft	24.910	5690.254

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-11.360	AFAR	SIG	TT5			
2459XA	-7.250	CCL					
2459XA	-5.390	GR					
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Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

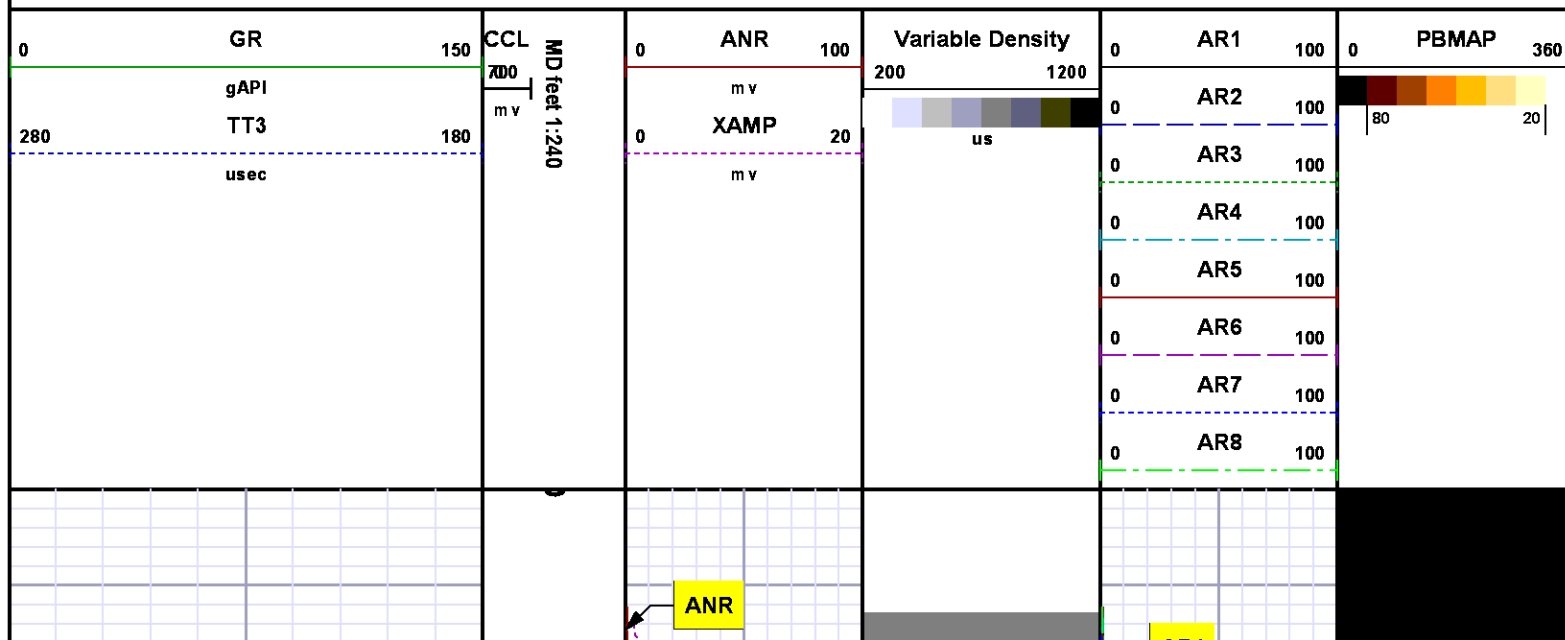
Well : FEDERAL SG 432-28

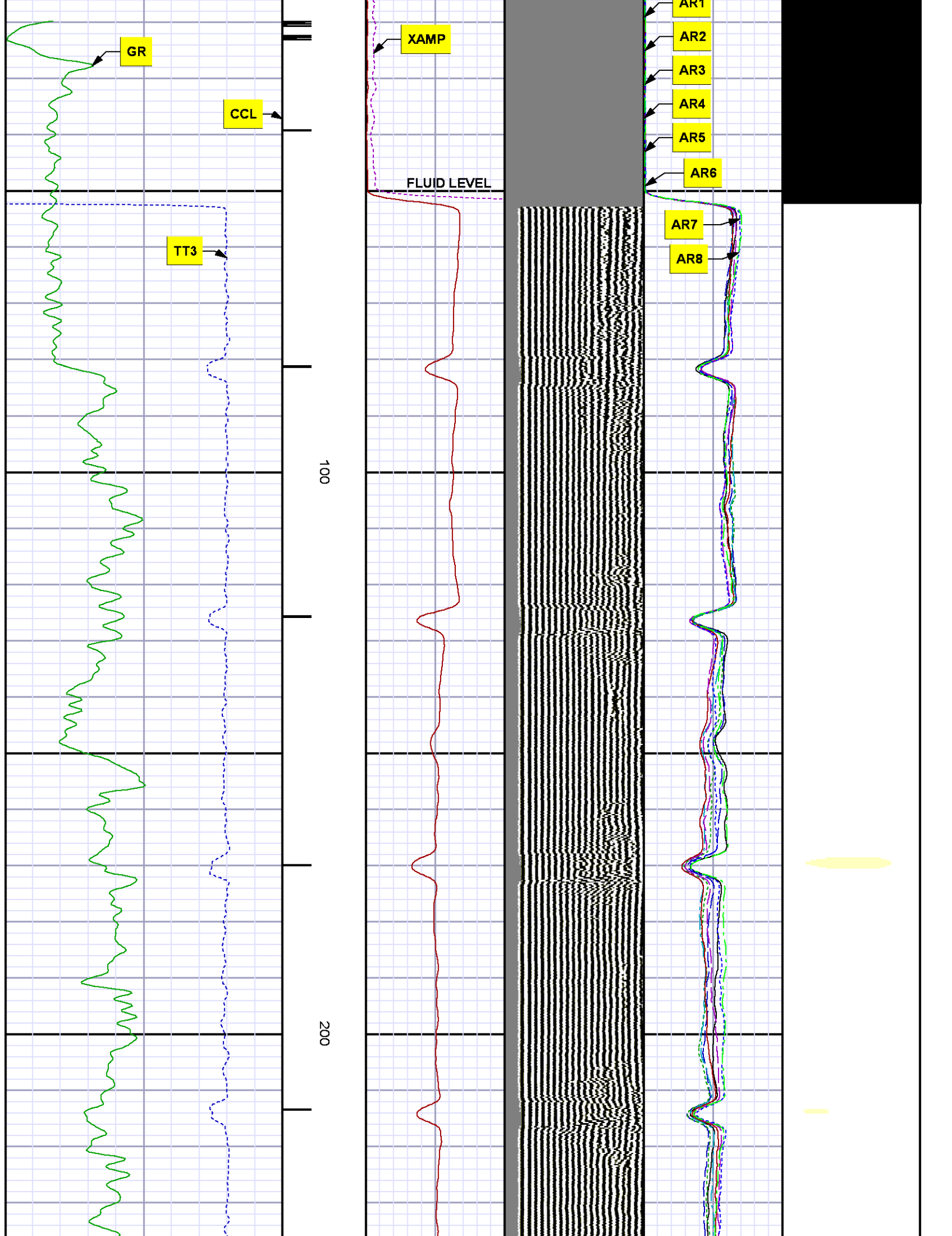
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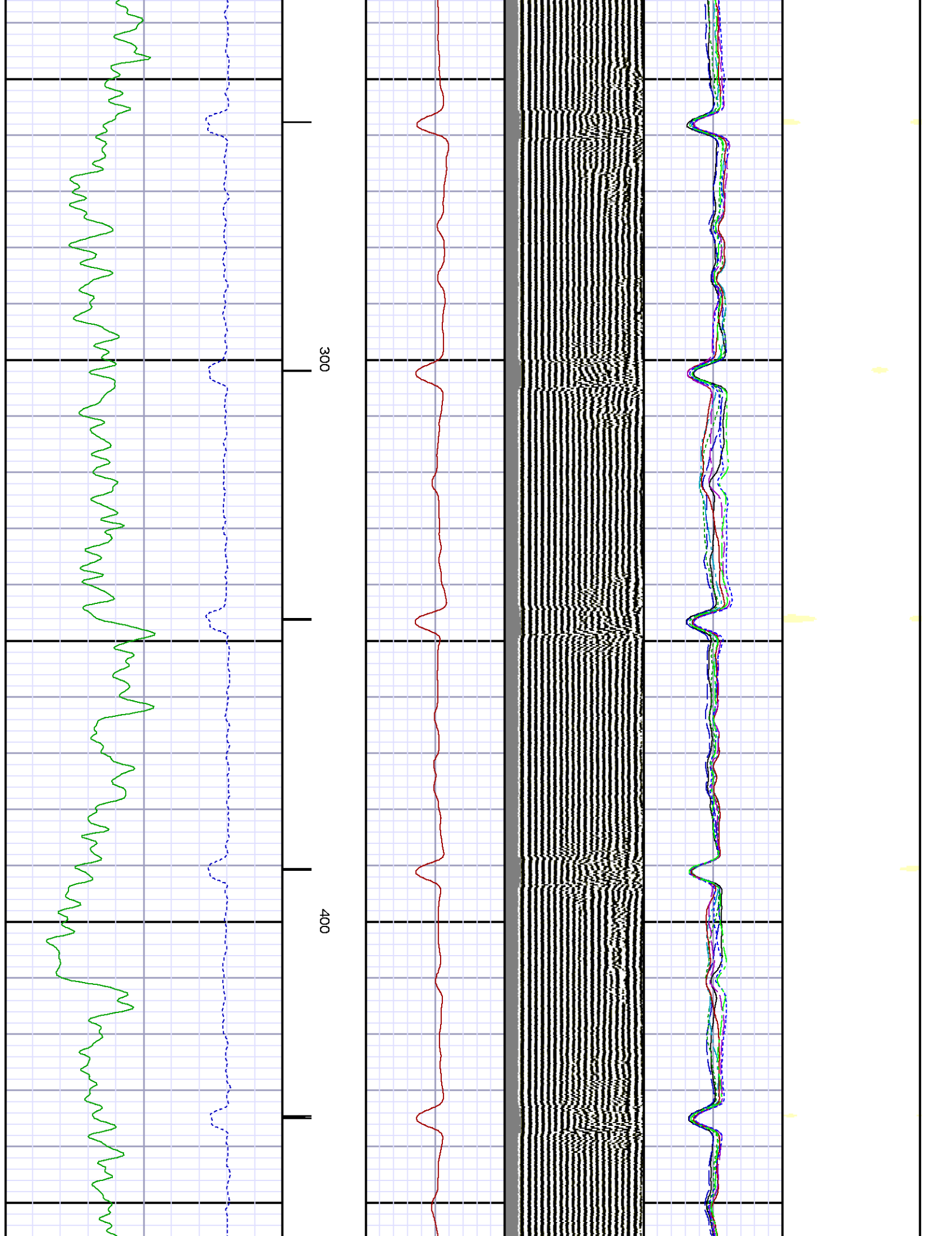
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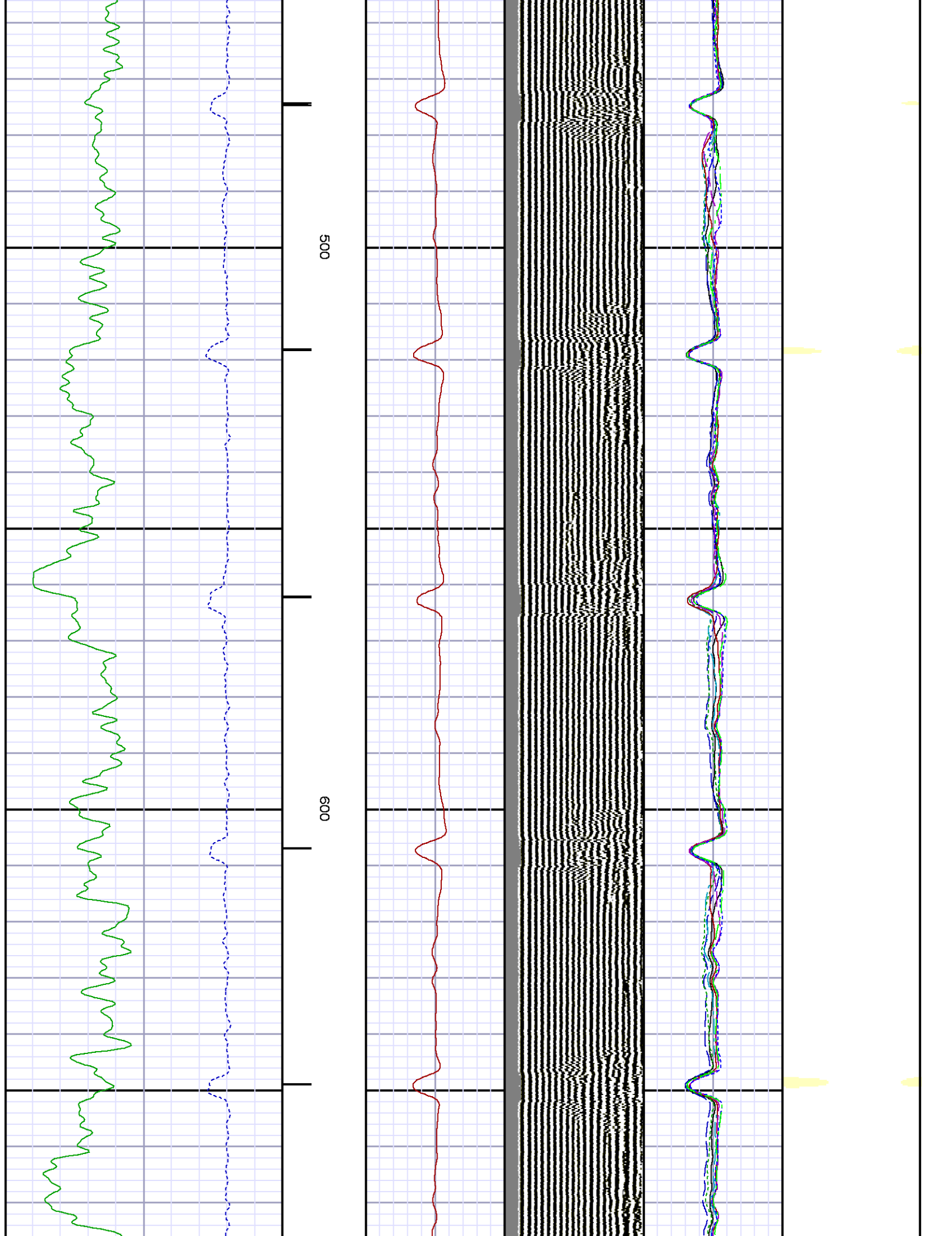
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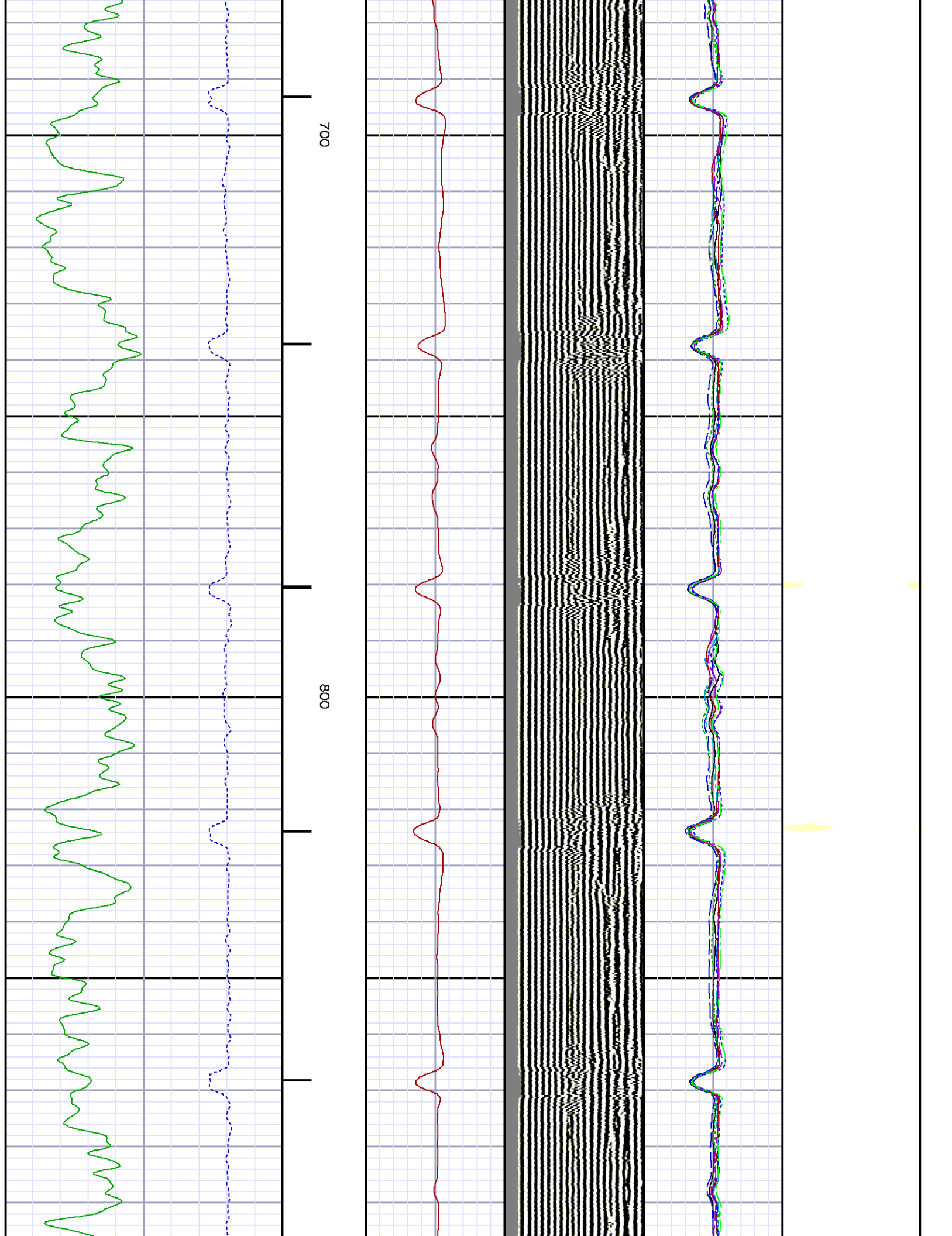
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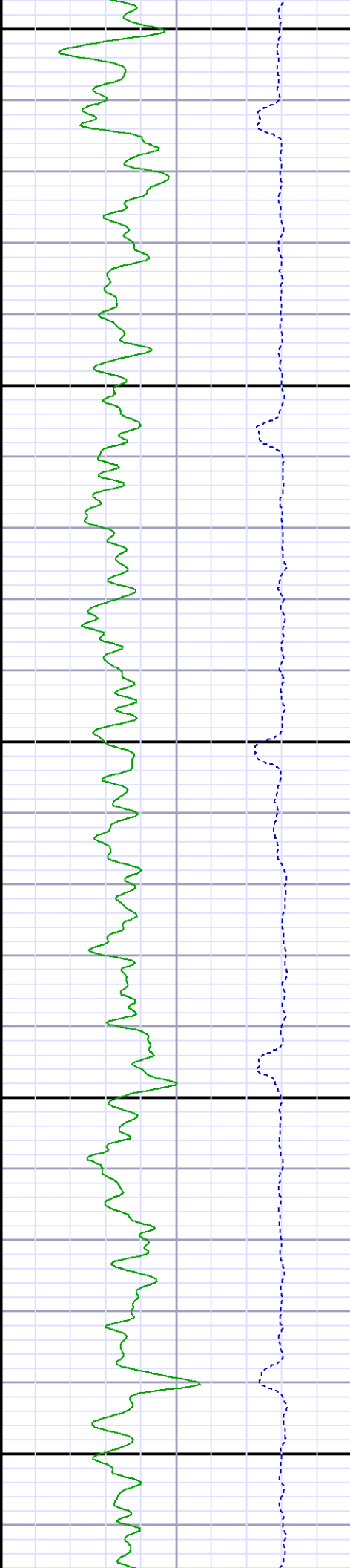
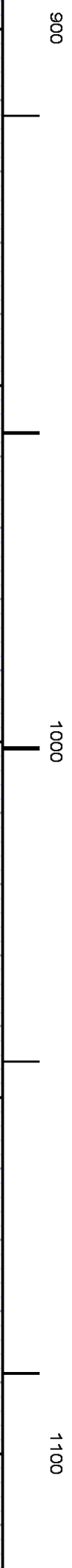
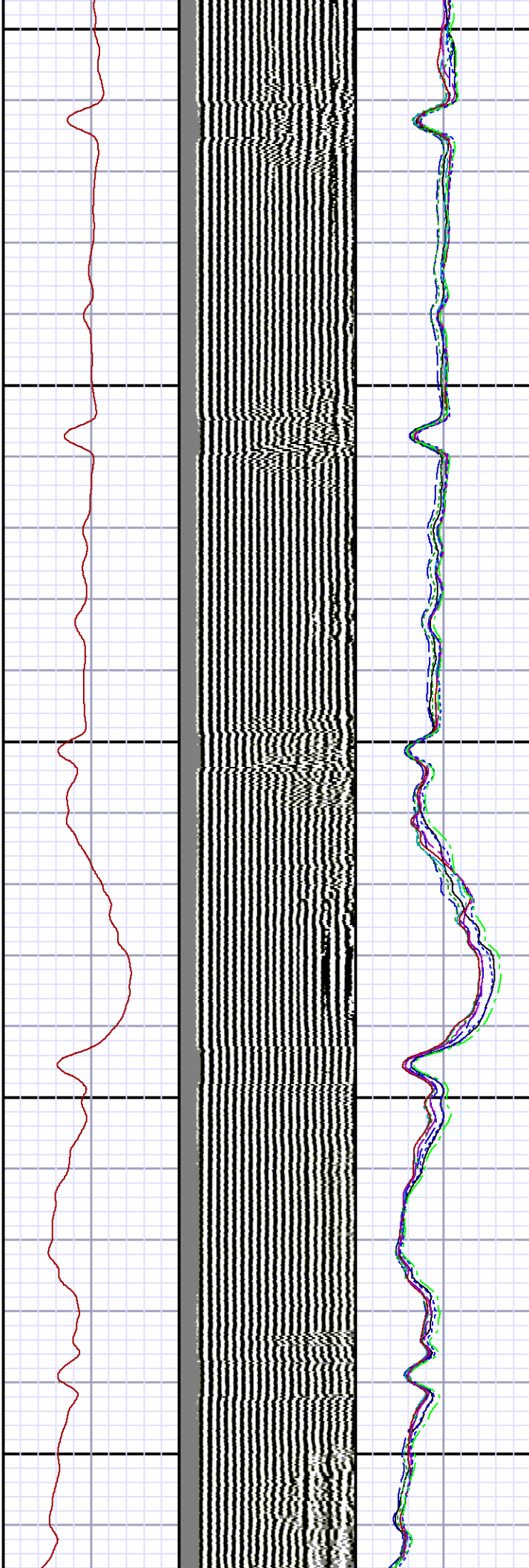
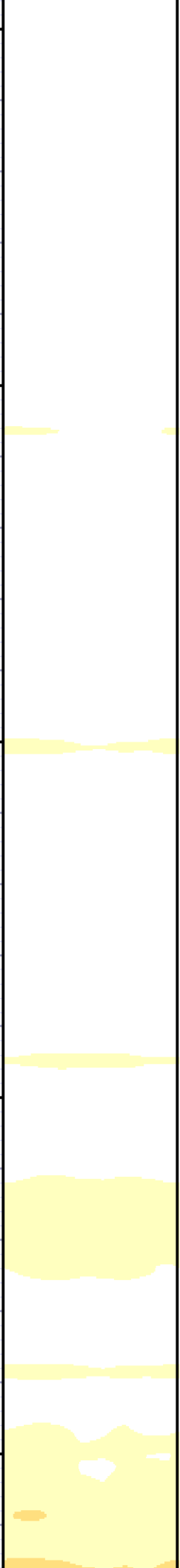


