



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH084708	Company Well Field County	WPX ENERGY SAVAGE RWF 321-25 RULISON GARFIELD	State CO
API No: 05045219700000	Location SHL: 2437' FNL & 1436' FWL RWF: 22-25 PAD BHL: 132' FNL & 2005' FWL CYCLONE 17 SEC 25 TWP 6S RGE 94W		
25 GS 94W RWF 22-25 PAD CYCLONE 17	Other Services RPM		Elevations KB 6058 ft DF GL 6037 ft
Permanent Datum Log Measured From Drill Measured From	GL KB KB		Elevation 21 ft Above P. D.

Date	20/APR/14	
Run	ONE	
Service Order	US625369	
Depth Driller	9163 ft	
Depth Logger	9099 ft	
Bottom Logged Interval	9089 ft	
Top Logged Interval	21 ft	
Time Started	7:30	
Time Finished	11:00	
Operator Rig Time	3.5 HOURS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	71 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	65 fpm	
Maximum Recorded Temperature	236 degF	
Reference Log	NA	
Reference Log Date	NA	
Equipment No.	4271	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	1170 ft
8.75 In	1170 ft	9239 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 In			0 ft	1170 ft
4.5 In	11.6 lbm/ft	1-80	0 ft	9239 ft

Remarks
All data on this log is shifted using the CCL curve to put the wellhead (top CCL mark) on depth with ground level elevation at the client's request.
The amount of linear shift is 15 feet.
Logged with zero PSI at wellhead.
BHT = 236 °F

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

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	30.468	9100.750
RAL	Amp Gate Start Near	195.000	usec	30.468	9100.750
RAL	Amp Gate Start Radial	195.000	usec	30.468	9100.750
RAL	Amp Gate Width Far	25.000	usec	30.468	9100.750
RAL	Amp Gate Width Near	25.000	usec	30.468	9100.750
RAL	Amp Gate Width Radial	25.000	usec	30.468	9100.750
RAL	casing od	4.500	inches	30.468	9100.750
RAL	casing wt	11.600	lbm/ft	30.468	9100.750
RAL	FB Start Far	291.900	usec	30.468	9100.750
RAL	FB Start Near	175.391	usec	30.468	9100.750
RAL	FB Start Radial	175.391	usec	30.468	9100.750
RAL	FB Thresh Far	10.000	mv	30.468	9100.750
RAL	FB Thresh Near	4.000	mv	30.468	9100.750
RAL	FB Thresh Radial	4.000	mv	30.468	9100.750
RAL	Fluid Travel Time	200.000	usec/ft	30.468	9100.750

DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	AR9	AR10

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

AR3	AR6	AR7	AR8	CHV	FPR2
FPR3	FPR5	TT3	TTR1	TTR2	TTR3
TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
AFAR	SIG	TT5			
CCL					
GR					
NEU					

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

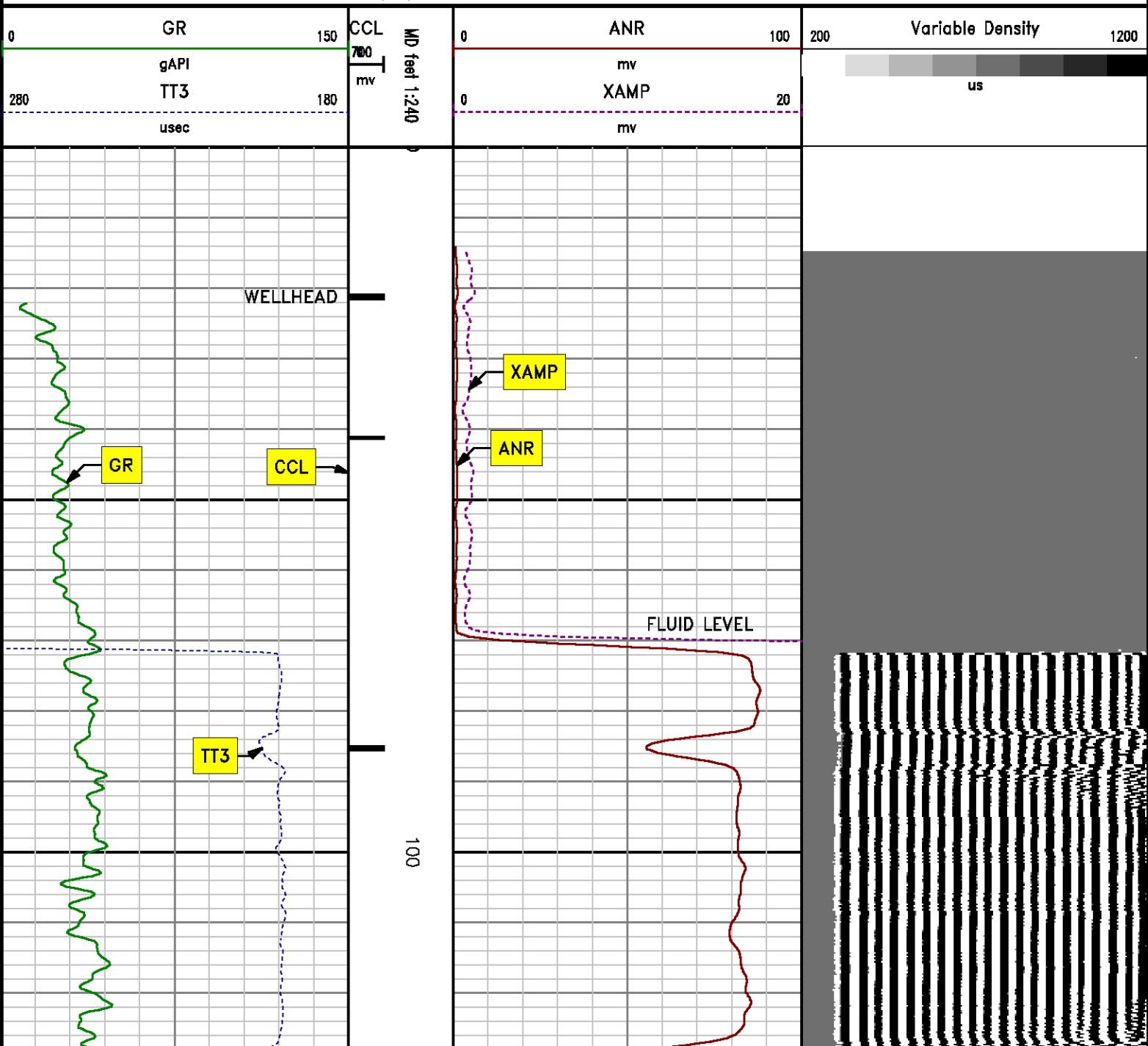
Well : SAVAGE RWF 321-25

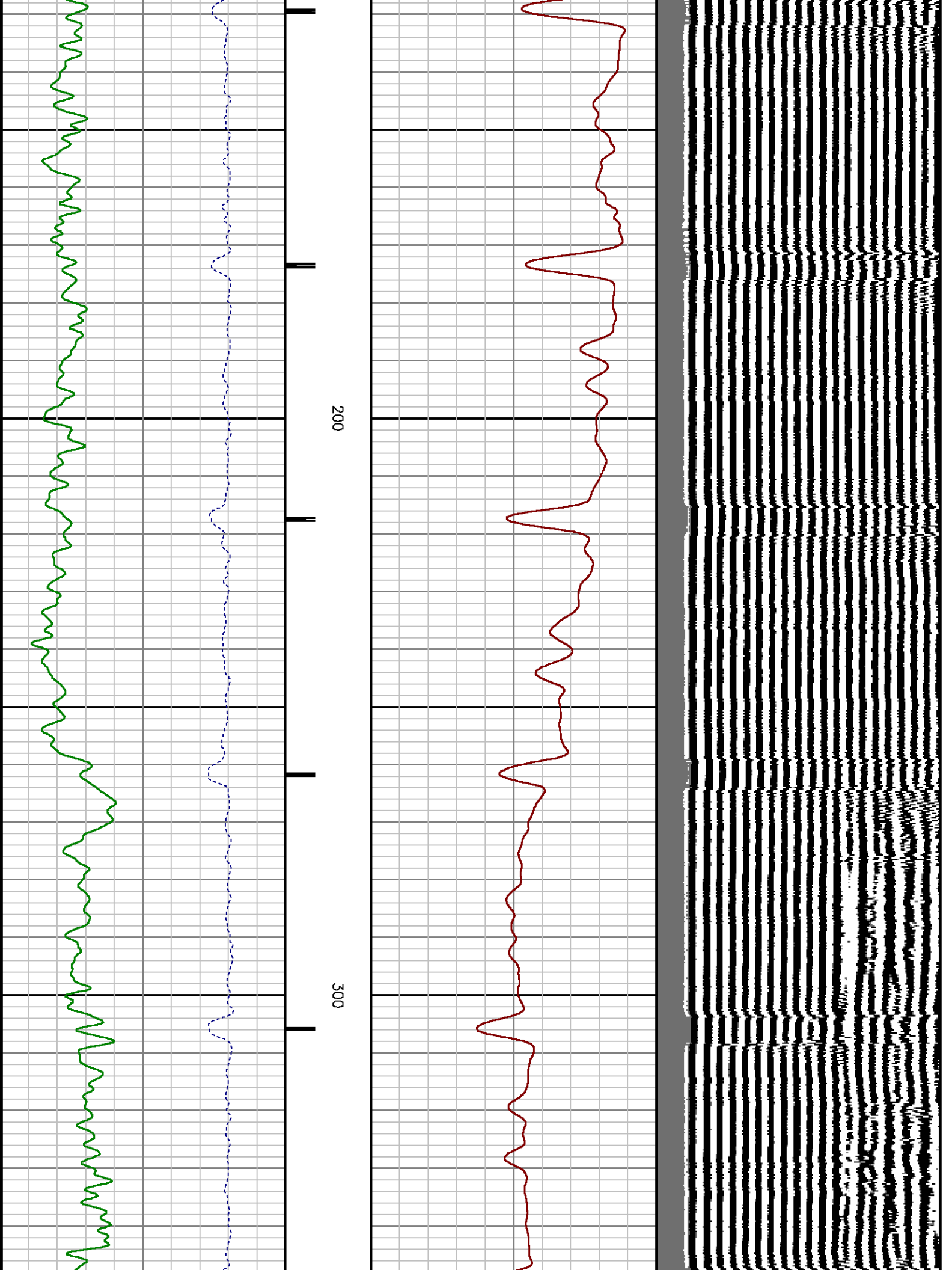
File Name : d:\welldata\wp\savege rwf 321-25\321cbl\main.xtf

