



Baker Atlas

# RADIAL ANALYSIS BOND LOG

File No: CH03874 Company WPX ENERGY

Well SAVAGE RWF 314-25

API No: RULISON

County GARFIELD State COLORADO

05045219780000

Location

SHL: 1617' FSL & 2304' FWL

RWF 23-25 PAD BHL: 1231' FSL & 922' FWL (SWSW)

NABORS 677

Other Services

NONE

SEC 25 TWP 6S RGE 94W

Permanent Datum GL Elevation 6096 ft

Log Measured From KB 26 ft Above P. D.

Drill Measured From KELLY BUSHING

Elevations

KB 6122 ft

DF

GL 6096 ft

Date	24/MAR/14	
Run	ONE	
Service Order	US625364	
Depth Driller	8719 ft	
Depth Logger	8704 ft	
Bottom Logged Interval	8694 ft	
Top Logged Interval	26 ft	
Time Started	0745	
Time Finished	1145	
Operator Rig Time	4 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	69 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	66 fpm	
Maximum Recorded Temperature	NA	
Reference Log	BAKER HUGHES OPEN HOLE	
Reference Log Date	28/FEB/2014	
Equipment No.	4271	GRAND JCT
Recorded By	FLYOD RENEAU	
Witnessed By	BOB CADY	

- FOLD HERE

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

Borehole Record		
Bit Size	From	To
13.5 in	0 ft	1119 ft
8.75 in	1119 ft	8719 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in			0 ft	1119 ft
4.5 in	11.6 lbm/ft	I-80	0 ft	8719 ft

Remarks
All data on this log is shifted and depth matched using the Gamma Ray curve to the Baker Hughes HDIL/ZDL/CN/GR open hole log dated 2/28/2014 at the clients request
The amount of linear shift is 18 feet.
The depth matching process creates potential for collar lengths to vary from those recorded on other cased hole wireline units without a Gamma Ray reference.
Logged with zero PSI at wellhead.

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10218496	CENT
1	1	GR/CCL	2459XA	10417456	CENT

PRIMARY PRESENTATION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	28.750	8695.000
RAL	Amp Gate Start Near	195.000	usec	28.750	8695.000
RAL	Amp Gate Start Radial	195.000	usec	28.750	8695.000
RAL	Amp Gate Width Far	20.000	usec	28.750	8695.000
RAL	Amp Gate Width Near	25.000	usec	28.750	8695.000
RAL	Amp Gate Width Radial	25.000	usec	28.750	8695.000
RAL	casing od	4.500	inches	28.750	8695.000
RAL	casing wt	11.600	lbm/ft	28.750	8695.000
RAL	FB Start Far	291.900	usec	28.750	8695.000
RAL	FB Start Near	180.000	usec	28.750	8695.000
RAL	FB Start Radial	180.000	usec	28.750	8695.000
RAL	FB Thresh Far	10.000	mV	28.750	8695.000
RAL	FB Thresh Near	4.000	mV	28.750	8695.000
RAL	FB Thresh Radial	4.000	mV	28.750	8695.000
RAL	Fluid Travel Time	200.000	usec/ft	28.750	8695.806

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES
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1426XA

-16.750

ACAL

ANR

AR1

AR2

AR3

AR4

AR5

AR6

AR7

AR8

CHV

FPR2

FPR3

FPR5

TT3

TTR1

TTR2

TTR3

TTR4

TTR5

TTR6

TTR7

TTR8

XAMP

1426XA

-15.750

AFAR

SIG

TT5

2459XA

-11.340

CCL

2459XA

-9.490

GR

2459XA

-4.090

NEU

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

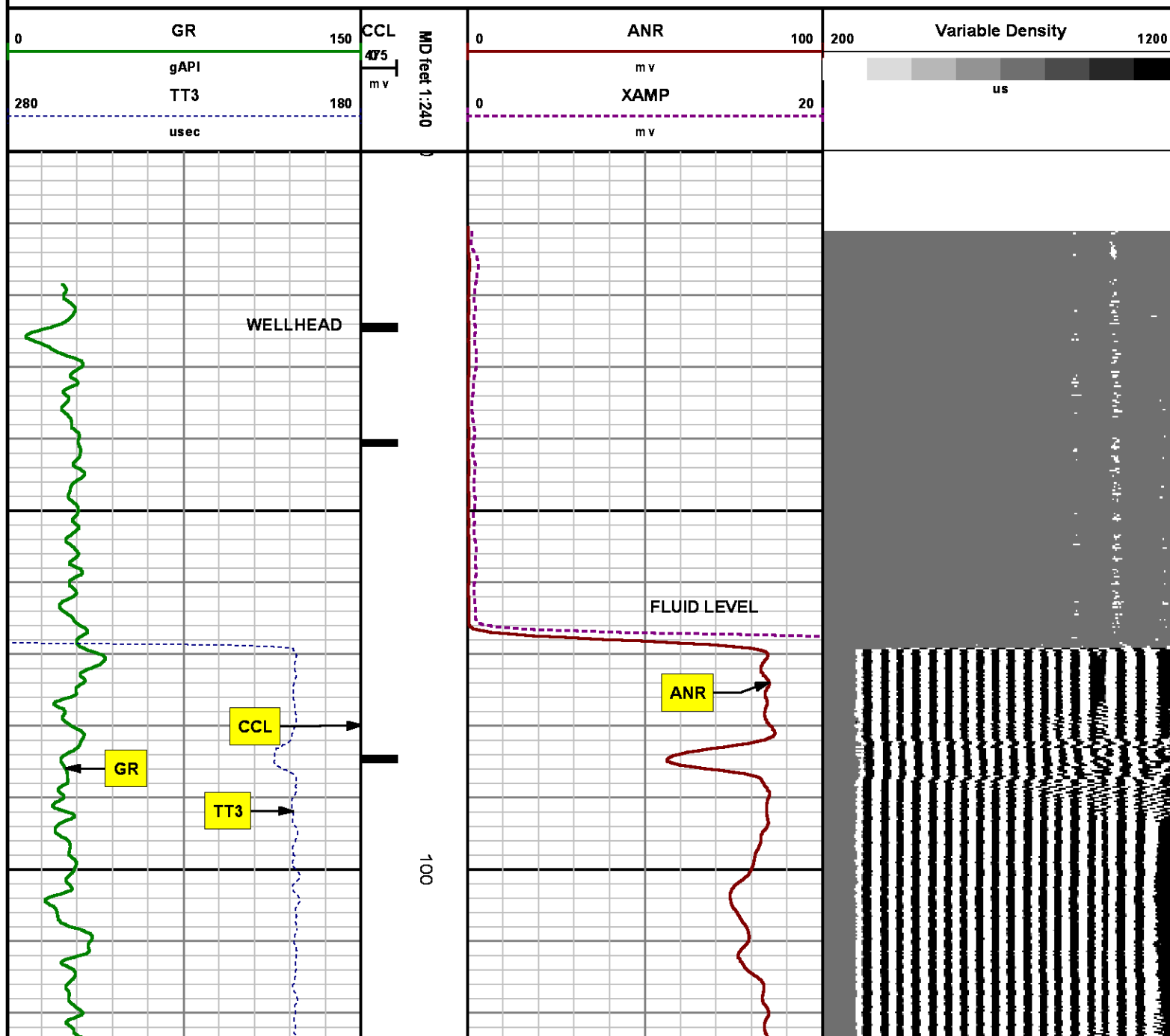
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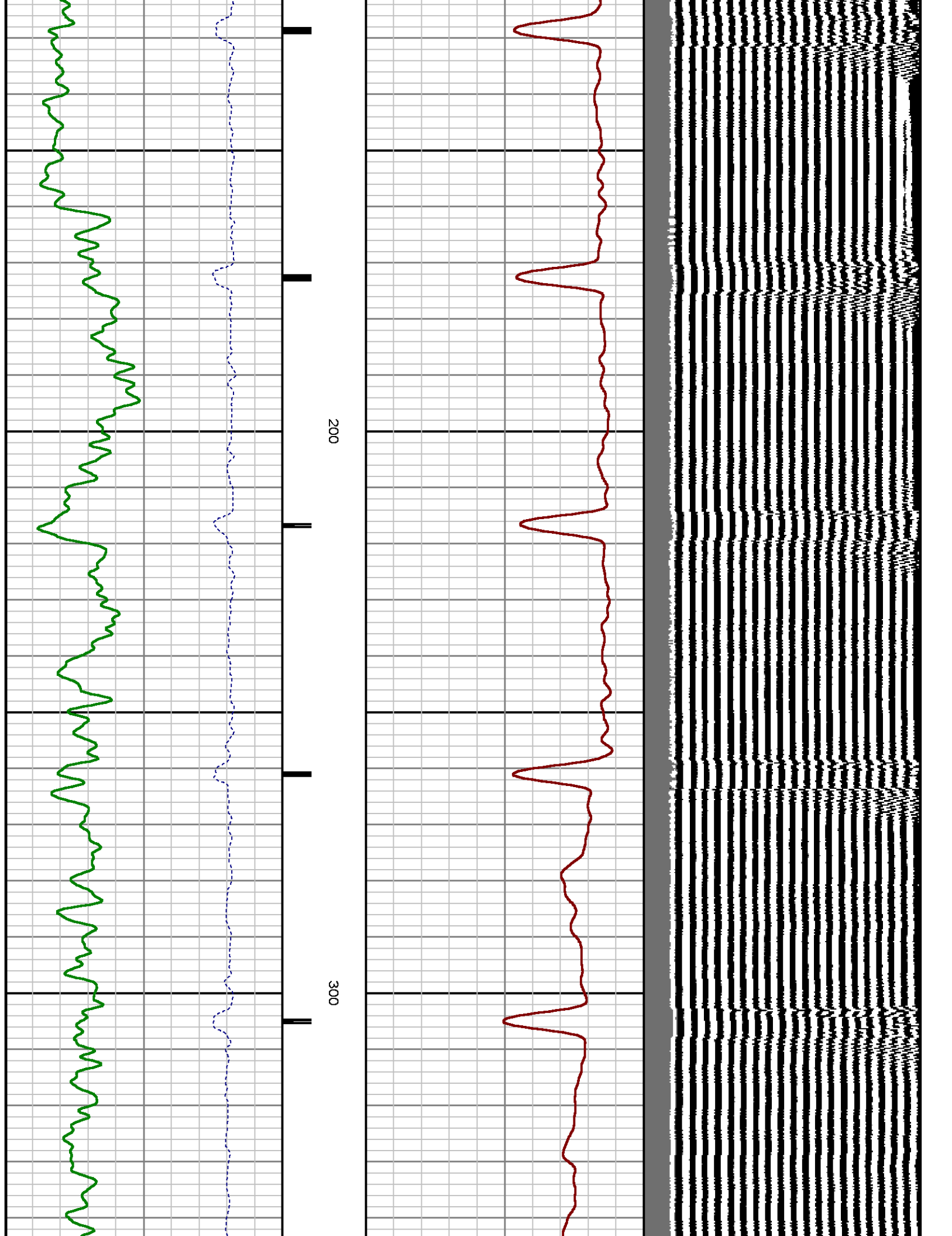
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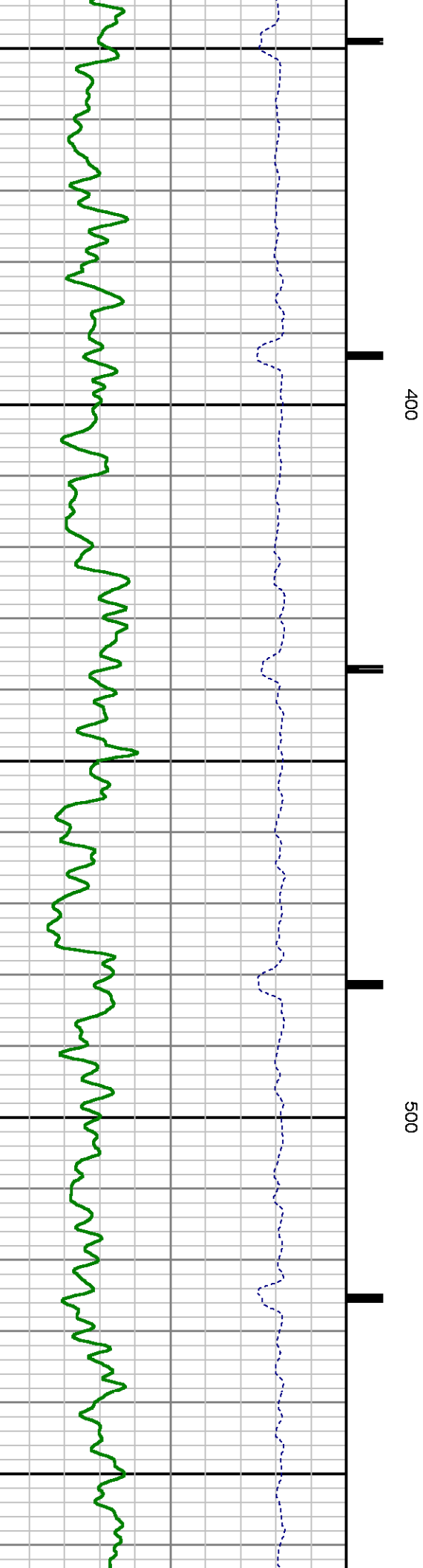
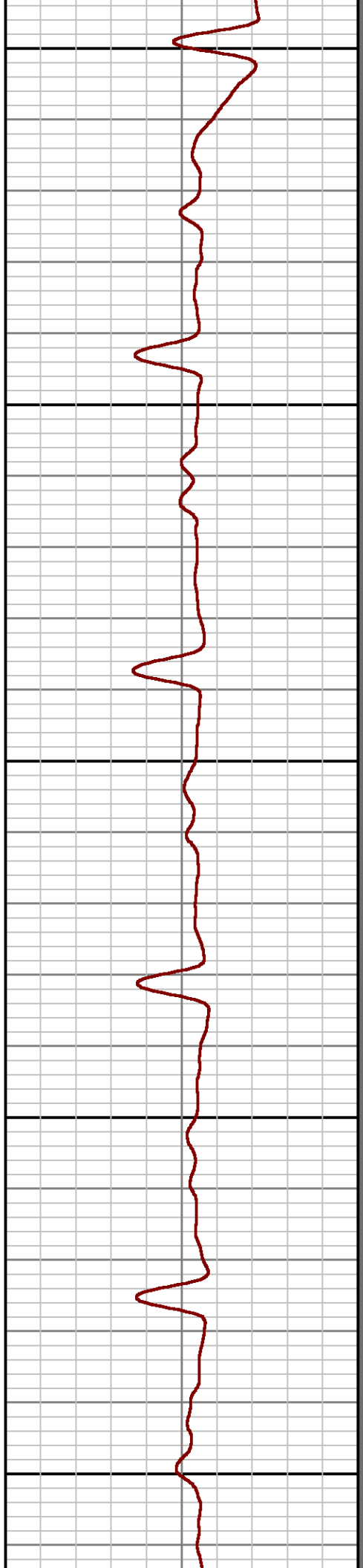
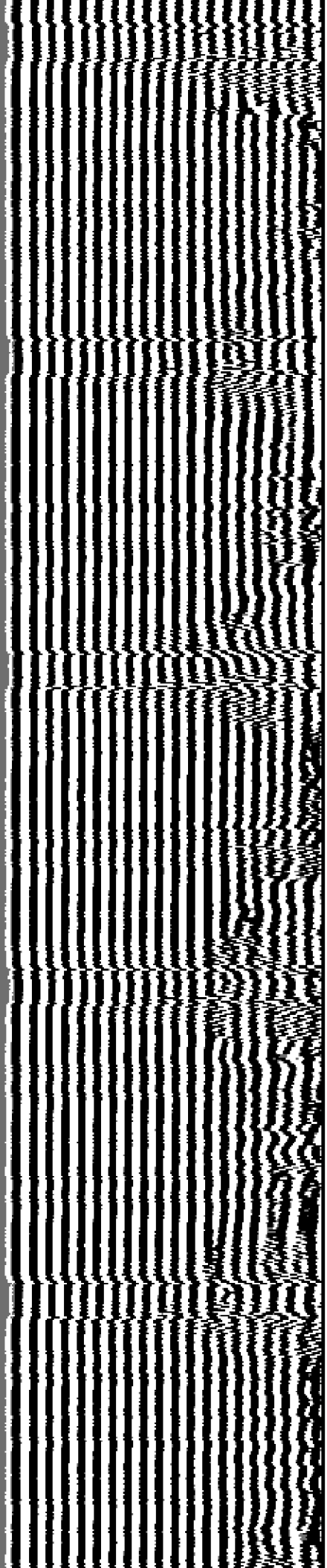
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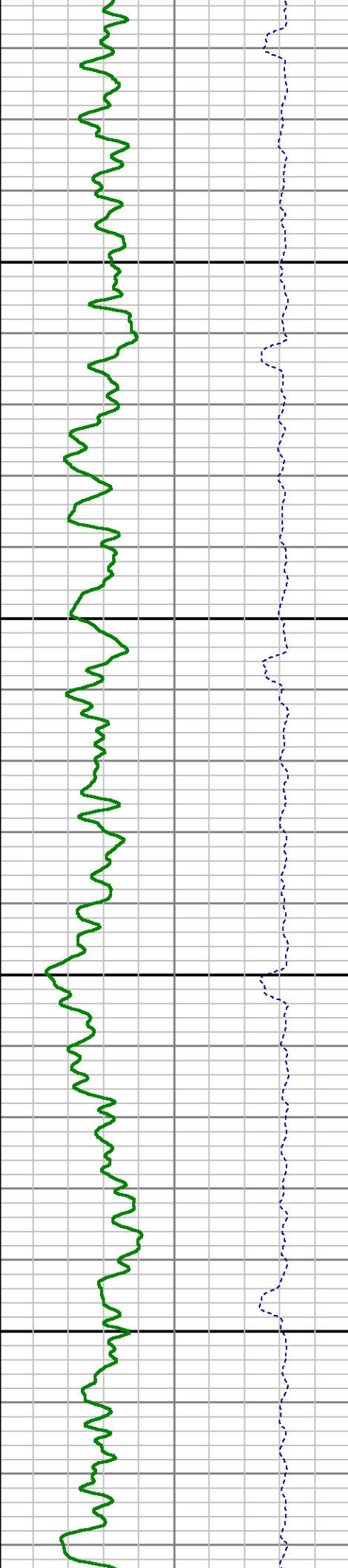
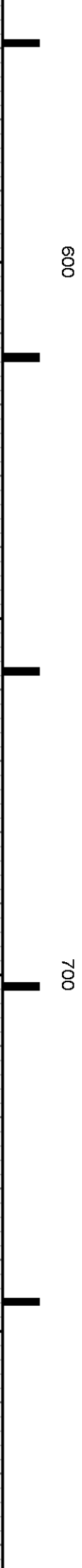
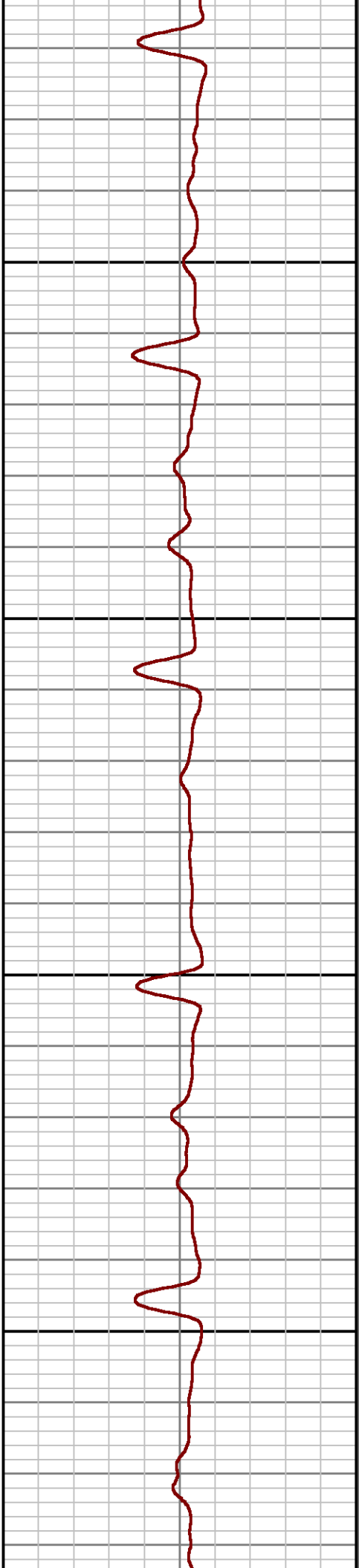
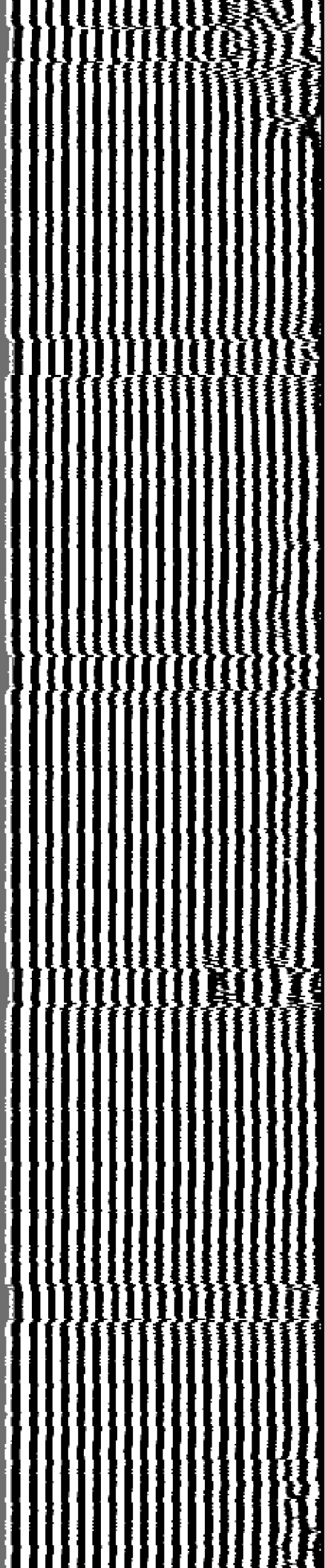
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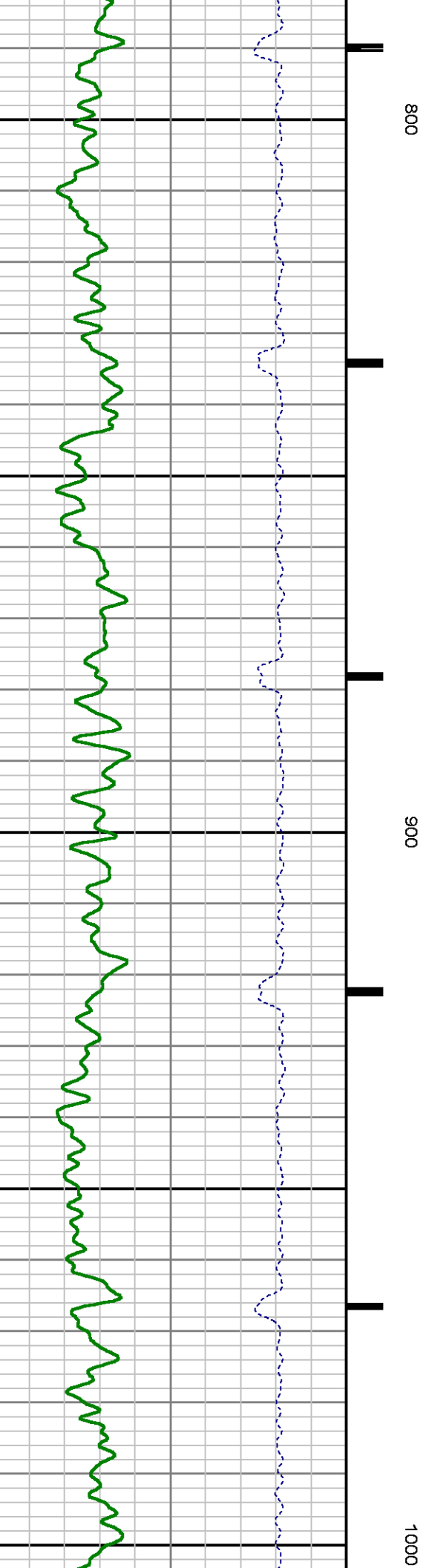
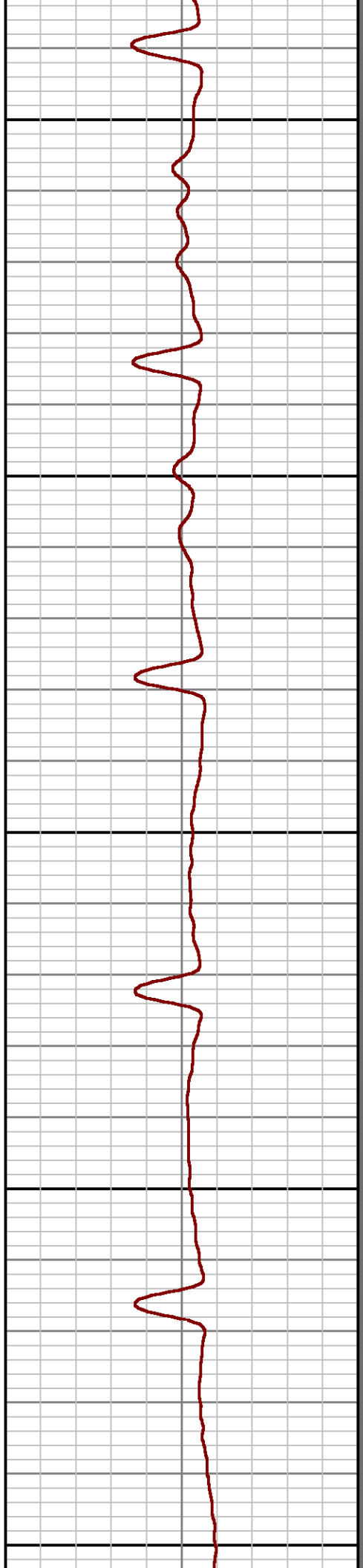
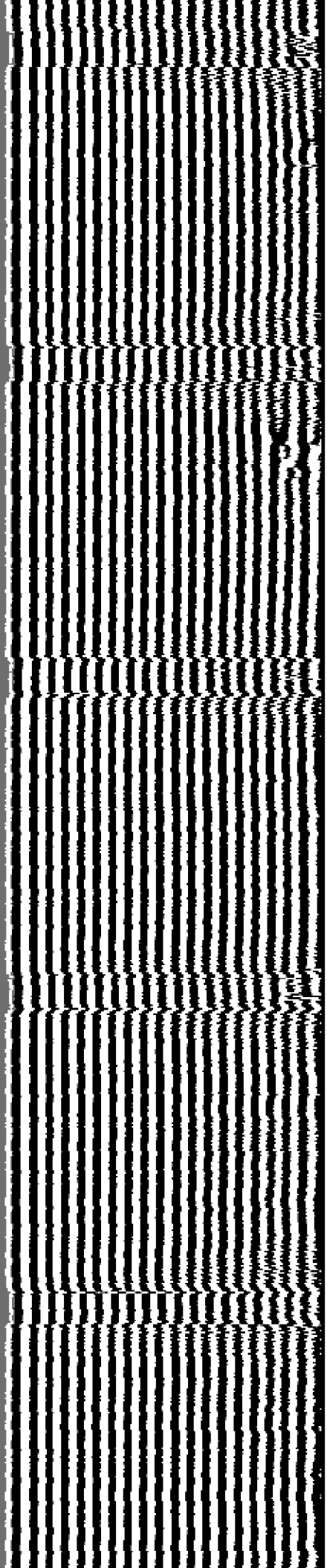
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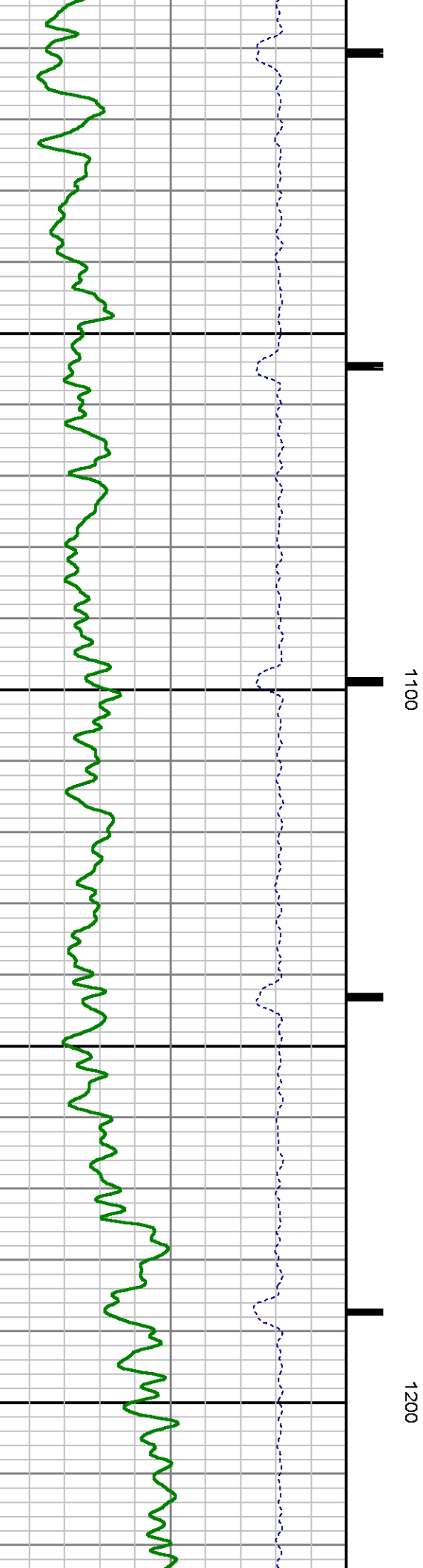
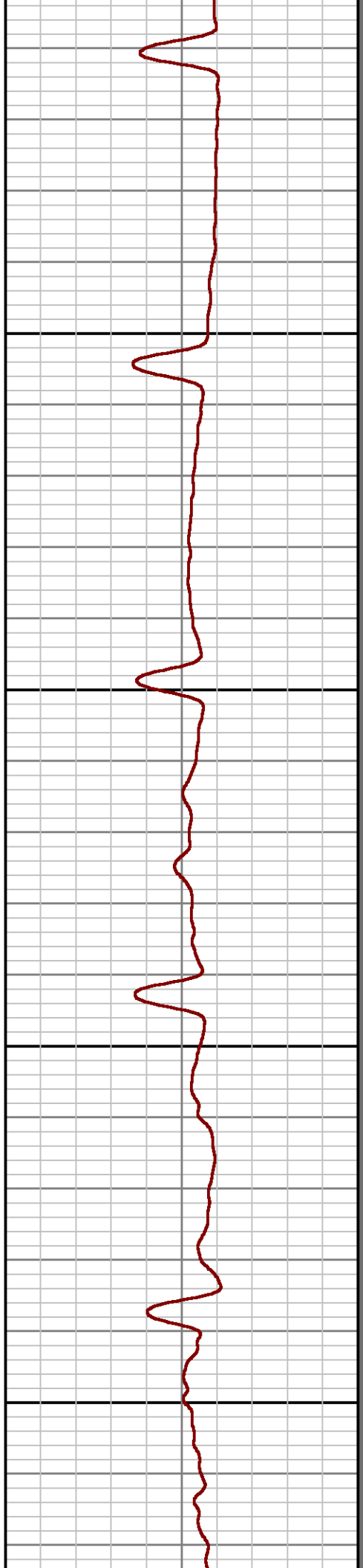
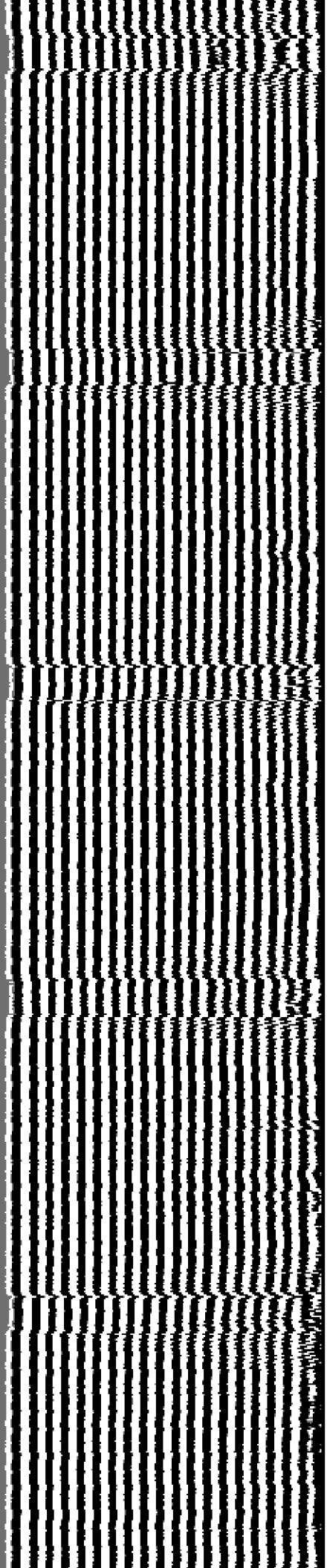




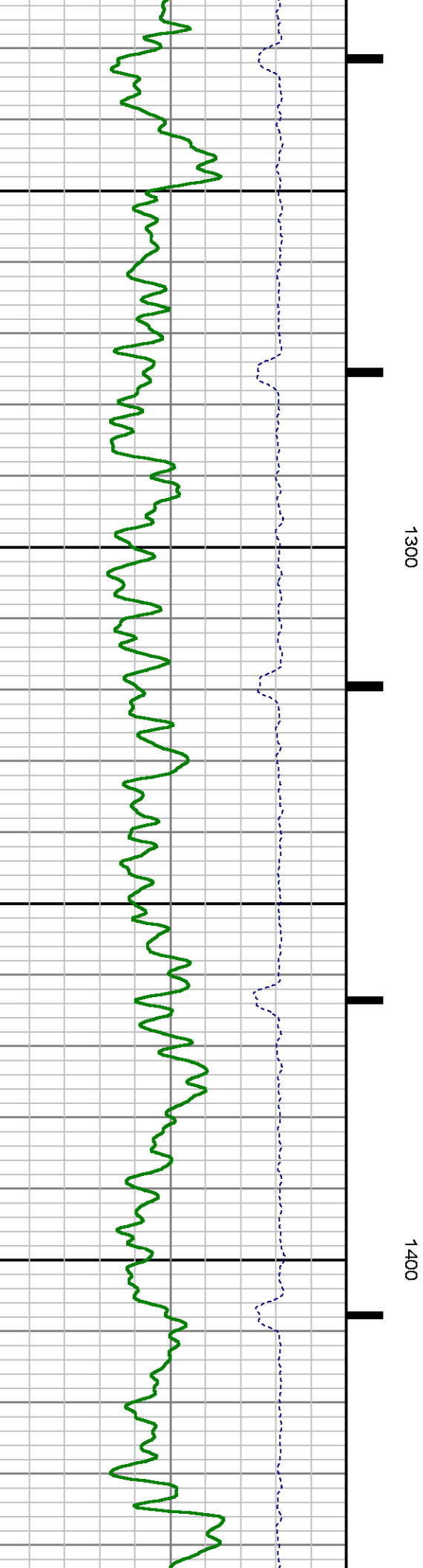
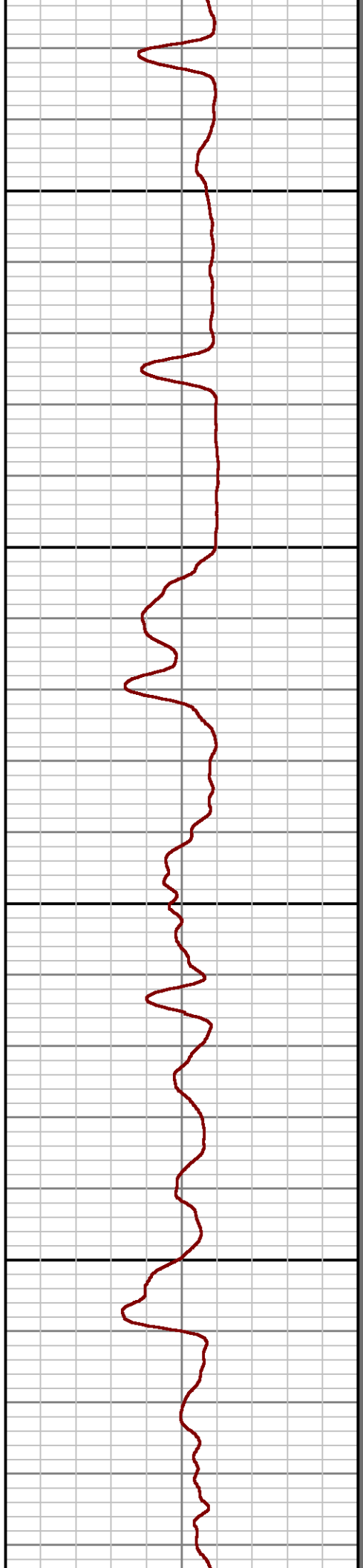
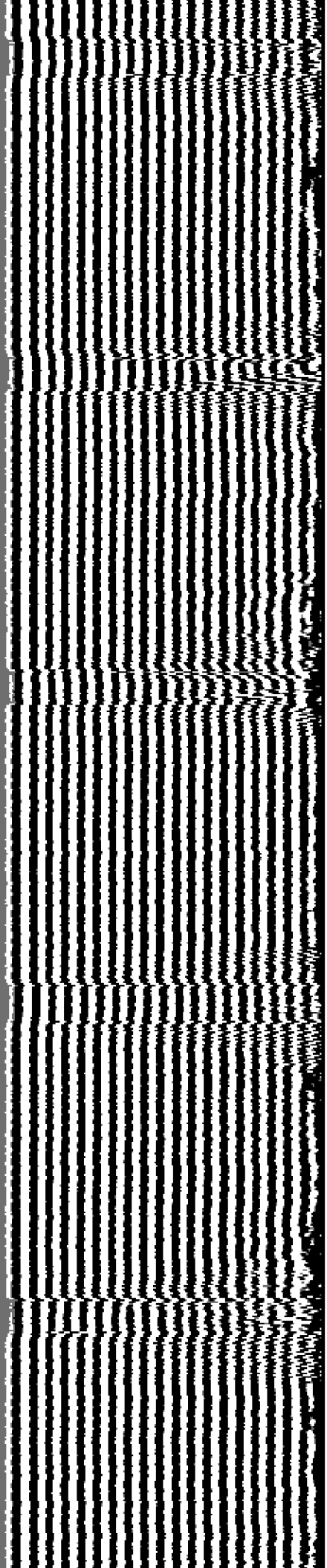


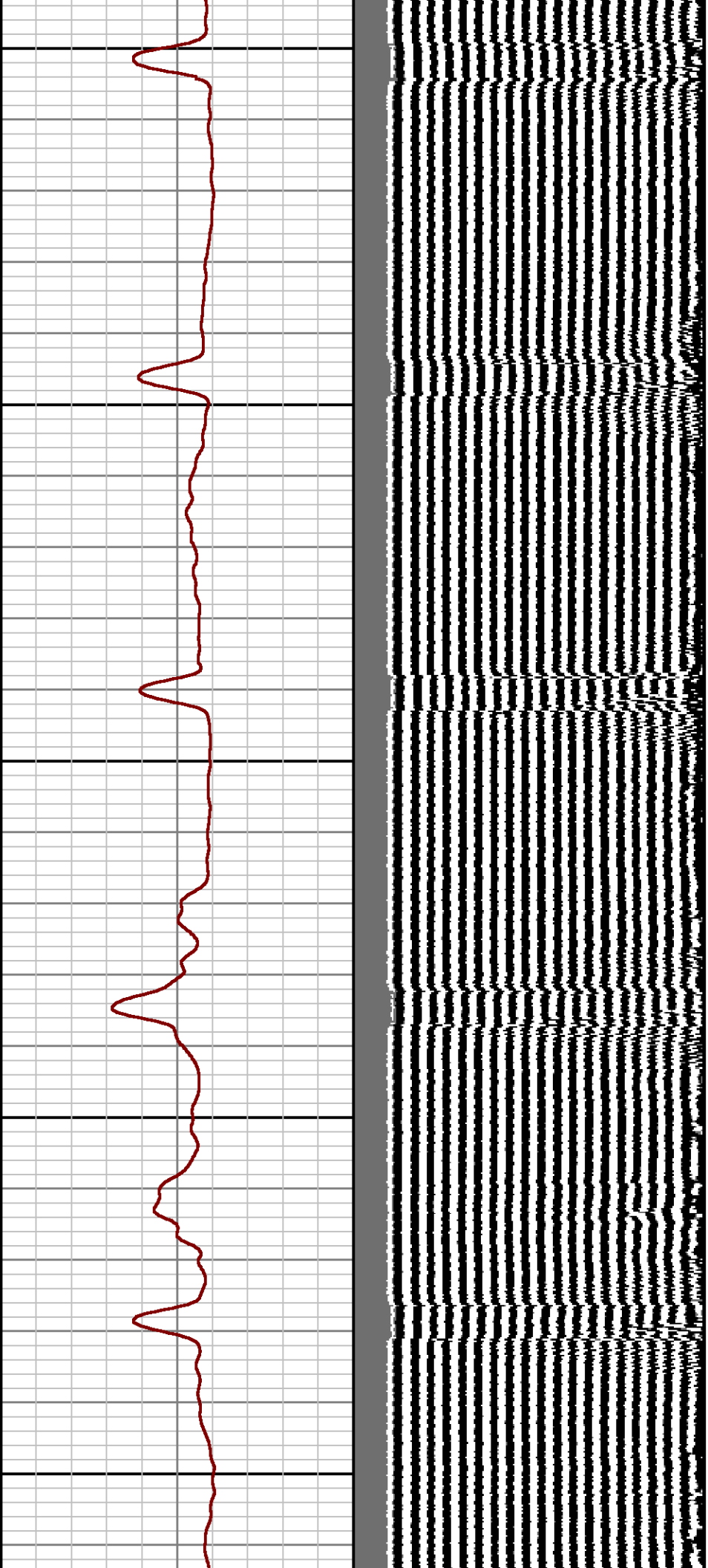






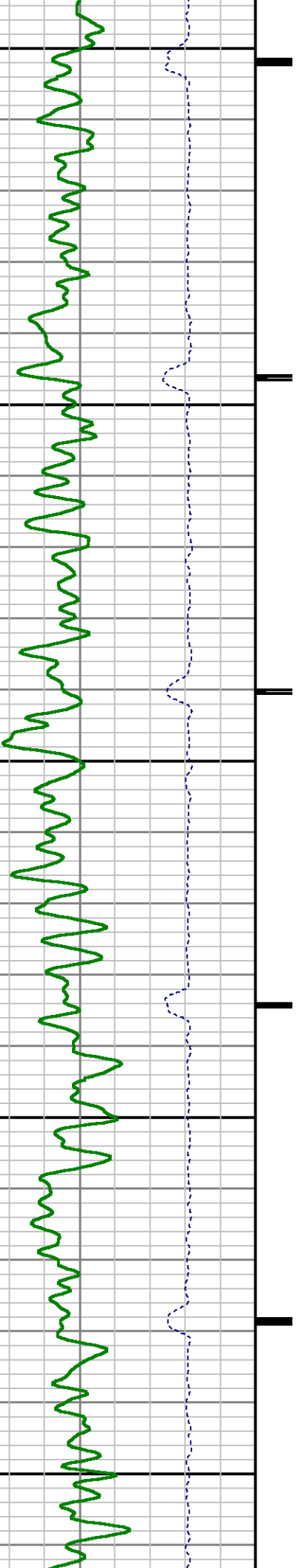


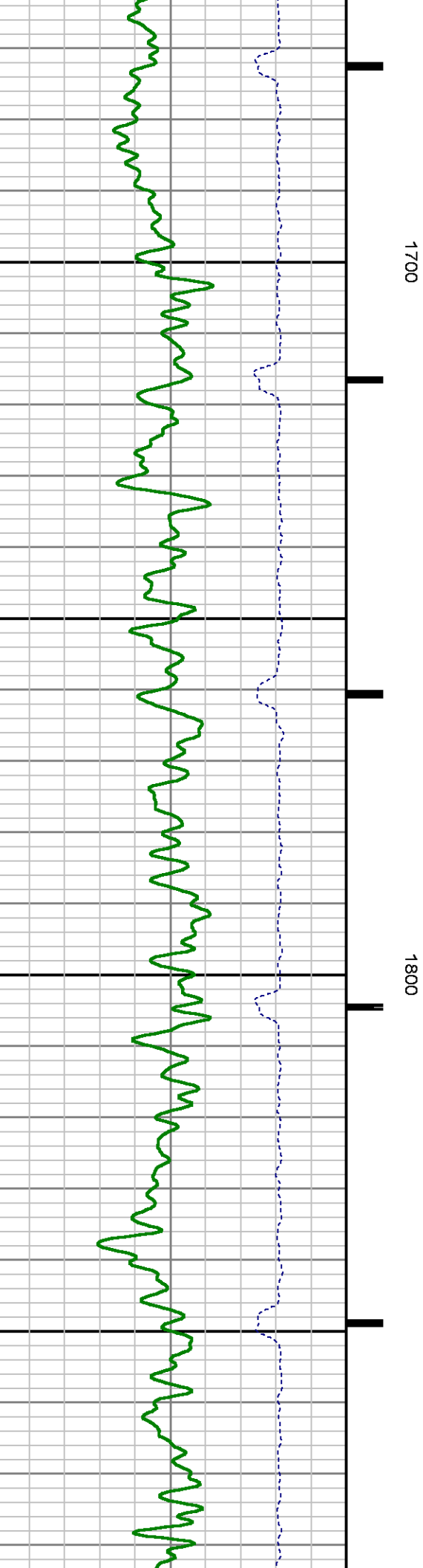
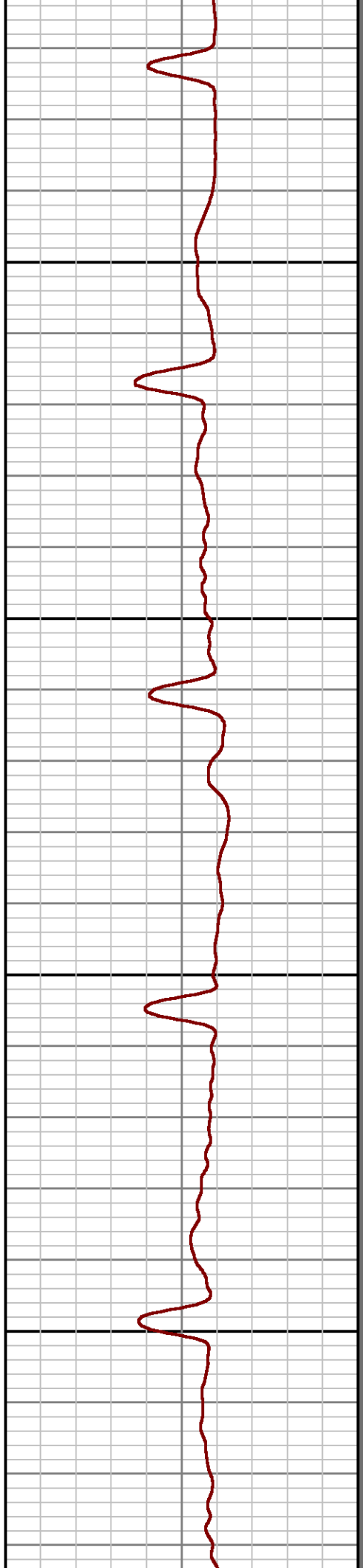
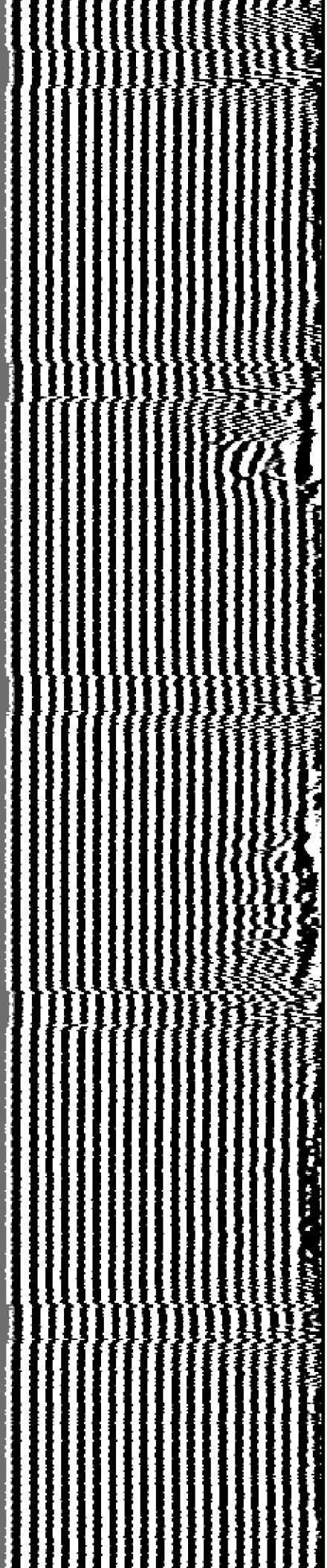


