



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH070855	Company Well Field County	WPX ENERGY DUGGAN RWF 413-29 RULISON GARFIELD	State COLORADO
API No: 05045216570000			
Location 29 65 94W RWF 413-29 NABORS SSD 573	SHL: 572' FSL & 585' FWL BHL: 1811' FSL & 696' FWL SEC 29 TWP 6S RGE 94W	Other Services RPM	
Permanent Datum Log Measured From Drill Measured From	G.L. _____ Elevation 5419.2 ft K.B. 26 ft Above P. D. KELLY BUSHING	Elevations KB 5445.2 ft DF GL 5419.2 ft	

Date	21/APR/13	
Run	ONE	
Service Order	533661	
Depth Driller	8055 ft	
Depth Logger	8027 ft	
Bottom Logged Interval	8017 ft	
Top Logged Interval	26 ft	
Time Started	8:00	
Time Finished	11:30	
Operator Rig Time	3.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	N/A	
Salinity	N/A	
Fluid Level	132 ft	
Logged Cement Top	N/A	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	N/A	
Nominal Logging Speed	45 fpm	
Maximum Recorded Temperature	228 degF	
Reference Log	BAKER HUGHES HDIL LOG	
Reference Log Date	07/APR/15	
Equipment No.	6726	ROCK SPRINGS
Recorded By	M. KINSEL	9712
Witnessed By	MR. BOB CADY	GRAND JUNCTION

- 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	1123 ft
8.75 in	0 ft	8095 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in	N/A	N/A	0 ft	1100 ft
4.5 in	11.6 lbm/ft	1-80	0 ft	8055 ft

Remarks
ALL DATA IN THIS LOG WAS DEPTH SHIFTED TO MATCH A BAKER HUGHES HDIL LOG DATED 7 APRIL 2013 AT THE CLIENT'S REQUEST. THE AMOUNT OF LINEAR SHIFT WAS 3 FEET DOWN. DEPTH SHIFTING PROCESS CREATES THE POTENTIAL FOR COLLAR LENGTHS TO VARY FROM OTHER CASED HOLE LOGS WITHOUT A GAMMA RAY REFERENCE. SHORT JOINT: 4534' - 4555' BHT: 228 degF

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10163028	CENTRALIZED
1	1	GAMMA RAY/CCL	2459XA	10417457	CENTRALIZED

MAIN LOG PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	323.655	usec	22.297	8039.000
RAL	Amp Gate Start Near	198.687	usec	22.297	8039.000
RAL	Amp Gate Start Radial	198.031	usec	22.297	8039.000
RAL	Amp Gate Width Far	25.000	usec	22.297	8039.000
RAL	Amp Gate Width Near	25.000	usec	22.297	8039.000
RAL	Amp Gate Width Radial	25.000	usec	22.297	8039.000
RAL	casing od	4.500	inches	22.297	8039.000
RAL	casing wt	11.600	lbm/ft	22.297	8039.000
RAL	FB Start Far	291.900	usec	22.297	8039.000
RAL	FB Start Near	175.391	usec	22.297	8039.000
RAL	FB Start Radial	175.391	usec	22.297	8039.000
RAL	FB Thresh Far	10.000	mv	22.297	8039.000
RAL	FB Thresh Near	4.000	mv	22.297	8039.000
RAL	FB Thresh Radial	4.000	mv	22.297	8039.000
RAL	Fluid Travel Time	200.000	usec/ft	22.297	8039.918

DEPTH OFFSETS

DEPTH OFFSETS

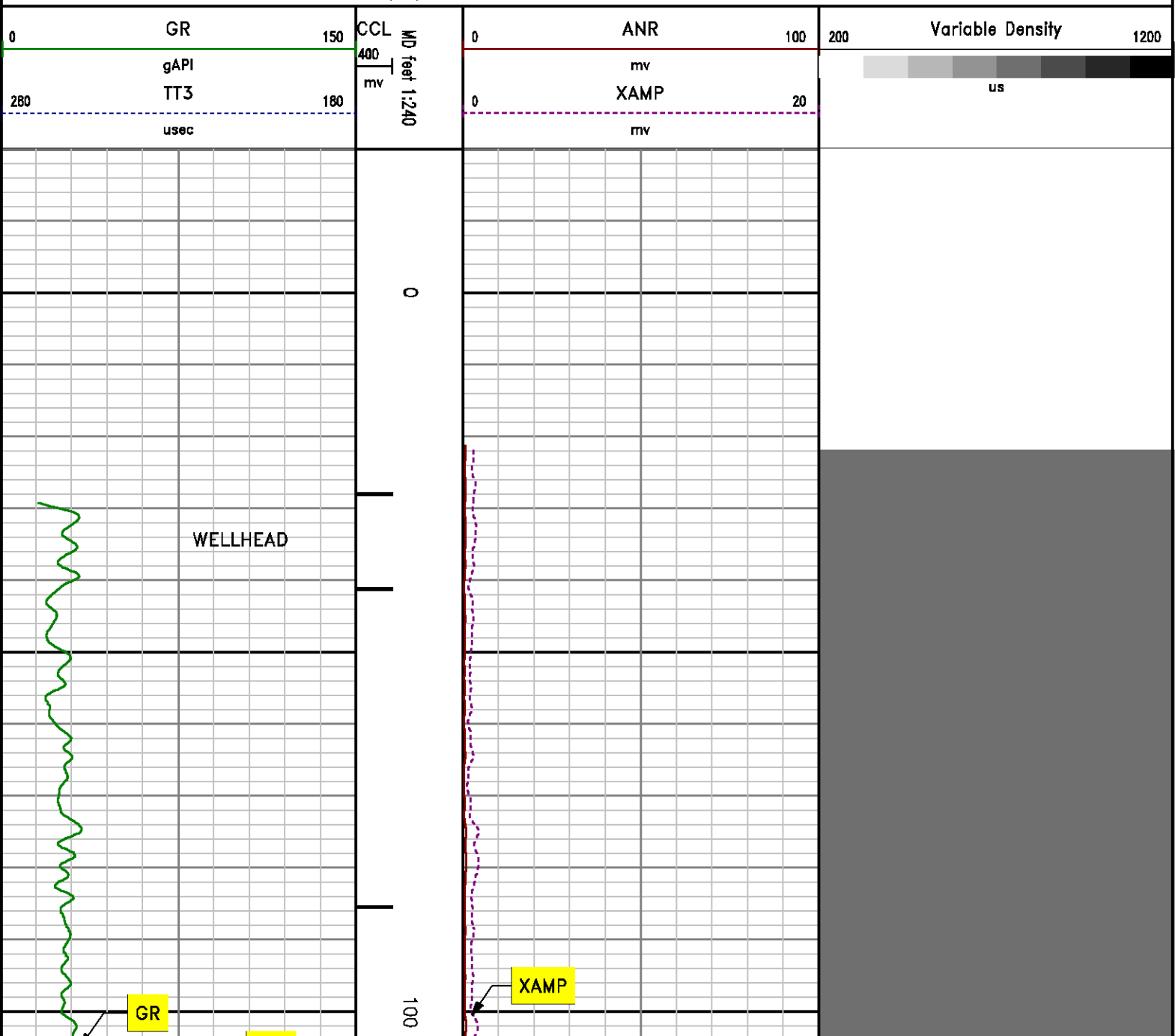
(for Acquired Curves)

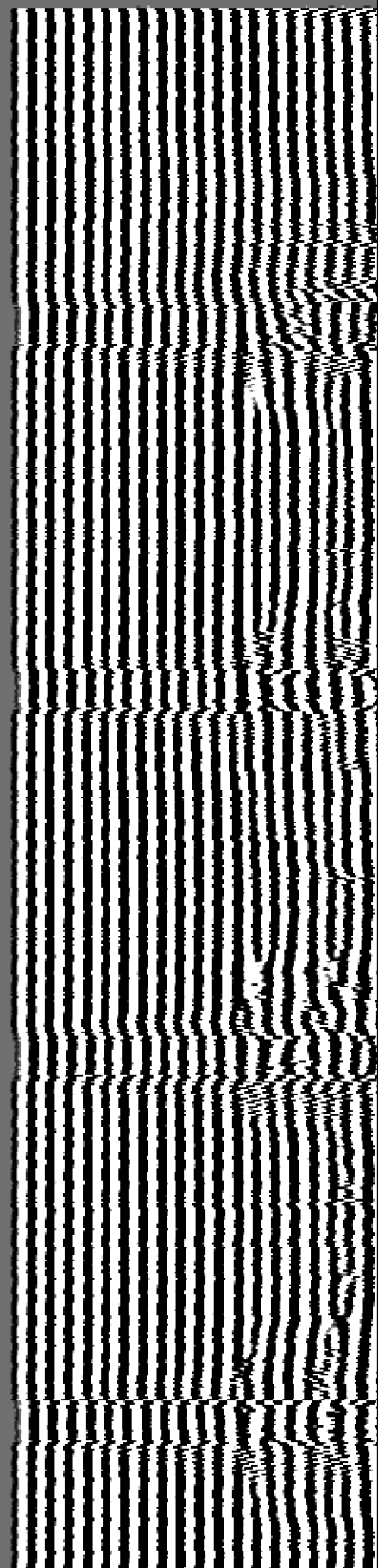
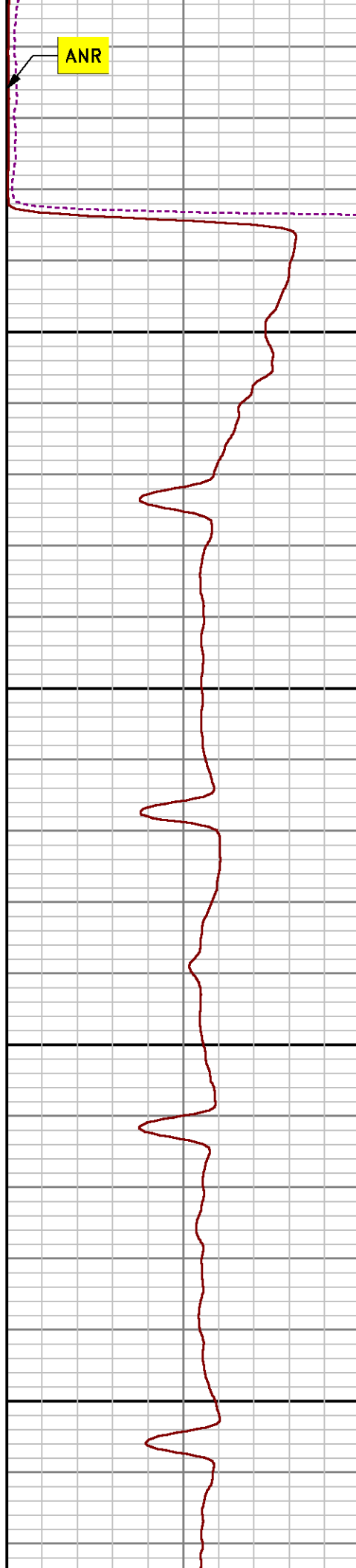
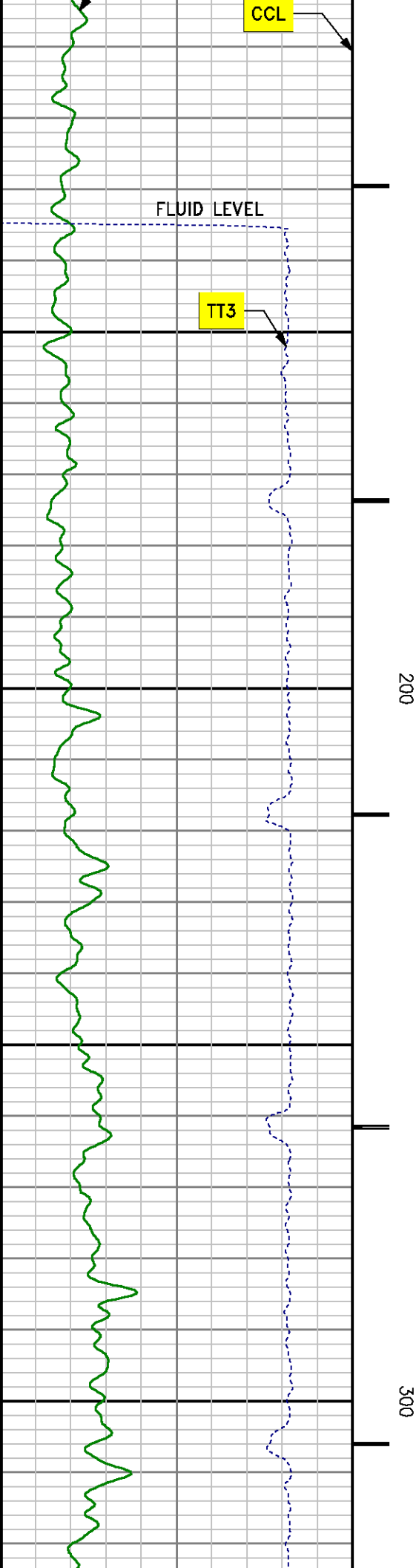
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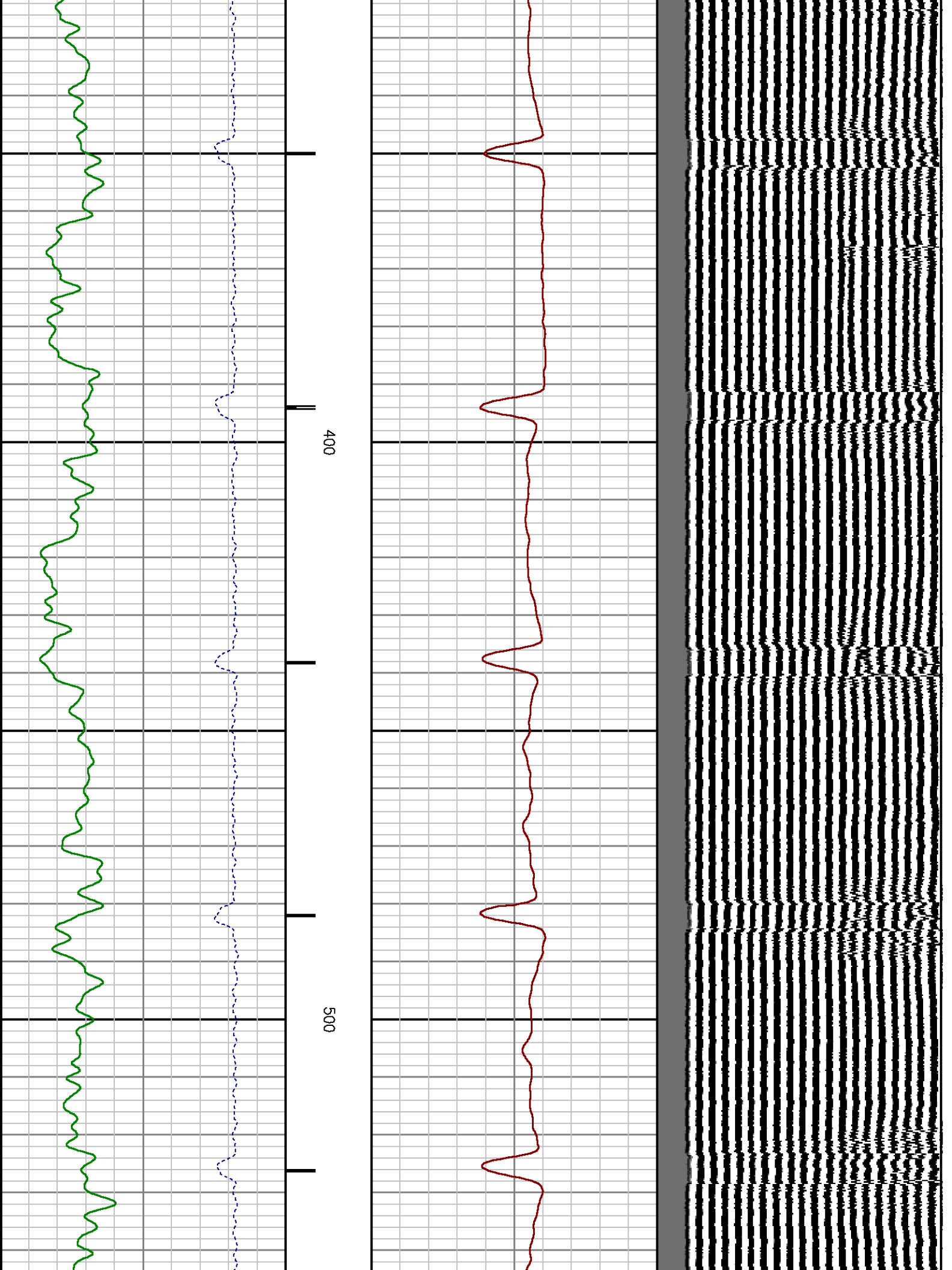
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 2459XA -11.340
 2459XA -9.490
 2459XA -4.090

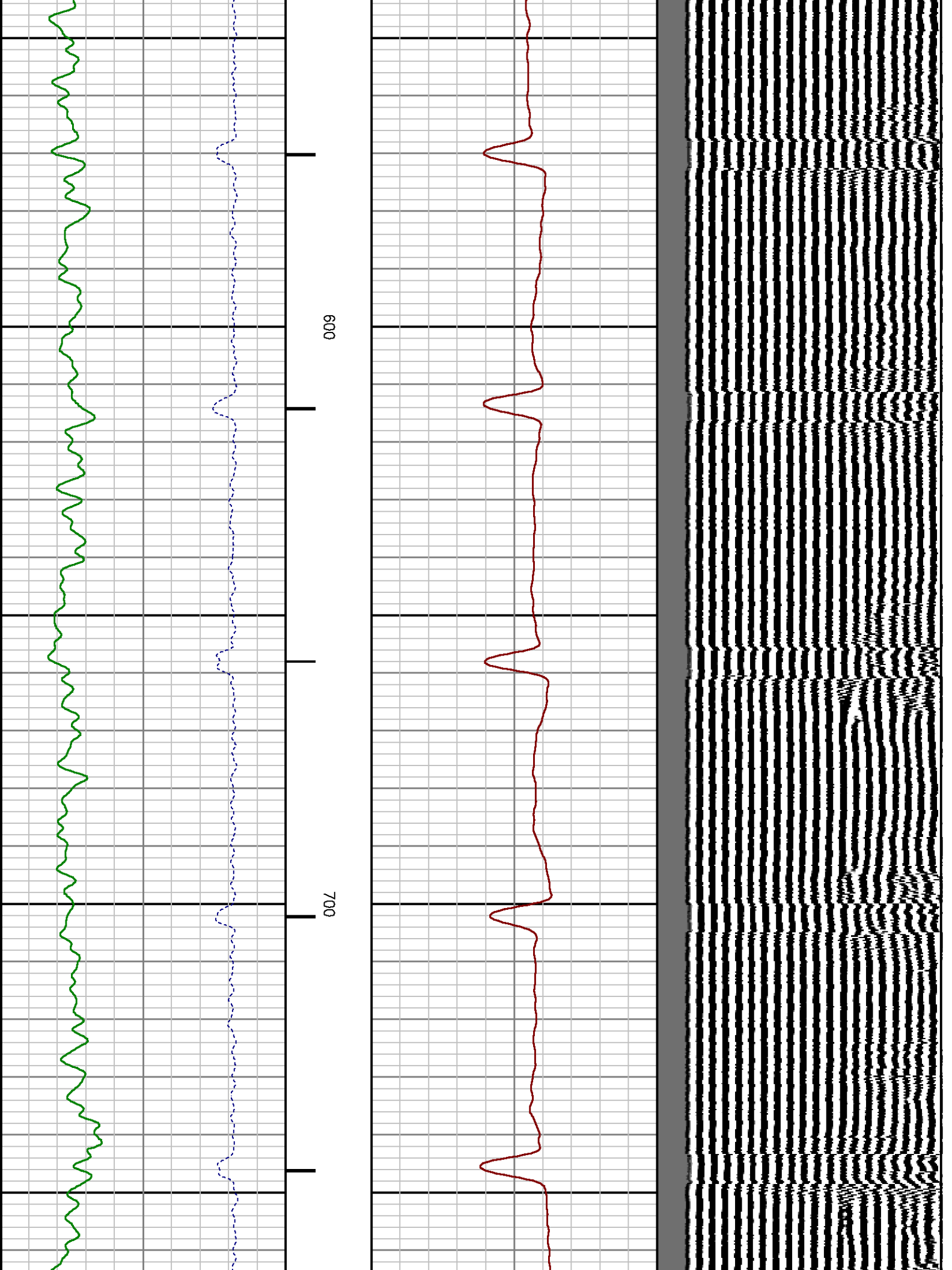
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FPR3	FPR5	TT3	TTR1	TTR2	TTR3
TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
AFAR	SIG	TT5			
CCL					
GR					
NEU					

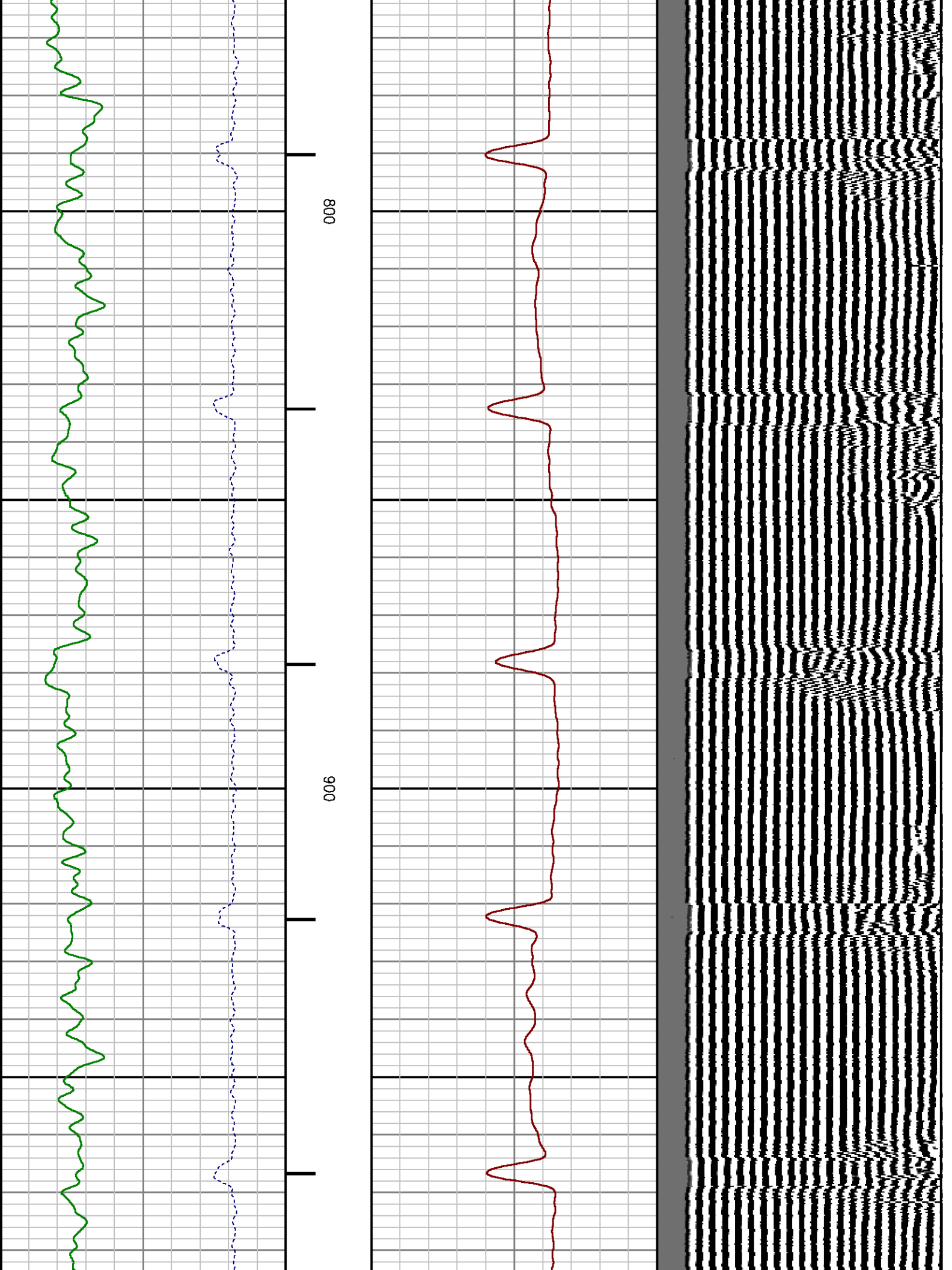
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 Plotted by : PlotMgr, v5.4.504
 Company : WPX ENERGY
 Well : DUGGAN RWF 413-29
 File Name : d:\welldata\cbl413\main_rdrd.xtf
 Mode : PlotMgr 5.4.504
 Interval : -20.00 - 8035.00 feet UP
 Created : 4/21/2013 11:50:56 AM

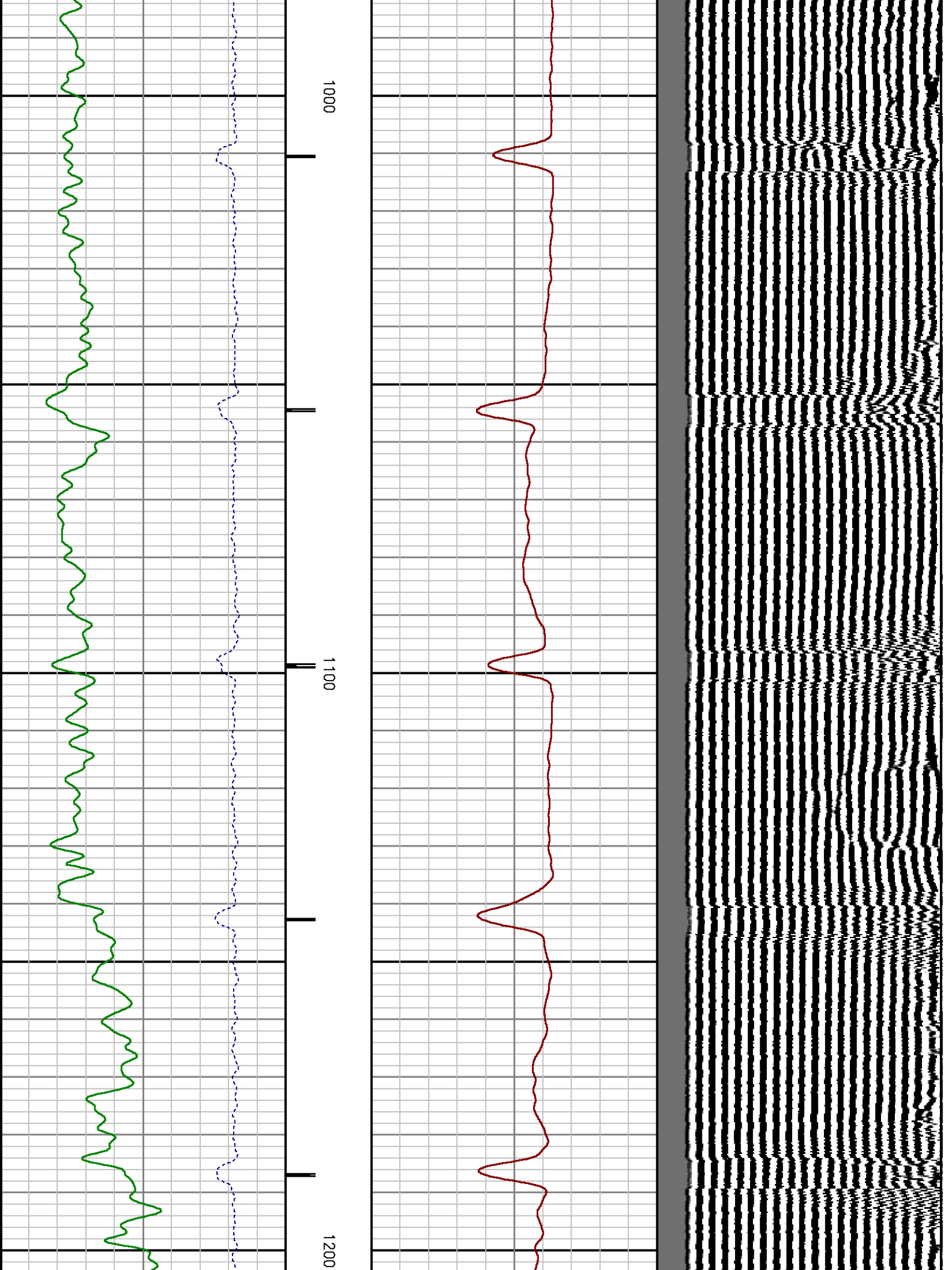


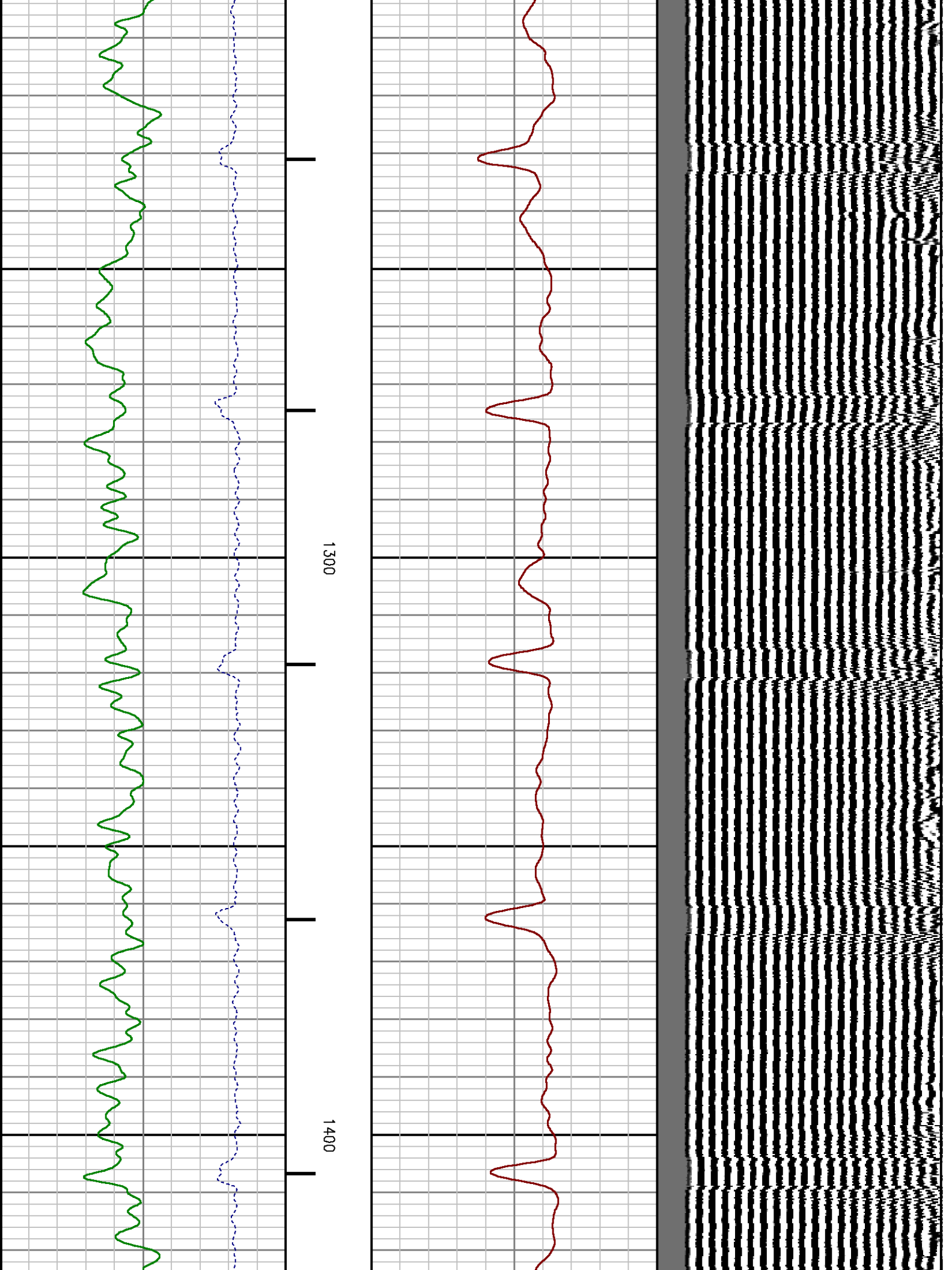


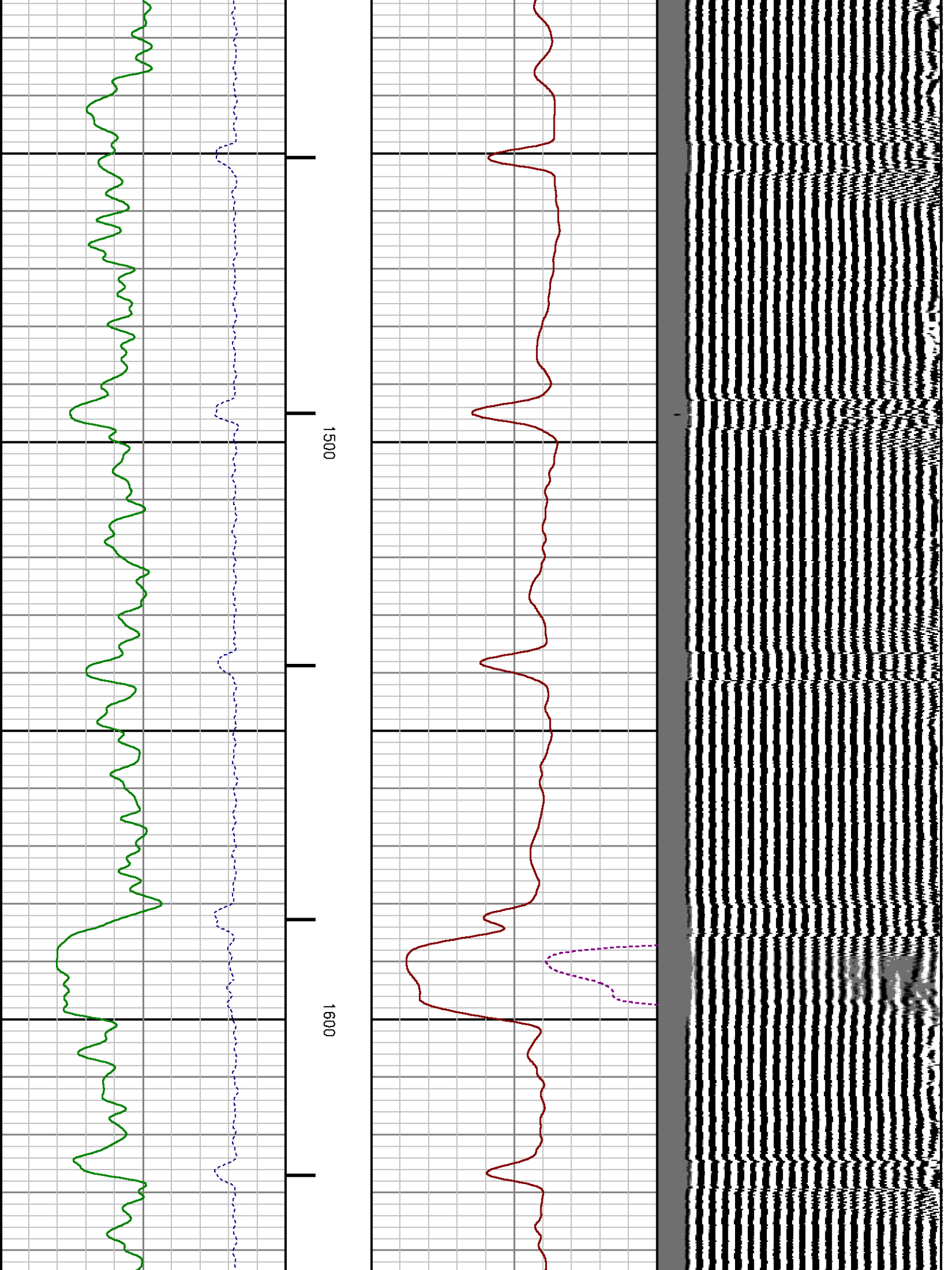


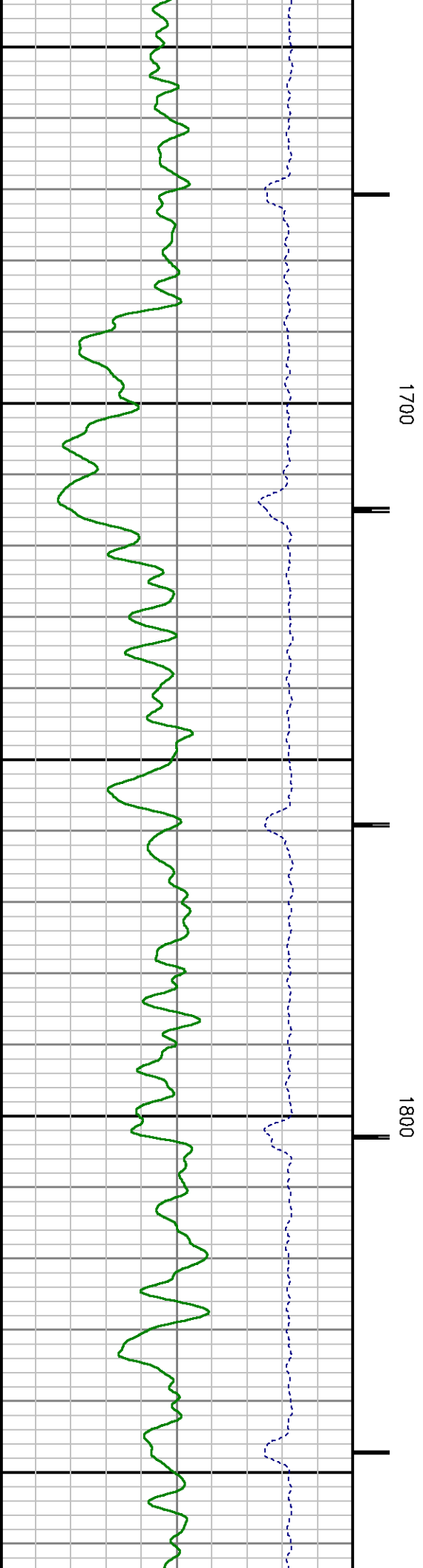
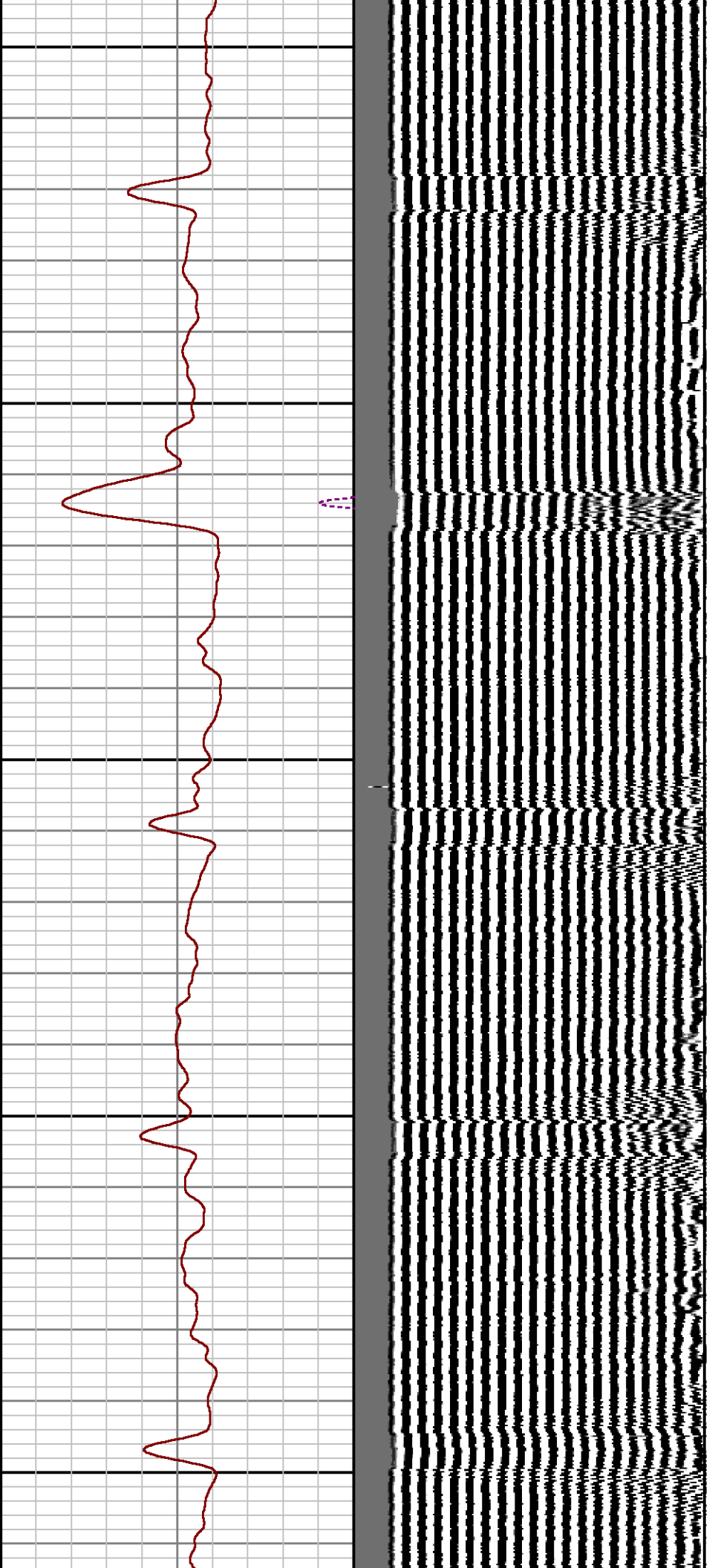