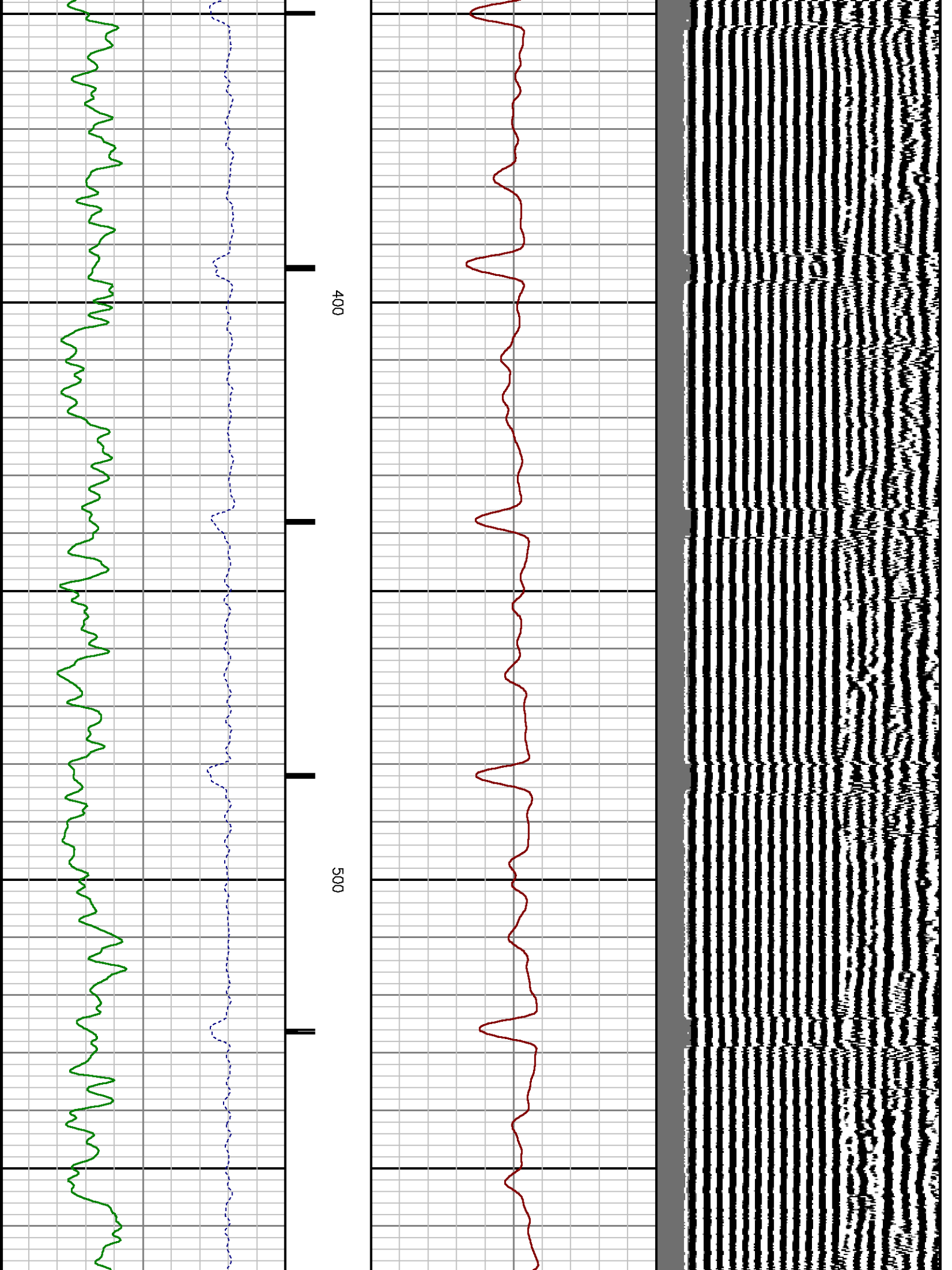
Mode : PlotMgr 5.4.504

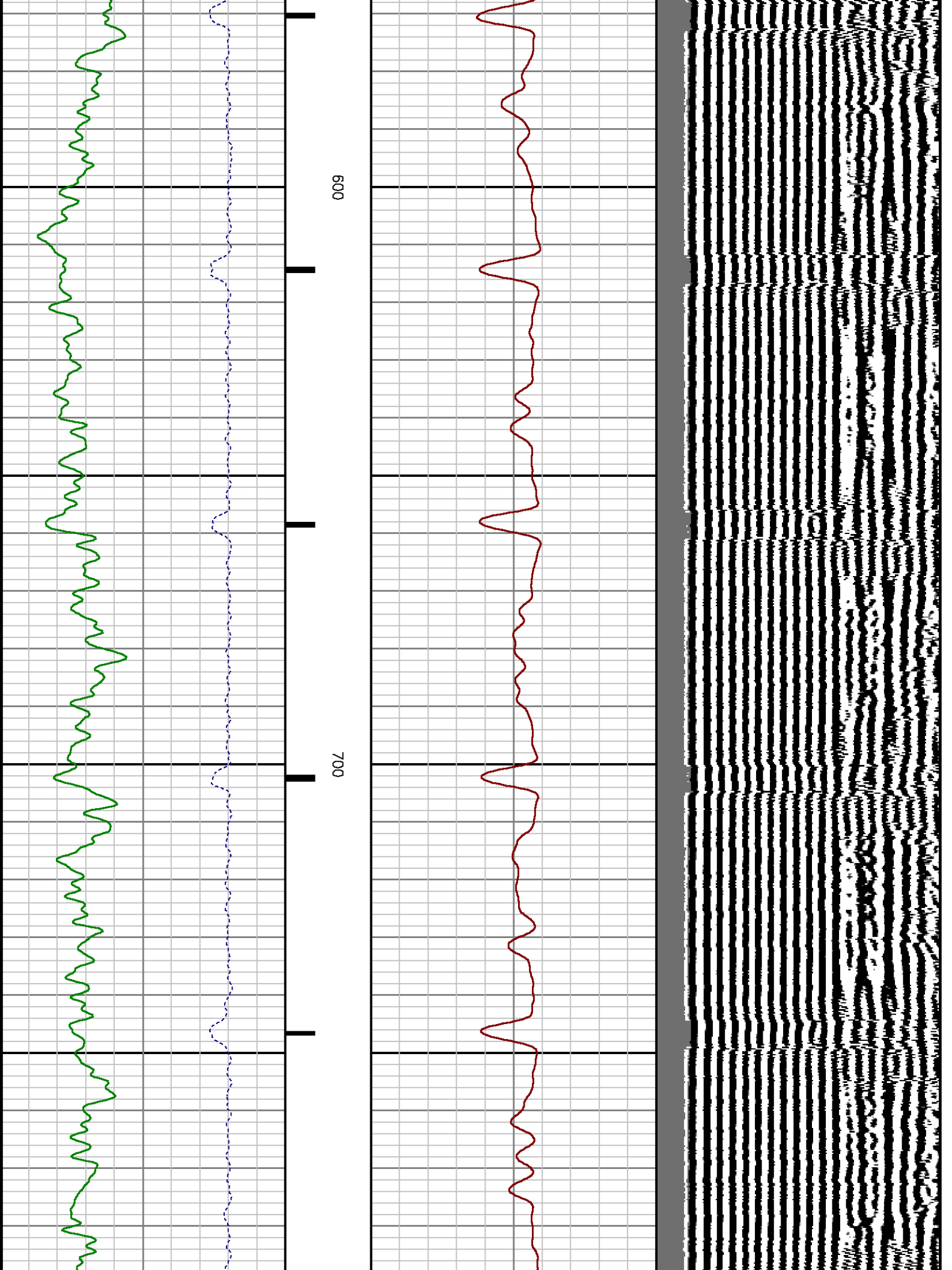
Interval : 0.00 - 9104.00 feet UP

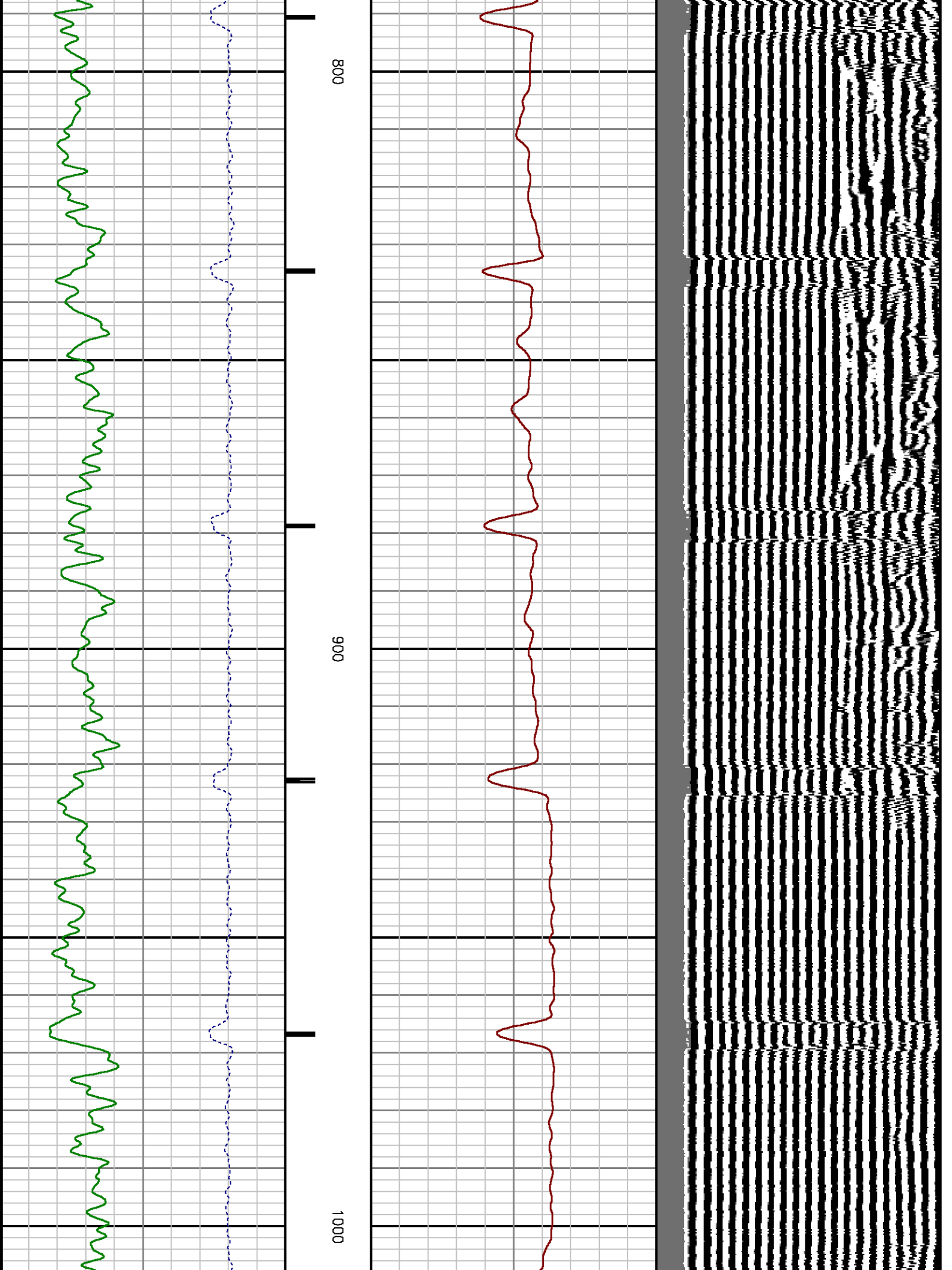
Created : 4/20/2014 8:48:42 AM

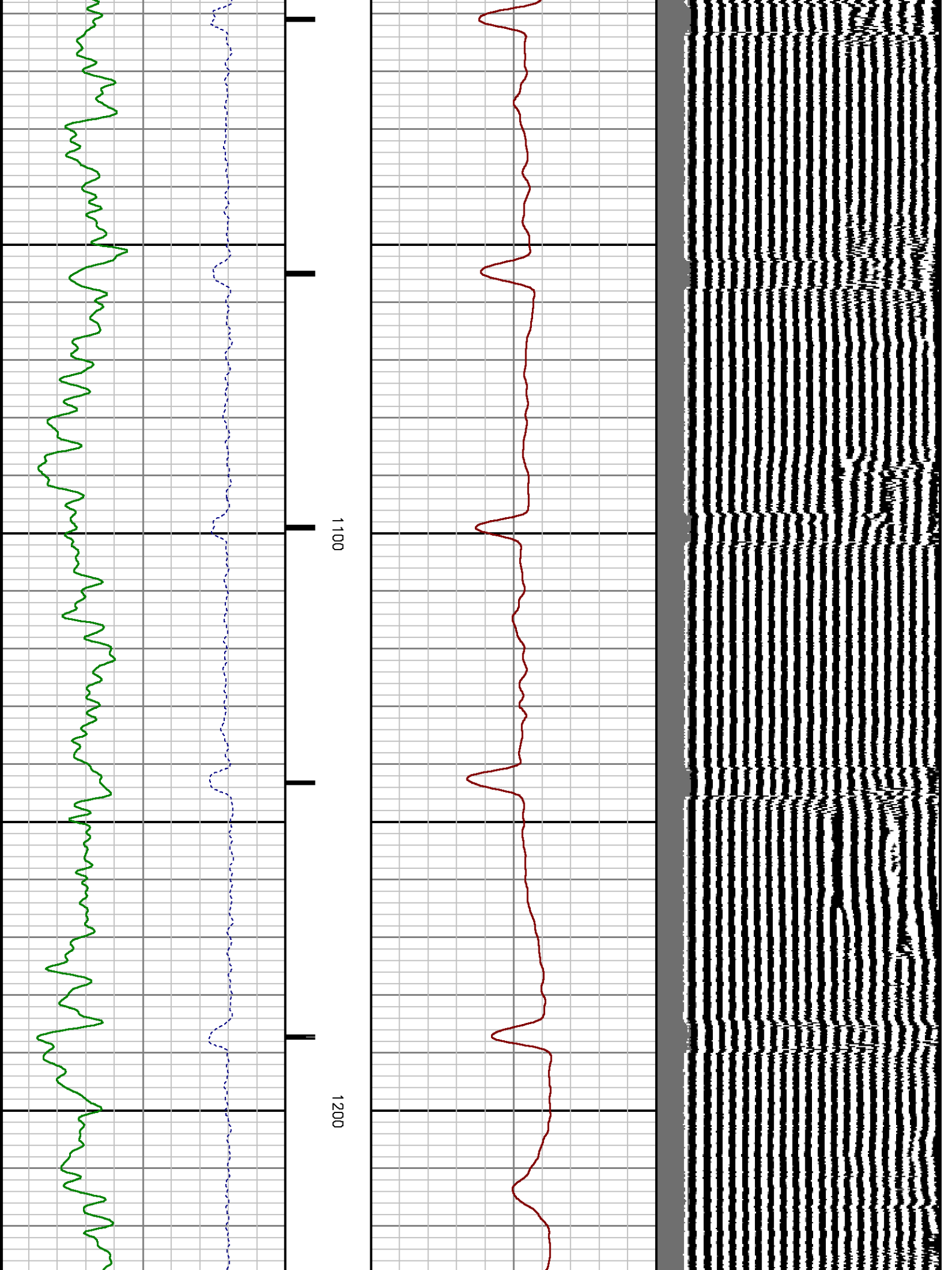


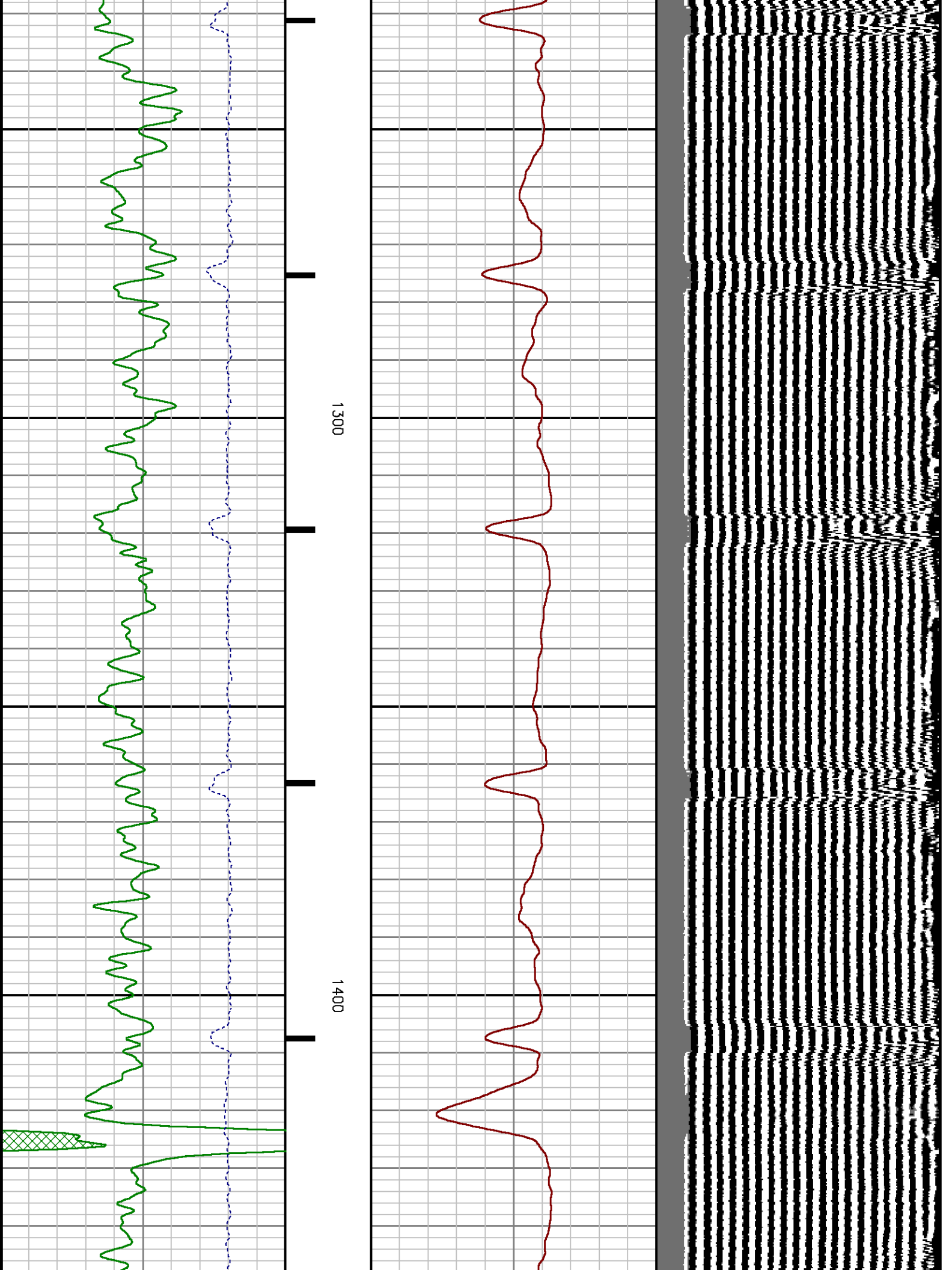


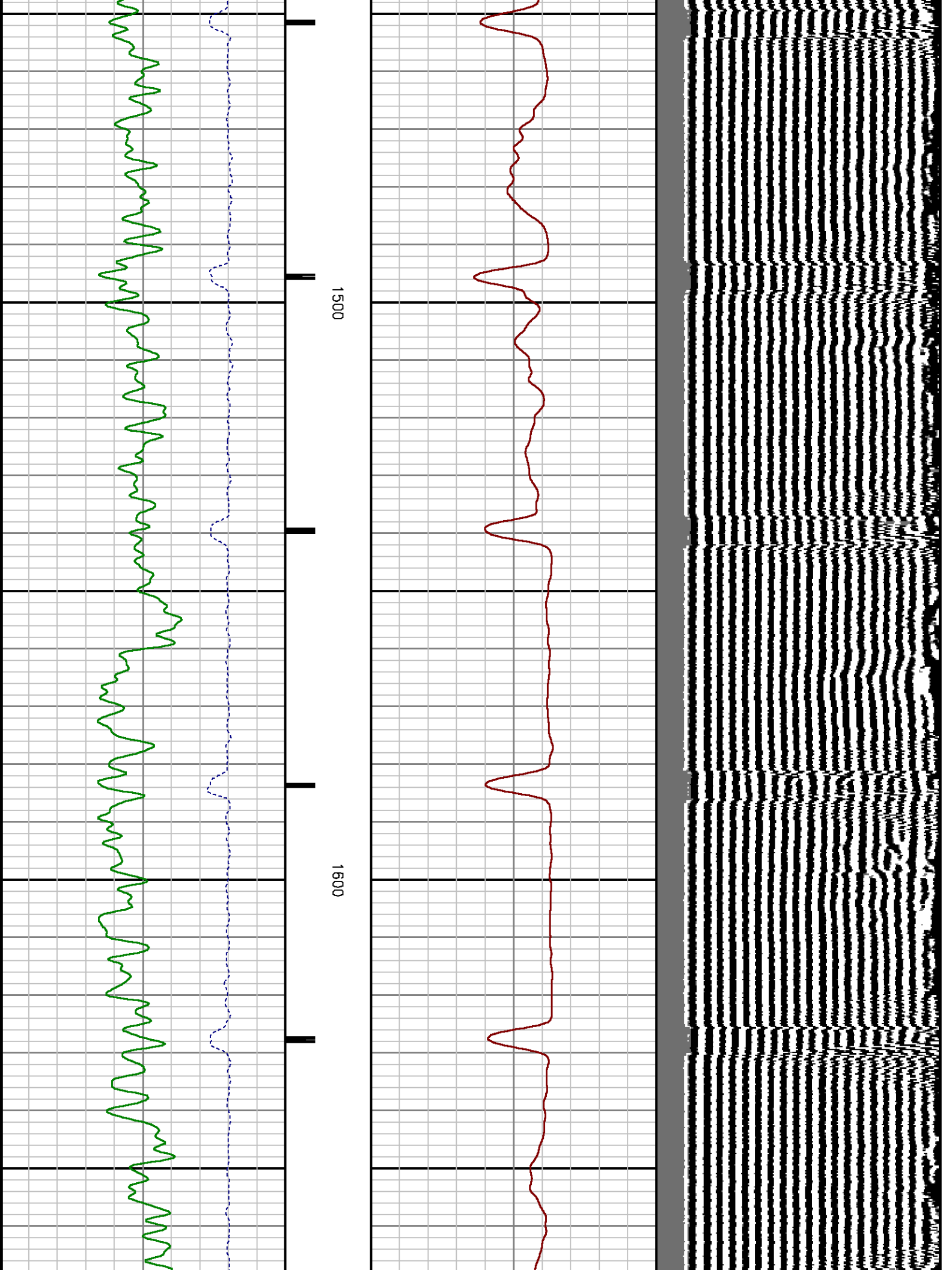


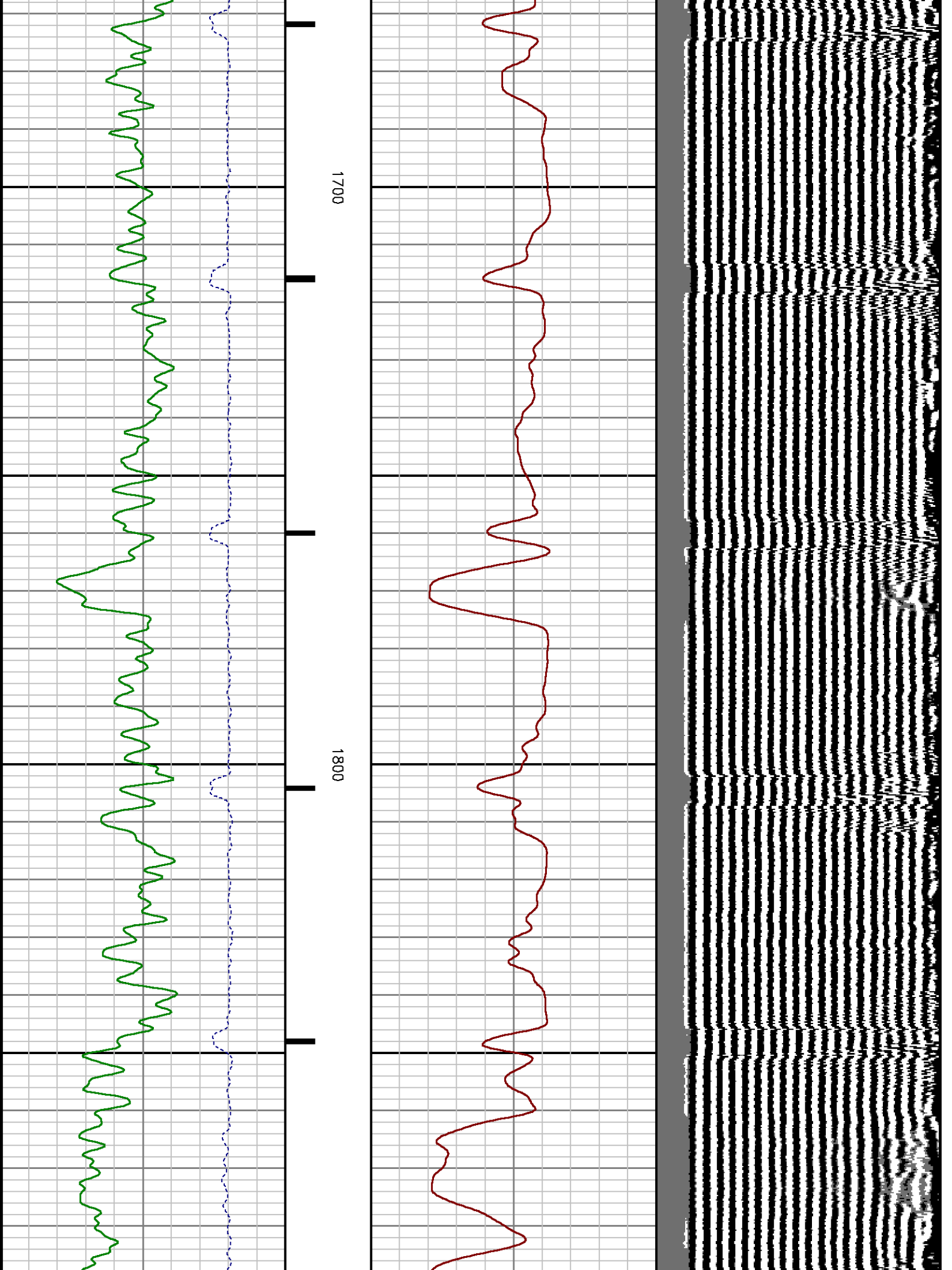


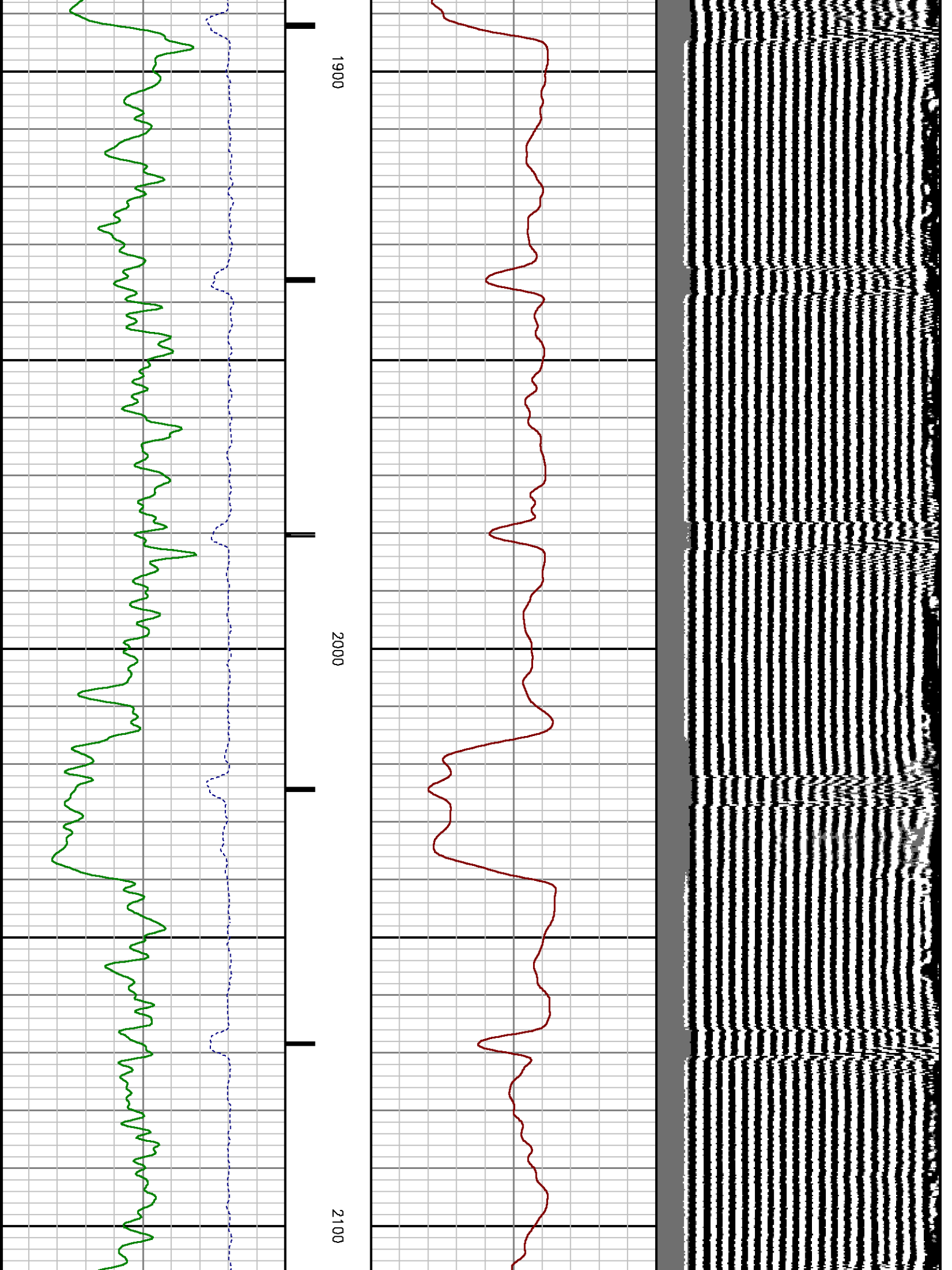


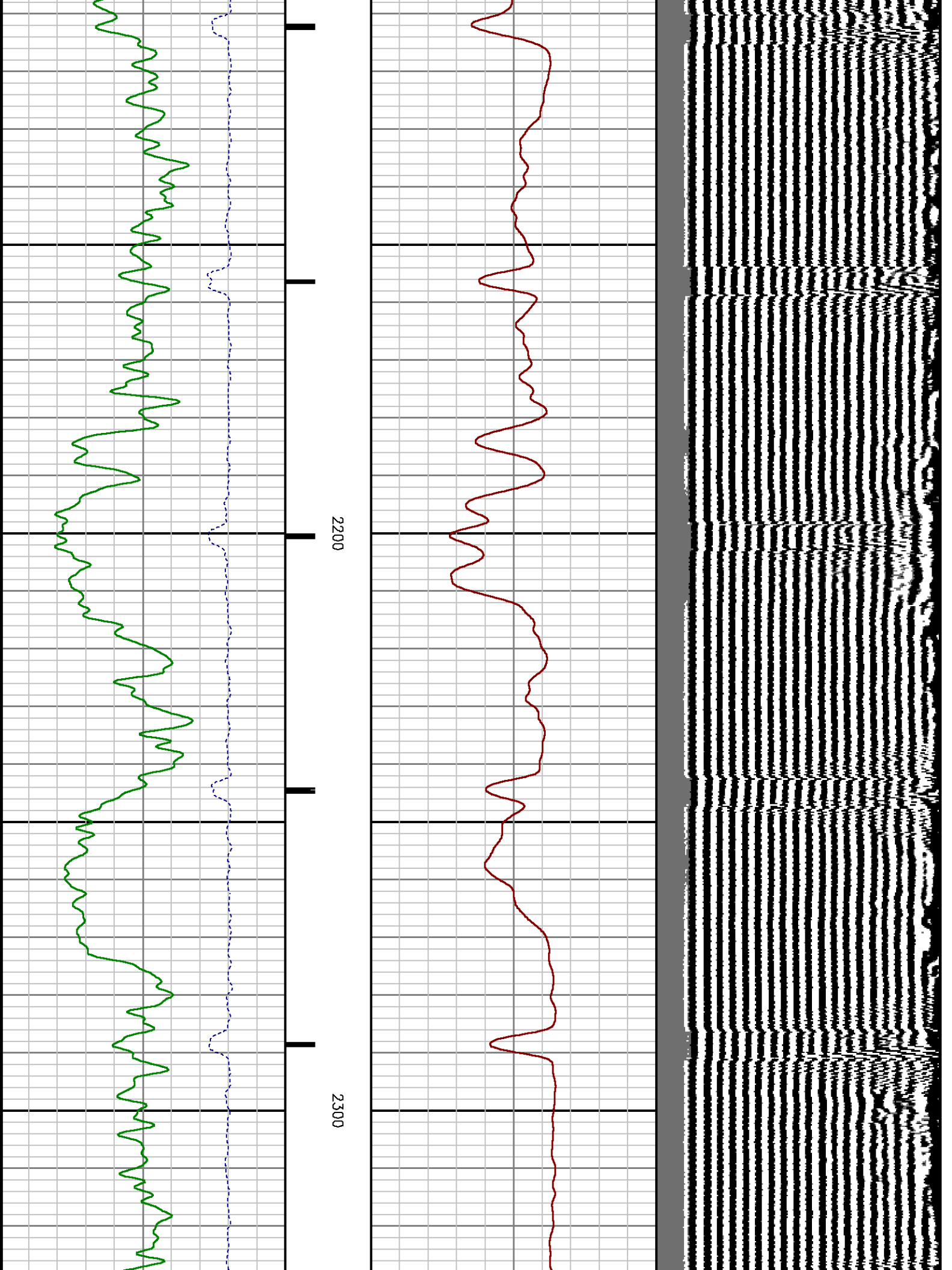


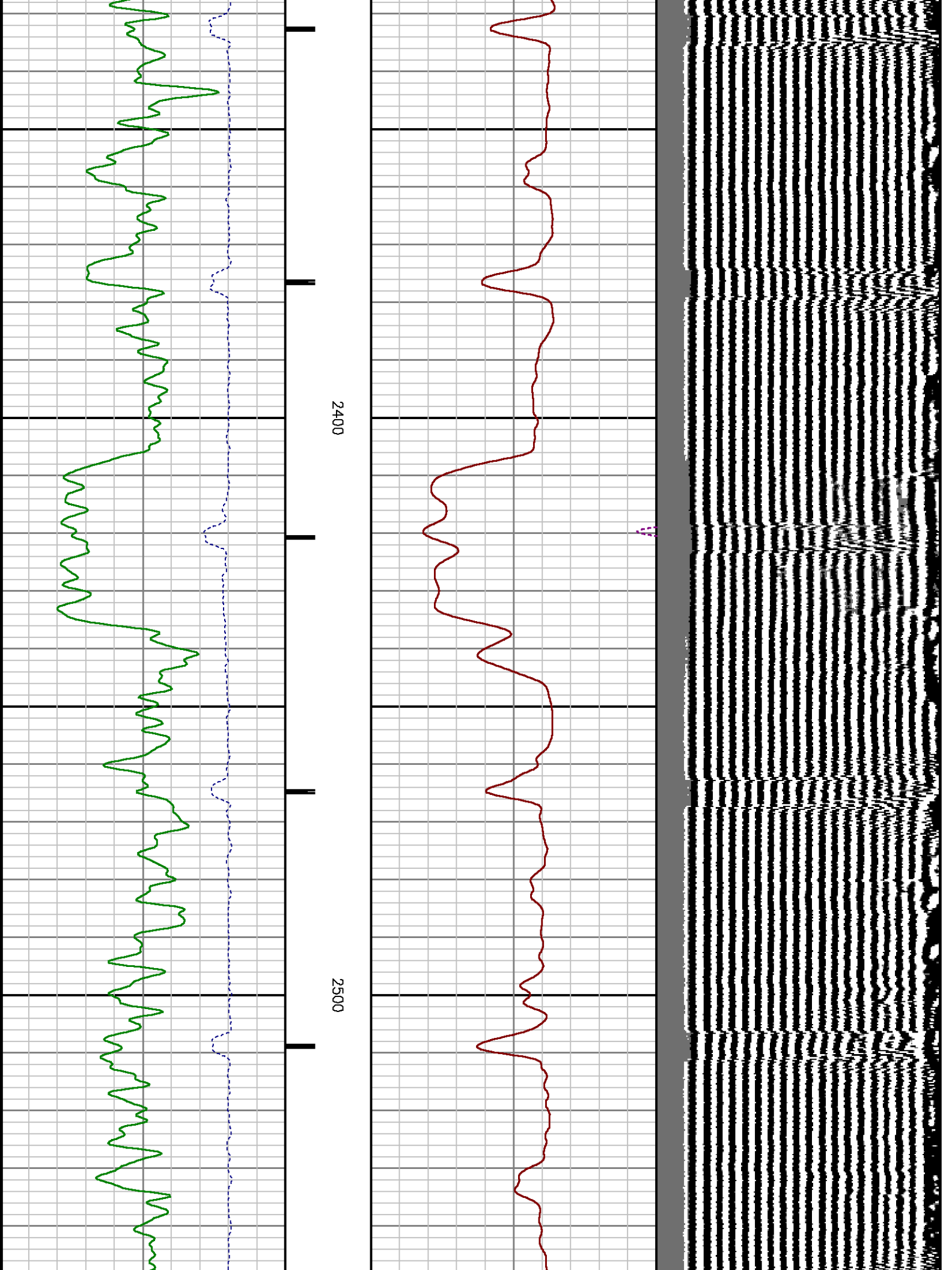


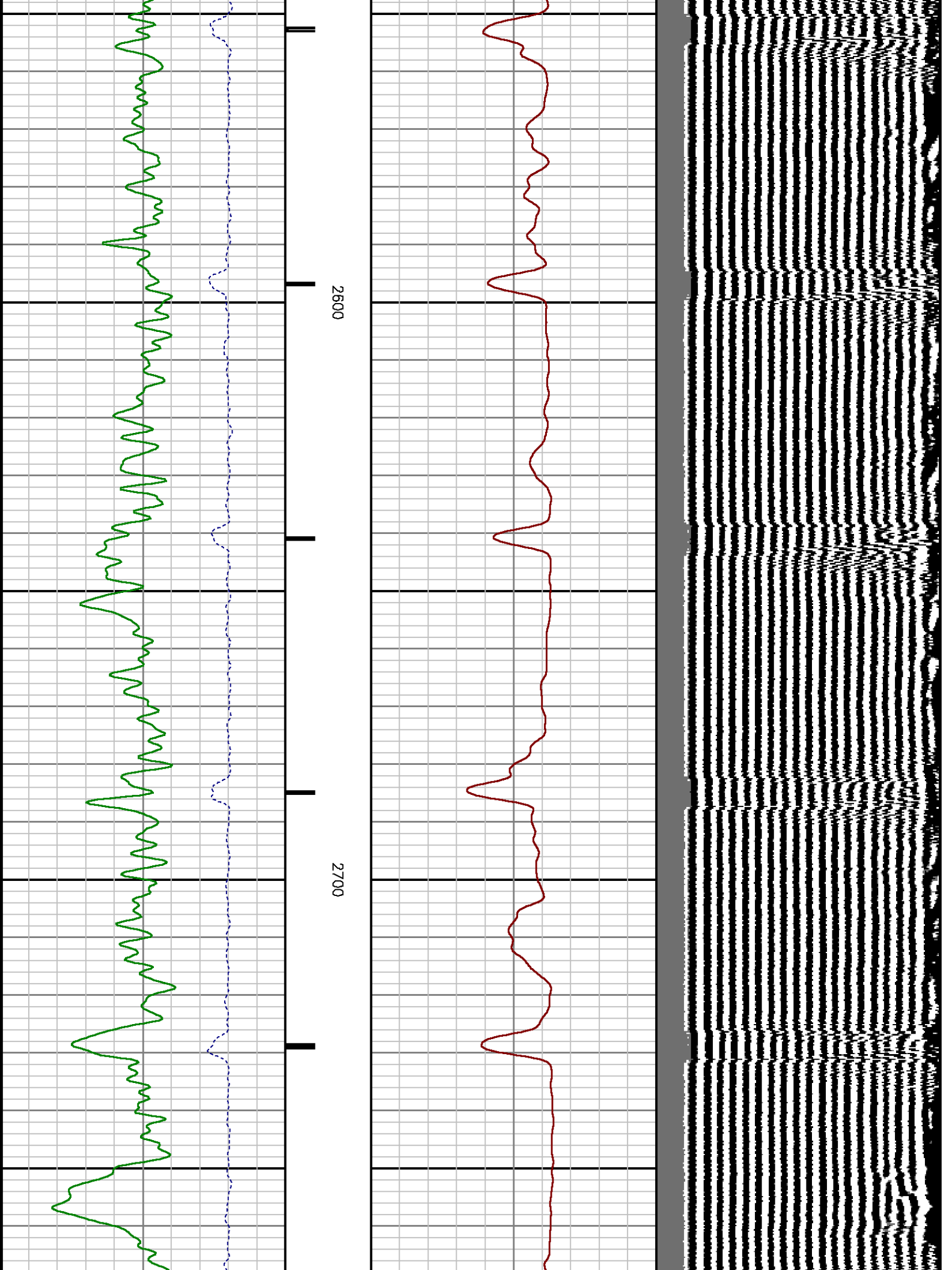


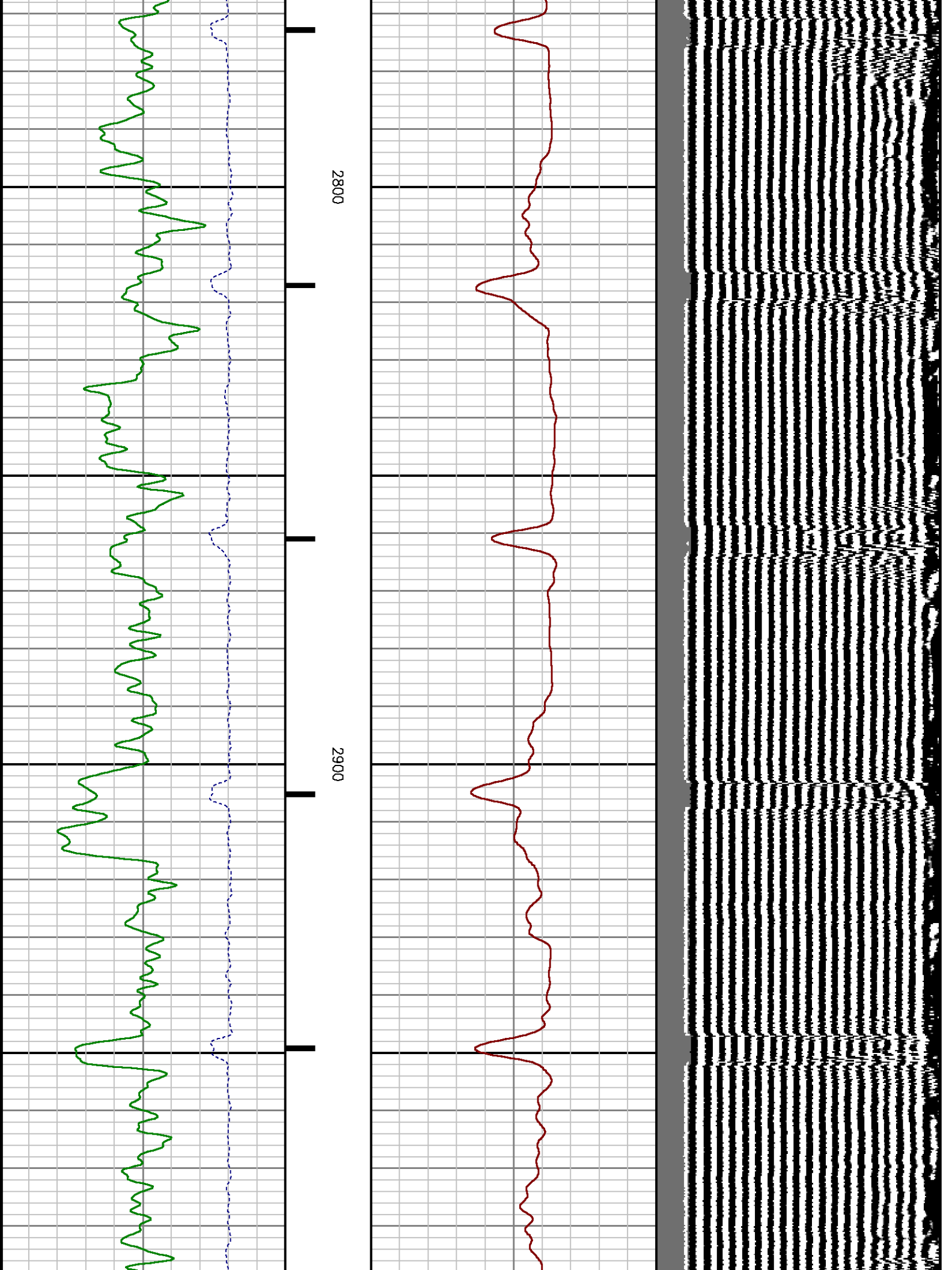


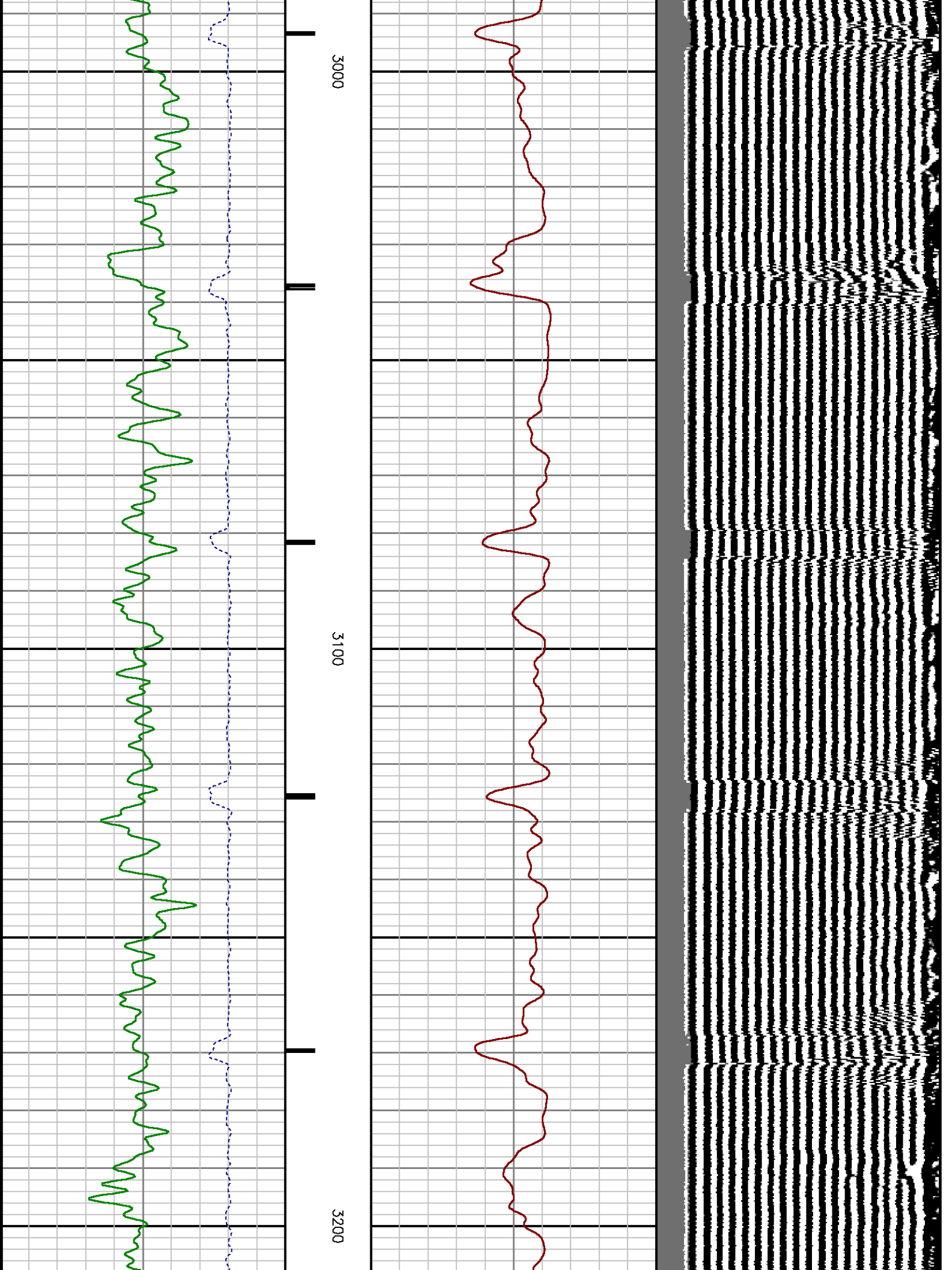


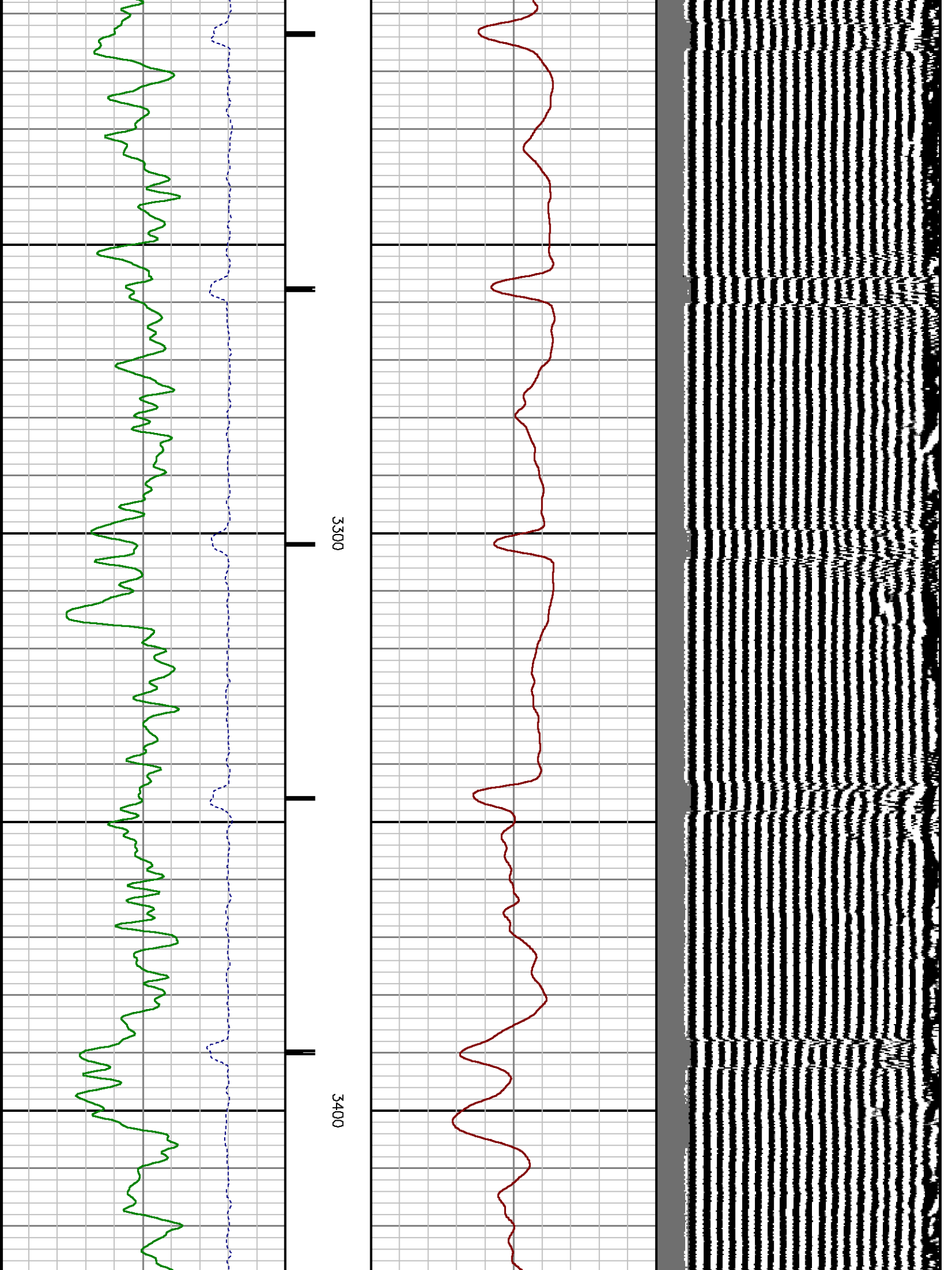


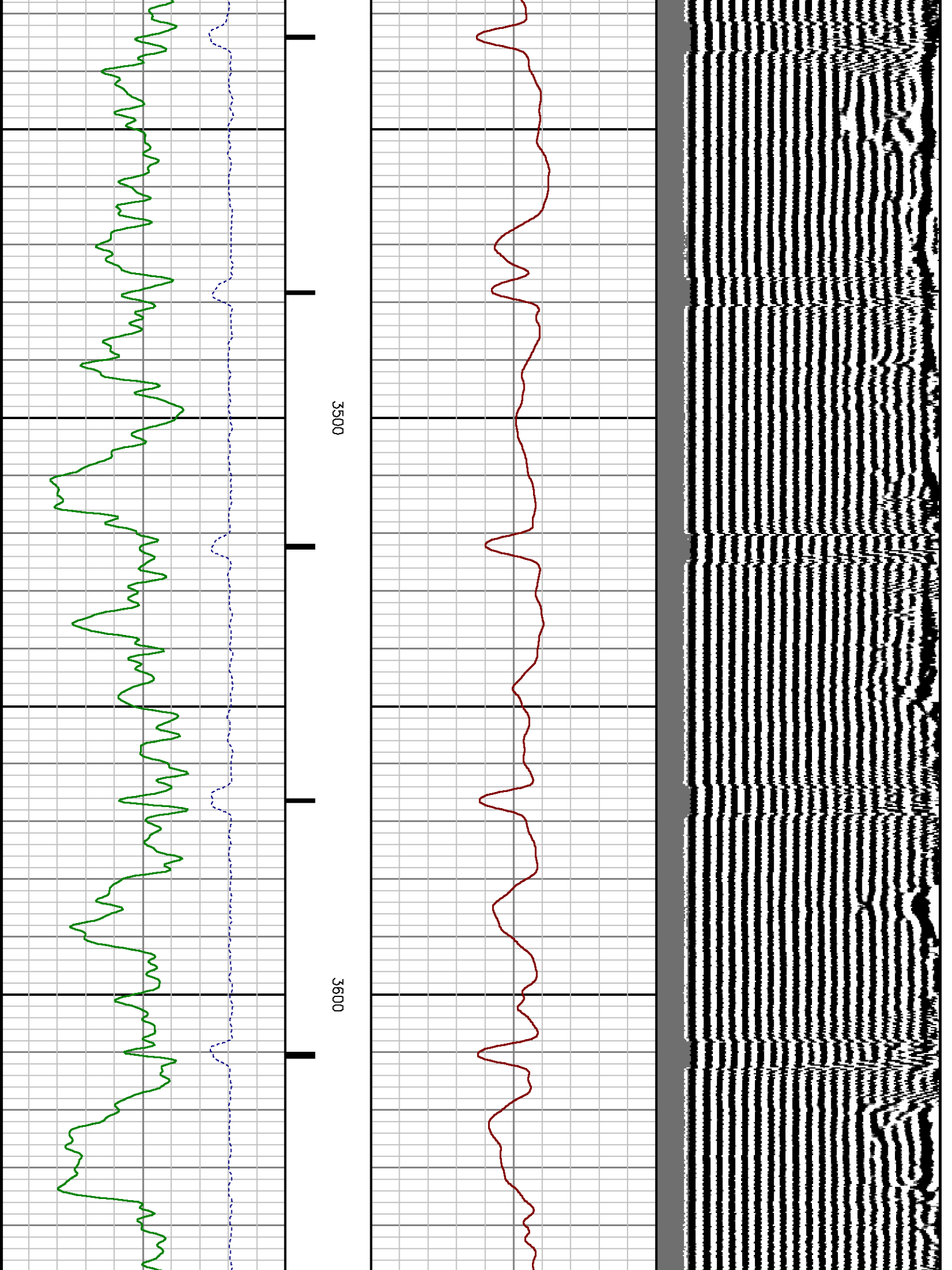


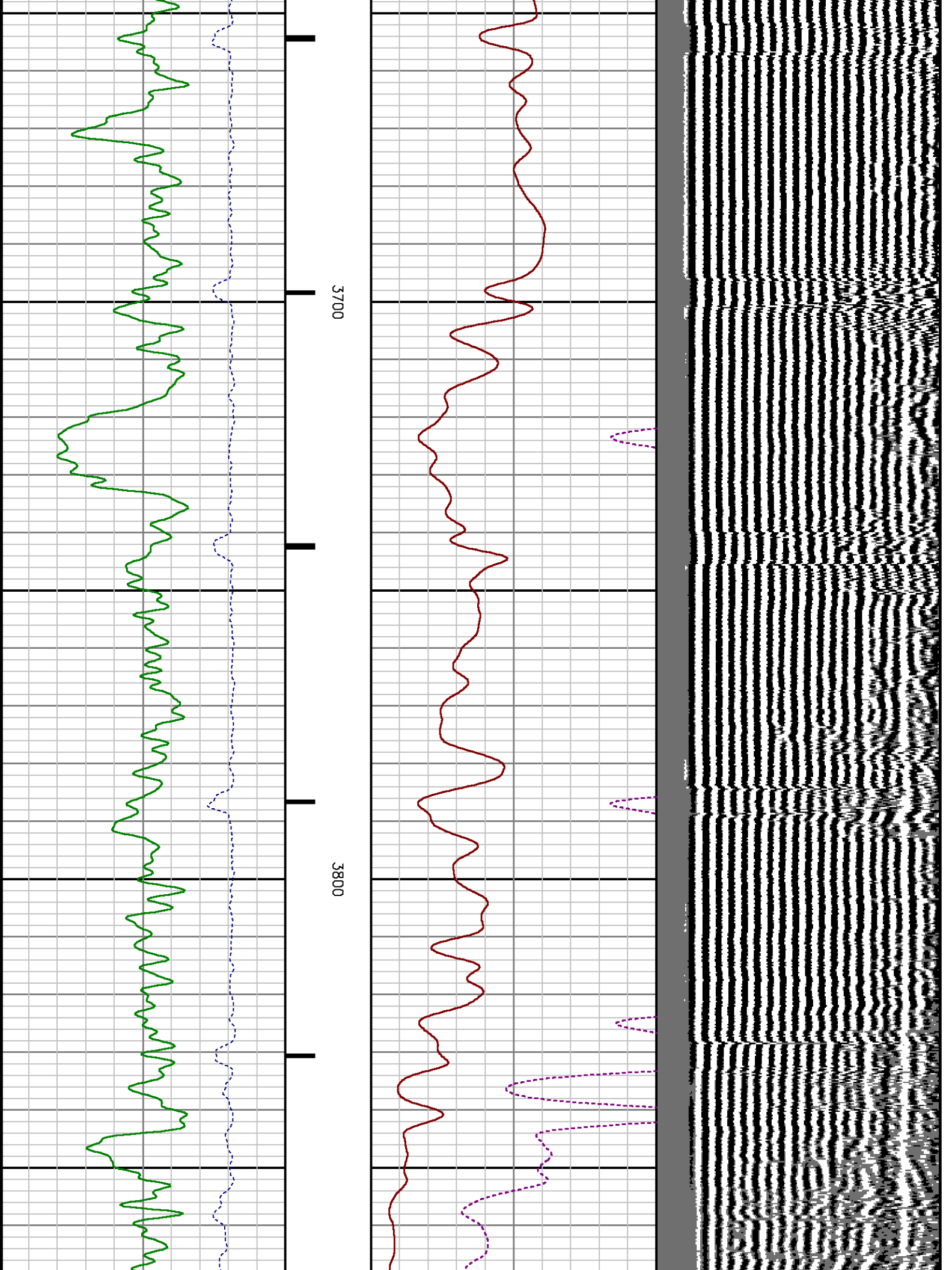


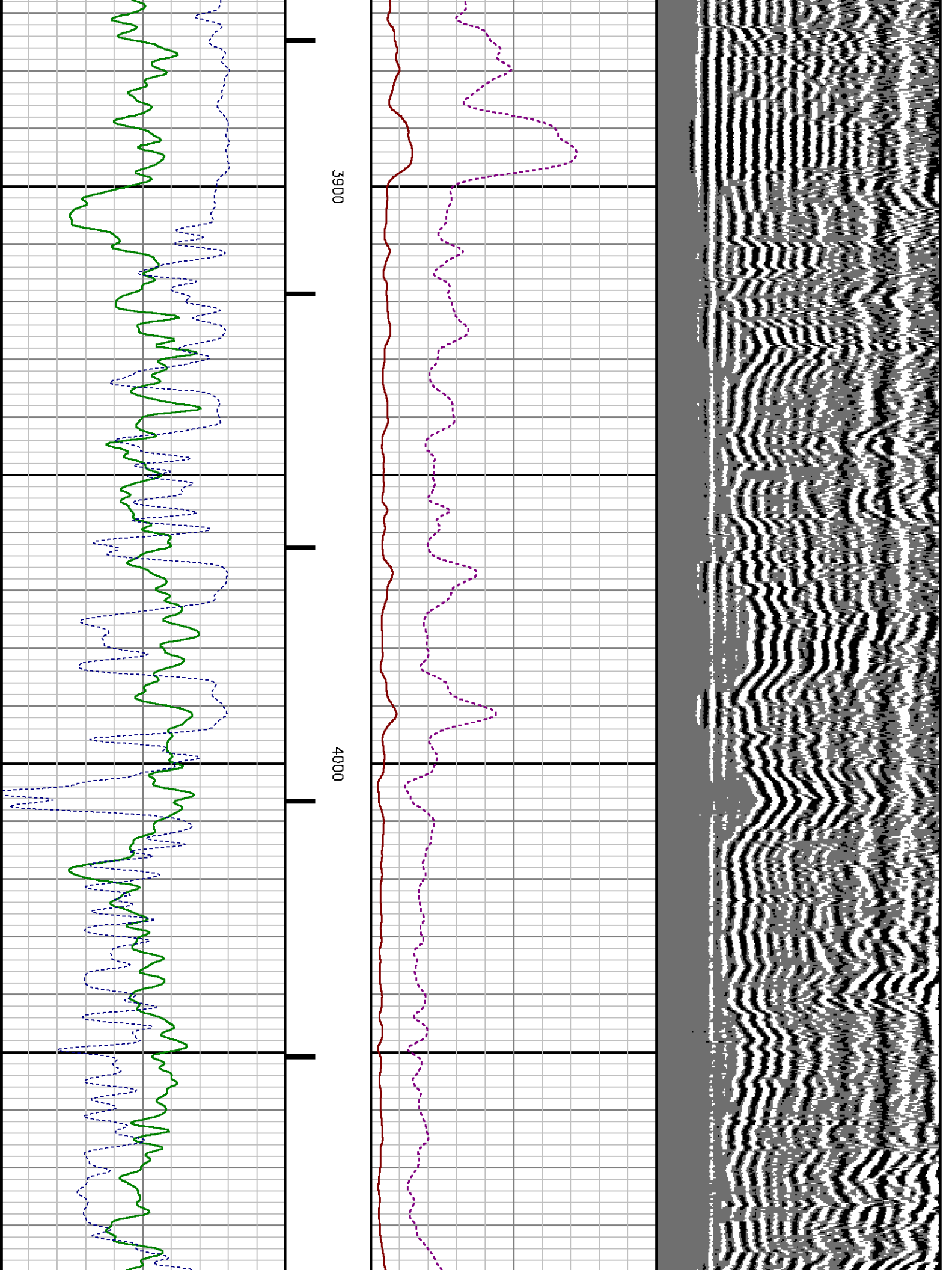


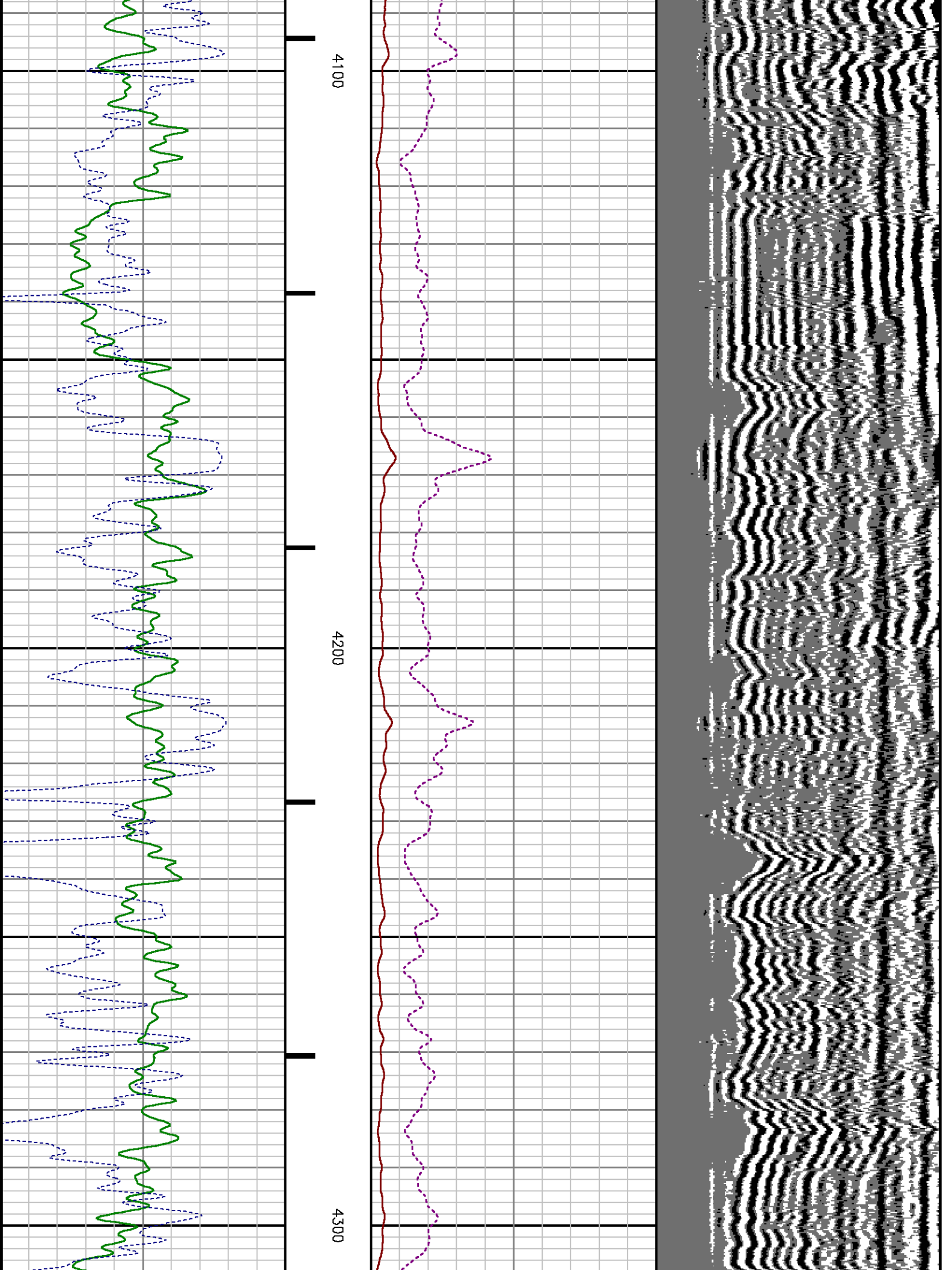


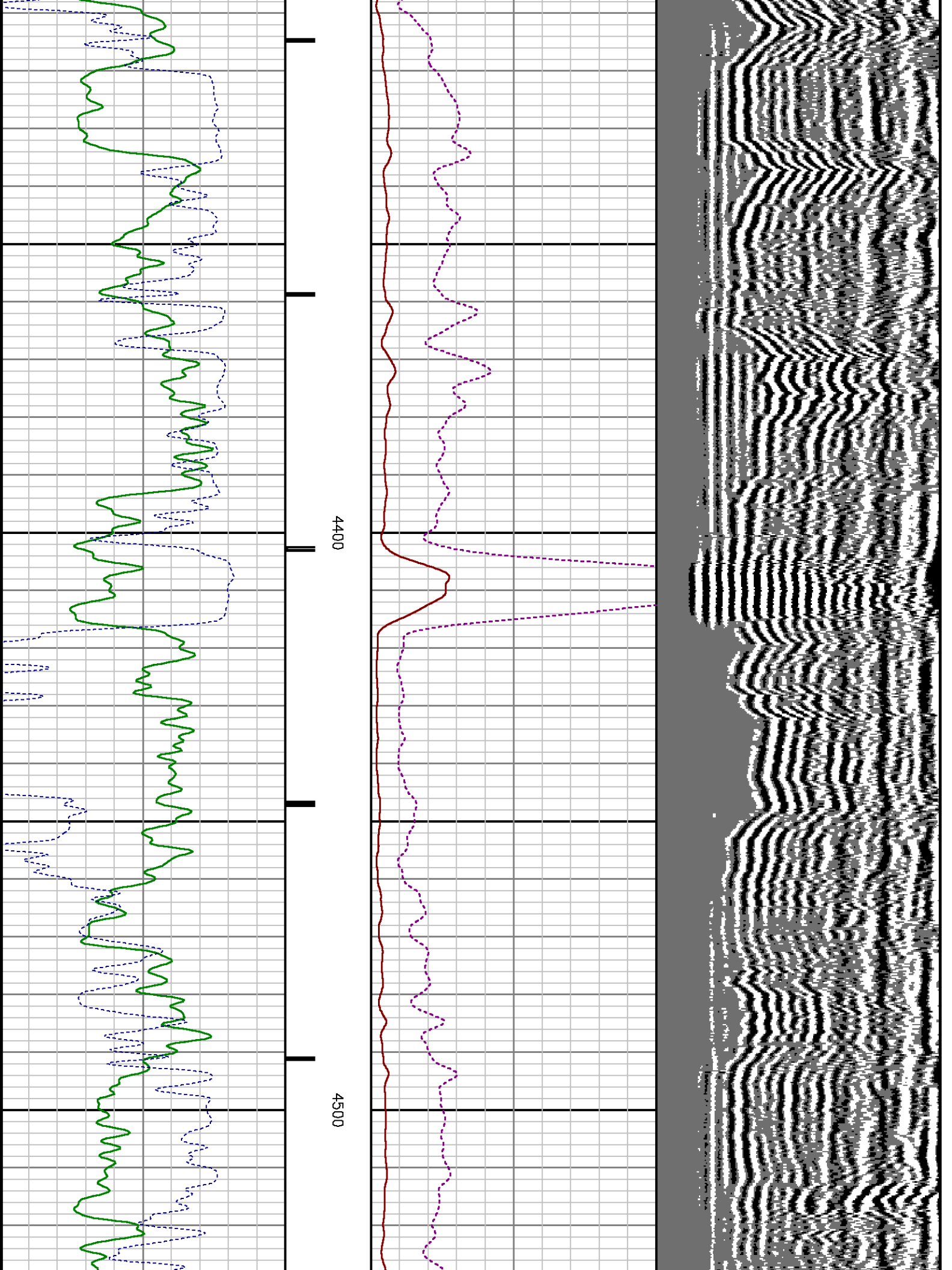


