



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: GH074838	Company Well Field County	WPX ENERGY DUGGAN RWF 24-29 RULISON GARFIELD	State COLORADO
API No: 06046216580000	Location SHL: 611' FSL X 611' FWL BHL: 294' FSL X 2216' FWL (SESWS) SEC 29 TWP 6S RGE 94W		
29 6S 94W RWF 14-29 PAD NABORS 673	Other Services RPM		
Permanent Datum Log Measured From Drill Measured From	OL KB KELLY BUSHING	Elevation 5415 ft Above P. D.	Elevations KB 5441 ft DF GL 5415 ft

Date	14/JUL/13	
Run	ONE	
Service Order	624446	
Depth Driller	8057 ft	
Depth Logger	8044 ft	
Bottom Logged Interval	8044 ft	
Top Logged Interval	26 ft	
Time Started	0930	
Time Finished	1230	
Operator Rig Time	3 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	380 ft	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	65 fpm	
Maximum Recorded Temperature	228 degF	
Reference Log	NONE	
Reference Log Date	NA	
Equipment No.	4271	GRAND JCT
Recorded By	FLOYD RENEAU	
Witnessed By	ORAN JACOBS	

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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	1139 ft
8.75 in	1139 ft	8057 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 in	32.2 lbm/ft		0 ft	1139 ft
4.6 in	11.6 lbm/ft	I-80	0 ft	8057 ft

Remarks
All data on this log is shifted using the CCL curve to put the wellhead (top CCL mark) on depth with ground level elevation at the client's request.
The amount of linear shift is 10 feet.
Logged with zero PSI at wellhead.
BHT = 228°F
SJ = 4404'-4428'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10404539	CENT
1	1	GRICCL	1355XA	10580209	CENT

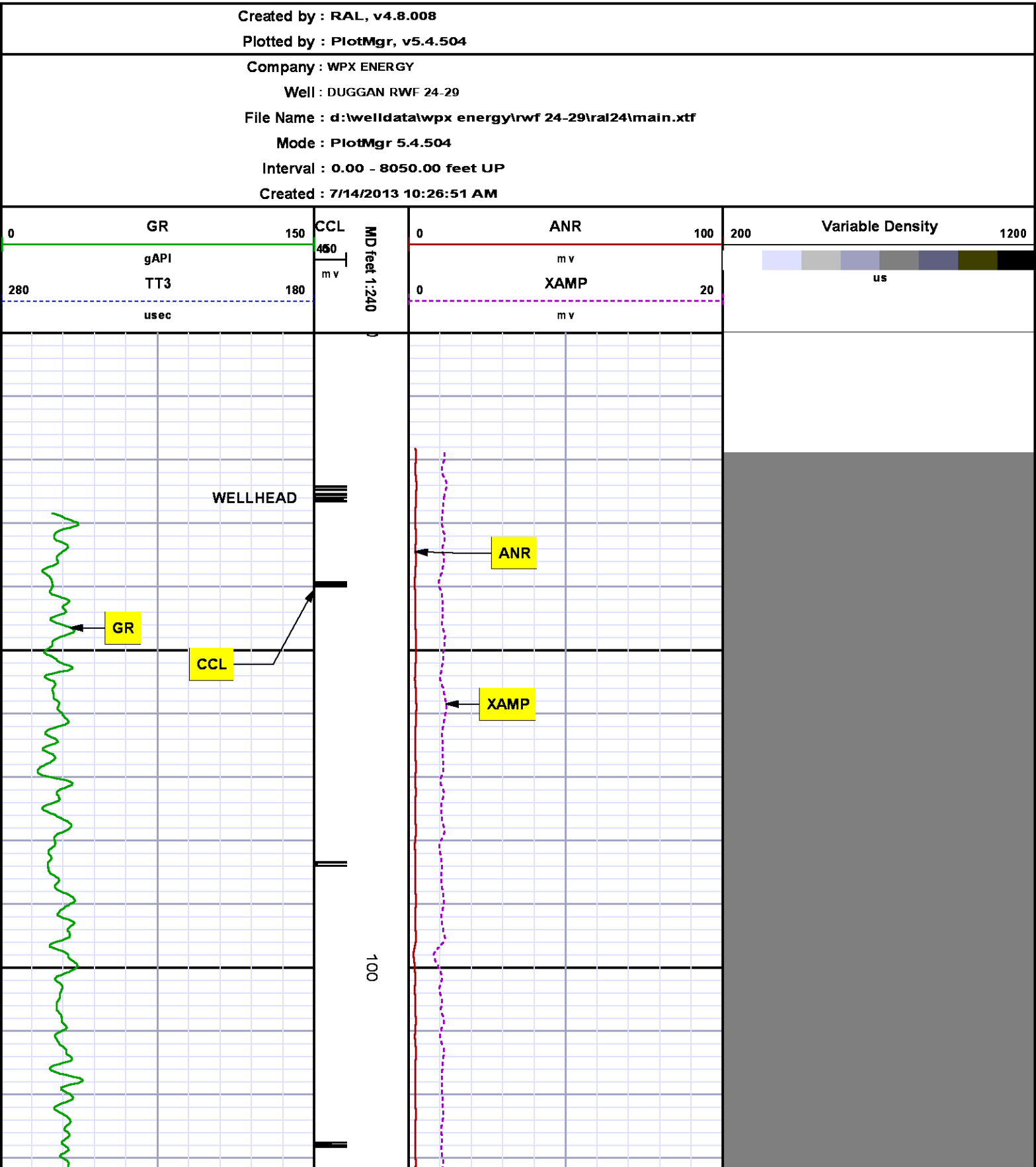
PRIMARY PRESENTATION
0 PSI

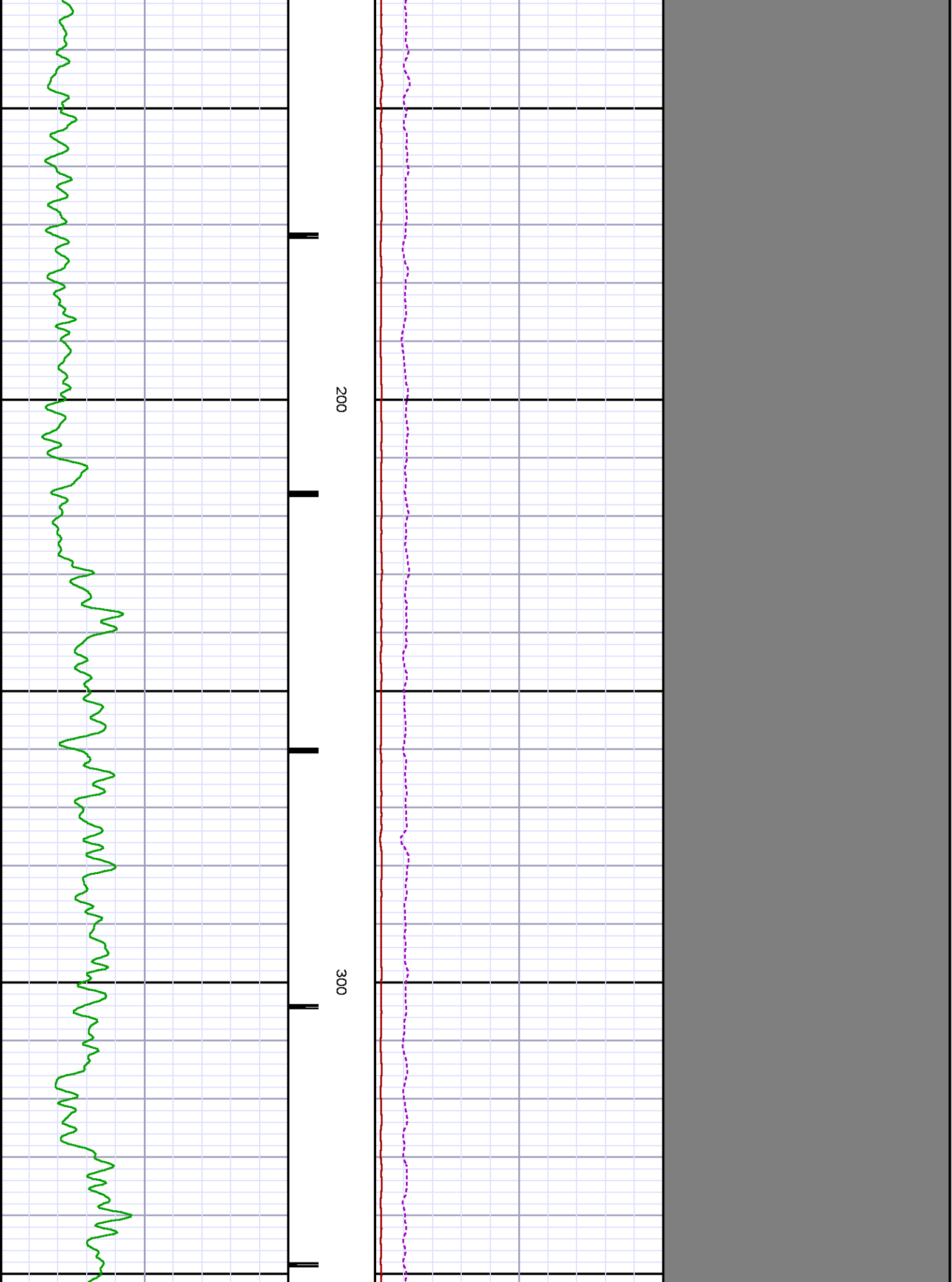
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	28.531	8069.000
RAL	Amp Gate Start Near	195.000	usec	28.531	8069.000
RAL	Amp Gate Start Radial	195.000	usec	28.531	8069.000
RAL	Amp Gate Width Far	25.000	usec	28.531	8069.000
RAL	Amp Gate Width Near	25.000	usec	28.531	8069.000
RAL	Amp Gate Width Radial	25.000	usec	28.531	8069.000
RAL	casing od	4.500	inches	28.531	8069.000
RAL	casing wt	11.600	lbm/ft	28.531	8069.000
RAL	FB Start Far	291.900	usec	28.531	8069.000
RAL	FB Start Near	180.000	usec	28.531	8069.000
RAL	FB Start Radial	180.000	usec	28.531	8069.000
RAL	FB Thresh Far	10.000	mv	28.531	8069.000
RAL	FB Thresh Near	4.000	mv	28.531	8069.000
RAL	FB Thresh Radial	4.000	mv	28.531	8069.000
RAL	Fluid Travel Time	200.000	usec/ft	28.531	8068.906

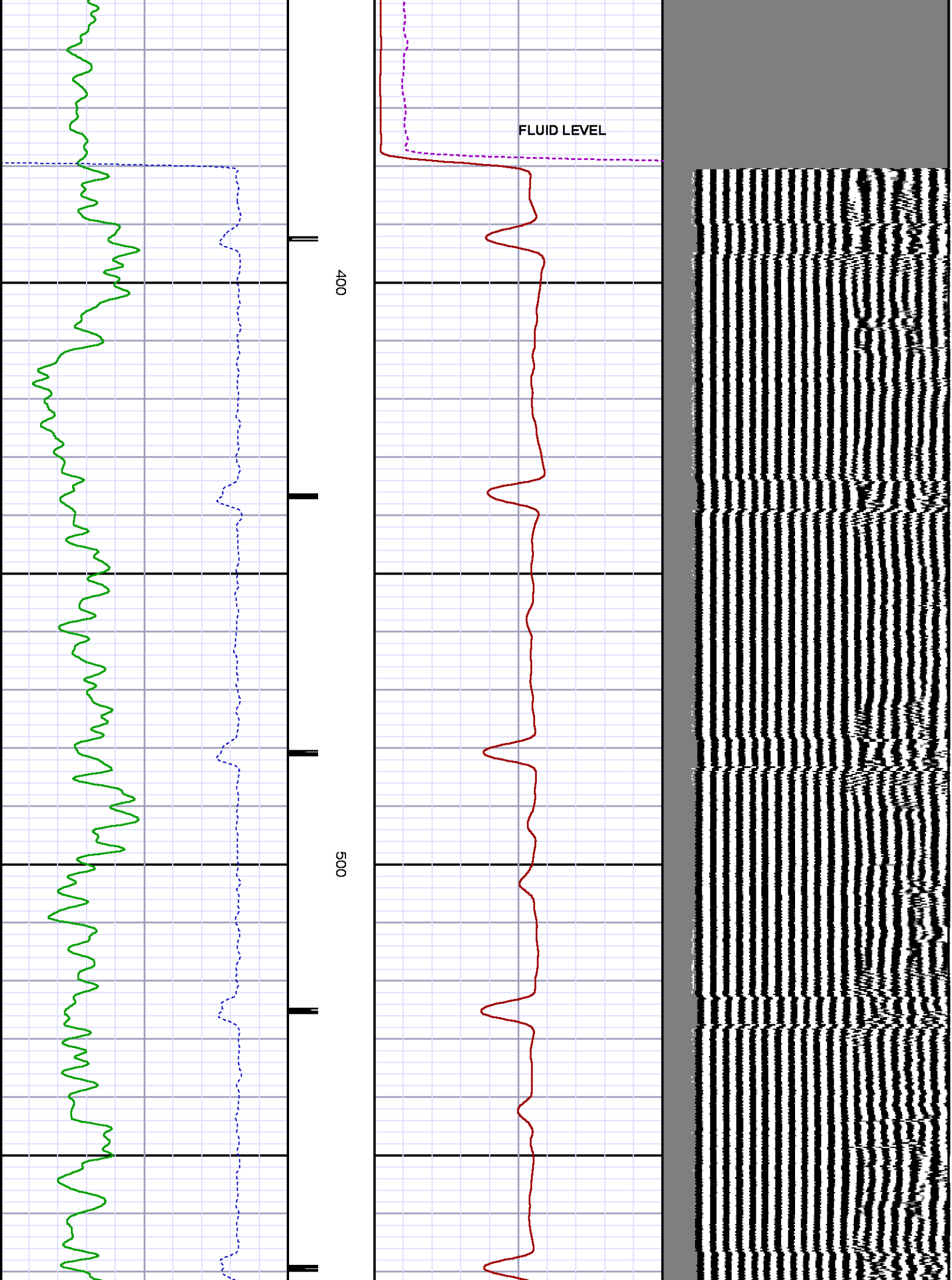
DEPTH OFFSETS
(for Acquired Curves)

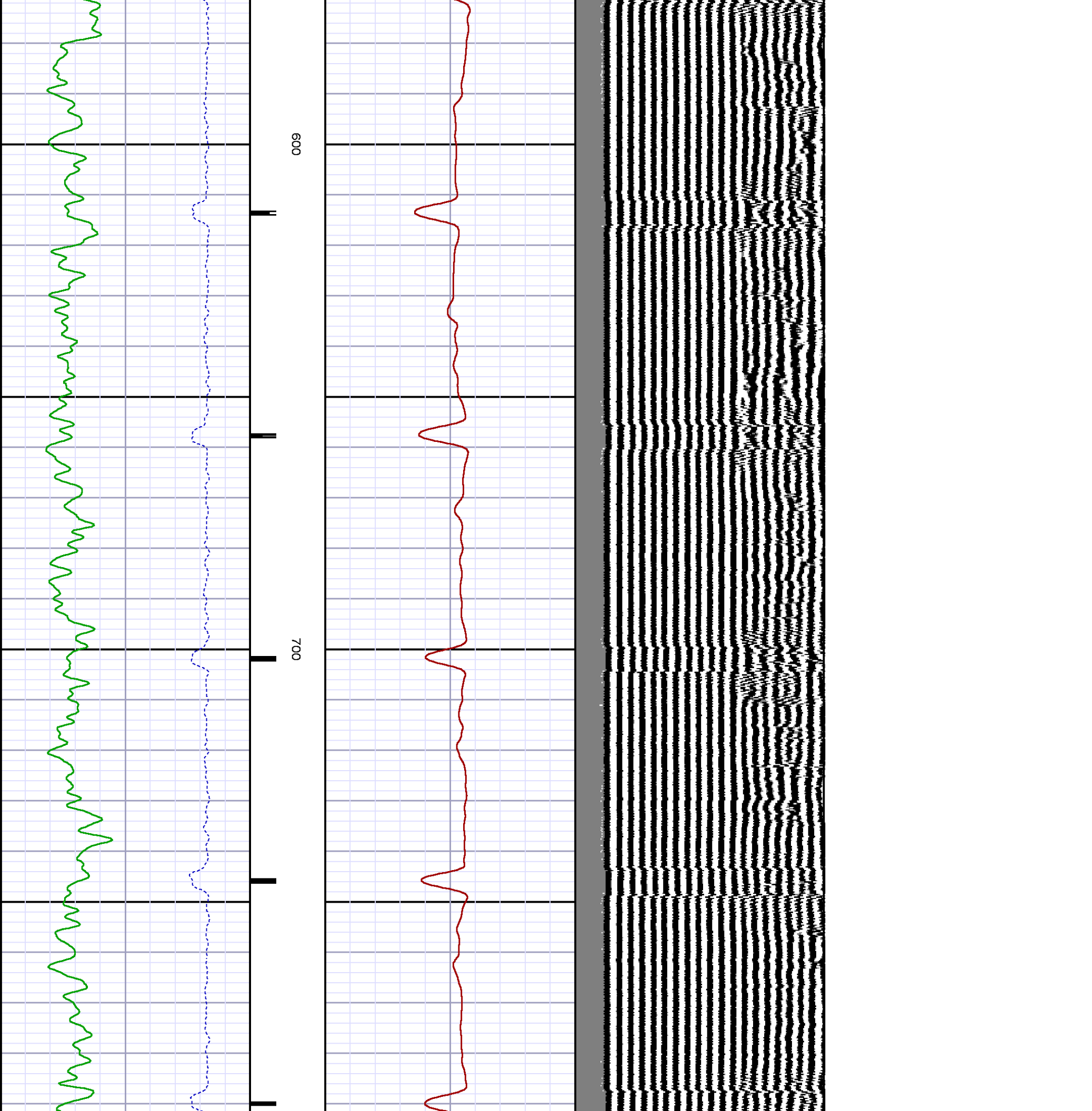
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-11.000	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2

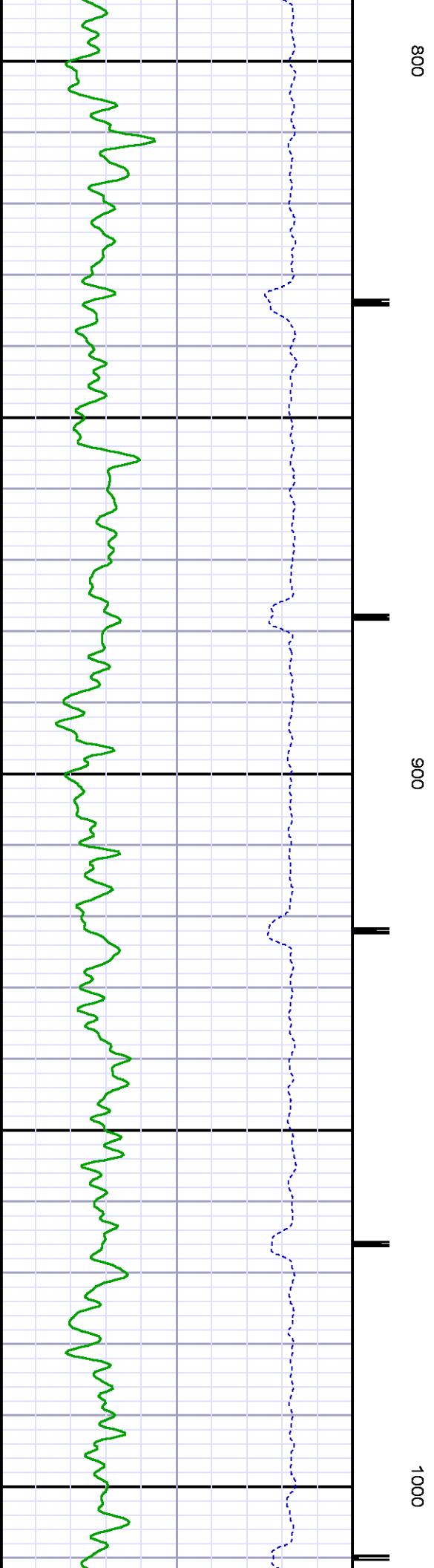
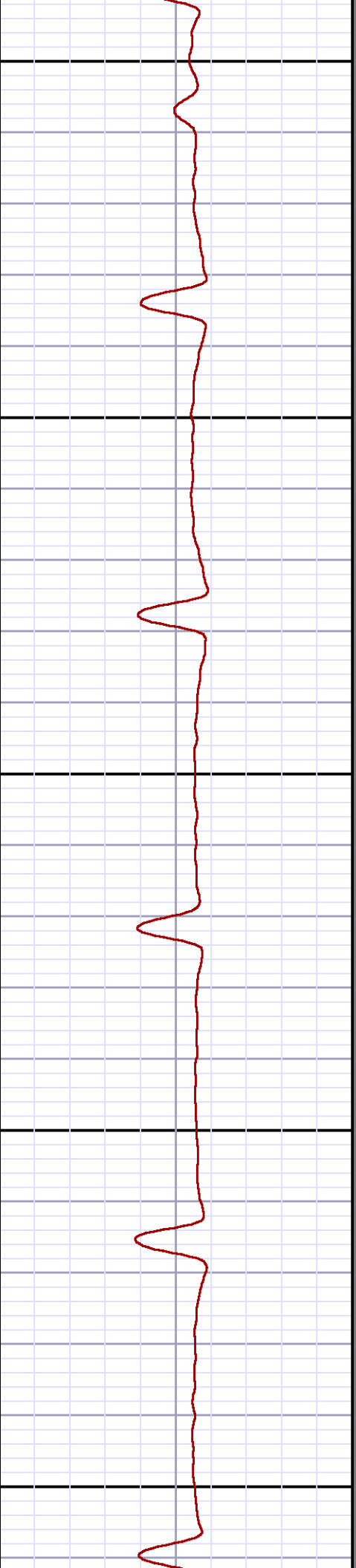
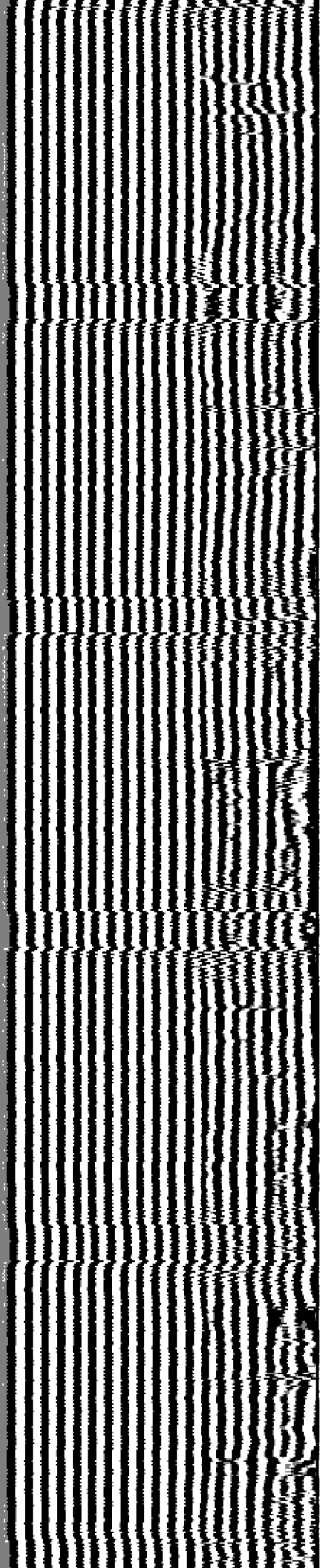
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-10.040	AFAR	SIG	TT5			
1355XA	-5.620	CCL					
1355XA	-1.500	GR					
1355XA	0.000	TEMP					