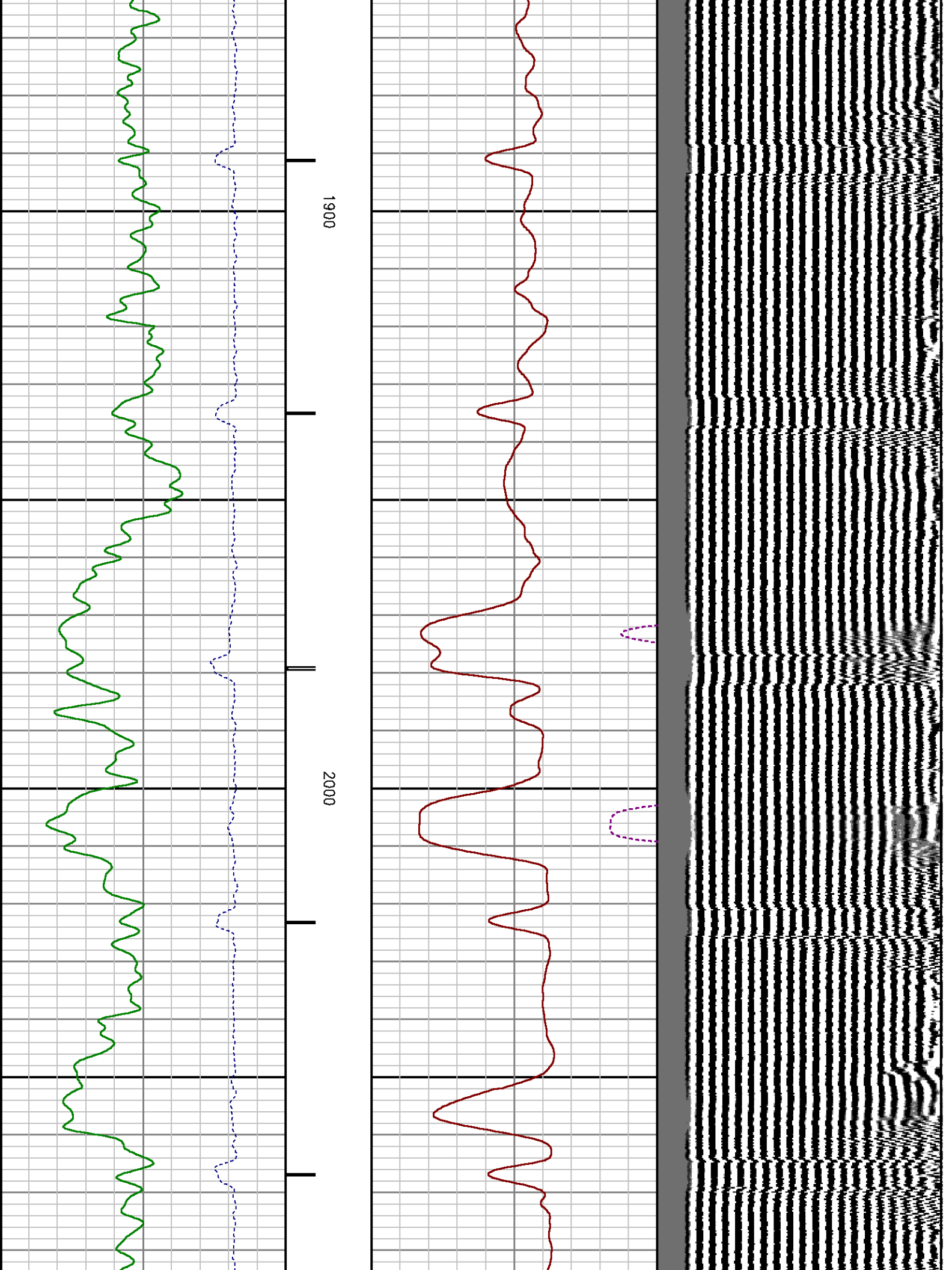


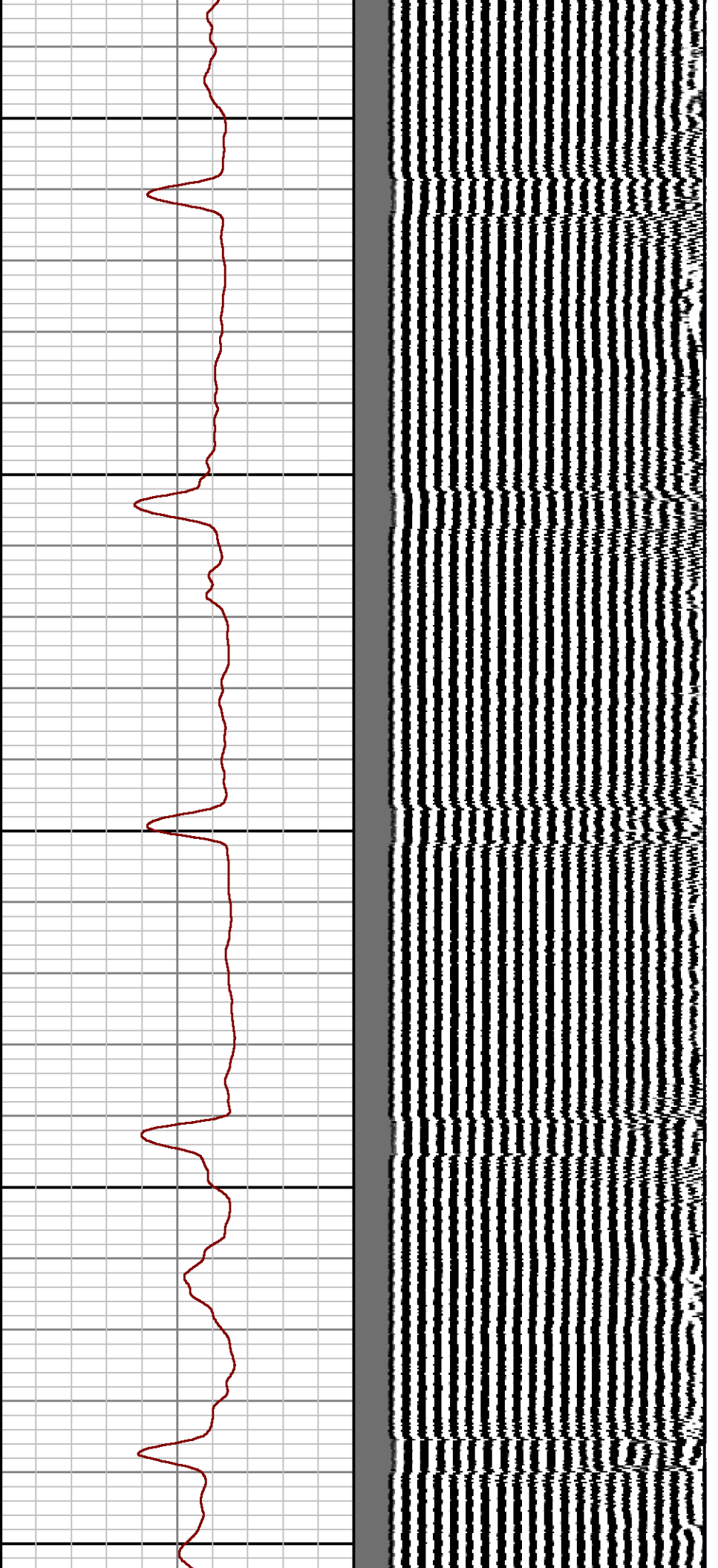








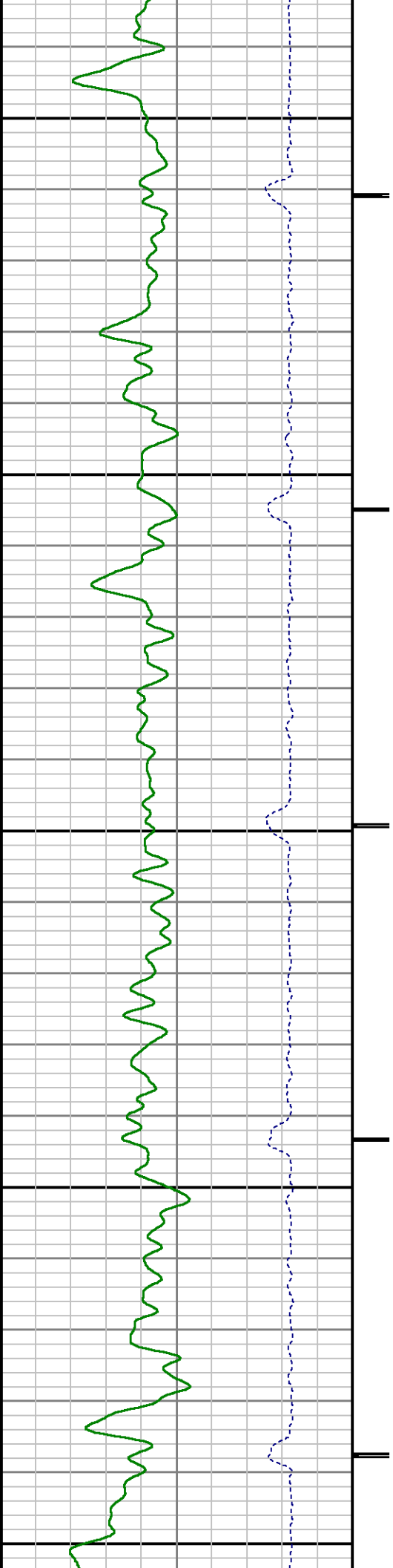


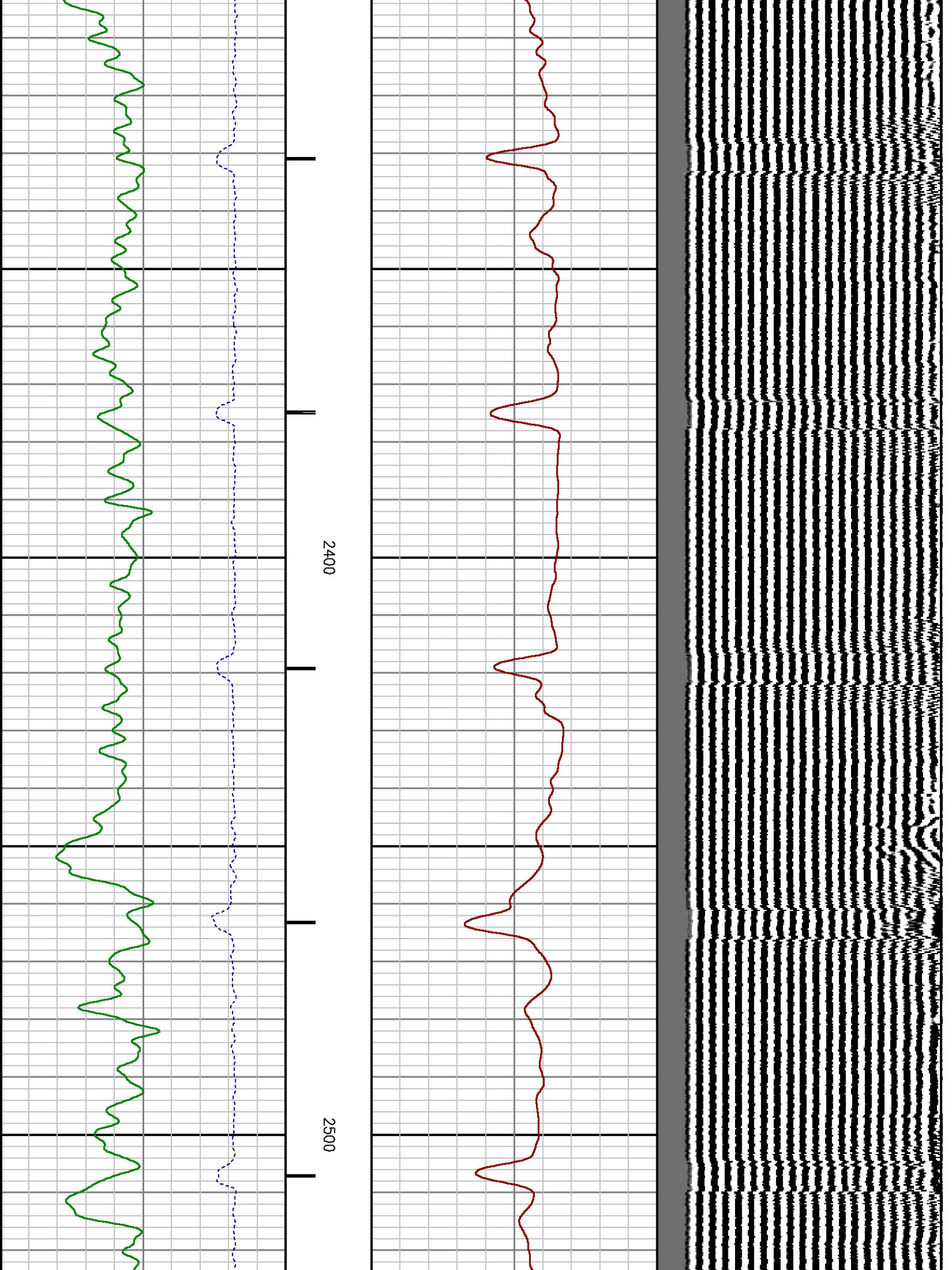


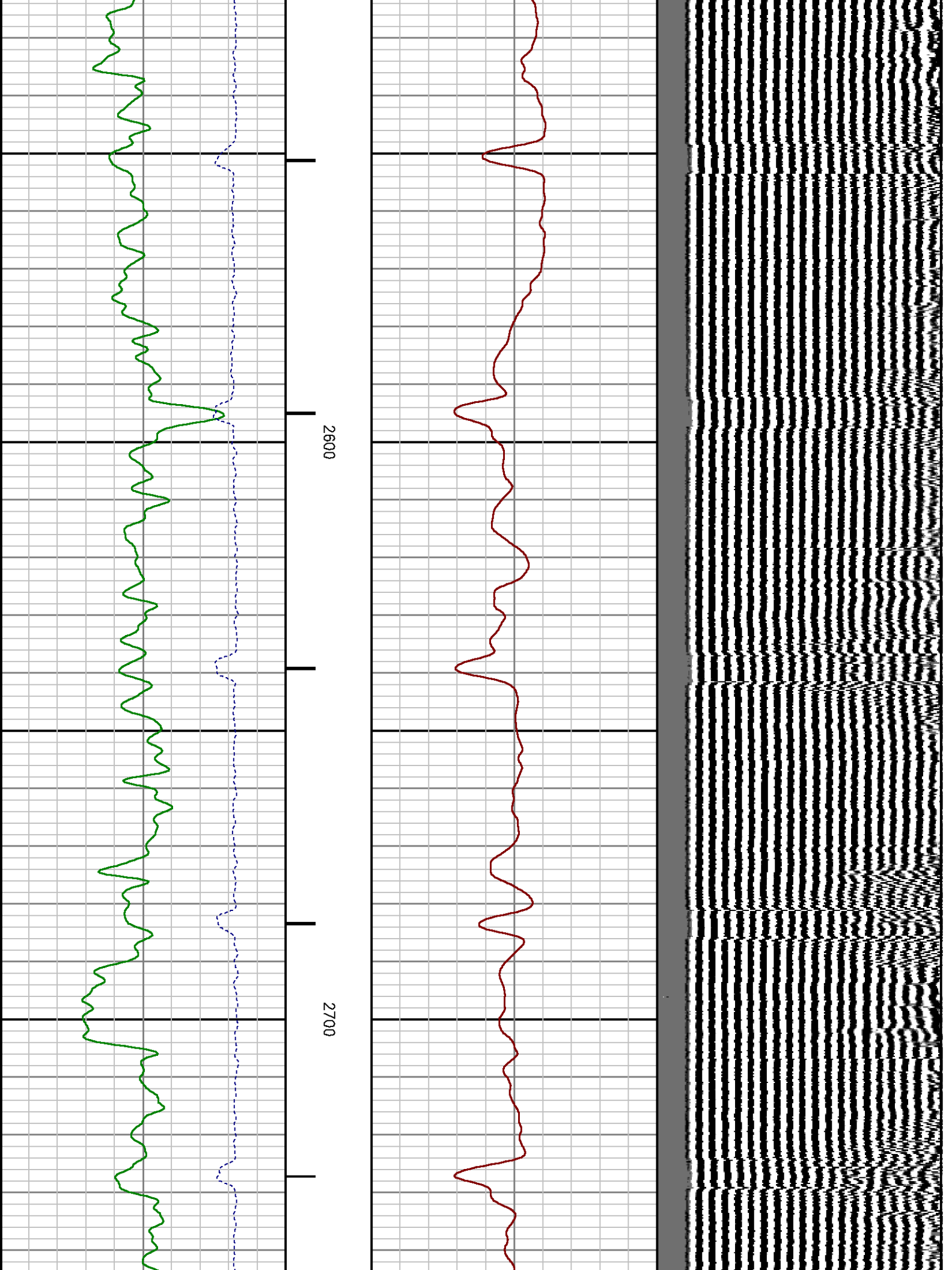
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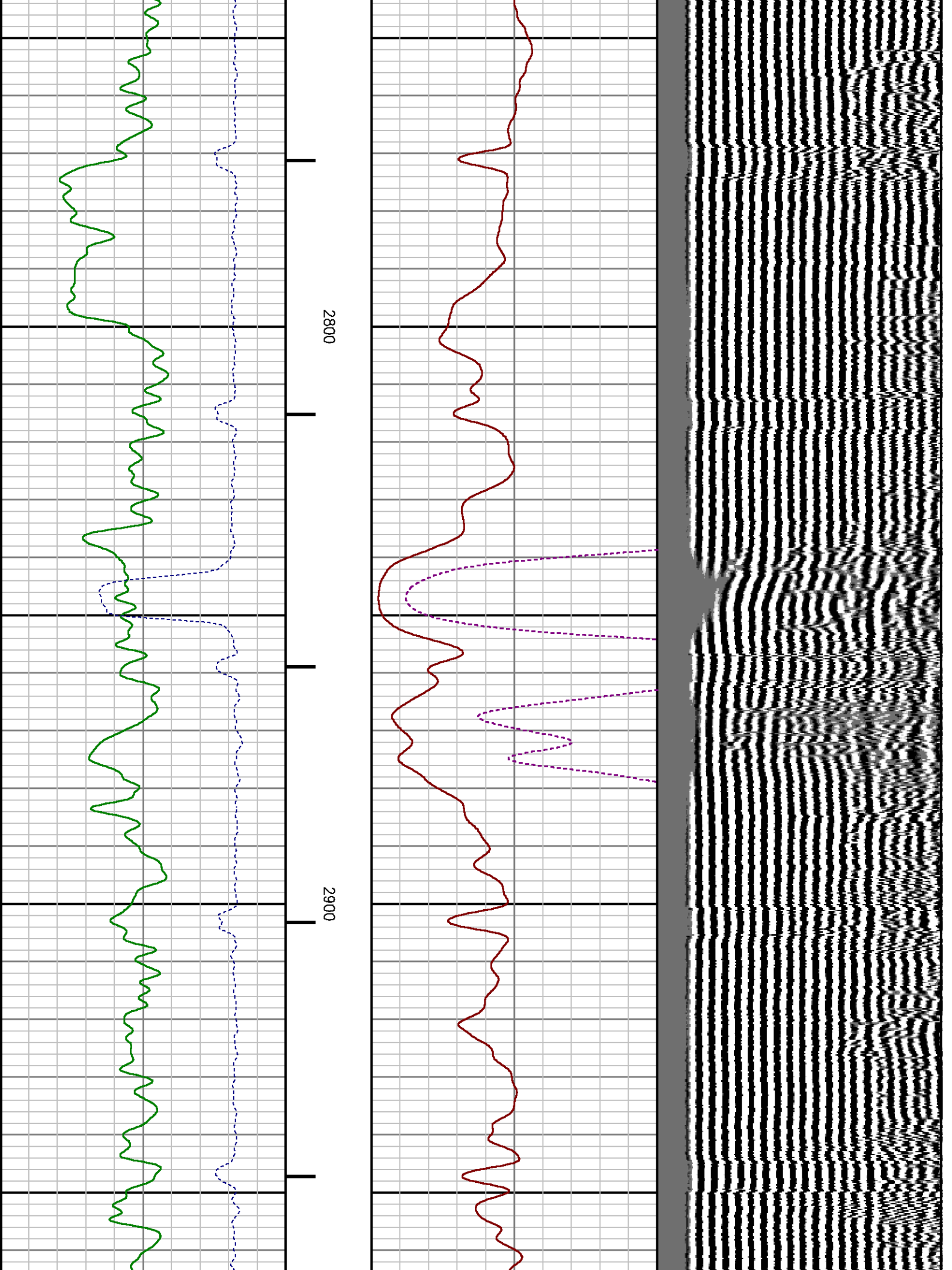
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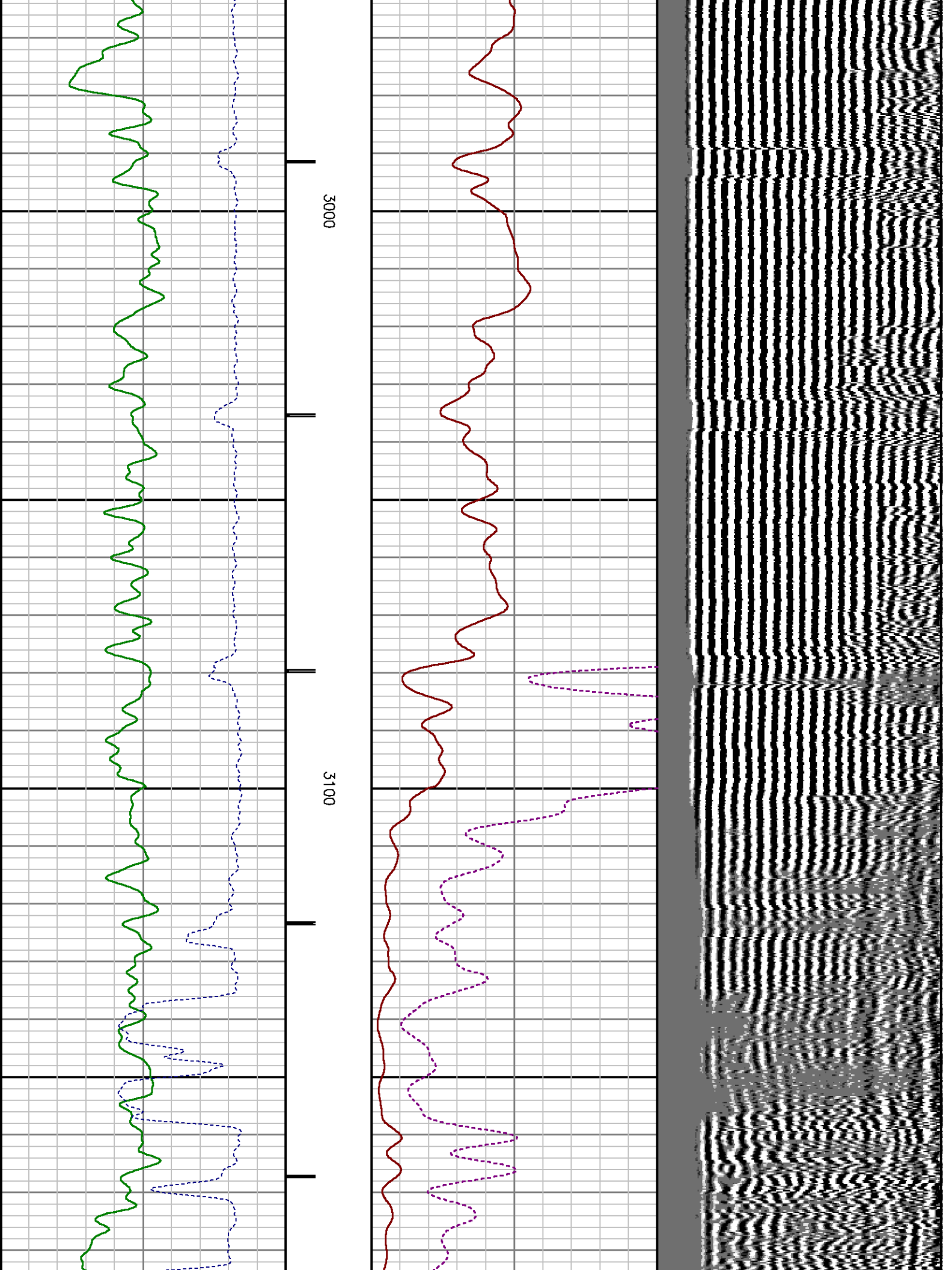
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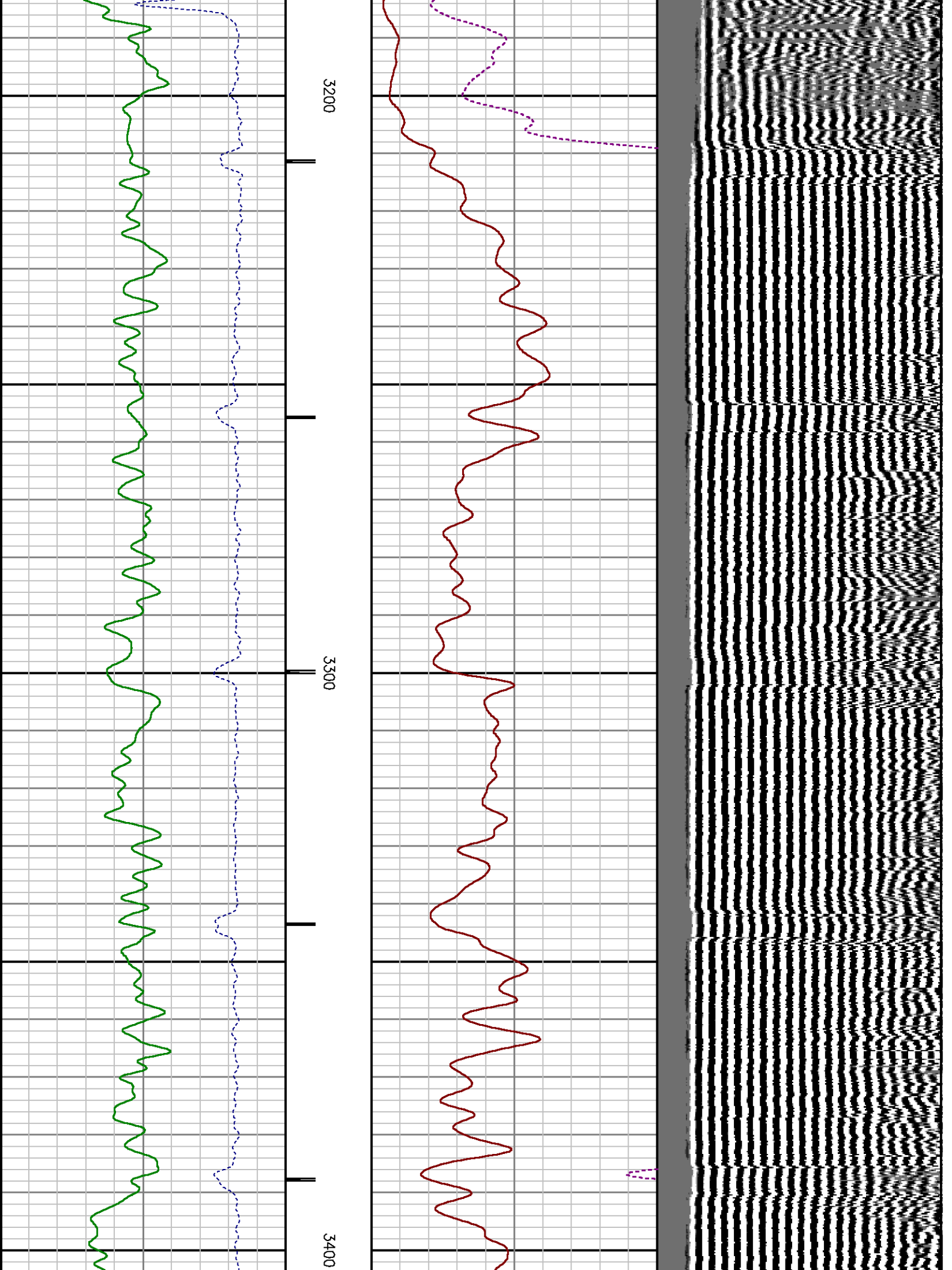