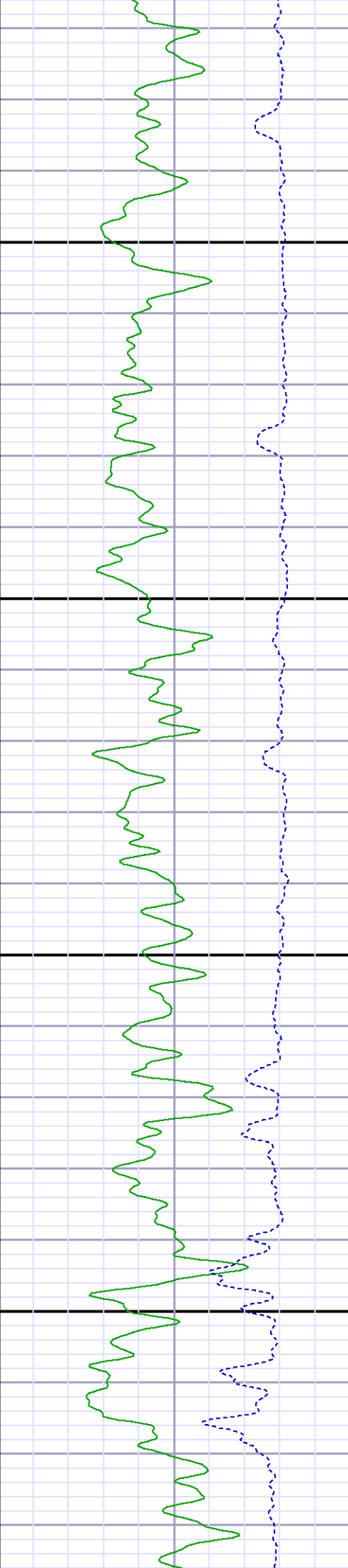
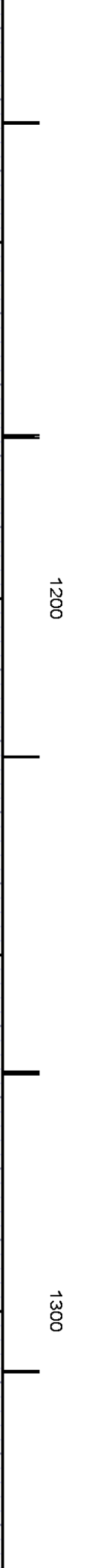
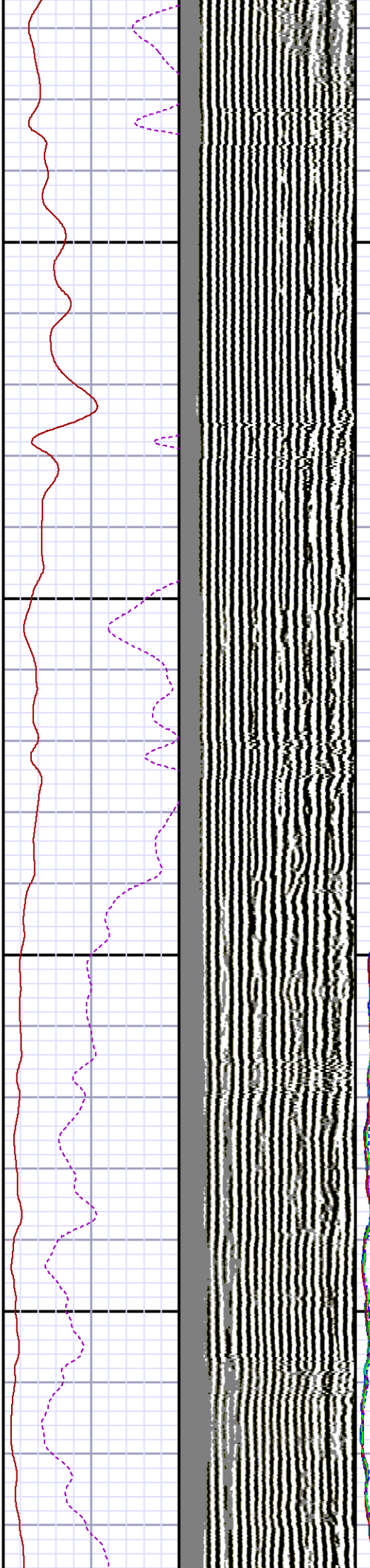
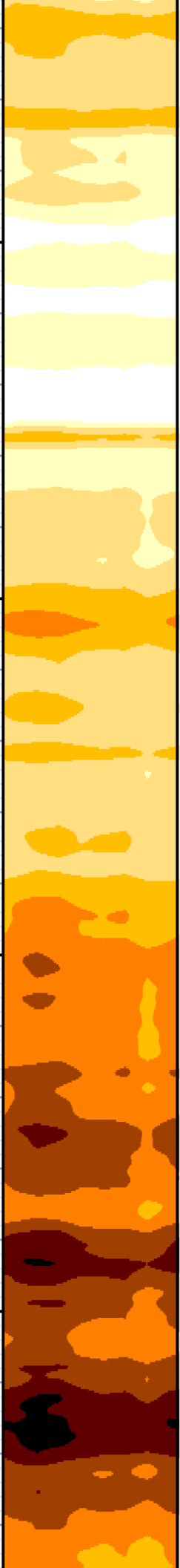


