



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH083304	Company Well	WPX ENERGY SAVAGE RWF 322-25
API No: 05045219680000	Field County	RULISON GARFIELD State CO
25 GS 94W RWF 22-25 PAD CYCLONE 17	Location SHL: 2466' FNL & 1424' FWL BHL: 1465' FNL & 2219' FWL SEC 25 TWP 6S RGE 94W	Other Services
Permanent Datum Log Measured From Drill Measured From	GL KB KB KB	Elevations KB 6058 ft DF GL 6037 ft

Date	05/MAR/14
Run	ONE
Service Order	US625352
Depth Driller	BZ21 ft
Depth Logger	8698 ft
Bottom Logged Interval	8698 ft
Top Logged Interval	21 ft
Time Started	8:00
Time Finished	15:30
Operator Rig Time	7.5 HOURS
Type of Fluid in Hole	WATER
Fluid Density	NA
Salinity	NA
Fluid Level	85 ft
Logged Cement Top	NA
Wellhead Pressure	0 psi
Maximum Hole Deviation	NA
Nominal Logging Speed	65 fpm
Maximum Recorded Temperature	232 degF
Reference Log	BAKER HUGHES OPEN HOLE
Reference Log Date	20/FEB/2014
Equipment No.	4271
Location	GRAND JCT.
Recorded By	NEWELL
Witnessed By	COLE APPLIGATE

- 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	1120 ft
8.75 In	1120 ft	8797 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 In			0 ft	1120 ft
4.5 In	11.6 lbm/ft	1-80	0 ft	8797 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 2/20/2014 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 15 feet.

Logged with zero PSI at wellhead.

BHT = 232 °F

SJ = 5338'–5362'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	CBL	1426XA	10218496	CENTRALIZED
1	1	GR/CCL	2459XA	10124121	CENTRALIZED

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	30.999	8693.000
RAL	Amp Gate Start Near	195.000	usec	30.999	8693.000
RAL	Amp Gate Start Radial	195.000	usec	30.999	8693.000
RAL	Amp Gate Width Far	25.000	usec	30.999	8693.000
RAL	Amp Gate Width Near	25.000	usec	30.999	8693.000
RAL	Amp Gate Width Radial	25.000	usec	30.999	8693.000
RAL	casing od	4.500	inches	30.999	8693.000
RAL	casing wt	11.600	lbm/ft	30.999	8693.000
RAL	FB Start Far	291.900	usec	30.999	8693.000
RAL	FB Start Near	175.391	usec	30.999	8693.000
RAL	FB Start Radial	175.391	usec	30.999	8693.000
RAL	FB Thresh Far	10.000	mv	30.999	8693.000
RAL	FB Thresh Near	4.000	mv	30.999	8693.000
RAL	FB Thresh Radial	4.000	mv	30.999	8693.000
RAL	Fluid Travel Time	200.000	usec/ft	30.999	8693.874

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

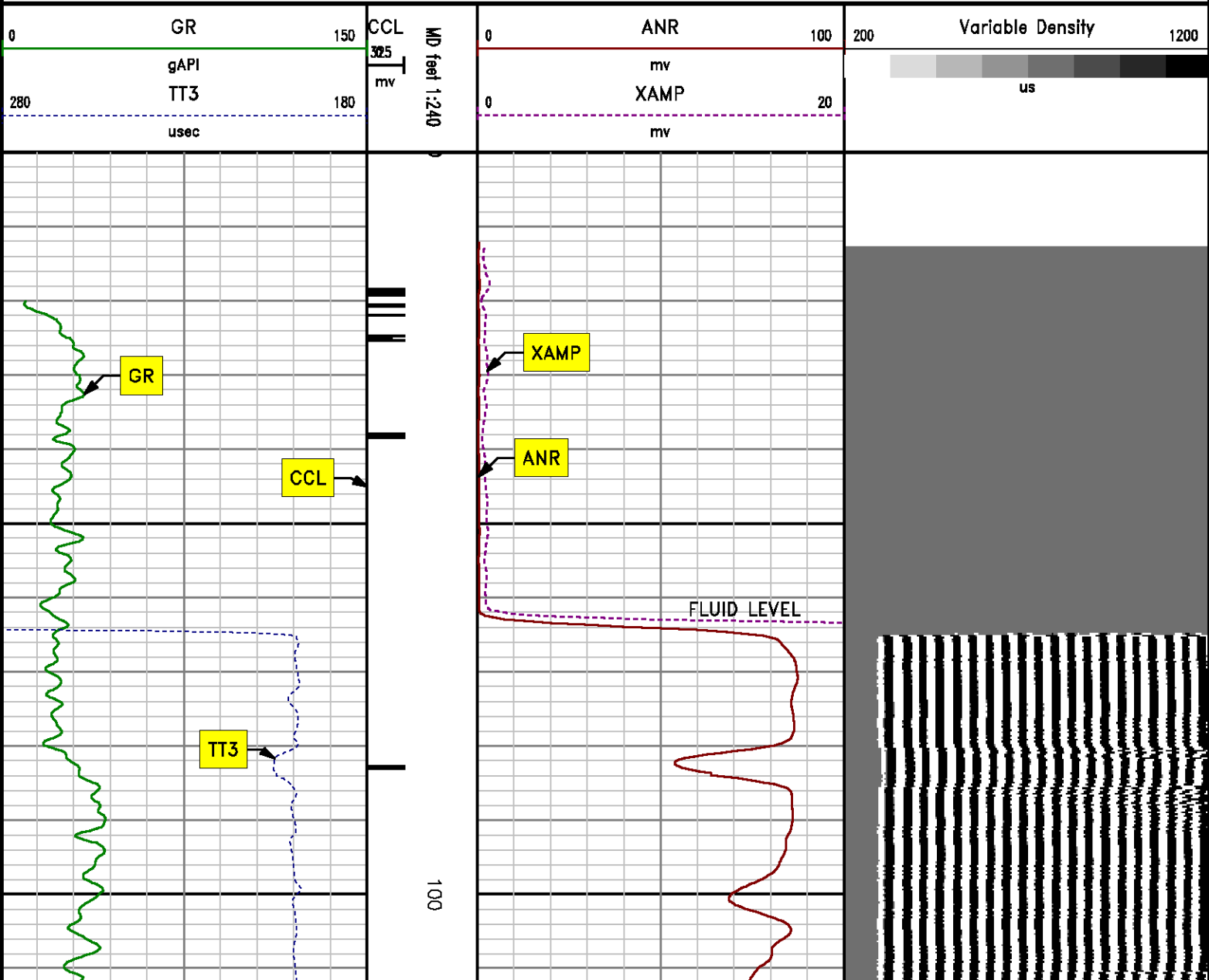
Well : SAVAGE RWF 11-25

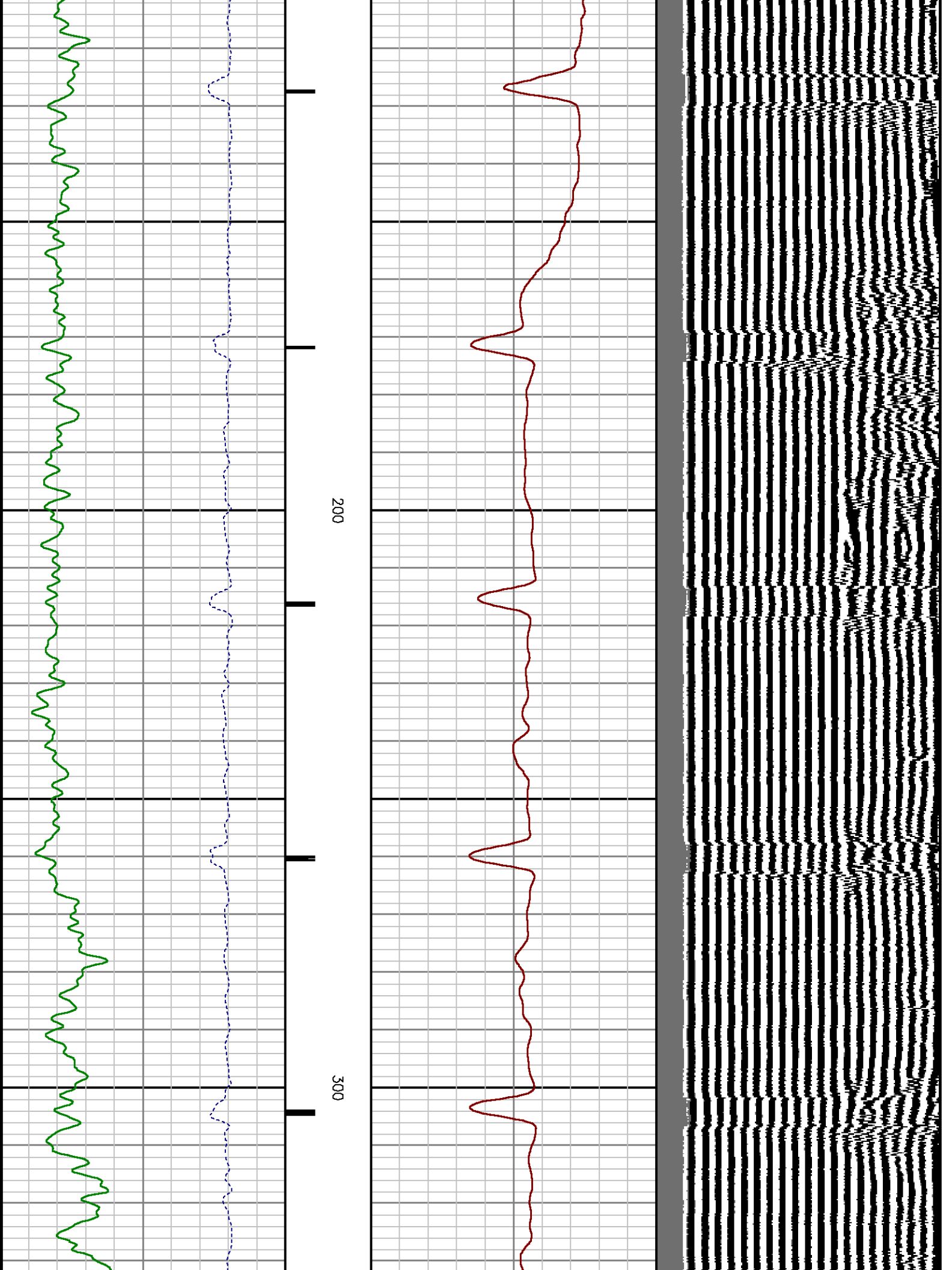
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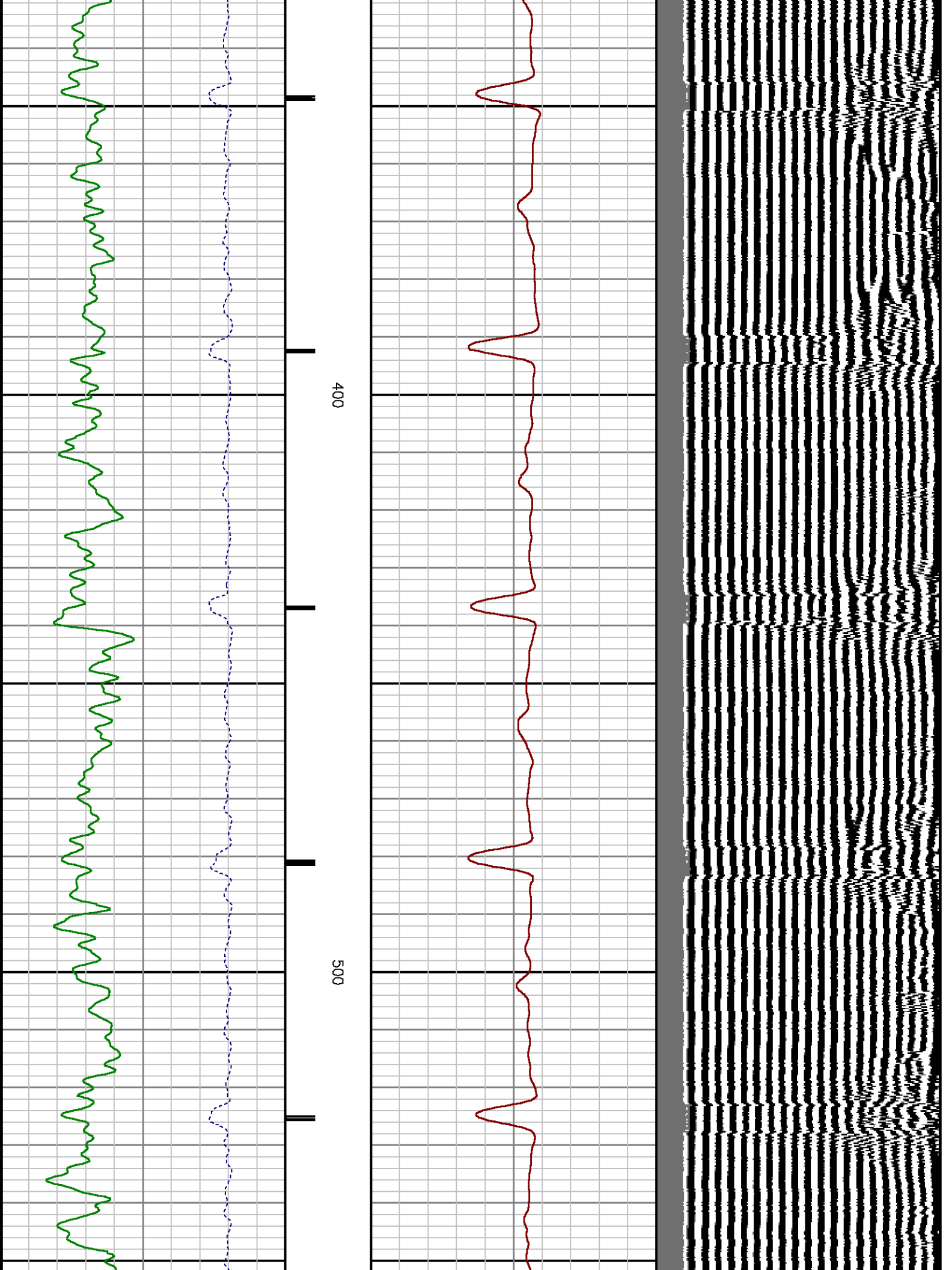
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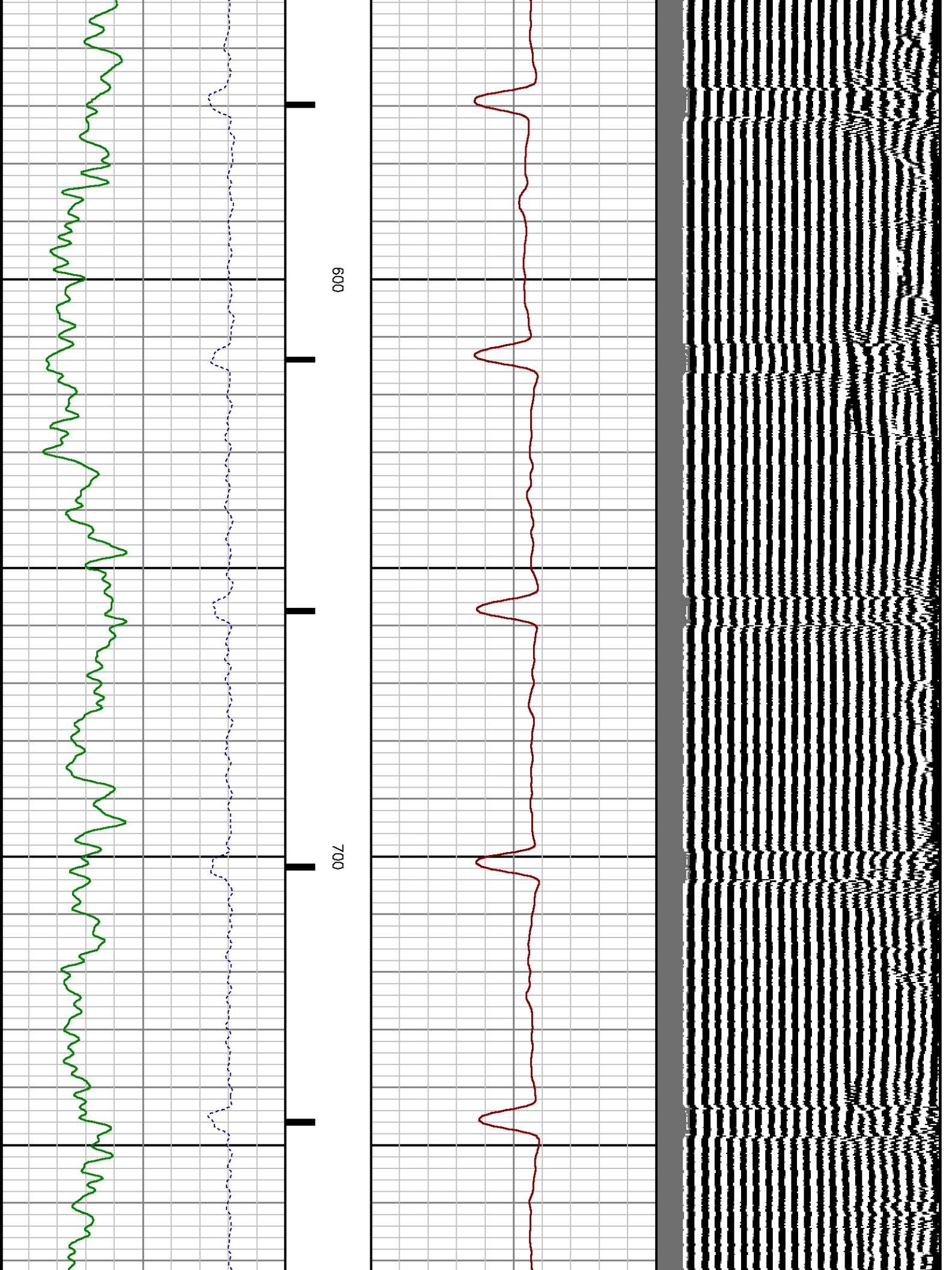
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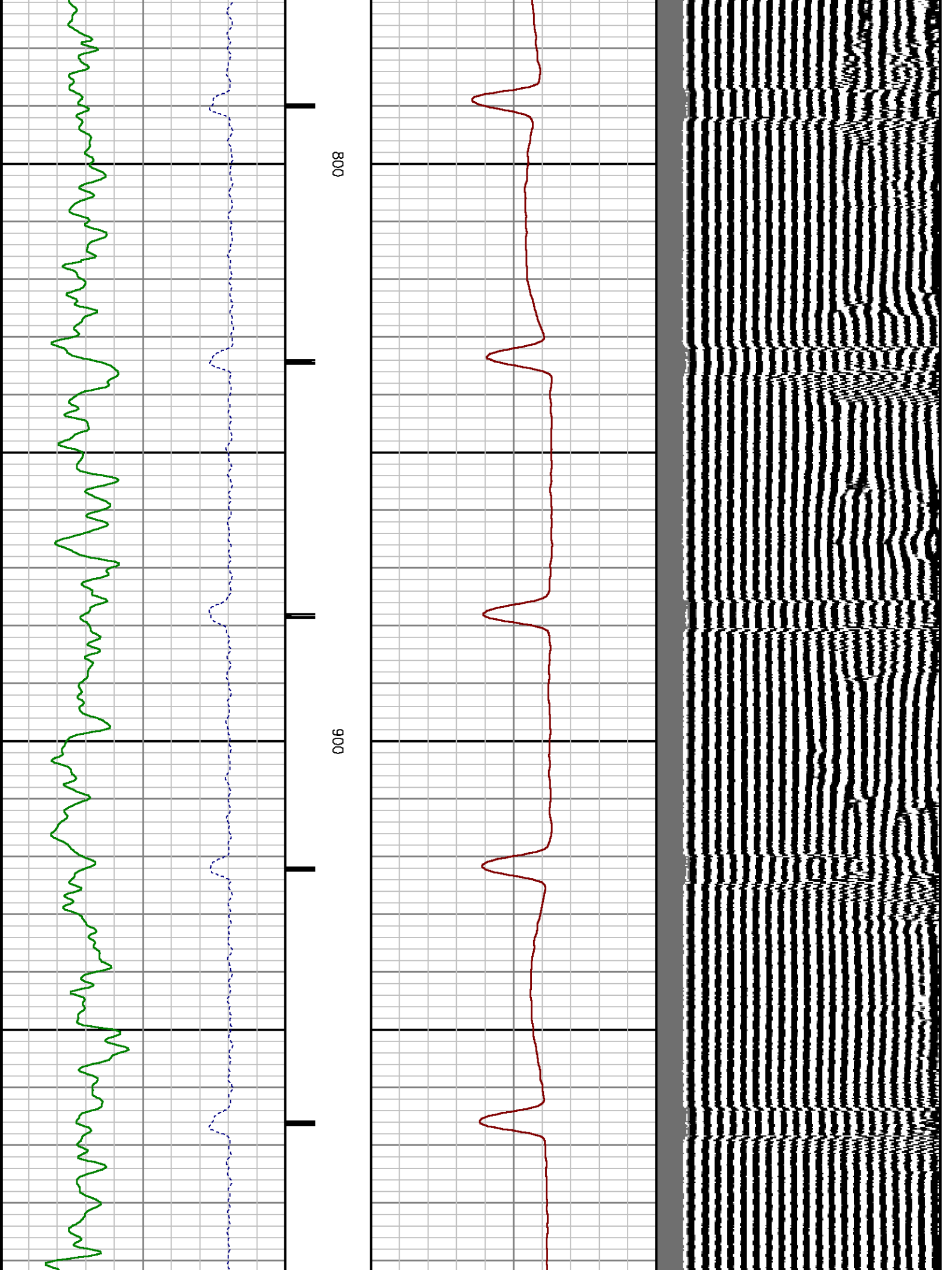
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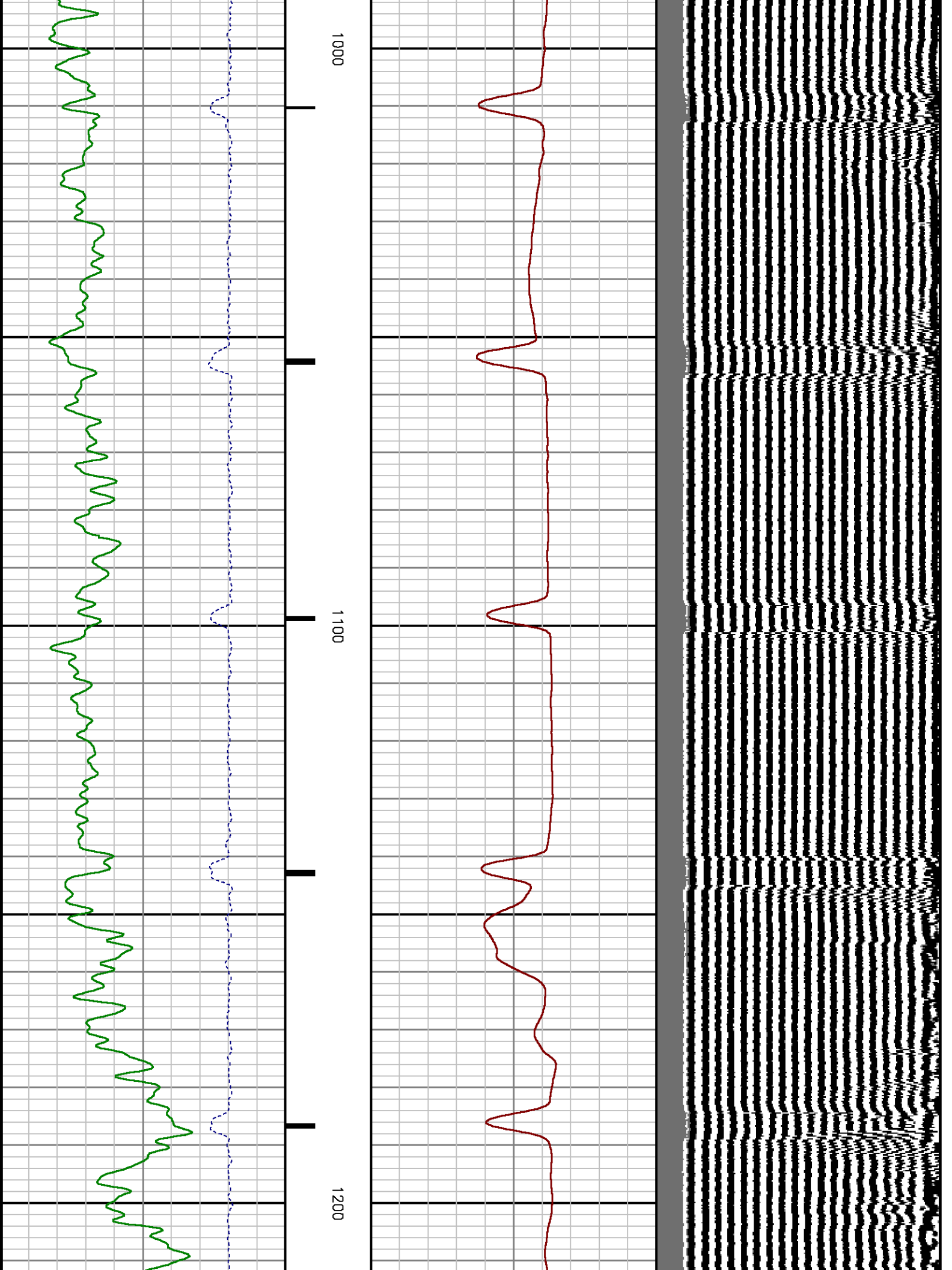


