



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH072035	Company Well Field County	WPX ENERGY DIAMOND ELK PA 43-2 PARACHUTE GARFIELD	State COLORADO
API No: 05045209010000			
Location SHL: 2526' FSL & 665' FWL SEC:1 BHL: 2270' FSL & 718' FEL SEC:2	Other Services RPM		
2 7S 9SW GV 84-1 NABORS SSD 574	SEC 2 TWP 7S RGE 9SW		
Permanent Datum Log Measured From Drill Measured From	G.L. Elevation 6027 ft K.B. 26 ft Above P. D. KELLY BUSHING	Elevations KB 6053 ft DF GL 6027 ft	

Date	18/MAY/15	
Run	ONE	
Service Order	575080	
Depth Driller	6103 ft	
Depth Logger	6054 ft	
Bottom Logged Interval	6044 ft	
Top Logged Interval	26 ft	
Time Started	7:00	
Time Finished	10:30	
Operator Rig Time	3.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	N/A	
Salinity	N/A	
Fluid Level	78 ft	
Logged Cement Top	N/A	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	N/A	
Nominal Logging Speed	45 fpm	
Maximum Recorded Temperature	225 degF	
Reference Log	BAKER HUGHES HDIL LOG	
Reference Log Date	26/APR/2015	
Equipment No.	4271	9721
Recorded By	U. KINSEL	GRAND JUNCTION
Witnessed By	MR. MATT HUTSON	

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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	1447 ft
7.875 In	0 ft	8168 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 In	N/A	N/A	0 ft	1404 ft
4.5 In	11.6 lbm/ft	1-80	0 ft	8103 ft

Remarks
ALL DATA IN THIS LOG WAS DEPTH SHIFTED TO MATCH A BAKER HUGHES HDIL LOG DATED 26 APRIL 2013 AT THE CLIENT'S REQUEST. THE AMOUNT OF LINEAR SHIFT WAS 10 FEET UP. DEPTH SHIFTING PROCESS CREATES THE POTENTIAL FOR COLLAR LENGTHS TO VARY FROM OTHER CASED HOLE LOGS WITHOUT A GAMMA RAY REFERENCE.
SHORT JOINT: 4710' - 4735
BHT: 225 degF

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	303.100	usec	19.937	8059.000
RAL	Amp Gate Start Near	199.125	usec	19.937	8059.000
RAL	Amp Gate Start Radial	198.578	usec	19.937	8059.000
RAL	Amp Gate Width Far	25.000	usec	19.937	8059.000
RAL	Amp Gate Width Near	25.000	usec	19.937	8059.000
RAL	Amp Gate Width Radial	25.000	usec	19.937	8059.000
RAL	casing od	4.500	inches	19.937	8059.000
RAL	casing wt	11.600	lbm/ft	19.937	8059.000
RAL	FB Start Far	291.900	usec	19.937	8059.000
RAL	FB Start Near	175.391	usec	19.937	8059.000
RAL	FB Start Radial	175.391	usec	19.937	8059.000
RAL	FB Thresh Far	10.000	mv	19.937	8059.000
RAL	FB Thresh Near	4.000	mv	19.937	8059.000
RAL	FB Thresh Radial	4.000	mv	19.937	8059.000
RAL	Fluid Travel Time	200.000	usec/ft	19.937	8058.937

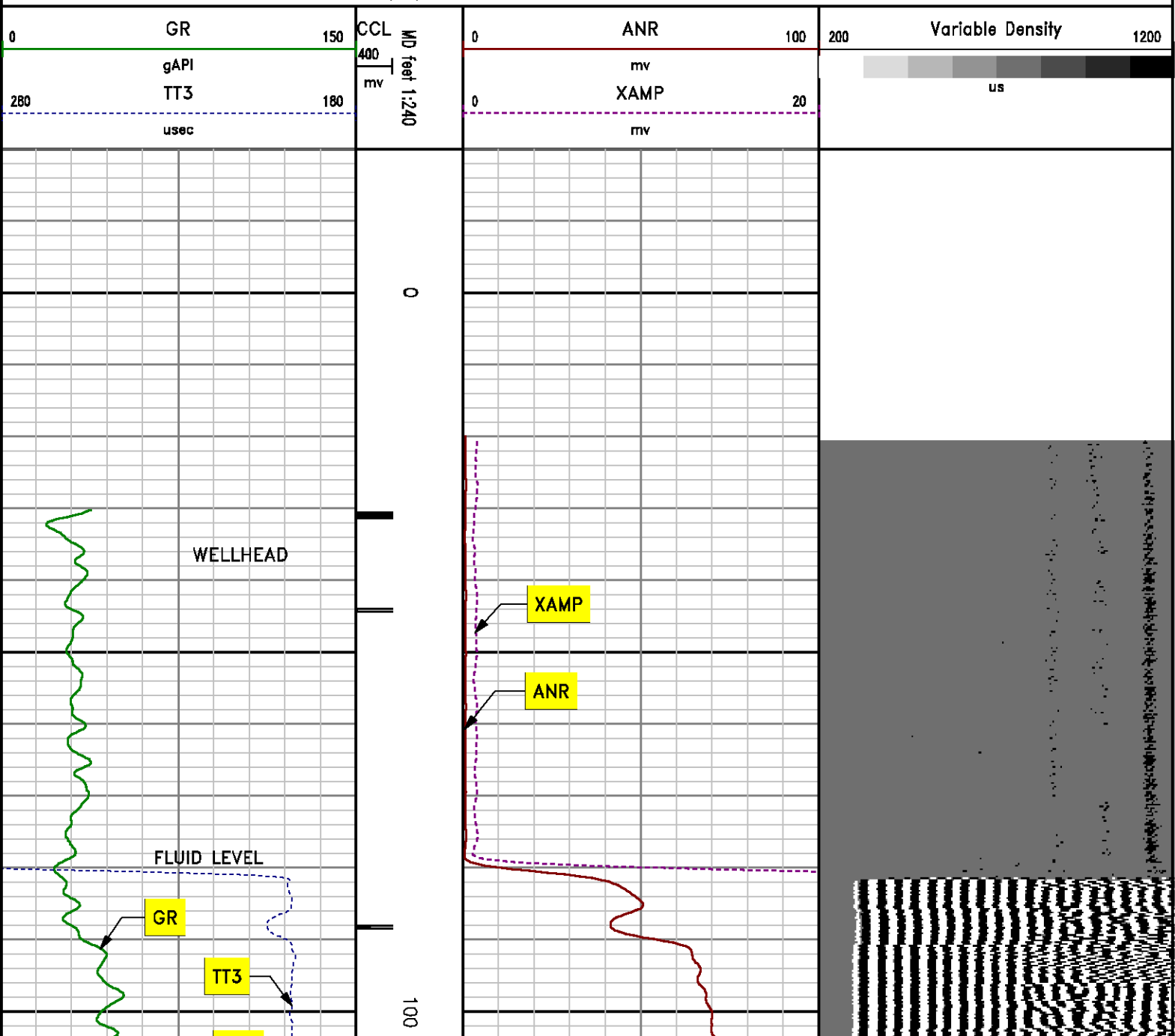
DEPTH OFFSETS  
(for Acquired Curves)

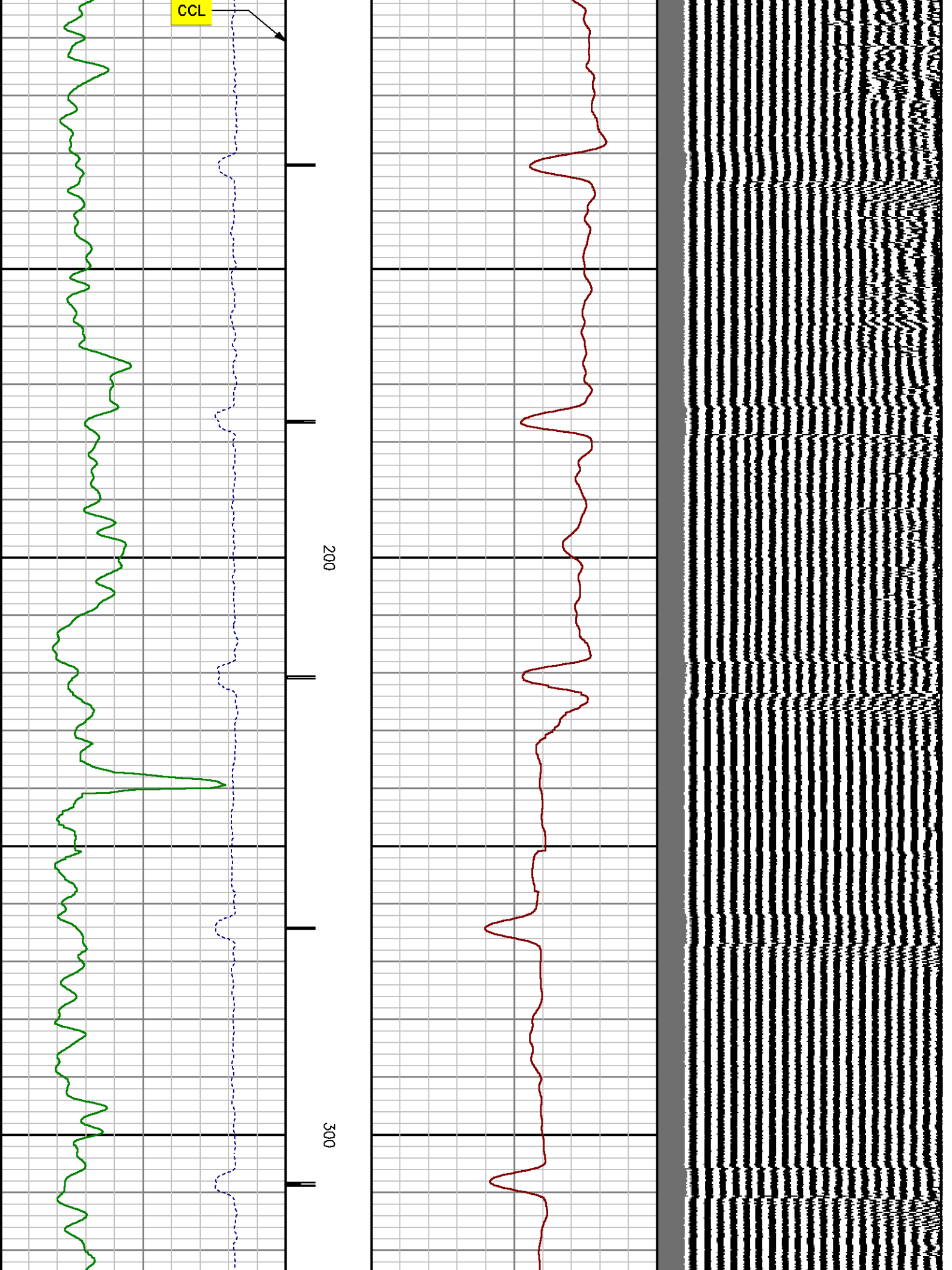
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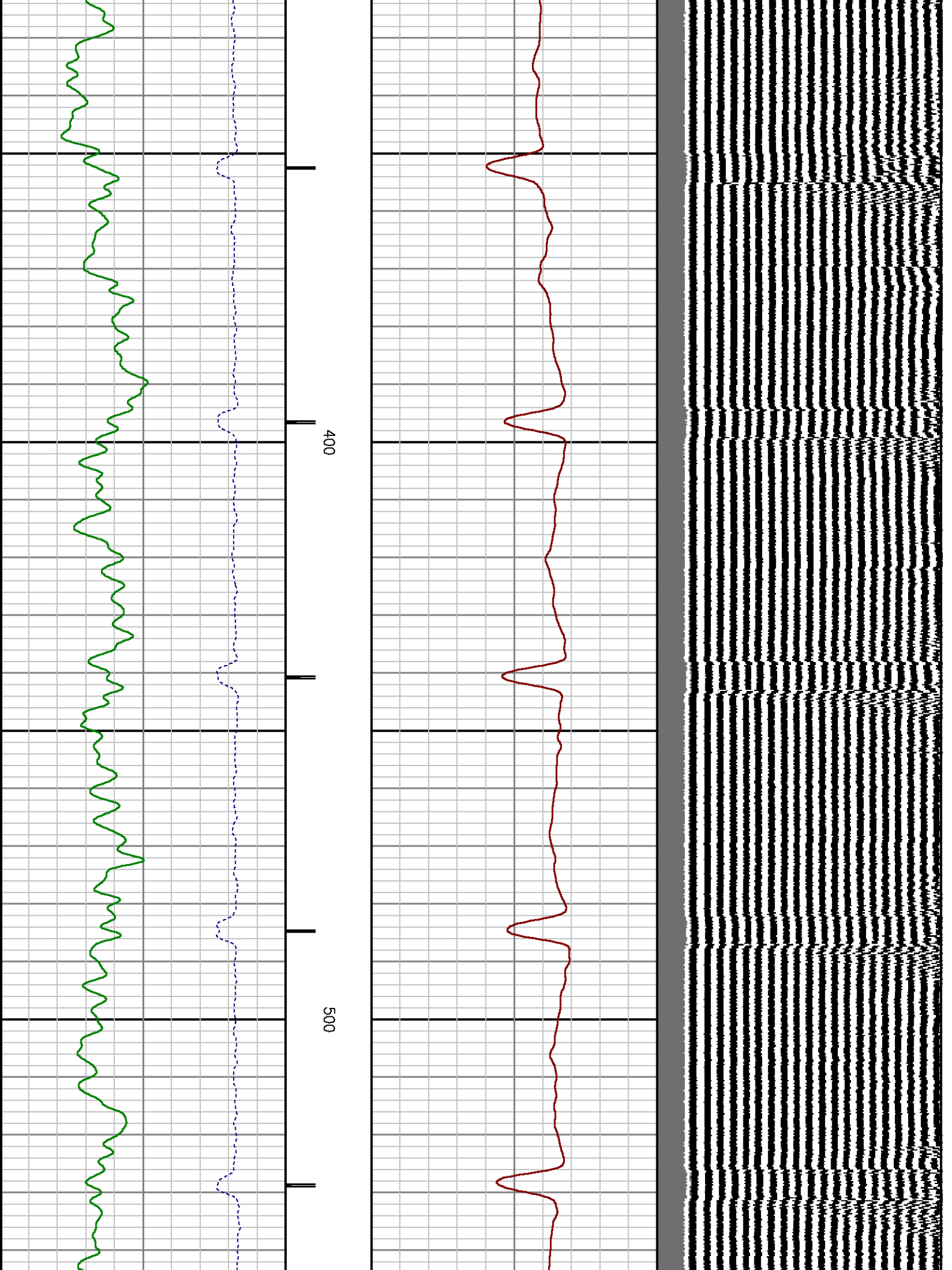
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 1355XA -5.620  
 1355XA -1.500  
 1355XA 0.000

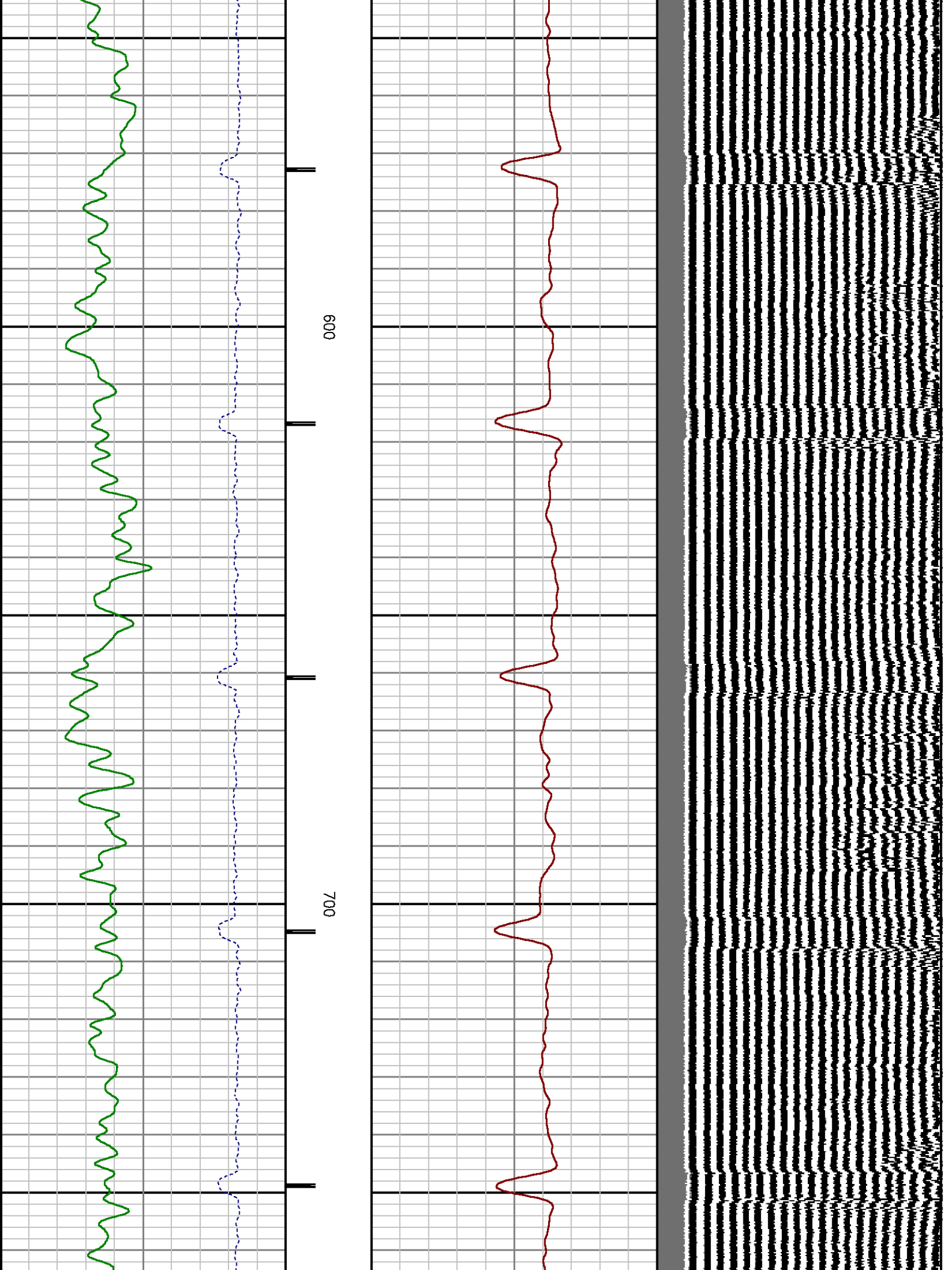
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FPR3	FPR5	TT3	TTR1	TTR2	TTR3
TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
AFAR	SIG	TT5			
CCL					
GR					
TEMP					

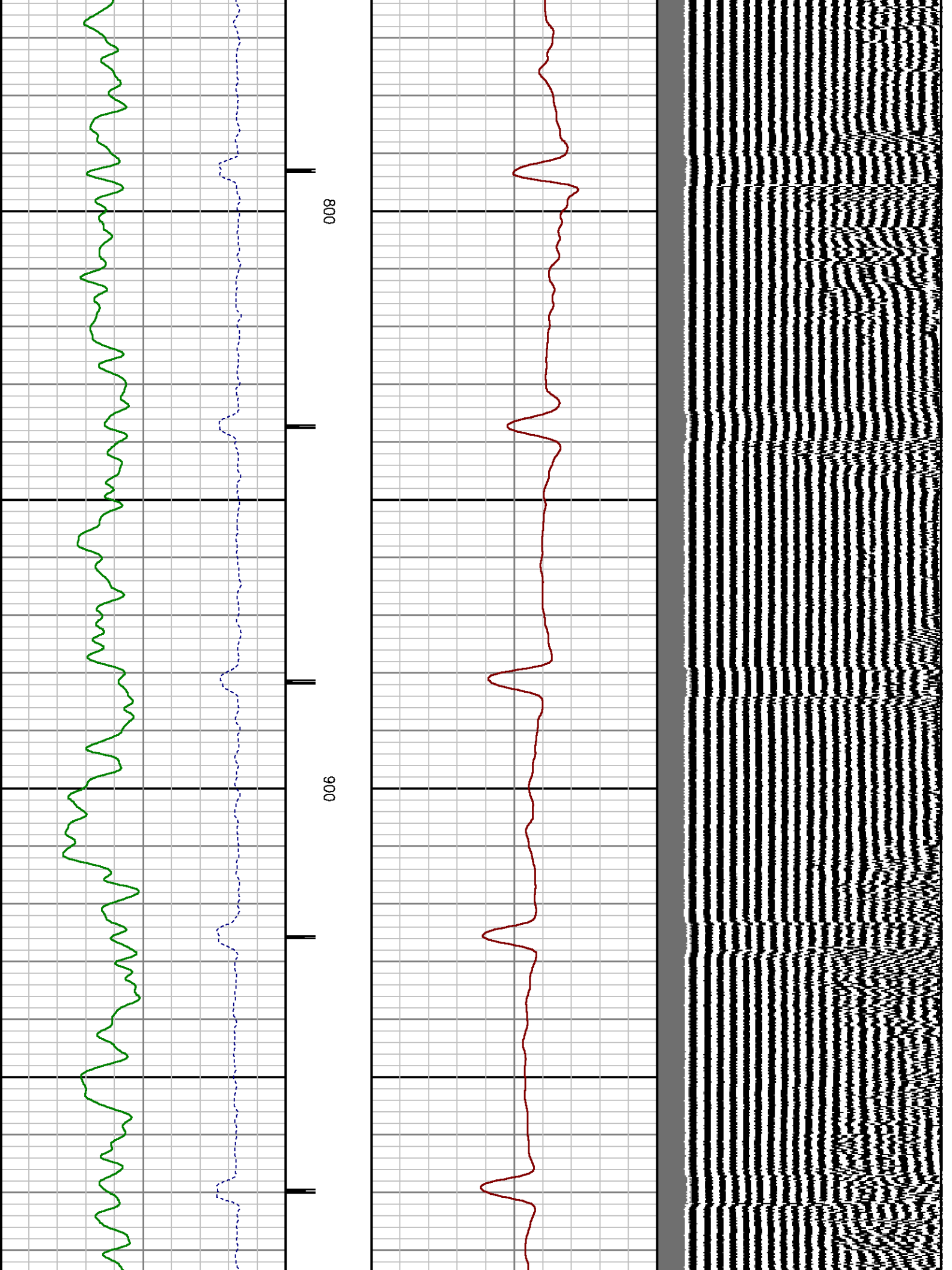
Created by : RAL, v4.8.008  
 Plotted by : PlotMgr, v5.4.504  
 Company : WPX ENERGY  
 Well : DIAMOND ELK PA 43-2  
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 Mode : PlotMgr 5.4.504  
 Interval : -20.00 - 8060.00 feet UP  
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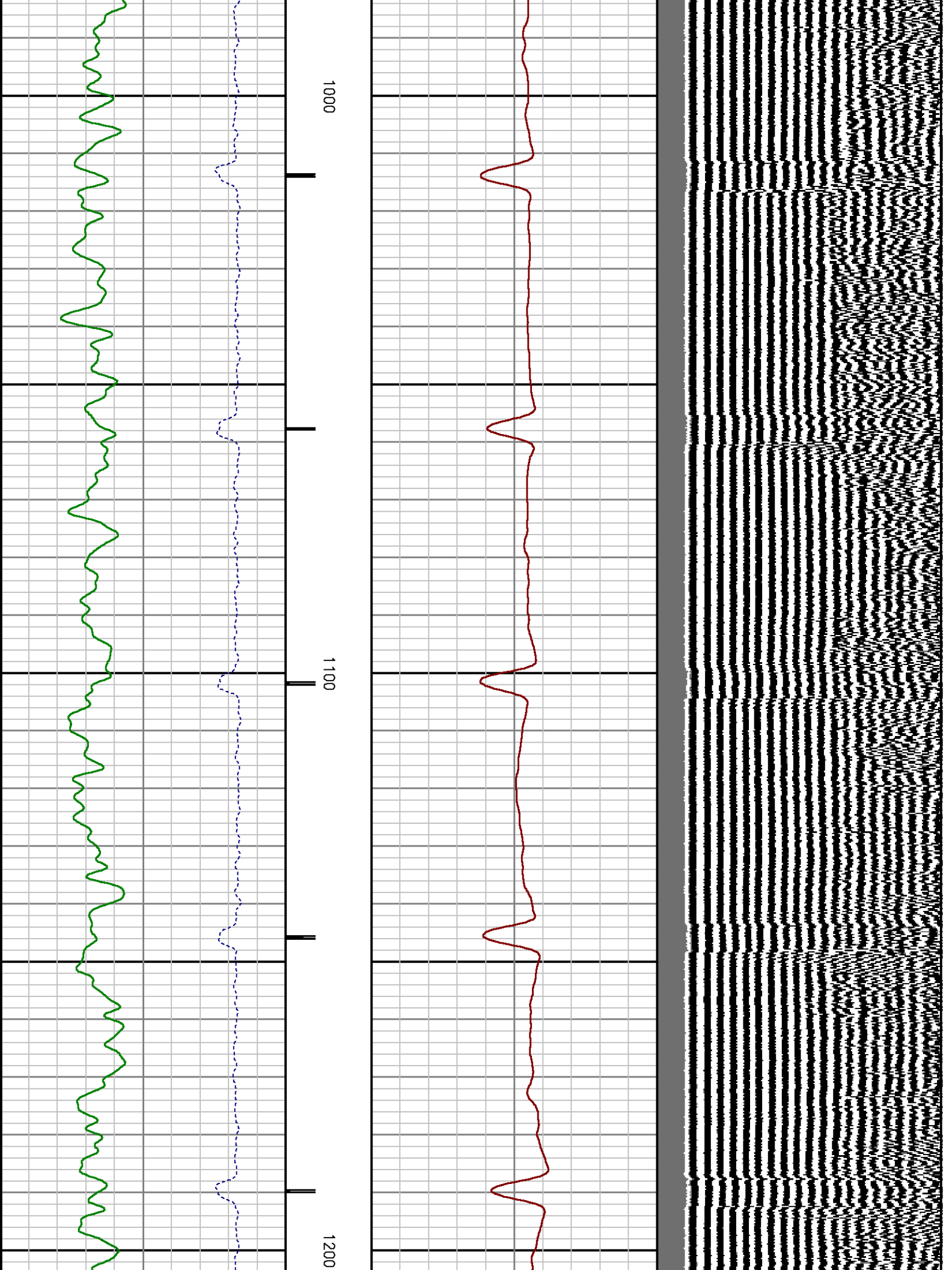




