



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH072055	Company Well Field County	WPX ENERGY DUGGAN RWF 314-29 RULISON GARFIELD	State COLORADO
API No: 05045216870000			
29 GS 94W RWF 14-29 NABORS SSD 573	Location SHL: 547' FSL & 584' FWL BHL: 1173' FSL & 721' 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	19/MAY/15	
Run	ONE	
Service Order	575082	
Depth Driller	7917 ft	
Depth Logger	7890 ft	
Bottom Logged Interval	7880 ft	
Top Logged Interval	26 ft	
Time Started	10:30	
Time Finished	14:00	
Operator Rig Time	3.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	N/A	
Salinity	N/A	
Fluid Level	72 ft	
Logged Cement Top	N/A	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	N/A	
Nominal Logging Speed	45 fpm	
Maximum Recorded Temperature	221 degF	
Reference Log	N/A	
Reference Log Date	N/A	
Equipment No.	4271	GRAND JUNCTION
Recorded By	W. KINSEL	9721
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	1107 ft
8.75 In	0 ft	7956 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	7917 ft

Remarks
ALL DATA IN THIS LOG WAS DEPTH SHIFTED TO MATCH THE TOP CCL MARK WITH KB LEVEL
AT THE CLIENT'S REQUEST. THE AMOUNT OF LINEAR SHIFT WAS 4 FEET DOWN.
SHORT JOINT: 4684' - 4688'
BHT: 221 degF
LOG DONE WITH 0 PSI ON WELLHEAD

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10404539	CENTRALIZED
1	1	GAMMA RAY/CCL	1355XA	10580209	CENTRALIZED

***MAIN LOG PRIMARY PRESENTATION***  
***0 PSI***

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	304.887	usec	22.781	7910.000
RAL	Amp Gate Start Near	199.125	usec	22.781	7910.000
RAL	Amp Gate Start Radial	199.015	usec	22.781	7910.000
RAL	Amp Gate Width Far	25.000	usec	22.781	7910.000
RAL	Amp Gate Width Near	25.000	usec	22.781	7910.000
RAL	Amp Gate Width Radial	25.000	usec	22.781	7910.000
RAL	casing od	4.500	inches	22.781	7910.000
RAL	casing wt	11.600	lbm/ft	22.781	7910.000
RAL	FB Start Far	291.900	usec	22.781	7910.000
RAL	FB Start Near	175.391	usec	22.781	7910.000
RAL	FB Start Radial	175.391	usec	22.781	7910.000
RAL	FB Thresh Far	10.000	mv	22.781	7910.000
RAL	FB Thresh Near	4.000	mv	22.781	7910.000
RAL	FB Thresh Radial	4.000	mv	22.781	7910.000
RAL	Fluid Travel Time	200.000	usec/ft	22.781	7909.968

## DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
		ACAL	ANR	AR1	AR2	AR3	AR4
1426XA	-11.000	AR5	AR6	AR7	AR8	CHV	FPR2

1426XA -10.040  
1355XA -5.620  
1355XA -1.500  
1355XA 0.000

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

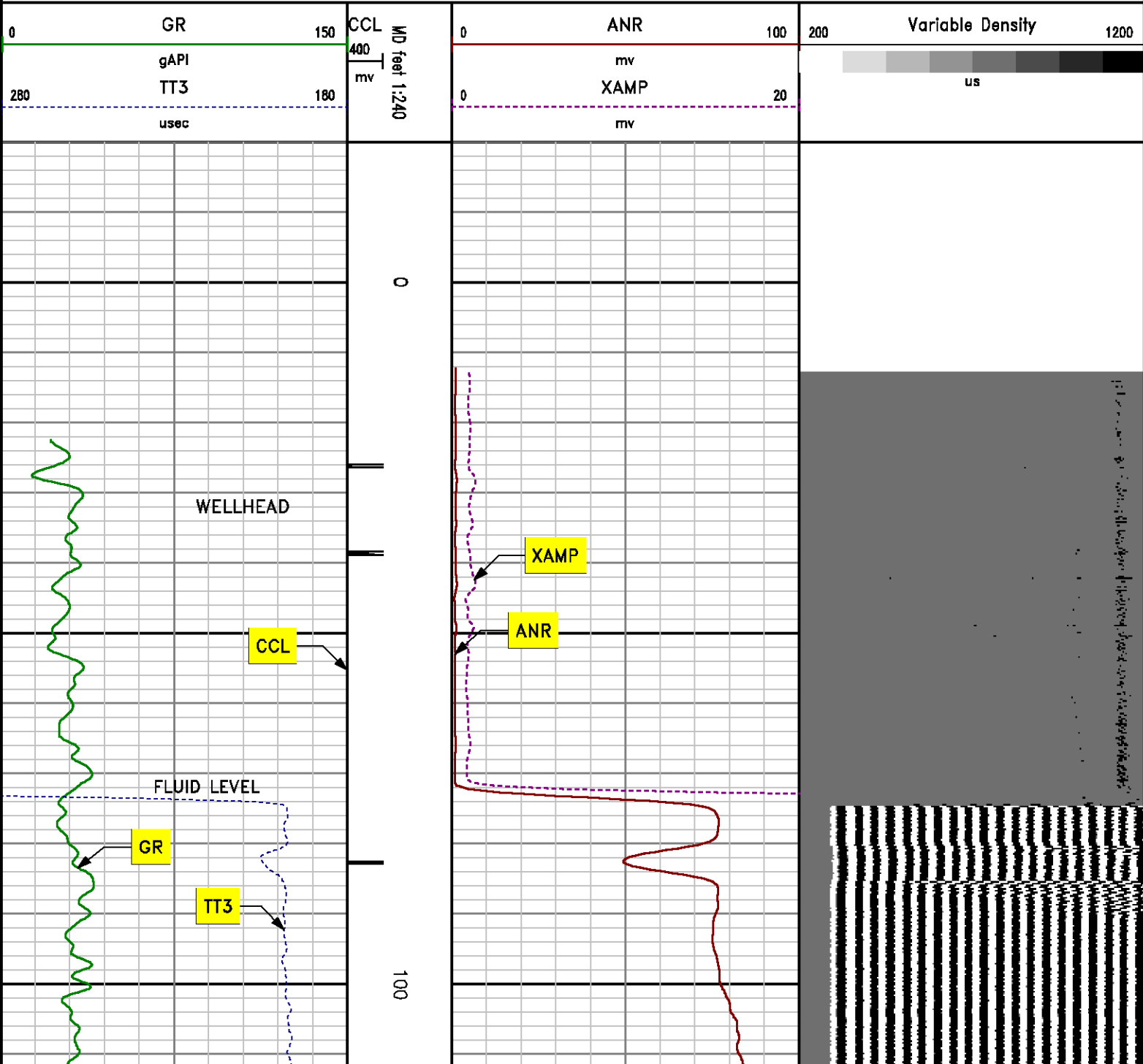
Well : DUGGAN RWF 314-29

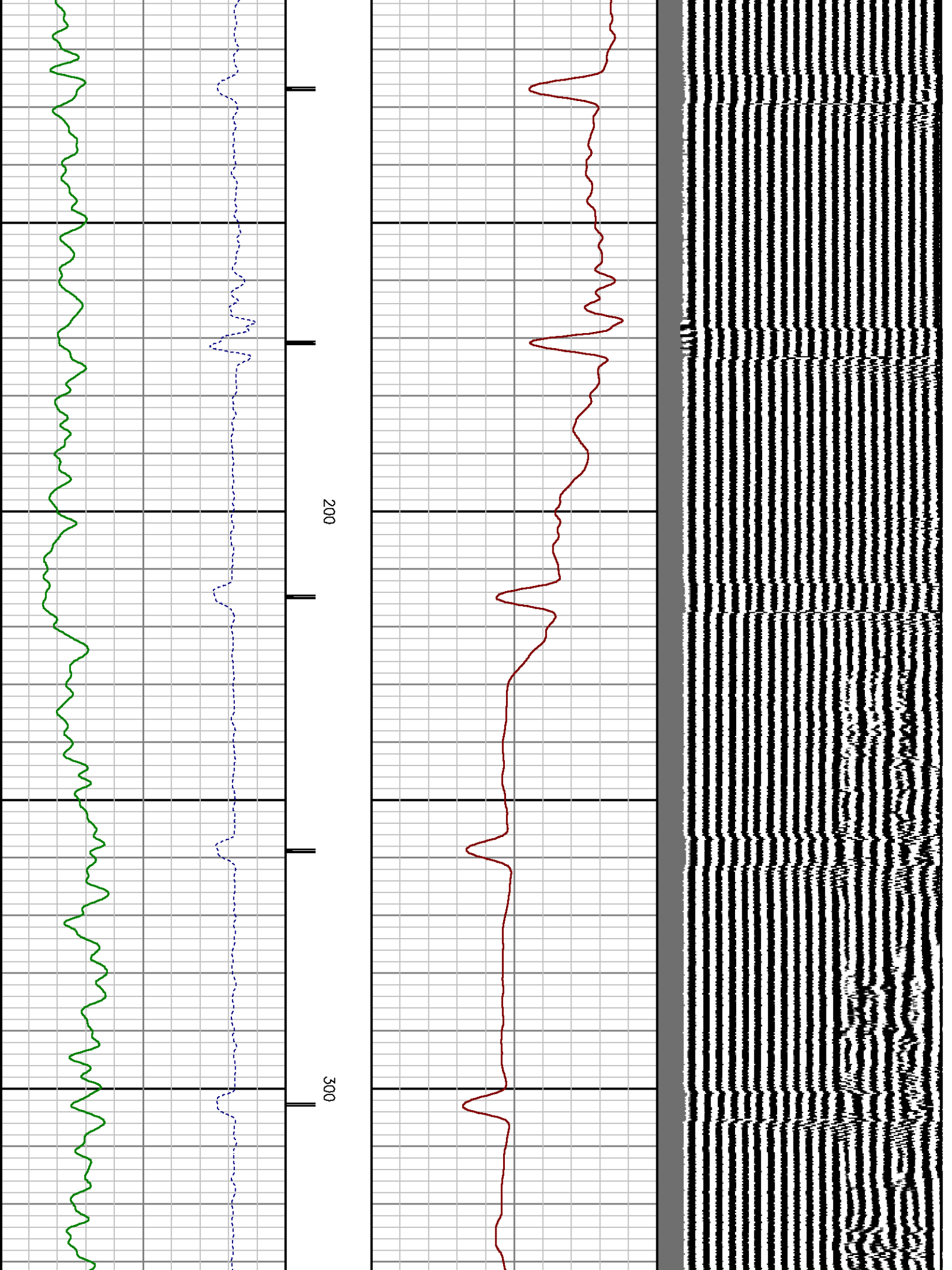
File Name : d:\welldata\314cbl\main.xtf

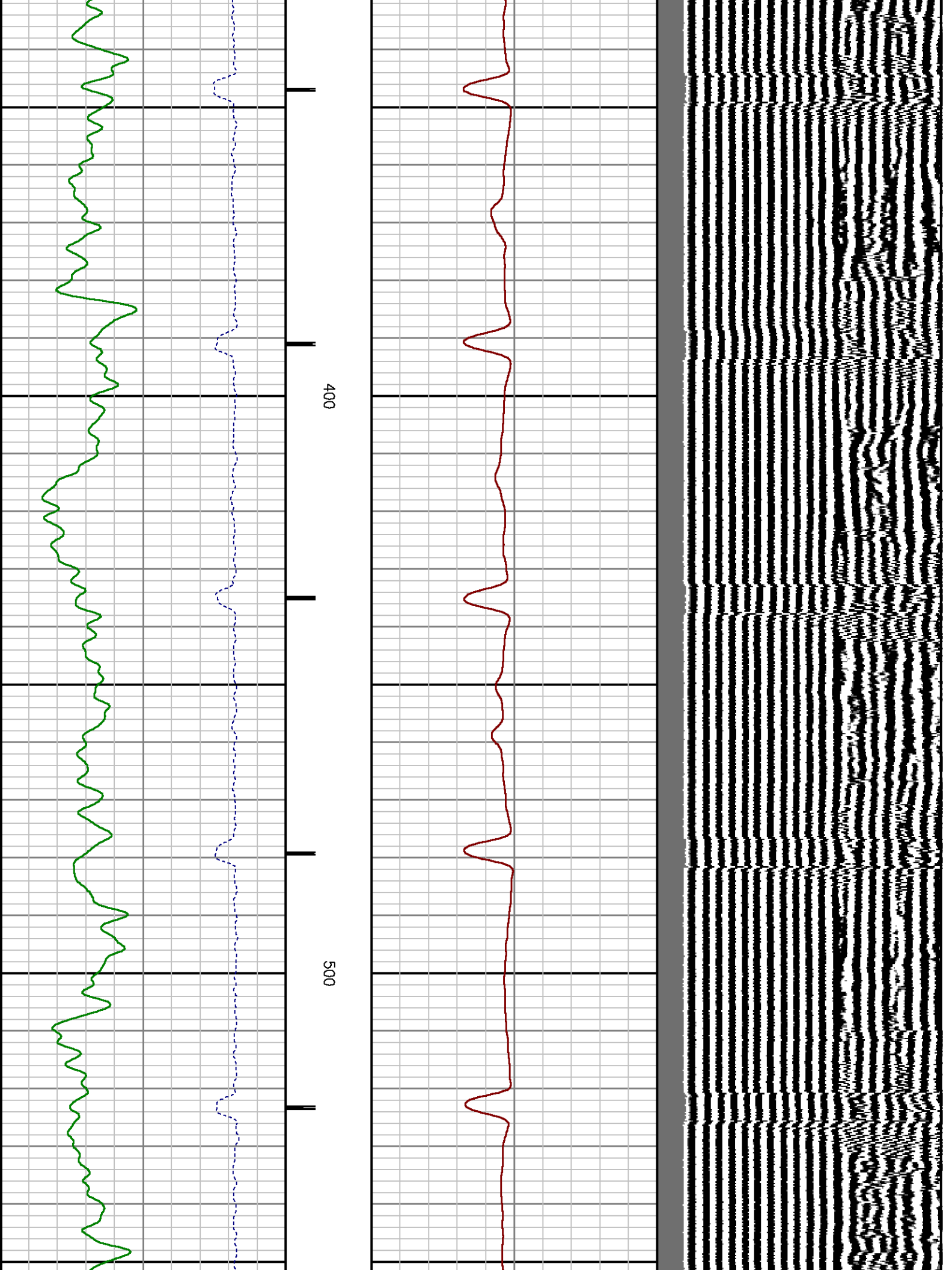
Mode : PlotMgr 5.4.504

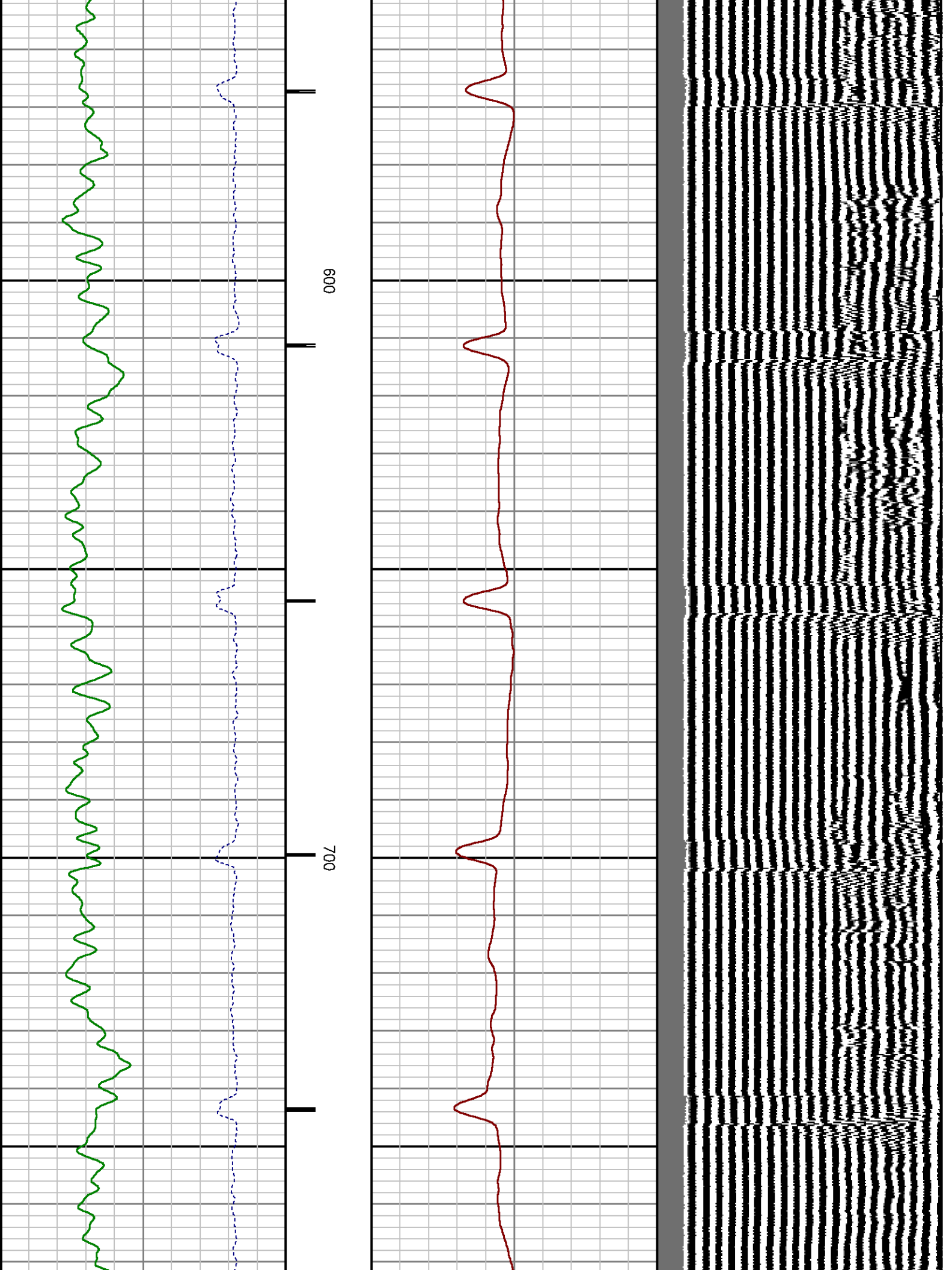
Interval : -20.00 - 7900.00 feet UP

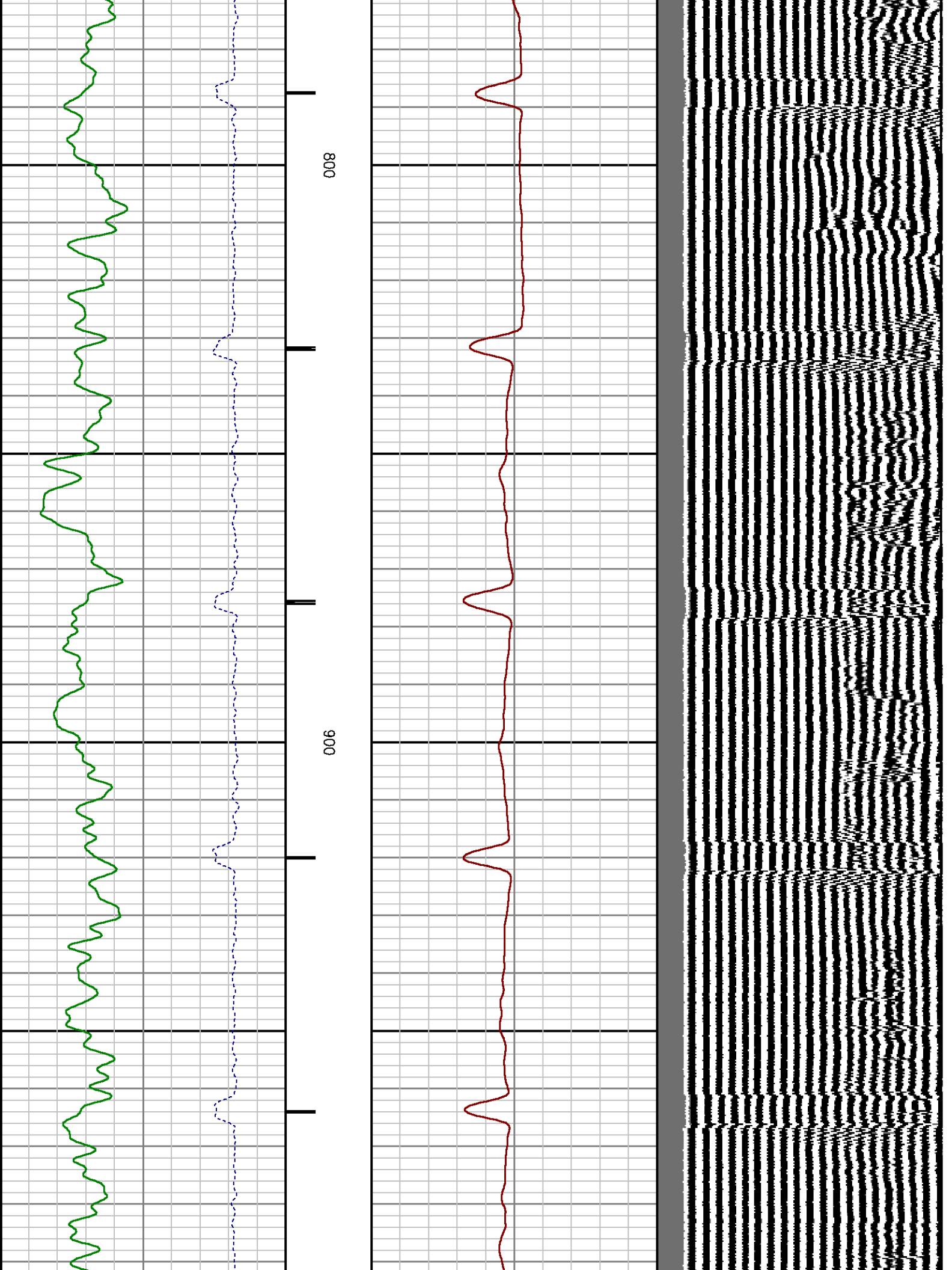
Created : 5/19/2013 12:09:09 PM

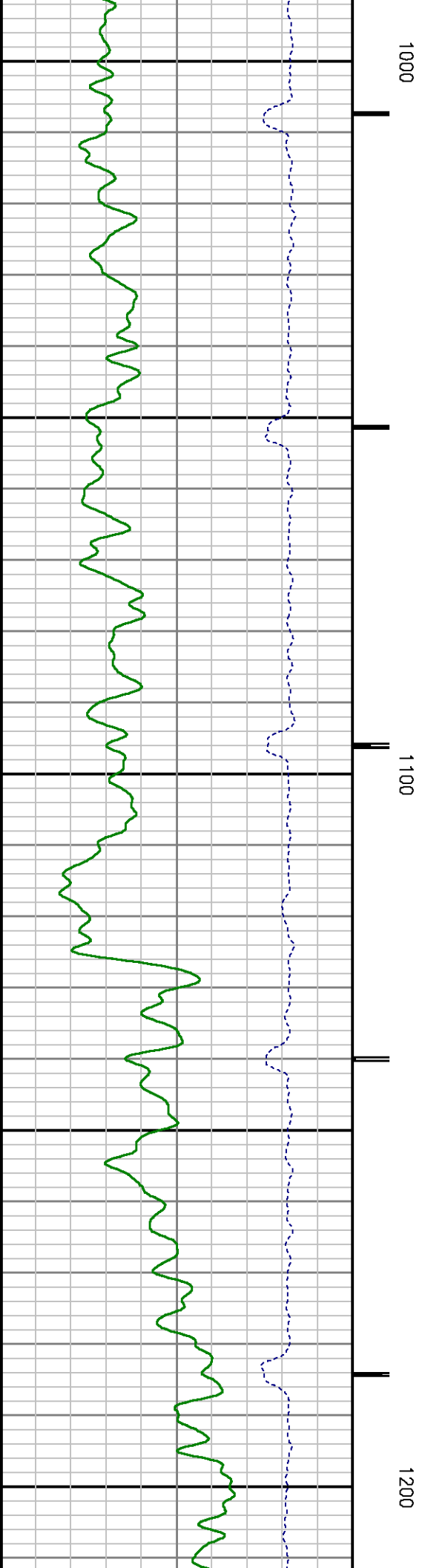
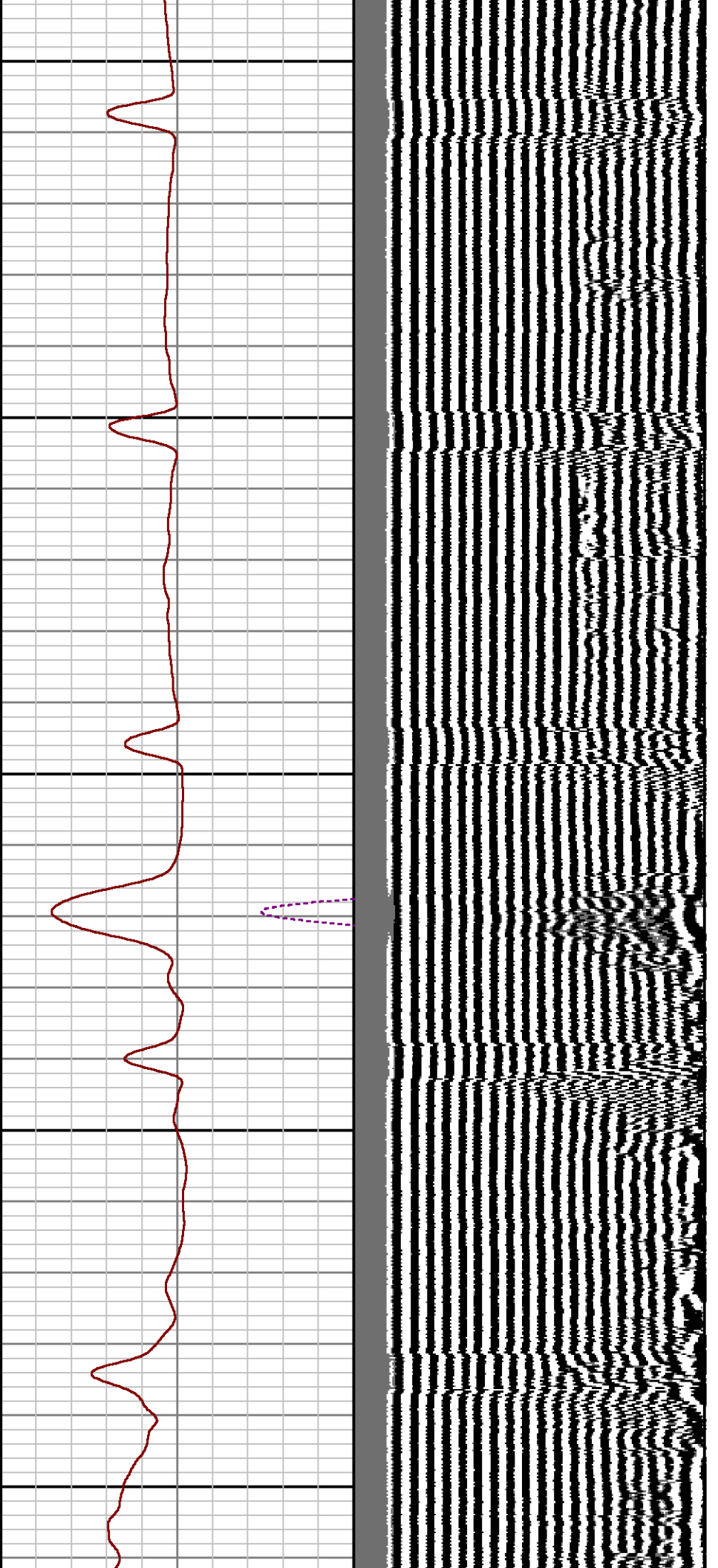




