



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: _____ Company **EXXONMOBIL PRODUCTION COMPANY**
 Well **PCU 197-36 A5**
 Field **PICEANCE CREEK**
 County **RIO BLANCO** State **COLORADO**
 API No: **05103111940000**

Location
 SHL: 1849' FSL & 2613' FNL
 SEC 36 TWP 15 RGE 97W
 Other Services
 3.70 QUAG/JUNK BASKET
 RPM

Permanent Datum **GL** Elevation **7114 ft**
 Log Measured From **KB** **30.2 ft** Above P. D.
 Drill Measured From **KELLY BUSHING**
 Elevations
KB 7144.2 ft
DF 7143.2 ft
GL 7114 ft

Date	25 SEP 2010
Run	ONE
Service Order	574368
Depth Driller	13620 ft
Depth Logger	13499 ft
Bottom Logged Interval	13496 ft
Top Logged Interval	3088 ft
Time Started	12:00
Time Finished	16:00
Operator Rig Time	4 hrs
Type of Fluid in Hole	WATER
Fluid Density	N/A
Salinity	N/A
Fluid Level	FULL
Logged Cement Top	N/A
Wellhead Pressure	0 psi
Maximum Hole Deviation	N/A
Nominal Logging Speed	45 fpm
Maximum Recorded Temperature	N/A
Reference Log	BAKER ATLAS SEGMENTED BOND LOG
Reference Log Date	23 AUG 2010
Equipment No.	4214
Location	G.J., COLORADO
Recorded By	J. OSTLER
Witnessed By	MR. MIKE SADLER

- 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
9.875 In	SURFACE	9208 ft
6.125 In	SURFACE	13620 ft

Casing Record				
Size	Weight	Grade	From	To
7 In	26 lbm/ft	P-110	SURFACE	9208 ft
4.5 In	15.1 lbm/ft	P-110	SURFACE	13620 ft

Remarks

LOG WAS TIED INTO A BAKER ATLAS SEGMENTED BOND LOG FROM THE TLI TO 9140'

WELL WAS LOGGED WITH 0 PSI AT THE WELL HEAD

SHORT JOINTS AT:

8323' TO 8331'

9391' TO 9399'

10401' TO 10409'

11519' TO 11526'

12595' TO 12602'

Equipment Data

Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10163038	CENTRALIZED
1	1	GR/CCL/NEU	2459XA	10404544	CENTRALIZED

***MAIN SECTION
PRIMARY PRESENTATION
0 PSI***

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	314.263	usec	3080.500	13504.000
RAL	Amp Gate Start Near	197.754	usec	3080.500	13504.000
RAL	Amp Gate Start Radial	197.754	usec	3080.500	13504.000
RAL	Amp Gate Width Far	30.000	usec	3080.500	13504.000
RAL	Amp Gate Width Near	30.000	usec	3080.500	13504.000
RAL	Amp Gate Width Radial	30.000	usec	3080.500	13504.000
RAL	casing od	4.500	inches	3080.500	13504.000
RAL	casing wt	15.100	lbm/ft	3080.500	13504.000
RAL	FB Start Far	289.263	usec	3080.500	13504.000
RAL	FB Start Near	172.754	usec	3080.500	13504.000
RAL	FB Start Radial	172.754	usec	3080.500	13504.000
RAL	FB Thresh Far	15.000	mv	3080.500	13504.000
RAL	FB Thresh Near	10.000	mv	3080.500	13504.000
RAL	FB Thresh Radial	10.000	mv	3080.500	13504.000
RAL	Fluid Travel Time	200.000	usec/ft	3080.500	13501.843

DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.450	ACAL	ANR	AR1	AR2	AR3	AR4

1426XA -15.450
 2459XA -11.340
 2459XA -9.490
 2459XA -4.090

AR5 AR6 AR7 AR8 CHV FPR2
 FPR3 FPR5 TT3 TTR1 TTR2 TTR3
 TTR4 TTR5 TTR6 TTR7 TTR8 XAMP
 AFAR SIG TT5
 NEU

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : EXXONMOBILE PRODUCTION COMPANY

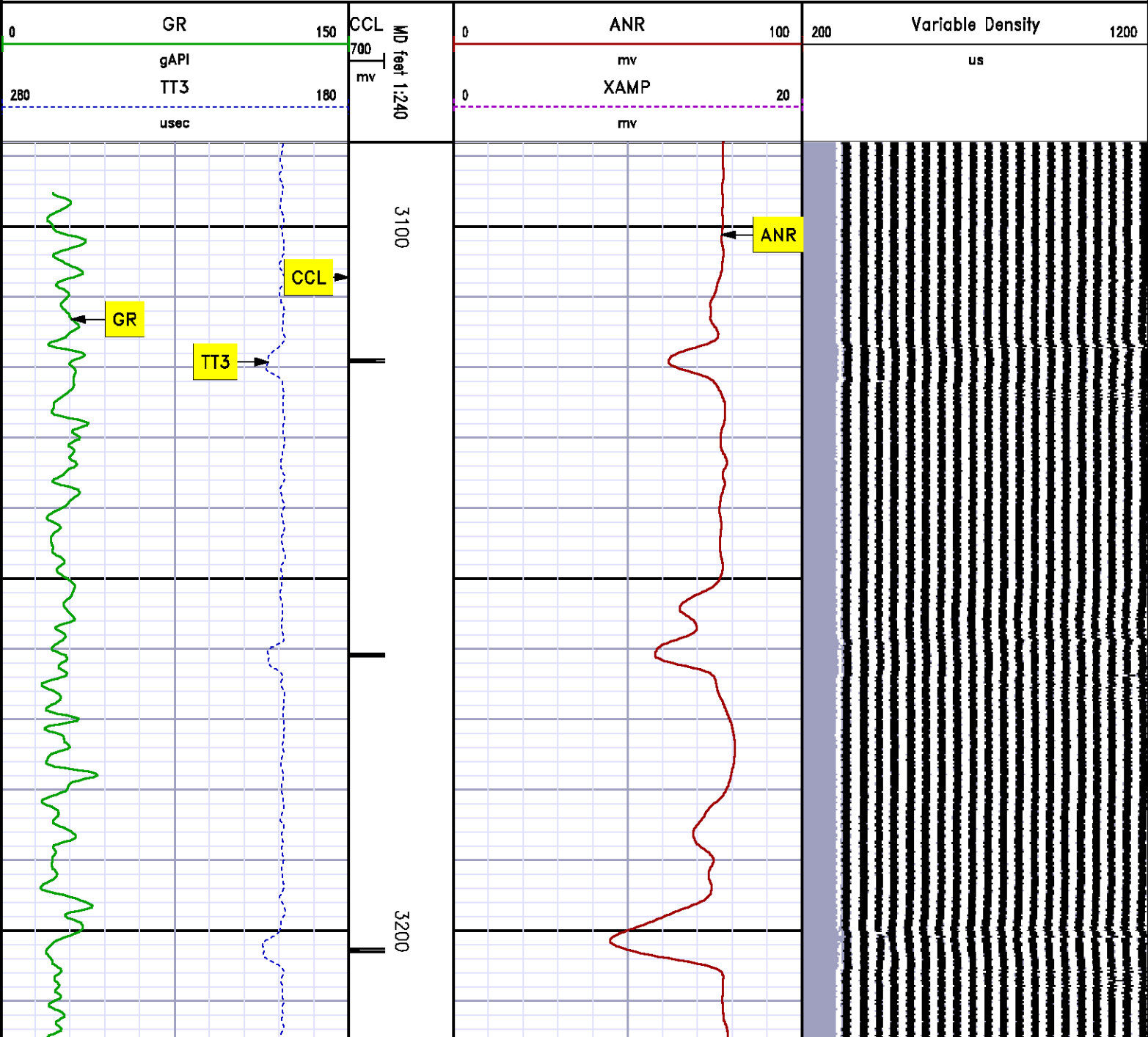
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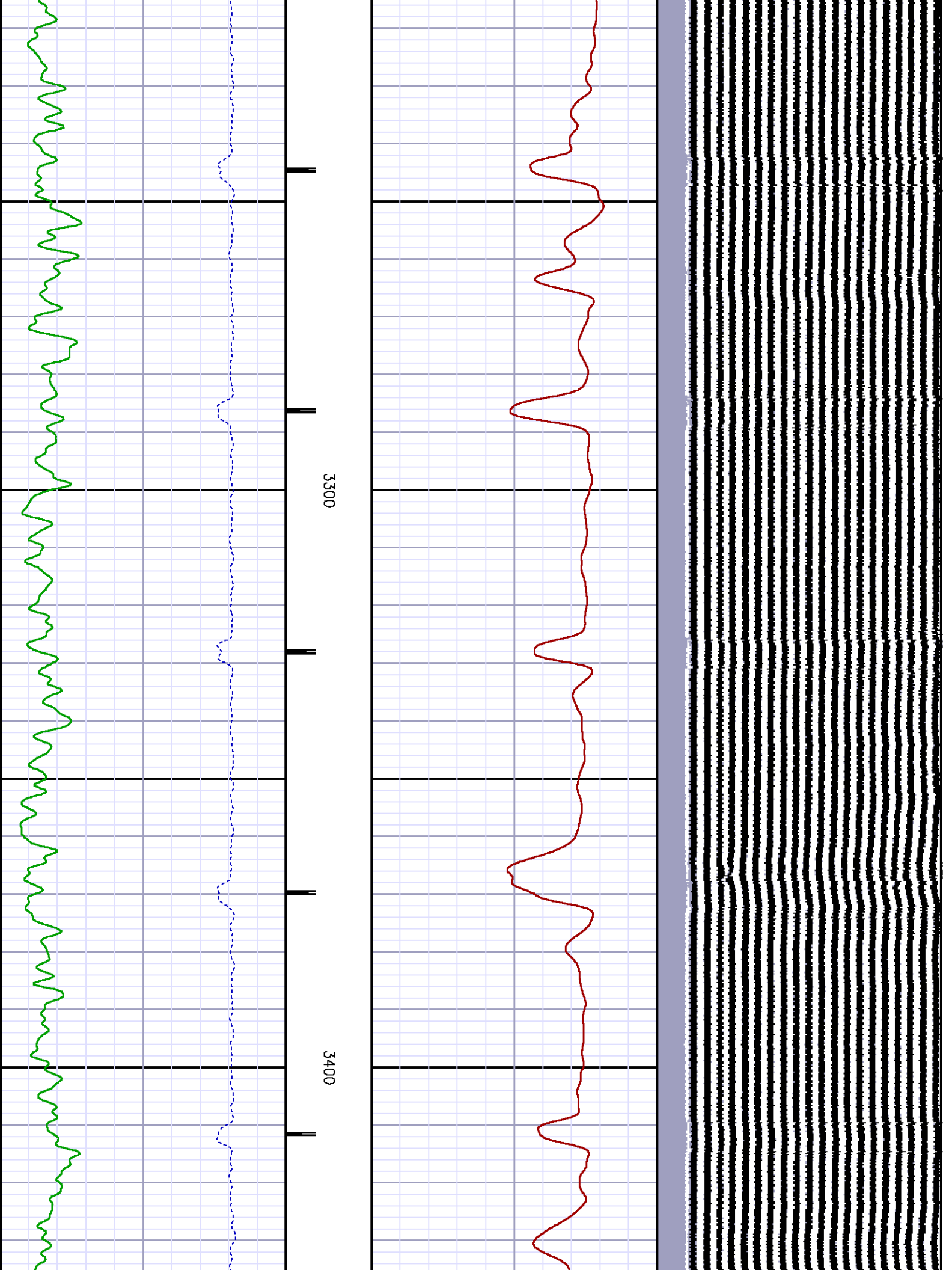
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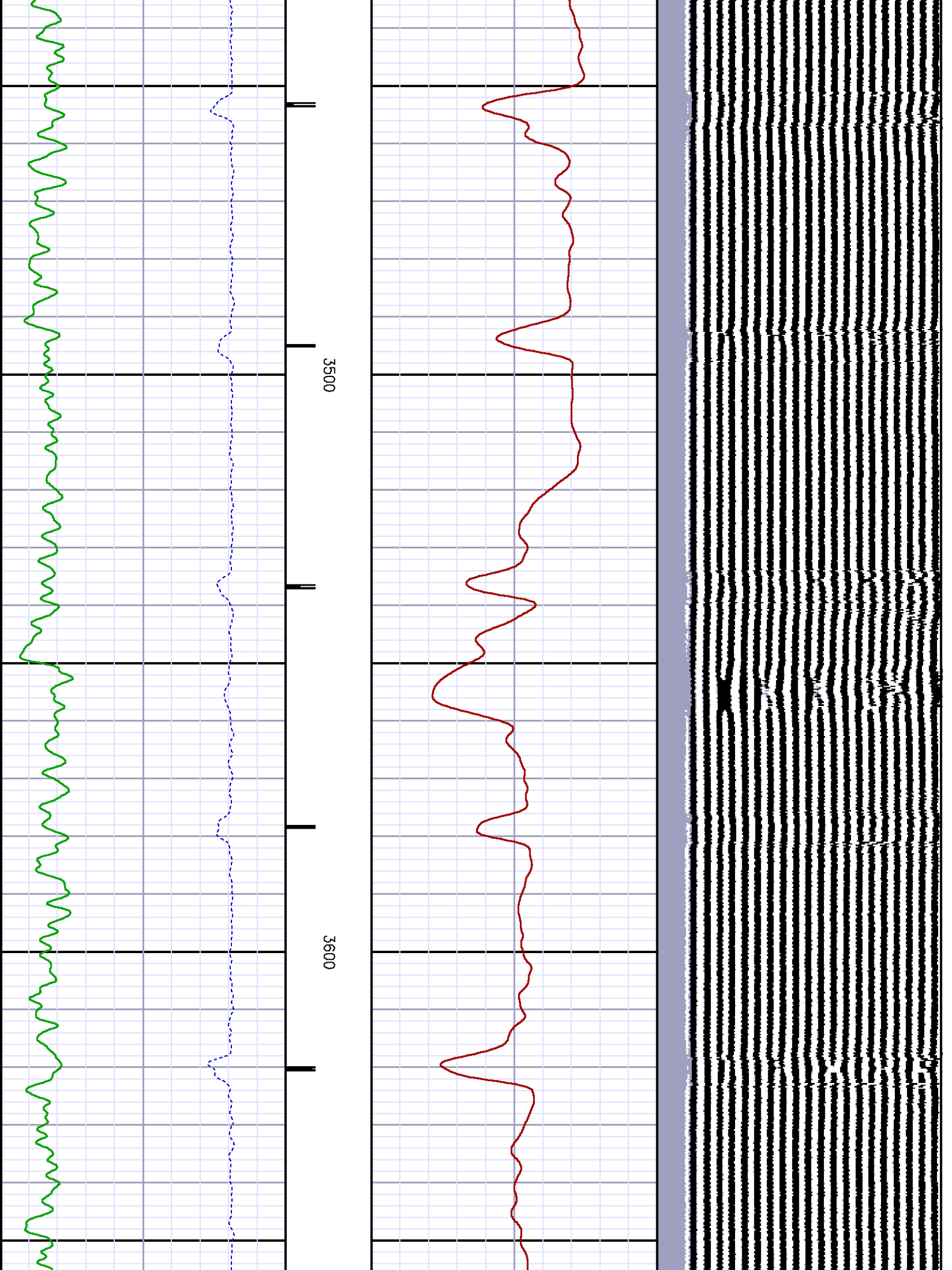
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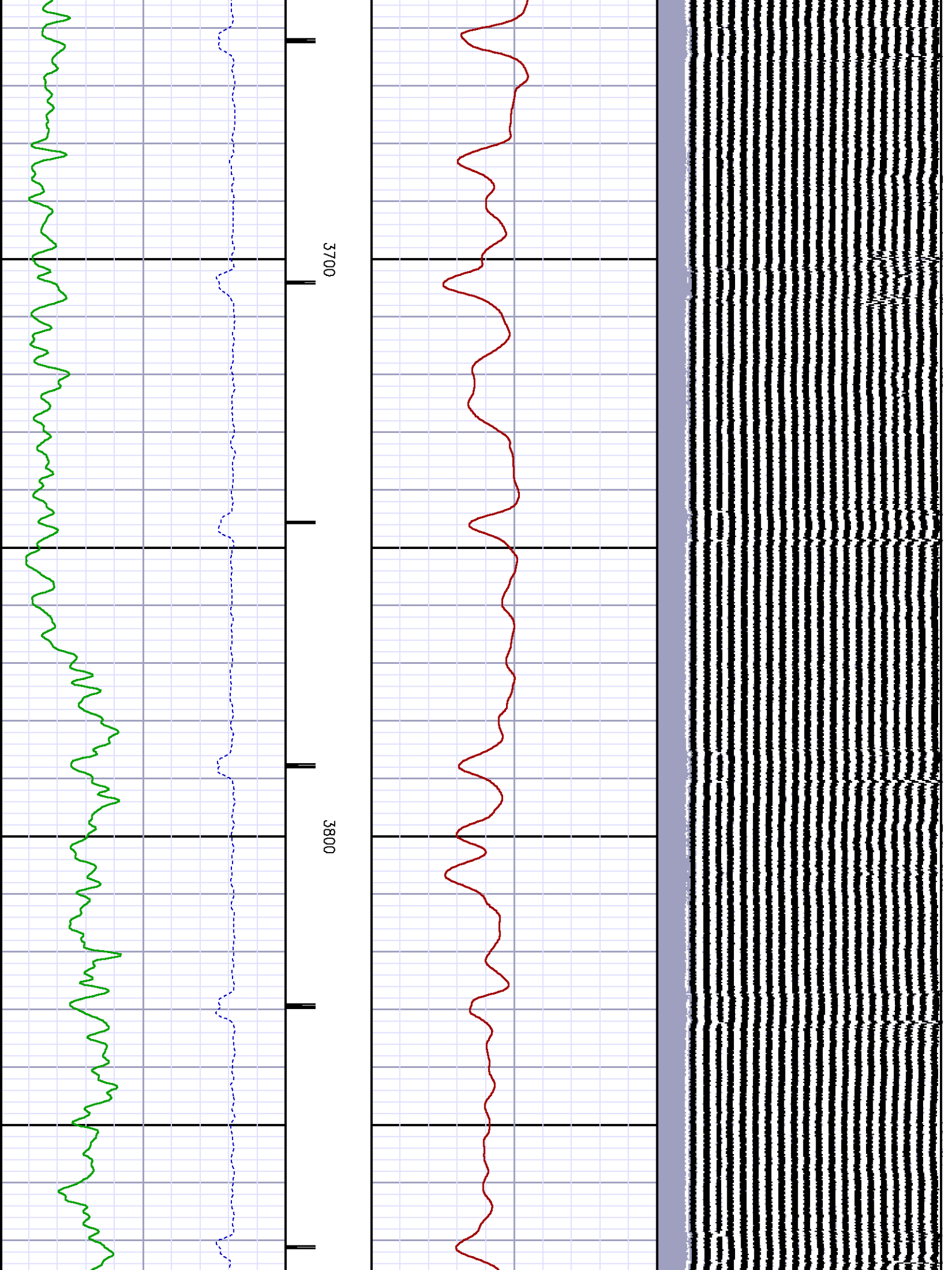
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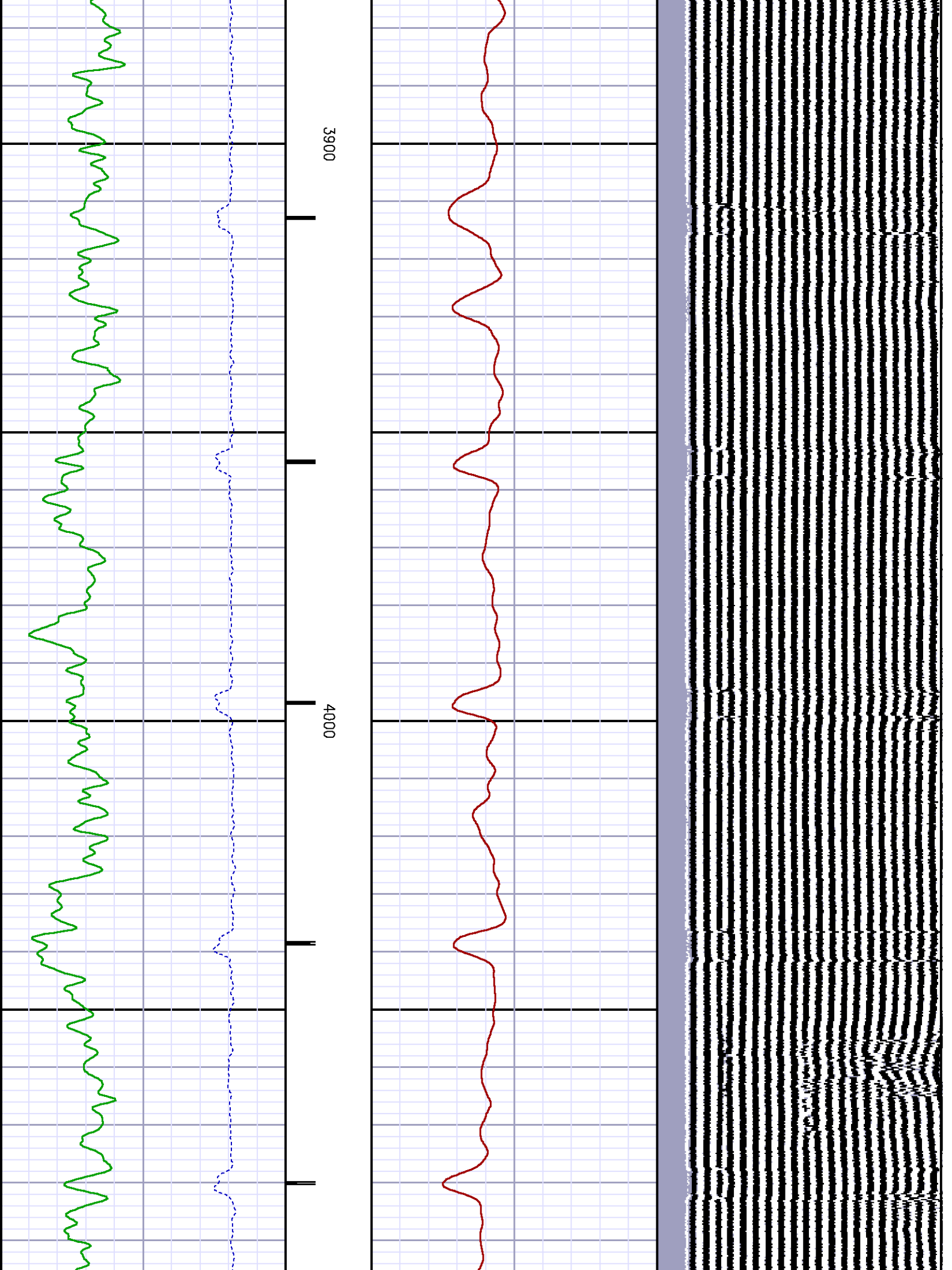
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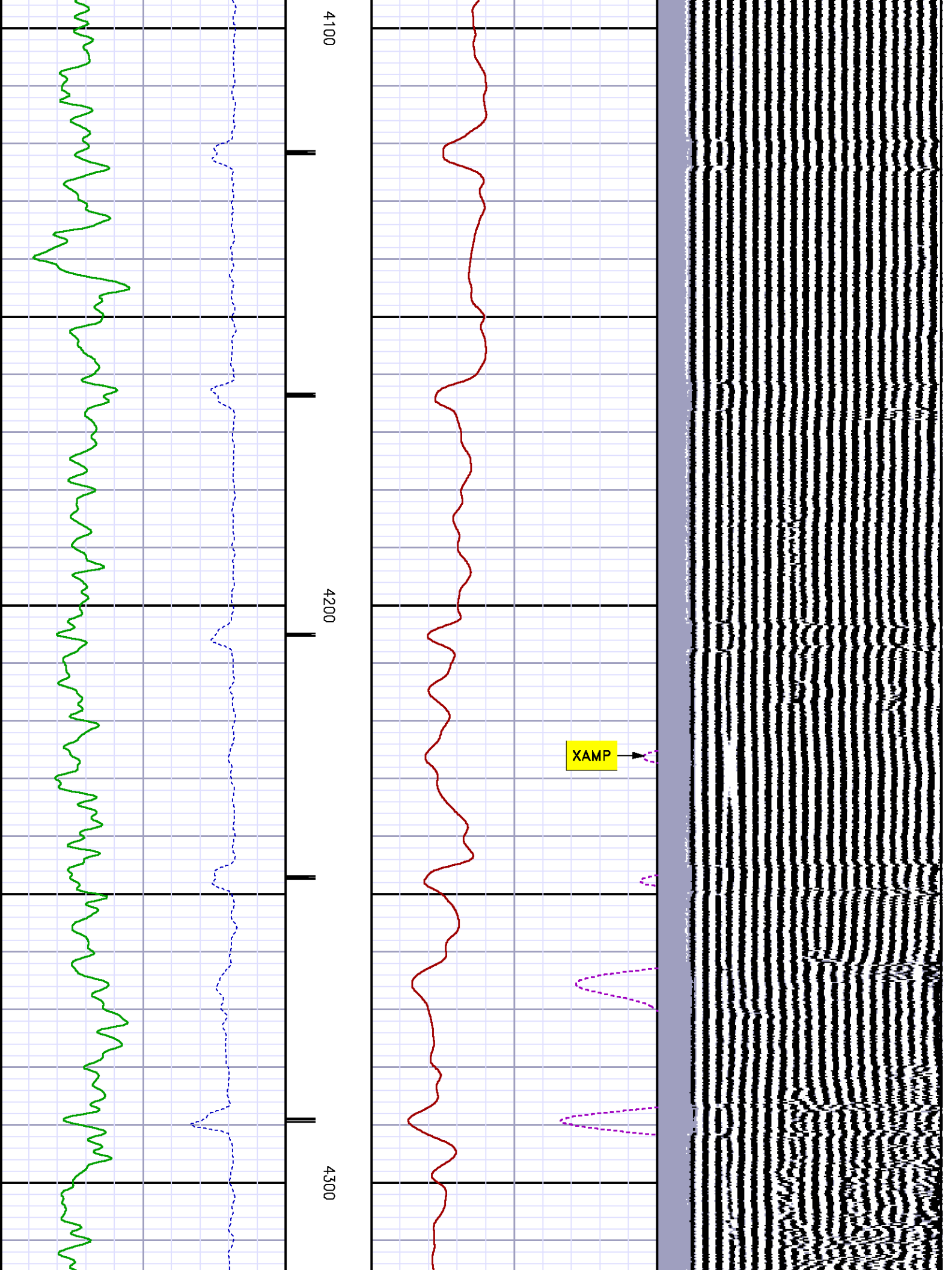