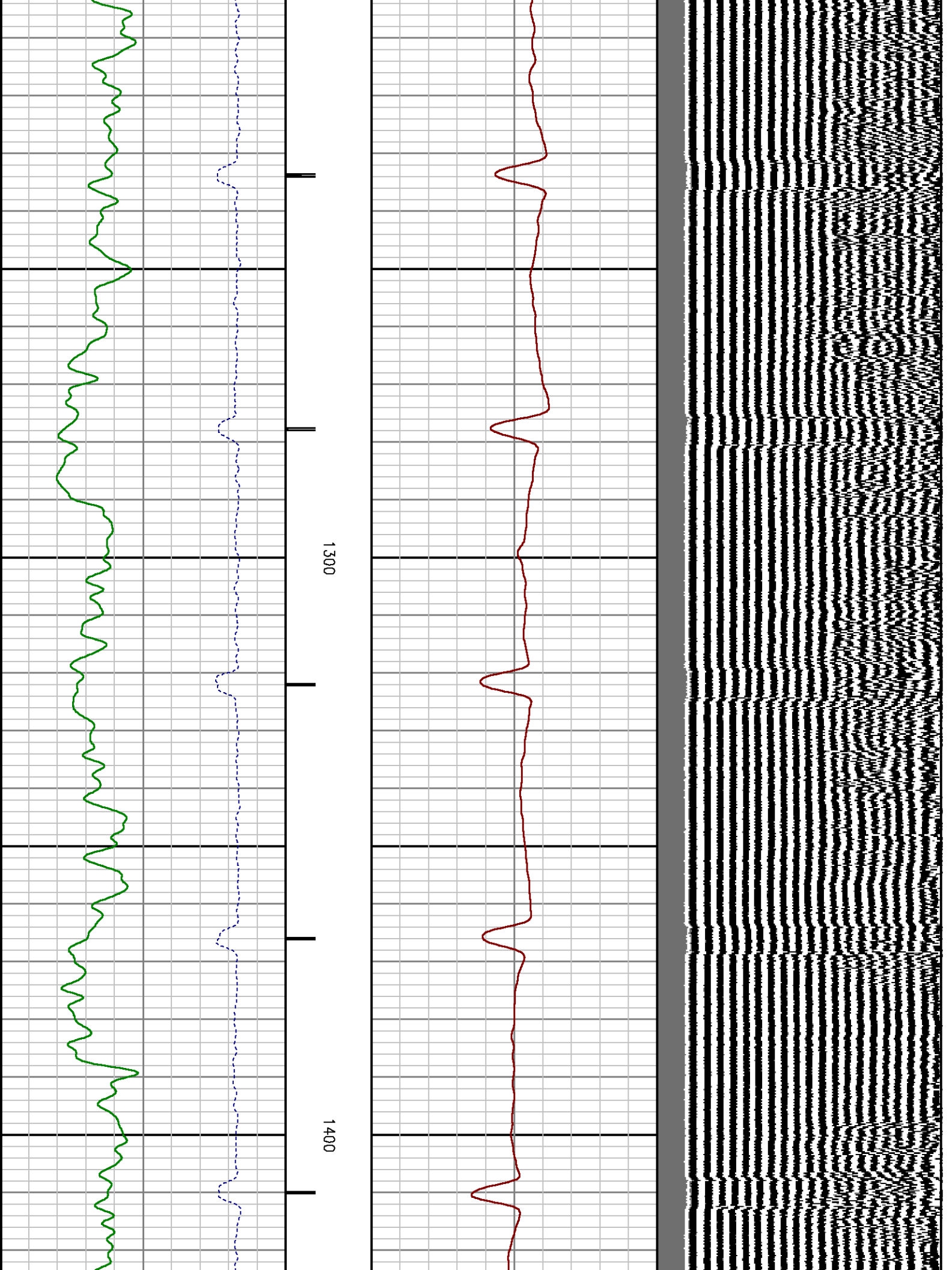


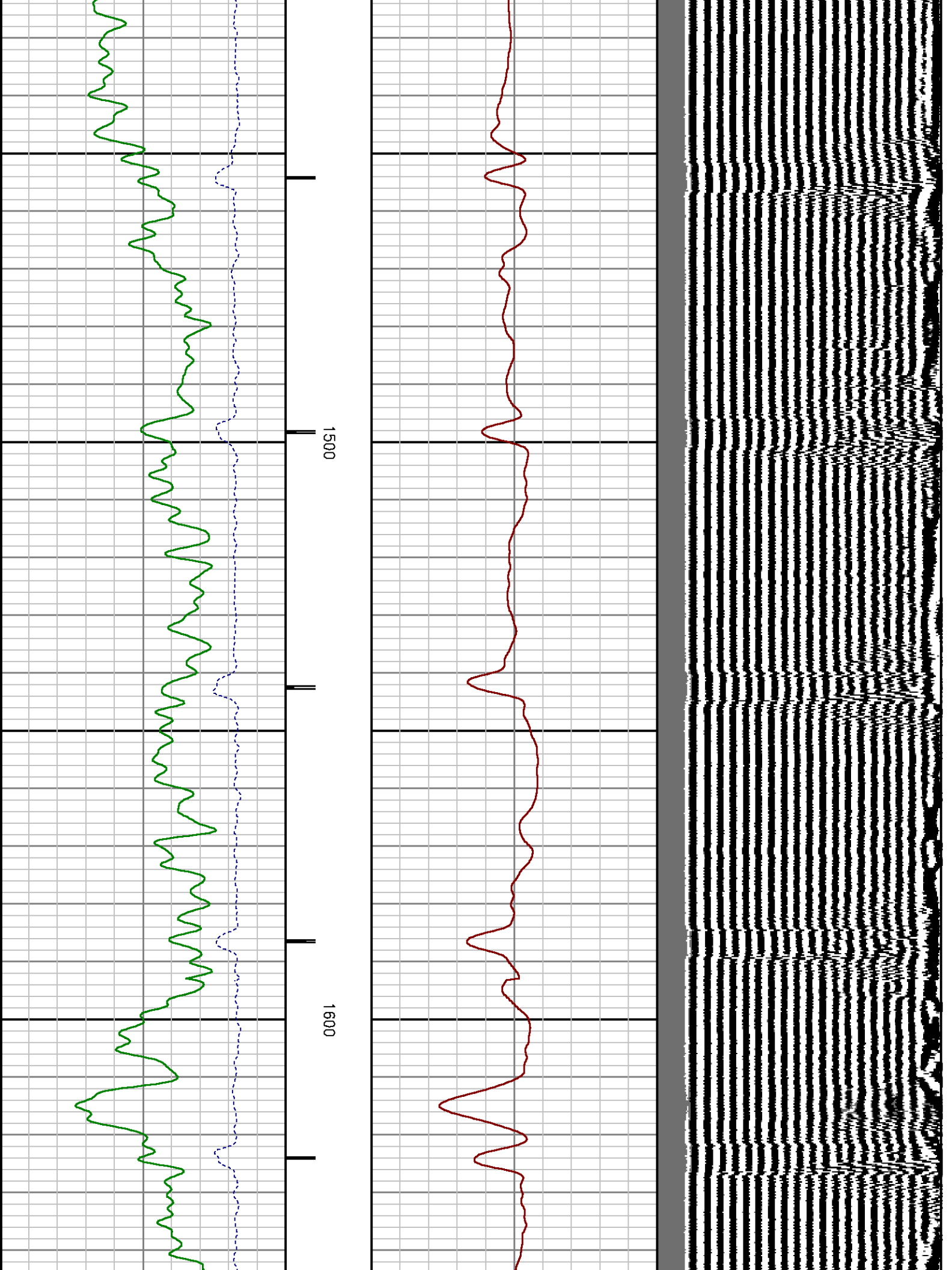


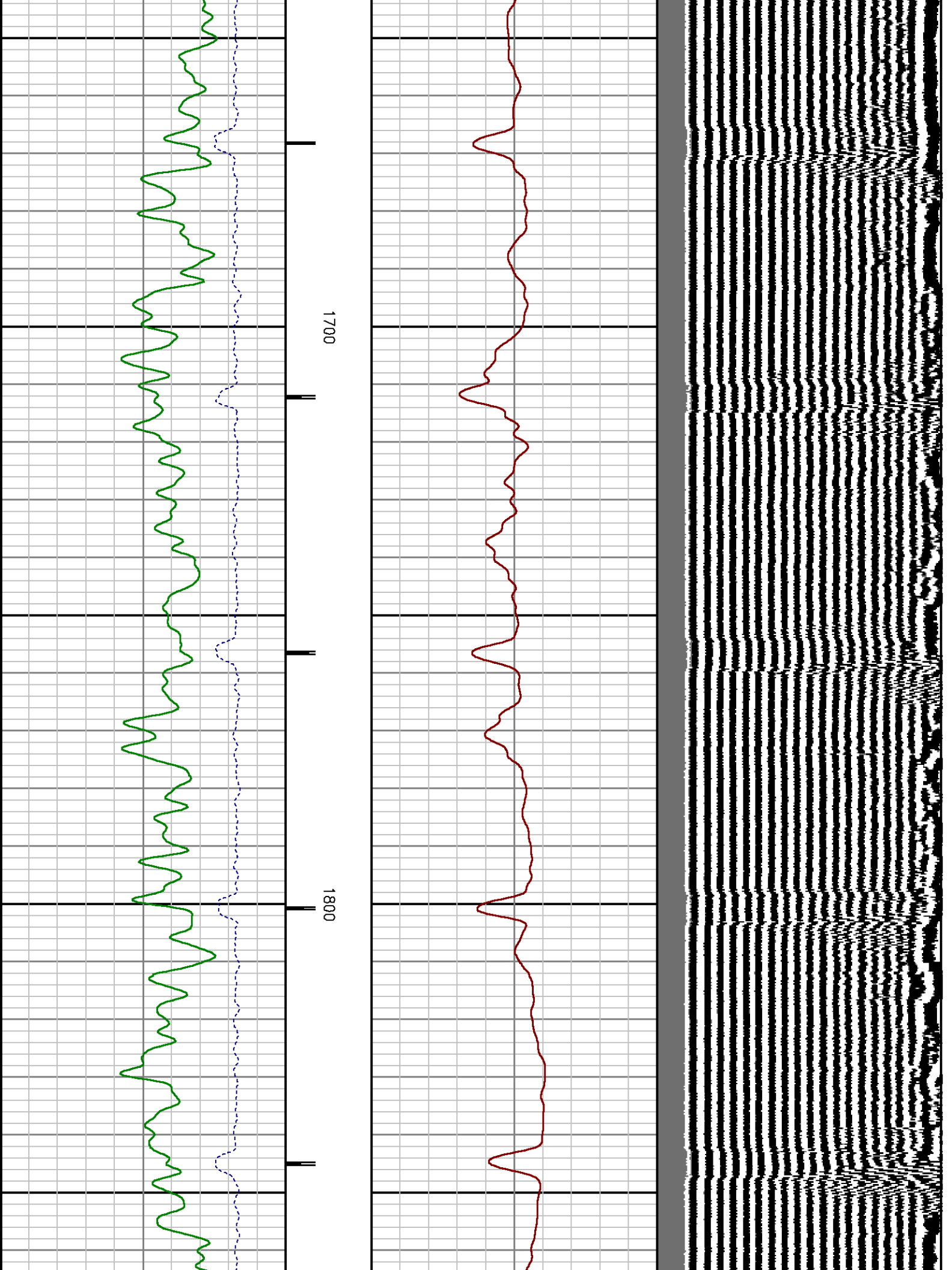


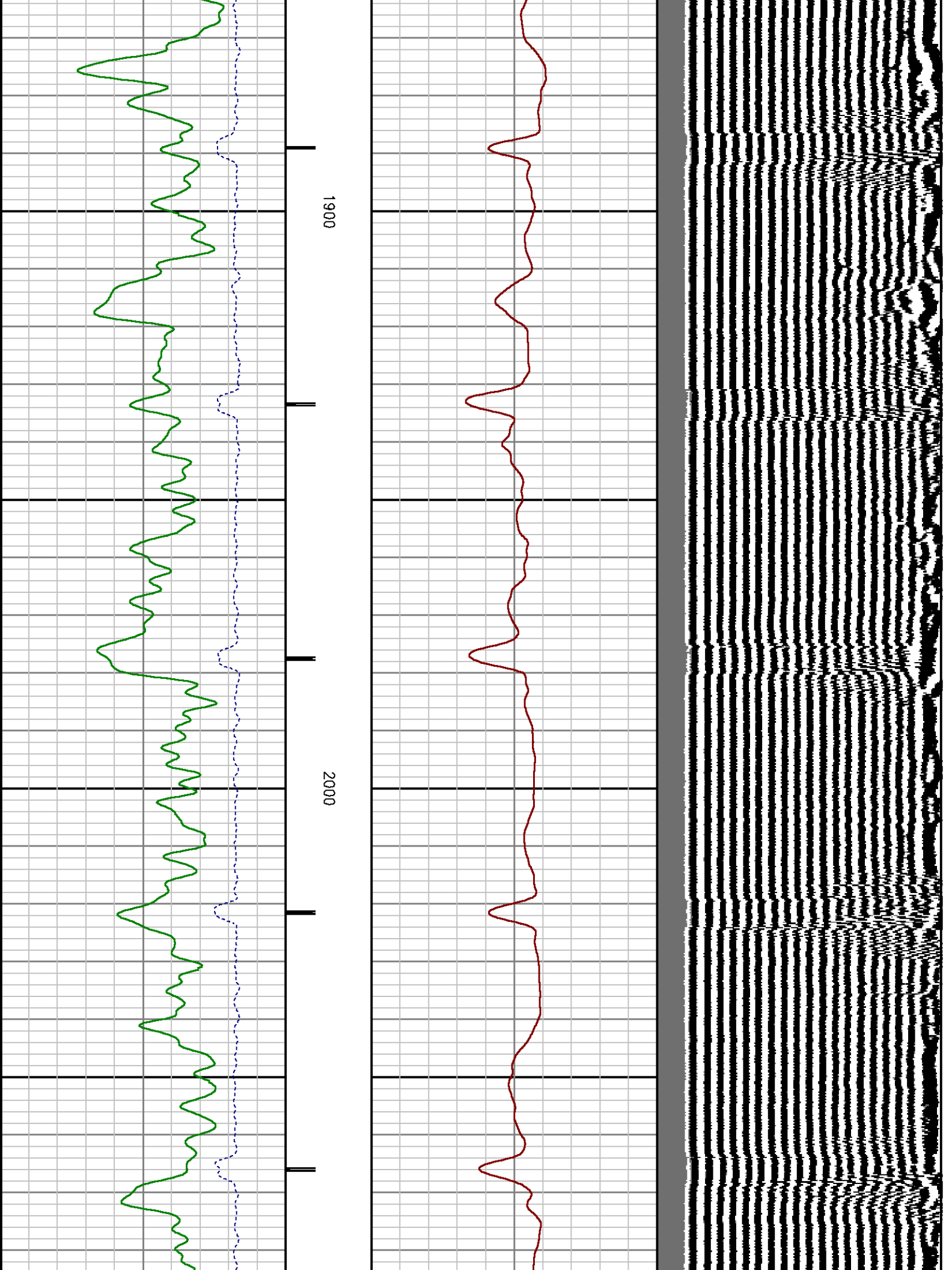


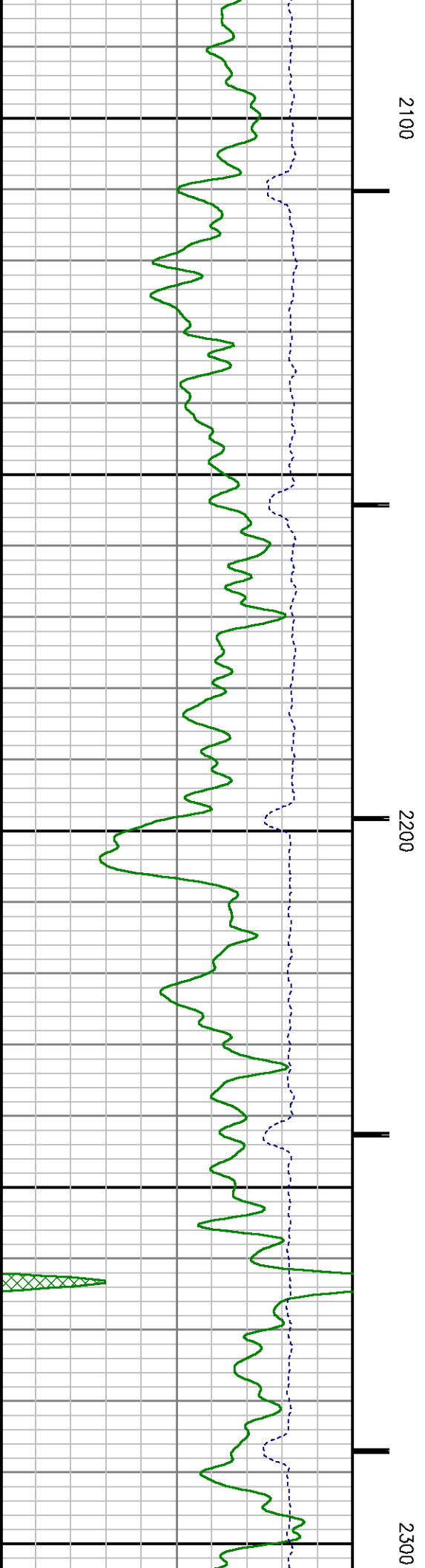
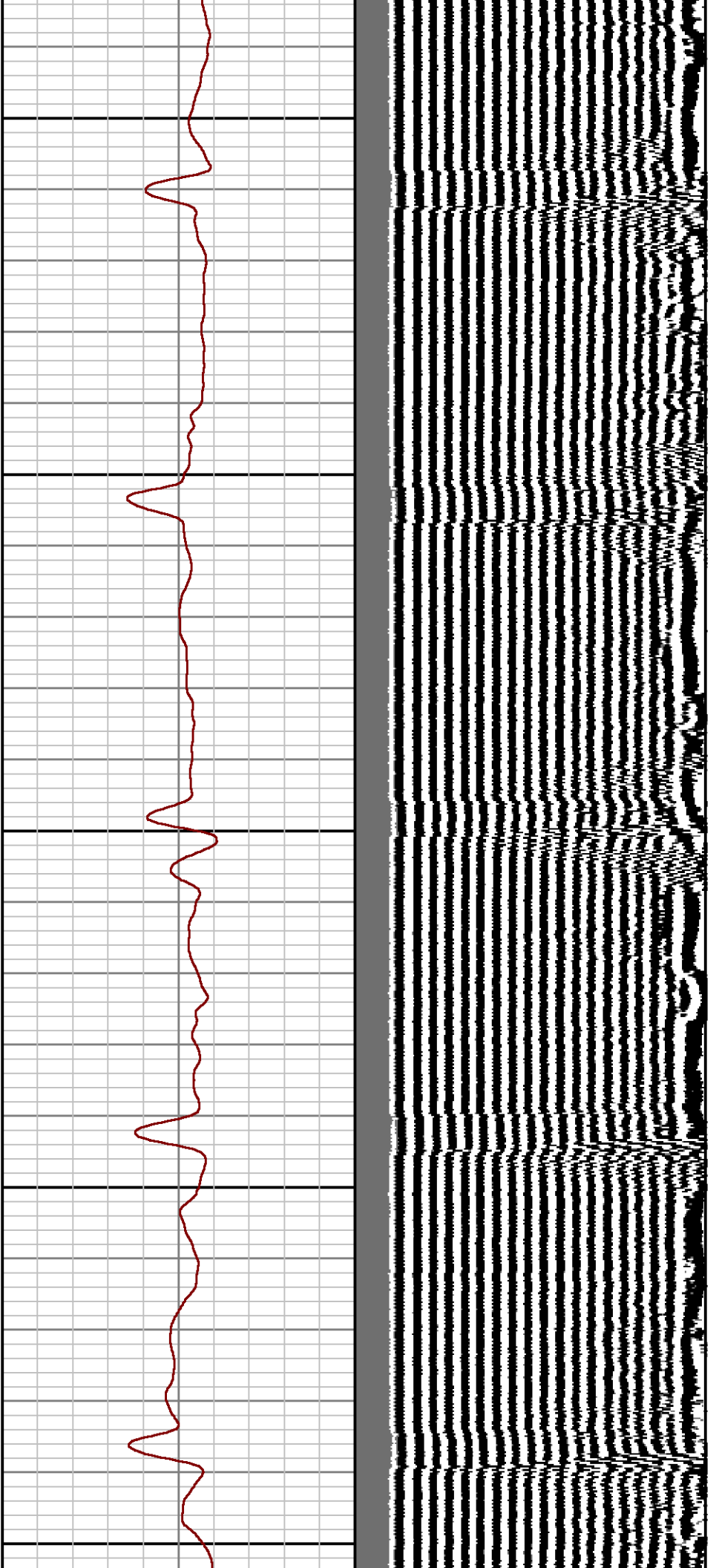