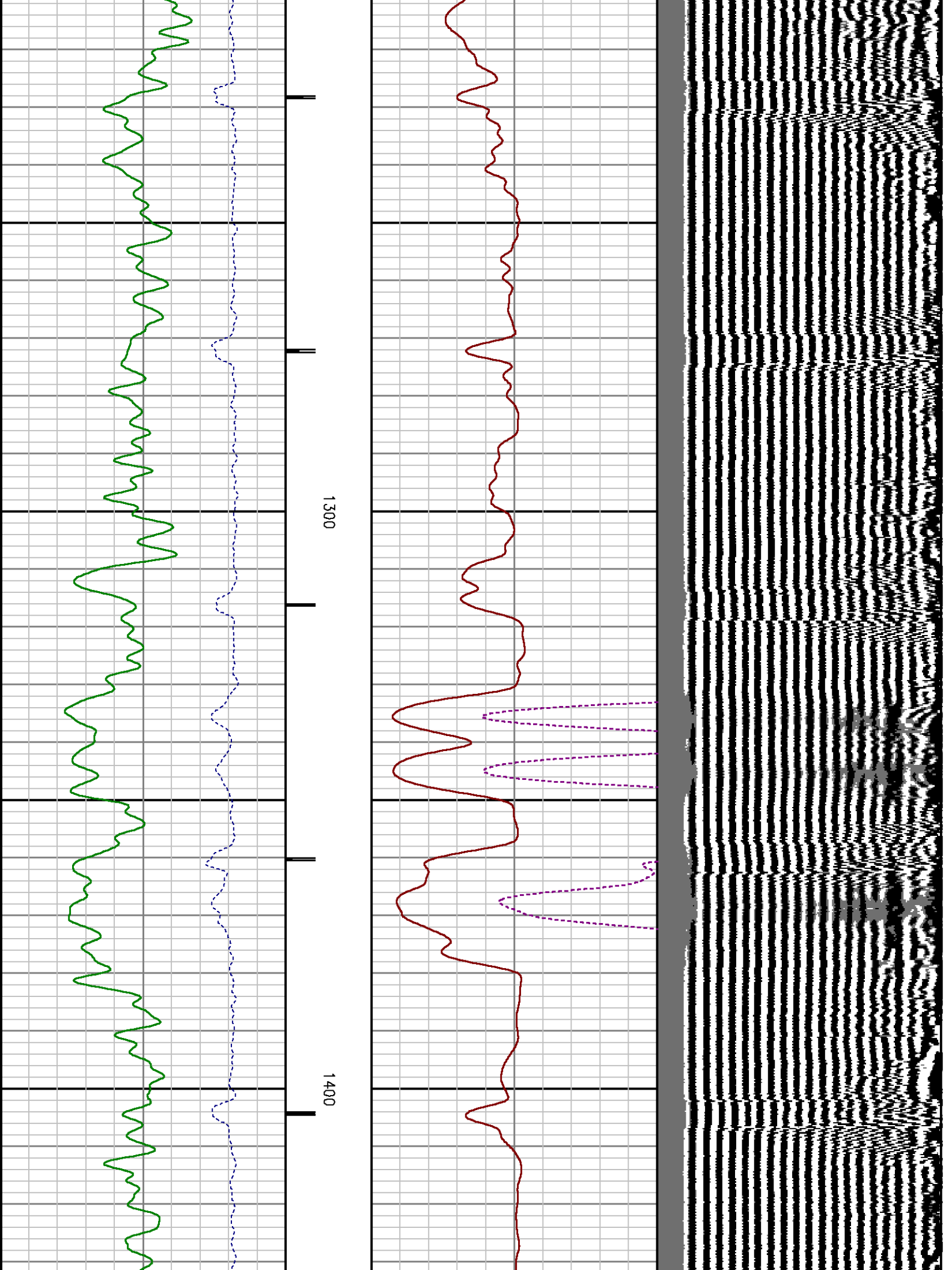


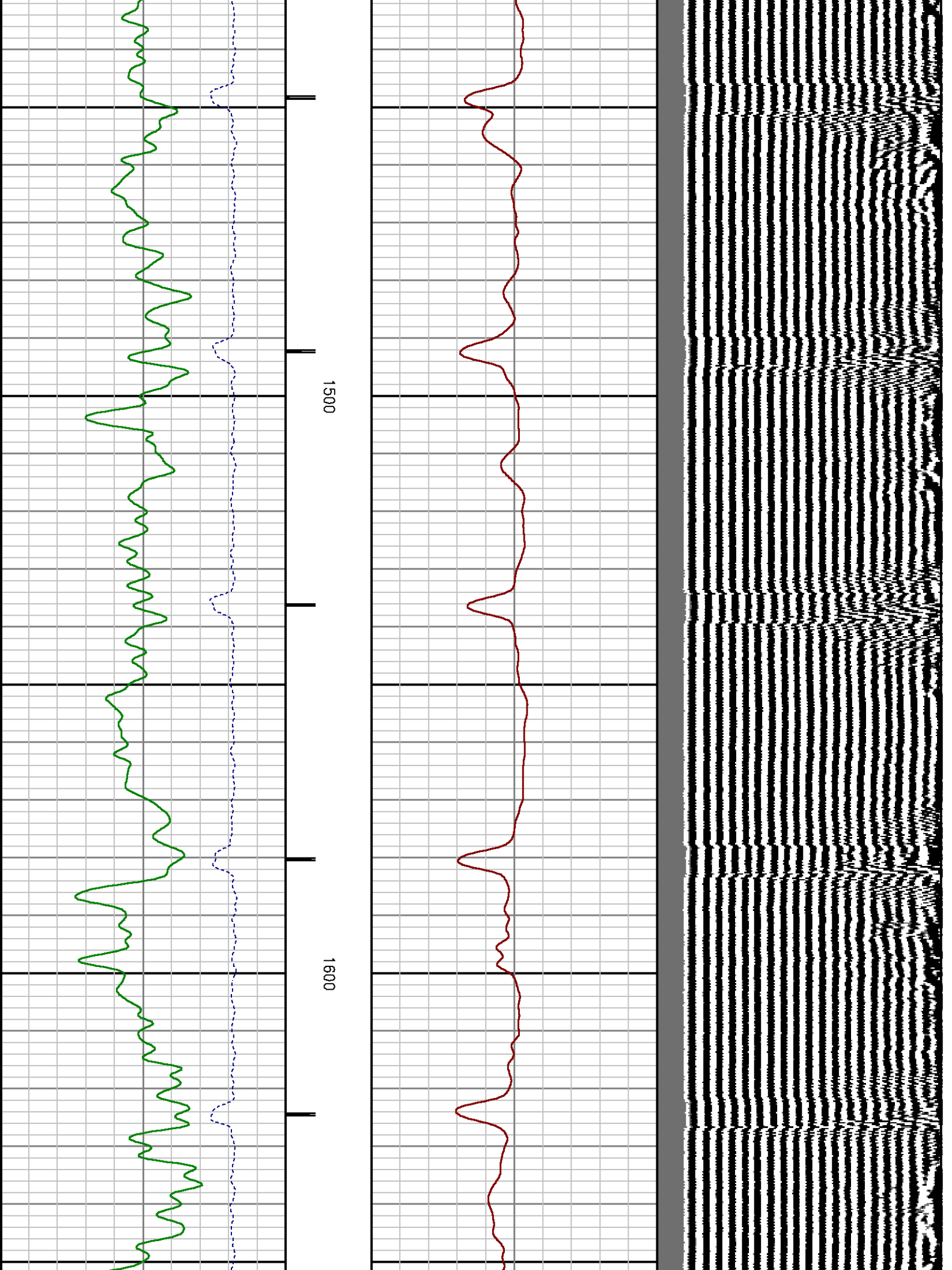


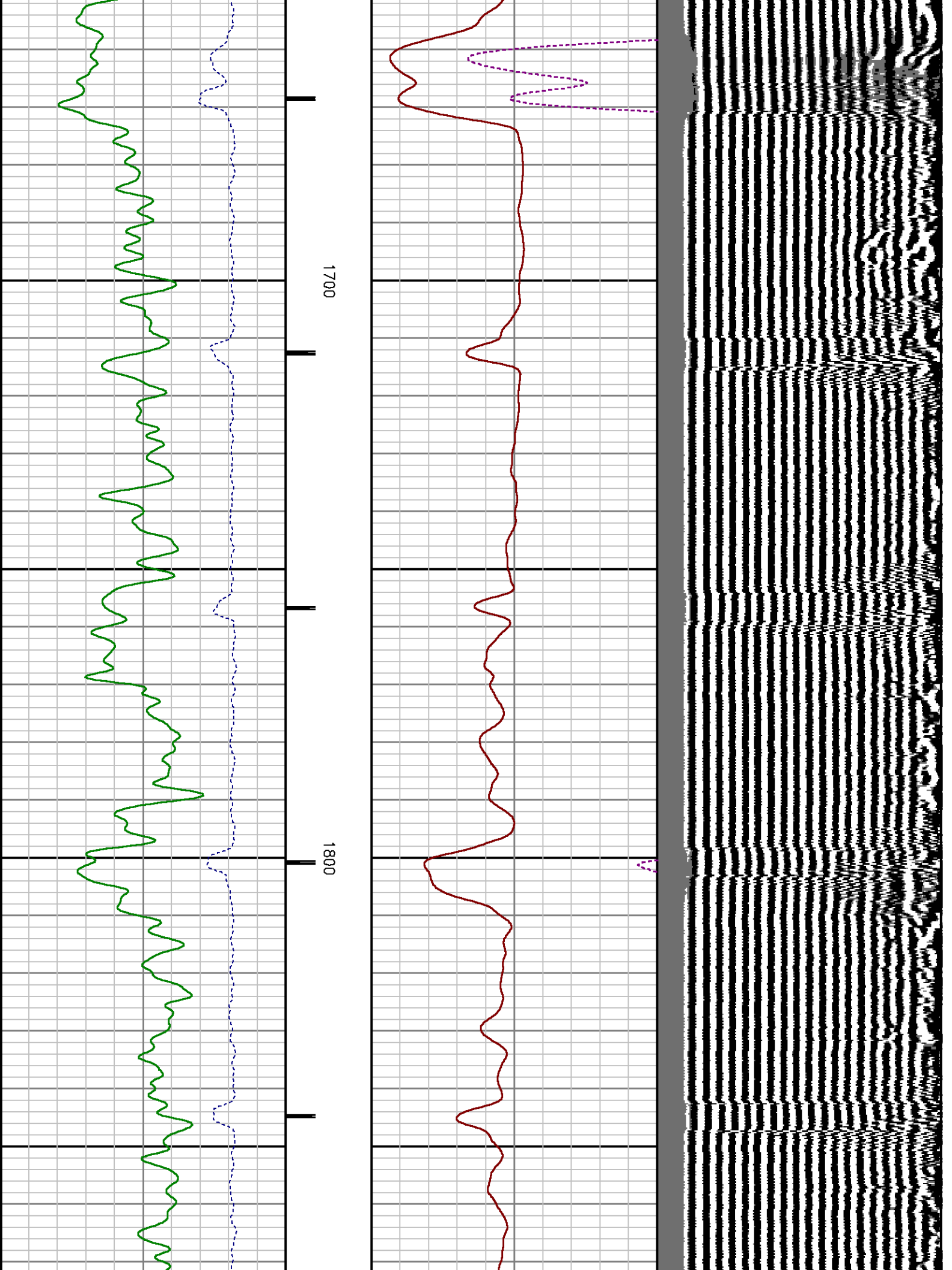


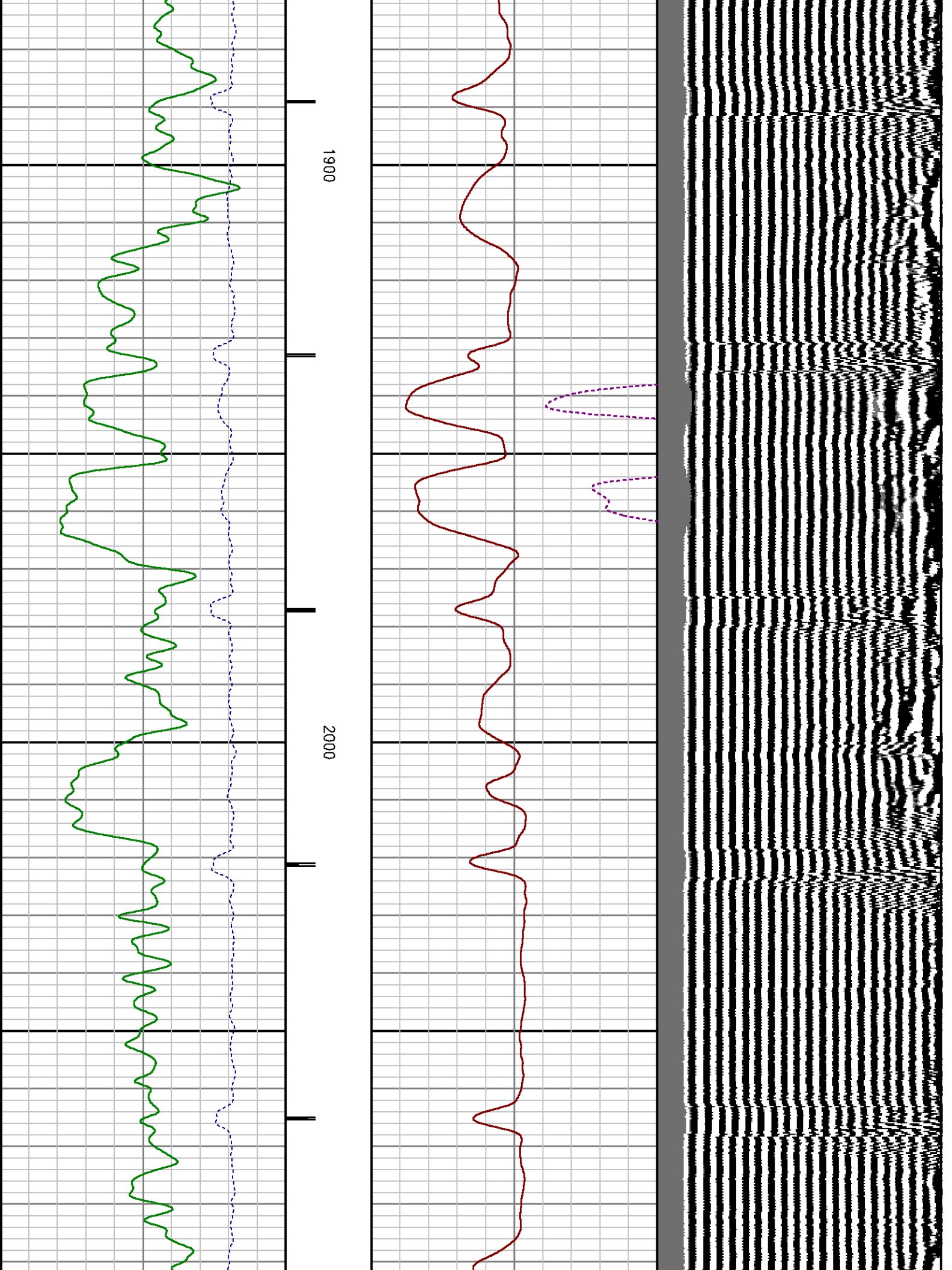


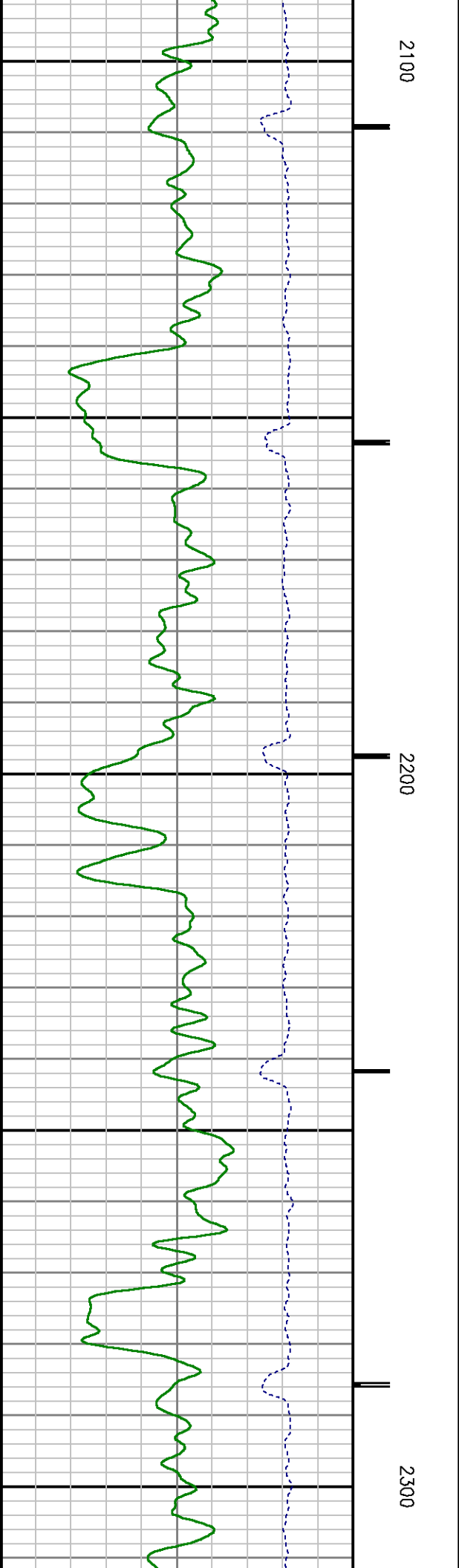
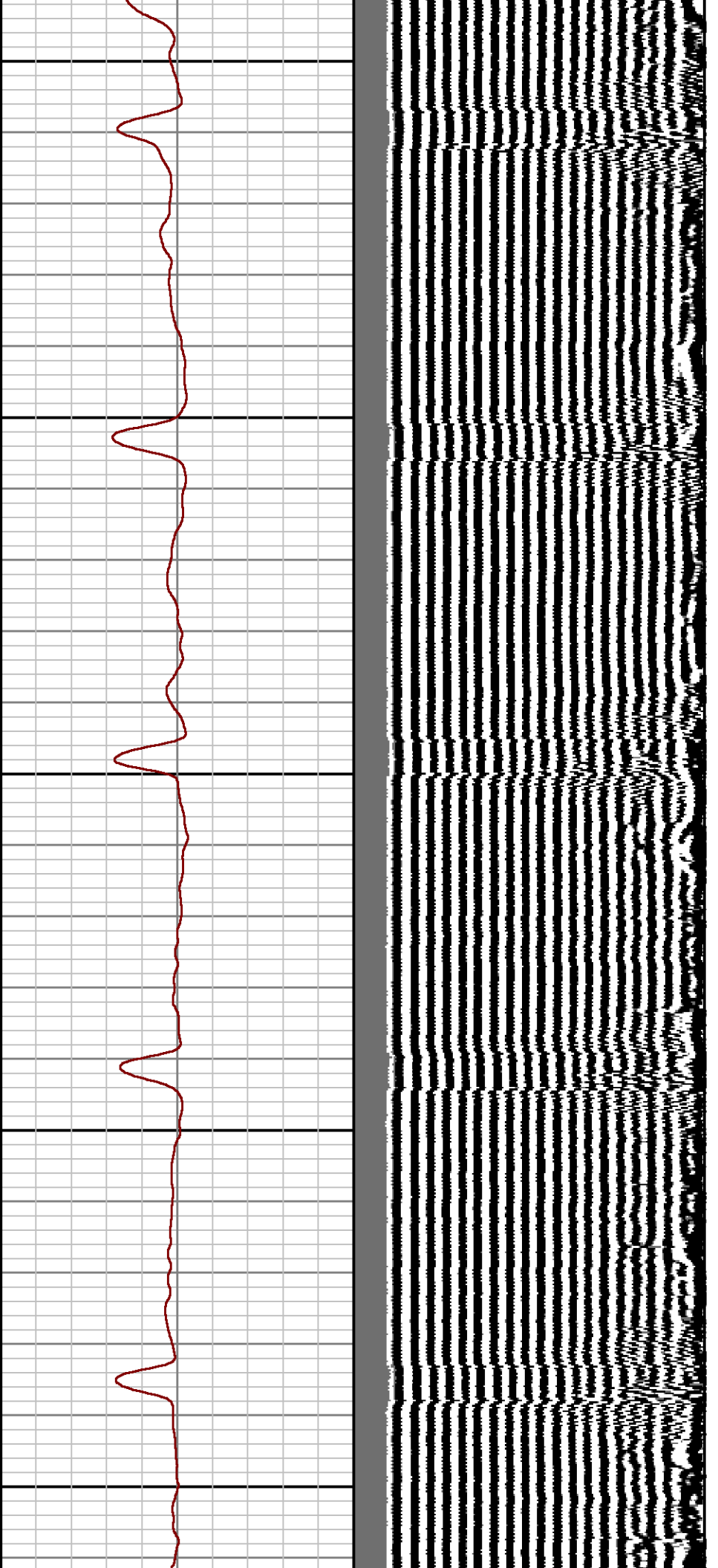