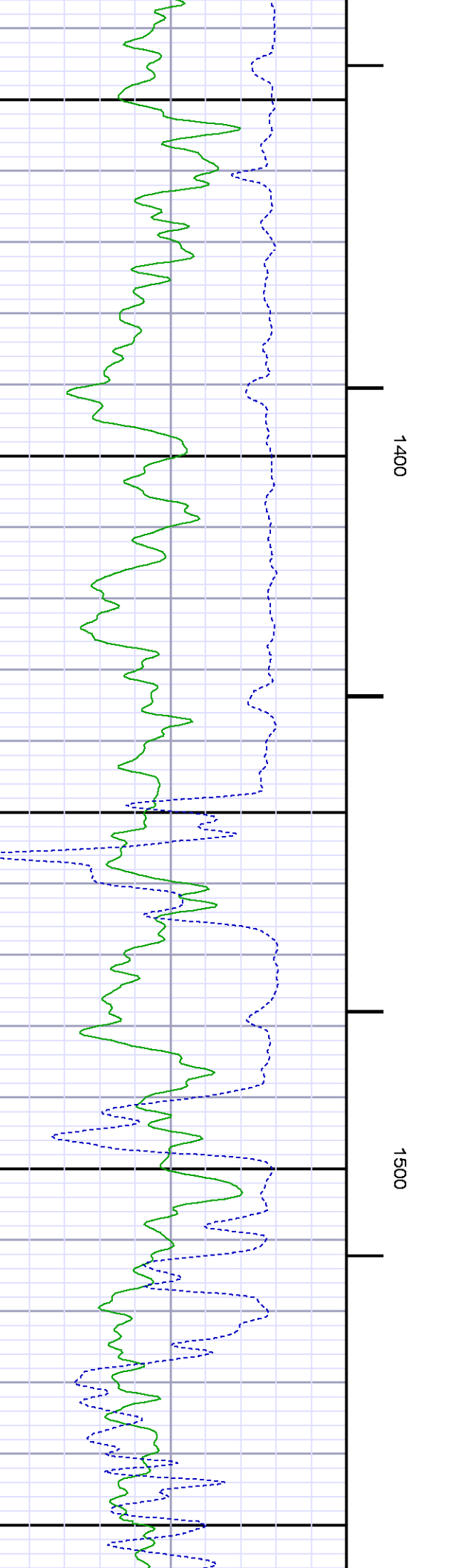
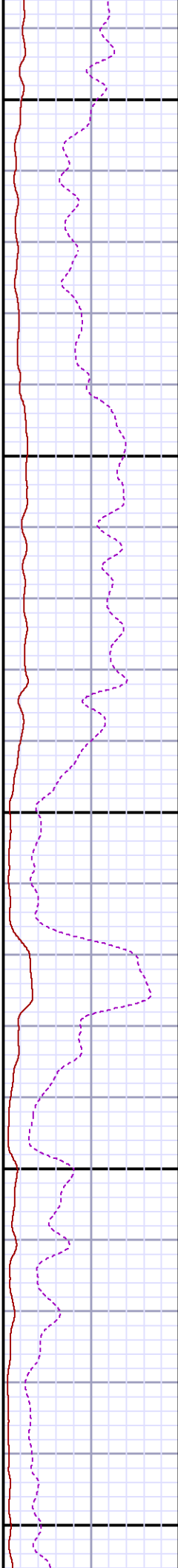
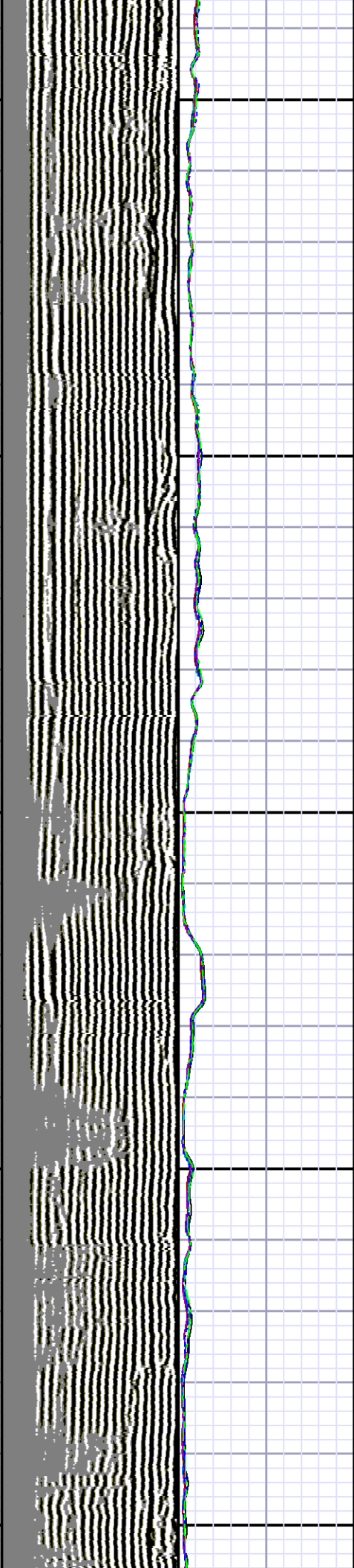


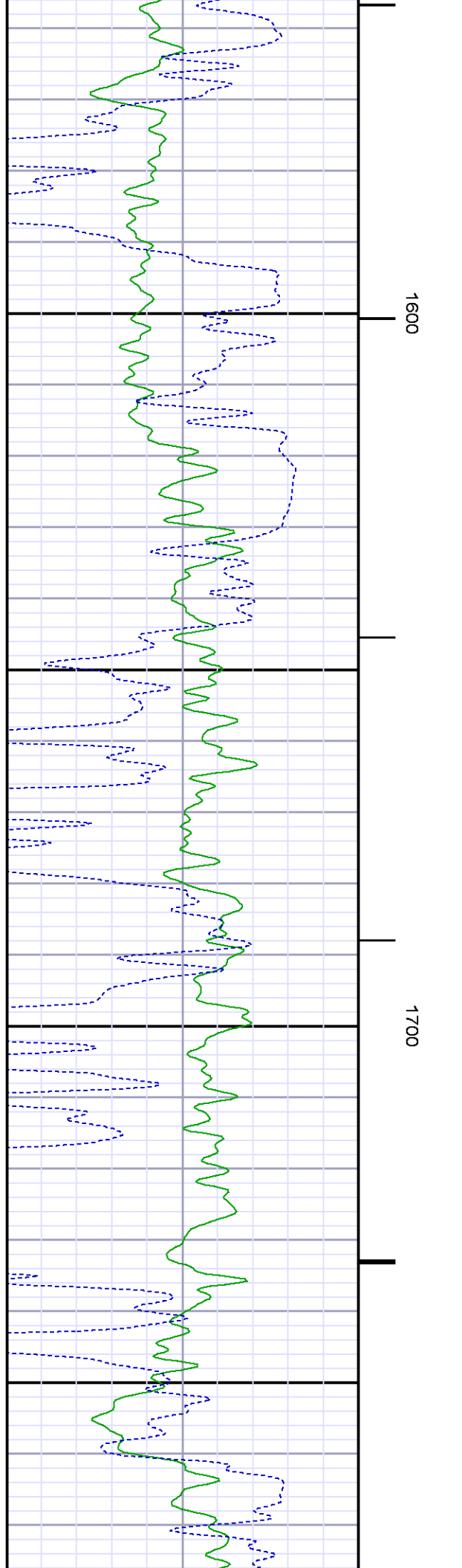
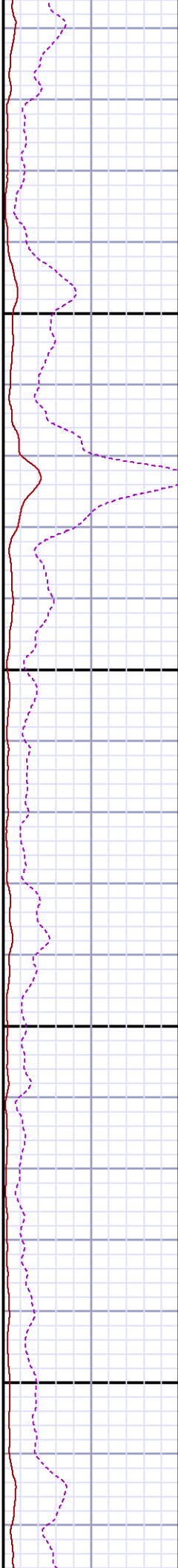
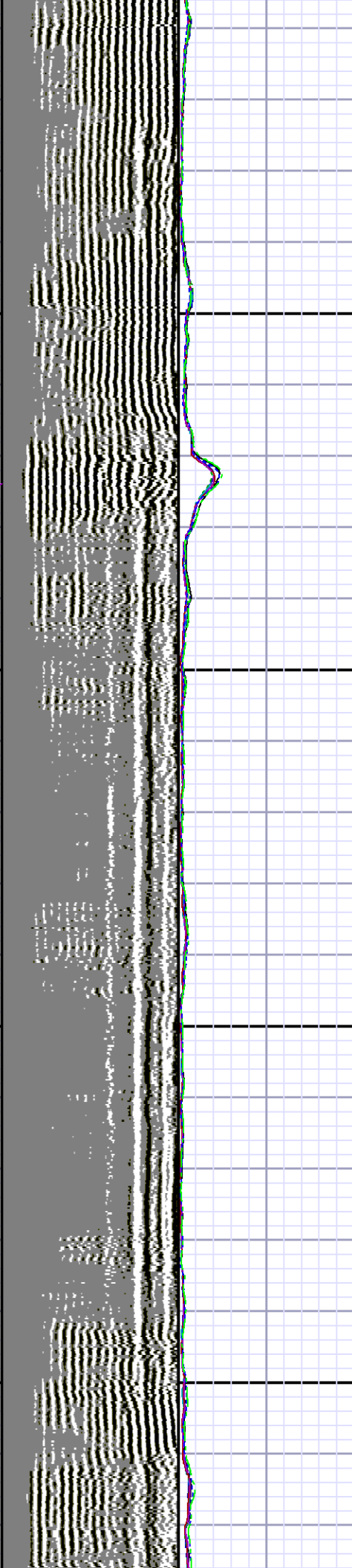
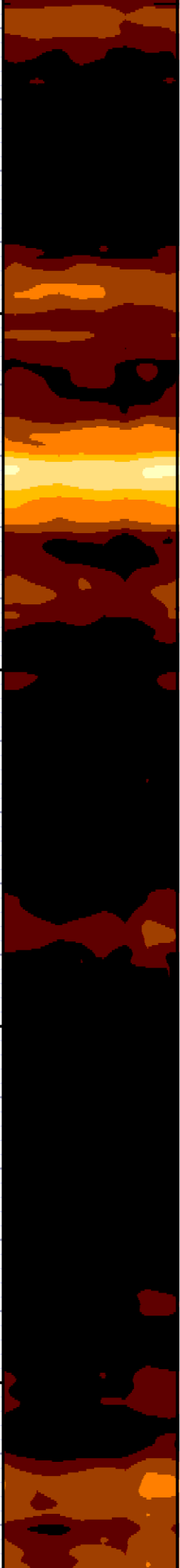


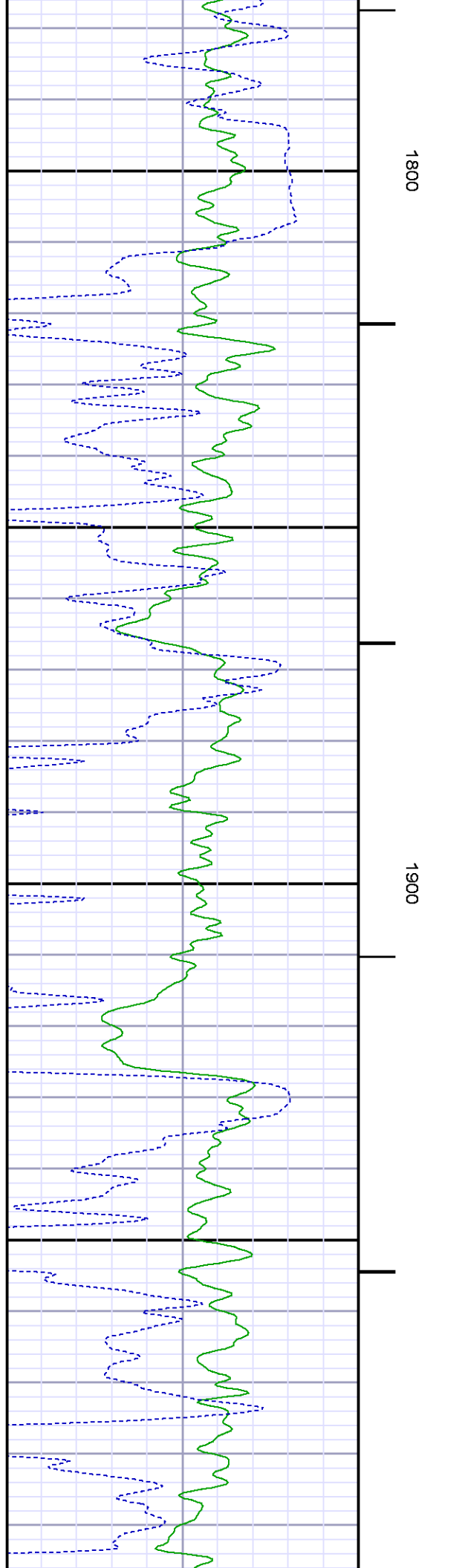
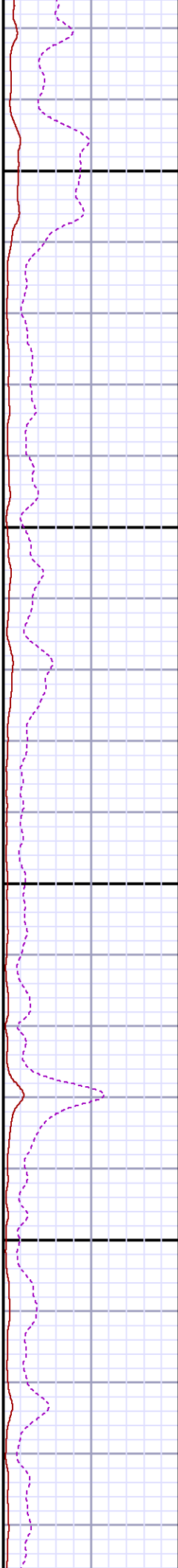
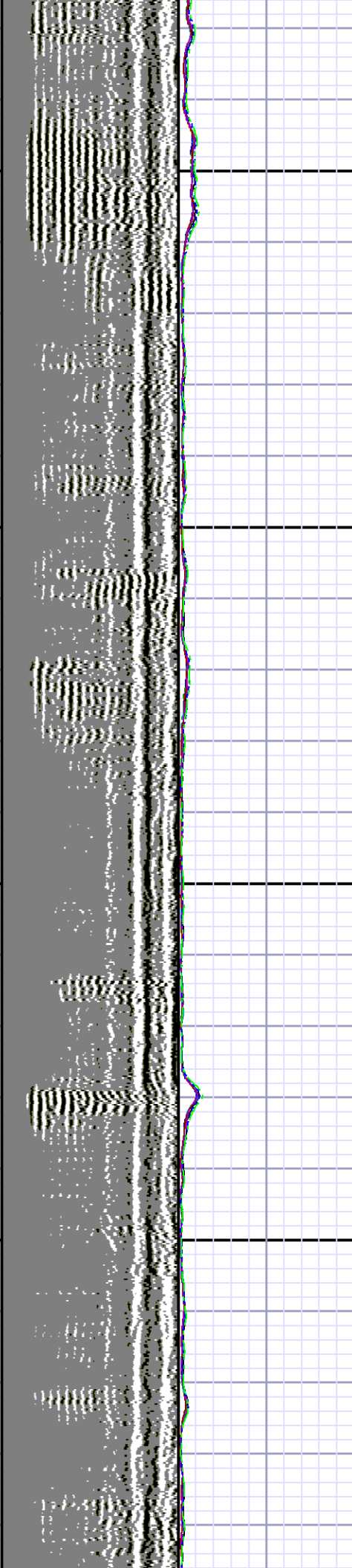
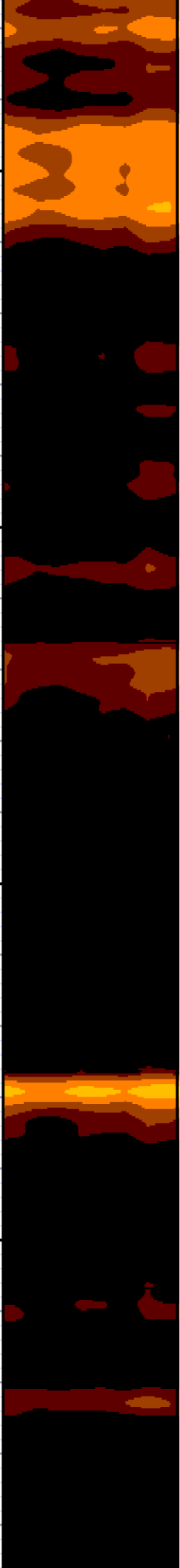