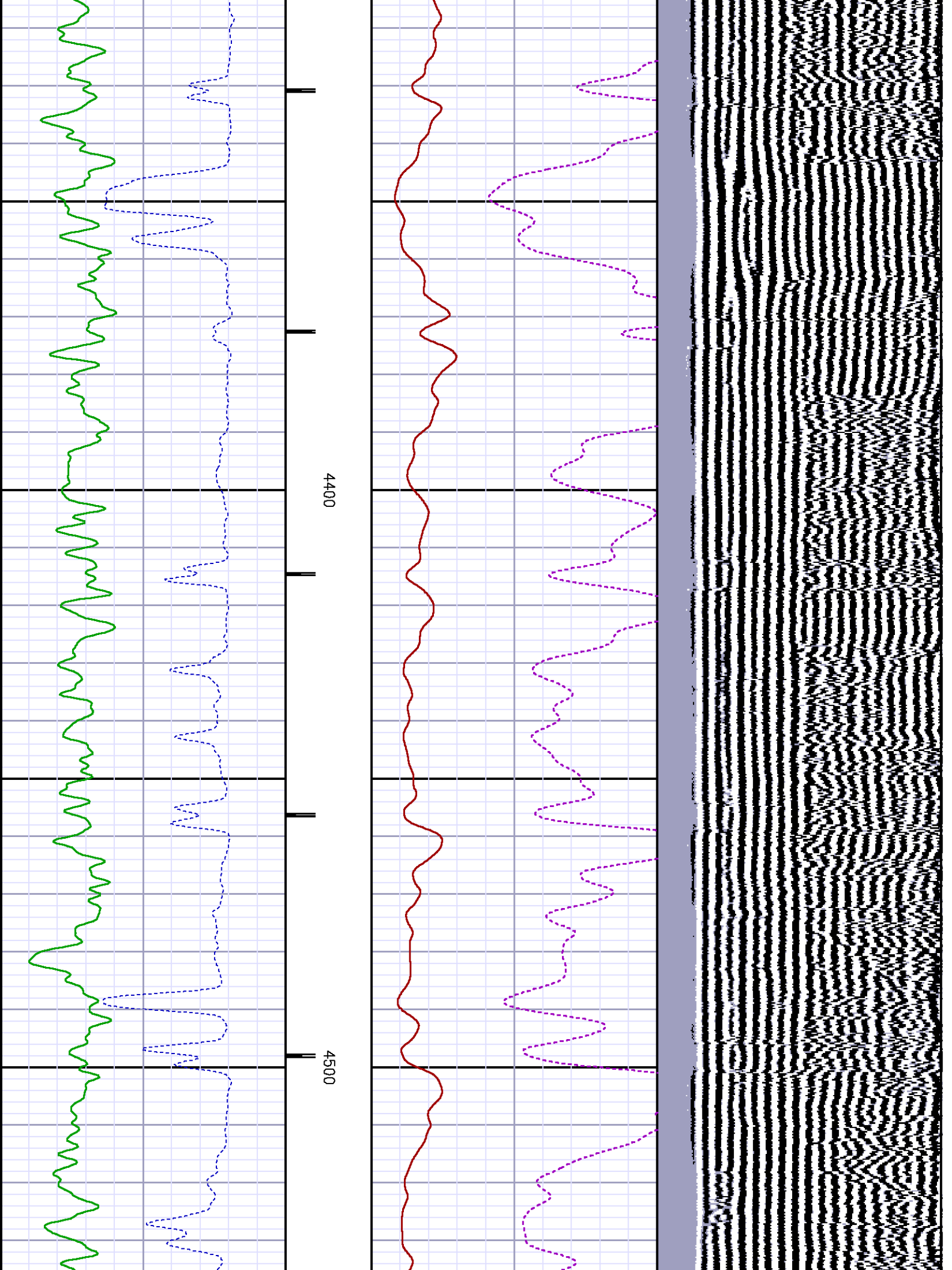


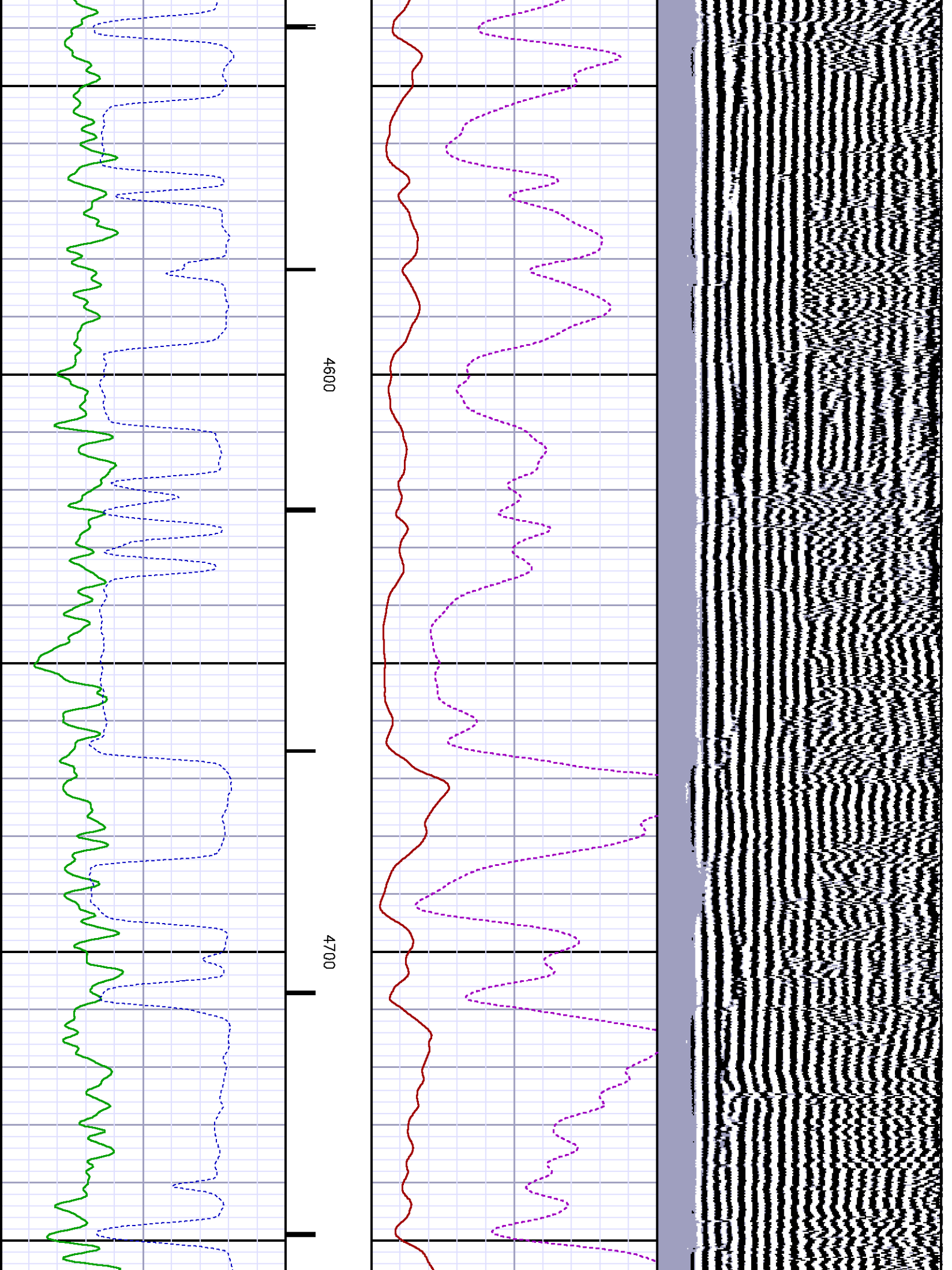


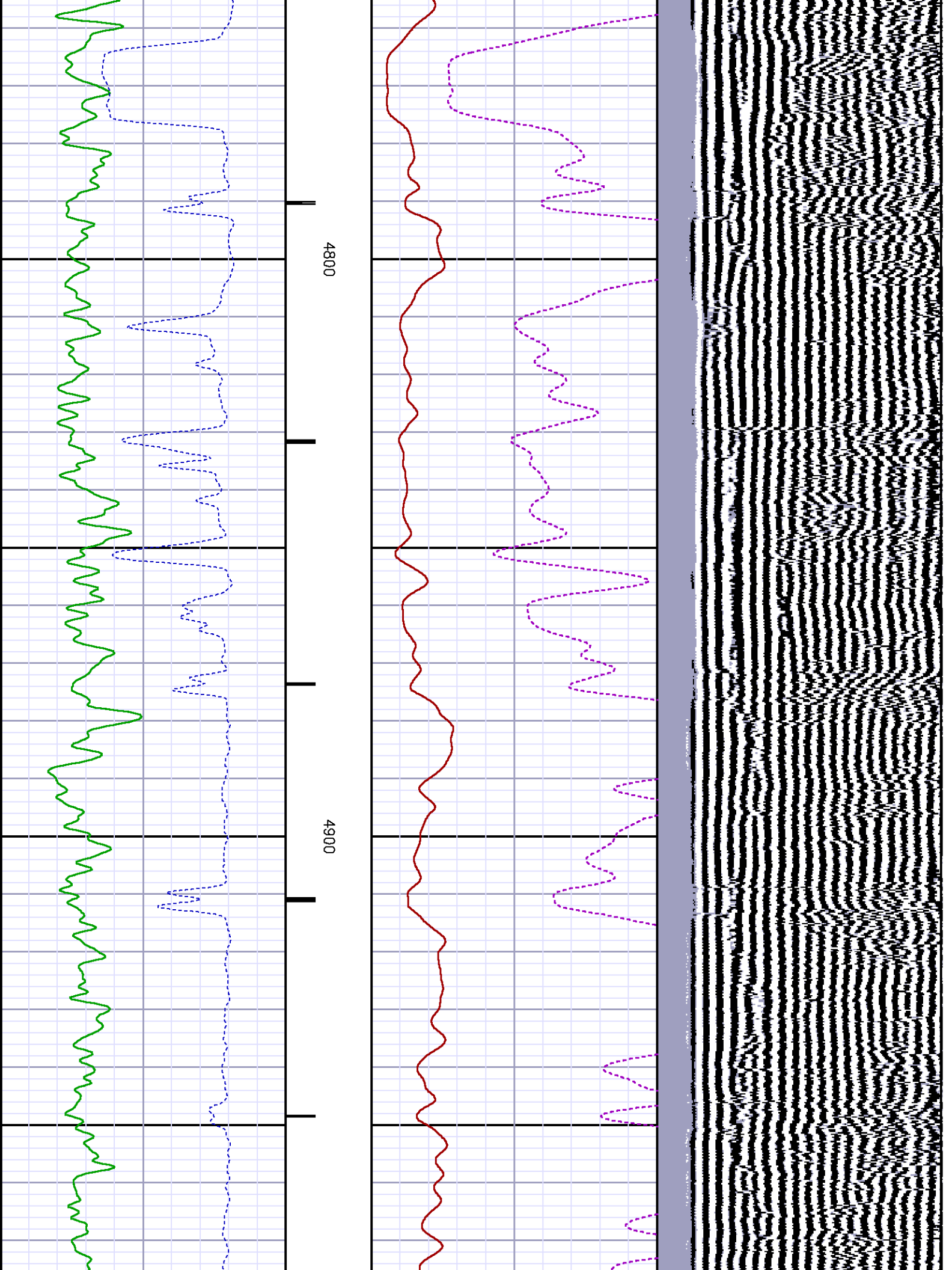


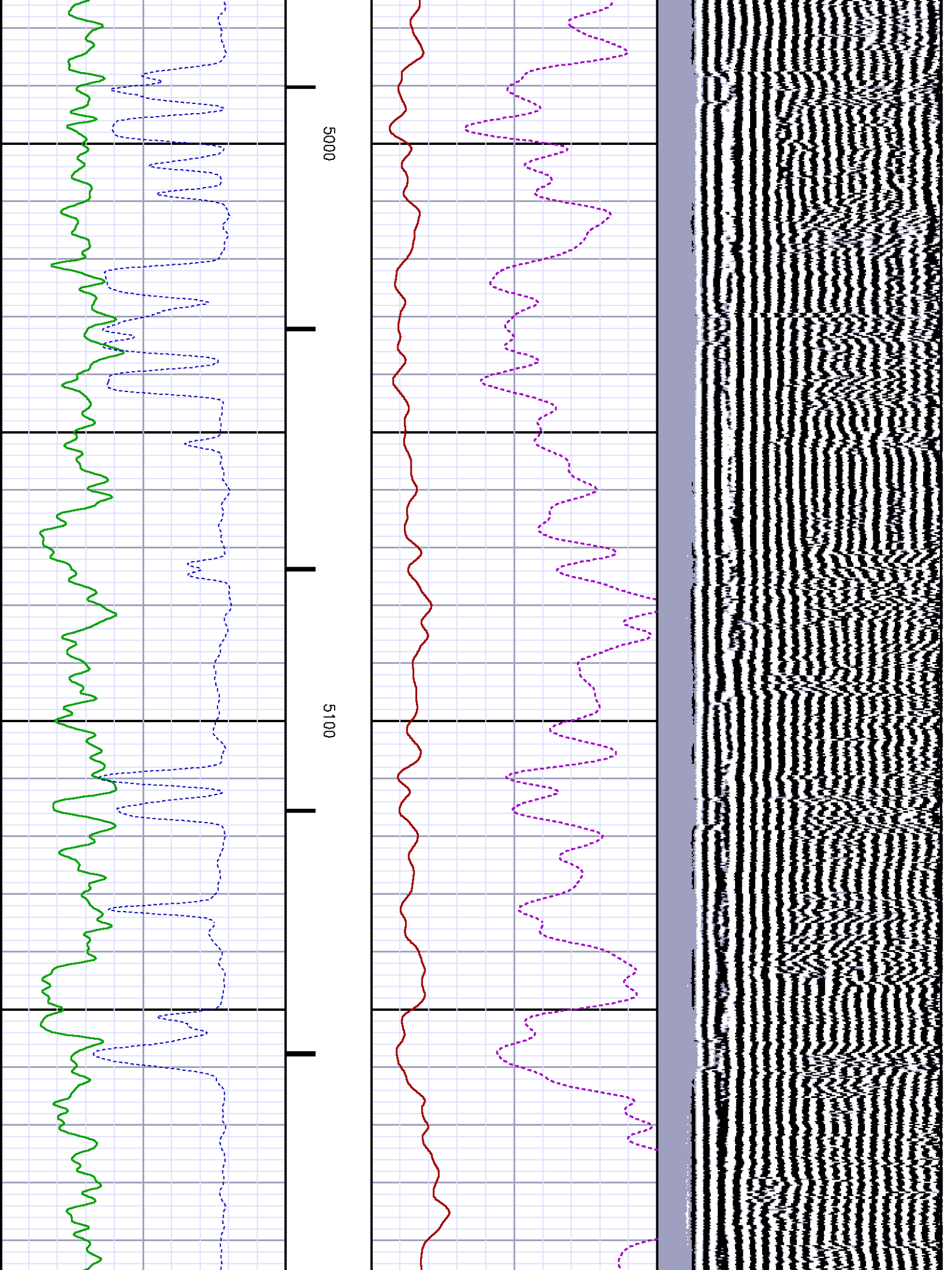


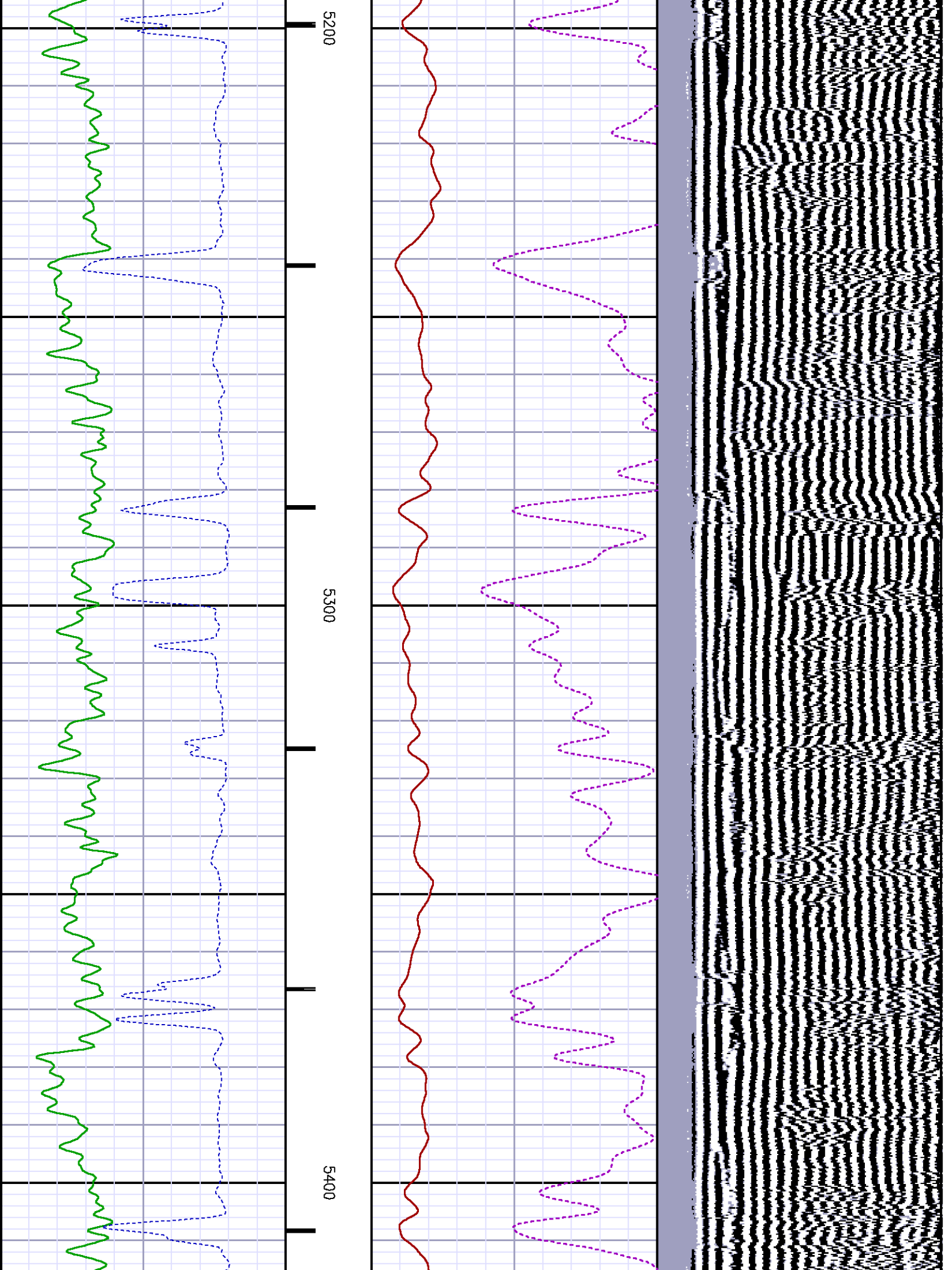


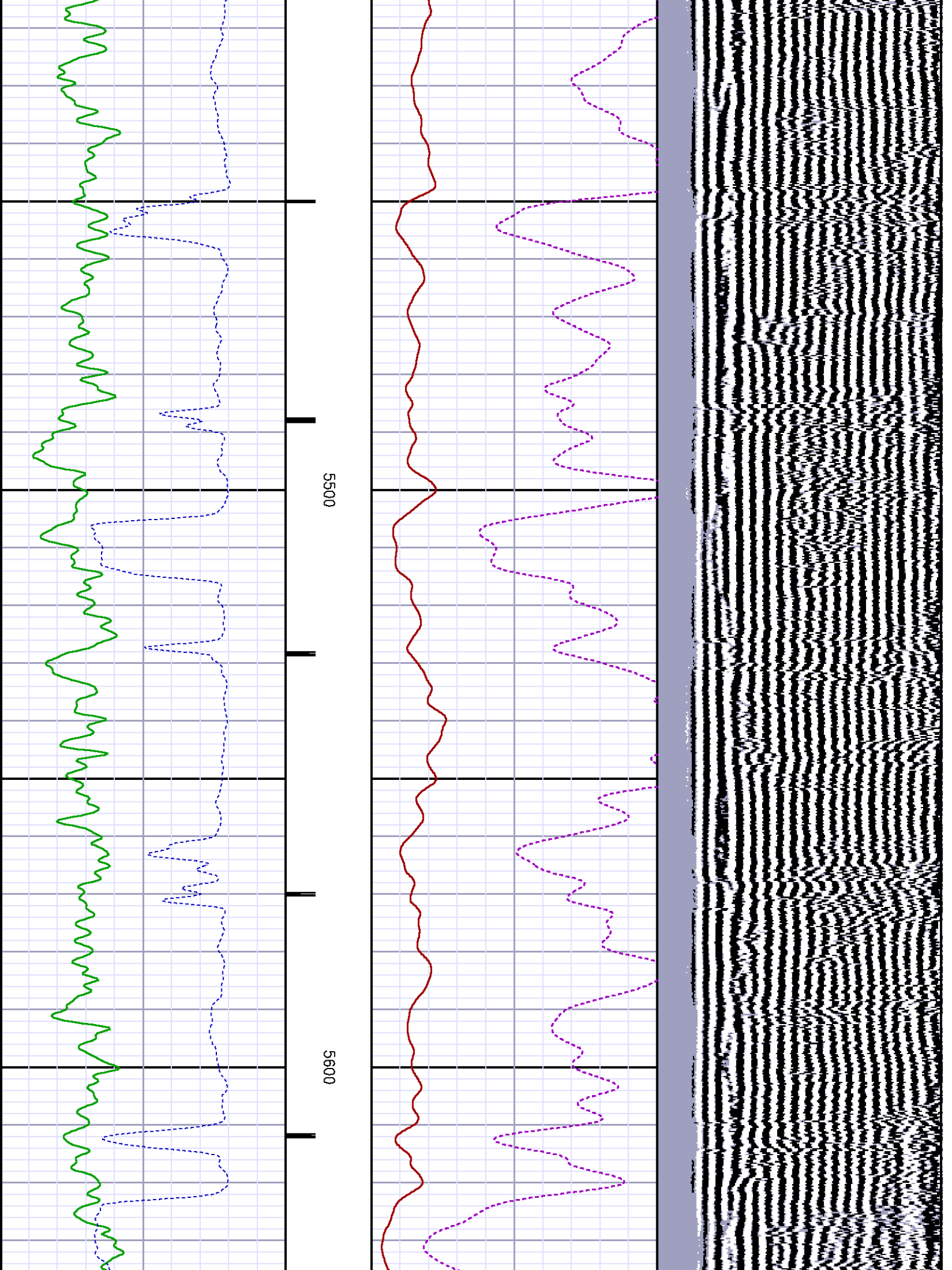


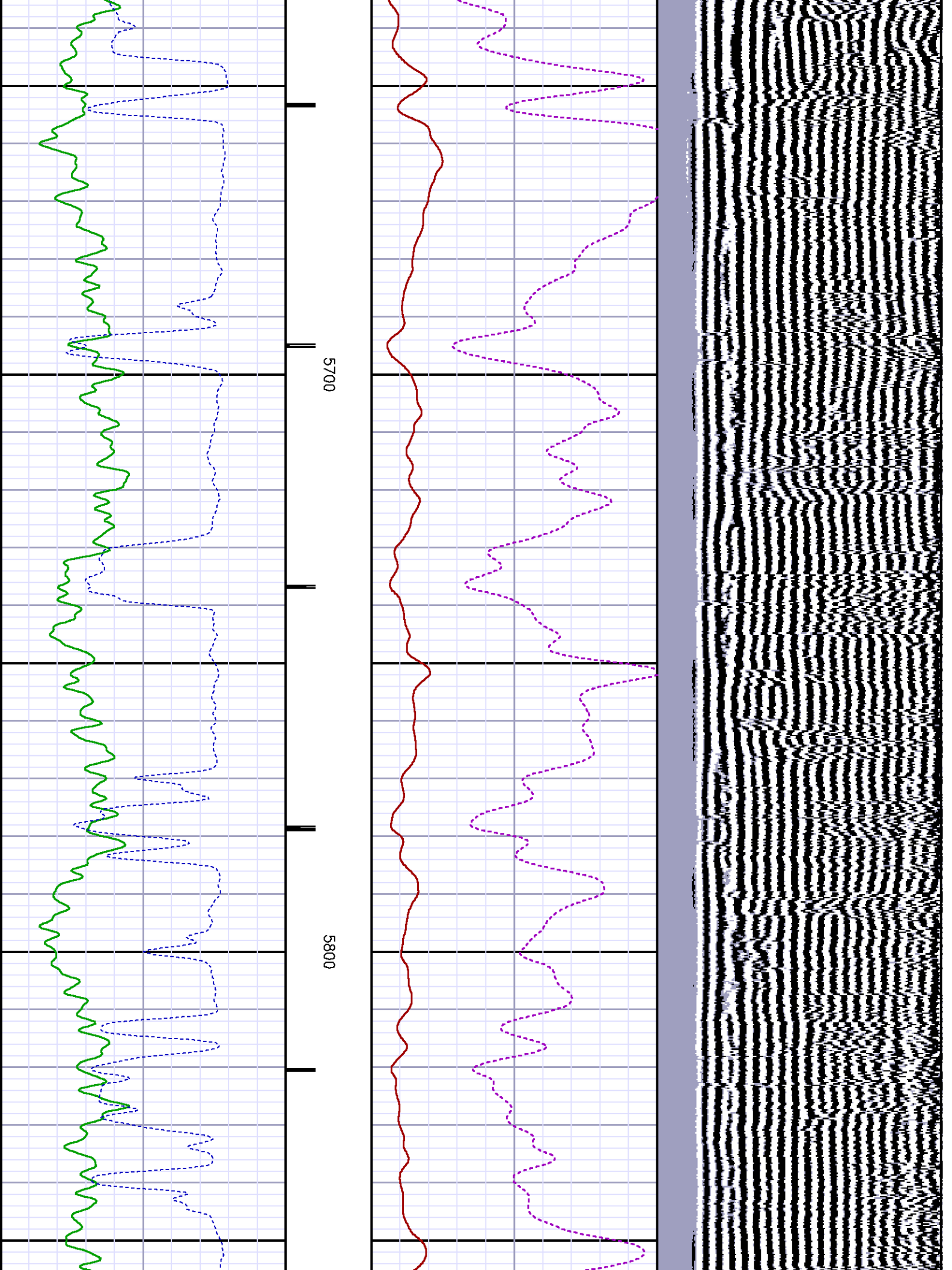


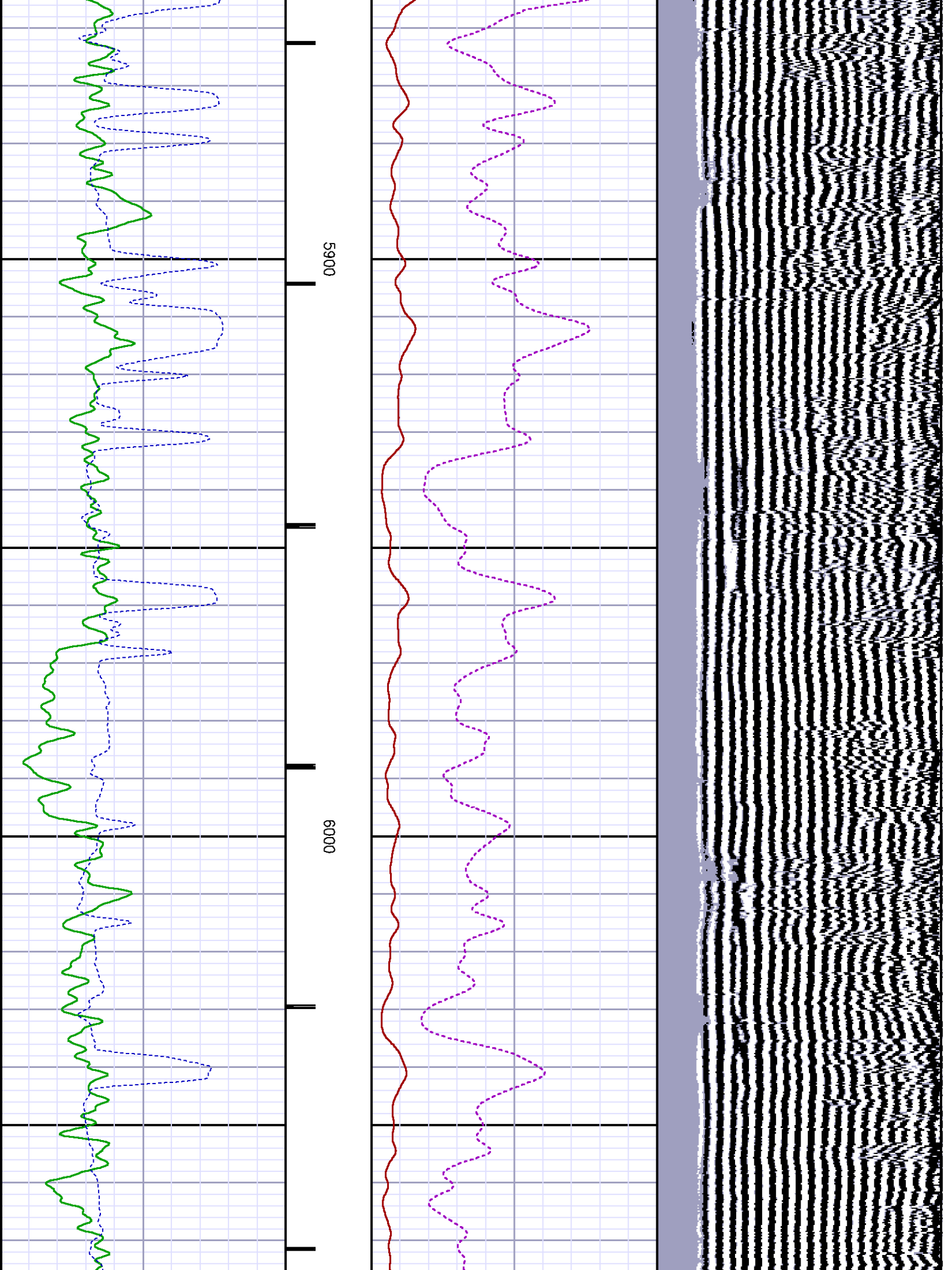


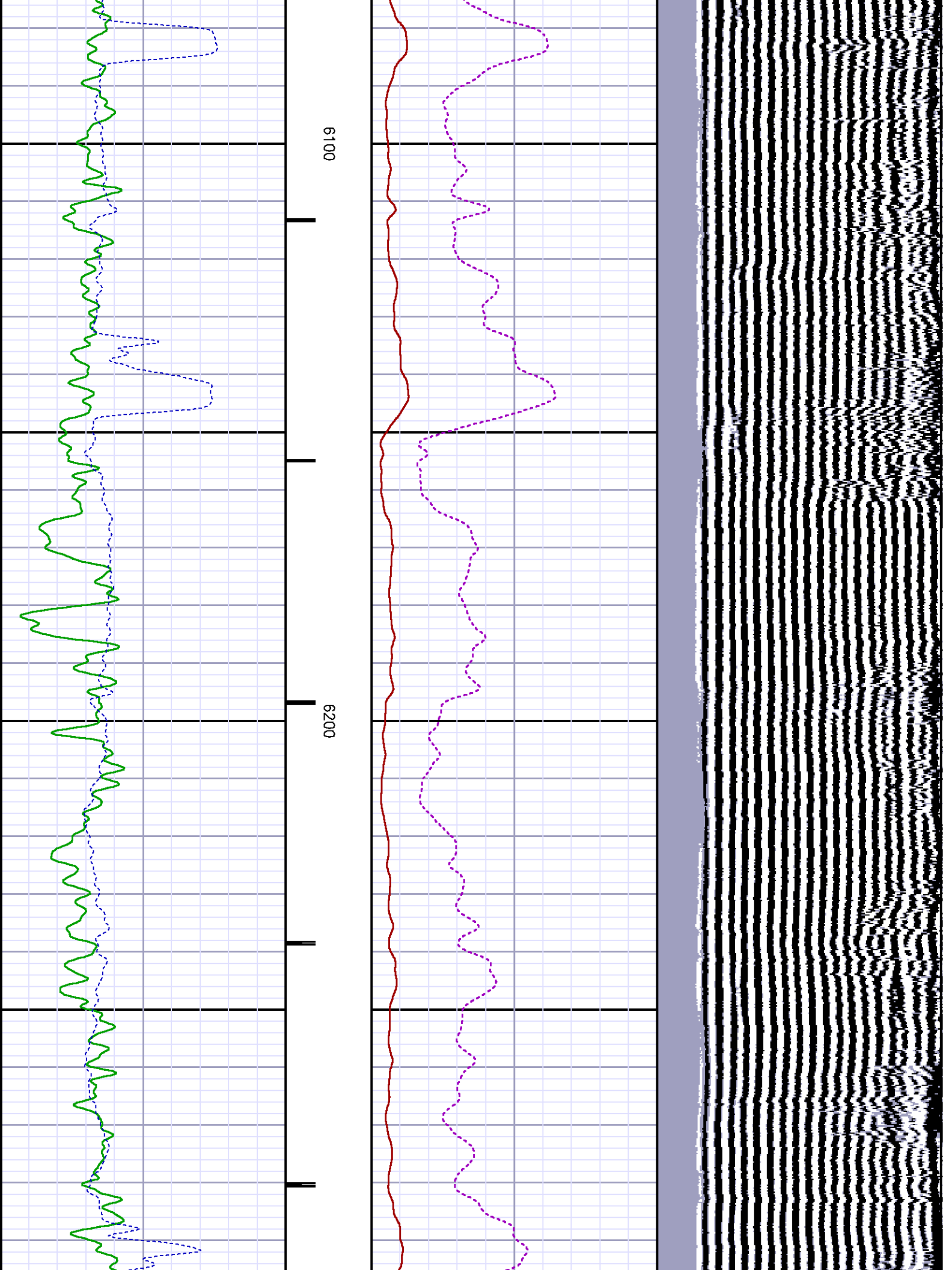


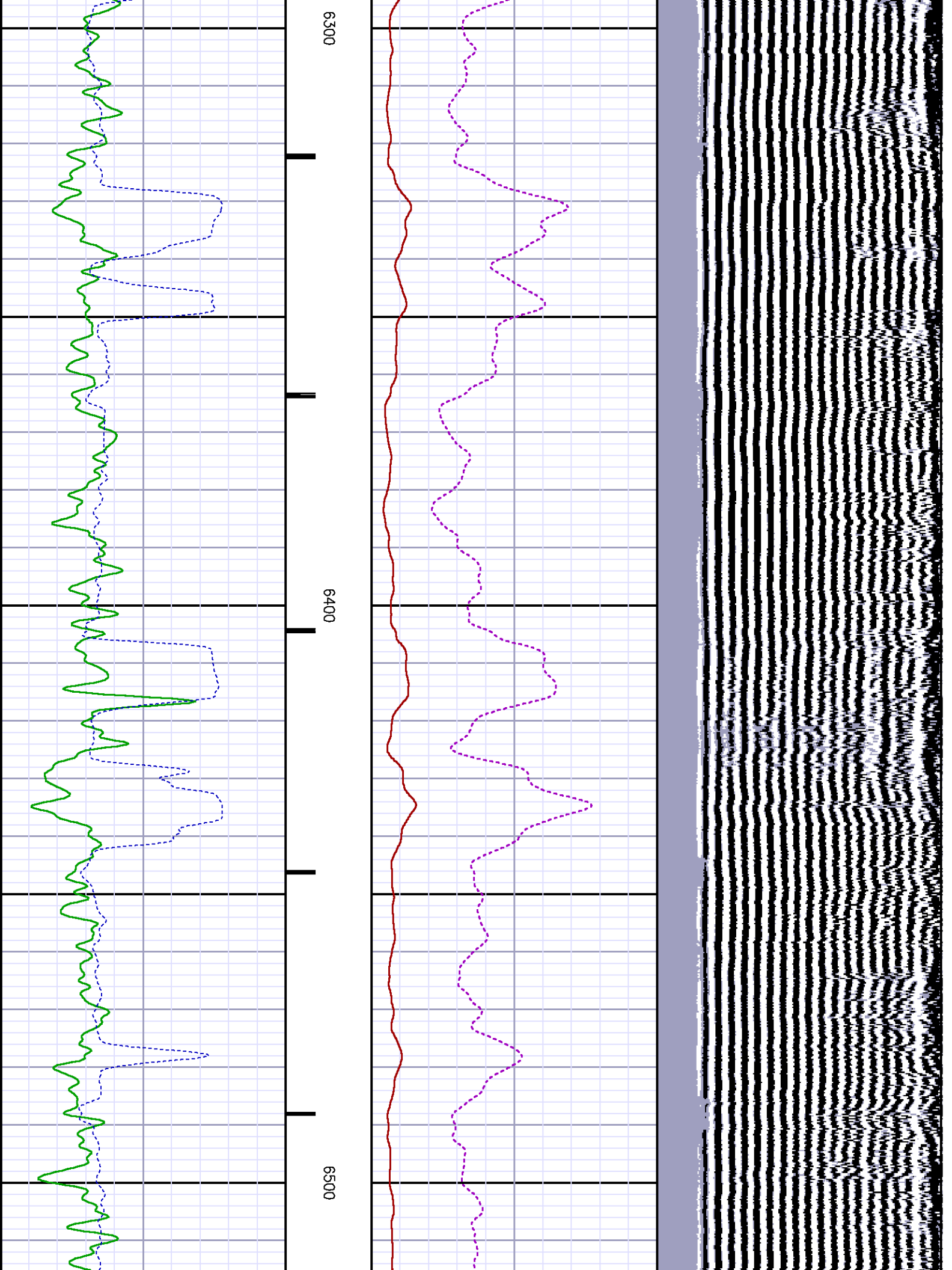


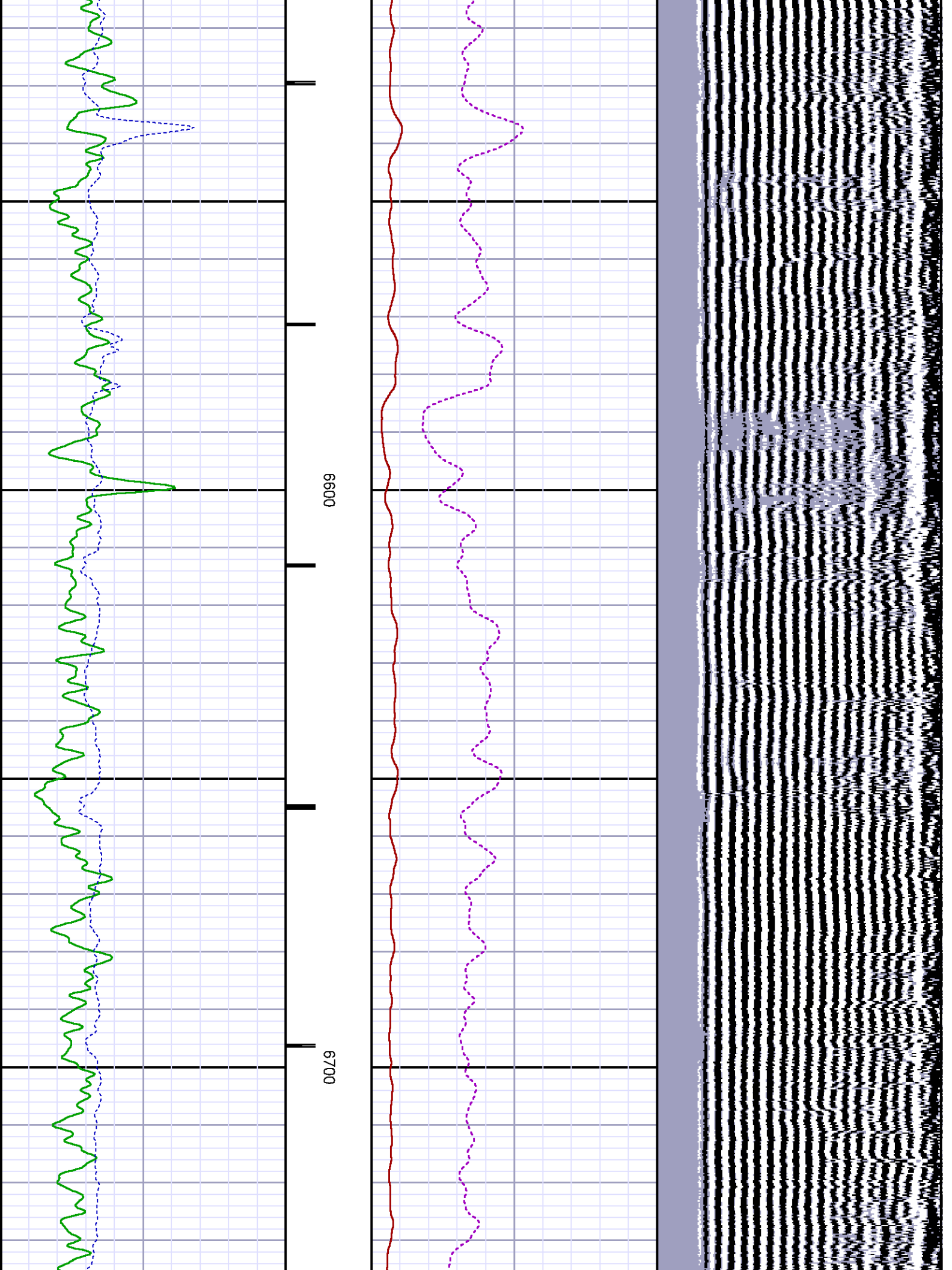


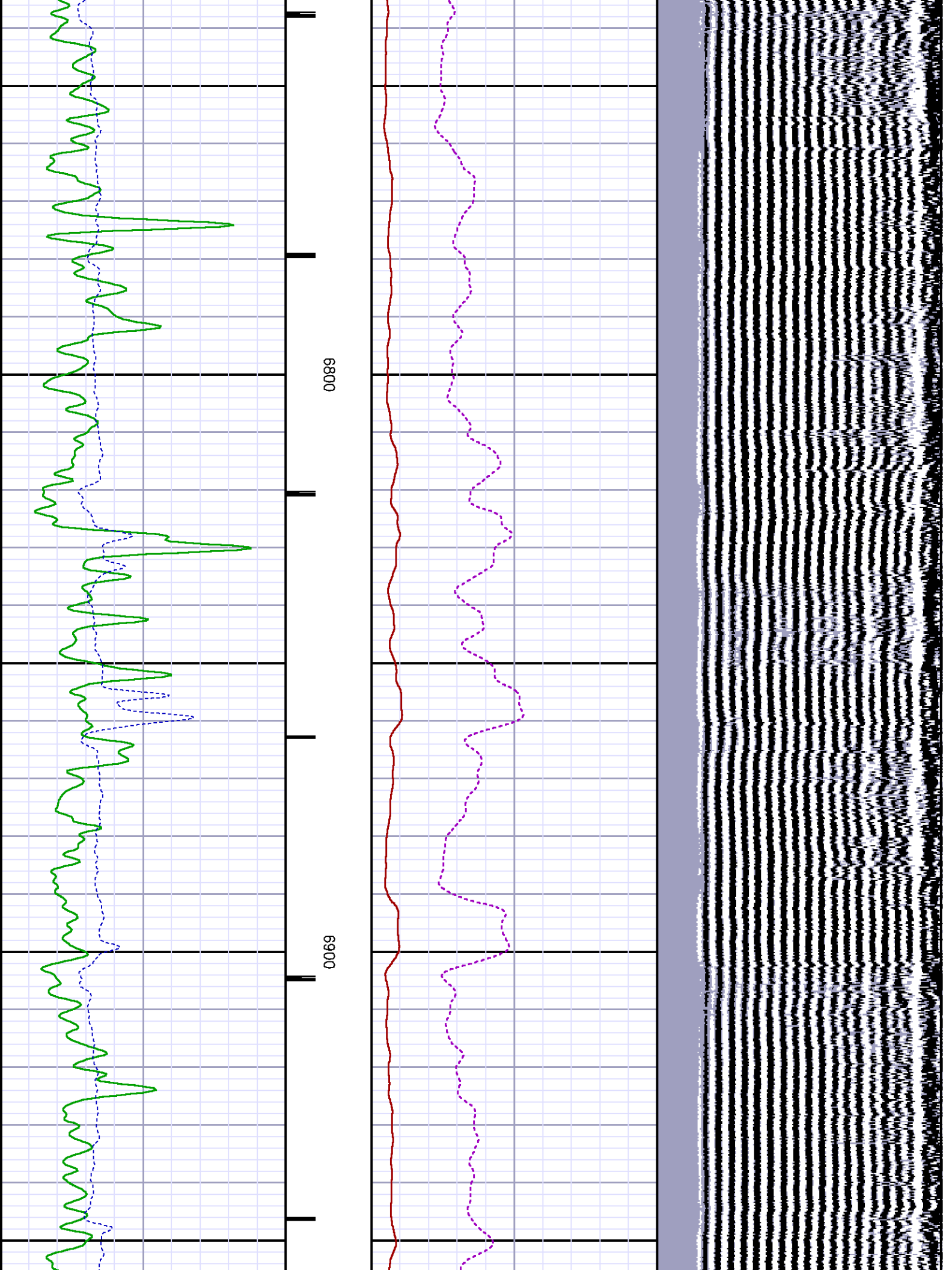


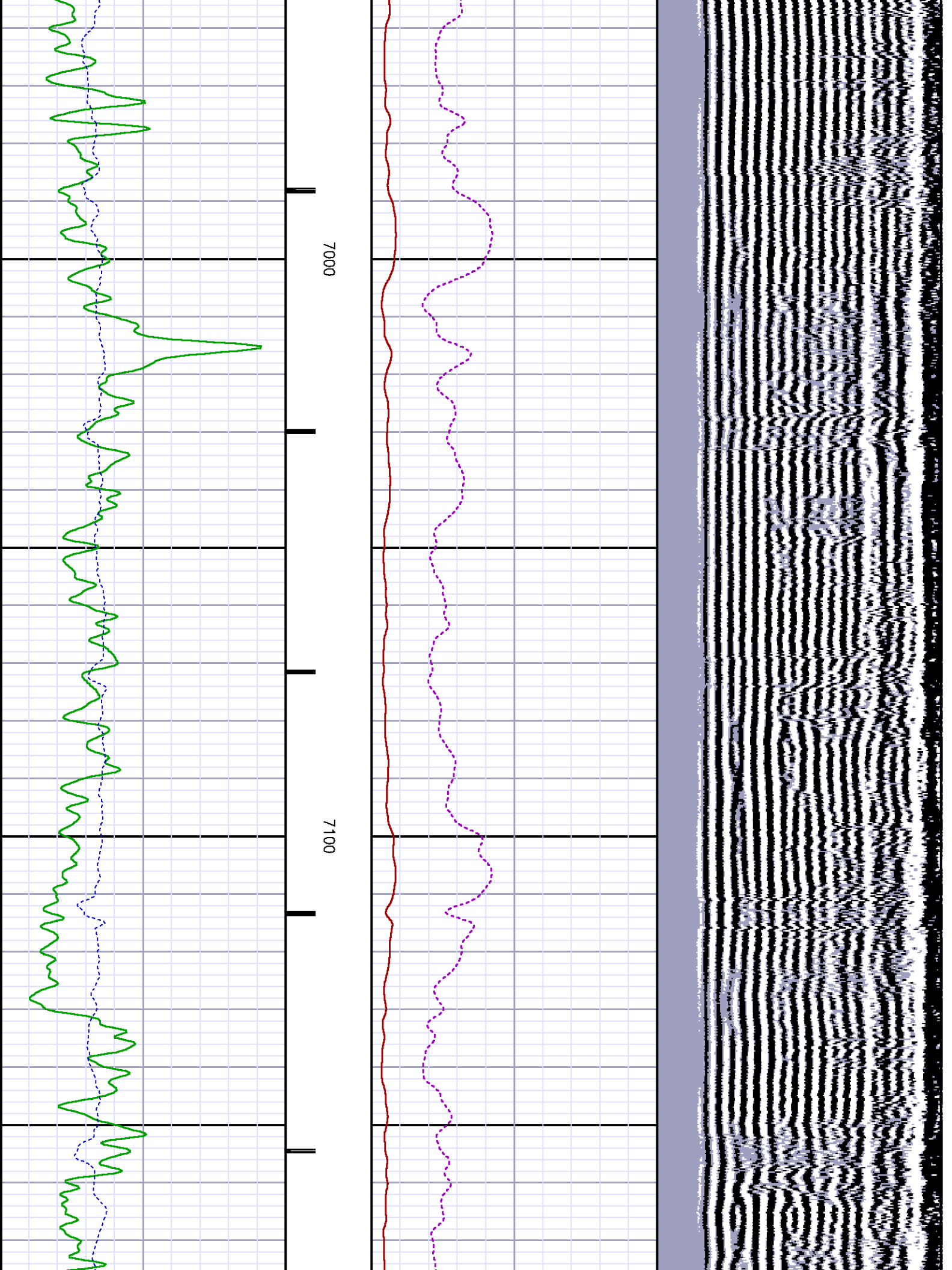


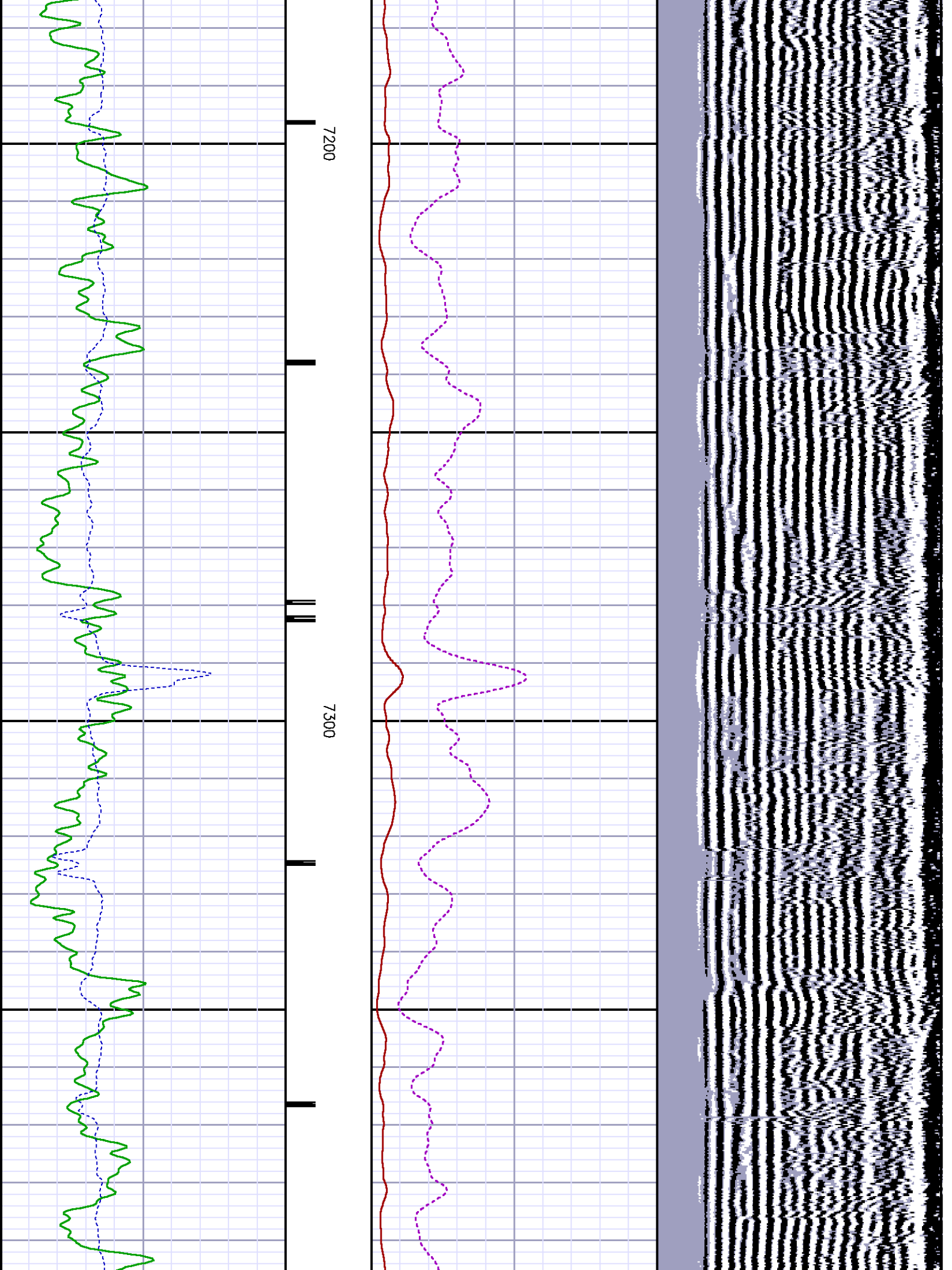


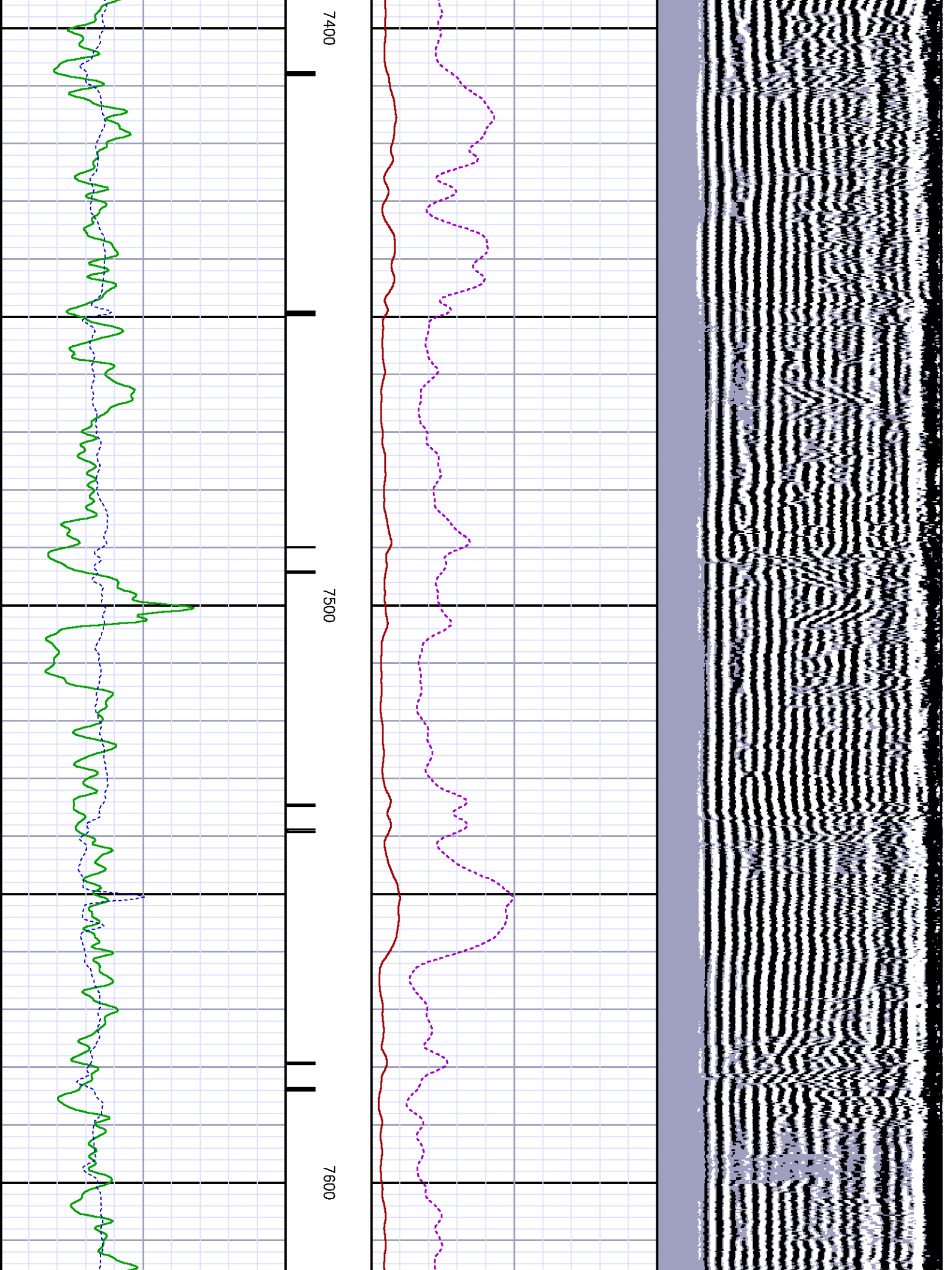


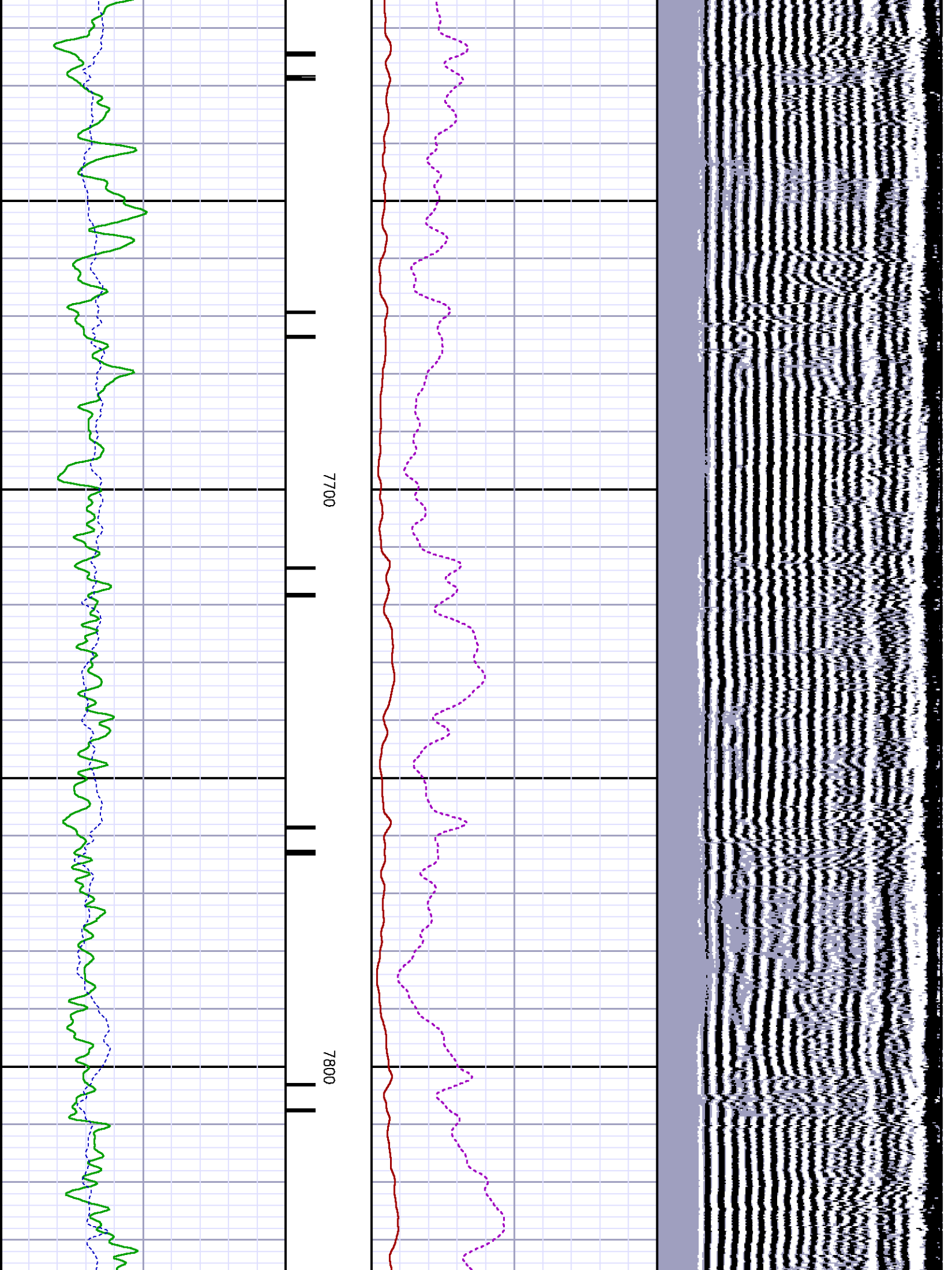


