



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: CH074543	Company Well Field County	WPX ENERGY HOEPPLI RWF 34-36 RULLISON GARFIELD	State COLORADO
API No: 05045215490000			
56 SS 94W RWF 33-35 NABORS SSD 576	Location SHL: 2619' FNL & 2598' FEL BHL: 950' FSL & 1882' FEL SEC 36 TWP 6S RGE 94W	Other Services RPM	
Permanent Datum Log Measured From Drill Measured From	G.L. _____ Elevation 6528 ft K.B. _____ 26 ft Above P. D. KELLY BUSHING	Elevations KB 6554 ft DF GL 6528 ft	

Date	22/JUL/13	
Run	ONE	
Service Order	B24A56	
Depth Driller	9133 ft	
Depth Logger	9114 ft	
Bottom Logged Interval	9104 ft	
Top Logged Interval	26 ft	
Time Started	7:30	
Time Finished	11:00	
Operator Rig Time	3.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	N/A	
Salinity	N/A	
Fluid Level	71 ft	
Logged Cement Top	N/A	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	N/A	
Nominal Logging Speed	45 fpm	
Maximum Recorded Temperature	239 degF	
Reference Log	N/A	
Reference Log Date	N/A	
Equipment No.	4271	GRAND JUNCTION
Recorded By	W. KINSEL	9712
Witnessed By	MR. BOB CADY	GRAND JUNCTION

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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	1144.61 ft
8.75 In	0 ft	9203 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 In	N/A	N/A	0 ft	1100 ft
4.5 In	11.6 lbm/ft	1-80	0 ft	9133 ft

Remarks
ALL DATA IN THIS LOG WAS DEPTH SHIFTED TO MATCH THE TOP CCL MARK WITH KB LEVEL
AT THE CLIENT'S REQUEST. THE AMOUNT OF LINEAR SHIFT WAS 10 FEET DOWN.
SHORT JOINT: 5767' - 5792'
BHT: 239 degF
LOG DONE WITH 0 PSI ON WELLHEAD

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10124106	CENTRALIZED
1	1	GAMMA RAY/CCL	1355XA	10580209	CENTRALIZED

***MAIN LOG PRIMARY PRESENTATION***  
***0 PSI***

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.653	usec	33.687	9136.750
RAL	Amp Gate Start Near	198.140	usec	33.687	9136.750
RAL	Amp Gate Start Radial	198.140	usec	33.687	9136.750
RAL	Amp Gate Width Far	25.000	usec	33.687	9136.750
RAL	Amp Gate Width Near	25.000	usec	33.687	9136.750
RAL	Amp Gate Width Radial	25.000	usec	33.687	9136.750
RAL	casing od	4.500	inches	33.687	9136.750
RAL	casing wt	11.600	lbm/ft	33.687	9136.750
RAL	FB Start Far	291.900	usec	33.687	9136.750
RAL	FB Start Near	175.391	usec	33.687	9136.750
RAL	FB Start Radial	175.391	usec	33.687	9136.750
RAL	FB Thresh Far	10.000	mv	33.687	9136.750
RAL	FB Thresh Near	4.000	mv	33.687	9136.750
RAL	FB Thresh Radial	4.000	mv	33.687	9136.750
RAL	Fluid Travel Time	200.000	usec/ft	33.687	9136.655

## 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

1426XA -10.040  
1355XA -5.620  
1355XA -1.500  
1355XA 0.000

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

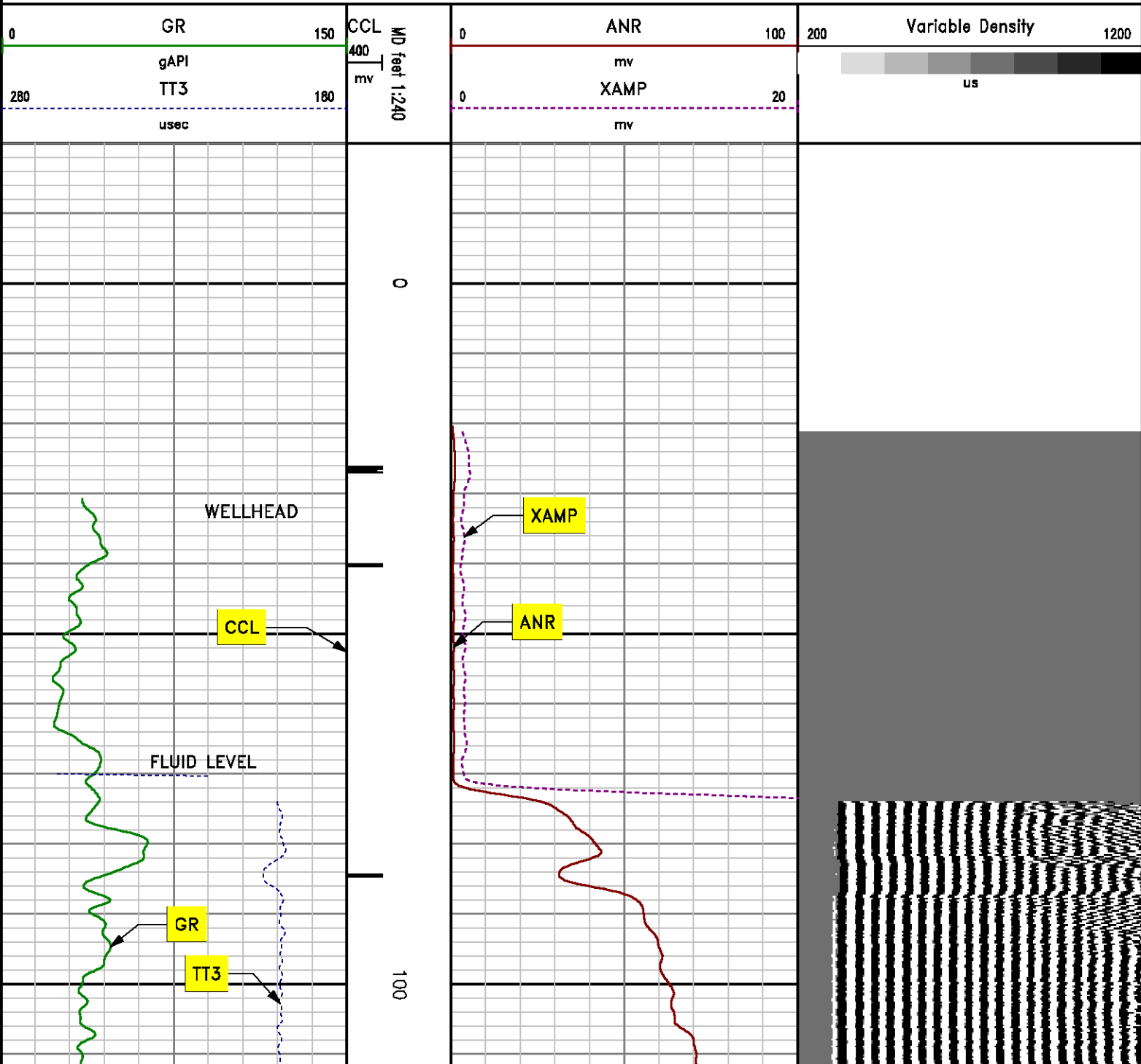
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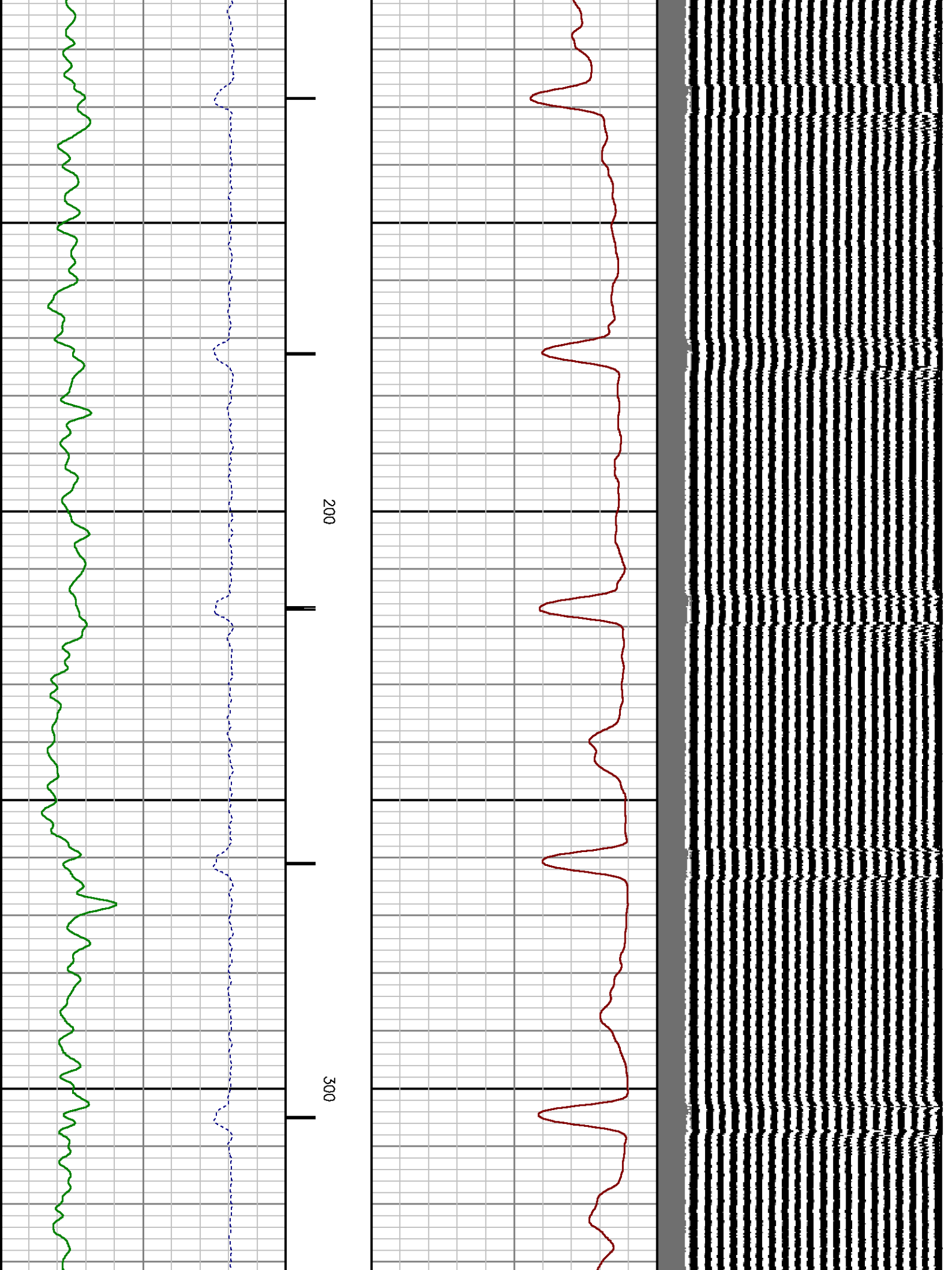
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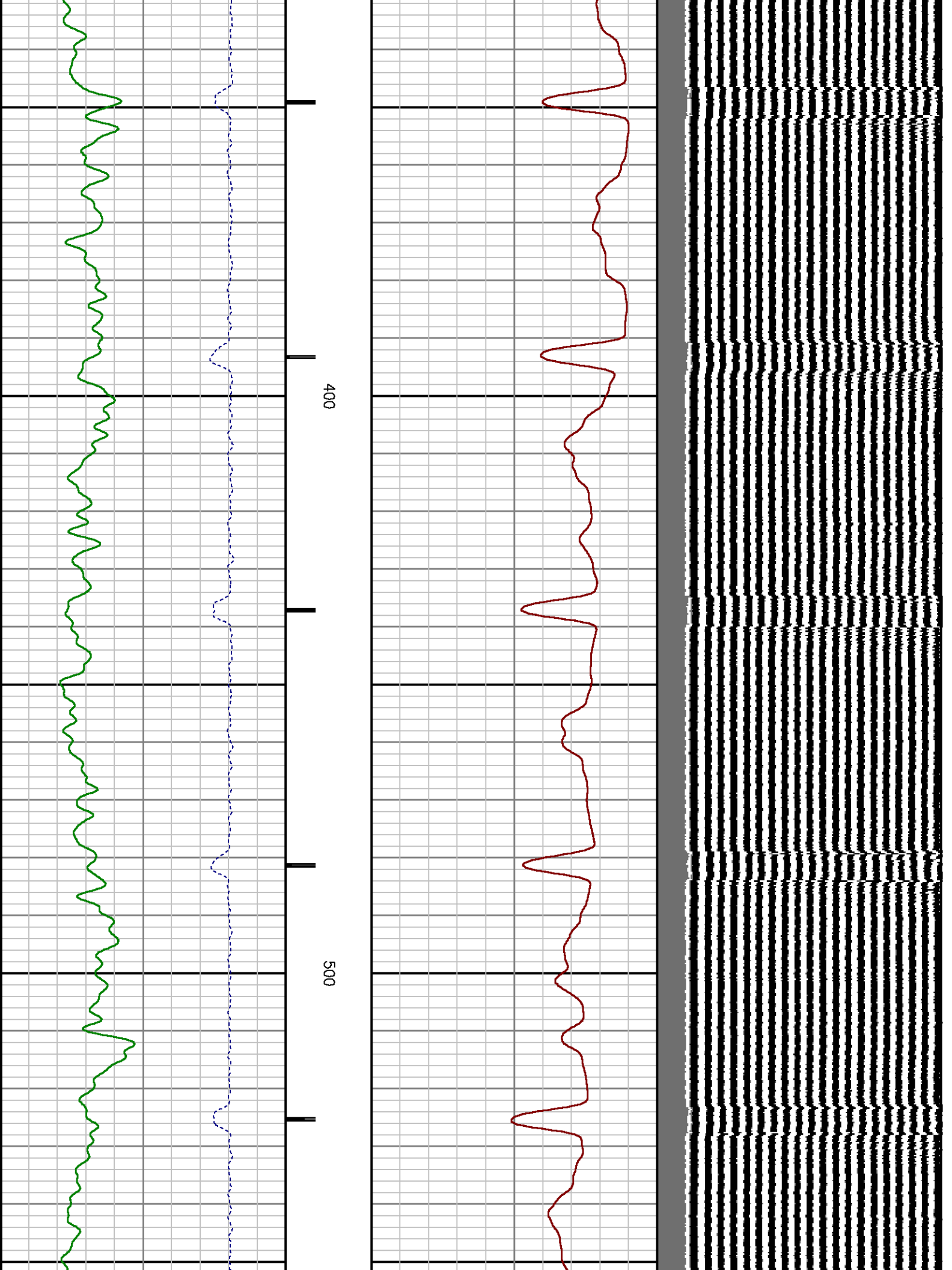
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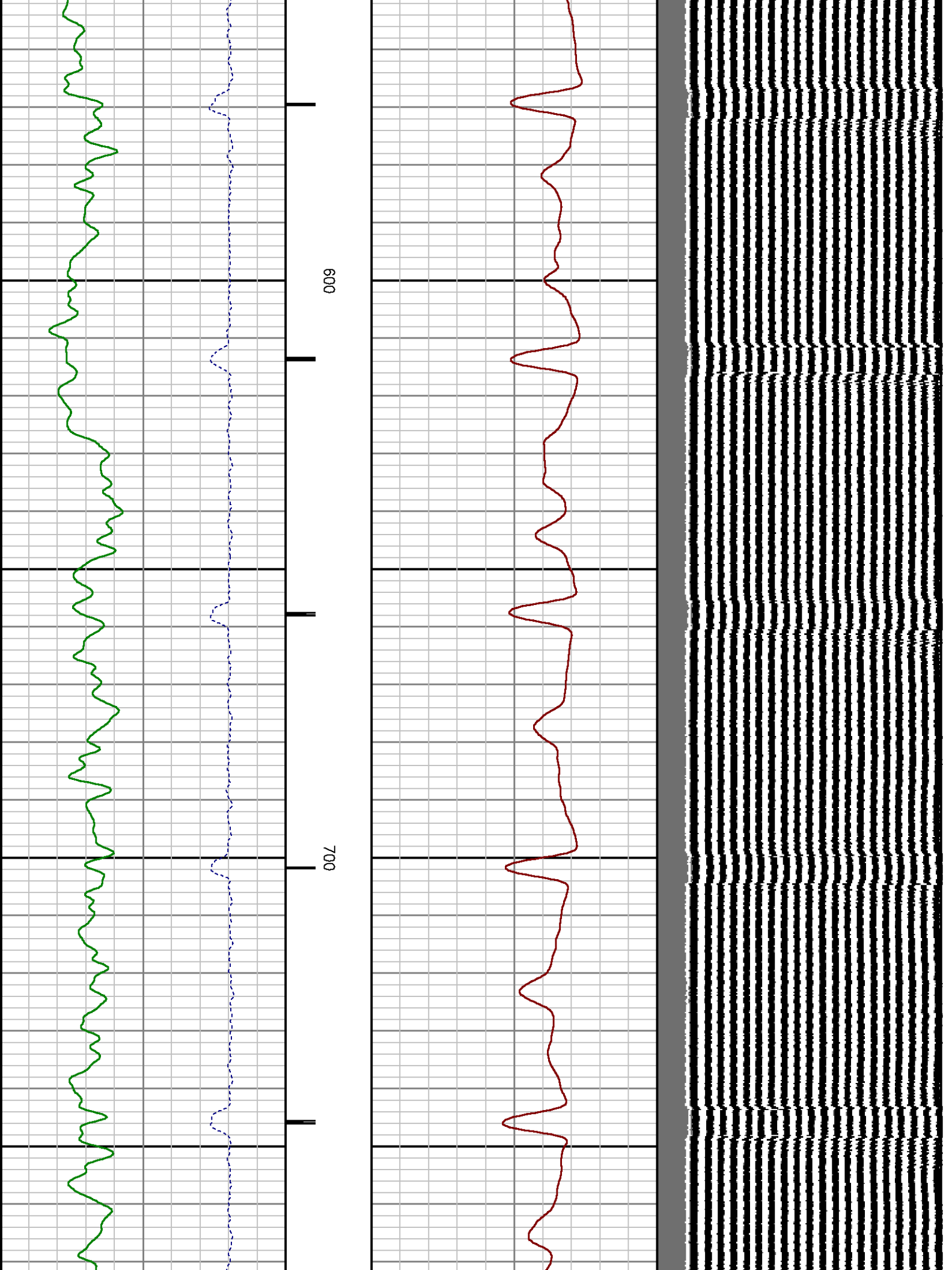
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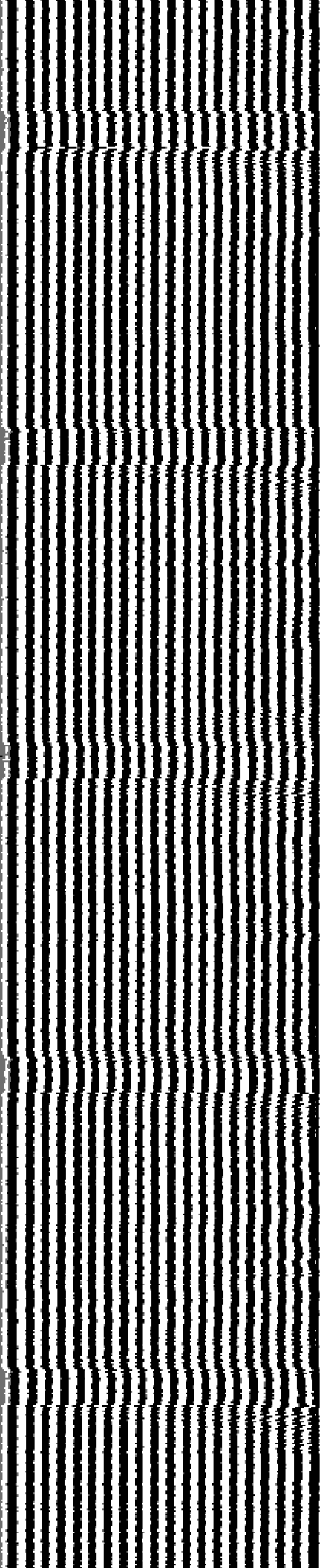
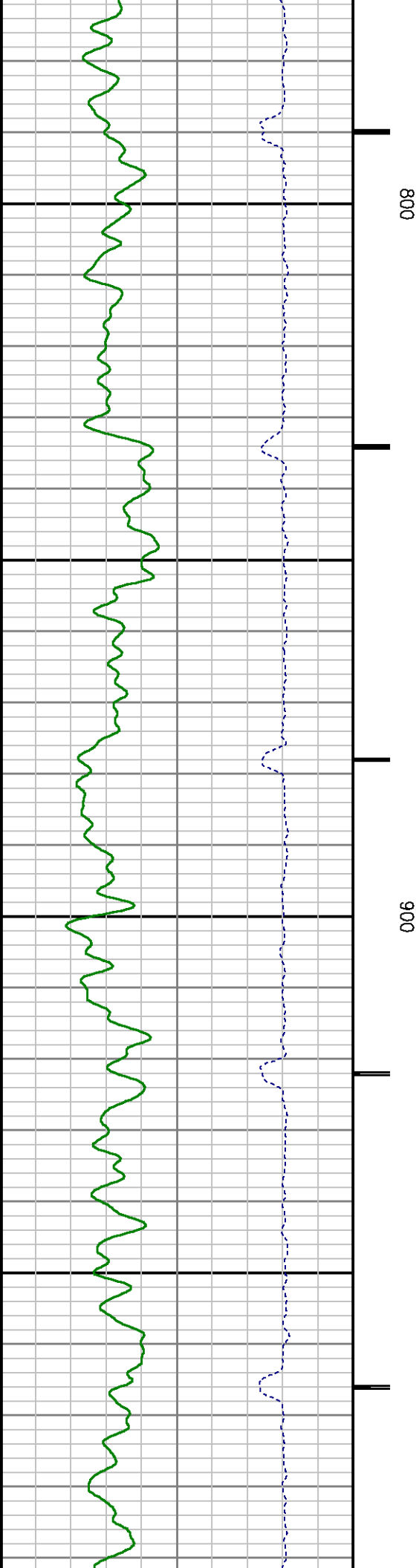