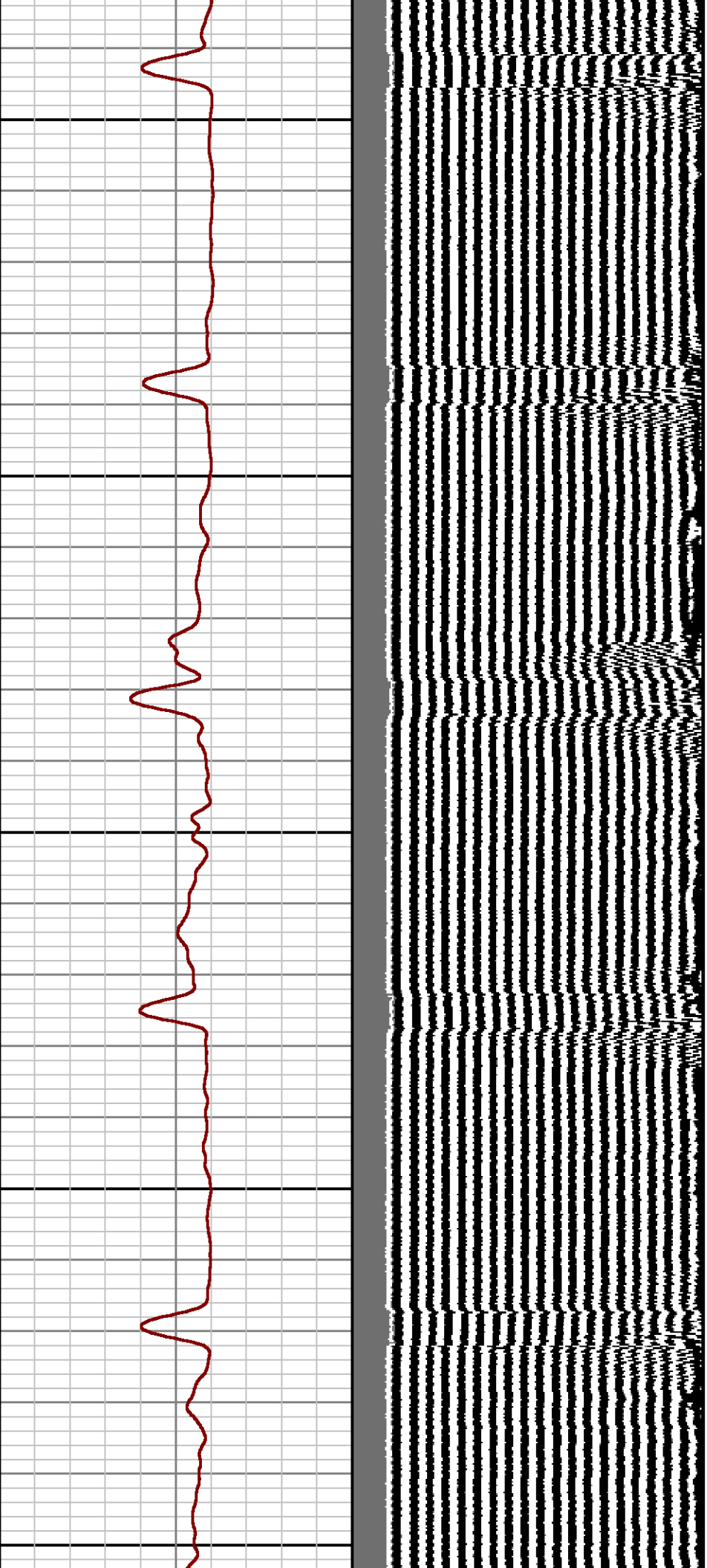


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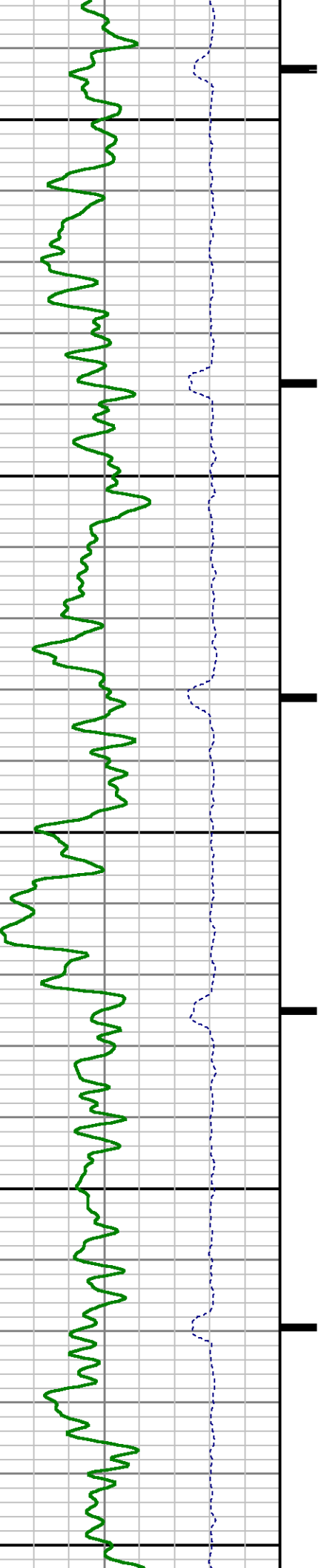


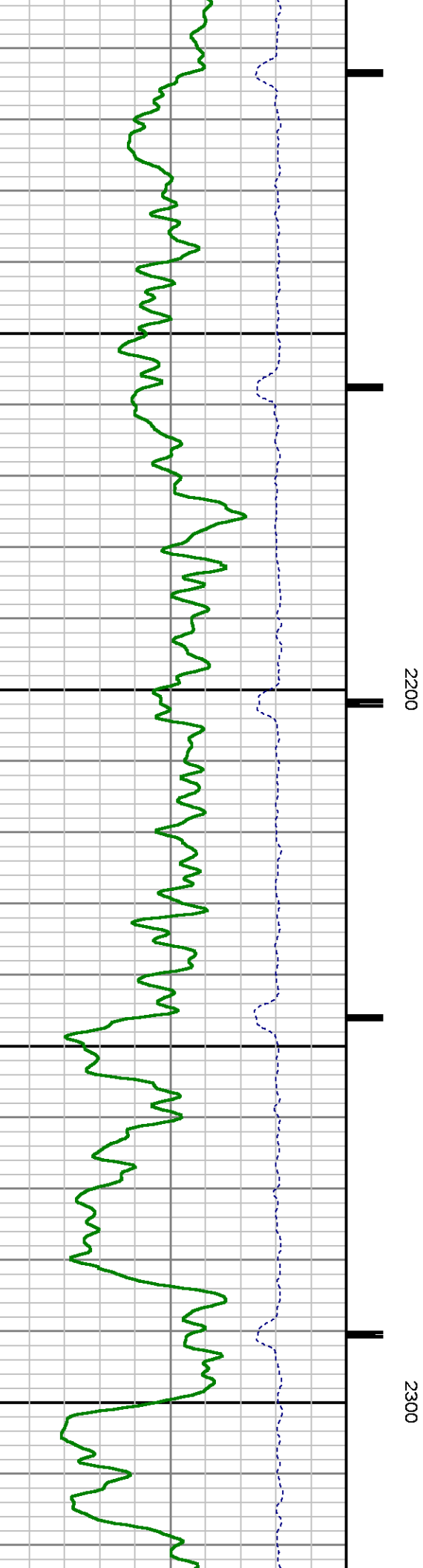
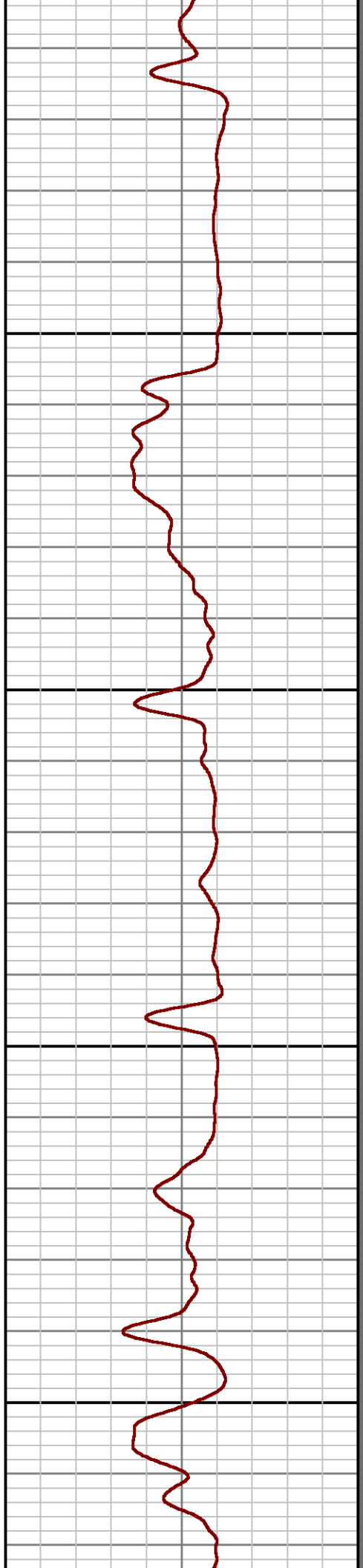
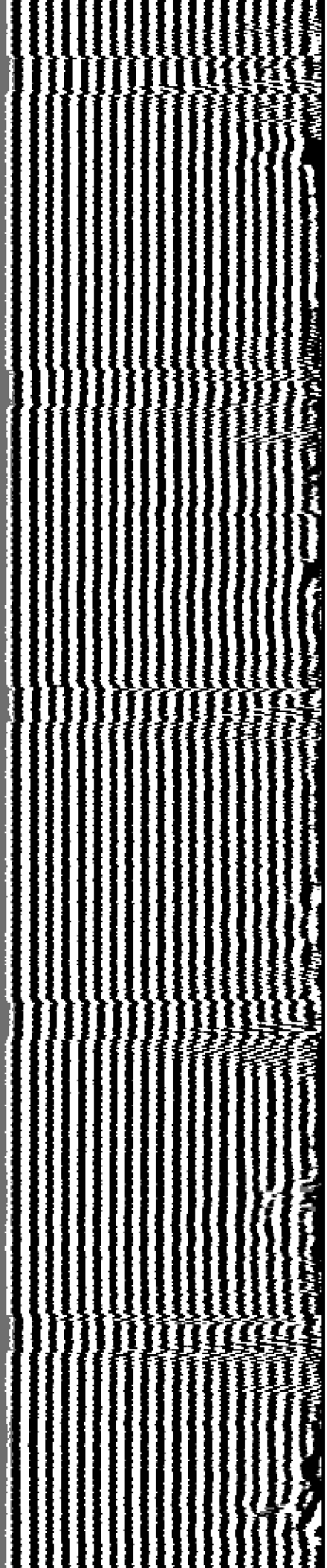


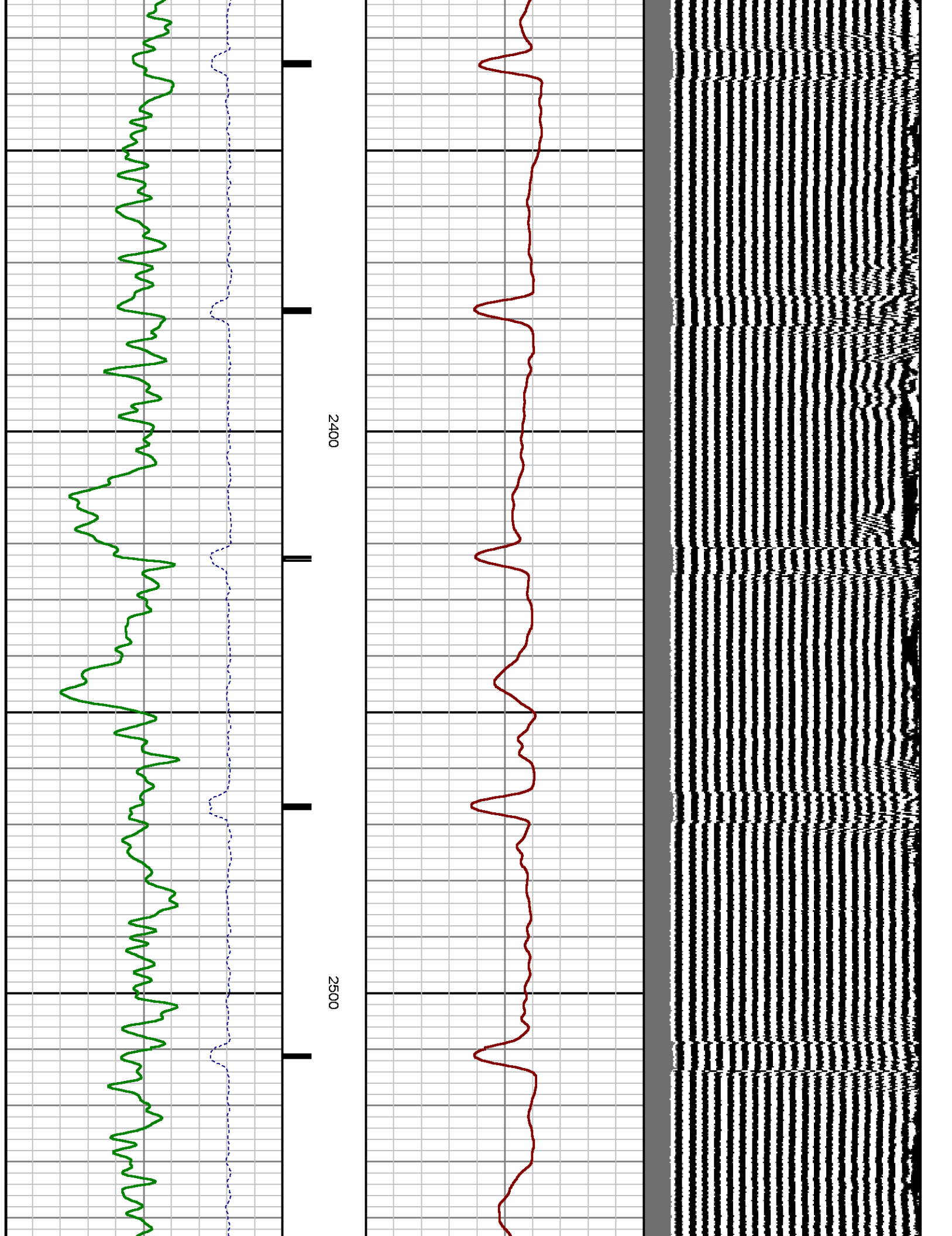
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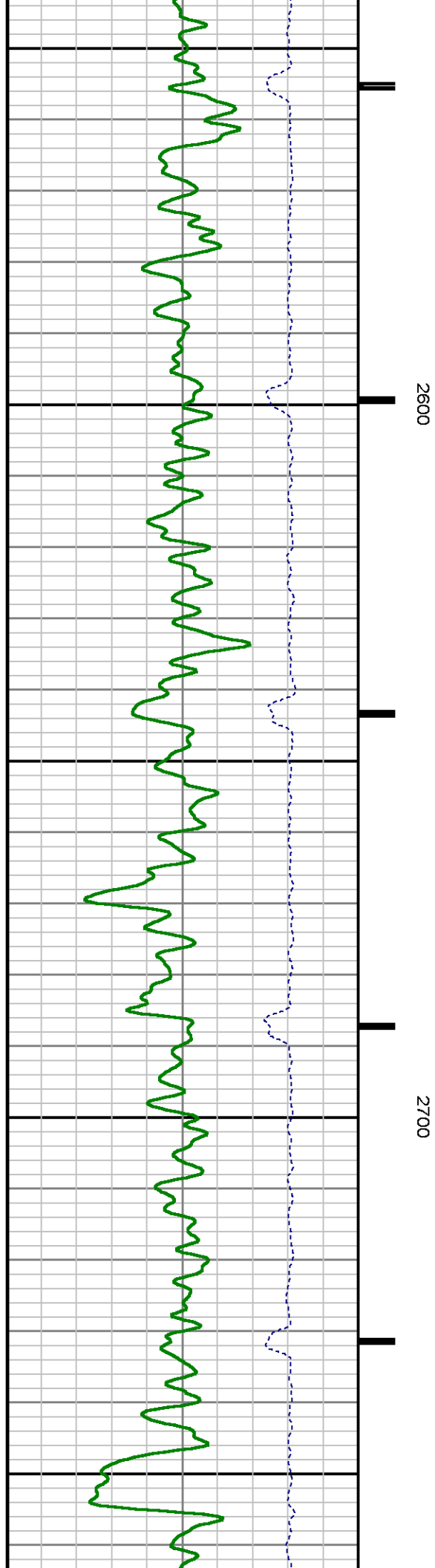
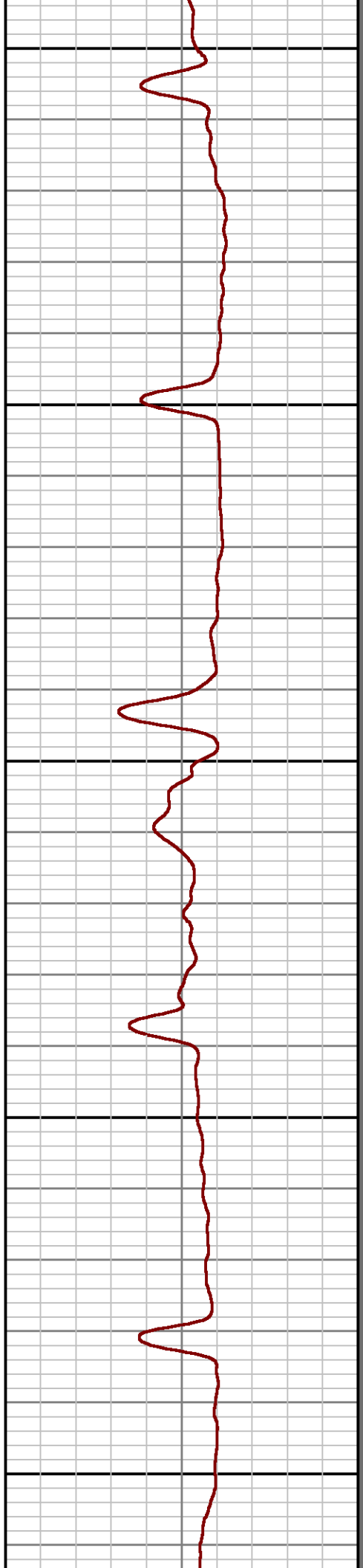
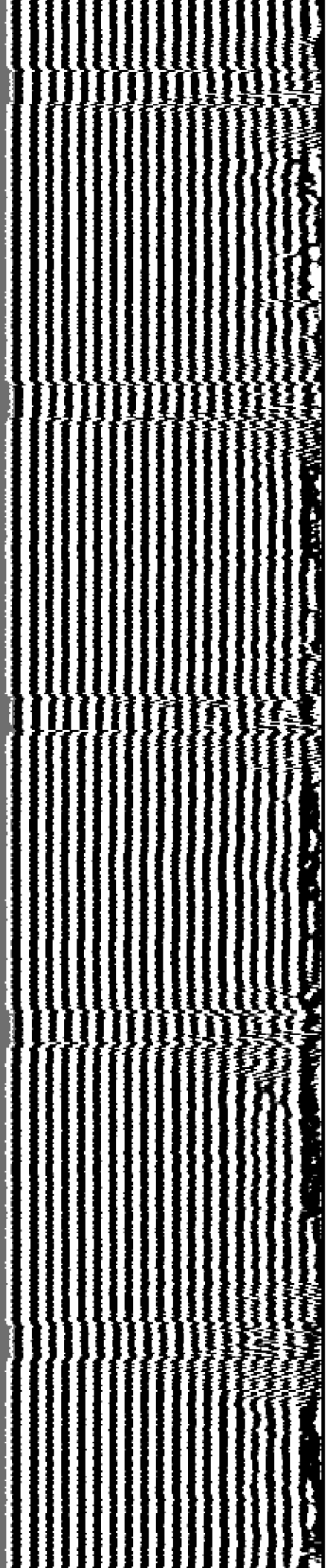
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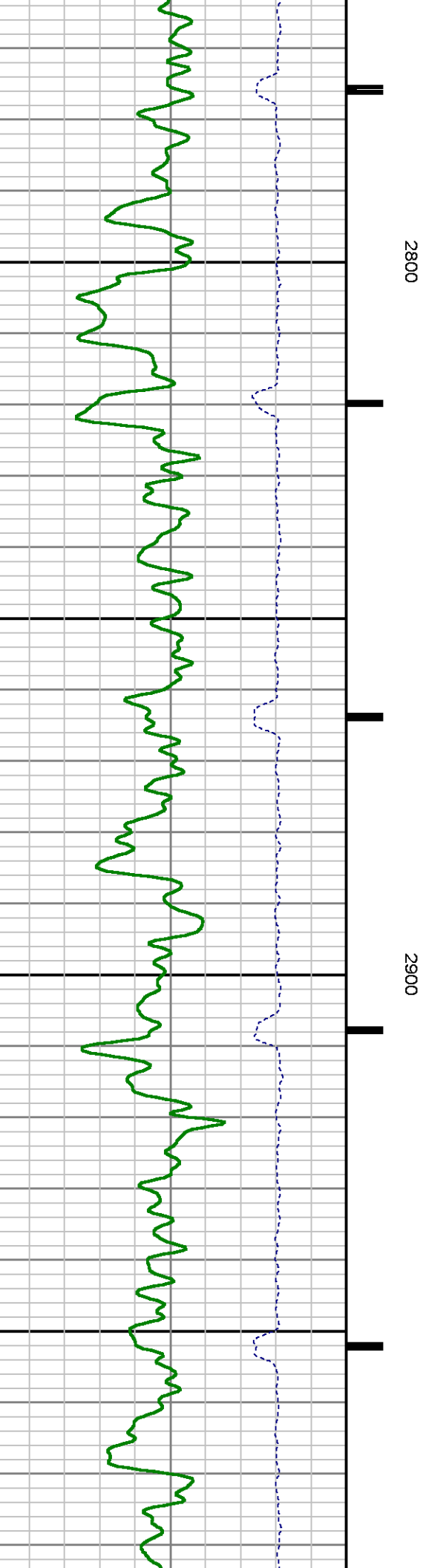
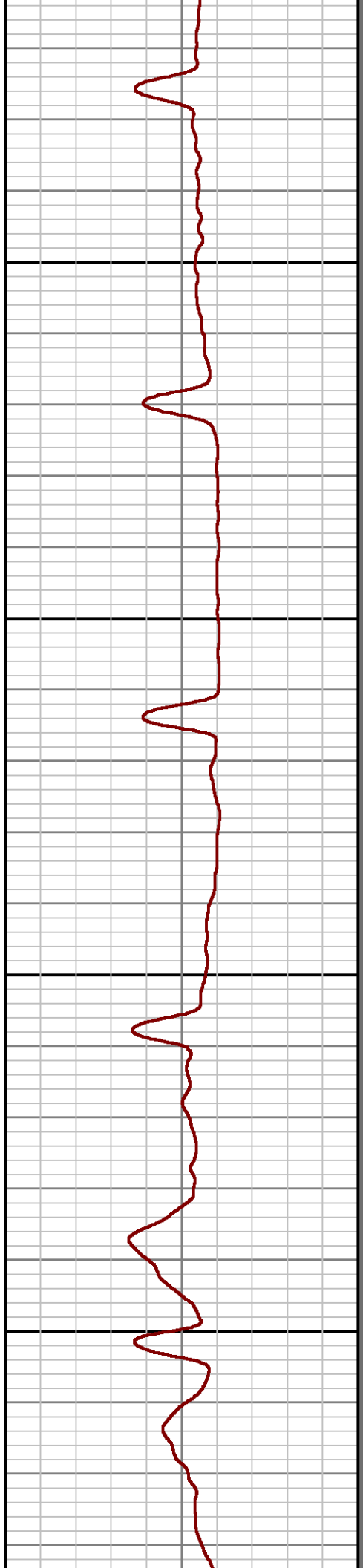
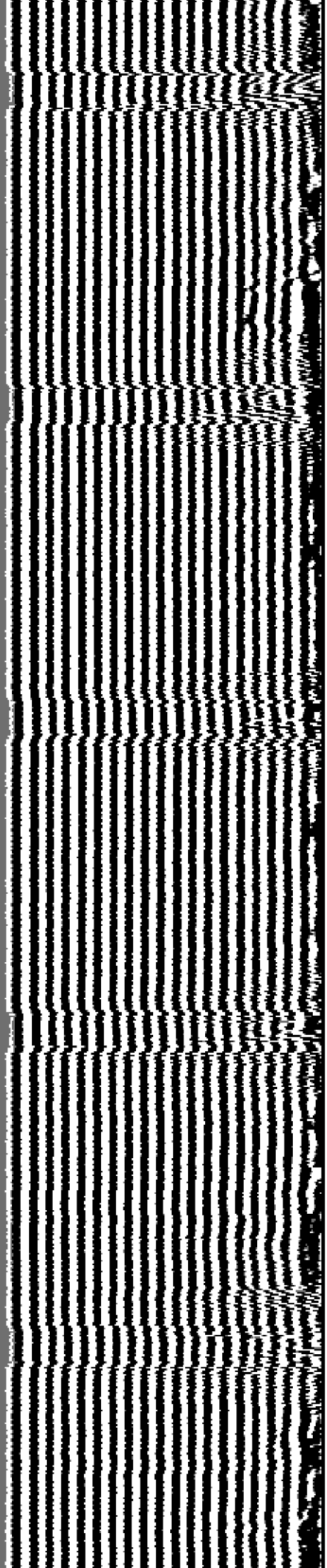




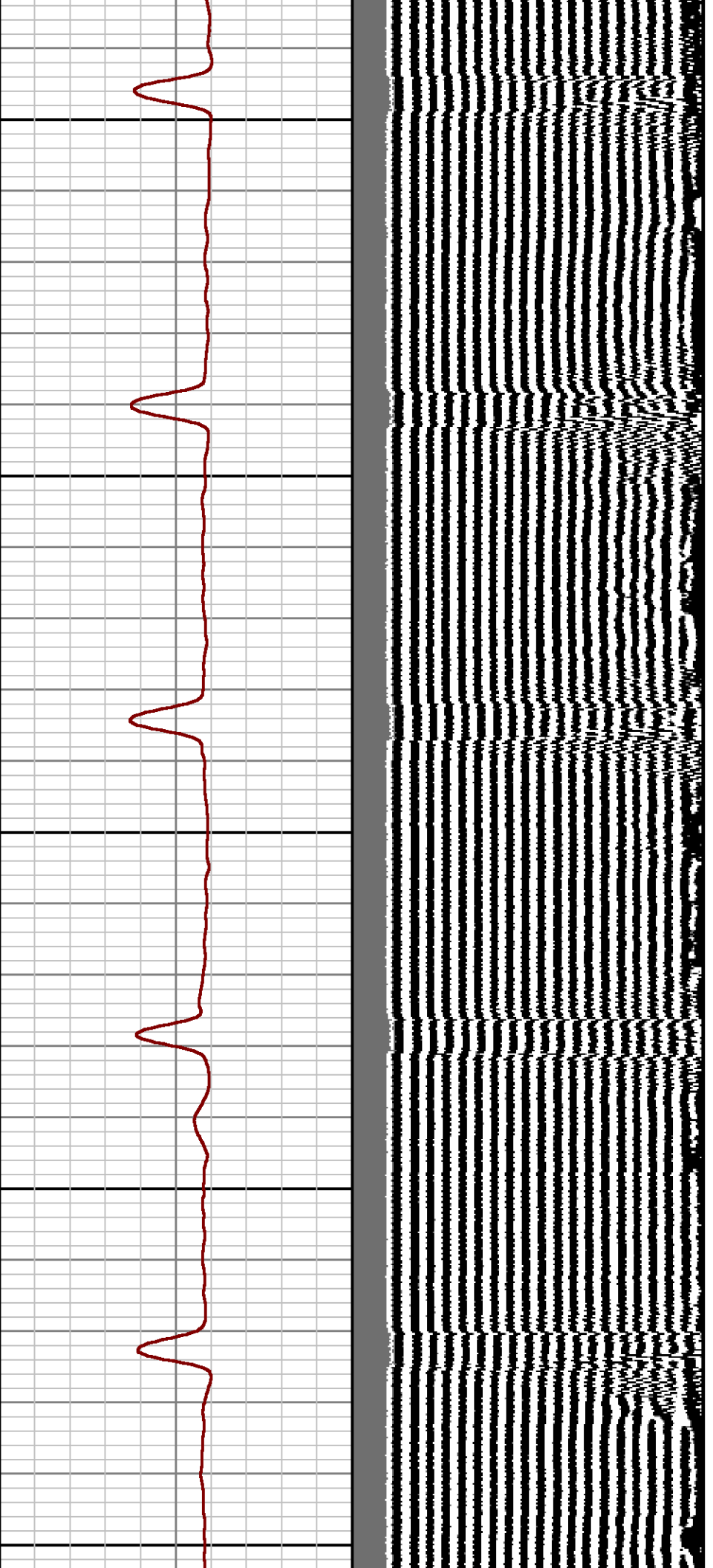








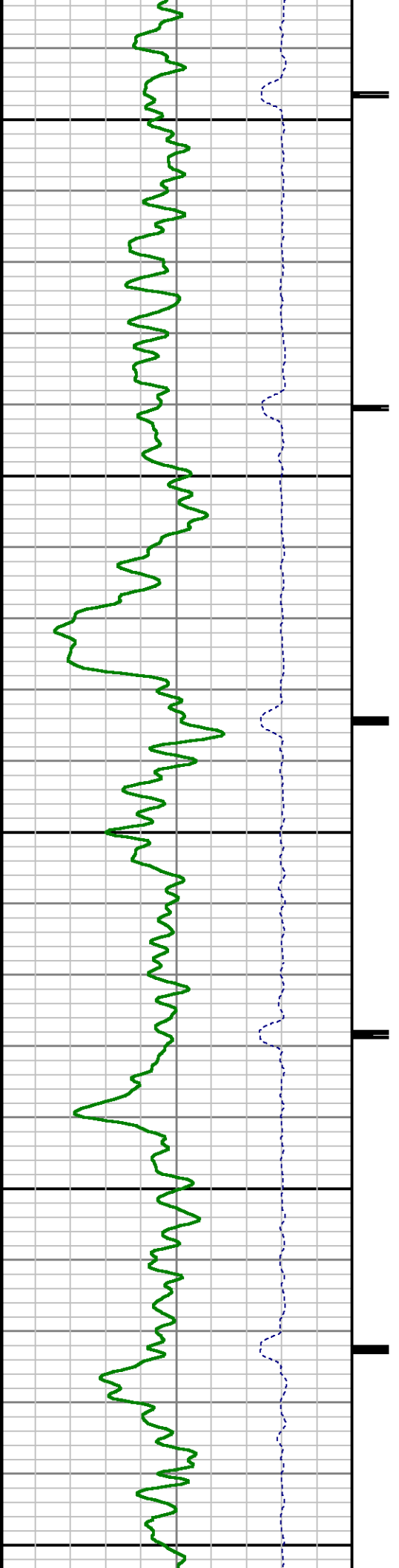


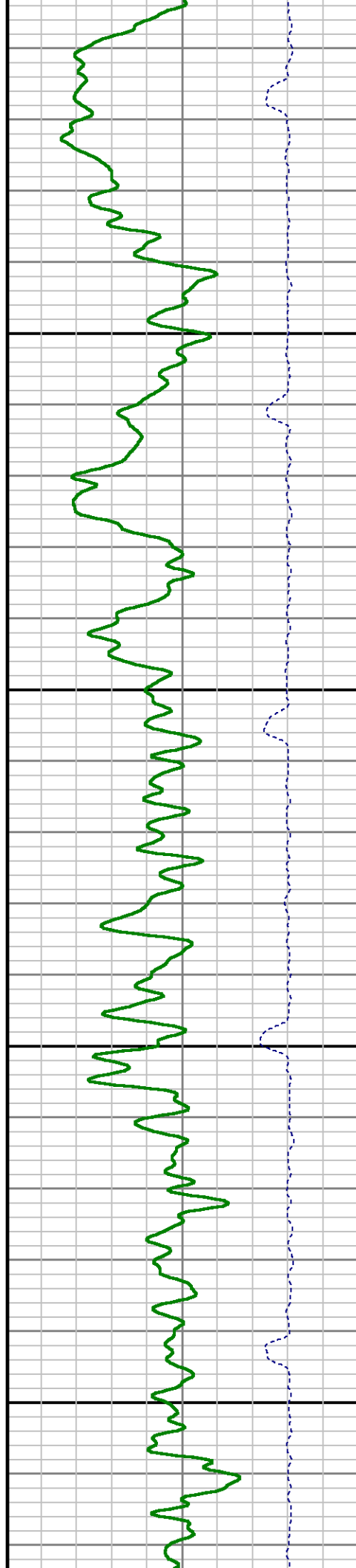
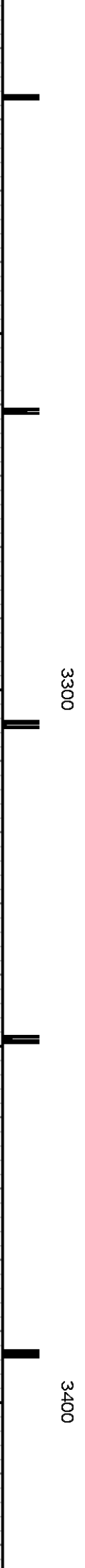
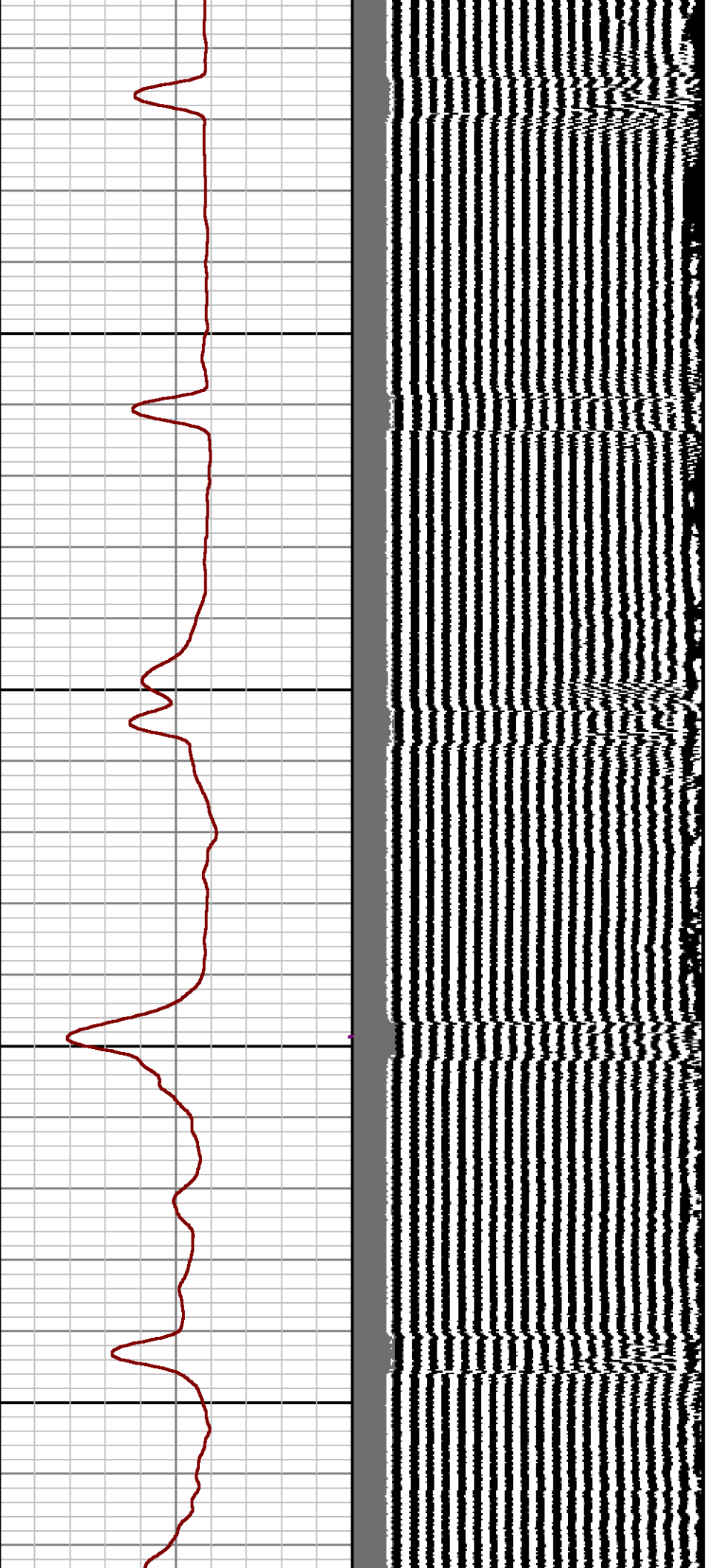