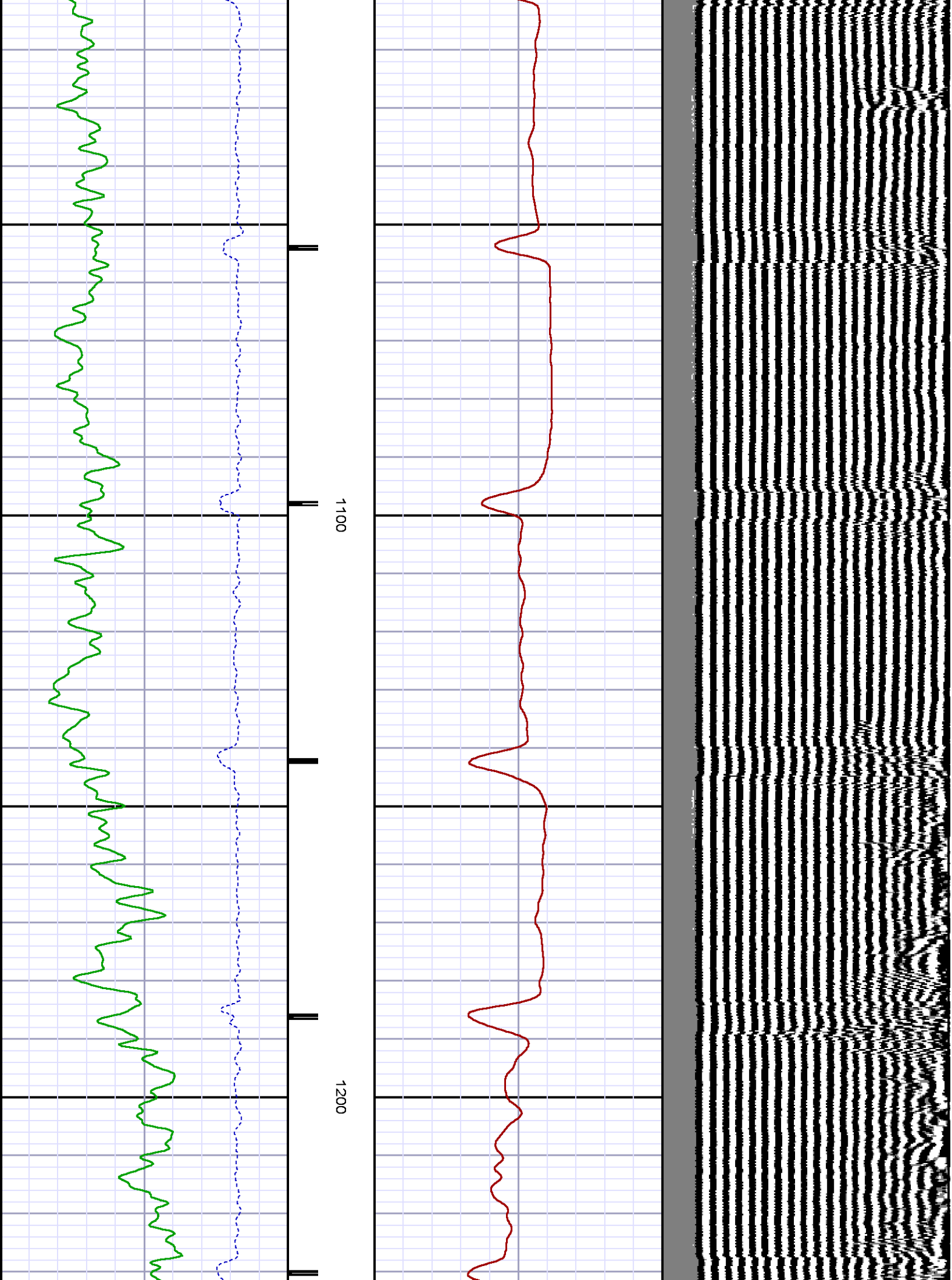


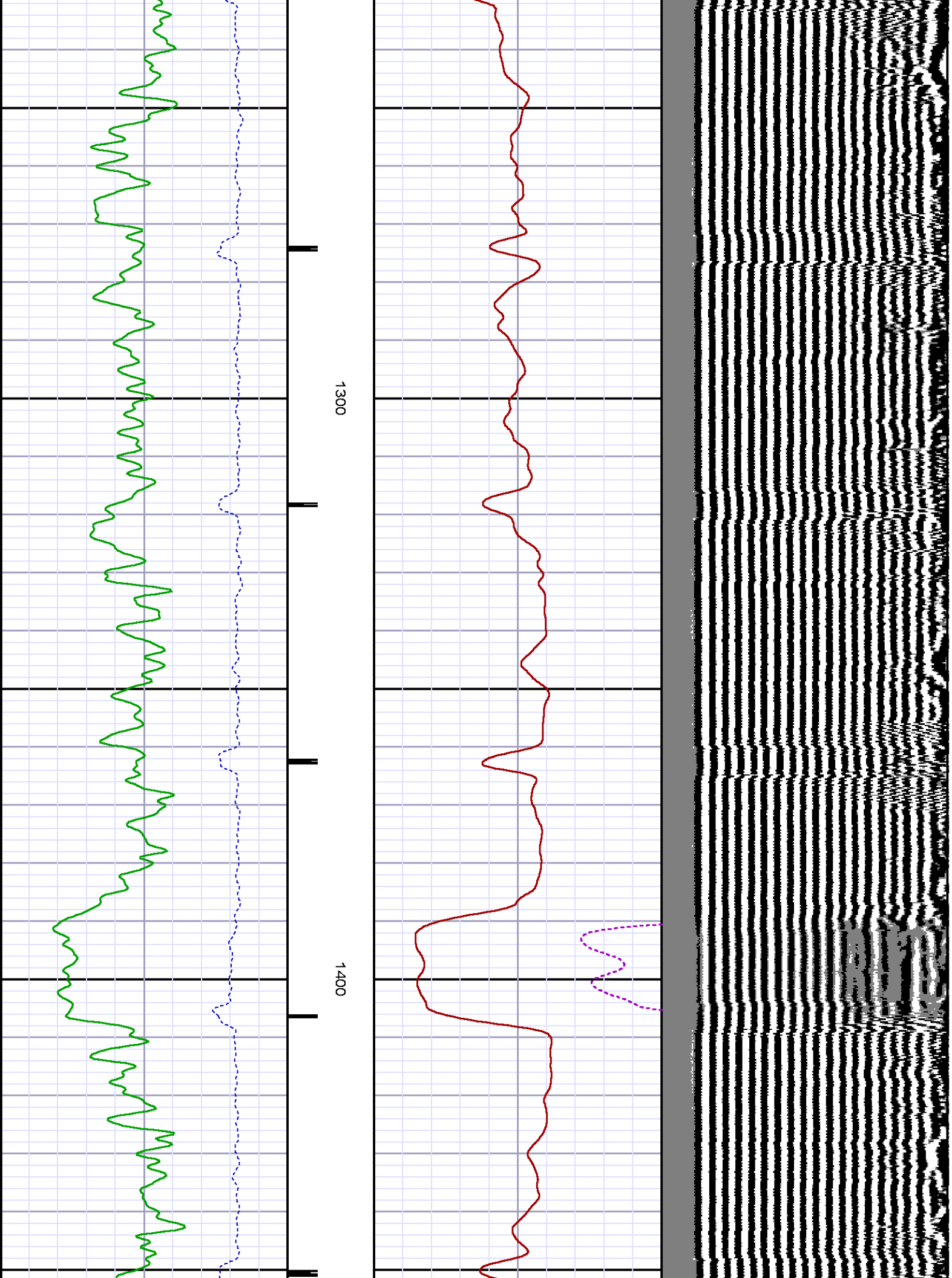


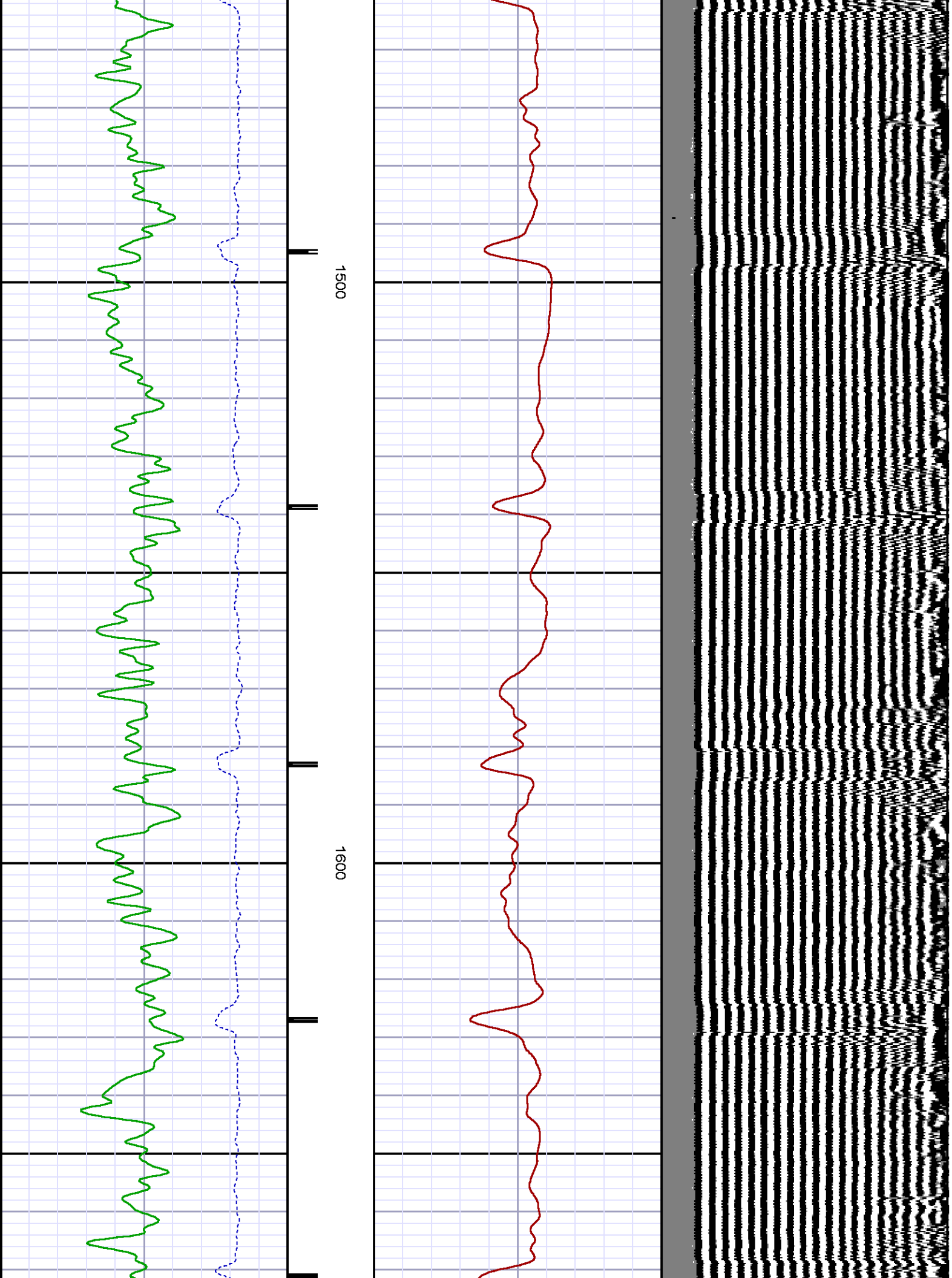


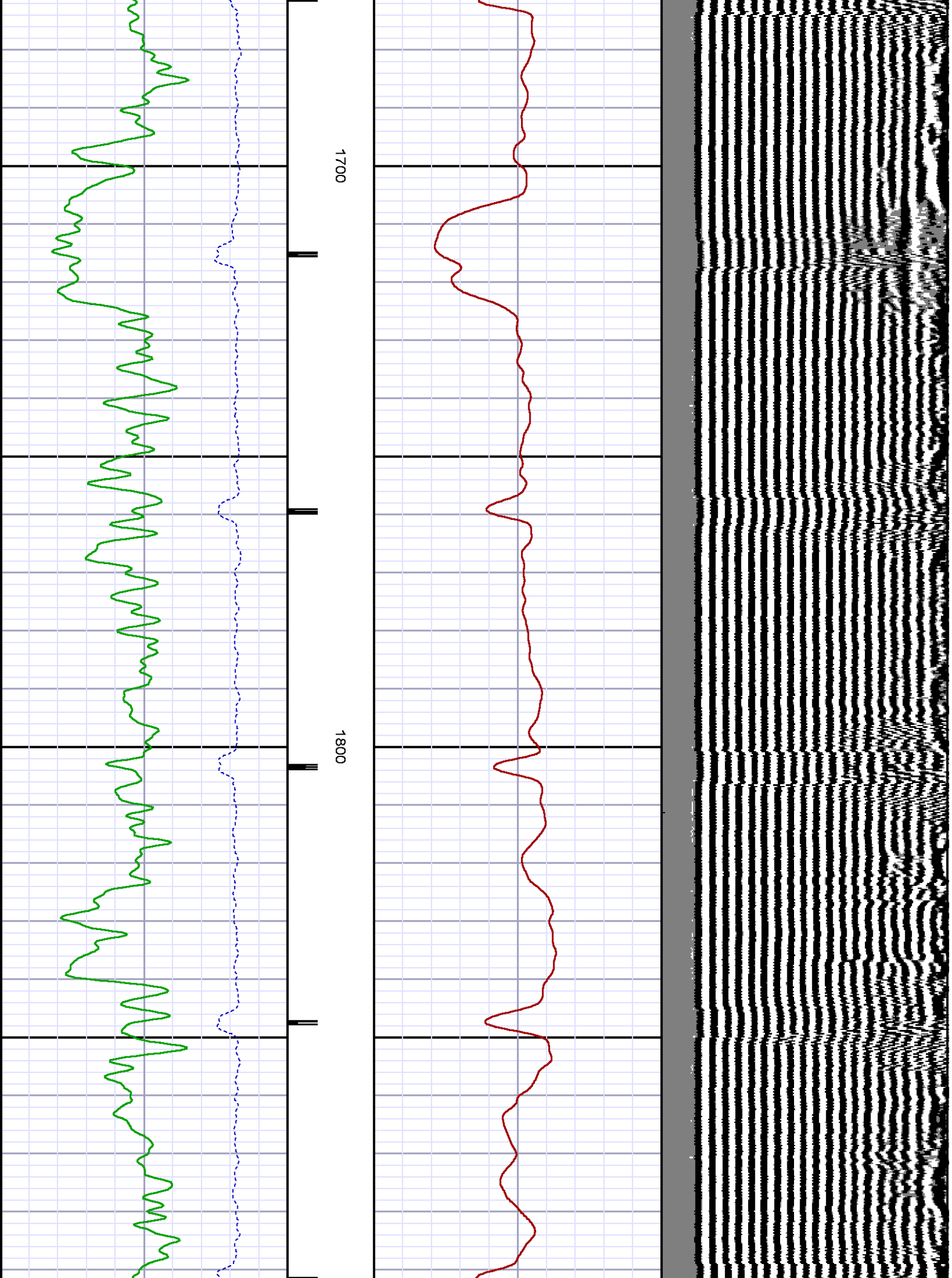


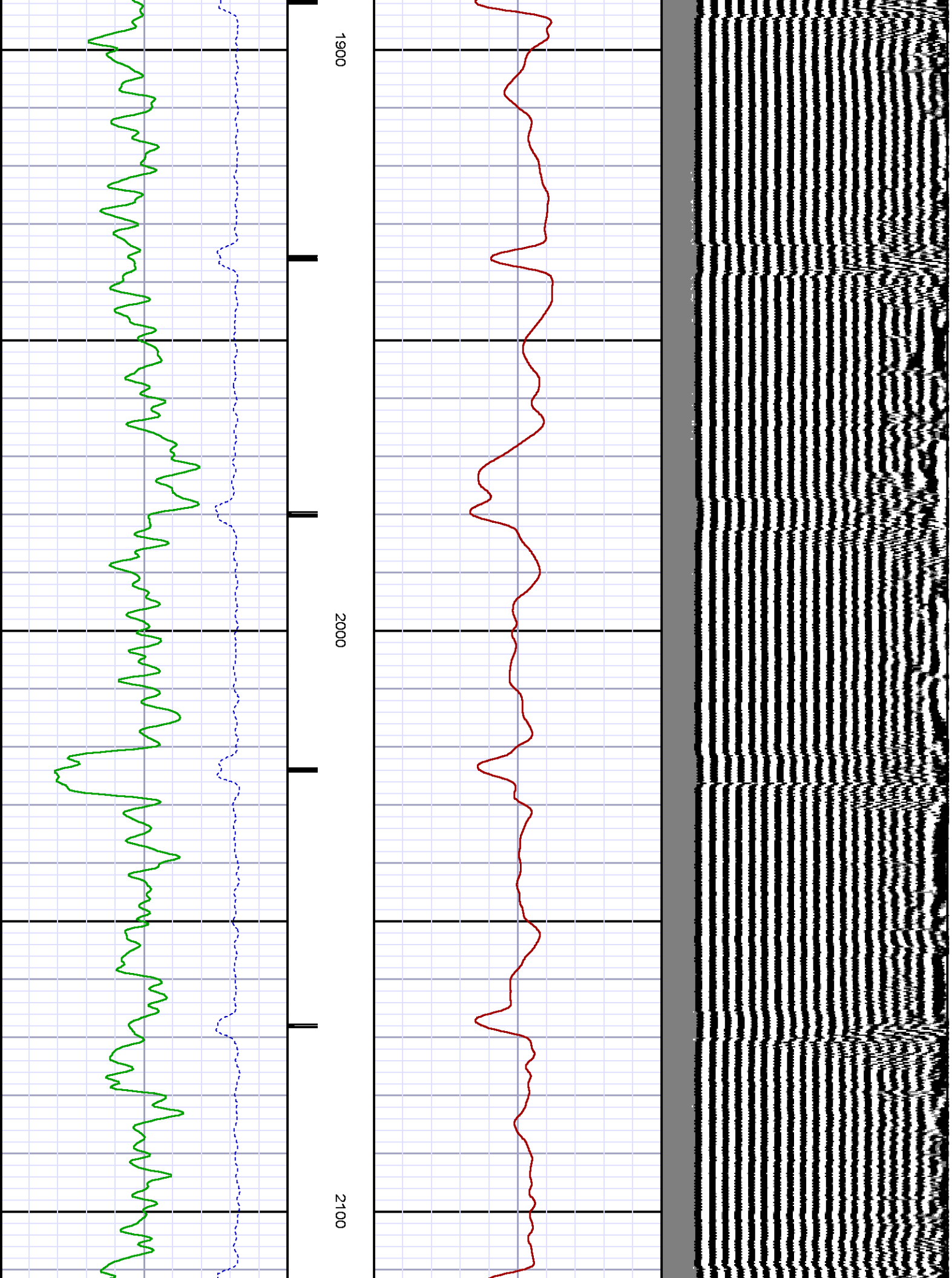


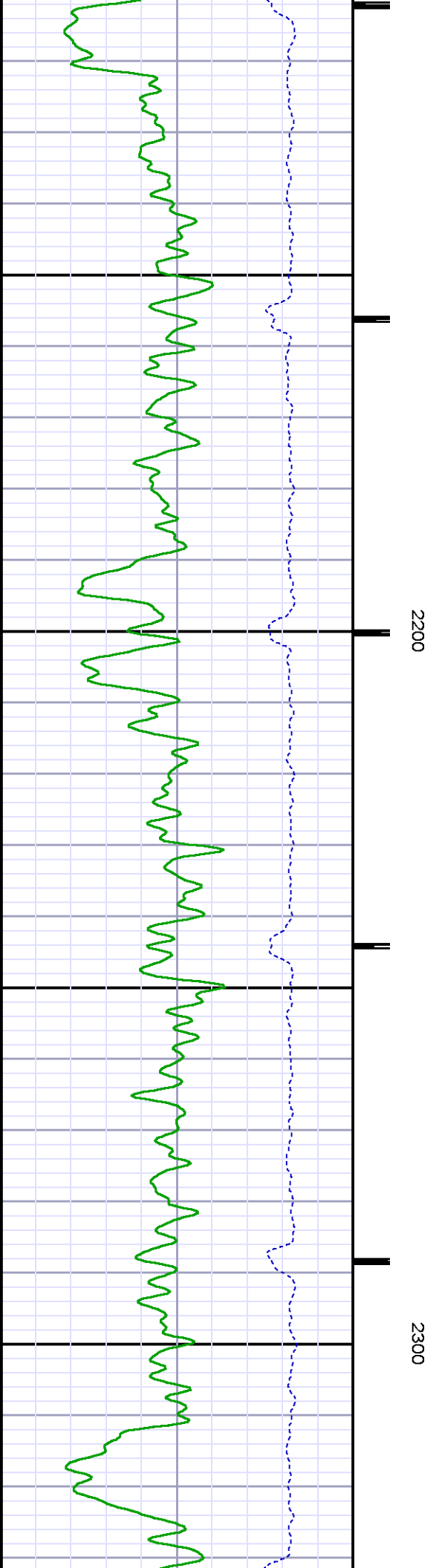
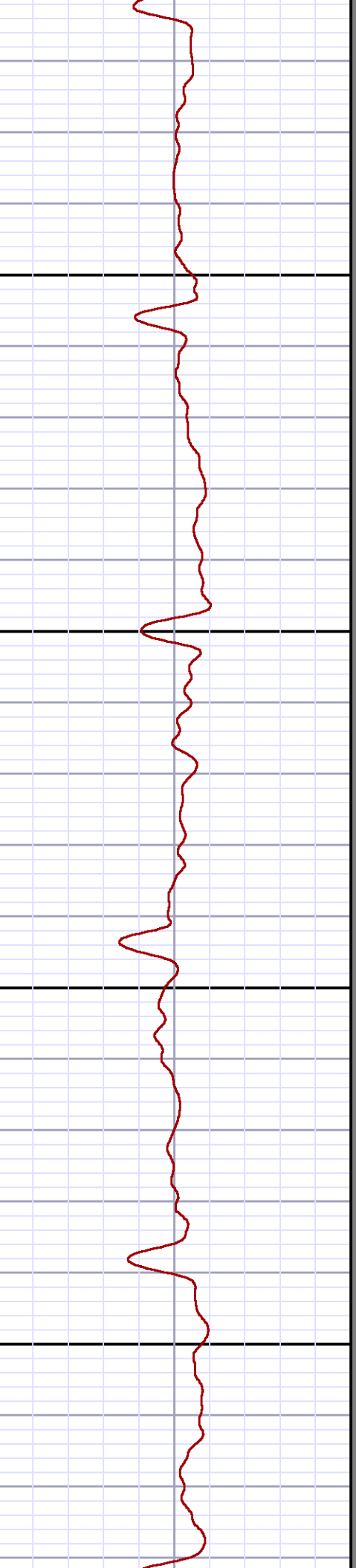
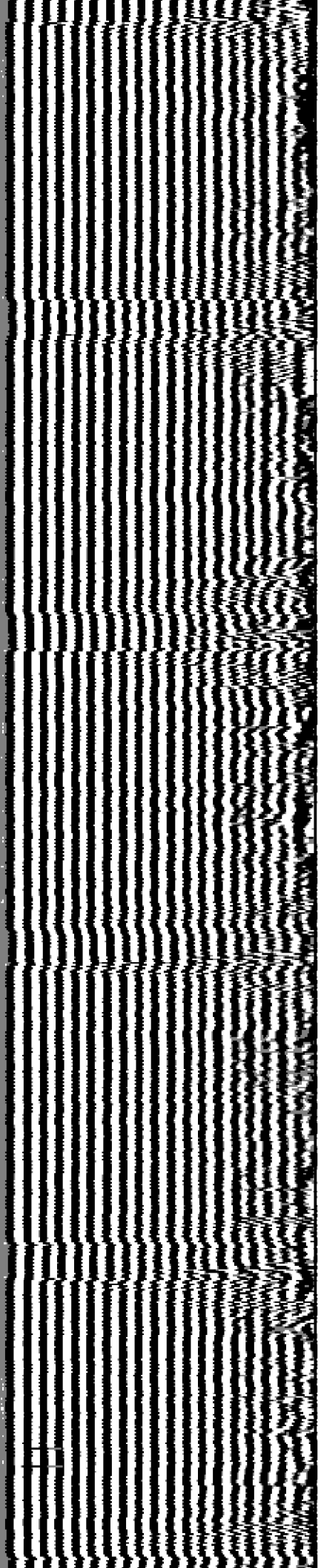


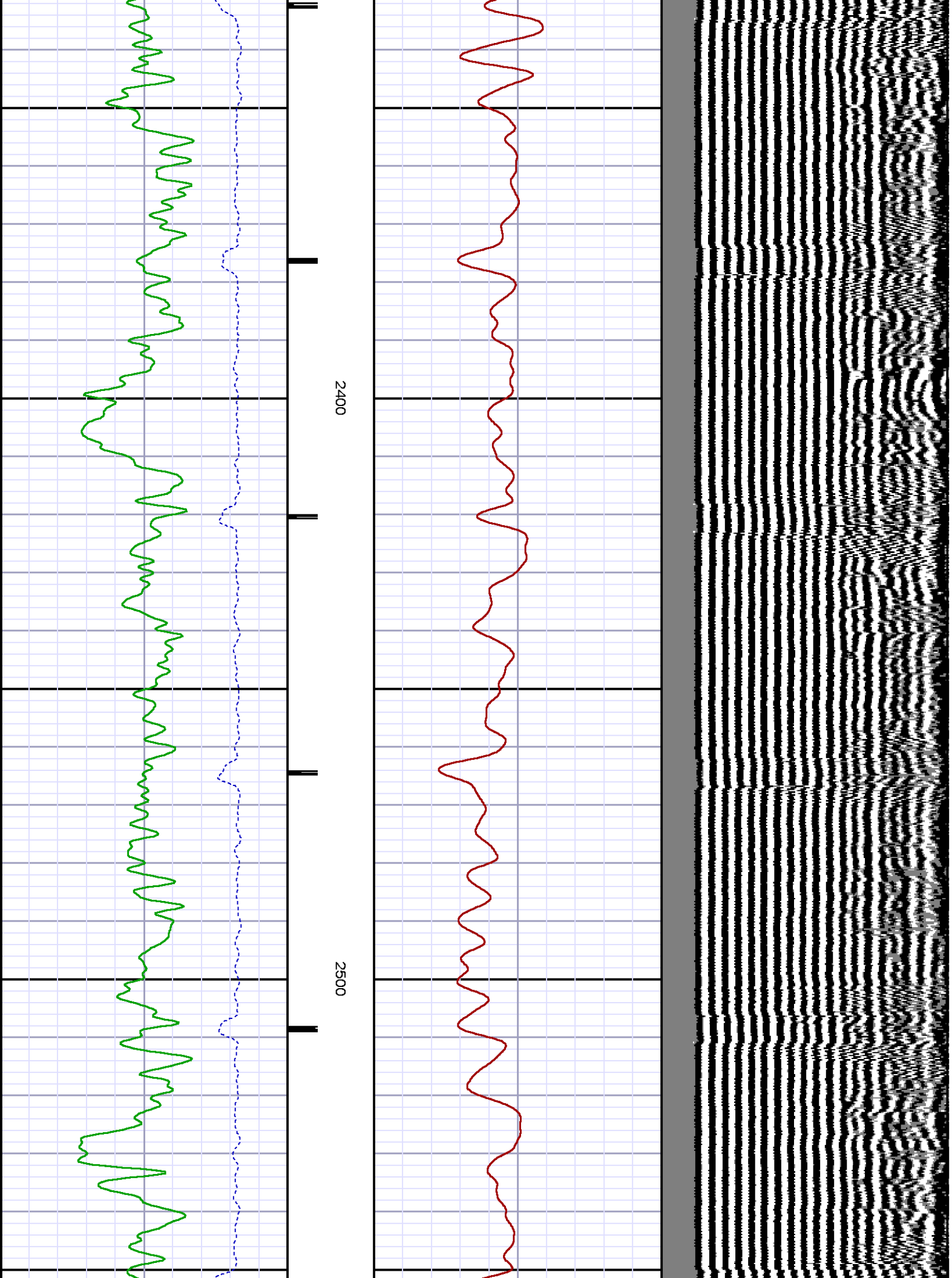


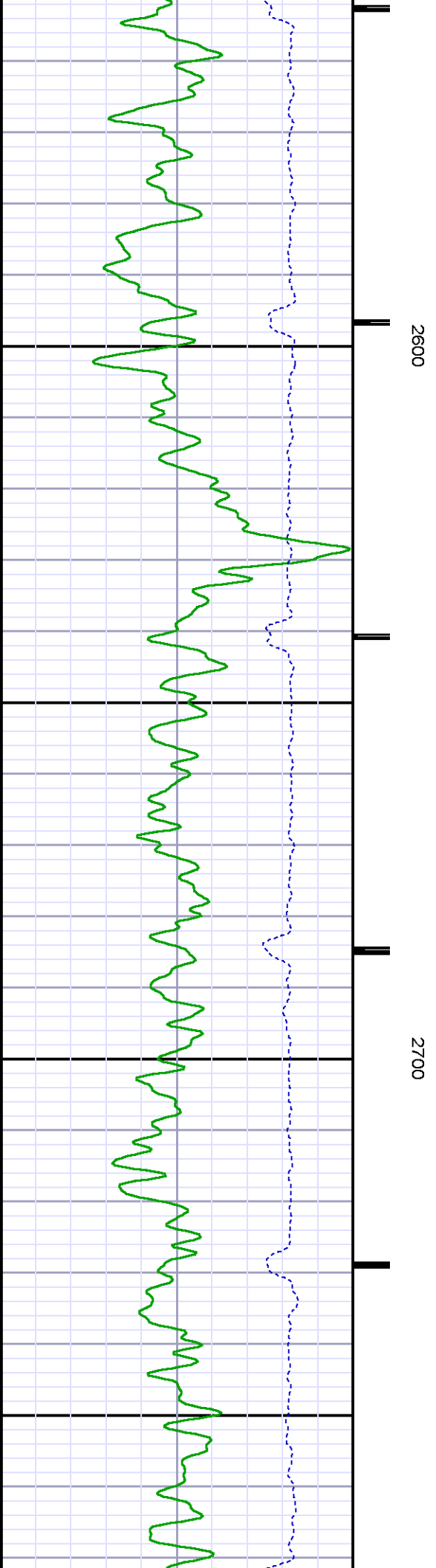
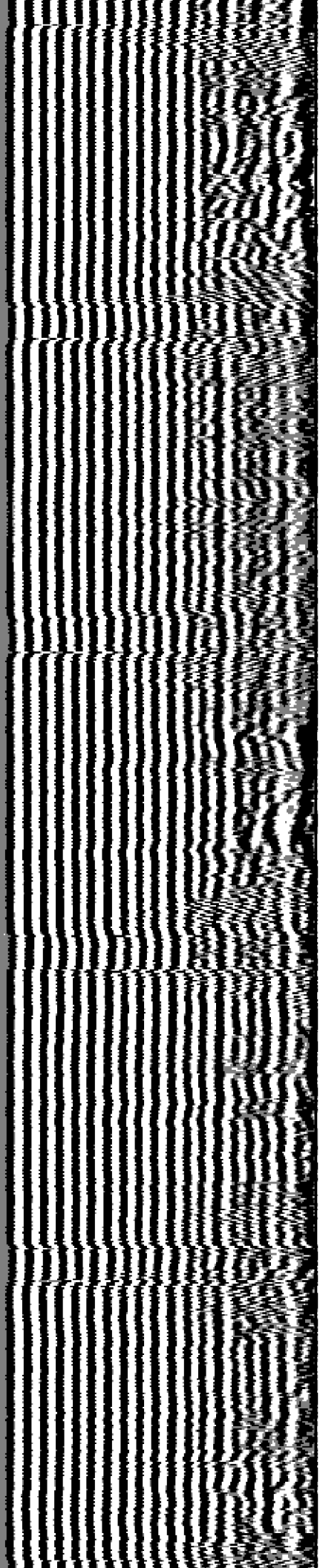


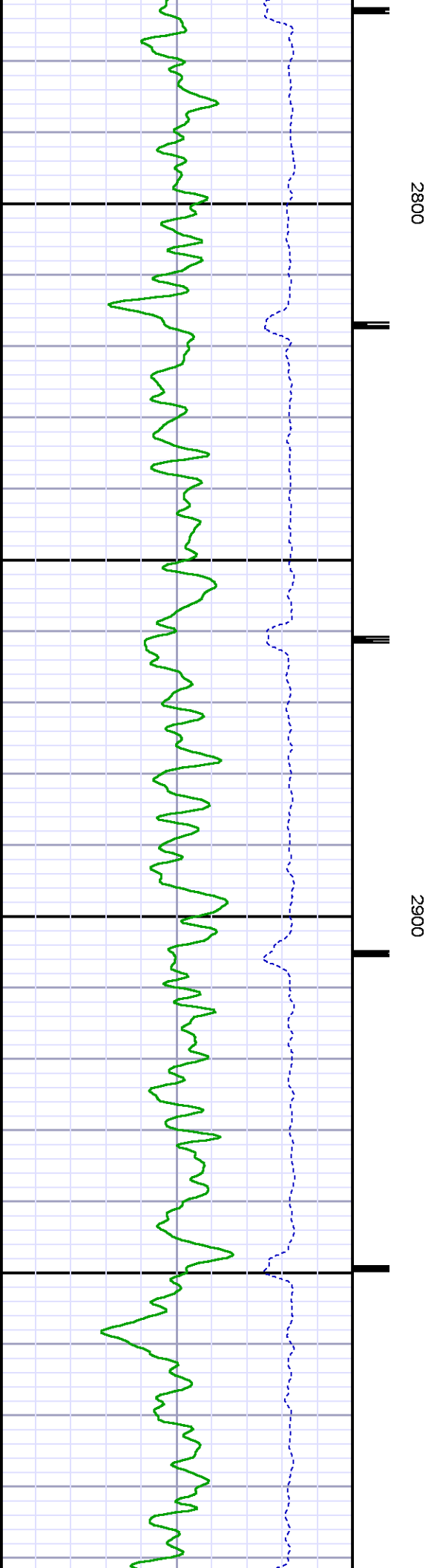
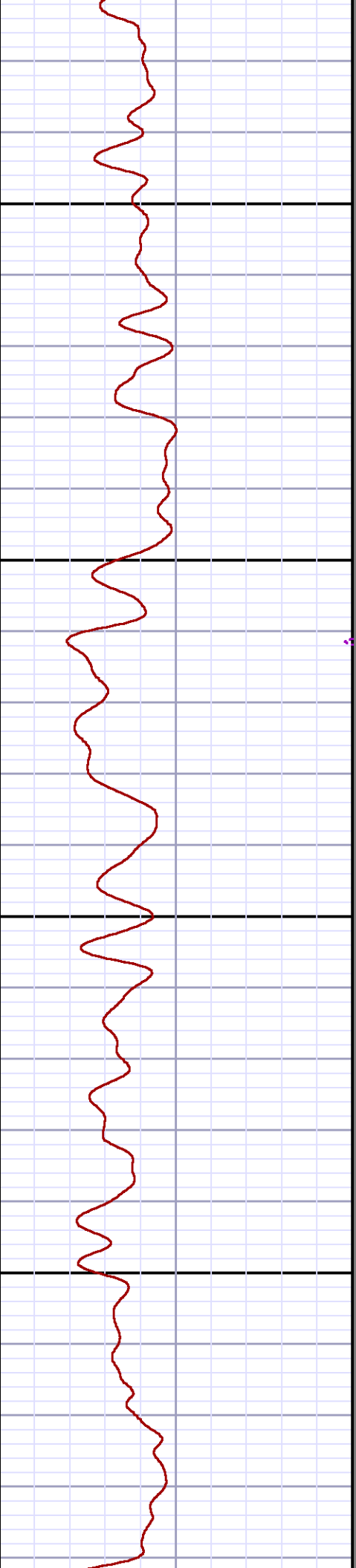
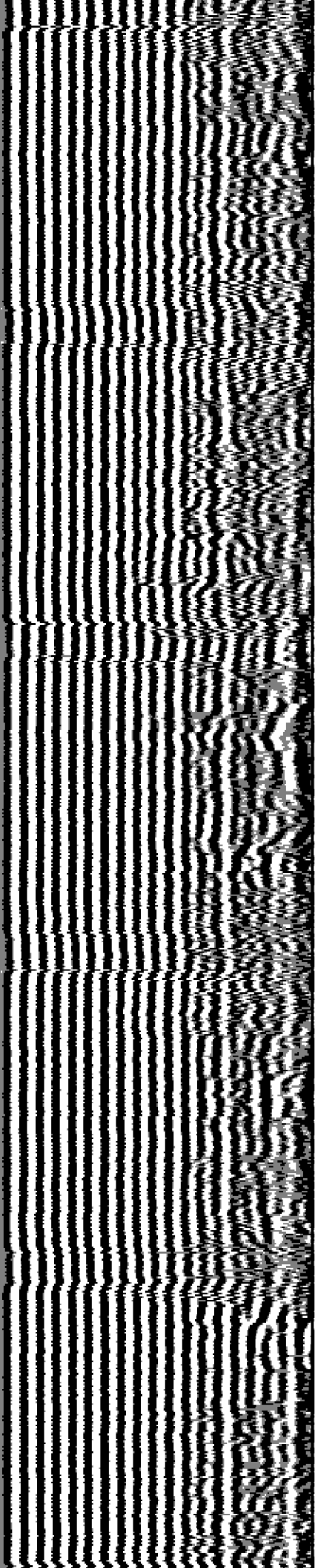