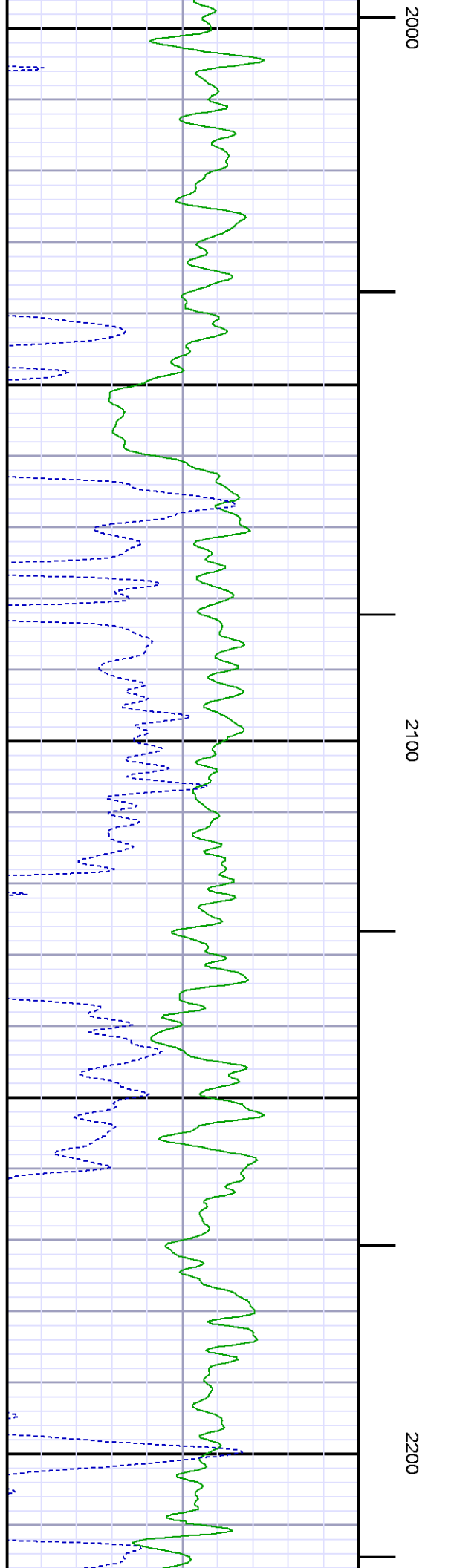
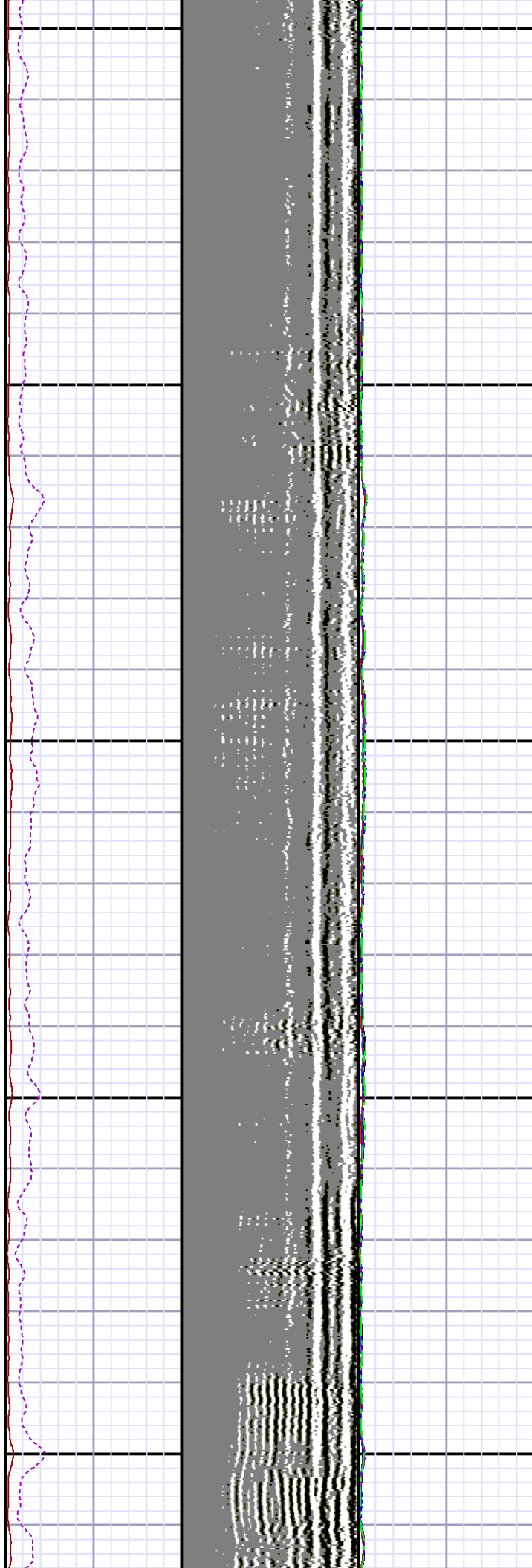


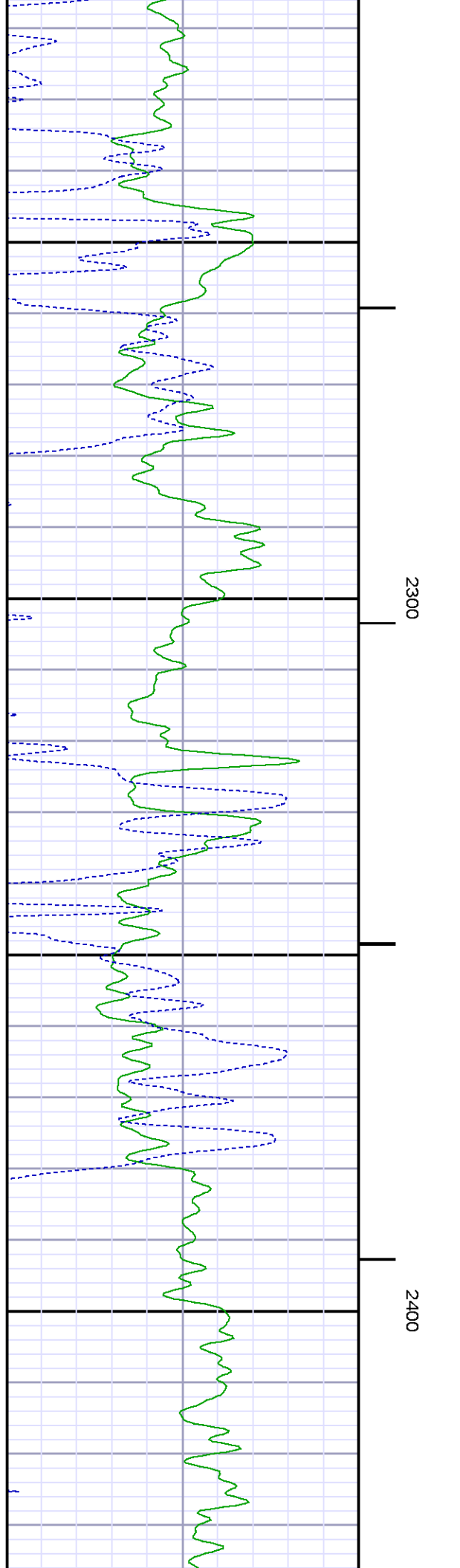
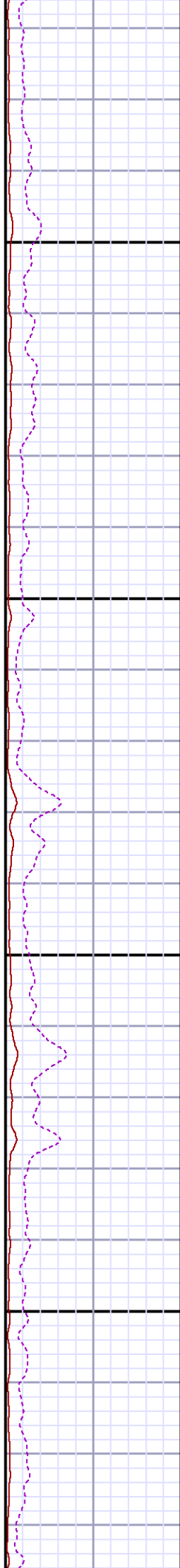
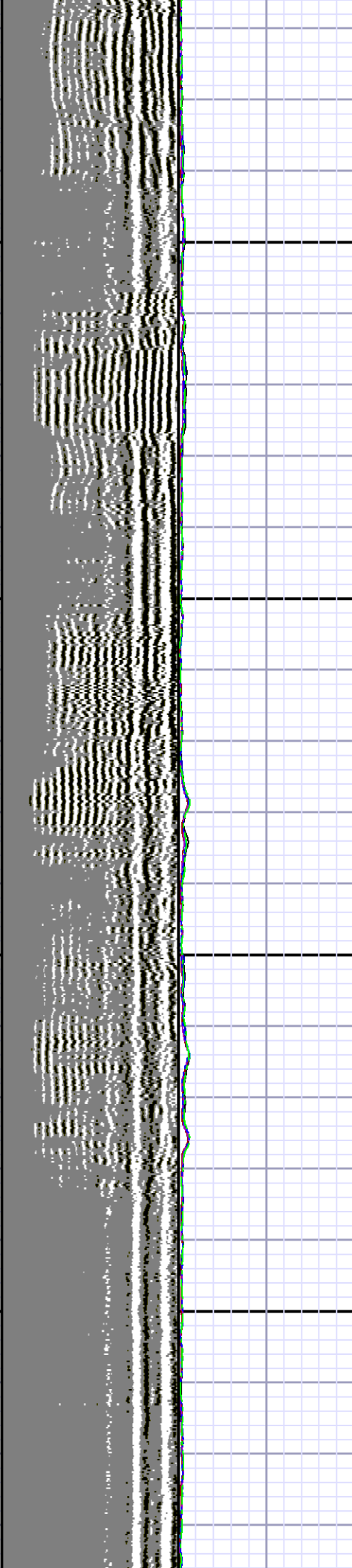
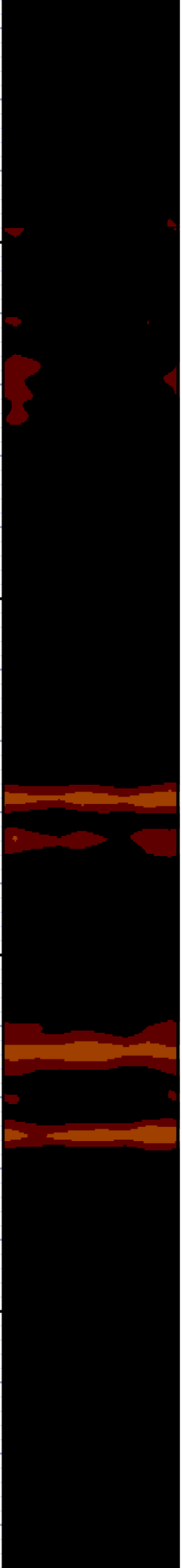


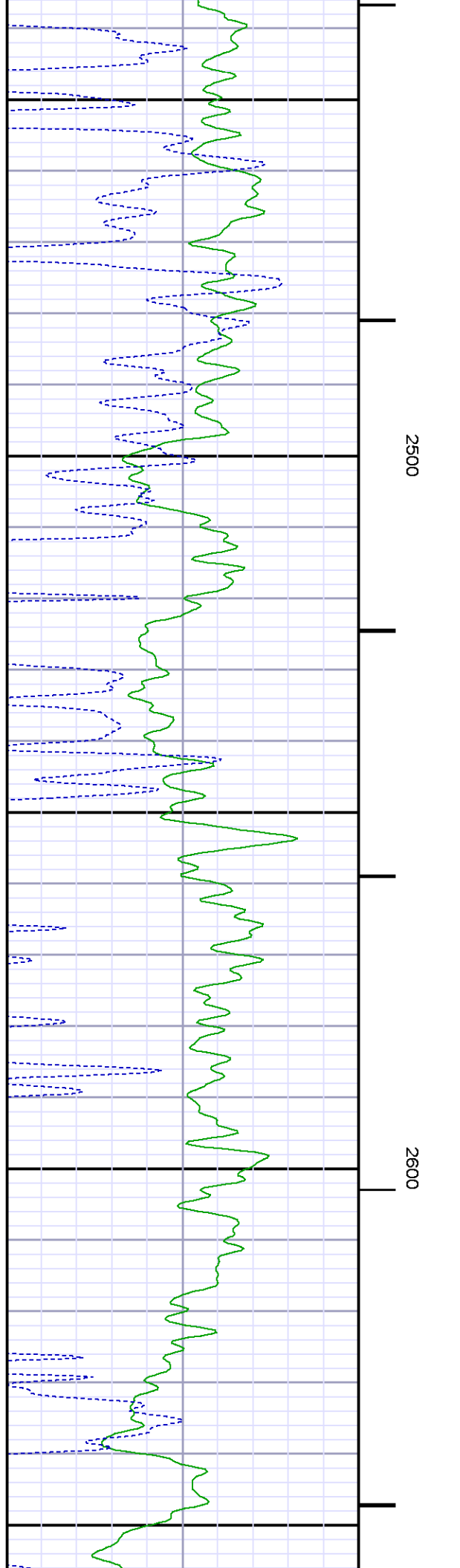
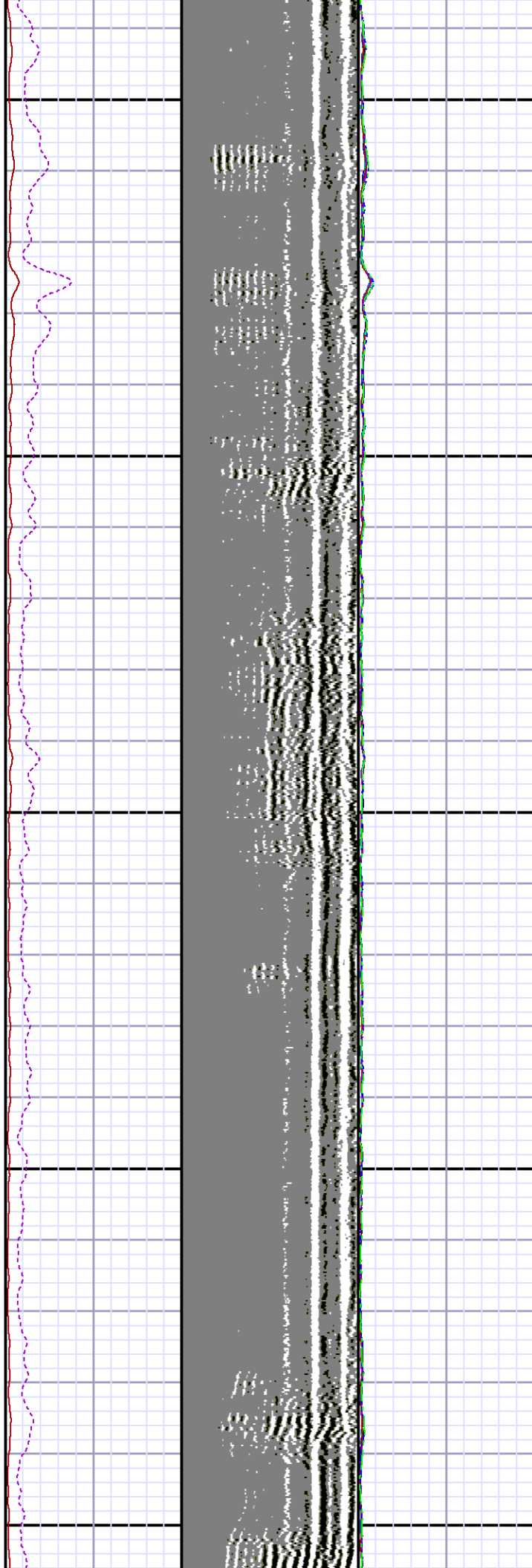