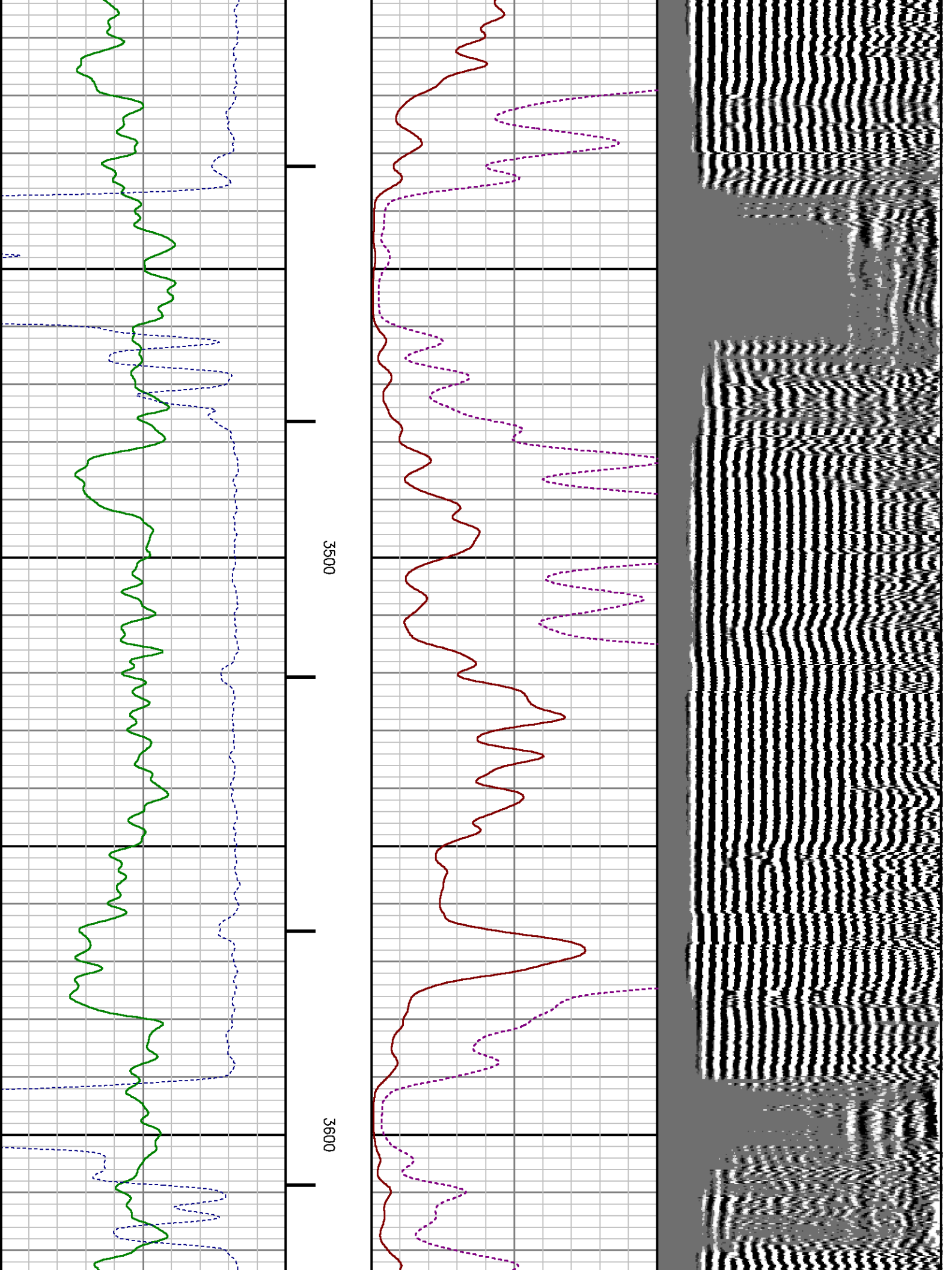


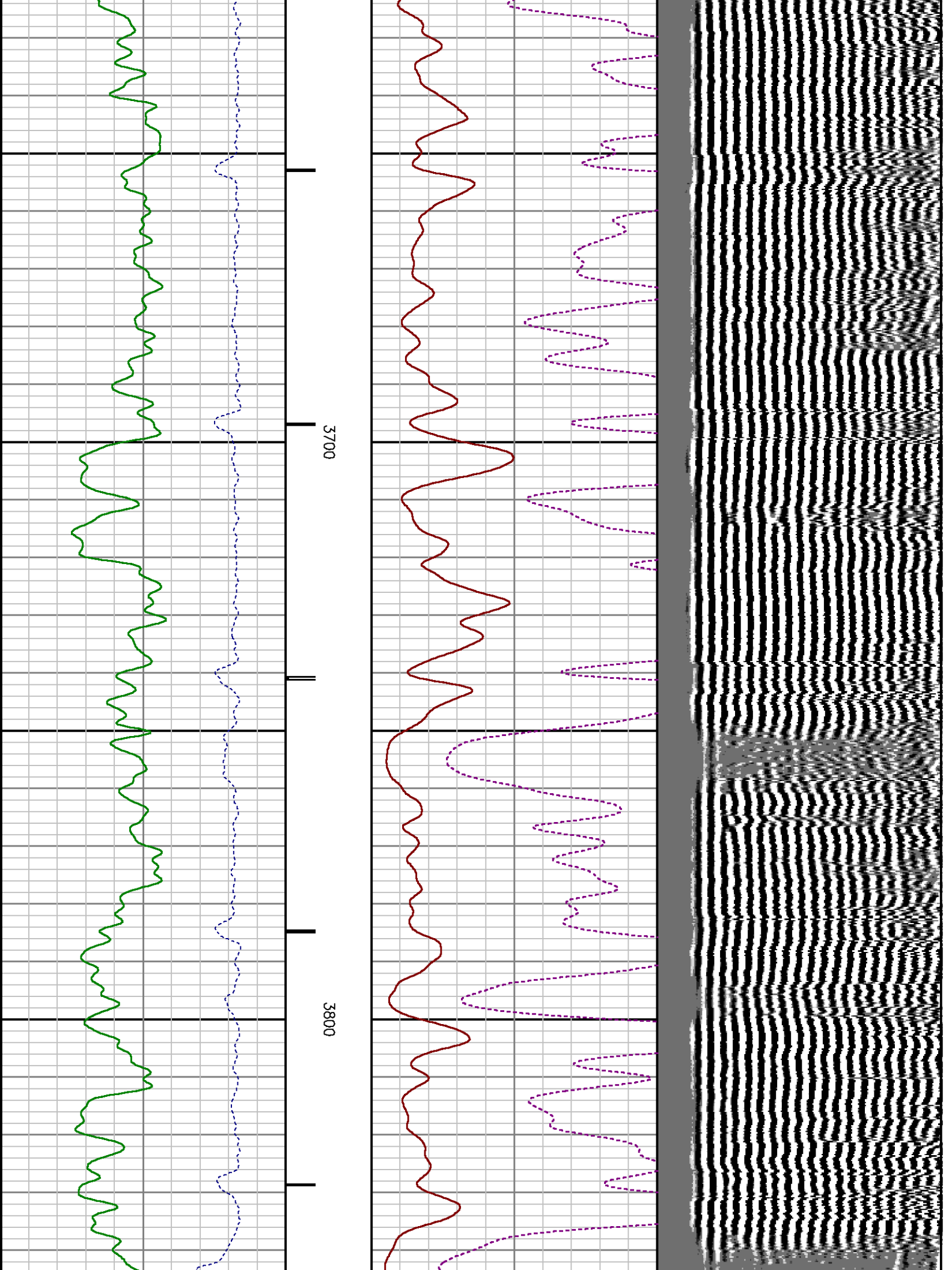


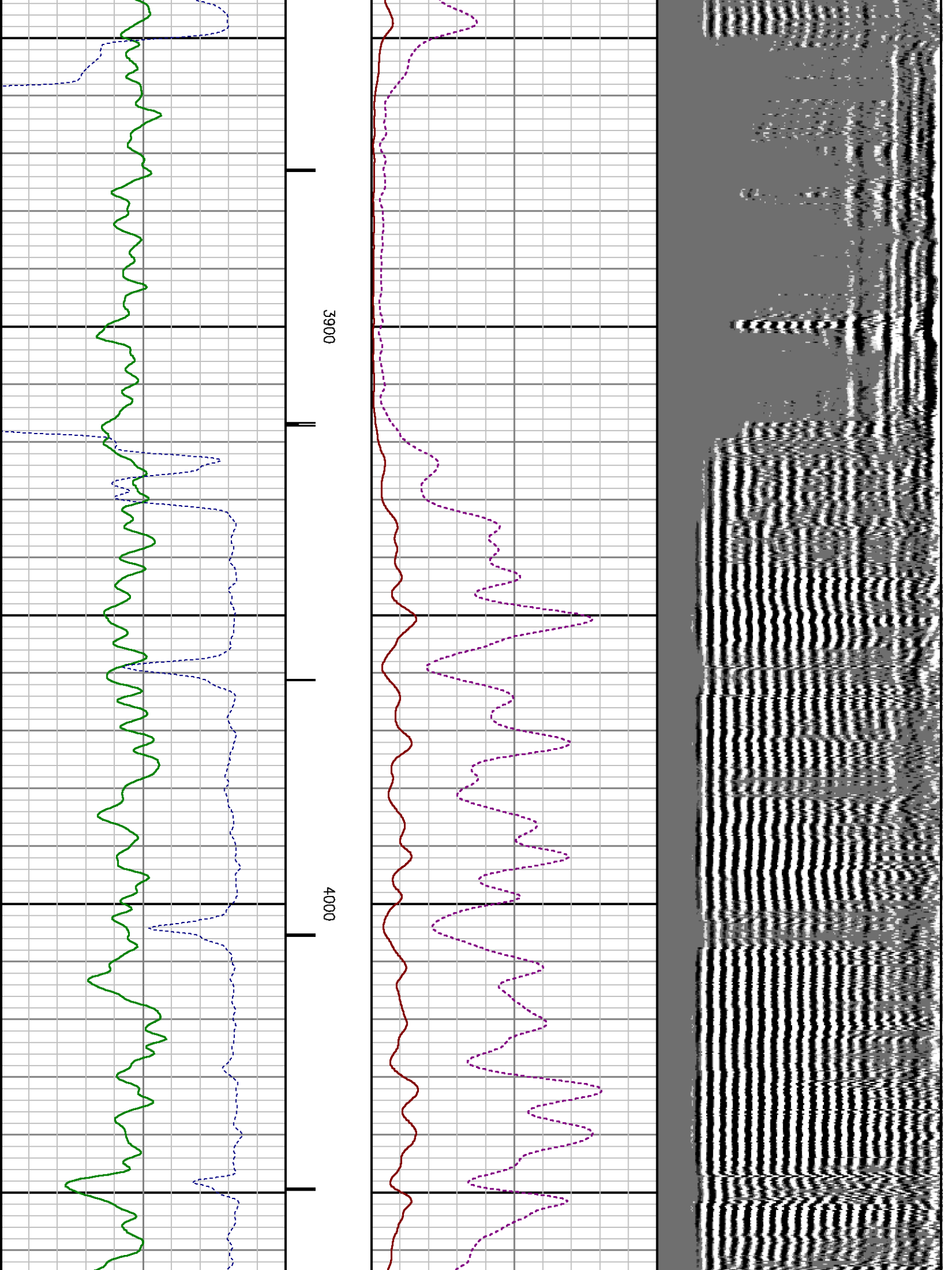


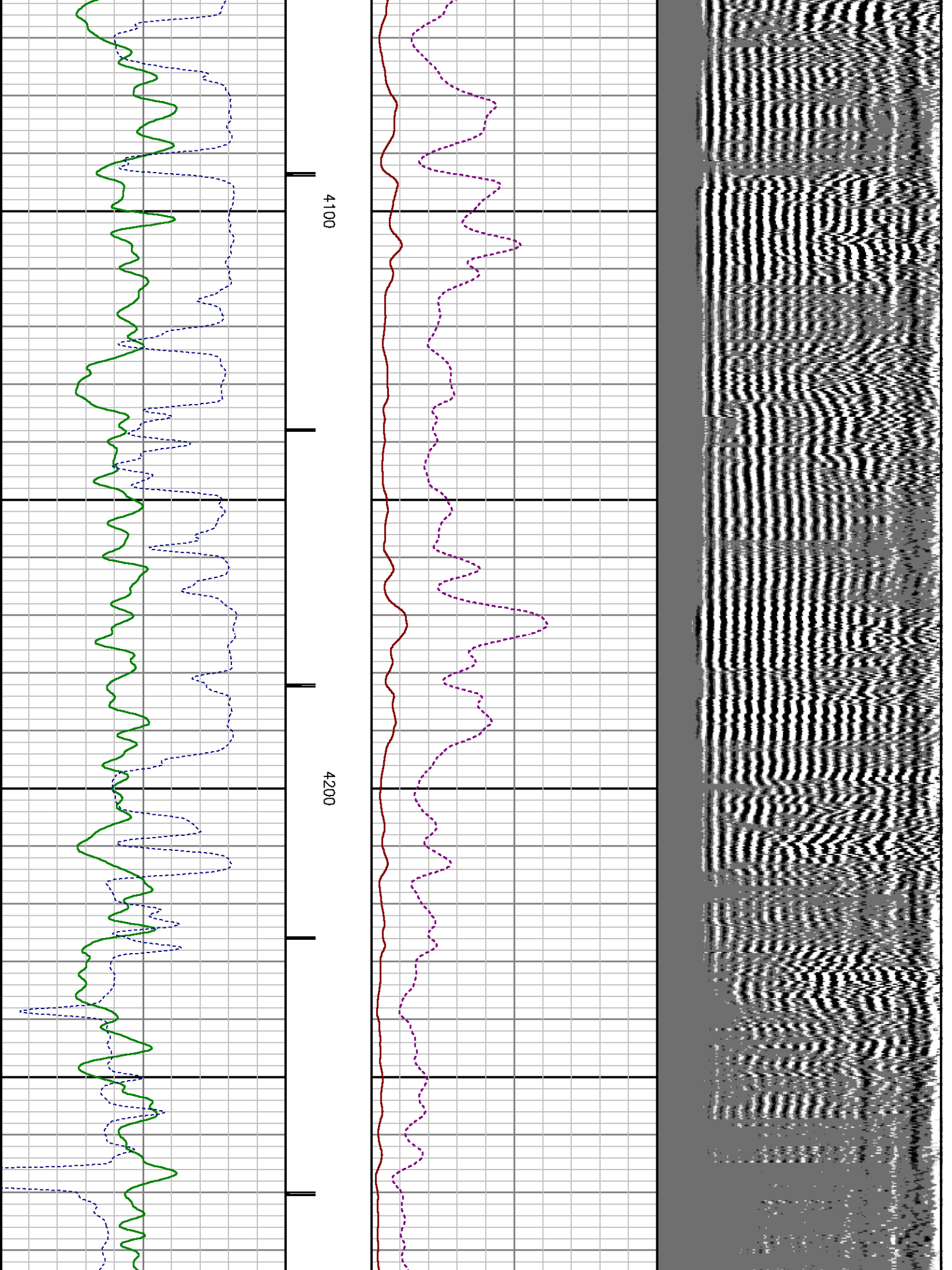


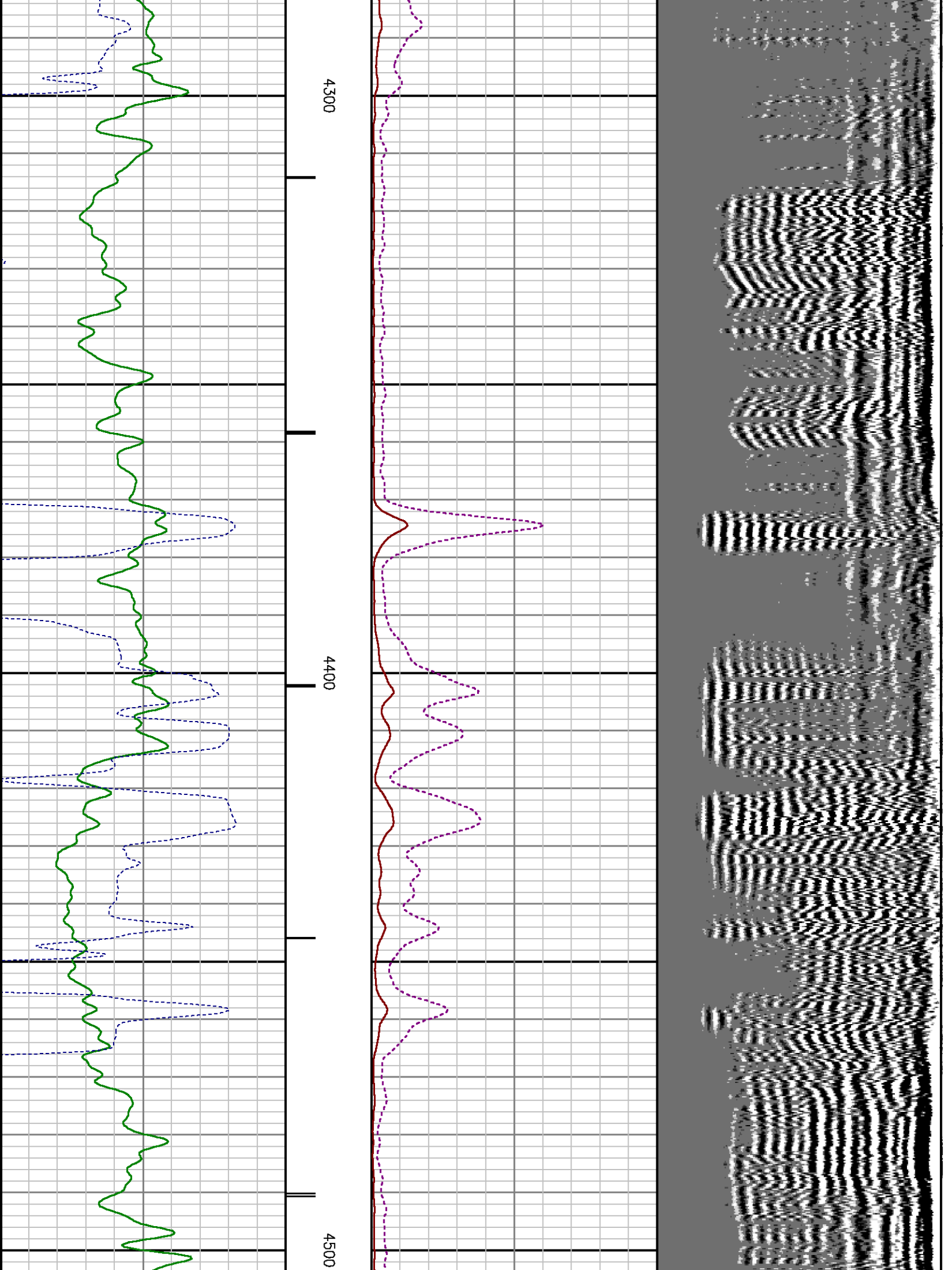


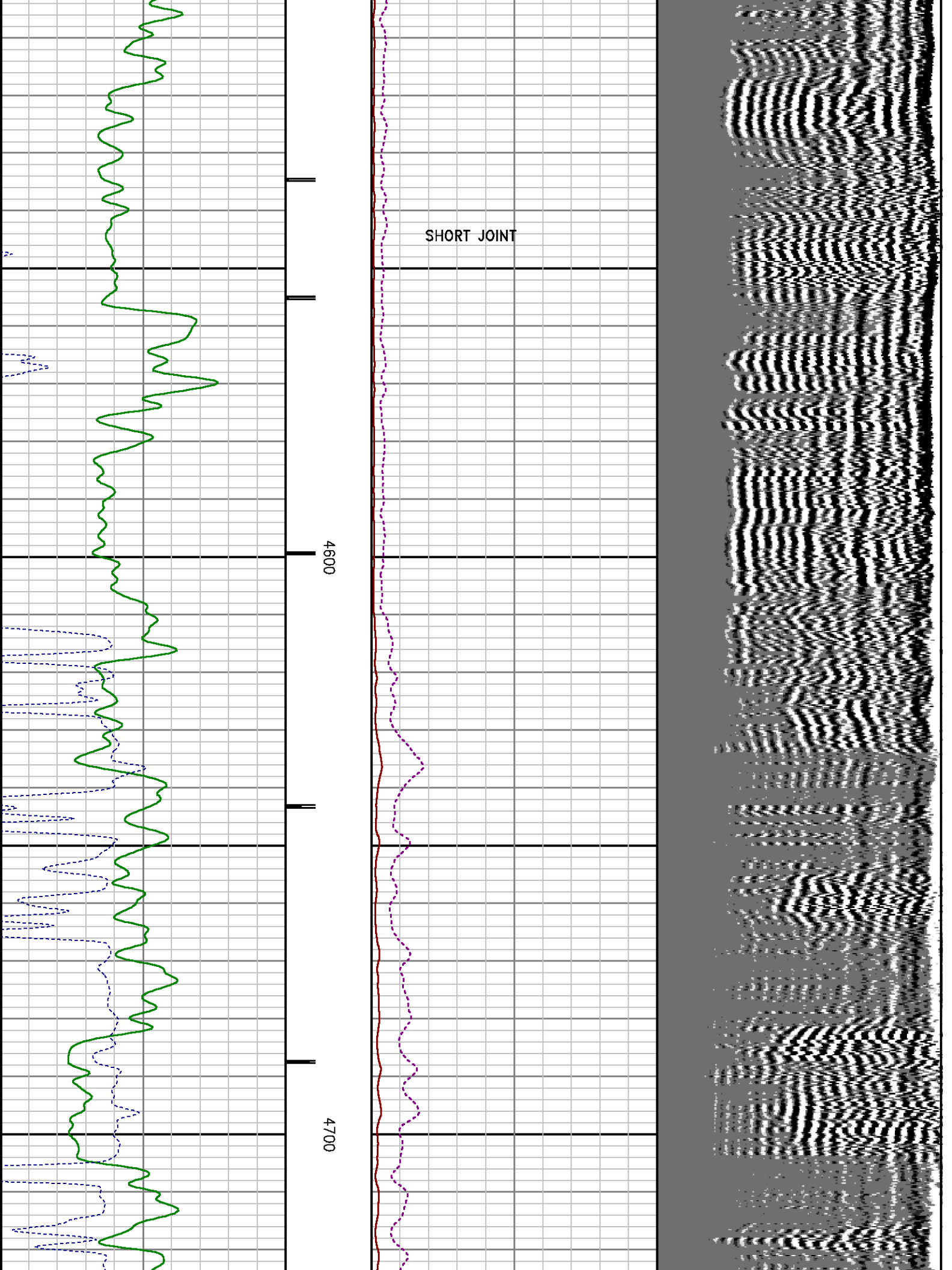


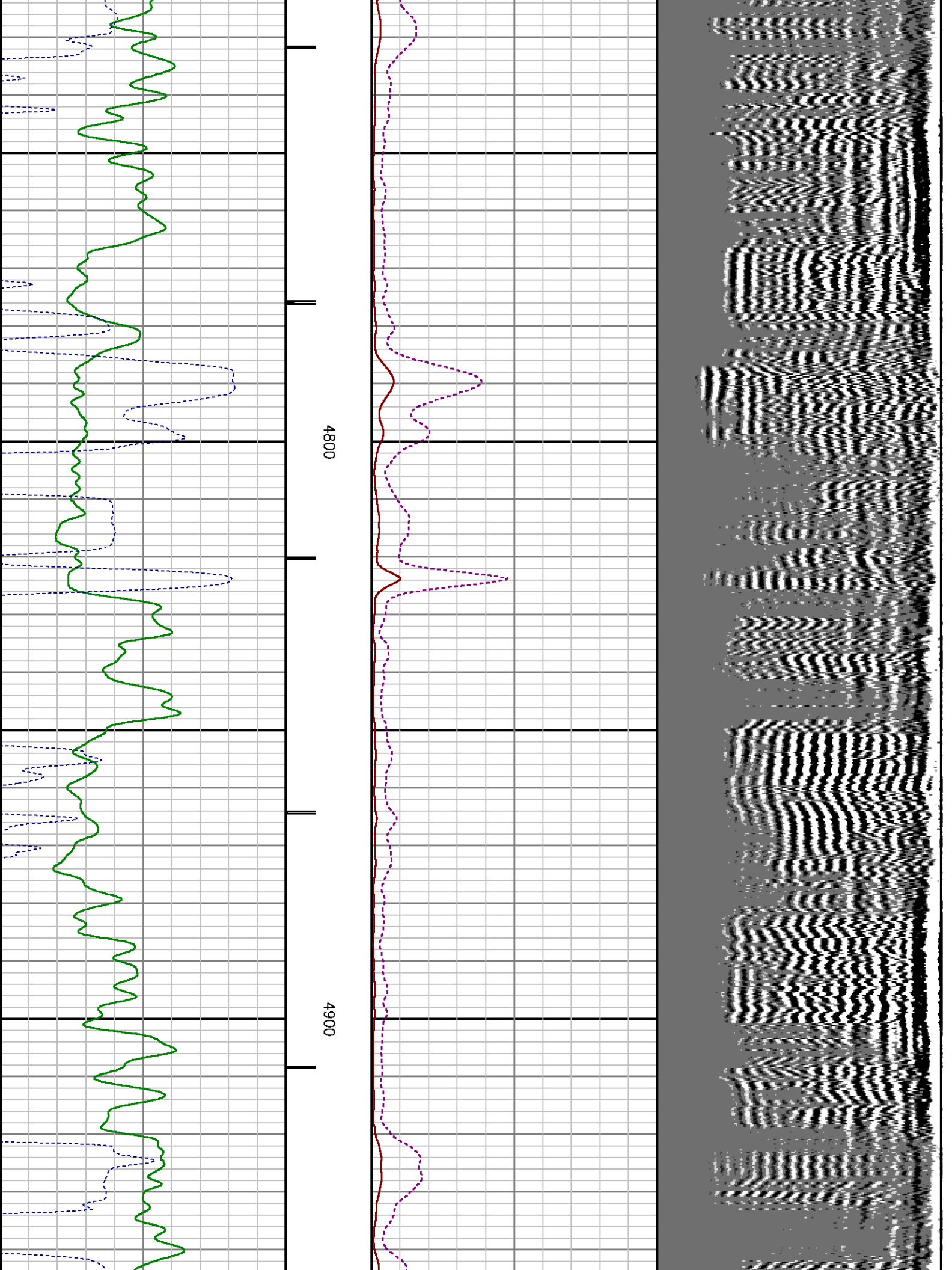


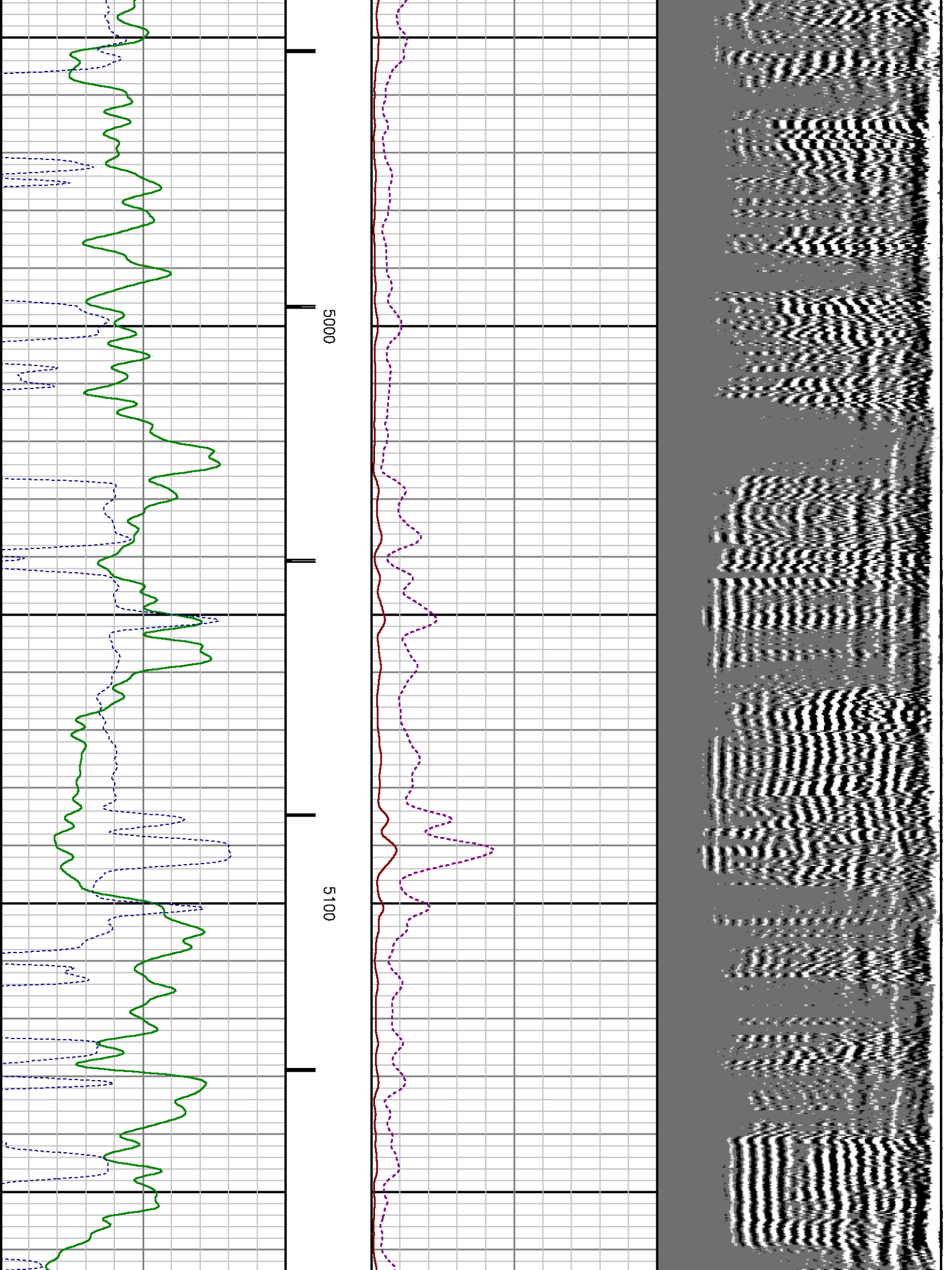


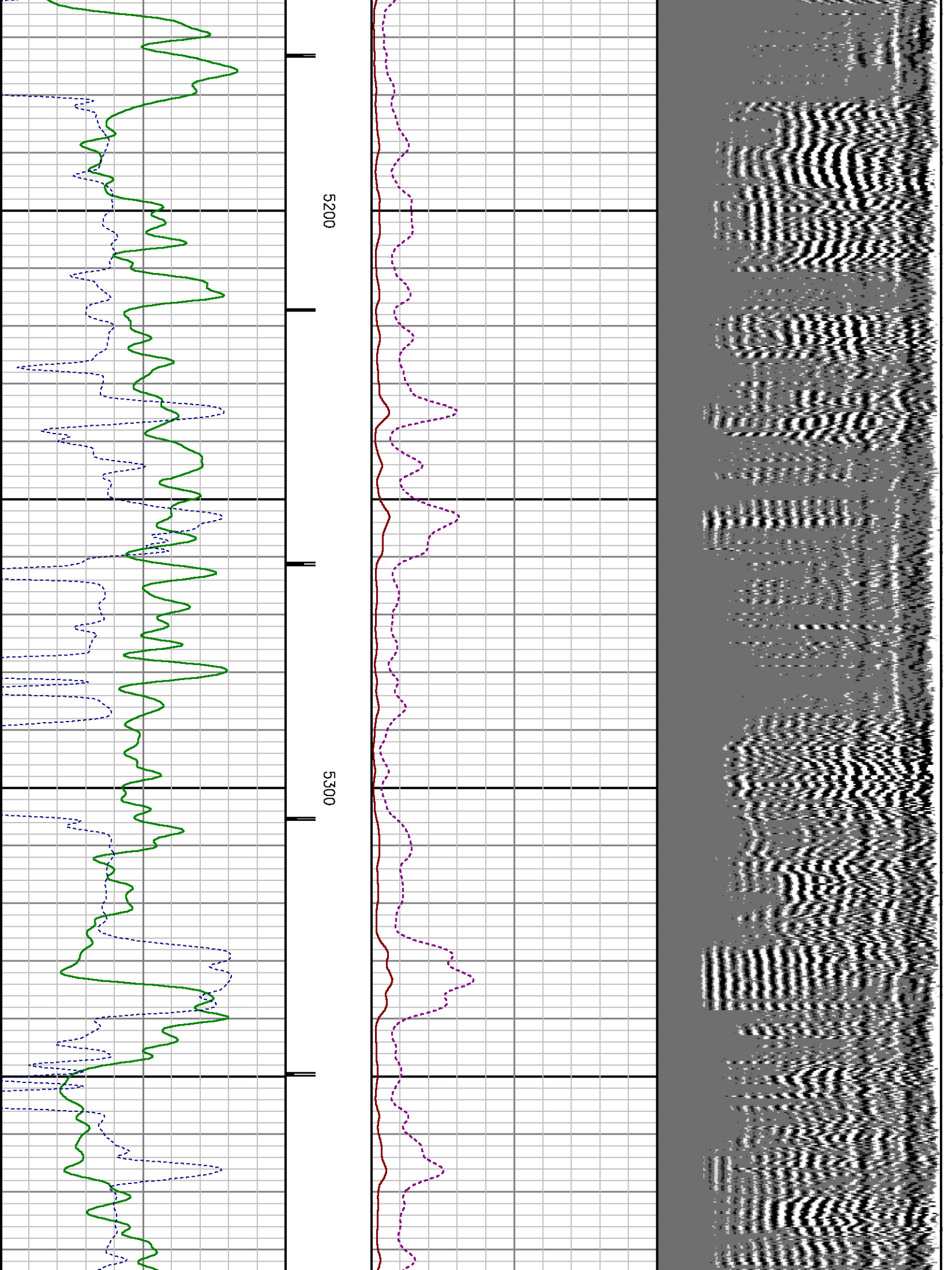


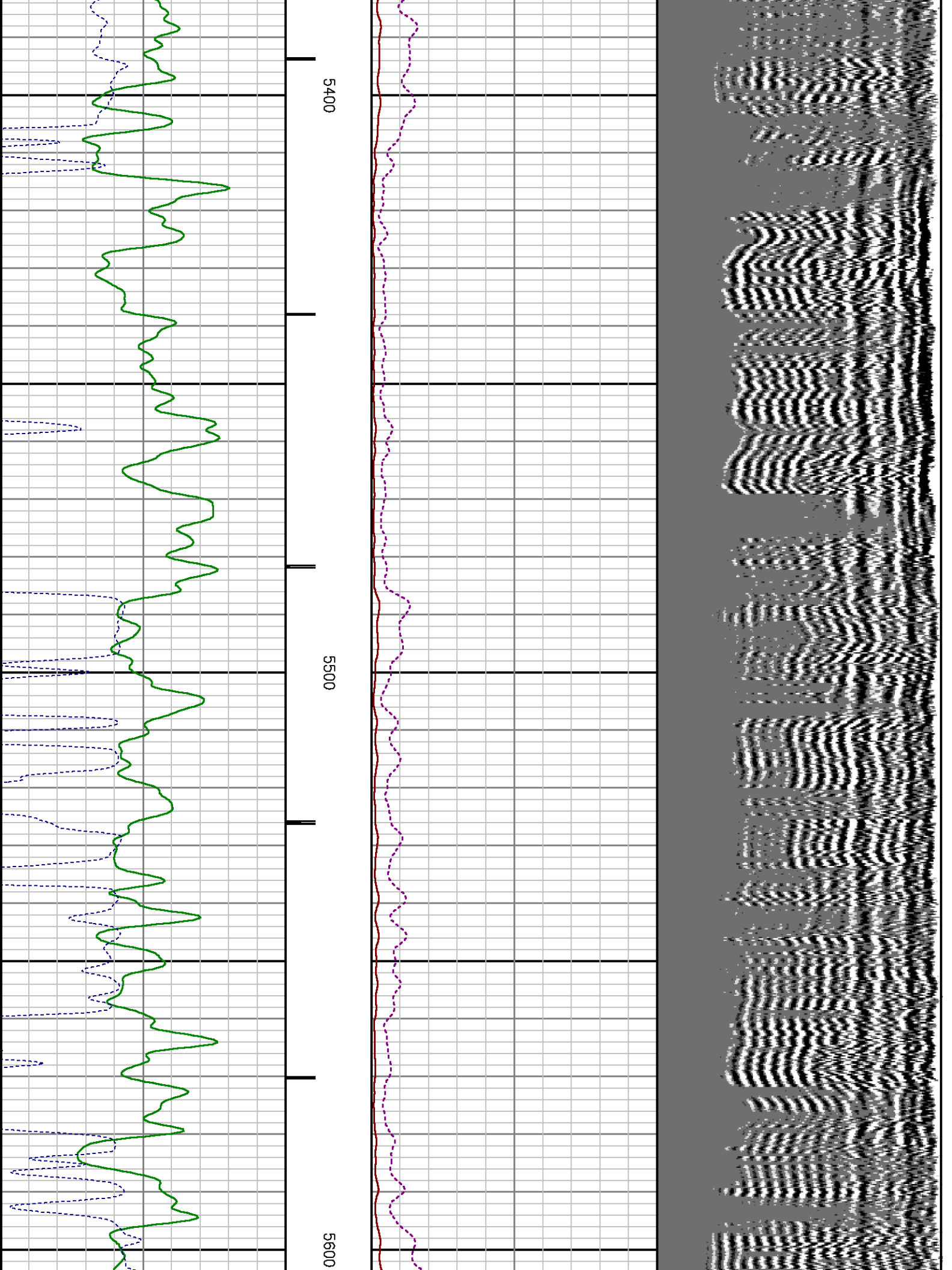


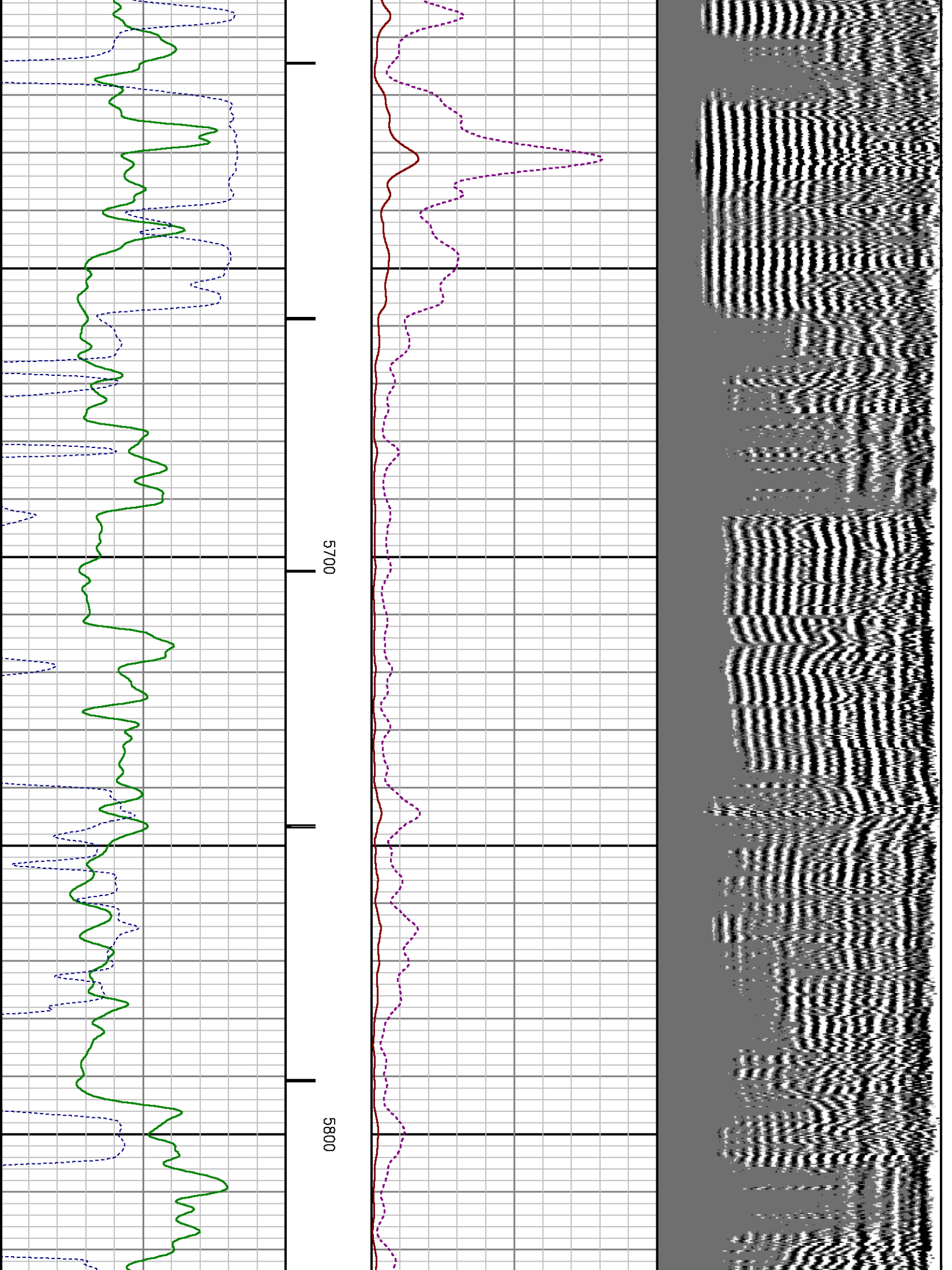


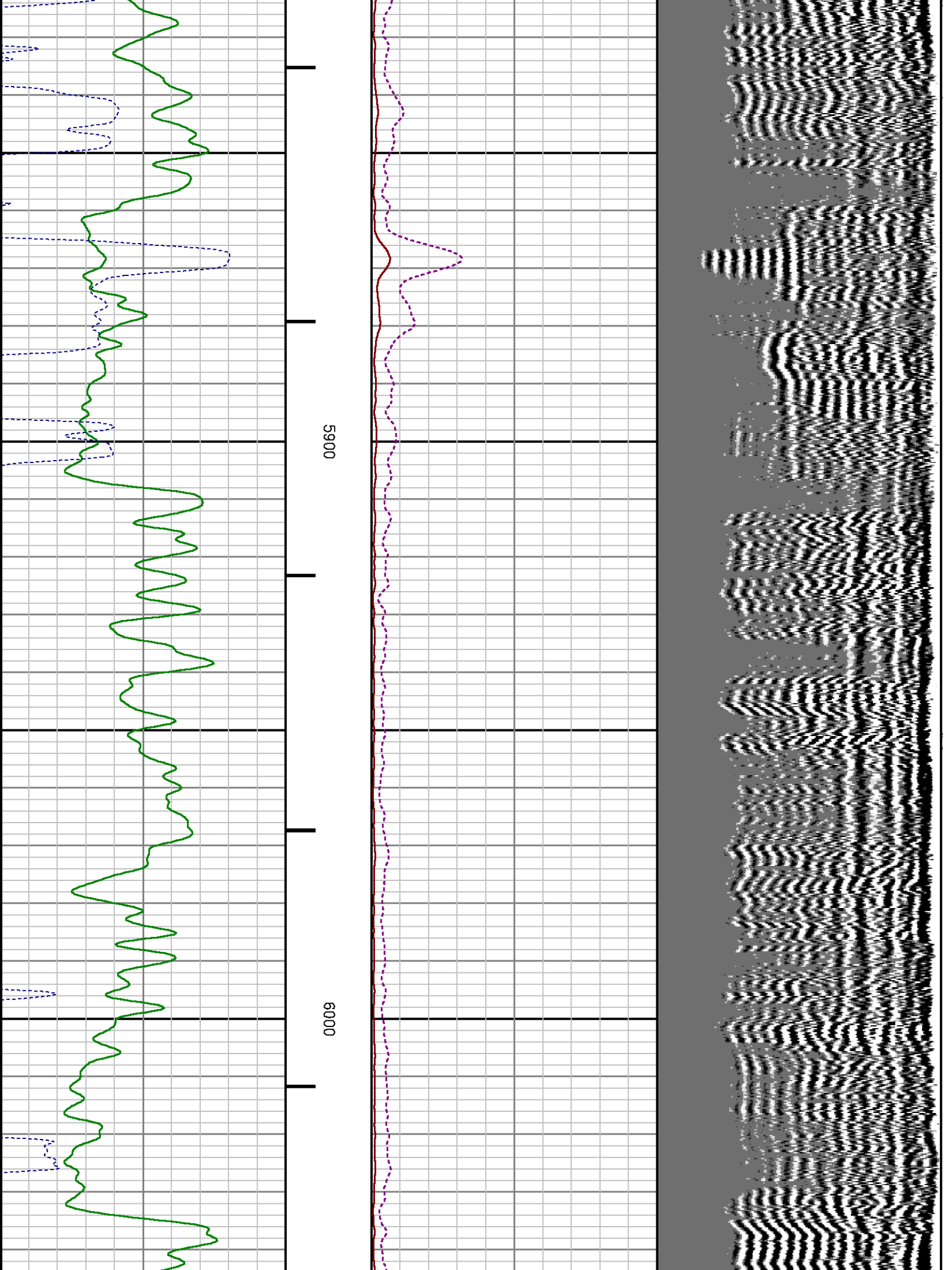


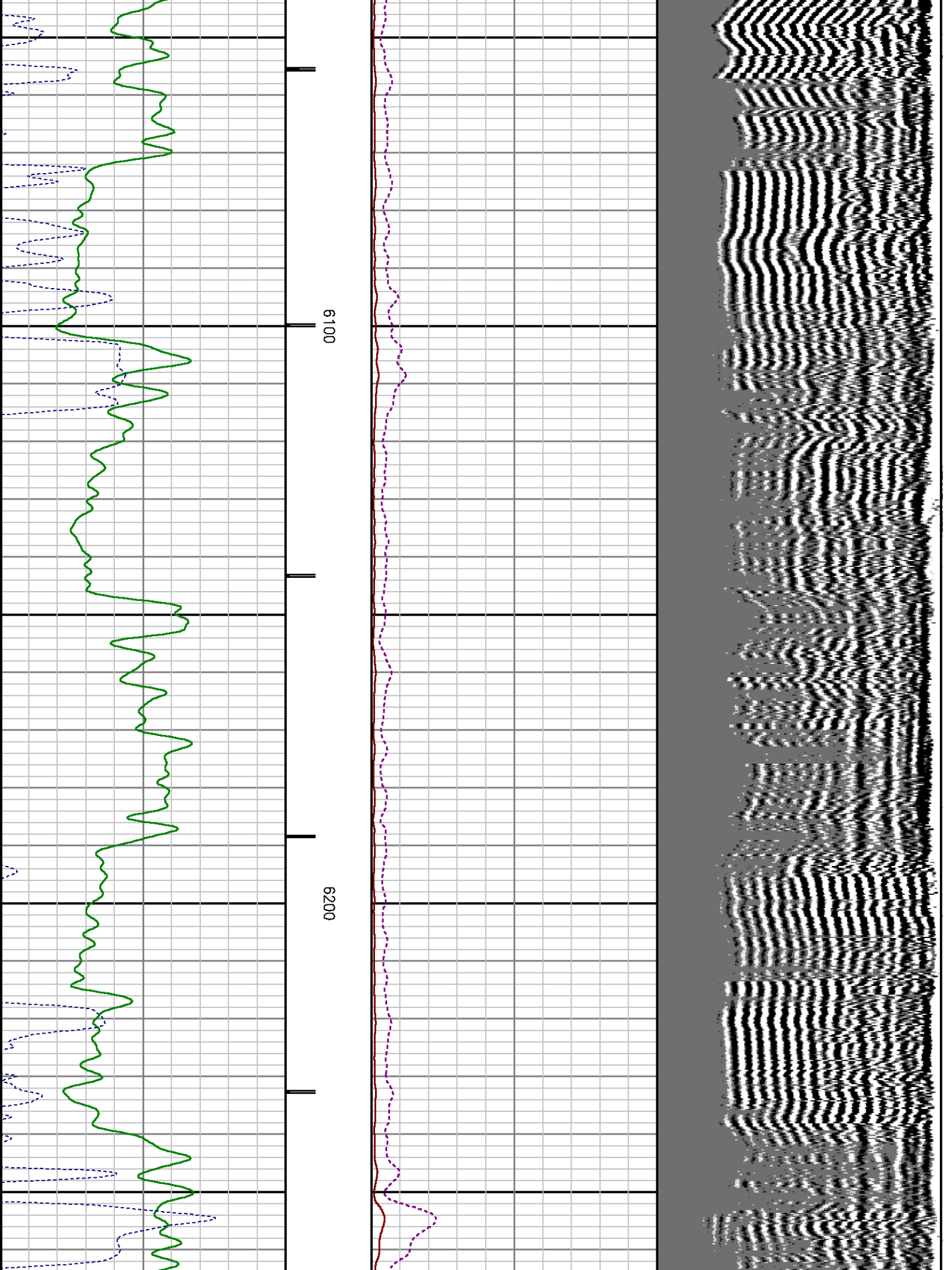


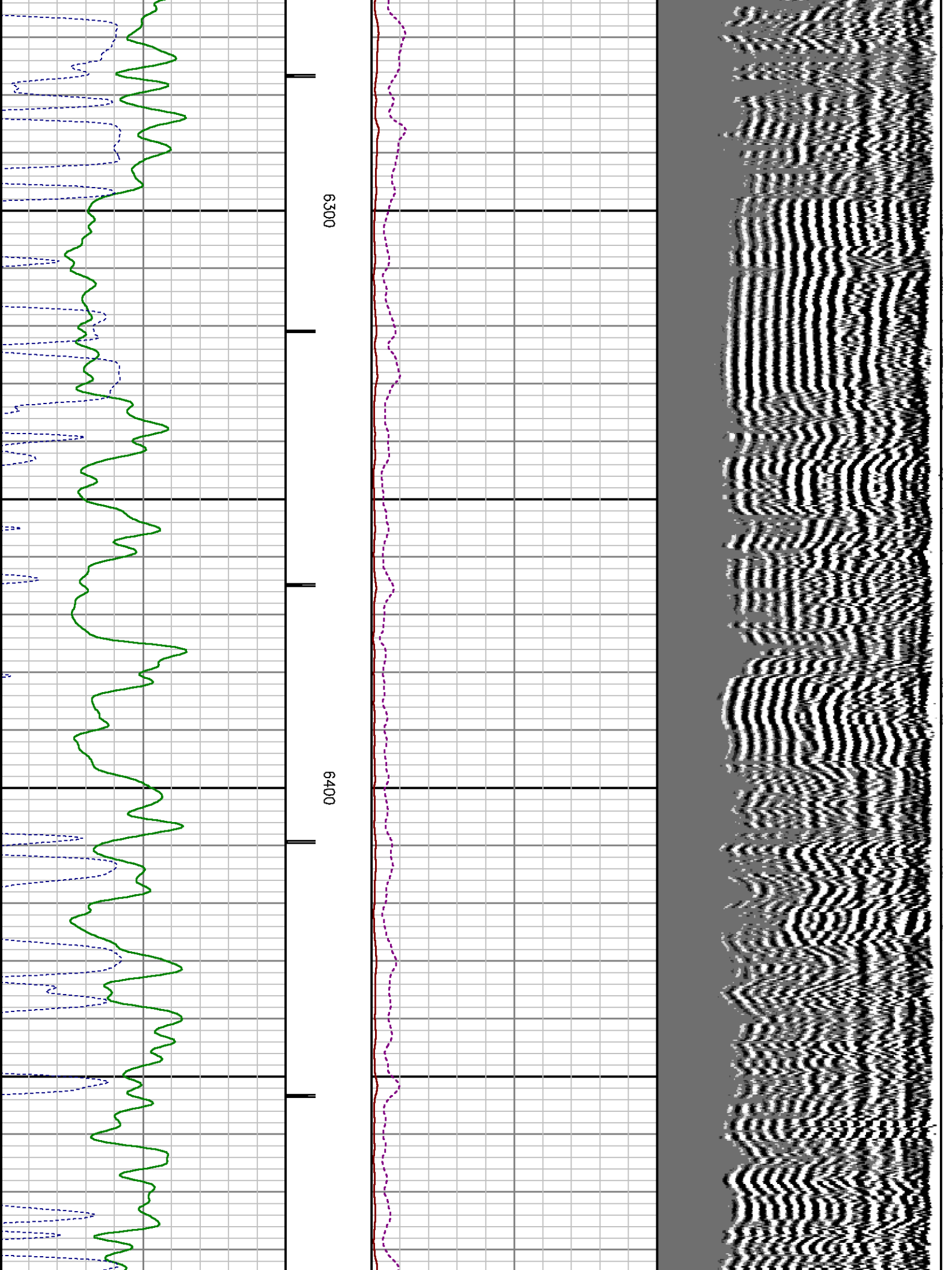


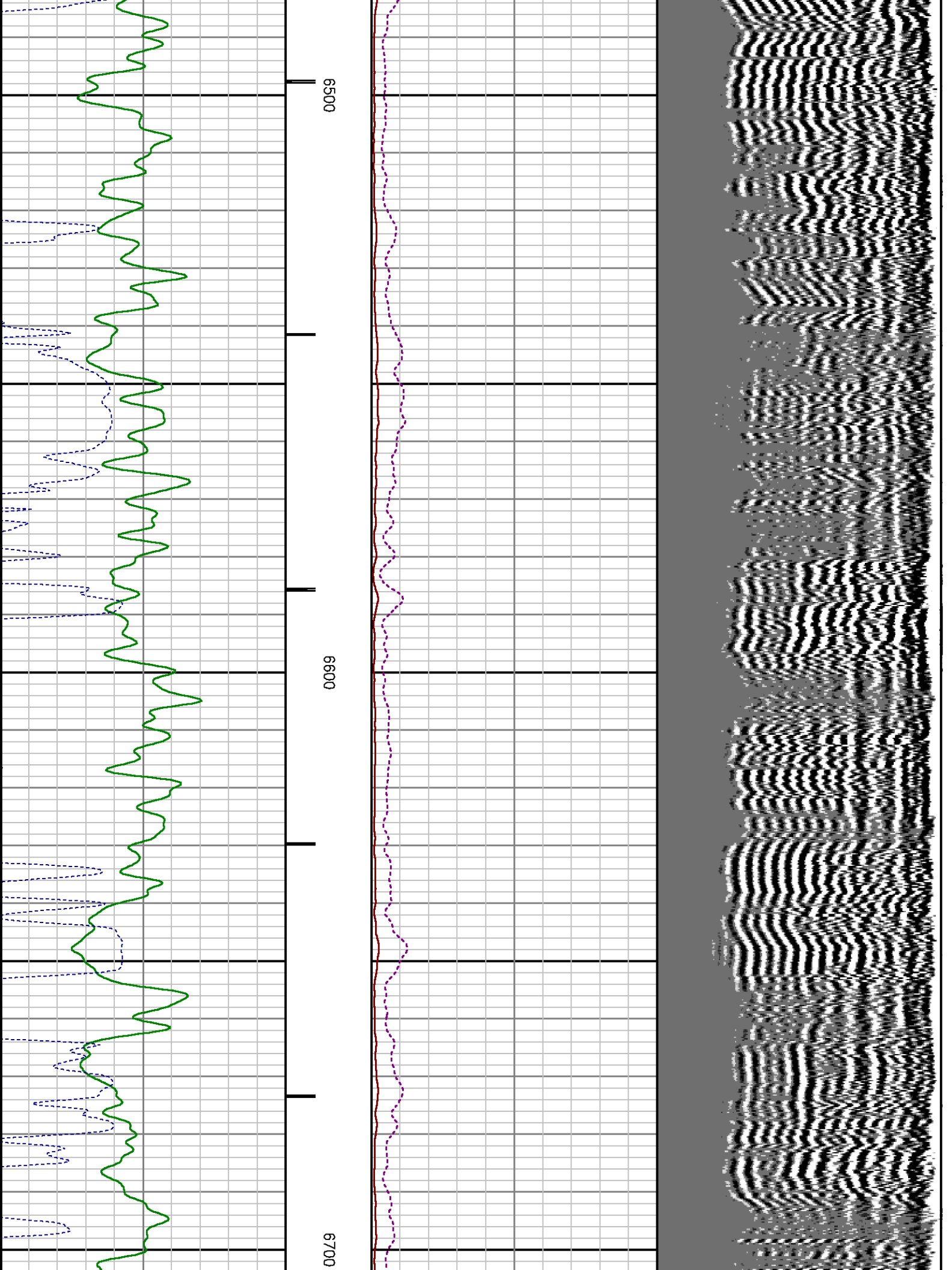


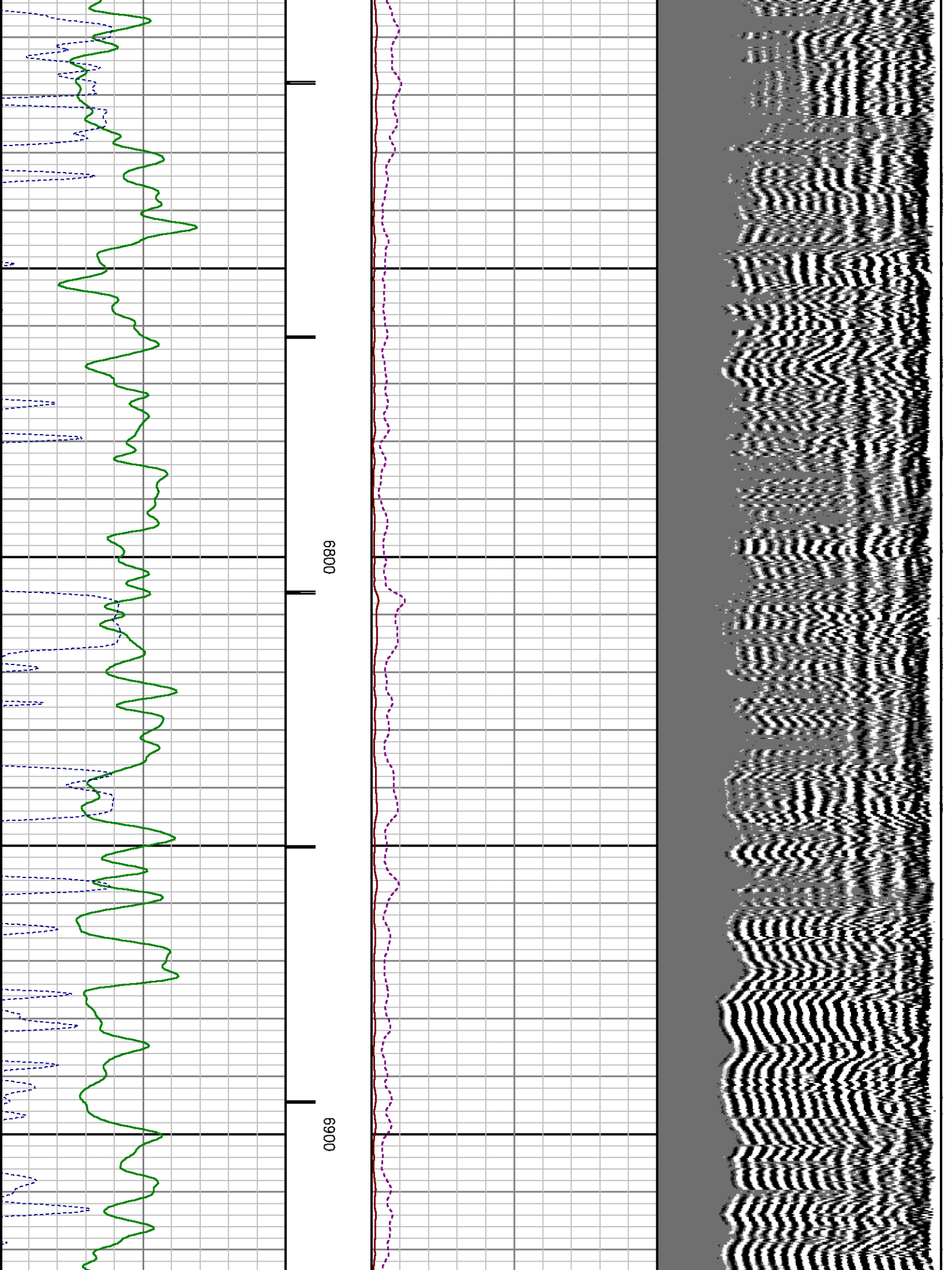


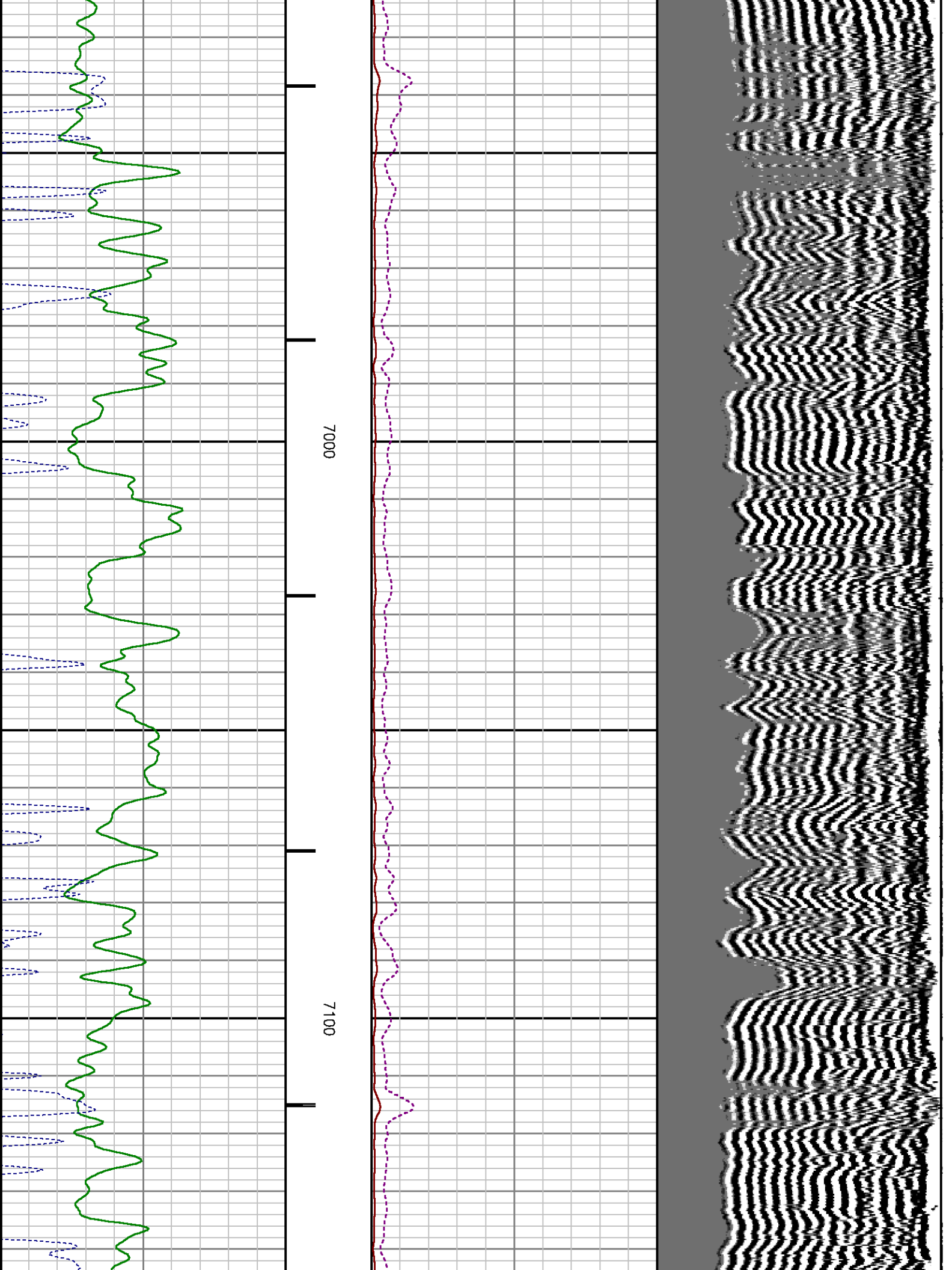


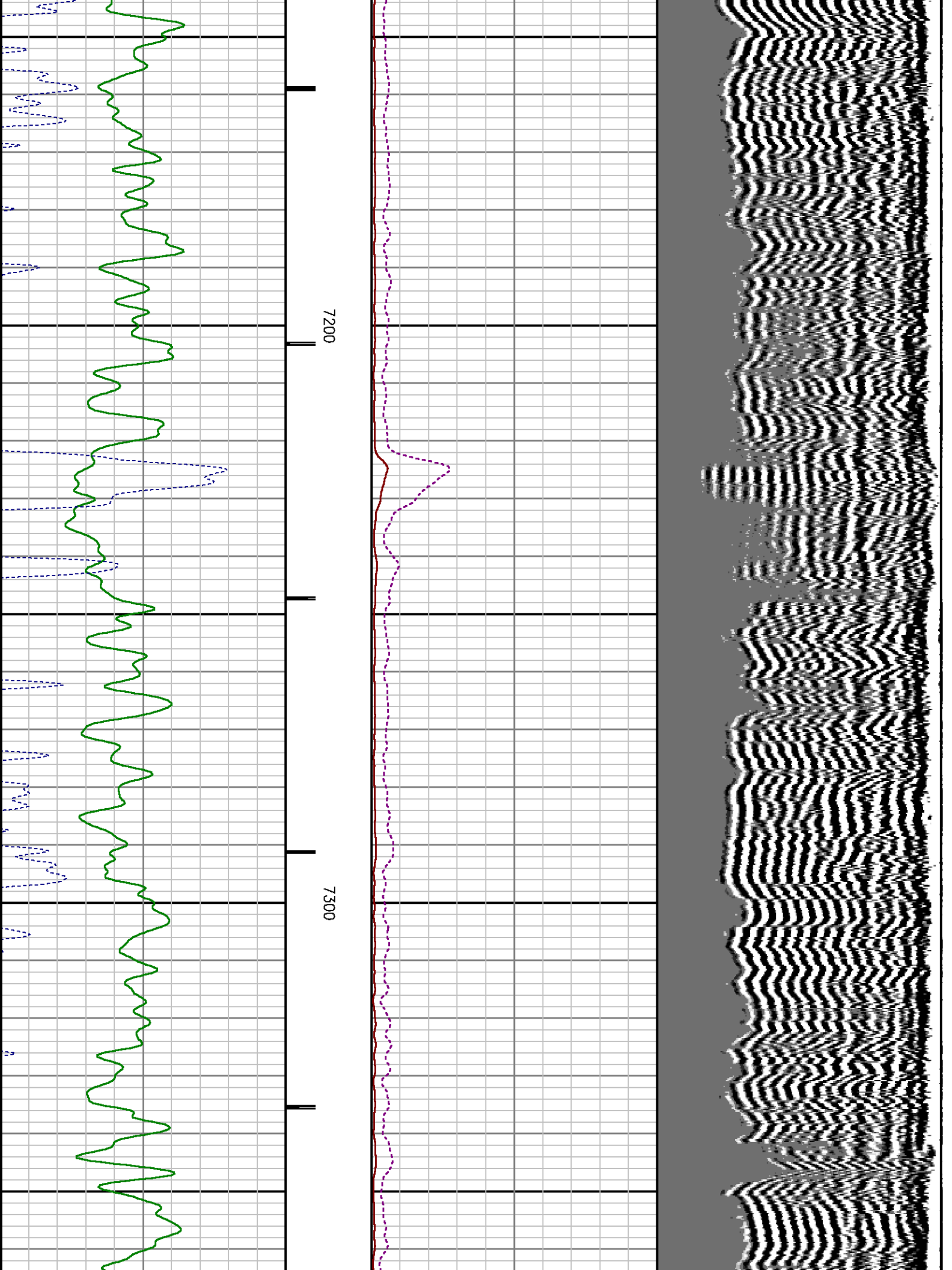


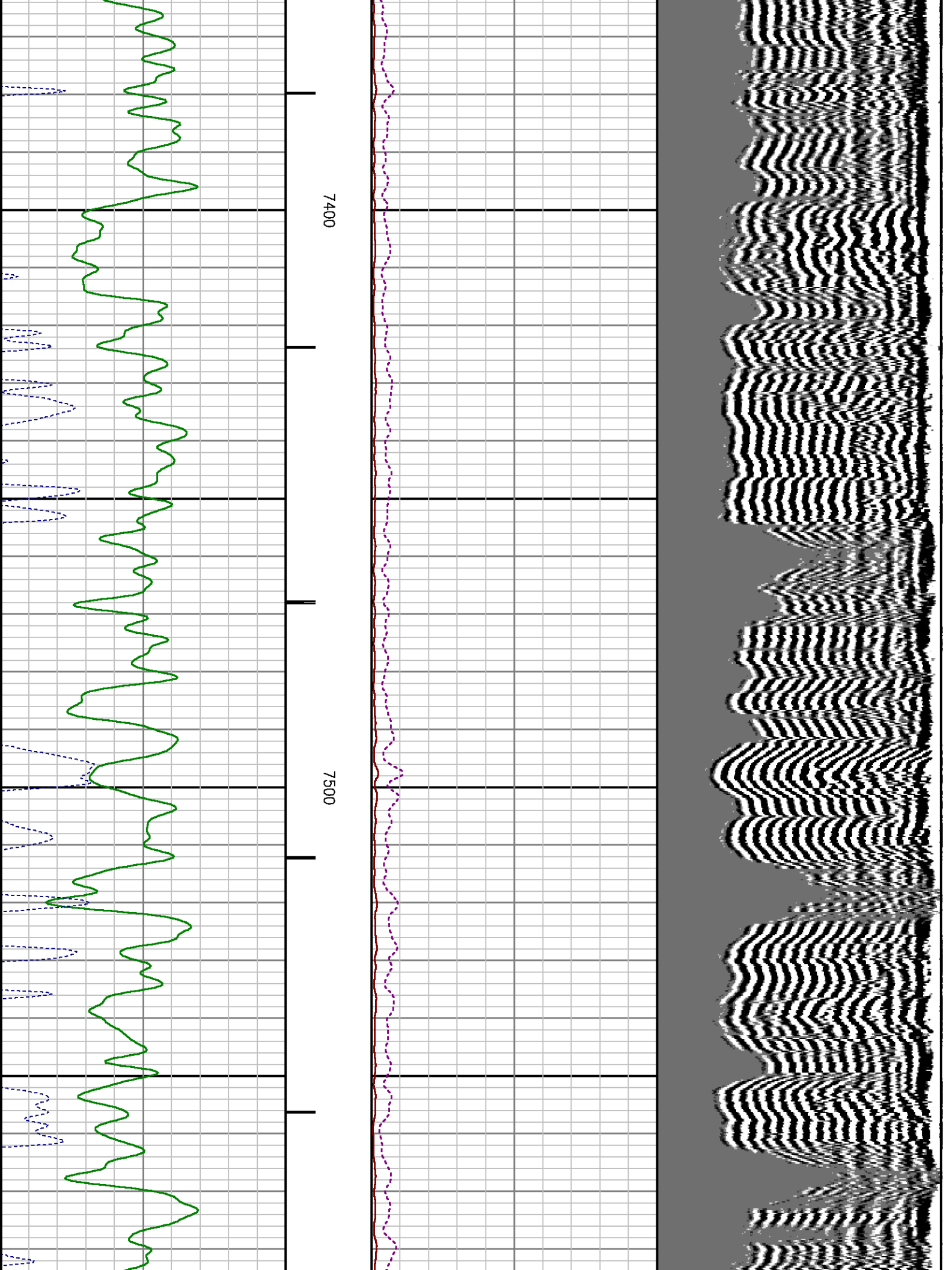


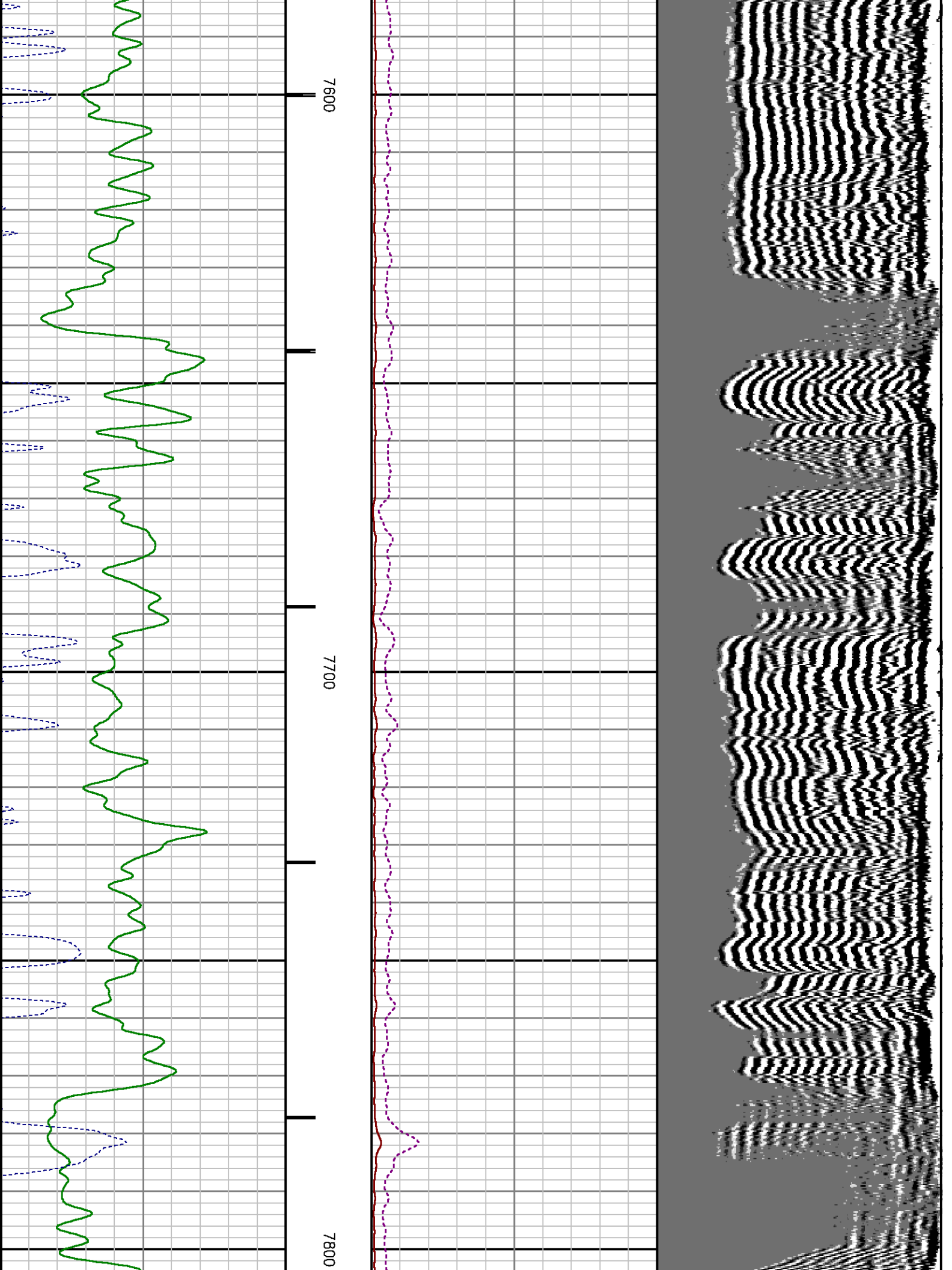