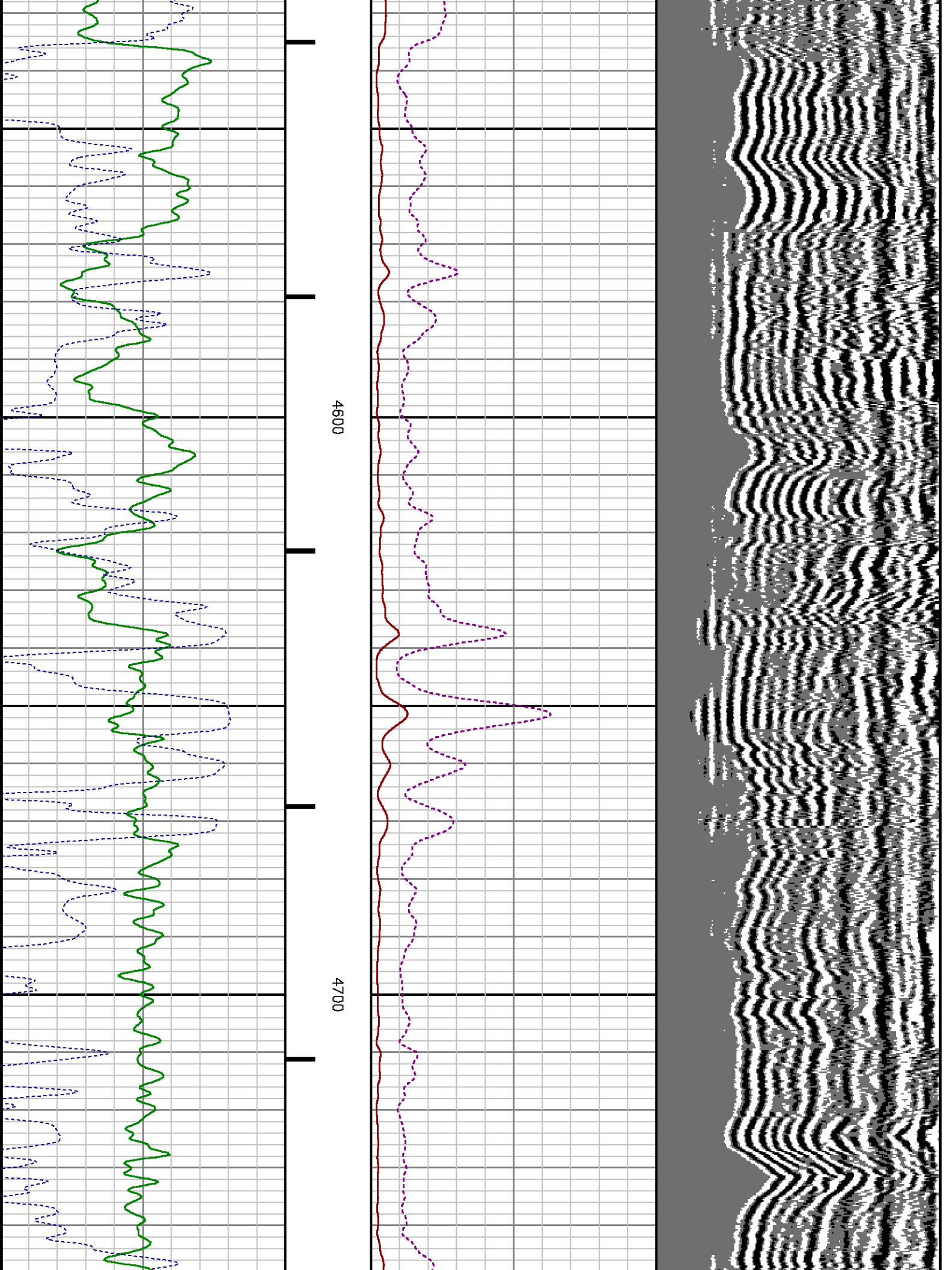


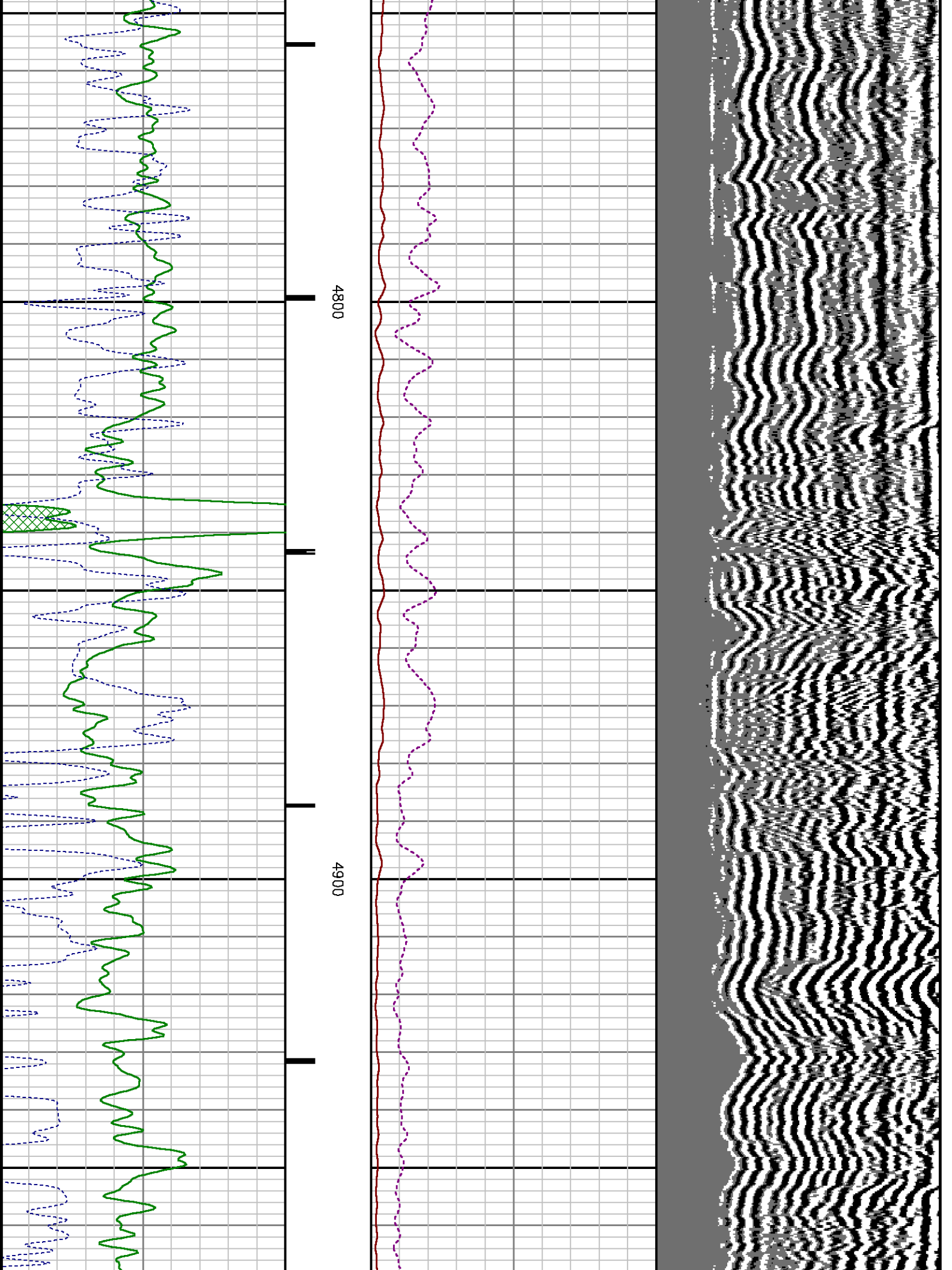


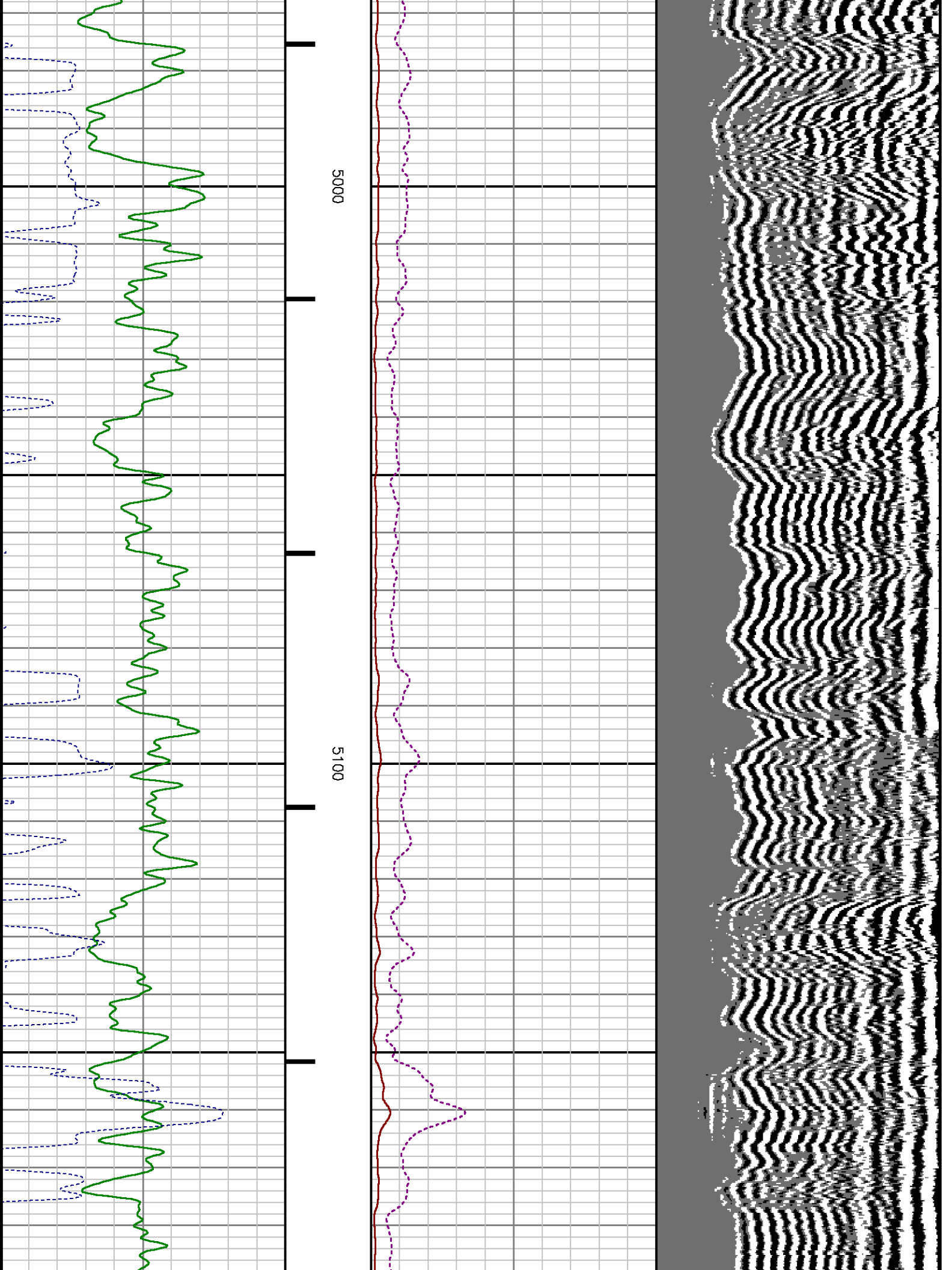


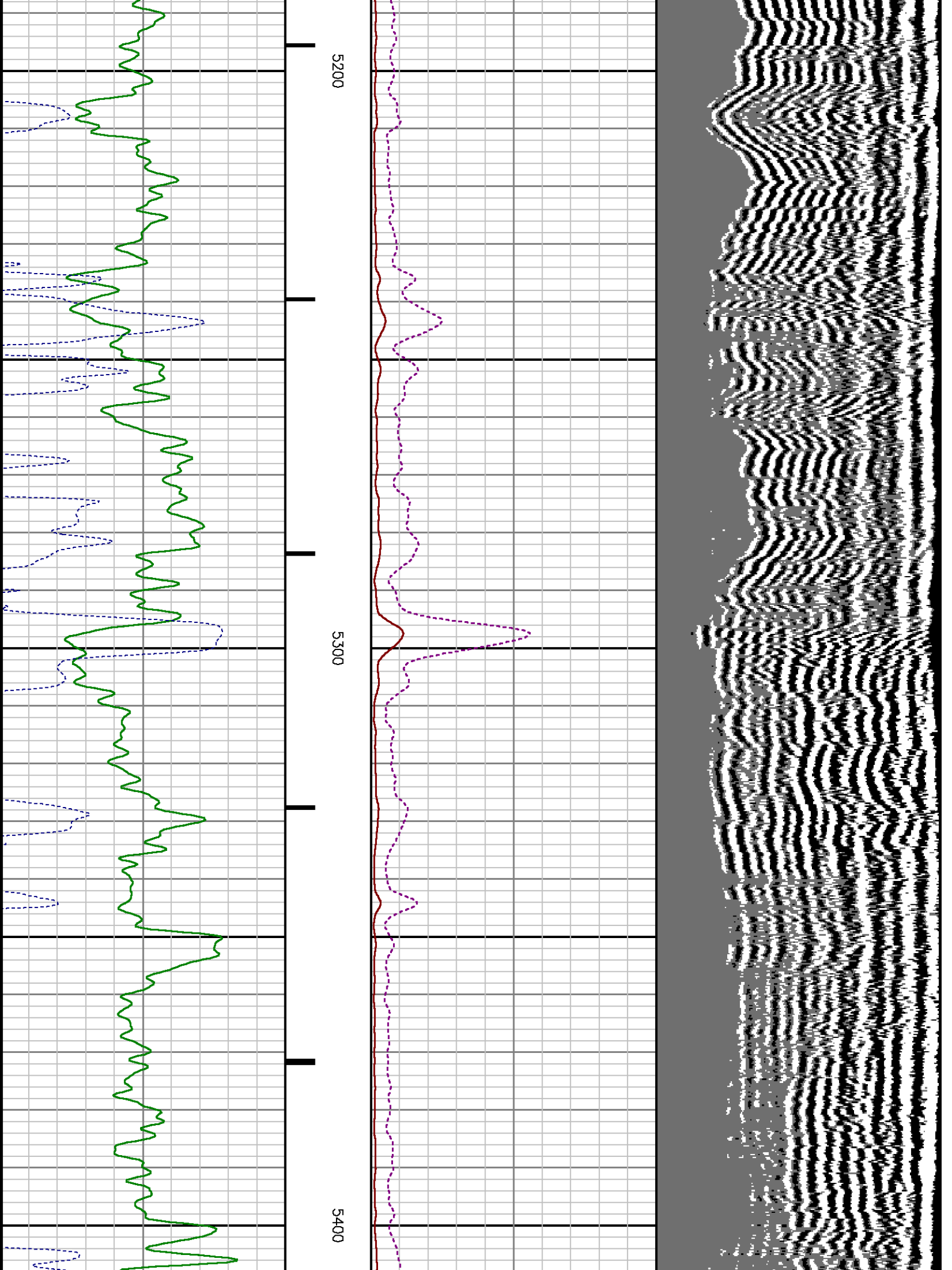


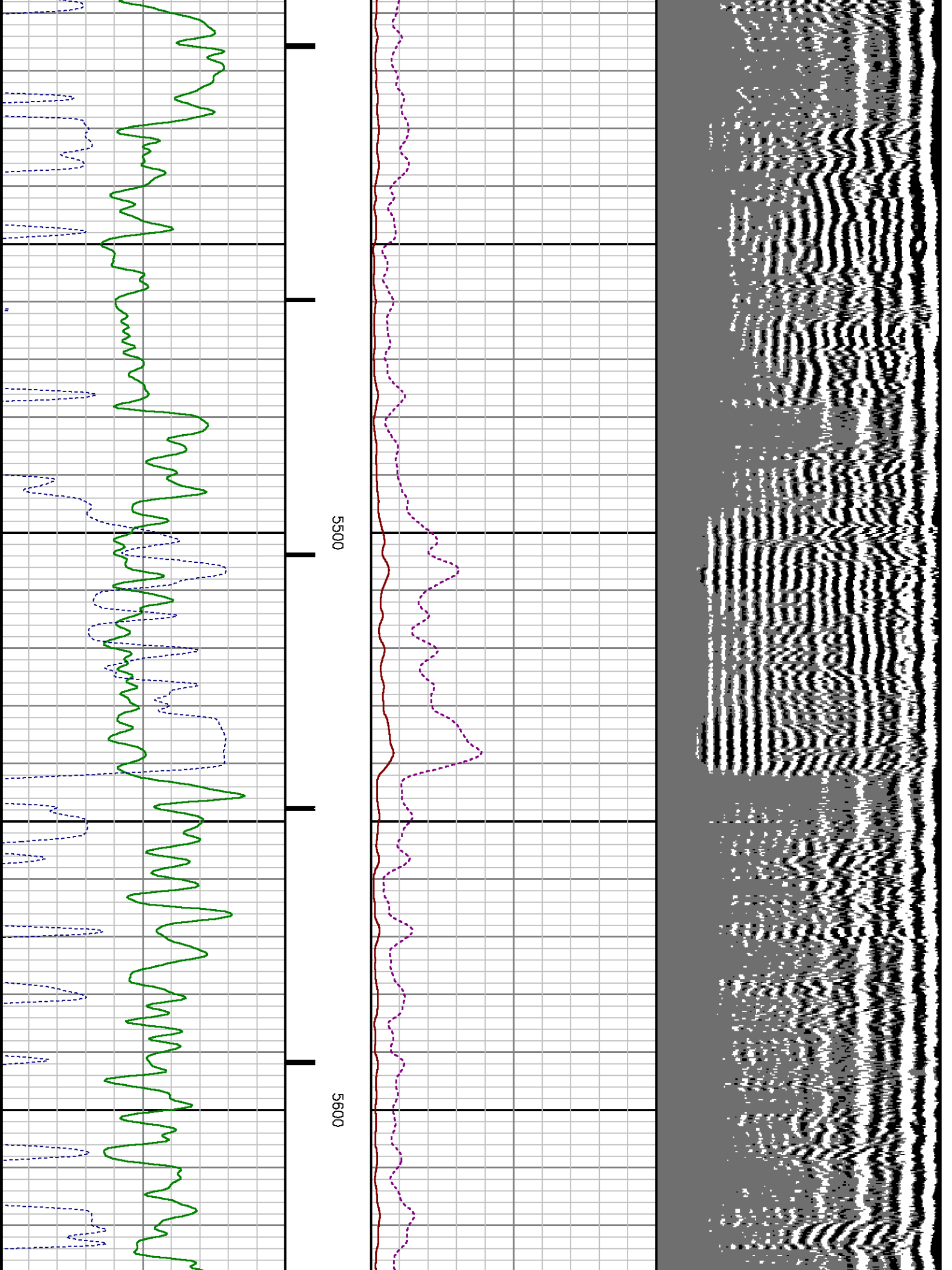


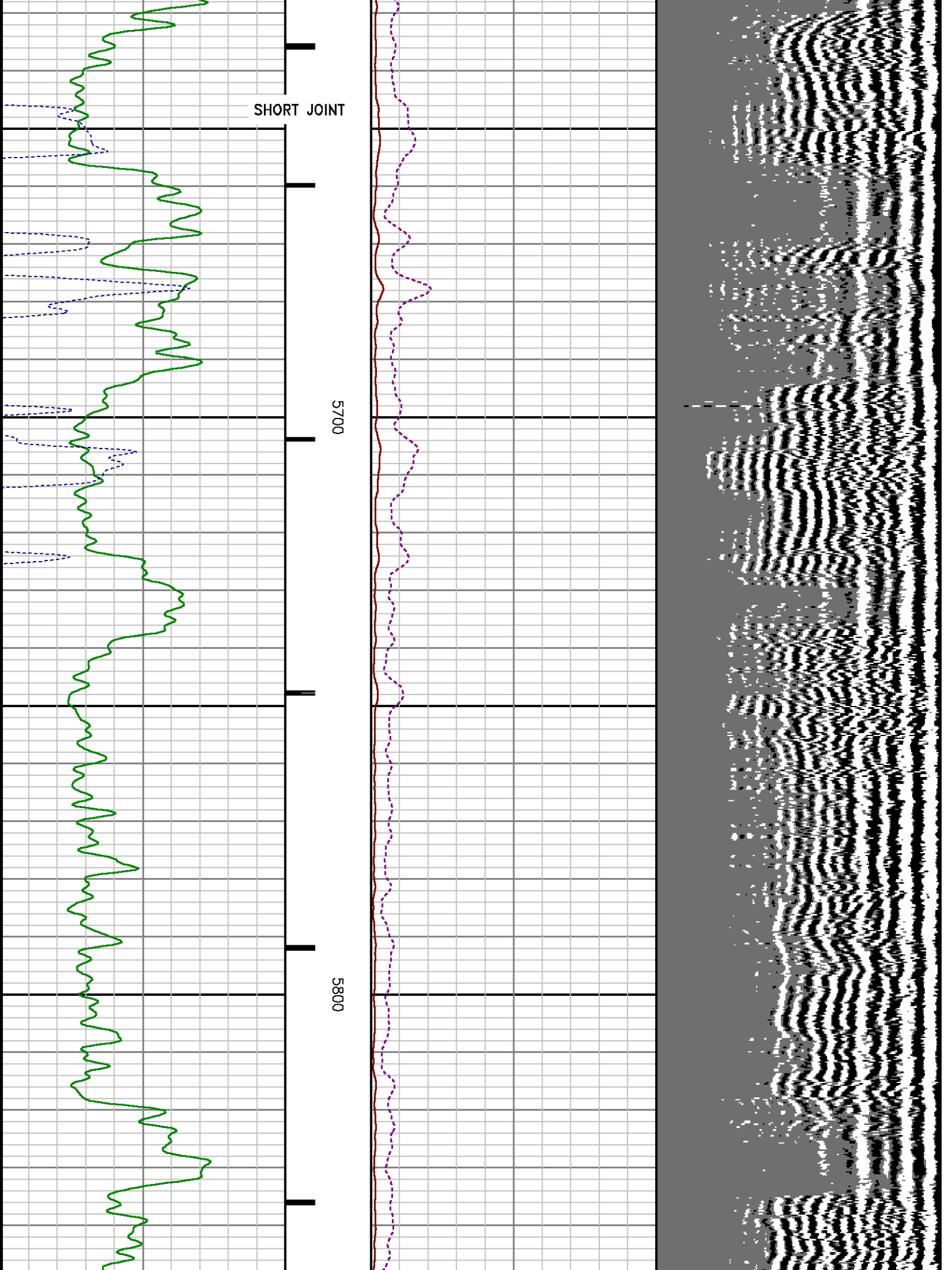


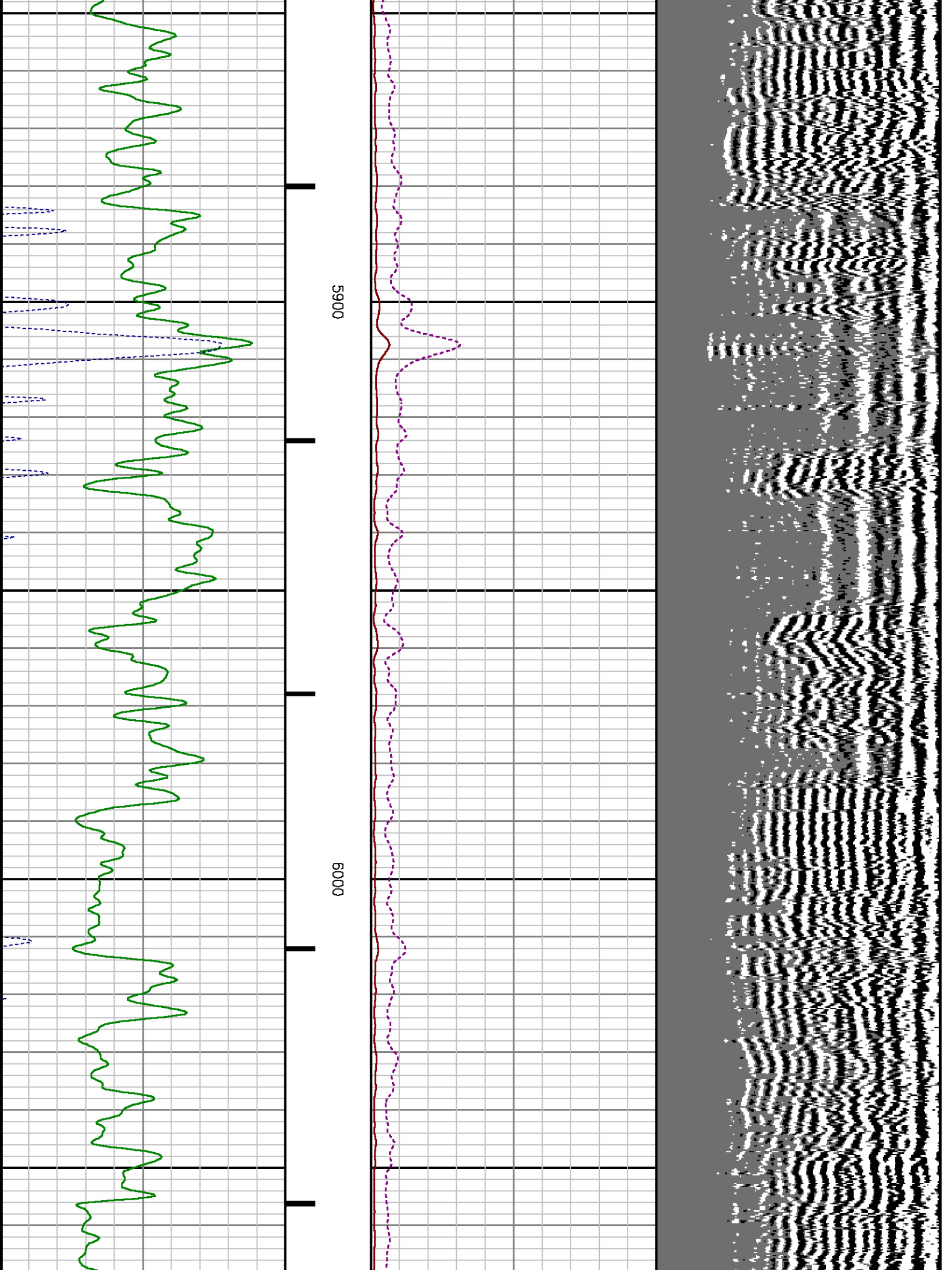


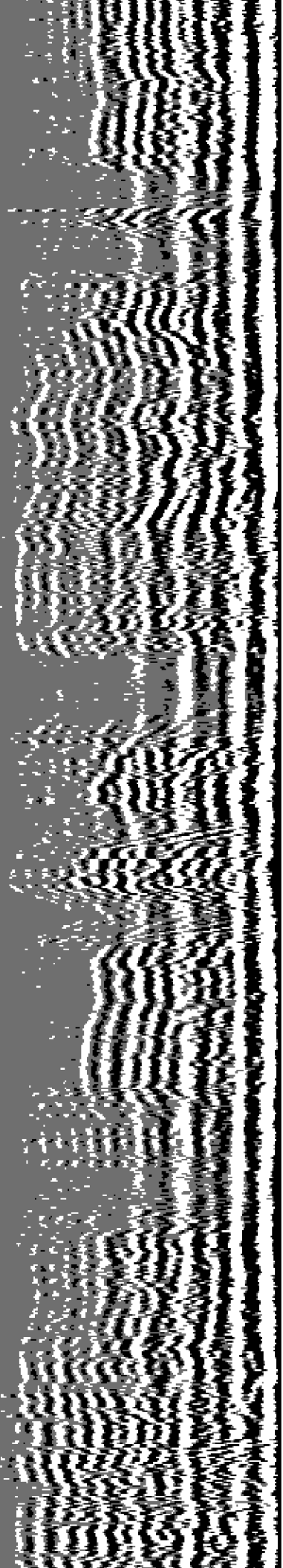






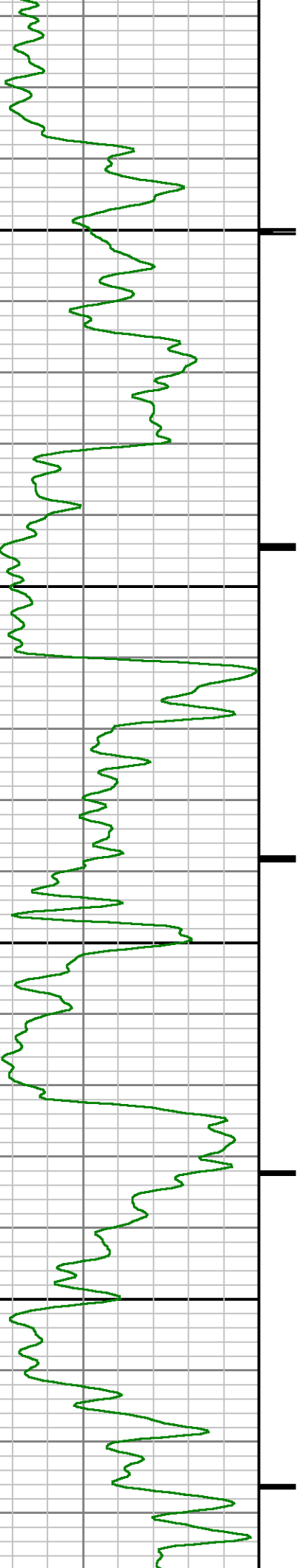


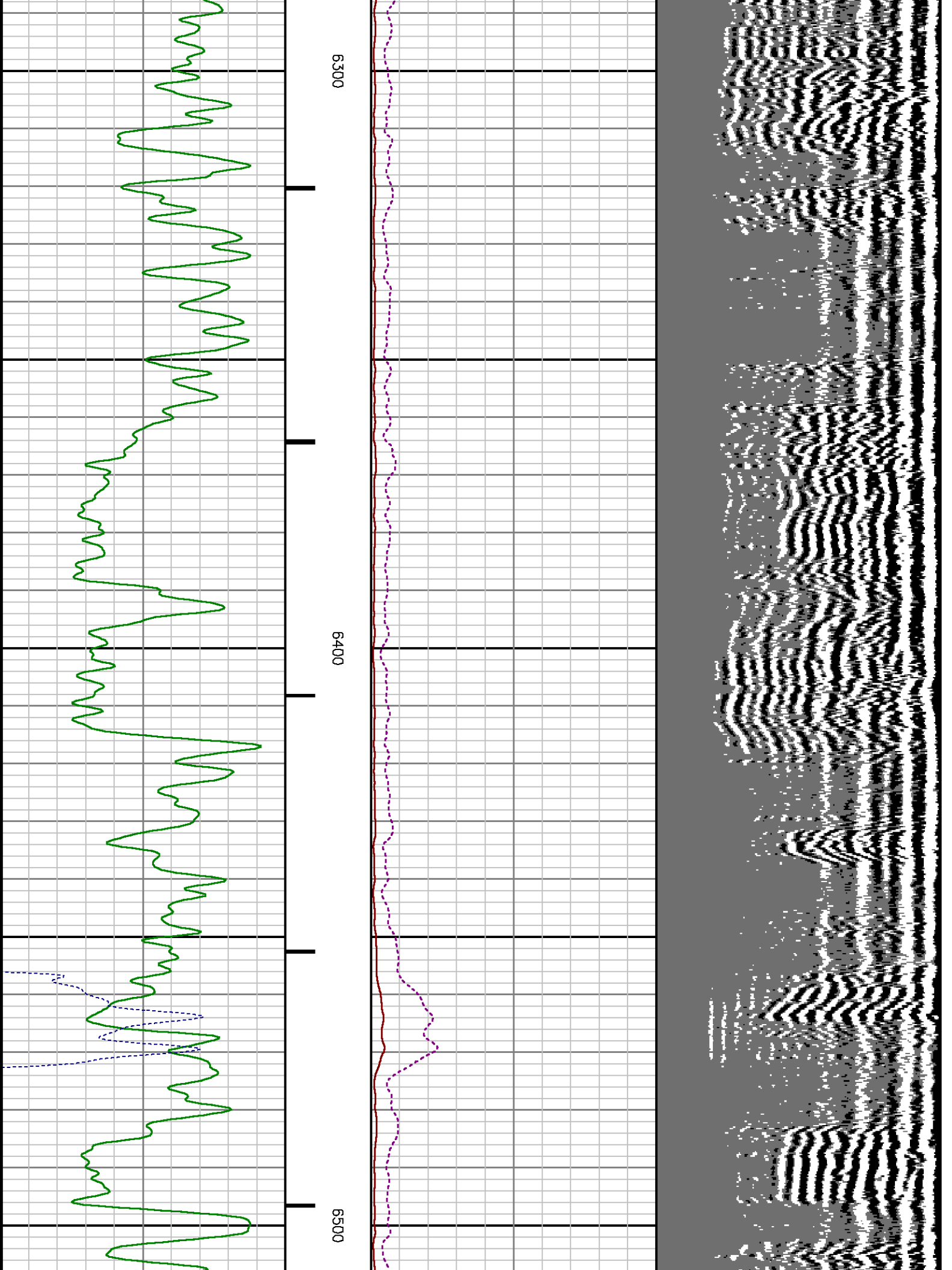


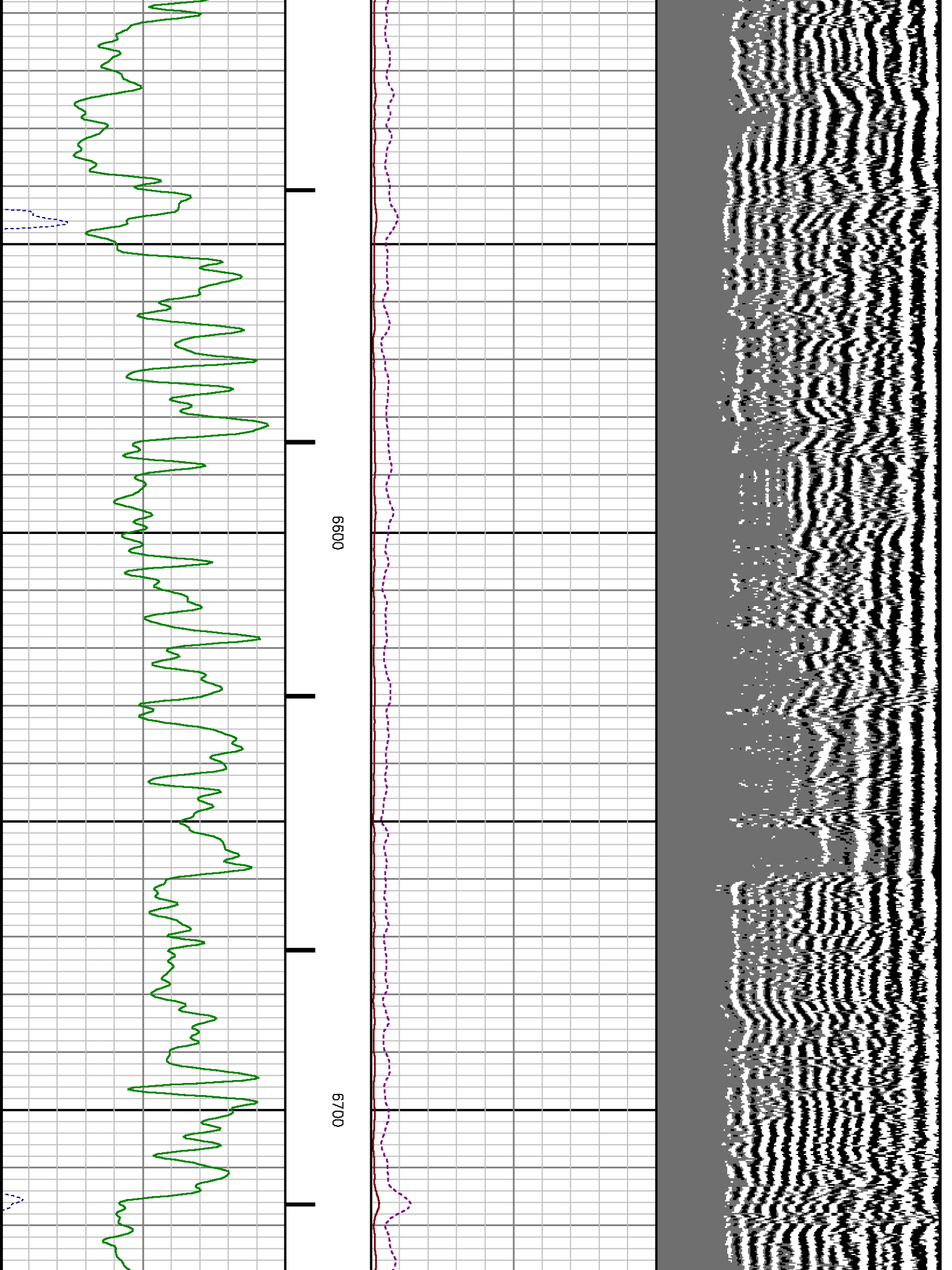


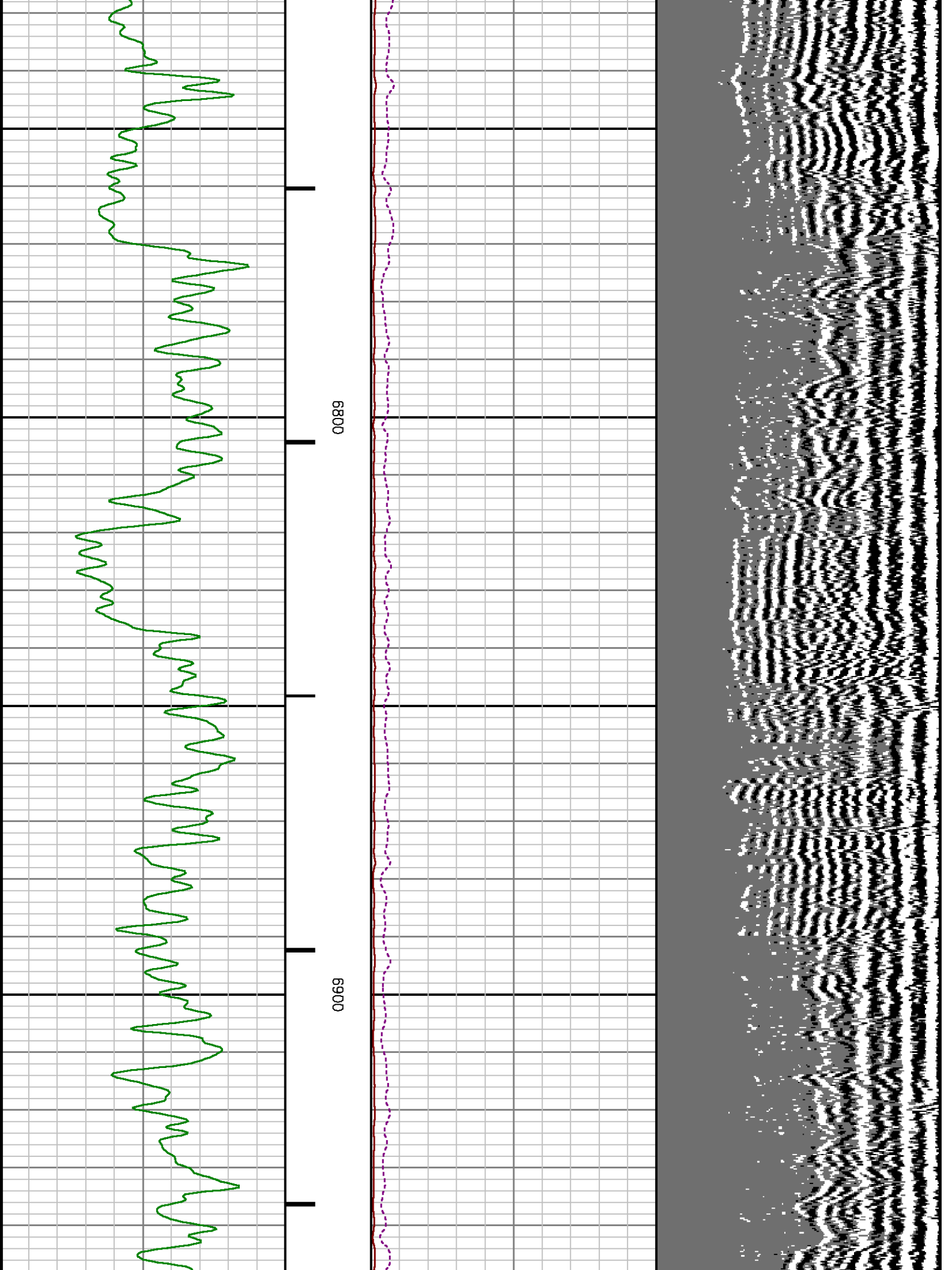
6100

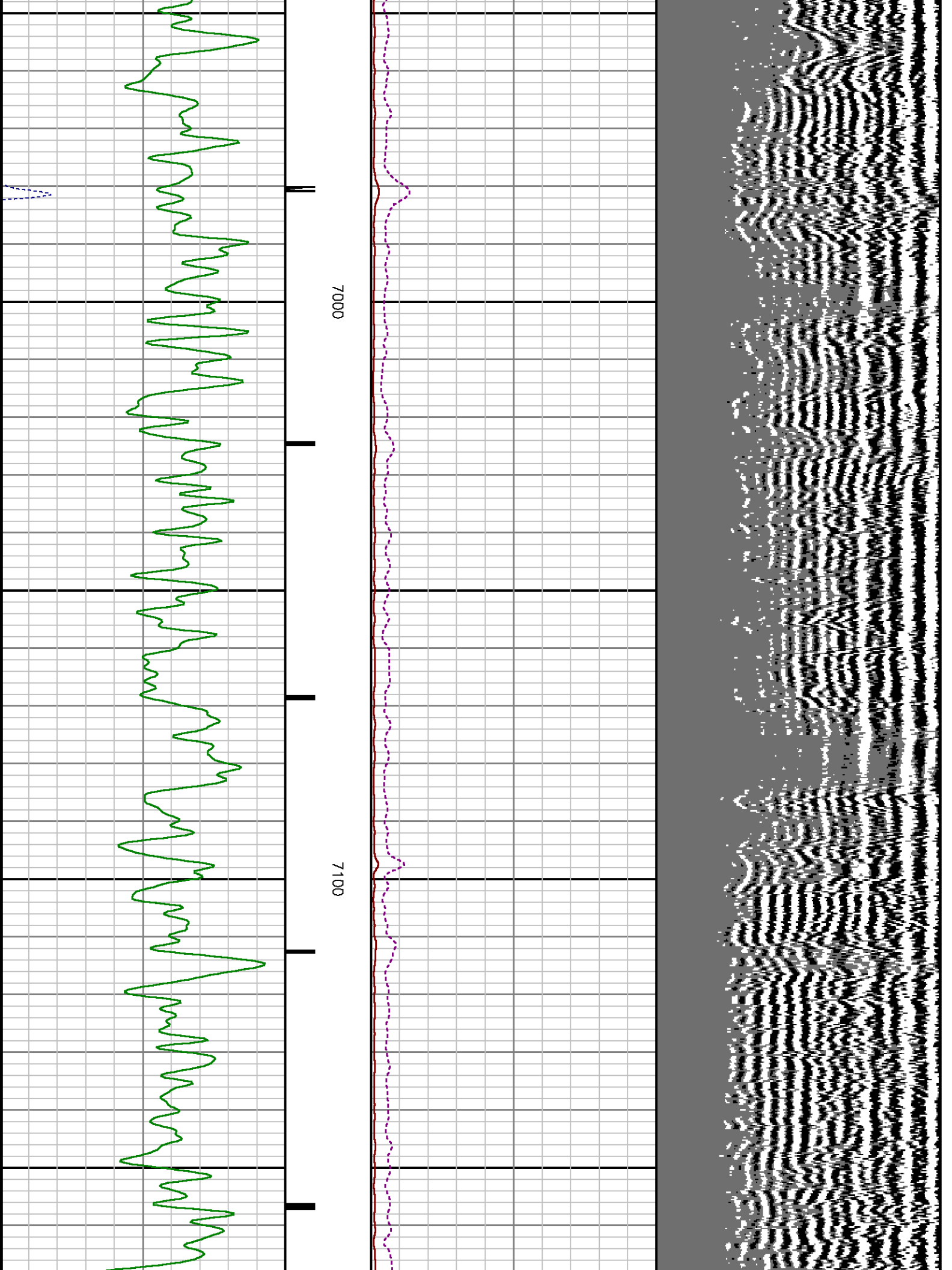
6200

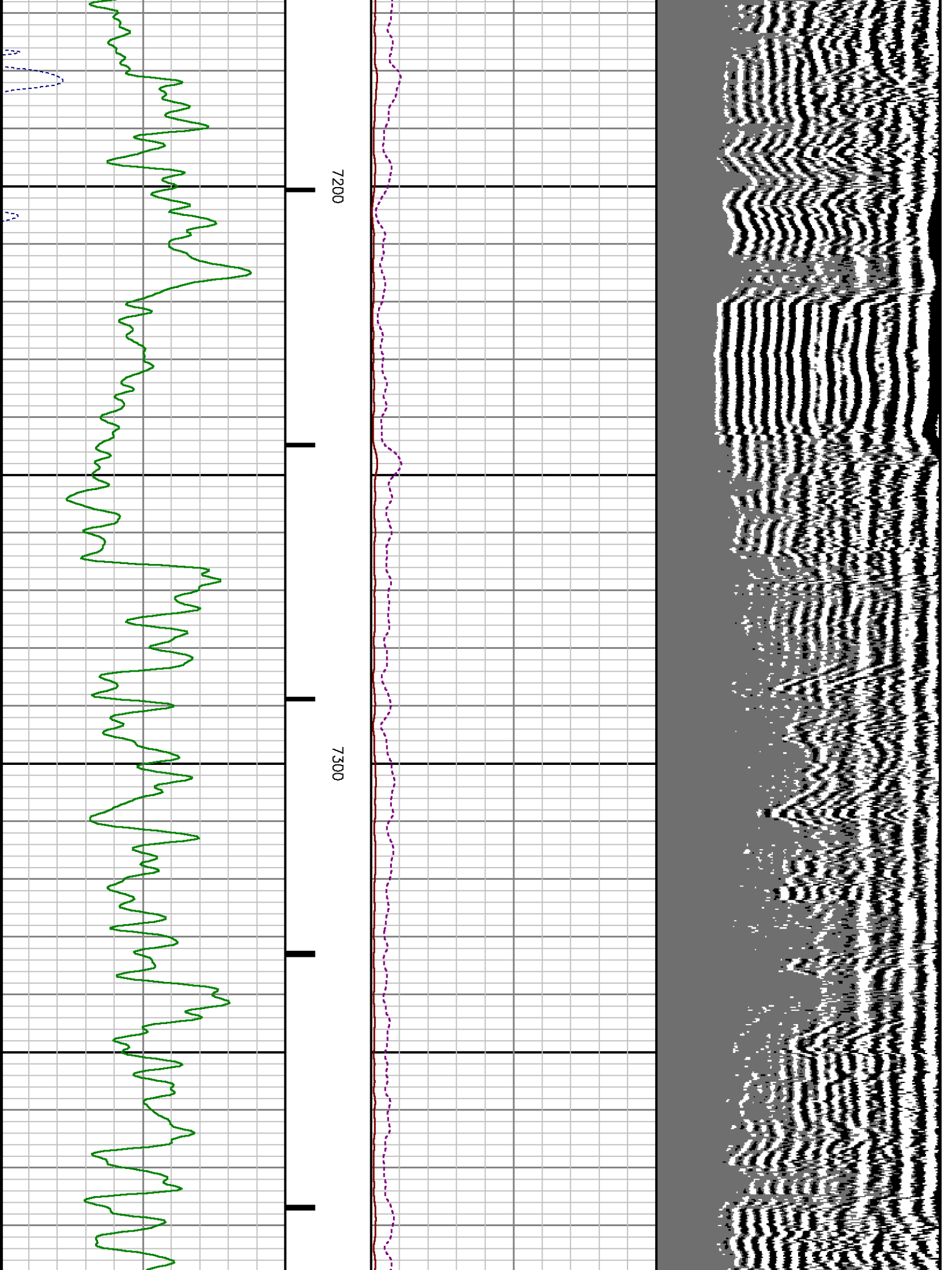


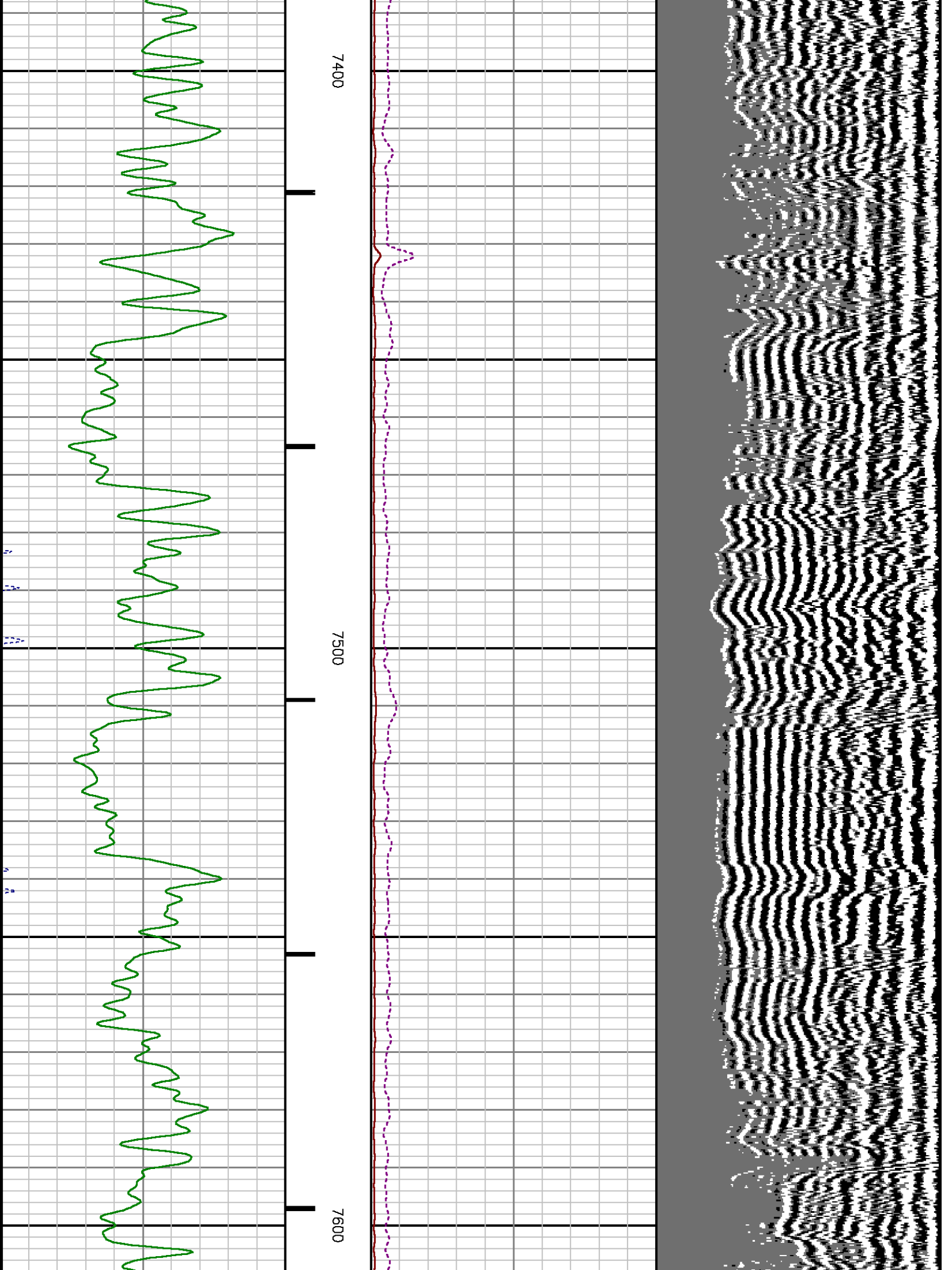


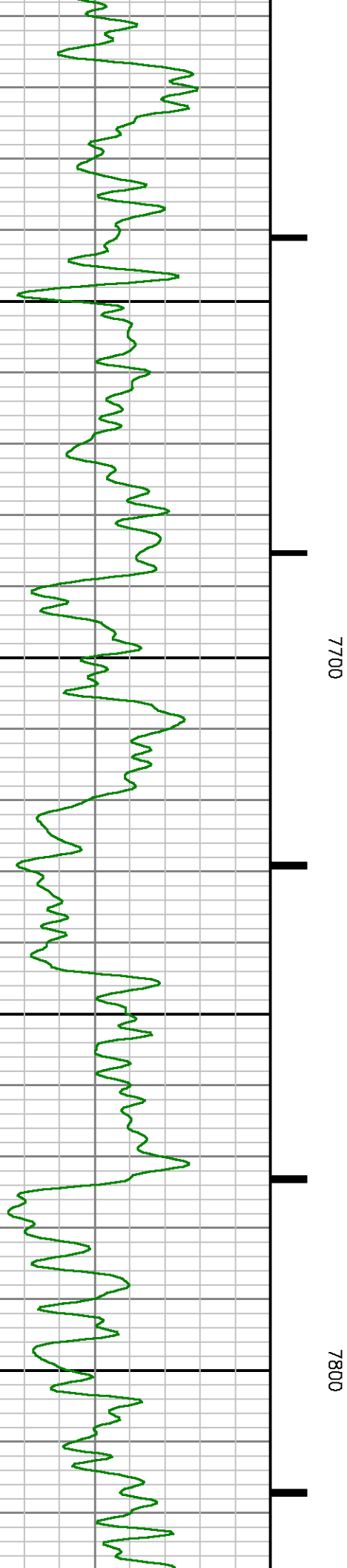
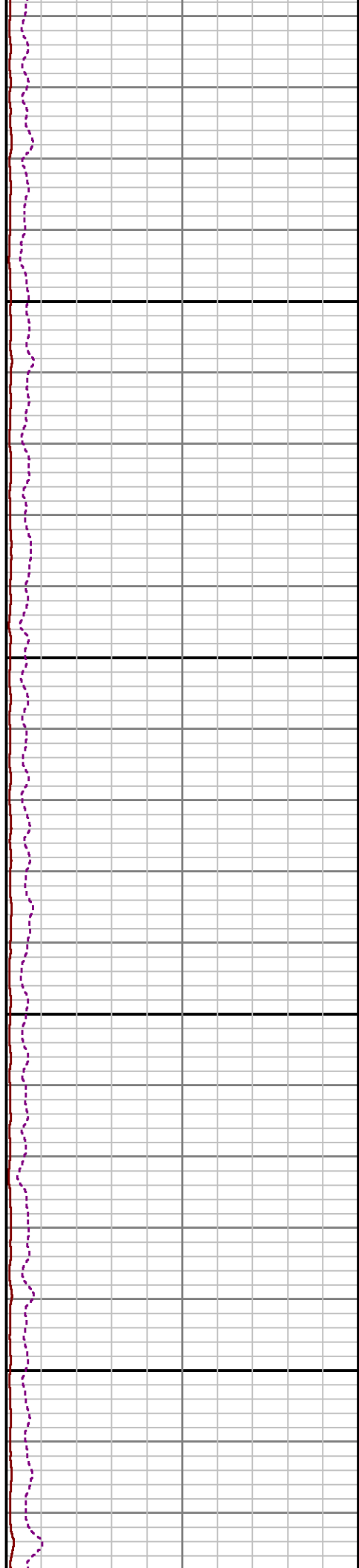
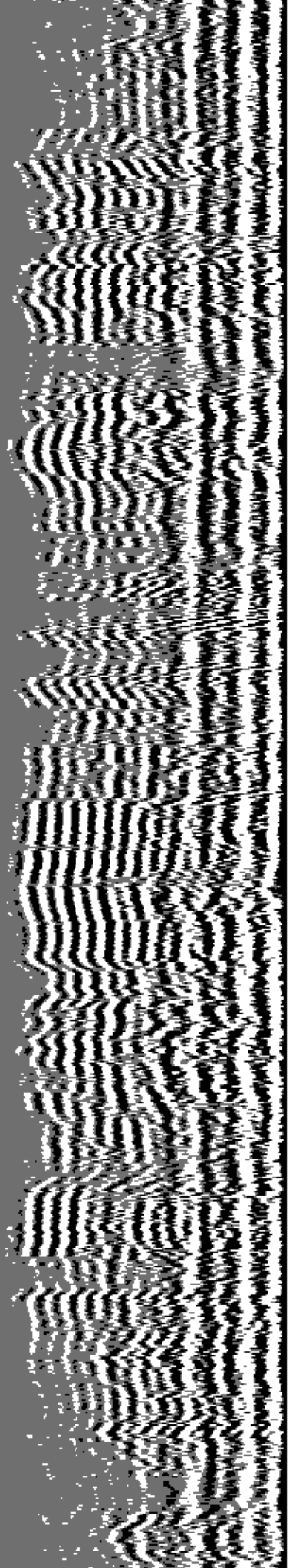


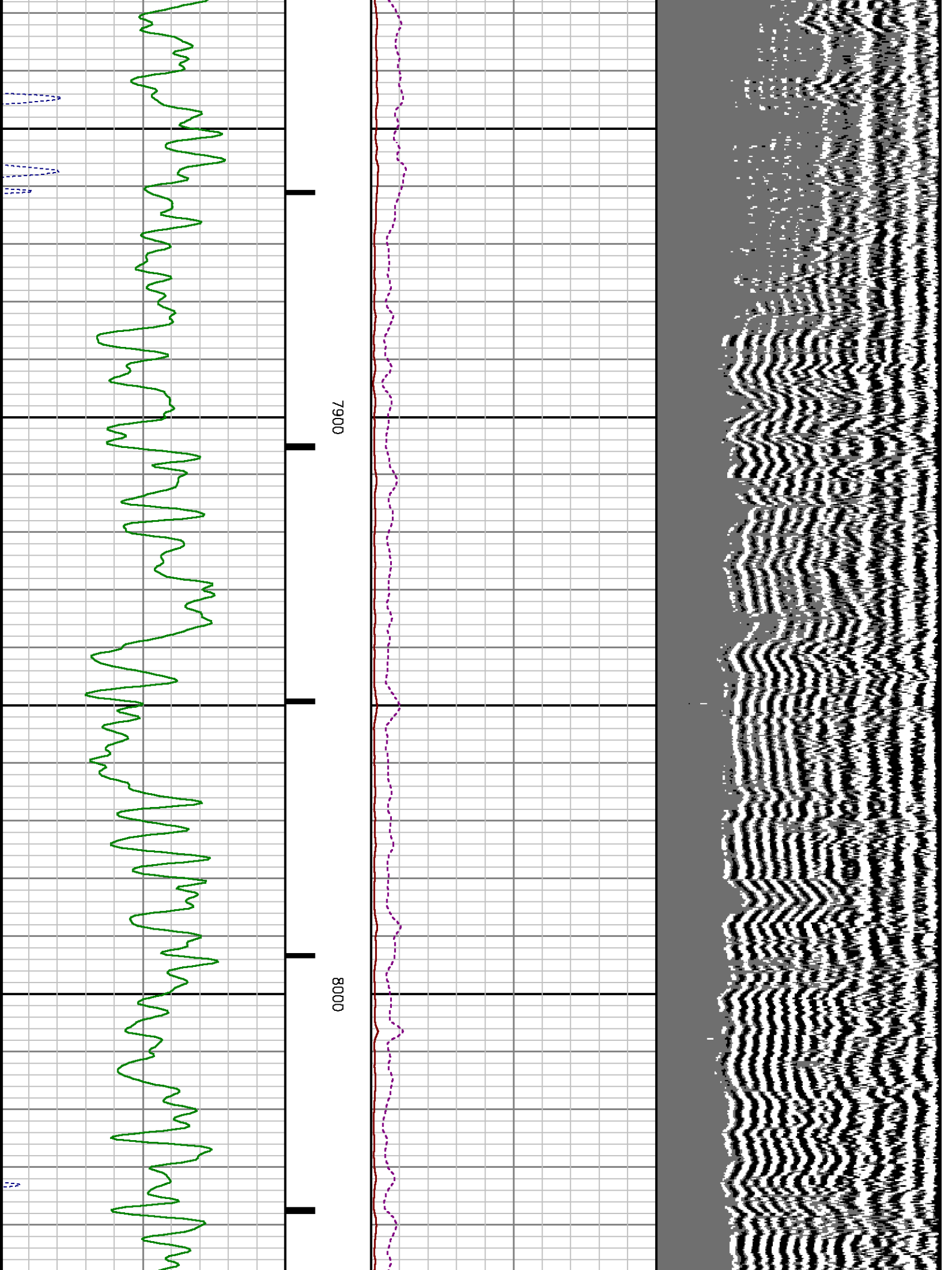


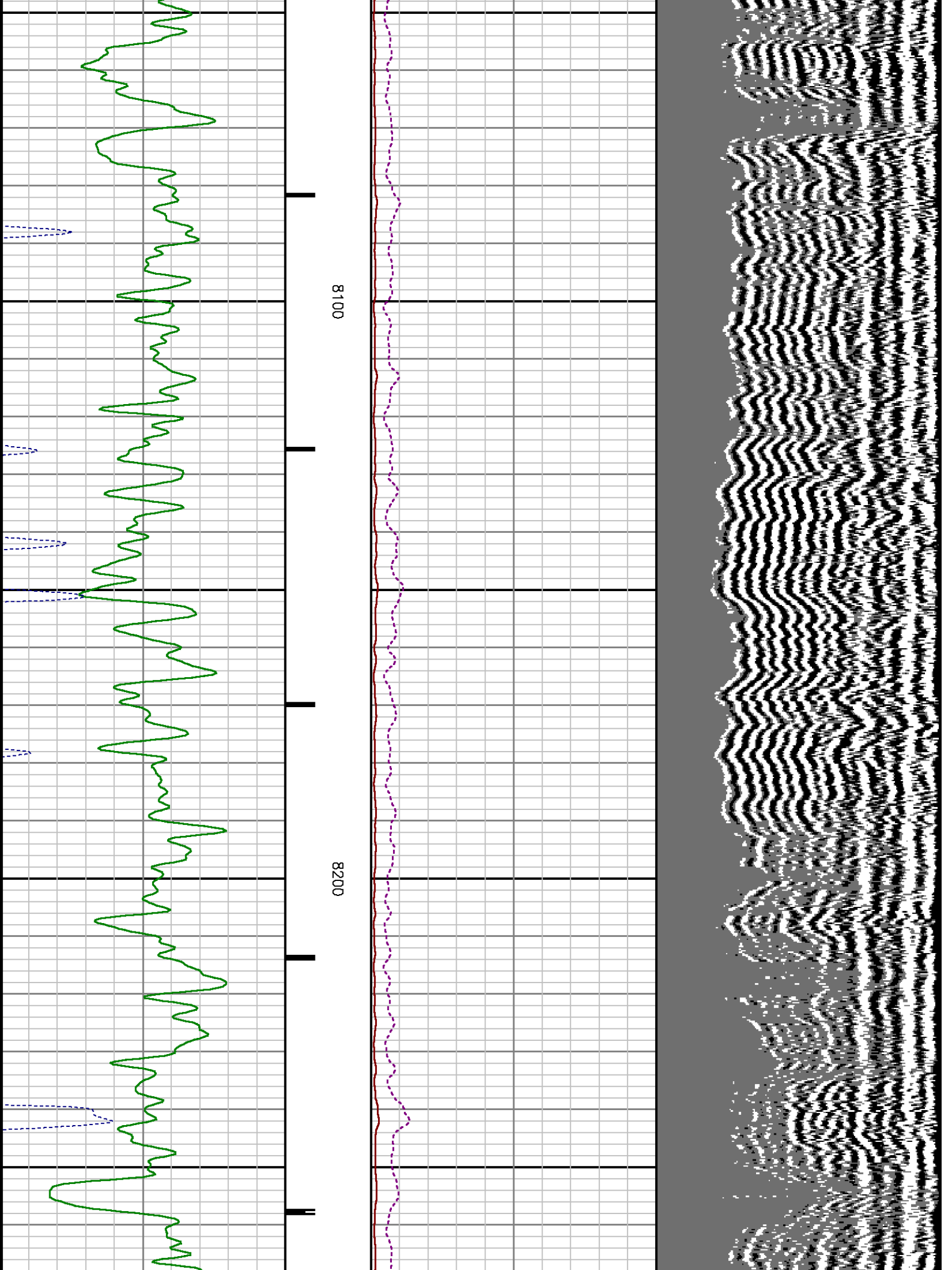


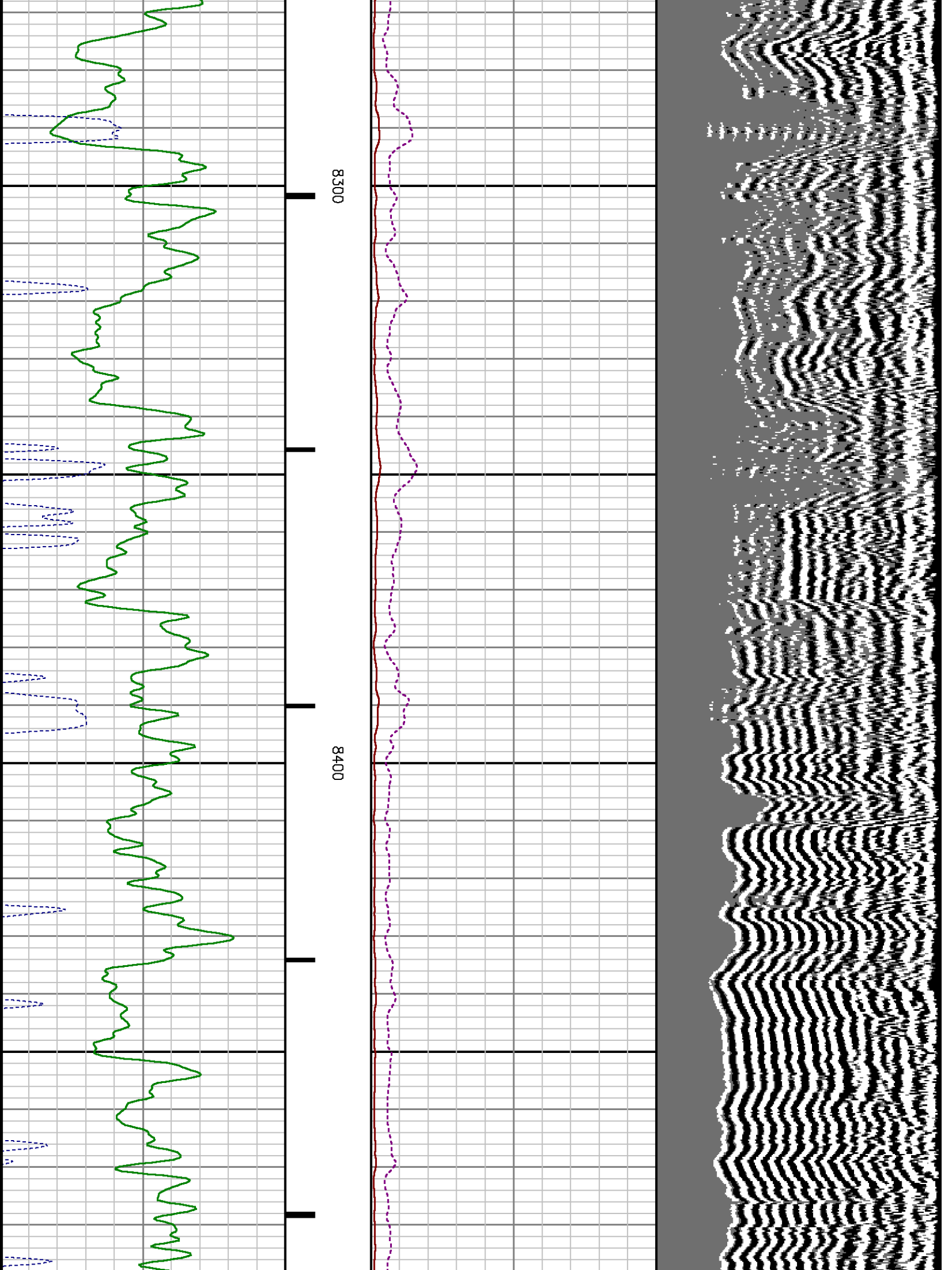


