



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH057336	Company Well Field County	WPX ENERGY FEDERAL KP 14-18 KOKOPELLI GARFIELD	State COLORADO
API No: 05045206250000			
18 GS 91W KP 34-18 PAD NABORS 574	Location SHL: 740' FSL, 1966' FEL BHL: 1189' FSL, 588' FWL SEC 18 TWP 6S RGE 91W	Other Services RPM	
Permanent Datum Log Measured From Drill Measured From	GL KB KELLY BUSHING	Elevation 26 ft Above P. D.	Elevations KB 5944 ft DF GL 5918 ft

Date	30/JUN/12	
Run	ONE	
Service Order	574676	
Depth Driller	8157 ft	
Depth Logger	8114 ft	
Bottom Logged Interval	8104 ft	
Top Logged Interval	26 ft	
Time Started	0900	
Time Finished	1300	
Operator Rig Time	4 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	NA	
Salinity	NA	
Fluid Level	FULL	
Logged Cement Top	NA	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	NA	
Nominal Logging Speed	45 fpm	
Maximum Recorded Temperature	204 degF	
Reference Log	NONE	
Reference Log Date	NA	
Equipment No.	4271	GRAND JCT
Recorded By	FLOYD RENEAU	
Witnessed By	JEFF BRANDY	

- 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	1341 ft
7.875 In	1341 ft	8157 ft

Casing Record				
Size	Weight	Grade	From	To
9.825 In			0 ft	1341 ft
4.5 In			0 ft	8157 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 12 feet.
Logged with zero PSI at wellhead.
BHT = 204°F
SJ = 4850'-4871'

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10417452	CENT
1	1	GR/CCL	2459XA	10417456	CENT

PRIMARY PRESENTATION
0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	28.968	2764.000
RAL	Amp Gate Start Near	195.000	usec	28.968	2764.000
RAL	Amp Gate Start Radial	195.000	usec	28.968	2764.000
RAL	Amp Gate Width Far	25.000	usec	28.968	2764.000
RAL	Amp Gate Width Near	25.000	usec	28.968	2764.000
RAL	Amp Gate Width Radial	25.000	usec	28.968	2764.000
RAL	casing od	4.500	inches	28.968	2764.000
RAL	casing wt	11.600	lbm/ft	28.968	2764.000
RAL	FB Start Far	291.900	usec	28.968	2764.000
RAL	FB Start Near	180.000	usec	28.968	2764.000
RAL	FB Start Radial	180.000	usec	28.968	2764.000
RAL	FB Thresh Far	10.000	mv	28.968	2764.000
RAL	FB Thresh Near	4.000	mv	28.968	2764.000
RAL	FB Thresh Radial	4.000	mv	28.968	2764.000
RAL	Fluid Travel Time	200.000	usec/ft	28.968	2764.000
RAL	Amp Gate Start Far	305.000	usec	2764.000	3200.200
RAL	Amp Gate Start Near	195.000	usec	2764.000	3200.200
RAL	Amp Gate Start Radial	195.000	usec	2764.000	3200.200
RAL	Amp Gate Width Far	25.000	usec	2764.000	3200.200
RAL	Amp Gate Width Near	25.000	usec	2764.000	3200.200
RAL	Amp Gate Width Radial	25.000	usec	2764.000	3200.200
RAL	casing od	4.500	inches	2764.000	3200.200
RAL	casing wt	11.600	lbm/ft	2764.000	3200.200
RAL	FB Start Far	291.900	usec	2764.000	3200.200
RAL	FB Start Near	180.000	usec	2764.000	3200.200
RAL	FB Start Radial	180.000	usec	2764.000	3200.200
RAL	FB Thresh Far	10.000	mv	2764.000	3200.200
RAL	FB Thresh Near	4.000	mv	2764.000	3200.200
RAL	FB Thresh Radial	4.000	mv	2764.000	3200.200

RAL	FB Thresh Near	4.000	mv	2764.000	3200.200
RAL	FB Thresh Radial	4.000	mv	2764.000	3200.200
RAL	Fluid Travel Time	200.000	usec/ft	2764.000	3200.200
RAL	Amp Gate Start Far	305.000	usec	3200.200	8152.680
RAL	Amp Gate Start Near	195.000	usec	3200.200	8152.680
RAL	Amp Gate Start Radial	195.000	usec	3200.200	8152.680
RAL	Amp Gate Width Far	25.000	usec	3200.200	8152.680
RAL	Amp Gate Width Near	25.000	usec	3200.200	8152.680
RAL	Amp Gate Width Radial	25.000	usec	3200.200	8152.680
RAL	casing od	4.500	inches	3200.200	8152.680
RAL	casing wt	11.600	lbm/ft	3200.200	8152.680
RAL	FB Start Far	291.900	usec	3200.200	8152.680
RAL	FB Start Near	180.000	usec	3200.200	8152.680
RAL	FB Start Radial	180.000	usec	3200.200	8152.680
RAL	FB Thresh Far	10.000	mv	3200.200	8152.680
RAL	FB Thresh Near	4.000	mv	3200.200	8152.680
RAL	FB Thresh Radial	4.000	mv	3200.200	8152.680
RAL	Fluid Travel Time	200.000	usec/ft	3200.200	8152.648

## DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	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	-15.750	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 : WPX ENERGY

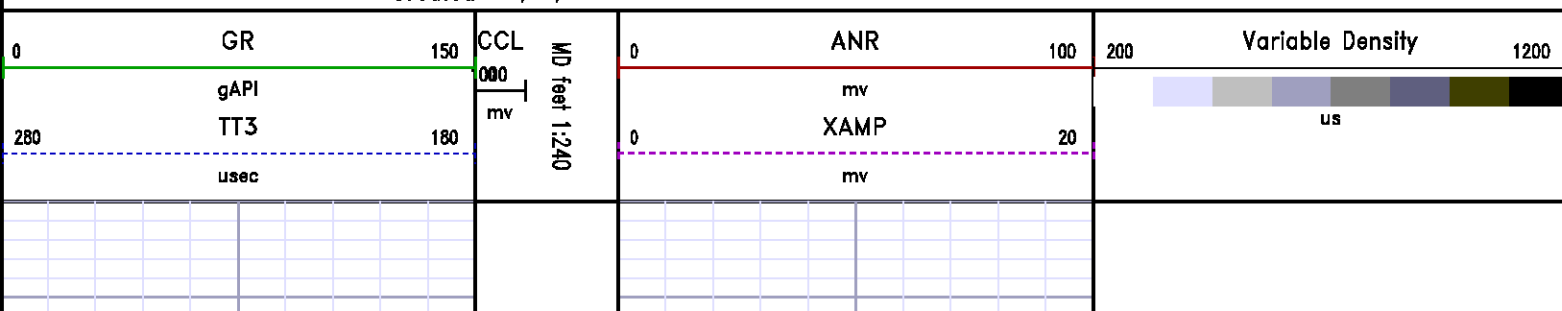
Well : FEDERAL KP 14-18

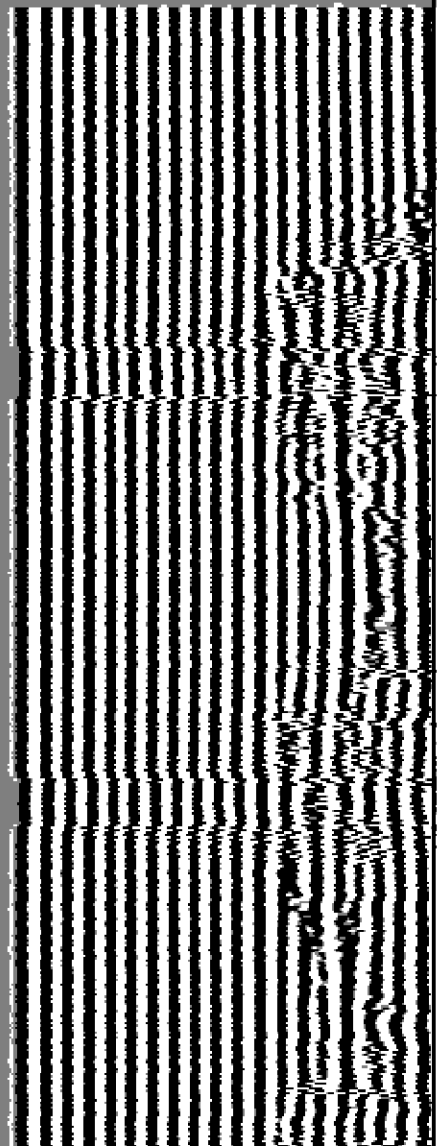
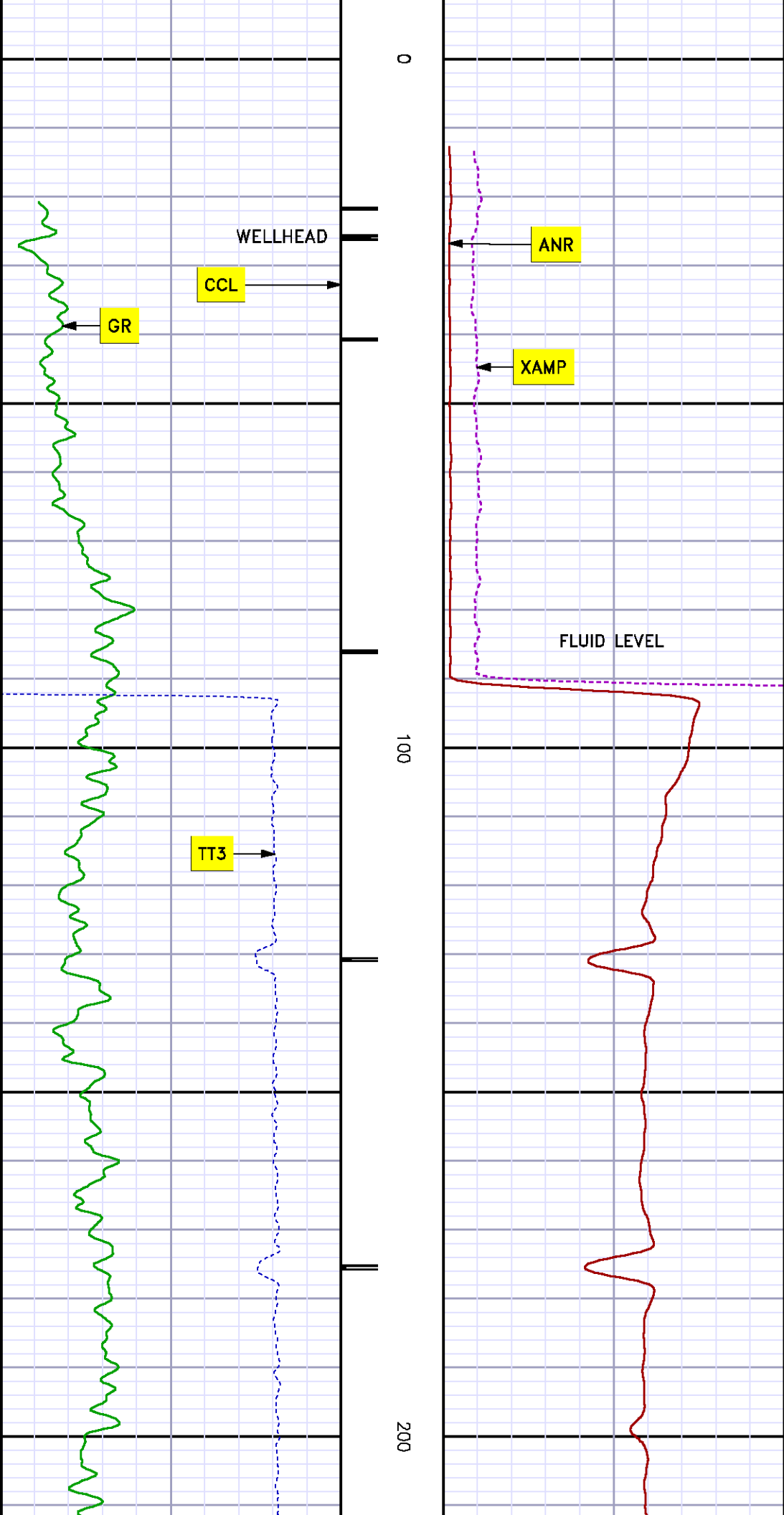
File Name : D:\WELLDATA\WPX Energy\KP 14-18\14ral\MAINsplice.XTF