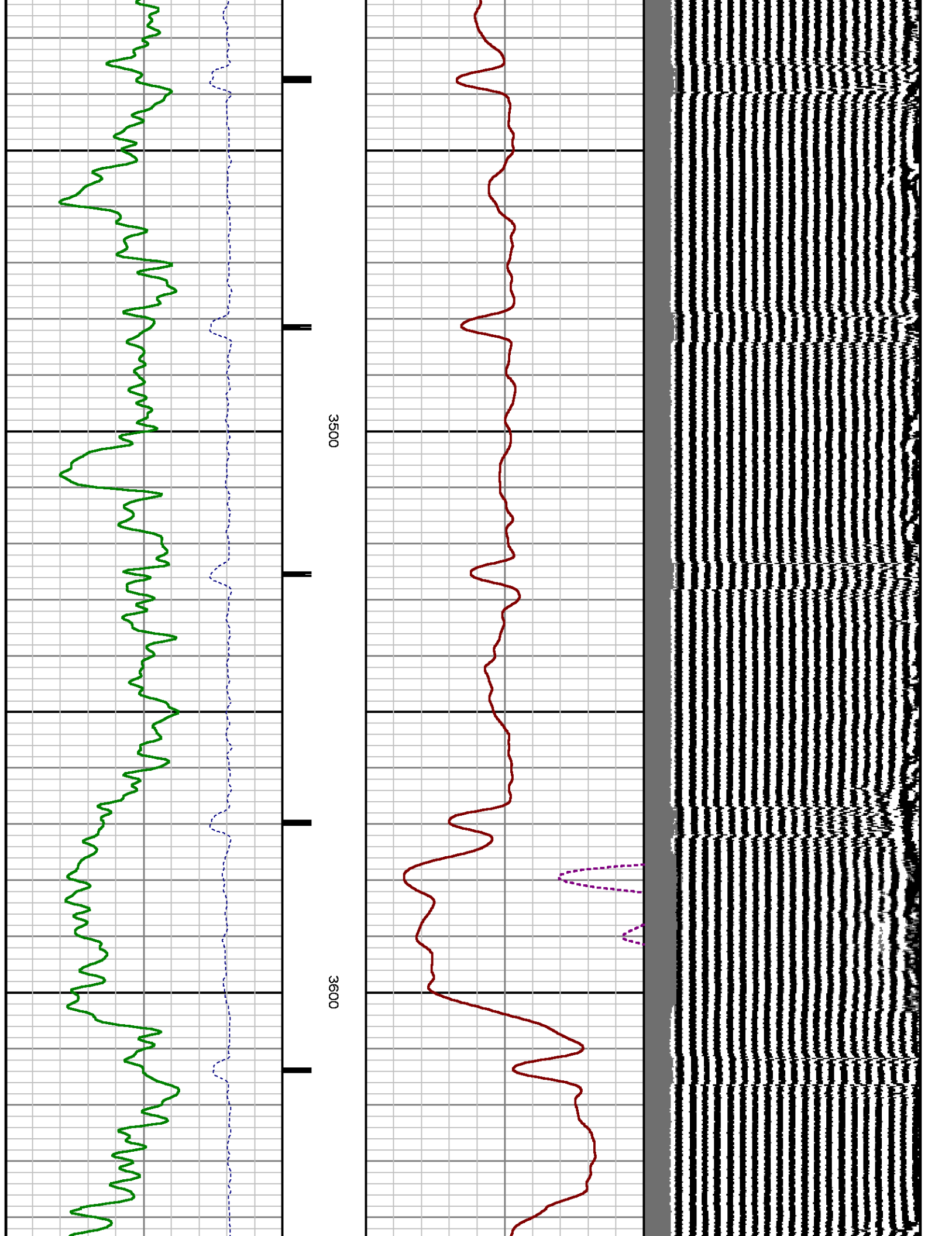
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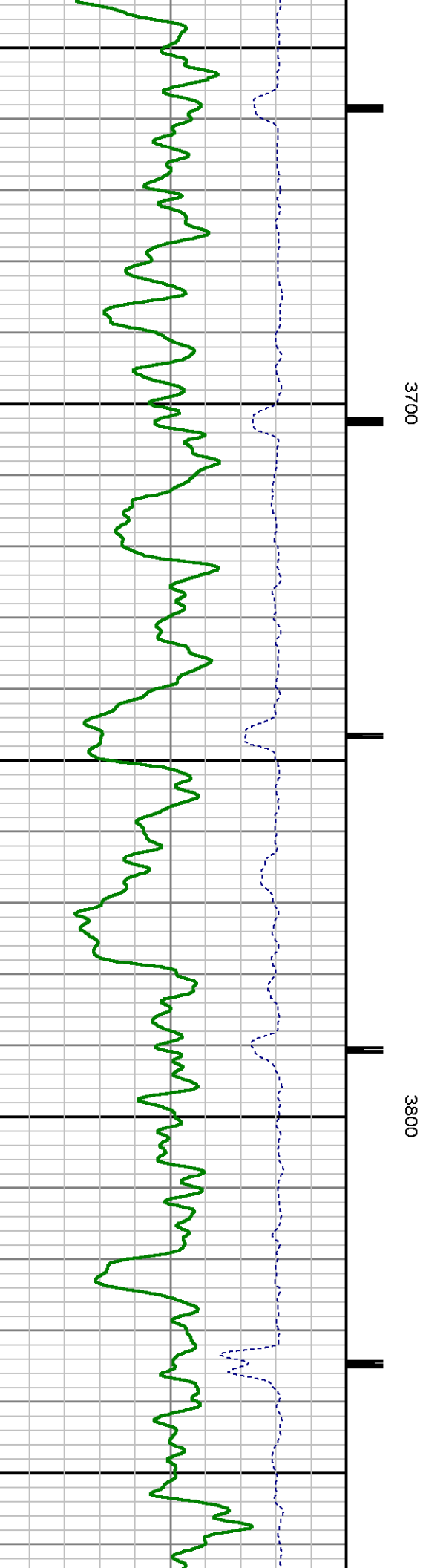
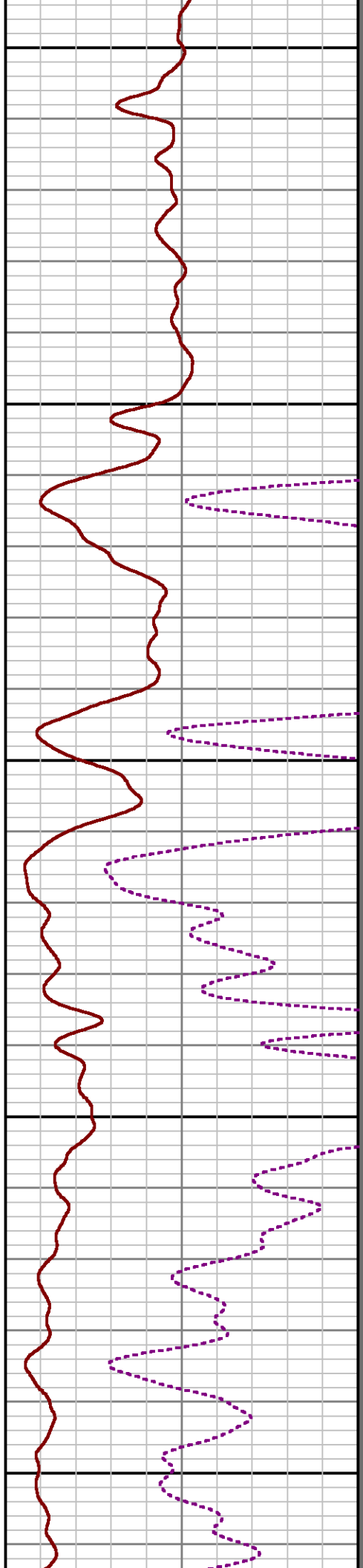
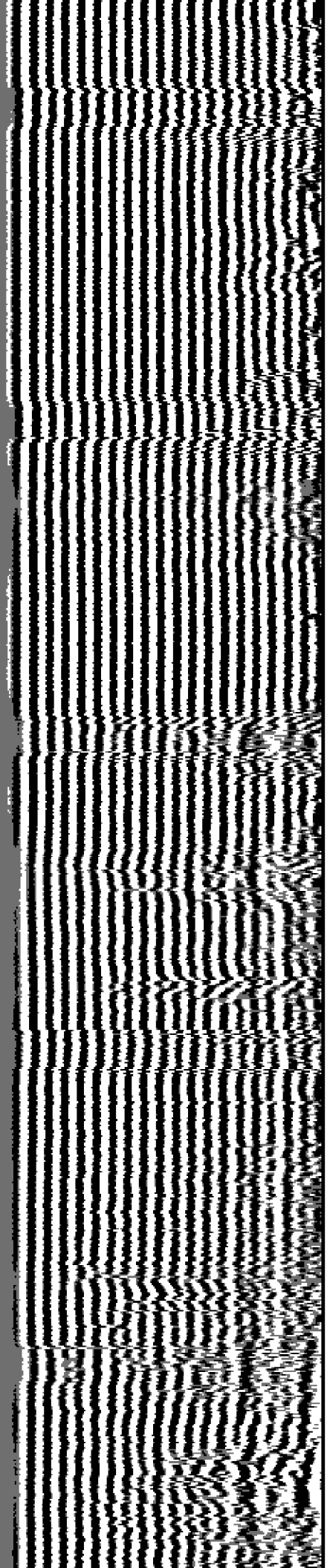
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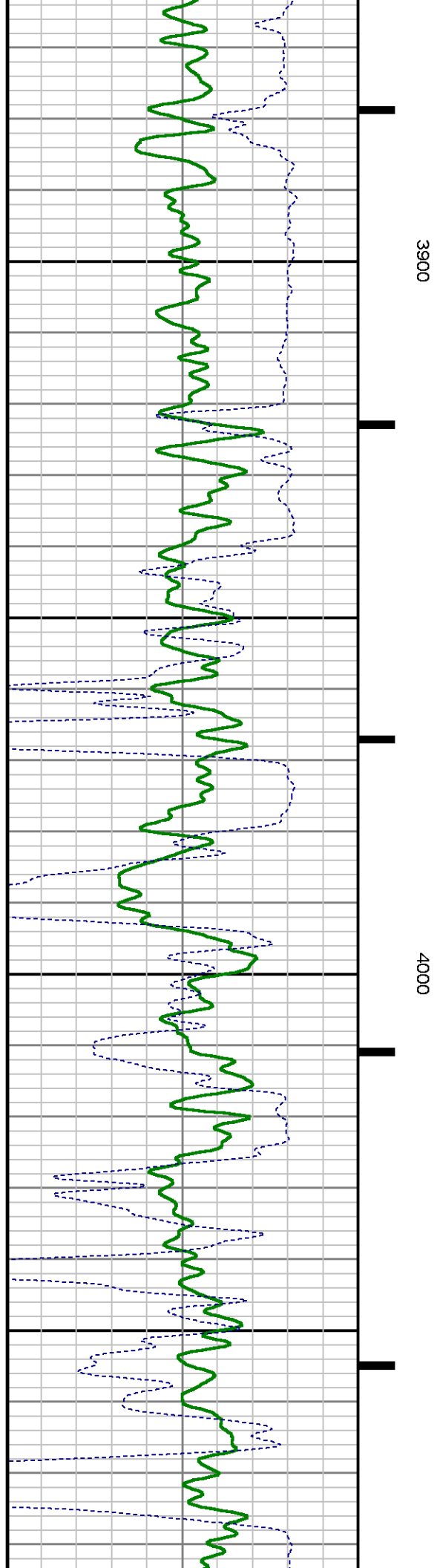
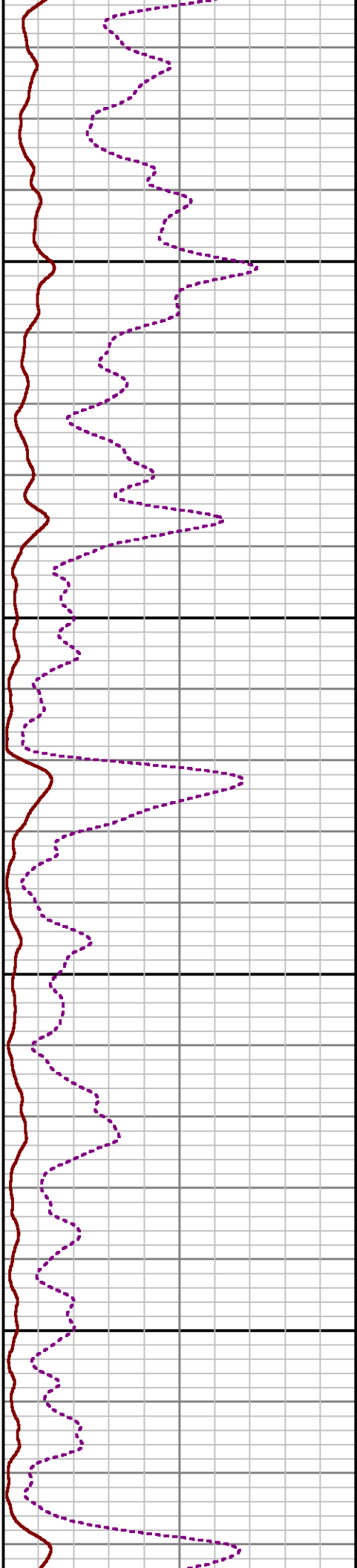
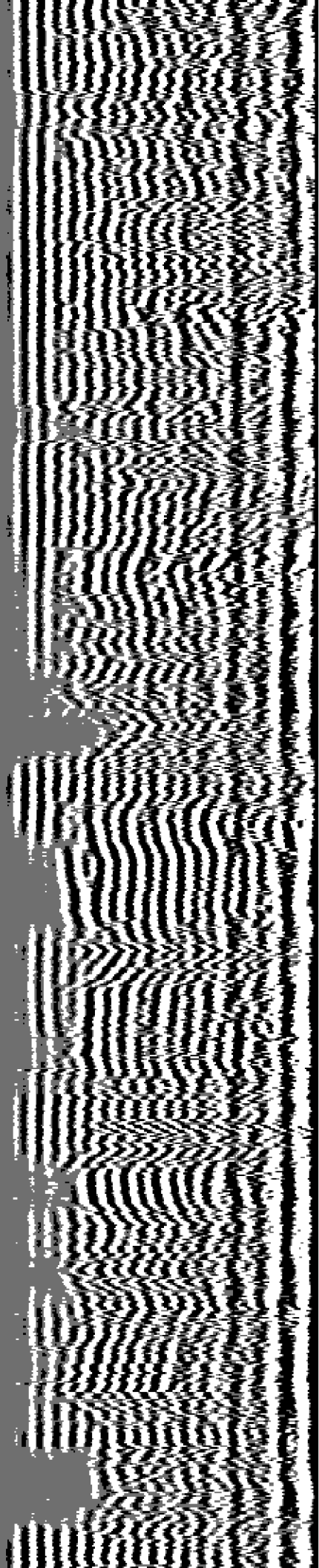
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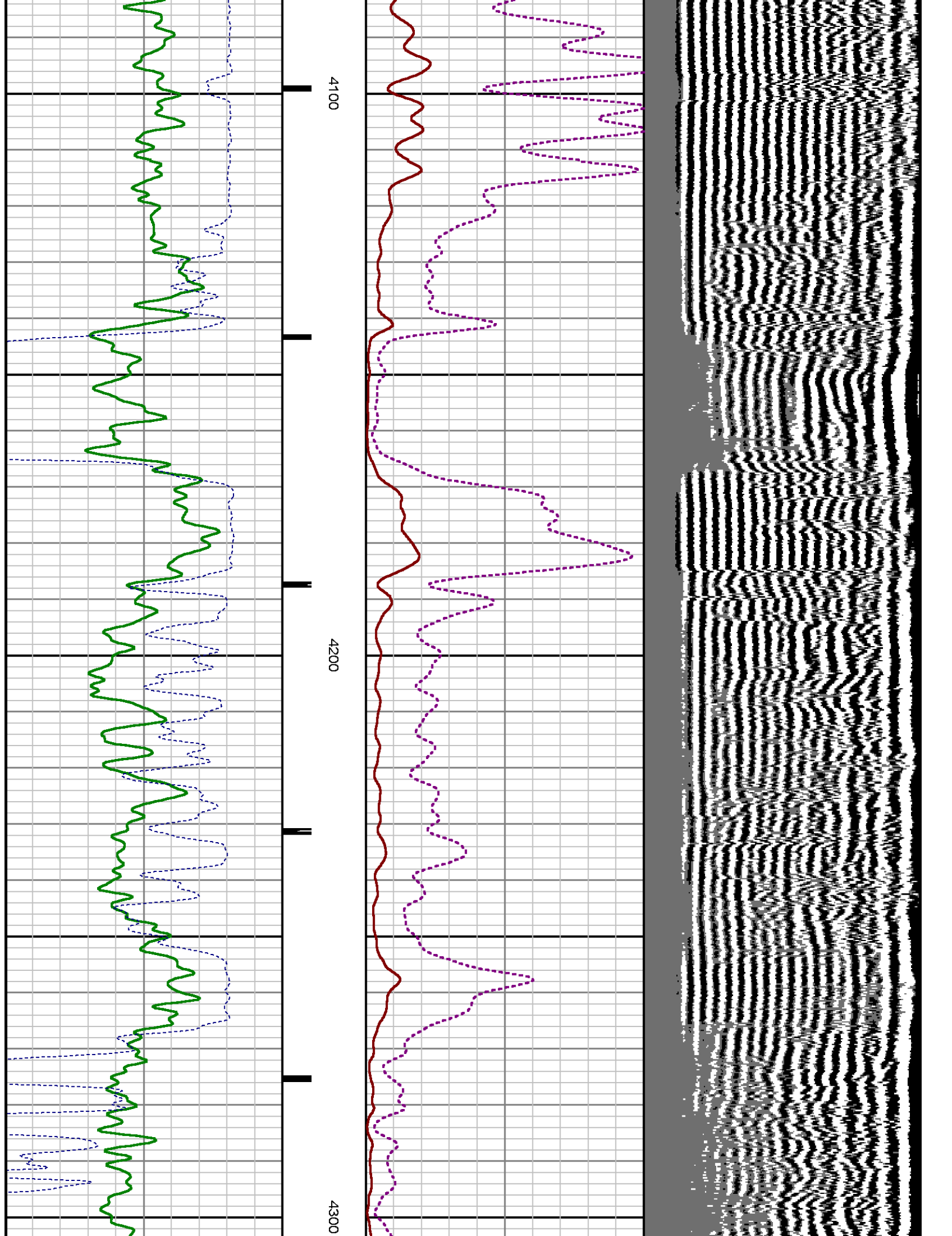


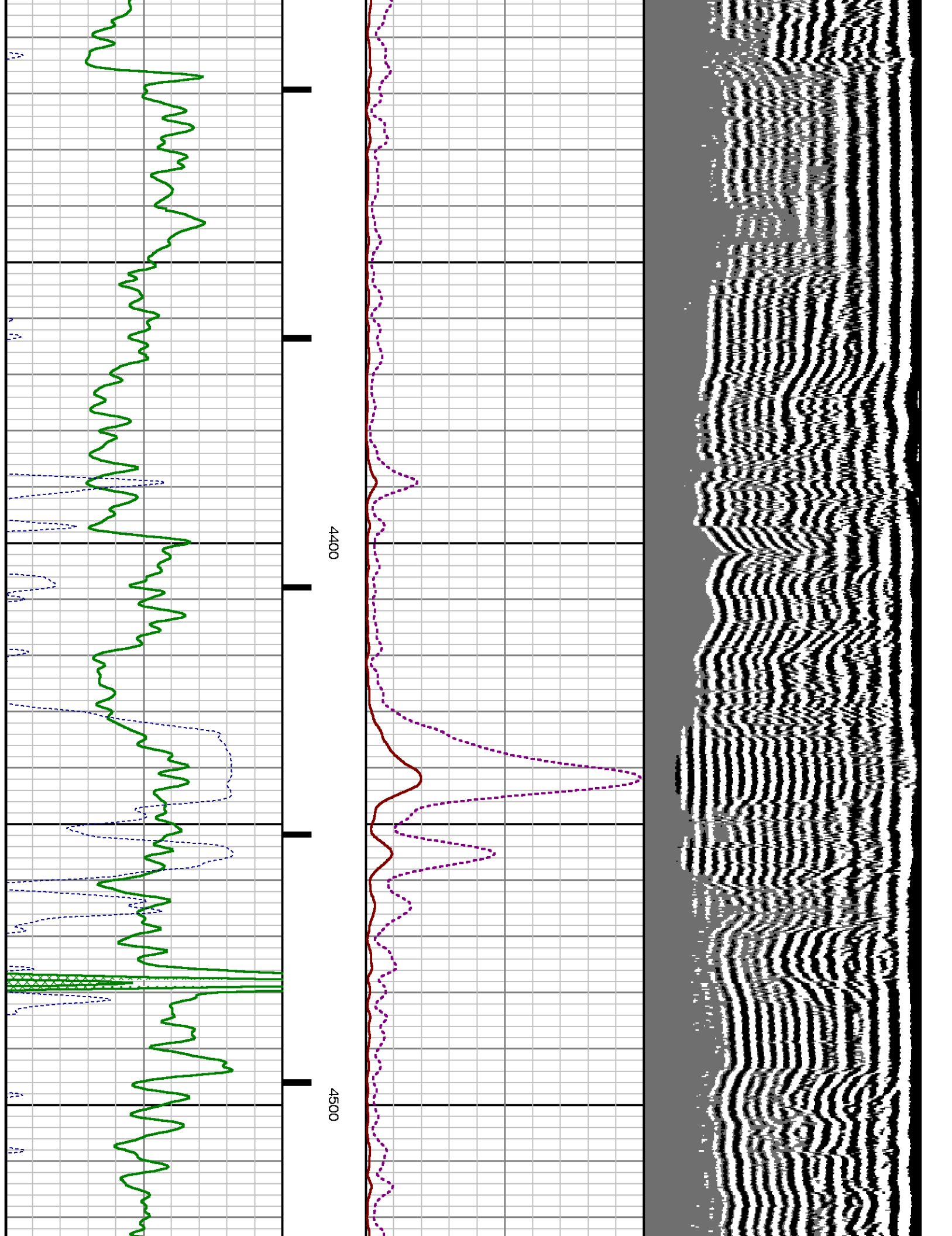


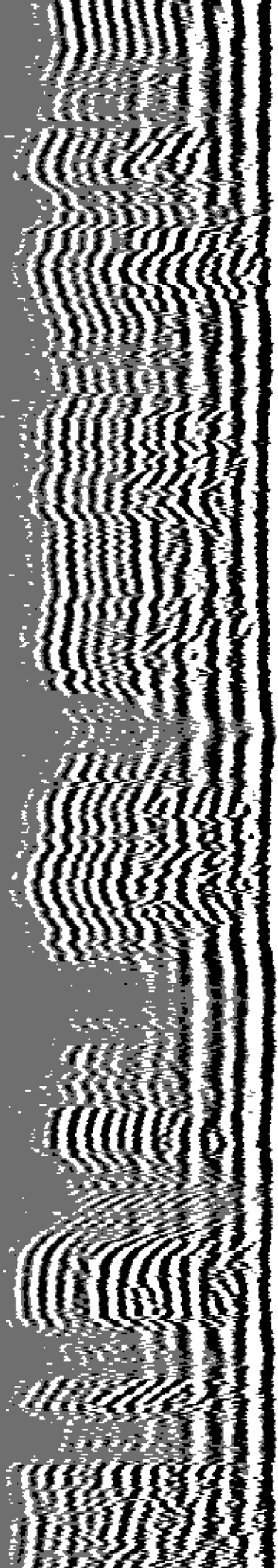






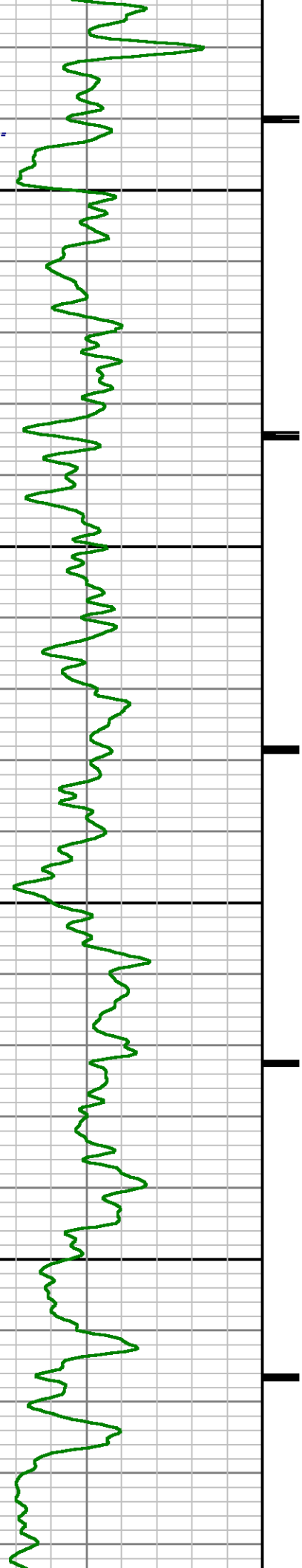




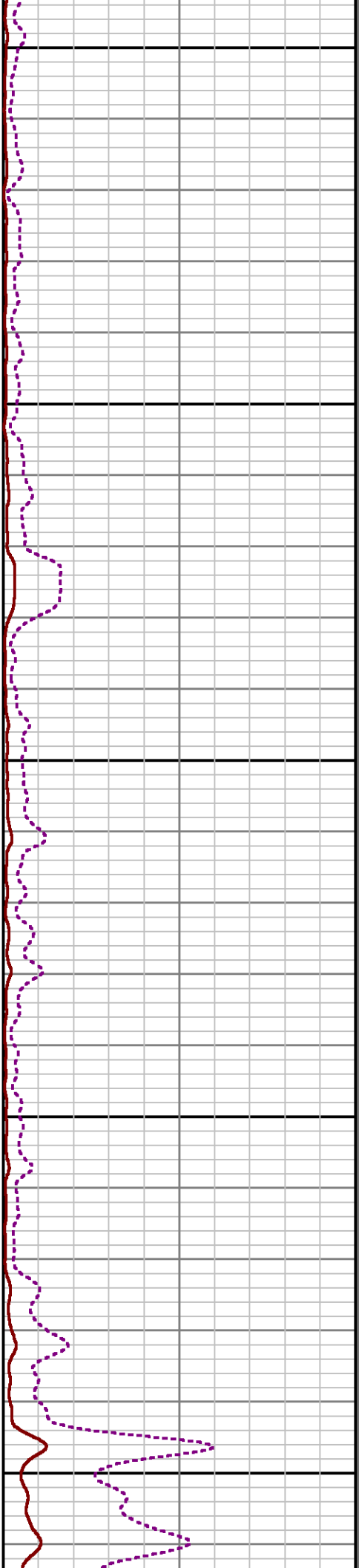
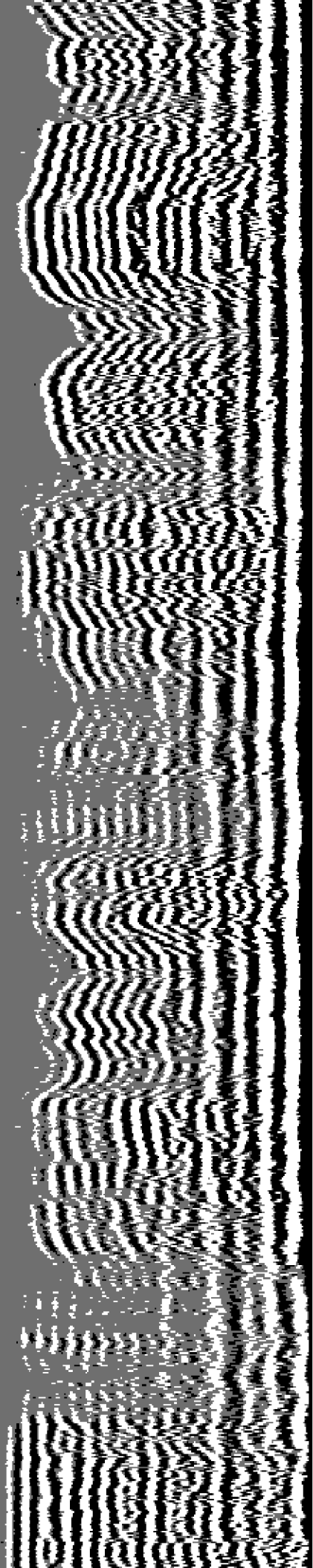


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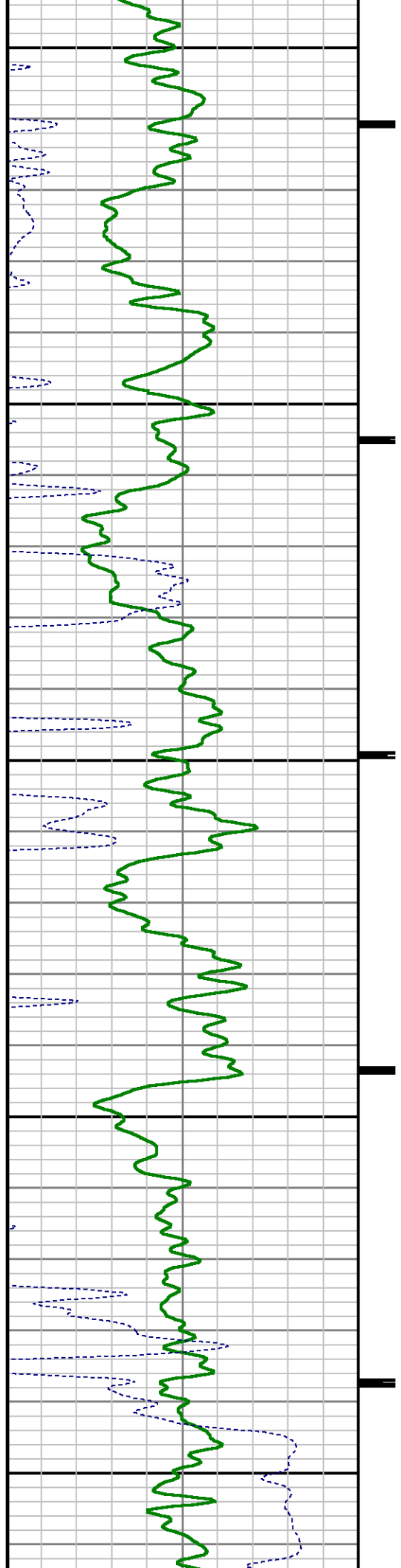


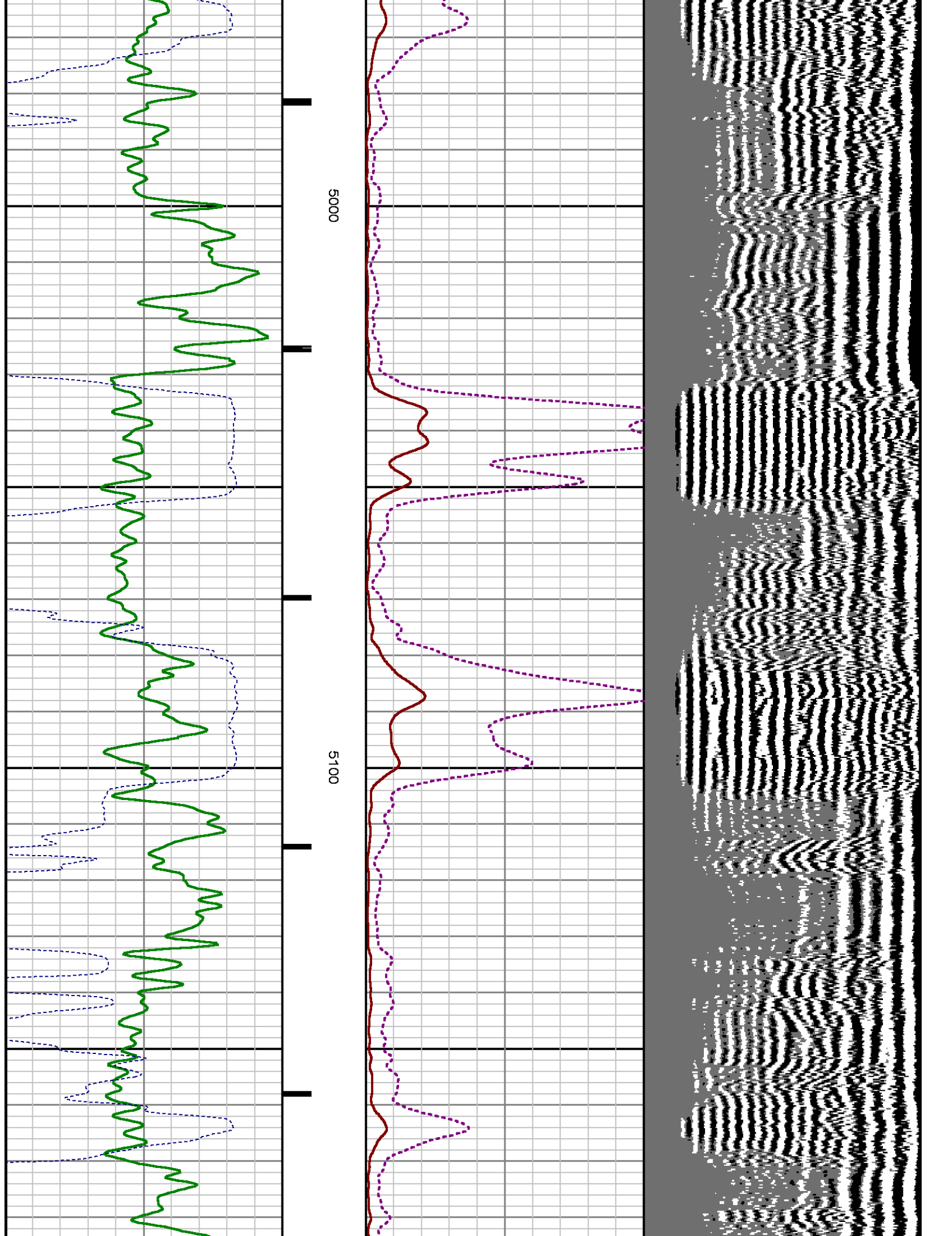


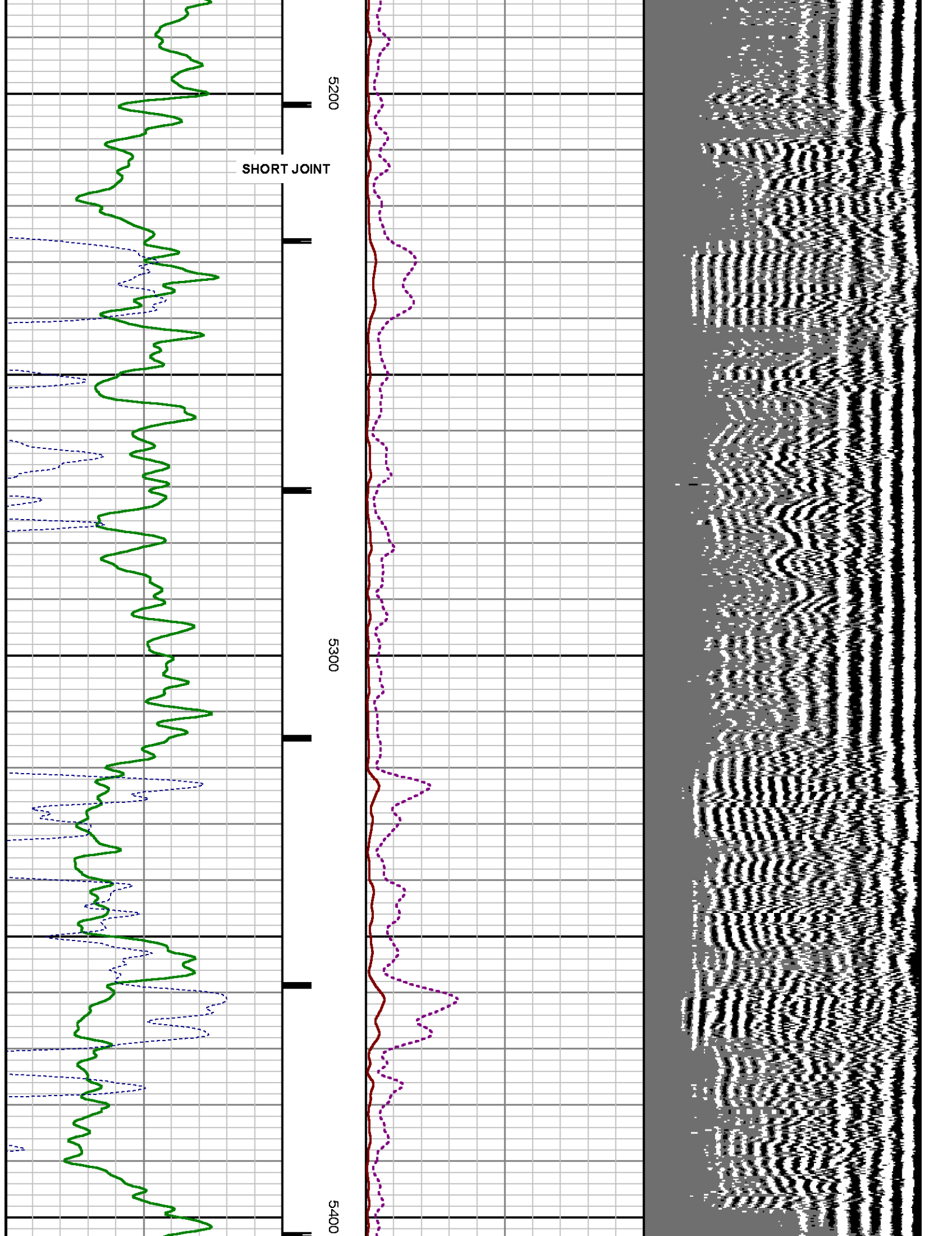


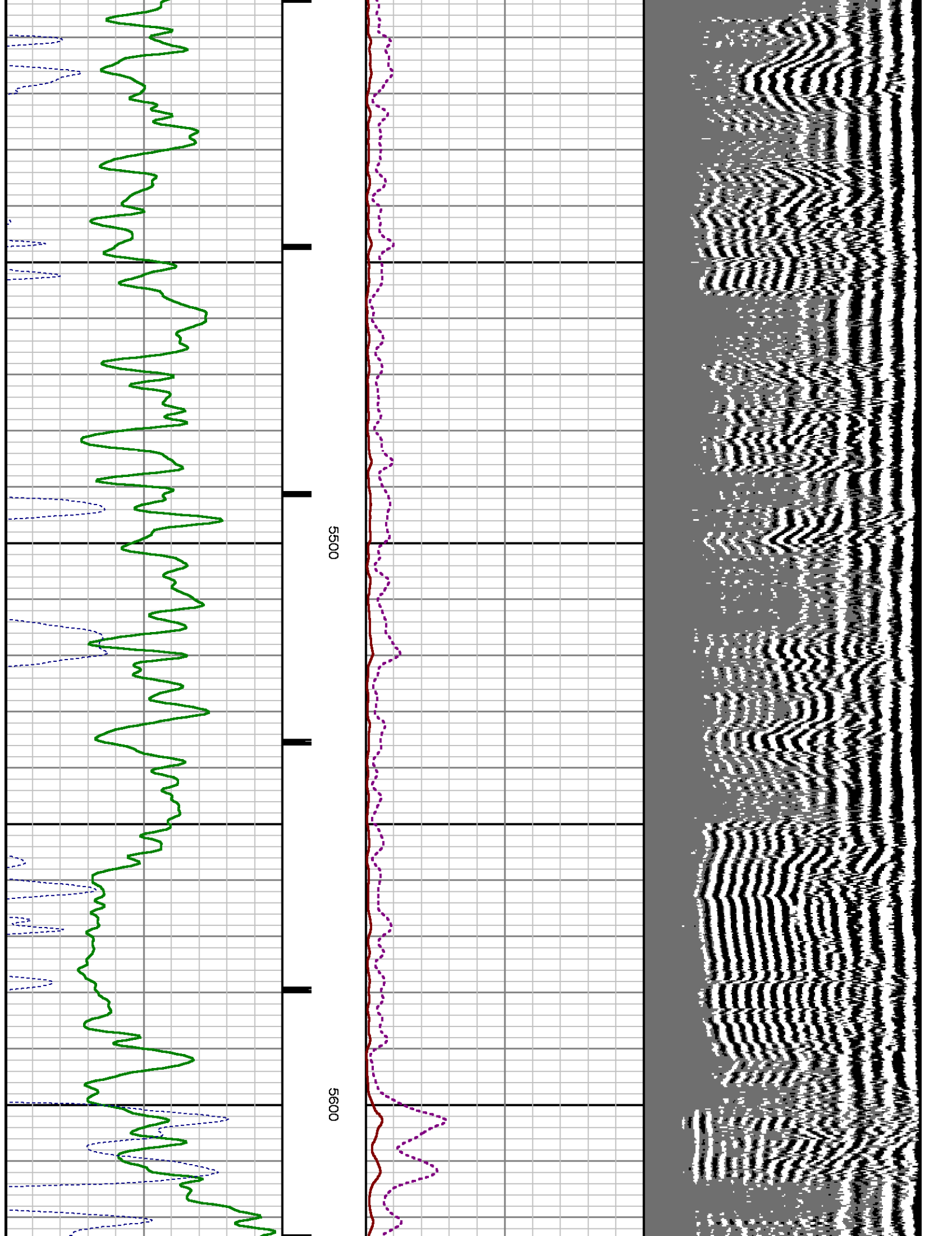
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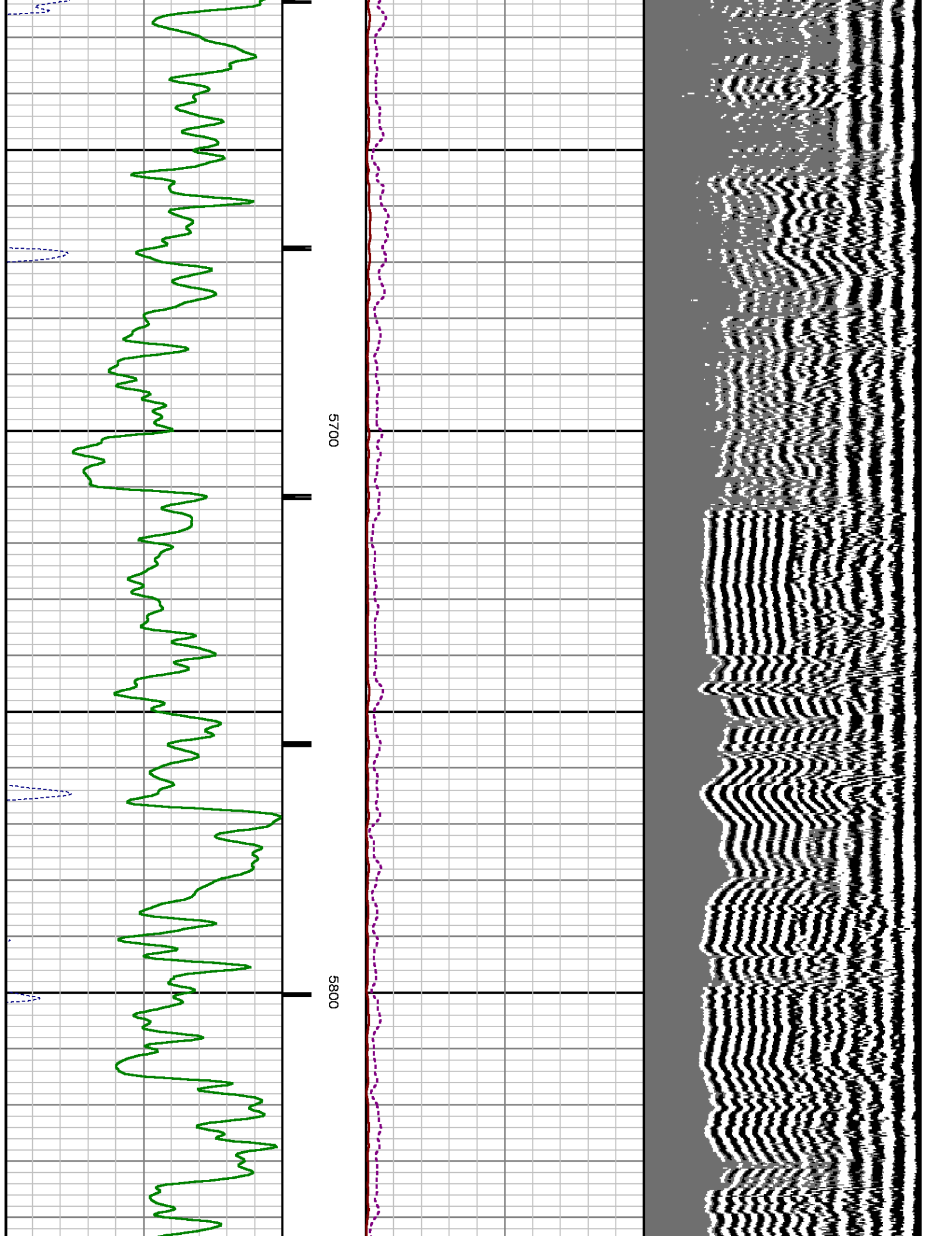
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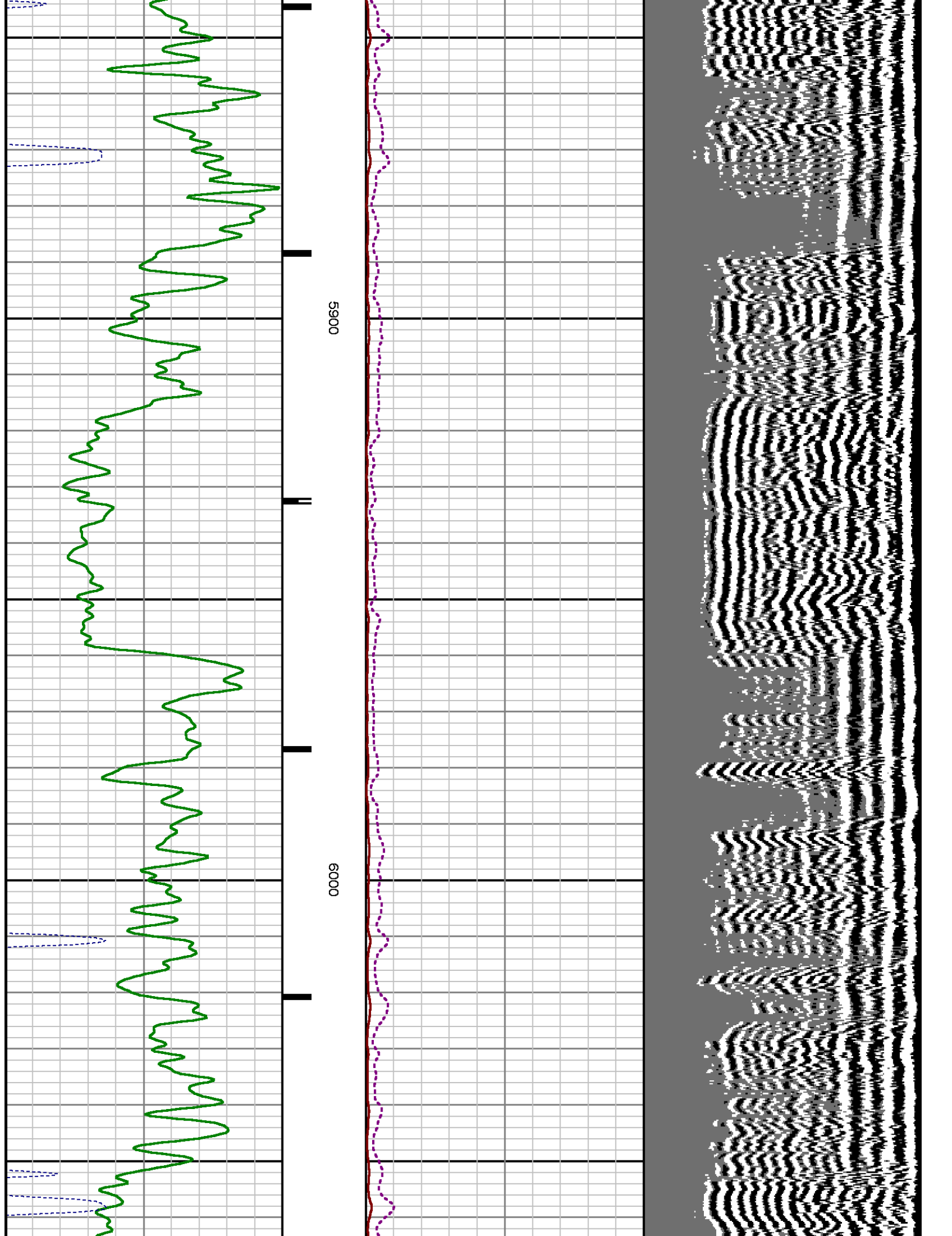


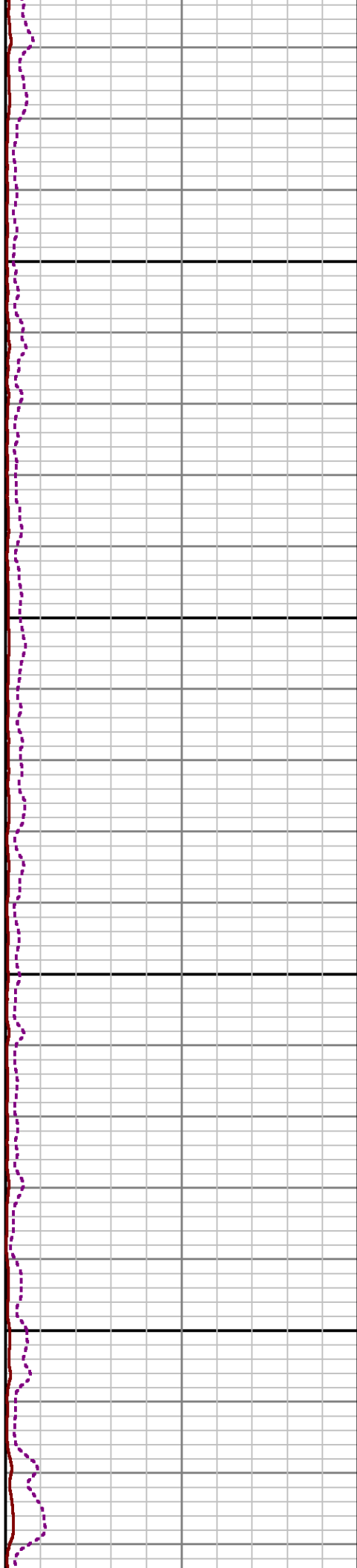
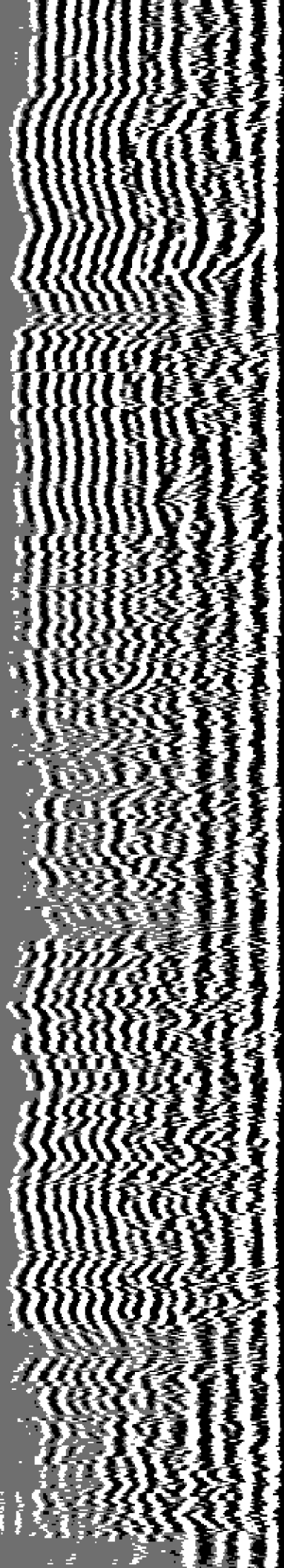