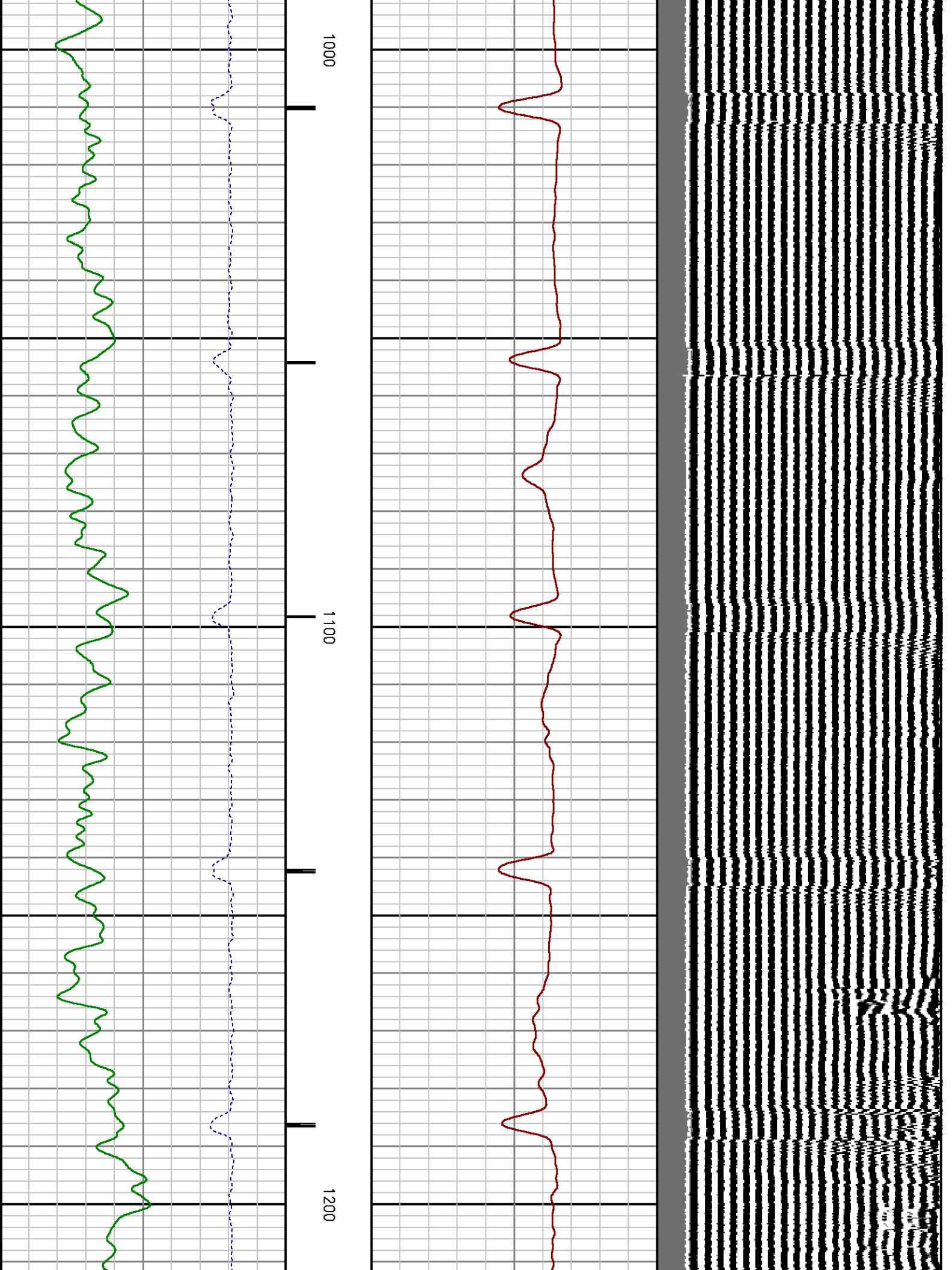


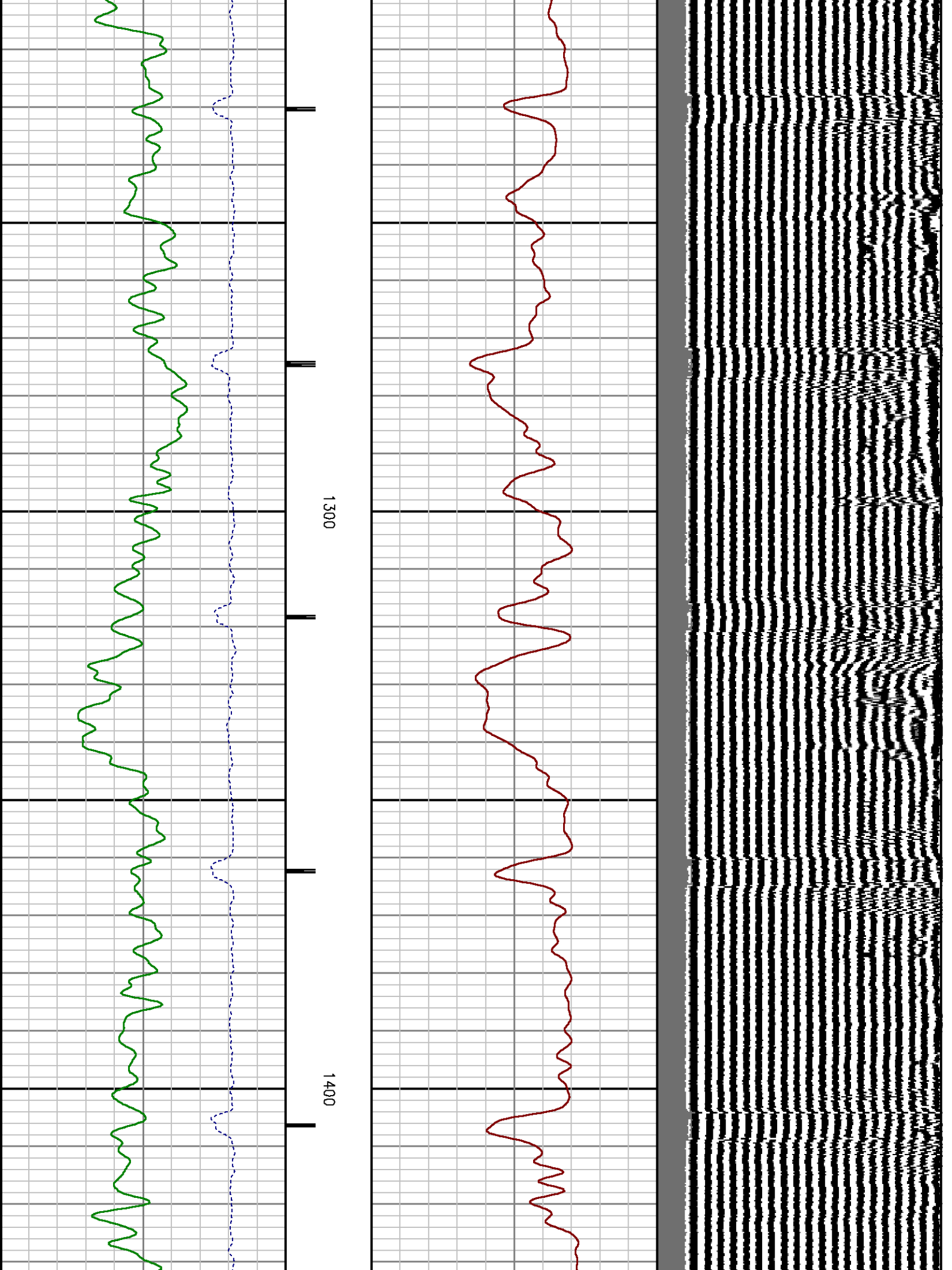


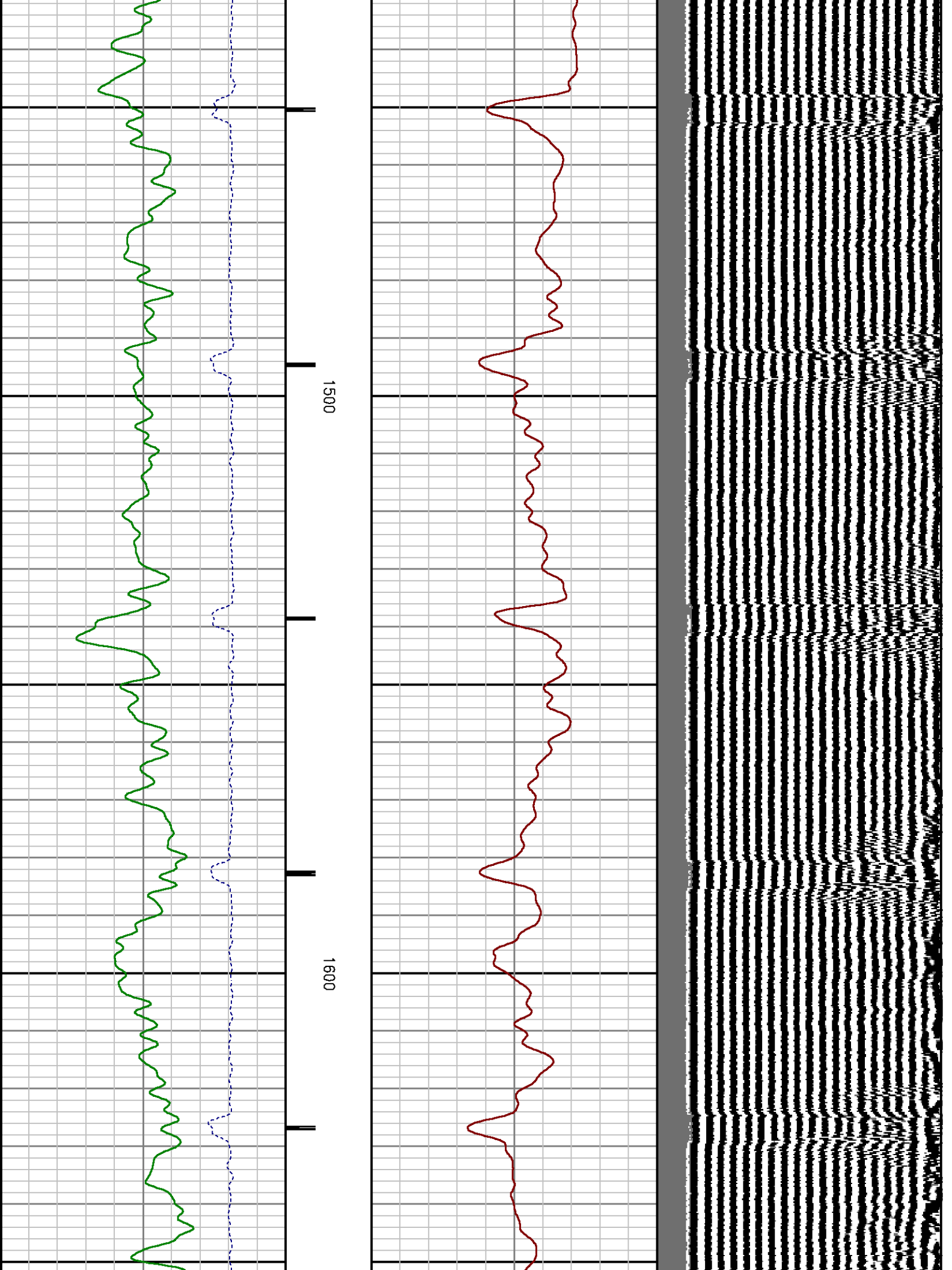


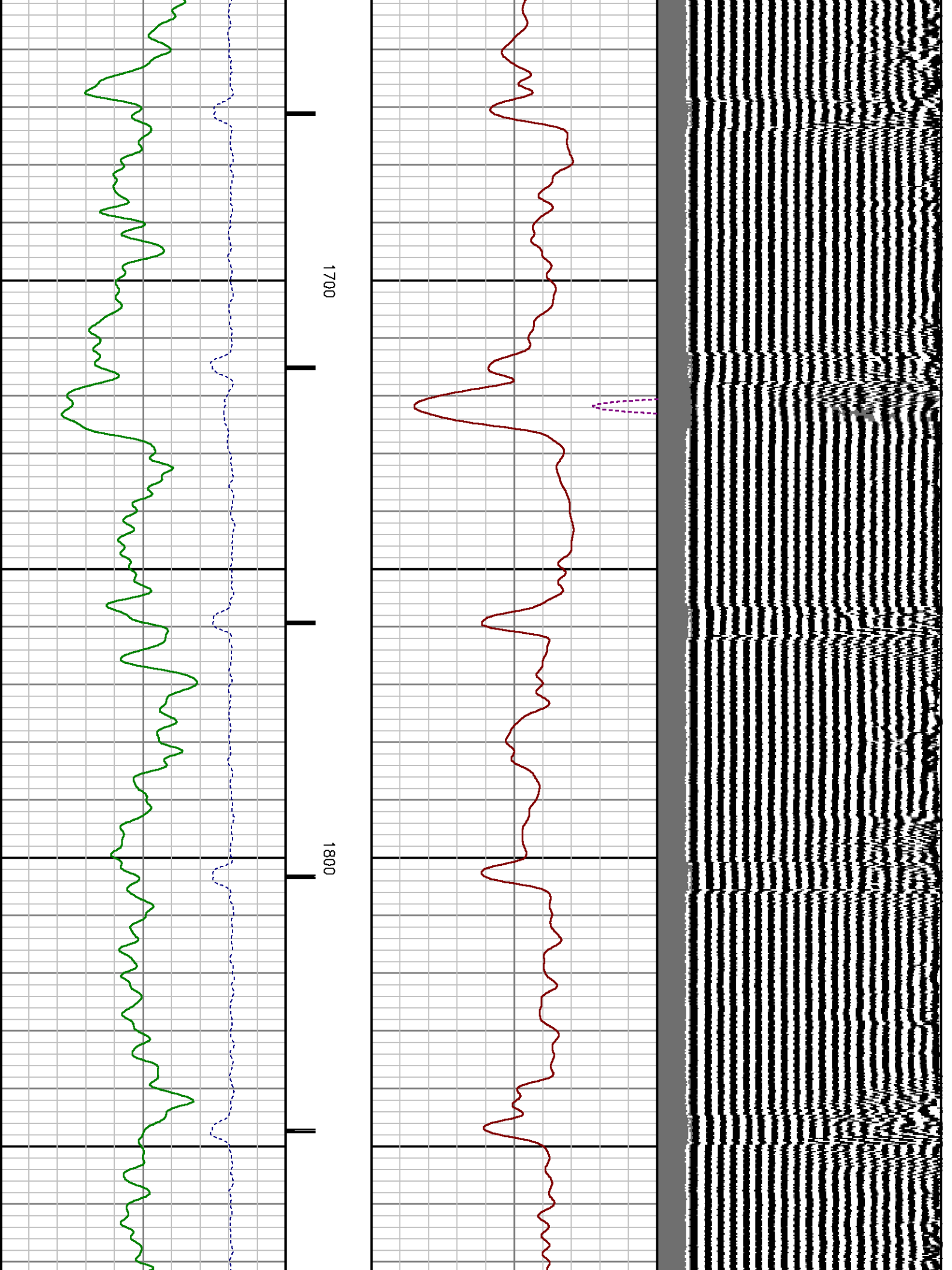