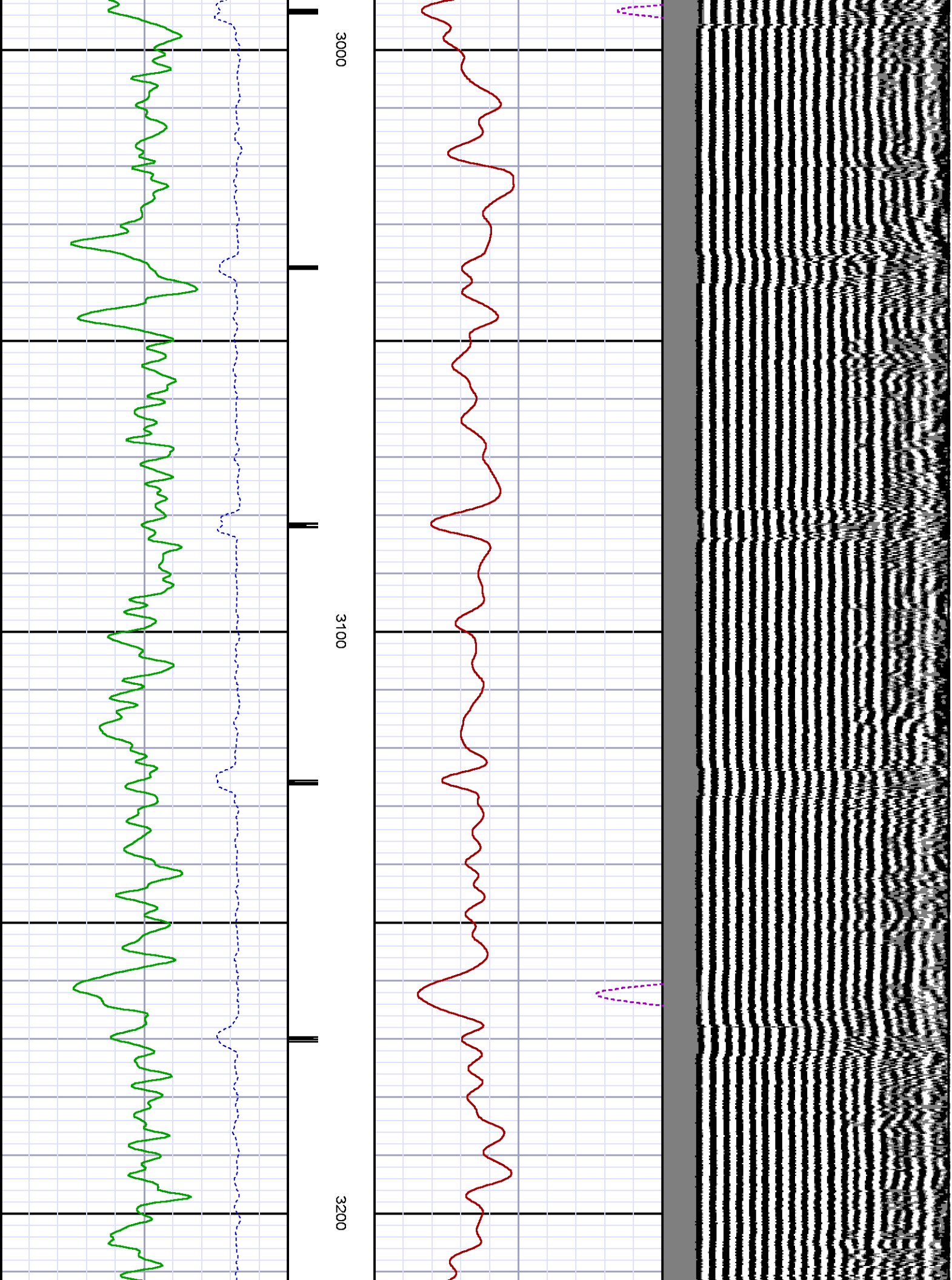


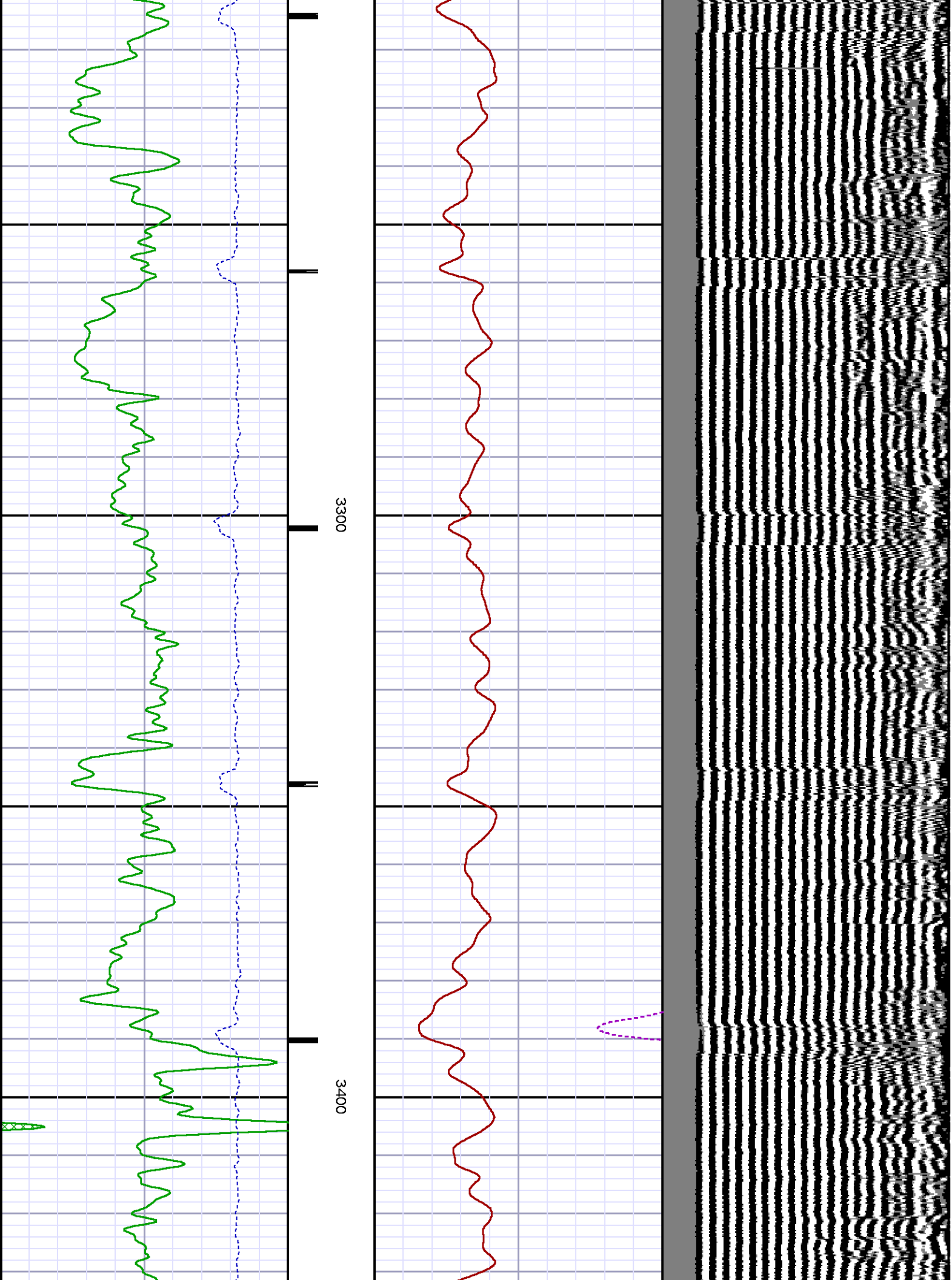


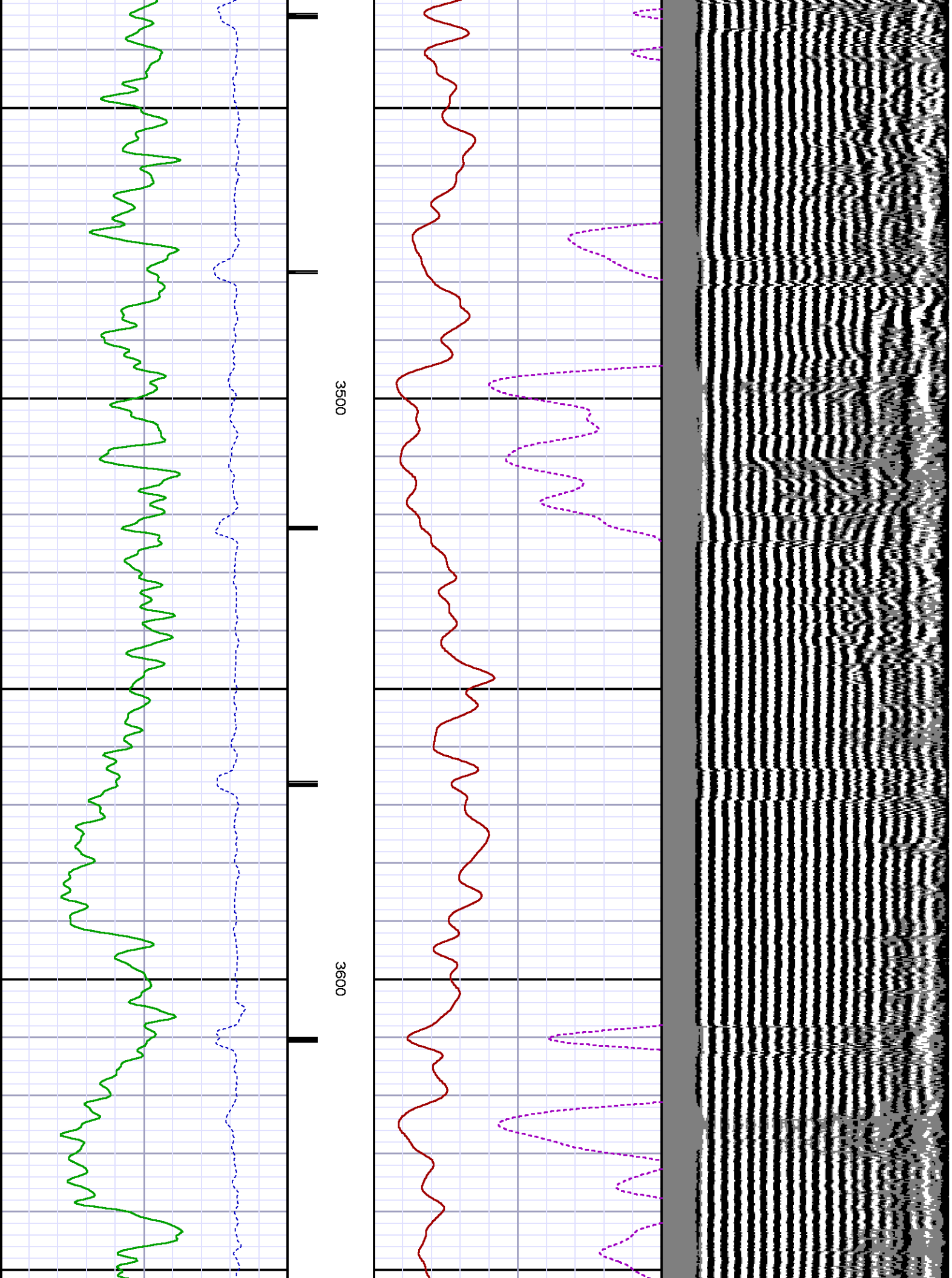


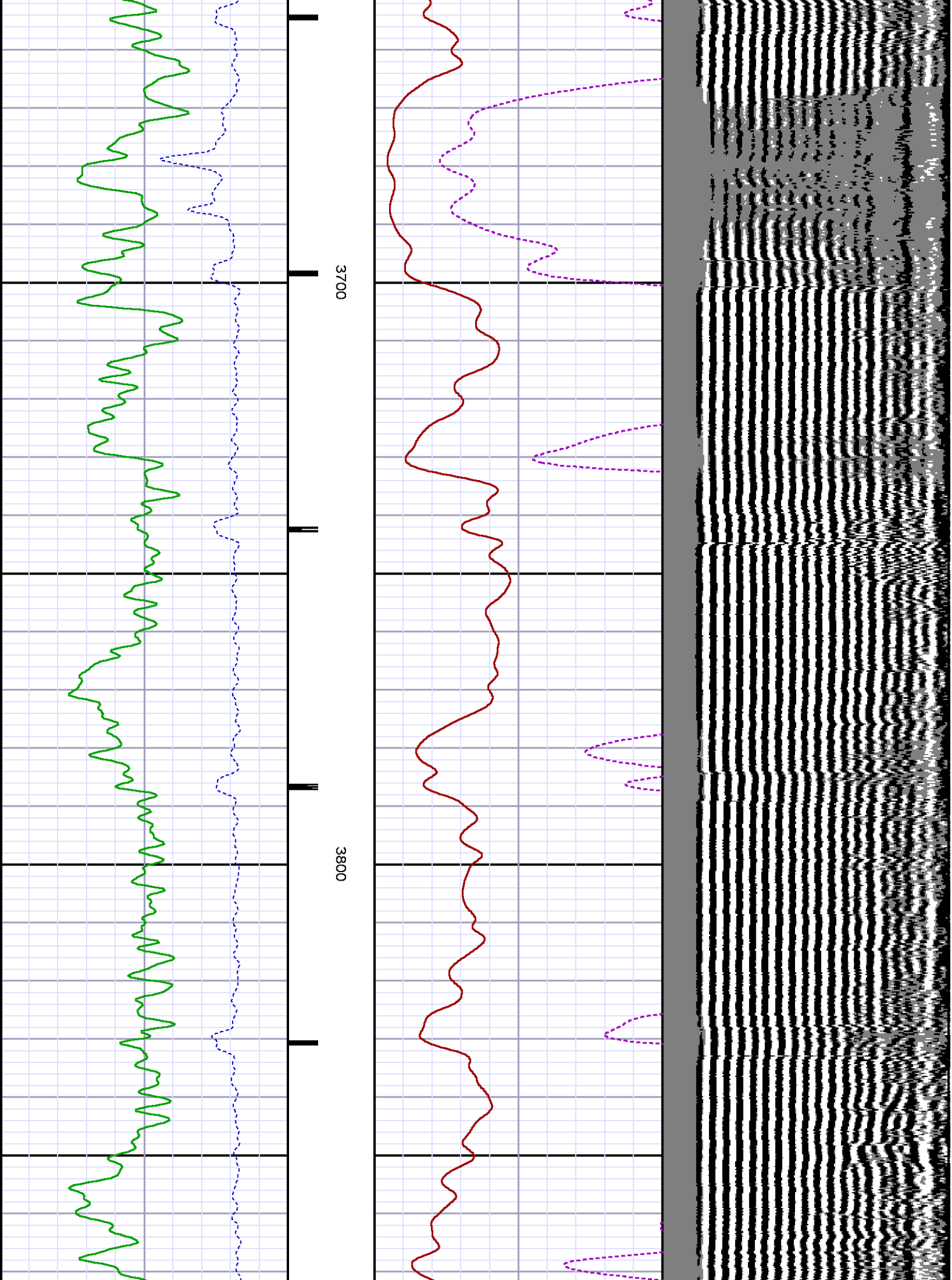


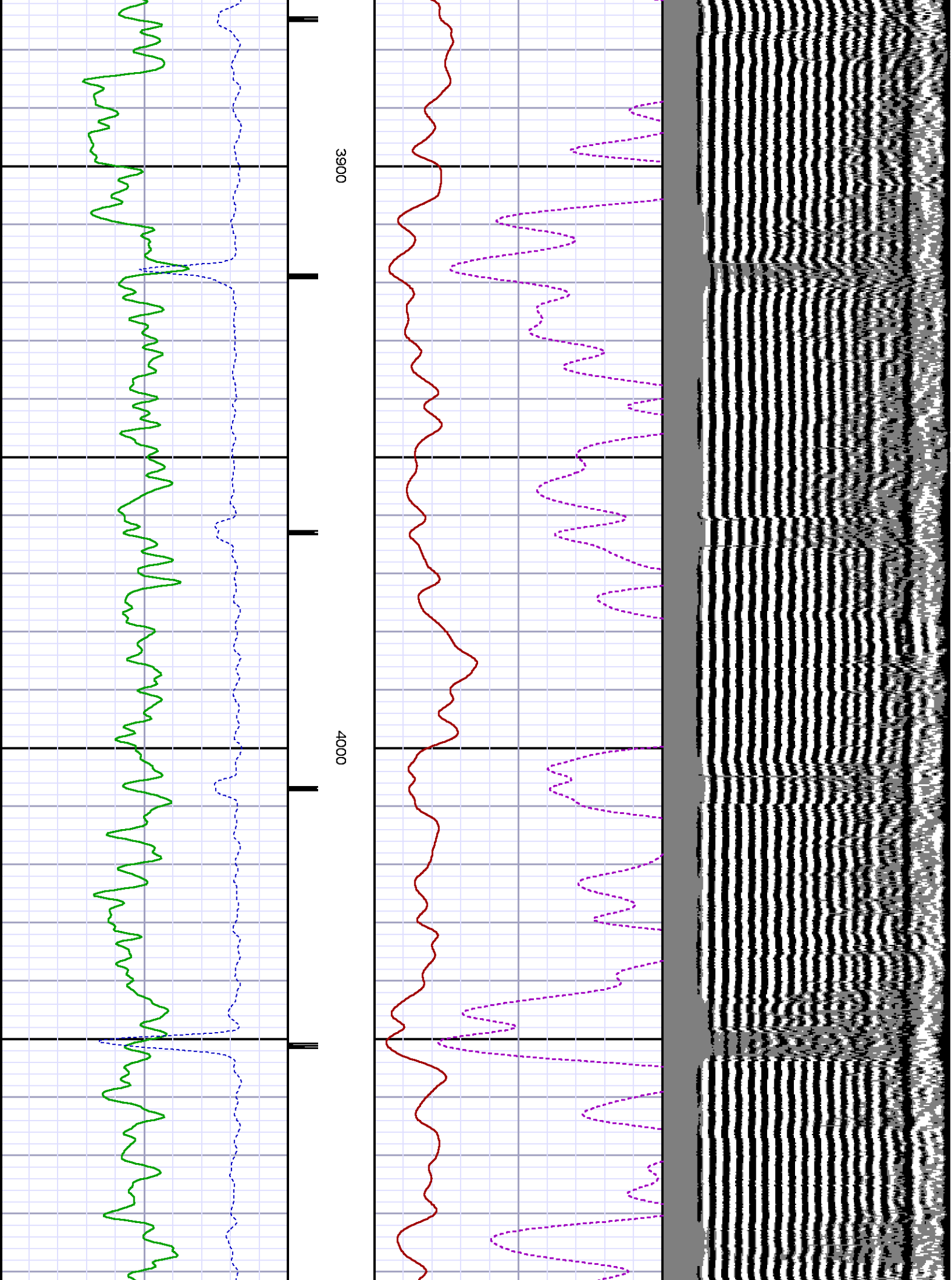


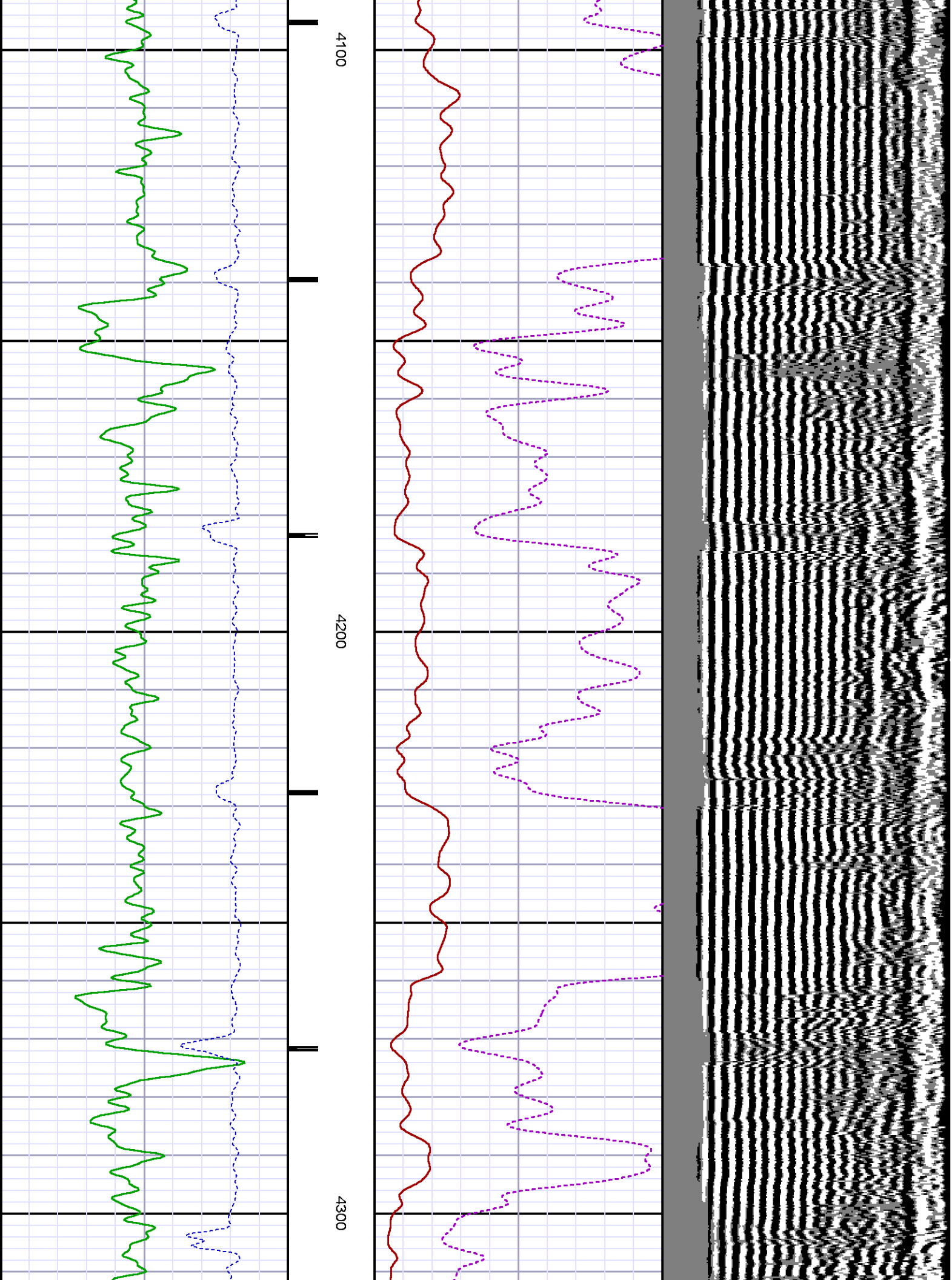


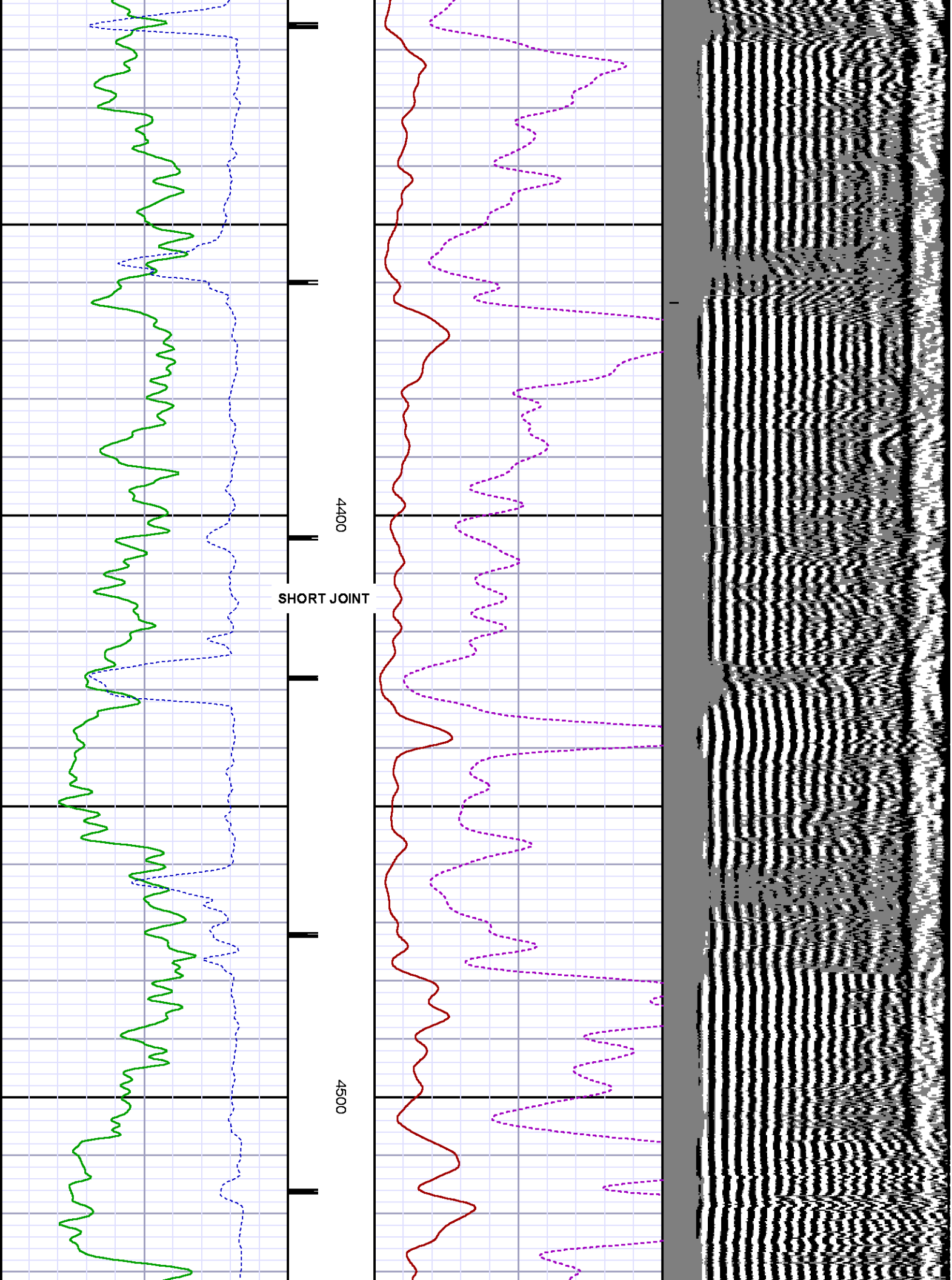


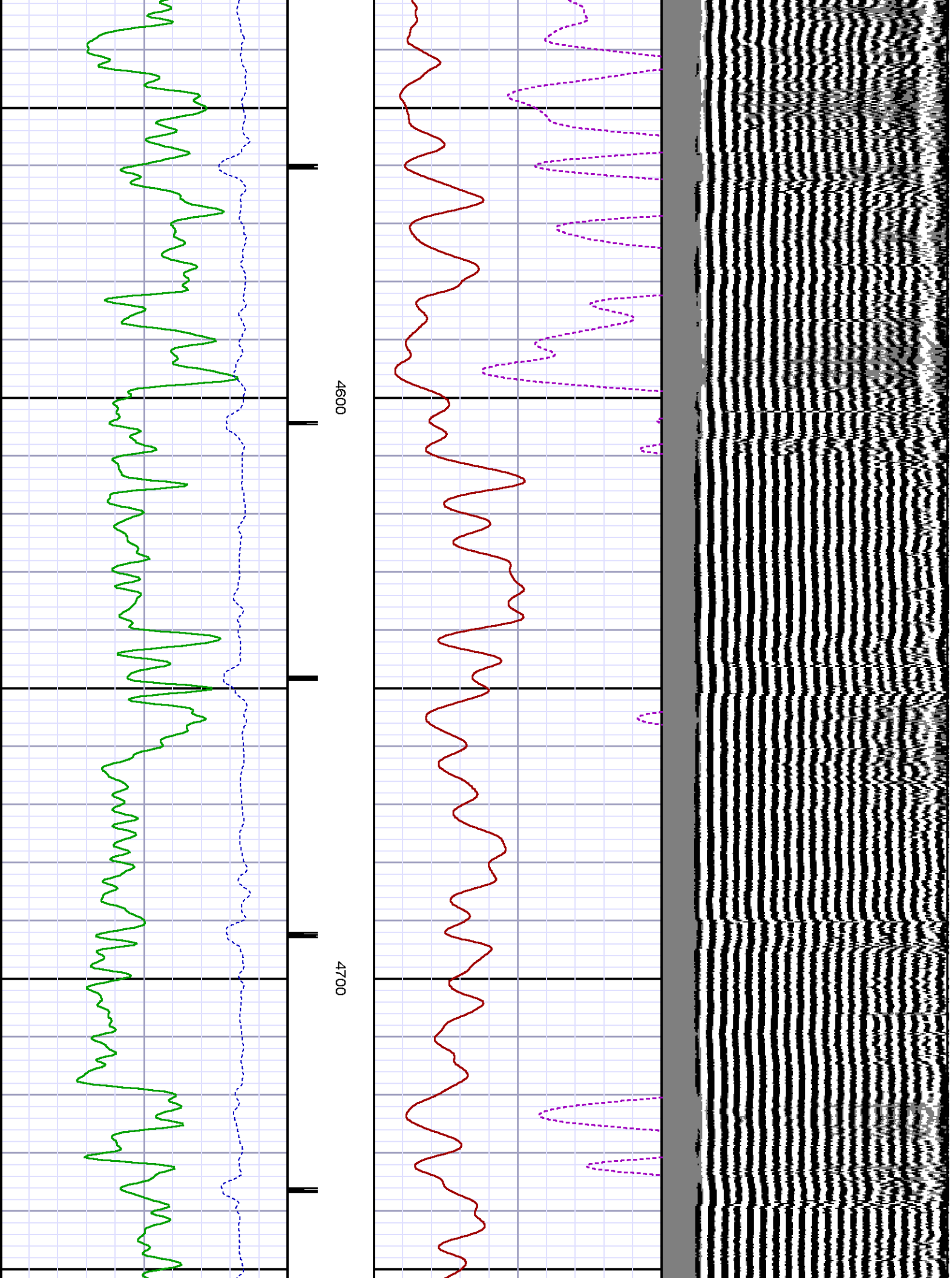


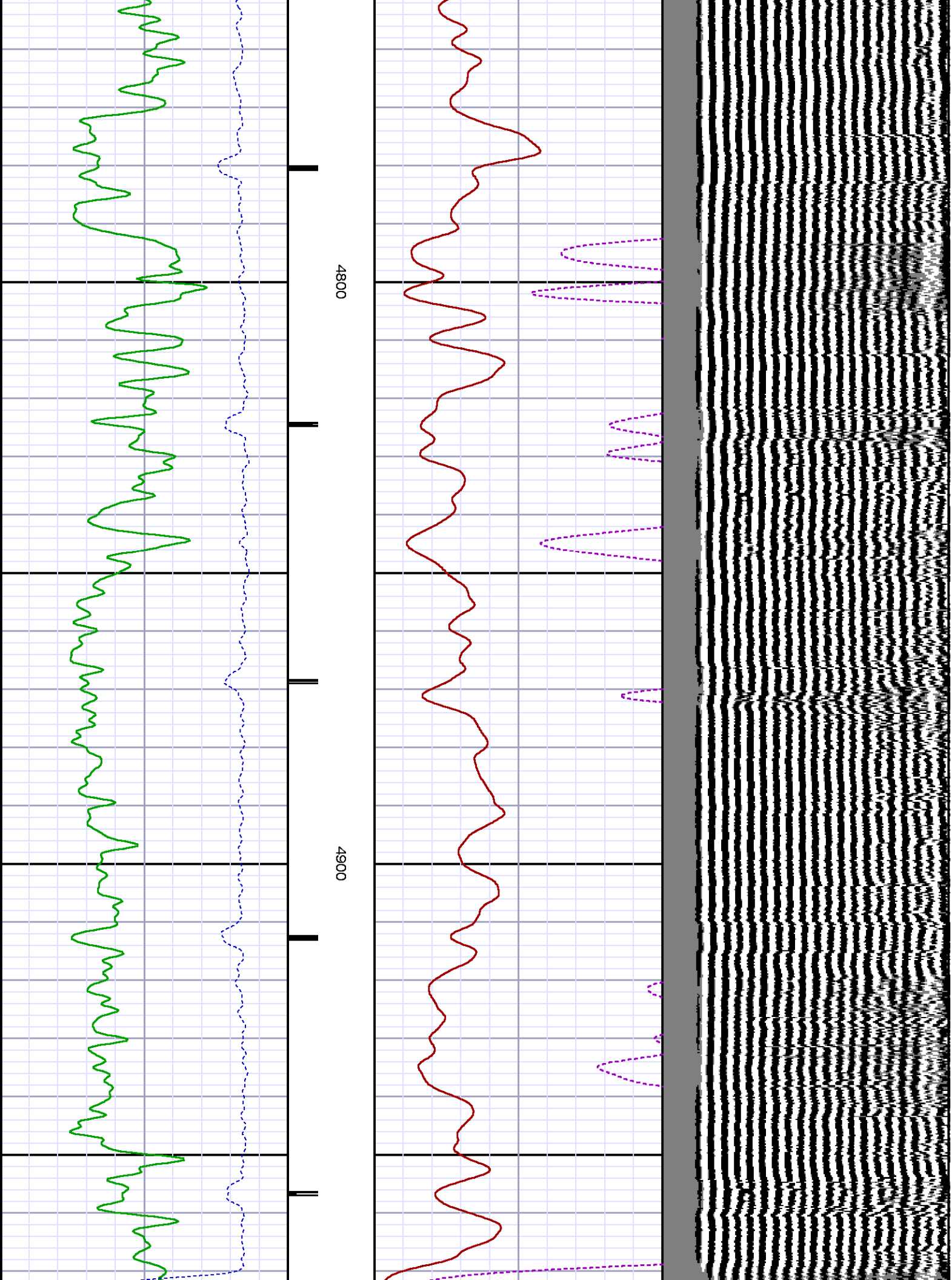


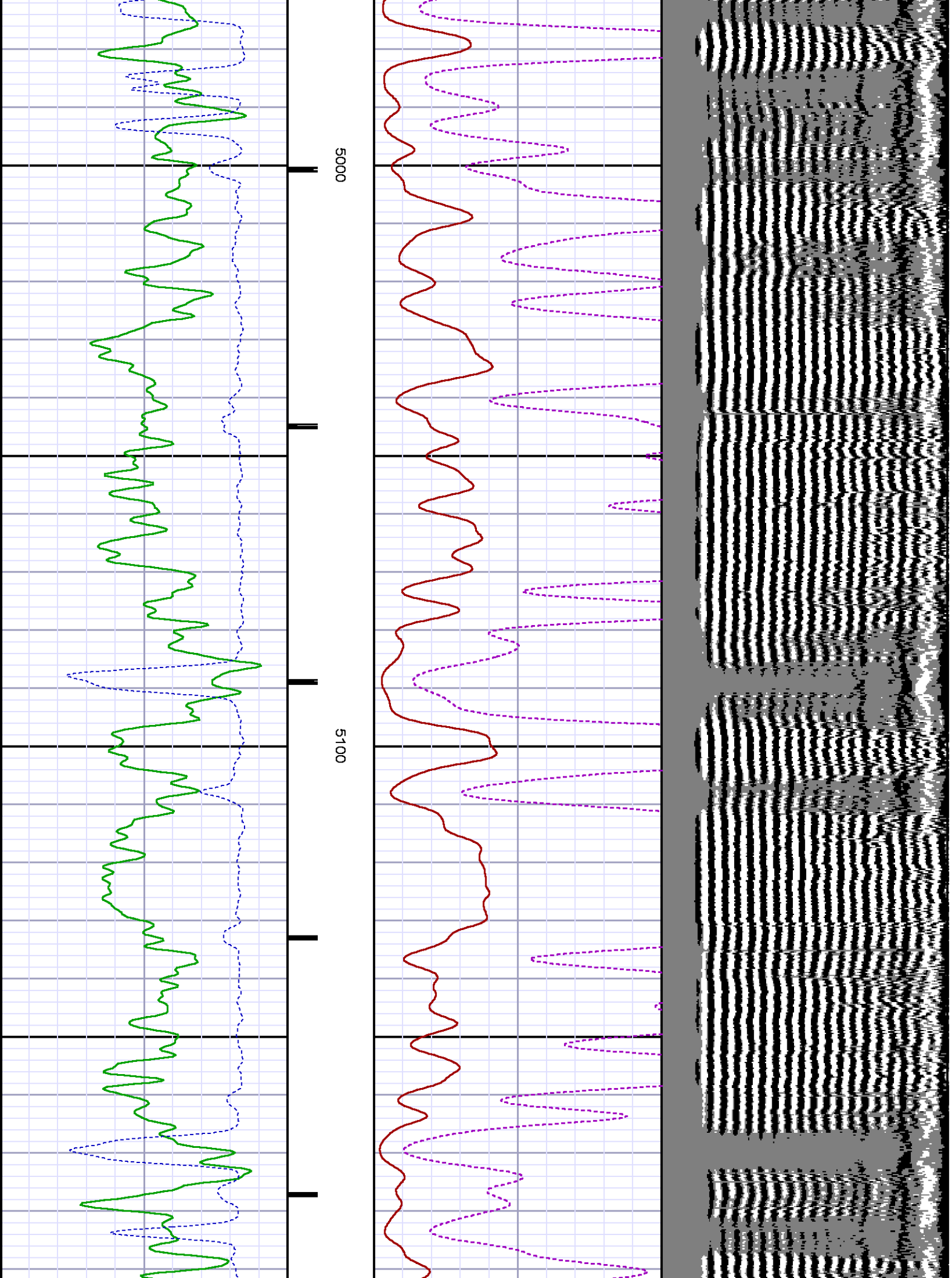


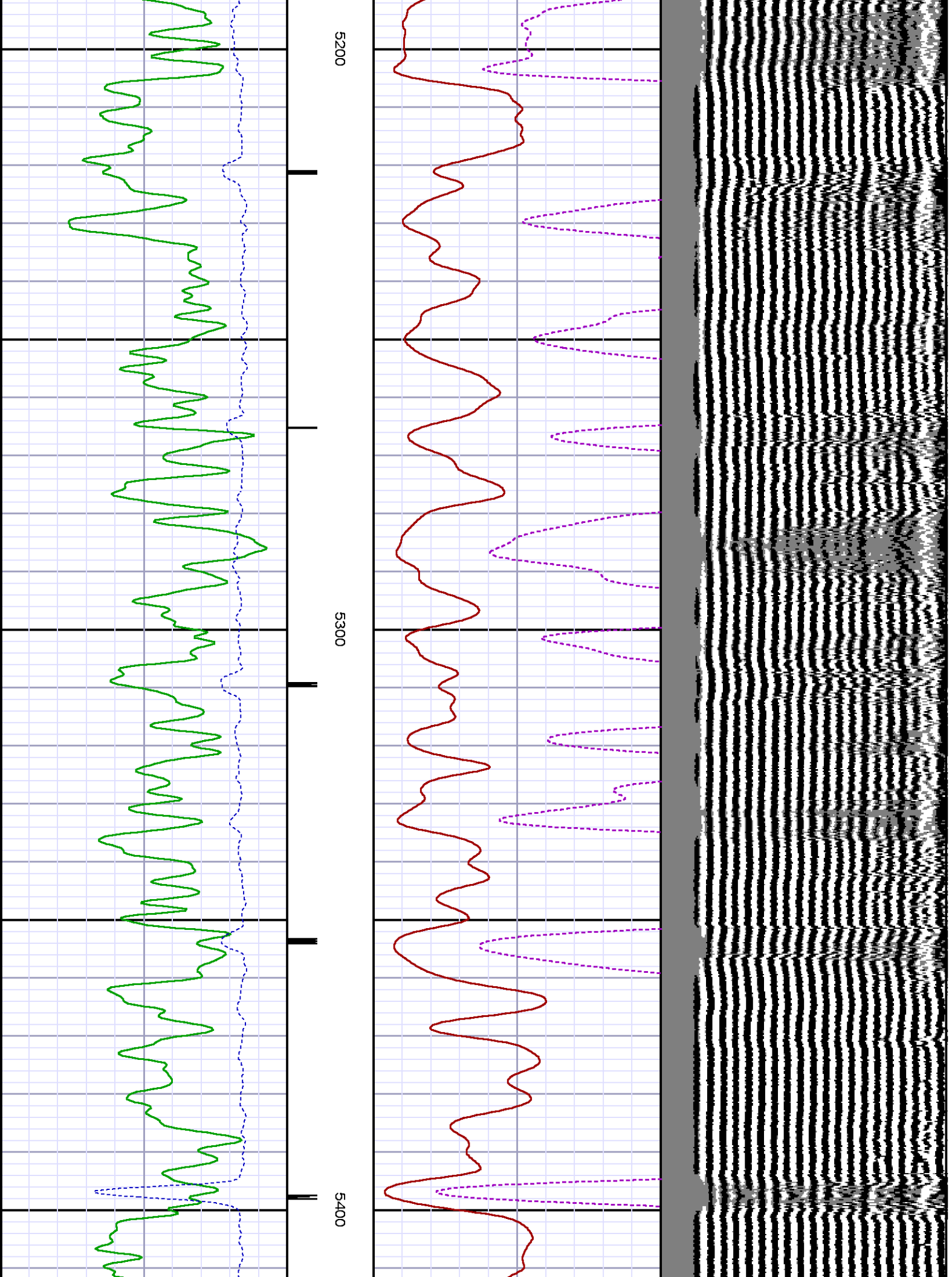


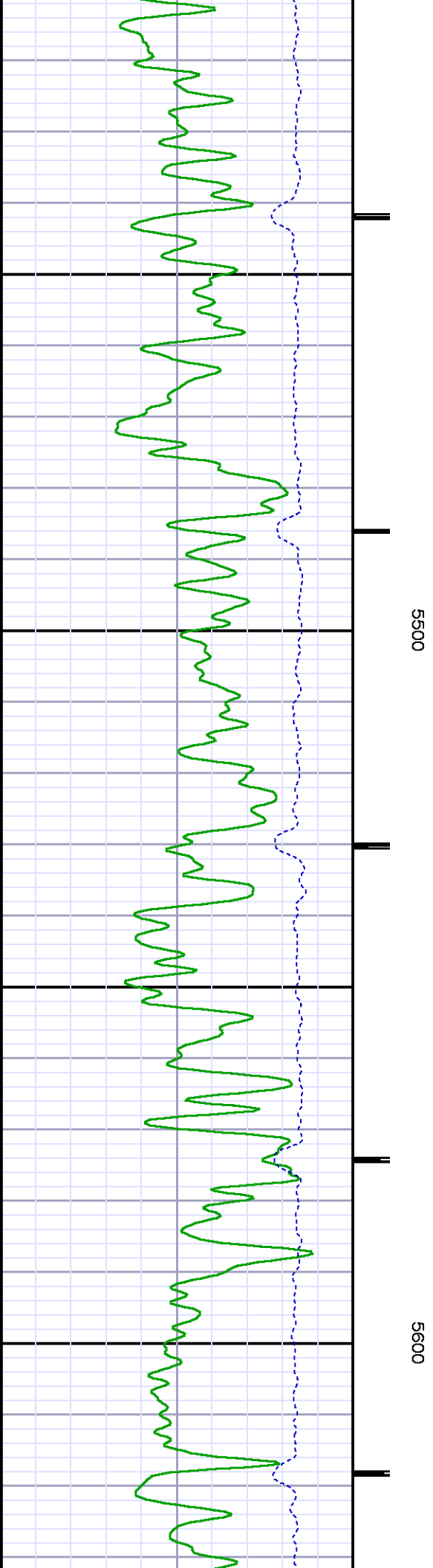
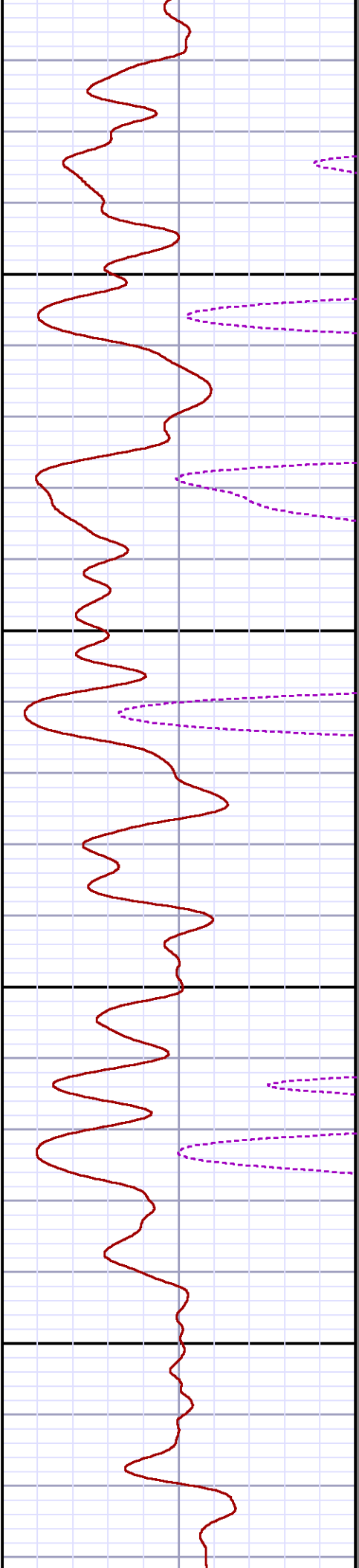
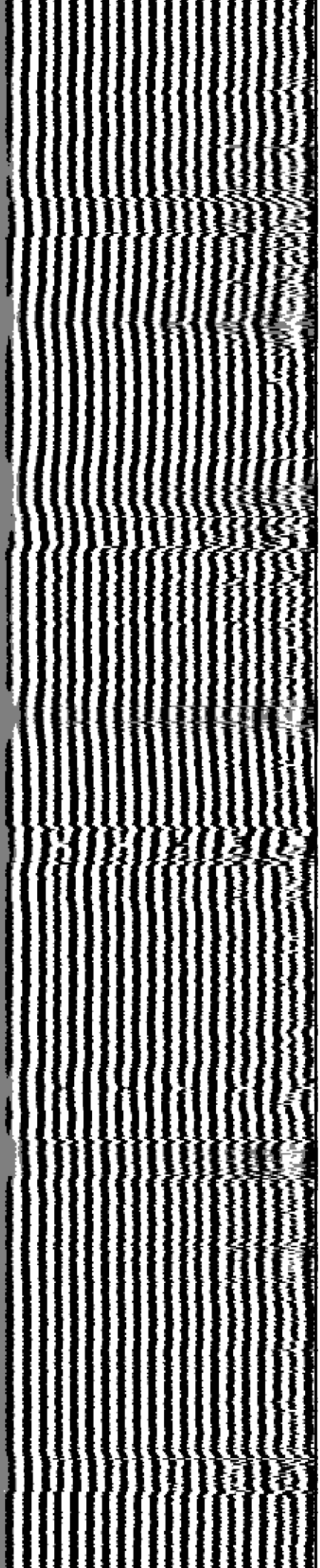