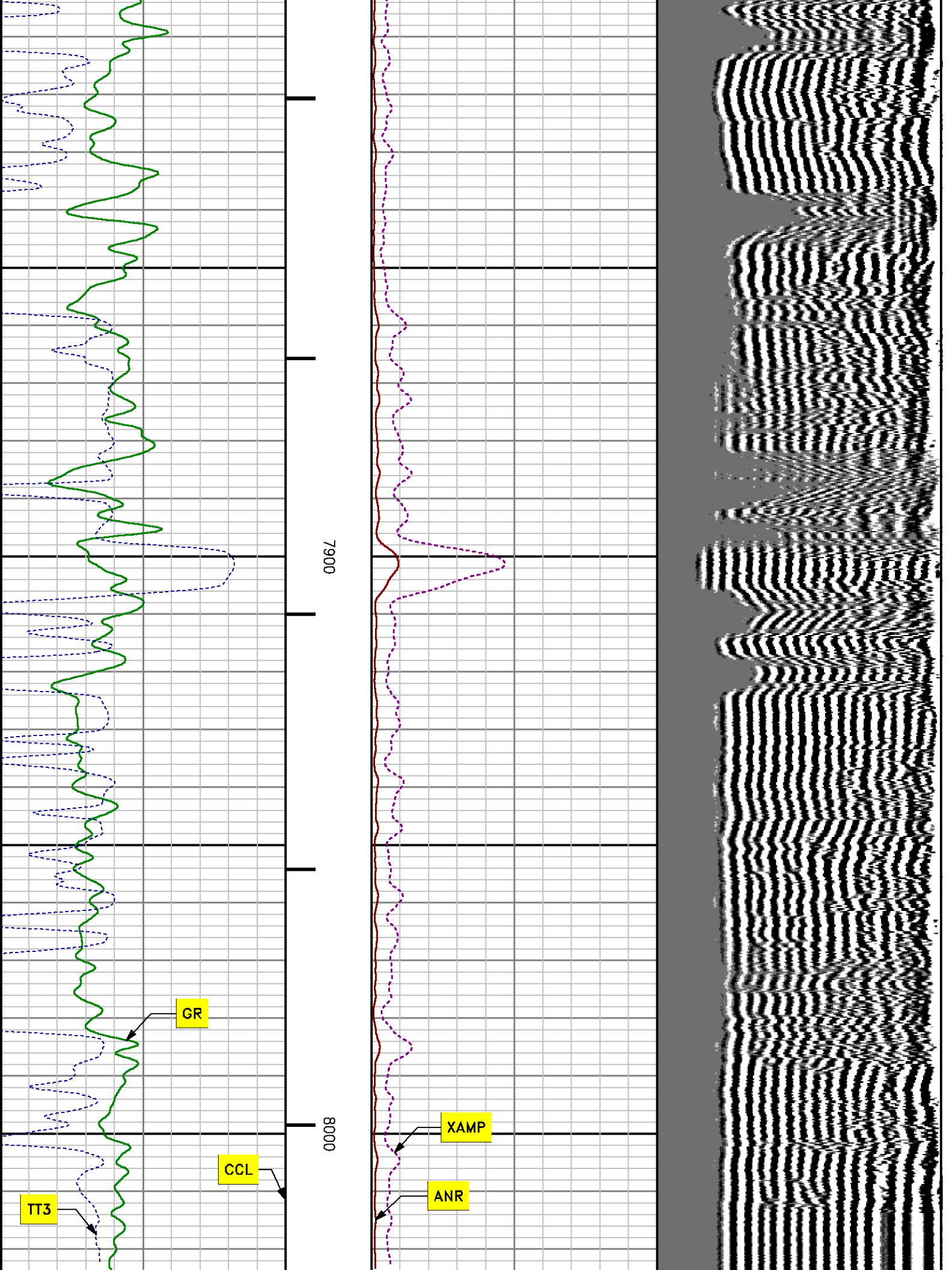


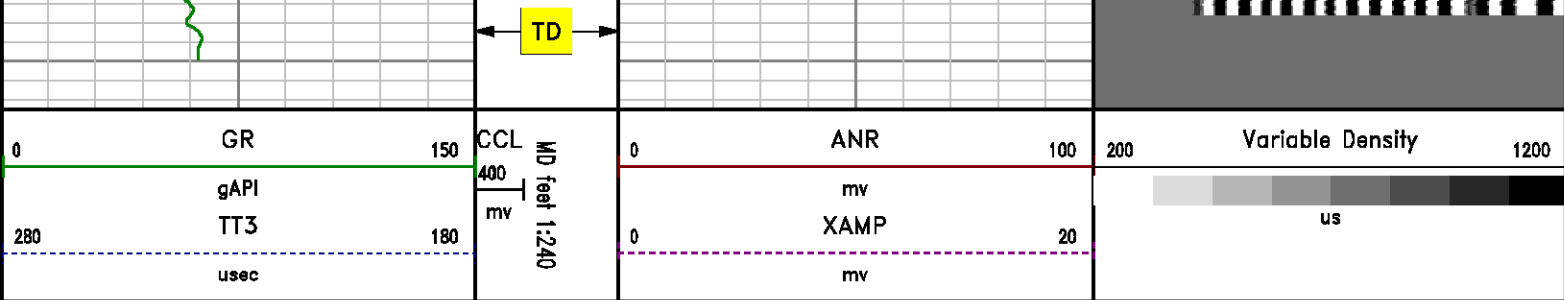












MAIN LOG SECONDARY PRESENTATION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	323.655	u sec	22.297	8039.000
RAL	Amp Gate Start Near	198.687	u sec	22.297	8039.000
RAL	Amp Gate Start Radial	198.031	u sec	22.297	8039.000
RAL	Amp Gate Width Far	25.000	u sec	22.297	8039.000
RAL	Amp Gate Width Near	25.000	u sec	22.297	8039.000
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RAL	casing od	4.500	inches	22.297	8039.000
RAL	casing wt	11.600	lbm/ft	22.297	8039.000
RAL	FB Start Far	291.900	u sec	22.297	8039.000
RAL	FB Start Near	175.391	u sec	22.297	8039.000
RAL	FB Start Radial	175.391	u sec	22.297	8039.000
RAL	FB Thresh Far	10.000	mv	22.297	8039.000
RAL	FB Thresh Near	4.000	mv	22.297	8039.000
RAL	FB Thresh Radial	4.000	mv	22.297	8039.000
RAL	Fluid Travel Time	200.000	u sec/ft	22.297	8039.918