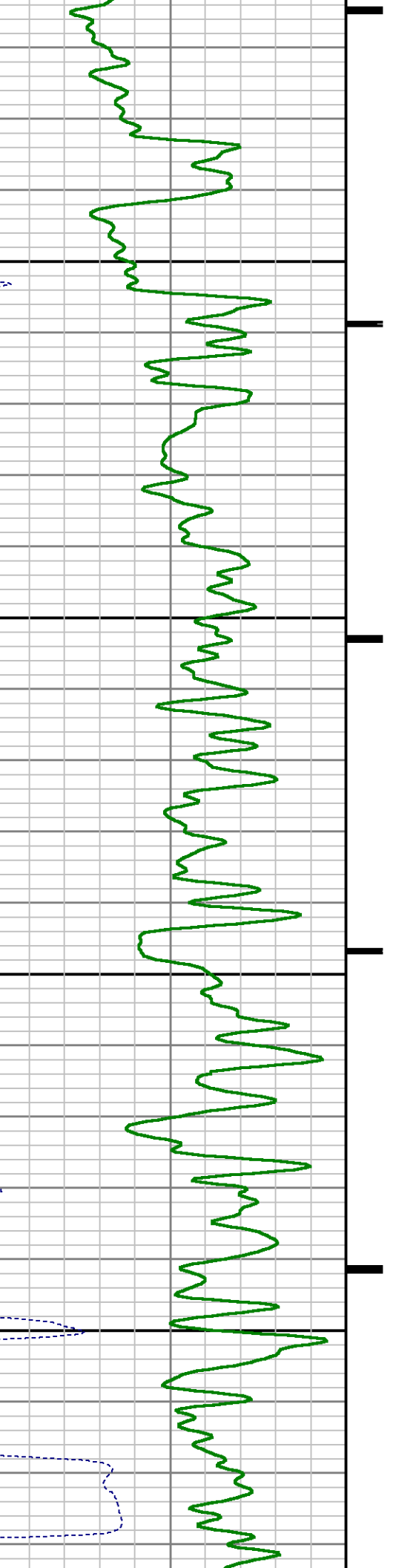


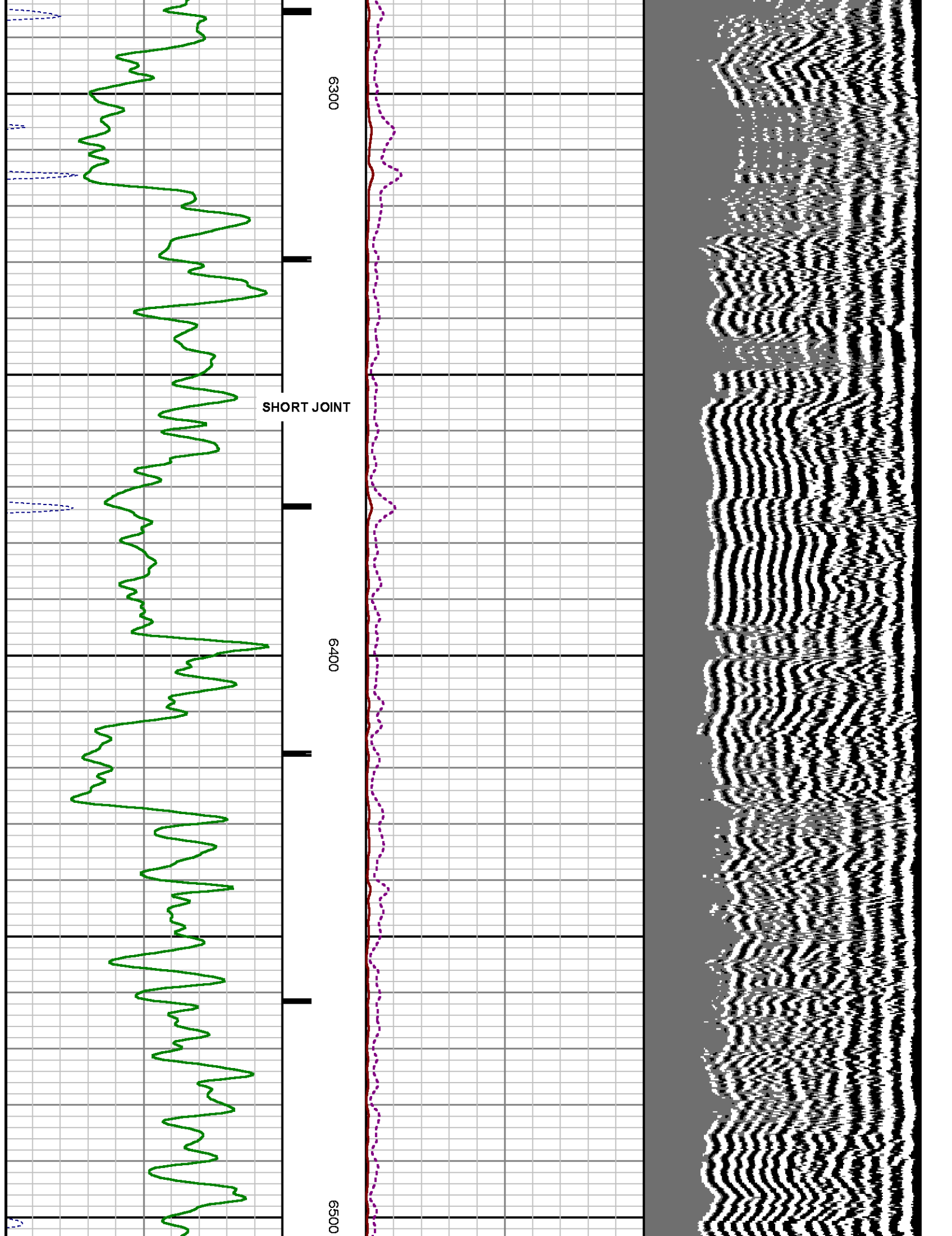




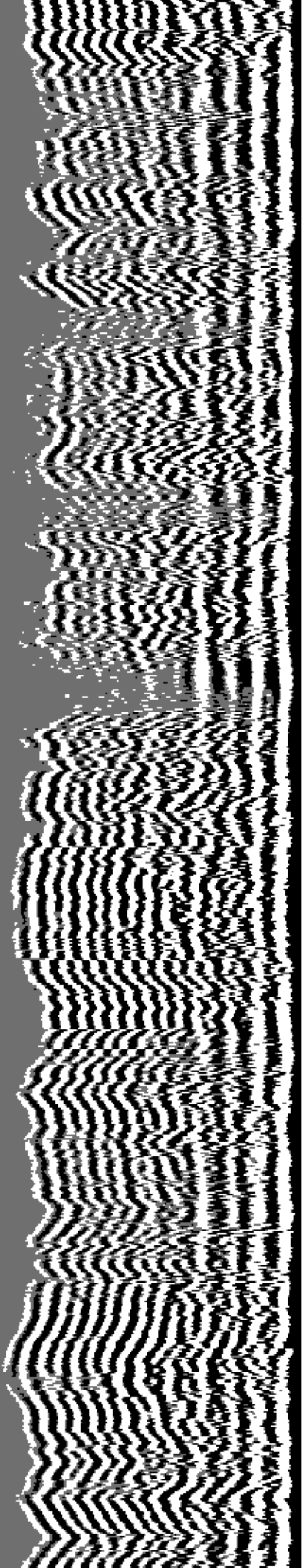
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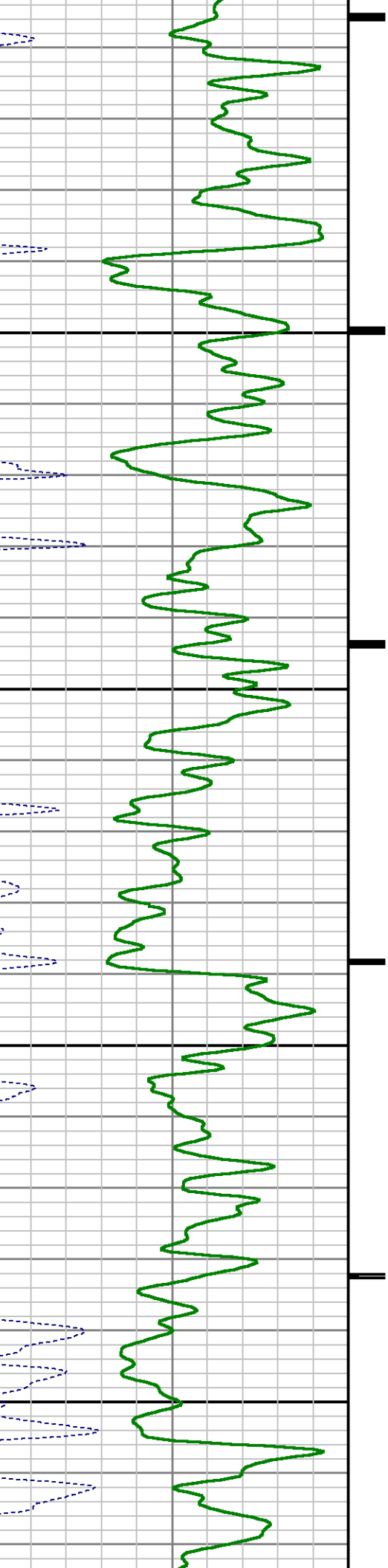


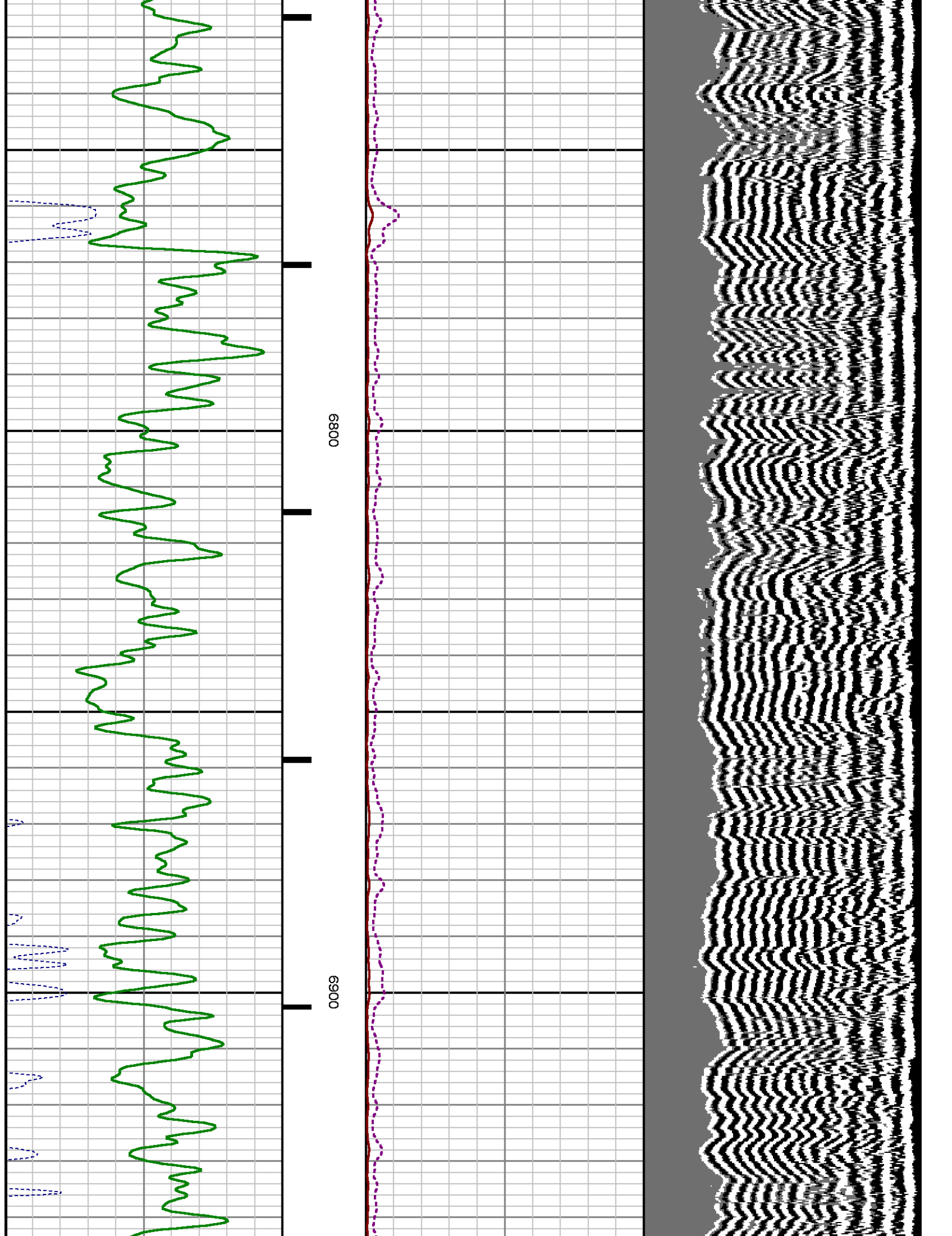


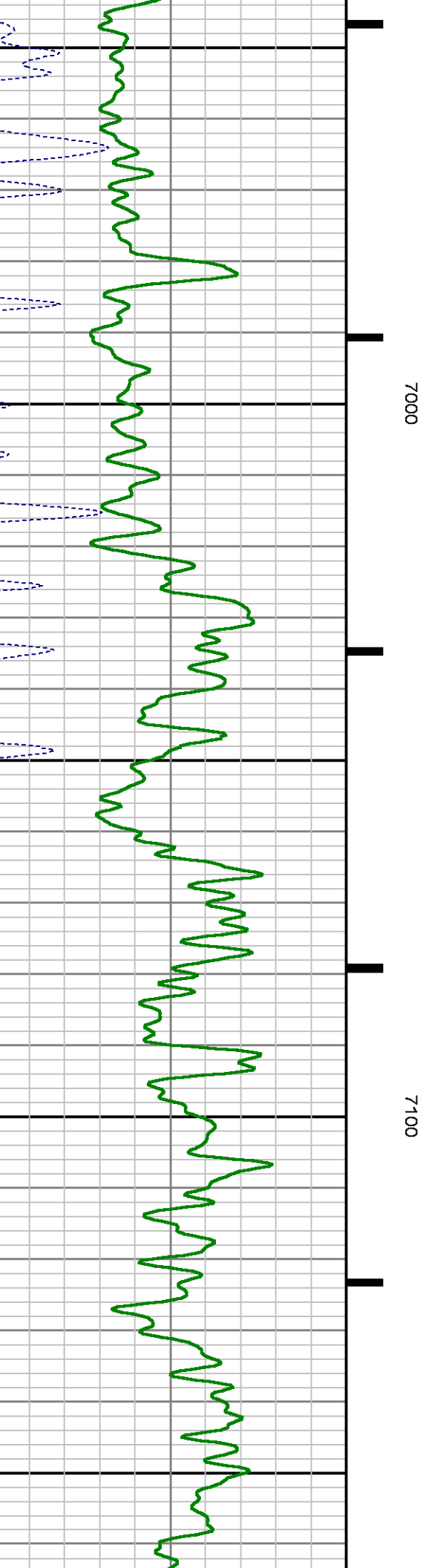
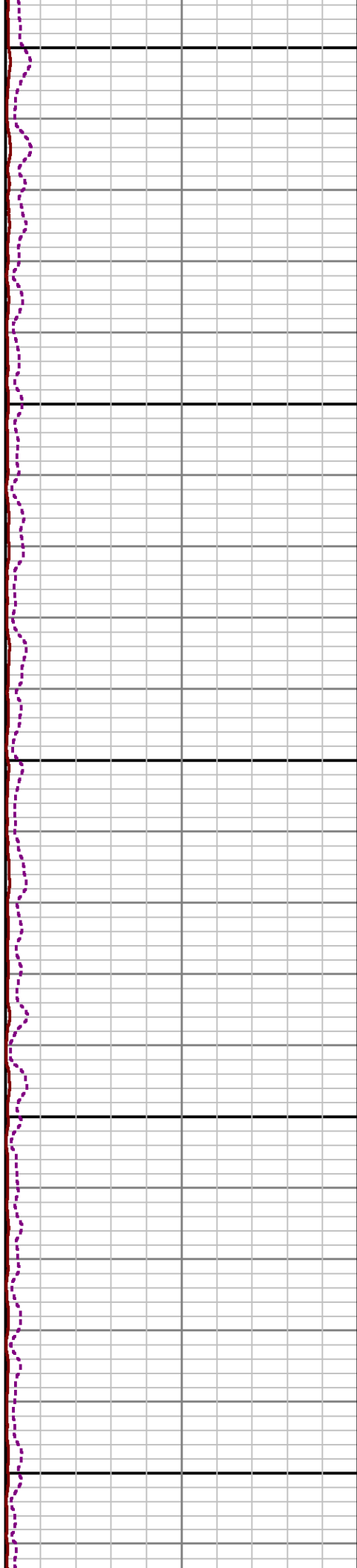
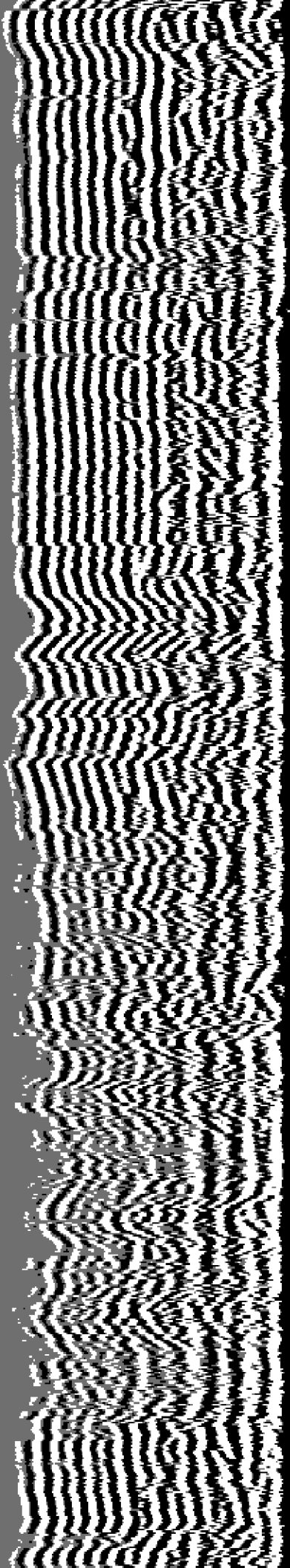


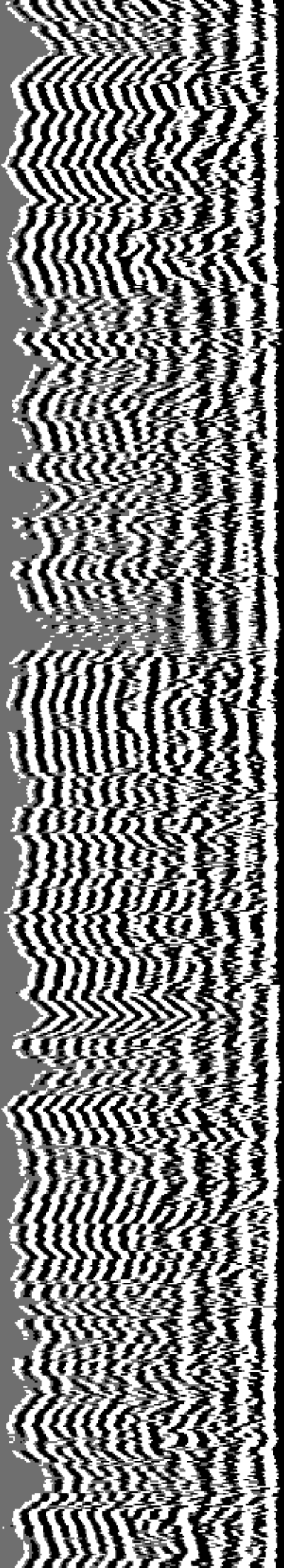
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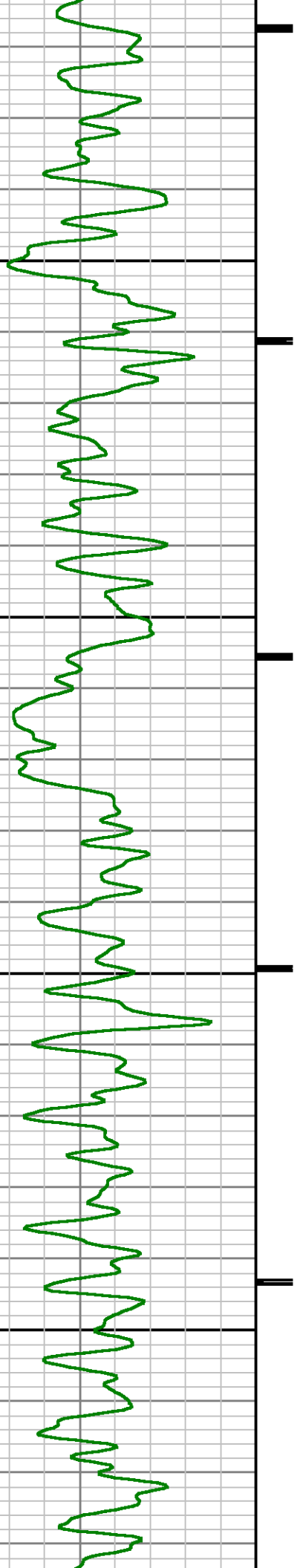


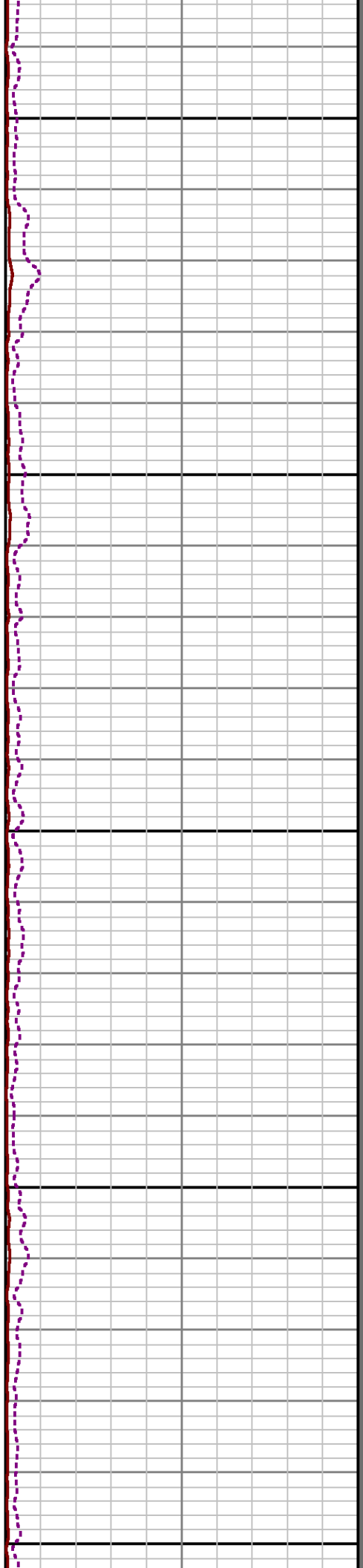
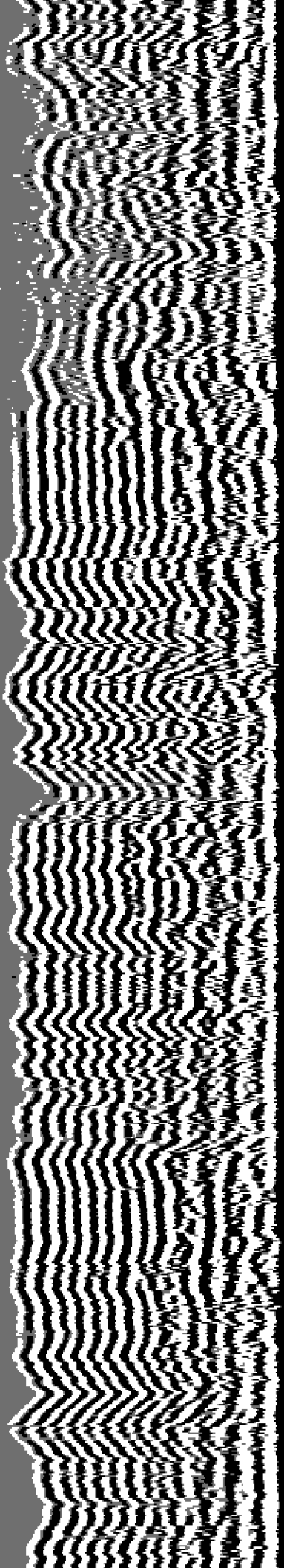




7200

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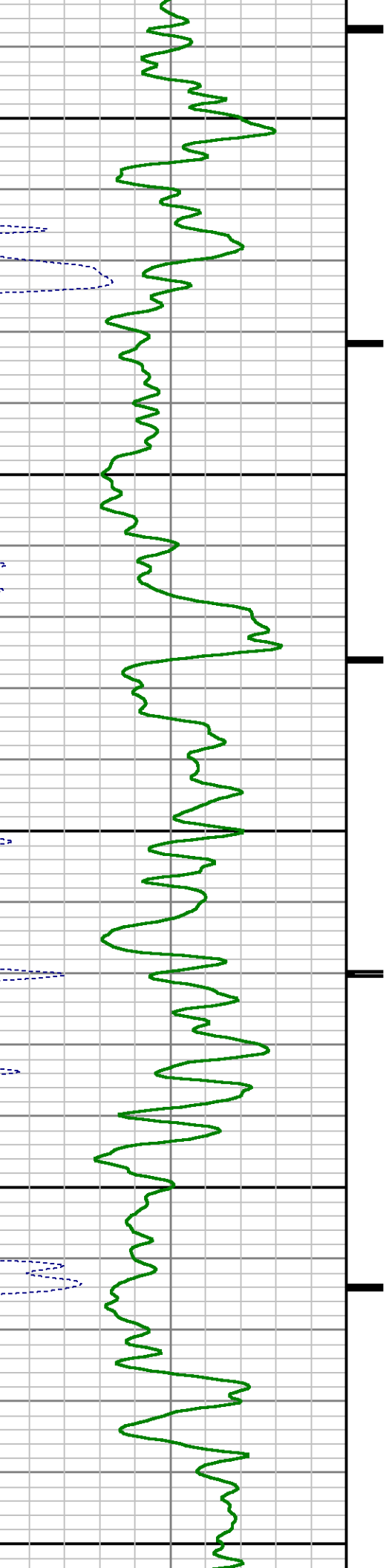




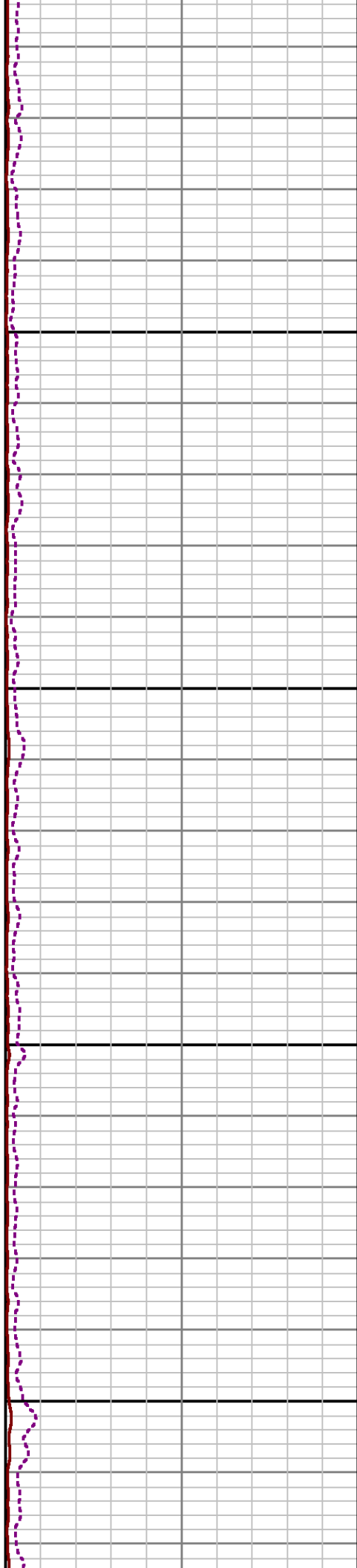
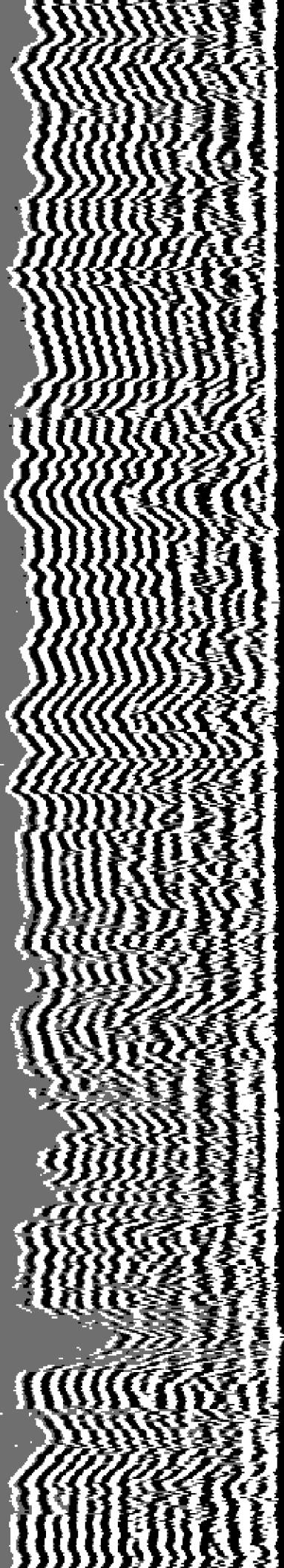
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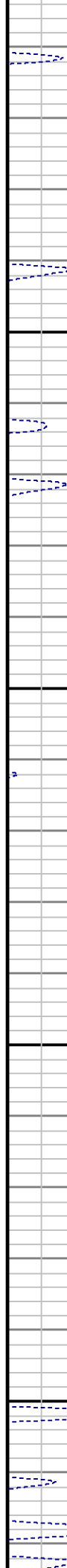
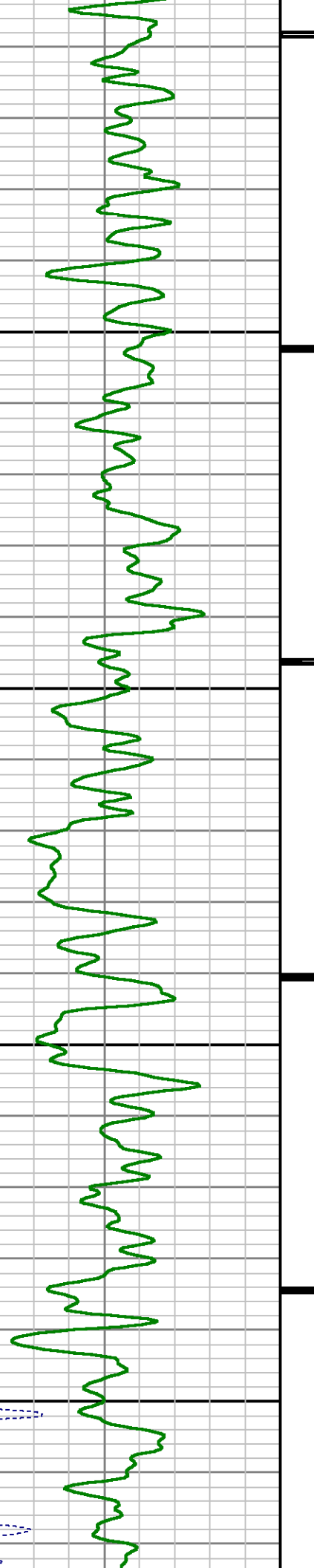


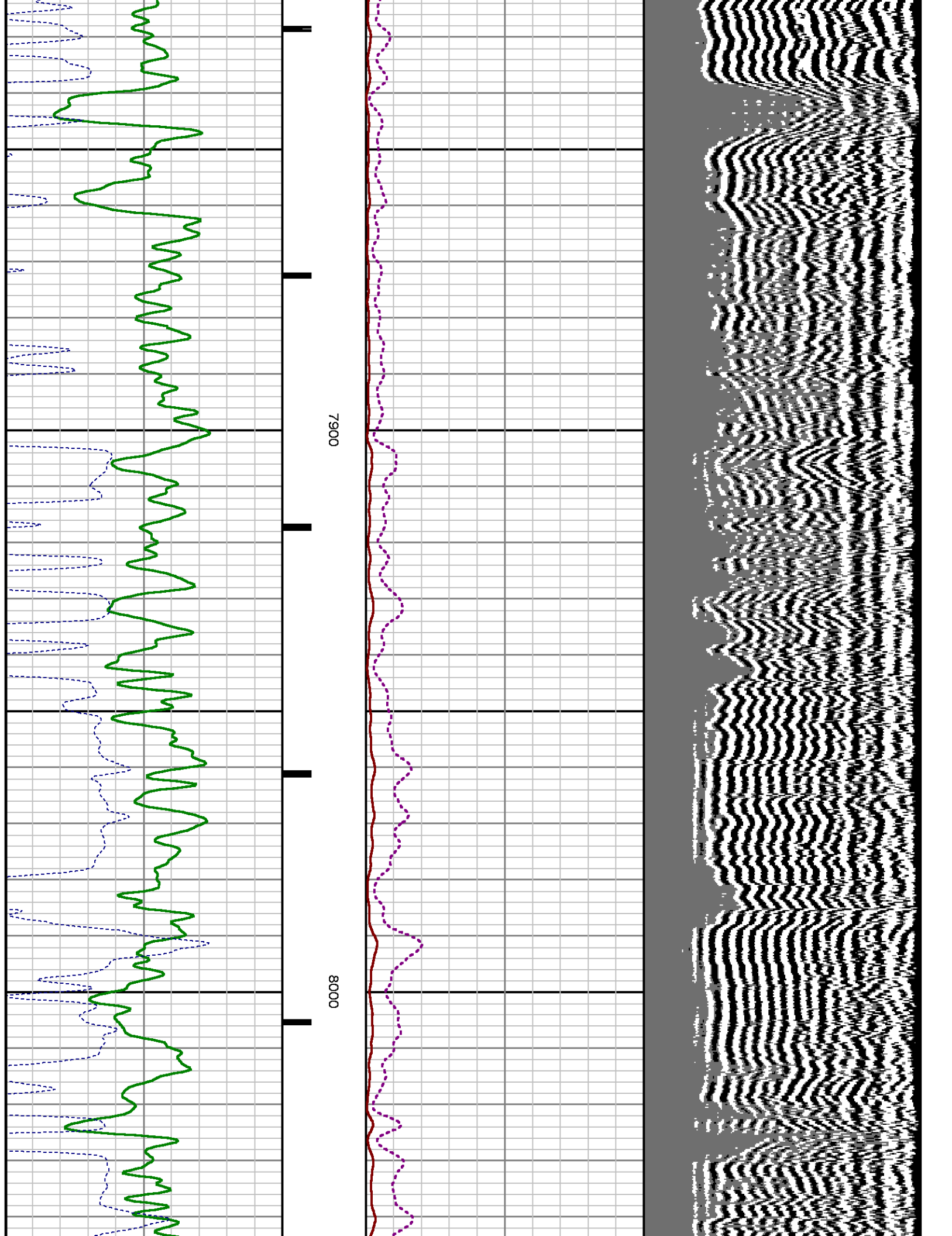


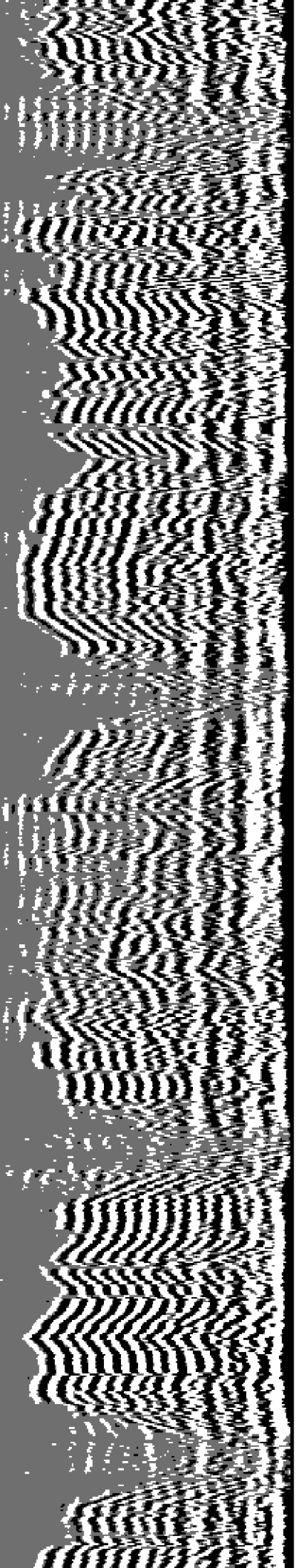


7700

7800

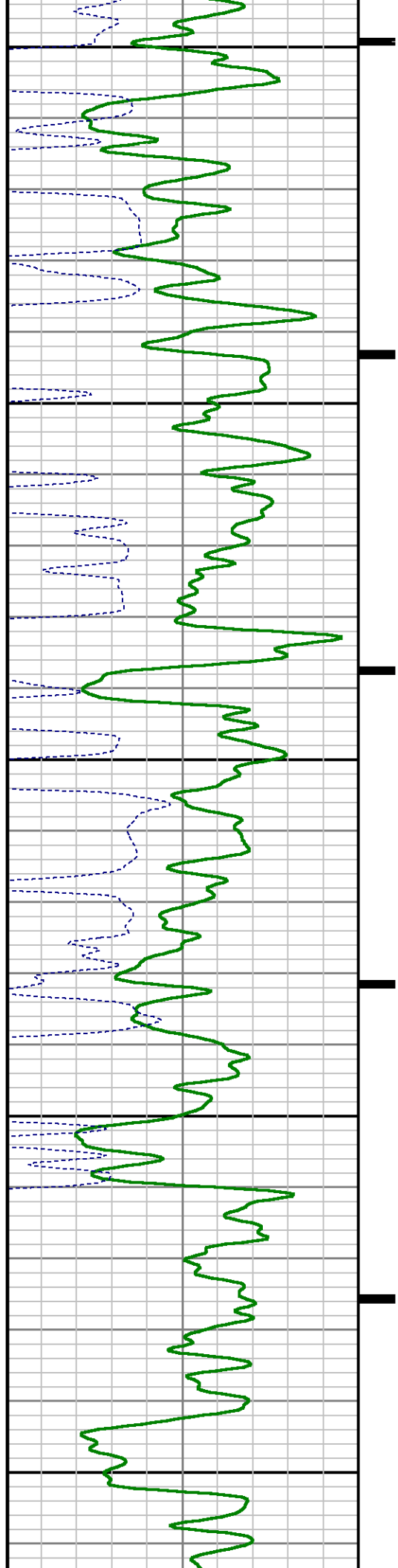




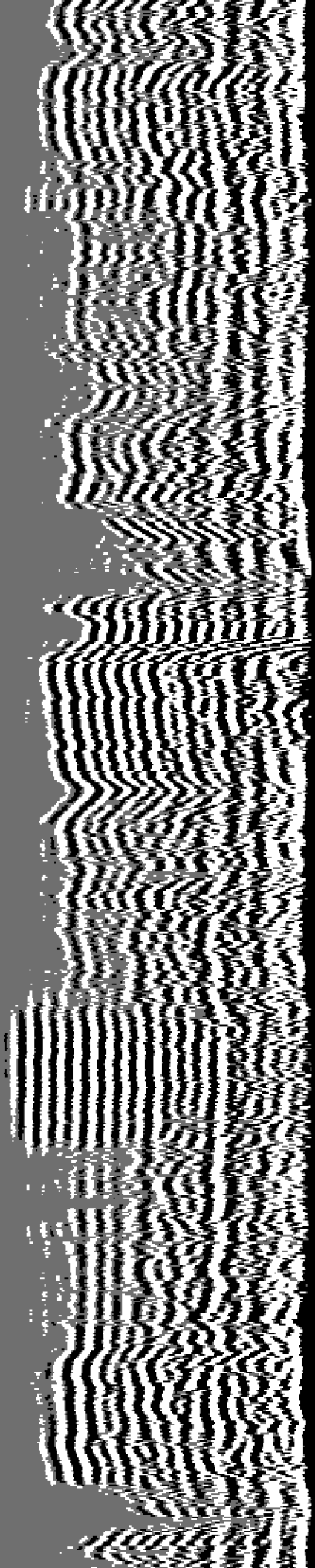


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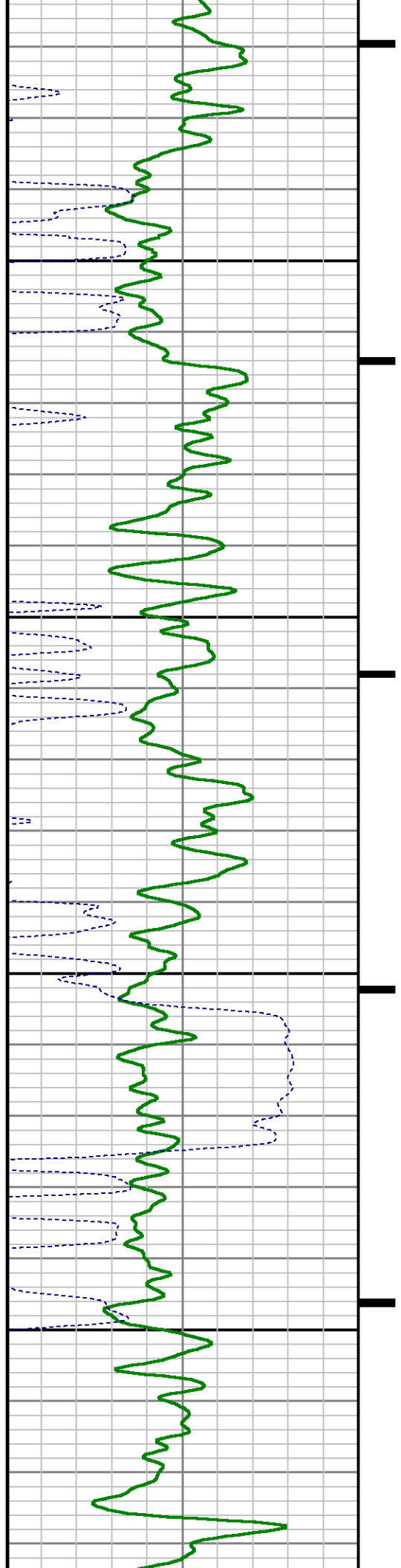


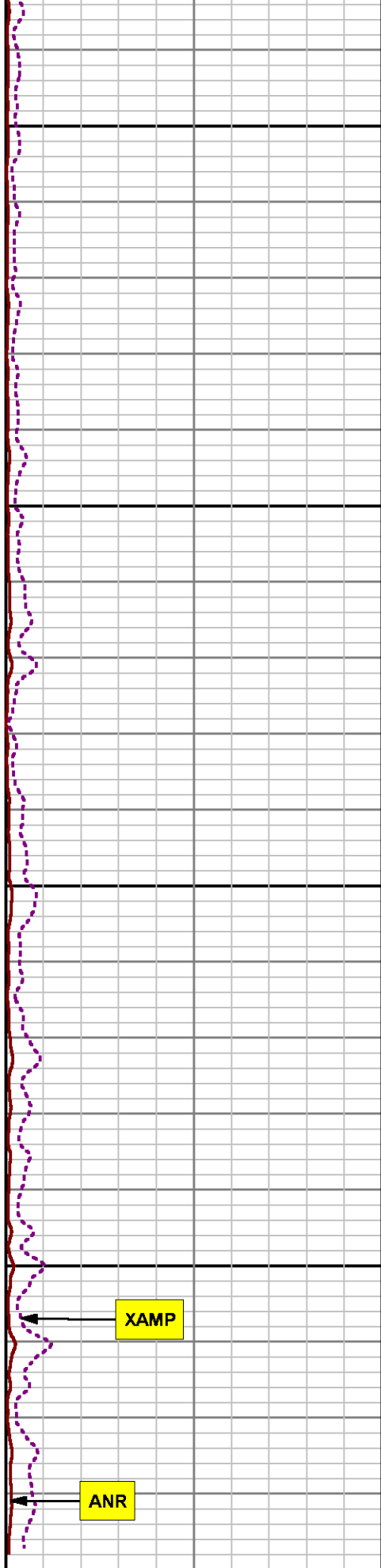
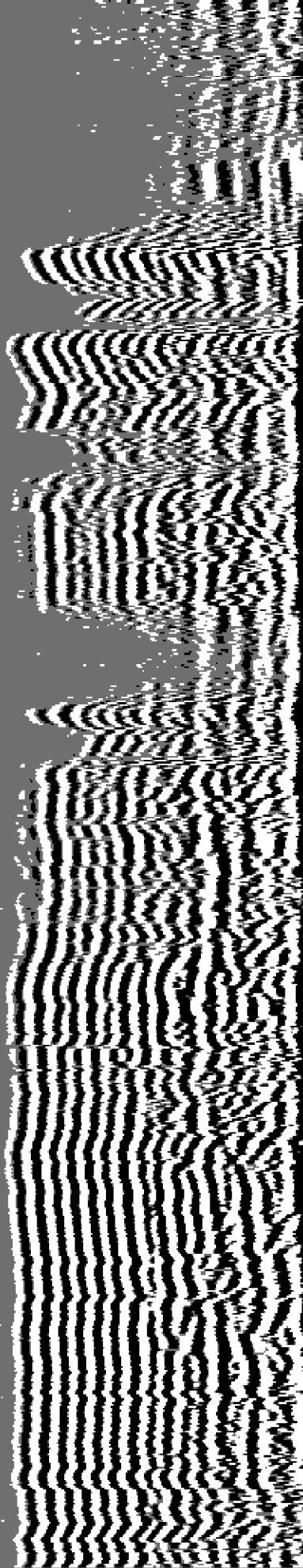