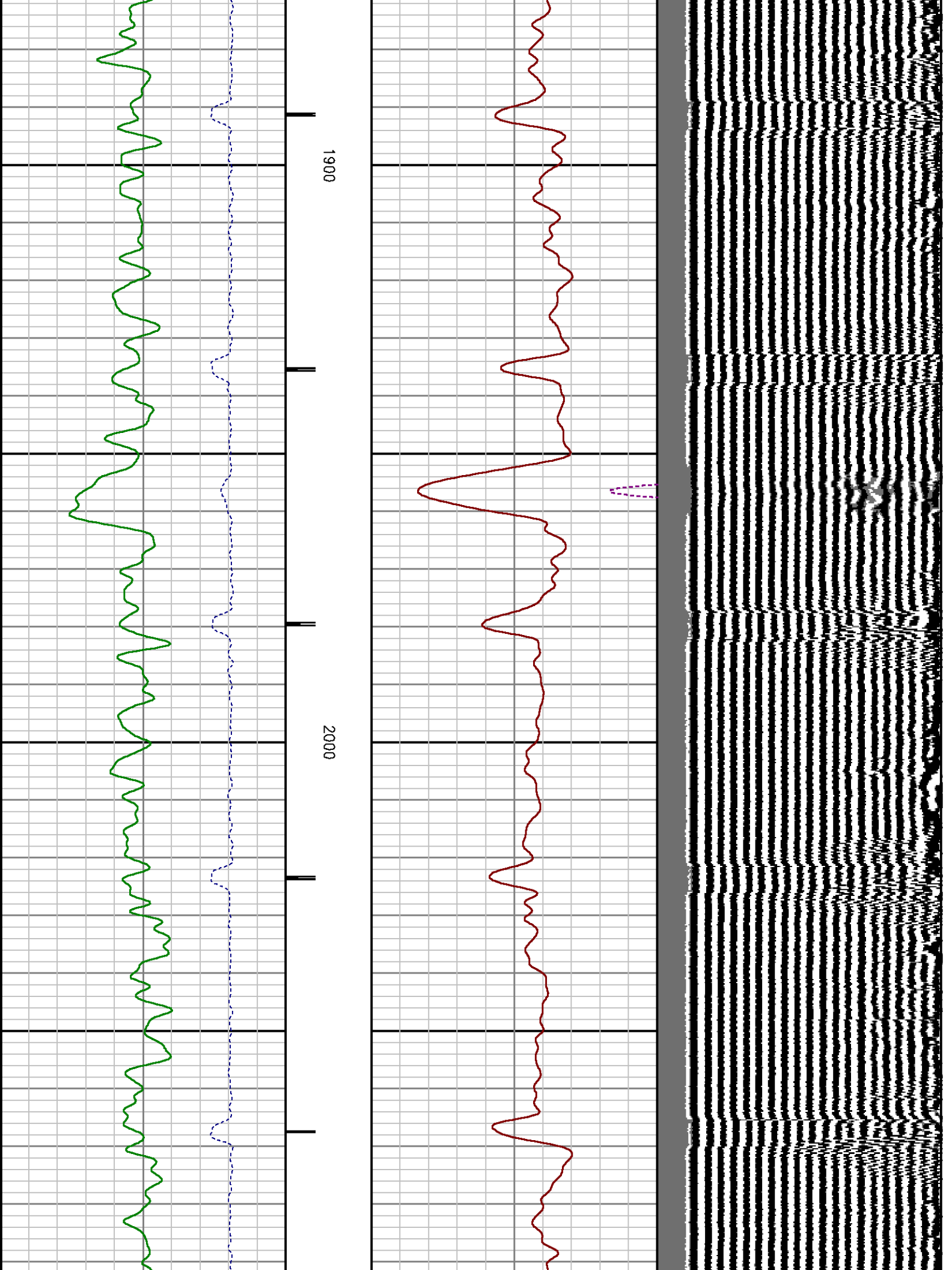




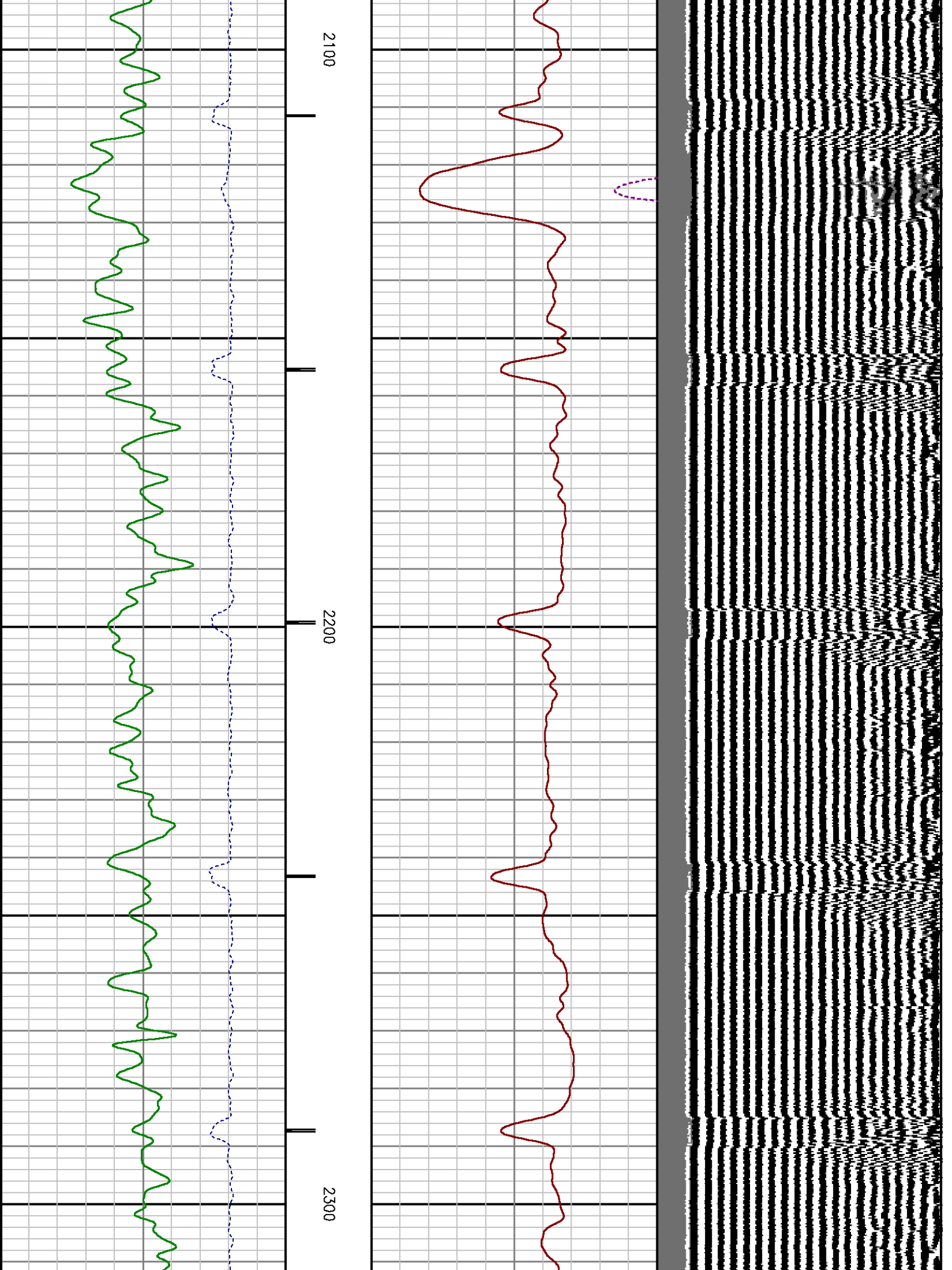


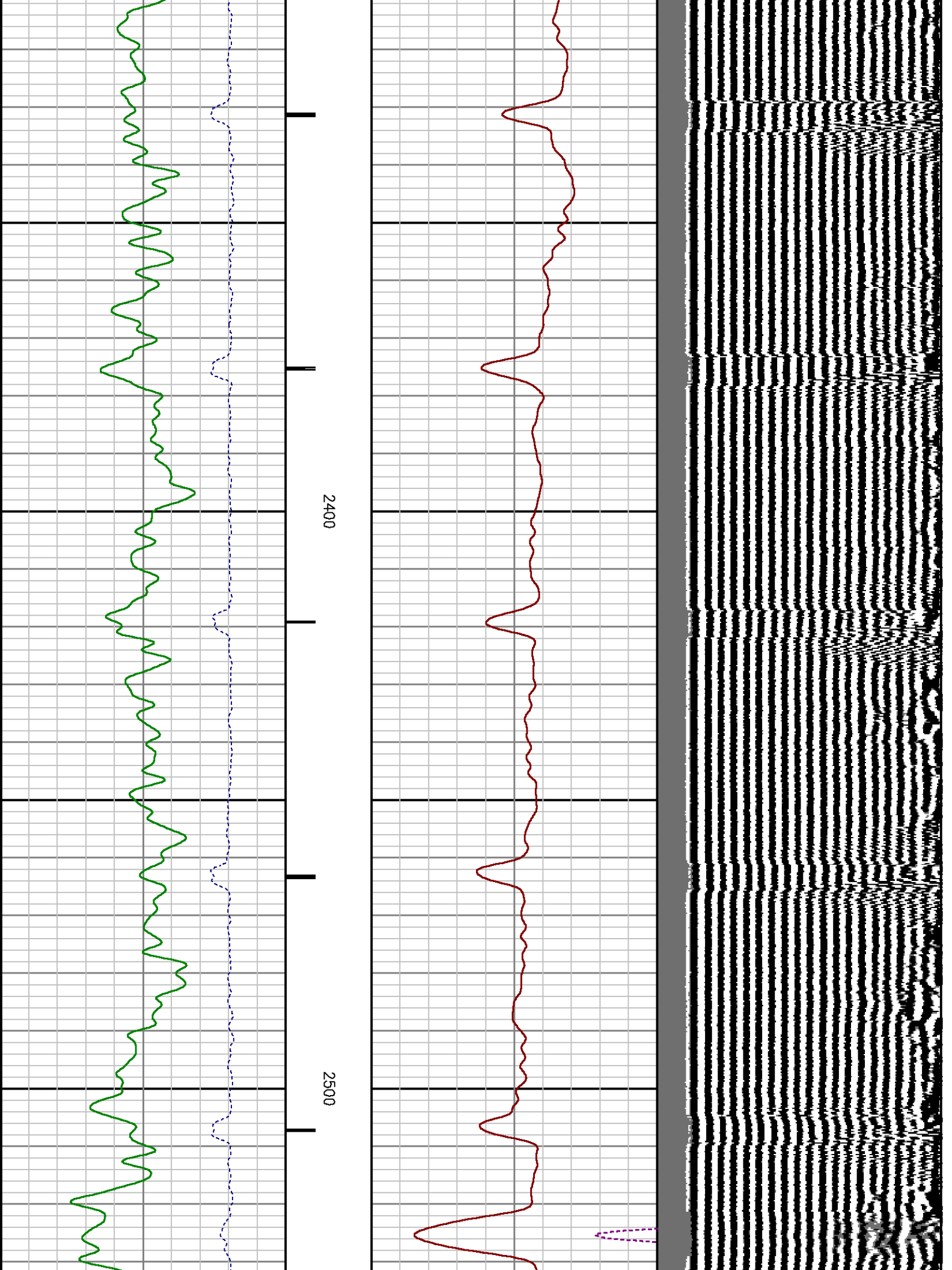


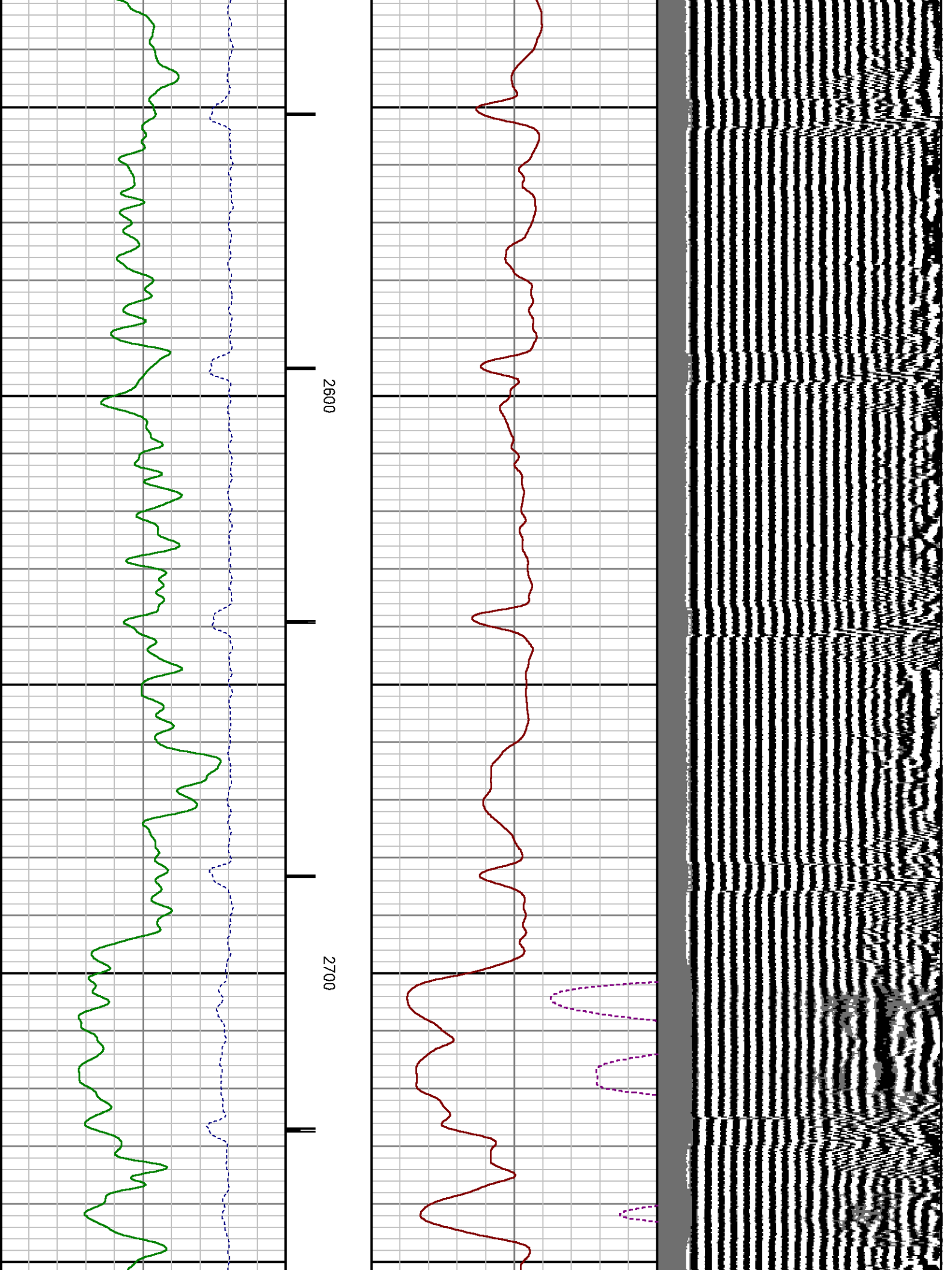