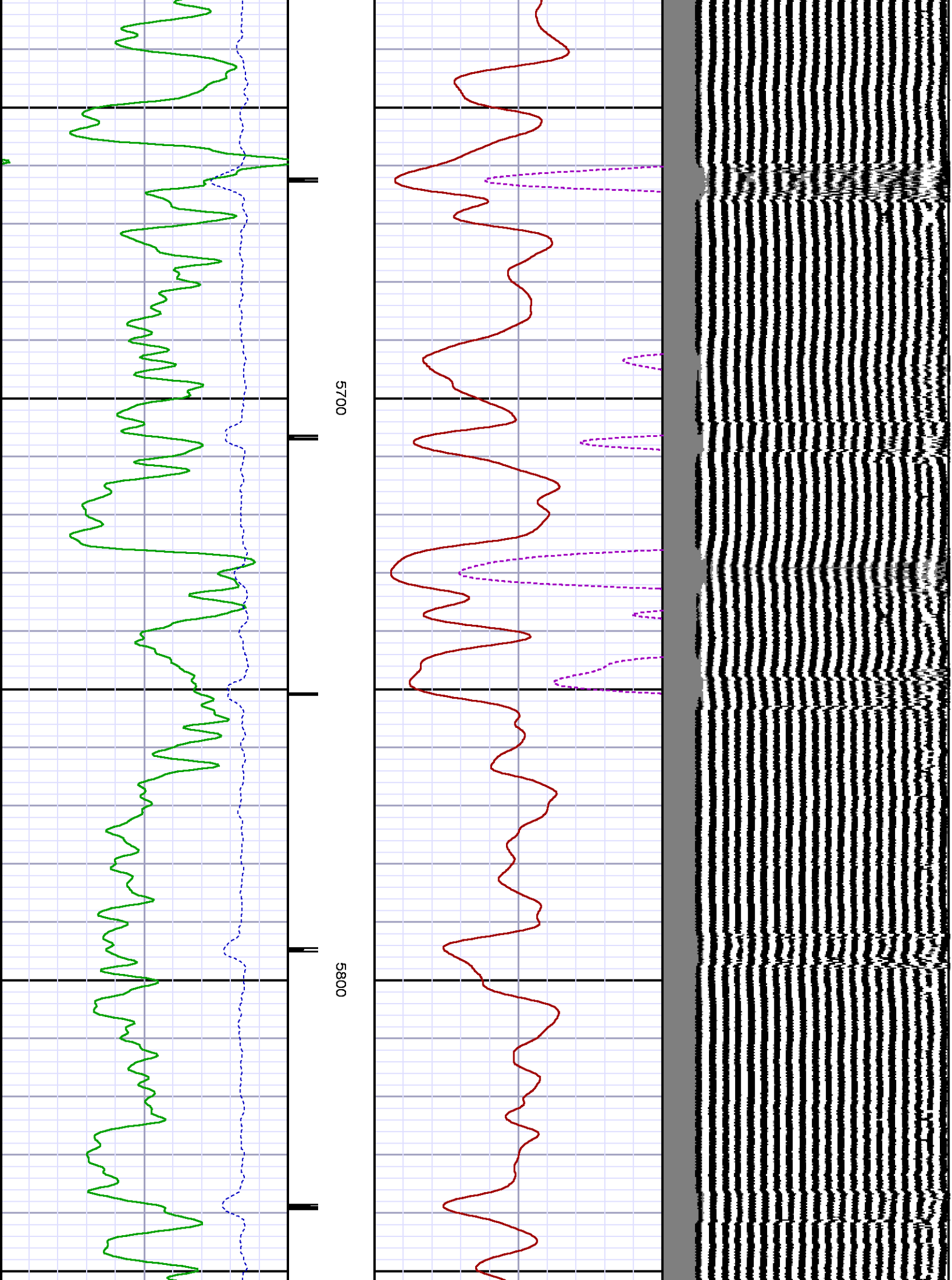


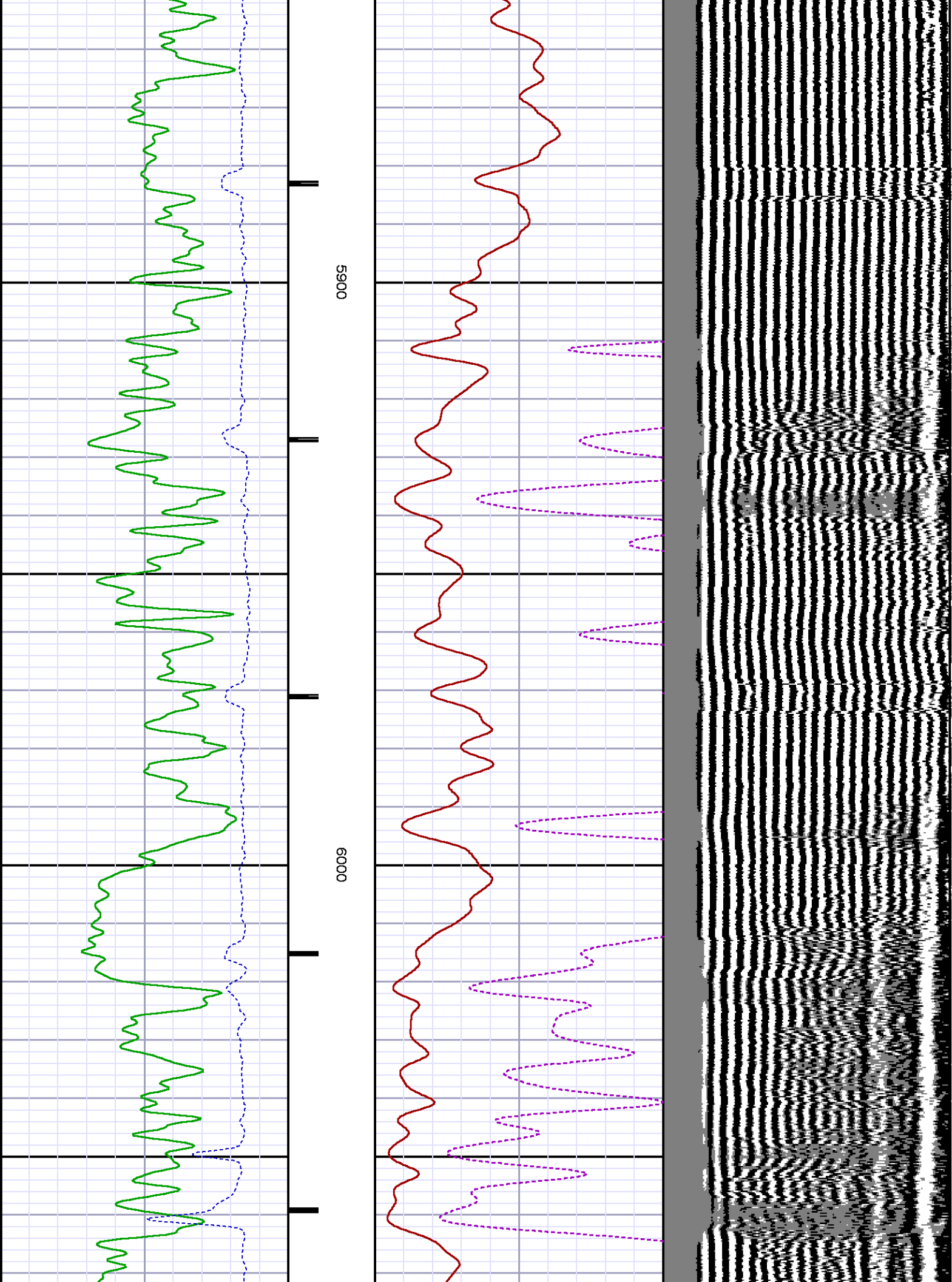


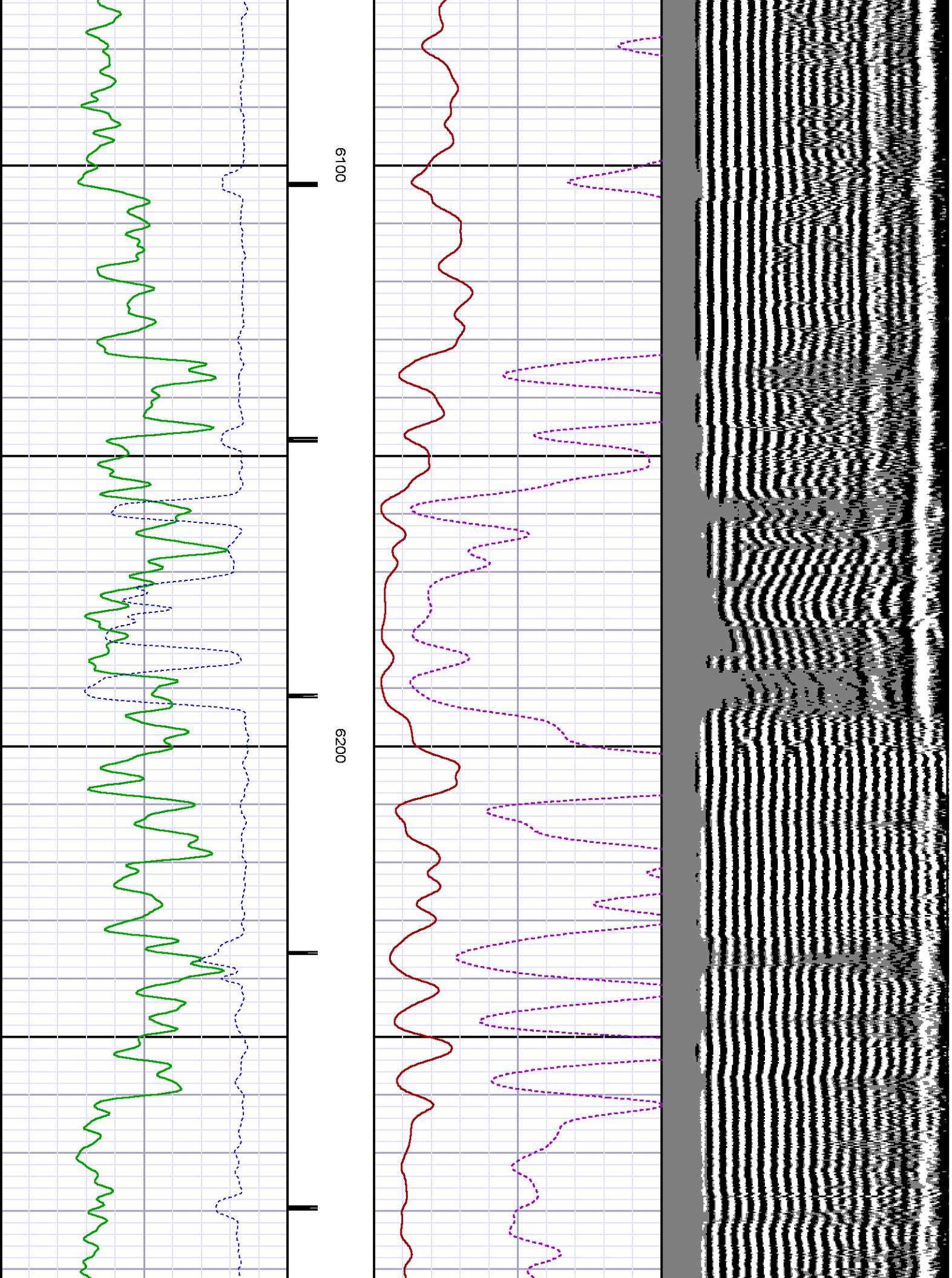


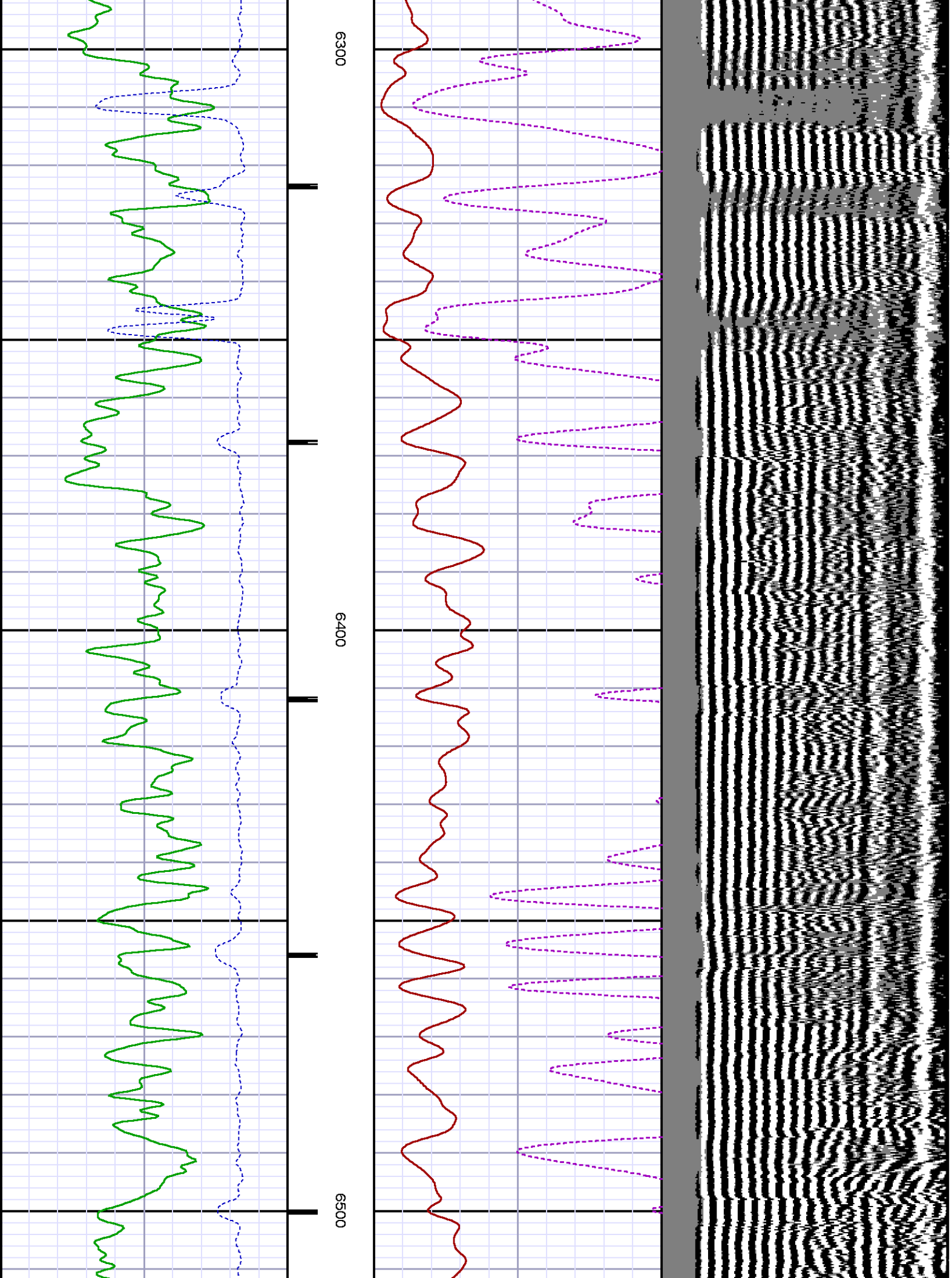


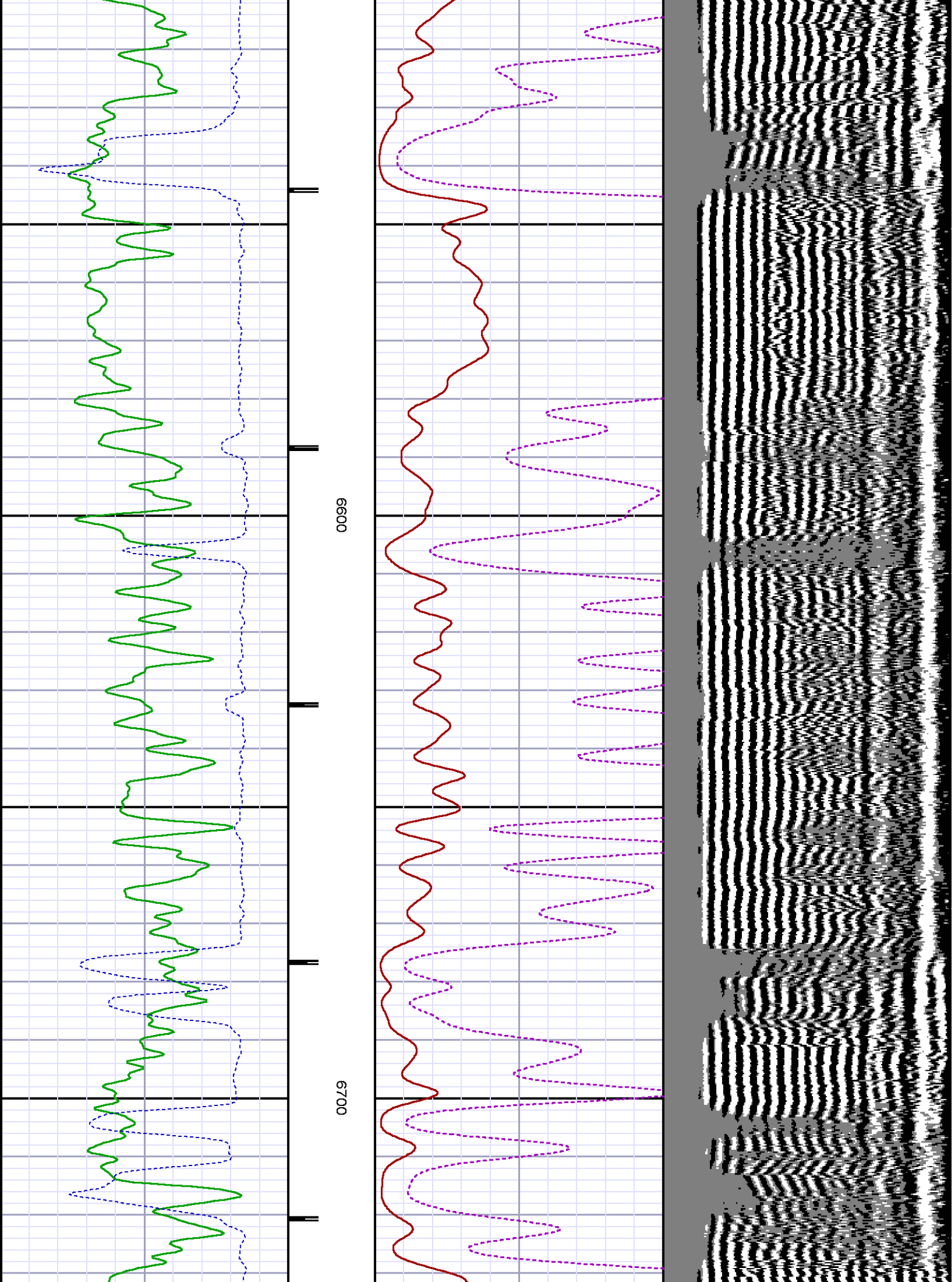


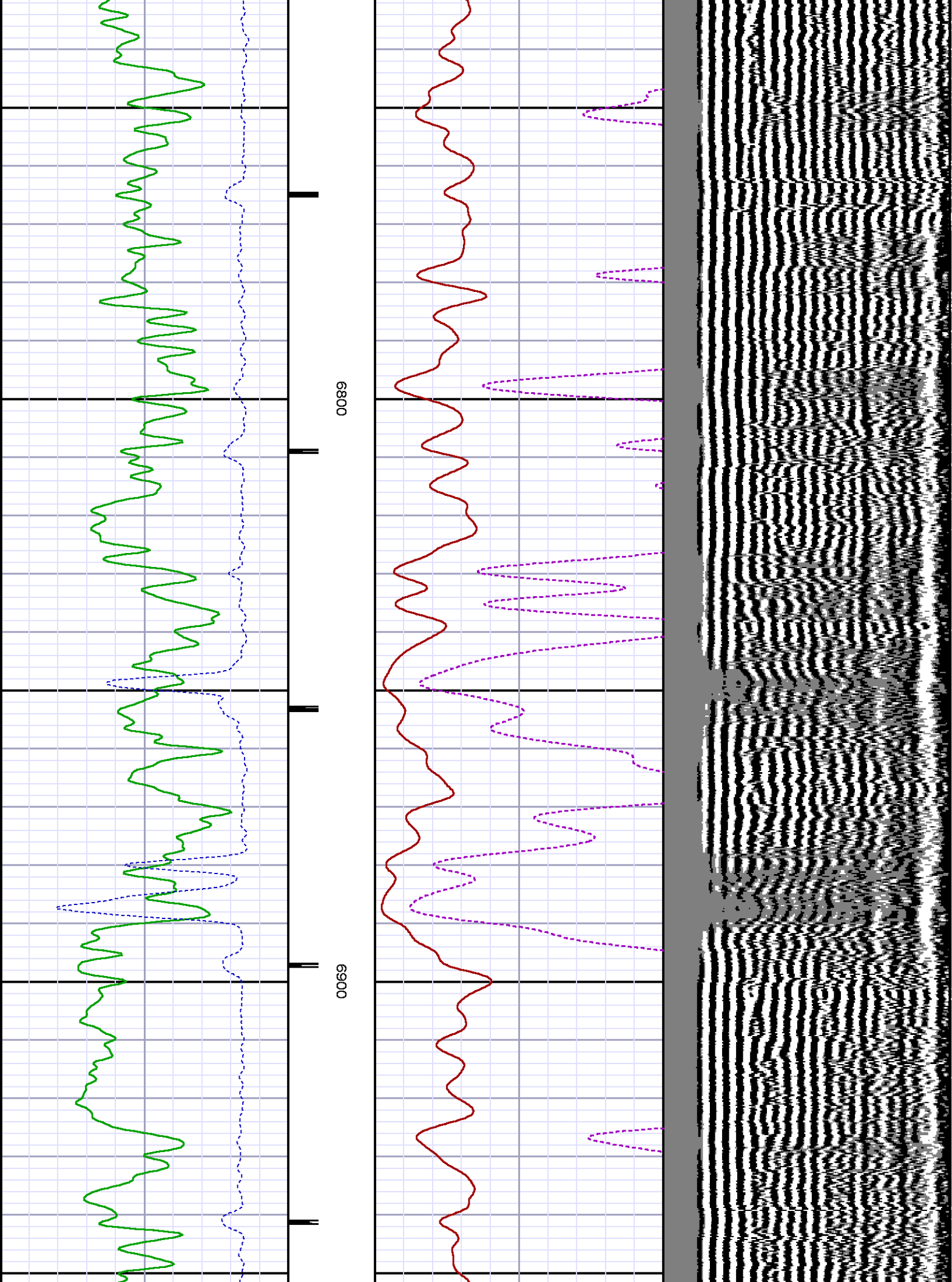


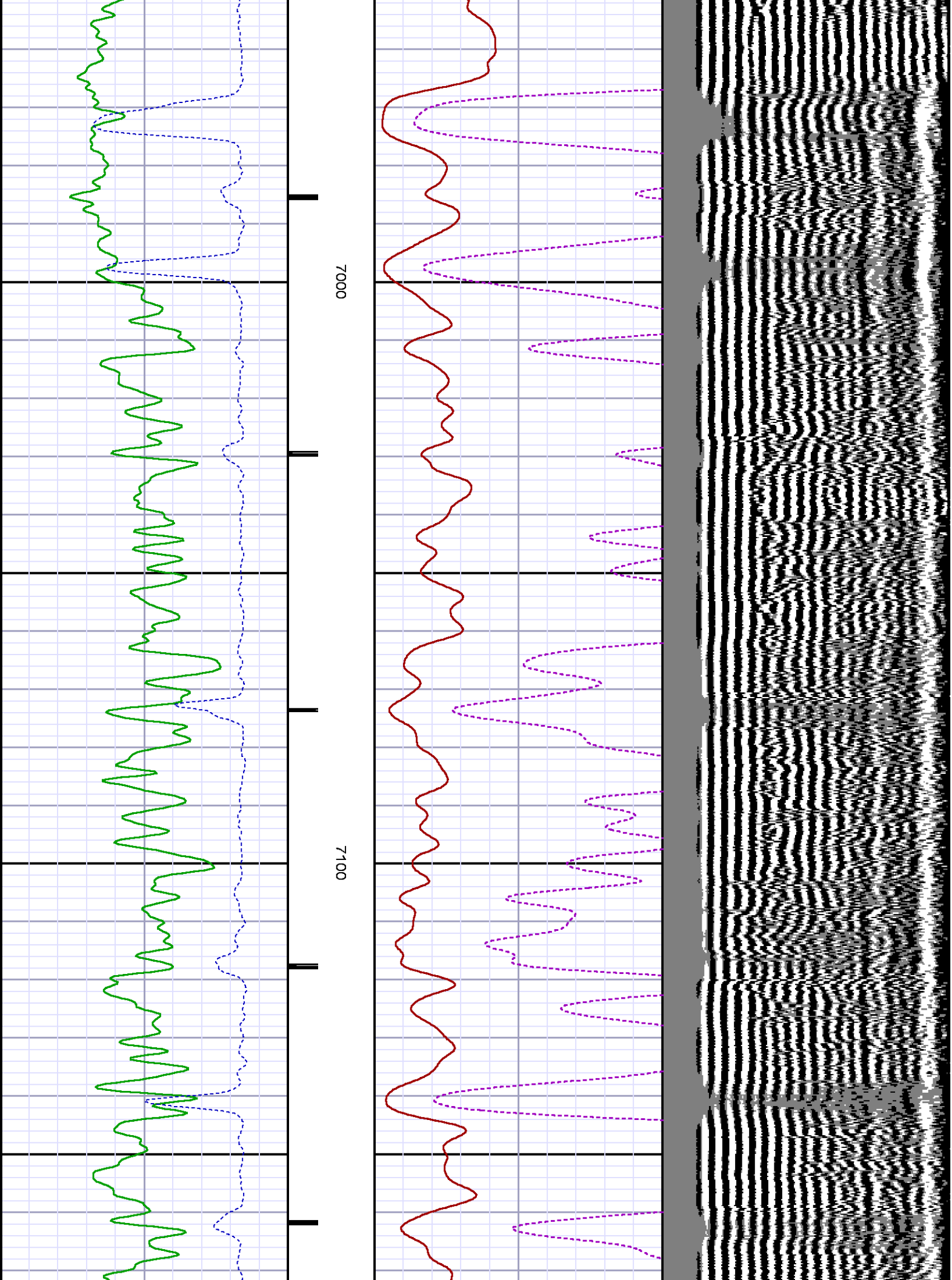


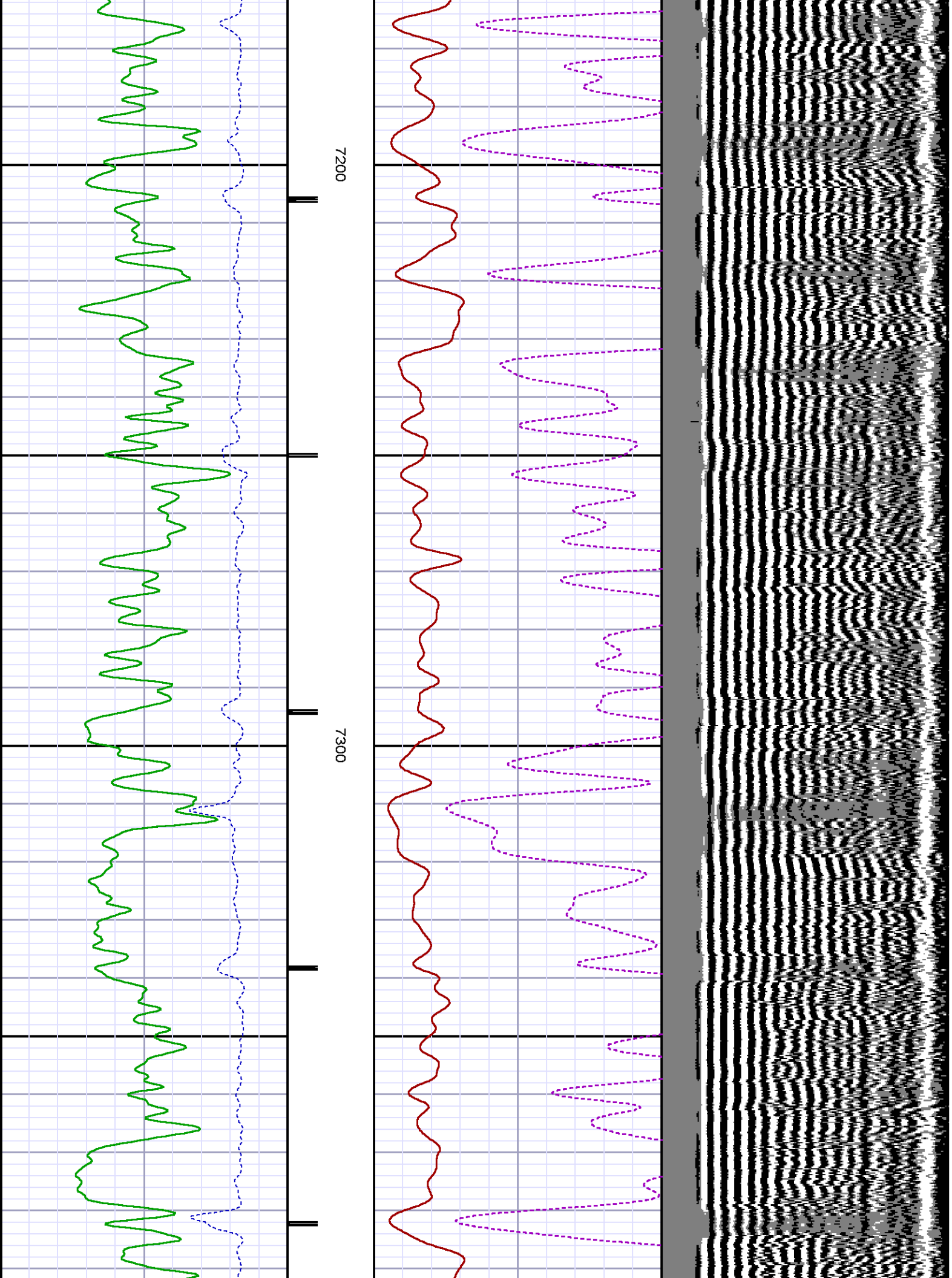


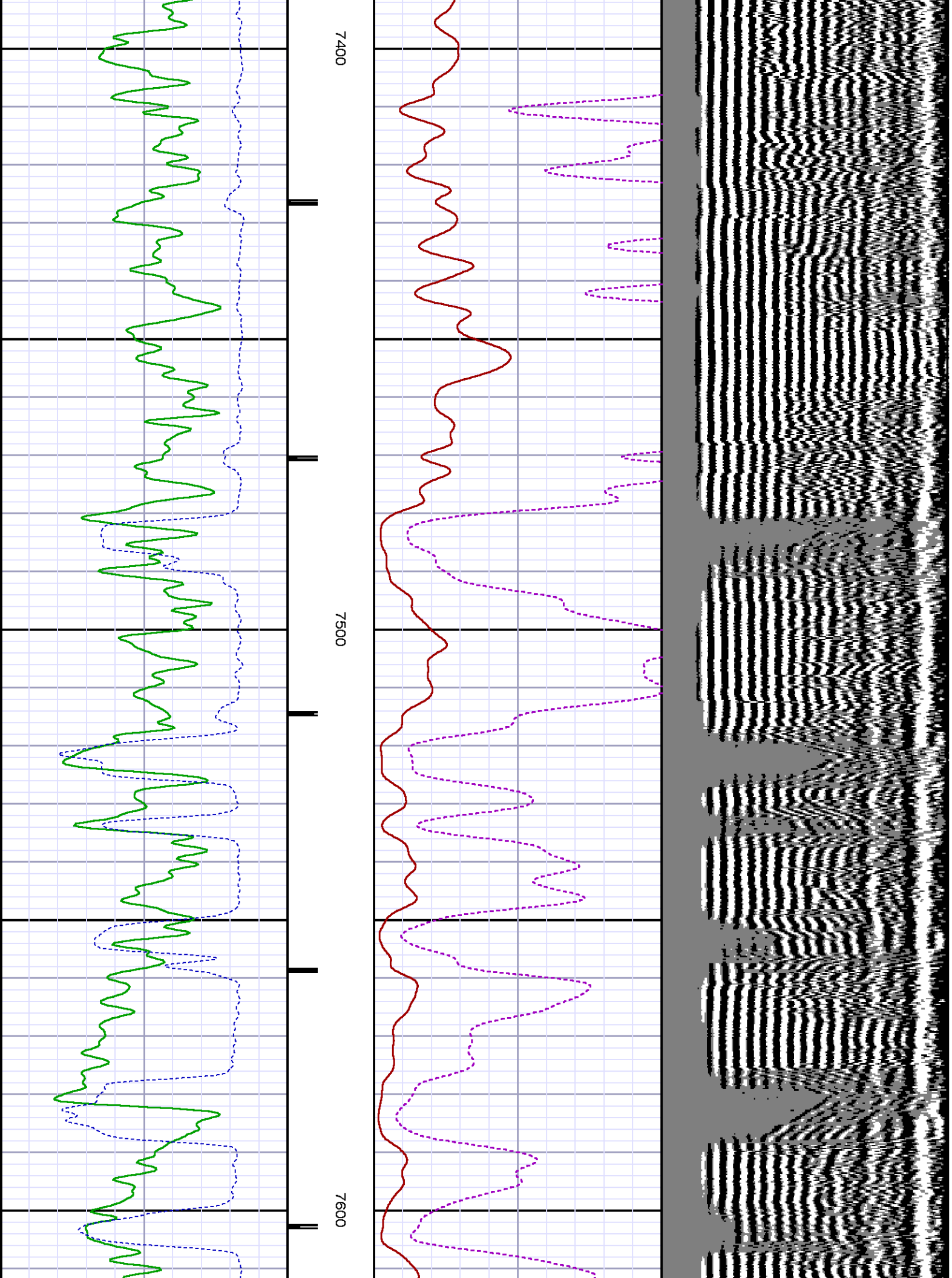


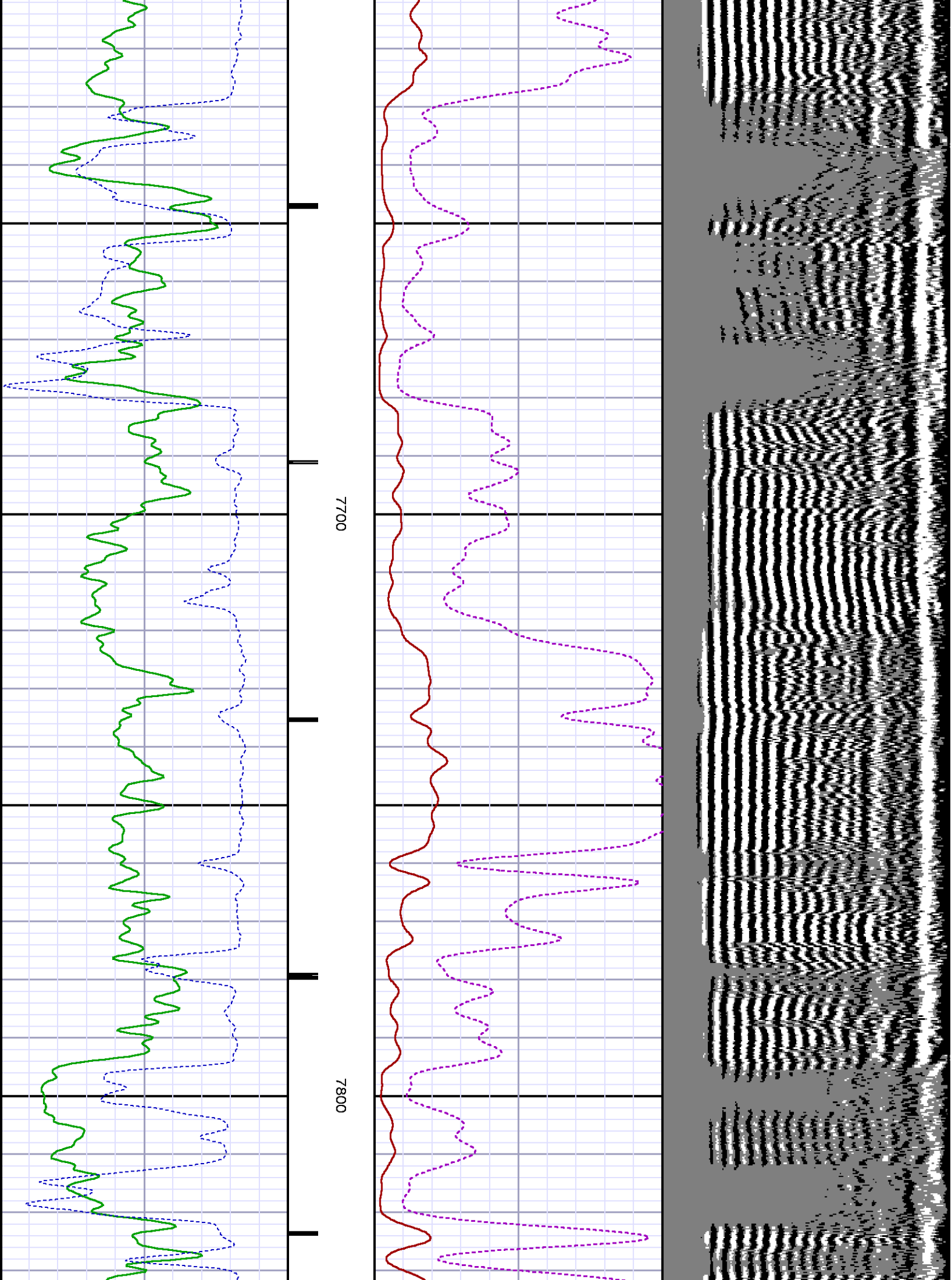


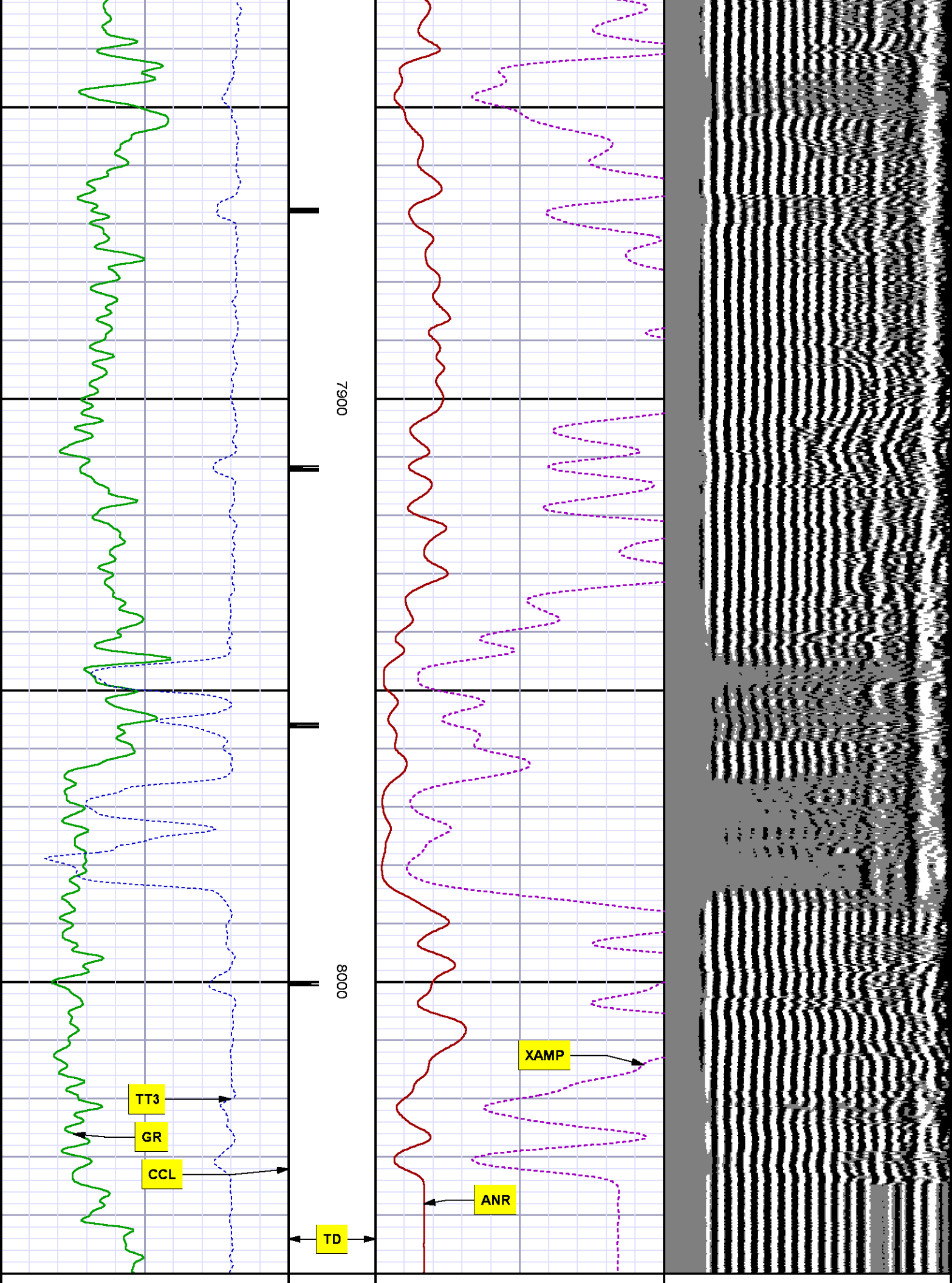


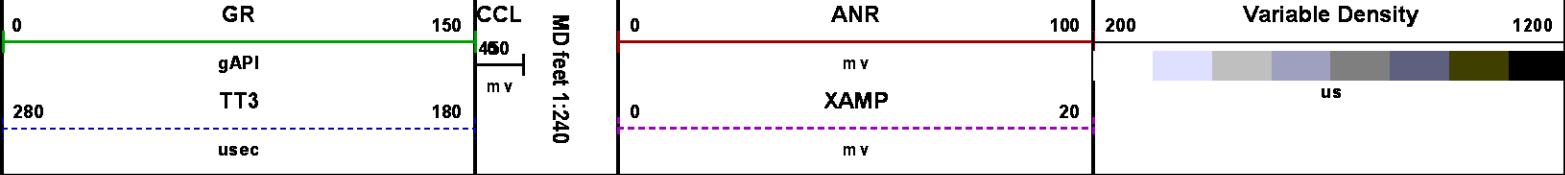












SECONDARY PRESENTATION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	28.531	8069.000
RAL	Amp Gate Start Near	195.000	usec	28.531	8069.000
RAL	Amp Gate Start Radial	195.000	usec	28.531	8069.000
RAL	Amp Gate Width Far	25.000	usec	28.531	8069.000
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RAL	FB Start Far	291.900	usec	28.531	8069.000
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RAL	FB Thresh Far	10.000	mv	28.531	8069.000
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RAL	Fluid Travel Time	200.000	usec/ft	28.531	8068.906