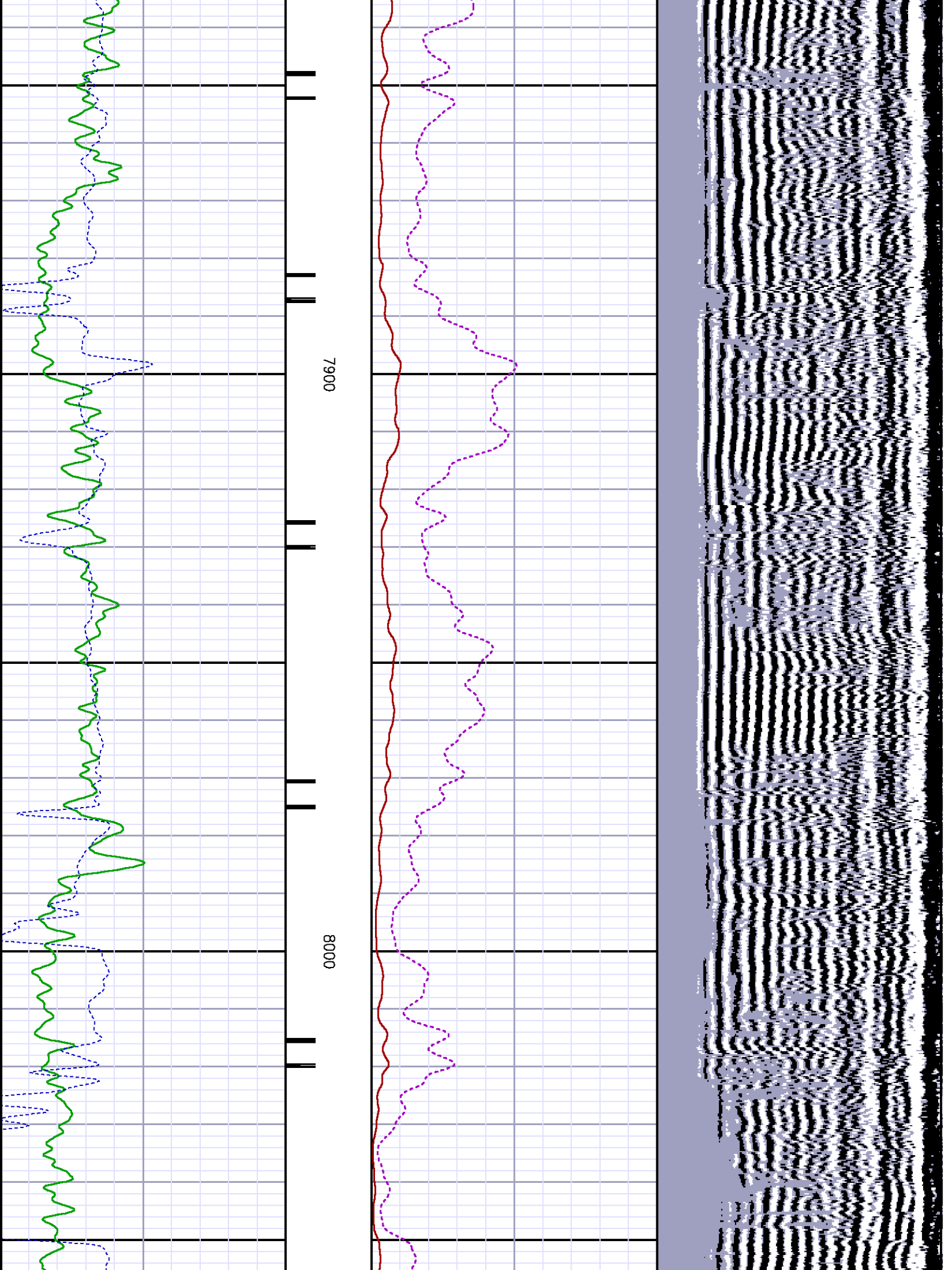


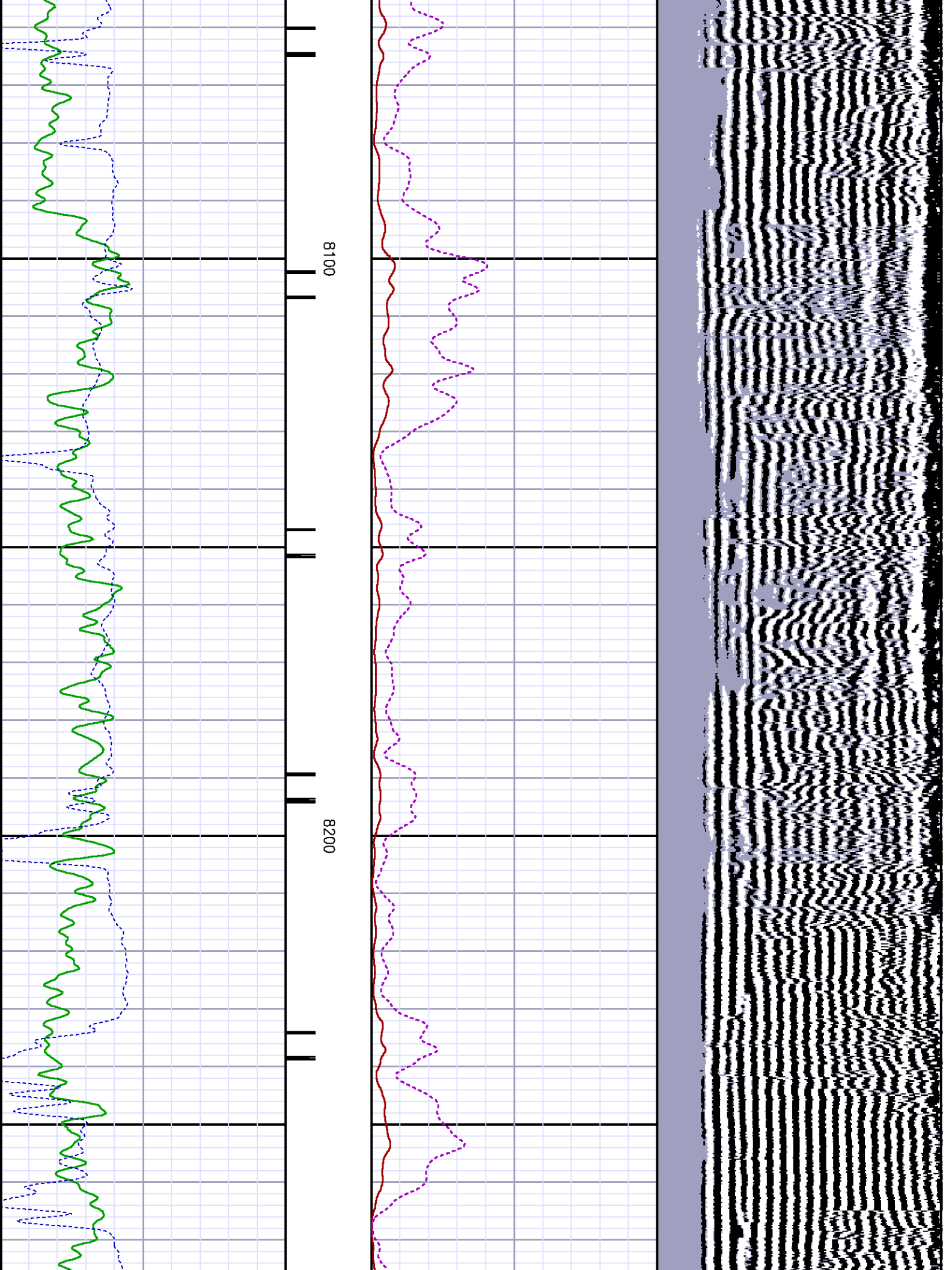


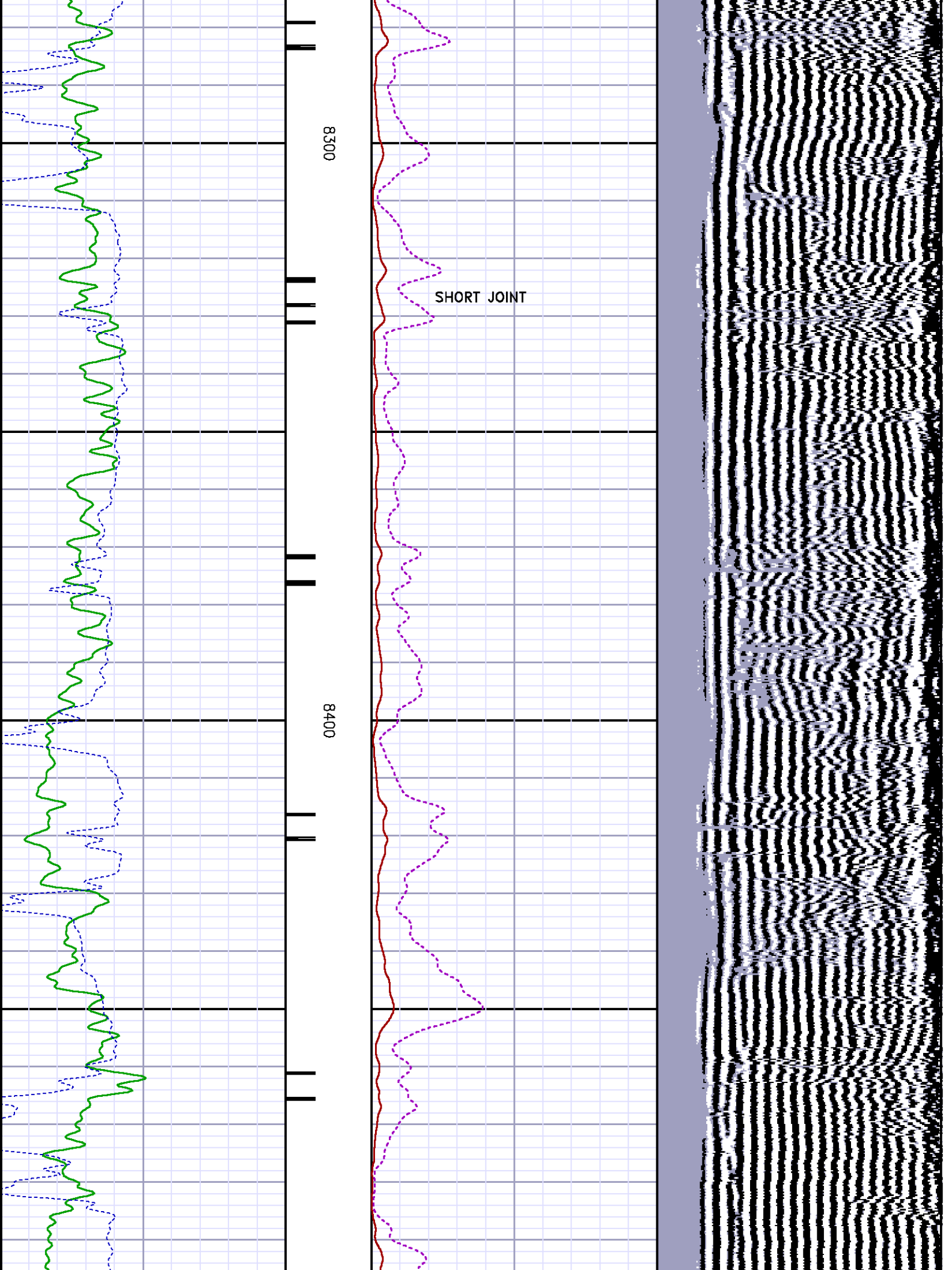


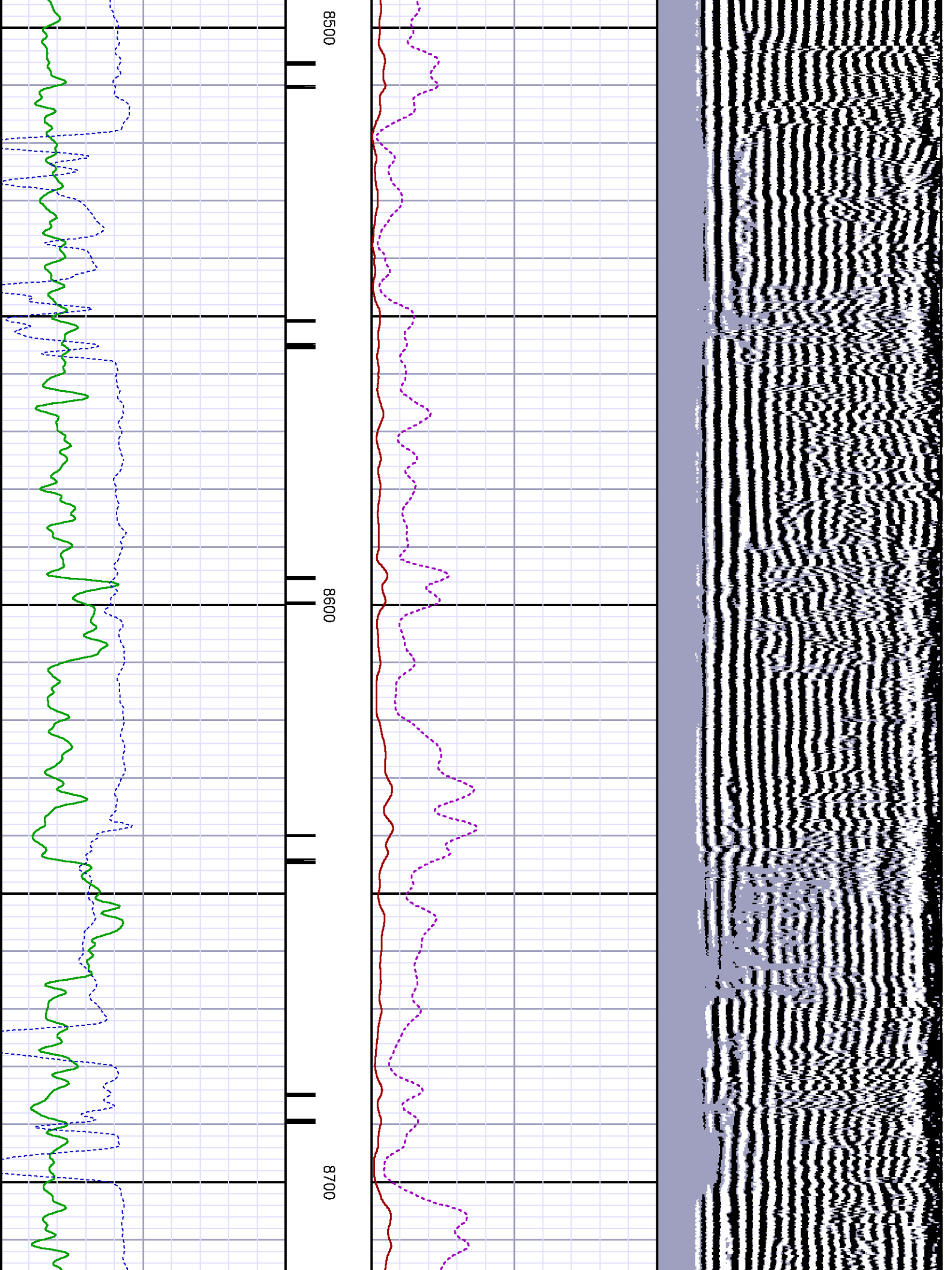


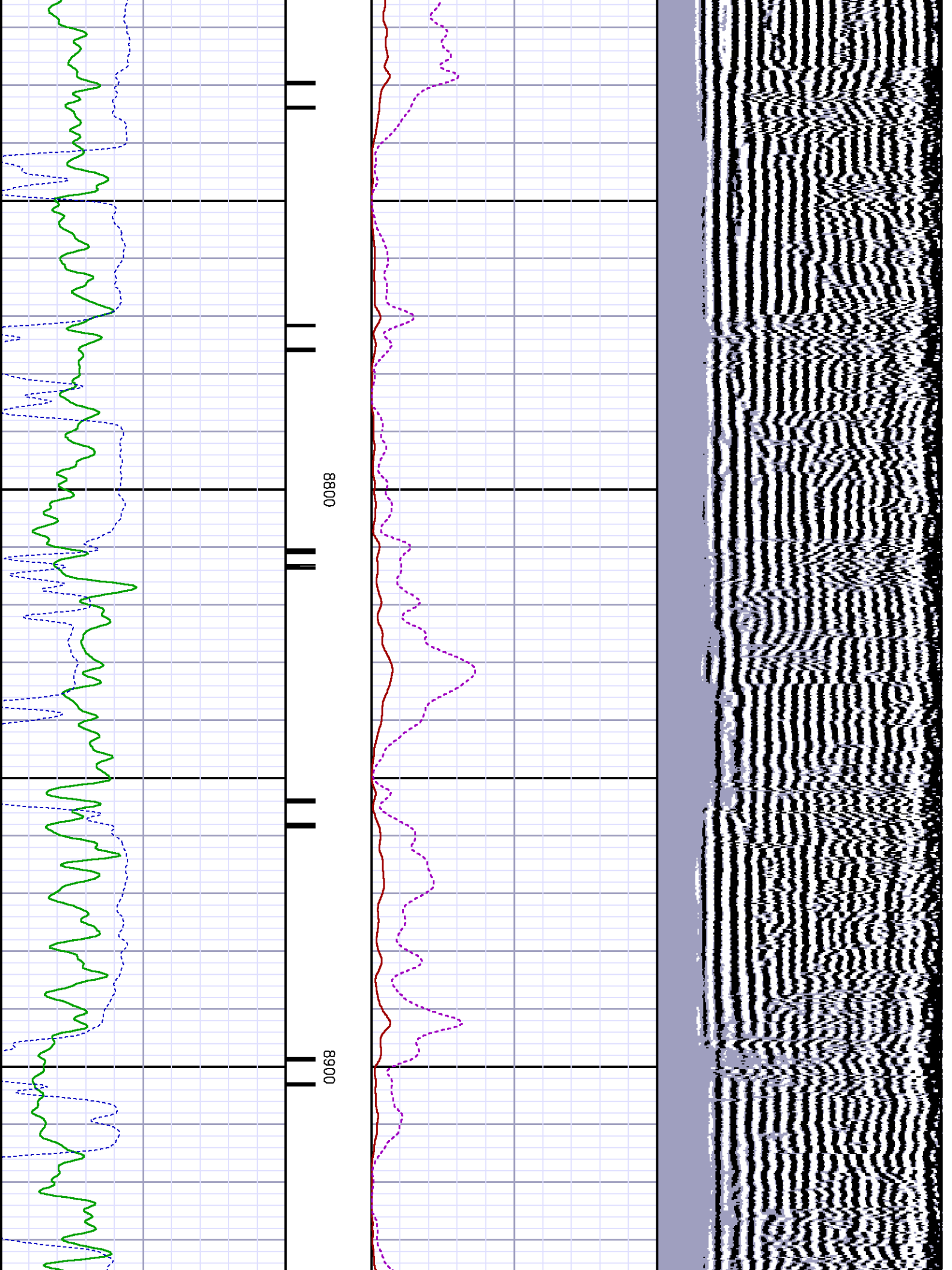


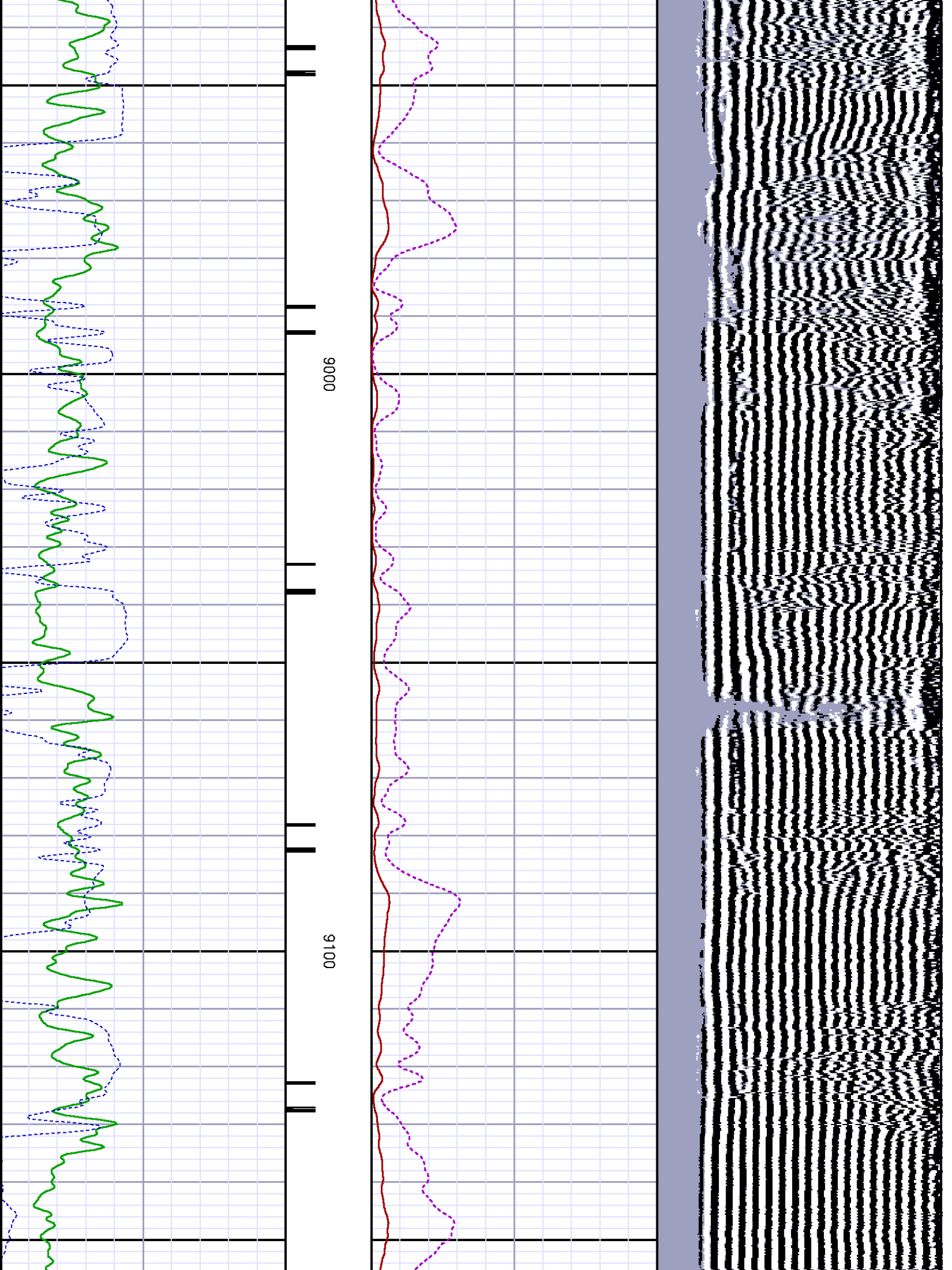


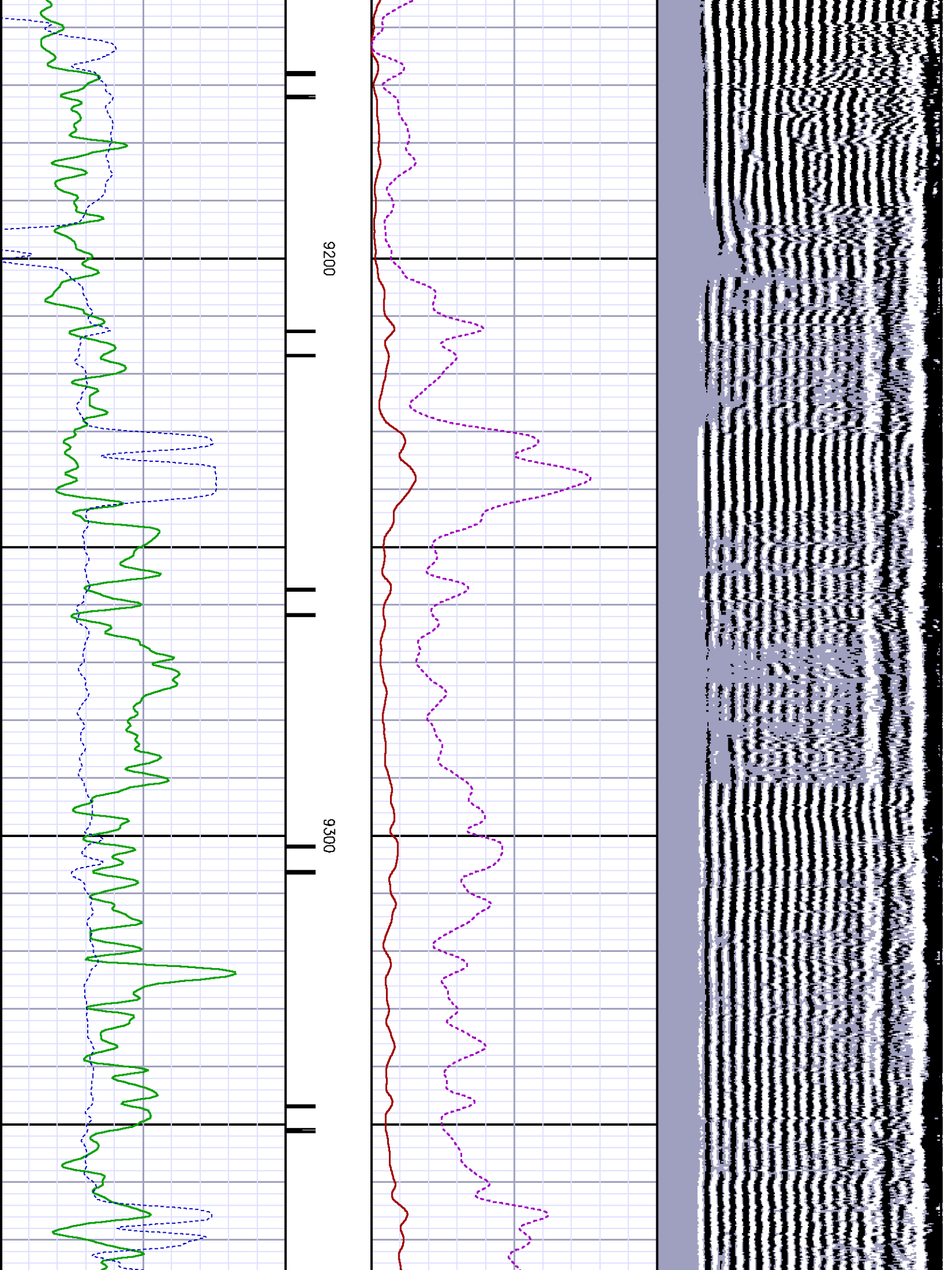


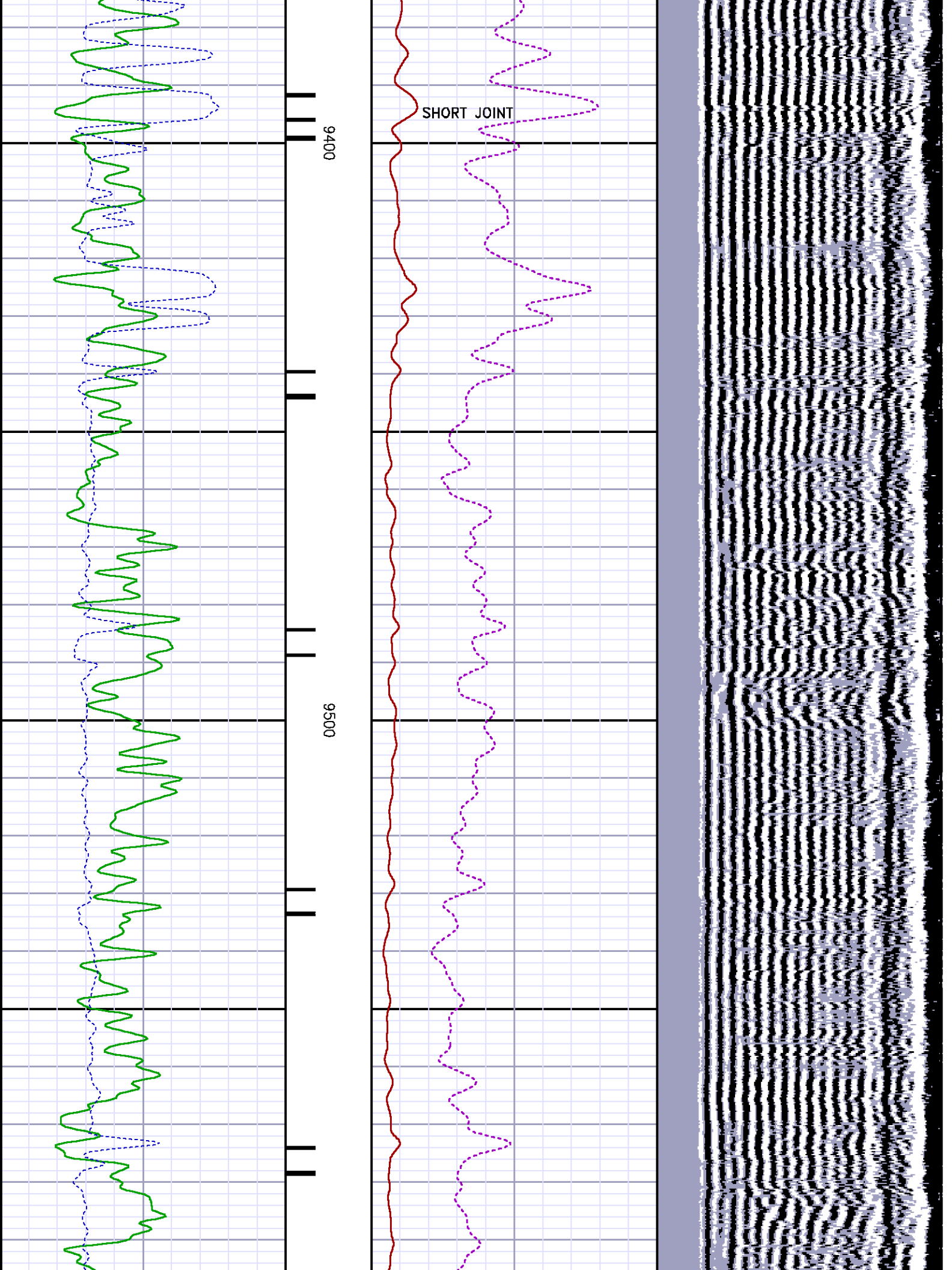


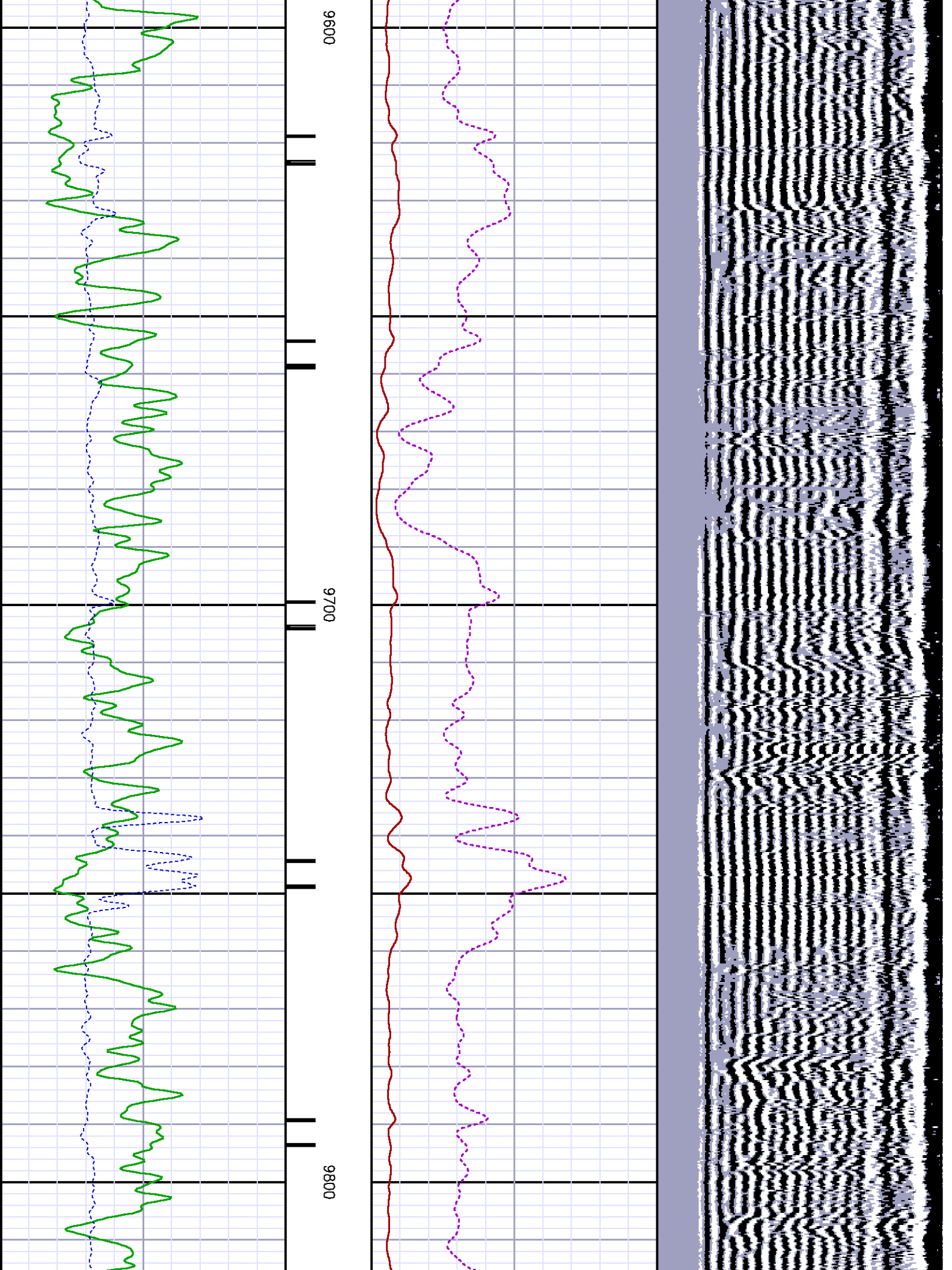


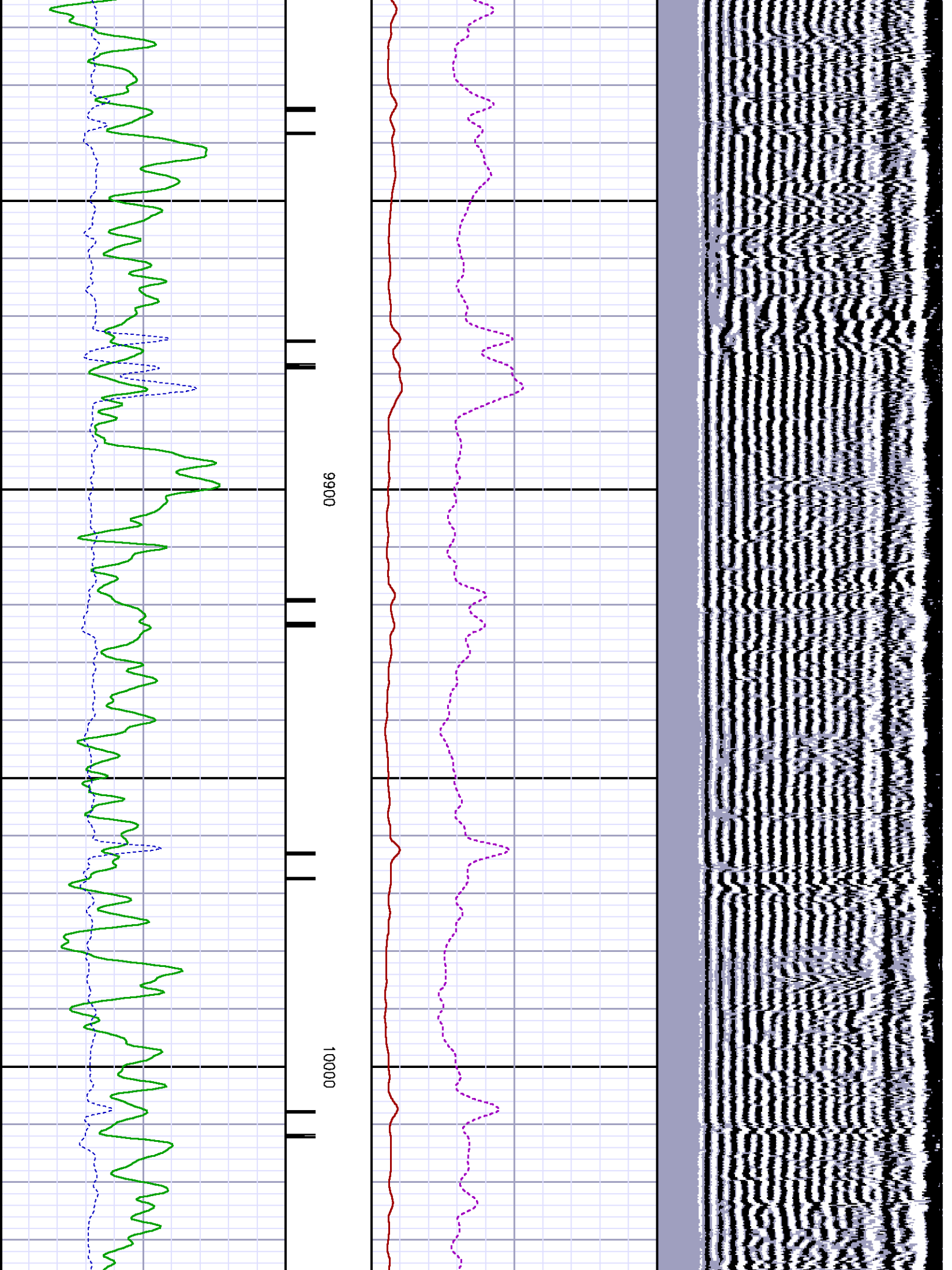


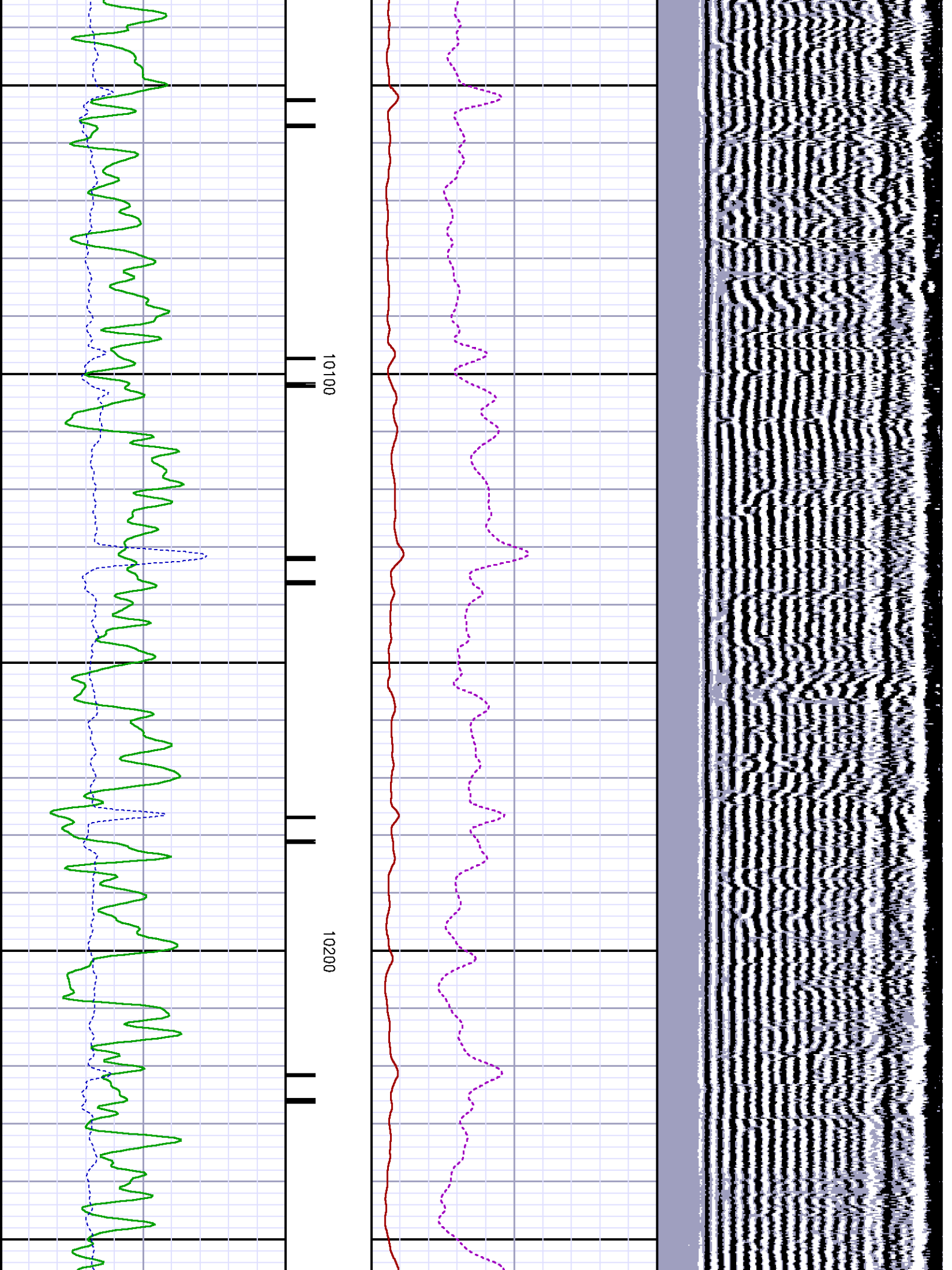


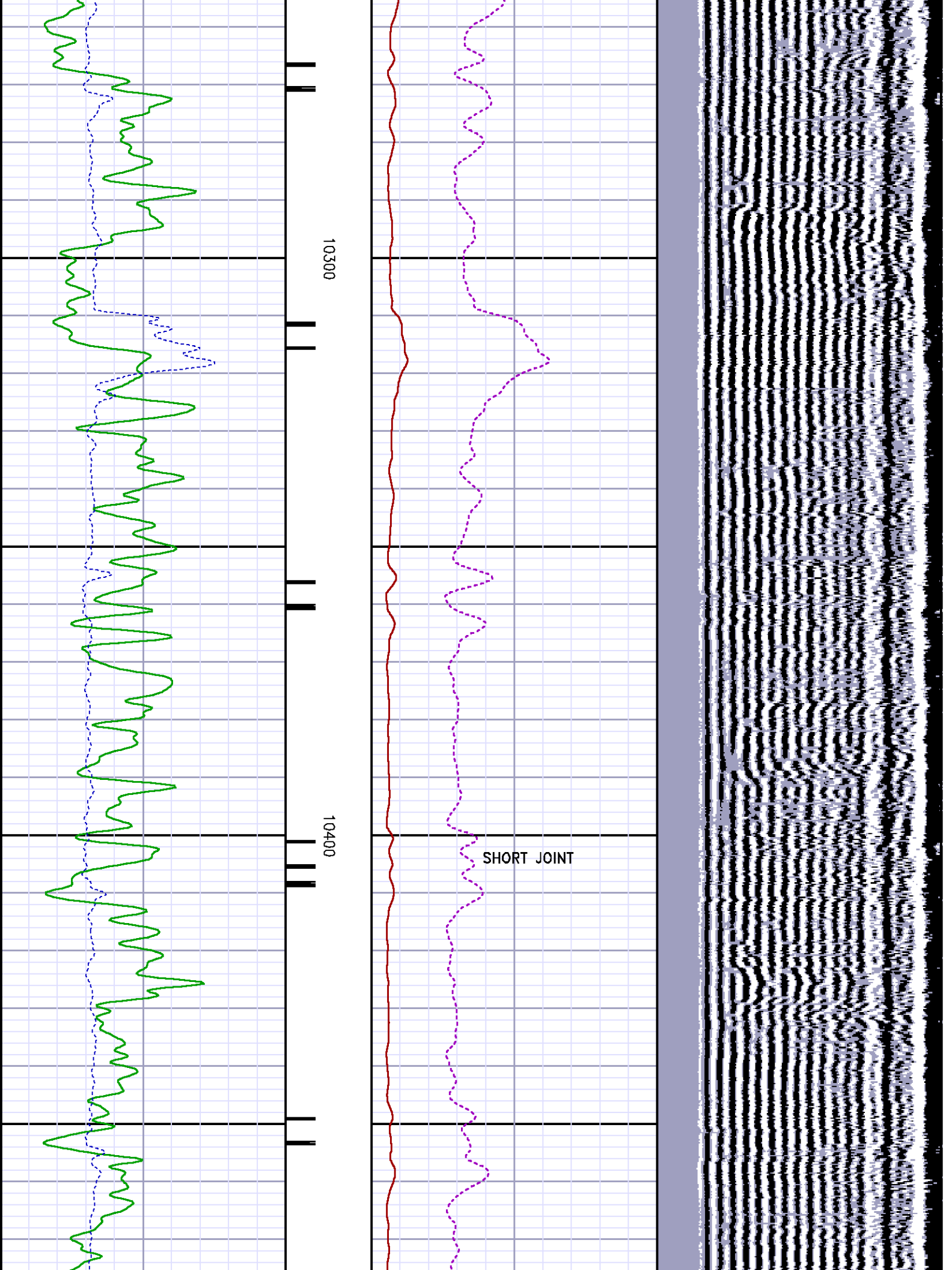


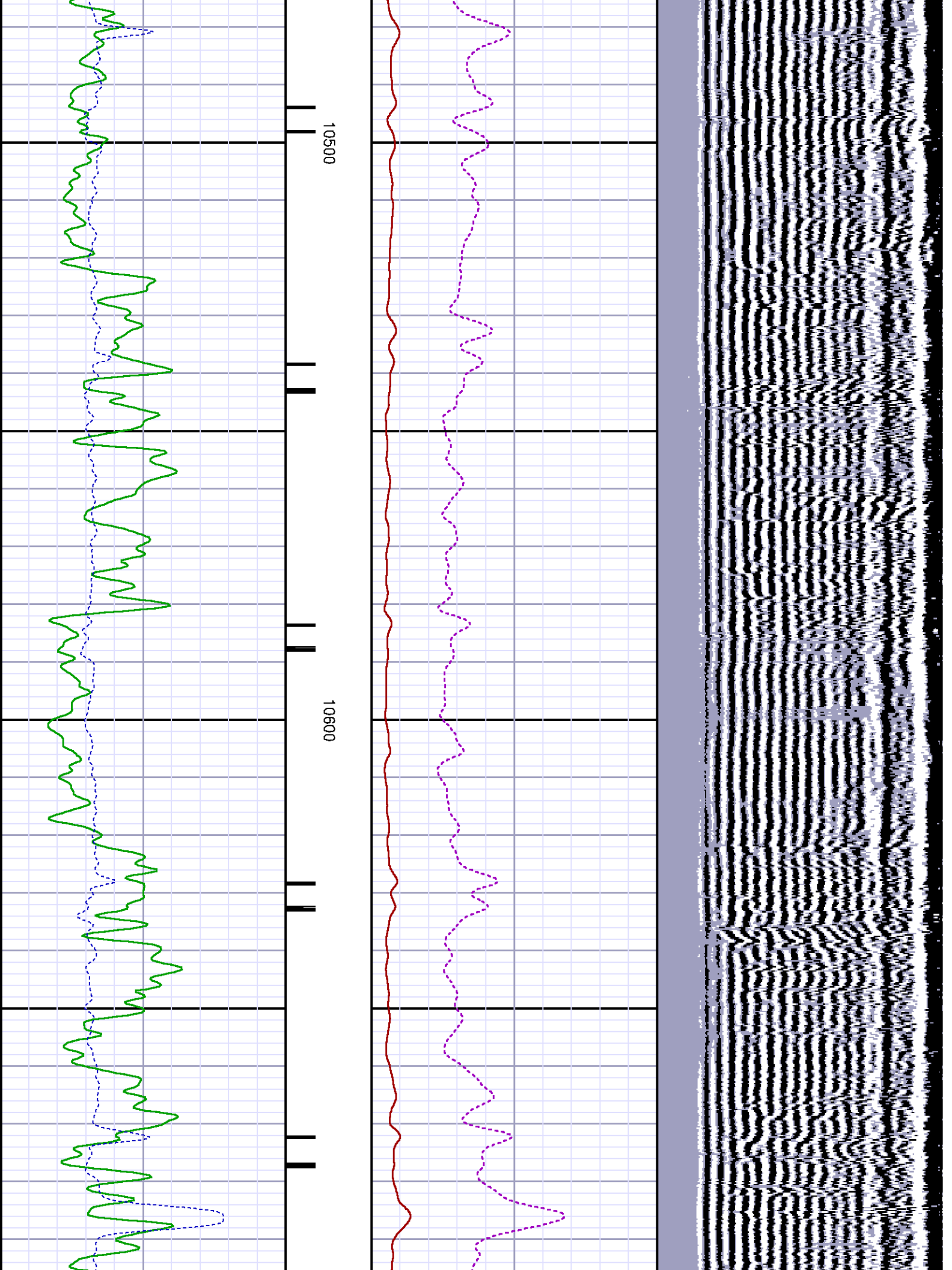


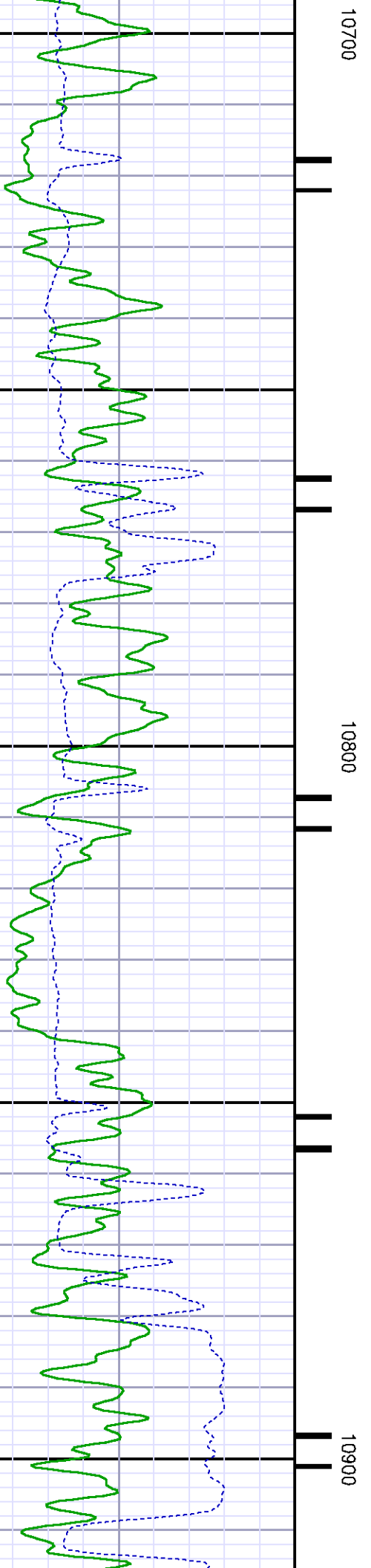
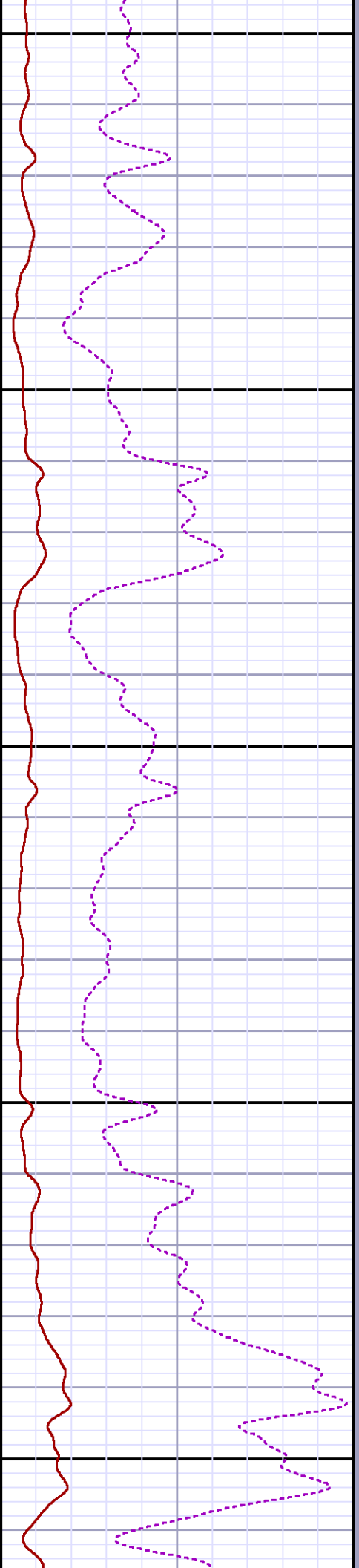
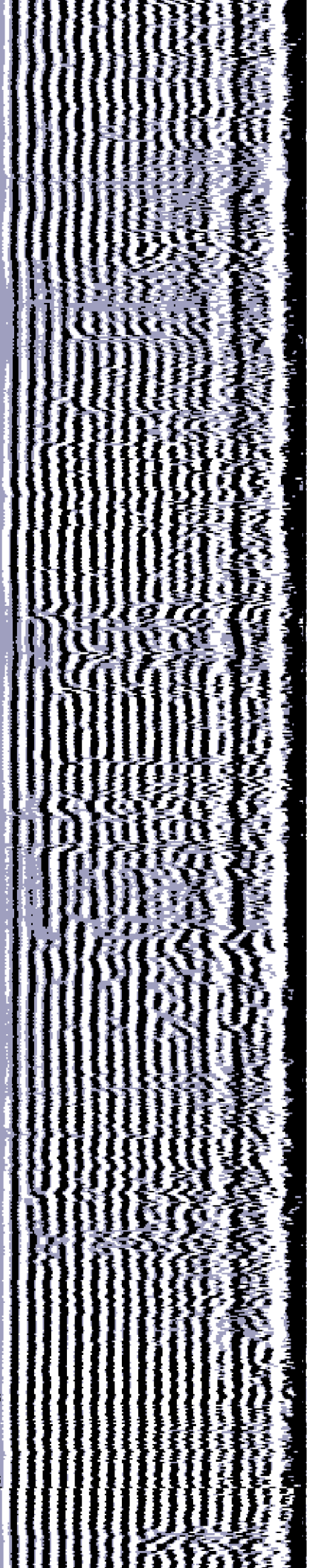