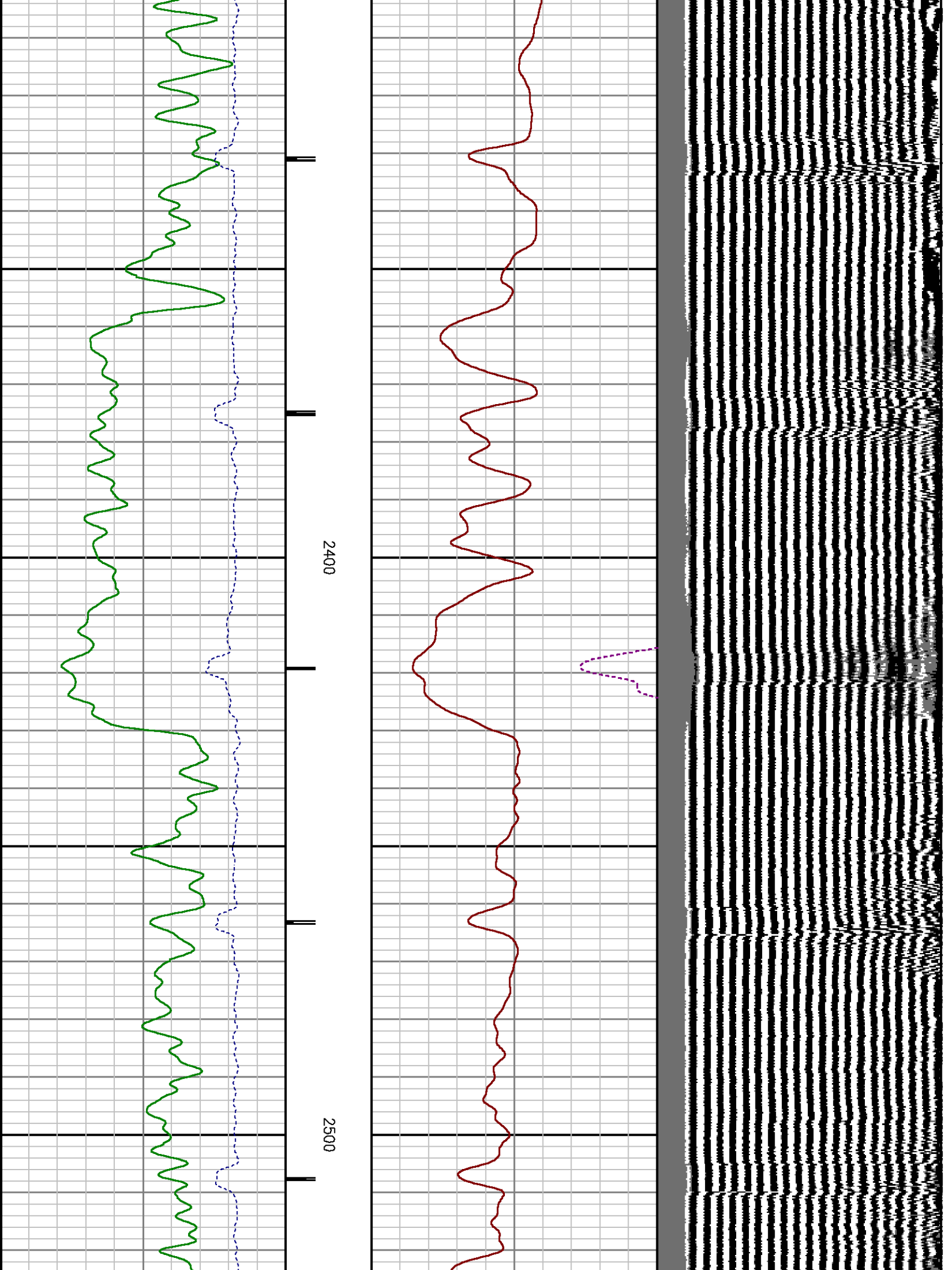




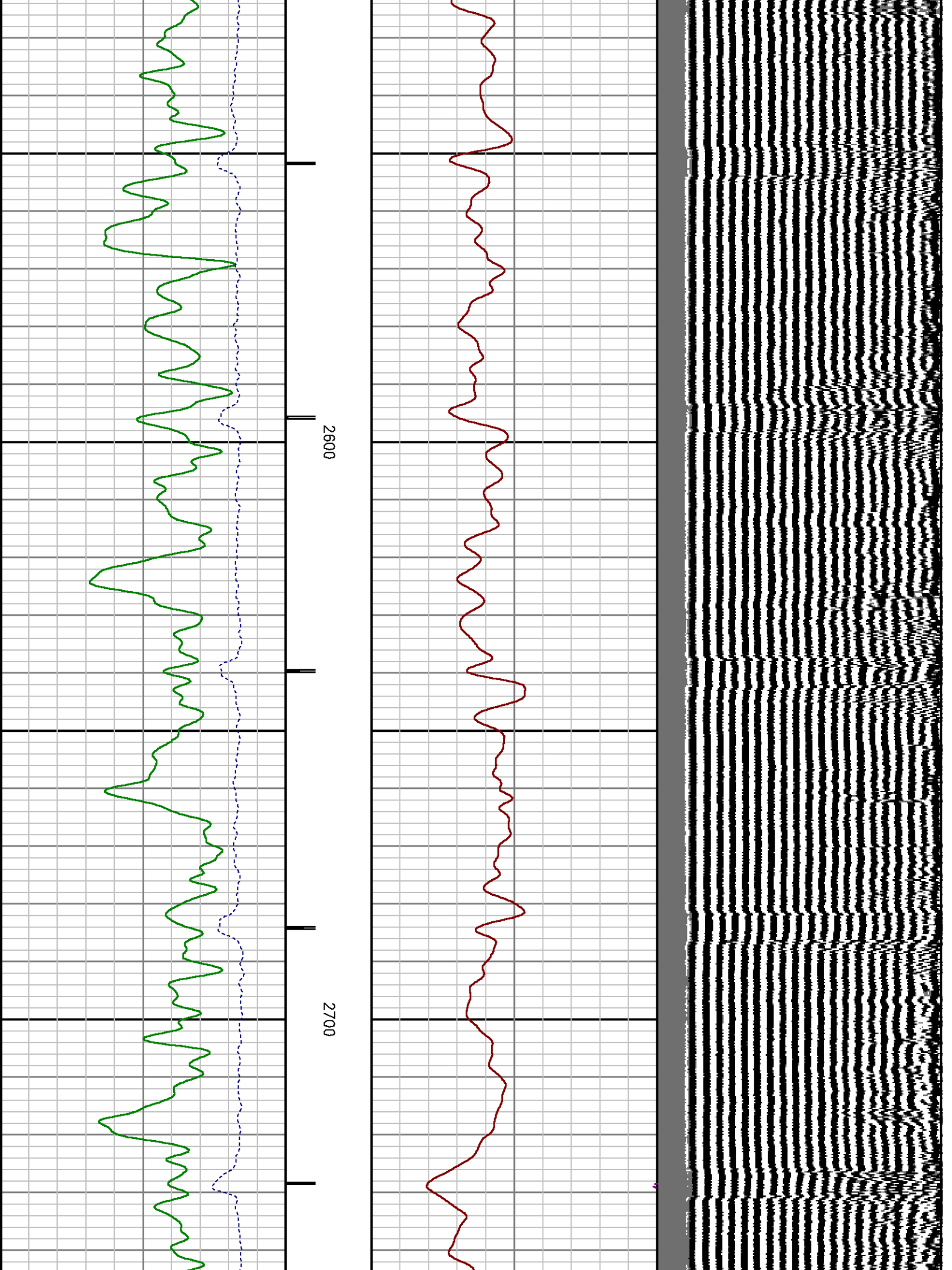


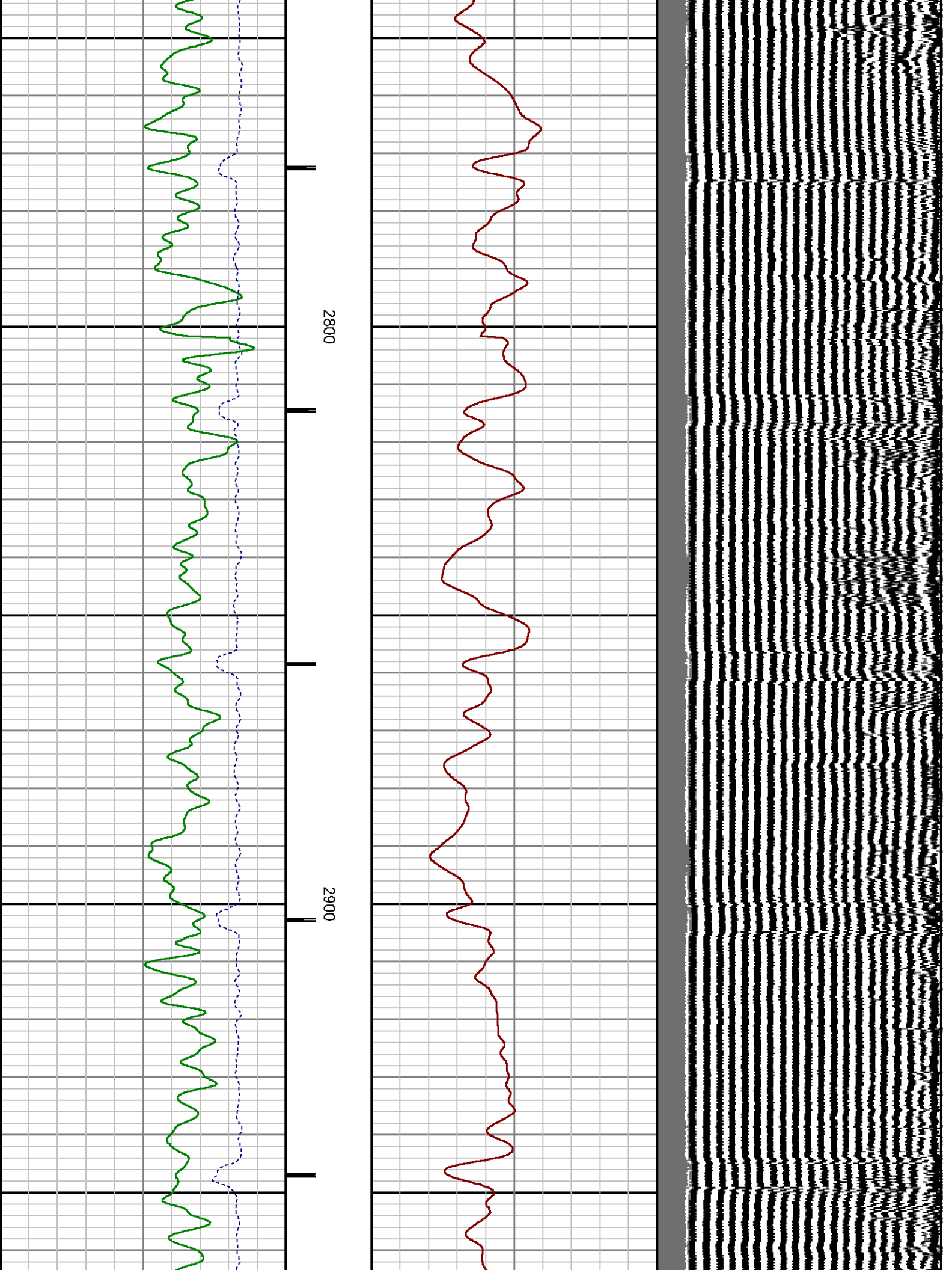




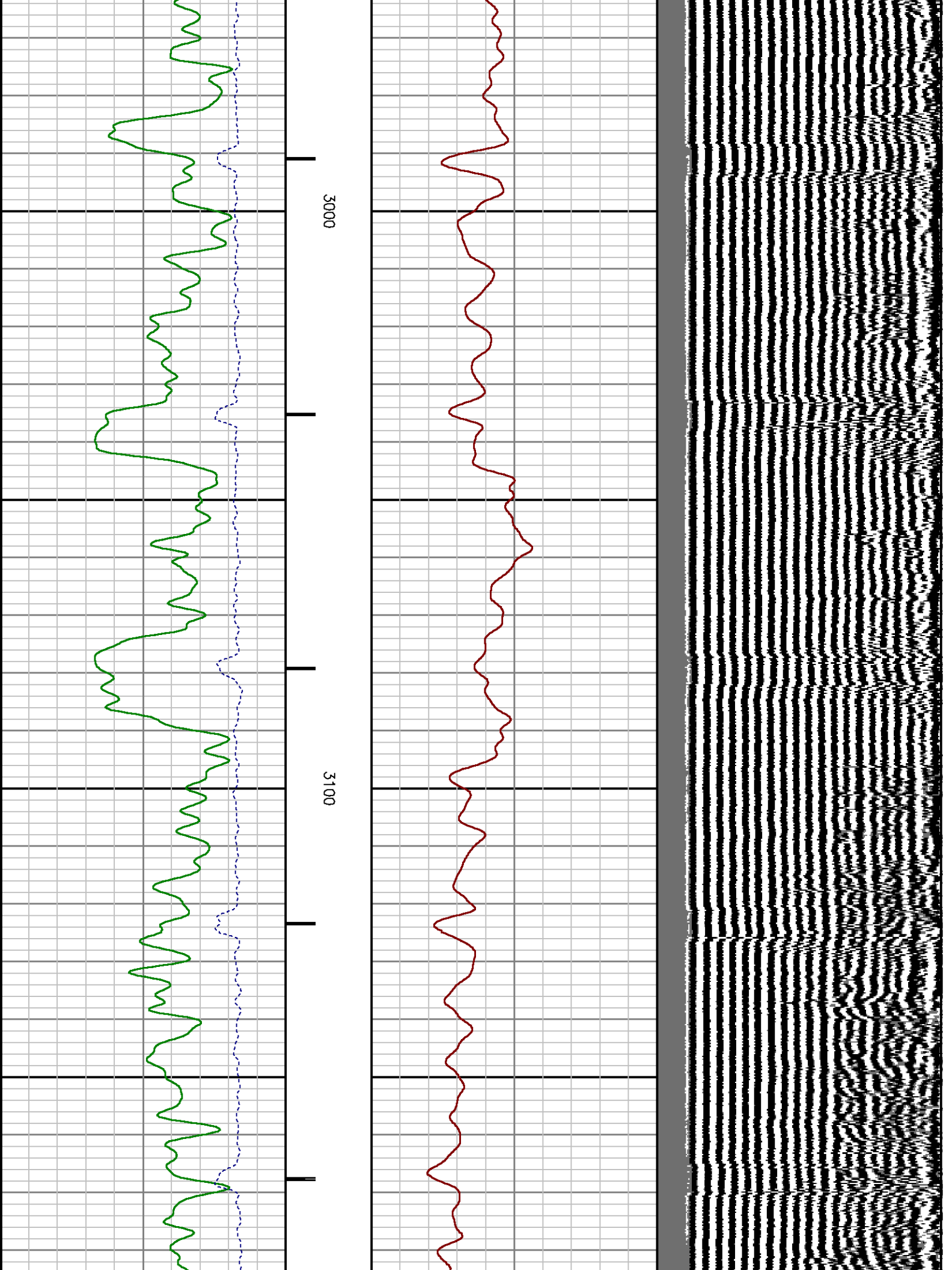


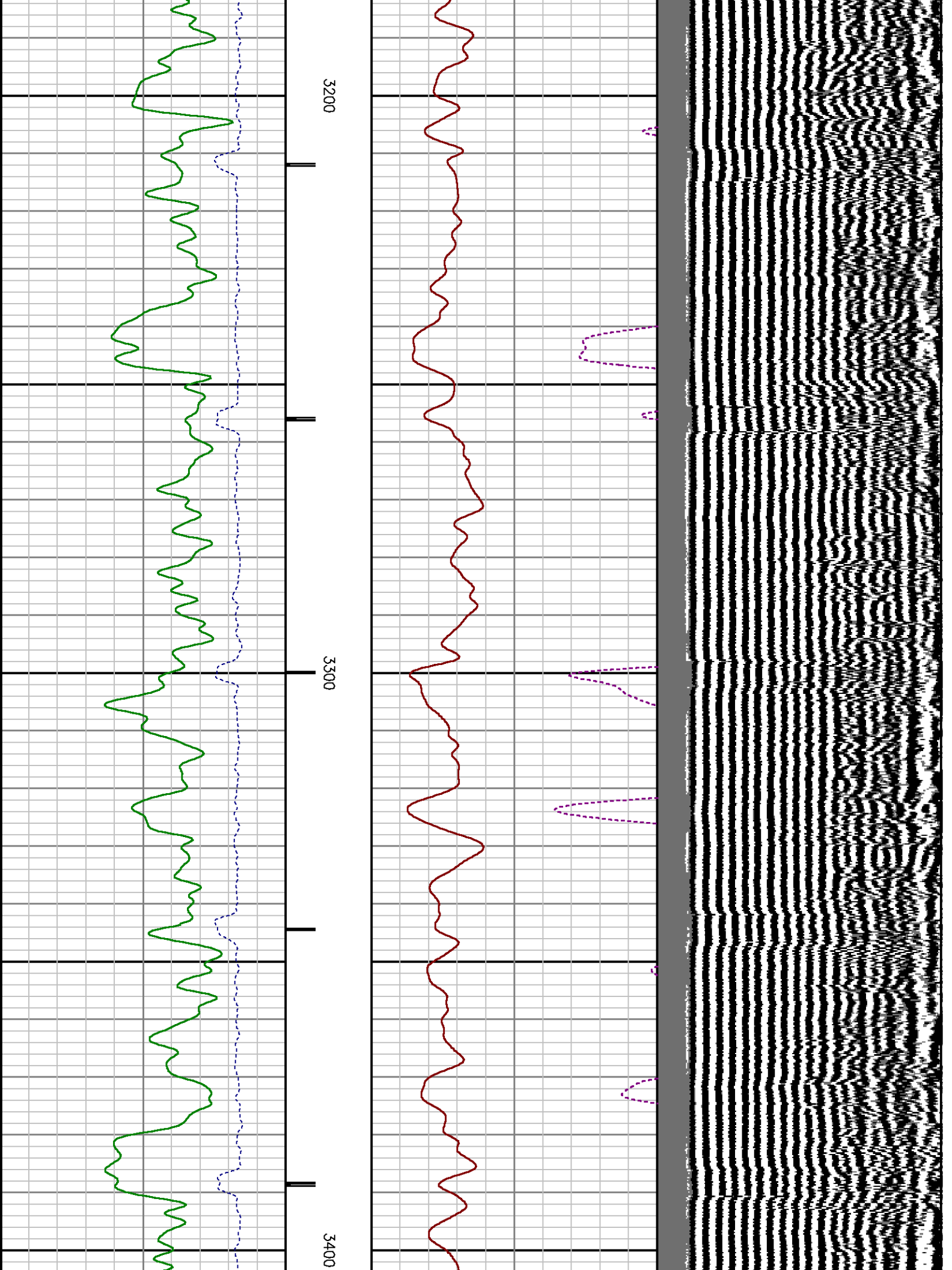


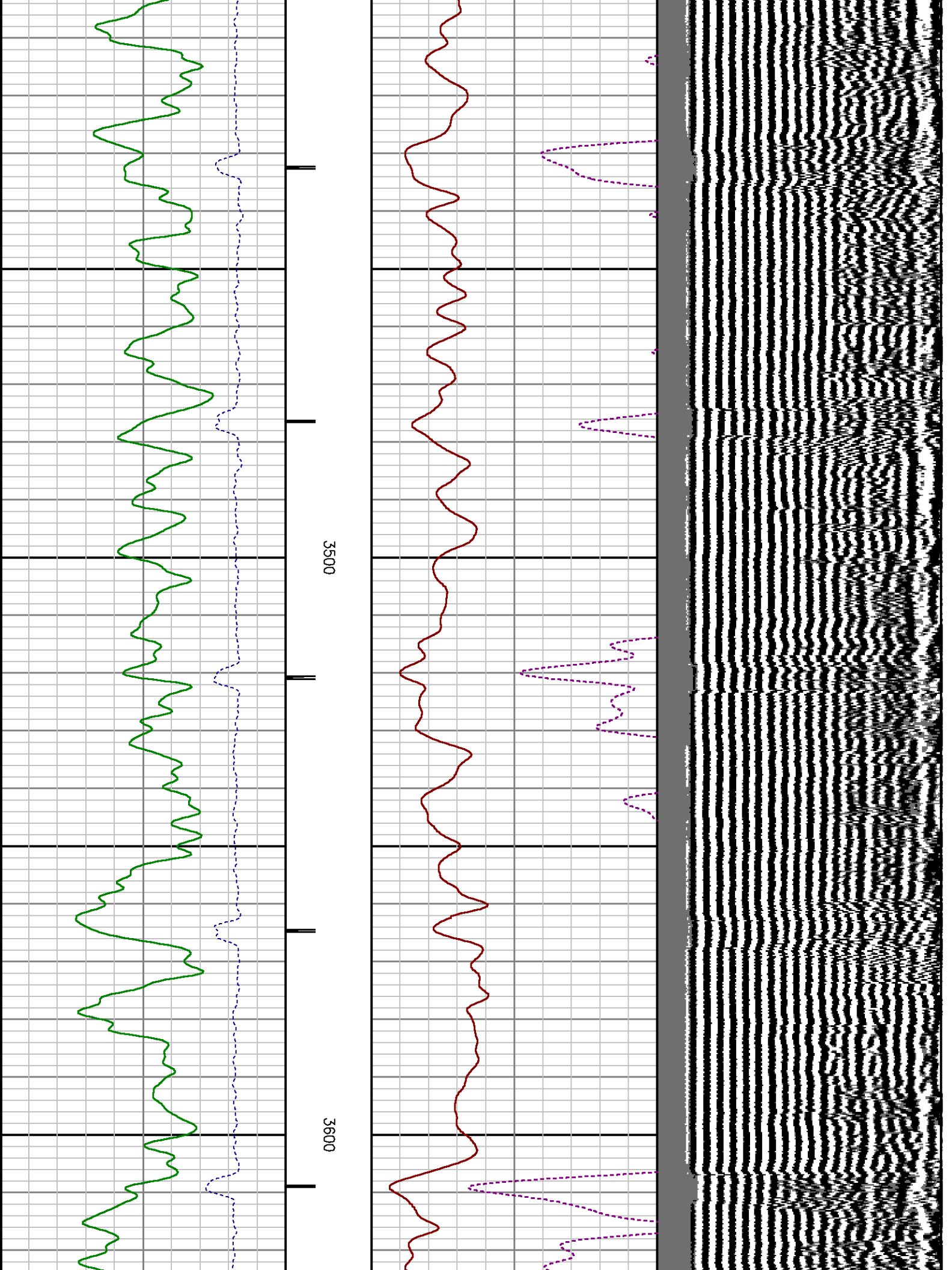


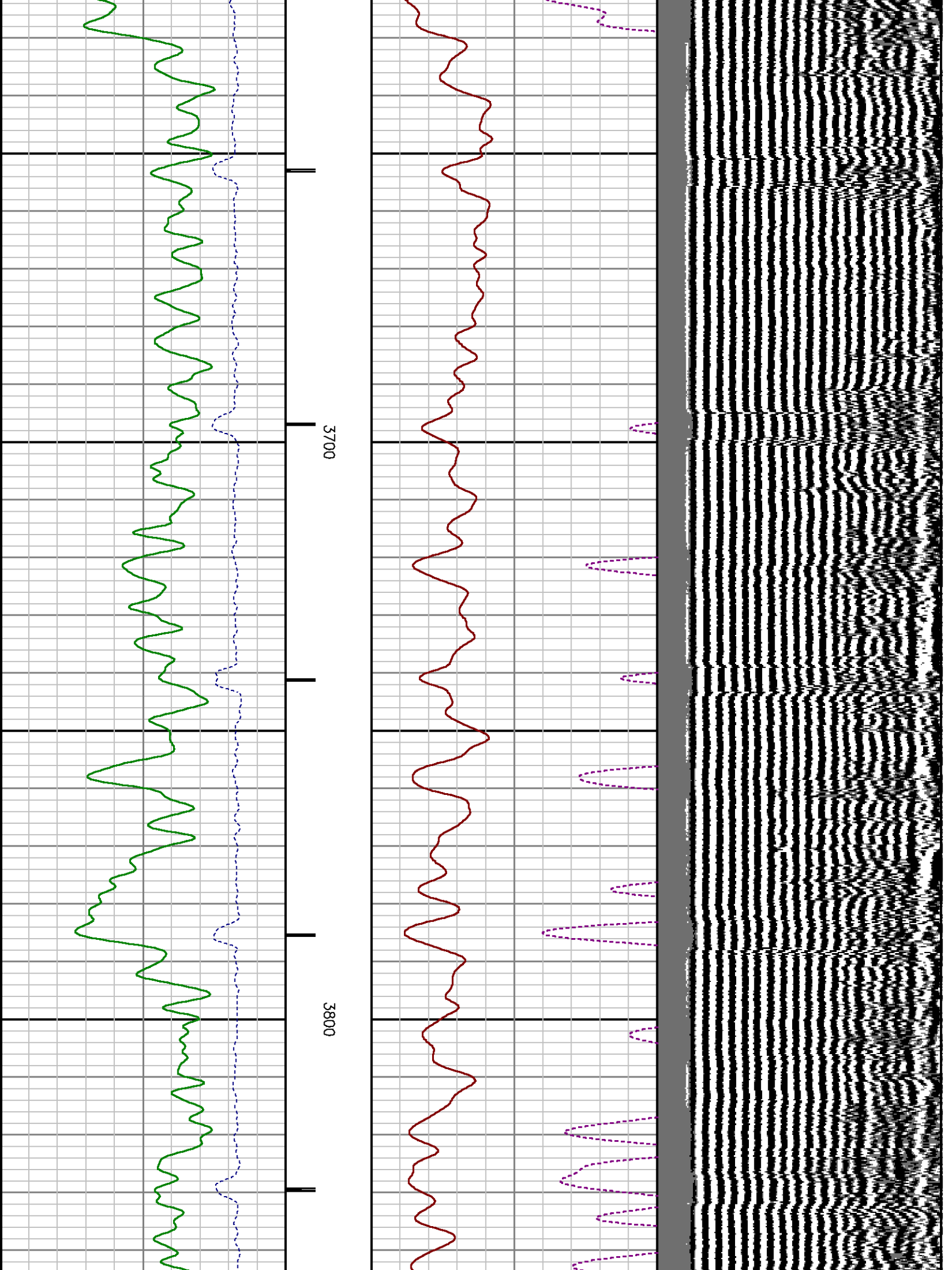


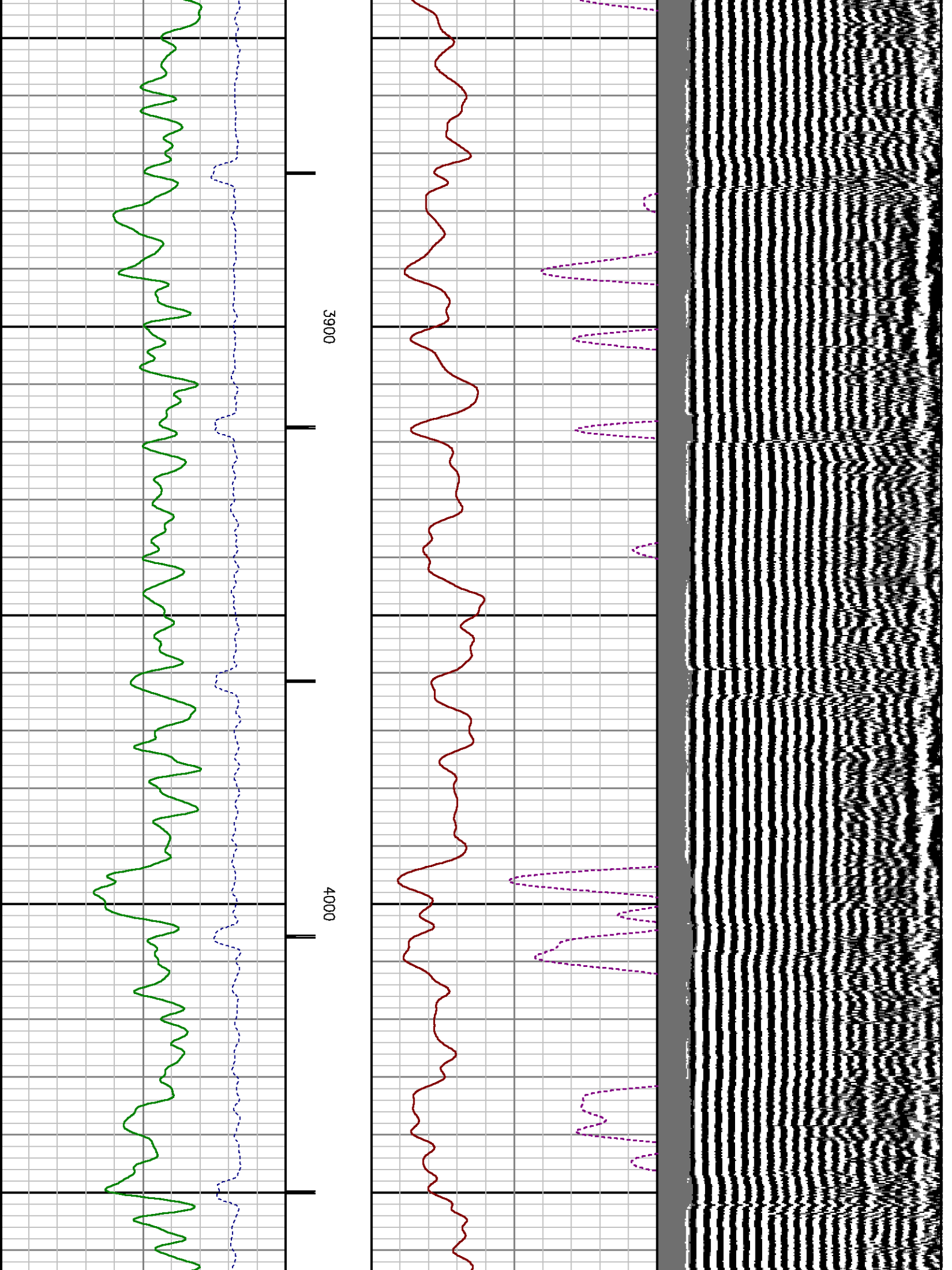




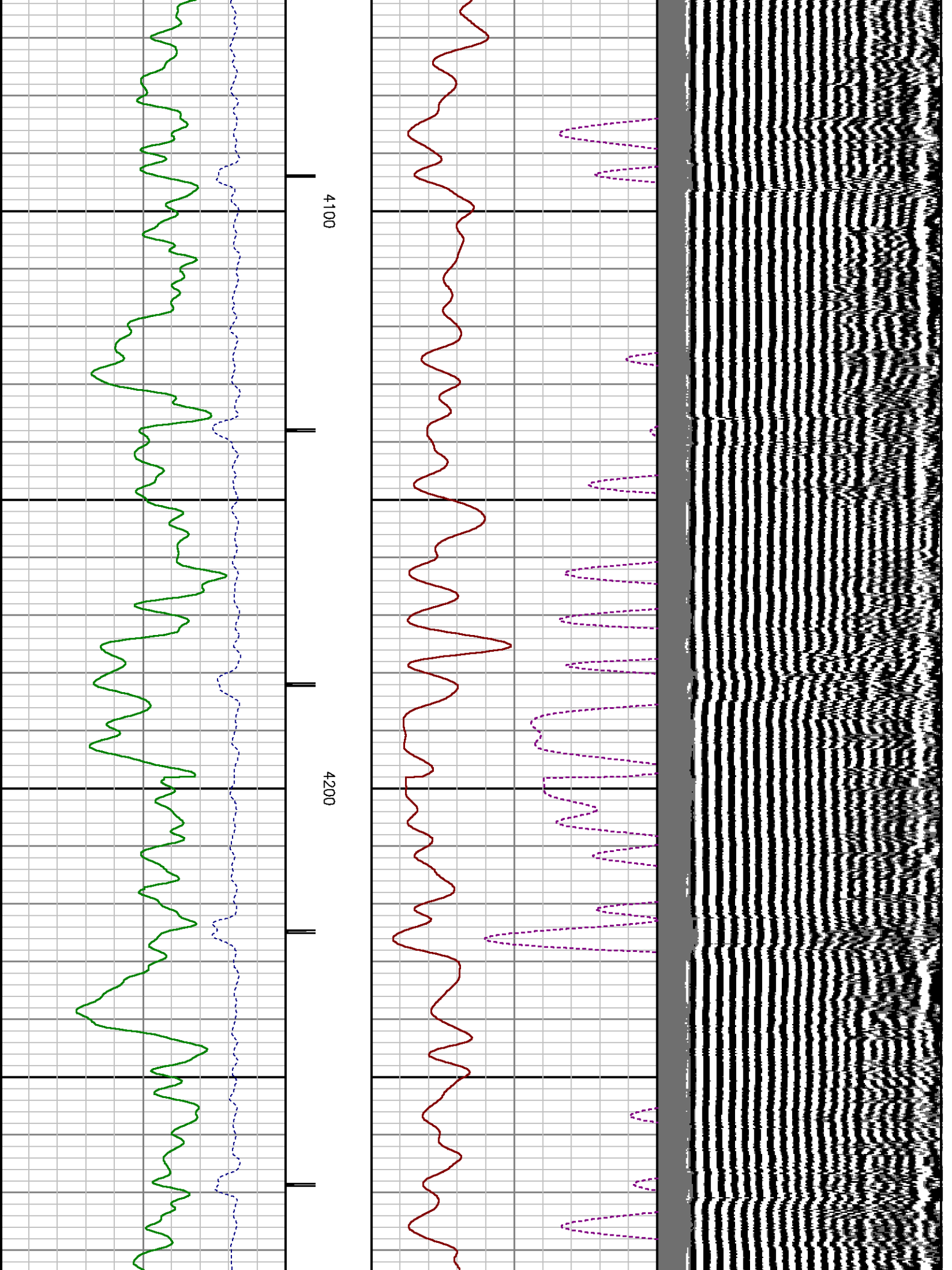


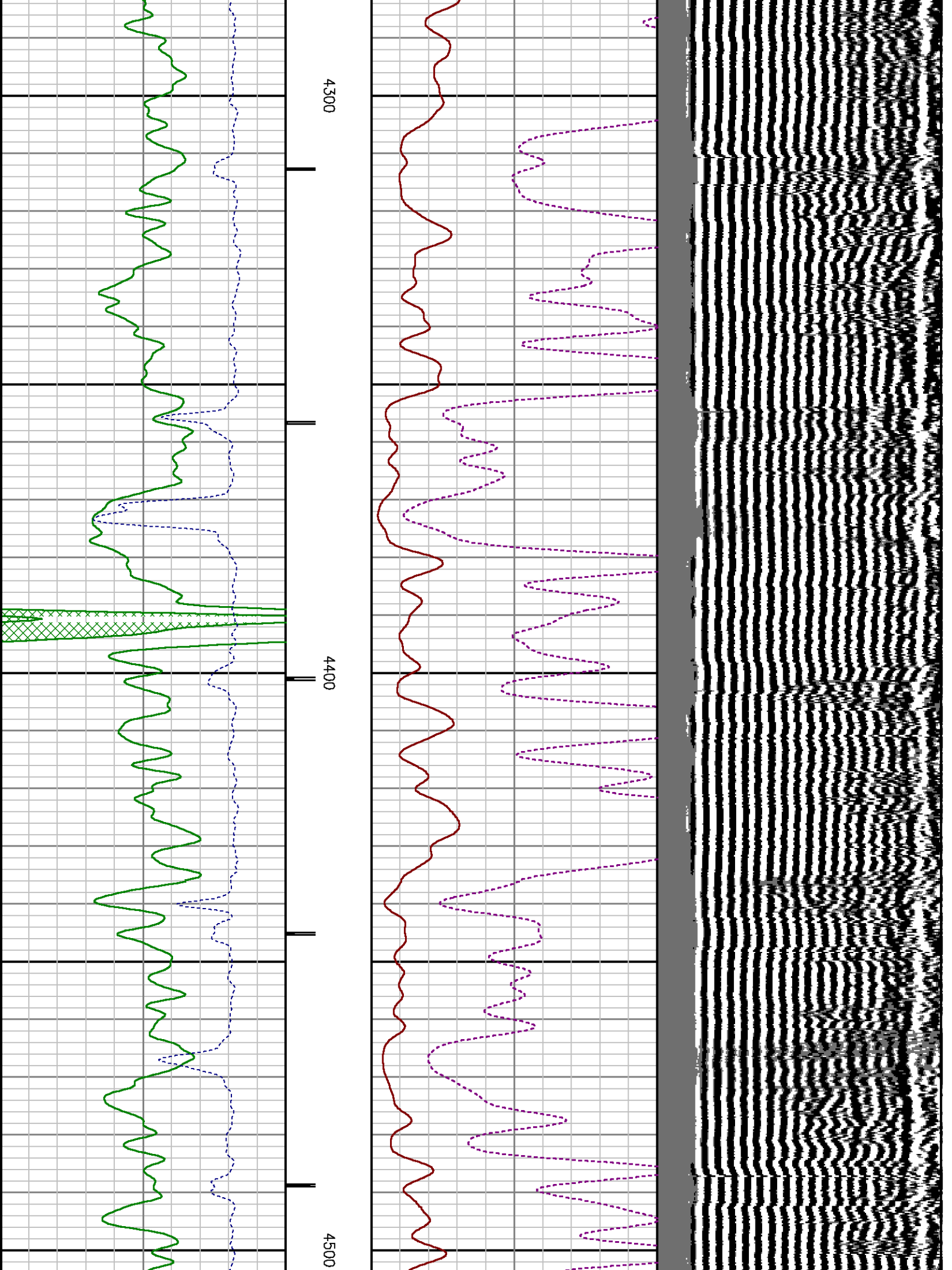


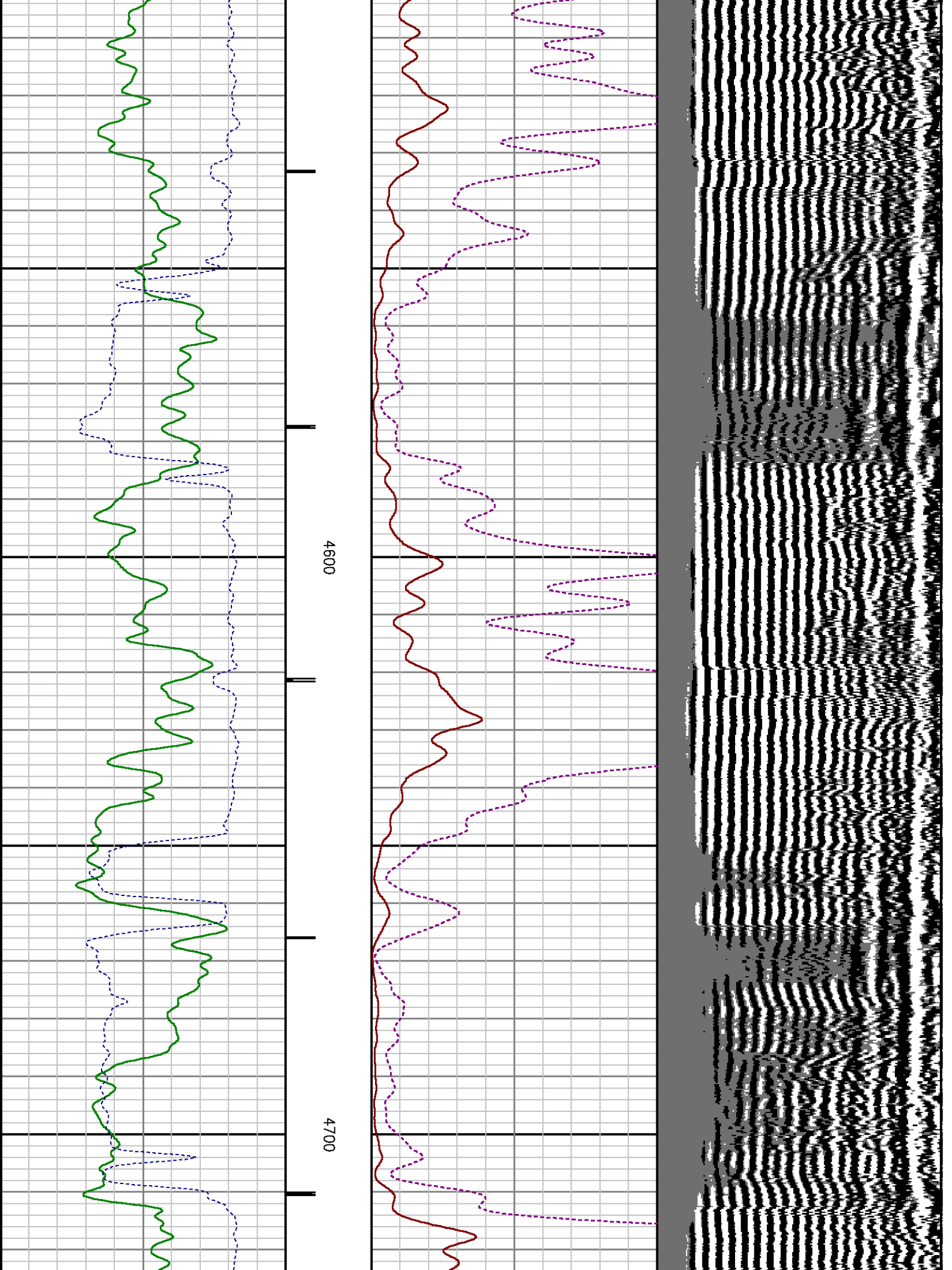




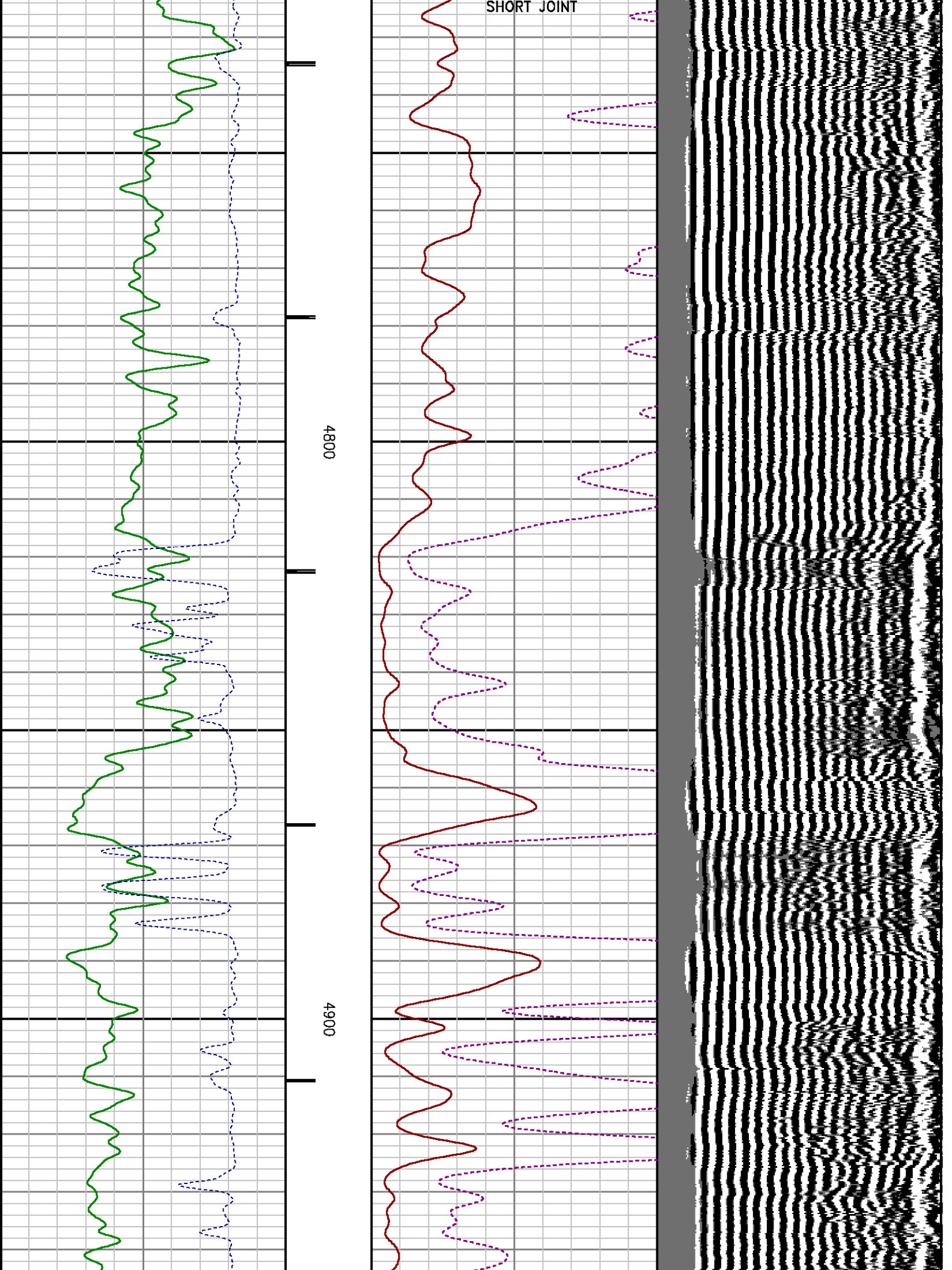


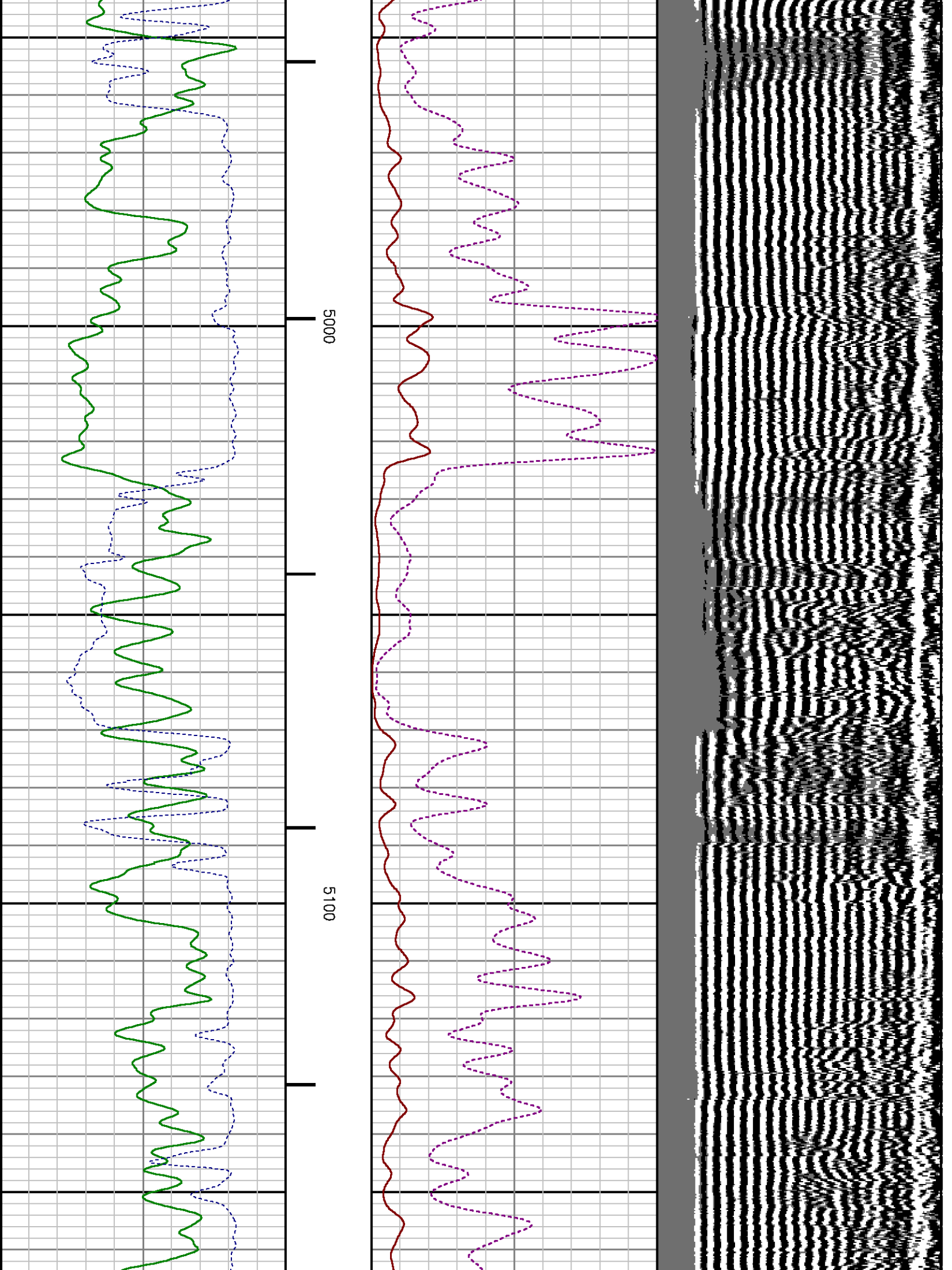


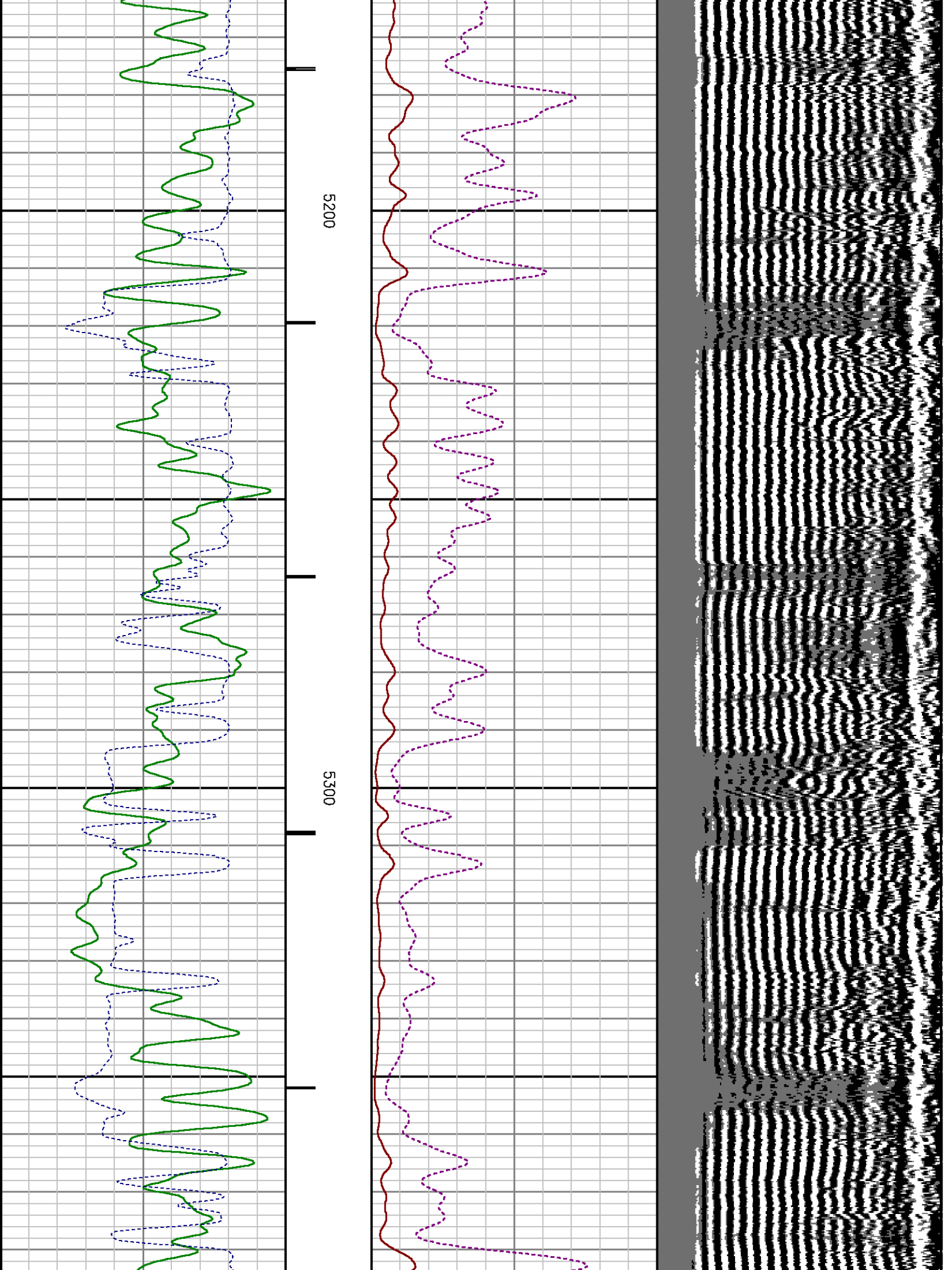


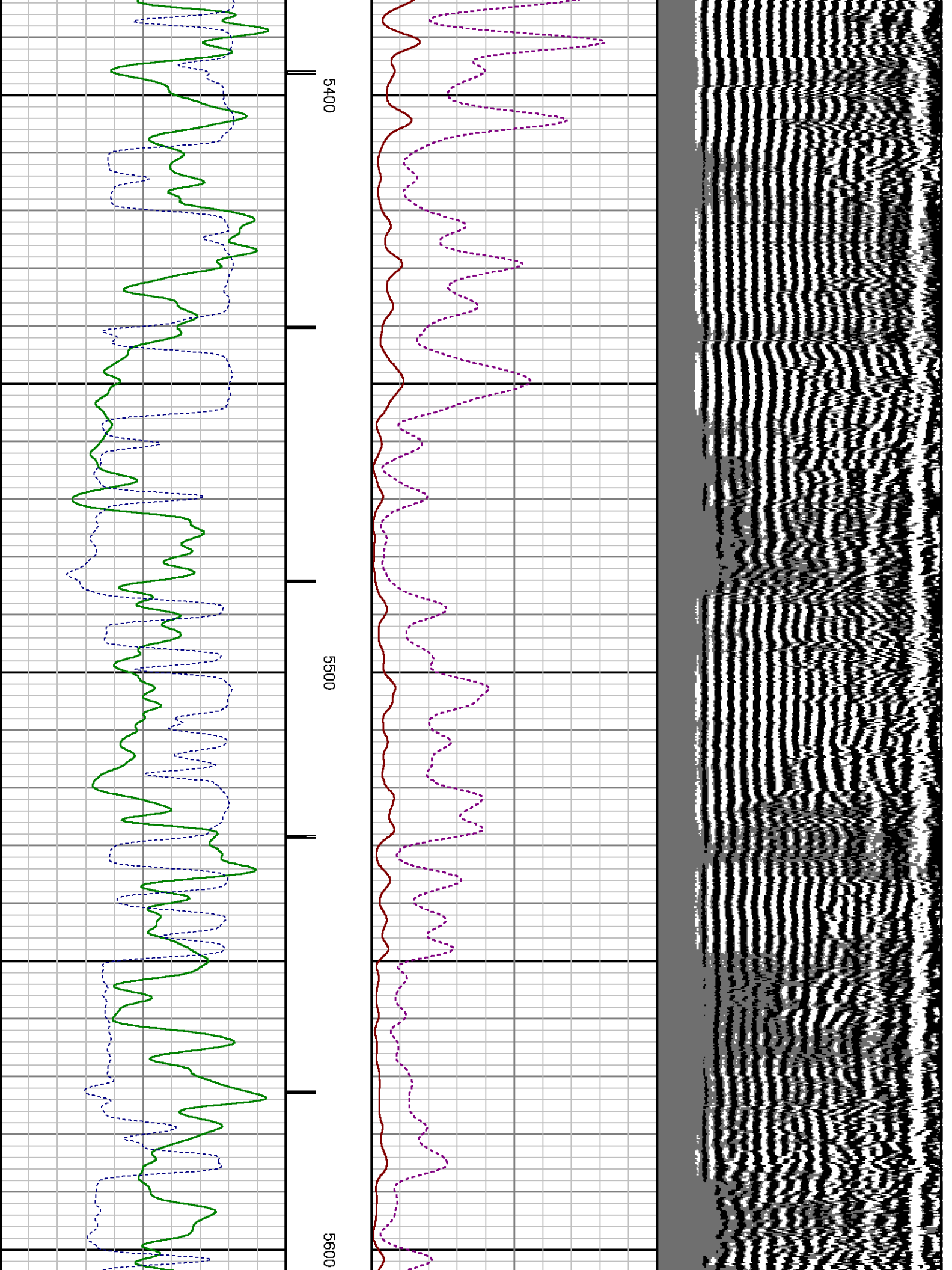


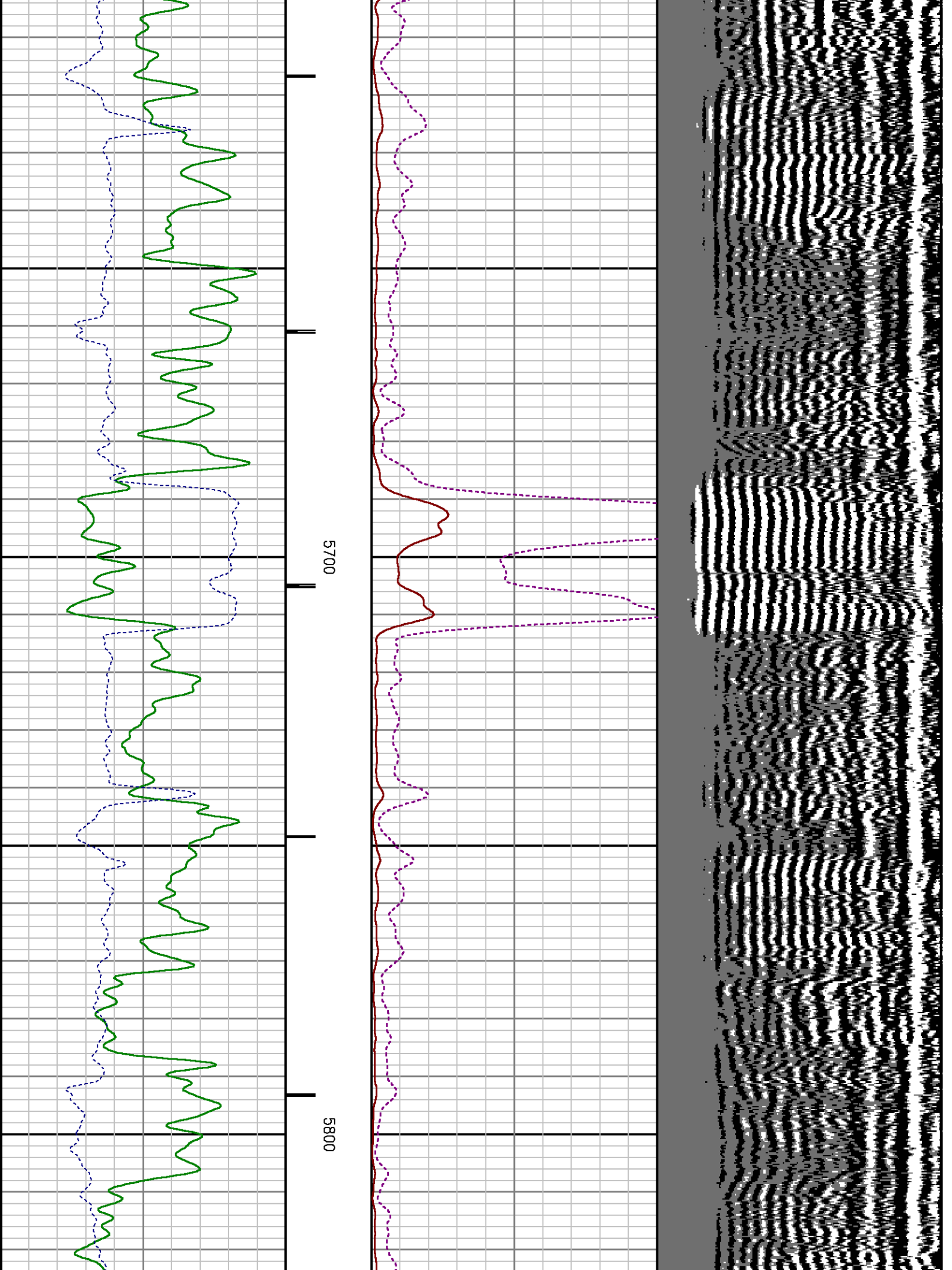




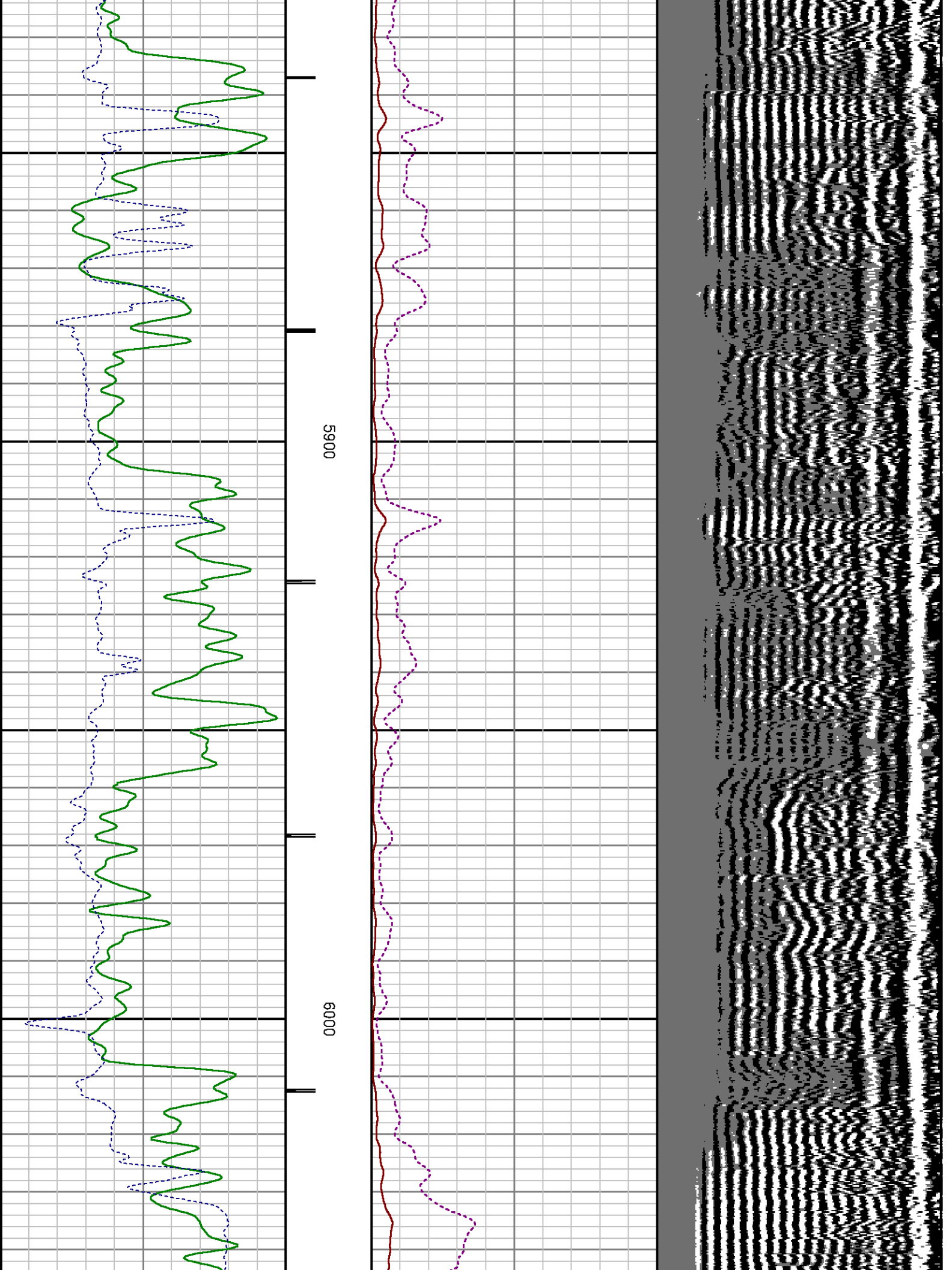


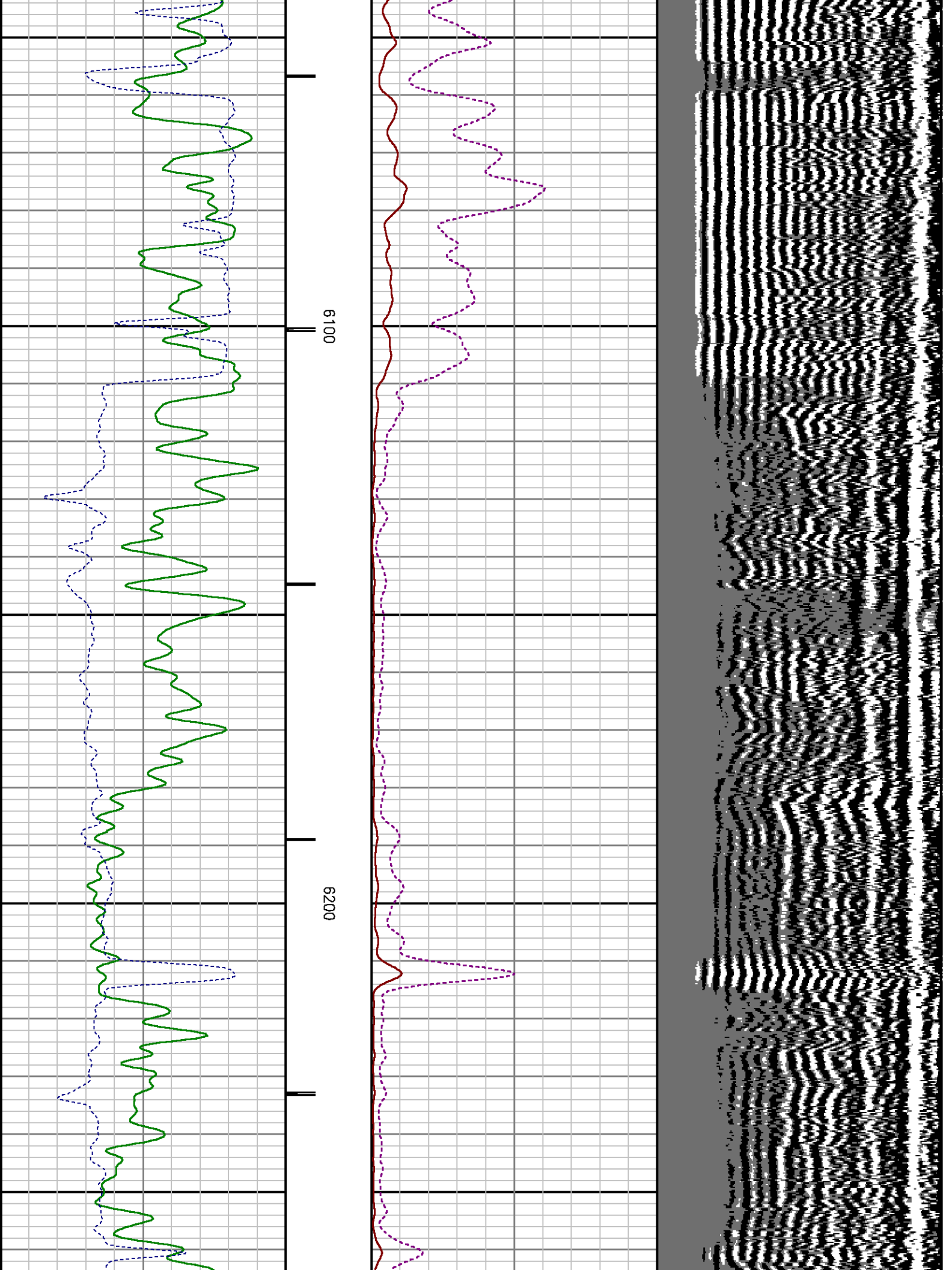


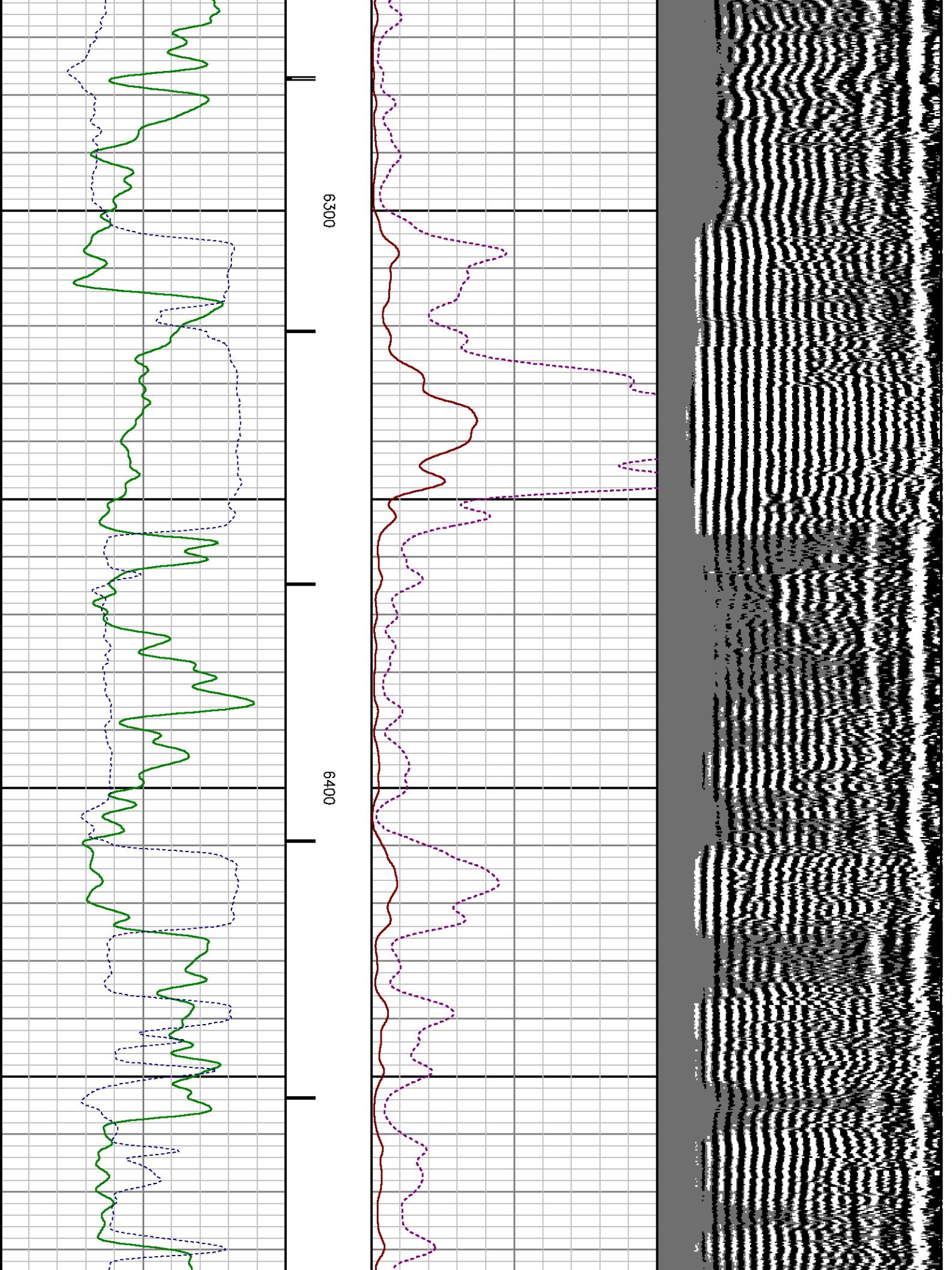




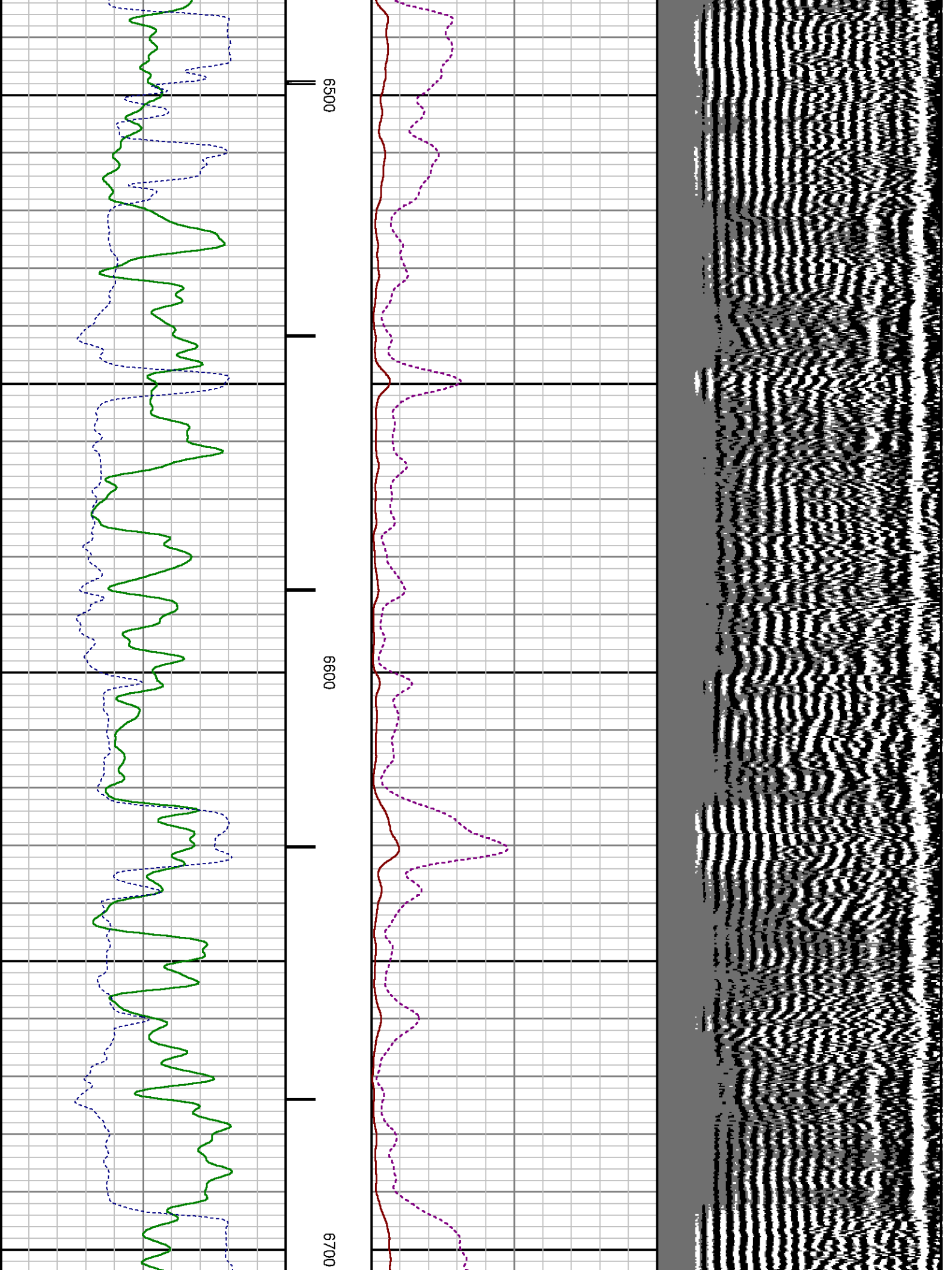


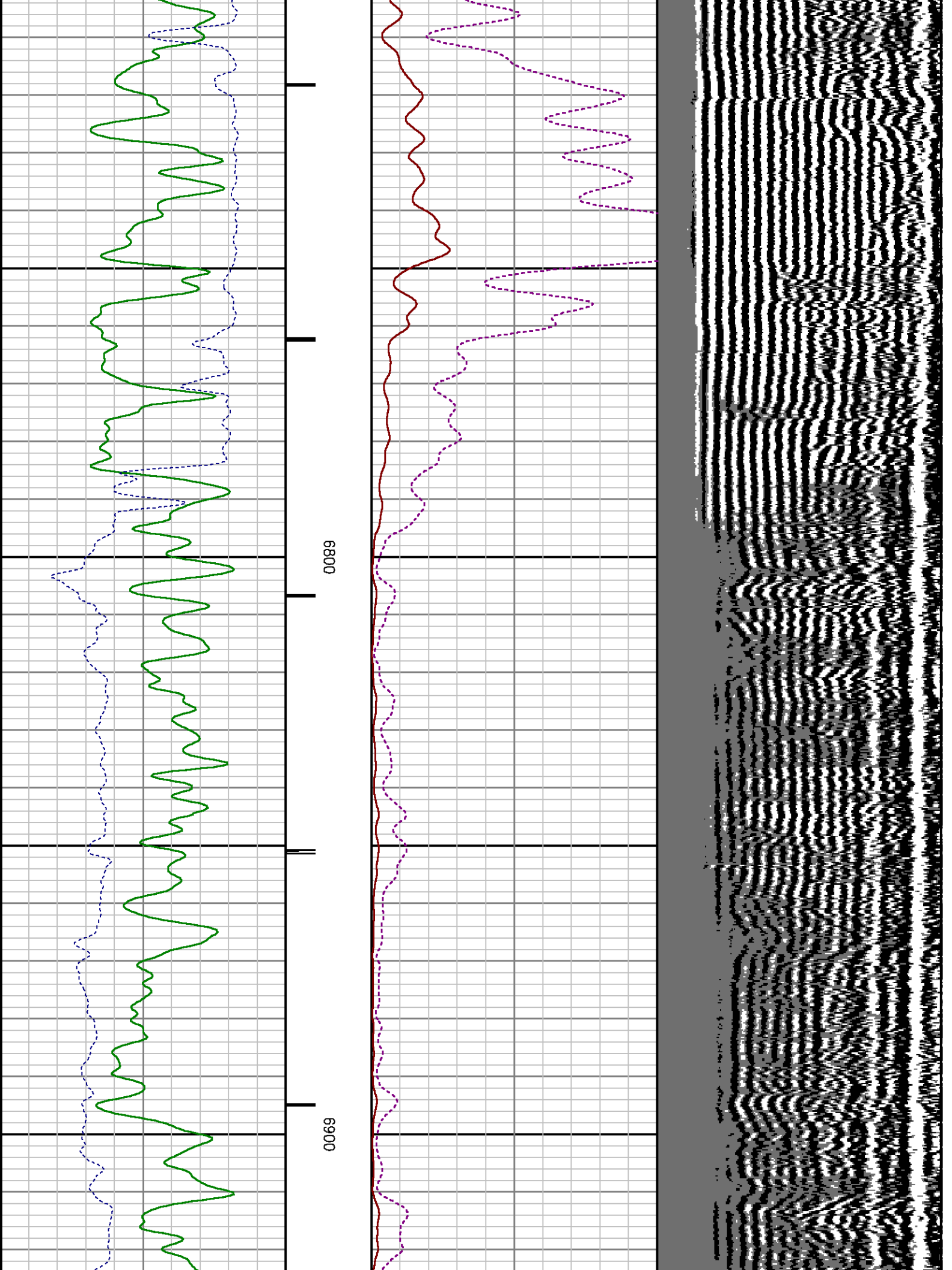


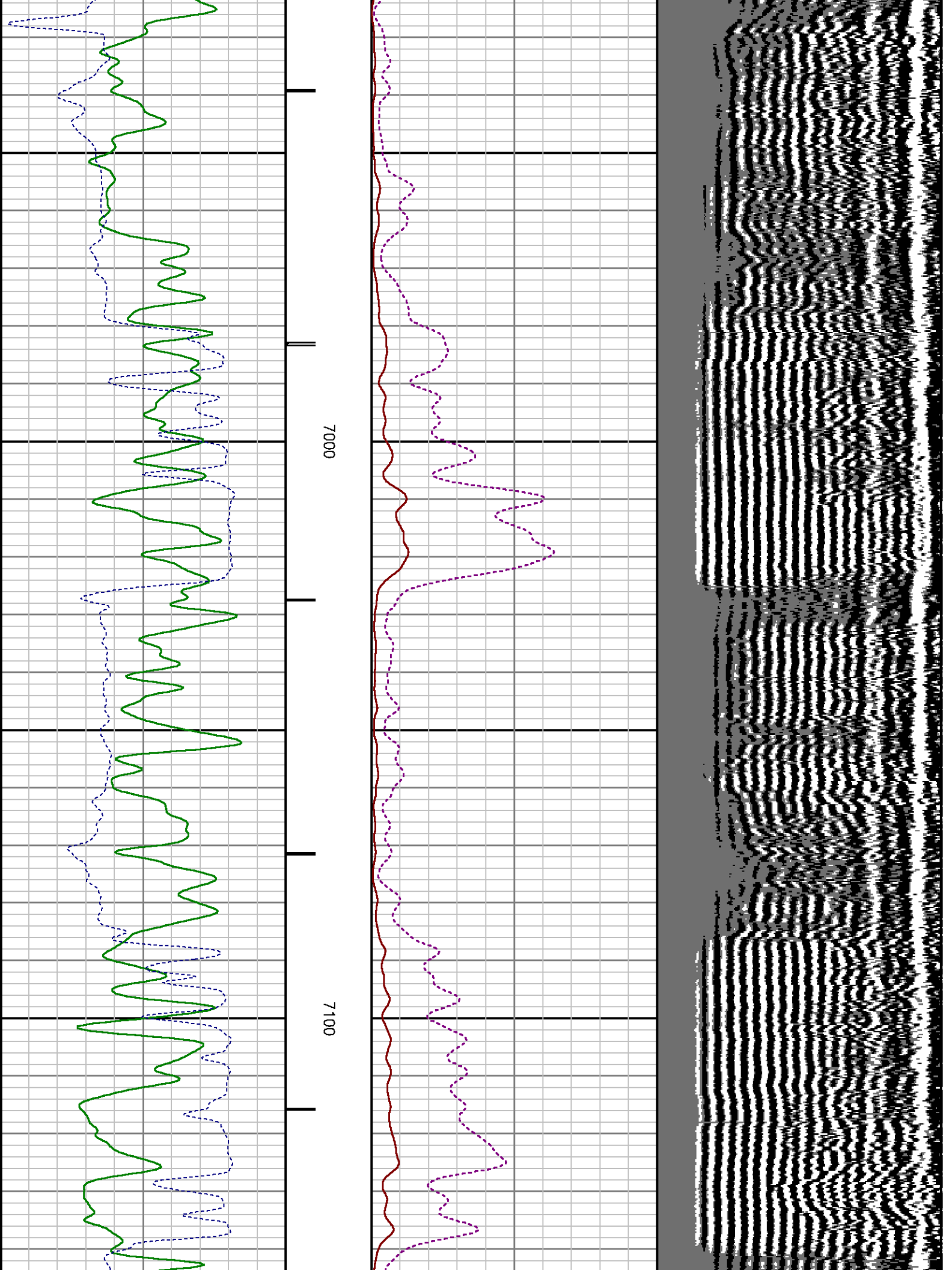


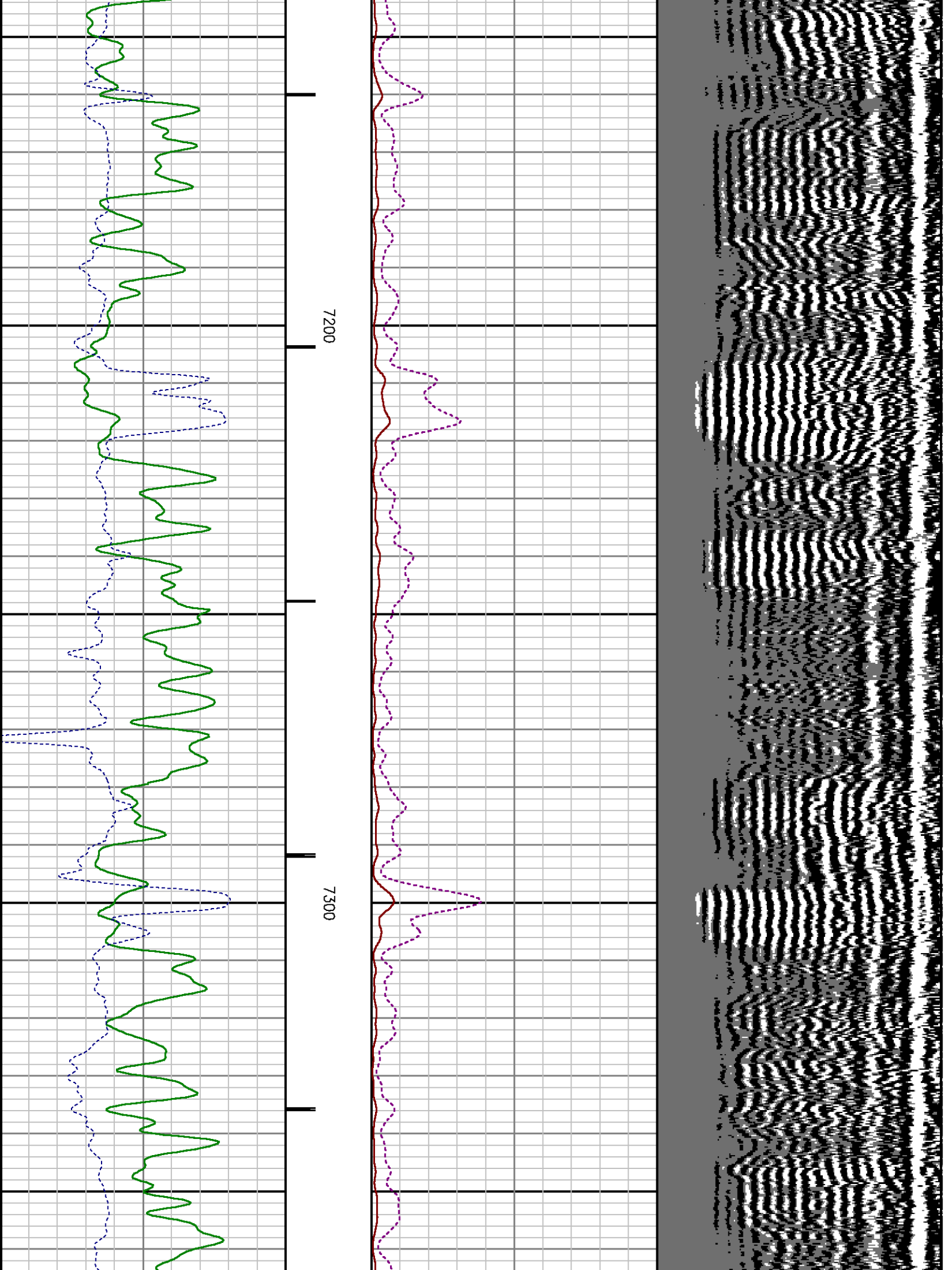