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

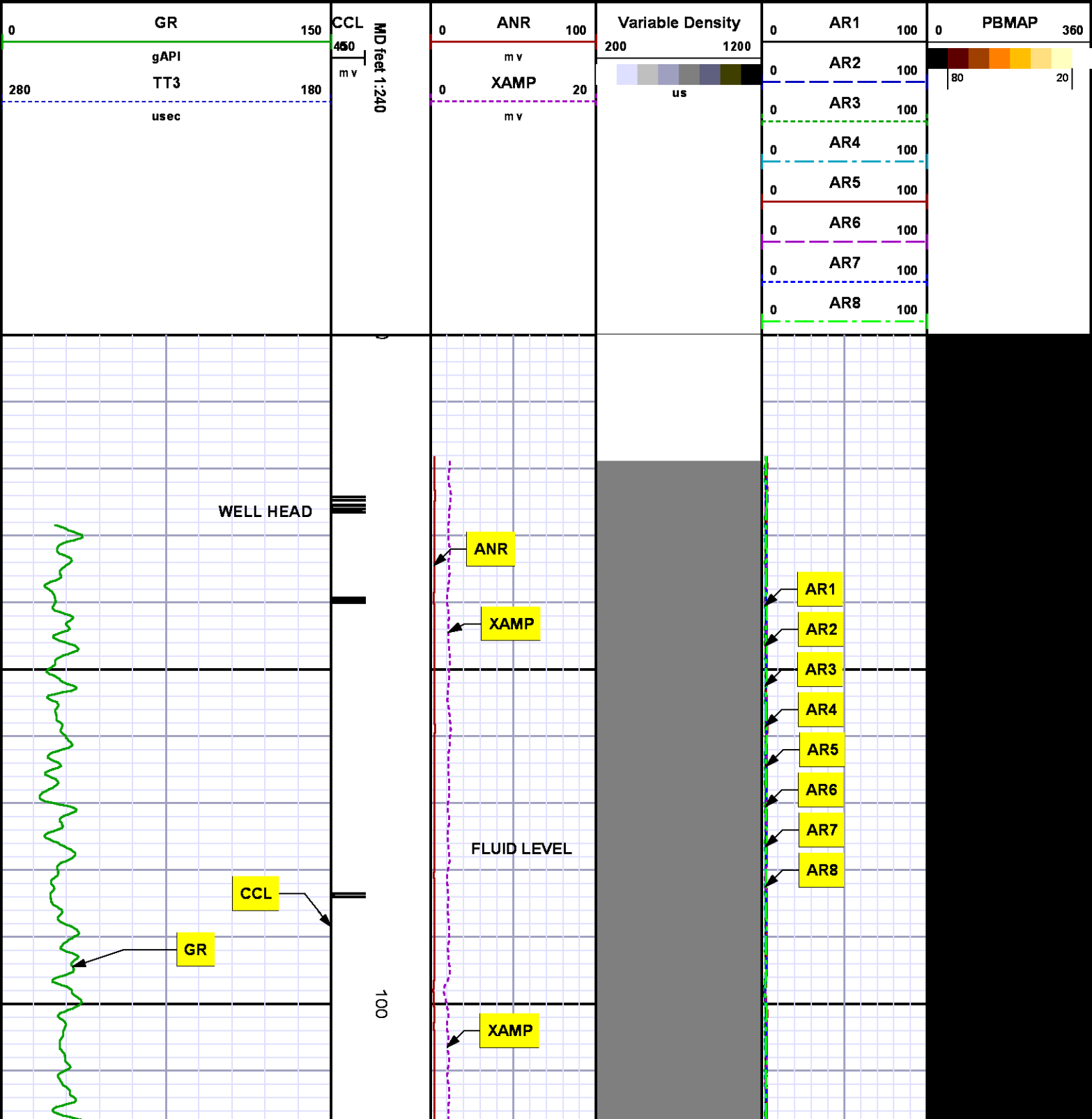
Well : DUGGAN RWF 24-29

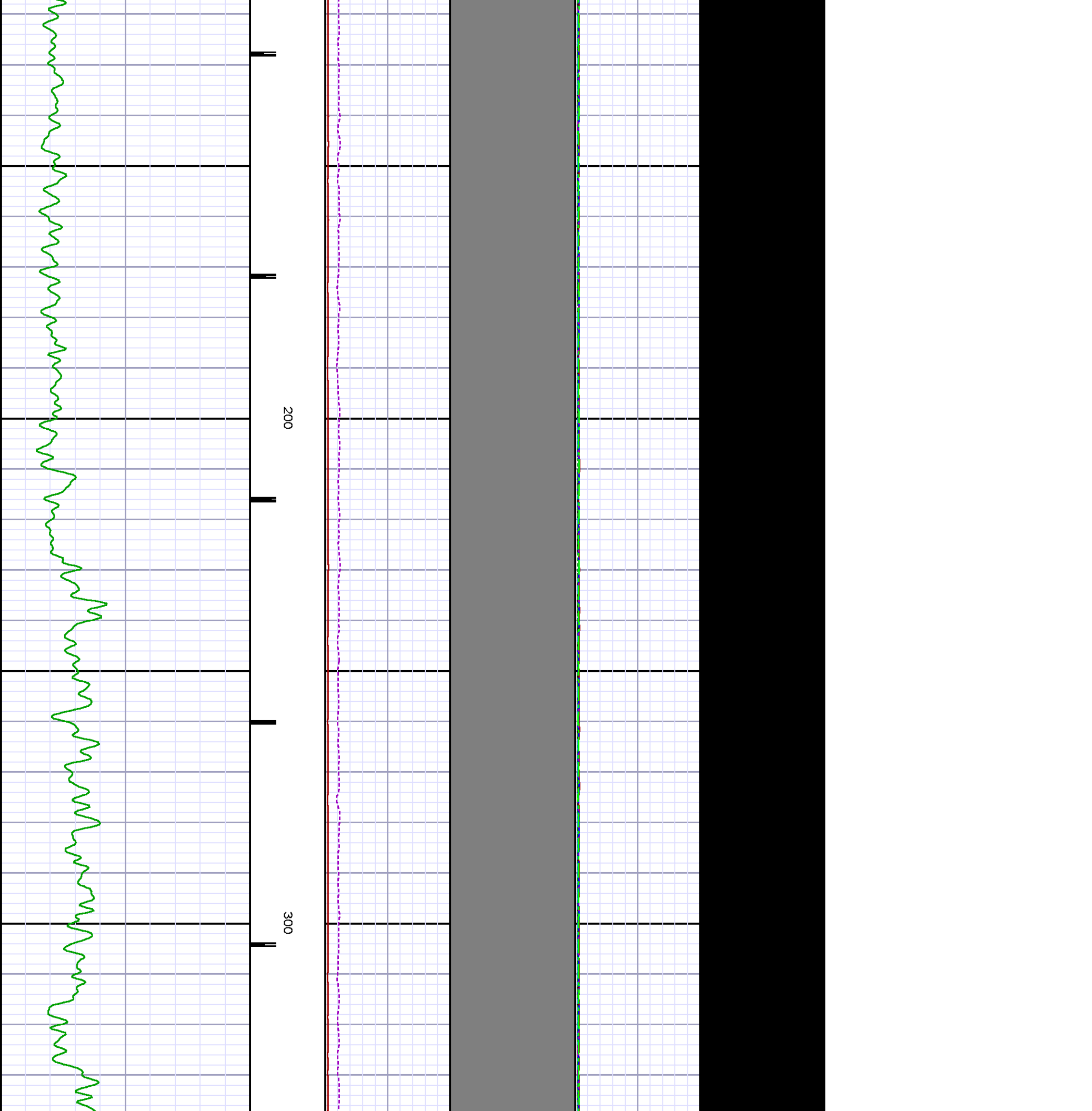
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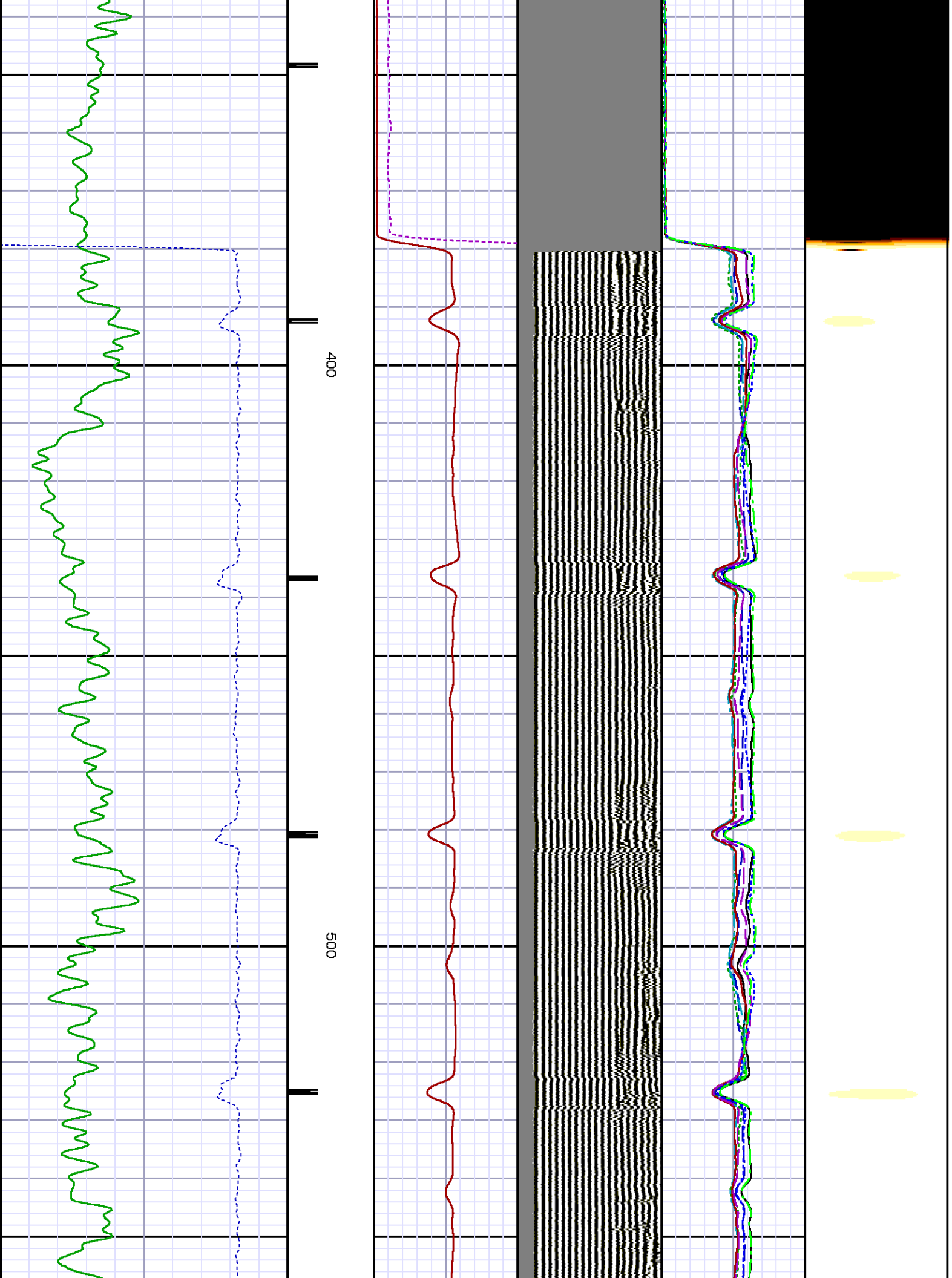
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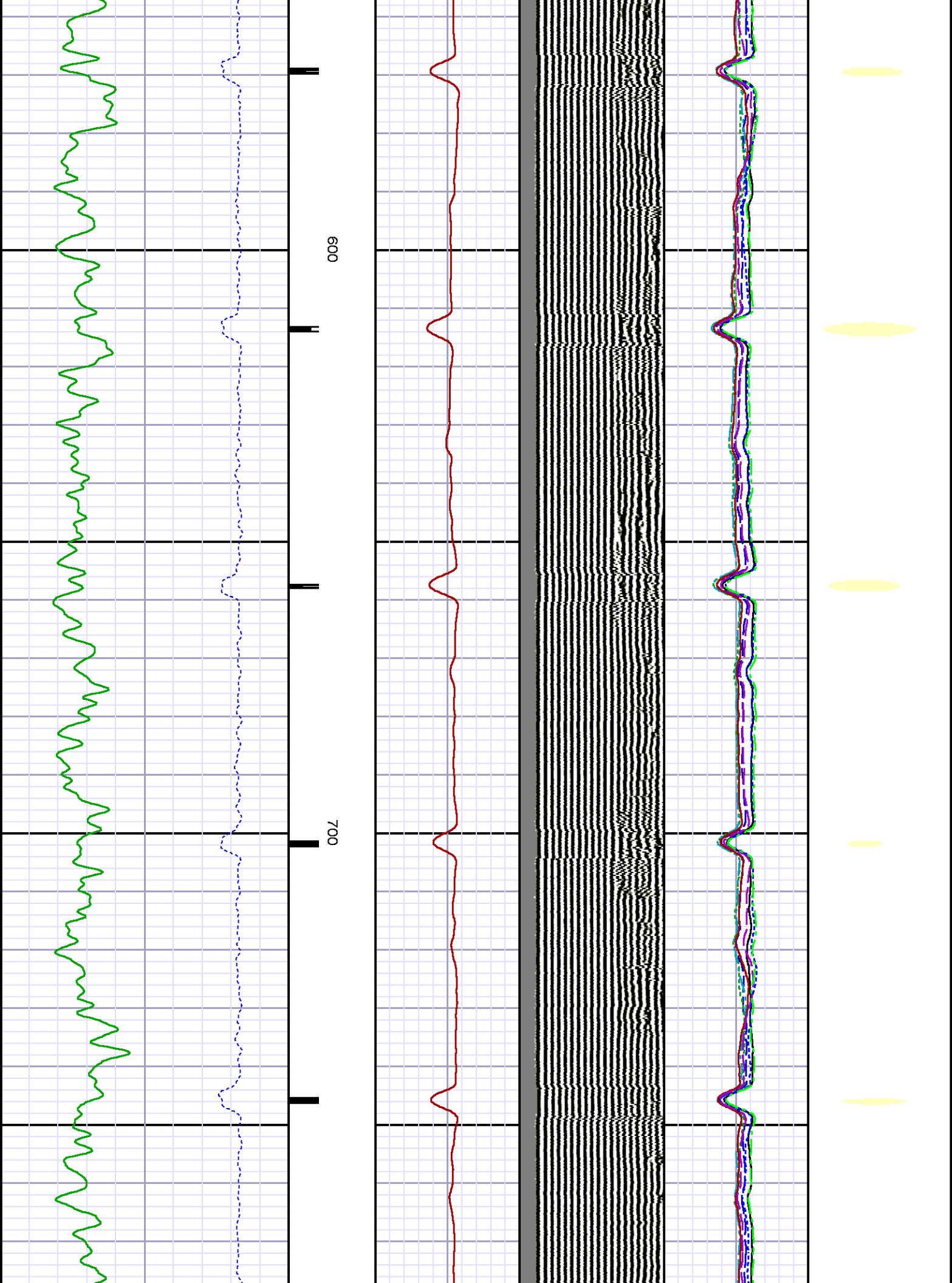
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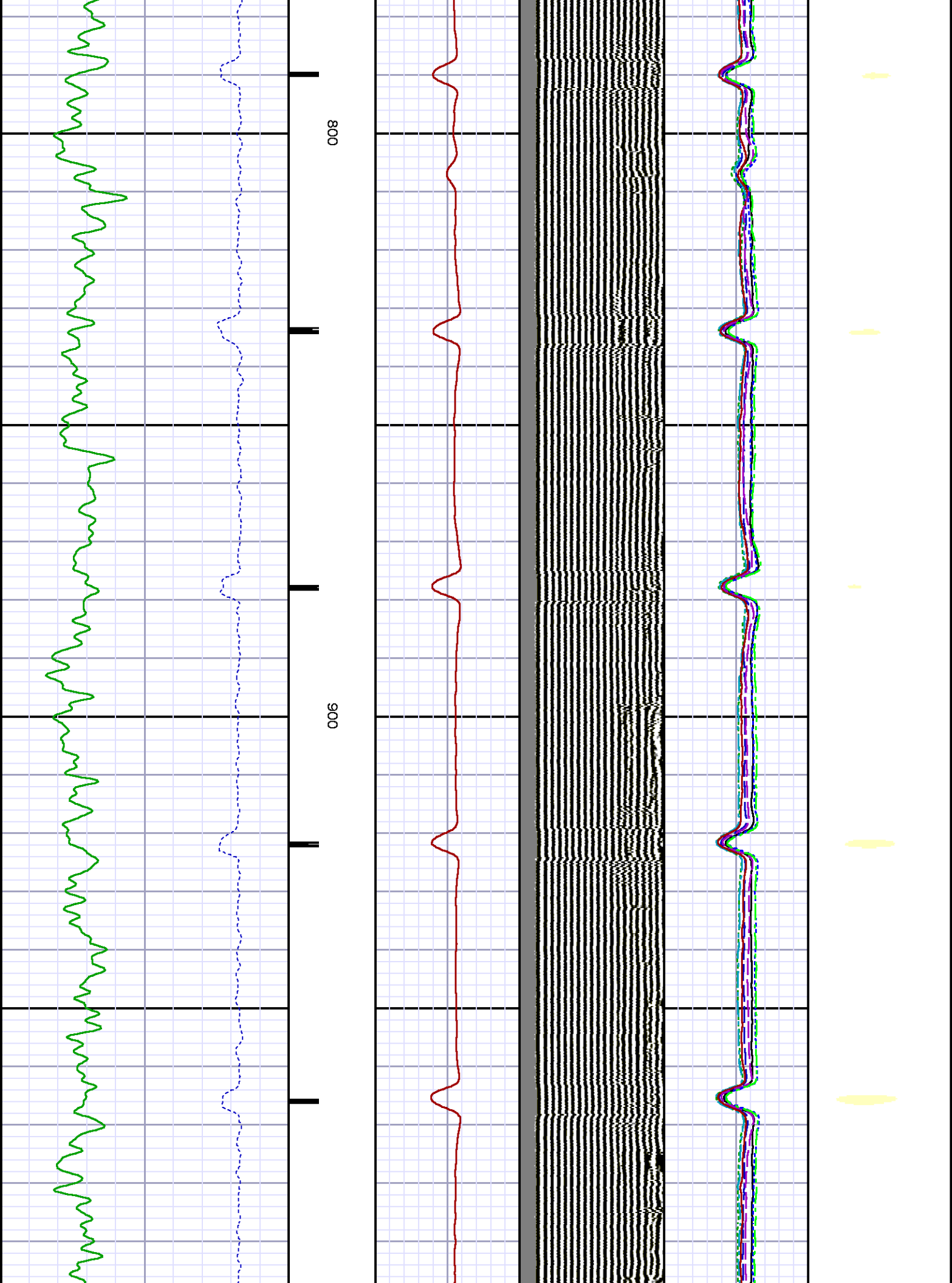
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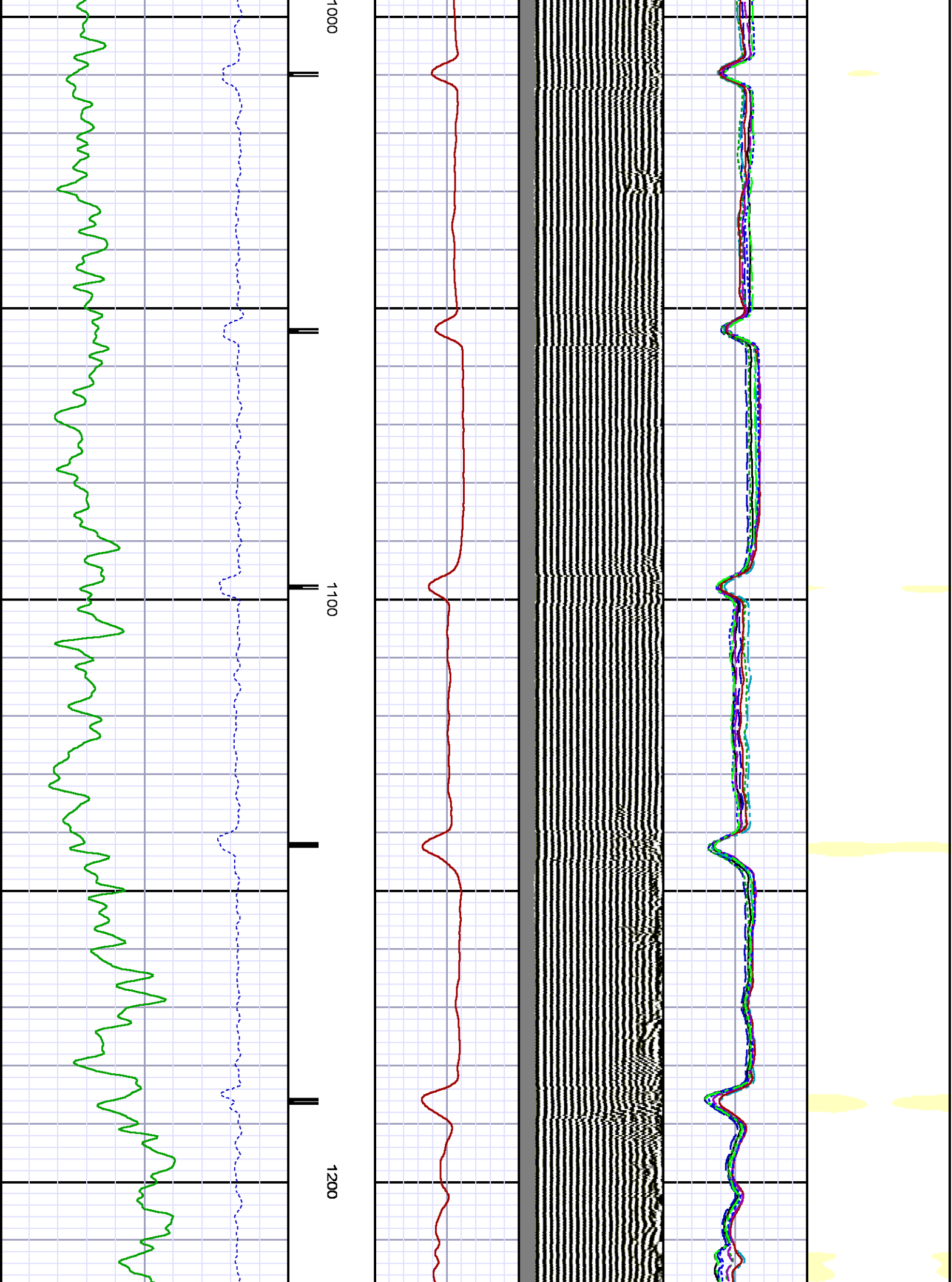