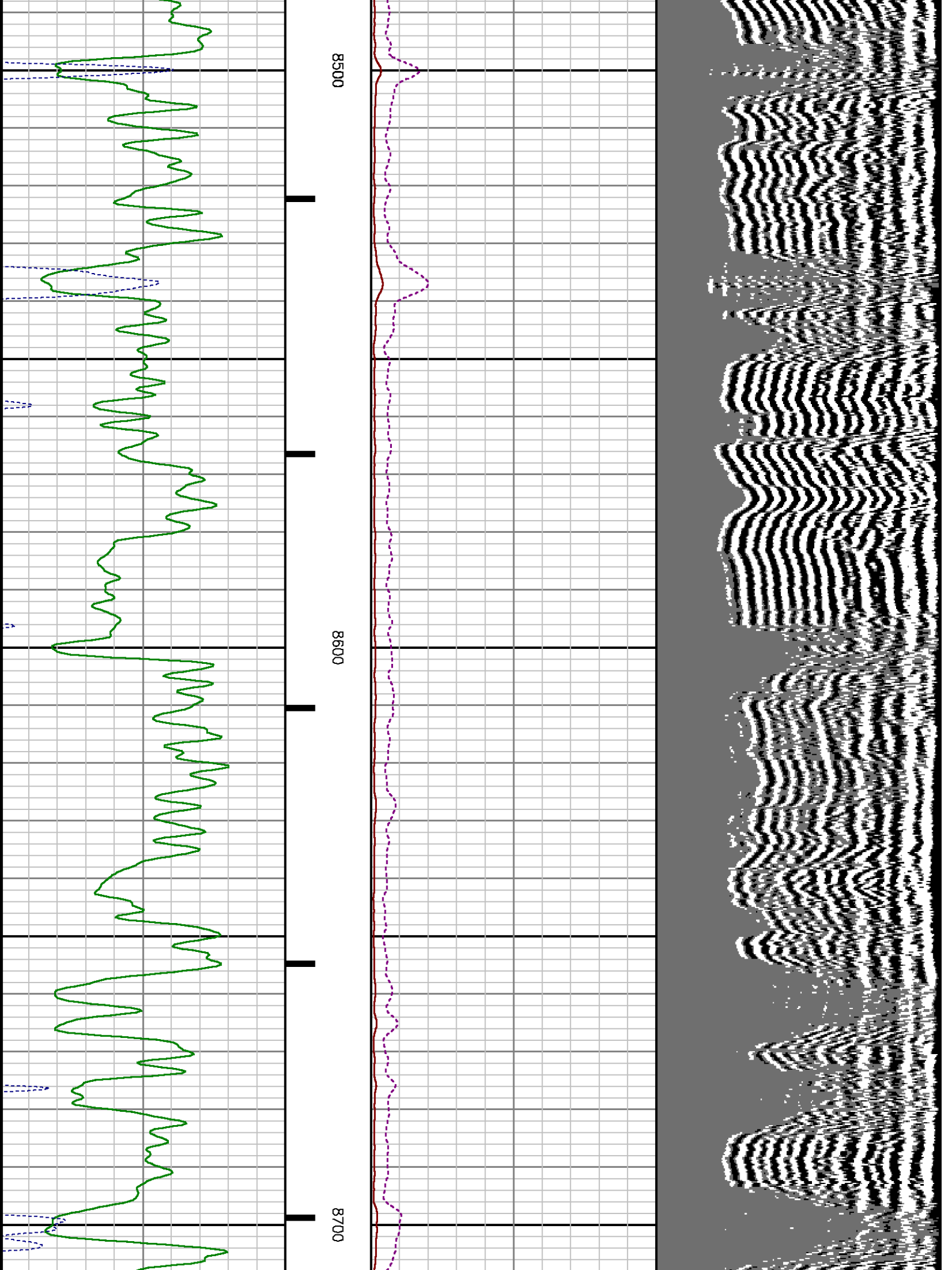


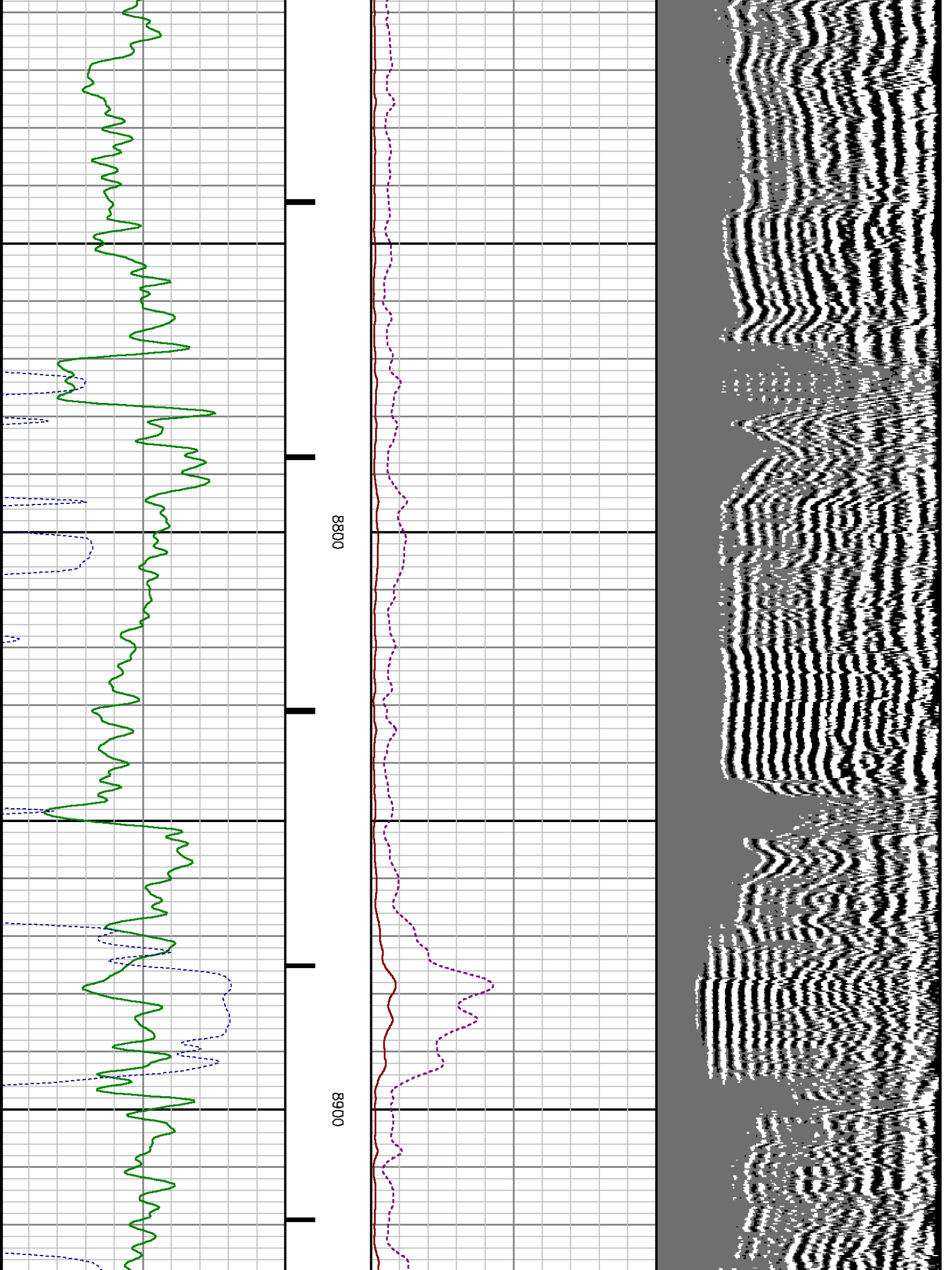


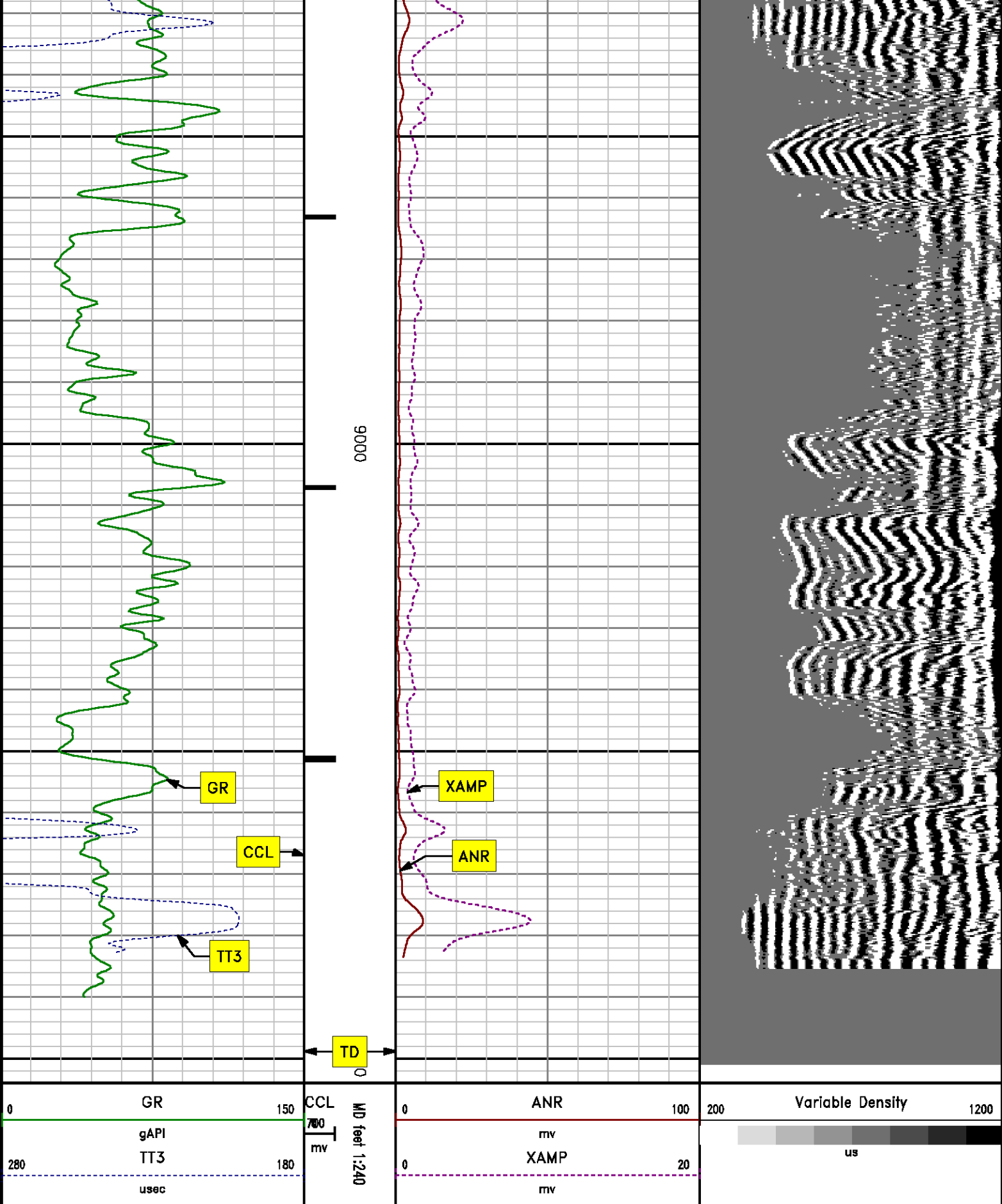












SECONDARY PRESENTATION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	30.468	9100.750
RAL	Amp Gate Start Near	195.000	usec	30.468	9100.750
RAL	Amp Gate Start Radial	195.000	usec	30.468	9100.750
RAL	Amp Gate Width Far	25.000	usec	30.468	9100.750
RAL	Amp Gate Width Near	25.000	usec	30.468	9100.750
RAL	Amp Gate Width Radial	25.000	usec	30.468	9100.750
RAL	casing od	4.500	inches	30.468	9100.750
RAL	casing wt	11.600	lbm/ft	30.468	9100.750
RAL	FB Start Far	291.900	usec	30.468	9100.750
RAL	FB Start Near	175.391	usec	30.468	9100.750
RAL	FB Start Radial	175.391	usec	30.468	9100.750
RAL	FB Thresh Far	10.000	mv	30.468	9100.750
RAL	FB Thresh Near	4.000	mv	30.468	9100.750
RAL	FB Thresh Radial	4.000	mv	30.468	9100.750
RAL	Fluid Travel Time	200.000	usec/ft	30.468	9100.750

