



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH072042	Company Well Field County	WPX ENERGY HOEPPLI RMF 333-36 RULLISON GARFIELD	State COLORADO
API No: 05045215470000			
56 SS 94W RMF 33-35 MABORS SSD 576	Location SHL: 2584' FNL & 2592' FEL BHL: 2156' FSL & 1779' FEL SEC 36 TWP 6S RGE 94W	Other Services RPM	
Permanent Datum Log Measured From Drill Measured From	G.L. _____ Elevation 6528 ft K.B. _____ 26 ft Above P. D. KELLY BUSHING	Elevations KB 6554 ft DF GL 6528 ft	

Date	15/MAY/13	
Run	ONE	
Service Order	575077	
Depth Driller	8868 ft	
Depth Logger	8865 ft	
Bottom Logged Interval	8855 ft	
Top Logged Interval	26 ft	
Time Started	7:00	
Time Finished	12:00	
Operator Rig Time	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	241 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	1110.11 ft
8.75 In	0 ft	8968 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	8868 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 10 FEET DOWN.
SHORT JOINT: 5636' - 5660'
BHT: 241 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	305.434	usec	29.124	8891.000
RAL	Amp Gate Start Near	197.374	usec	29.124	8891.000
RAL	Amp Gate Start Radial	198.578	usec	29.124	8891.000
RAL	Amp Gate Width Far	25.000	usec	29.124	8891.000
RAL	Amp Gate Width Near	25.000	usec	29.124	8891.000
RAL	Amp Gate Width Radial	25.000	usec	29.124	8891.000
RAL	casing od	4.500	inches	29.124	8891.000
RAL	casing wt	11.600	lbm/ft	29.124	8891.000
RAL	FB Start Far	291.900	usec	29.124	8891.000
RAL	FB Start Near	175.391	usec	29.124	8891.000
RAL	FB Start Radial	175.391	usec	29.124	8891.000
RAL	FB Thresh Far	10.000	mv	29.124	8891.000
RAL	FB Thresh Near	4.000	mv	29.124	8891.000
RAL	FB Thresh Radial	4.000	mv	29.124	8891.000
RAL	Fluid Travel Time	200.000	usec/ft	29.124	8890.968

## 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

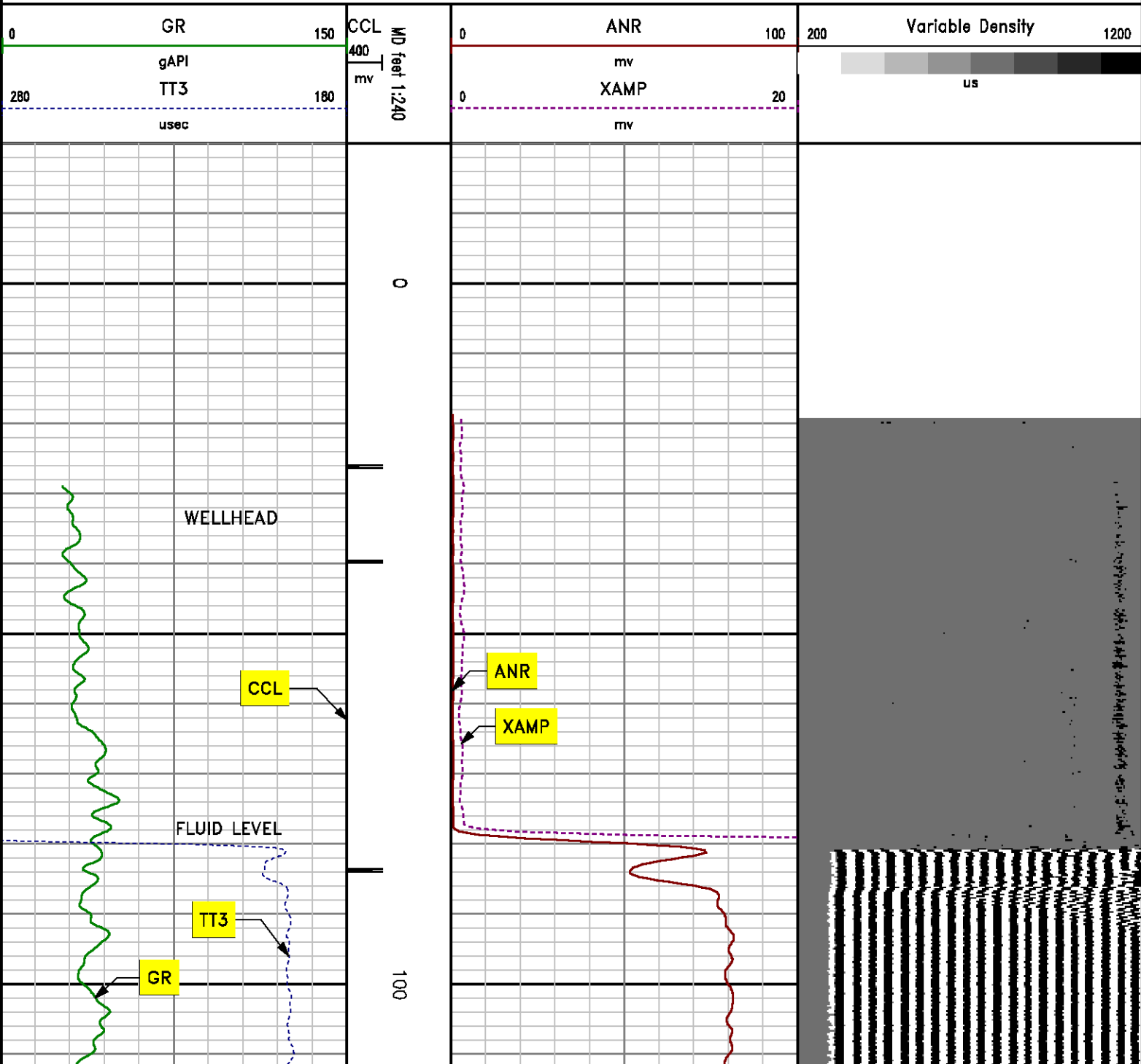
Well : HOEPPLI RWF 333-36

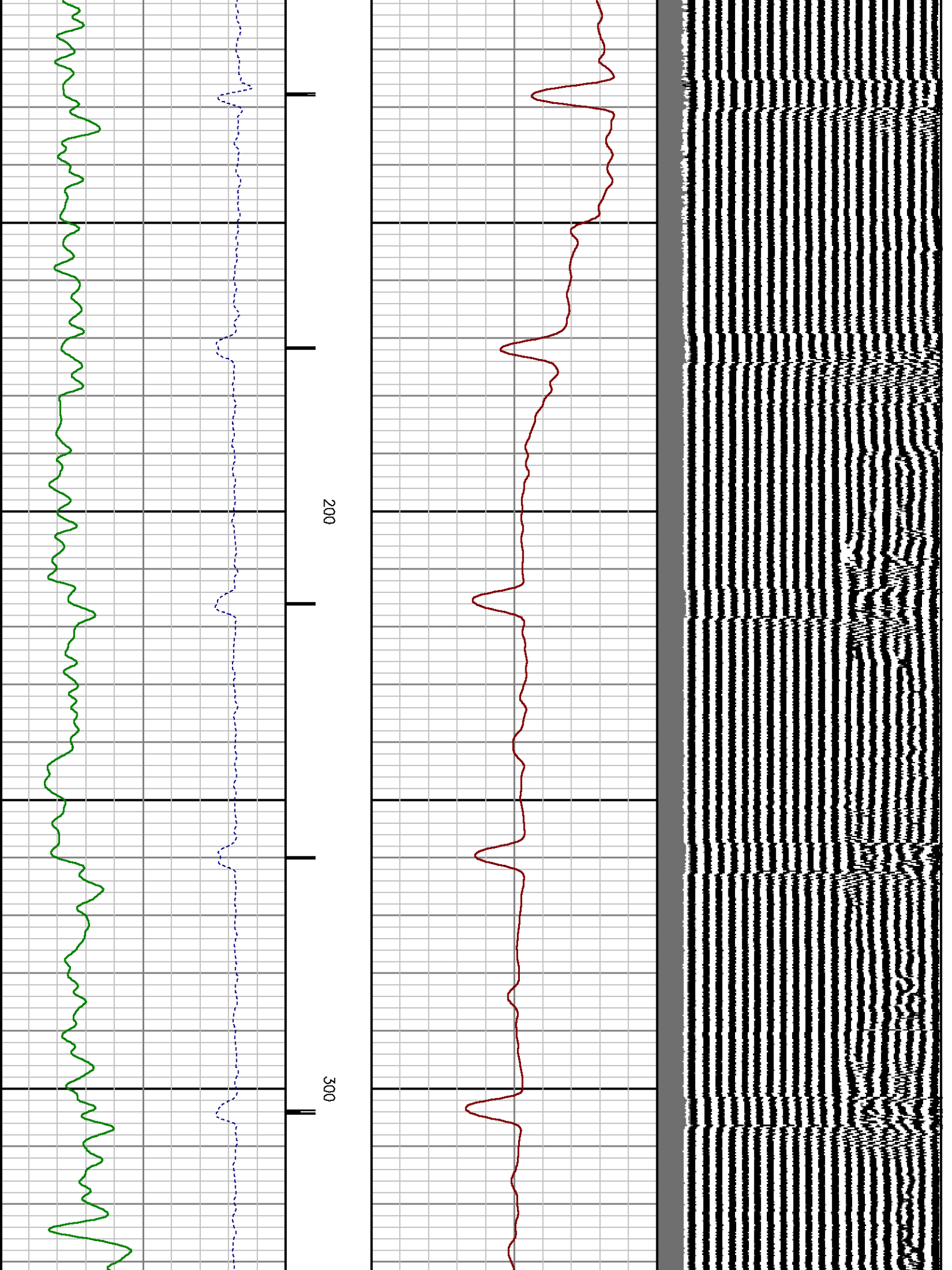
File Name : d:\welldata\cb1333\main.xtf

Mode : PlotMgr 5.4.504

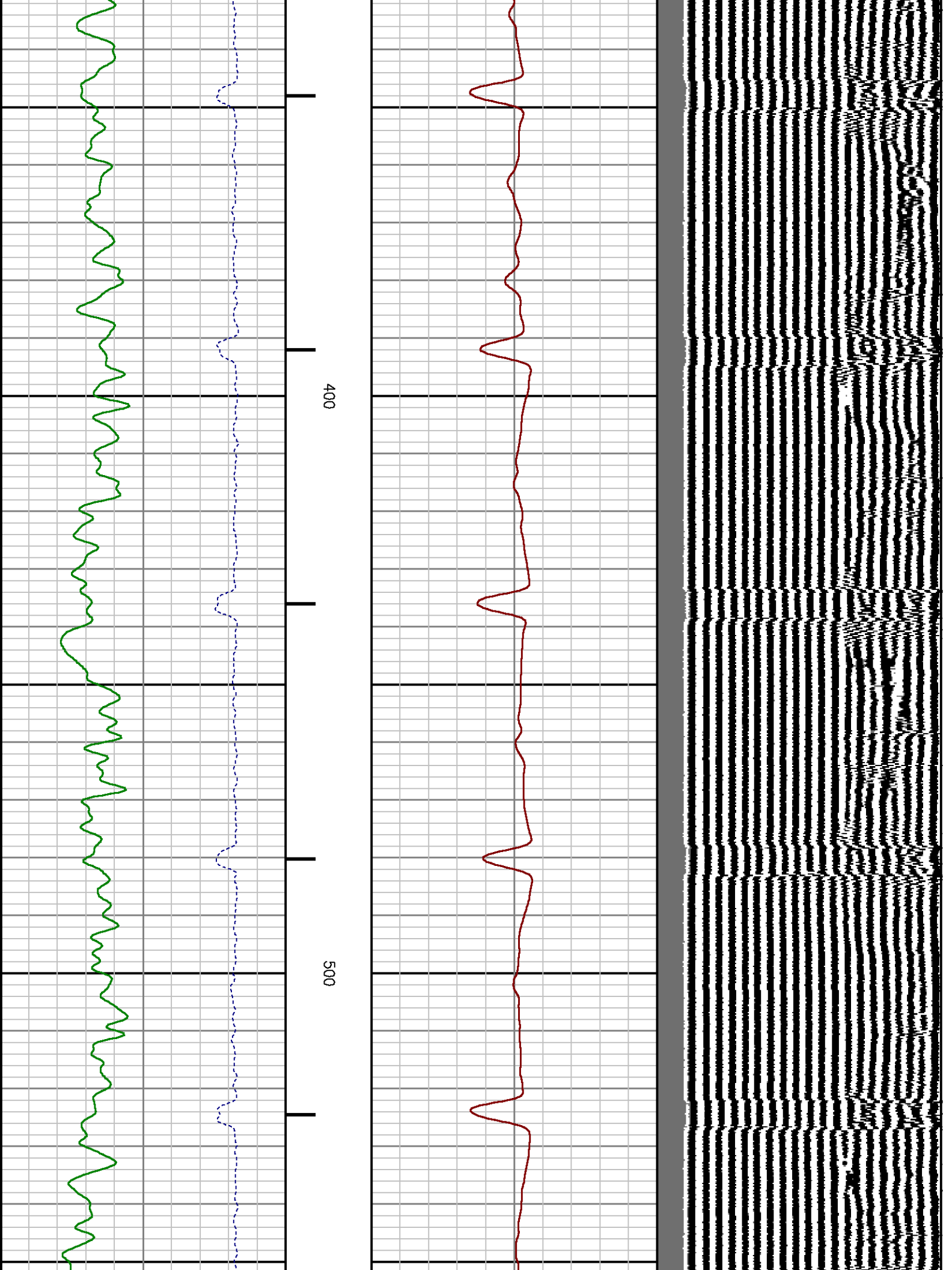
Interval : -20.00 - 8870.00 feet UP

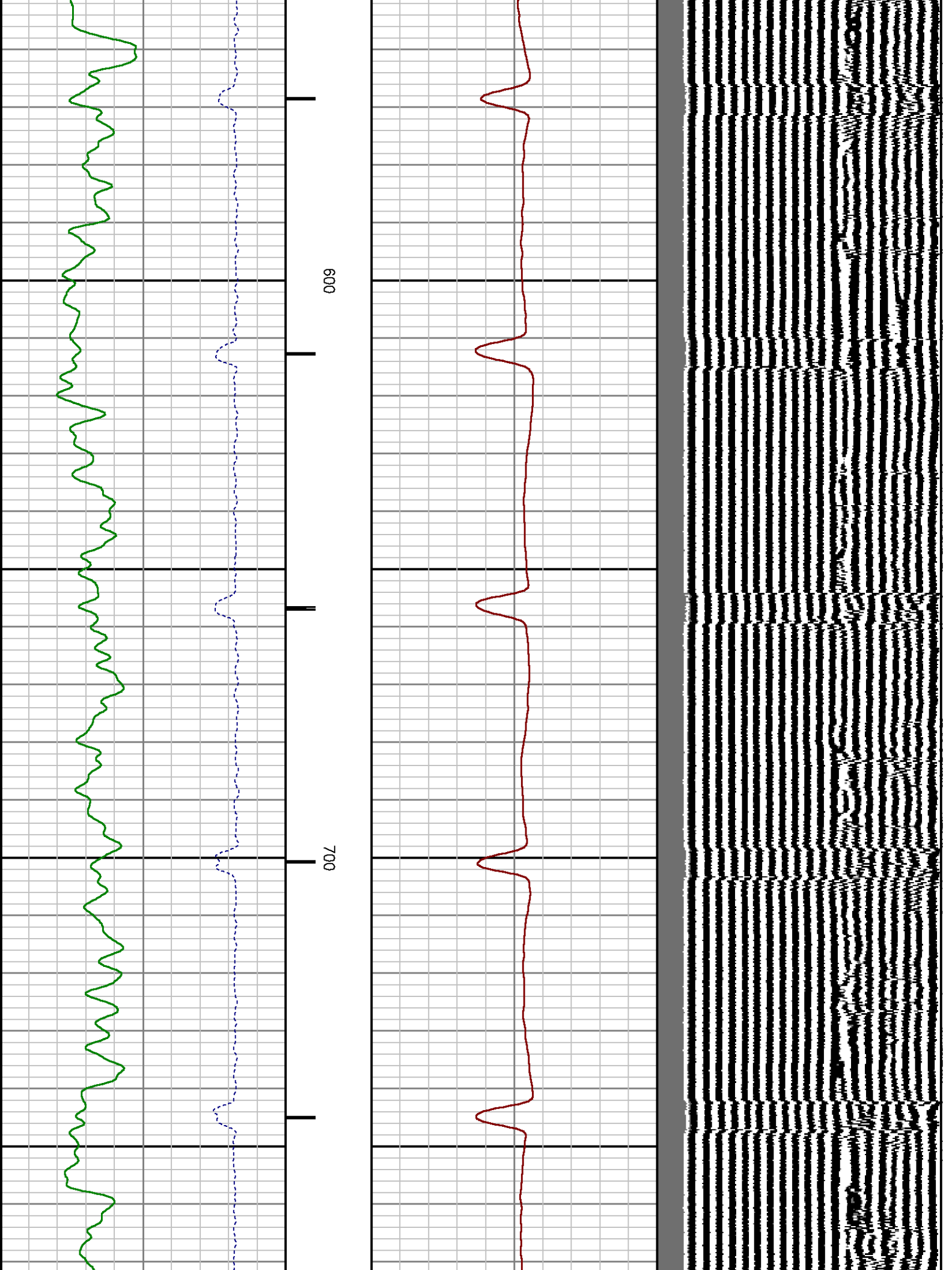
Created : 5/15/2013 9:27:43 AM

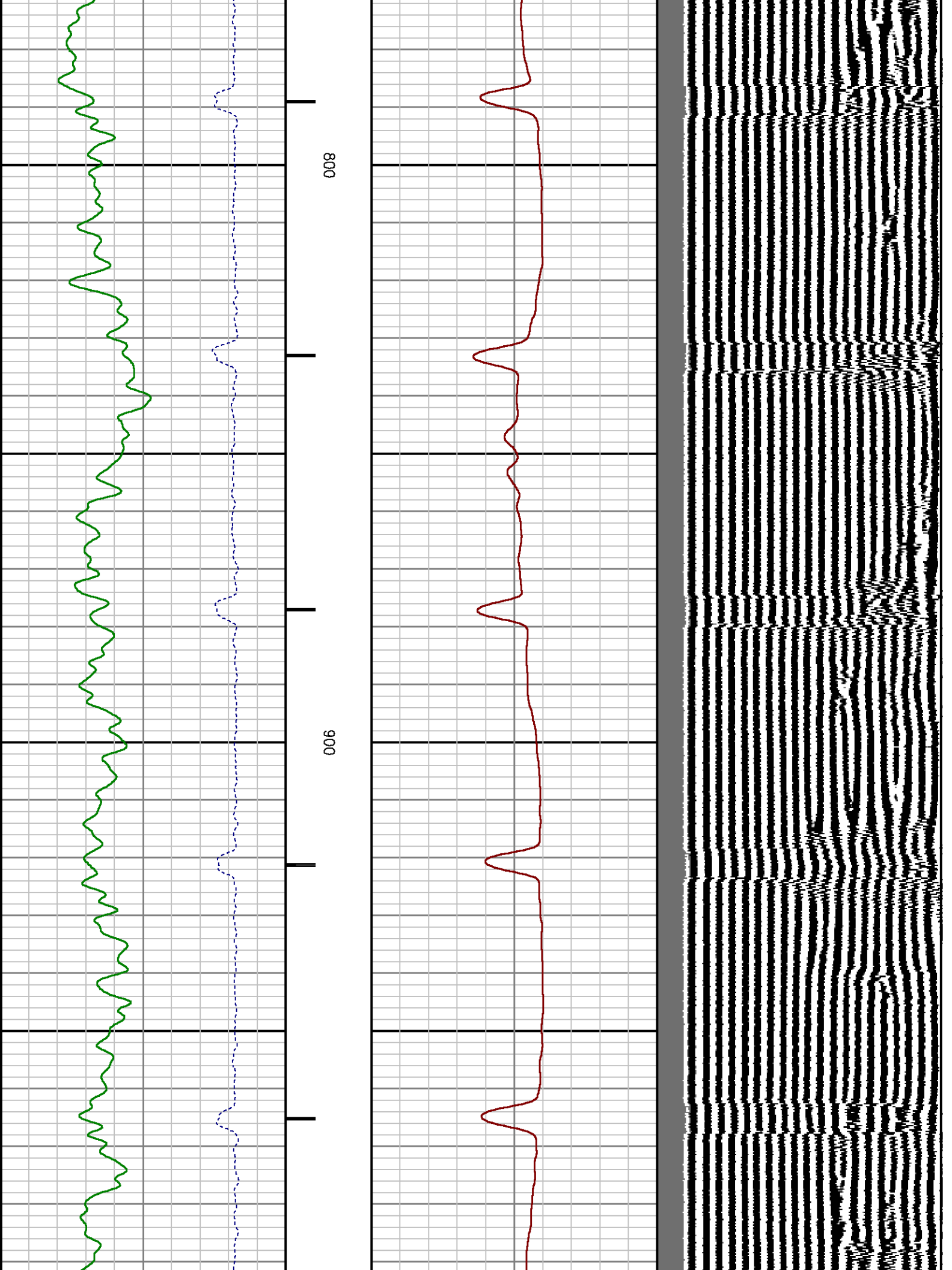


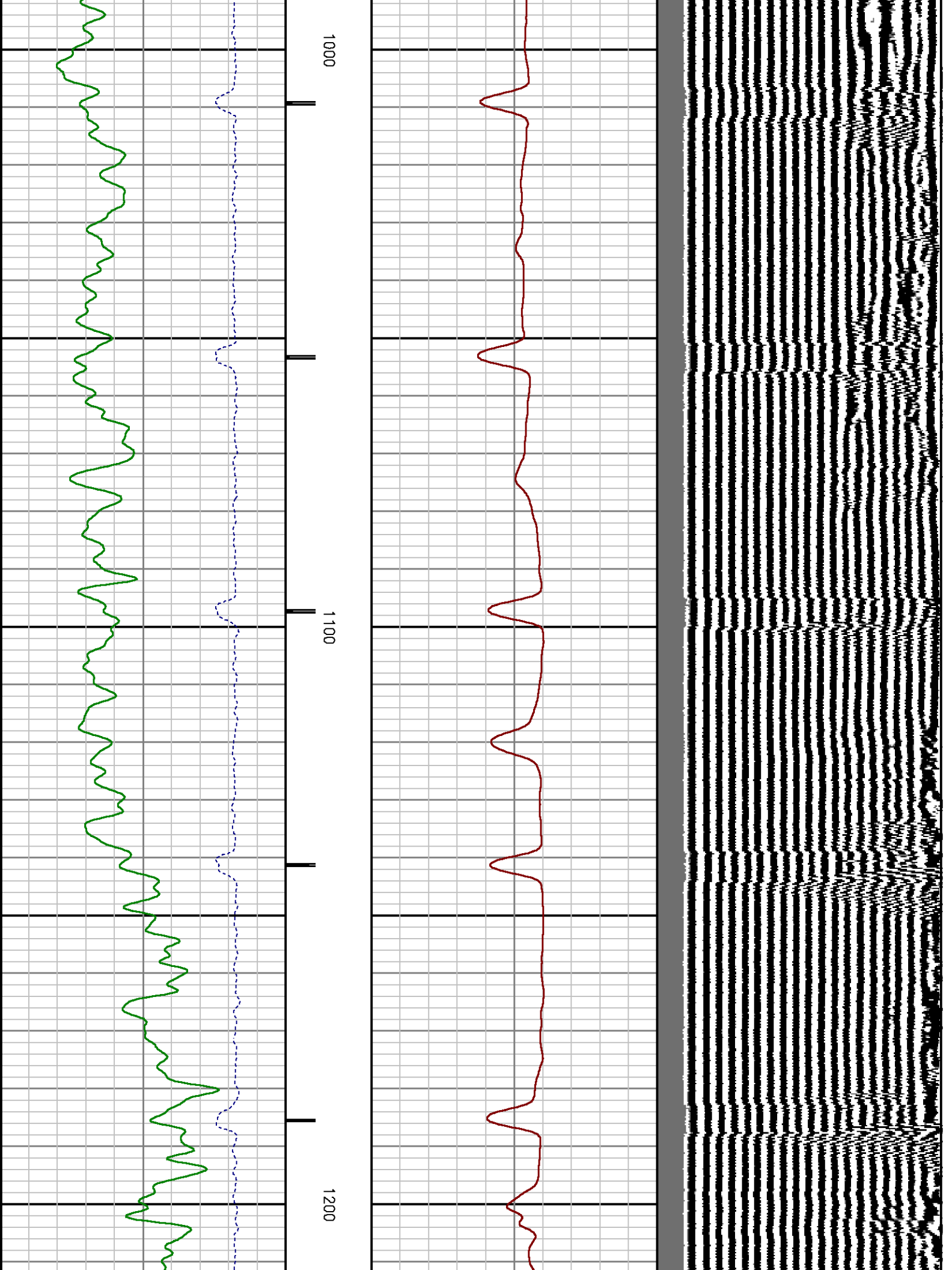


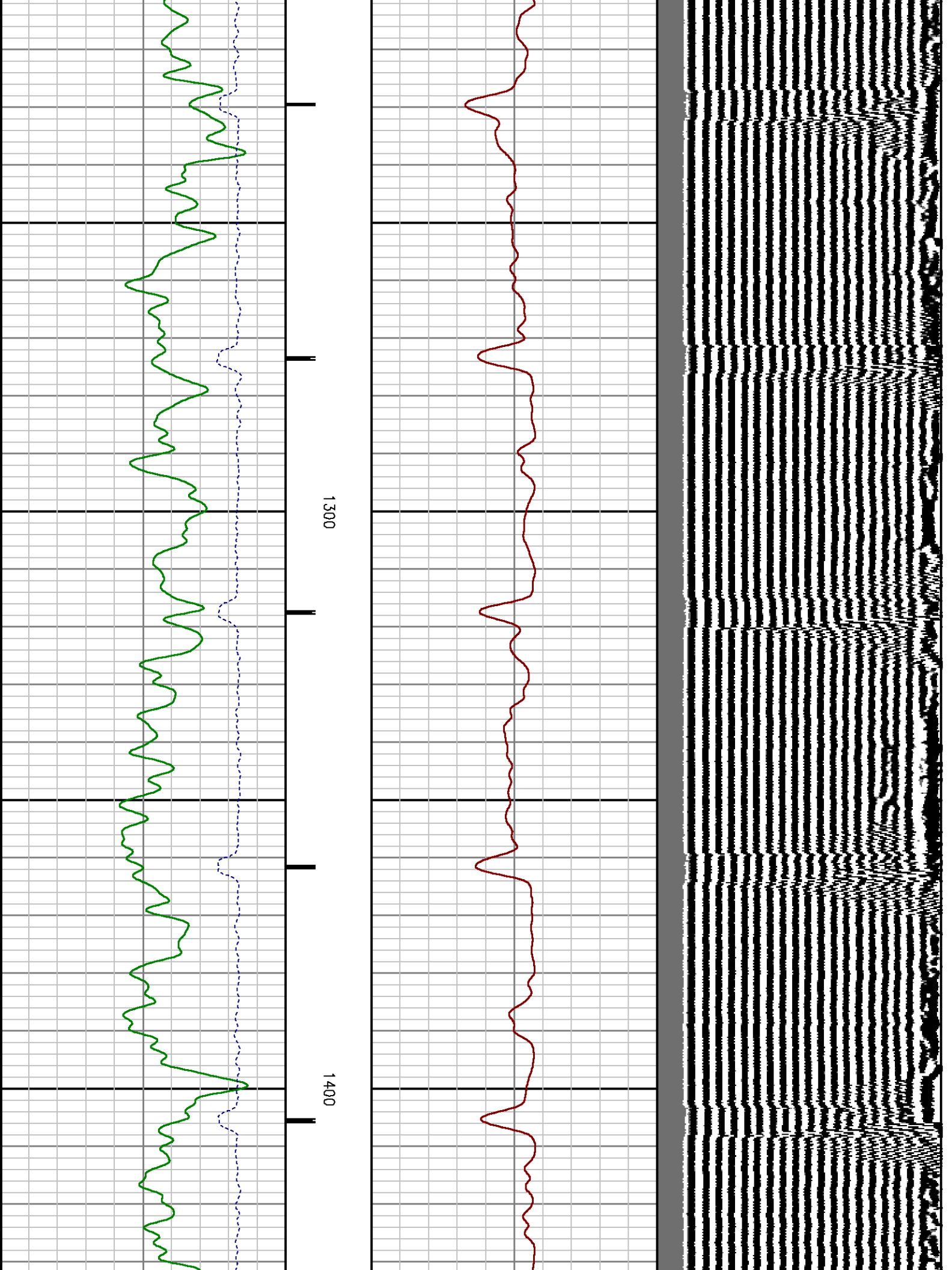


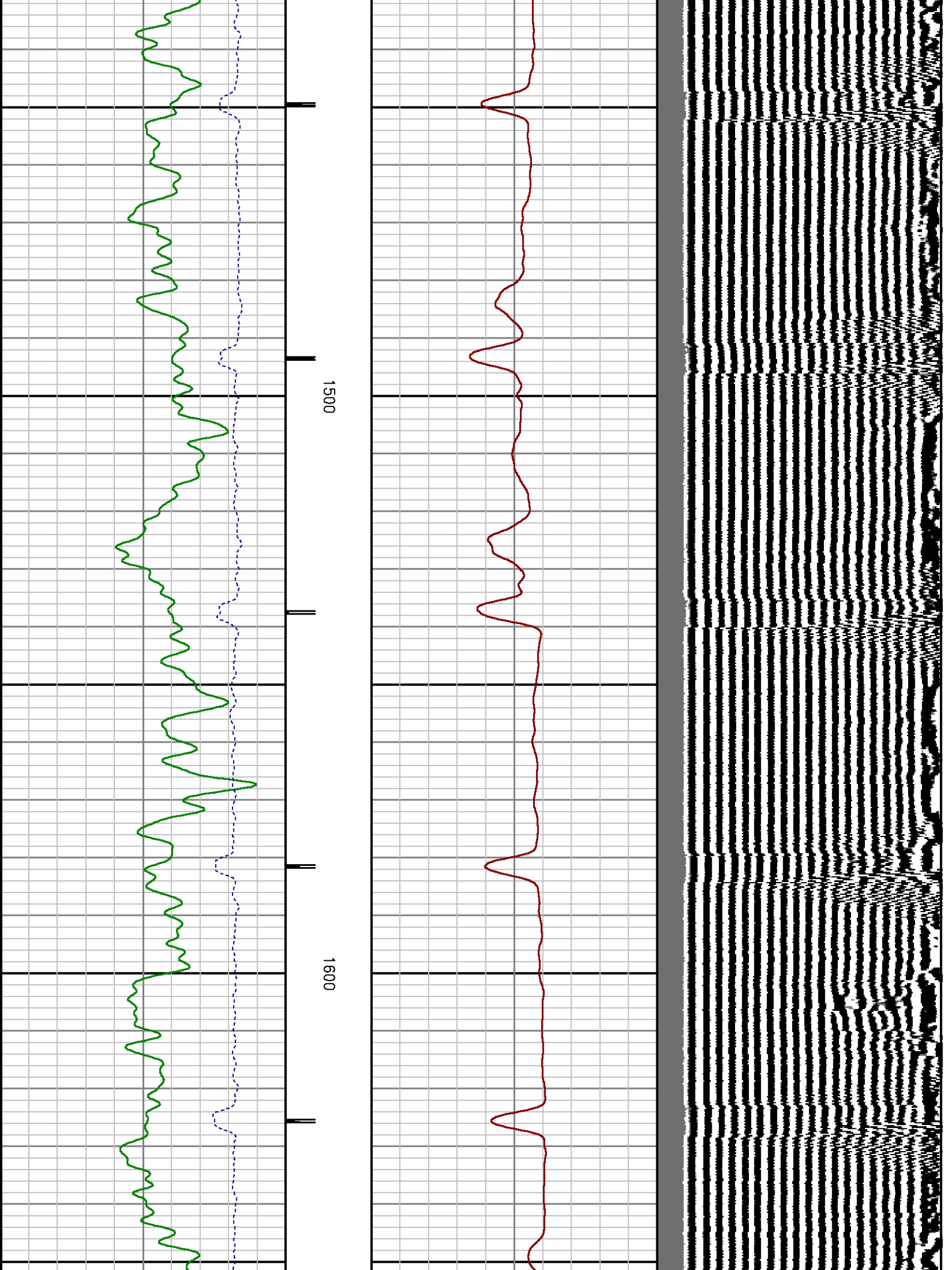




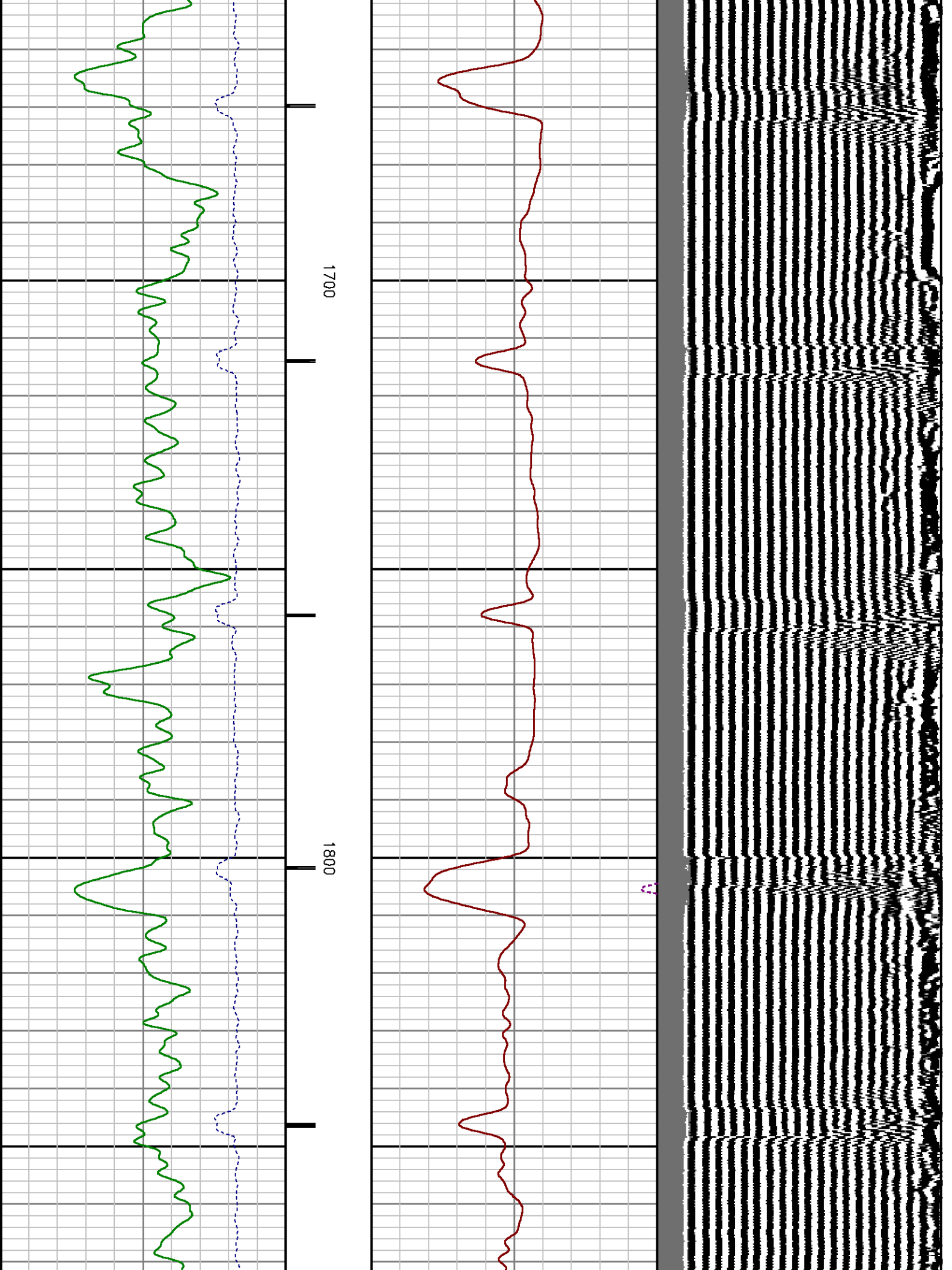


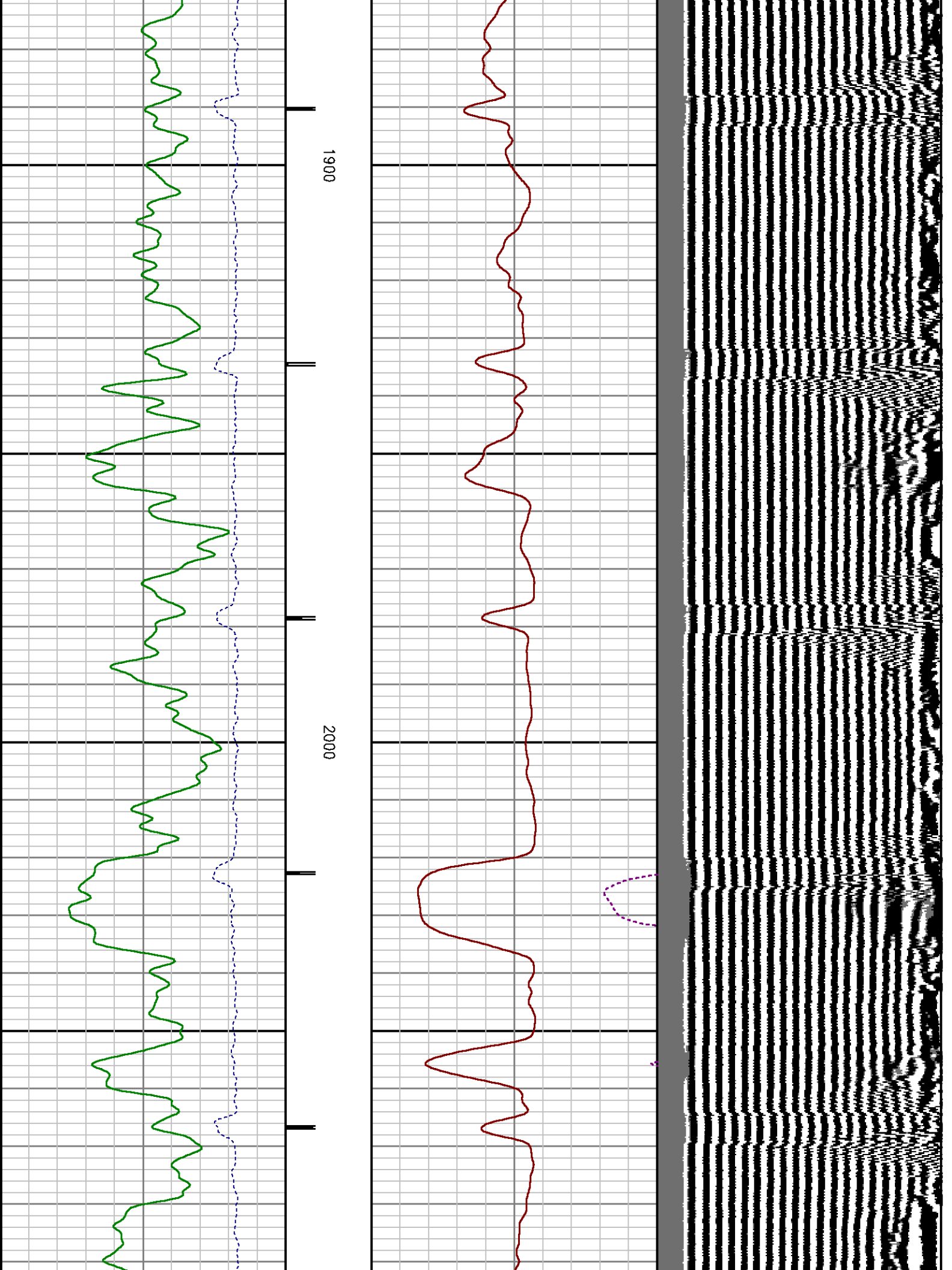




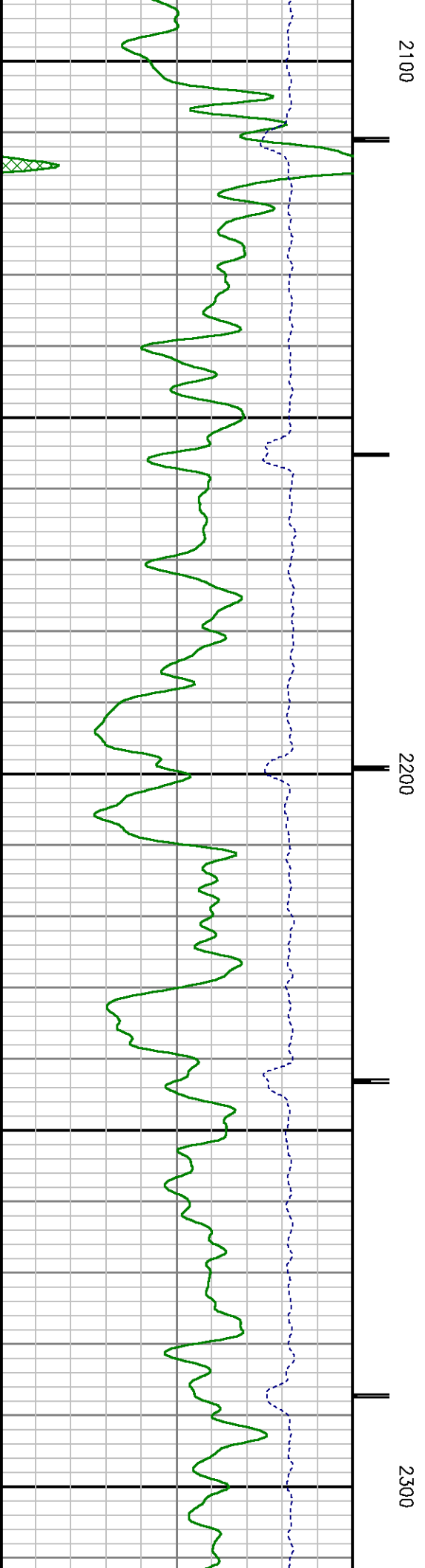
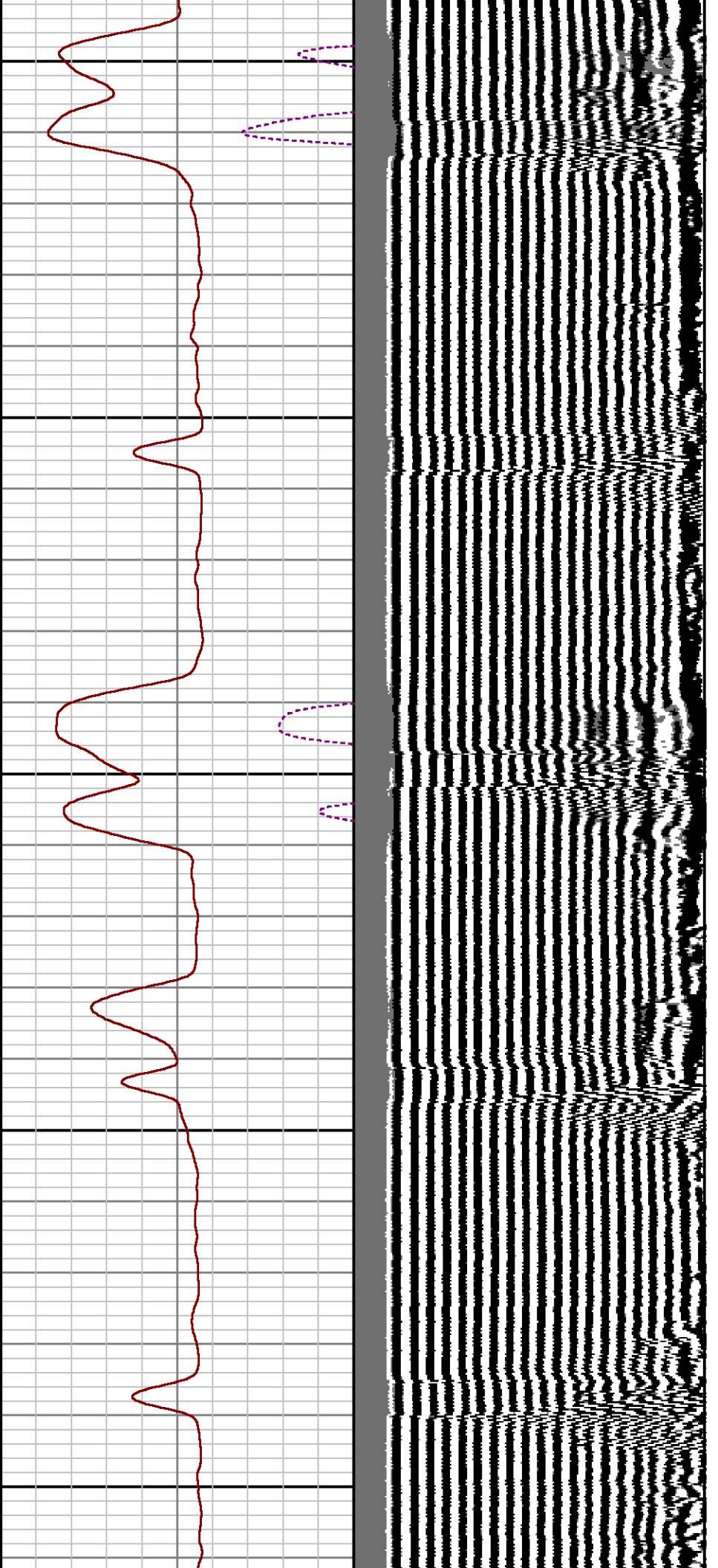