8300

8400





8500

8600

8700

XAMP

ANR

GR

CCL



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

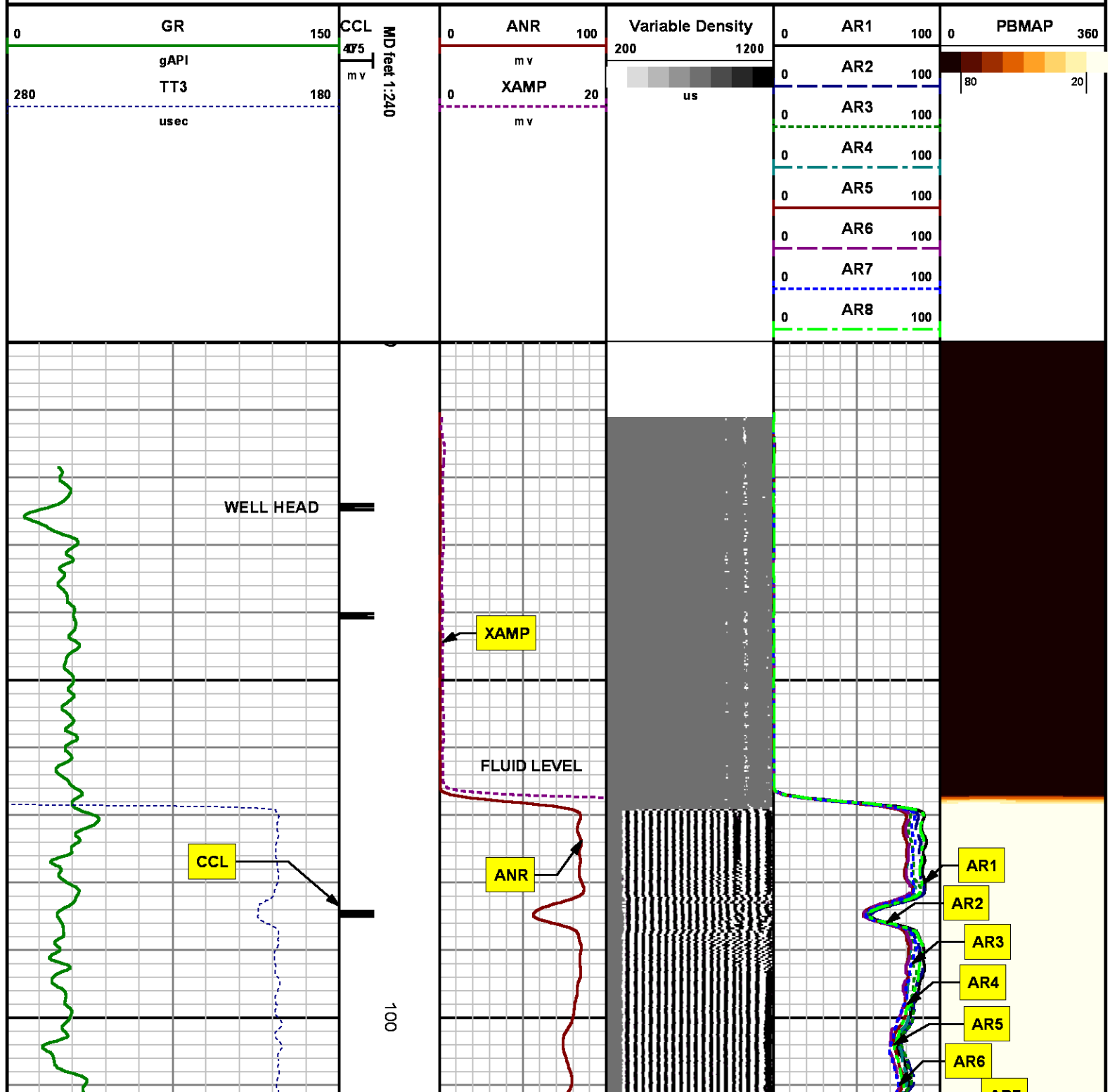
Well : SAVAGE RWF 314-25

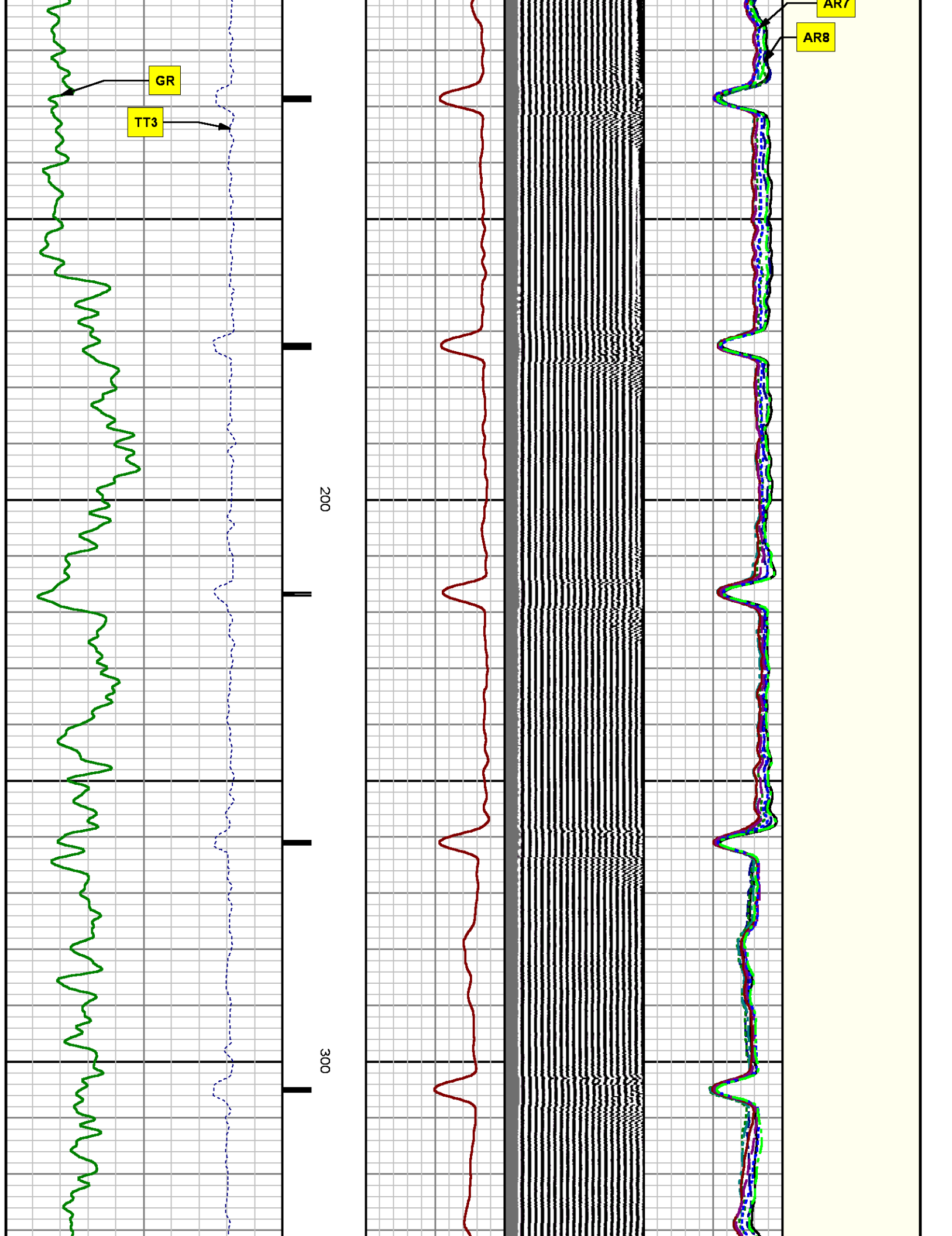
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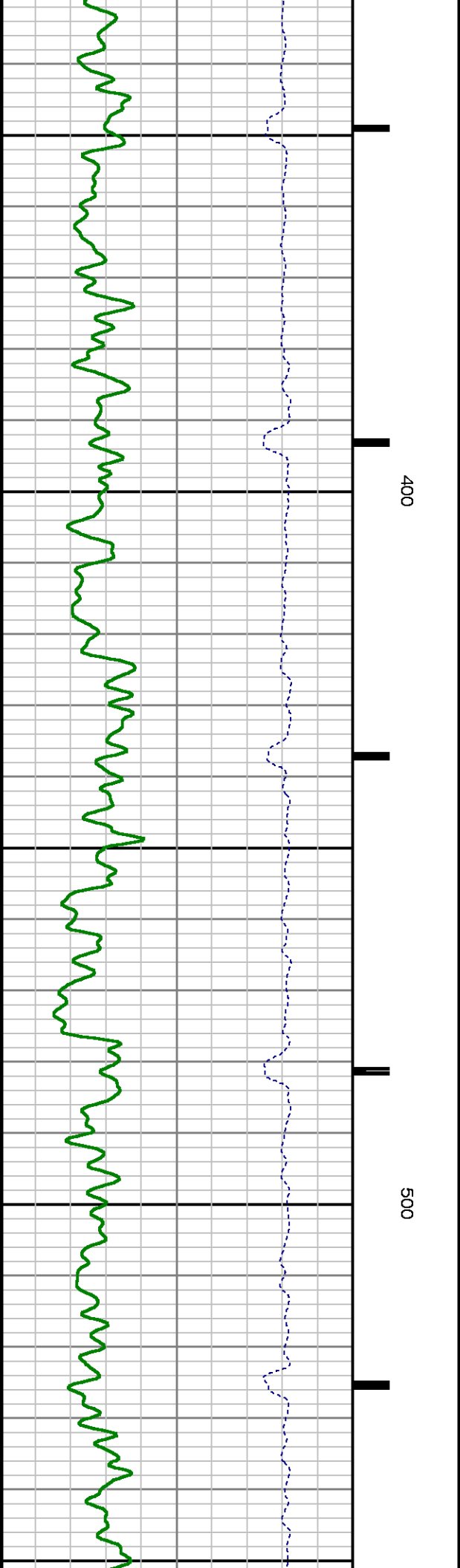
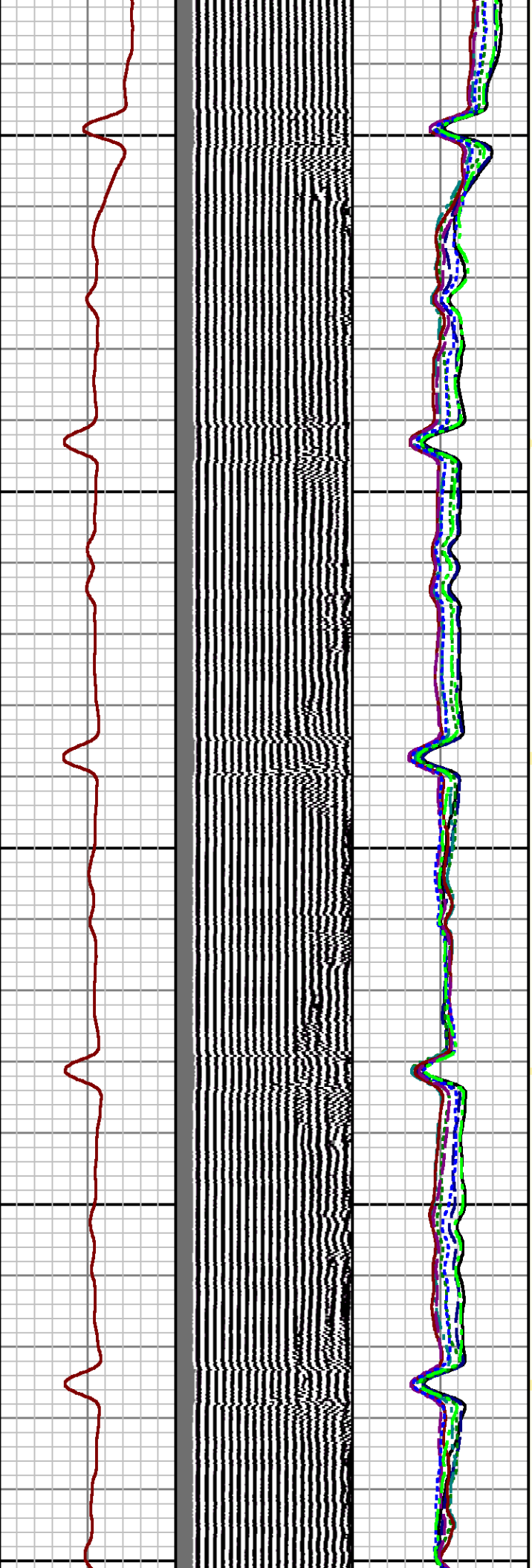
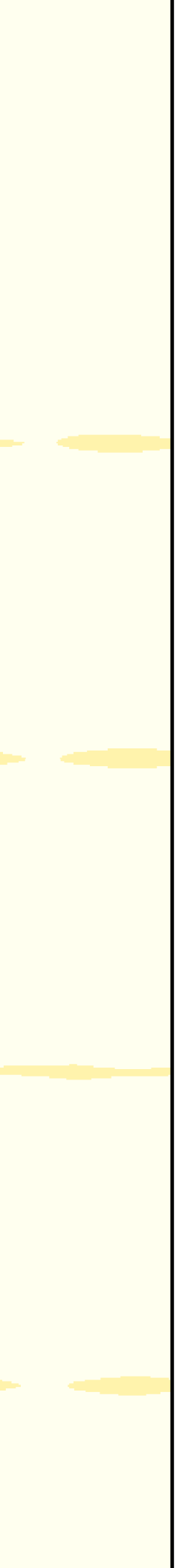
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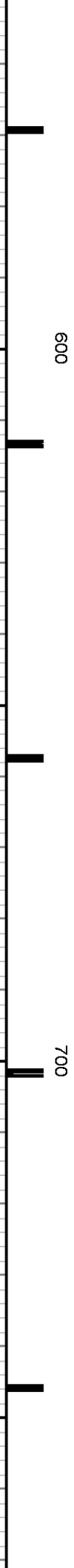
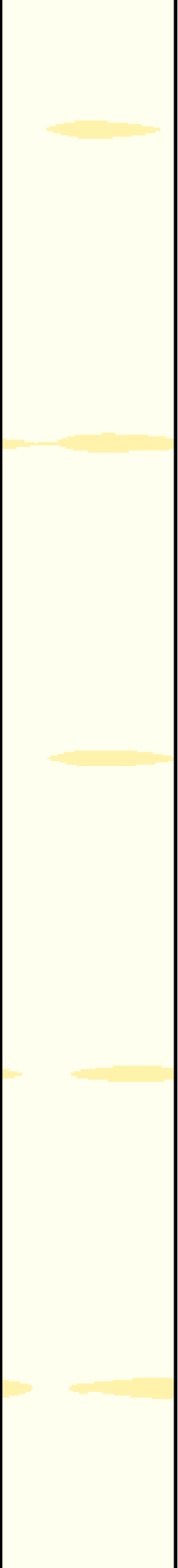
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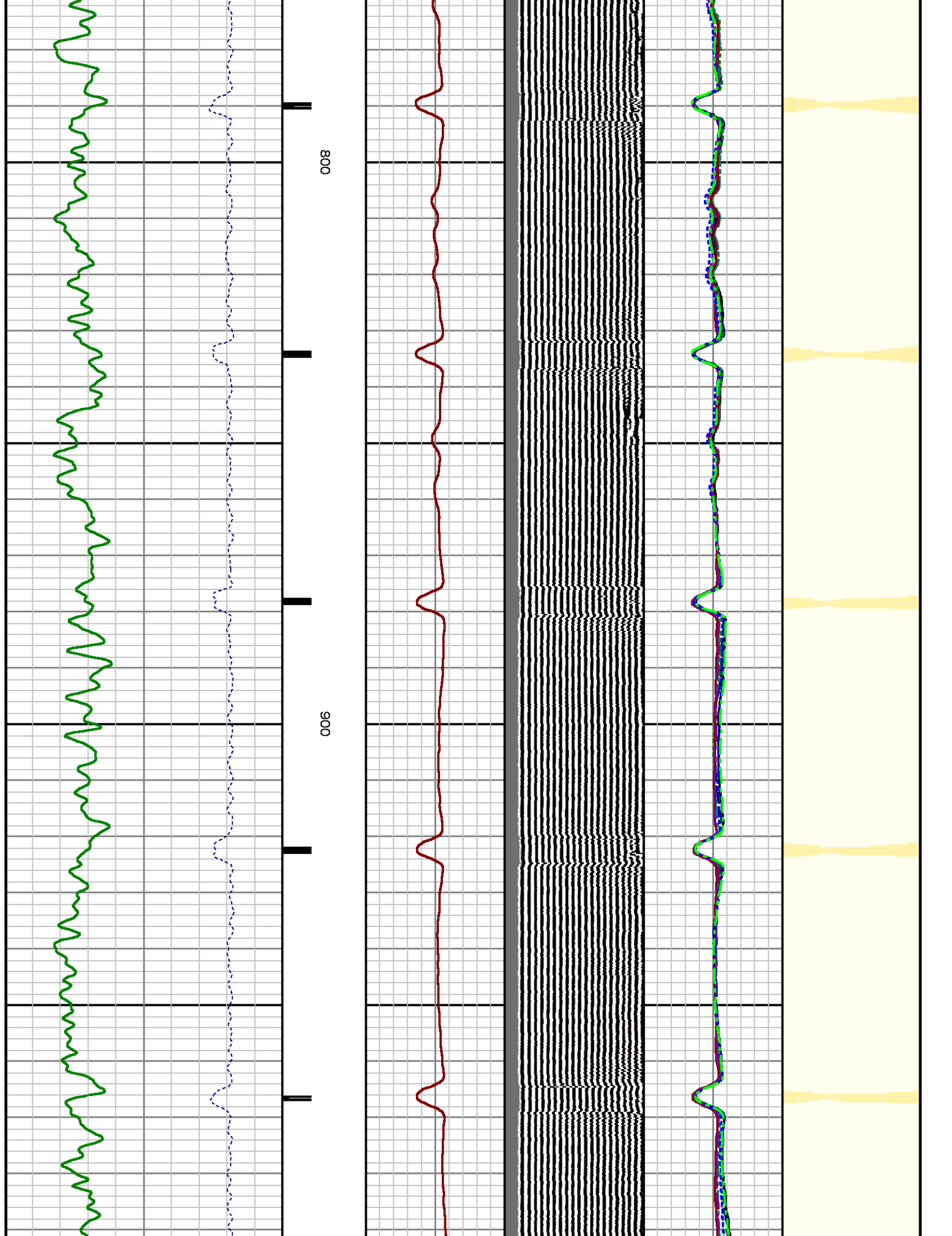


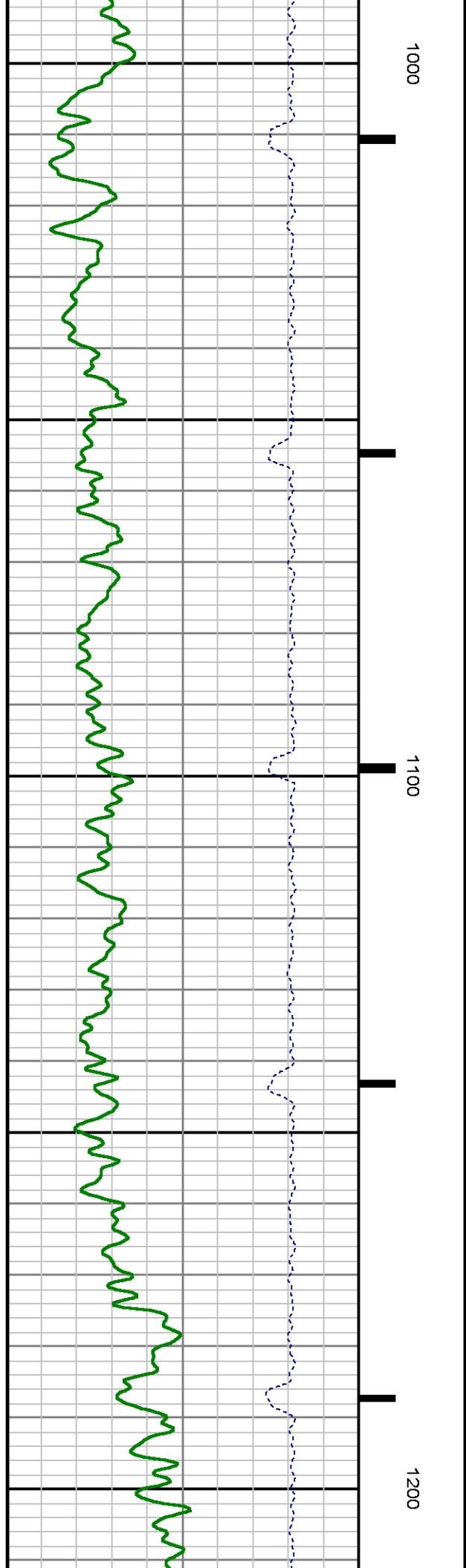
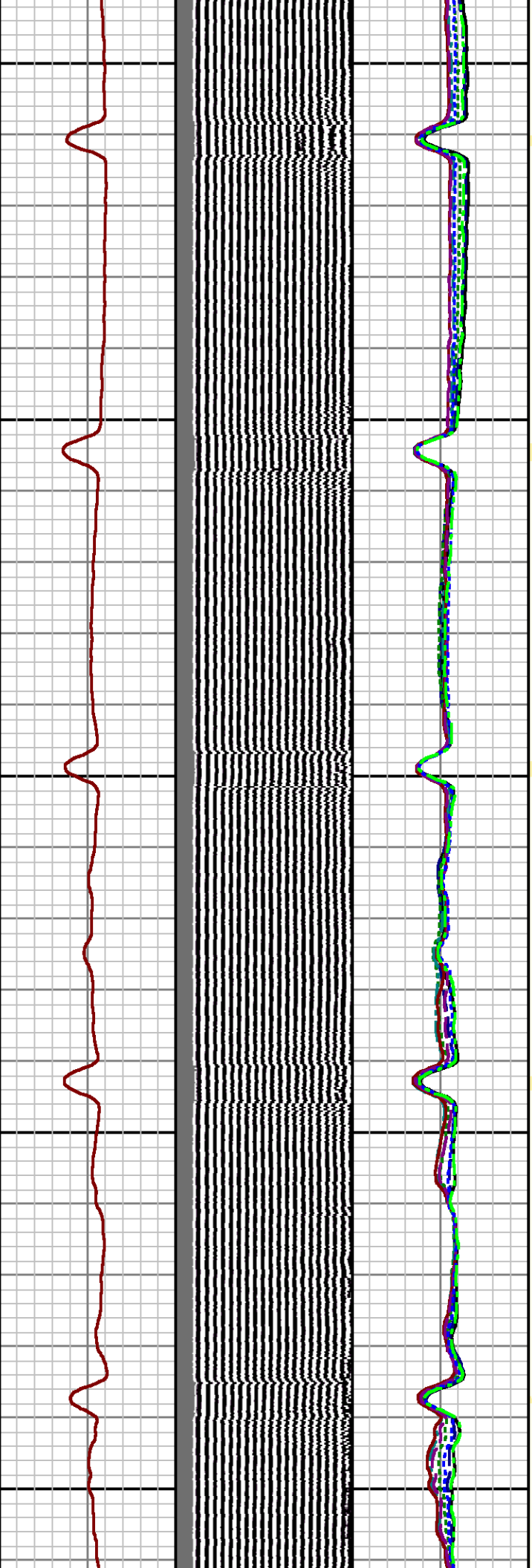


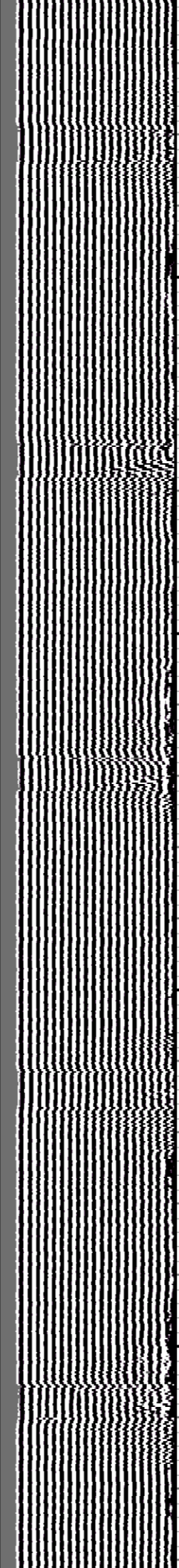
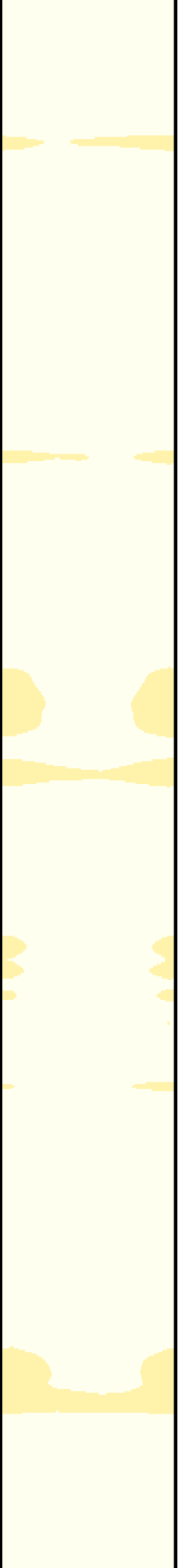


600

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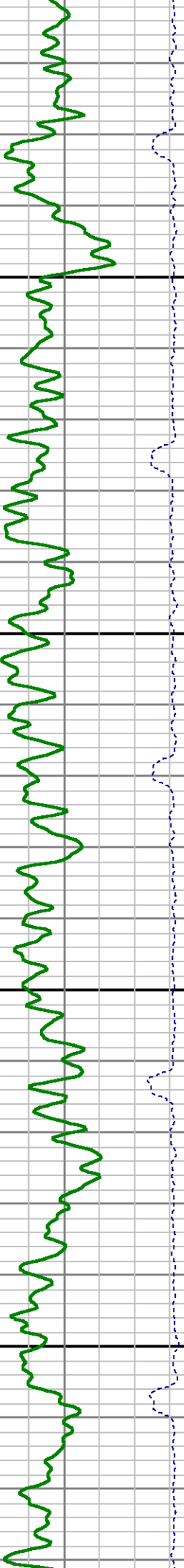


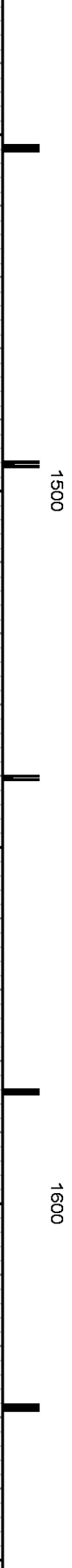
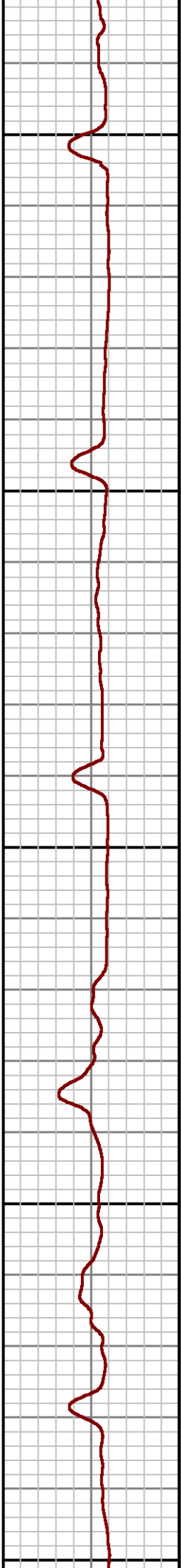
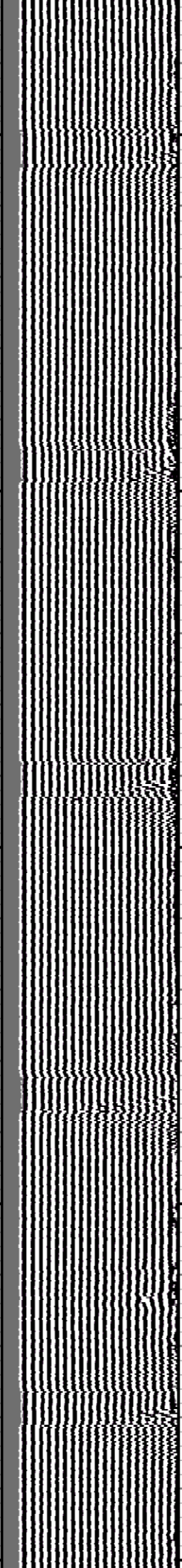
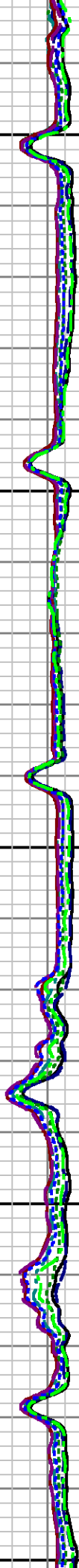
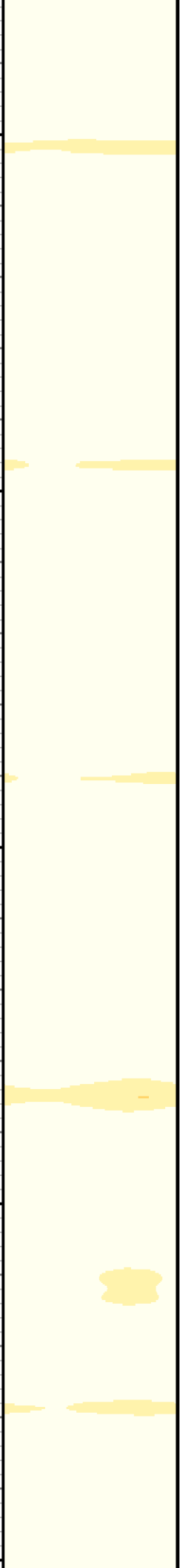


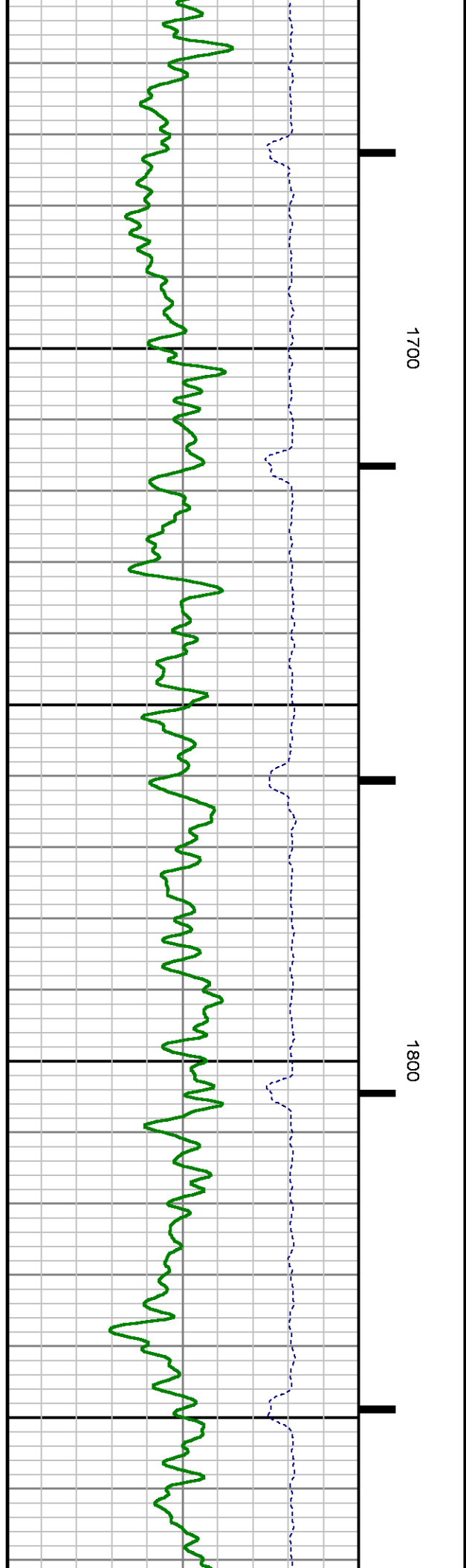
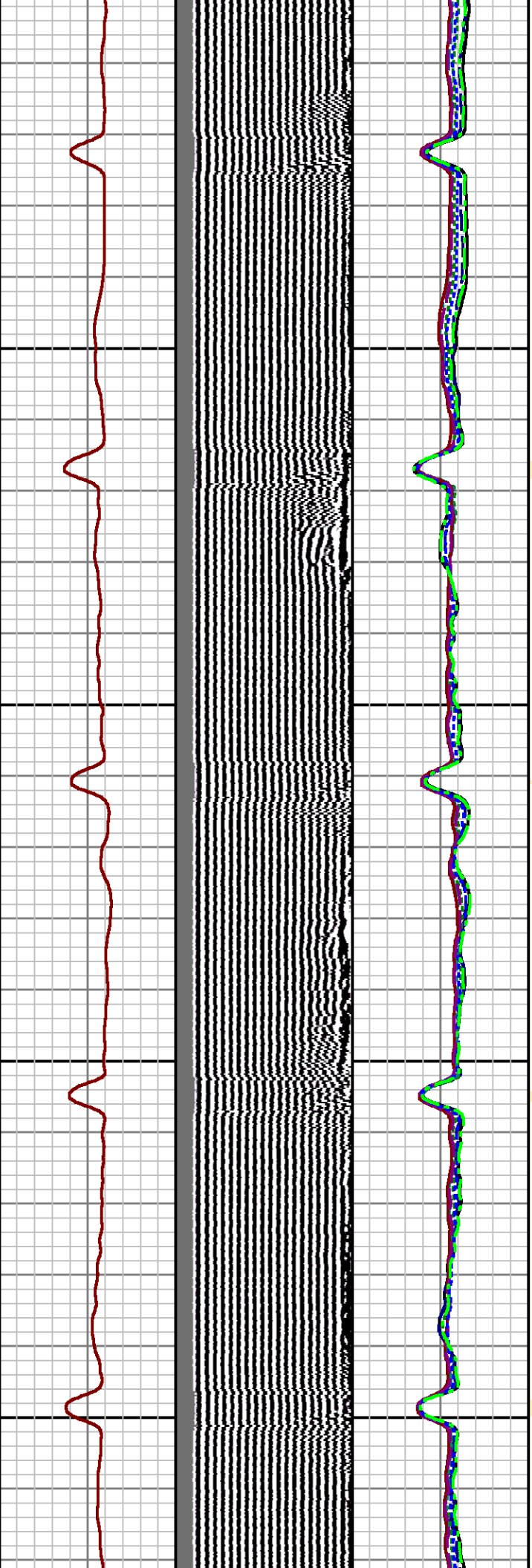
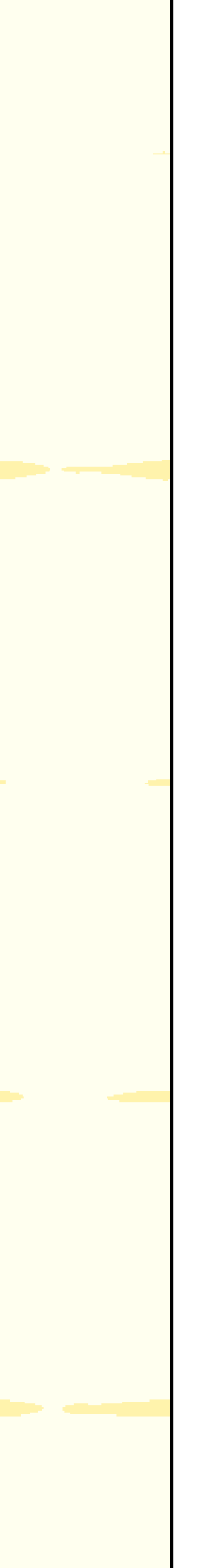


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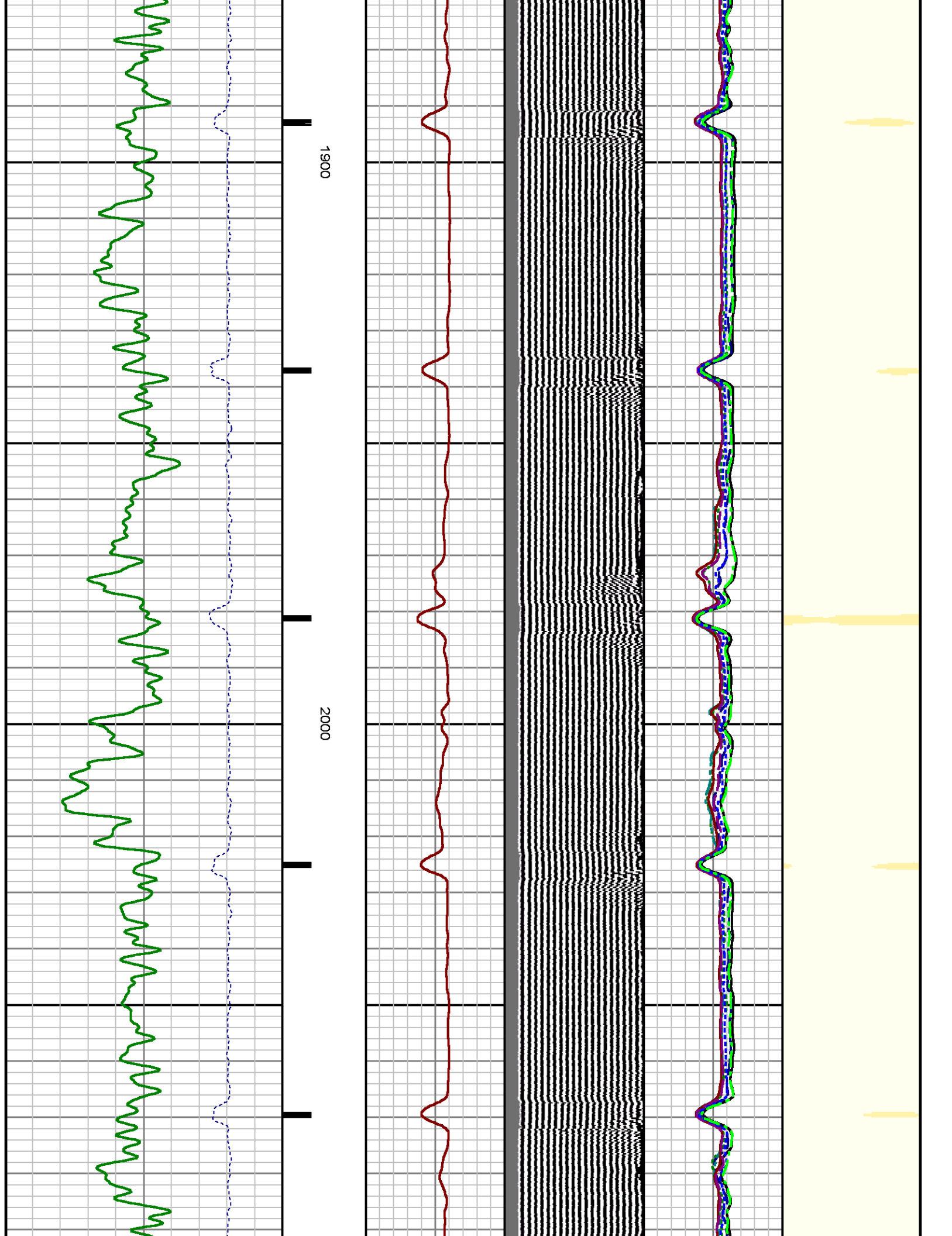
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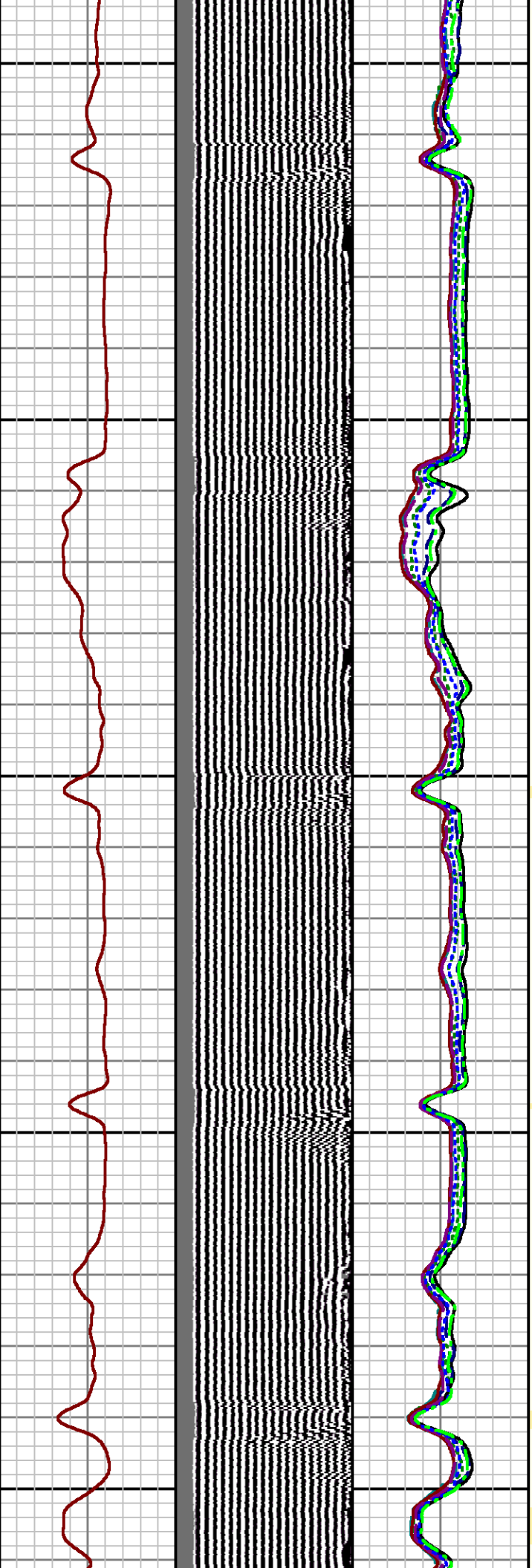
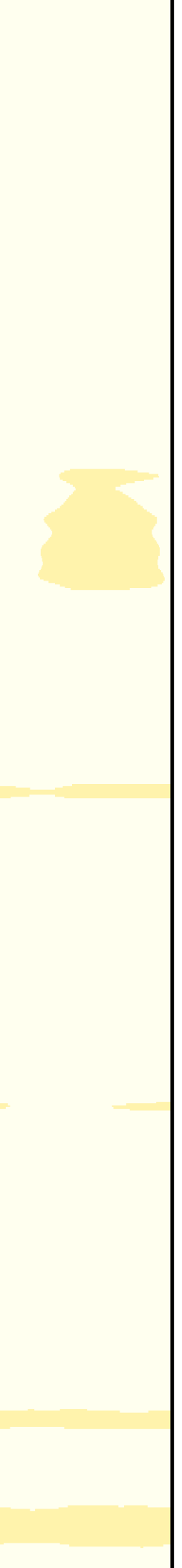