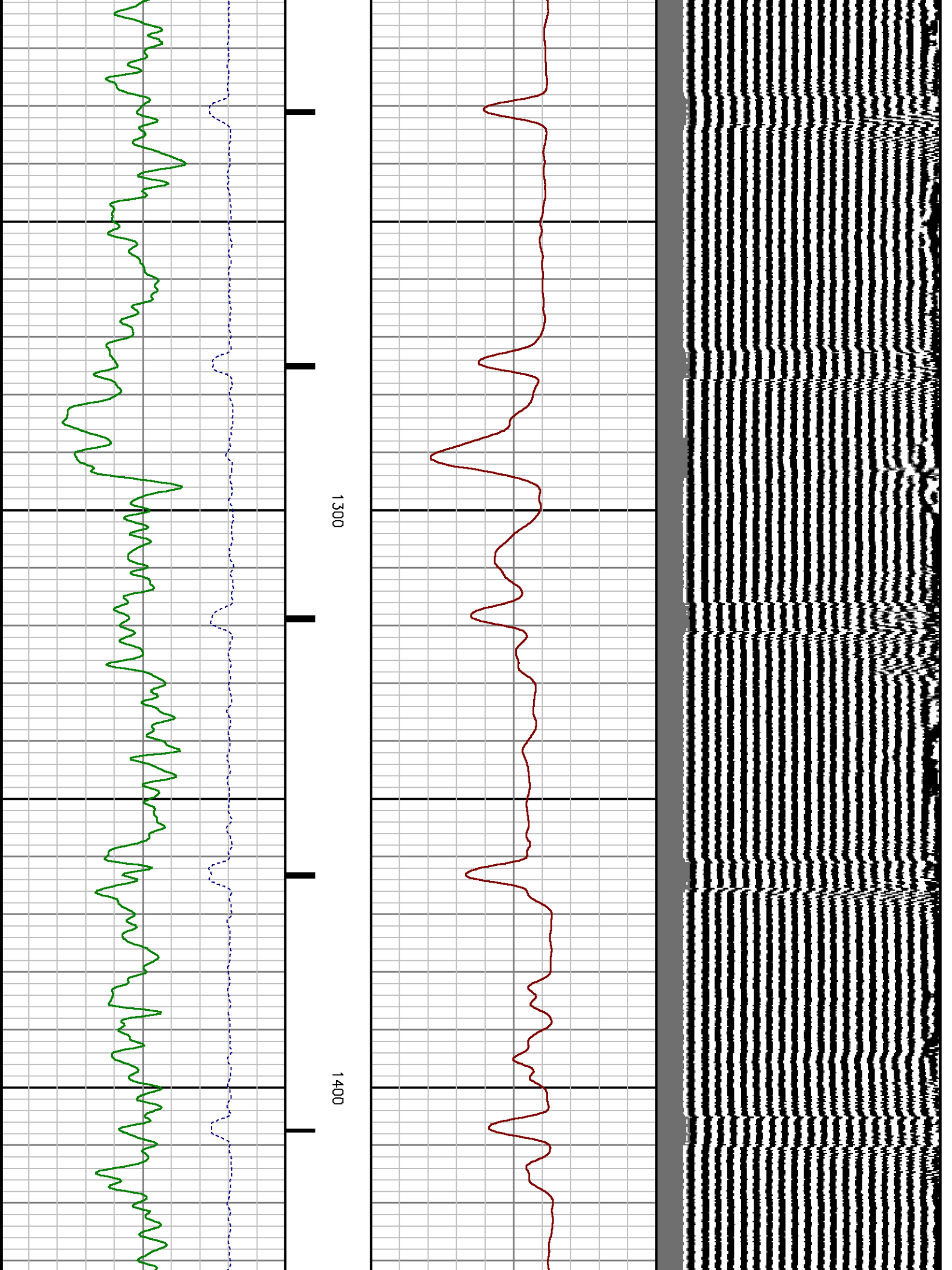


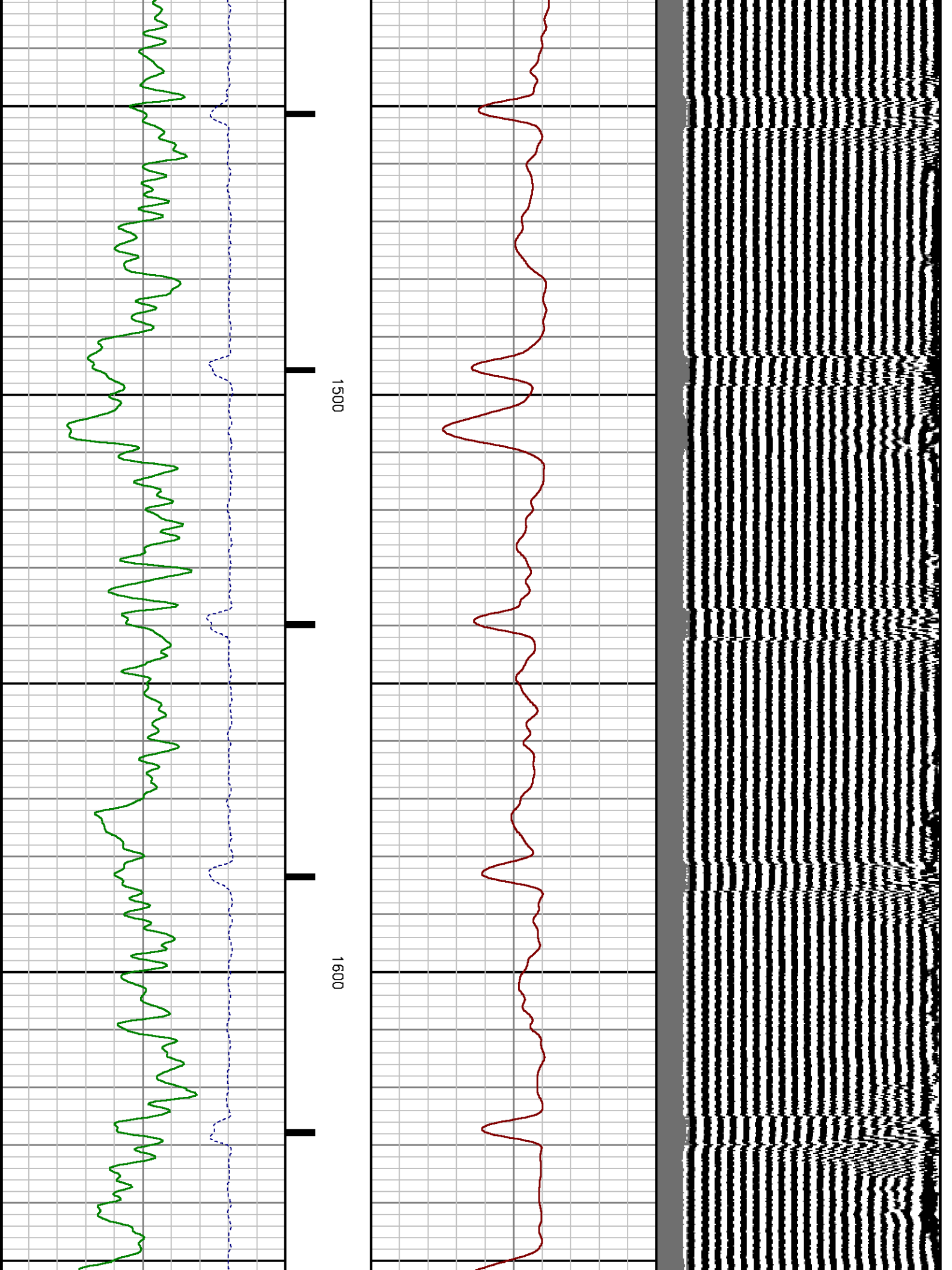


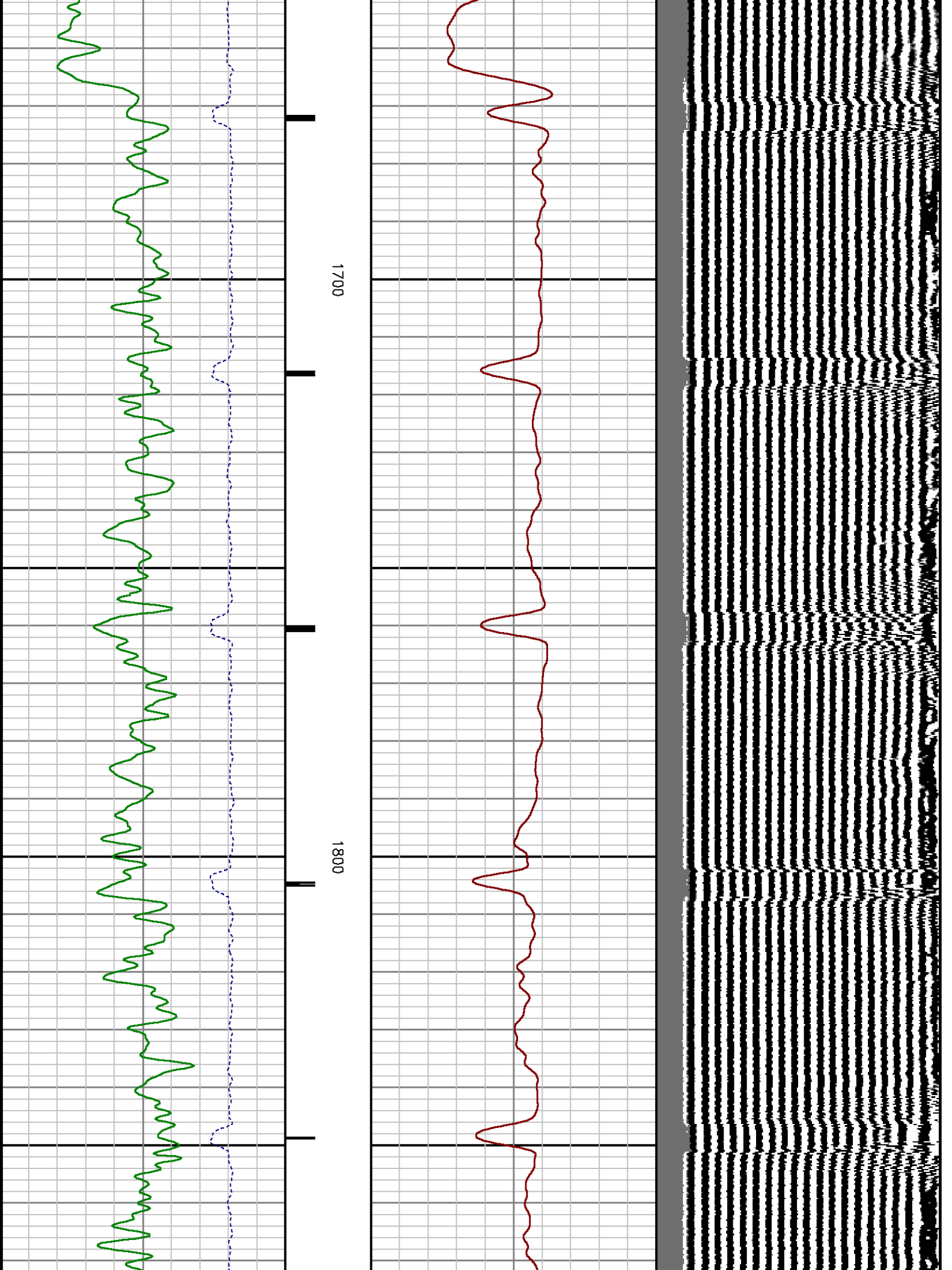


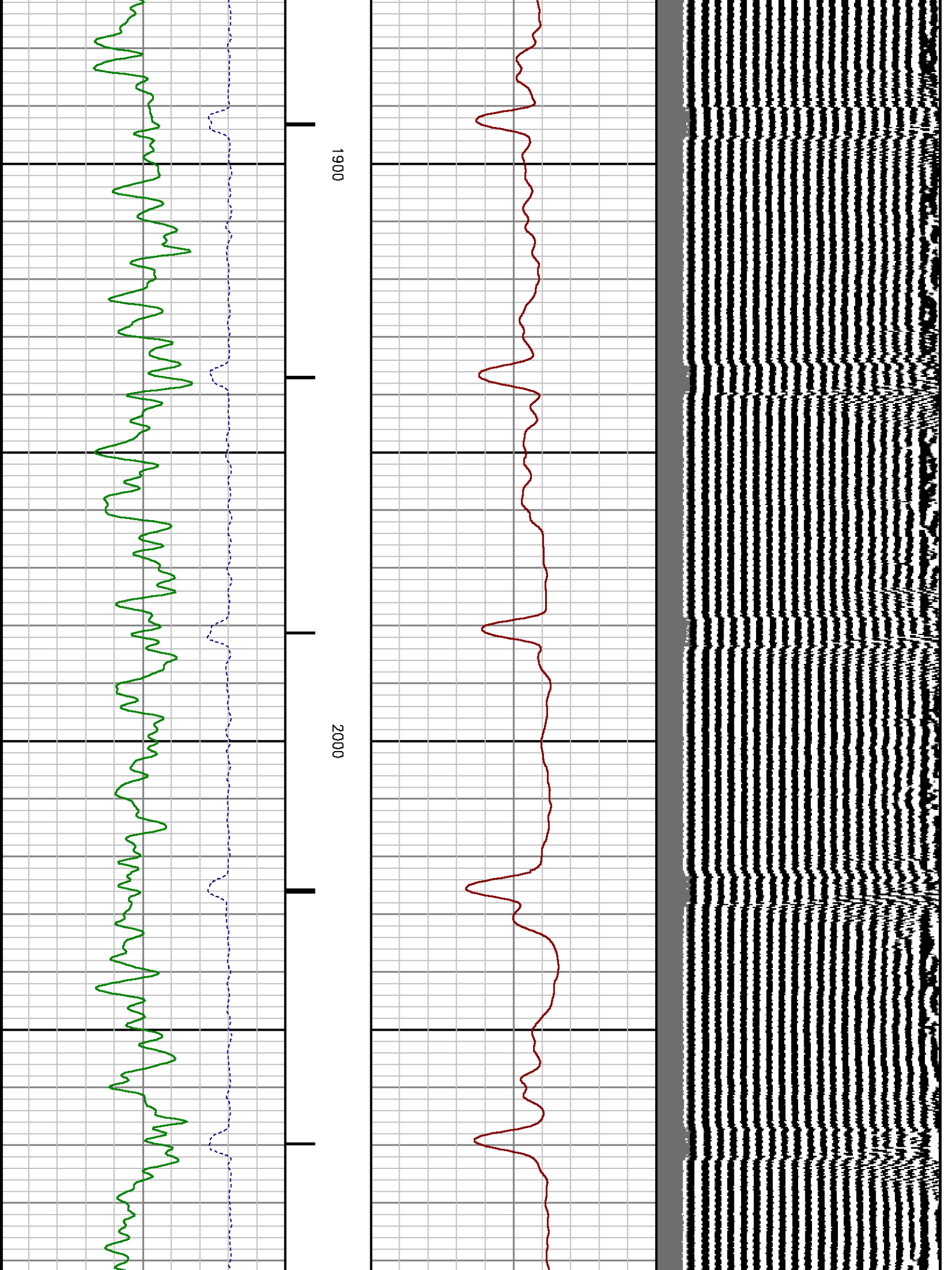


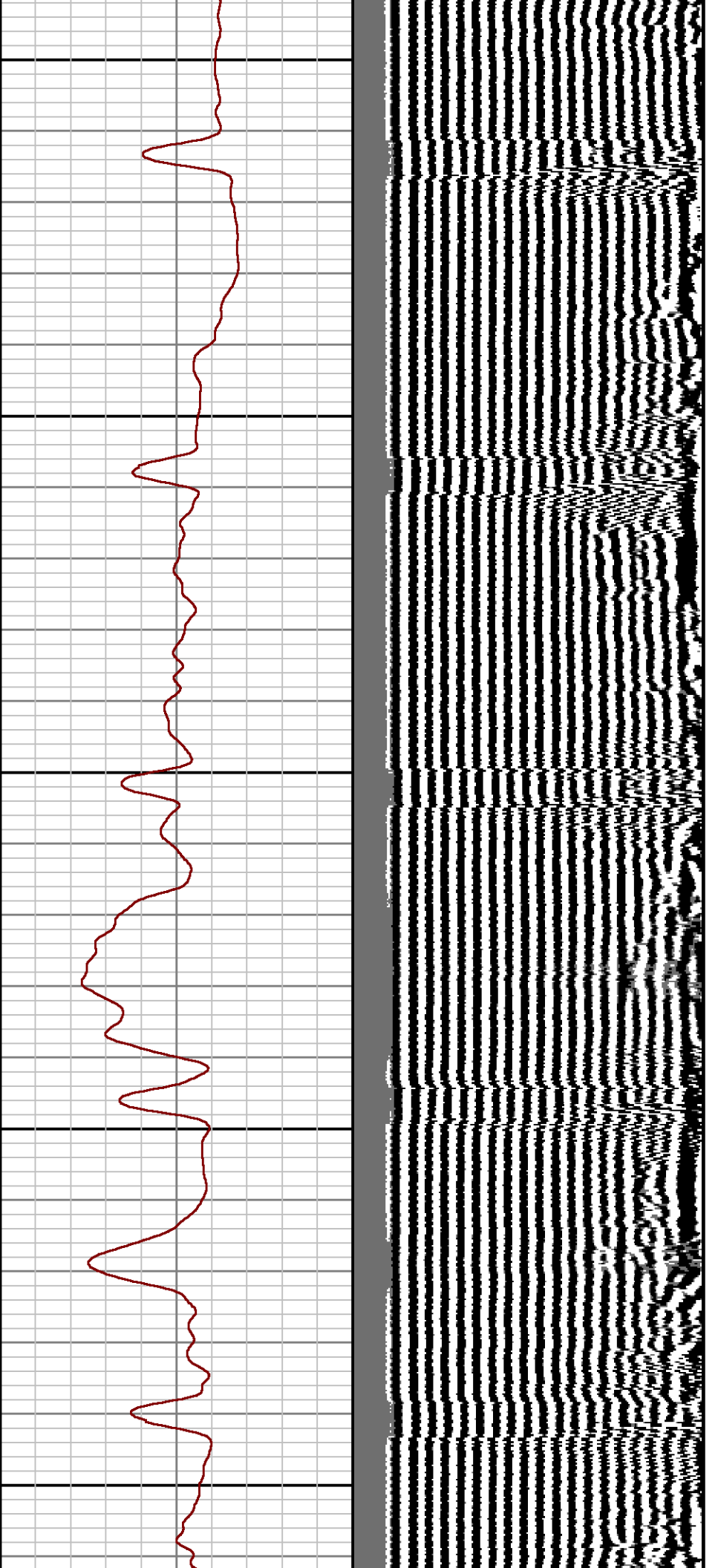








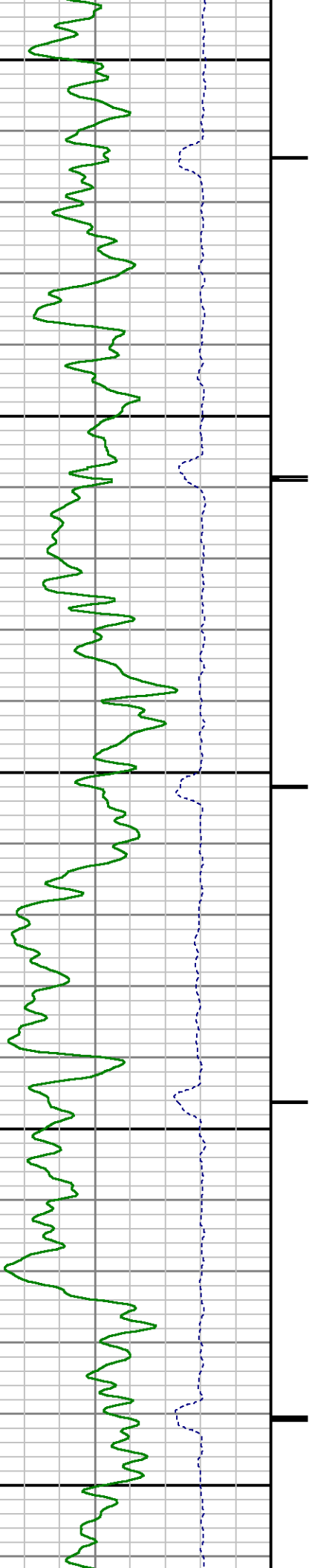


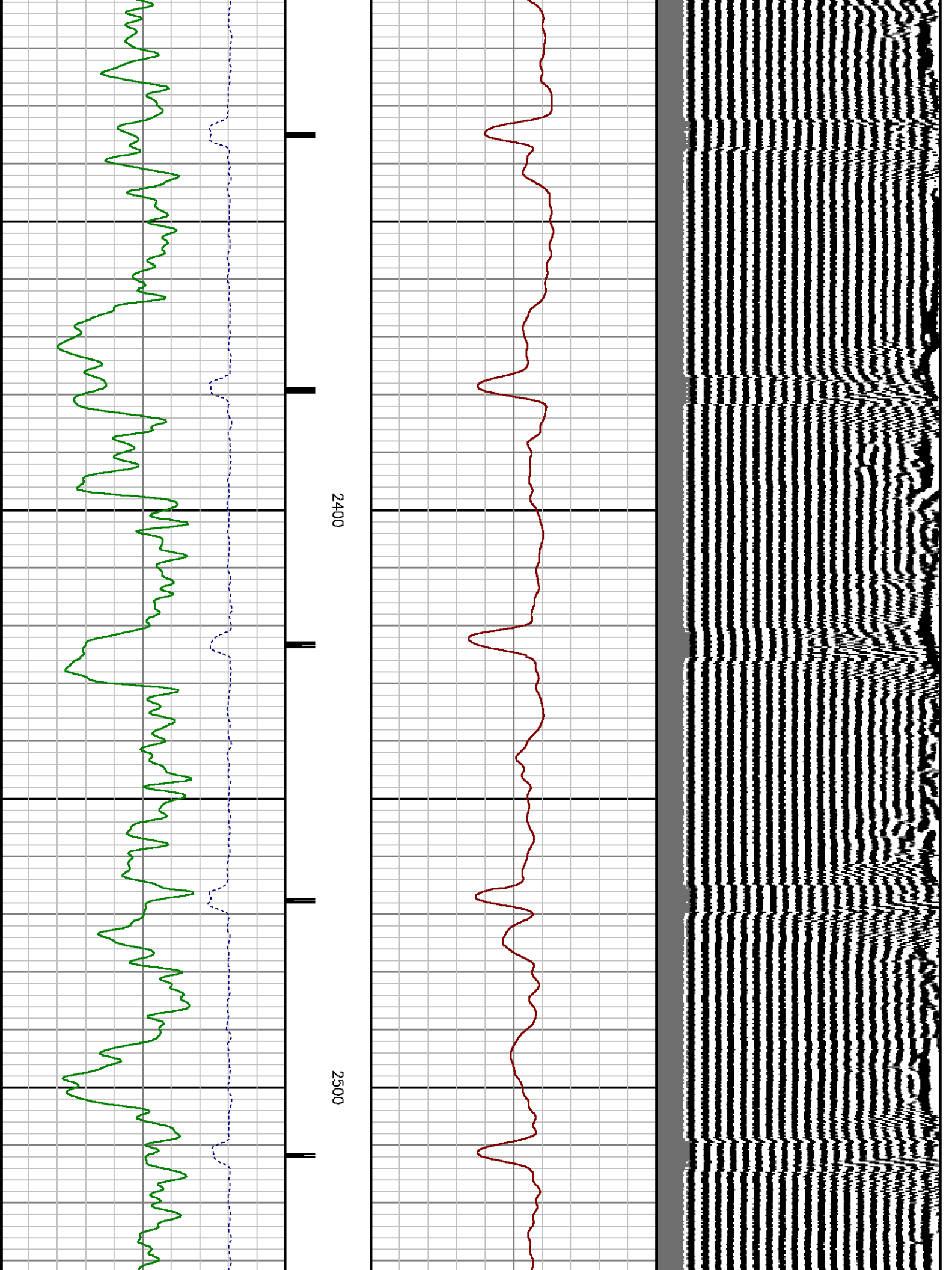


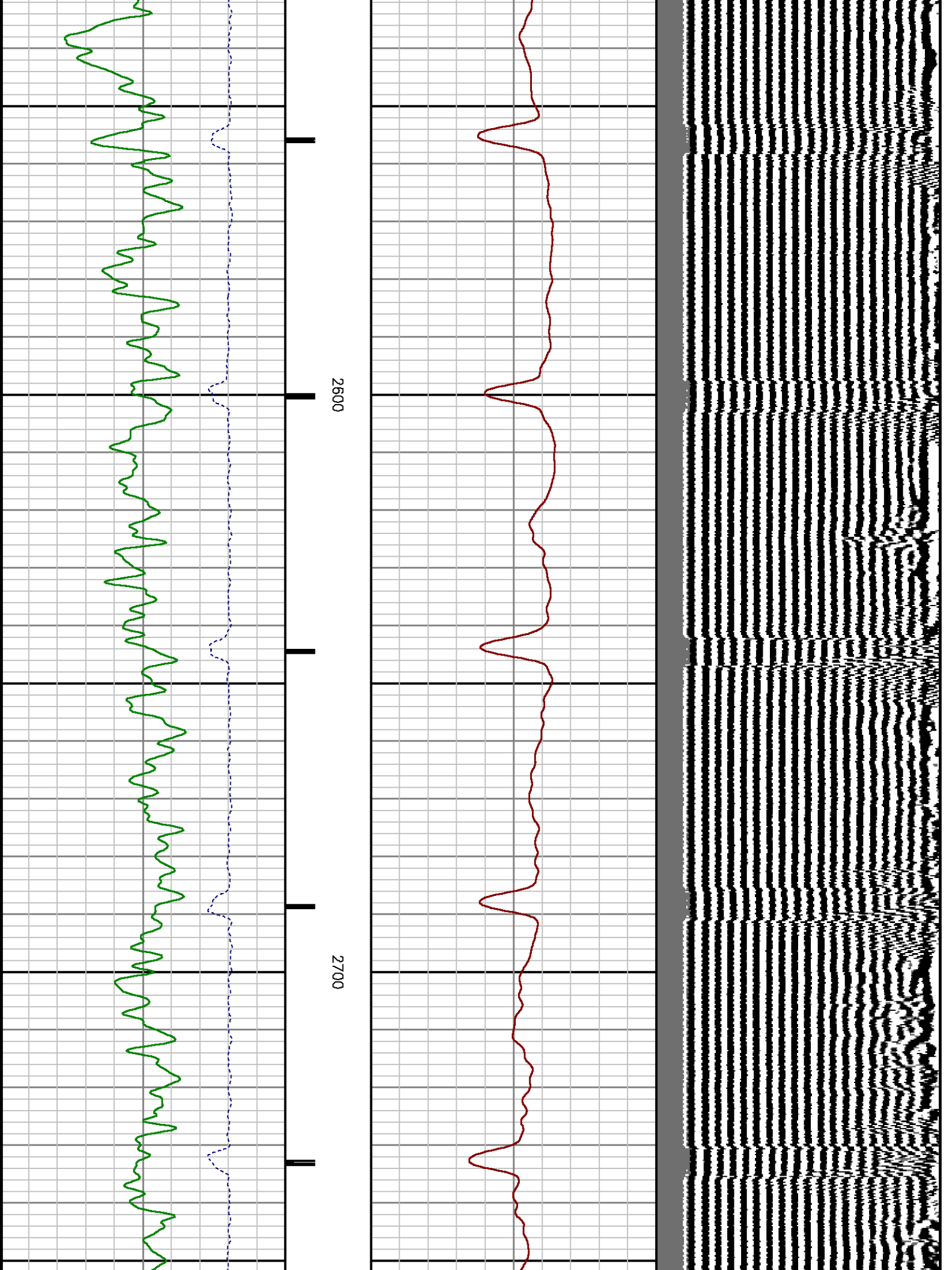
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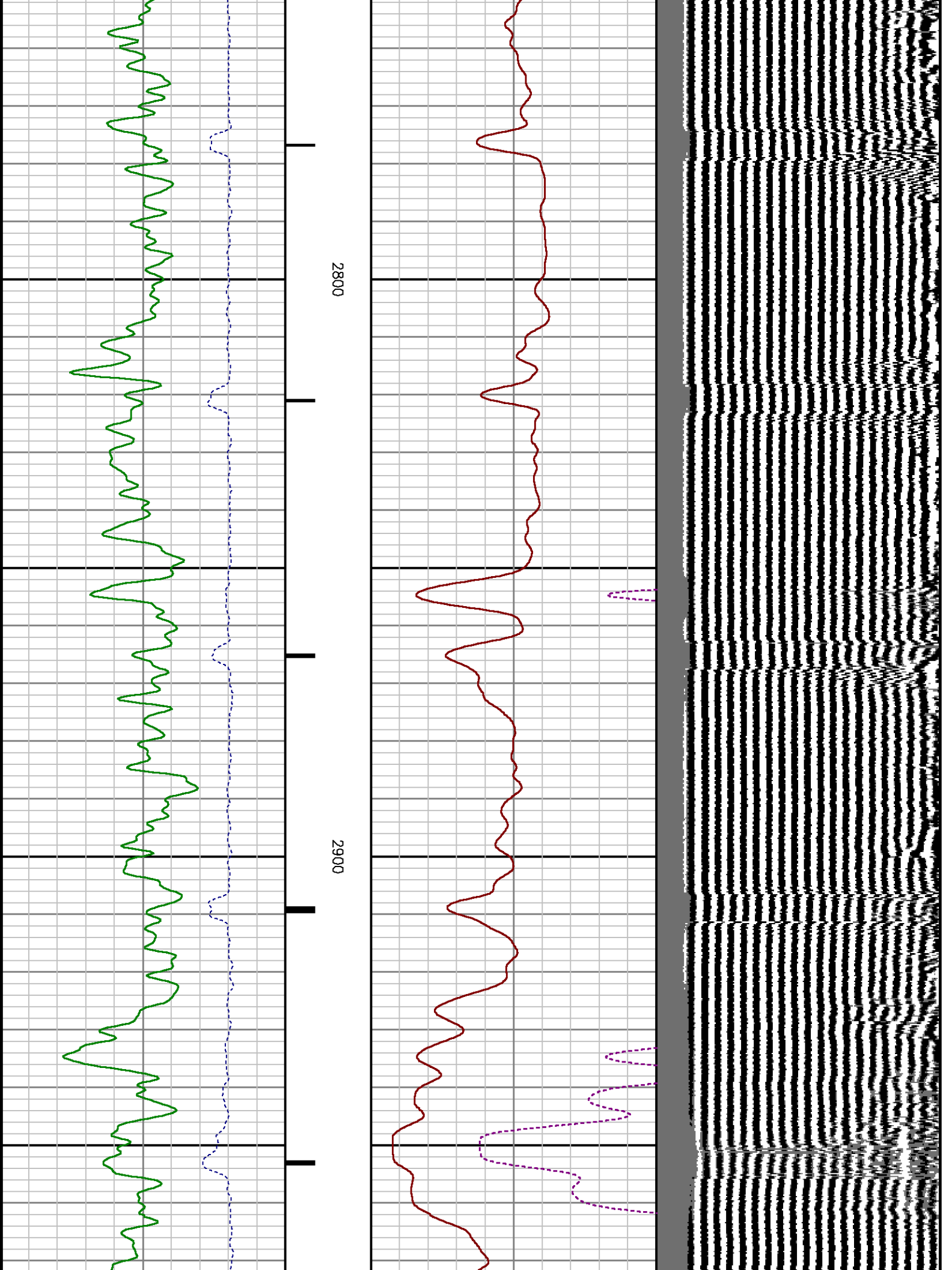
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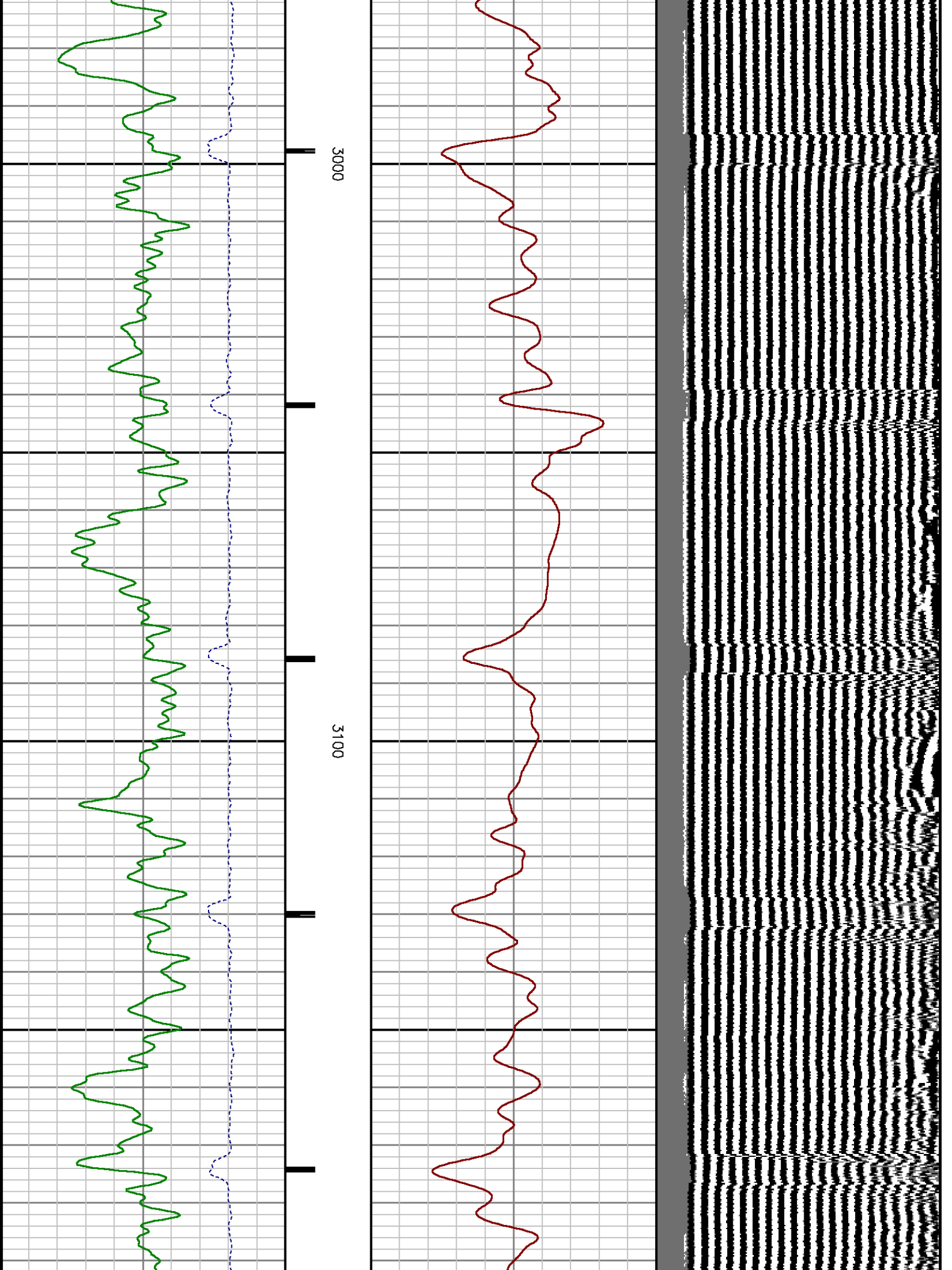
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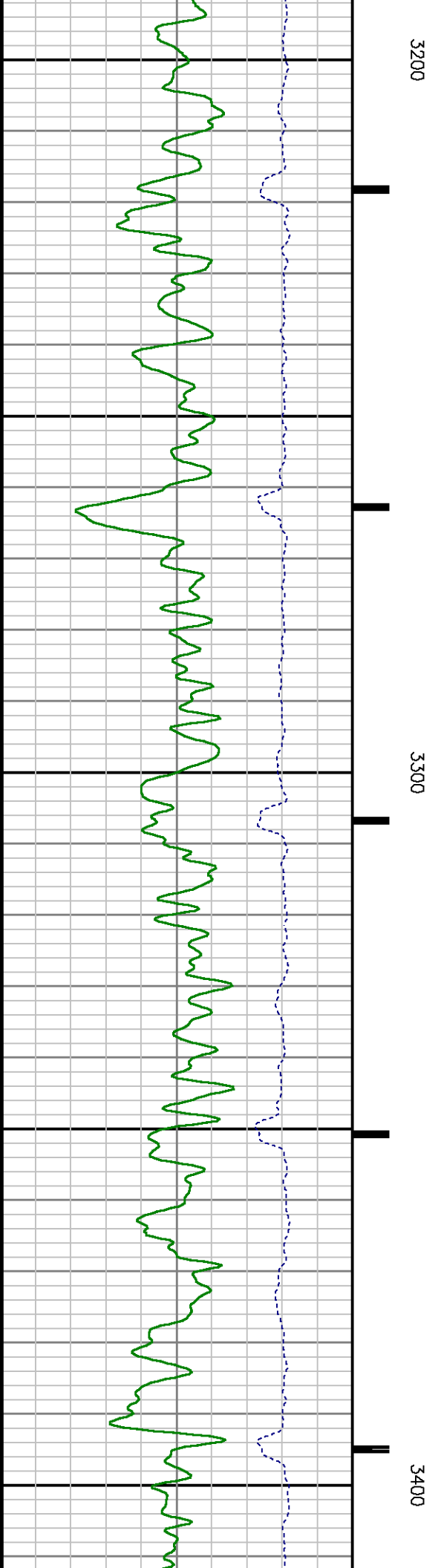
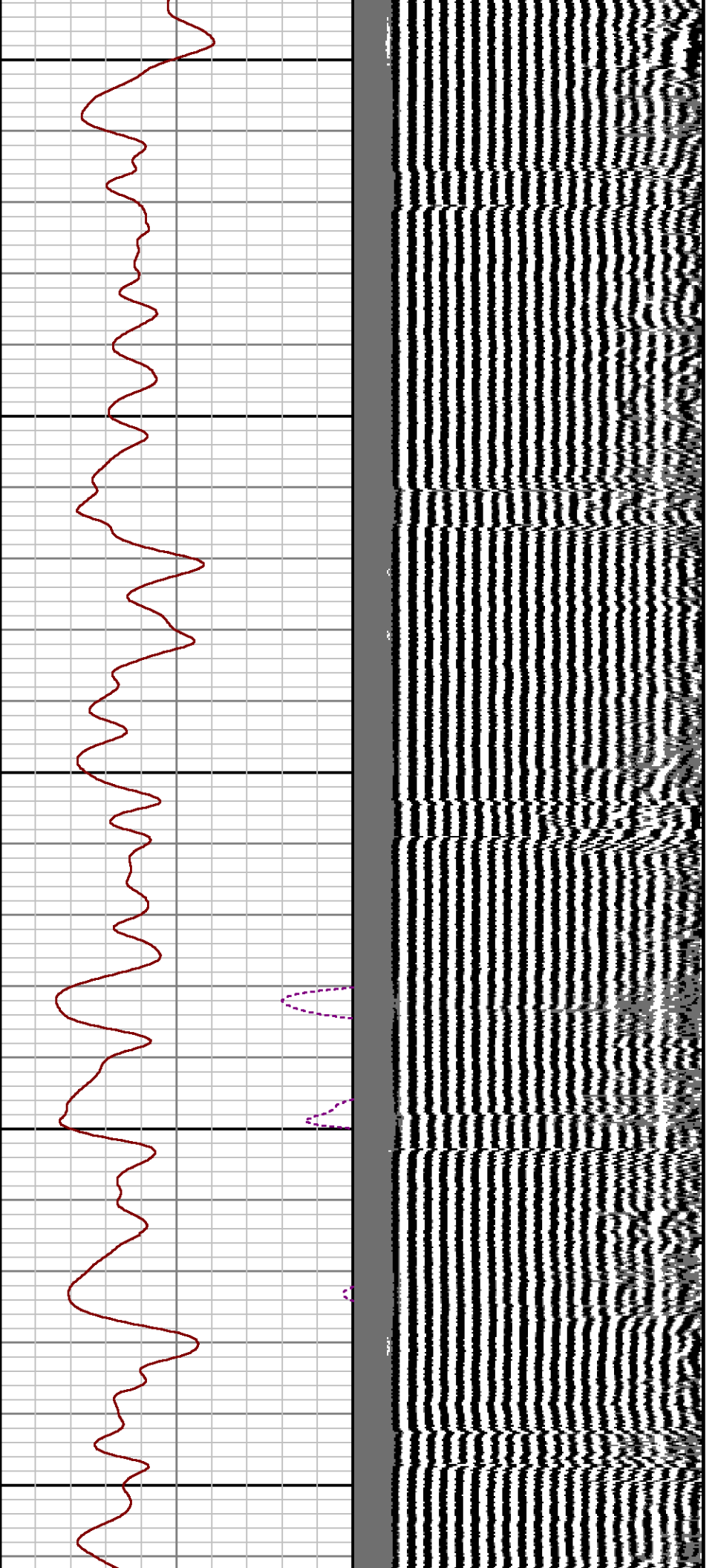