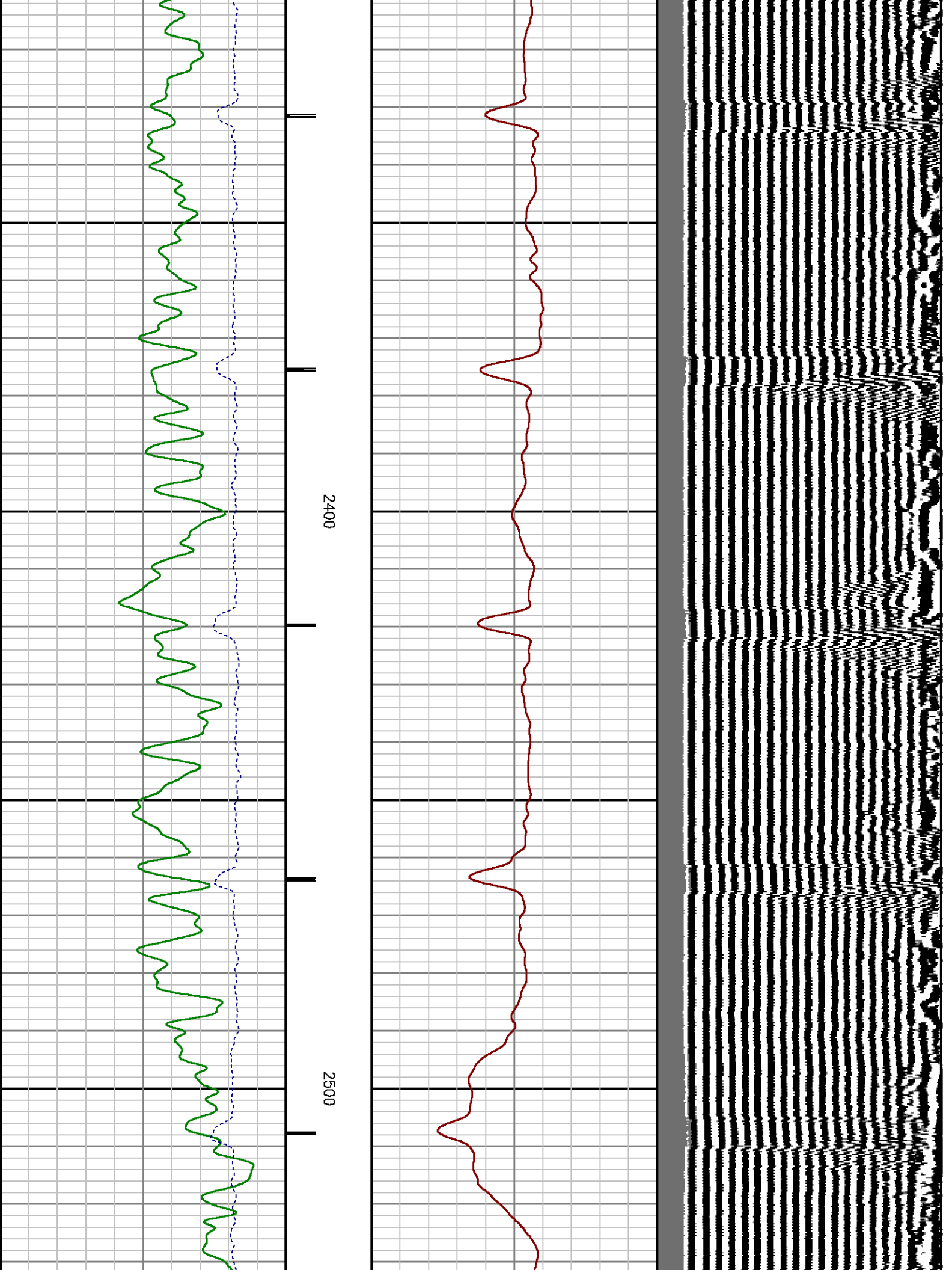


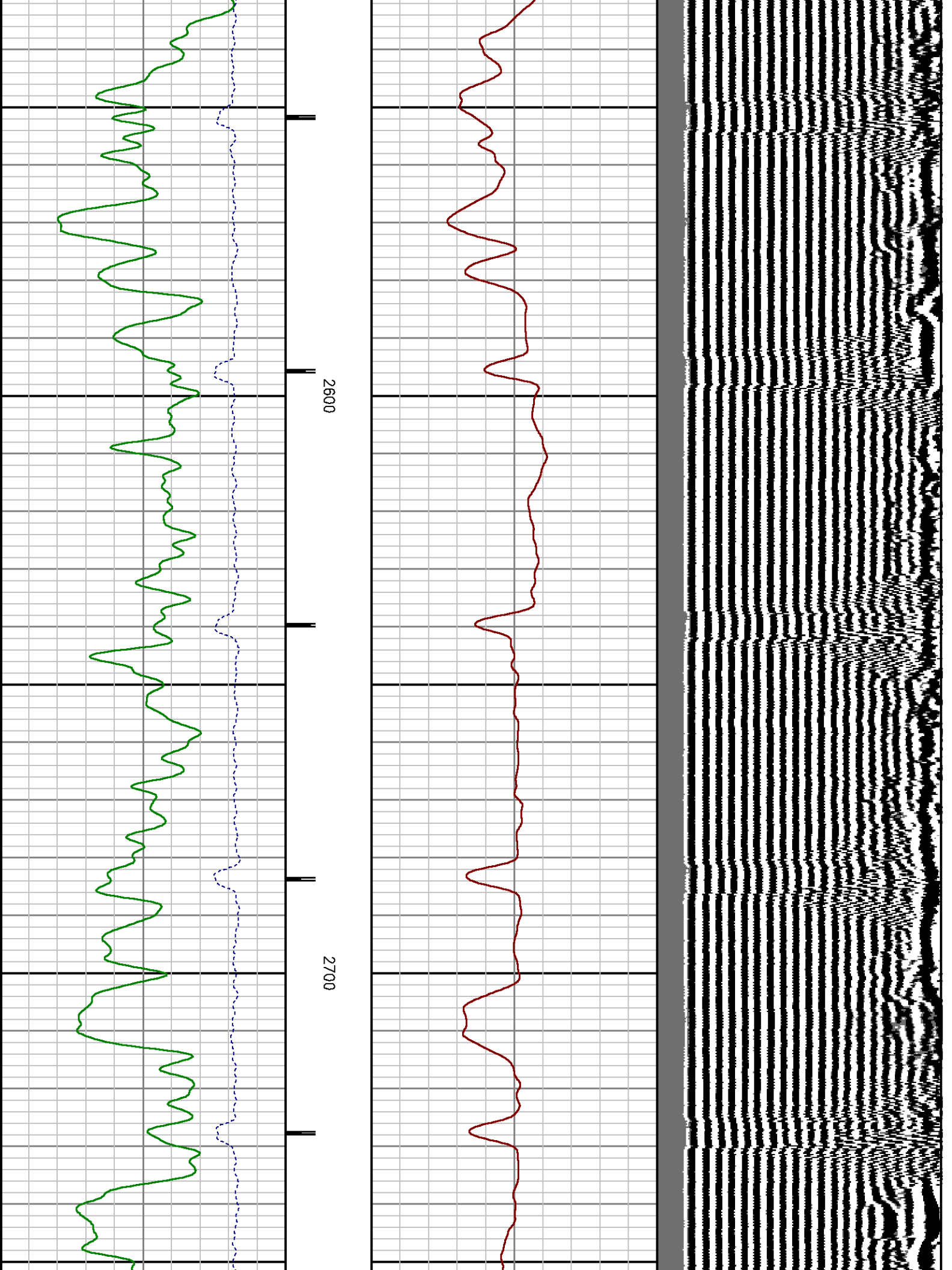


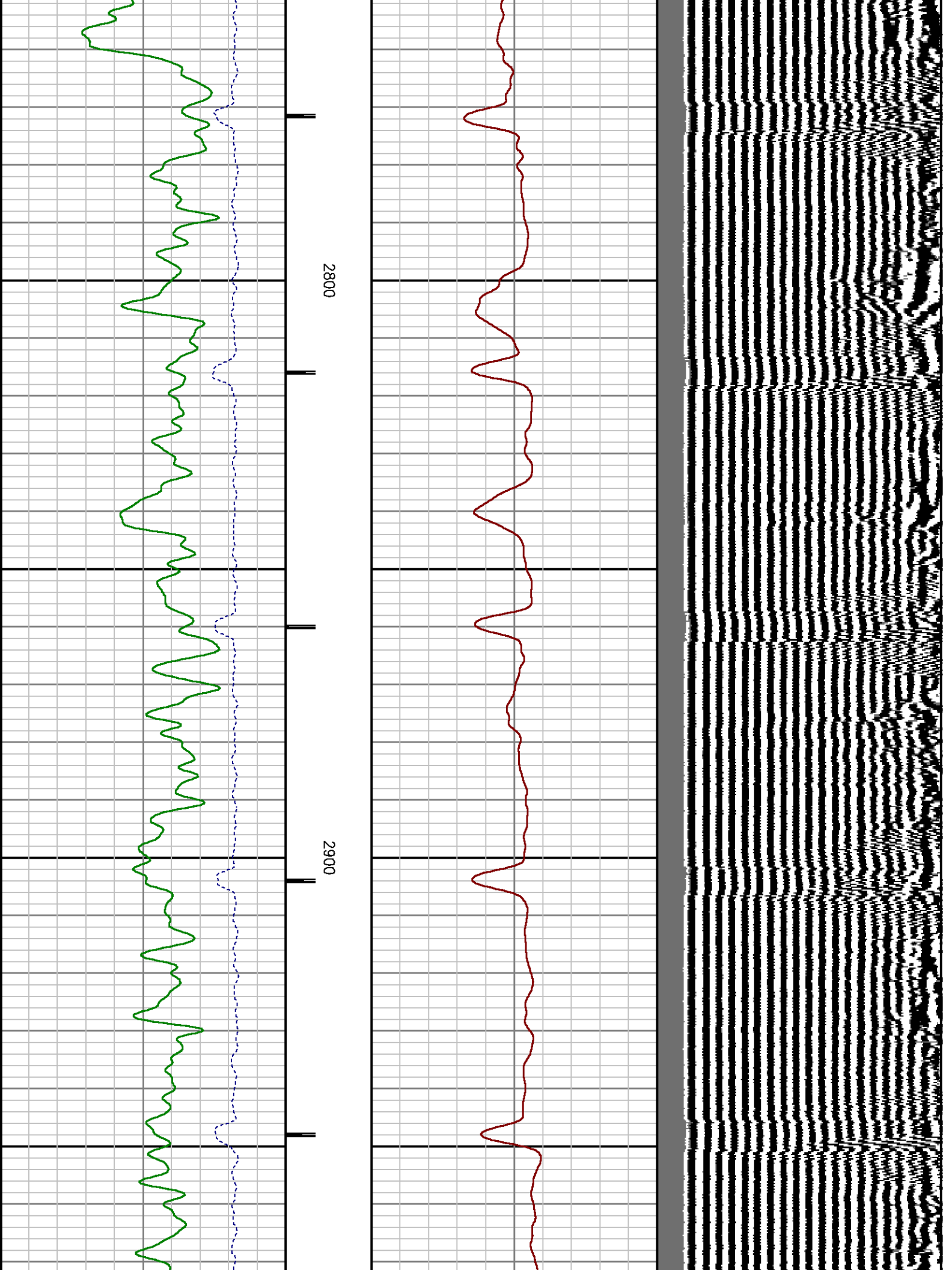


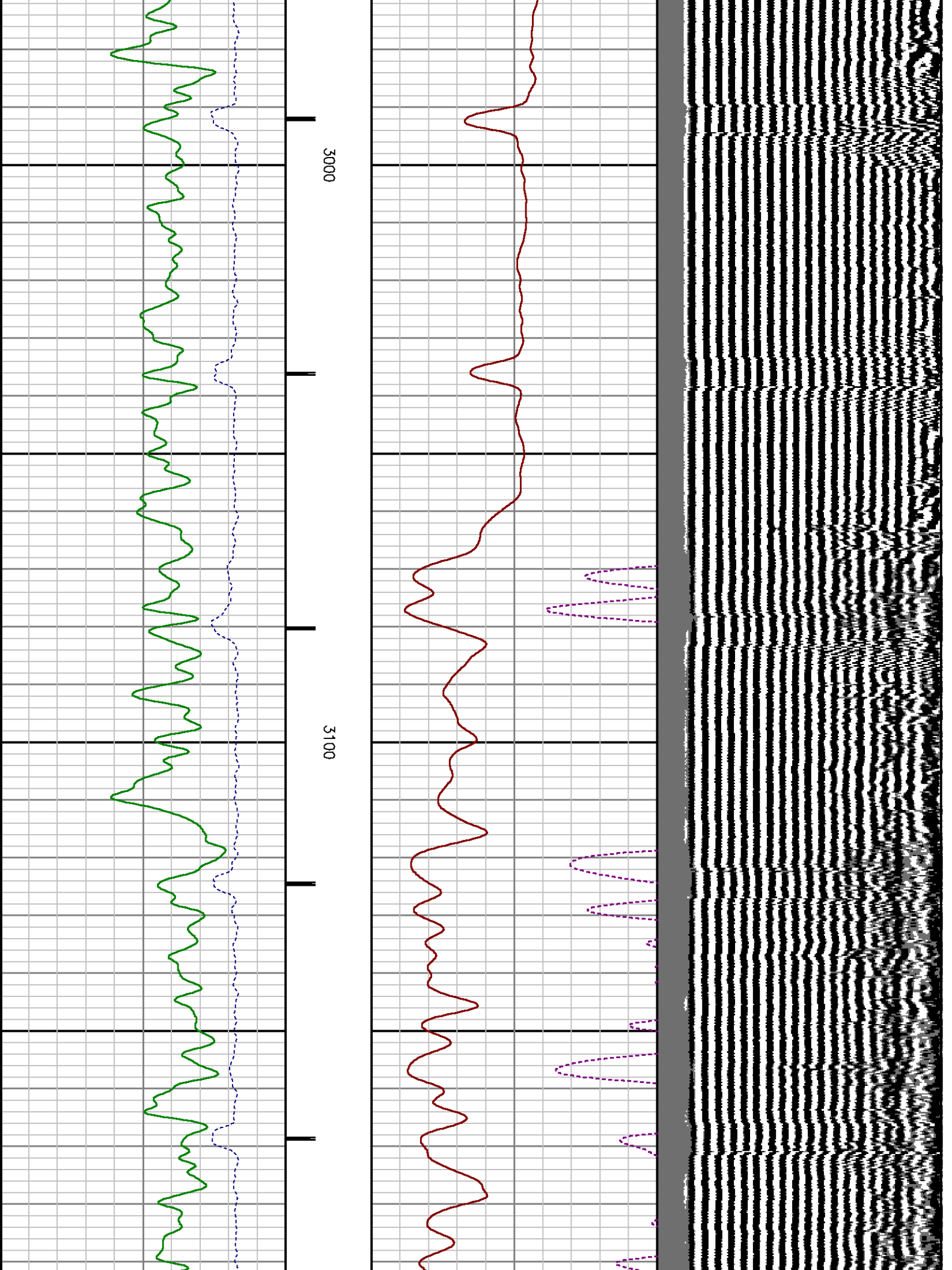




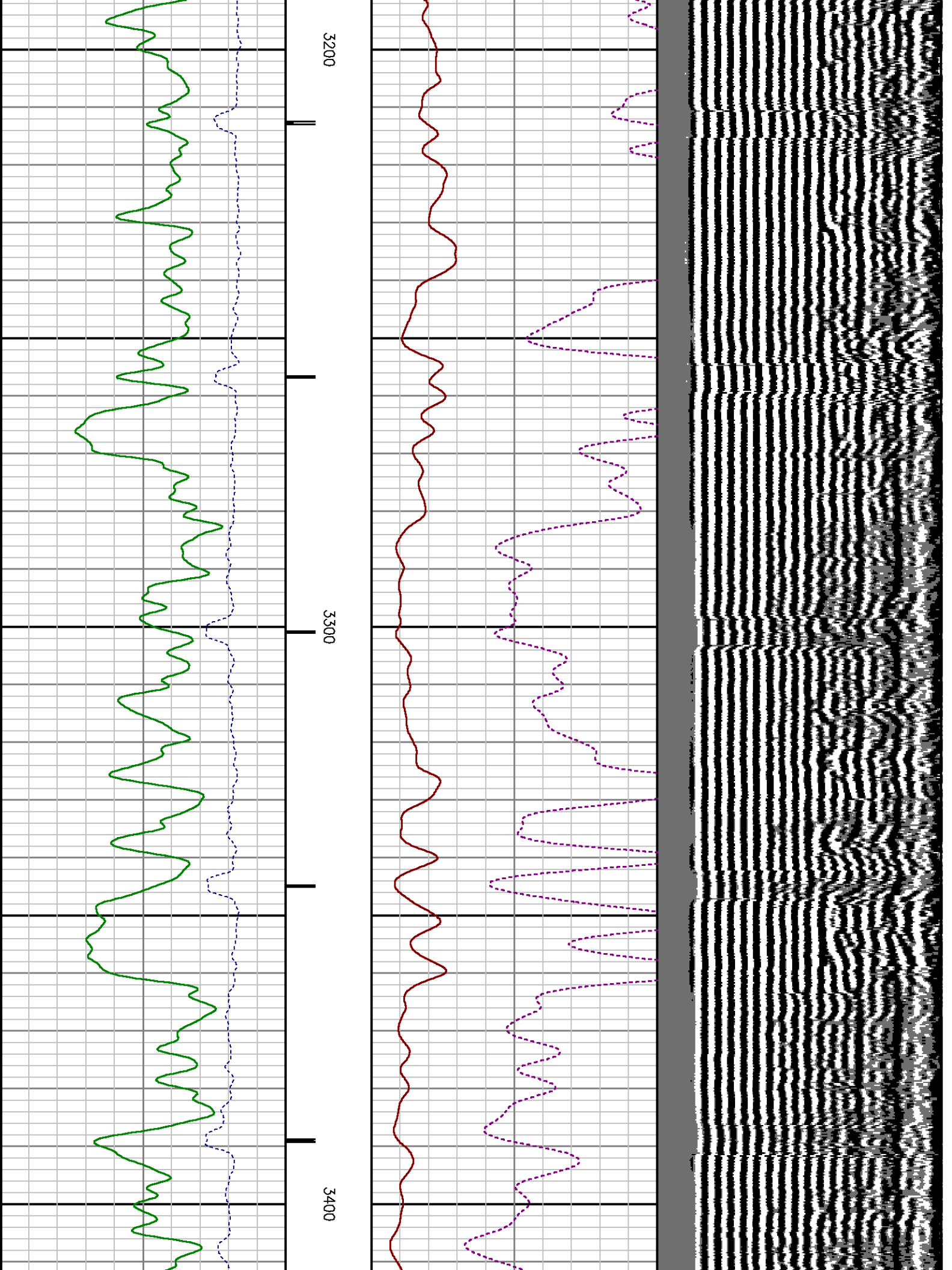


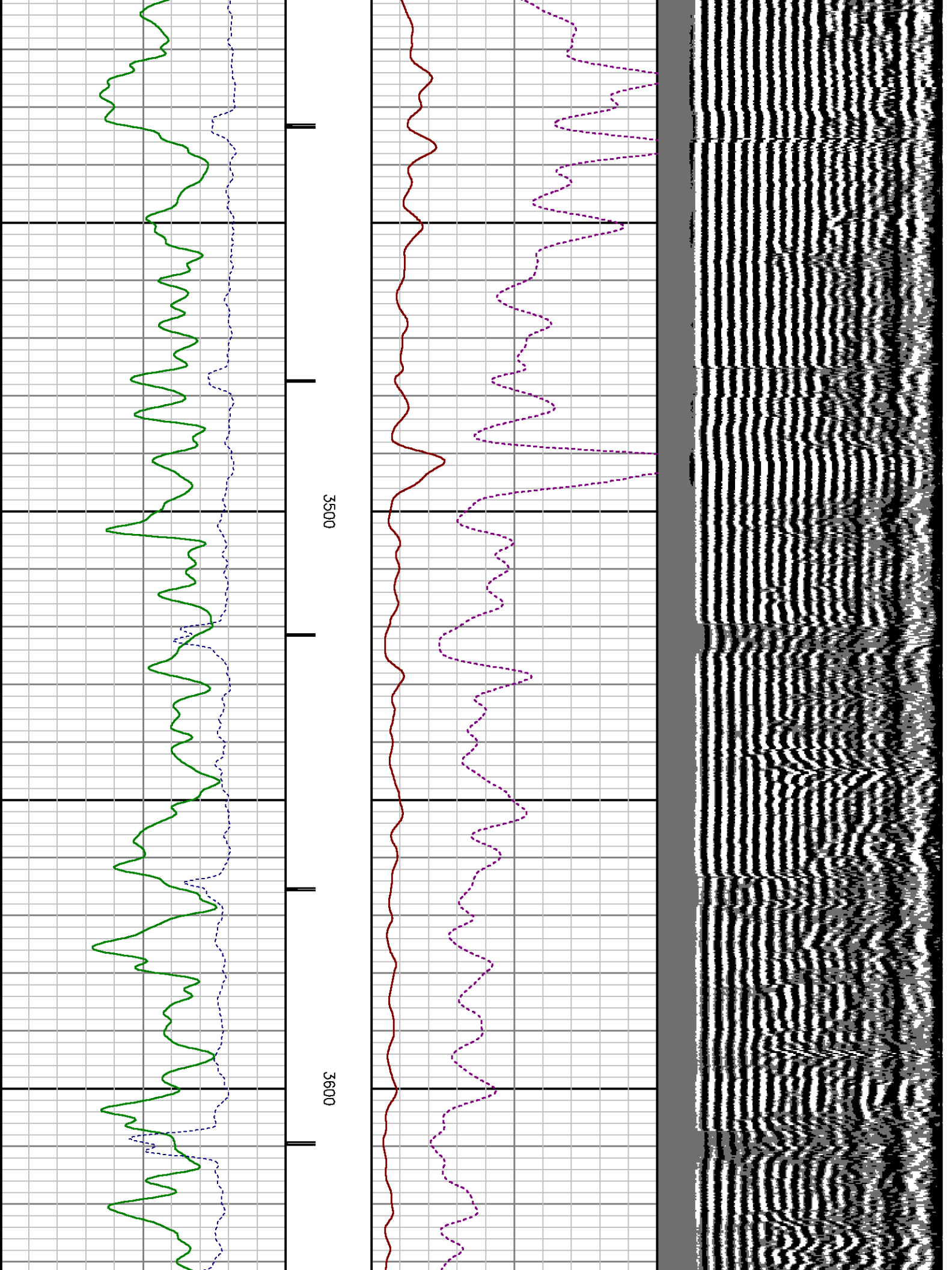


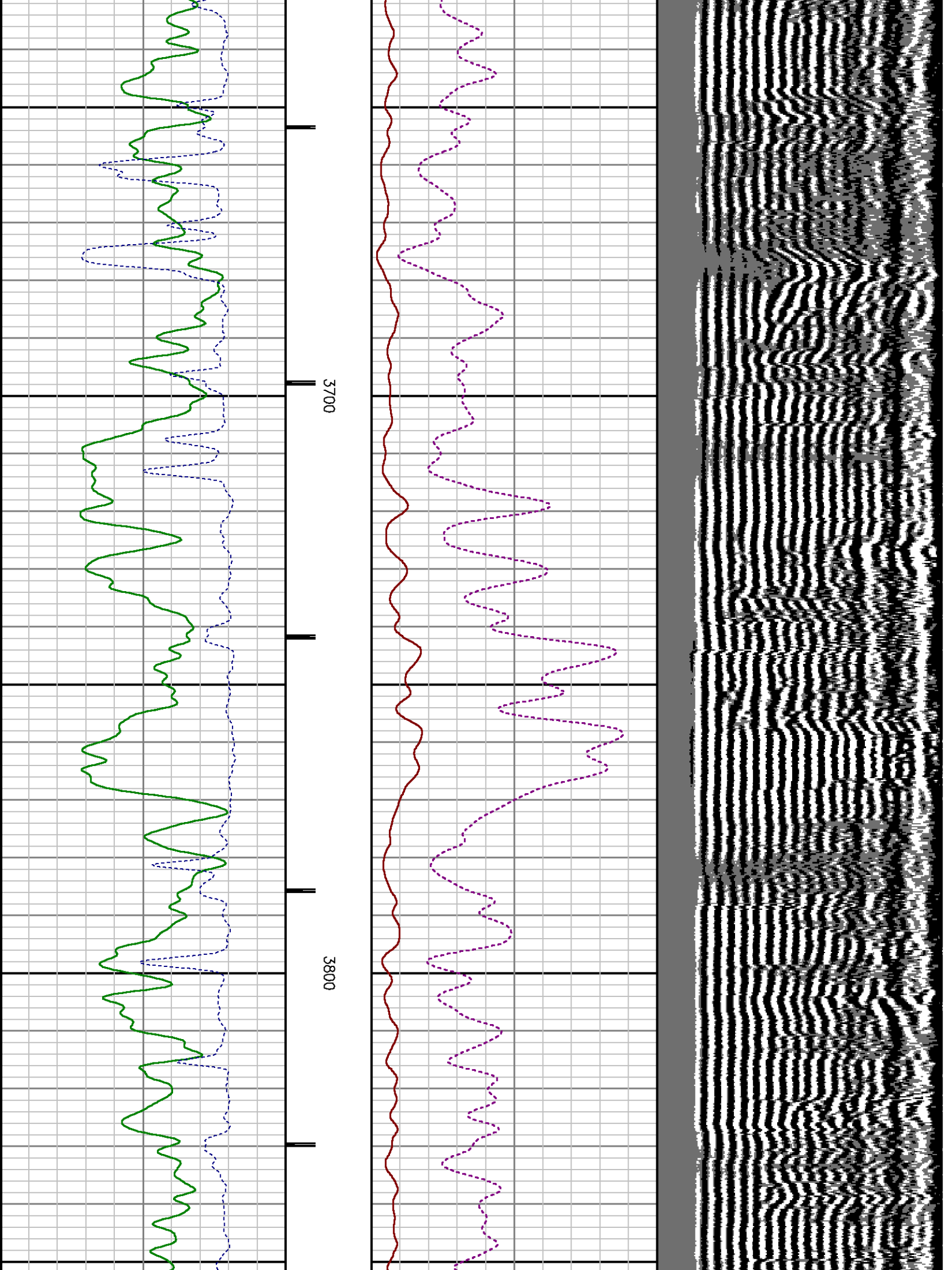




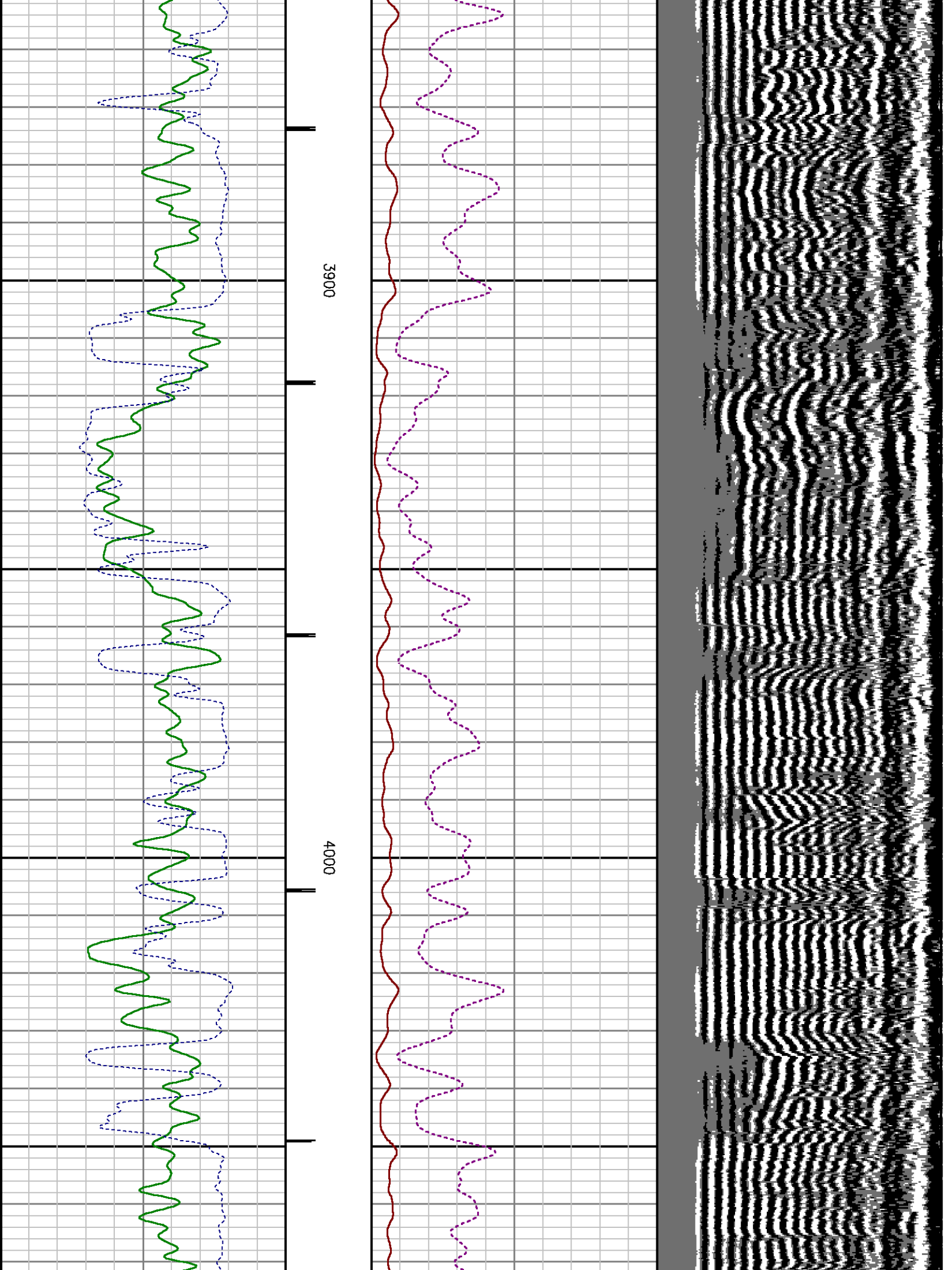


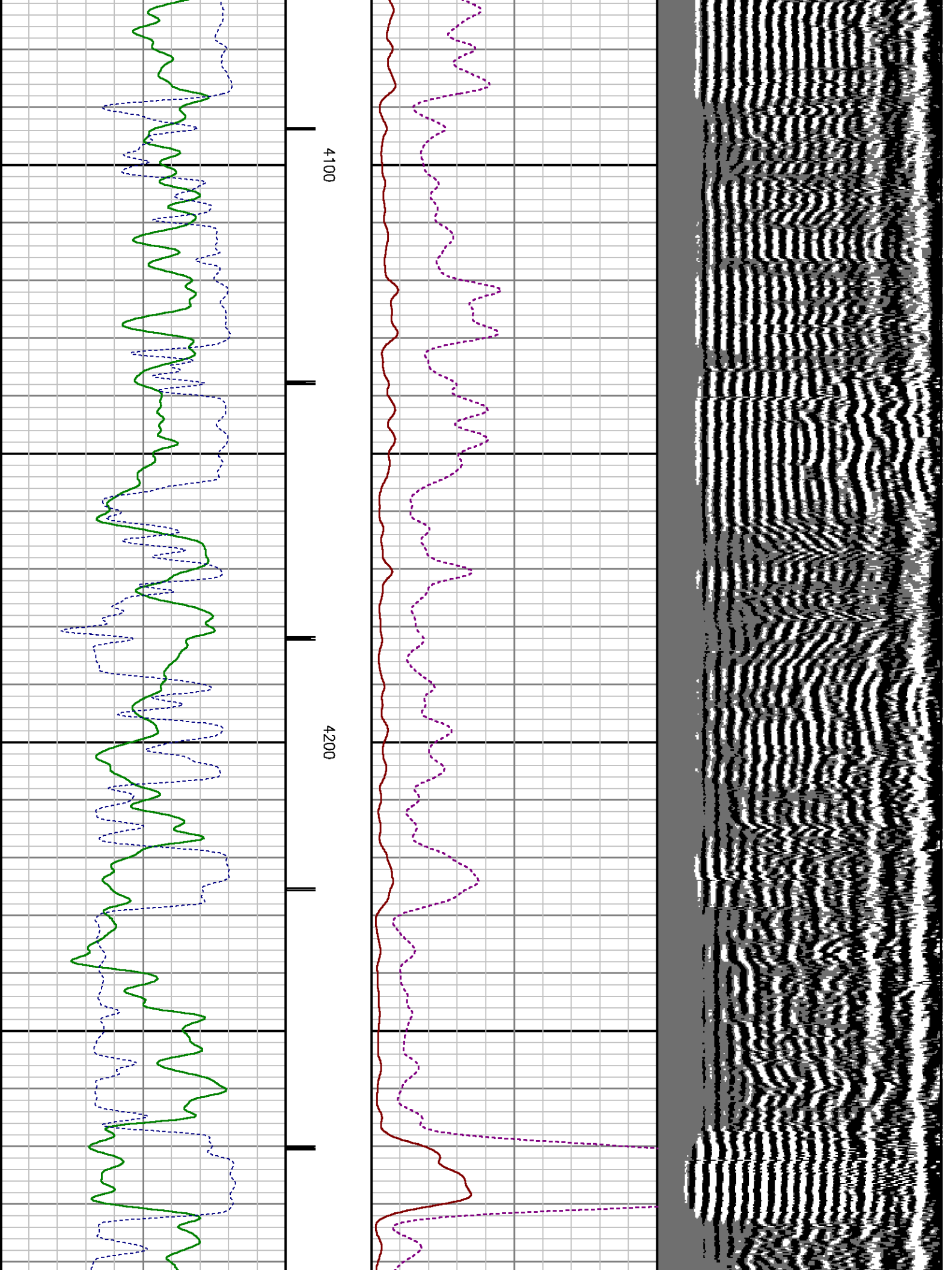


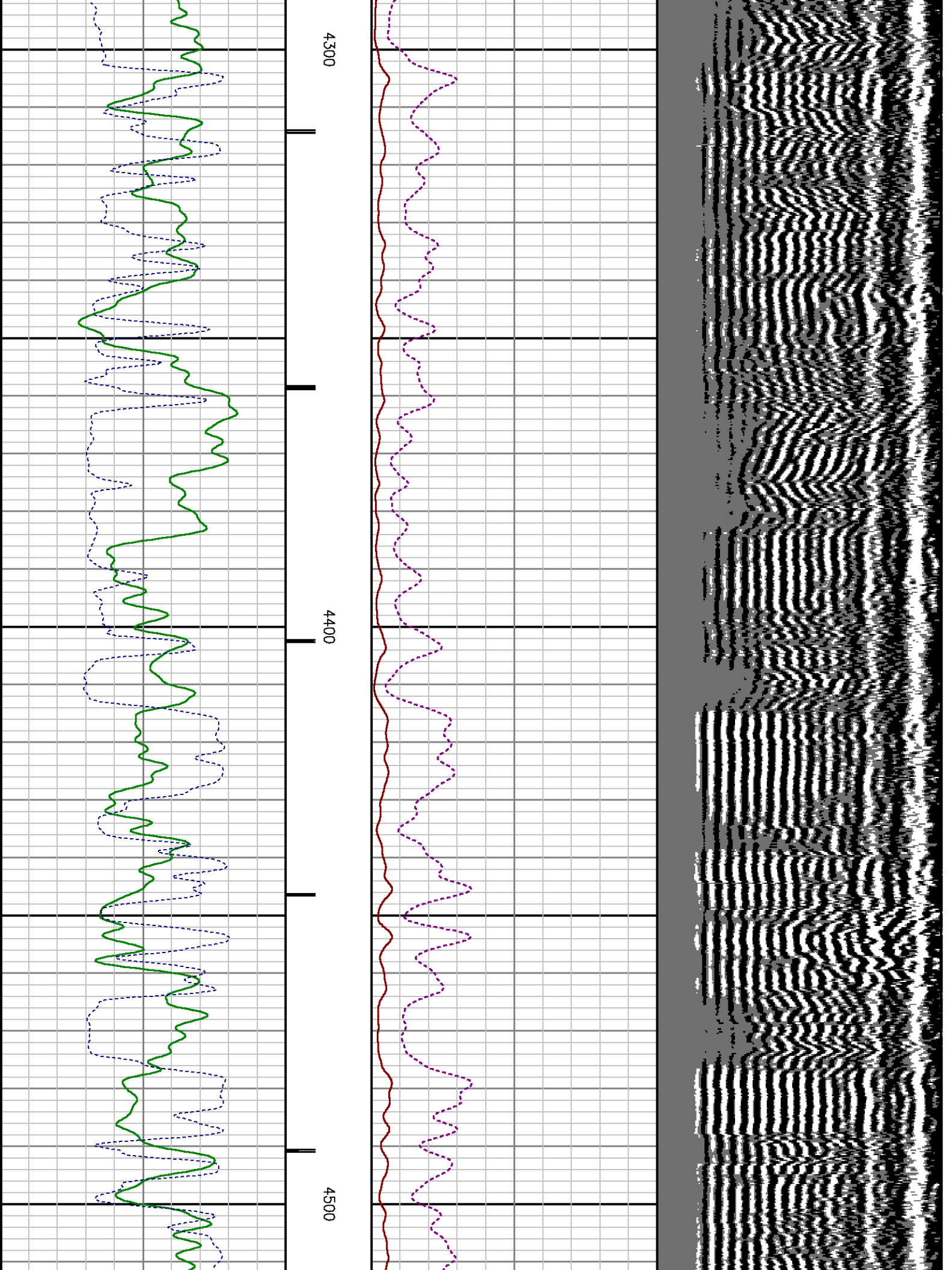


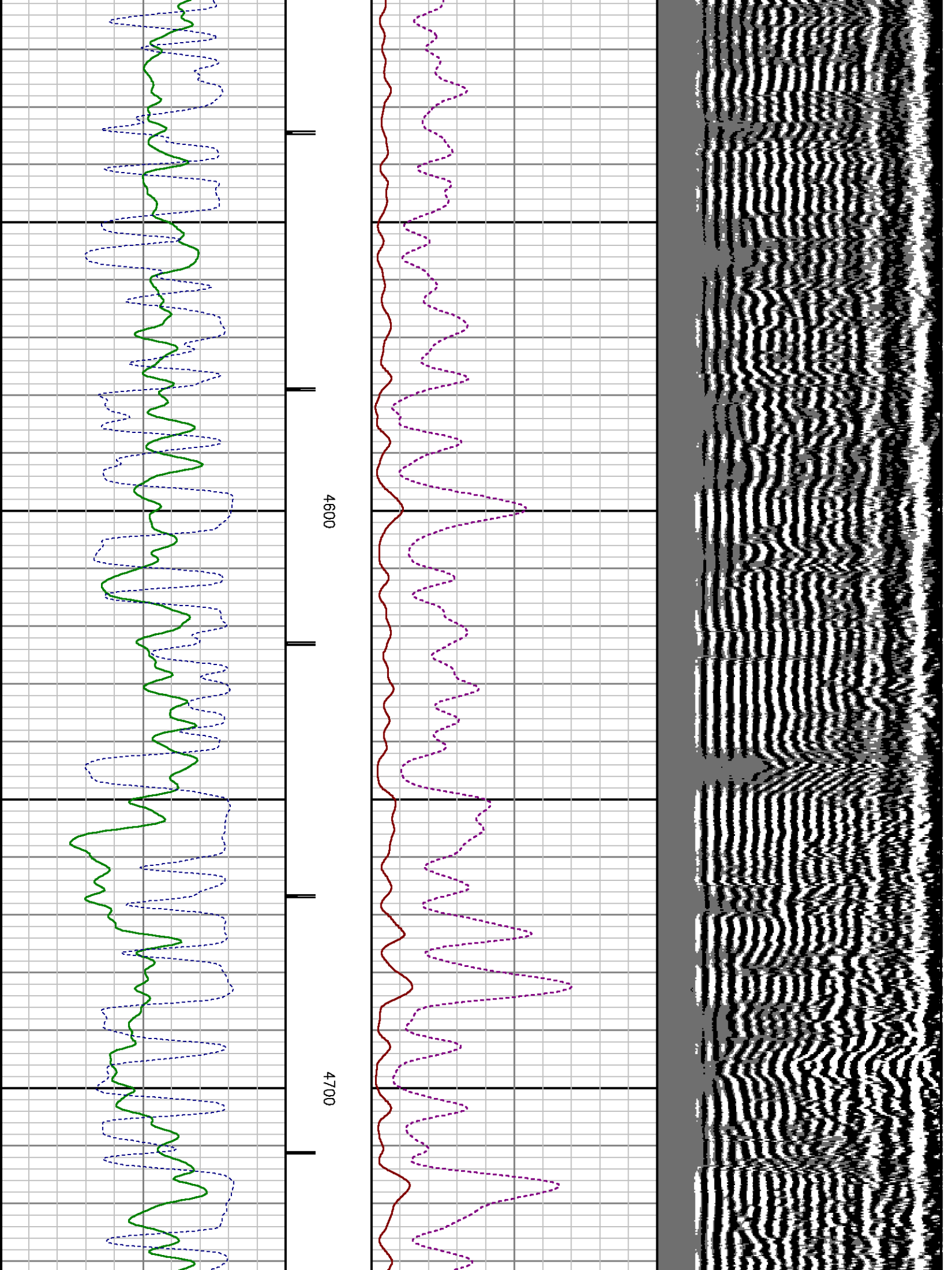