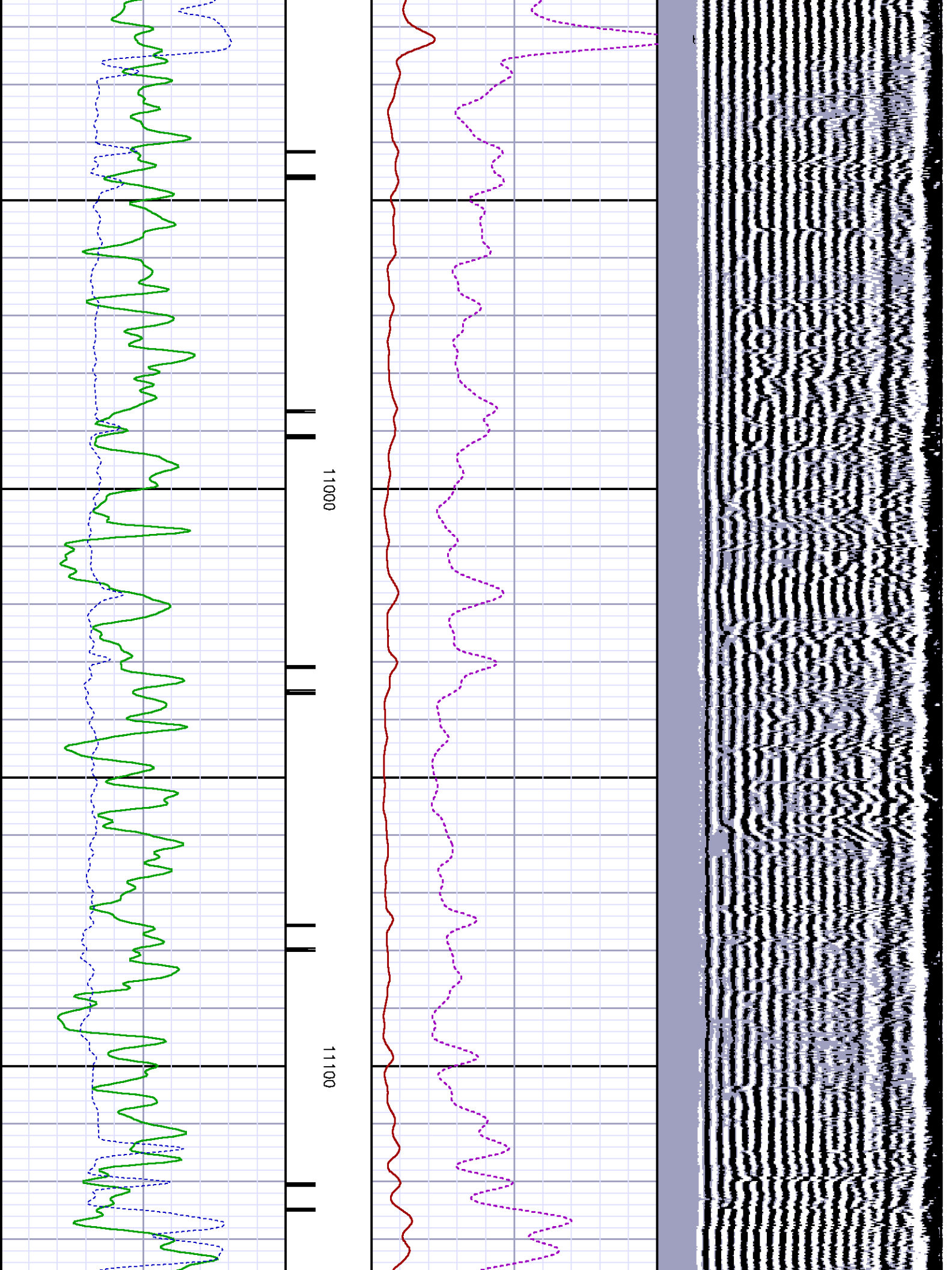


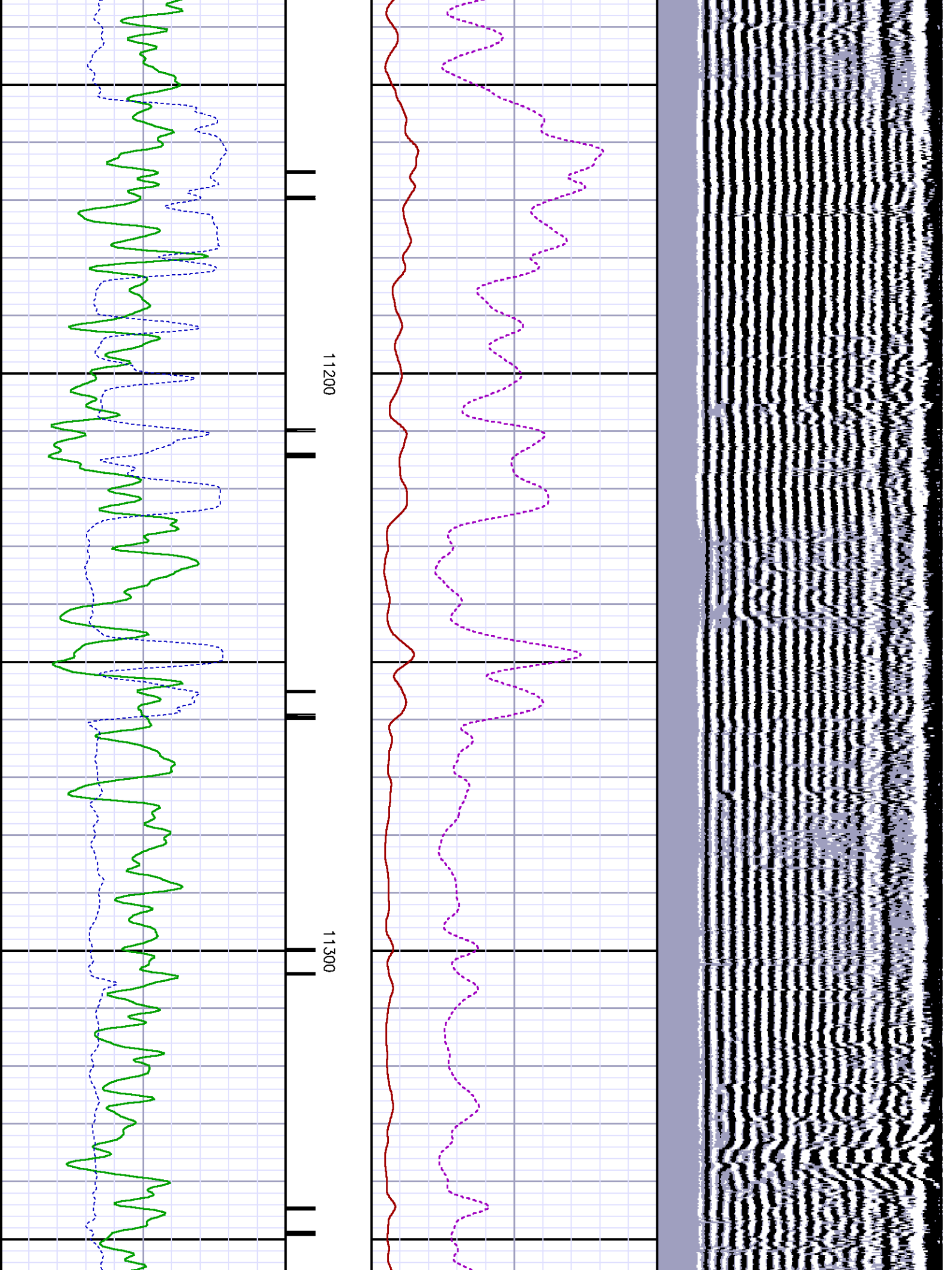


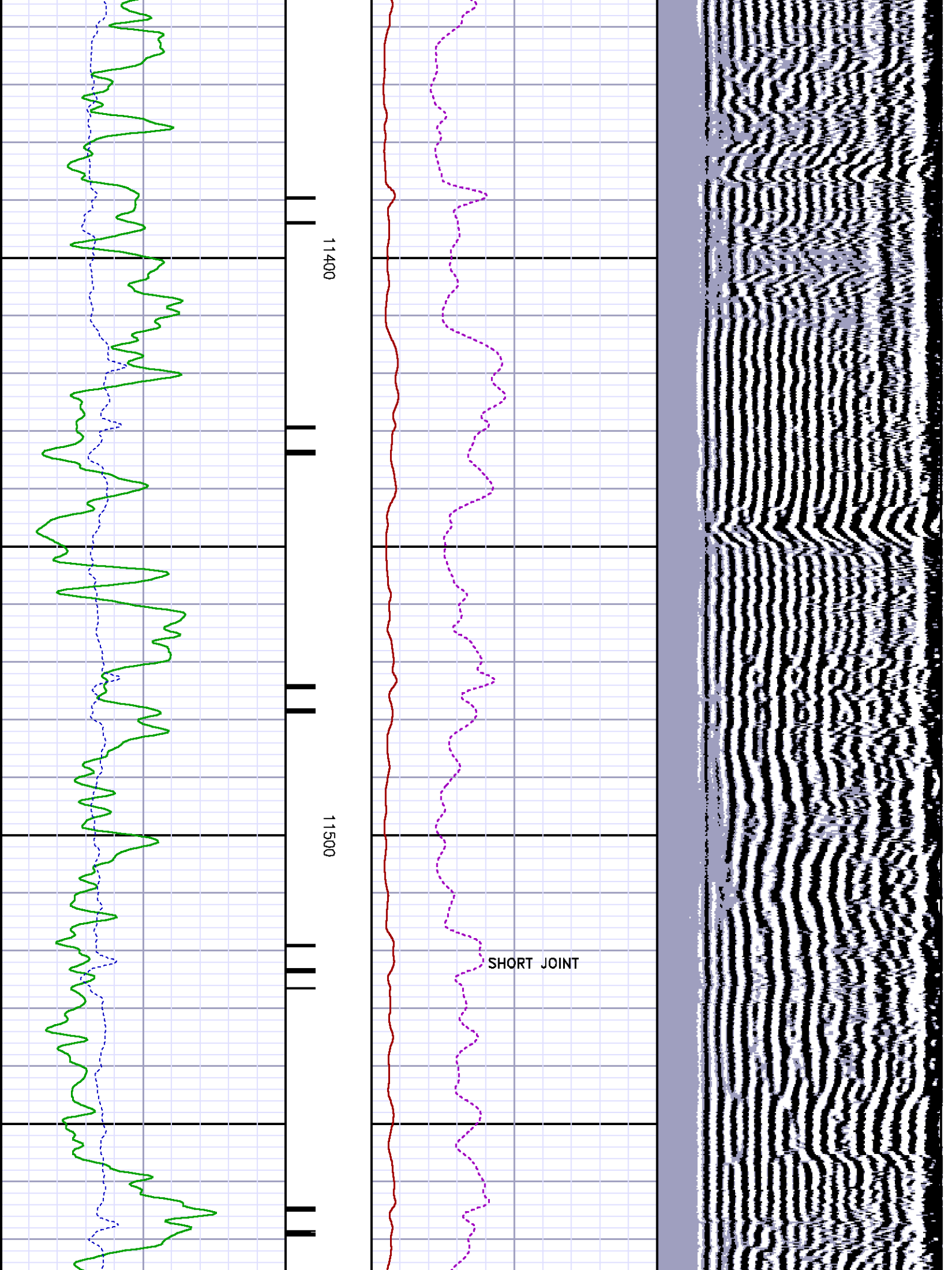


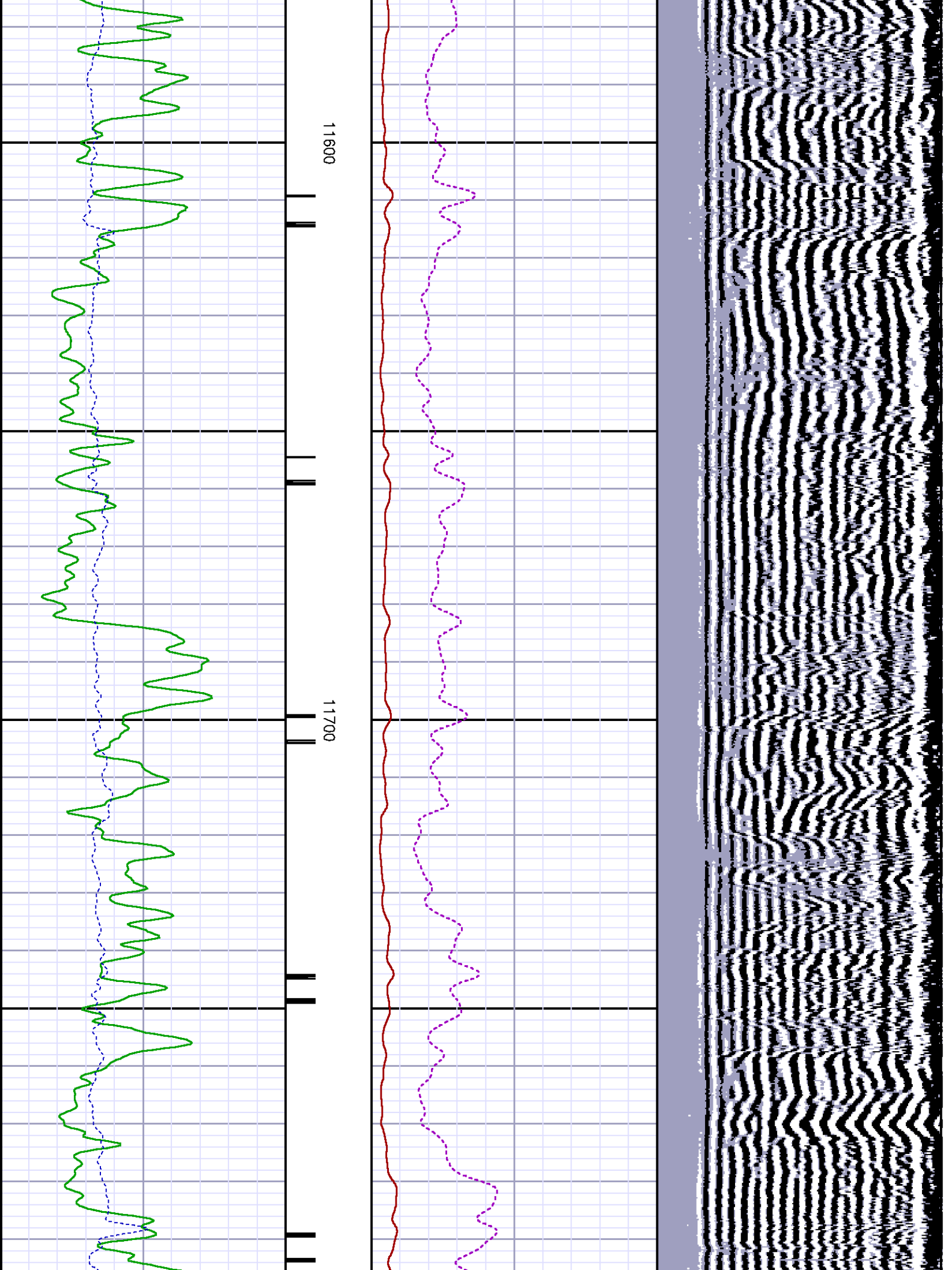


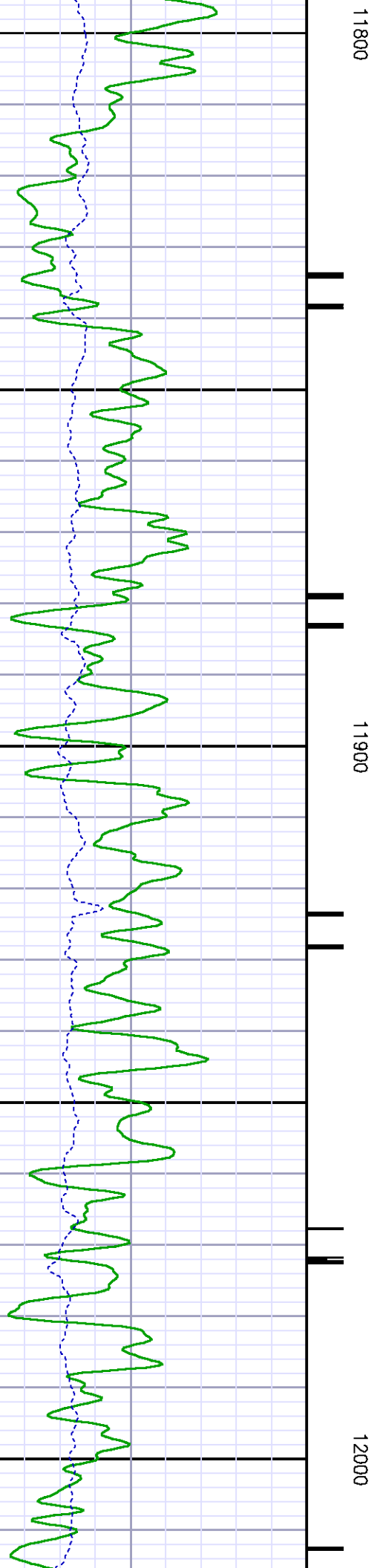
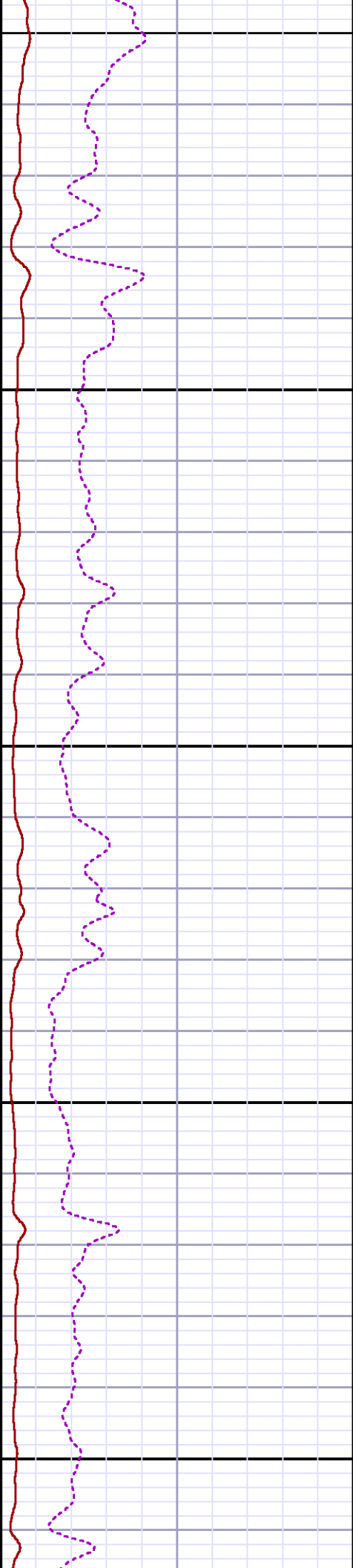
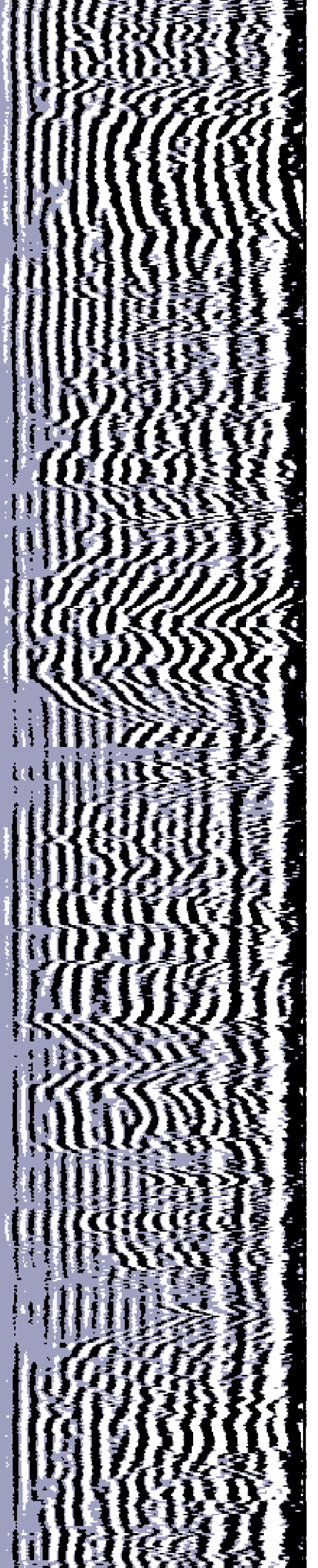


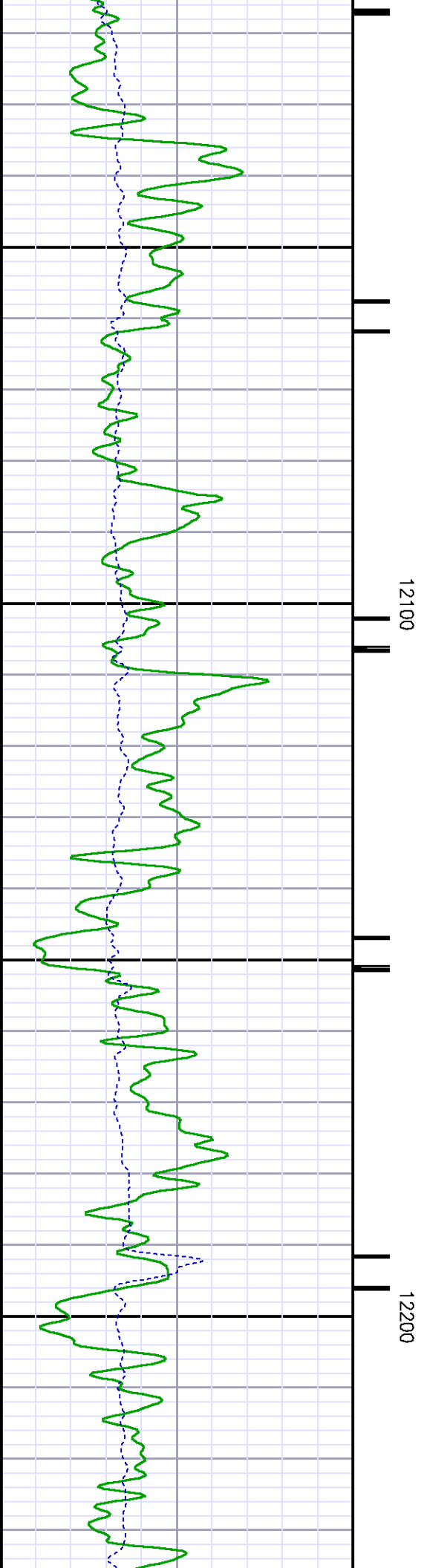
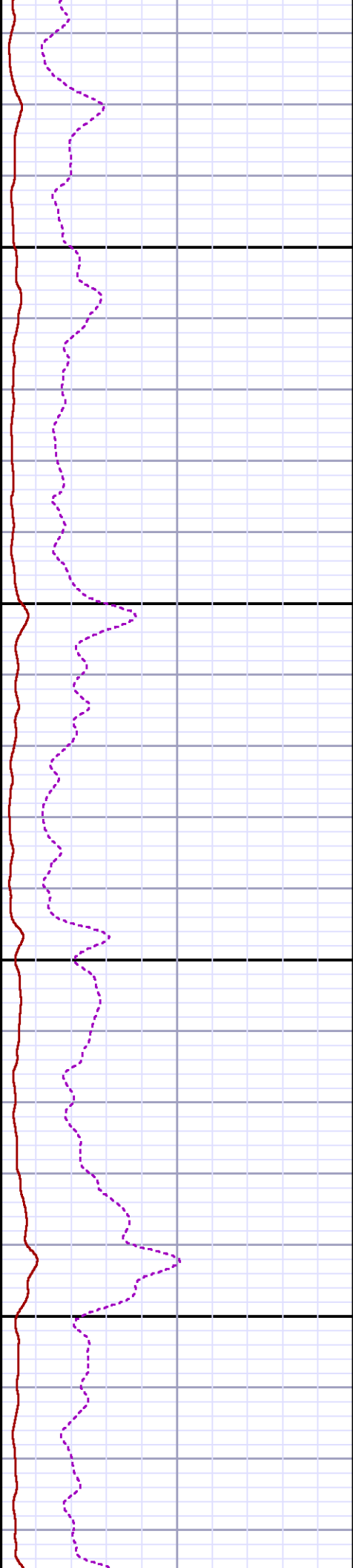
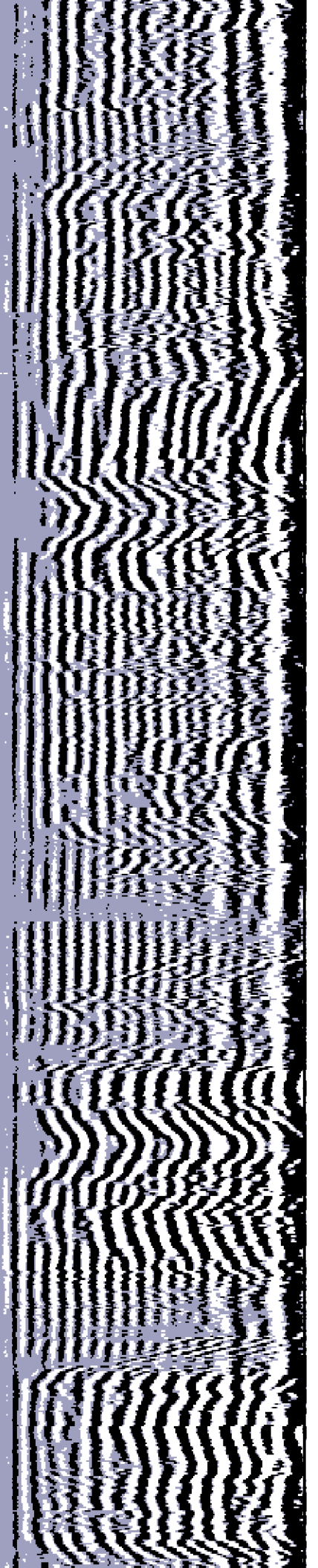






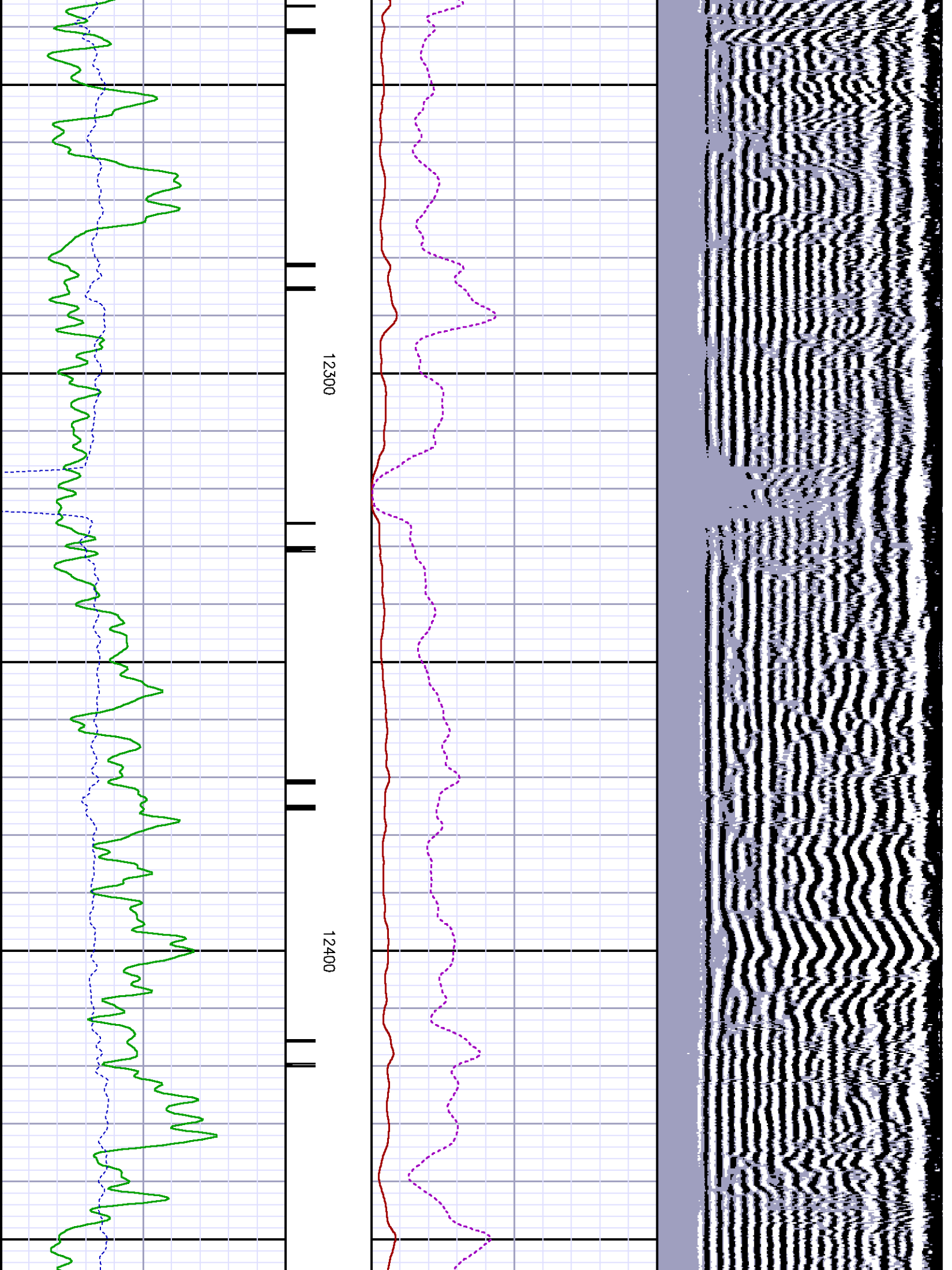


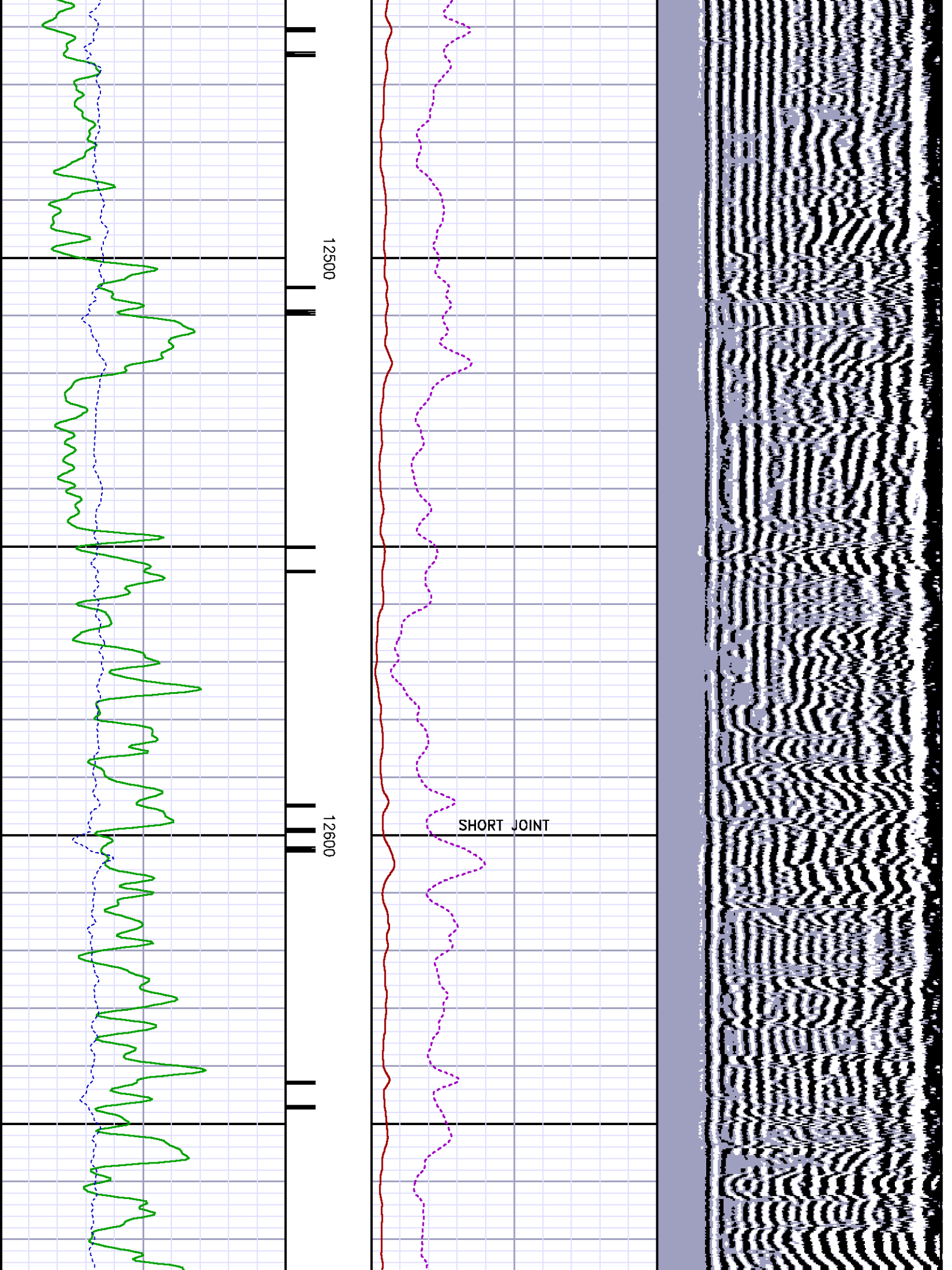


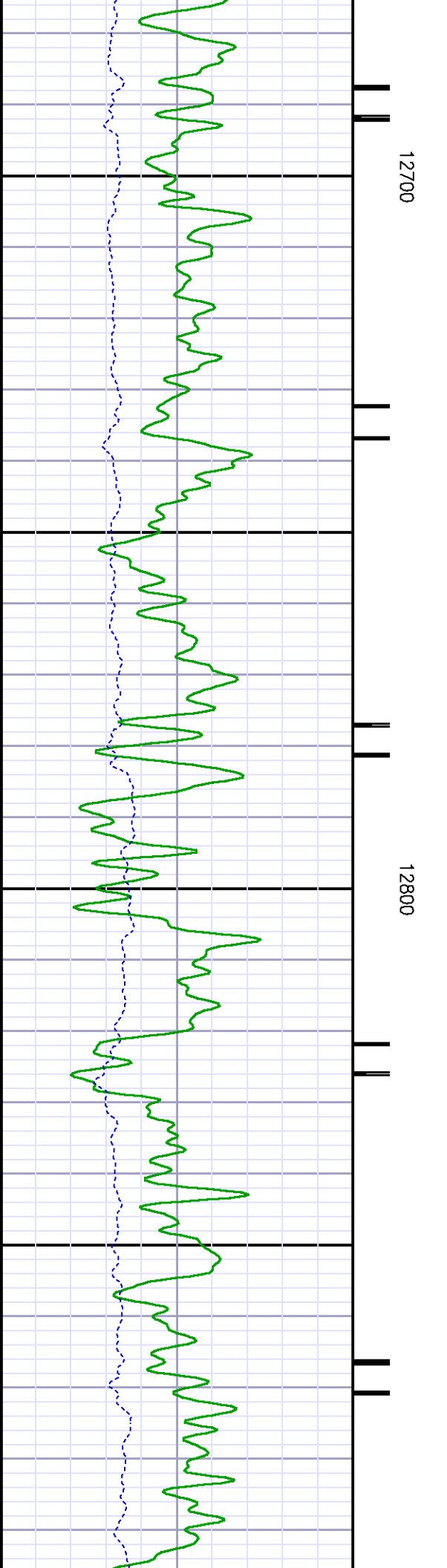
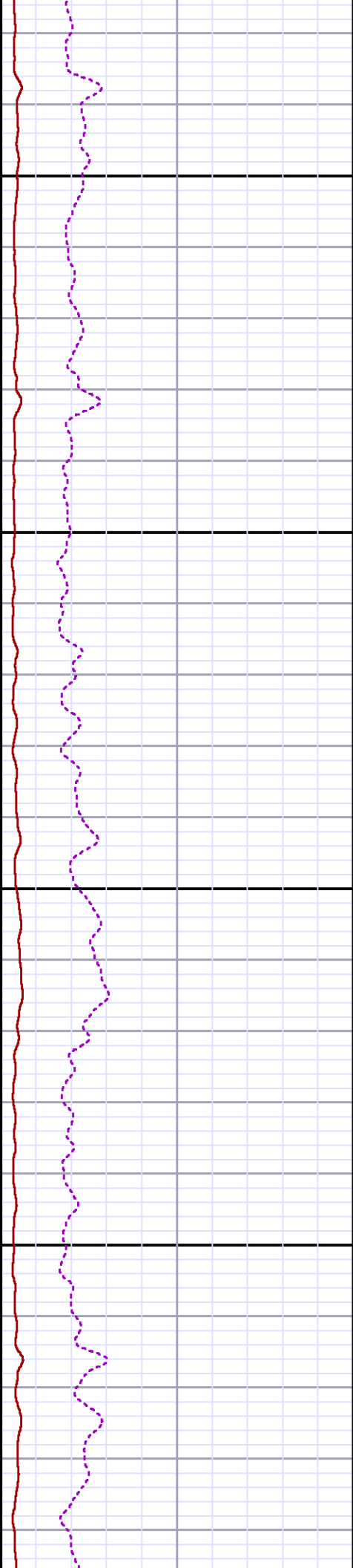
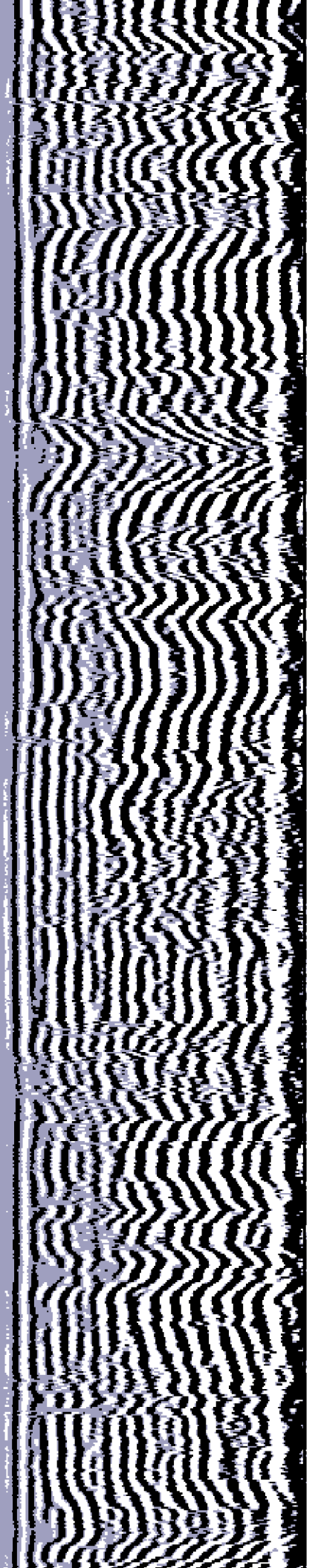


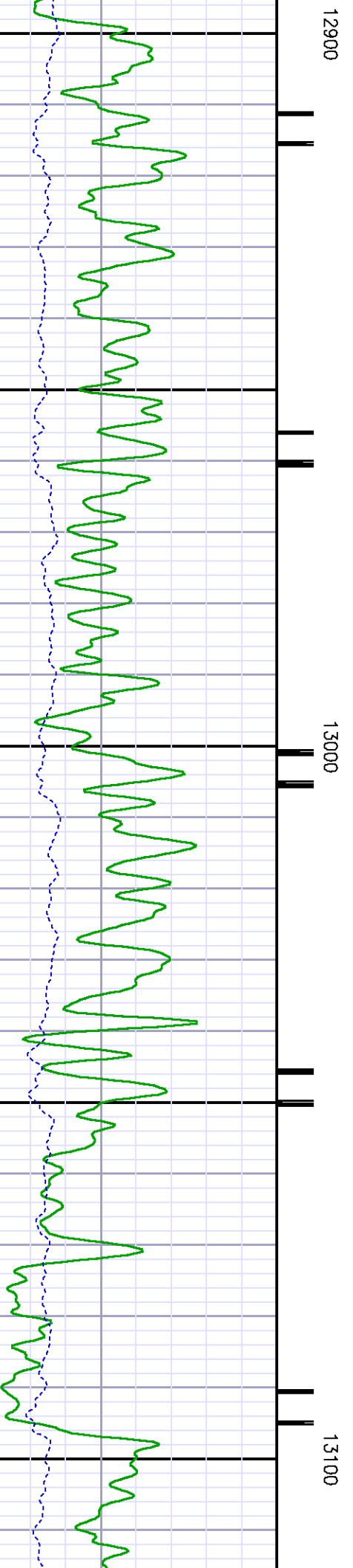
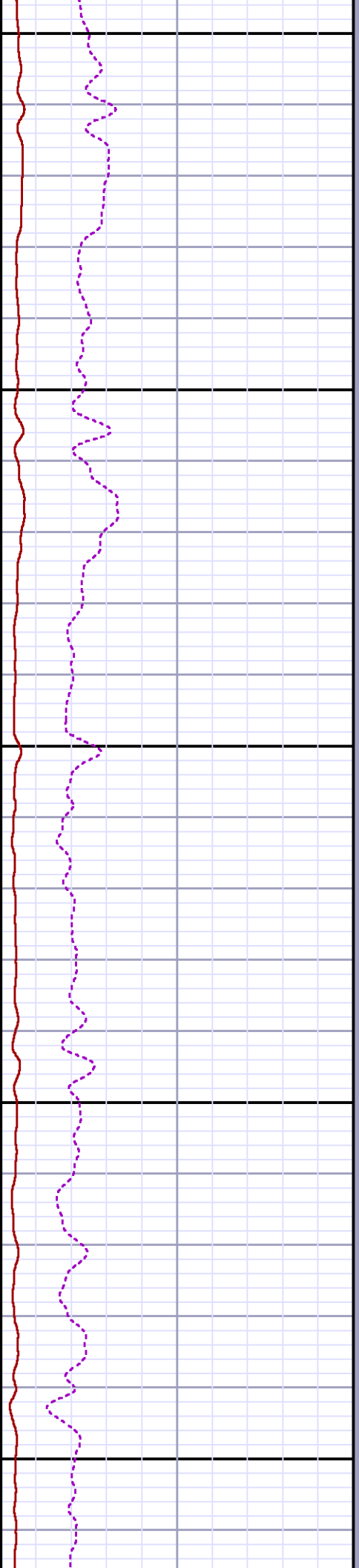
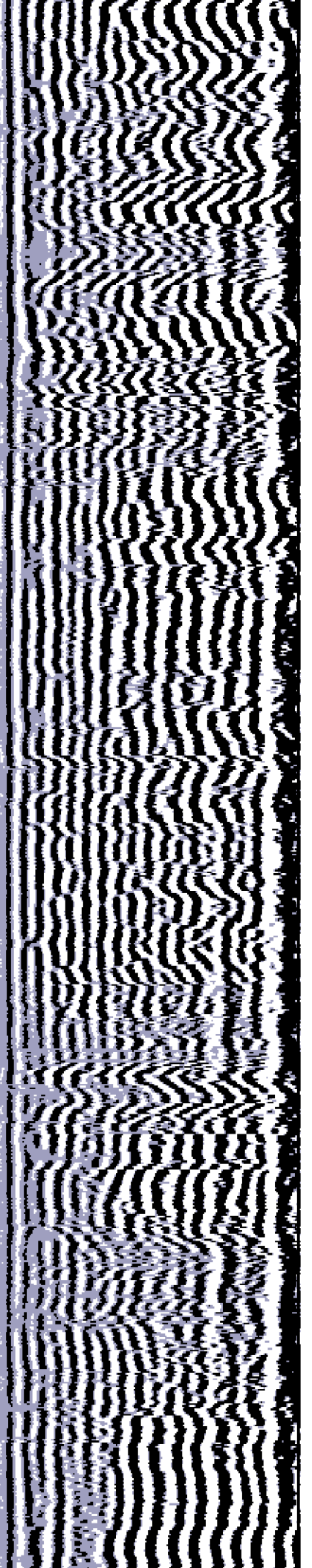
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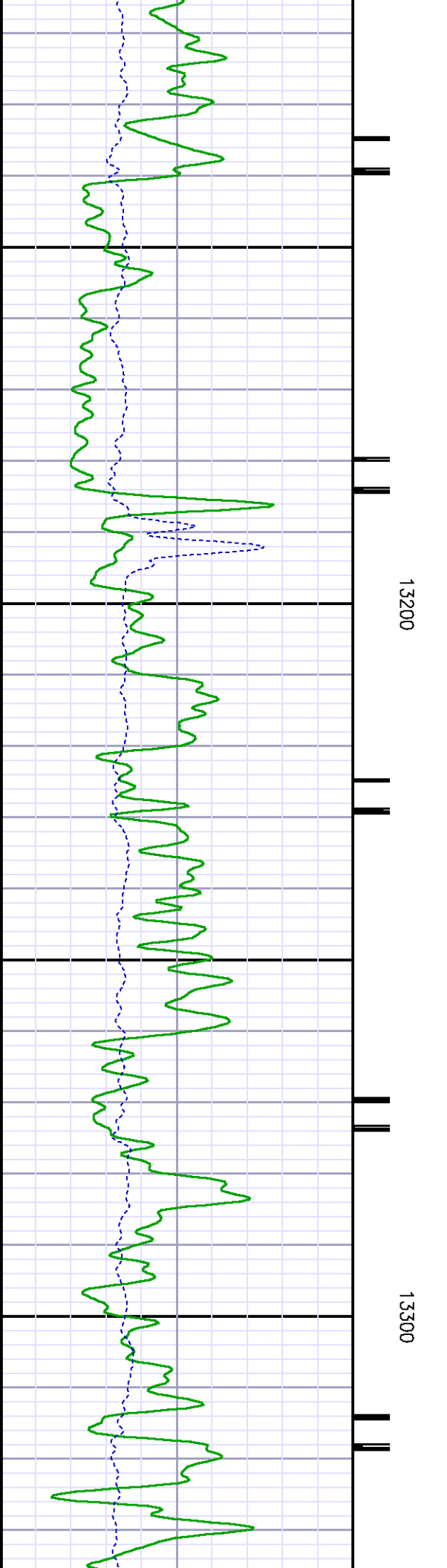
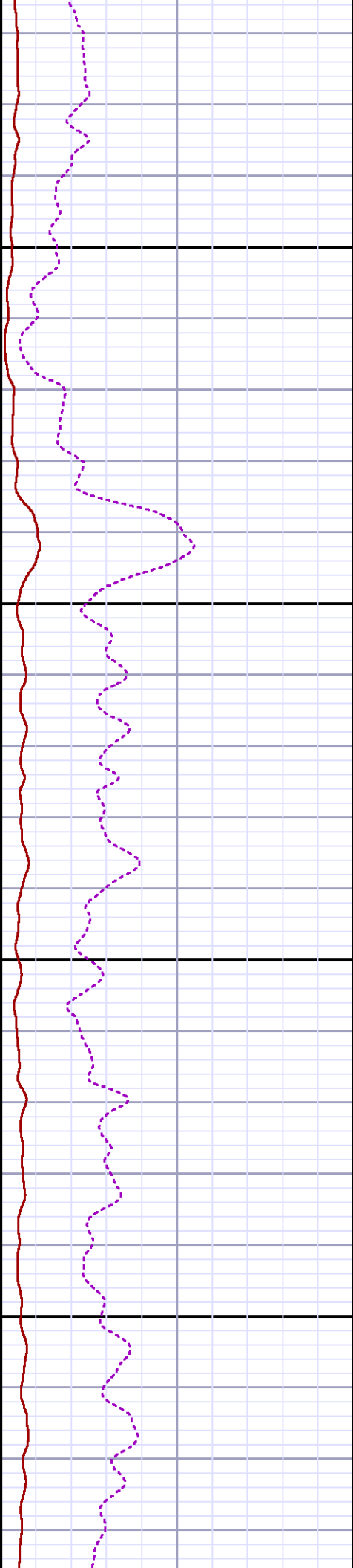
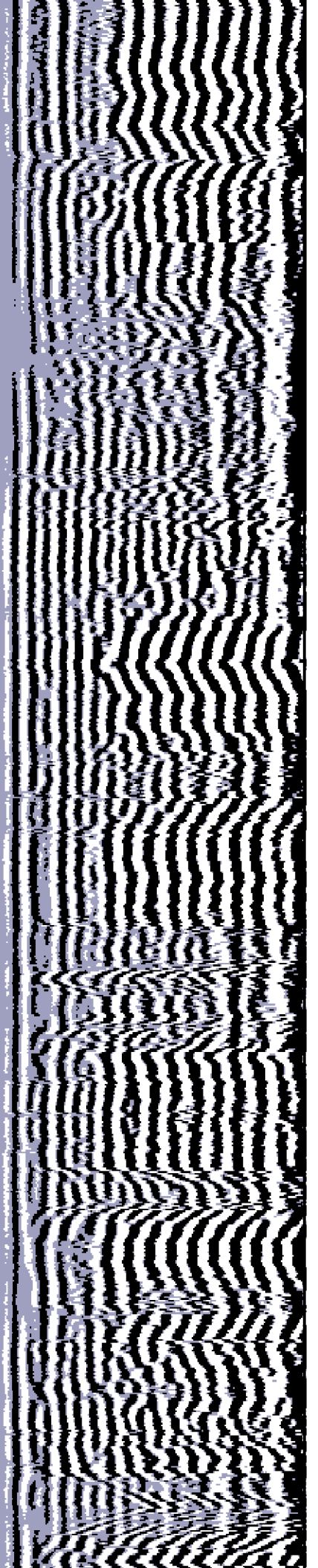
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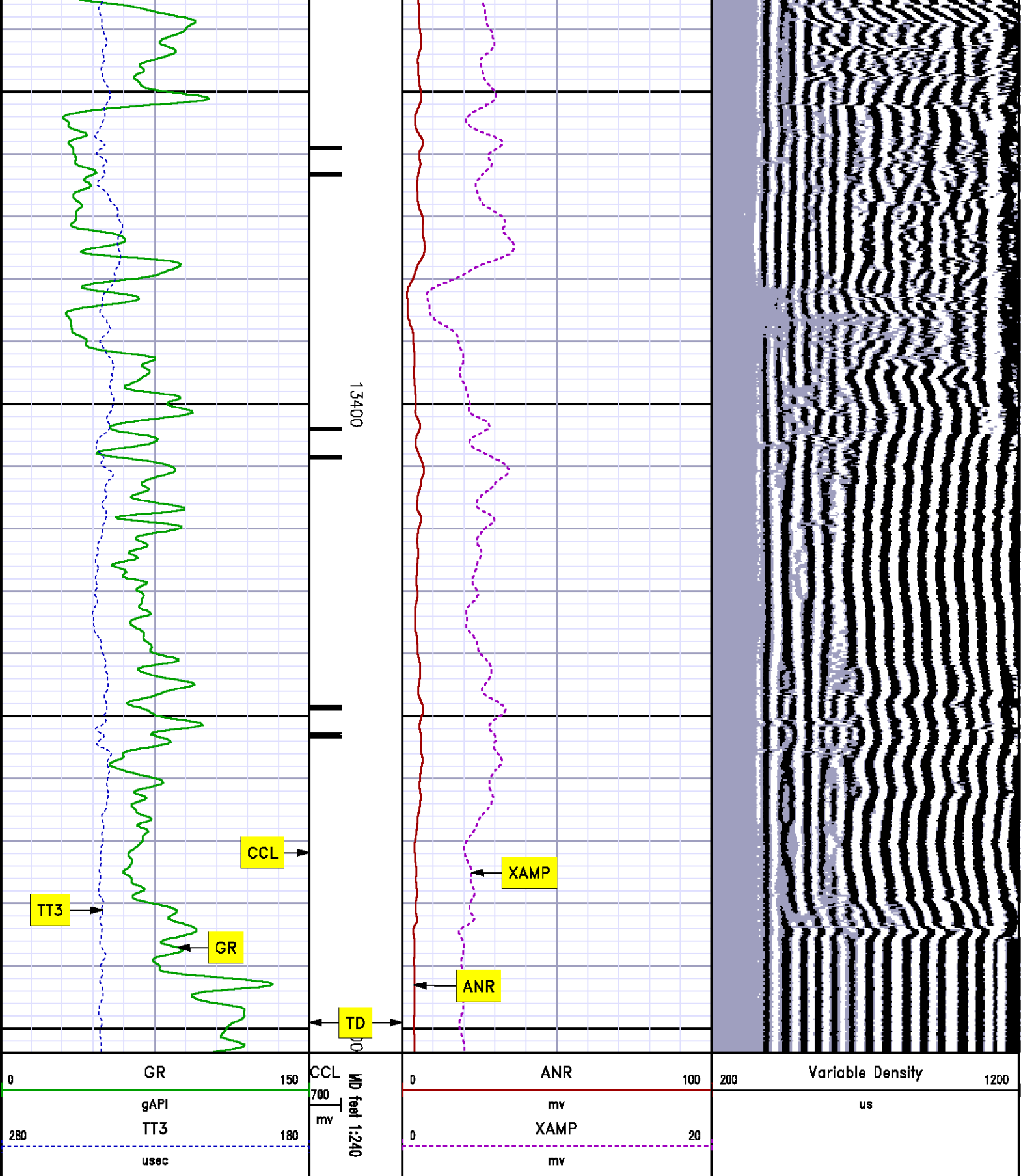












MAIN SECTION
SECONDARY PRESENTATION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
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RAL	casing wt	15.100	lbm/ft	3080.500	13504.000
RAL	FB Start Far	289.263	usec	3080.500	13504.000
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RAL	FB Thresh Far	15.000	mv	3080.500	13504.000
RAL	FB Thresh Near	10.000	mv	3080.500	13504.000
RAL	FB Thresh Radial	10.000	mv	3080.500	13504.000
RAL	Fluid Travel Time	200.000	usec/ft	3080.500	13501.843

DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES								
		ACAL	ANR	AR1	AR2	AR3	AR4	AR5	AR6	
1426XA	-16.450	AR7	AR8	CHV	FPR2	FPR3	FPR5	TT3	TTR1	
		TTR2	TTR3	TTR4	TTR5	TTR6	TTR7	TTR8	XAMP	
		1426XA	-15.450	AFAR	SIG	TT5				
		2459XA	-11.340	CCL						
2459XA	-9.490	GR								
2459XA	-4.090	NEU								