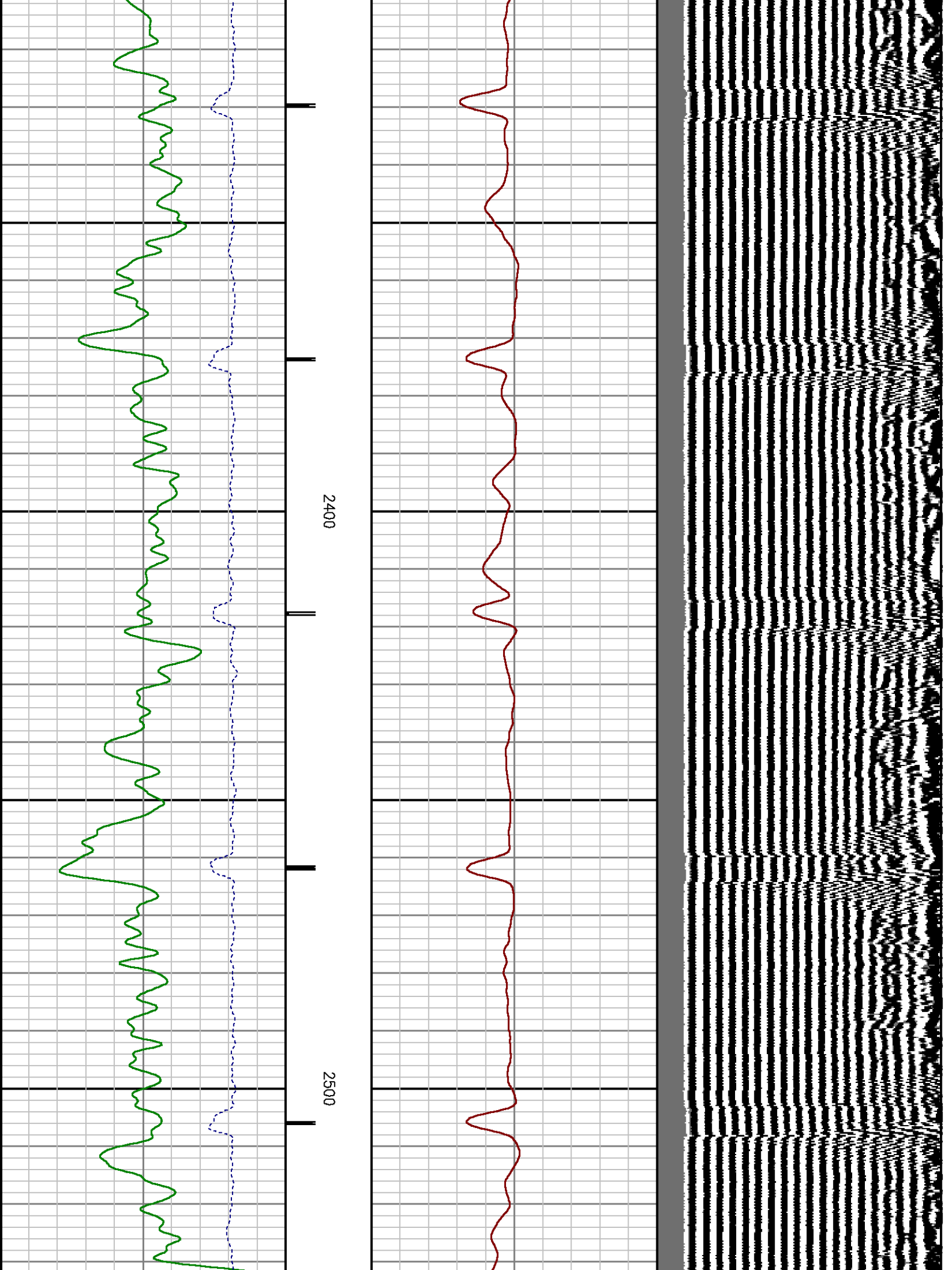




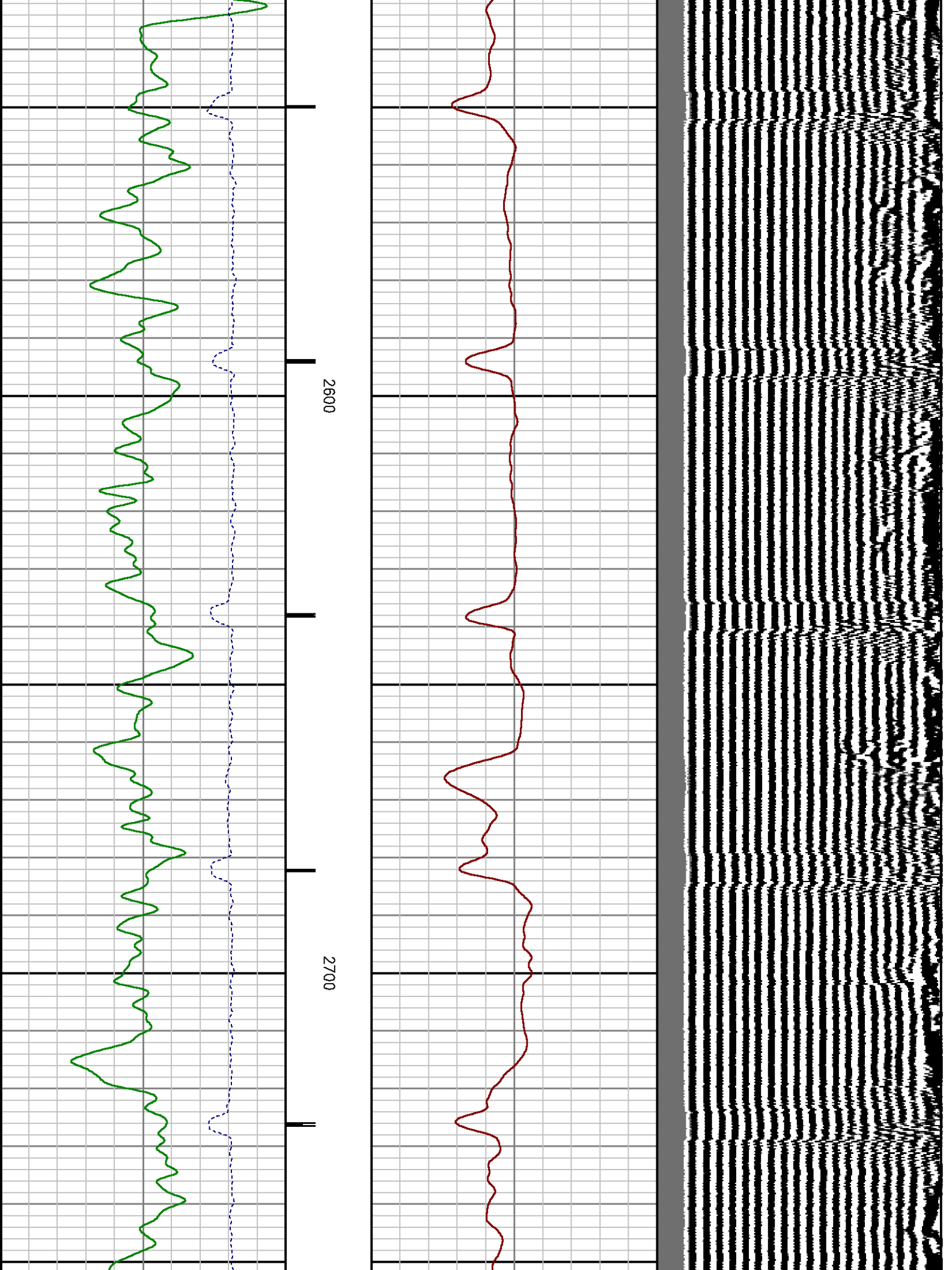


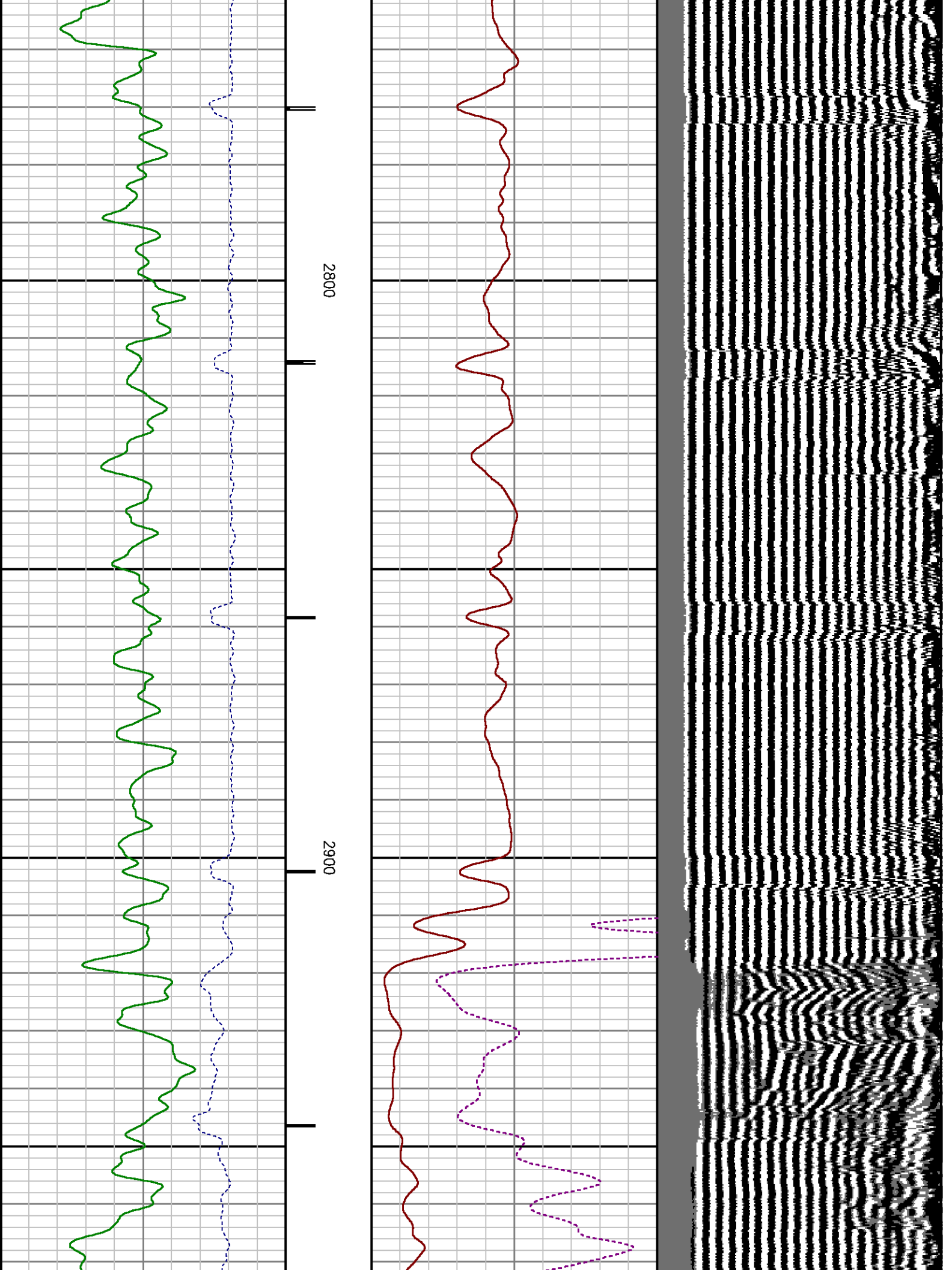




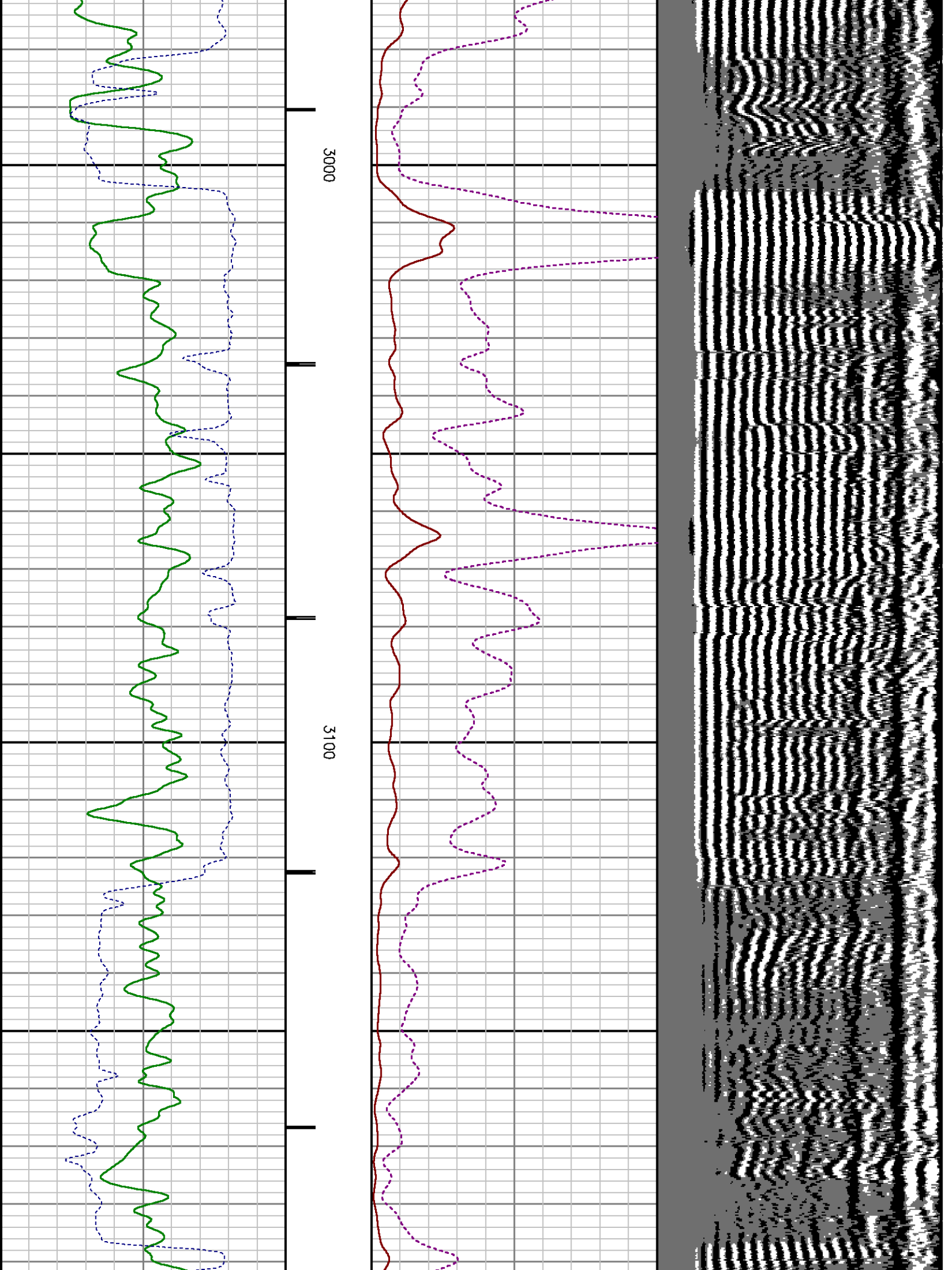


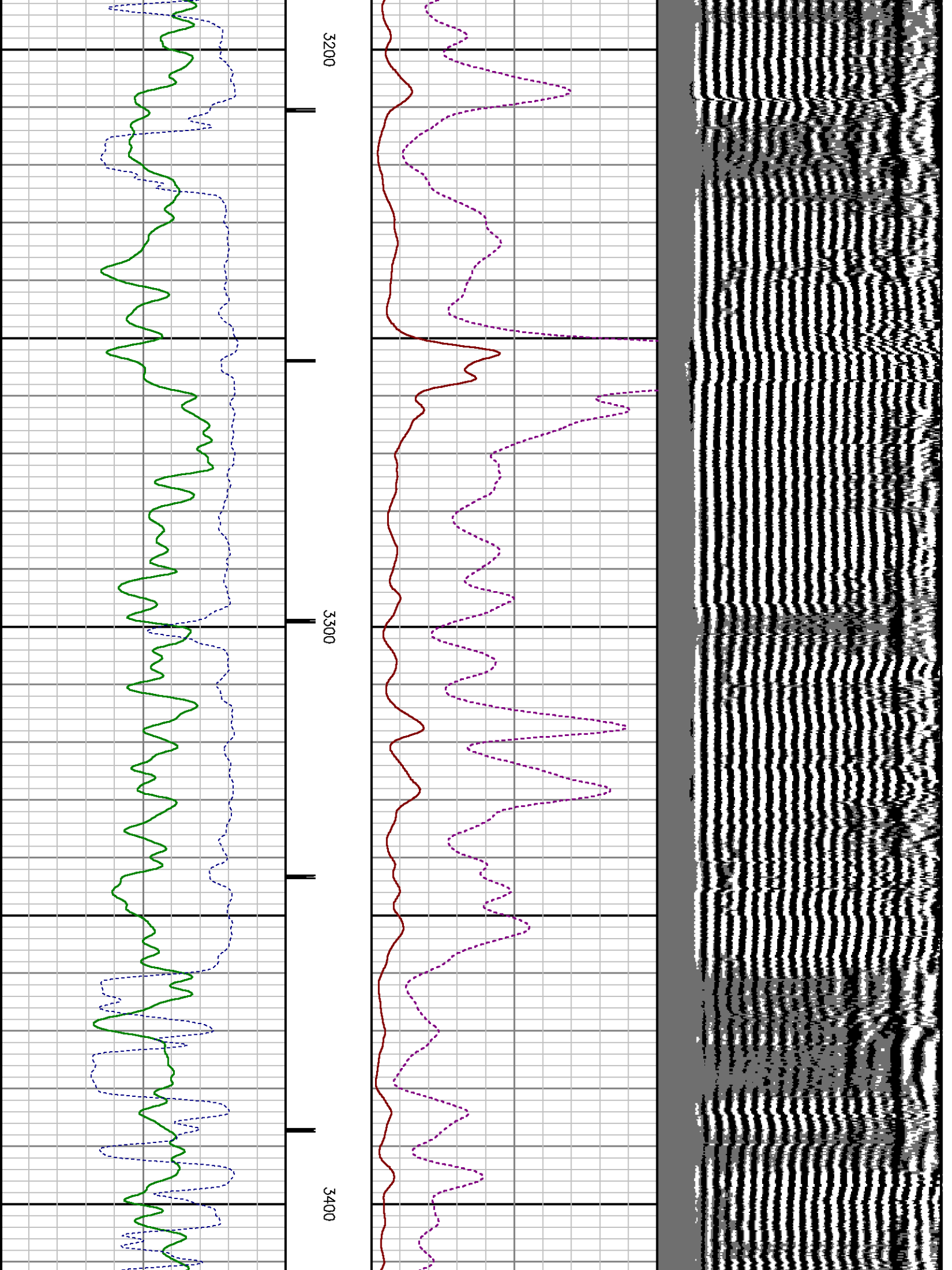


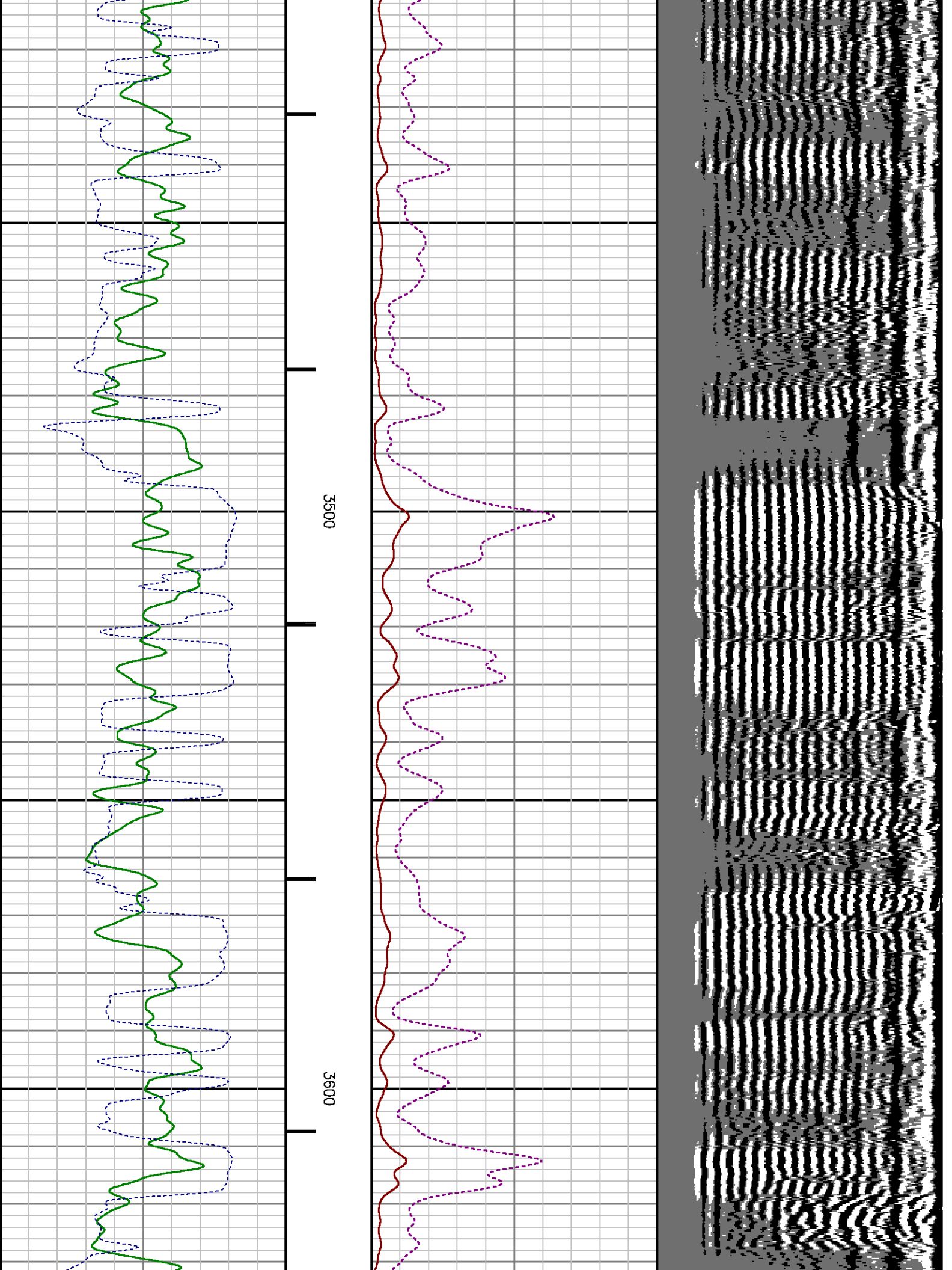


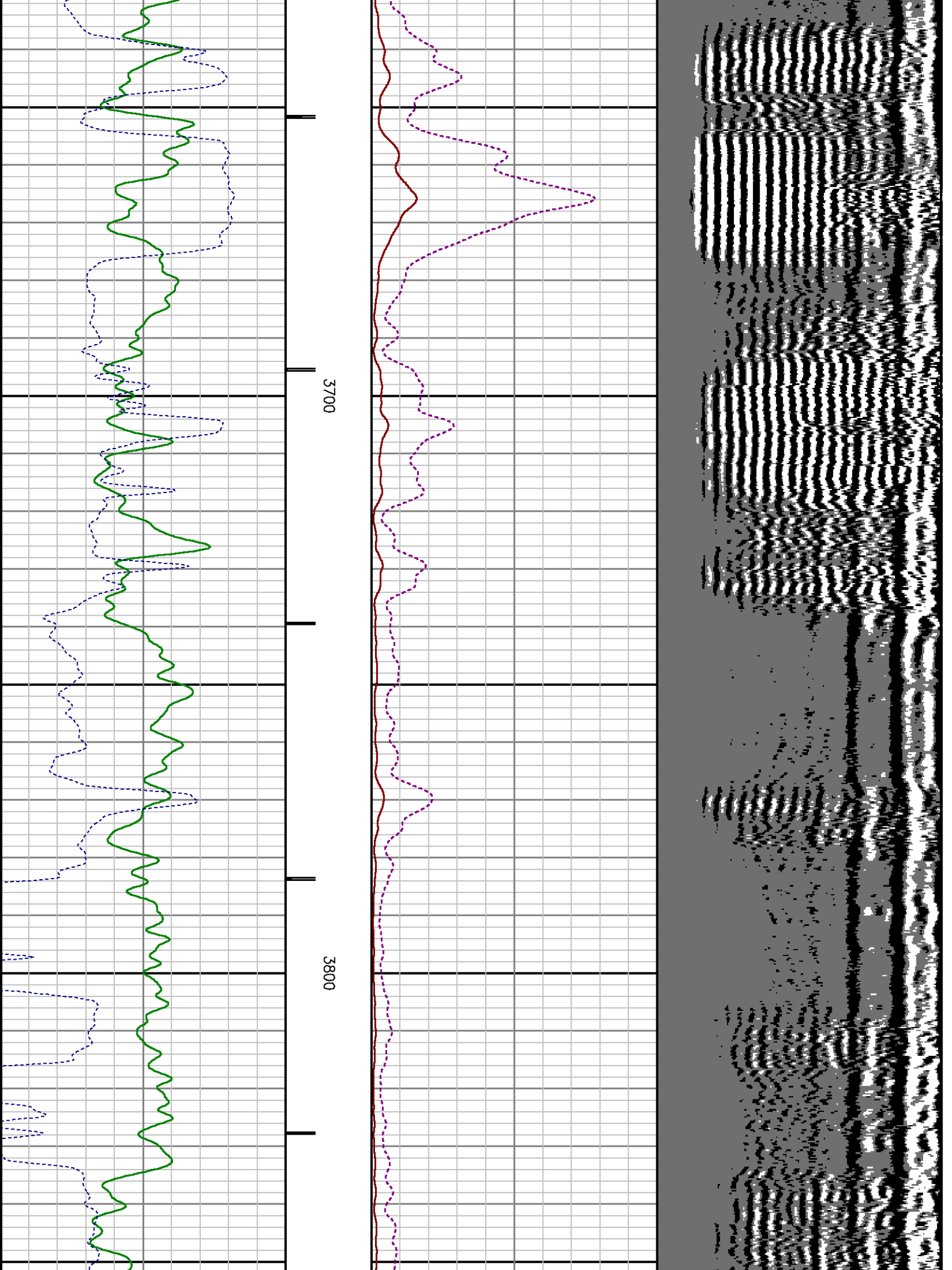


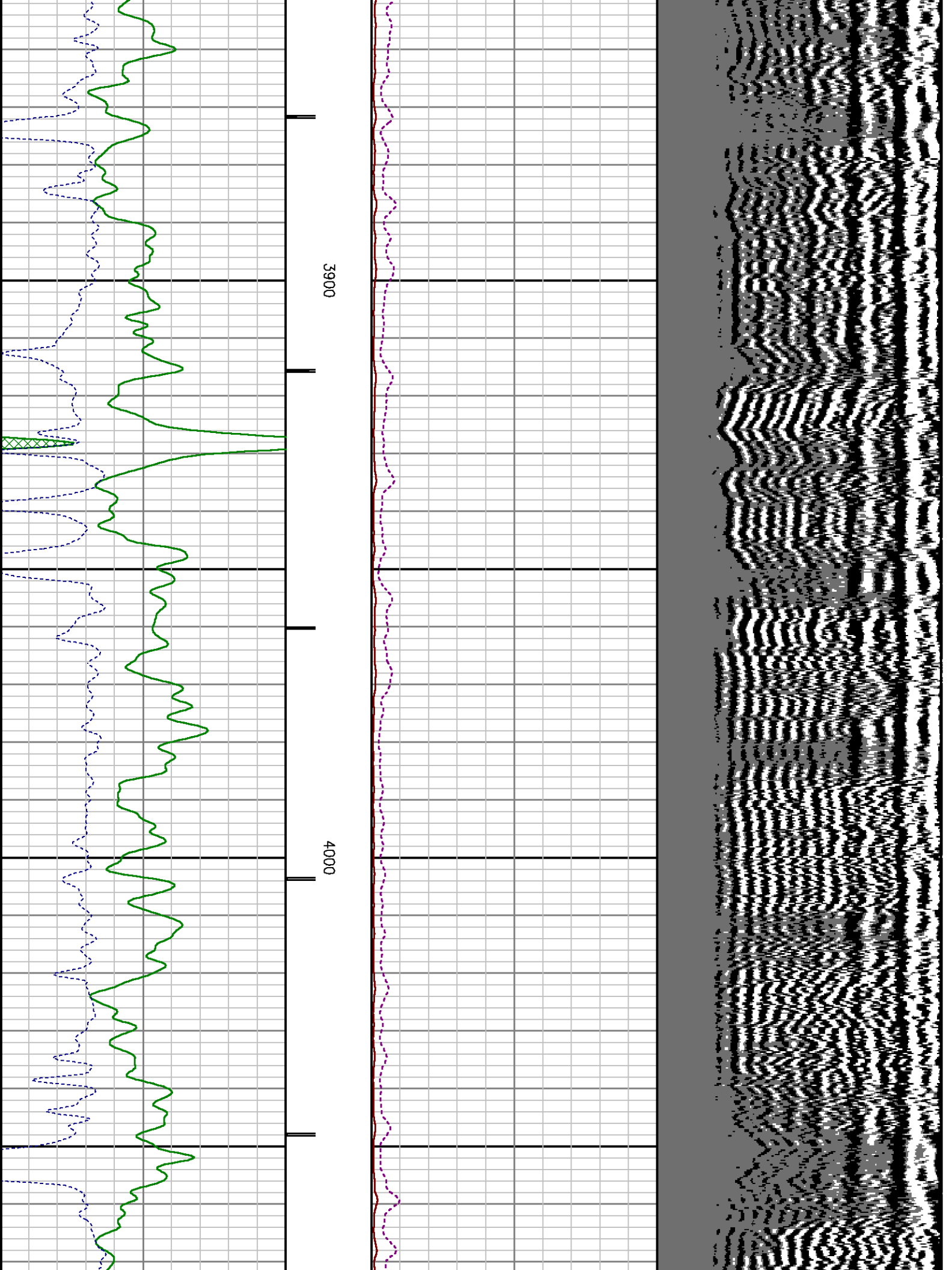




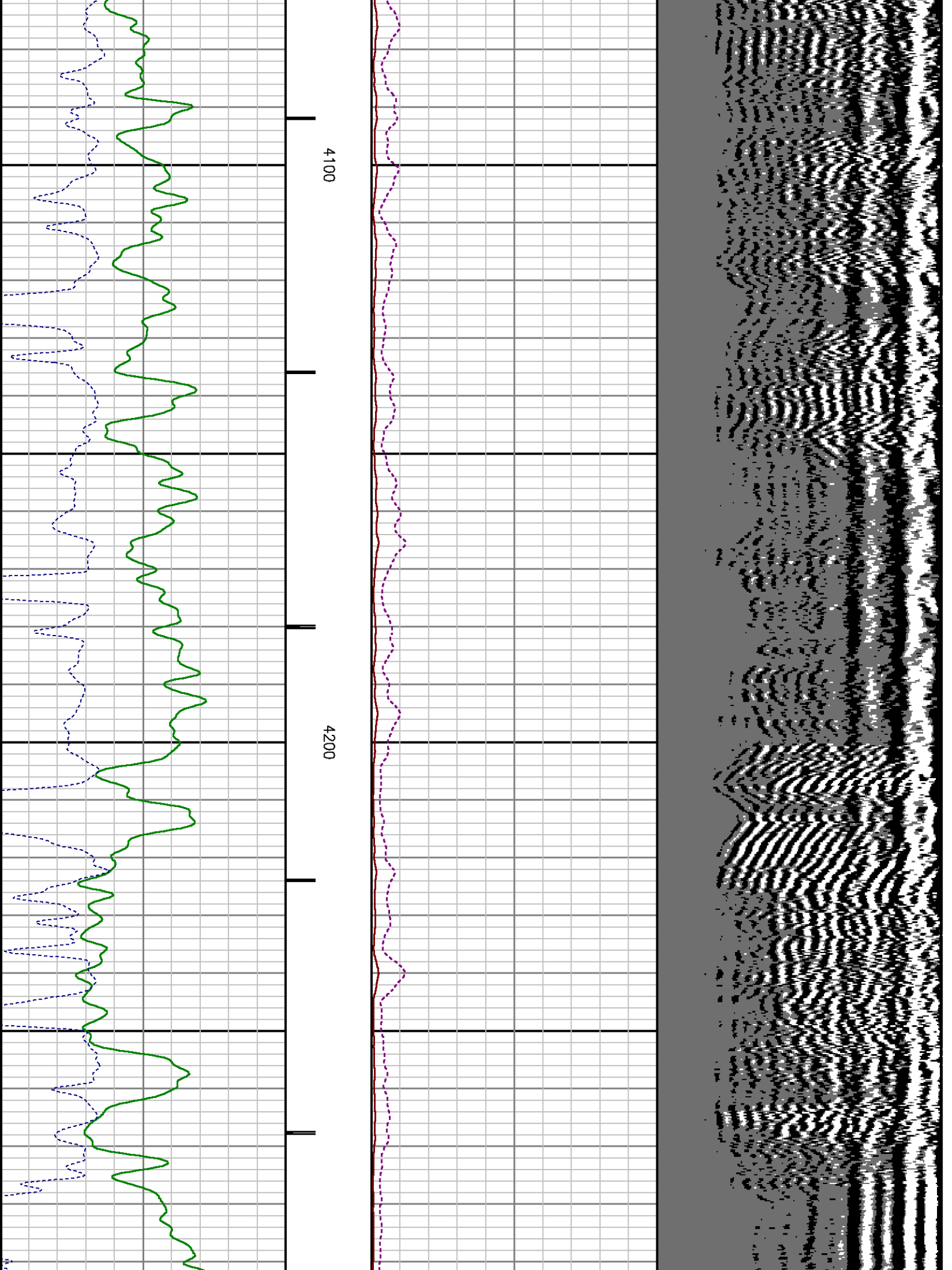


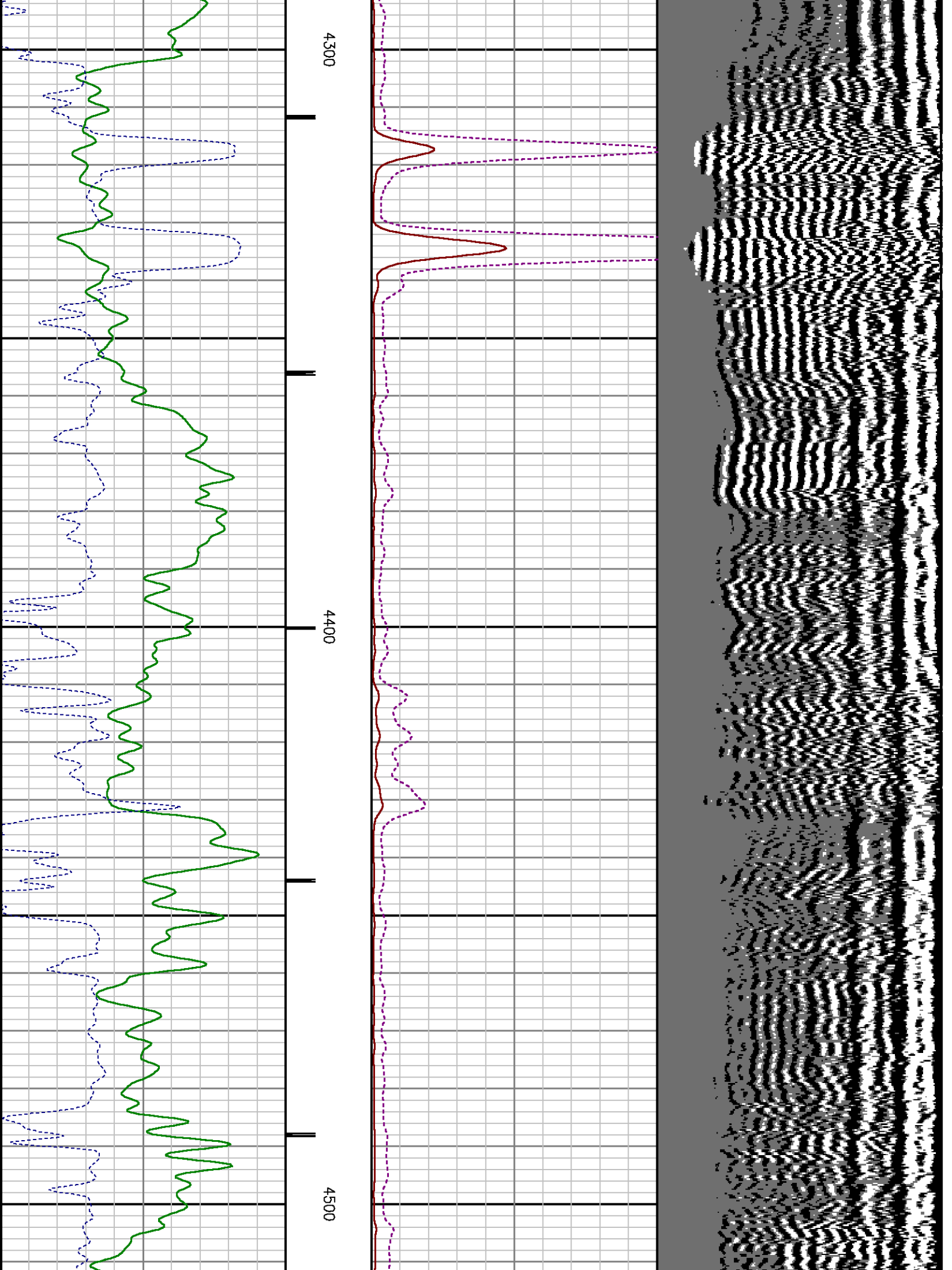


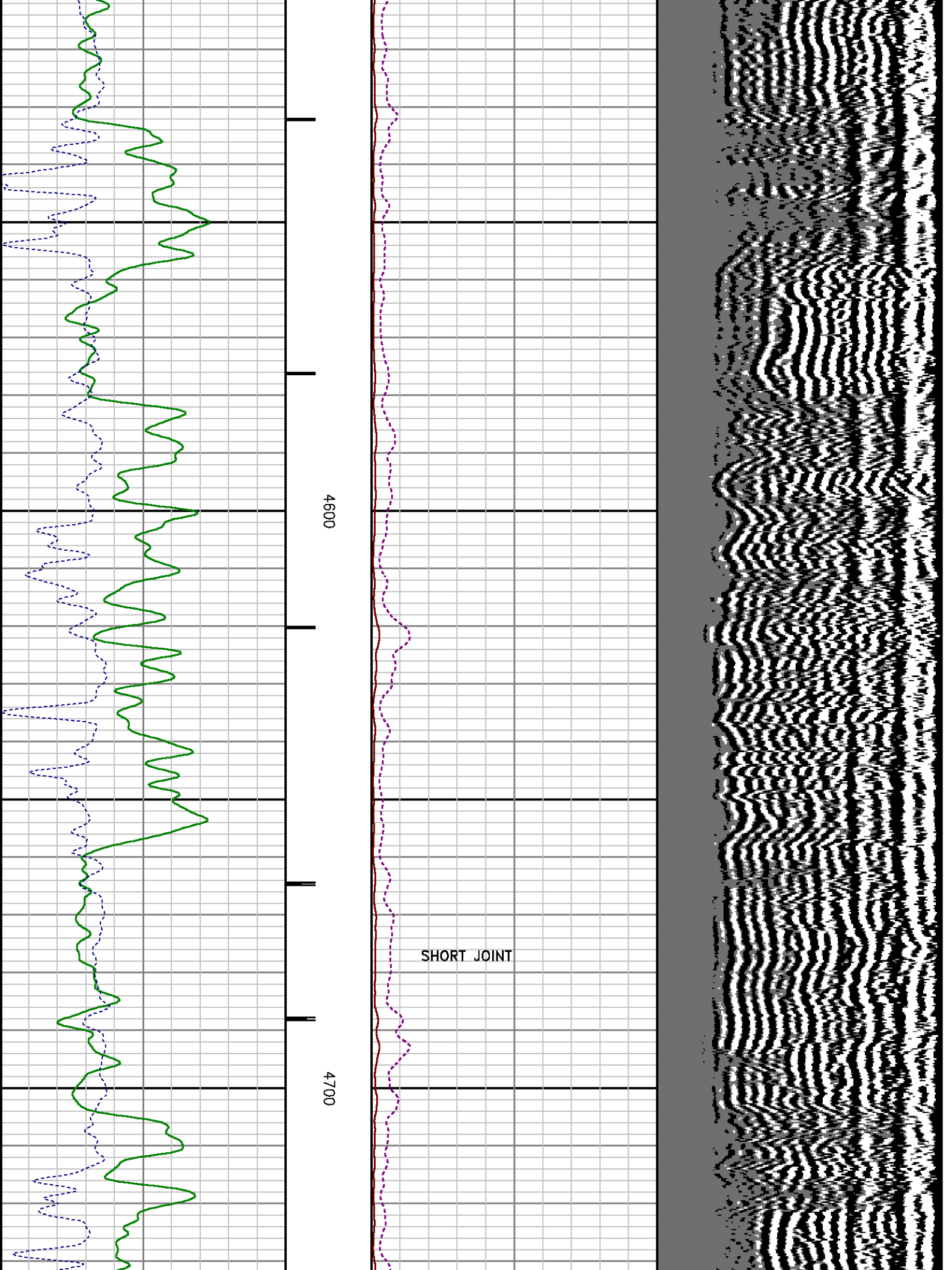




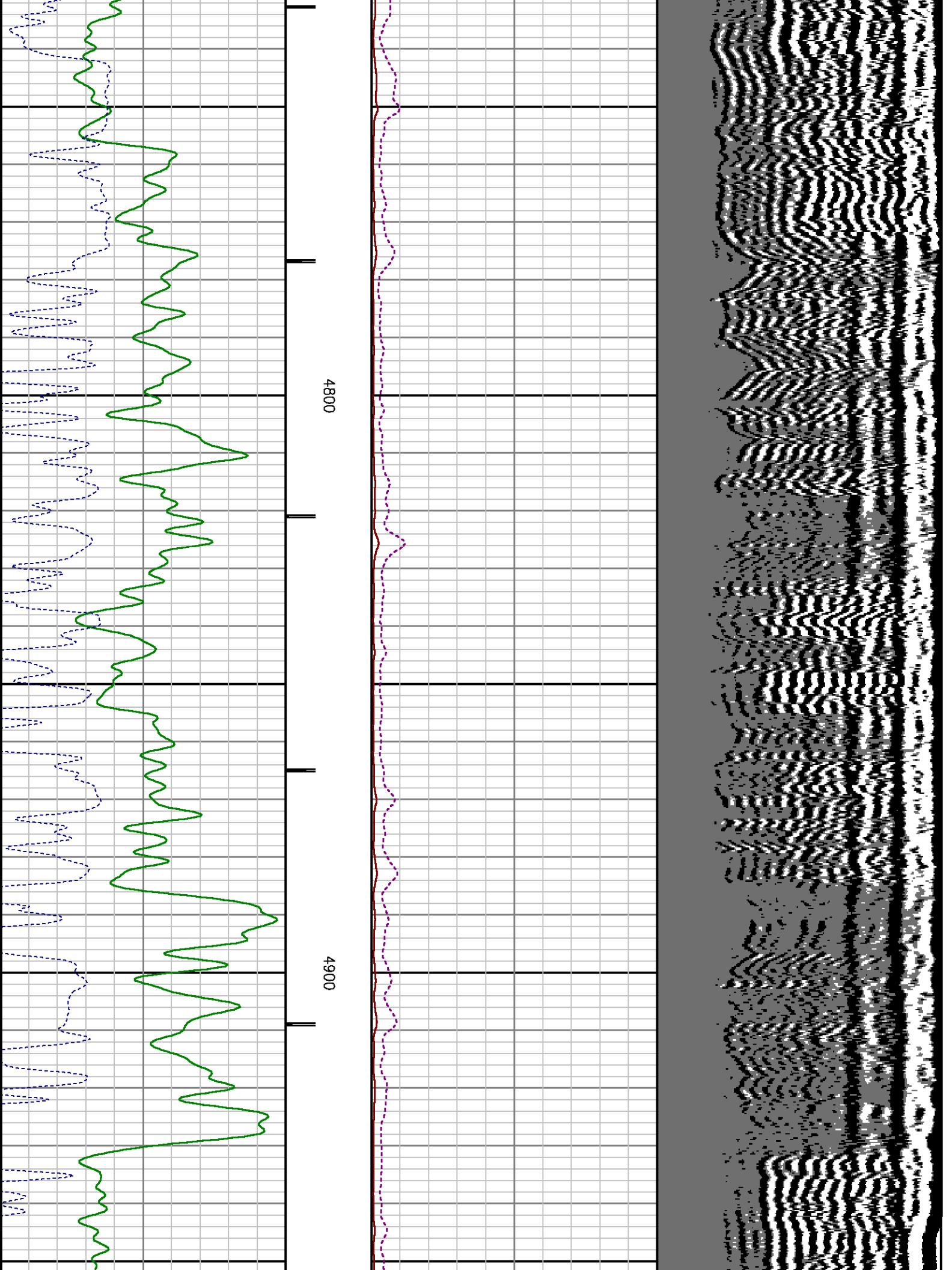


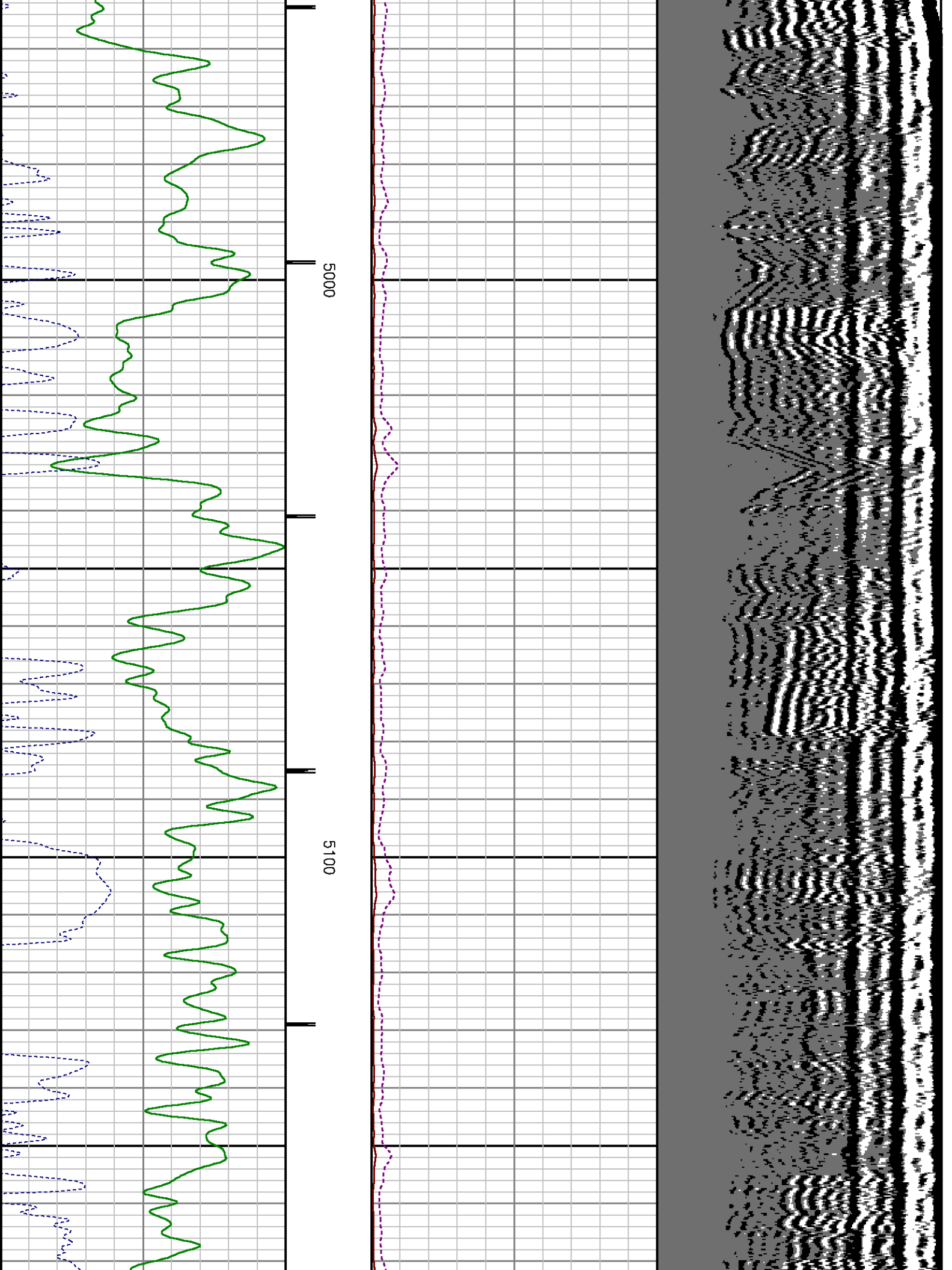


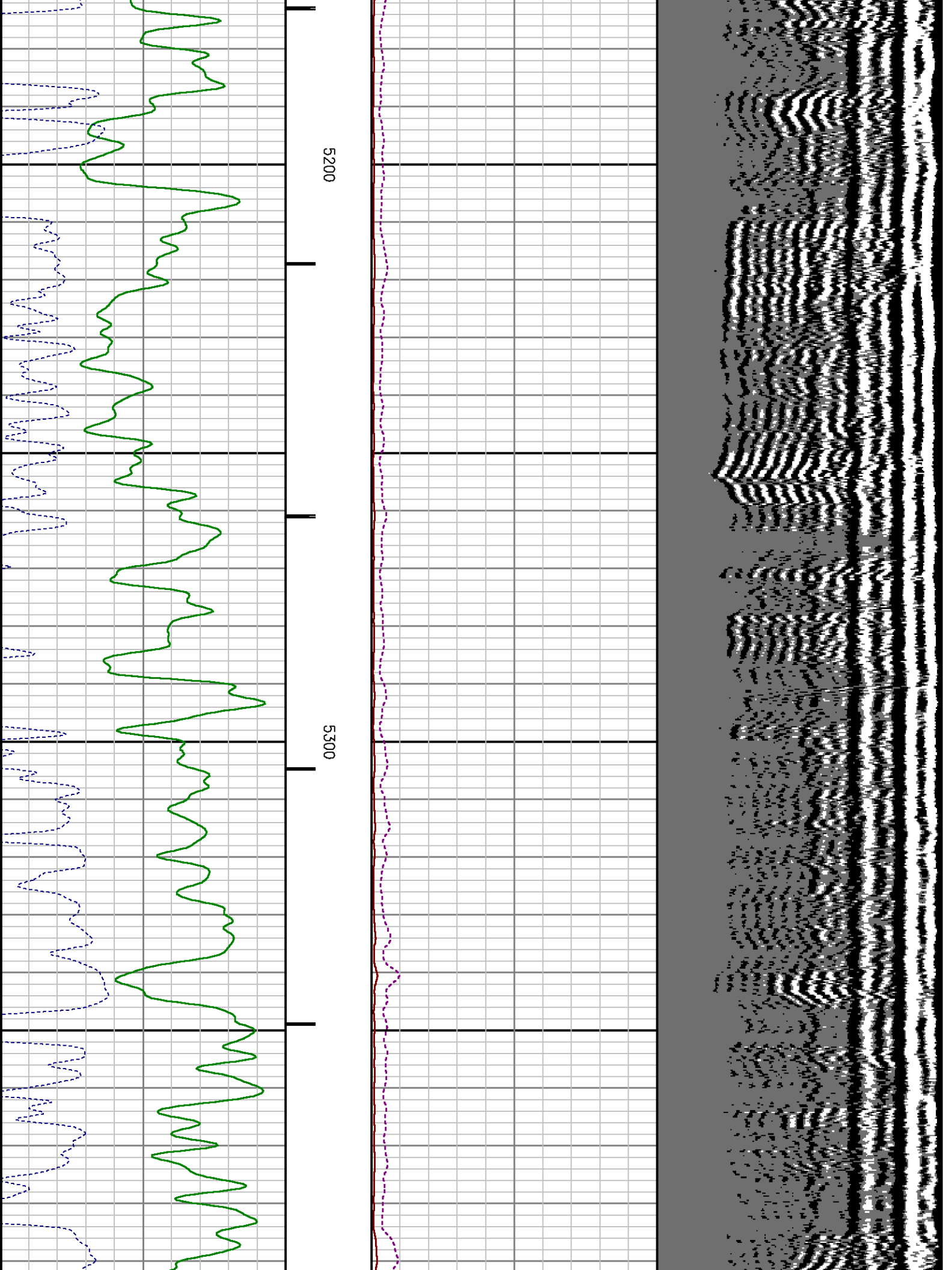


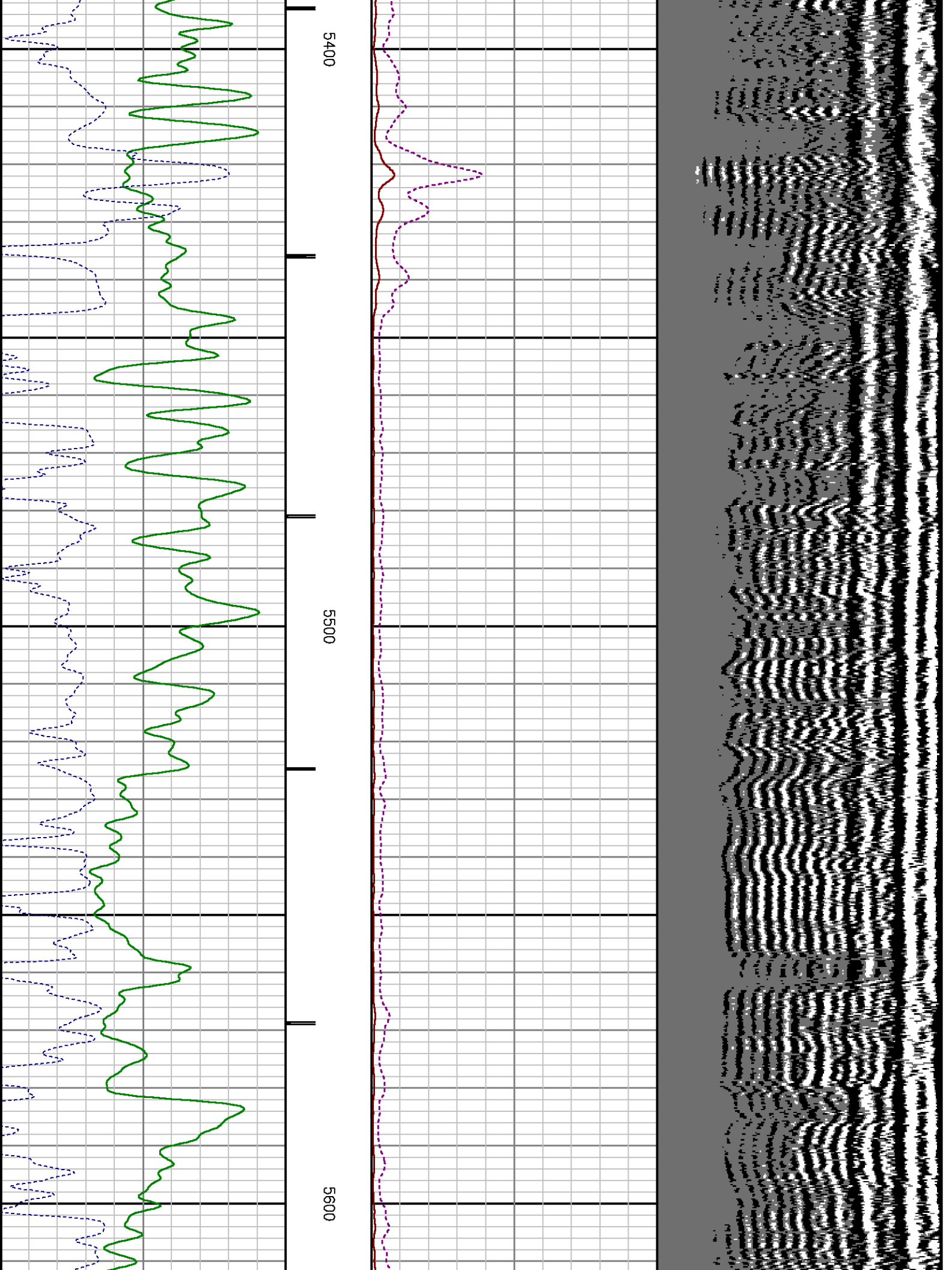


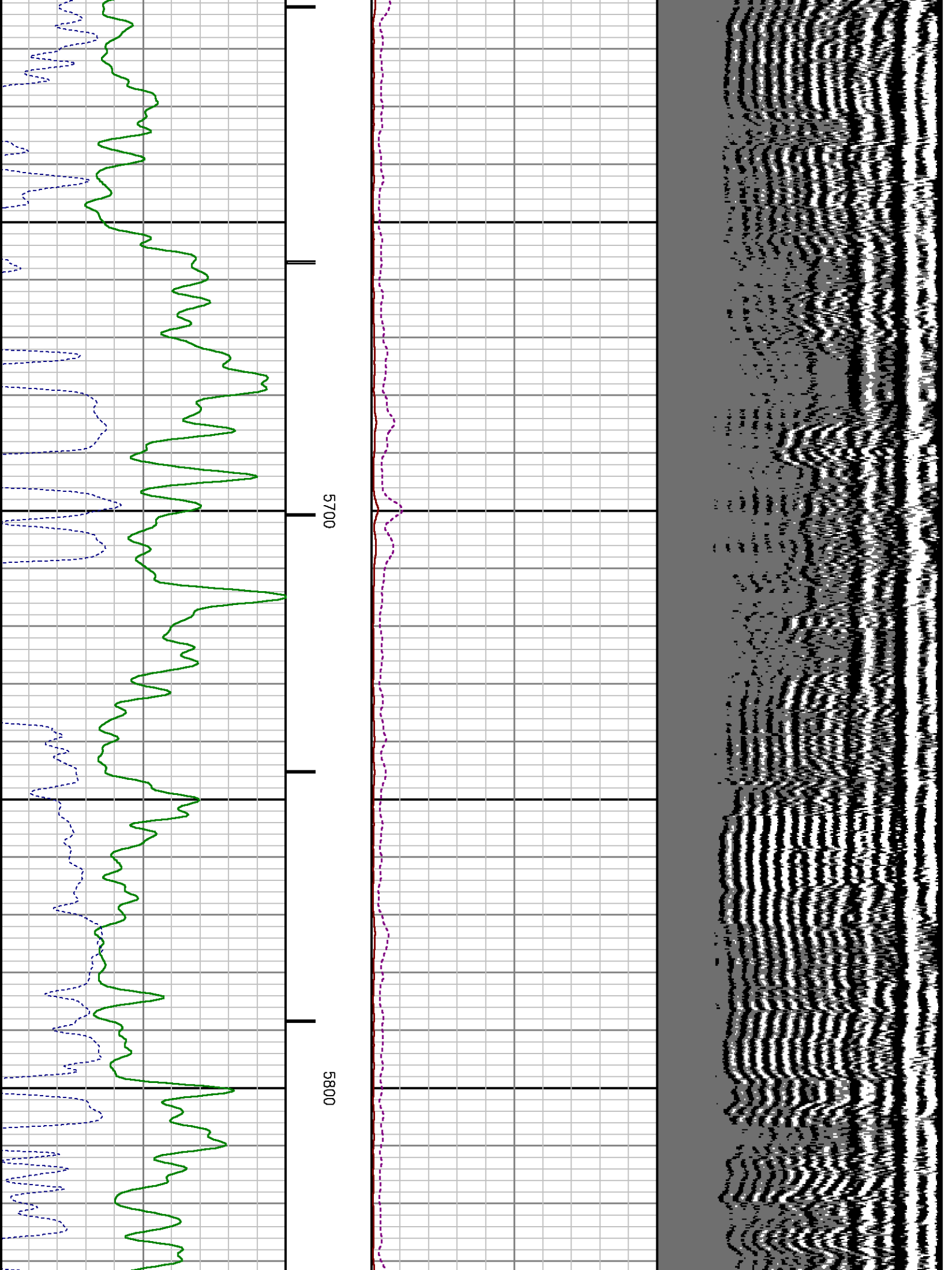


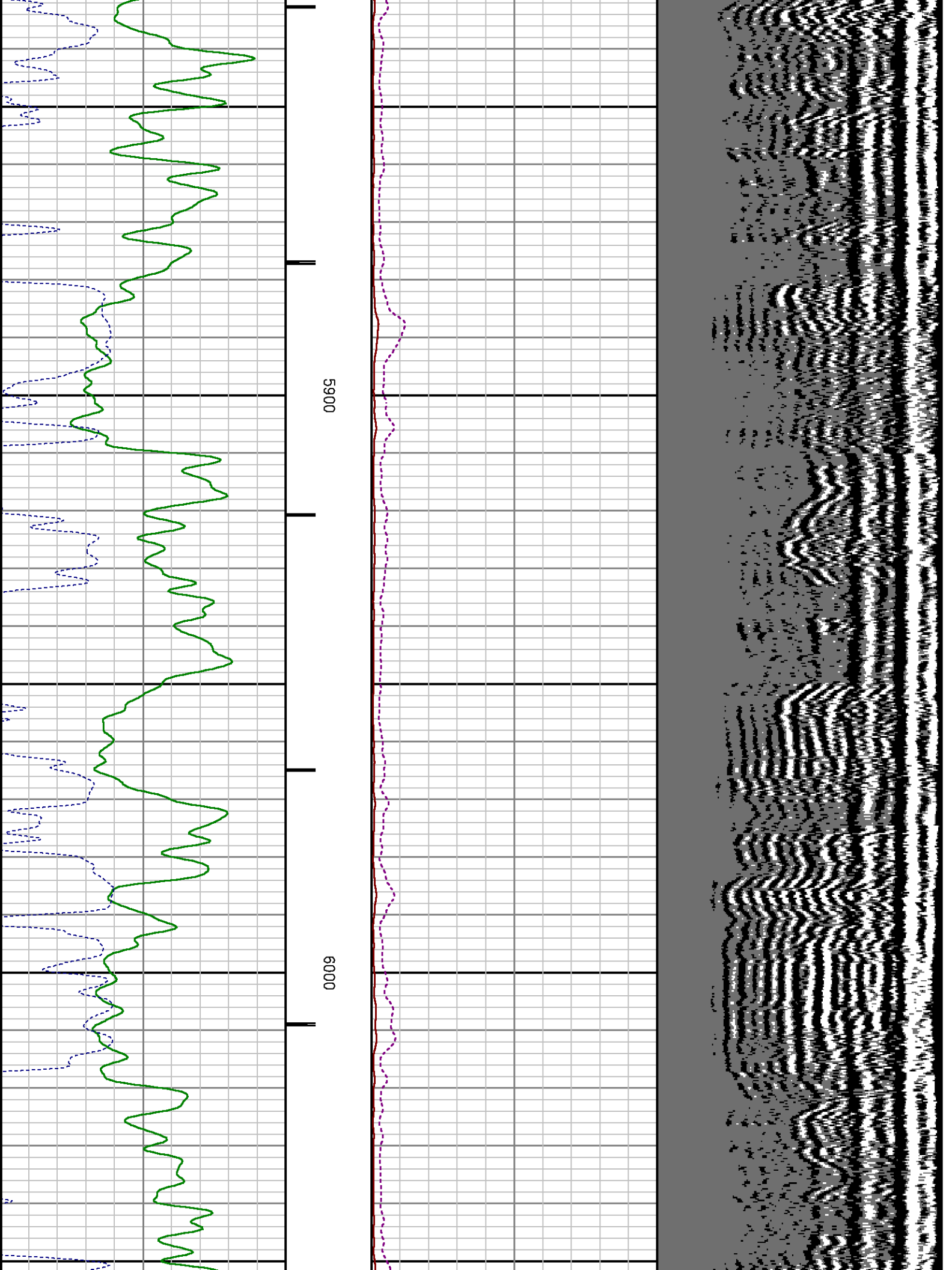




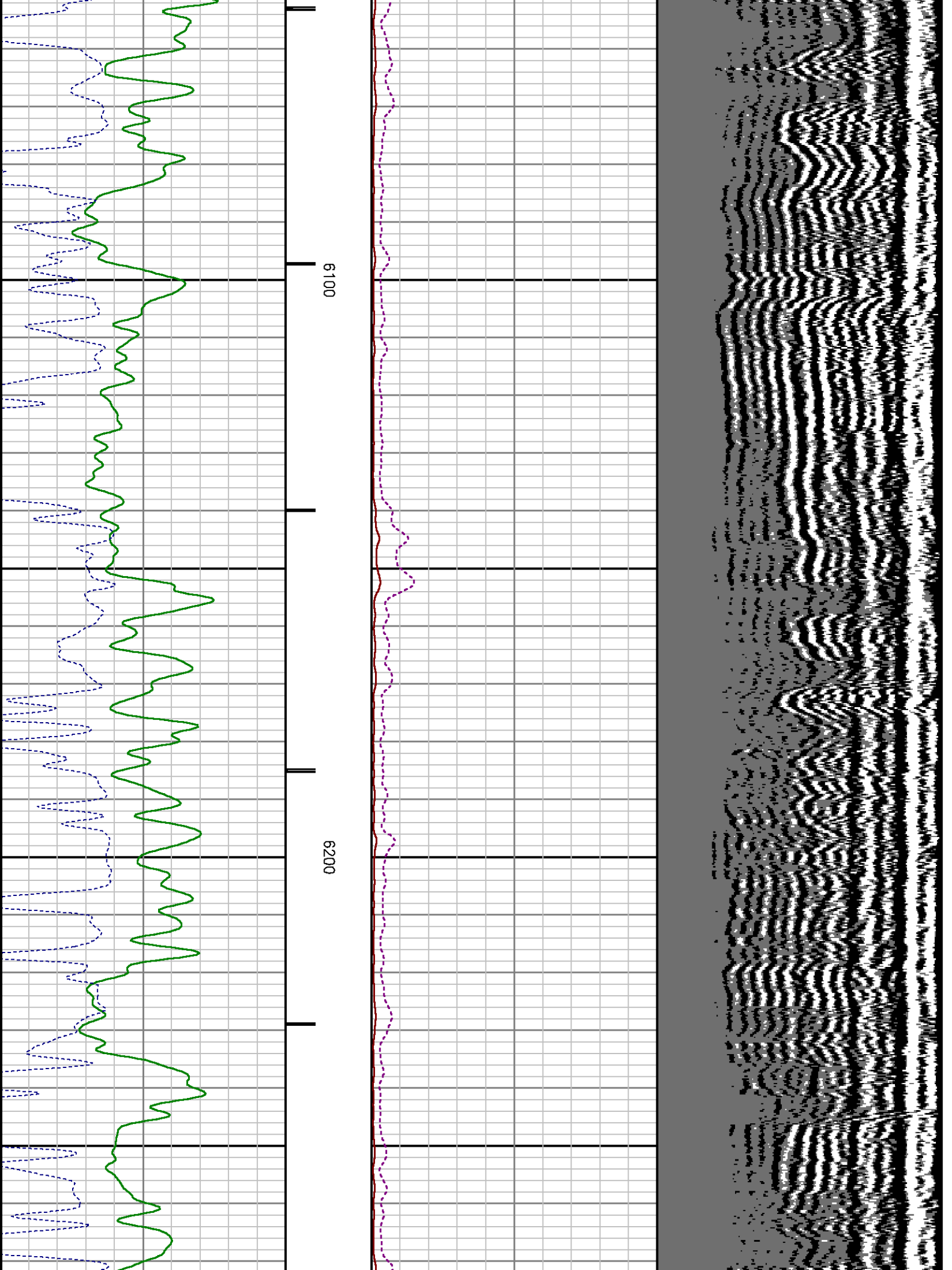


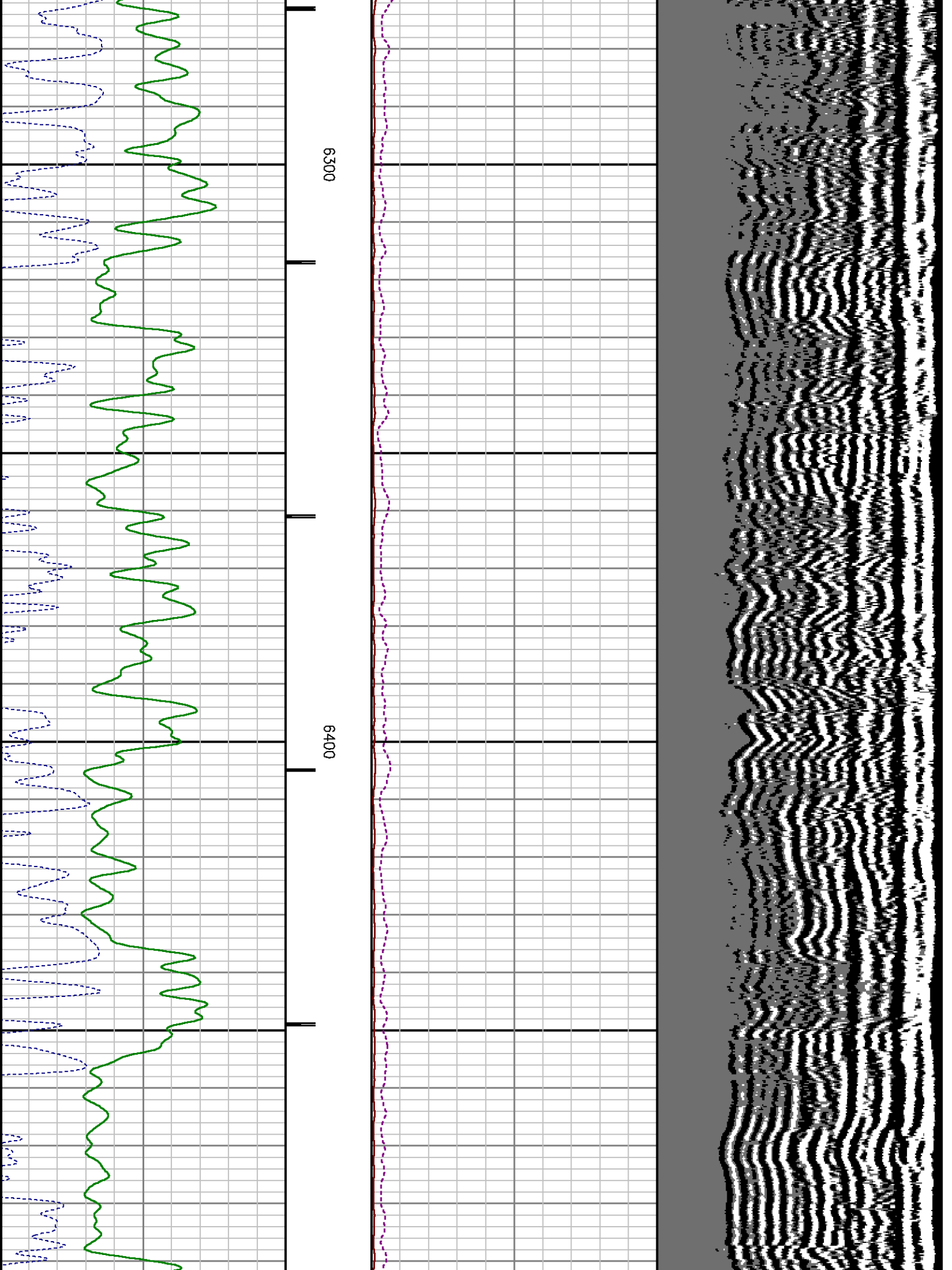




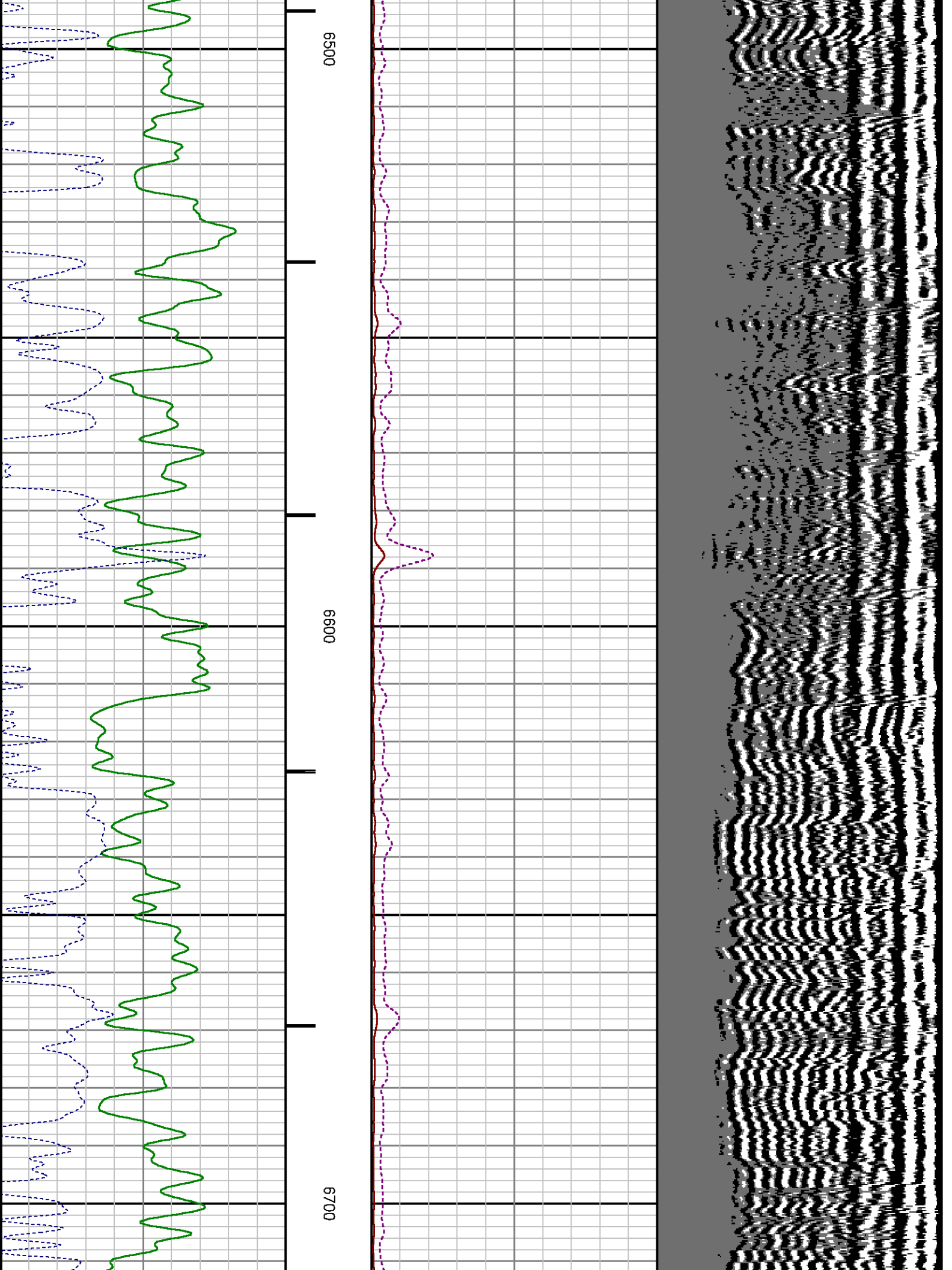


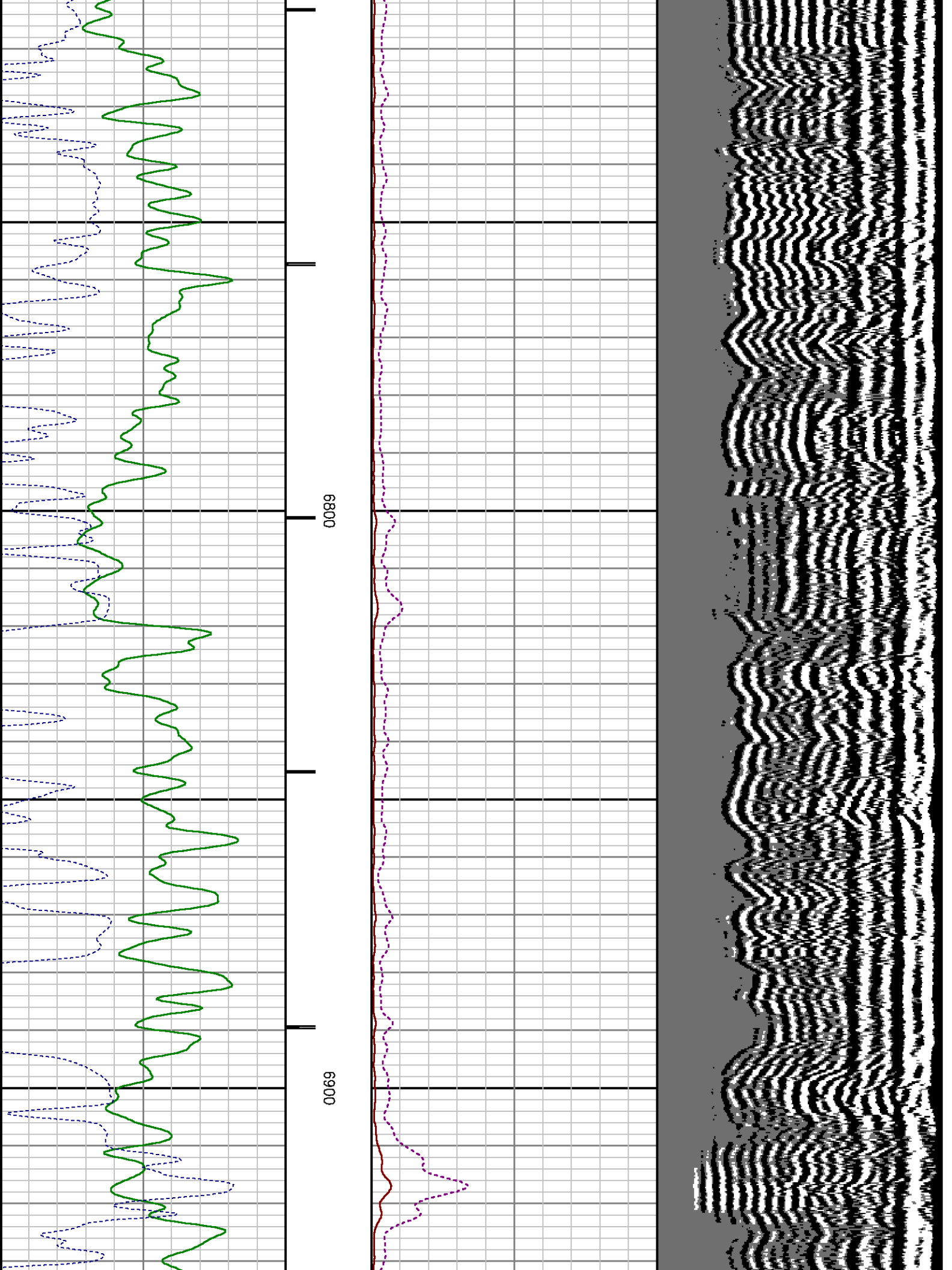


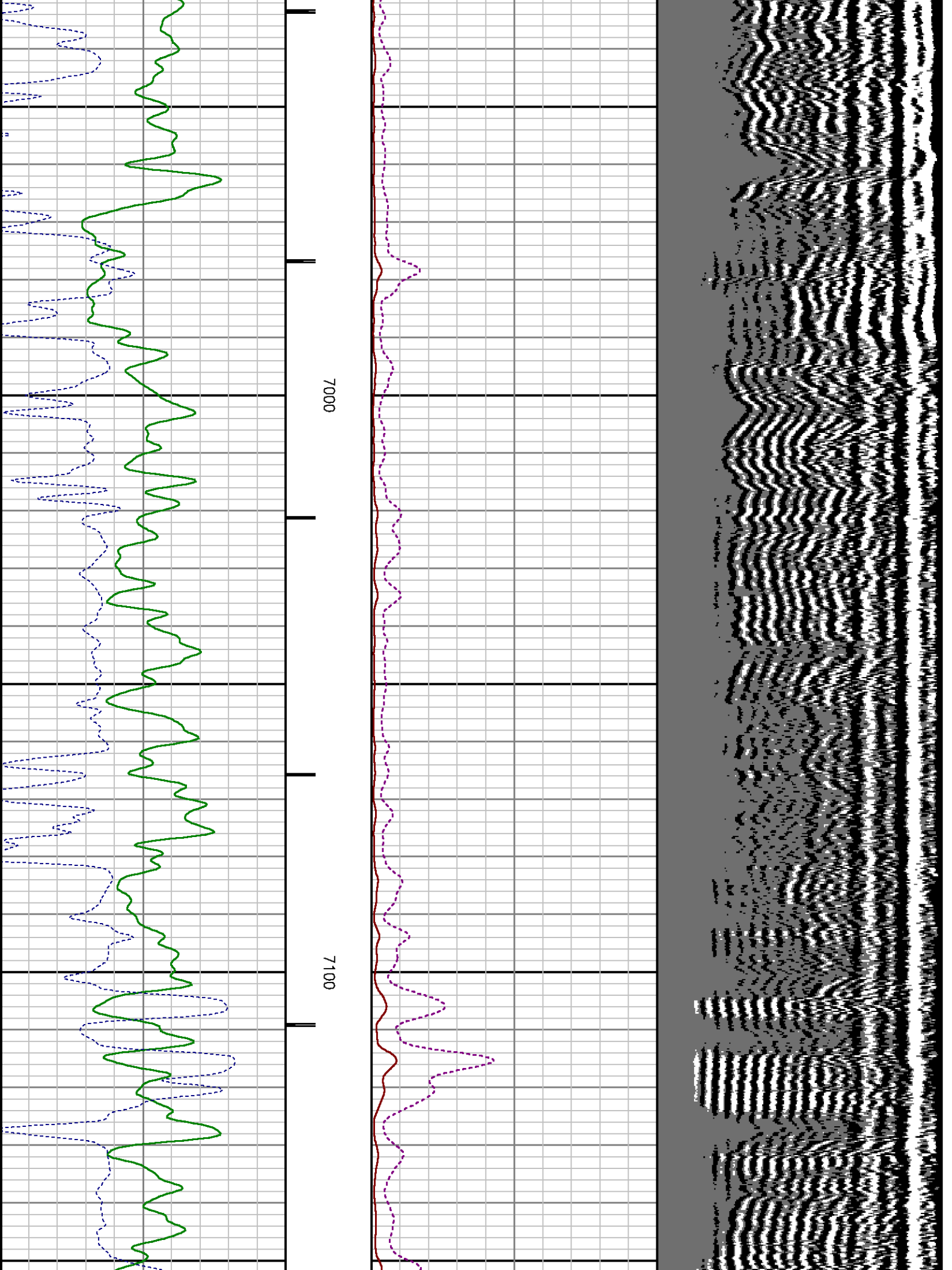


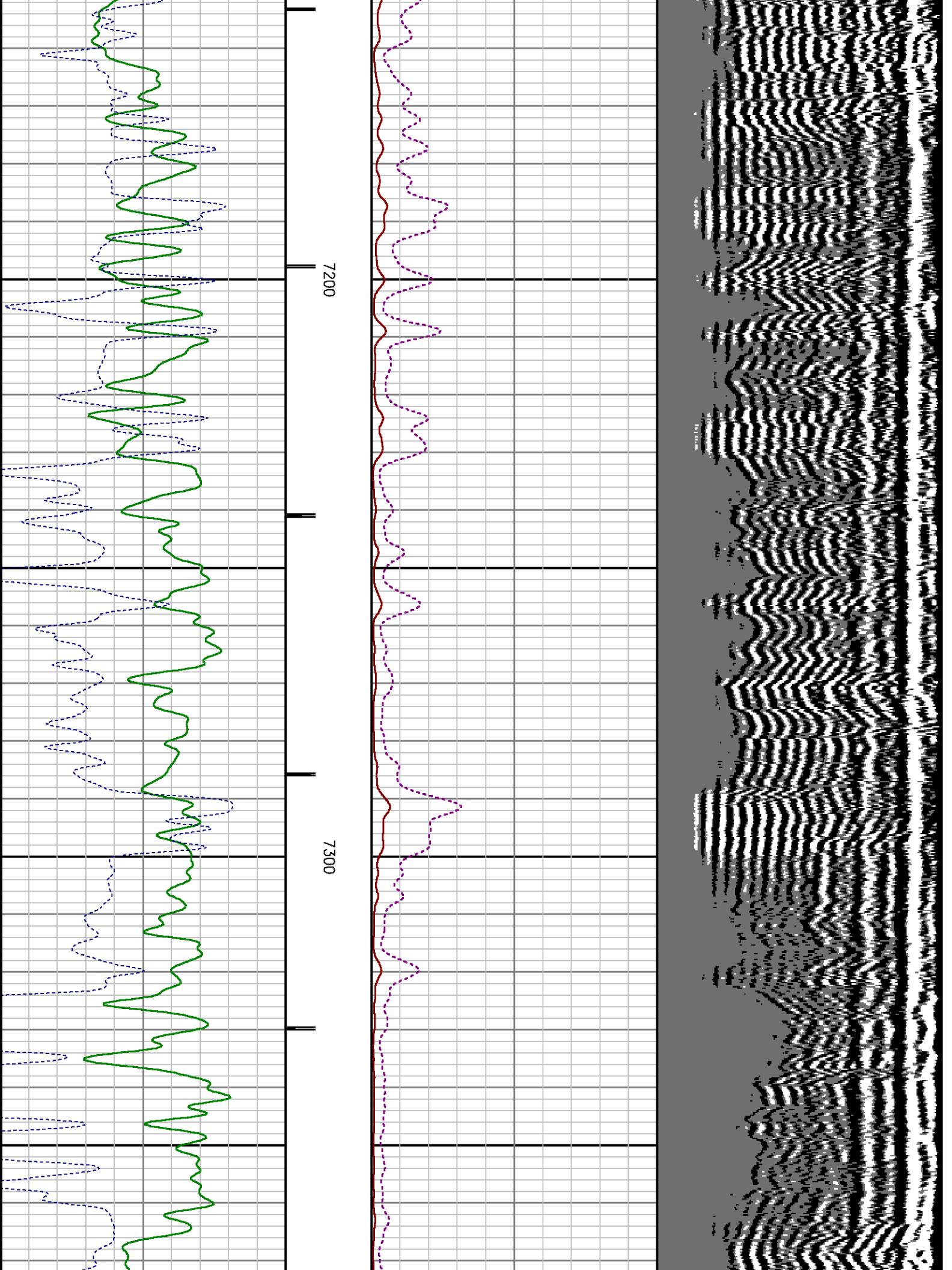