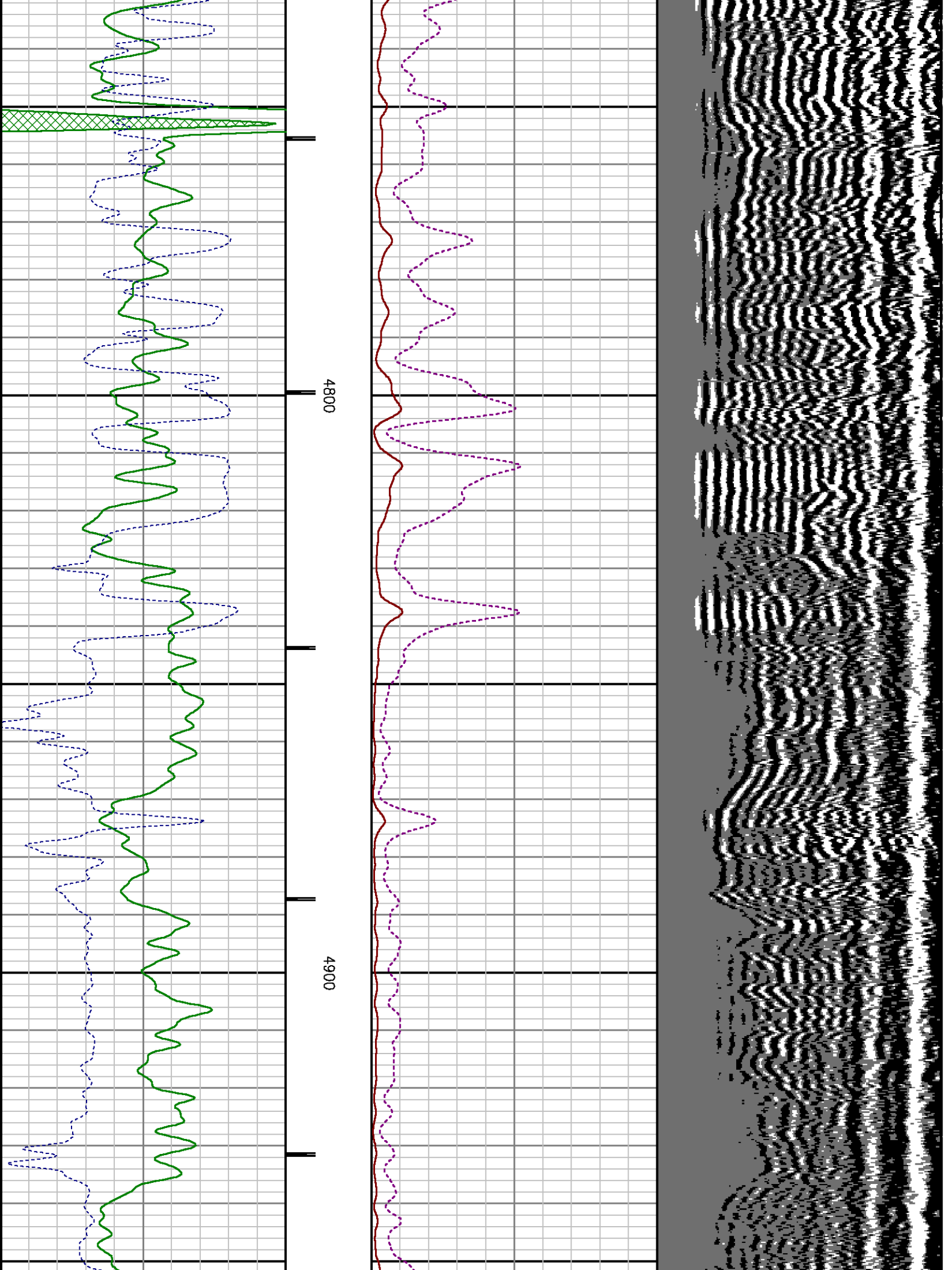




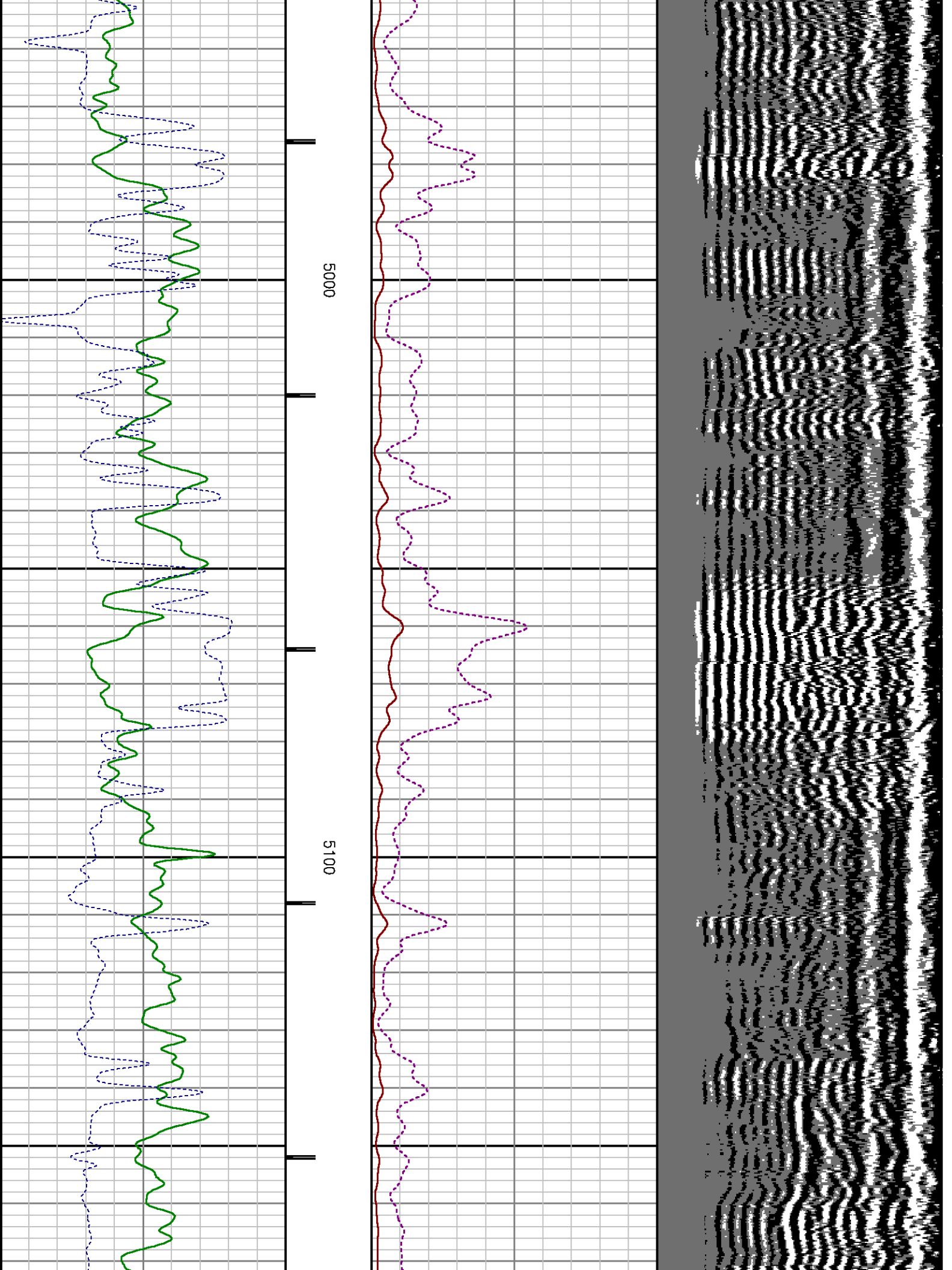


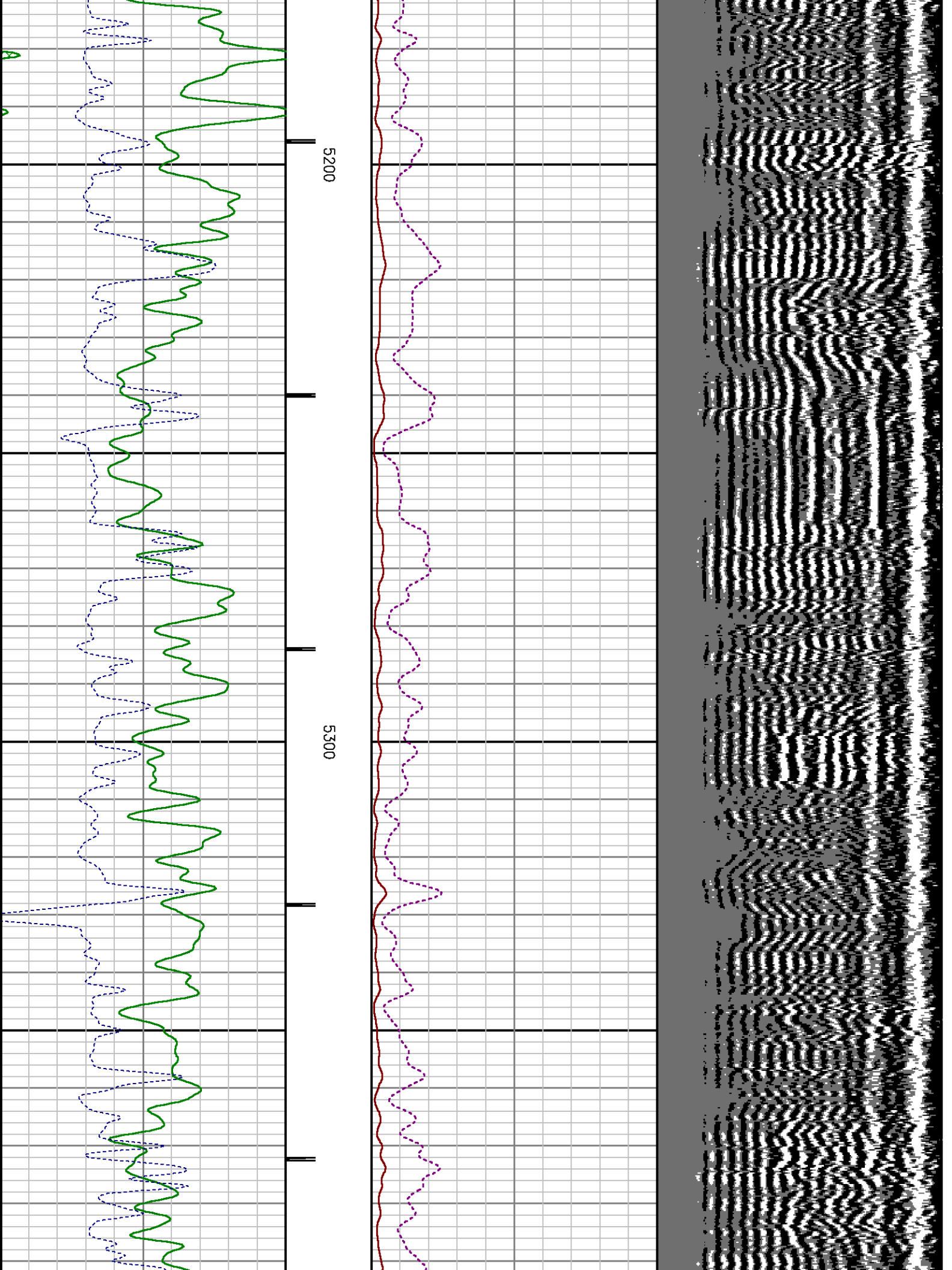


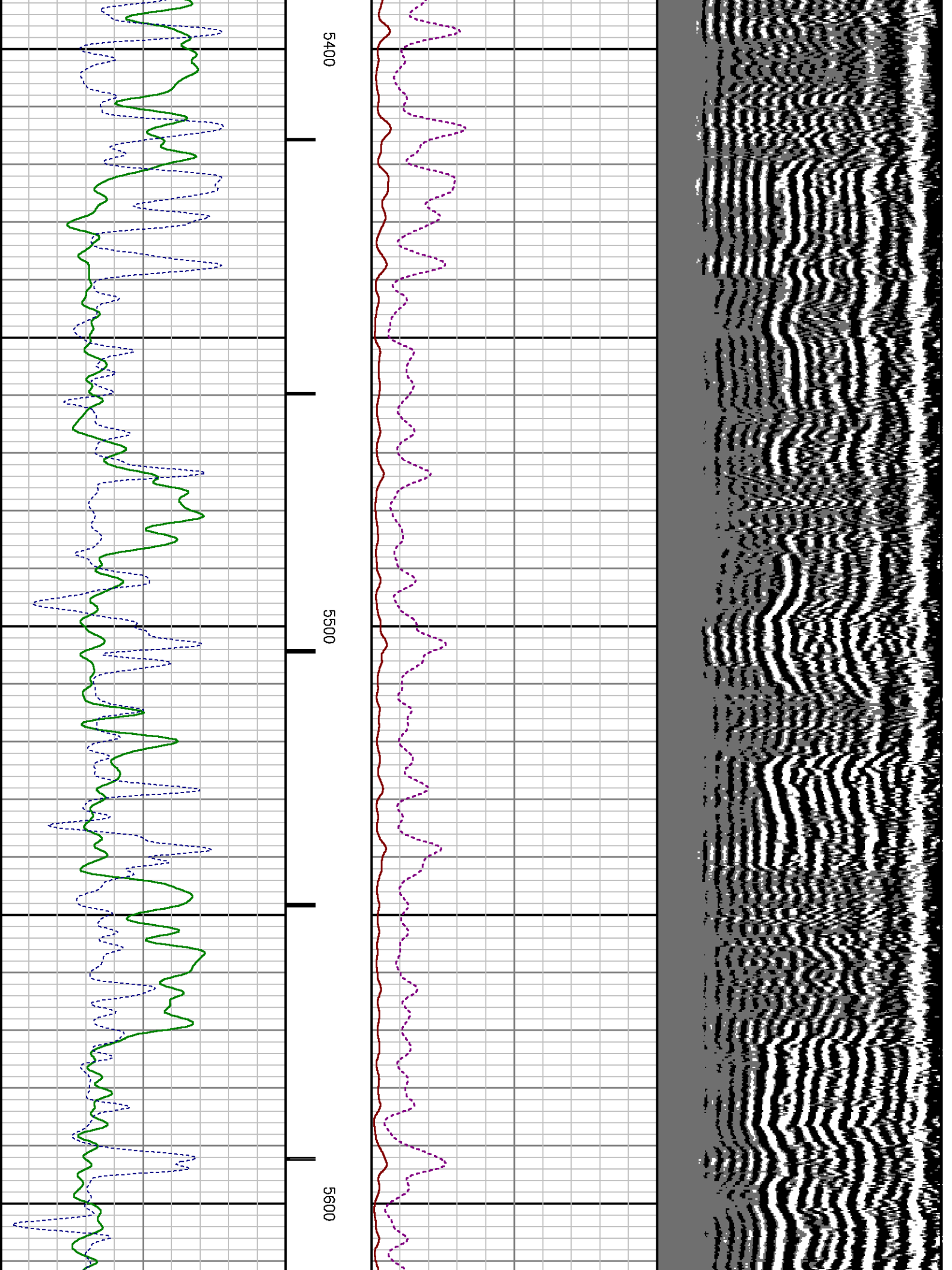




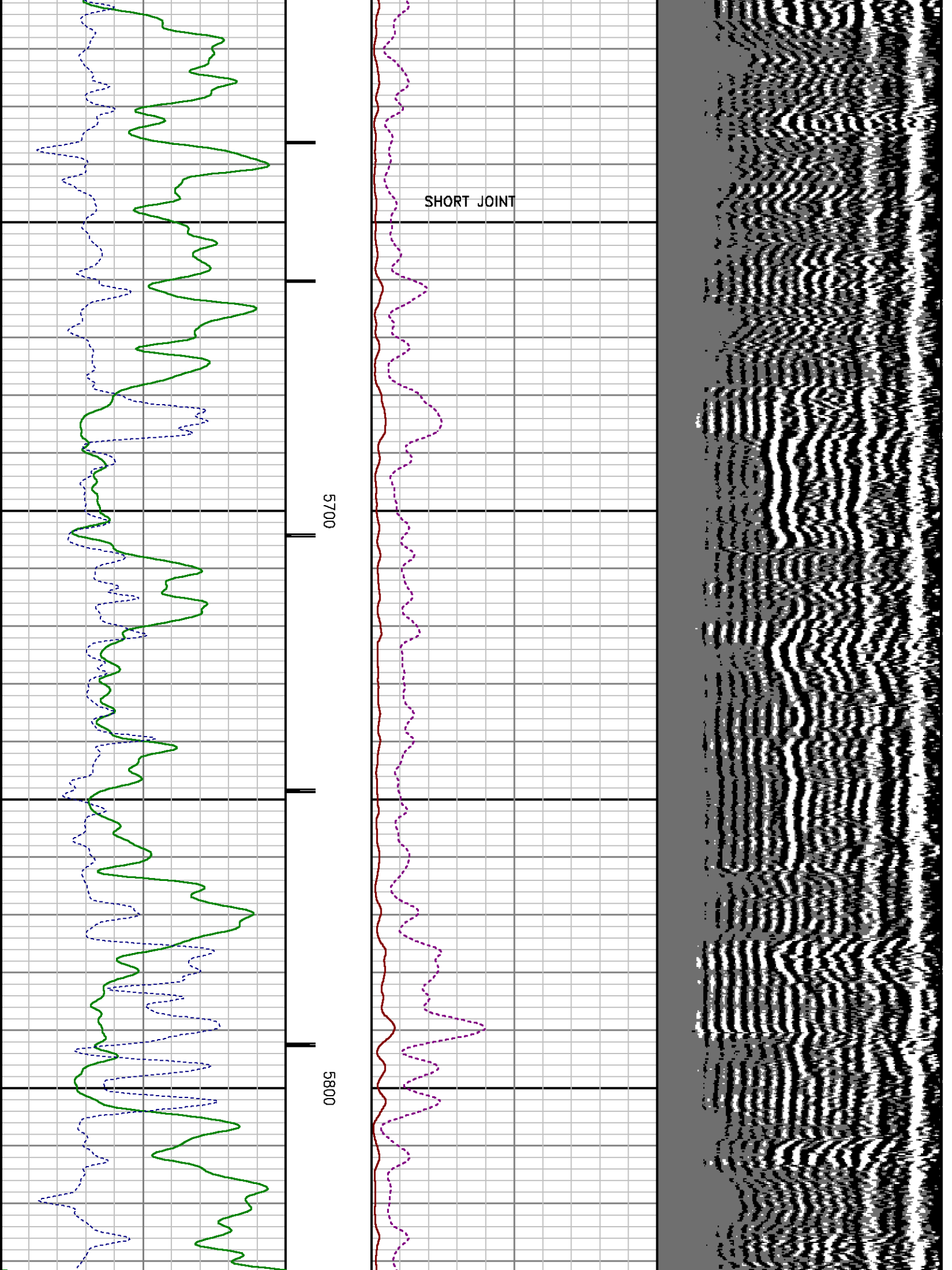


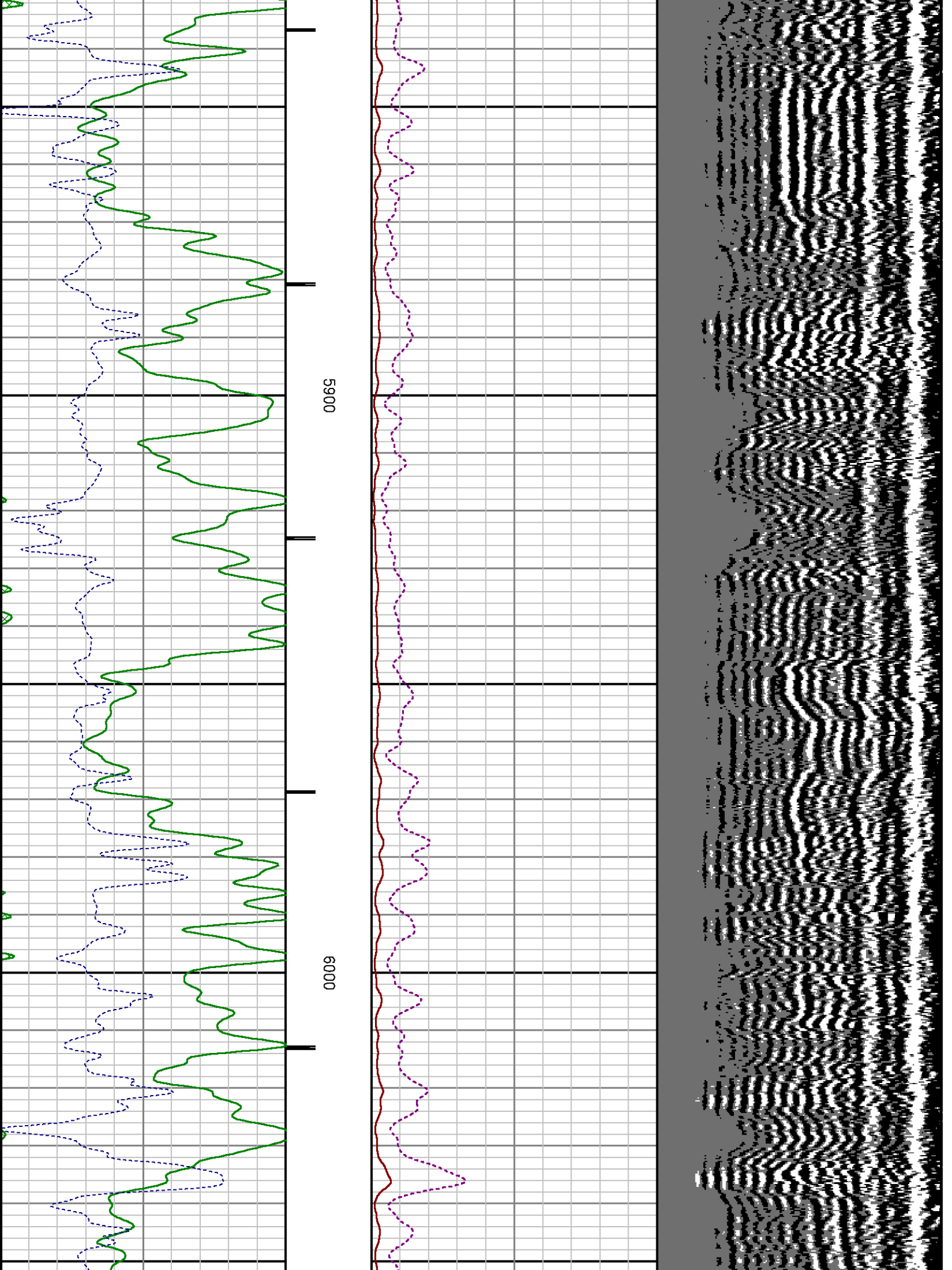


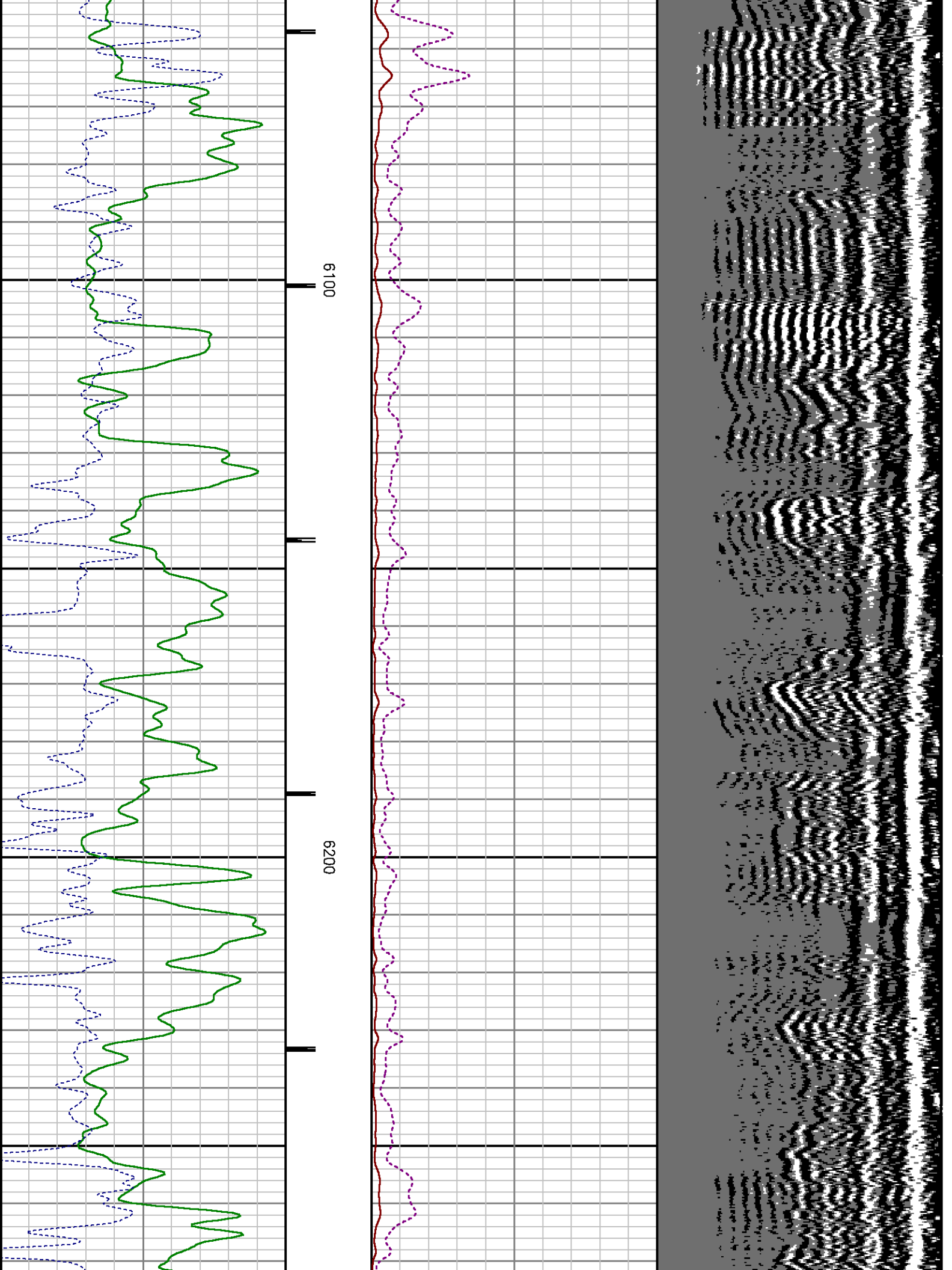


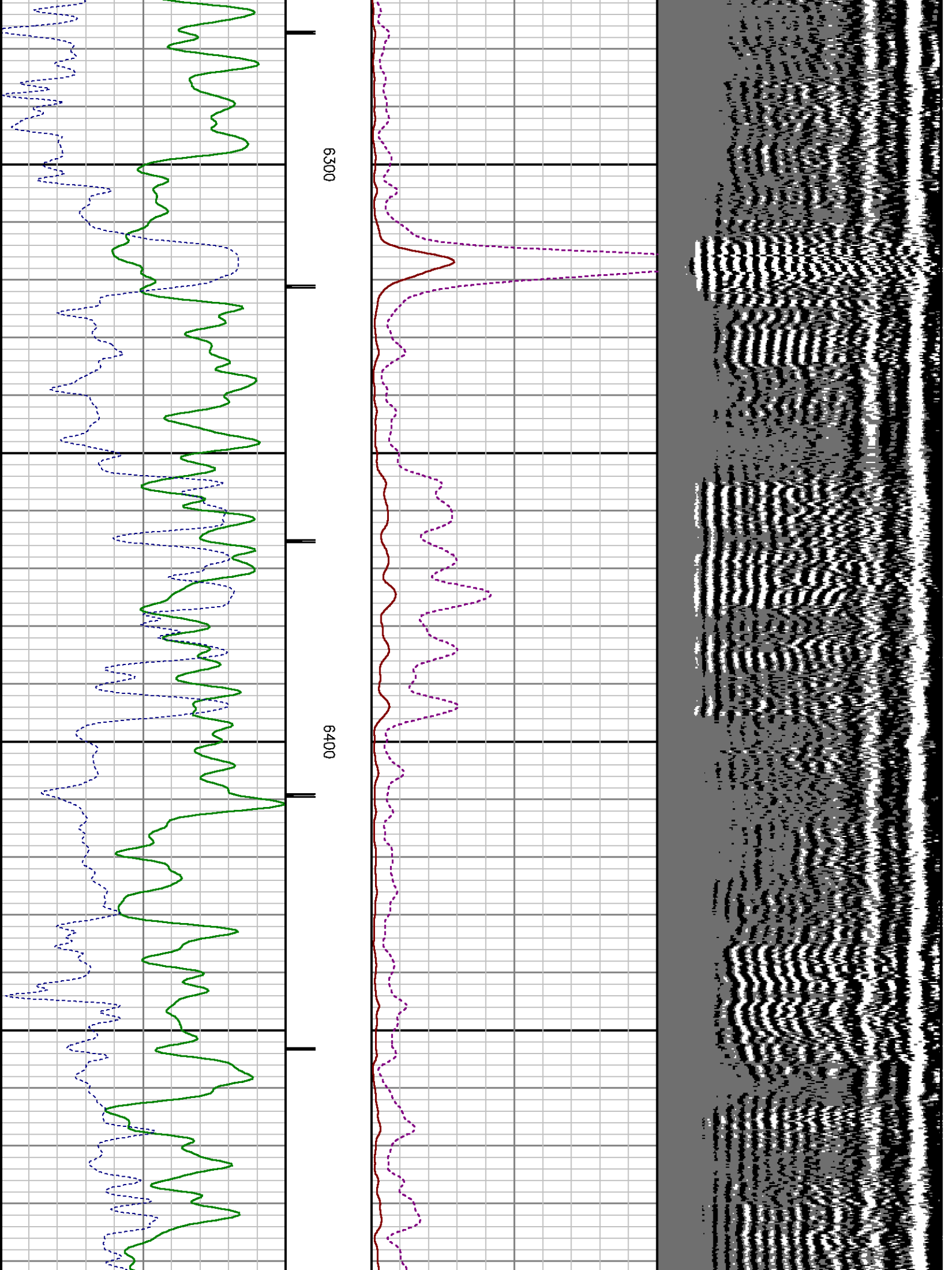


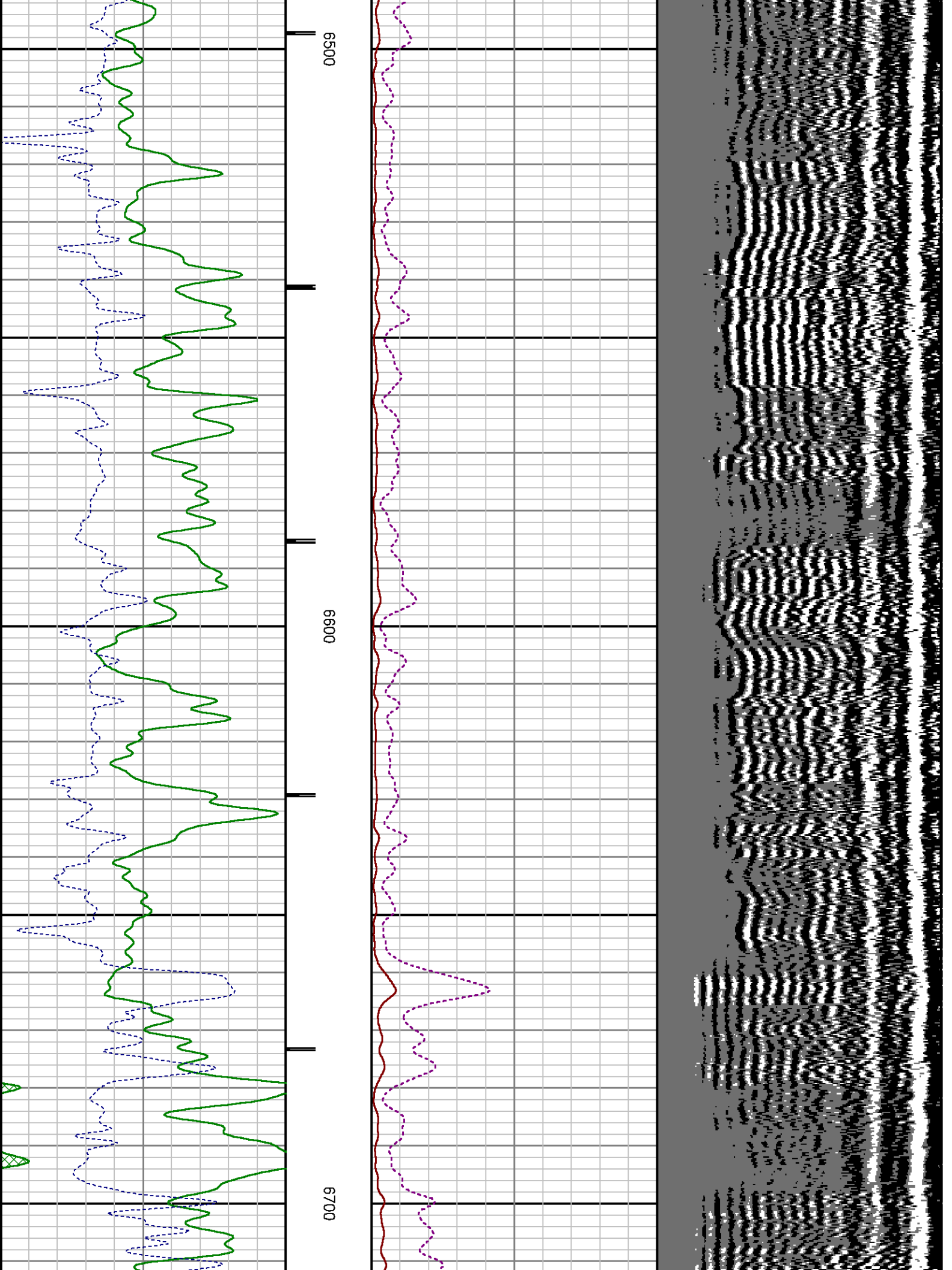




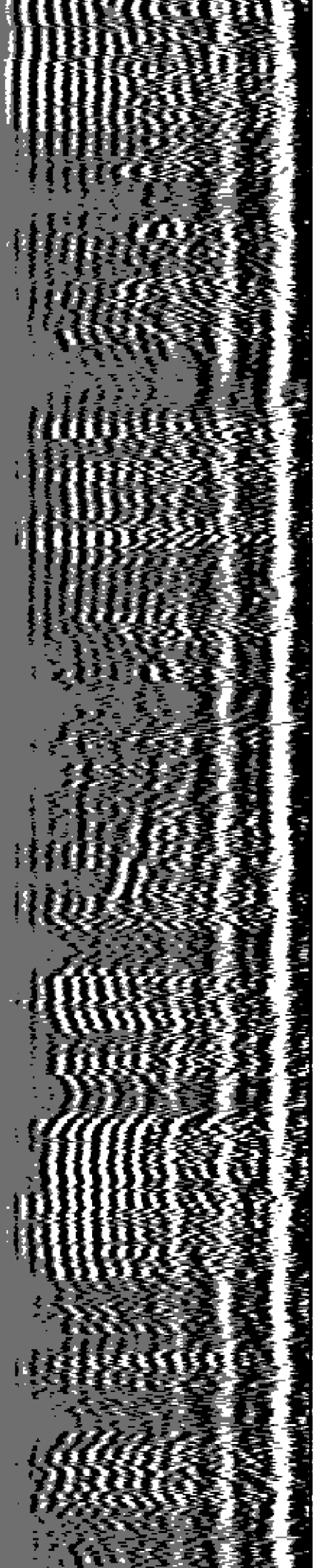
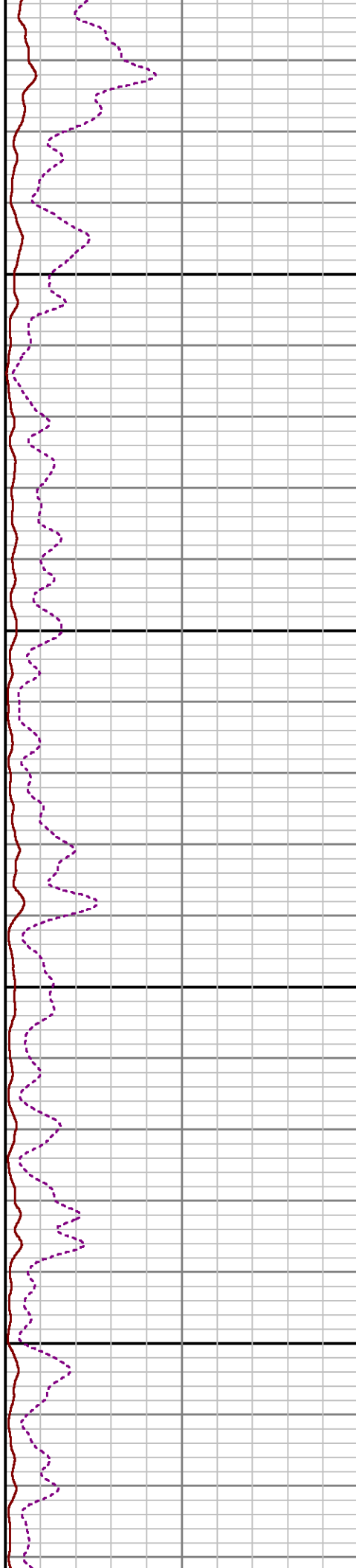
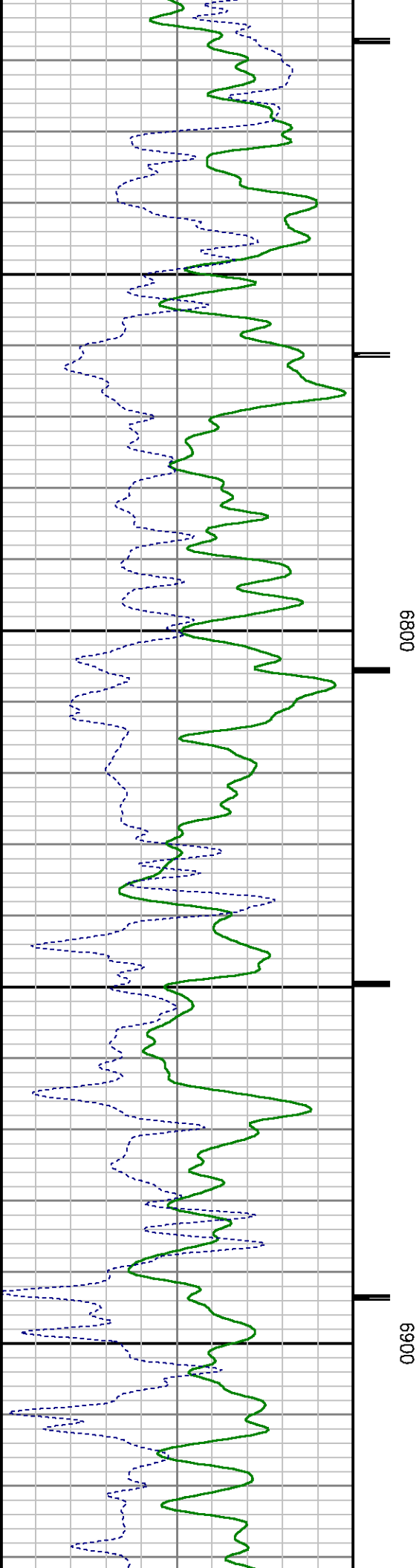