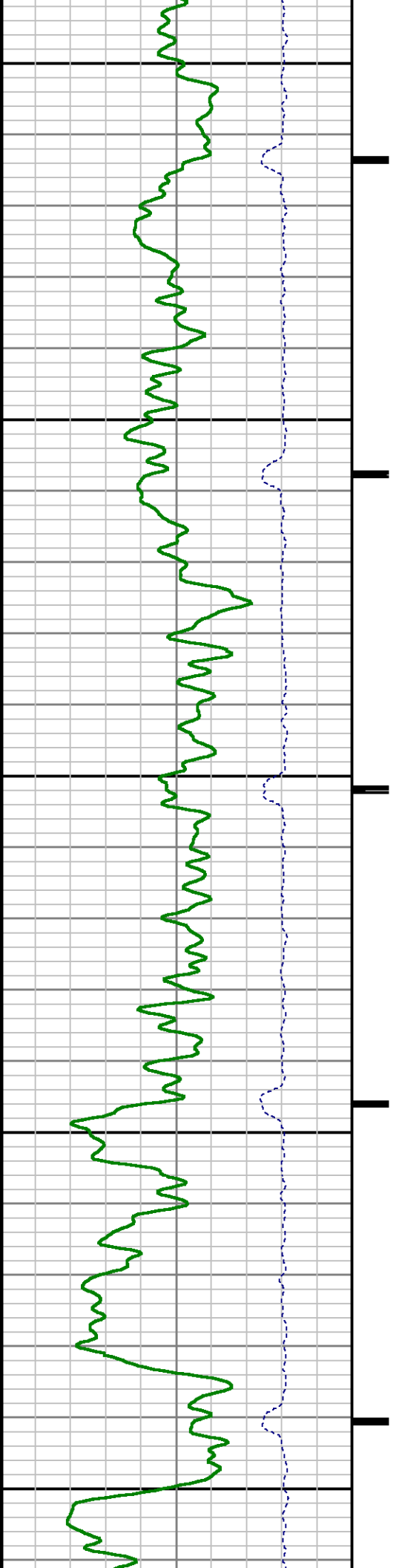


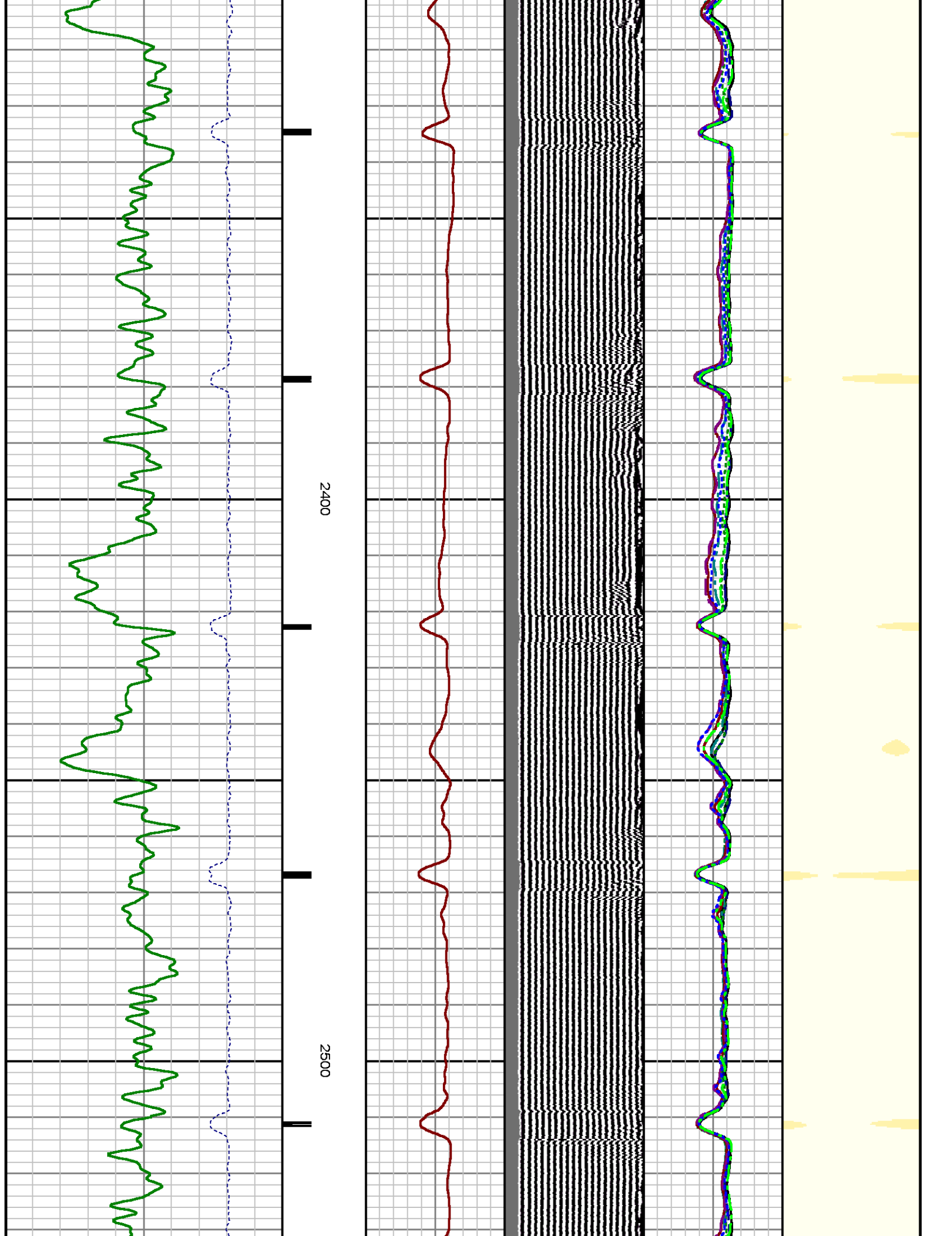


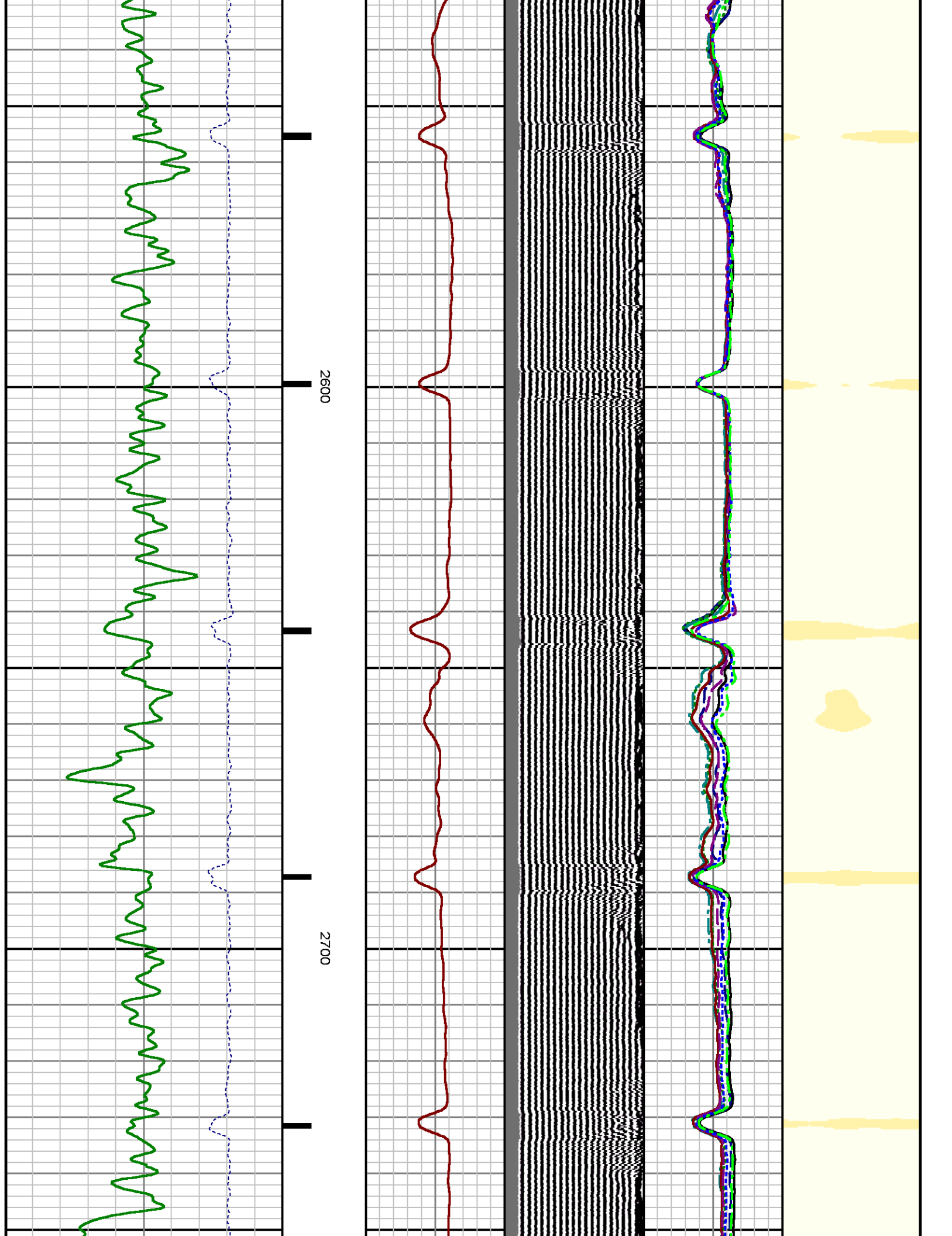
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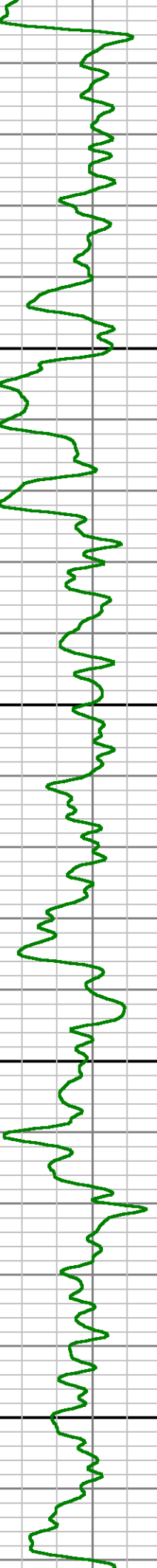
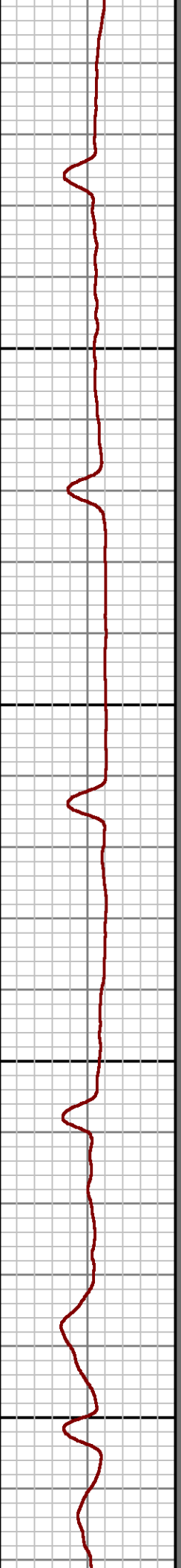
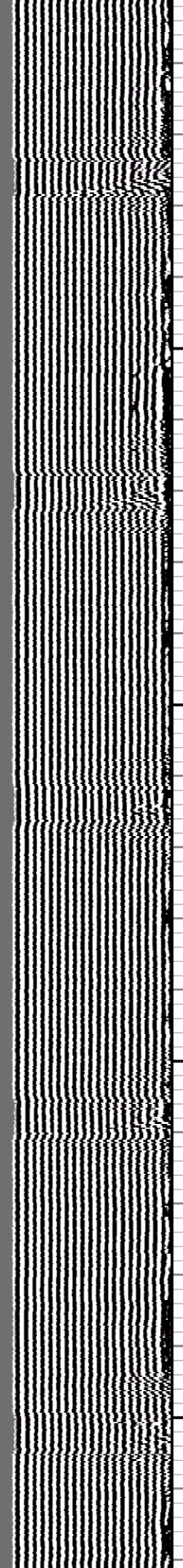
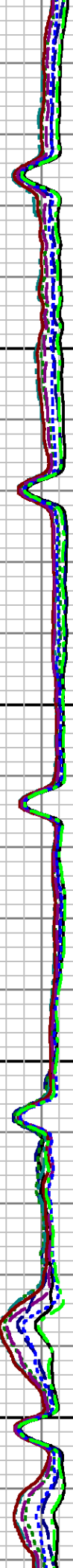
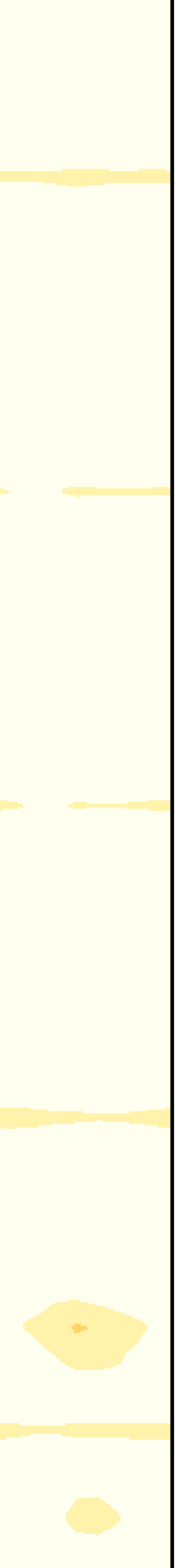
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2300





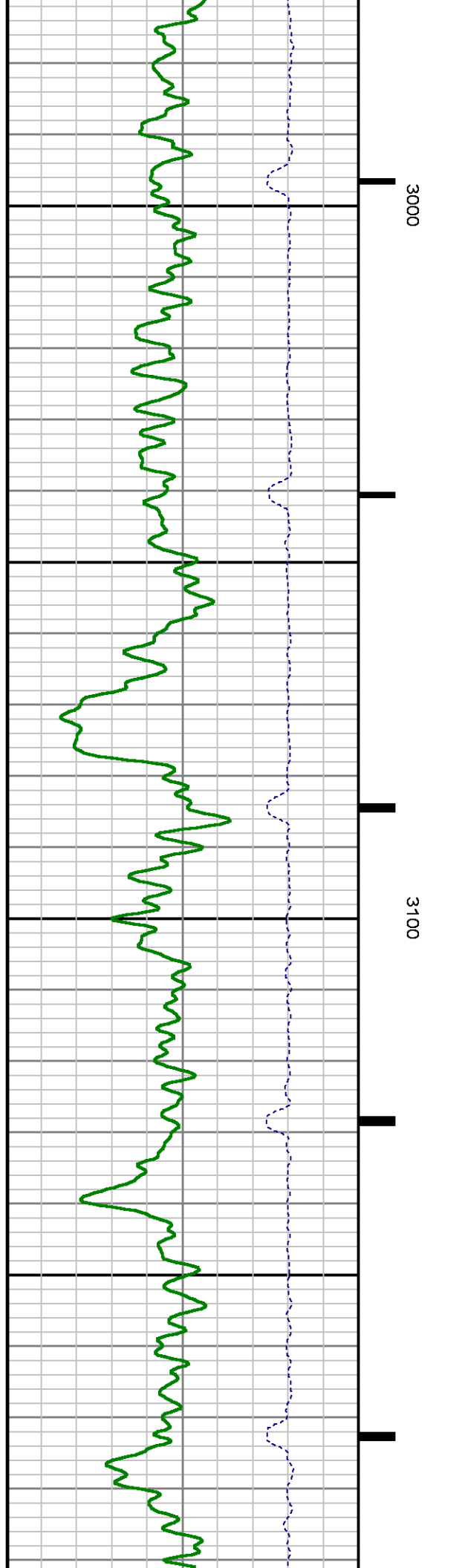
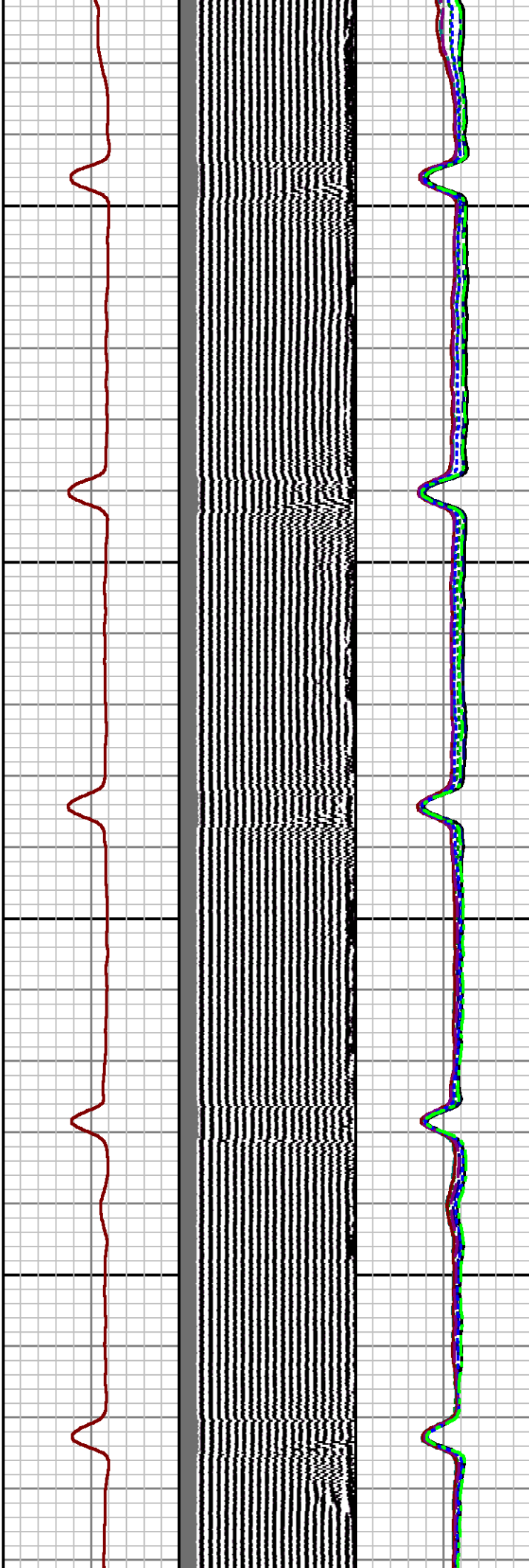
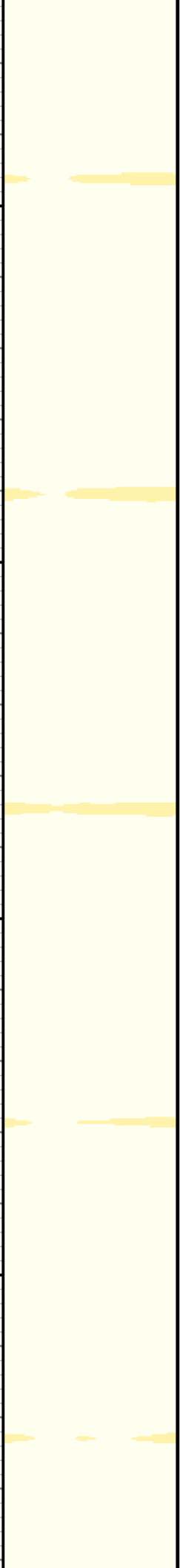




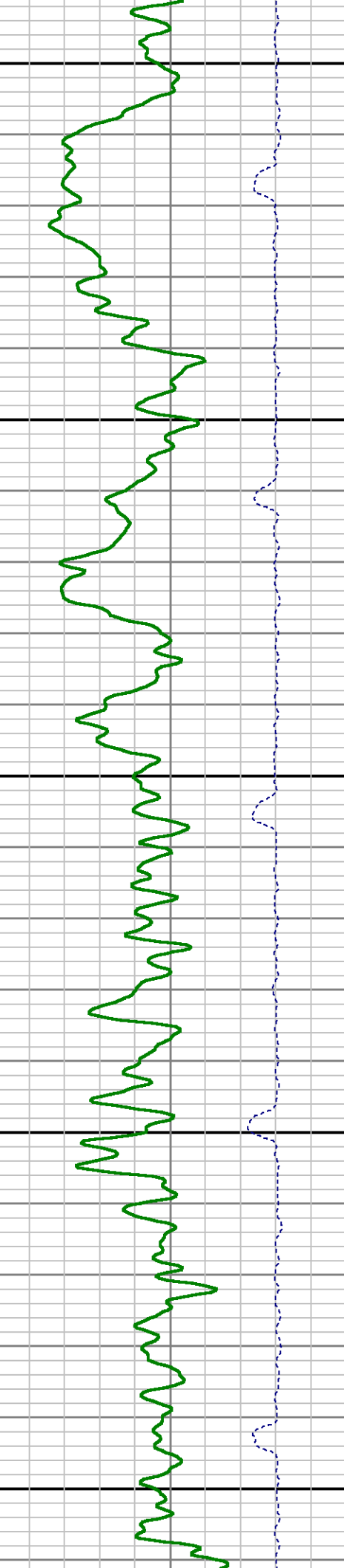
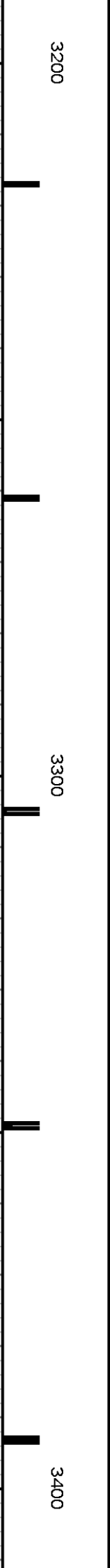
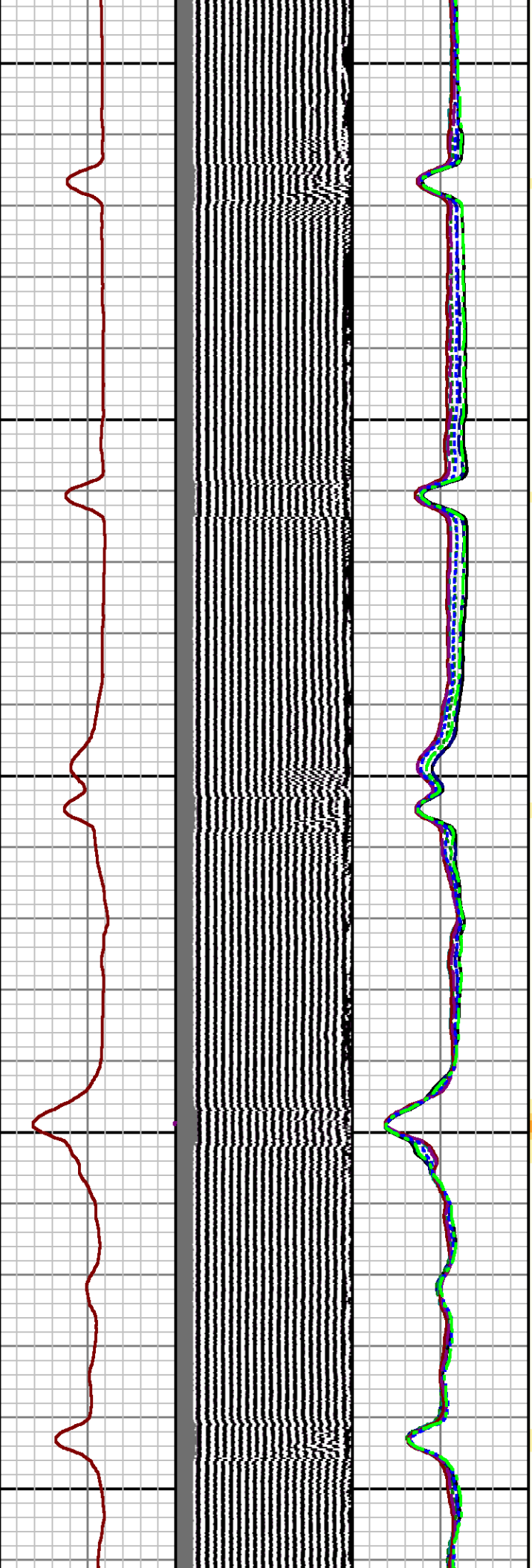
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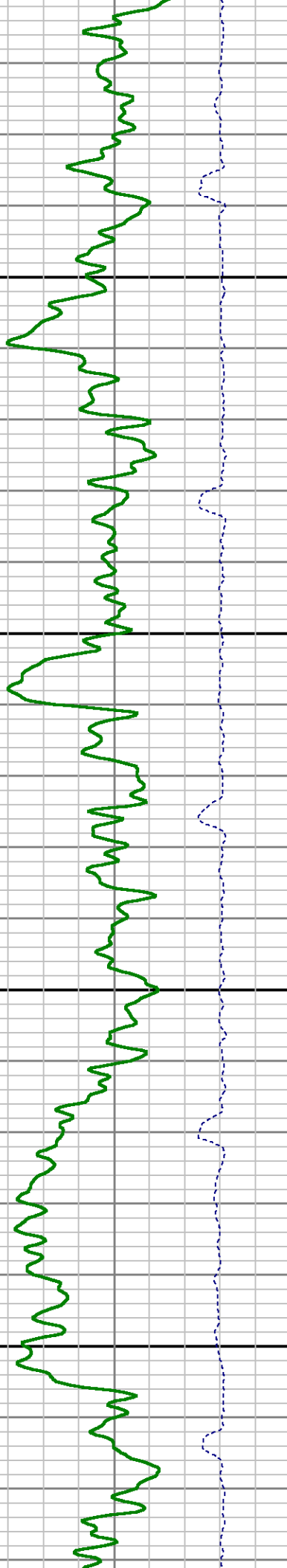
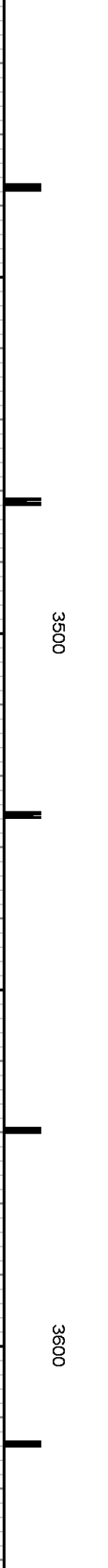
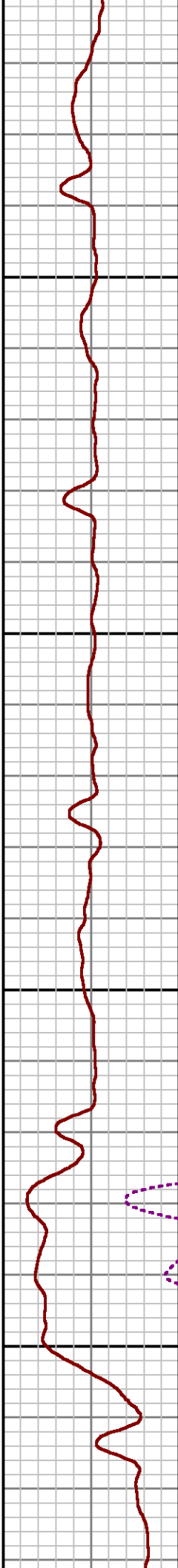
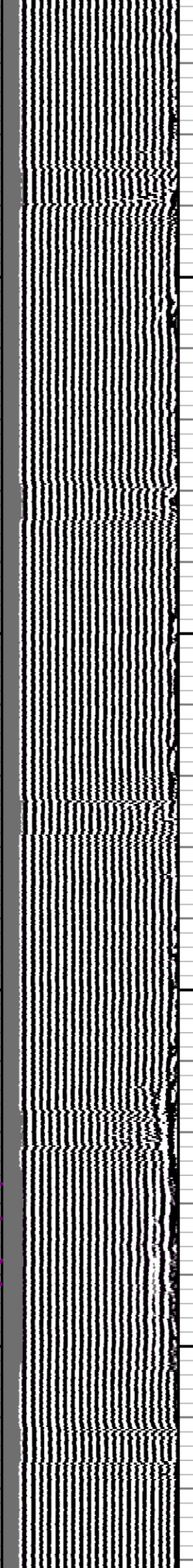
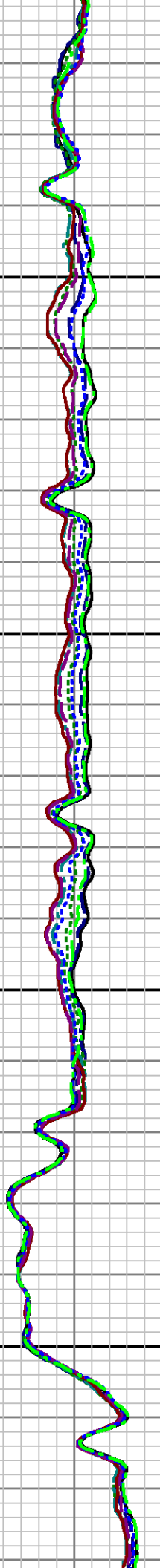
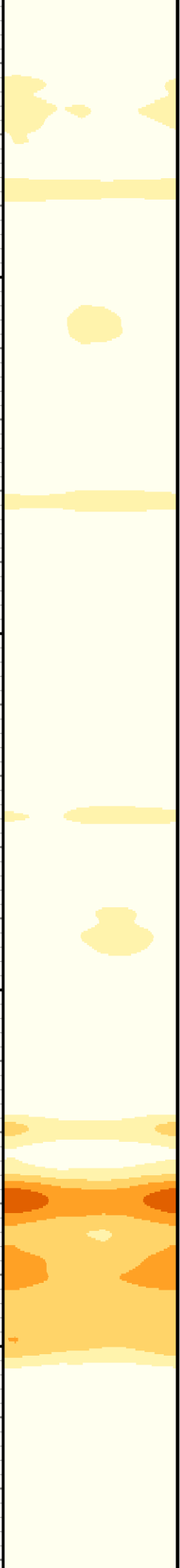
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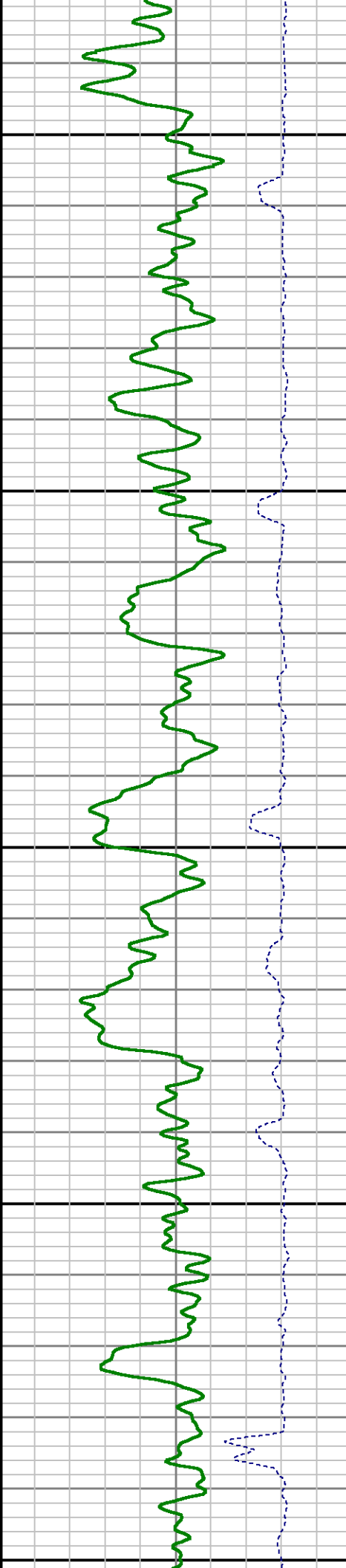
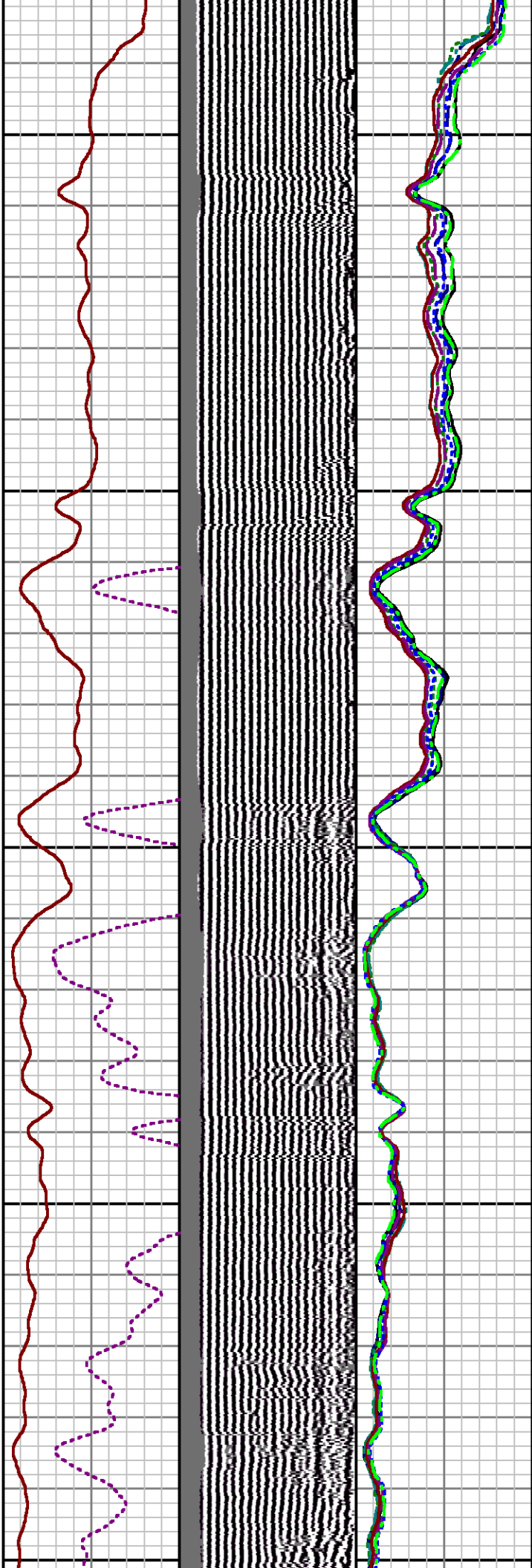


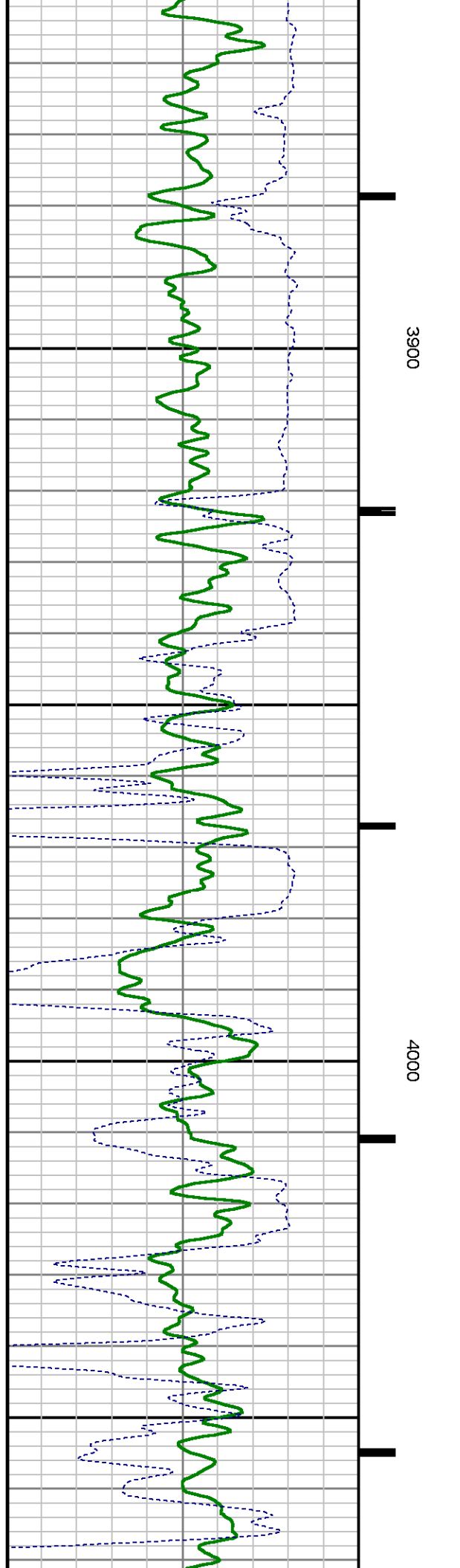
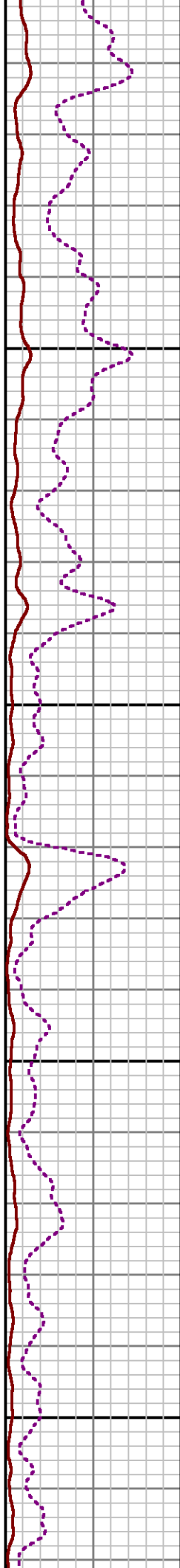
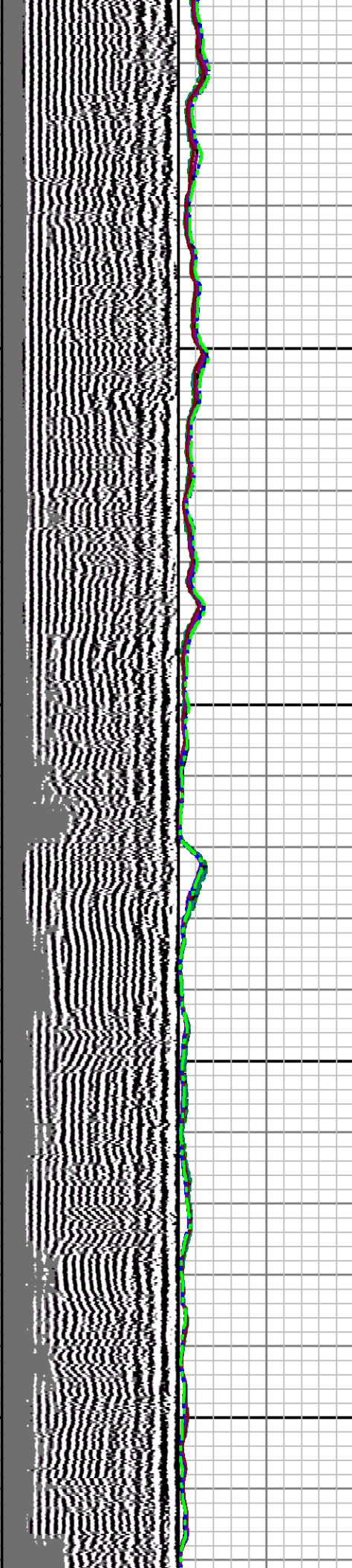




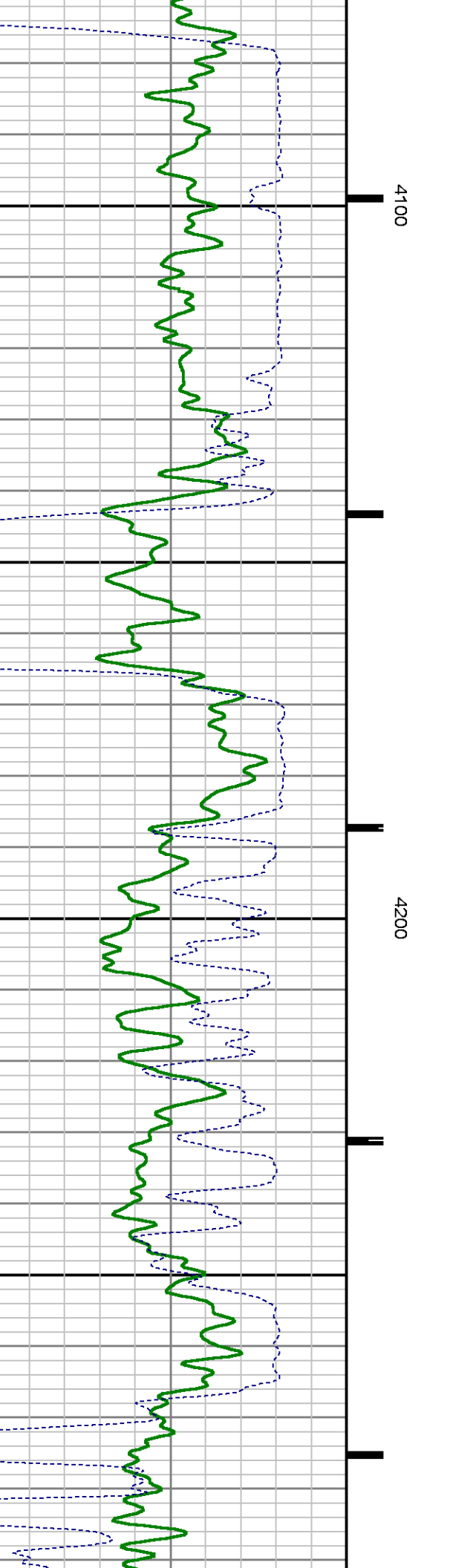
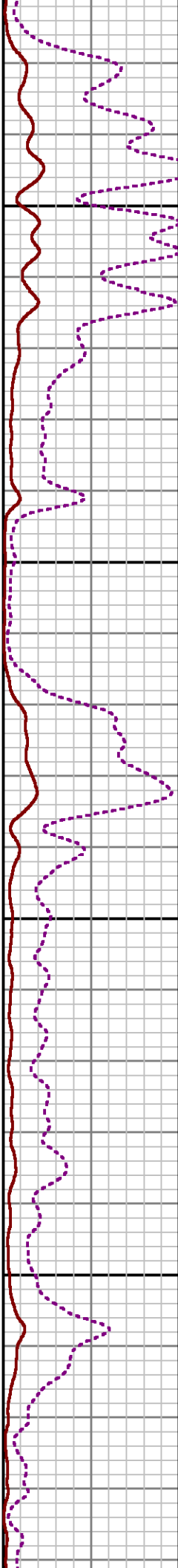
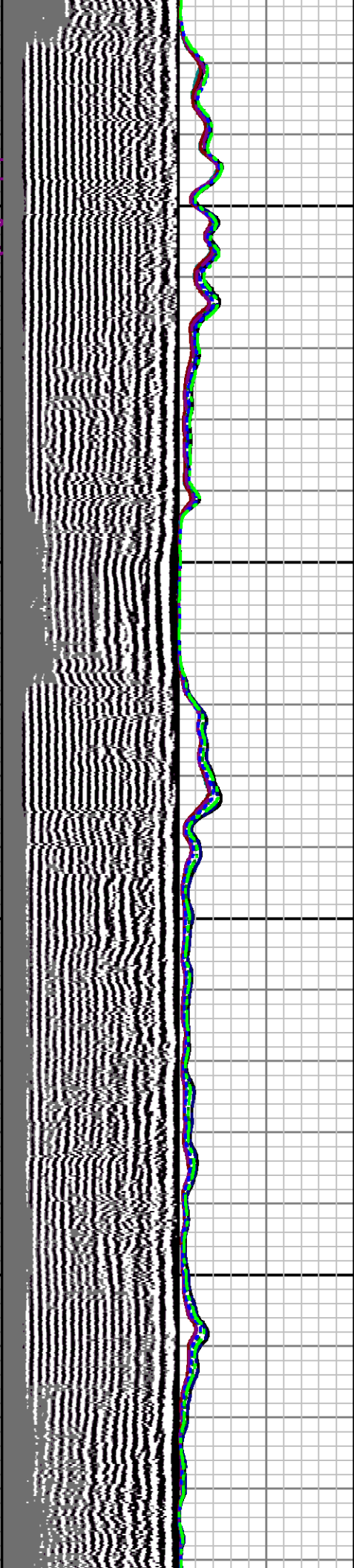
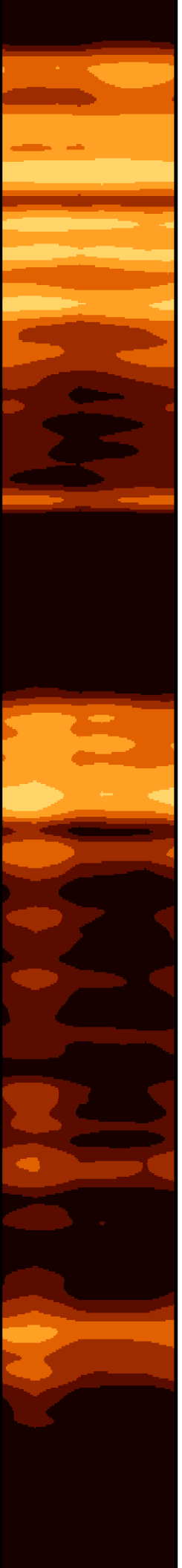


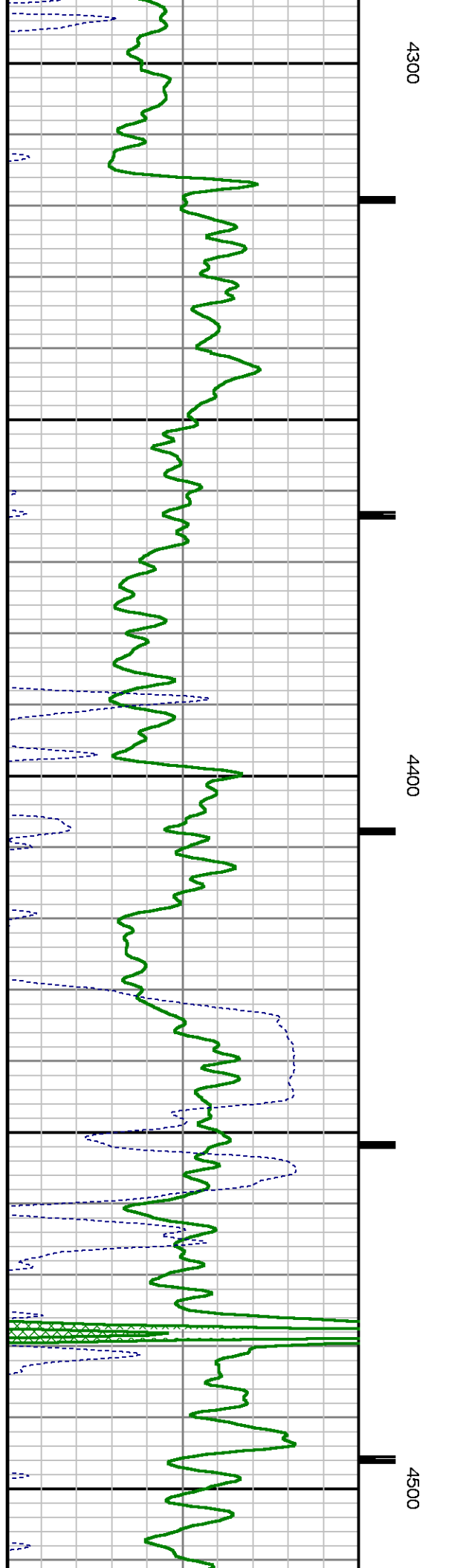
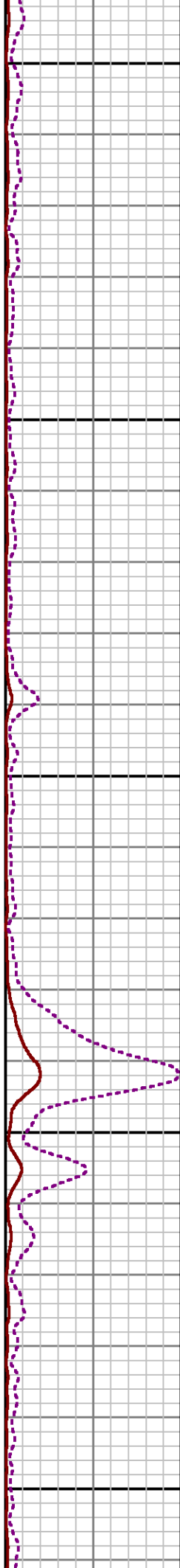
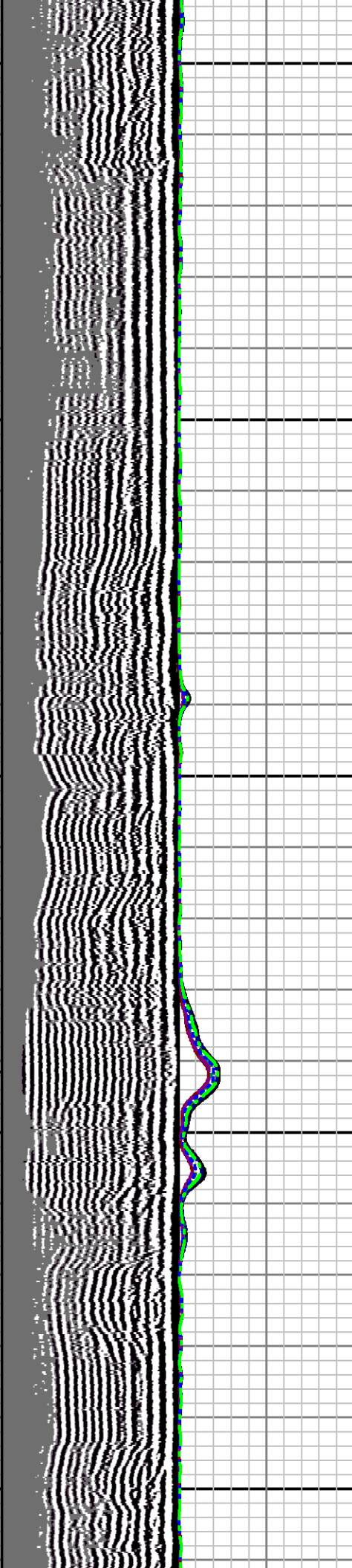