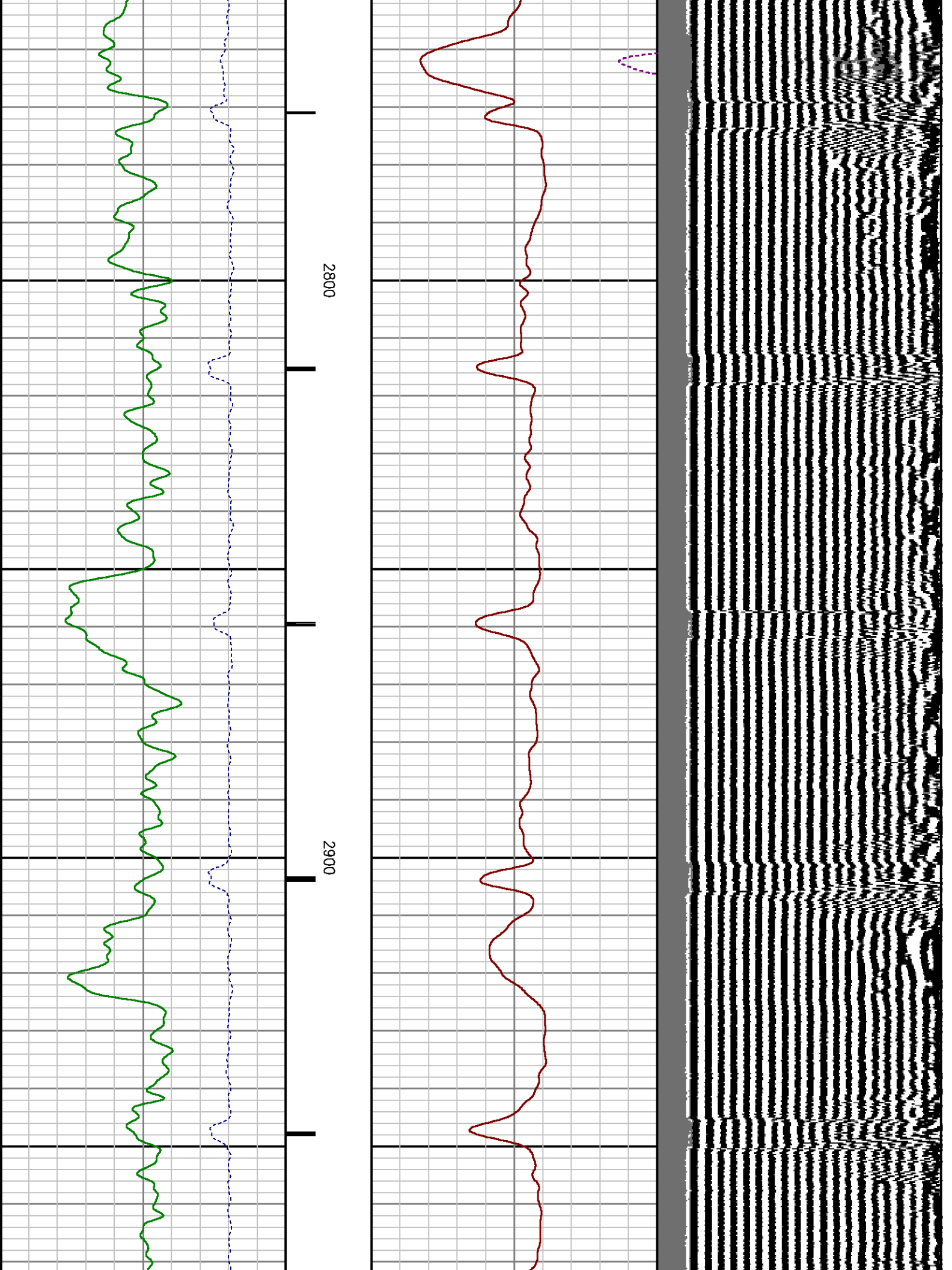


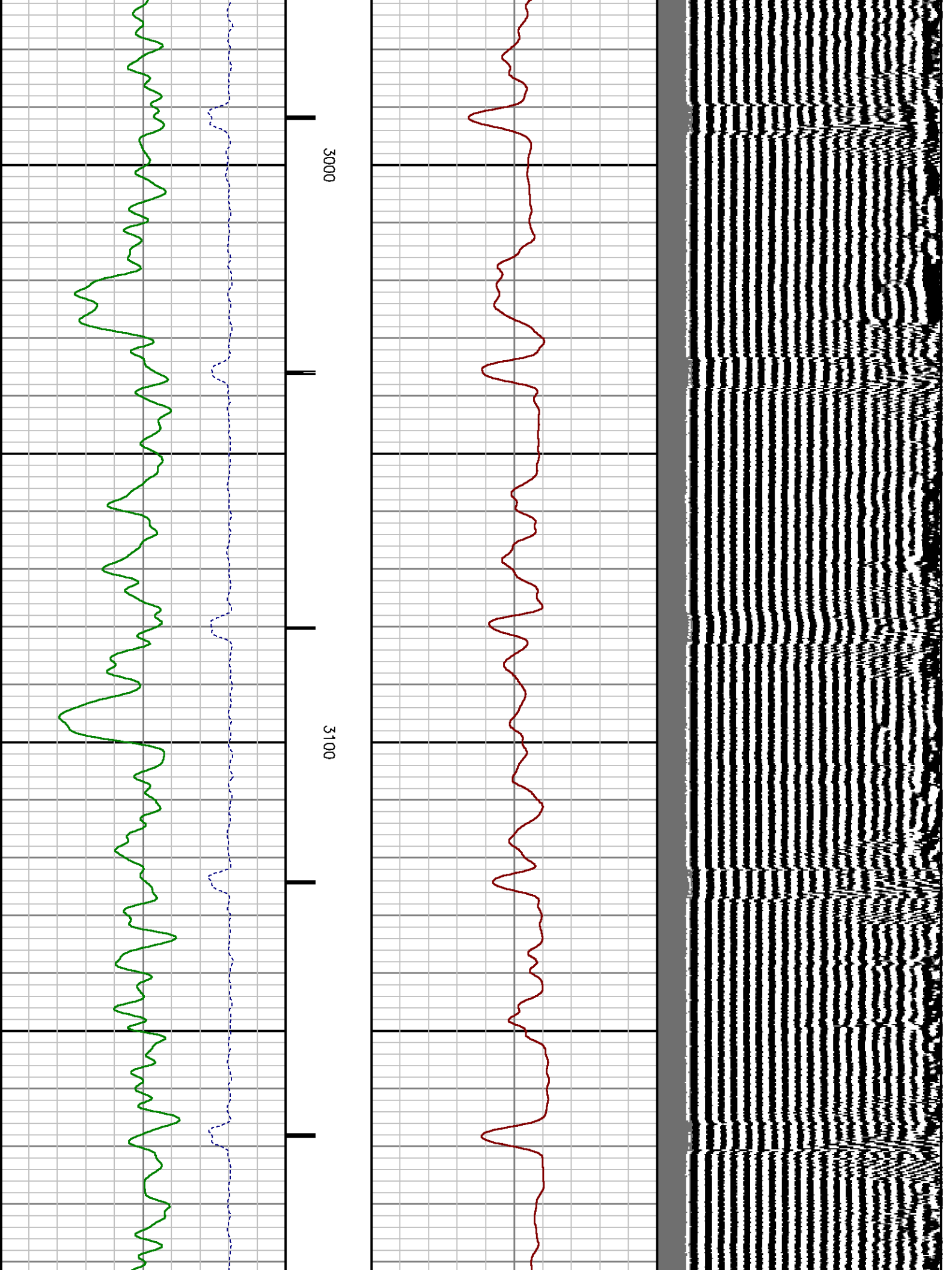


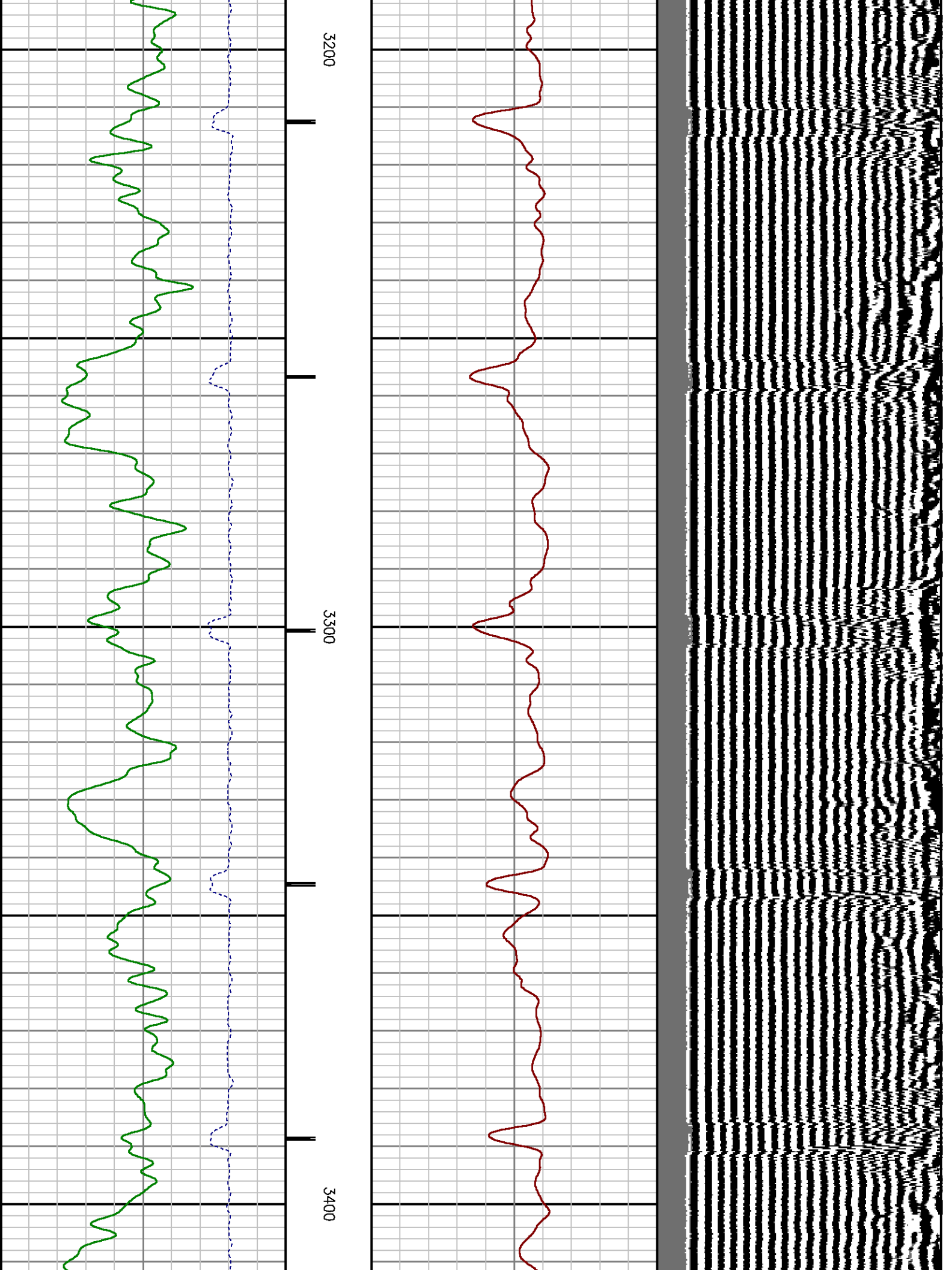




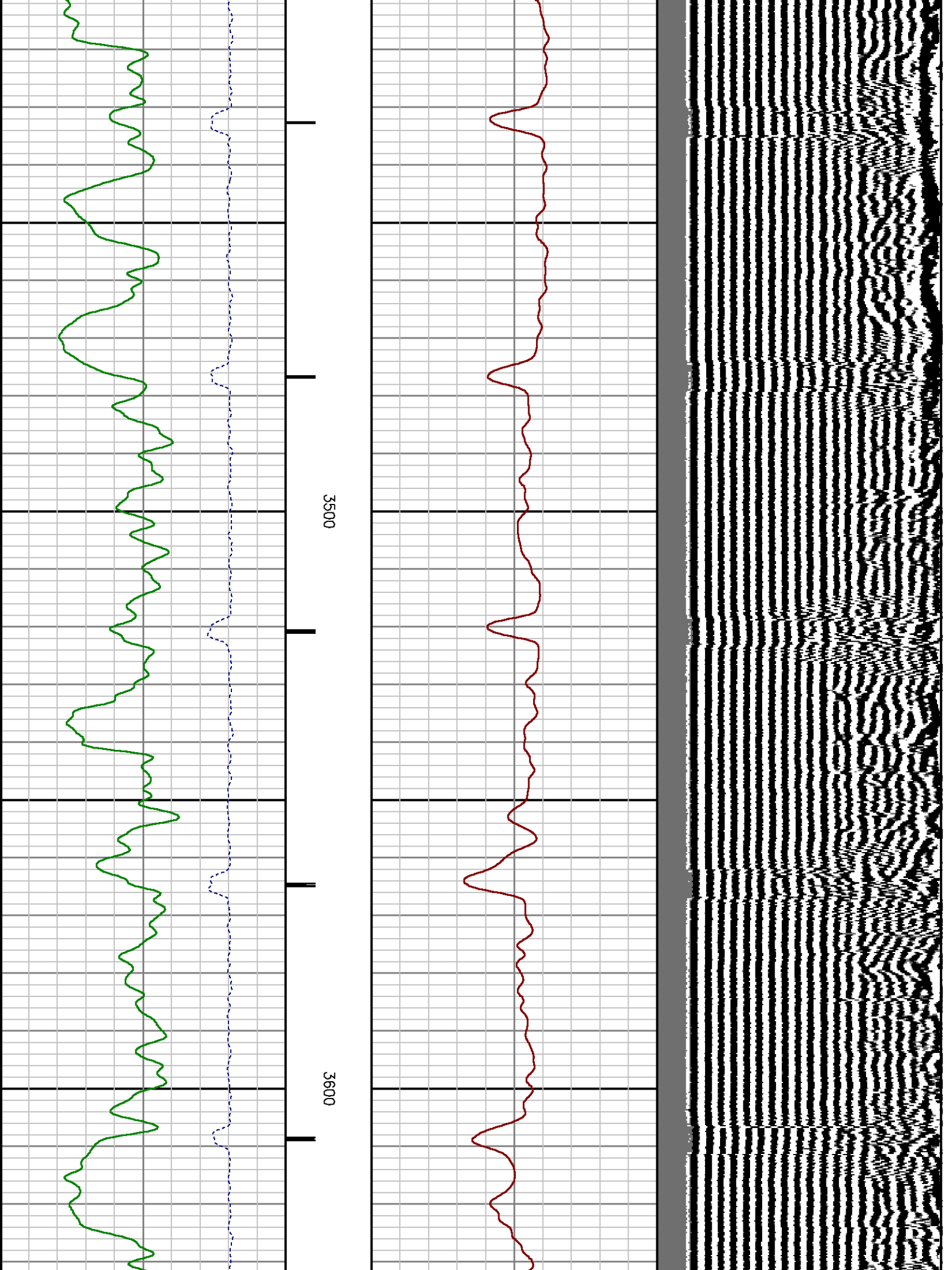


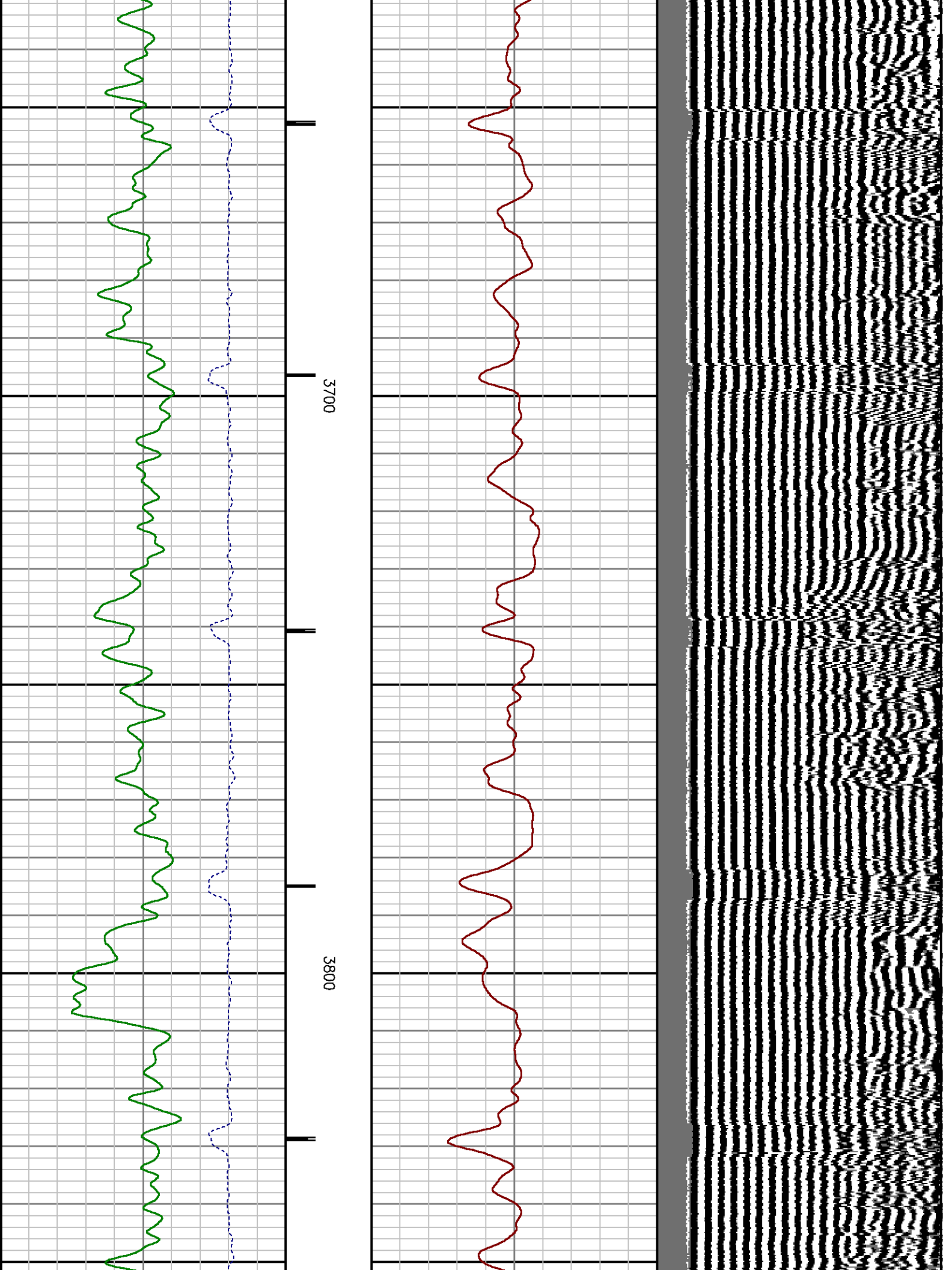