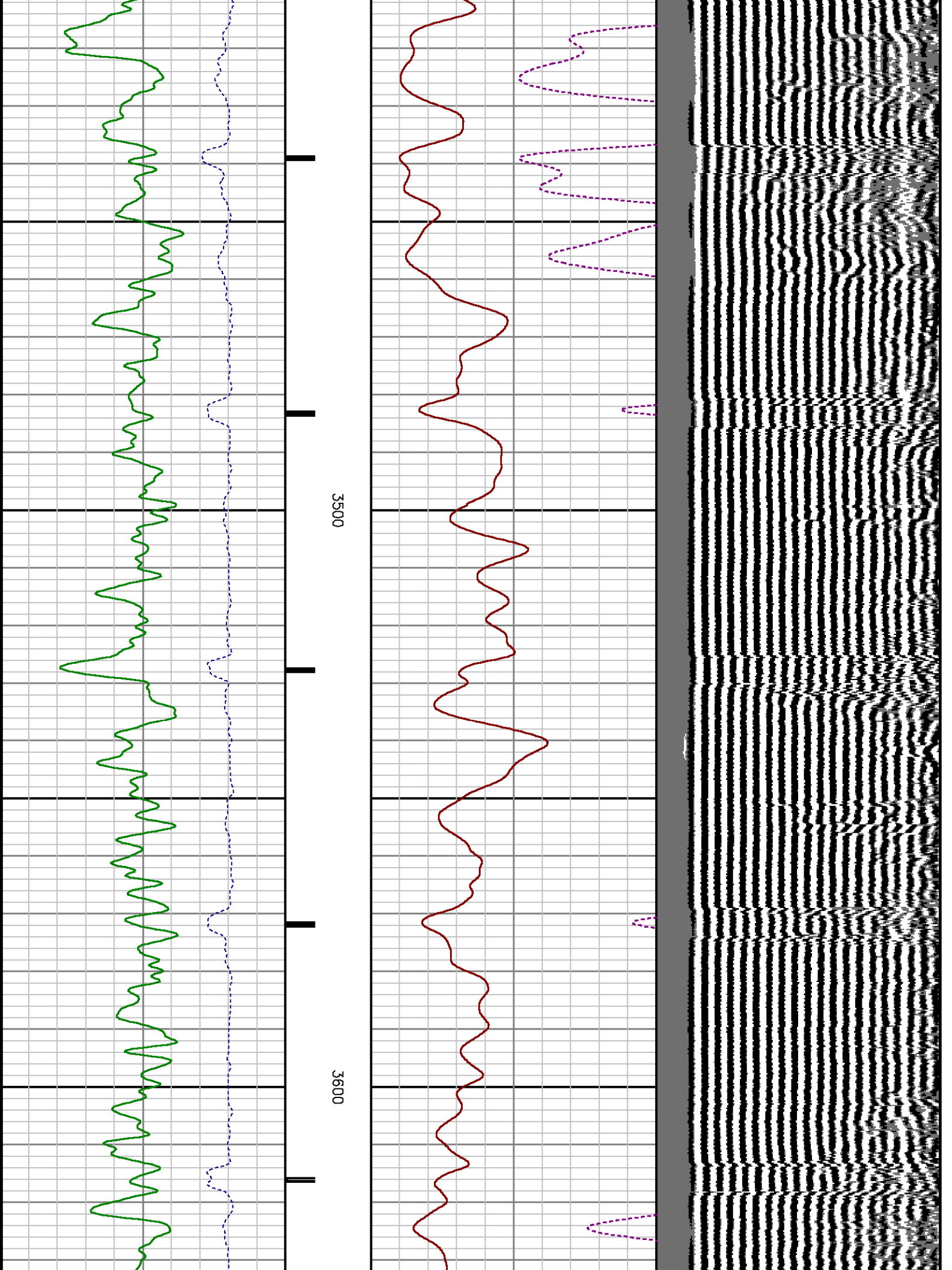


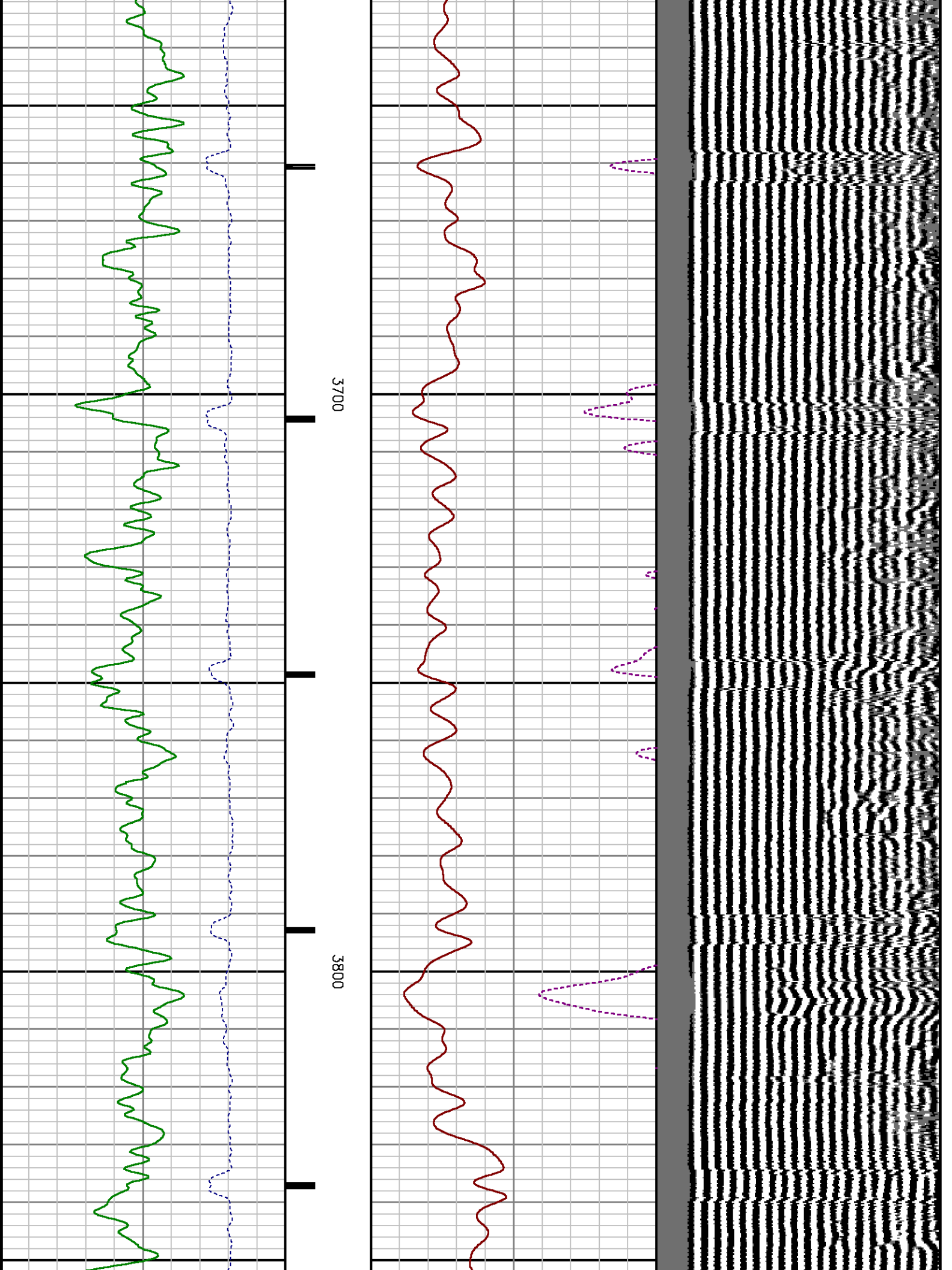


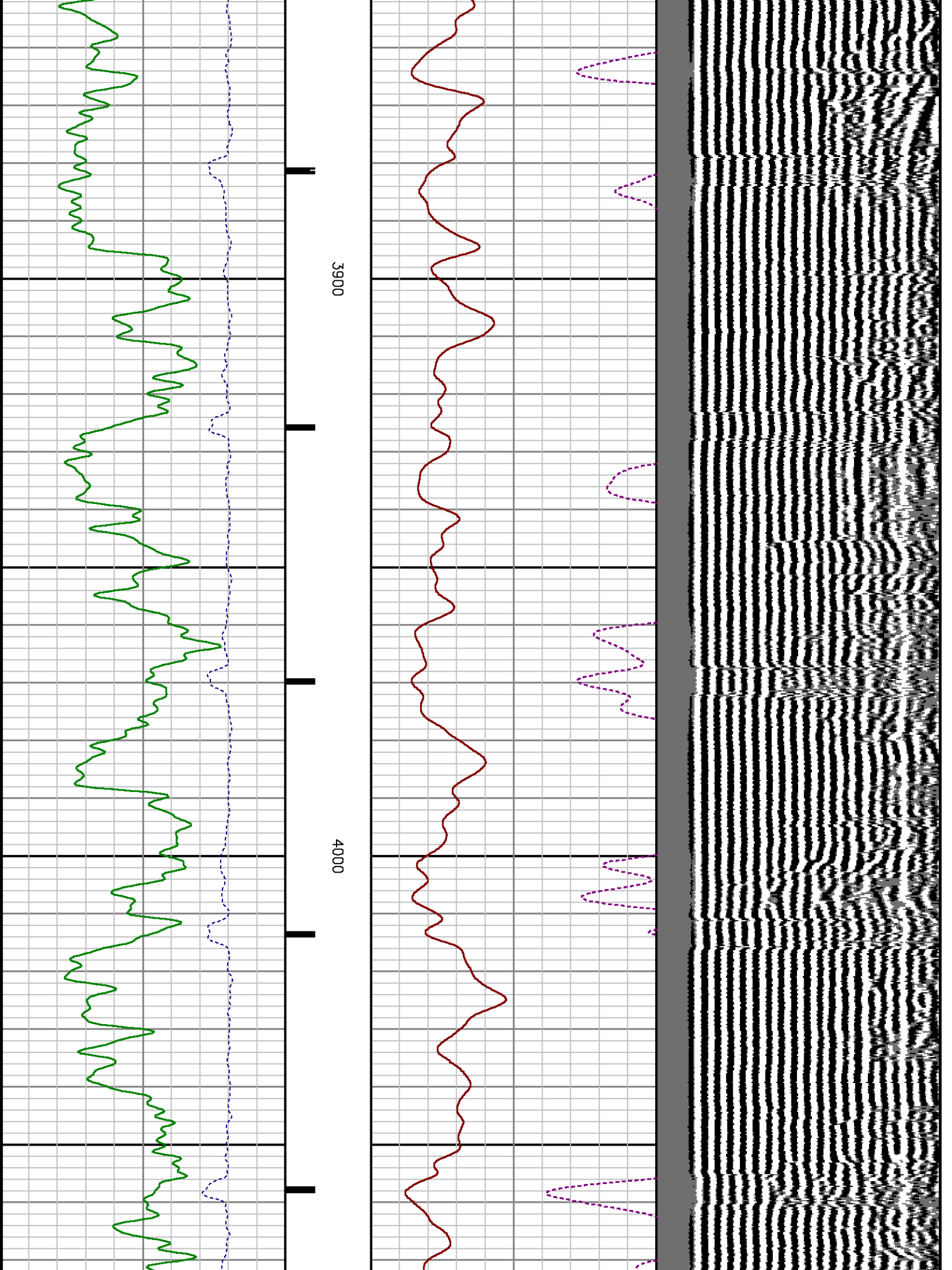


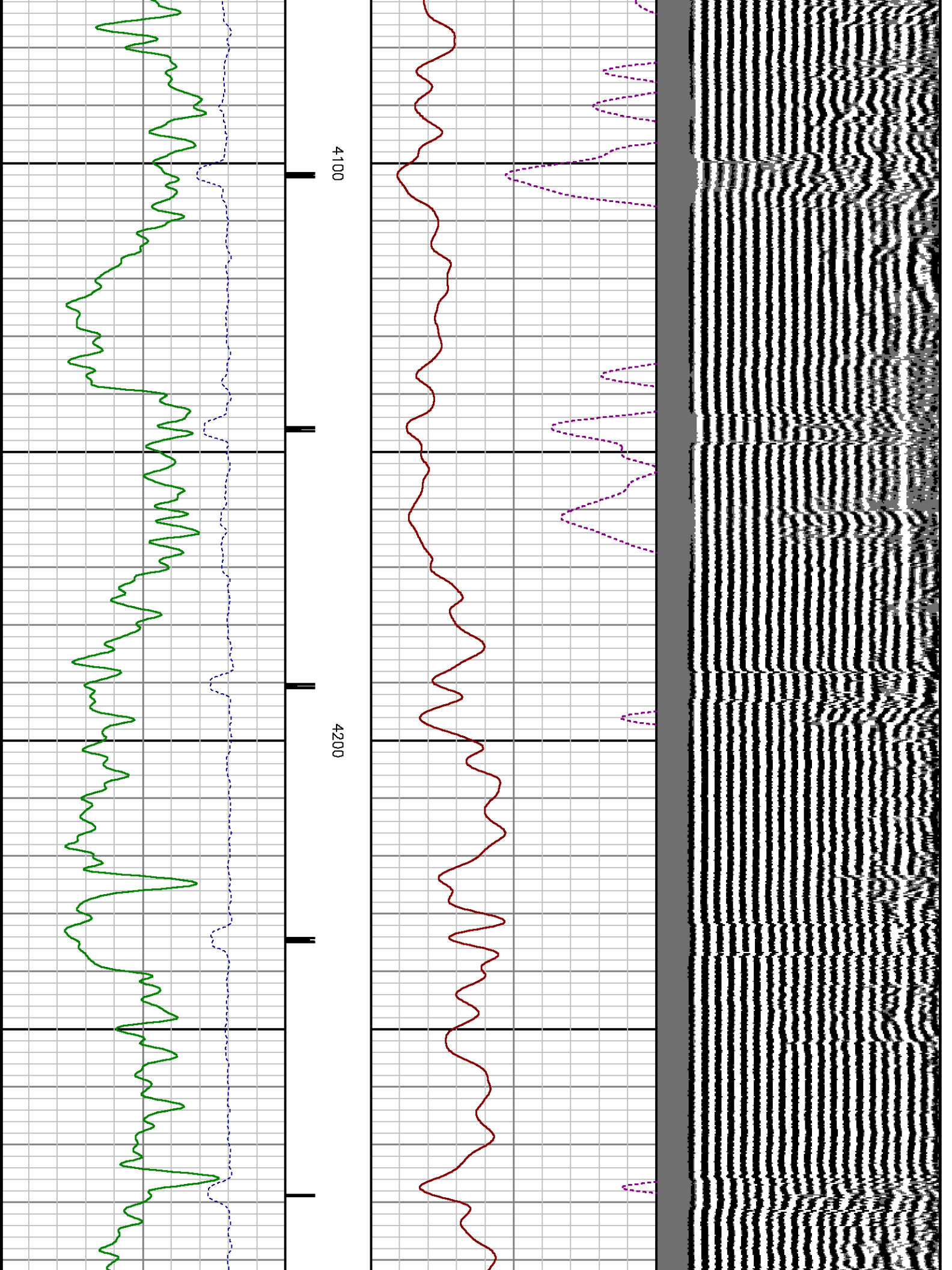


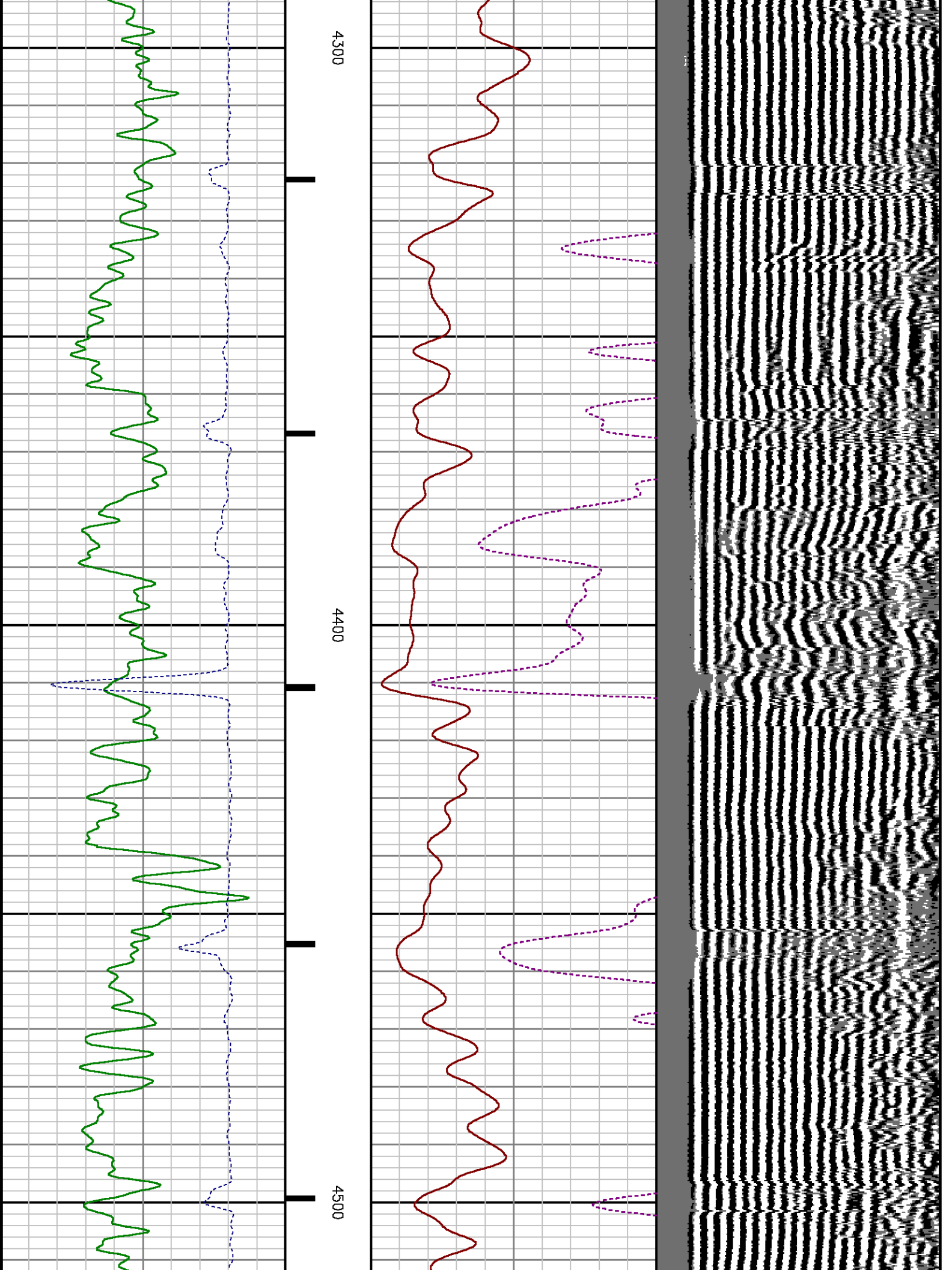


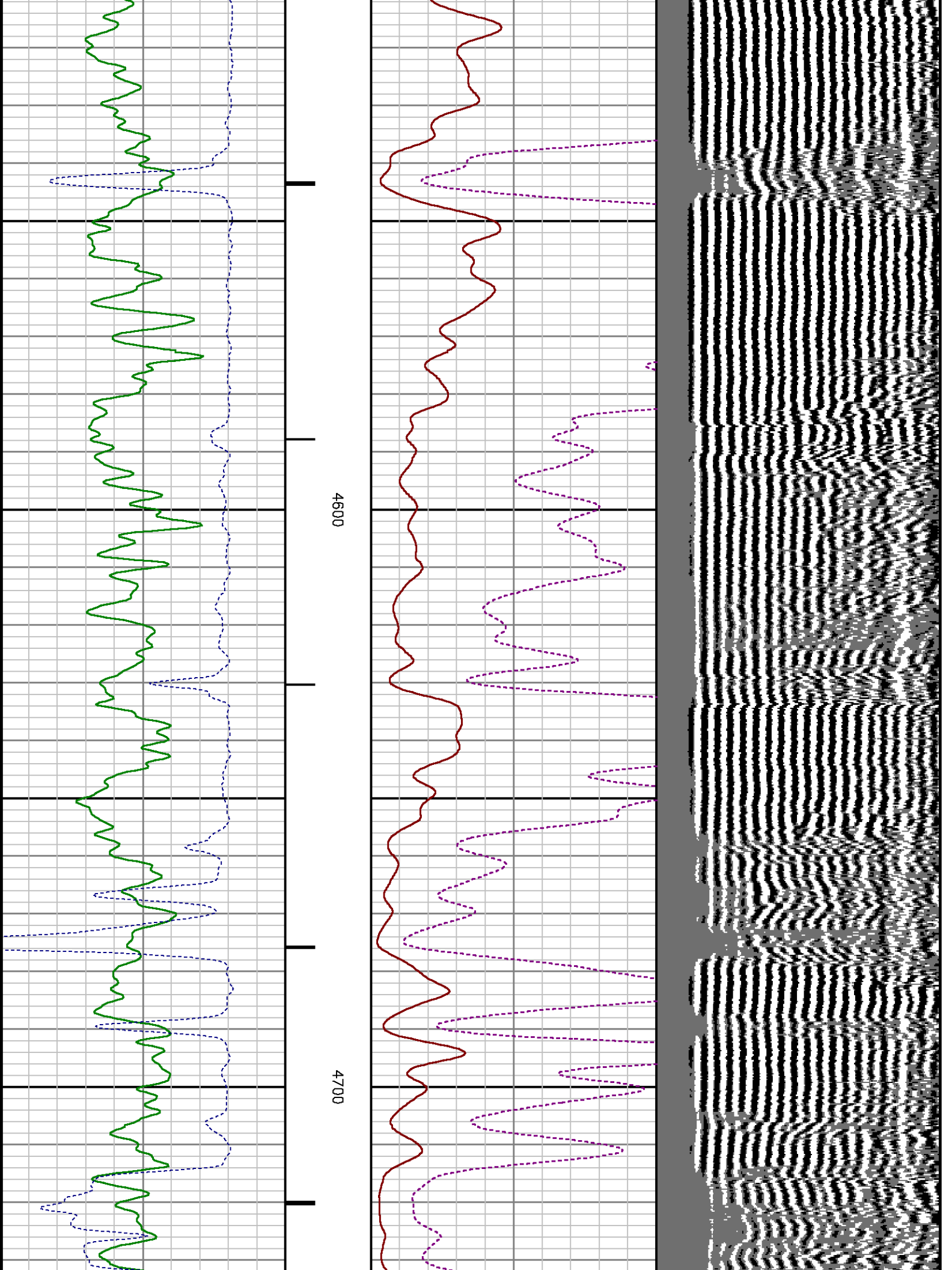


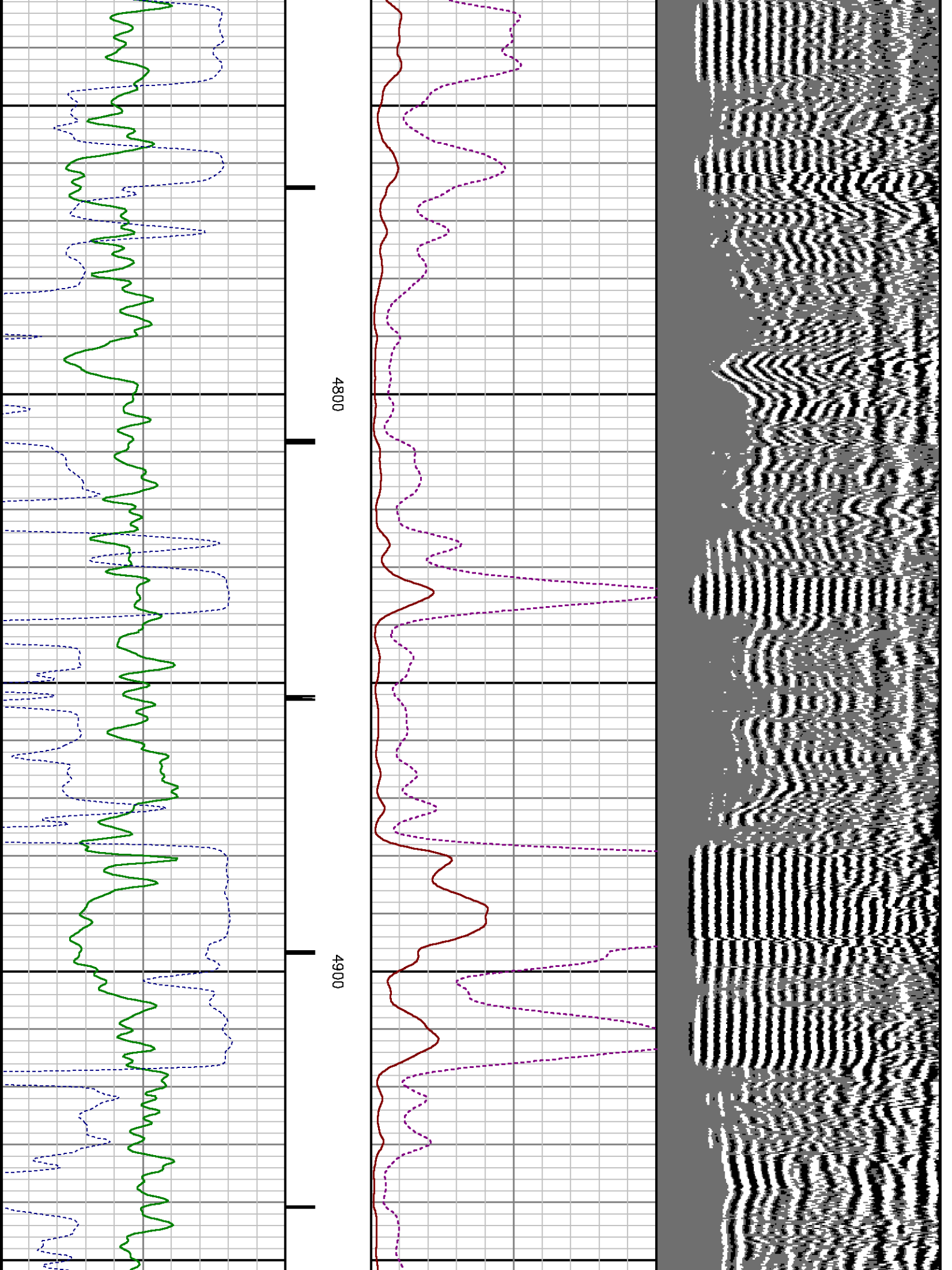


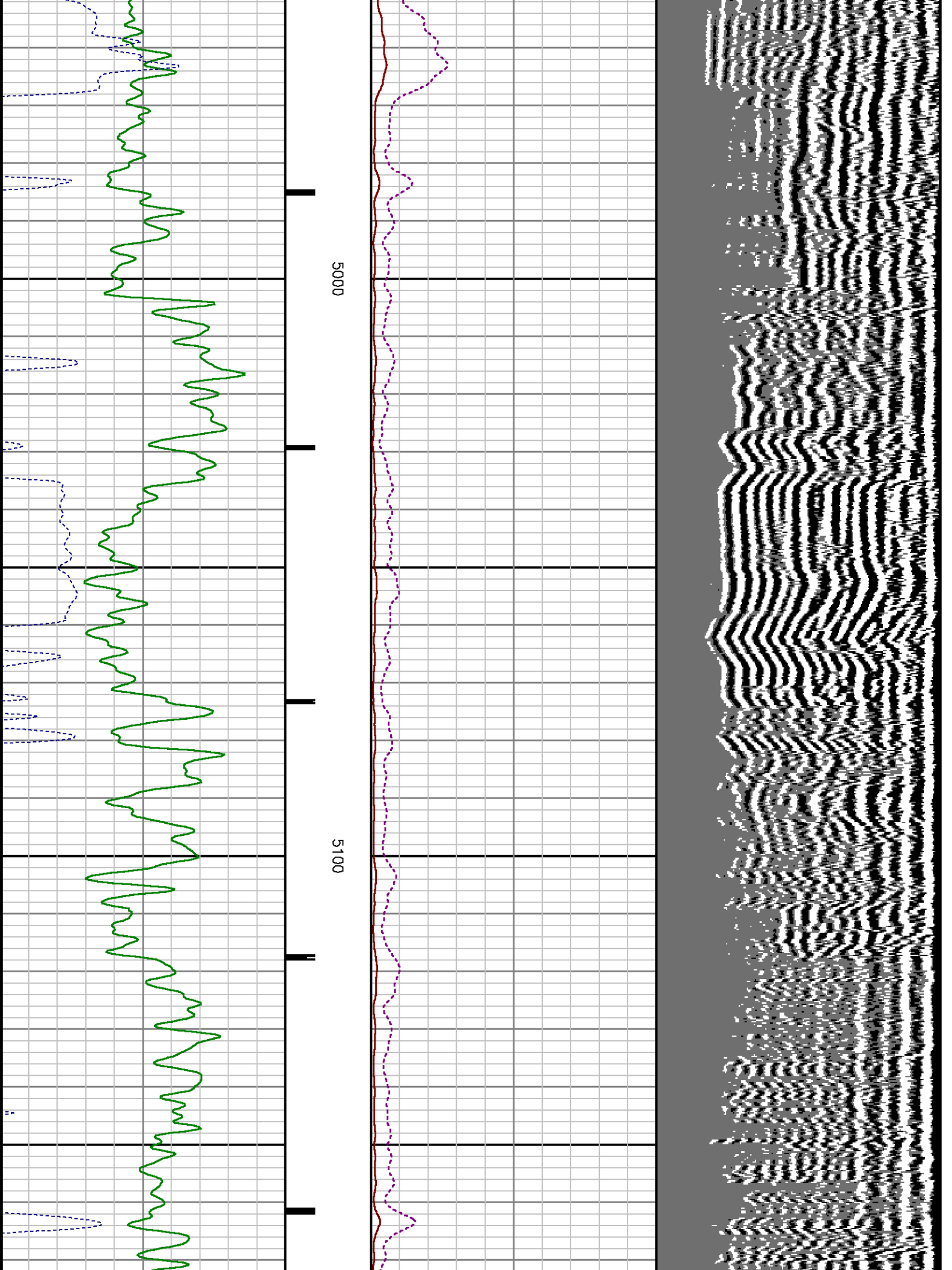


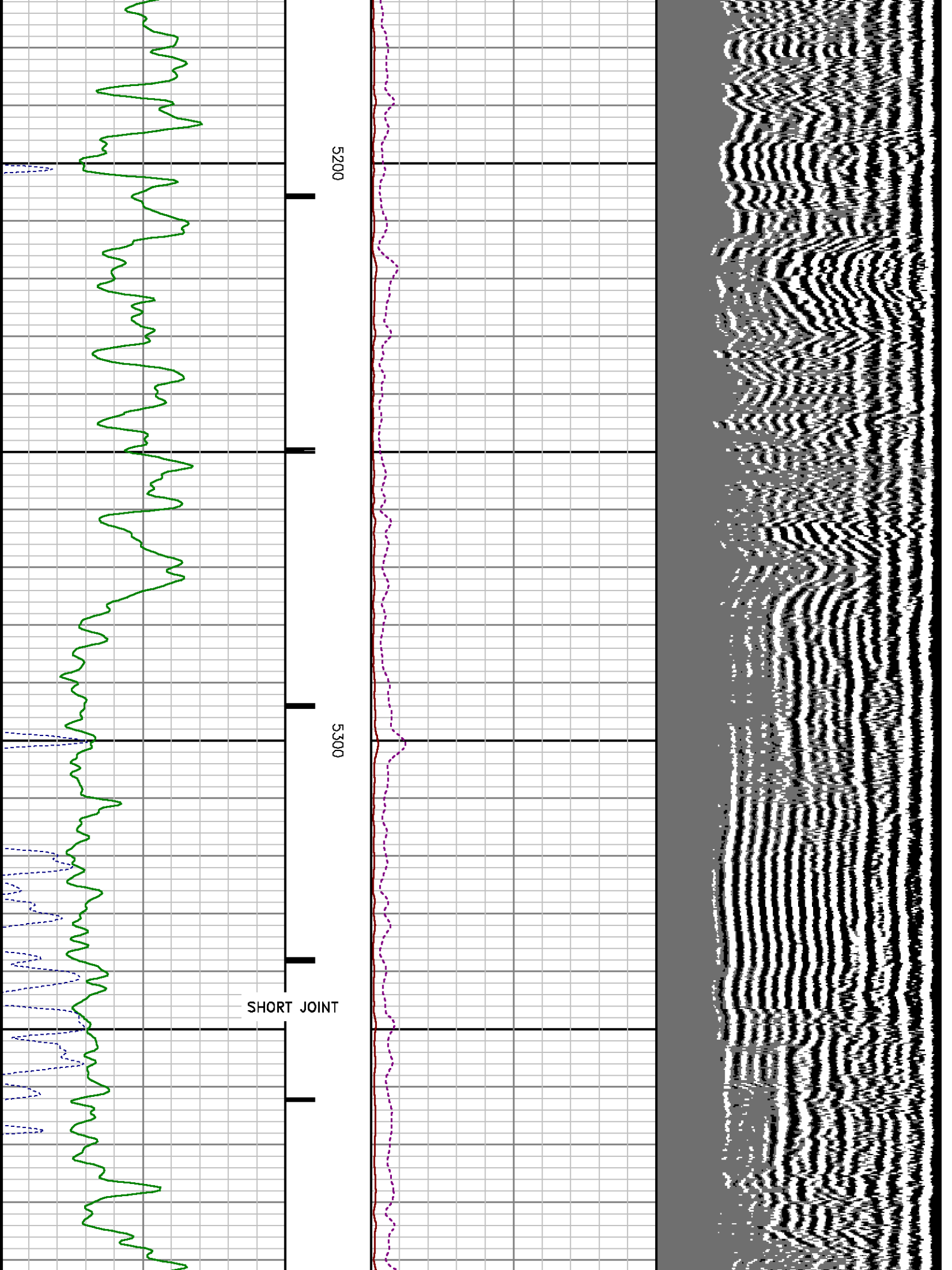


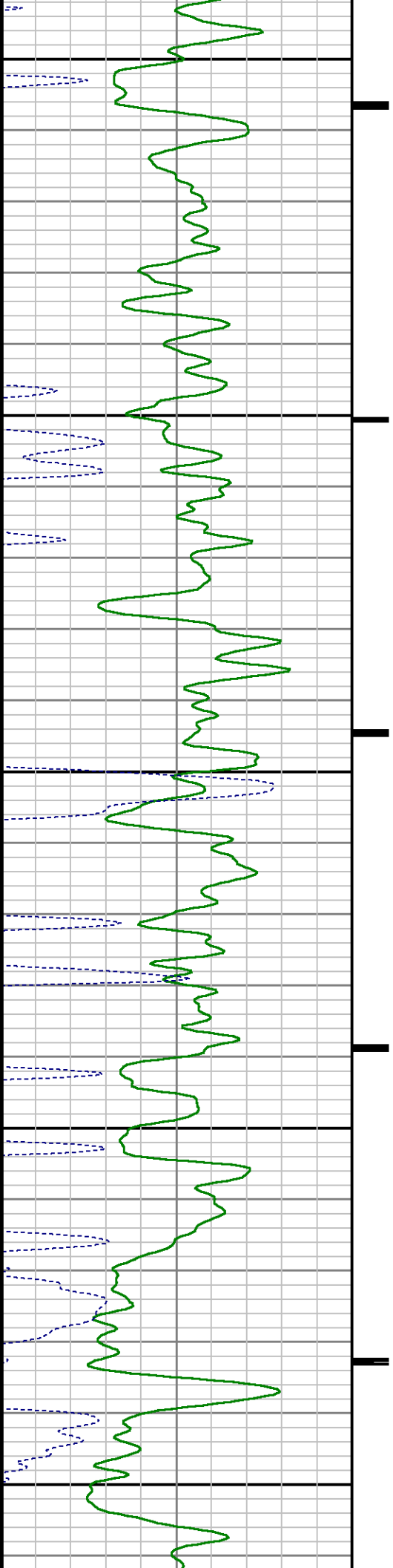
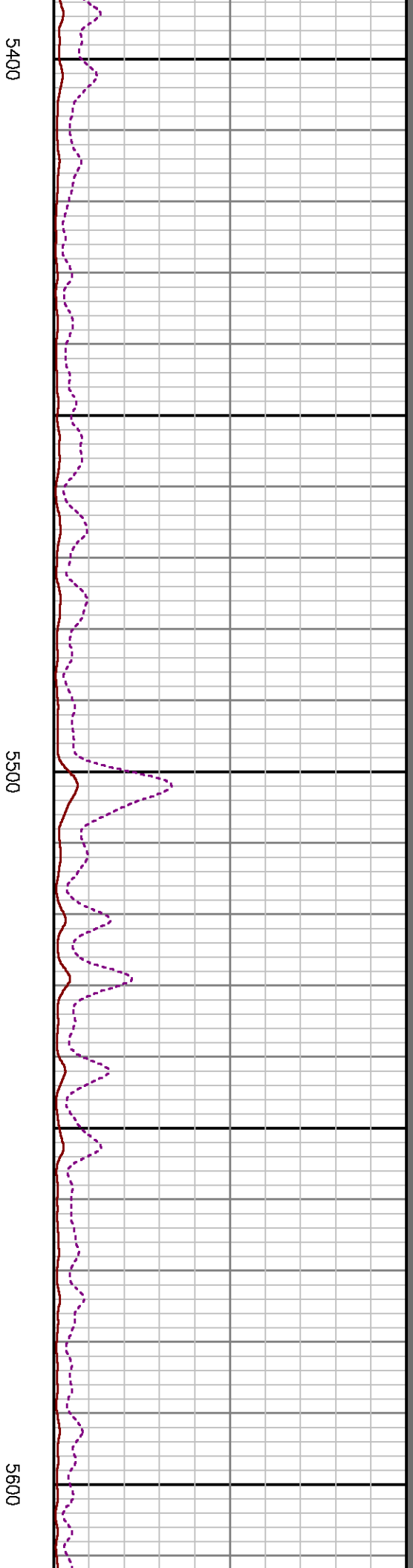
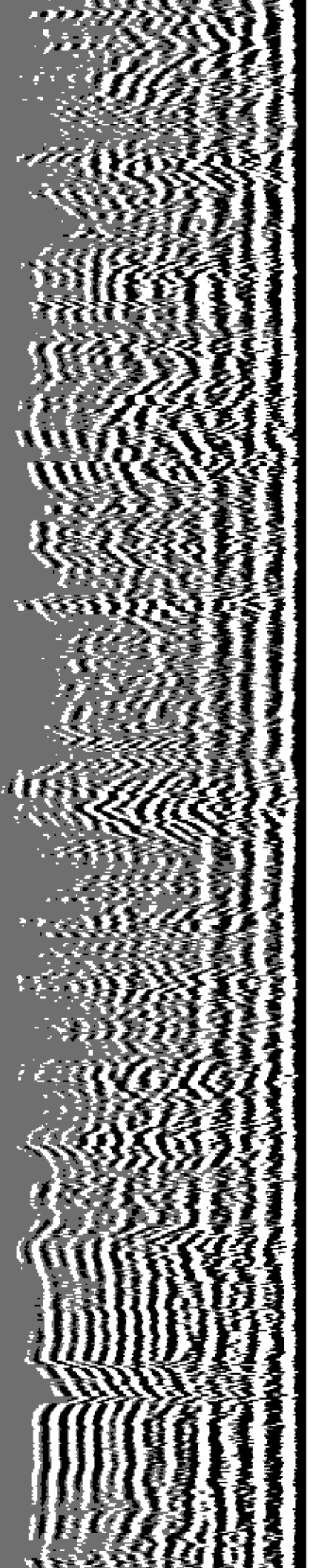