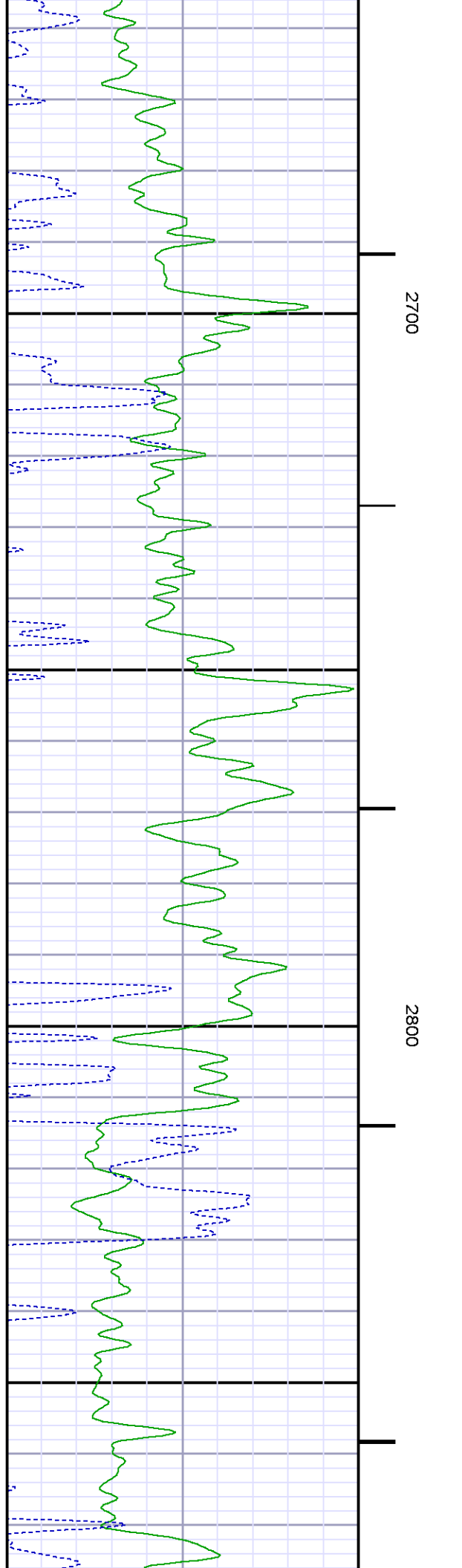
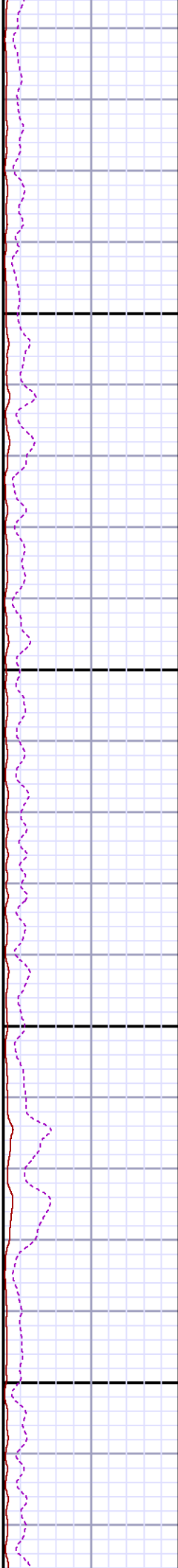
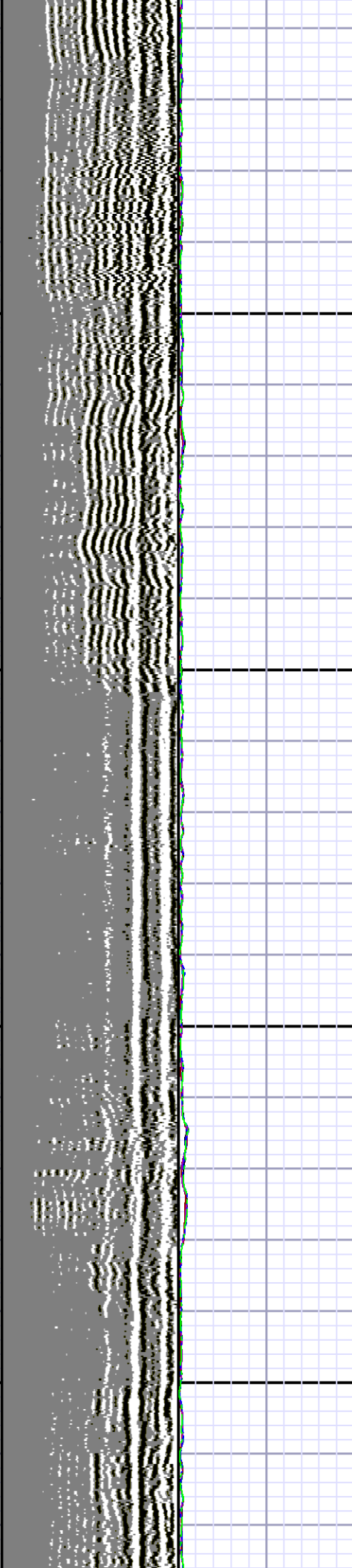


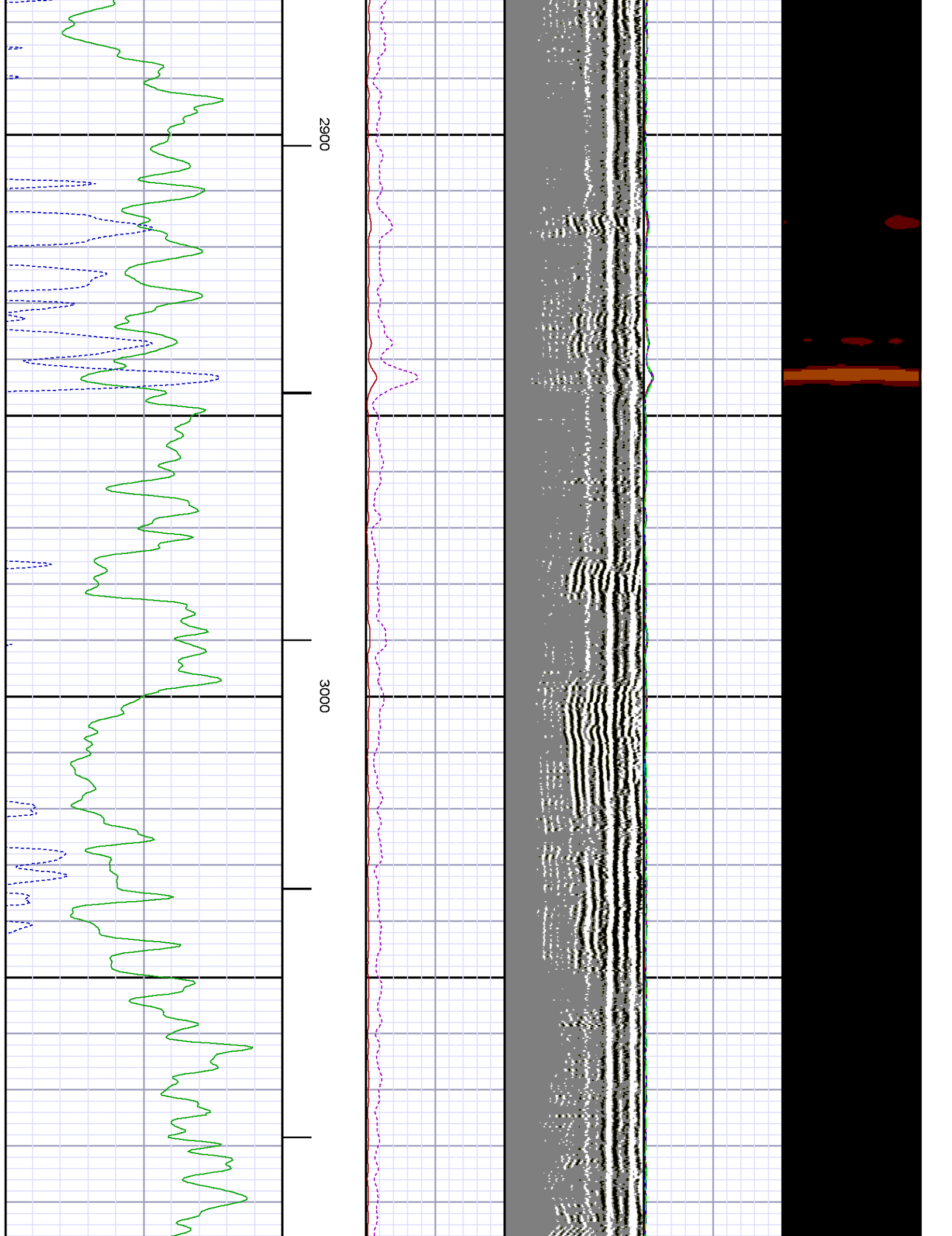


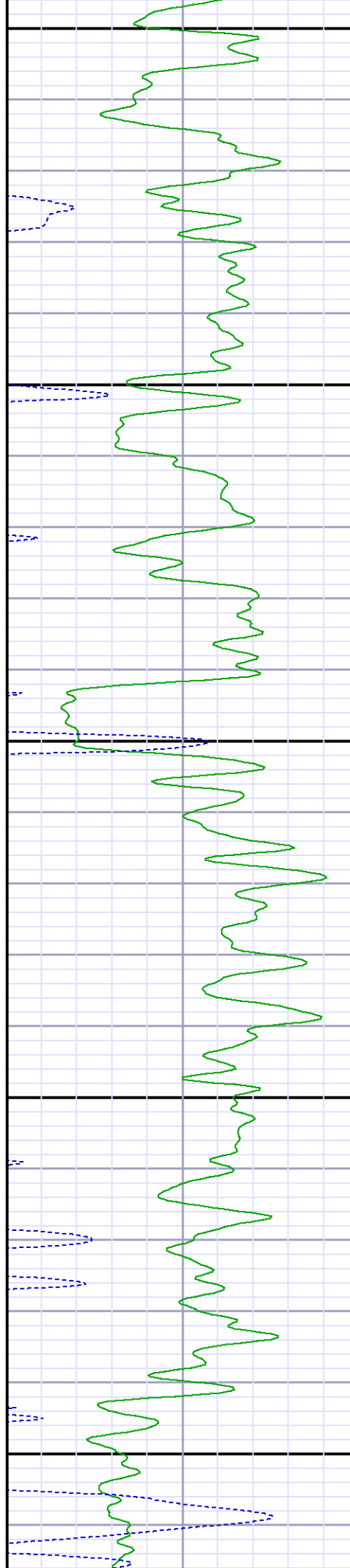
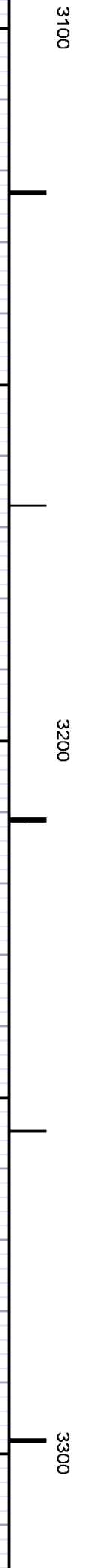
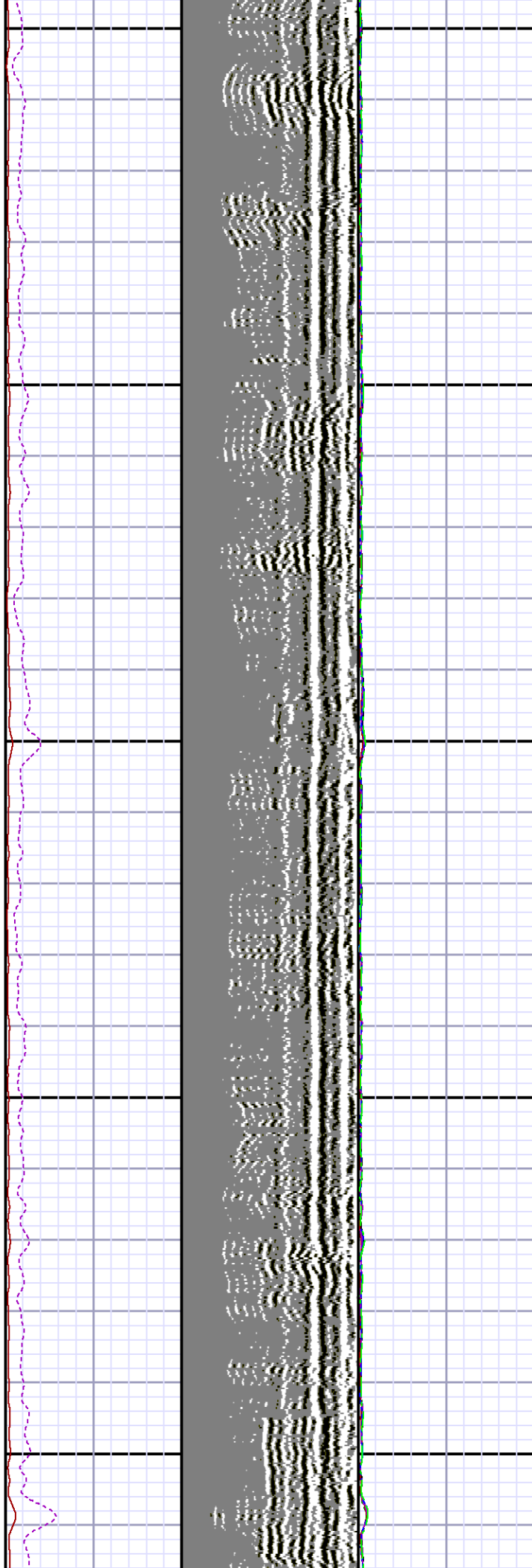