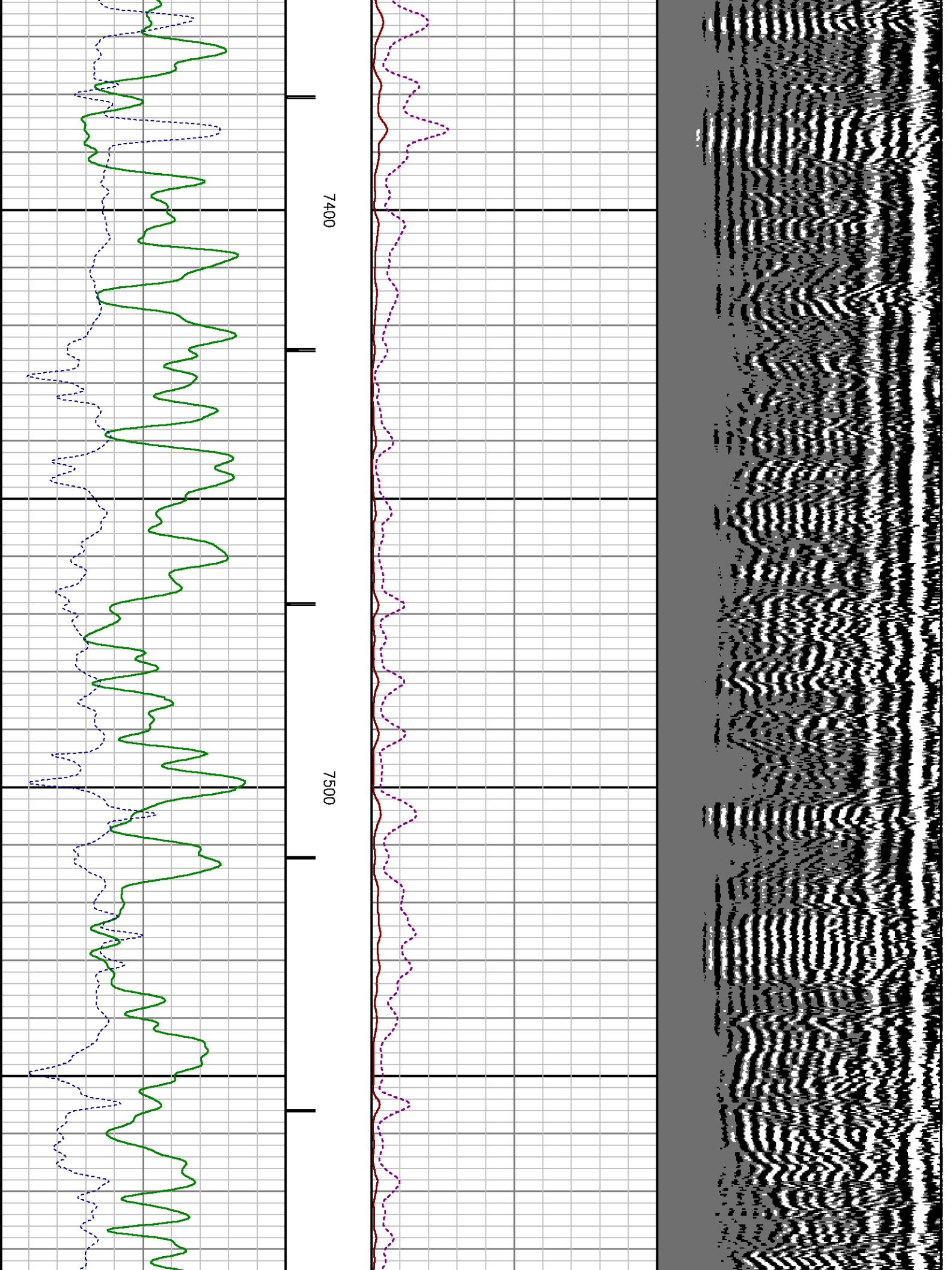




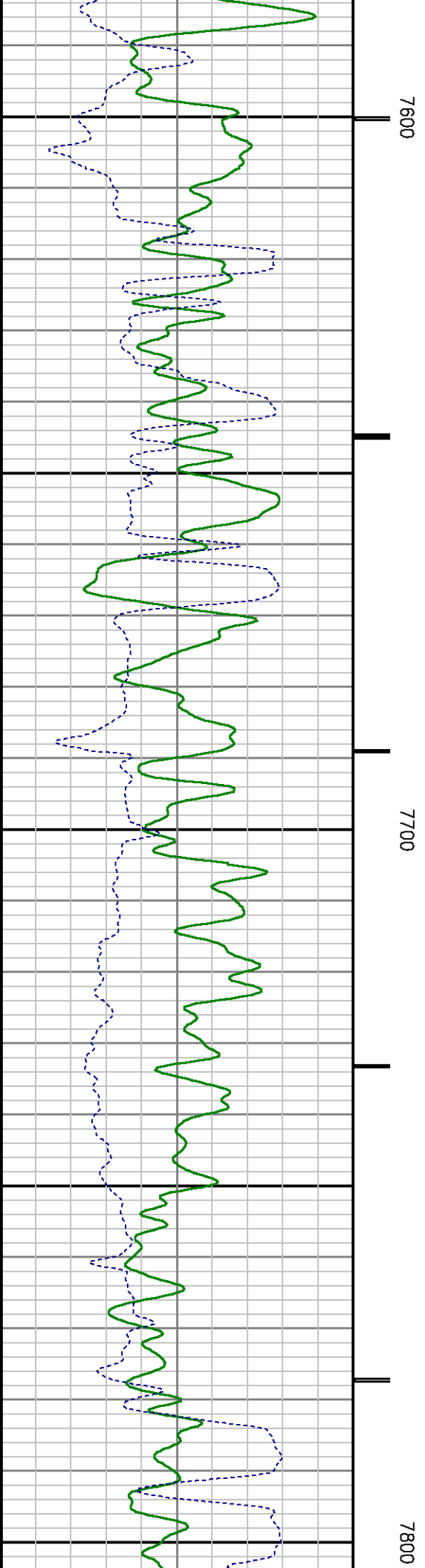
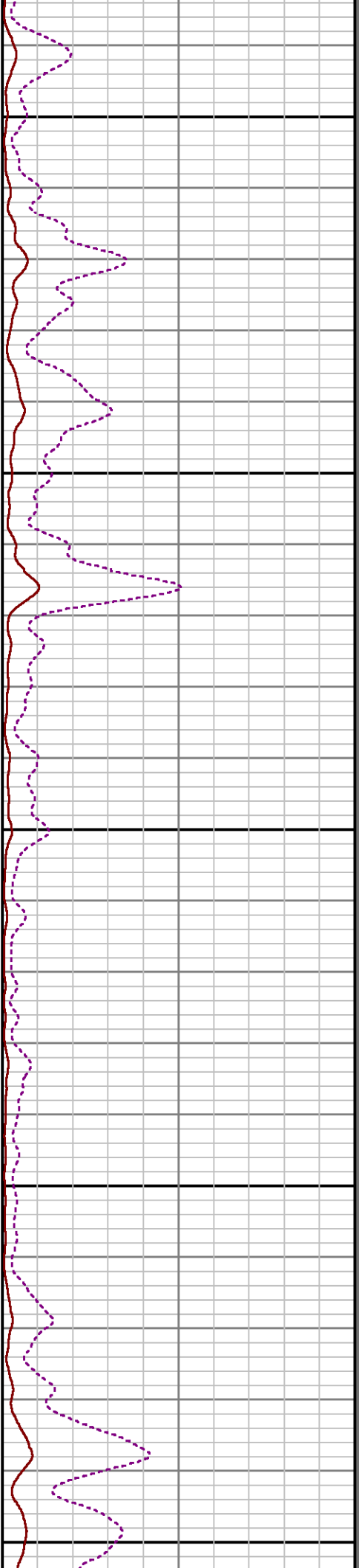
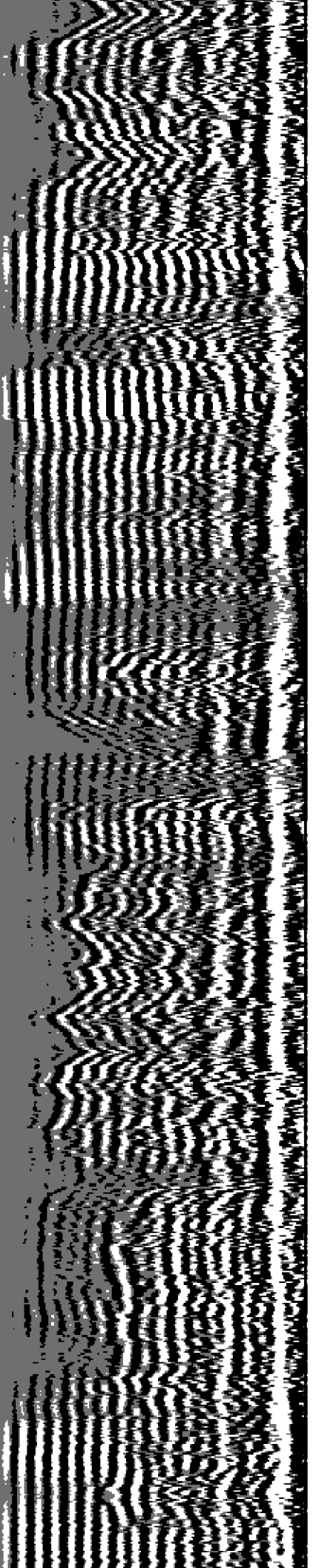


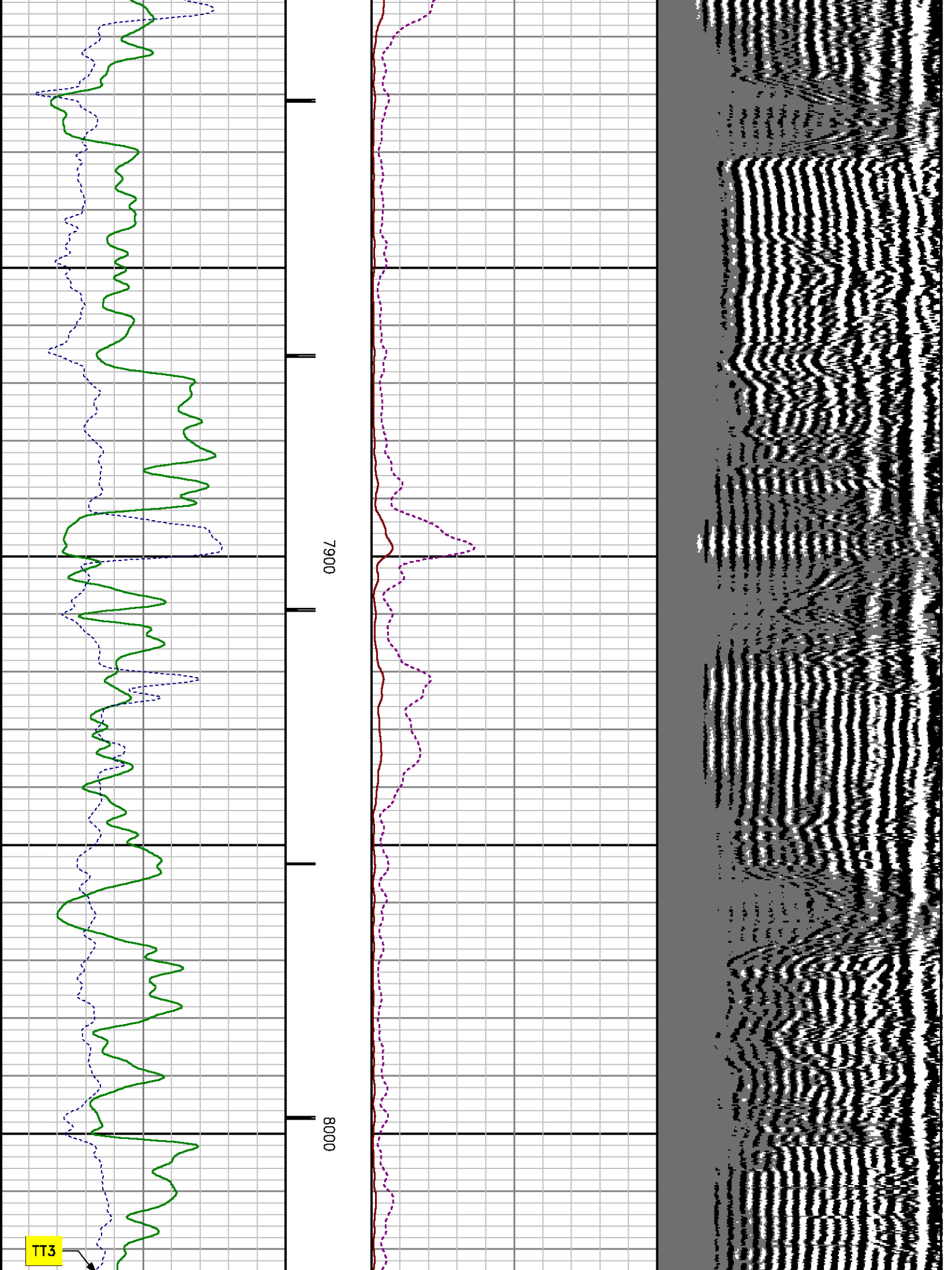


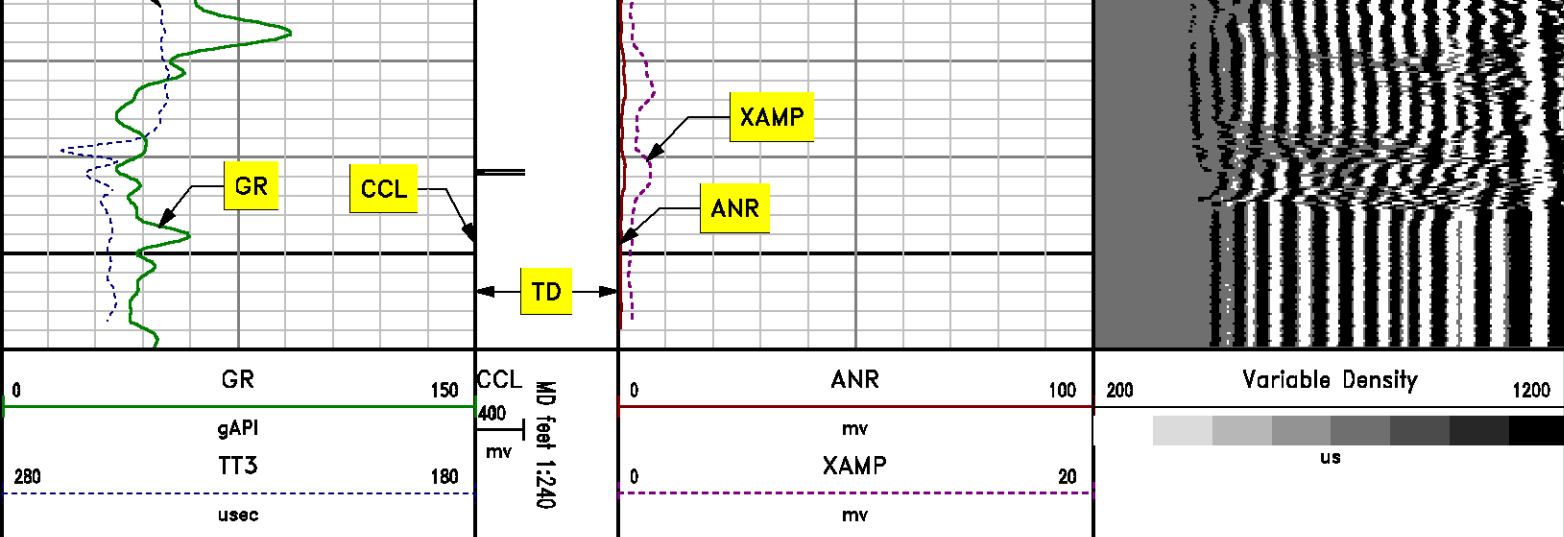












# *MAIN LOG SECONDARY PRESENTATION* *0 PSI*

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	303.100	usec	19.937	8059.000
RAL	Amp Gate Start Near	199.125	usec	19.937	8059.000
RAL	Amp Gate Start Radial	198.578	usec	19.937	8059.000
RAL	Amp Gate Width Far	25.000	usec	19.937	8059.000
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RAL	casing wt	11.600	lbm/ft	19.937	8059.000
RAL	FB Start Far	291.900	usec	19.937	8059.000
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RAL	FB Start Radial	175.391	usec	19.937	8059.000
RAL	FB Thresh Far	10.000	mv	19.937	8059.000
RAL	FB Thresh Near	4.000	mv	19.937	8059.000
RAL	FB Thresh Radial	4.000	mv	19.937	8059.000
RAL	Fluid Travel Time	200.000	usec/ft	19.937	8058.937