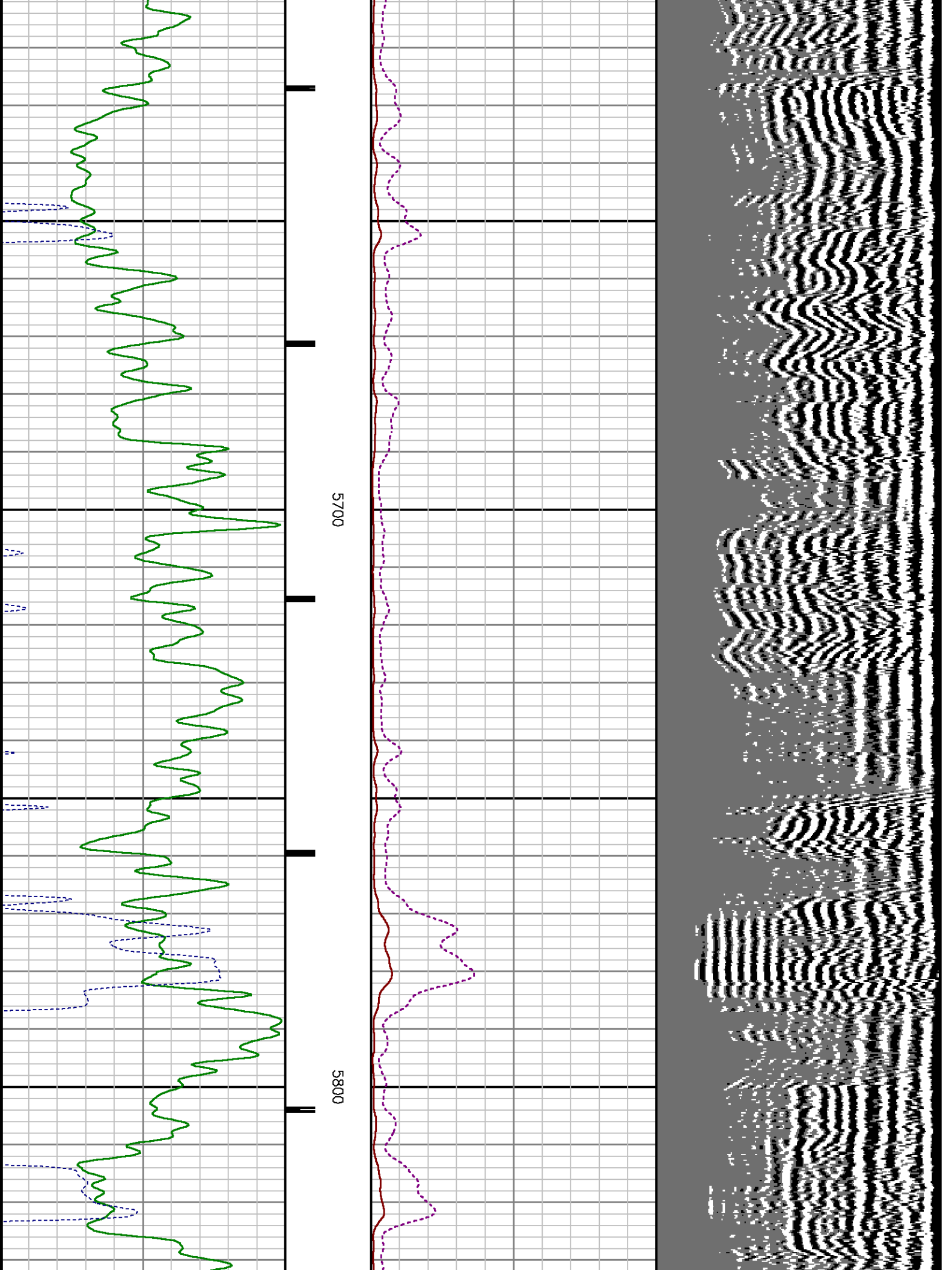


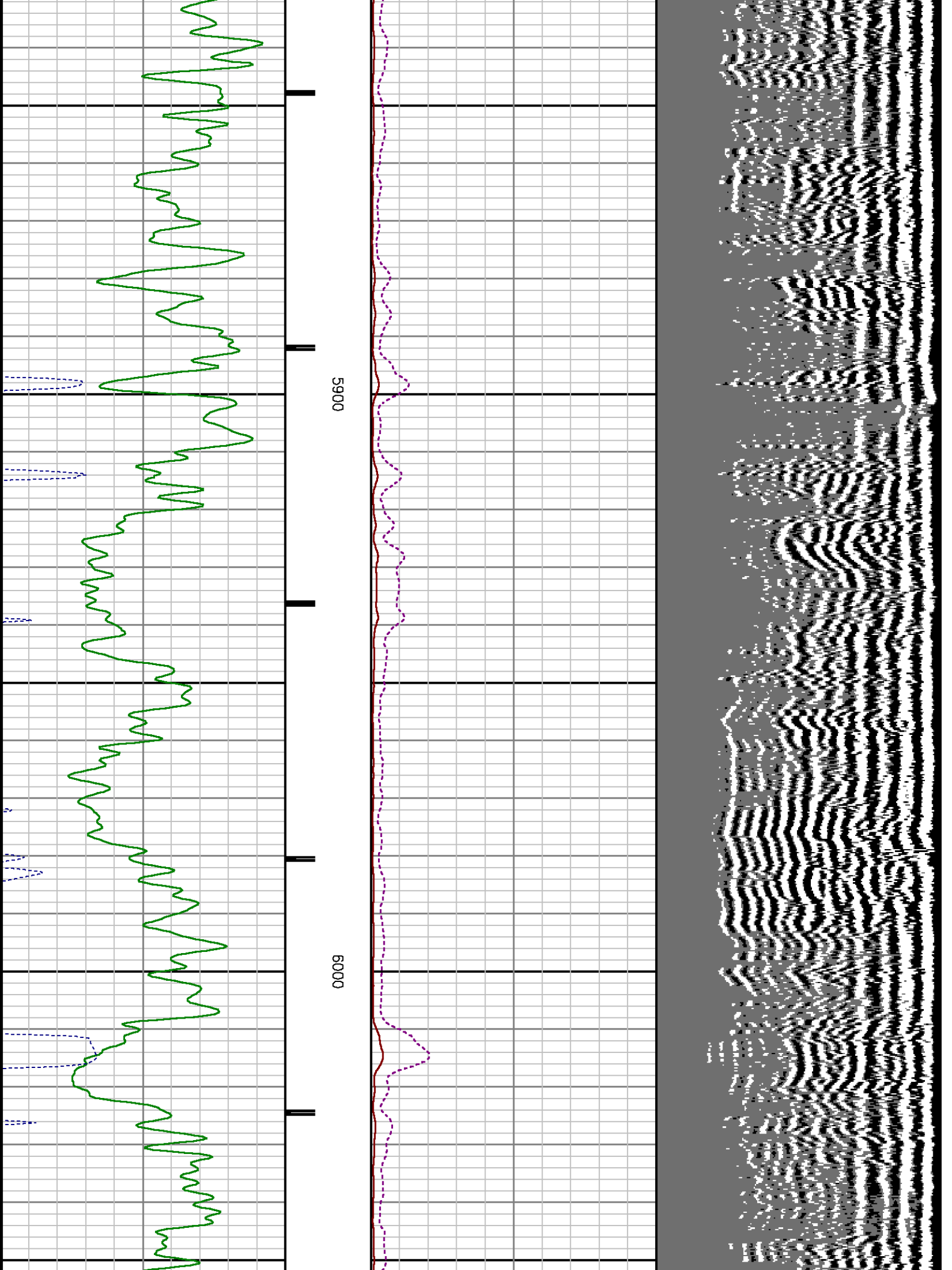


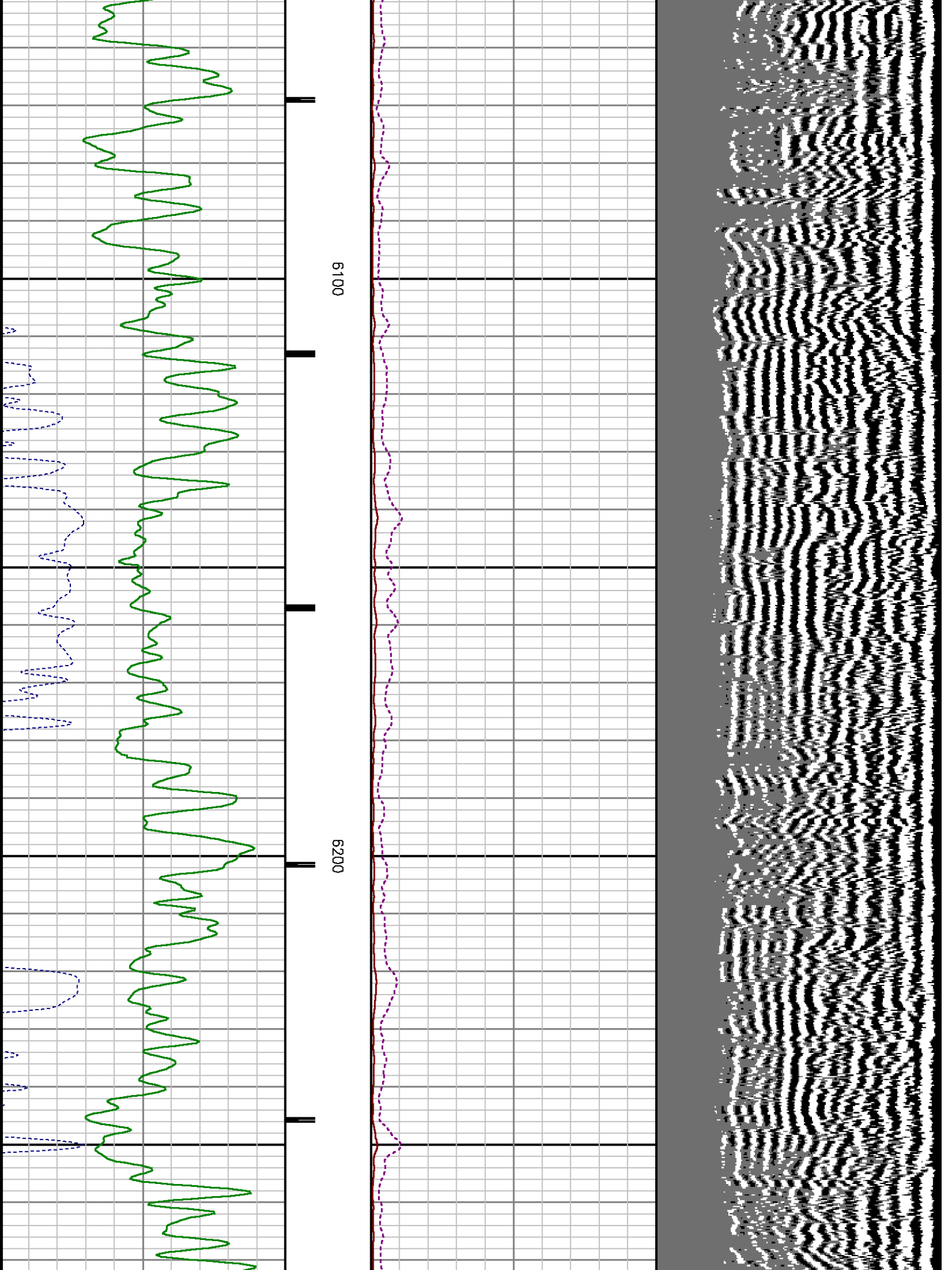


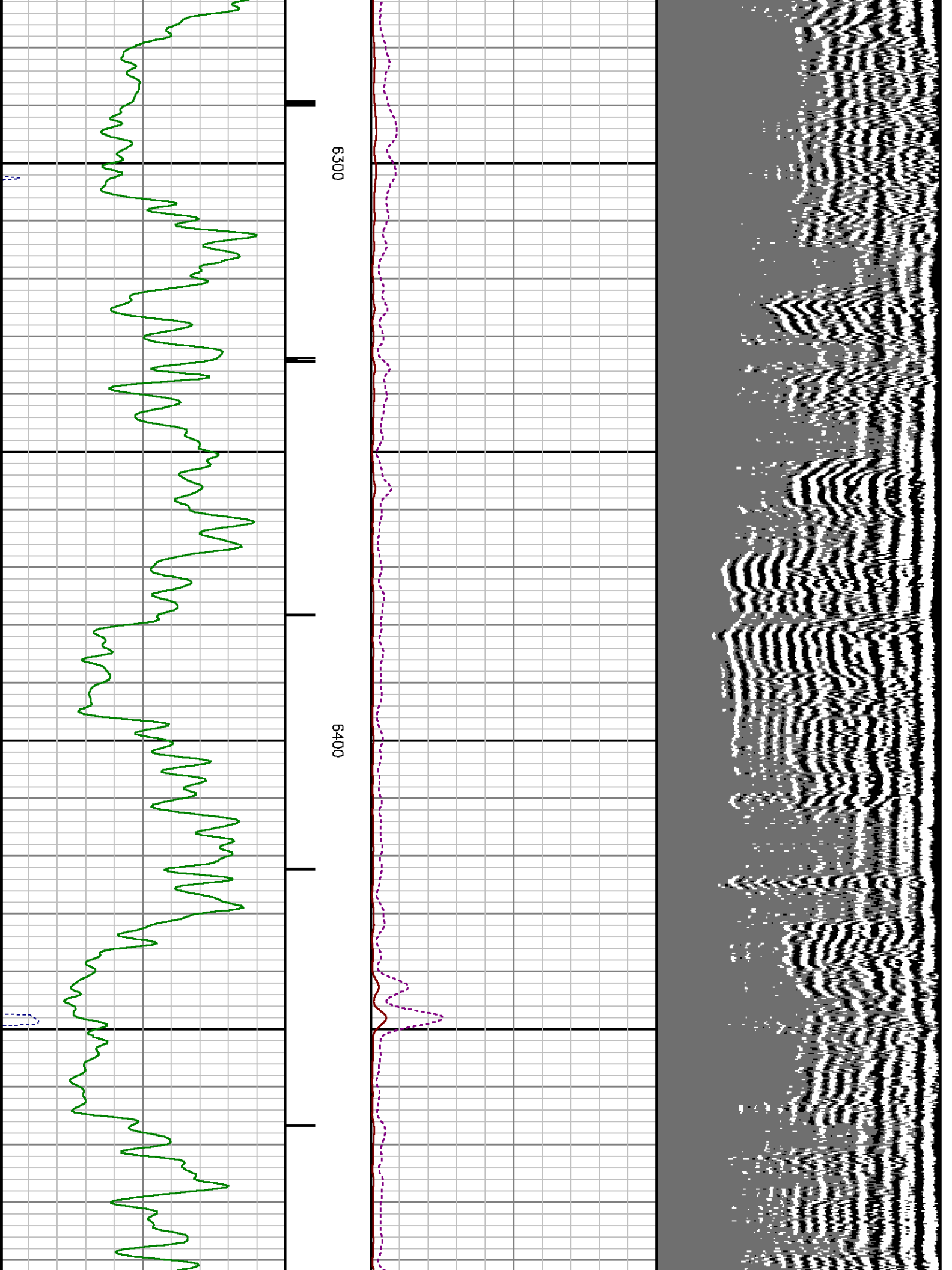


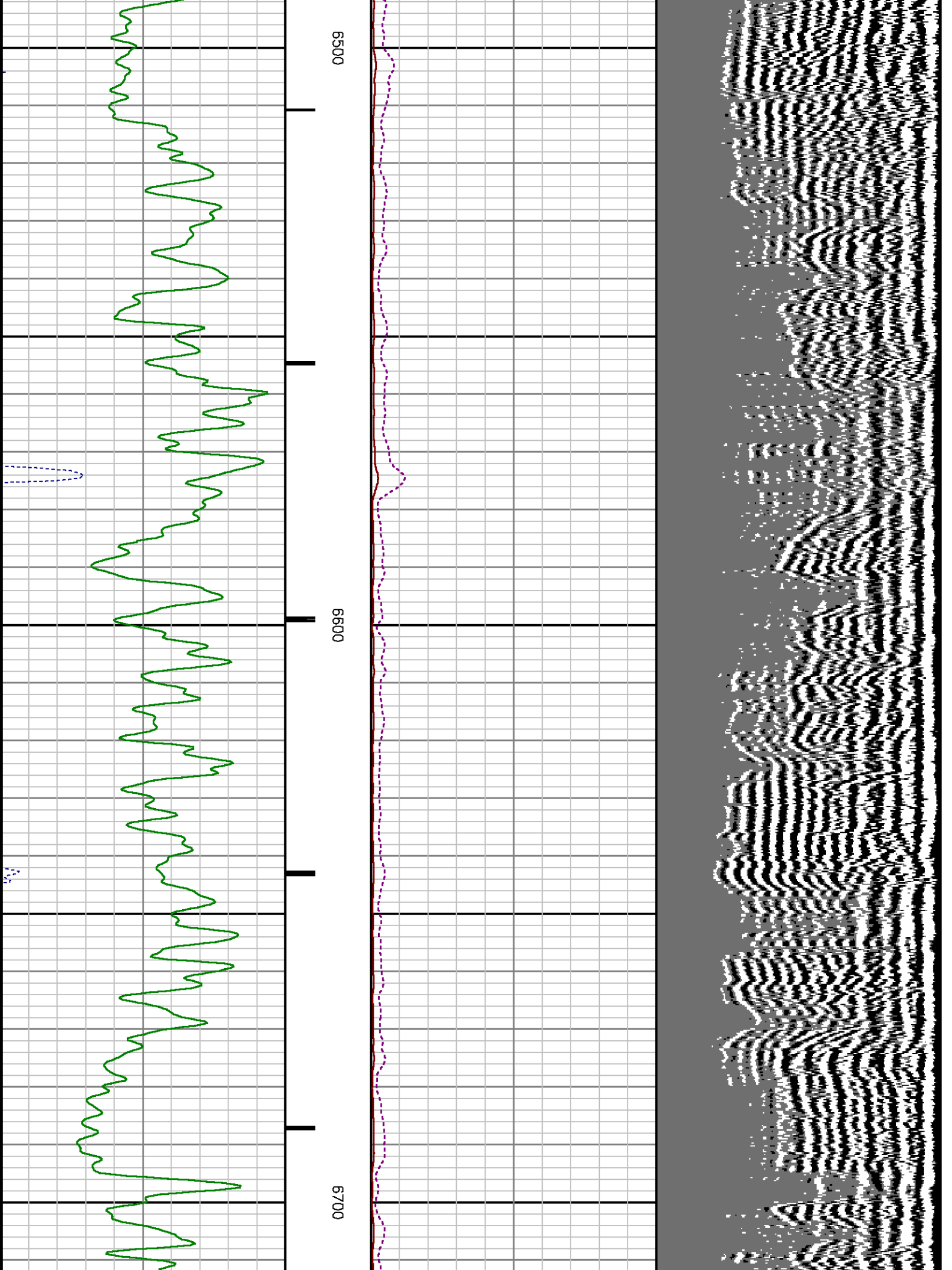


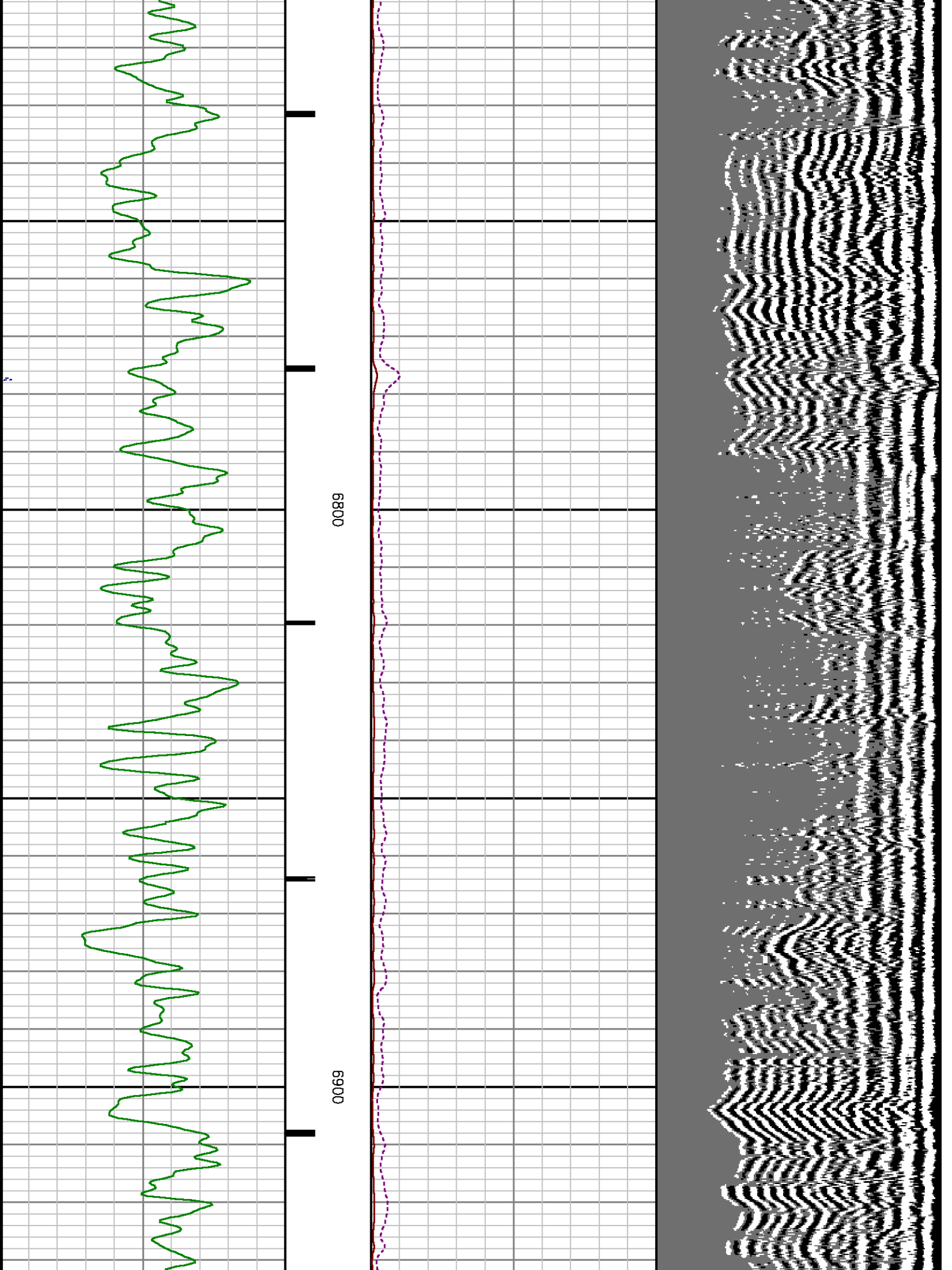


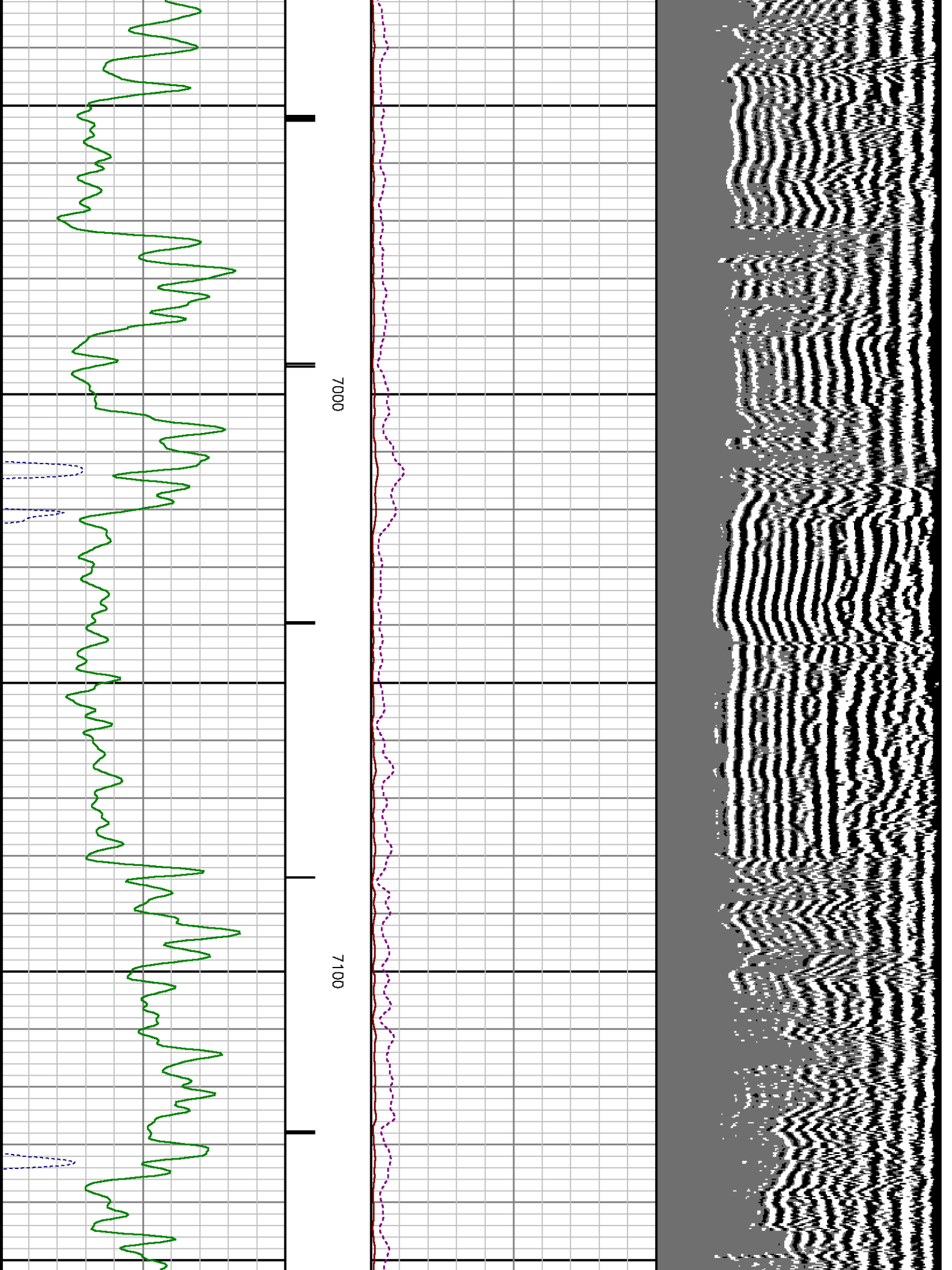


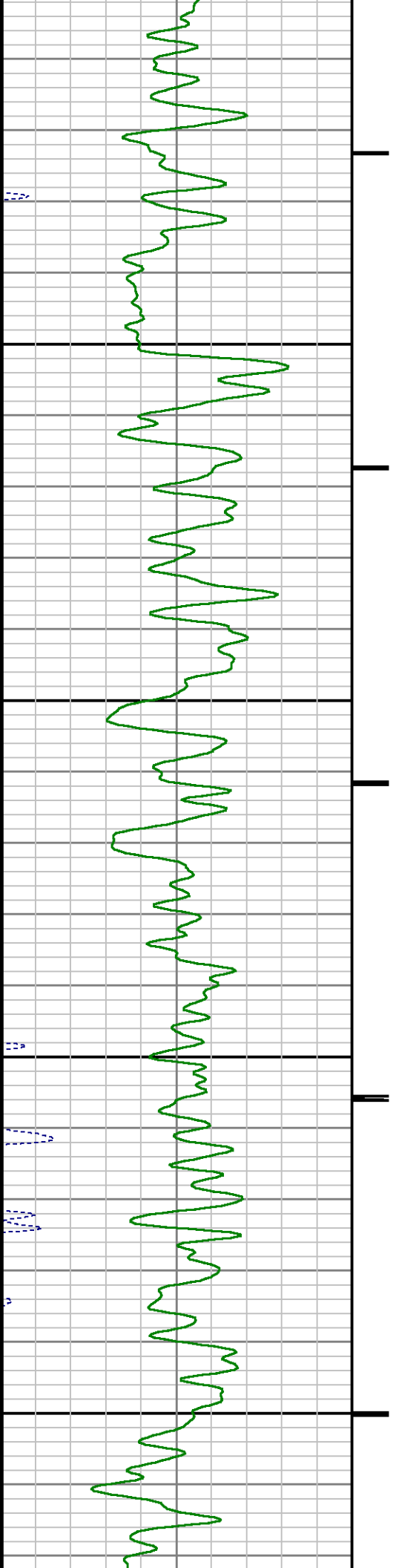
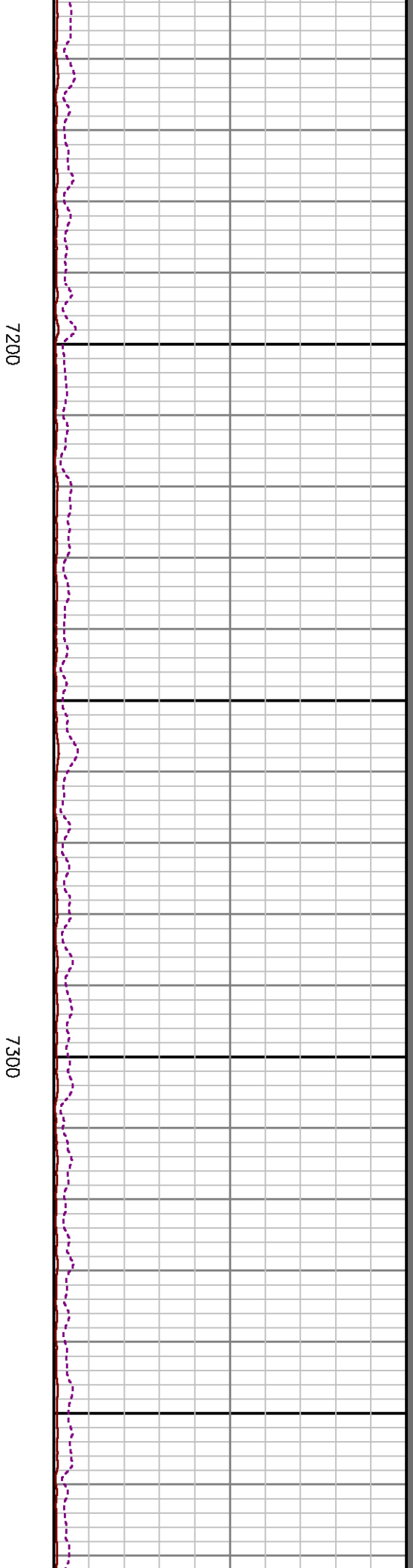
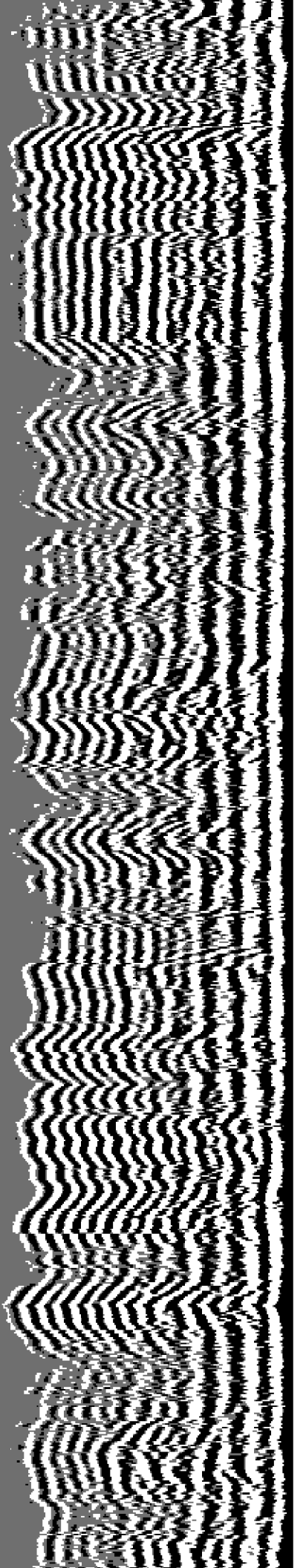


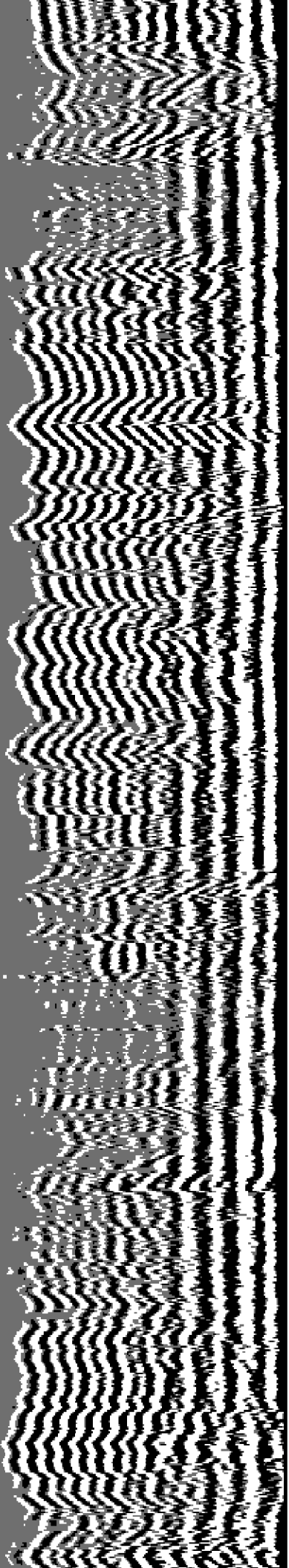






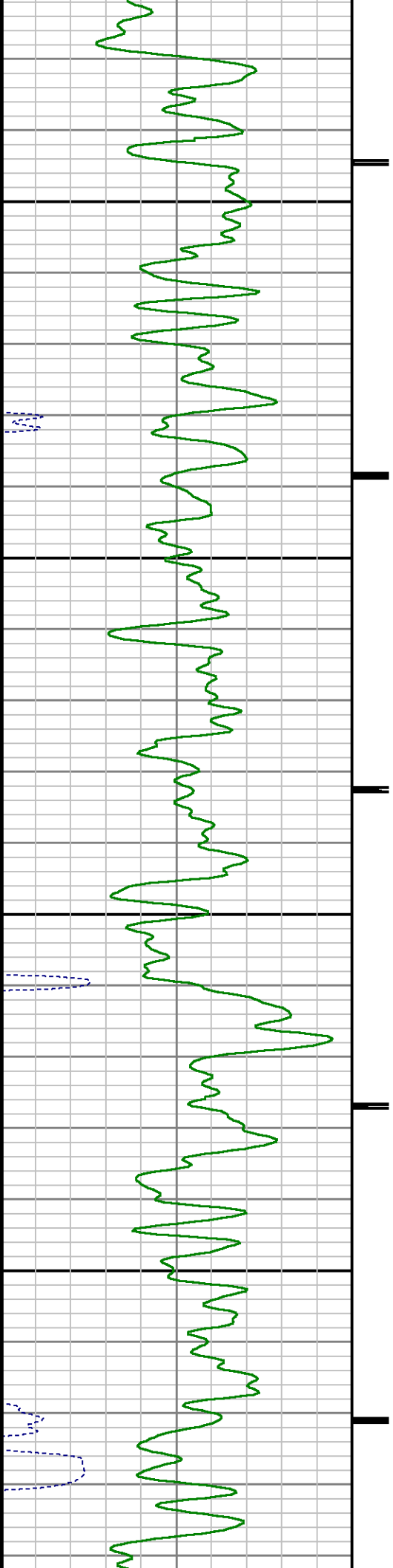


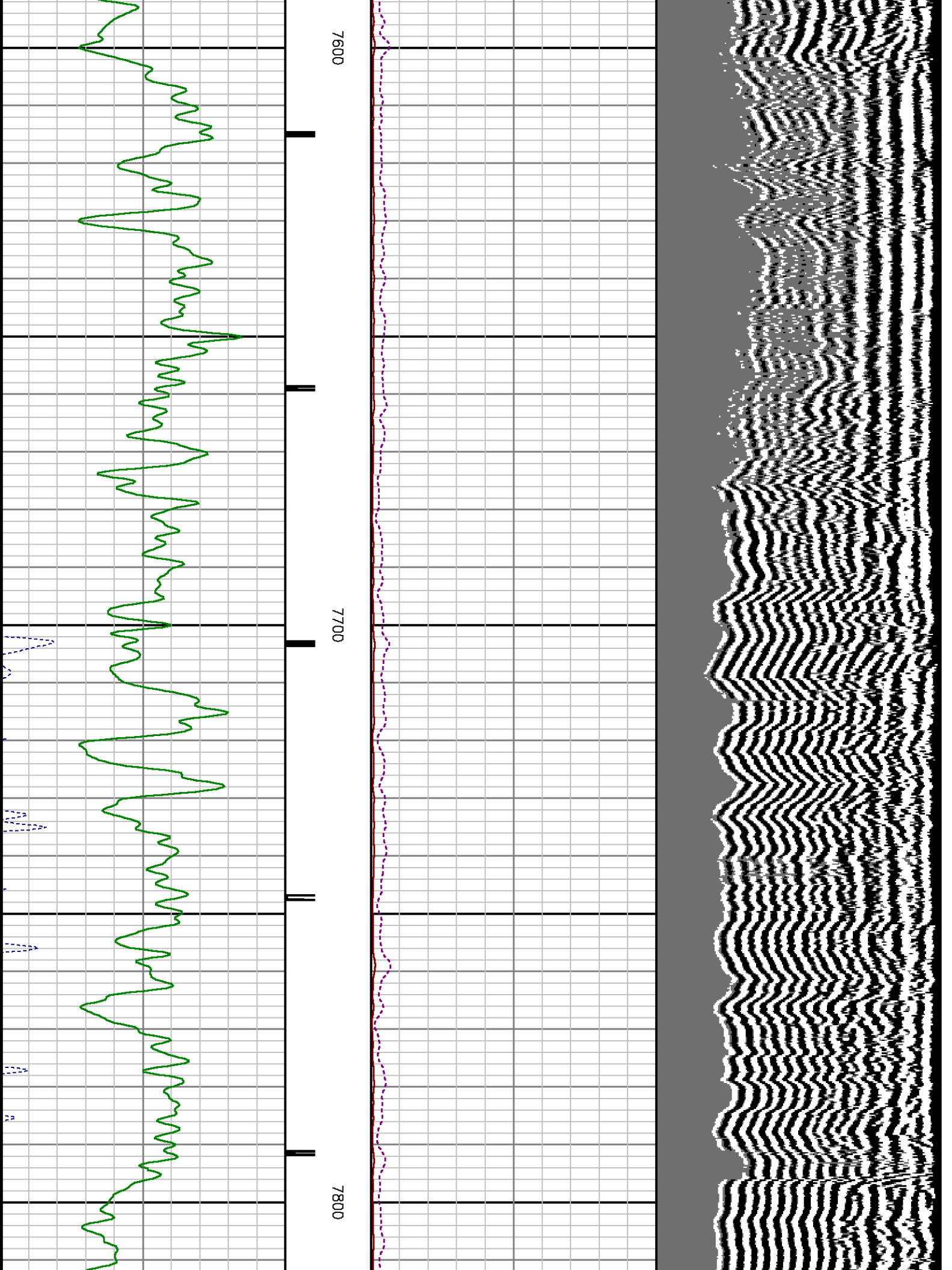


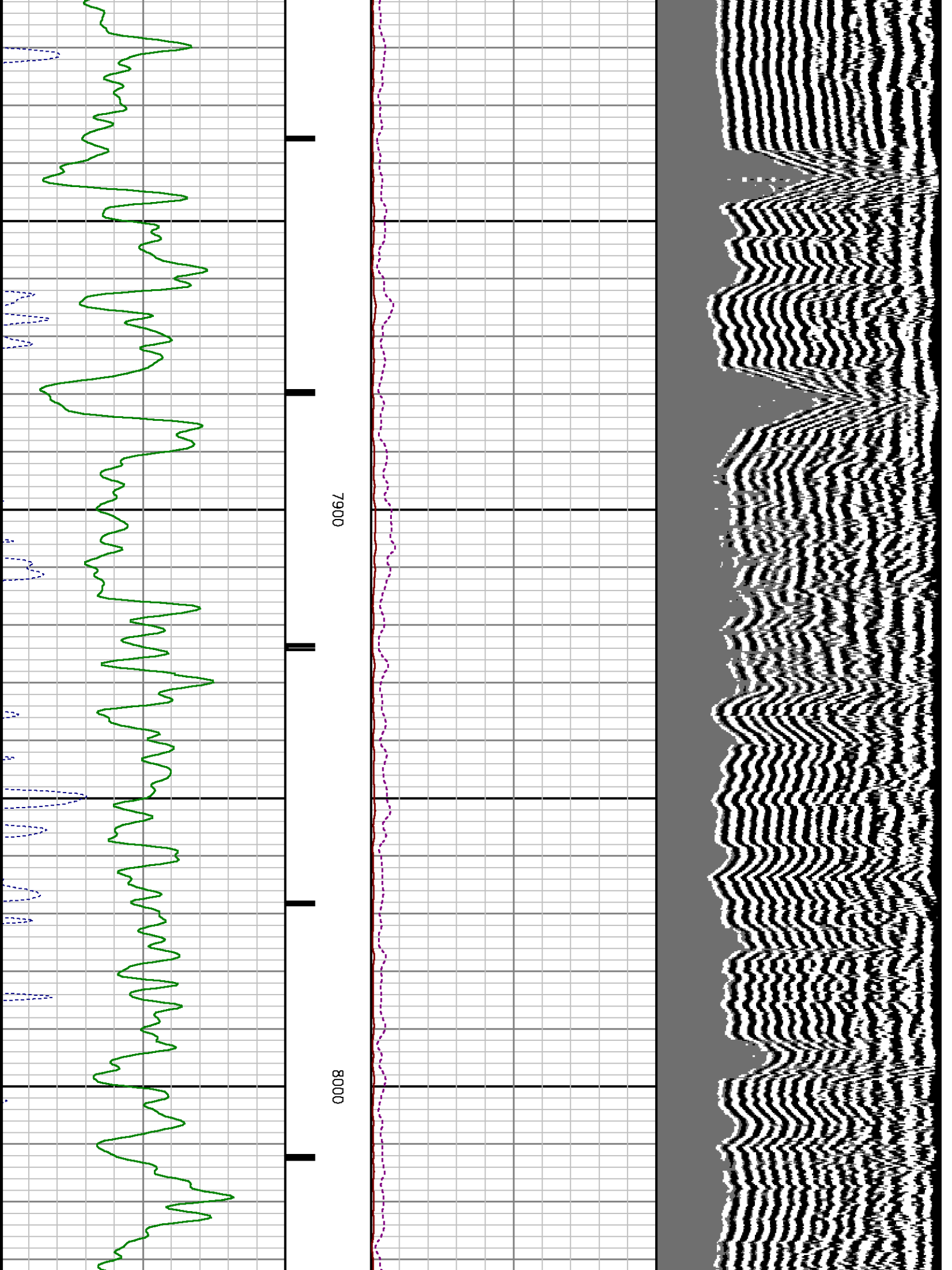


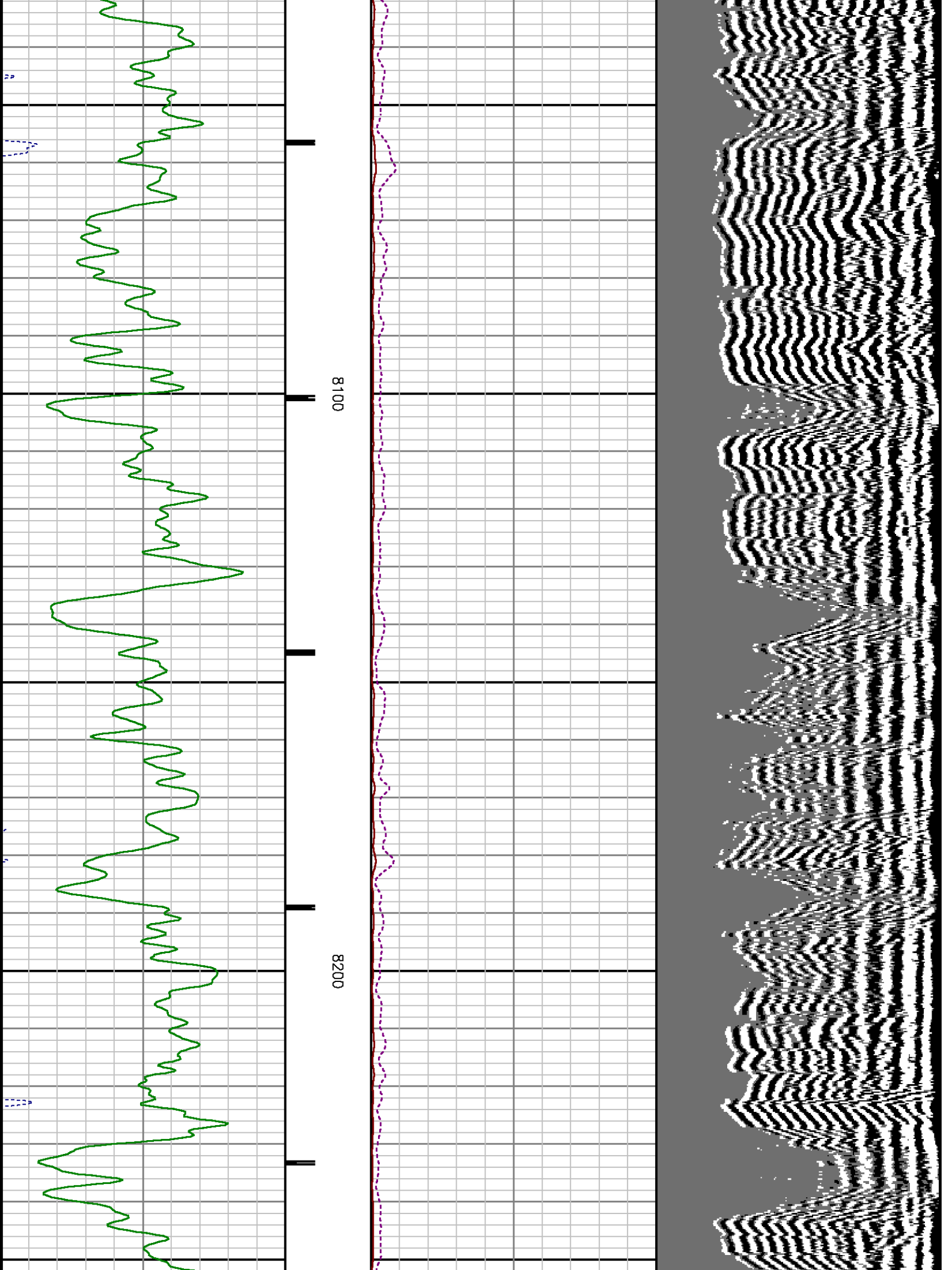
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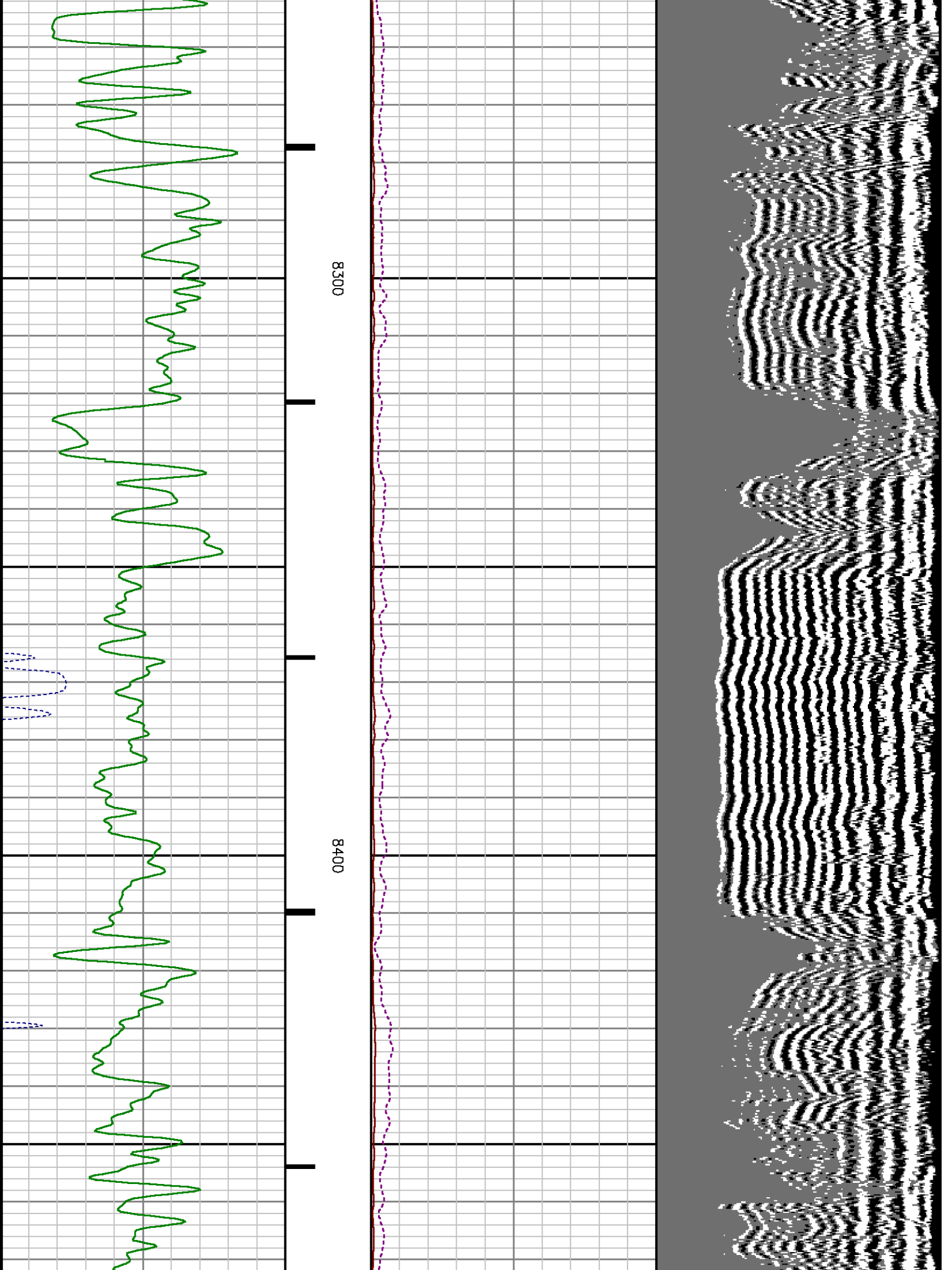
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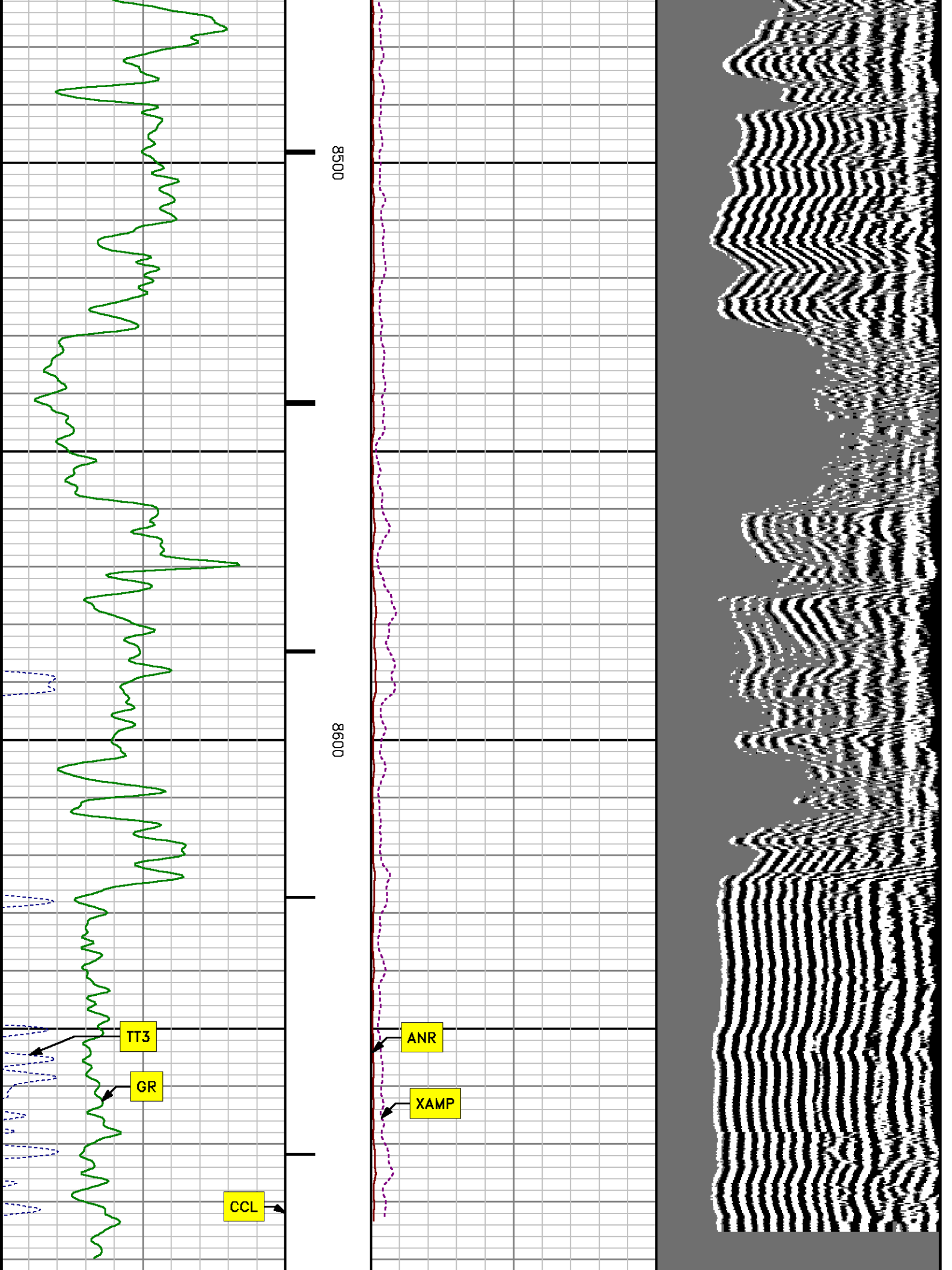


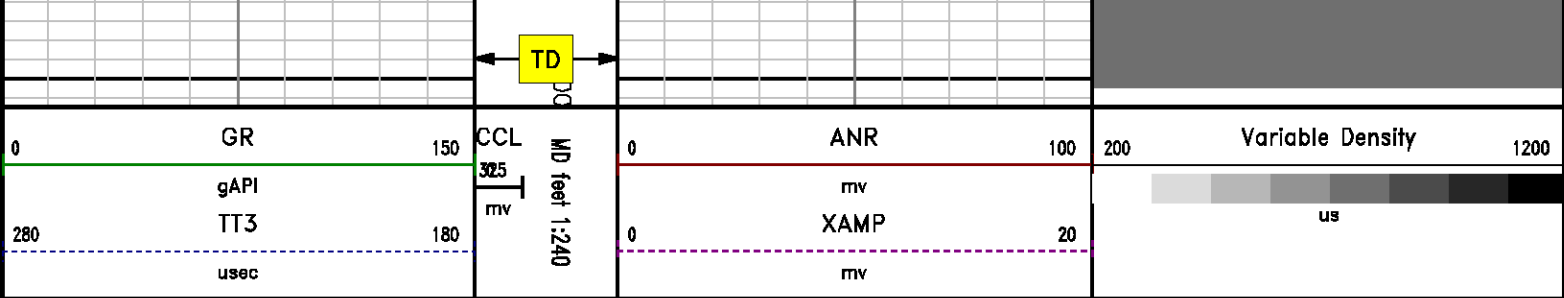












SECONDARY PRESENTATION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	uSec	30.999	8693.000
RAL	Amp Gate Start Near	195.000	uSec	30.999	8693.000
RAL	Amp Gate Start Radial	195.000	uSec	30.999	8693.000
RAL	Amp Gate Width Far	25.000	uSec	30.999	8693.000
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RAL	FB Thresh Near	4.000	mv	30.999	8693.000
RAL	FB Thresh Radial	4.000	mv	30.999	8693.000
RAL	Fluid Travel Time	200.000	uSec/ft	30.999	8693.874