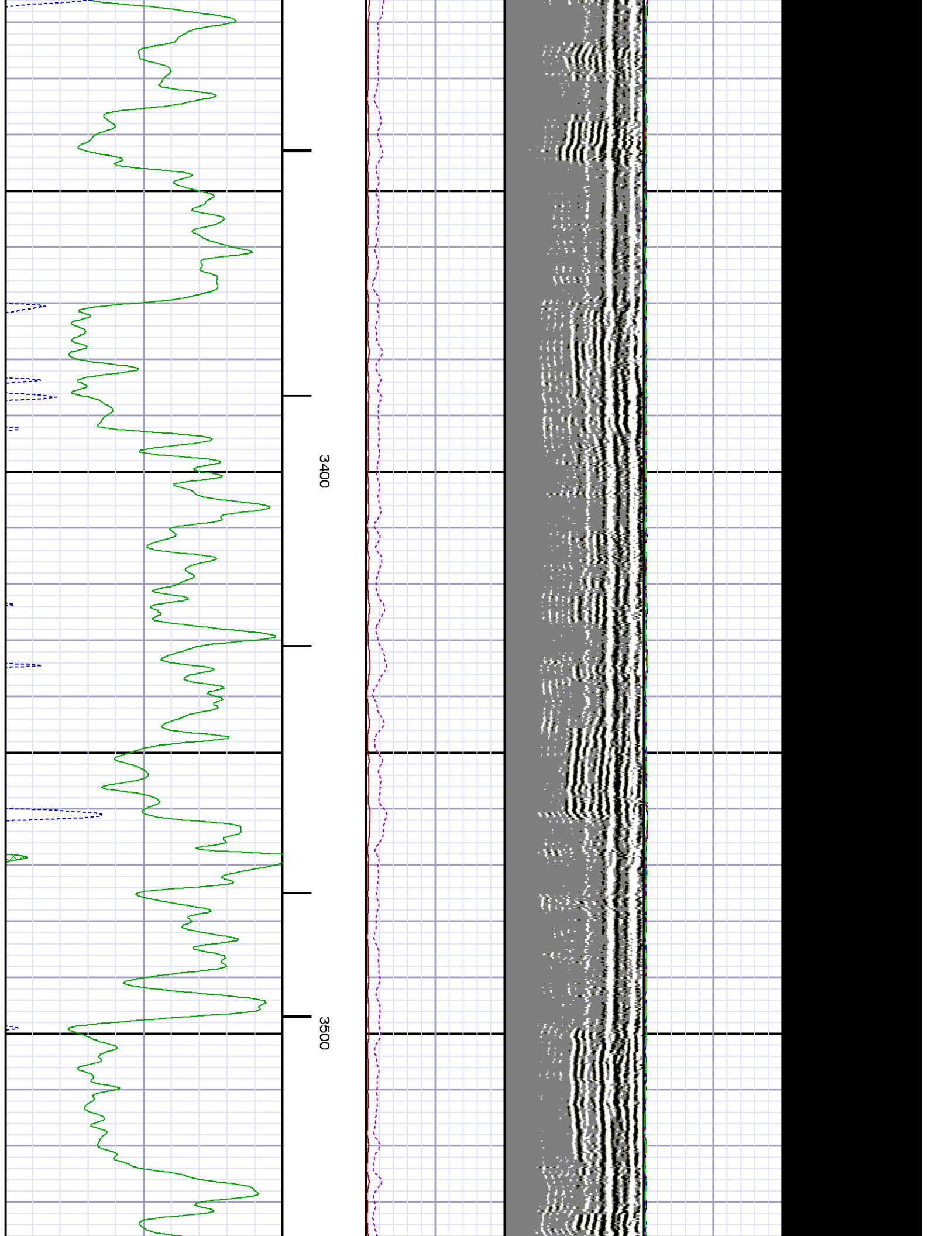


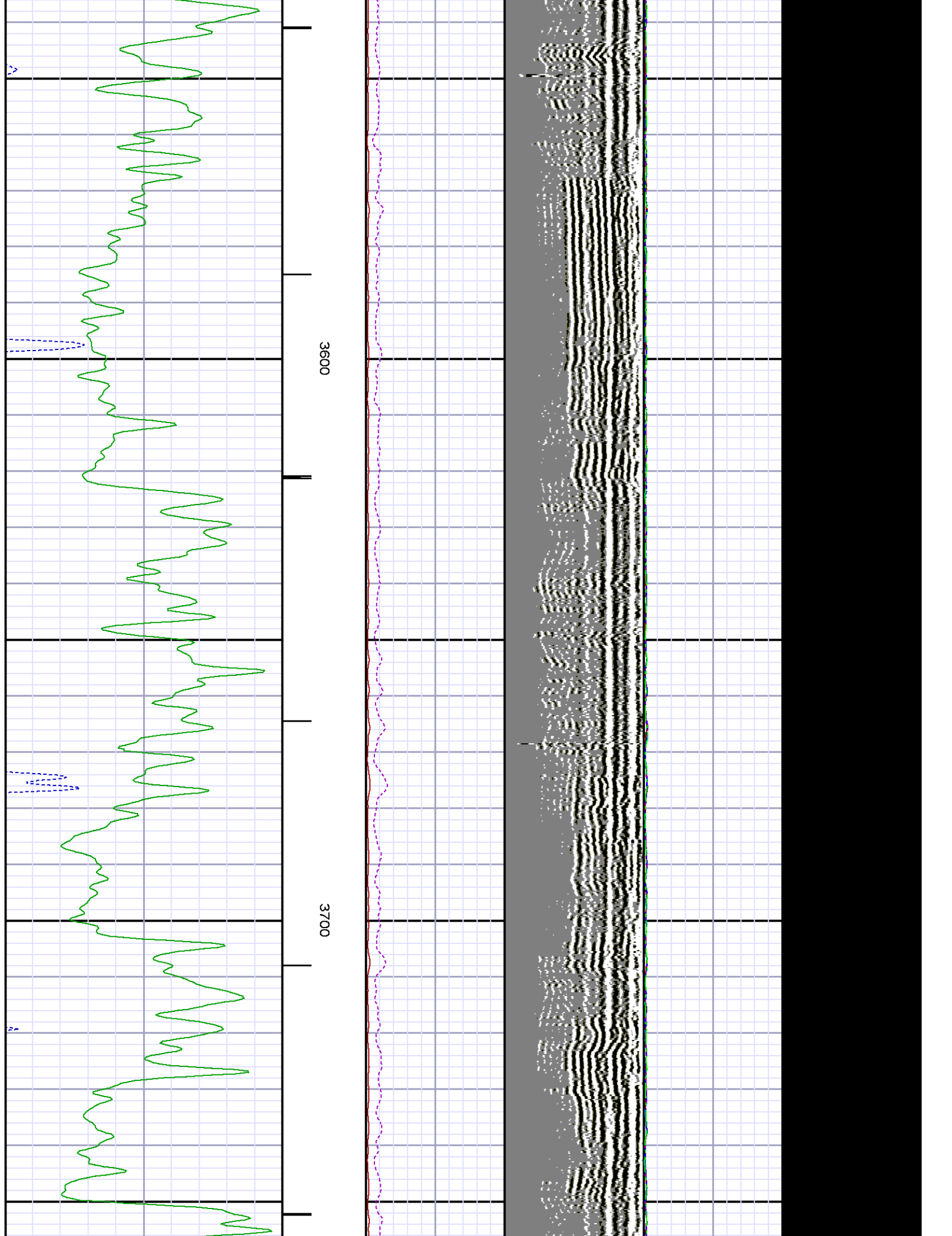


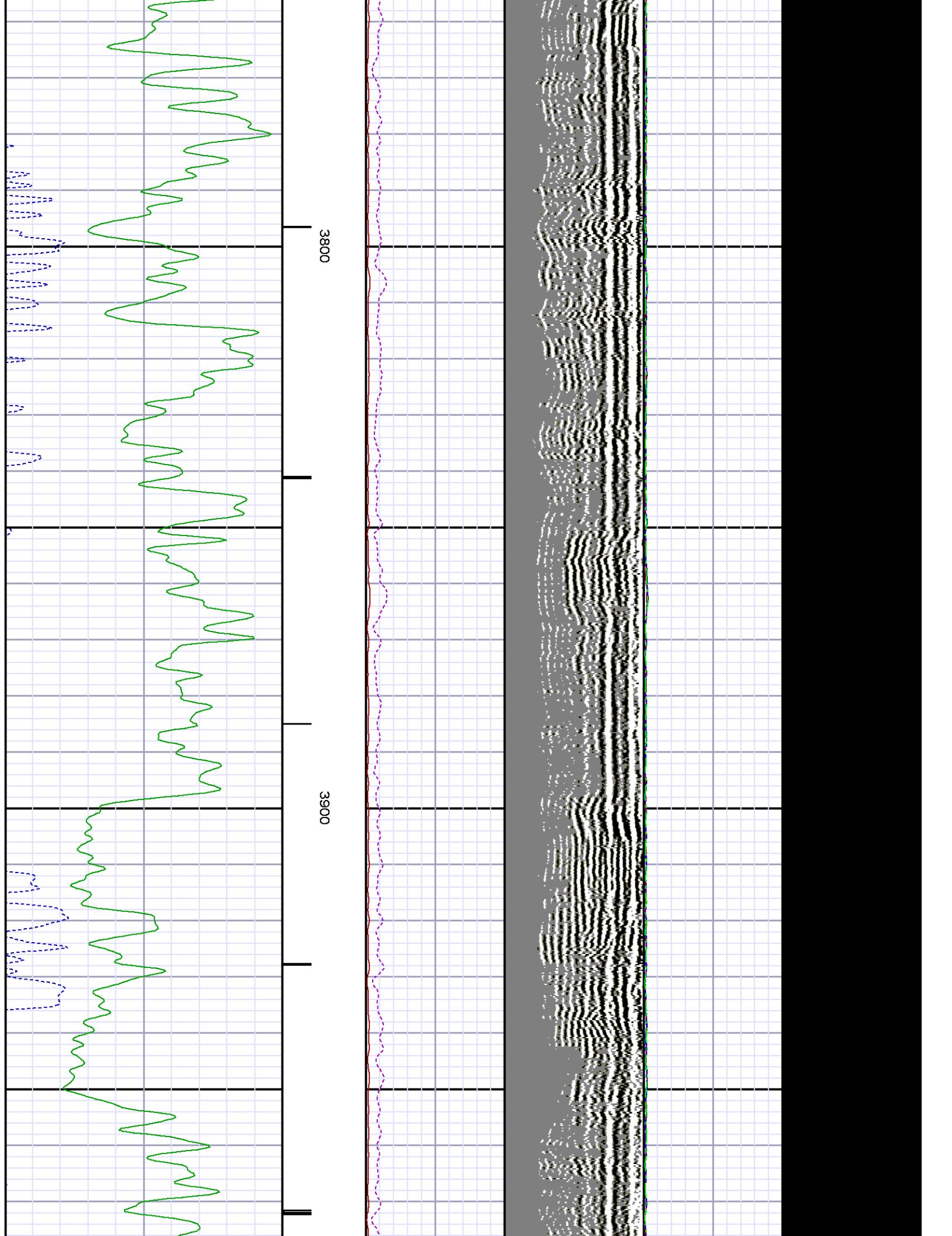


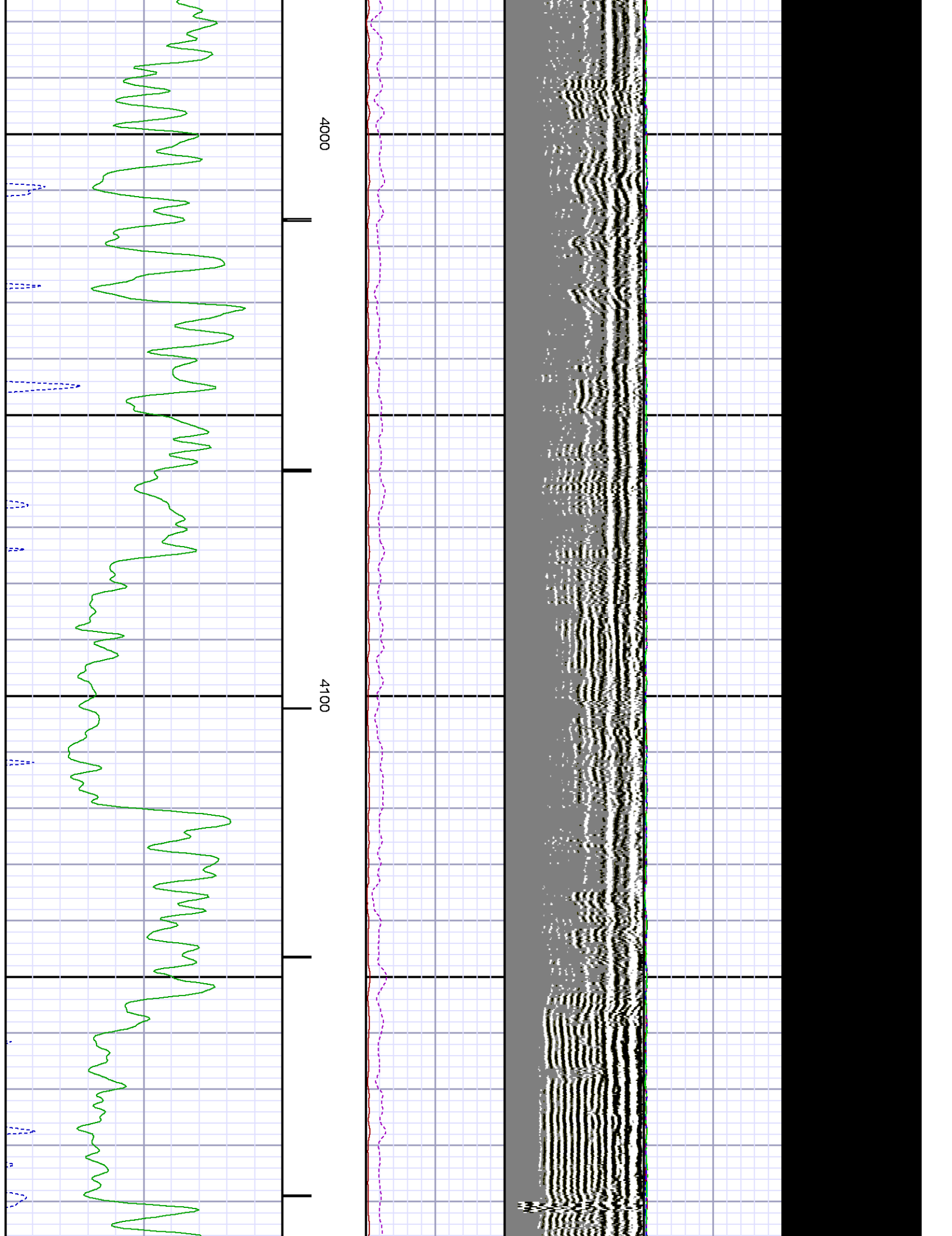


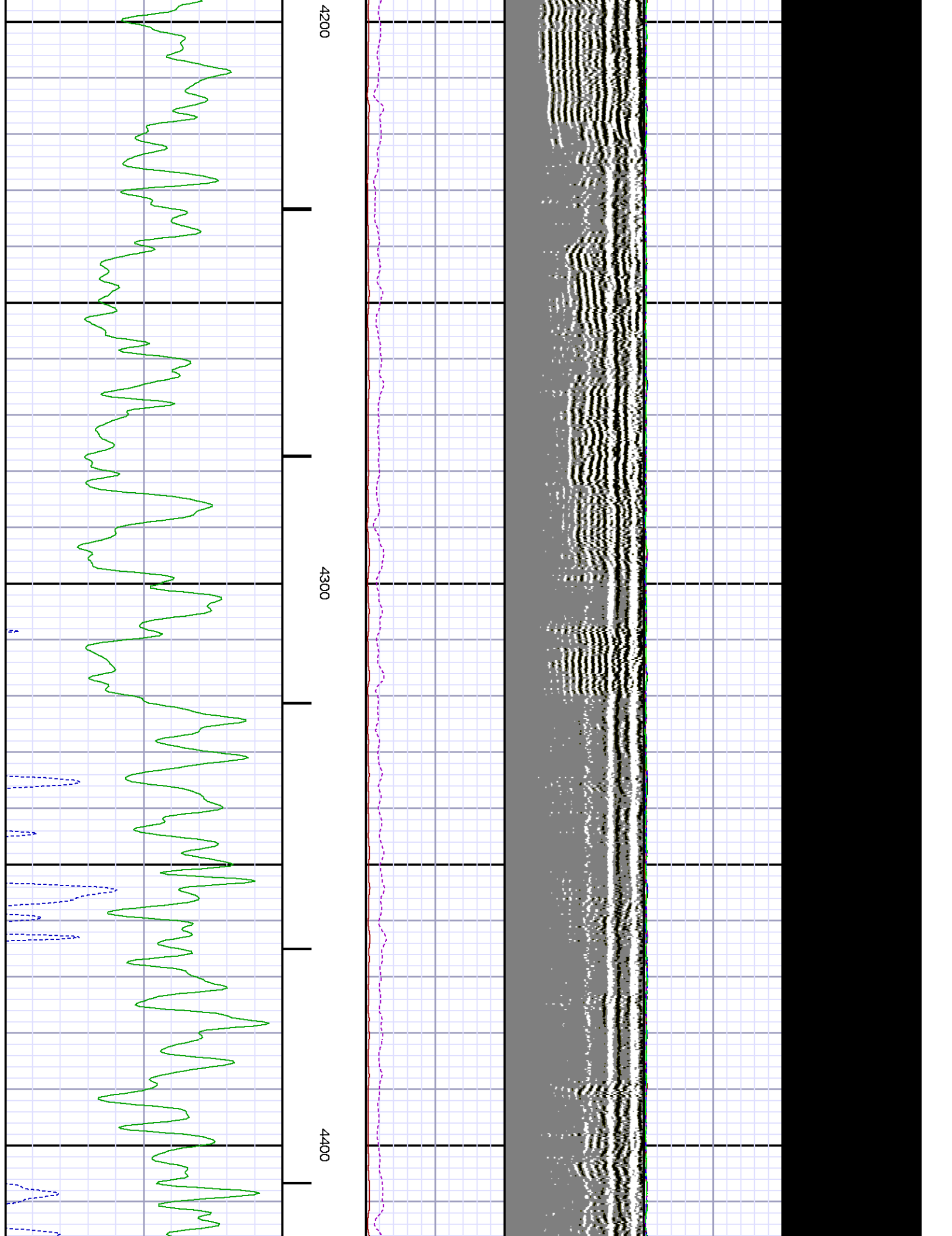


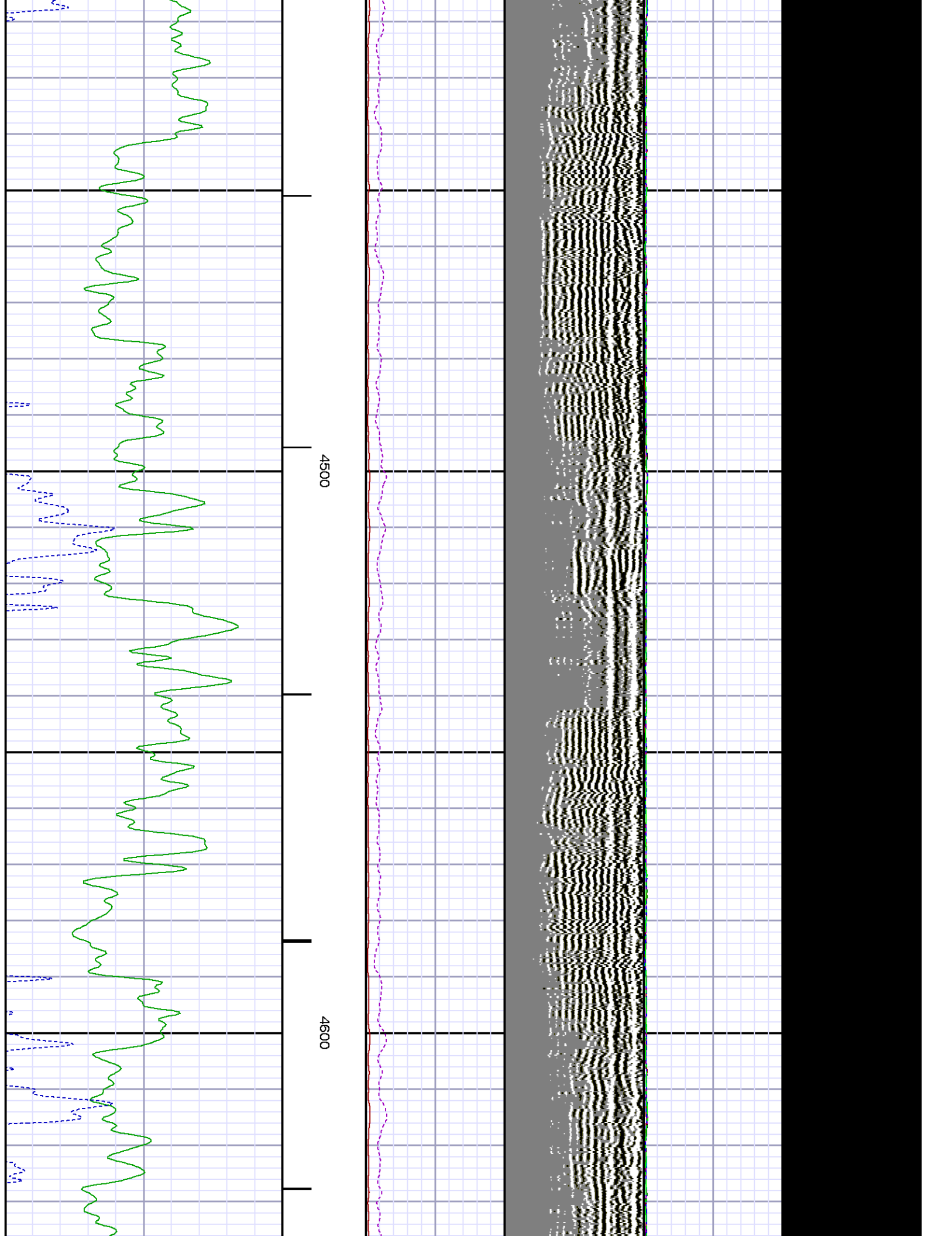


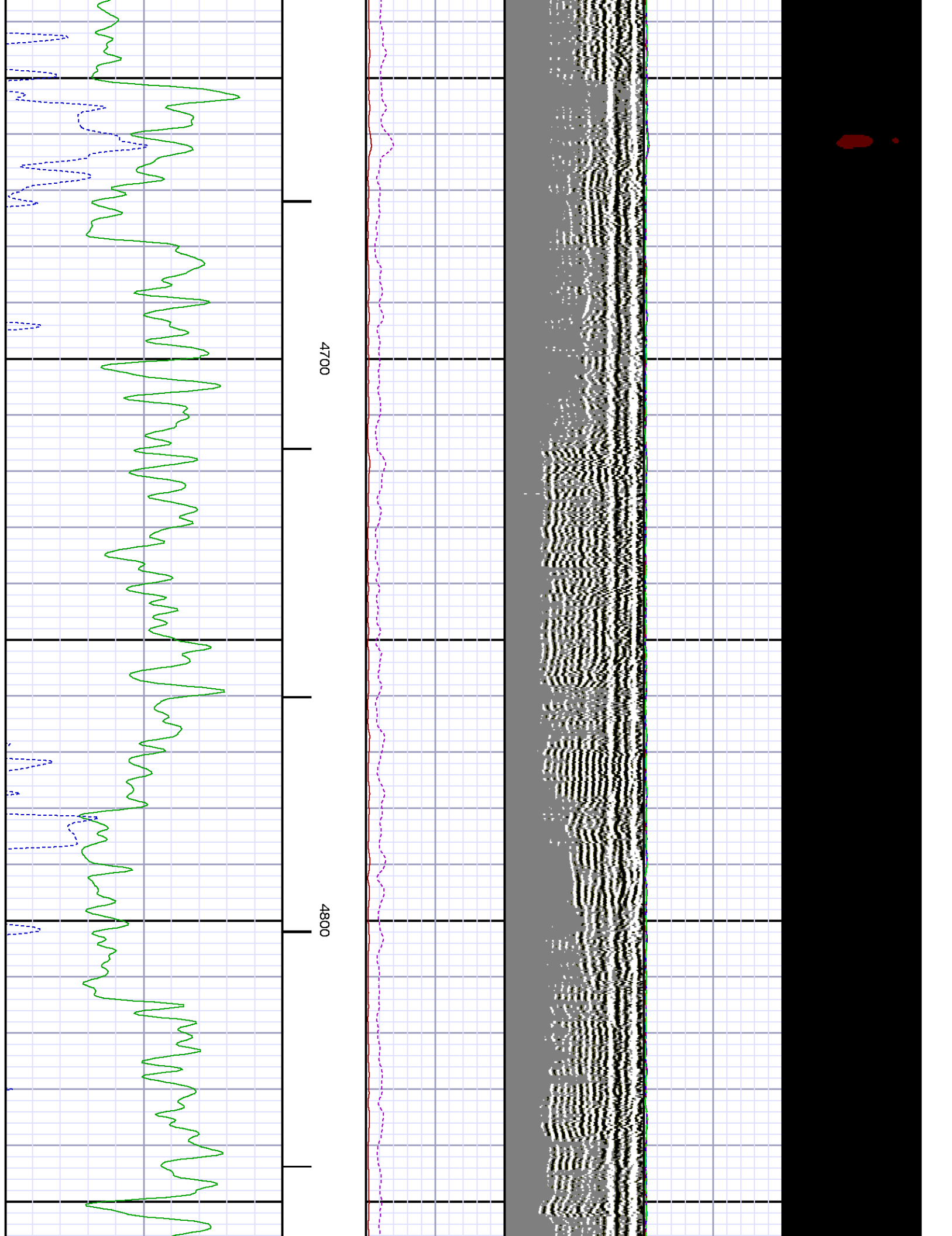


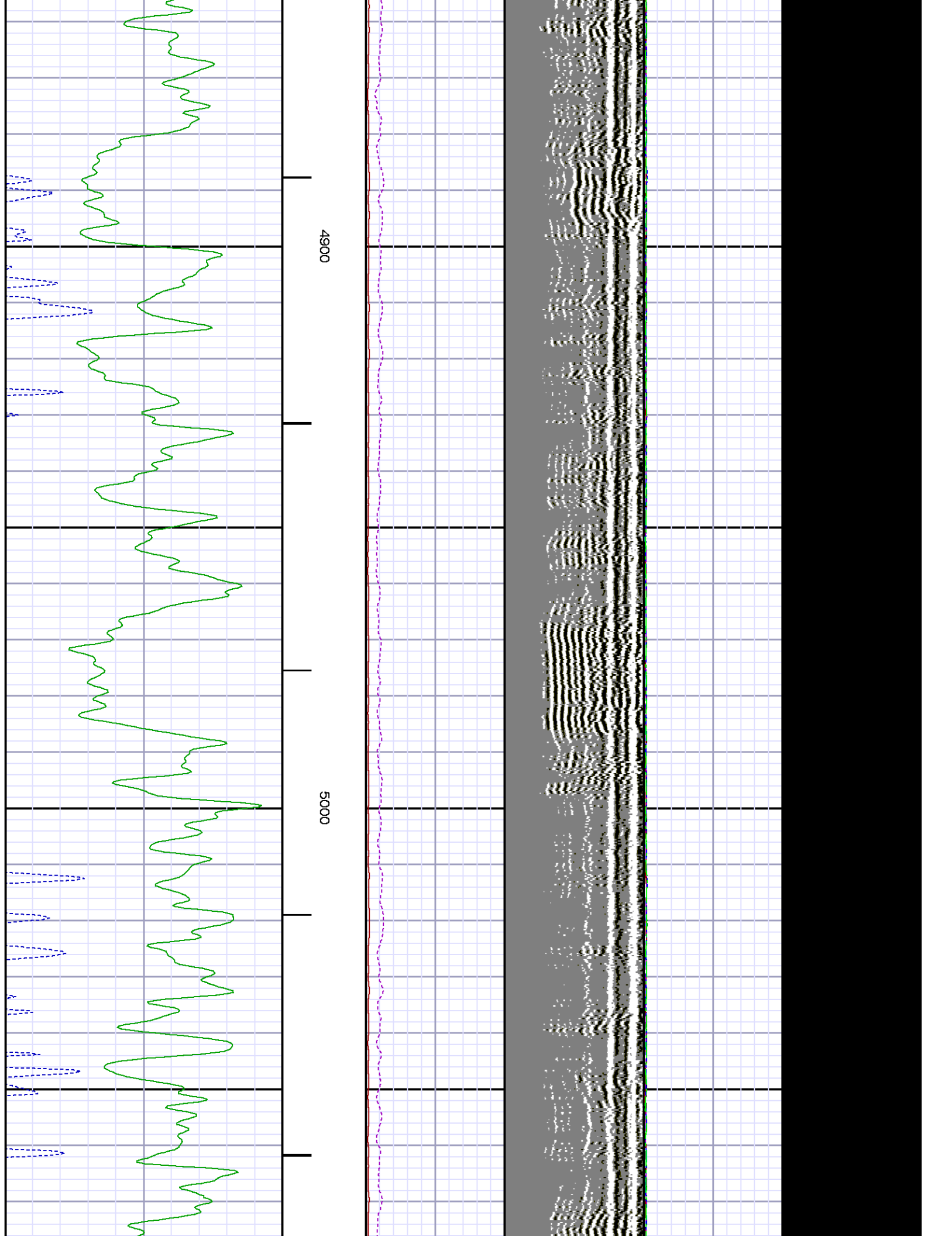


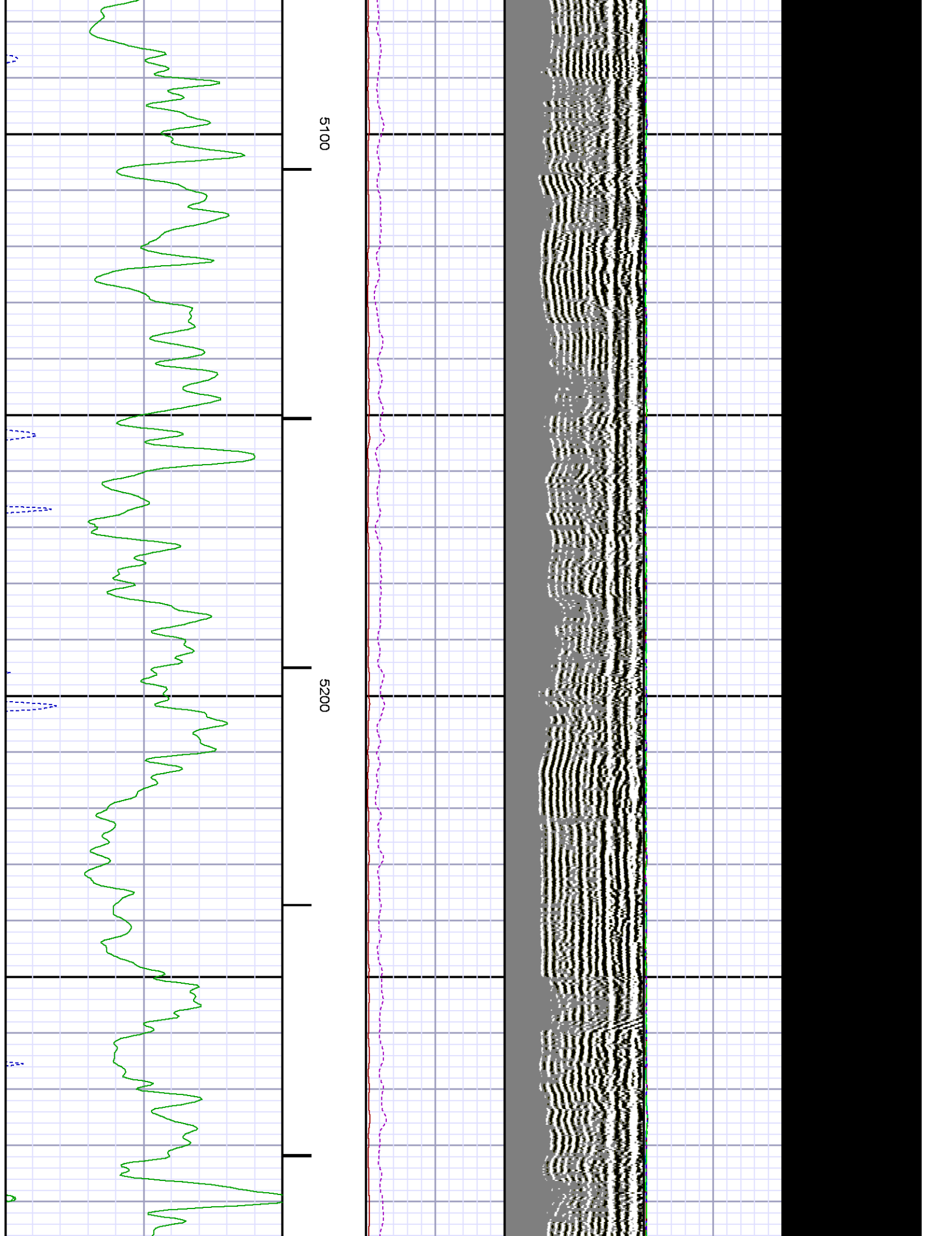


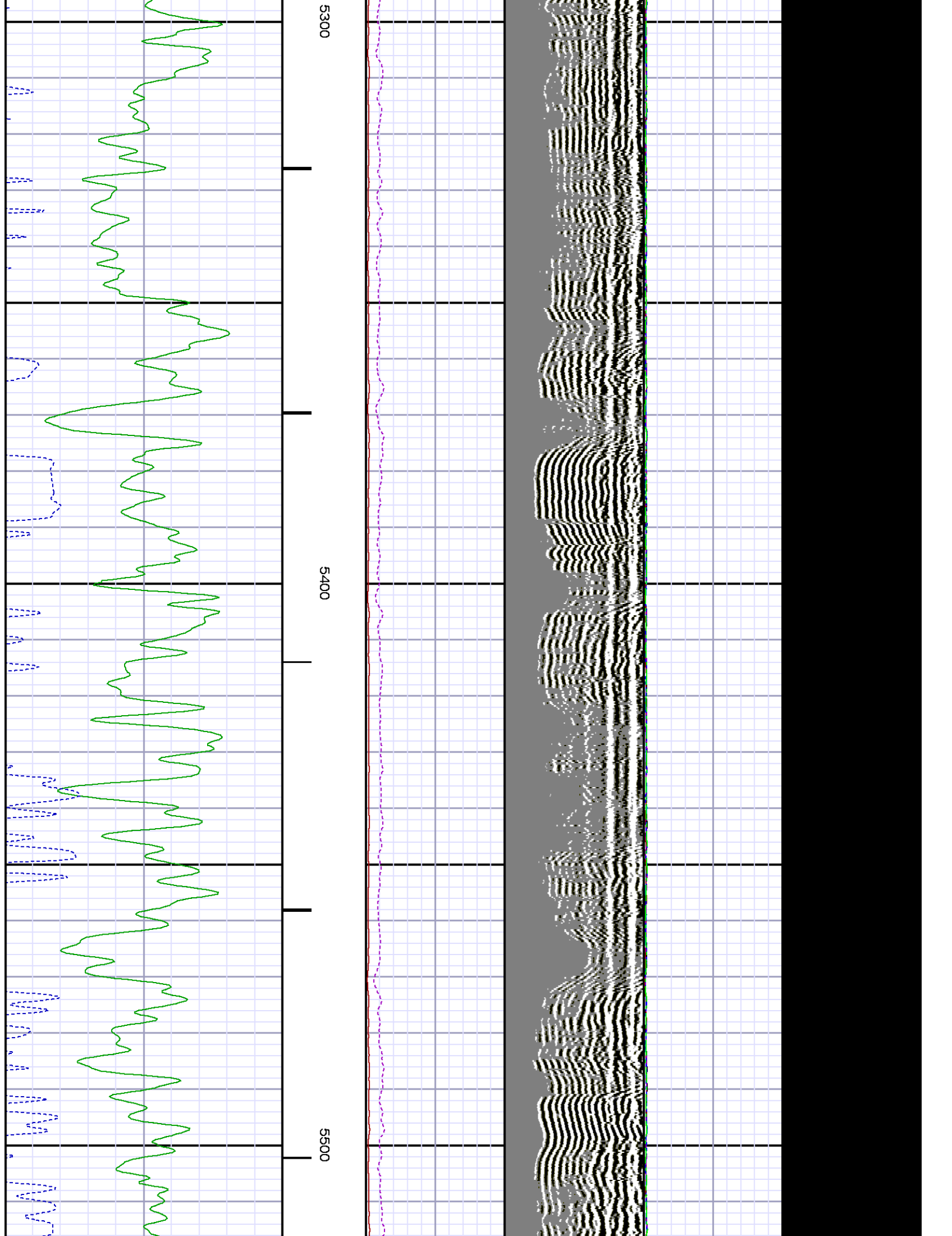


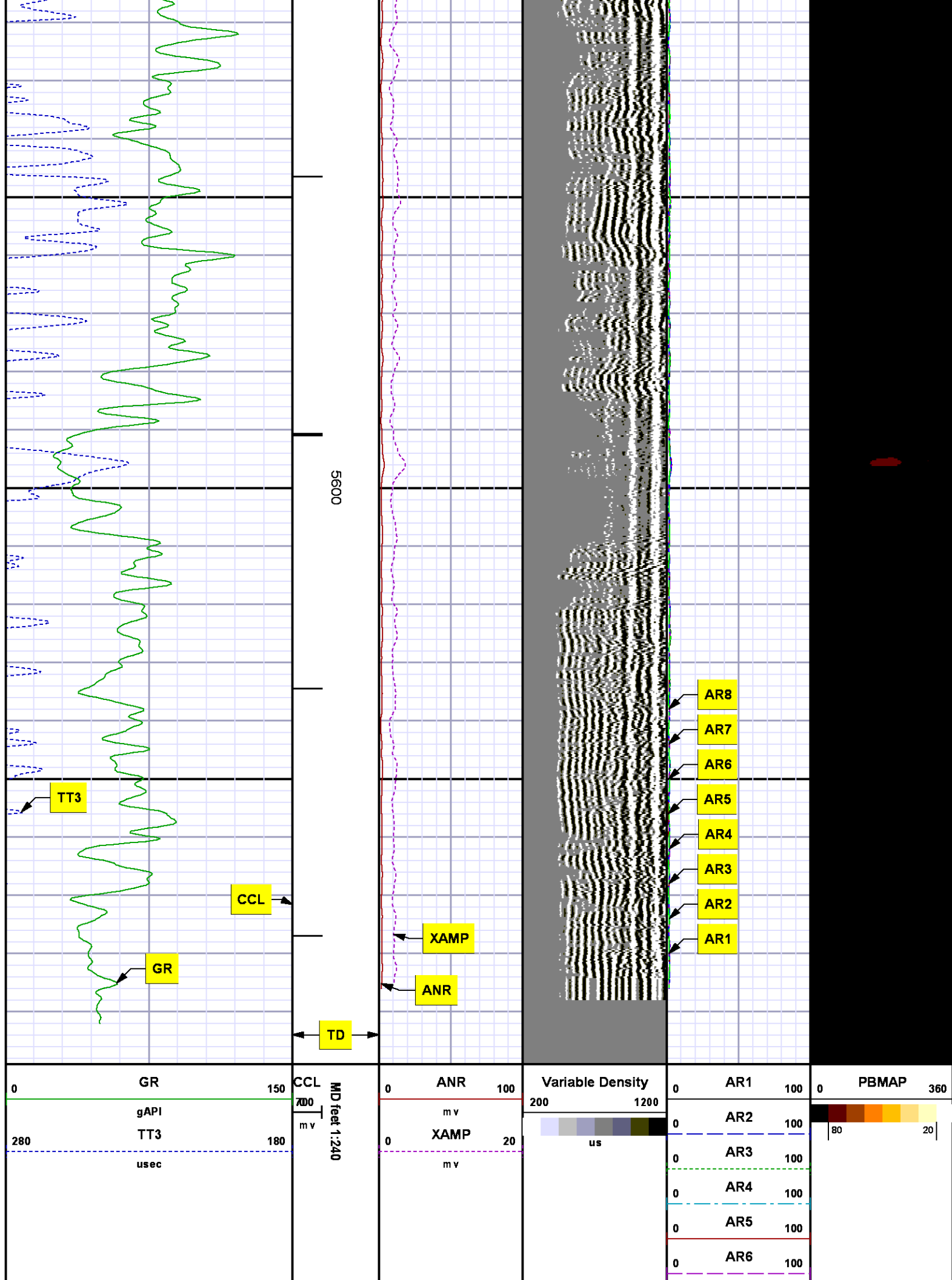












0	AR7	100
0	AR8	100

*REPEAT SECTION
0 PSI*

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	5360.310	5699.310
RAL	Amp Gate Start Near	195.000	usec	5360.310	5699.310
RAL	Amp Gate Start Radial	195.000	usec	5360.310	5699.310
RAL	Amp Gate Width Far	25.000	usec	5360.310	5699.310
RAL	Amp Gate Width Near	25.000	usec	5360.310	5699.310
RAL	Amp Gate Width Radial	25.000	usec	5360.310	5699.310
RAL	casing od	4.500	inches	5360.310	5699.310
RAL	casing wt	11.600	lbm/ft	5360.310	5699.310
RAL	FB Start Far	291.900	usec	5360.310	5699.310
RAL	FB Start Near	175.391	usec	5360.310	5699.310
RAL	FB Start Radial	175.391	usec	5360.310	5699.310
RAL	FB Thresh Far	10.000	mv	5360.310	5699.310
RAL	FB Thresh Near	4.000	mv	5360.310	5699.310
RAL	FB Thresh Radial	4.000	mv	5360.310	5699.310
RAL	Fluid Travel Time	200.000	usec/ft	5360.310	5699.907

DEPTH OFFSETS