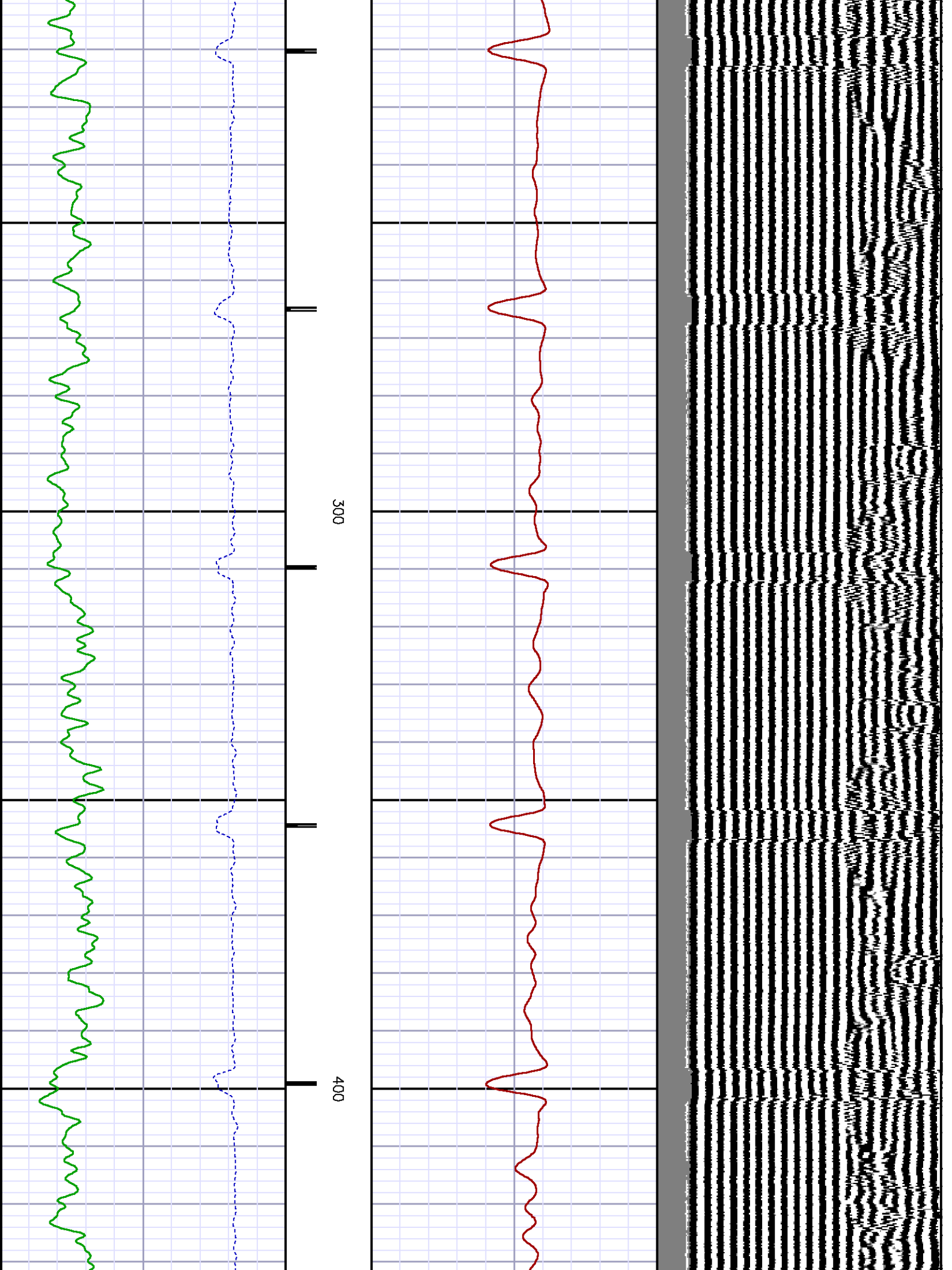
Mode : PlotMgr 5.4.504

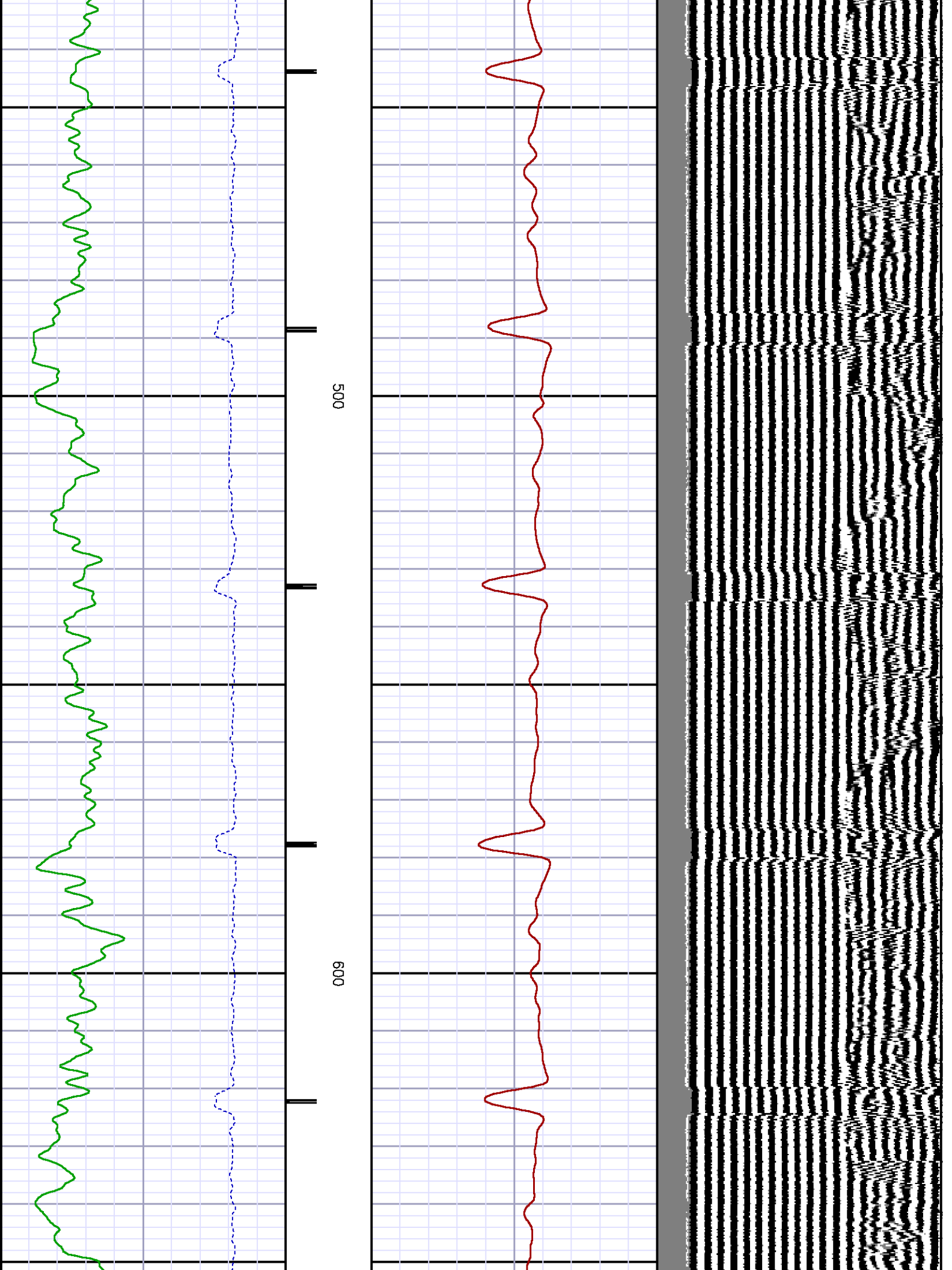
Interval : -20.00 - 8120.00 feet UP

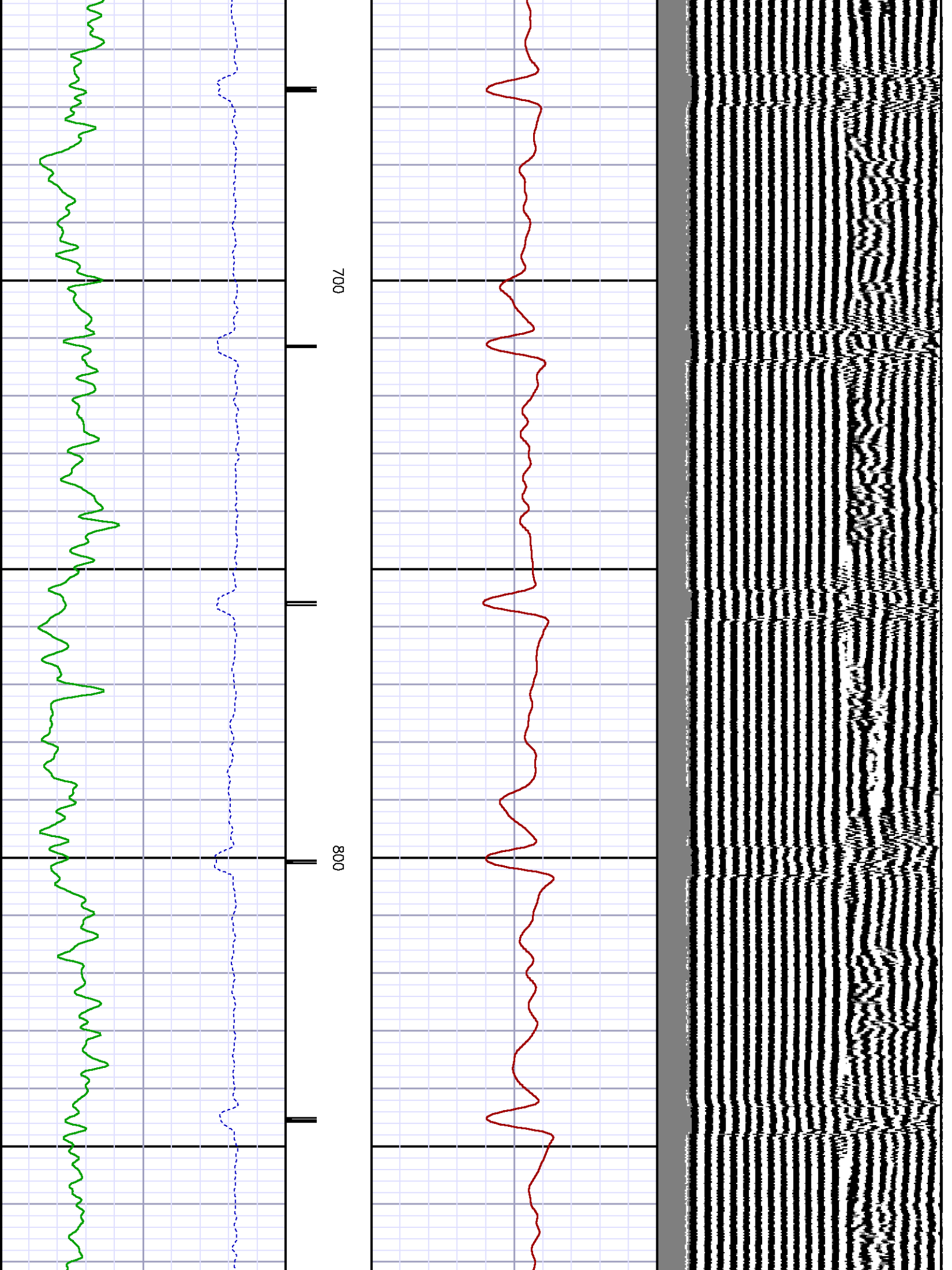
Created : 6/30/2012 12:52:11 PM

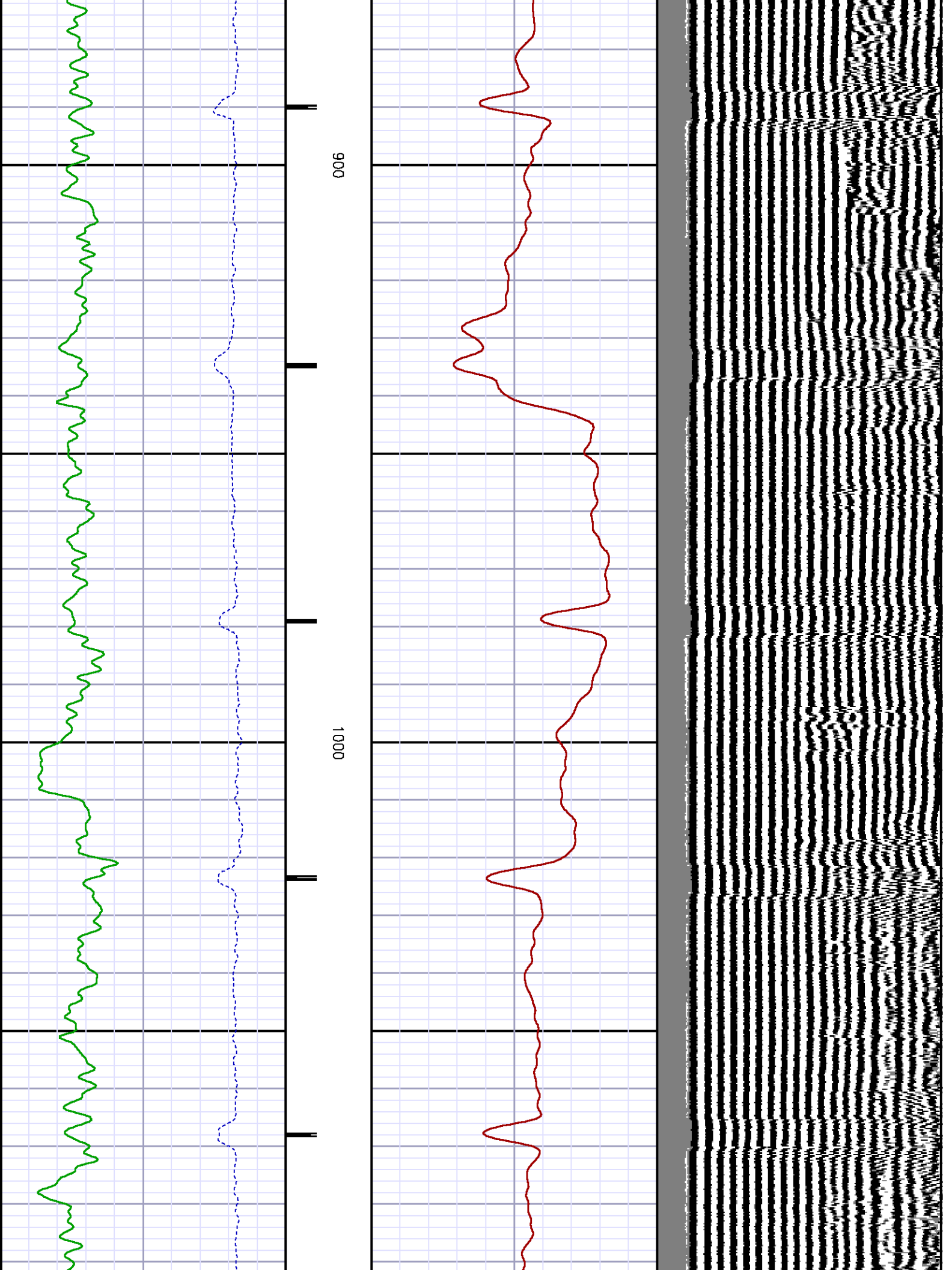




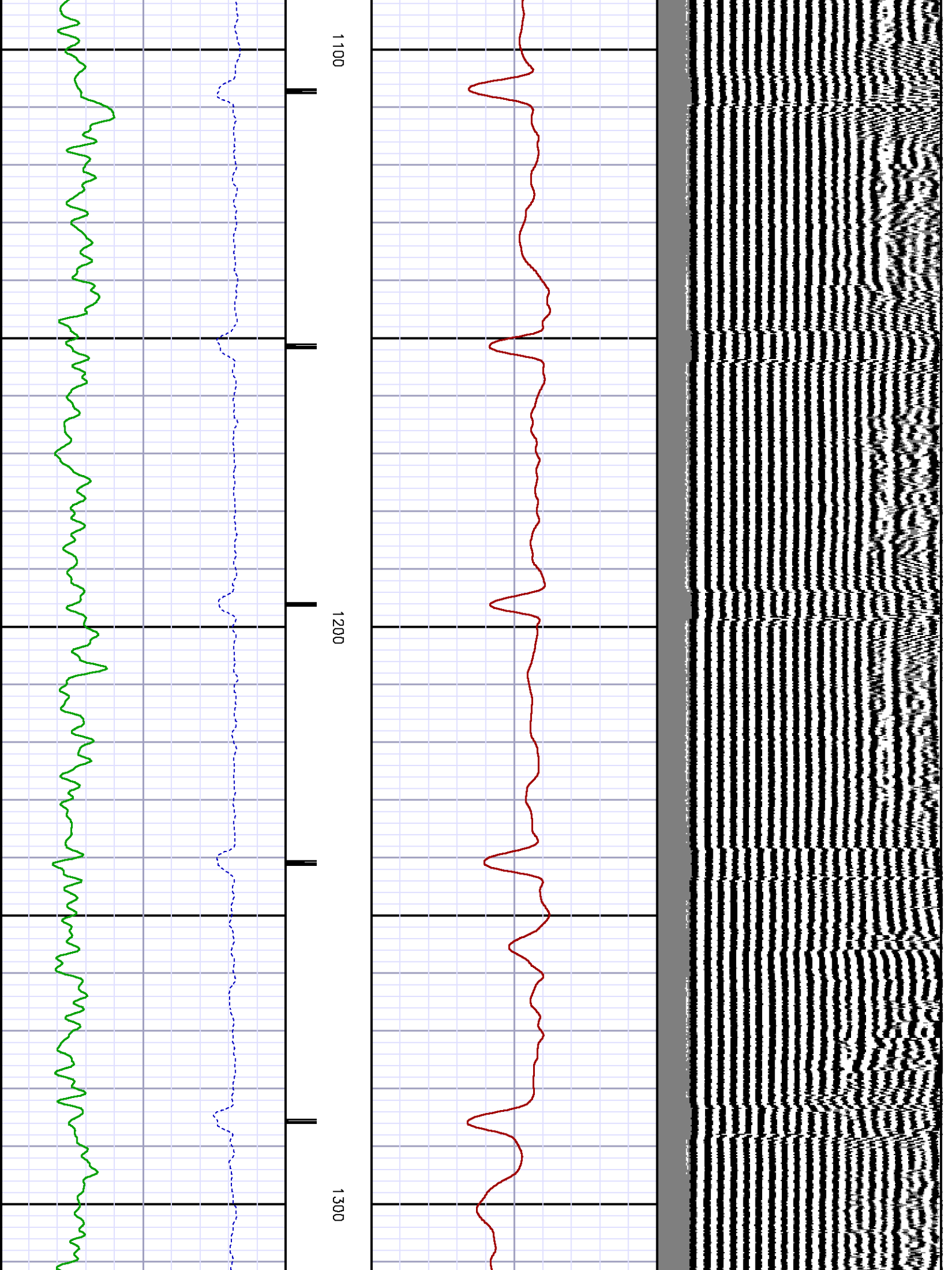


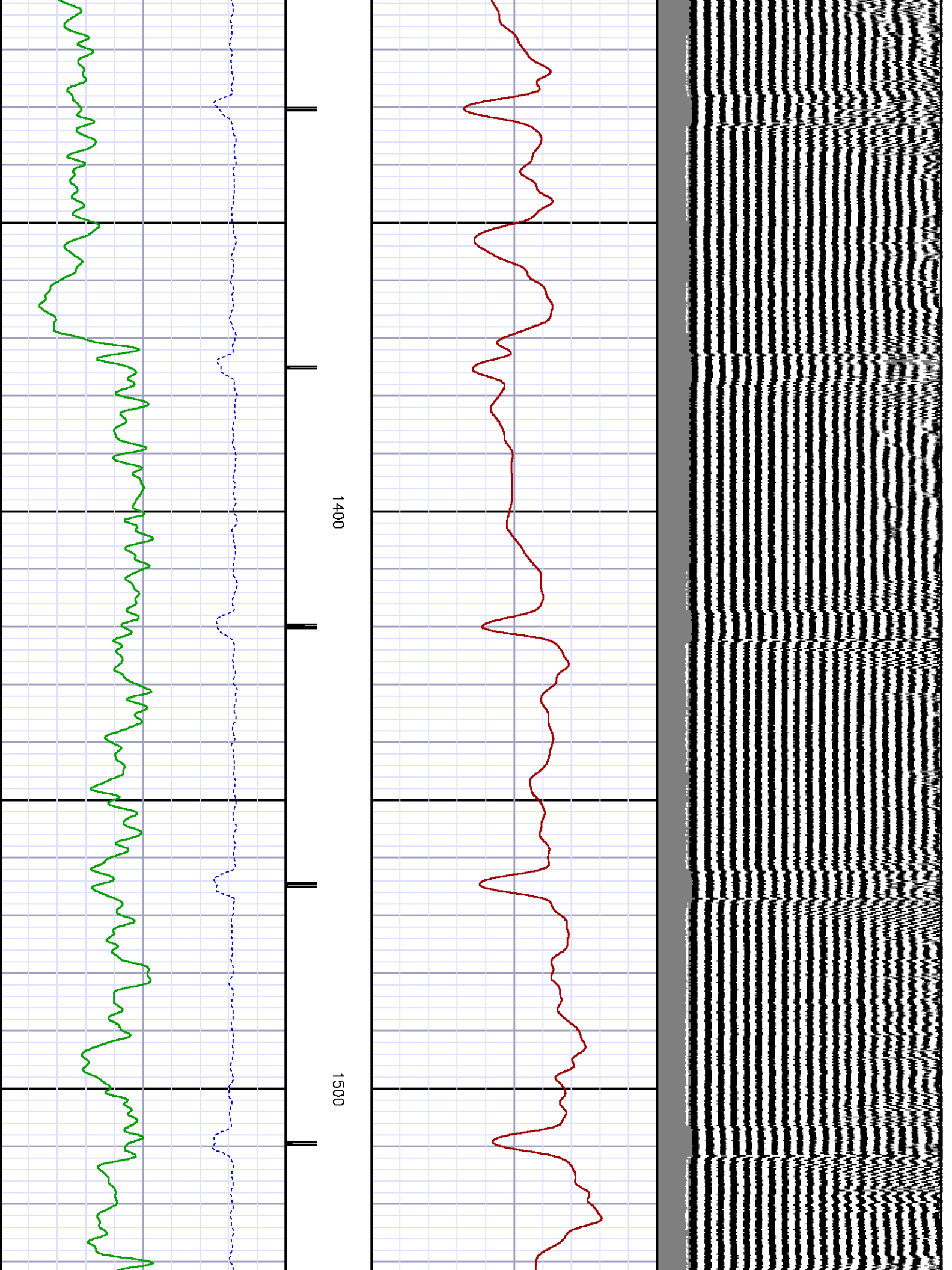


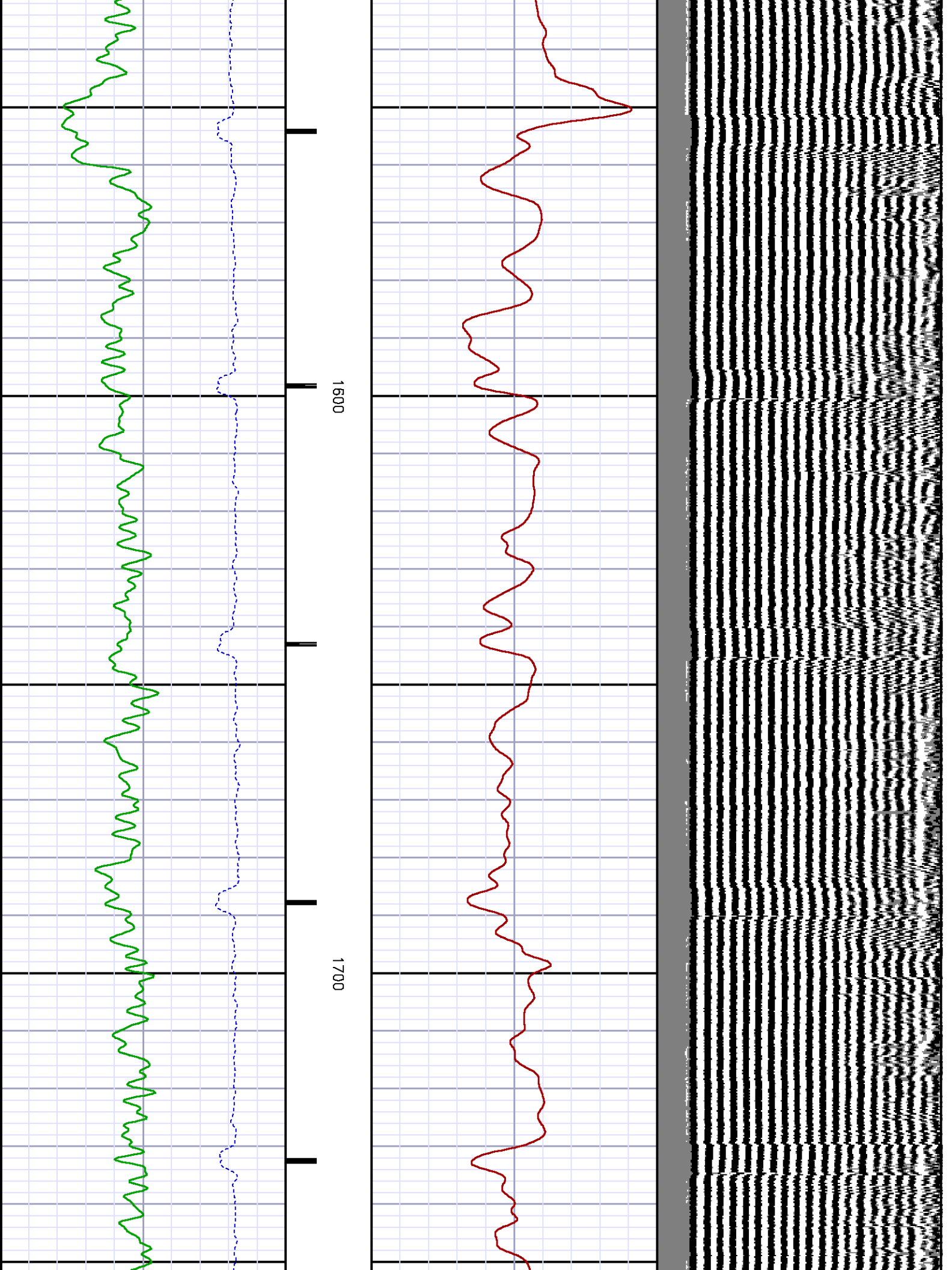


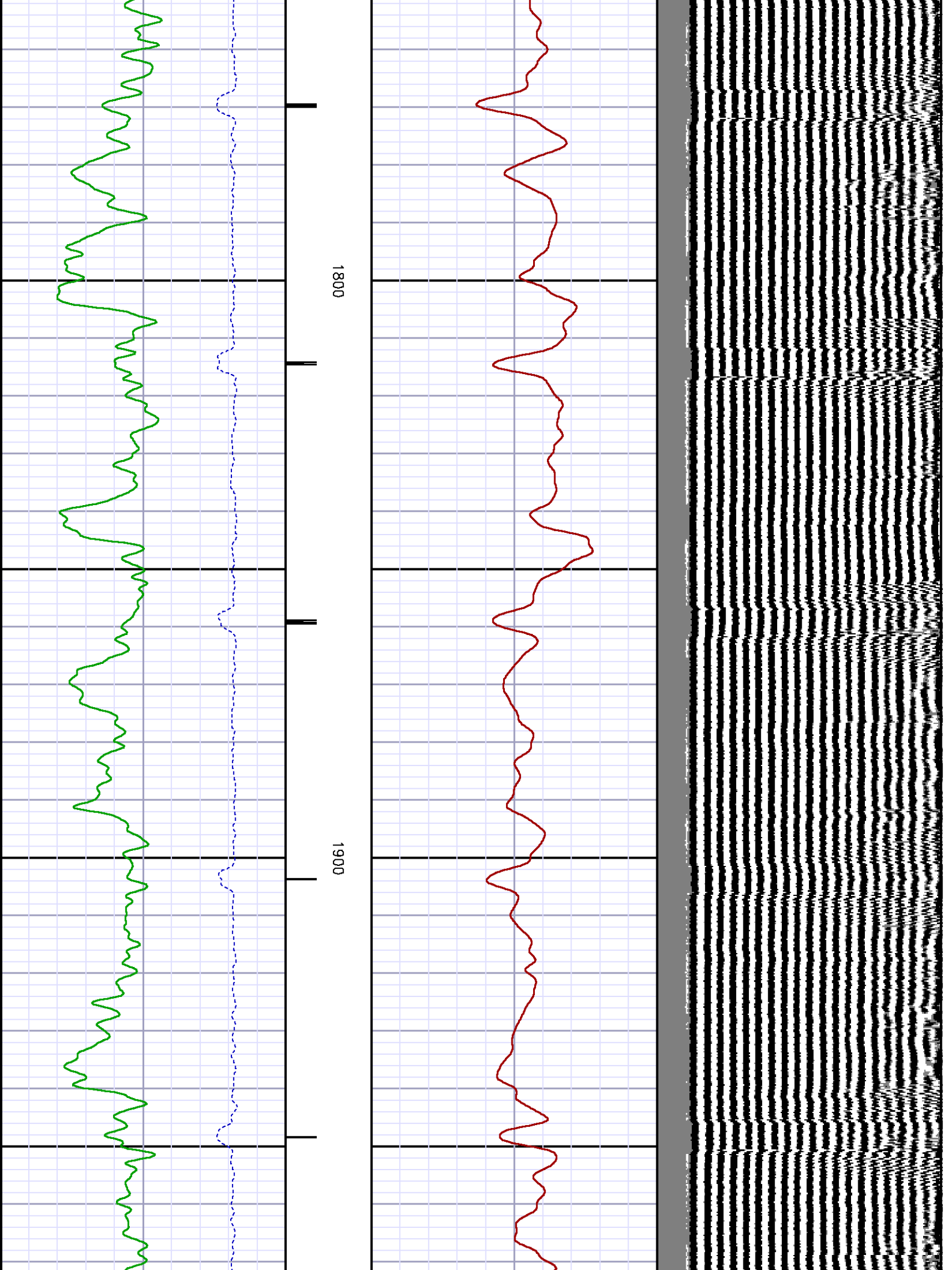


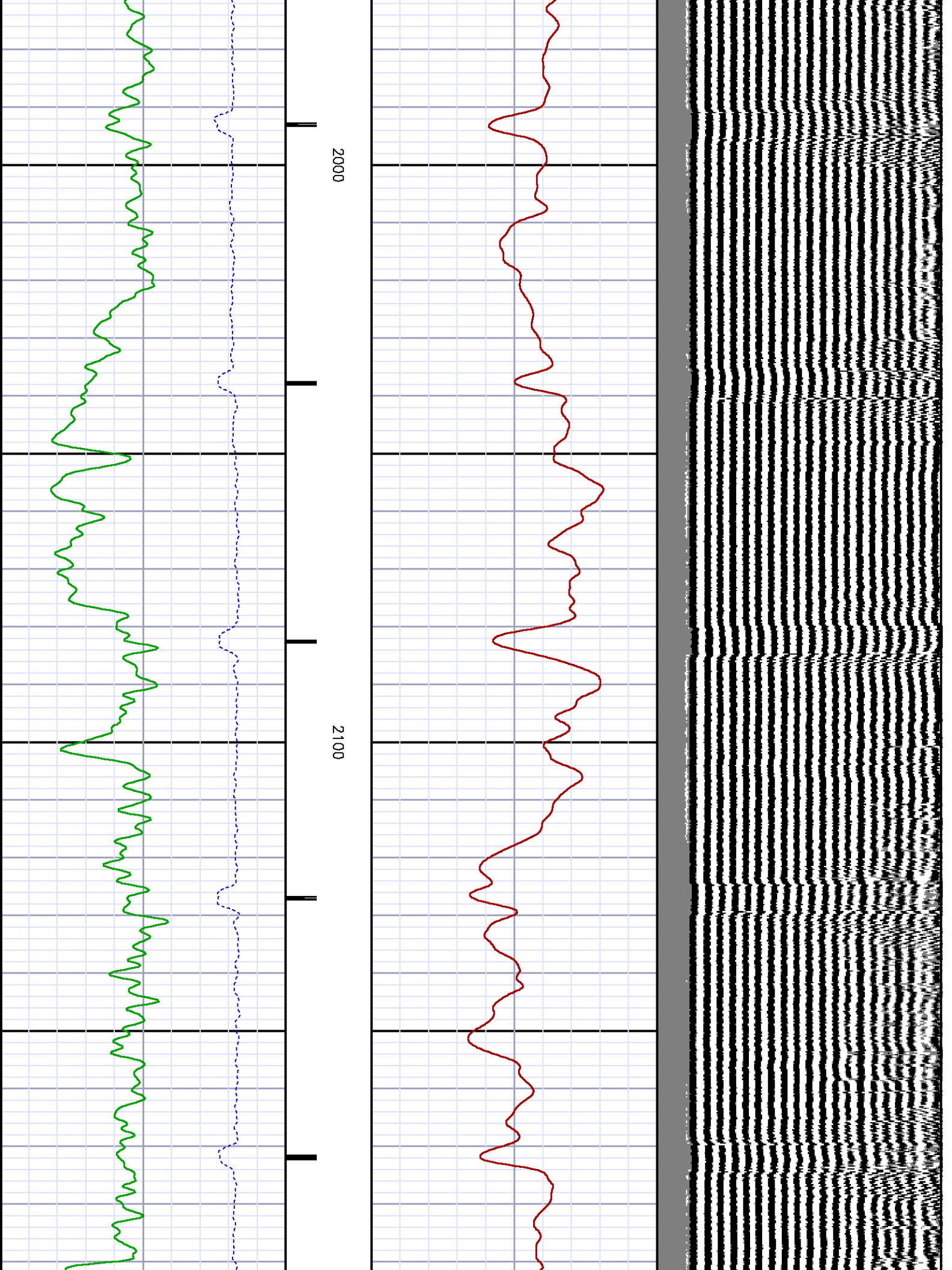




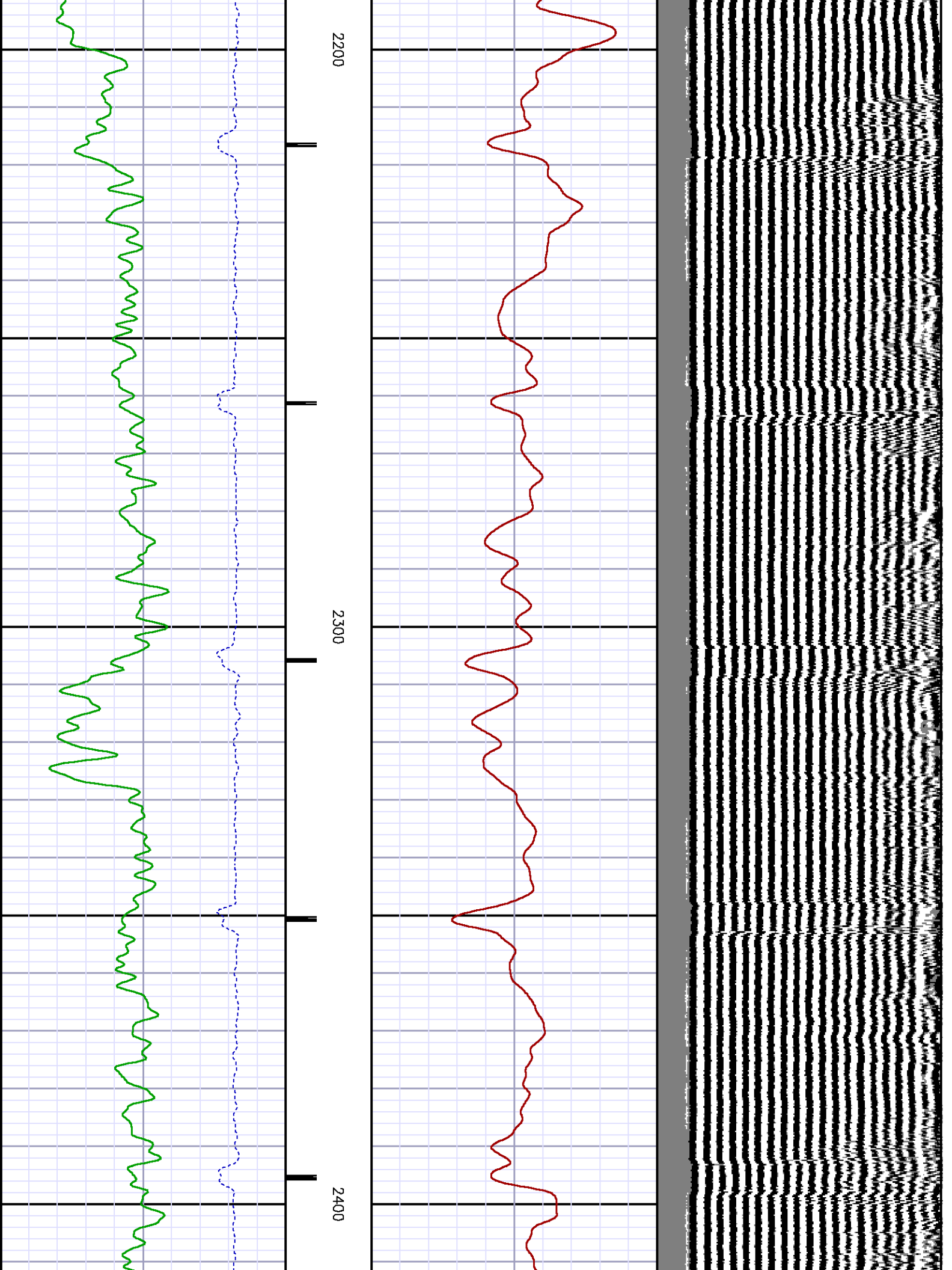


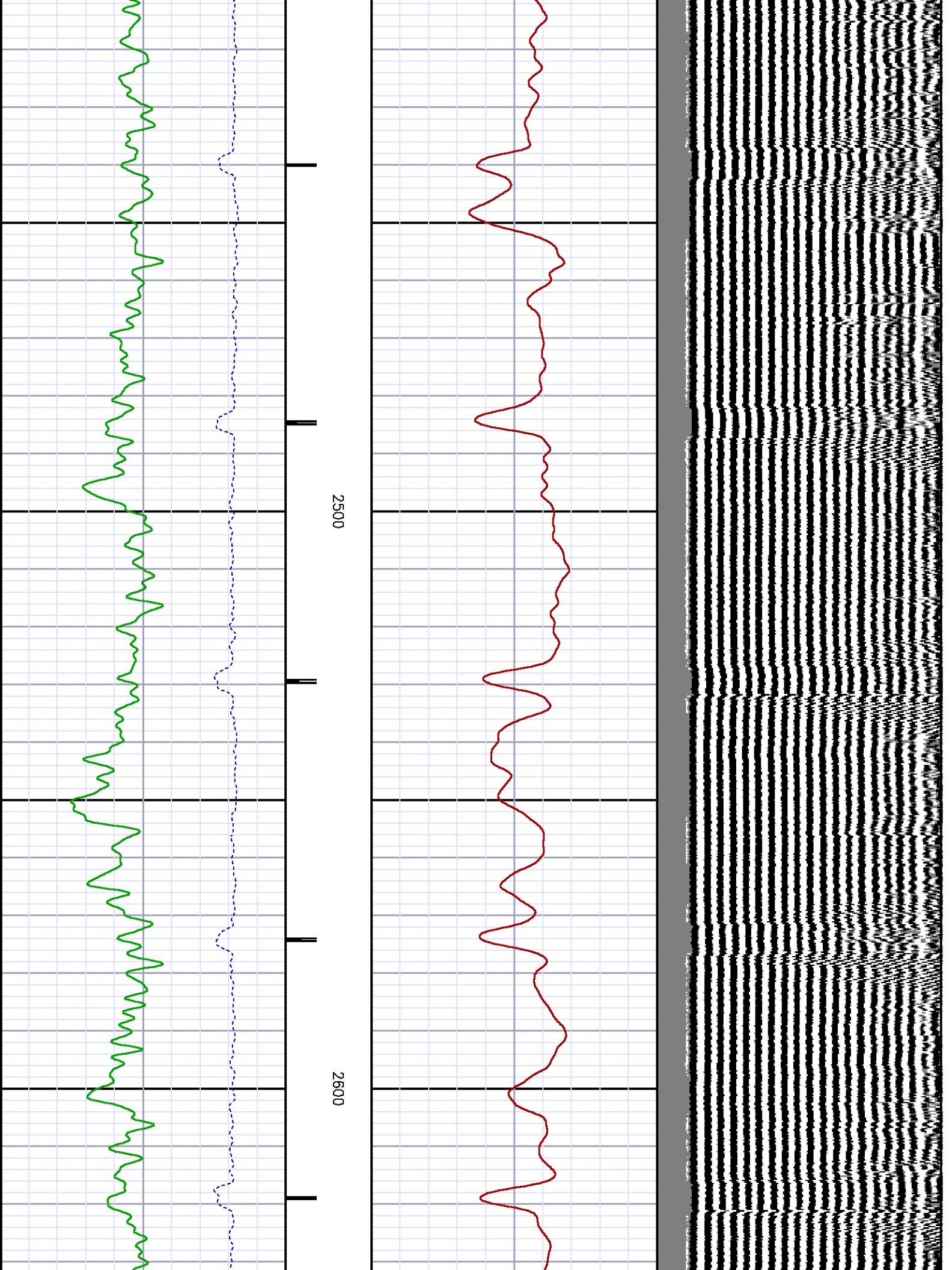


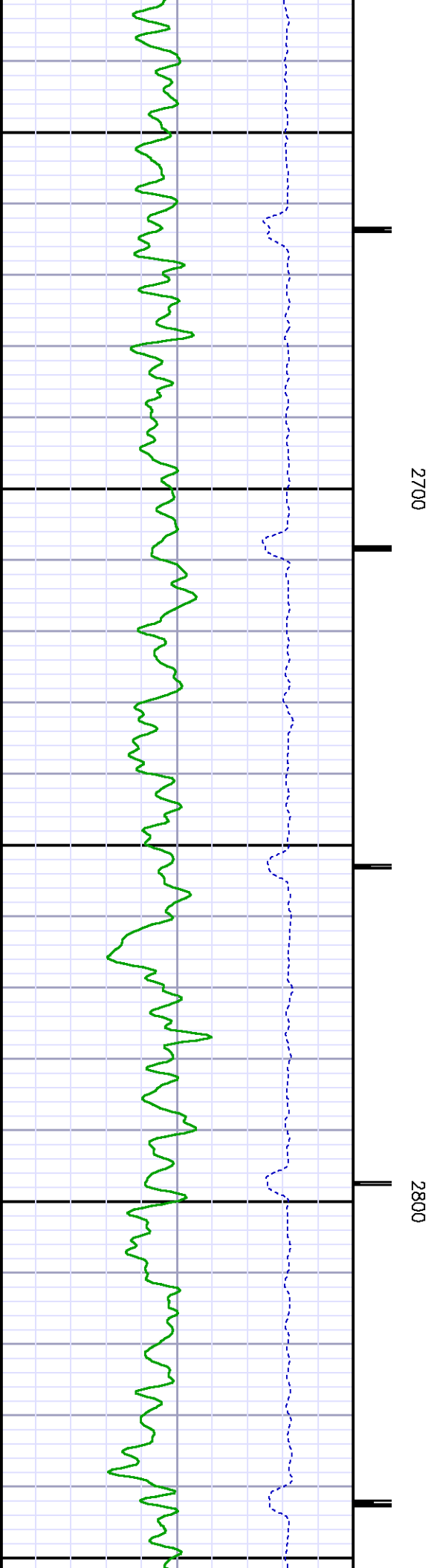
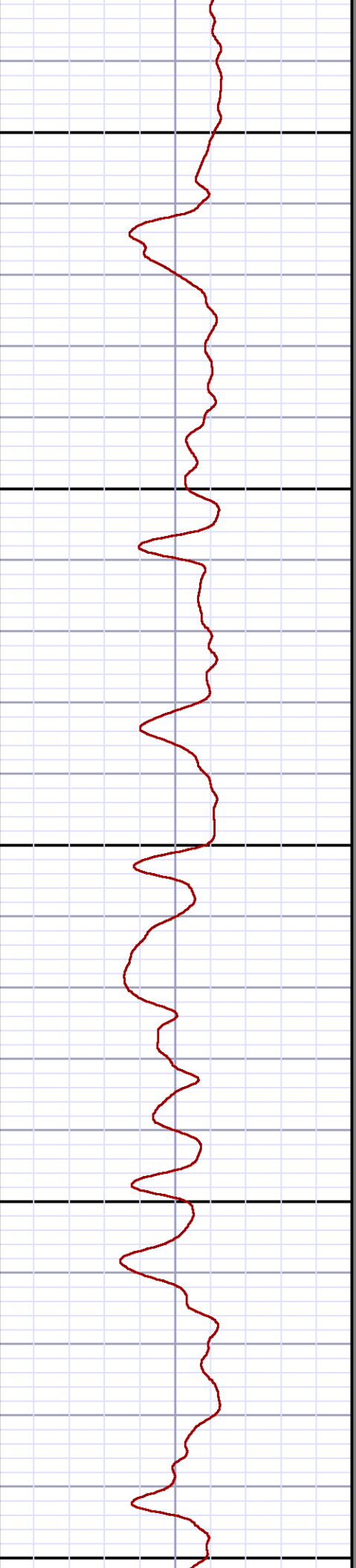
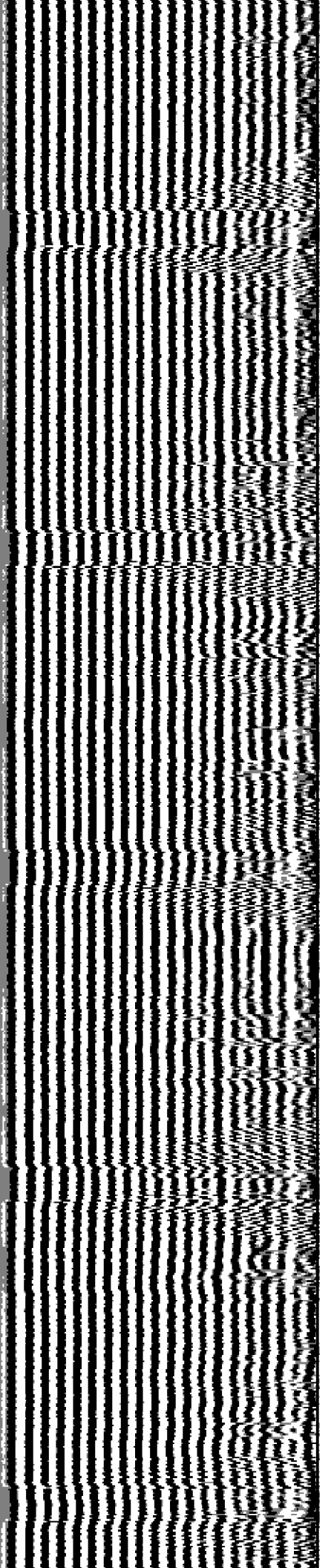




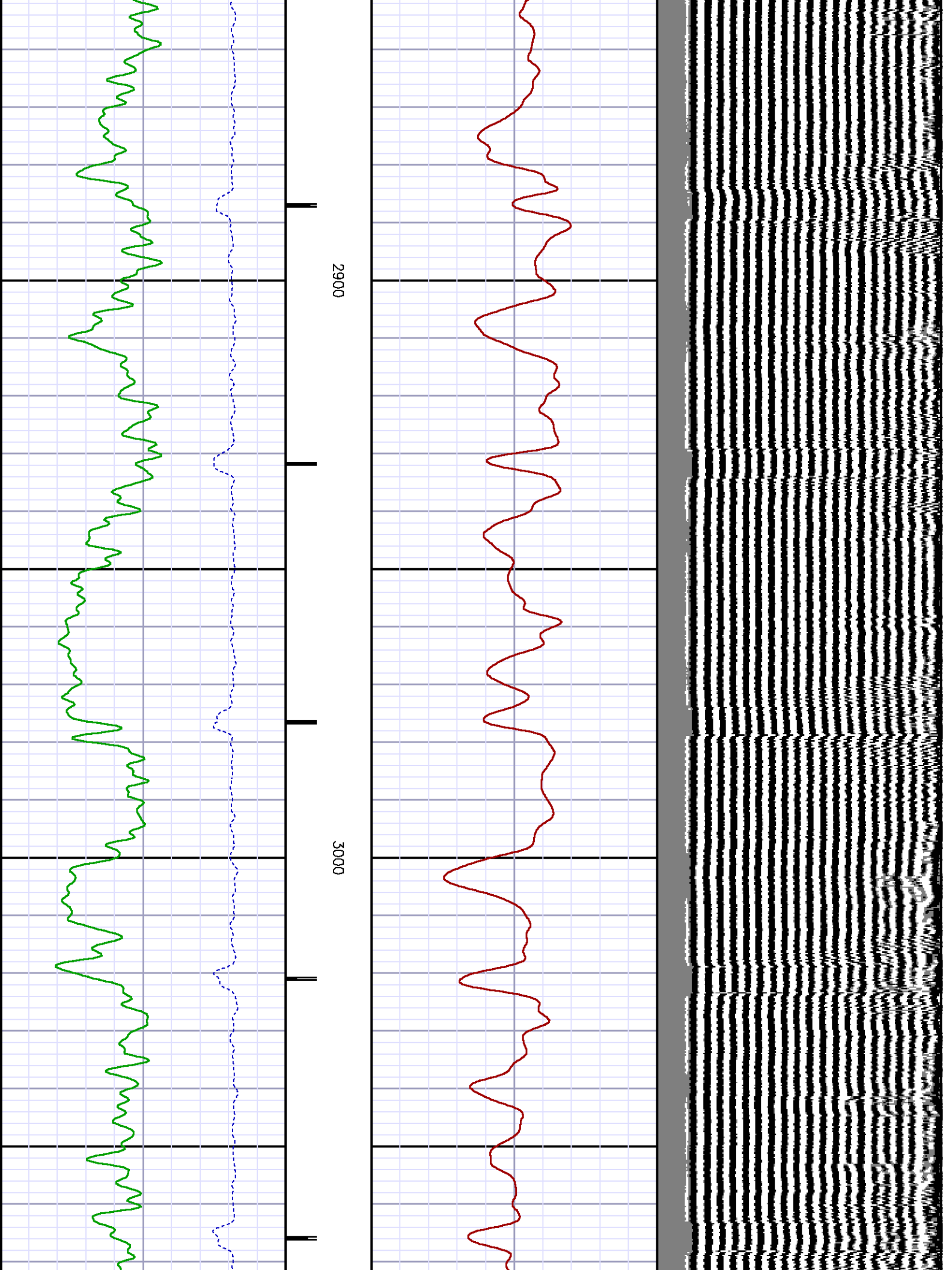


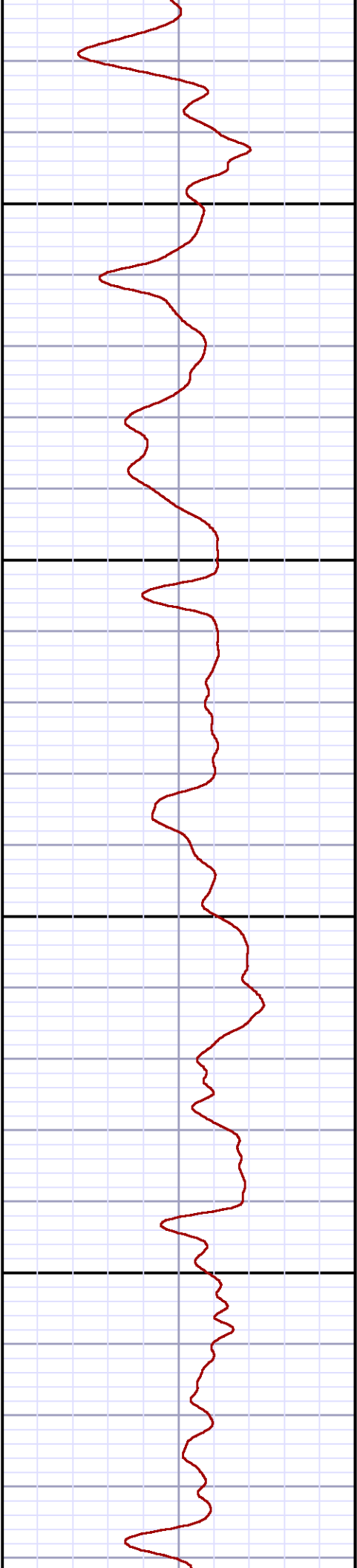
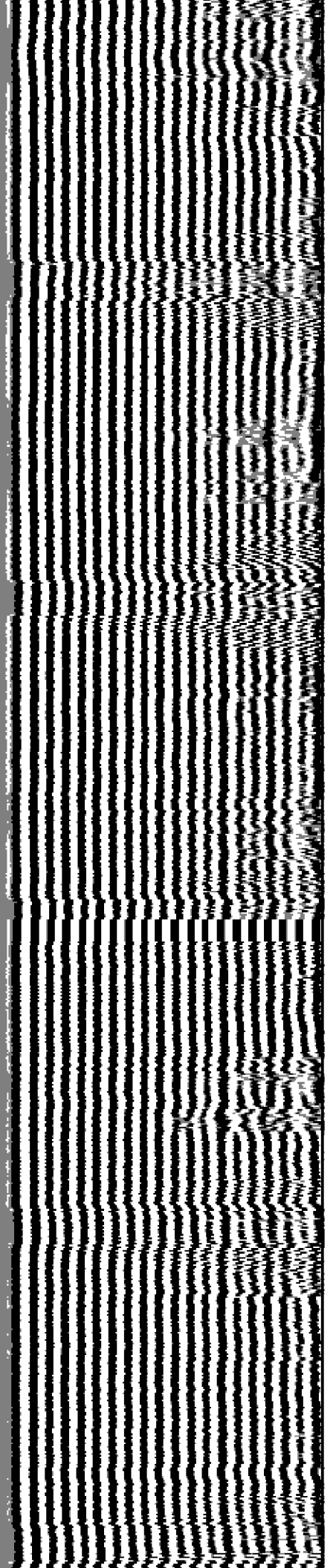