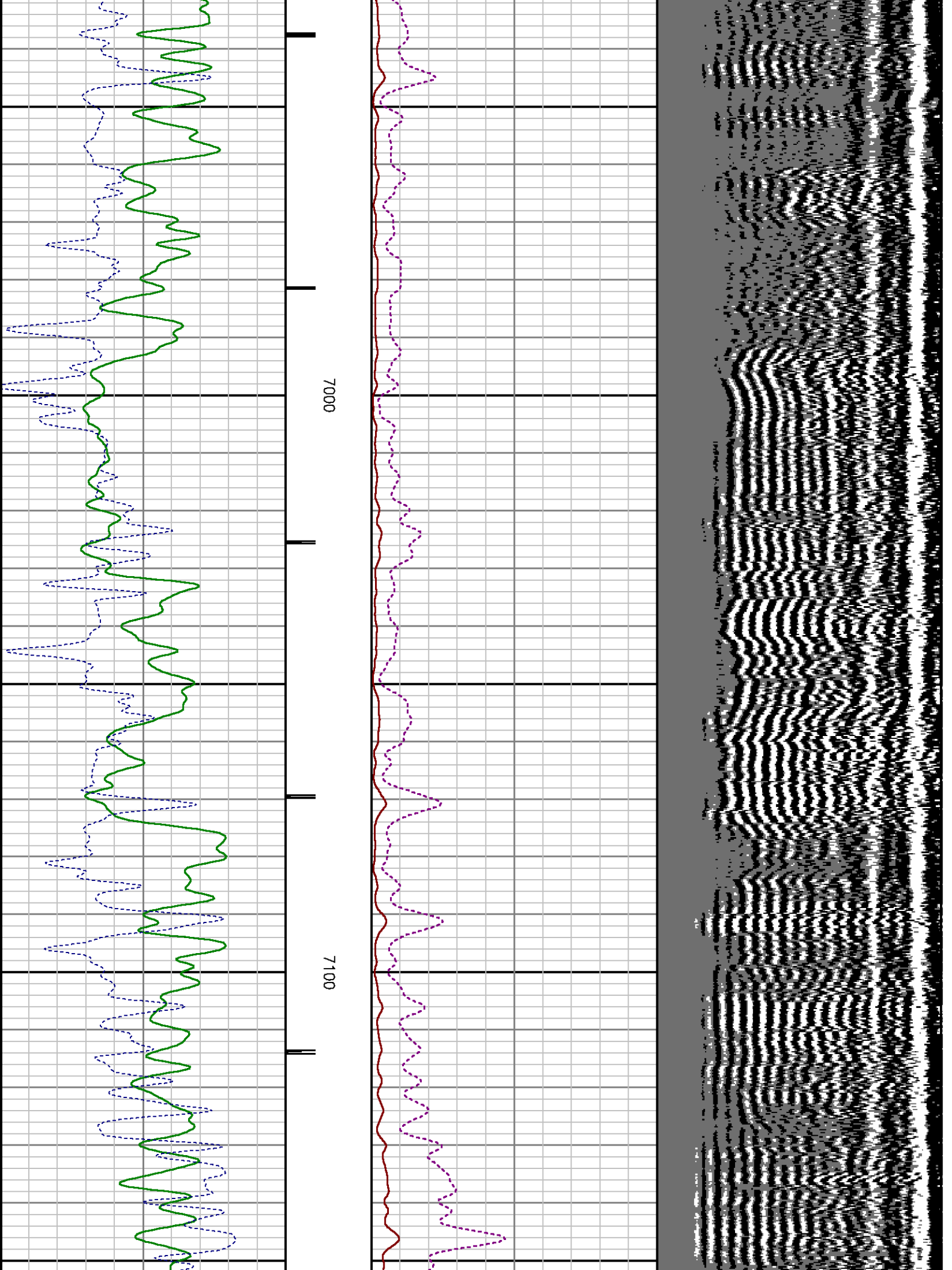


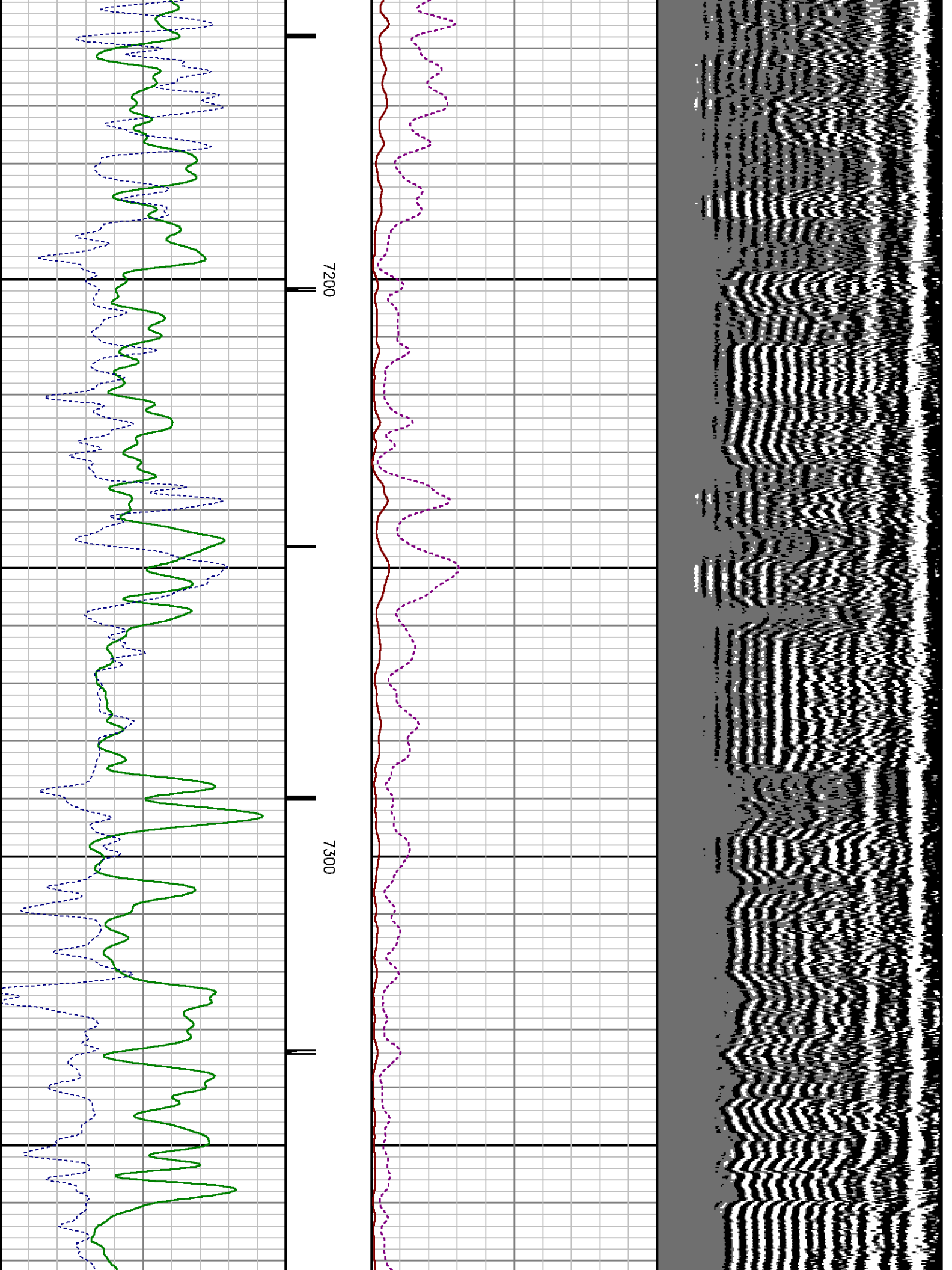




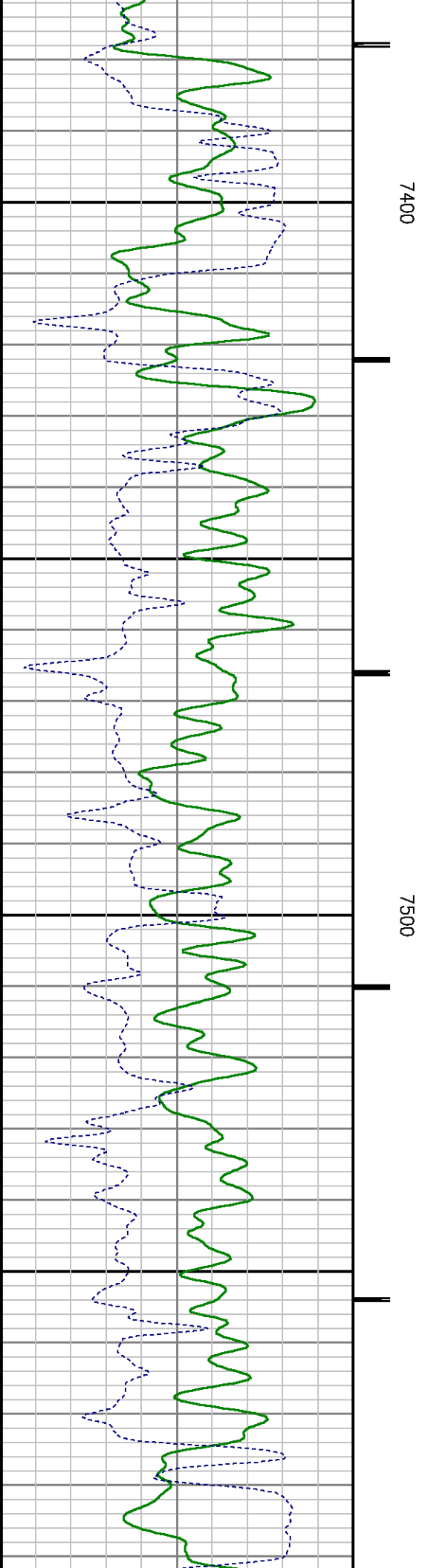
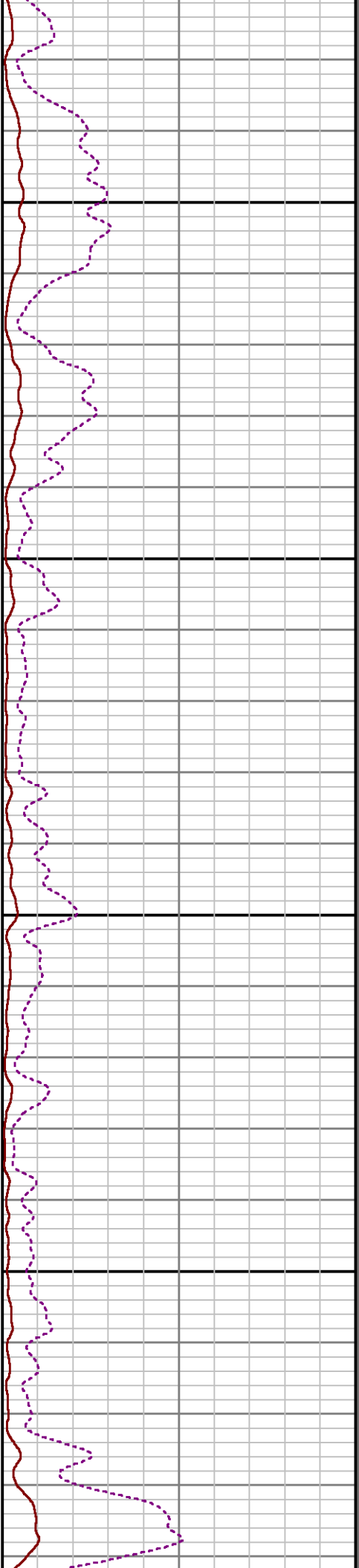
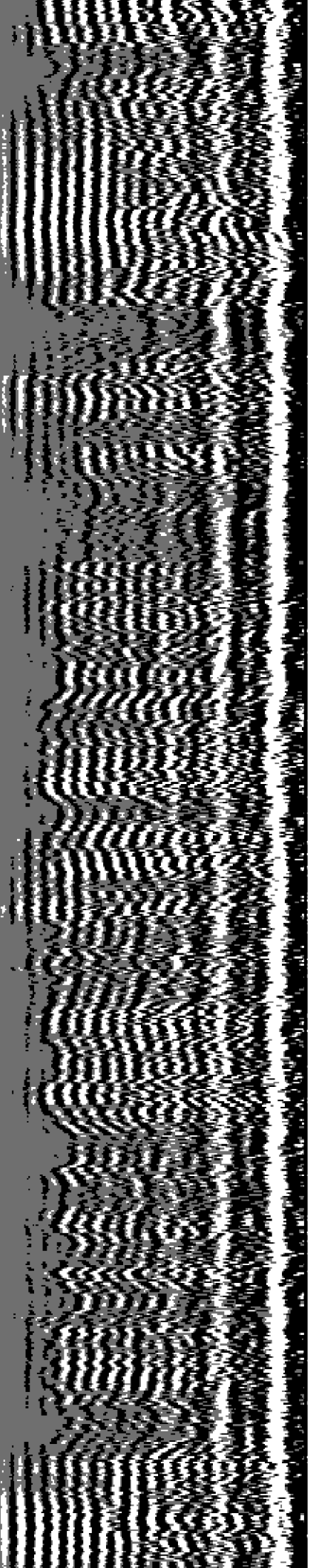


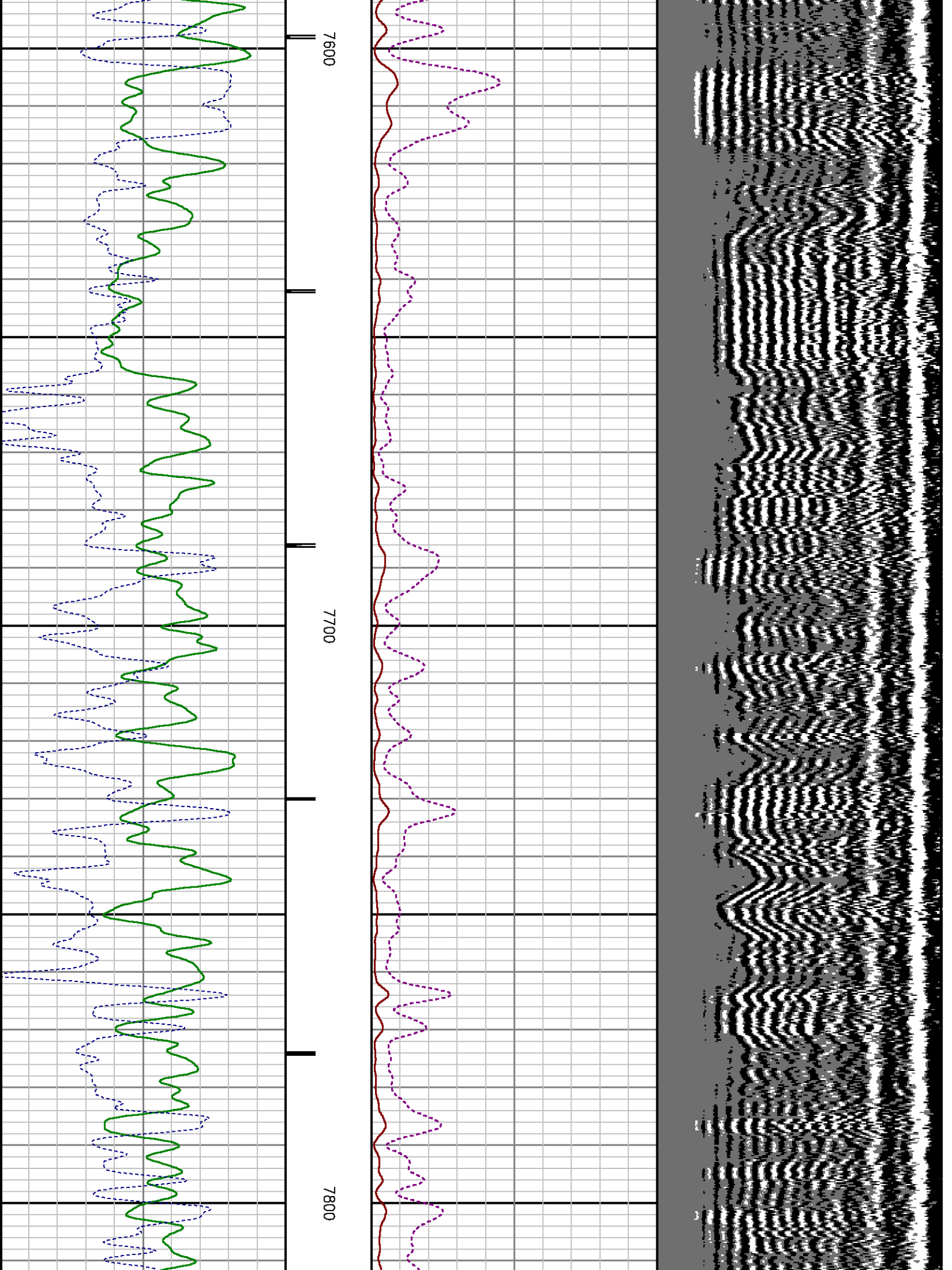


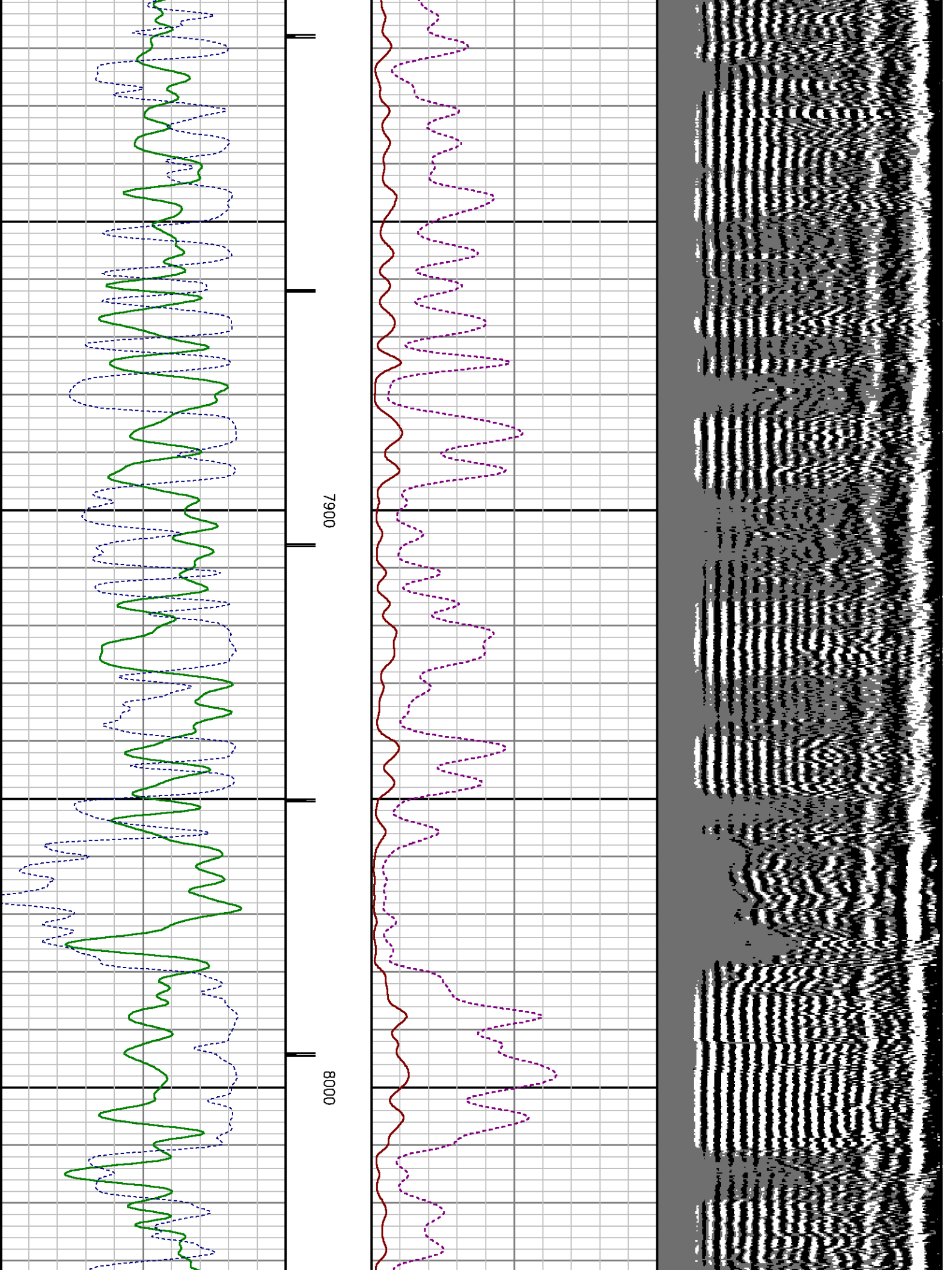


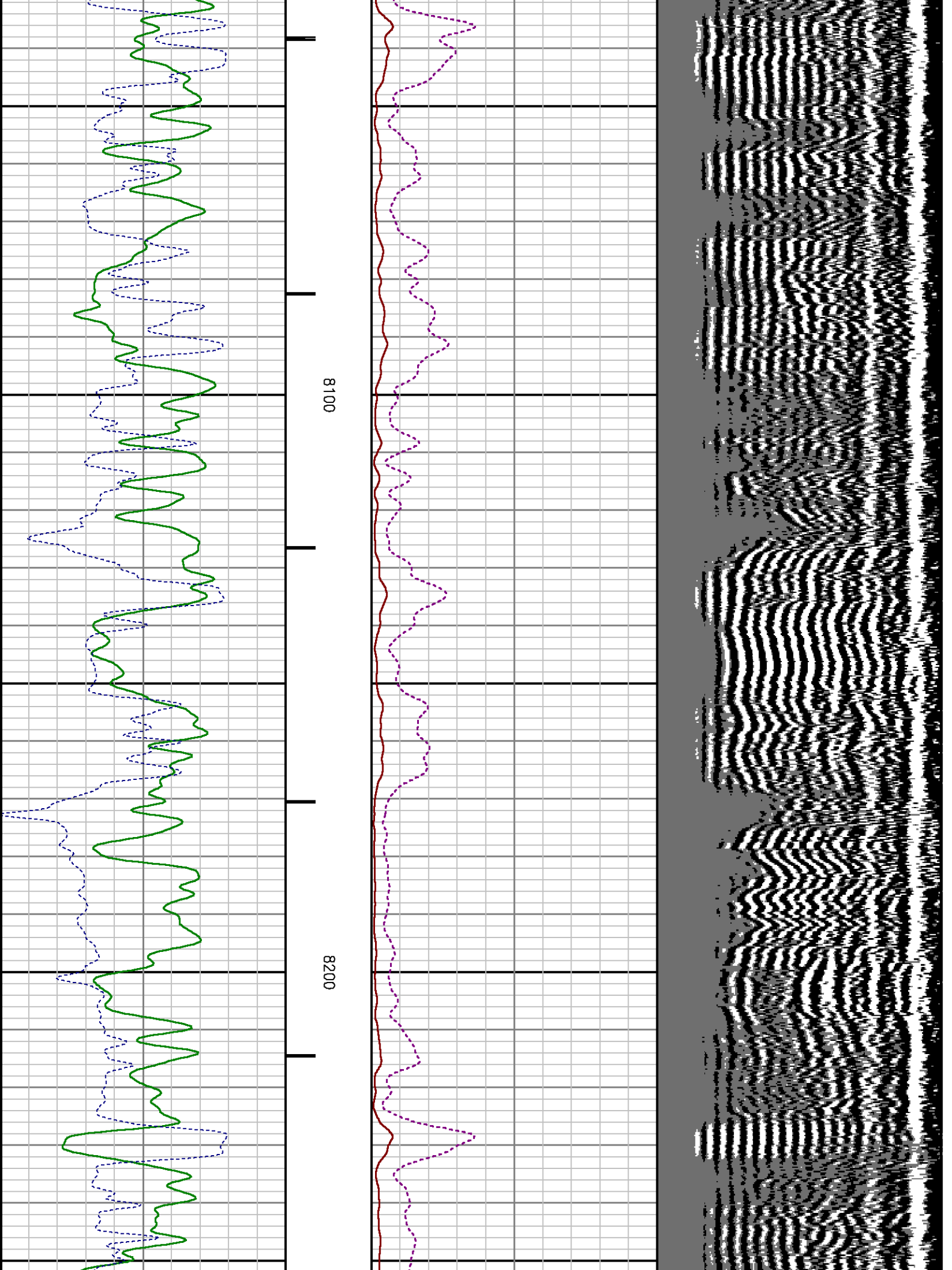


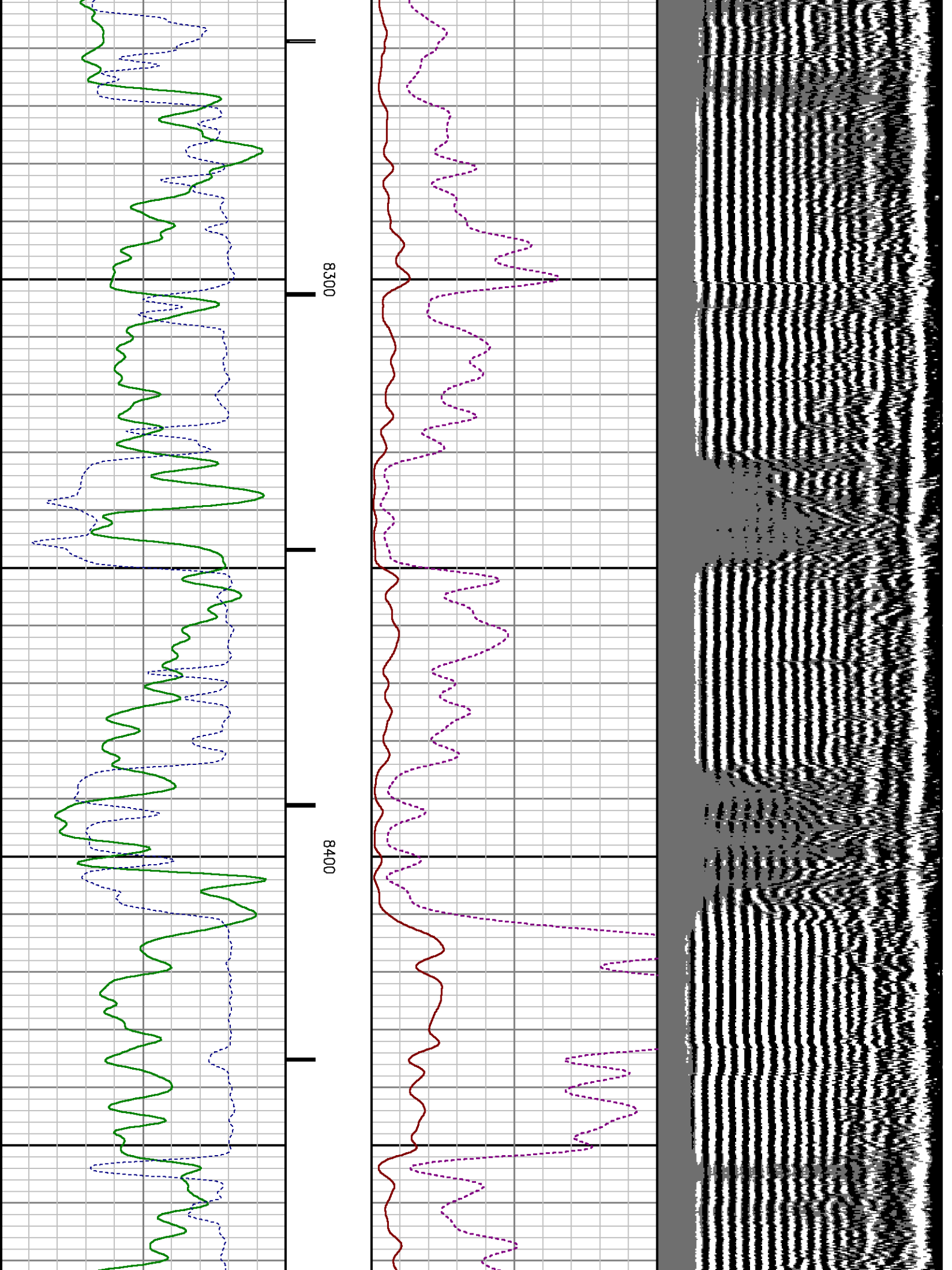




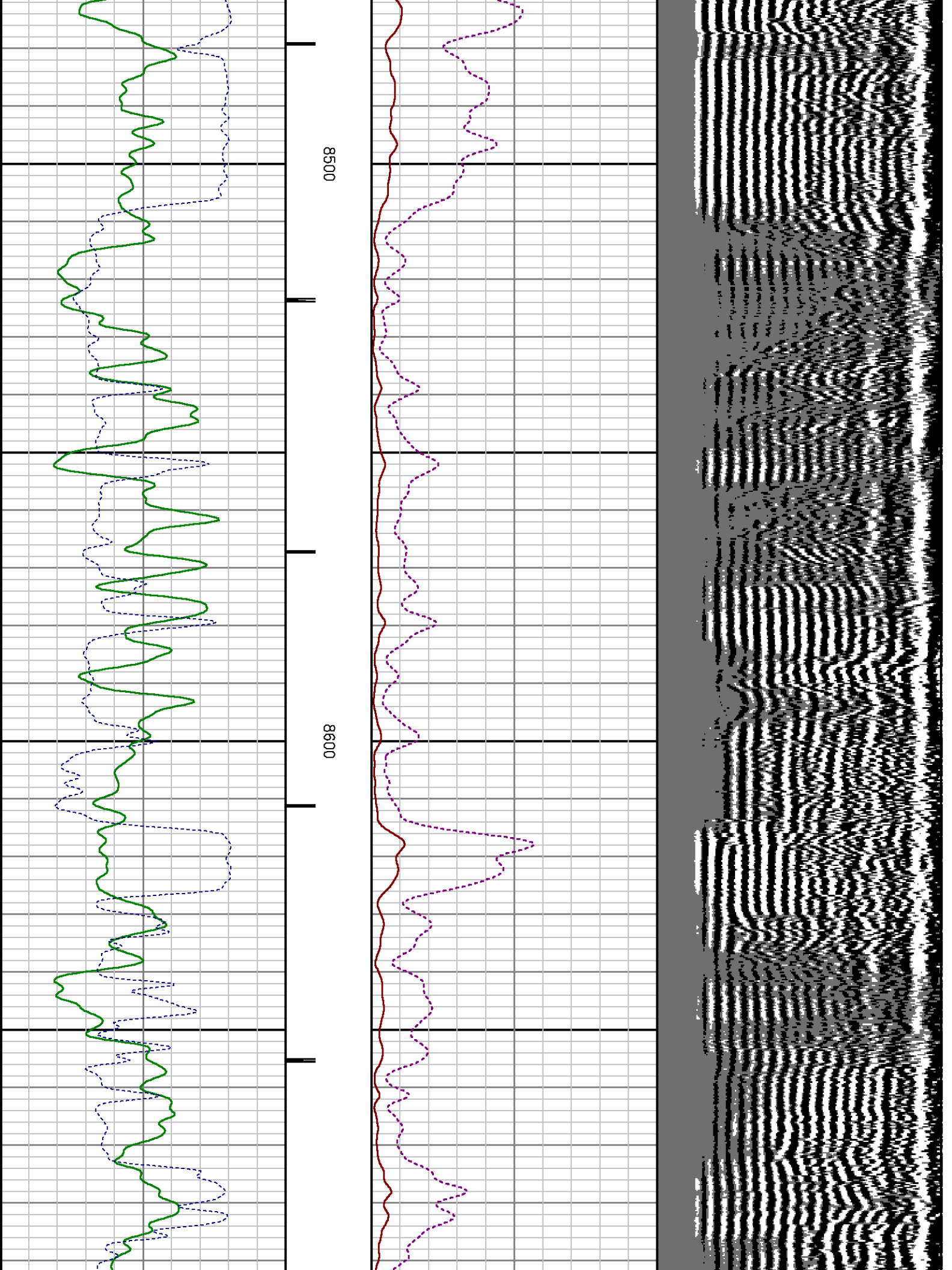




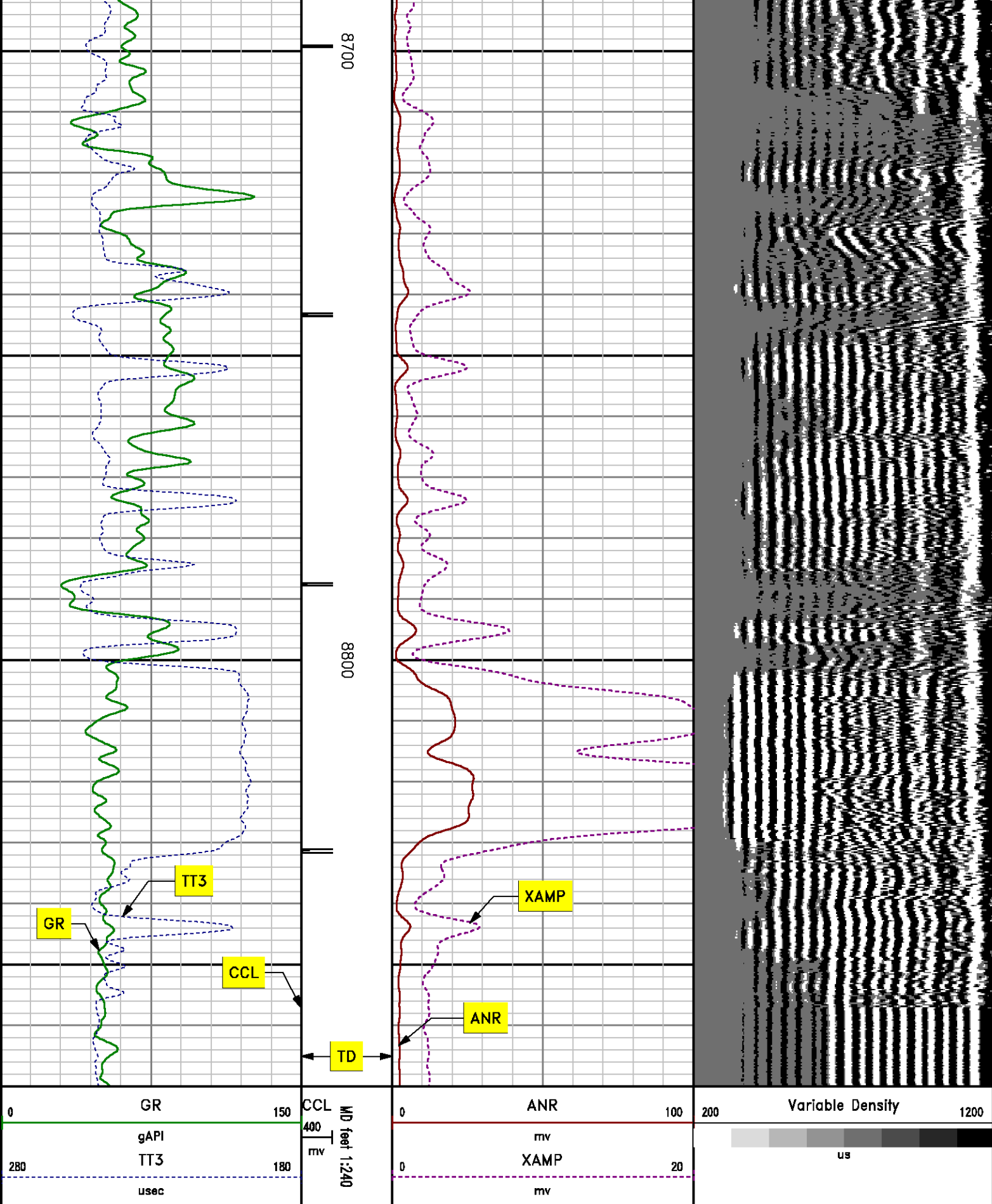












# MAIN LOG SECONDARY PRESENTATION

## 0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.434	usec	29.124	8891.000
RAL	Amp Gate Start Near	197.374	usec	29.124	8891.000
RAL	Amp Gate Start Radial	198.578	usec	29.124	8891.000
RAL	Amp Gate Width Far	25.000	usec	29.124	8891.000
RAL	Amp Gate Width Near	25.000	usec	29.124	8891.000
RAL	Amp Gate Width Radial	25.000	usec	29.124	8891.000
RAL	casing od	4.500	inches	29.124	8891.000
RAL	casing wt	11.600	lbm/ft	29.124	8891.000
RAL	FB Start Far	291.900	usec	29.124	8891.000
RAL	FB Start Near	175.391	usec	29.124	8891.000
RAL	FB Start Radial	175.391	usec	29.124	8891.000
RAL	FB Thresh Far	10.000	mv	29.124	8891.000
RAL	FB Thresh Near	4.000	mv	29.124	8891.000
RAL	FB Thresh Radial	4.000	mv	29.124	8891.000
RAL	Fluid Travel Time	200.000	usec/ft	29.124	8890.968