DEPTH OFFSETS



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

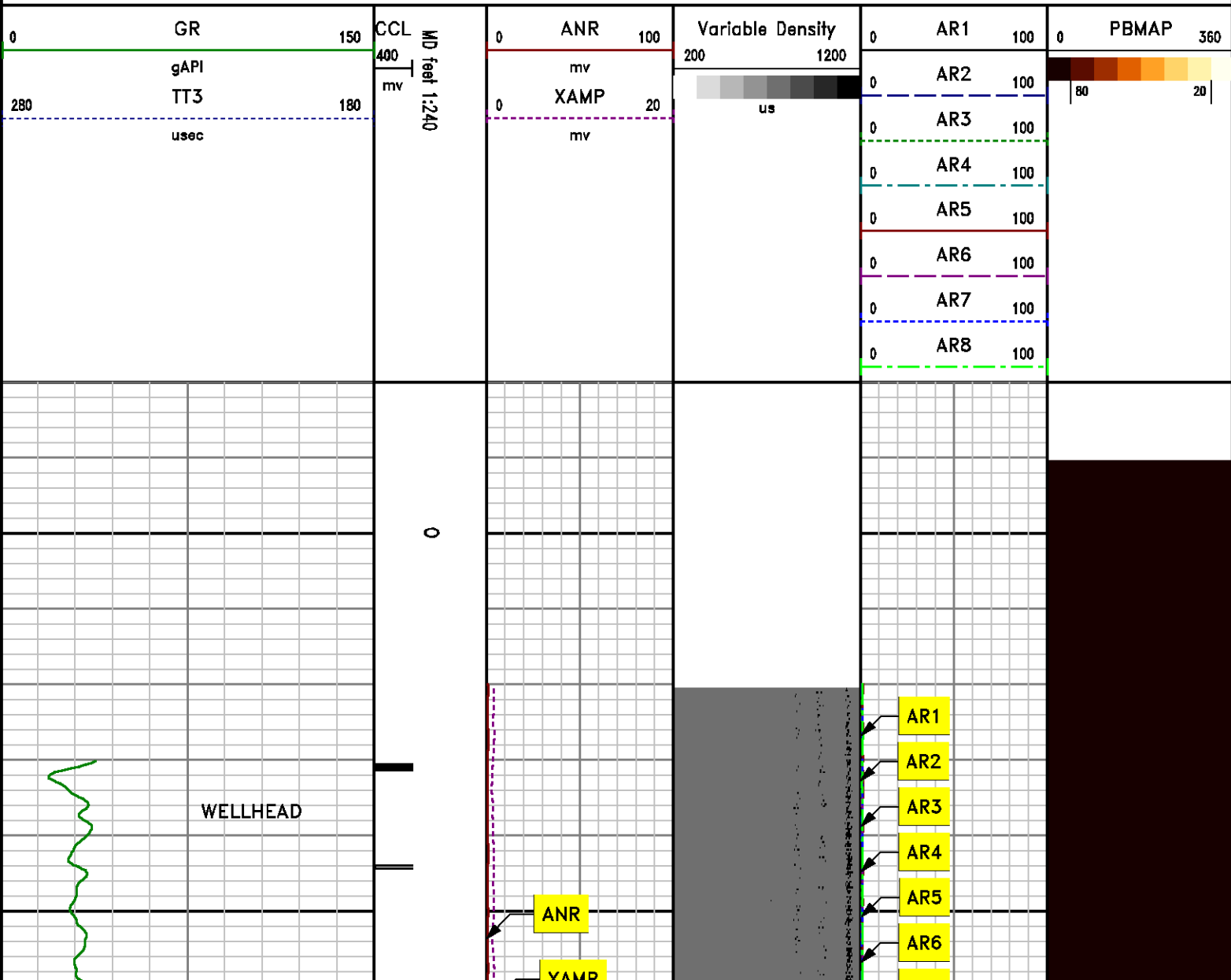
Well : DIAMOND ELK PA 43-2

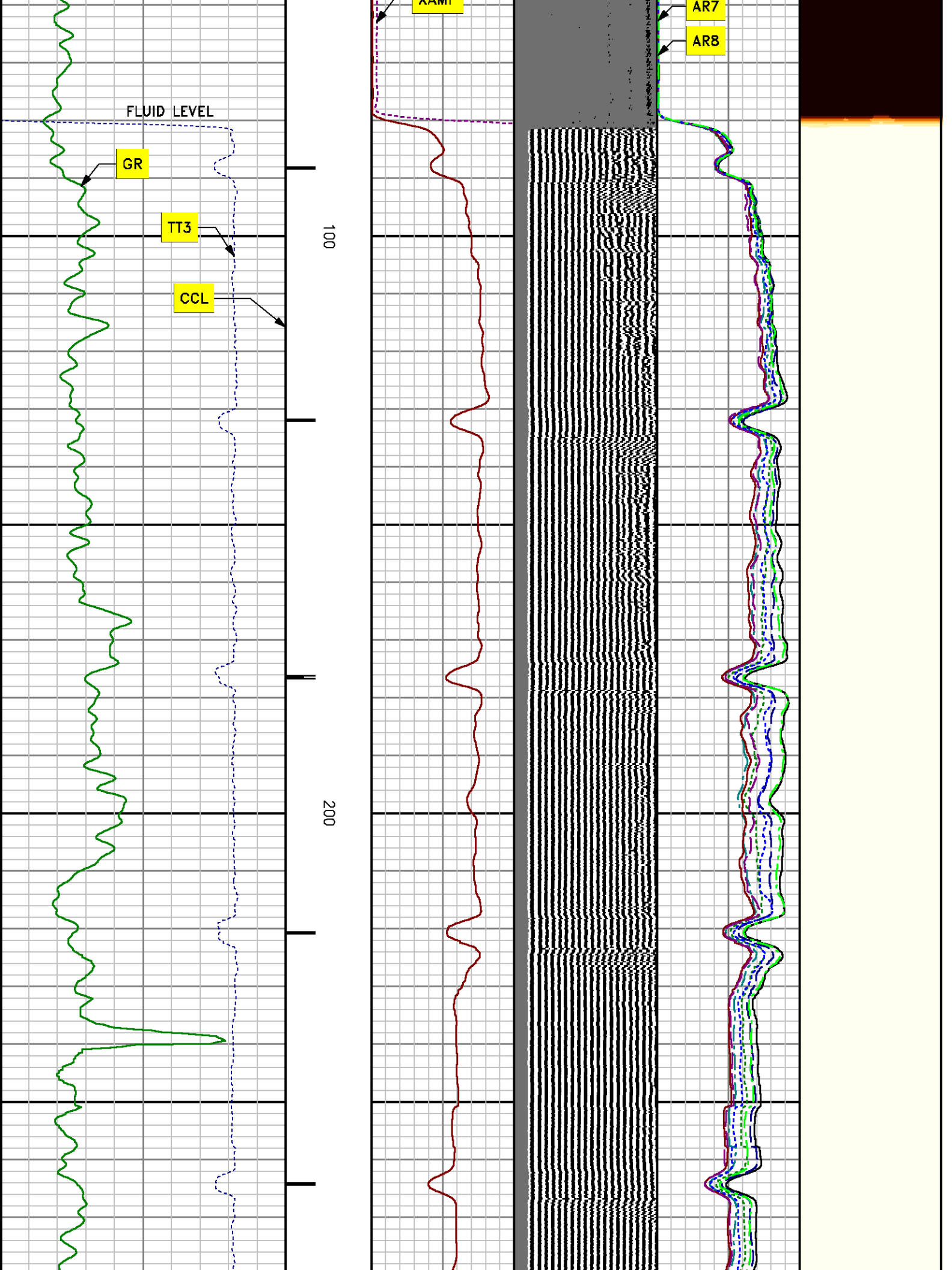
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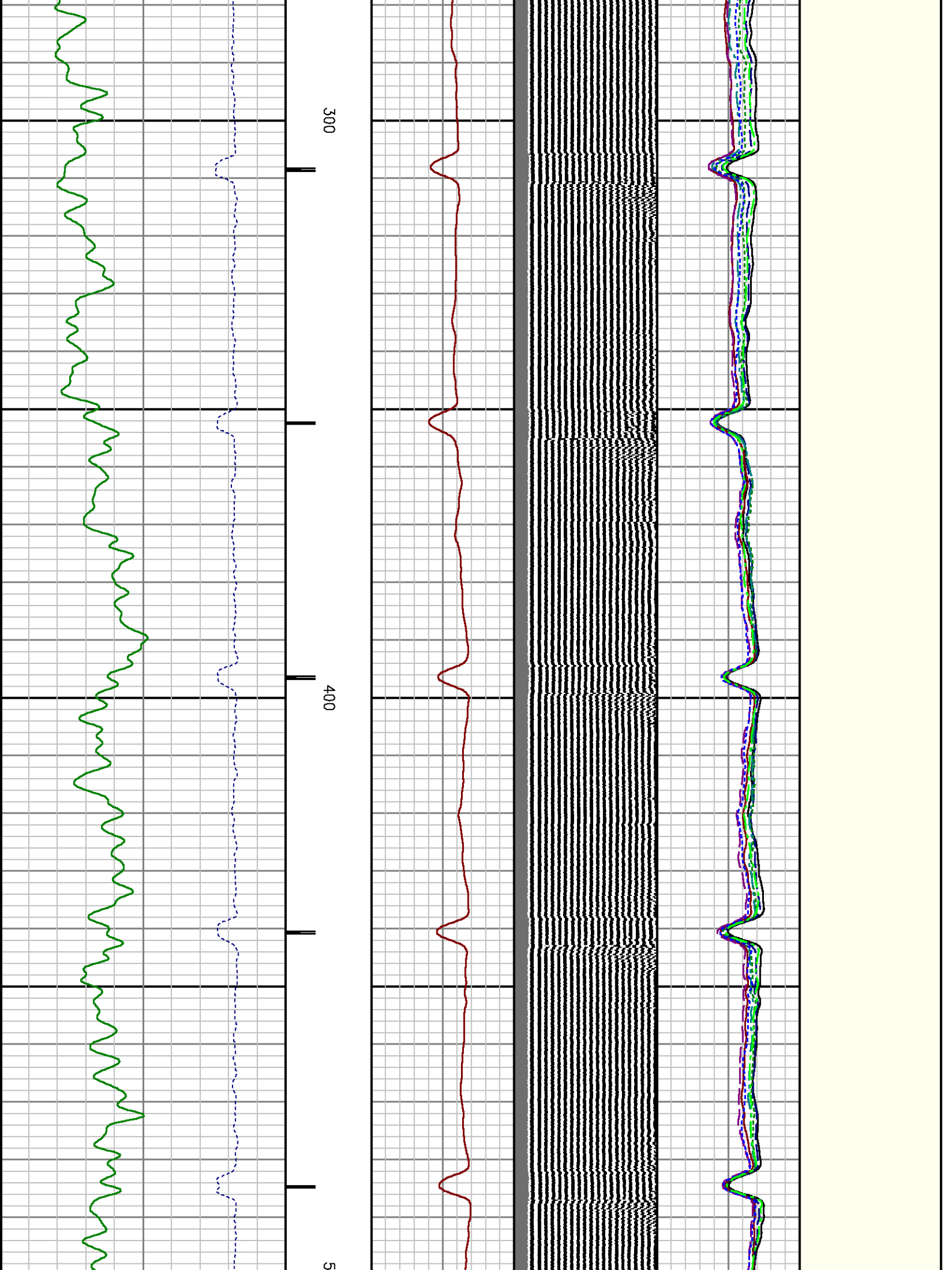
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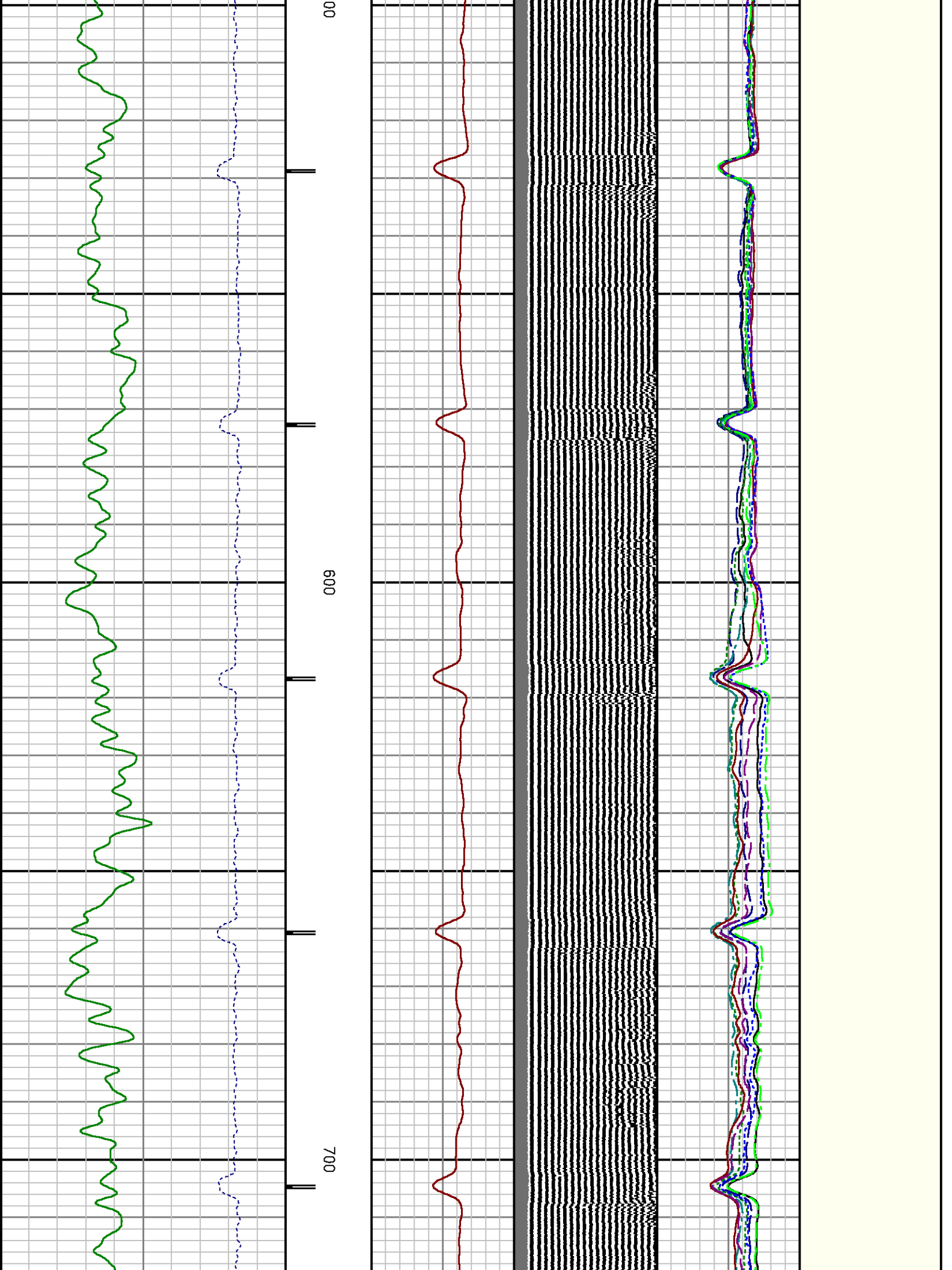
Interval : -20.00 - 8060.00 feet UP

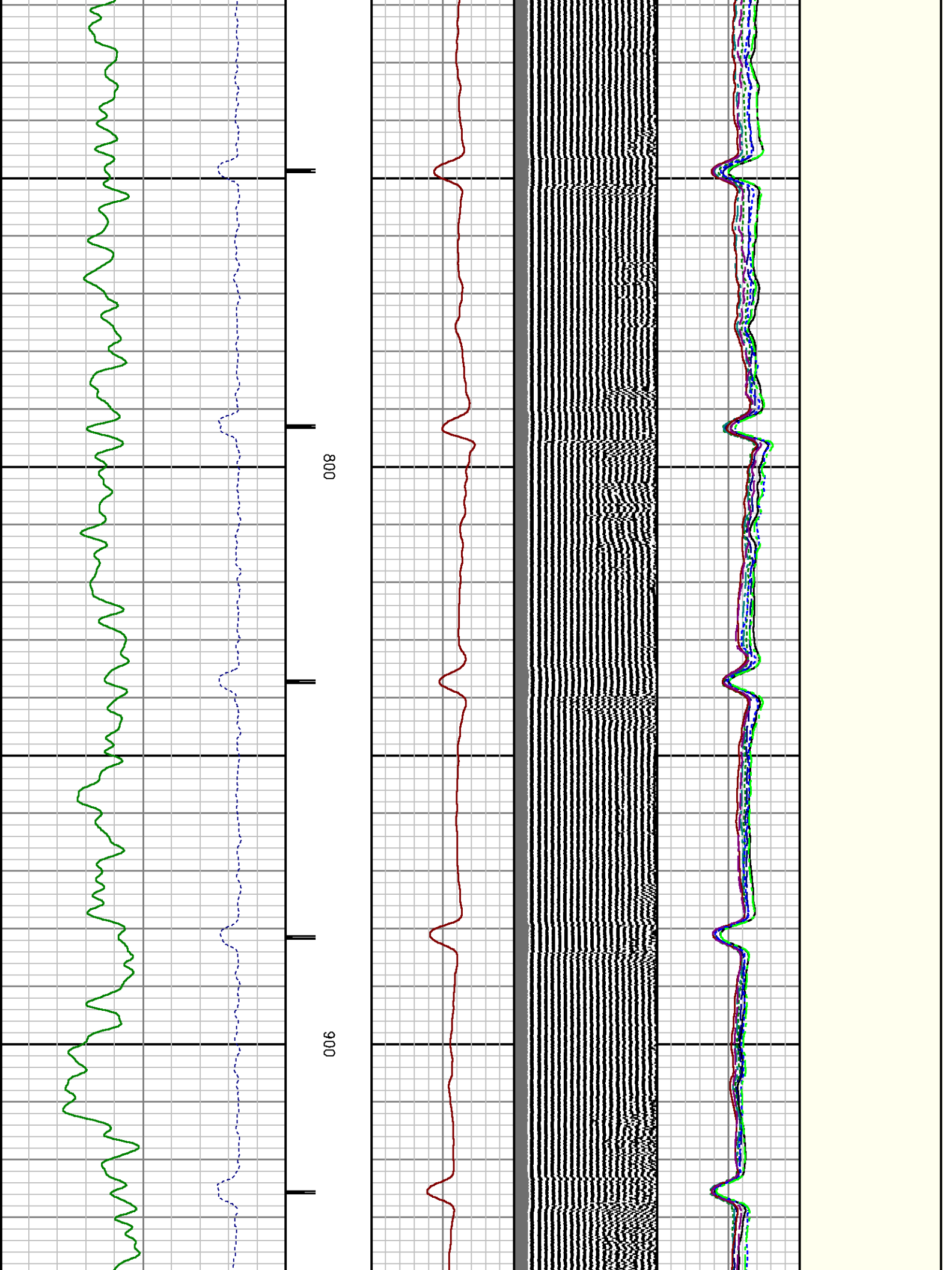
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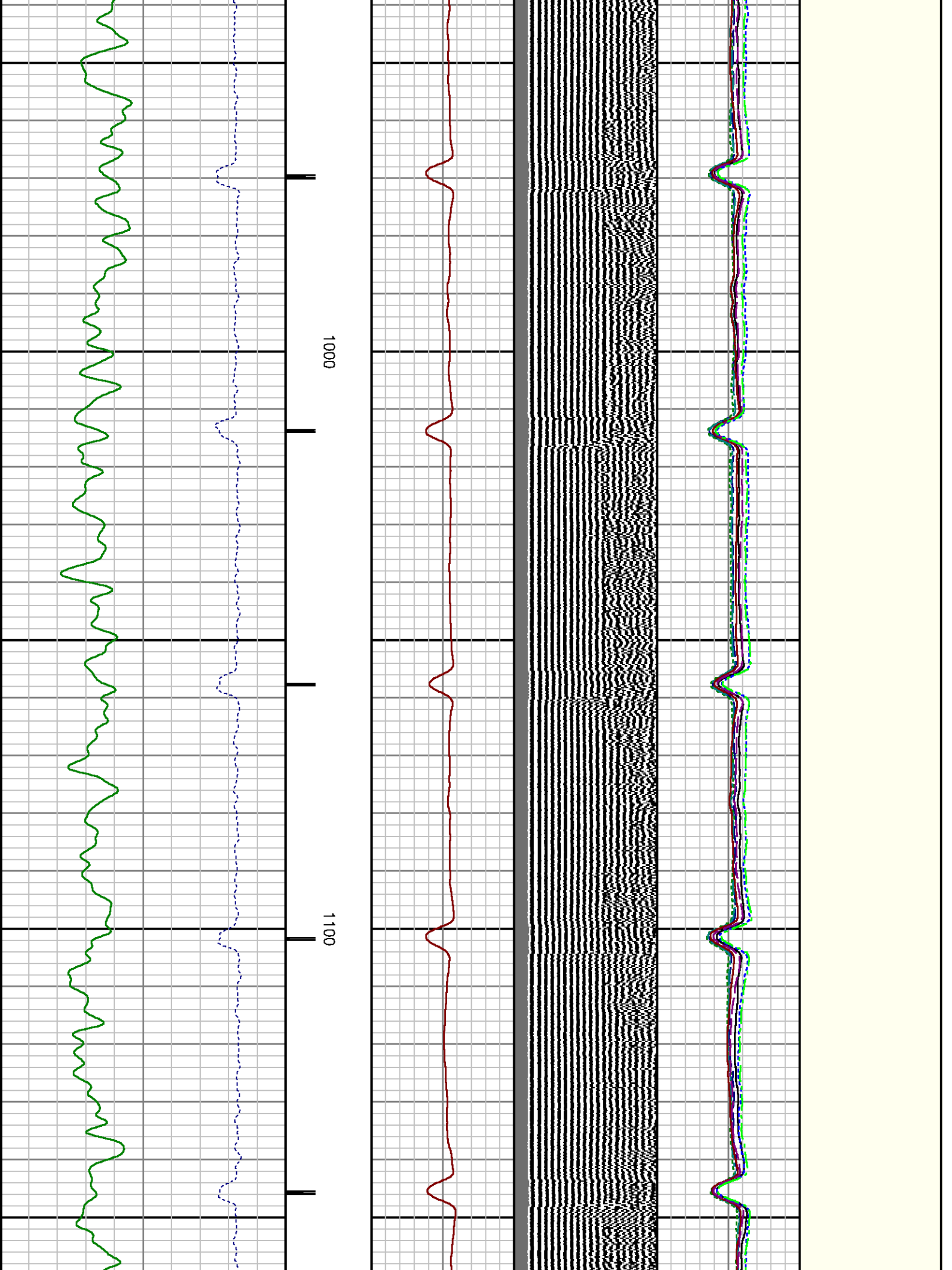