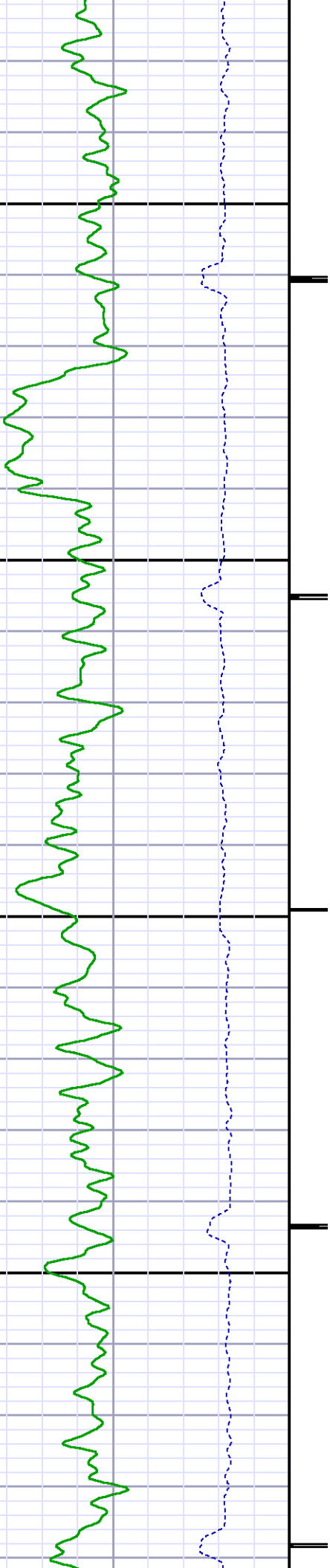


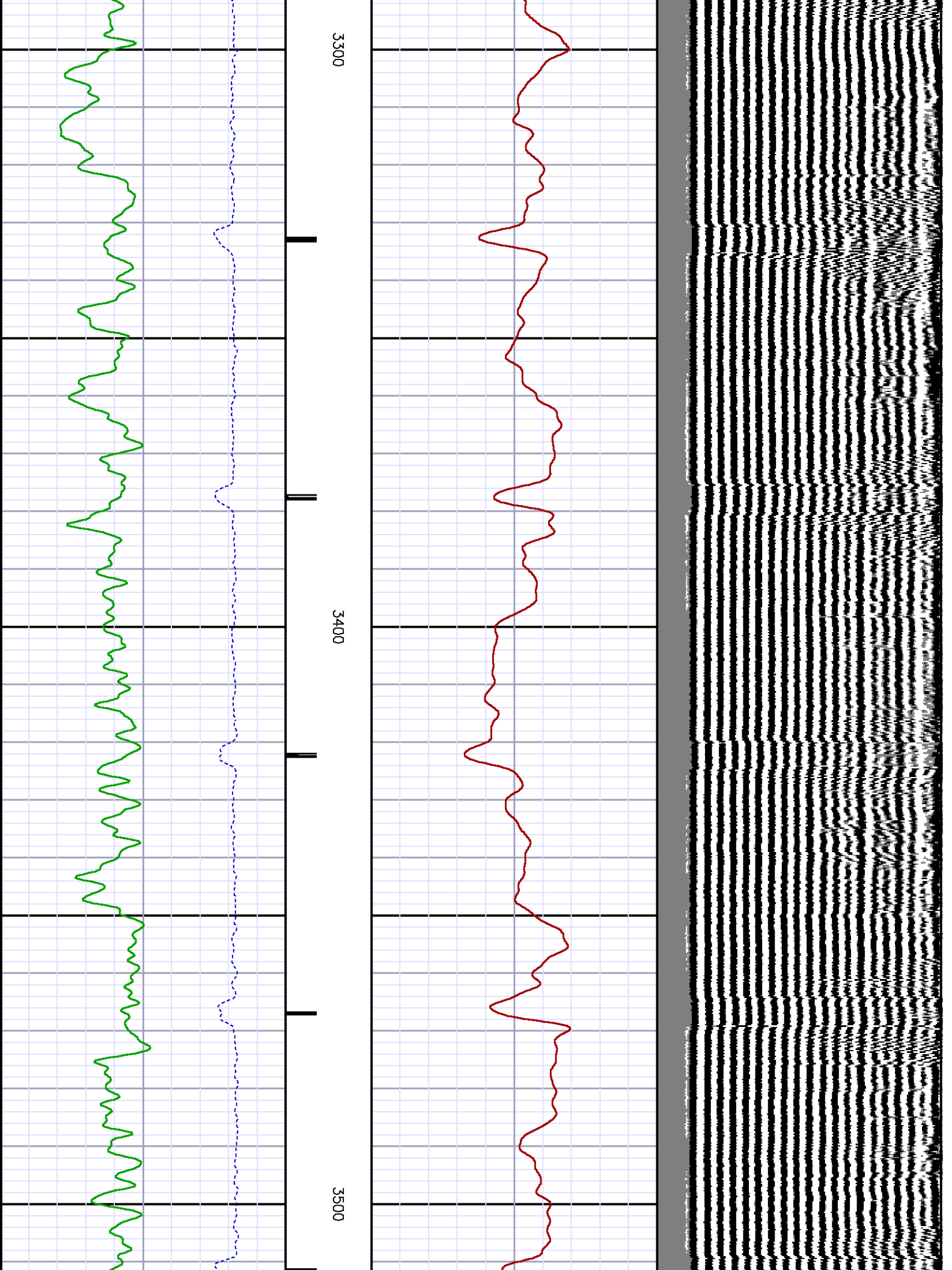


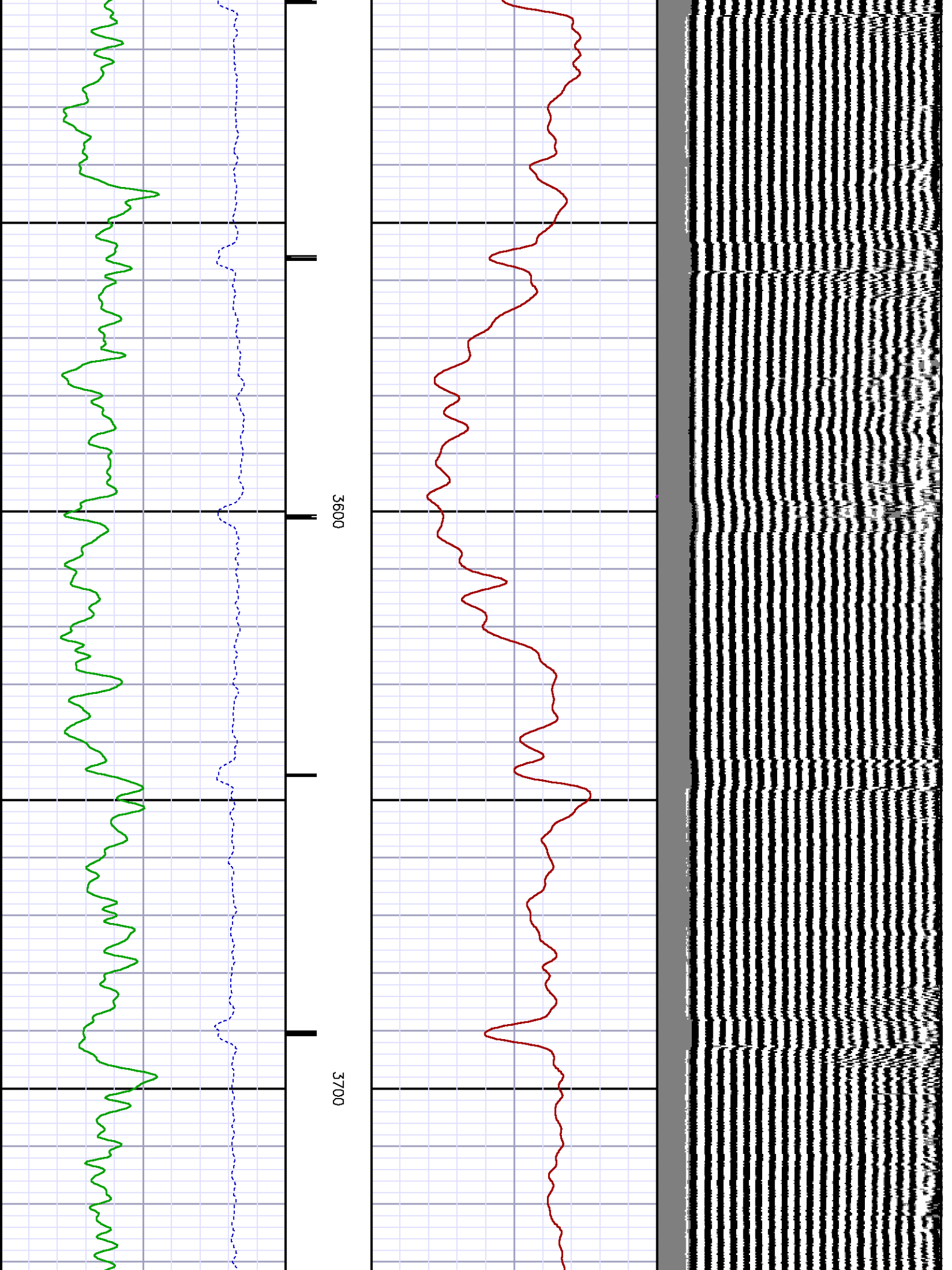


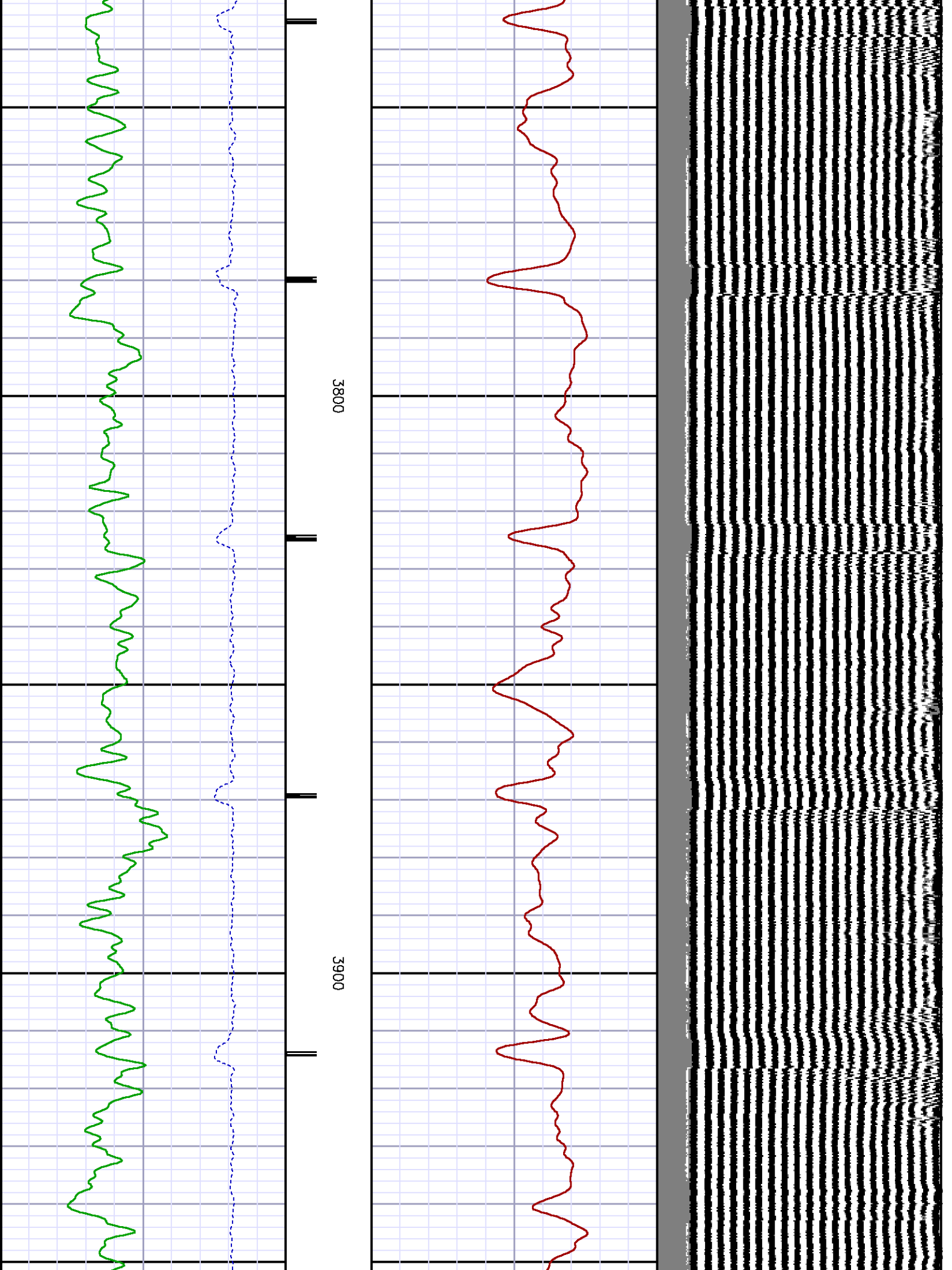
3100

3200

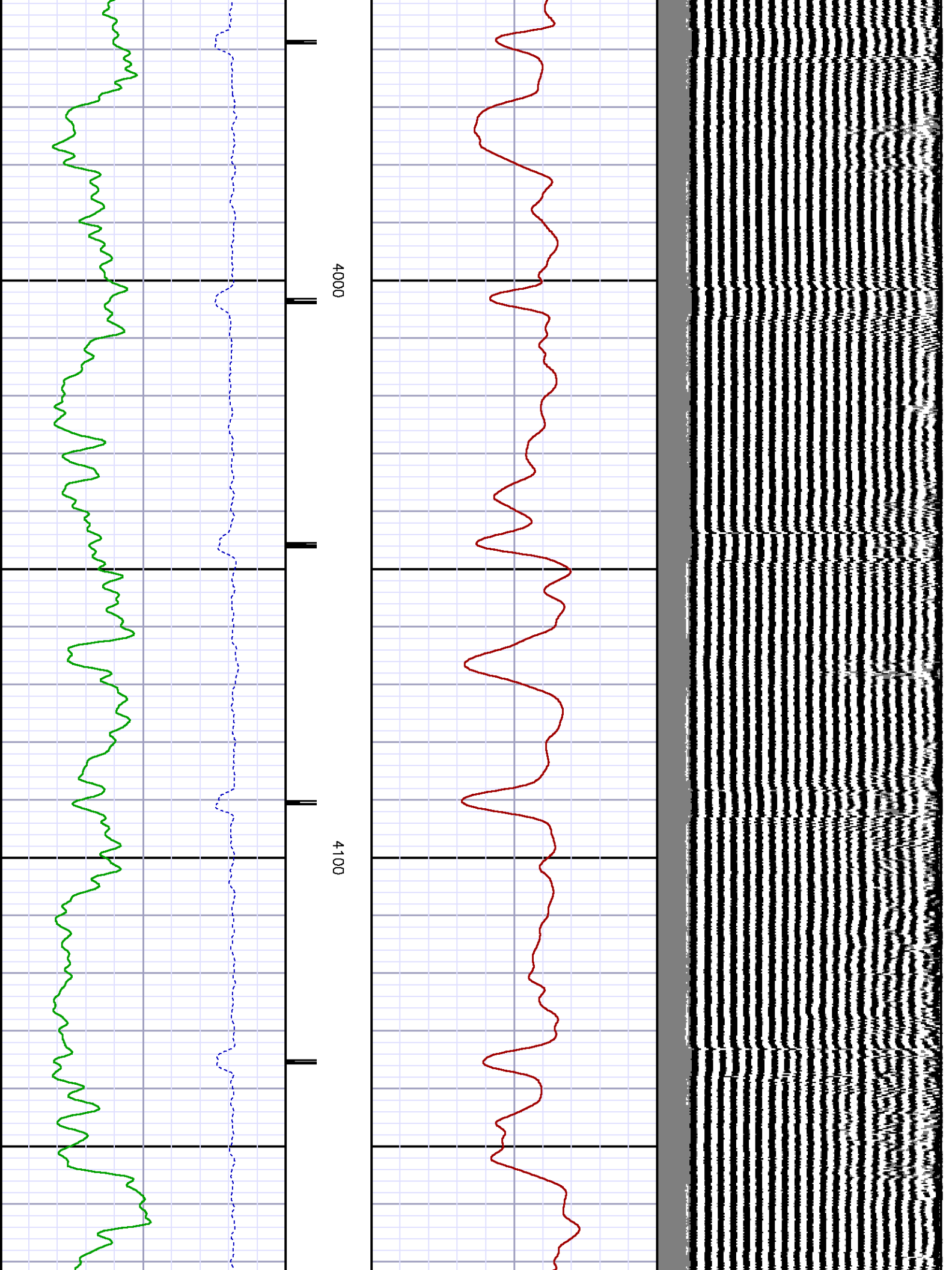


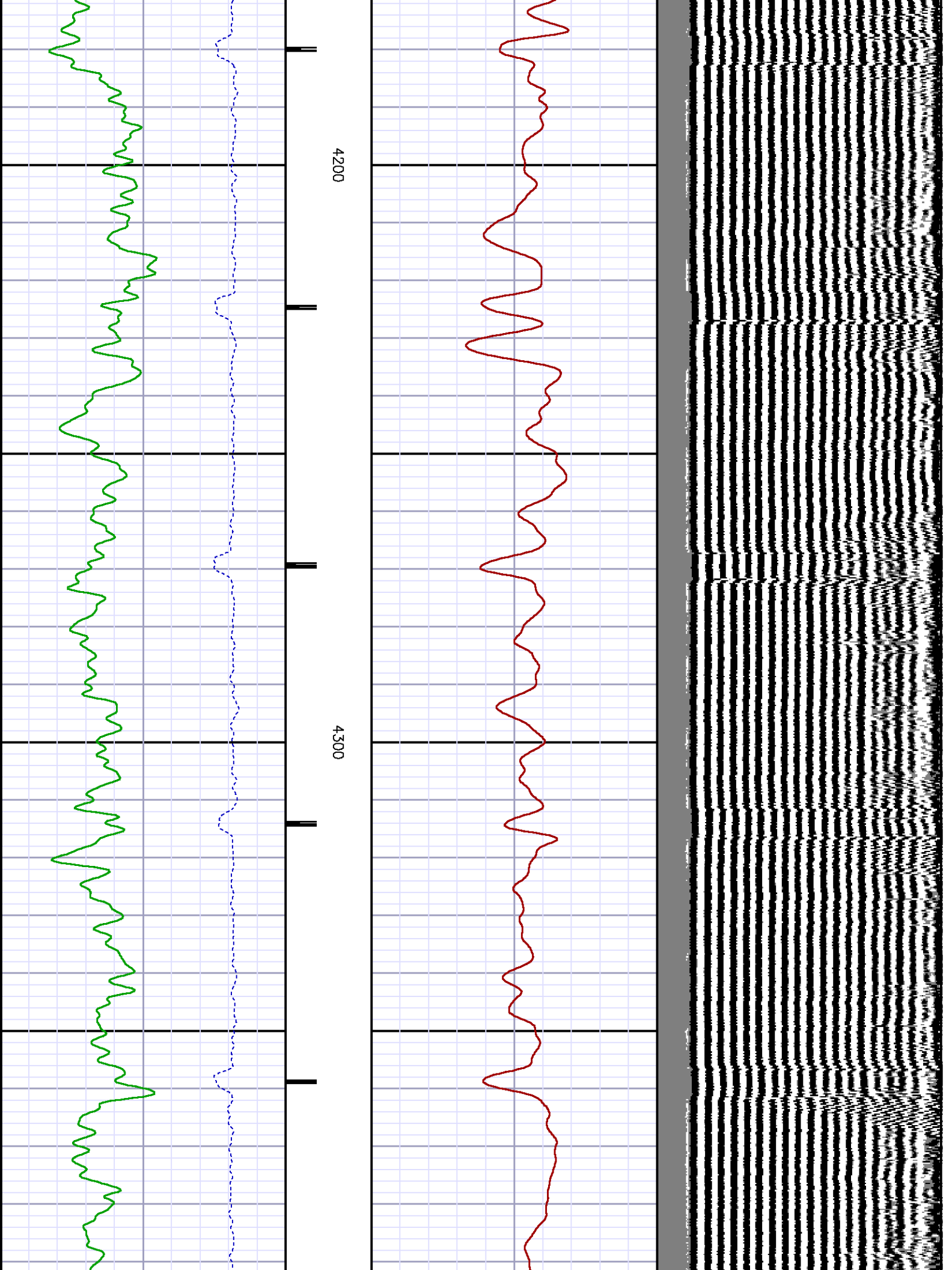


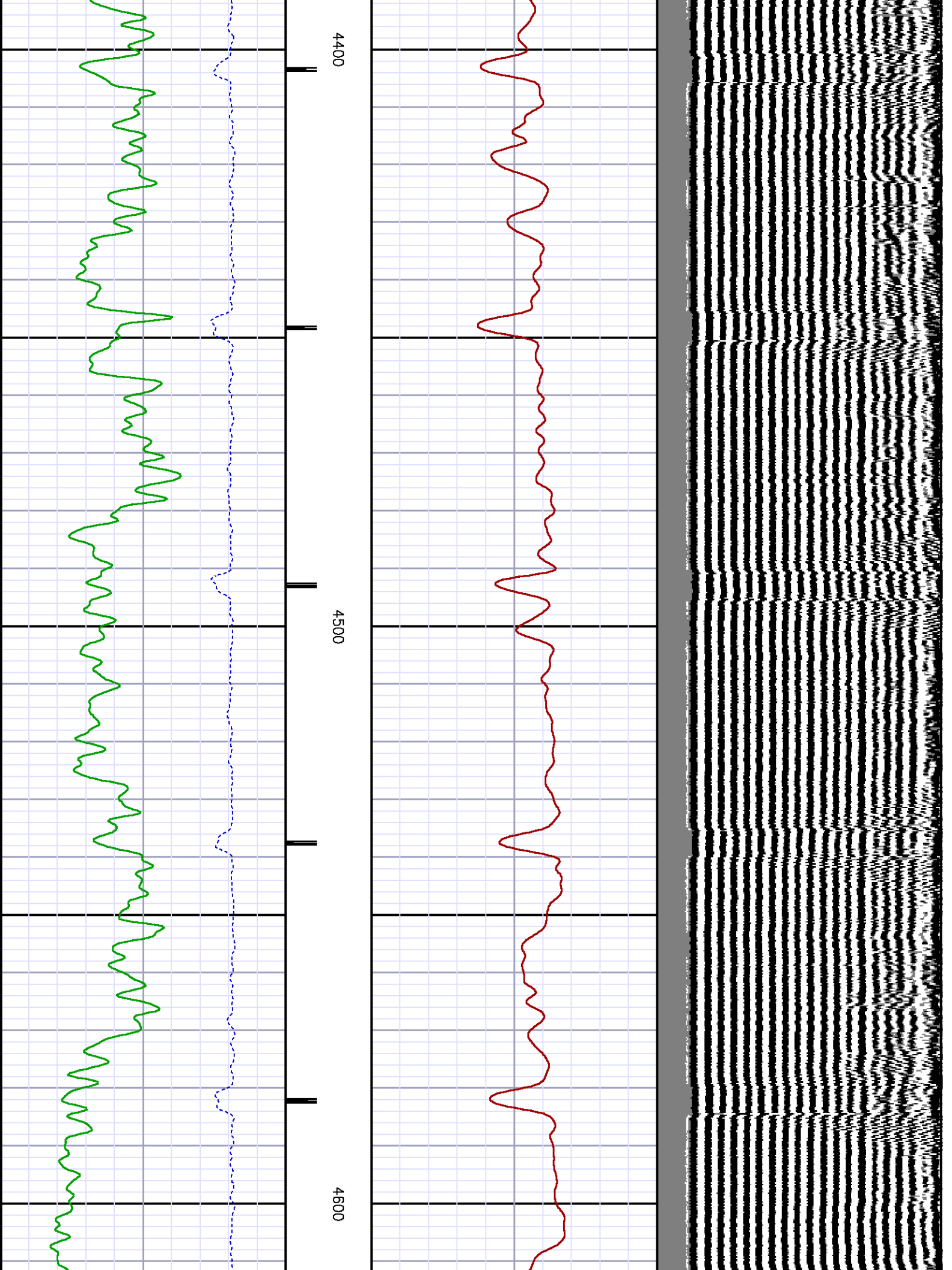




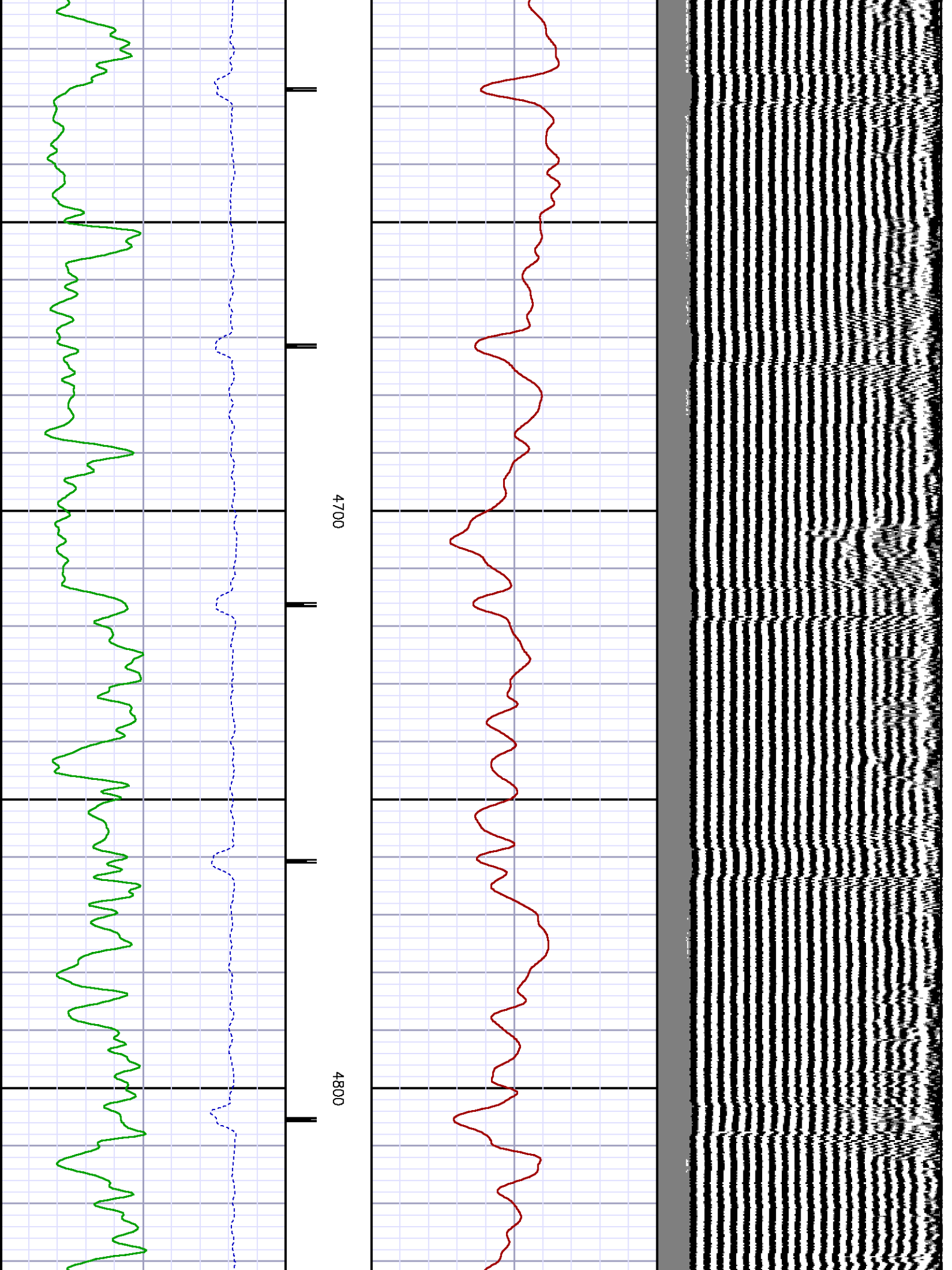


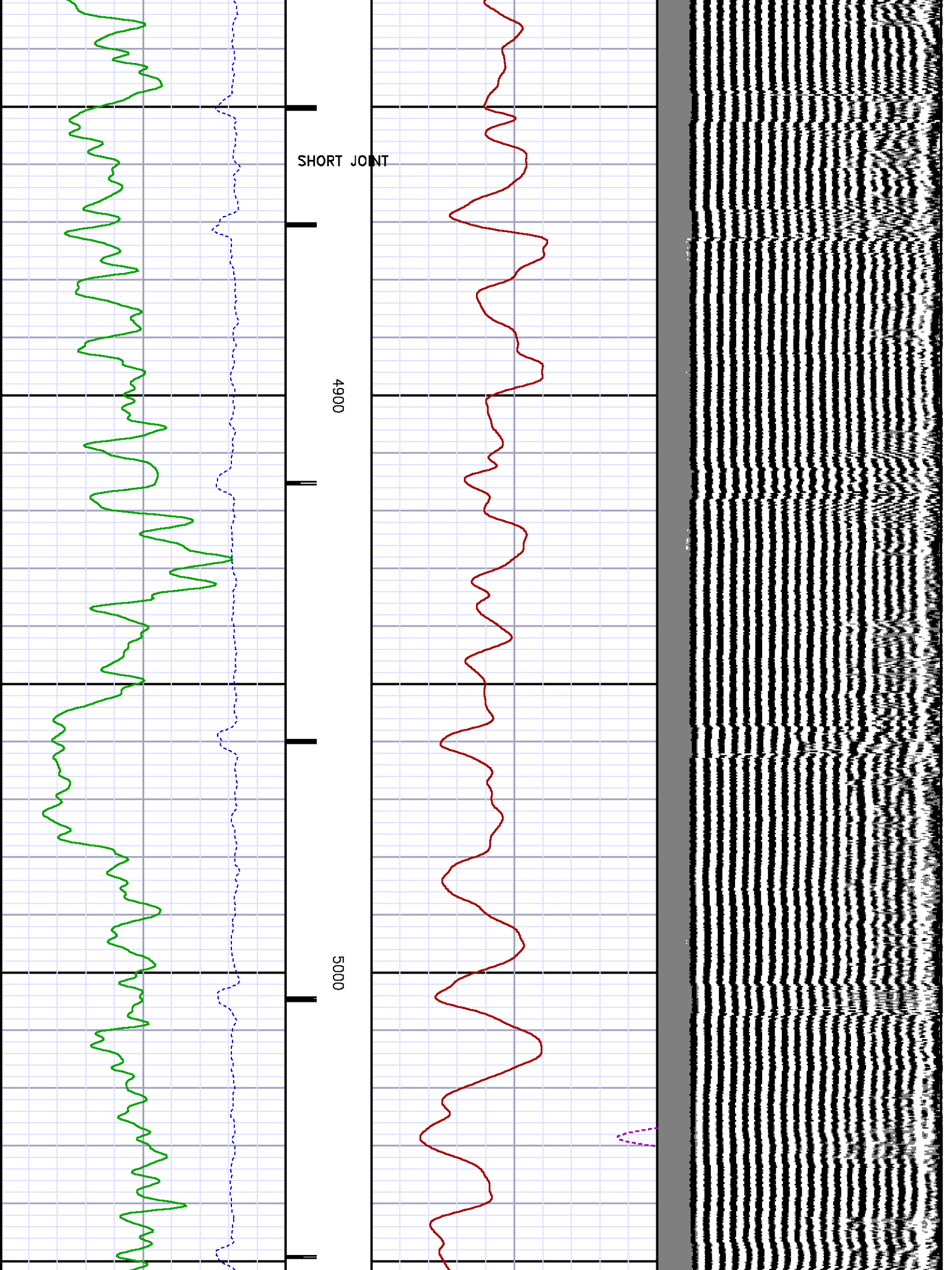


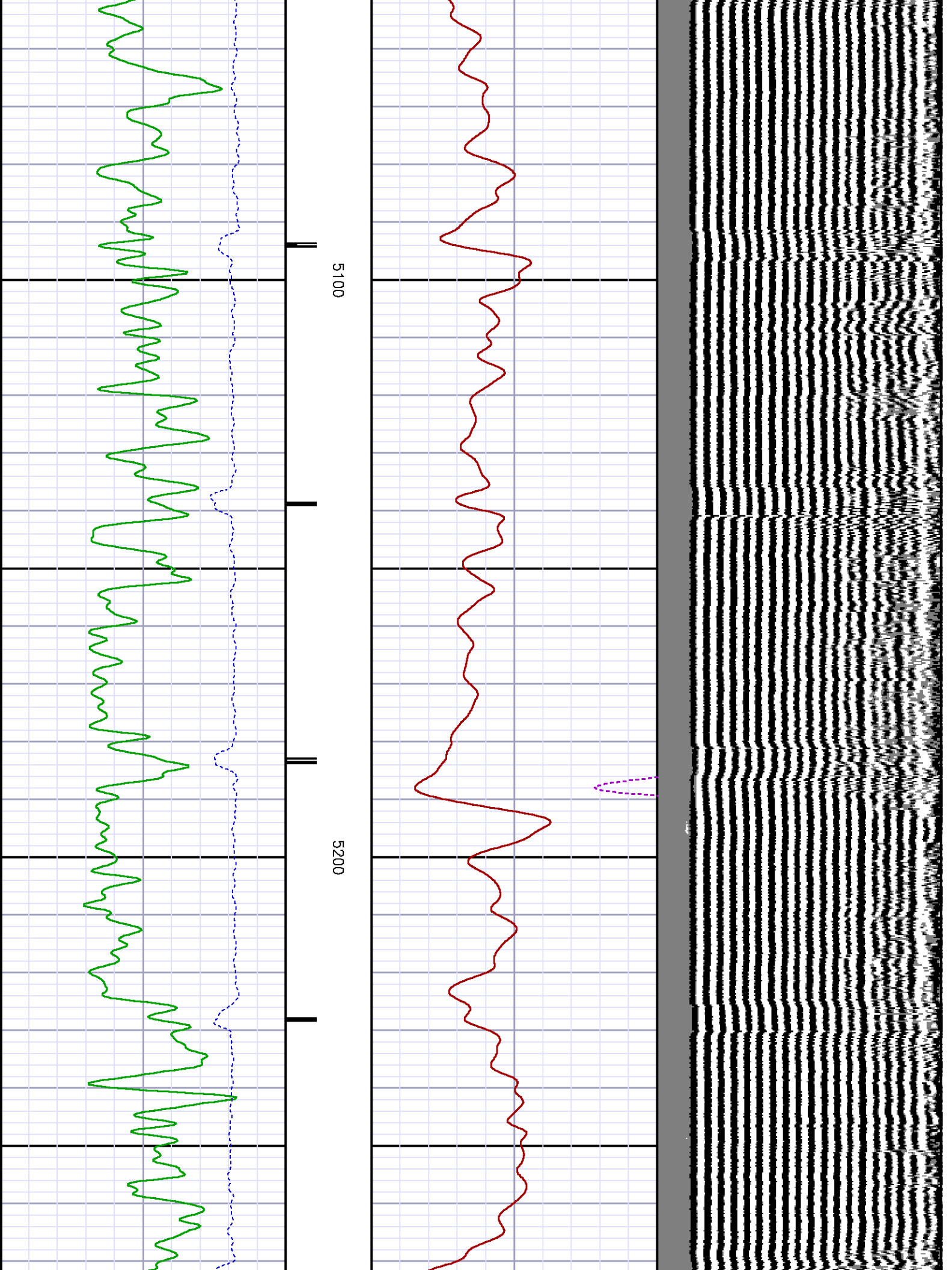


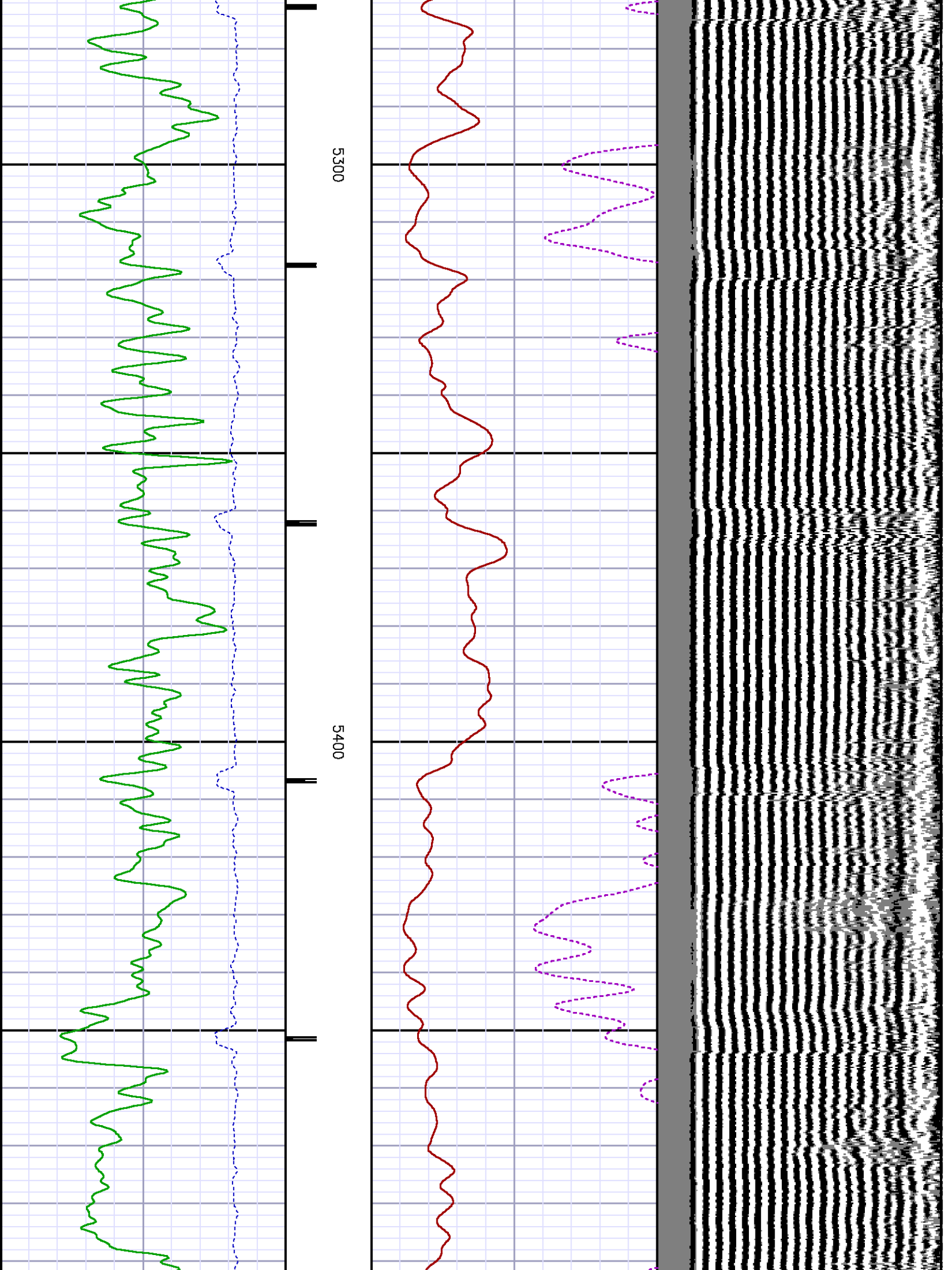


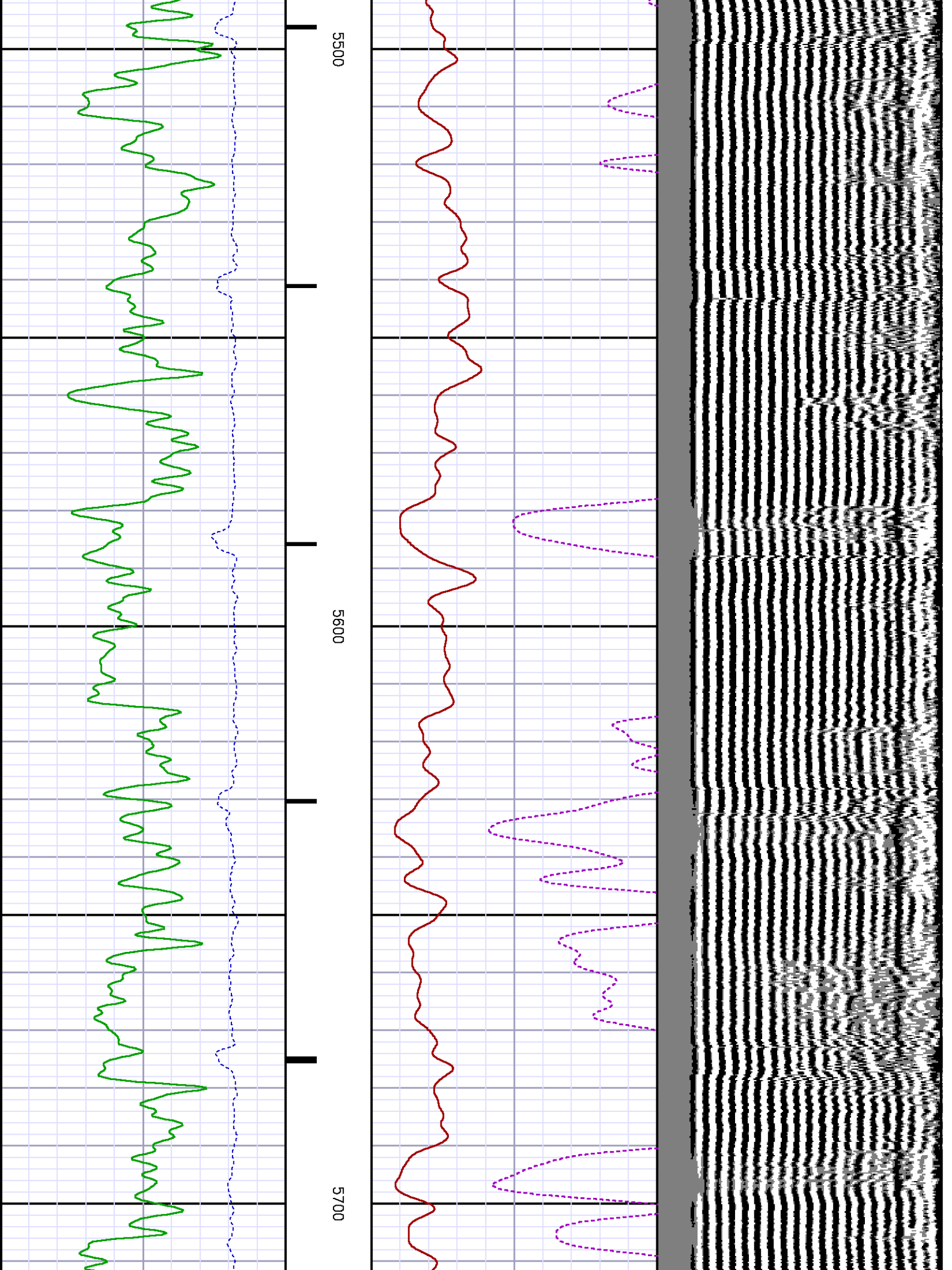




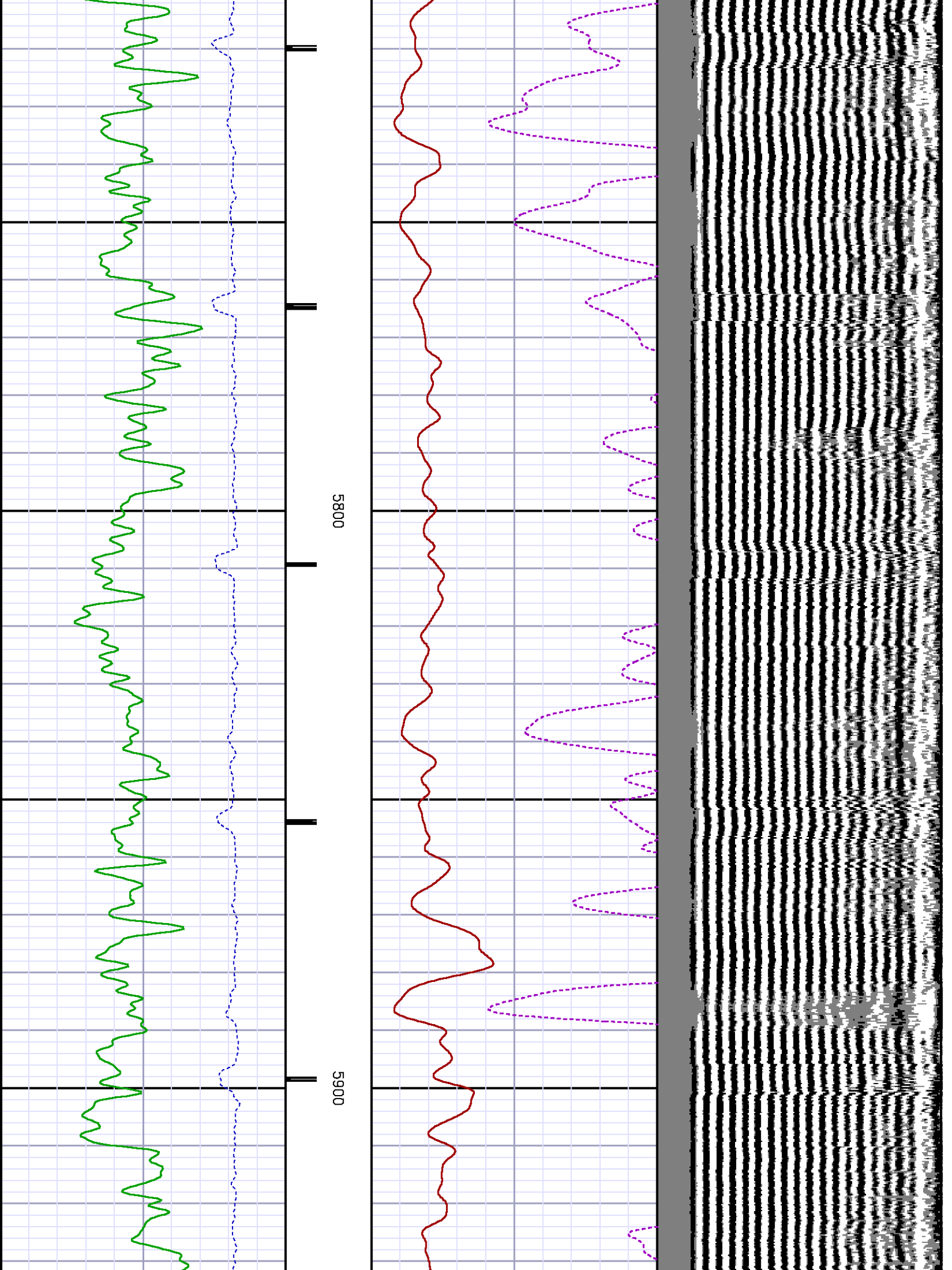


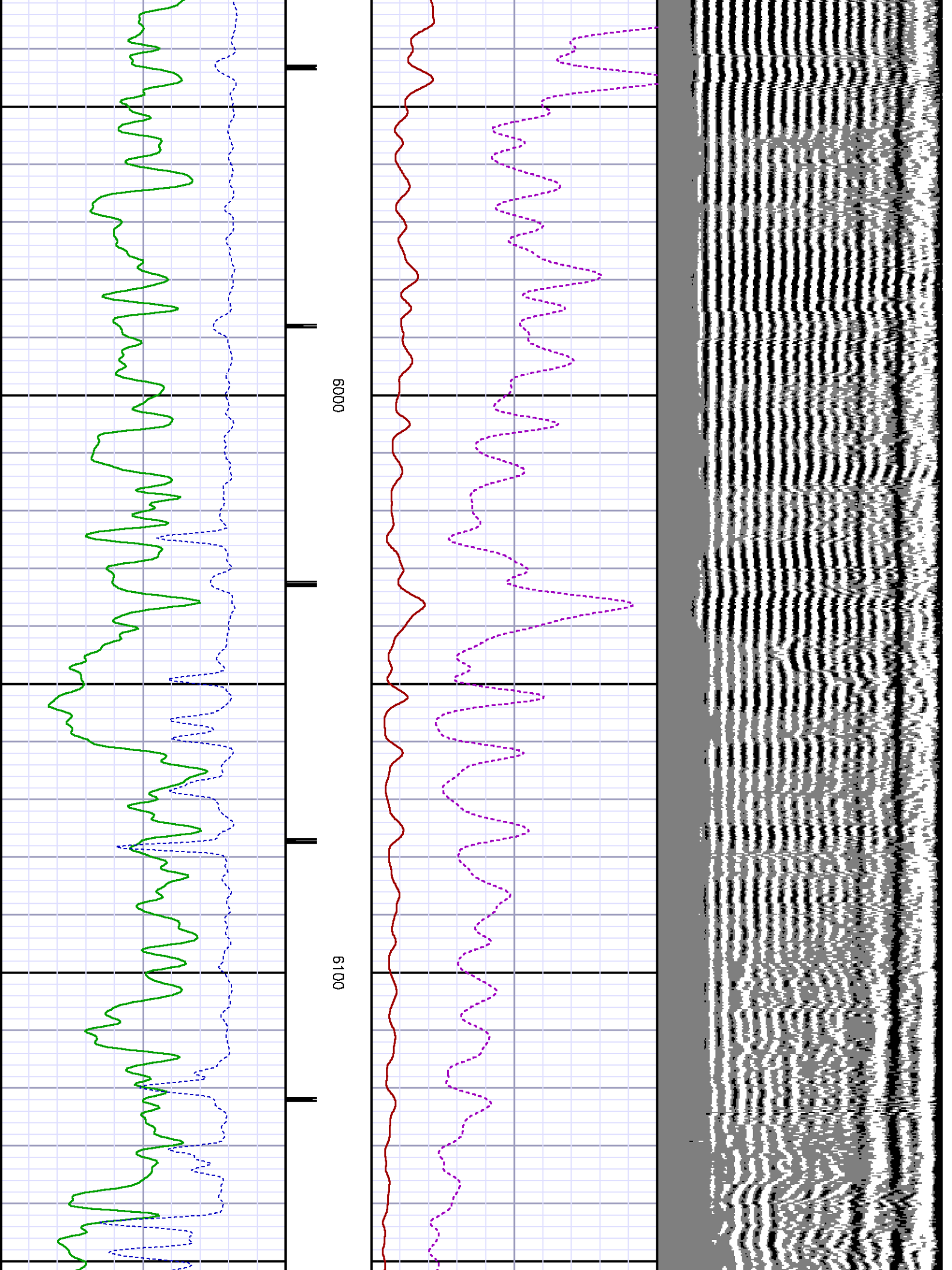


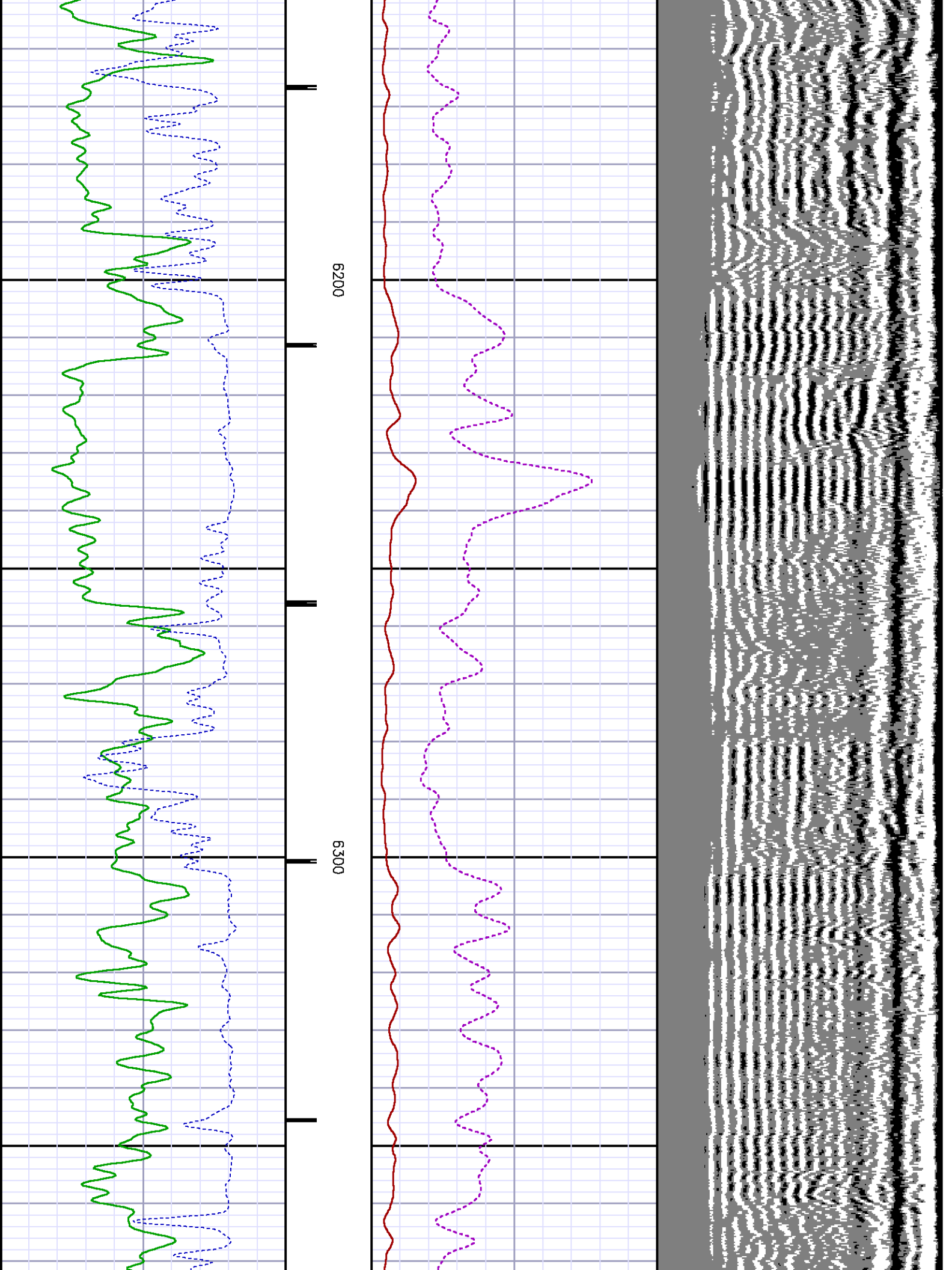




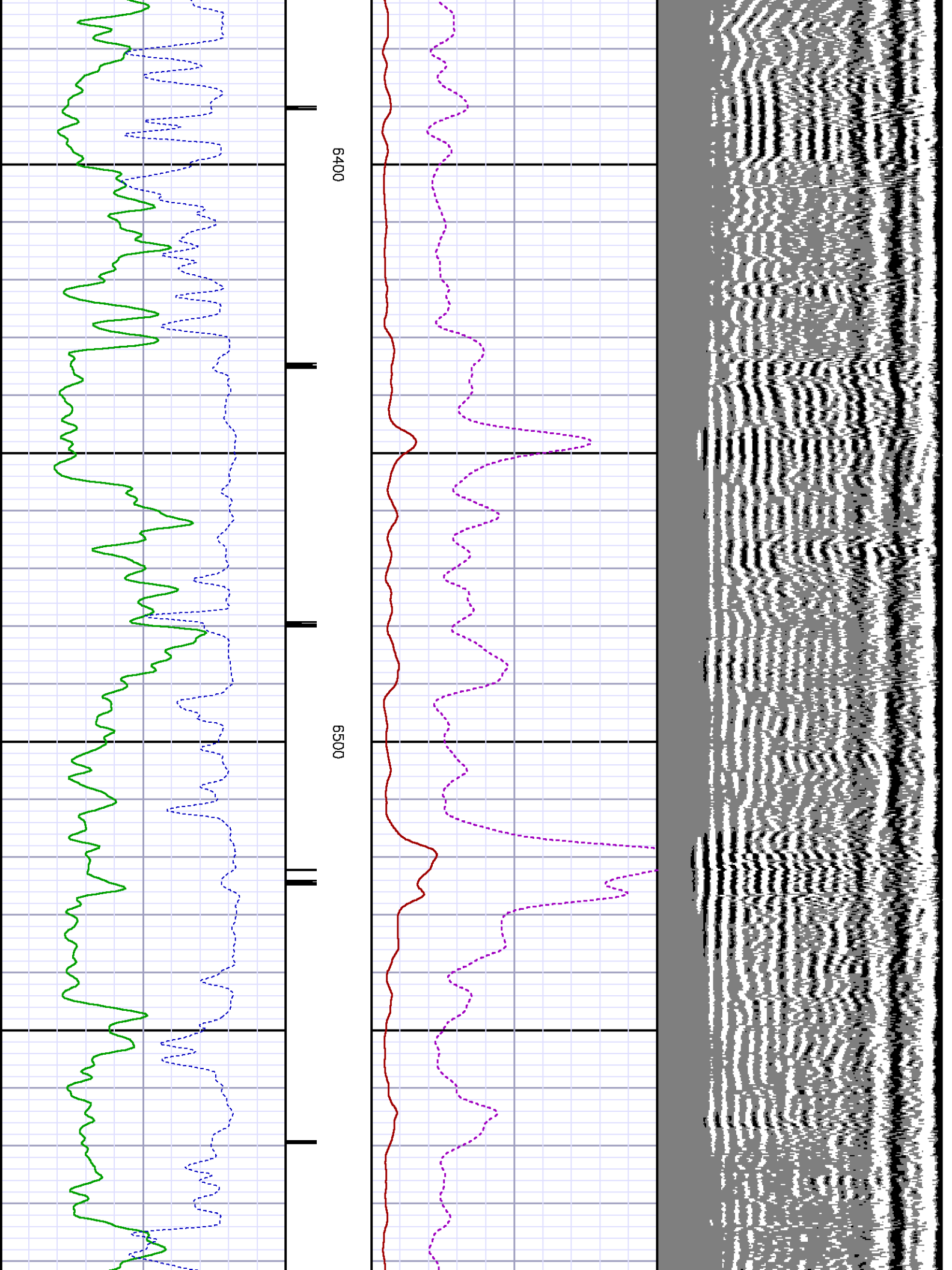


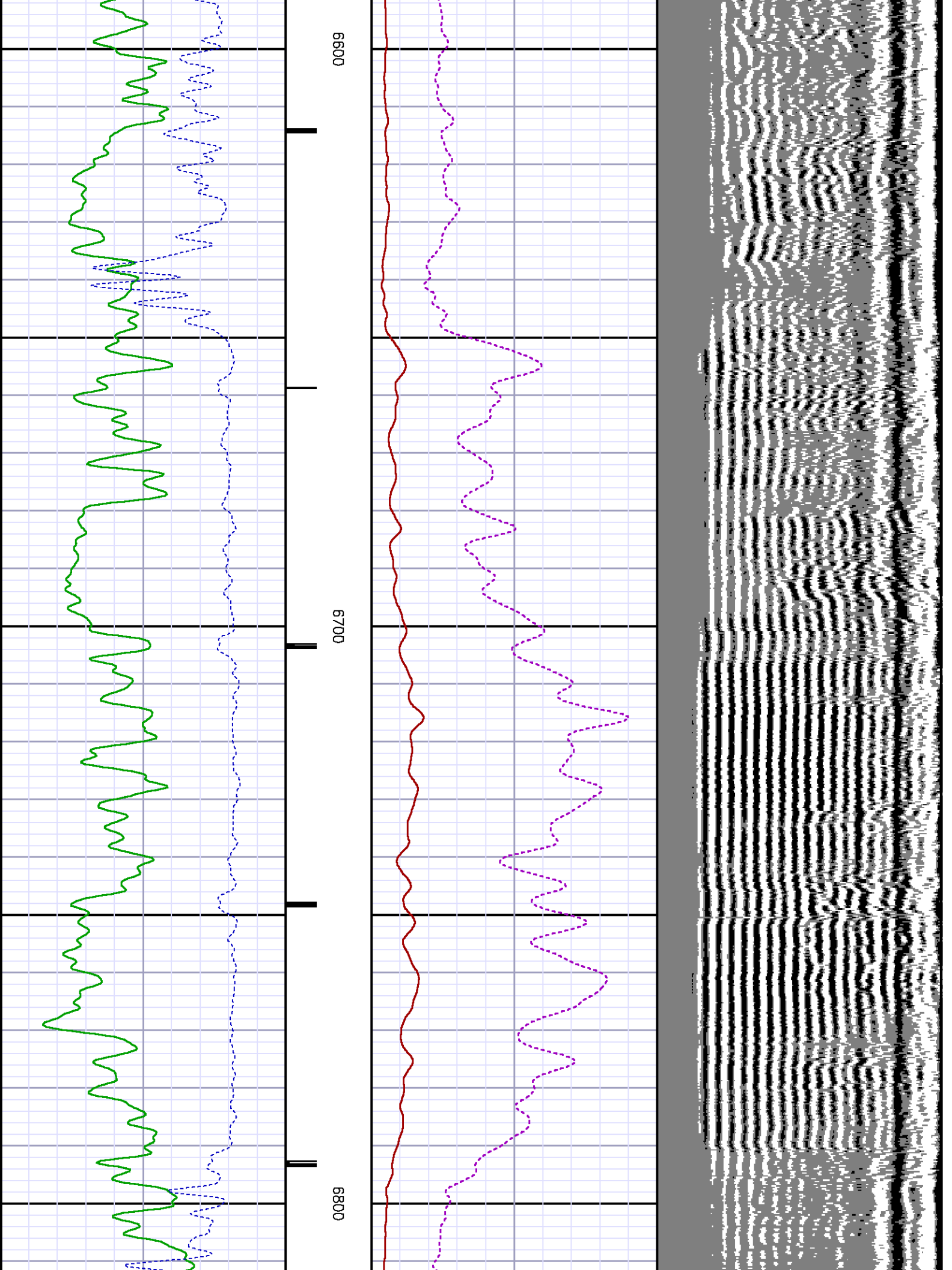


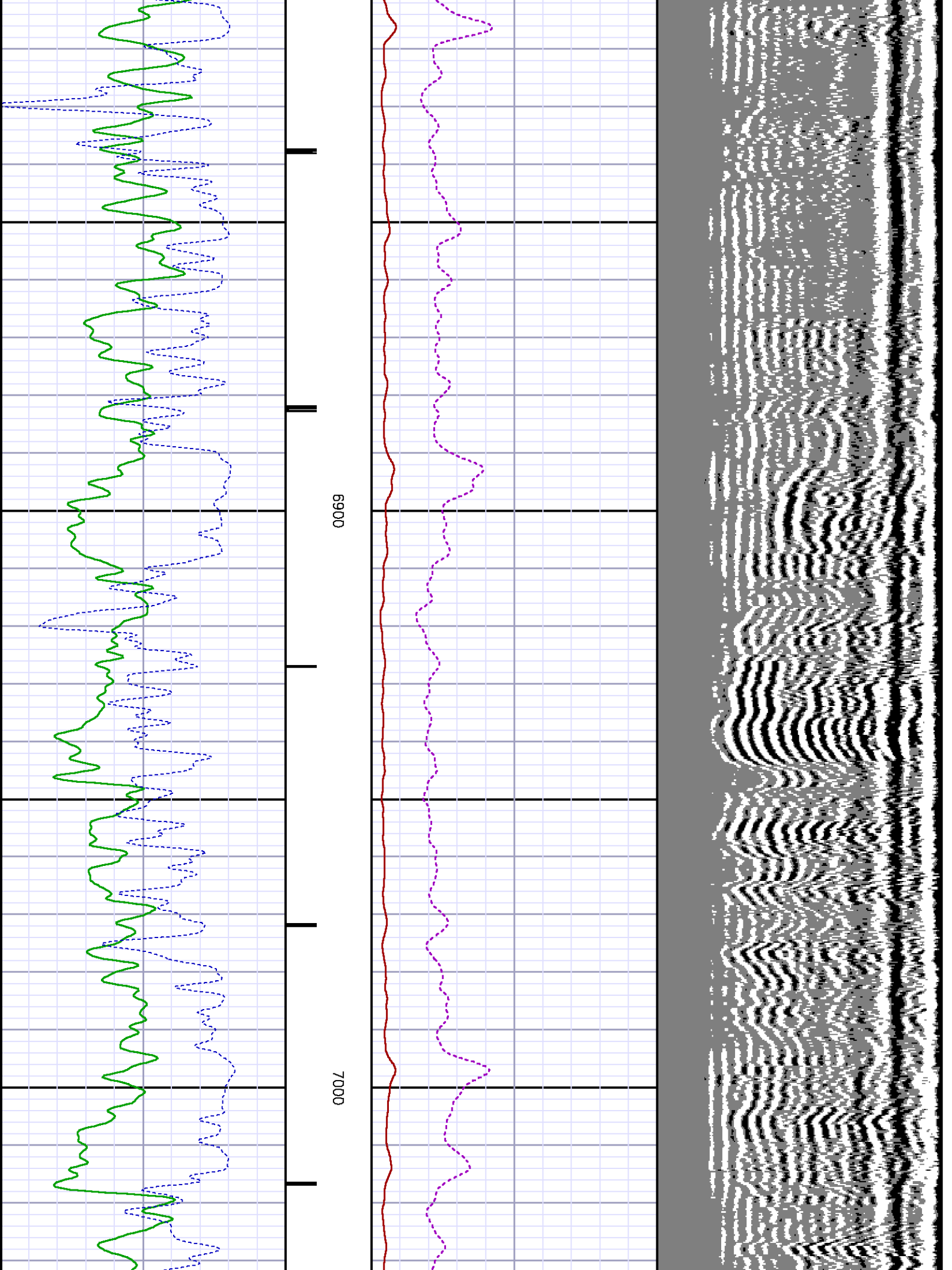


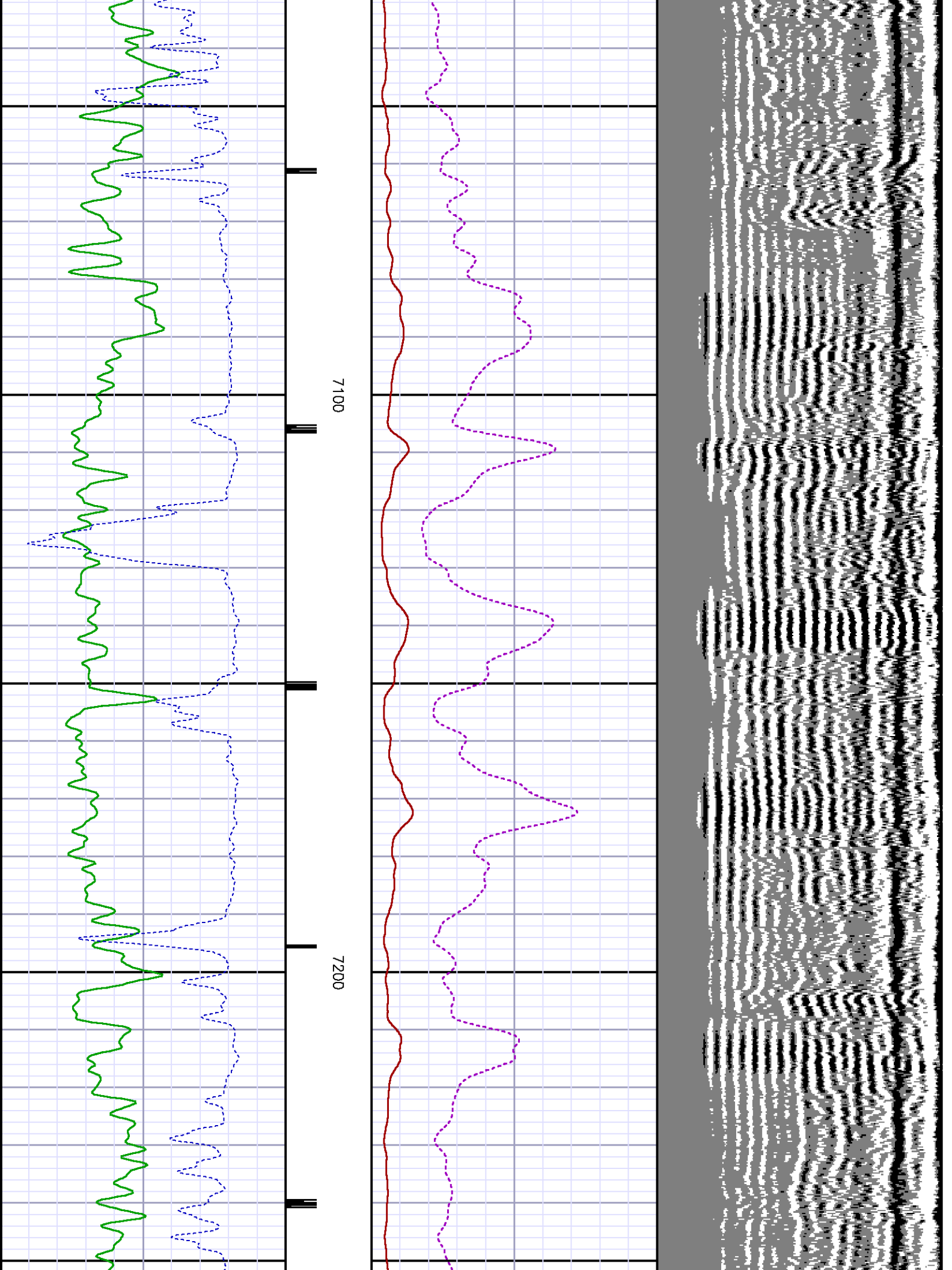


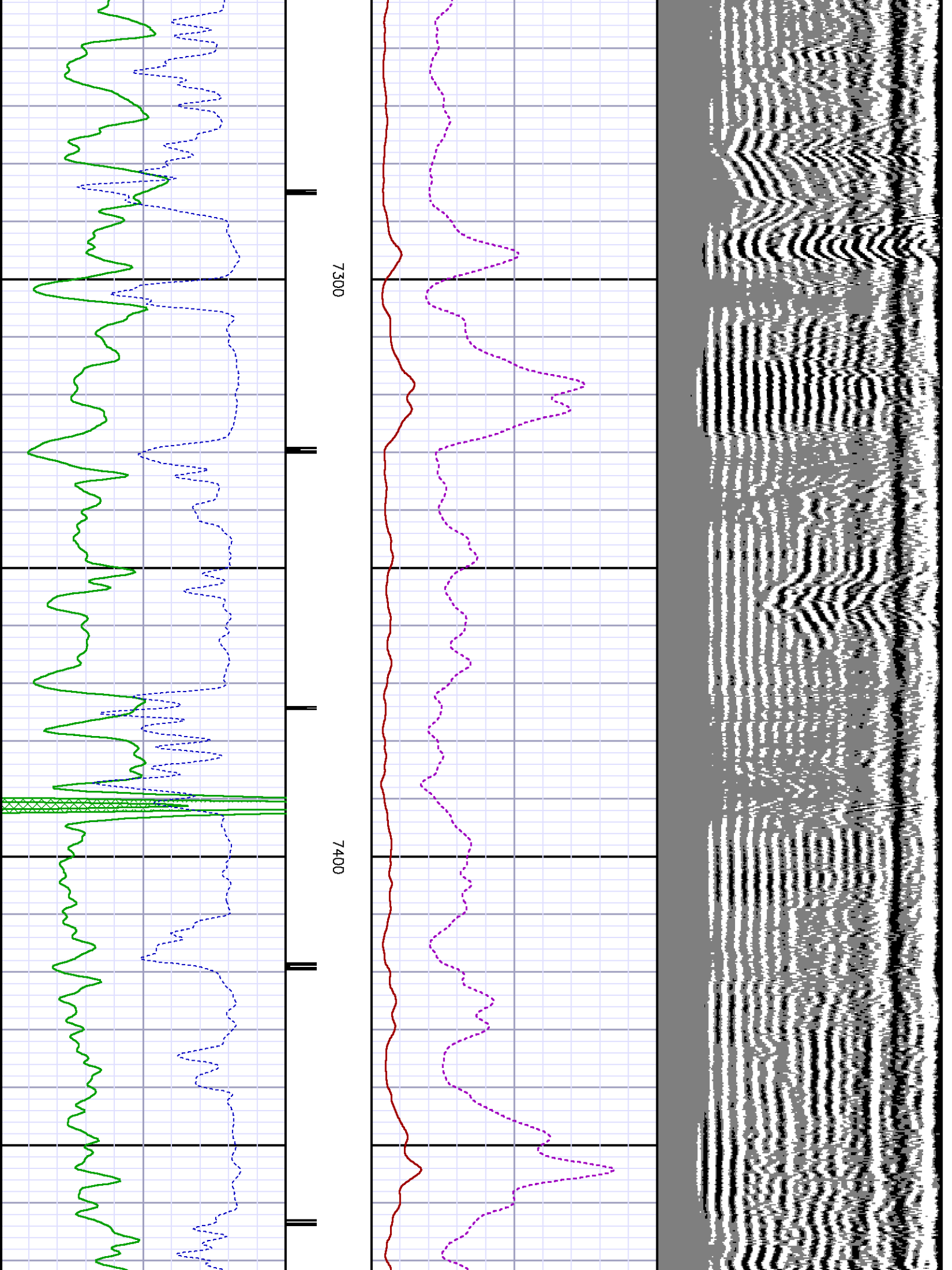


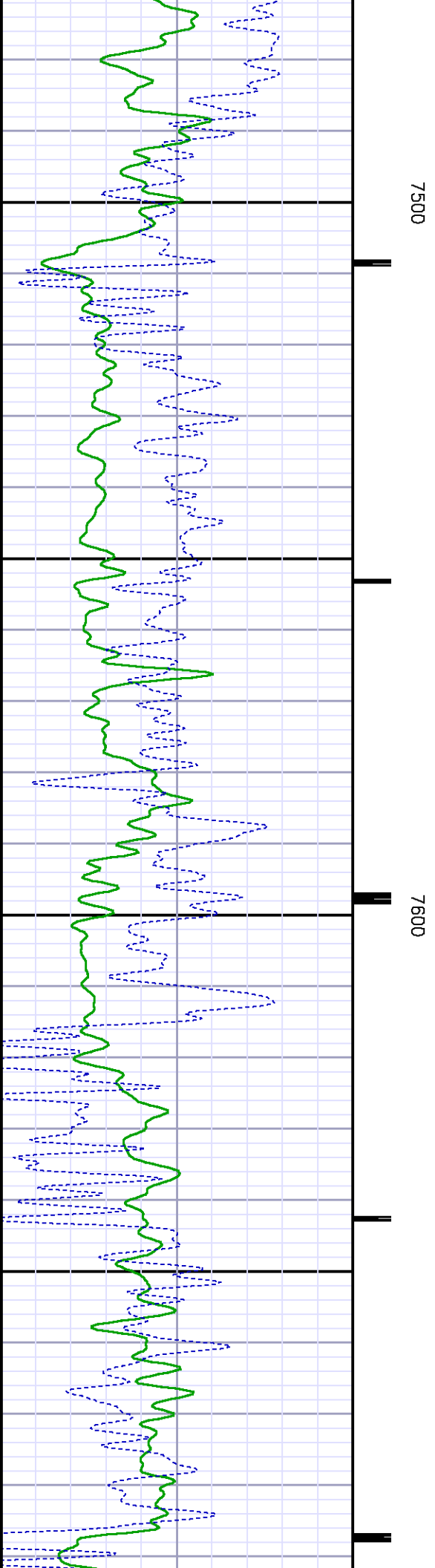
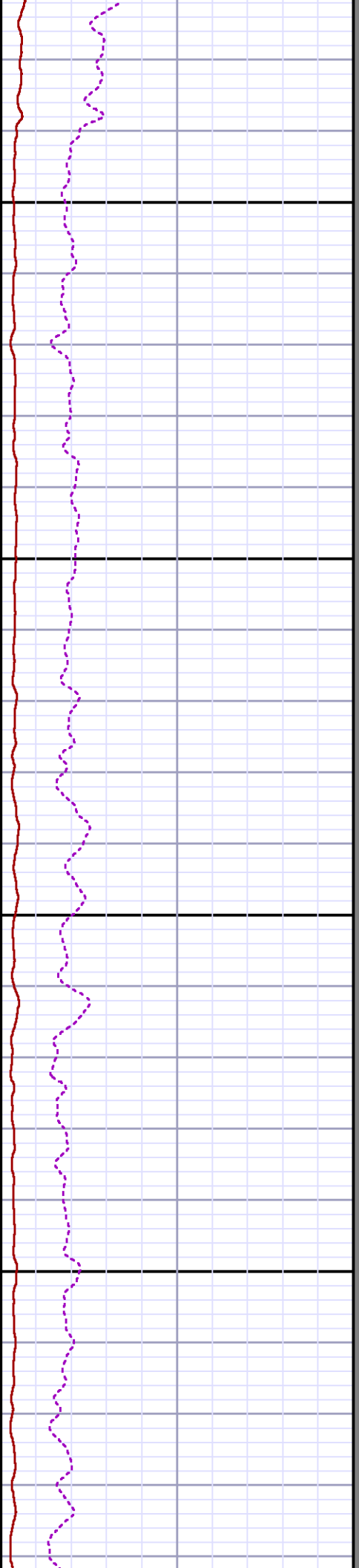
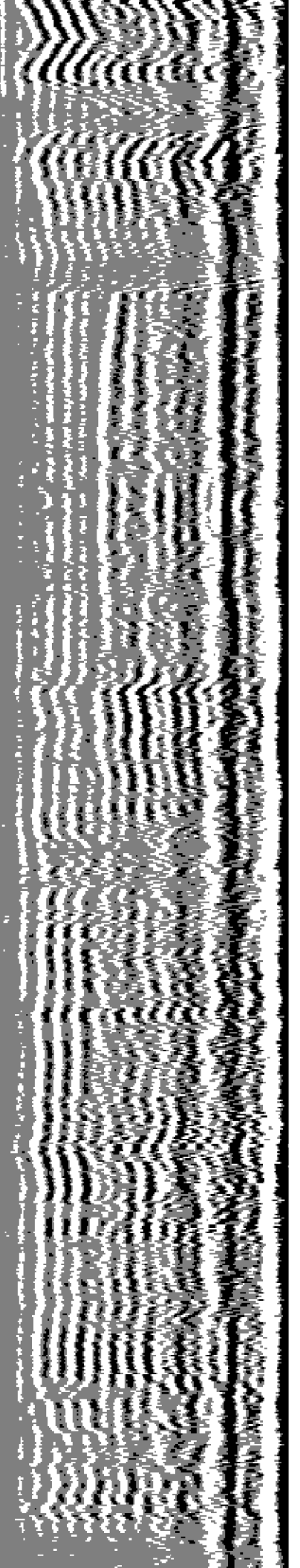




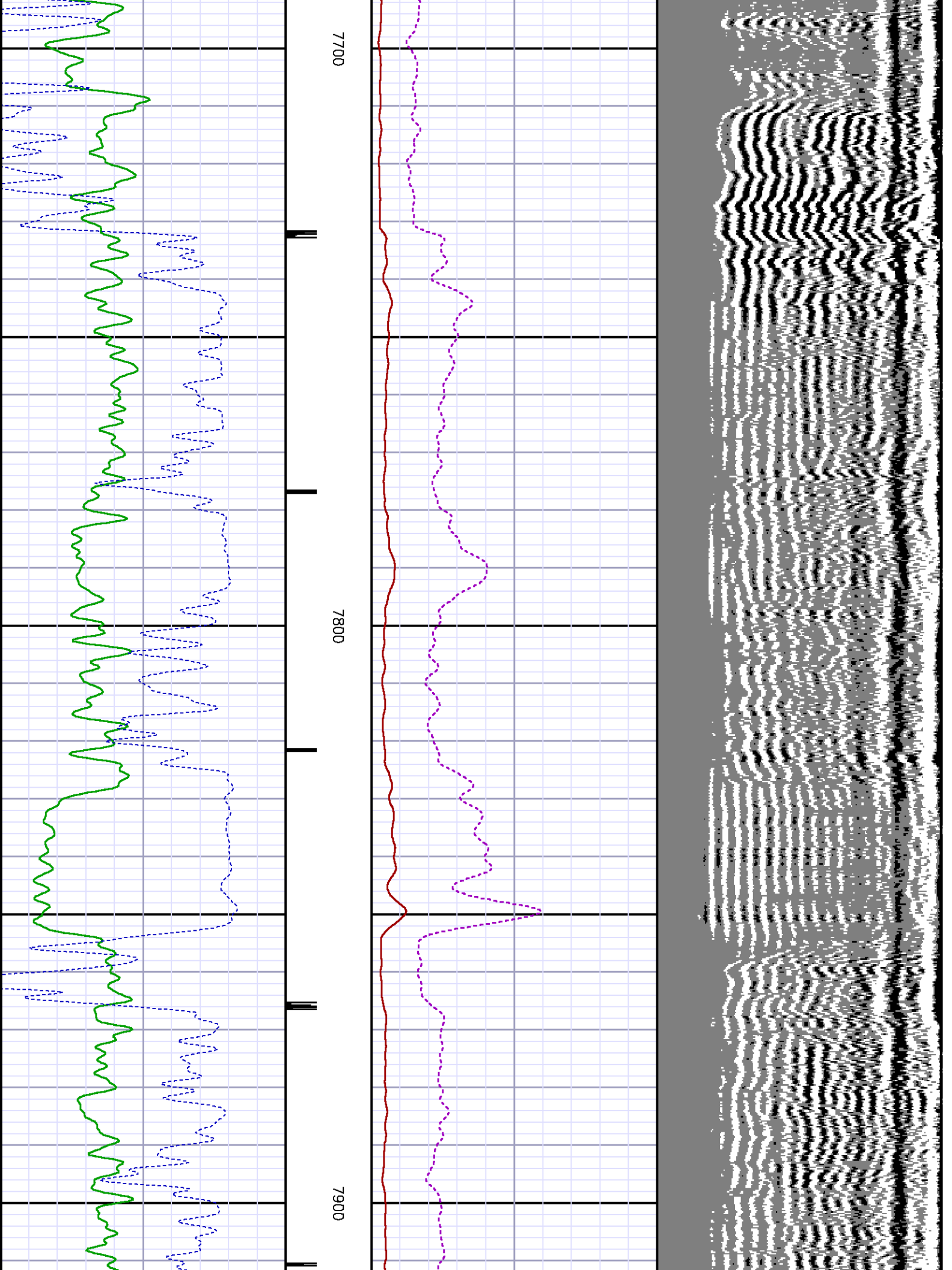


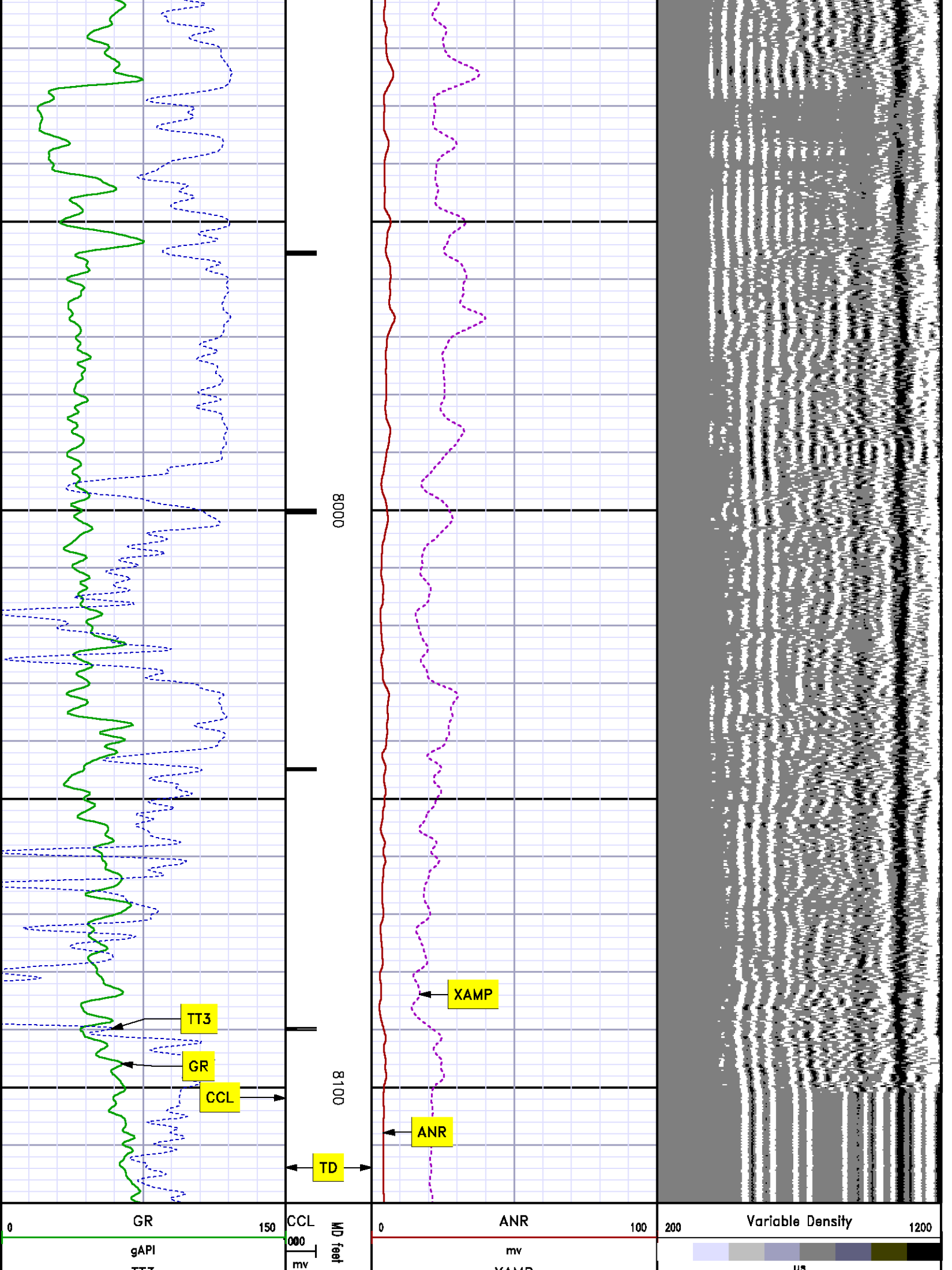














280	115	180	1:240	0	XAMP	20	45
	usec				mv		

## ***SECONDARY PRESENTATION***

### ***0 PSI***

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	28.968	2764.000
RAL	Amp Gate Start Near	195.000	usec	28.968	2764.000
RAL	Amp Gate Start Radial	195.000	usec	28.968	2764.000
RAL	Amp Gate Width Far	25.000	usec	28.968	2764.000
RAL	Amp Gate Width Near	25.000	usec	28.968	2764.000
RAL	Amp Gate Width Radial	25.000	usec	28.968	2764.000
RAL	casing od	4.500	inches	28.968	2764.000
RAL	casing wt	11.600	lbm/ft	28.968	2764.000
RAL	FB Start Far	291.900	usec	28.968	2764.000
RAL	FB Start Near	180.000	usec	28.968	2764.000
RAL	FB Start Radial	180.000	usec	28.968	2764.000