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

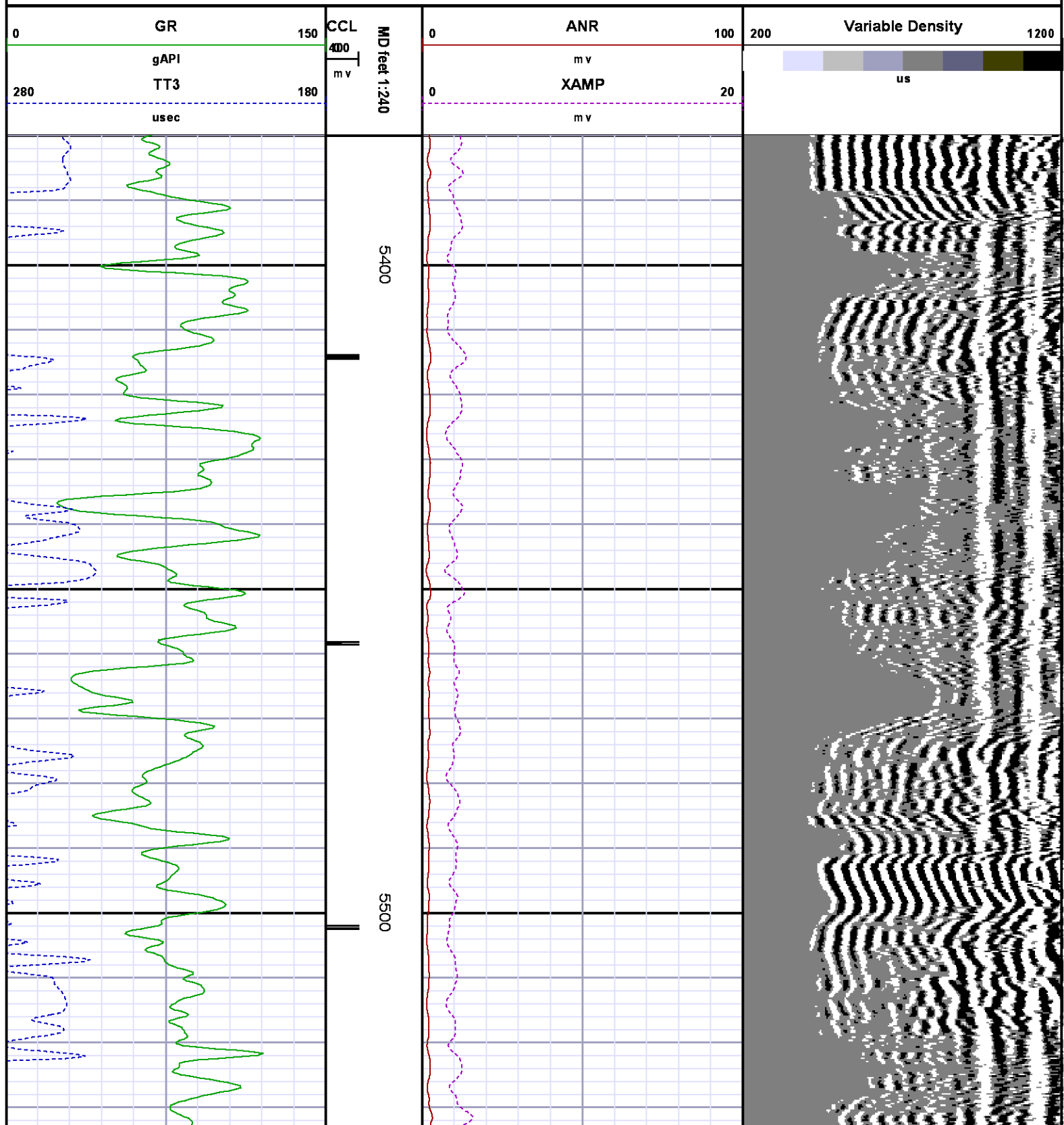
Well : FEDERAL SG 432-28

File Name : d:\welldata\wpx\federal sg 432-28\432cbl\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 5380.00 - 5690.00 feet UP

Created : 10/26/2014 2:21:04 PM



RALSHP

Shop Calibration: C:\case\calver\RALSHP\49525_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Oct 25 09:39:22 2014 TOOL SERIES: 1426XA ASSET: 495 SEQ: 25

Tool Delay [usec] -51.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	218	216	30	166	25	-0.532	100.00	0.27
3 Ft. Receiver	218	216	30	166	25	1.304	100.00	0.26
5 Ft. Receiver	328	325	30	256	44	3.245	150.00	0.29
Radial #1	218	216	30	166	19	0.913	100.00	0.26
Radial #2	218	216	30	166	19	0.085	100.00	0.26
Radial #3	217	216	30	166	19	0.431	100.00	0.26
Radial #4	216	216	30	166	19	0.297	100.00	0.26
Radial #5	216	216	30	166	19	0.620	100.00	0.26
Radial #6	216	216	30	166	19	0.310	100.00	0.26
Radial #7	217	216	30	166	19	0.285	100.00	0.26
Radial #8	219	216	30	166	19	0.647	100.00	0.26

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\49526 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Oct 26 10:05:26 2014 TOOL SERIES: 1426XA ASSET: 495 SEQ: 26

Tool Delay [usec] -51.00 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	-0.037	0.000	0.97	100.000
3 Ft. Receiver	200	30	2.123			
5 Ft. Receiver	317	30	3.554			