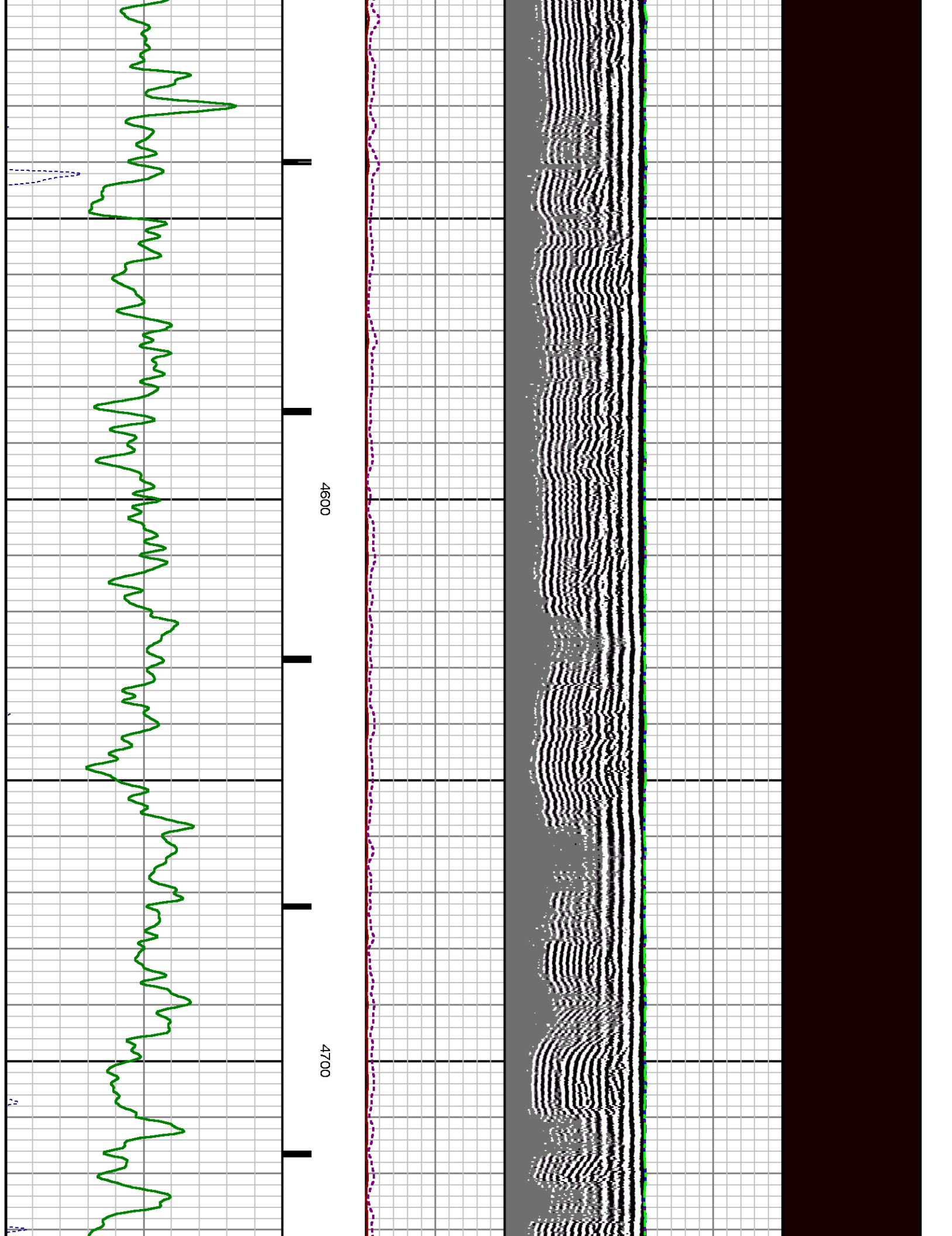


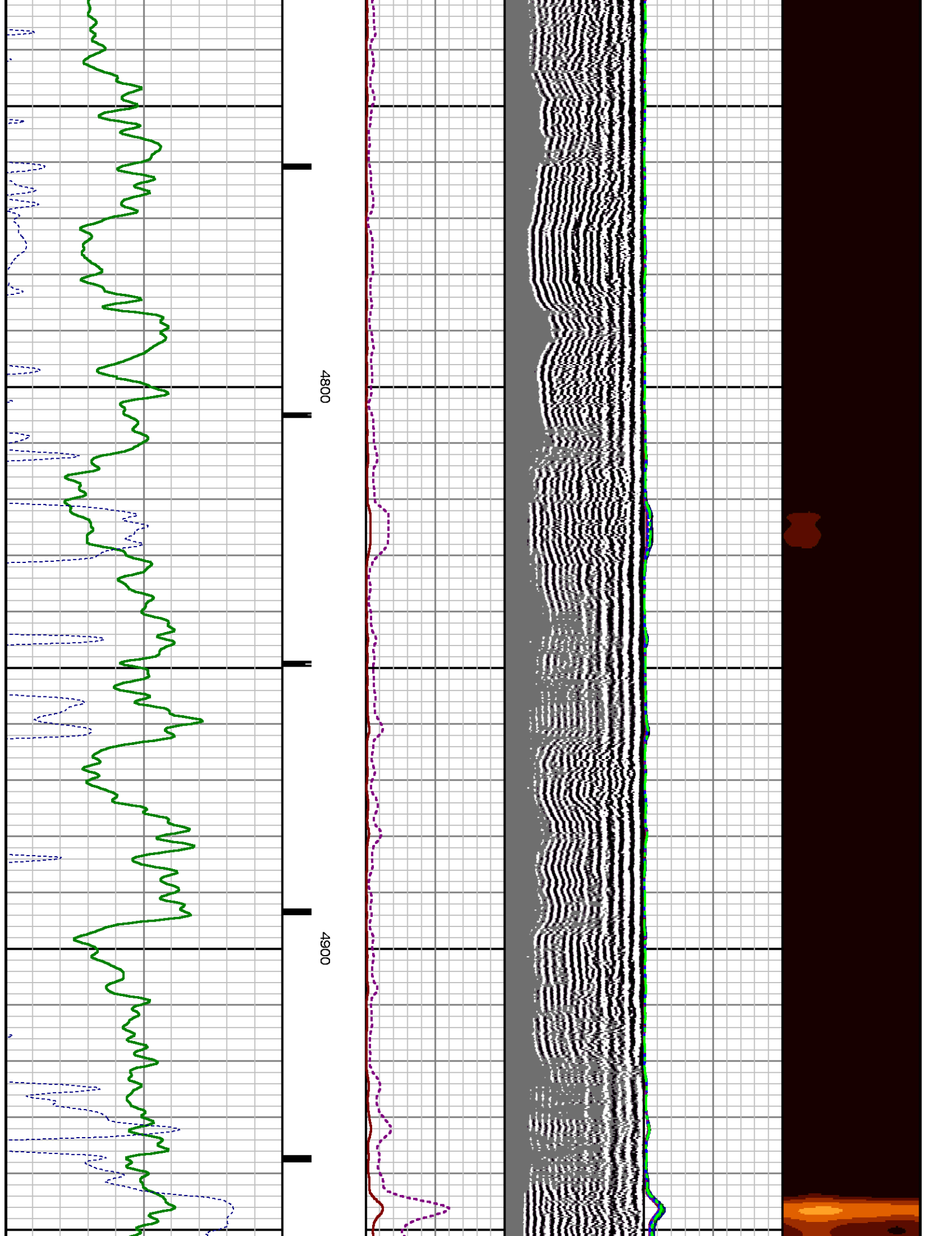


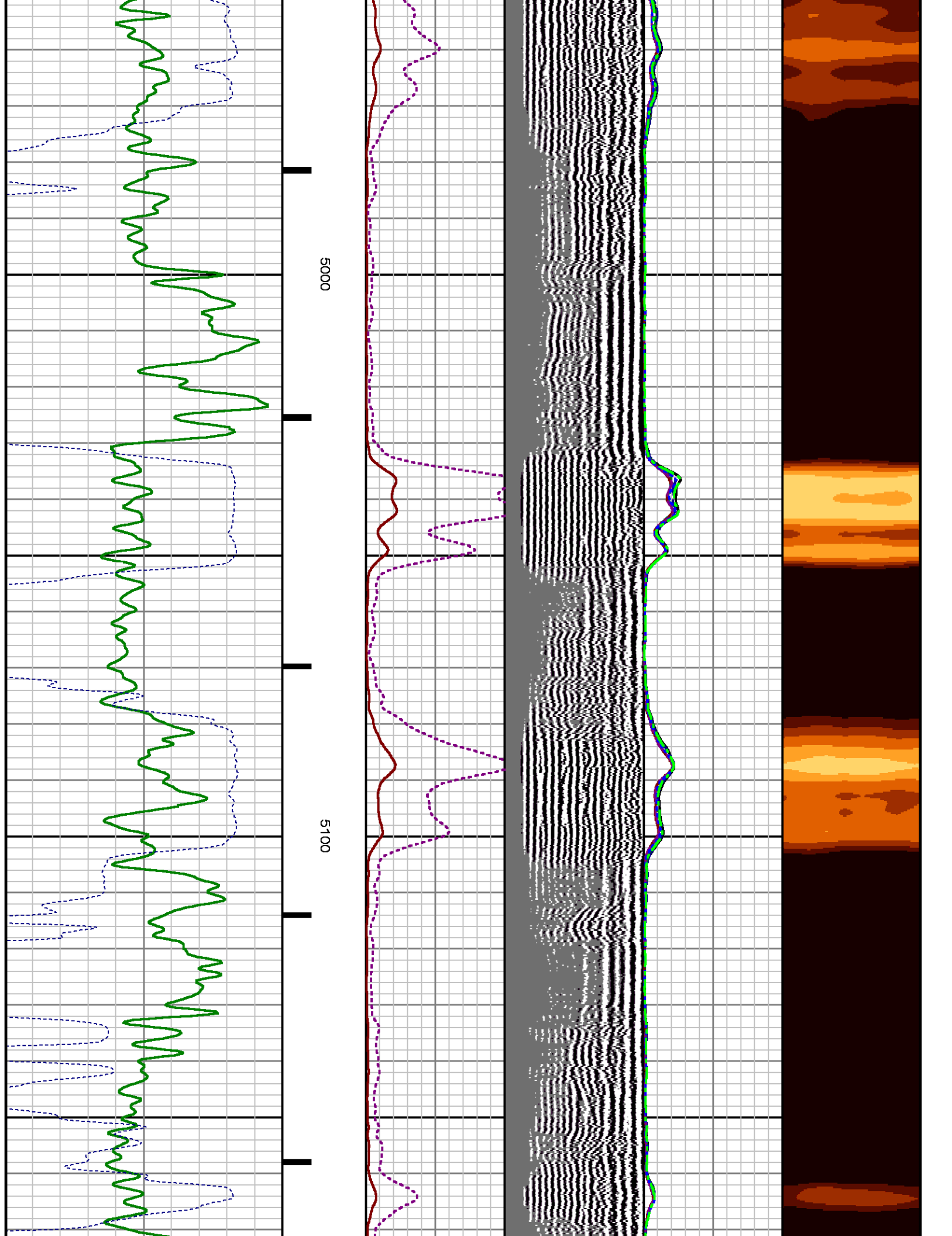


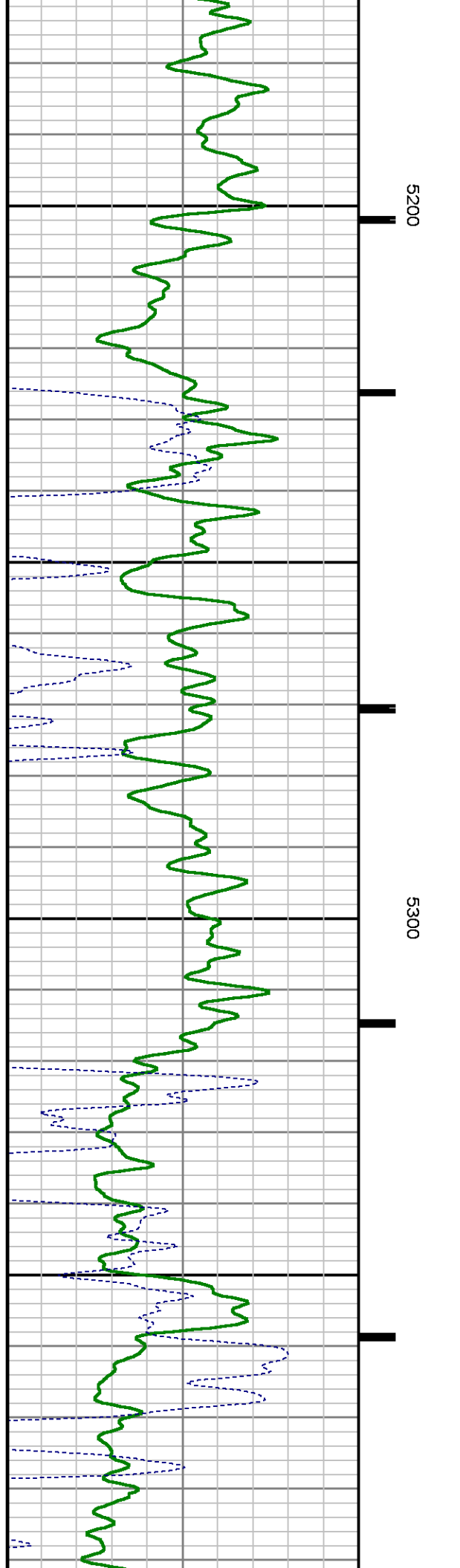
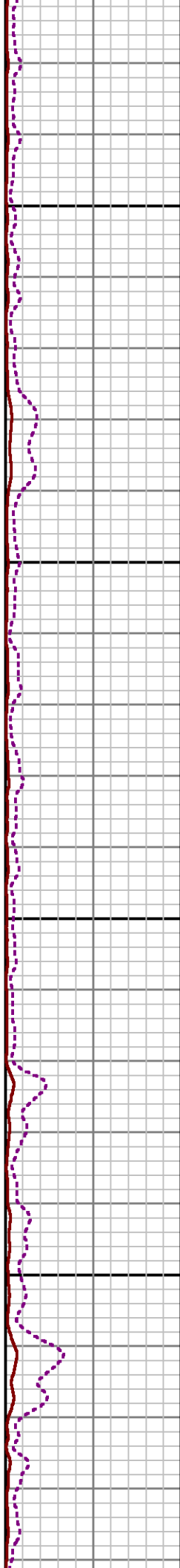
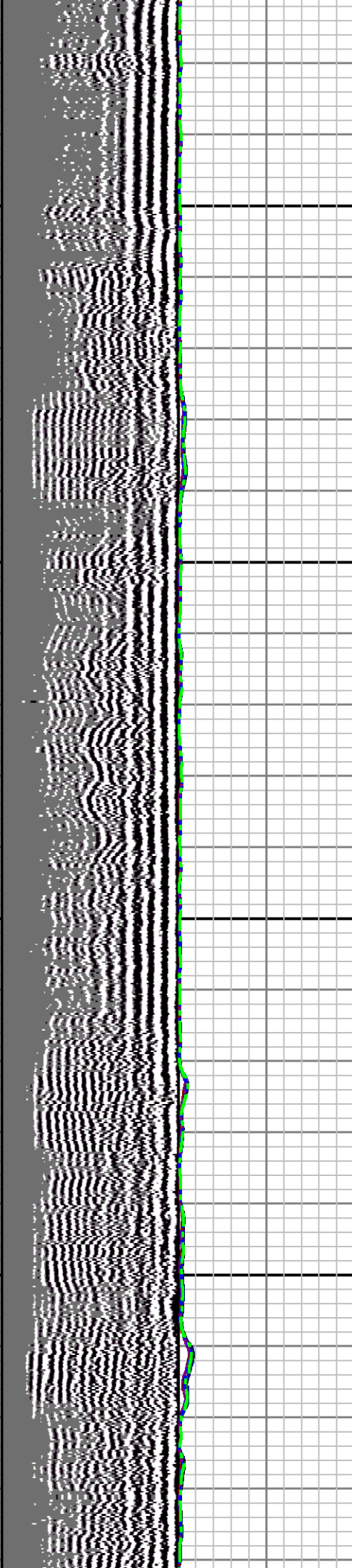