RAL	FB Thresh Far	10.000	mv	28.968	2764.000
RAL	FB Thresh Near	4.000	mv	28.968	2764.000
RAL	FB Thresh Radial	4.000	mv	28.968	2764.000
RAL	Fluid Travel Time	200.000	usec/ft	28.968	2764.000
RAL	Amp Gate Start Far	305.000	usec	2764.000	3200.200
RAL	Amp Gate Start Near	195.000	usec	2764.000	3200.200
RAL	Amp Gate Start Radial	195.000	usec	2764.000	3200.200
RAL	Amp Gate Width Far	25.000	usec	2764.000	3200.200
RAL	Amp Gate Width Near	25.000	usec	2764.000	3200.200
RAL	Amp Gate Width Radial	25.000	usec	2764.000	3200.200
RAL	casing od	4.500	inches	2764.000	3200.200
RAL	casing wt	11.600	lbm/ft	2764.000	3200.200
RAL	FB Start Far	291.900	usec	2764.000	3200.200
RAL	FB Start Near	180.000	usec	2764.000	3200.200
RAL	FB Start Radial	180.000	usec	2764.000	3200.200
RAL	FB Thresh Far	10.000	mv	2764.000	3200.200
RAL	FB Thresh Near	4.000	mv	2764.000	3200.200
RAL	FB Thresh Radial	4.000	mv	2764.000	3200.200
RAL	Fluid Travel Time	200.000	usec/ft	2764.000	3200.200
RAL	Amp Gate Start Far	305.000	usec	3200.200	8152.680
RAL	Amp Gate Start Near	195.000	usec	3200.200	8152.680
RAL	Amp Gate Start Radial	195.000	usec	3200.200	8152.680
RAL	Amp Gate Width Far	25.000	usec	3200.200	8152.680

RAL	Amp Gate Width Near	25.000	usec	3200.200	8152.680
RAL	Amp Gate Width Radial	25.000	usec	3200.200	8152.680
RAL	casing od	4.500	inches	3200.200	8152.680
RAL	casing wt	11.600	lbm/ft	3200.200	8152.680
RAL	FB Start Far	291.900	usec	3200.200	8152.680
RAL	FB Start Near	180.000	usec	3200.200	8152.680
RAL	FB Start Radial	180.000	usec	3200.200	8152.680
RAL	FB Thresh Far	10.000	mv	3200.200	8152.680
RAL	FB Thresh Near	4.000	mv	3200.200	8152.680
RAL	FB Thresh Radial	4.000	mv	3200.200	8152.680
RAL	Fluid Travel Time	200.000	usec/ft	3200.200	8152.648

## DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	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	-15.750	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 : WPX ENERGY

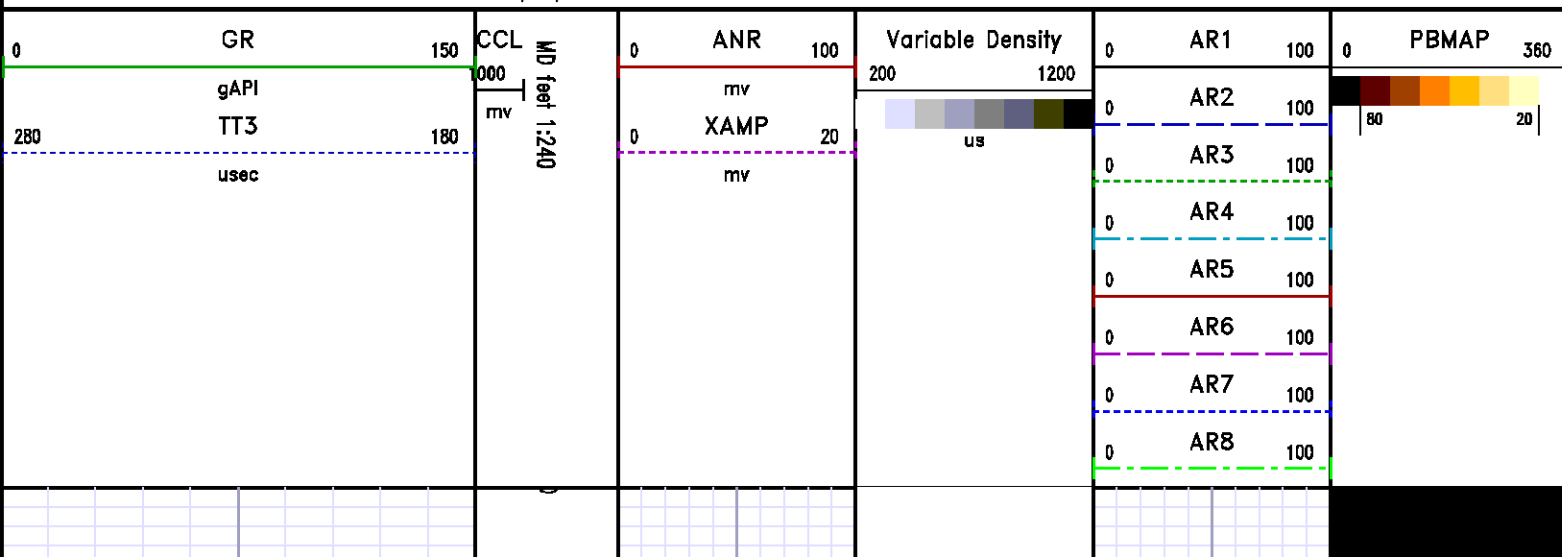
Well : FEDERAL KP 14-18

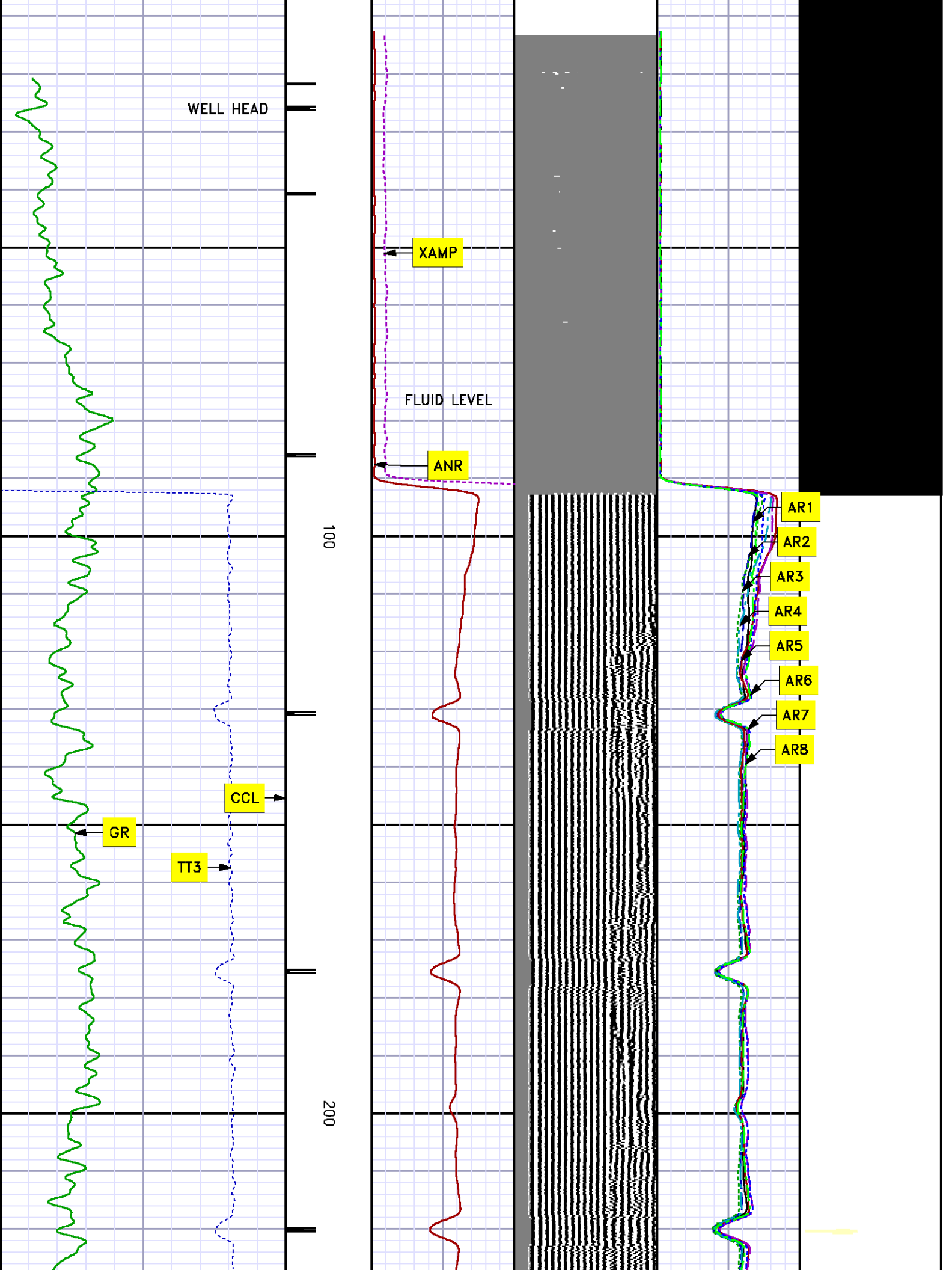
File Name : D:\WELLDATA\WPX Energy\KP 14-18\14ral\MAINsplice.XTF