Radial #1	200	30	1.876			
Radial #2	200	30	1.842			
Radial #3	200	30	1.891			
Radial #4	200	30	2.018			
Radial #5	200	30	1.935			
Radial #6	200	30	1.927			
Radial #7	200	30	1.922			
Radial #8	200	30	1.821			

GAMMA RAY

Calibration File: C:\case\calver\GR\503O5.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Oct 15 10:27:26 2014 TOOL SERIES: 2459XA ASSET: 503 SEQ: 05

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	94.67	359.07	0.700	66.24	251.24	185.00

Verification File: C:\case\calver\GR\503O5.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Wed Oct 15 10:29:17 2014 TOOL SERIES: 2459XA ASSET: 503 SEQ: 05

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	94.09	365.73	0.700	65.83	255.90	190.07

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'



21.35'

XMIT — 15.17'

NEAR RCVR — 12.08'

FAR RCVR — 10.17'

CCL — 8.46'

GR — 6.60'

Measure Point 1.21' NEU
Measure Point 6.60' GR
Measure Point 8.46' CCL

NEU 1.21'
0.00'

Total Length: 21.35'
Total Weight: Not Available
Max Diameter: 0' 2.75"



Baker Atlas

CASE

Company

WPX ENERGY

Well

FEDERAL SG 432-28

Field

GRAND VALLEY

County

GARFIELD

State

CO

Location

SHL: 2279' FSL & 499' FEL

BHL: 2248' FNL & 2323' FEL

Elevations

KB 5143

DF

GL 5119

SEC 28 TWP 7S RGE 96W

File No:

CH091652

API No:

05045219540000

28 7S 96W

SG 43-28 PAD

H&P 318