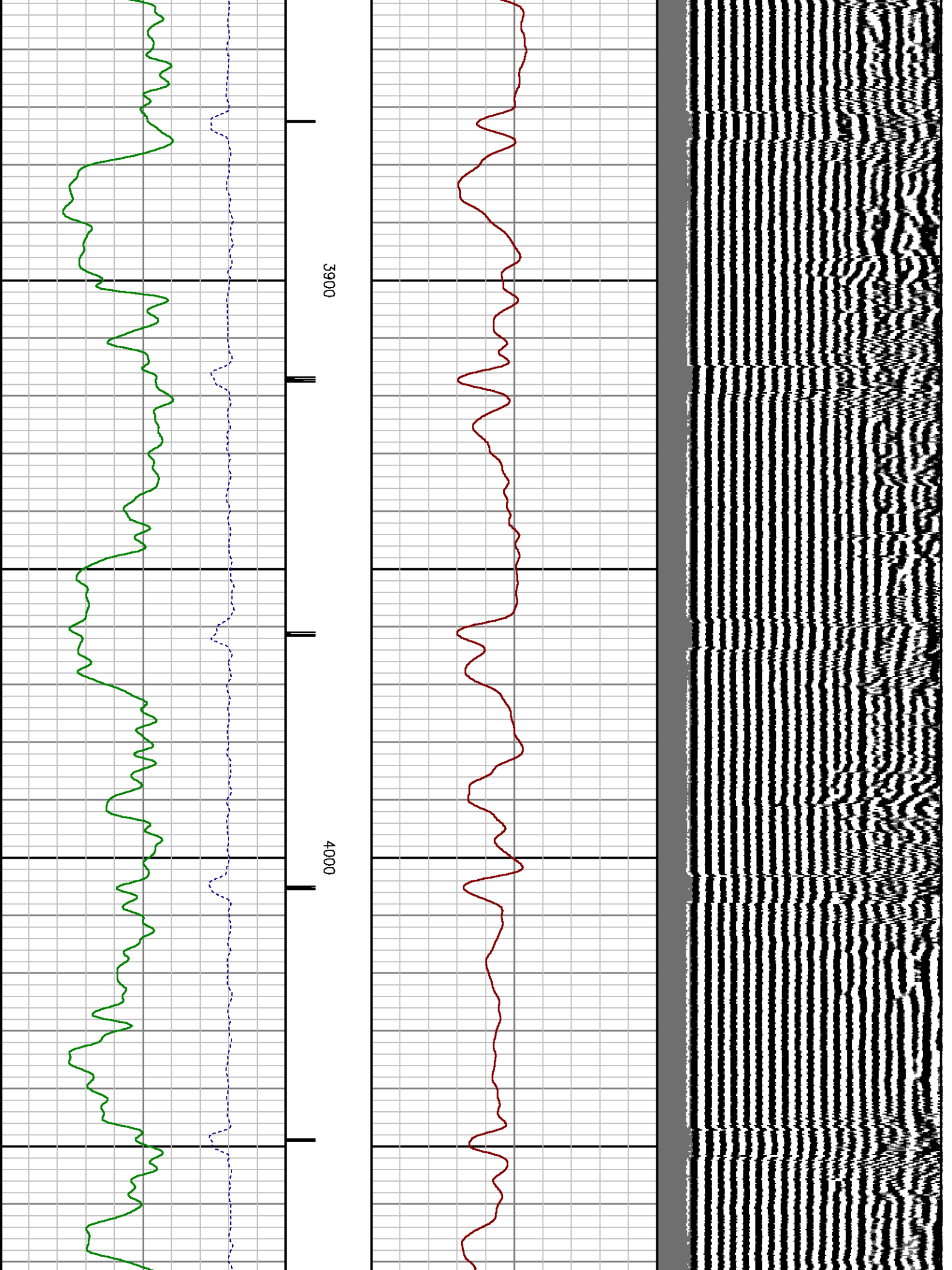


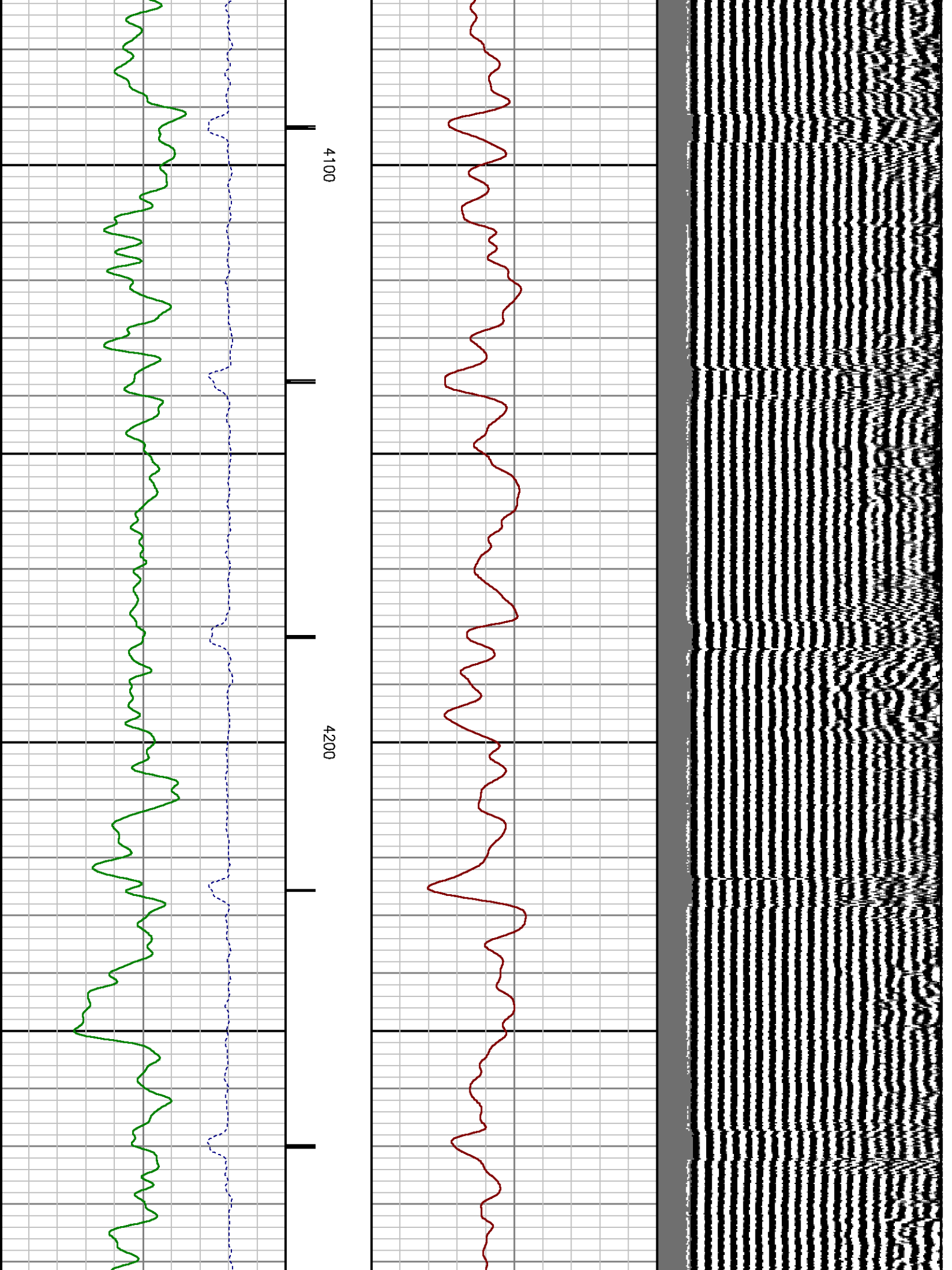


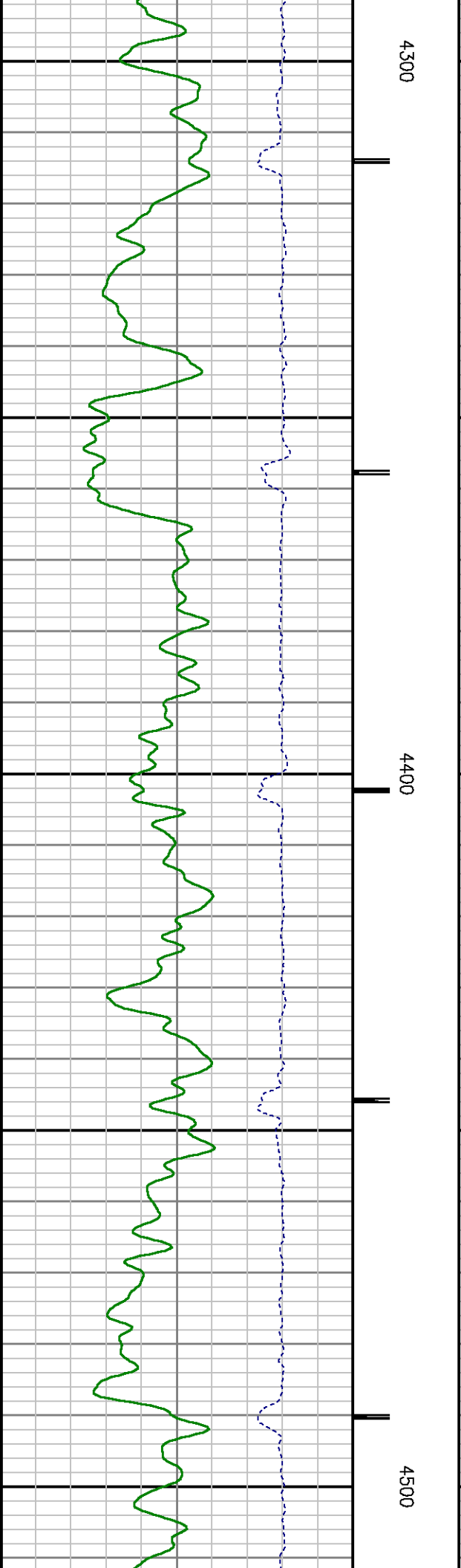
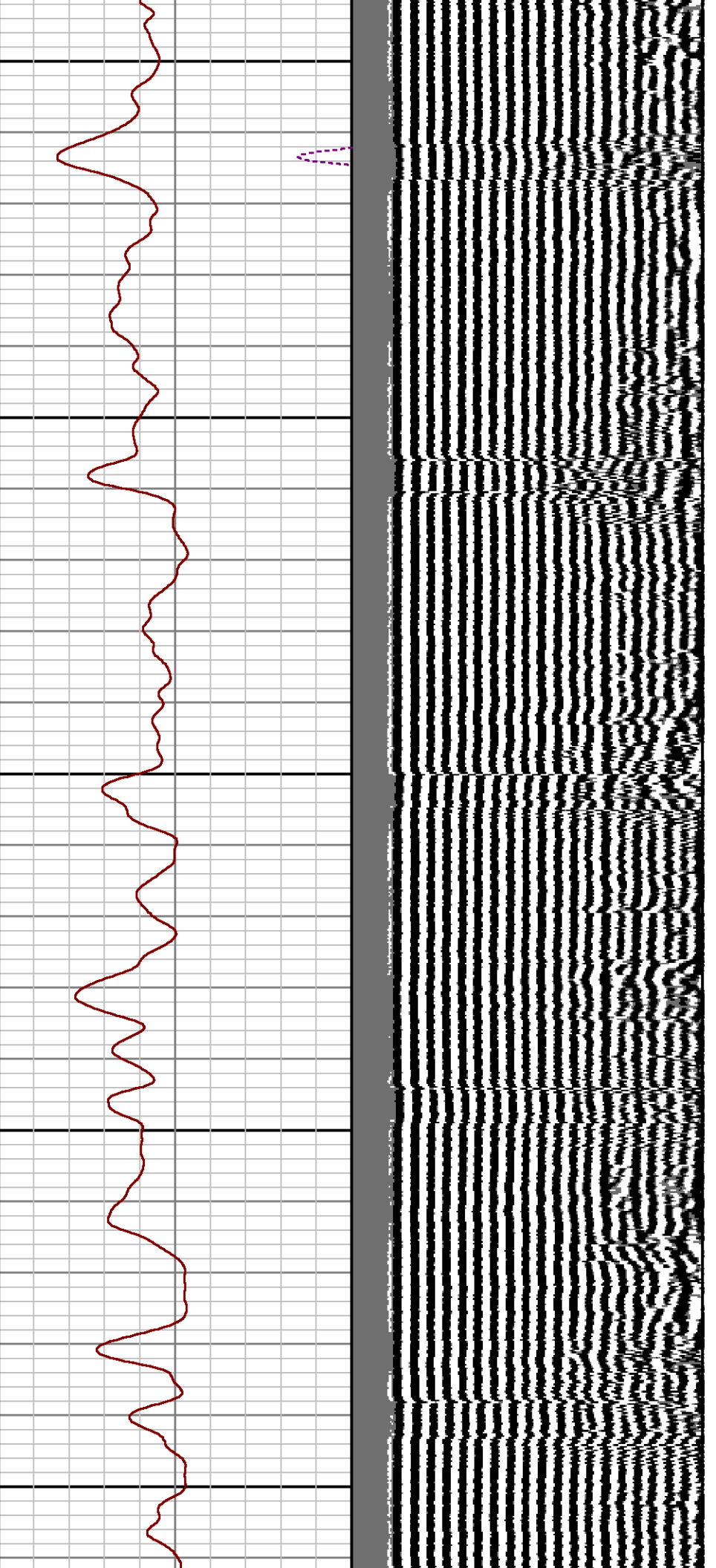