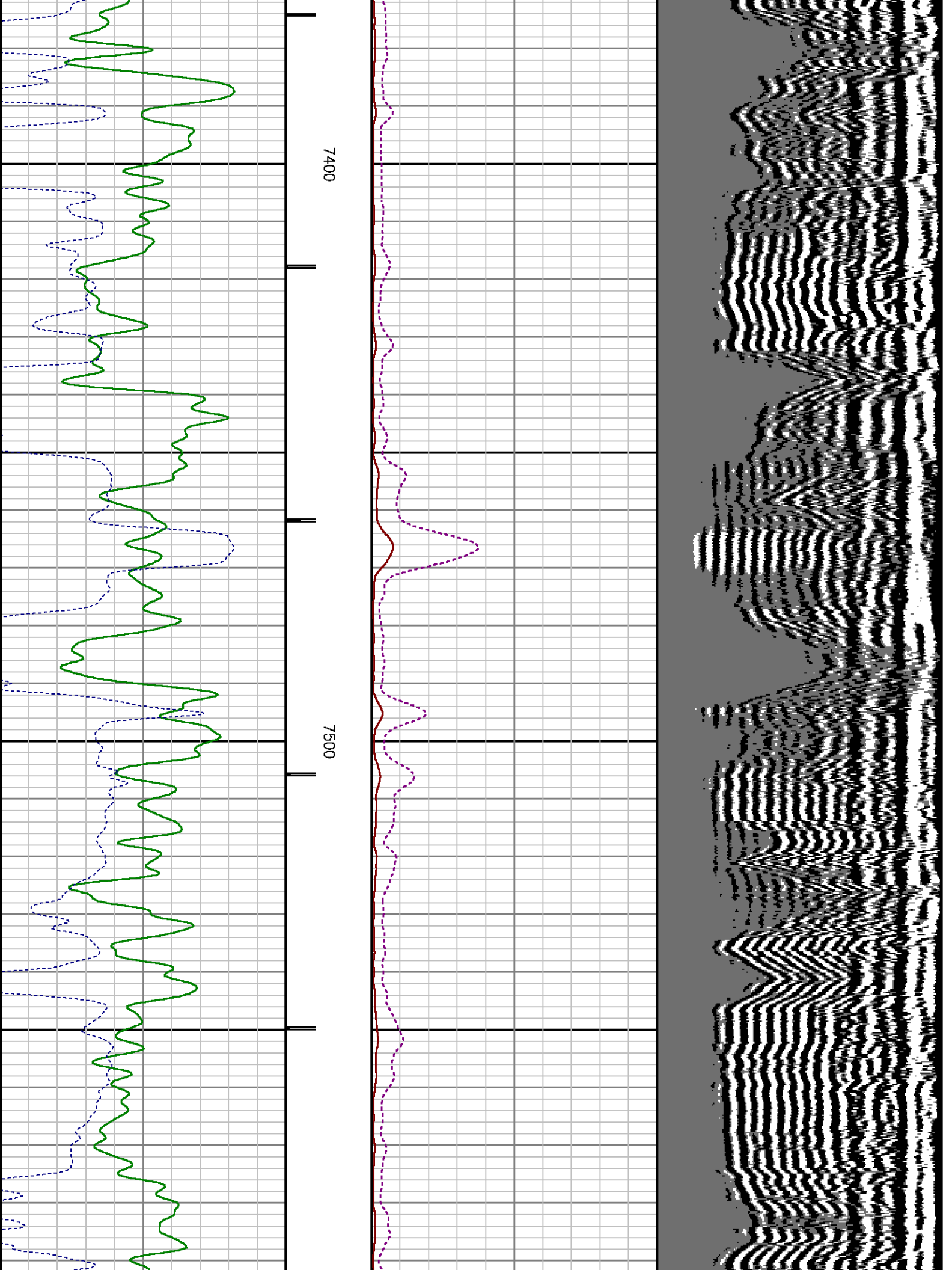




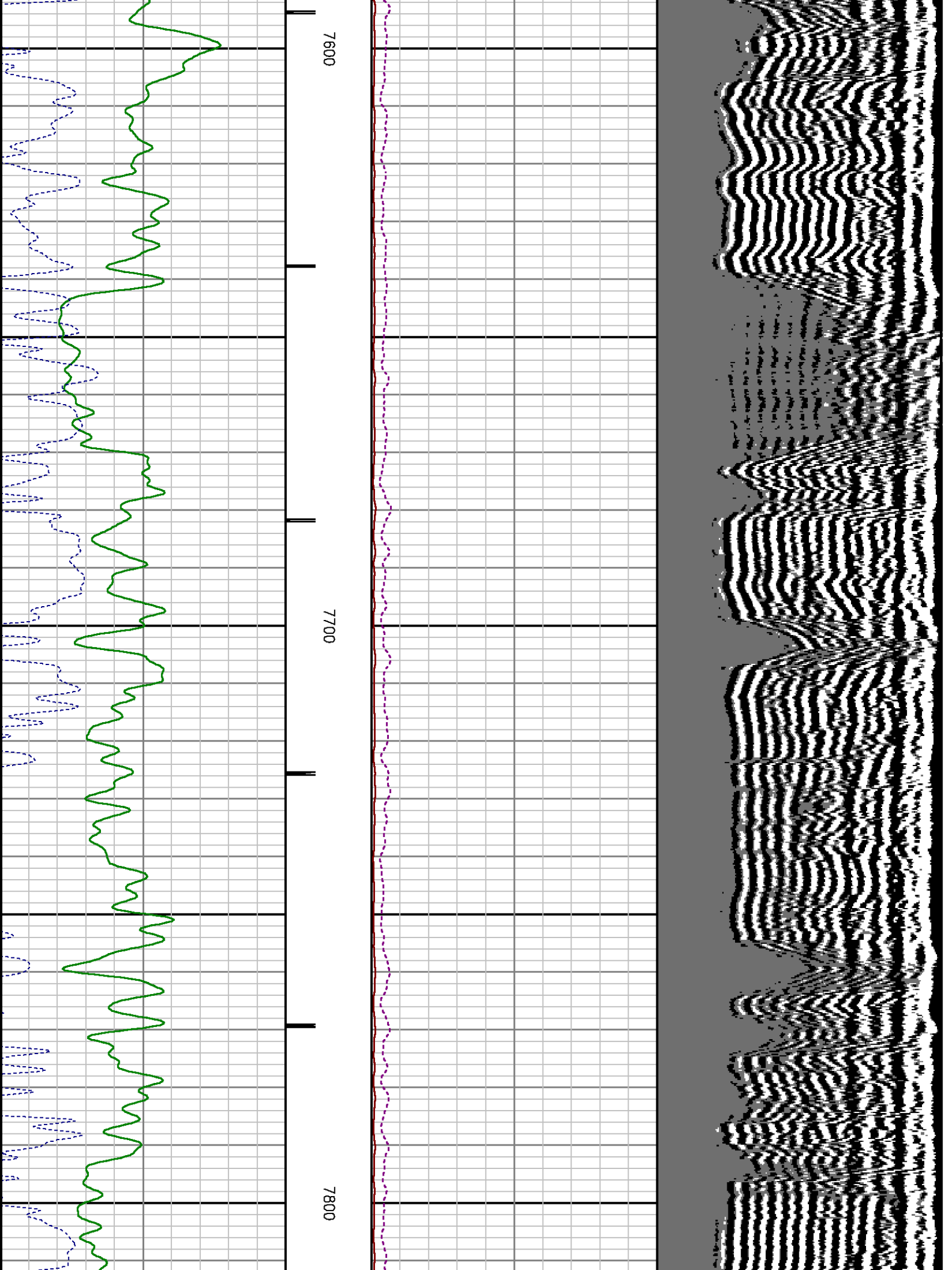


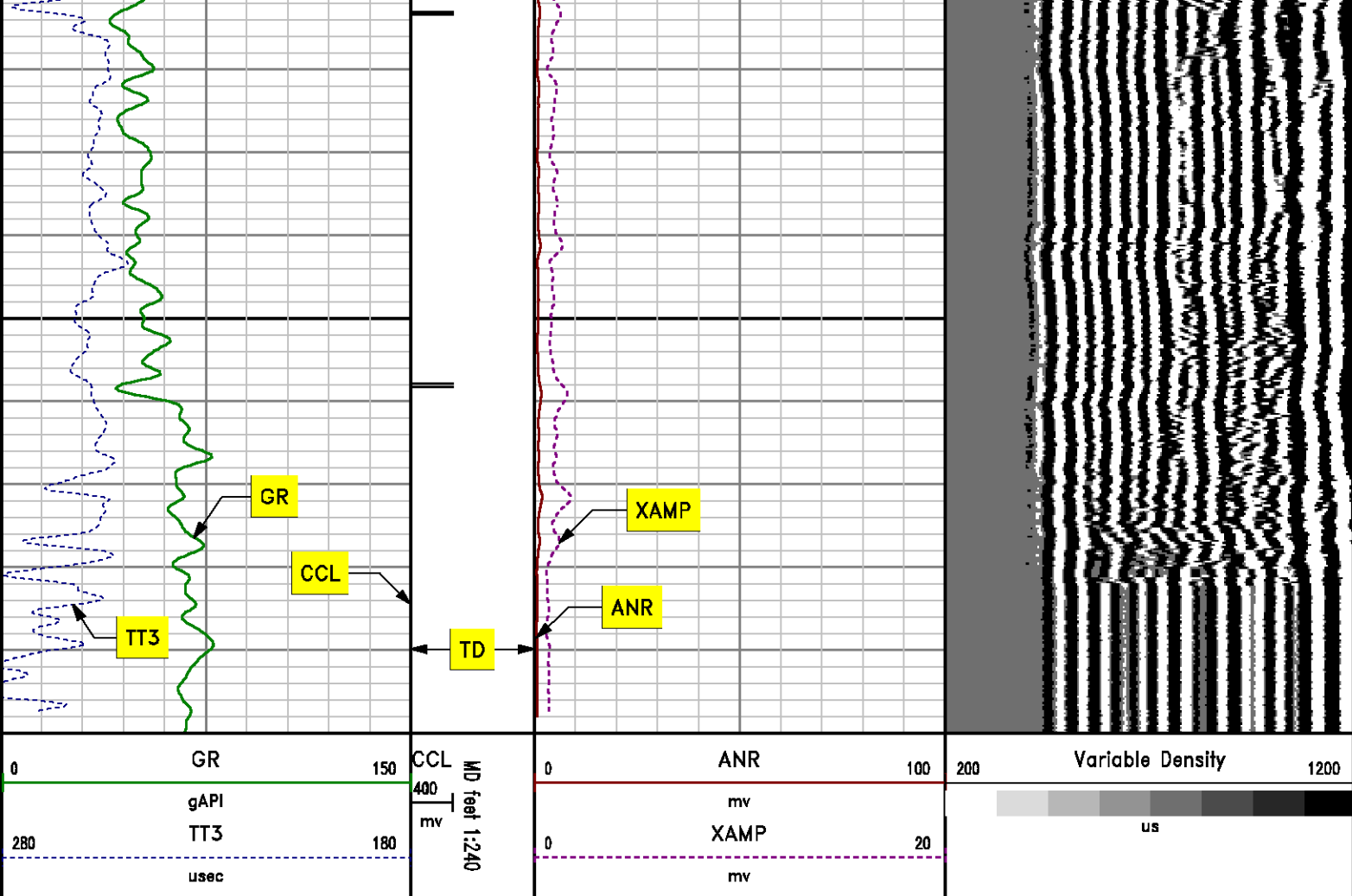












## MAIN LOG SECONDARY PRESENTATION 0 PSI

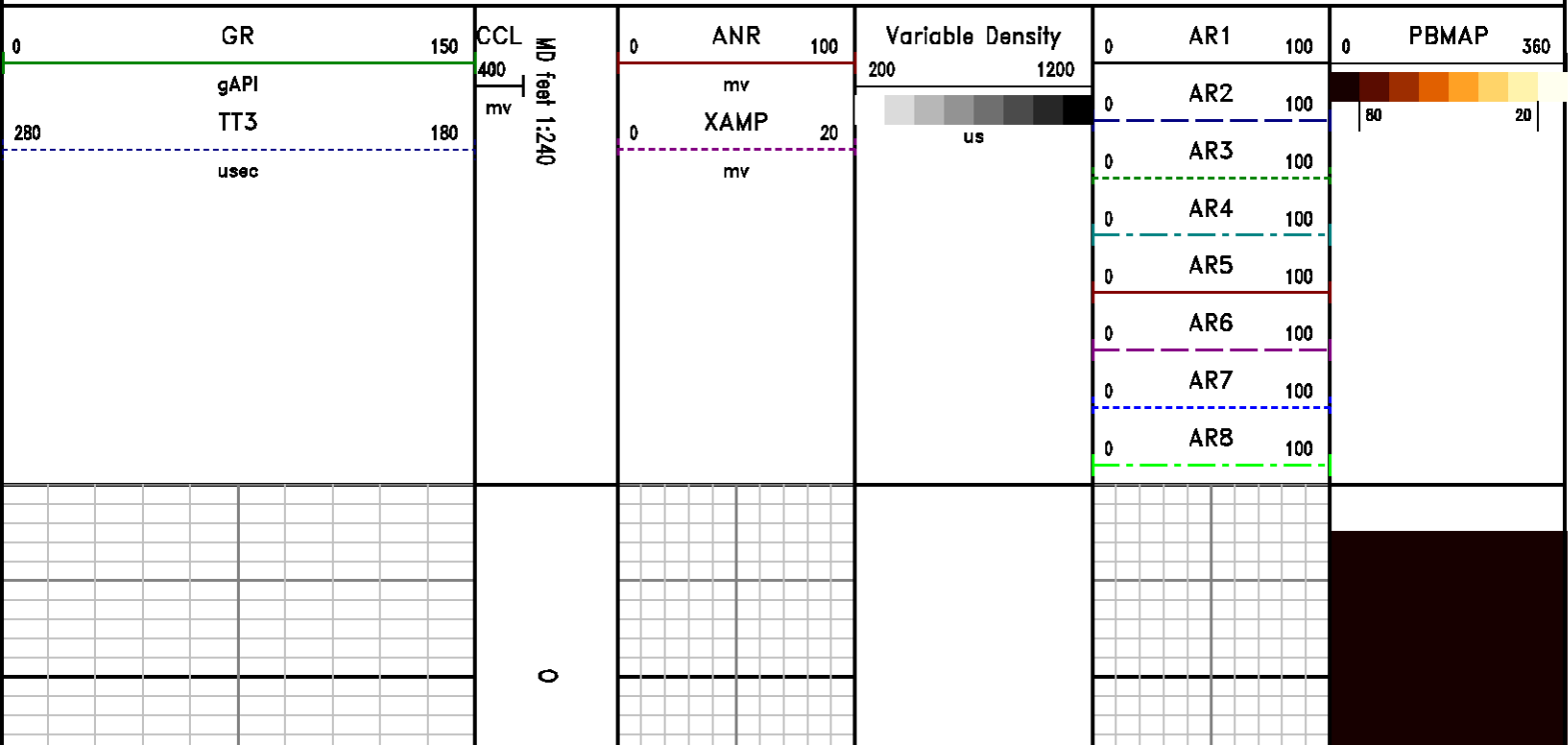
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	304.887	u sec	22.781	7910.000
RAL	Amp Gate Start Near	199.125	u sec	22.781	7910.000
RAL	Amp Gate Start Radial	199.015	u sec	22.781	7910.000
RAL	Amp Gate Width Far	25.000	u sec	22.781	7910.000
RAL	Amp Gate Width Near	25.000	u sec	22.781	7910.000
RAL	Amp Gate Width Radial	25.000	u sec	22.781	7910.000
RAL	casing od	4.500	inches	22.781	7910.000
RAL	casing wt	11.600	lbm/ft	22.781	7910.000
RAL	FB Start Far	291.900	u sec	22.781	7910.000

RAL	FB Start Near	175.391	usec	22.781	7910.000
RAL	FB Start Radial	175.391	usec	22.781	7910.000
RAL	FB Thresh Far	10.000	mv	22.781	7910.000
RAL	FB Thresh Near	4.000	mv	22.781	7910.000
RAL	FB Thresh Radial	4.000	mv	22.781	7910.000
RAL	Fluid Travel Time	200.000	usec/ft	22.781	7909.968