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					

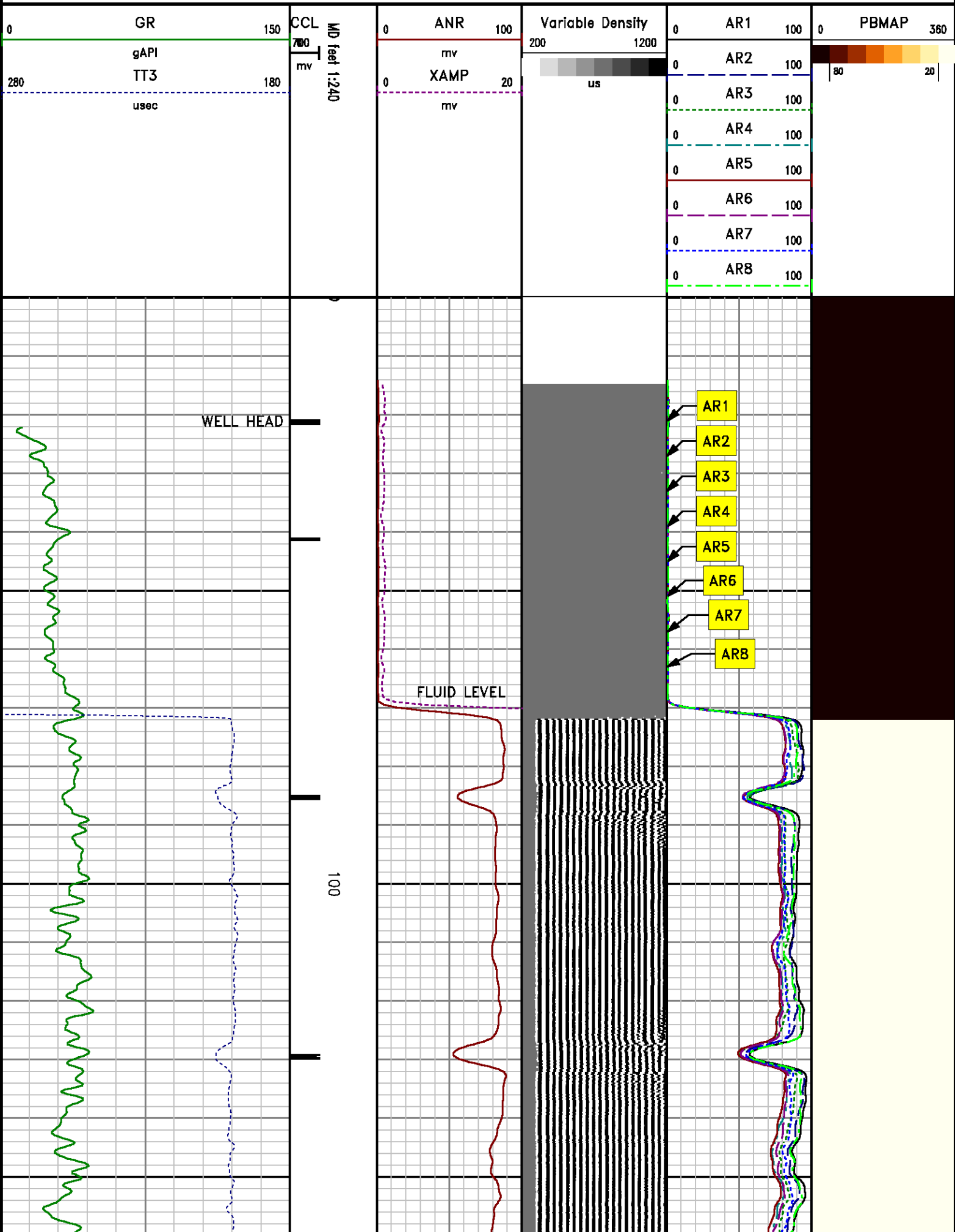
Created by : RAL, v4.8.008

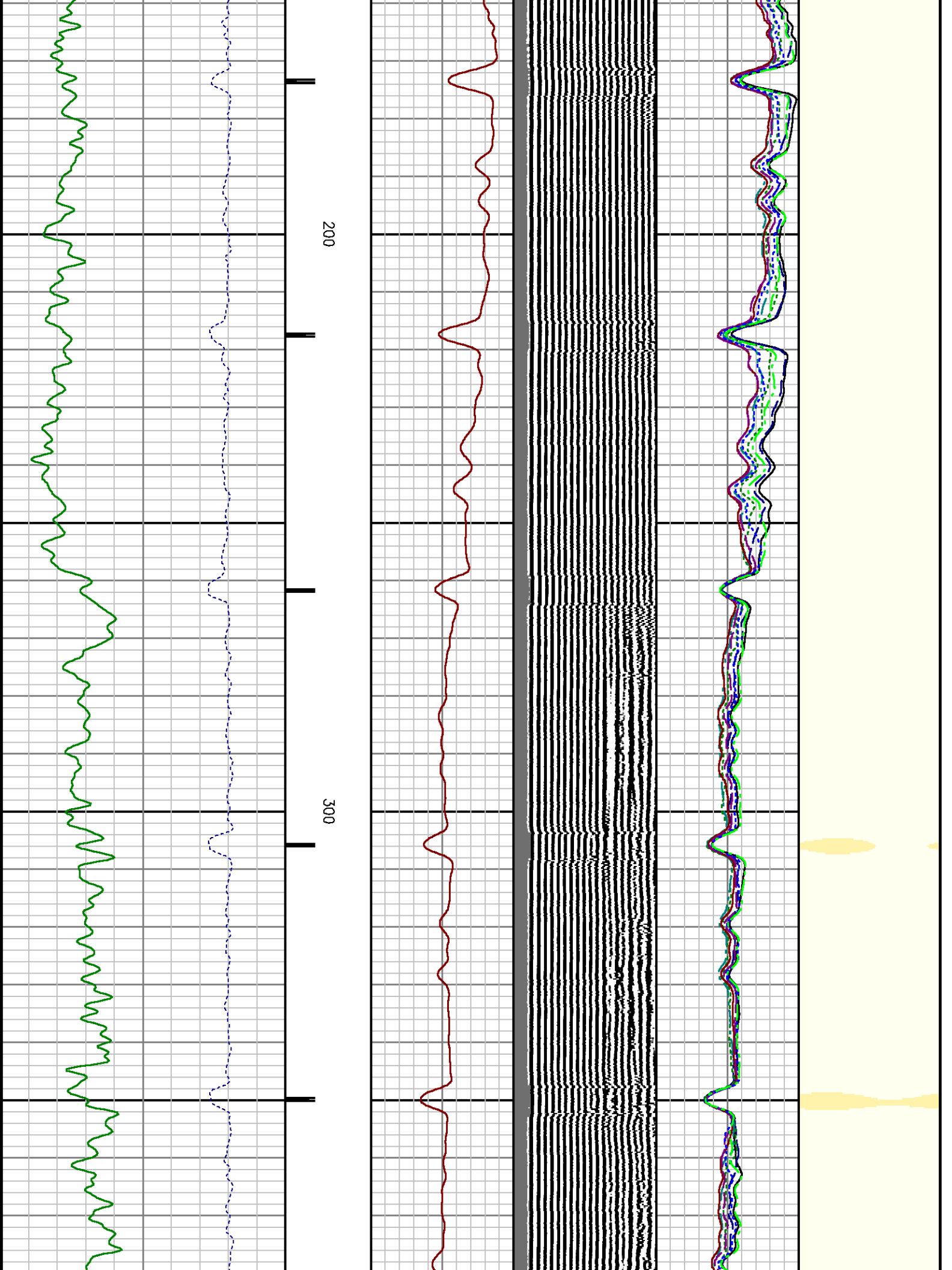
Plotted by : PlotMgr, v5.4.504

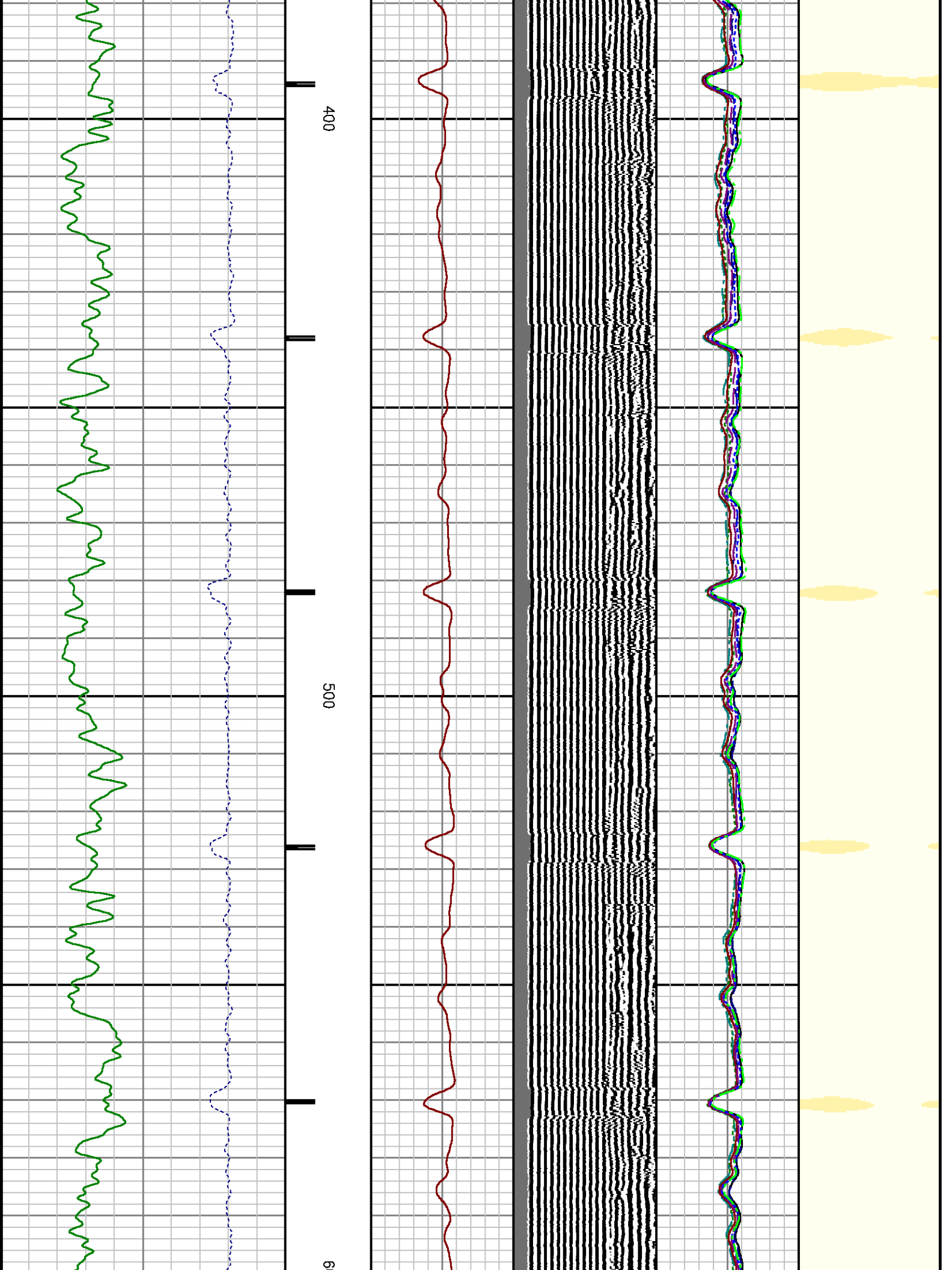
Company : WPX ENERGY

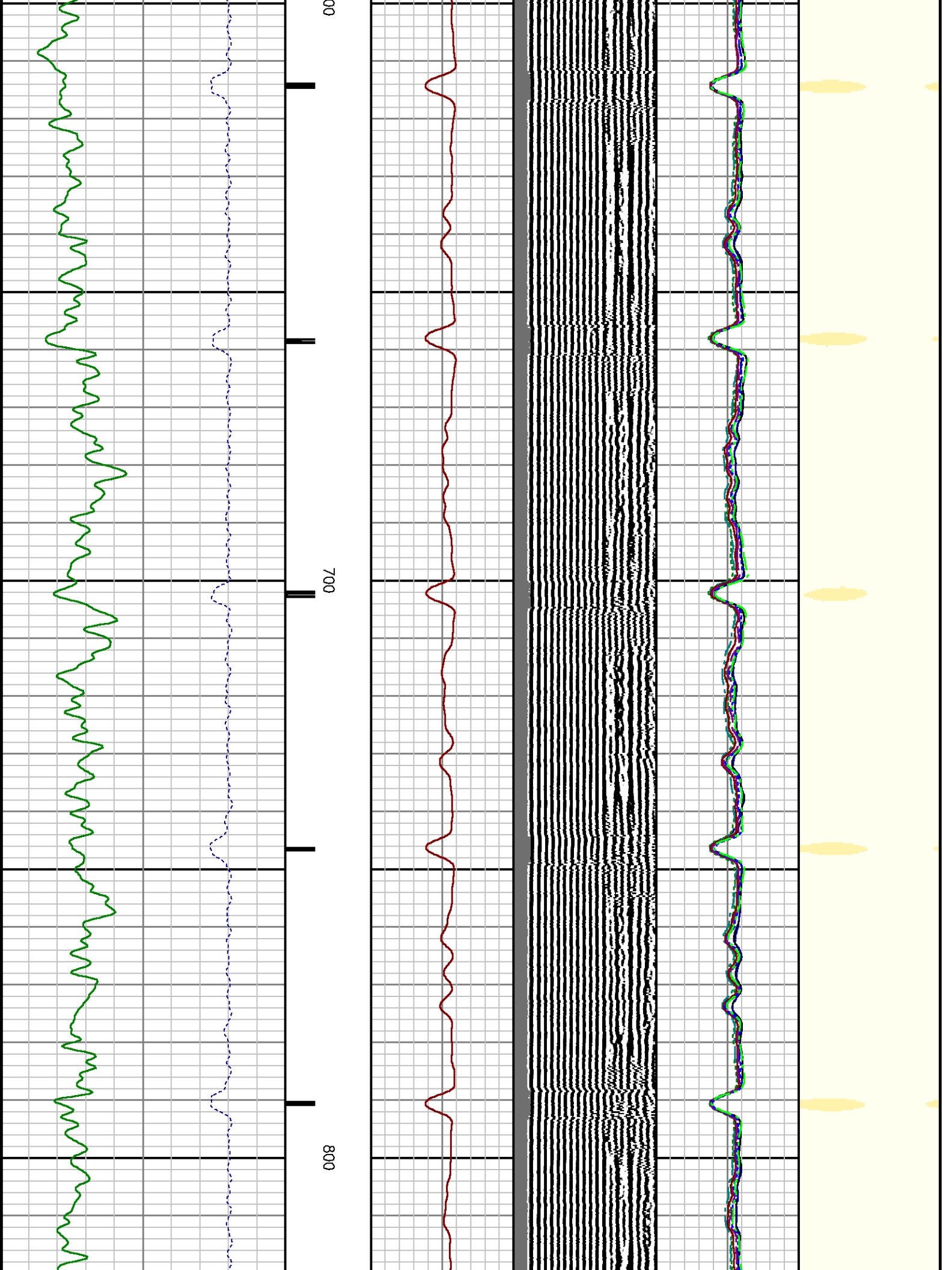
Well : SAVAGE RWF 321-25

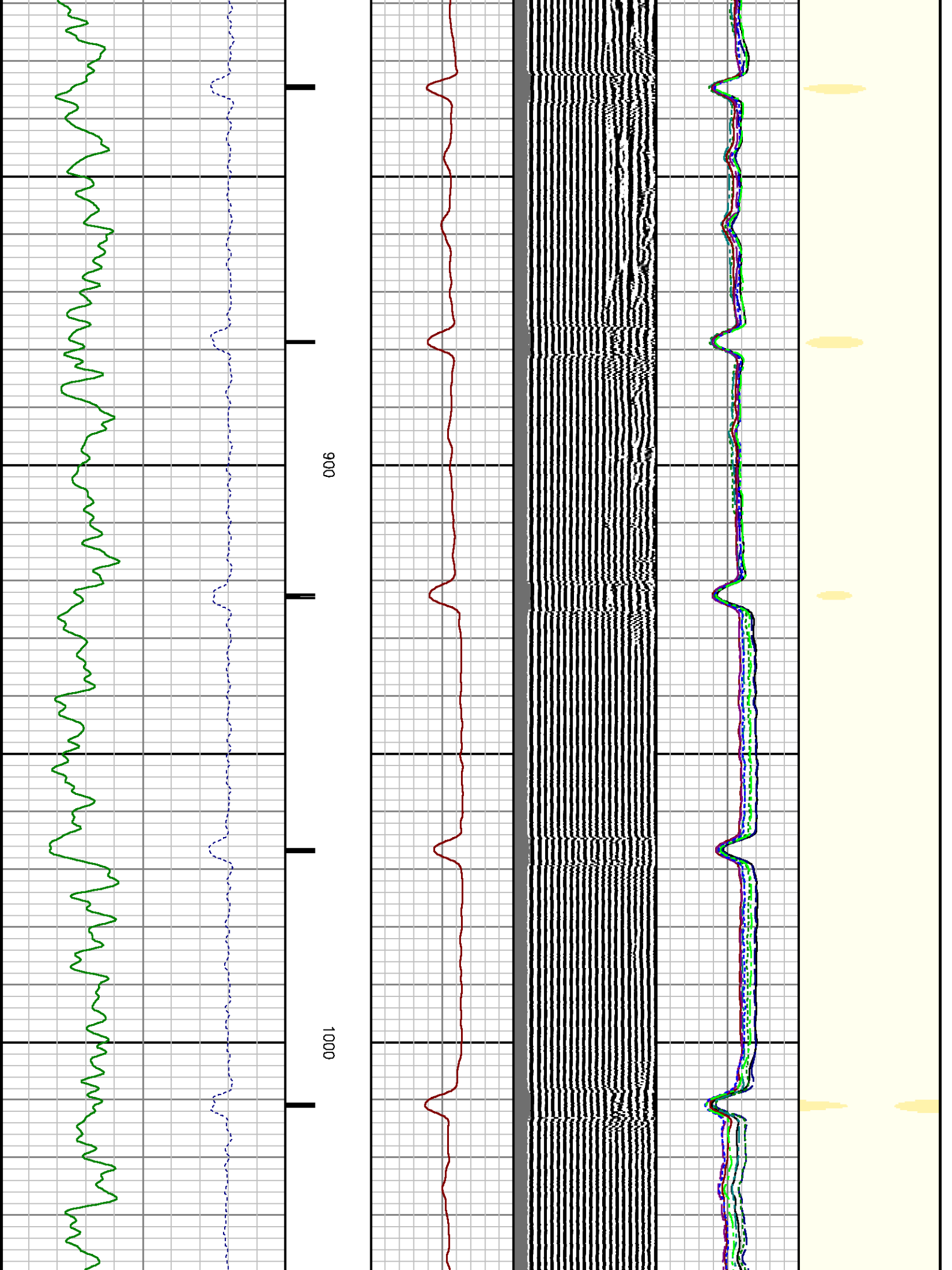
File Name : d:\welldata\wpx\savage rwf 321-25\321cbl\main.tif