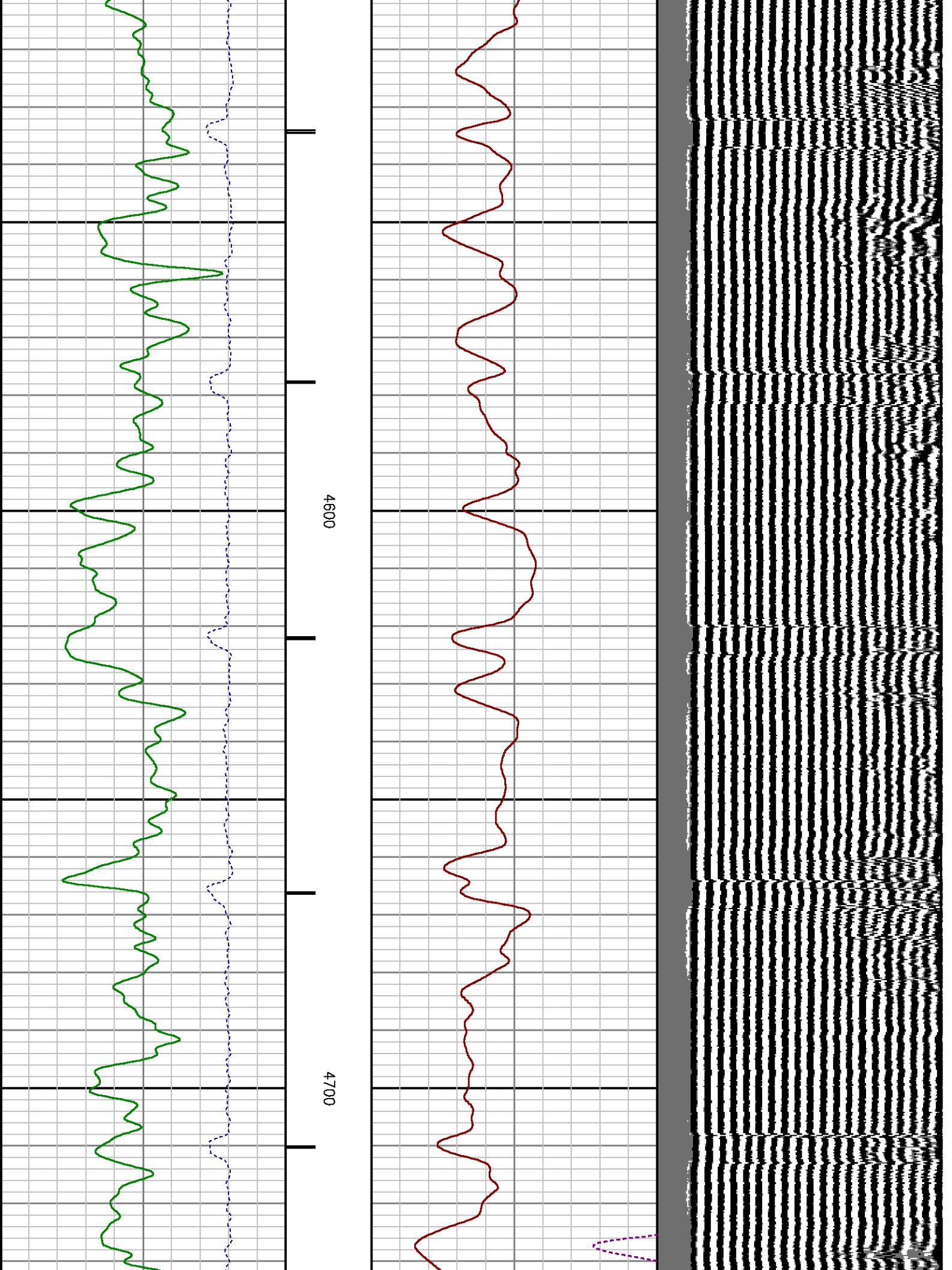


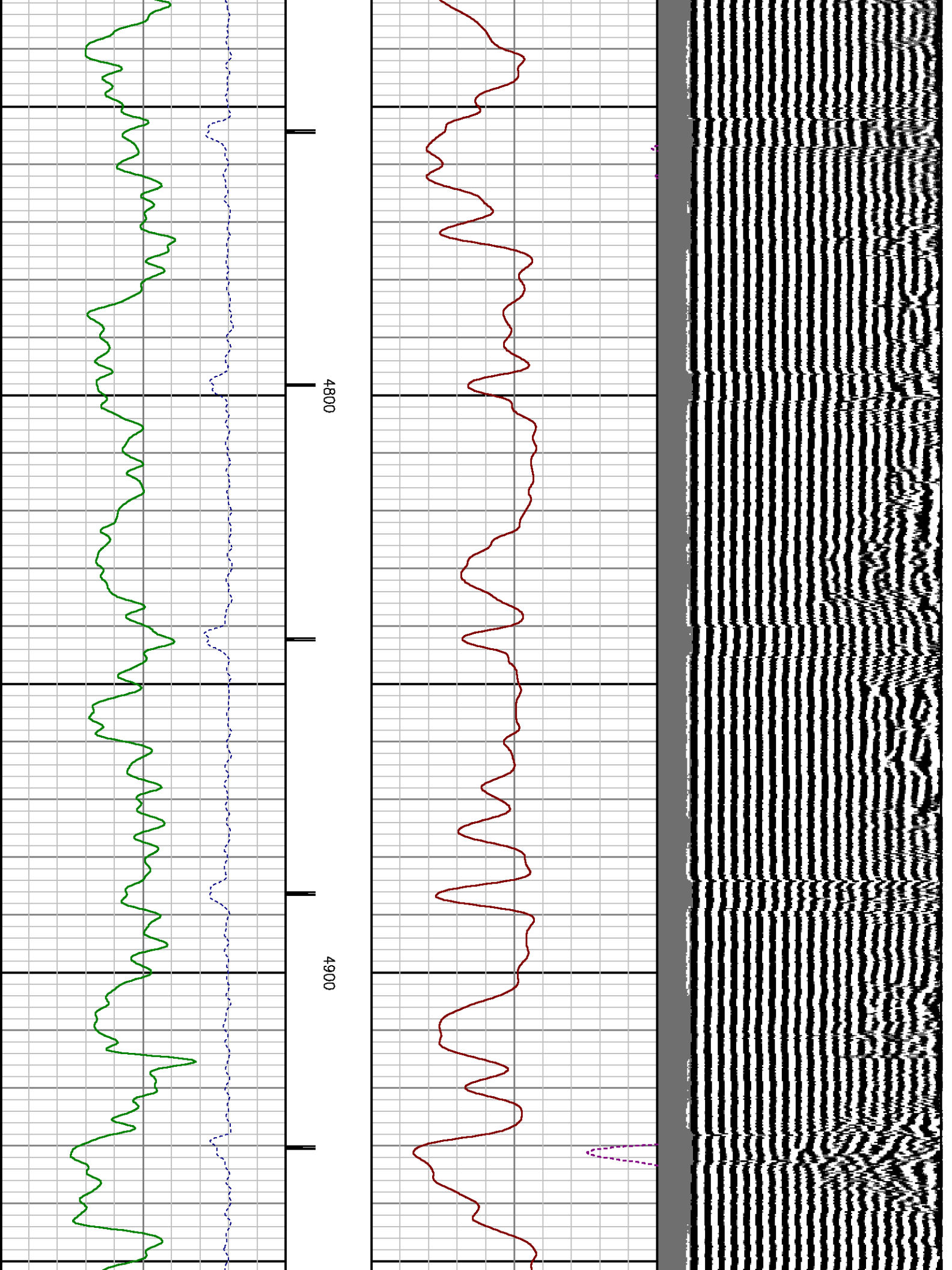


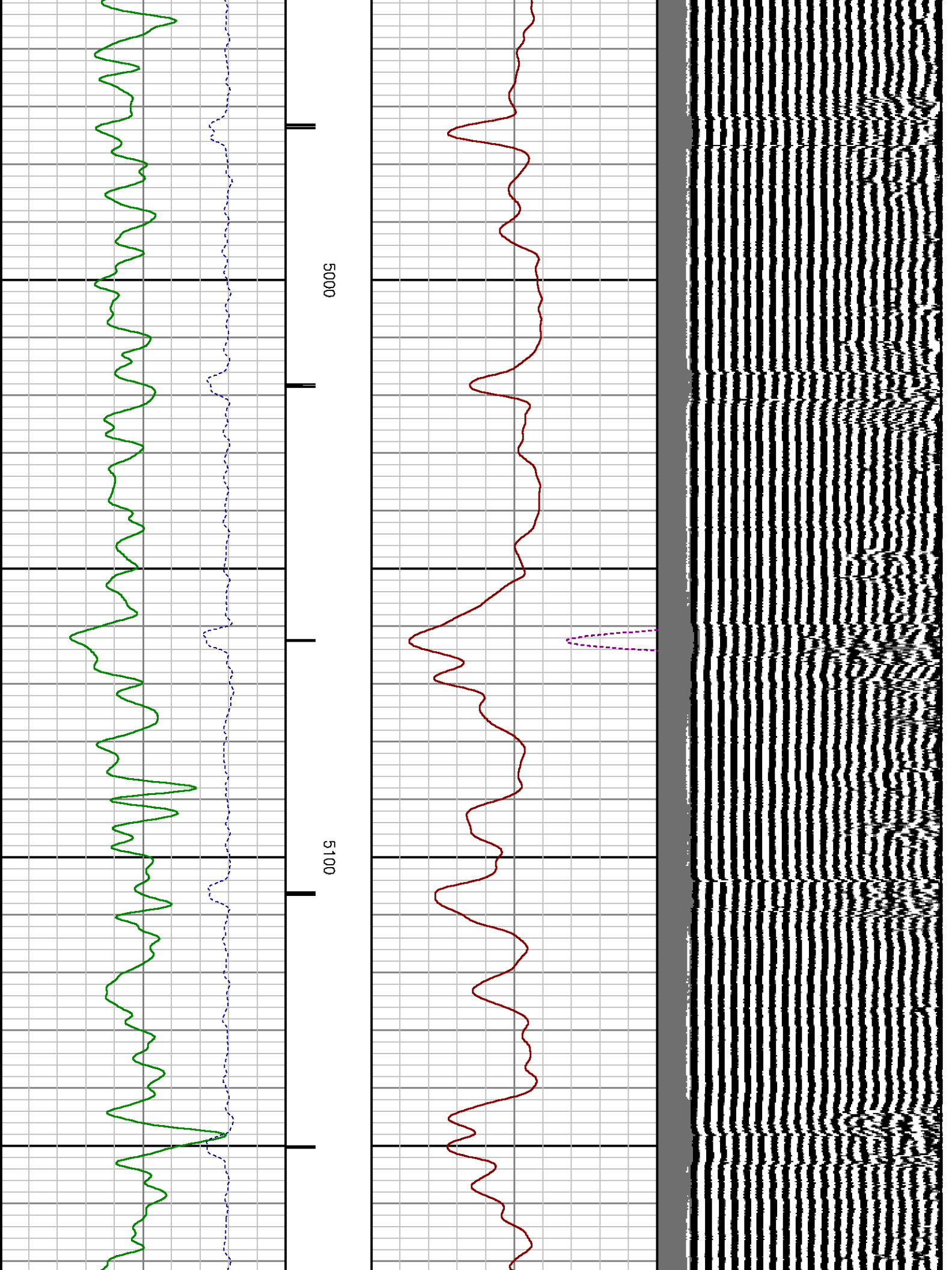




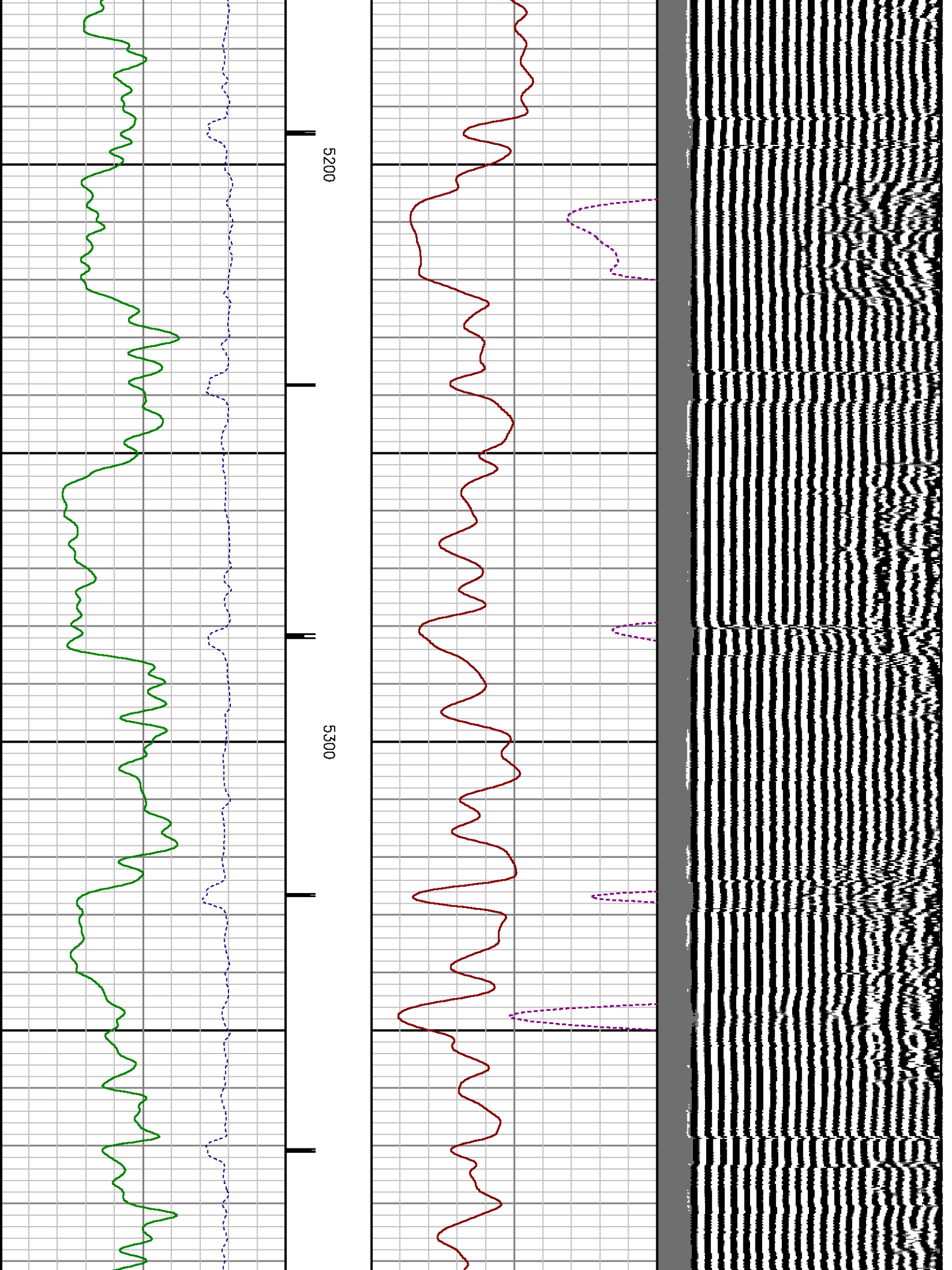


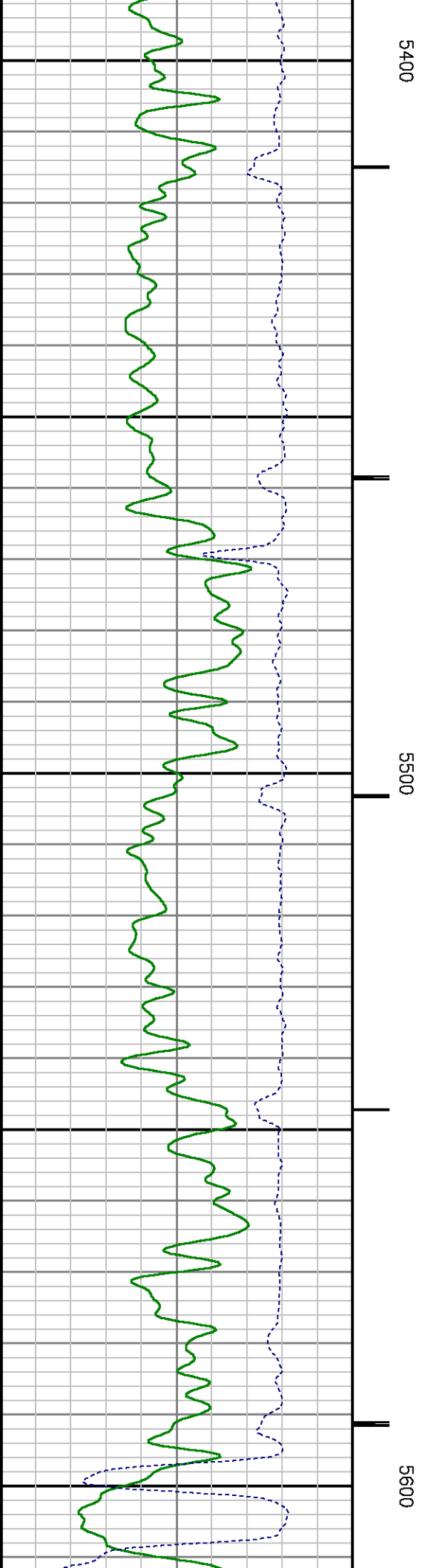
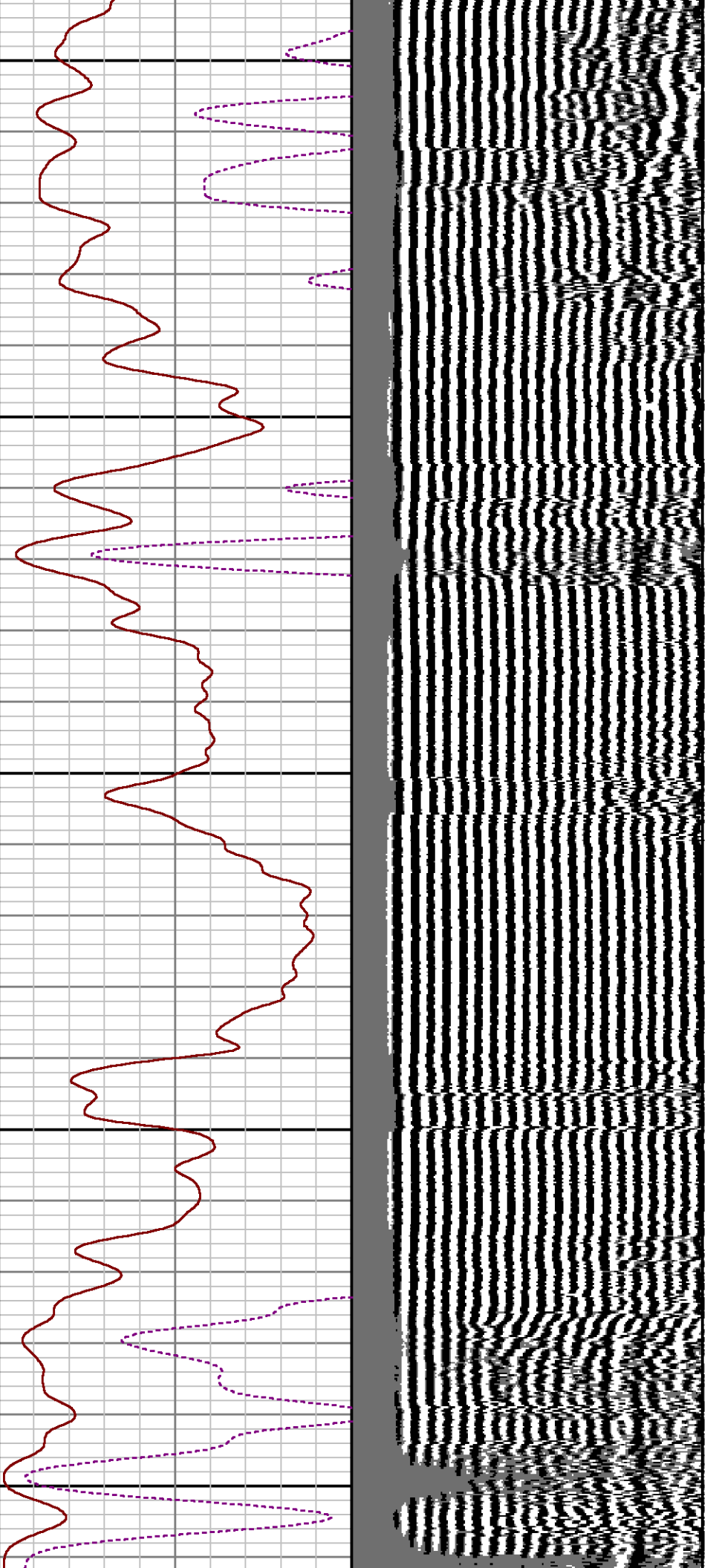