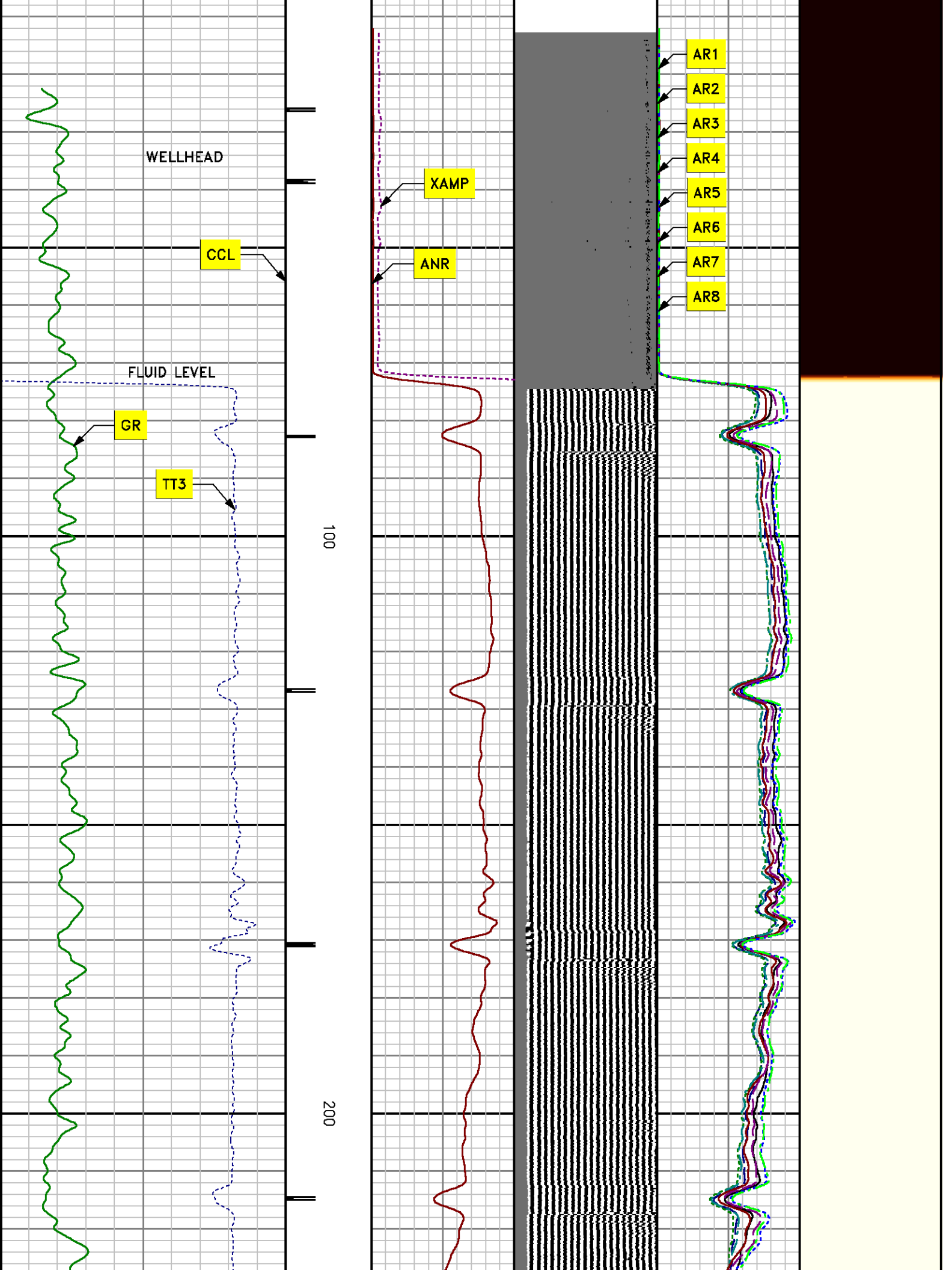
DEPTH OFFSETS  
(for Acquired Curves)

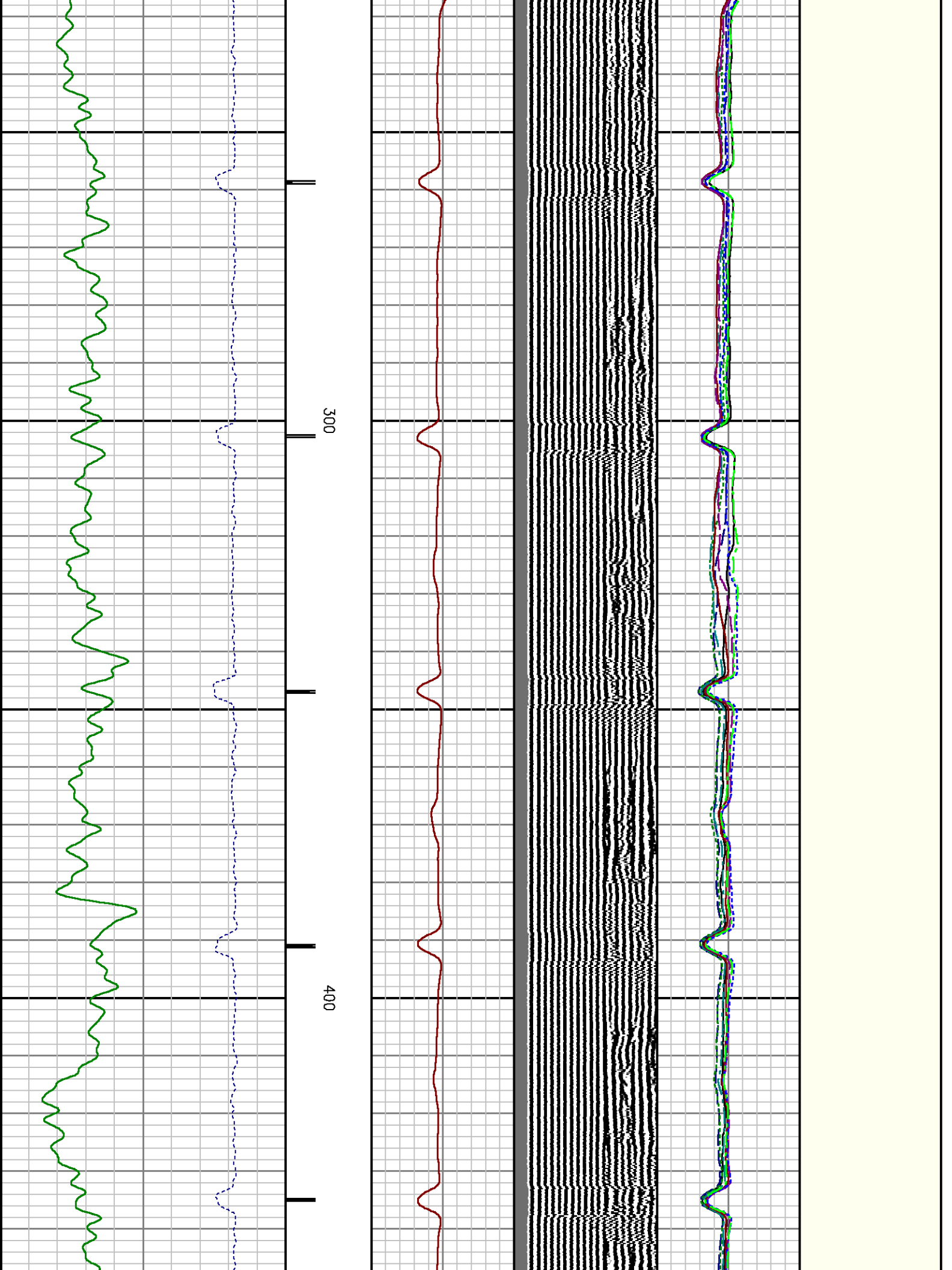
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000	TEMP					

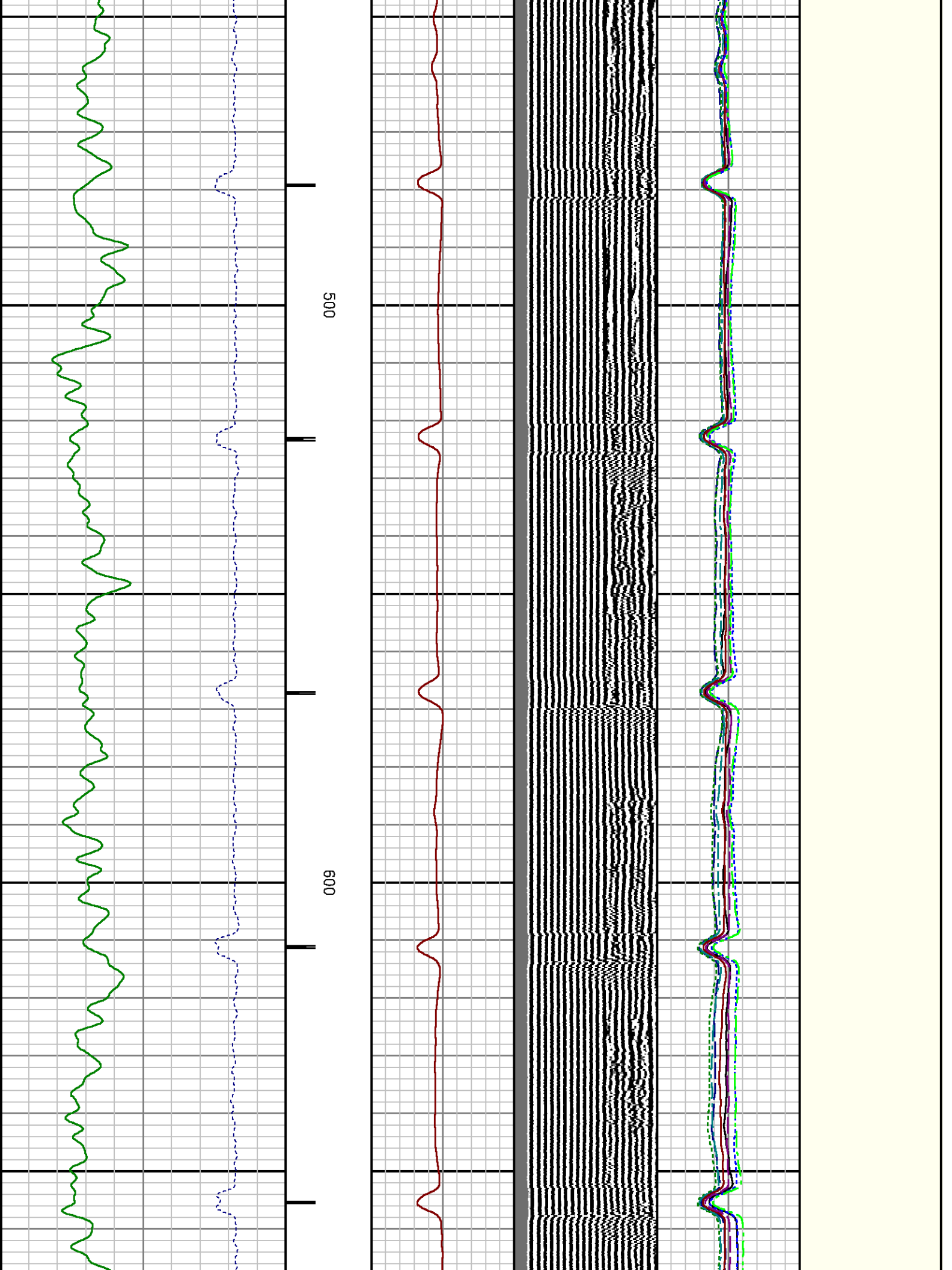
Created by : RAL, v4.8.008  
Plotted by : PlotMgr, v5.4.504  
Company : WPX ENERGY  
Well : DUGGAN RWF 314-29  
File Name : d:\welldata\314cbl\main.xtf  
Mode : PlotMgr 5.4.504  
Interval : -20.00 - 7900.00 feet UP  
Created : 5/19/2013 12:09:09 PM