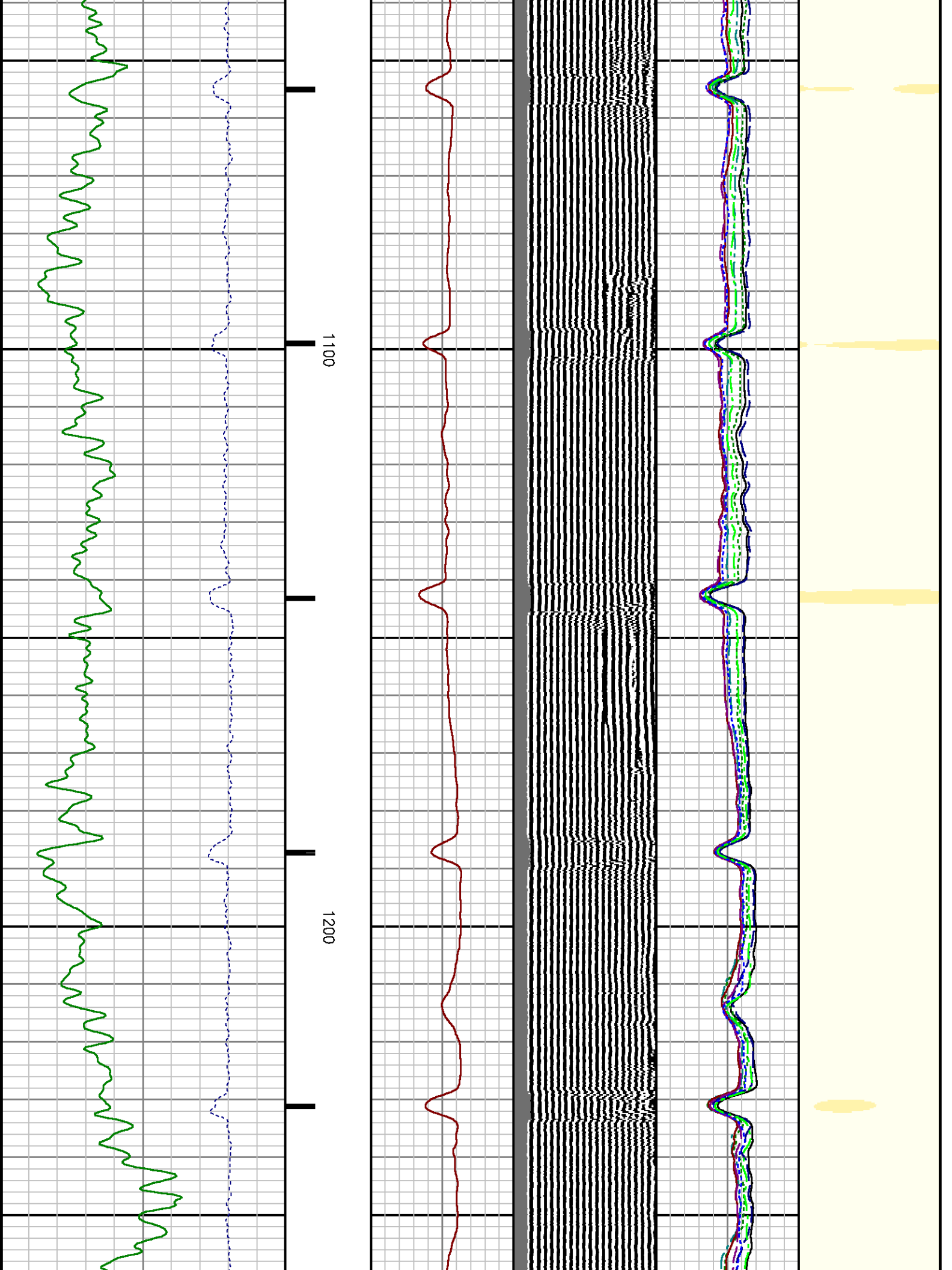


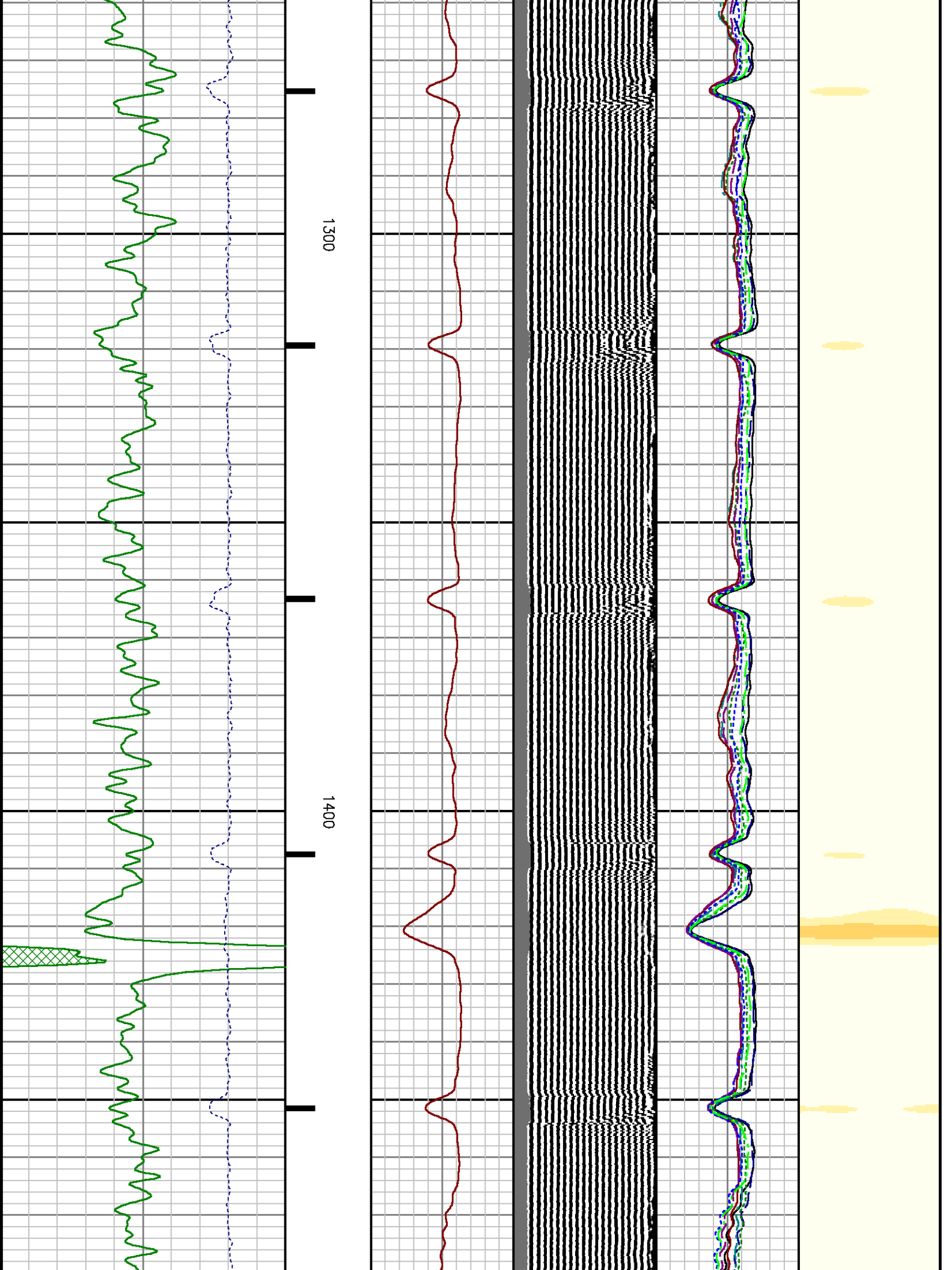


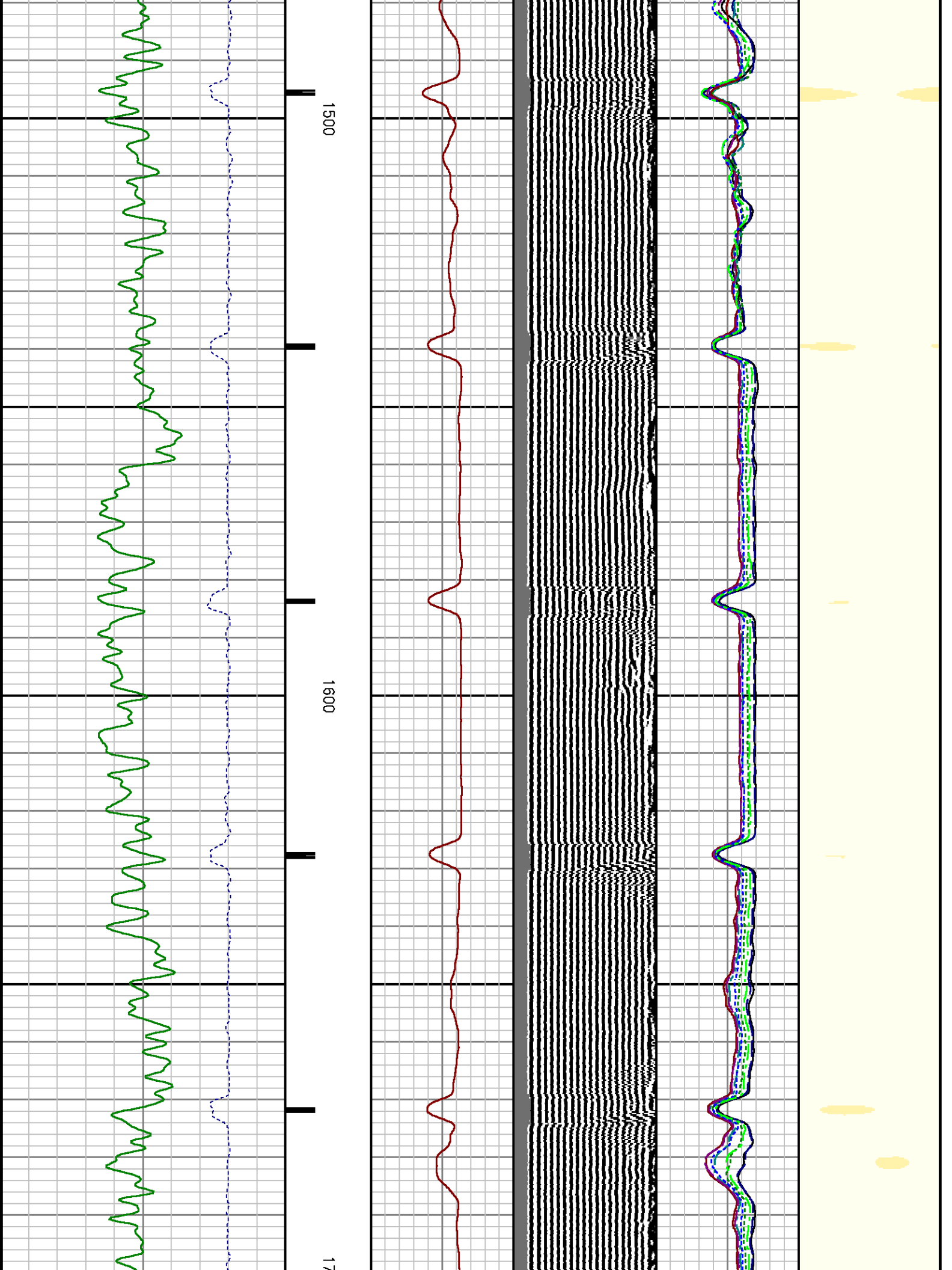


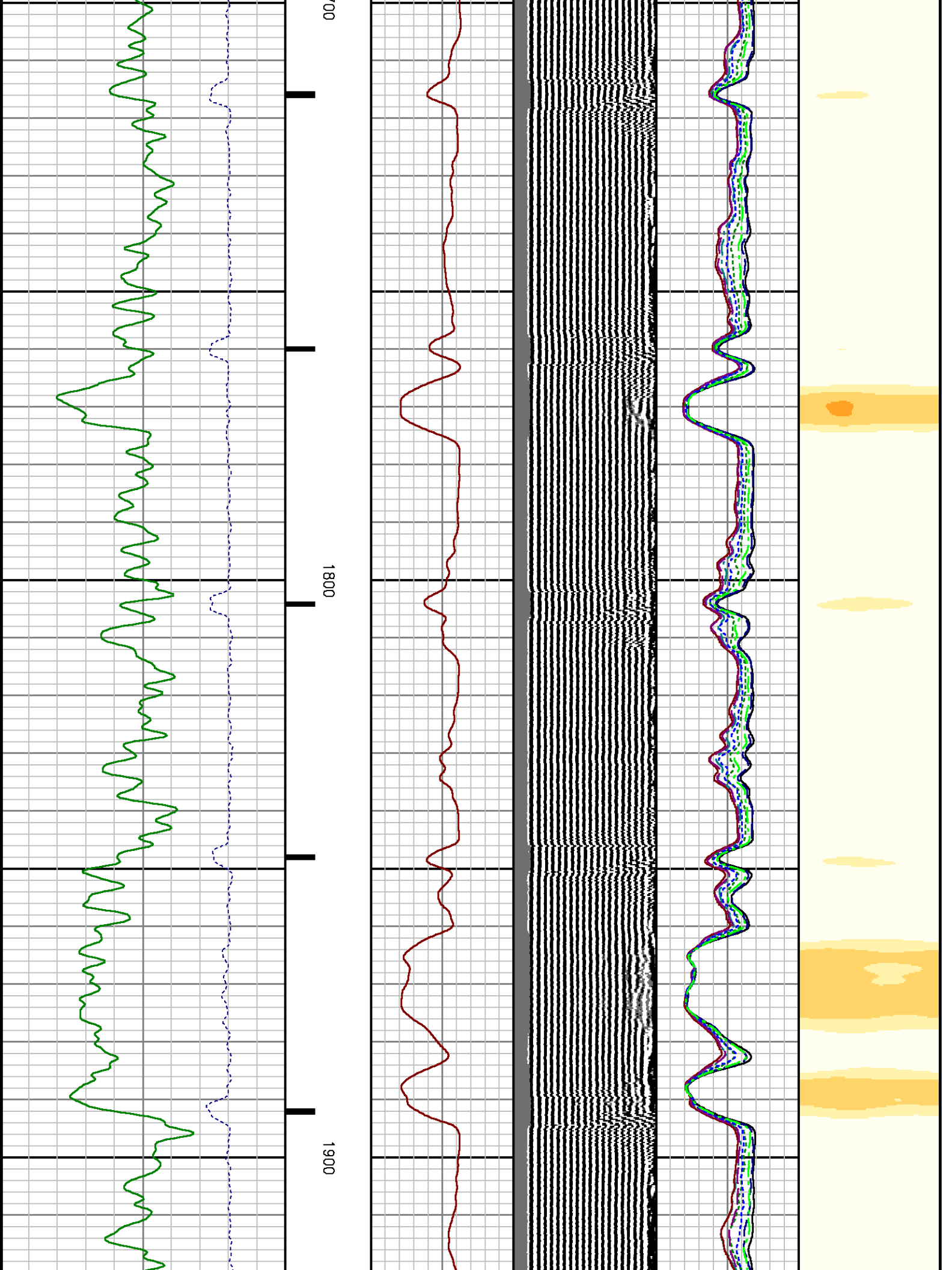


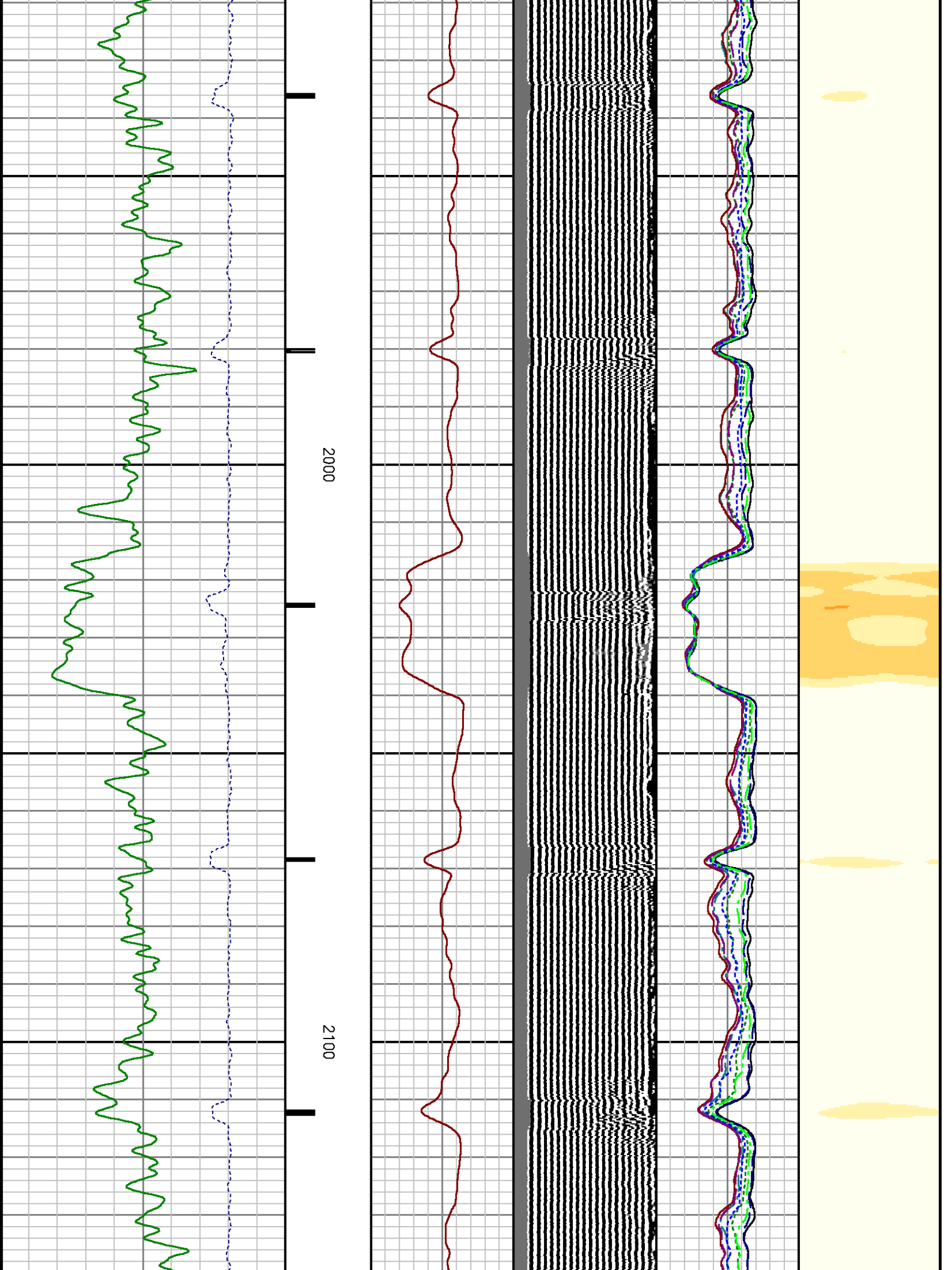


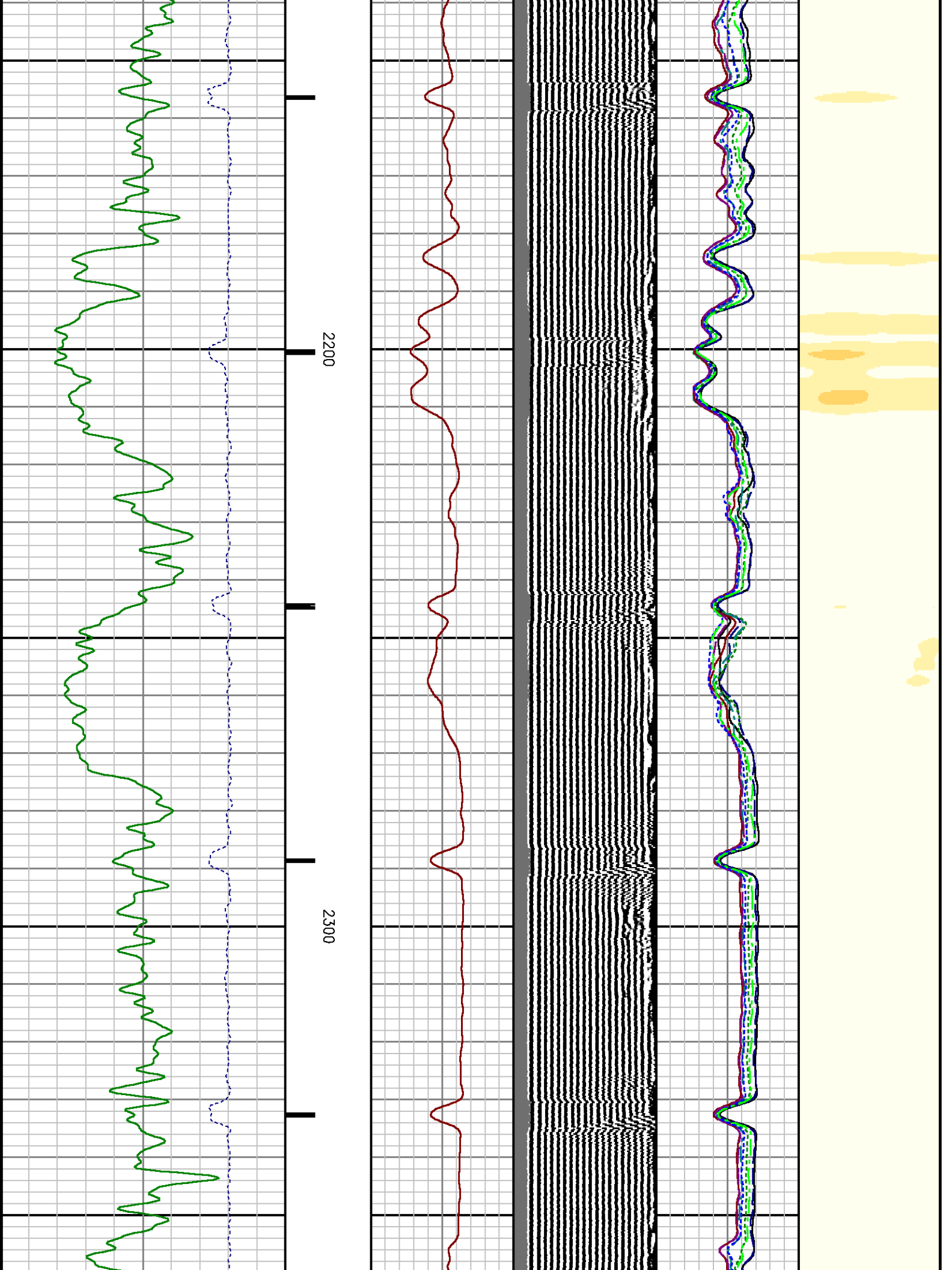


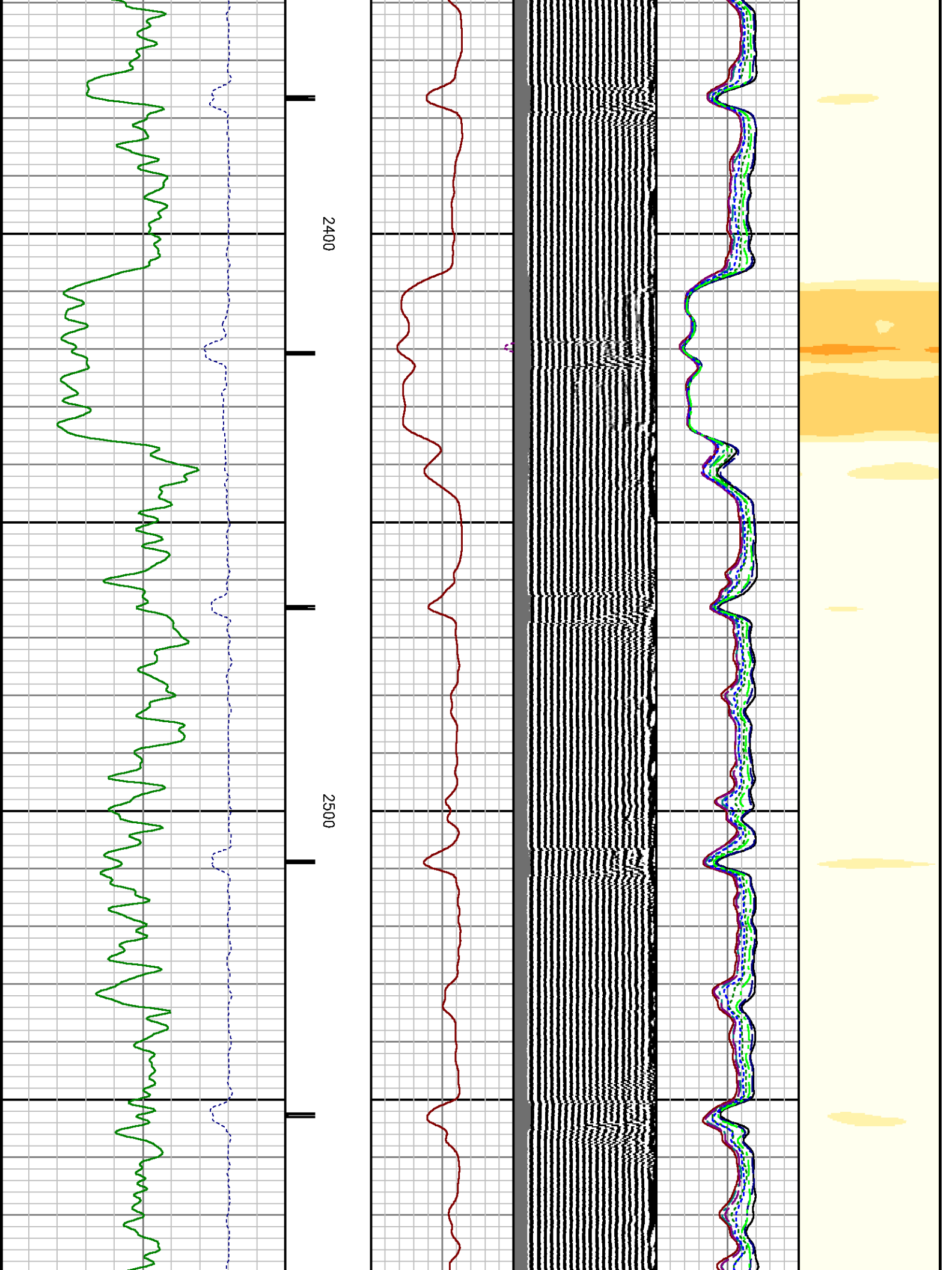


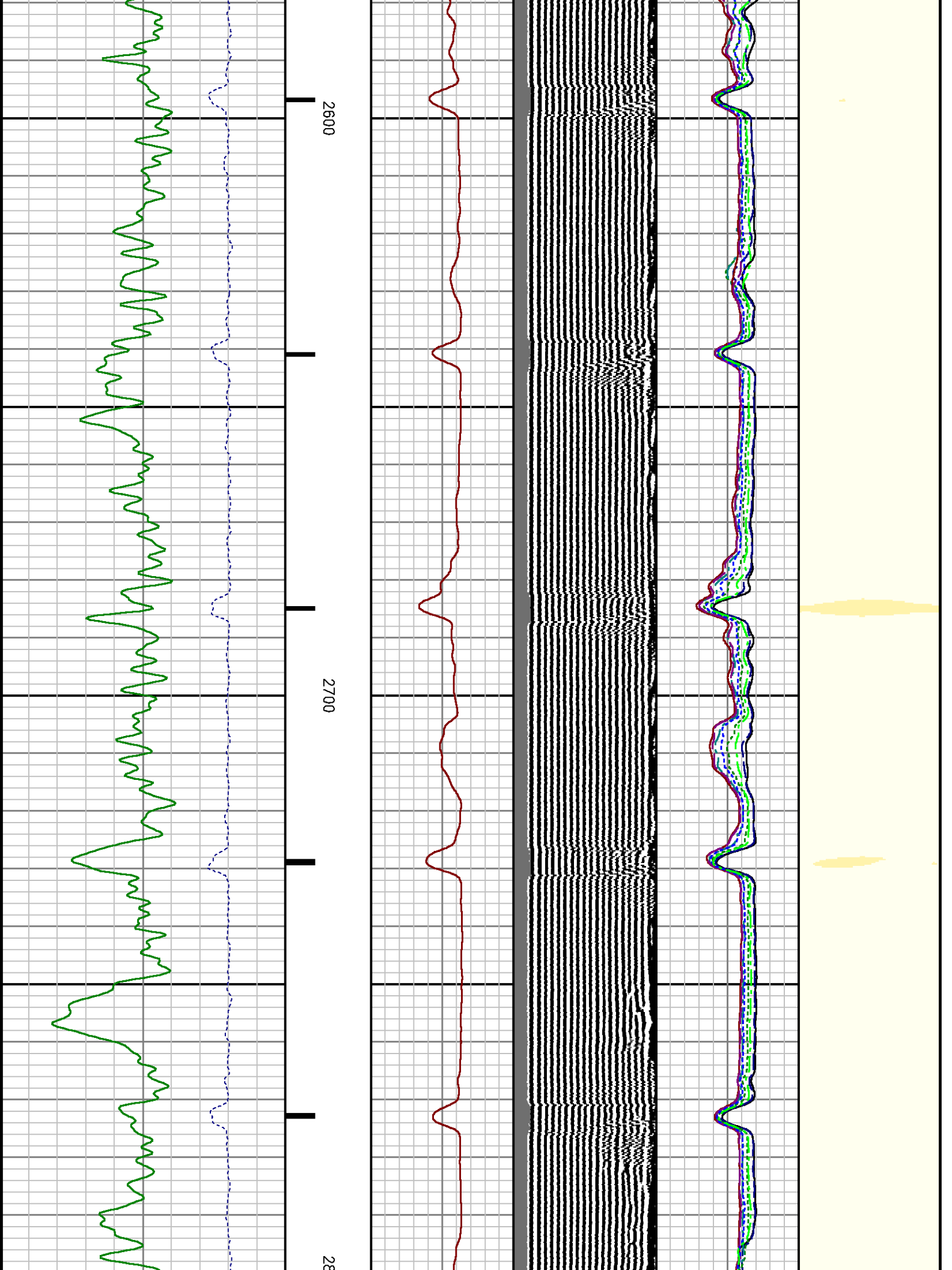


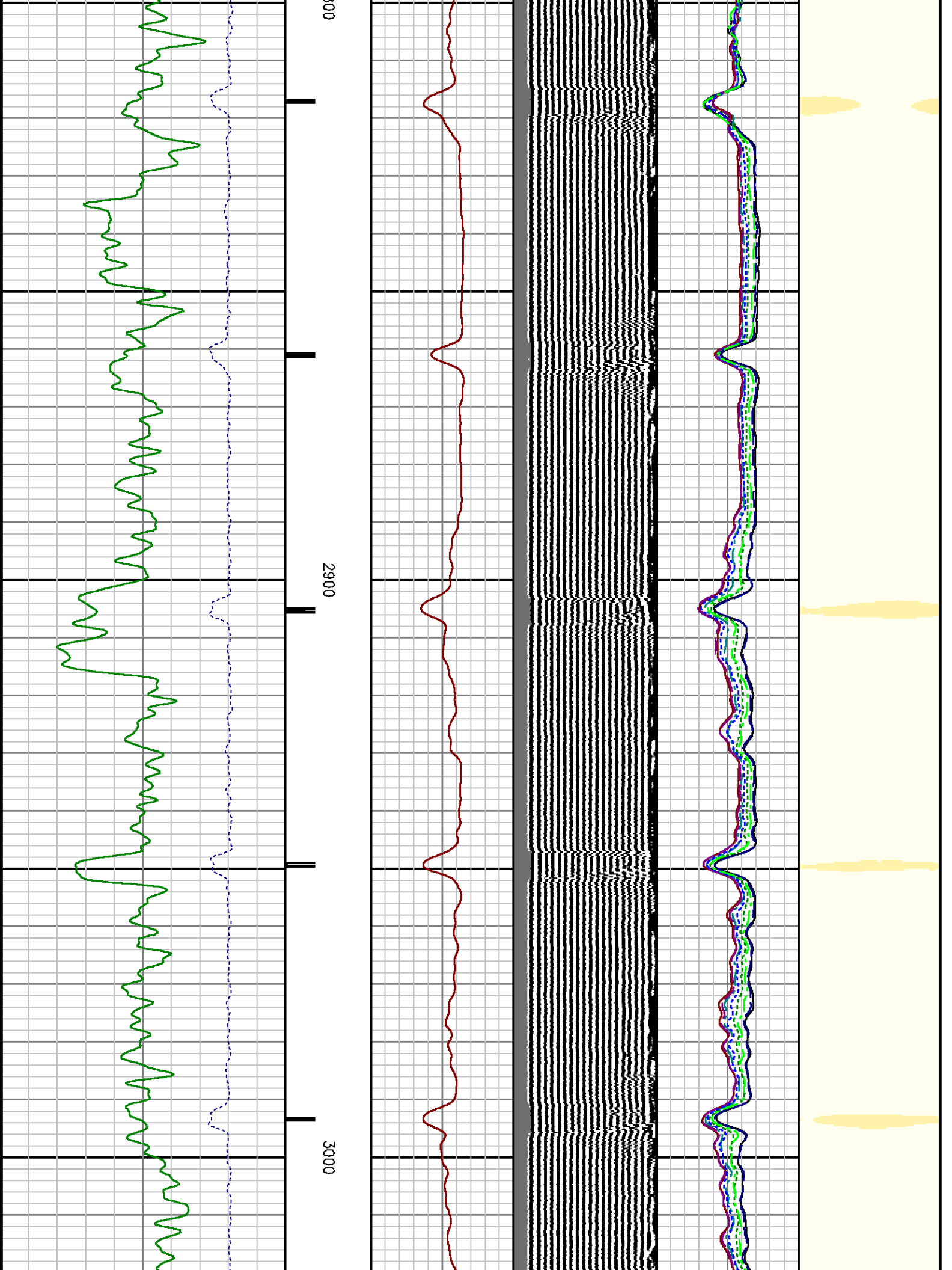


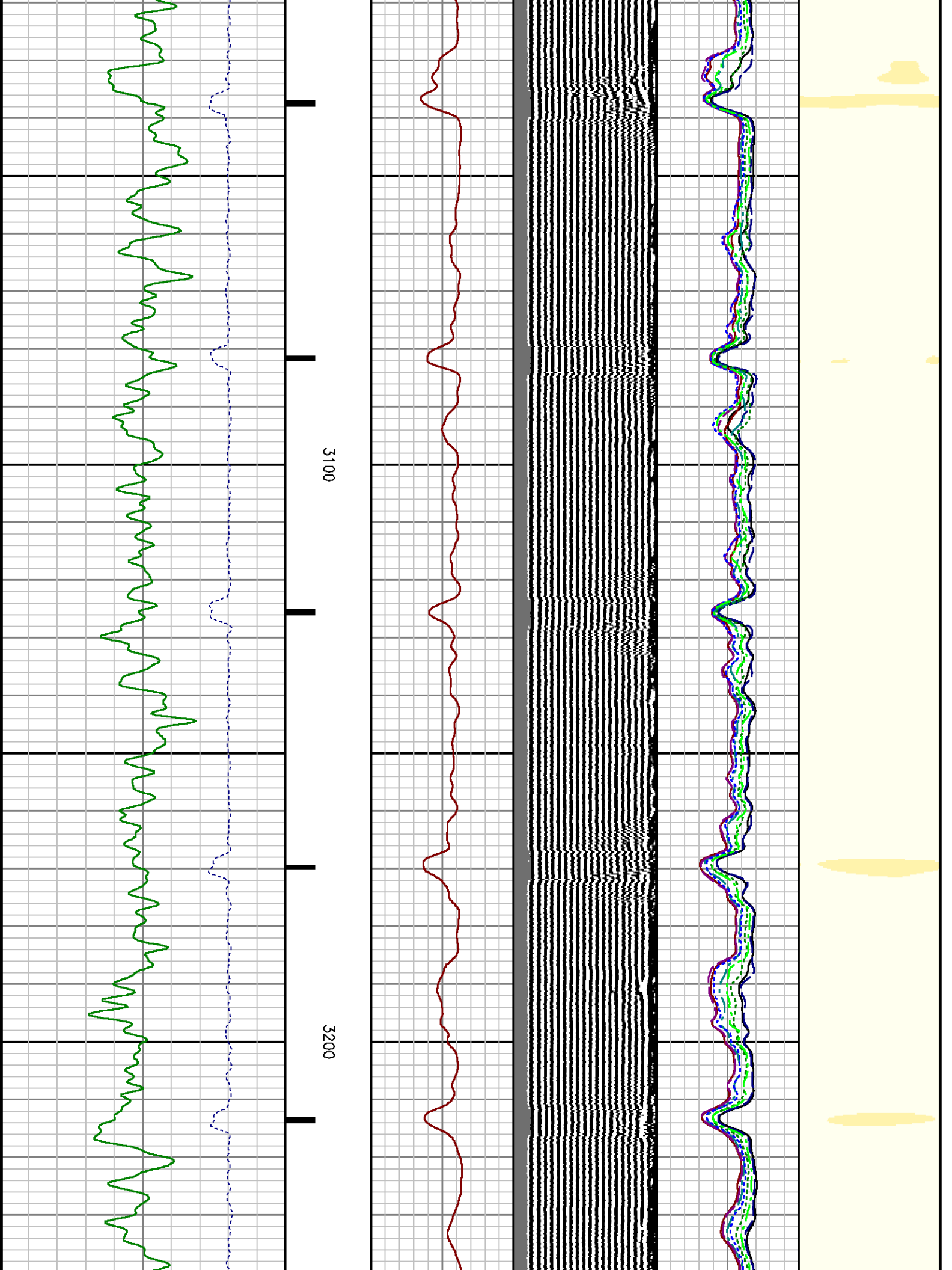


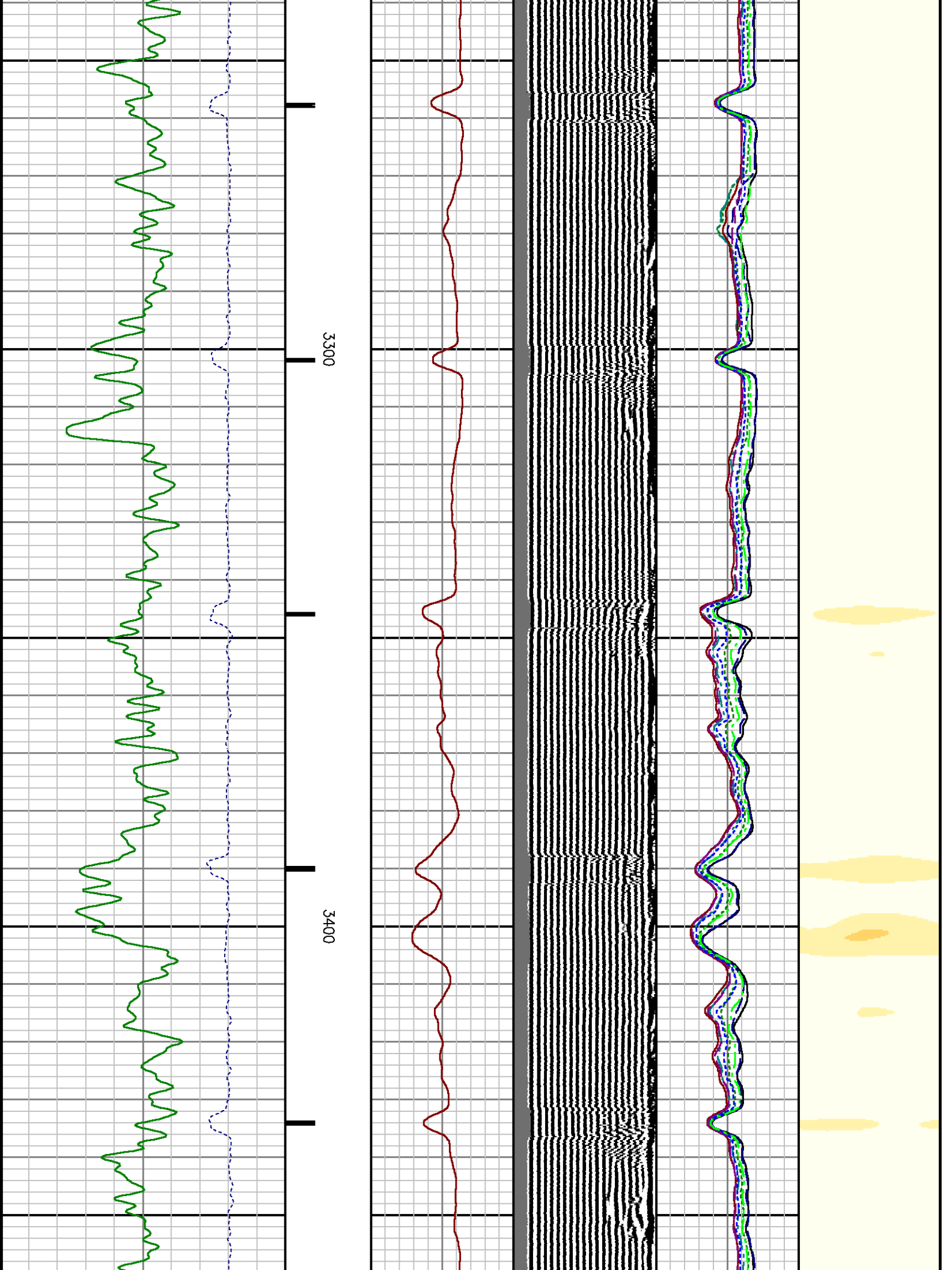


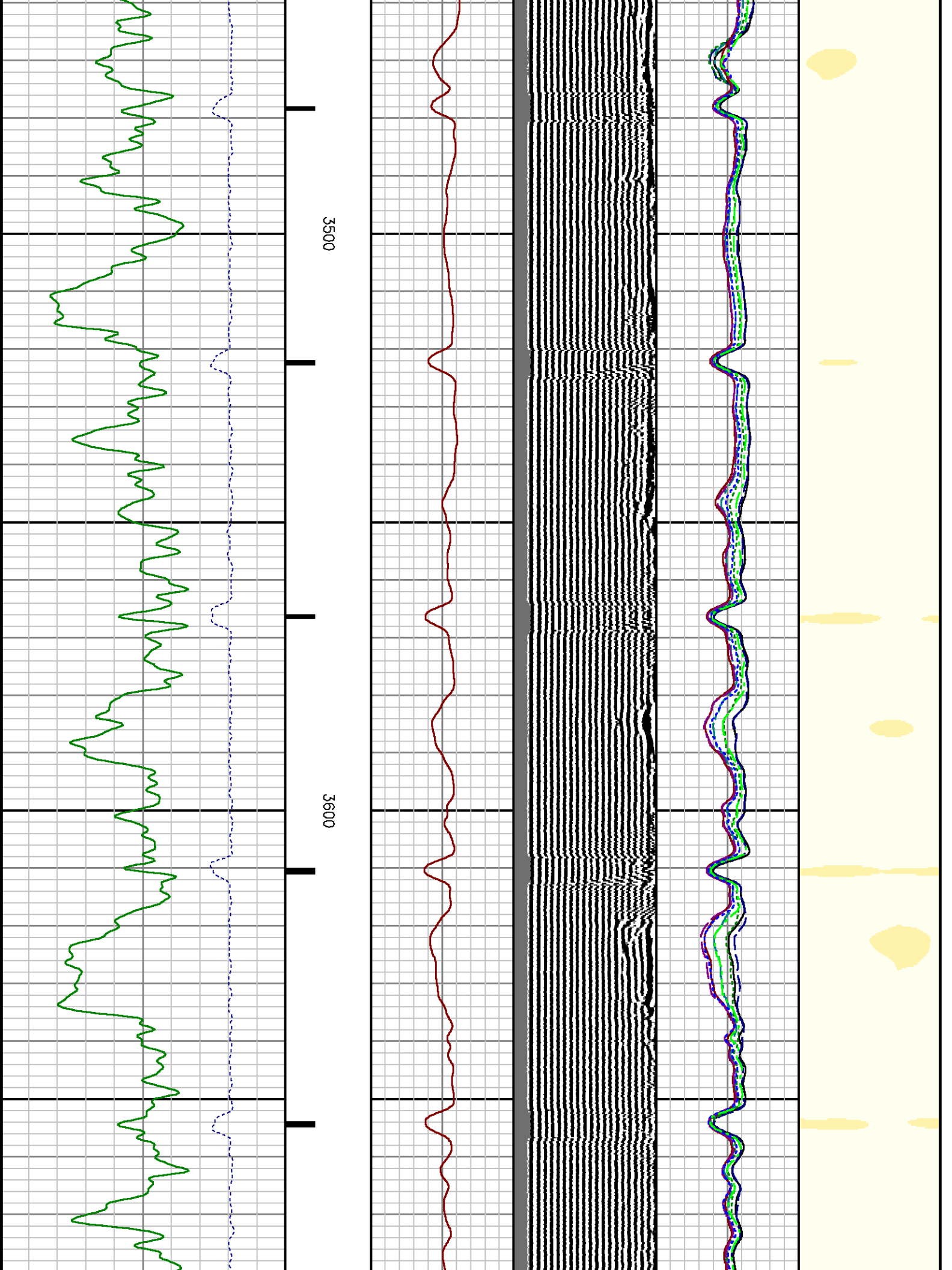


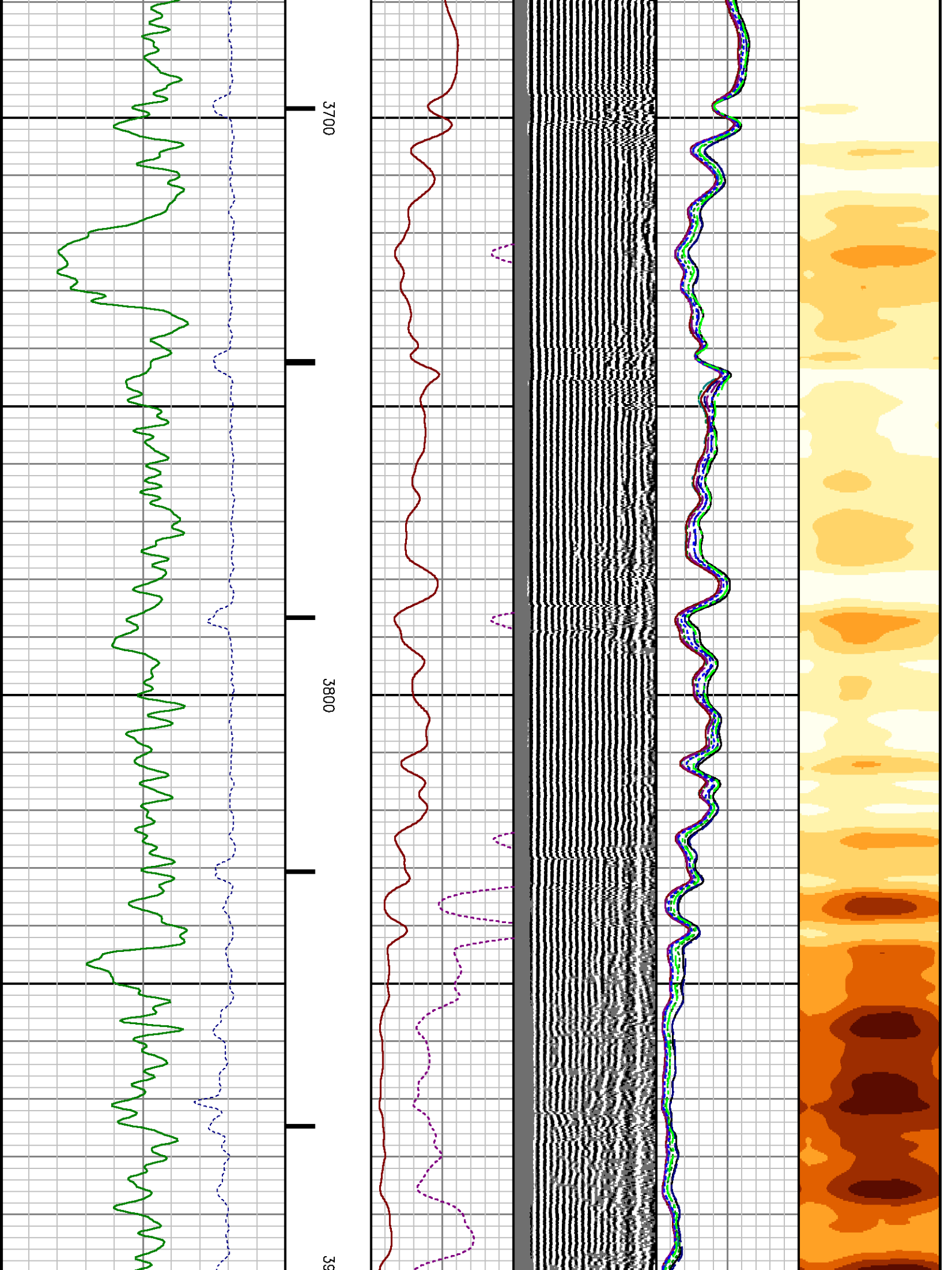


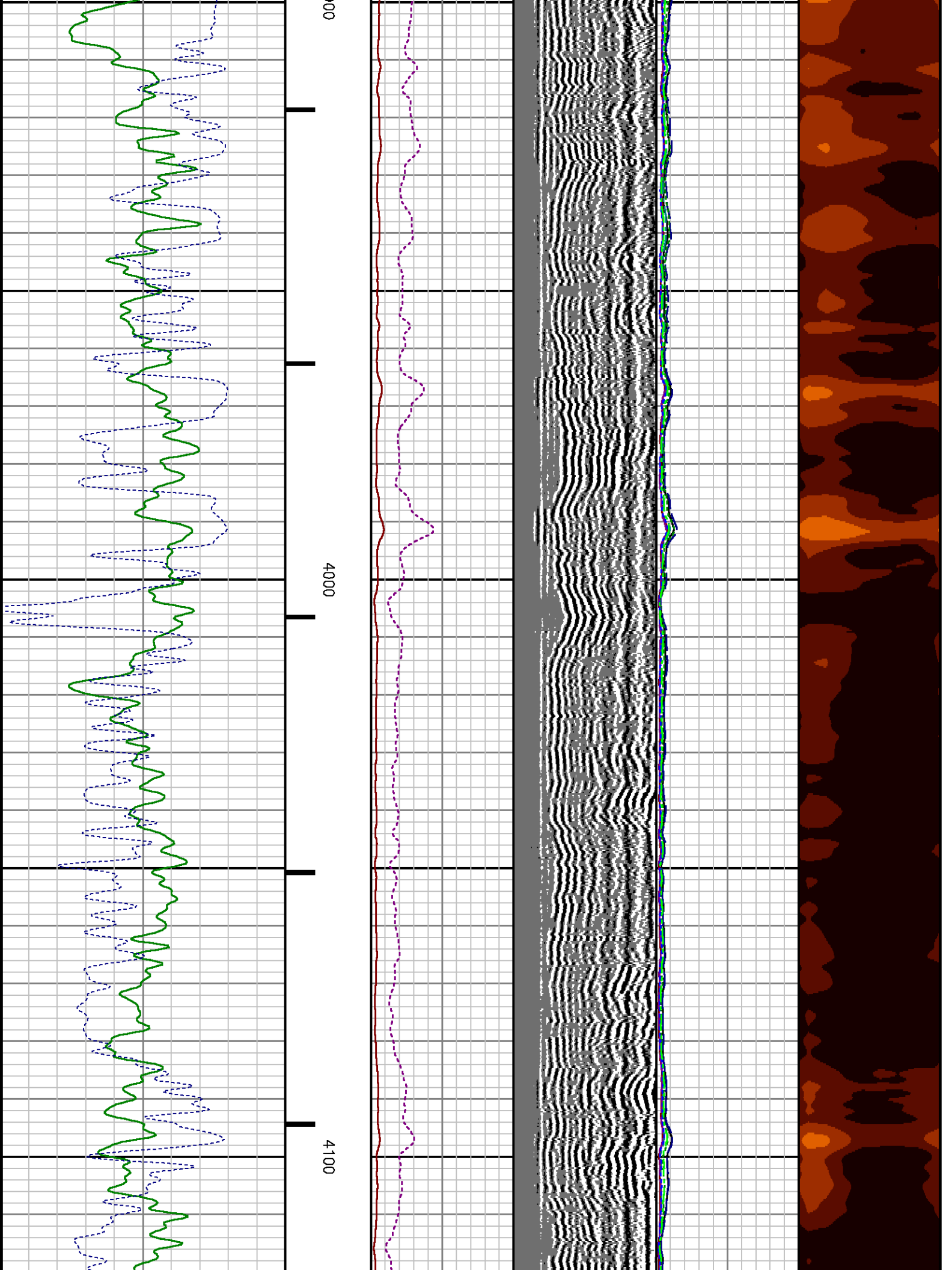


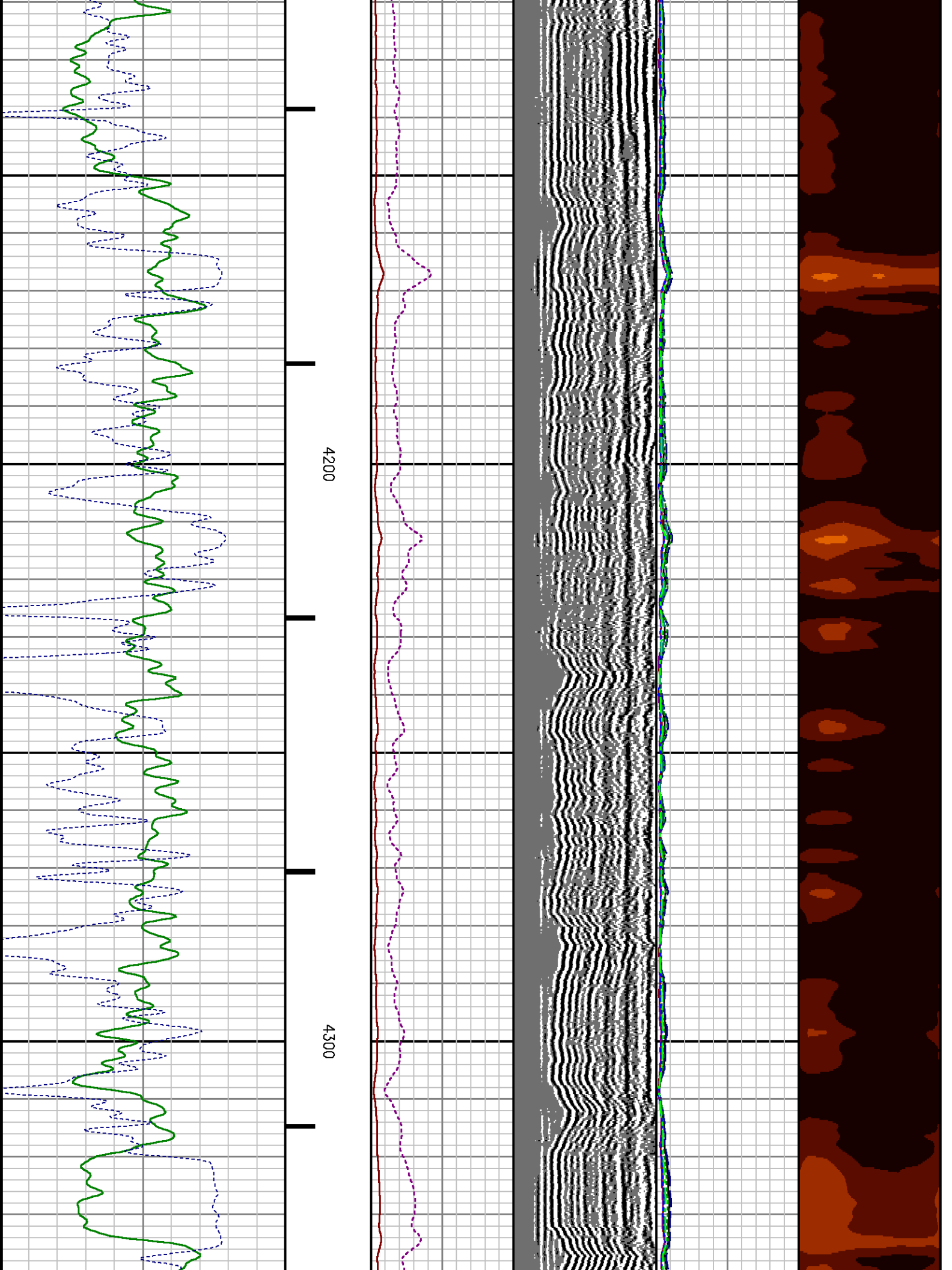


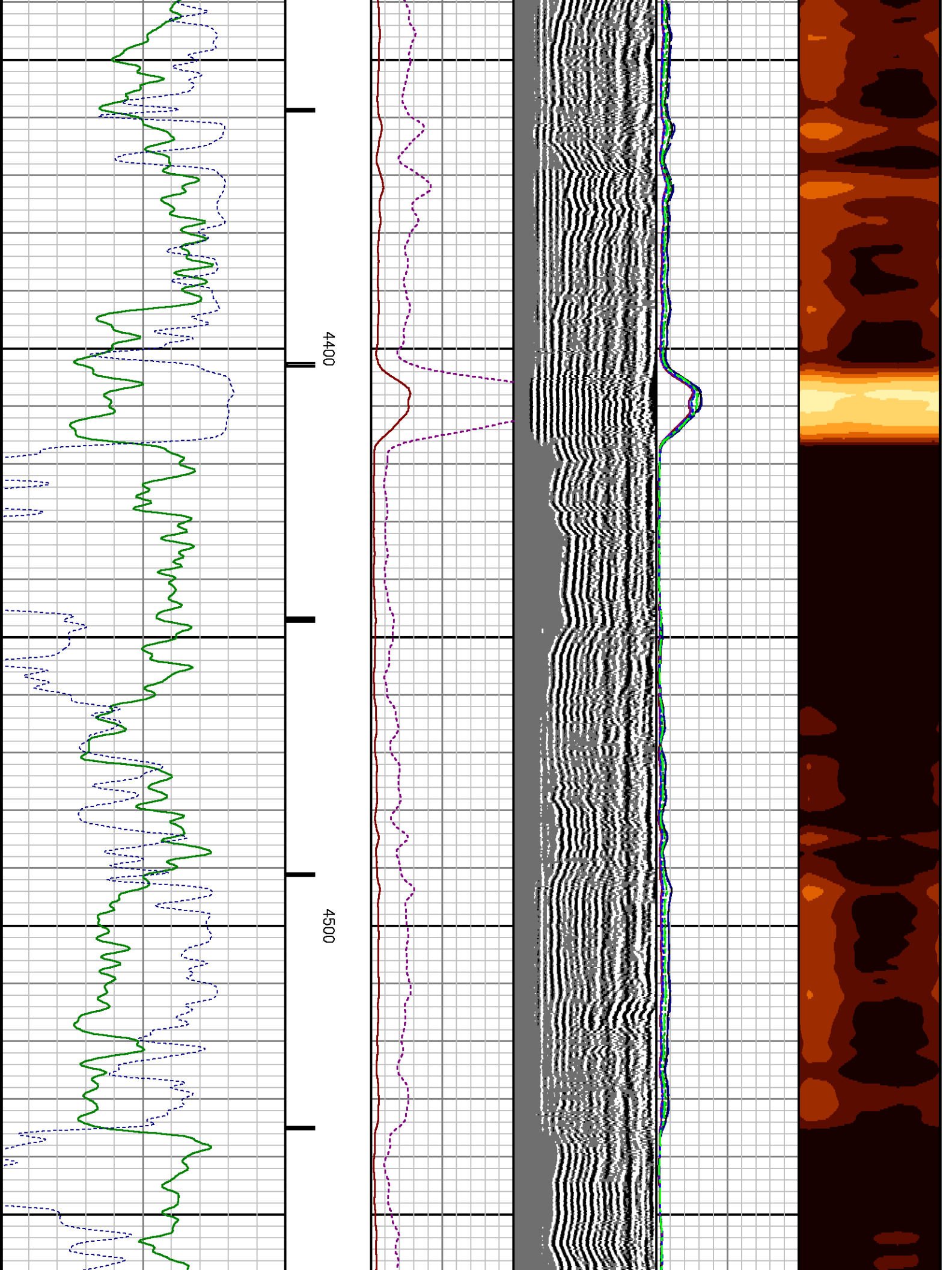


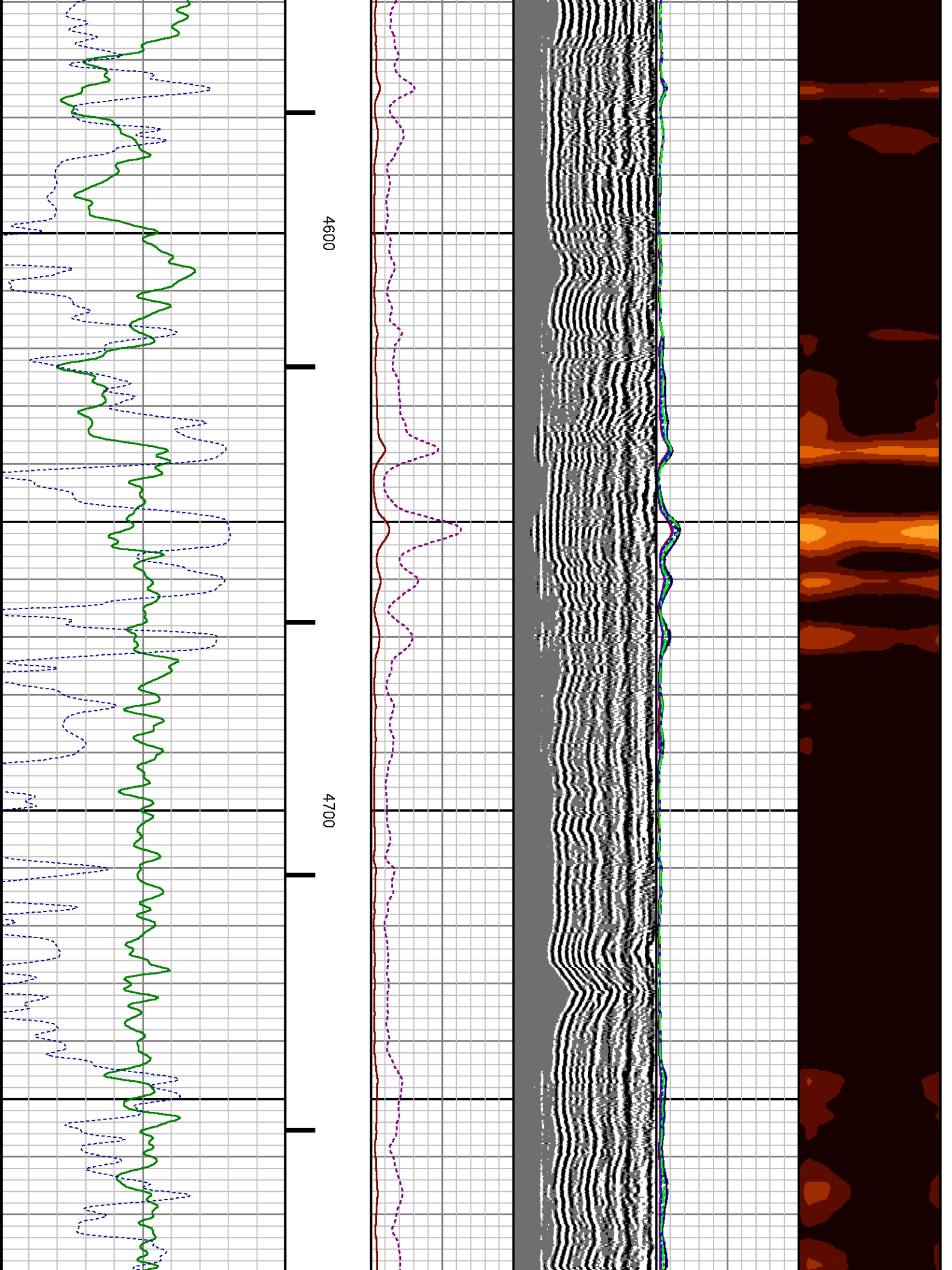


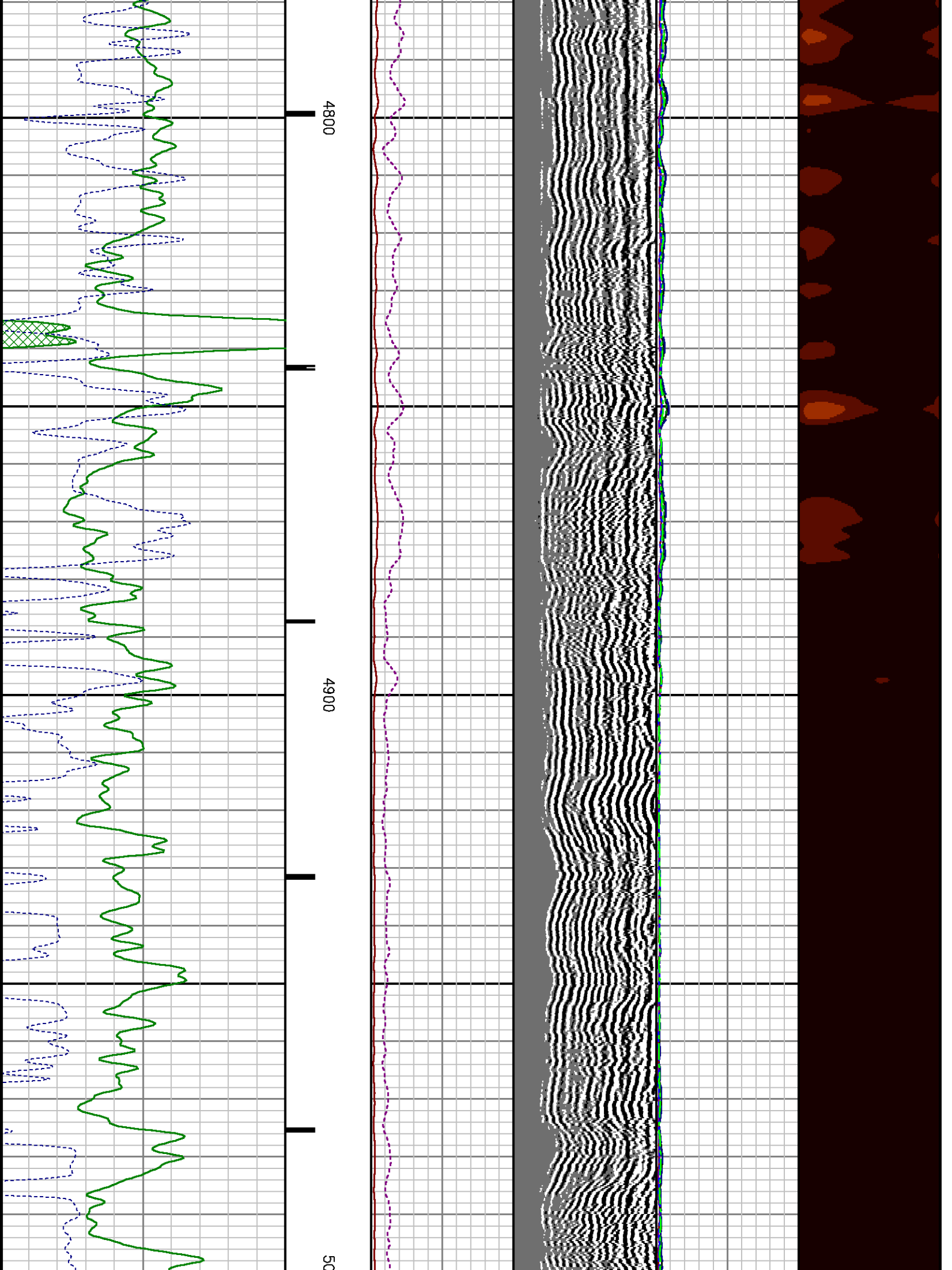


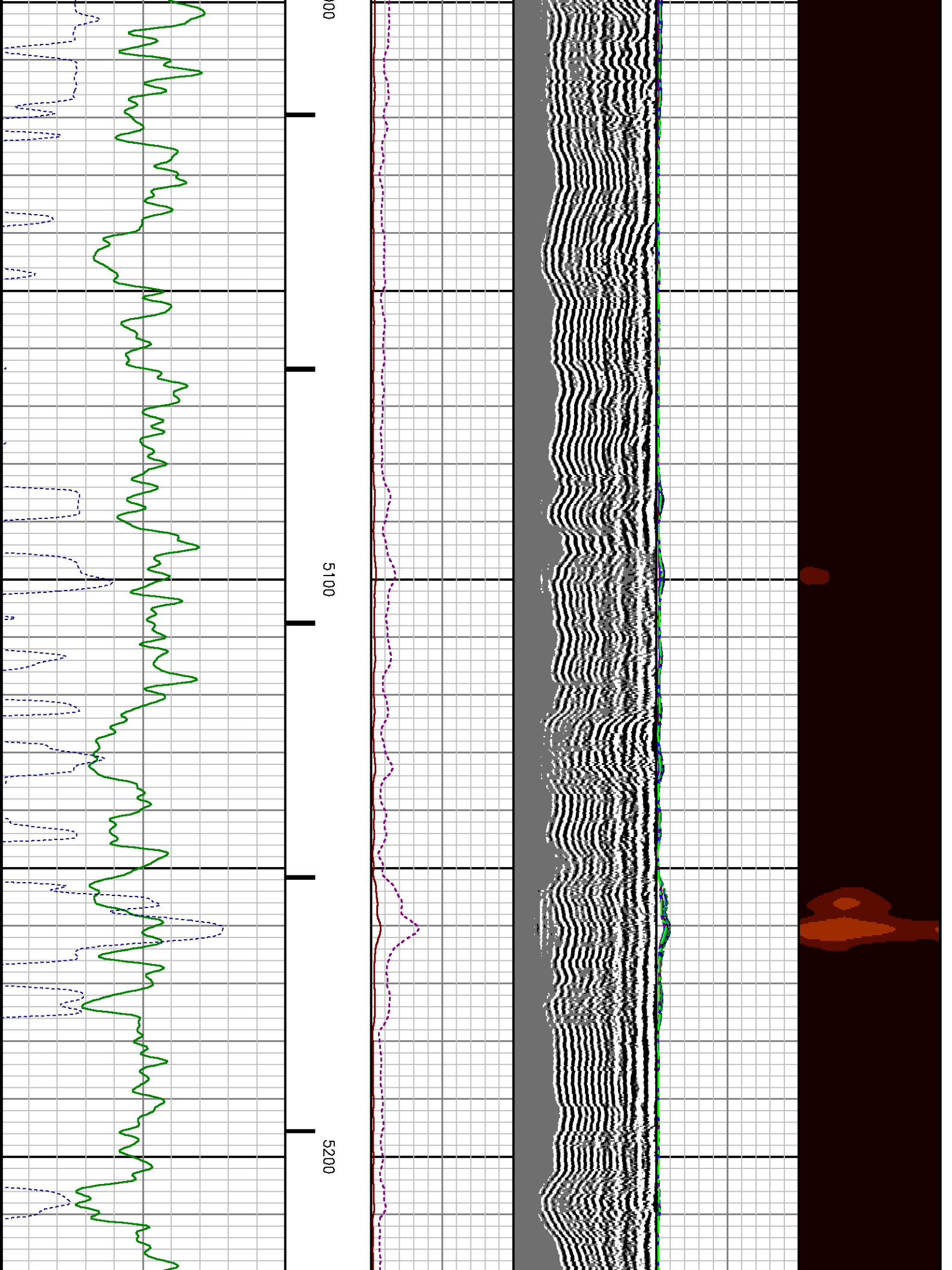


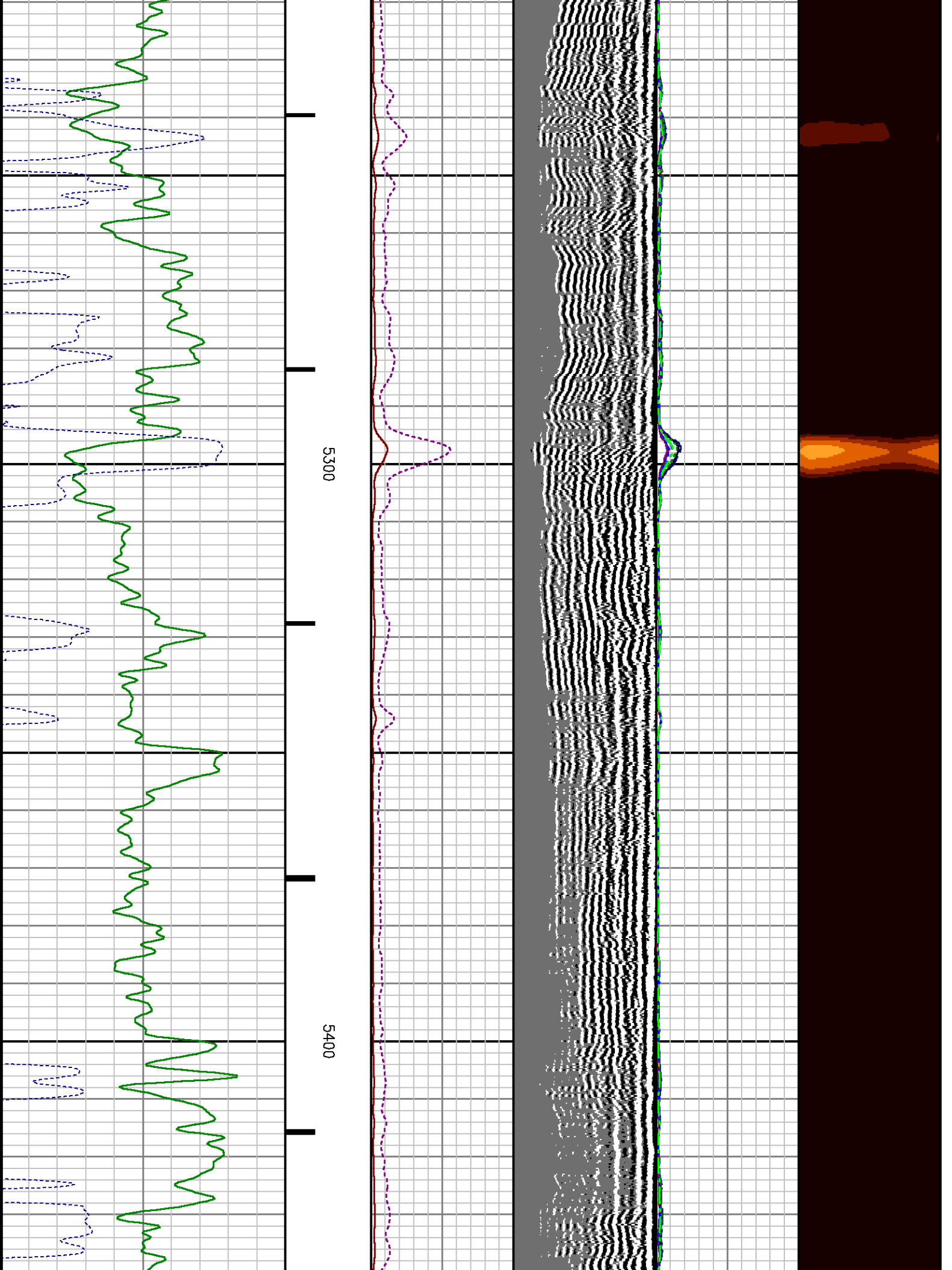


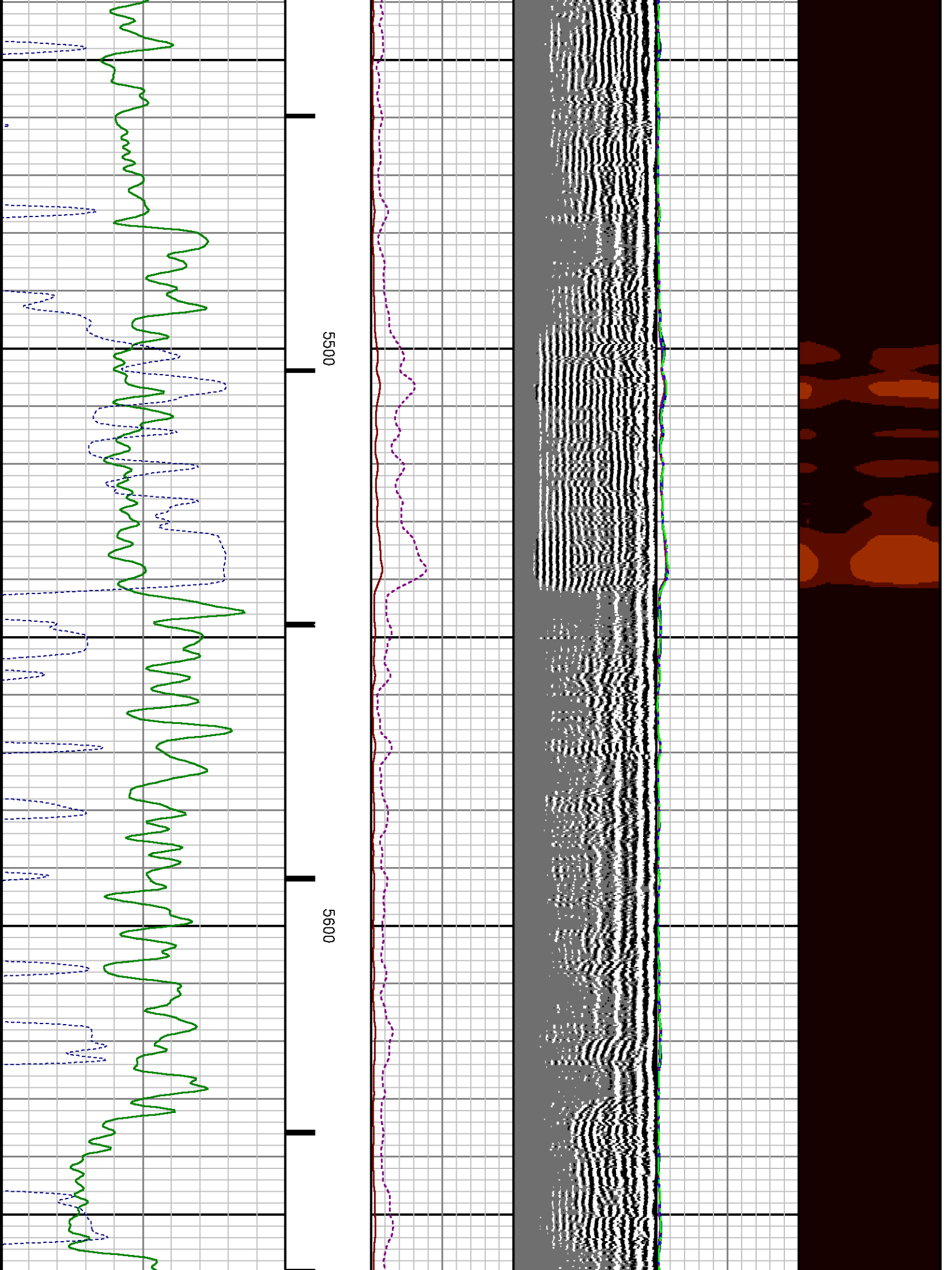


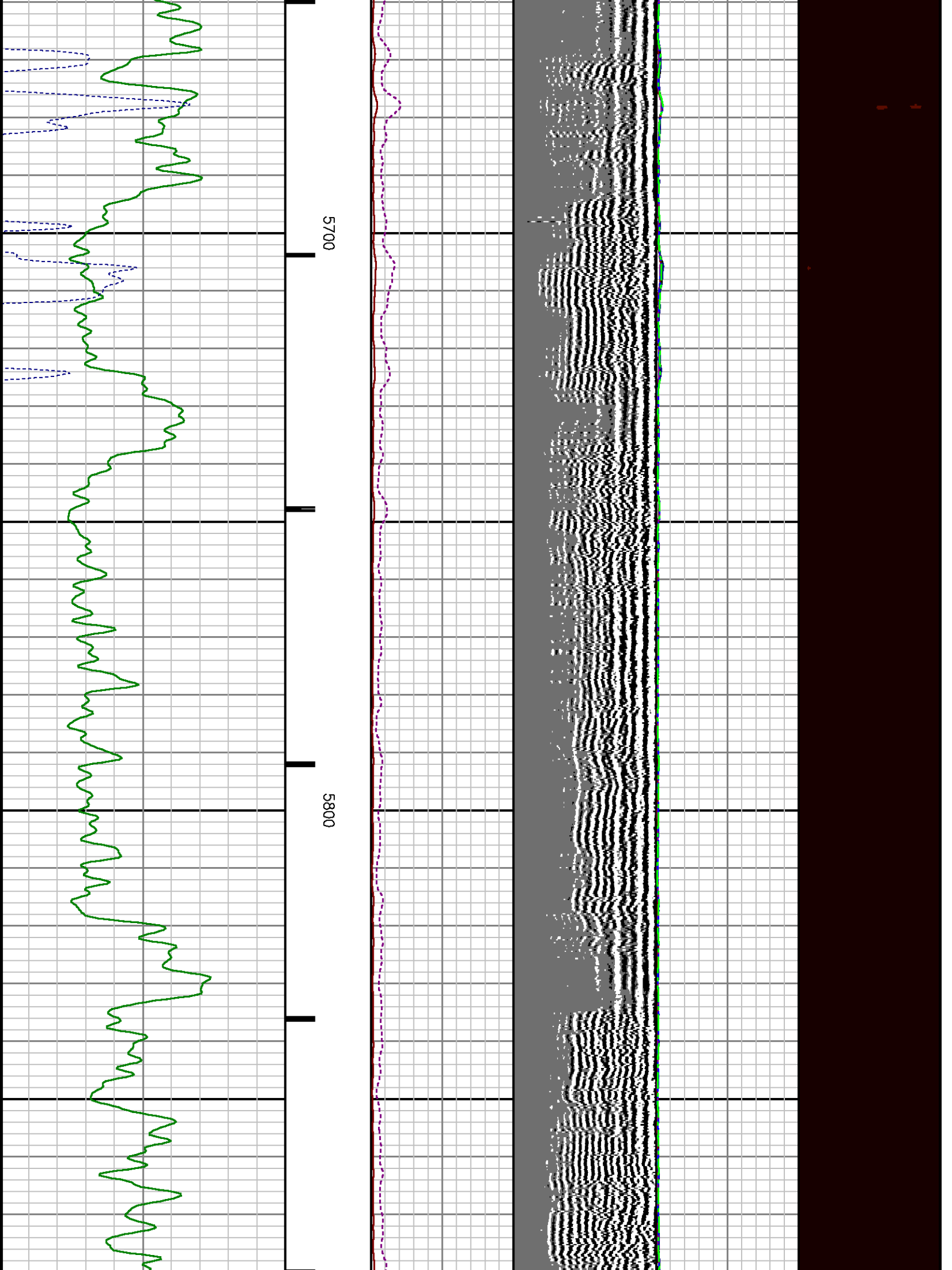


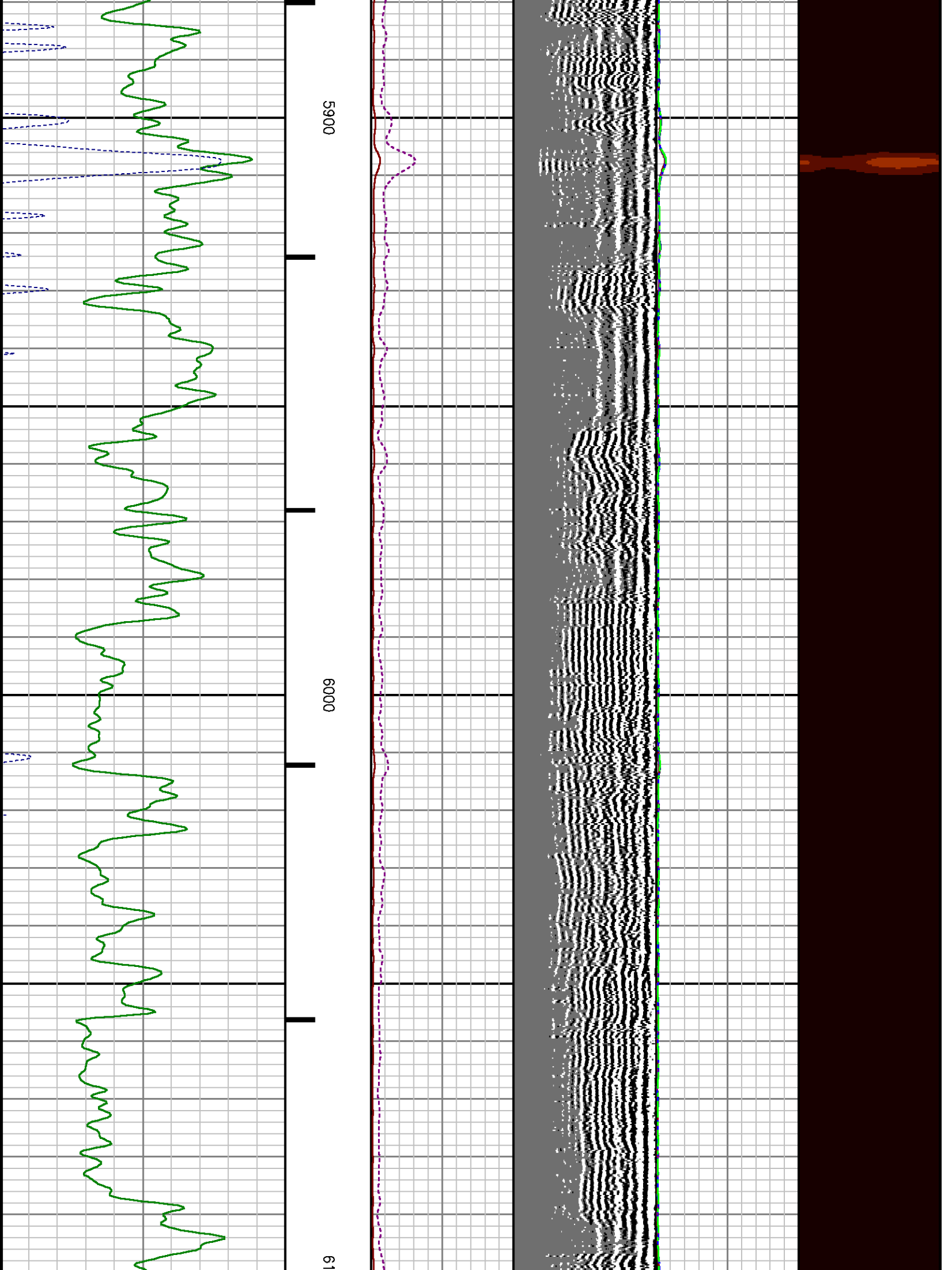


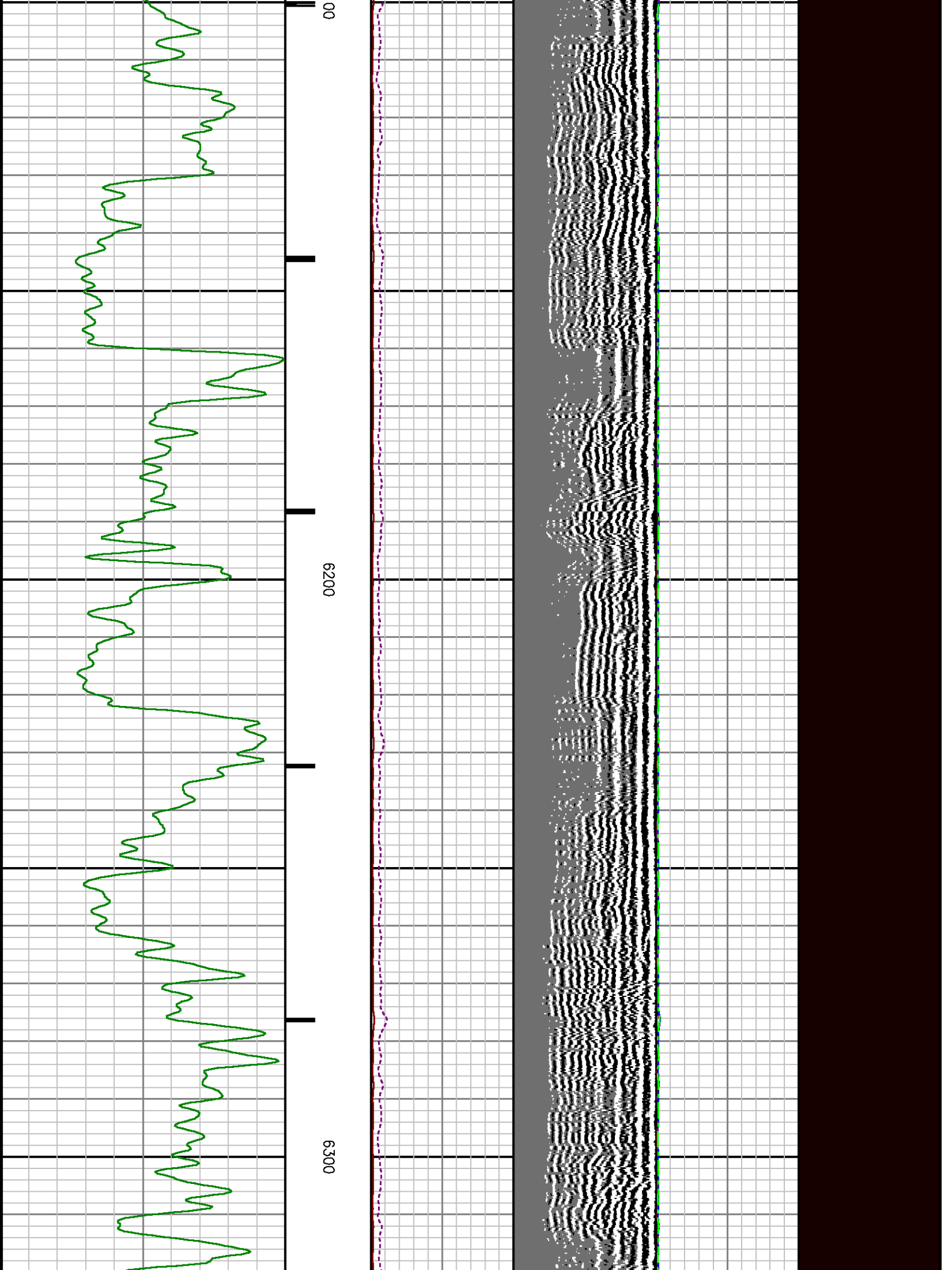


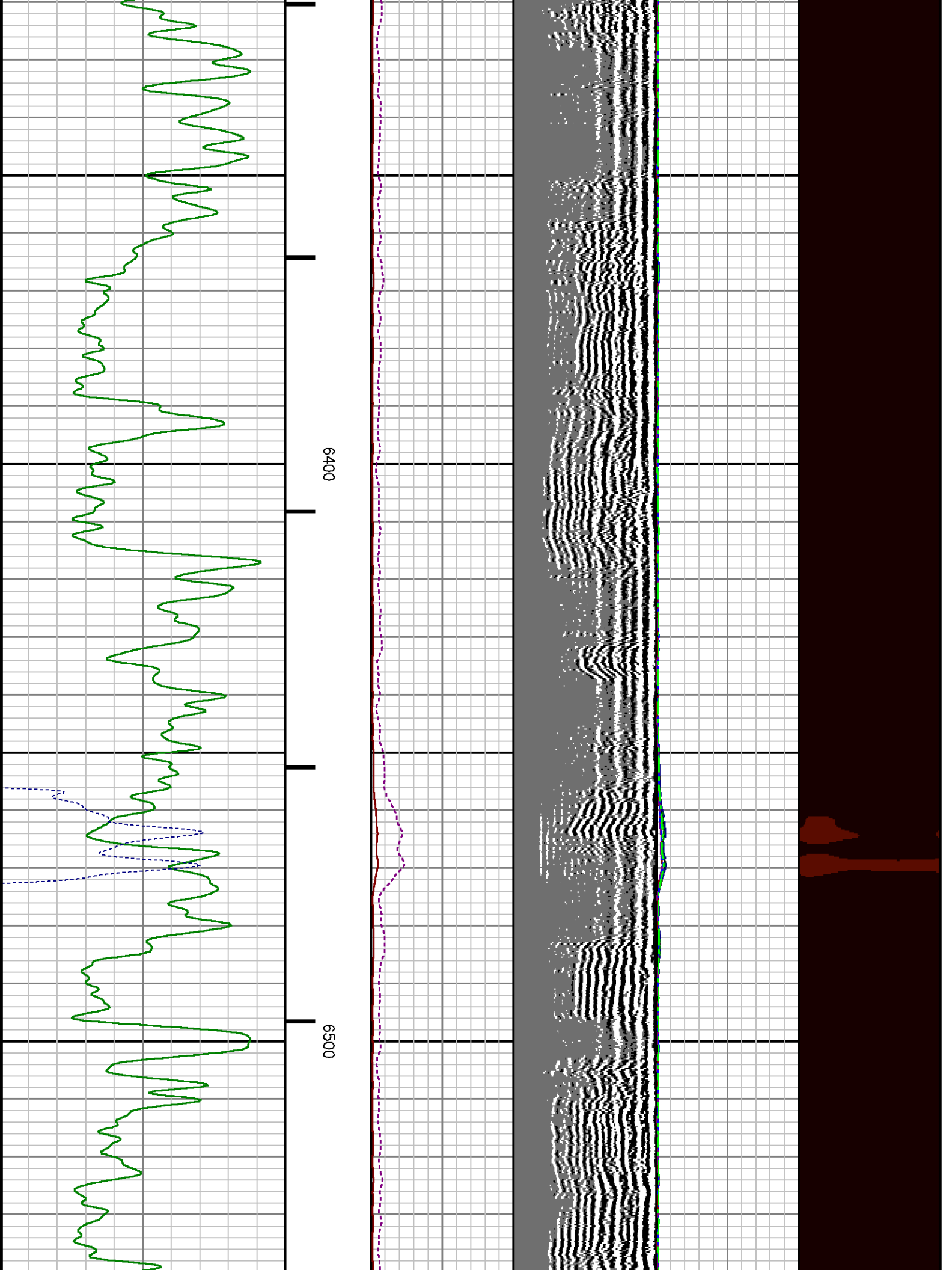


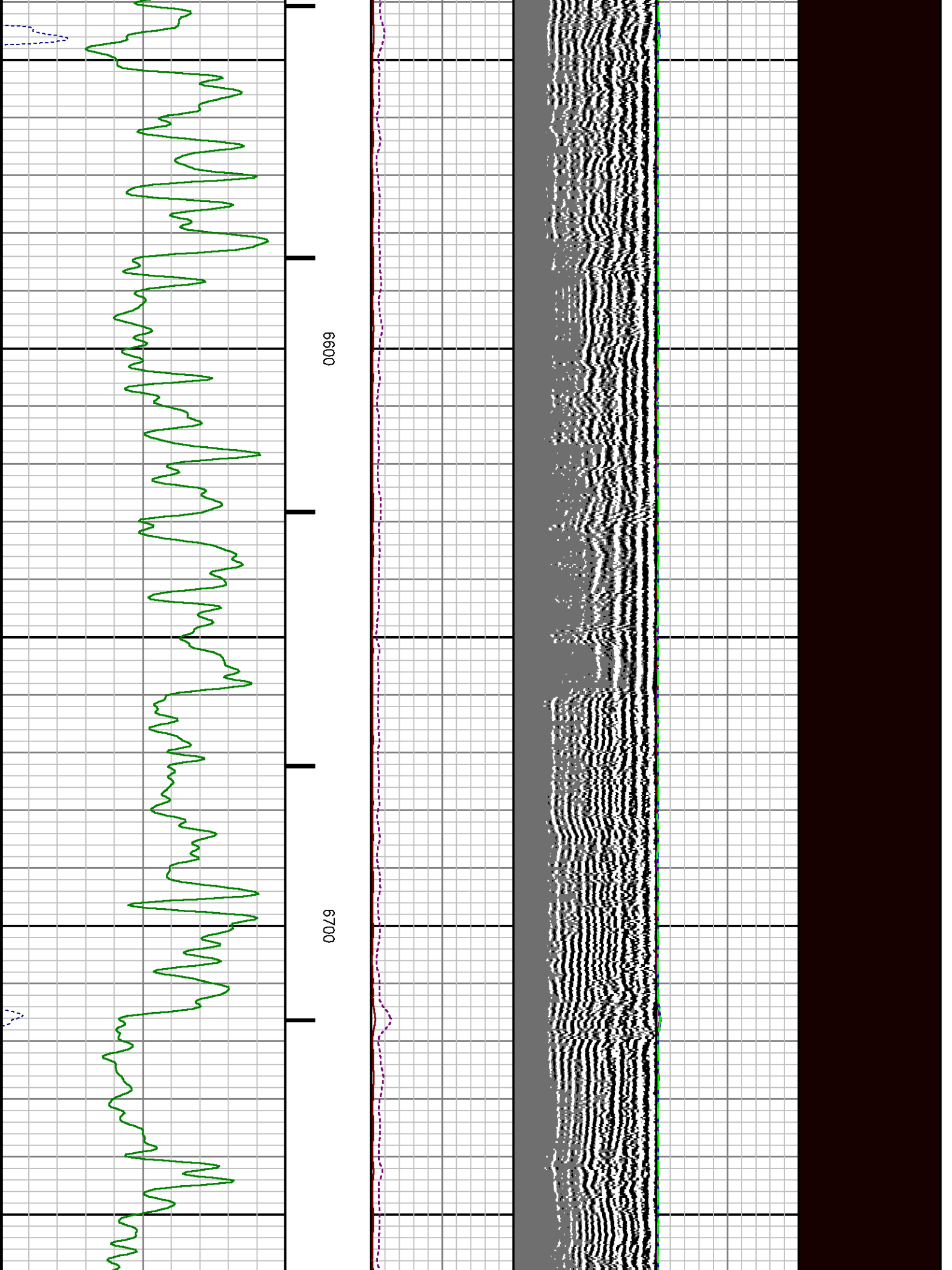


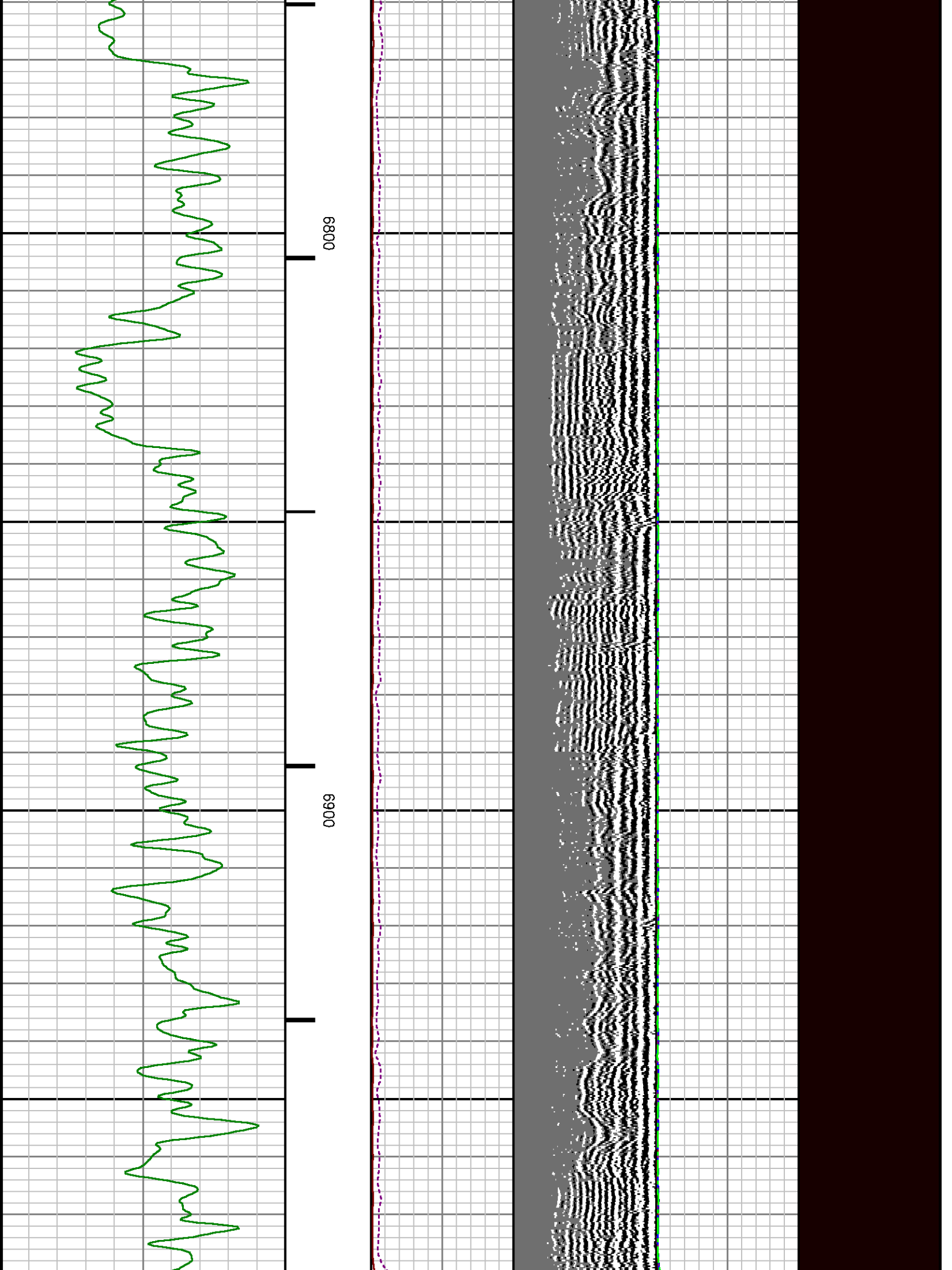


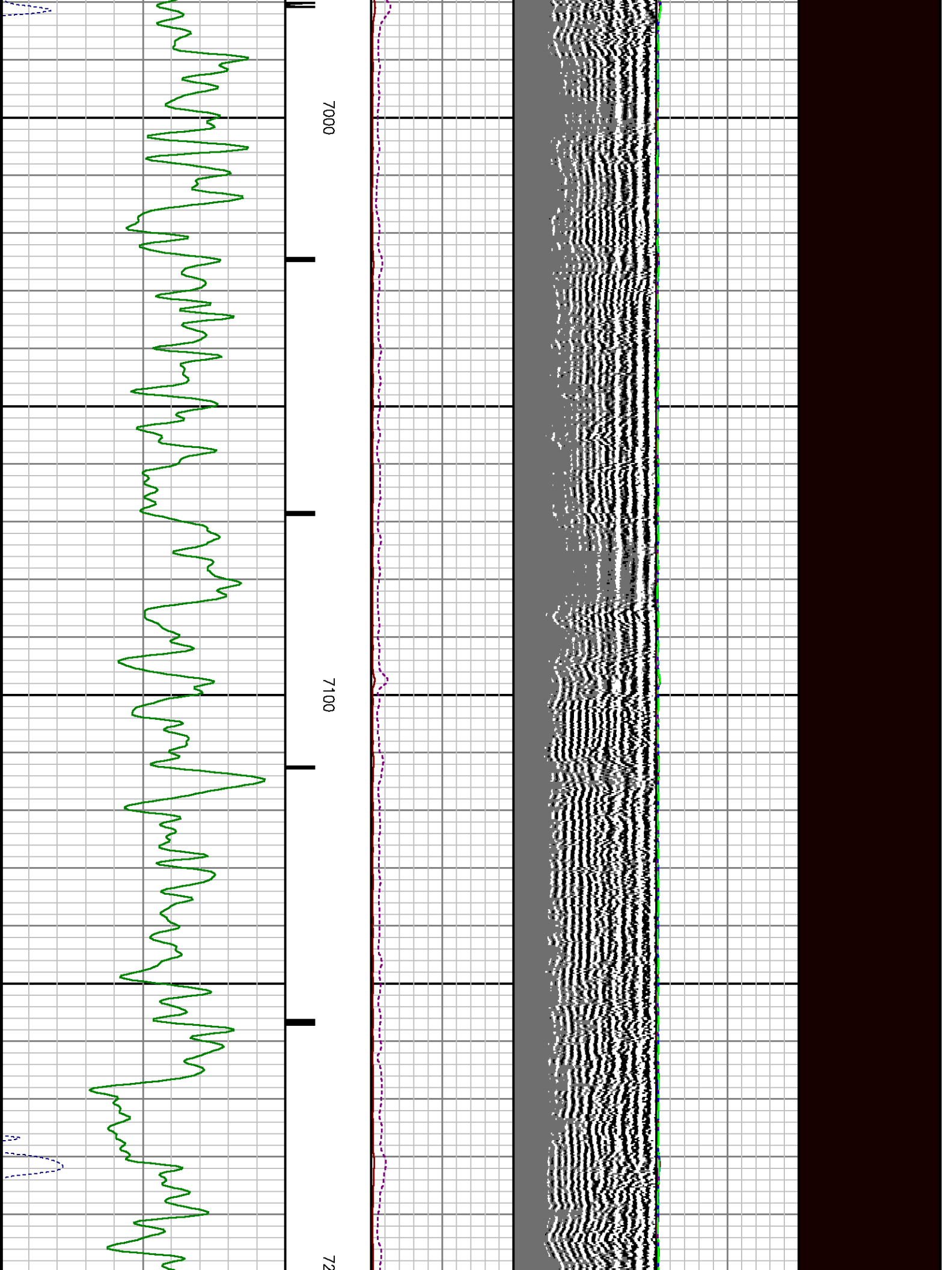


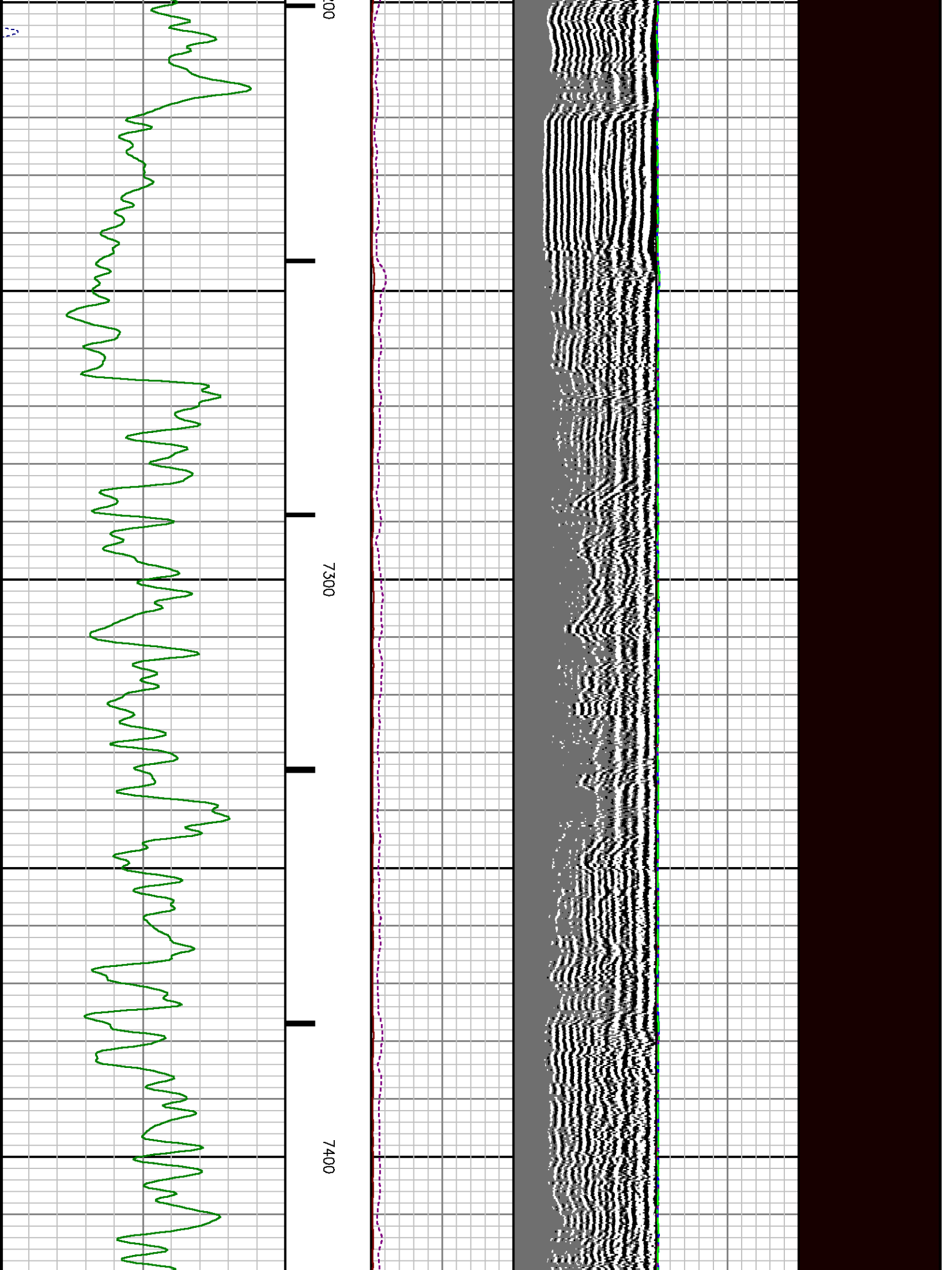


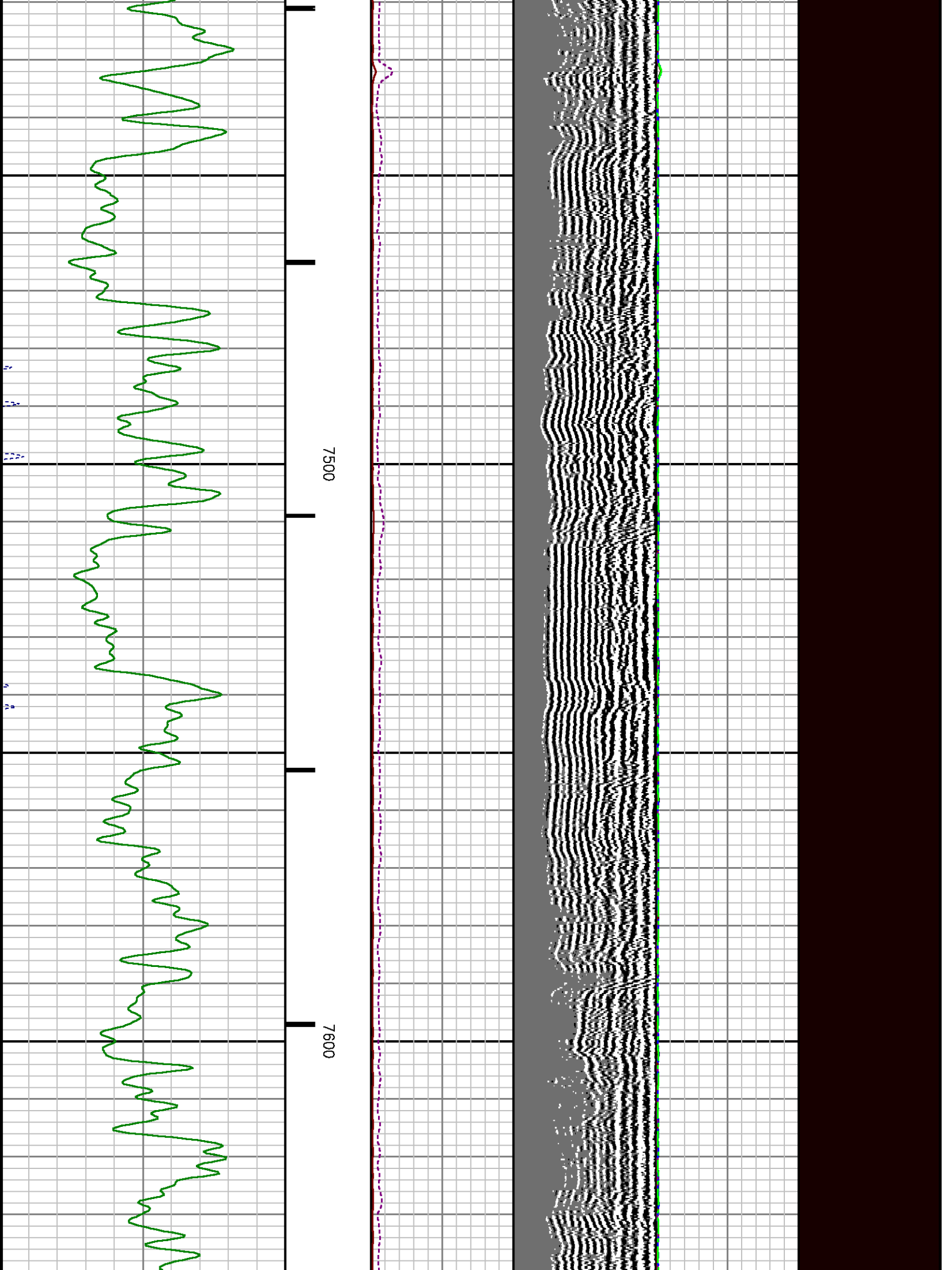


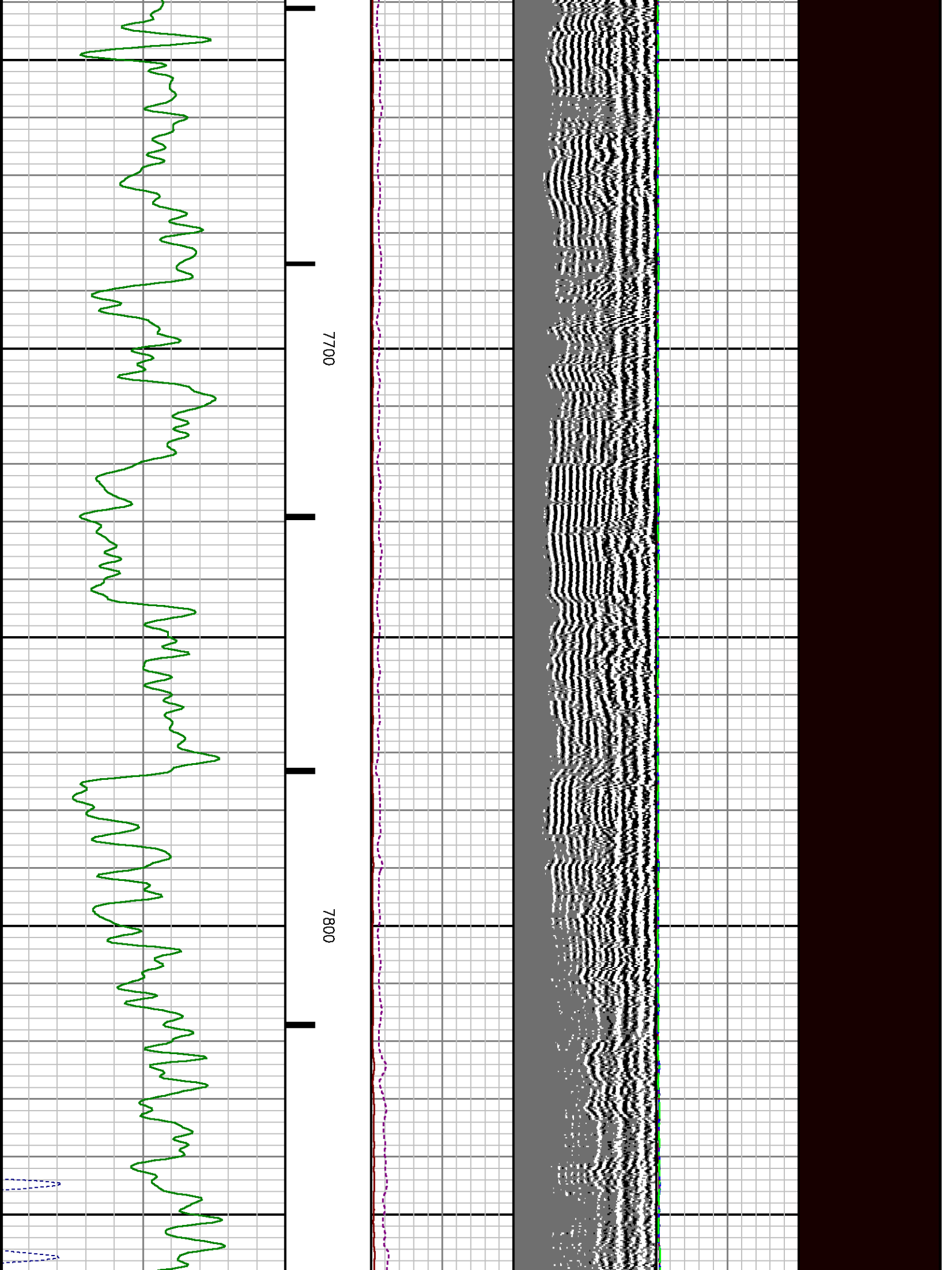


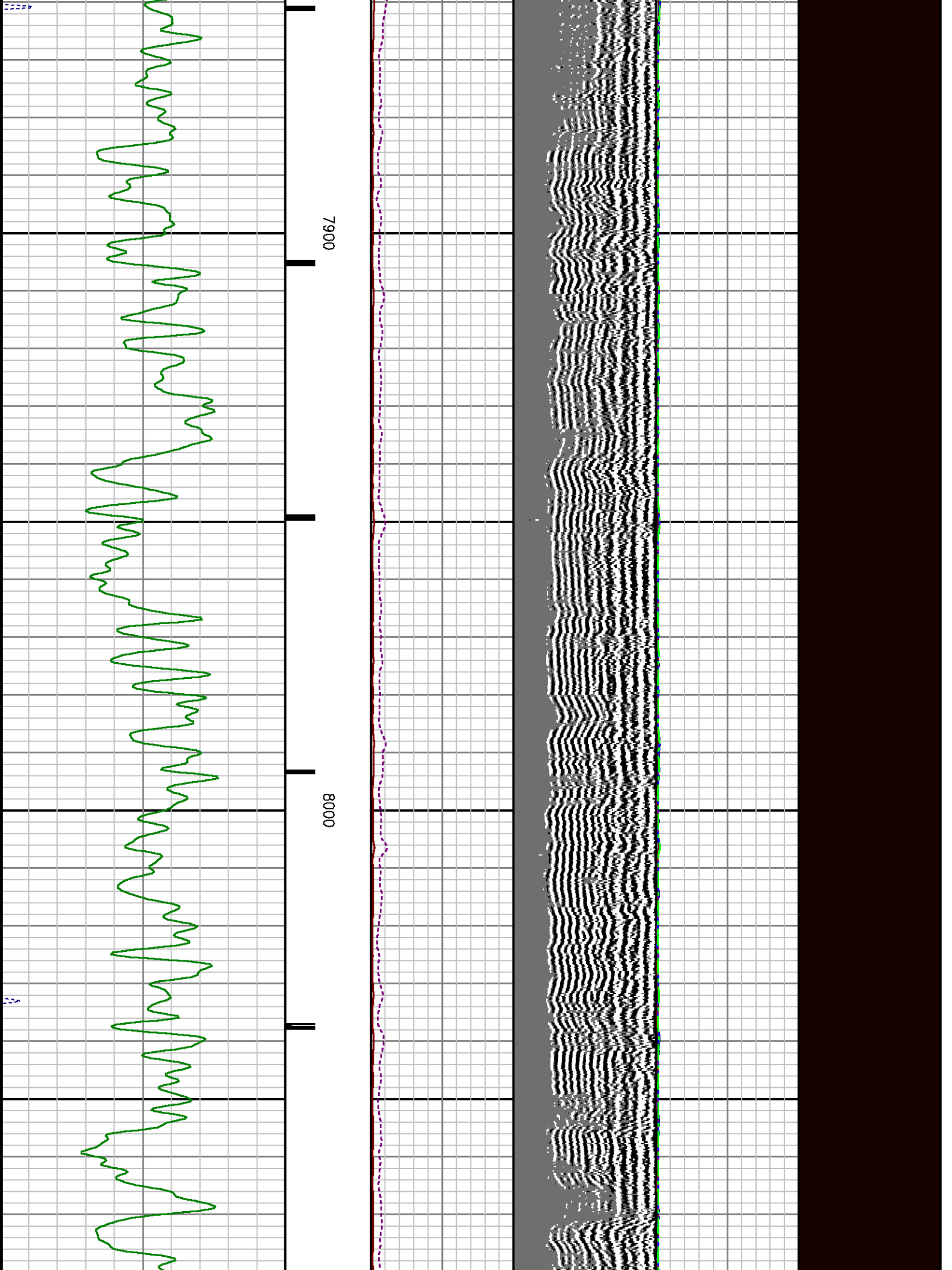


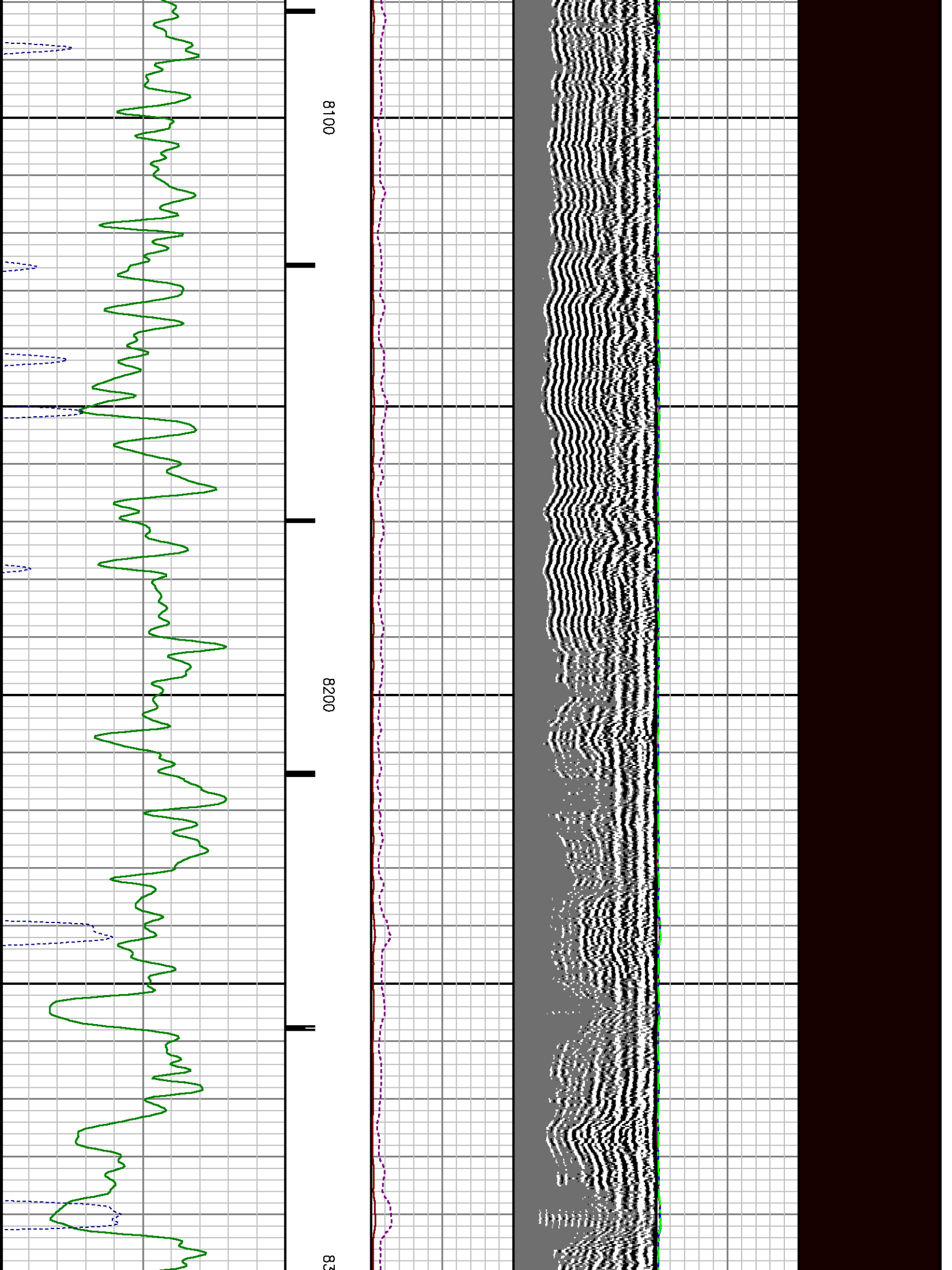


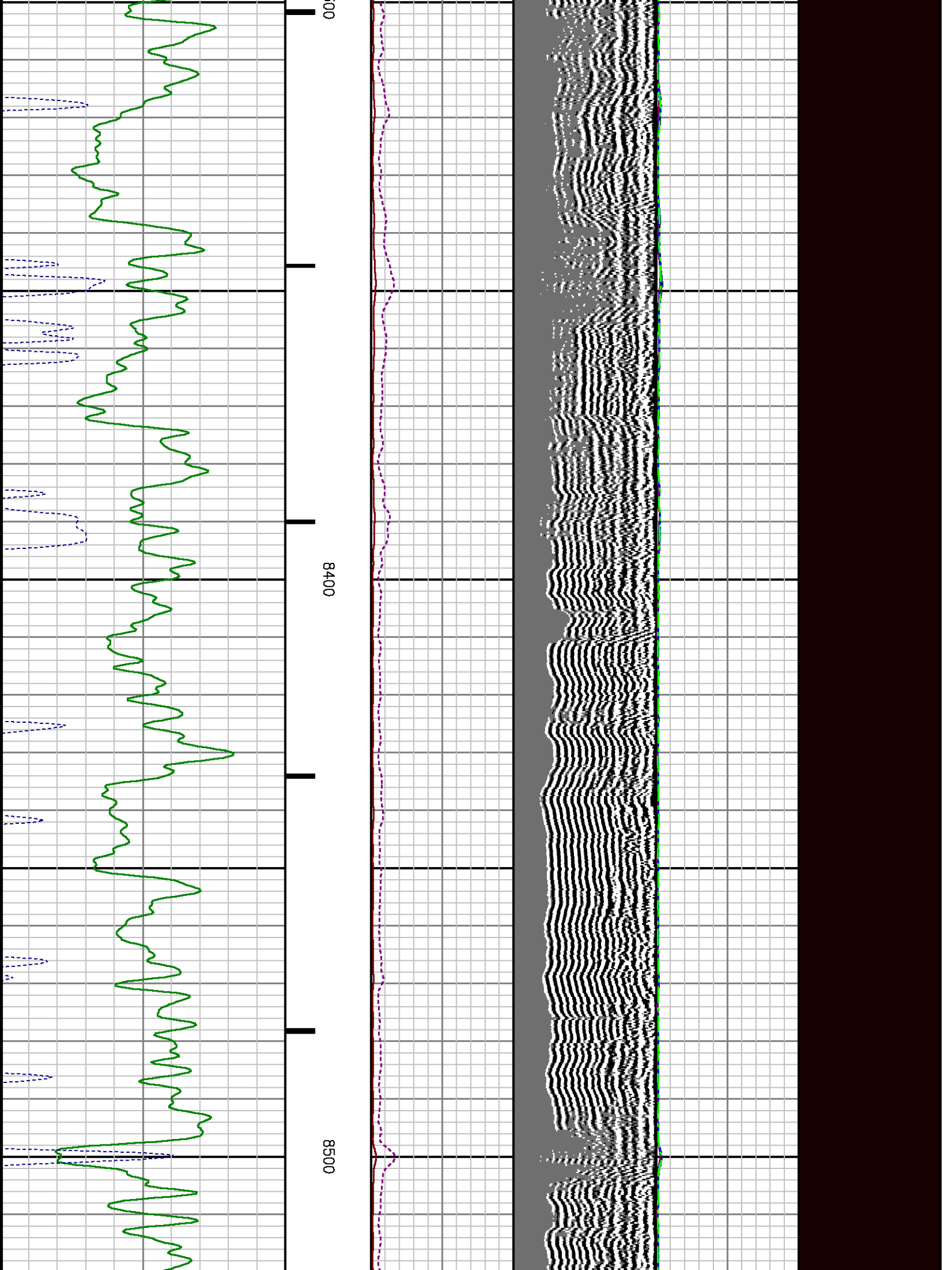


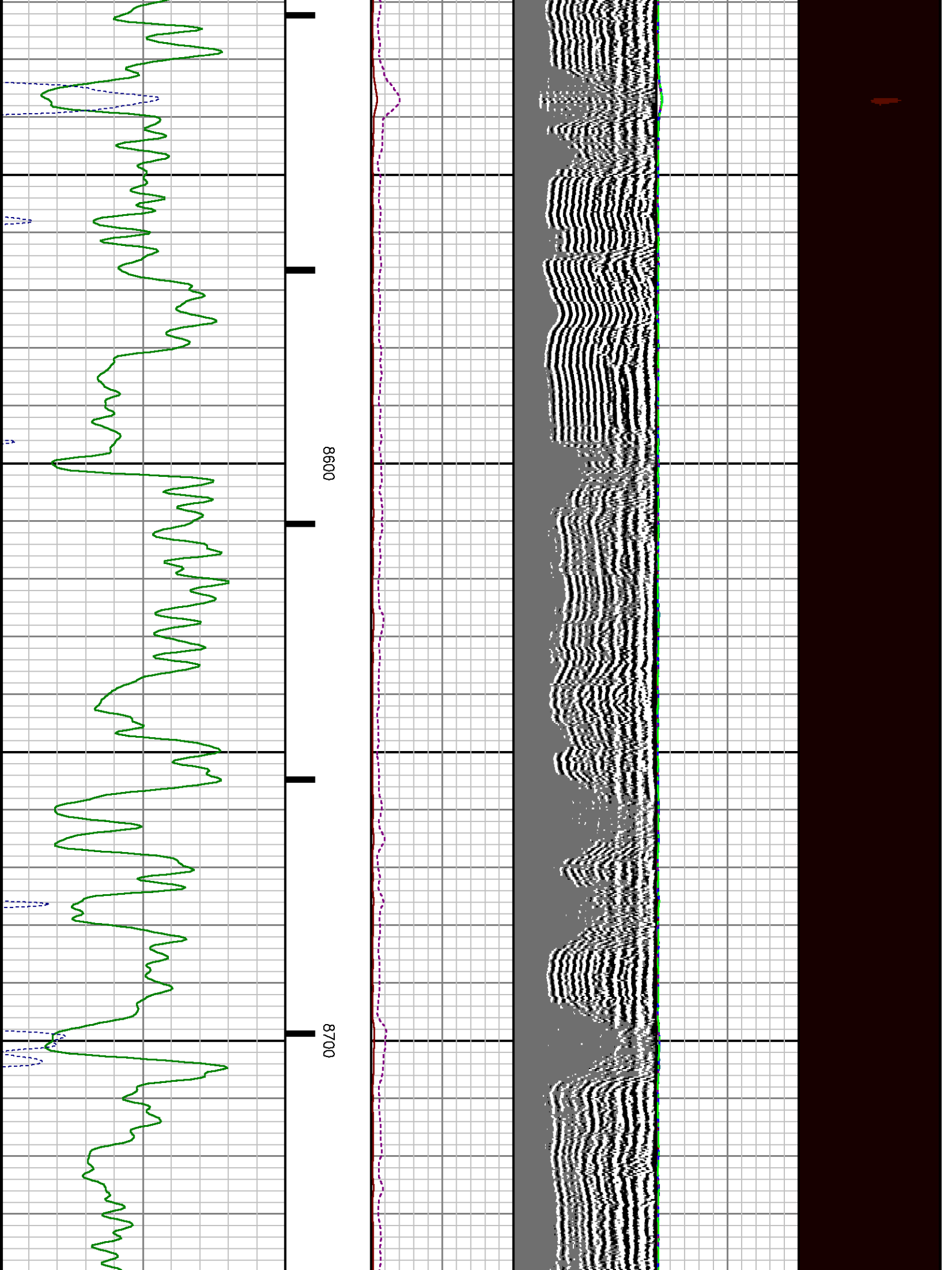


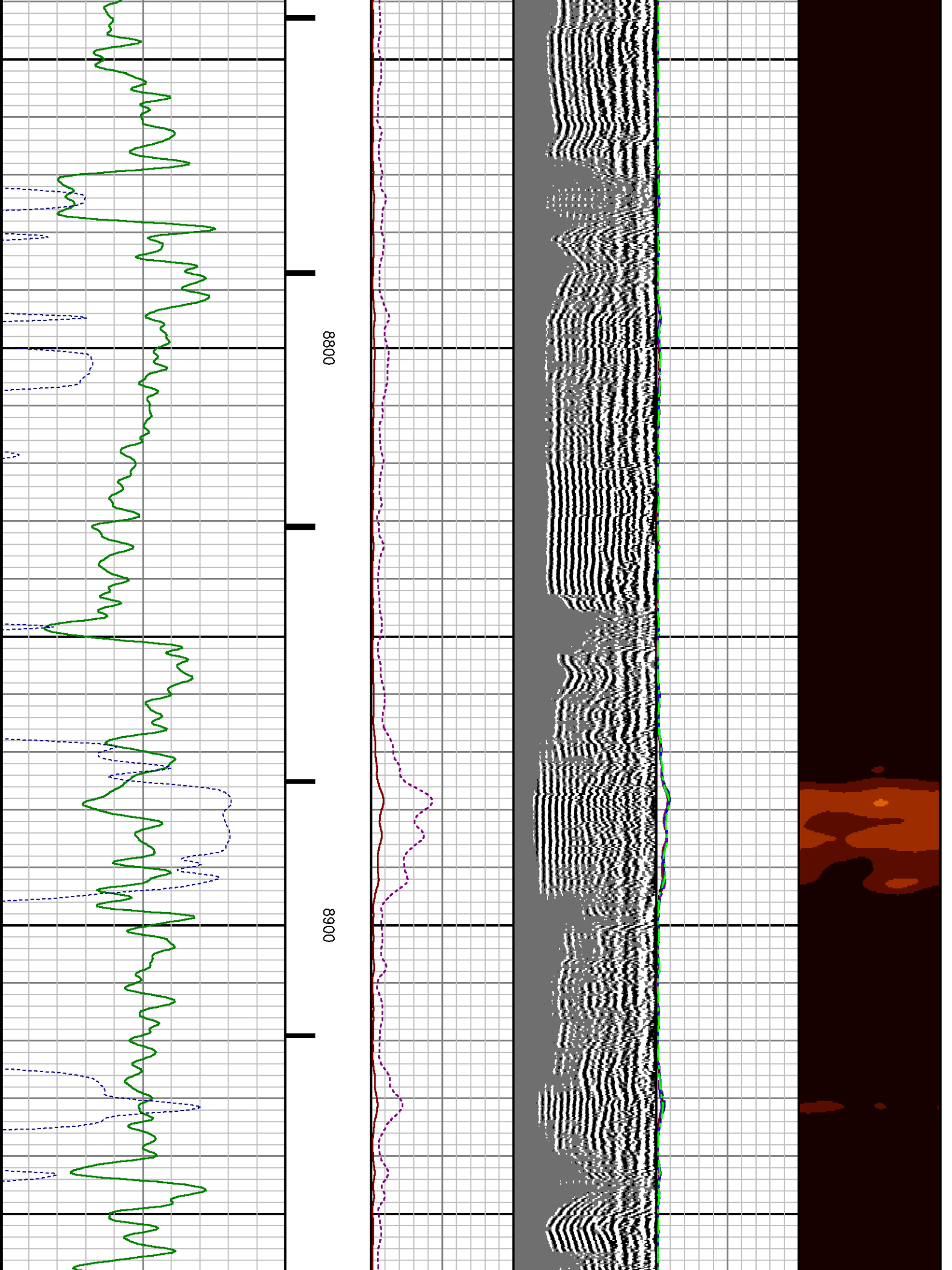


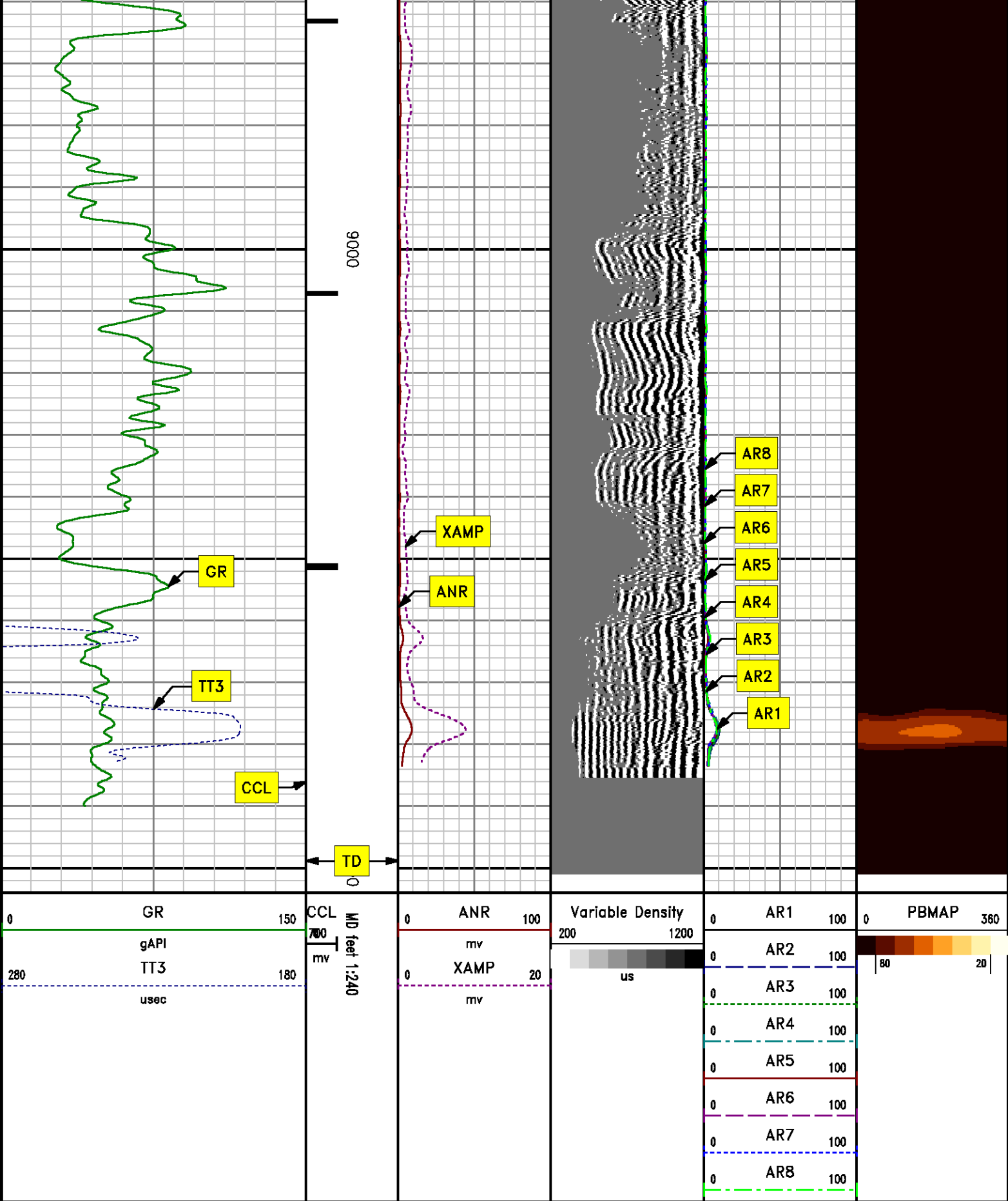












REPEAT SECTION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	8771.177	9101.240
RAL	Amp Gate Start Near	195.000	usec	8771.177	9101.240
RAL	Amp Gate Start Radial	195.000	usec	8771.177	9101.240
RAL	Amp Gate Width Far	25.000	usec	8771.177	9101.240
RAL	Amp Gate Width Near	25.000	usec	8771.177	9101.240
RAL	Amp Gate Width Radial	25.000	usec	8771.177	9101.240
RAL	casing od	4.500	inches	8771.177	9101.240
RAL	casing wt	11.600	lbm/ft	8771.177	9101.240
RAL	FB Start Far	291.900	usec	8771.177	9101.240
RAL	FB Start Near	175.391	usec	8771.177	9101.240
RAL	FB Start Radial	175.391	usec	8771.177	9101.240
RAL	FB Thresh Far	10.000	mv	8771.177	9101.240
RAL	FB Thresh Near	4.000	mv	8771.177	9101.240
RAL	FB Thresh Radial	4.000	mv	8771.177	9101.240
RAL	Fluid Travel Time	200.000	usec/ft	8771.177	9100.989

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

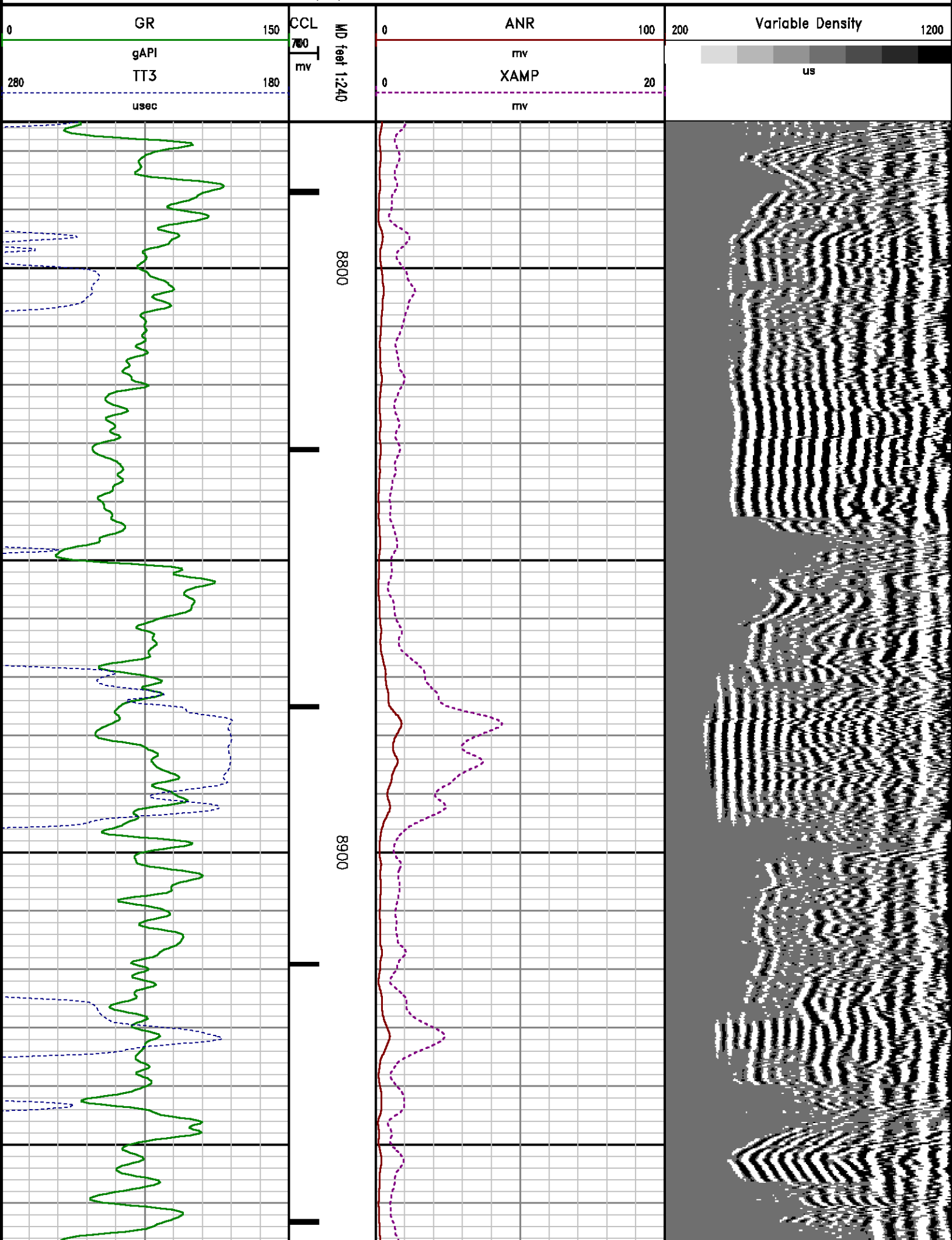
Well : SAVAGE RWF 321-25

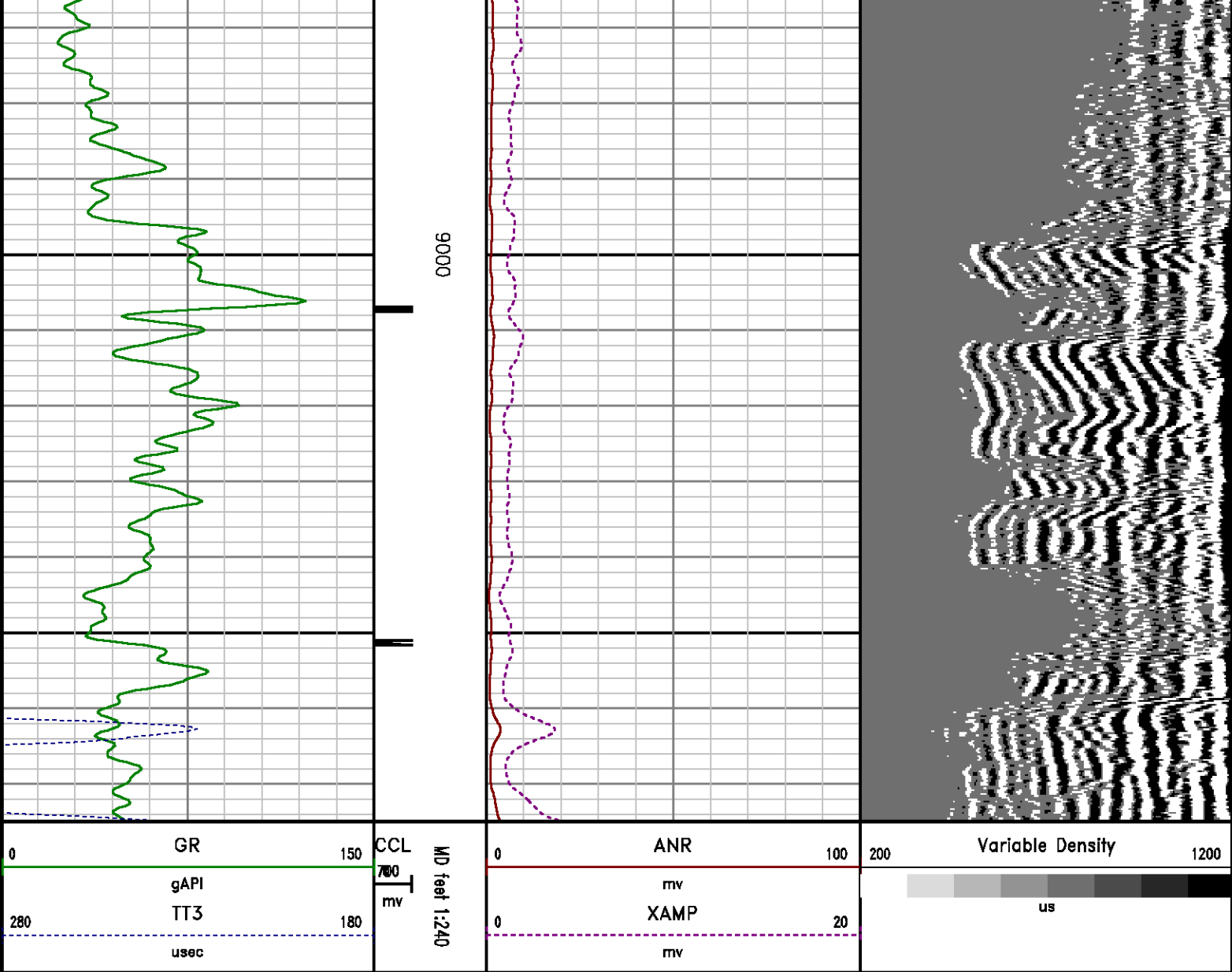