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

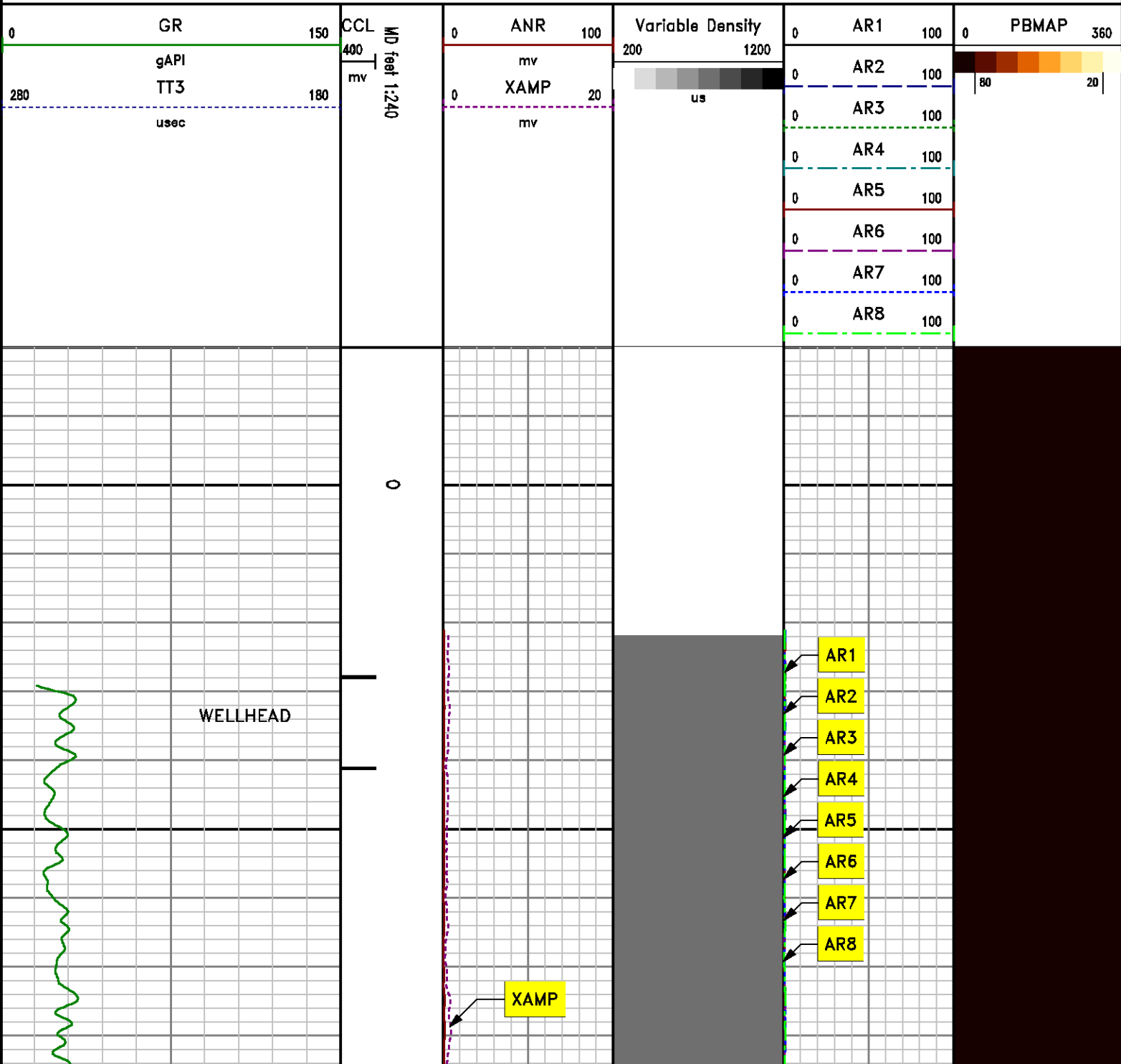
Well : DUGGAN RWF 413-29

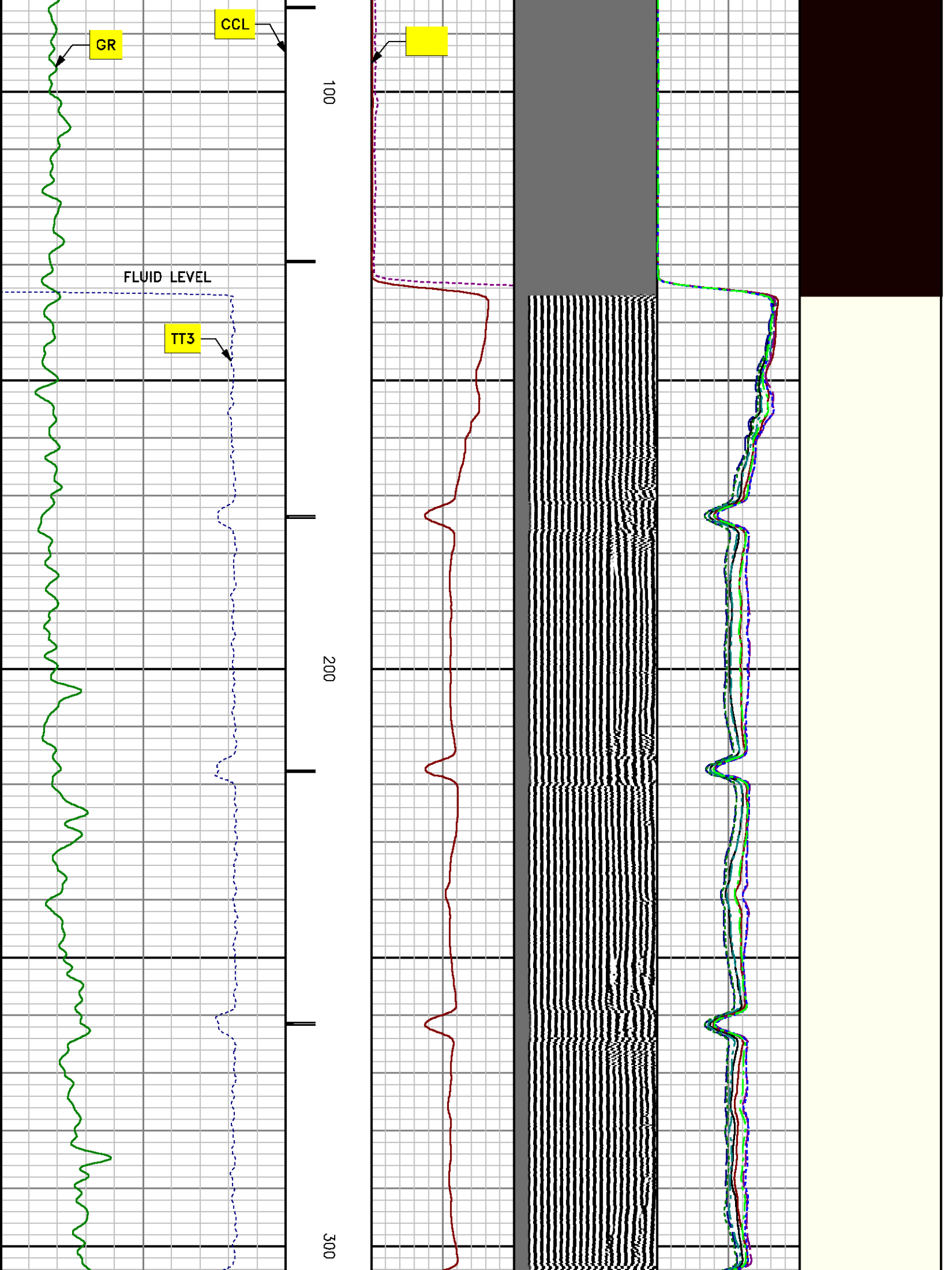
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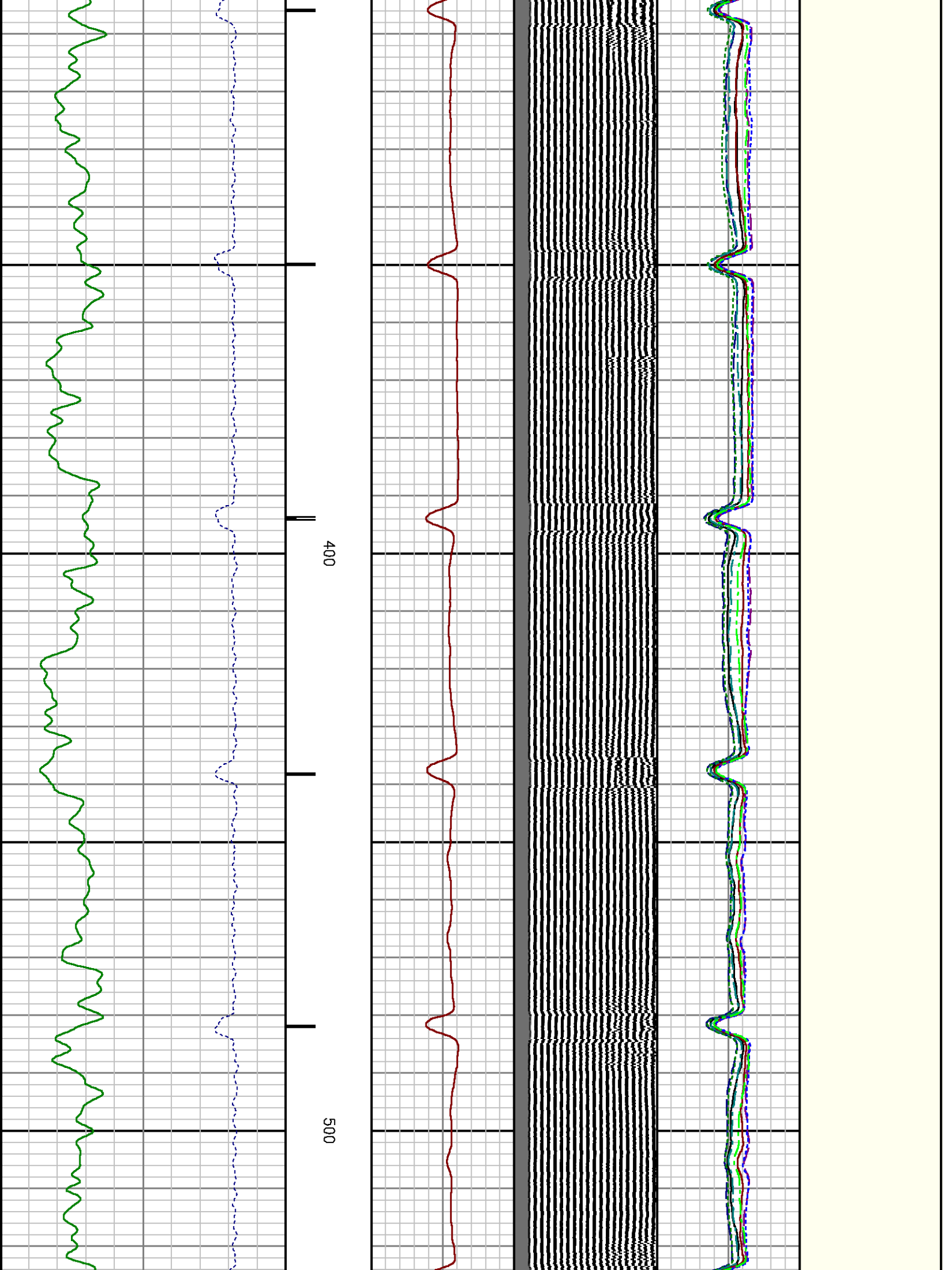
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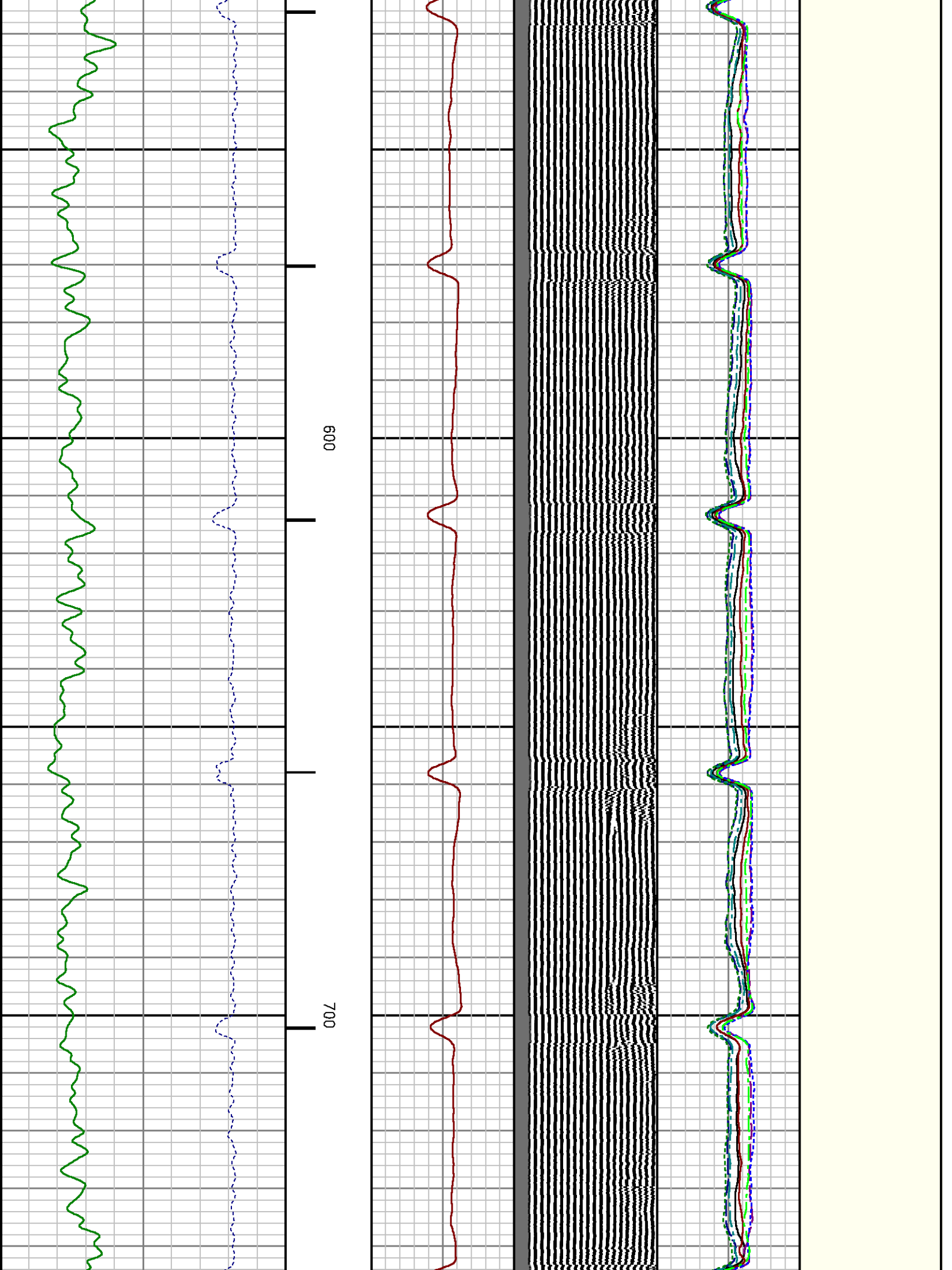
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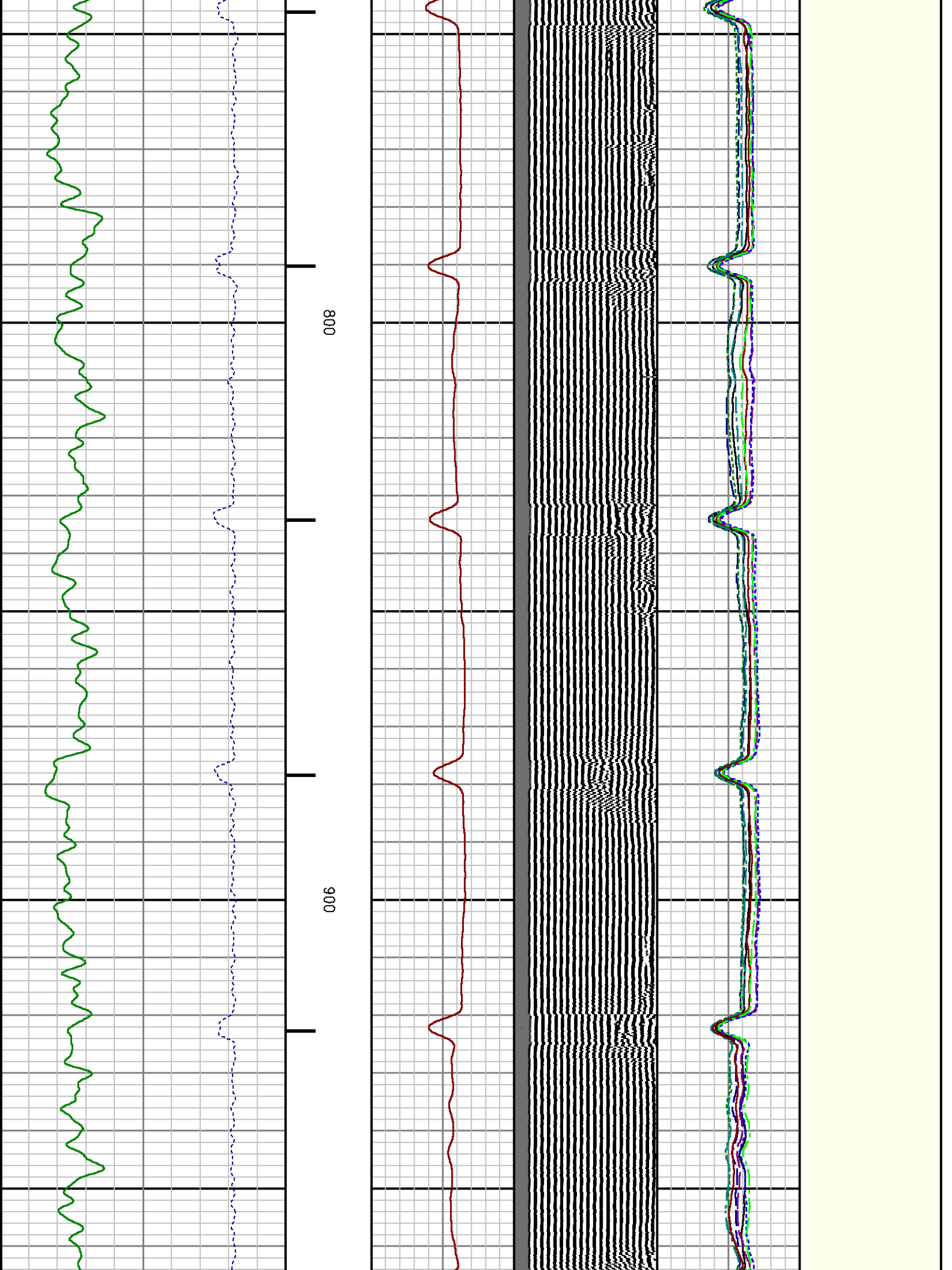
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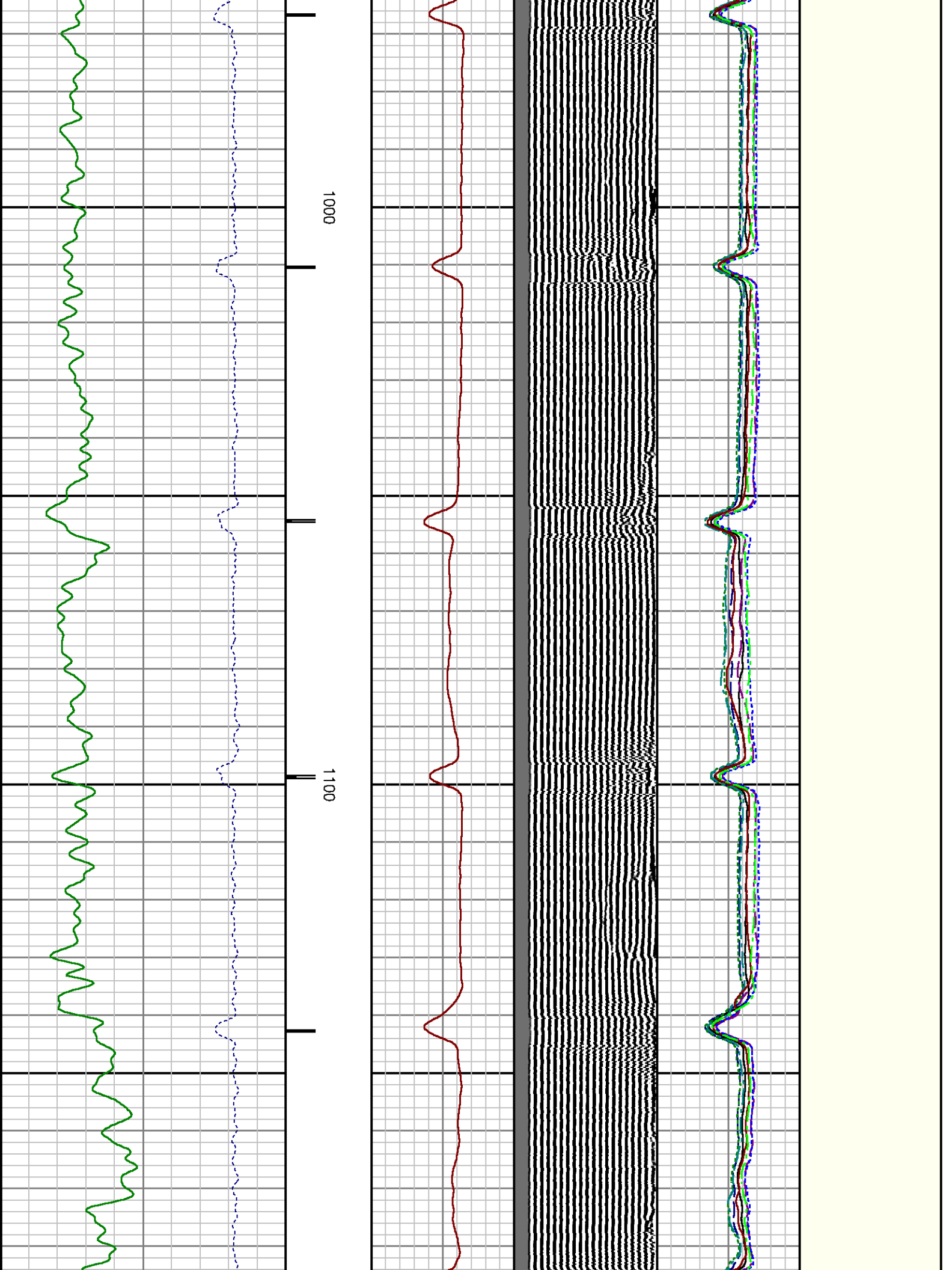