### 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					

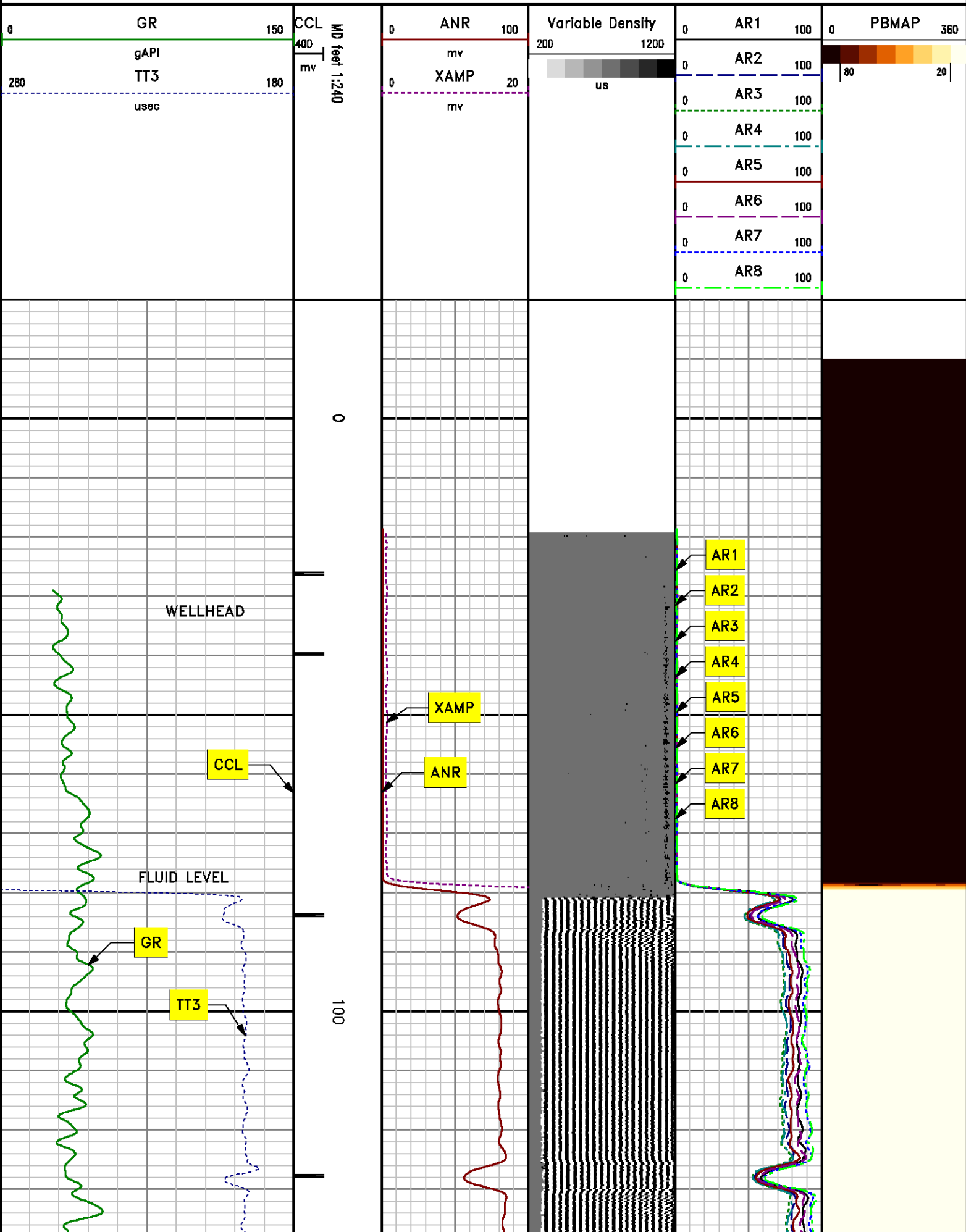
Created by : RAL, v4.8.008

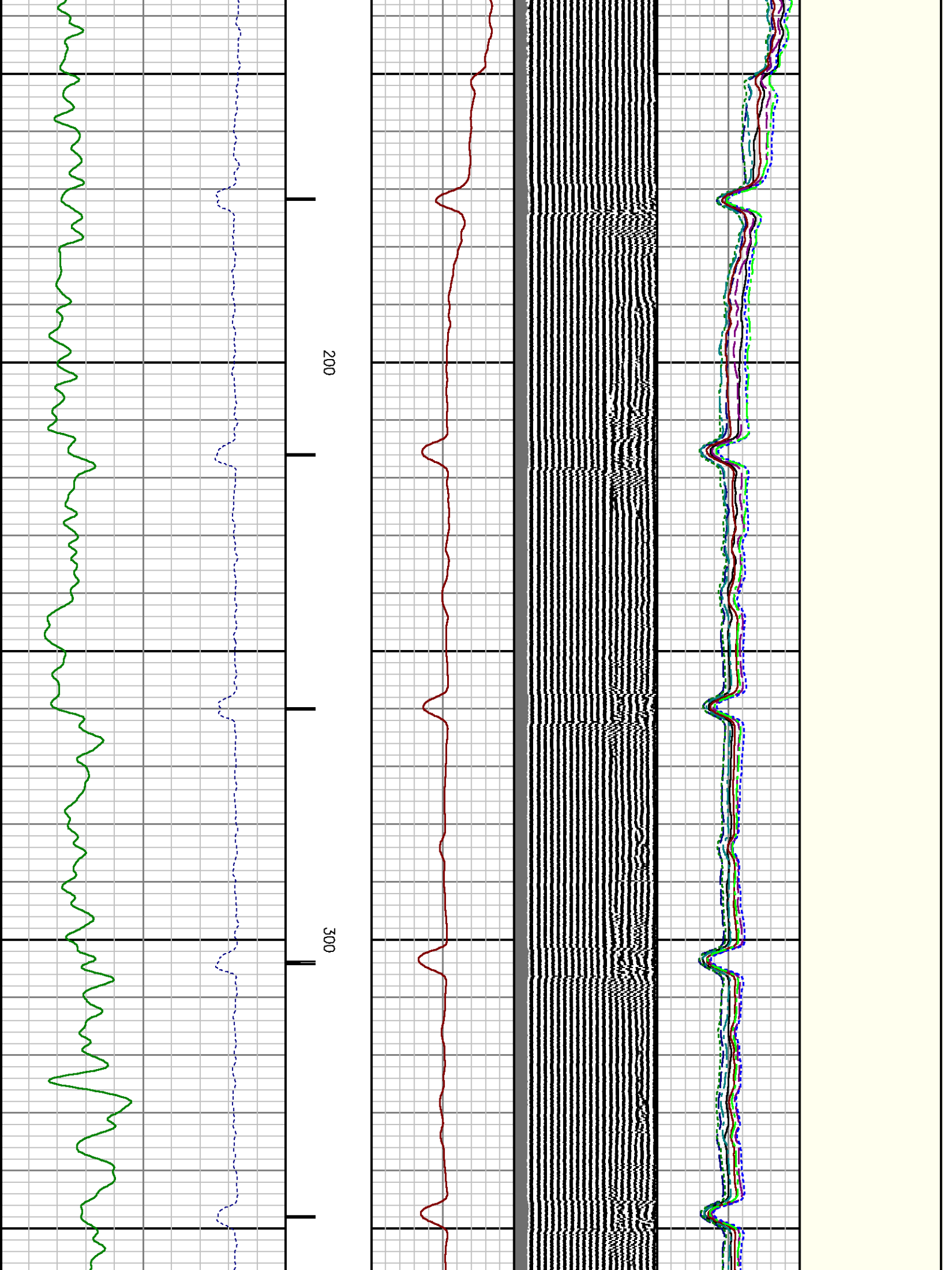
Plotted by : PlotMgr, v5.4.504

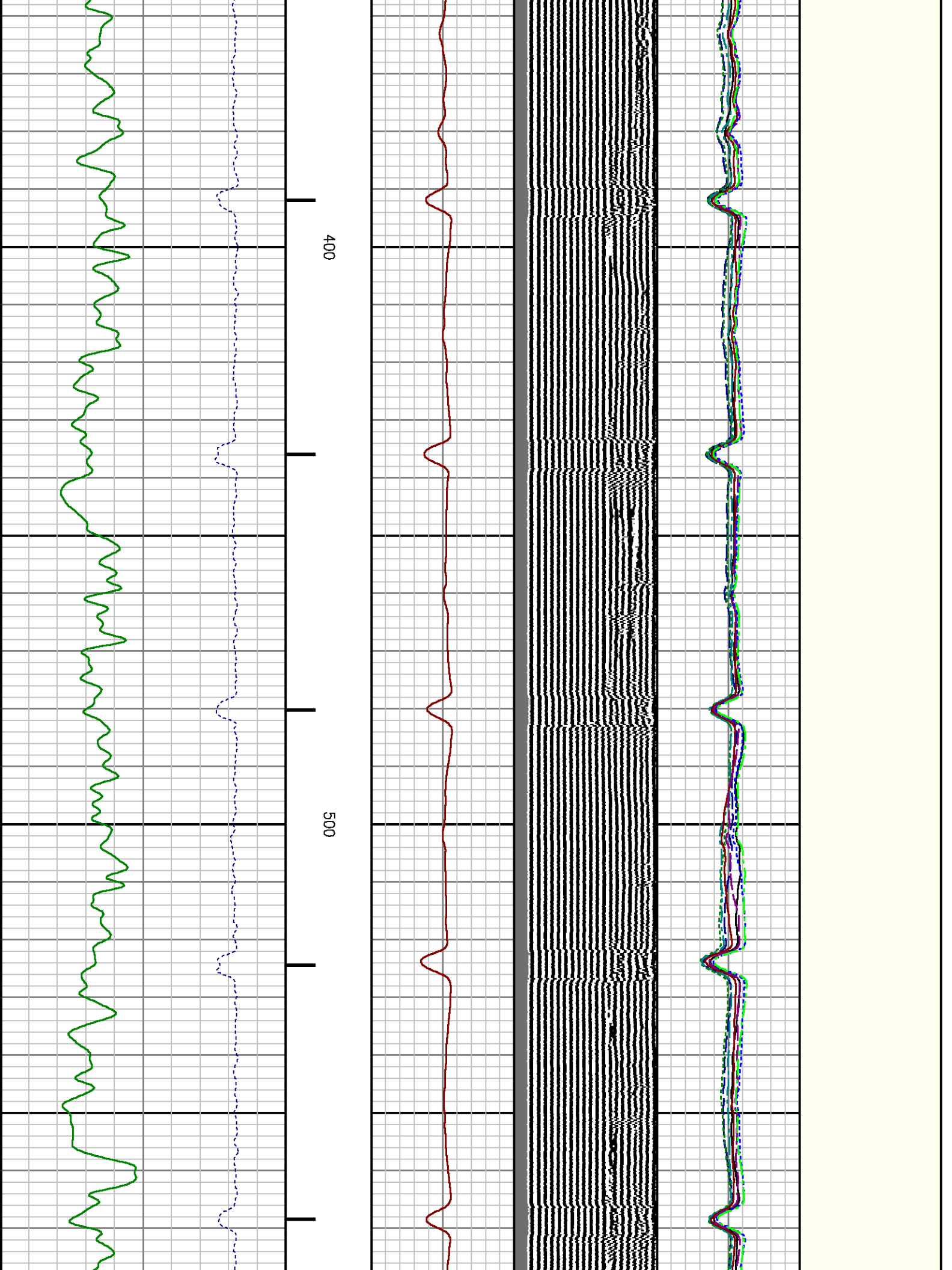
Company : WPX ENERGY

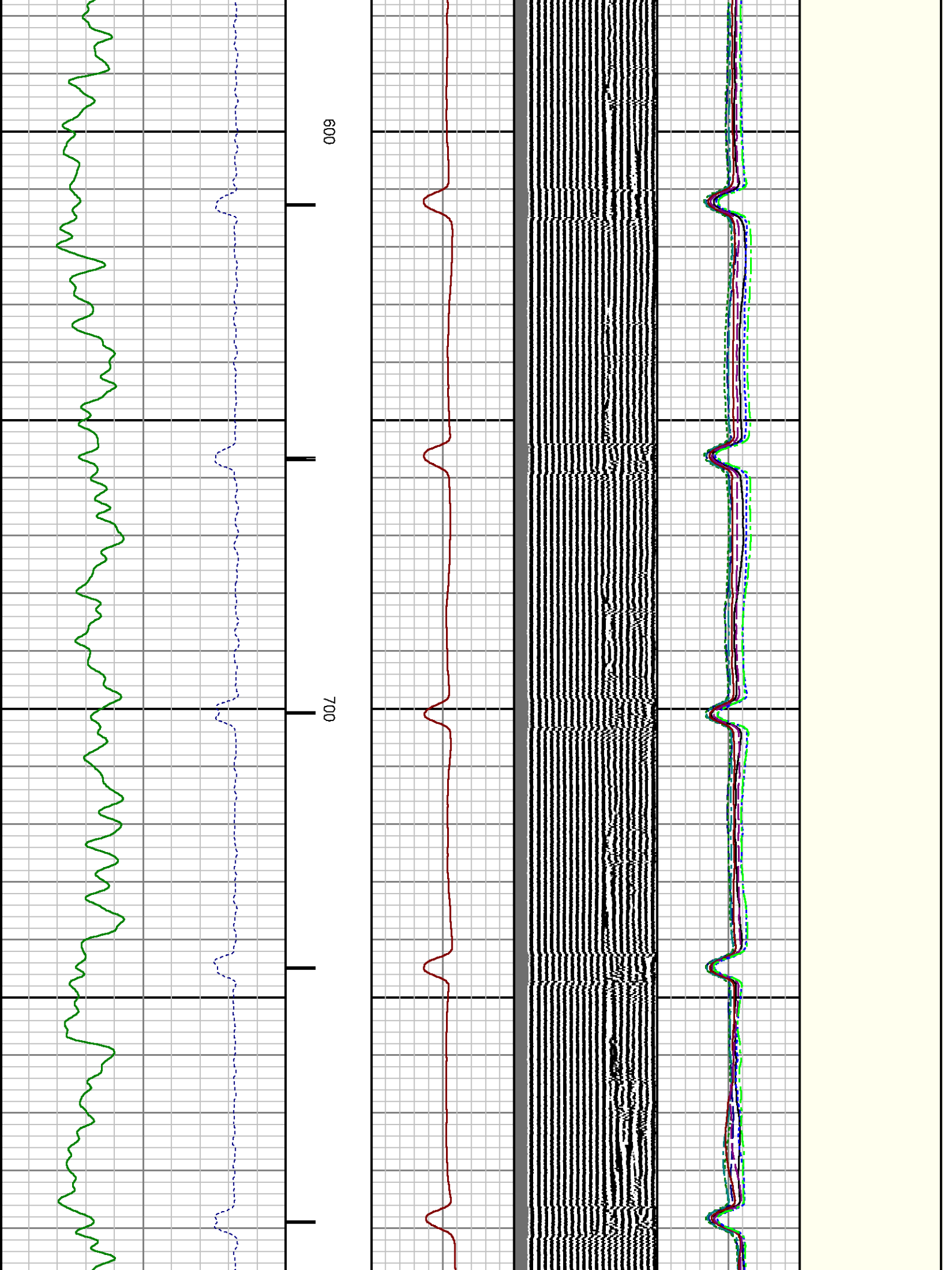
Well : HOEPPLI RWF 333-36

File Name : d:\welldata\cb1333\main.xtf

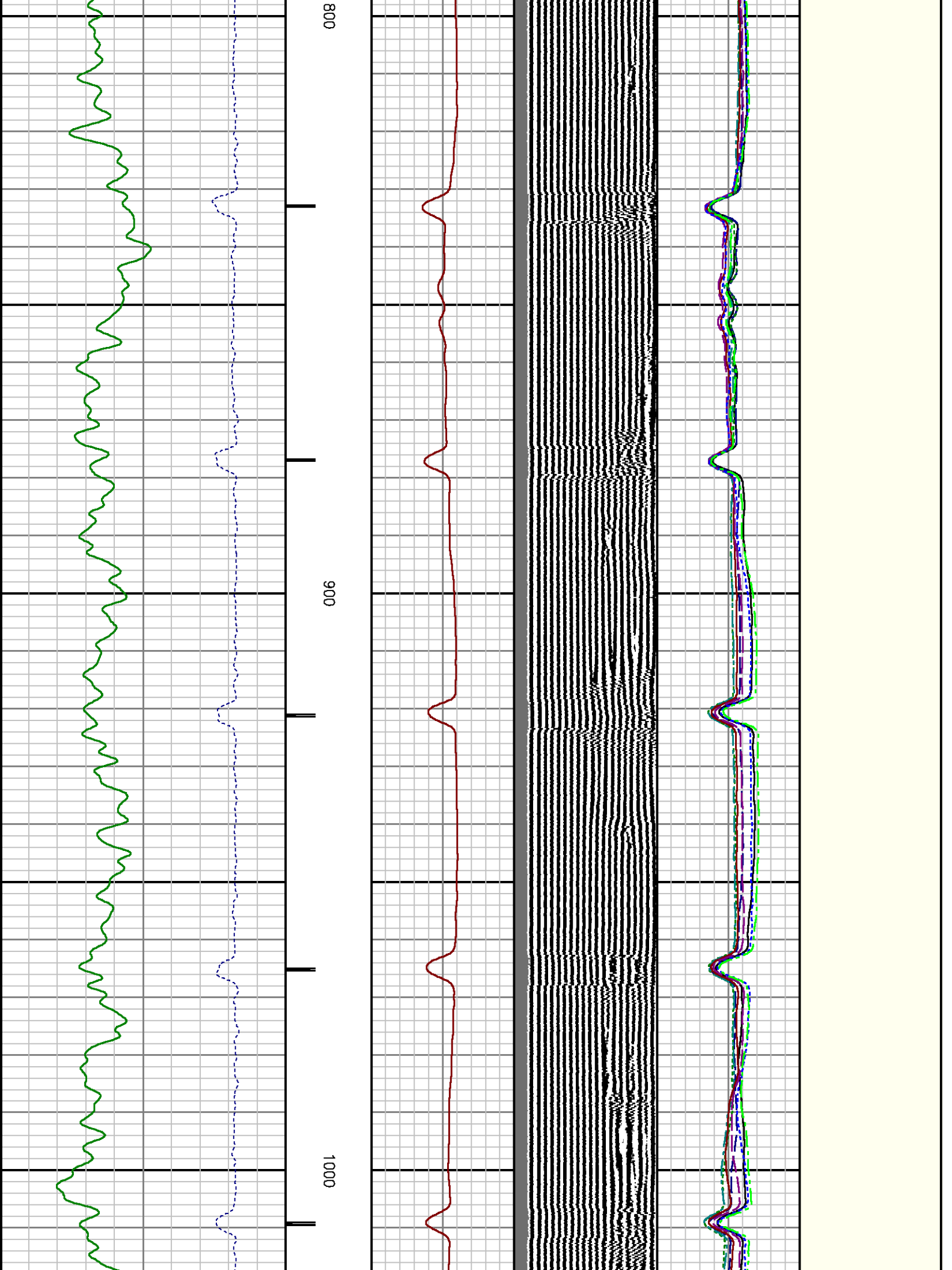


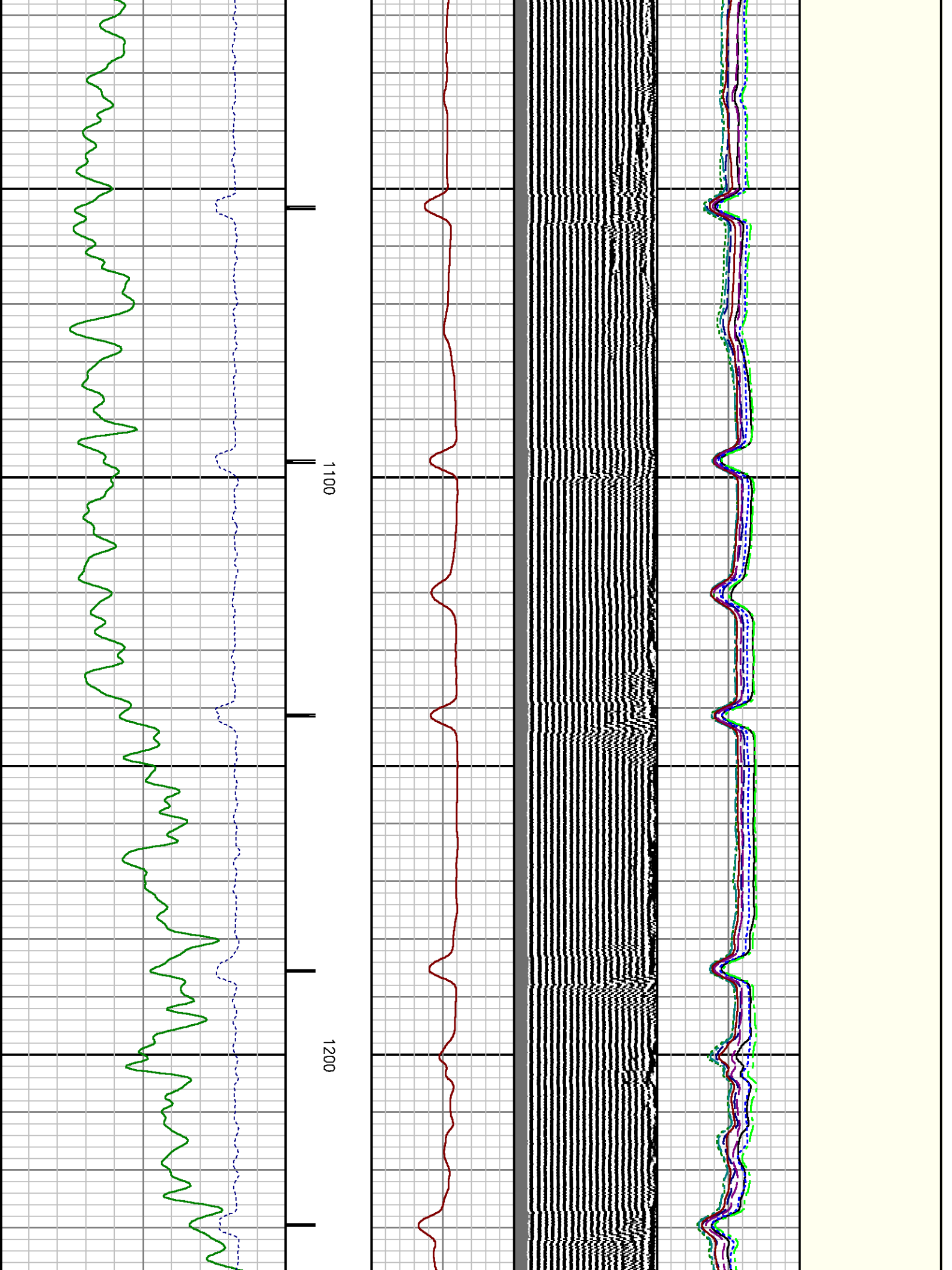


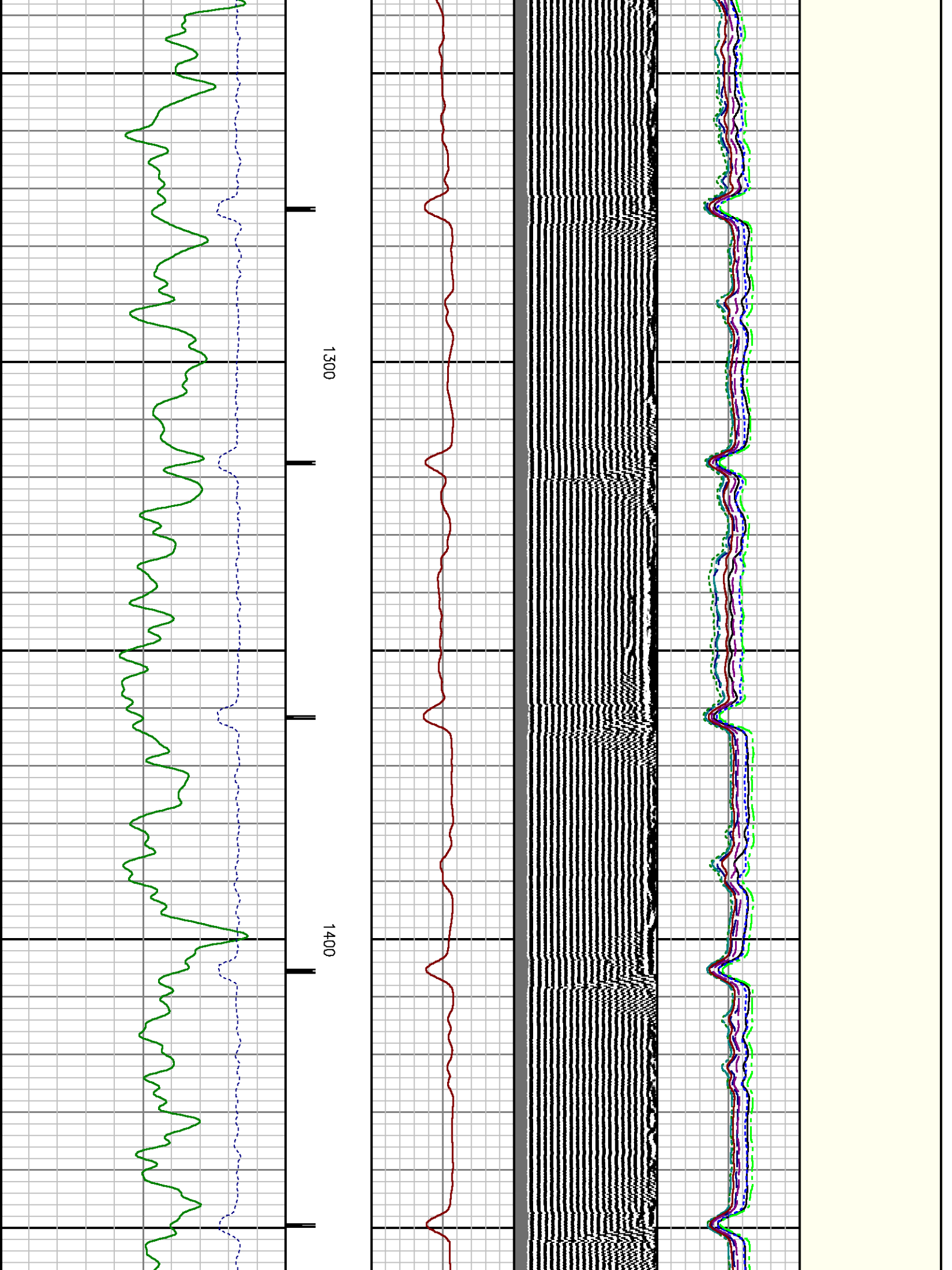


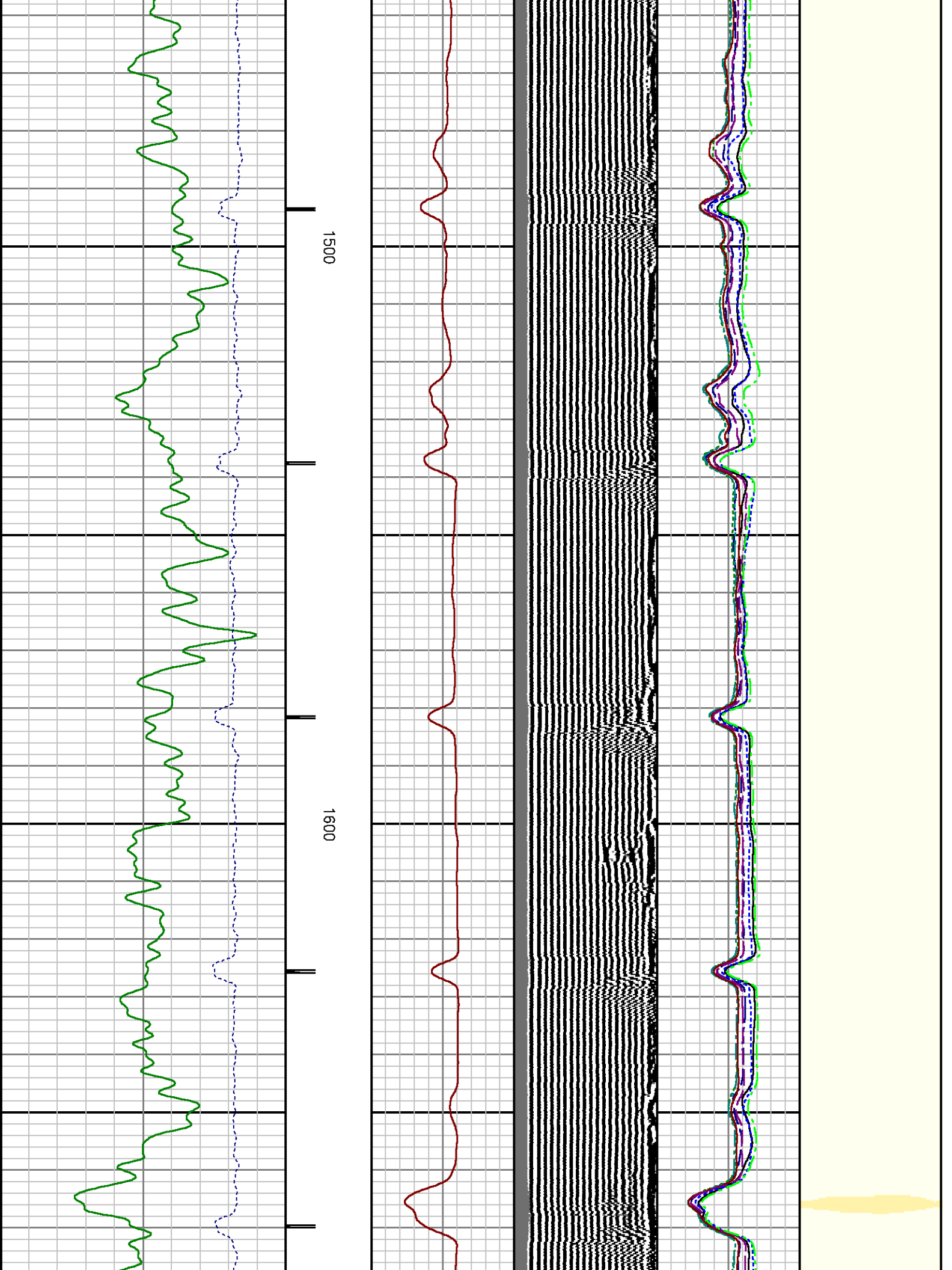


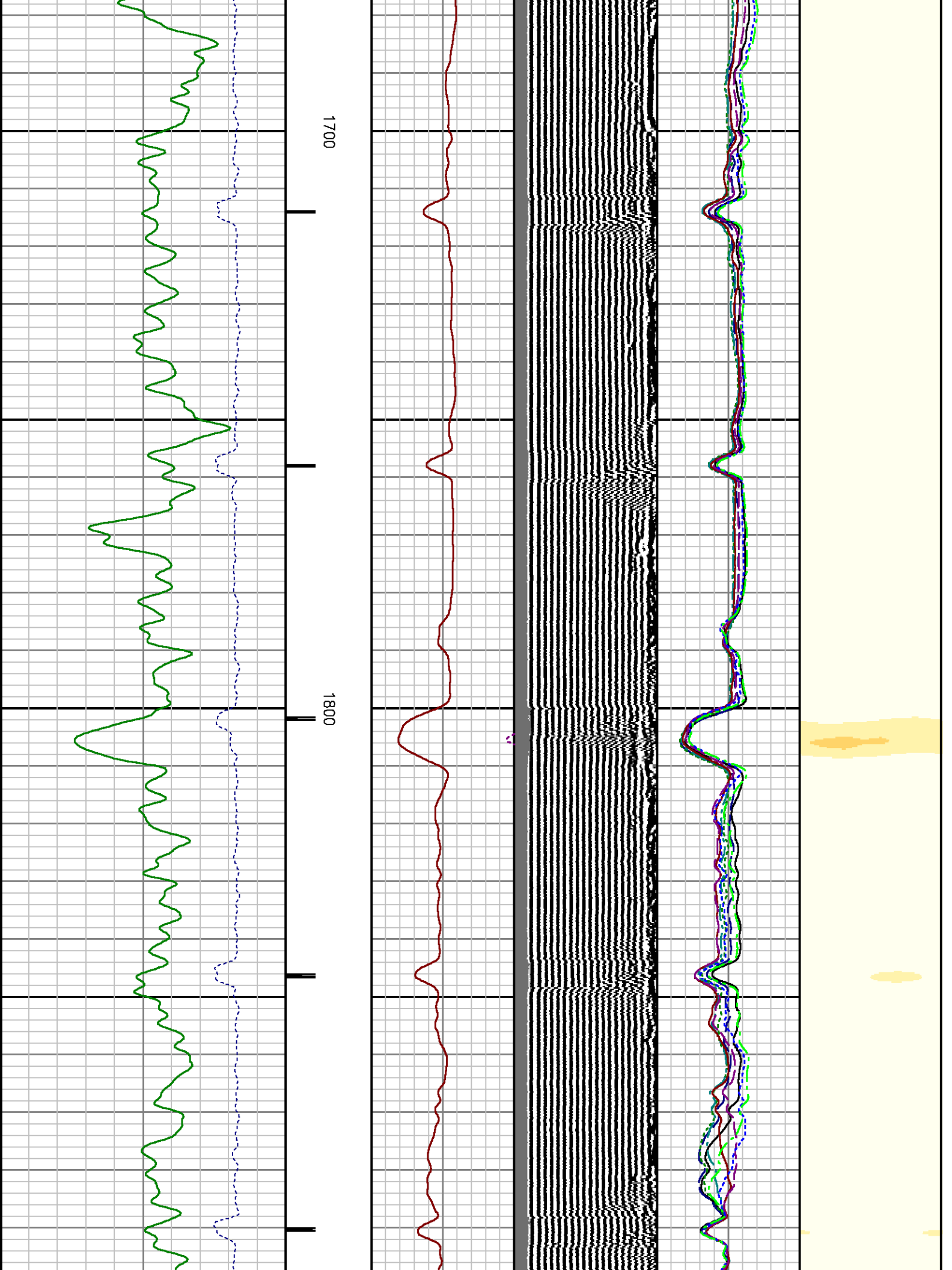


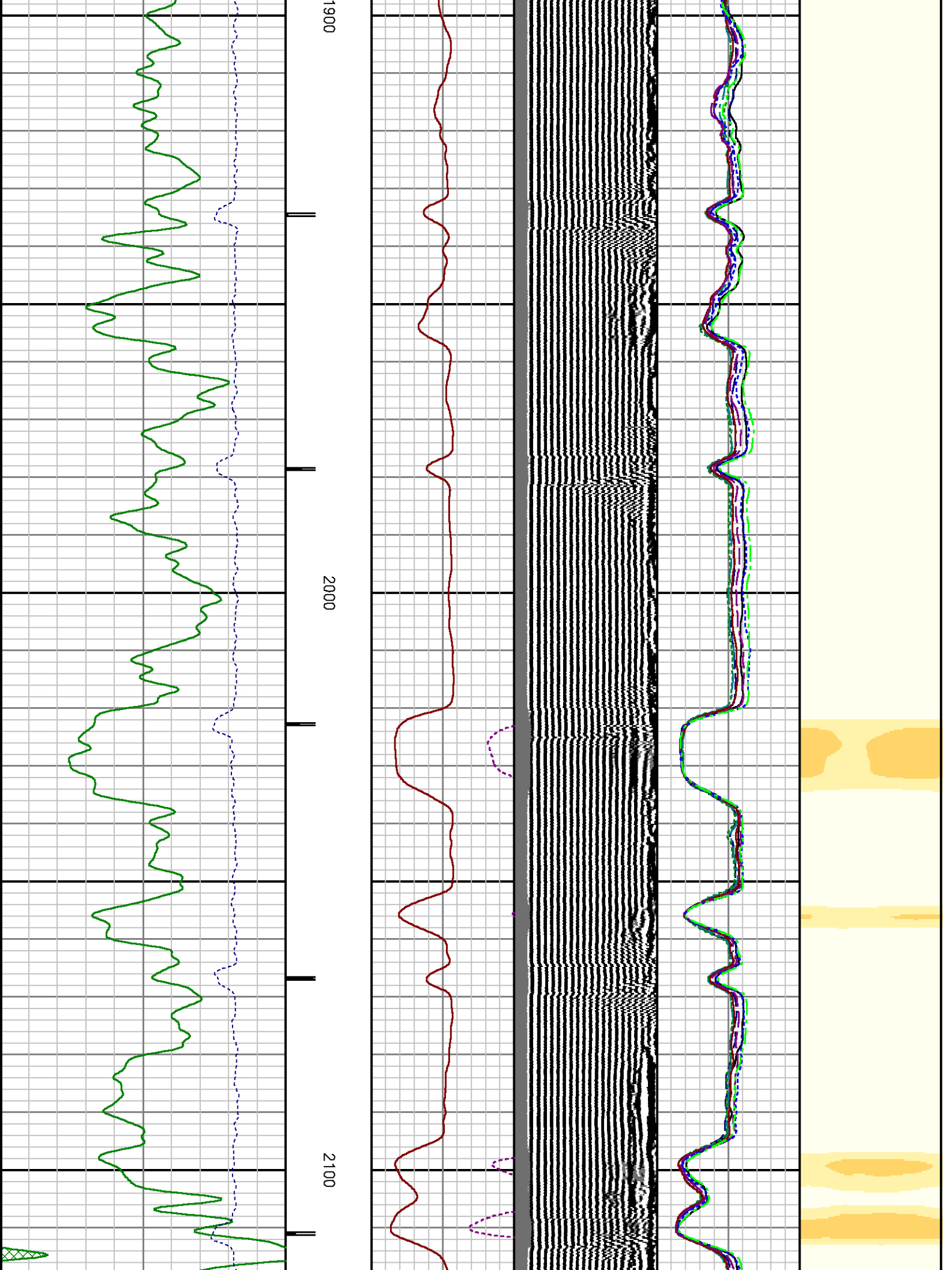




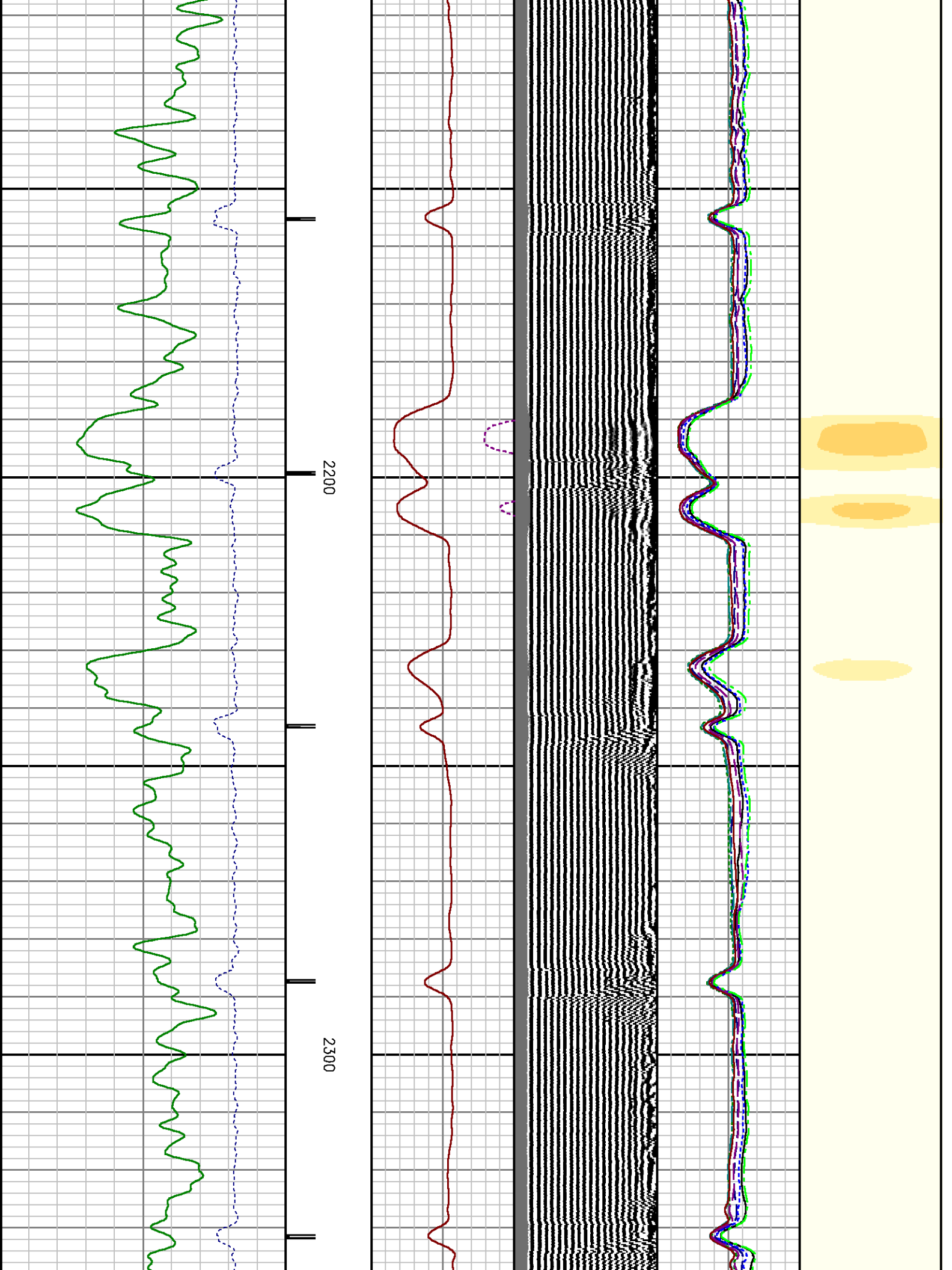


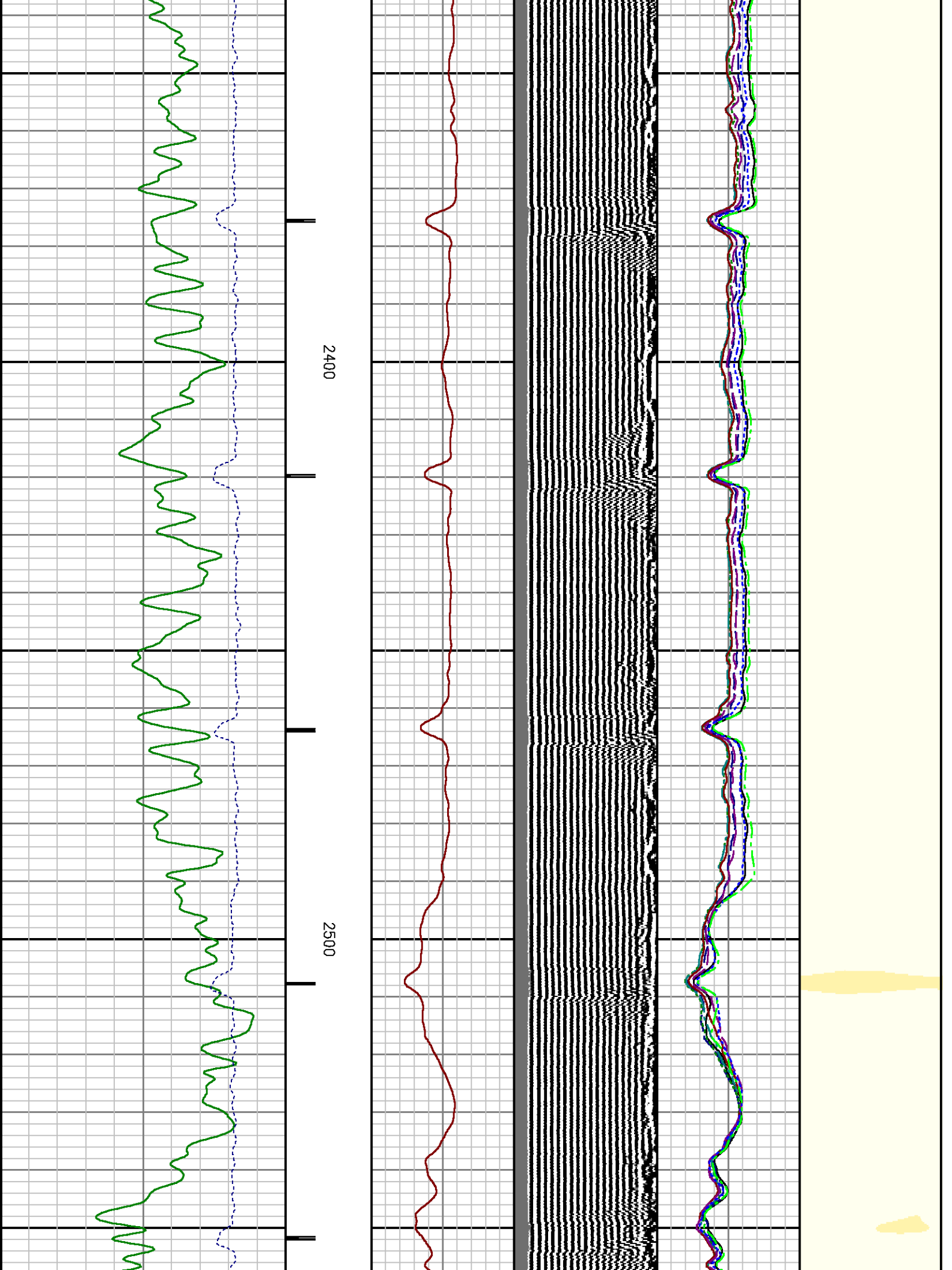