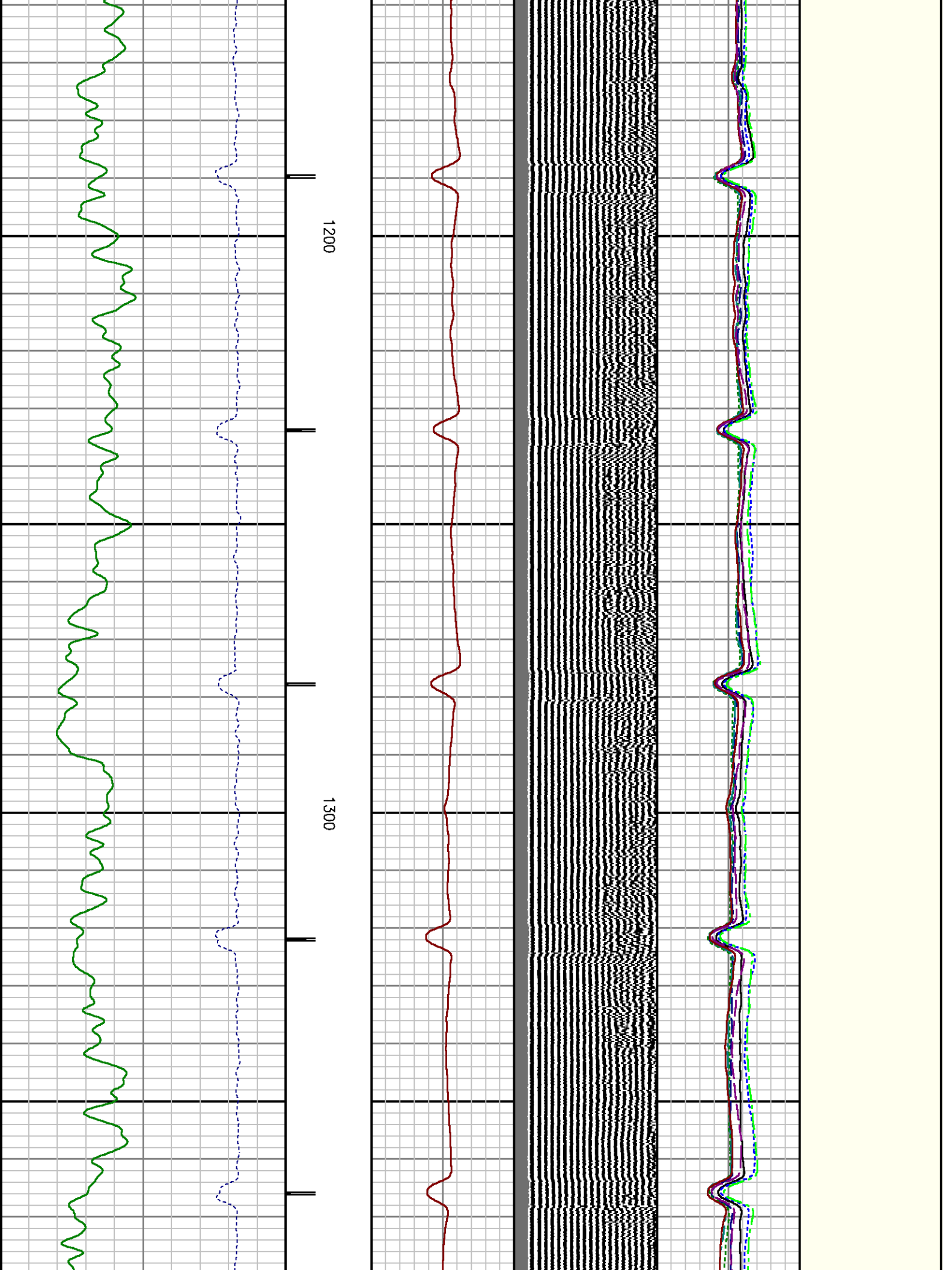


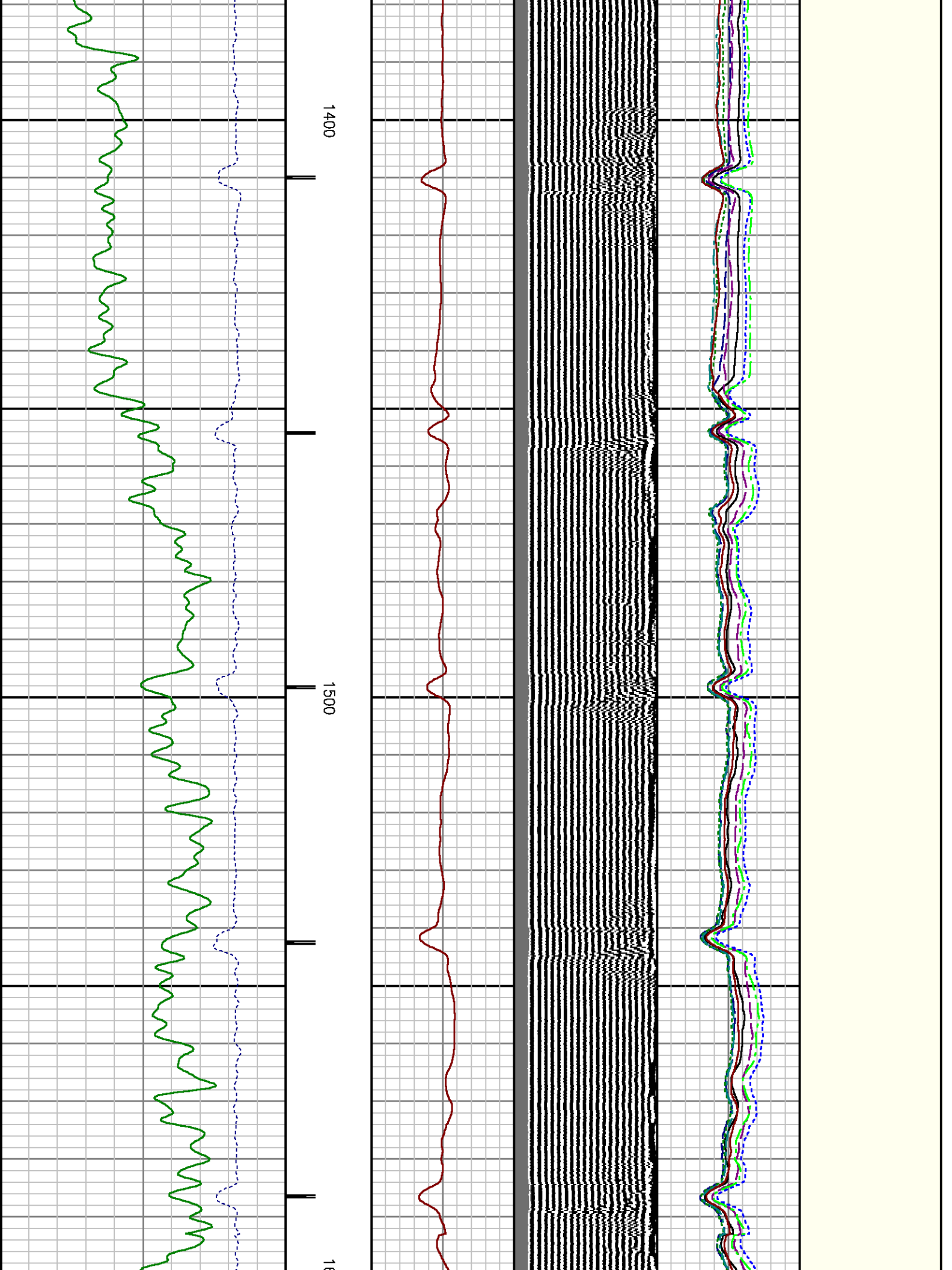


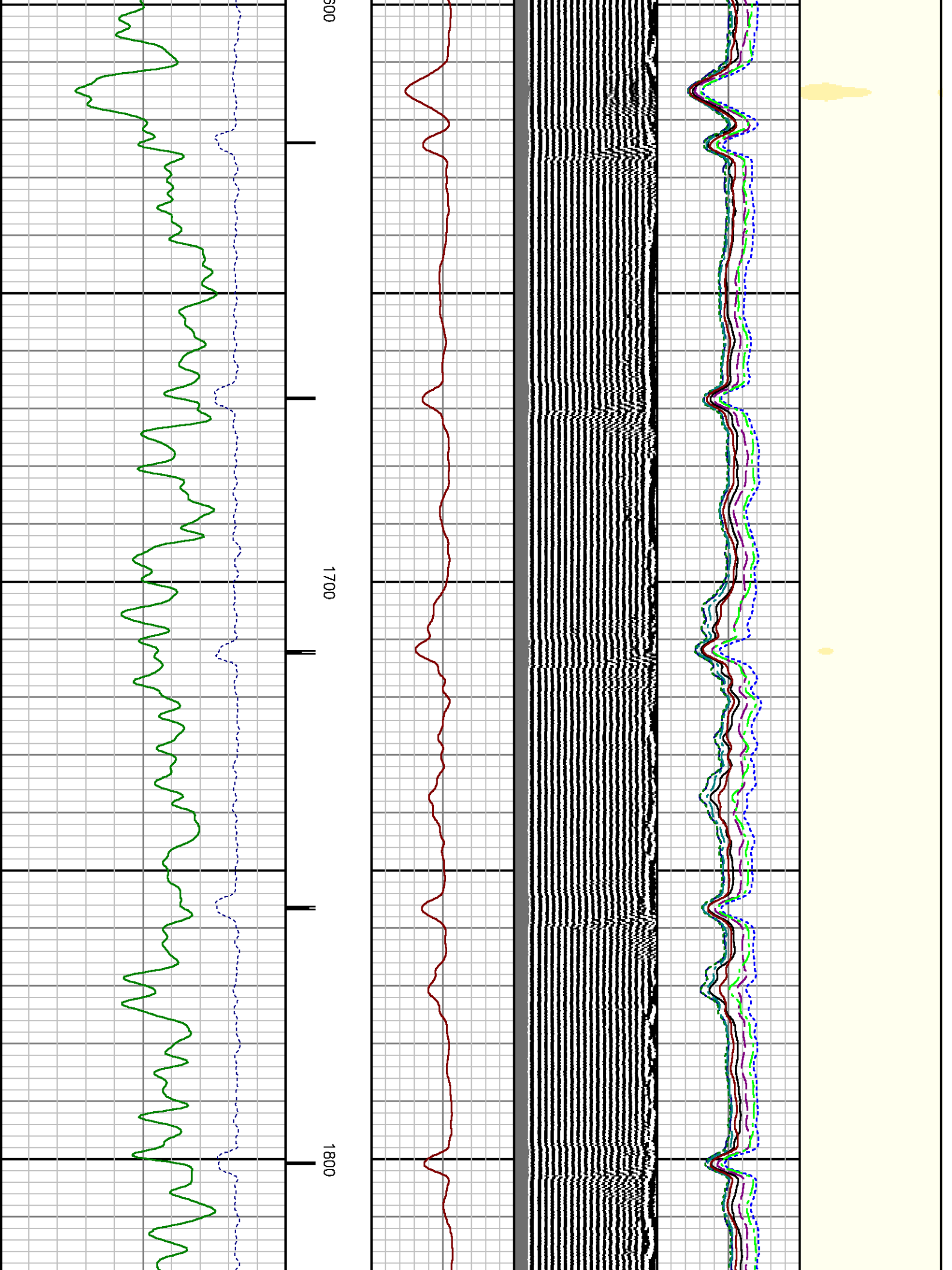


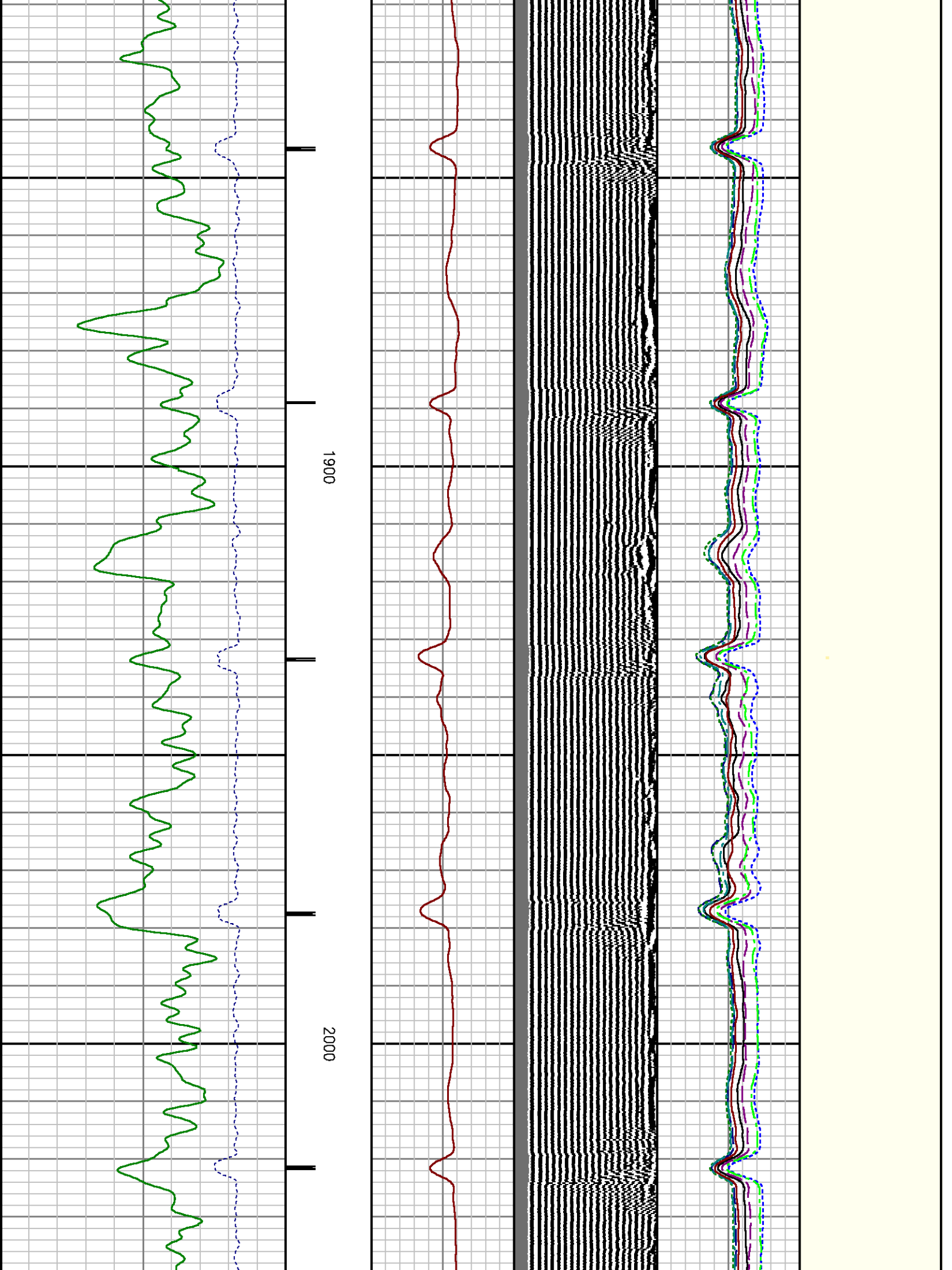




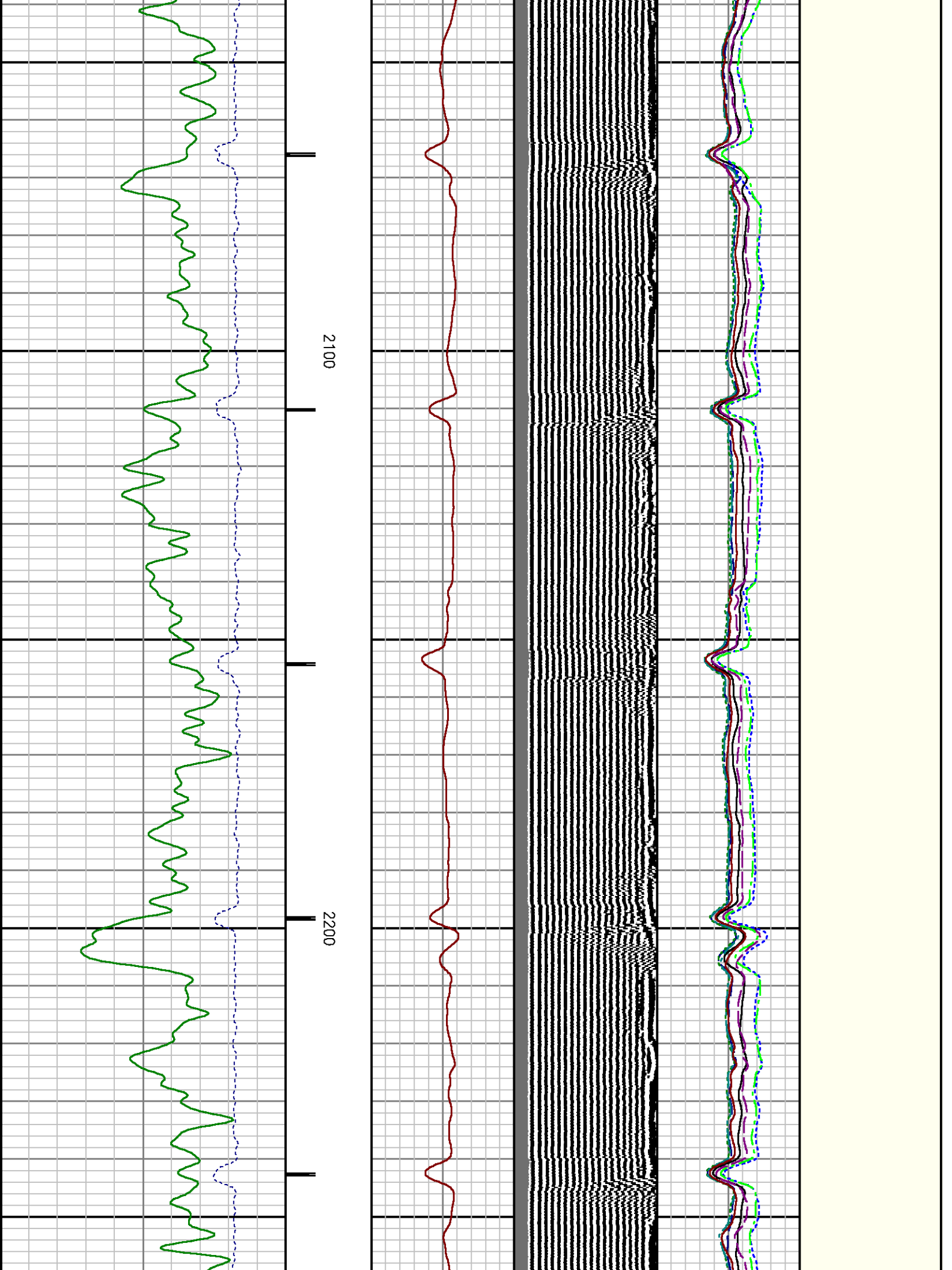


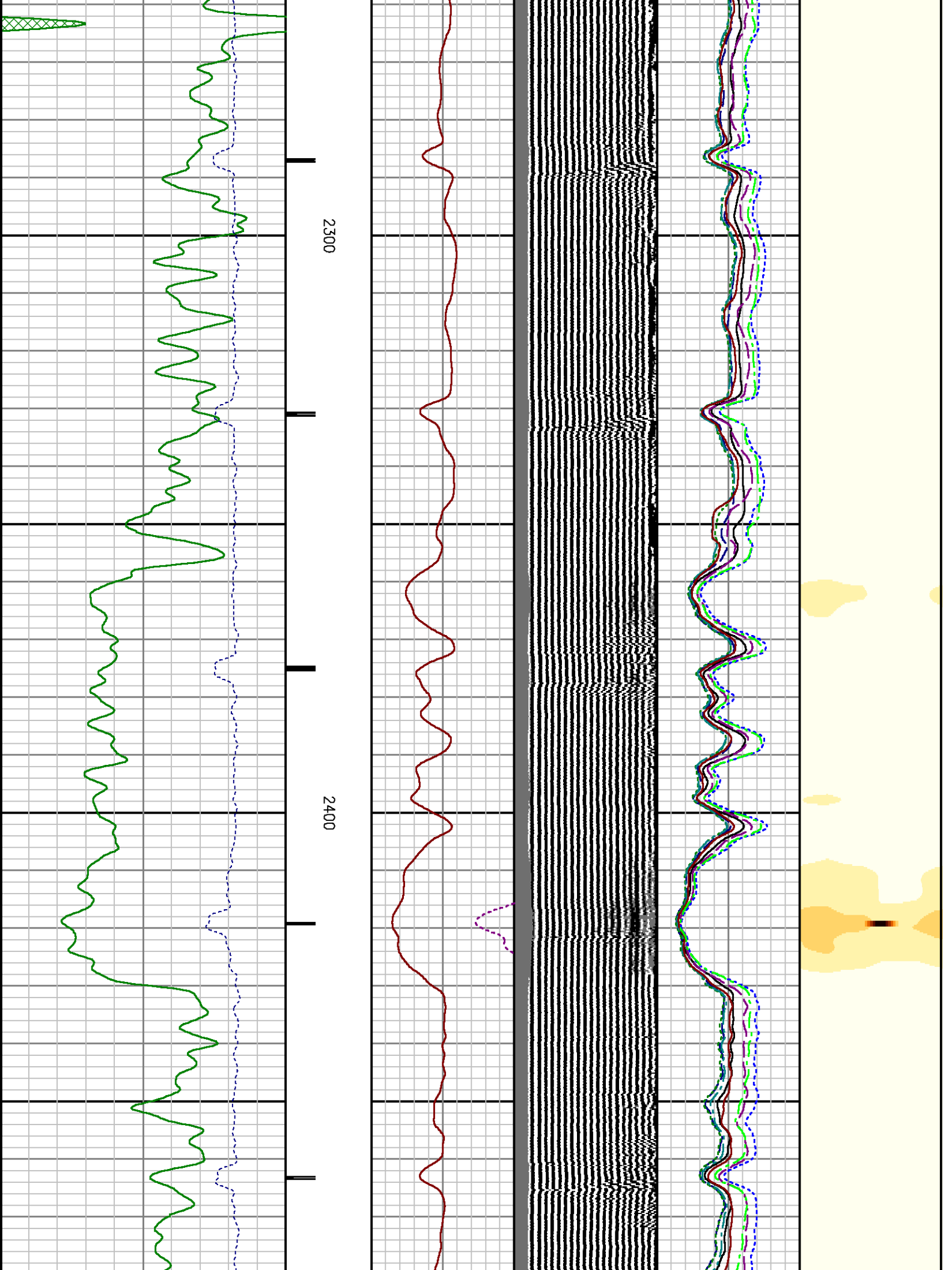


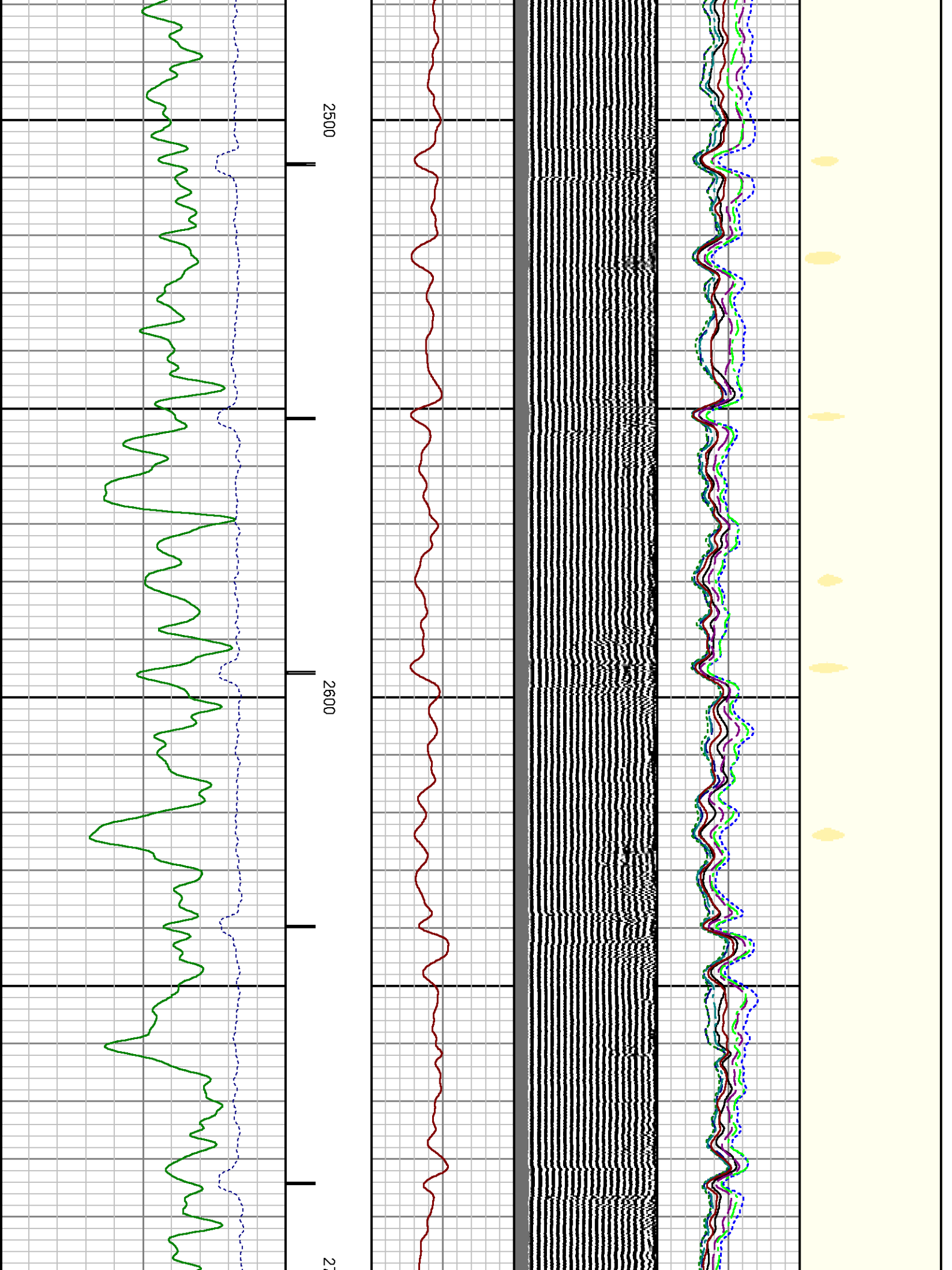


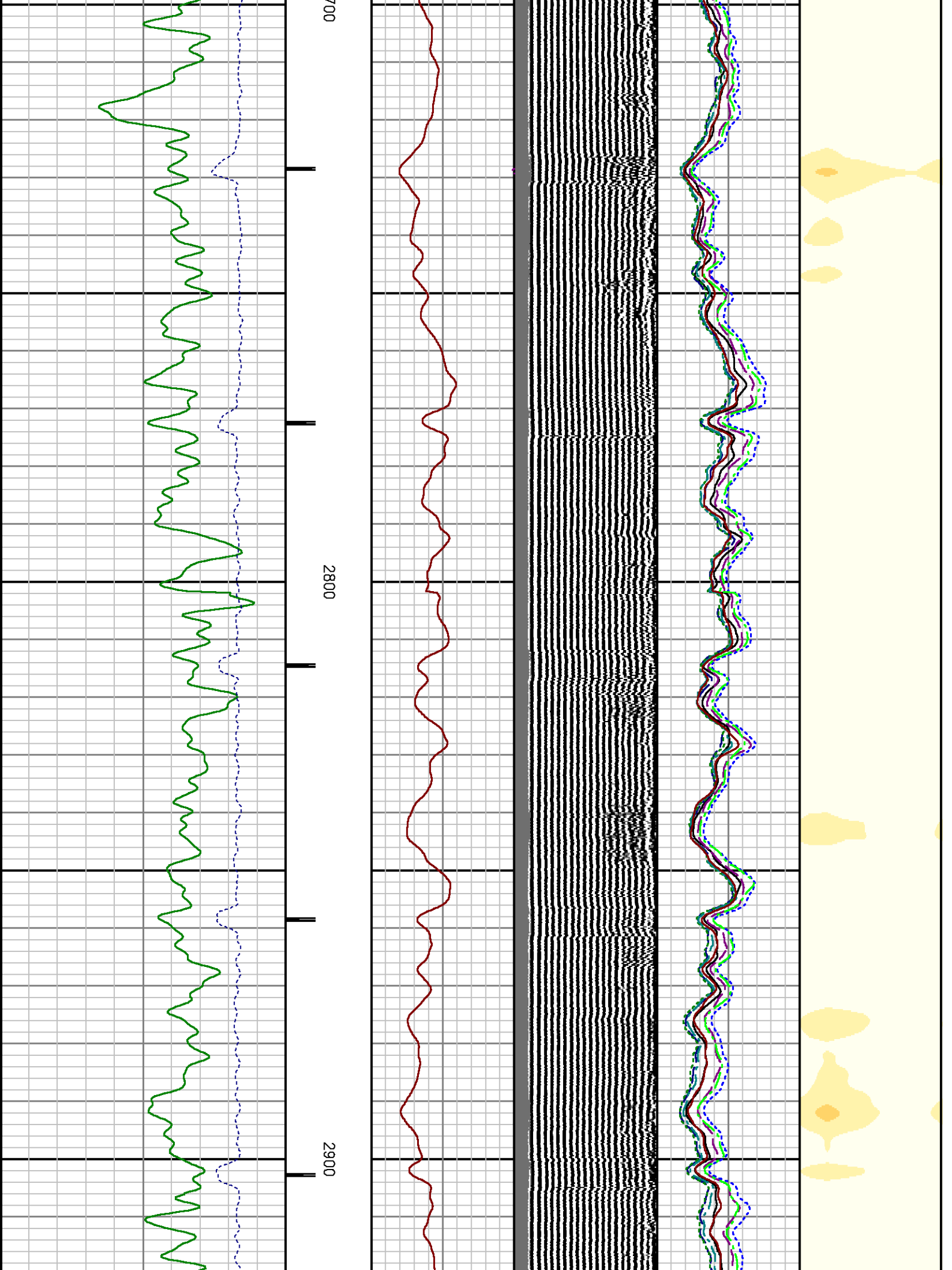


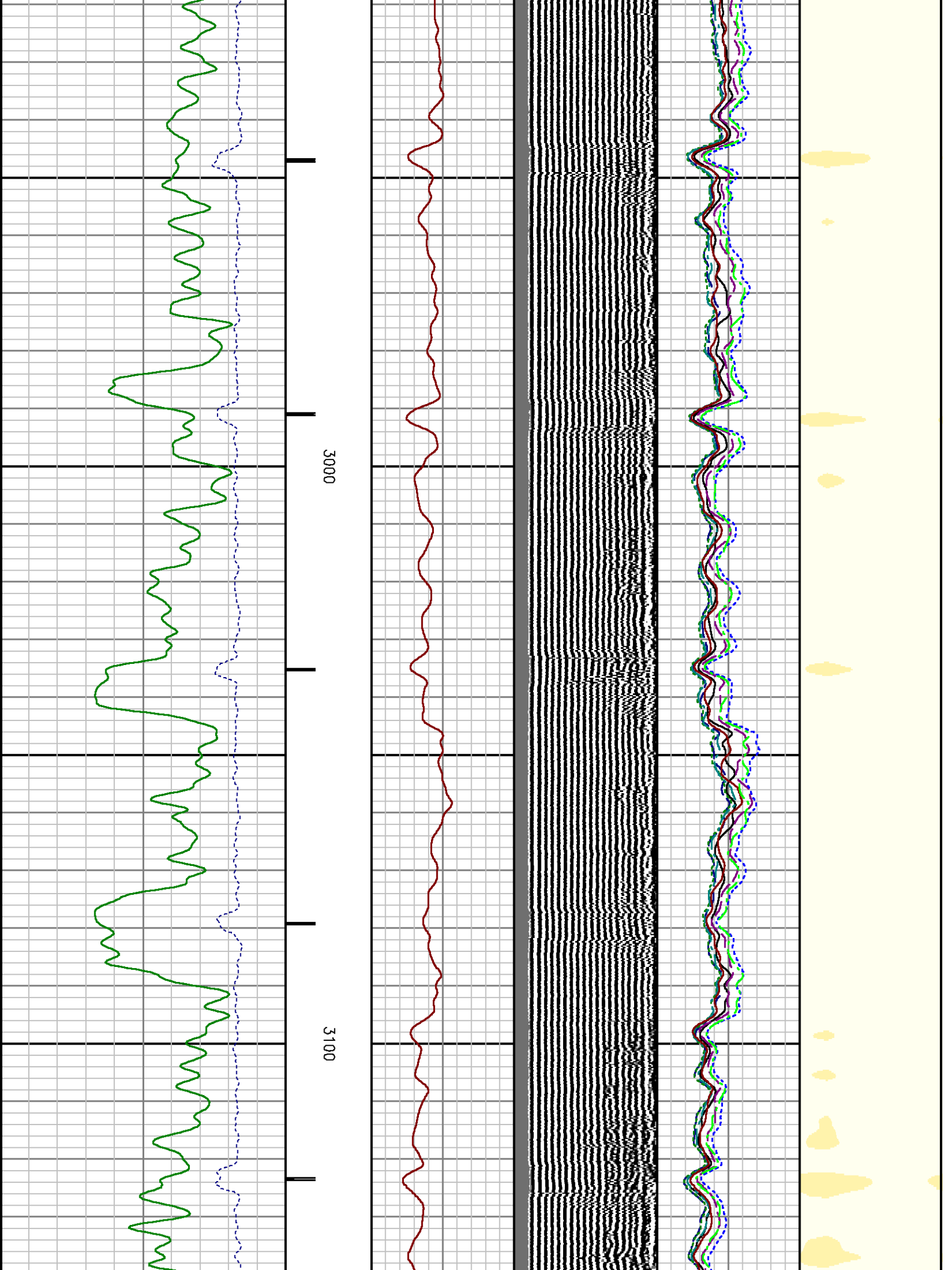




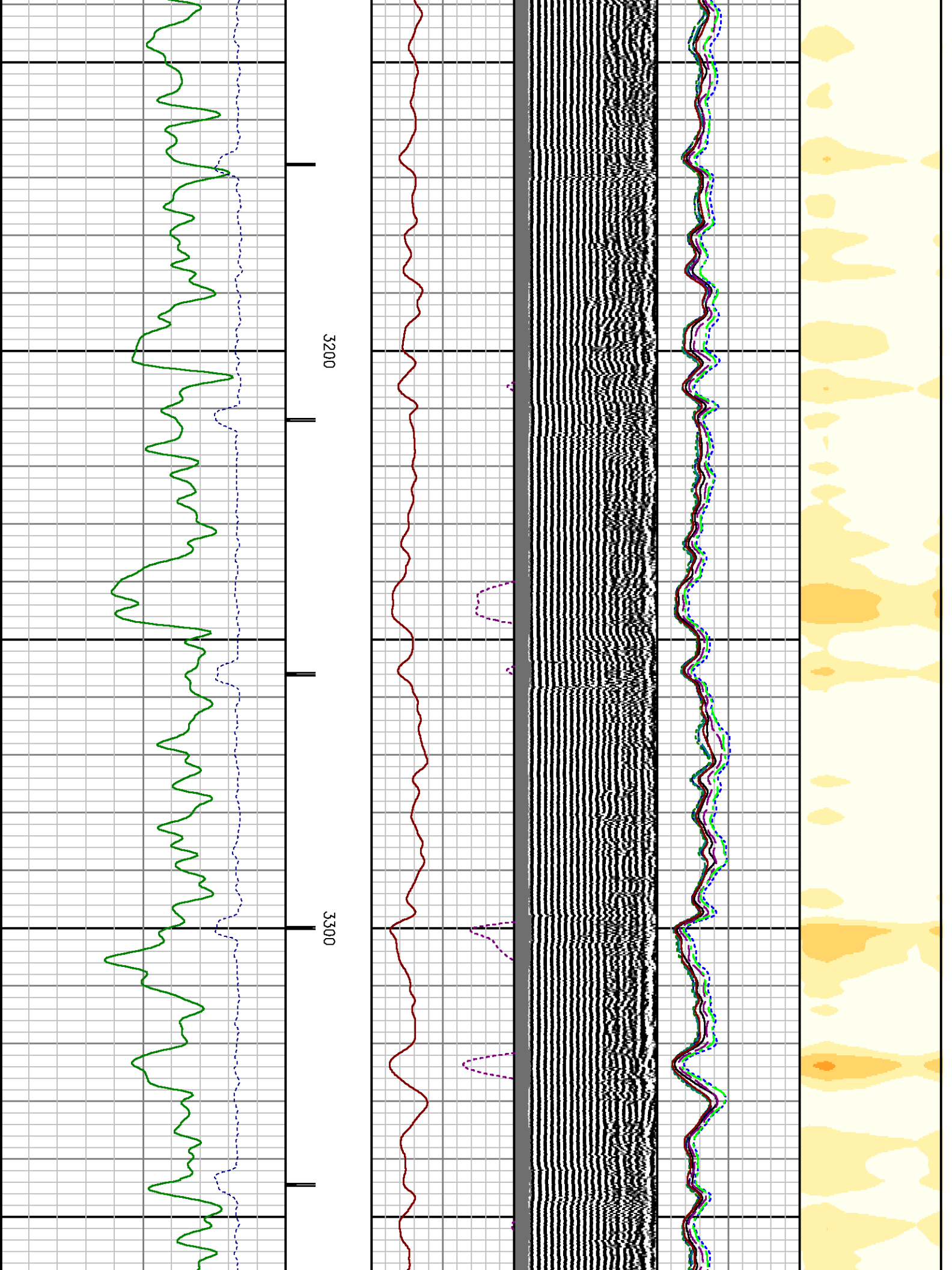


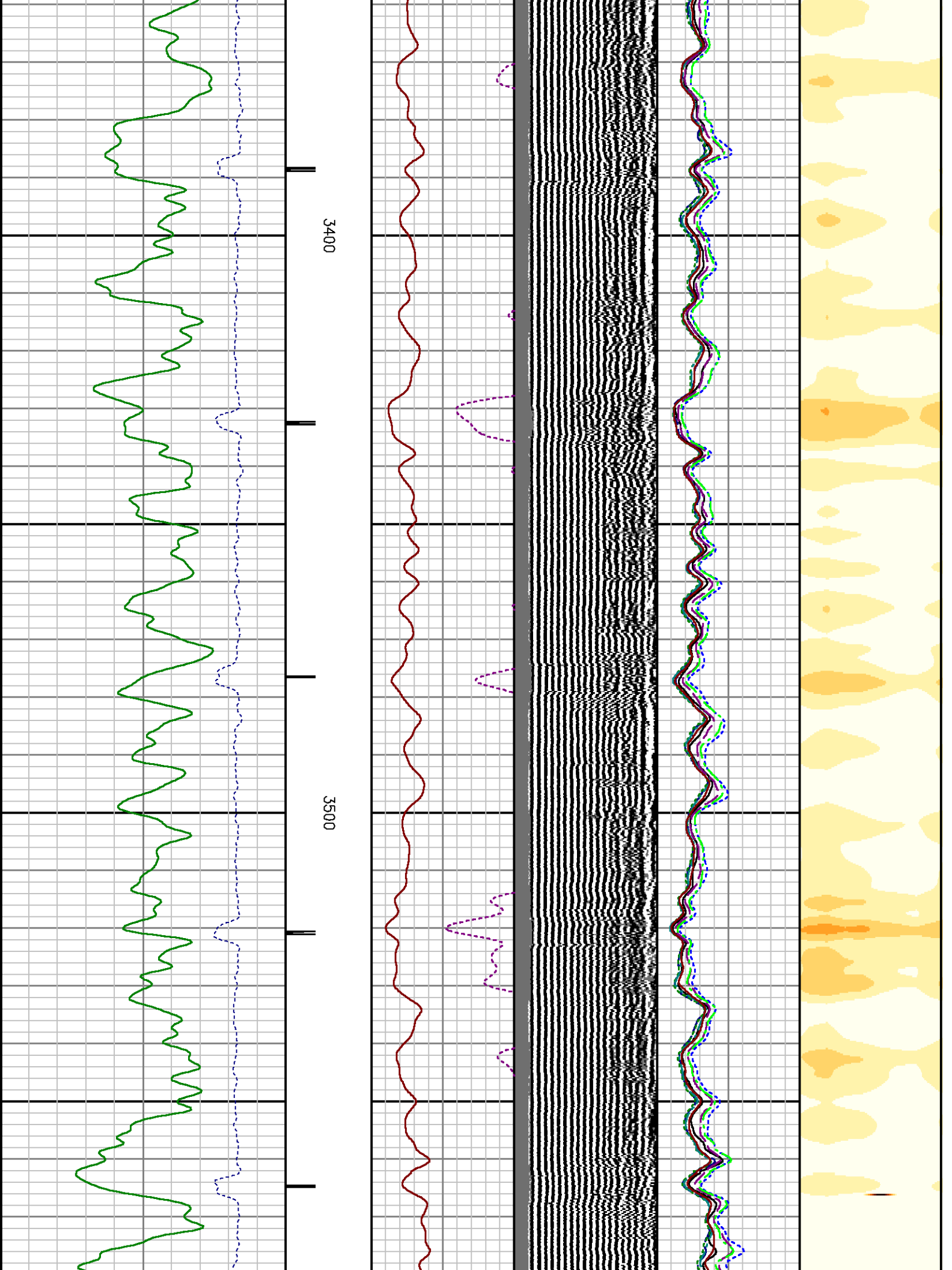


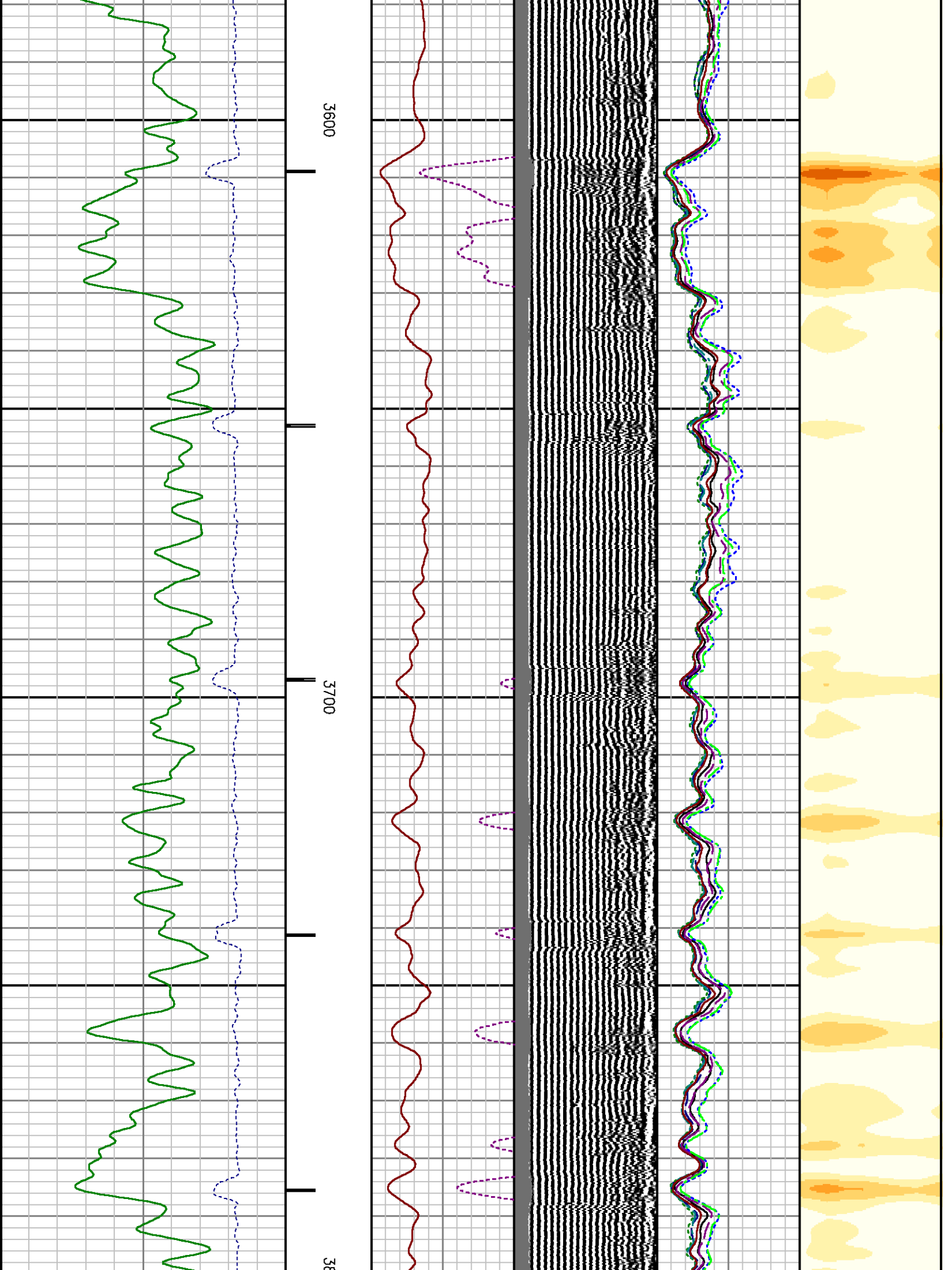


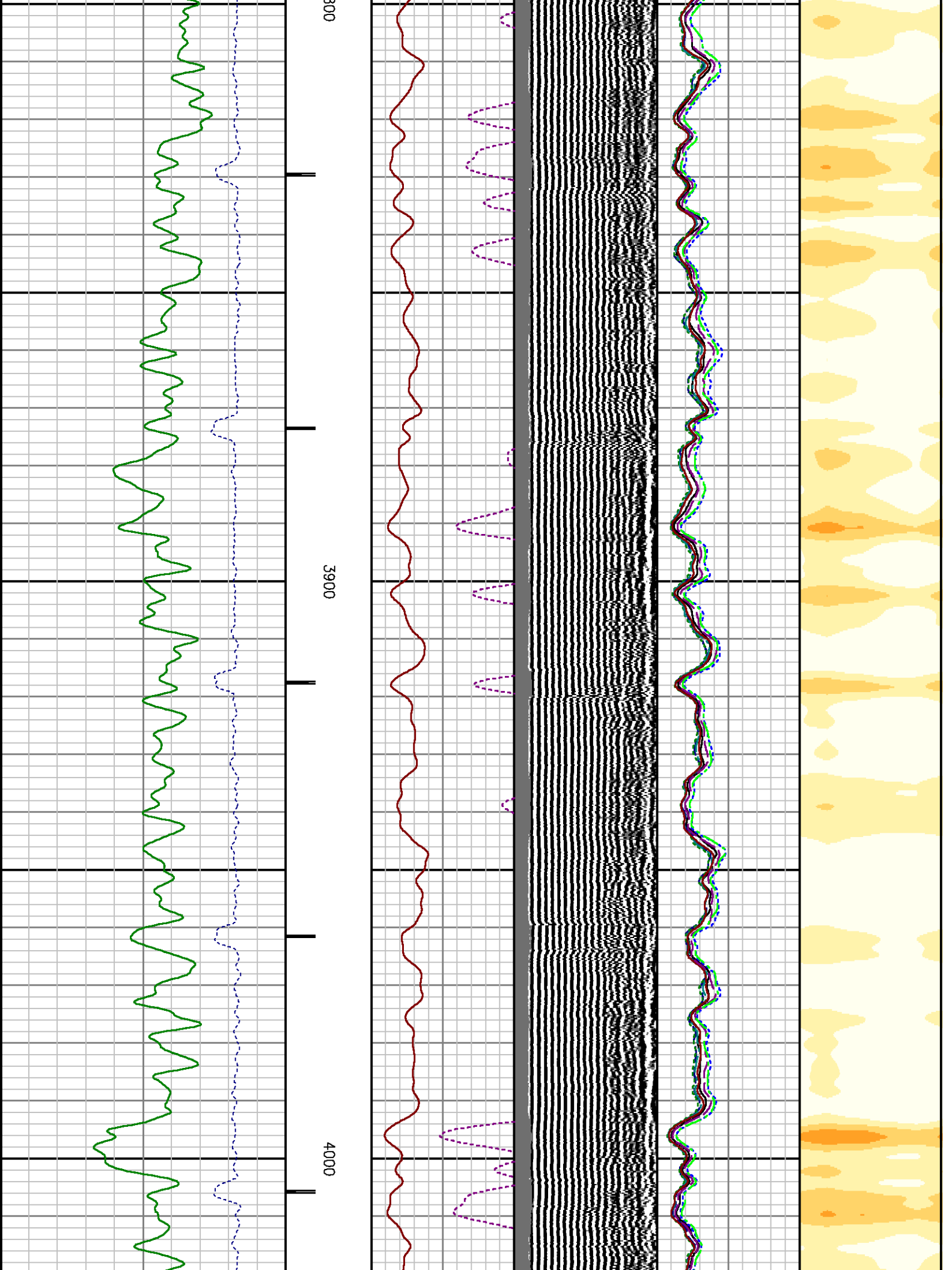


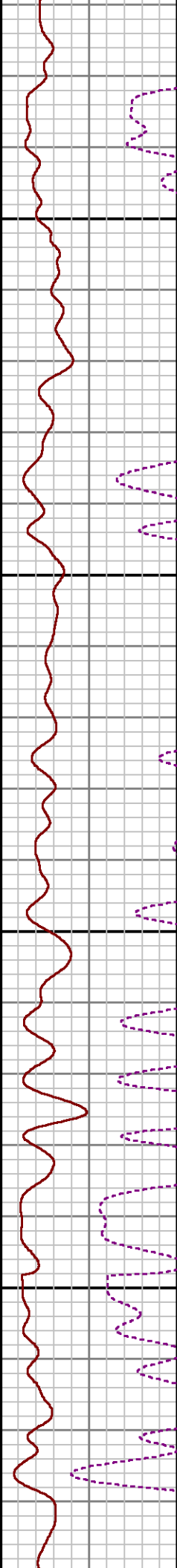
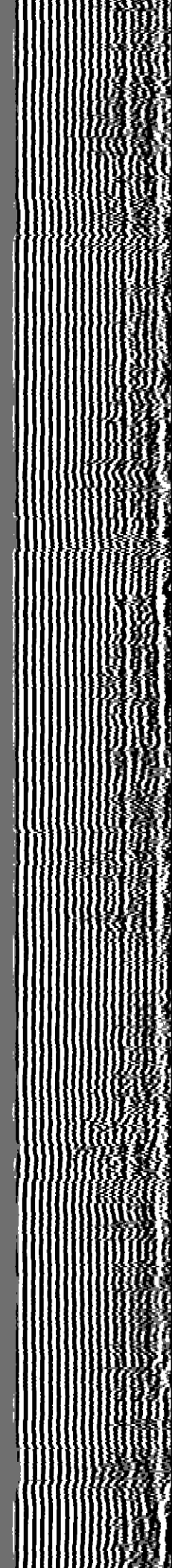
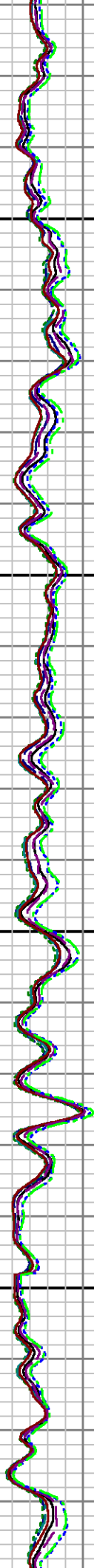
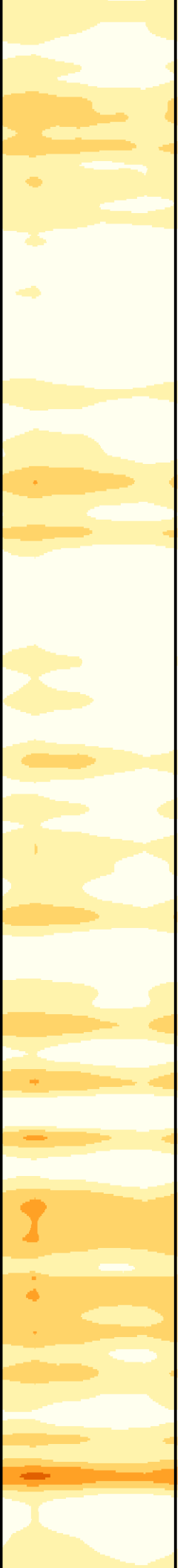






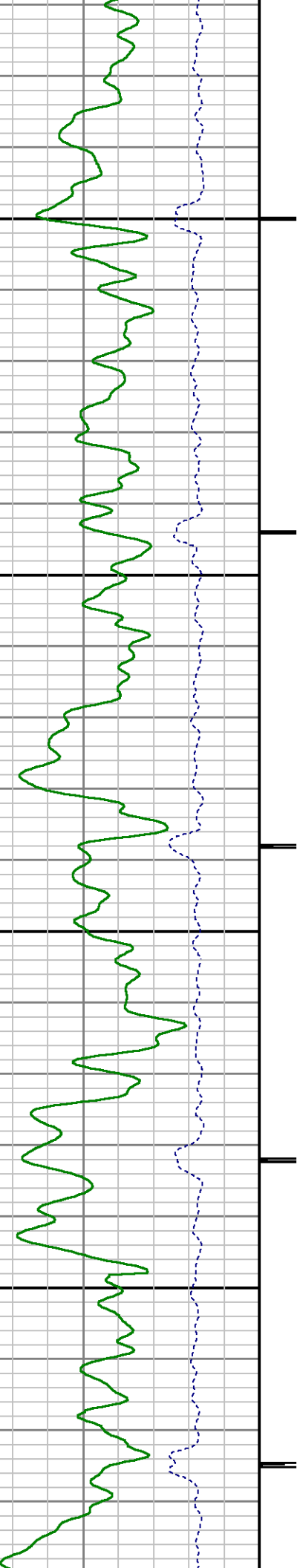




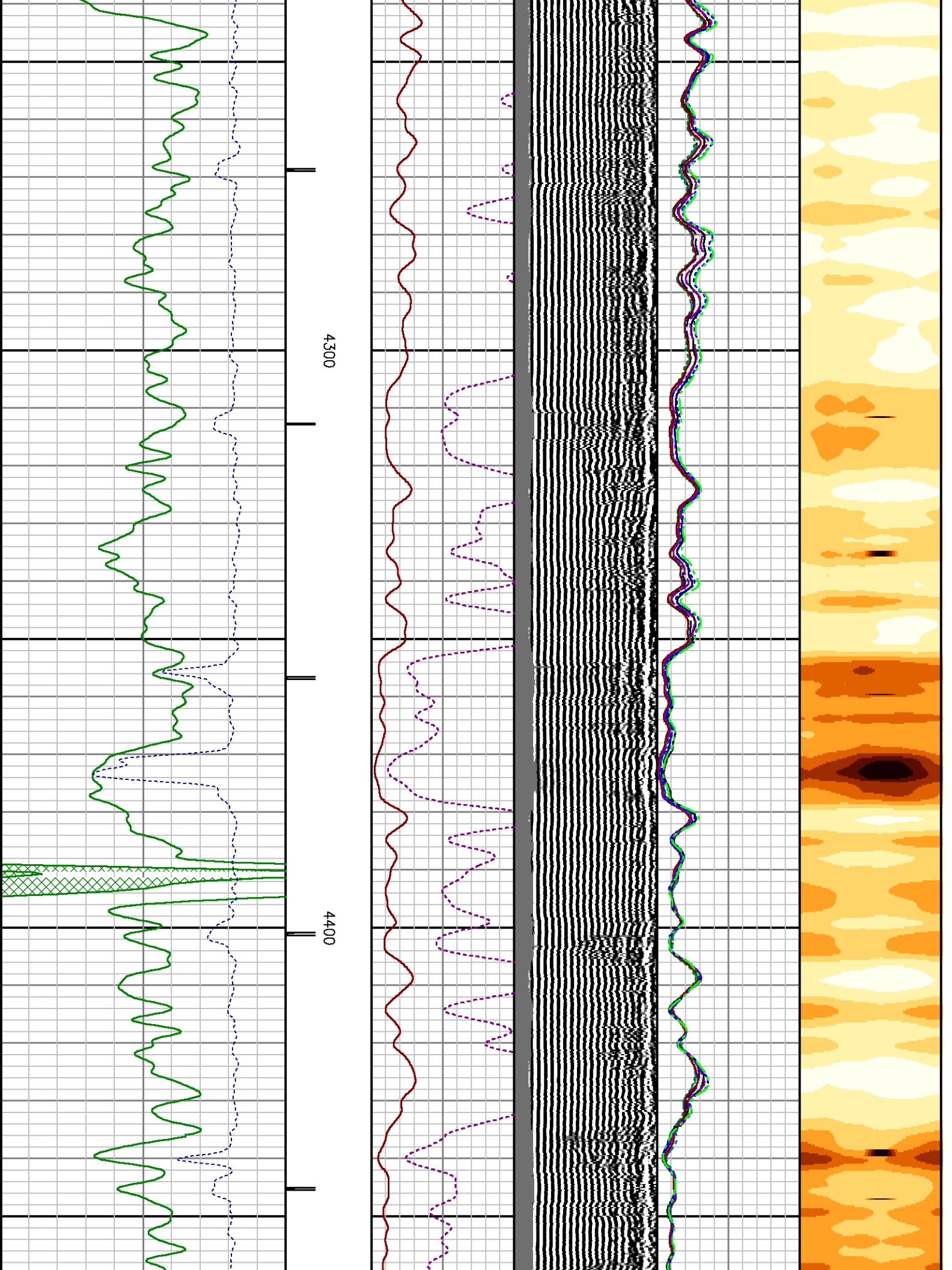


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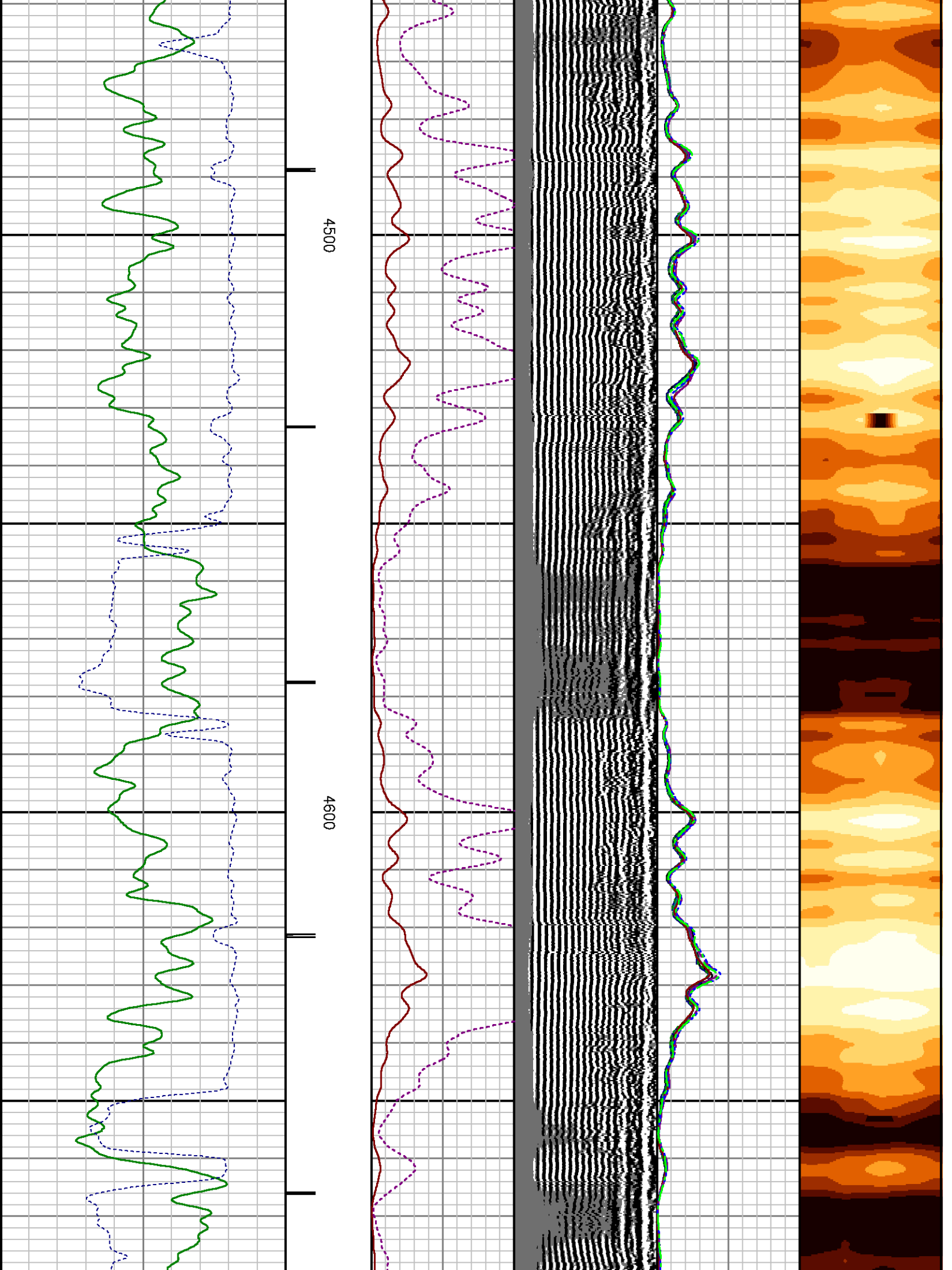
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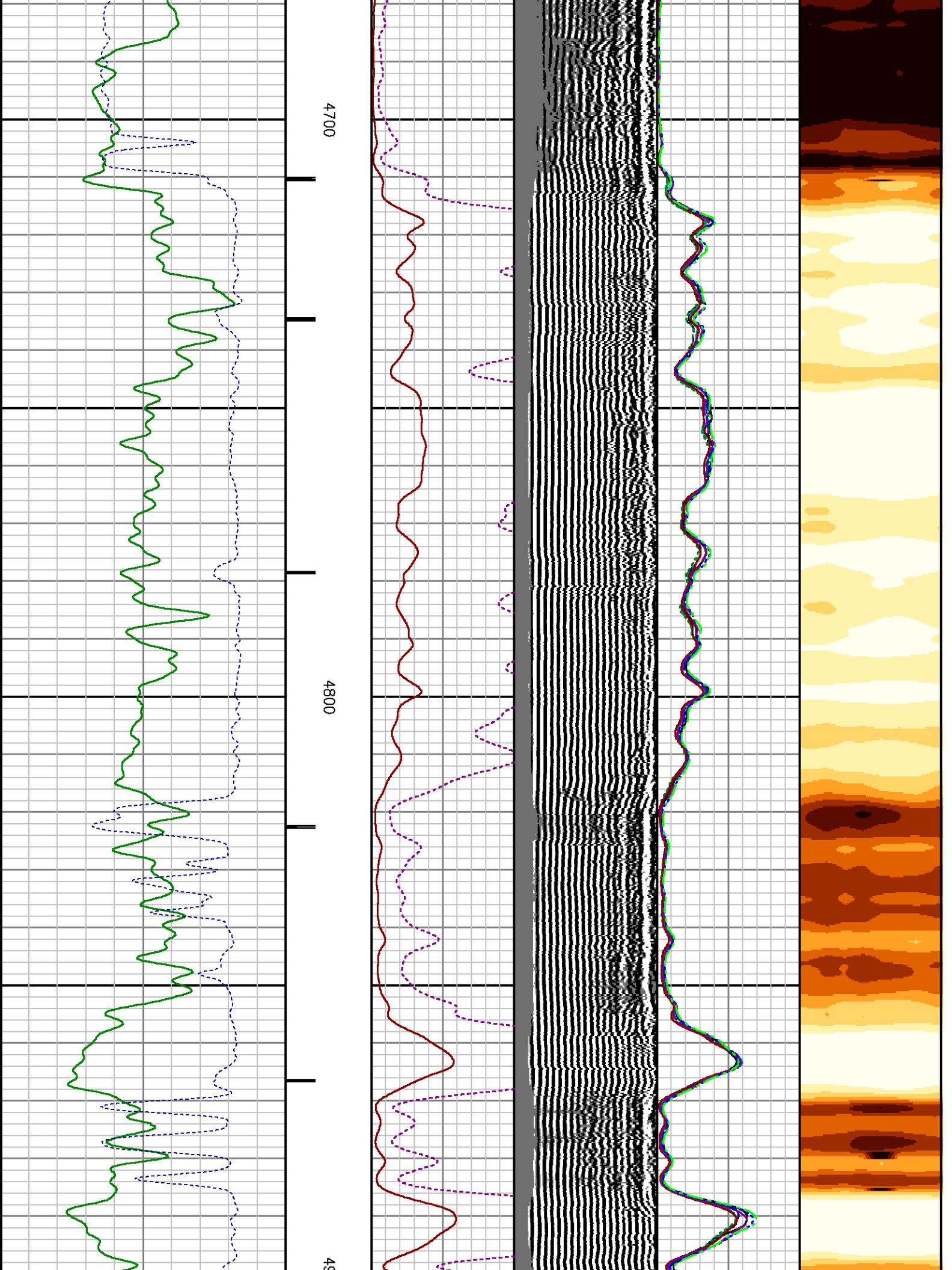