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

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

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

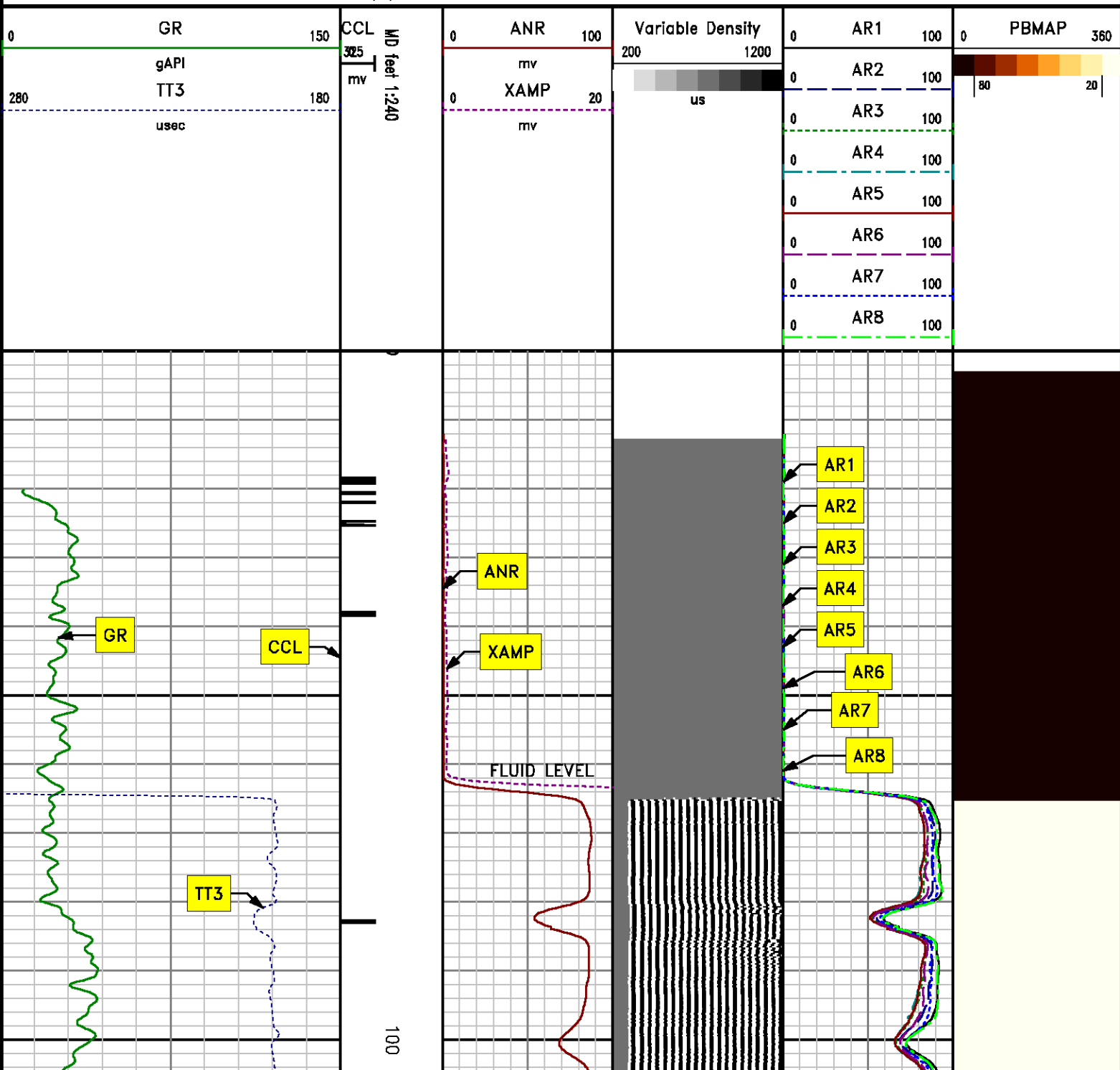
Well : SAVAGE RWF 11-25

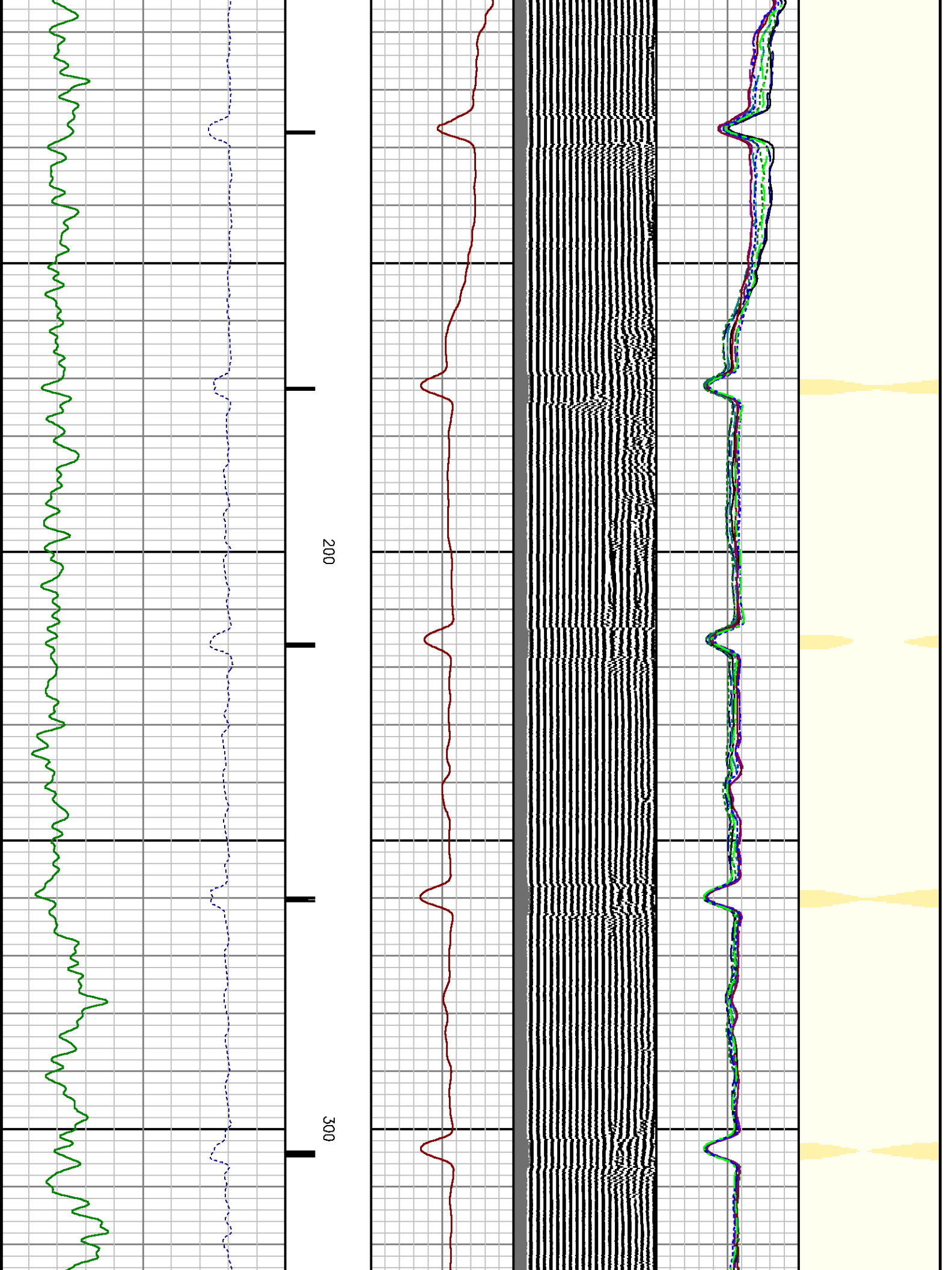
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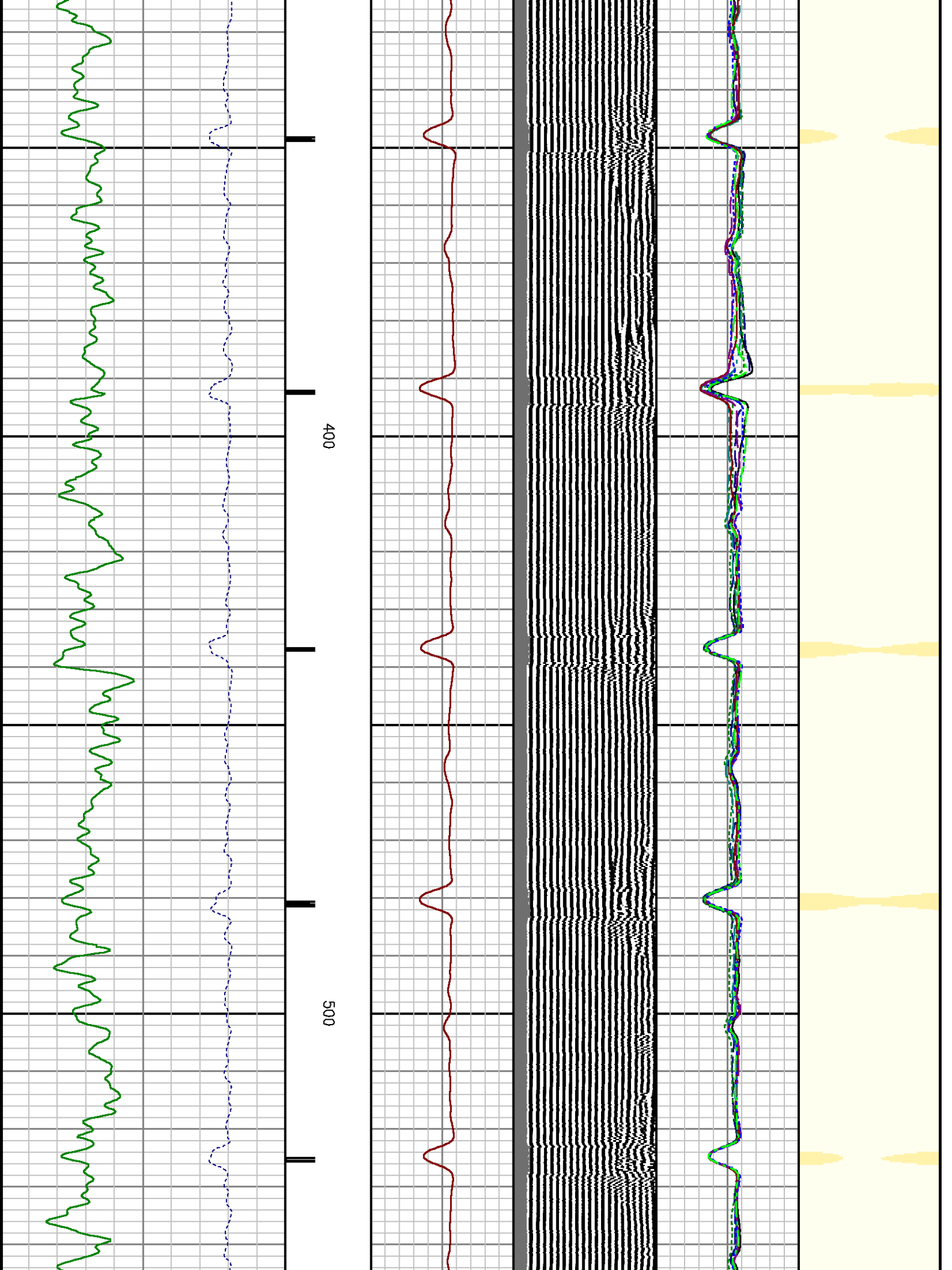
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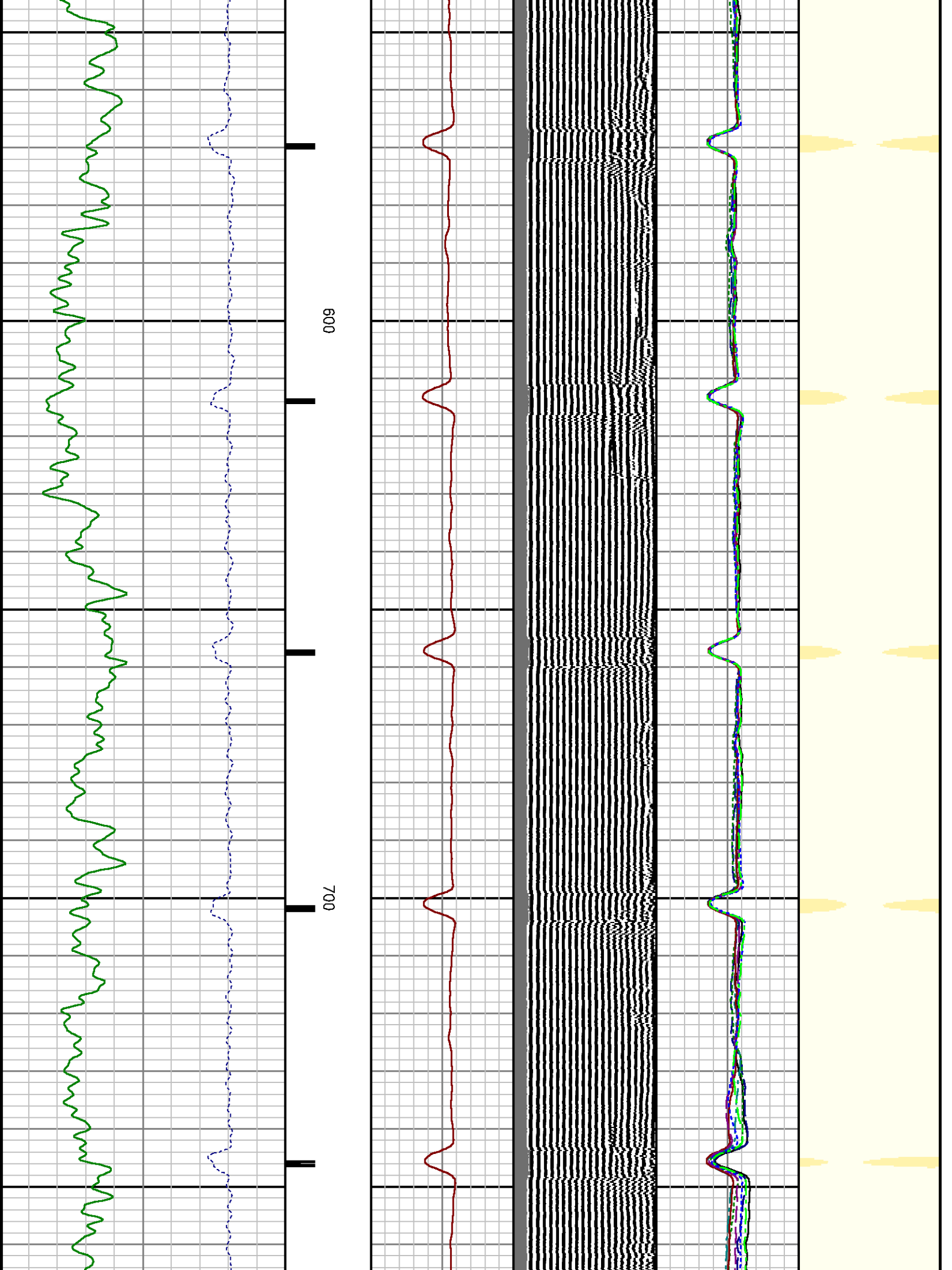
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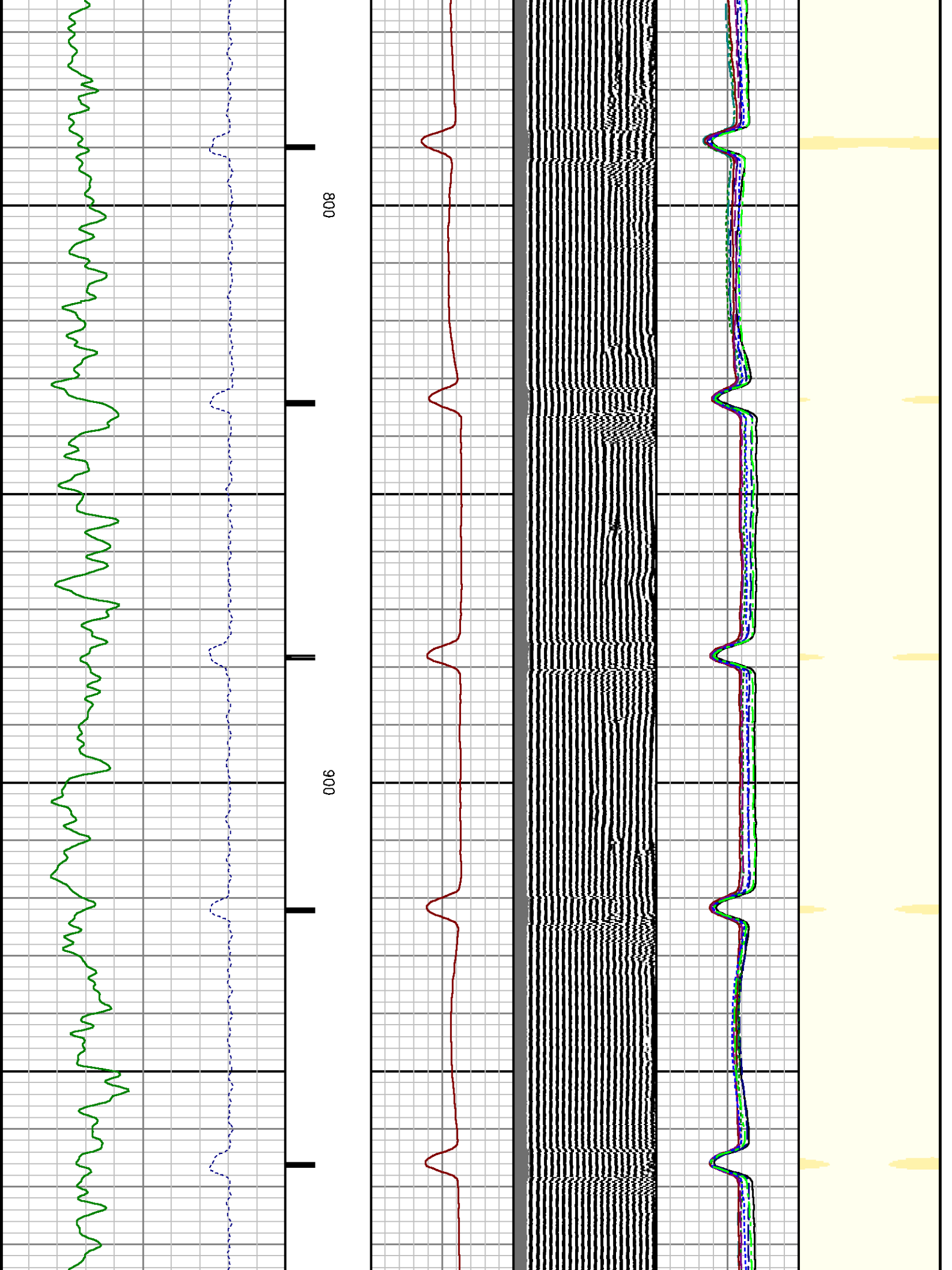
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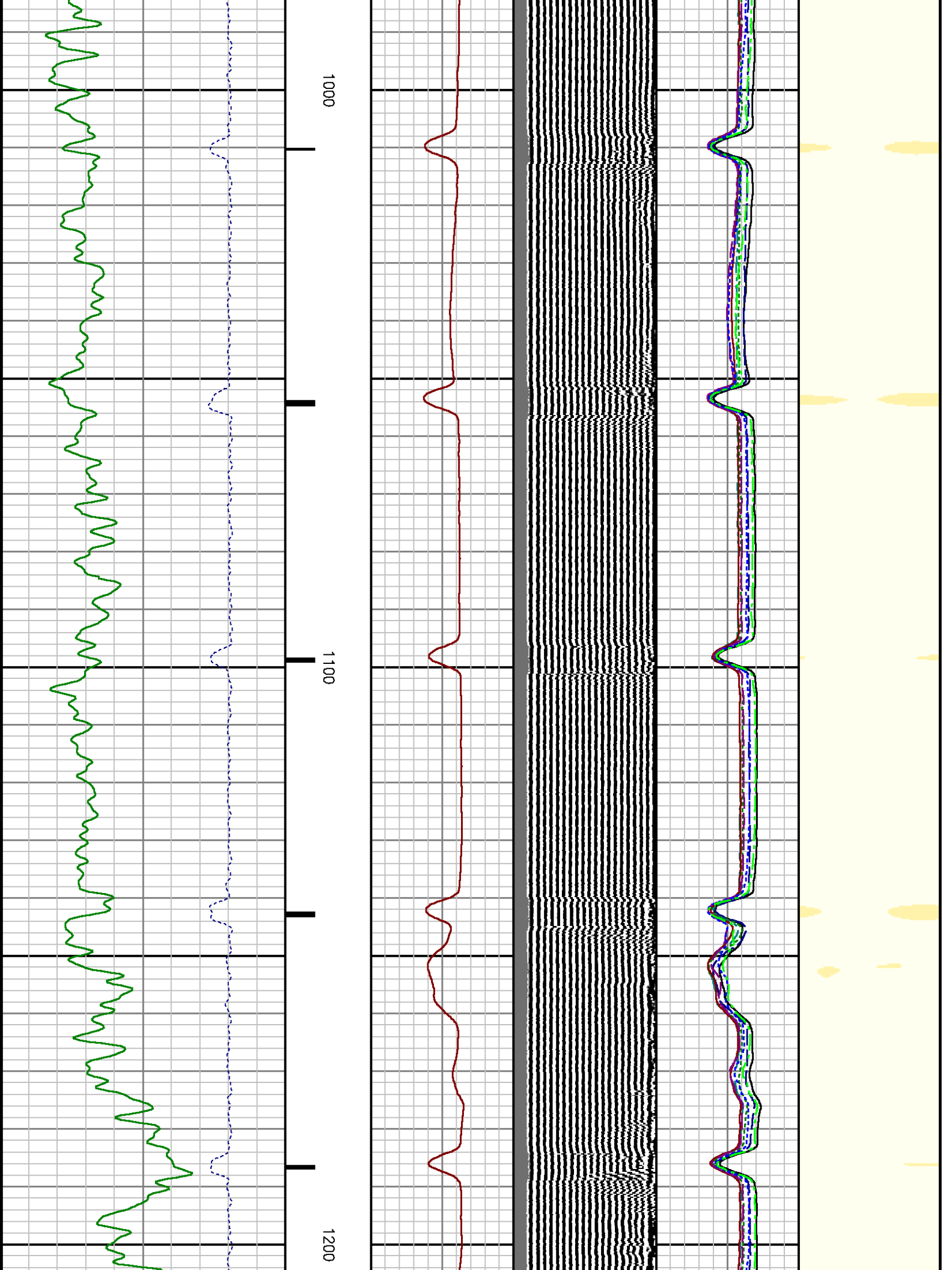