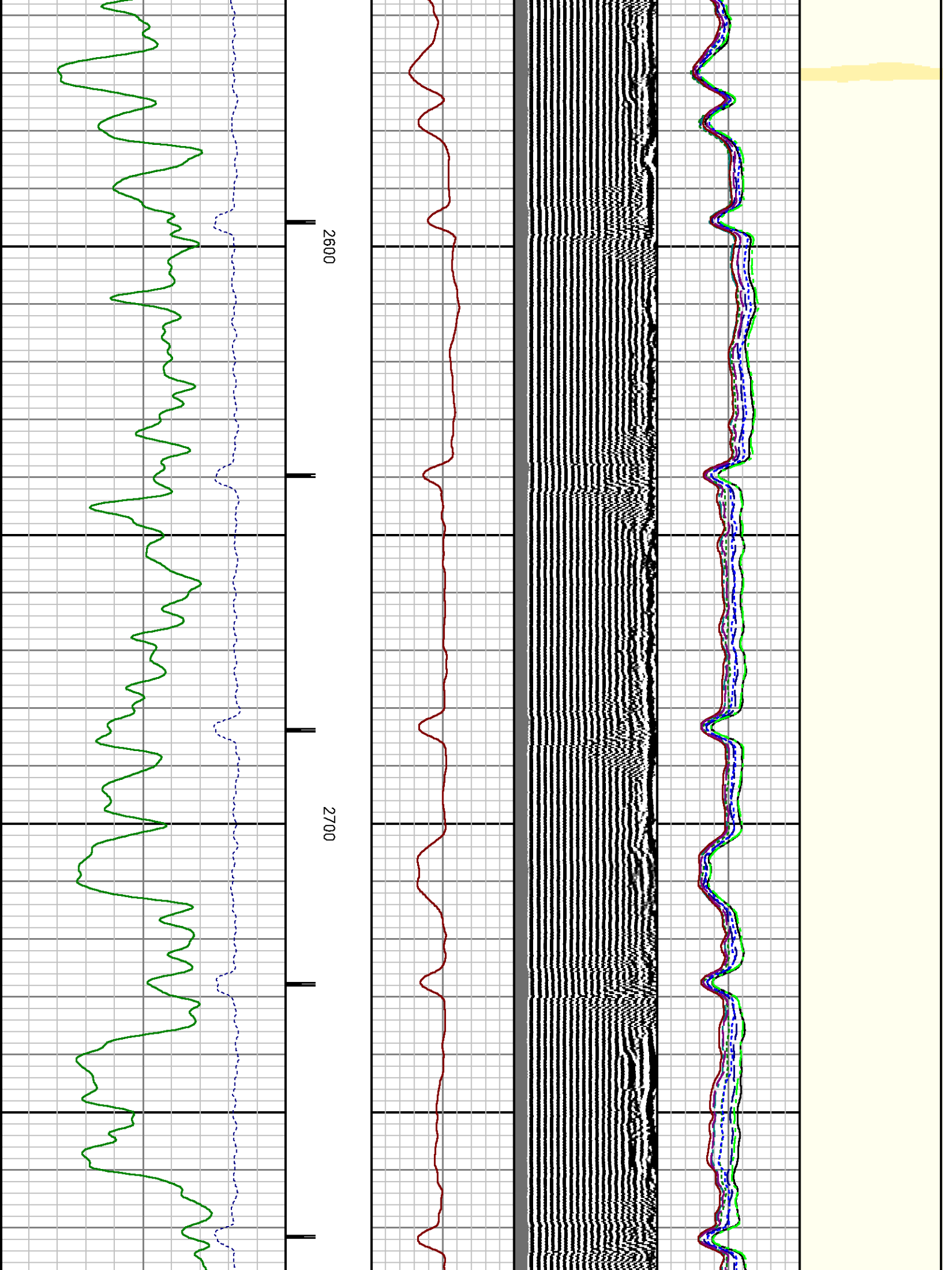


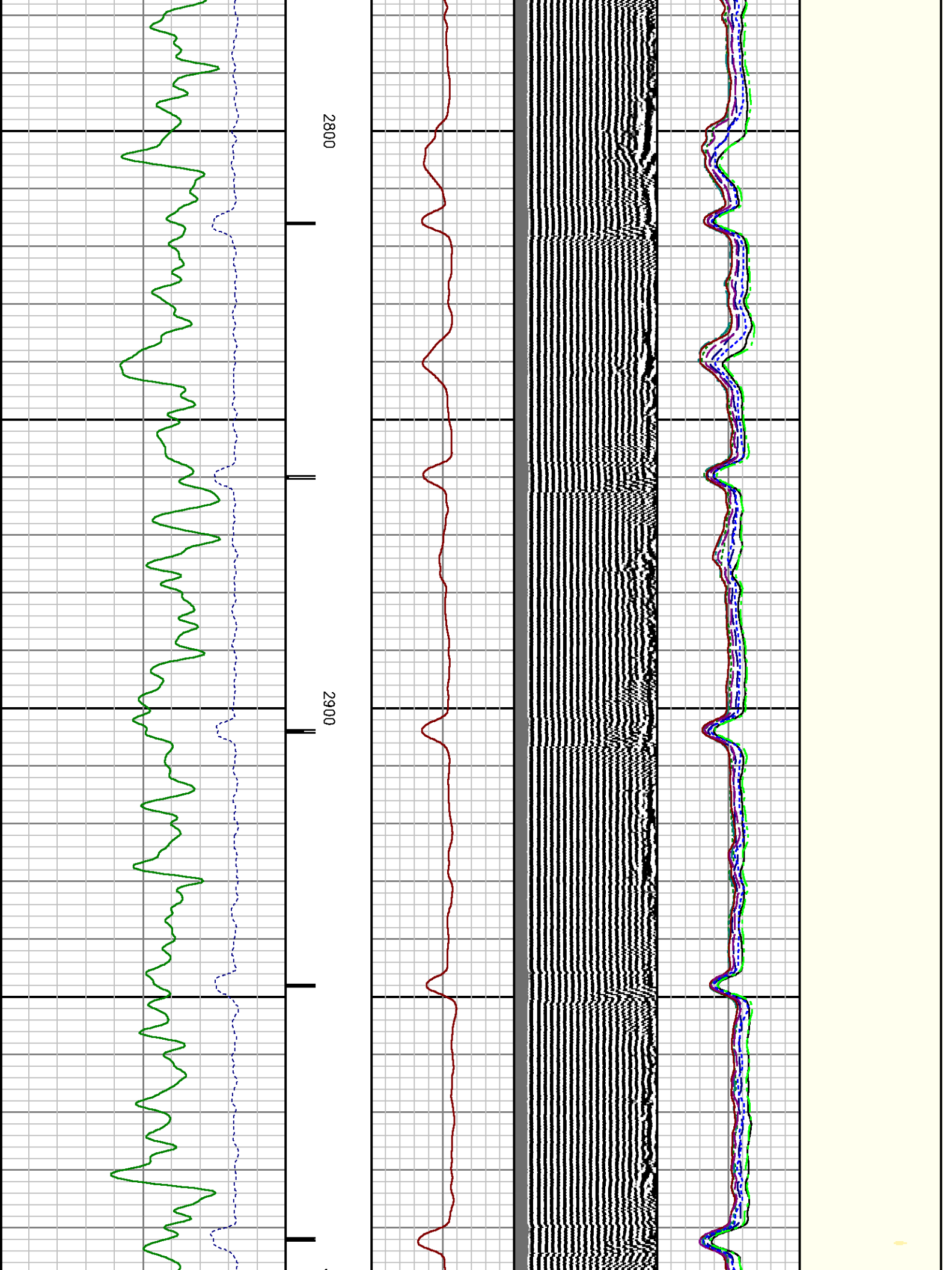


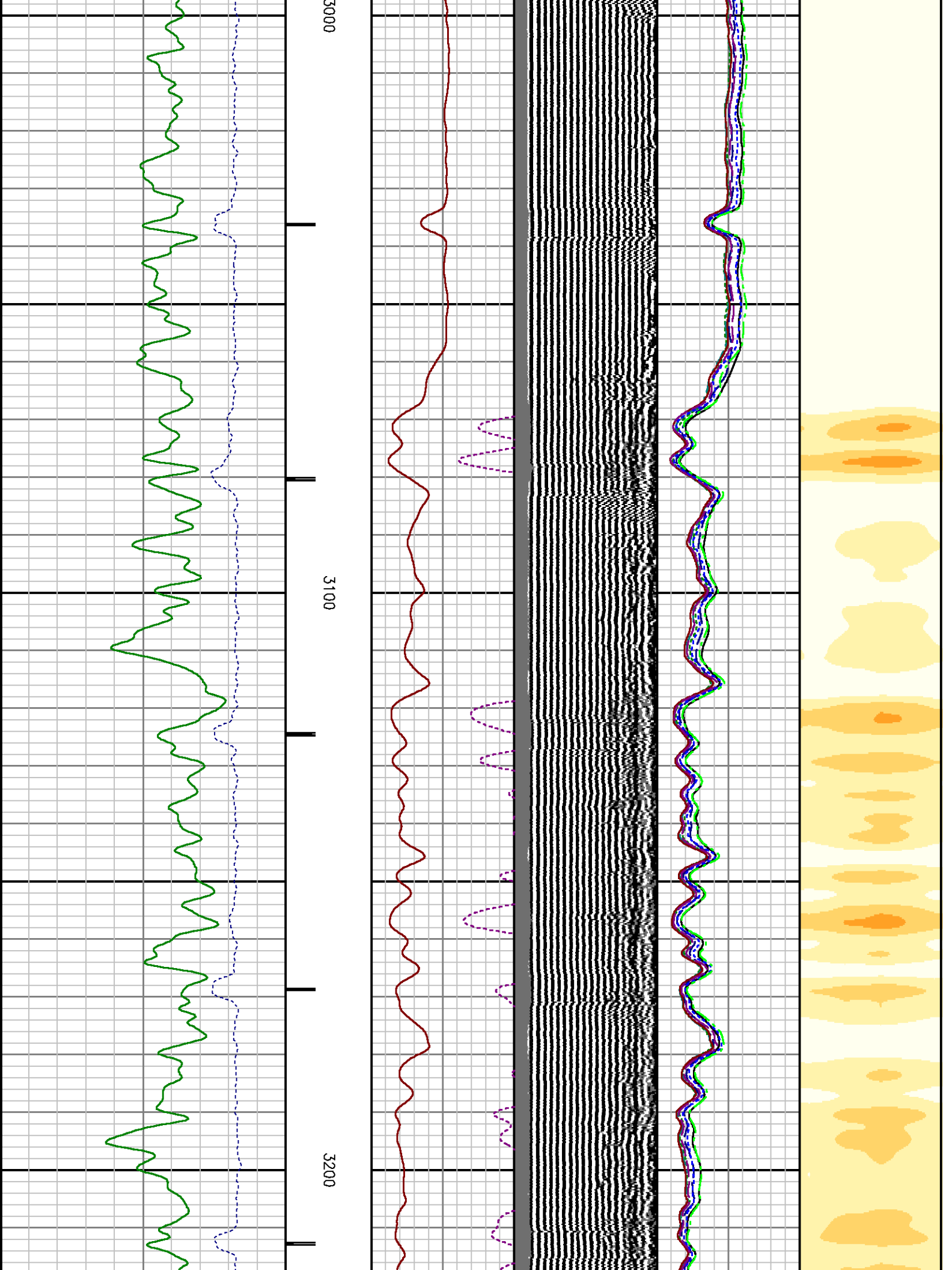


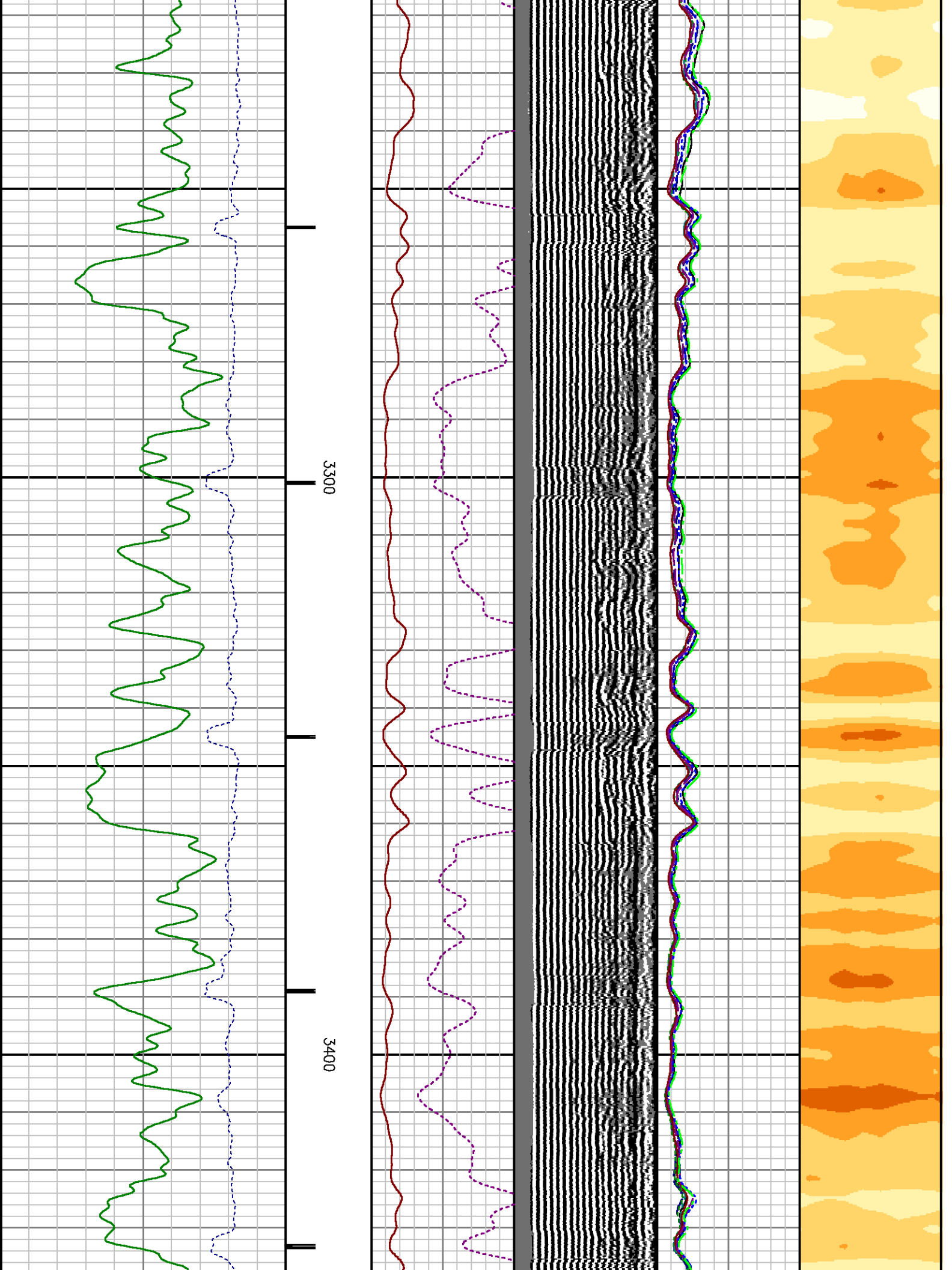




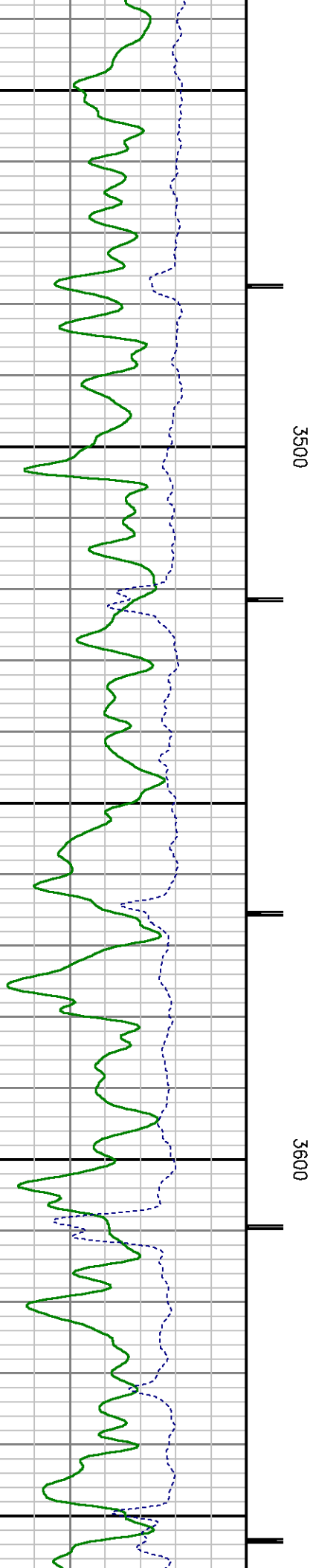
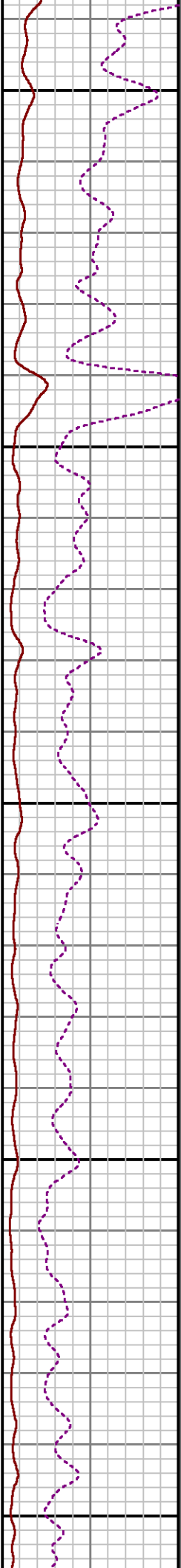
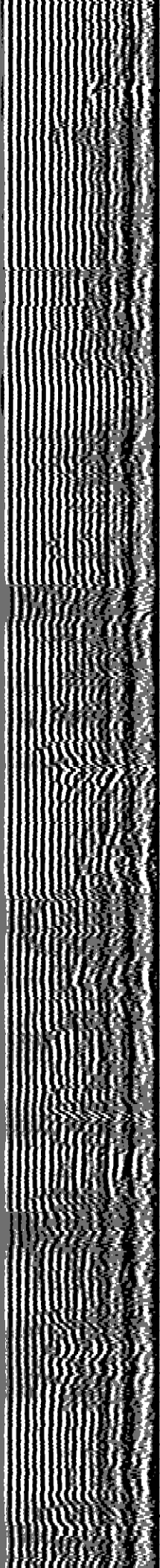
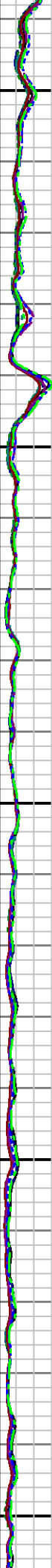
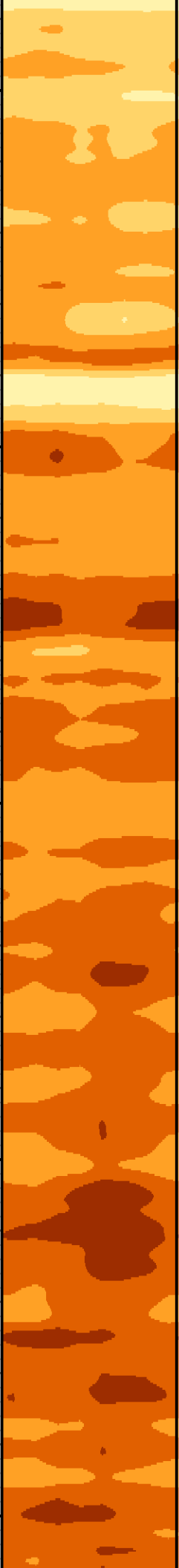


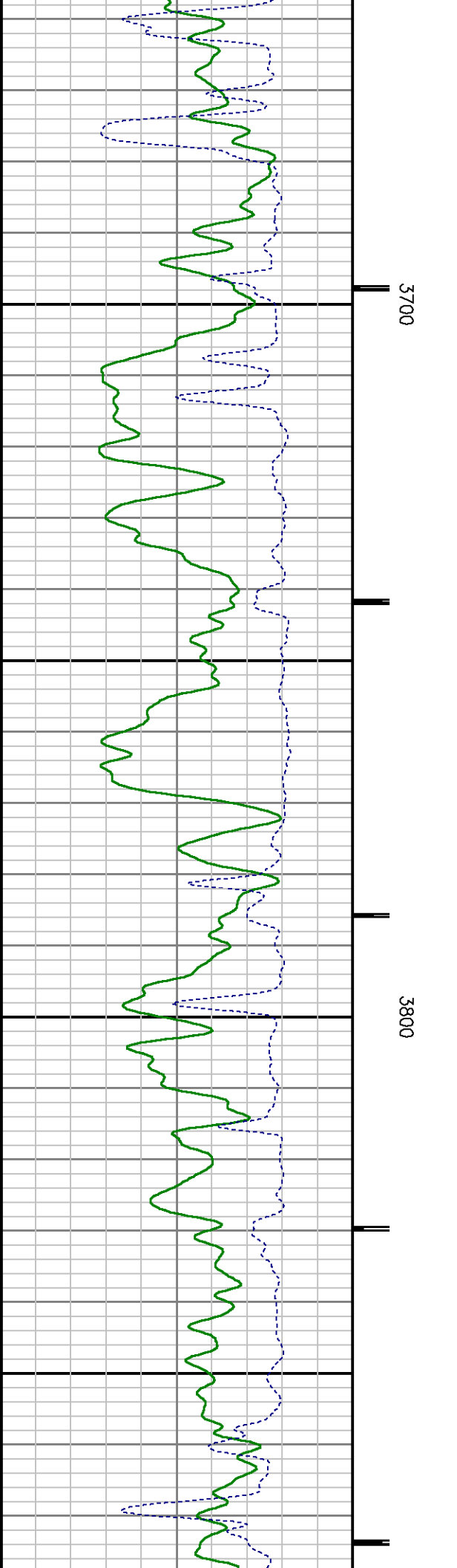
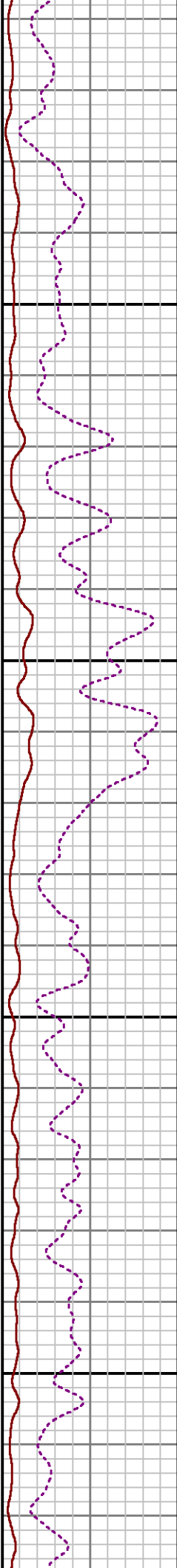
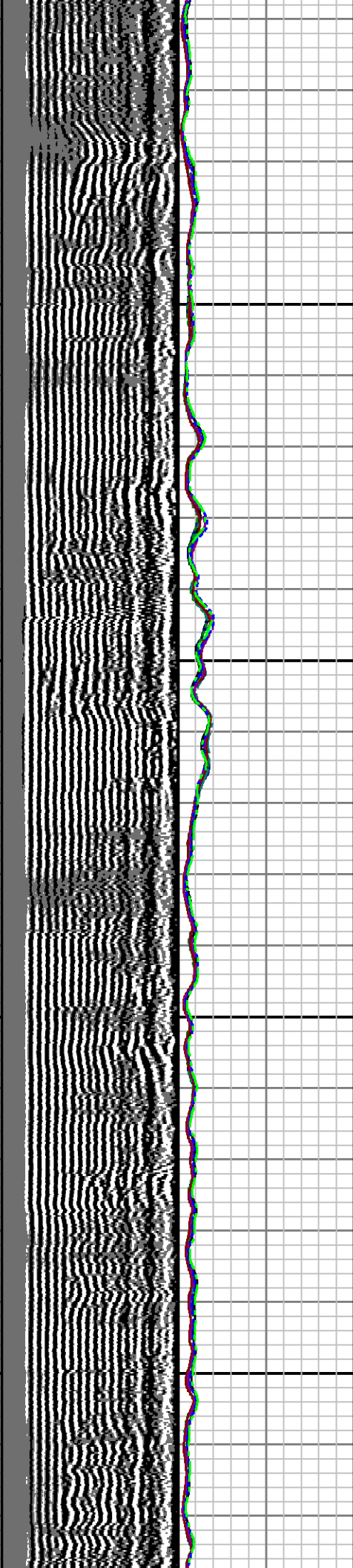


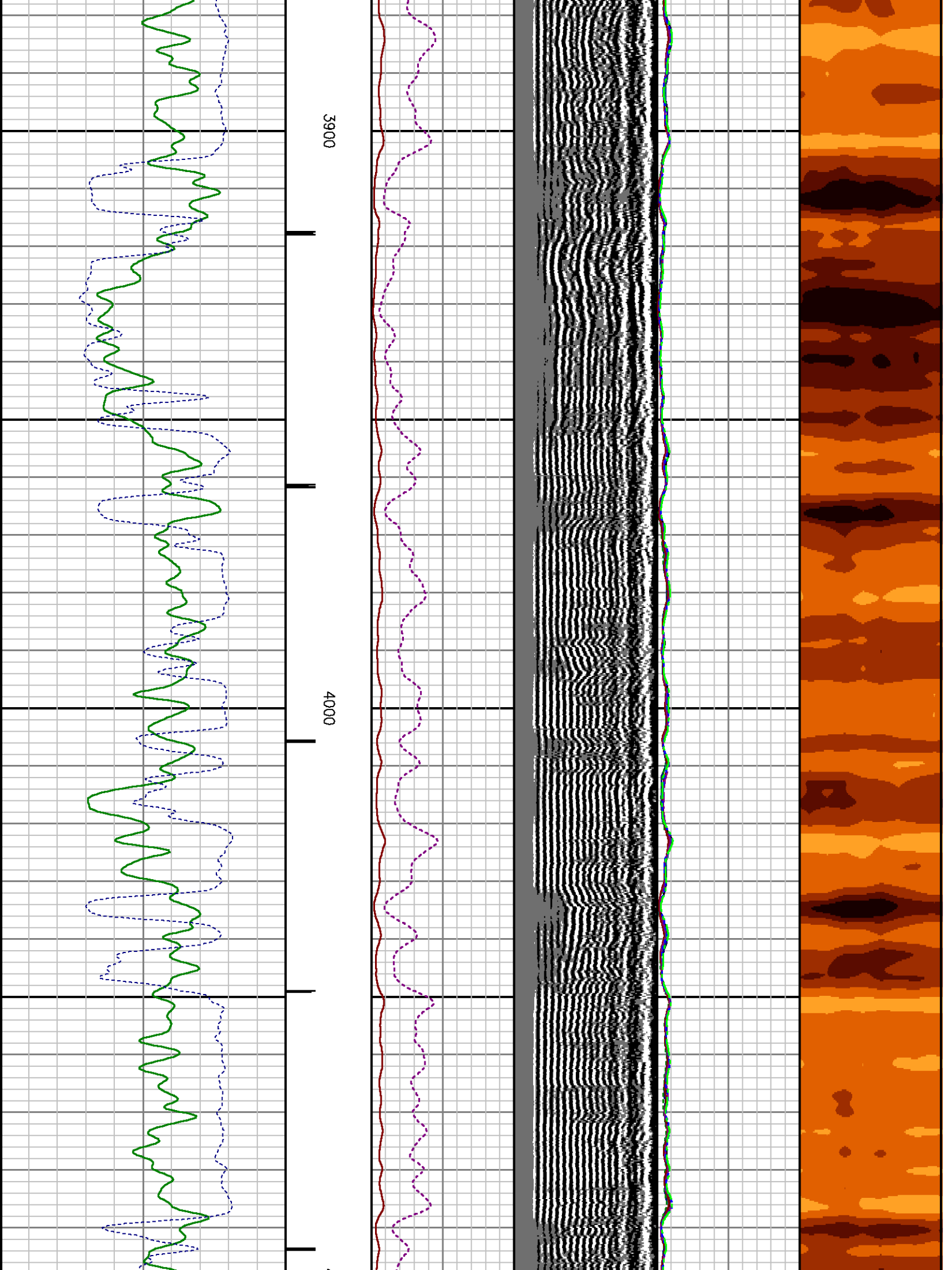


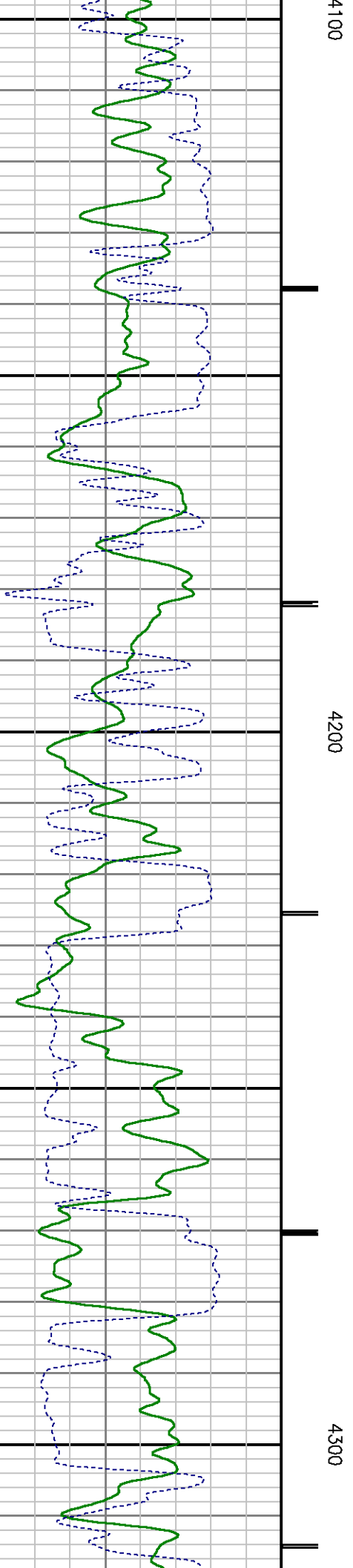
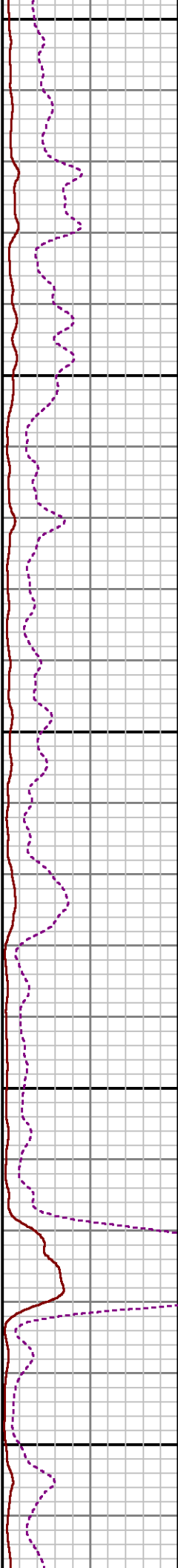
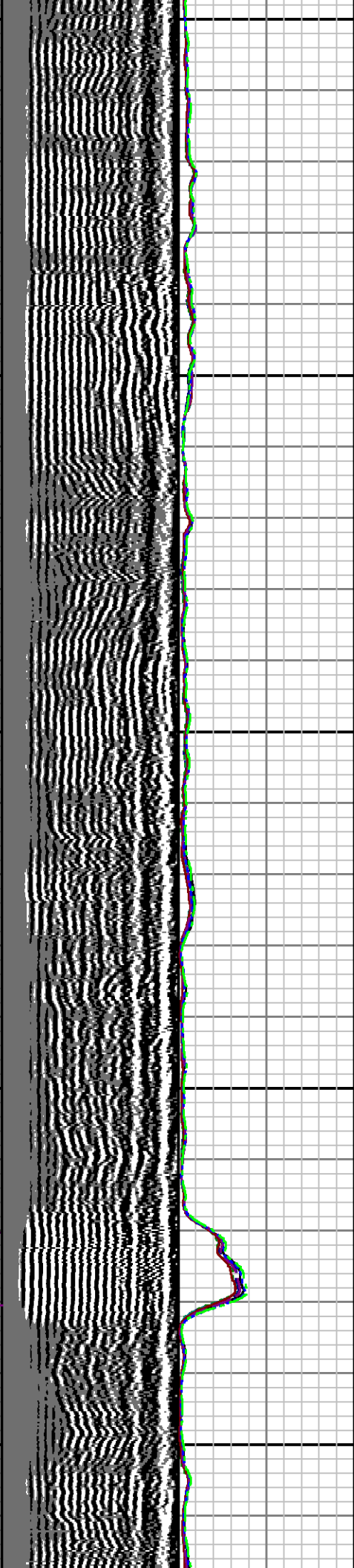
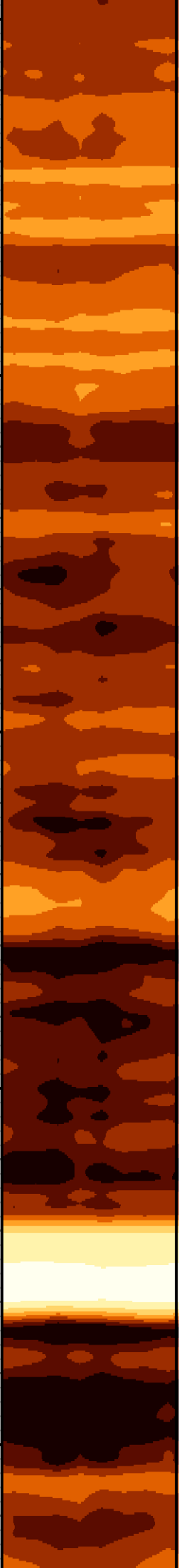