File Name : d:\welldata\wpx\savage rwf 321-25\321cbl\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 8775.00 - 9075.00 feet UP

Created : 4/20/2014 8:38:06 AM





CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\496A18_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Apr 18 10:49:13 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: A18

Tool Delay [uSec] -52.00 Tank OD 5.50 Tank Wt 15.50 Tank ID 4.95

RECEIVER Travel Time Amp. Gate Amp. Gate Zero Gate Zero Gate Zero Amp. Amp Ref. Shop Factor

CAL Pulse	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="25"/>	<input type="text" value="-0.008"/>	<input type="text" value="100.00"/>	<input type="text" value="0.31"/>
3 Ft. Receiver	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="20"/>	<input type="text" value="0.409"/>	<input type="text" value="100.00"/>	<input type="text" value="0.30"/>
5 Ft. Receiver	<input type="text" value="327"/>	<input type="text" value="325"/>	<input type="text" value="30"/>	<input type="text" value="263"/>	<input type="text" value="25"/>	<input type="text" value="1.035"/>	<input type="text" value="150.00"/>	<input type="text" value="0.34"/>
Radial #1	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="22"/>	<input type="text" value="0.623"/>	<input type="text" value="100.00"/>	<input type="text" value="0.30"/>
Radial #2	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="22"/>	<input type="text" value="0.382"/>	<input type="text" value="100.00"/>	<input type="text" value="0.30"/>
Radial #3	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="22"/>	<input type="text" value="0.626"/>	<input type="text" value="100.00"/>	<input type="text" value="0.30"/>
Radial #4	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="22"/>	<input type="text" value="0.873"/>	<input type="text" value="100.00"/>	<input type="text" value="0.31"/>
Radial #5	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="22"/>	<input type="text" value="0.926"/>	<input type="text" value="100.00"/>	<input type="text" value="0.31"/>
Radial #6	<input type="text" value="217"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="22"/>	<input type="text" value="1.116"/>	<input type="text" value="100.00"/>	<input type="text" value="0.31"/>
Radial #7	<input type="text" value="216"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="22"/>	<input type="text" value="0.567"/>	<input type="text" value="100.00"/>	<input type="text" value="0.30"/>