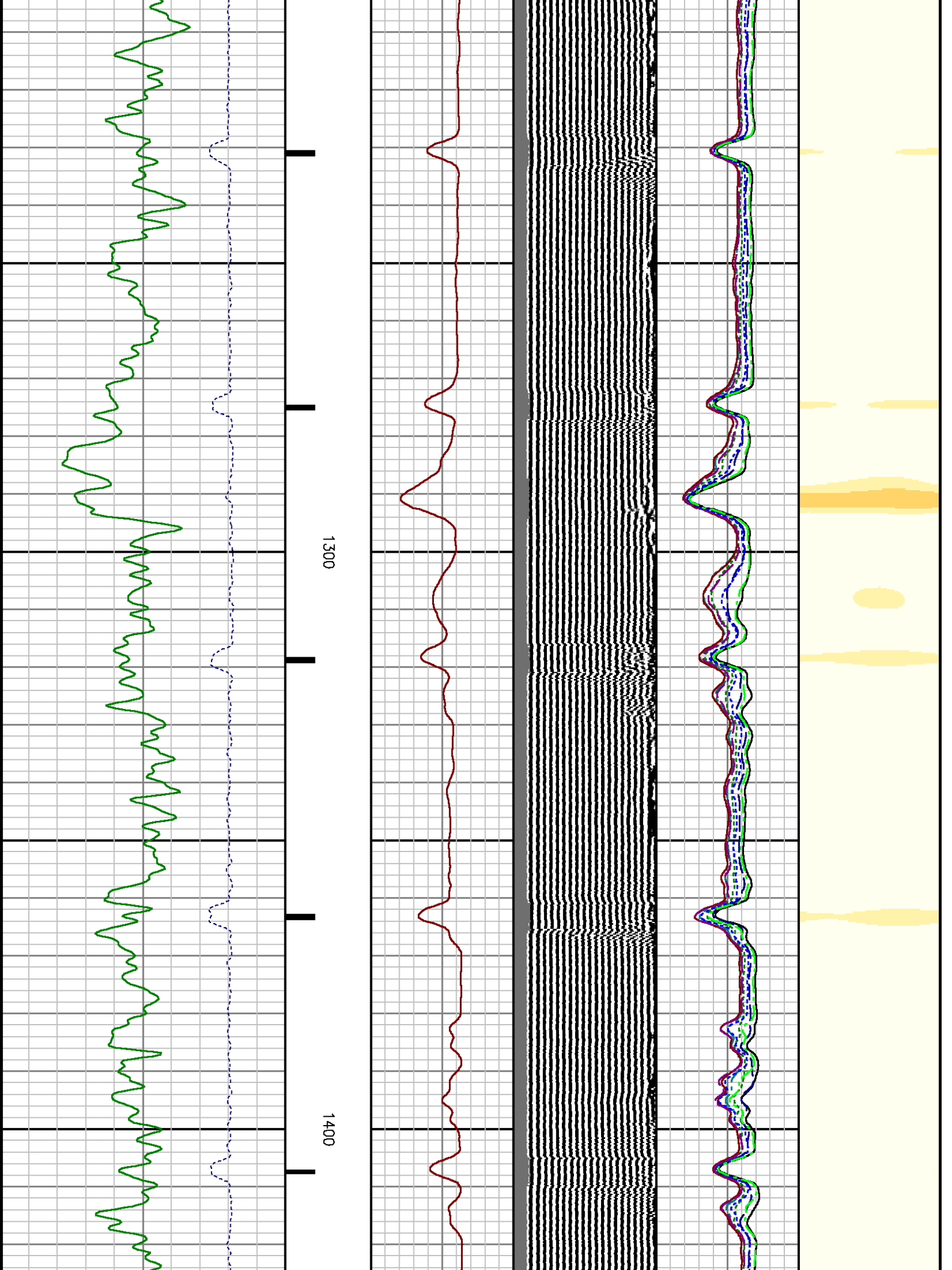


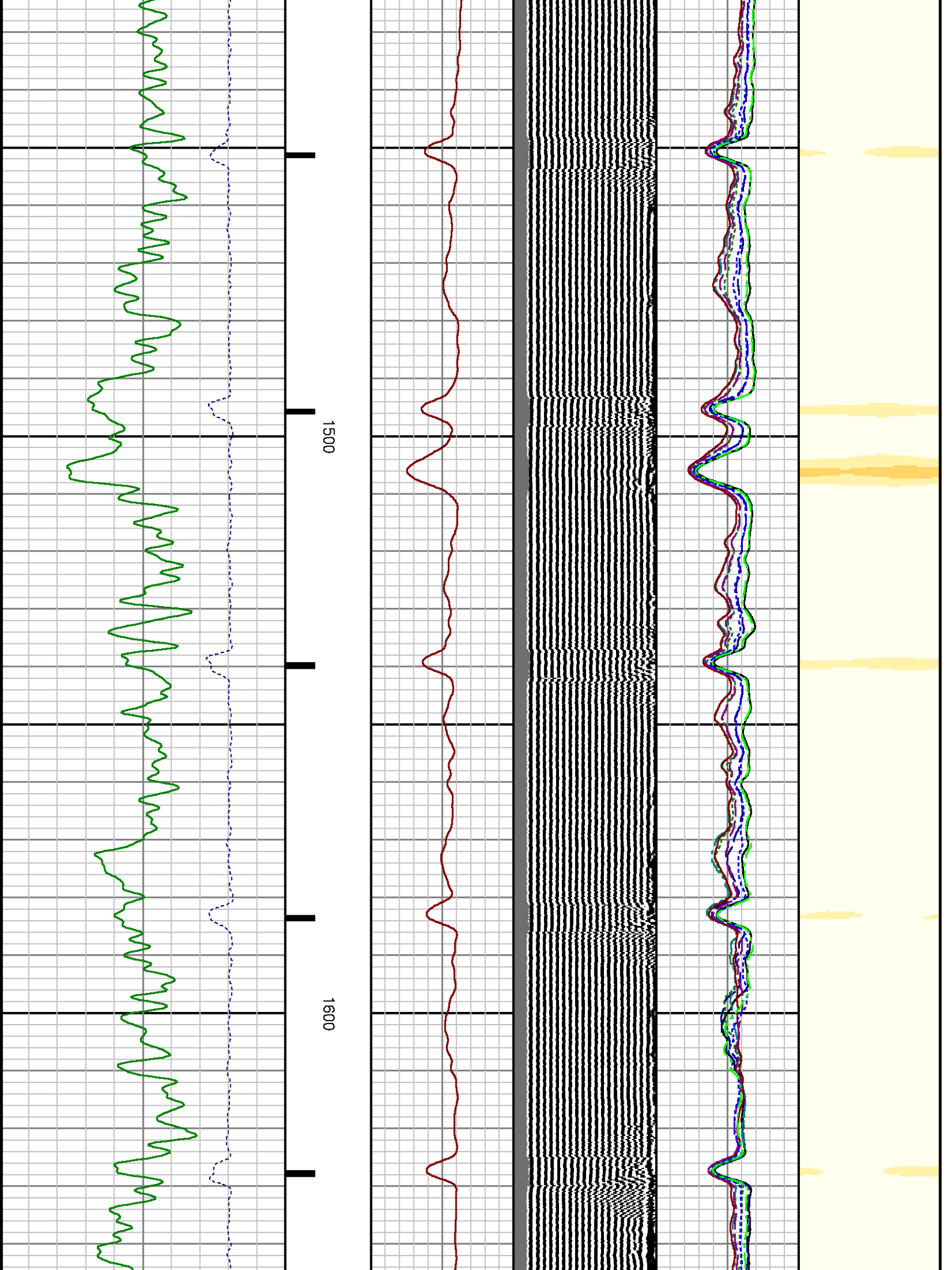


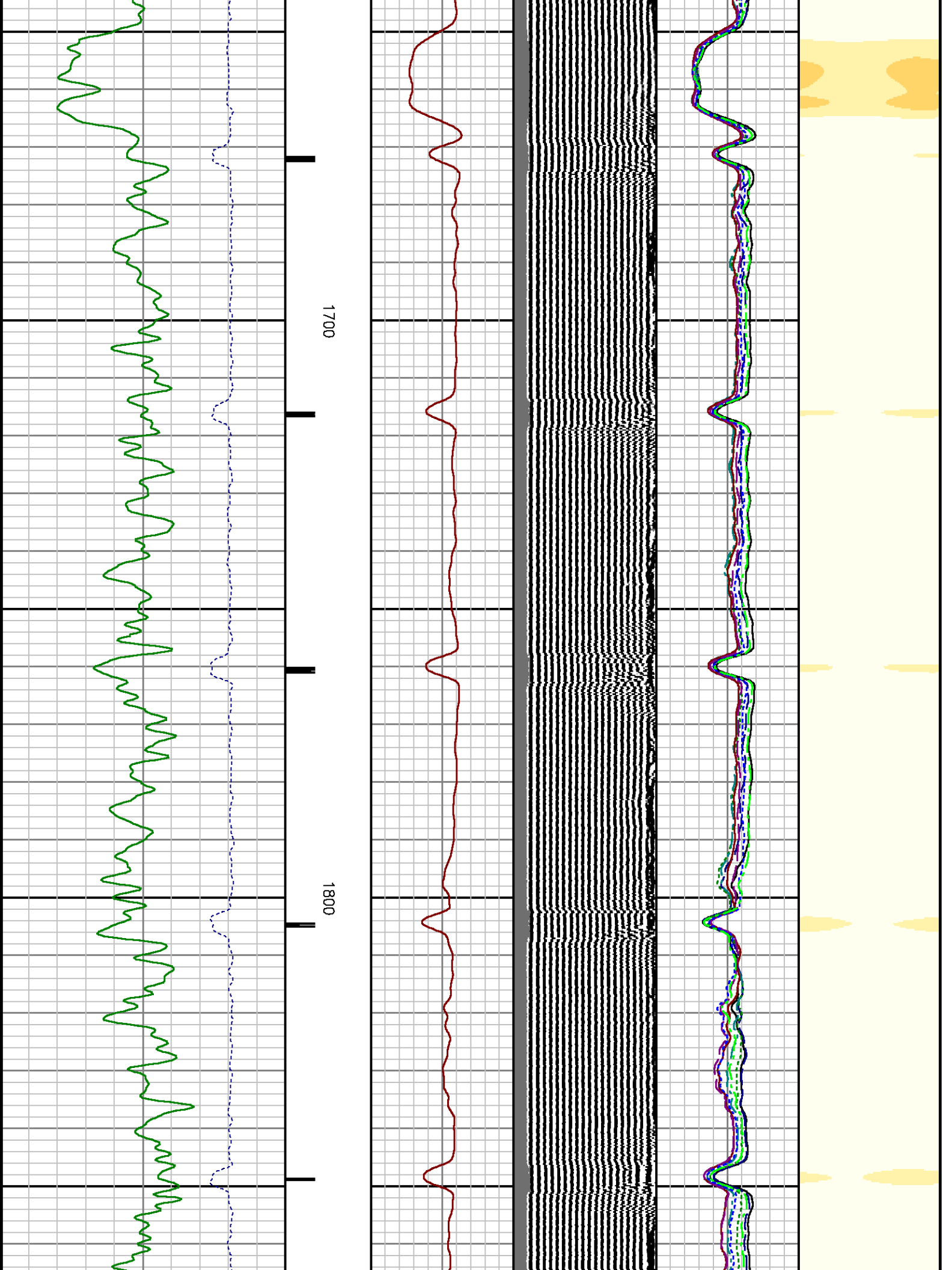


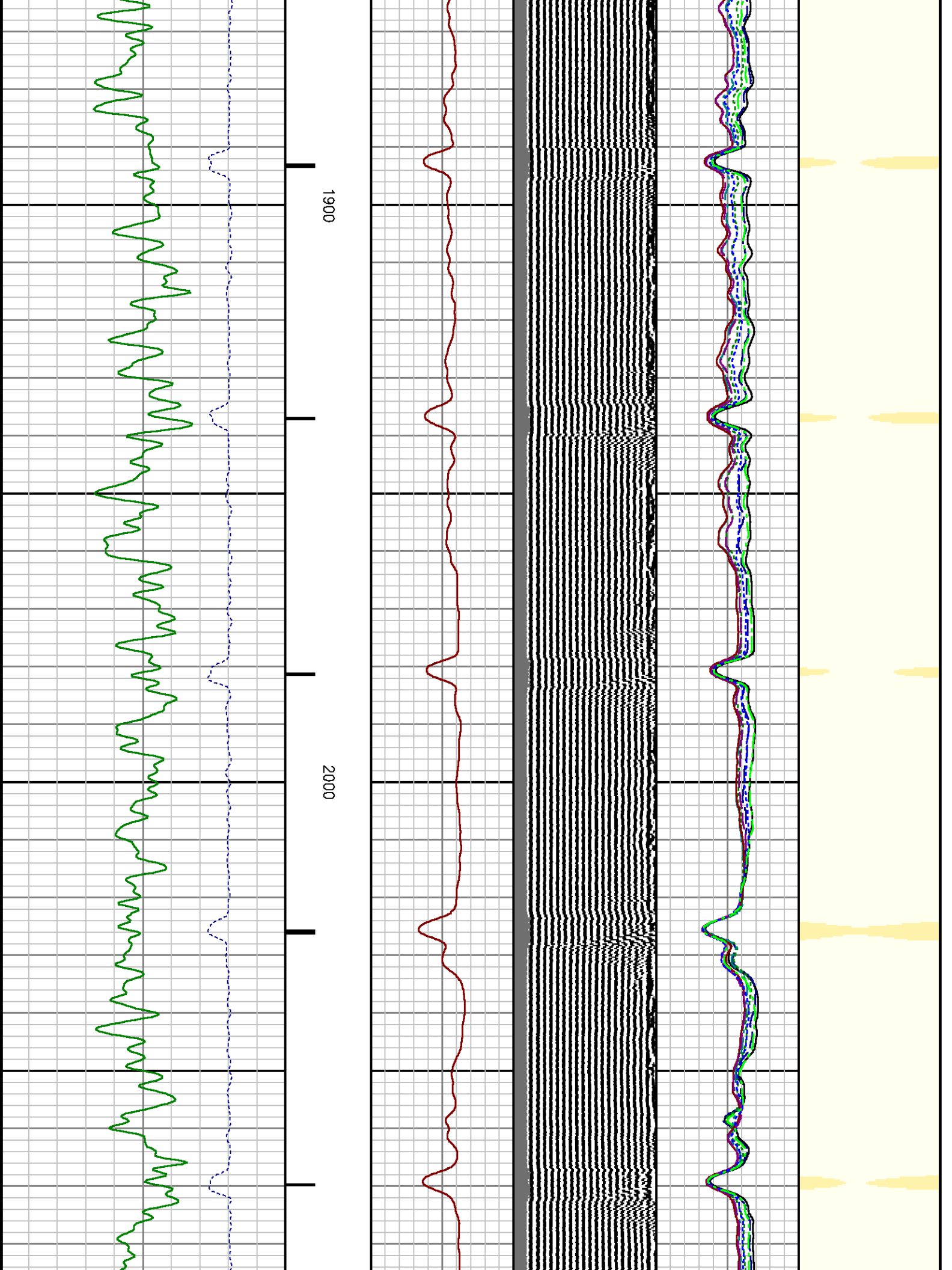


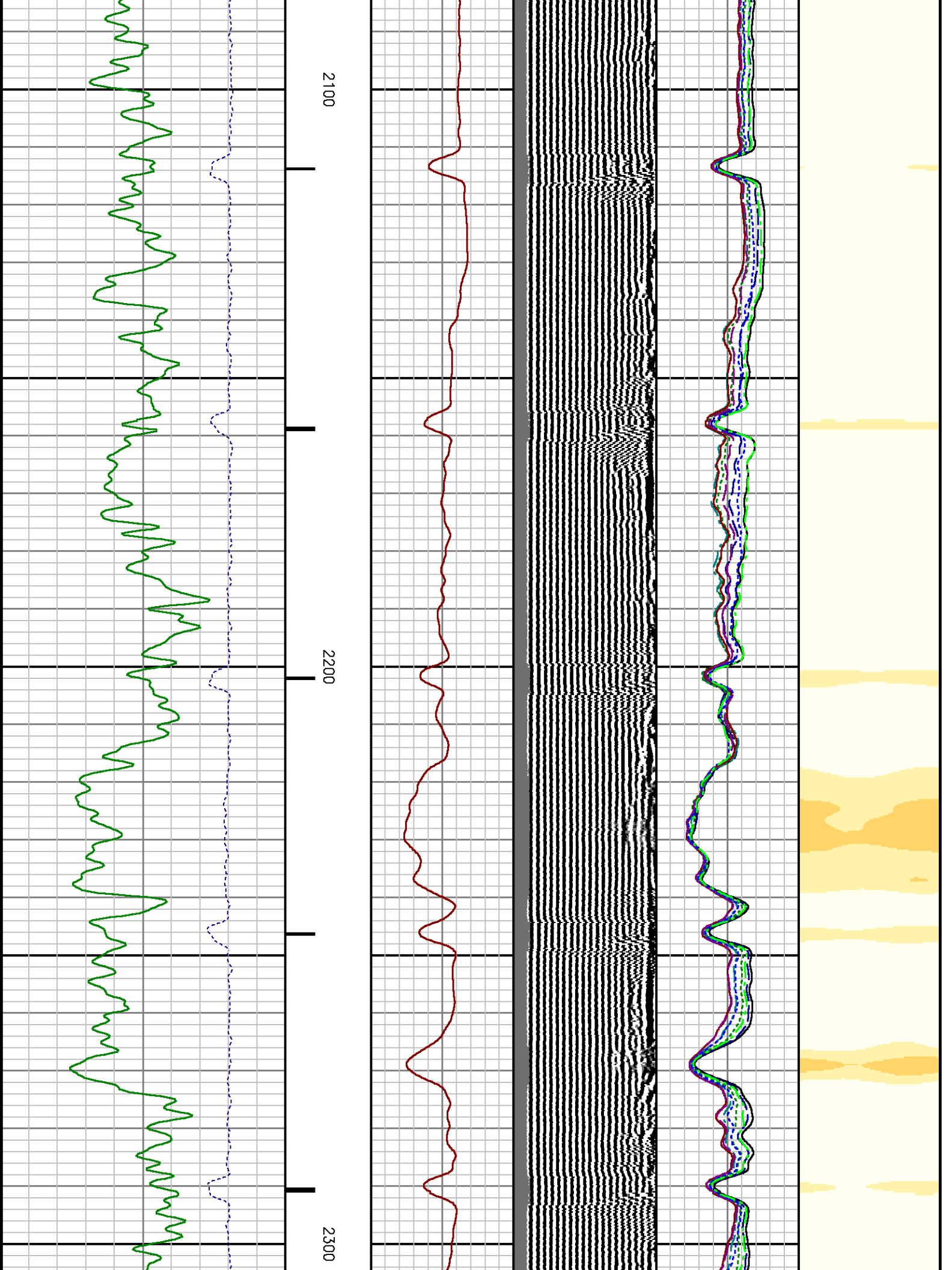


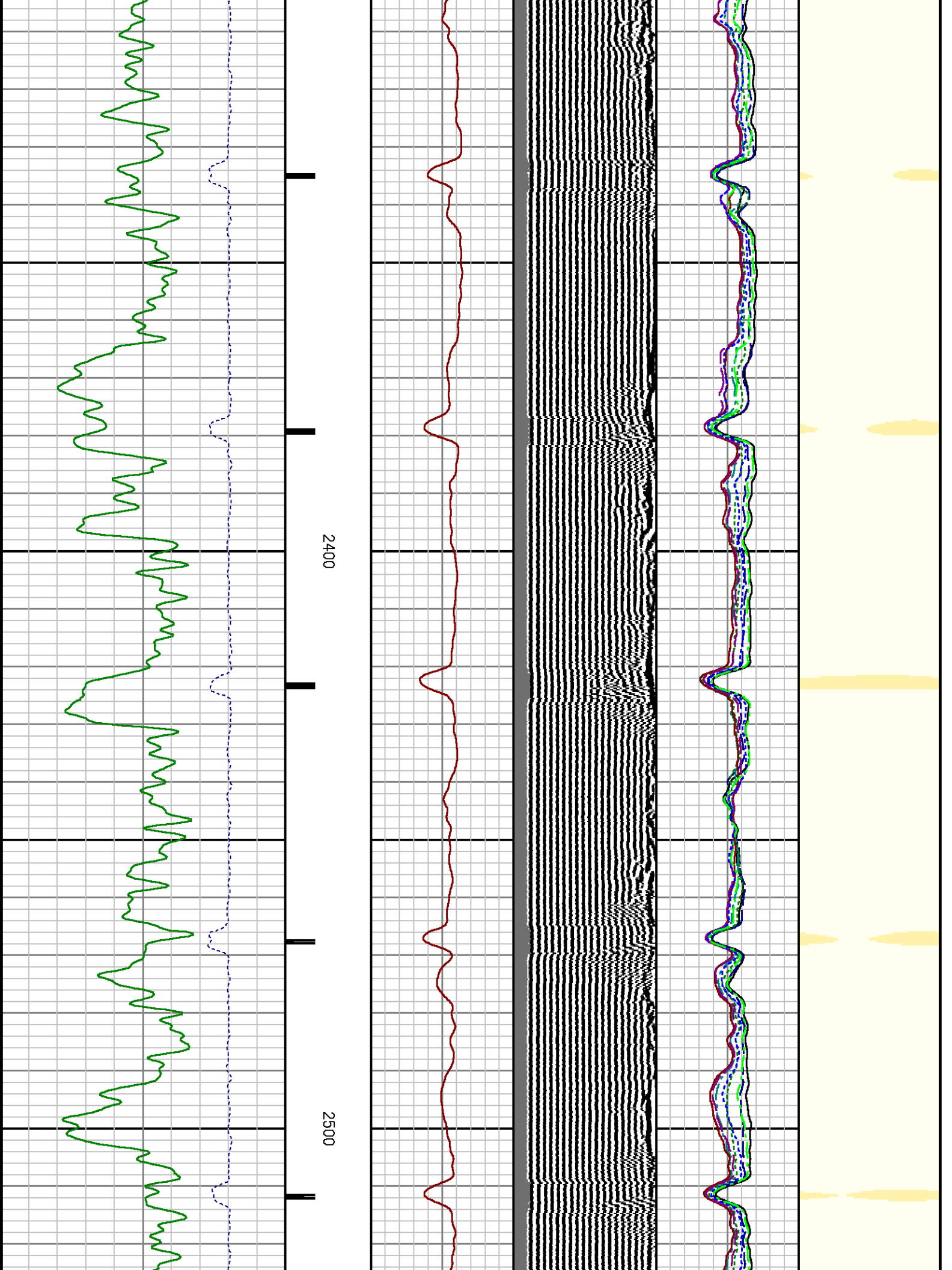


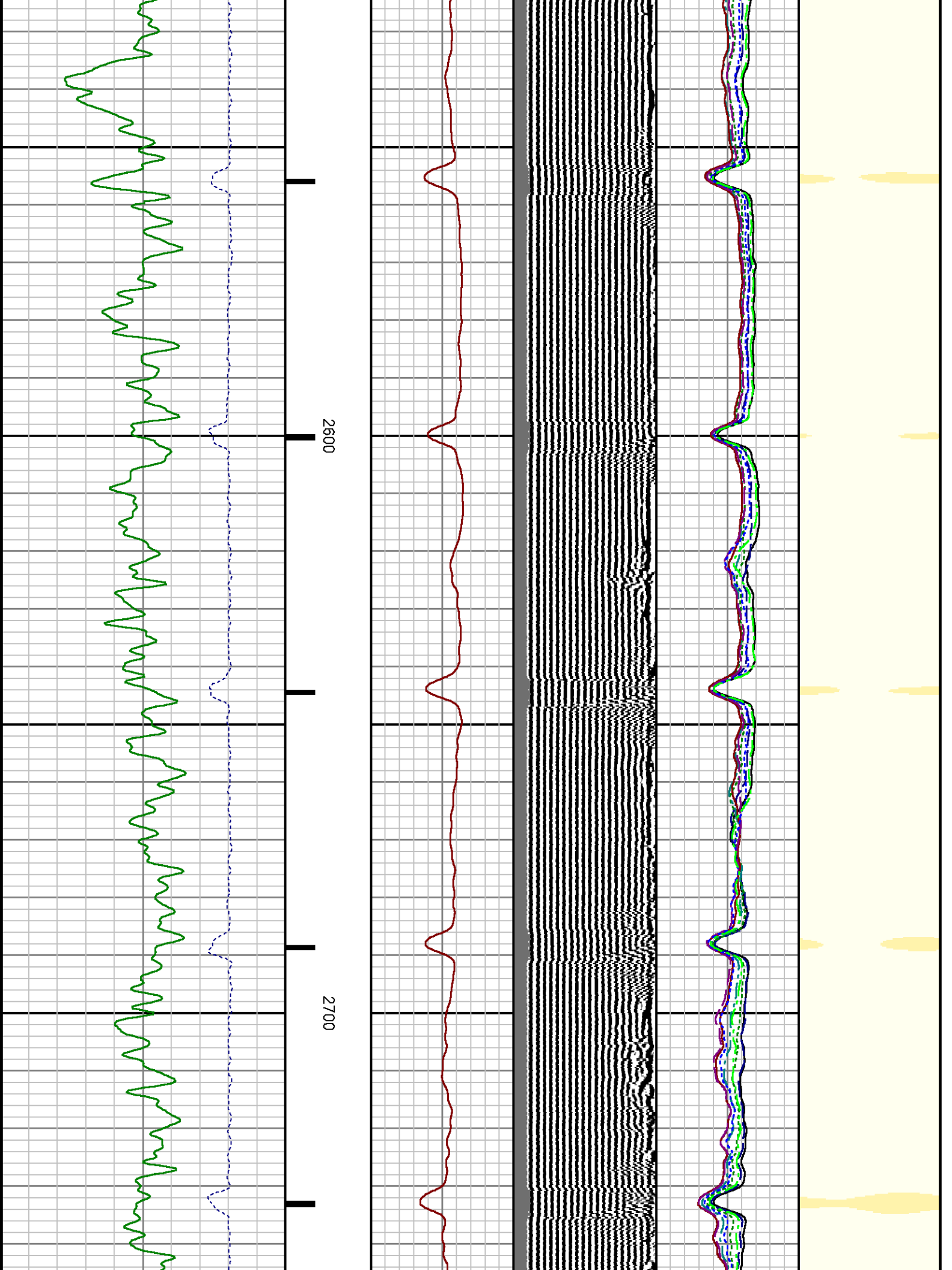


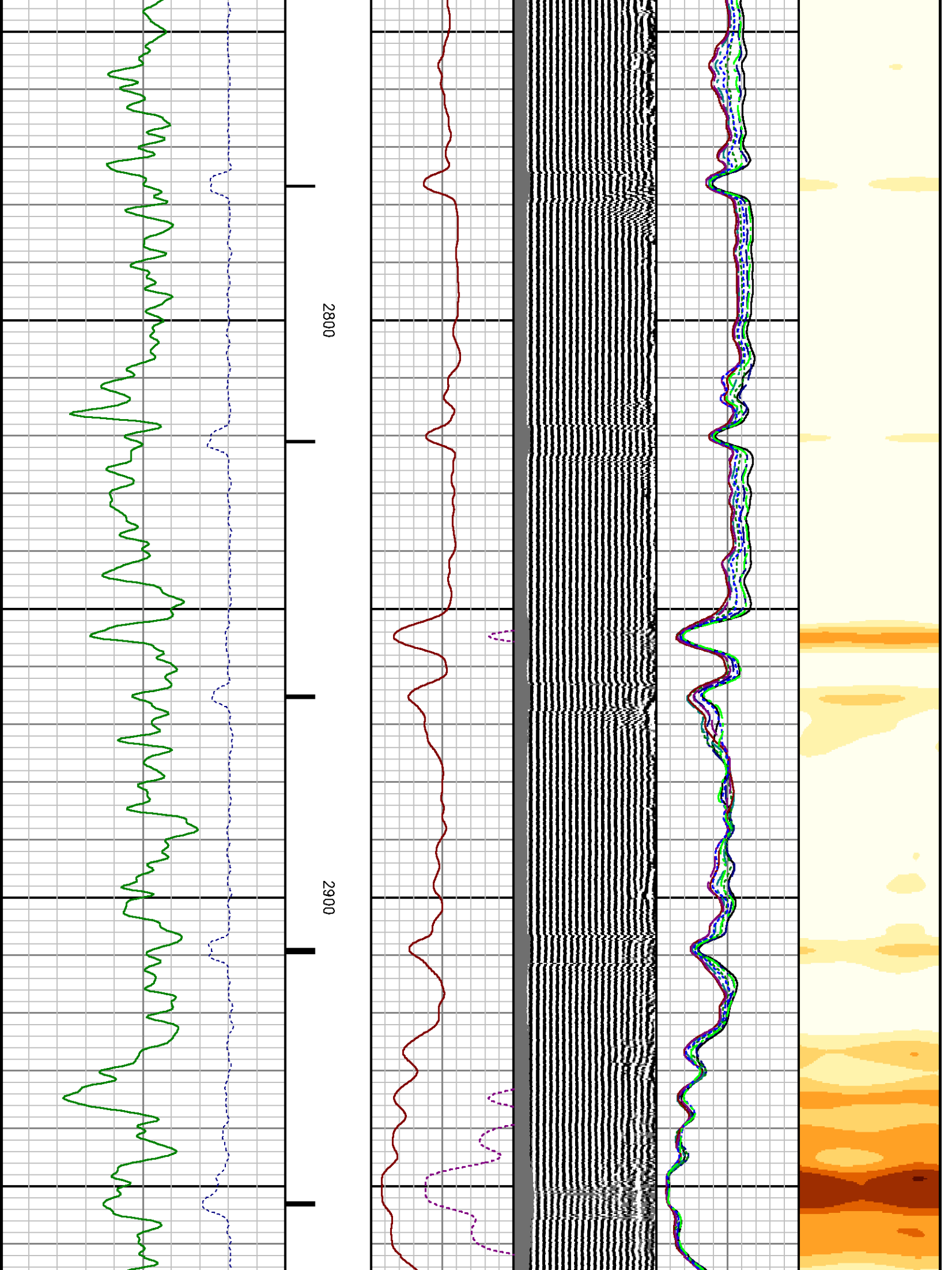


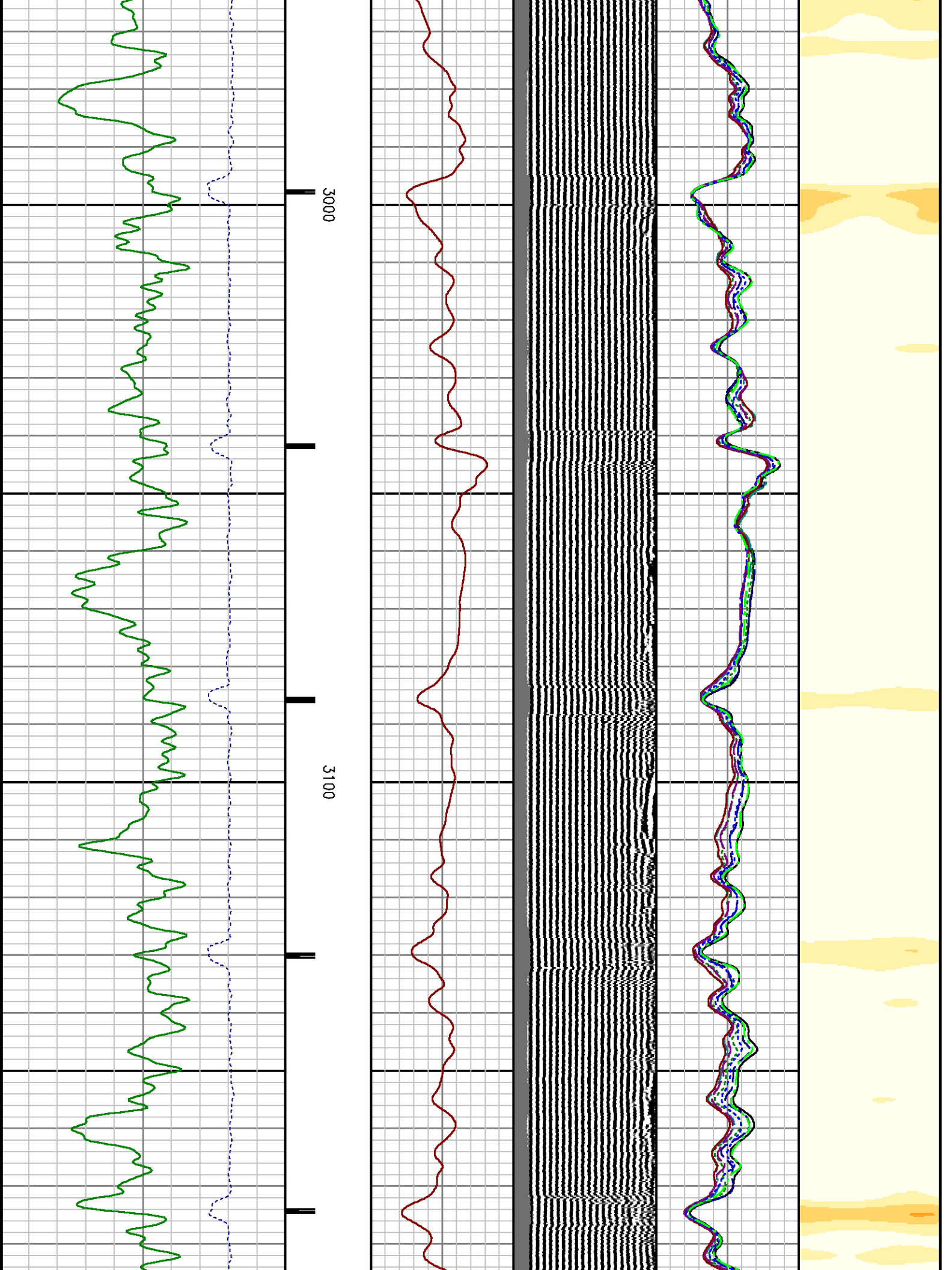


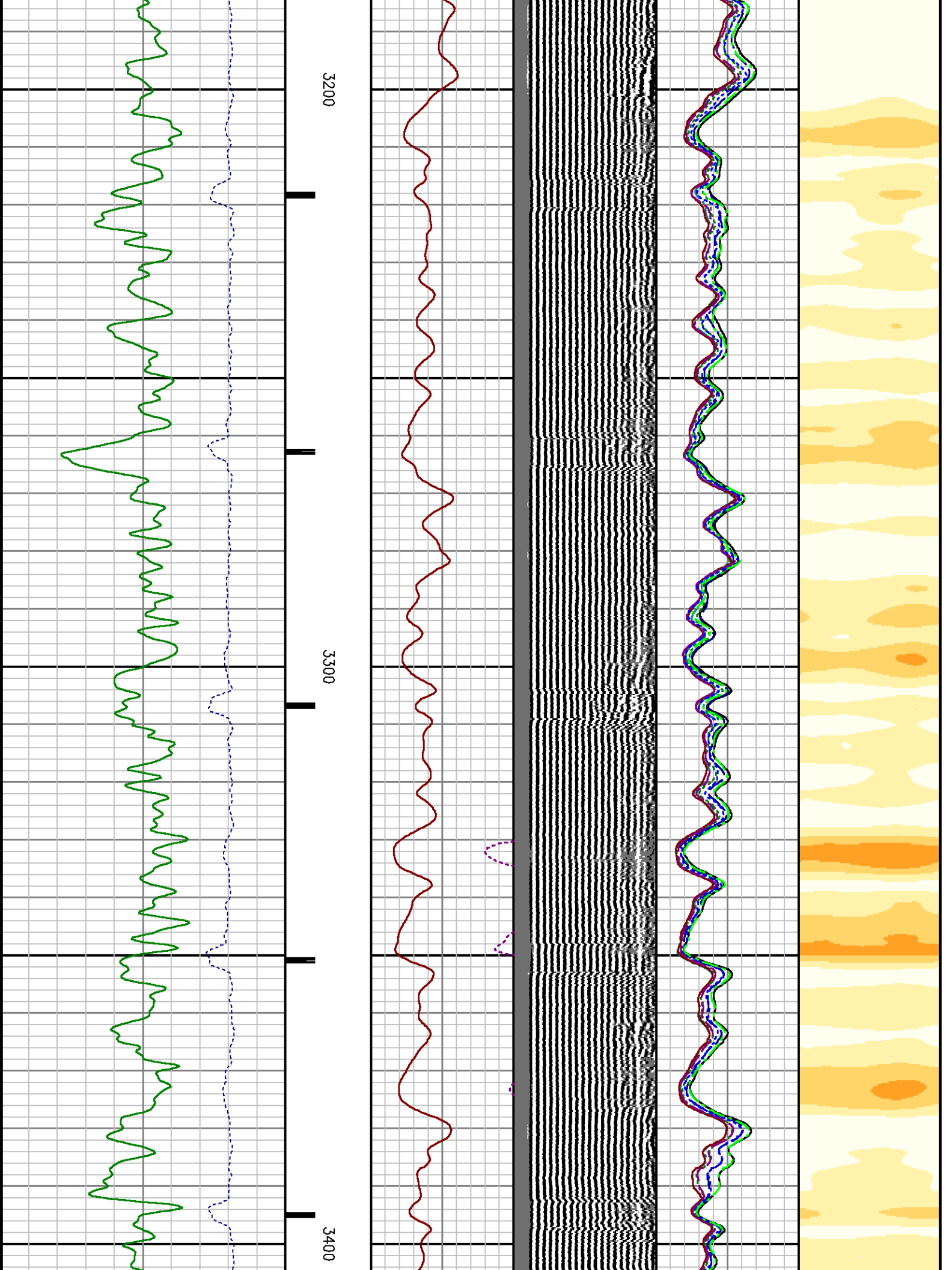


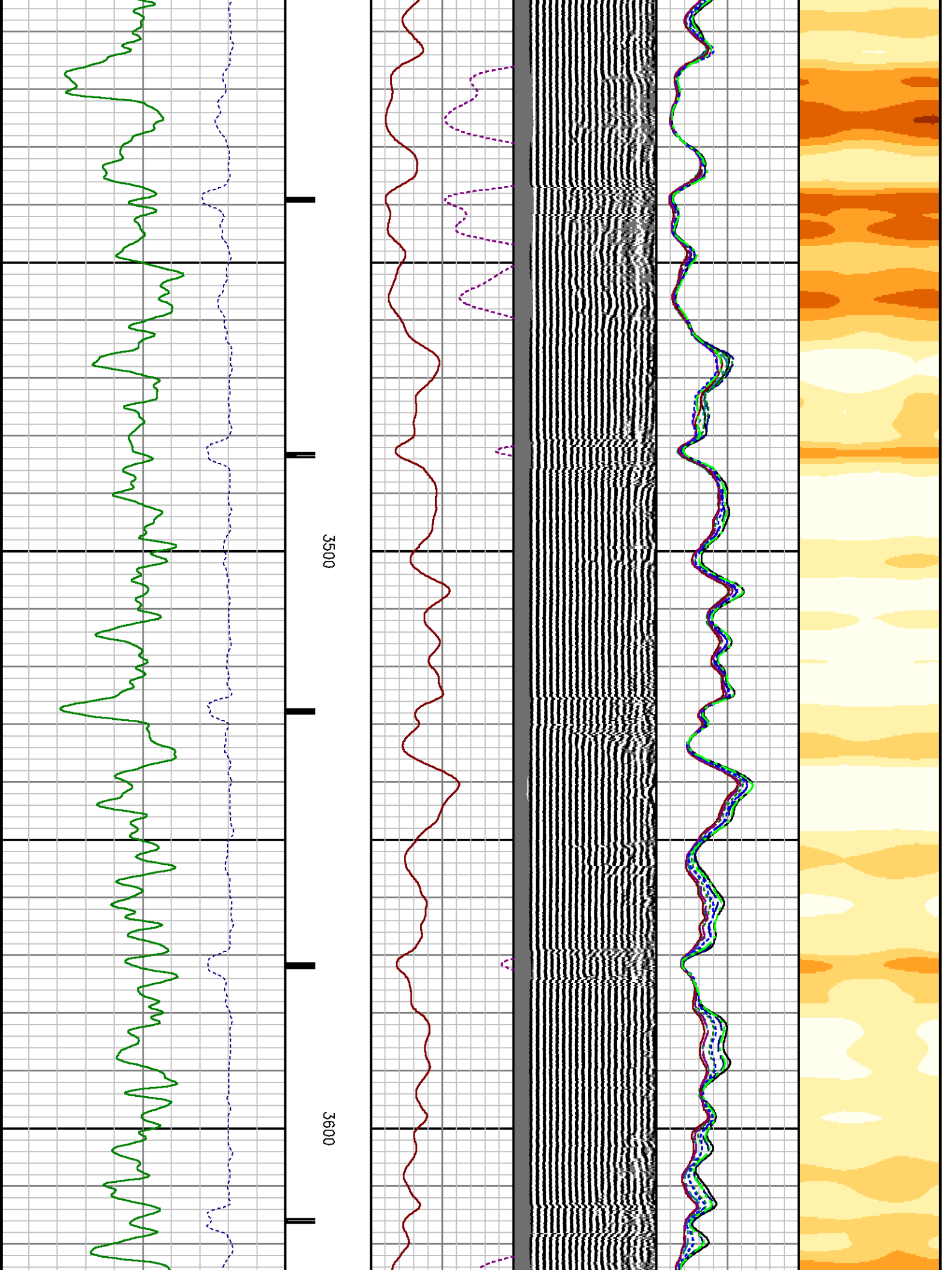


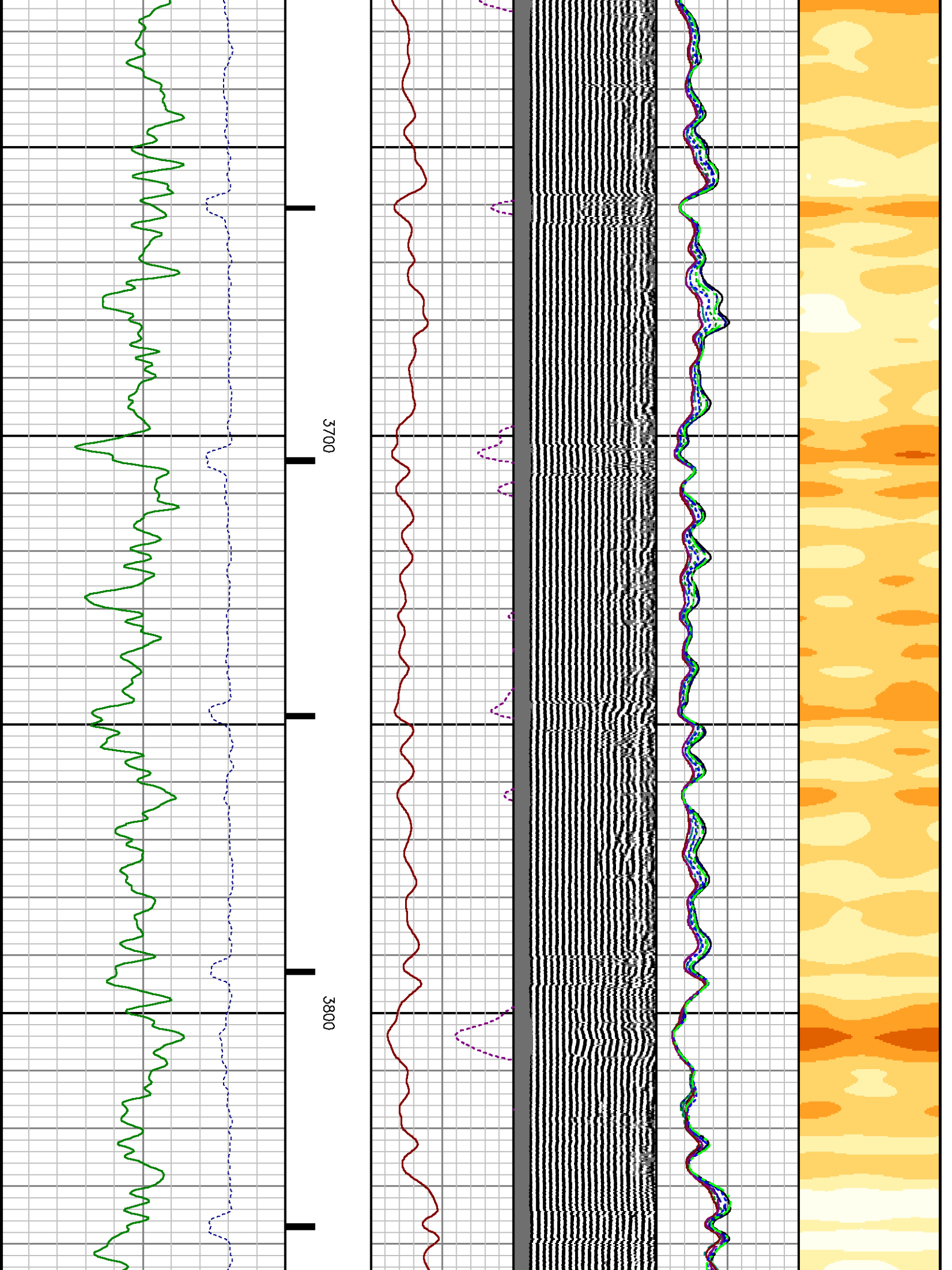


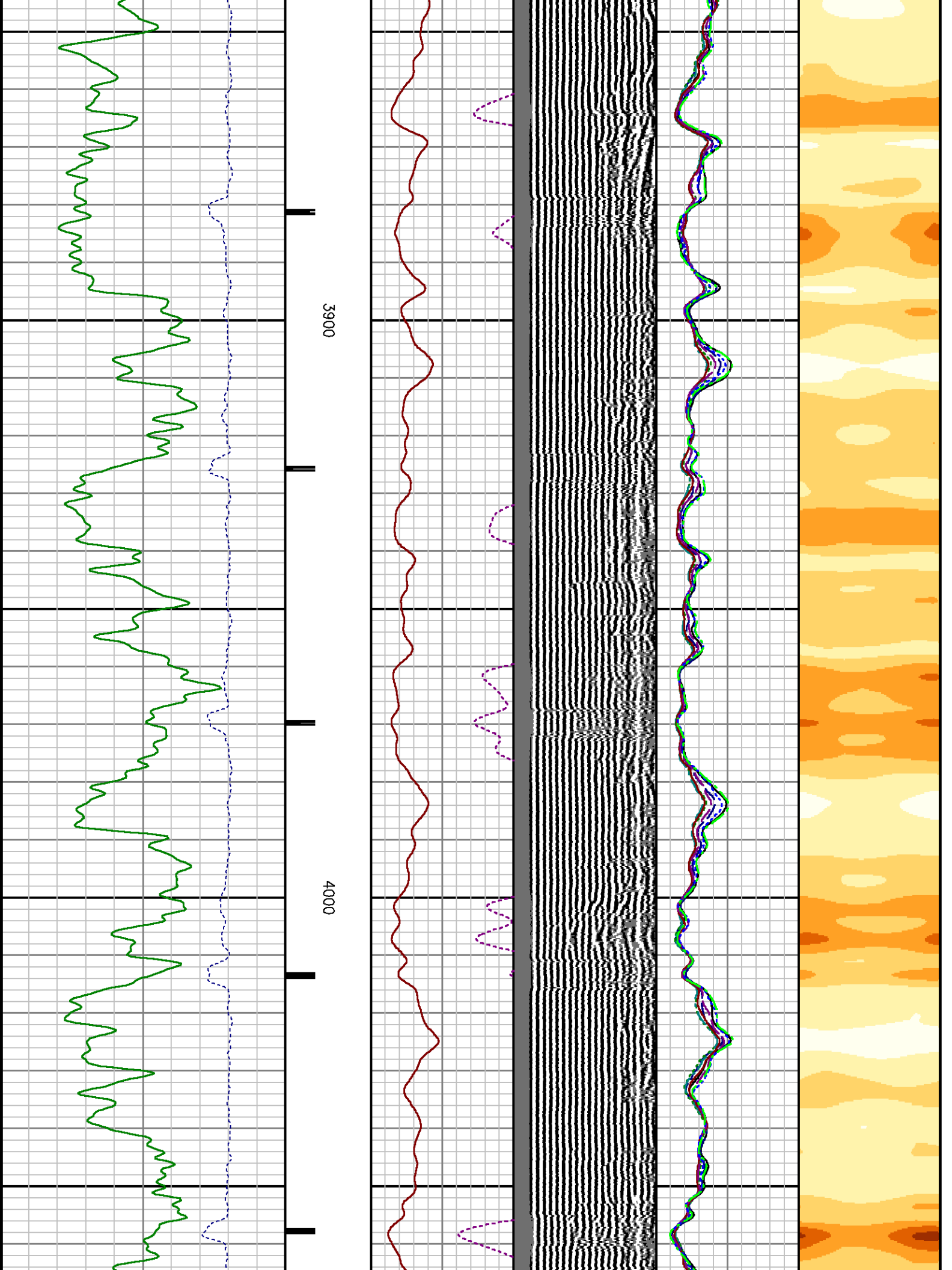


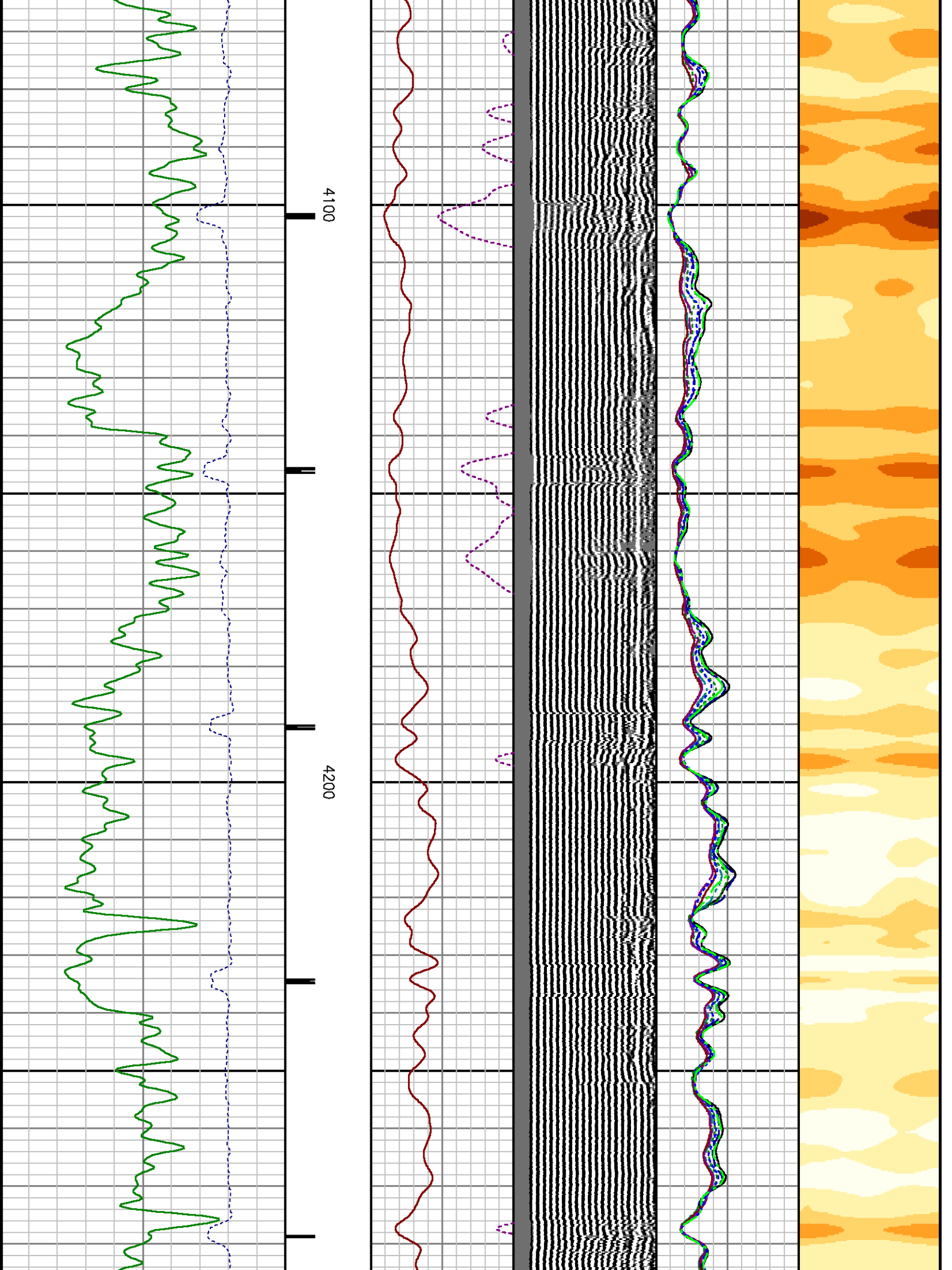


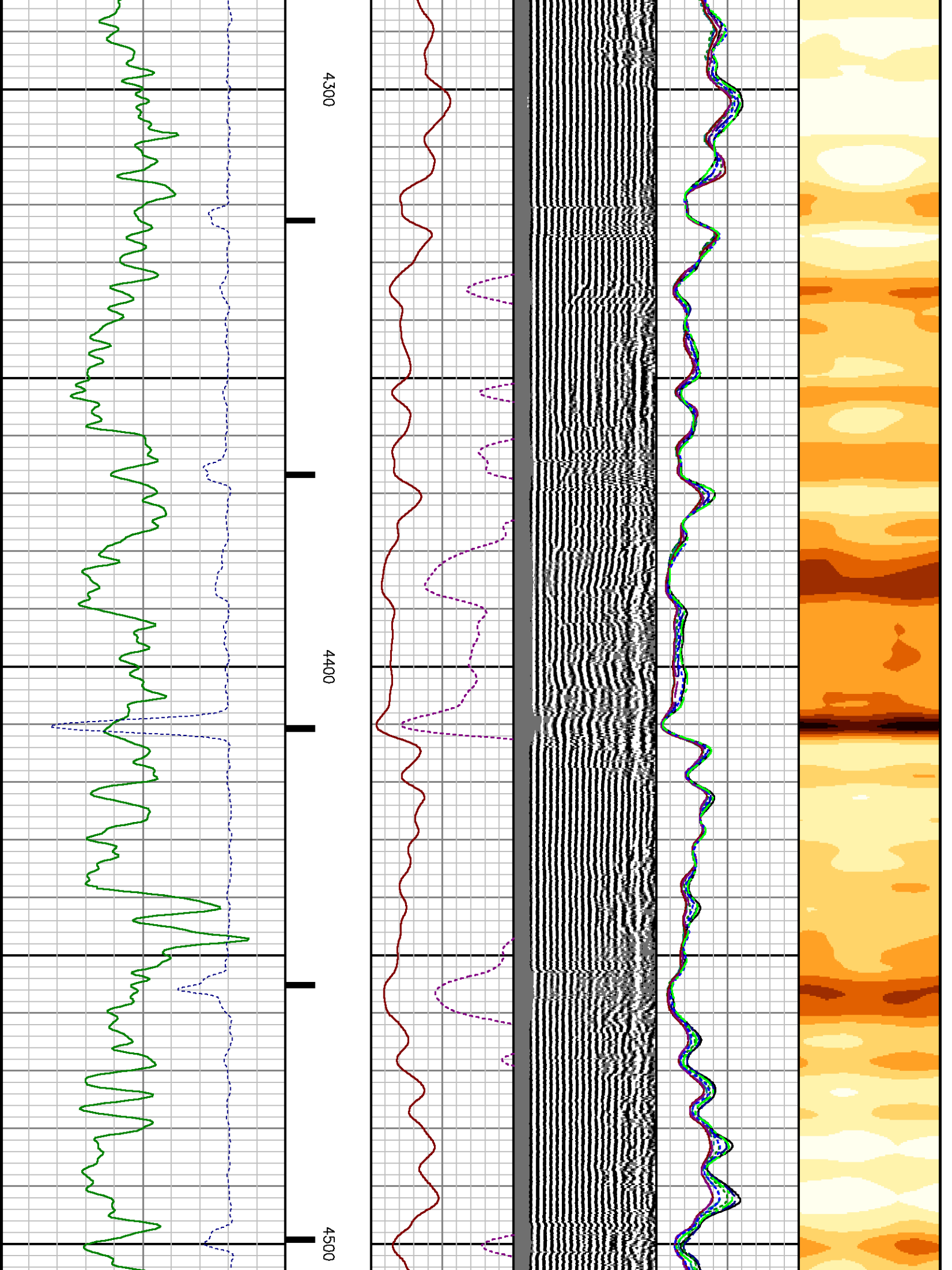


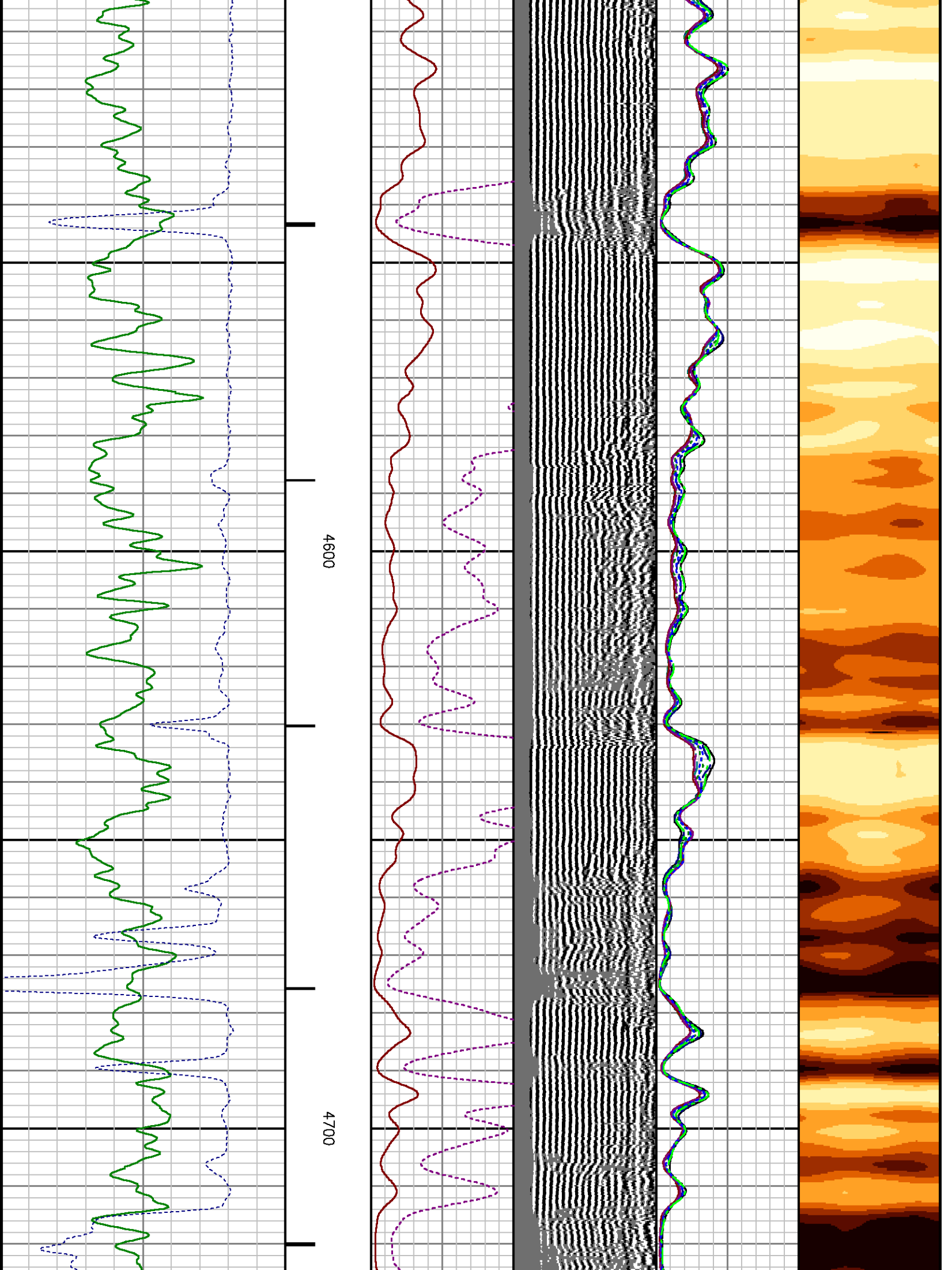


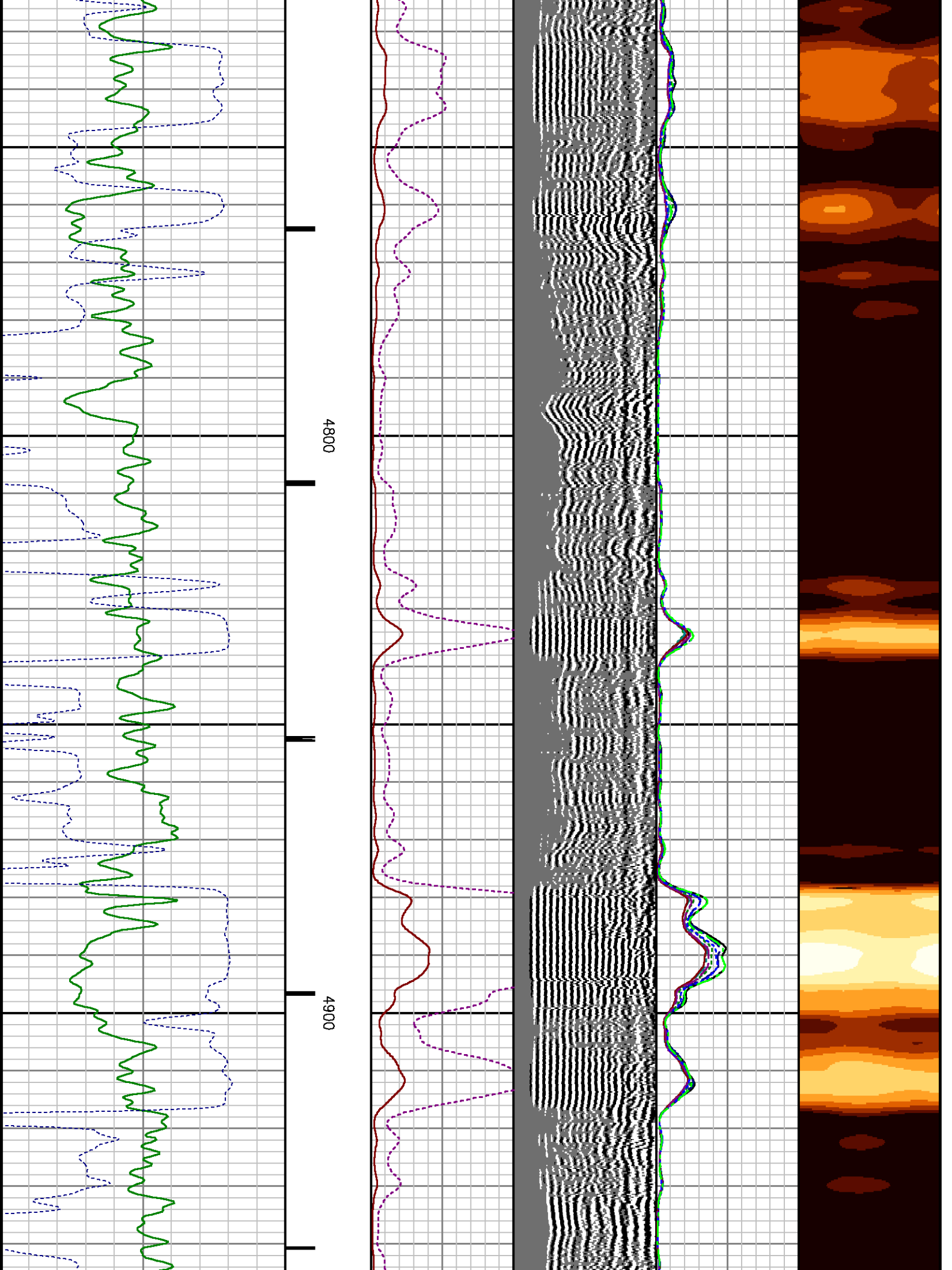


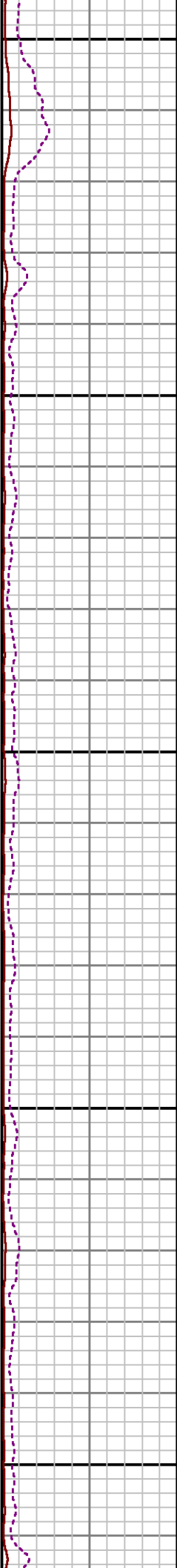
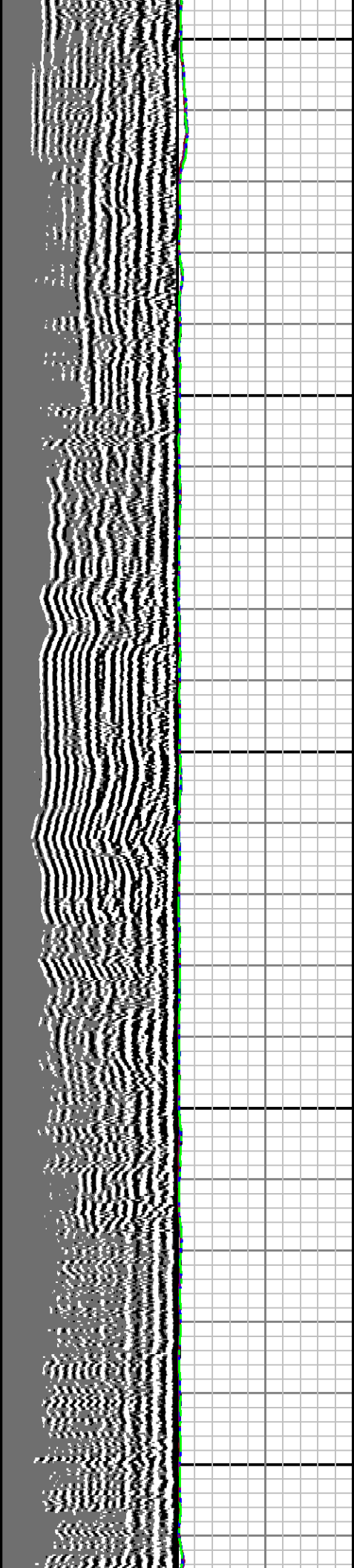