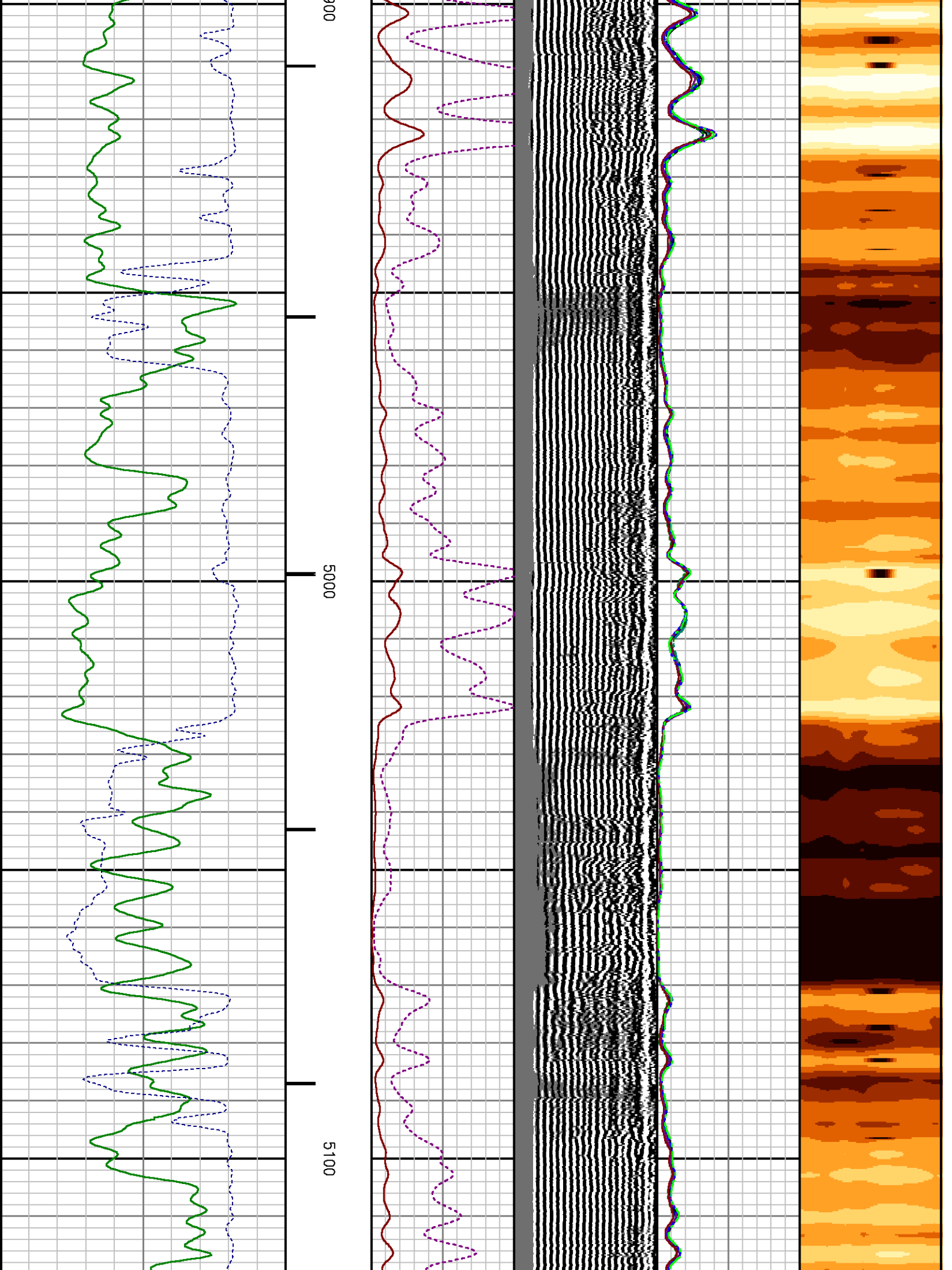


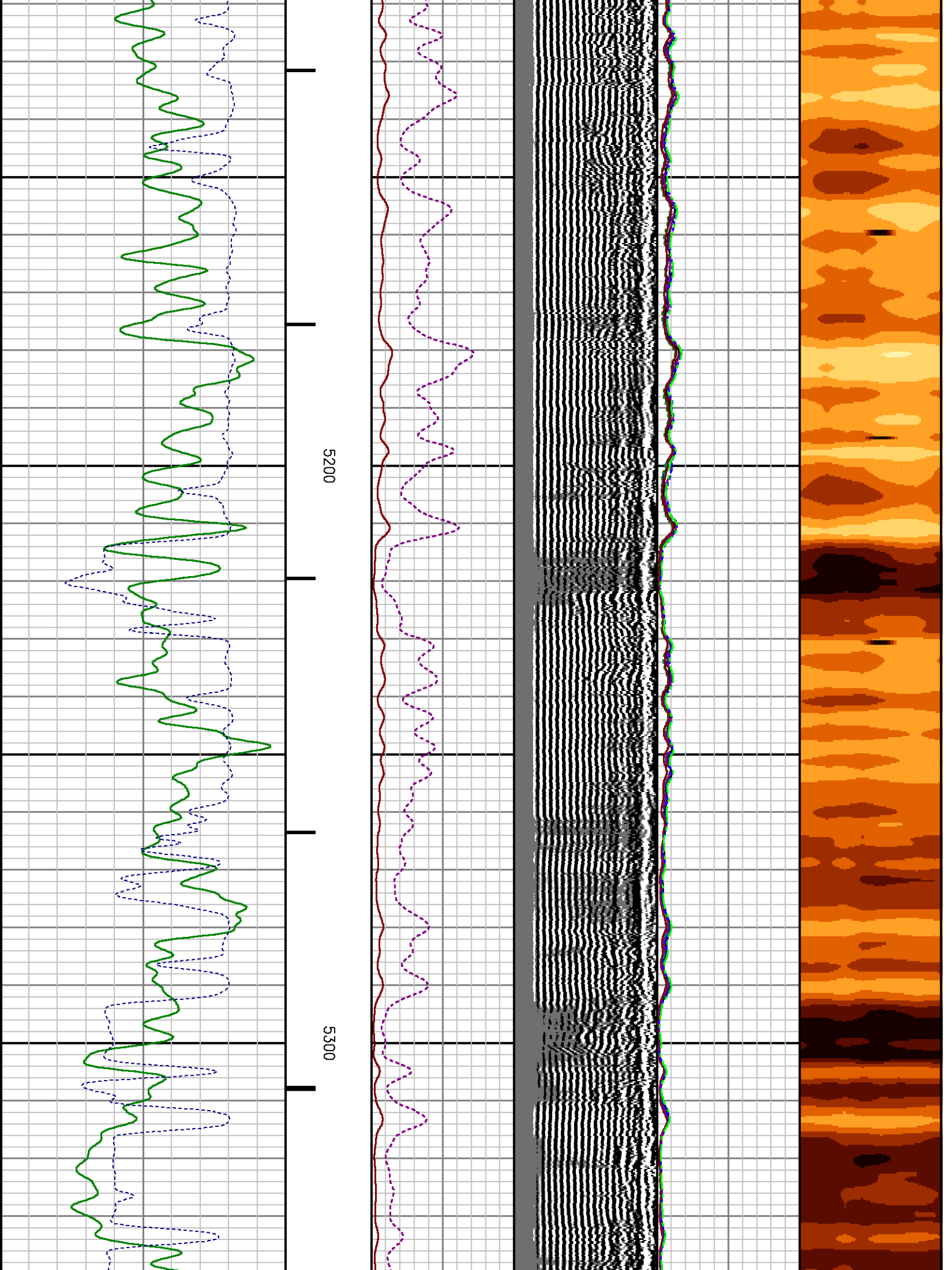


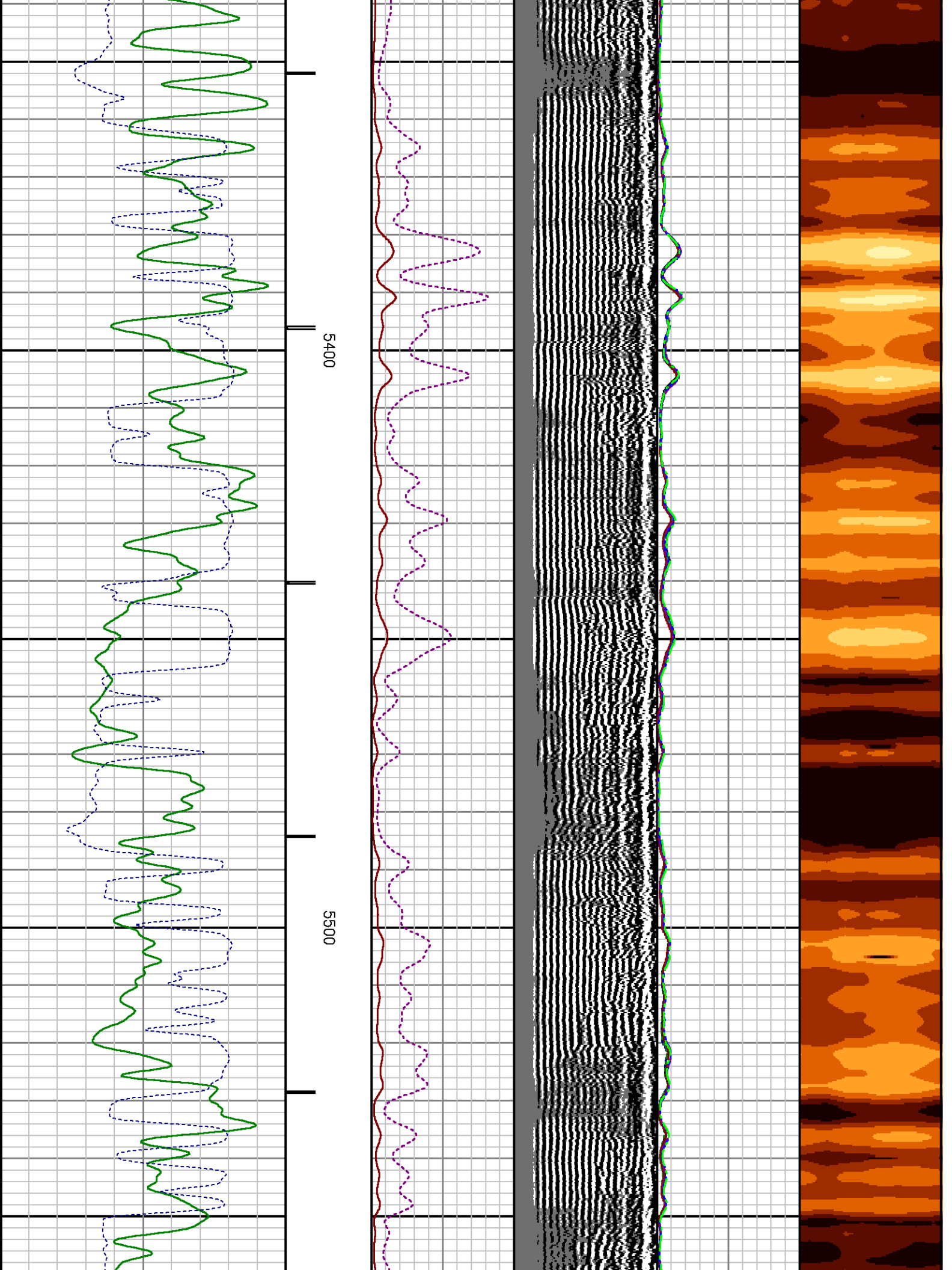




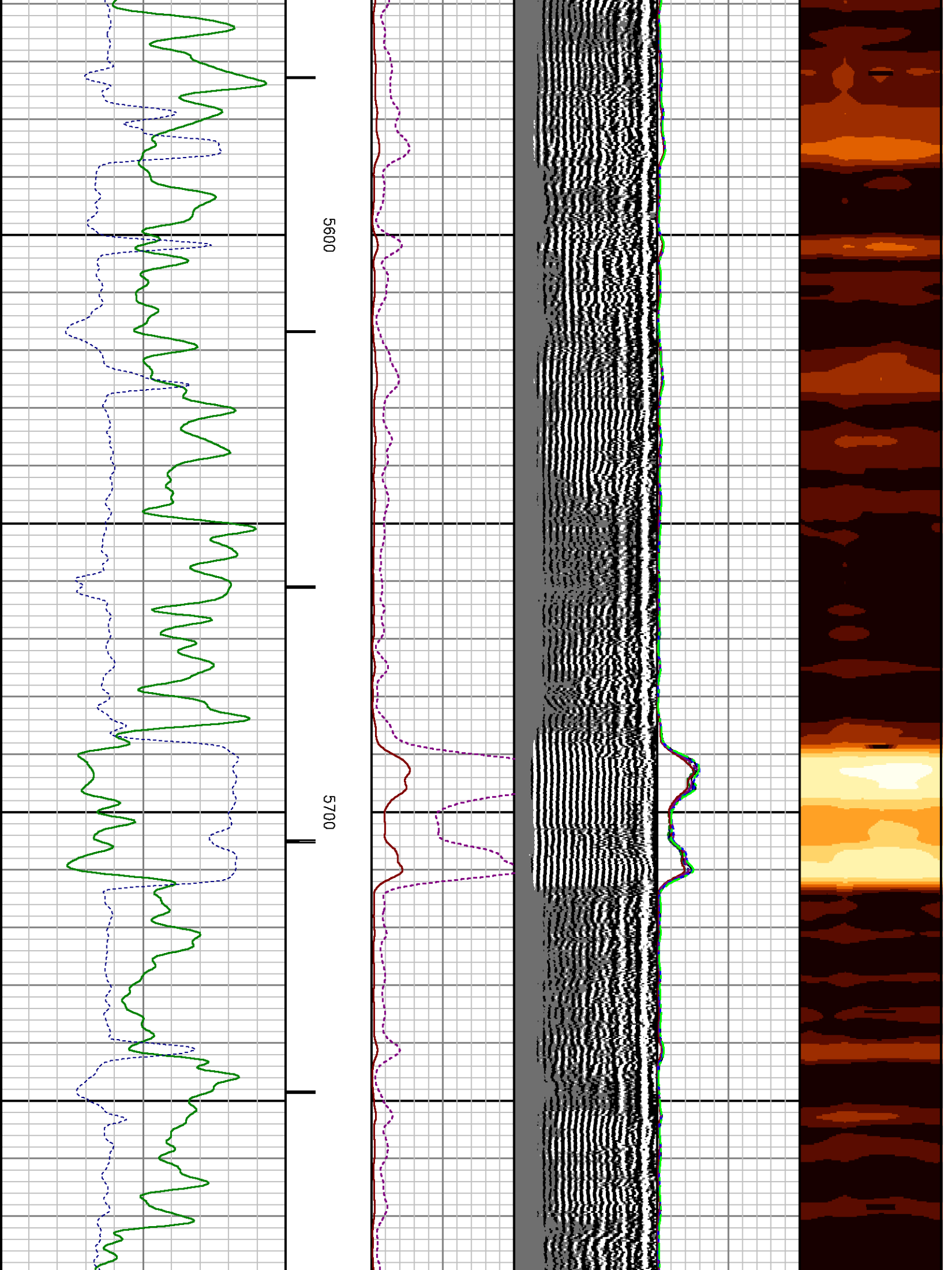




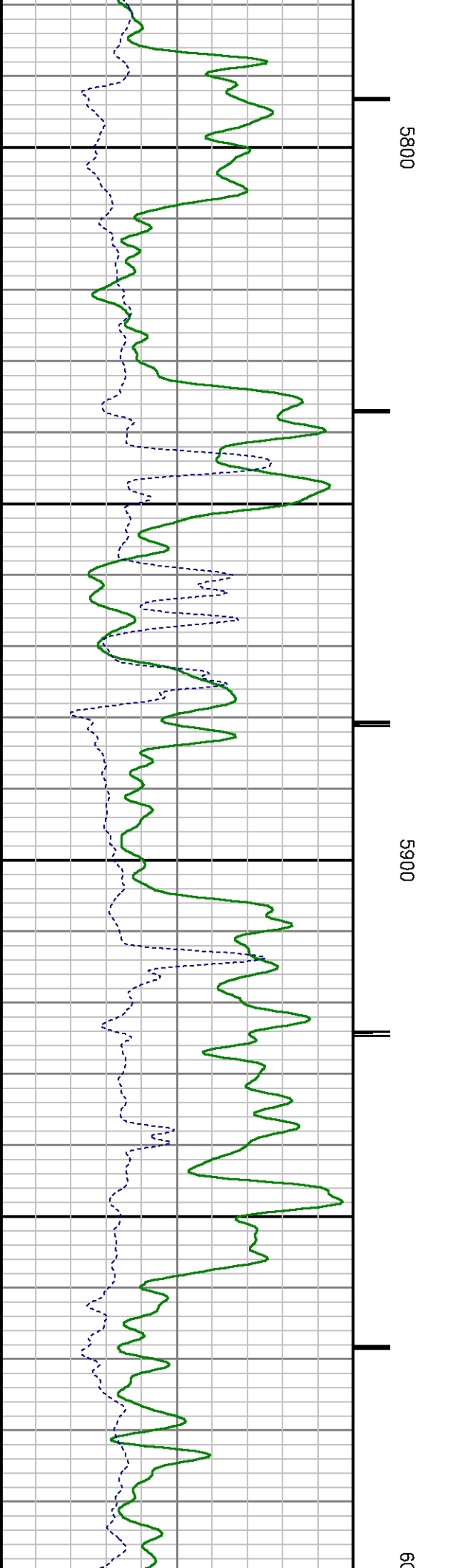
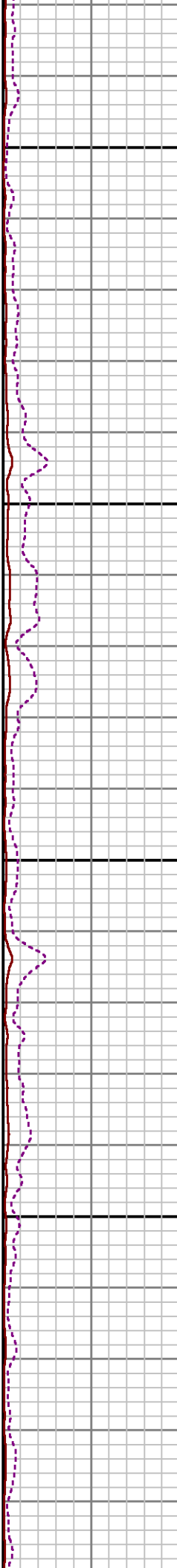
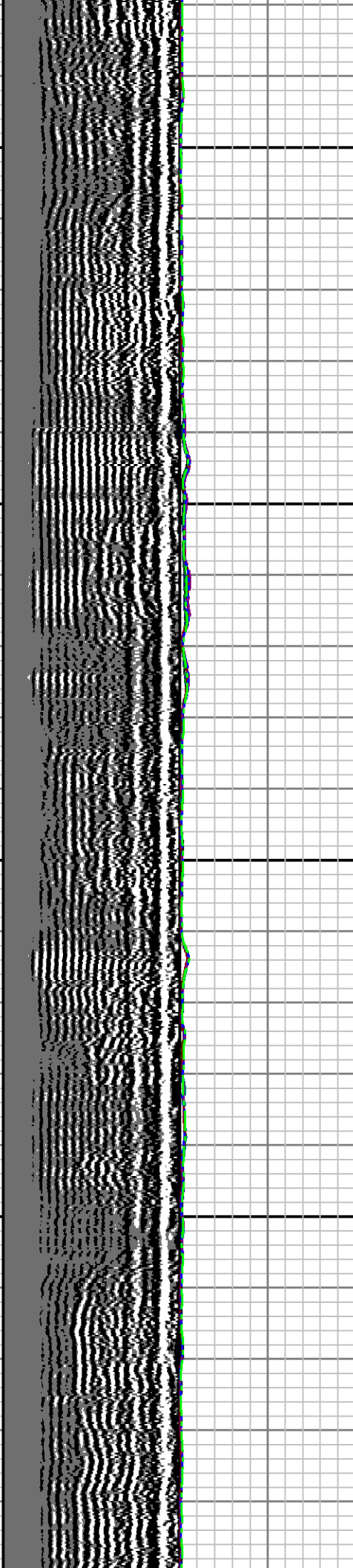


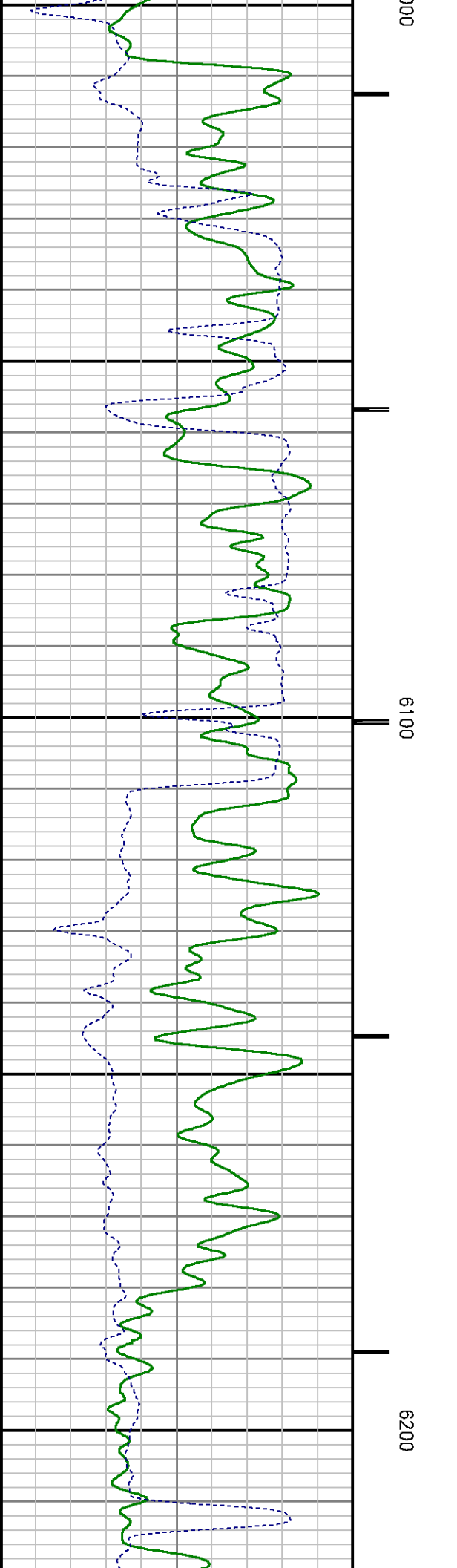
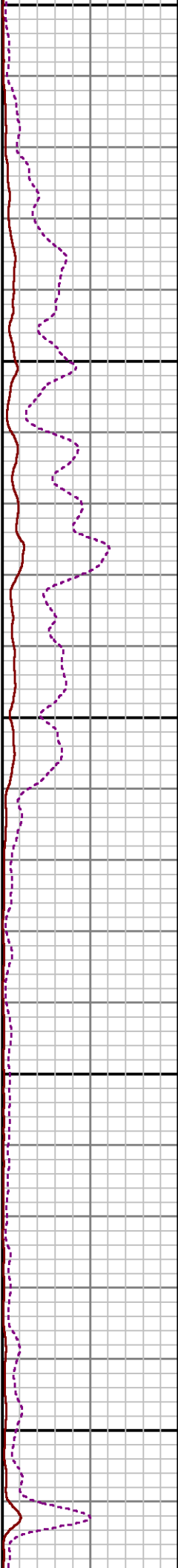
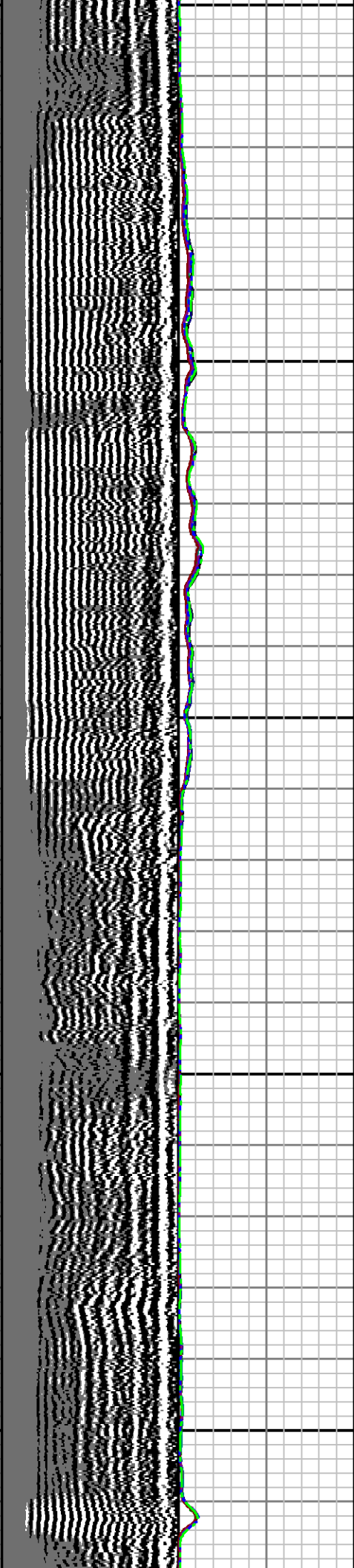