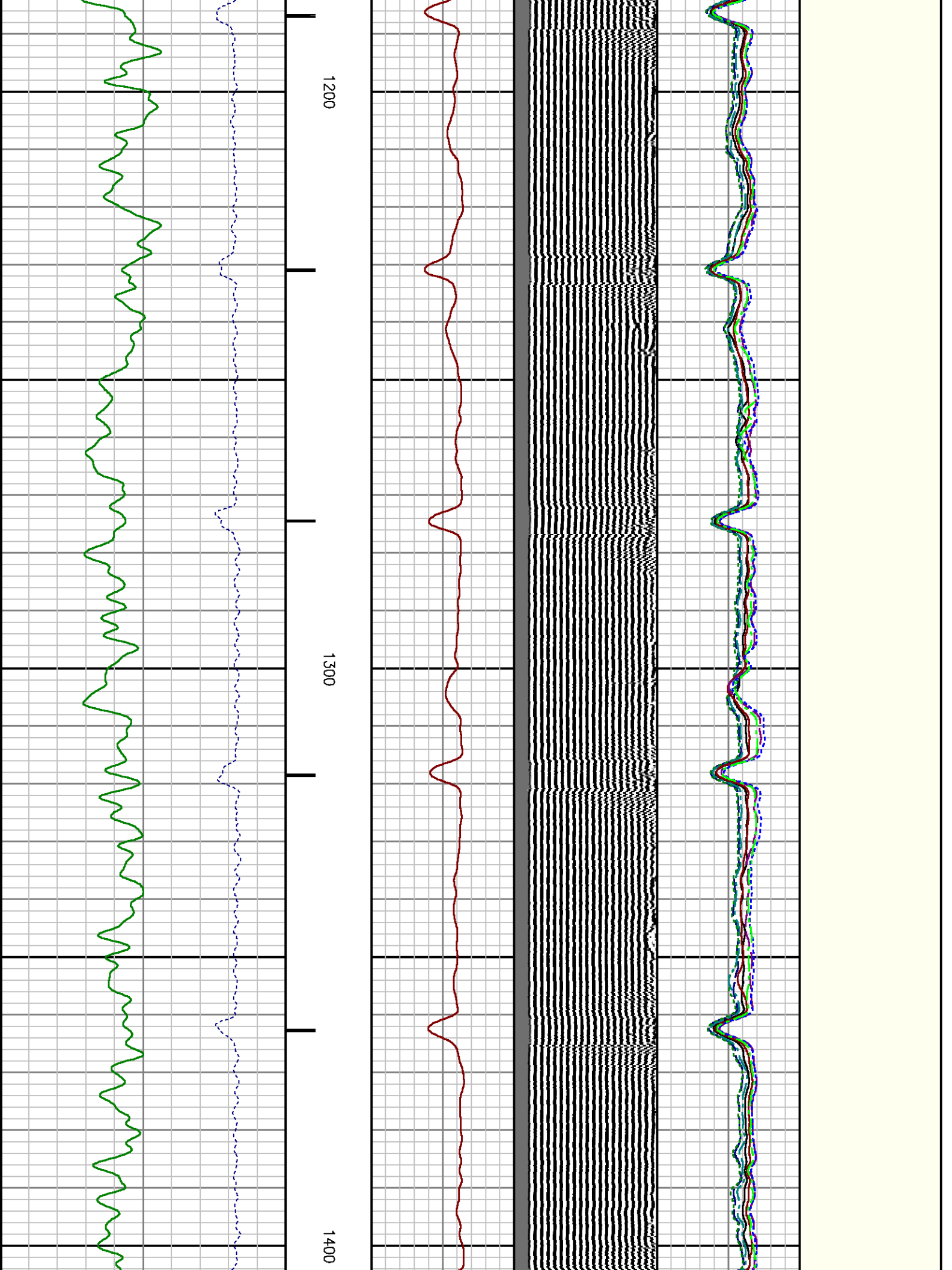


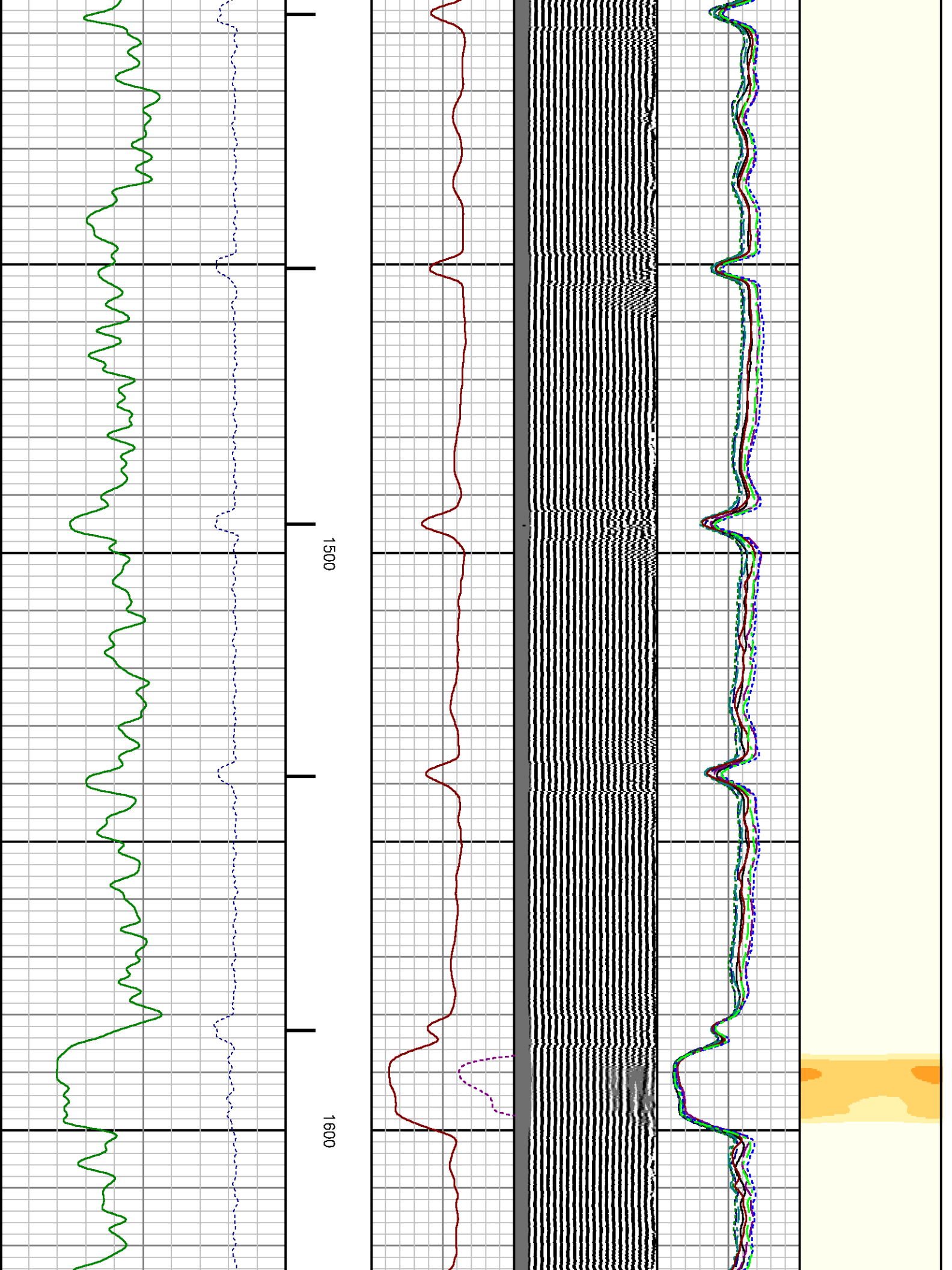


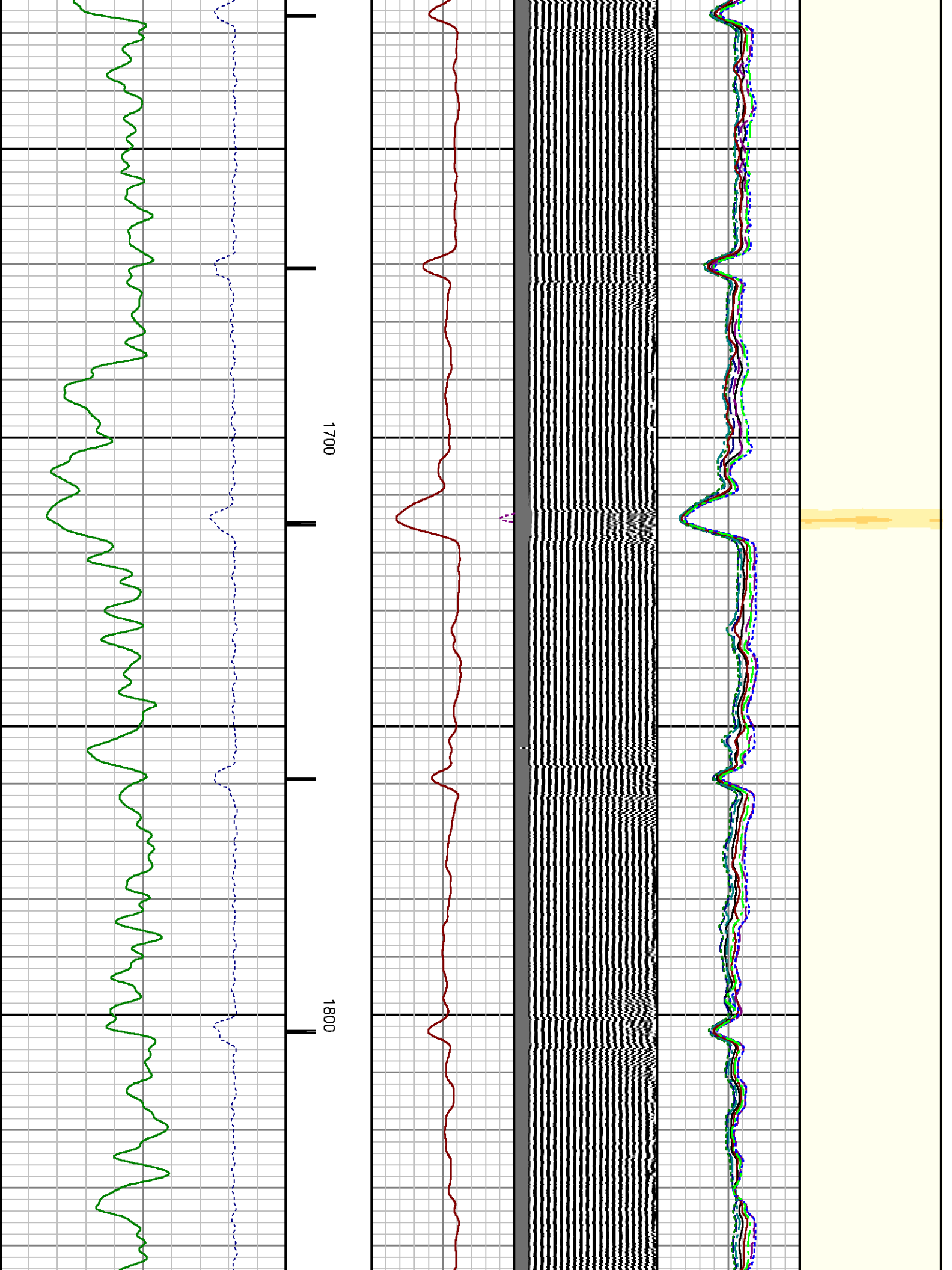


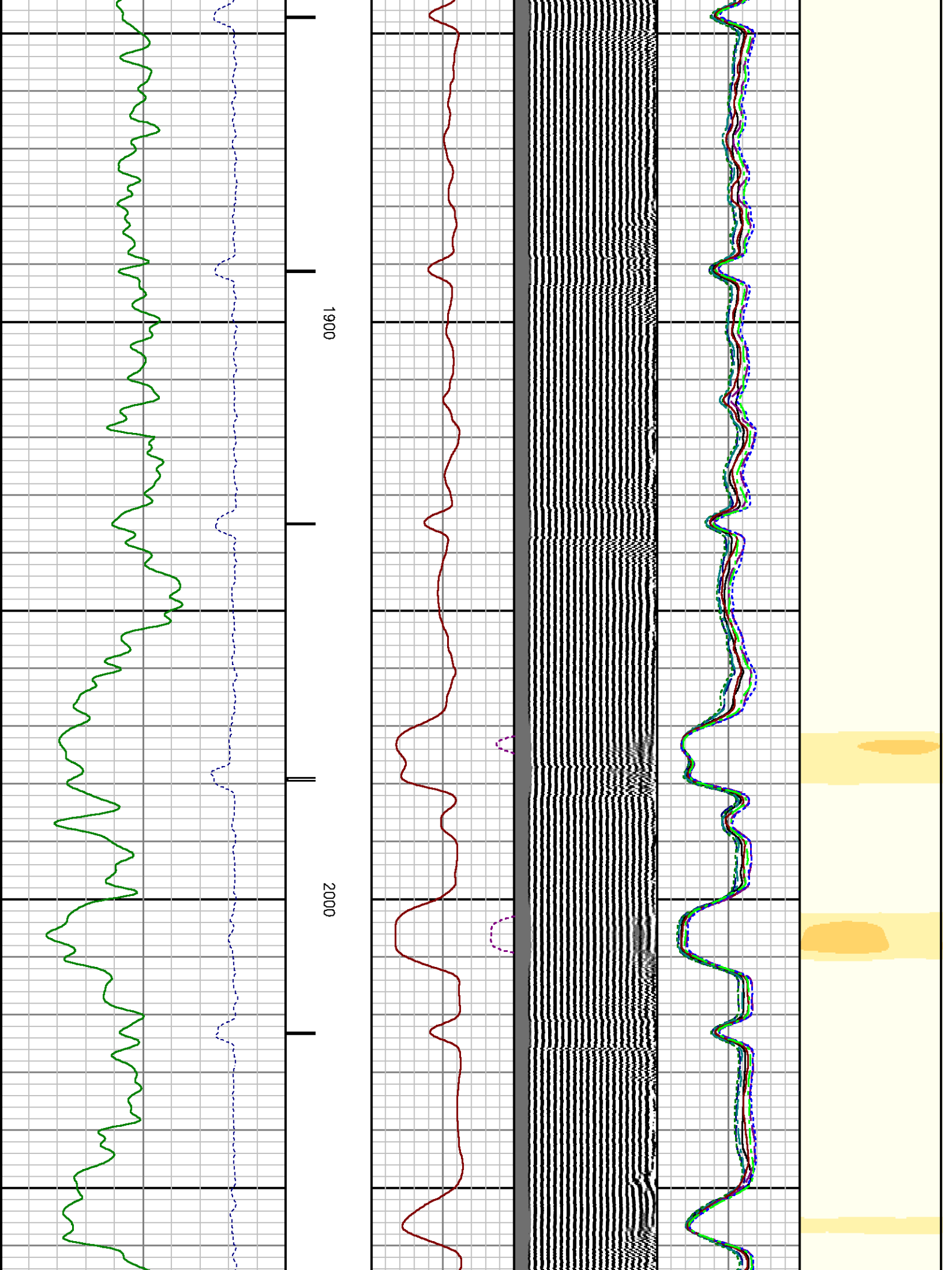


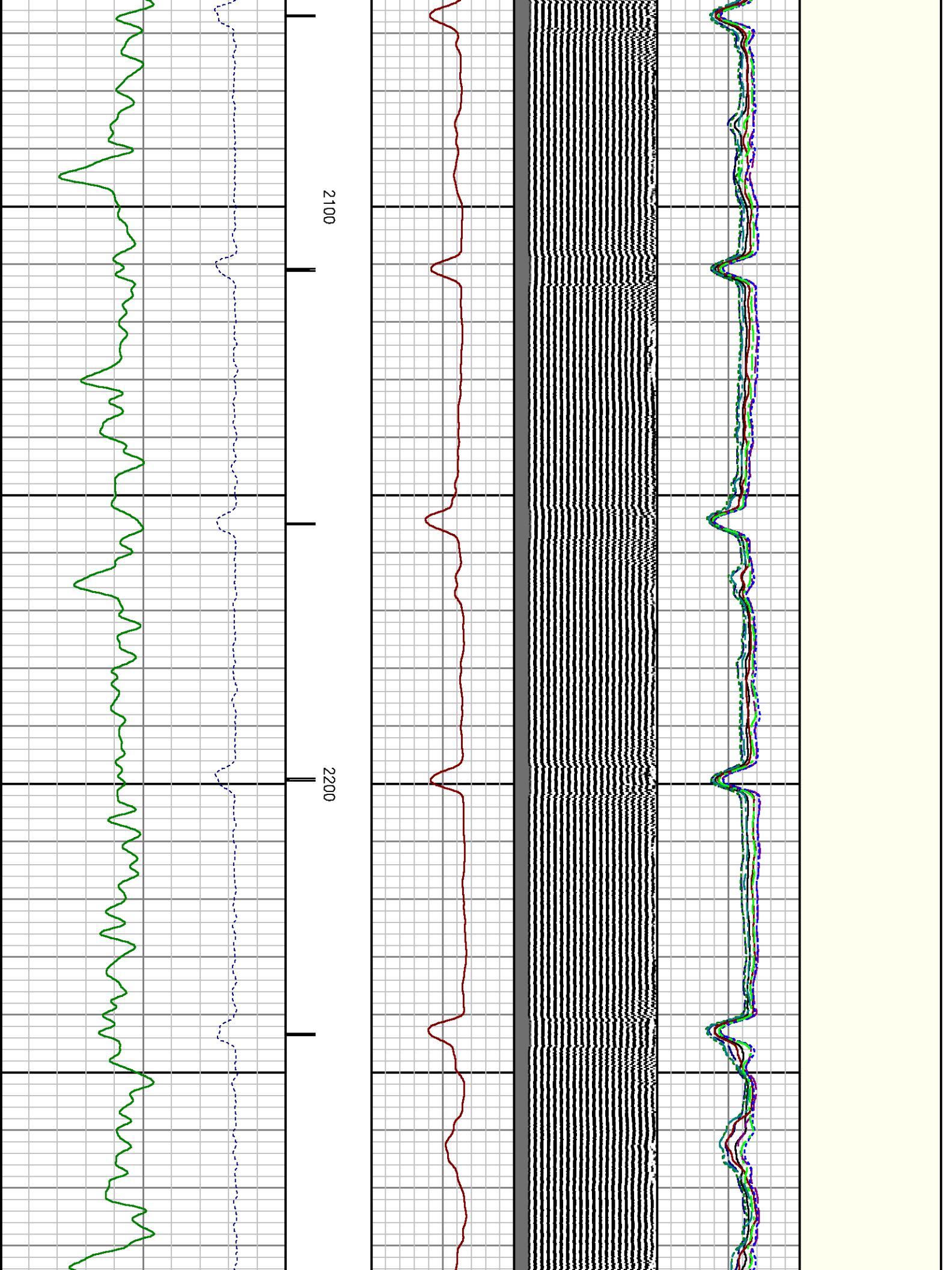


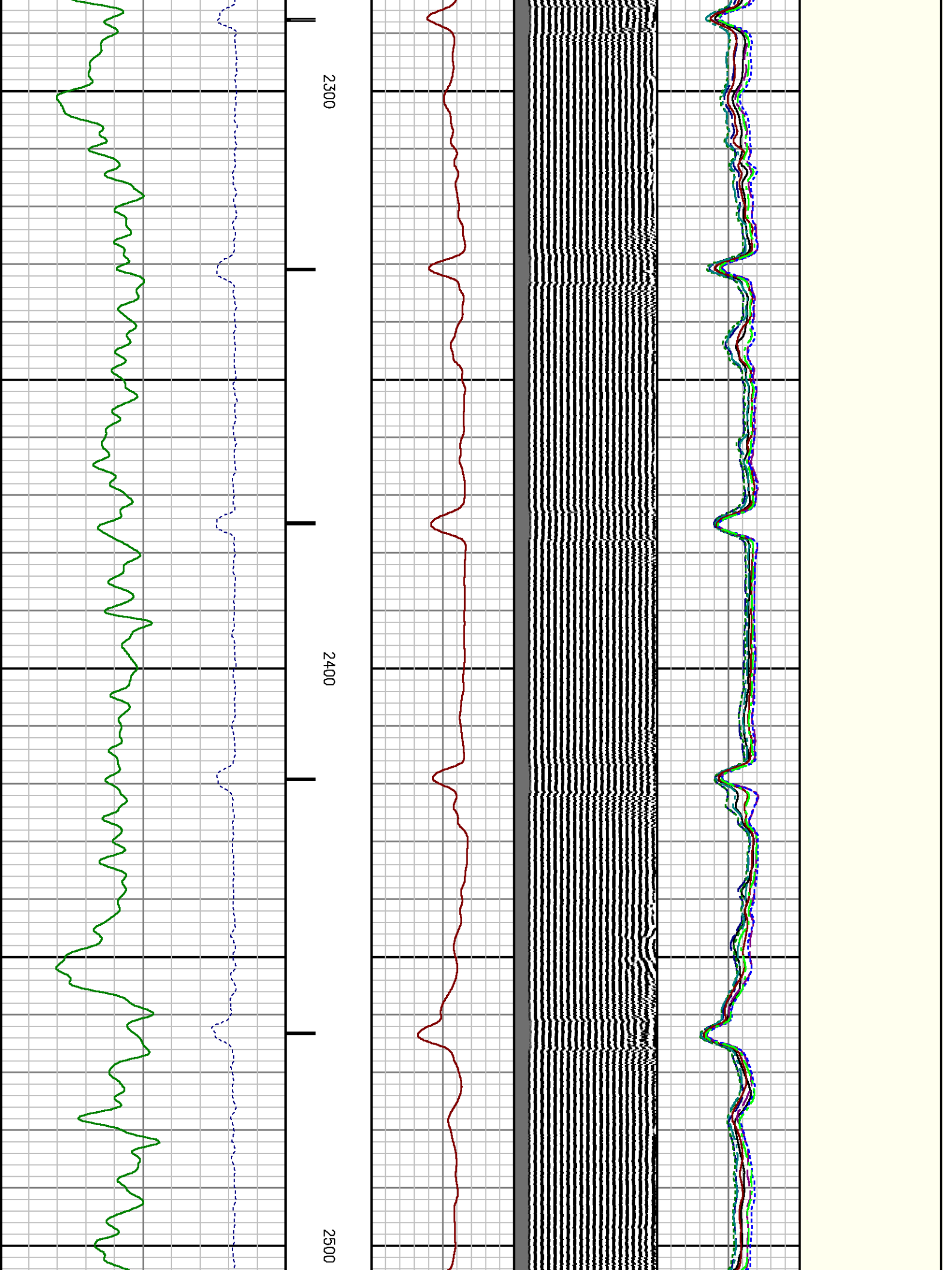


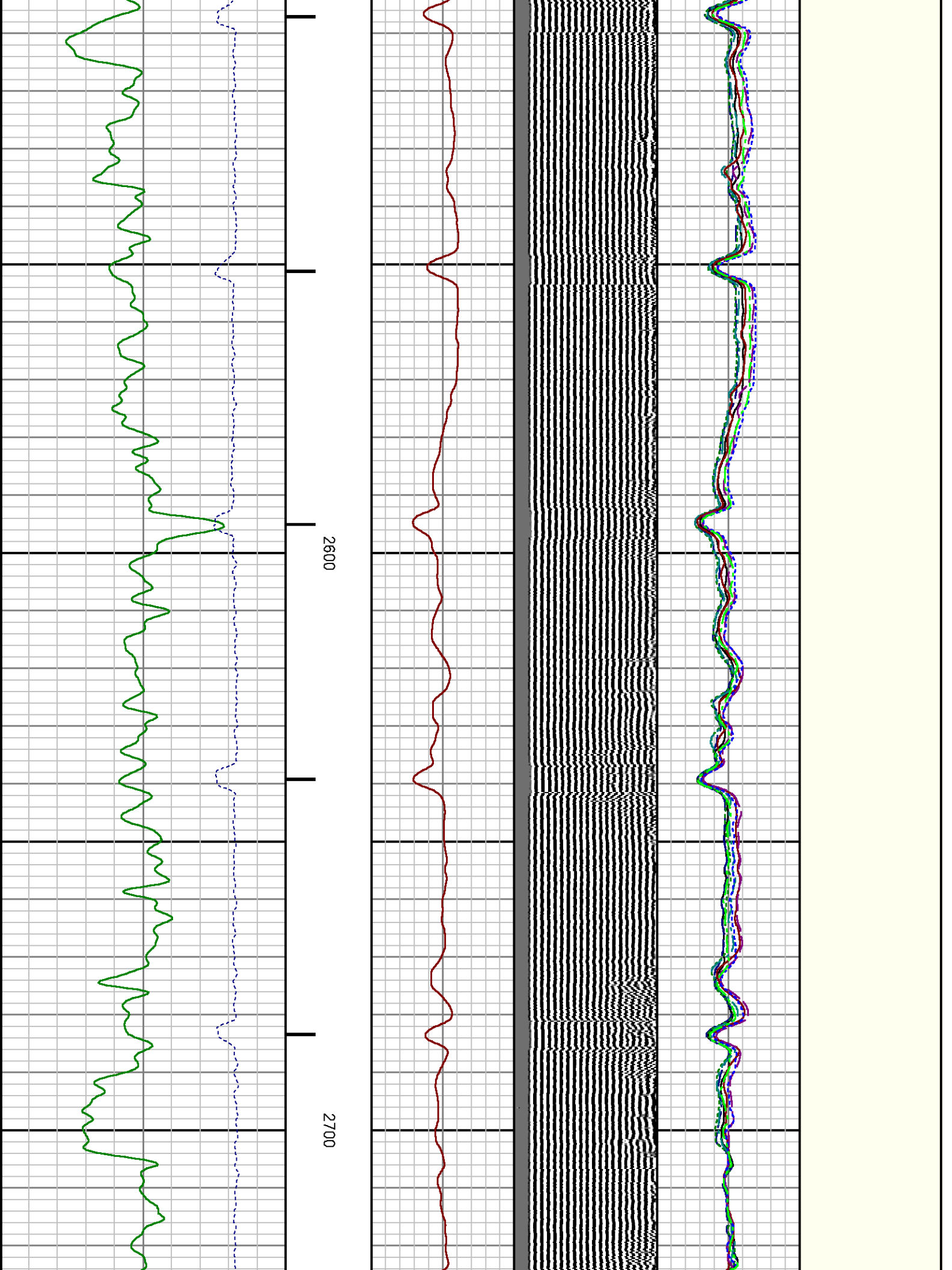


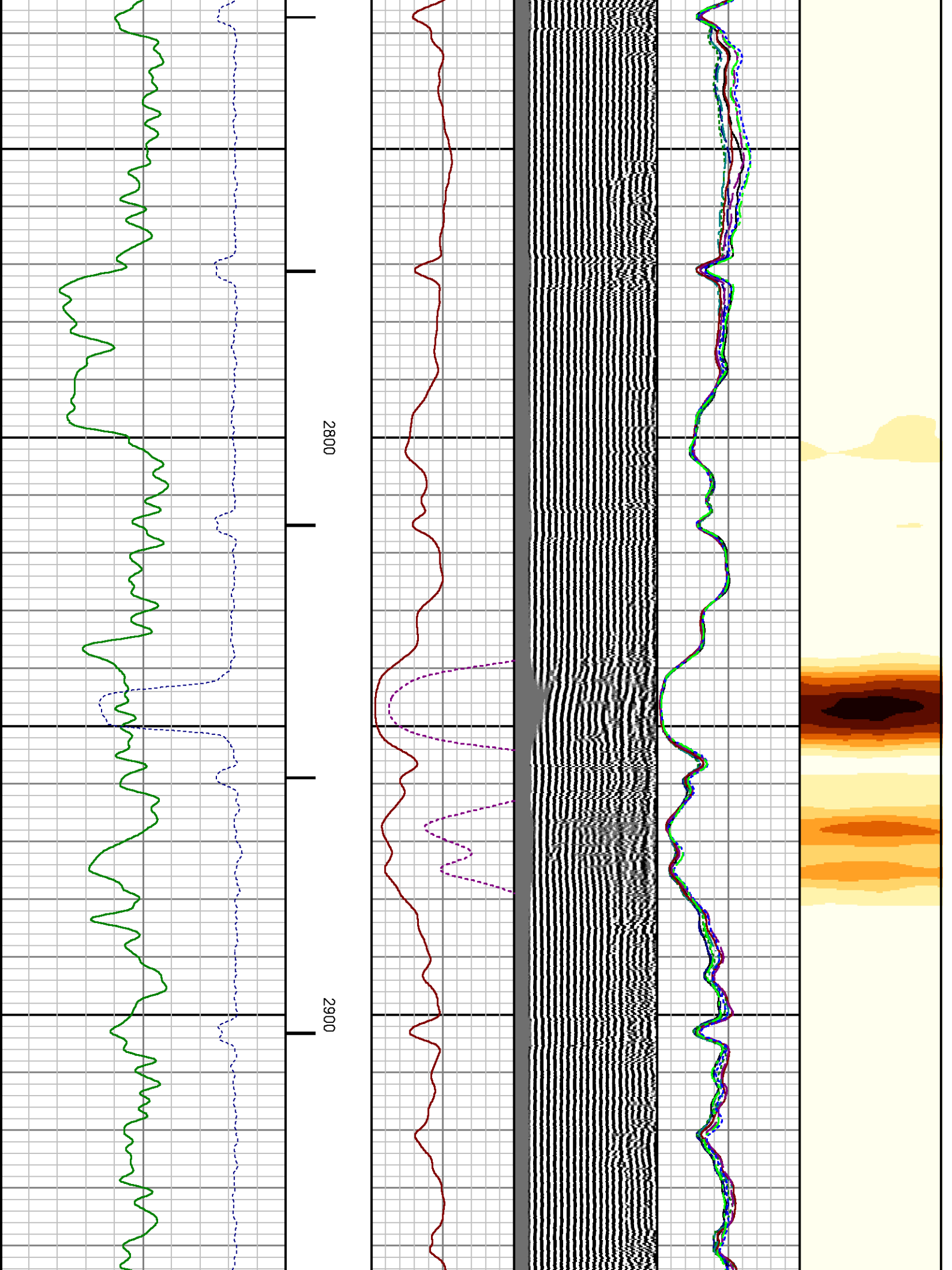


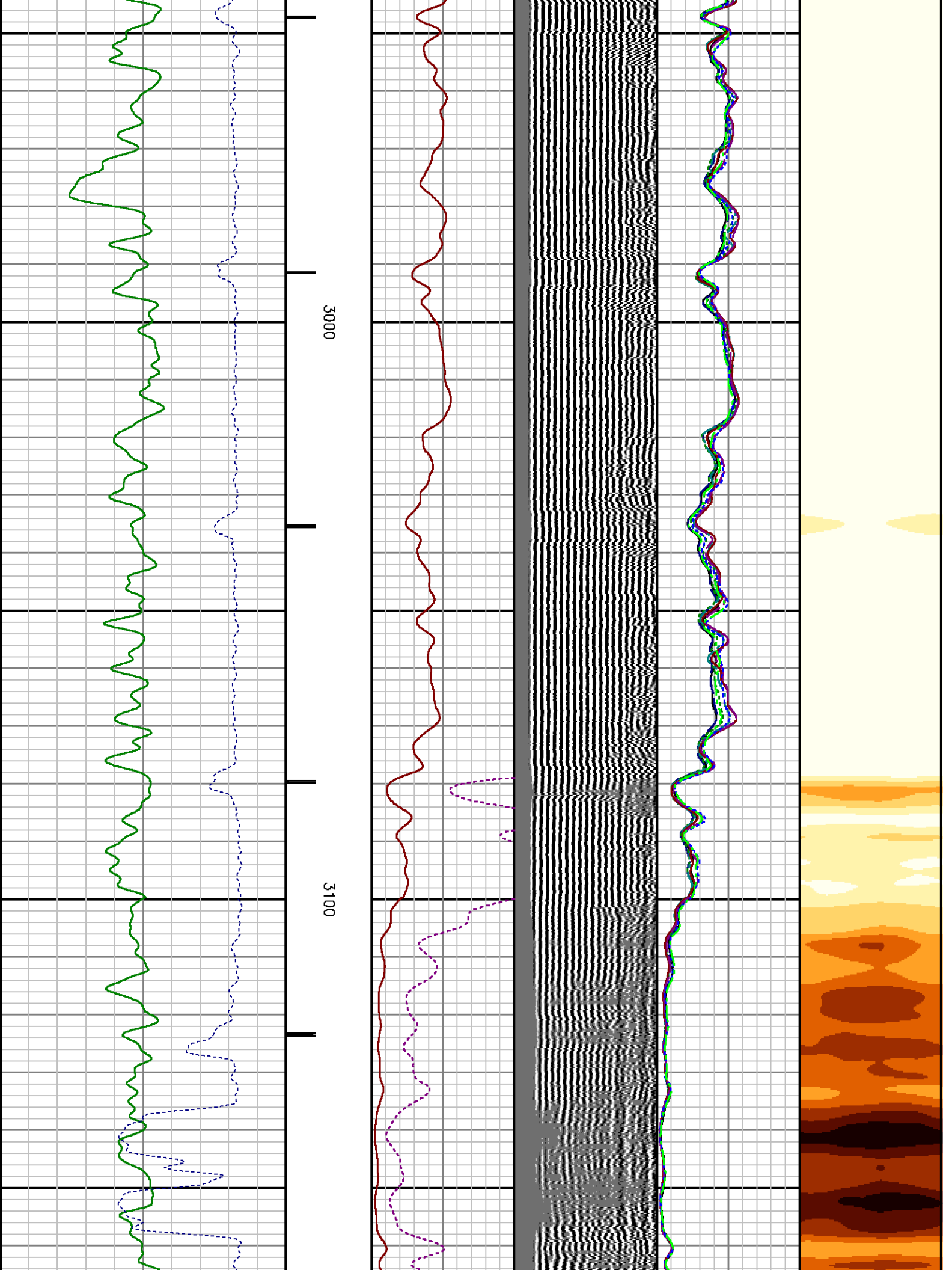


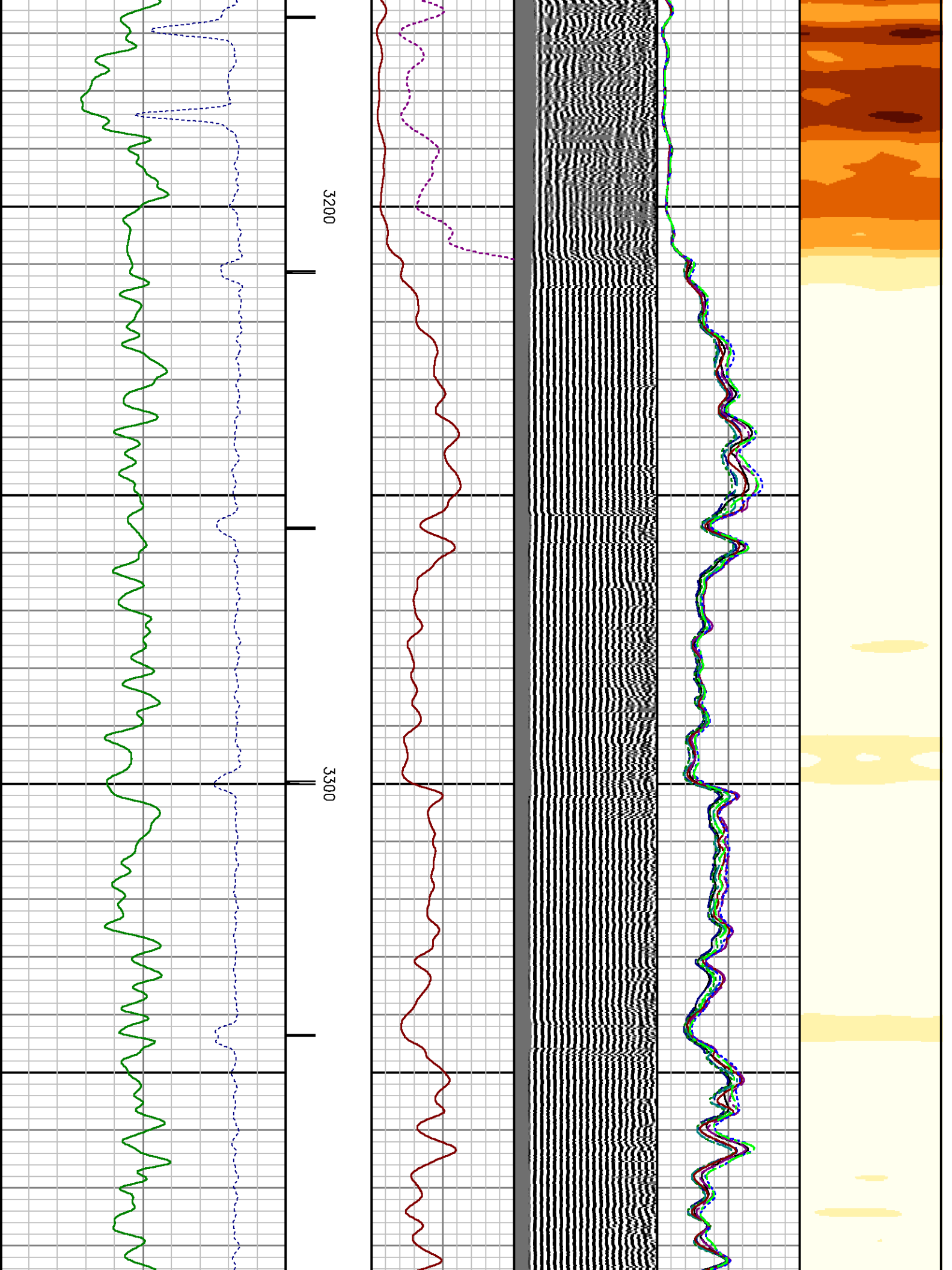


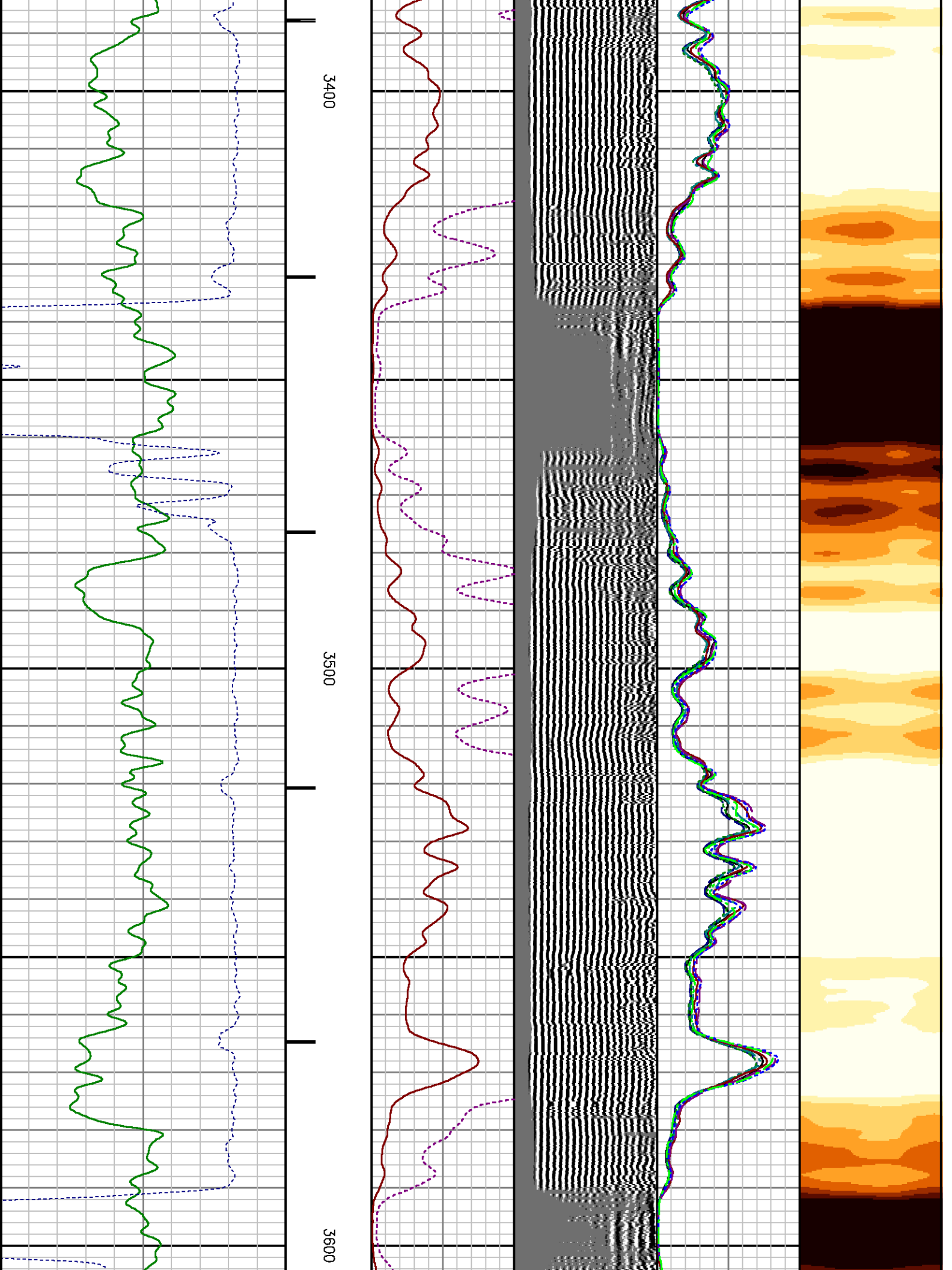


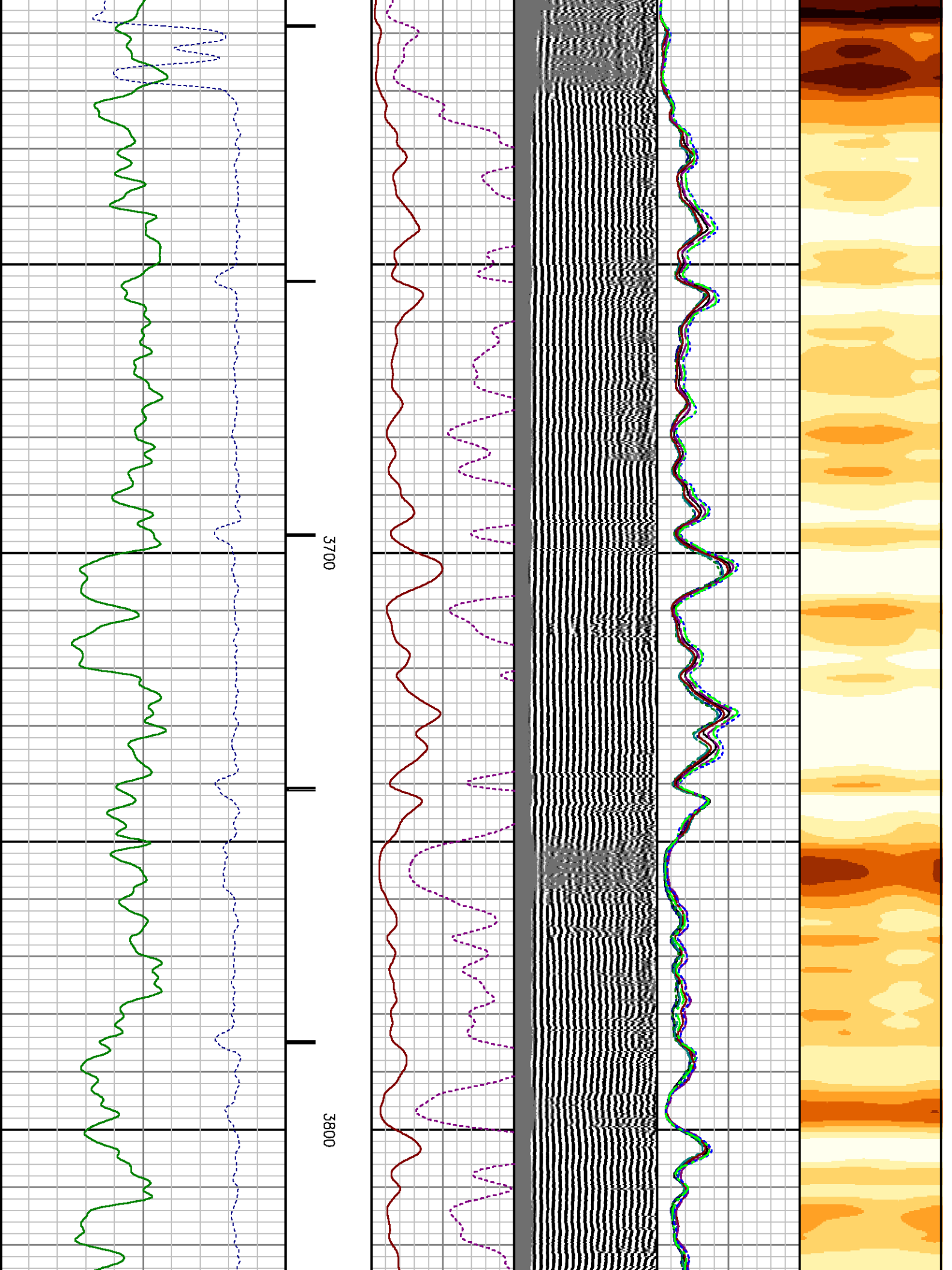


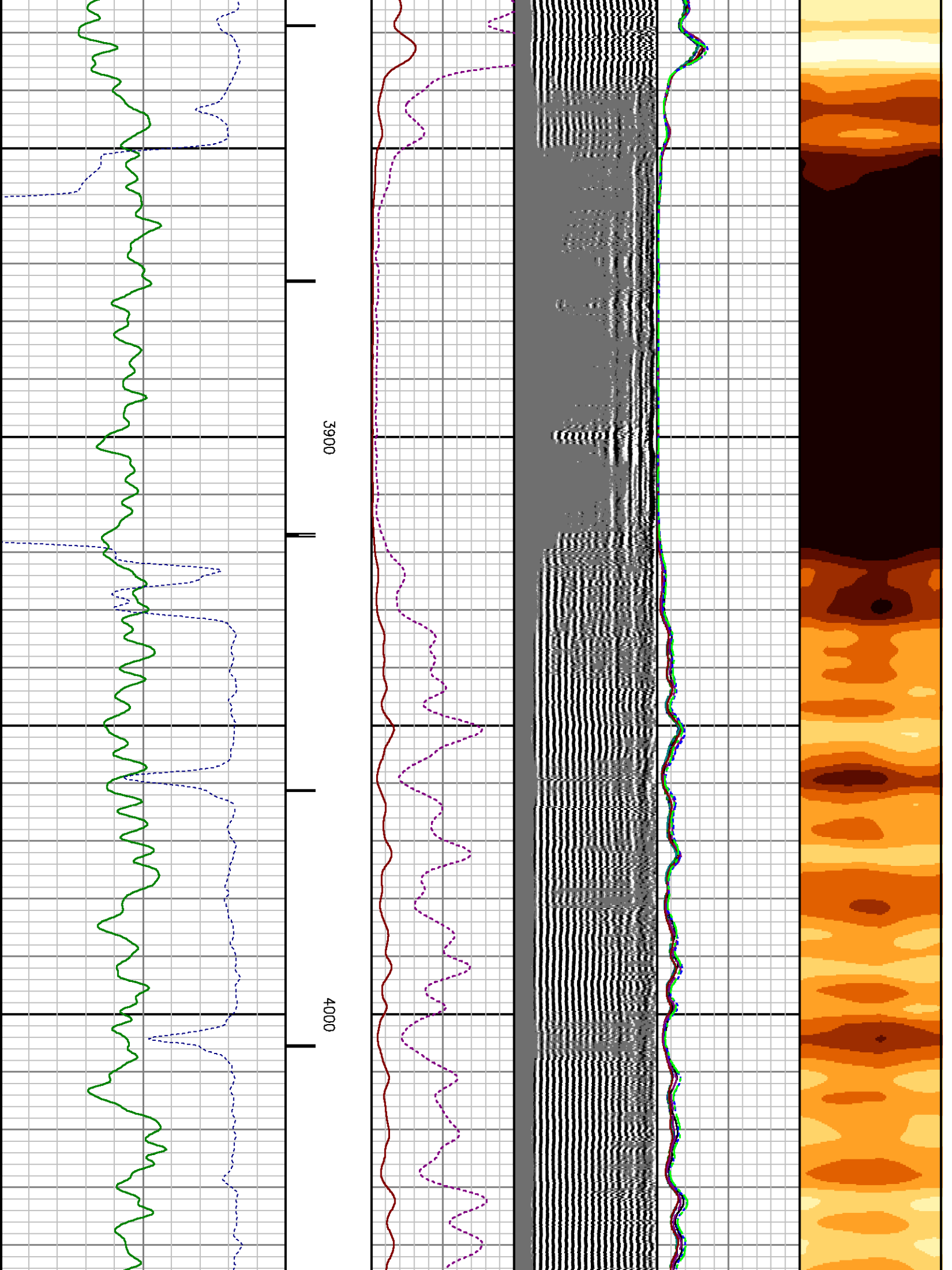


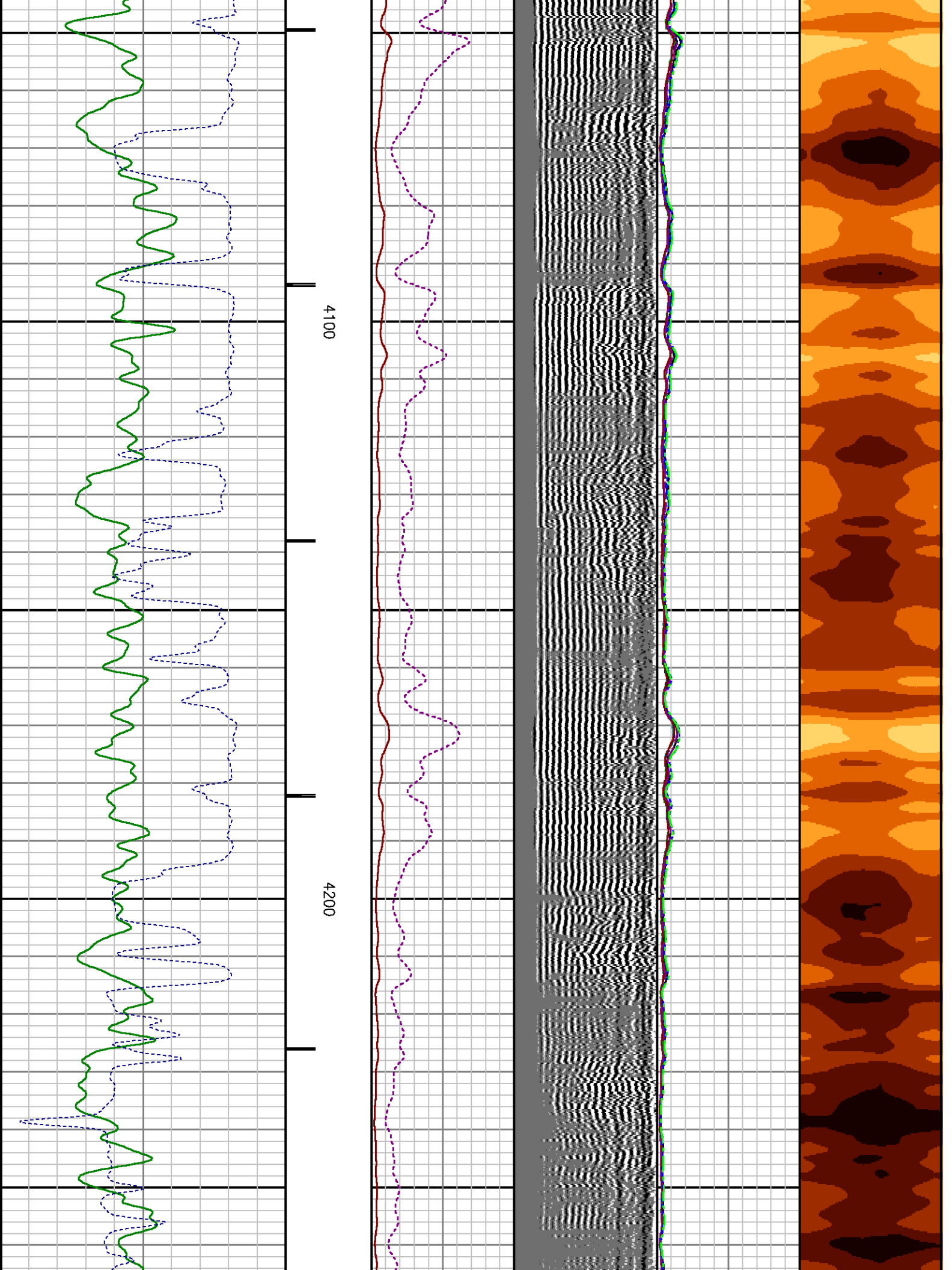


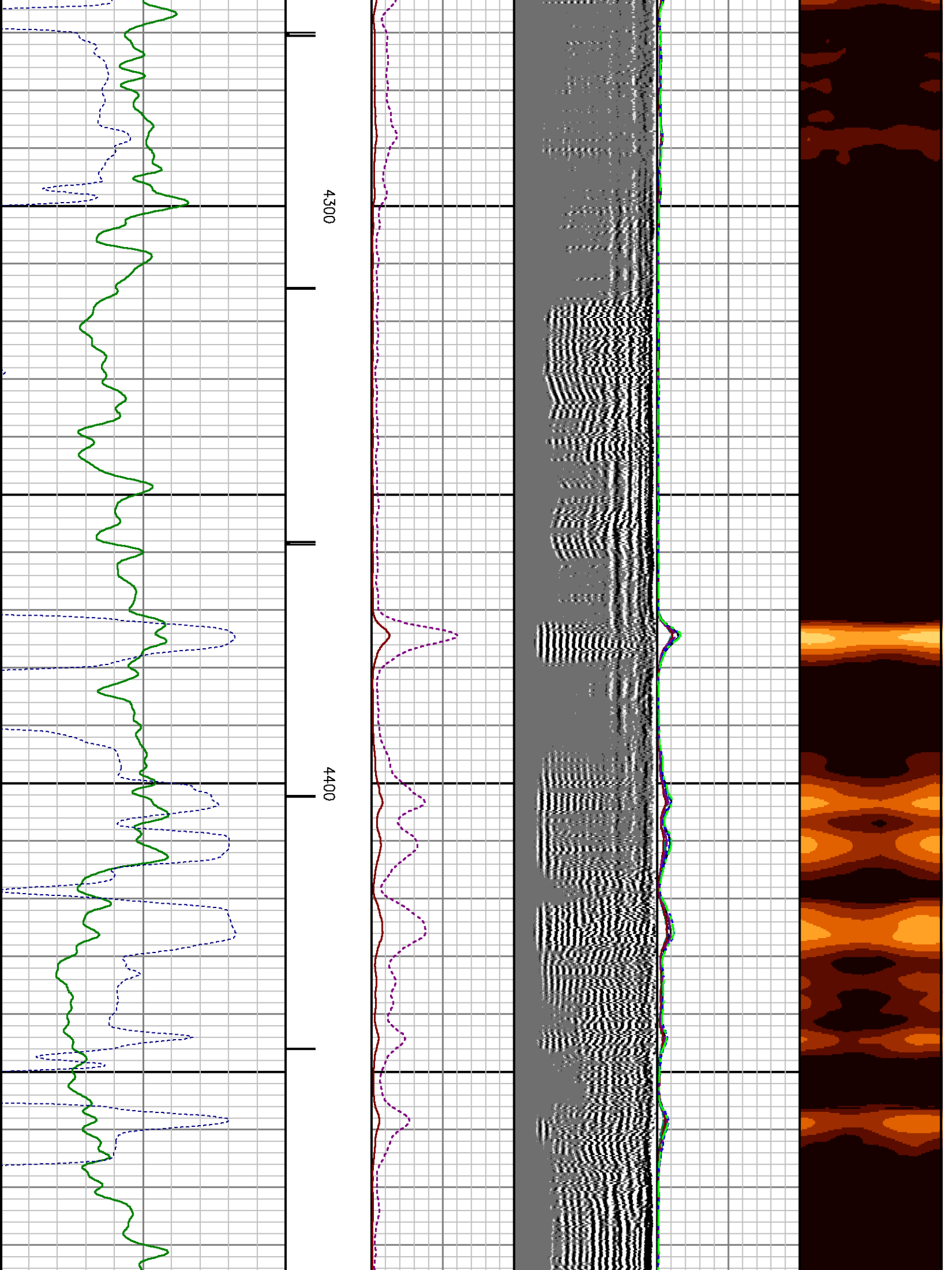


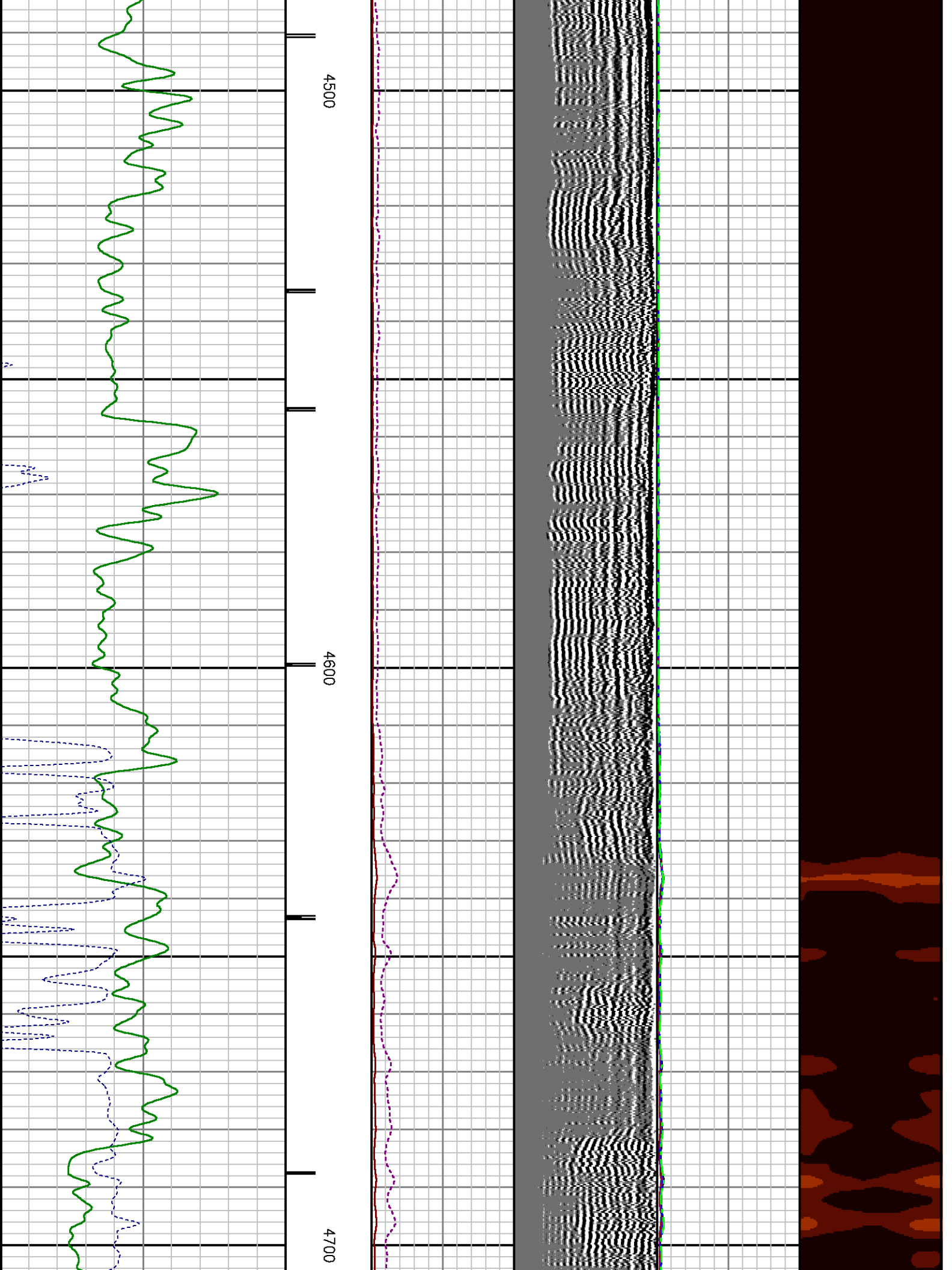


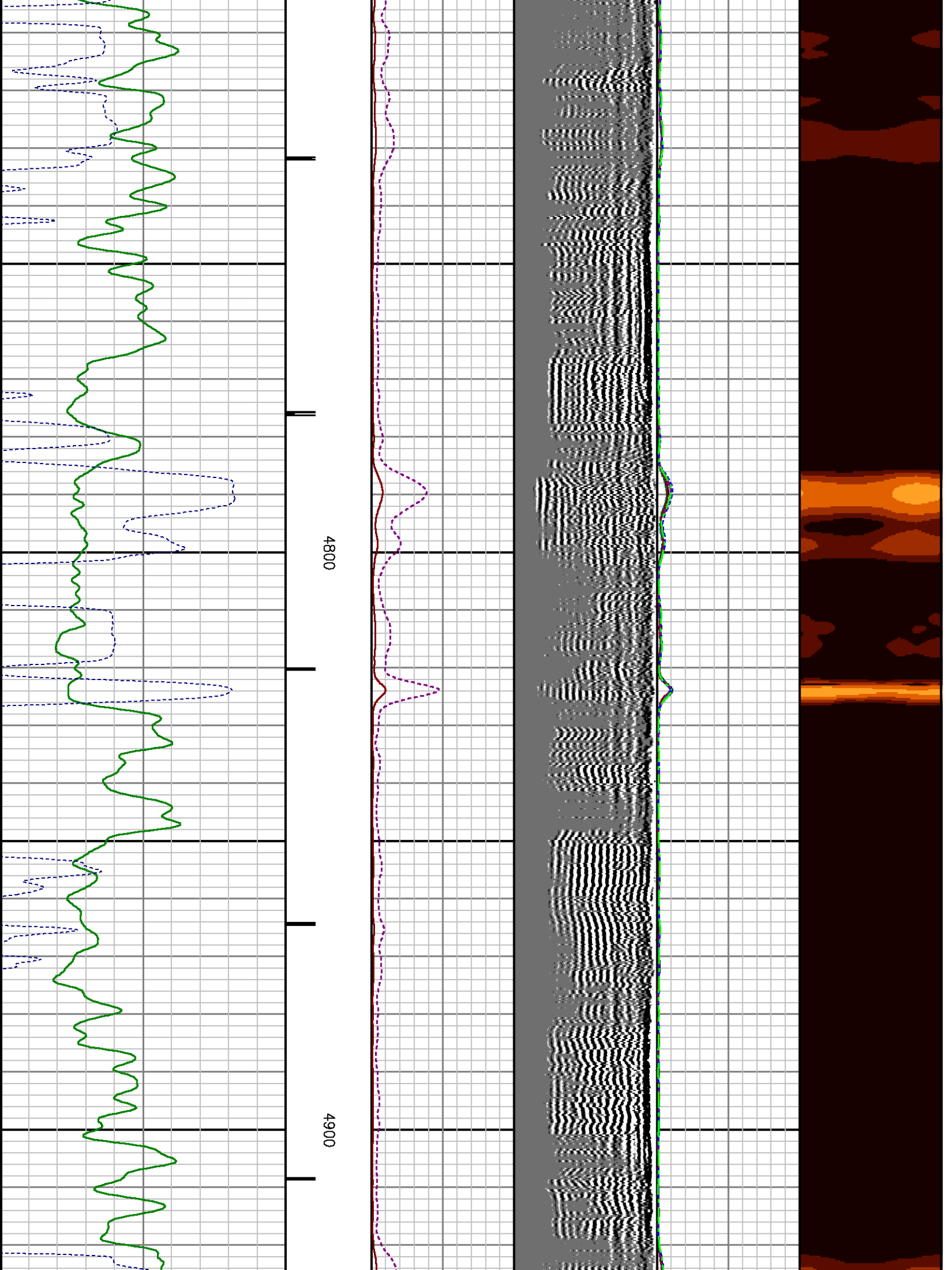


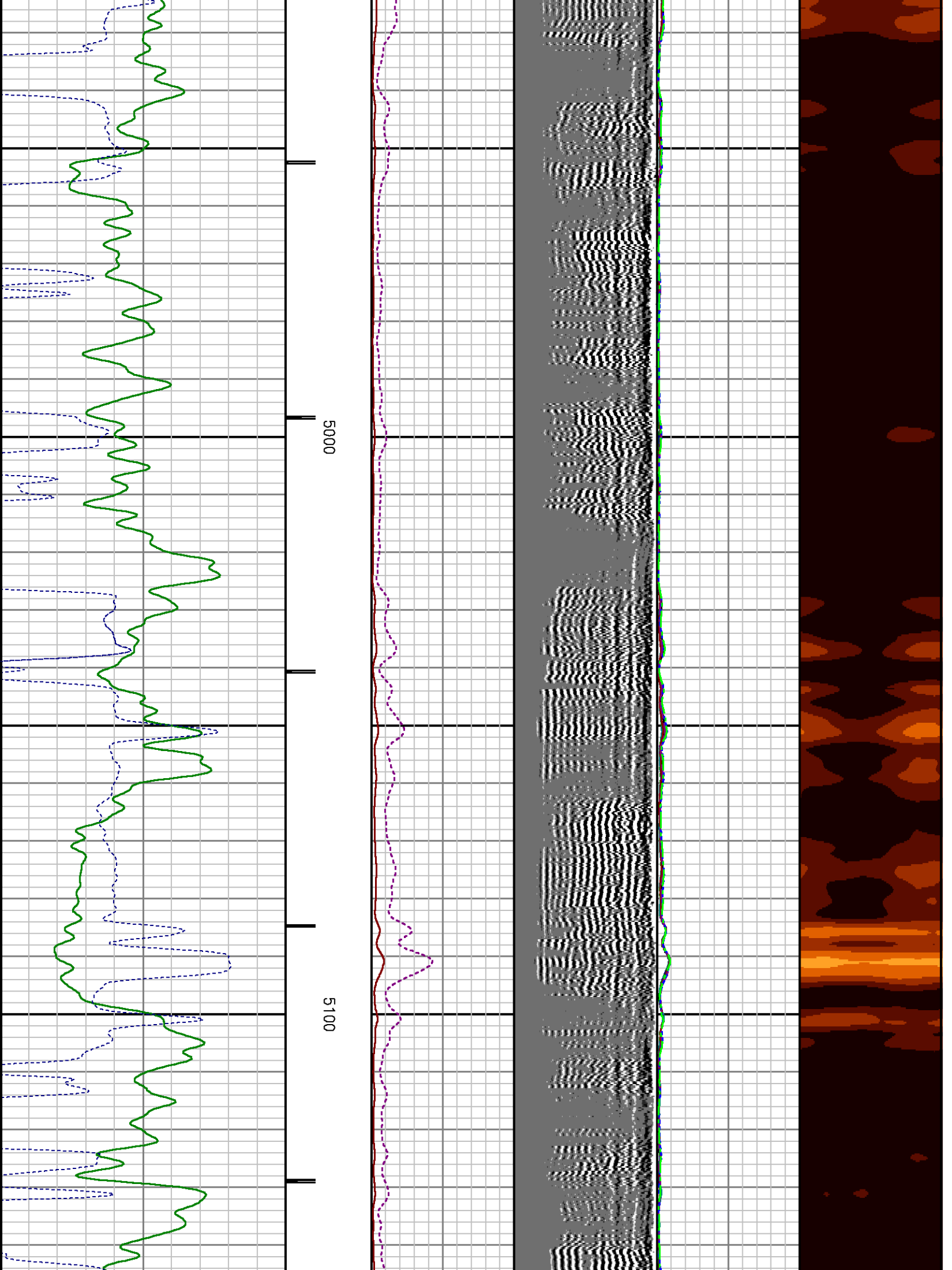


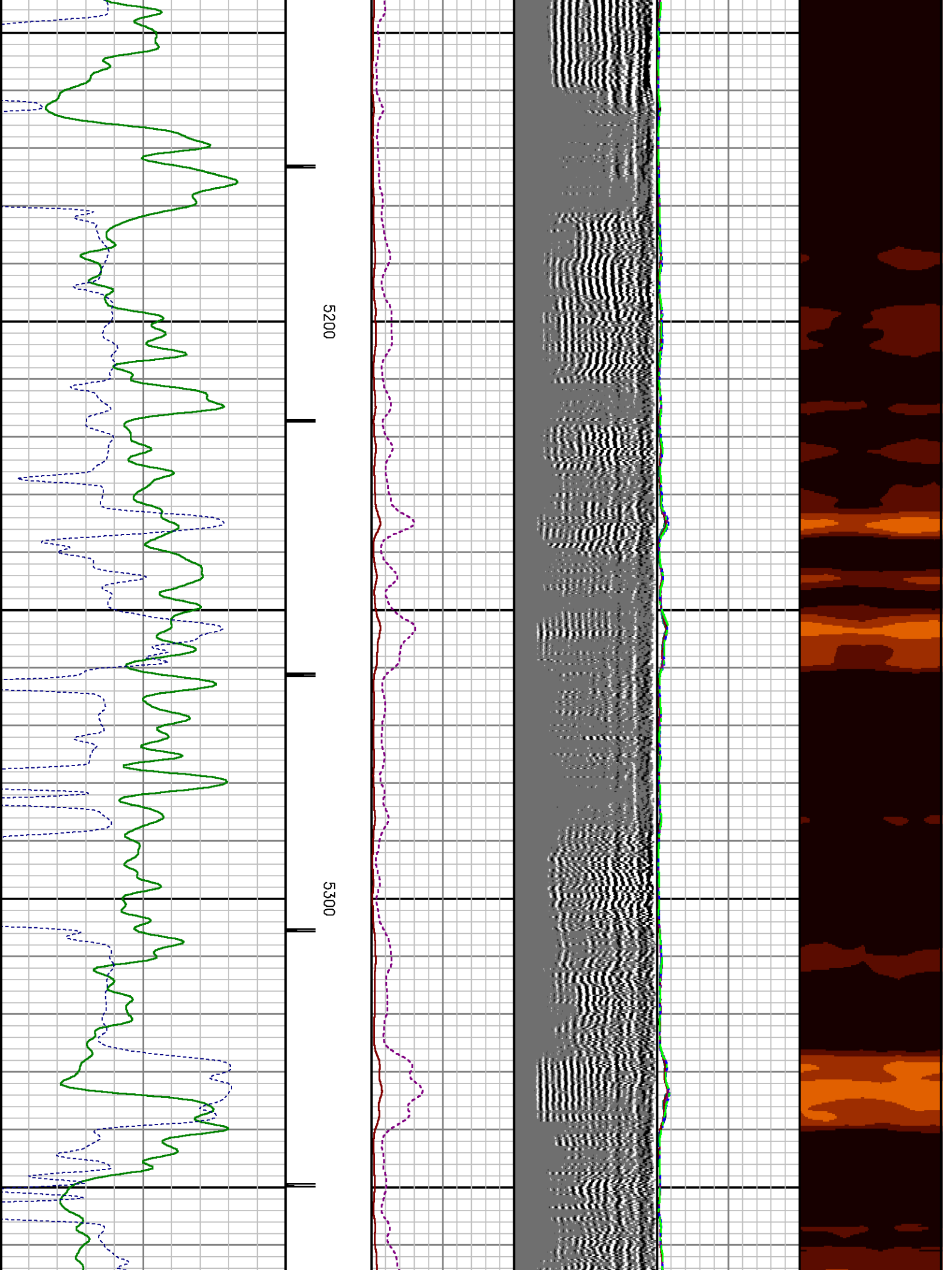


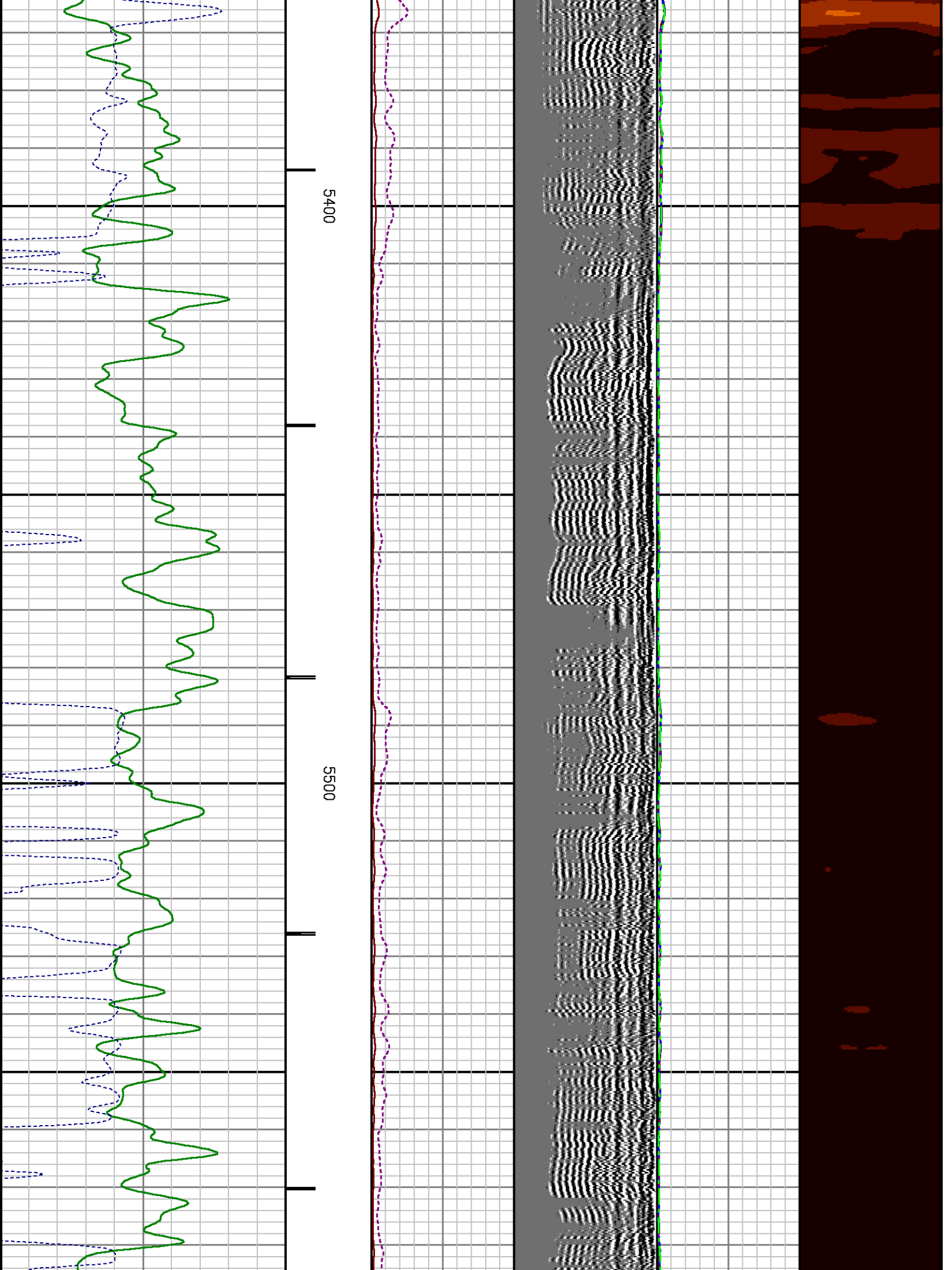


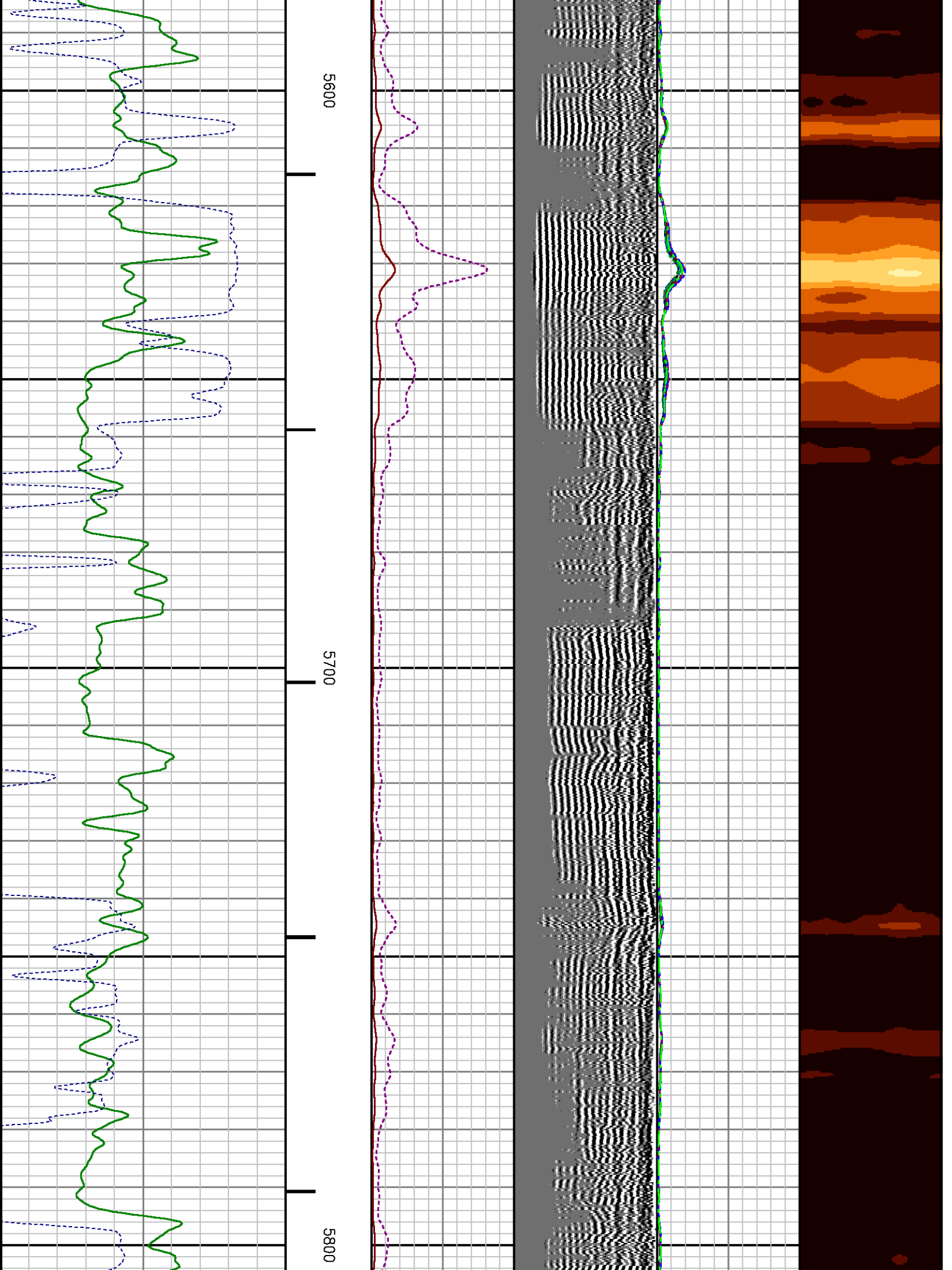


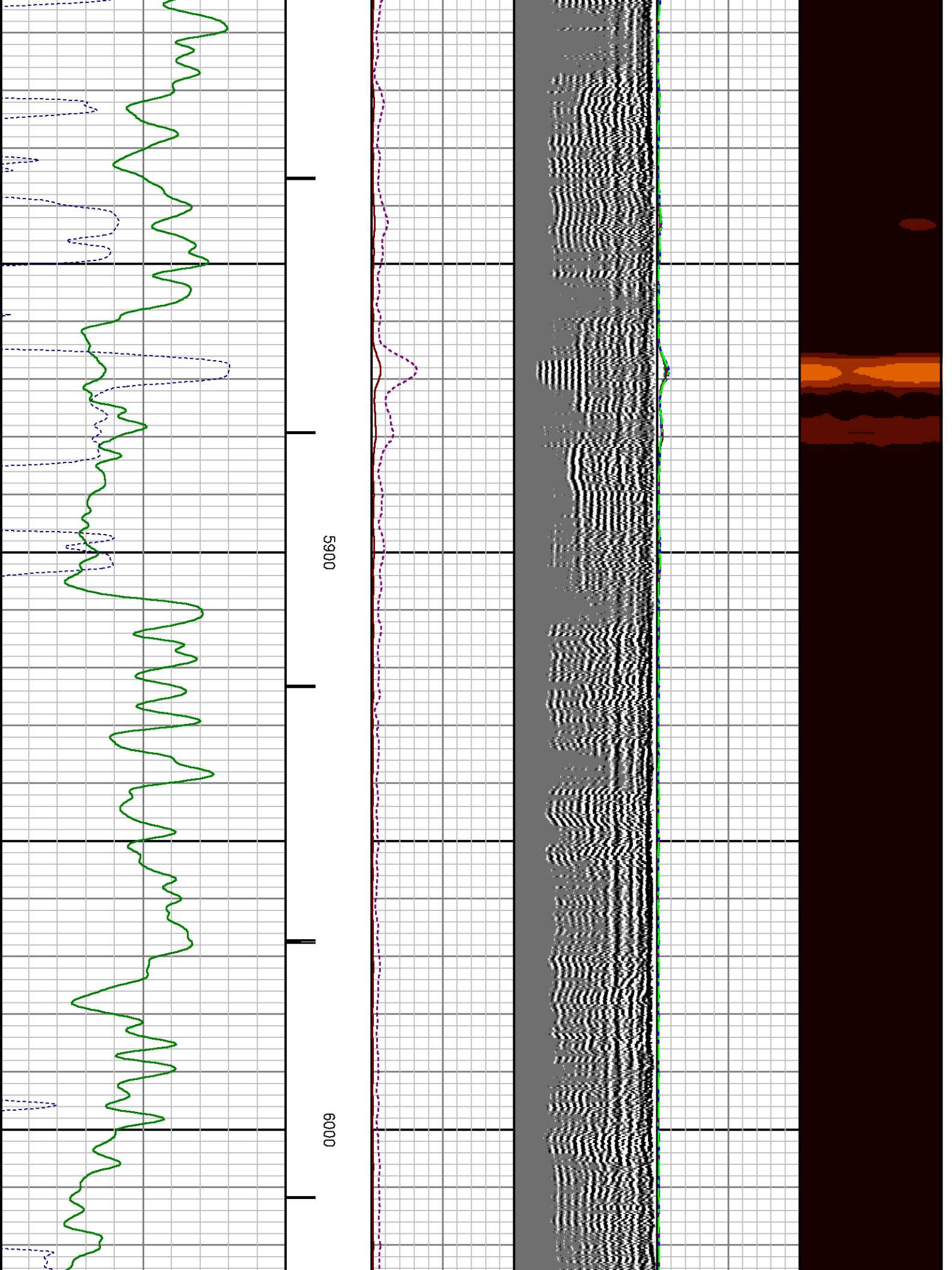


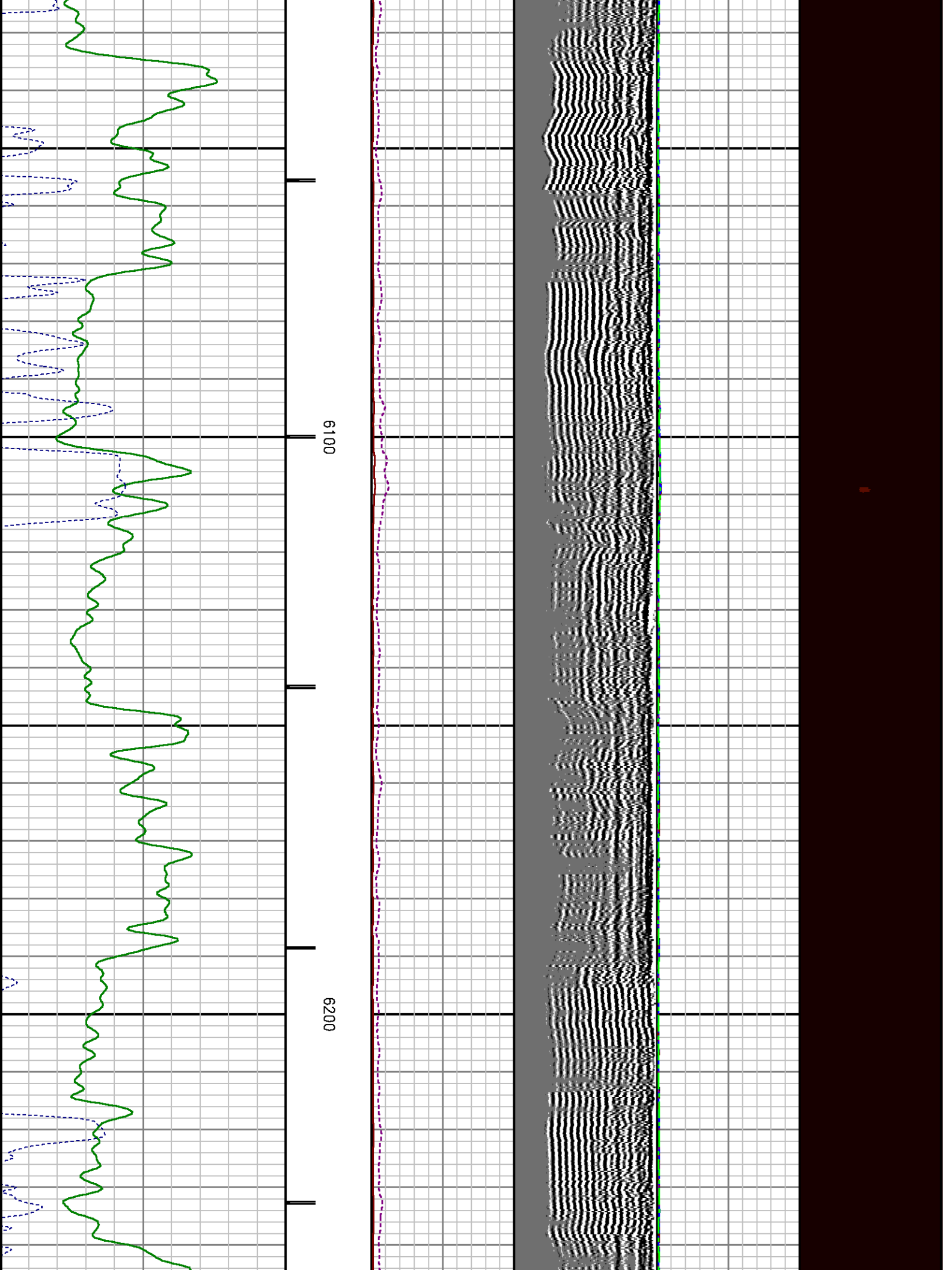


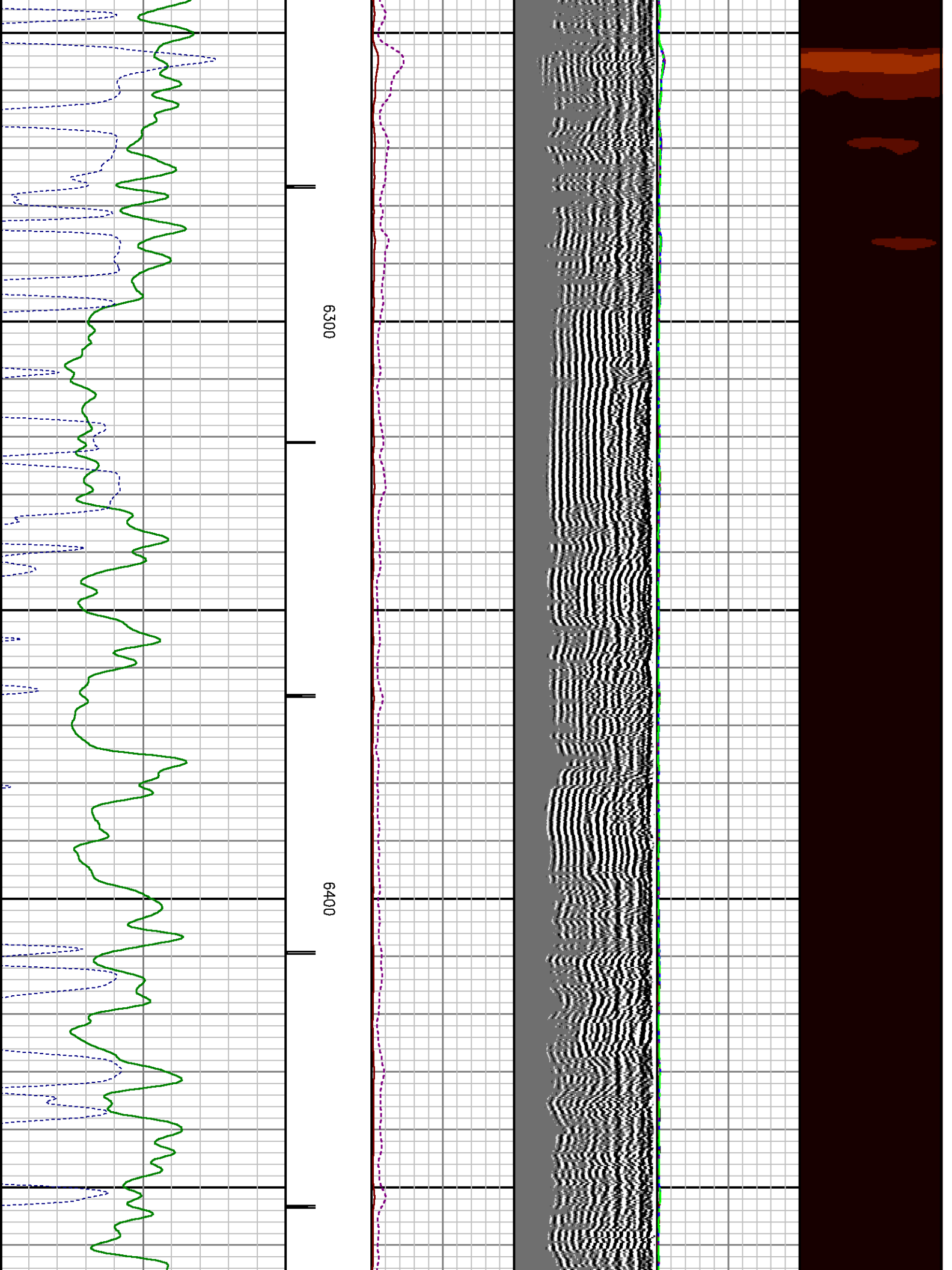


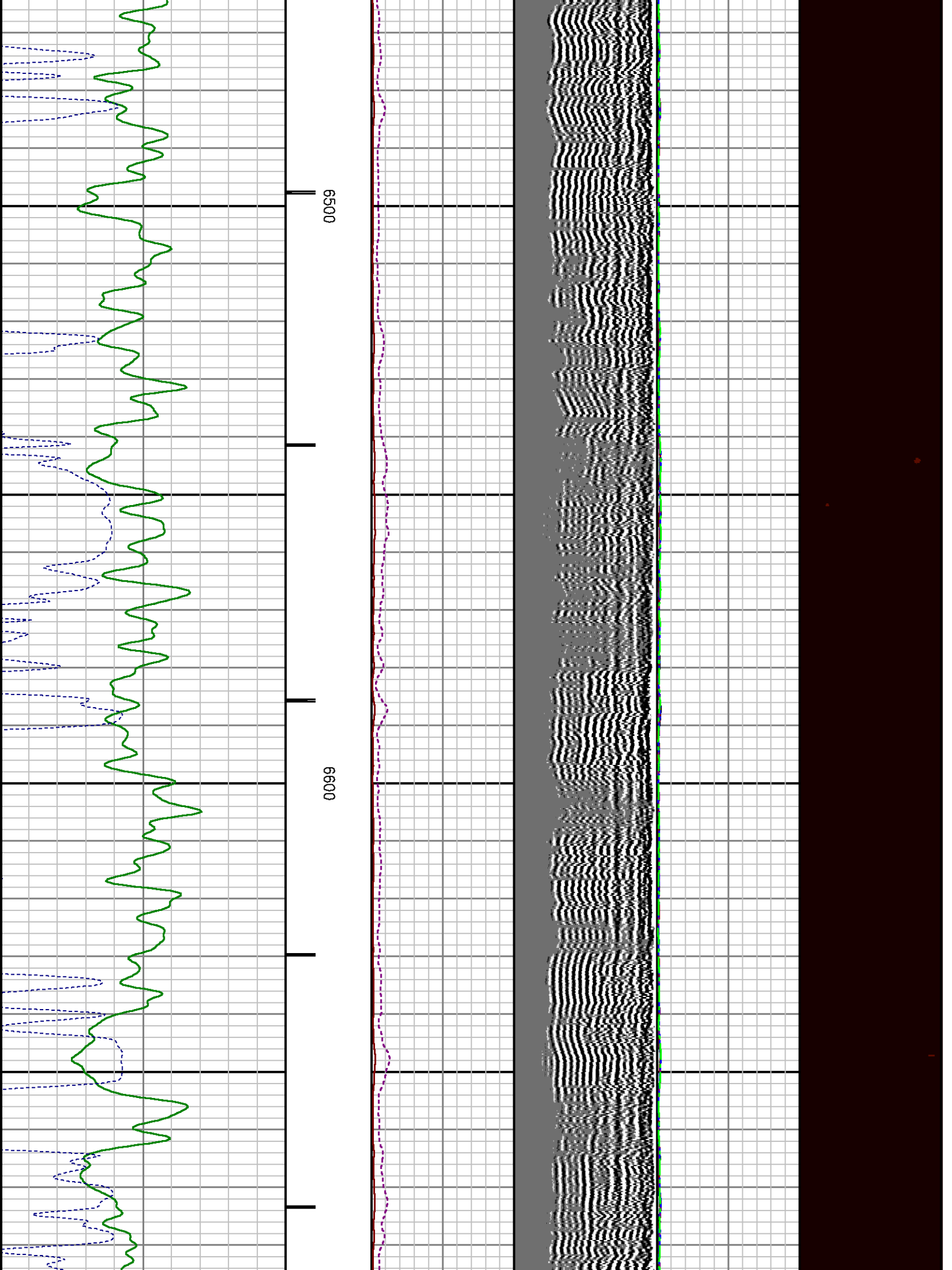


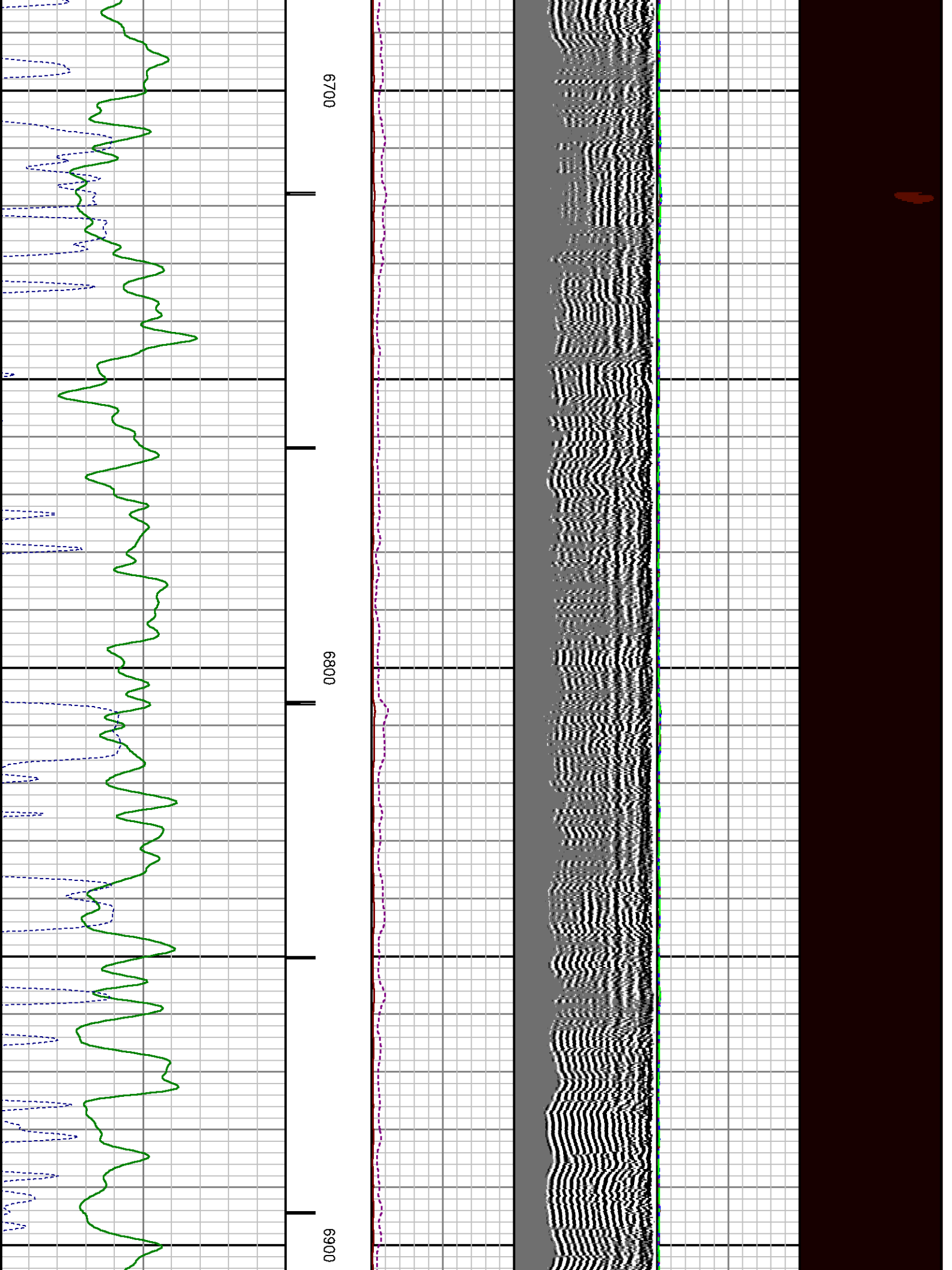


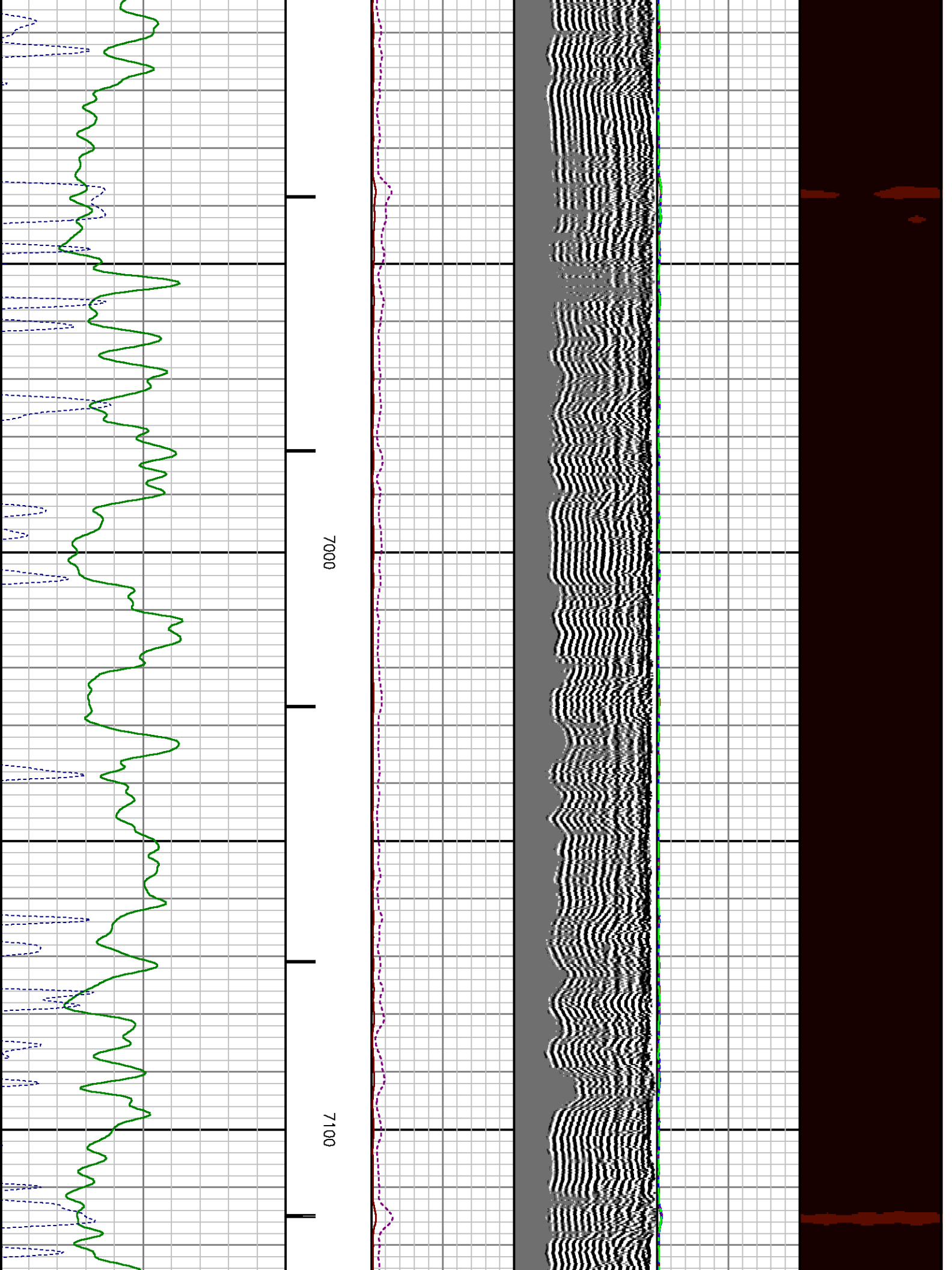


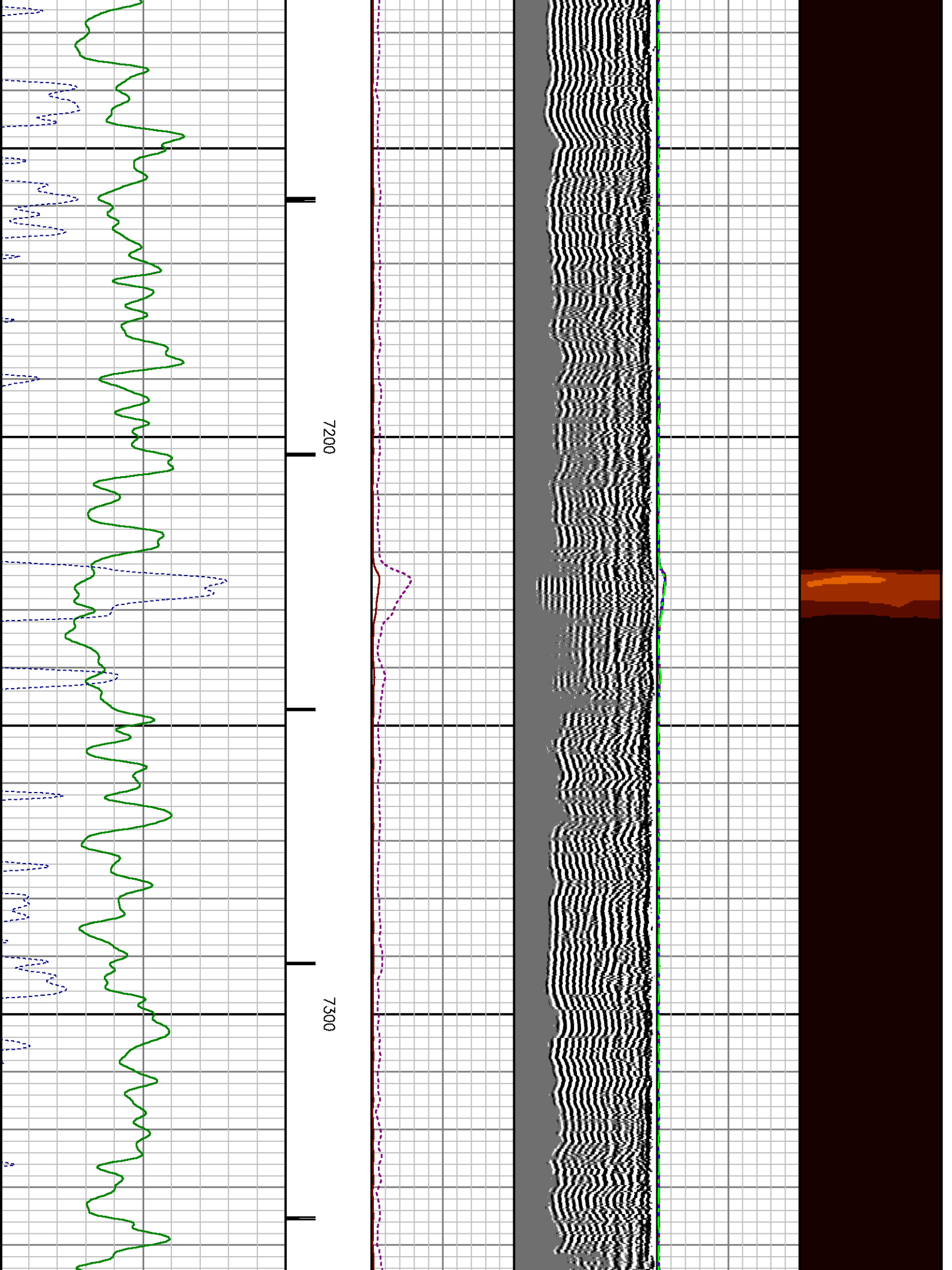


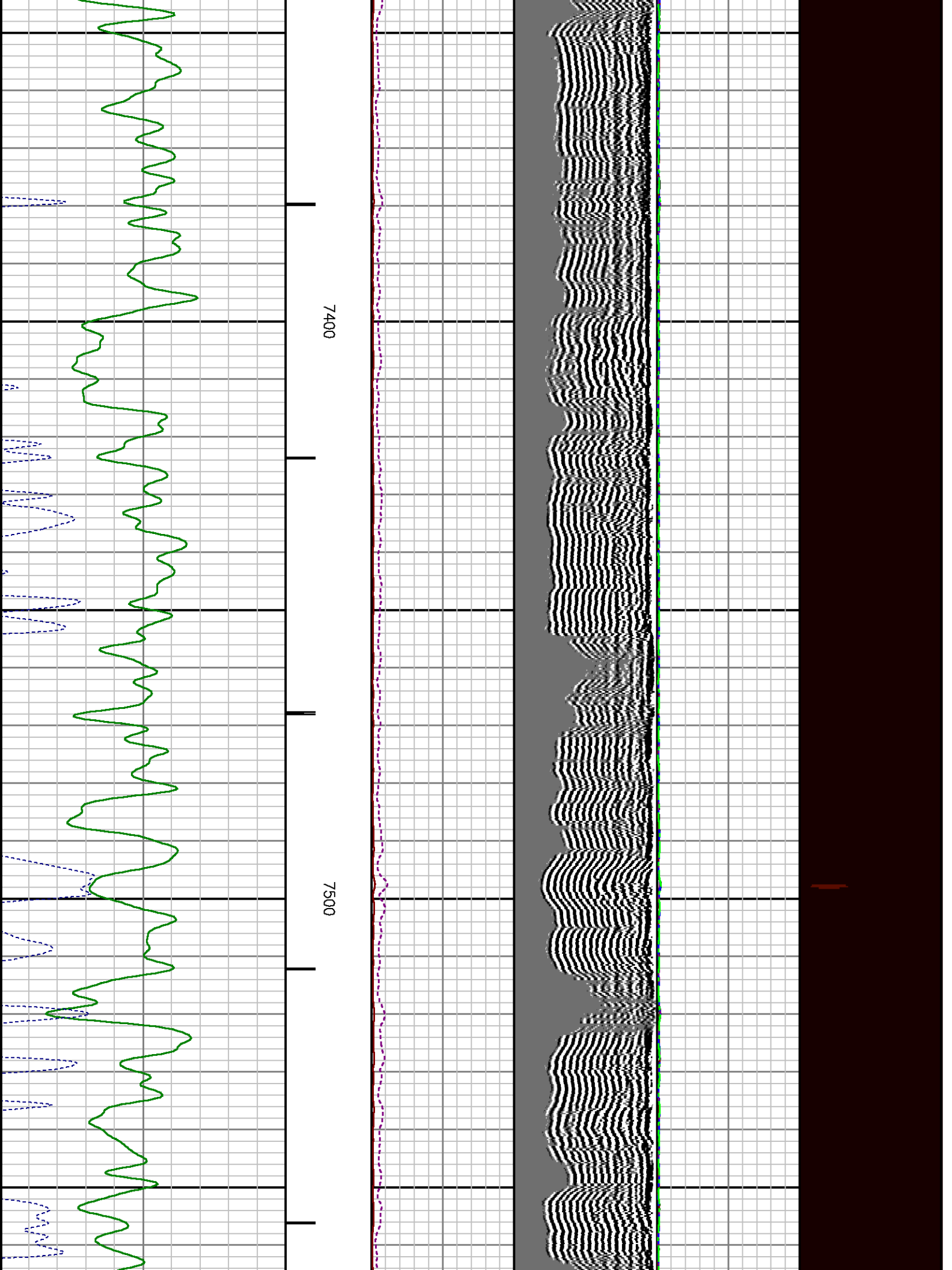


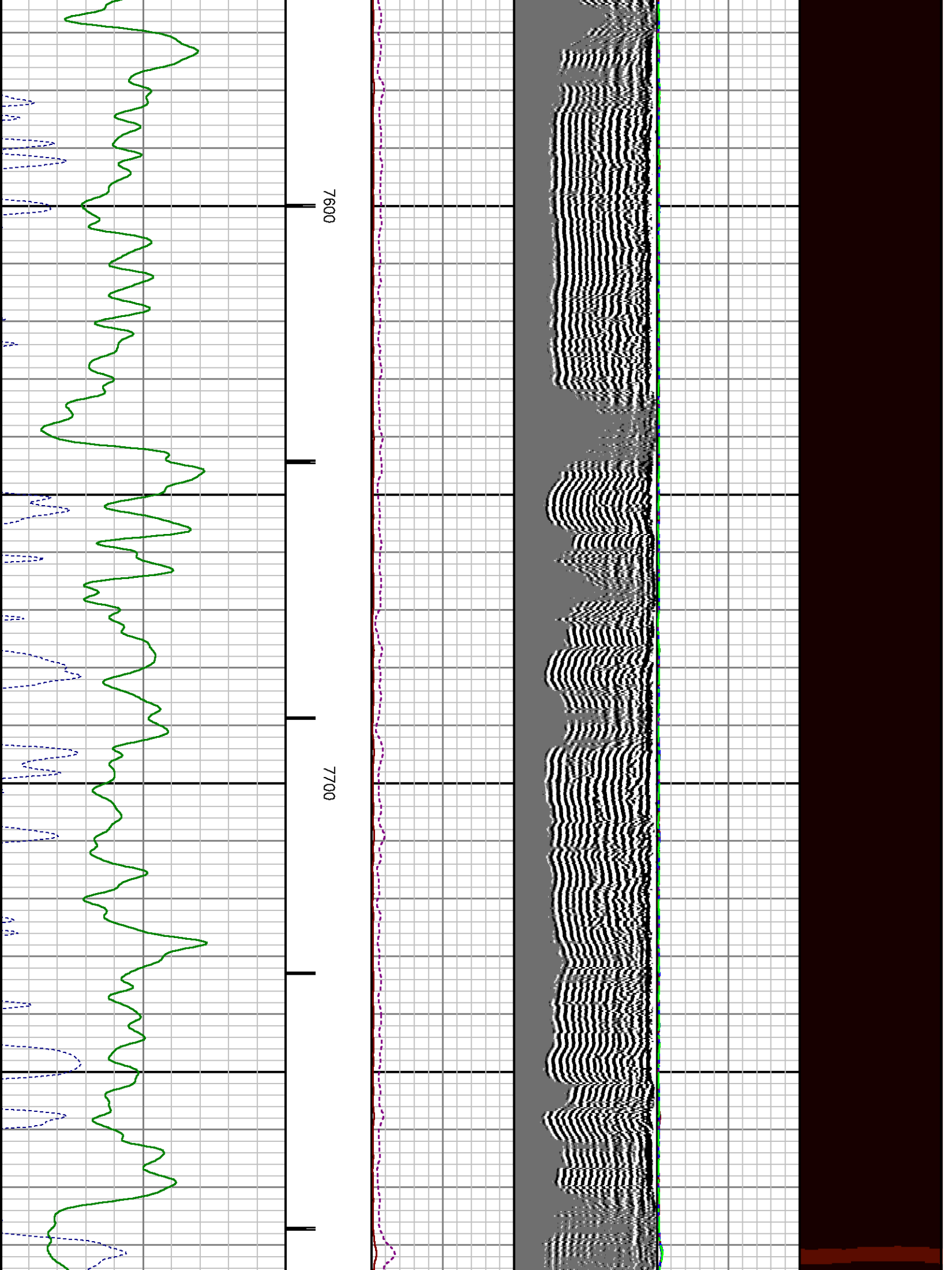


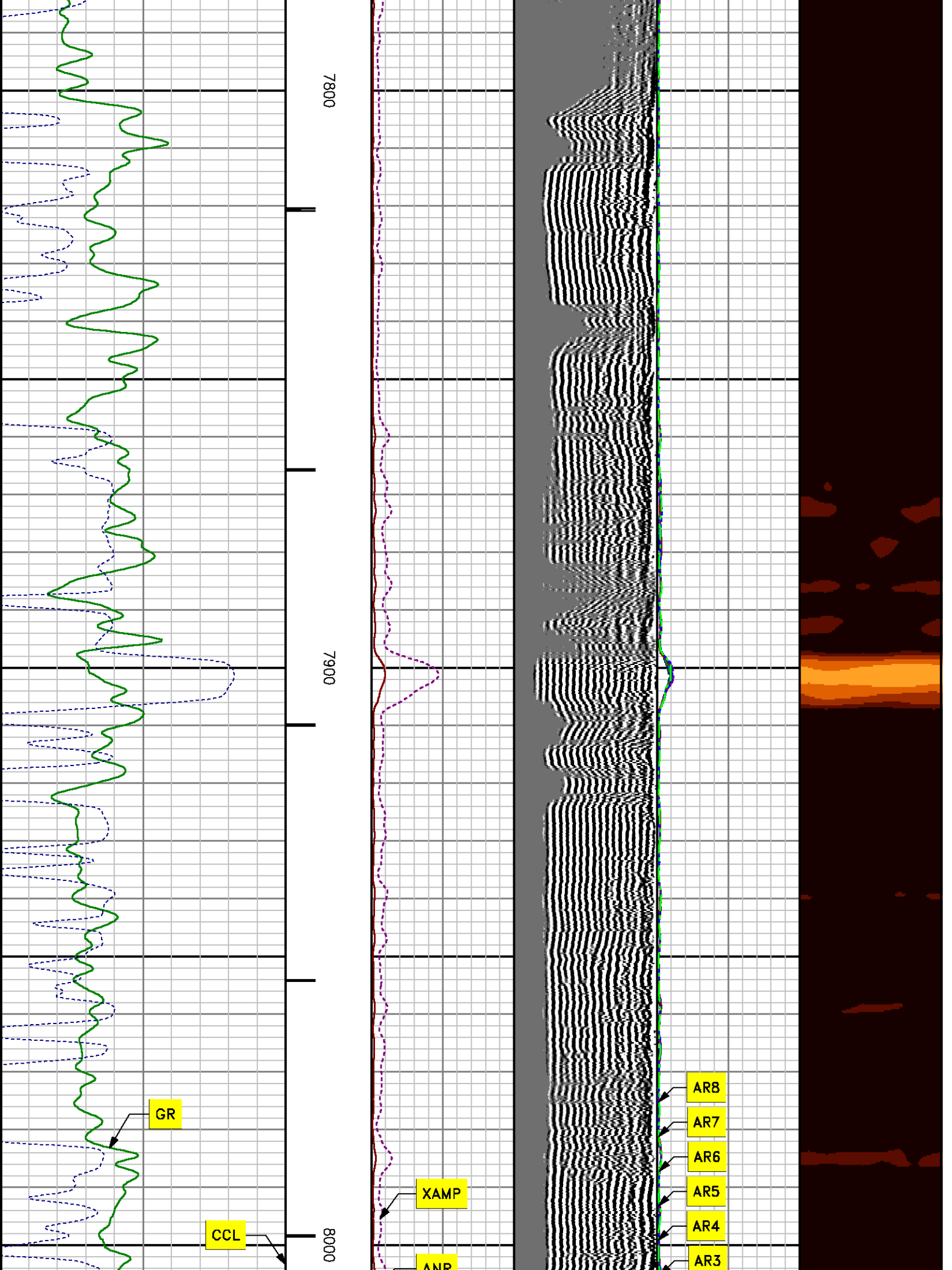


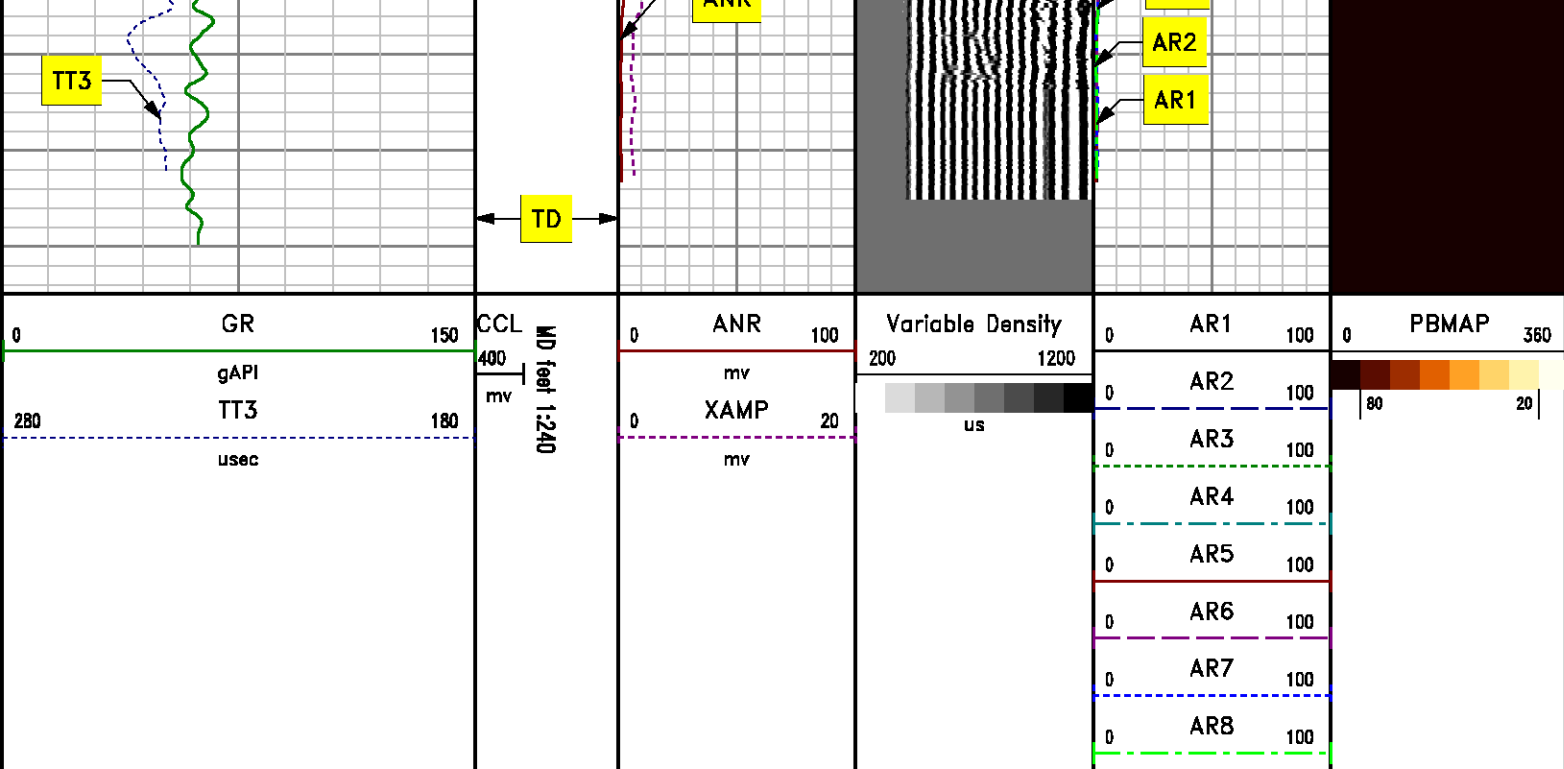












REPEAT PASS
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	323.655	usec	7700.000	8044.000
RAL	Amp Gate Start Near	198.687	usec	7700.000	8044.000
RAL	Amp Gate Start Radial	198.031	usec	7700.000	8044.000
RAL	Amp Gate Width Far	25.000	usec	7700.000	8044.000
RAL	Amp Gate Width Near	25.000	usec	7700.000	8044.000
RAL	Amp Gate Width Radial	25.000	usec	7700.000	8044.000
RAL	casing od	4.500	inches	7700.000	8044.000
RAL	casing wt	11.600	lbm/ft	7700.000	8044.000
RAL	FB Start Far	291.900	usec	7700.000	8044.000
RAL	FB Start Near	175.391	usec	7700.000	8044.000
RAL	FB Start Radial	175.391	usec	7700.000	8044.000