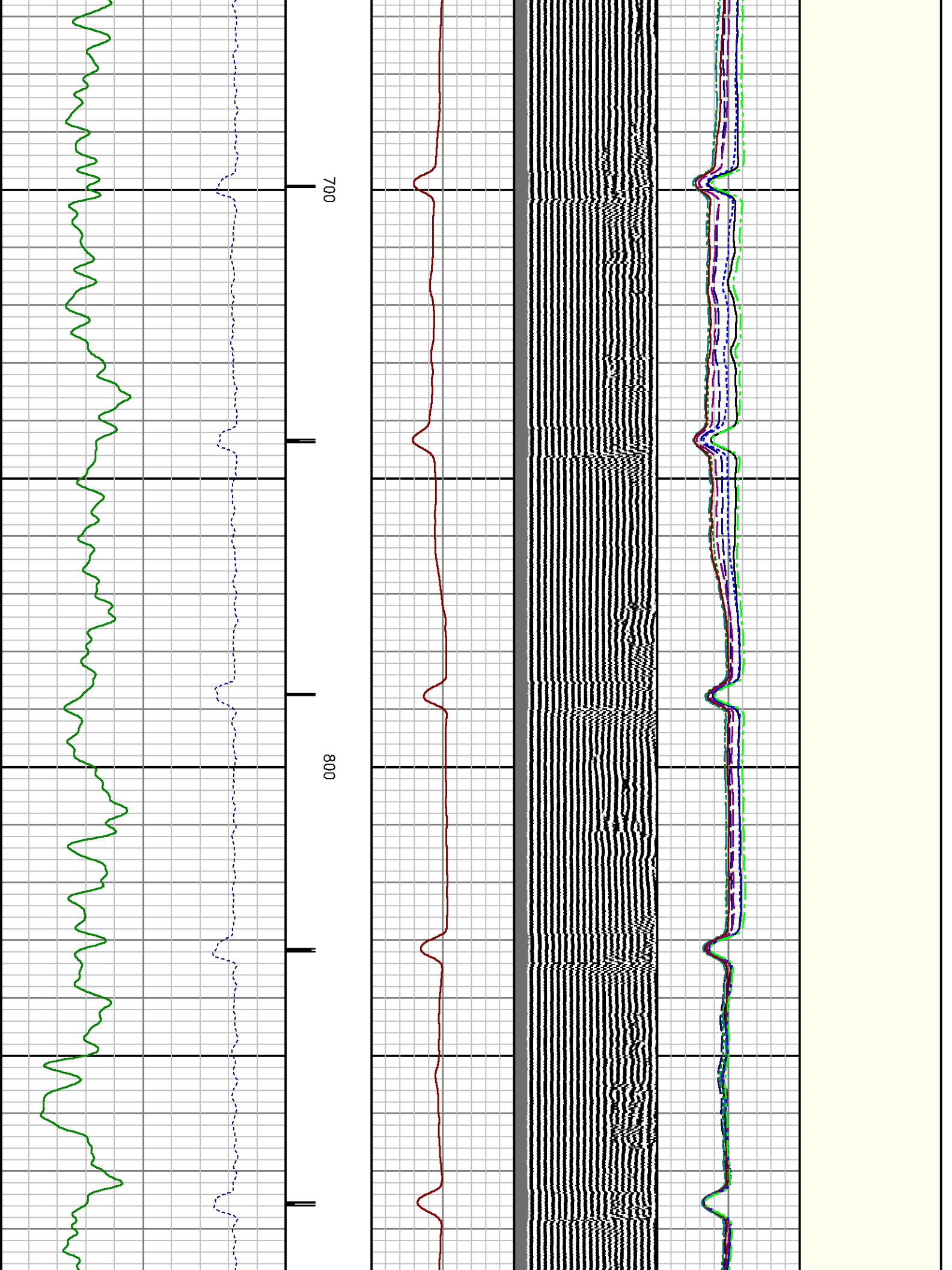


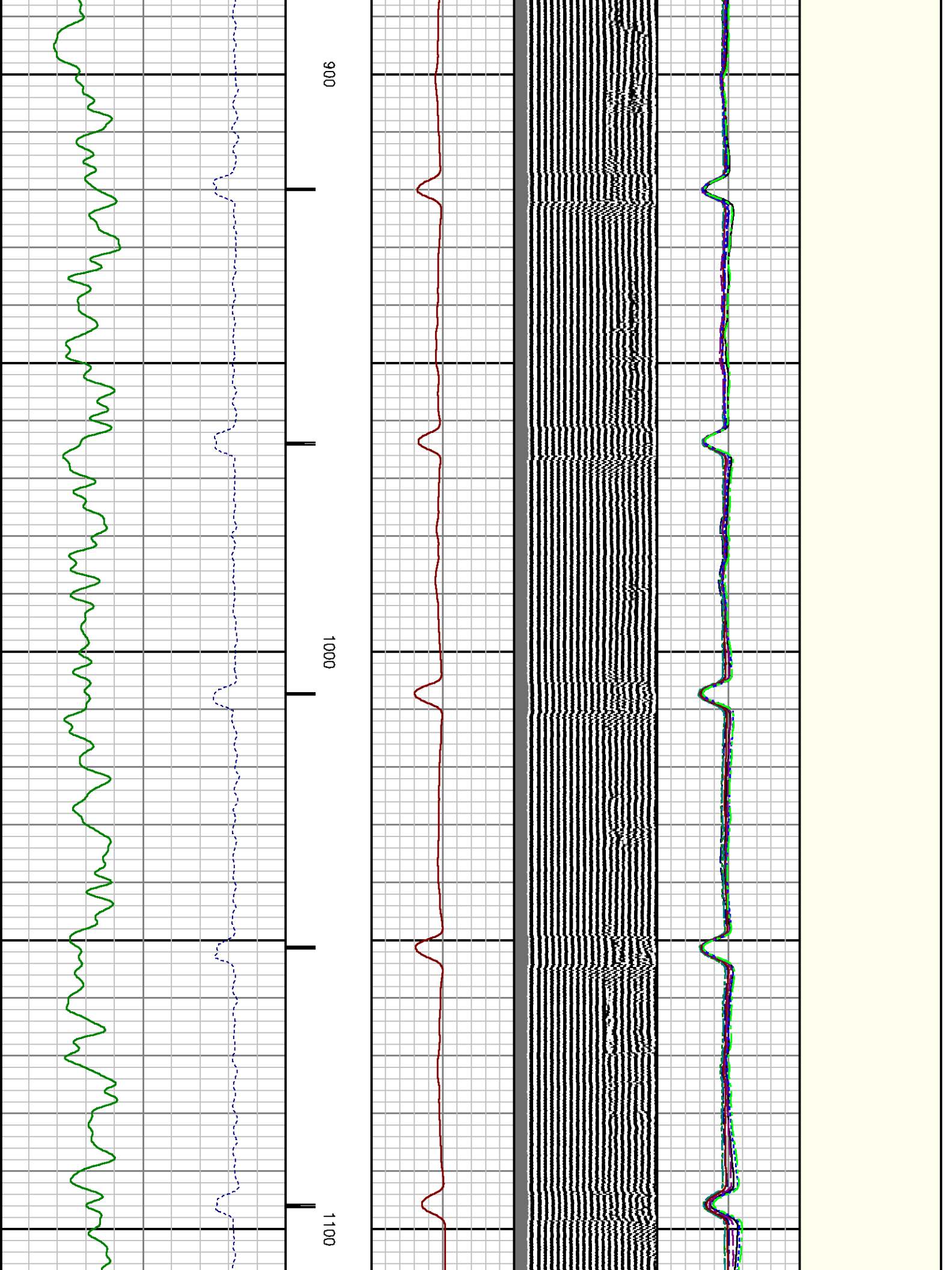


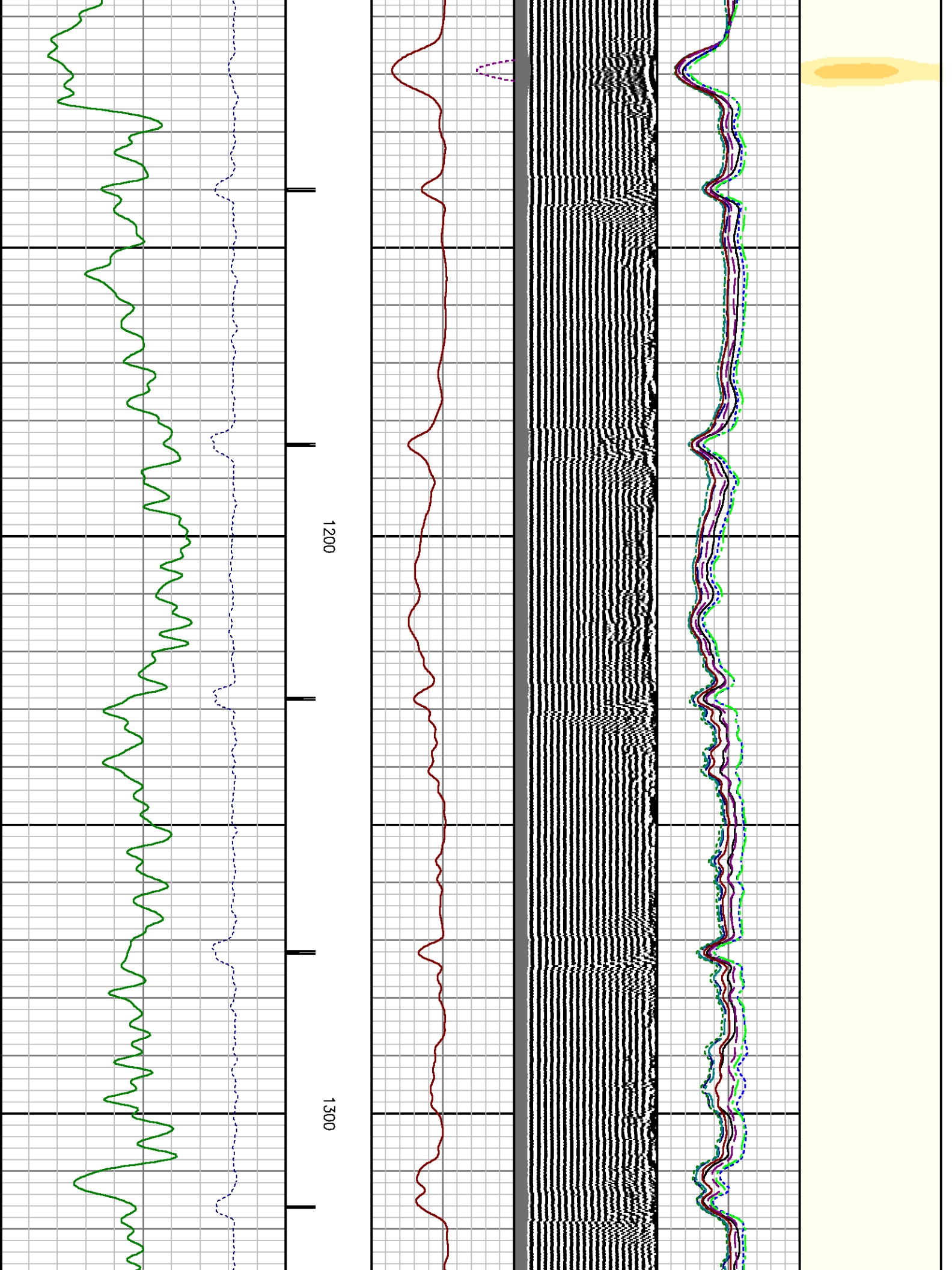




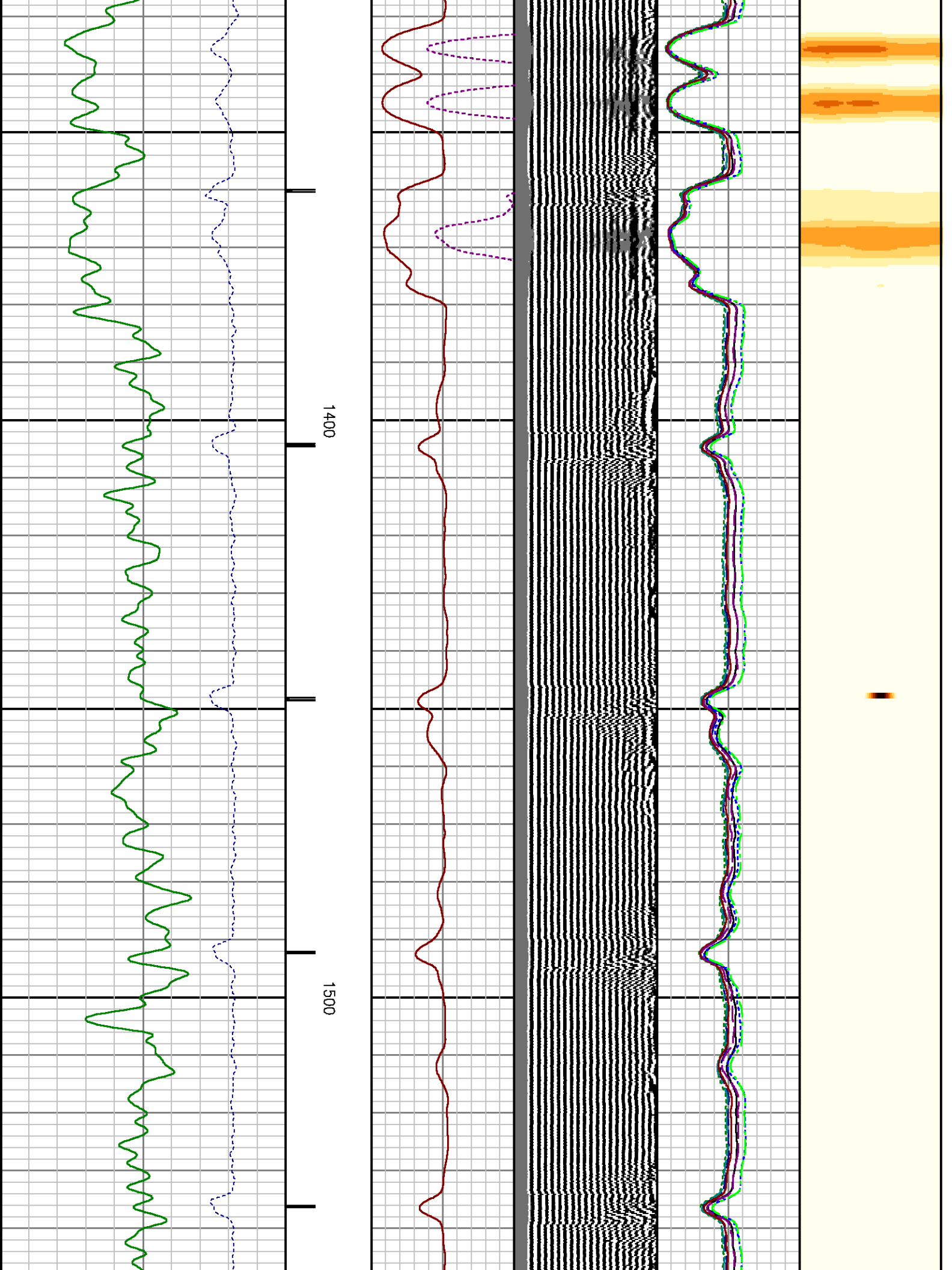


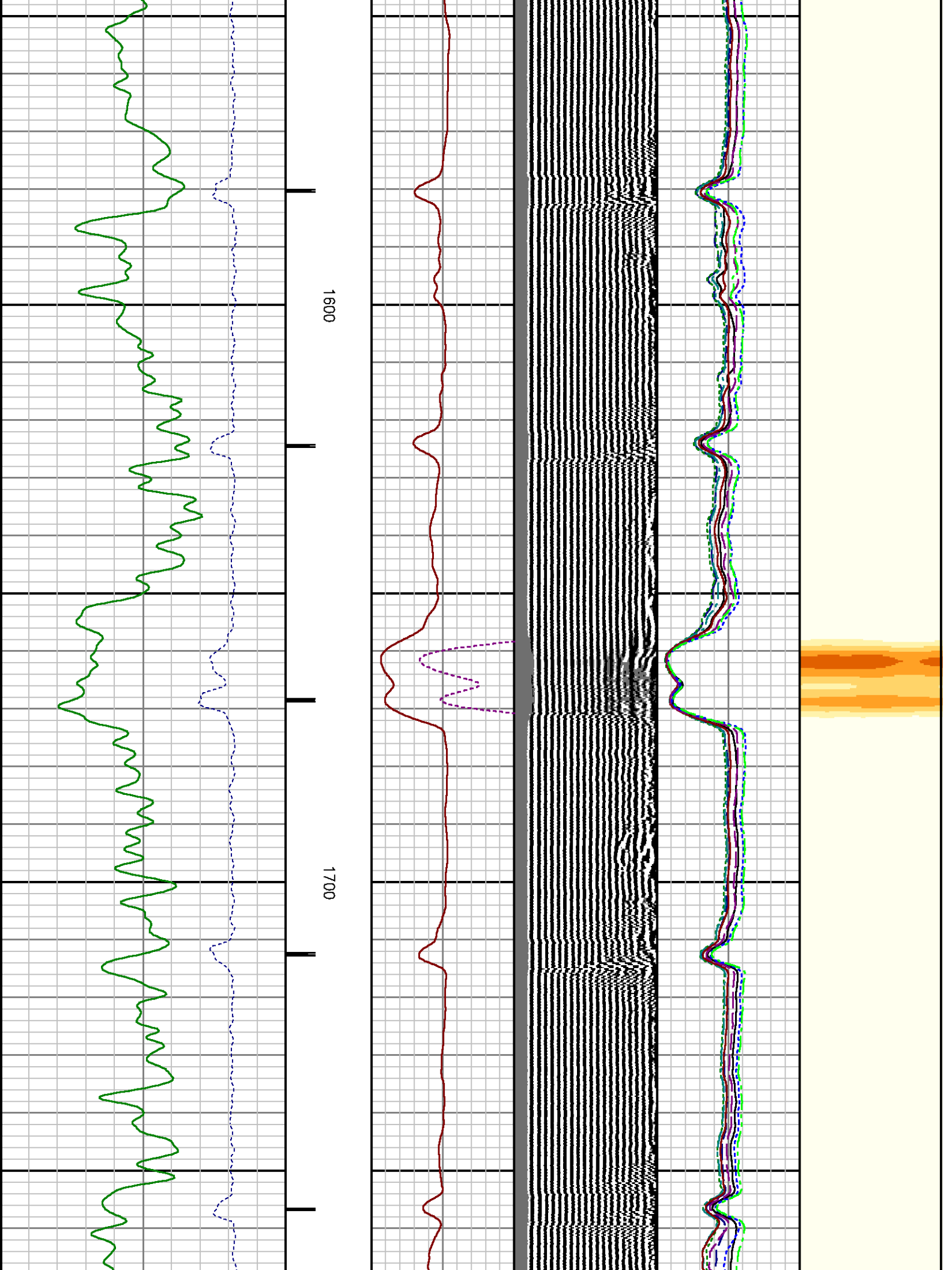


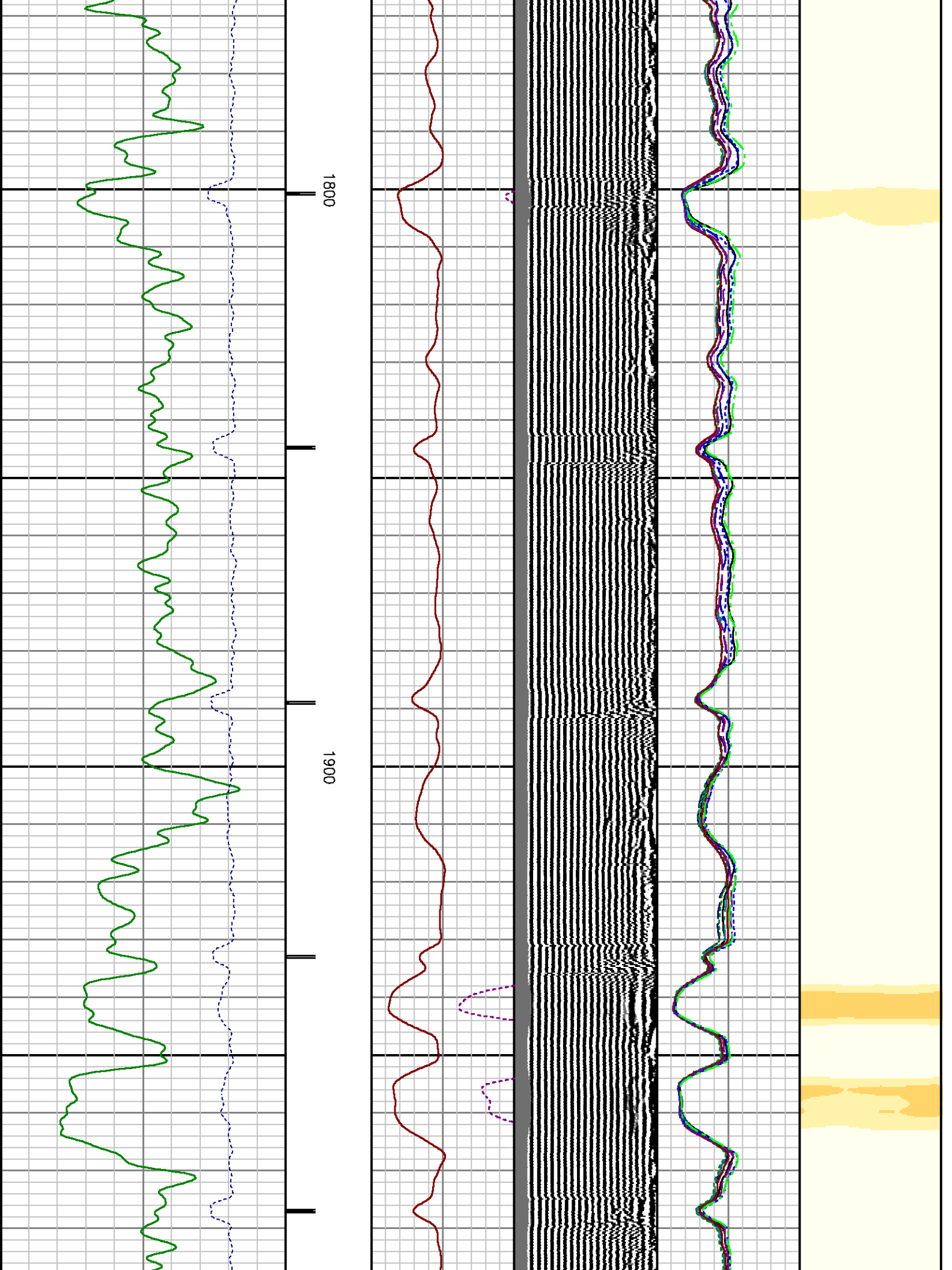


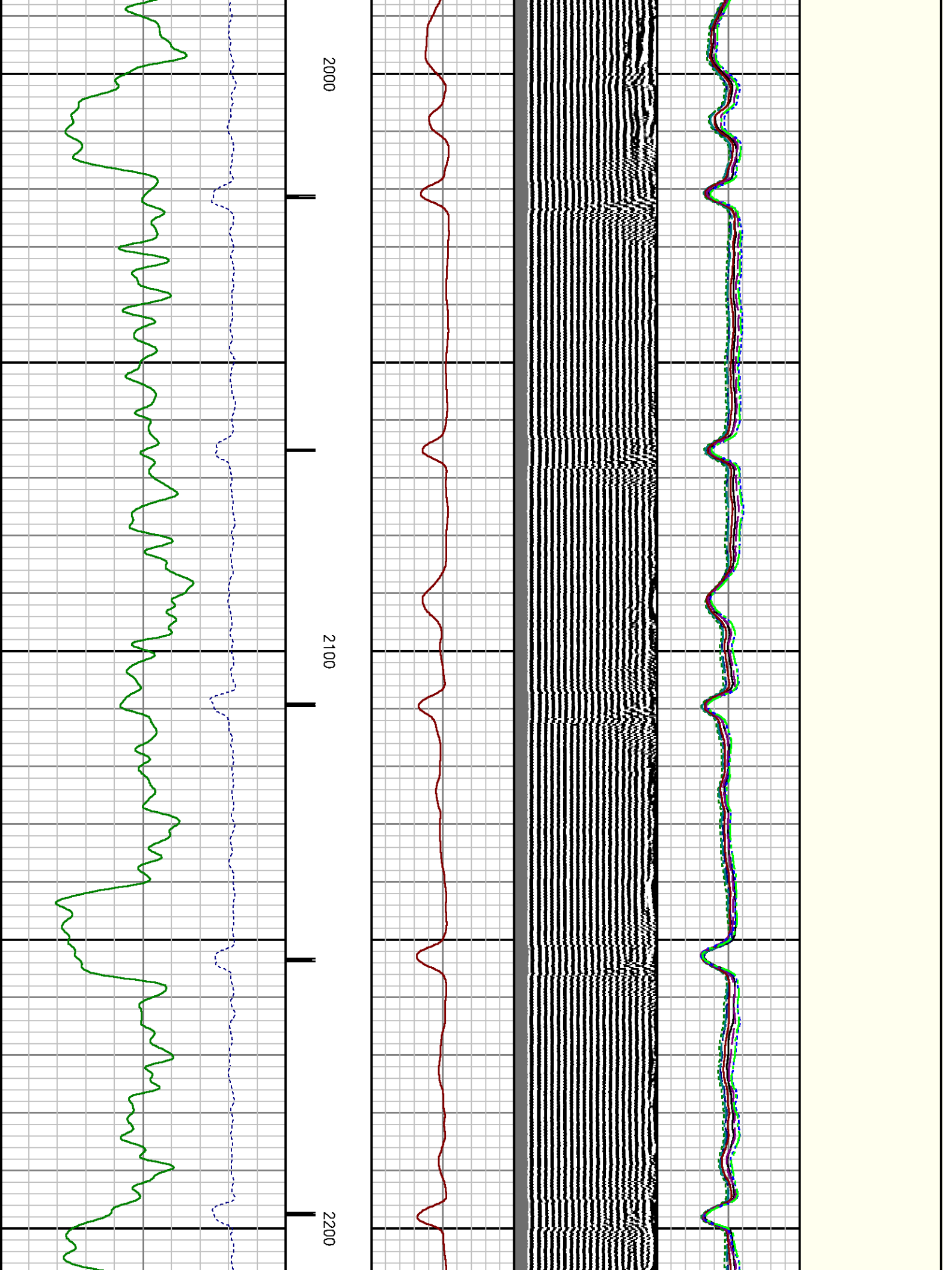


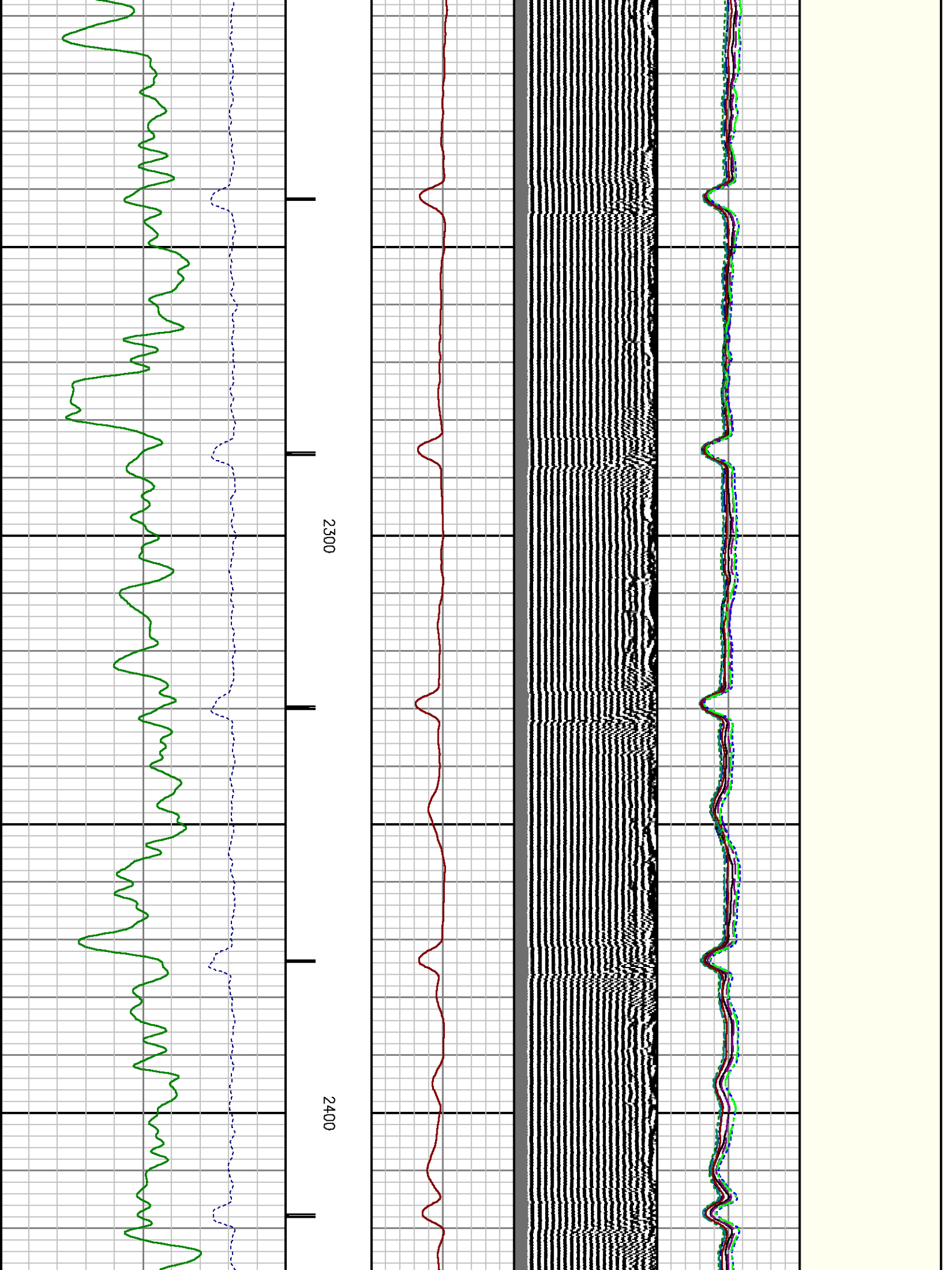


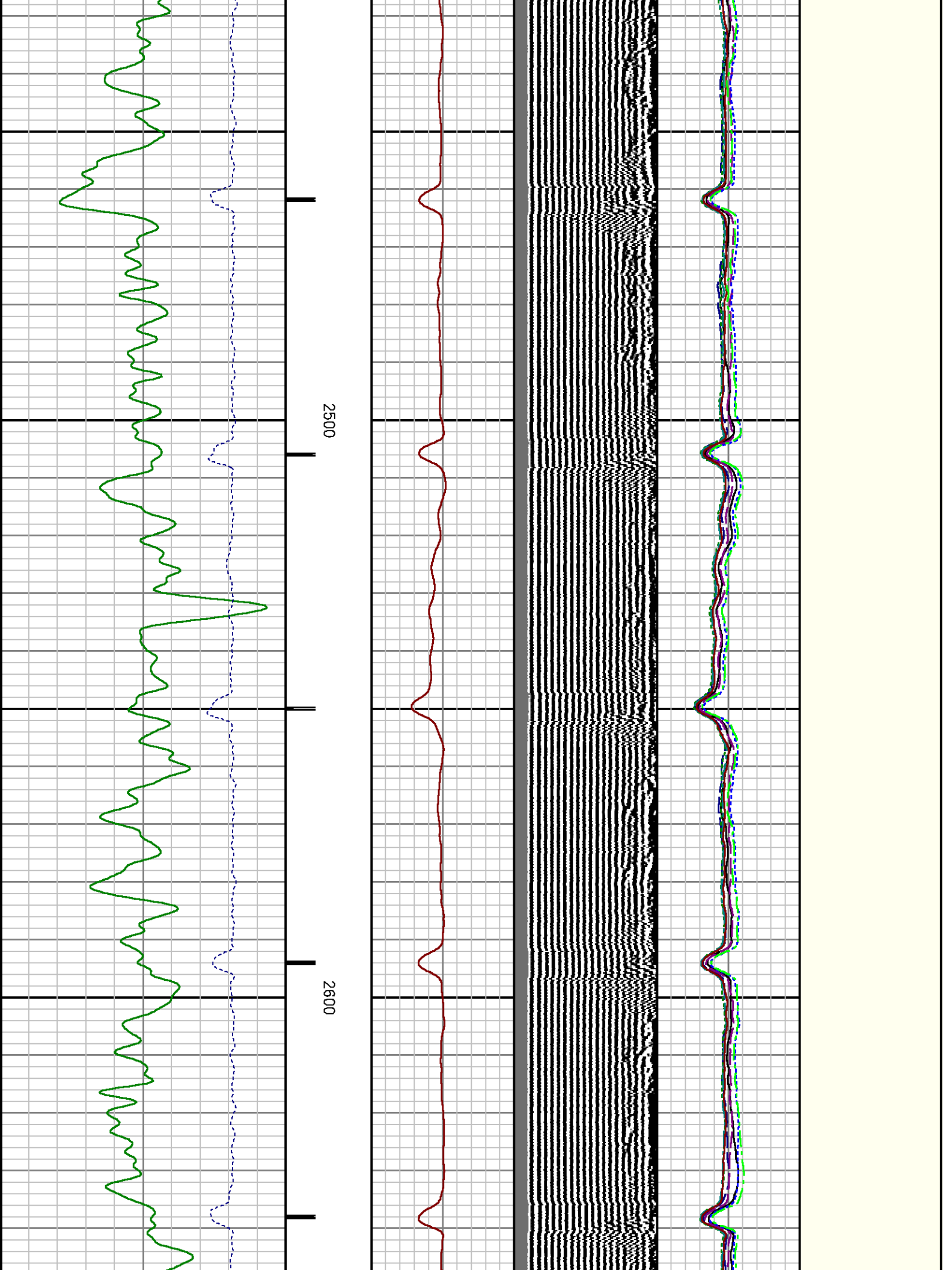




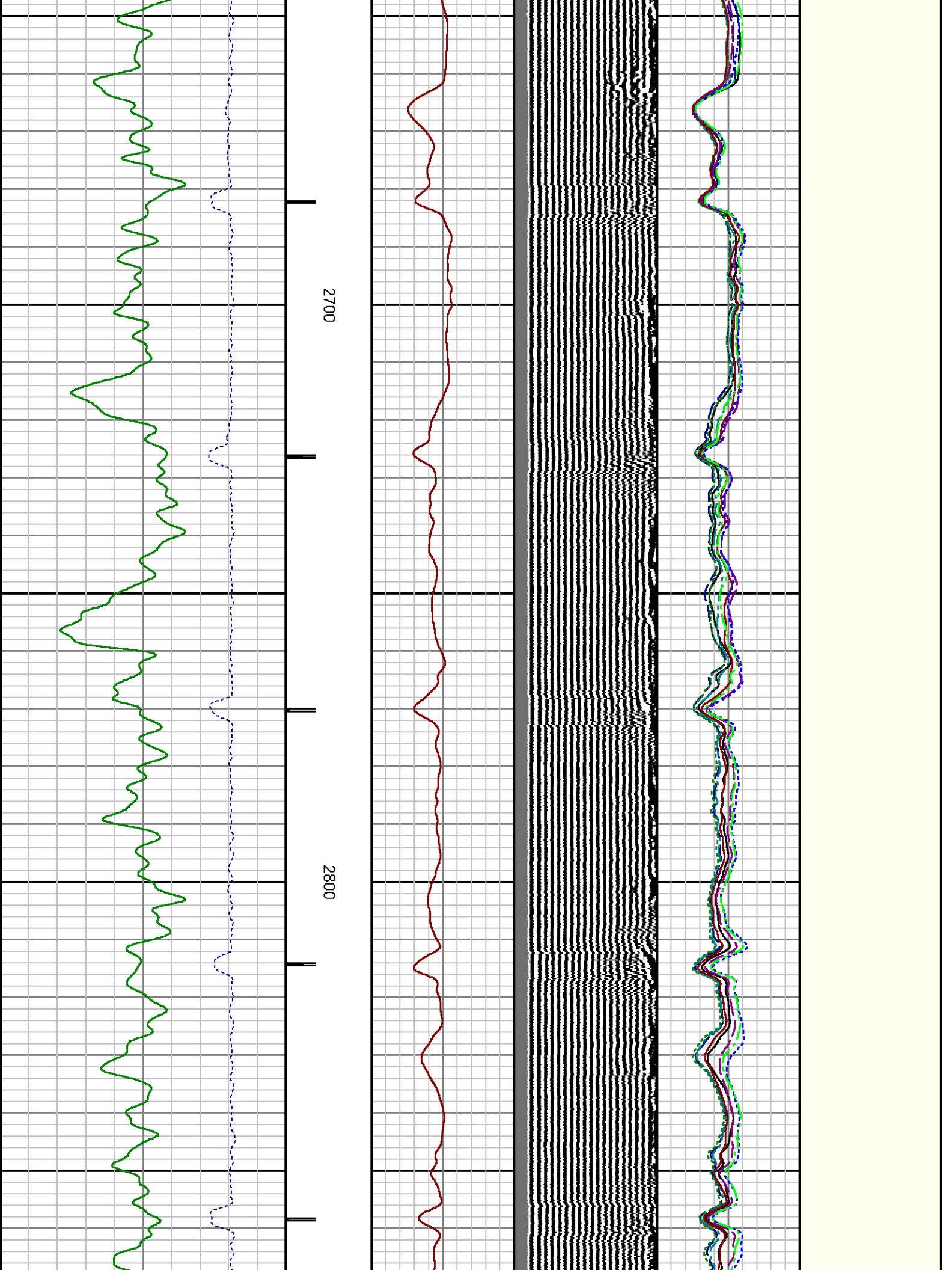


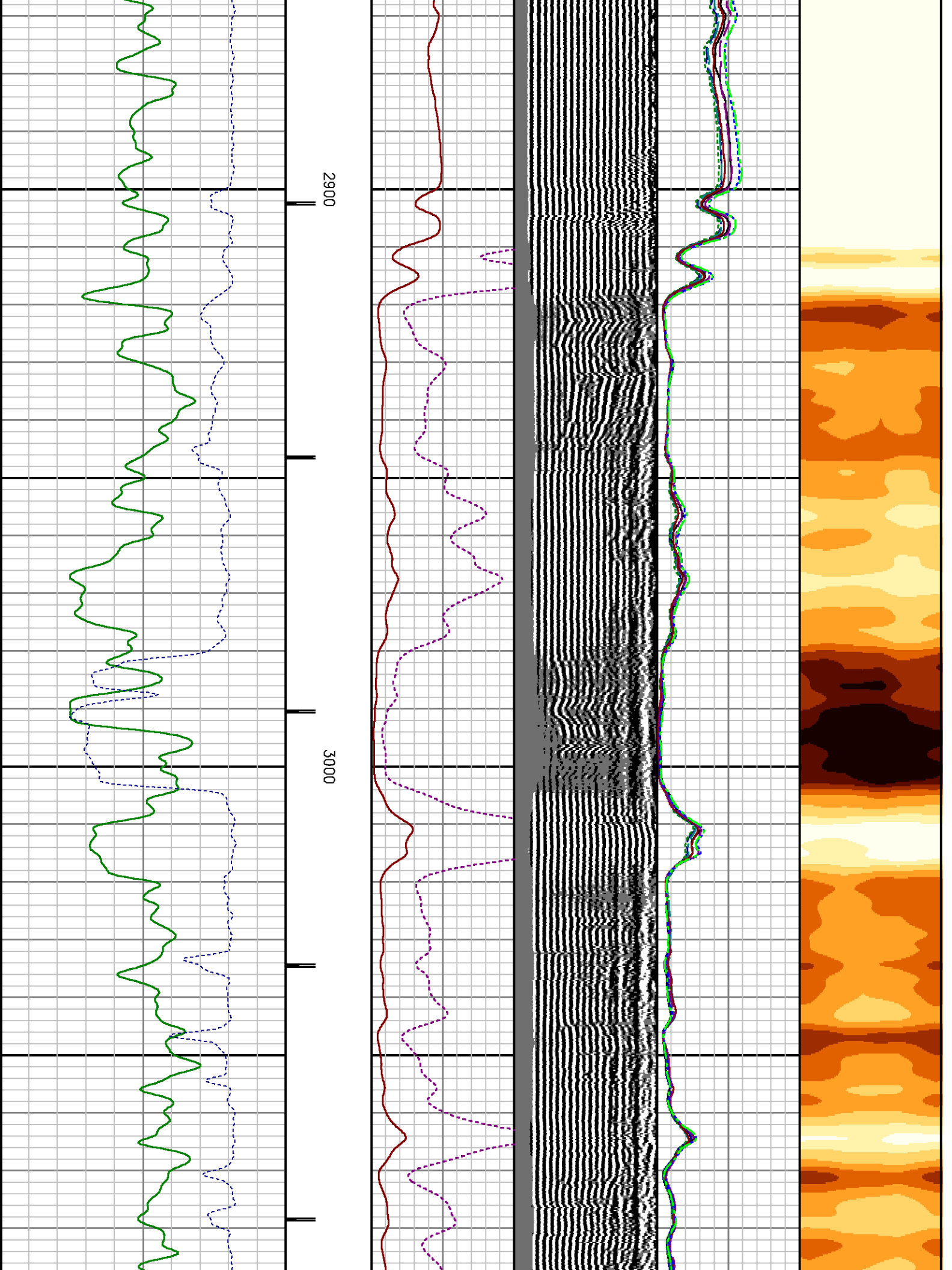


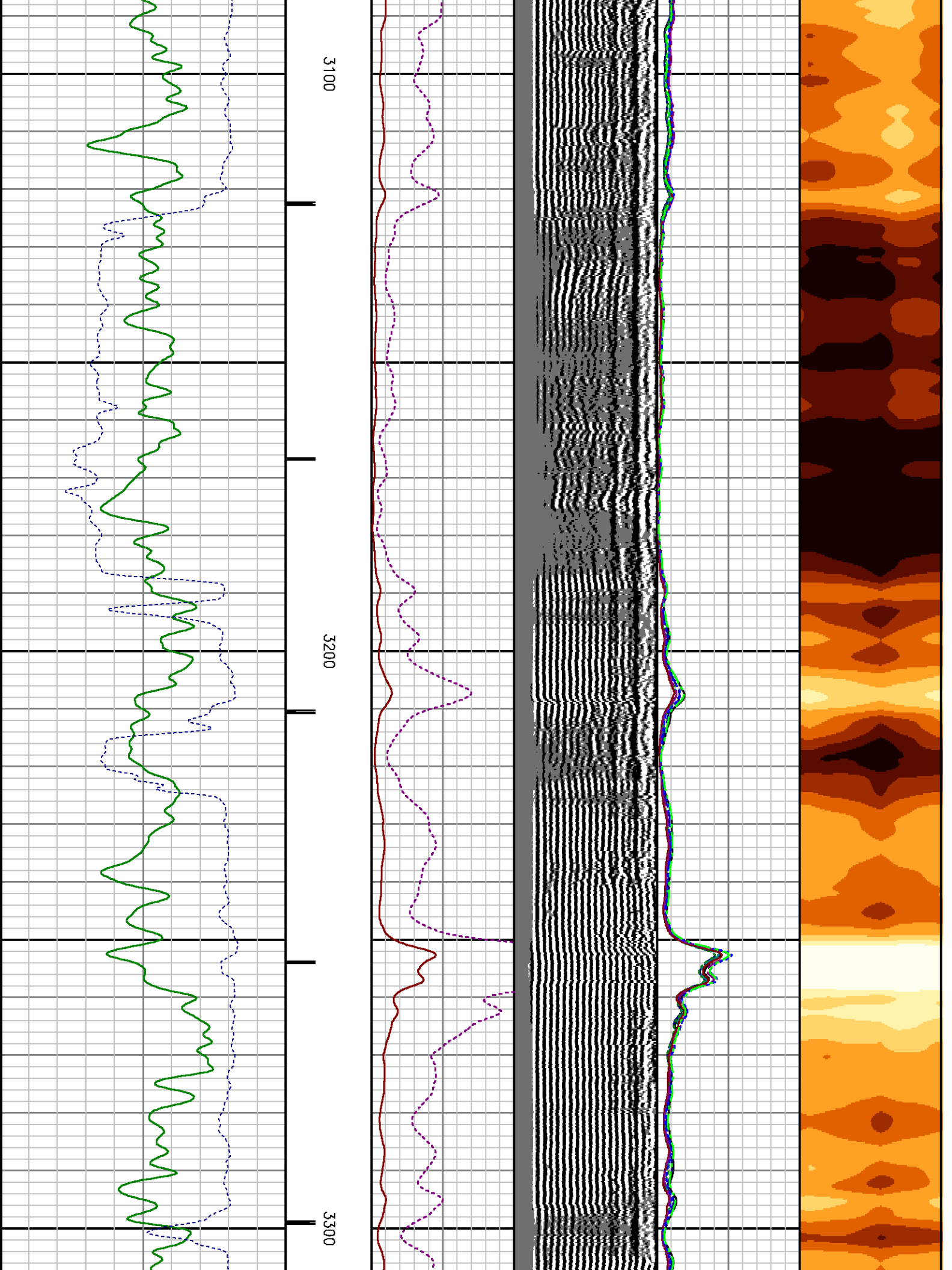


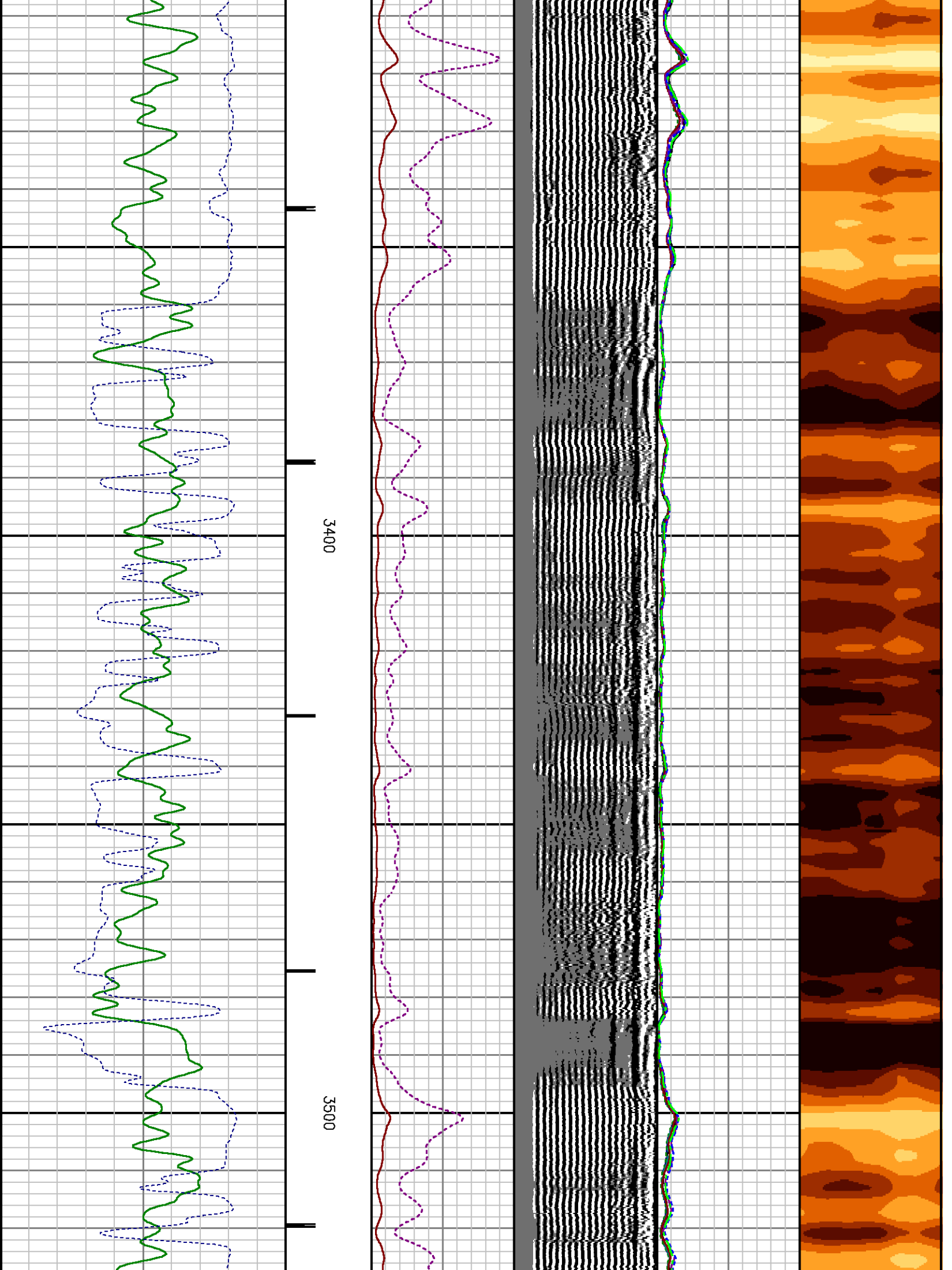


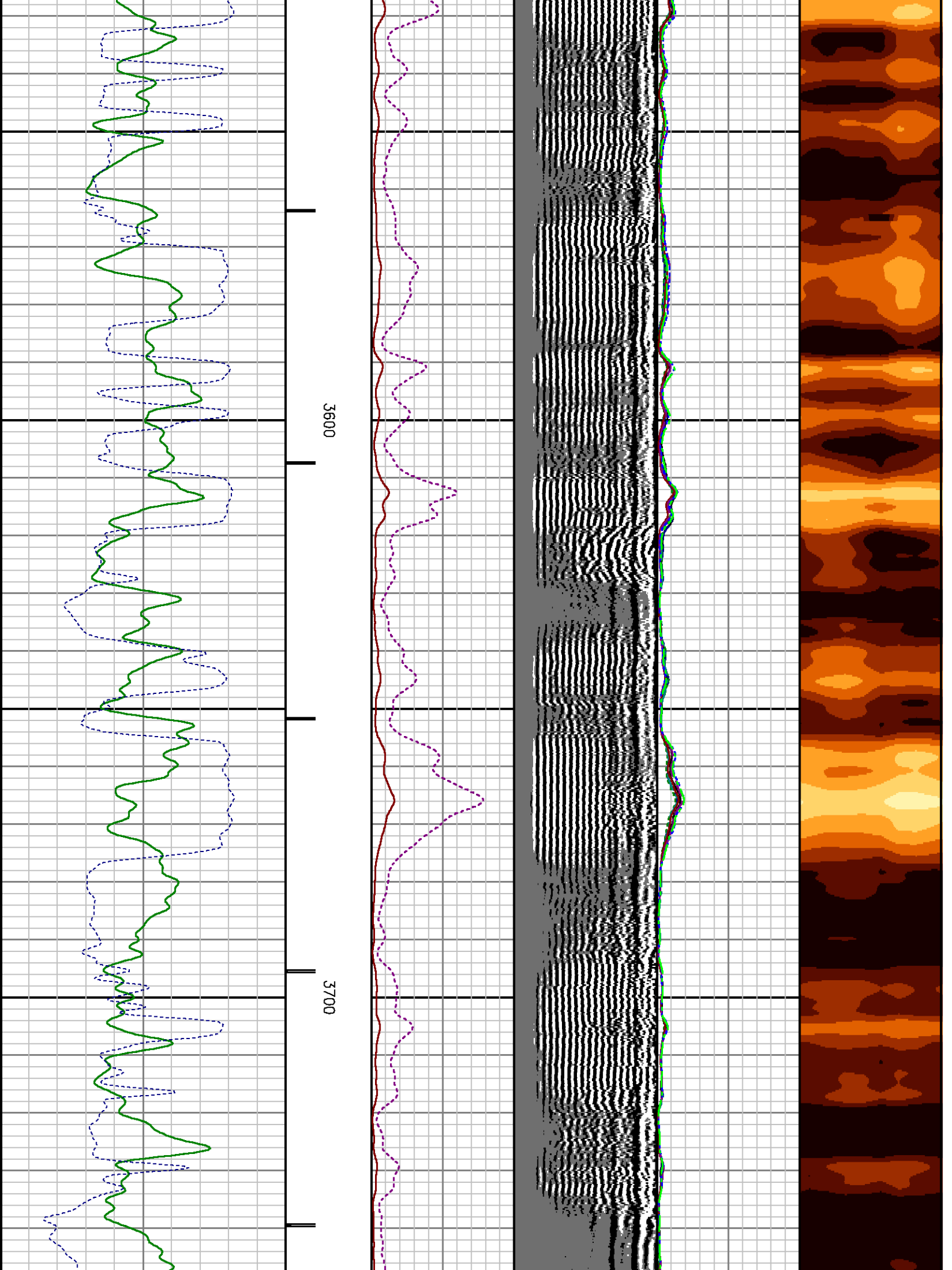




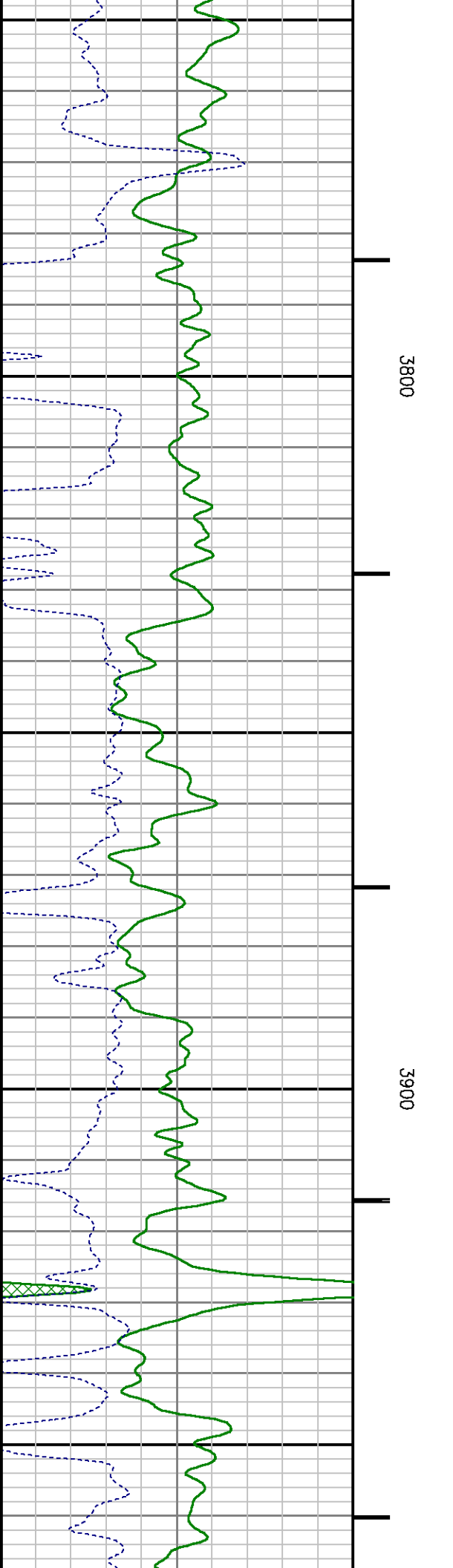
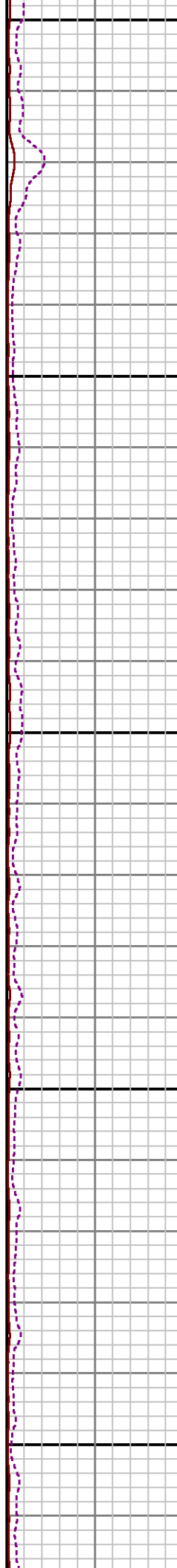
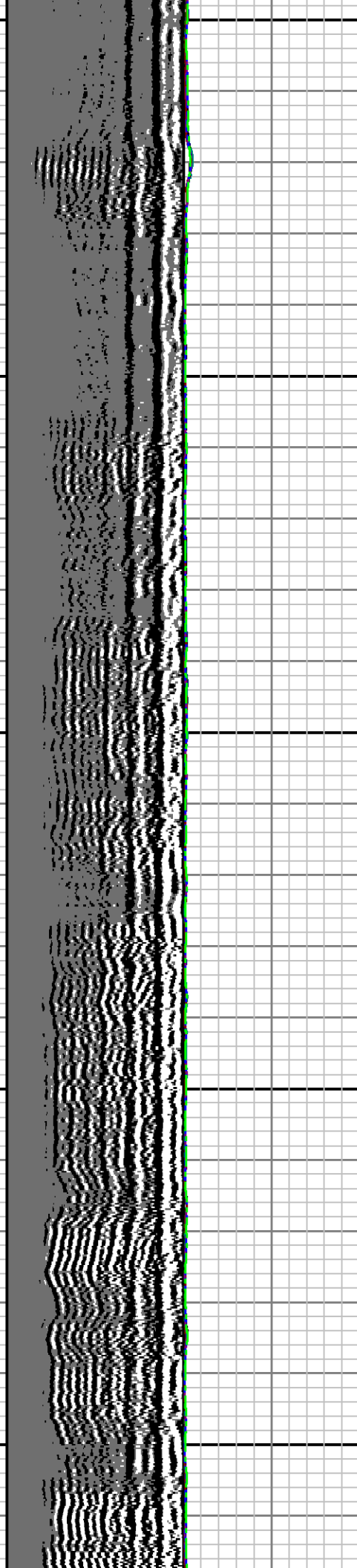
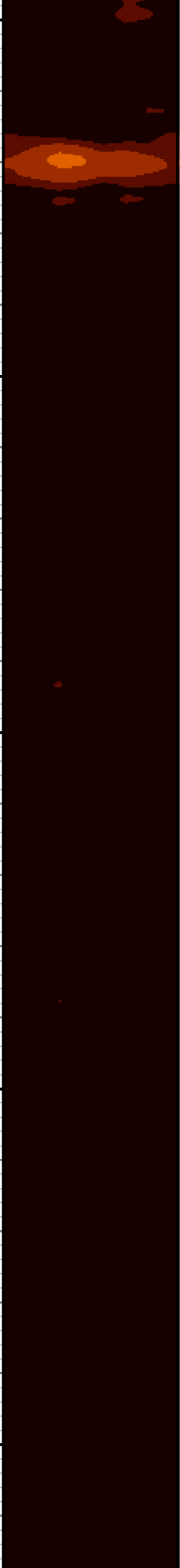