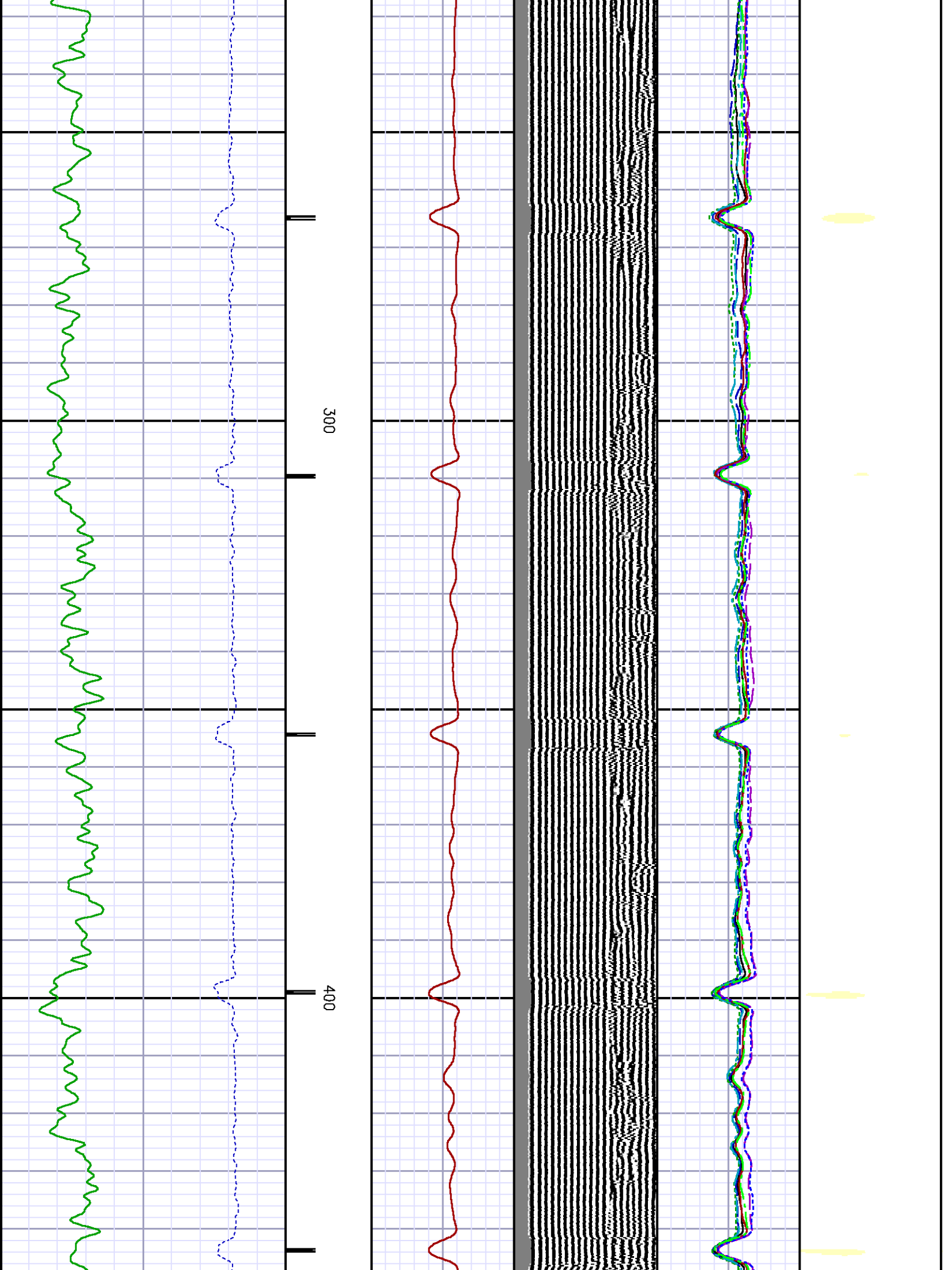
Mode : PlotMgr 5.4.504

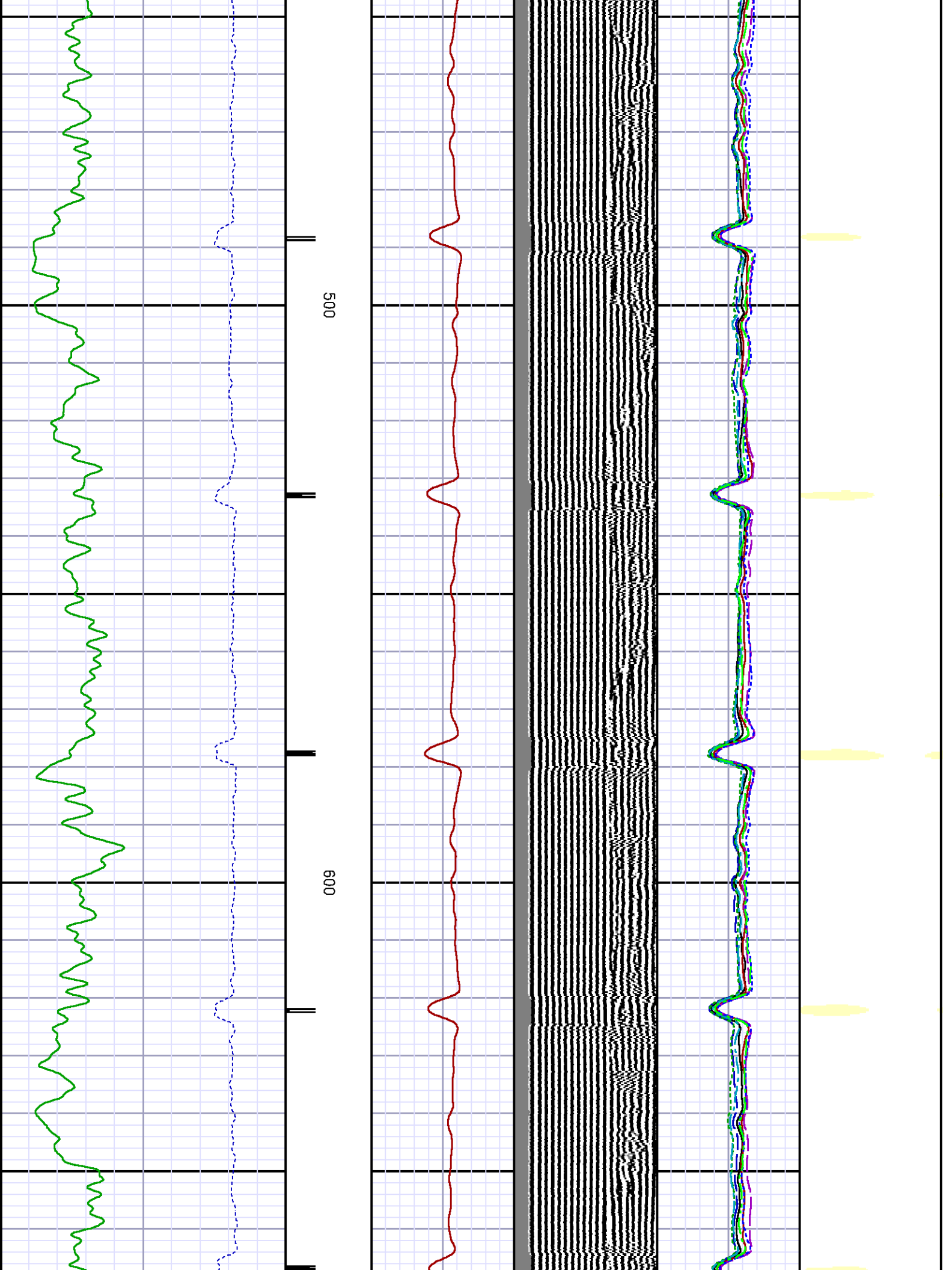
Interval : 0.00 - 8120.00 feet UP

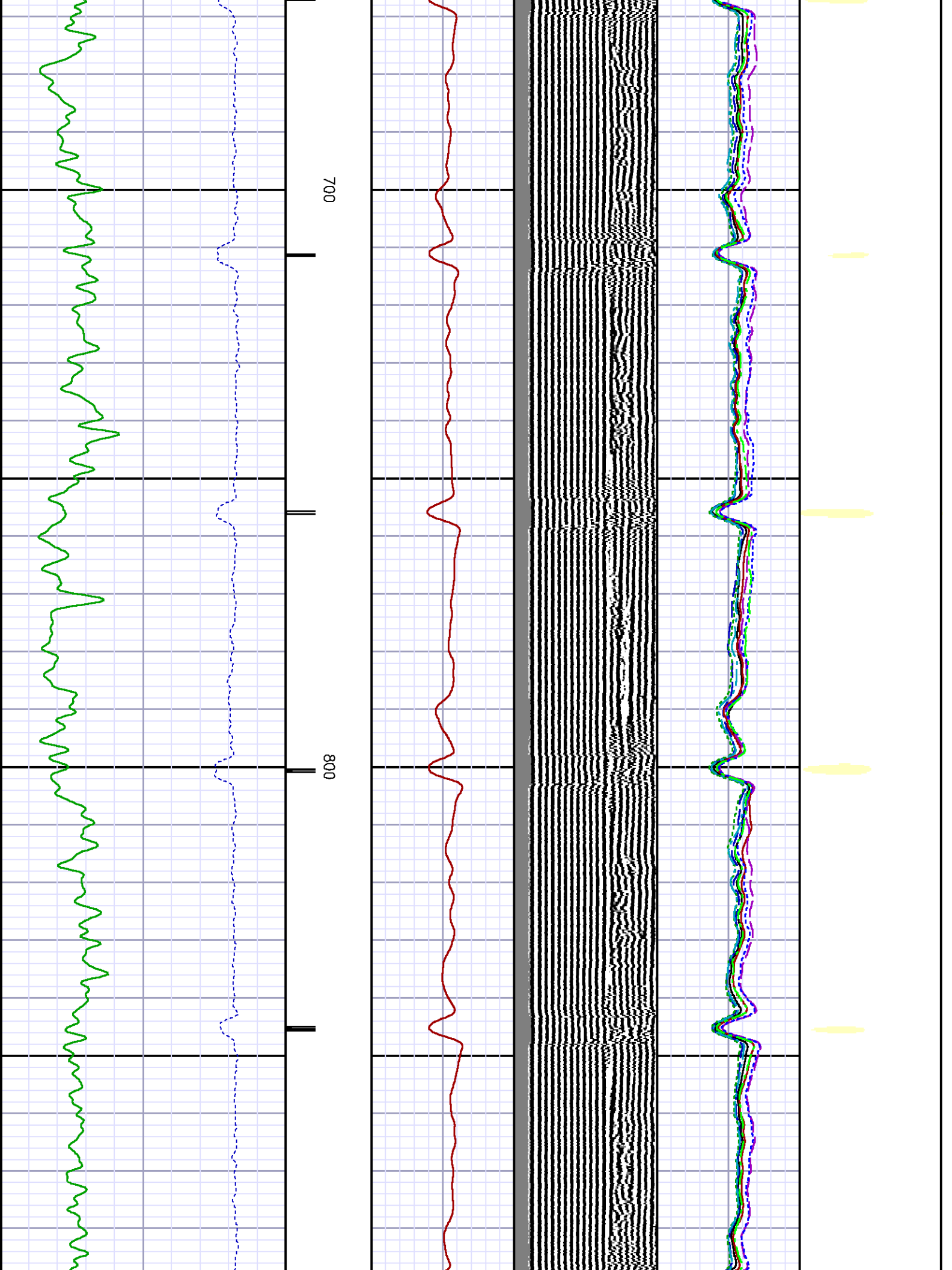
Created : 6/30/2012 12:52:11 PM



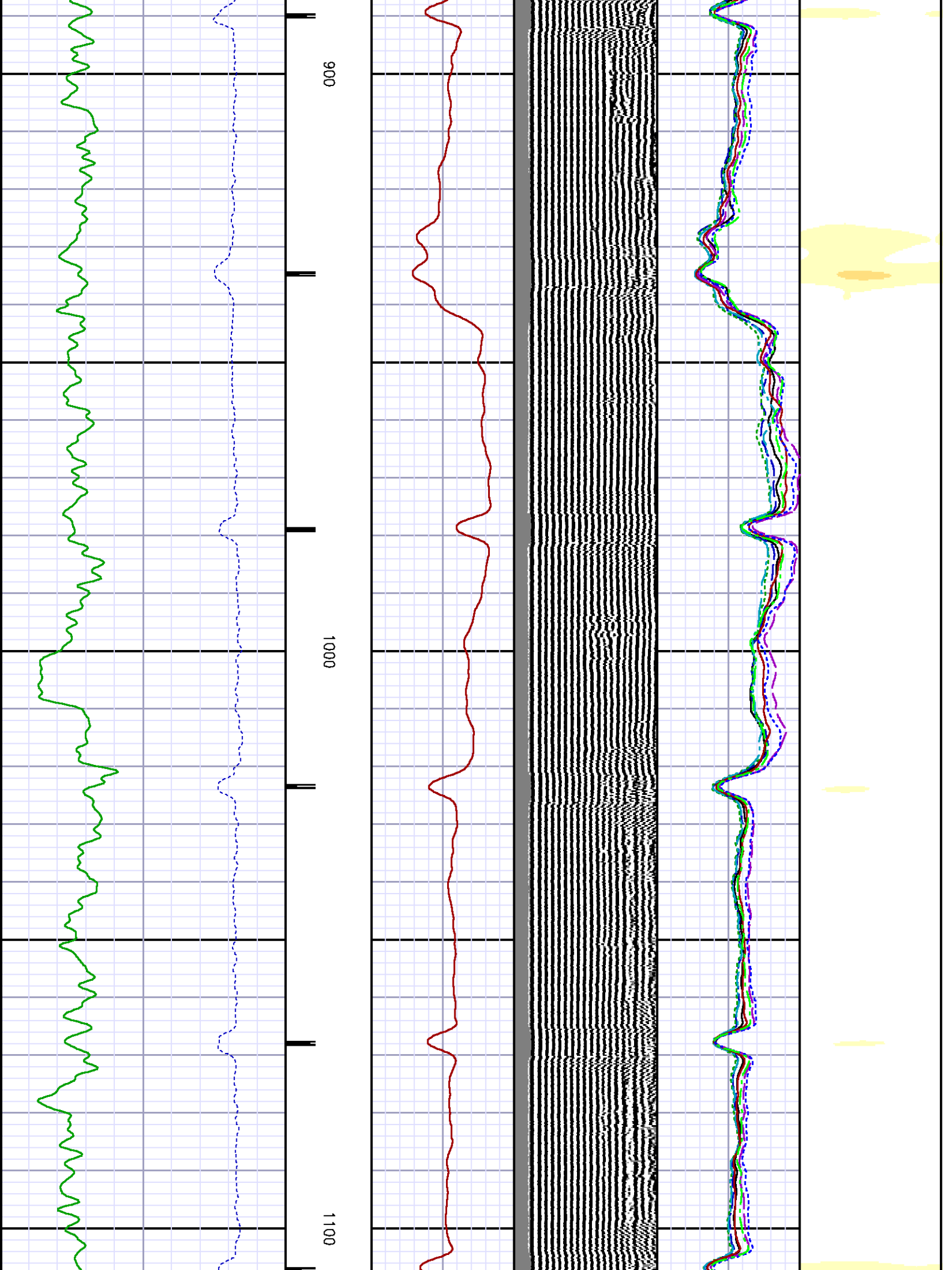


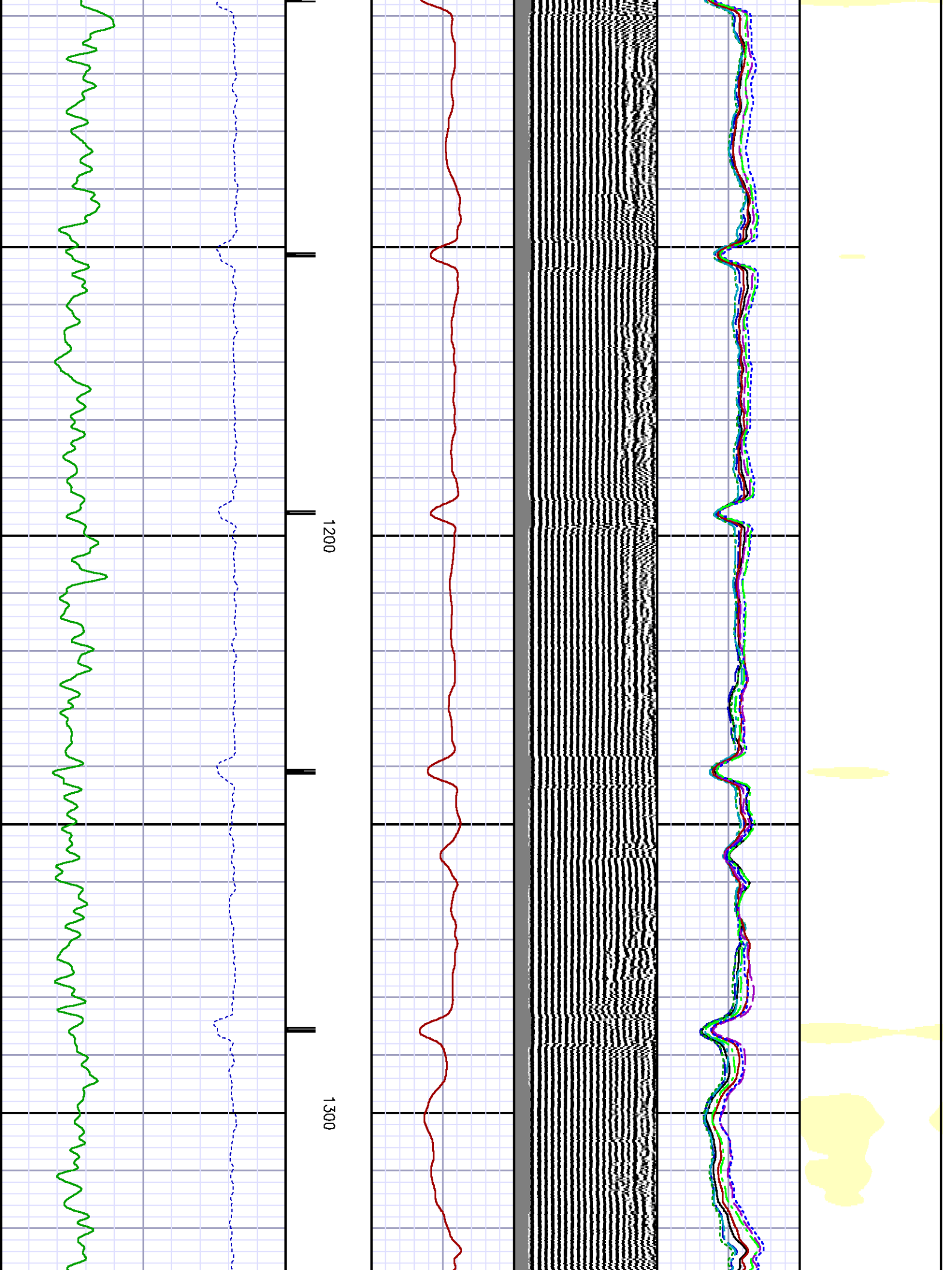


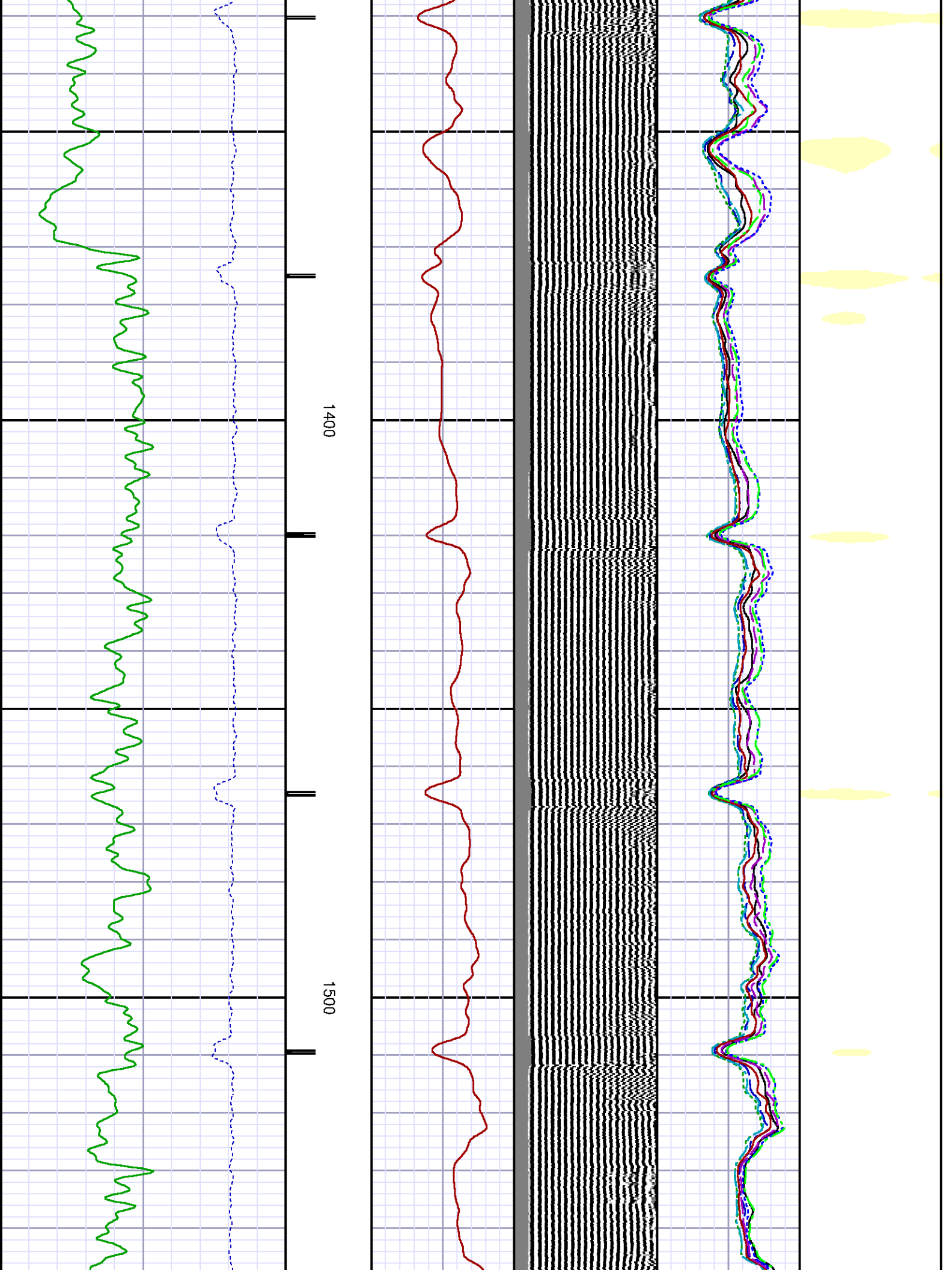


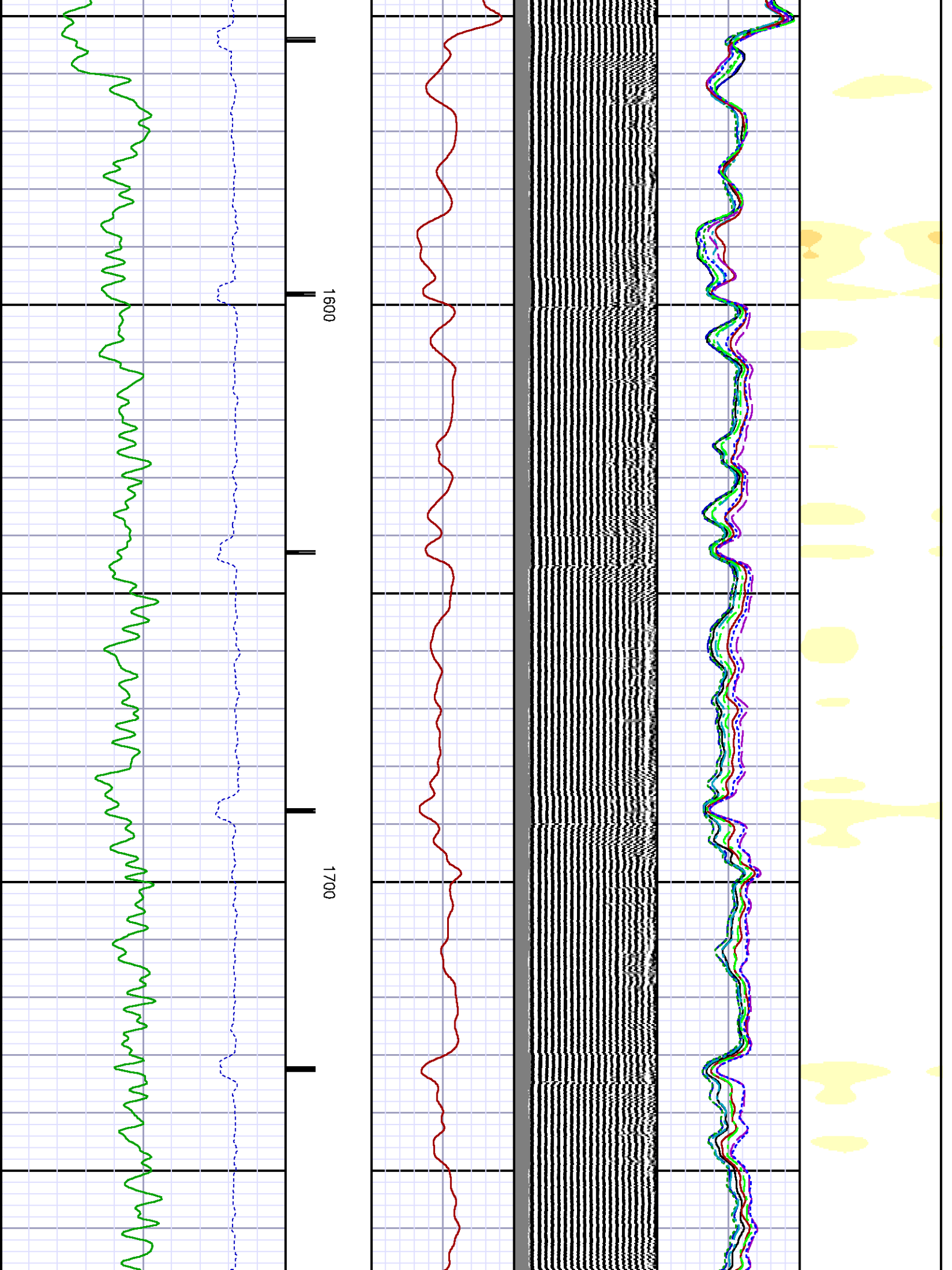


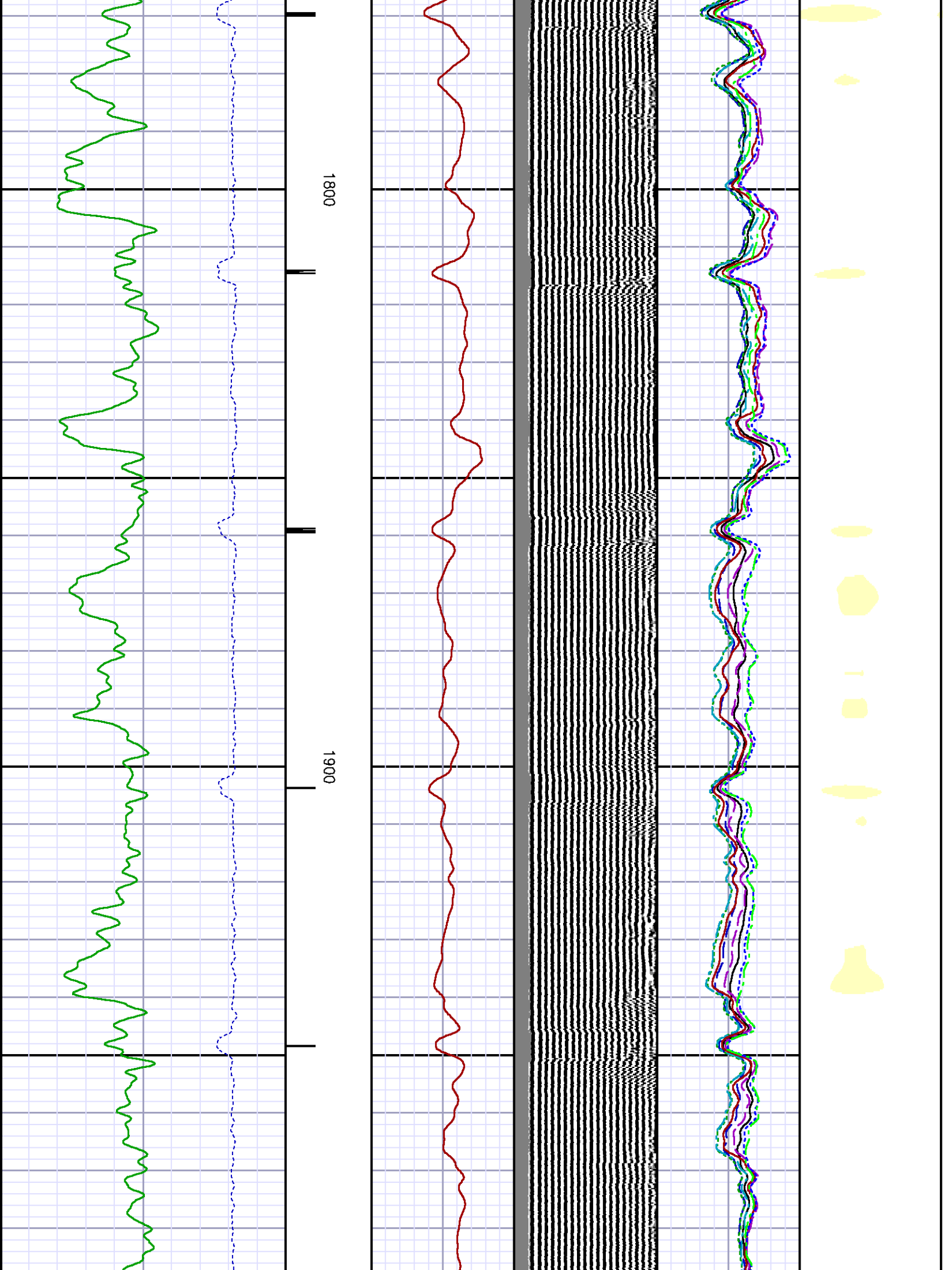




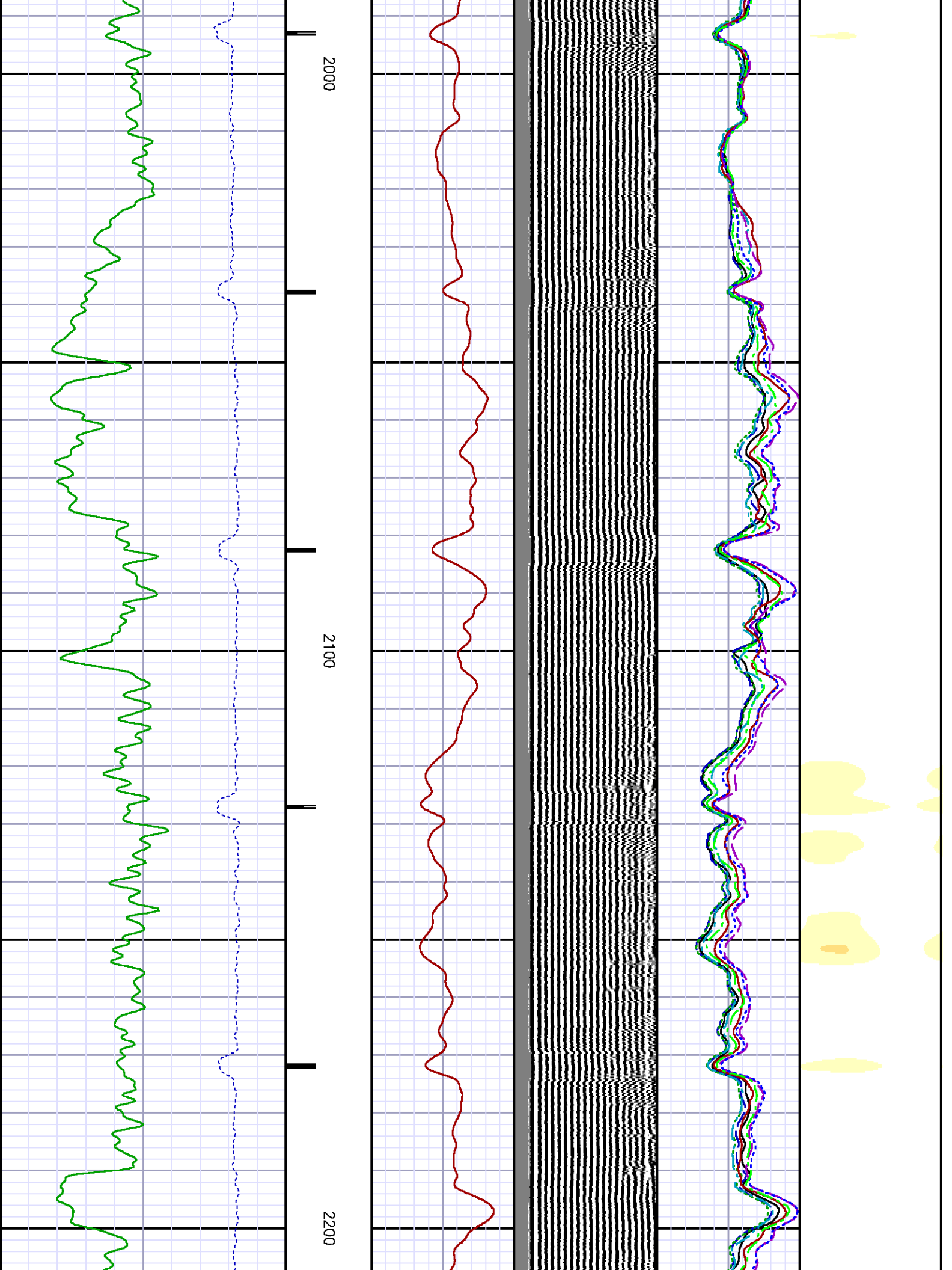




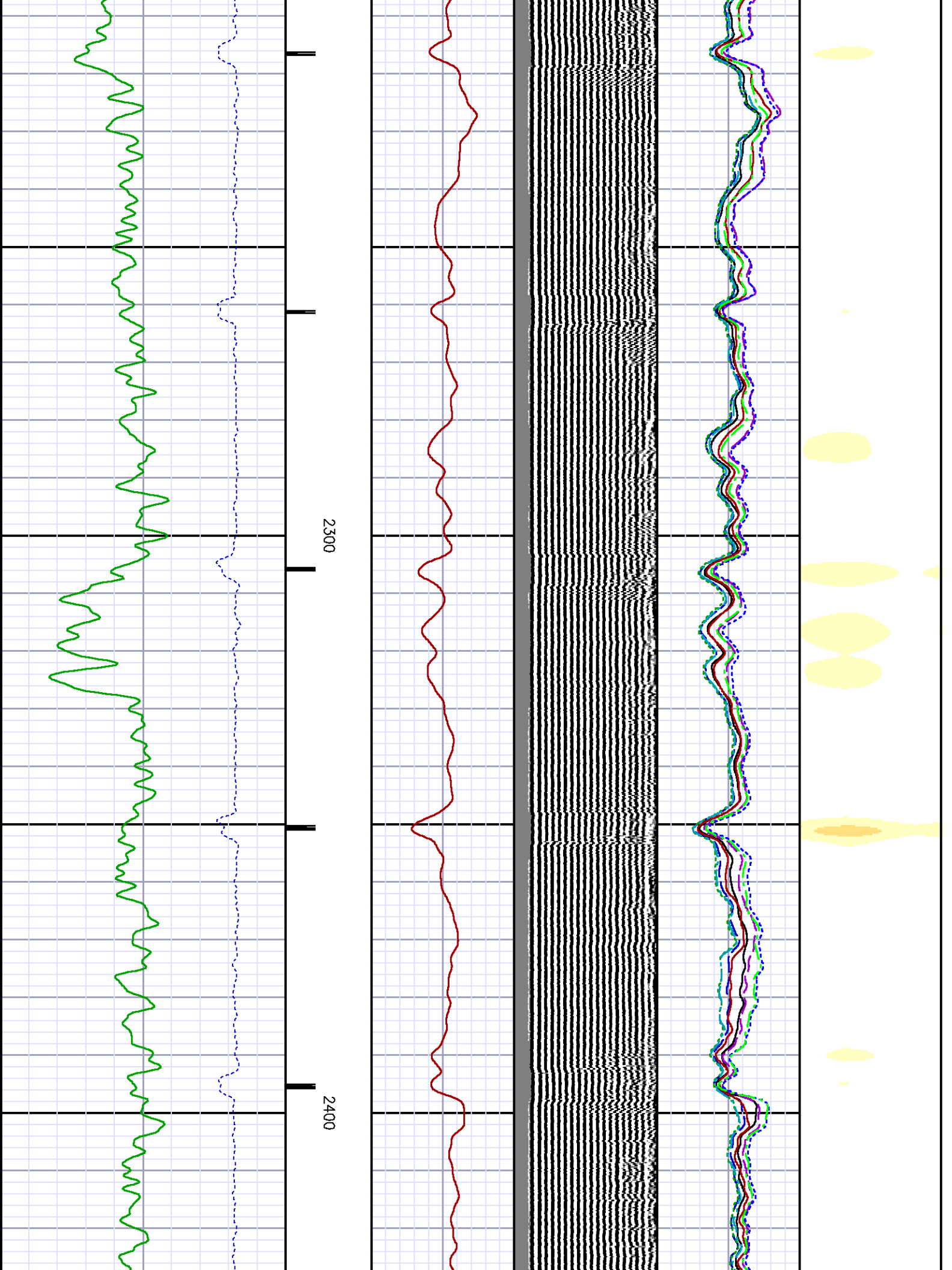


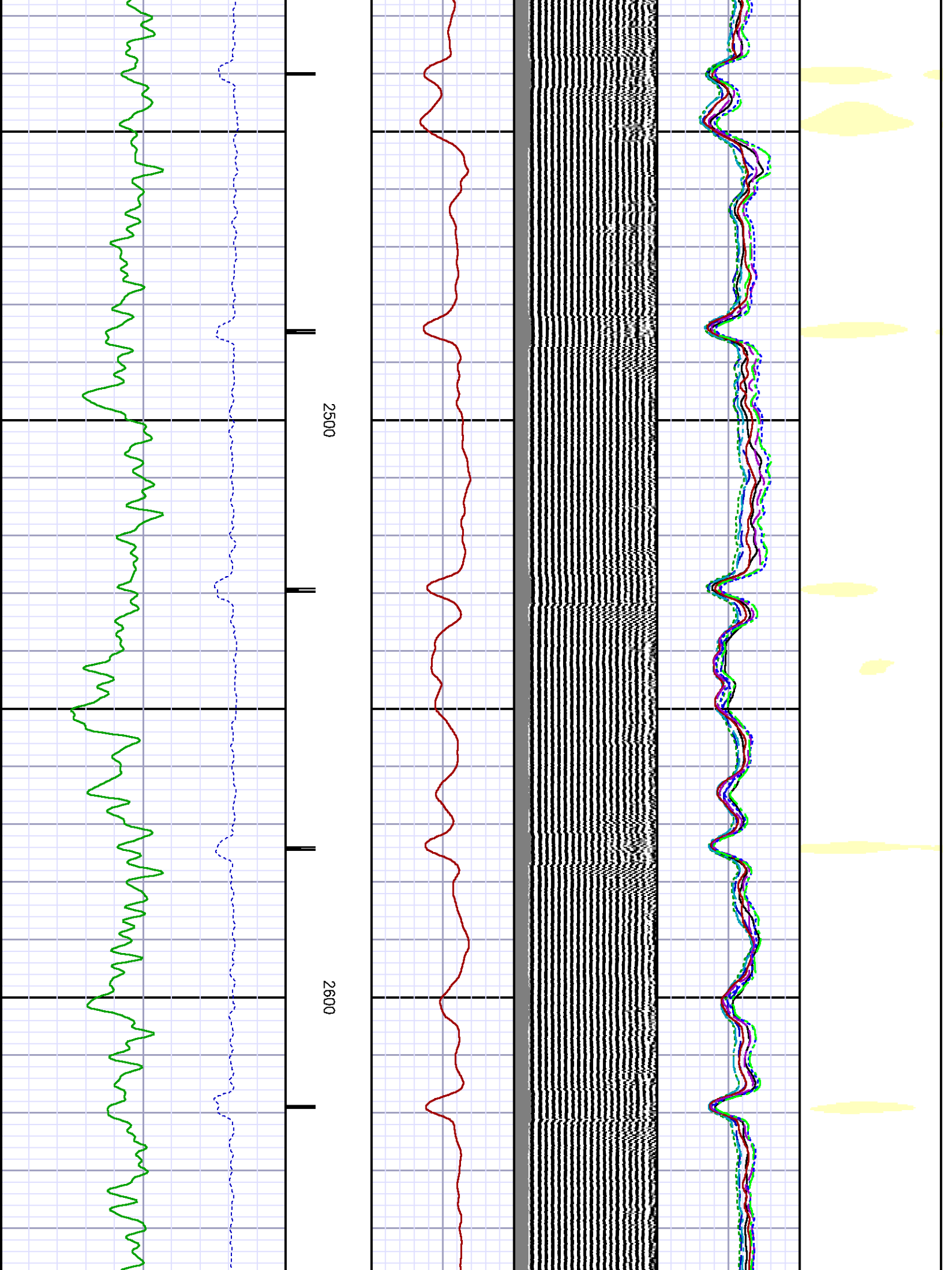


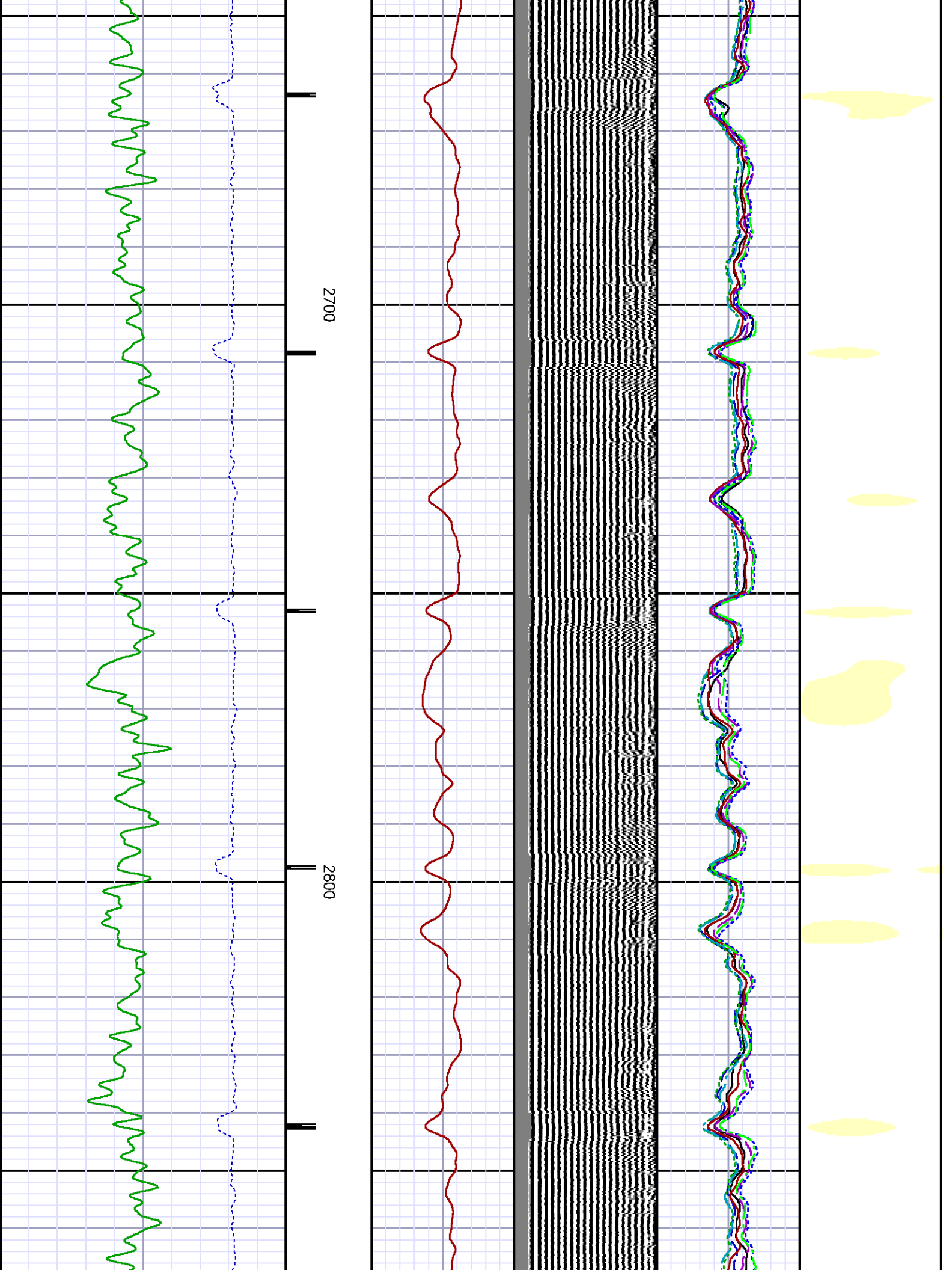