Radial #8	<input type="text" value="218"/>	<input type="text" value="216"/>	<input type="text" value="30"/>	<input type="text" value="166"/>	<input type="text" value="22"/>	<input type="text" value="0.774"/>	<input type="text" value="100.00"/>	<input type="text" value="0.30"/>

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496A18 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Apr 18 10:50:37 2014 TOOL SERIES: 1426XA ASSET: 496 SEQ: A18

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="0.021"/>	<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="2.197"/>			
5 Ft. Receiver	<input type="text" value="317"/>	<input type="text" value="30"/>	<input type="text" value="2.024"/>			
Radial #1	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.639"/>			
Radial #2	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.572"/>			
Radial #3	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.819"/>			
Radial #4	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.797"/>			
Radial #5	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="2.067"/>			
Radial #6	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="2.157"/>			
Radial #7	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.758"/>			
Radial #8	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="1.733"/>			

GAMMA RAY

Calibration File: C:\case\calver\GR\456A3.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Apr 03 13:37:28 2014 TOOL SERIES: 2459XA ASSET: 456 SEQ: A3

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	<input type="text" value="76.84"/>	<input type="text" value="356.71"/>	<input type="text" value="0.661"/>	<input type="text" value="50.80"/>	<input type="text" value="235.80"/>	<input type="text" value="185.00"/>

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu Apr 03 13:38:35 2014

TOOL SERIES: 2459XA ASSET: 456 SEQ: A3

Calibrator #	Background [cps]	Calibrator On [cps]
S2K WA612	80.98	351.78

Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
0.661	53.53	232.54	179.01

TOOL DIAGRAM

OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII

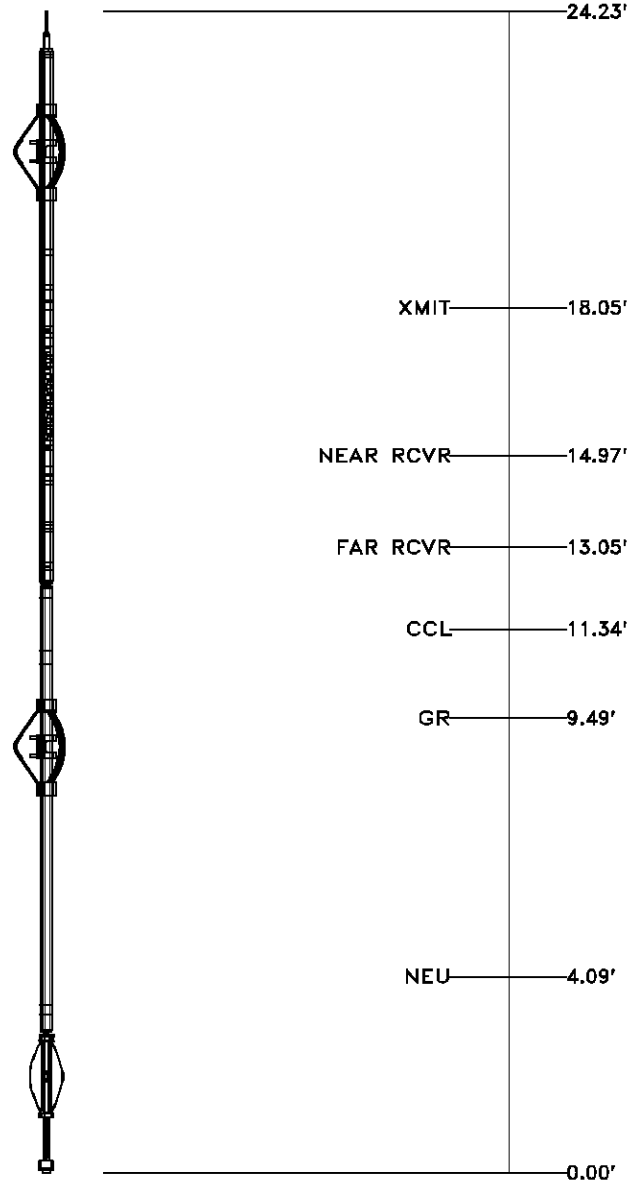
Series	1426XA
Mnemonic	PROB
Diameter	2.75"
Length	11.17'
Measure Point	0.75' FAR RCVR
Measure Point	2.67' NEAR RCVR
Measure Point	5.75' XMIT
Temp Rating	350.00 °F
Press Rating	18000.00 PSI

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"



Baker Atlas

CASE

Company	WPX ENERGY		
Well	SAVAGE RWF 321-25		
Field	RULISON		
County	GARFIELD	State	CO

File No:
CH084708
API No:
05045219700000

Location			
SHL: 2437' FNL & 1436' FWL			
BHL: 132' FNL & 2005' FWL			
SEC	25	TWP	6S
		RGE	94W

Elevations	
KB	6058 ft
DF	
GL	6037 ft

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