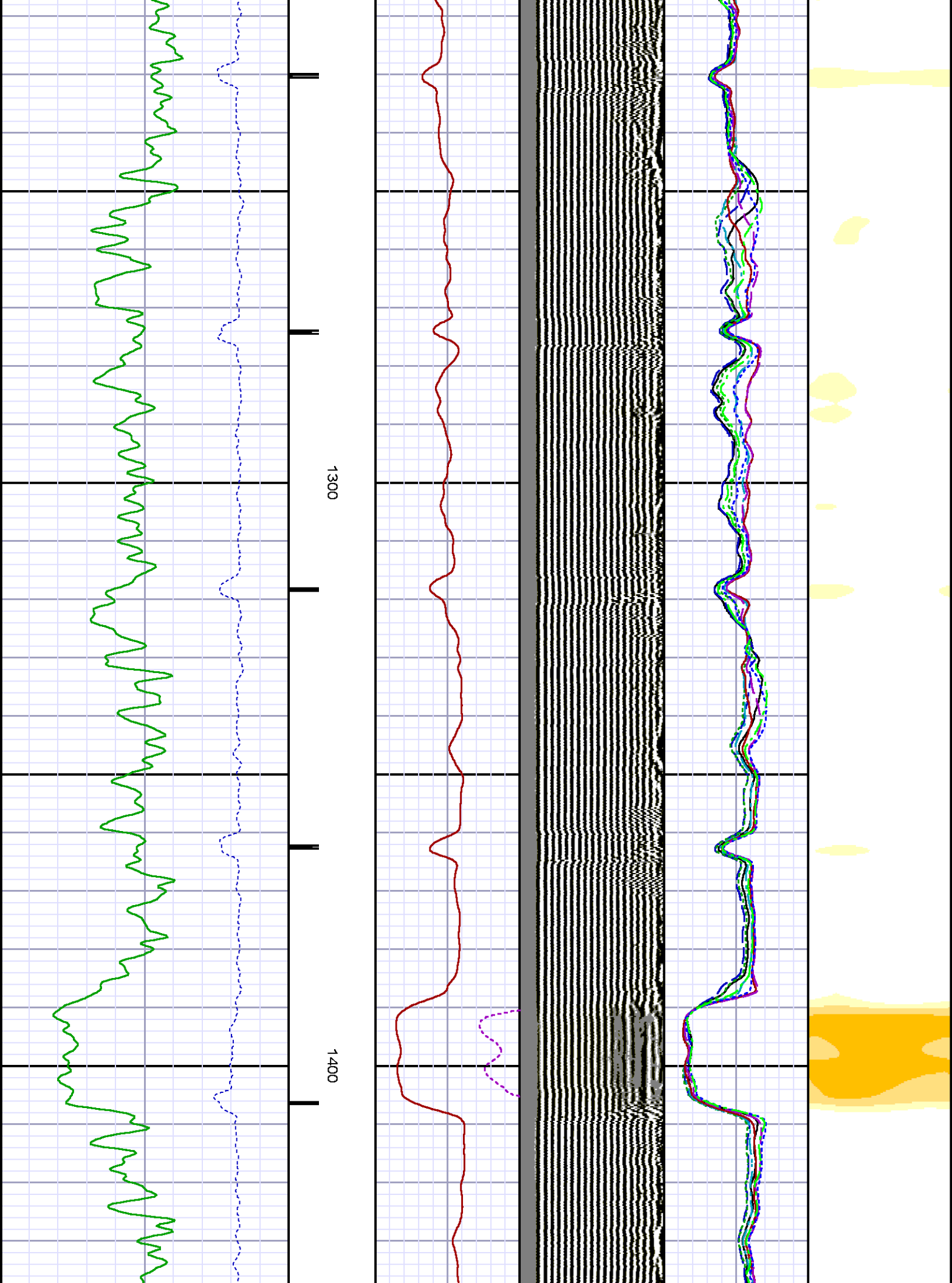


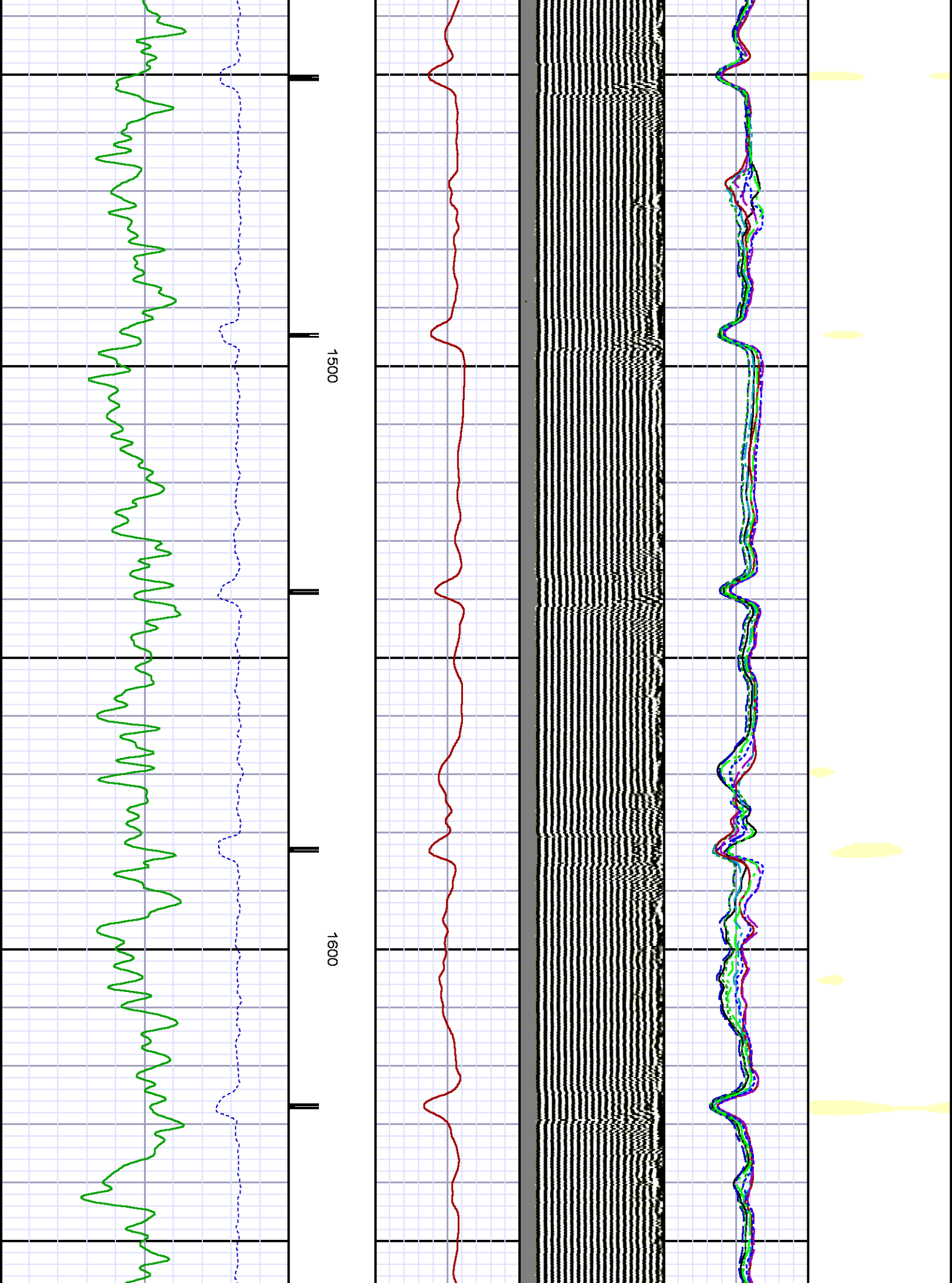


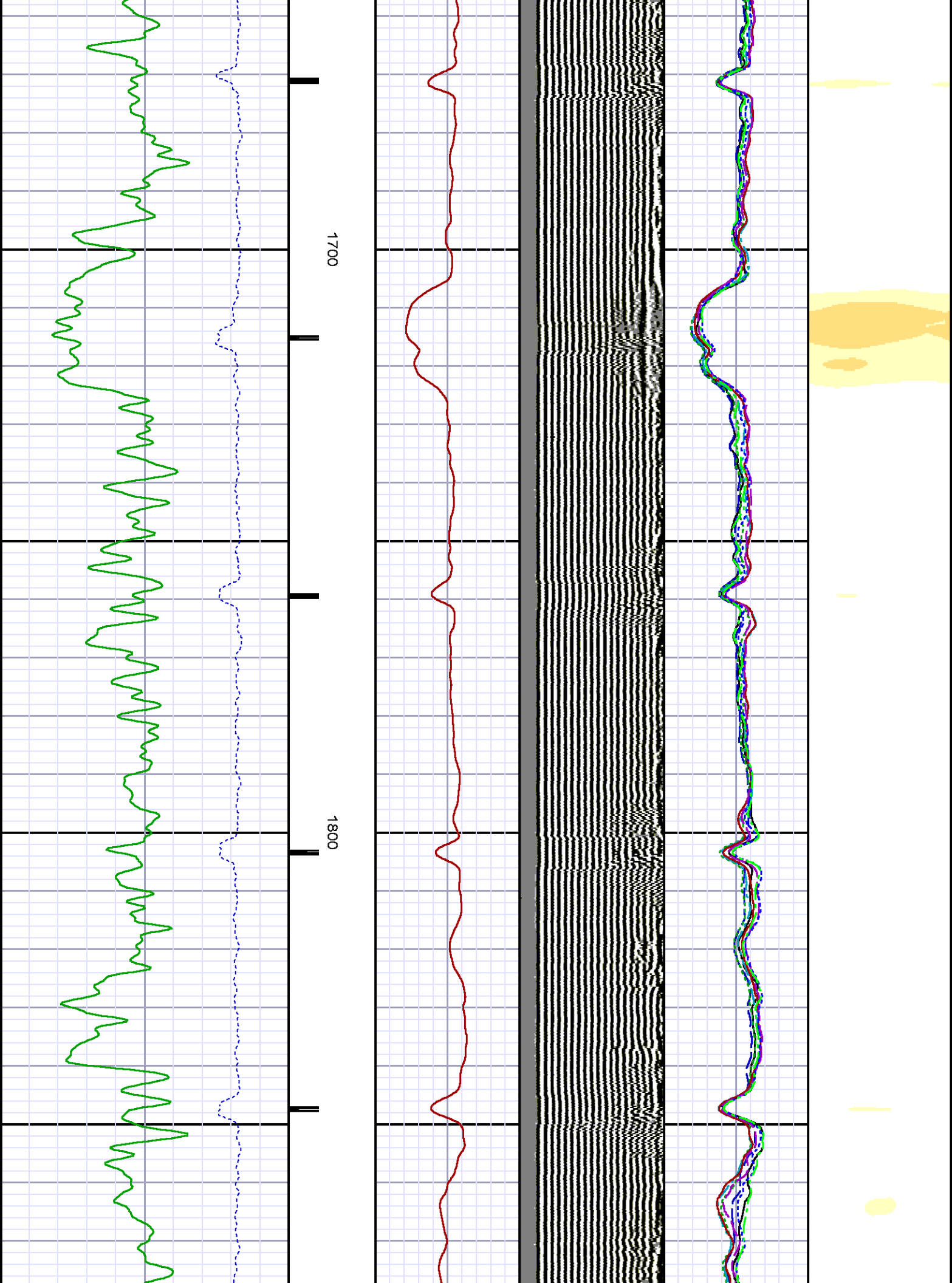


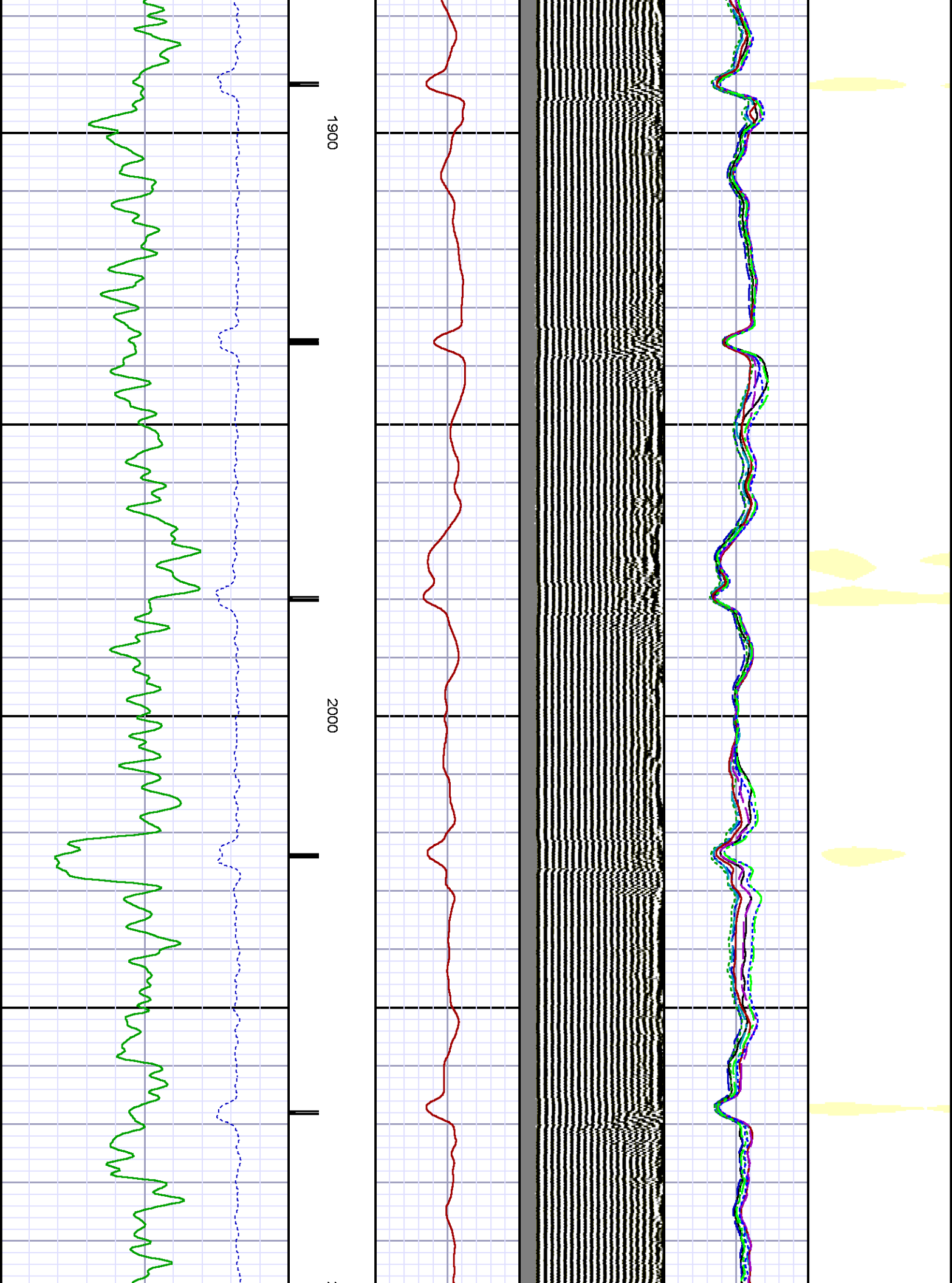


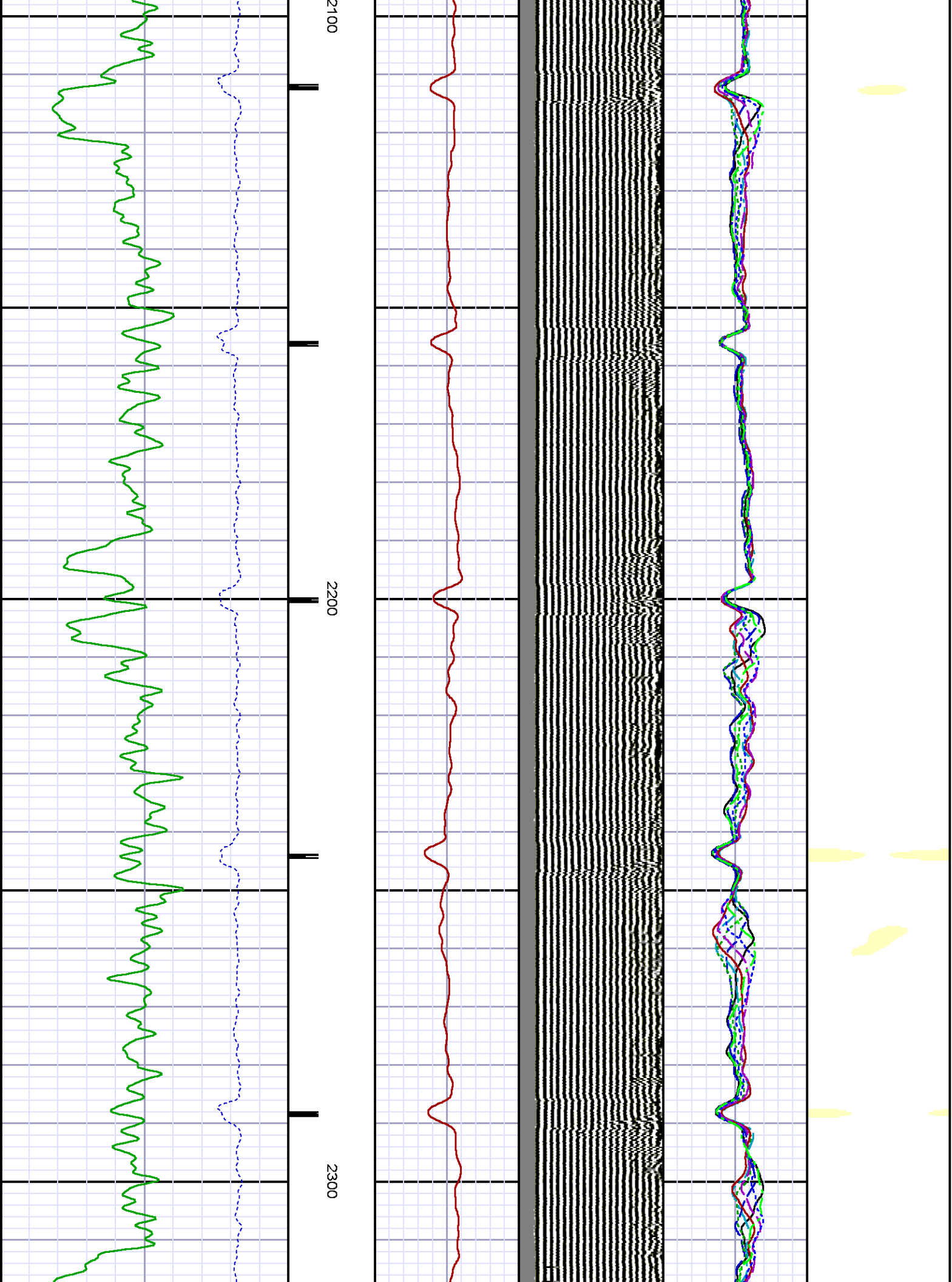


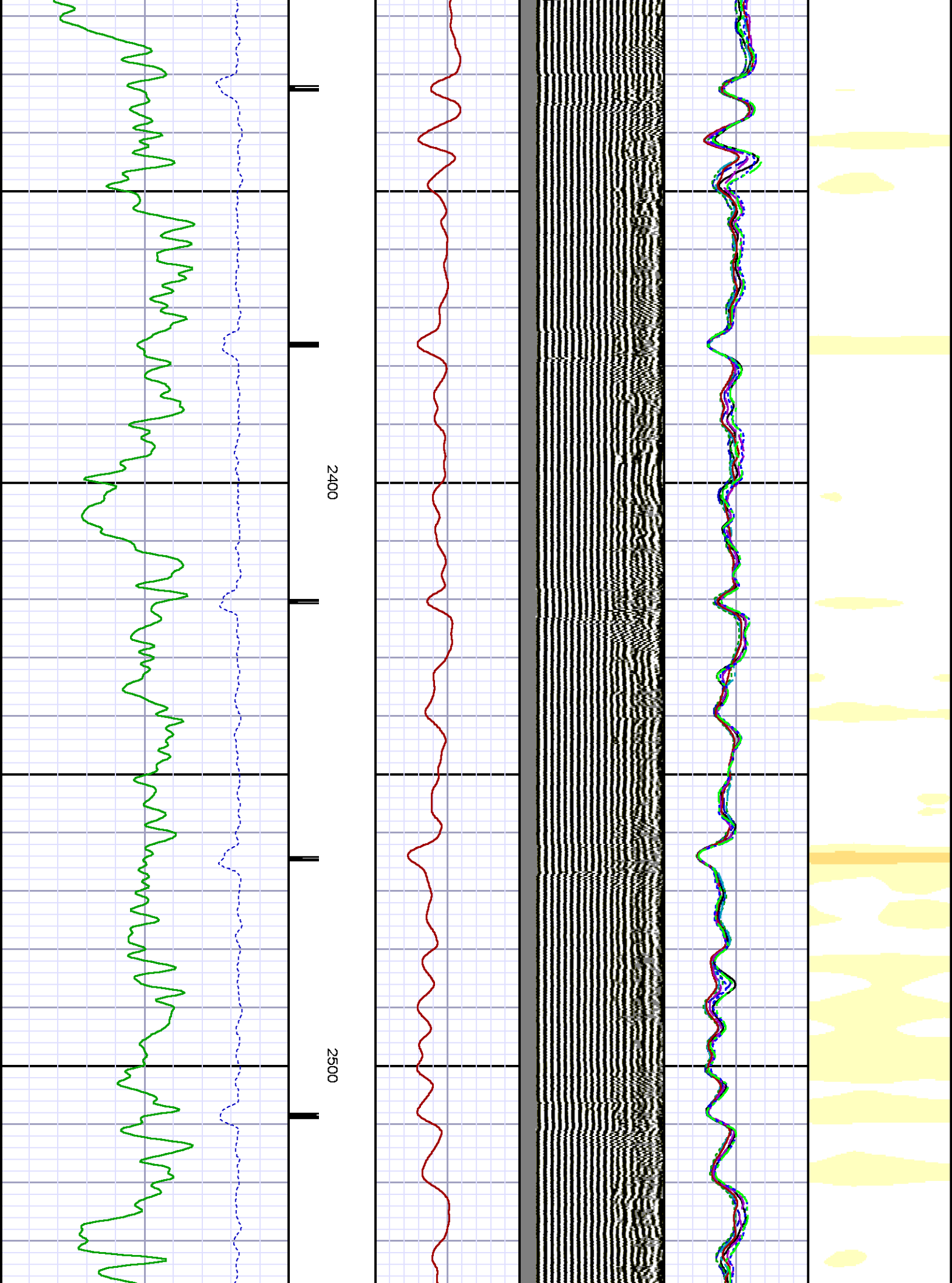


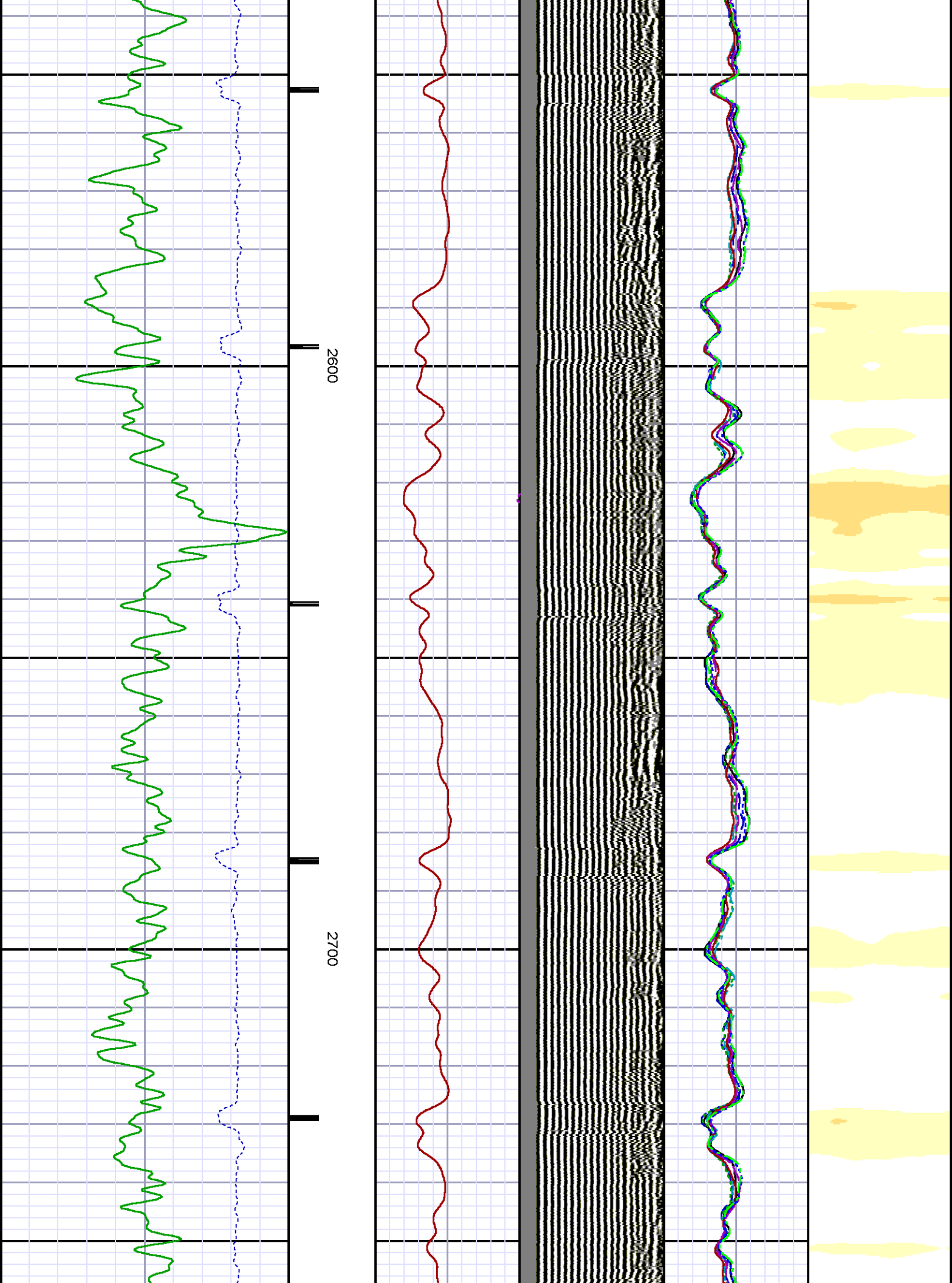


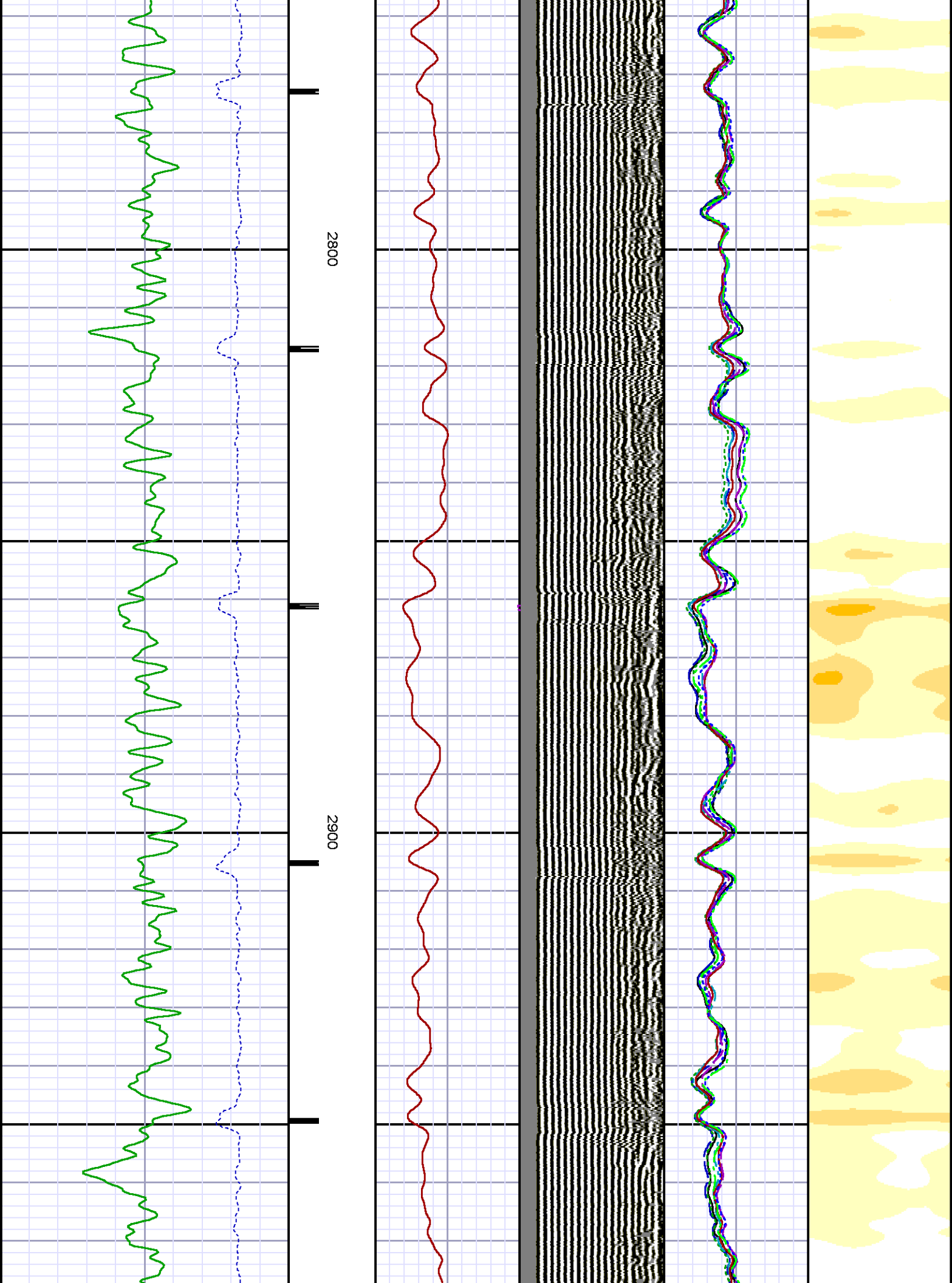


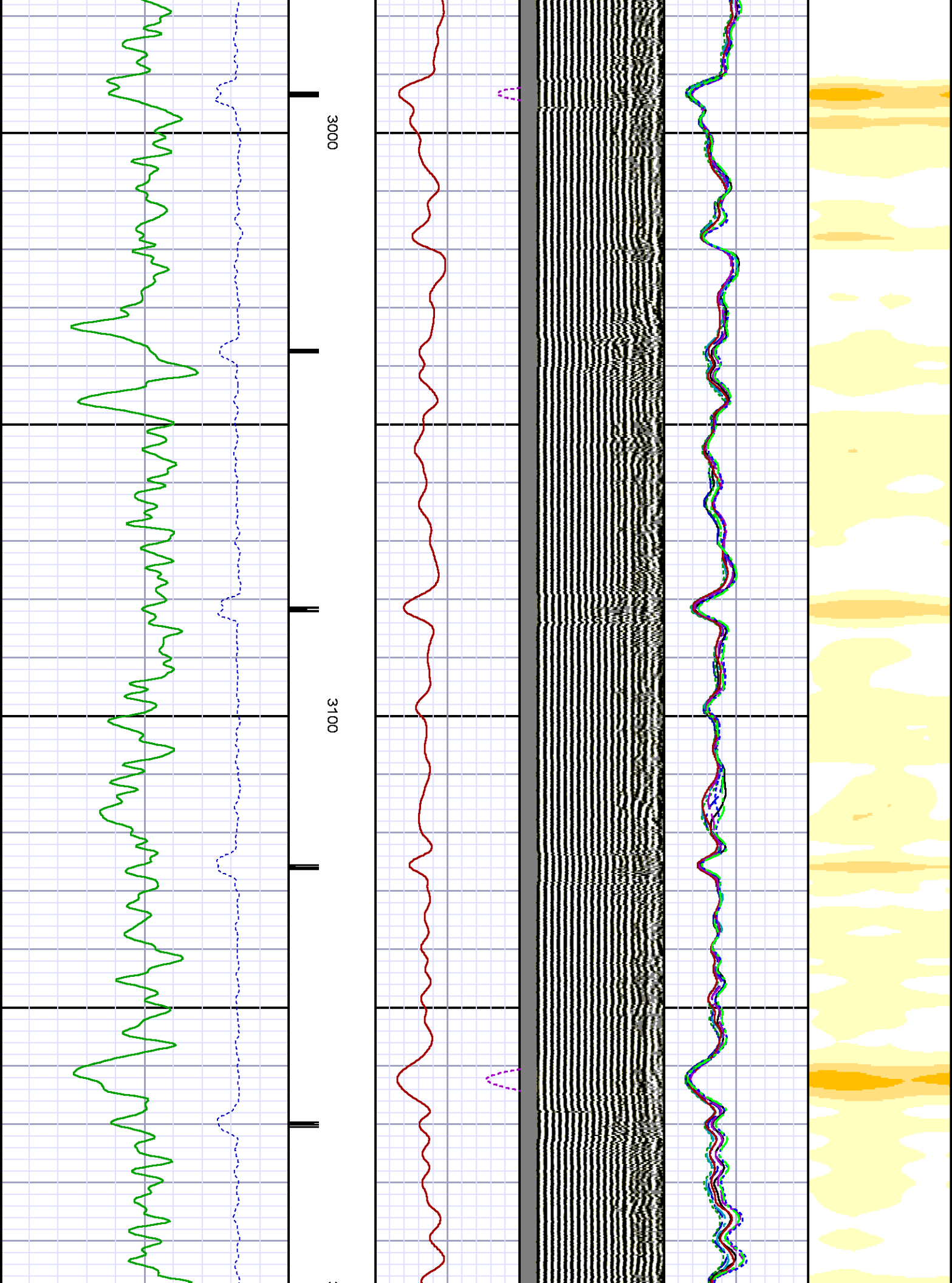


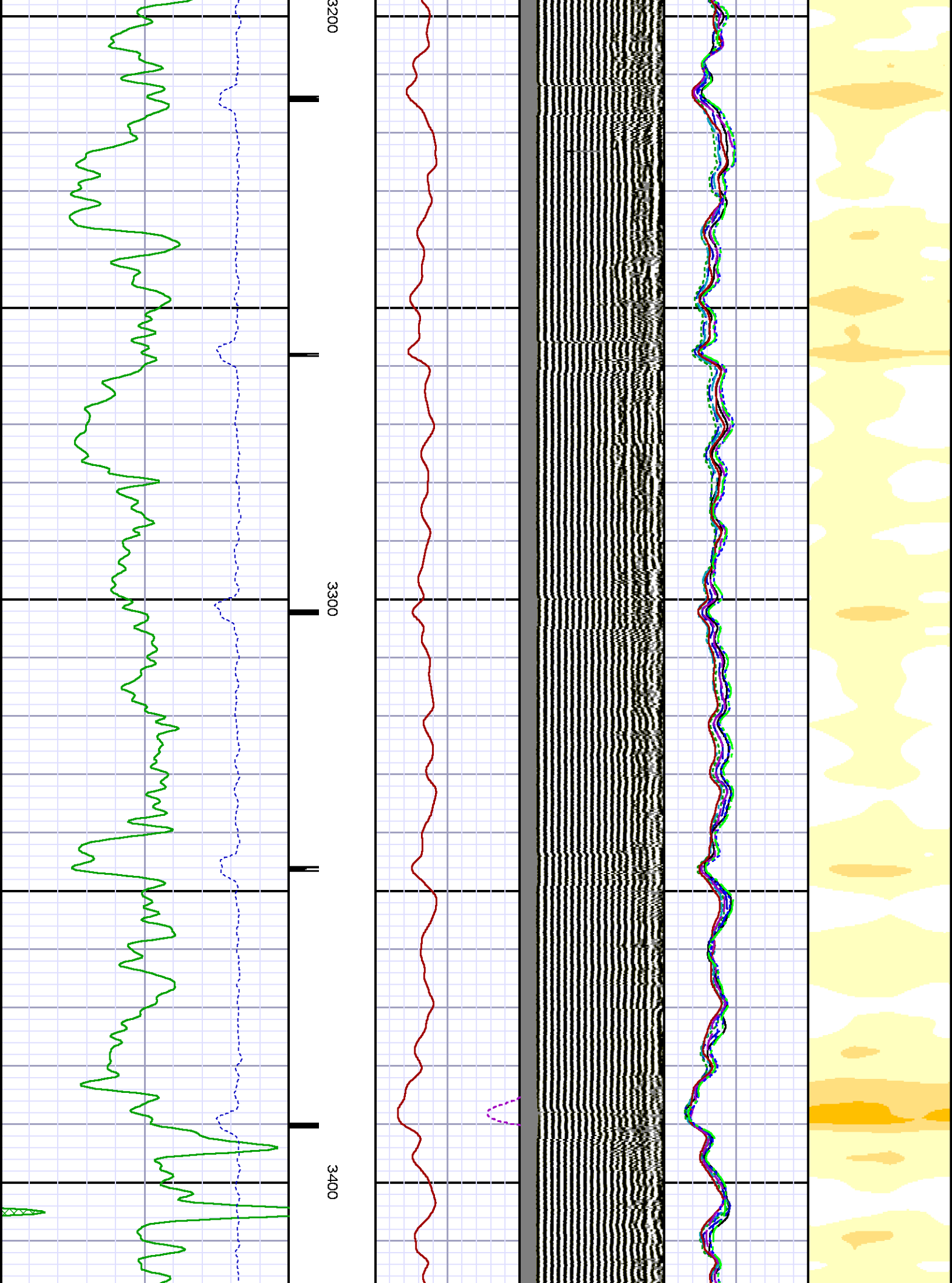


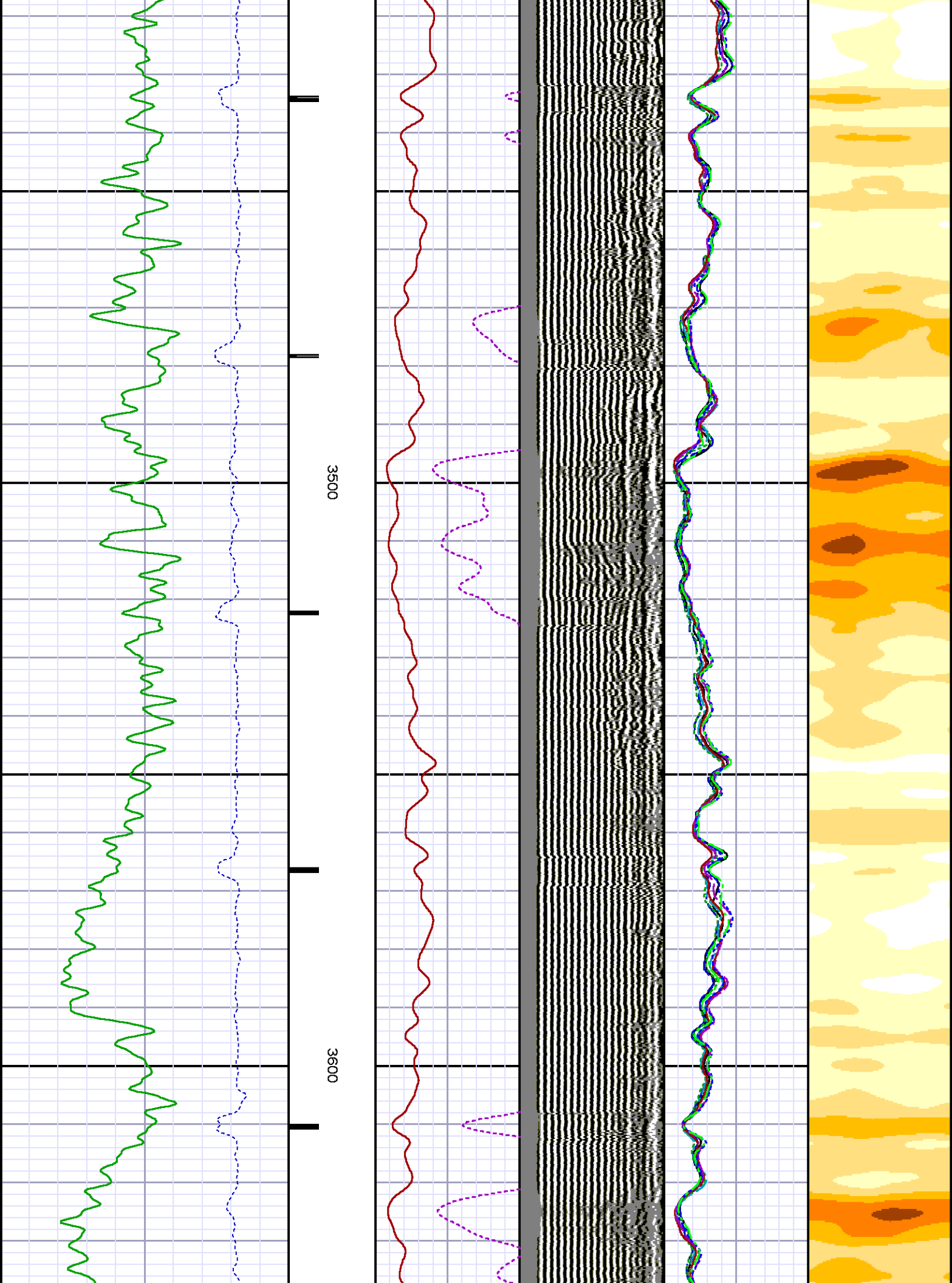


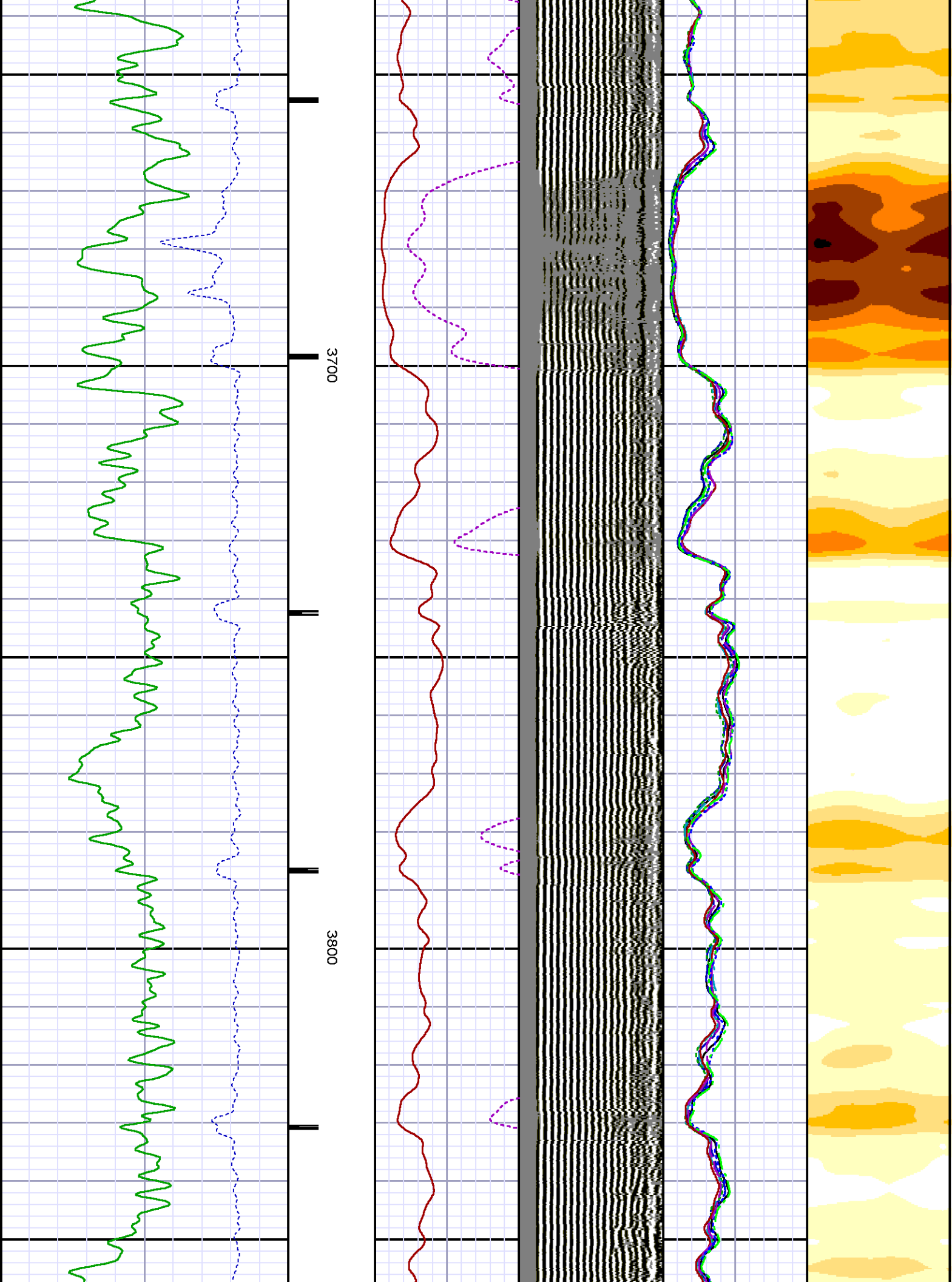


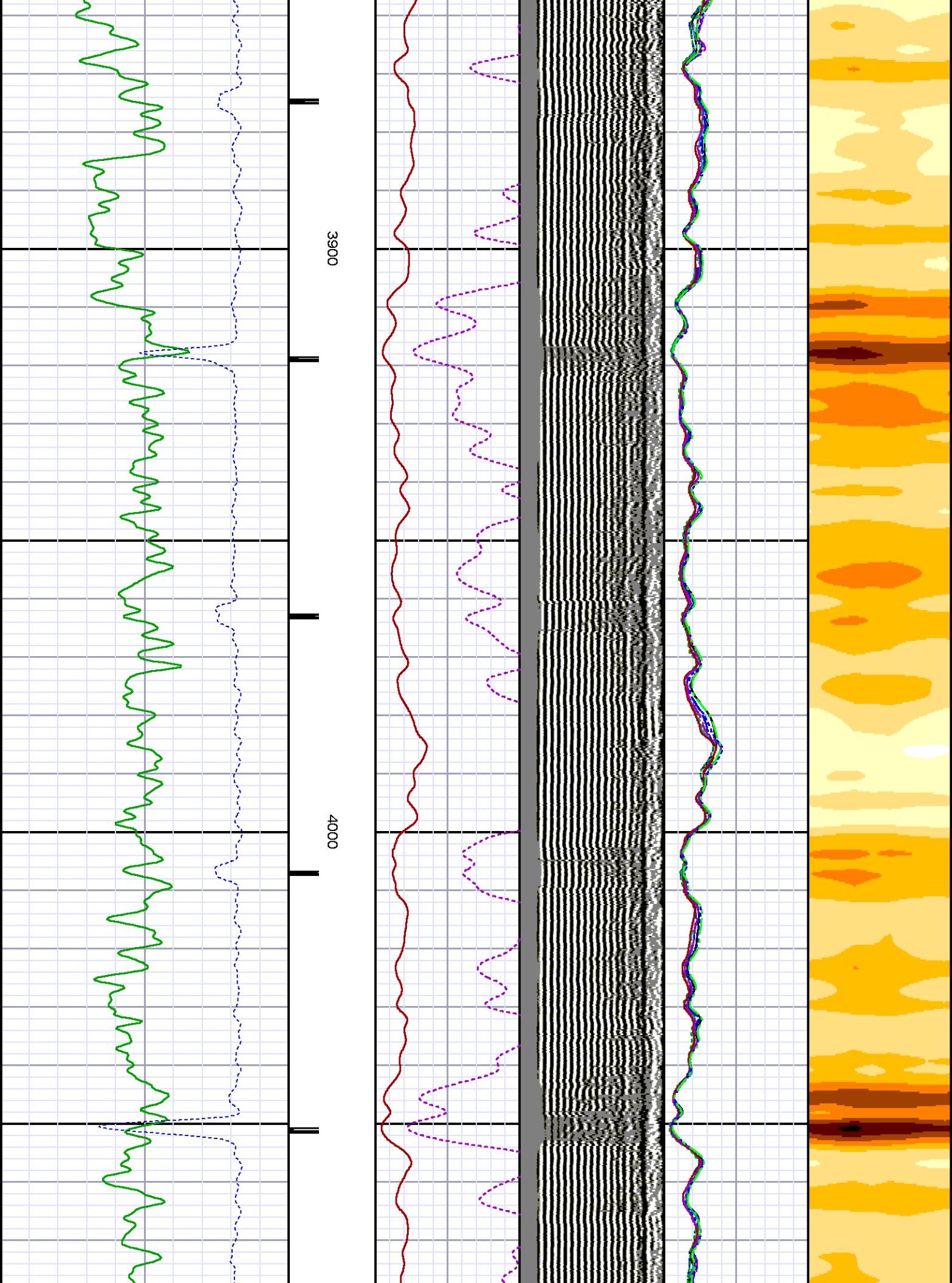


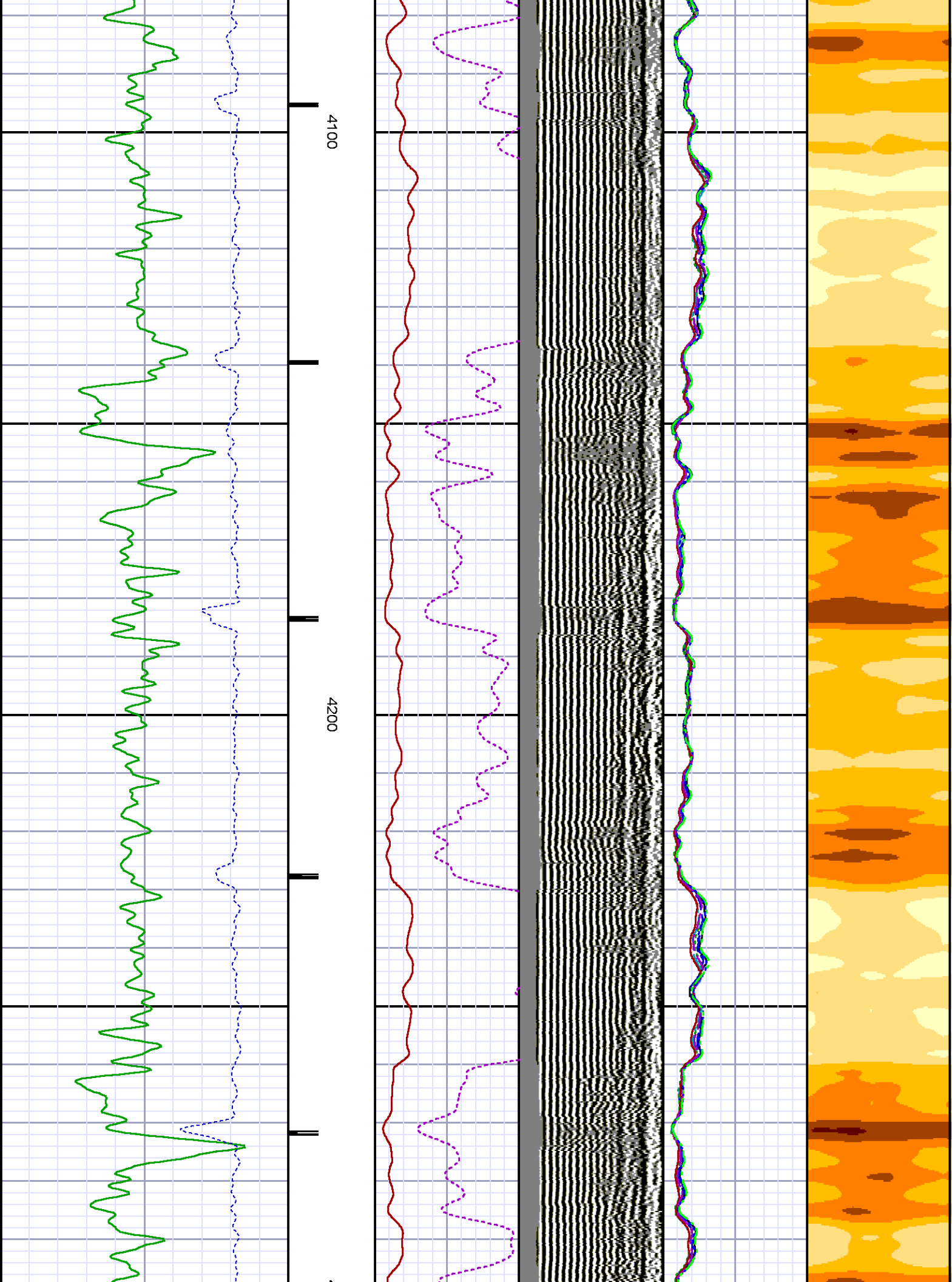


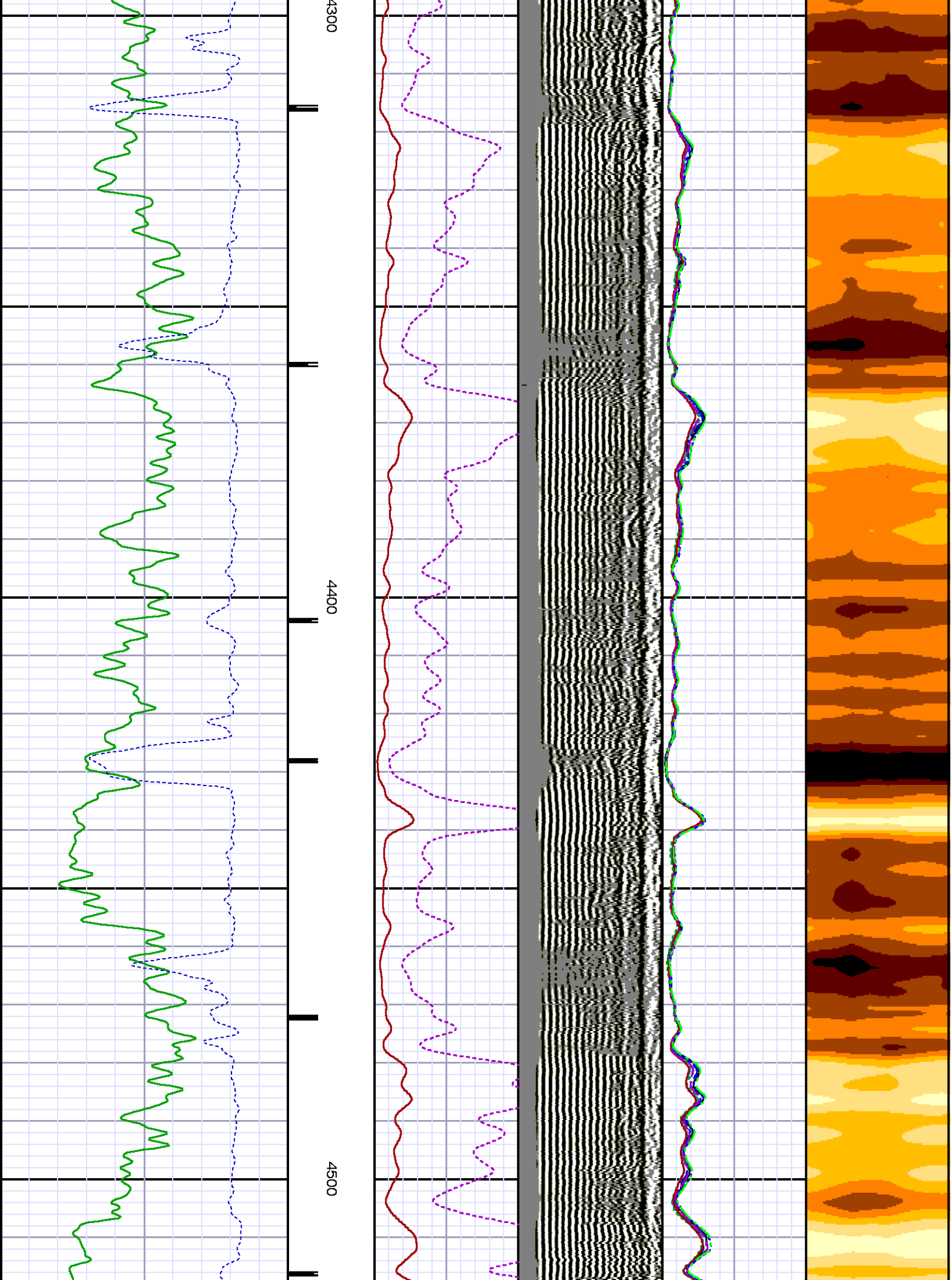


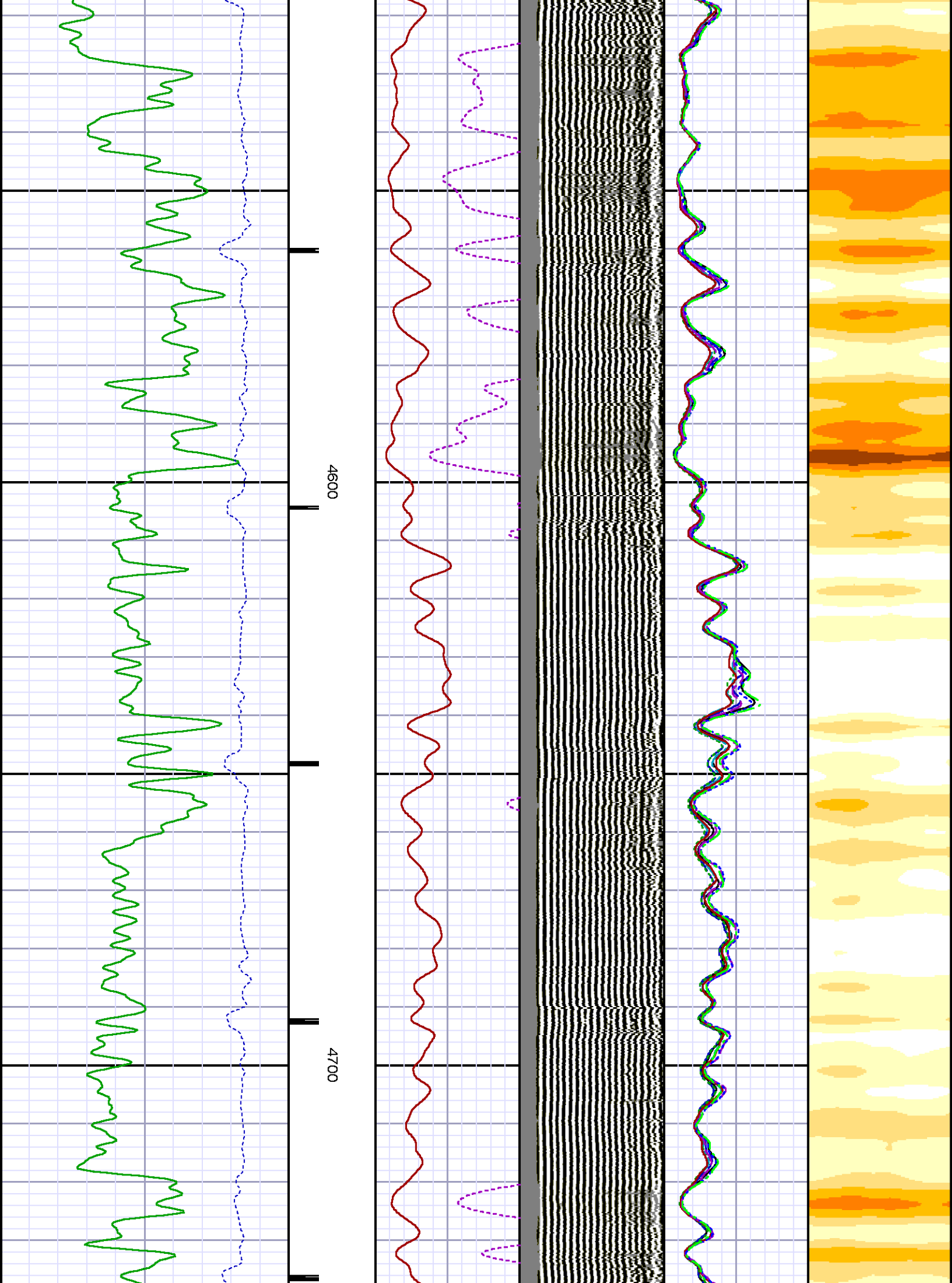


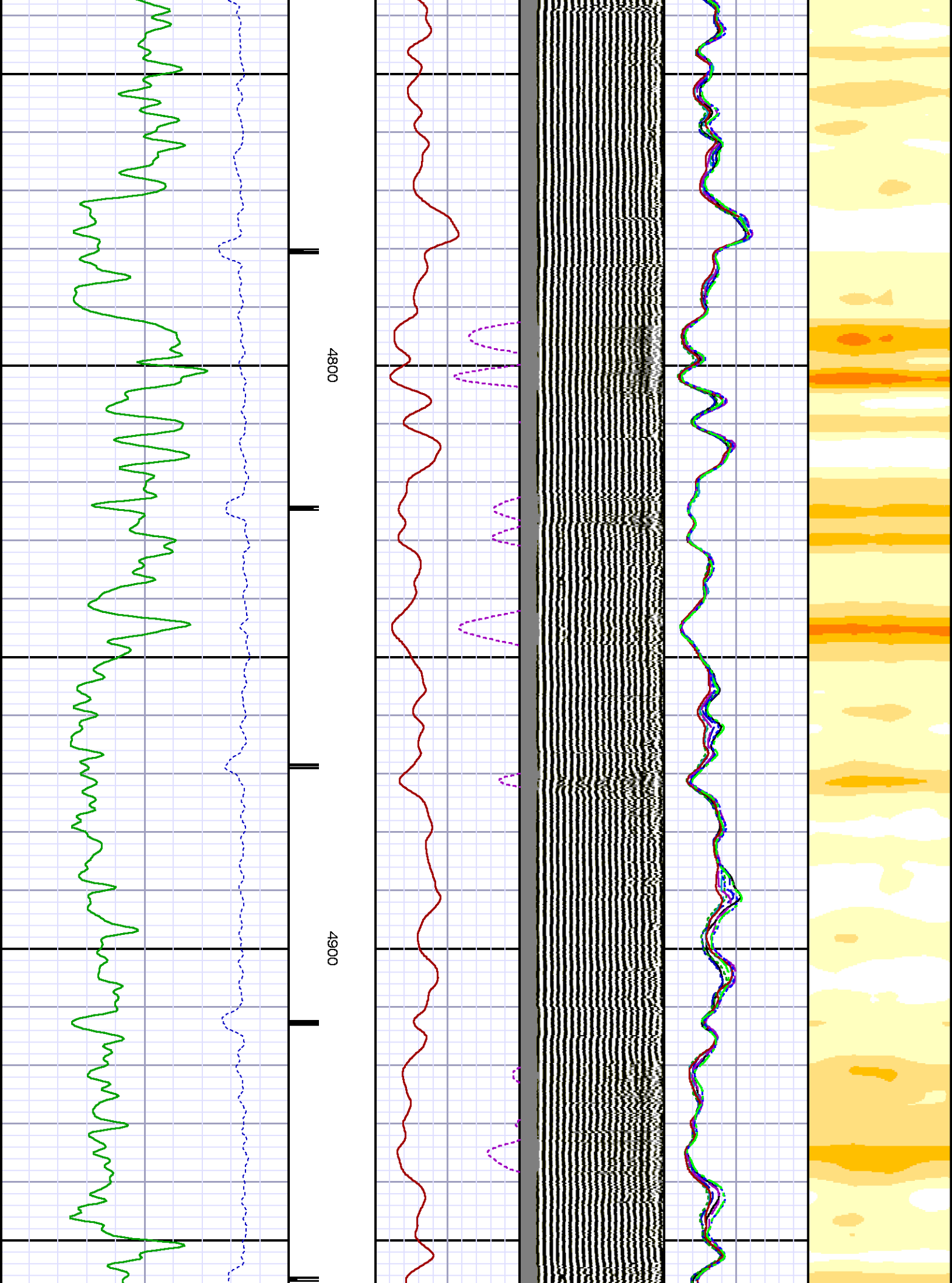


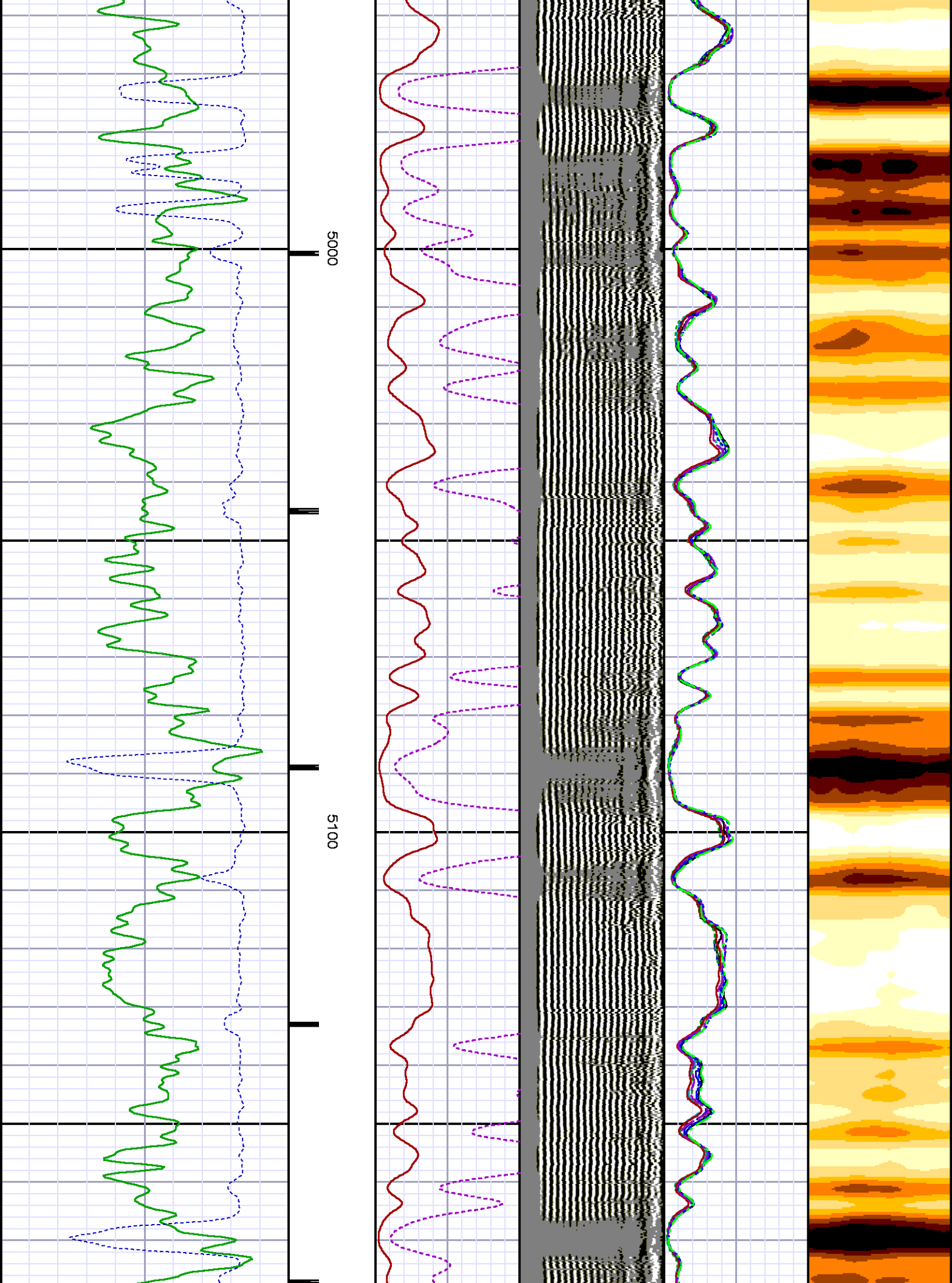


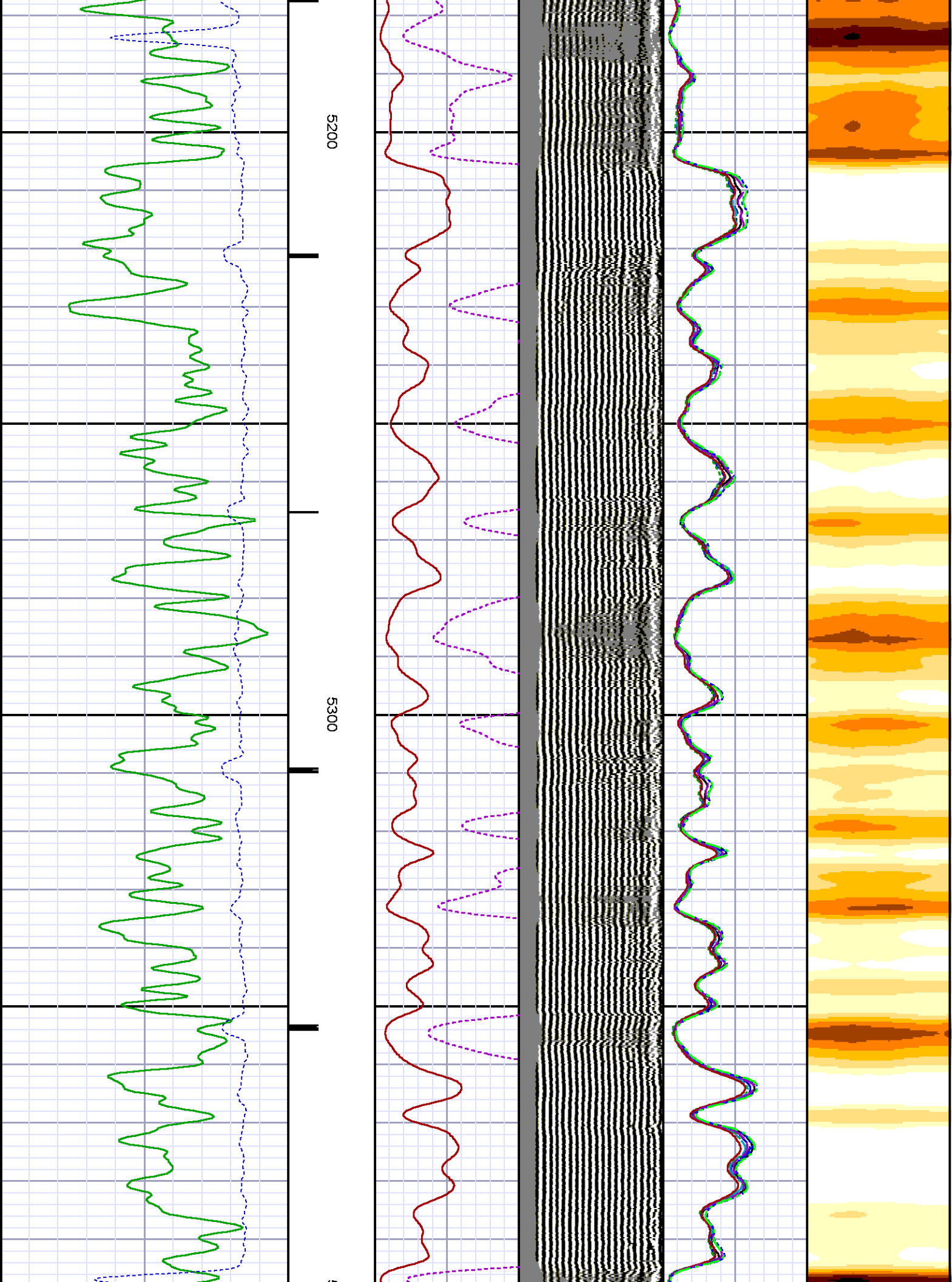


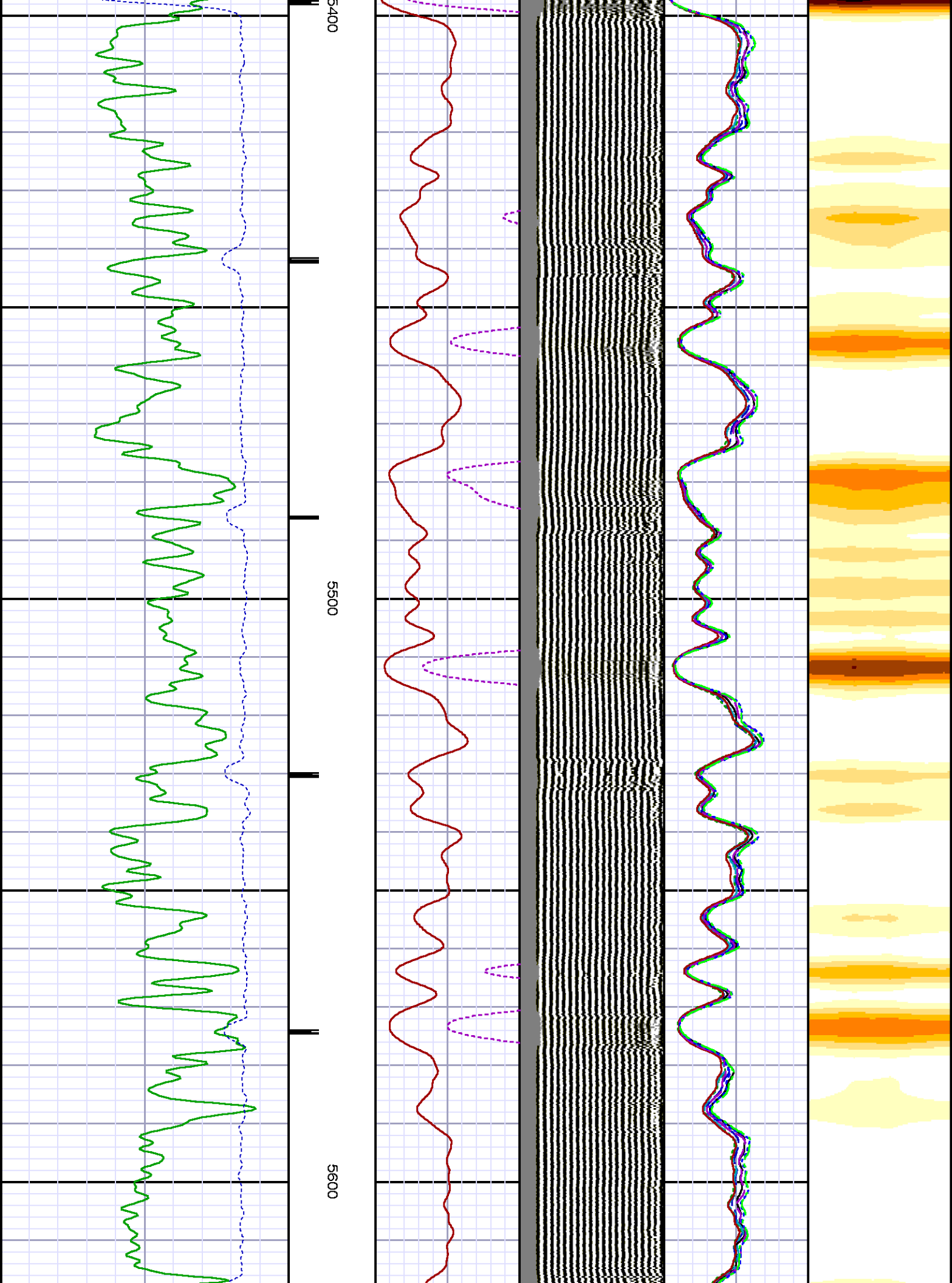


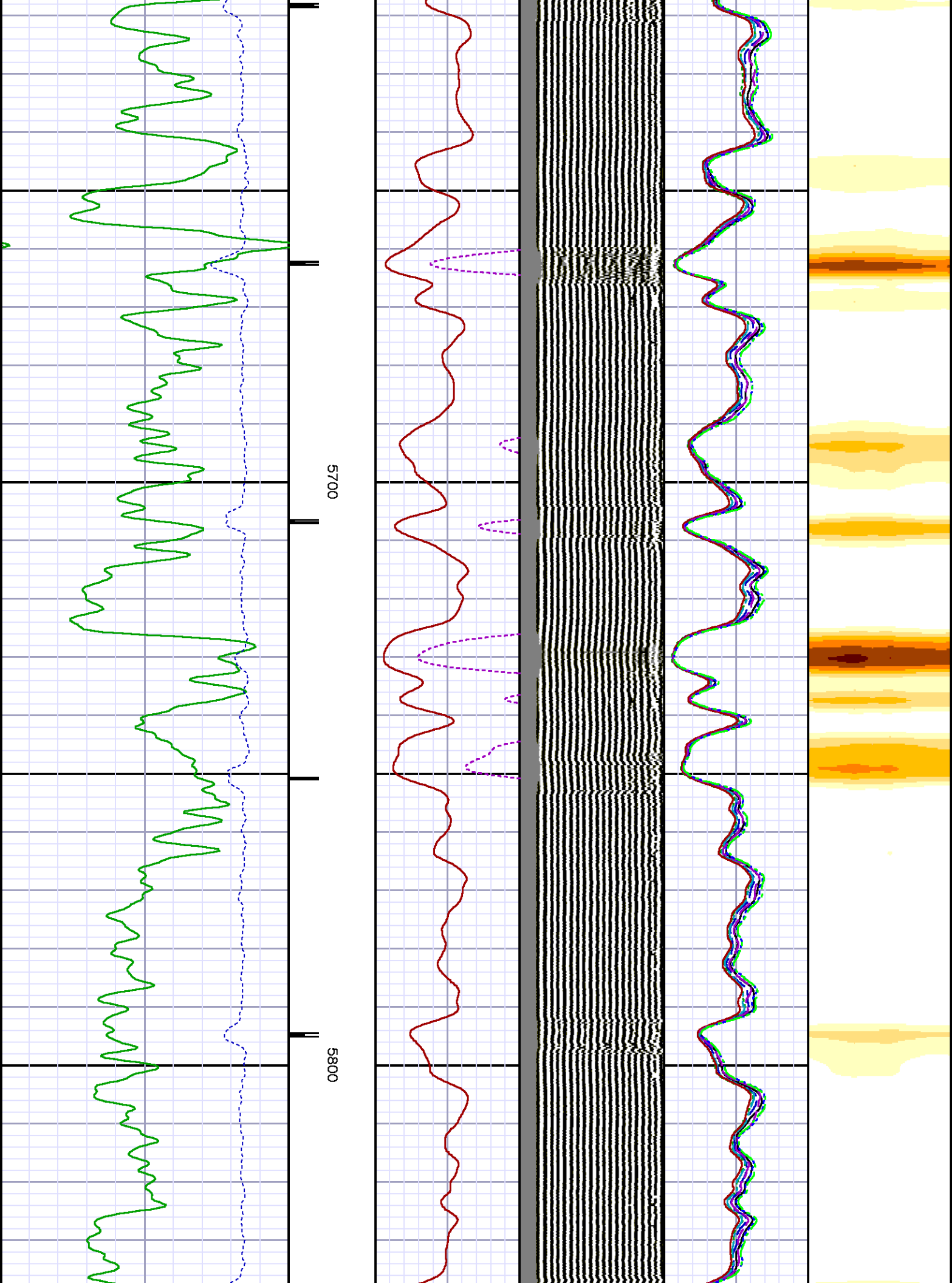


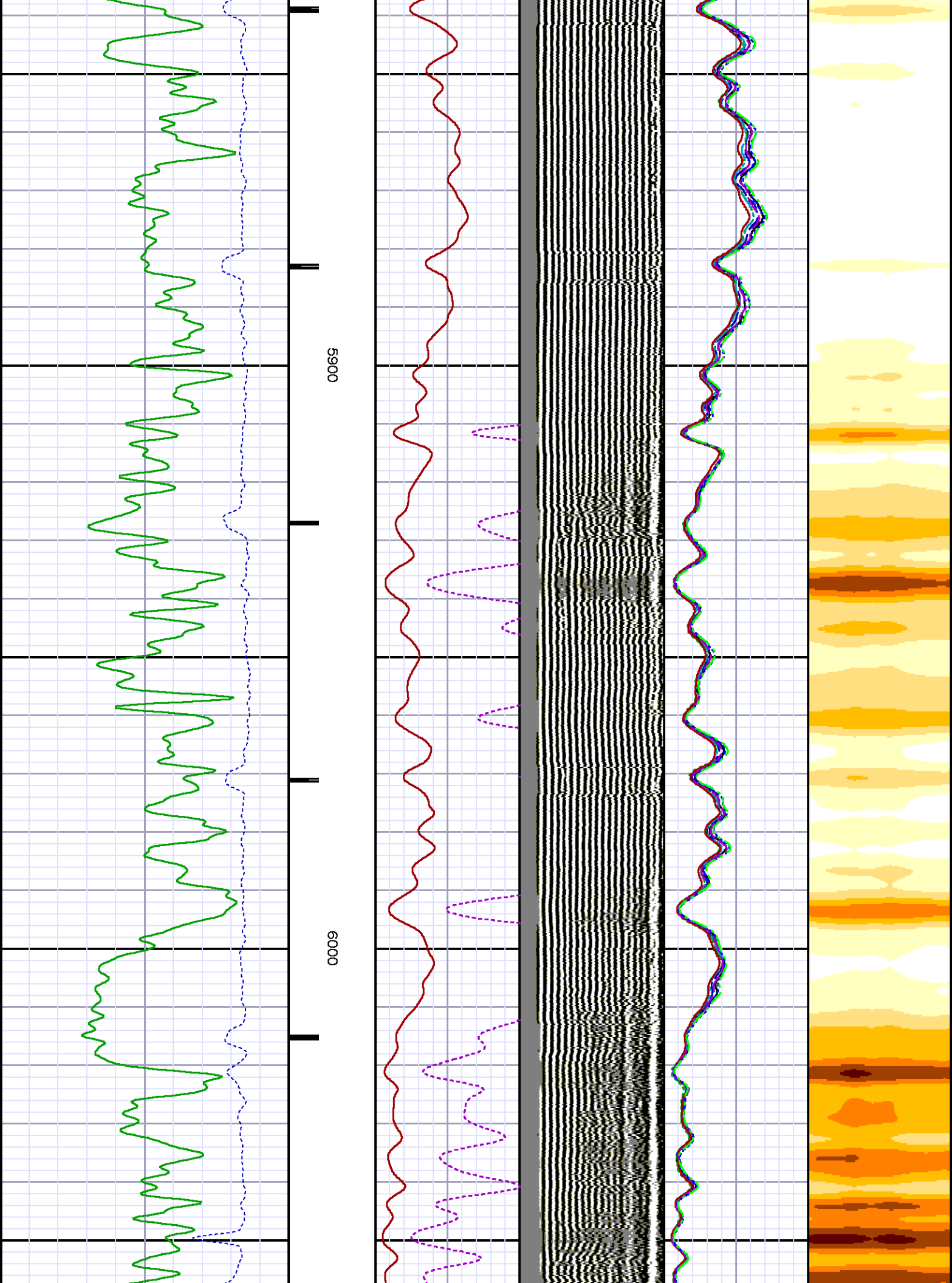


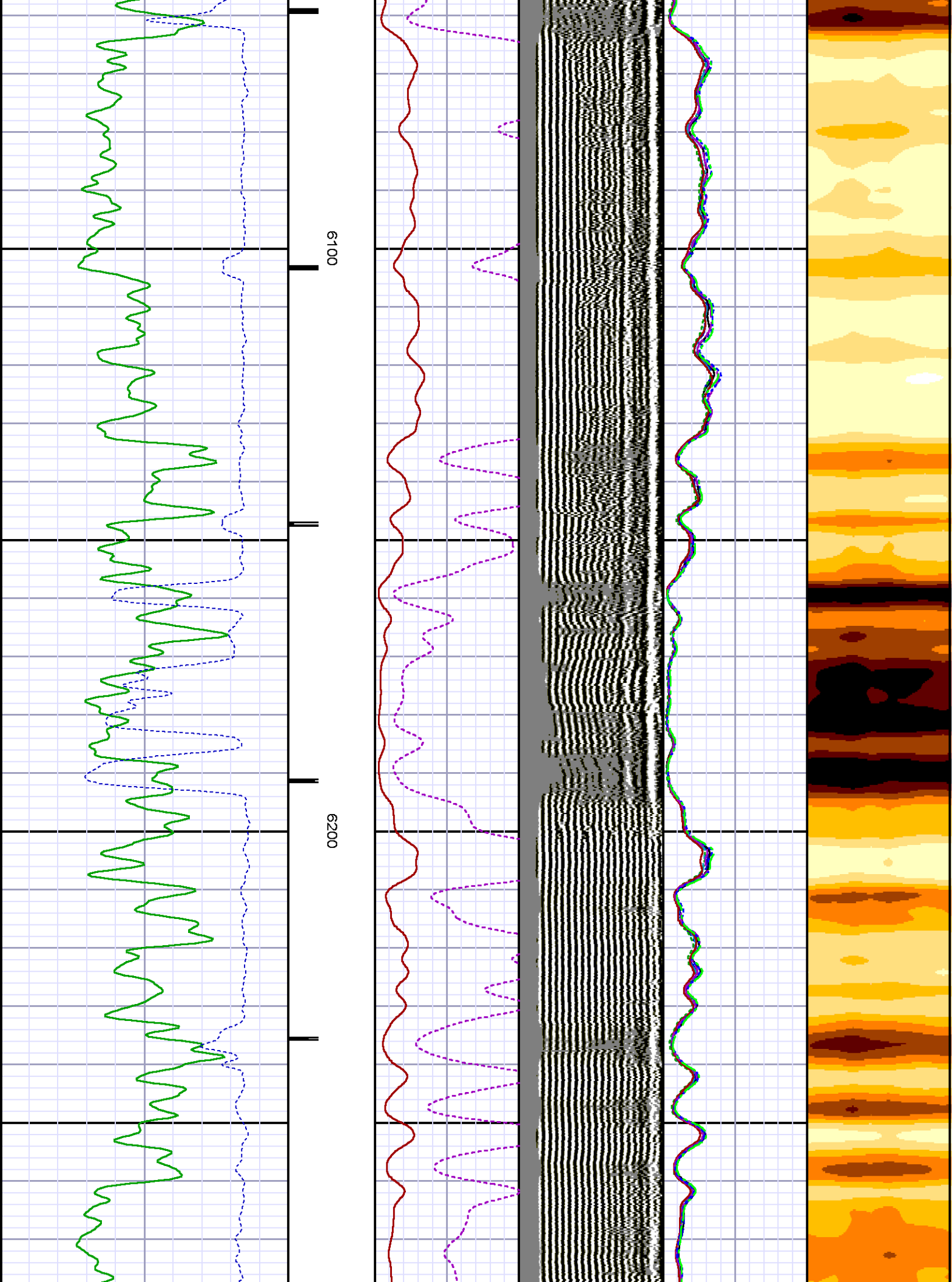


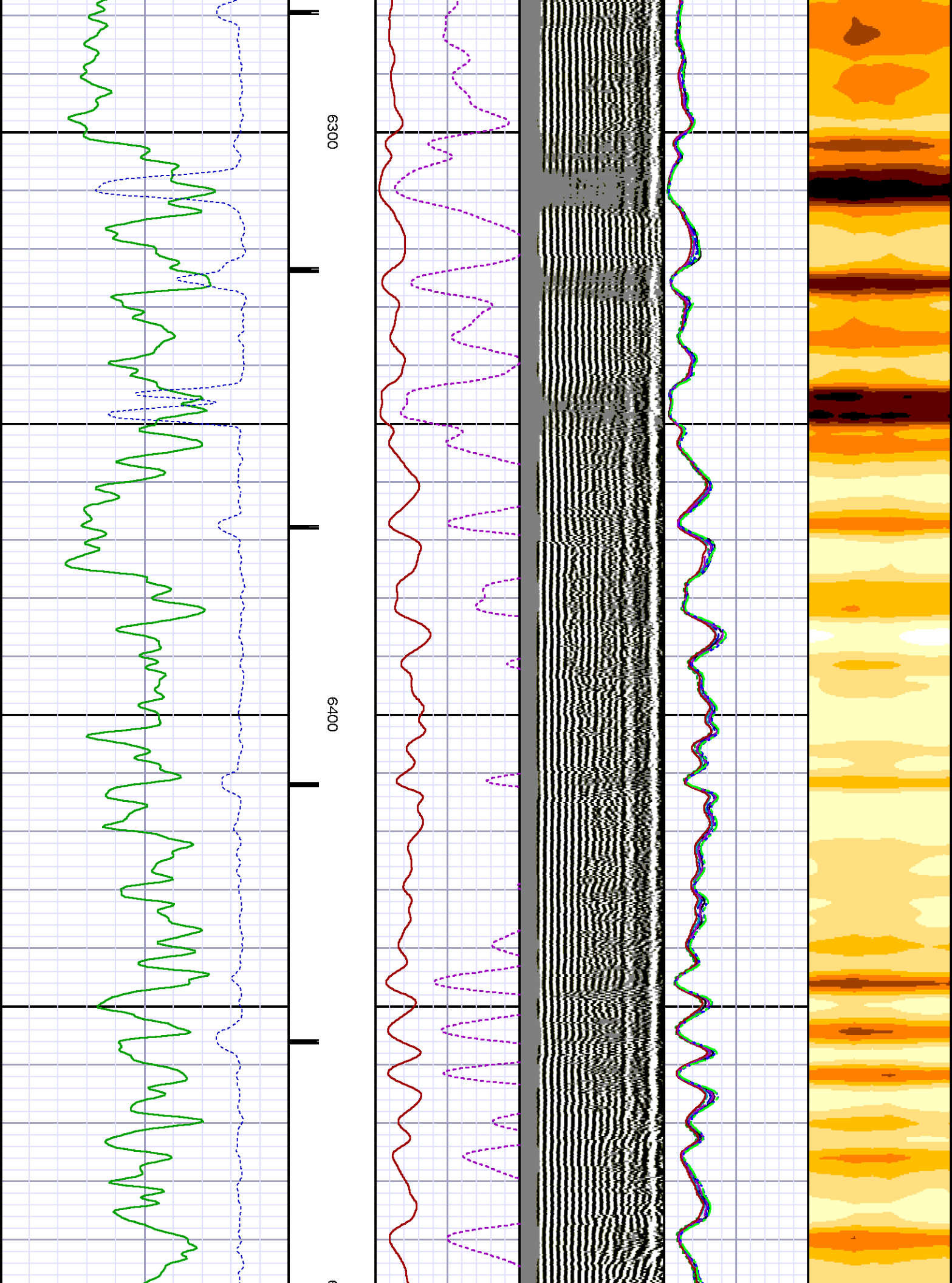


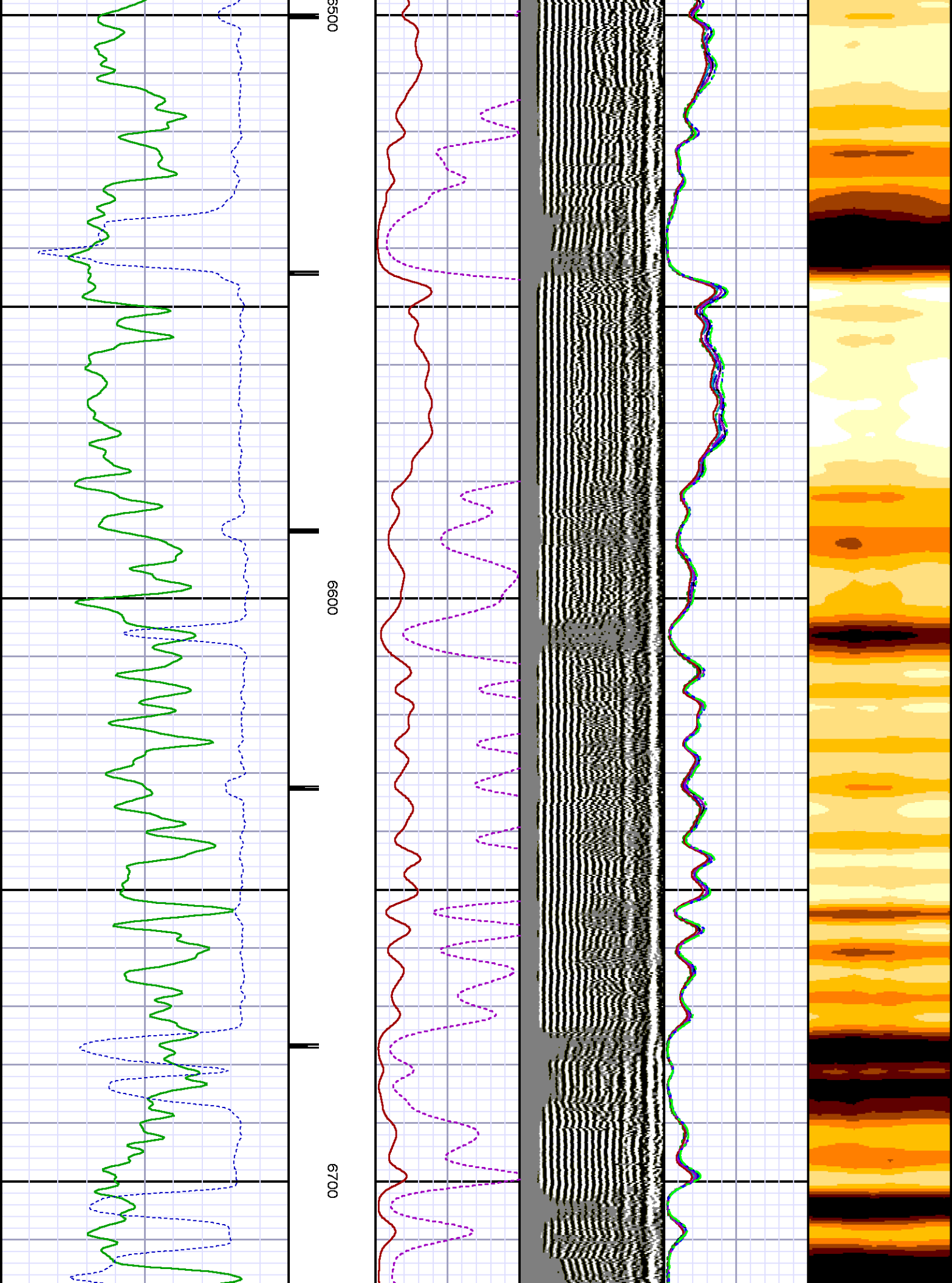


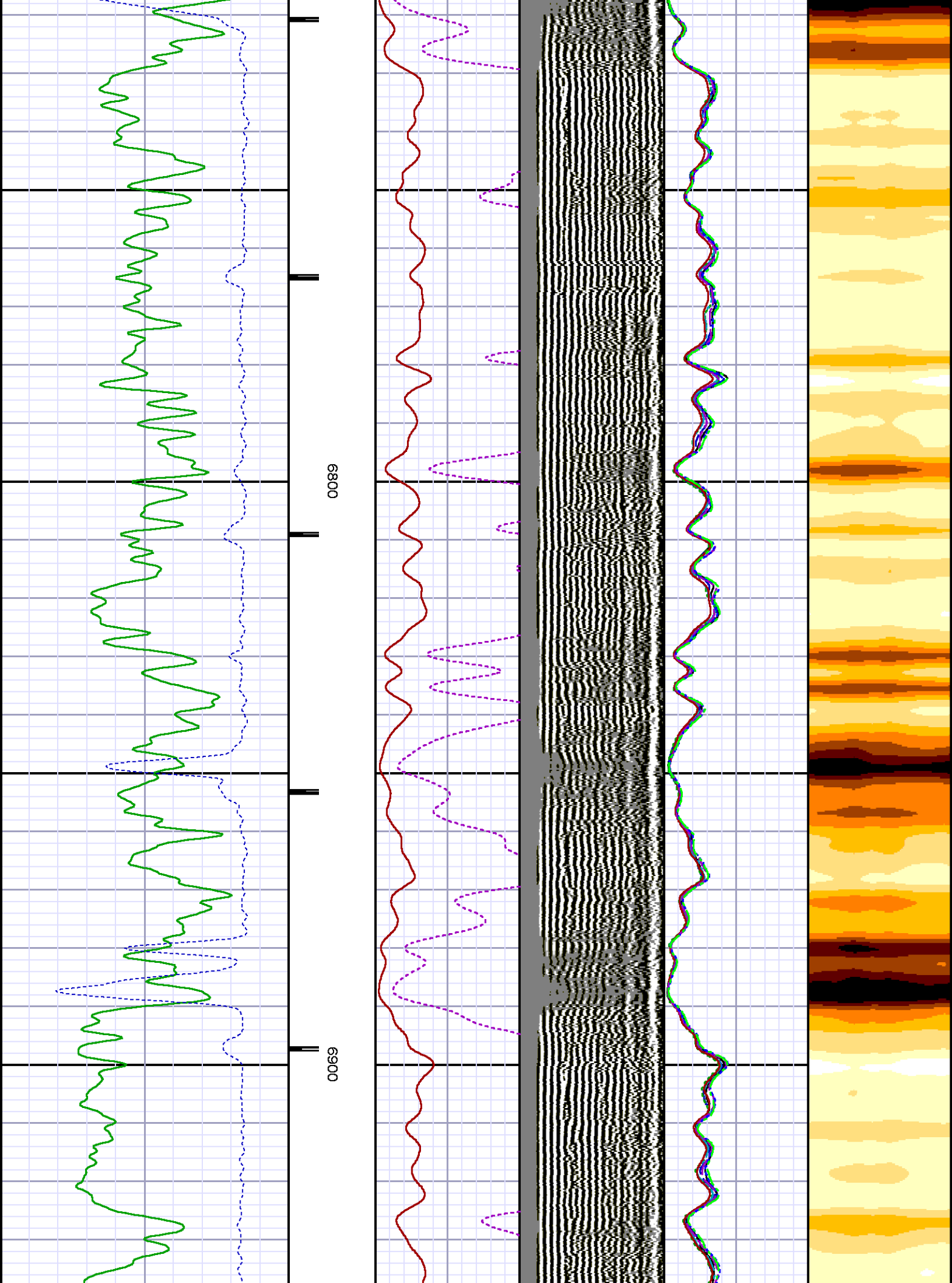


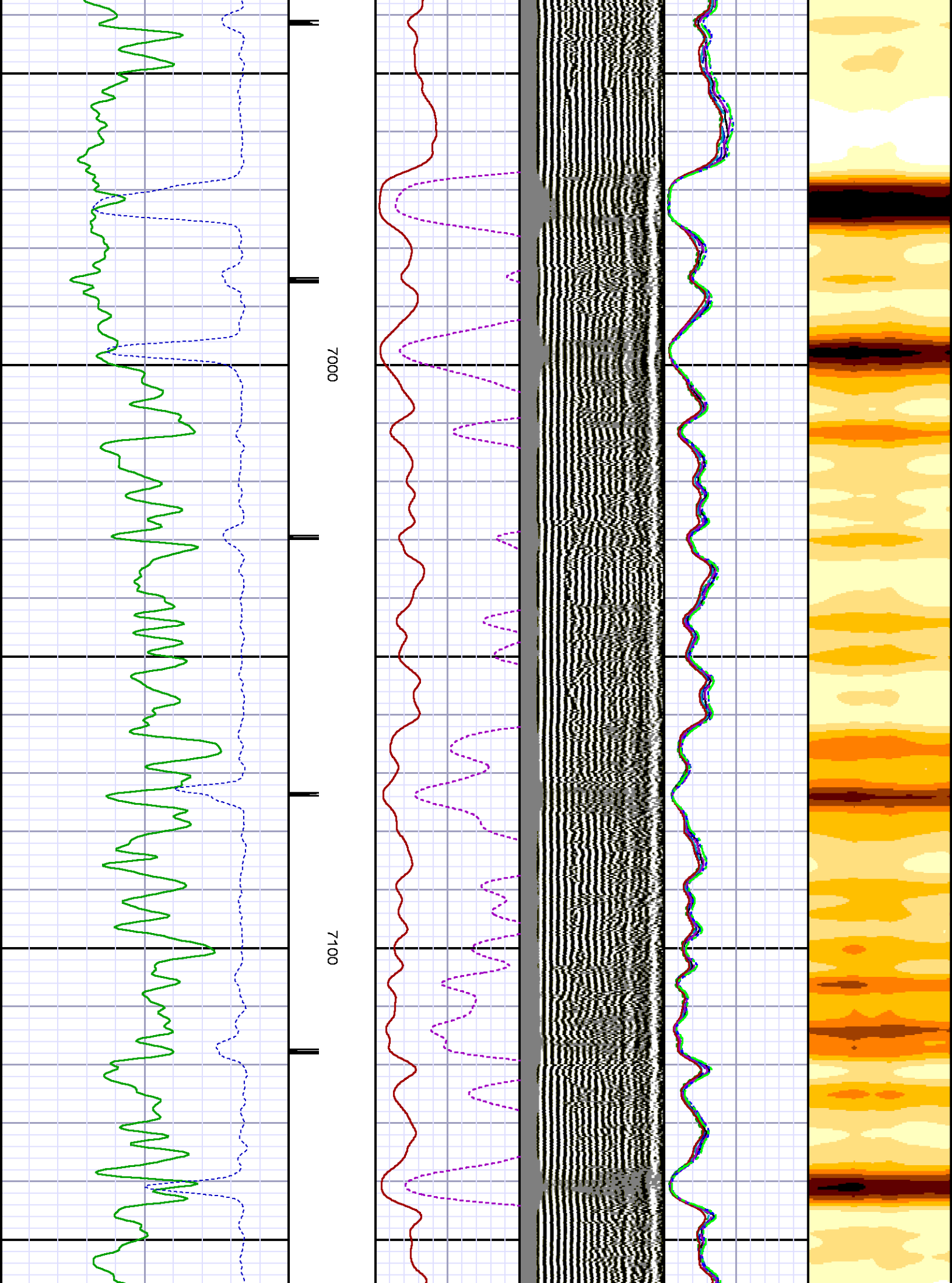


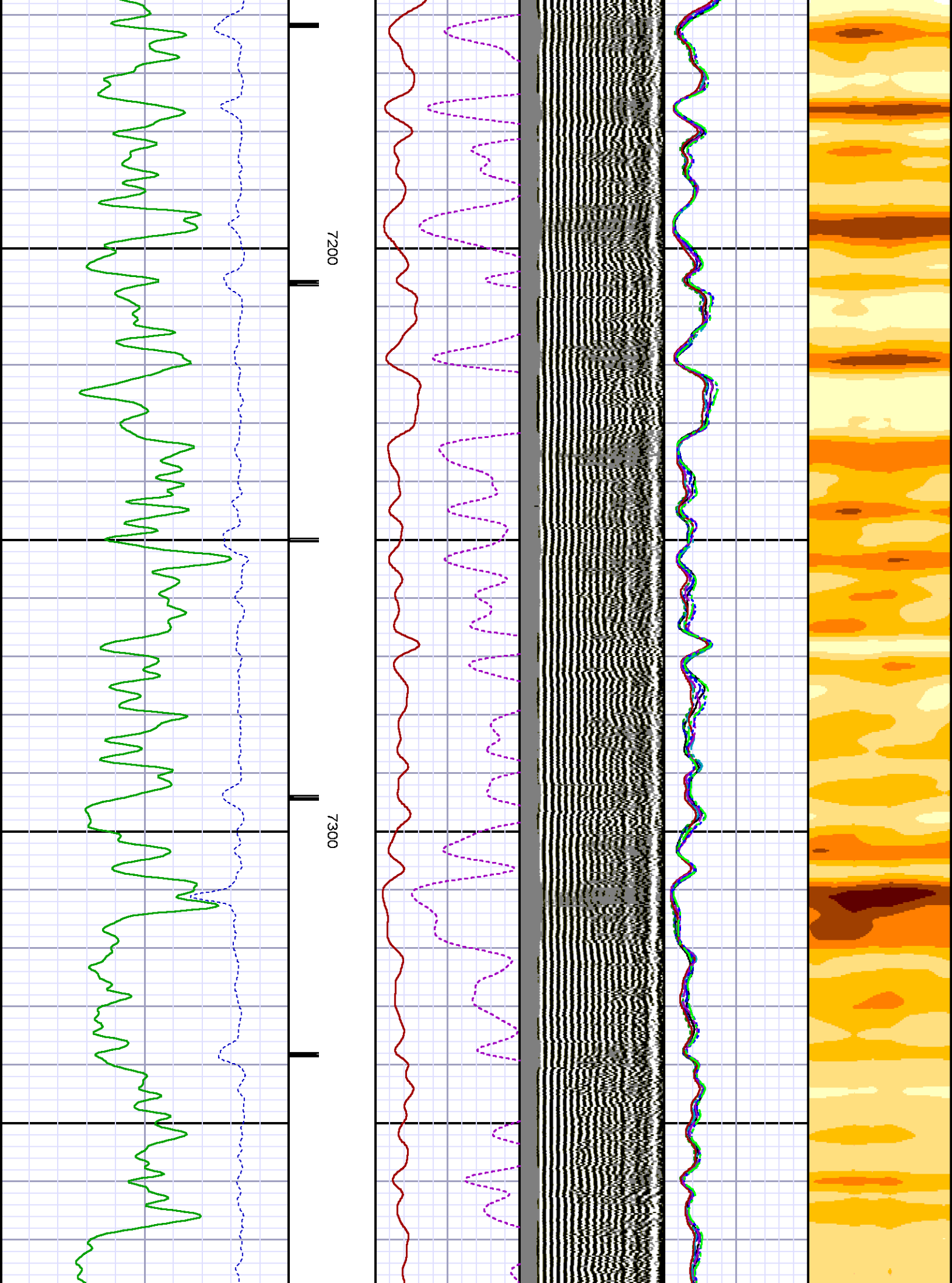


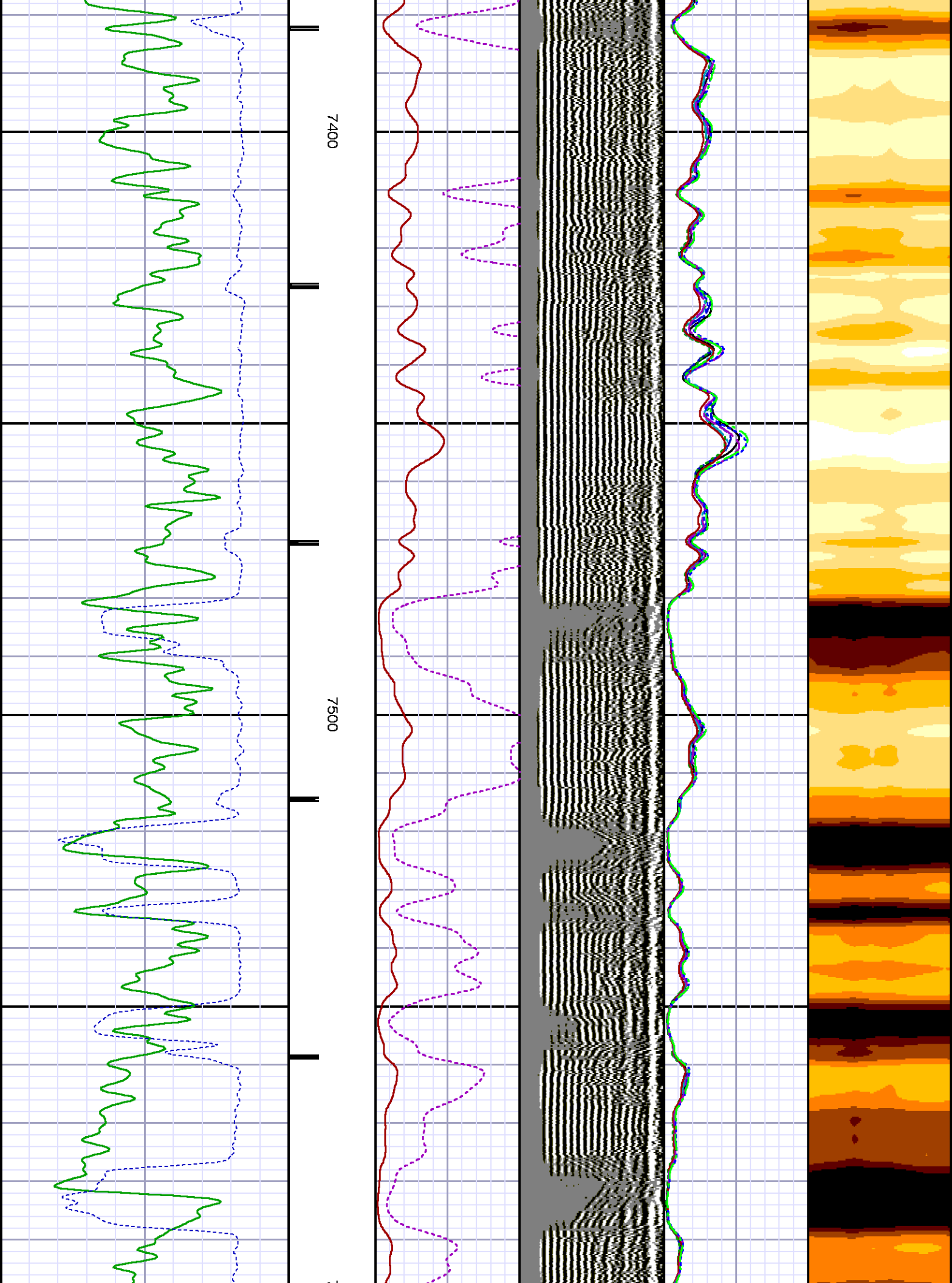


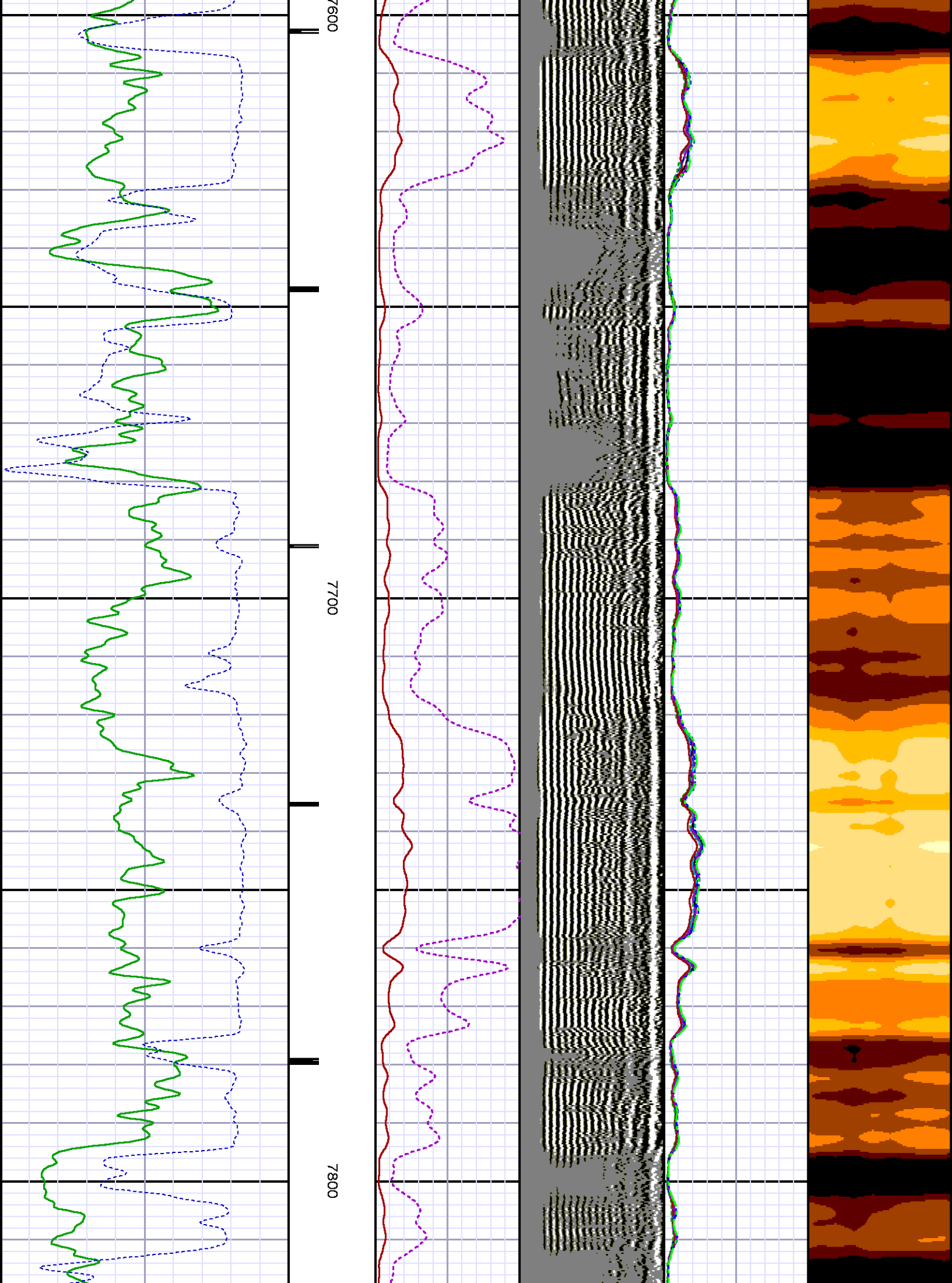


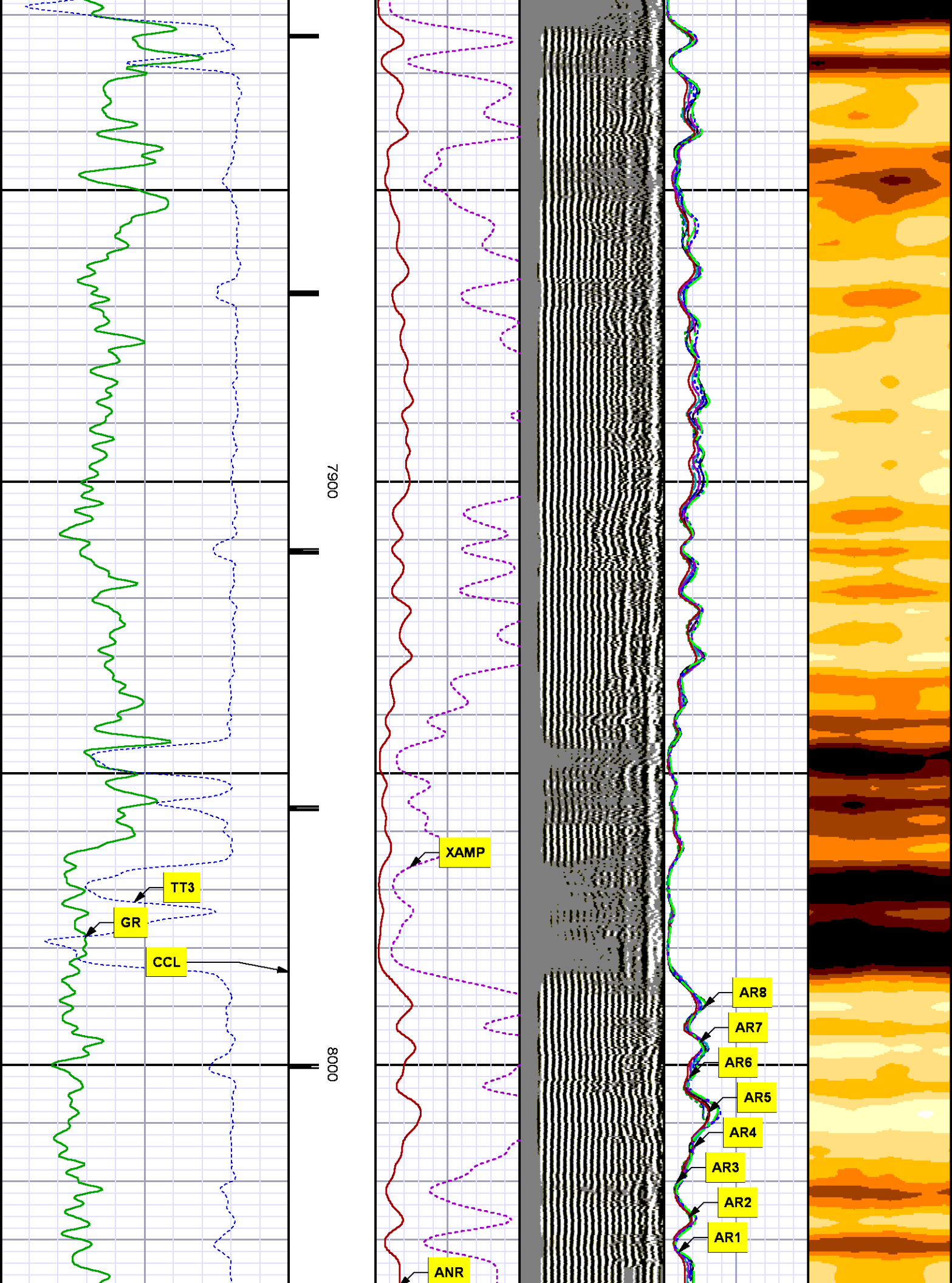


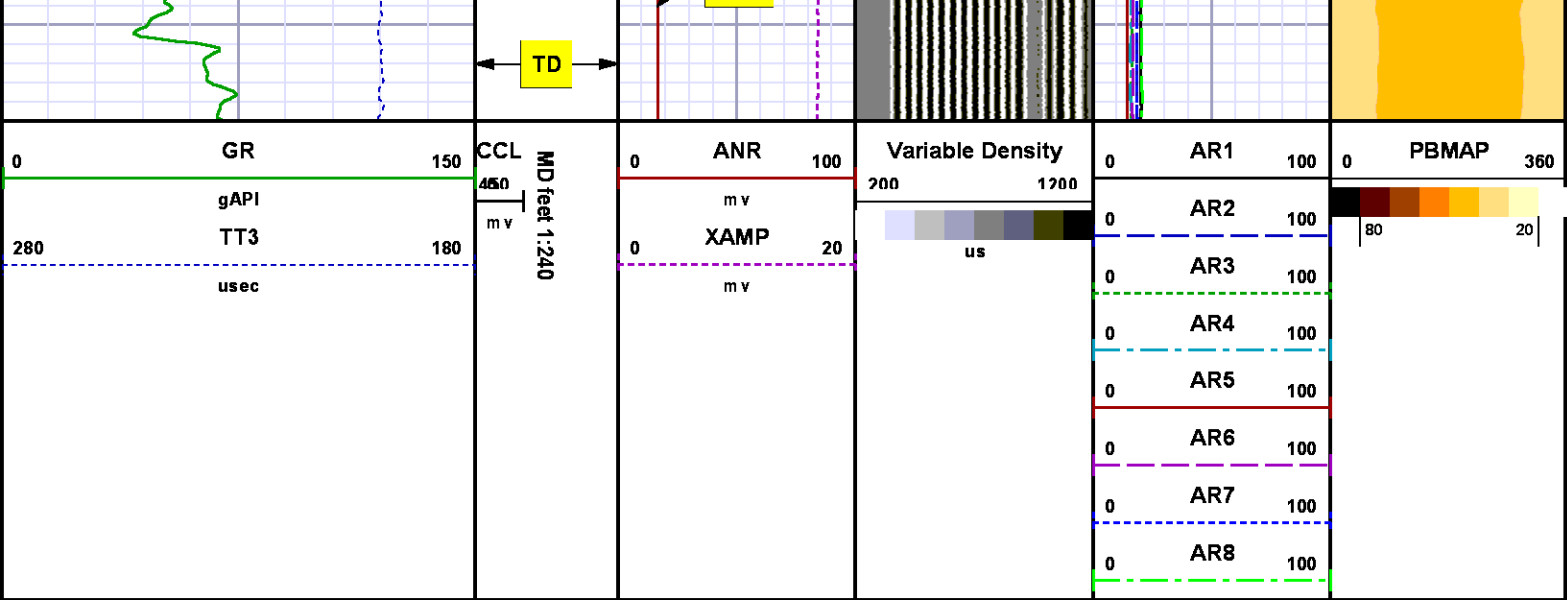












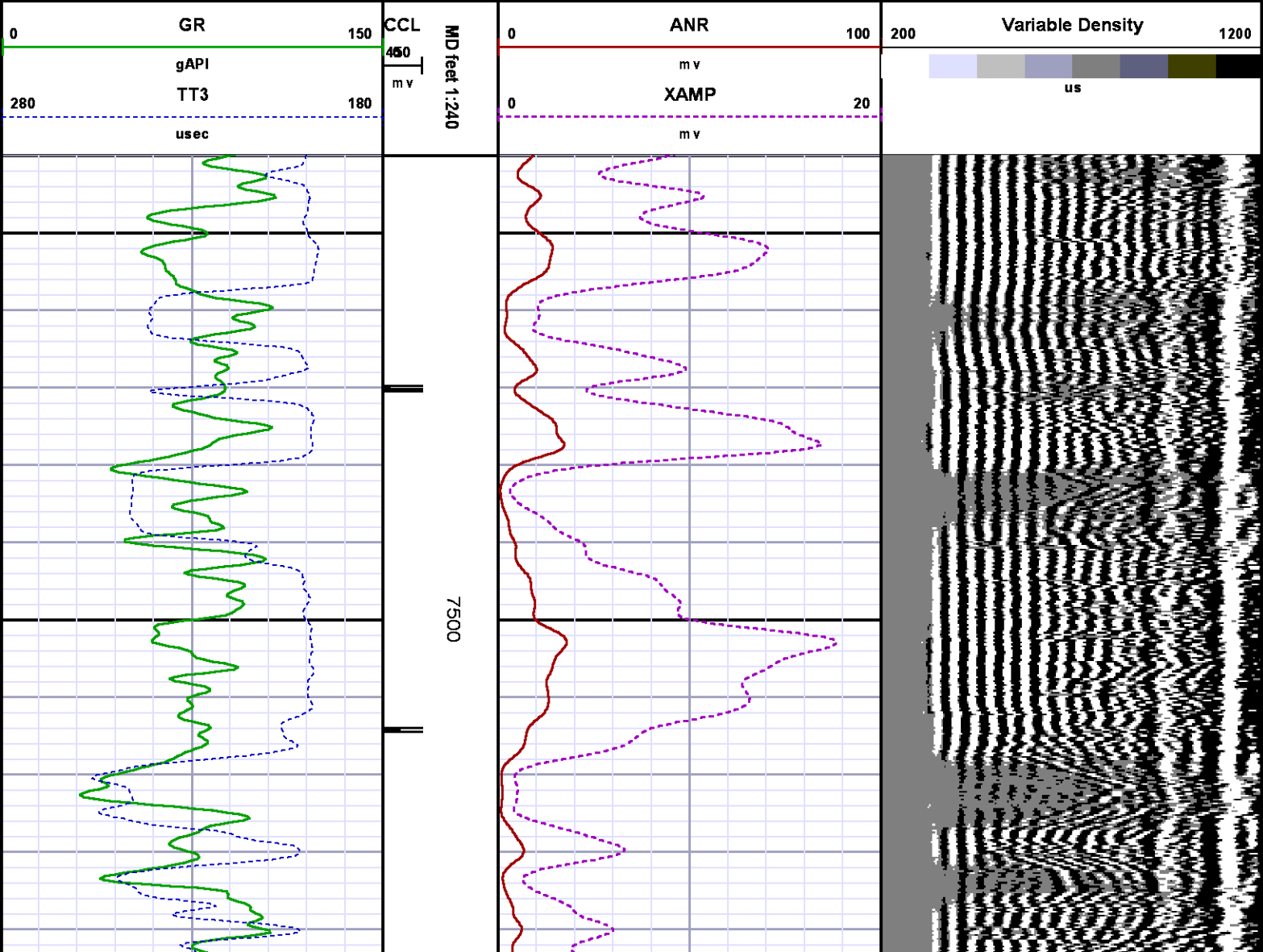
REPEAT SECTION
0 PSI

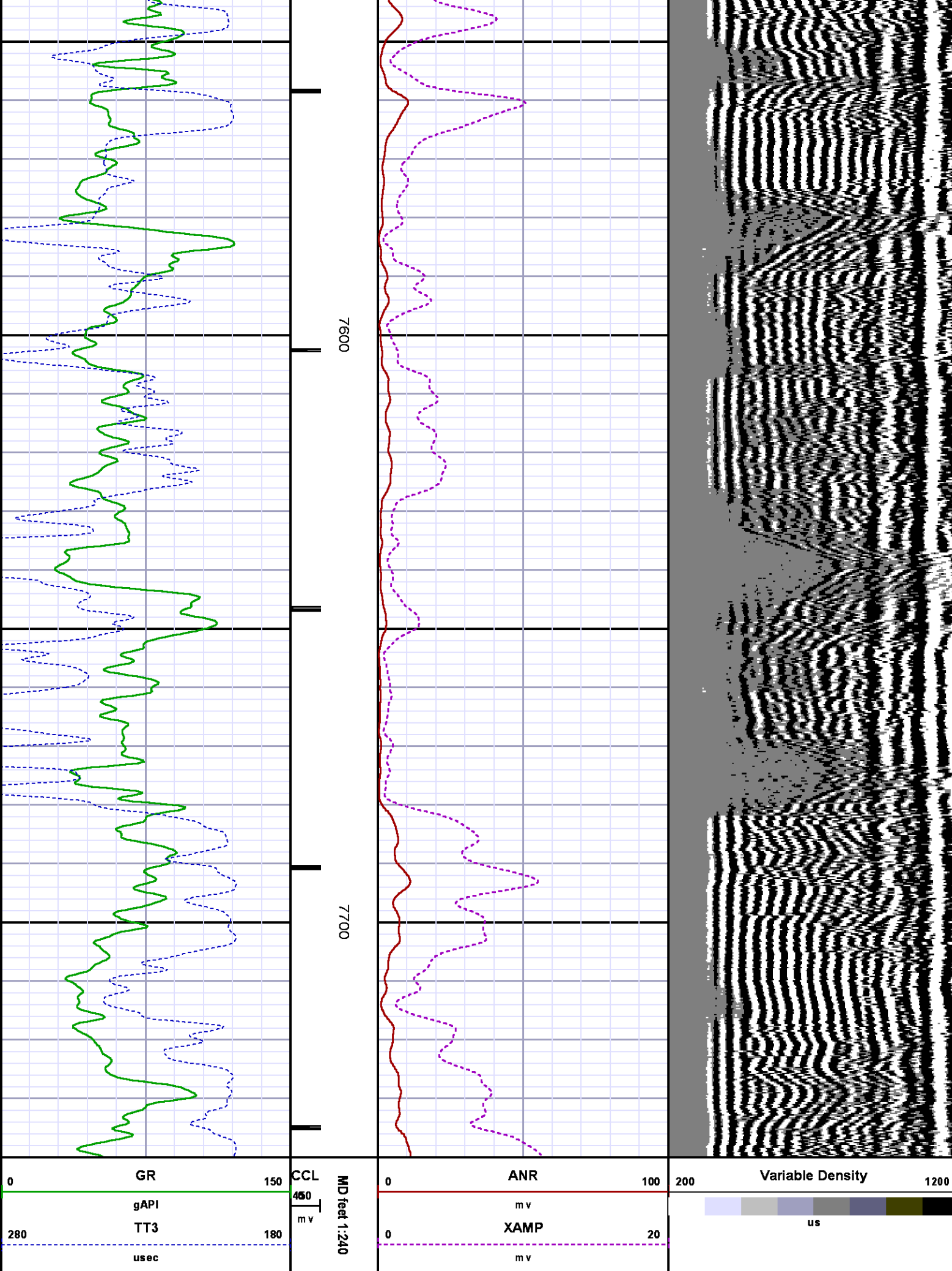
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	7438.690	7773.940
RAL	Amp Gate Start Near	195.000	usec	7438.690	7773.940
RAL	Amp Gate Start Radial	195.000	usec	7438.690	7773.940
RAL	Amp Gate Width Far	25.000	usec	7438.690	7773.940
RAL	Amp Gate Width Near	25.000	usec	7438.690	7773.940
RAL	Amp Gate Width Radial	25.000	usec	7438.690	7773.940