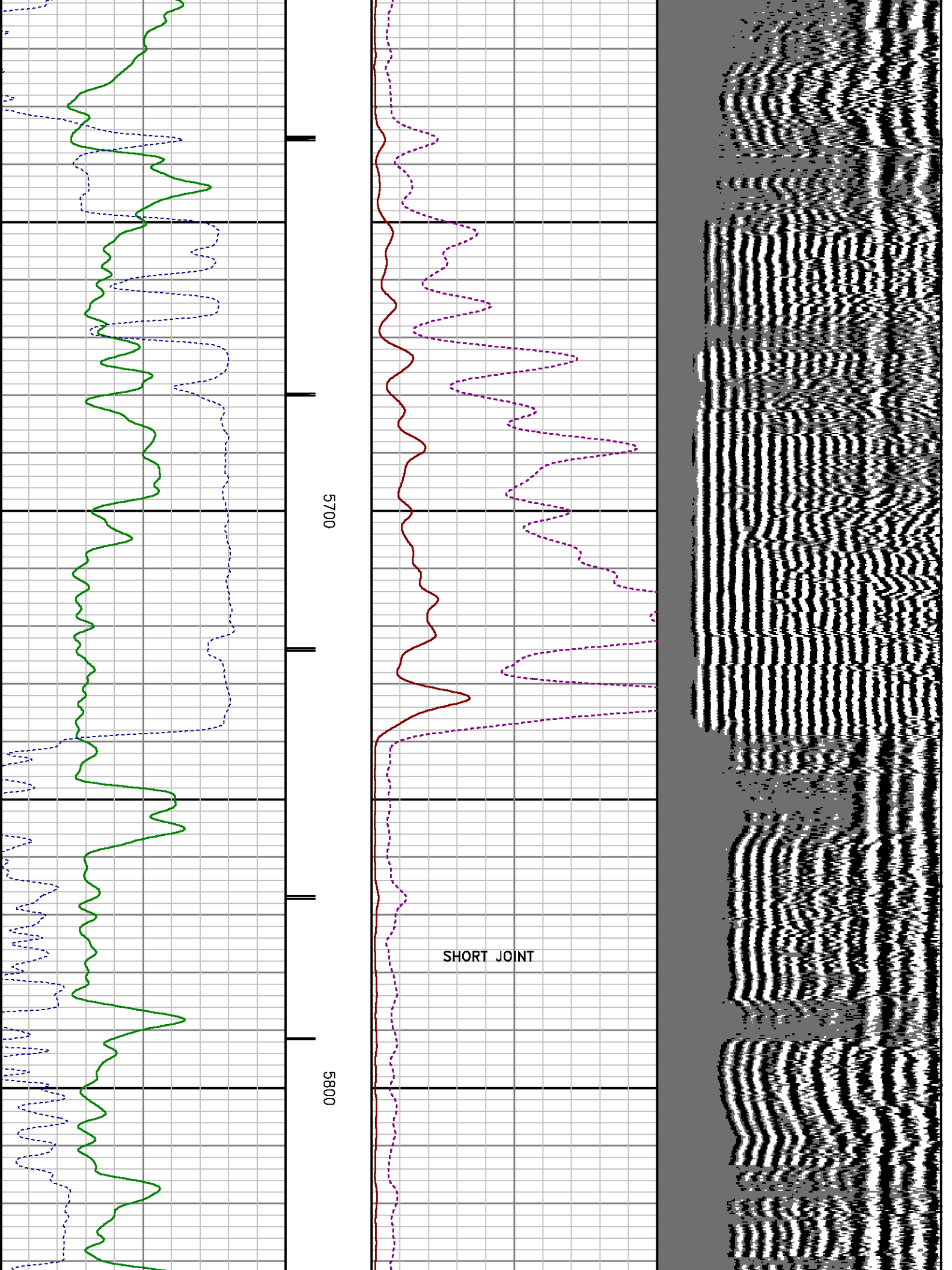


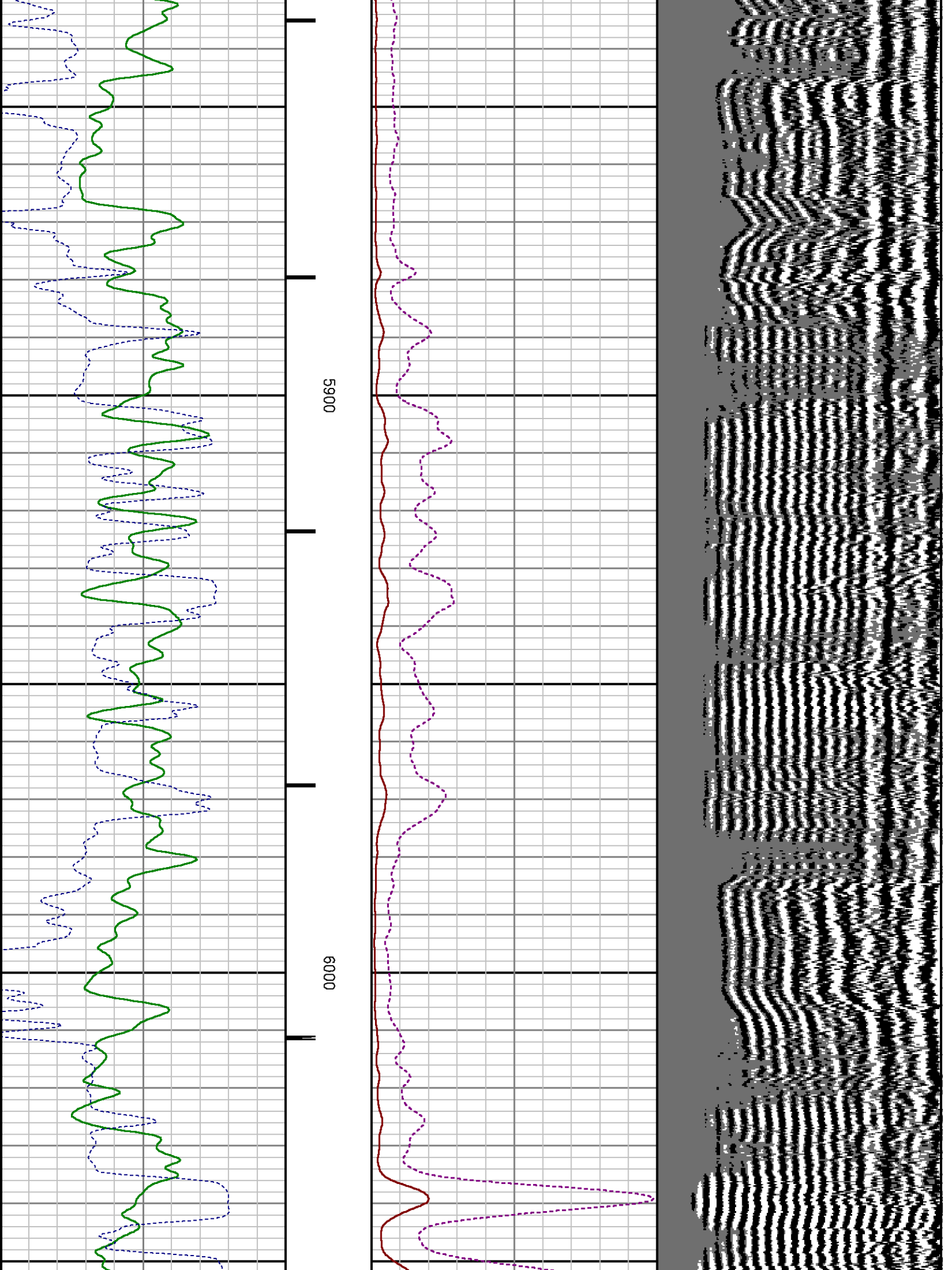


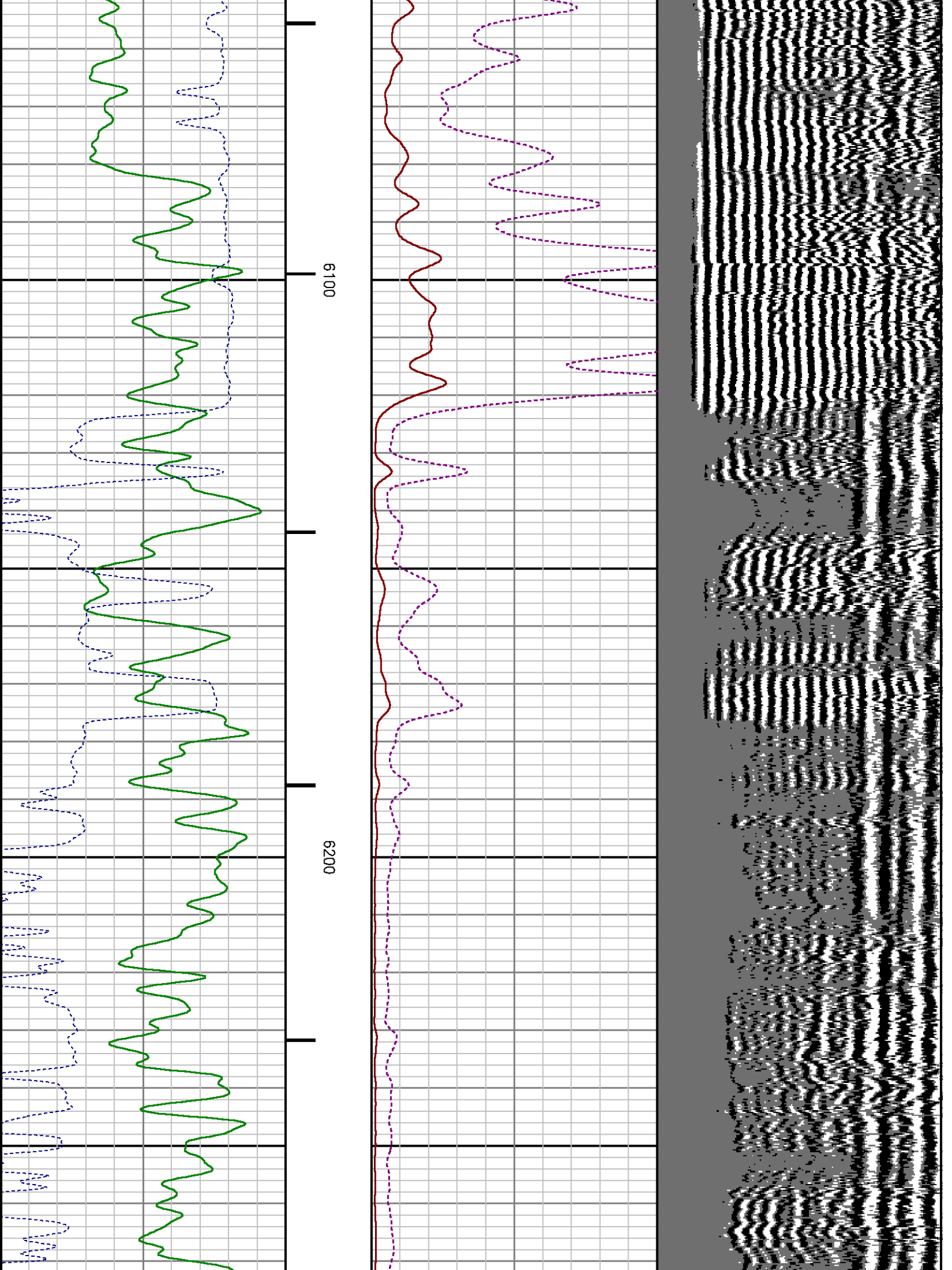


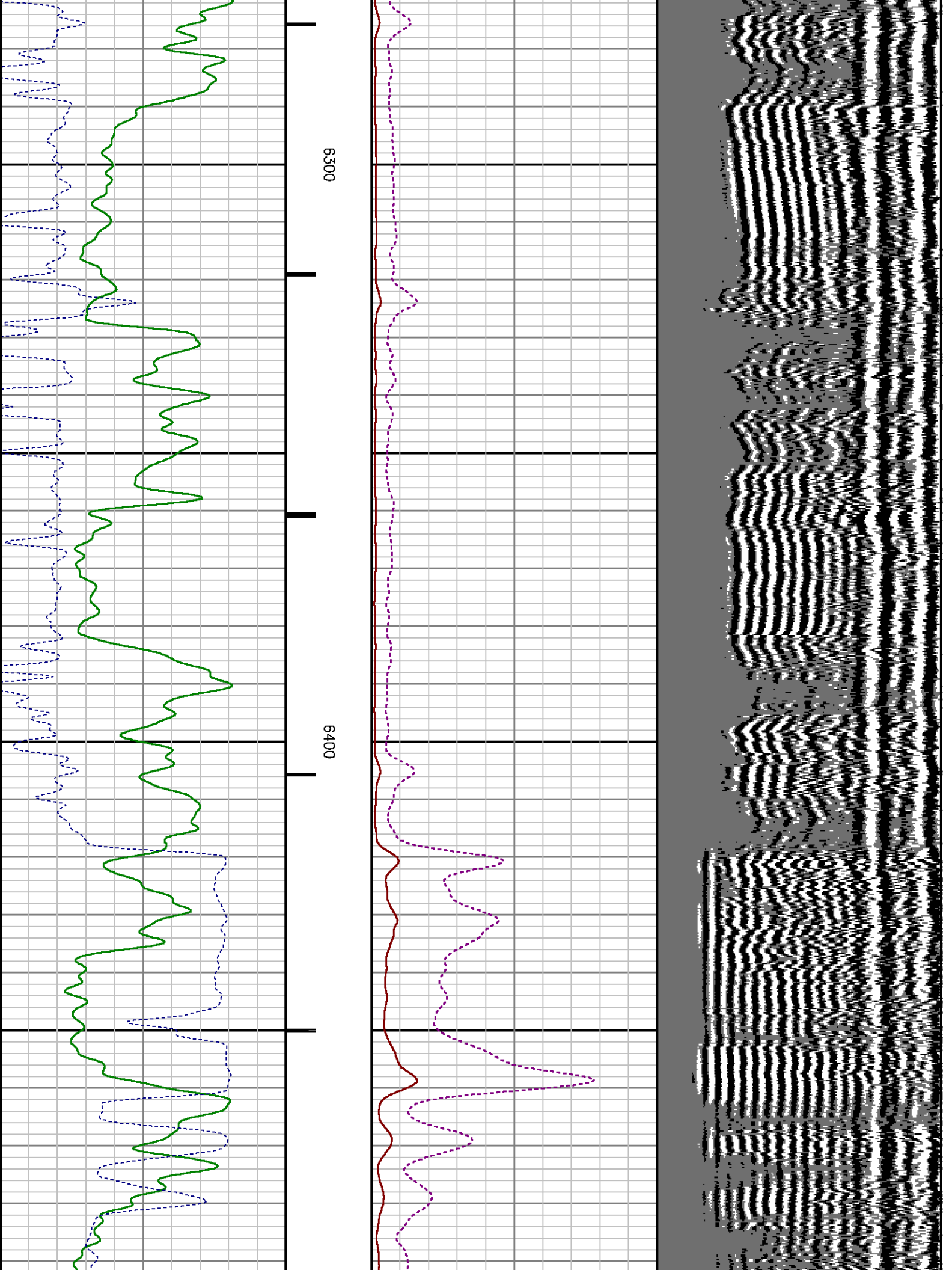