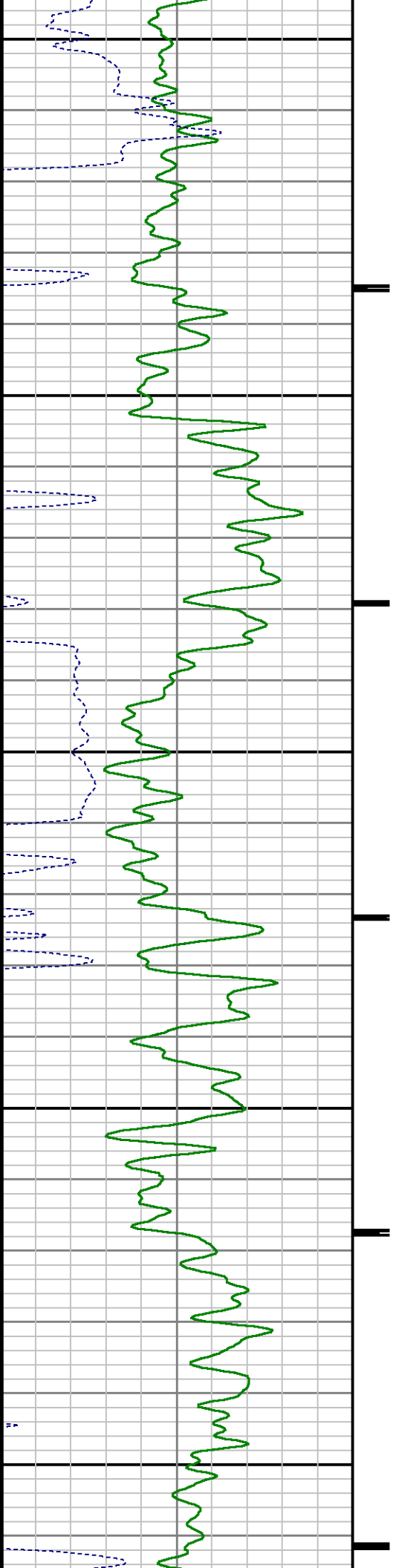


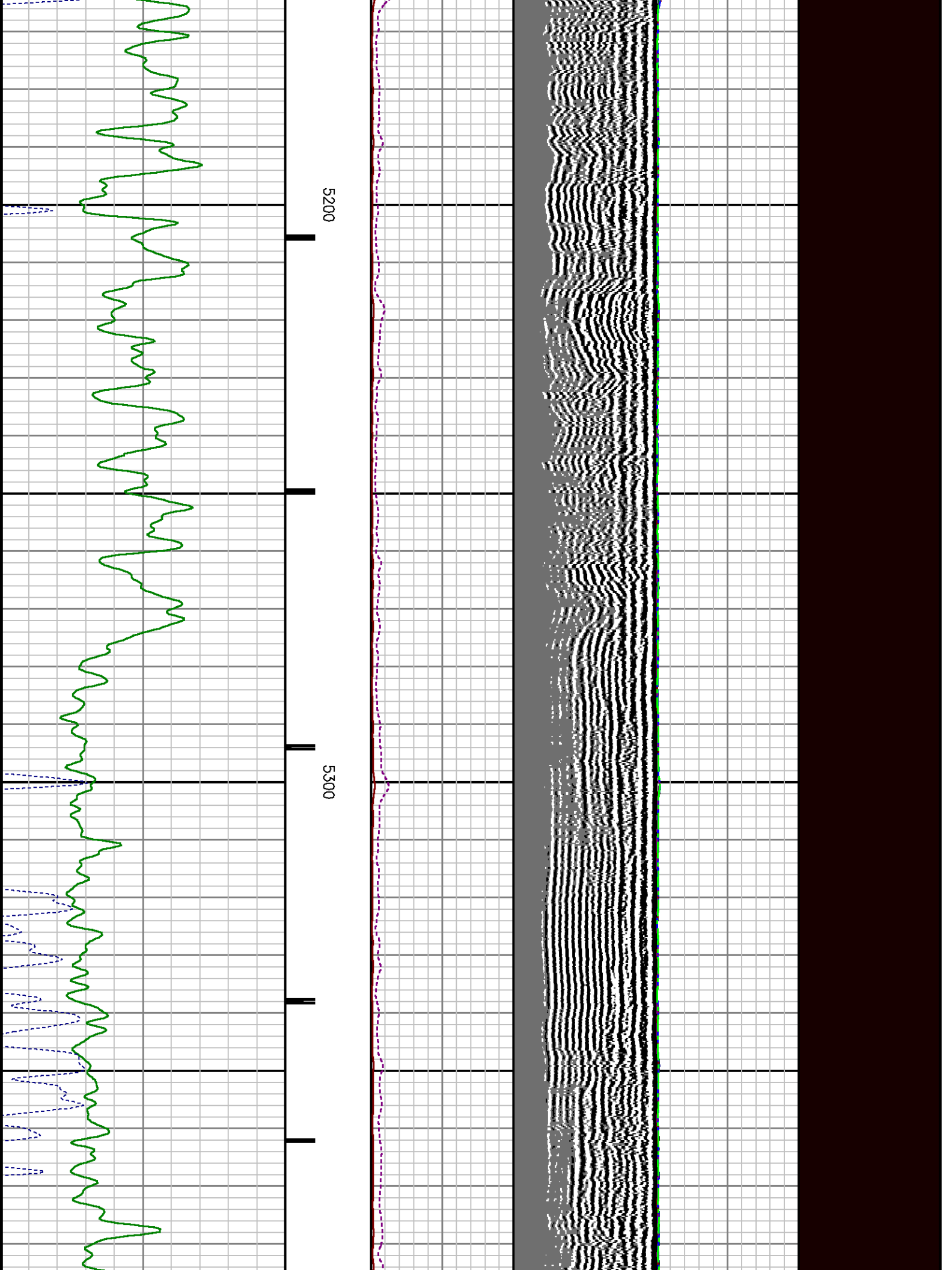


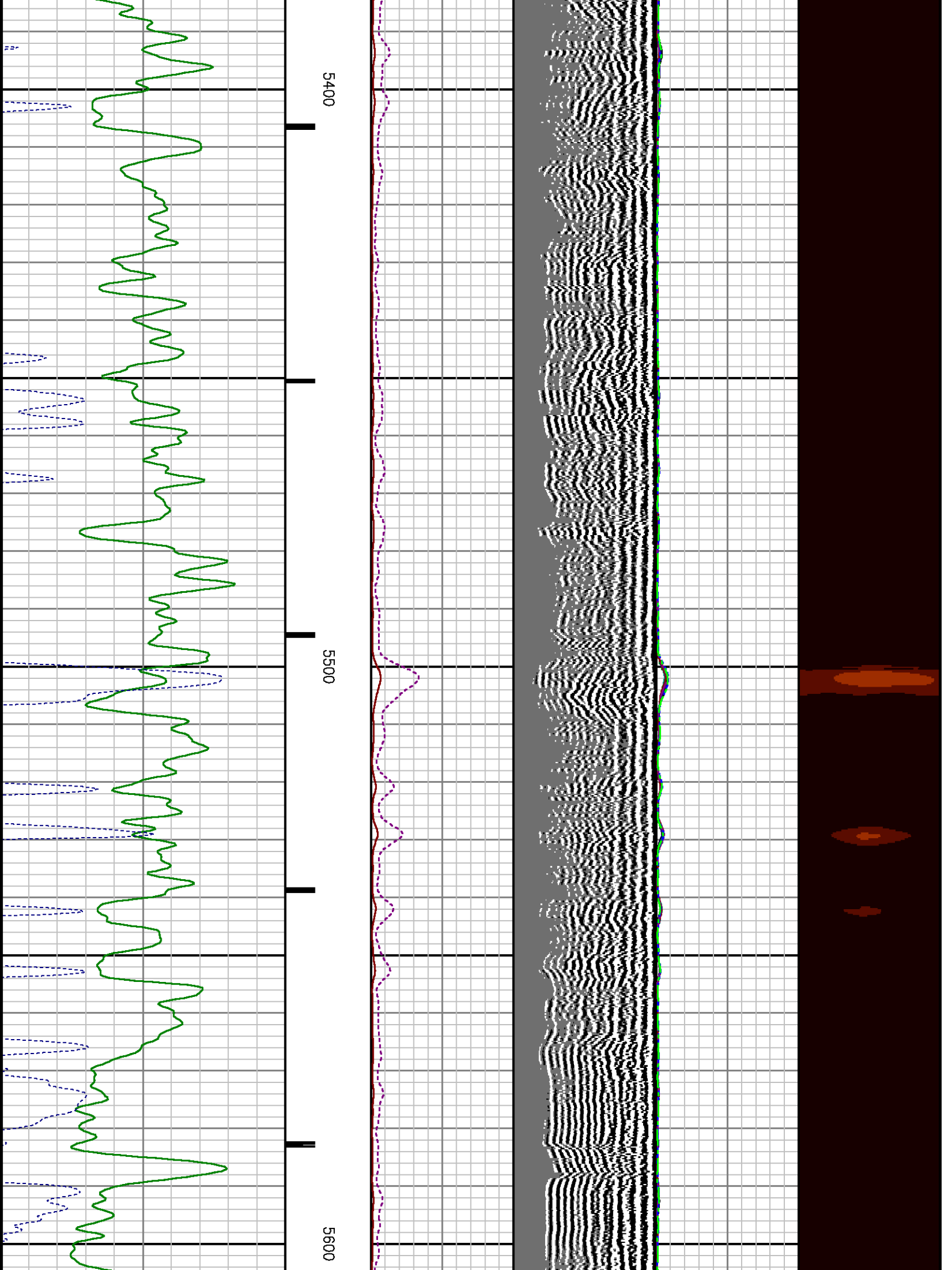


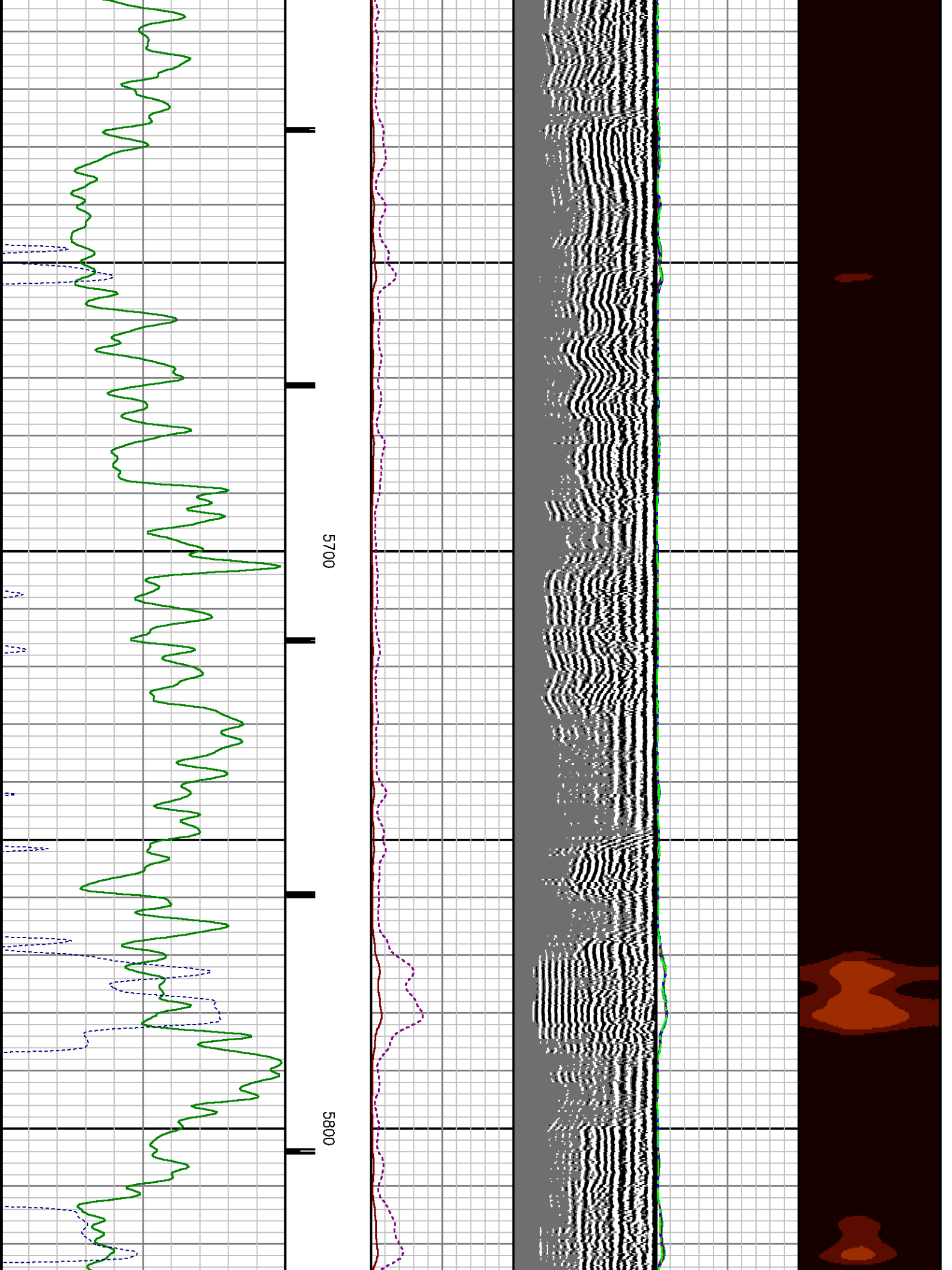
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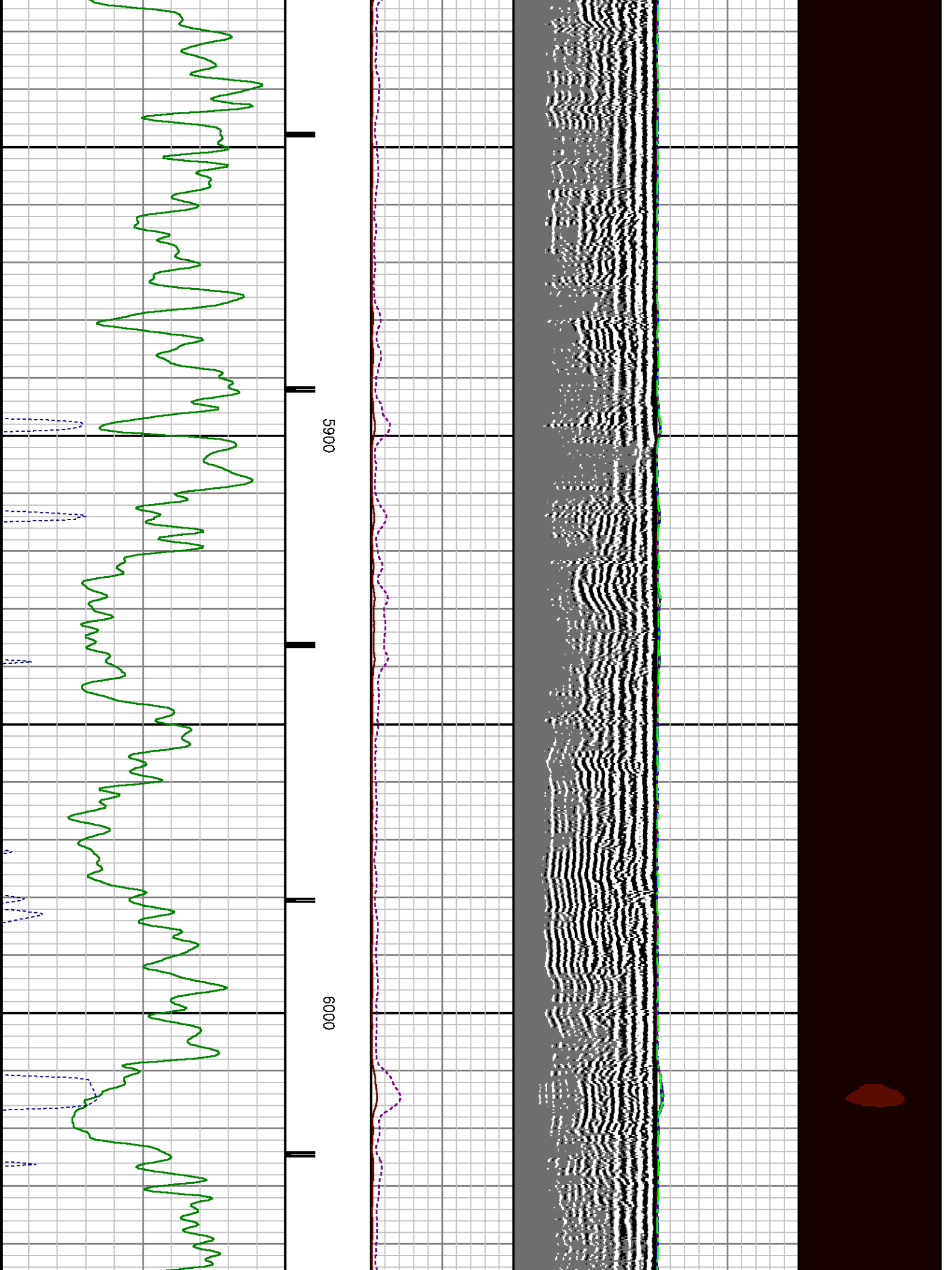
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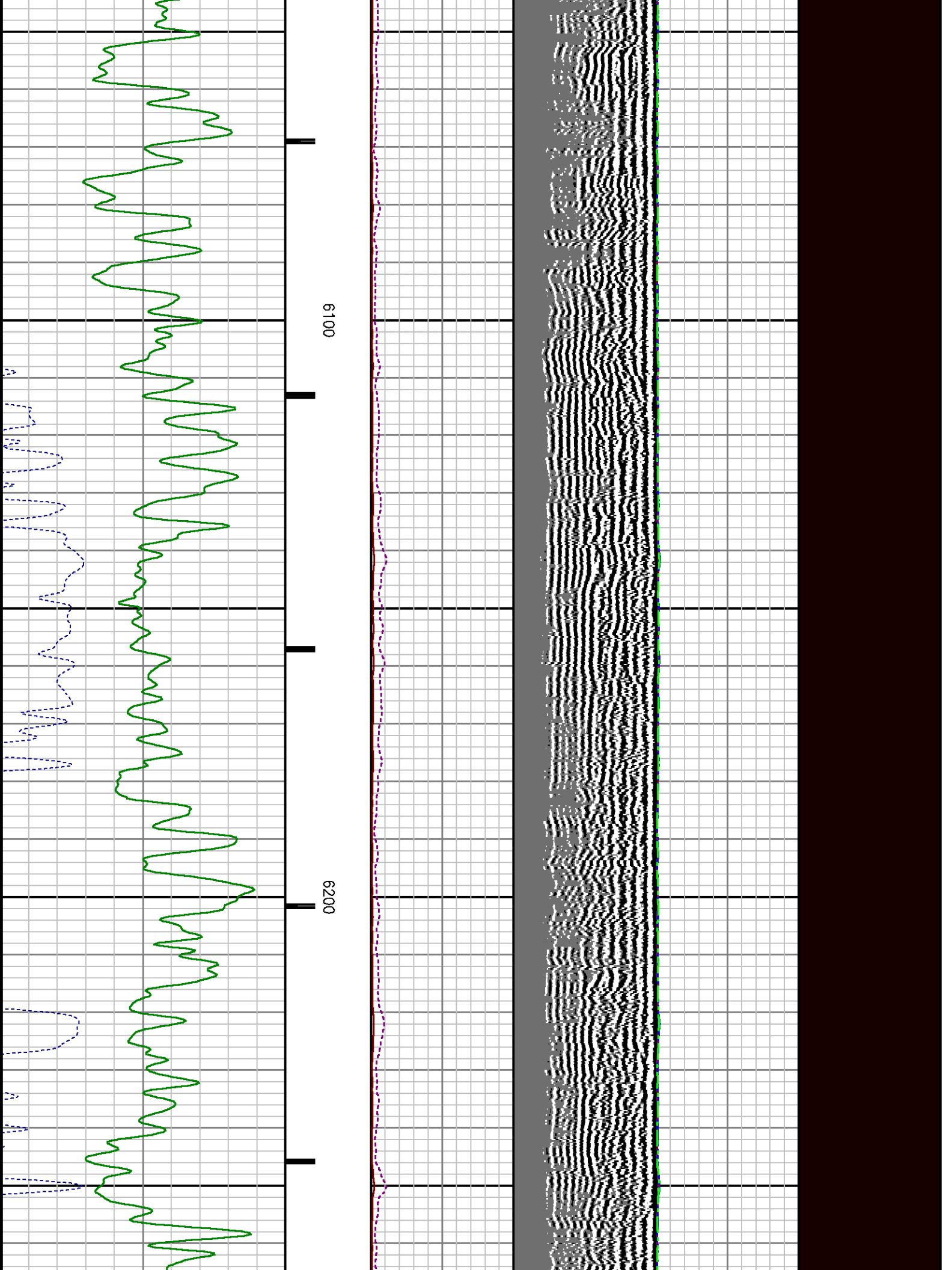