RAL	casing od	4.500	inches	7438.690	7773.940
RAL	casing wt	11.600	lbm/ft	7438.690	7773.940
RAL	FB Start Far	291.900	usec	7438.690	7773.940
RAL	FB Start Near	180.000	usec	7438.690	7773.940
RAL	FB Start Radial	180.000	usec	7438.690	7773.940
RAL	FB Thresh Far	10.000	mv	7438.690	7773.940
RAL	FB Thresh Near	4.000	mv	7438.690	7773.940
RAL	FB Thresh Radial	4.000	mv	7438.690	7773.940
RAL	Fluid Travel Time	200.000	usec/ft	7438.690	7773.883

DEPTH OFFSETS
(for Acquired Curves)

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

Created by : RAL, v4.8.008
Plotted by : PlotMgr, v5.4.504
Company : WPX ENERGY
Well : DUGGAN RWF 24-29
File Name : d:\welldata\wpx energy\rwf 24-29\ral24\repeat.xtf
Mode : PlotMgr 5.4.504
Interval : 7440.00 - 7740.00 feet UP
Created : 7/10/2013 11:09:04 AM





CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\539JUL12_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Jul 12 07:31:55 2013 TOOL SERIES: 1426XA ASSET: 539 SEQ: JUL12

Tool Delay [usec]	-63.00	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	0.127	100.00	0.17
3 Ft. Receiver	217	216	30	166	25	-6.422	100.00	0.17
5 Ft. Receiver	324	324	30	192	25	0.438	150.00	0.19
Radial #1	217	216	30	139	25	1.920	100.00	0.17
Radial #2	217	216	30	139	25	0.842	100.00	0.17
Radial #3	217	216	30	139	25	0.681	100.00	0.17
Radial #4	217	216	30	139	25	0.086	100.00	0.17
Radial #5	217	216	30	139	25	-0.180	100.00	0.17
Radial #6	216	216	30	139	25	0.129	100.00	0.17
Radial #7	215	216	30	139	25	0.136	100.00	0.17
Radial #8	217	216	30	139	25	0.060	100.00	0.17

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\539JUL12 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Jul 12 07:33:56 2013 TOOL SERIES: 1426XA ASSET: 539 SEQ: JUL12

Tool Delay [usec]	-63.00	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]	Wellsite Factor	Amp. Ref [mV]		