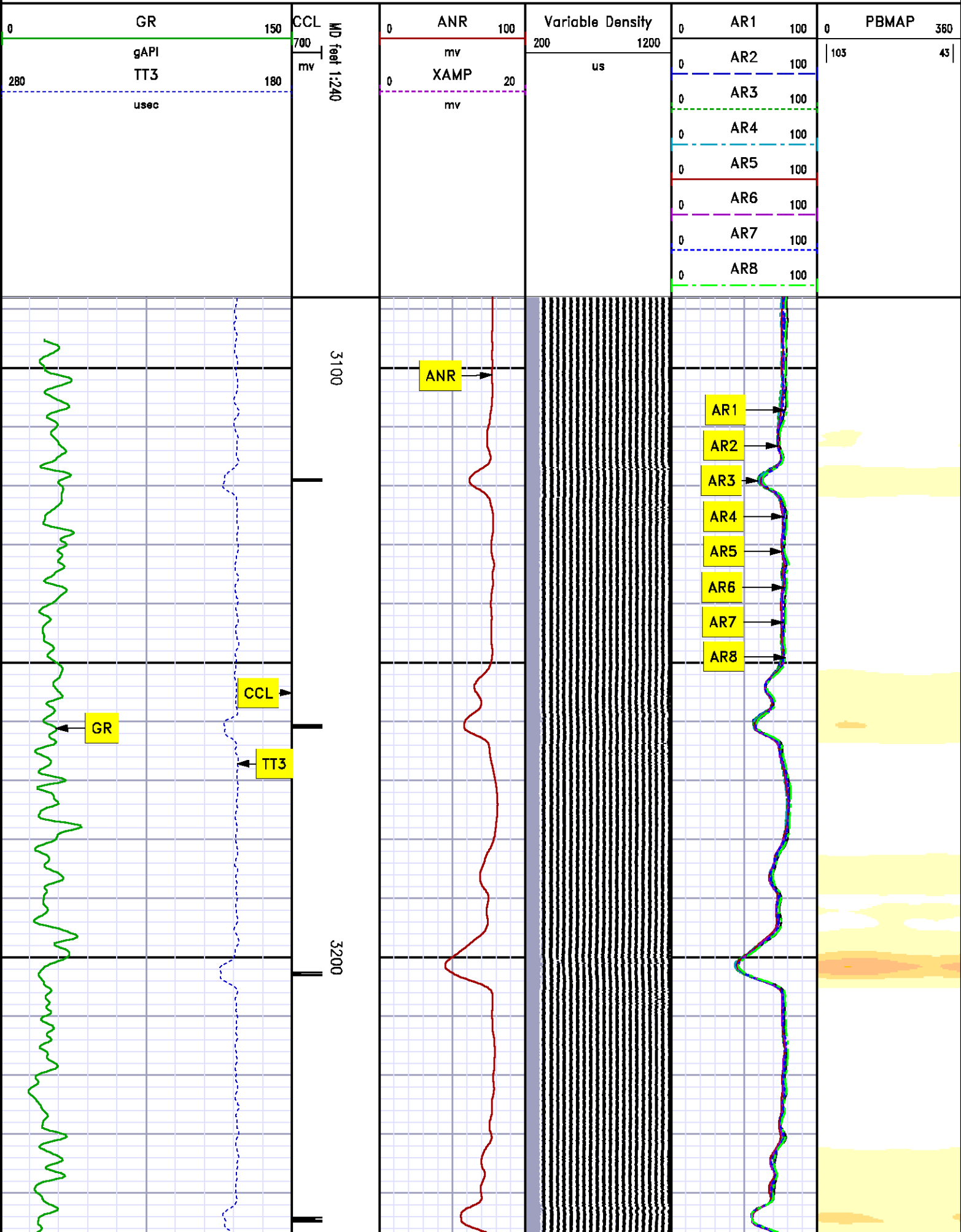
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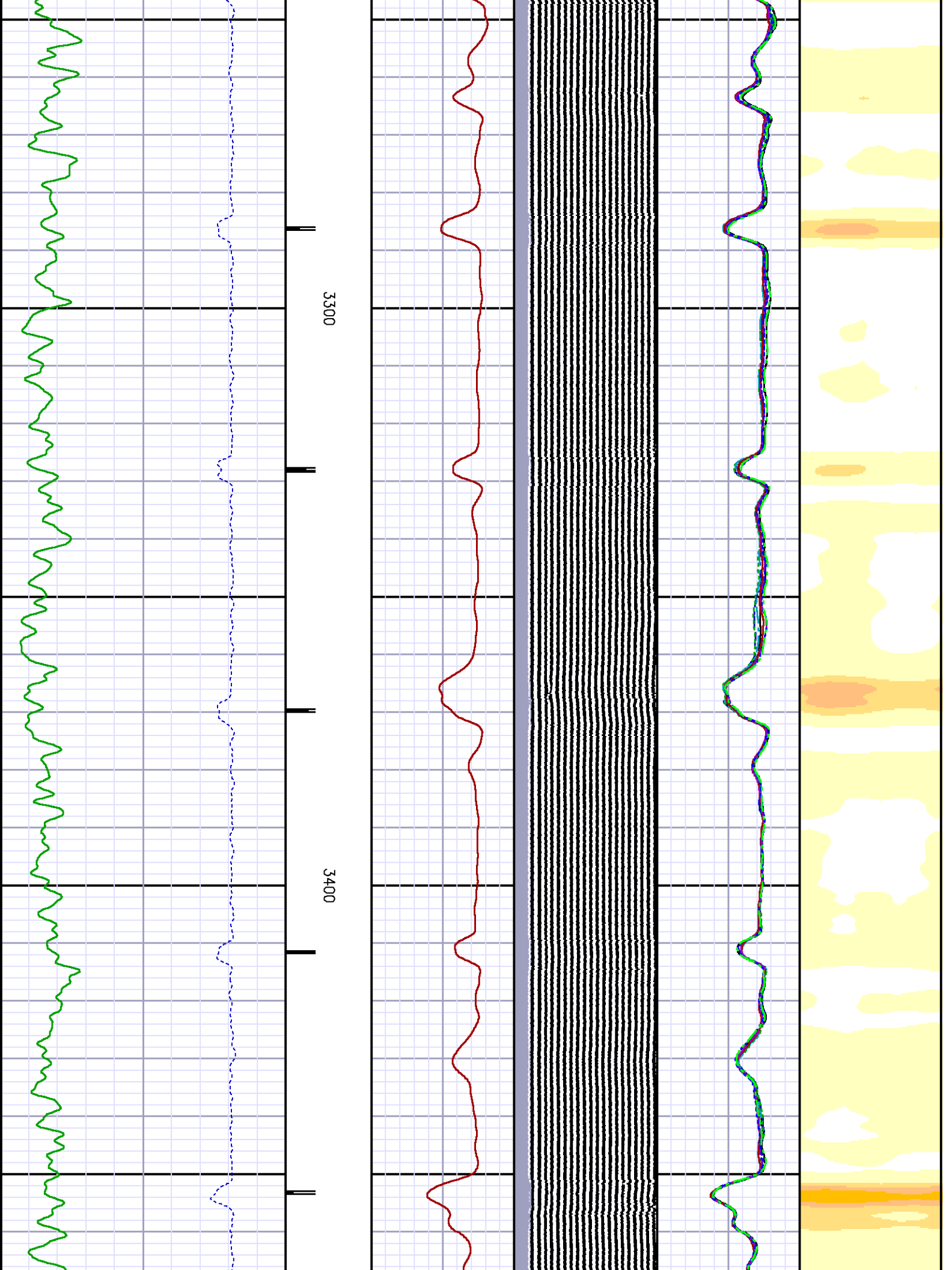
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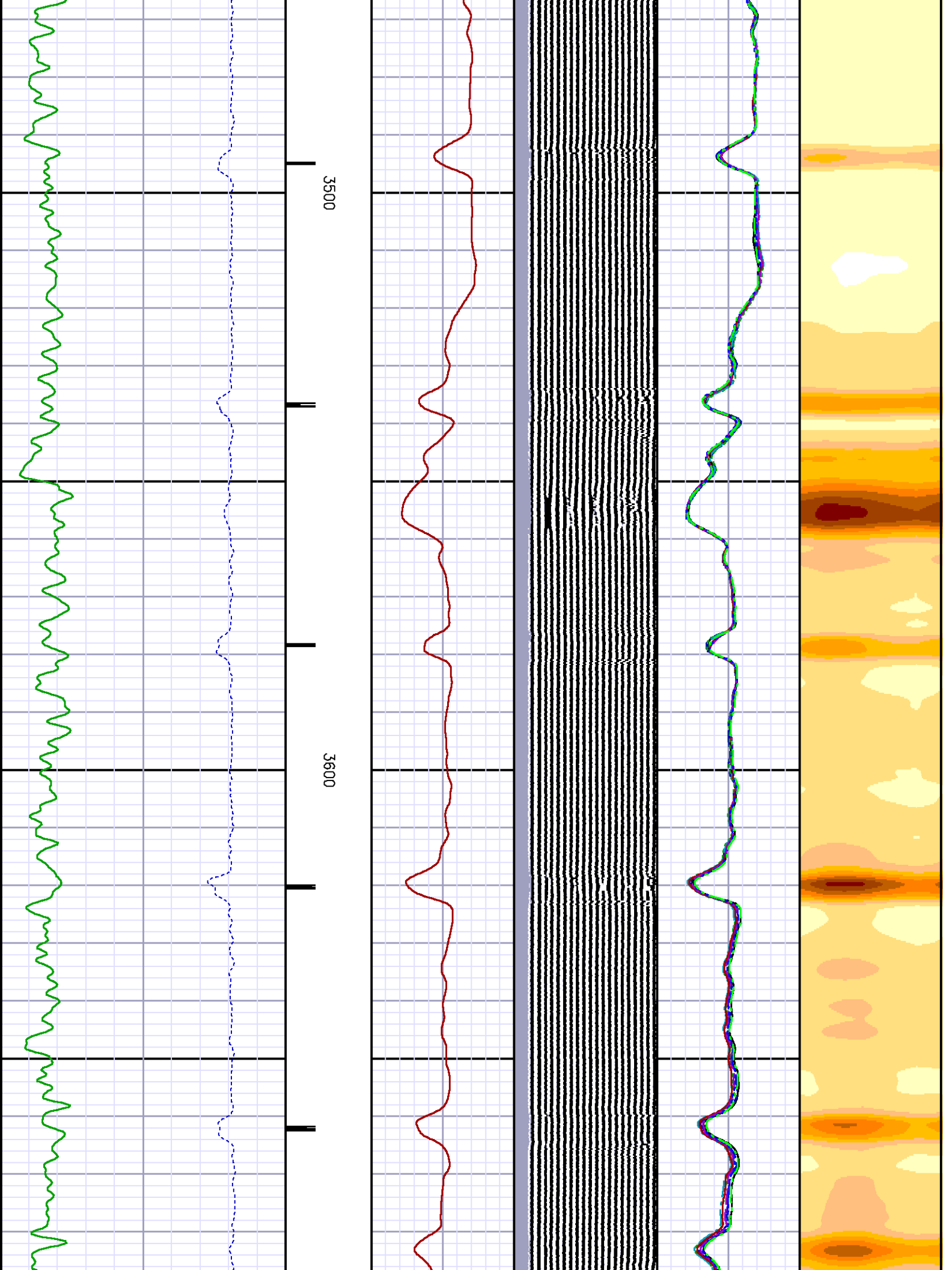
Company : EXXONMOBILE PRODUCTION COMPANY

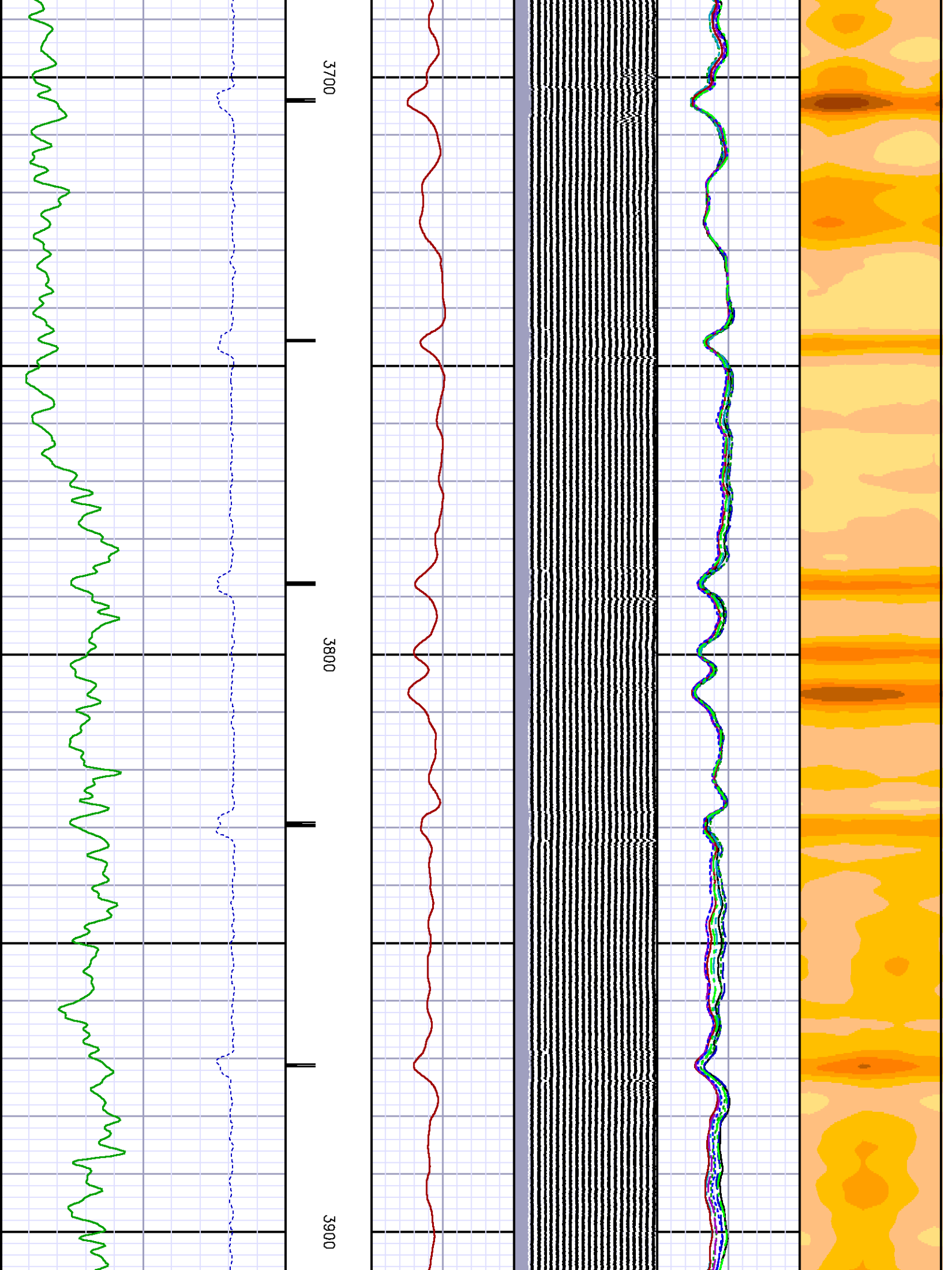
Well : PCU 197-36 A5

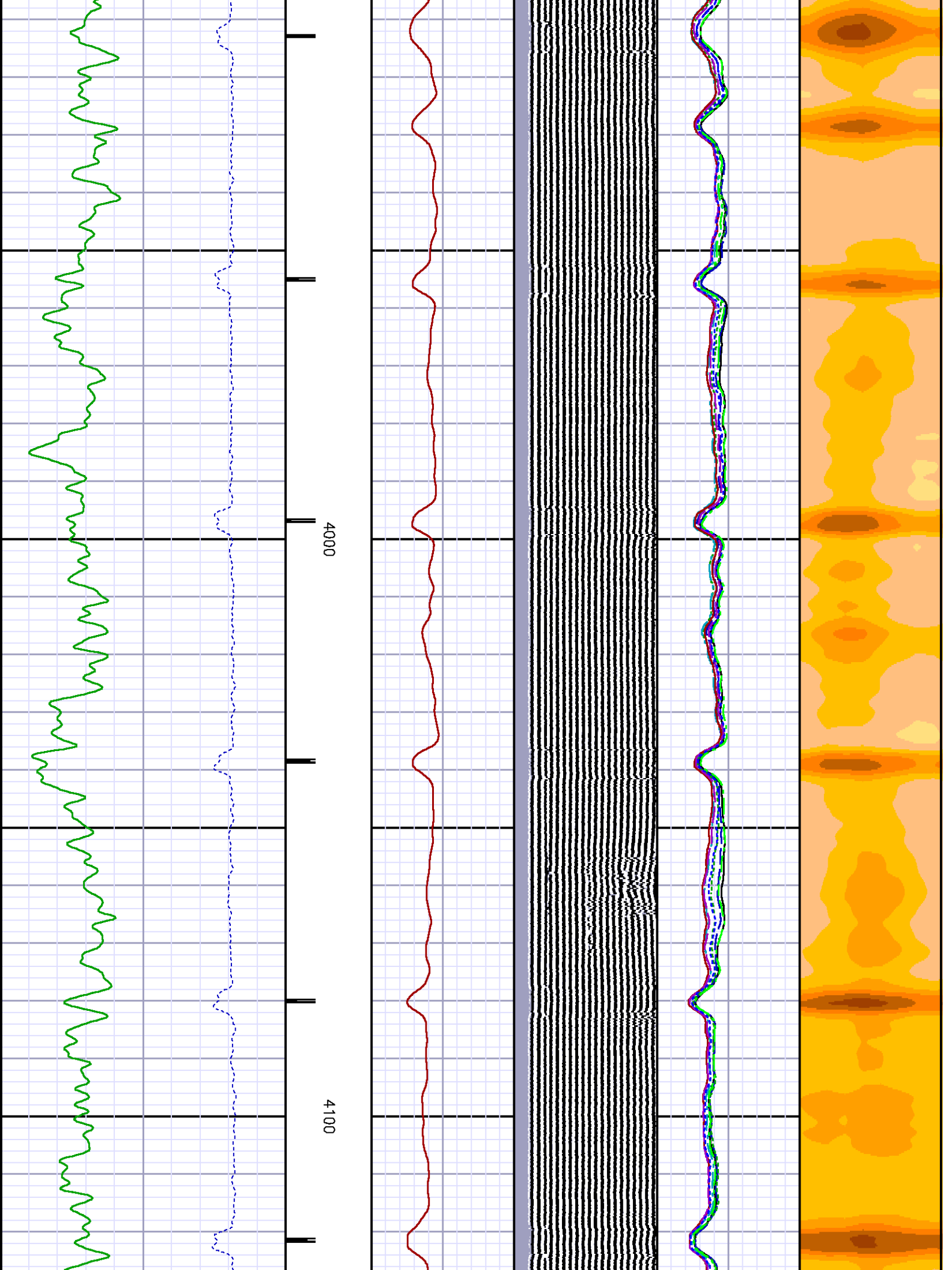
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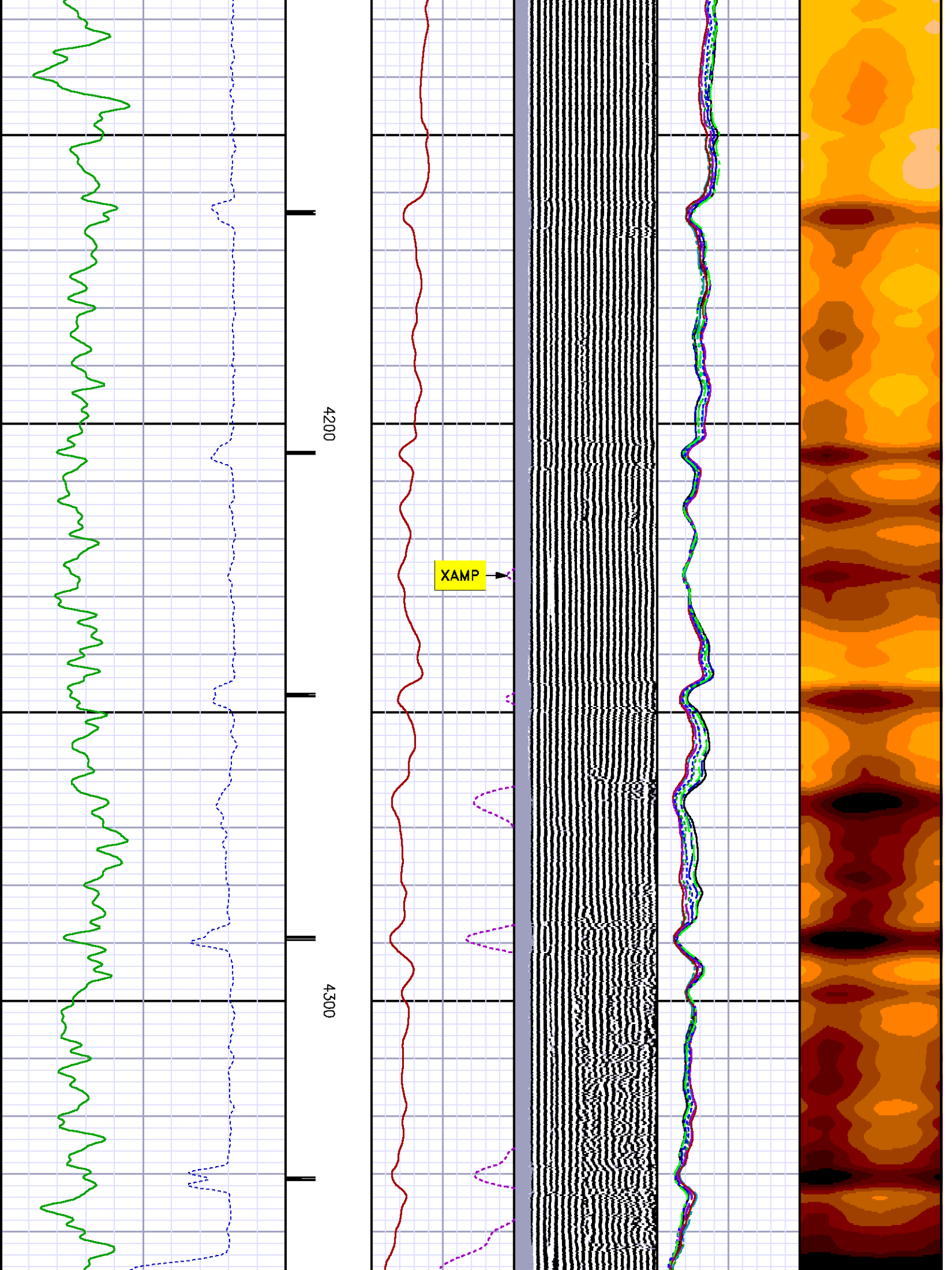