RAL	FB Thresh Far	10.000	mv	7700.000	8044.000
RAL	FB Thresh Near	4.000	mv	7700.000	8044.000
RAL	FB Thresh Radial	4.000	mv	7700.000	8044.000
RAL	Fluid Travel Time	200.000	usec/ft	7700.000	8044.742

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

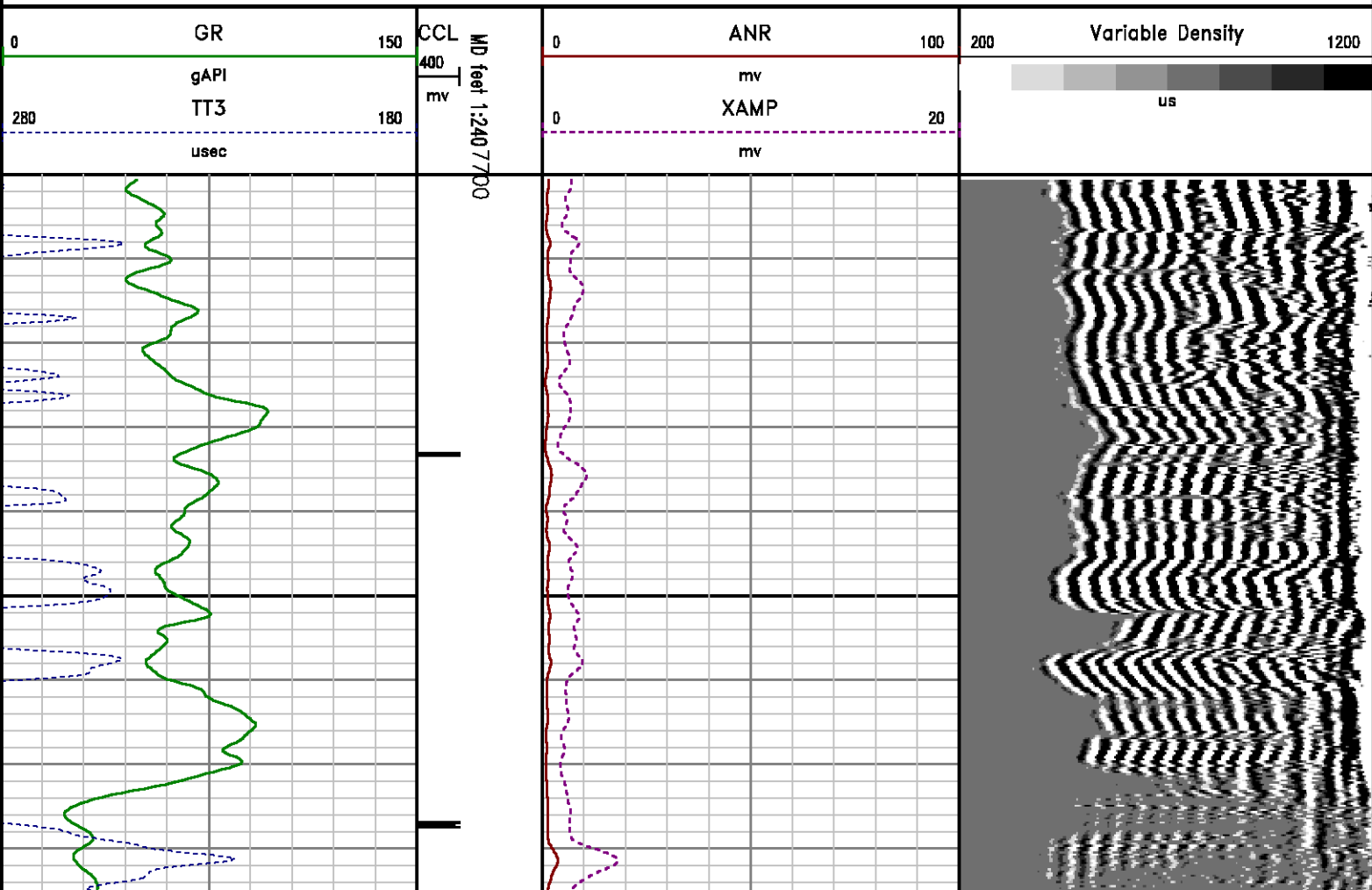
Well : DUGGAN RWF 413-29

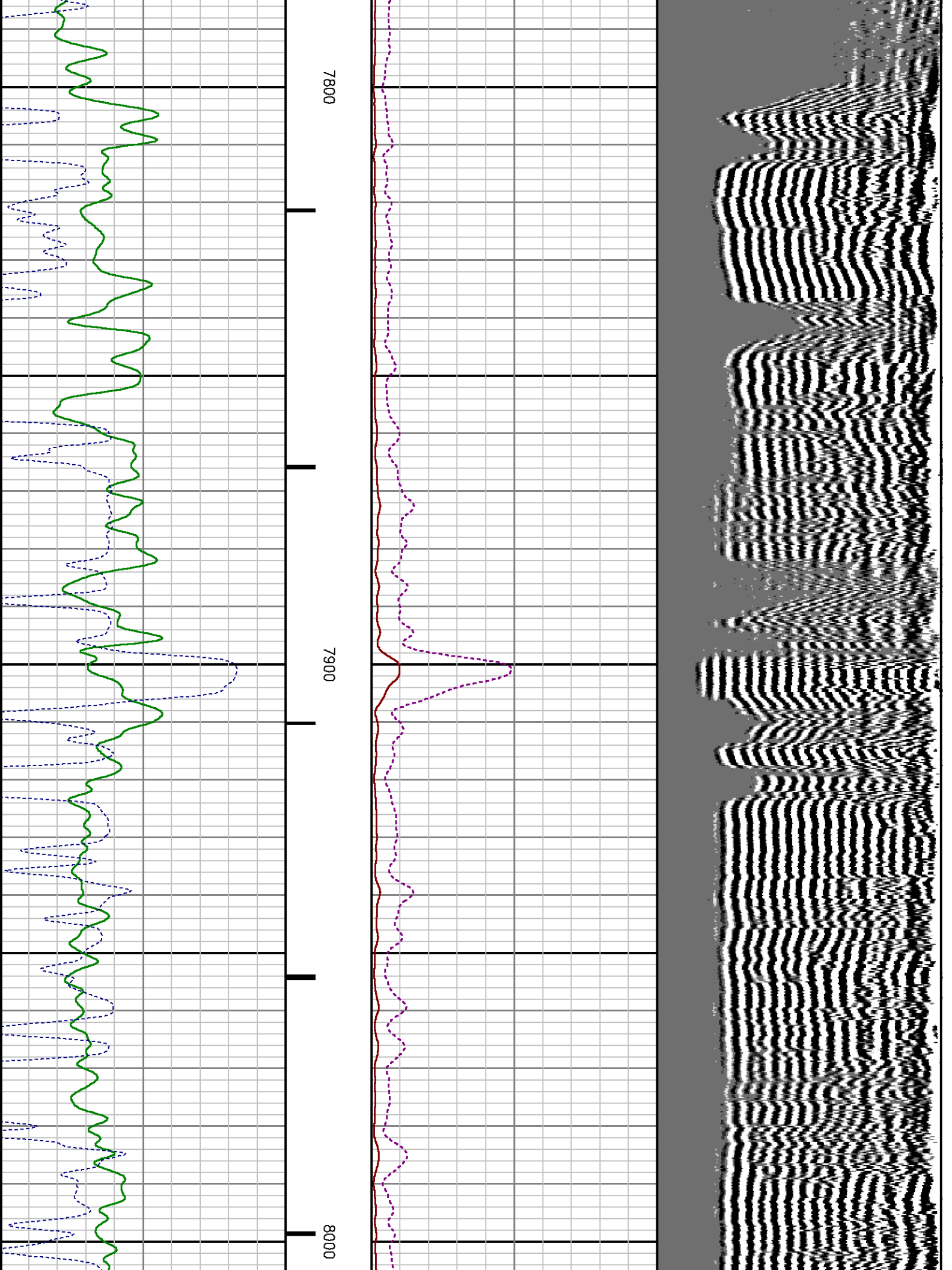
File Name : d:\welldata\cb1413\repeat_rdrd.xtf

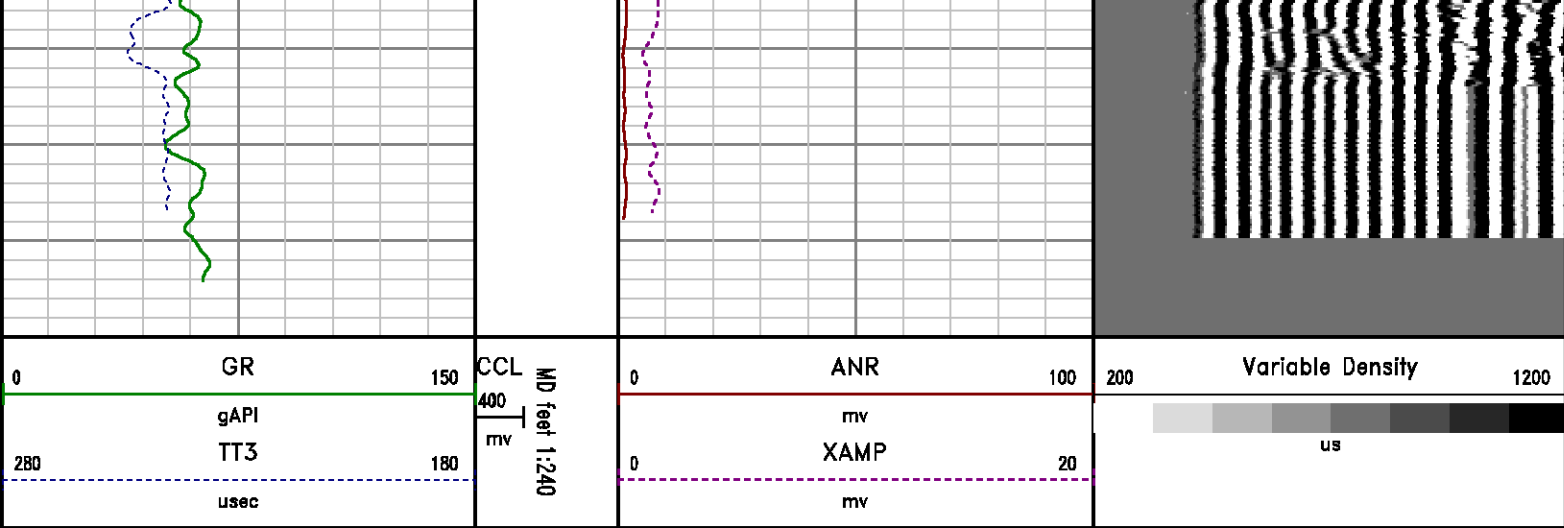
Mode : PlotMgr 5.4.504

Interval : 7700.00 - 8040.00 feet UP

Created : 4/21/2013 11:50:11 AM







CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\028A21_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Apr 21 11:07:07 2013 TOOL SERIES: 1426XA ASSET: 028 SEQ: A21

Tool Delay [usec] -61.00 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	219	216	30	166	25	0.033	100.00	0.74
3 Ft. Receiver	217	216	30	166	25	-0.339	100.00	0.73
5 Ft. Receiver	315	348	30	282	25	-1.639	150.00	0.62
Radial #1	219	216	30	166	25	0.322	100.00	0.73
Radial #2	219	216	30	166	25	-0.017	100.00	0.73
Radial #3	218	216	30	166	25	-0.011	100.00	0.74
Radial #4	217	216	30	166	25	0.011	100.00	0.74
Radial #5	217	216	30	166	25	-0.344	100.00	0.73
Radial #6	215	216	30	166	25	0.022	100.00	0.74
Radial #7	215	216	30	166	25	-0.089	100.00	0.73
Radial #8	219	216	30	166	25	0.189	100.00	0.73

RALFLD

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Apr 21 11:08:50 2013 TOOL SERIES: 1426XA ASSET: 028 SEQ: A21

Tool Delay [usec] Casing OD in Casing Wt lbm/ft Casing ID in

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.008"/>	<input type="text" value="0.000"/>	<input type="text" value="1.00"/>	<input type="text" value="100.000"/>
3 Ft. Receiver	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="0.059"/>			
5 Ft. Receiver	<input type="text" value="317"/>	<input type="text" value="30"/>	<input type="text" value="0.006"/>			
Radial #1	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="0.059"/>			