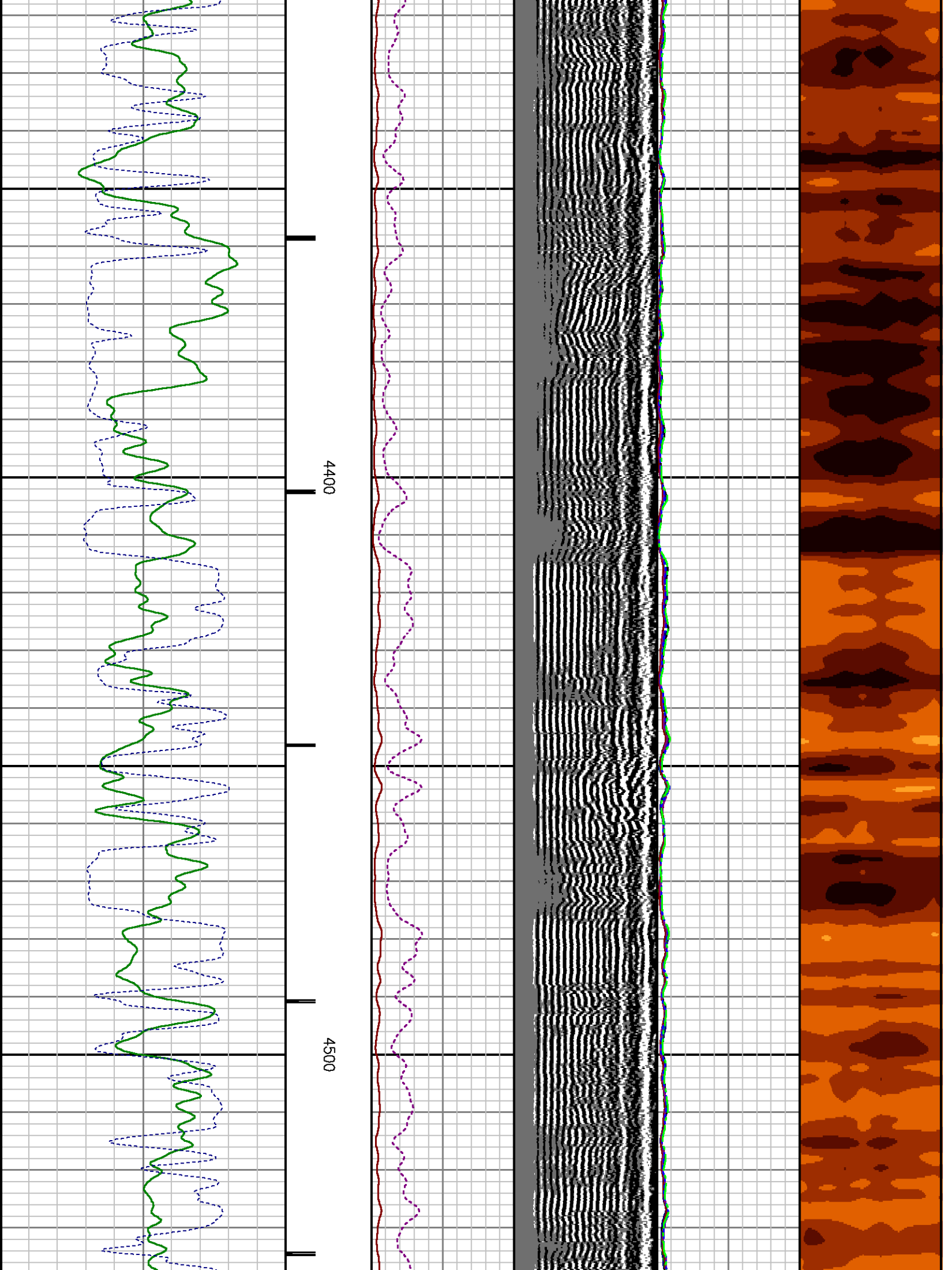




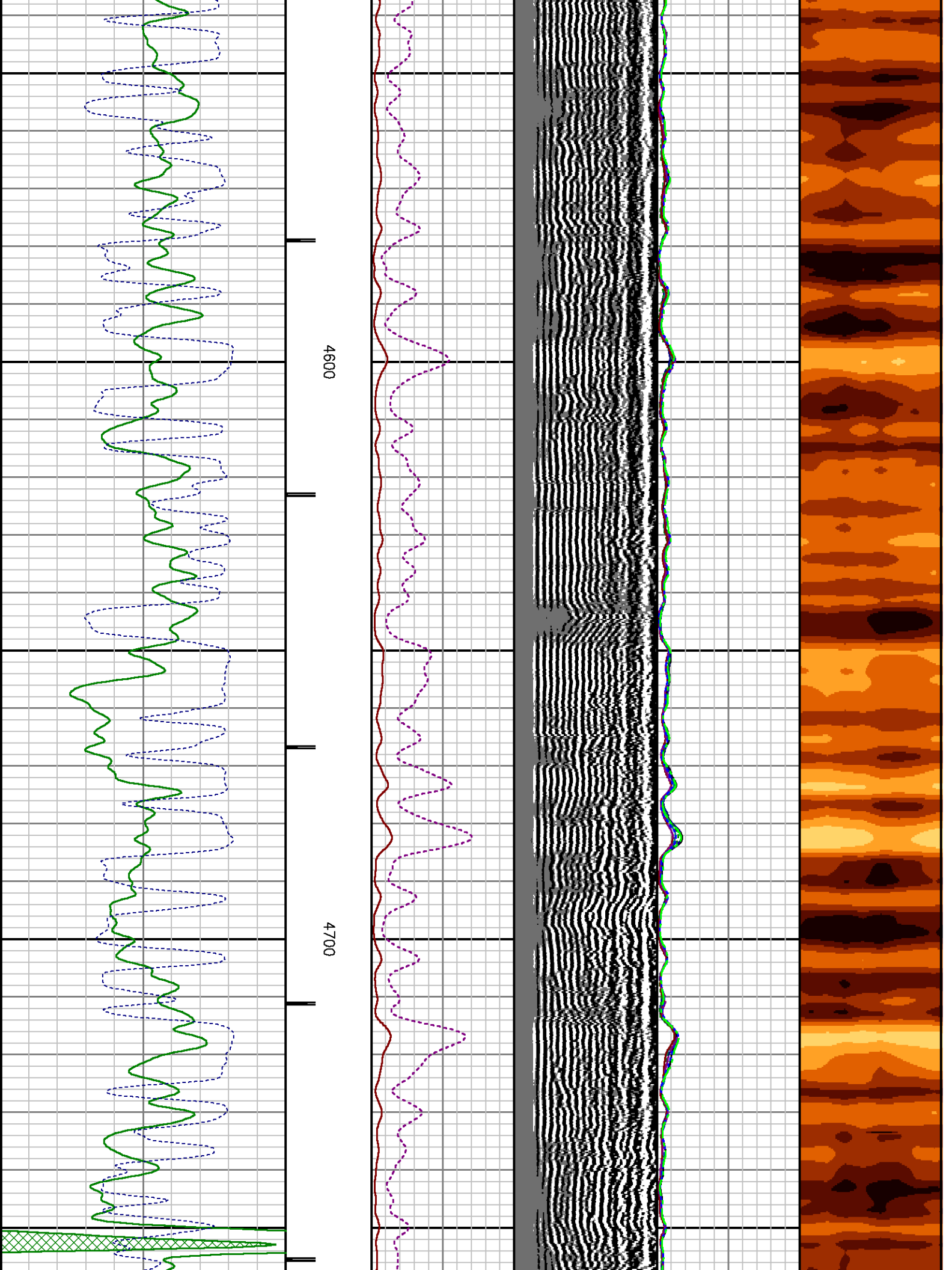




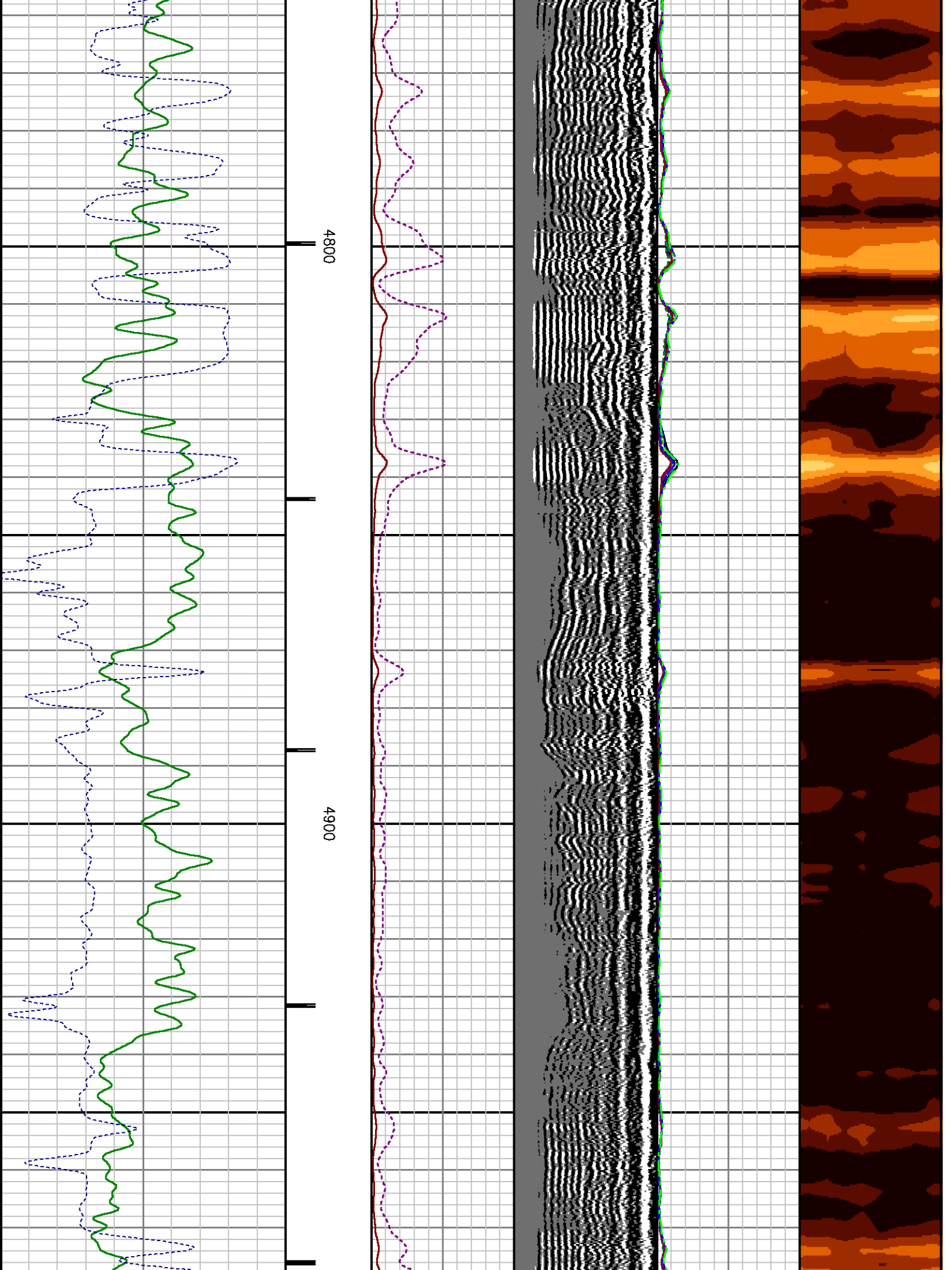


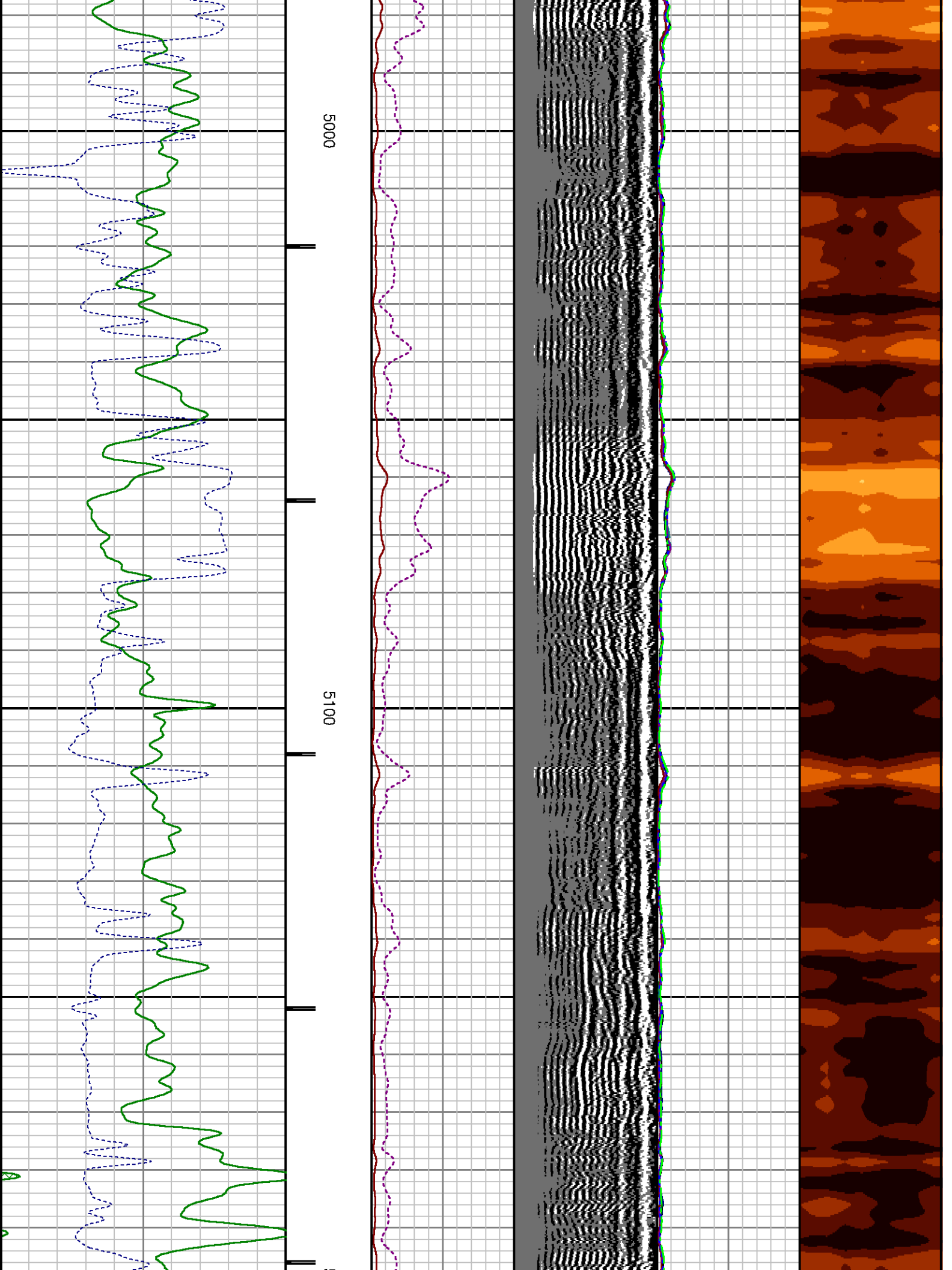


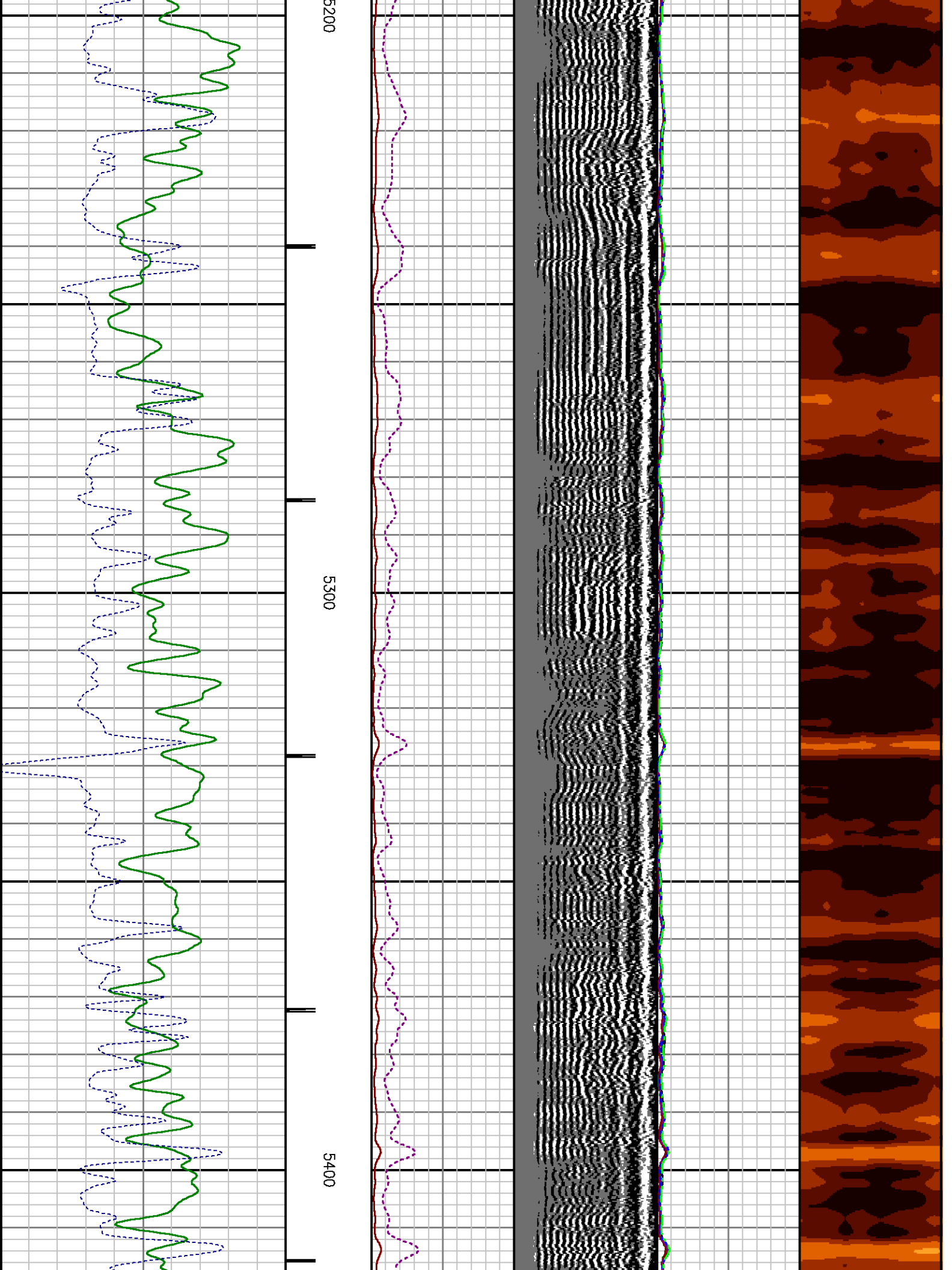


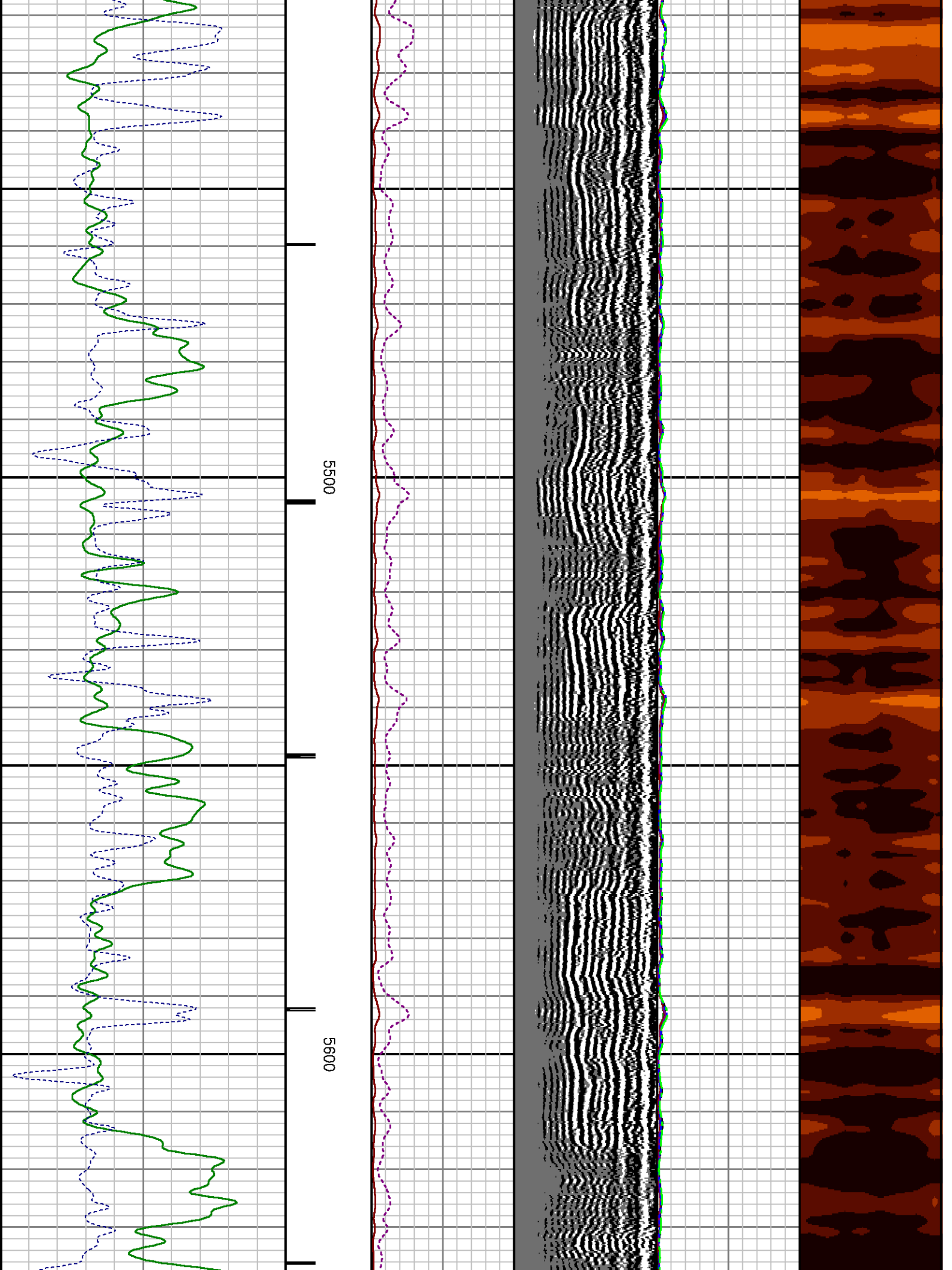


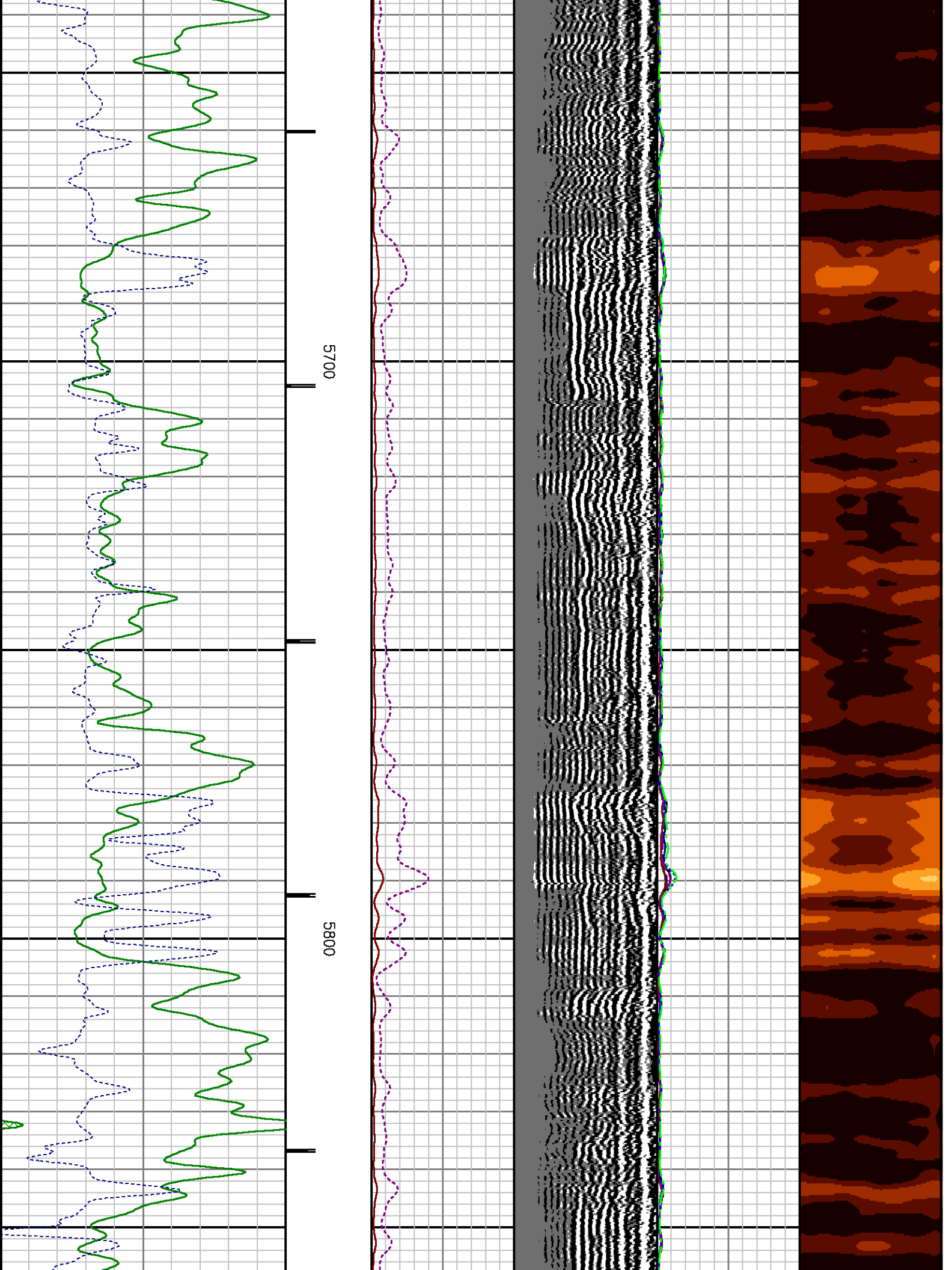




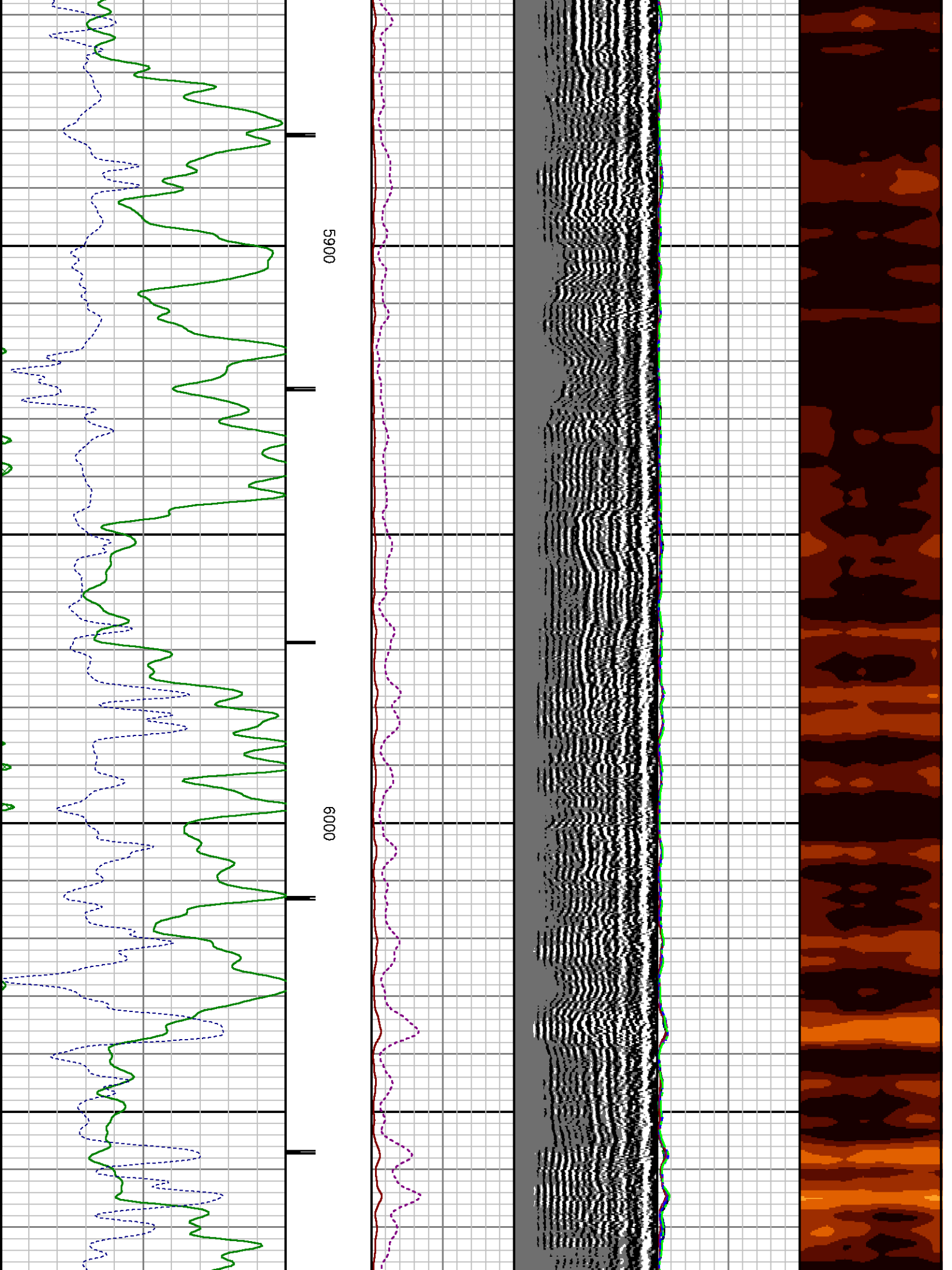




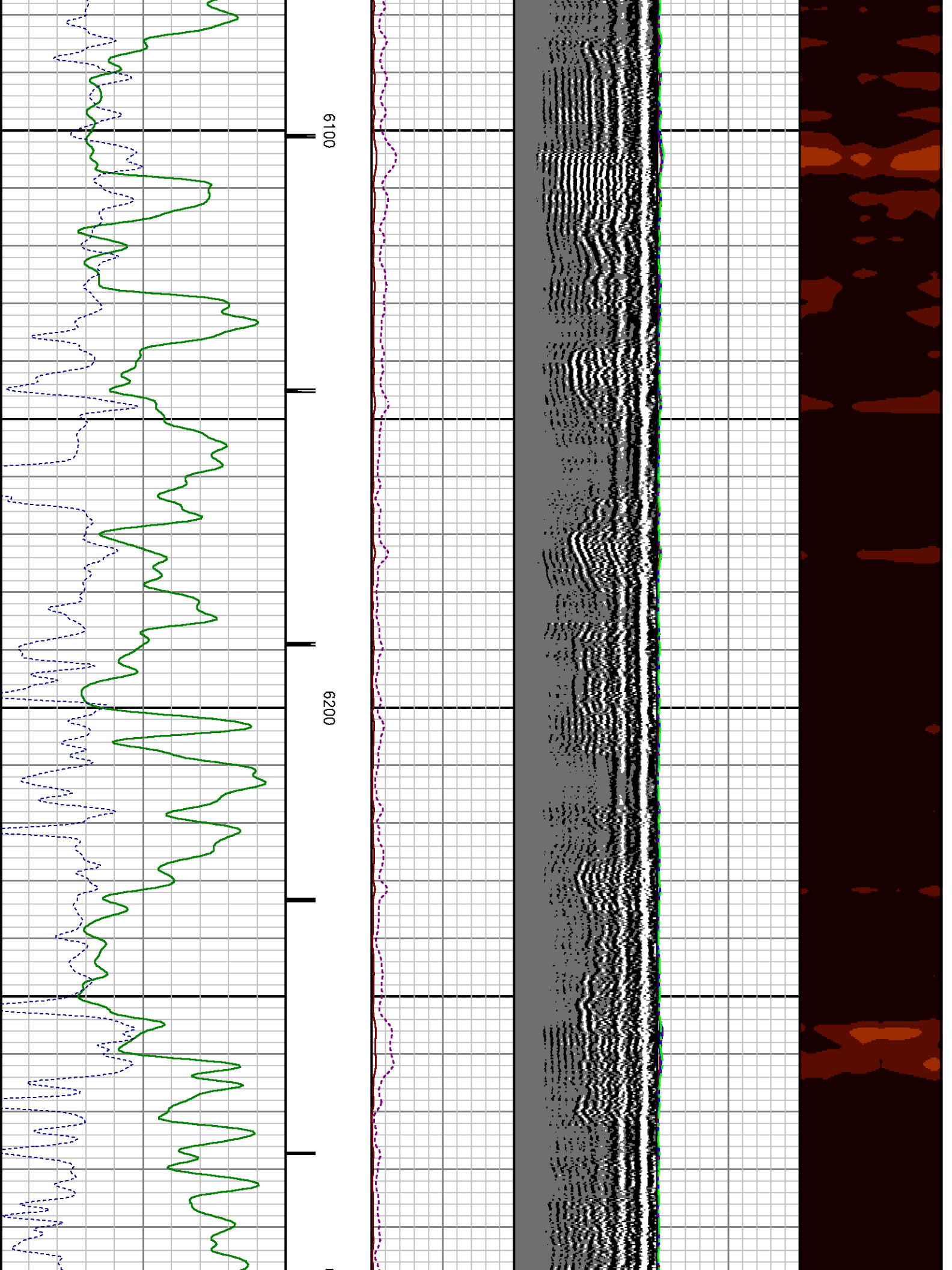


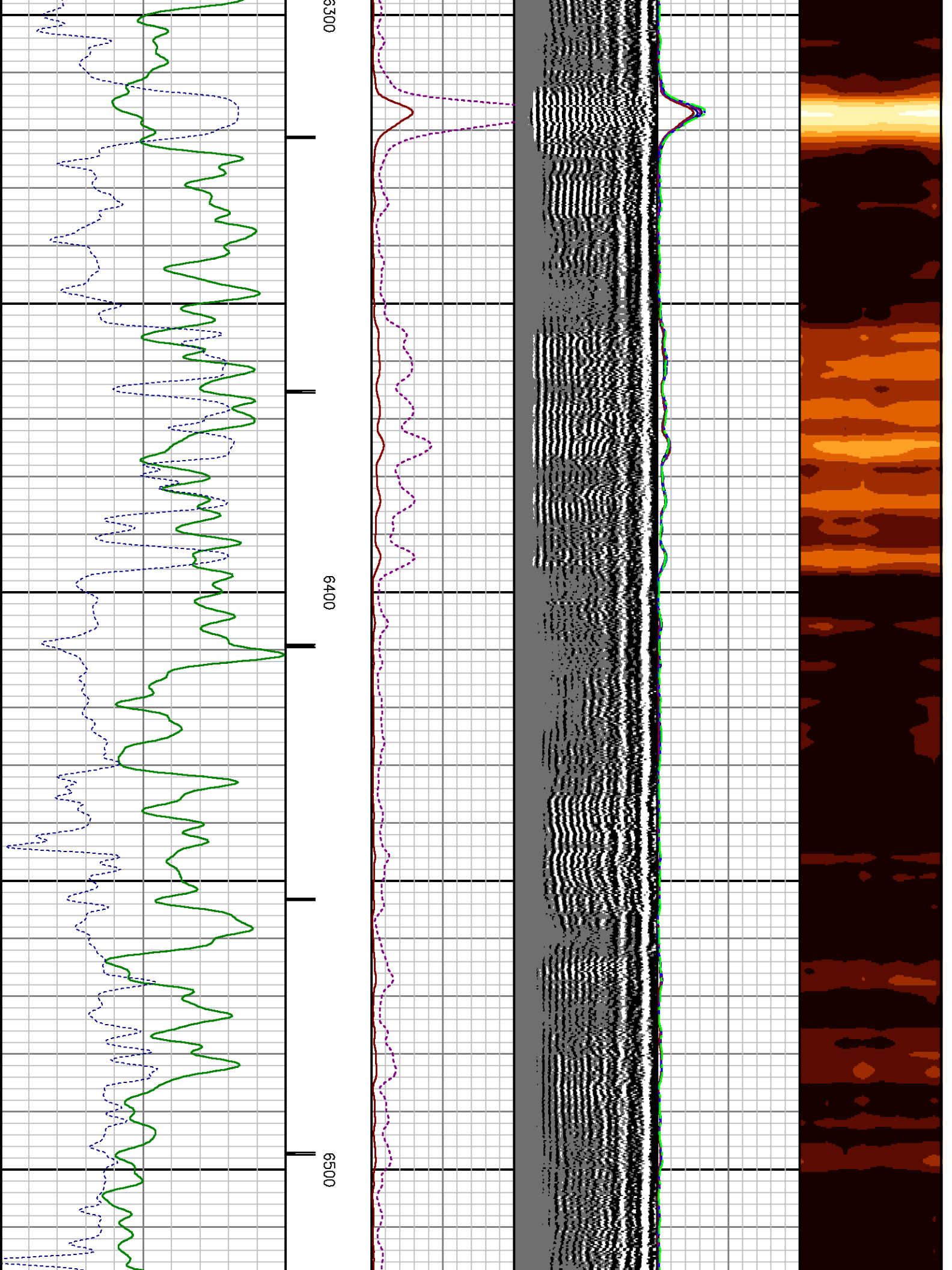


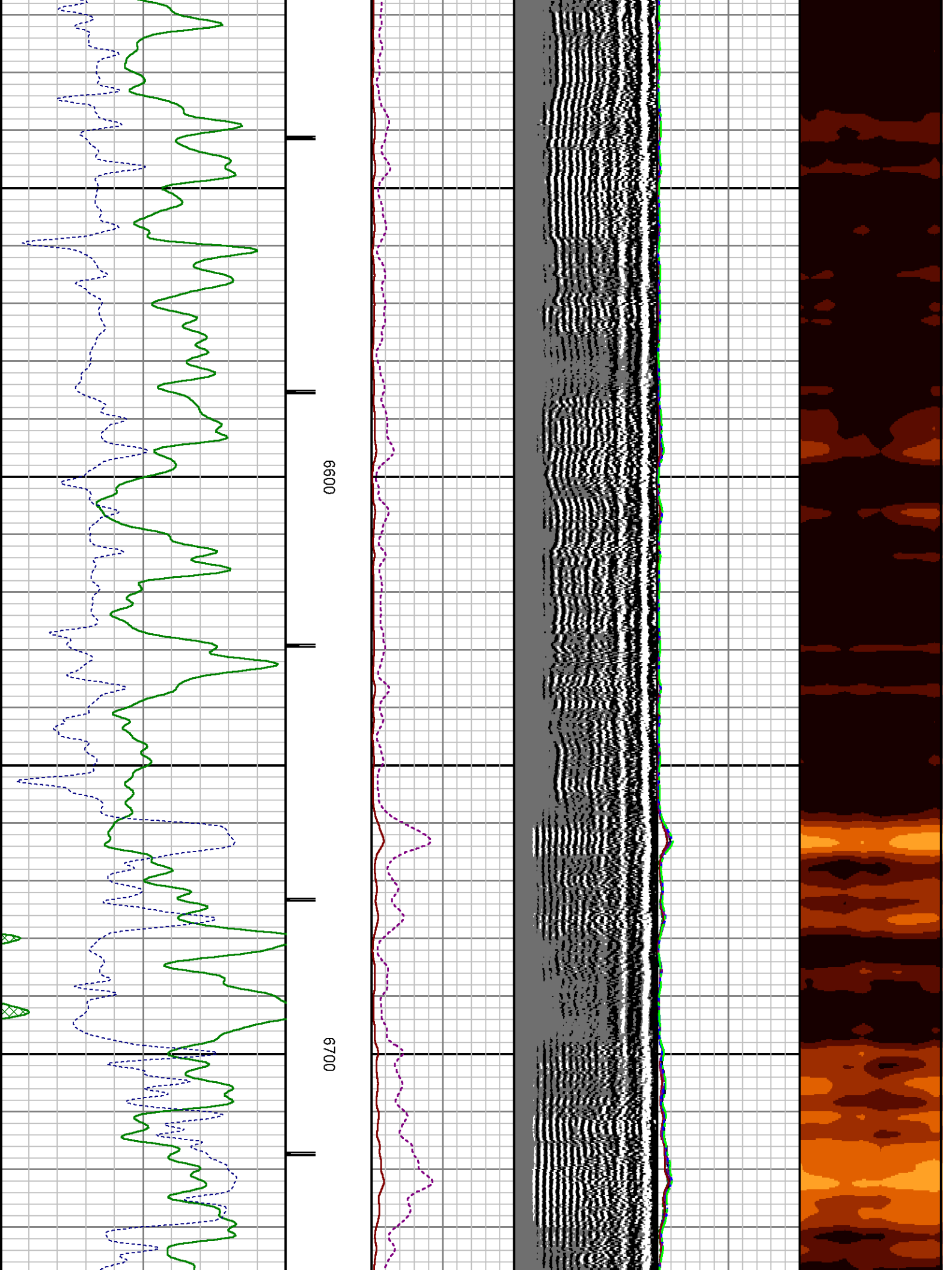


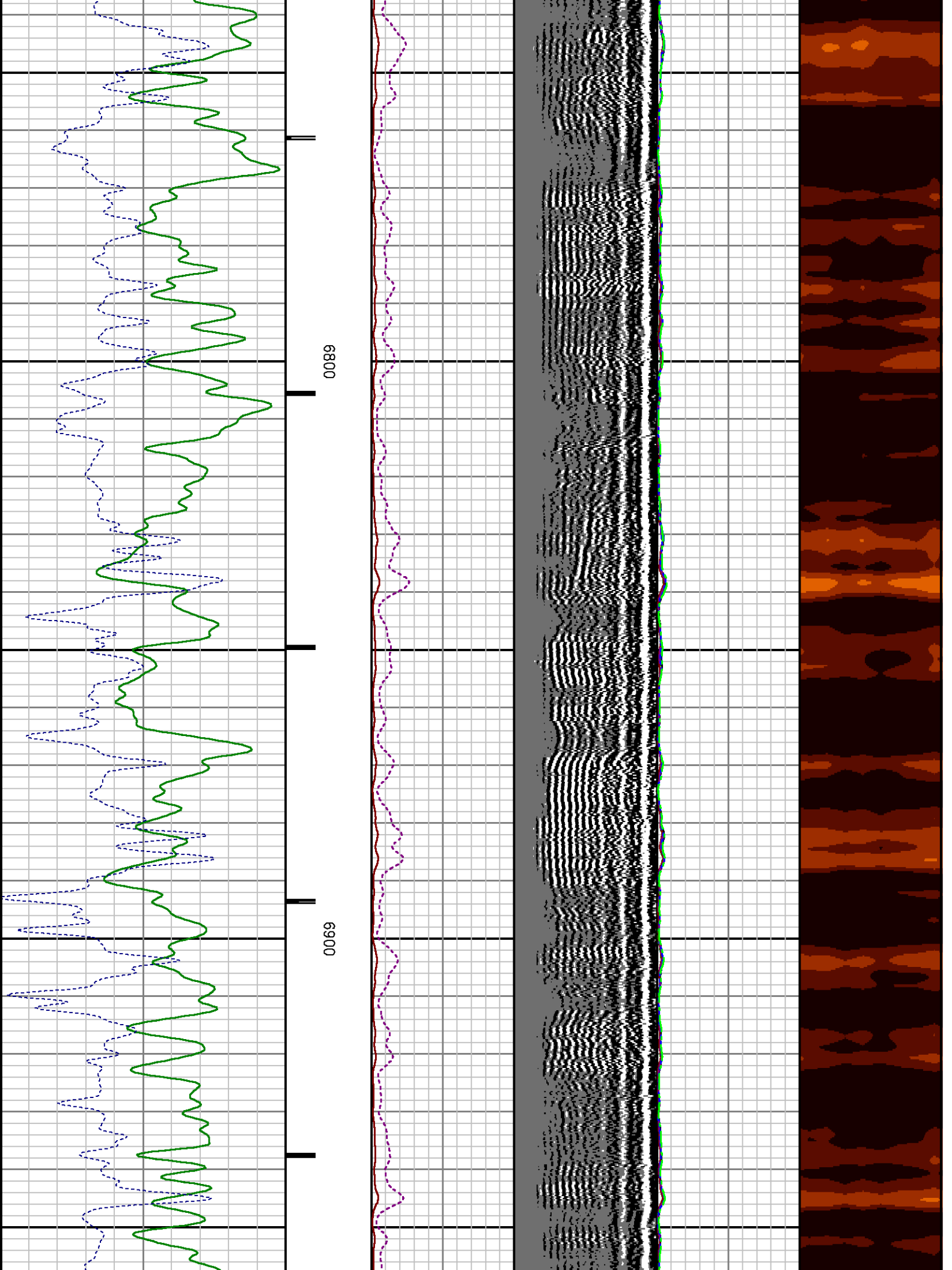


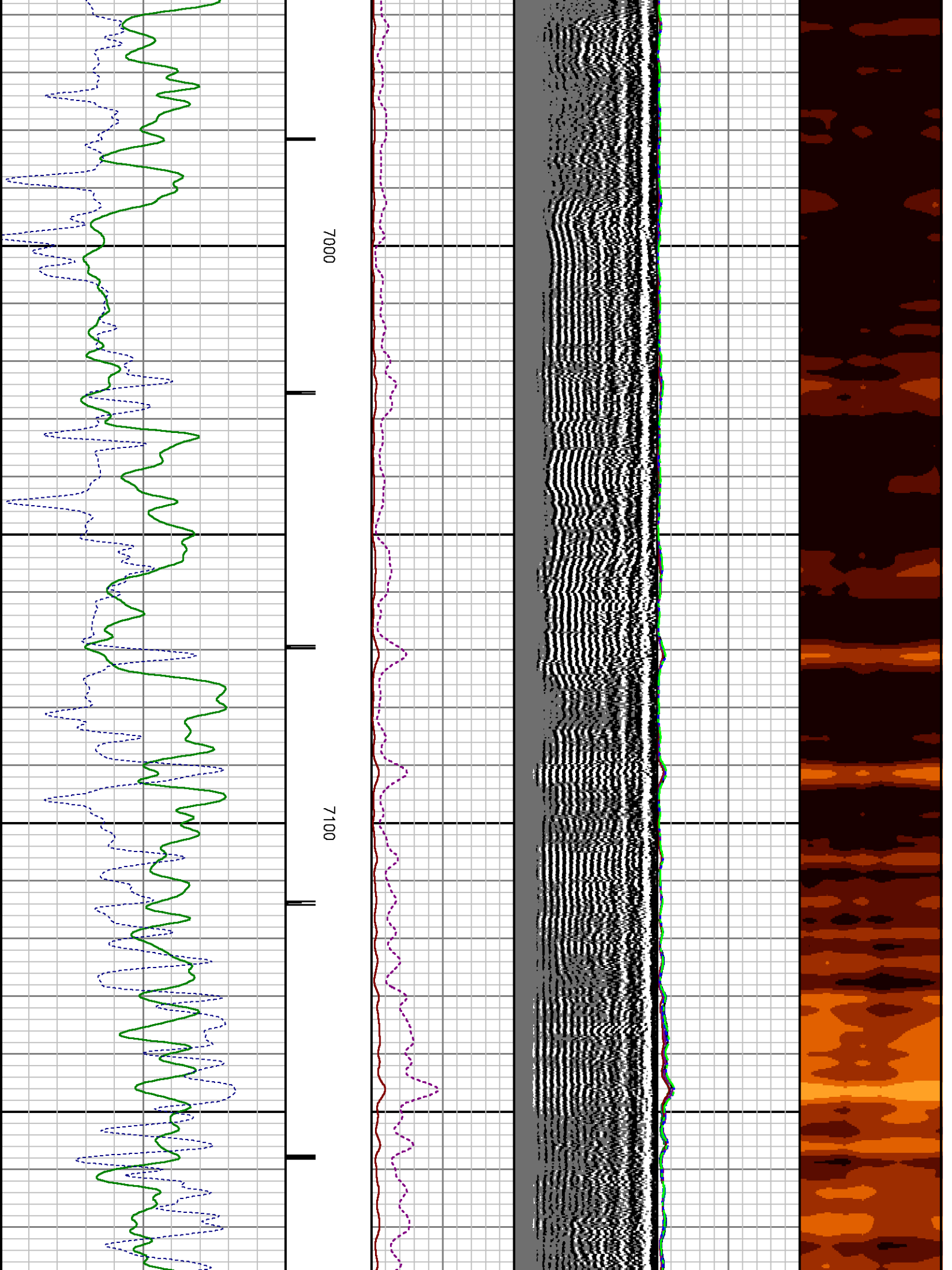




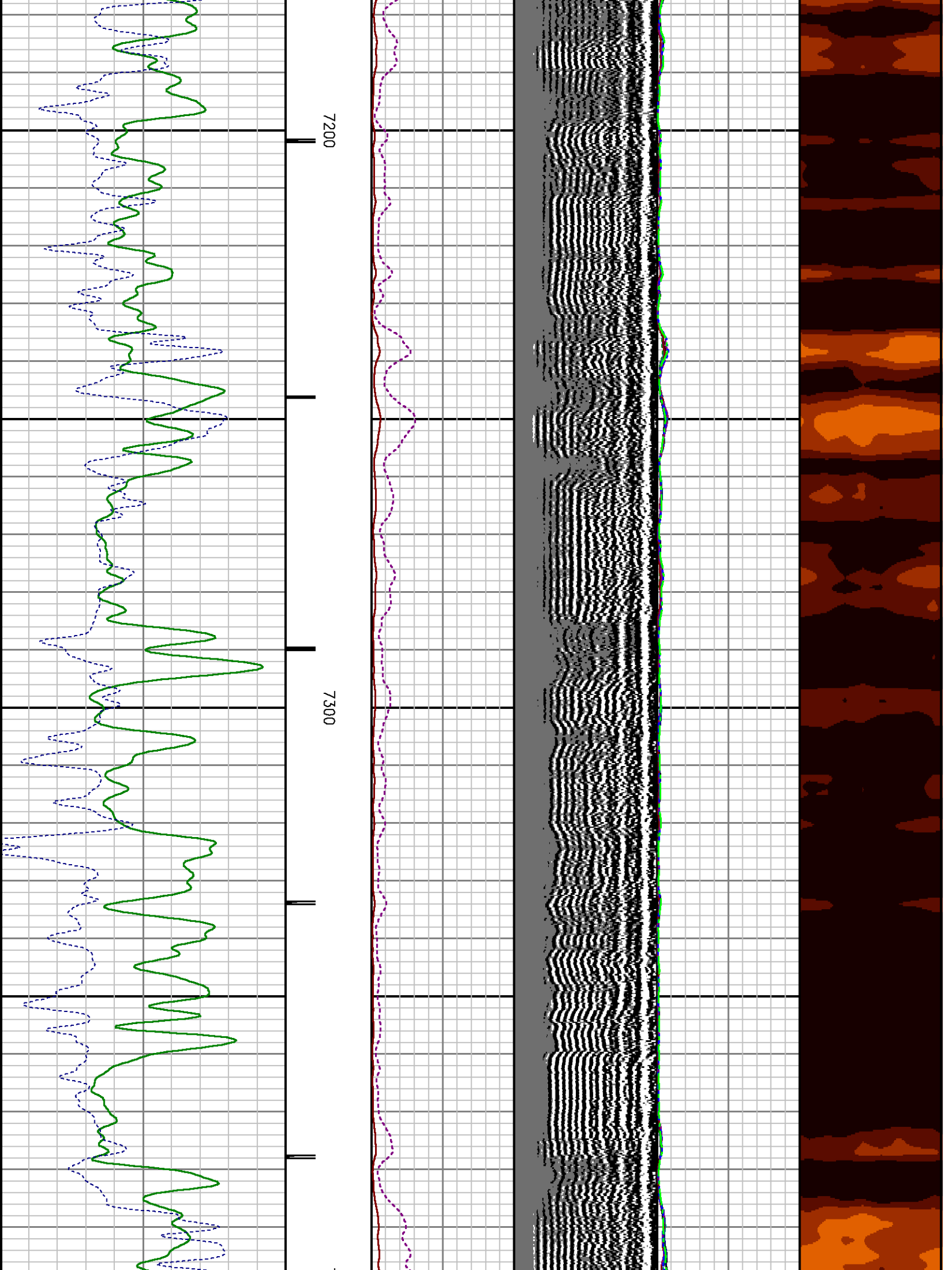




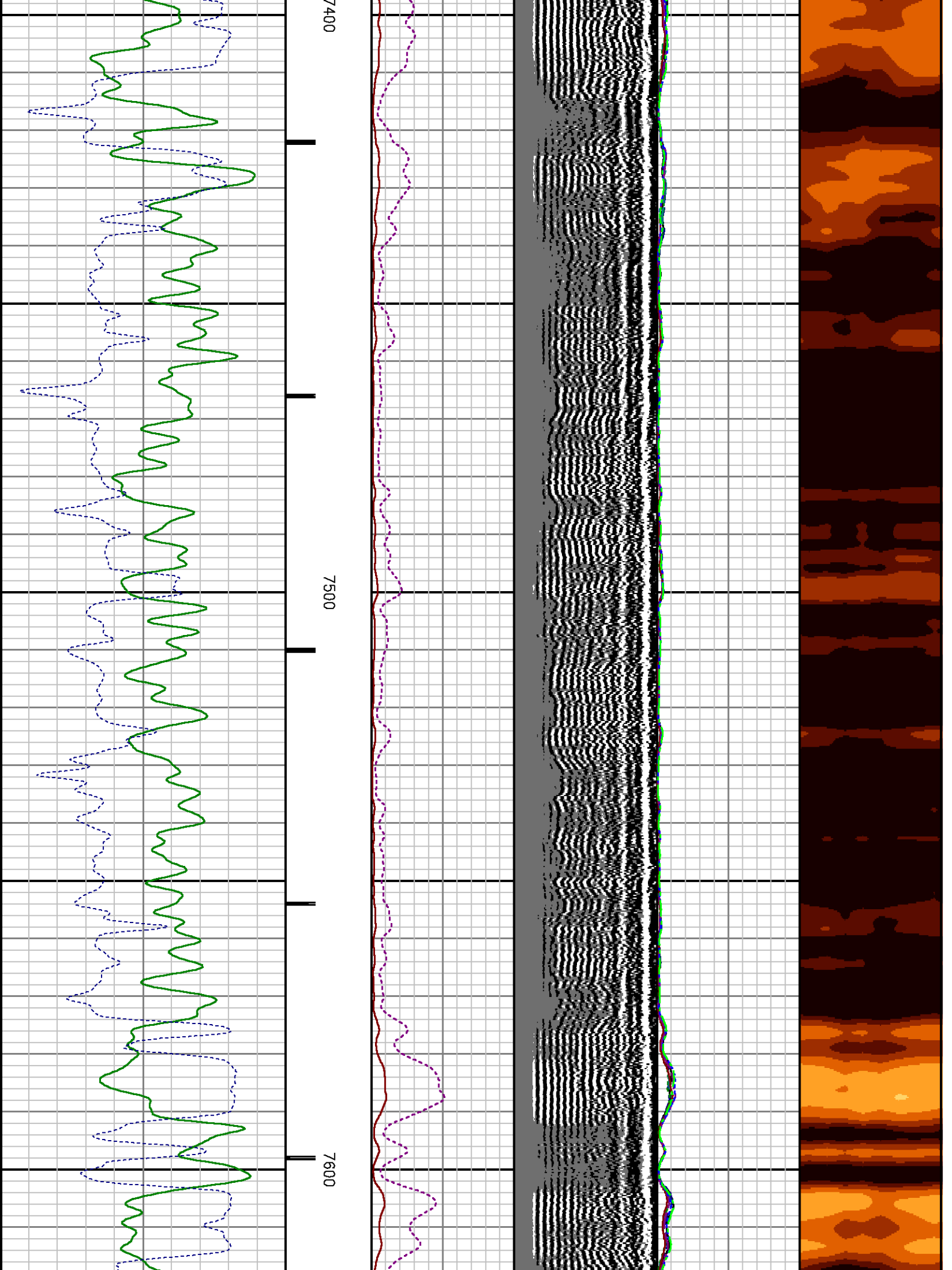


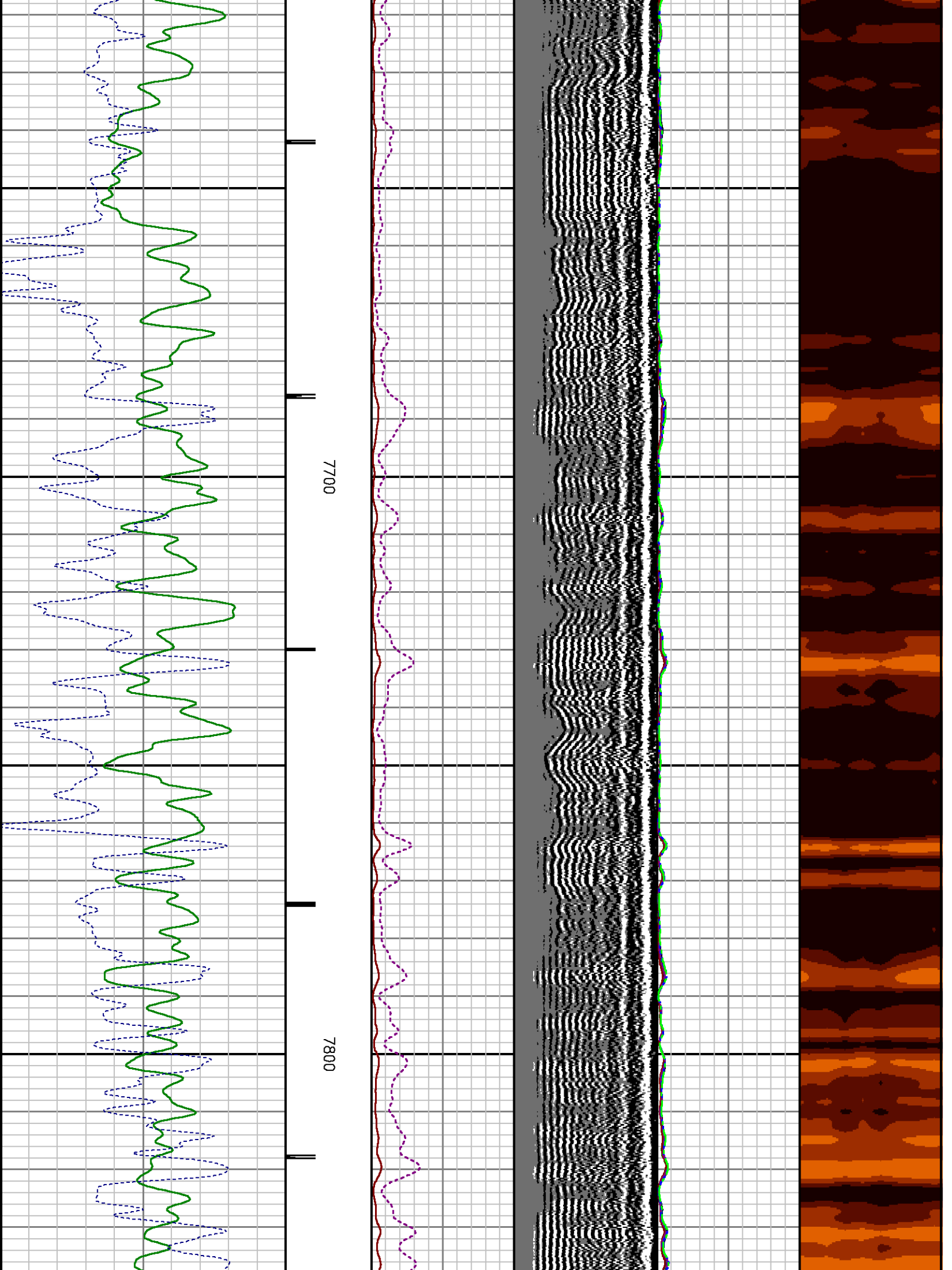


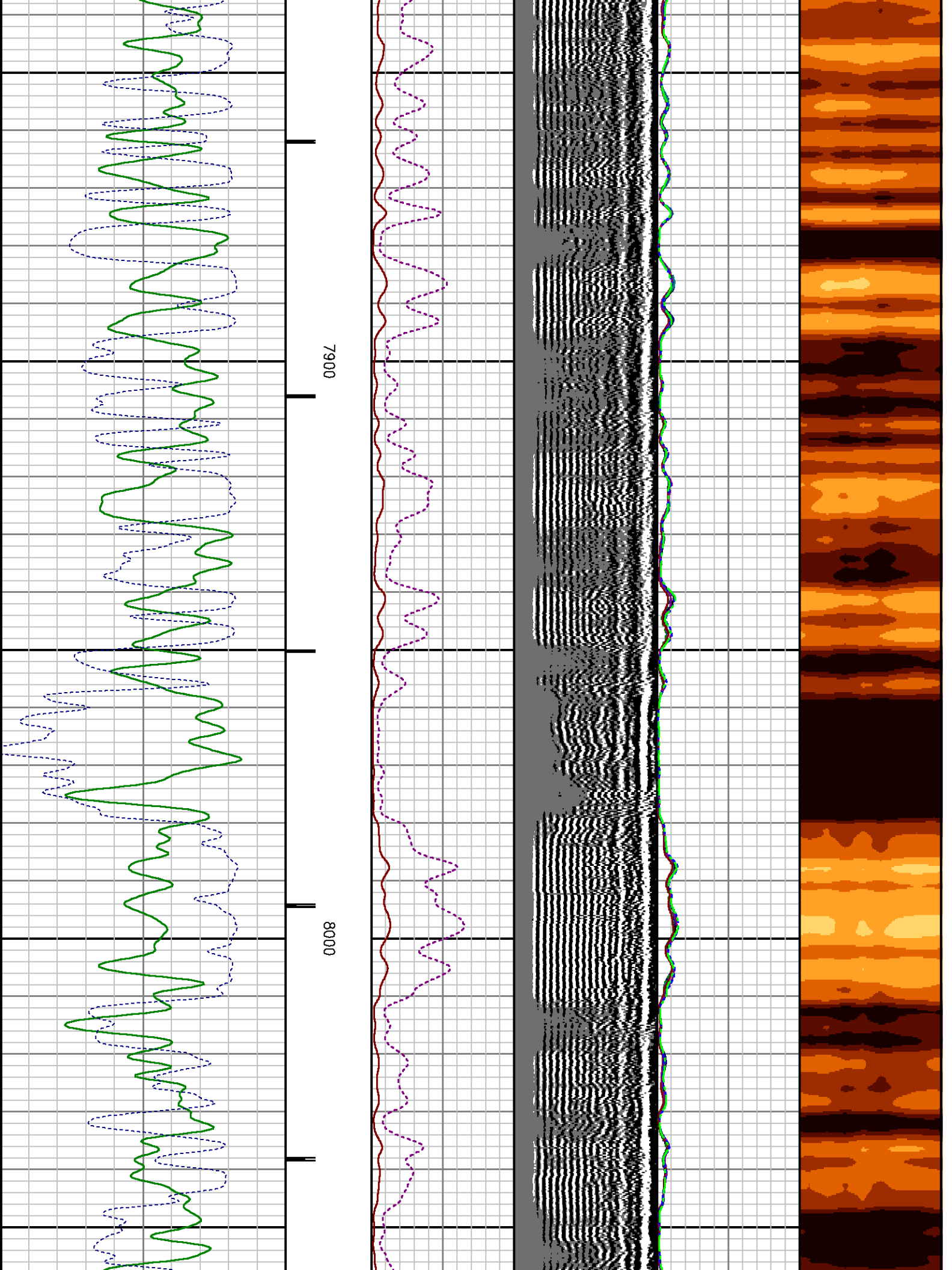


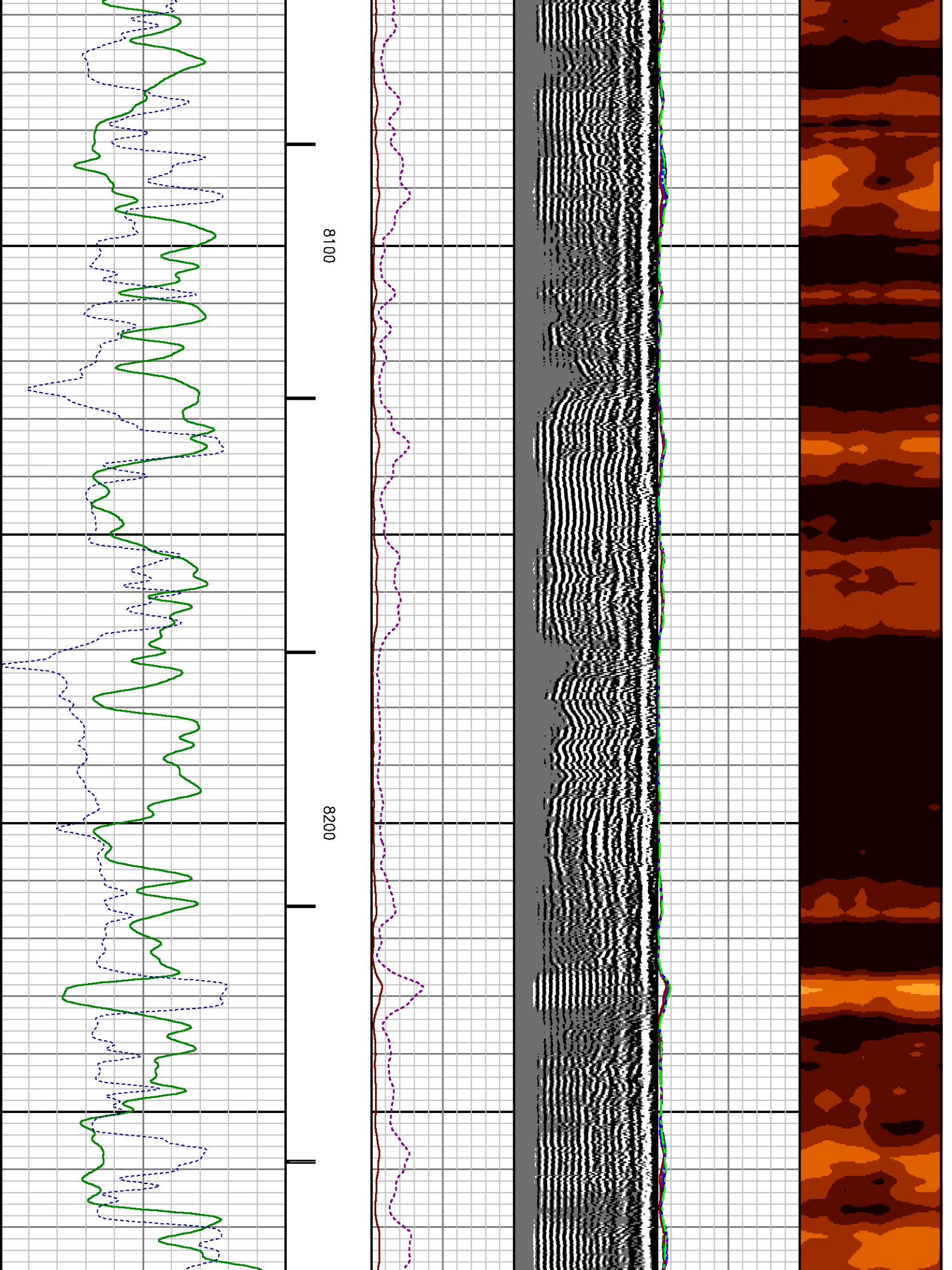


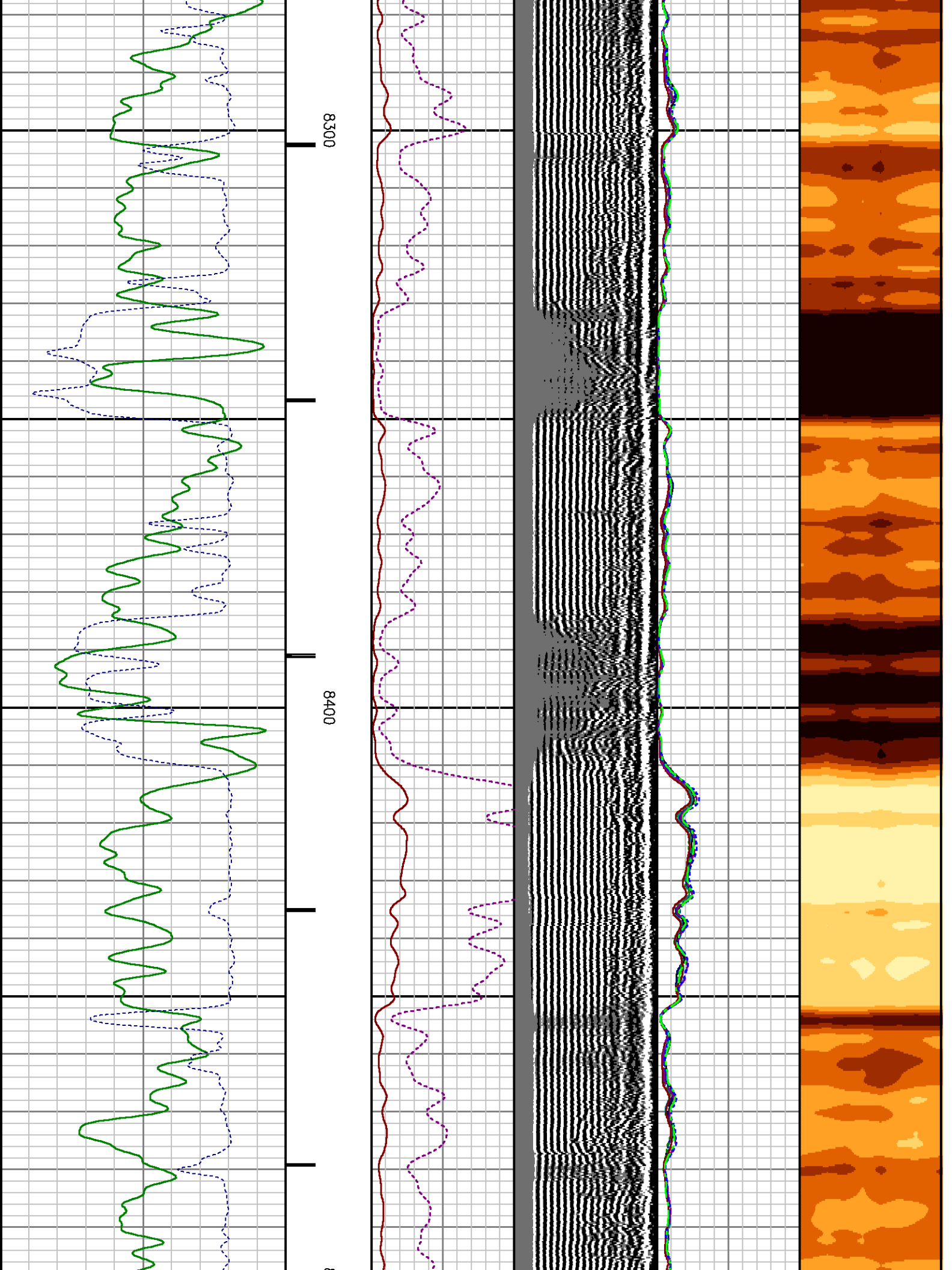




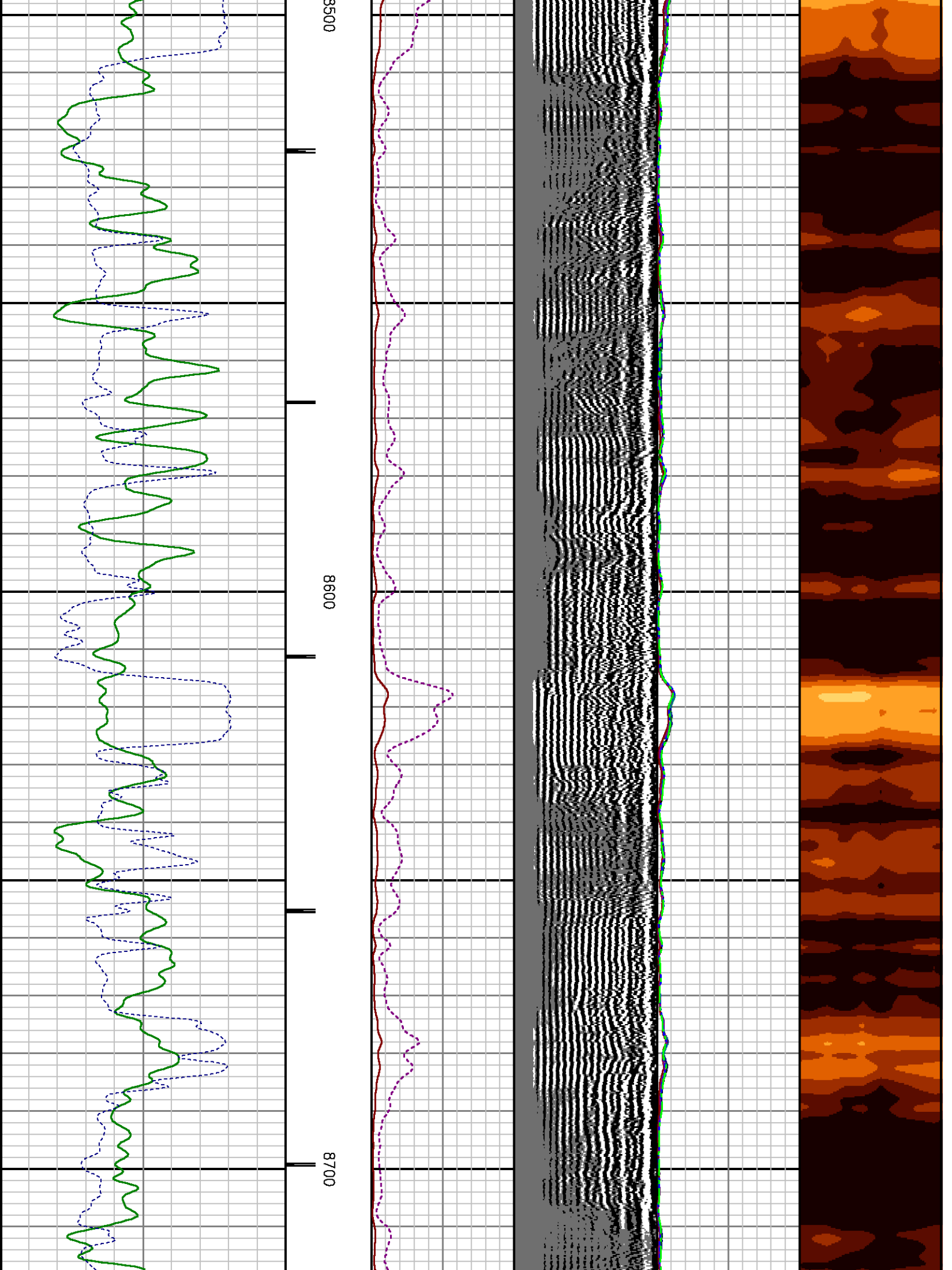




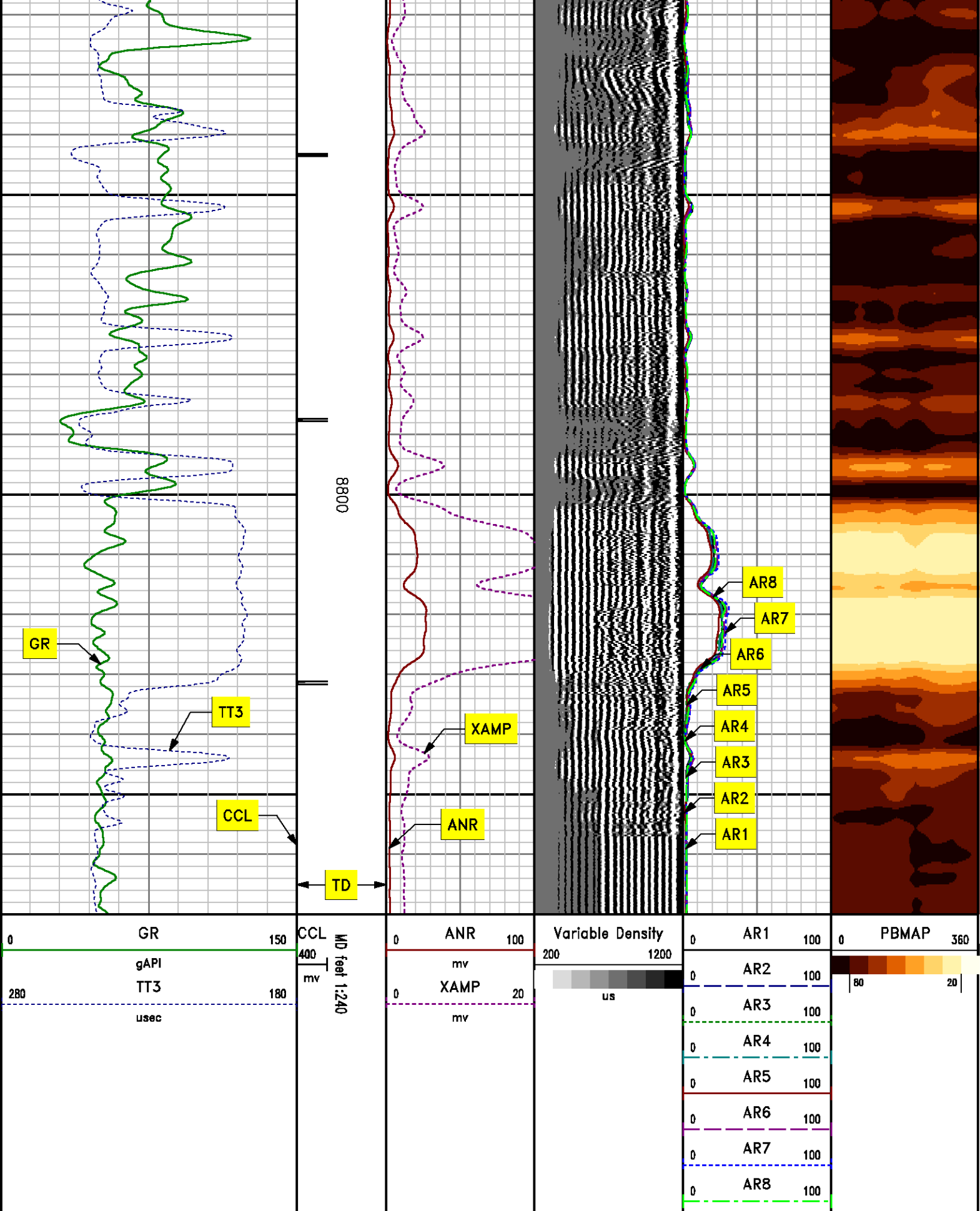












# *REPEAT PASS*

## *0 PSI*

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.434	usec	8549.750	8904.000
RAL	Amp Gate Start Near	197.374	usec	8549.750	8904.000
RAL	Amp Gate Start Radial	198.578	usec	8549.750	8904.000
RAL	Amp Gate Width Far	25.000	usec	8549.750	8904.000
RAL	Amp Gate Width Near	25.000	usec	8549.750	8904.000
RAL	Amp Gate Width Radial	25.000	usec	8549.750	8904.000
RAL	casing od	4.500	inches	8549.750	8904.000
RAL	casing wt	11.600	lbm/ft	8549.750	8904.000
RAL	FB Start Far	291.900	usec	8549.750	8904.000
RAL	FB Start Near	175.391	usec	8549.750	8904.000
RAL	FB Start Radial	175.391	usec	8549.750	8904.000
RAL	FB Thresh Far	10.000	mv	8549.750	8904.000
RAL	FB Thresh Near	4.000	mv	8549.750	8904.000
RAL	FB Thresh Radial	4.000	mv	8549.750	8904.000
RAL	Fluid Travel Time	200.000	usec/ft	8549.750	8903.437

### 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

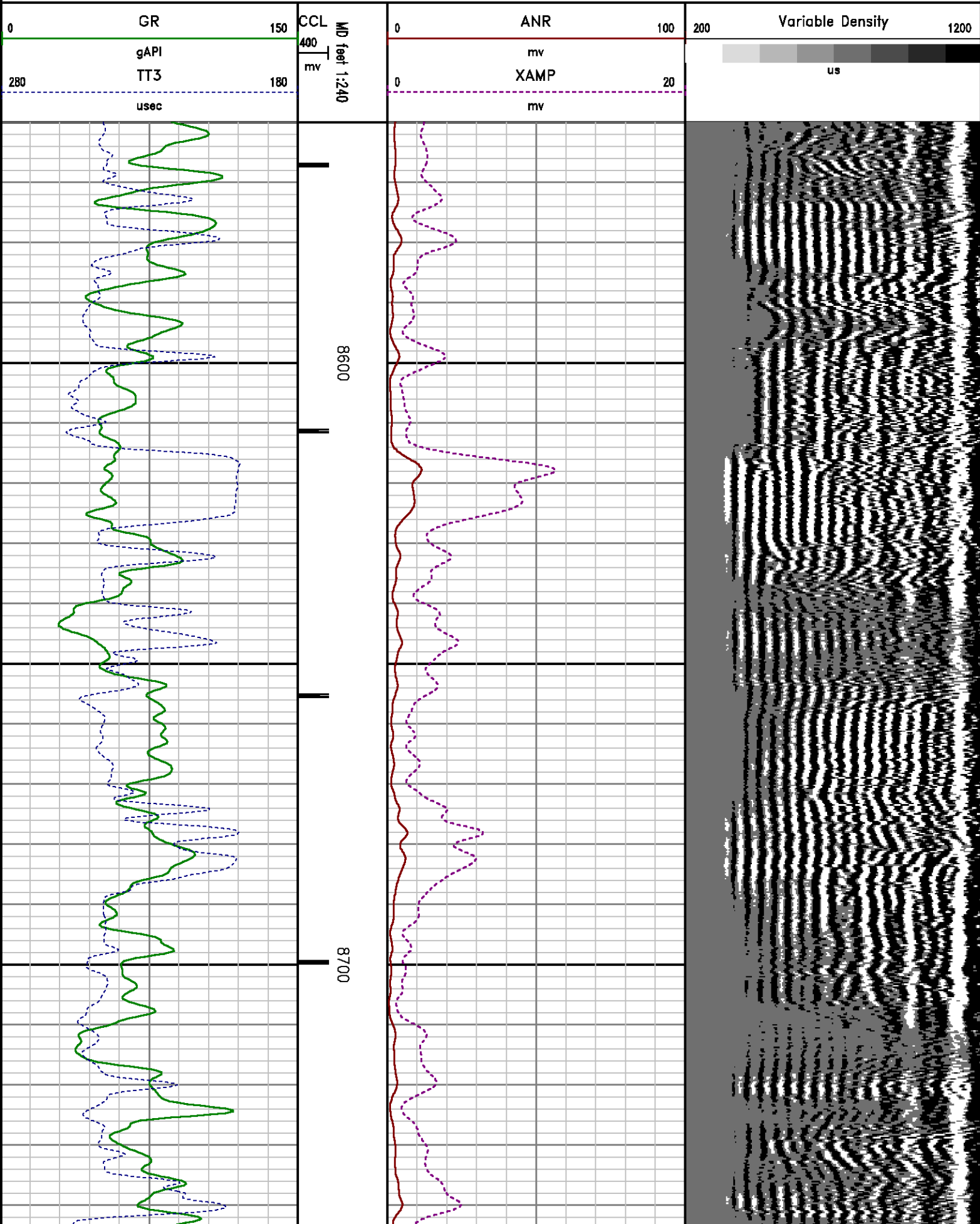
Well : HOEPPLI RWF 333-36

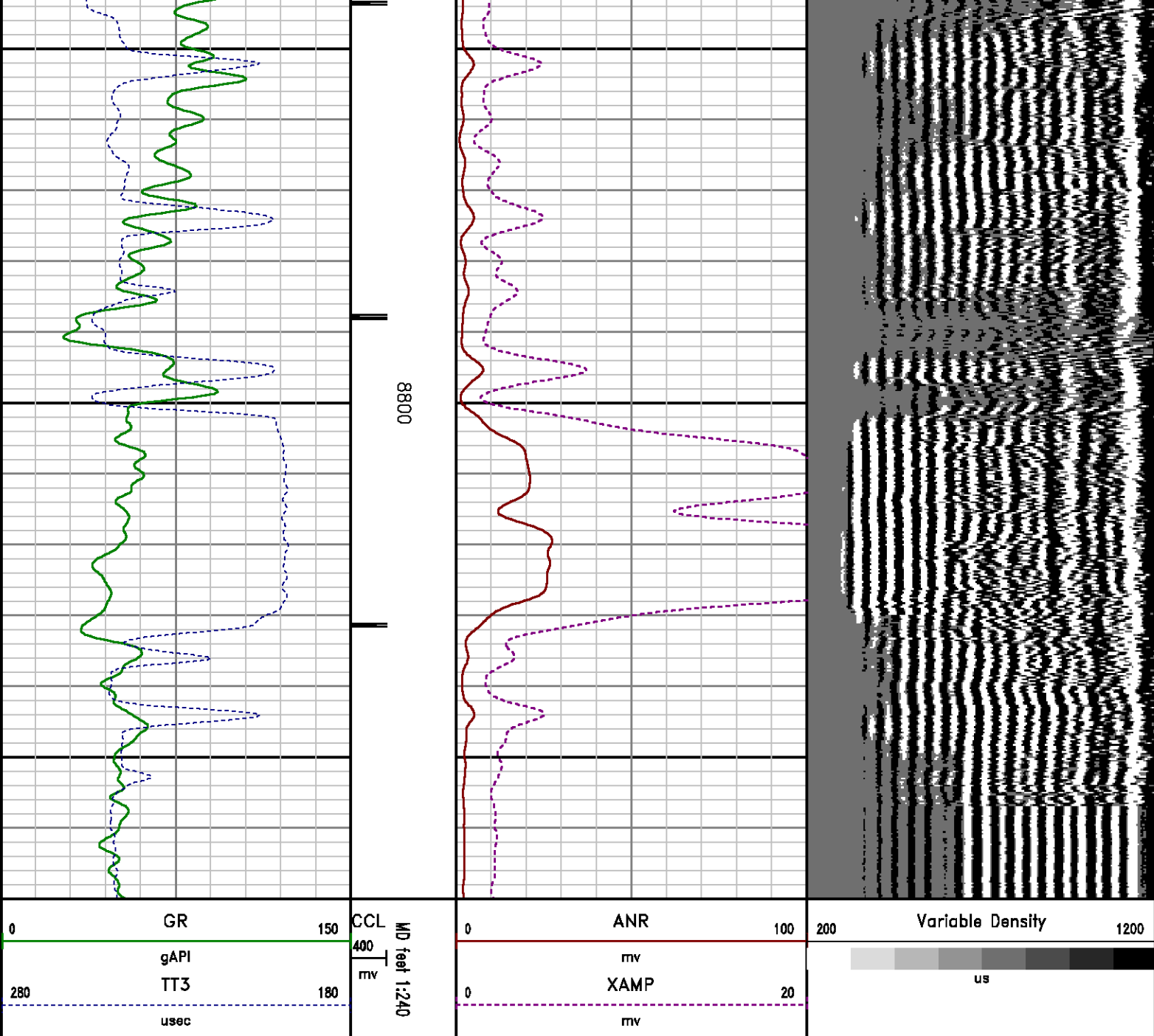
File Name : d:\well\data\cb1333\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 8560.00 - 8870.00 feet UP

Created : 5/15/2013 9:16:10 AM