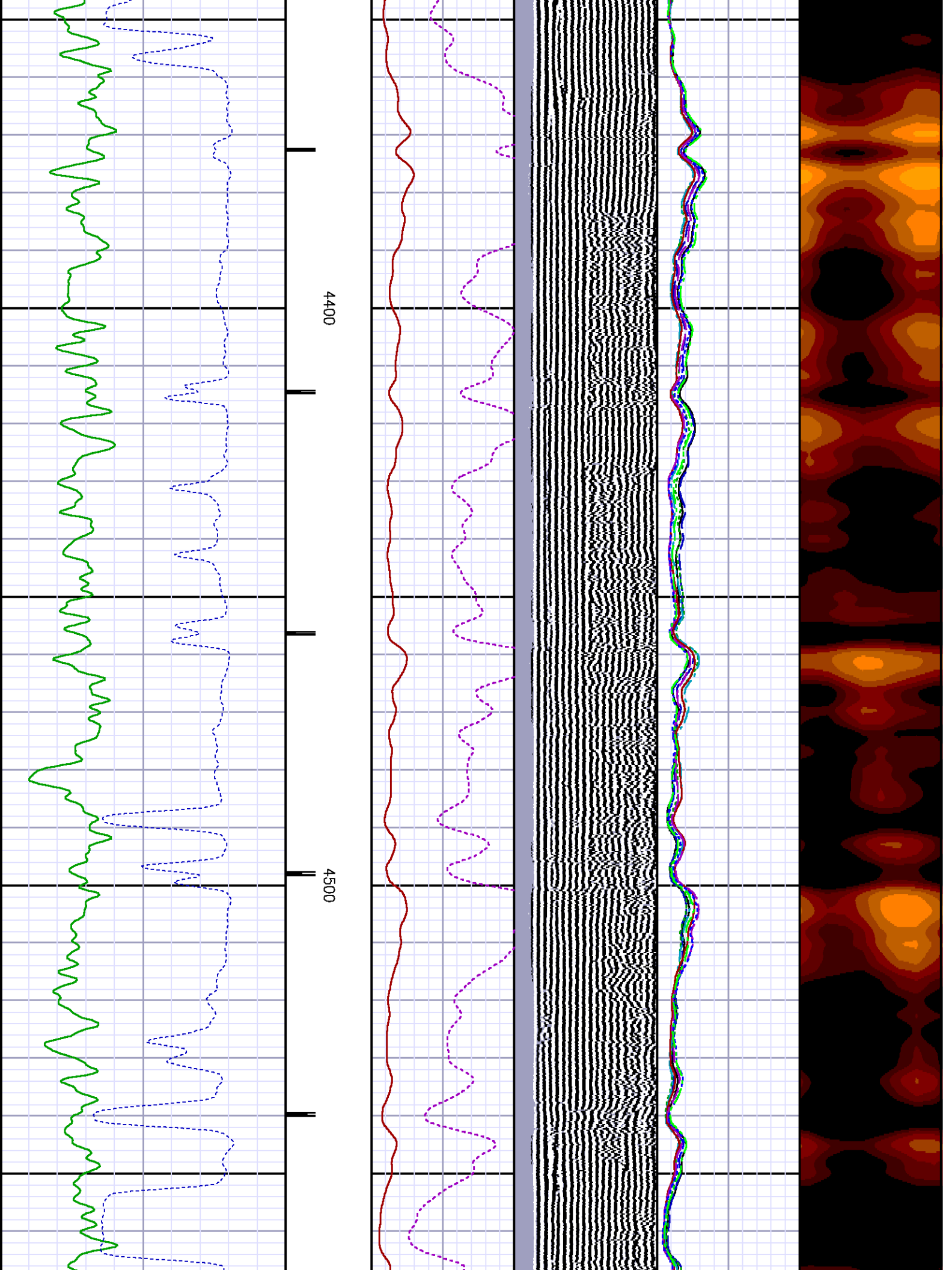


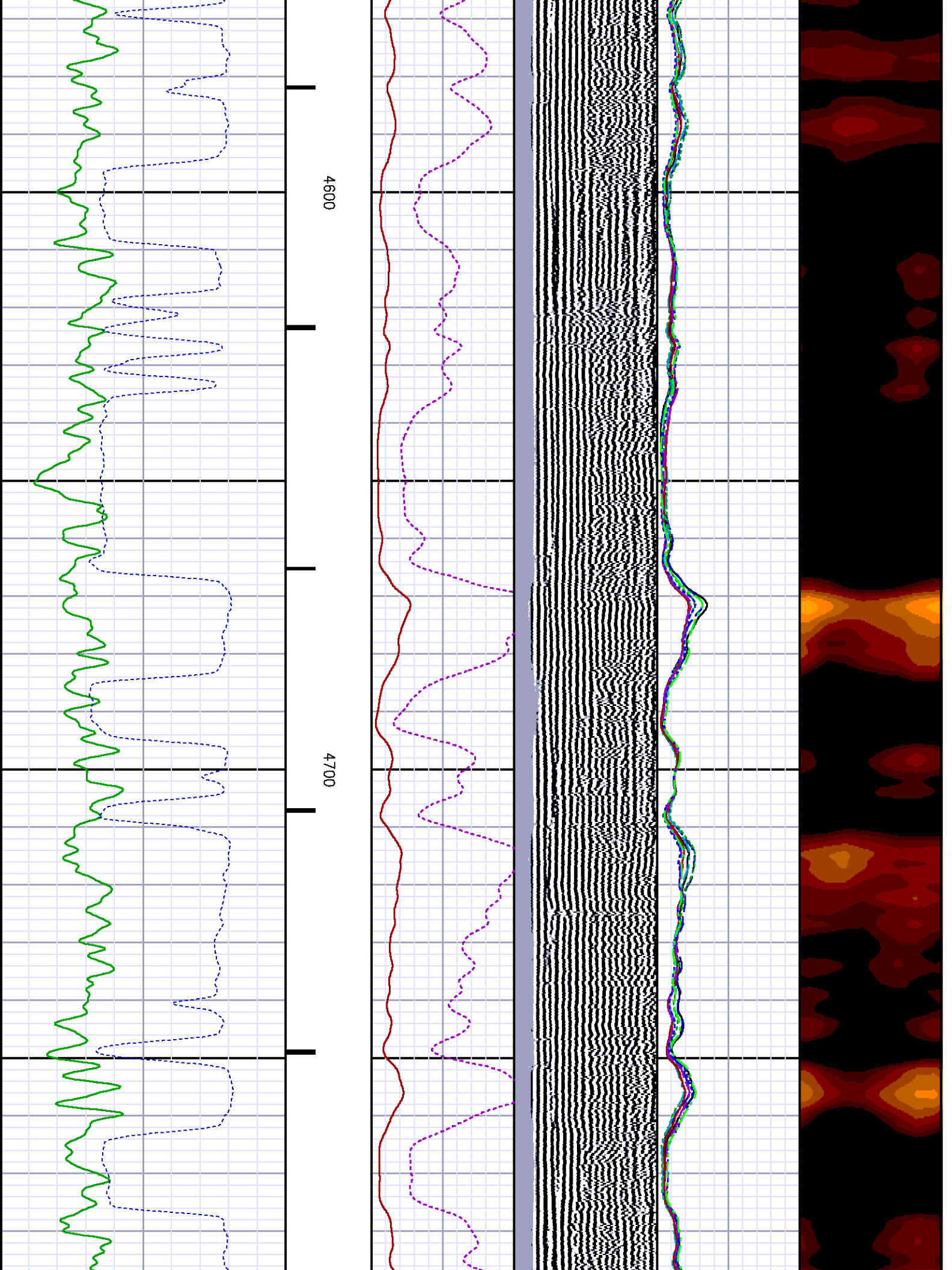


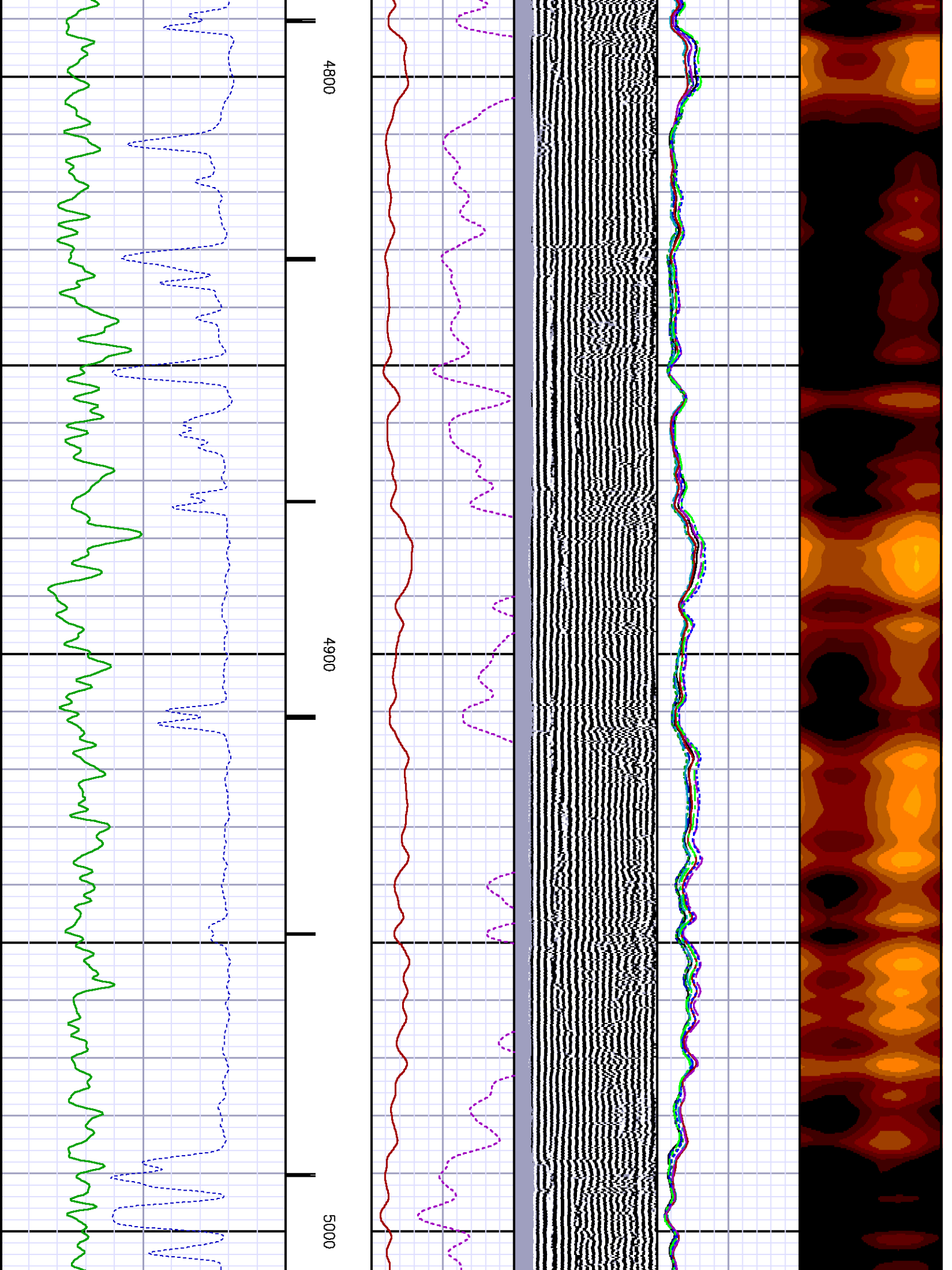


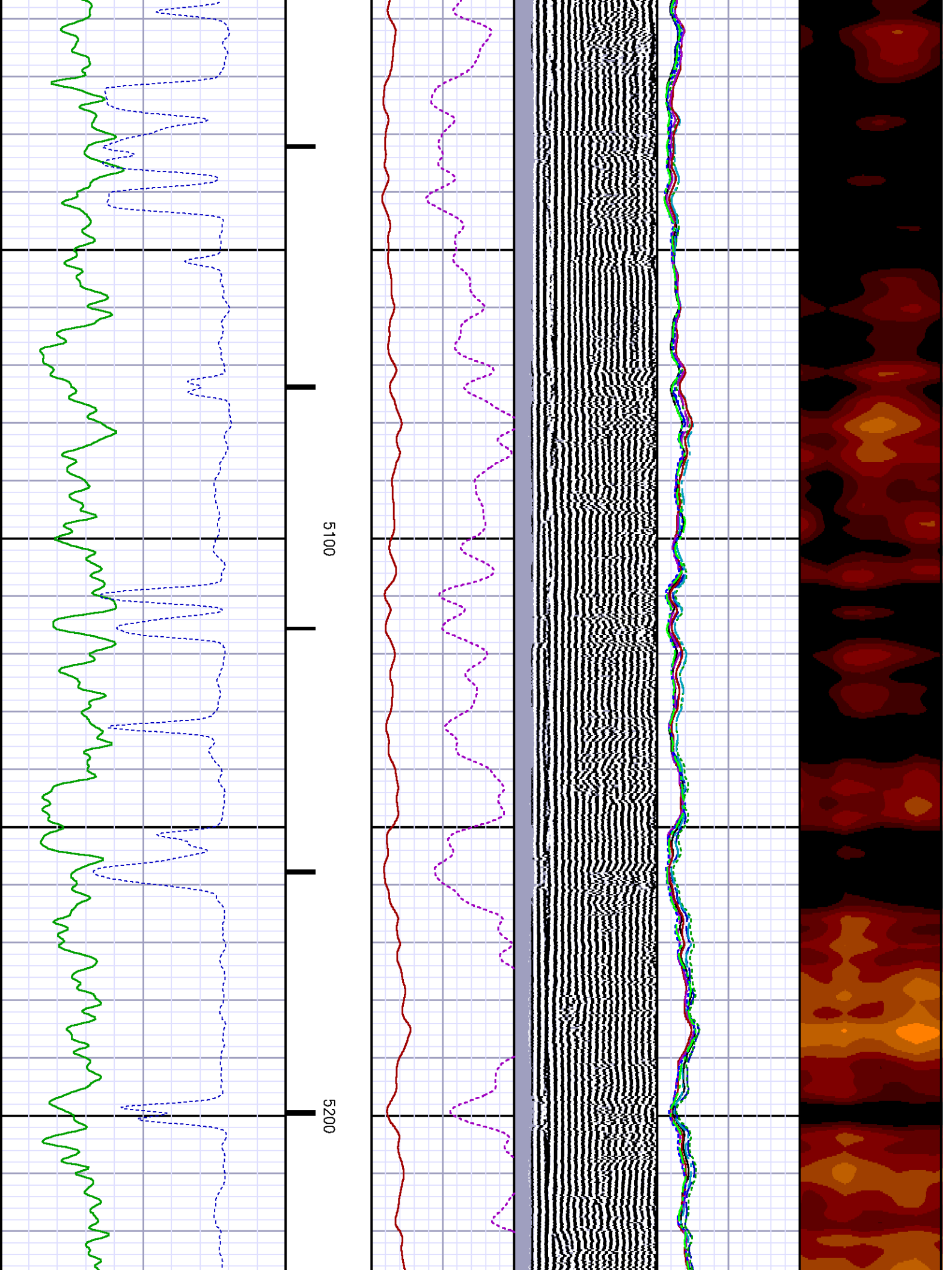


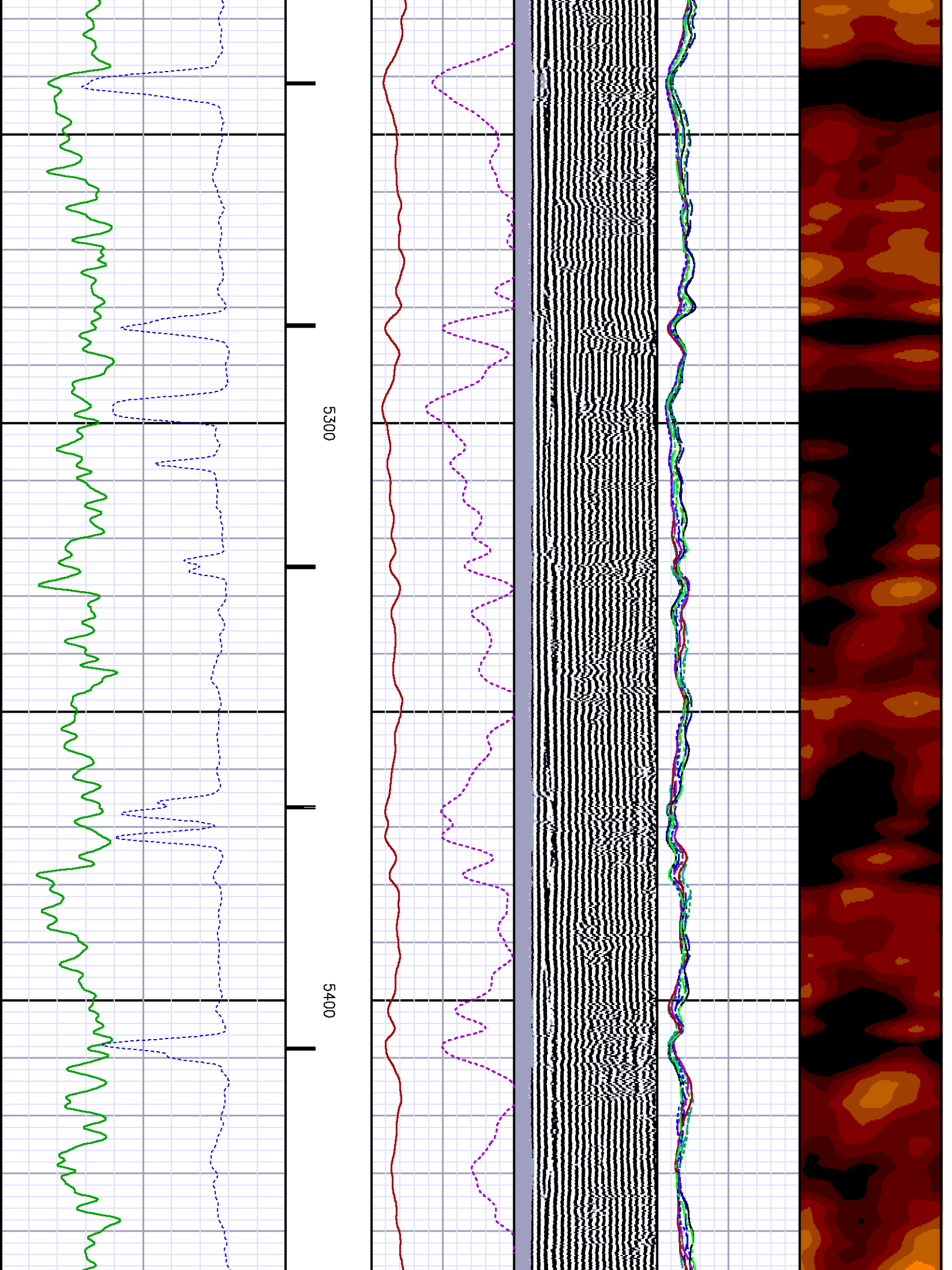


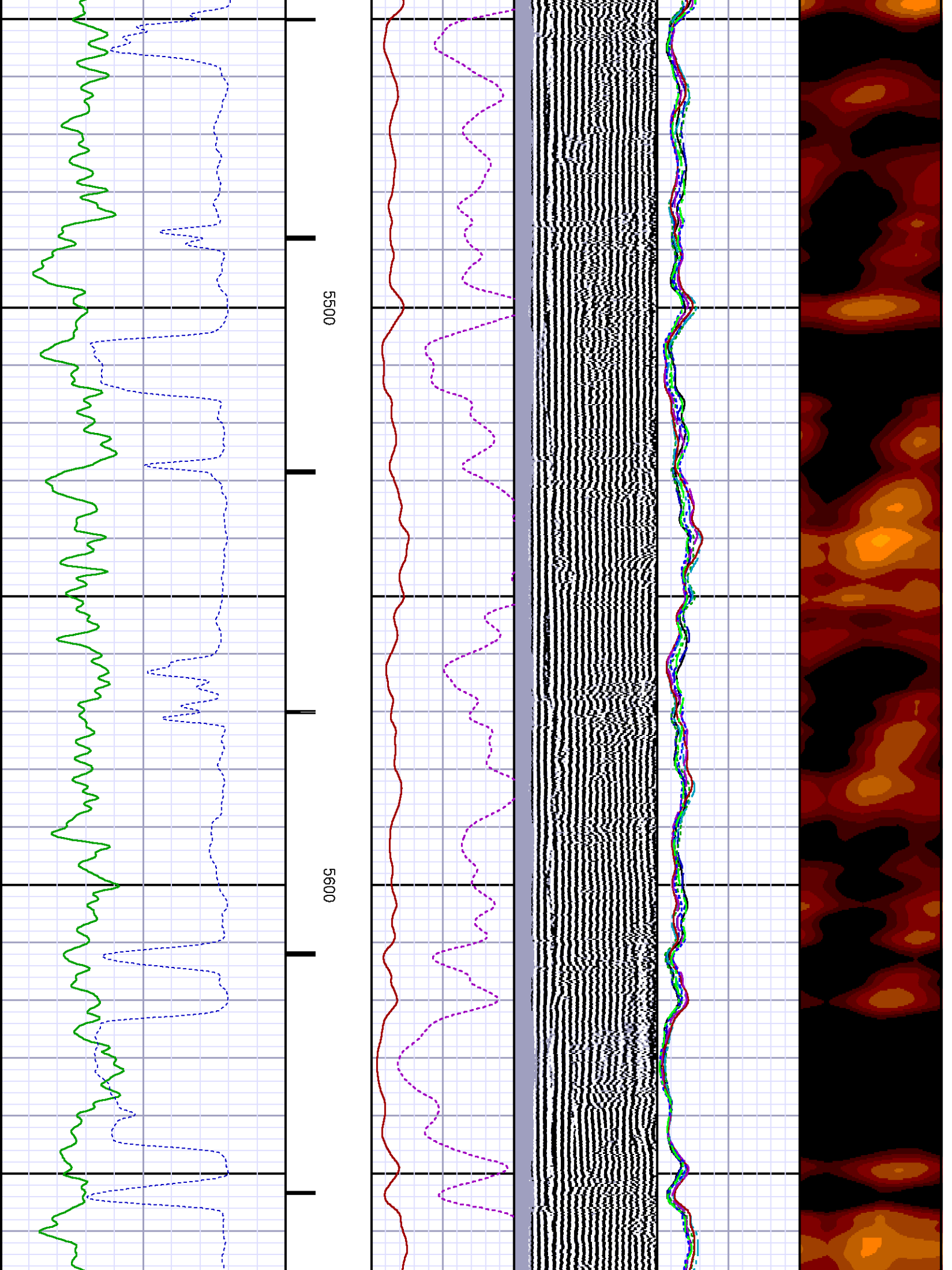


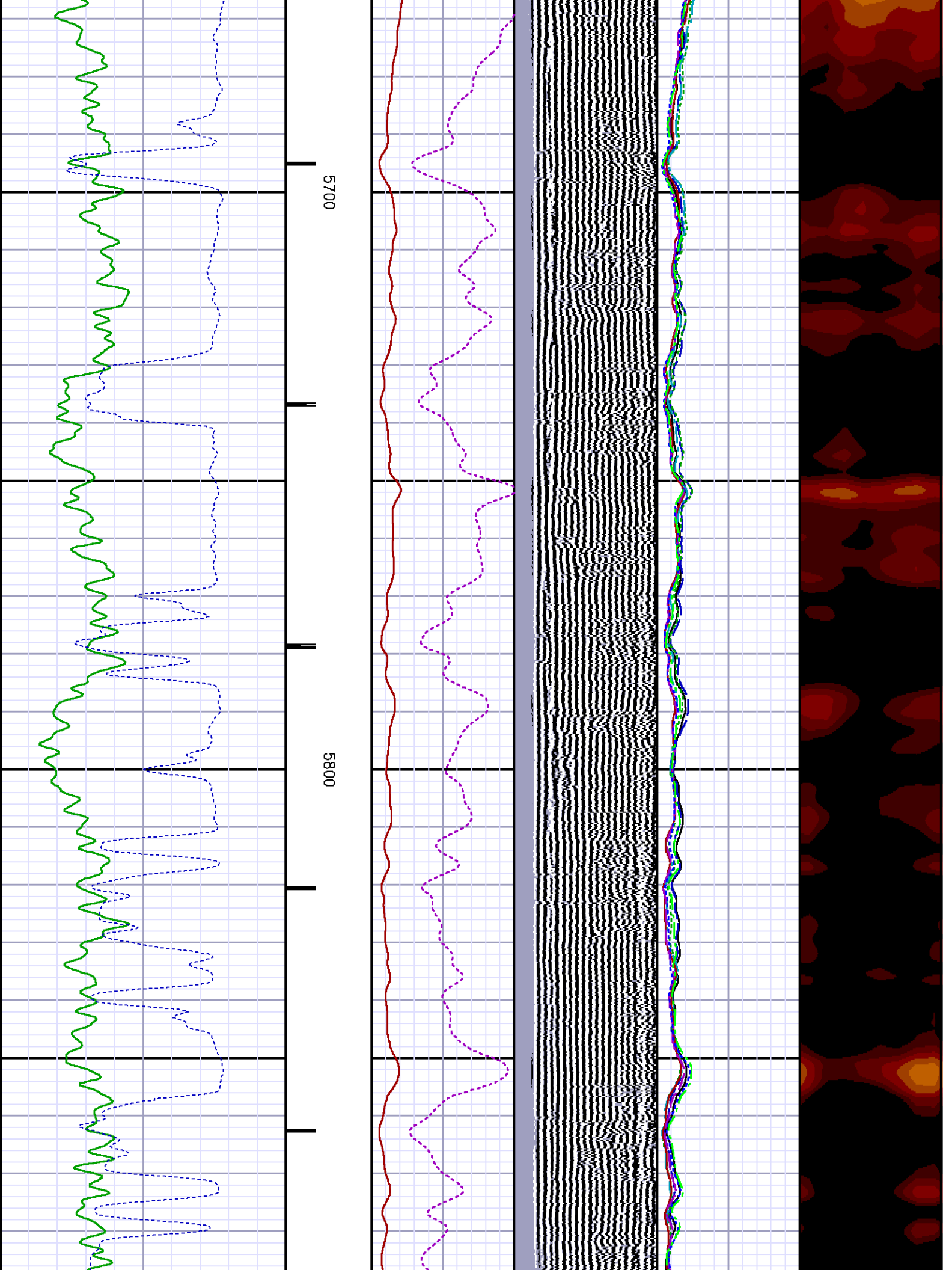


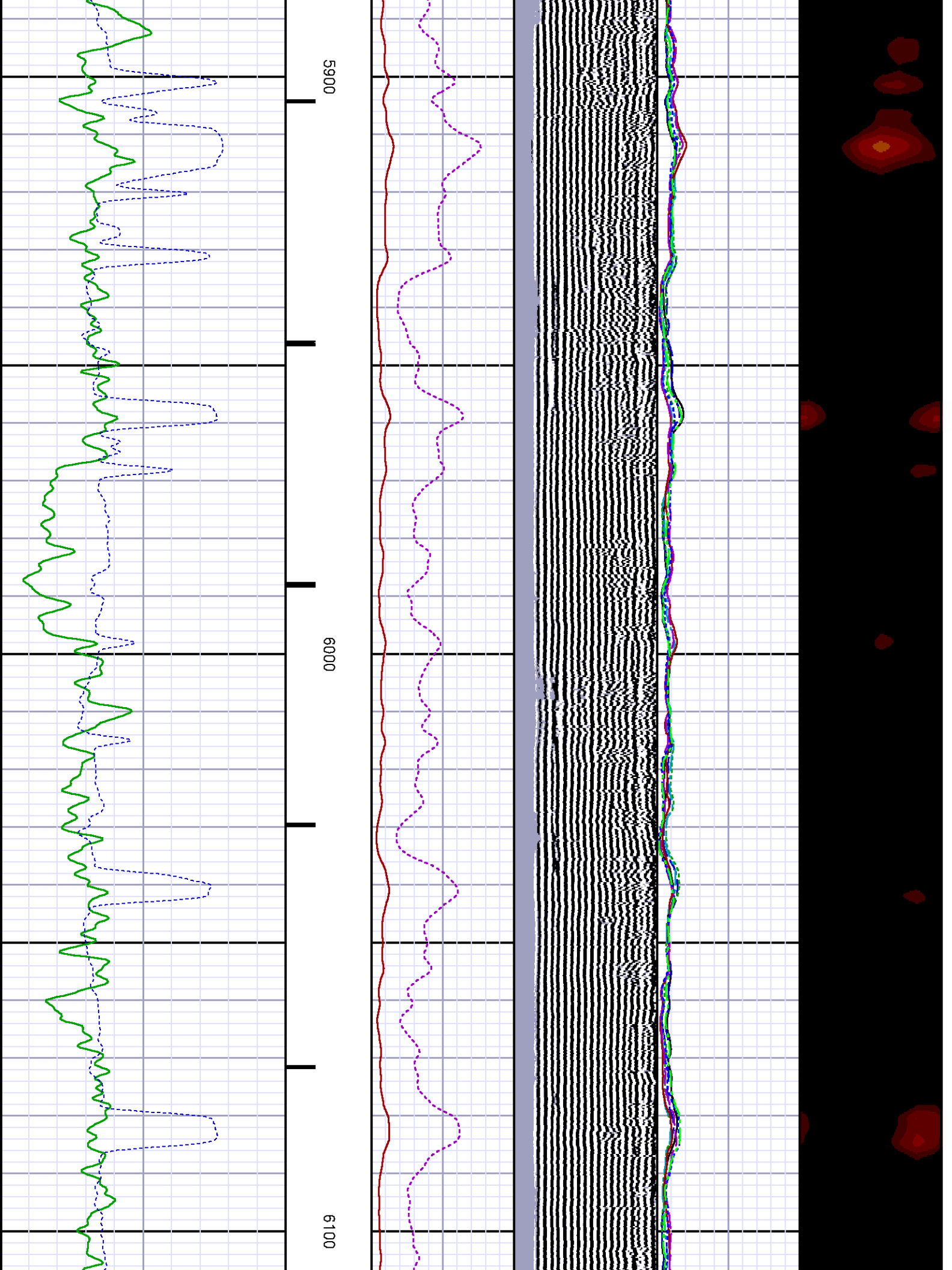


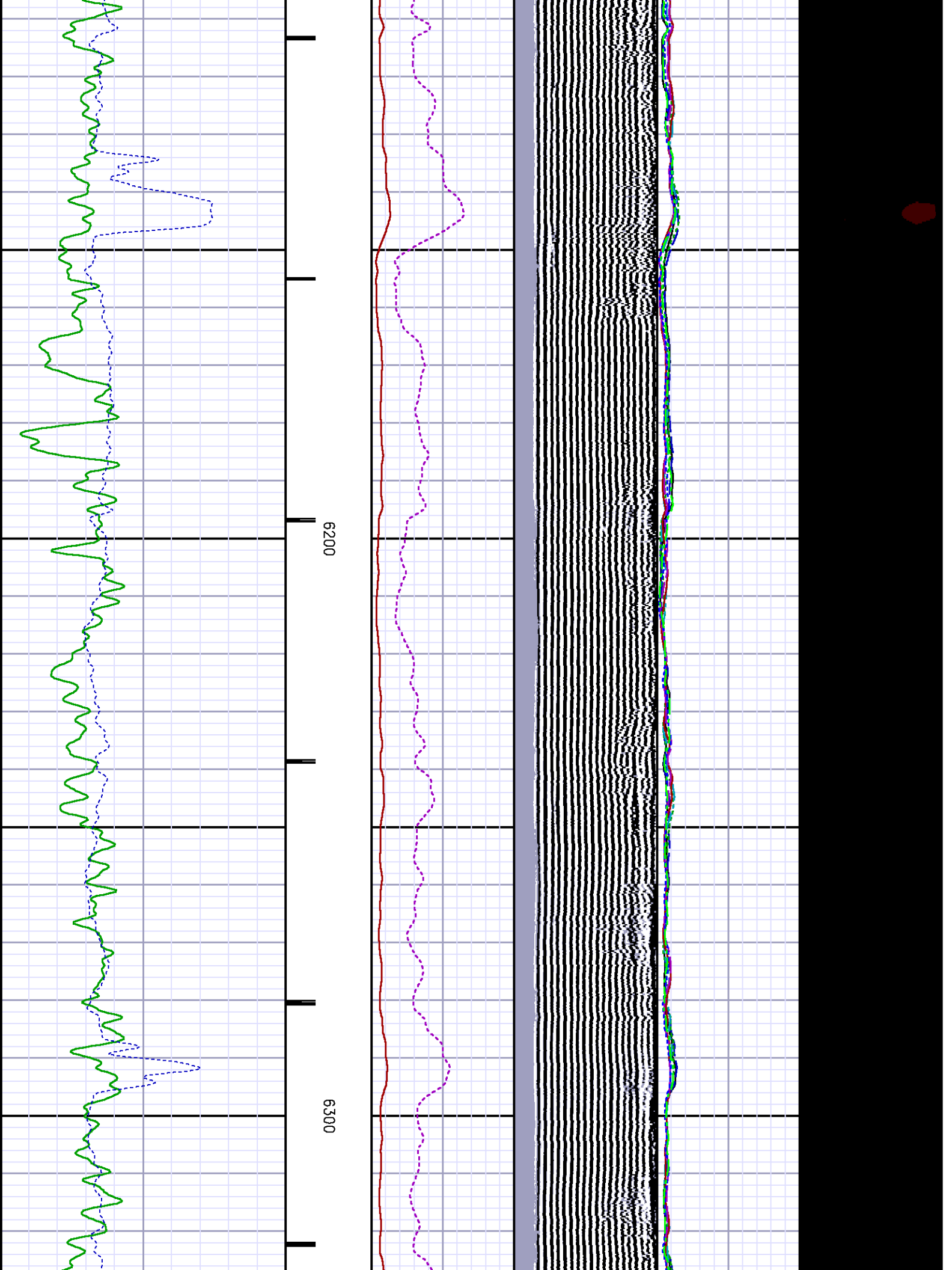


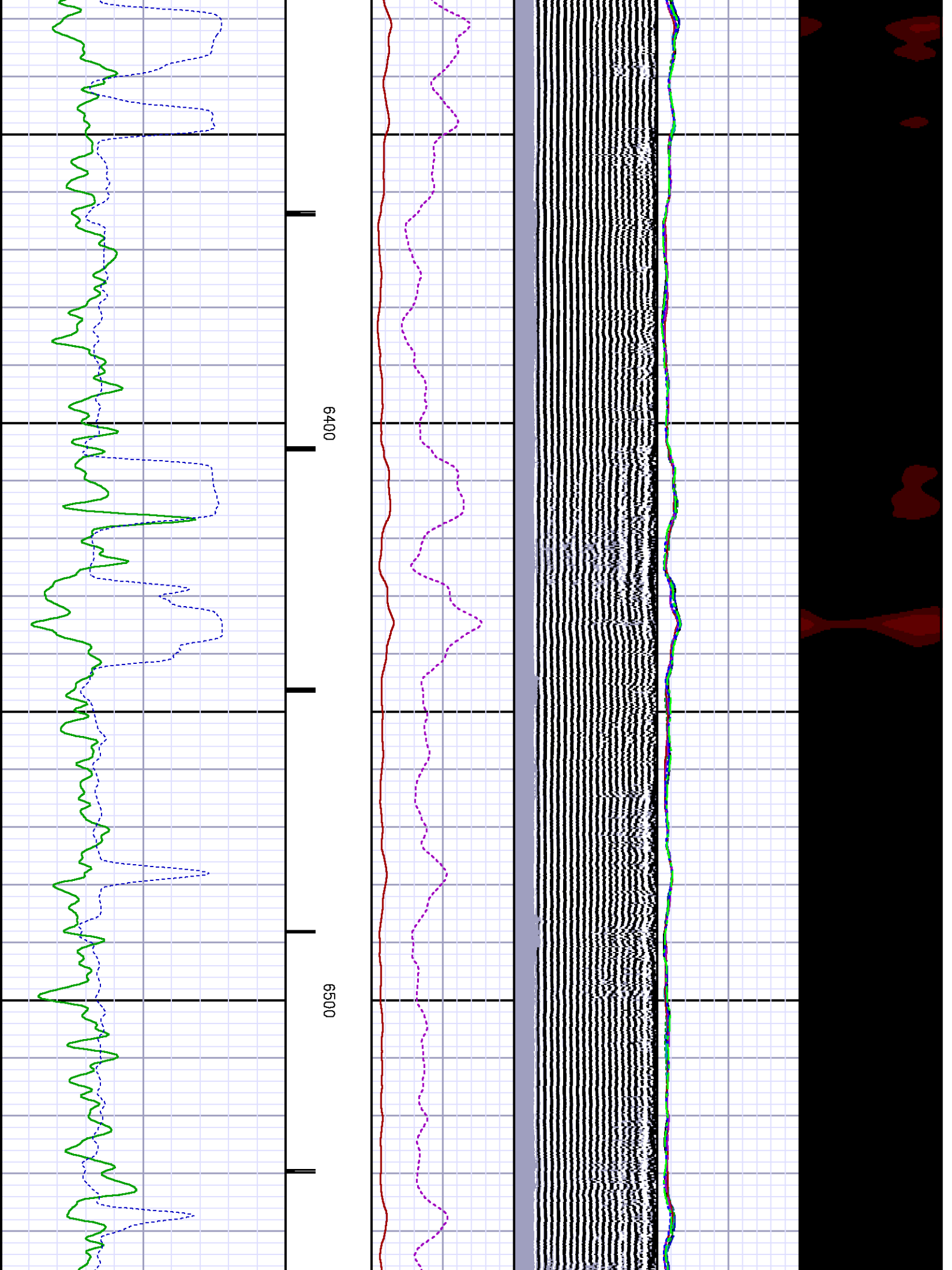


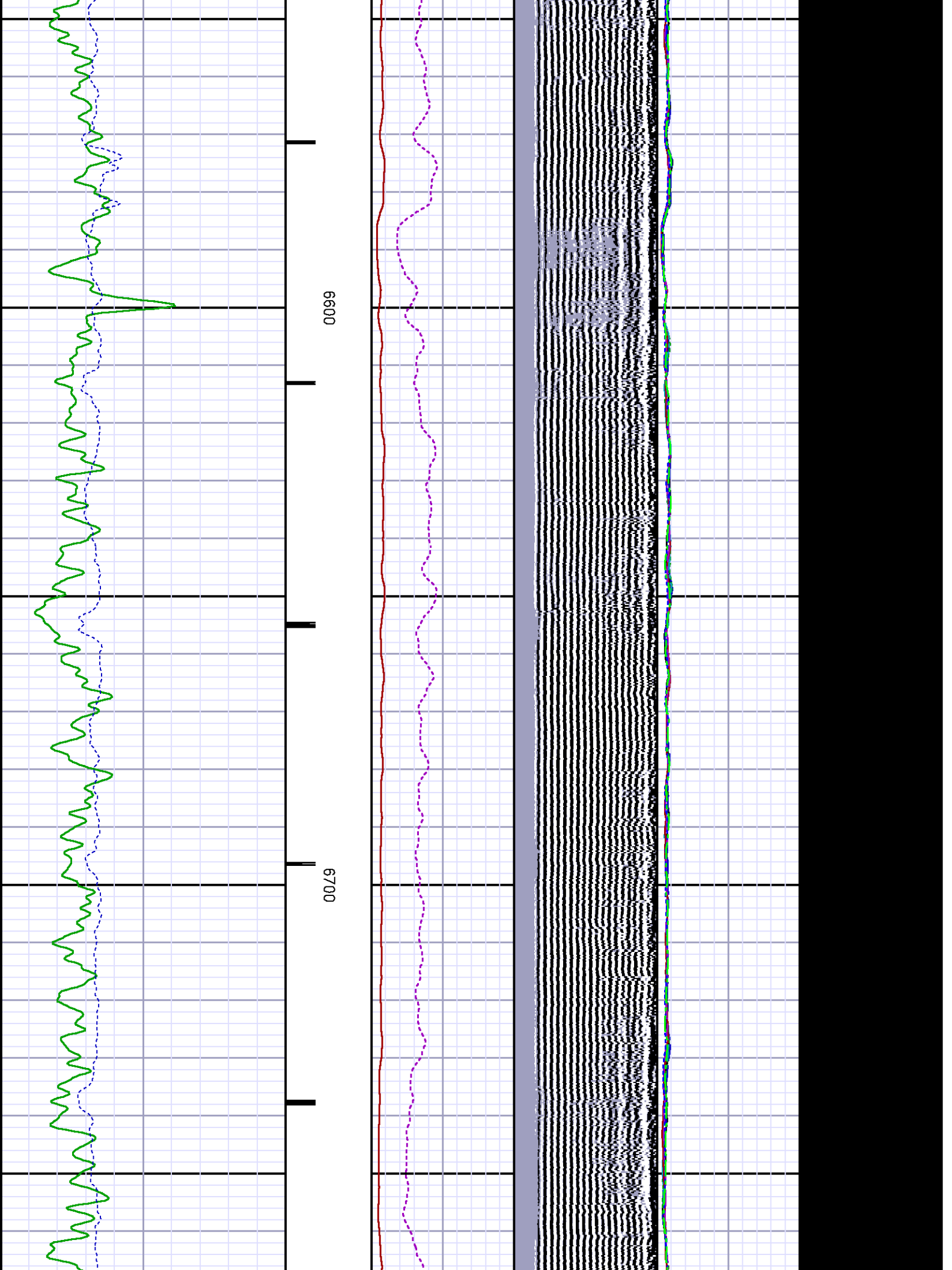


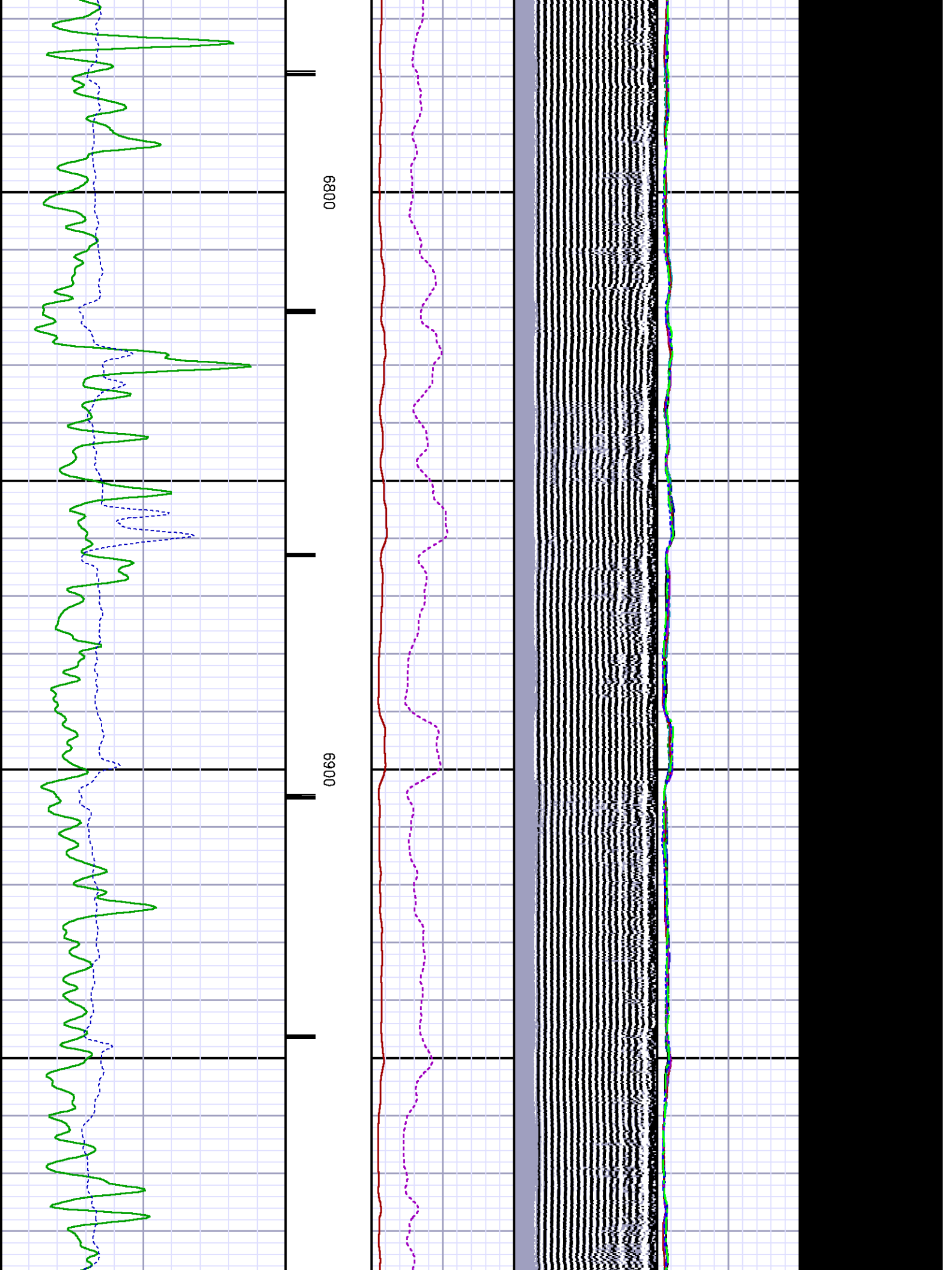


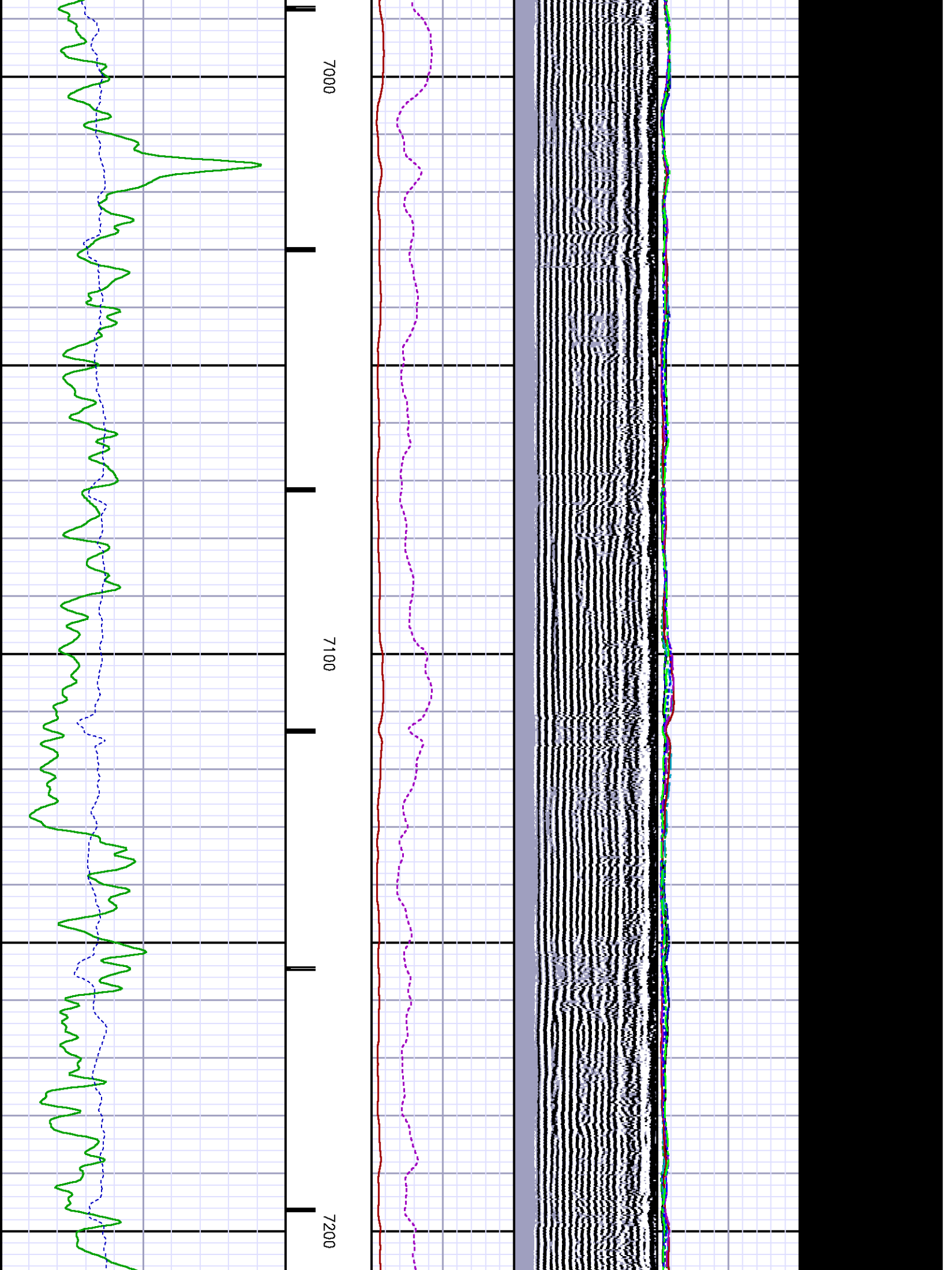


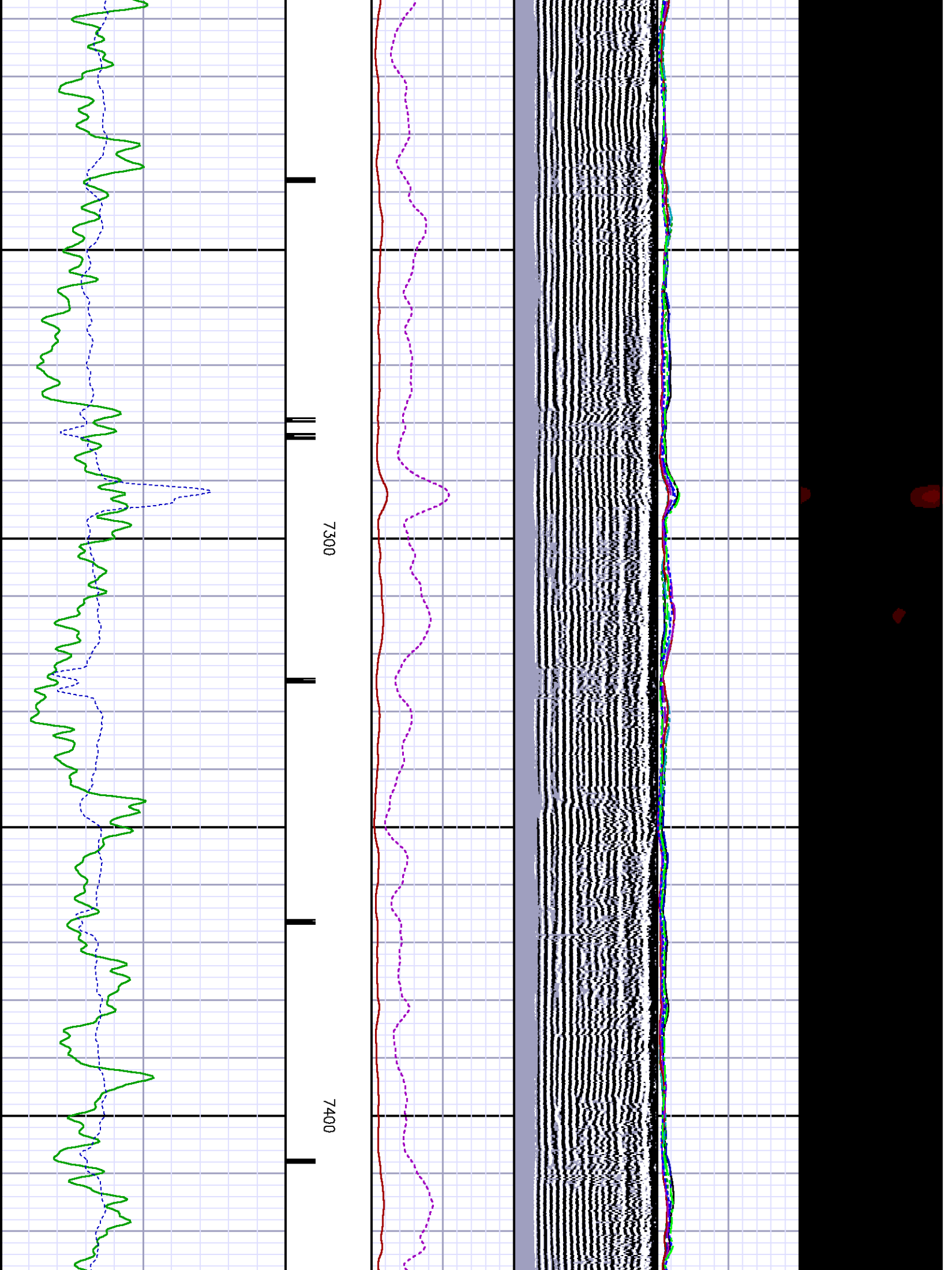


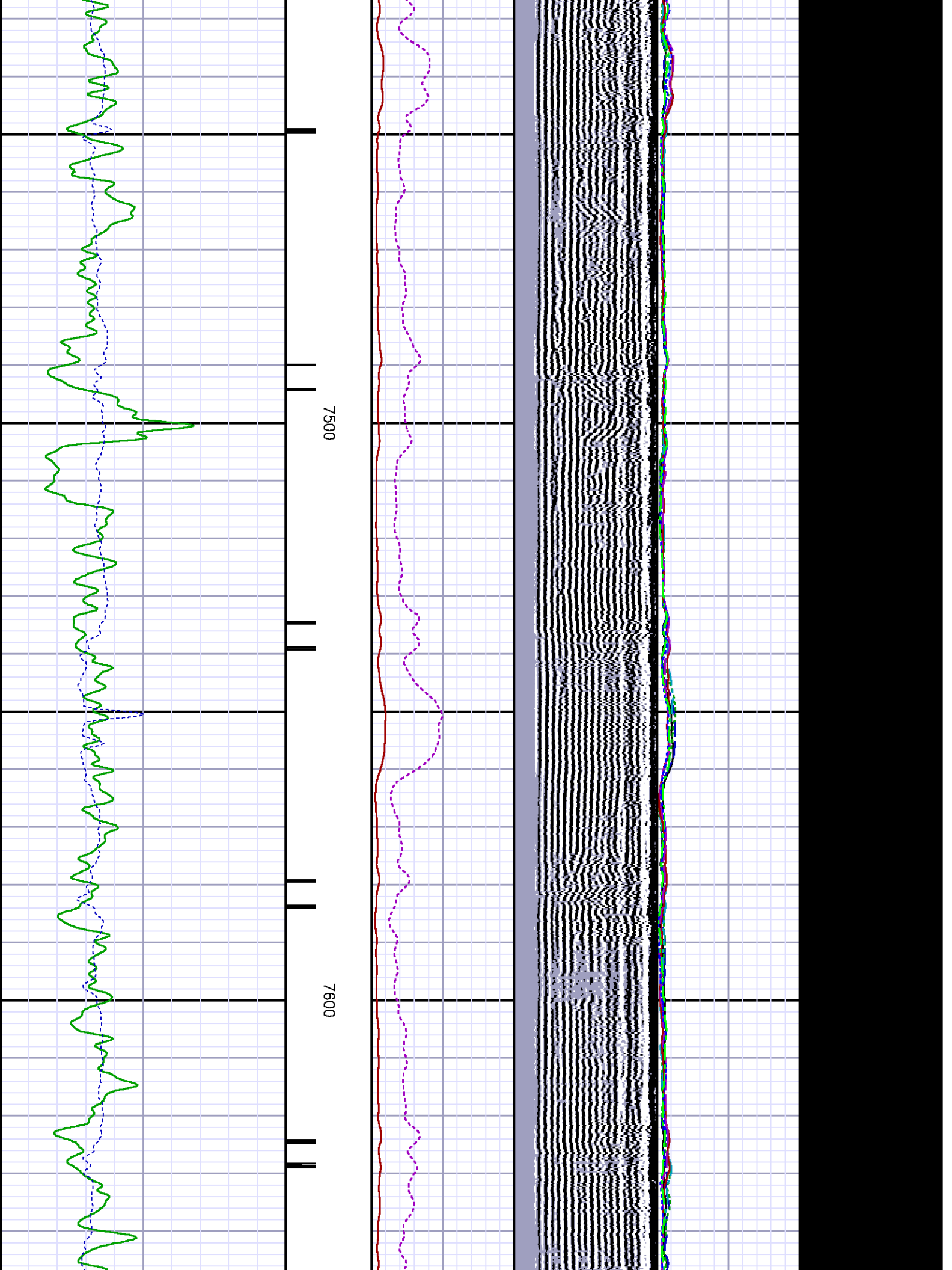


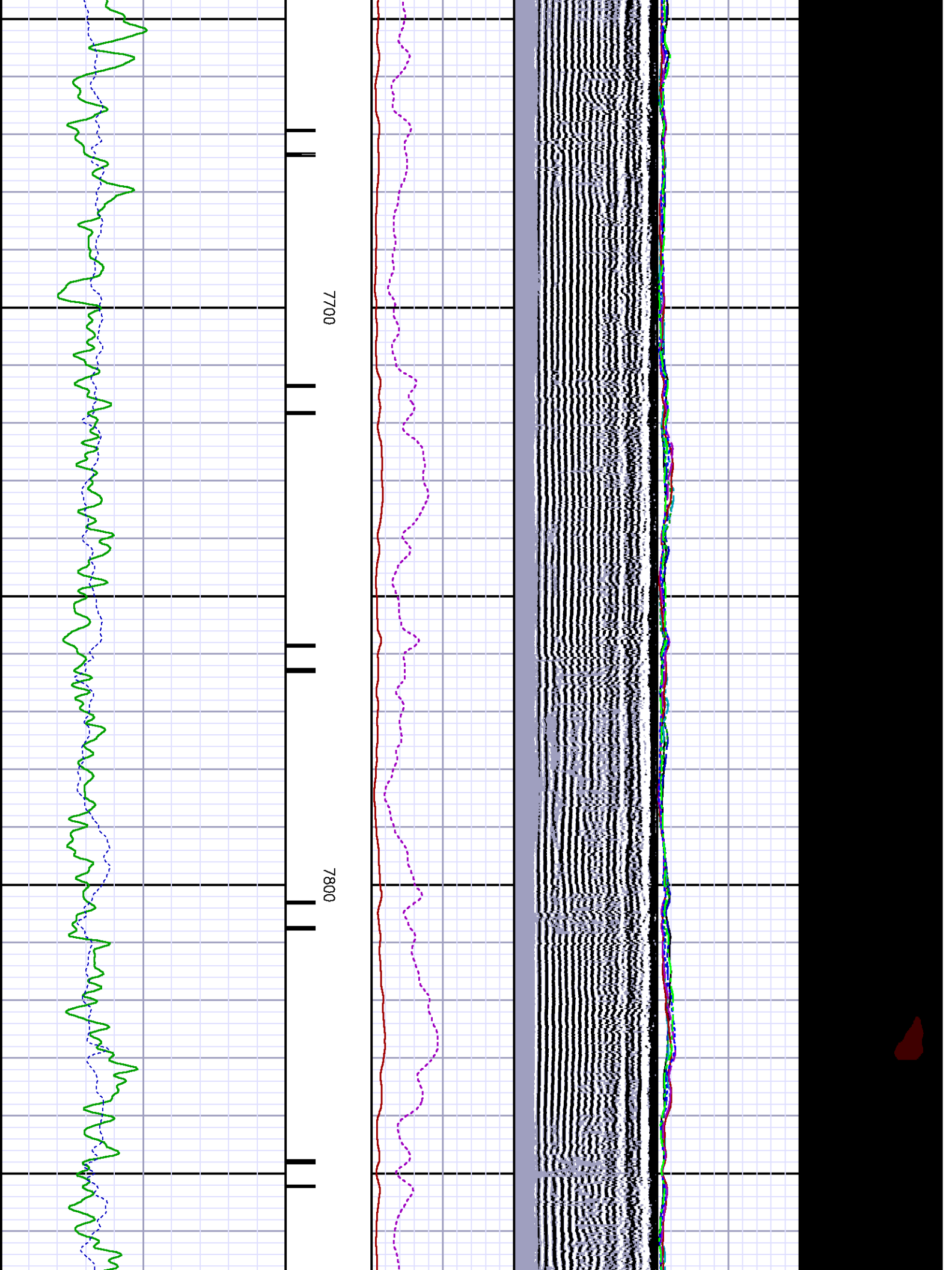


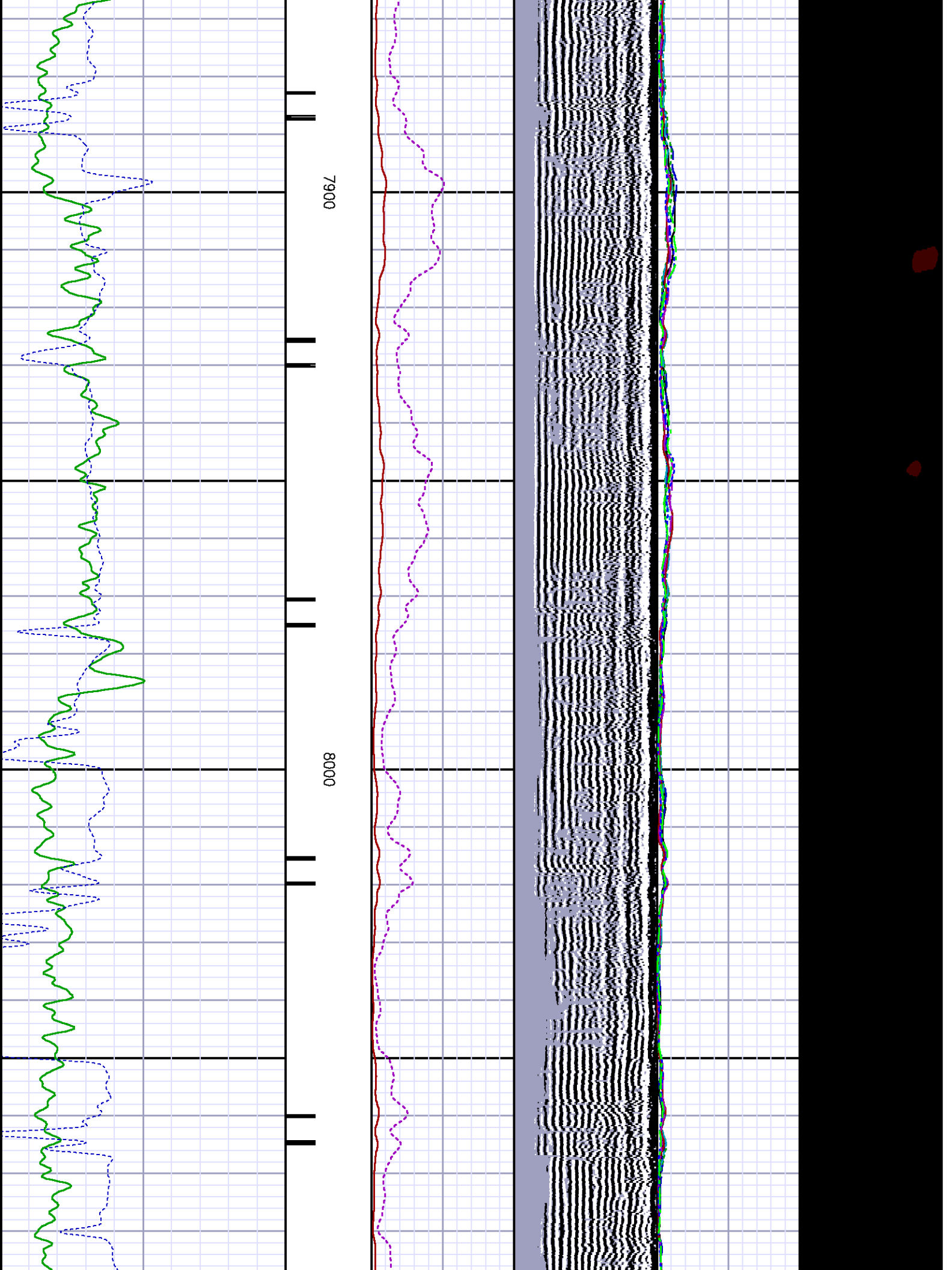


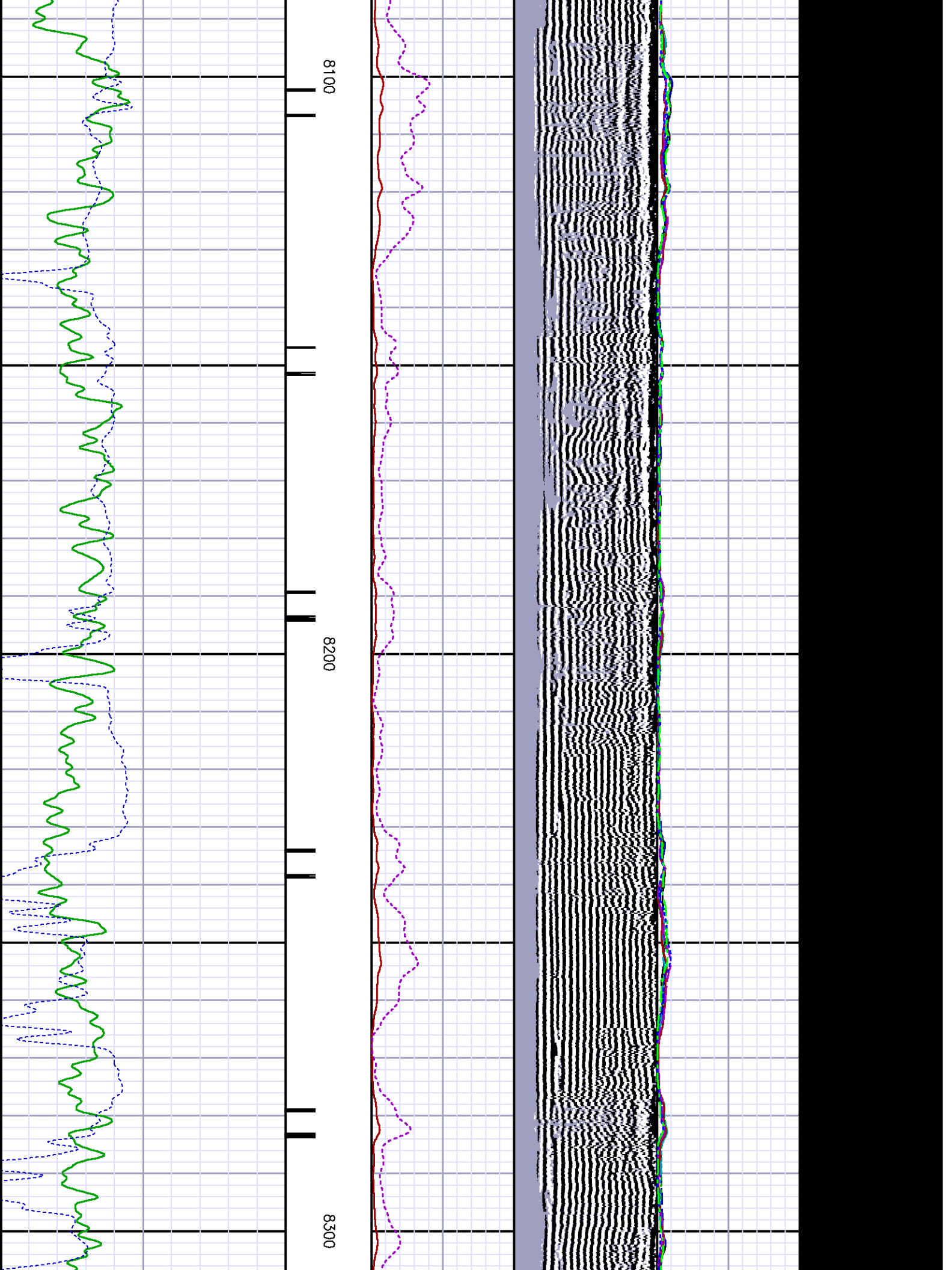


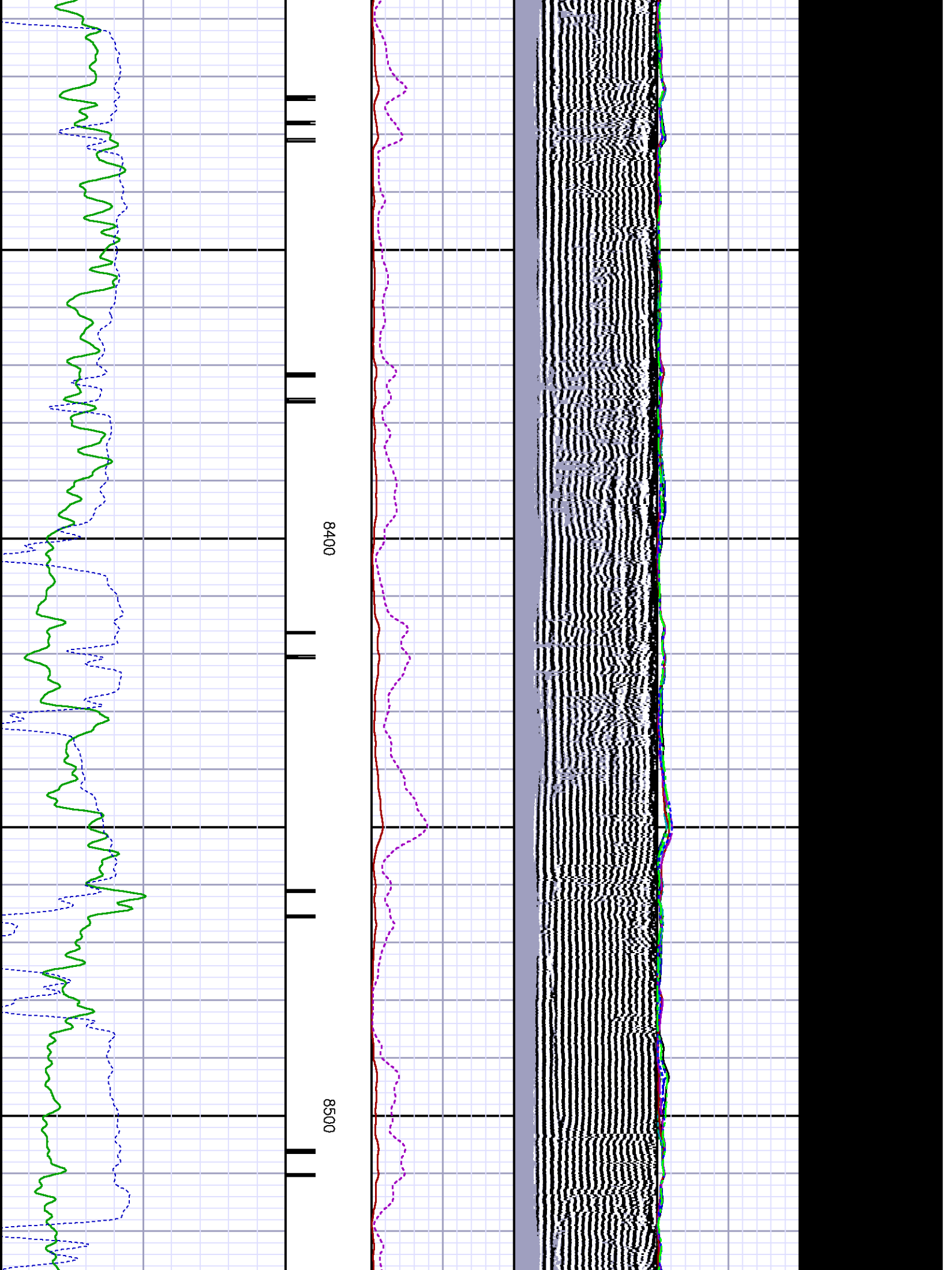


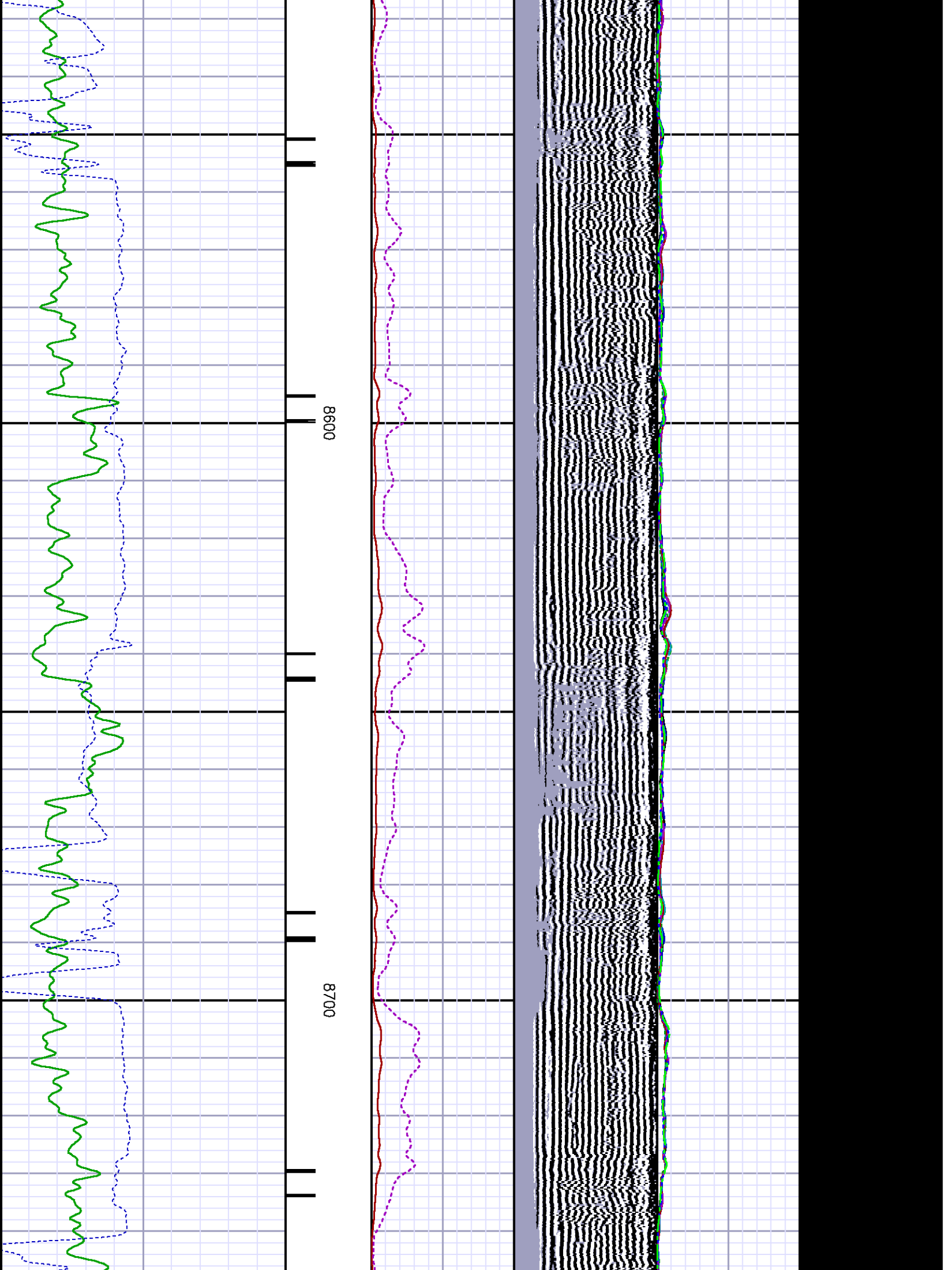


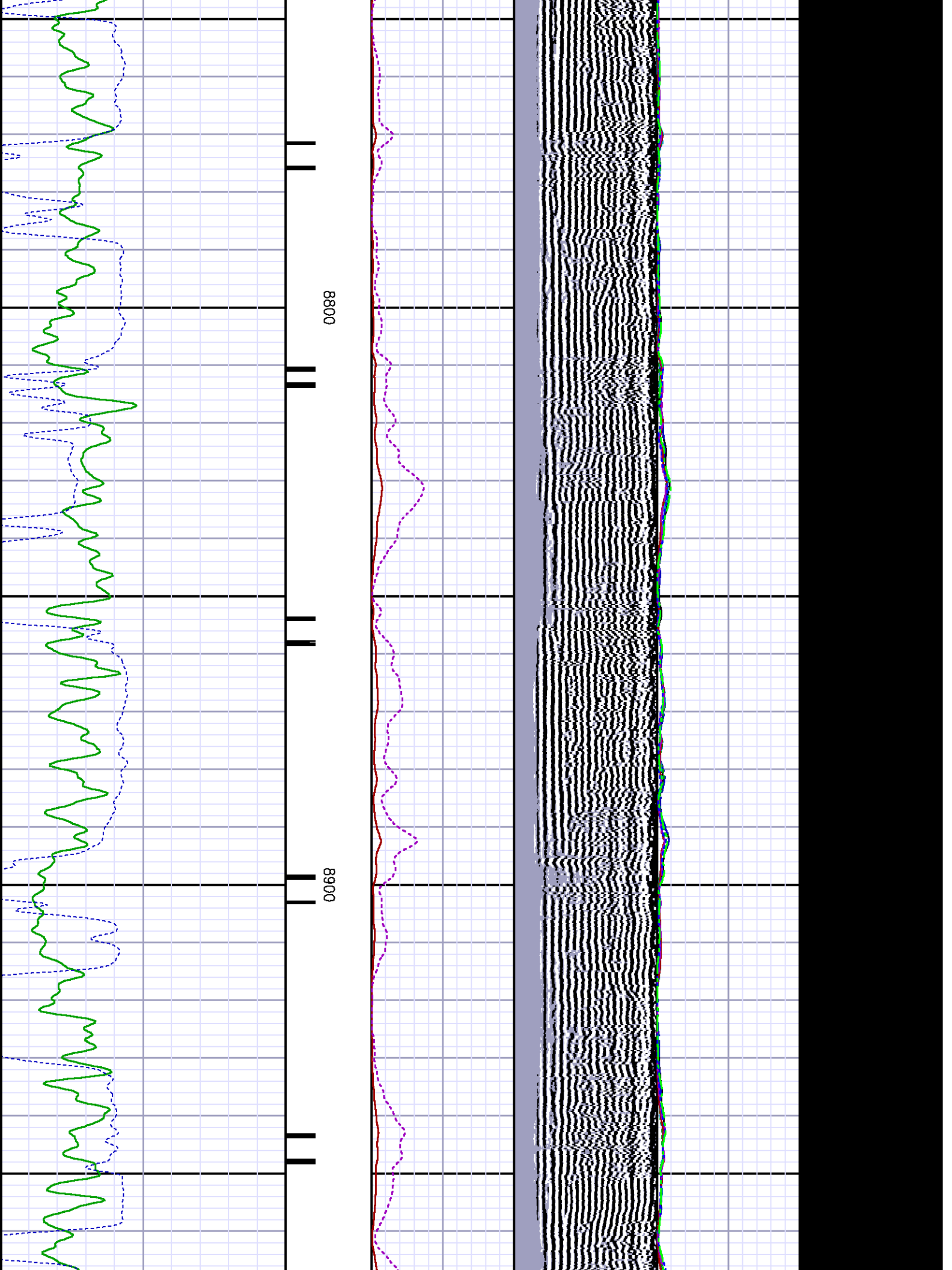


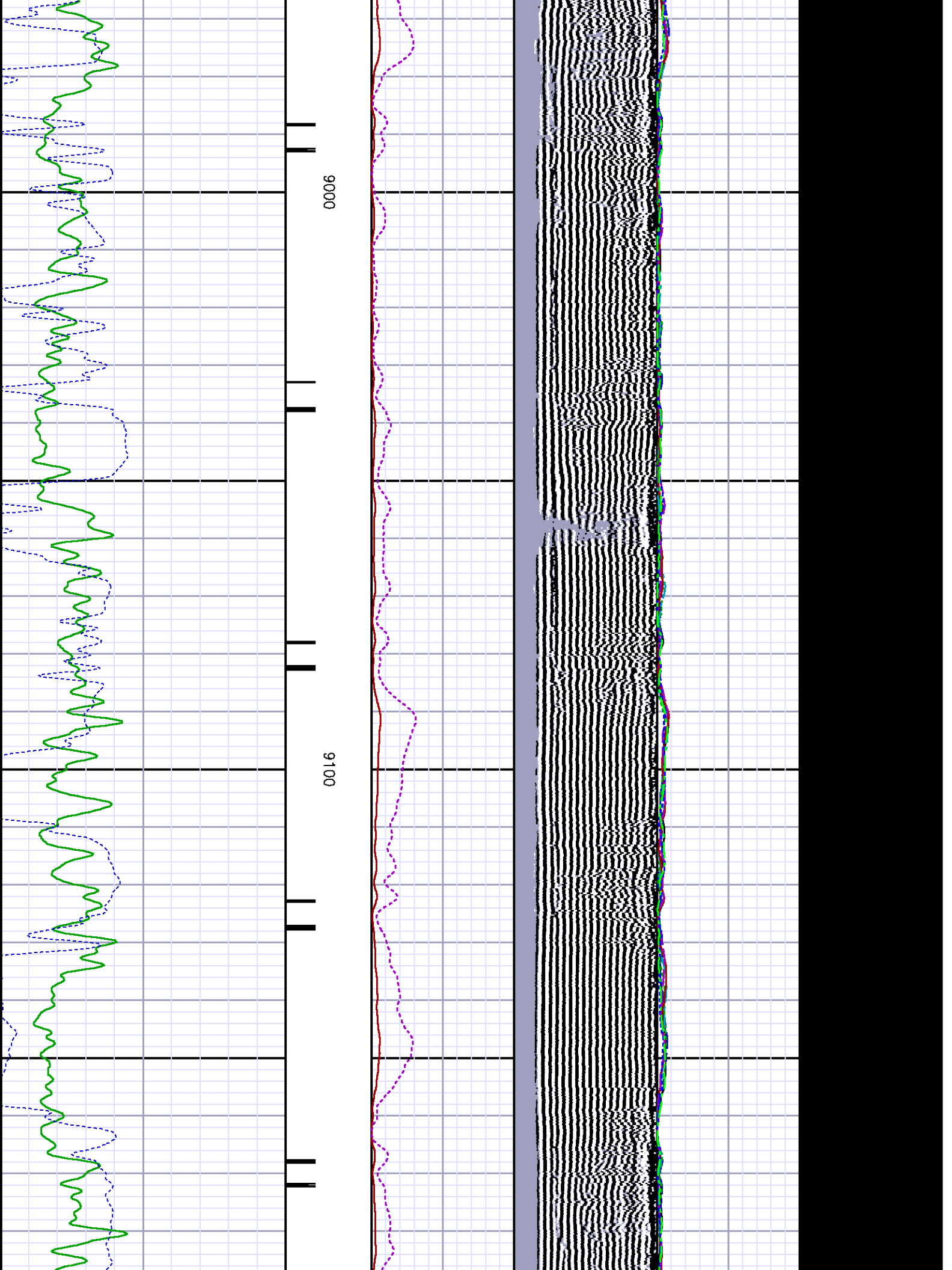


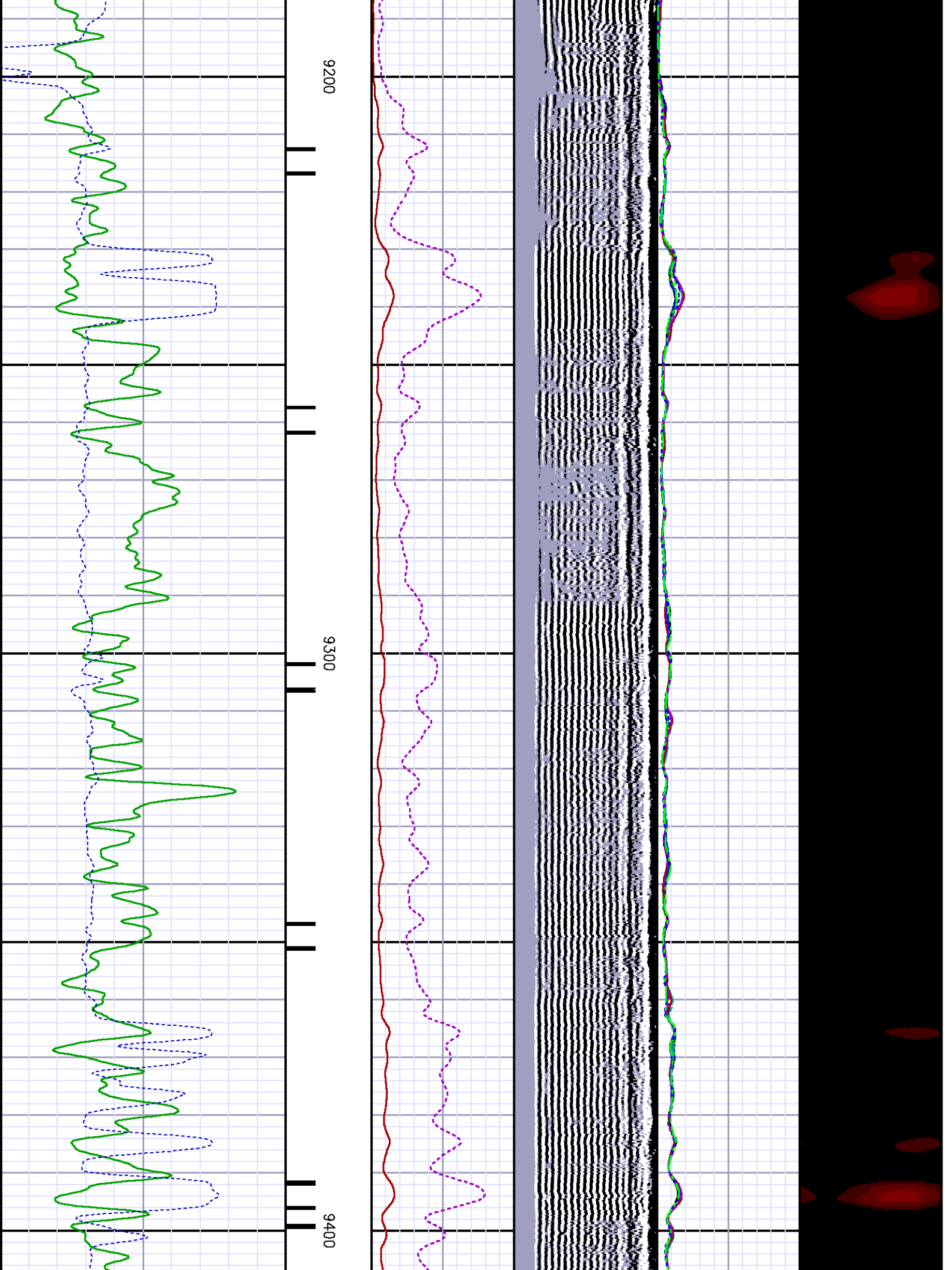


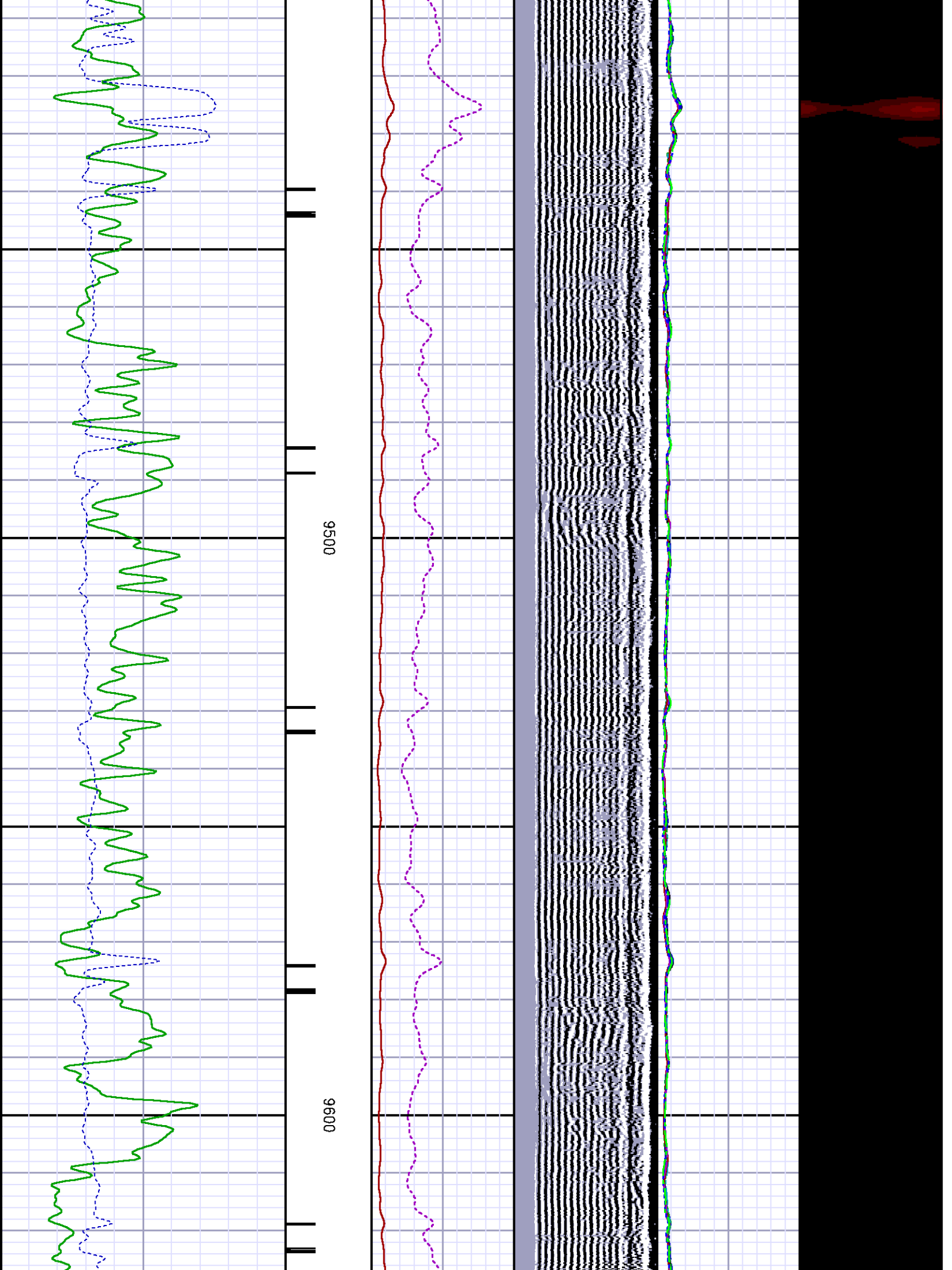


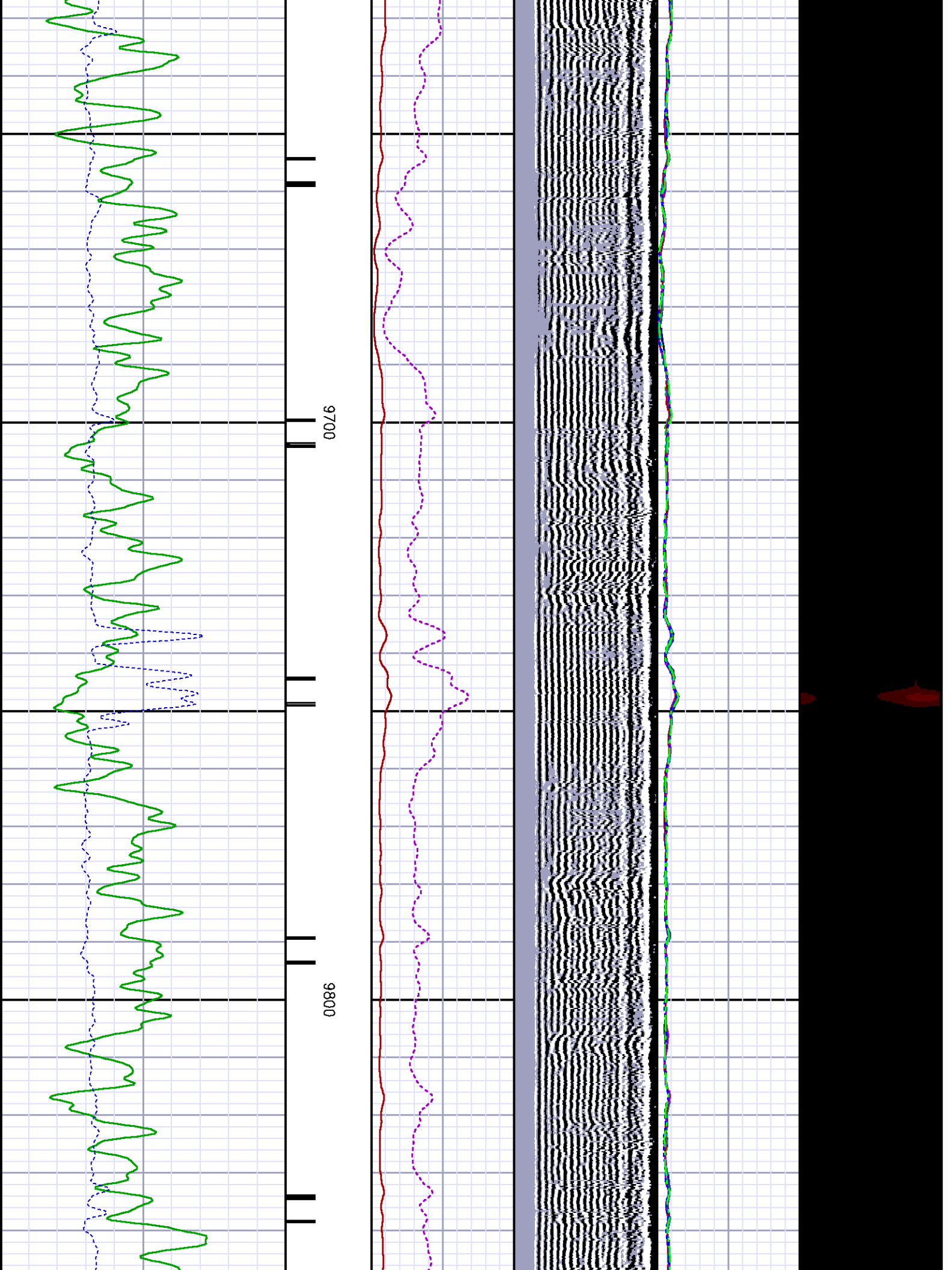


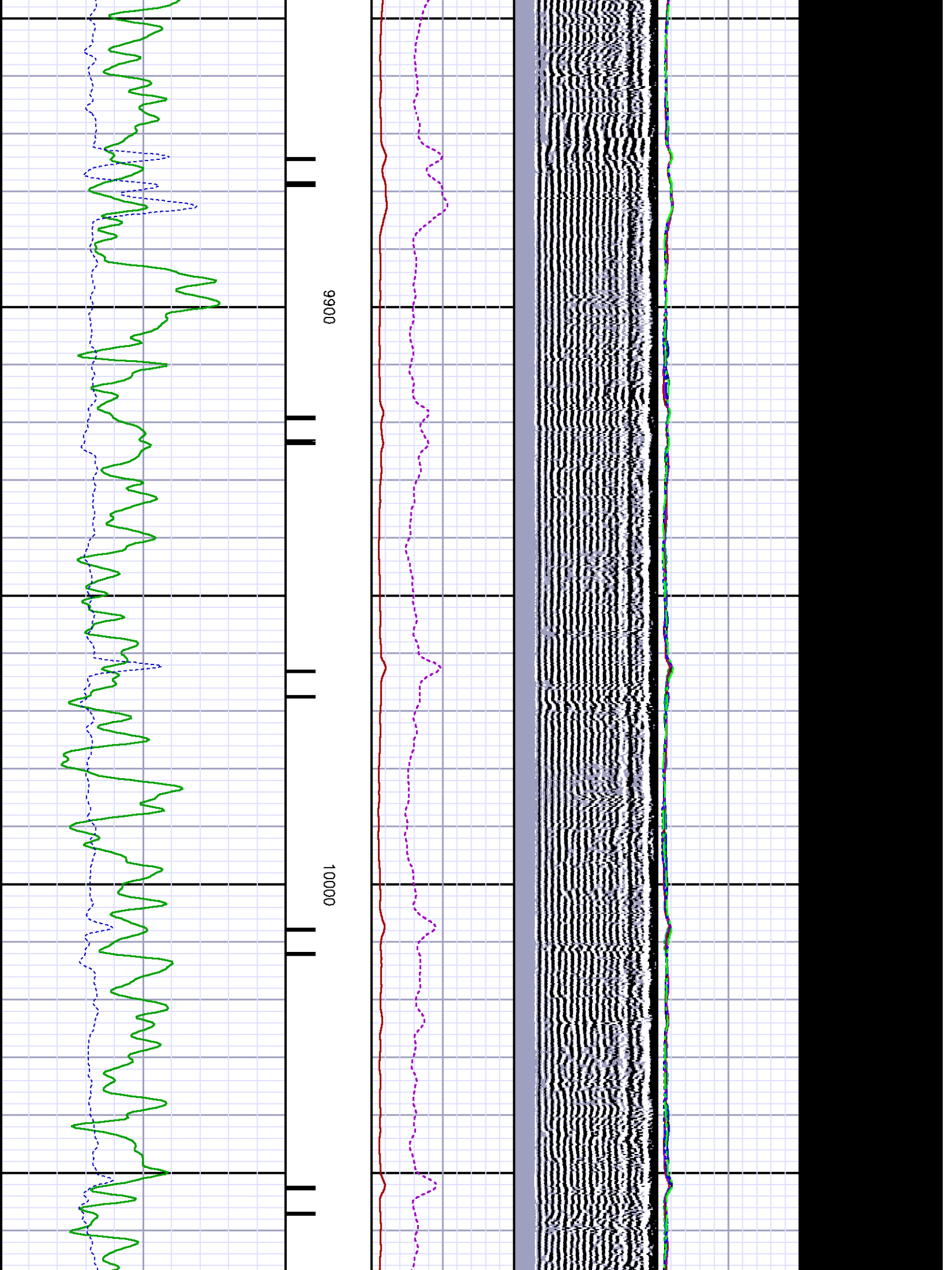


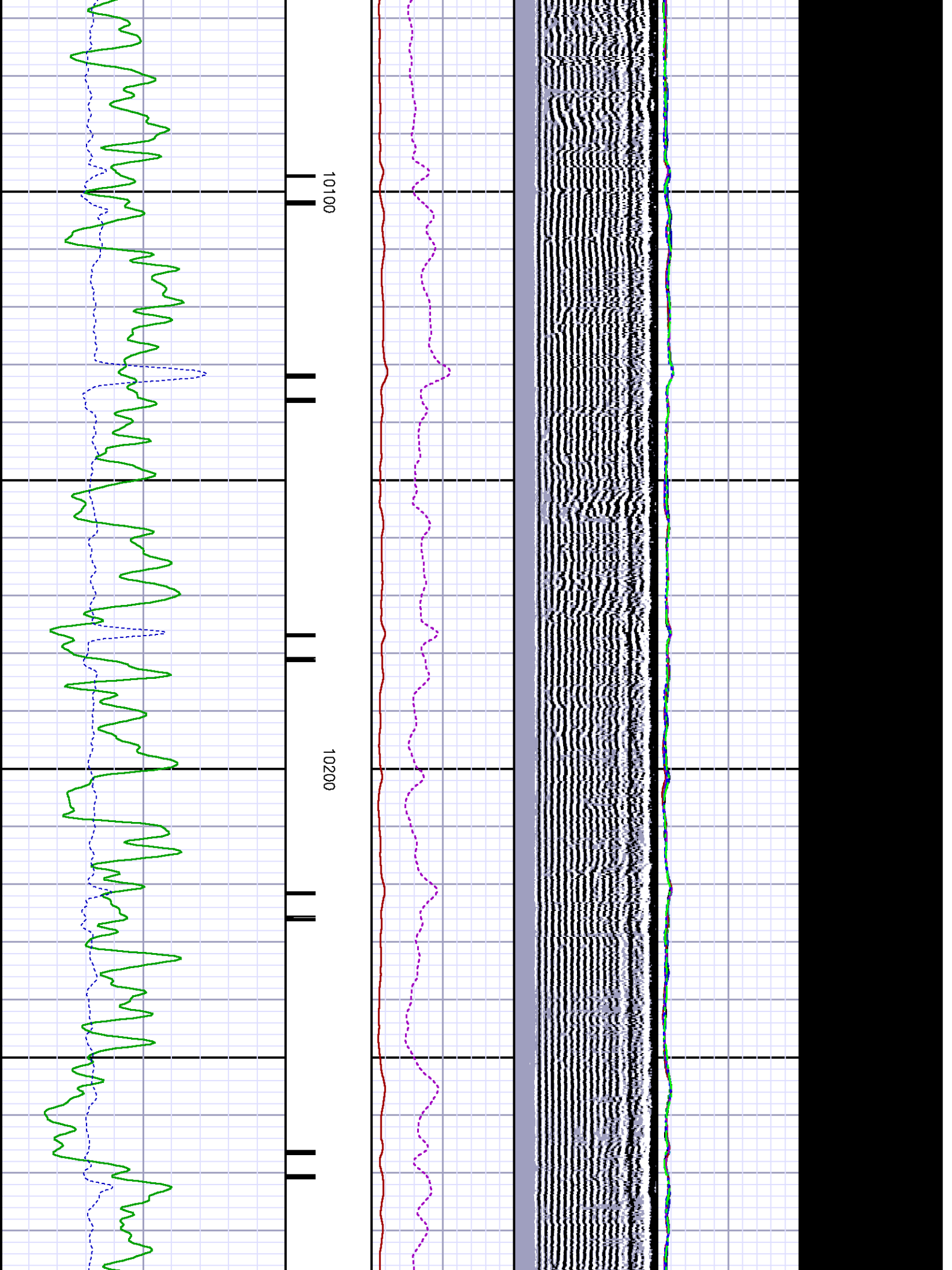


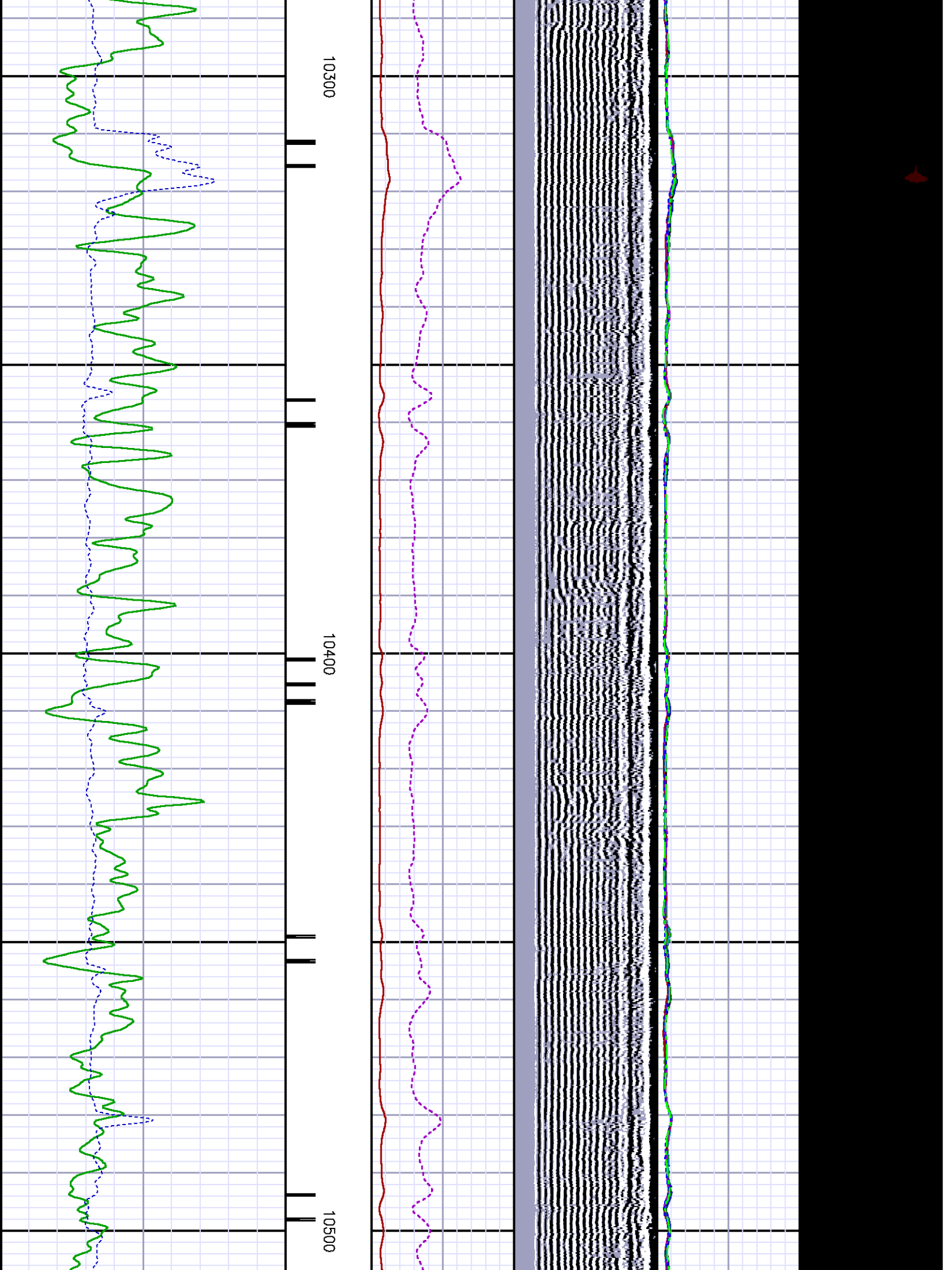


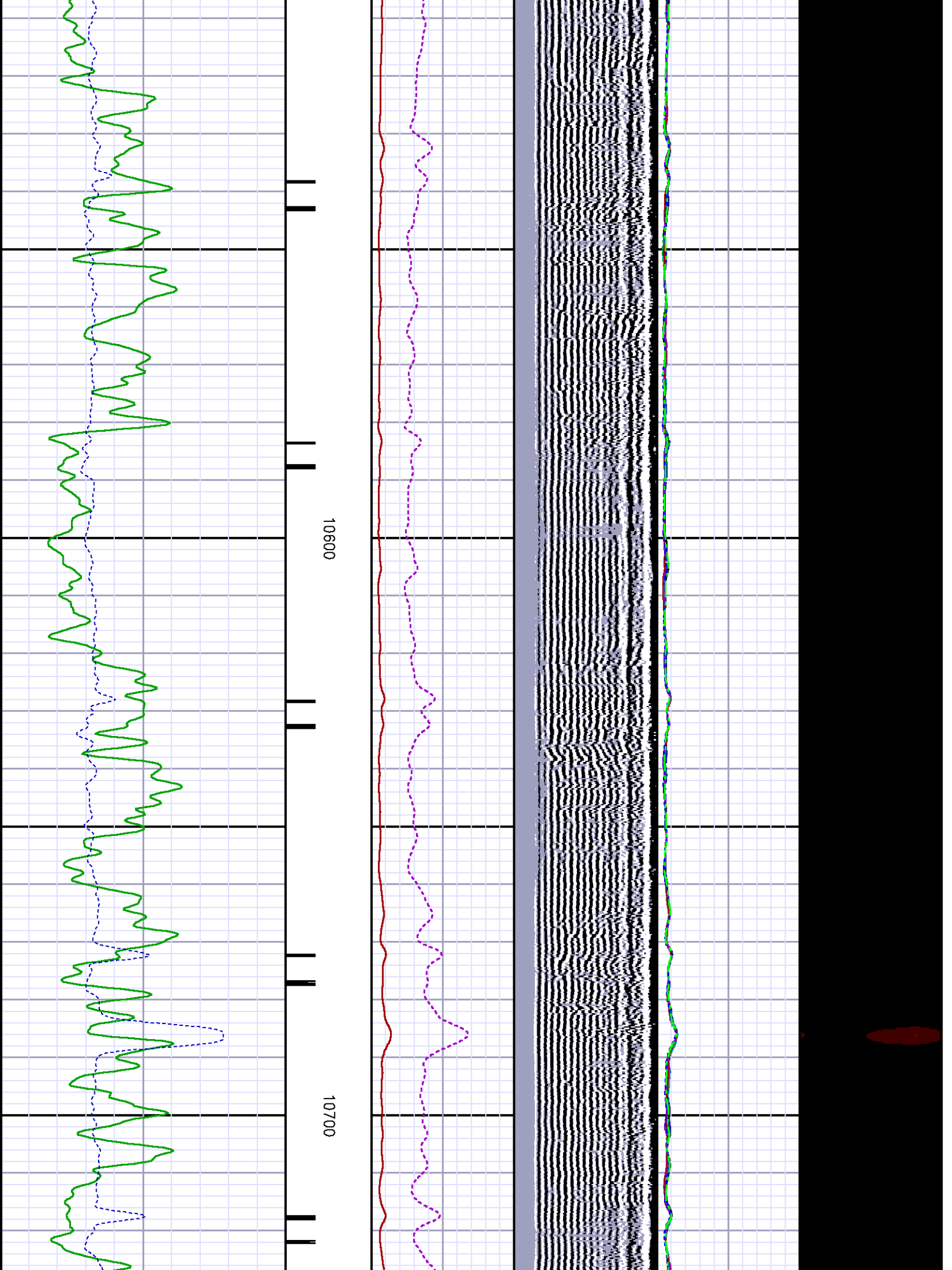


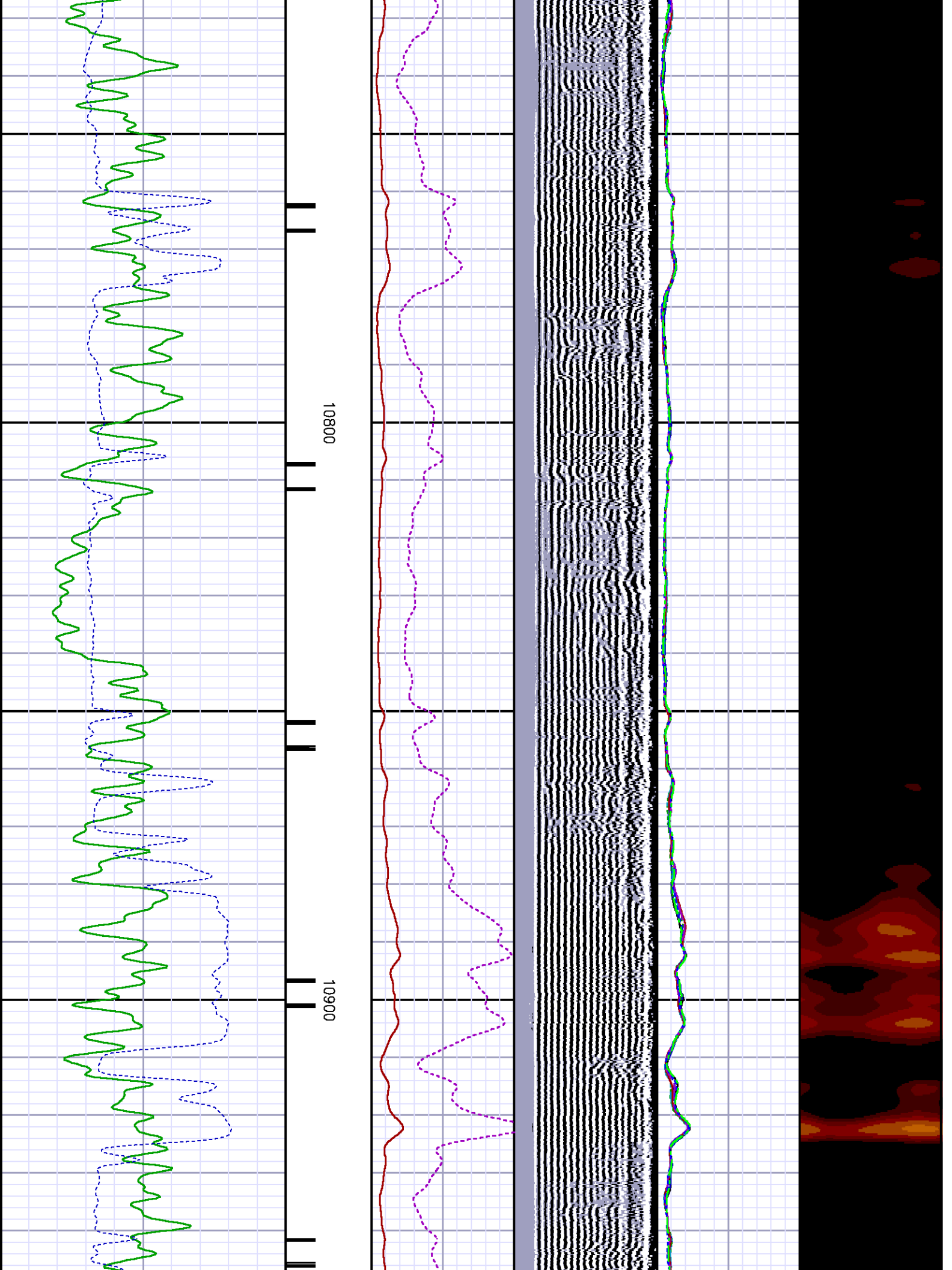


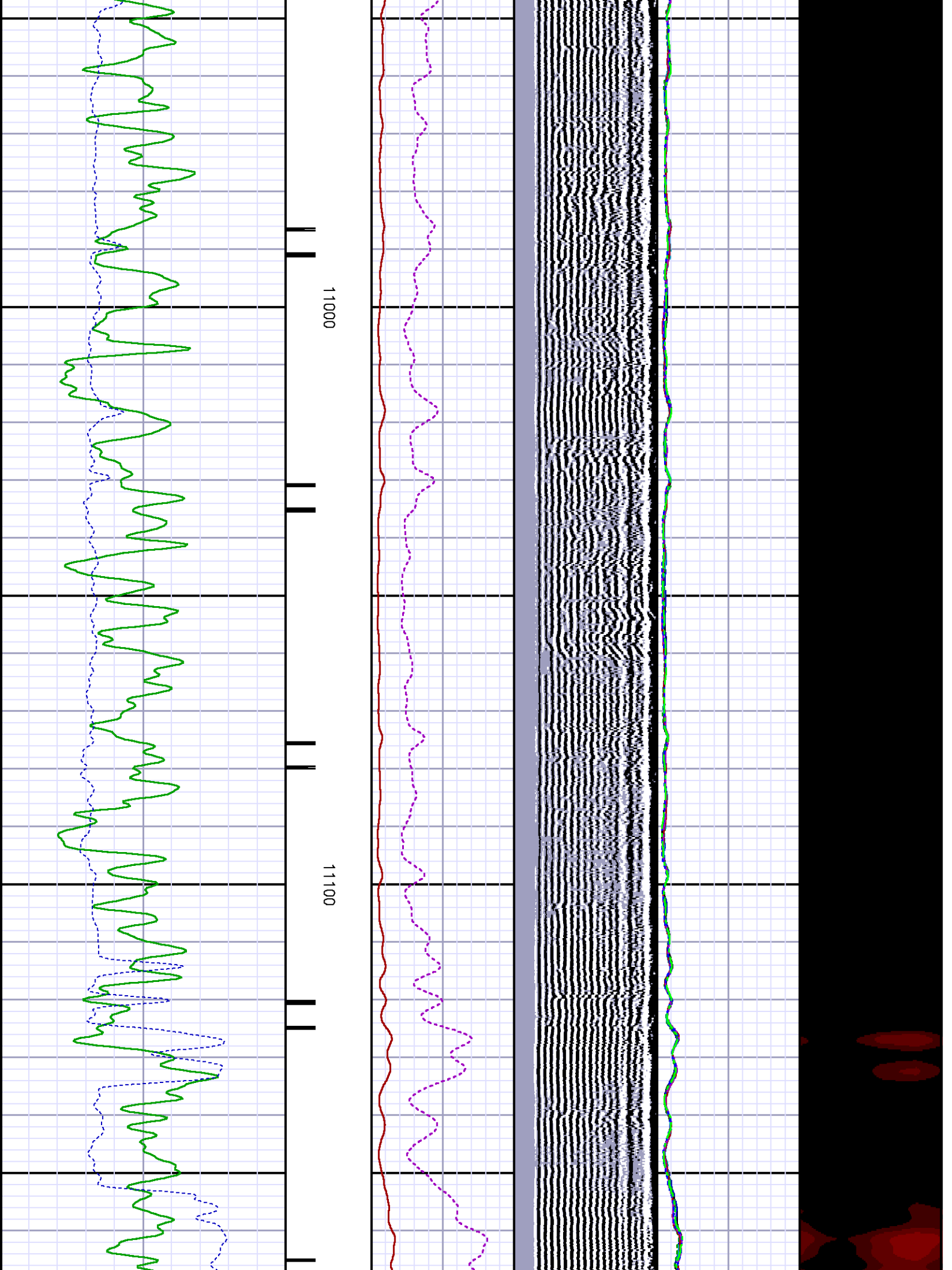


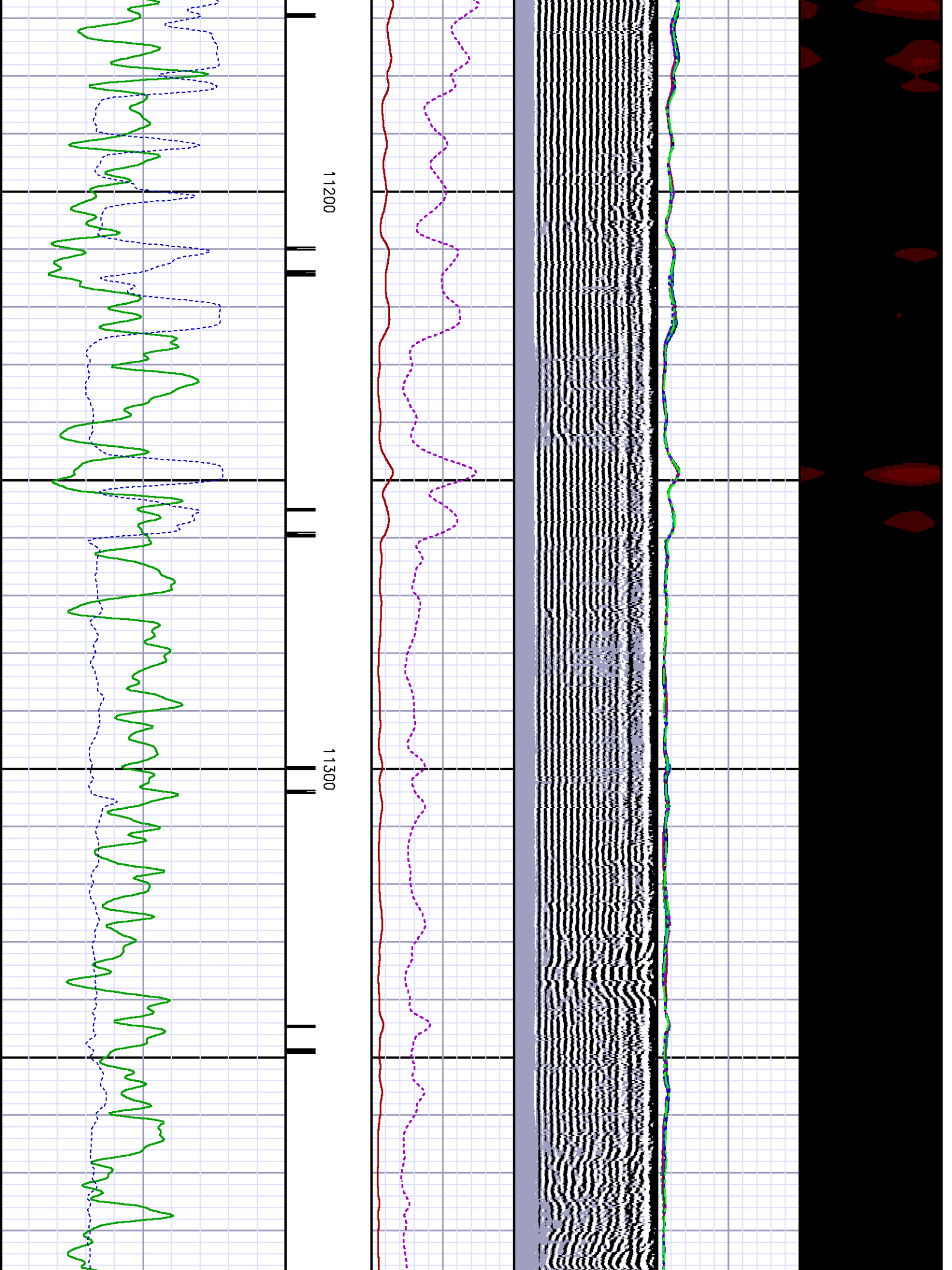


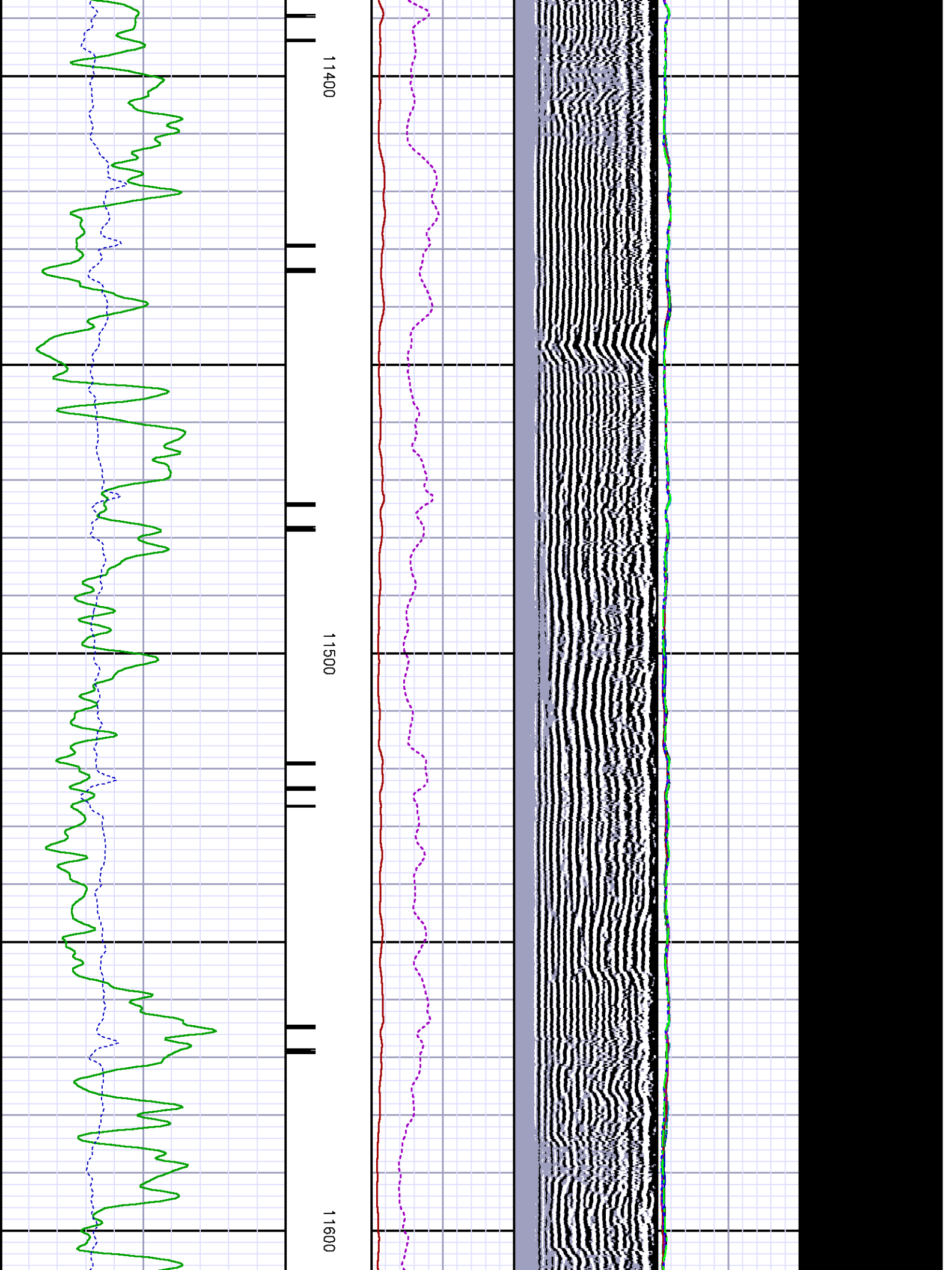


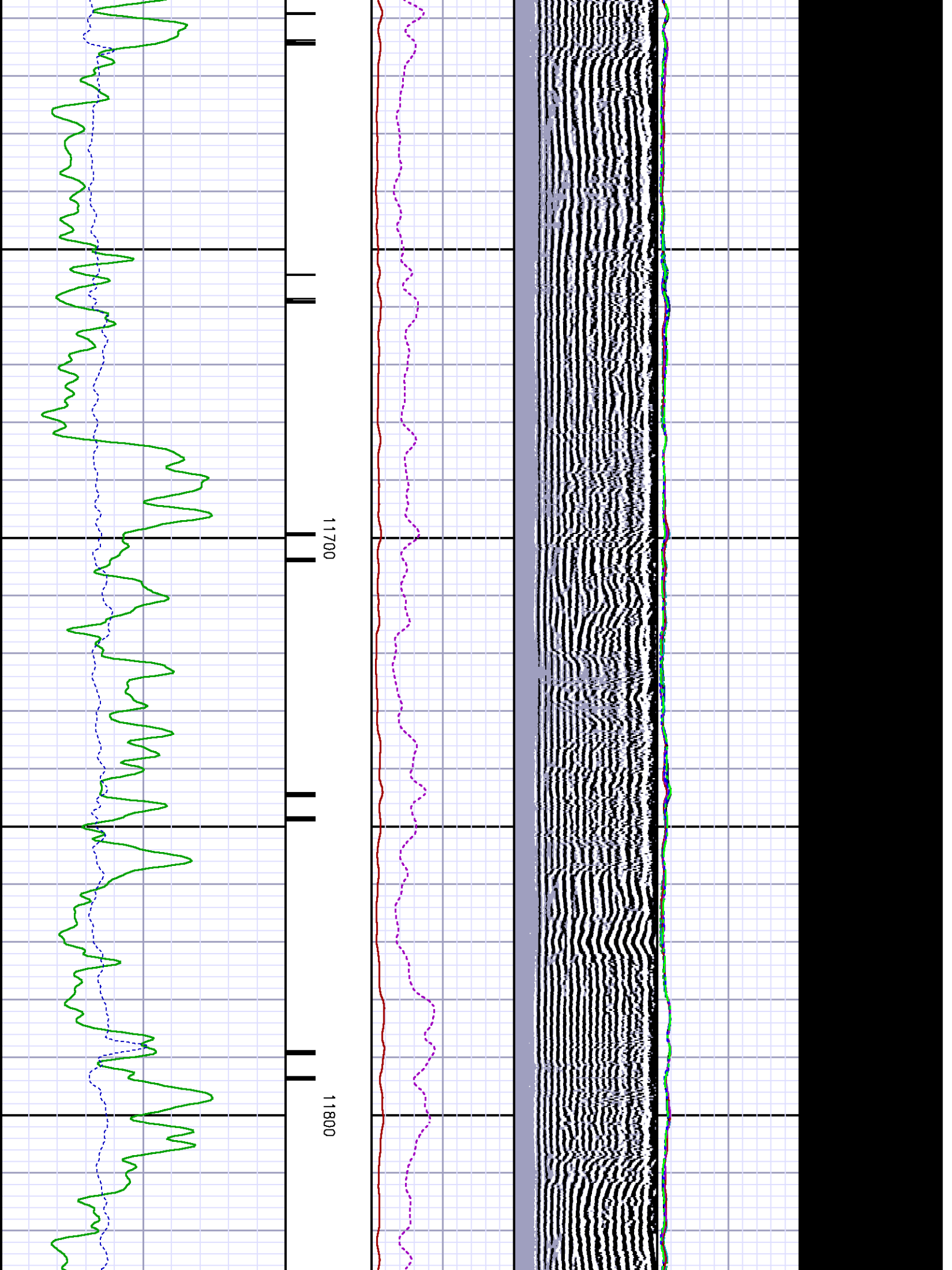


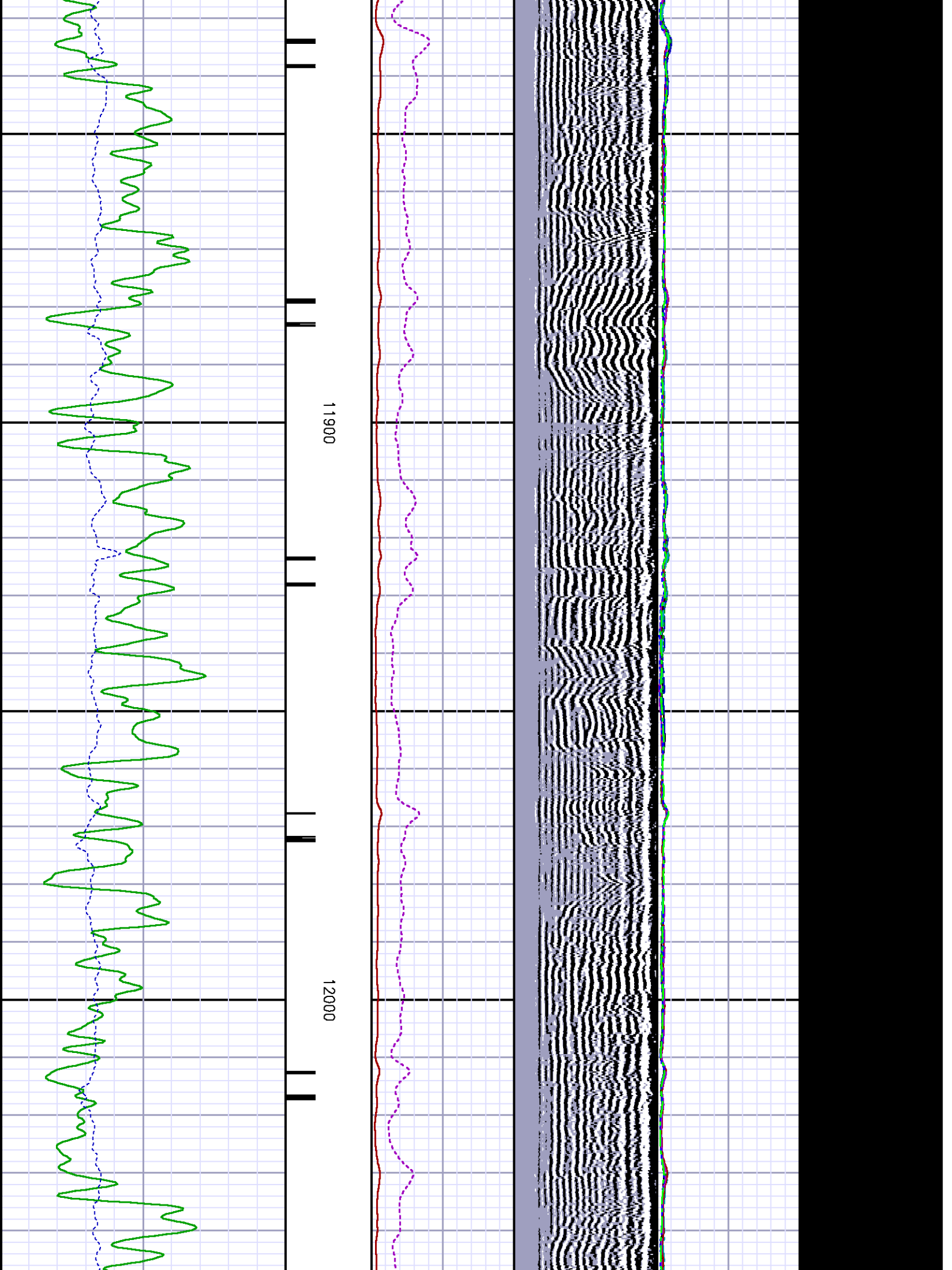


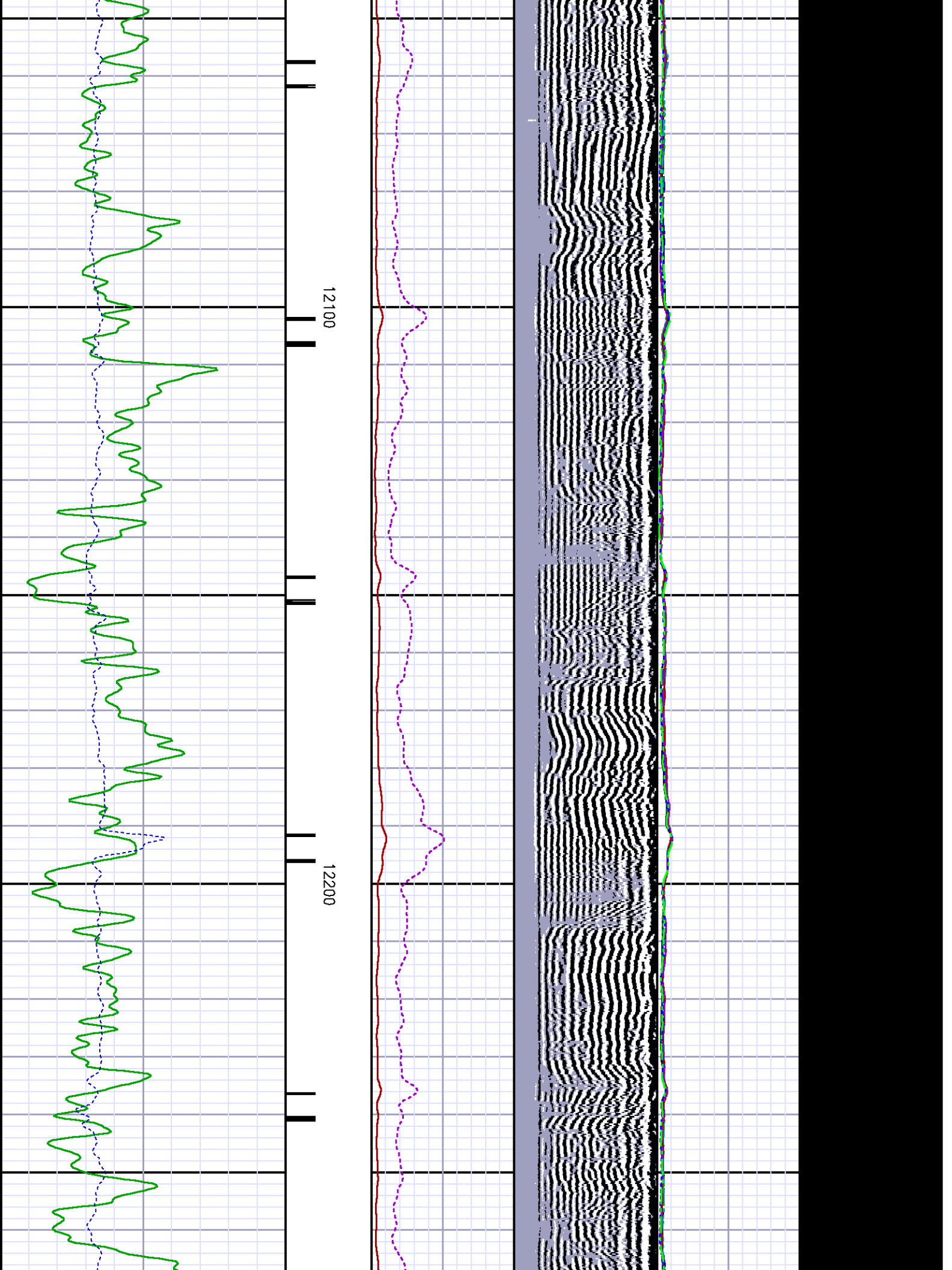


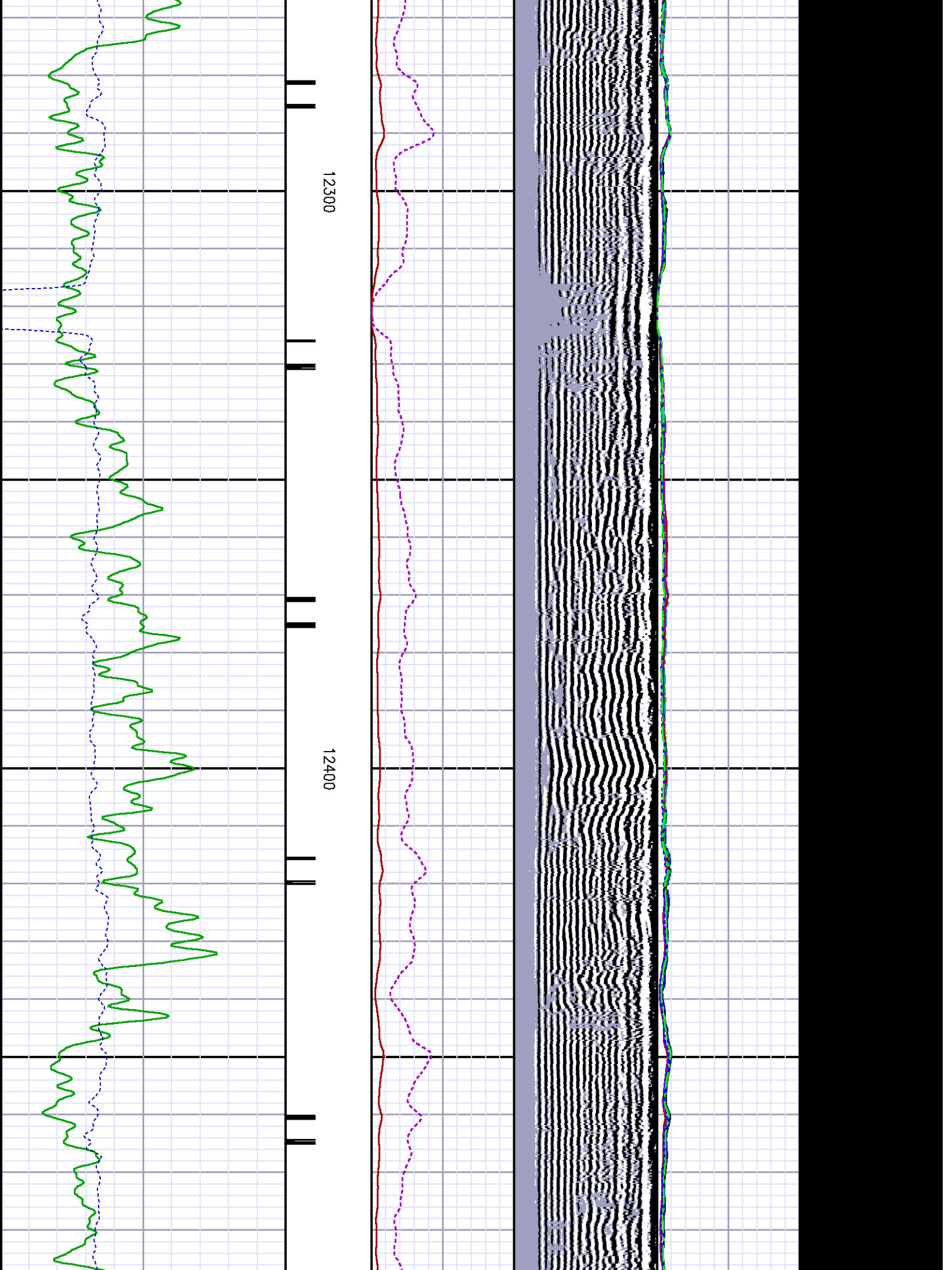


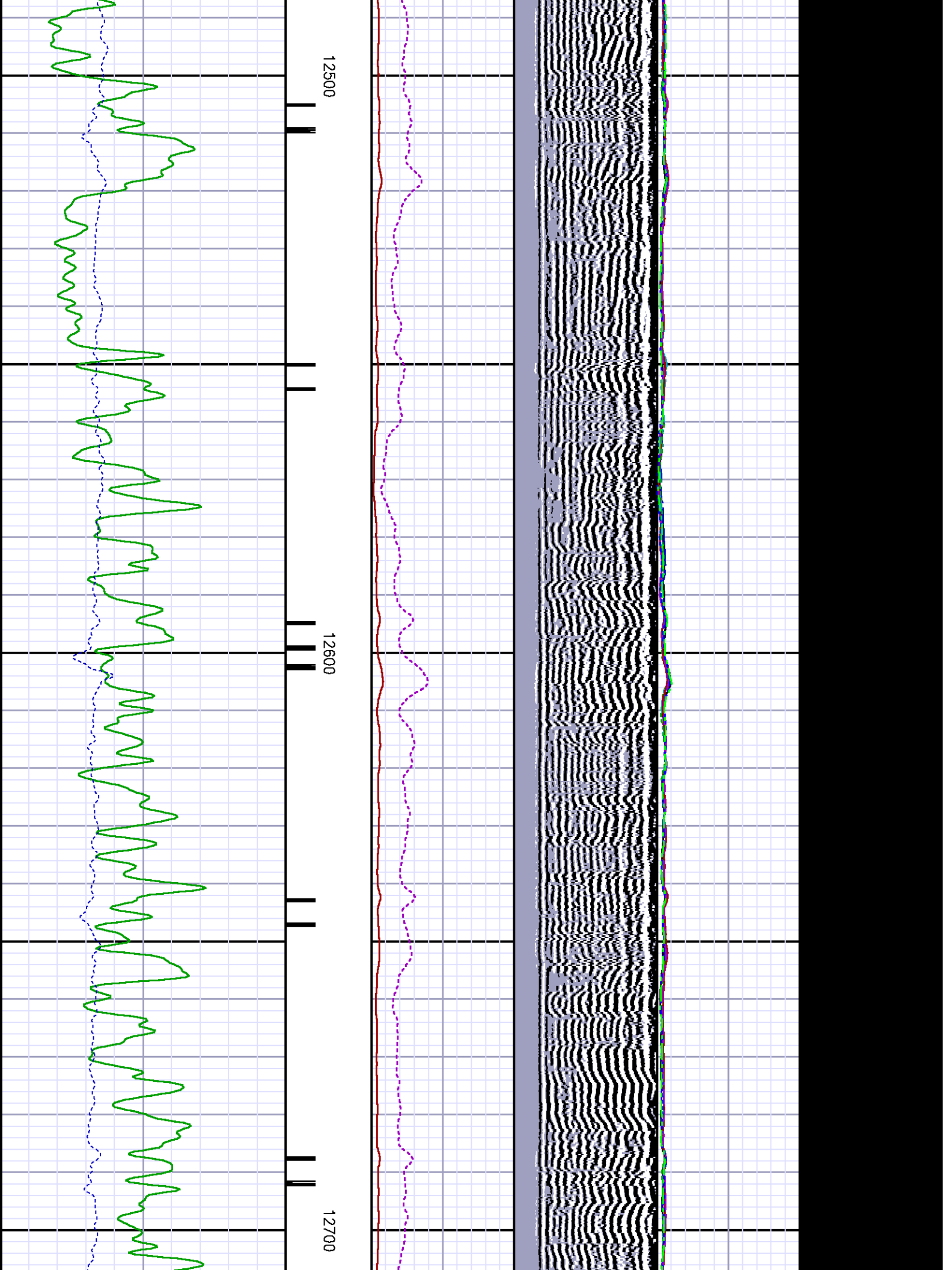


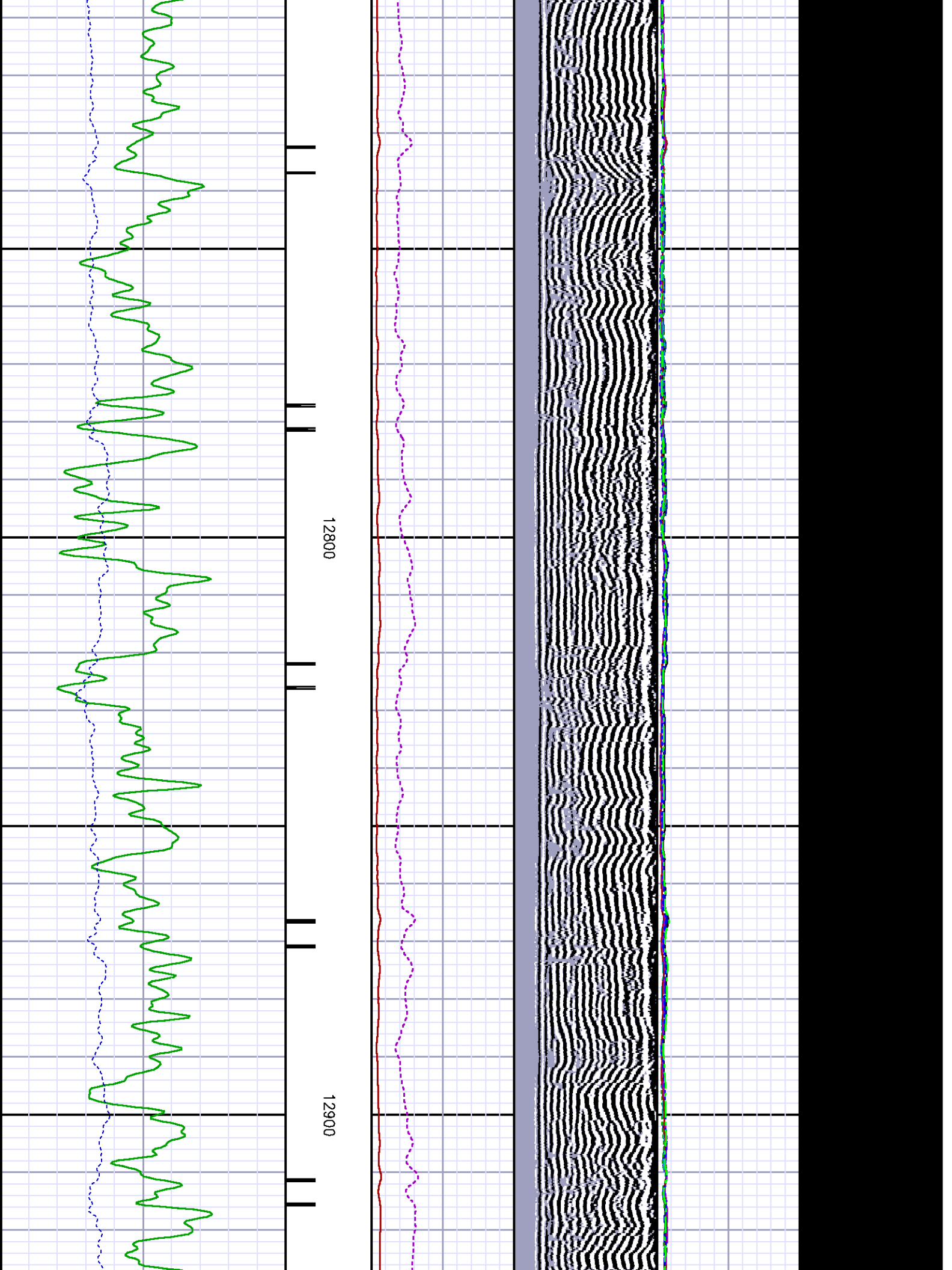


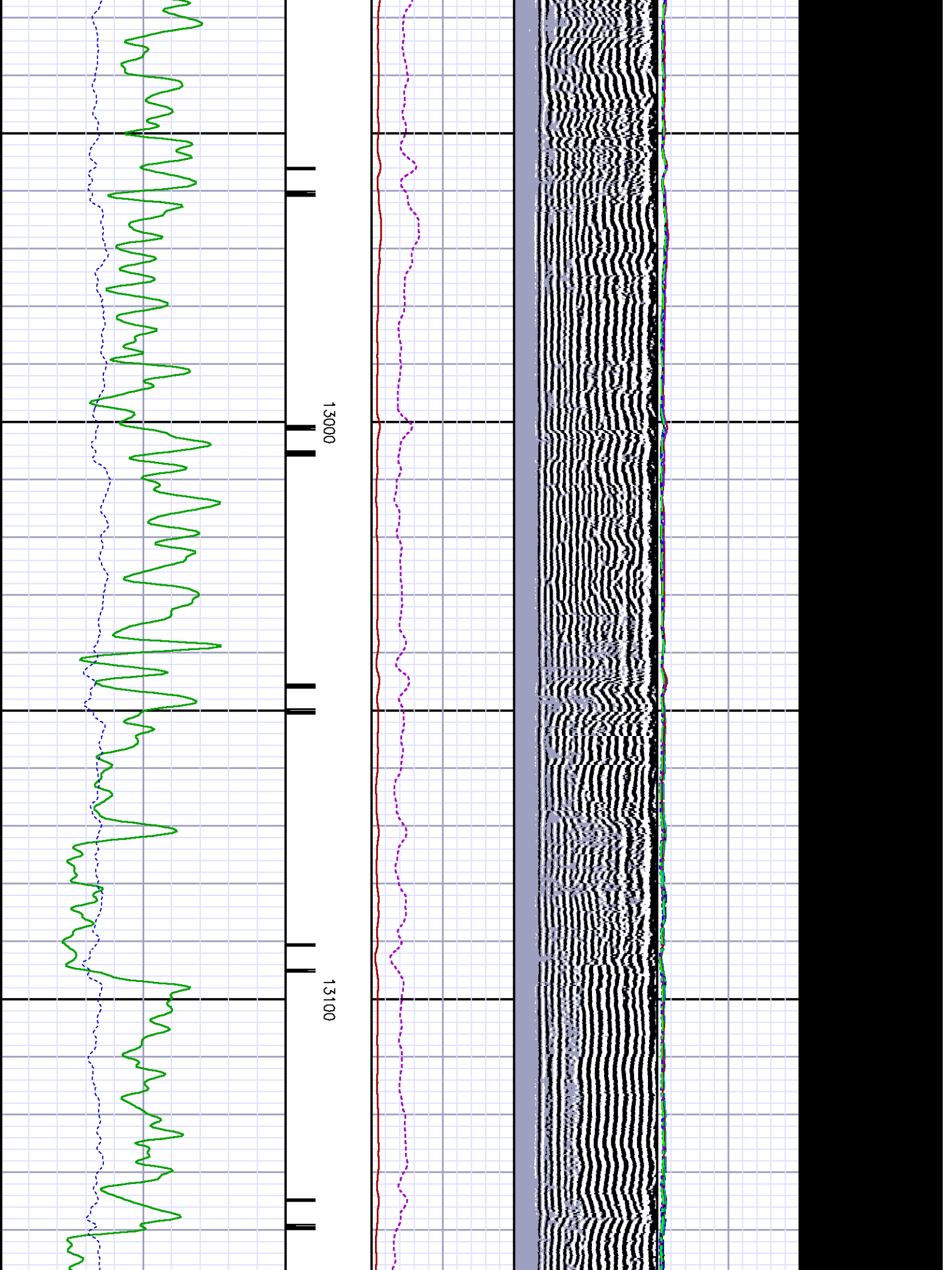


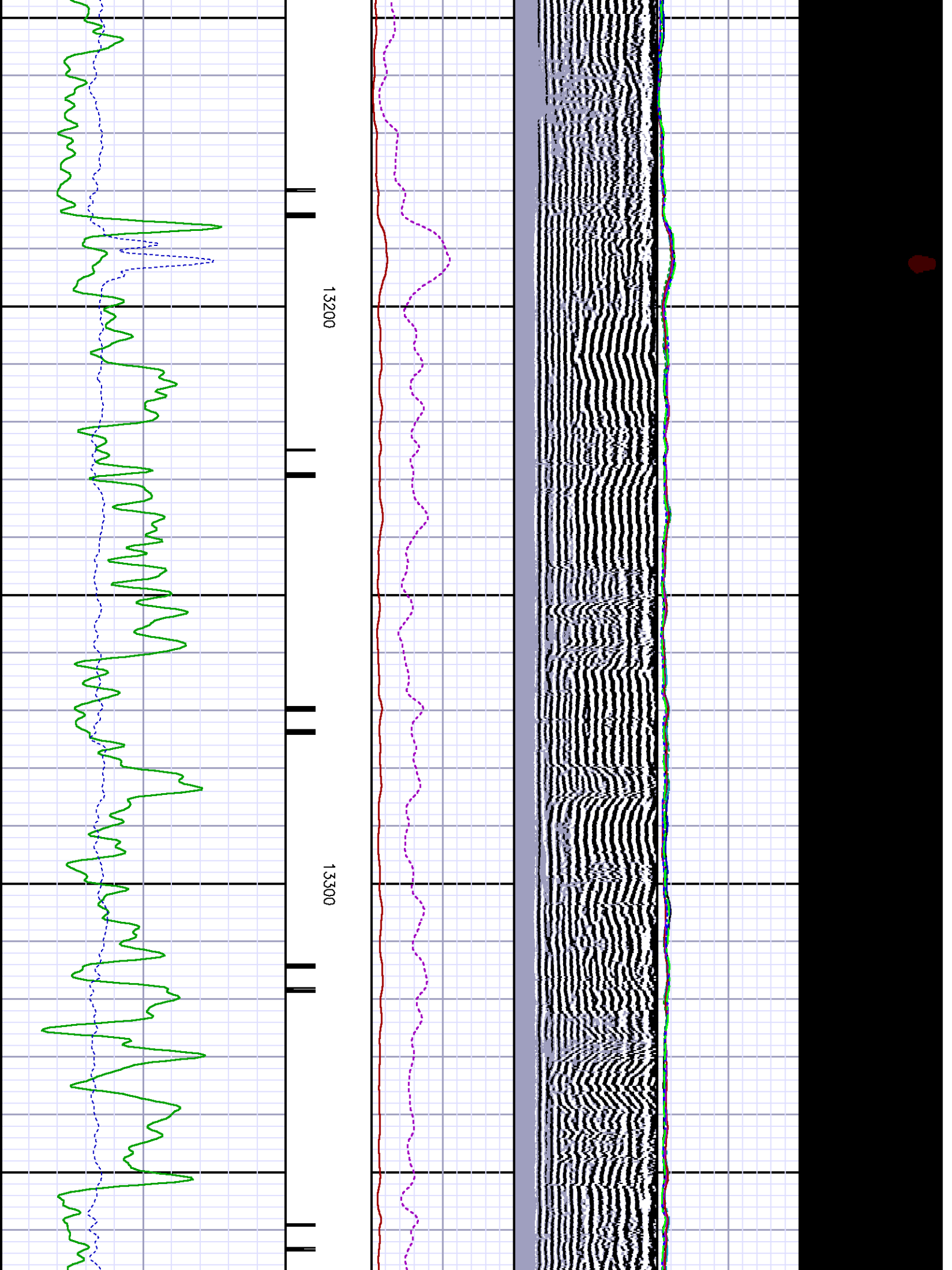


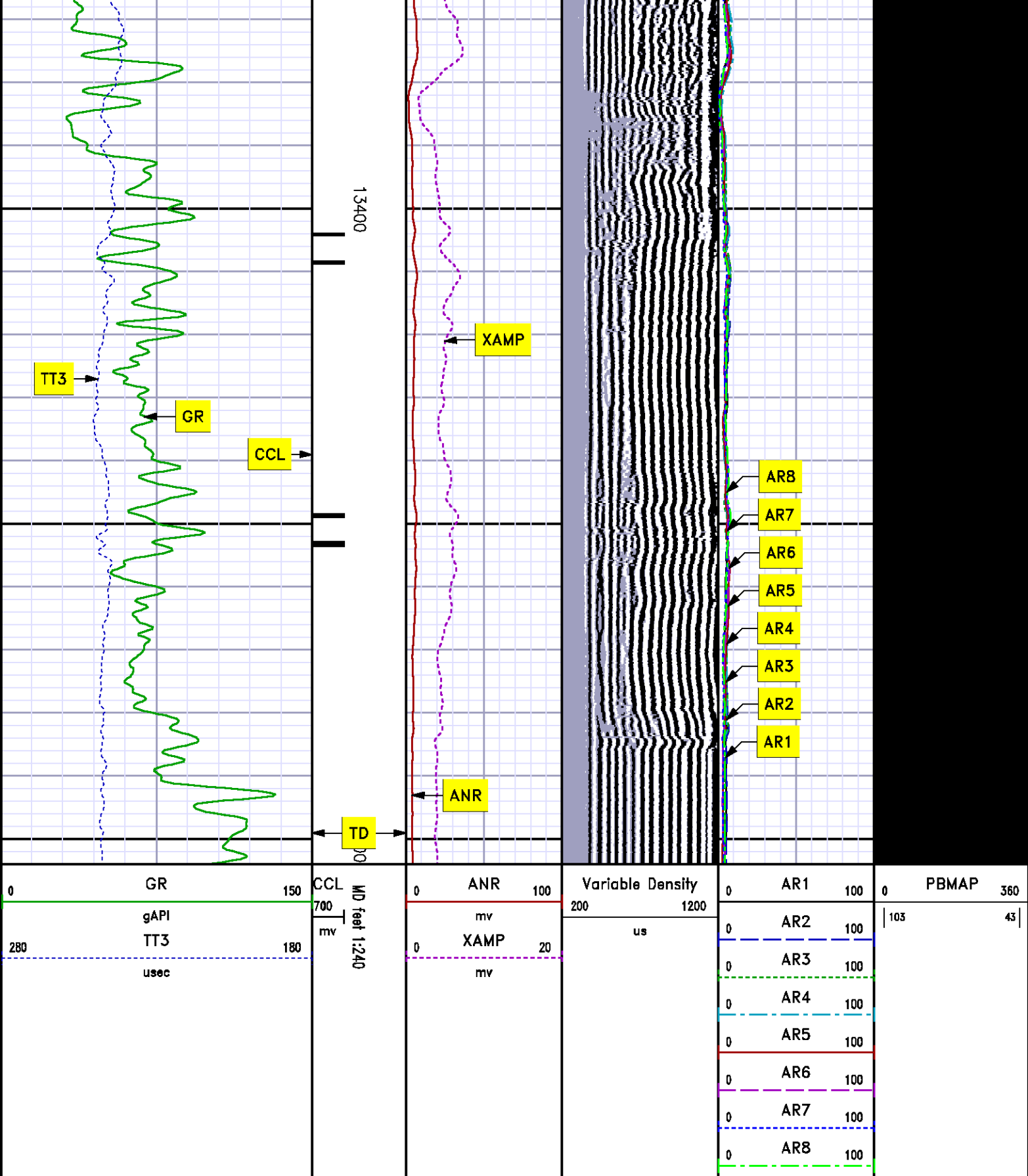












REPEAT SECTION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	314.263	usec	13121.937	13526.000
RAL	Amp Gate Start Near	197.754	usec	13121.937	13526.000
RAL	Amp Gate Start Radial	197.754	usec	13121.937	13526.000
RAL	Amp Gate Width Far	30.000	usec	13121.937	13526.000
RAL	Amp Gate Width Near	30.000	usec	13121.937	13526.000
RAL	Amp Gate Width Radial	30.000	usec	13121.937	13526.000
RAL	casing od	4.500	inches	13121.937	13526.000
RAL	casing wt	15.100	lbm/ft	13121.937	13526.000
RAL	FB Start Far	289.263	usec	13121.937	13526.000
RAL	FB Start Near	172.754	usec	13121.937	13526.000