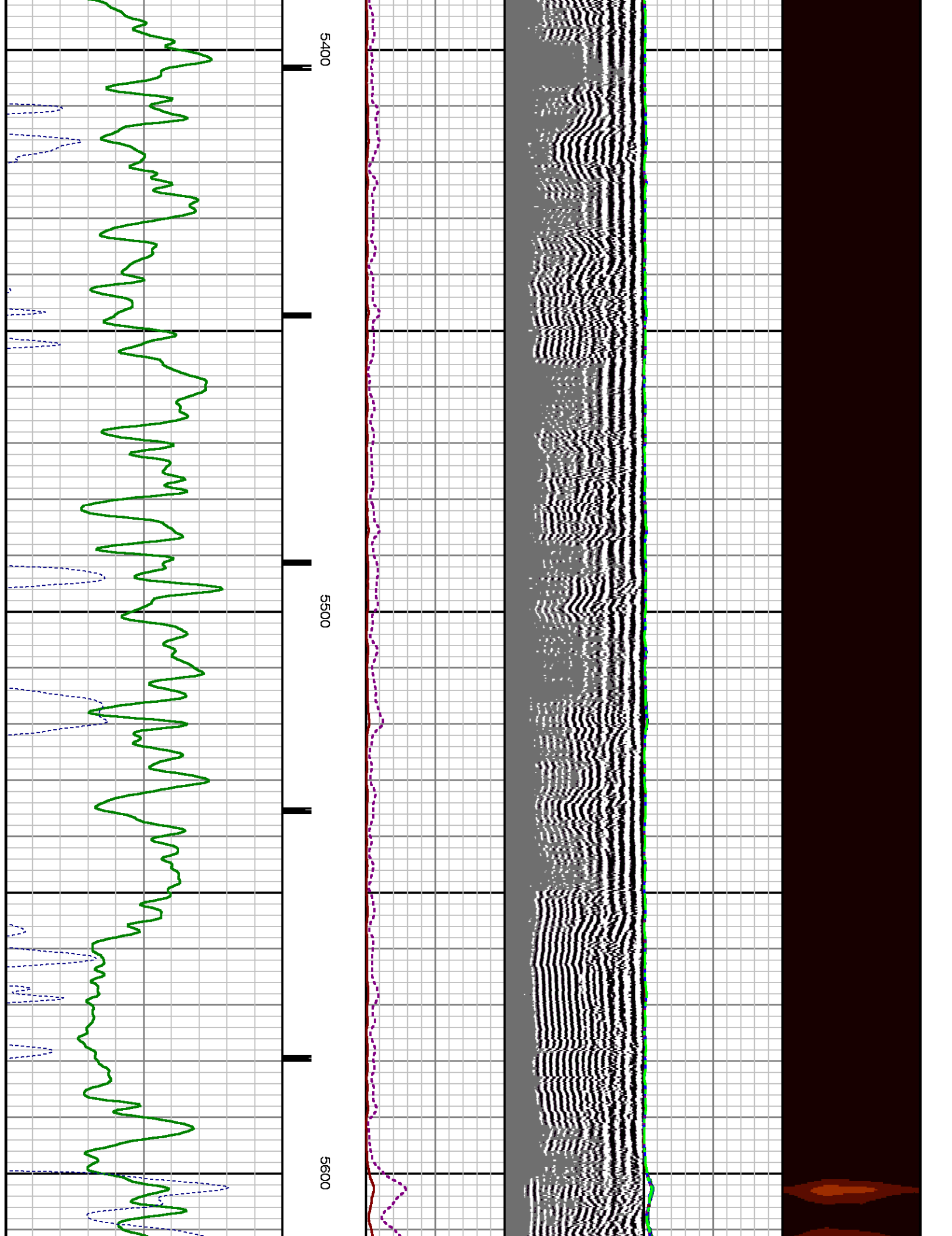




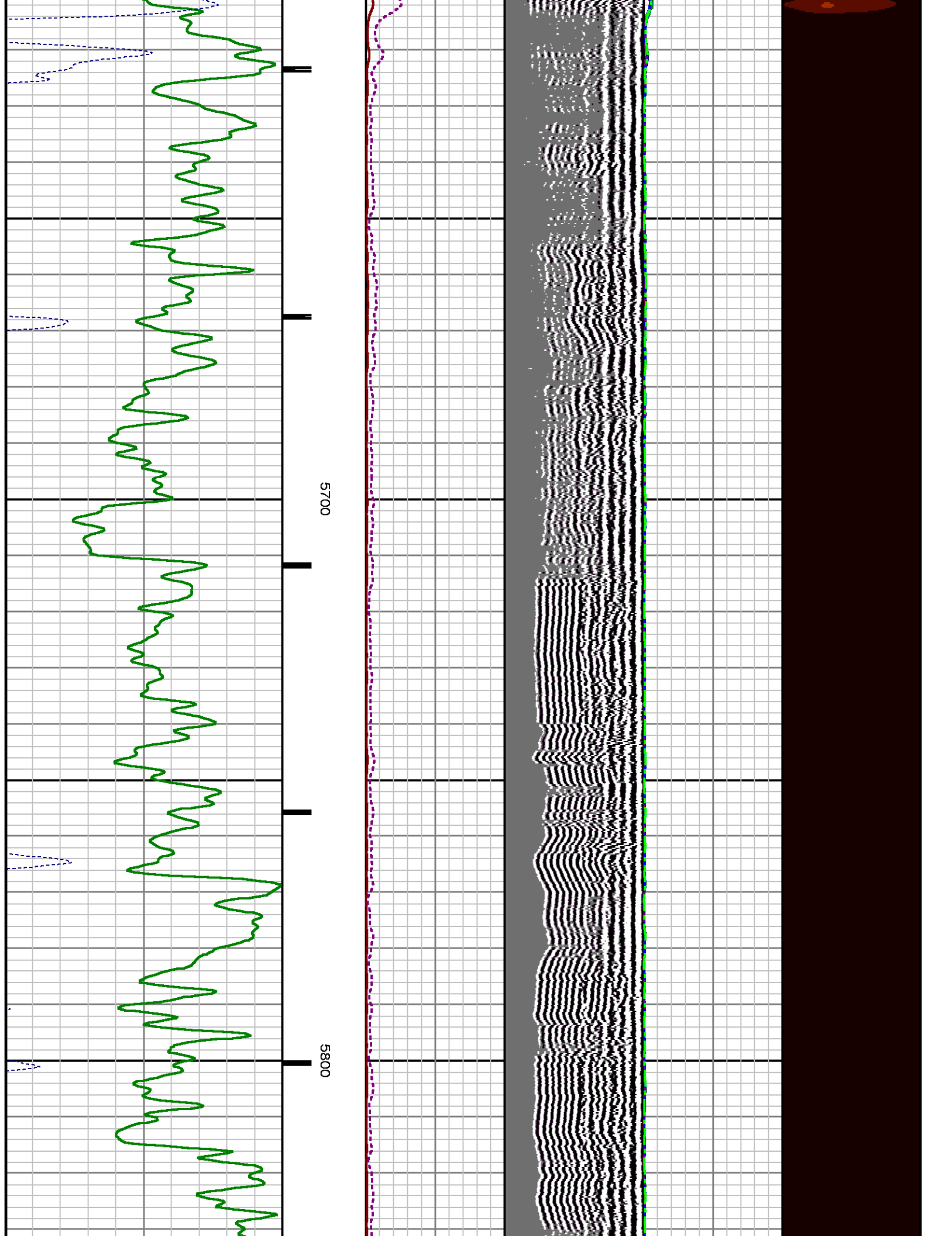




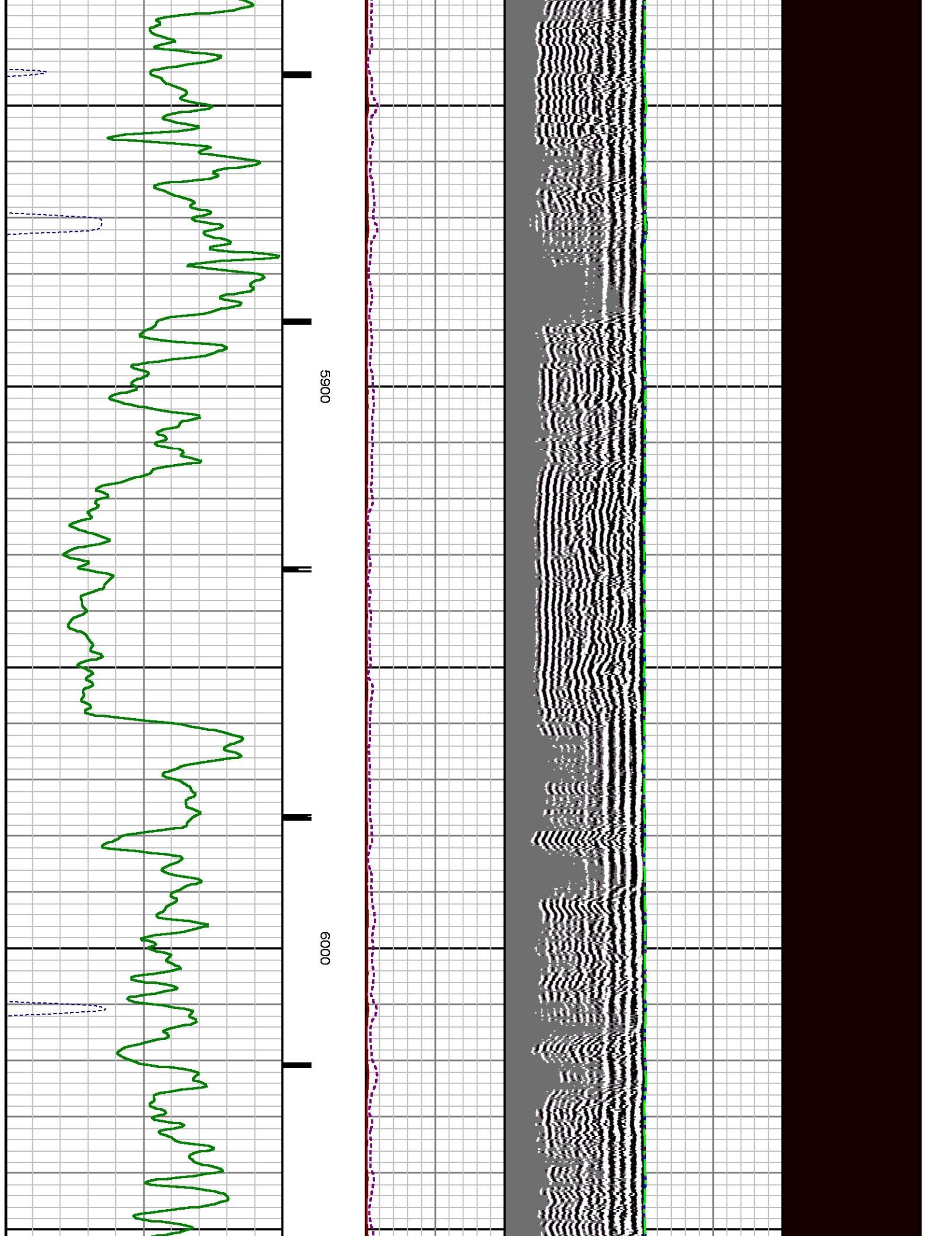


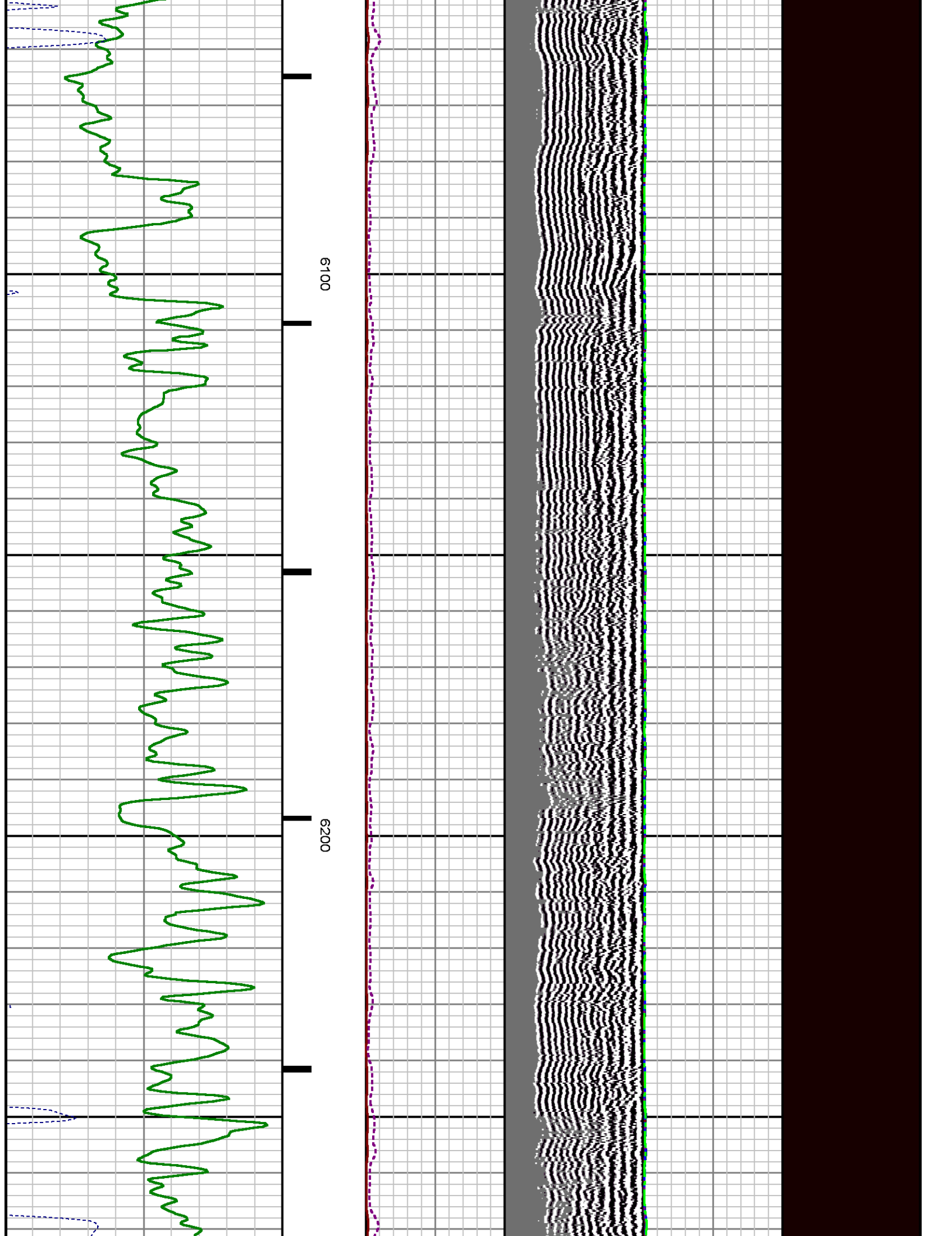


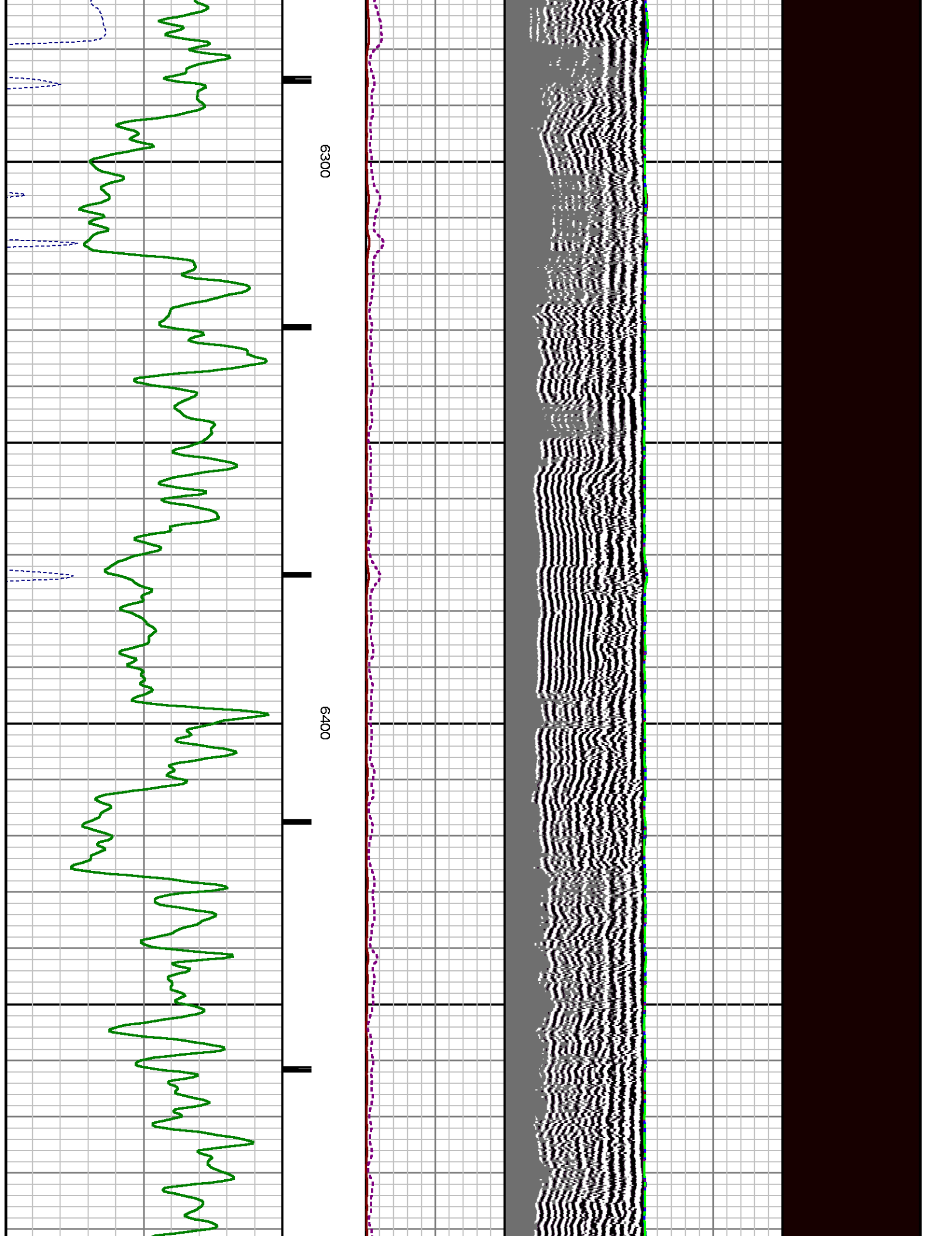


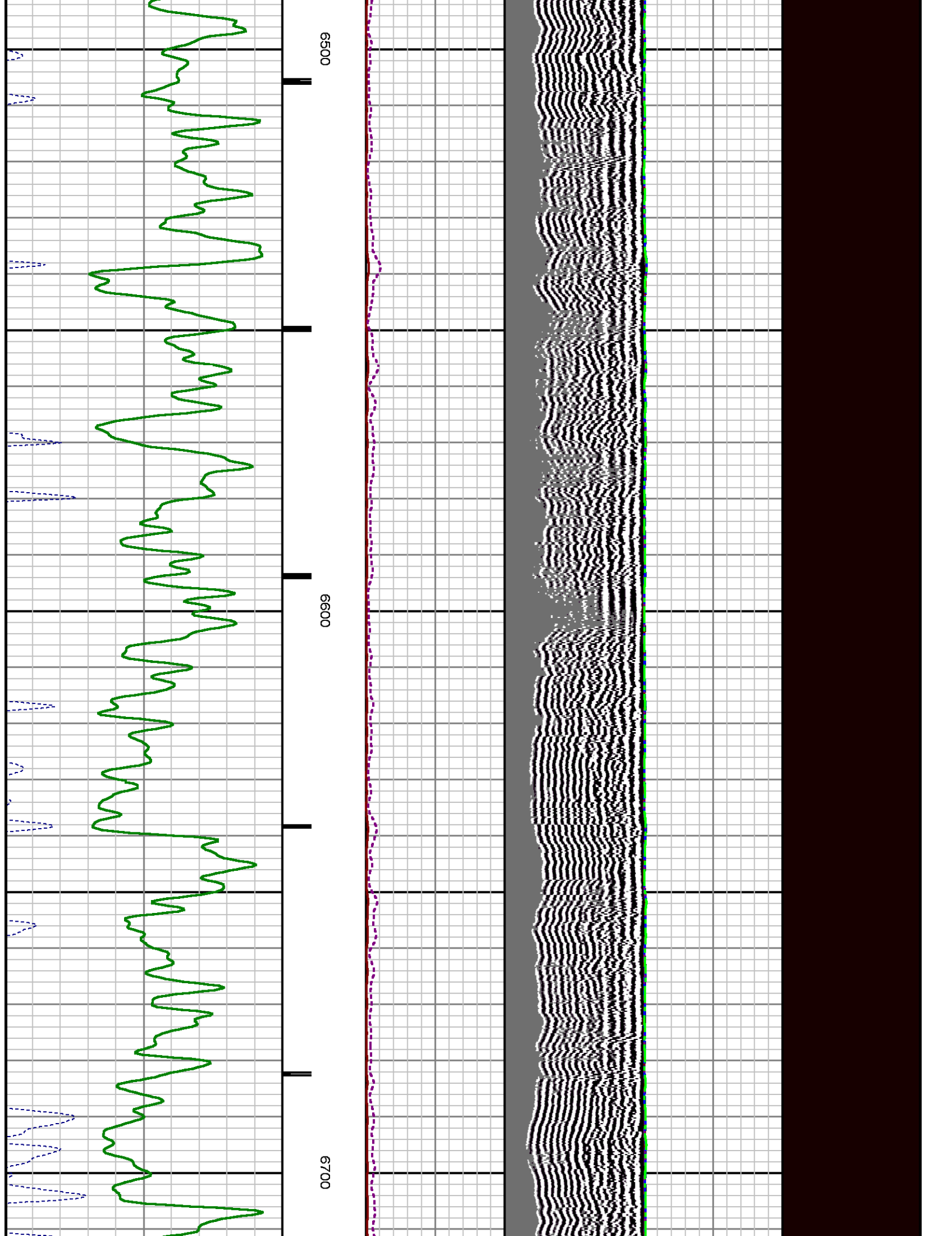


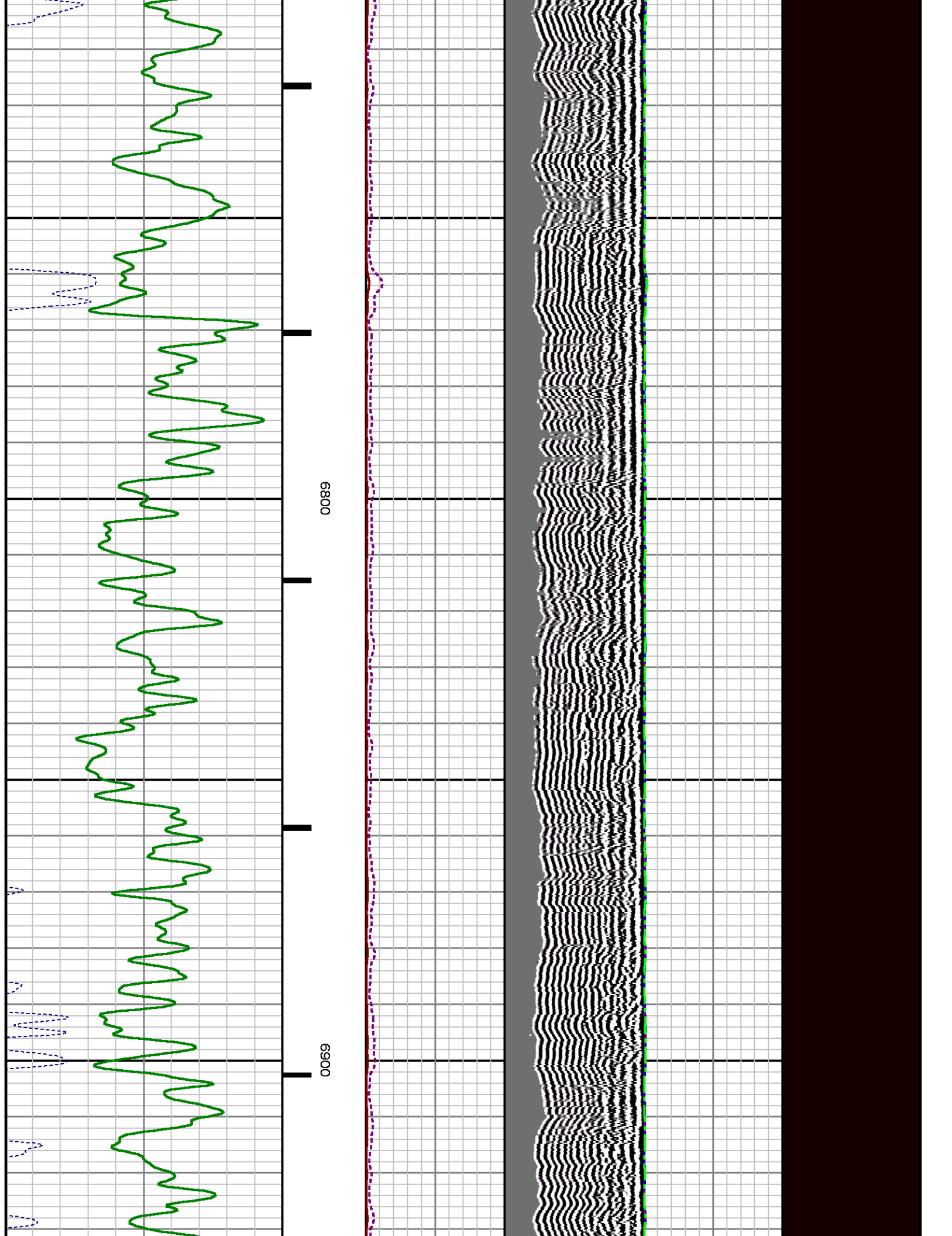




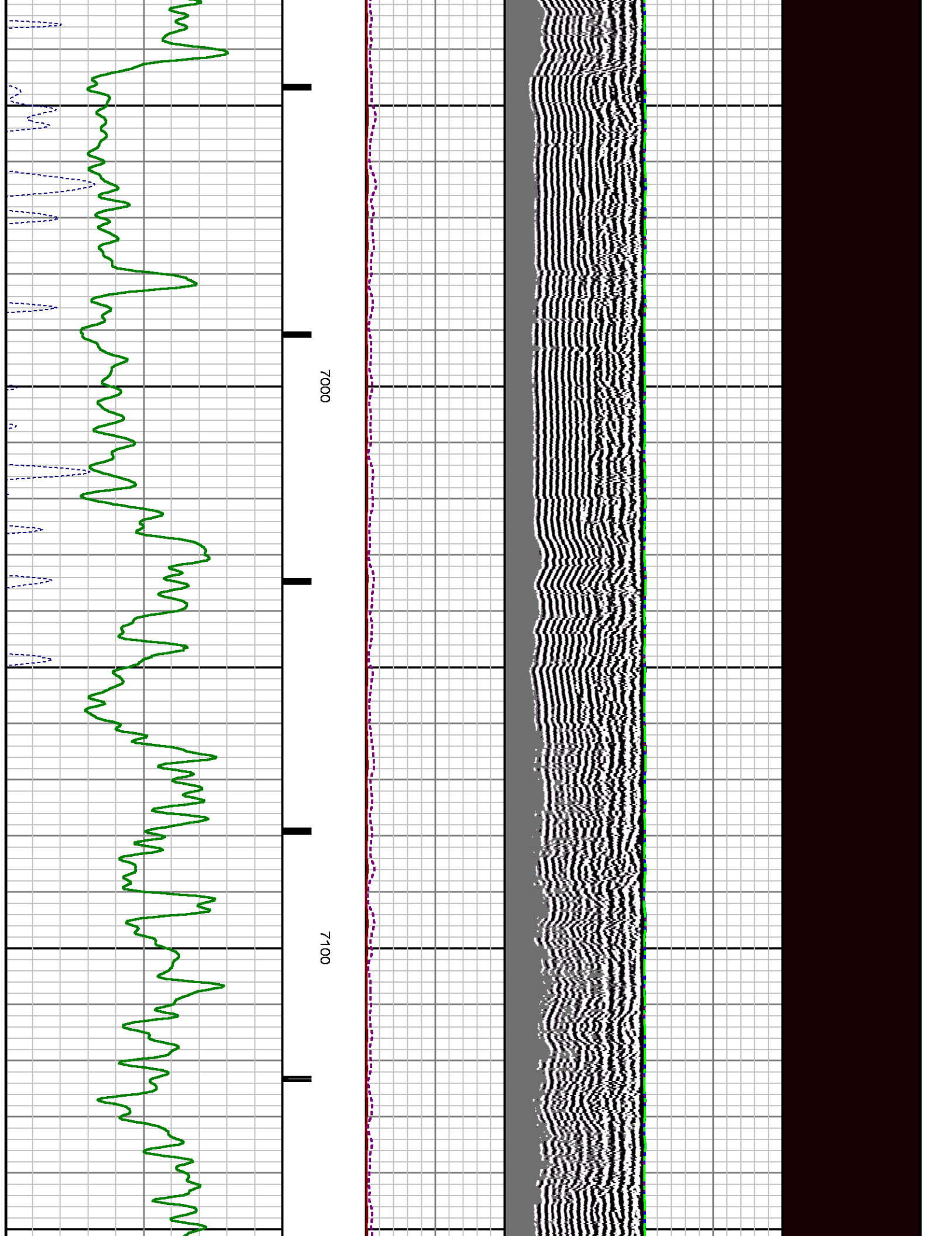




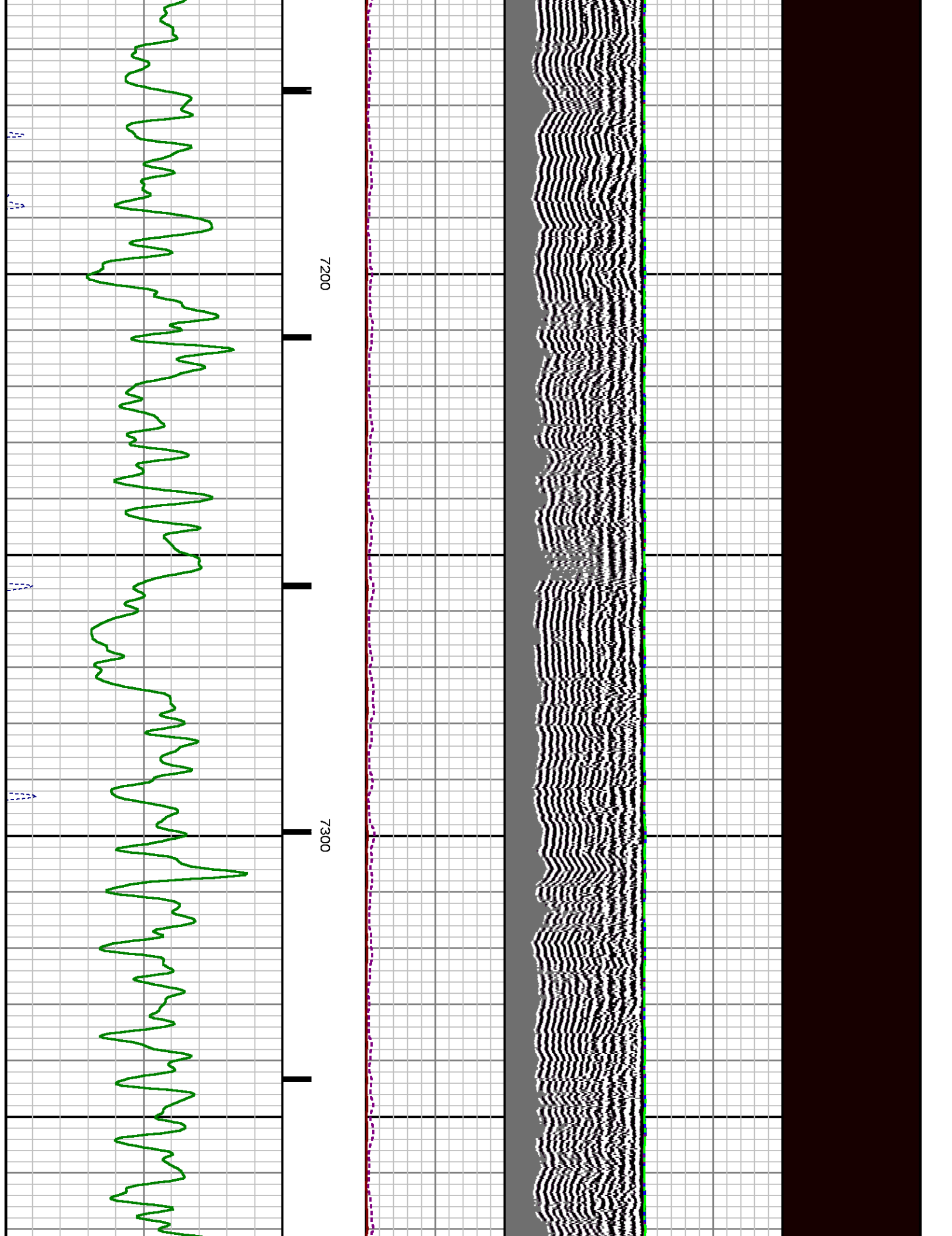


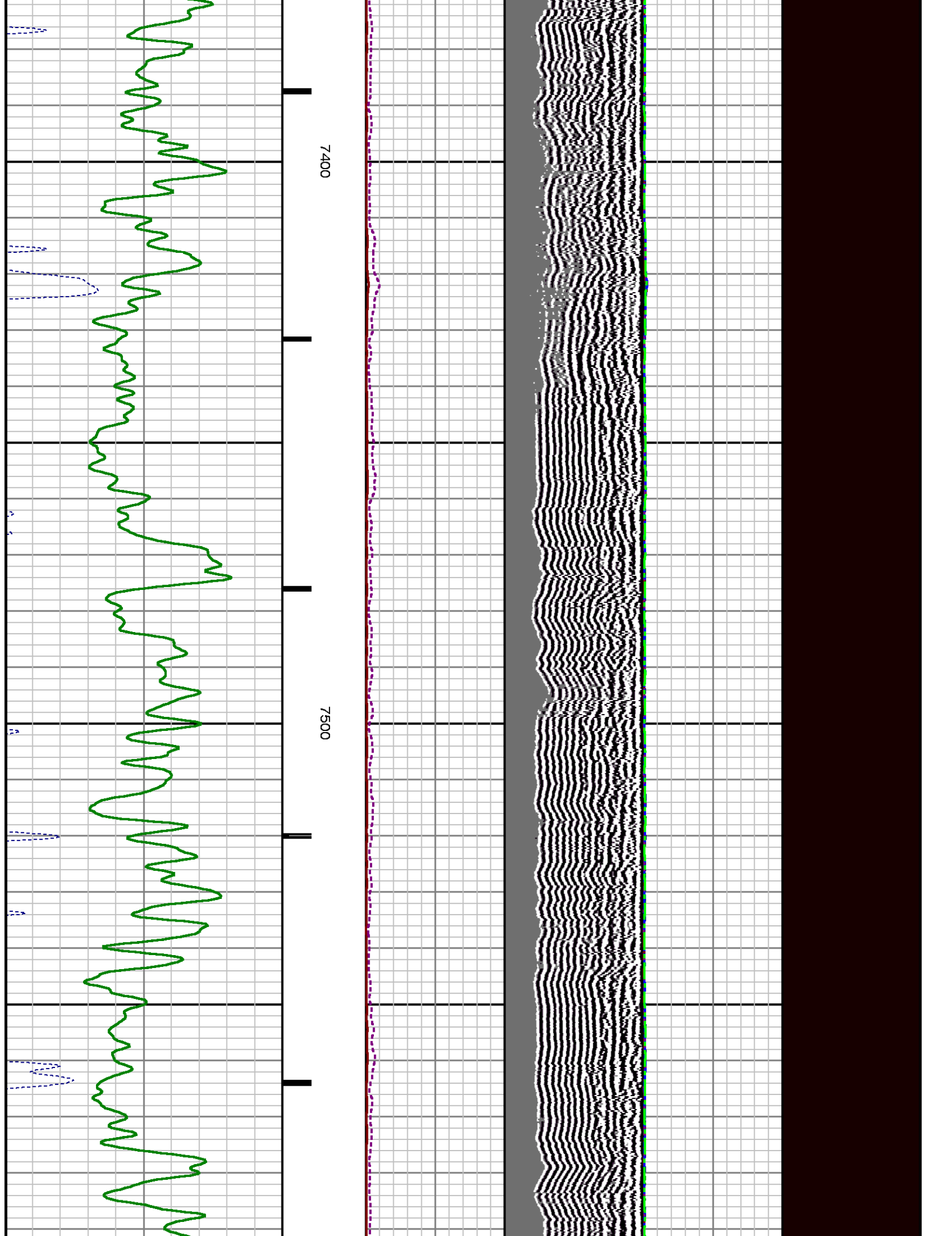


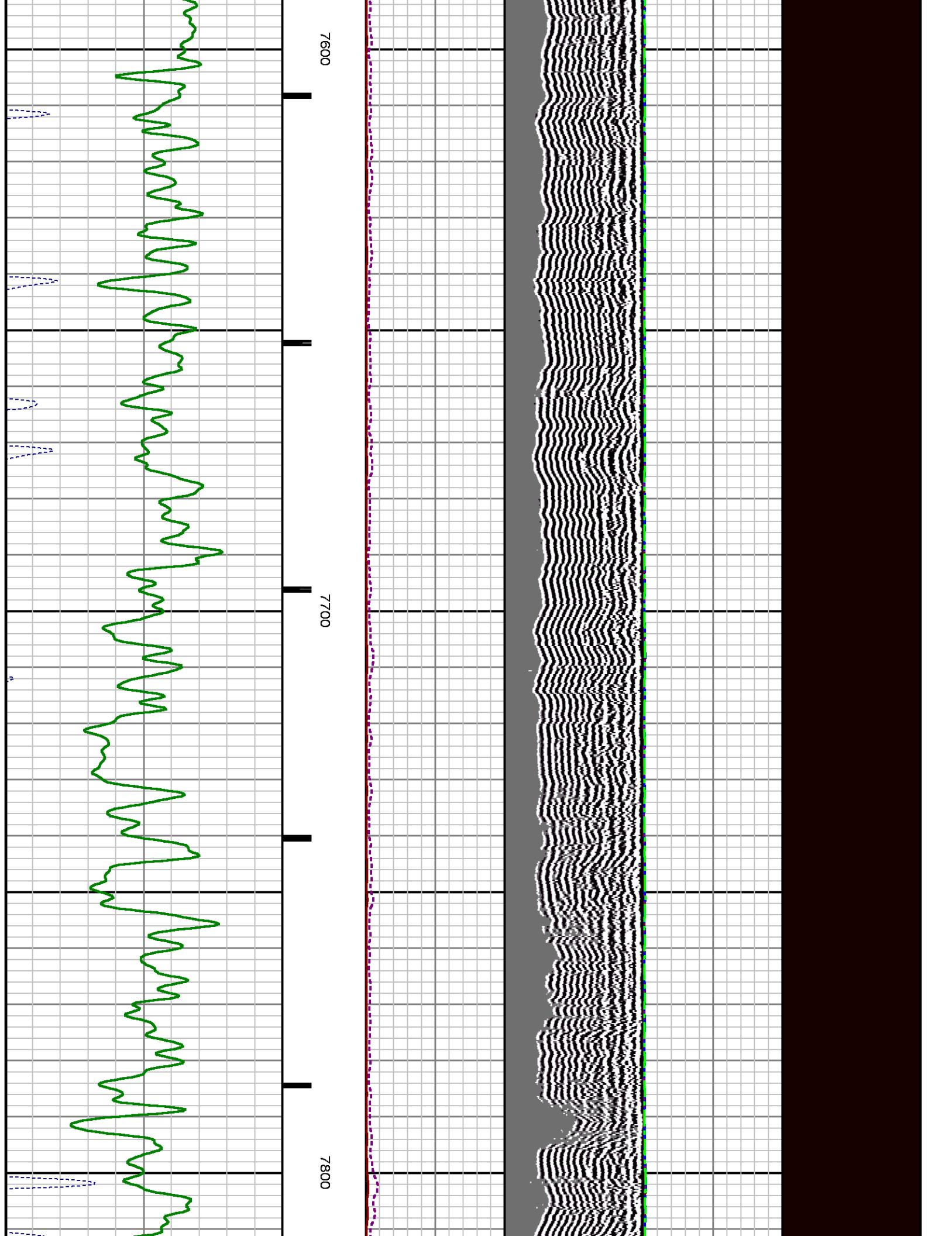


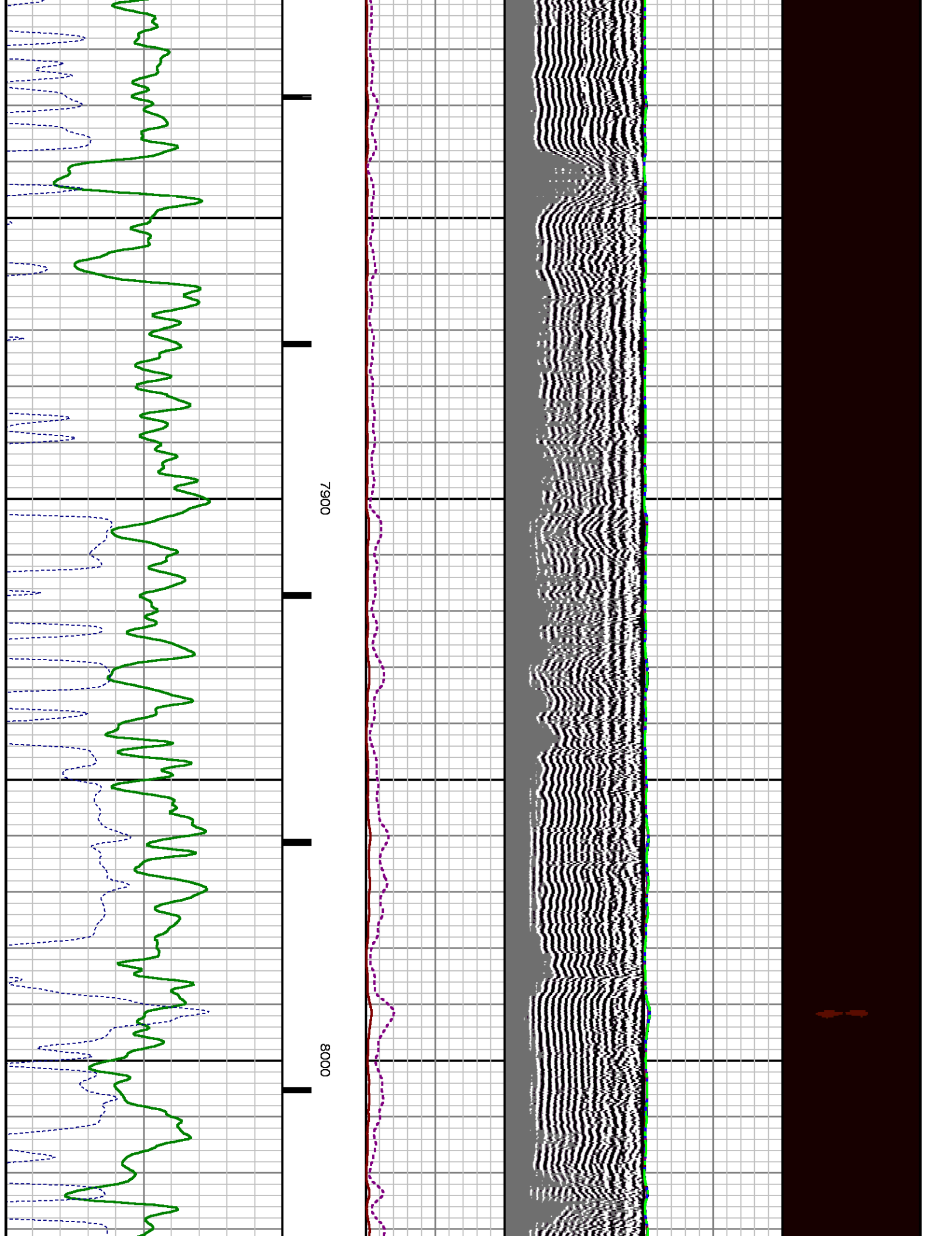


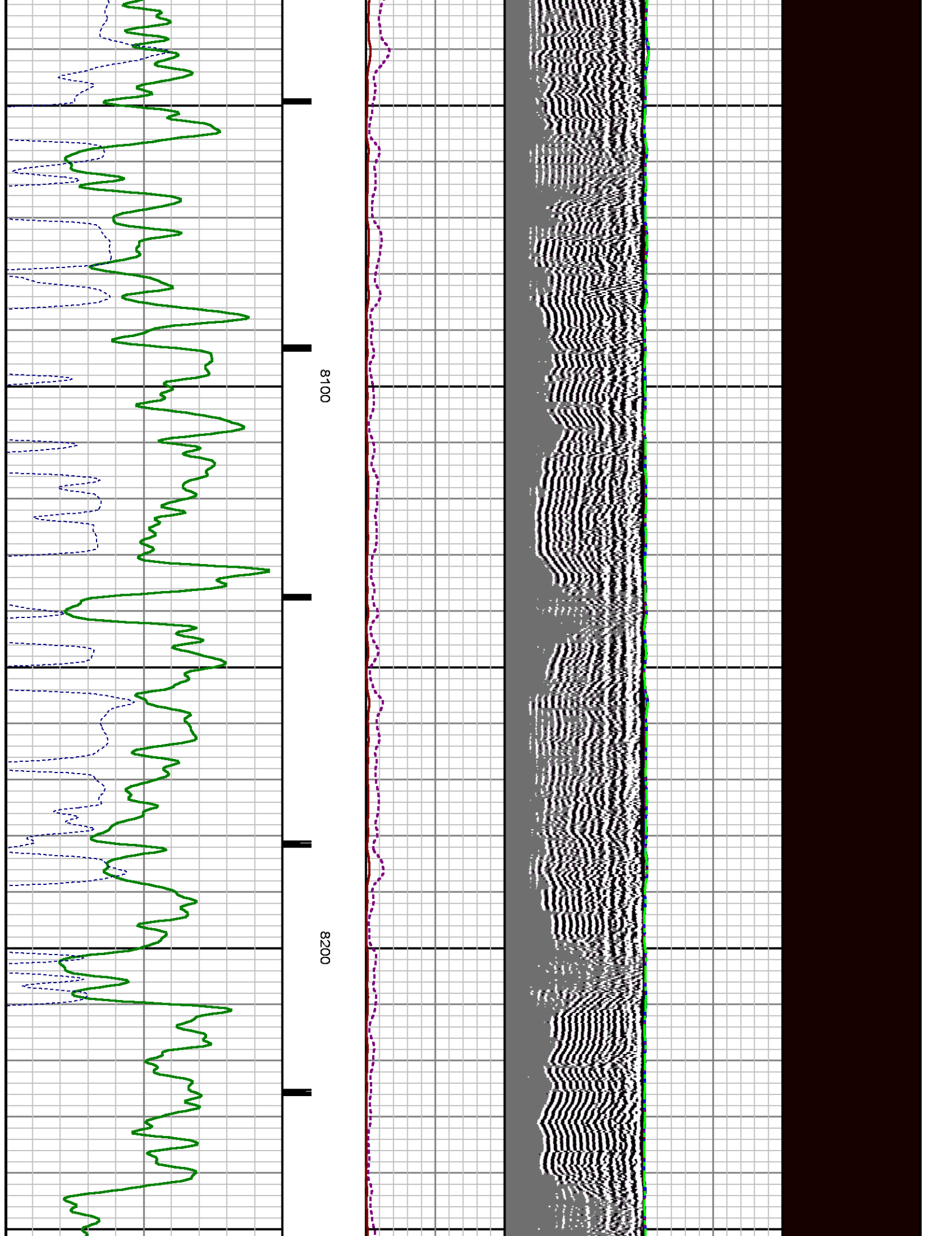




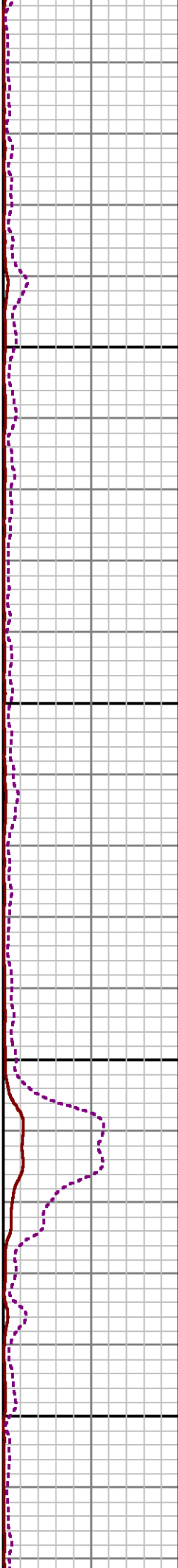
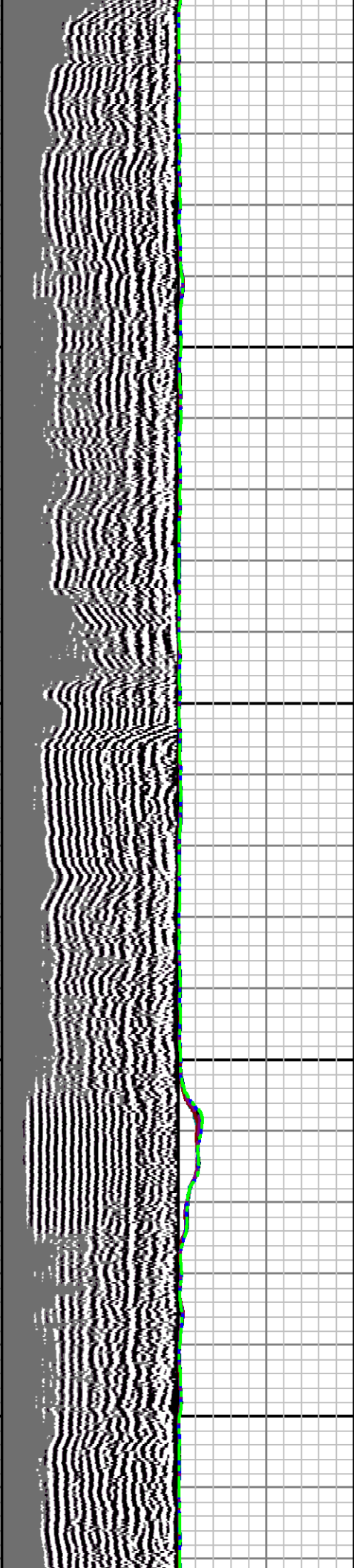
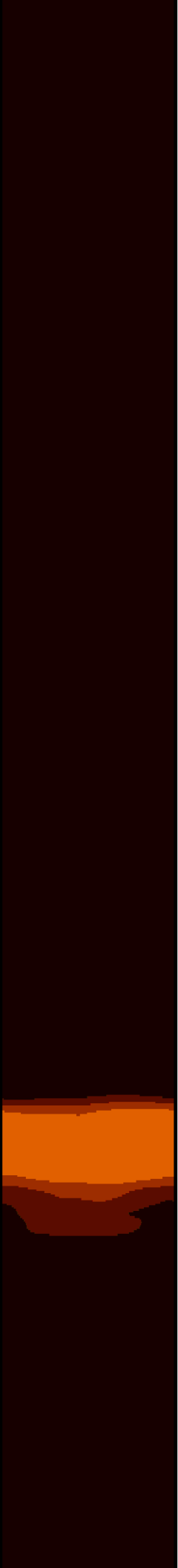






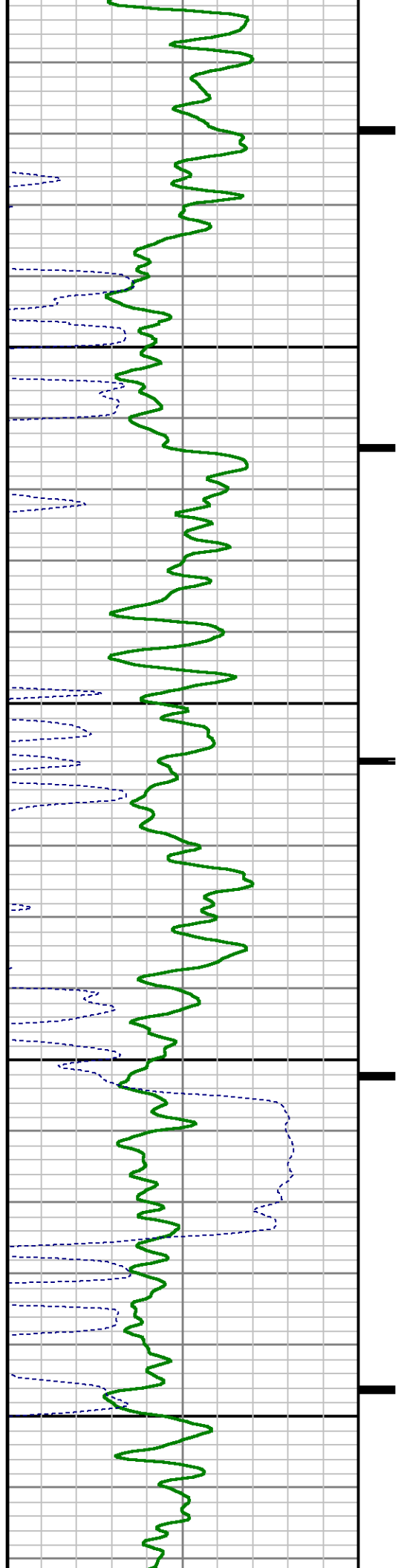




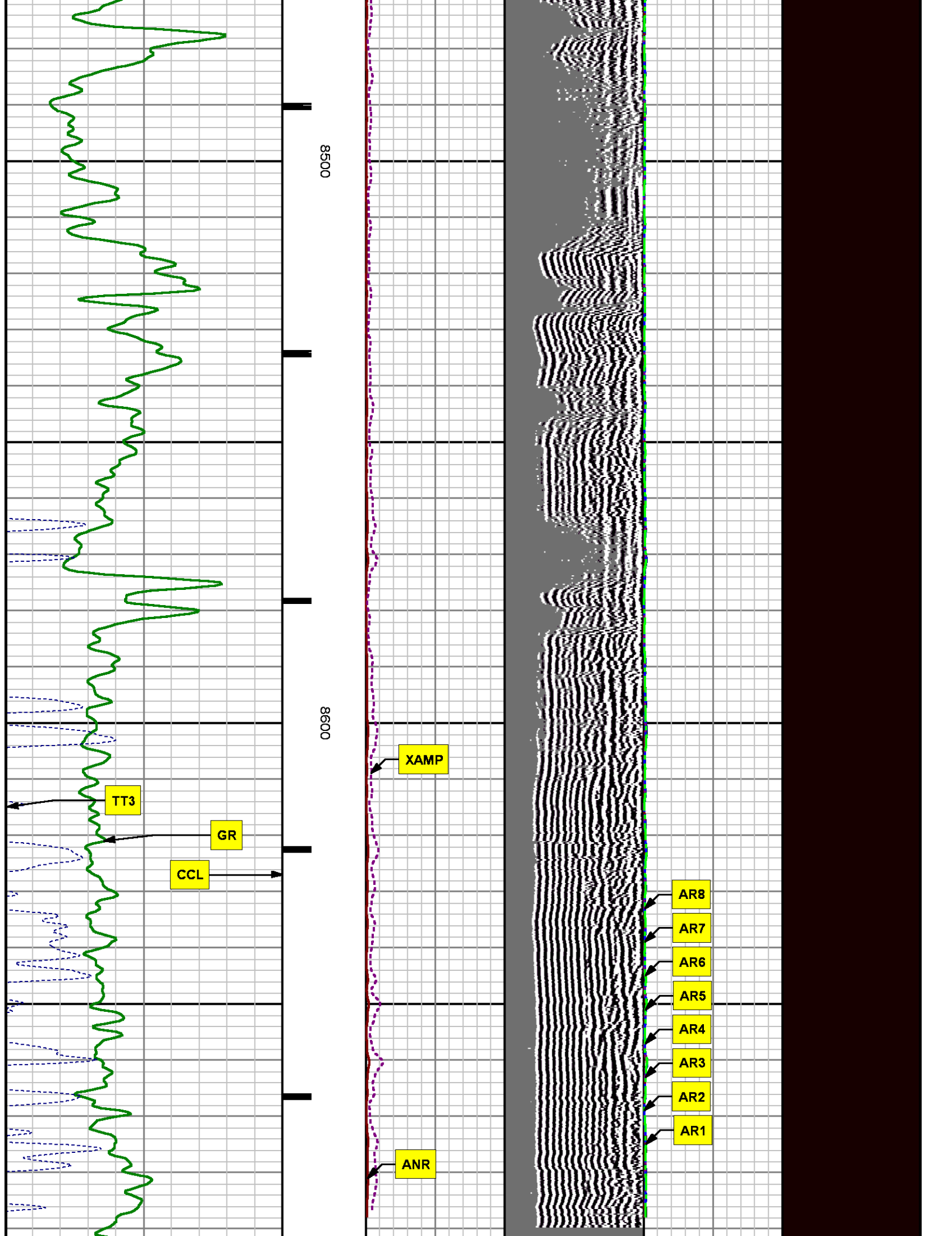


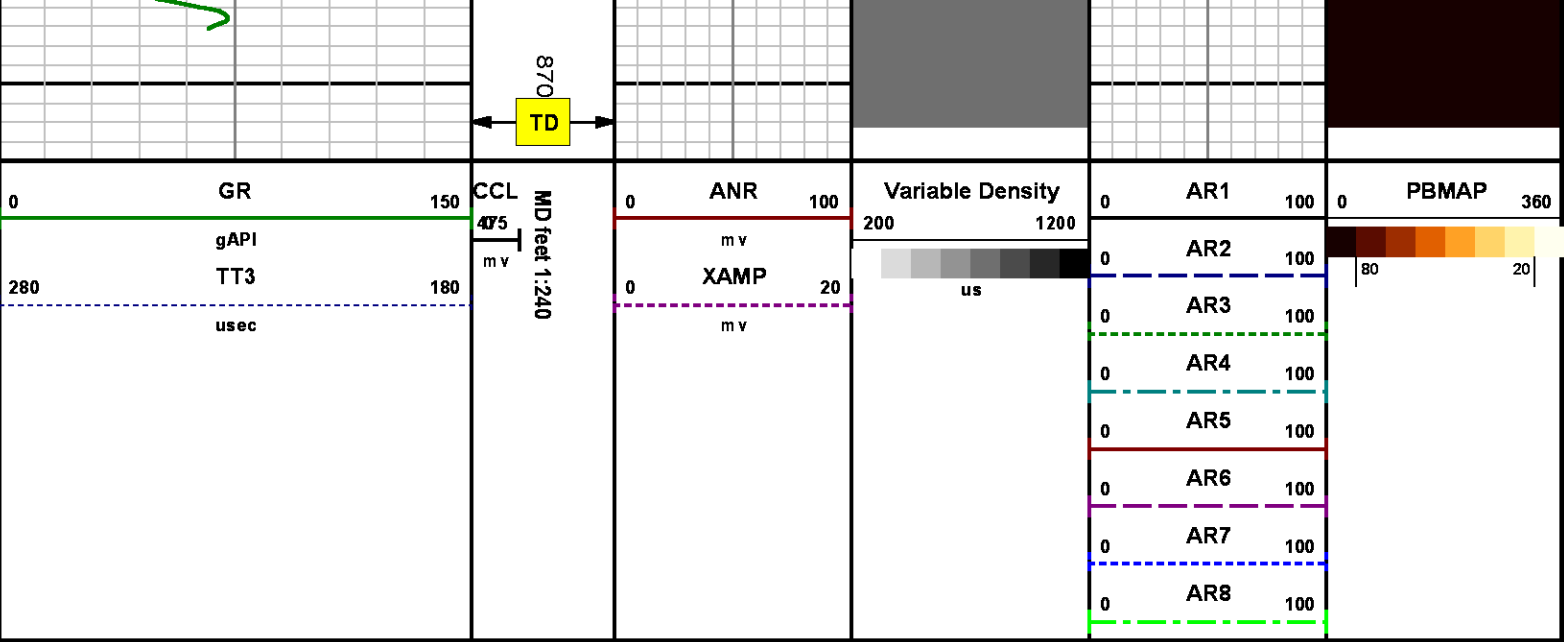
8300

8400









*REPEAT SECTION*  
*0 PSI*

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	u sec	8392.160	8712.160
RAL	Amp Gate Start Near	195.000	u sec	8392.160	8712.160
RAL	Amp Gate Start Radial	195.000	u sec	8392.160	8712.160
RAL	Amp Gate Width Far	20.000	u sec	8392.160	8712.160
RAL	Amp Gate Width Near	25.000	u sec	8392.160	8712.160
RAL	Amp Gate Width Radial	25.000	u sec	8392.160	8712.160
RAL	casing od	4.500	inches	8392.160	8712.160
RAL	casing wt	11.600	lbm/ft	8392.160	8712.160
RAL	FB Start Far	291.900	u sec	8392.160	8712.160
RAL	FB Start Near	180.000	u sec	8392.160	8712.160
RAL	FB Start Radial	180.000	u sec	8392.160	8712.160
RAL	FB Thresh Far	10.000	mv	8392.160	8712.160
RAL	FB Thresh Near	4.000	mv	8392.160	8712.160
RAL	FB Thresh Radial	4.000	mv	8392.160	8712.160
RAL	Fluid Travel Time	200.000	u sec/ft	8392.160	8713.122

# 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

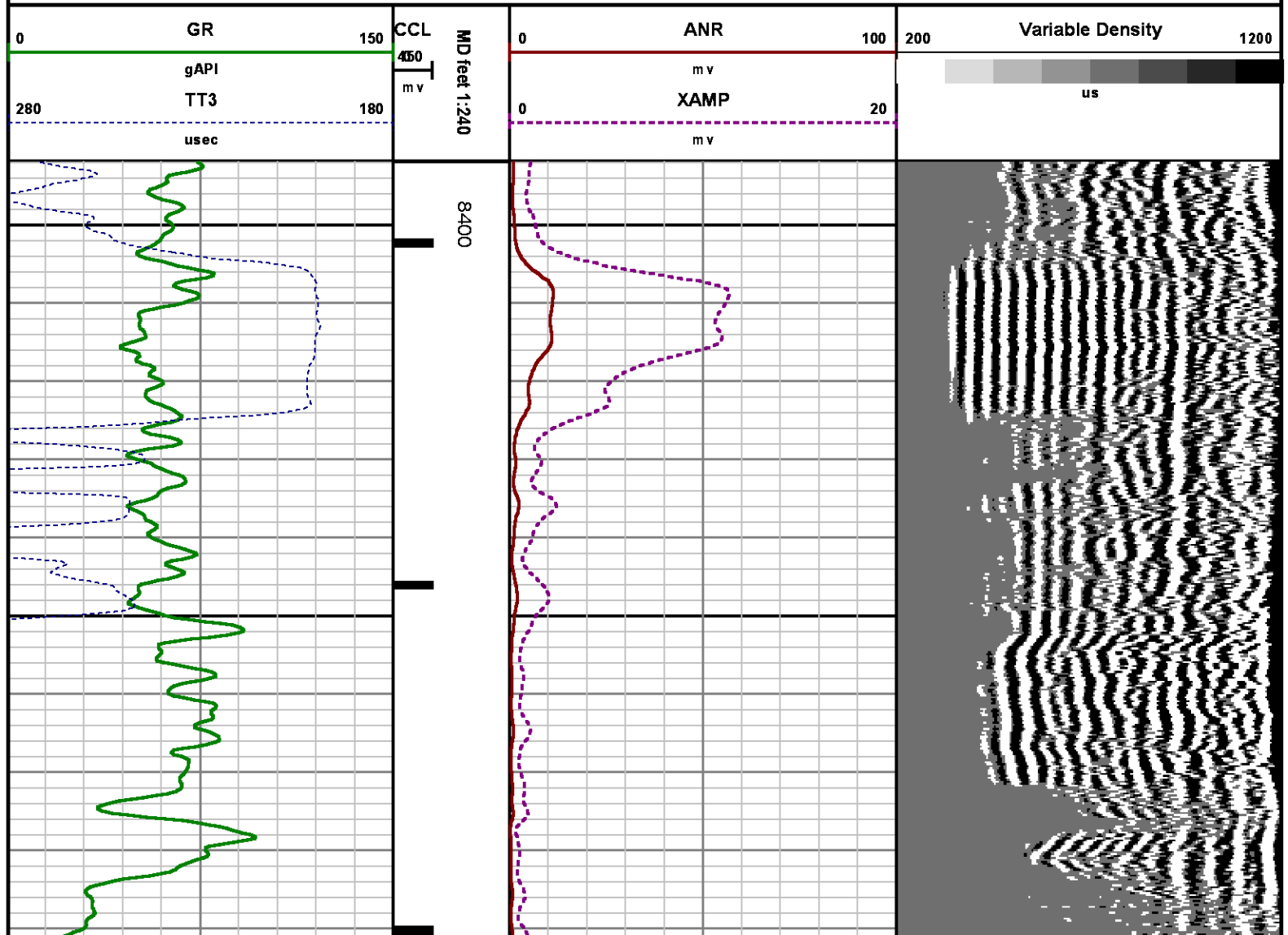
Well : SAVAGE RWF 314-25

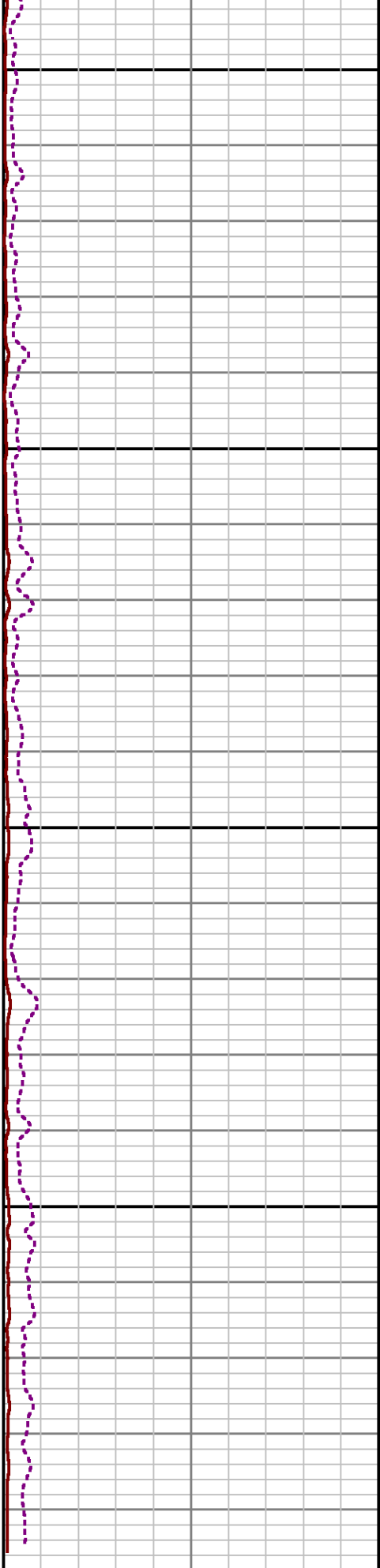
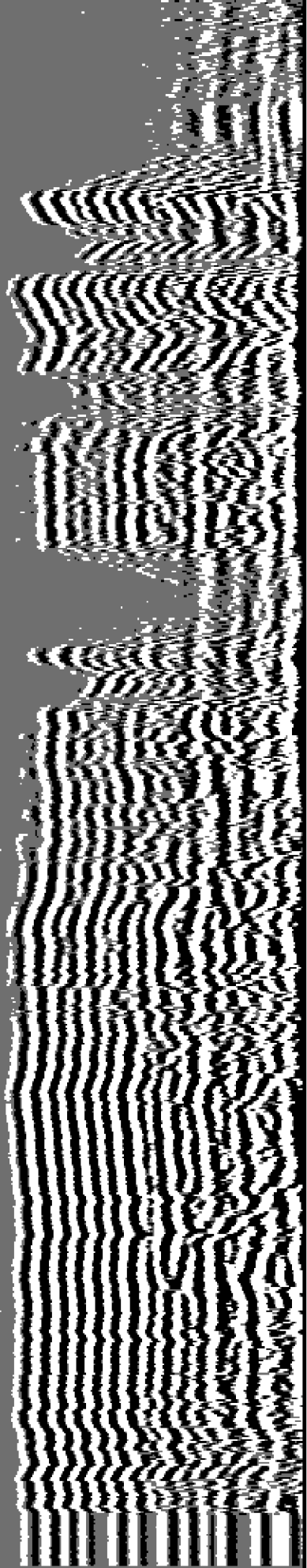
File Name : d:\well\data\wpx\rwf 314-25\ral314\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 8391.91 - 8713.16 feet UP

Created : 3/24/2014 12:26:49 PM

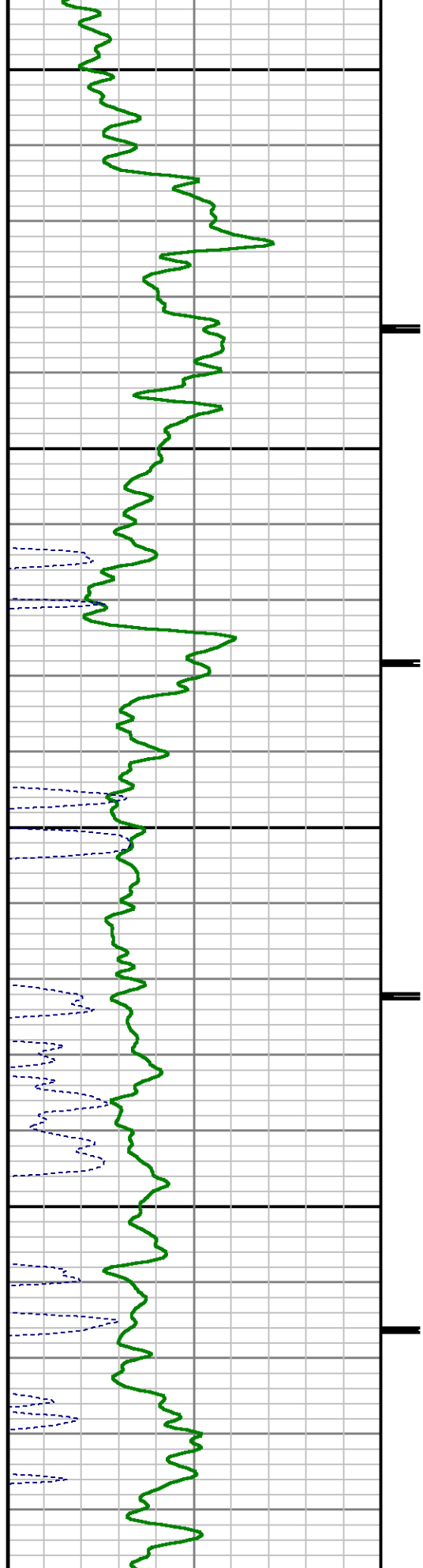


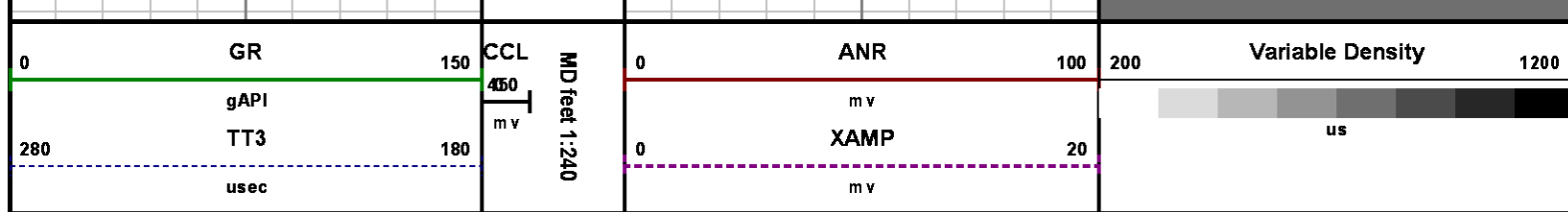


8500

8600

8700





## CALIBRATION SUMMARY

## RALSHP

Shop Calibration: C:\case\calver\RALSHP\496M24\_shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Mar 24 11:49:35 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: M24

Tool Delay [usec] -56.00 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	216	216	30	166	25	0.138	100.00	0.16
3 Ft. Receiver	216	216	30	166	25	2.449	100.00	0.16
5 Ft. Receiver	326	325	30	271	25	3.508	150.00	0.18
Radial #1	216	216	30	166	25	1.984	100.00	0.16
Radial #2	216	216	30	166	25	1.682	100.00	0.16
Radial #3	216	216	30	166	25	1.292	100.00	0.16
Radial #4	216	216	30	166	25	2.217	100.00	0.16
Radial #5	216	216	30	166	25	2.666	100.00	0.16
Radial #6	215	216	30	166	25	2.465	100.00	0.16
Radial #7	215	216	30	166	25	1.417	100.00	0.16
Radial #8	216	216	30	166	25	1.834	100.00	0.16

## RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496M24 fld.cal

### WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Mar 24 11:55:11 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: M24

Tool Delay [usec] -56.00 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	0.062	0.000	0.96	100.000
3 Ft. Receiver	195	25	1.880			
5 Ft. Receiver	305	20	2.497			
Radial #1	195	25	1.263			
Radial #2	195	25	1.265			
Radial #3	195	25	1.472			
Radial #4	195	25	1.512			
Radial #5	195	25	1.767			
Radial #6	195	25	1.811			
Radial #7	195	25	1.507			
Radial #8	195	25	1.381			

## GAMMA RAY

Calibration File: C:\case\calver\GR\45609.cal

### CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Mar 09 11:17:29 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: 09

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	52.36	330.13	0.666	34.87	219.87	185.00

Verification File: C:\case\calver\GR\45609.VP

### PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Sun Mar 09 11:18:54 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: 09

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA-612	56.49	331.07	0.666	37.62	220.49	182.87

## TOOL DIAGRAM

OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII



21.81'



**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

XMIT	15.62'
NEAR RCVR	12.54'
FAR RCVR	10.62'
CCL	8.92'
GR	7.06'
NEU	1.67'
	0.00'

**Probe GR/CCL/NEU**

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

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



**Baker Atlas**

**CASE**

**Company**

**WPX ENERGY**

**Well**

**SAVAGE RWF 314-25**

**Field**

**RULISON**

**County**

**GARFIELD**

**State**

**COLORADO**

**Location**

**SHL: 1617' FSL & 2304' FWL**

**BHL: 1231' FSL & 922' FWL (SWSW)**

**SEC 25**

**TWP 6S**

**RGE 94W**

**Elevations**

**KB 6122 ft**

**DF**

**GL 6096 ft**

**File No:**

**CH083874**

**API No:**

**05045219780000**

**25 6S 94W**

**RWF 23-25 PAD**

**NABORS 577**