## CALIBRATION SUMMARY

## GAMMA RAY

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\539M15\_shp.cal

## SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed May 15 08:35:44 2013 TOOL SERIES: 1426XA ASSET: 539 SEQ: M15

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	-0.709	100.00	0.19
3 Ft. Receiver	218	216	30	152	25	-0.247	100.00	0.18
5 Ft. Receiver	325	323	30	260	25	-1.391	150.00	0.20
Radial #1	219	216	30	150	25	1.015	100.00	0.18
Radial #2	218	216	30	150	25	0.237	100.00	0.18
Radial #3	218	216	30	150	25	-0.282	100.00	0.19
Radial #4	217	216	30	150	25	-0.227	100.00	0.19
Radial #5	218	216	30	150	25	-0.114	100.00	0.18
Radial #6	217	216	30	150	25	-0.524	100.00	0.18
Radial #7	216	216	30	150	25	-0.650	100.00	0.18
Radial #8	218	216	30	150	25	-0.286	100.00	0.18

**RALFLD**

Wellsite Calibration: C:\case\calver\RALFLD\539M15 fld.cal

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed May 15 08:37:57 2013 TOOL SERIES: 1426XA ASSET: 539 SEQ: M15

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

RECEIVER	Zero Gate Start	Zero Gate Width	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
----------	--------------------	--------------------	-------------------	-------------------	-----------------	------------------

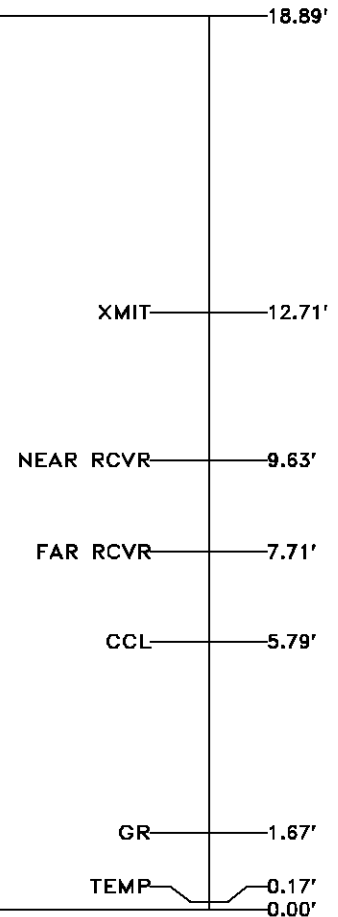
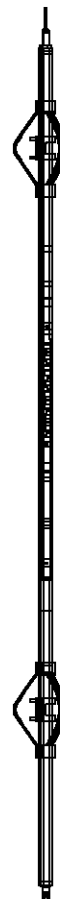
CAL Pulse	166	25	-0.251	0.000	1.00	100.000
3 Ft. Receiver	200	30	-2.957			
5 Ft. Receiver	317	30	-3.868			
Radial #1	200	30	-4.353			
Radial #2	200	30	-3.742			
Radial #3	200	30	-3.676			
Radial #4	200	30	-3.838			
Radial #5	200	30	-5.296			
Radial #6	200	30	-4.144			
Radial #7	200	30	-4.324			
Radial #8	200	30	-4.403			

## 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"





Baker Atlas



Company	WPX ENERGY		
Well	HOEPPLI RWF 333-36		
Field	RULISON		
County	GARFIELD	State	COLORADO

File No:
CH072042
API No:
05045215470000

Location

SHL: 2584' FNL & 2582' FEL  
BHL: 2156' FSL & 1779' FEL

Elevations

KB 6554 ft  
DF  
GL 6528 ft

36 6S 94W  
RWF 33-36  
NABORS SSD 576

SEC 36 TWP 6S RGE 94W