RAL	FB Start Radial	172.754	usec	13121.937	13526.000
RAL	FB Thresh Far	15.000	mv	13121.937	13526.000
RAL	FB Thresh Near	10.000	mv	13121.937	13526.000
RAL	FB Thresh Radial	10.000	mv	13121.937	13526.000
RAL	Fluid Travel Time	200.000	usec/ft	13121.937	13525.750

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES							
1426XA	-16.450	ACAL	ANR	AR1	AR2	AR3	AR4		
		AR5	AR6	AR7	AR8	CHV	FPR2		
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3		
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP		
1426XA	-15.450	AFAR	SIG	TT5					
2459XA	-11.340	CCL							
2459XA	-9.490	GR							
2459XA	-4.090	NEU							

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : EXXONMOBILE PRODUCTION COMPANY

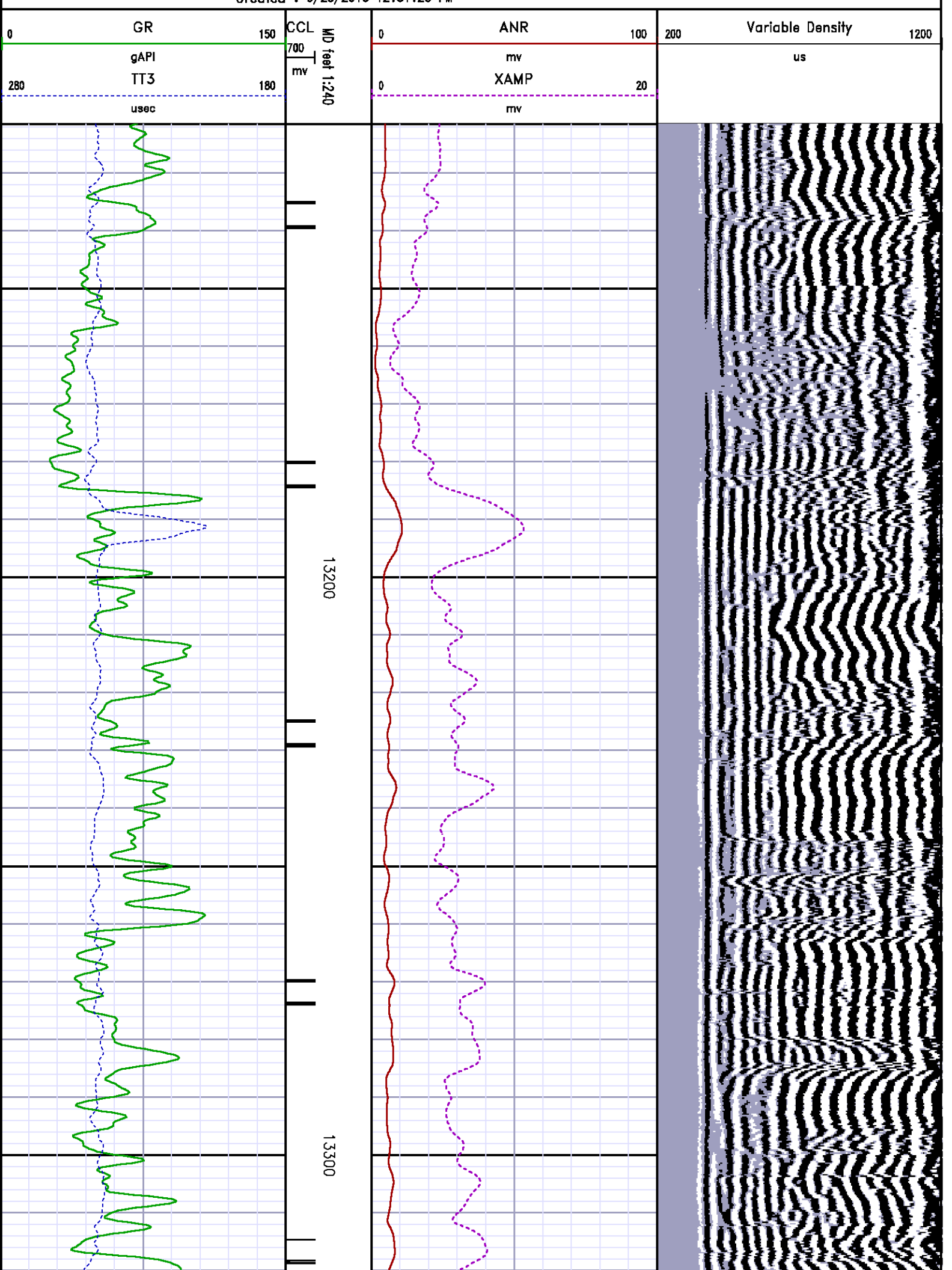
Well : PCU 197-36 A5

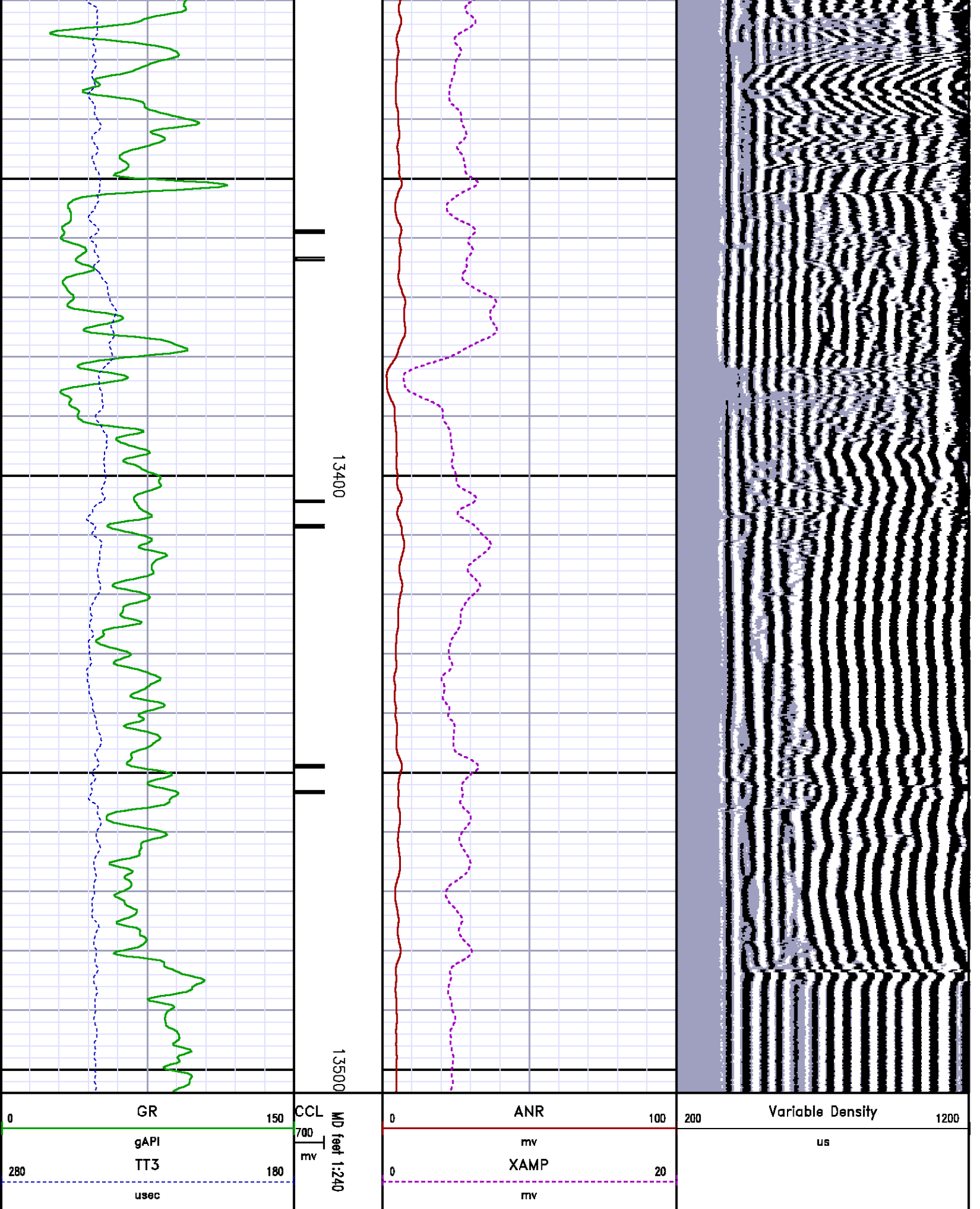
File Name : d:\well\data\rada5\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 13121.50 - 13504.00 feet UP

Created : 9/25/2010 12:51:20 PM





0	GR	150
	gAPI	
280	TT3	180
	usec	

CCL
700
mv
MD feet 1:240

0	ANR	100
	mv	
0	XAMP	20
	mv	

200	Variable Density	1200
	us	

CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\544S1.ca

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Sep 04 10:05:21 2010 TOOL SERIES: 2459XA ASSET: 544 SEQ: S1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K SHOP	69.69	254.84	0.999	69.63	254.63	185.00

Verification File: C:\case\calver\GR\544S1.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Sat Sep 04 10:06:50 2010 TOOL SERIES: 2459XA ASSET: 544 SEQ: S1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K SHOP	75.20	255.02	0.999	75.14	254.81	179.67

RALSHP #2

Shop Calibration: C:\case\calver\RALSHP\028S25_shp.ca

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Sep 25 11:51:22 2010 TOOL SERIES: 1426XA ASSET: 028 SEQ: S25

Tool Delay [usec]	-53.00	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	220	216	30	84	95	0.108	100.00	0.28
3 Ft. Receiver	220	216	30	94	88	-0.266	100.00	0.27
5 Ft. Receiver	327	324	30	208	76	0.122	150.00	0.30
Radial #1	220	216	30	132	60	-0.243	100.00	0.28
Radial #2	220	216	30	132	60	-0.200	100.00	0.27
Radial #3	220	216	30	132	60	-0.282	100.00	0.27
Radial #4	220	216	30	132	60	-0.296	100.00	0.27
Radial #5	219	216	30	132	60	-0.158	100.00	0.27
Radial #6	218	216	30	132	60	-0.503	100.00	0.28
Radial #7	218	216	30	132	60	-0.008	100.00	0.28