Radial #2	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="0.083"/>			
Radial #3	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="0.028"/>			
Radial #4	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-0.011"/>			
Radial #5	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="0.063"/>			
Radial #6	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="0.081"/>			
Radial #7	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="0.021"/>			
Radial #8	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="0.014"/>			

GAMMA RAY

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Apr 18 23:15:39 2010 TOOL SERIES: 2459XA ASSET: 457 SEQ: A8

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
SHOP JIG	<input type="text" value="66.00"/>	<input type="text" value="309.33"/>	<input type="text" value="0.760"/>	<input type="text" value="50.17"/>	<input type="text" value="235.17"/>	<input type="text" value="185.00"/>

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Sun Apr 18 23:18:38 2010 TOOL SERIES: 2459XA ASSET: 457 SEQ: A8

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
SHOP JIG	<input type="text" value="62.89"/>	<input type="text" value="300.67"/>	<input type="text" value="0.760"/>	<input type="text" value="47.81"/>	<input type="text" value="228.59"/>	<input type="text" value="180.77"/>

TOOL DIAGRAM

OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII

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

Probe GR/CCL/NEU

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

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"



24.23'

XMIT 18.05'

NEAR RCVR 14.97'

FAR RCVR 13.05'

CCL 11.34'

GR 9.49'

NEU 4.09'

0.00'



Company

WPX ENERGY

Well

DUGGAN RWF 413-29

Field

RULISON

County

GARFIELD

State

COLORADO

Location

SHL: 572' FSL & 585' FWL

BHL: 1811' FSL & 696' FWL

Elevations

KB 5445.2 ft

DF

GL 5419.2 ft

File No:

CH070855

API No:

05045216570000

29 GS 94W

RWF 413-29

NABORS SSD 573

SEC 29

TWP 6S

RGE 94W

Baker Atlas