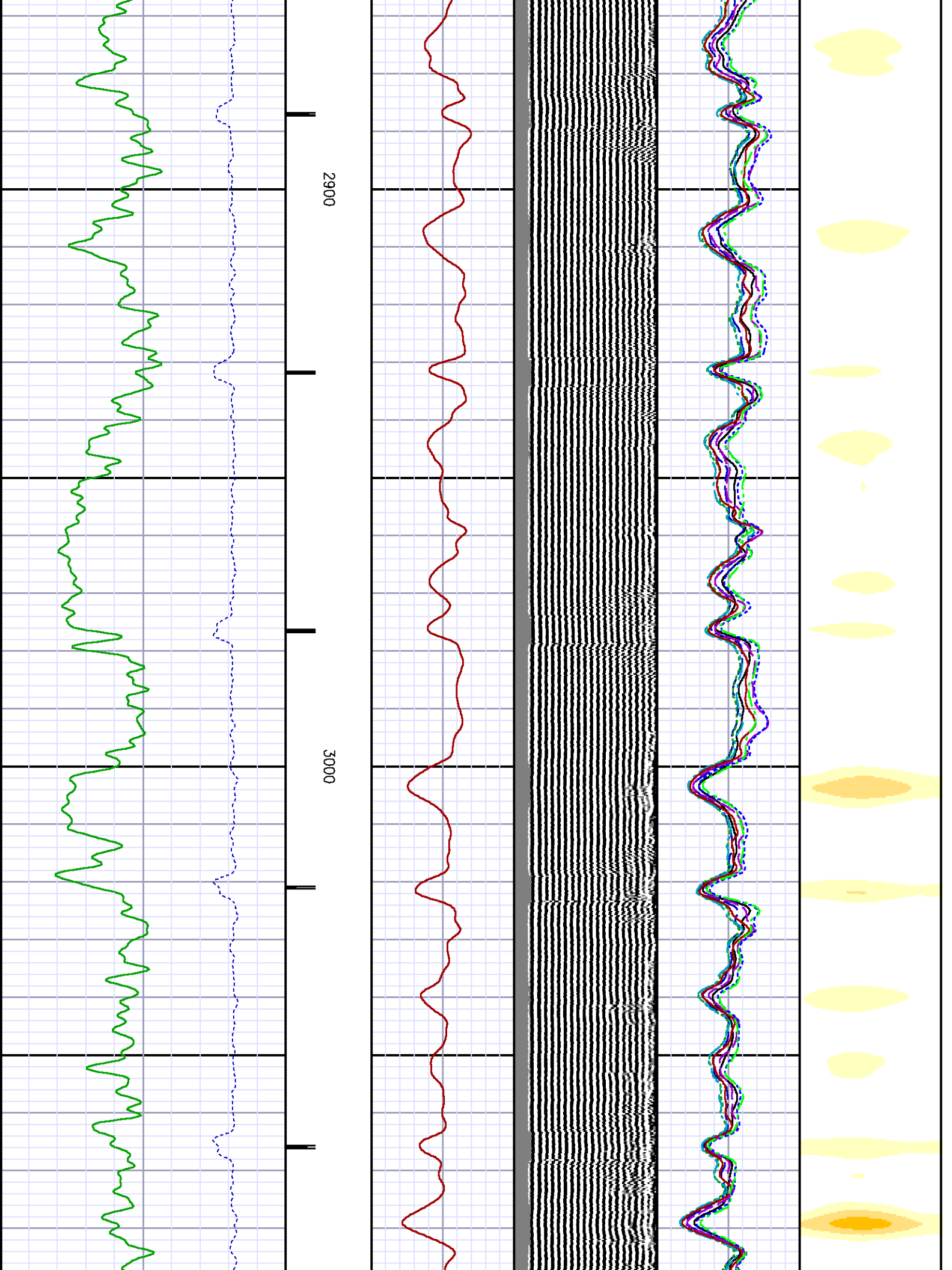


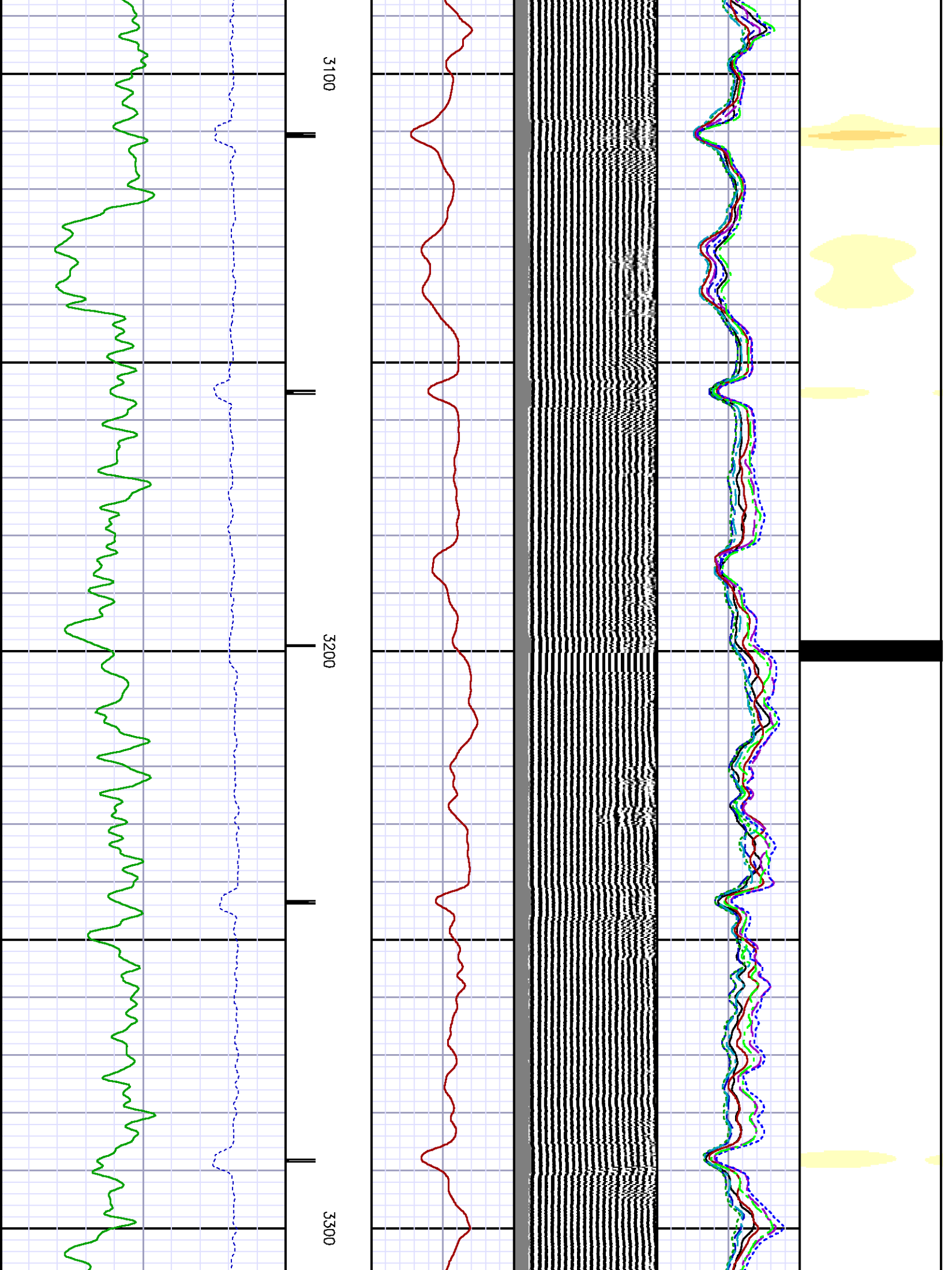




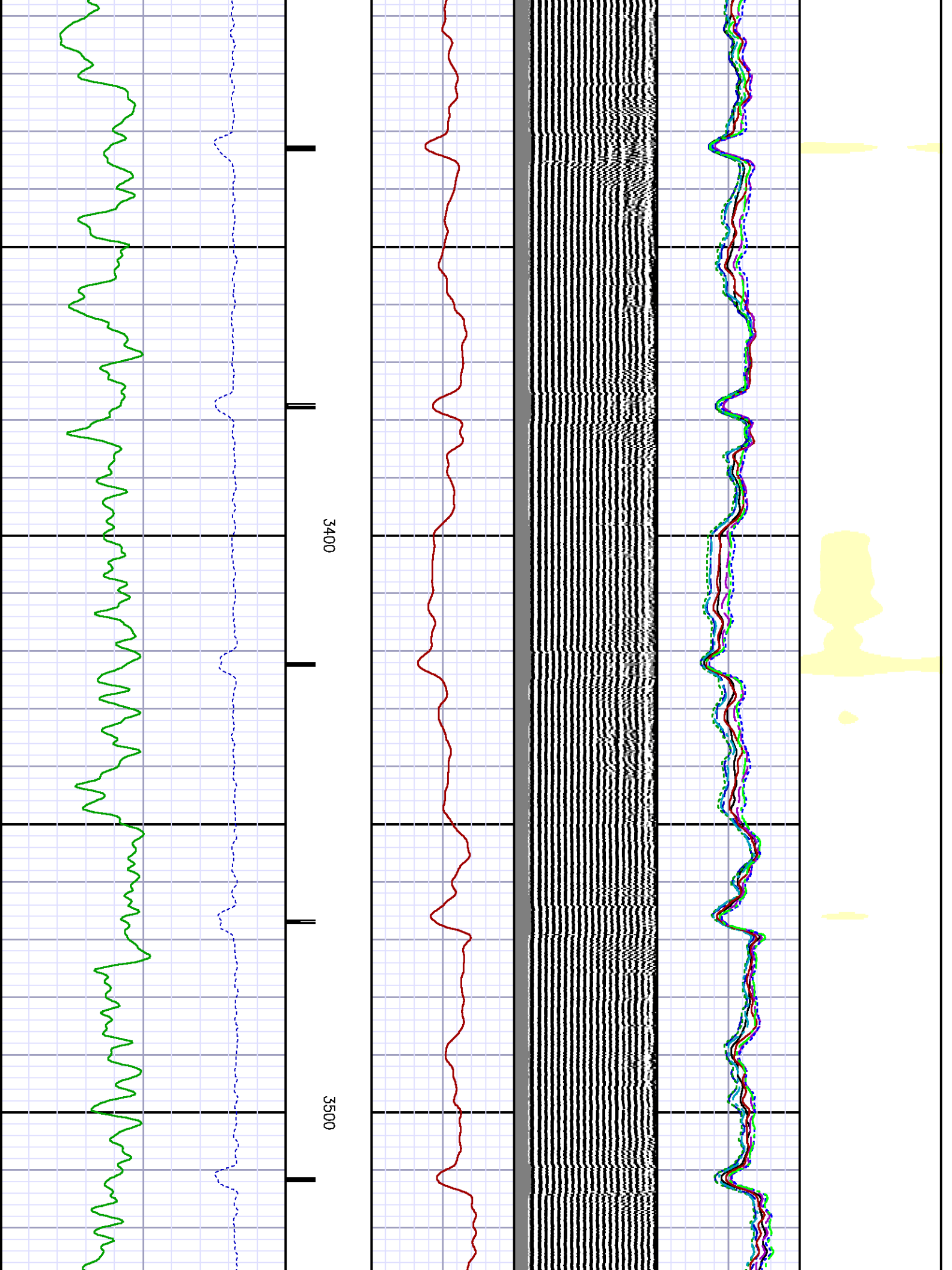




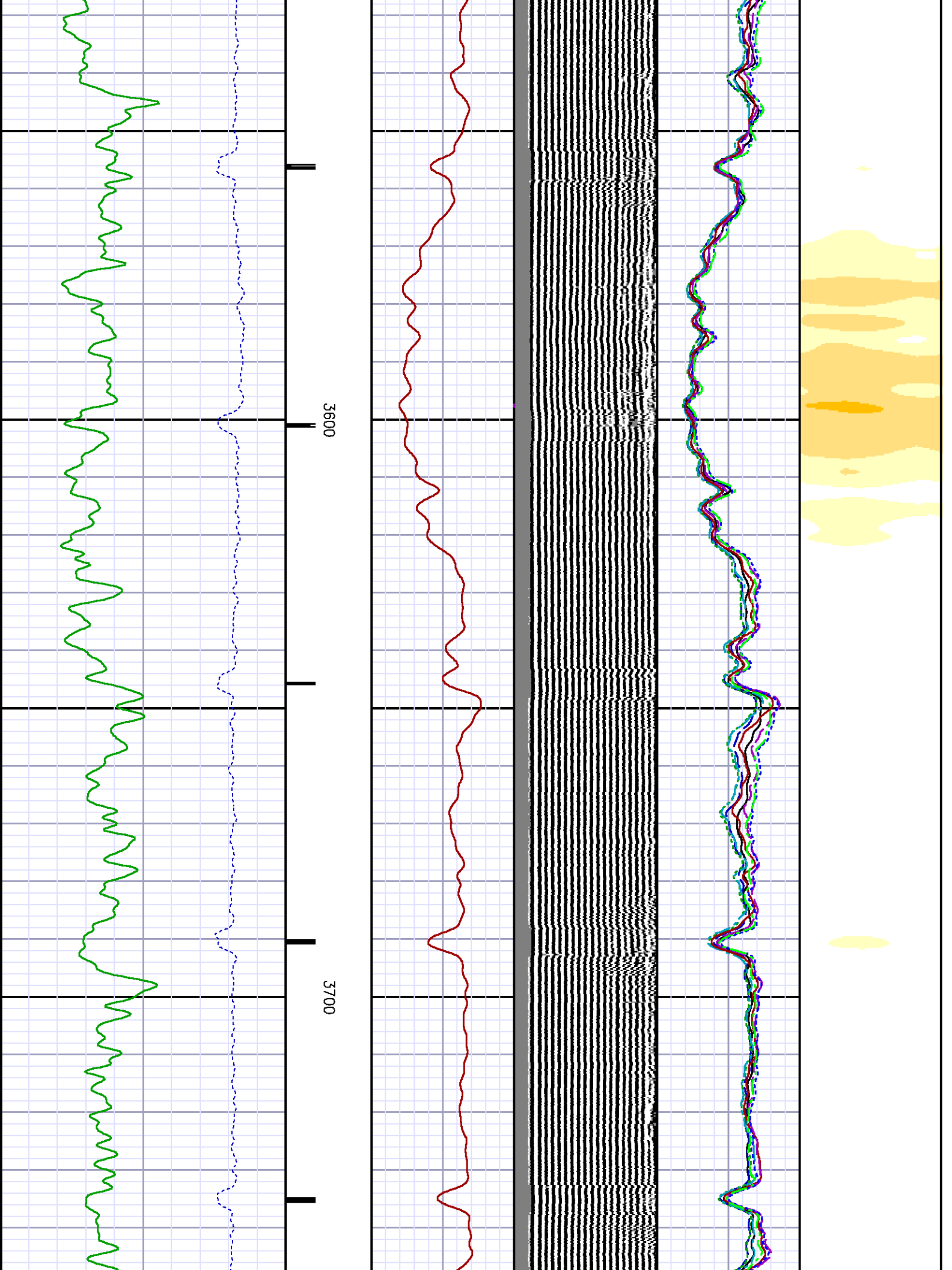


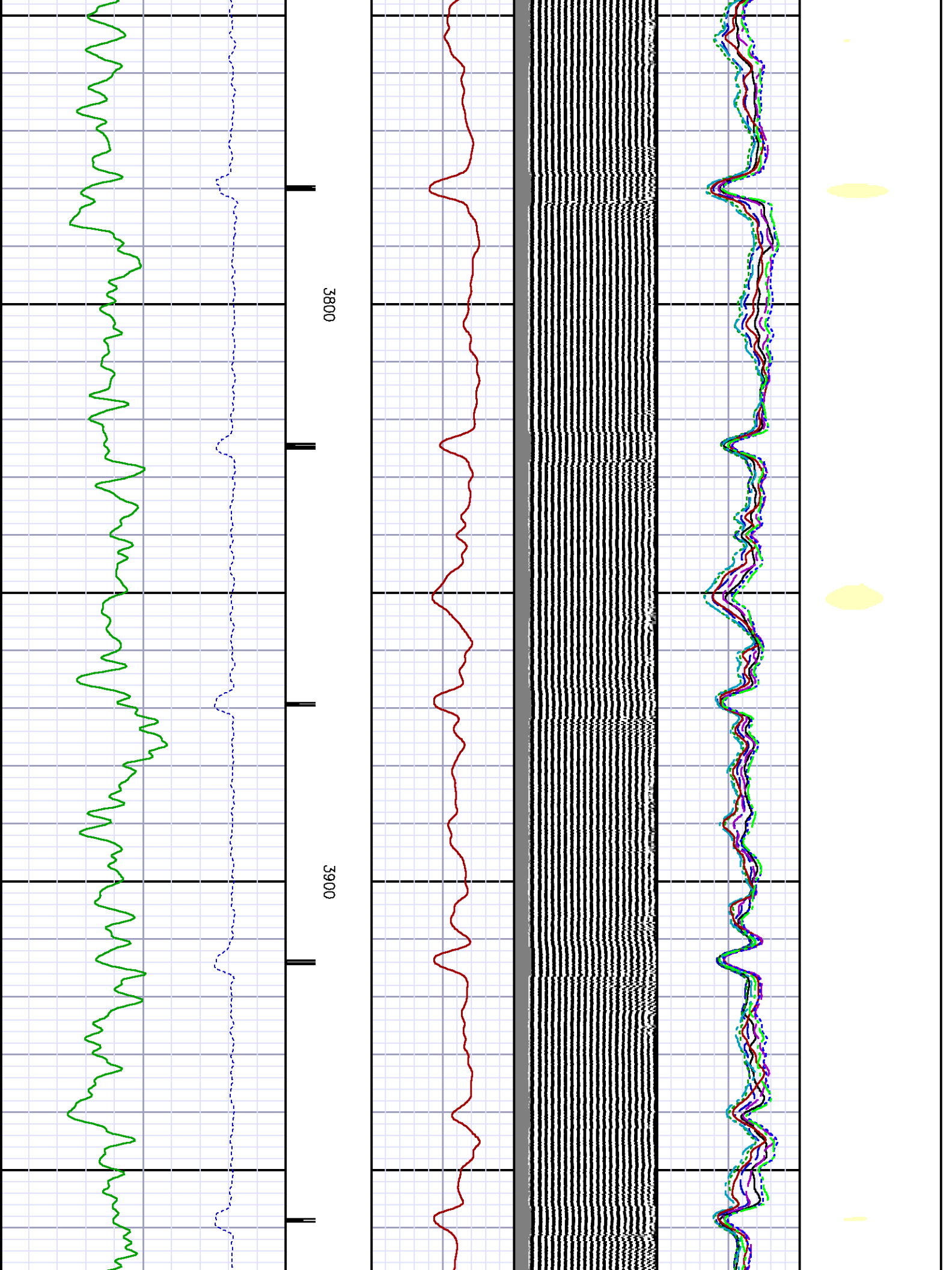


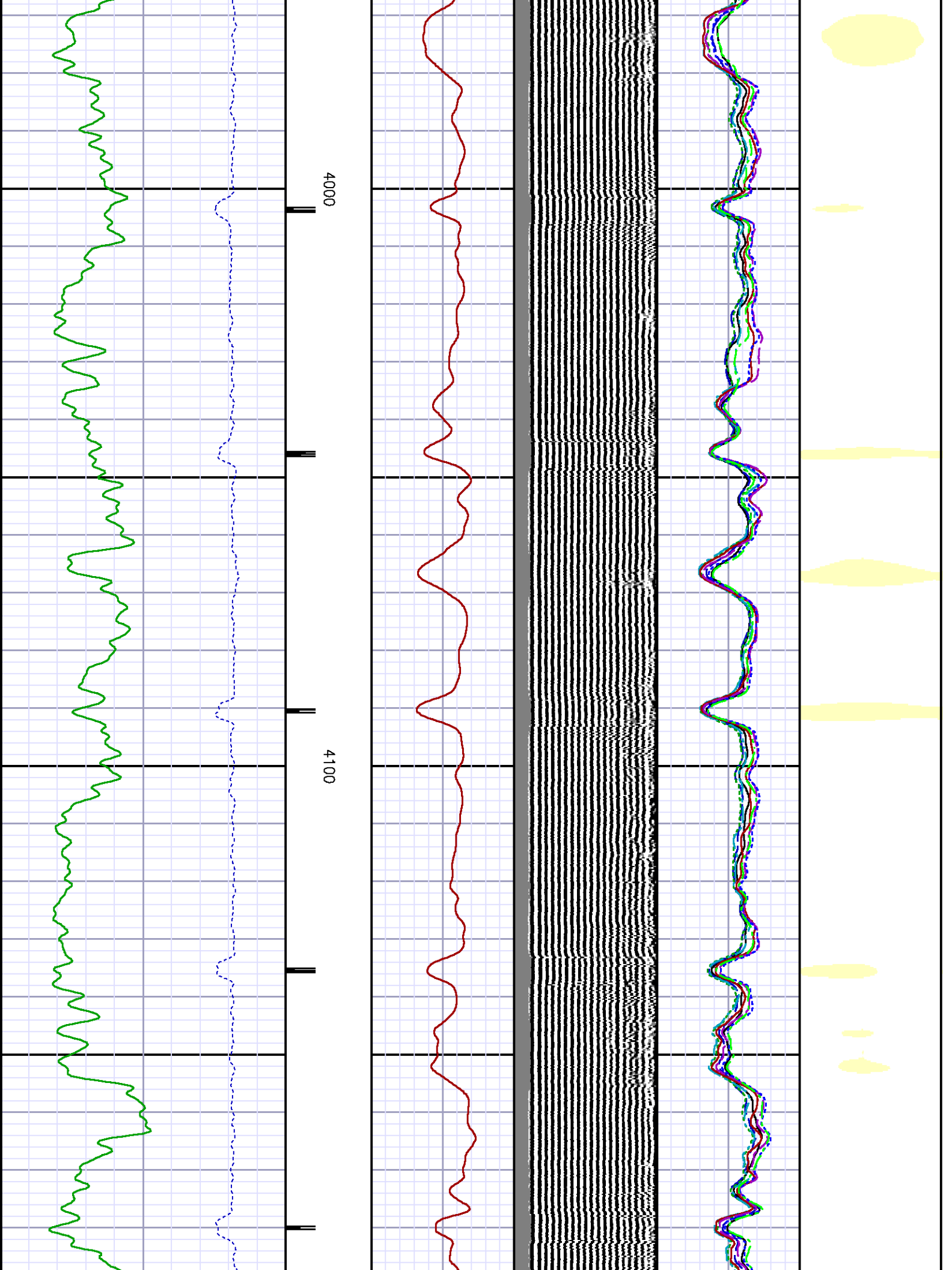


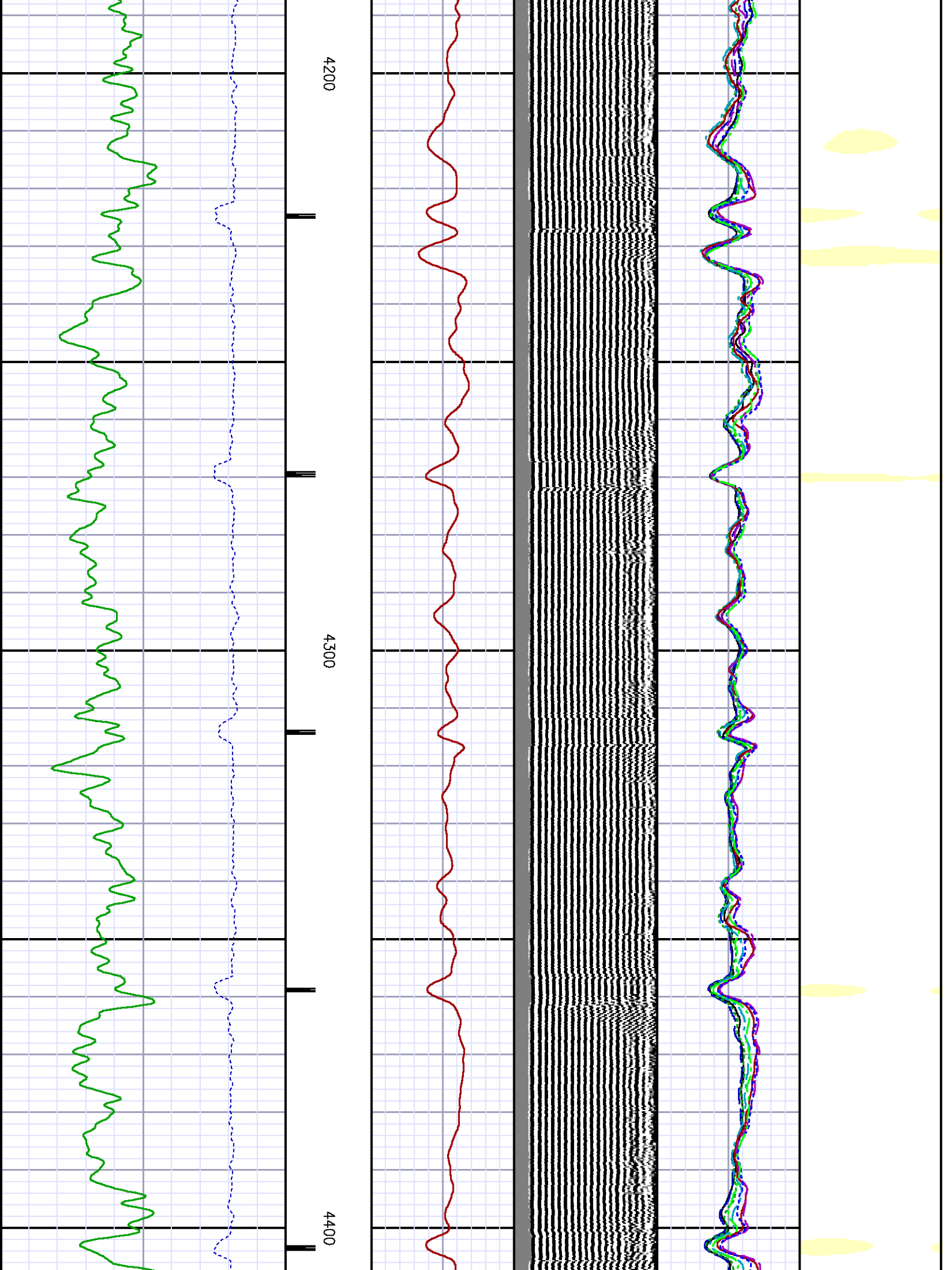


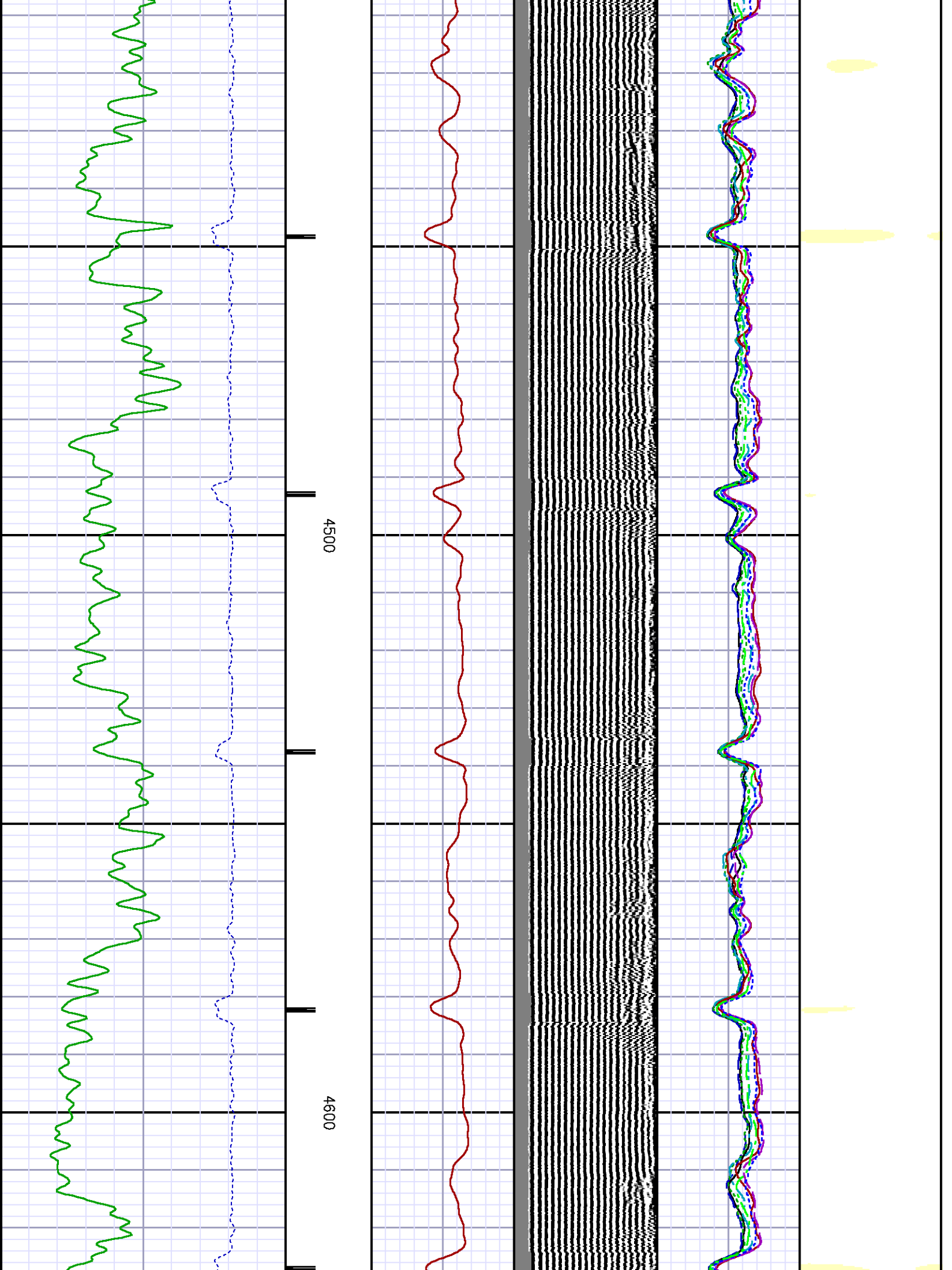


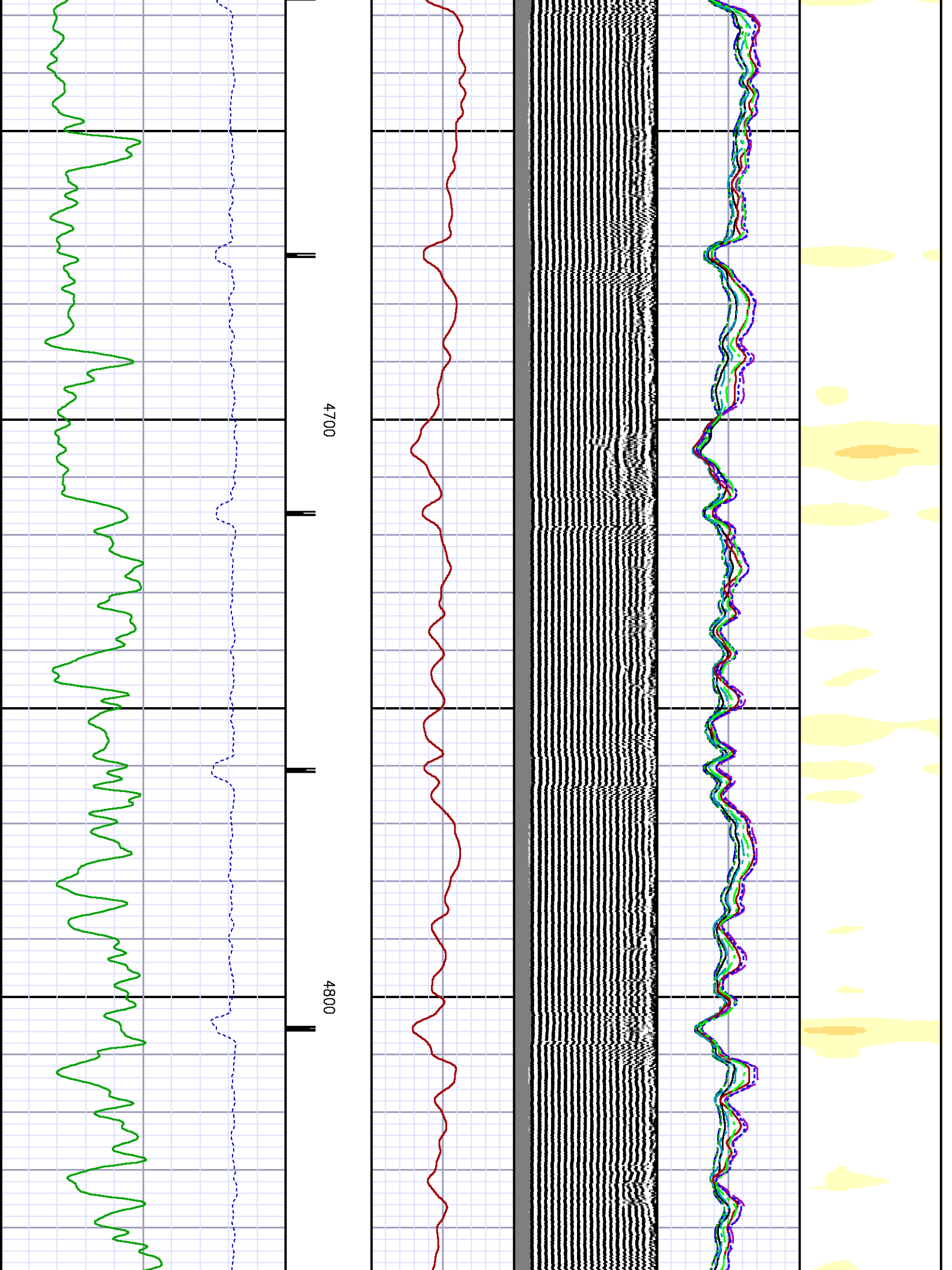




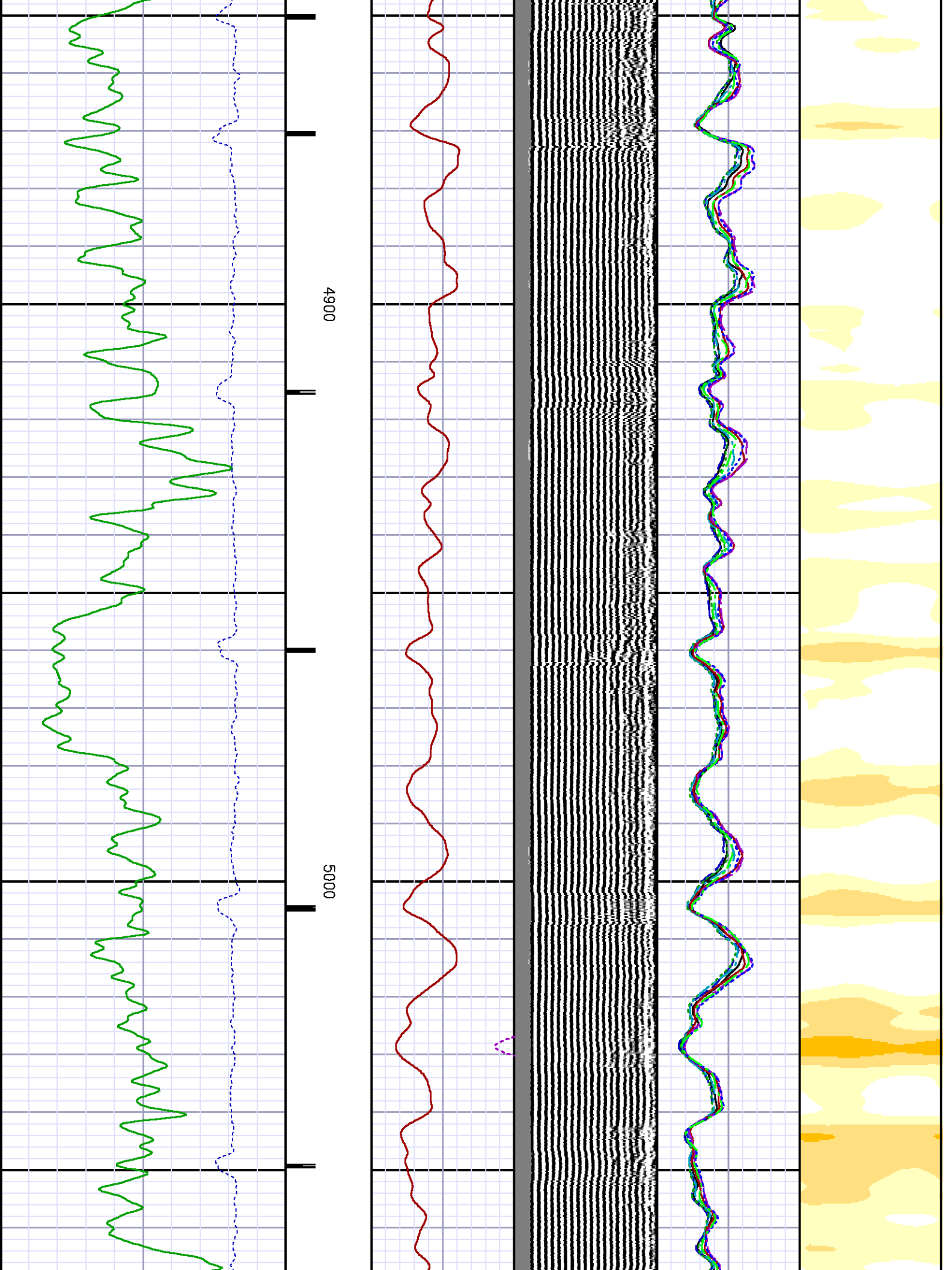


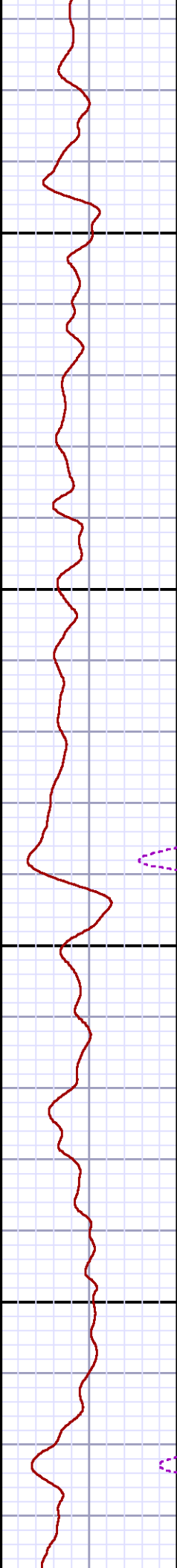
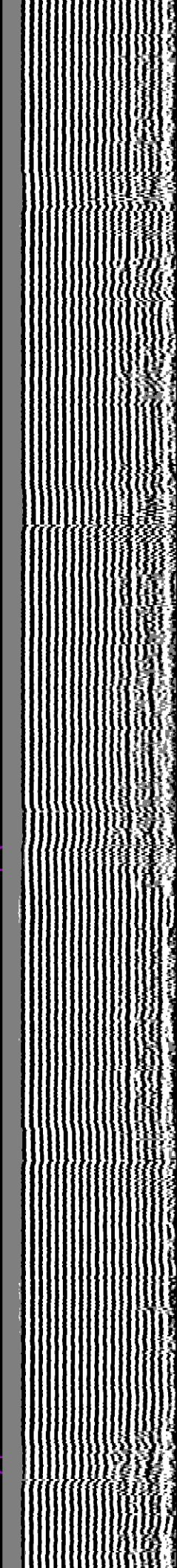
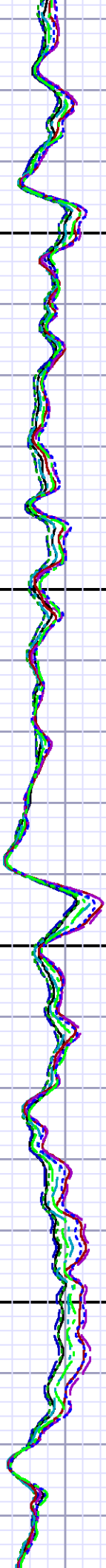
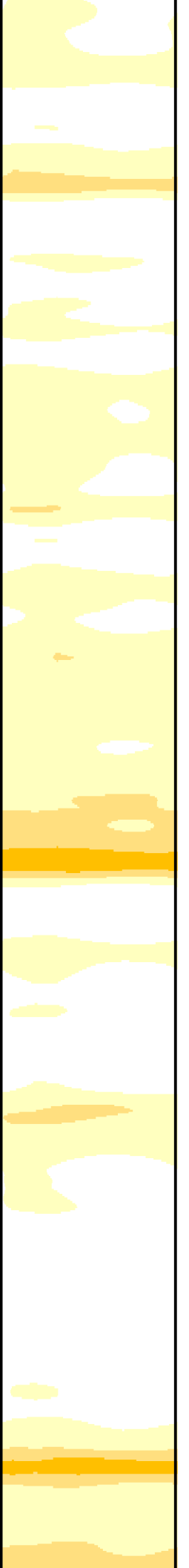