Radial #8	220	216	30	132	60	0.121	100.00	0.28

RALFLD #2

Wellsite Calibration: C:\case\calver\RALFLD\028S25 fld.ca\

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Sep 25 16:00:16 2010 TOOL SERIES: 1426XA ASSET: 028 SEQ: S25

Tool Delay [usec] Casing OD Casing Wt Casing ID

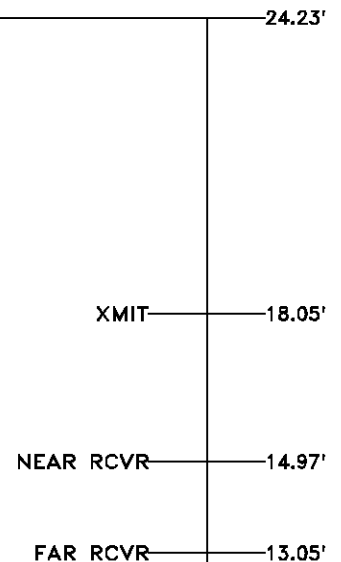
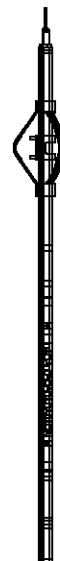
RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	<input type="text" value="84"/>	<input type="text" value="95"/>	<input type="text" value="-0.003"/>	<input type="text" value="0.000"/>	<input type="text" value="1.00"/>	<input type="text" value="100.000"/>
3 Ft. Receiver	<input type="text" value="198"/>	<input type="text" value="30"/>	<input type="text" value="-1.678"/>			
5 Ft. Receiver	<input type="text" value="314"/>	<input type="text" value="30"/>	<input type="text" value="-1.698"/>			
Radial #1	<input type="text" value="198"/>	<input type="text" value="30"/>	<input type="text" value="-1.879"/>			
Radial #2	<input type="text" value="198"/>	<input type="text" value="30"/>	<input type="text" value="-1.625"/>			
Radial #3	<input type="text" value="198"/>	<input type="text" value="30"/>	<input type="text" value="-1.803"/>			
Radial #4	<input type="text" value="198"/>	<input type="text" value="30"/>	<input type="text" value="-1.816"/>			
Radial #5	<input type="text" value="198"/>	<input type="text" value="30"/>	<input type="text" value="-1.806"/>			
Radial #6	<input type="text" value="198"/>	<input type="text" value="30"/>	<input type="text" value="-1.686"/>			
Radial #7	<input type="text" value="198"/>	<input type="text" value="30"/>	<input type="text" value="-1.976"/>			
Radial #8	<input type="text" value="198"/>	<input type="text" value="30"/>	<input type="text" value="-1.705"/>			

TOOL DIAGRAM

OTA SHORT CABLE HEAD

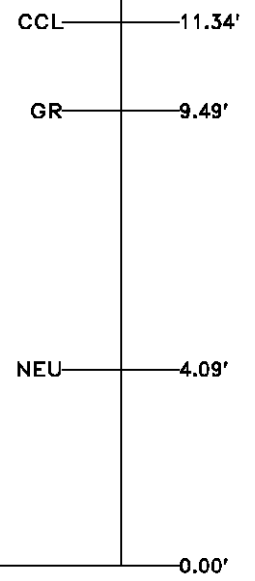
PROBE 2 3/4 DUAL RECEIVER RADII

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




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

CENTRALIZER	
Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb



Total Length: 24.23'
 Total Weight: Not Available
 Max Diameter: 0' 3.12"

 Baker Atlas	Company EXXONMOBIL PRODUCTION COMPANY Well PCU 197-36 A5 Field PICEANCE CREEK County RIO BLANCO State COLORADO	File No: API No: 05103111840000
	Location SHL: 1849' FSL & 2613' FWL SEC 36 TWP 1S RGE 97W	Elevations KB 7144.2 ft DF 7143.2 ft GL 7114 ft