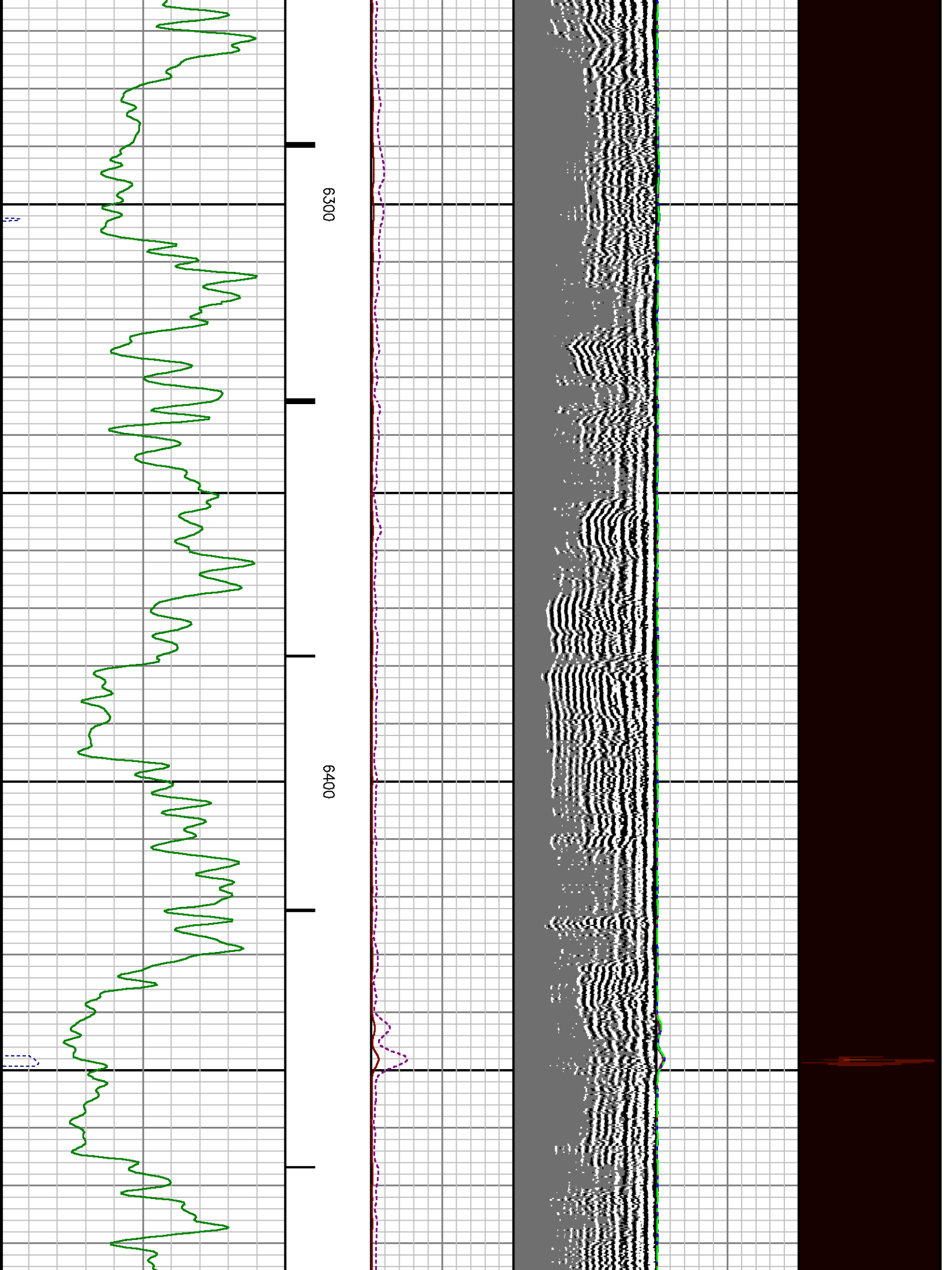


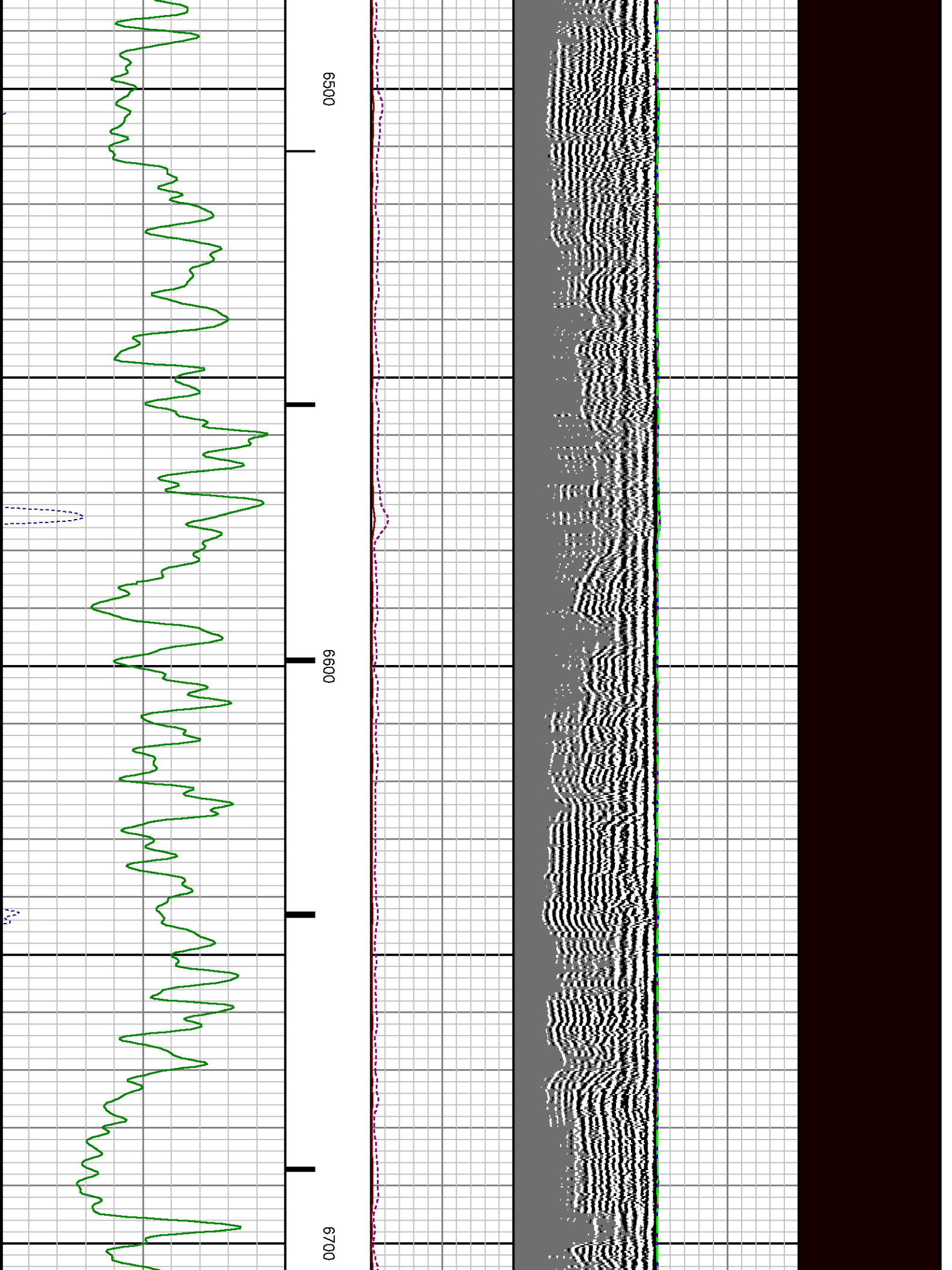


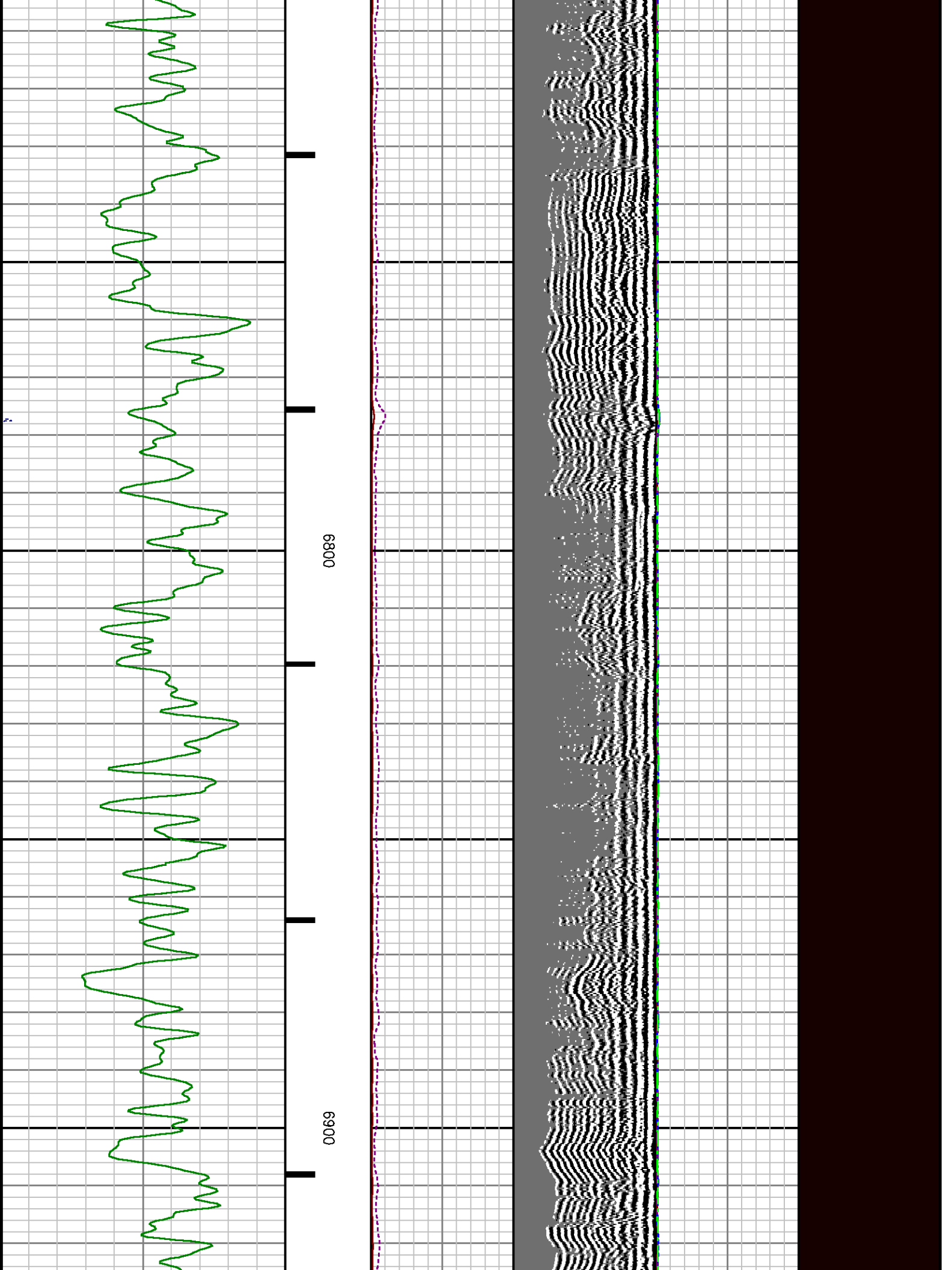


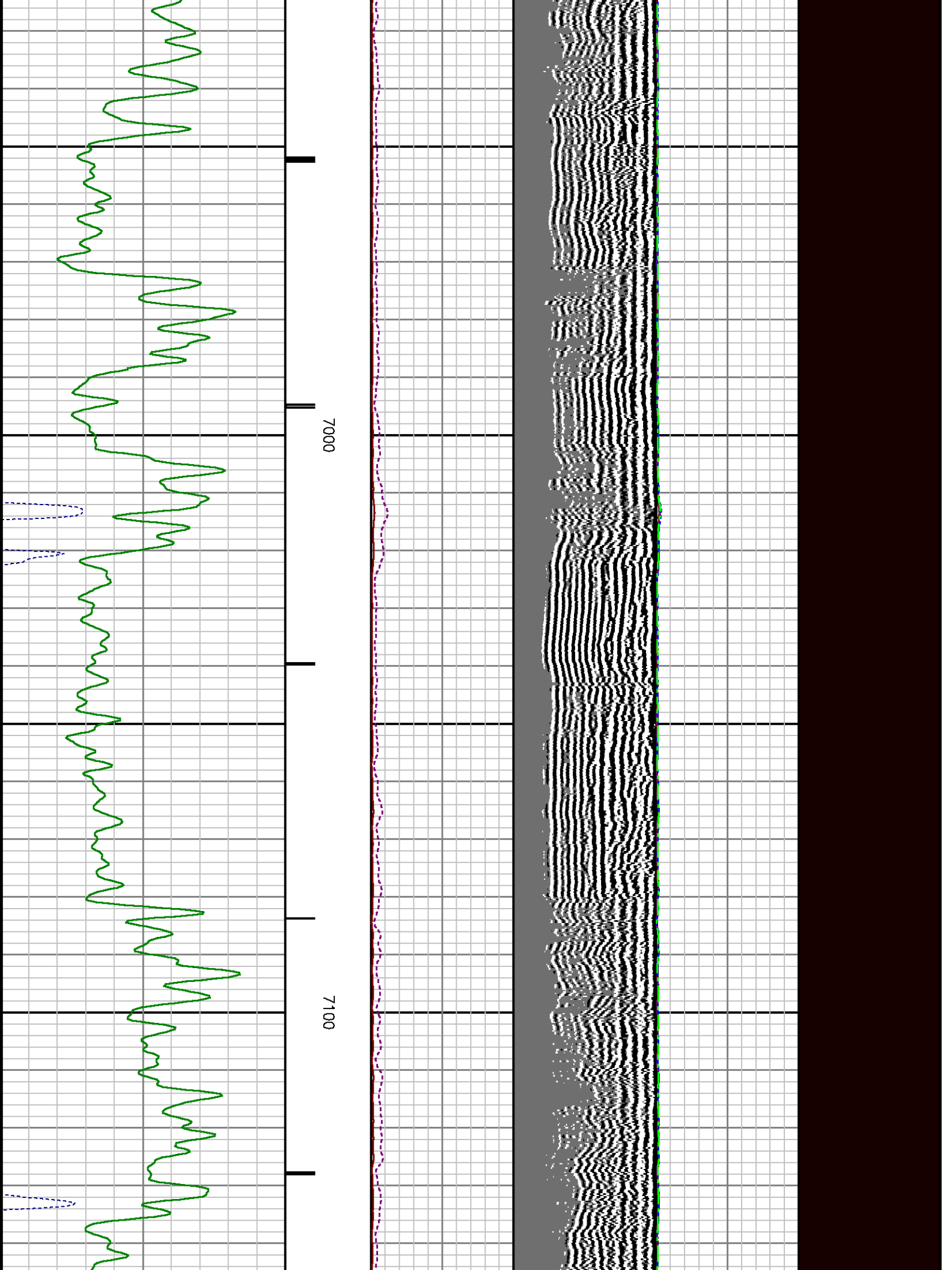


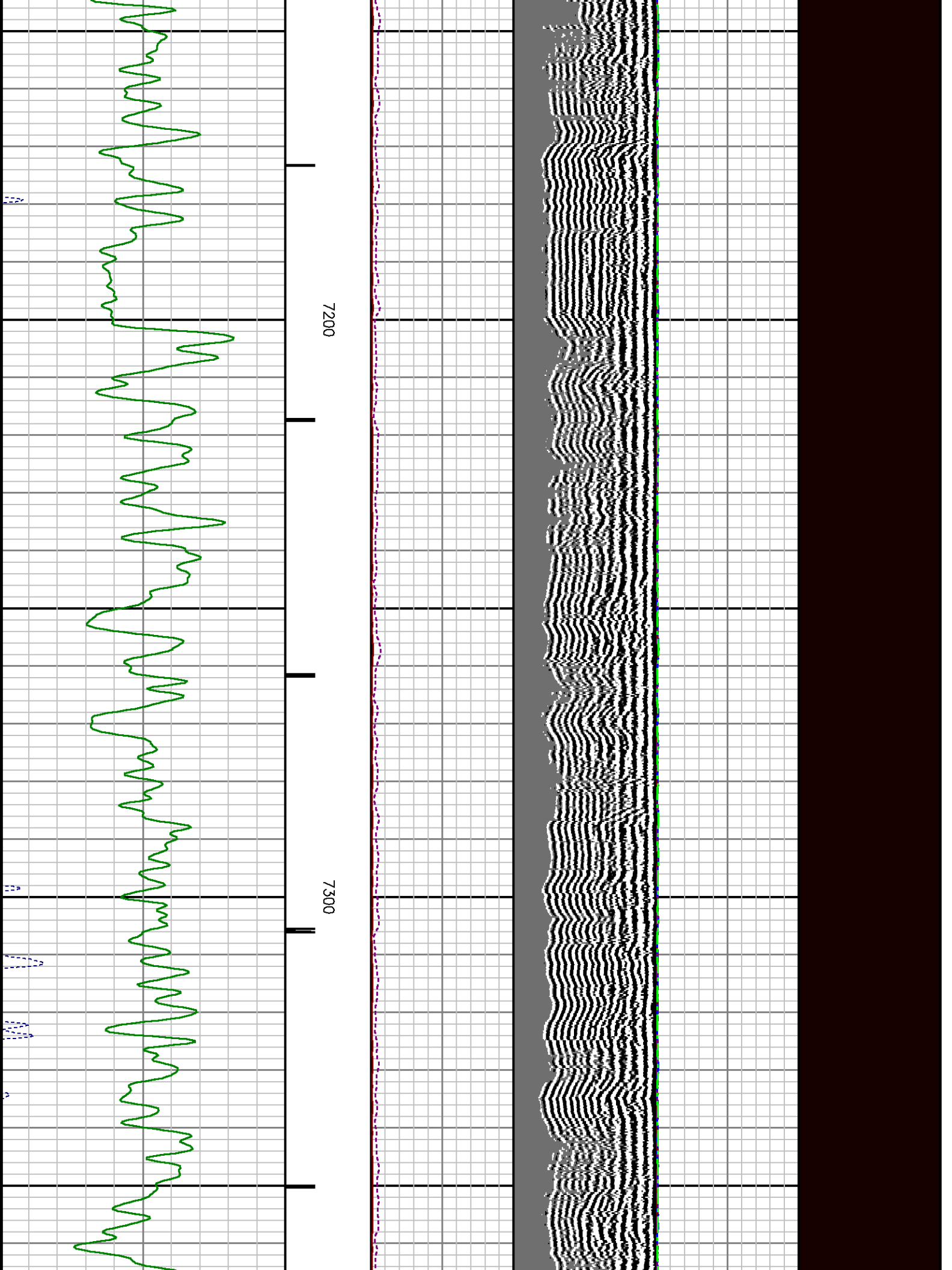


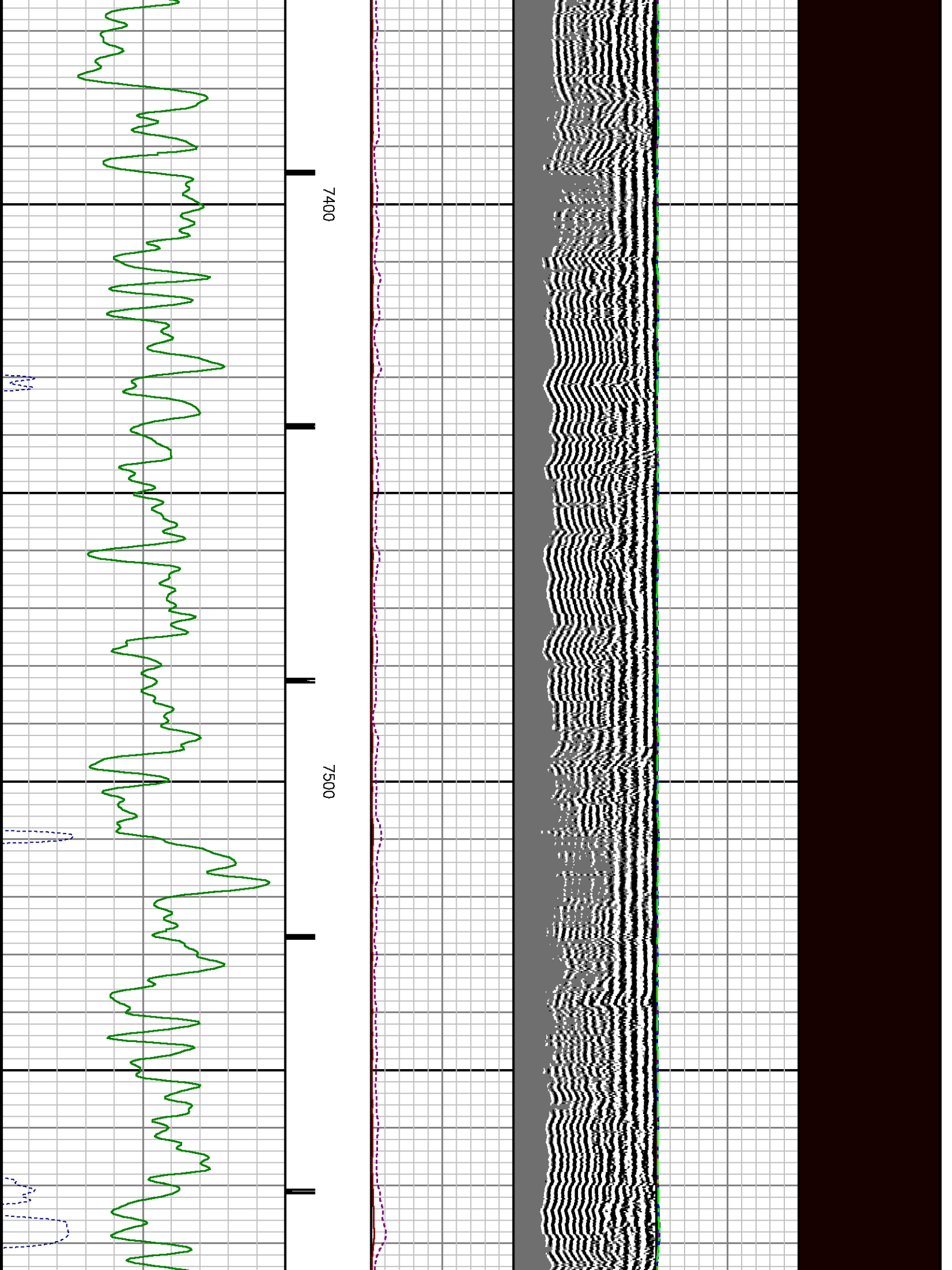


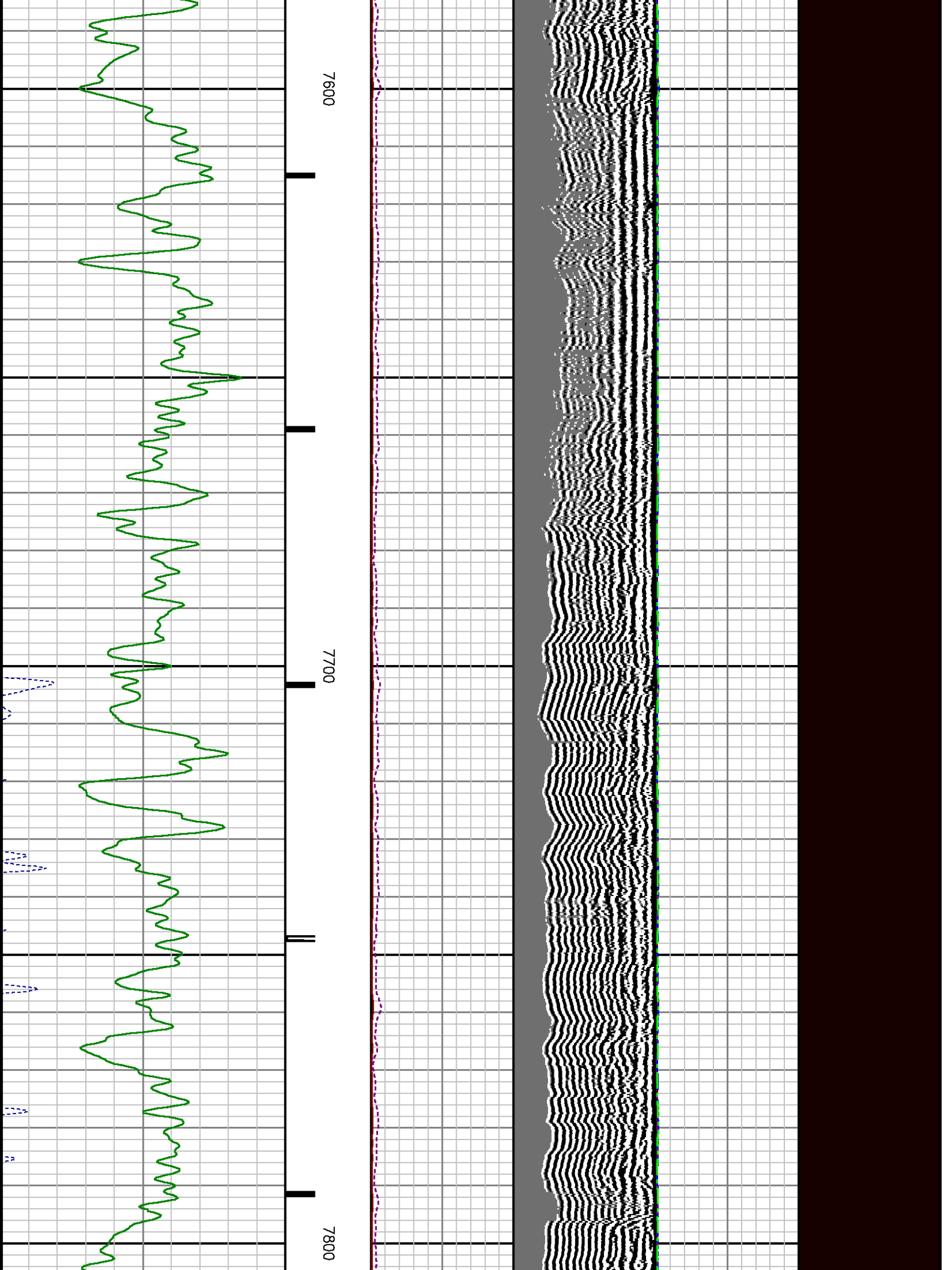


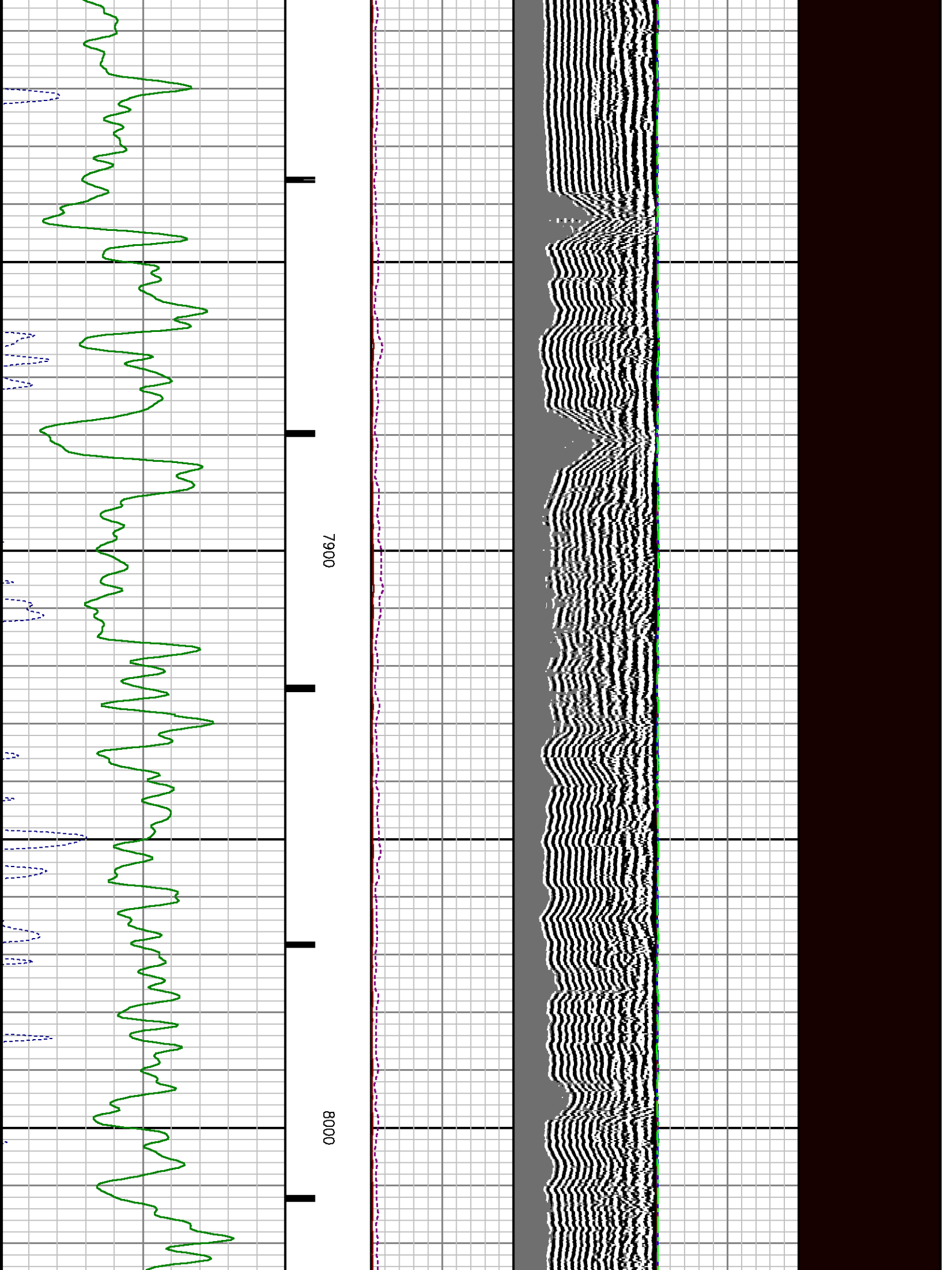


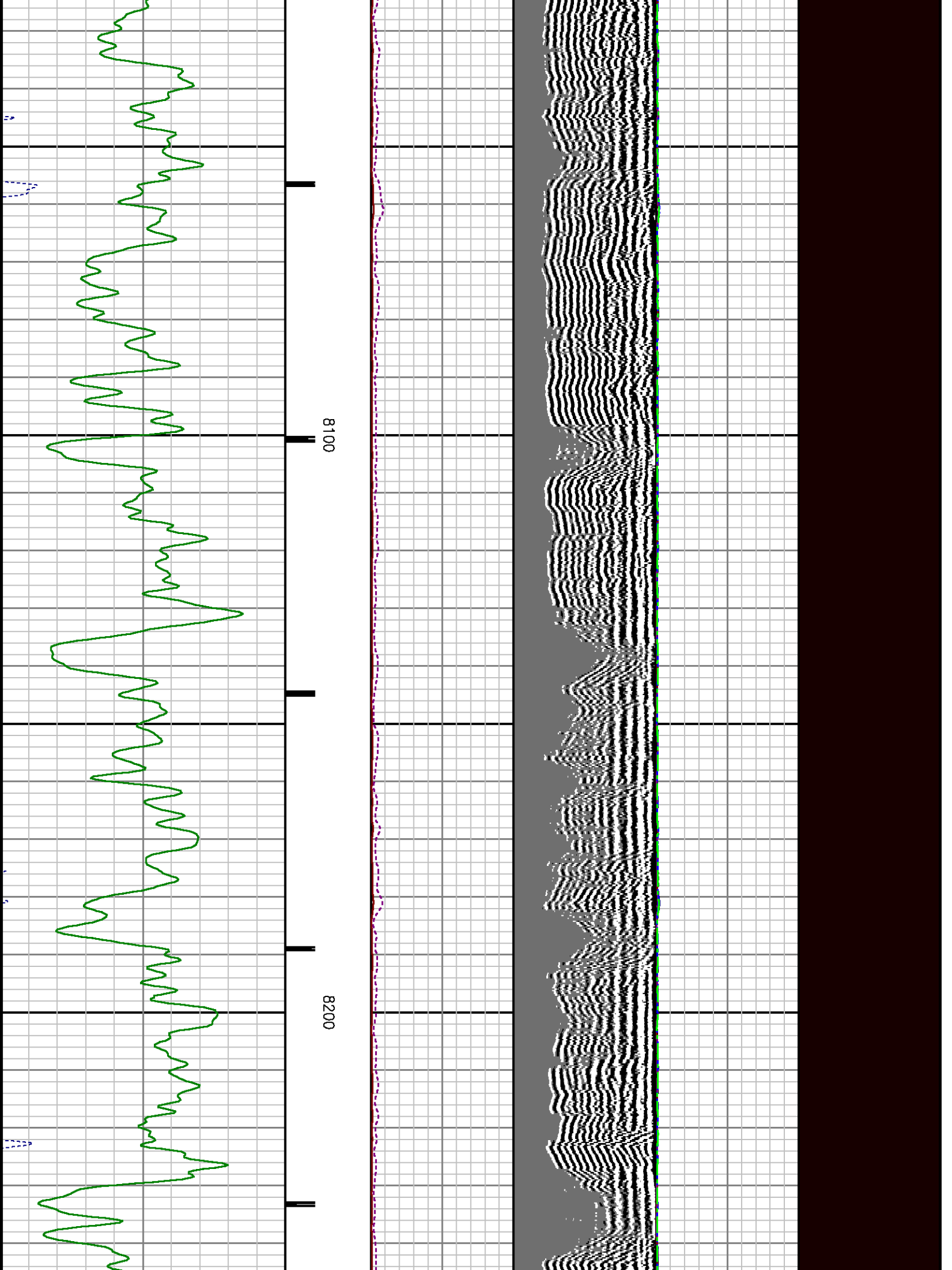


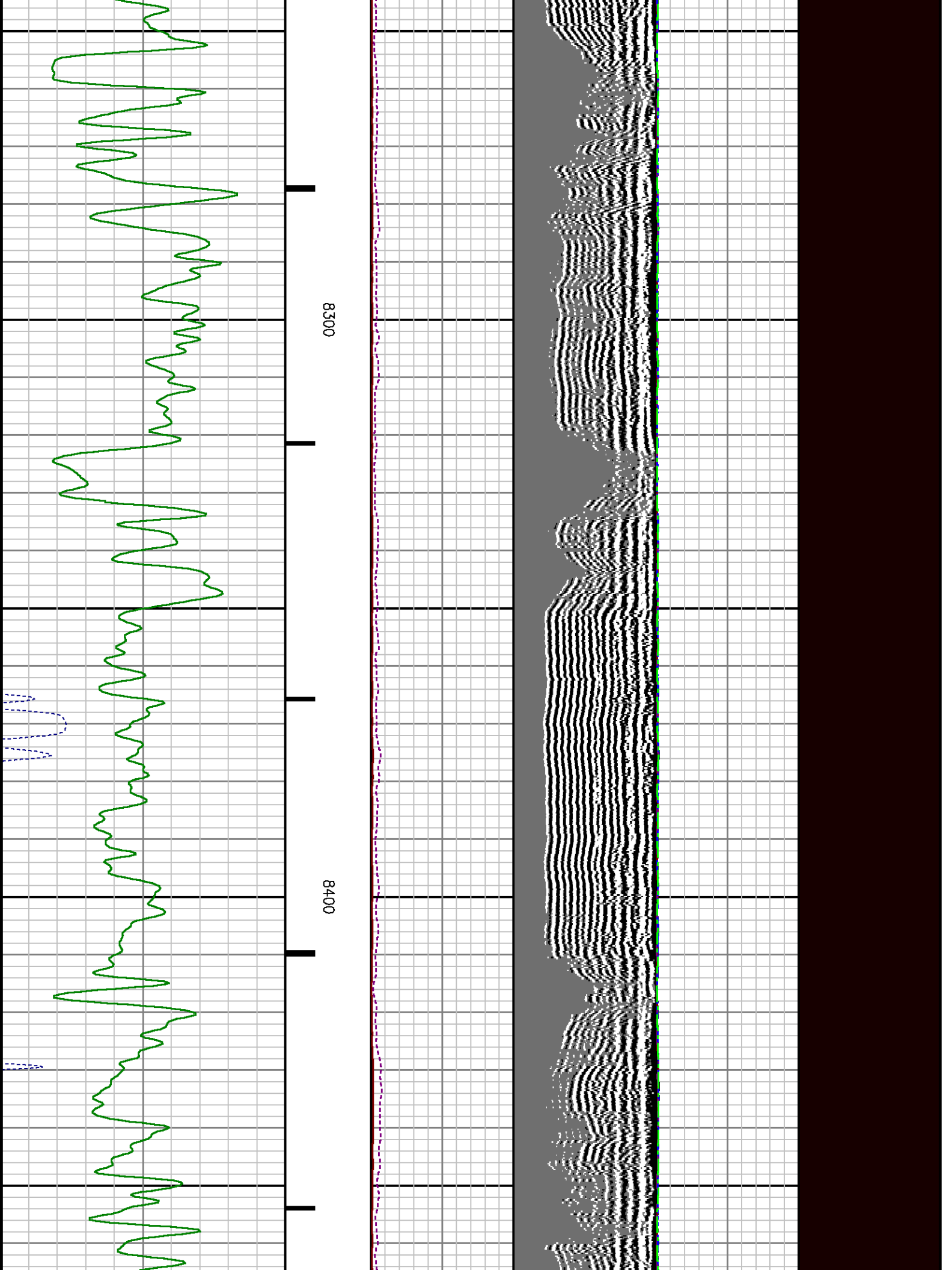


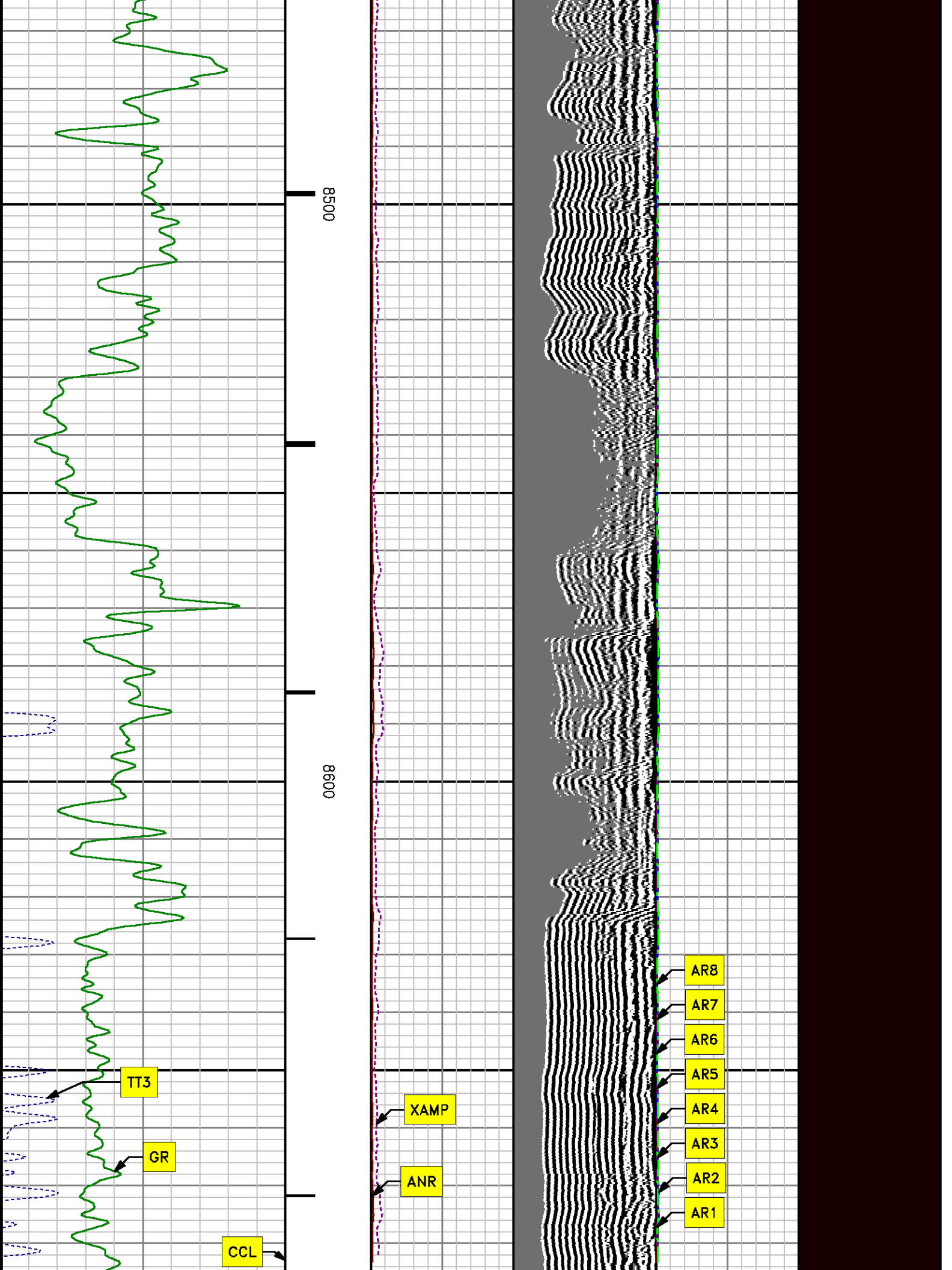


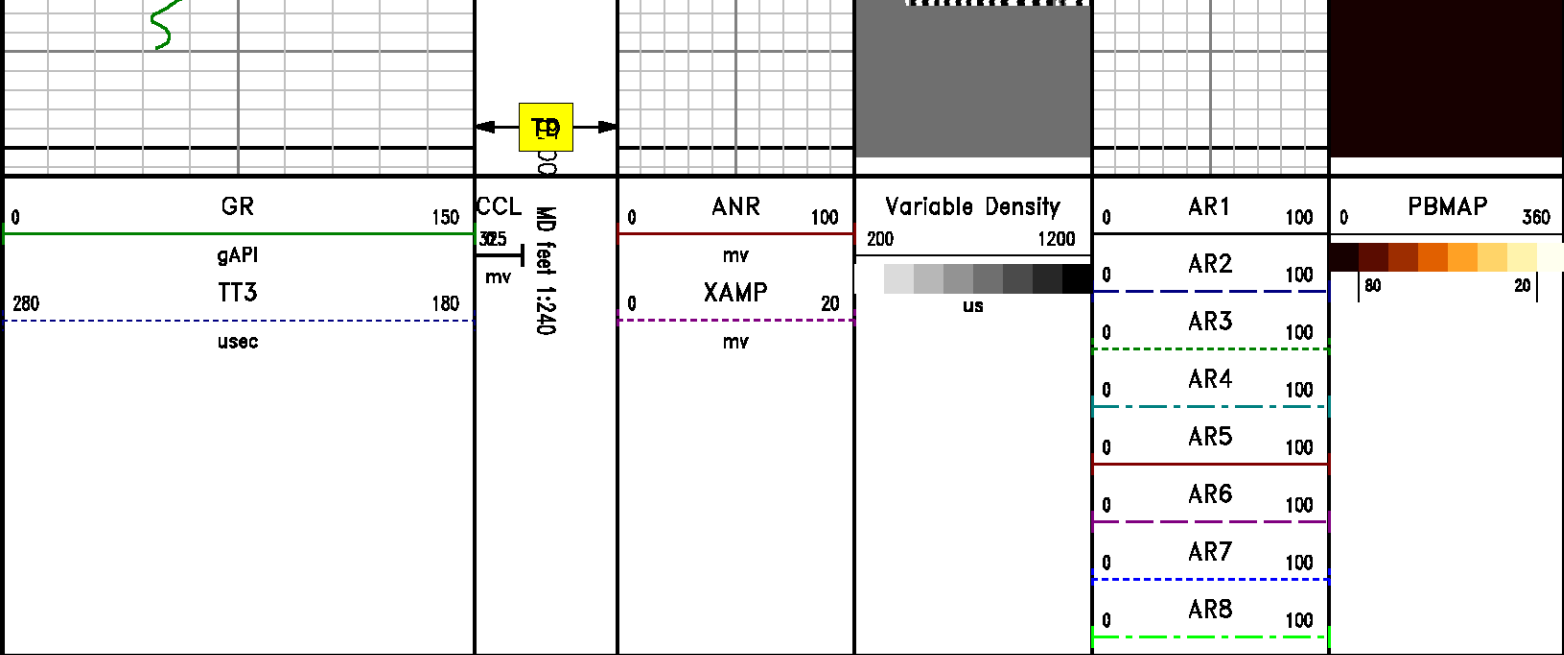












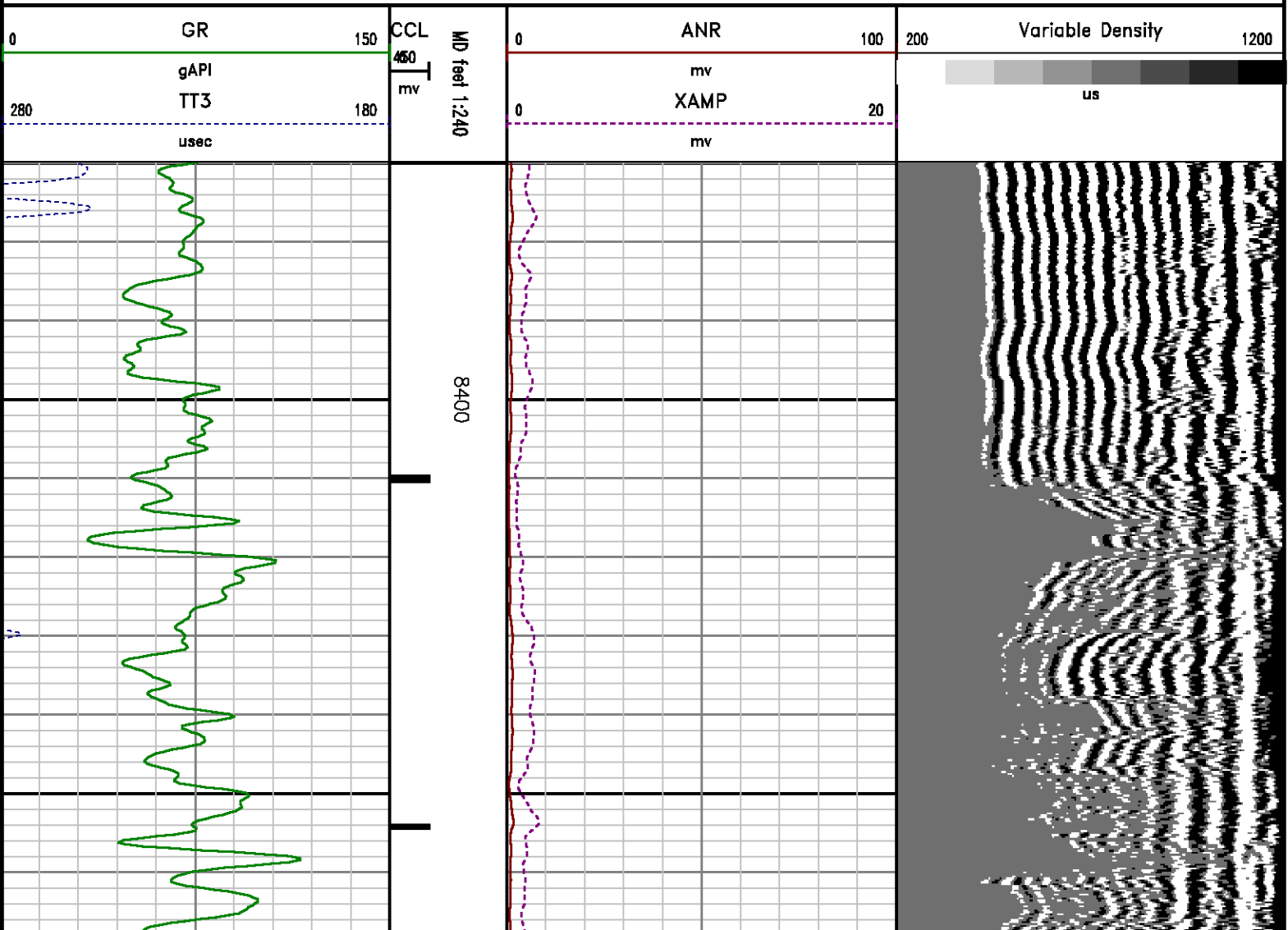
REPEAT SECTION
0 PSI

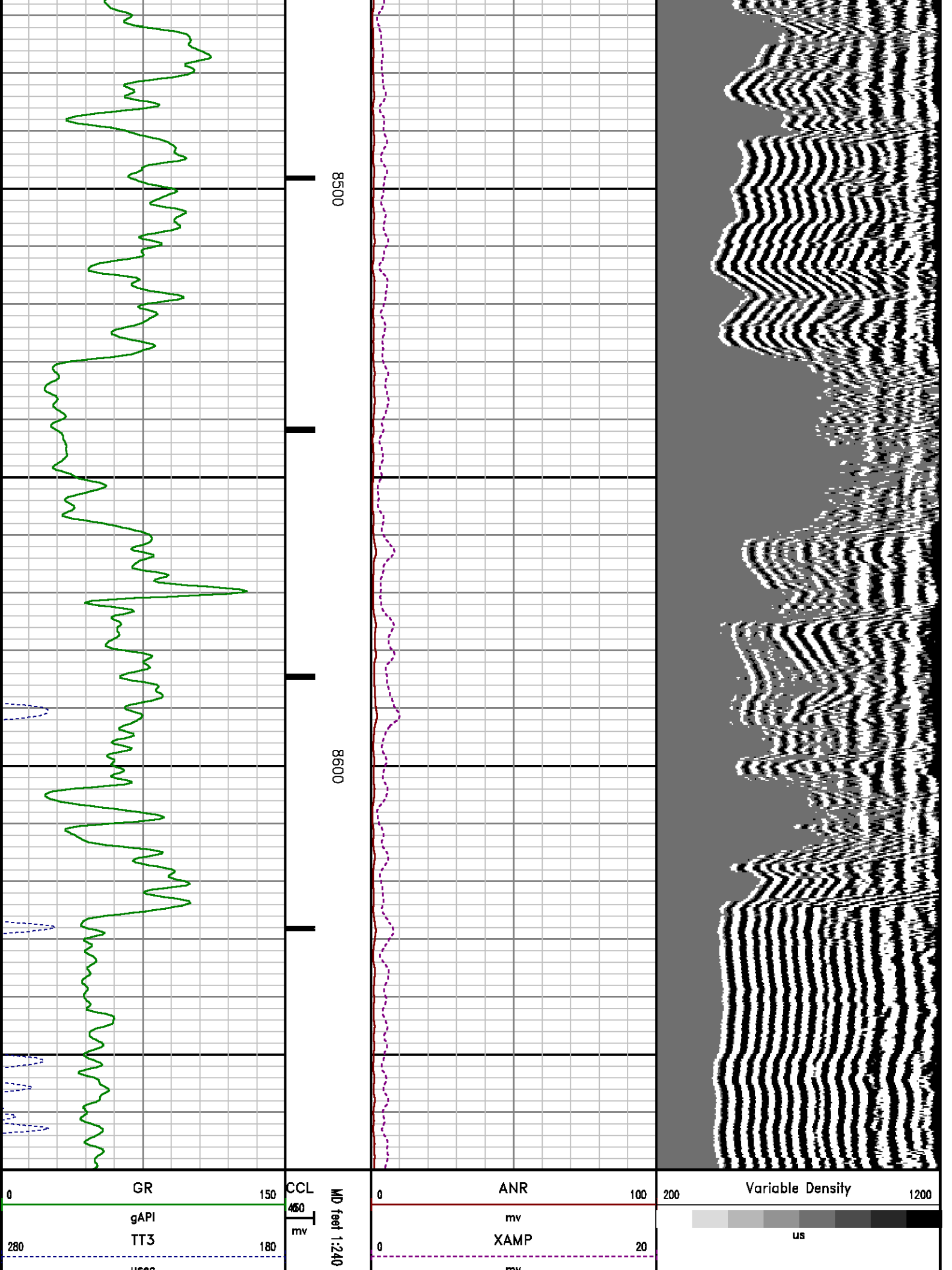
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	u sec	8360.811	8699.811
RAL	Amp Gate Start Near	195.000	u sec	8360.811	8699.811
RAL	Amp Gate Start Radial	195.000	u sec	8360.811	8699.811
RAL	Amp Gate Width Far	25.000	u sec	8360.811	8699.811
RAL	Amp Gate Width Near	25.000	u sec	8360.811	8699.811
RAL	Amp Gate Width Radial	25.000	u sec	8360.811	8699.811
RAL	casing od	4.500	inches	8360.811	8699.811
RAL	casing wt	11.600	lbm/ft	8360.811	8699.811
RAL	FB Start Far	291.900	u sec	8360.811	8699.811
RAL	FB Start Near	175.391	u sec	8360.811	8699.811
RAL	FB Start Radial	175.391	u sec	8360.811	8699.811
RAL	FB Thresh Far	10.000	mv	8360.811	8699.811
RAL	FB Thresh Near	4.000	mv	8360.811	8699.811
RAL	FB Thresh Radial	4.000	mv	8360.811	8699.811
RAL	Fluid Travel Time	200.000	u sec/ft	8360.811	8699.811

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 11-25
File Name : d:\welldata\wp\savege rwf 322-25\322cbl\repeat.xtf
Mode : PlotMgr 5.4.504
Interval : 8370.00 - 8670.00 feet UP
Created : 3/5/2014 9:19:31 PM





CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\496M5_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Mar 05 12:47:54 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: M5

Tool Delay [usec] -60.00 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	0.117	100.00	0.17
3 Ft. Receiver	218	216	30	166	21	1.357	100.00	0.16
5 Ft. Receiver	326	325	30	272	25	3.746	150.00	0.18
Radial #1	217	216	30	181	9	4.287	100.00	0.16
Radial #2	218	216	30	181	9	2.667	100.00	0.16
Radial #3	218	216	30	181	9	3.192	100.00	0.17
Radial #4	218	216	30	181	9	4.042	100.00	0.17
Radial #5	218	216	30	181	9	4.750	100.00	0.17
Radial #6	217	216	30	181	9	5.263	100.00	0.17
Radial #7	215	216	30	181	9	2.450	100.00	0.16
Radial #8	218	216	30	181	9	3.296	100.00	0.16

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496M5 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Mar 05 15:15:40 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: M5

Tool Delay [usec] -60.00 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	0.005	0.000	0.97	100.000
3 Ft. Receiver	195	25	1.932			
5 Ft. Receiver	305	25	2.263			

Radial #1	195	25	1.447
Radial #2	195	25	1.433
Radial #3	195	25	1.606
Radial #4	195	25	1.646
Radial #5	195	25	1.812
Radial #6	195	25	1.959
Radial #7	195	25	1.591
Radial #8	195	25	1.547

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

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



24.23'

XMIT 18.05'

Temp Rating 350.00 F
Press Rating 18000.00 PSI

NEAR RCVR 14.97'
FAR RCVR 13.05'
CCL 11.34'
GR 9.49'
NEU 4.09'
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

CENTRALIZER

Series RALCENT
Mnemonic CENT
Diameter 3.12"
Weight 20.00 lb

Total Length: 24.23'
Total Weight: Not Available
Max Diameter: 0' 3.12"



Company WPX ENERGY
Well SAVAGE RWF 322-25
Field RULISON
County GARFIELD State CO

File No: CH083304
API No: 05045219660000

Location

SHL: 2486' FNL & 1424' FWL
BHL: 1465' FNL & 2219' FWL

Elevations

KB 6058 ft
DF
GL 6037 ft

25 6S 94W
RWF 22-25 PAD
CYCLONE 17

SEC 25 TWP 6S RGE 94W

CASE

Baker Atlas