CAL Pulse	166	25	-0.098	0.000	1.00	100.000		
3 Ft. Receiver	195	25	-2.813					
5 Ft. Receiver	305	25	-4.103					
Radial #1	195	25	-3.509					

Radial #2	195	25	-3.294
Radial #3	195	25	-2.990
Radial #4	195	25	-3.366
Radial #5	195	25	-4.919
Radial #6	195	25	-3.696
Radial #7	195	25	-3.958
Radial #8	195	25	-3.990

GAMMA RAY

Calibration File: C:\case\calver\GR\209J7.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Jun 27 10:51:00 2013 TOOL SERIES: 2459XA ASSET: 209 SEQ: J7

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	132.31	583.42	0.410	54.26	239.26	185.00

Verification File: C:\case\calver\GR\209J7.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu Jun 27 10:52:46 2013 TOOL SERIES: 2459XA ASSET: 209 SEQ: J7

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	140.71	580.31	0.410	57.71	237.98	180.28

TOOL DIAGRAM

OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII

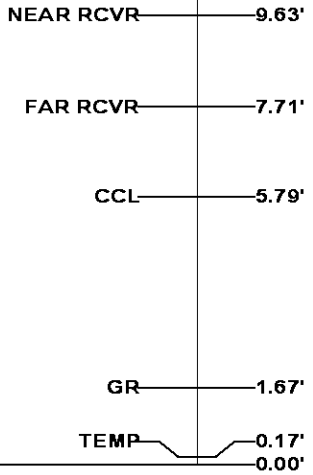
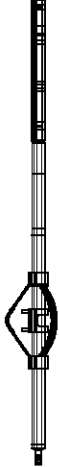
Series	1426XA
Mnemonic	PROB
Diameter	2.75"
Length	11.17'
Measure Point	0.75' FAR RCVR
Measure Point	2.67' NEAR RCVR
Measure Point	5.75' XMIT
Temp Rating	350.00 °F
Press Rating	18000.00 PSI





18.89'

XMIT 12.71'

RAL GR/TEMP/CCL/CHV DETECTOR	
Series	1355XA
Mnemonic	RAL
Diameter	2.75"
Weight	85.00 lb
Length	6.96'
Measure Point	0.17' TEMP
Measure Point	1.67' GR
Measure Point	5.79' CCL
Temp Rating	400.00 °F
Press Rating	20000.00 PSI



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

<div></div> <div>Baker Atlas</div> <div></div>	Company WPX ENERGY		File No: CH074538	
	Well DUGGAN RWF 24-29		API No: 05045216580000	
	Field RULISON			
	County GARFIELD	State COLORADO		
Location		Elevations		
SHL: 511' FSL X 611' FWL		KB 5441 ft	29 6S 94W	
BHL: 294' FSL X 2216' FWL (SESW)		DF	RWF 14-29 PAD	
		GL 5415 ft	NABORS 573	
SEC 29 TWP 6S RGE 94W				