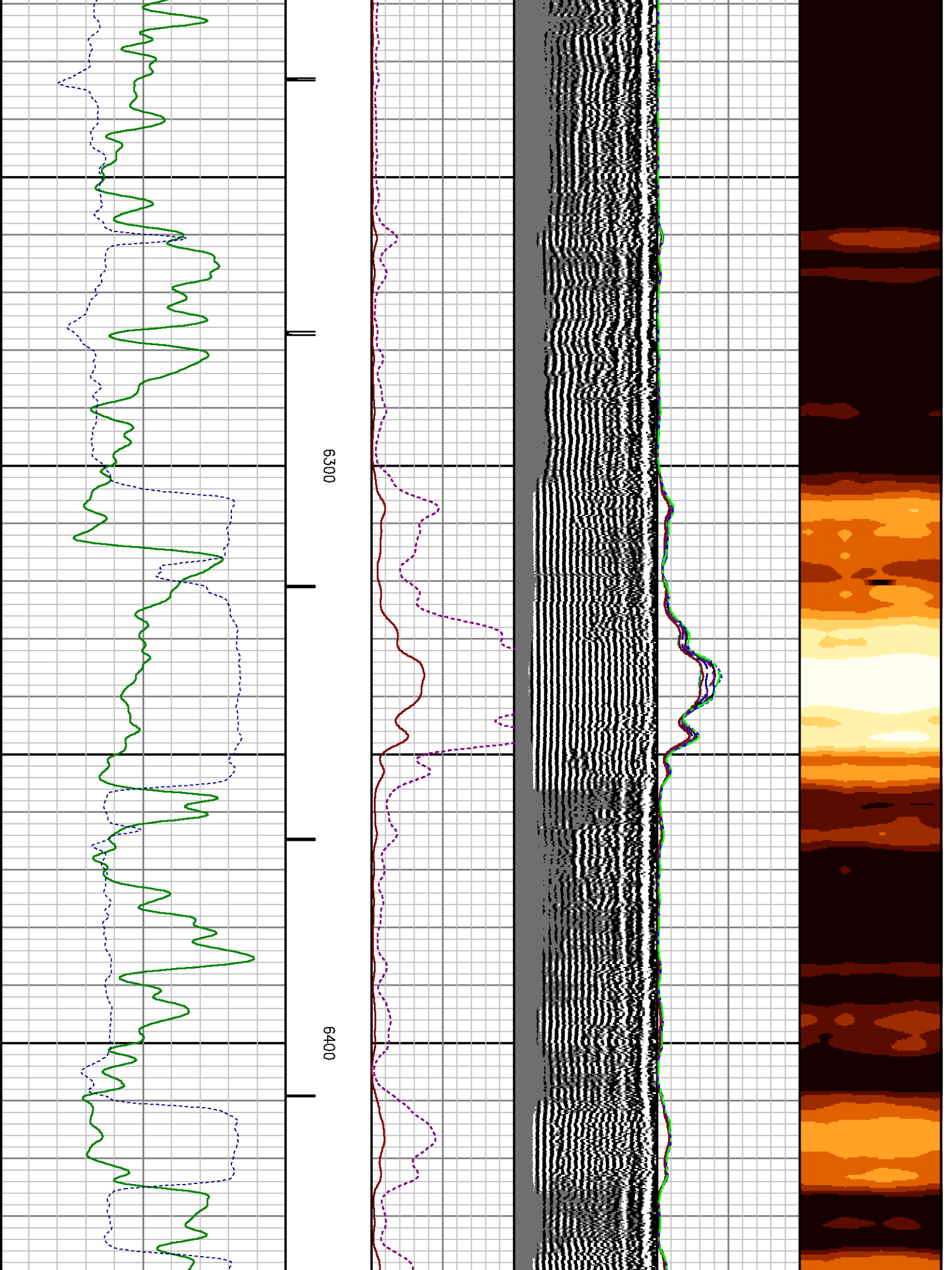


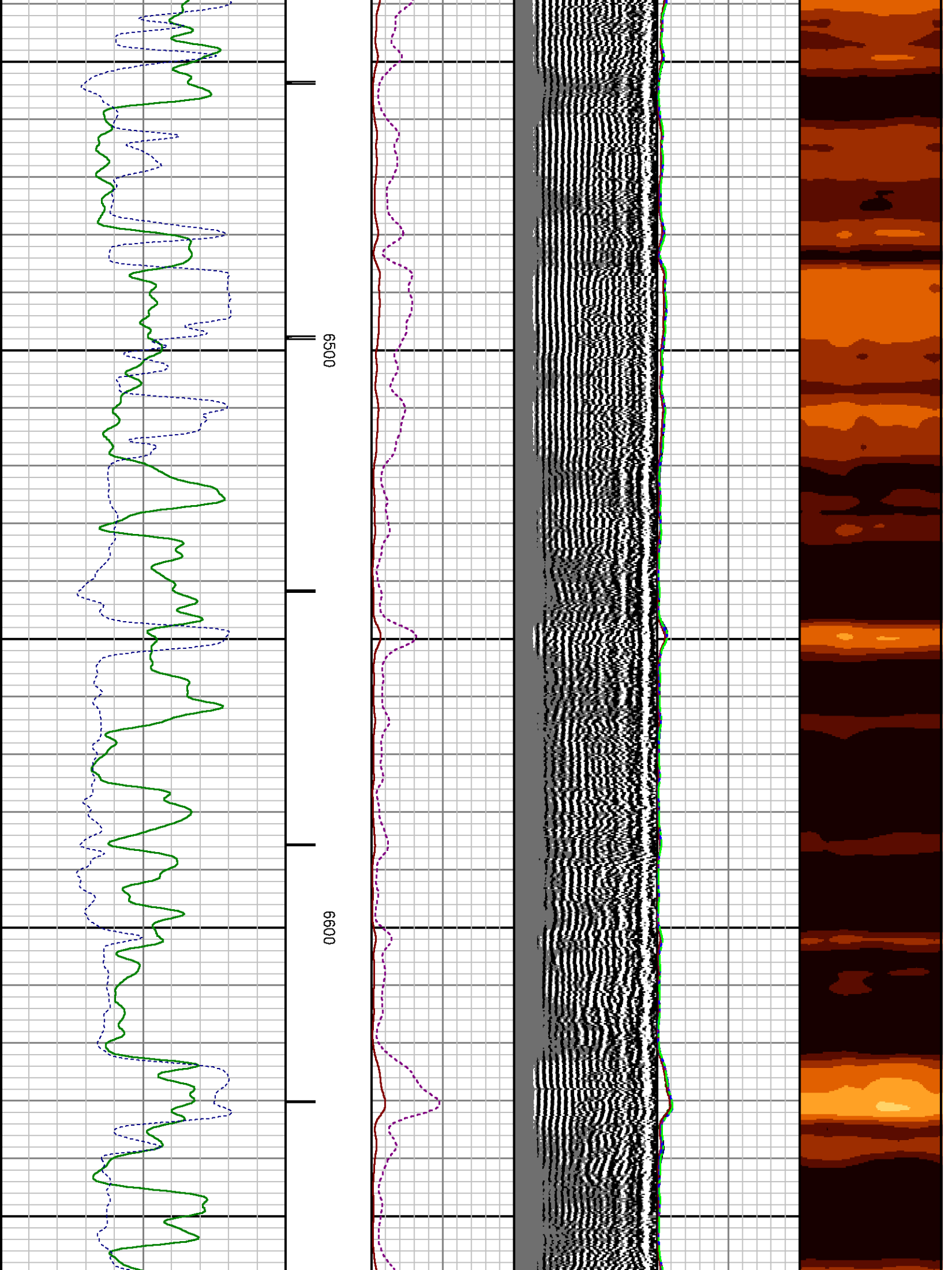


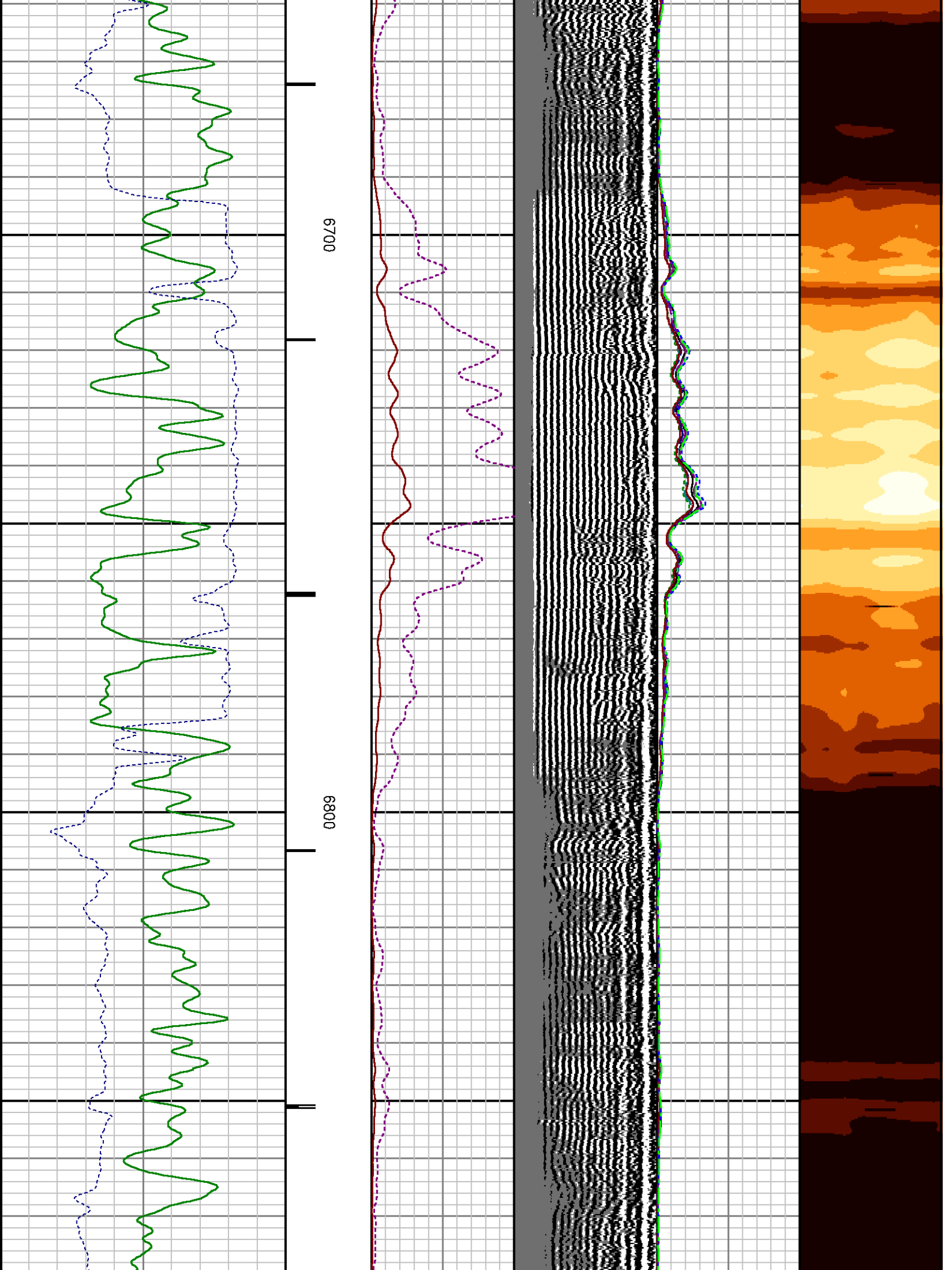




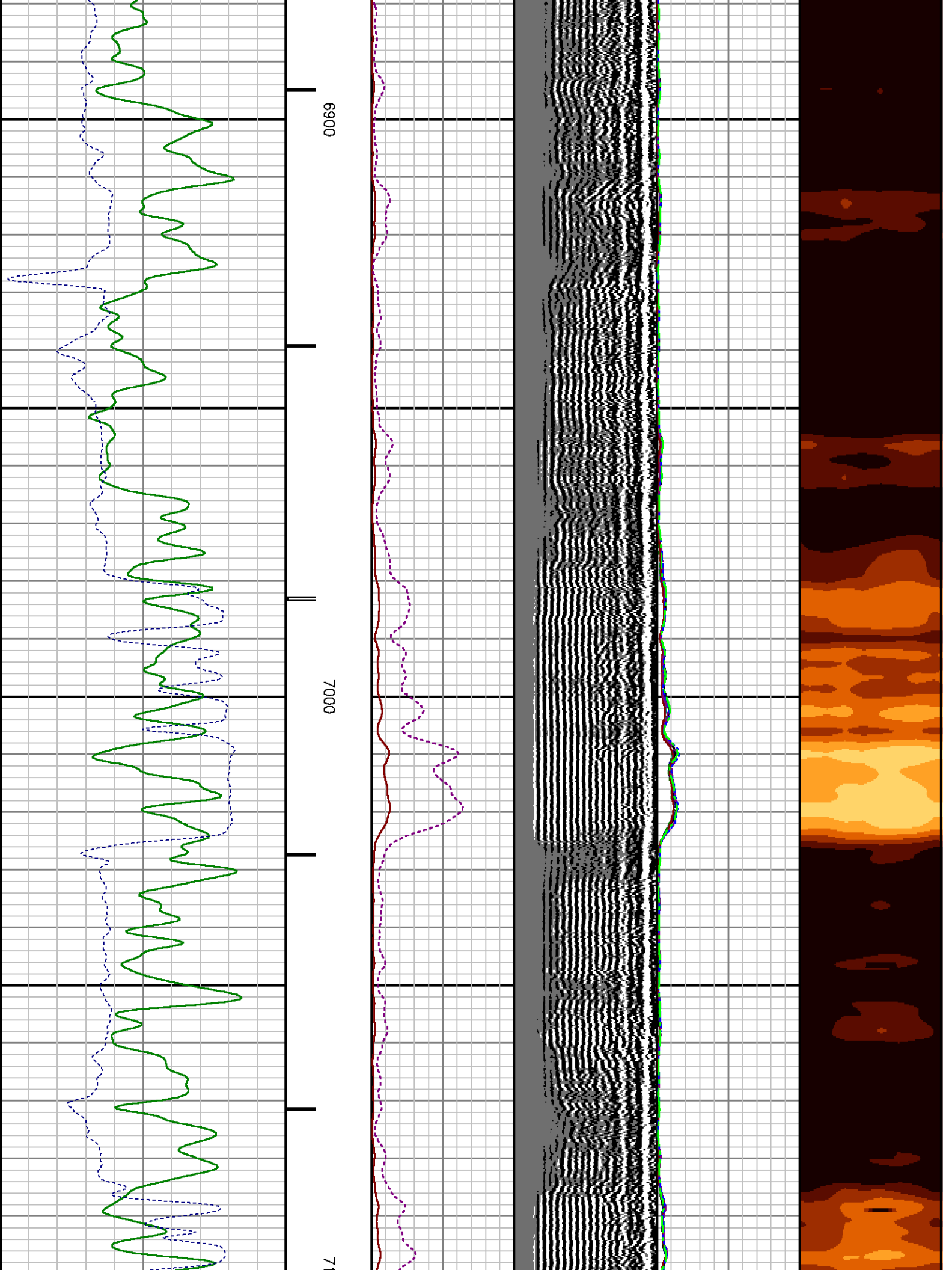




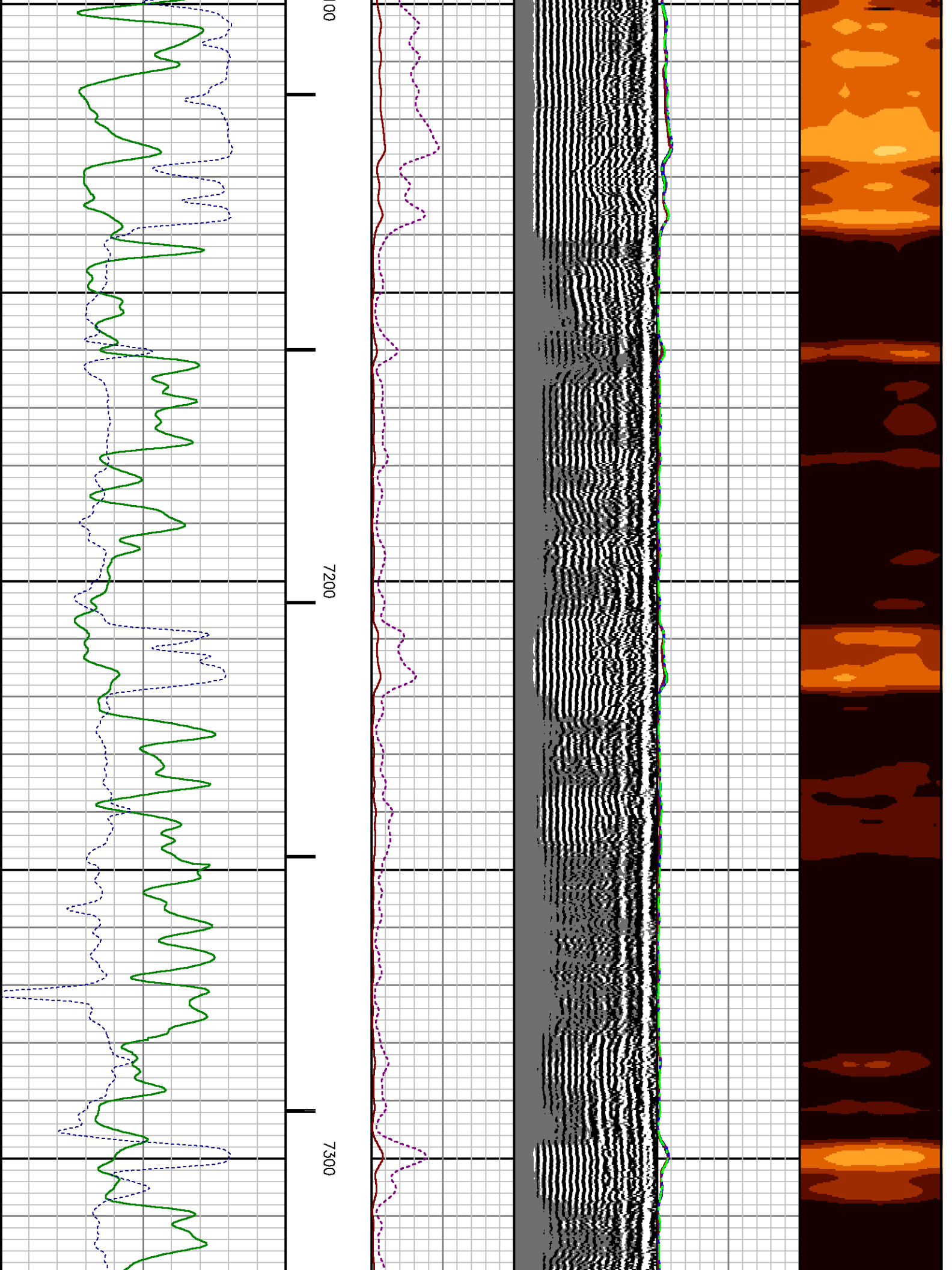


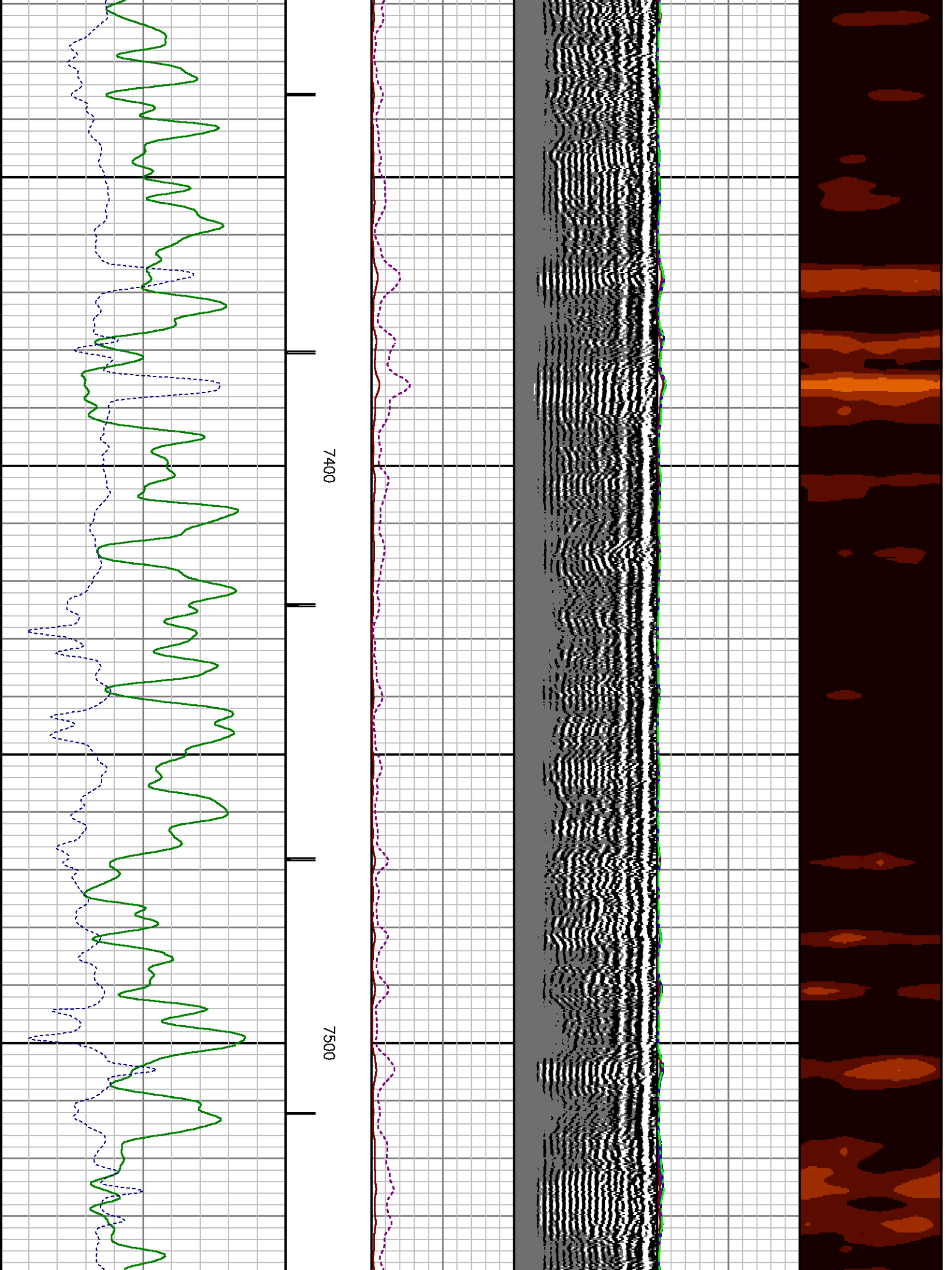


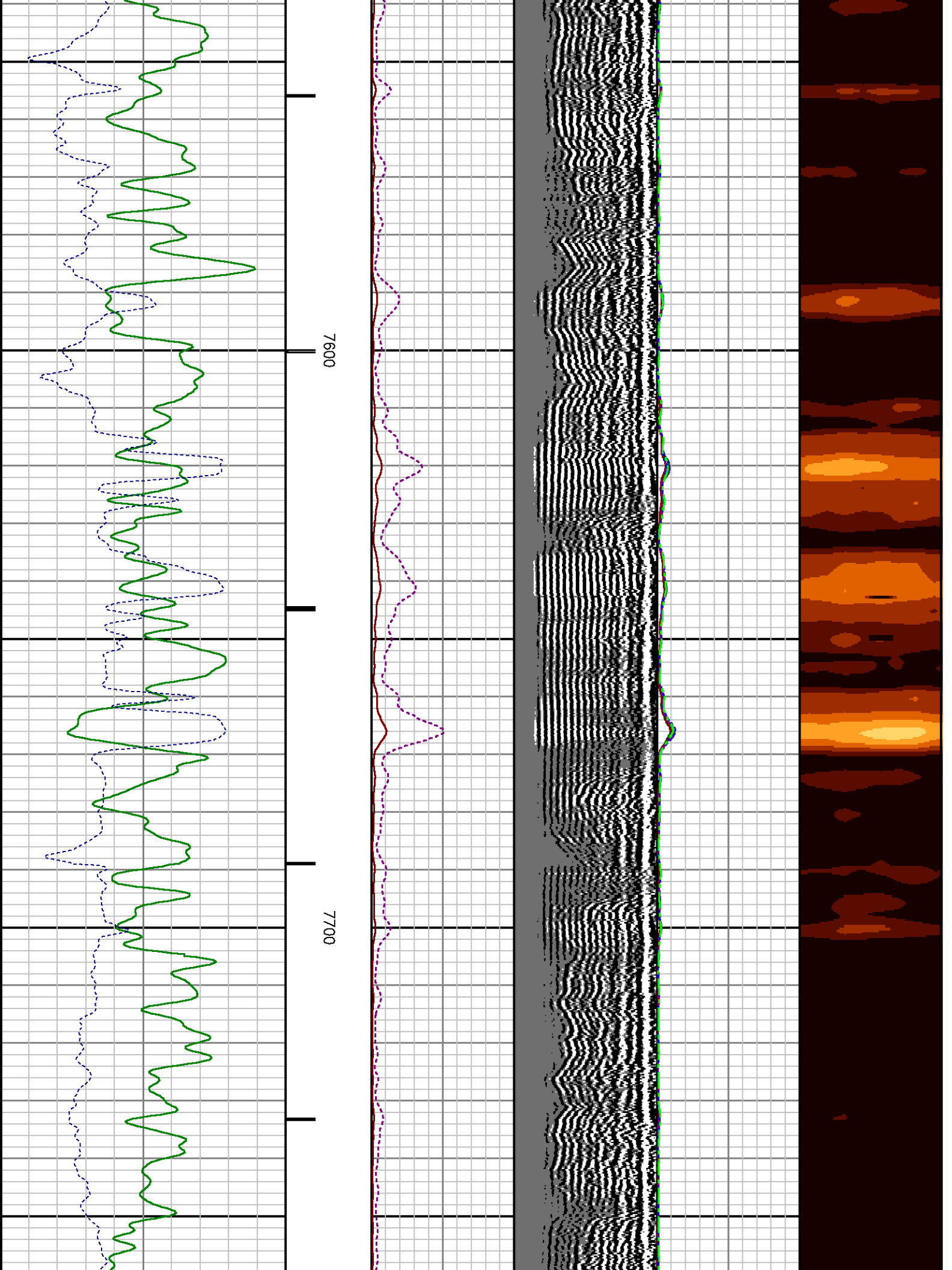


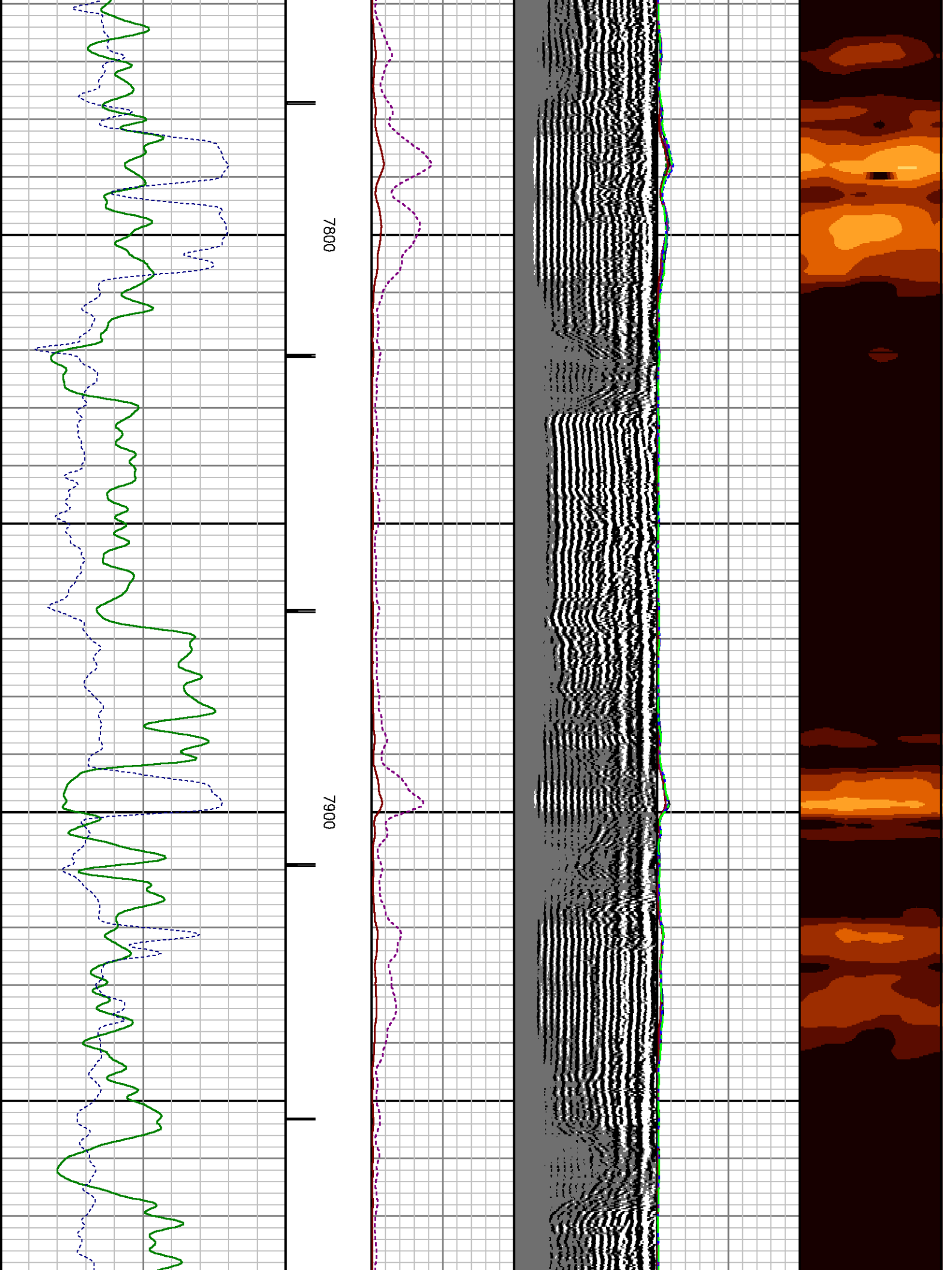


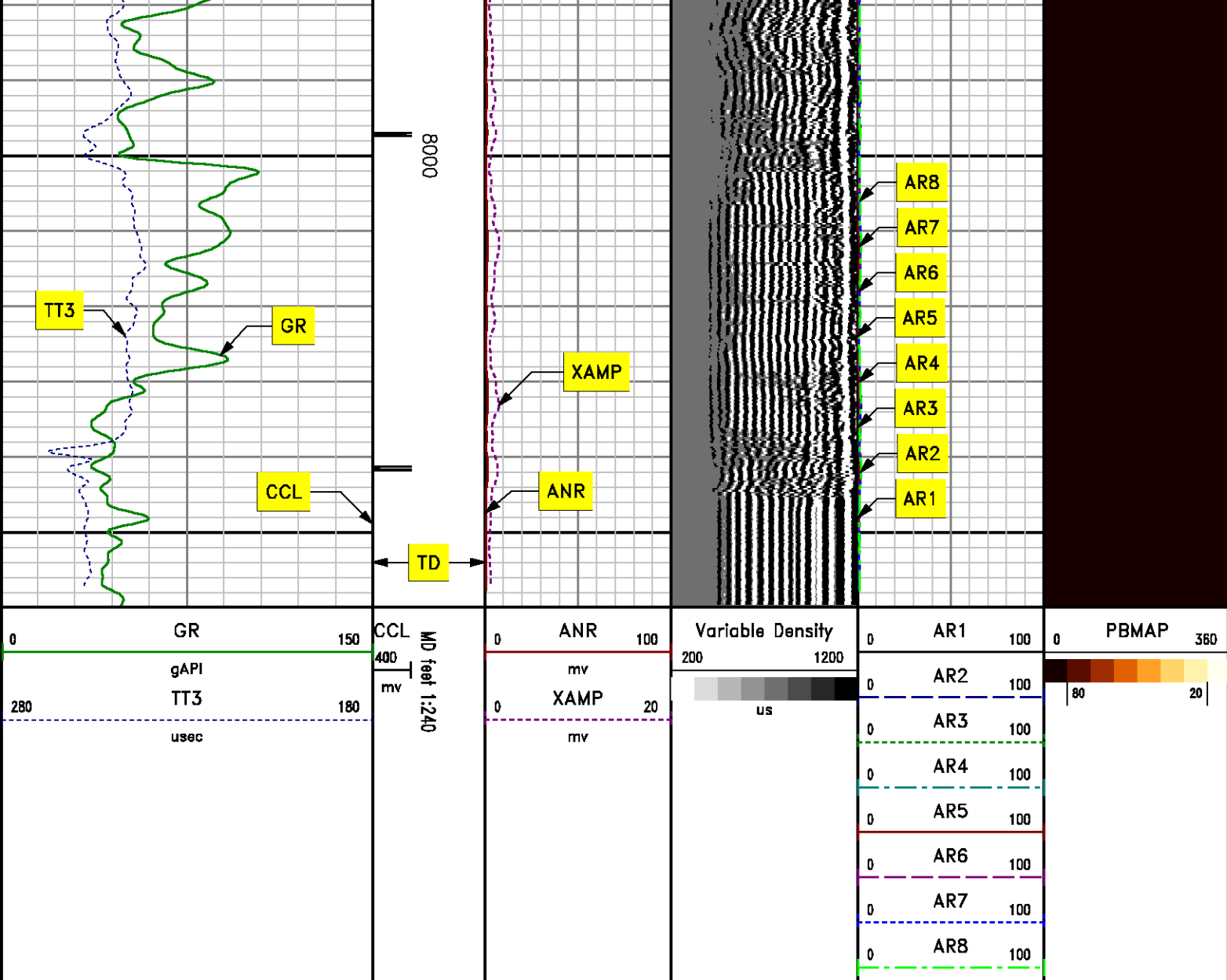












*REPEAT PASS*  
*0 PSI*

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	303.100	usec	7719.750	8062.000
RAL	Amp Gate Start Near	199.125	usec	7719.750	8062.000
RAL	Amp Gate Start Radial	198.578	usec	7719.750	8062.000

RAL	Amp Gate Width Far	25.000	usec	7719.750	8062.000
RAL	Amp Gate Width Near	25.000	usec	7719.750	8062.000
RAL	Amp Gate Width Radial	25.000	usec	7719.750	8062.000
RAL	casing od	4.500	inches	7719.750	8062.000
RAL	casing wt	11.600	lbm/ft	7719.750	8062.000
RAL	FB Start Far	291.900	usec	7719.750	8062.000
RAL	FB Start Near	175.391	usec	7719.750	8062.000
RAL	FB Start Radial	175.391	usec	7719.750	8062.000
RAL	FB Thresh Far	10.000	mv	7719.750	8062.000
RAL	FB Thresh Near	4.000	mv	7719.750	8062.000
RAL	FB Thresh Radial	4.000	mv	7719.750	8062.000
RAL	Fluid Travel Time	200.000	usec/ft	7719.750	8061.875

## 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
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

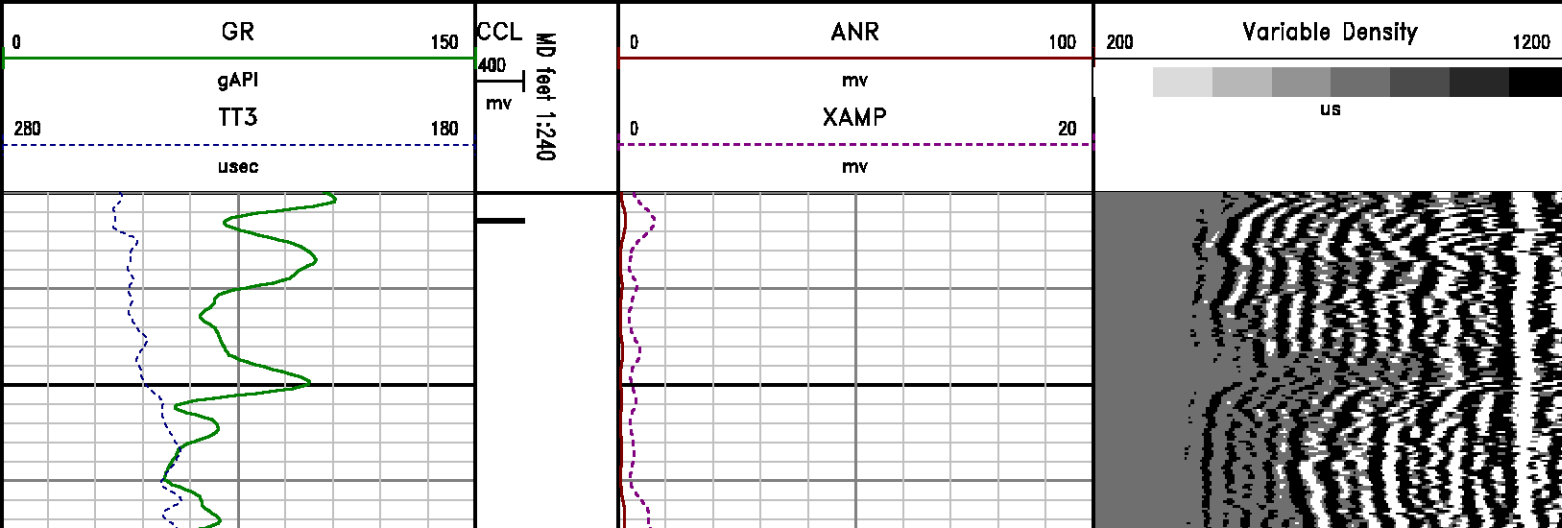
Well : DIAMOND ELK PA 43-2

File Name : d:\well\data\43cbl\repeat.xtf

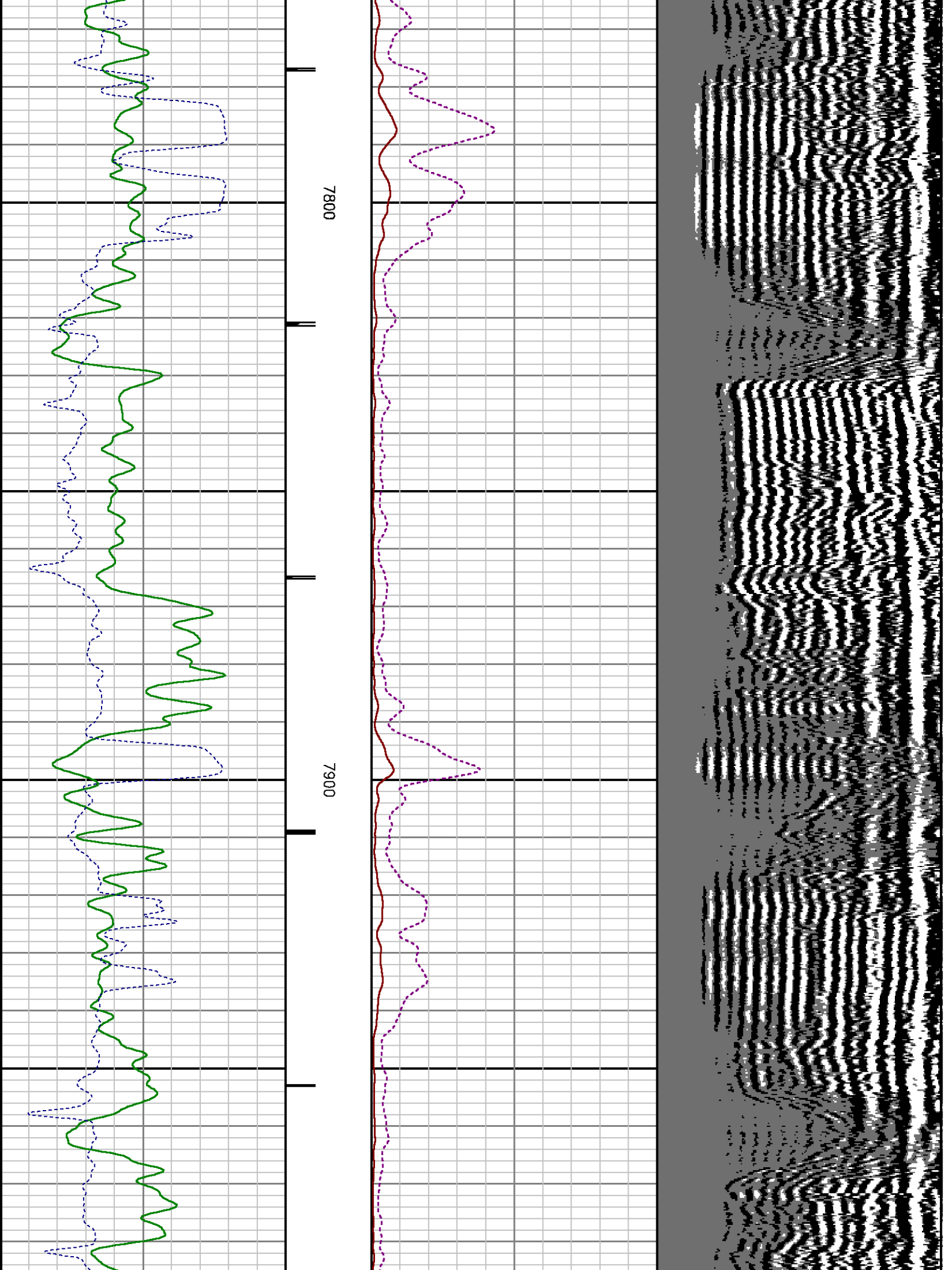
Mode : PlotMgr 5.4.504

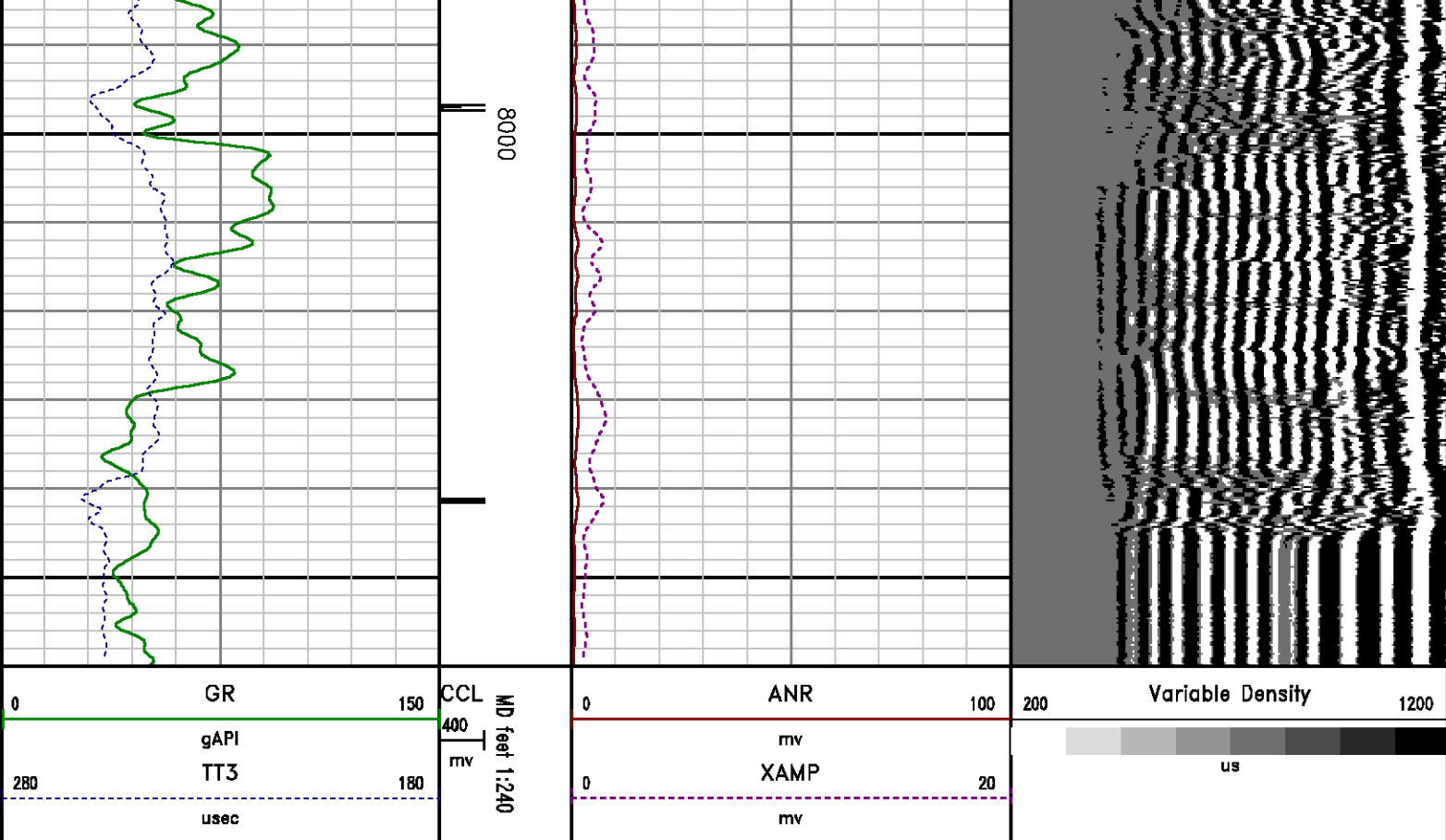
Interval : 7730.00 - 8060.00 feet UP

Created : 5/18/2013 8:04:55 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\539M18.shp.cal

## SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat May 18 07:30:07 2013 TOOL SERIES: 1426XA ASSET: 539 SEQ: M18

Tool Delay [usec] -58.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	218	216	30	166	25	-0.365	100.00	0.19
3 Ft. Receiver	218	216	30	153	25	-0.664	100.00	0.18
5 Ft. Receiver	324	323	30	252	25	0.419	150.00	0.20
Radial #1	218	216	30	146	25	1.365	100.00	0.18
Radial #2	218	216	30	146	25	0.597	100.00	0.19
Radial #3	218	216	30	146	25	0.178	100.00	0.19
Radial #4	217	216	30	146	25	-0.028	100.00	0.19
Radial #5	217	216	30	146	25	-0.128	100.00	0.18
Radial #6	216	216	30	146	25	-0.074	100.00	0.18
Radial #7	216	216	30	146	25	0.130	100.00	0.18
Radial #8	218	216	30	146	25	-0.019	100.00	0.18

# RALFLD

Well-site Calibration: C:\case\calver\RALFLD\539M18.fld.cal

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat May 18 07:31:41 2013 TOOL SERIES: 1426XA ASSET: 539 SEQ: M18

Tool Delay [usec] -58.00 Casing OD in 4.50 Casing Wt lbm/ft 11.60 Casing ID in 4.00

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Well-site Factor	Amp. Ref [mV]
CAL Pulse	166	25	-0.251	0.000	1.00	100.000
3 Ft. Receiver	200	30	-3.245			
5 Ft. Receiver	317	30	-4.392			
Radial #1	200	30	-4.867			
Radial #2	200	30	-4.294			
Radial #3	200	30	-4.131			
Radial #4	200	30	-4.524			
Radial #5	200	30	-5.982			
Radial #6	200	30	-4.803			
Radial #7	200	30	-5.007			
Radial #8	200	30	-4.864			

# TOOL DIAGRAM

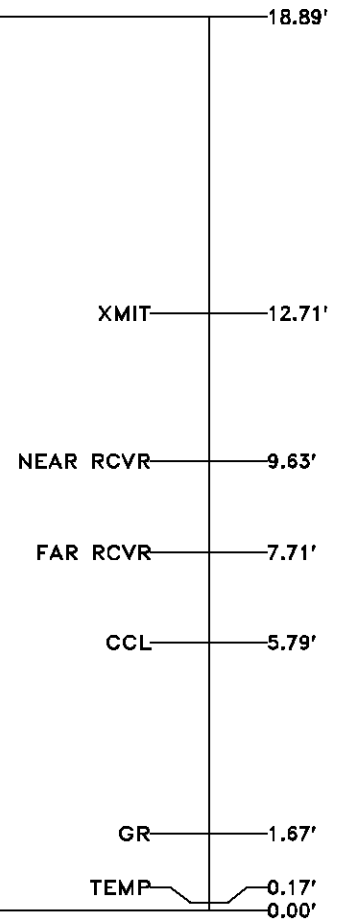
## OTA SHORT CABLE HEAD

### 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"



Company  
Well  
Field  
County

WPX ENERGY  
DIAMOND ELK PA 43-2  
PARACHUTE  
GARFIELD State COLORADO

File No:  
CH072035  
API No:  
05045209010000

Location

SHL: 2326' FSL & 685' FWL SEC:1  
BHL: 2270' FSL & 718' FEL SEC:2

Elevations

KB 6053 ft  
DF  
GL 6027 ft

2 7S 95W  
GV 84-1  
NABORS SSD 574

SEC 2 TWP 7S RGE 95W

Baker Atlas