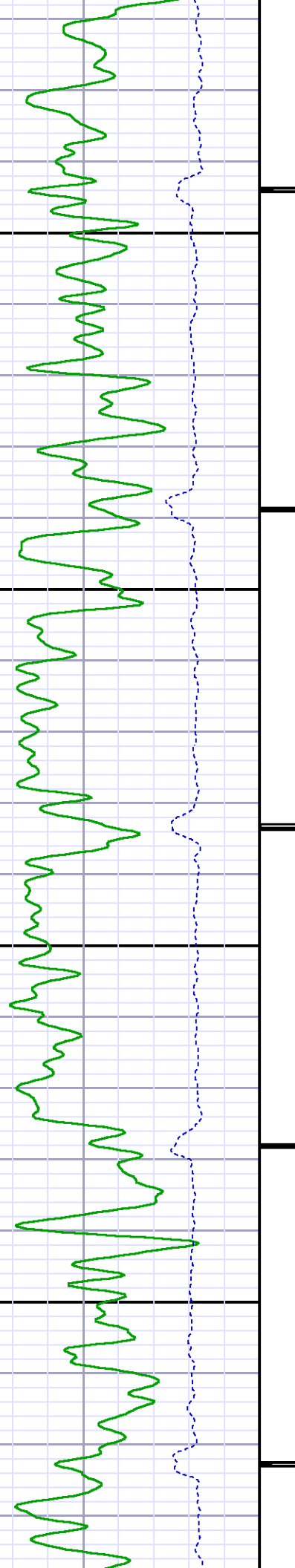


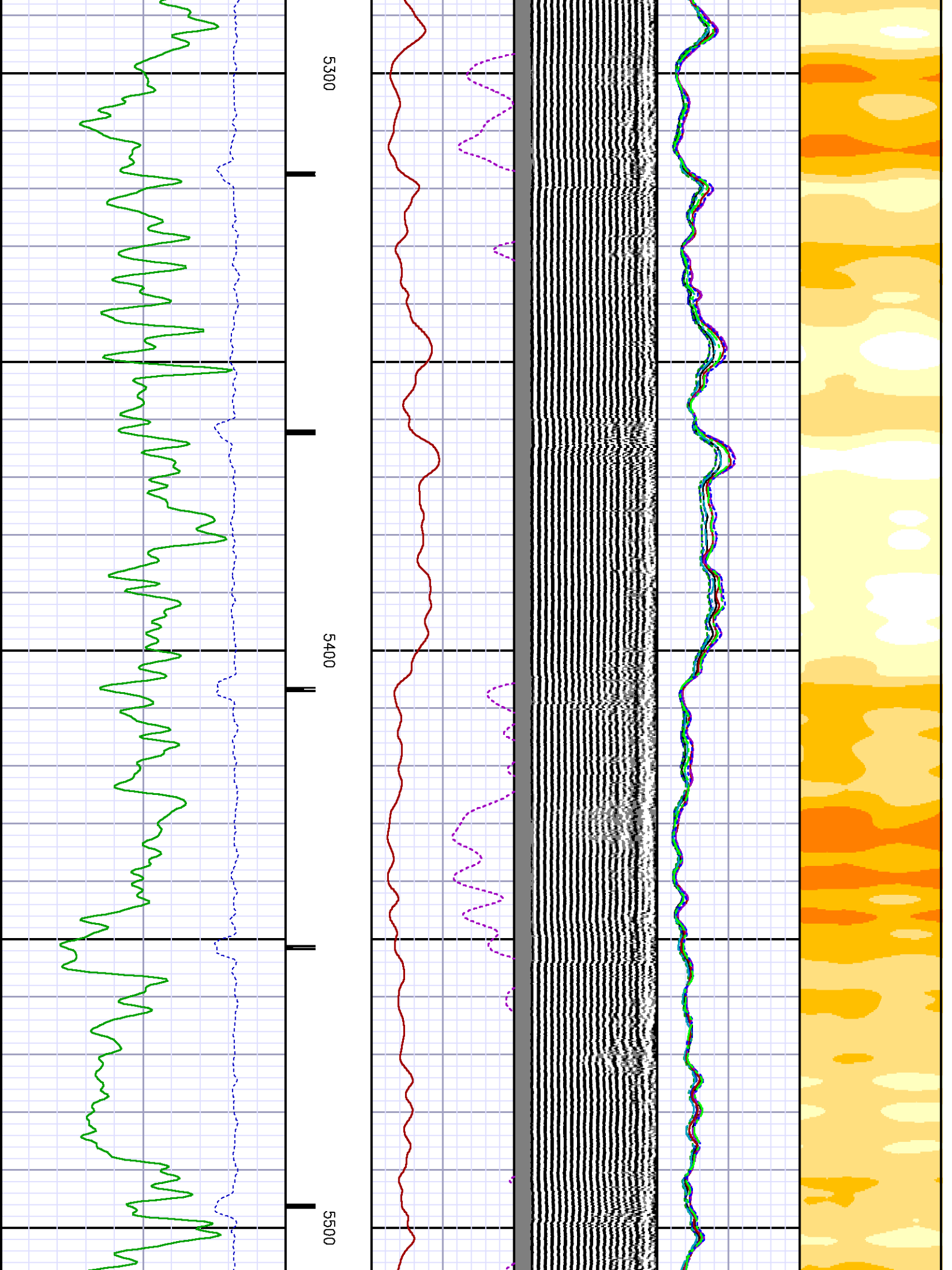


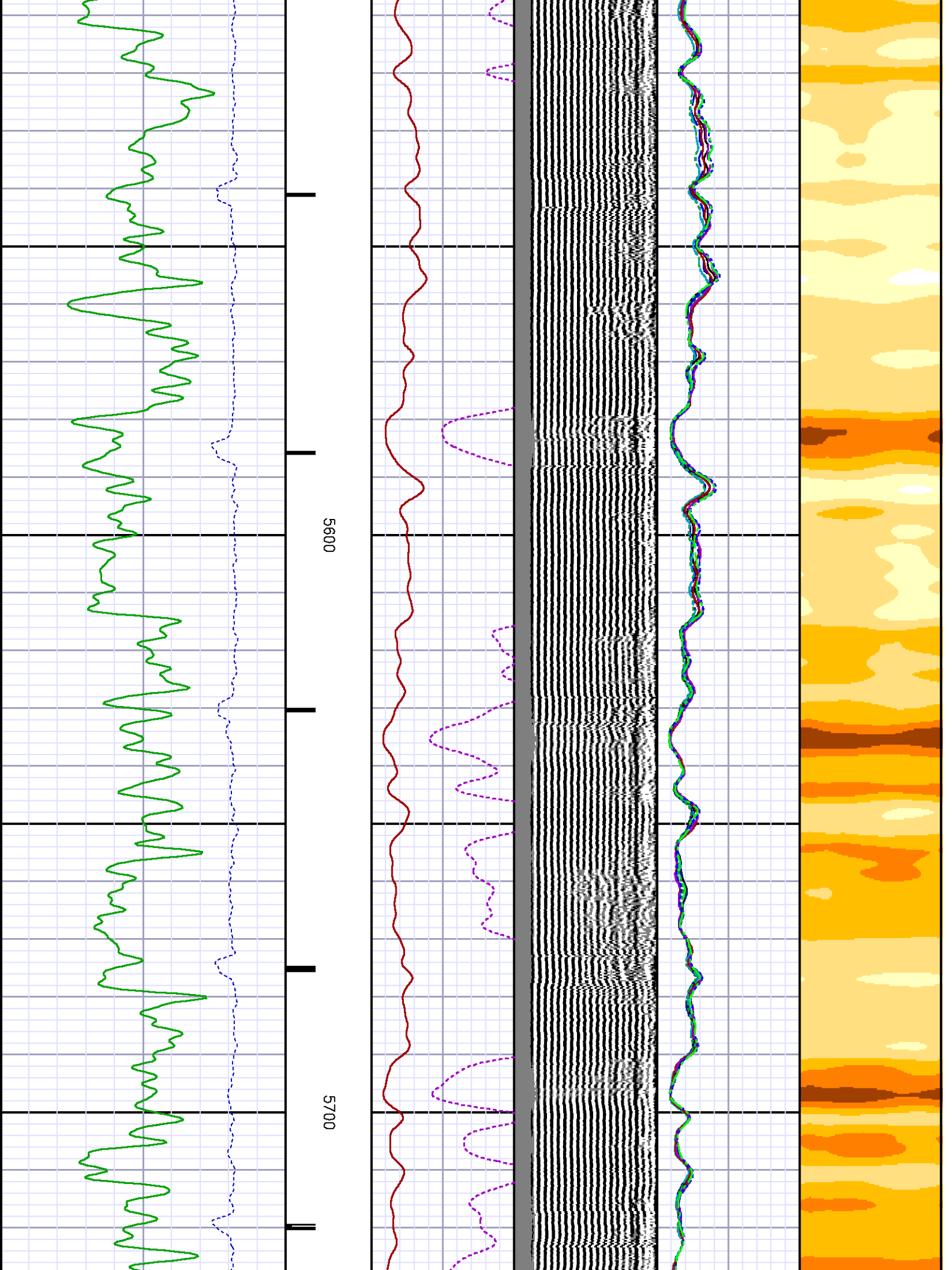


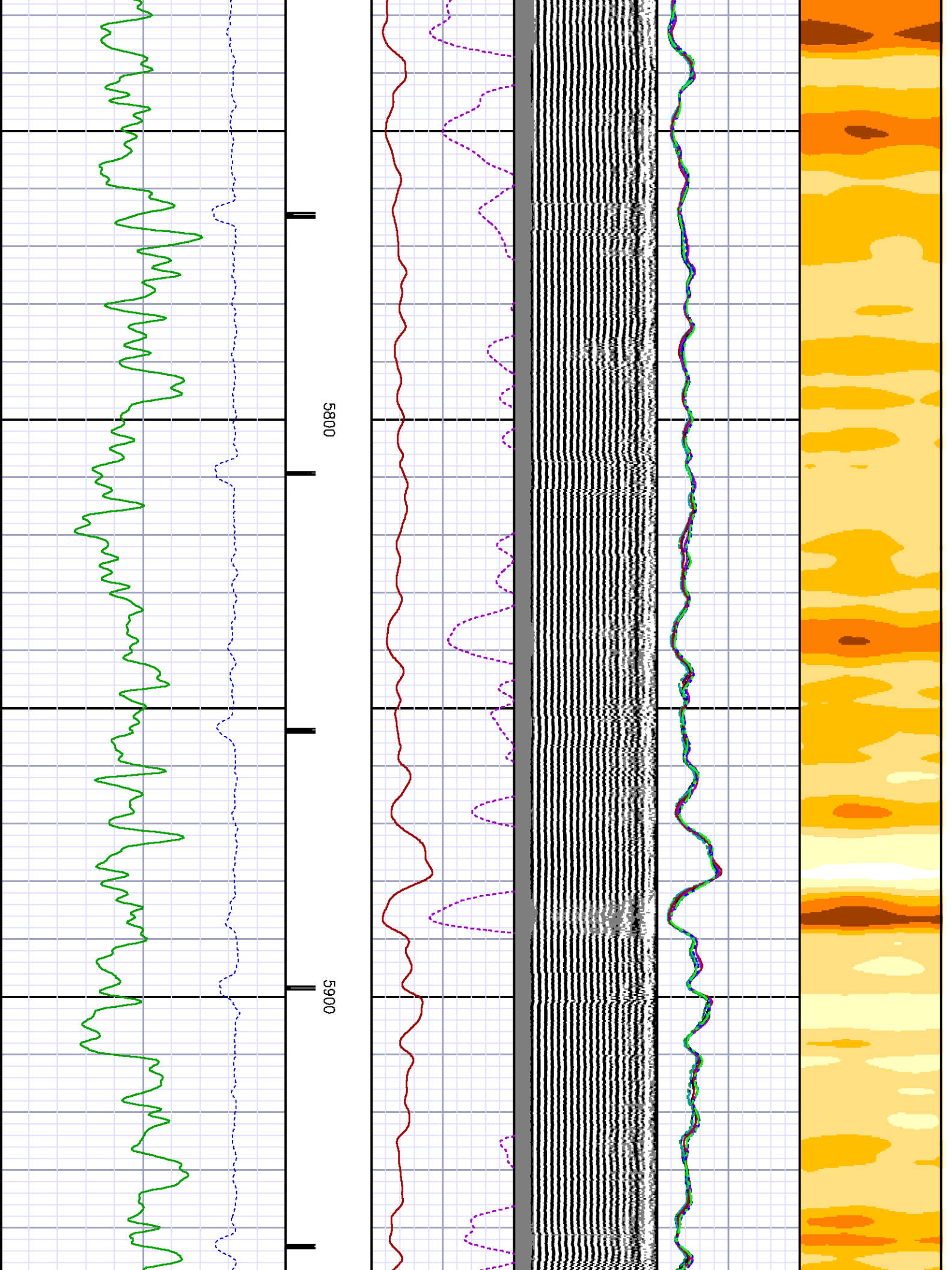
5100

5200

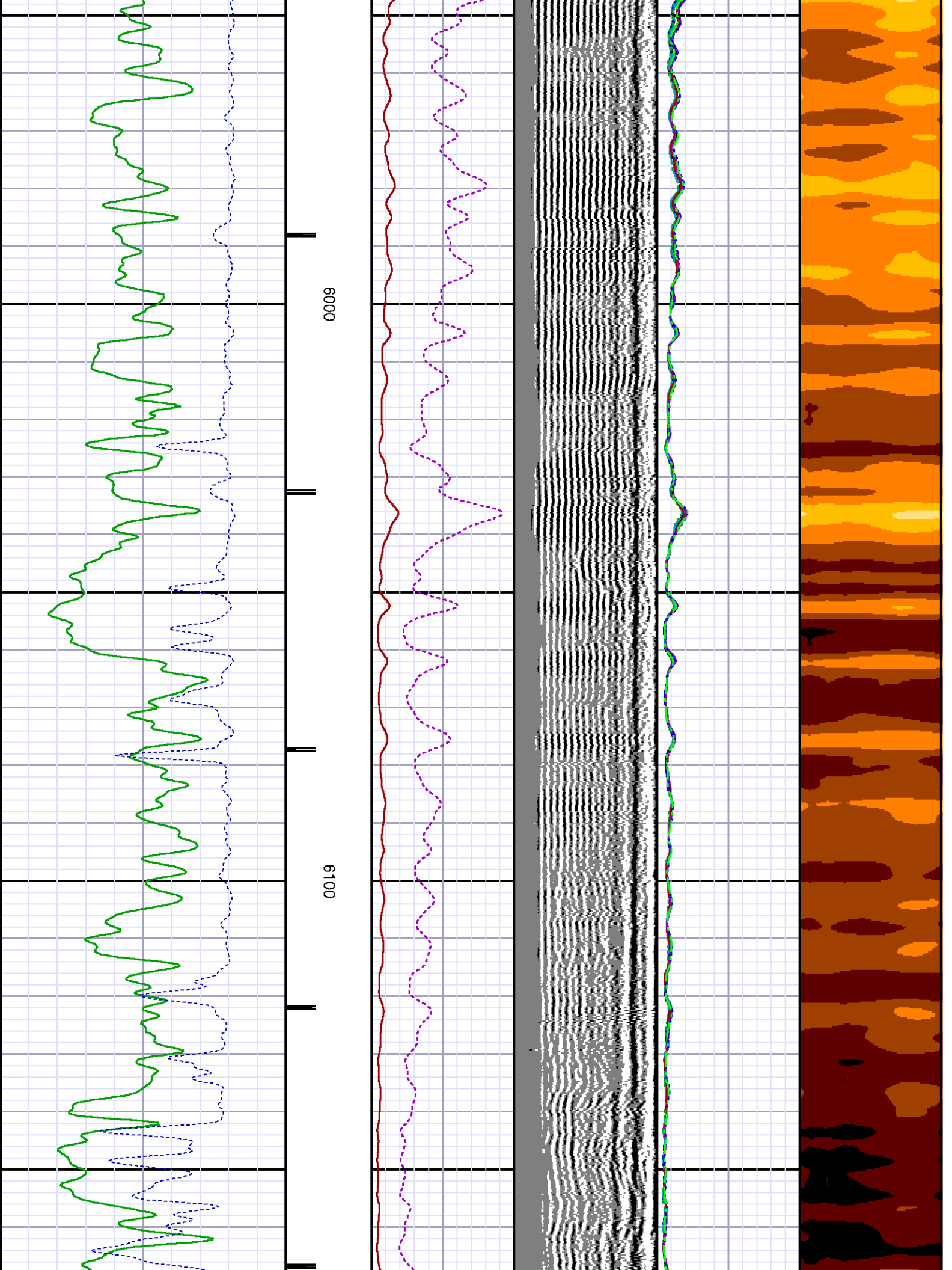




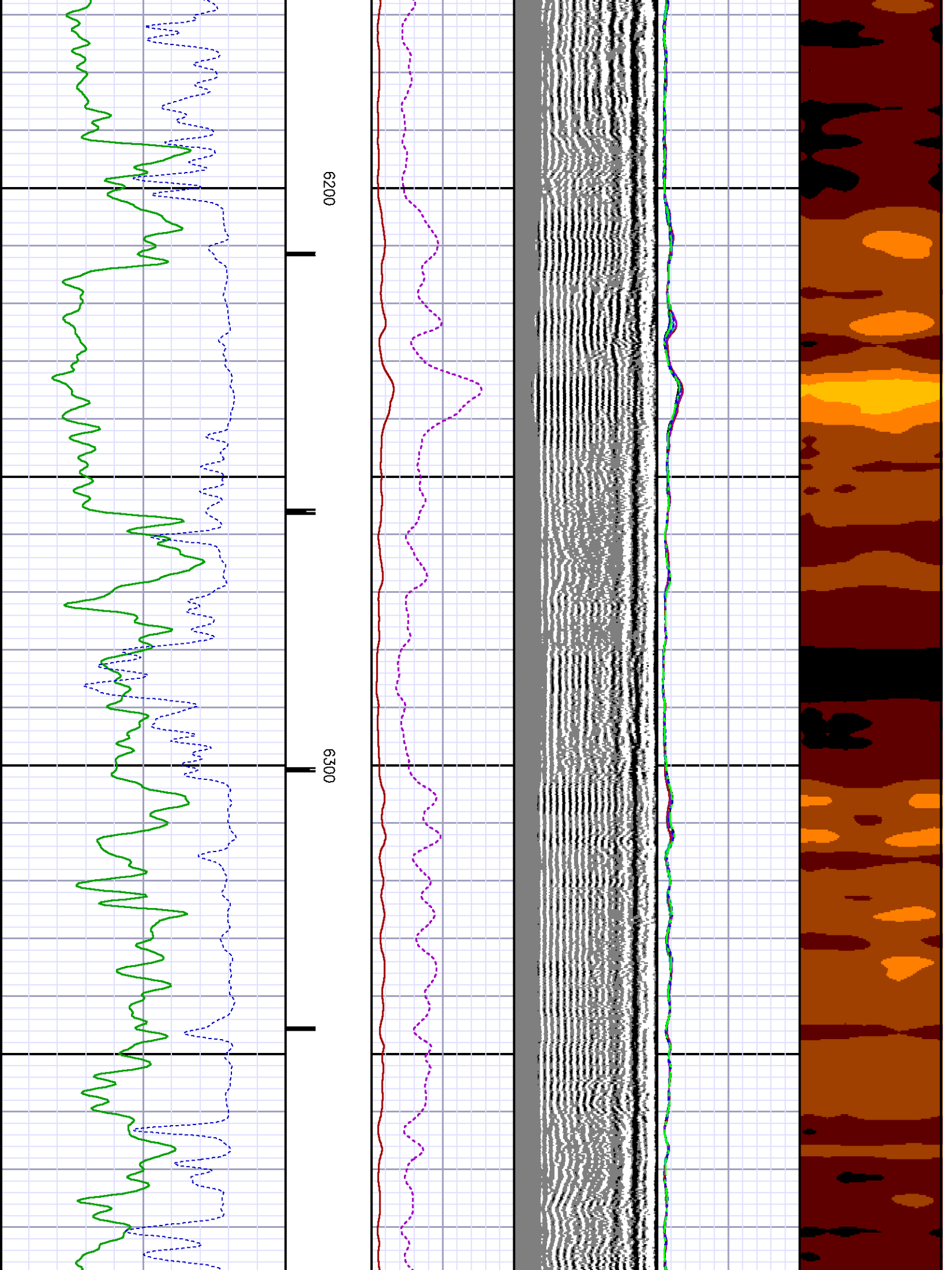


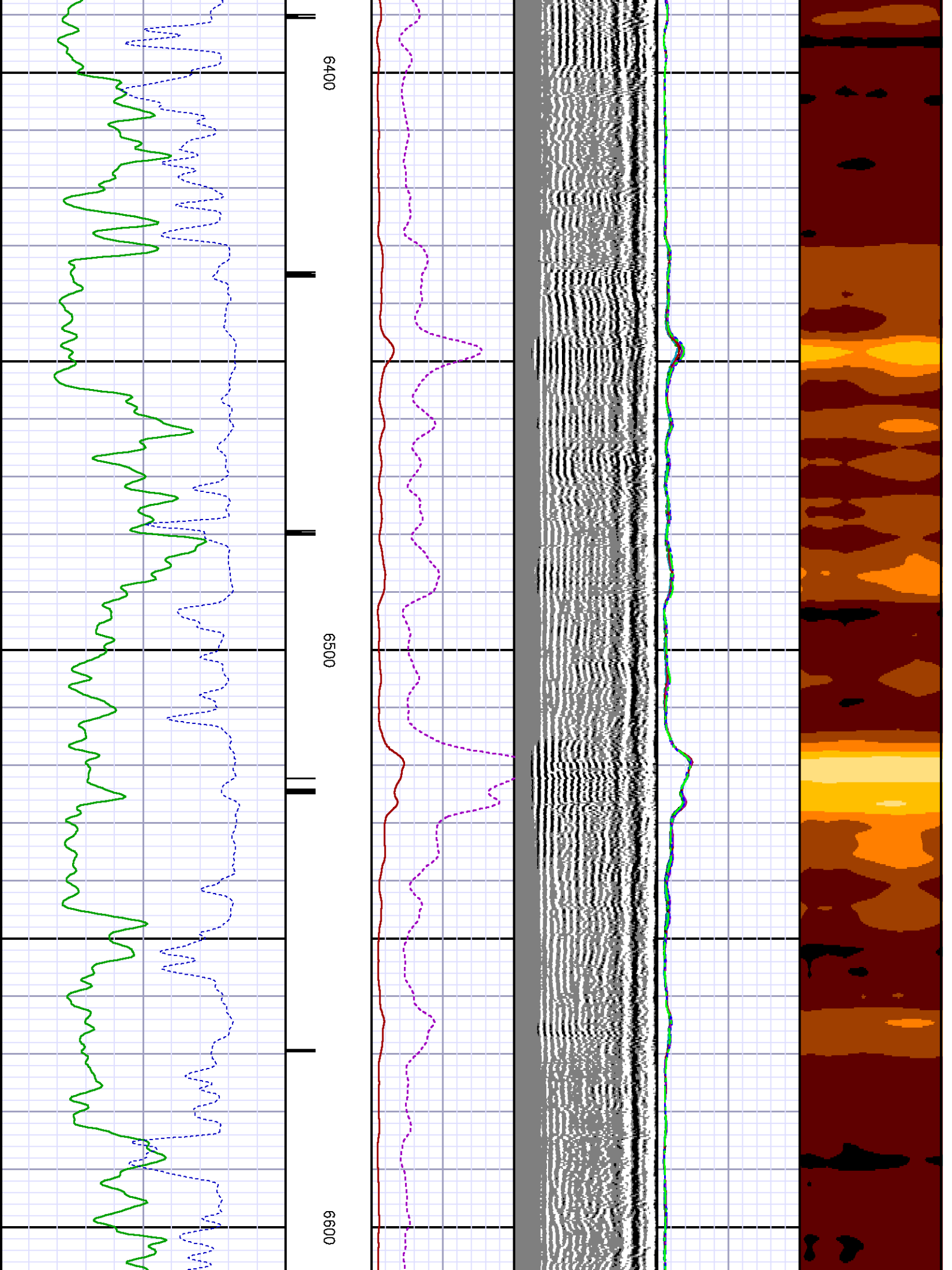


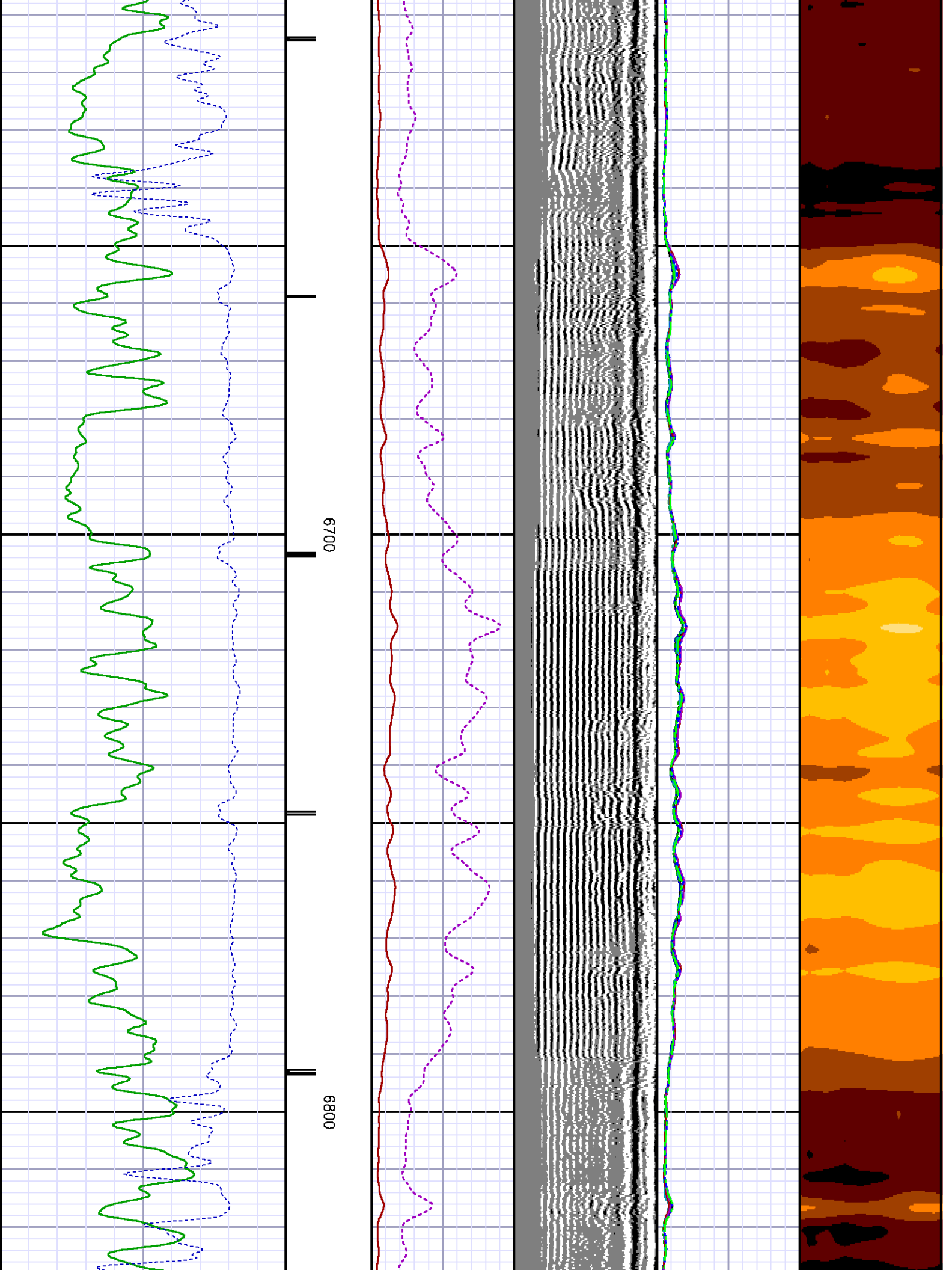


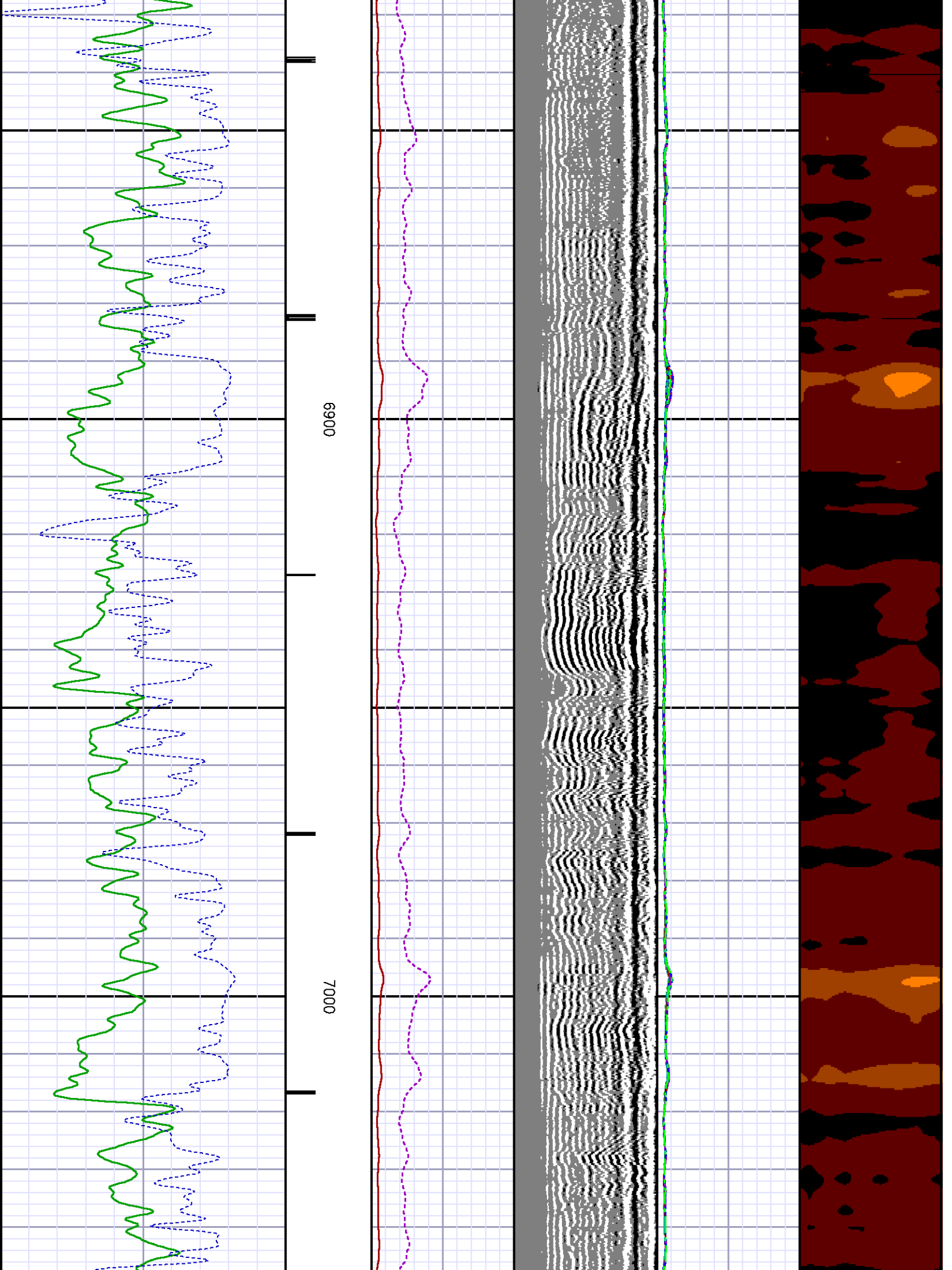


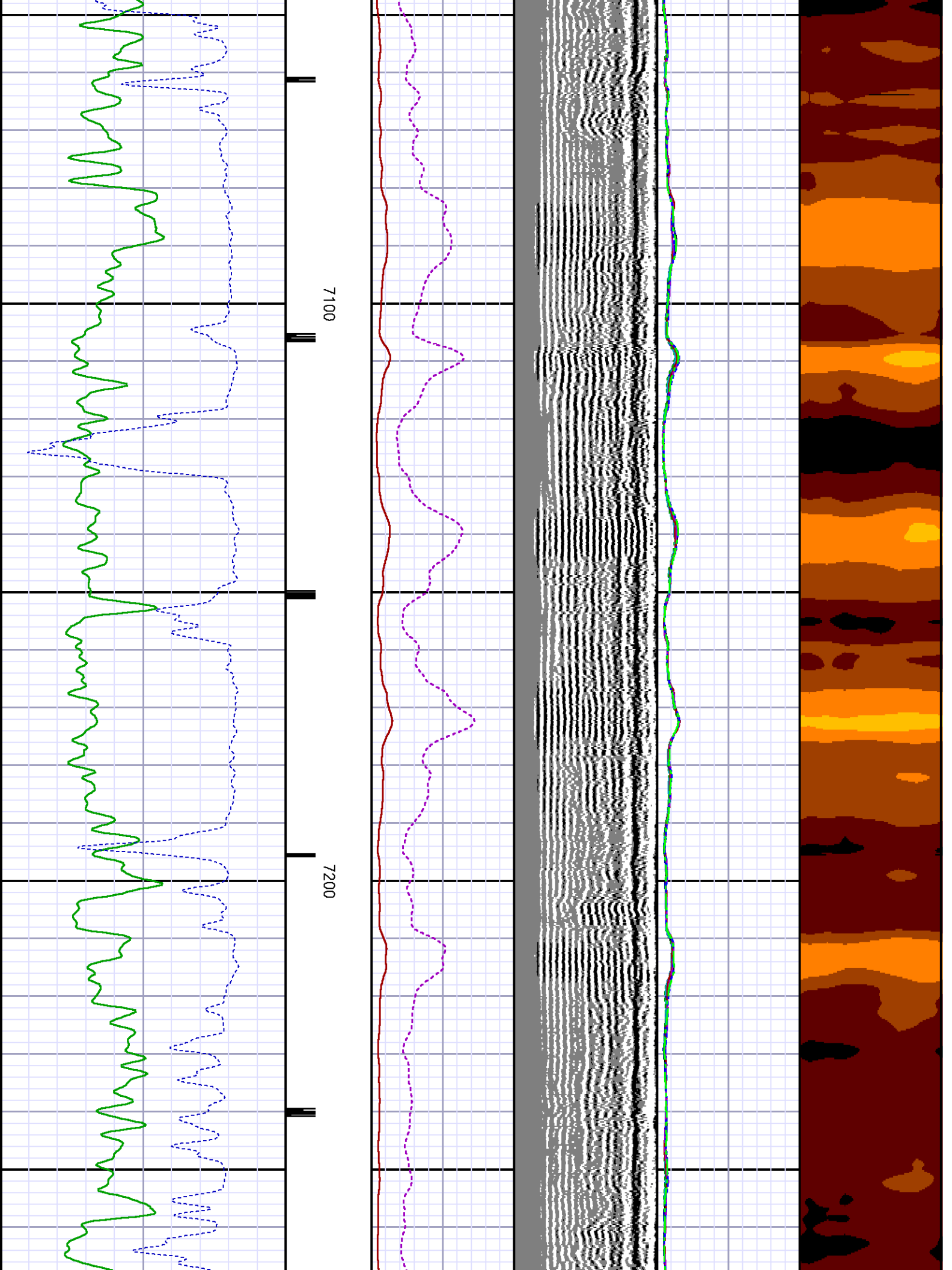


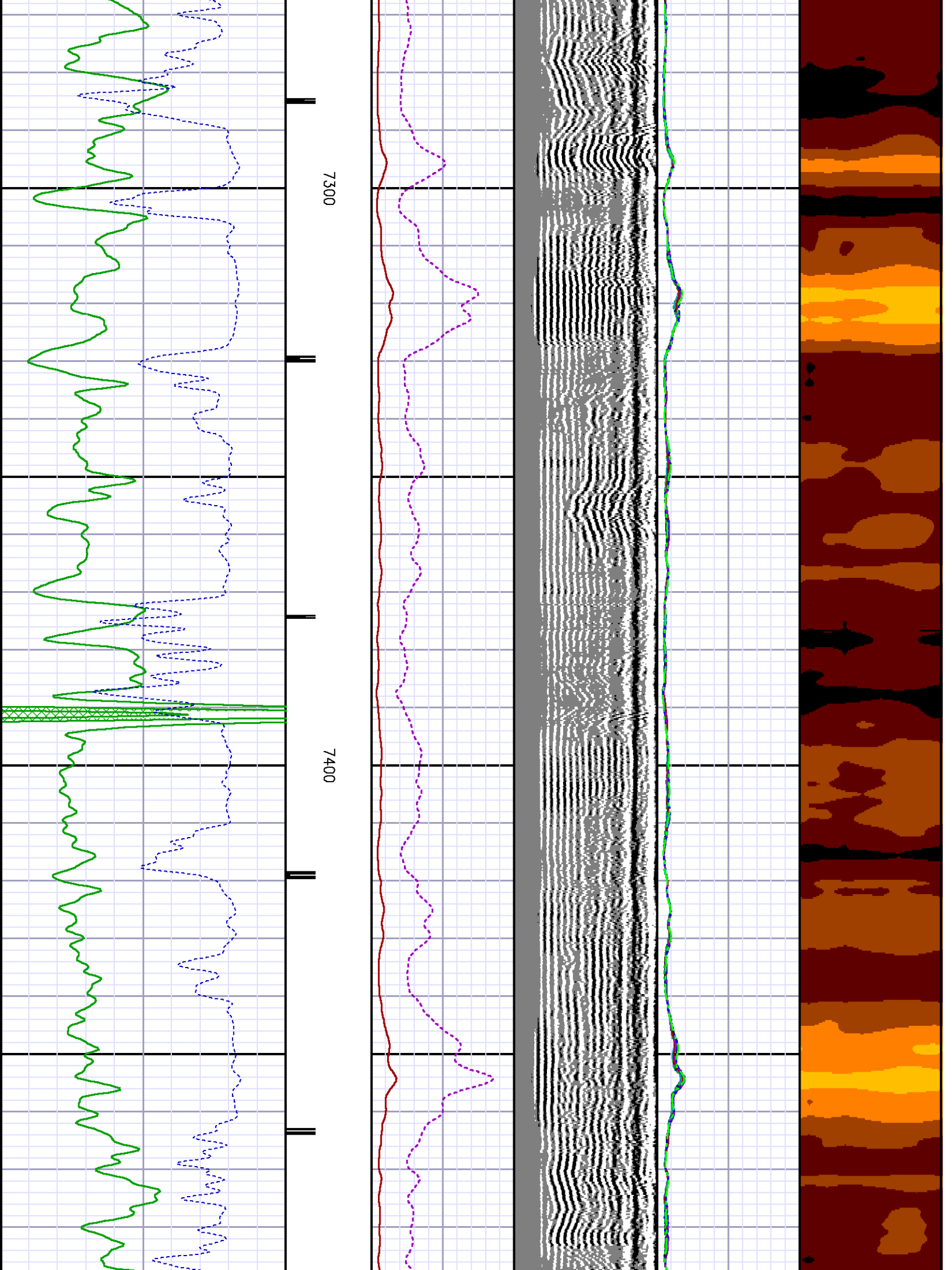




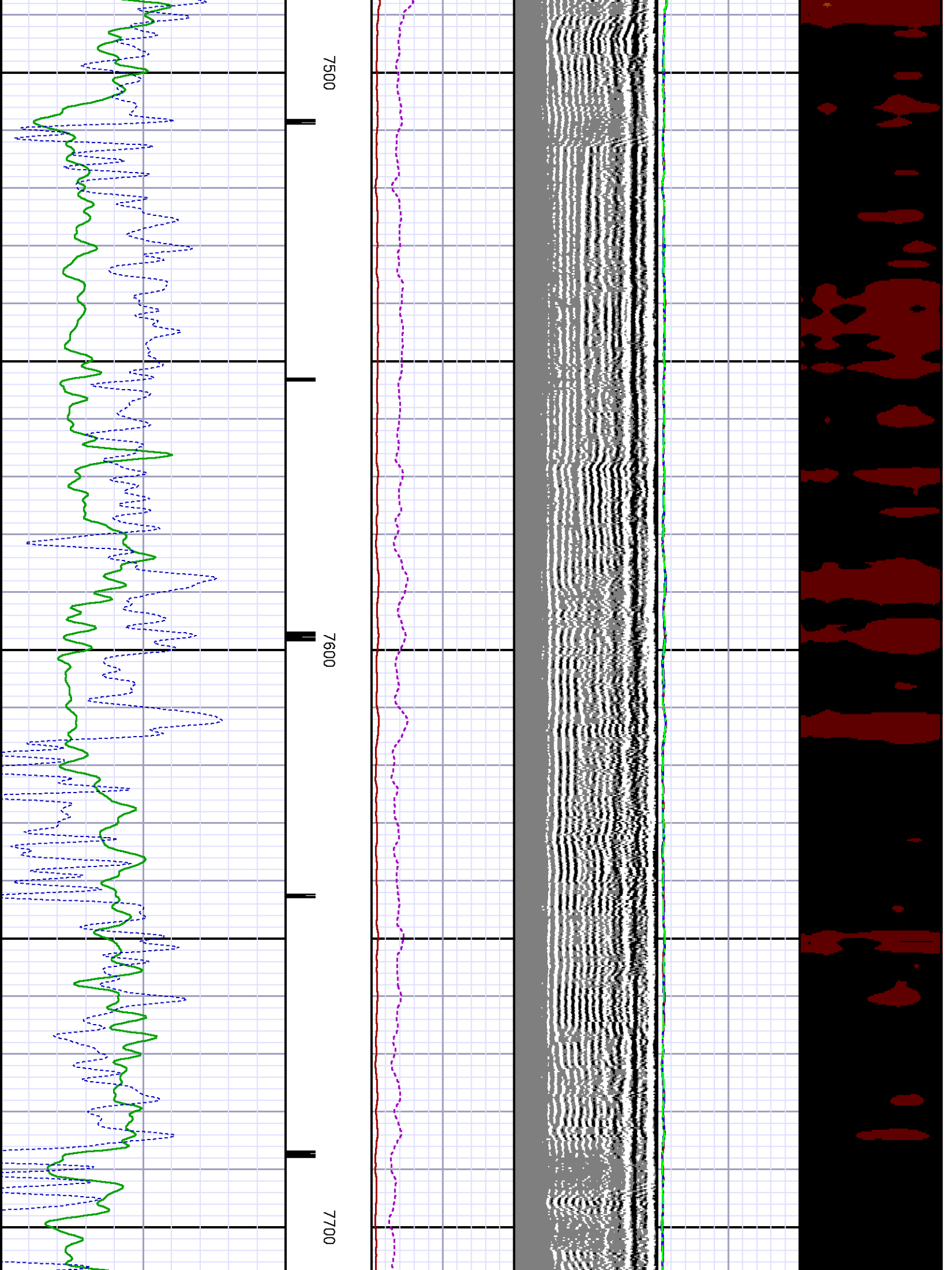


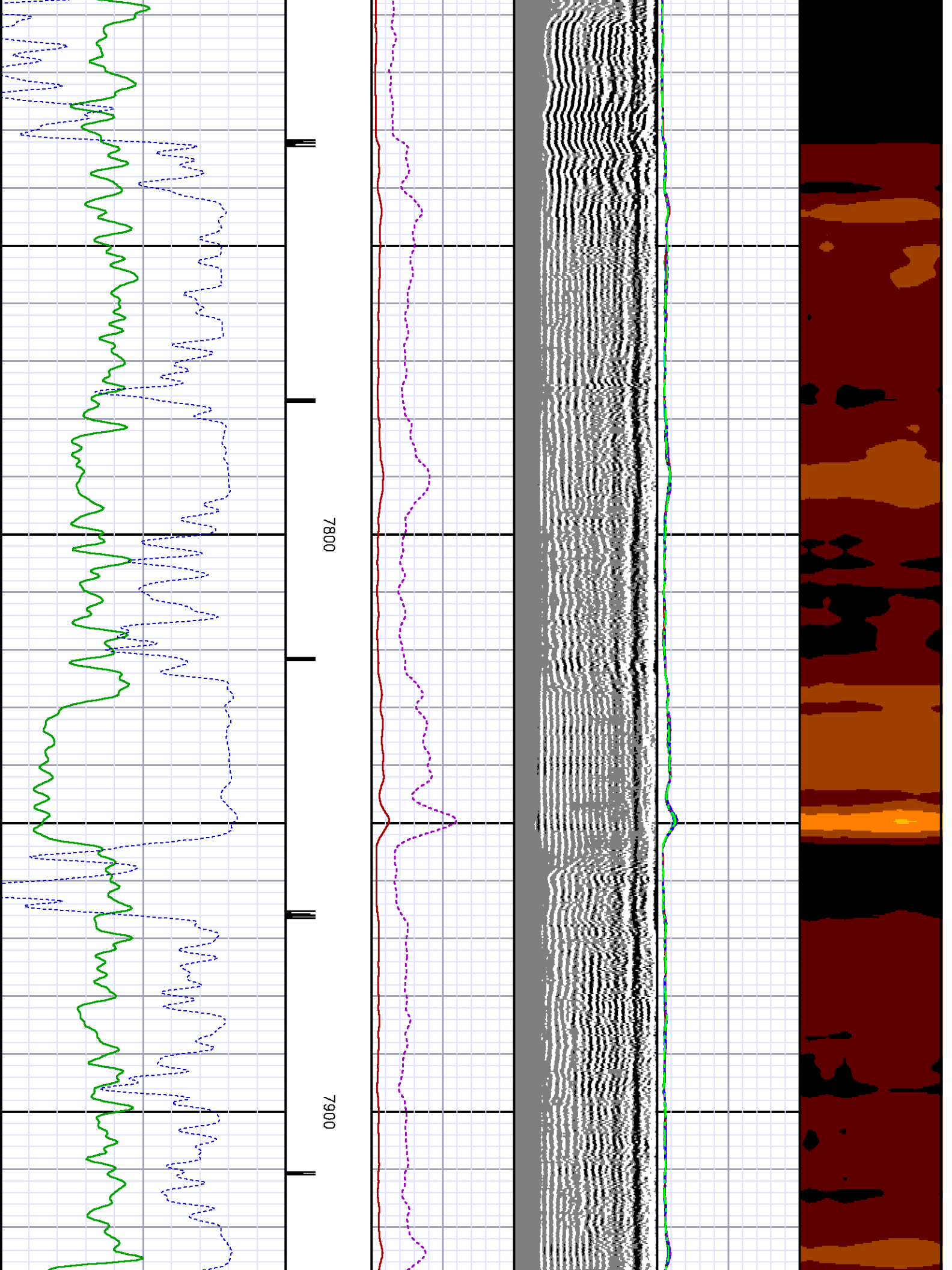


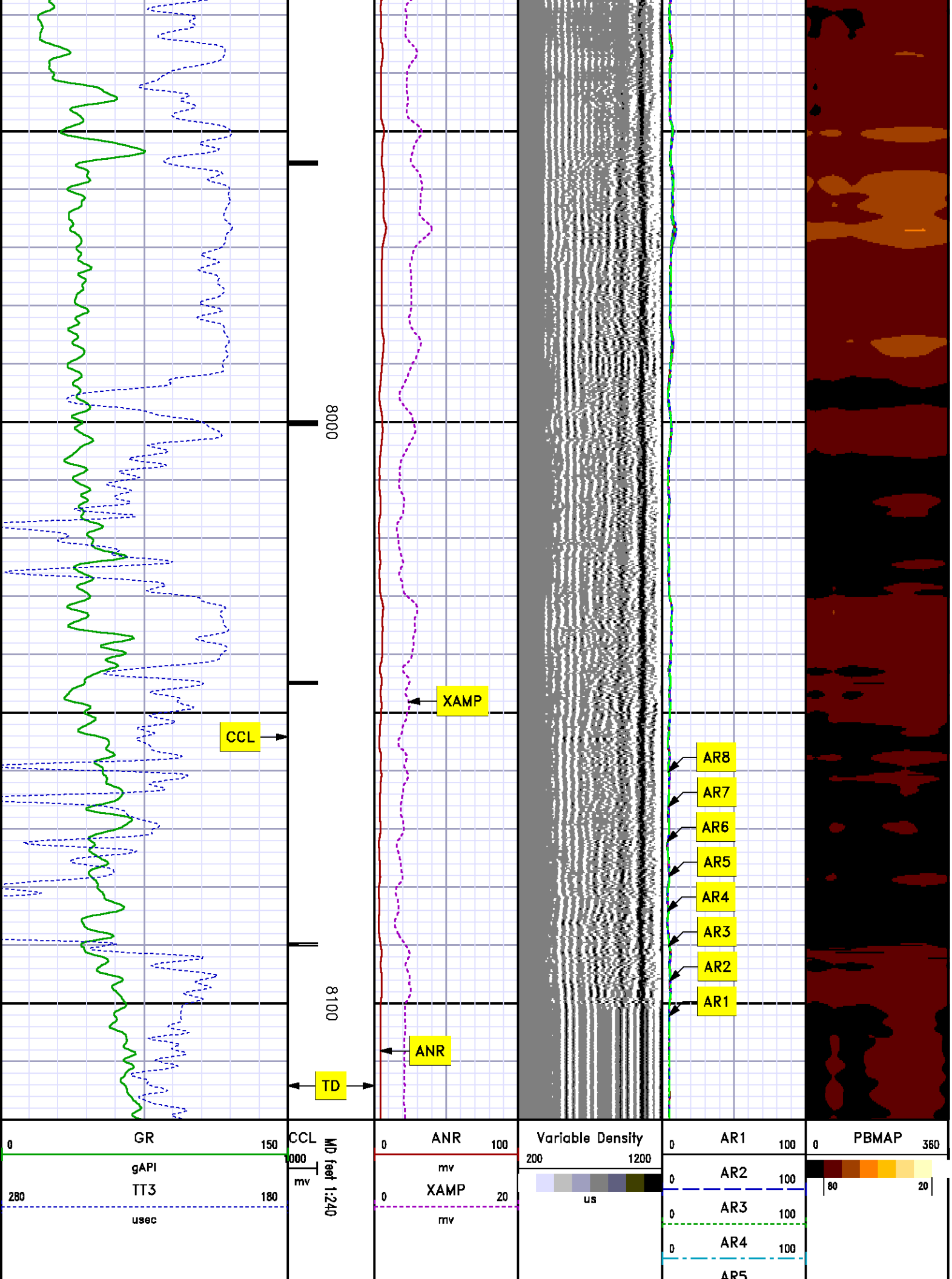












0	AR5	100
0	AR6	100
0	AR7	100
0	AR8	100

## ***REPEAT SECTION***

### ***0 PSI***

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.000	usec	7811.959	8151.960
RAL	Amp Gate Start Near	195.000	usec	7811.959	8151.960
RAL	Amp Gate Start Radial	195.000	usec	7811.959	8151.960
RAL	Amp Gate Width Far	25.000	usec	7811.959	8151.960
RAL	Amp Gate Width Near	25.000	usec	7811.959	8151.960
RAL	Amp Gate Width Radial	25.000	usec	7811.959	8151.960
RAL	casing od	4.500	inches	7811.959	8151.960
RAL	casing wt	11.600	lbm/ft	7811.959	8151.960
RAL	FB Start Far	291.900	usec	7811.959	8151.960
RAL	FB Start Near	180.000	usec	7811.959	8151.960
RAL	FB Start Radial	180.000	usec	7811.959	8151.960
RAL	FB Thresh Far	10.000	mv	7811.959	8151.960
RAL	FB Thresh Near	4.000	mv	7811.959	8151.960
RAL	FB Thresh Radial	4.000	mv	7811.959	8151.960
RAL	Fluid Travel Time	200.000	usec/ft	7811.959	8151.803

## DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-16.750	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	-15.750	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 : WPX ENERGY

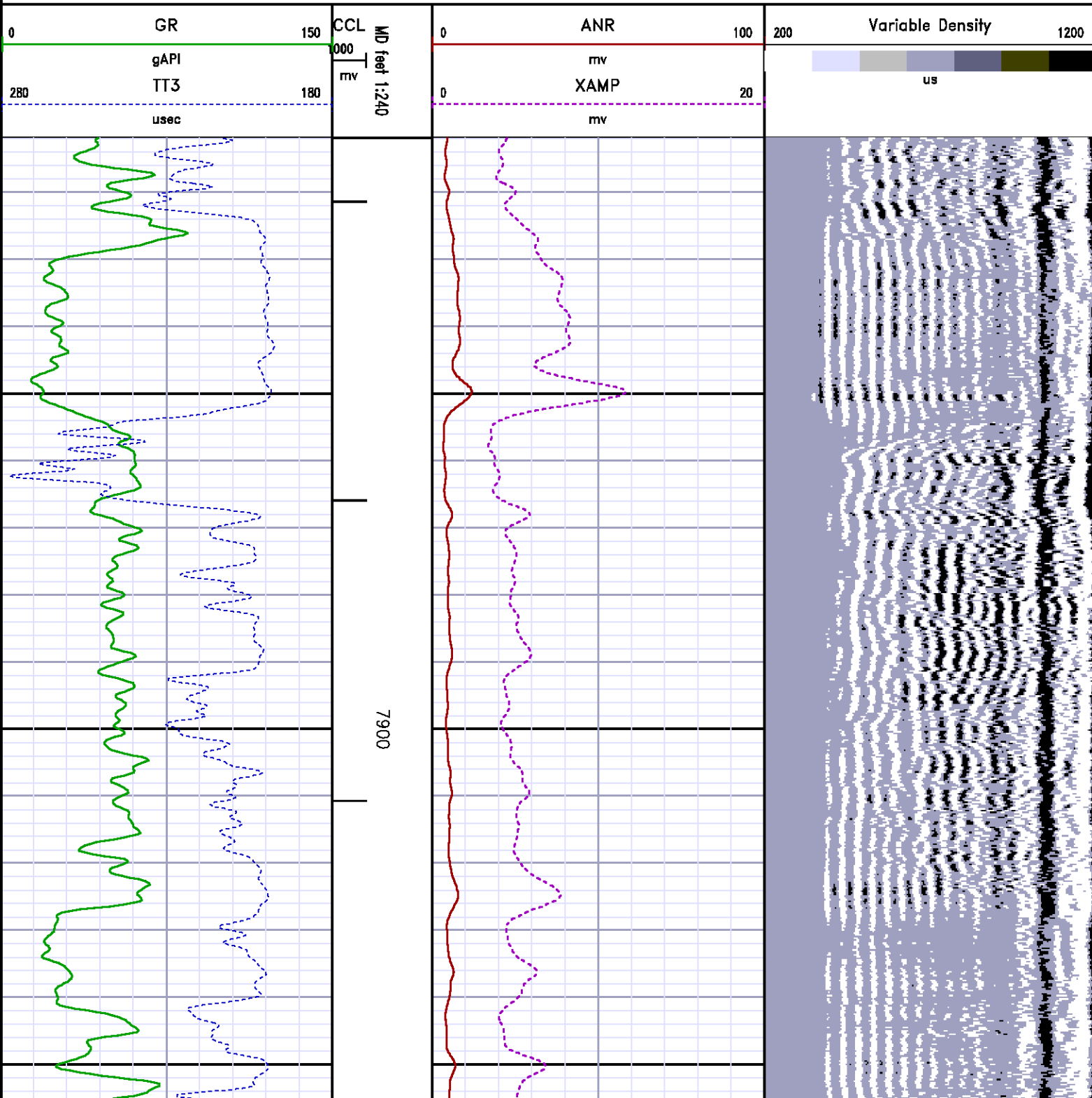
Well : FEDERAL KP 14-18

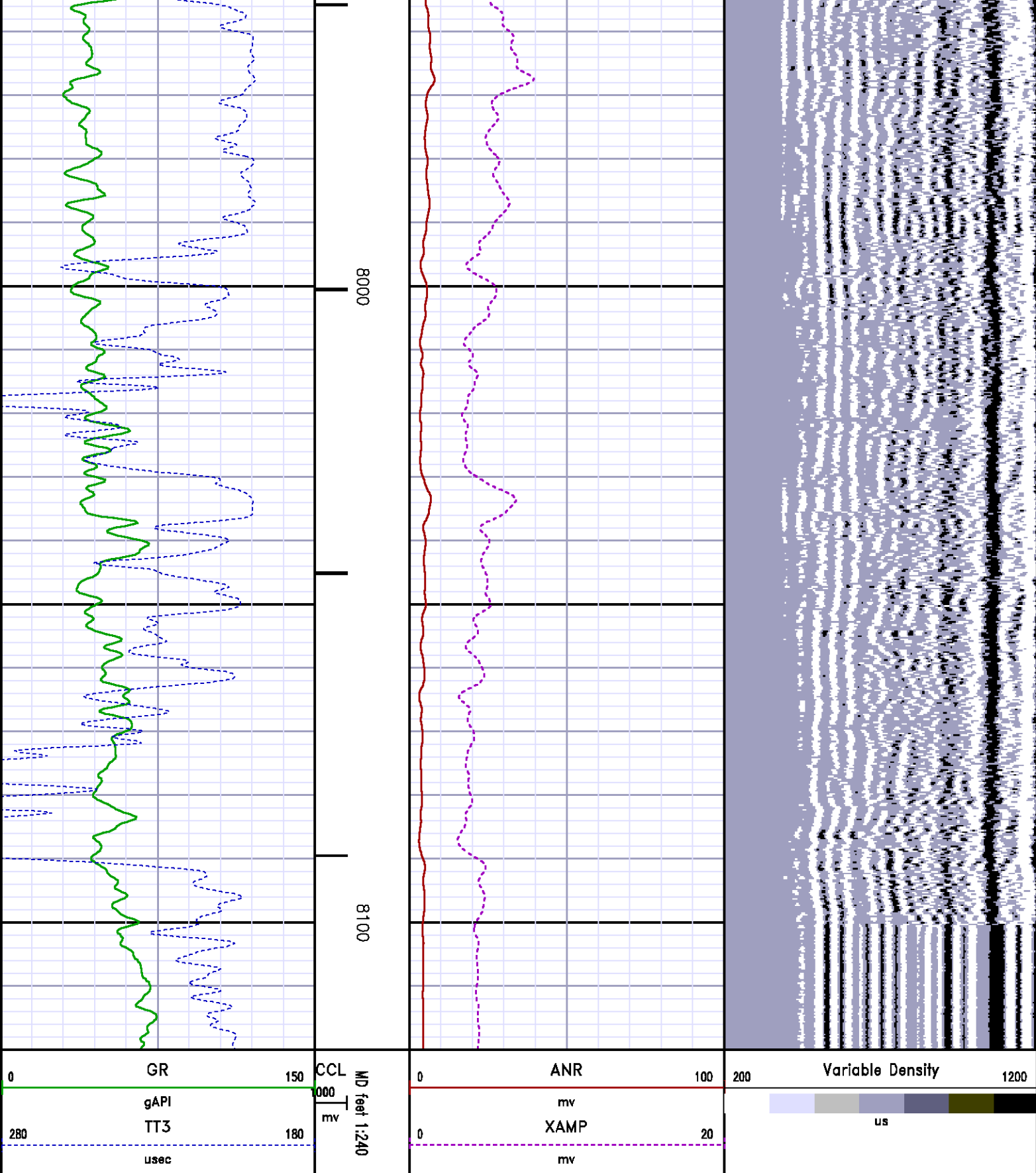
File Name : d:\welldata\wpx energy\kp 14-18\14ral\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 7811.96 - 8120.00 feet UP

Created : 6/30/2012 10:51:22 AM





## CALIBRATION SUMMARY



# RALSHP

Shop Calibration: C:\case\calver\RALSHP\452J3 shp.cal

## SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Jun 30 10:16:31 2012 TOOL SERIES: 1426XA ASSET: 452 SEQ: J3

Tool Delay [usec] -64.00 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	1.659	100.00	0.11
3 Ft. Receiver	217	216	30	154	25	1.793	100.00	0.11
5 Ft. Receiver	326	321	30	239	25	6.692	150.00	0.16
Radial #1	217	216	30	149	25	-2.416	100.00	0.11
Radial #2	218	216	30	149	25	2.024	100.00	0.11
Radial #3	218	216	30	149	25	1.326	100.00	0.11
Radial #4	218	216	30	149	25	0.316	100.00	0.11
Radial #5	217	216	30	149	25	1.918	100.00	0.12
Radial #6	216	216	30	149	25	1.218	100.00	0.11
Radial #7	215	216	30	149	25	1.082	100.00	0.11
Radial #8	217	216	30	149	25	2.689	100.00	0.11

# RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\452J3 fld.cal

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Jun 30 10:19:47 2012 TOOL SERIES: 1426XA ASSET: 452 SEQ: J3

Tool Delay [usec] -64.00 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	0.067	0.000	1.00	100.000
3 Ft. Receiver	195	25	1.675			
5 Ft. Receiver	305	25	4.740			
Radial #1	195	25	1.481			
Radial #2	195	25	1.576			
Radial #3	195	25	1.513			
Radial #4	195	25	1.374			
Radial #5	195	25	1.062			
Radial #6	195	25	1.364			
Radial #7	195	25	1.530			
Radial #8	195	25	1.270			

# ***GAMMA RAY #2***

Calibration File: C:\case\calver\GR\456J3.cal

## CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sat Jun 30 10:03:45 2012 TOOL SERIES: 2459XA ASSET: 456 SEQ: J3

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	78.53	346.00	0.692	54.32	239.32	185.00

Verification File: C:\case\calver\GR\456J3.VP

## PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Sat Jun 30 10:05:02 2012 TOOL SERIES: 2459XA ASSET: 456 SEQ: J3

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K WA612	81.91	352.31	0.692	56.66	243.68	187.03

# ***TOOL DIAGRAM***



Baker Atlas

CASE

Company	WPX ENERGY		
Well	FEDERAL KP 14-18		
Field	KOKOPELLI		
County	GARFIELD	State	COLORADO

File No:
CH057336
API No:
05045206250000

Location			
SHL: 740' FSL, 1966' FEL			
BHL: 1189' FSL, 588' FWL			
SEC	18	TWP	6S
		RGE	91W

Elevations	
KB	5944 ft
DF	
GL	5918 ft

18 6S 91W
KP 34-18 PAD
NABORS 574