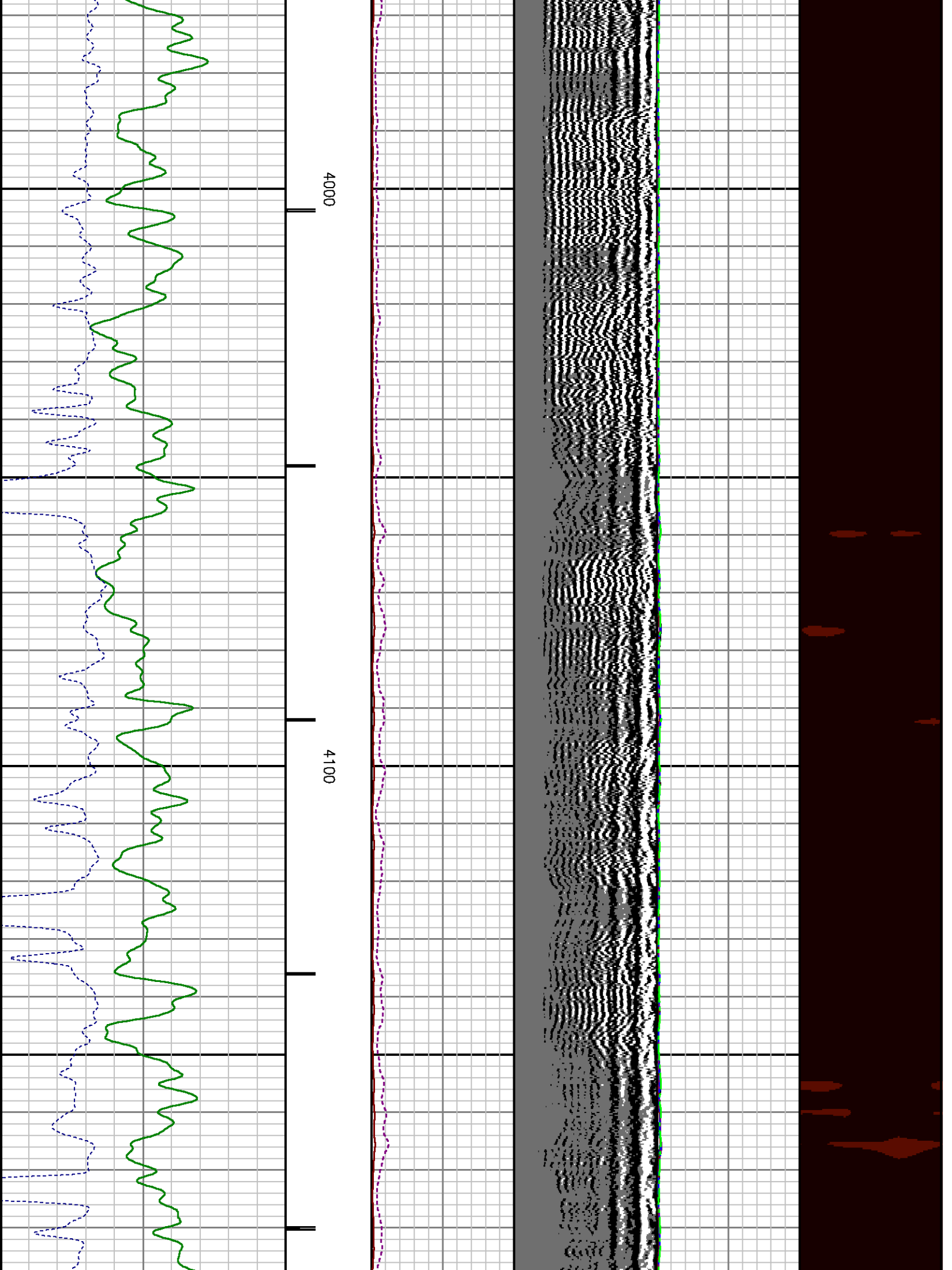


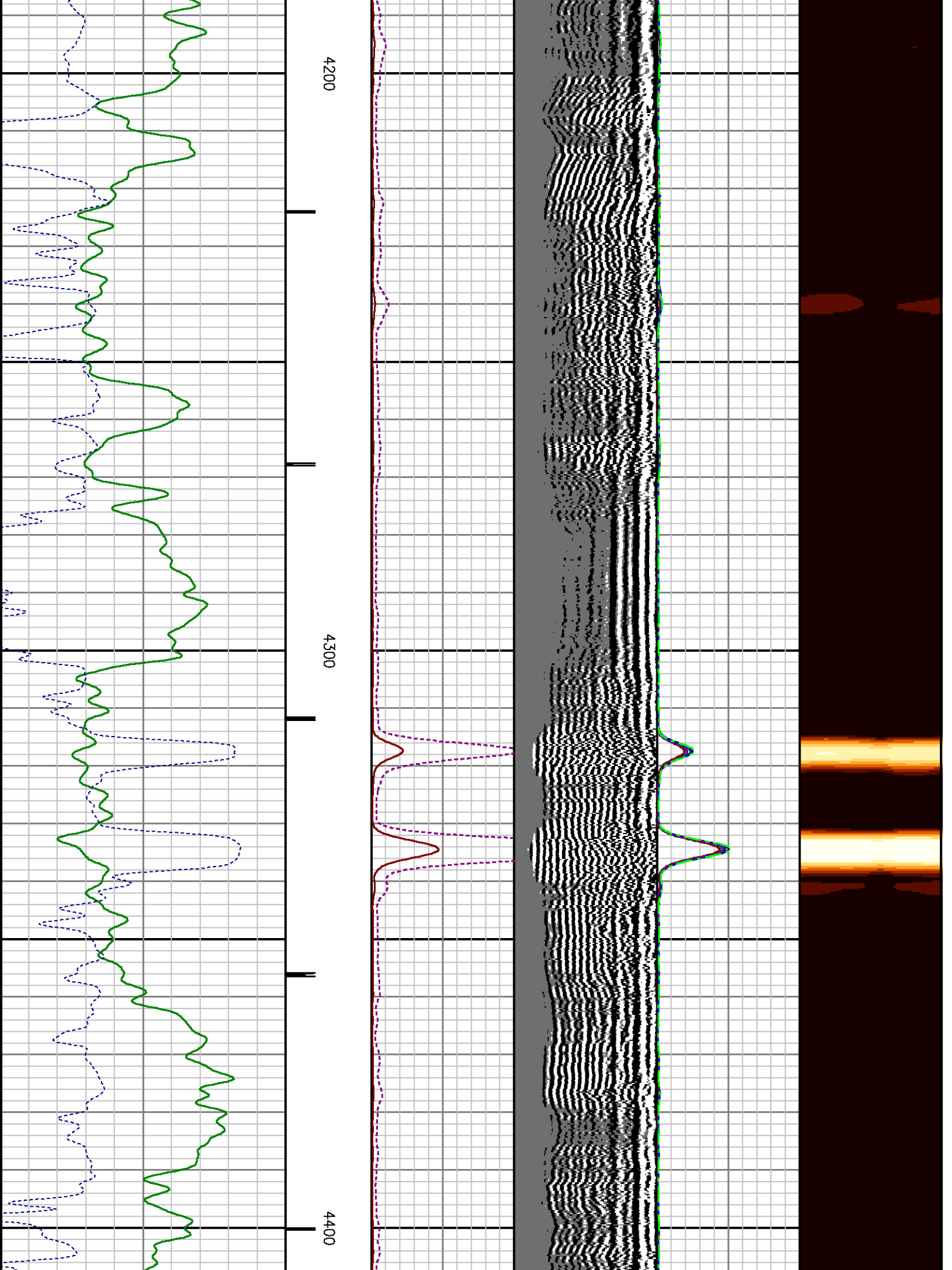


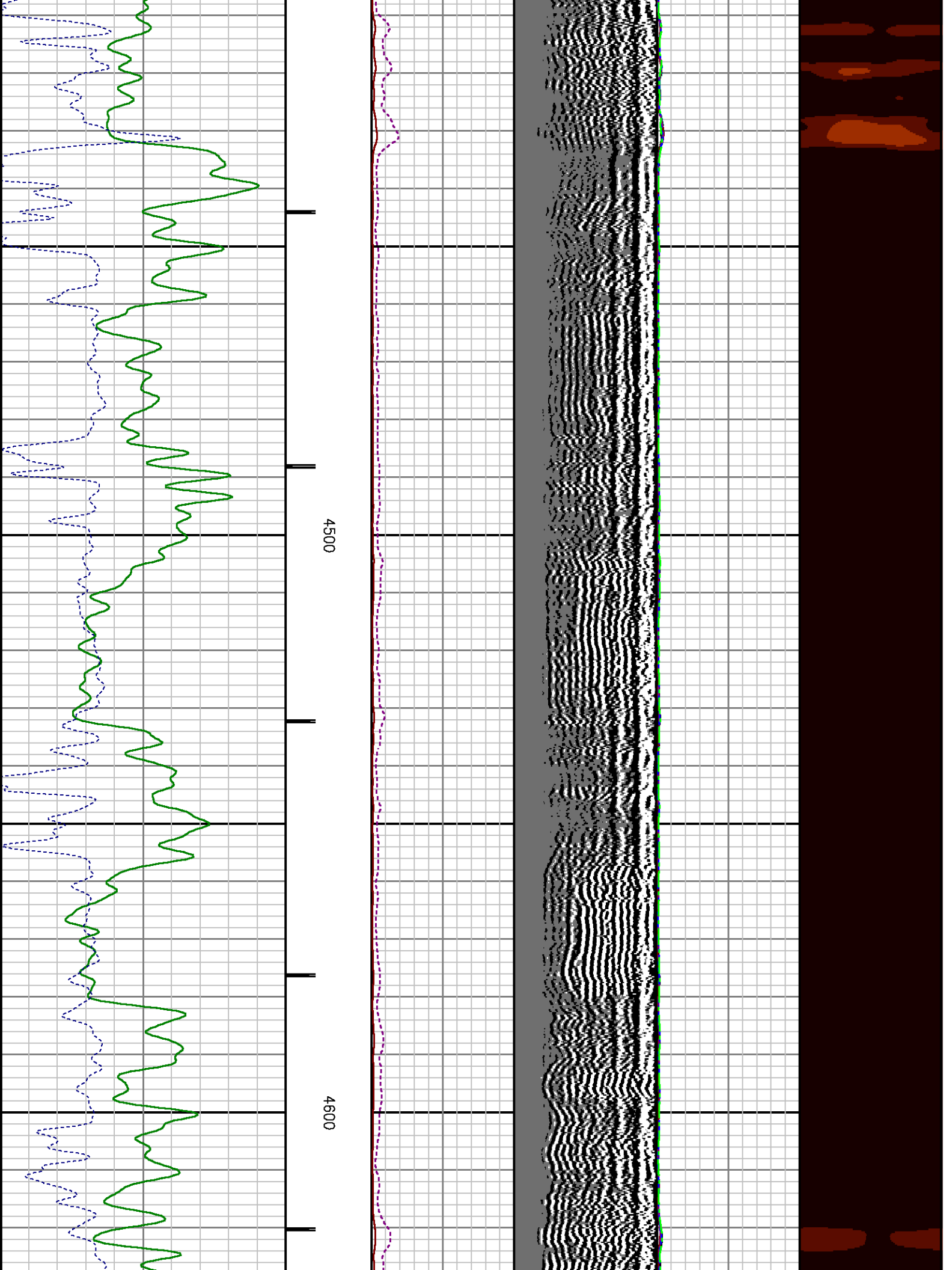


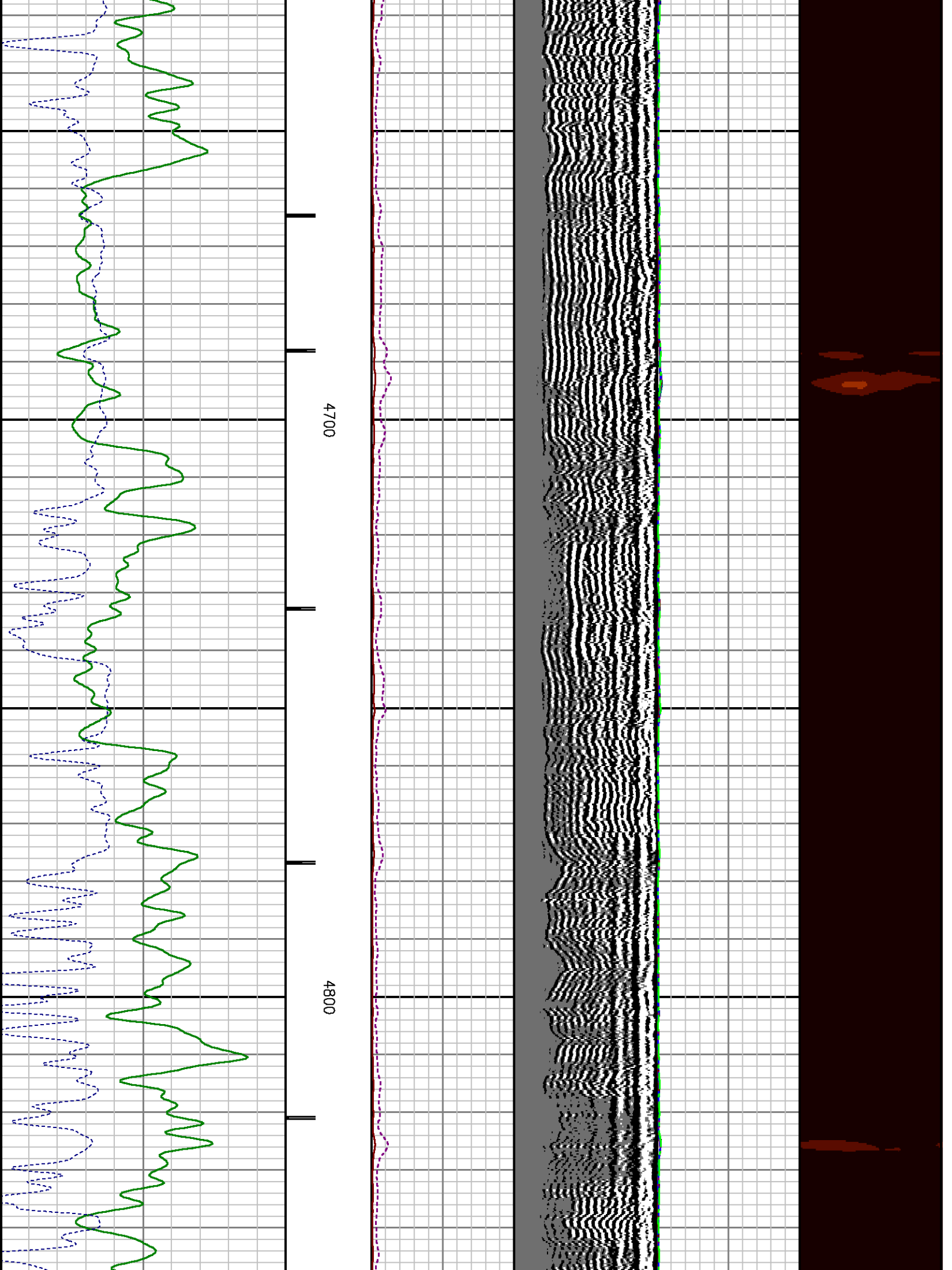


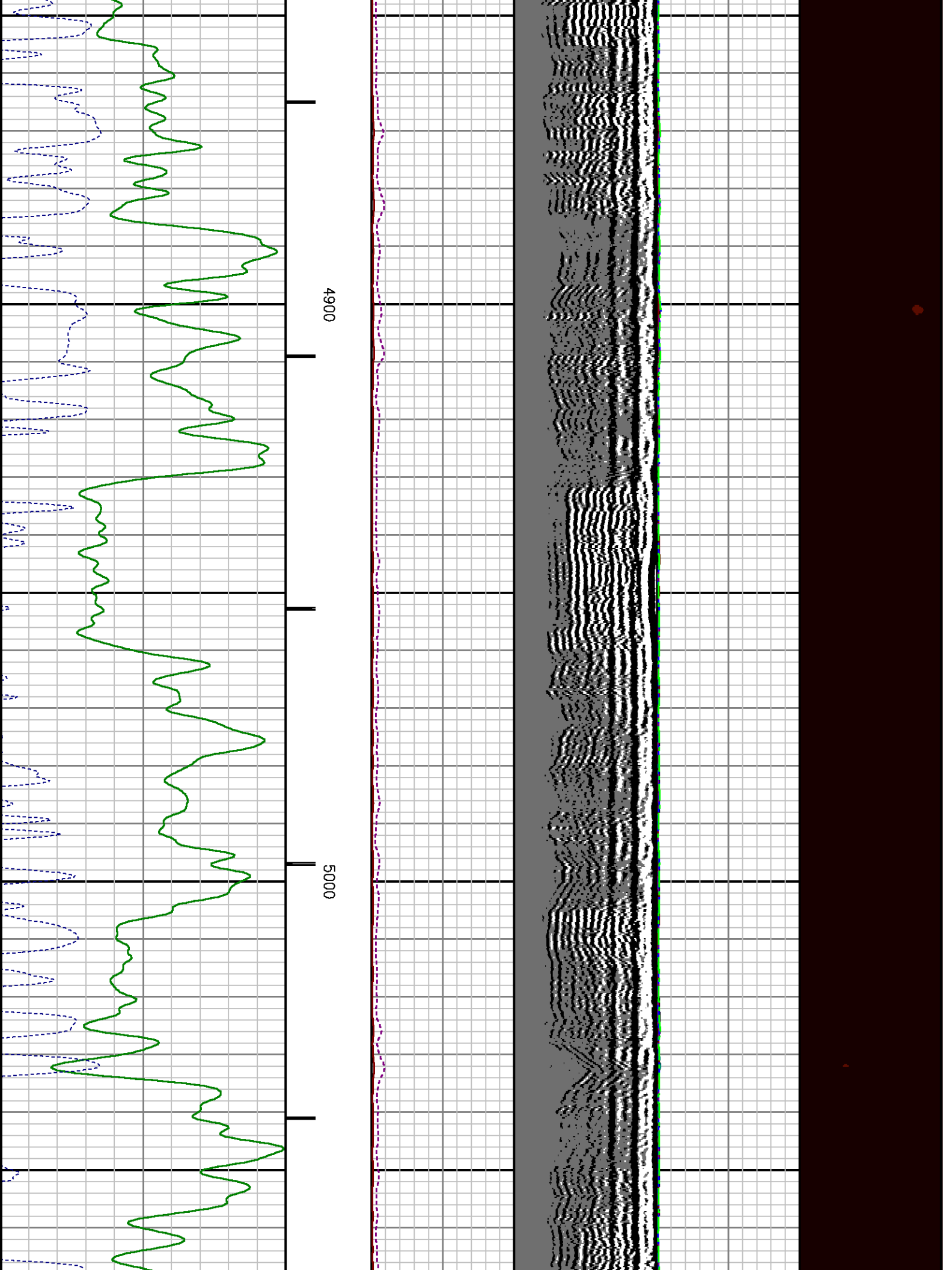


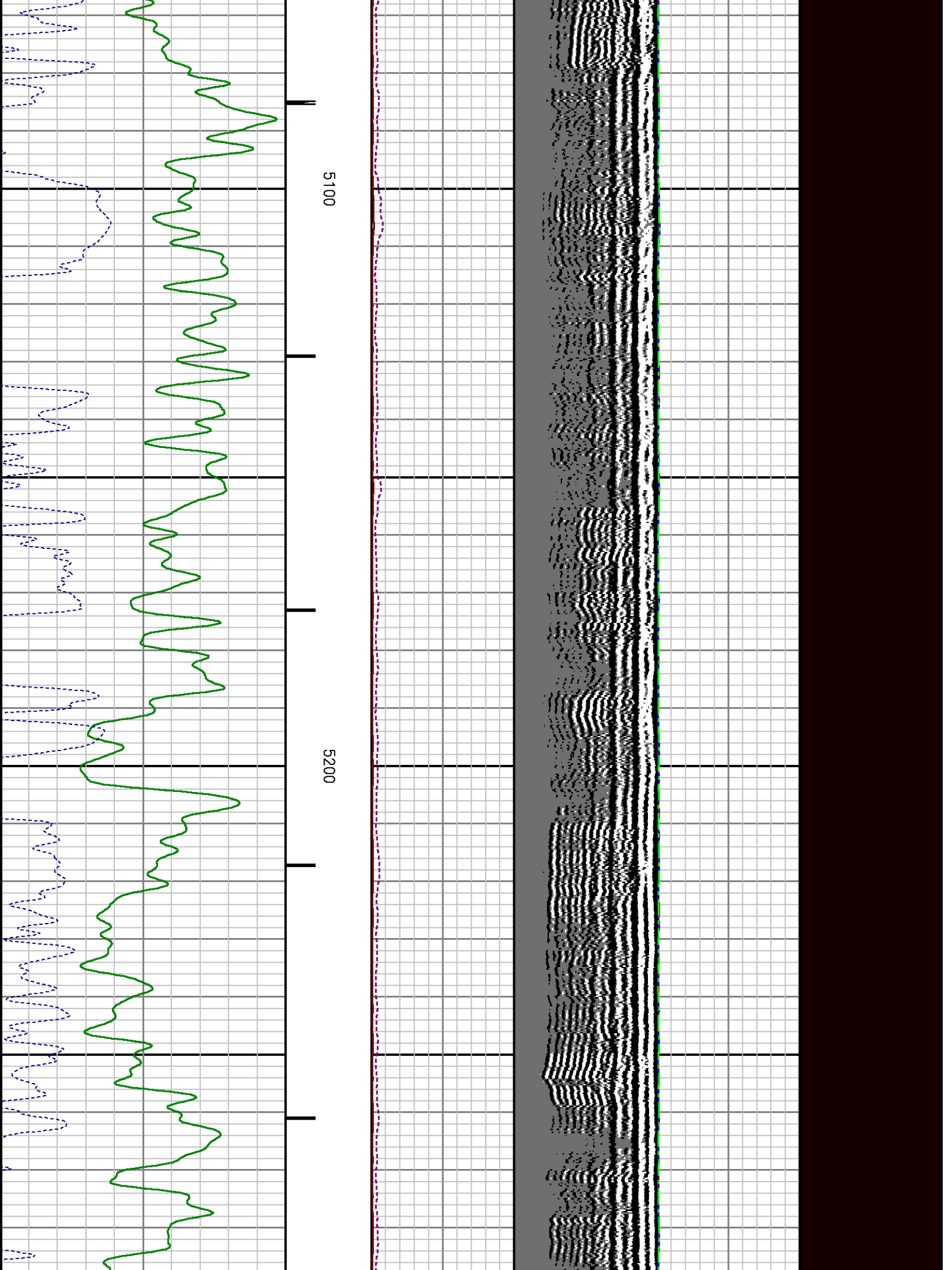




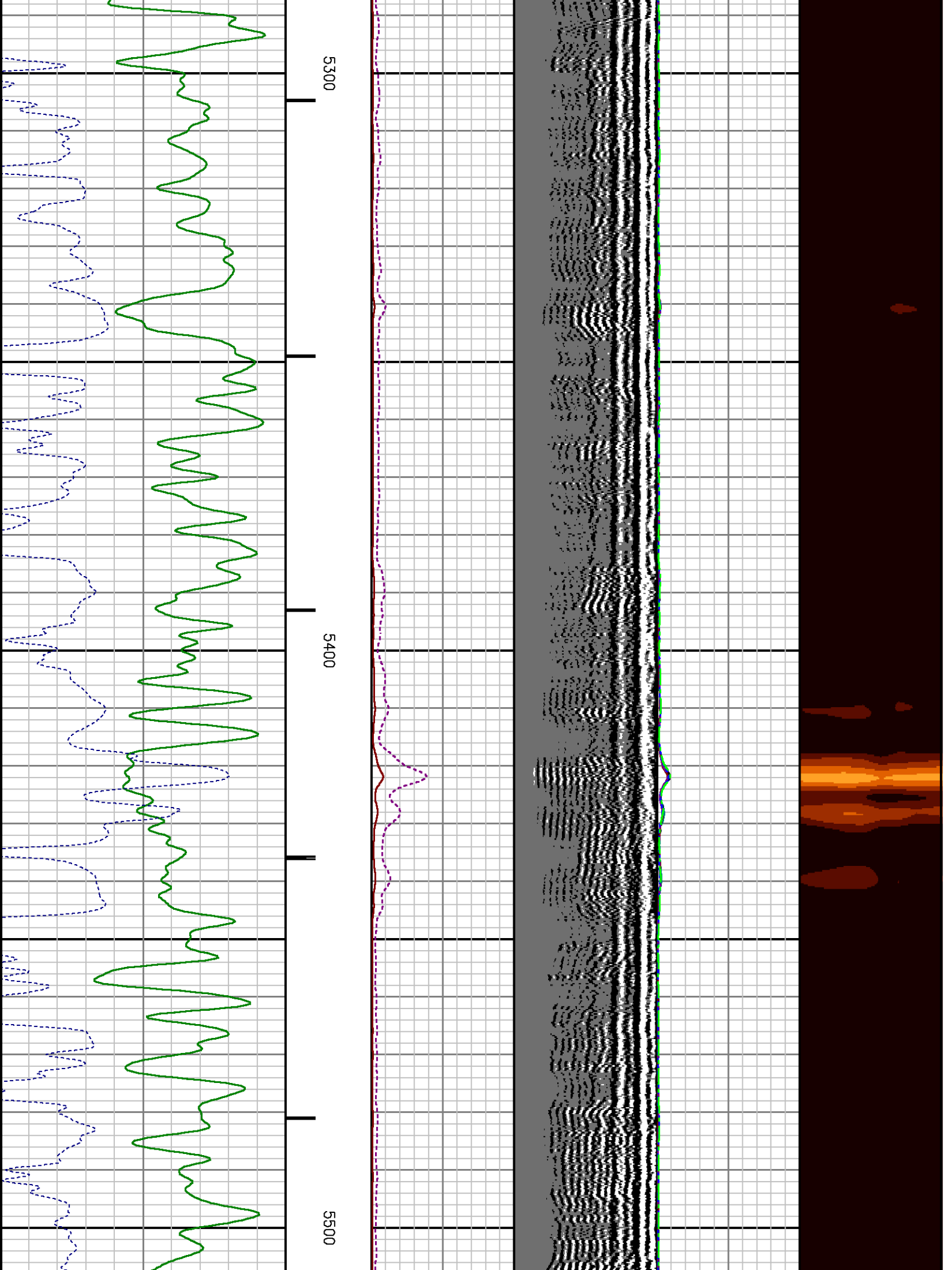


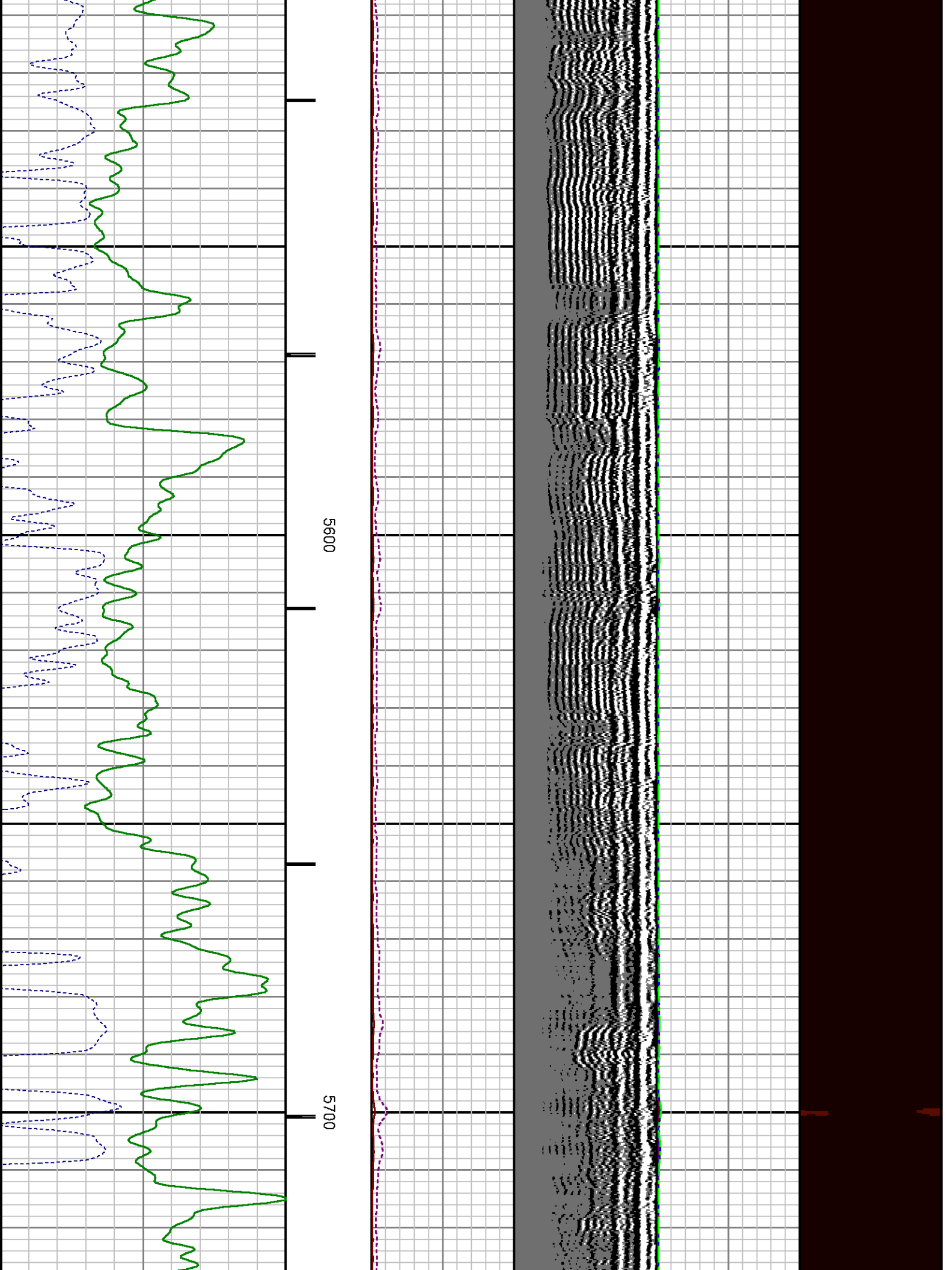


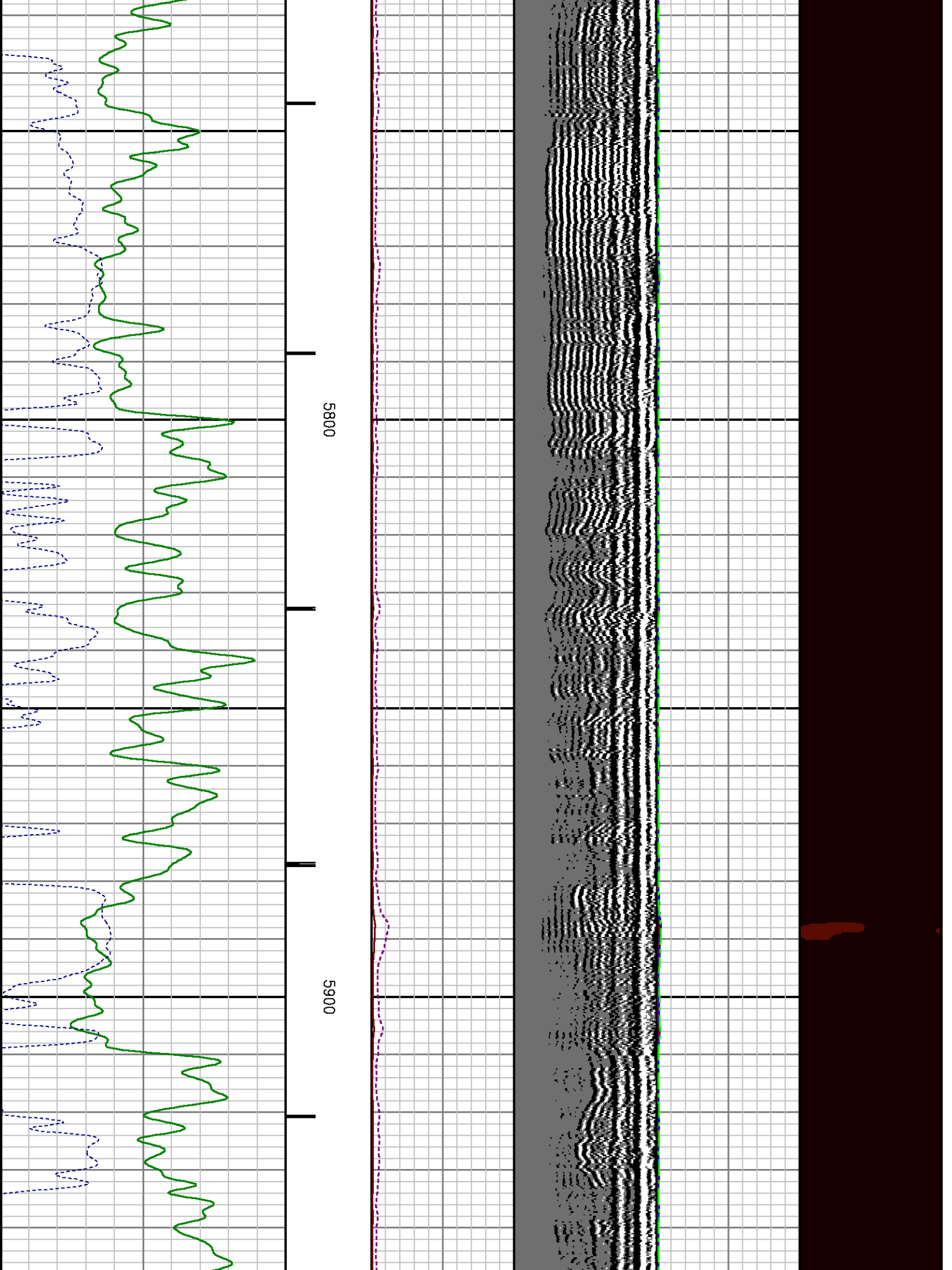


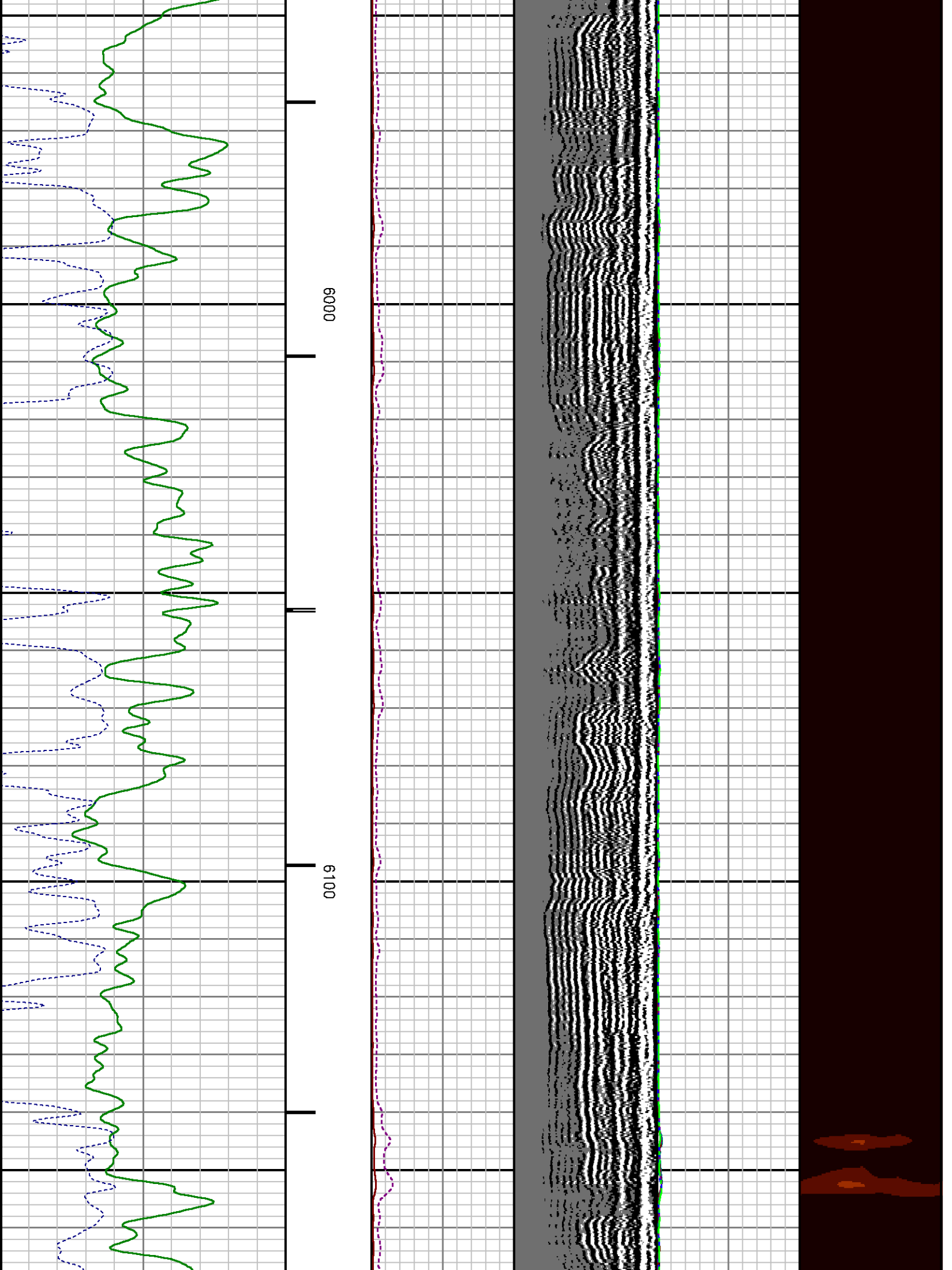


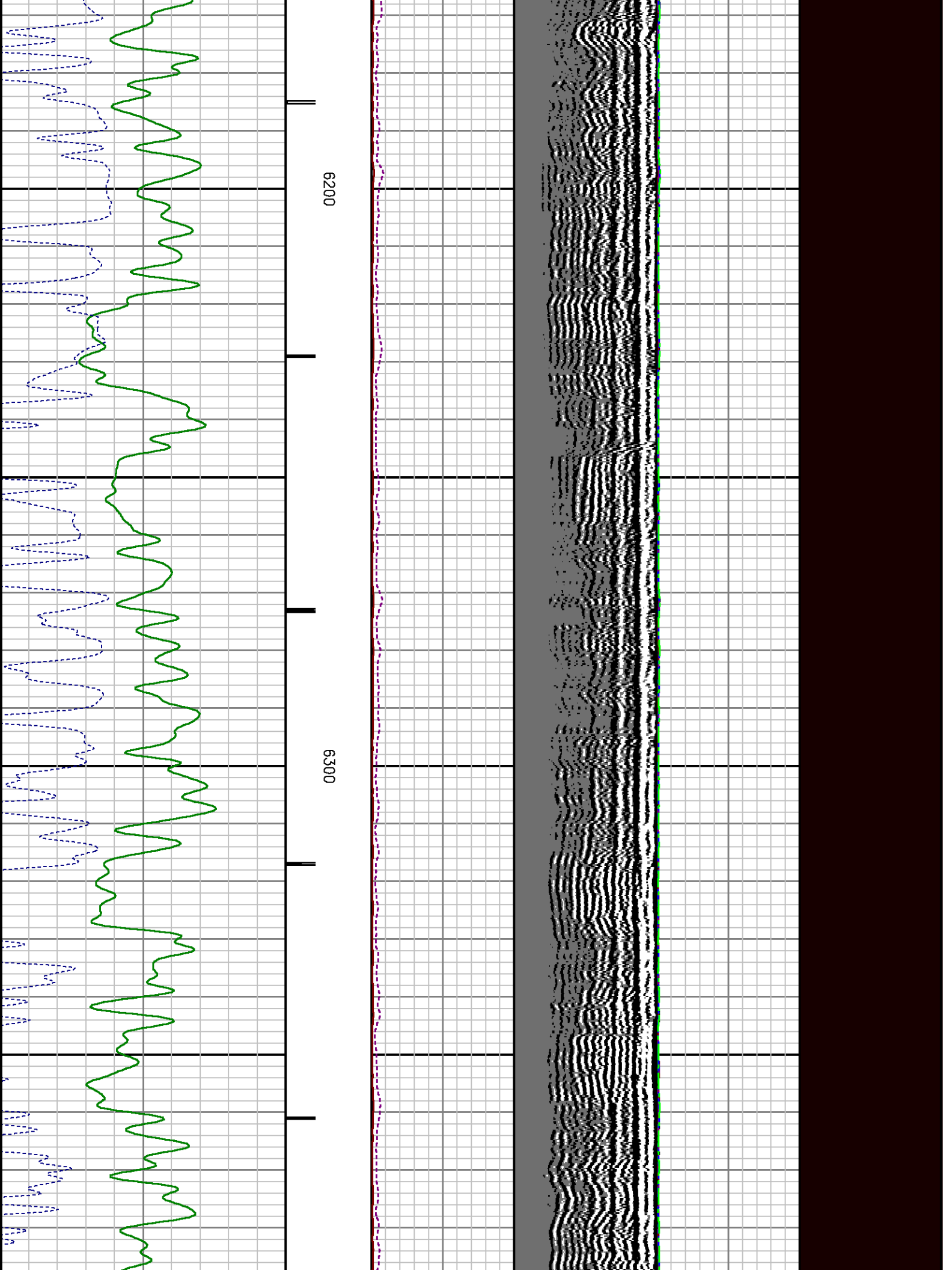


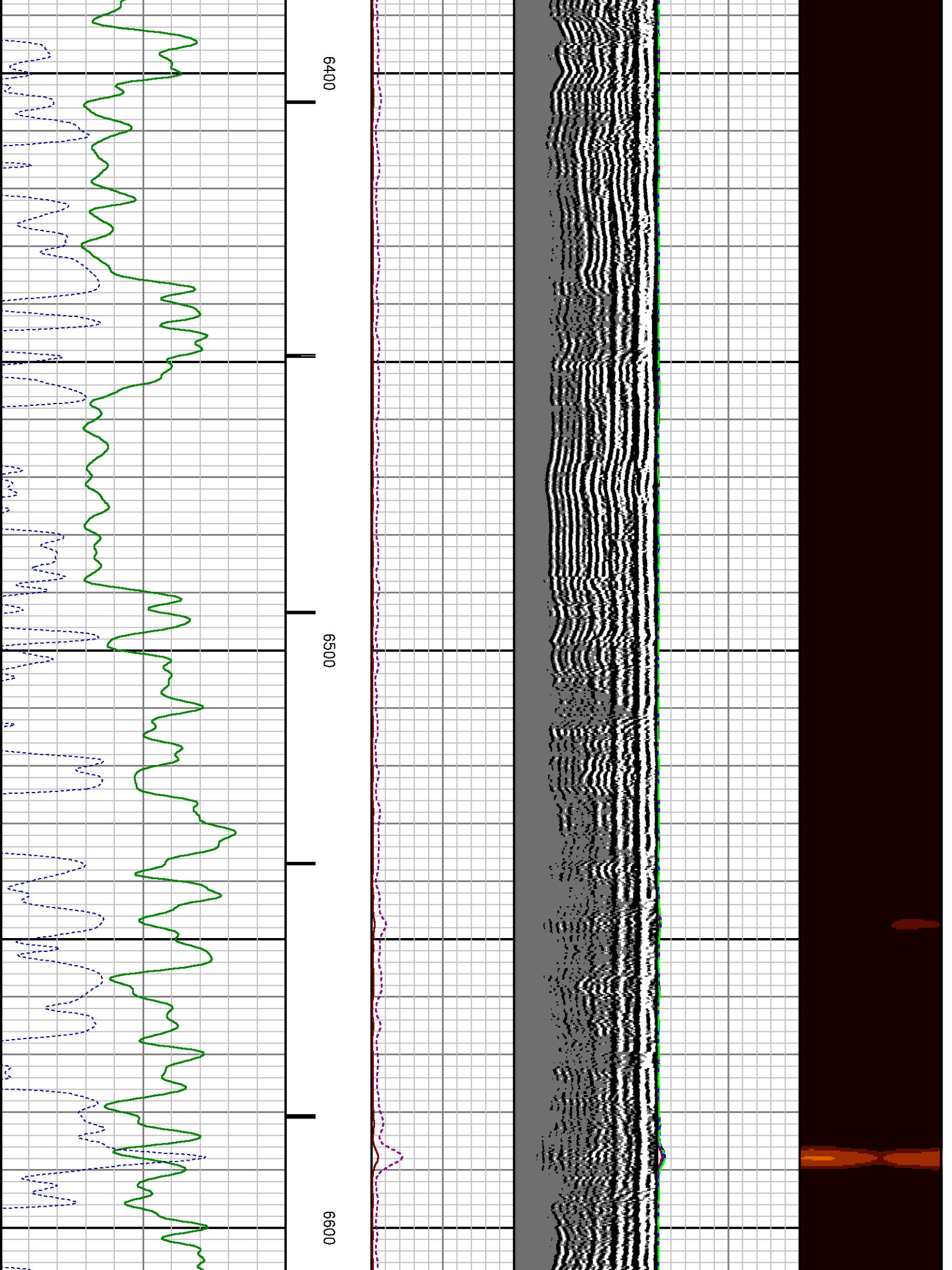




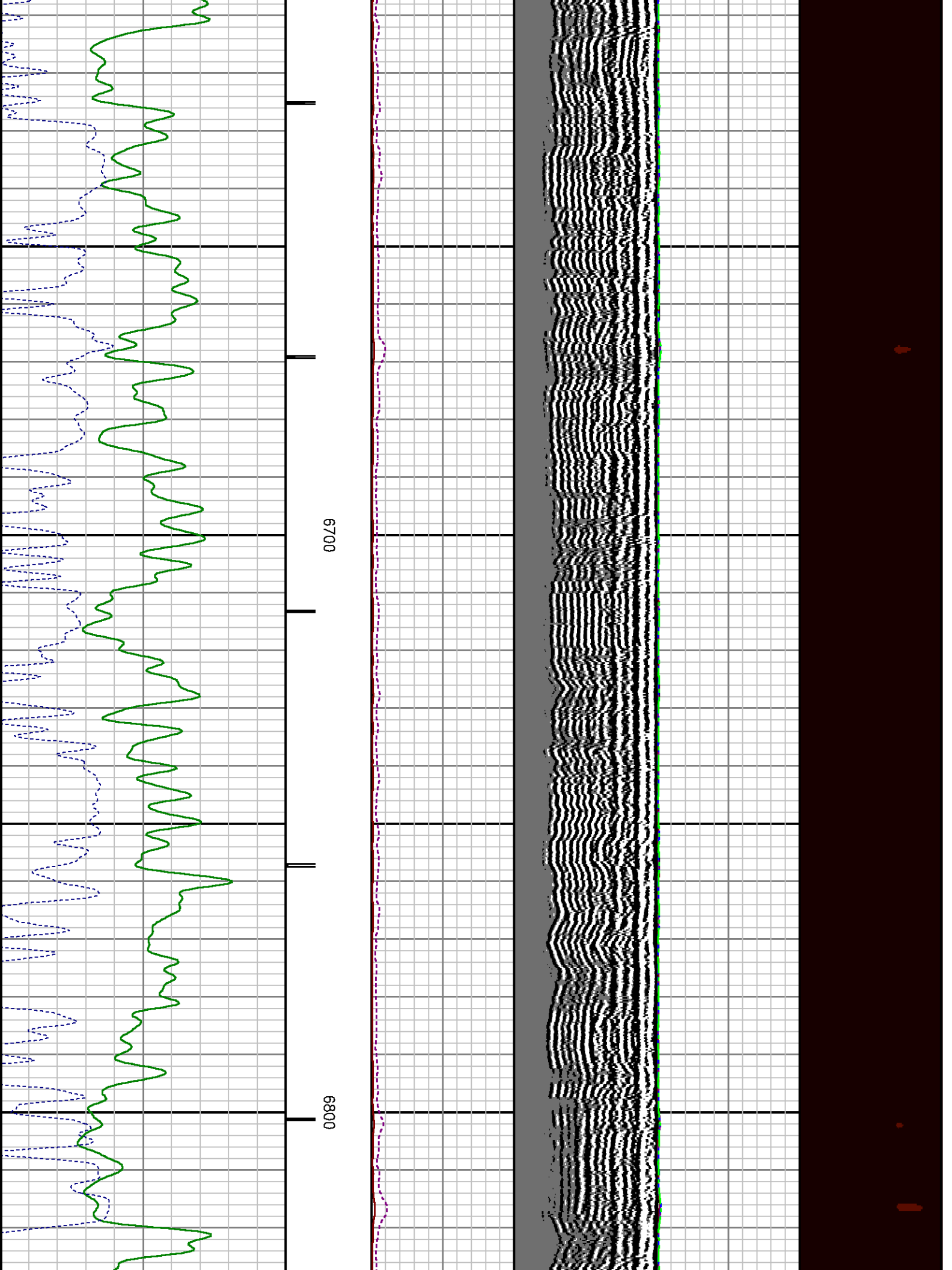


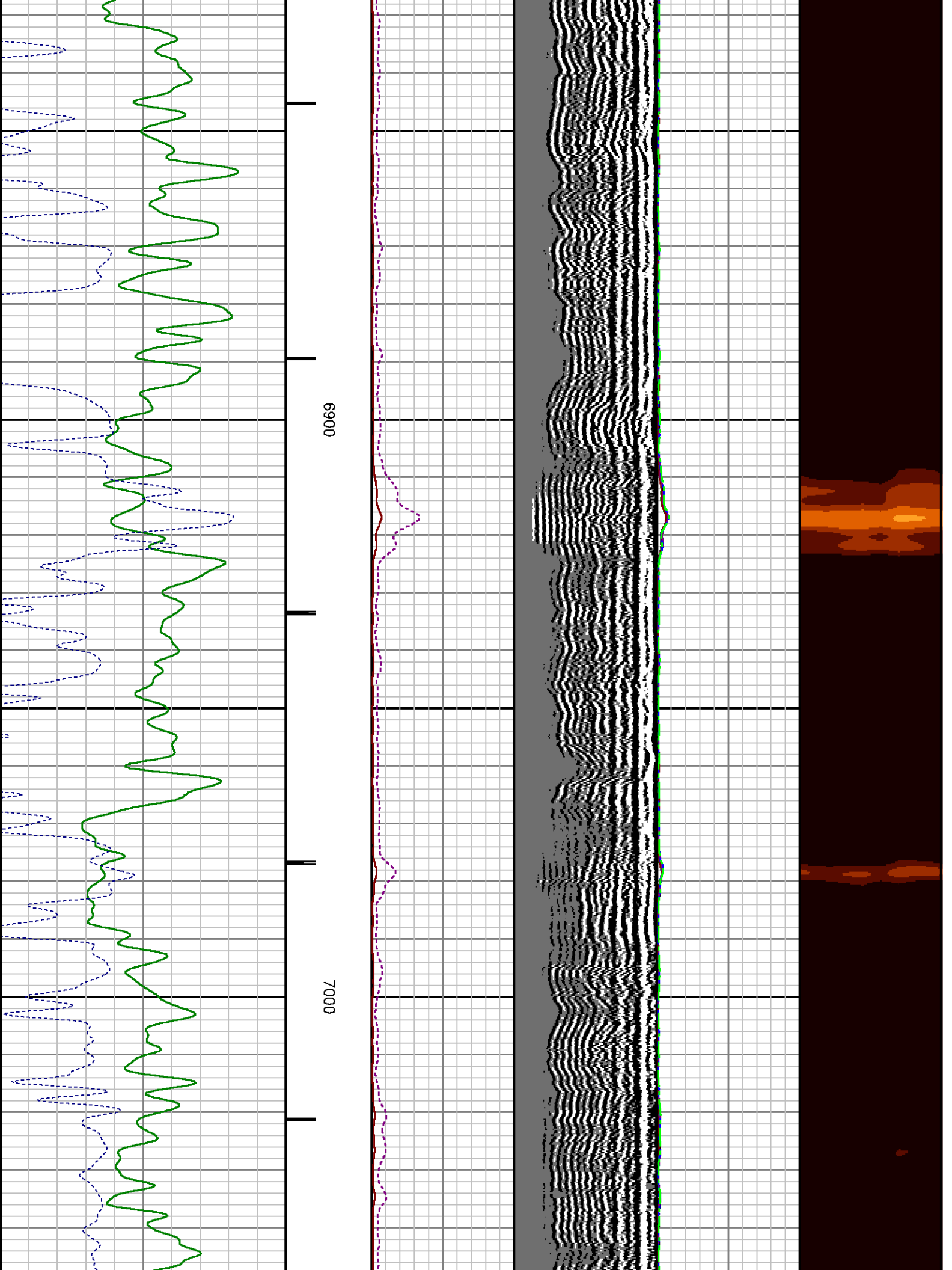


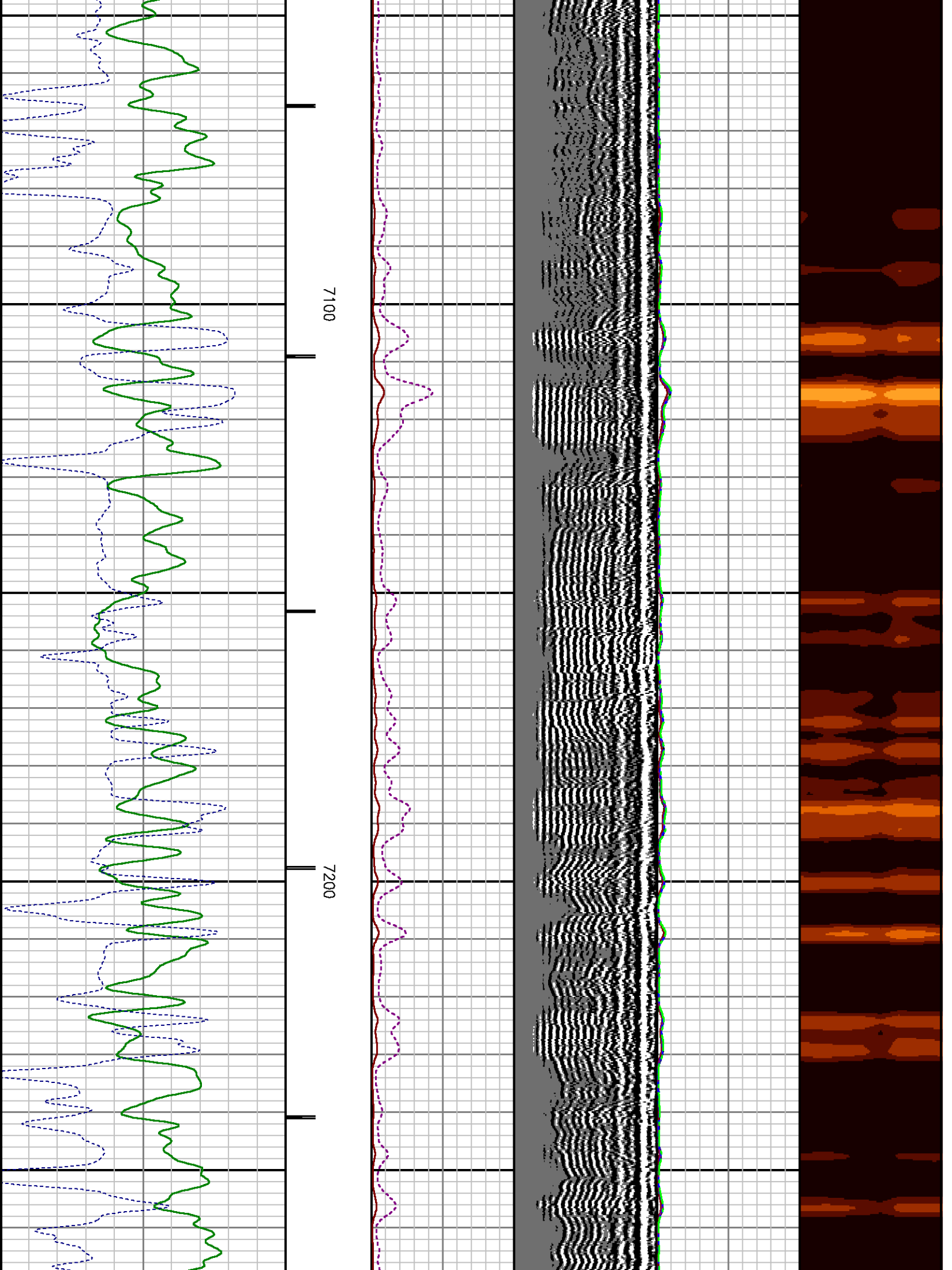


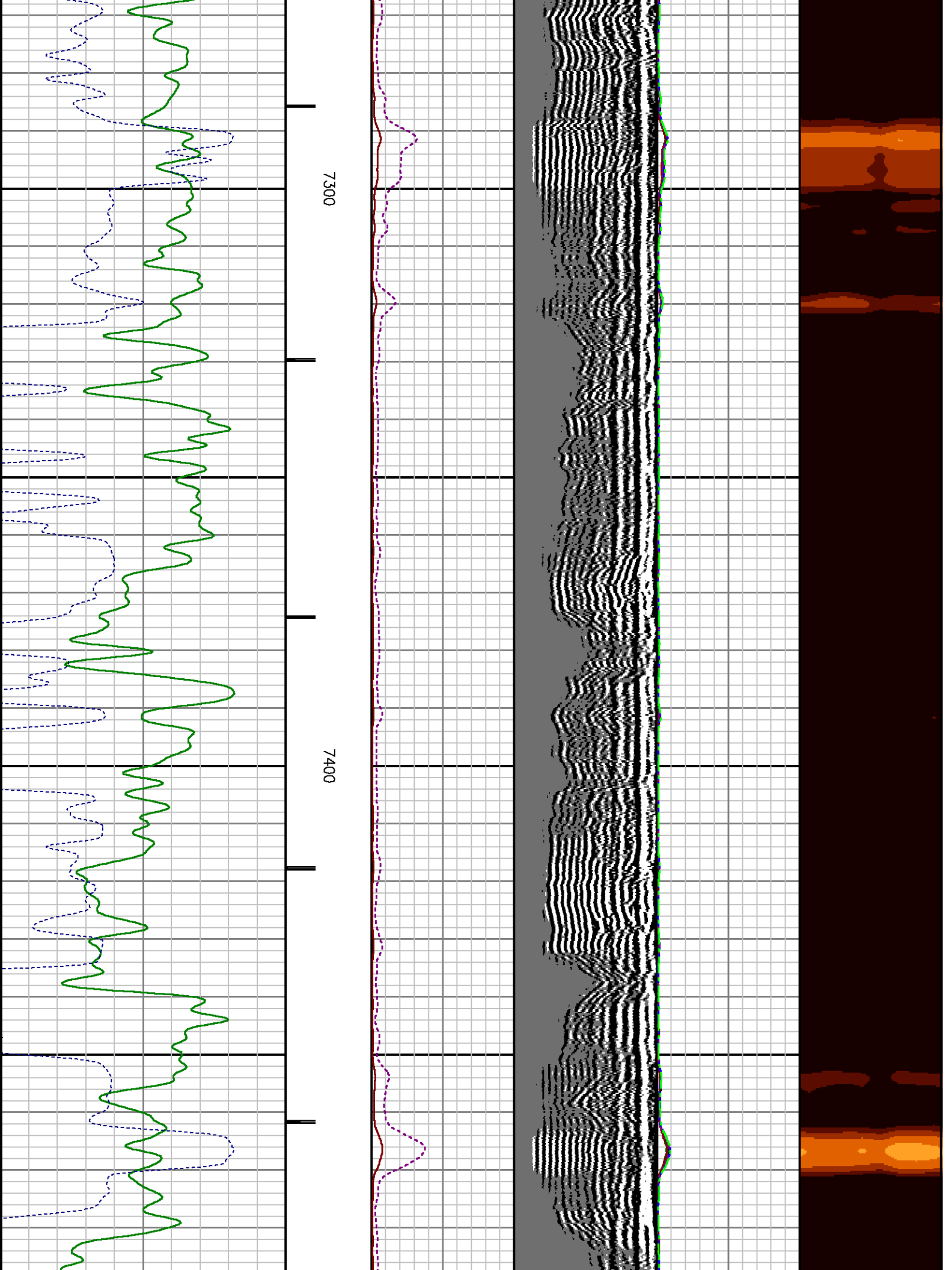


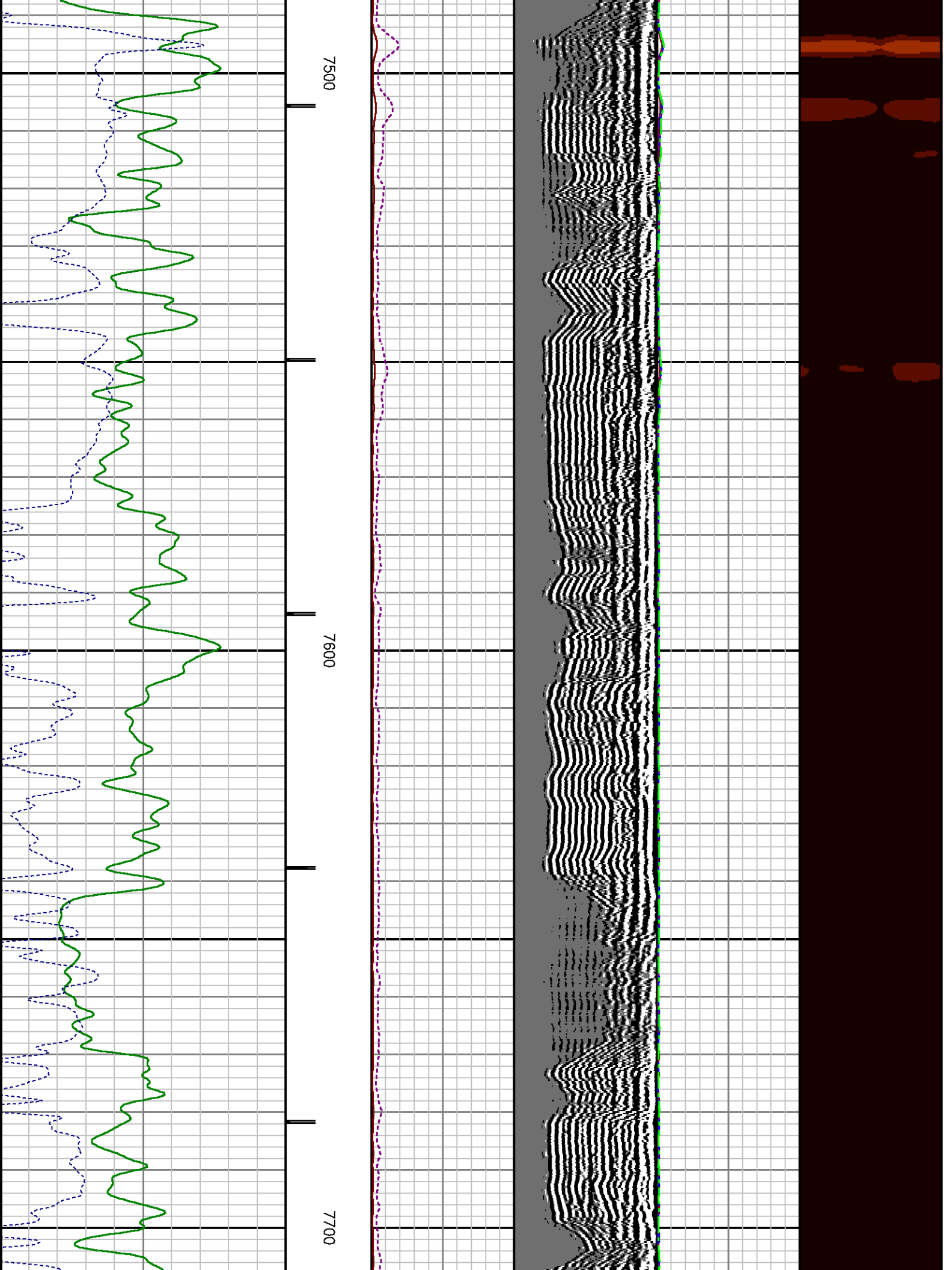


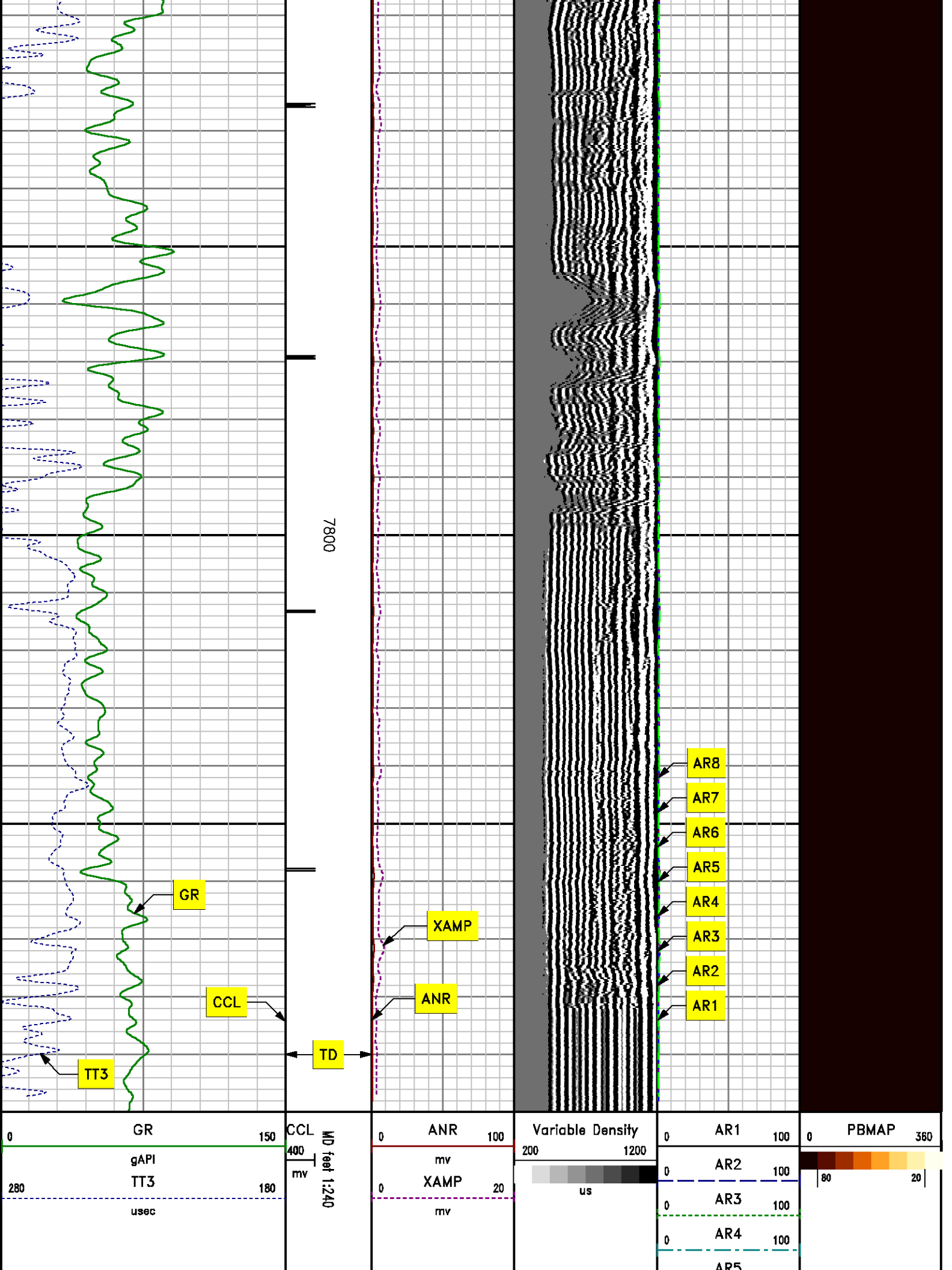














0	AR5	100
0	AR6	100
0	AR7	100
0	AR8	100

***REPEAT PASS***  
***0 PSI***

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	304.887	usec	7579.968	7905.000
RAL	Amp Gate Start Near	199.125	usec	7579.968	7905.000
RAL	Amp Gate Start Radial	199.015	usec	7579.968	7905.000
RAL	Amp Gate Width Far	25.000	usec	7579.968	7905.000
RAL	Amp Gate Width Near	25.000	usec	7579.968	7905.000
RAL	Amp Gate Width Radial	25.000	usec	7579.968	7905.000
RAL	casing od	4.500	inches	7579.968	7905.000
RAL	casing wt	11.600	lbm/ft	7579.968	7905.000
RAL	FB Start Far	291.900	usec	7579.968	7905.000
RAL	FB Start Near	175.391	usec	7579.968	7905.000
RAL	FB Start Radial	175.391	usec	7579.968	7905.000
RAL	FB Thresh Far	10.000	mv	7579.968	7905.000
RAL	FB Thresh Near	4.000	mv	7579.968	7905.000
RAL	FB Thresh Radial	4.000	mv	7579.968	7905.000
RAL	Fluid Travel Time	200.000	usec/ft	7579.968	7904.875

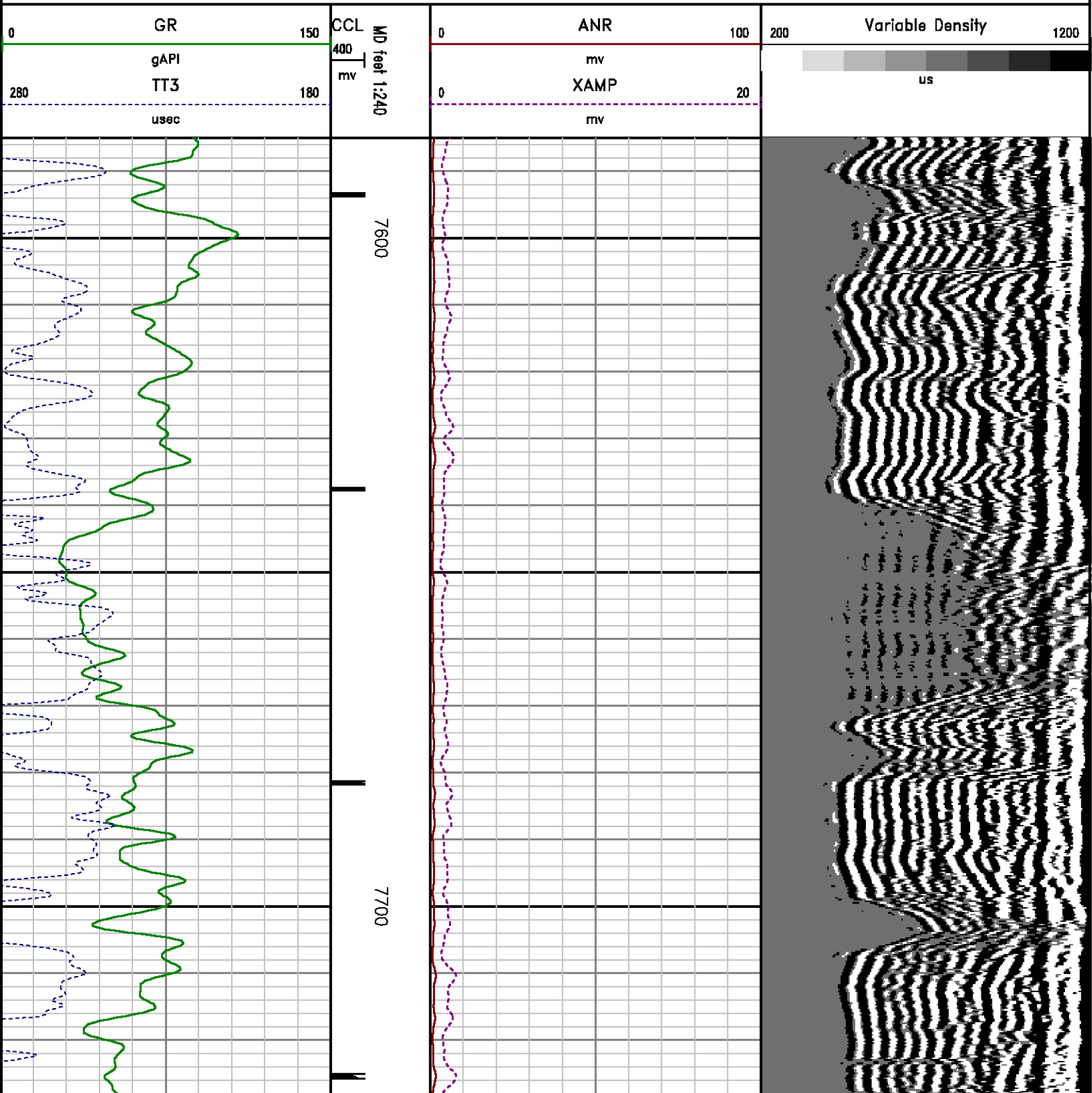
### DEPTH OFFSETS

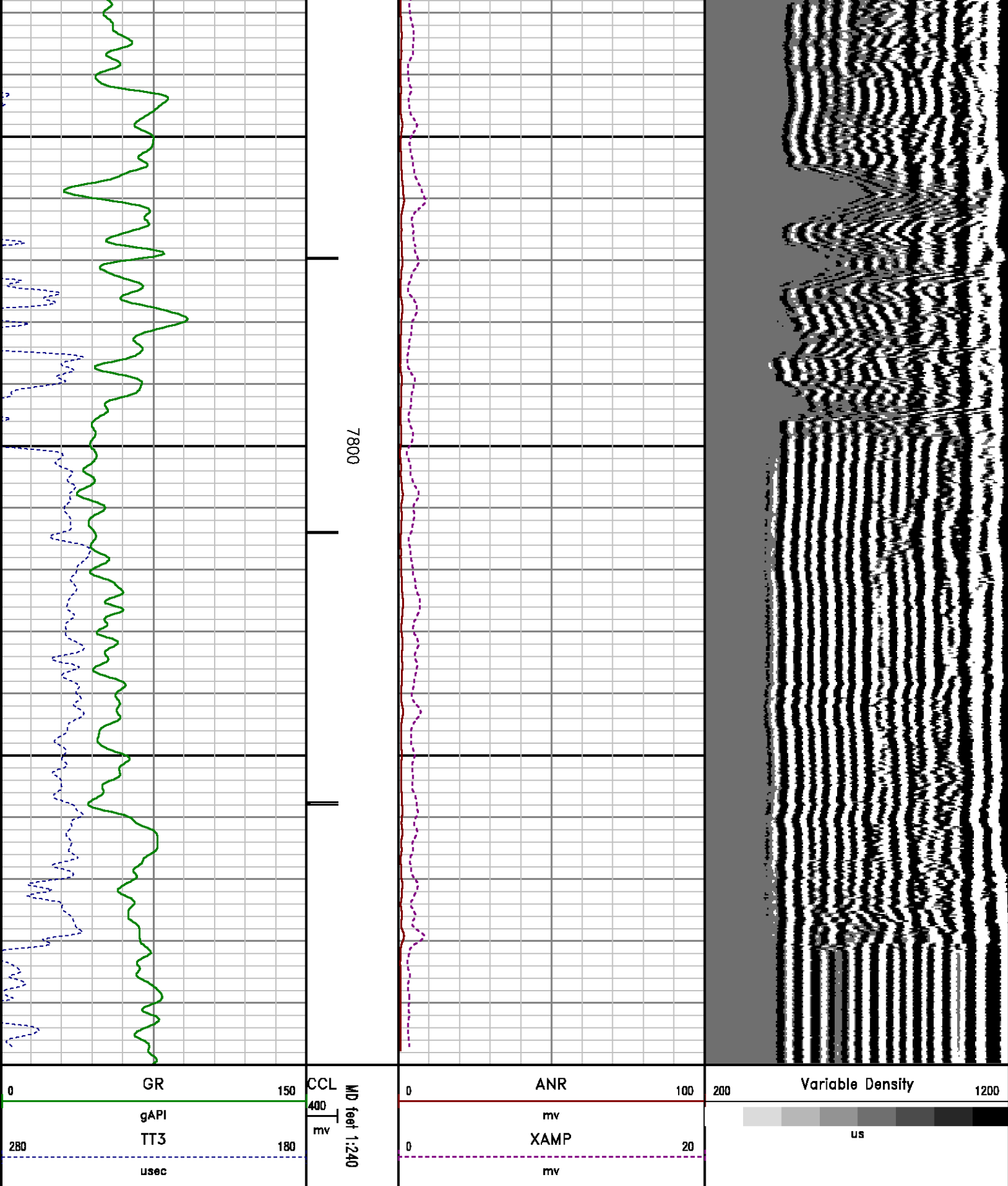
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
		AFAR	SIG	TT5			
1426XA	-10.040						

1355XA	-5.620	CCL
1355XA	-1.500	GR
1355XA	0.000	TEMP

Created by : RAL, v4.8.008  
 Plotted by : PlotMgr, v5.4.504  
 Company : WPX ENERGY  
 Well : DUGGAN RWF 314-29  
 File Name : d:\welldata\314cbl\repeat.xtf  
 Mode : PlotMgr 5.4.504  
 Interval : 7585.00 - 7900.00 feet UP  
 Created : 5/19/2013 11:57:42 AM





## CALIBRATION SUMMARY

# GAMMA RAY

Calibration File: C:\case\calver\GR\209M2.cal

## CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun May 12 13:40:15 2013 TOOL SERIES: 1355XA ASSET: 209 SEQ: M2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	129.07	523.51	0.469	60.53	245.53	185.00

Verification File: C:\case\calver\GR\209M2.VP

## PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Sun May 12 13:41:35 2013 TOOL SERIES: 1355XA ASSET: 209 SEQ: M2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	131.47	531.85	0.469	61.66	249.45	187.79

# RALSHP

Shop Calibration: C:\case\calver\RALSHP\539M19\_shp.cal

## SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun May 19 11:21:47 2013 TOOL SERIES: 1426XA ASSET: 539 SEQ: M19

Tool Delay [usec]	Tank OD in	Tank Wt lbm/ft	Tank ID in
-58.00	5.50	15.50	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	-0.394	100.00	0.19
3 Ft. Receiver	217	216	30	151	25	-0.281	100.00	0.18
5 Ft. Receiver	324	322	30	253	25	0.210	150.00	0.20
Radial #1	218	216	30	144	25	2.062	100.00	0.18
Radial #2	218	216	30	144	25	0.890	100.00	0.19
Radial #3	218	216	30	144	25	0.185	100.00	0.19
Radial #4	217	216	30	144	25	0.017	100.00	0.19
Radial #5	217	216	30	144	25	0.140	100.00	0.18
Radial #6	216	216	30	144	25	-0.130	100.00	0.18
Radial #7	216	216	30	144	25	-0.074	100.00	0.18
Radial #8	218	216	30	144	25	0.190	100.00	0.18

# RAILED

Wellsite Calibration: C:\case\calver\RALFLD\539M19 fld.cal

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun May 19 11:23:34 2013 TOOL SERIES: 1426XA ASSET: 539 SEQ: M19

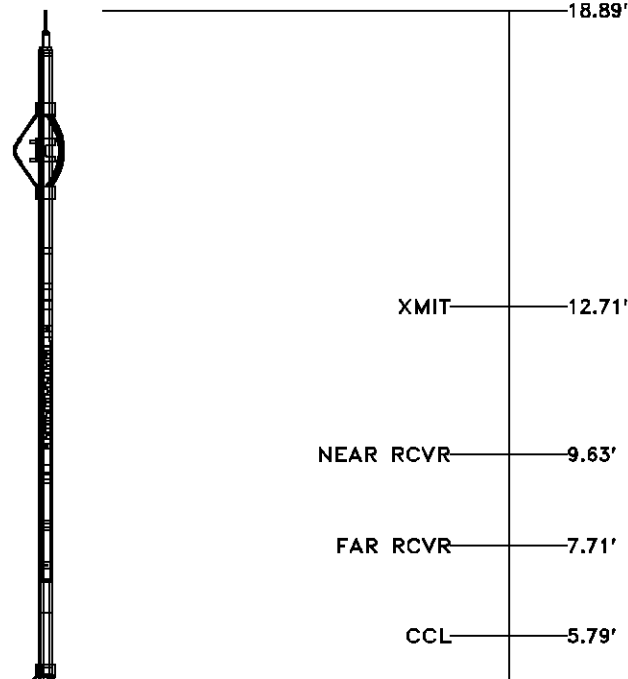
Tool Delay [usec]  Casing OD  in Casing Wt  lbm/ft Casing ID  in

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="-0.258"/>	<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="-2.814"/>			
5 Ft. Receiver	<input type="text" value="317"/>	<input type="text" value="30"/>	<input type="text" value="-3.773"/>			
Radial #1	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-4.611"/>			
Radial #2	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-3.928"/>			
Radial #3	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-3.872"/>			
Radial #4	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-4.158"/>			
Radial #5	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-5.590"/>			
Radial #6	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-4.285"/>			
Radial #7	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-4.583"/>			
Radial #8	<input type="text" value="200"/>	<input type="text" value="30"/>	<input type="text" value="-4.392"/>			

## TOOL DIAGRAM

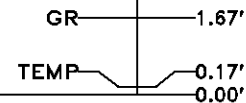
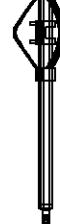
OTA SHORT CABLE HEAD

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





RAL GR/TEMP/CCL/CHV DETECTOR	
Series	1355XA
Mnemonic	RAL

Diameter	2.75"
Weight	85.00 lb
Length	6.96'
Measure Point	0.17' TEMP
Measure Point	1.67' GR
Measure Point	5.79' CCL
Temp Rating	400.00 °F
Press Rating	20000.00 PSI



Total Length: 18.89'  
 Total Weight: Not Available  
 Max Diameter: 0' 2.75"

<div>  </div> <div>           Baker Atlas         </div> <div>  </div>	<div> <div>Company</div> <div>Well</div> <div>Field</div> <div>County</div> </div> <div> <div>WPX ENERGY</div> <div>DUGGAN RWF 314-29</div> <div>RULISON</div> <div>GARFIELD</div> </div> <div> <div>State</div> <div>COLORADO</div> </div>		<div>File No:</div> <div>CH072055</div> <div>API No:</div> <div>05045216670000</div>
	<div>Location</div> <div>SHL: 547' FSL &amp; 584' FWL</div> <div>BHL: 1173' FSL &amp; 721' FWL</div> <div> <div>SEC</div> <div>29</div> <div>TWP</div> <div>6S</div> <div>RGE</div> <div>94W</div> </div>	<div>Elevations</div> <div>KB 5445.2 ft</div> <div>DF</div> <div>GL 5419.2 ft</div>	<div>29 6S 94W</div> <div>RWF 14-29</div> <div>NABORS SSD 573</div>