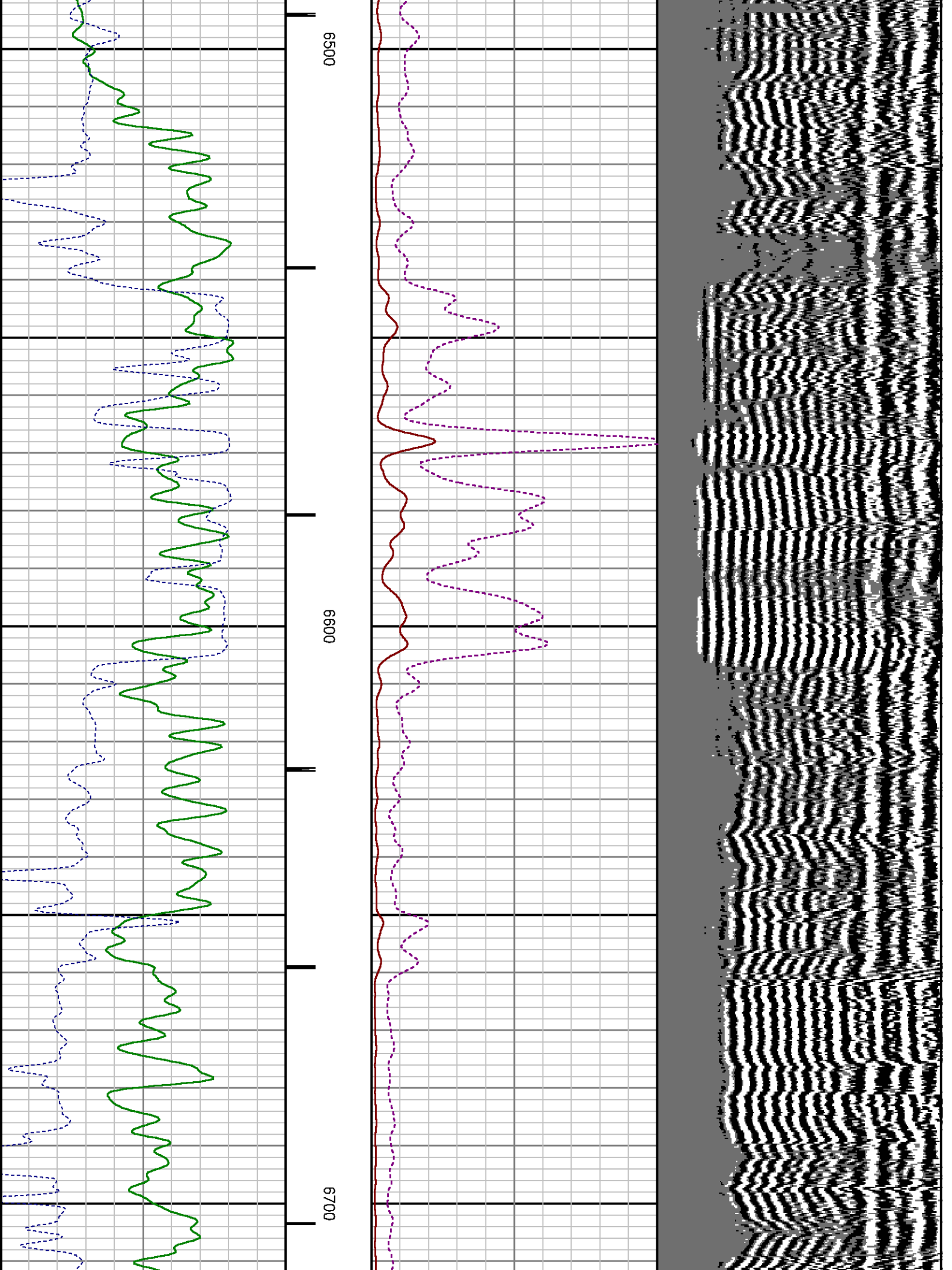




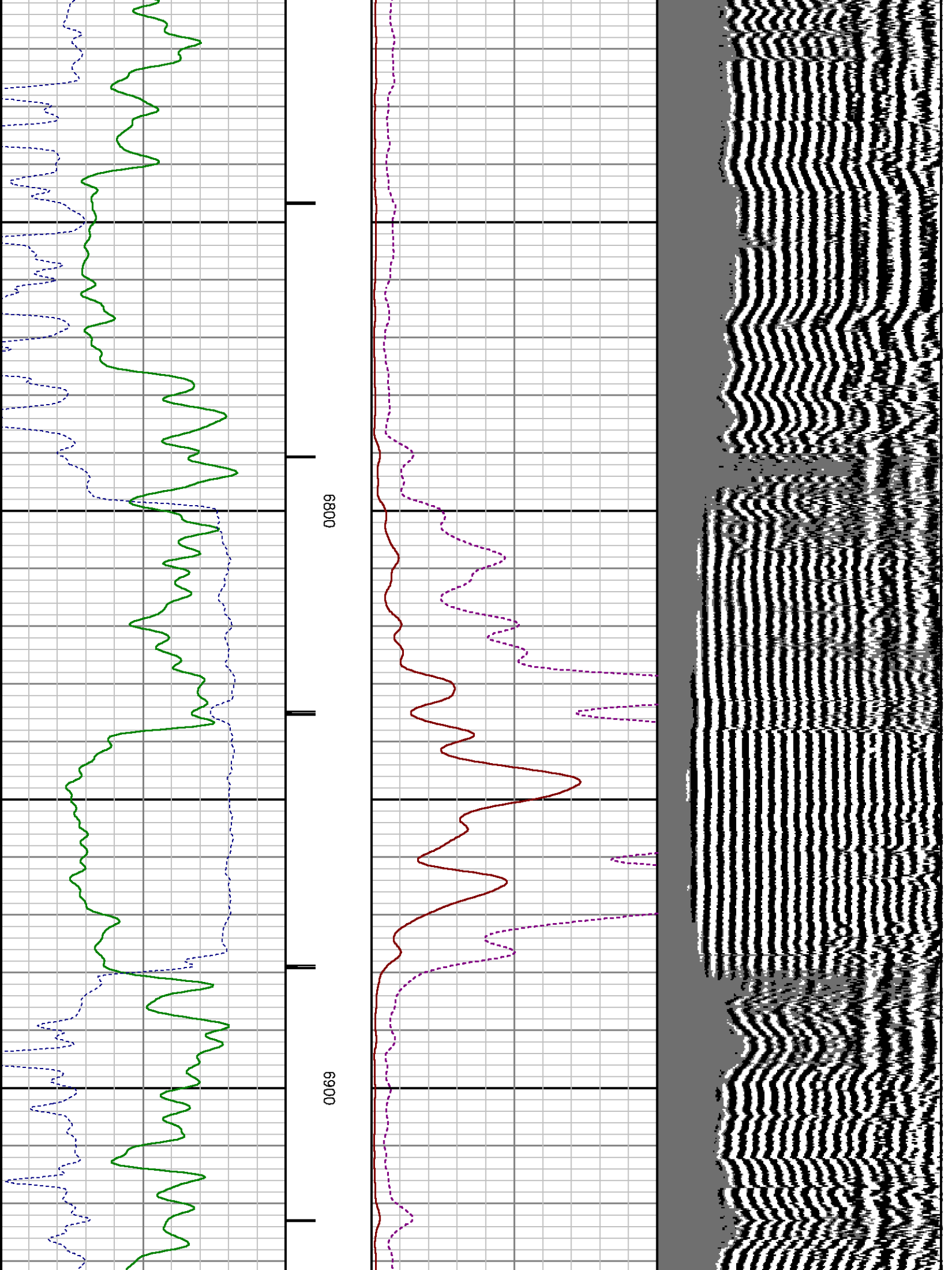


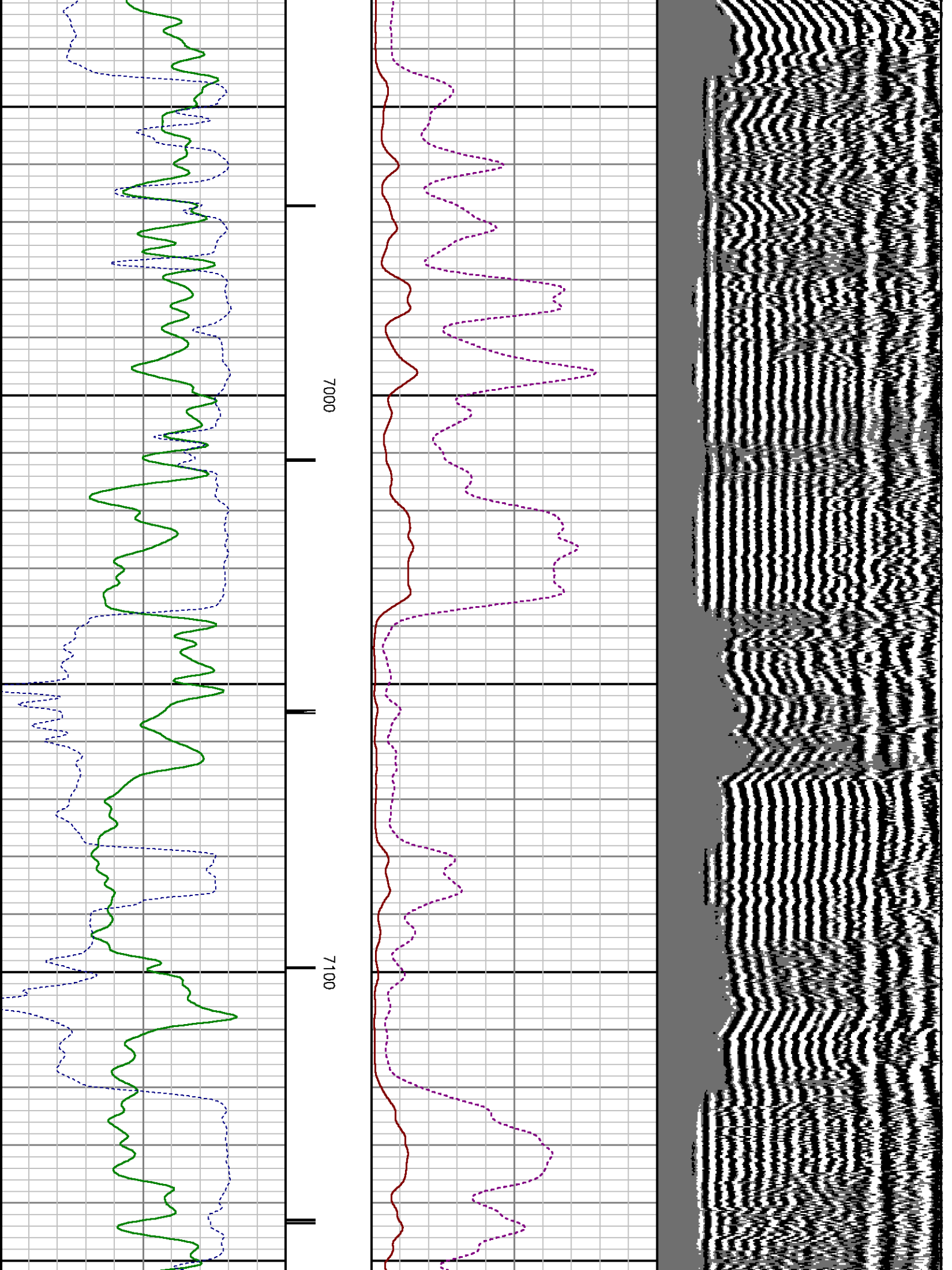


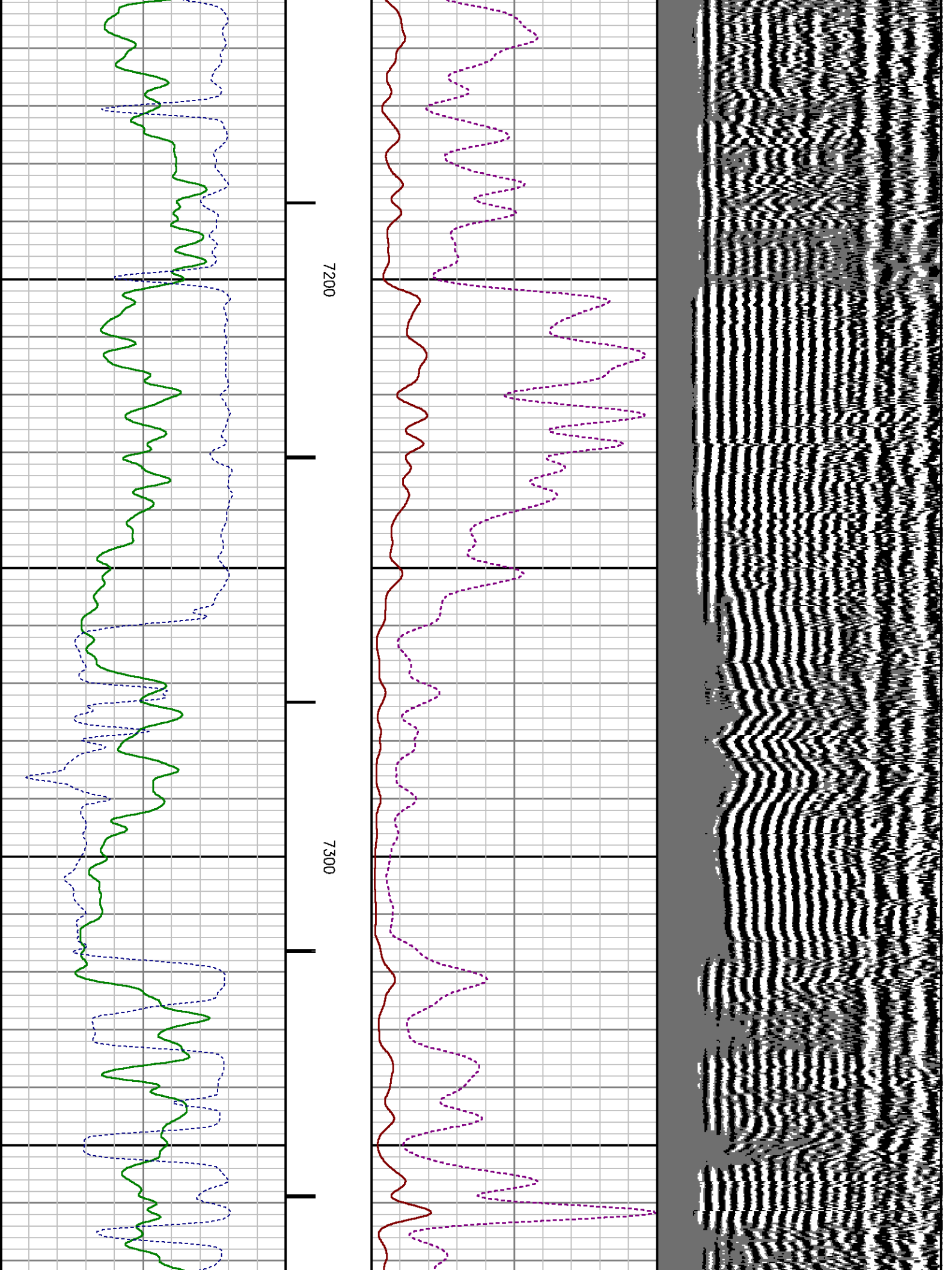




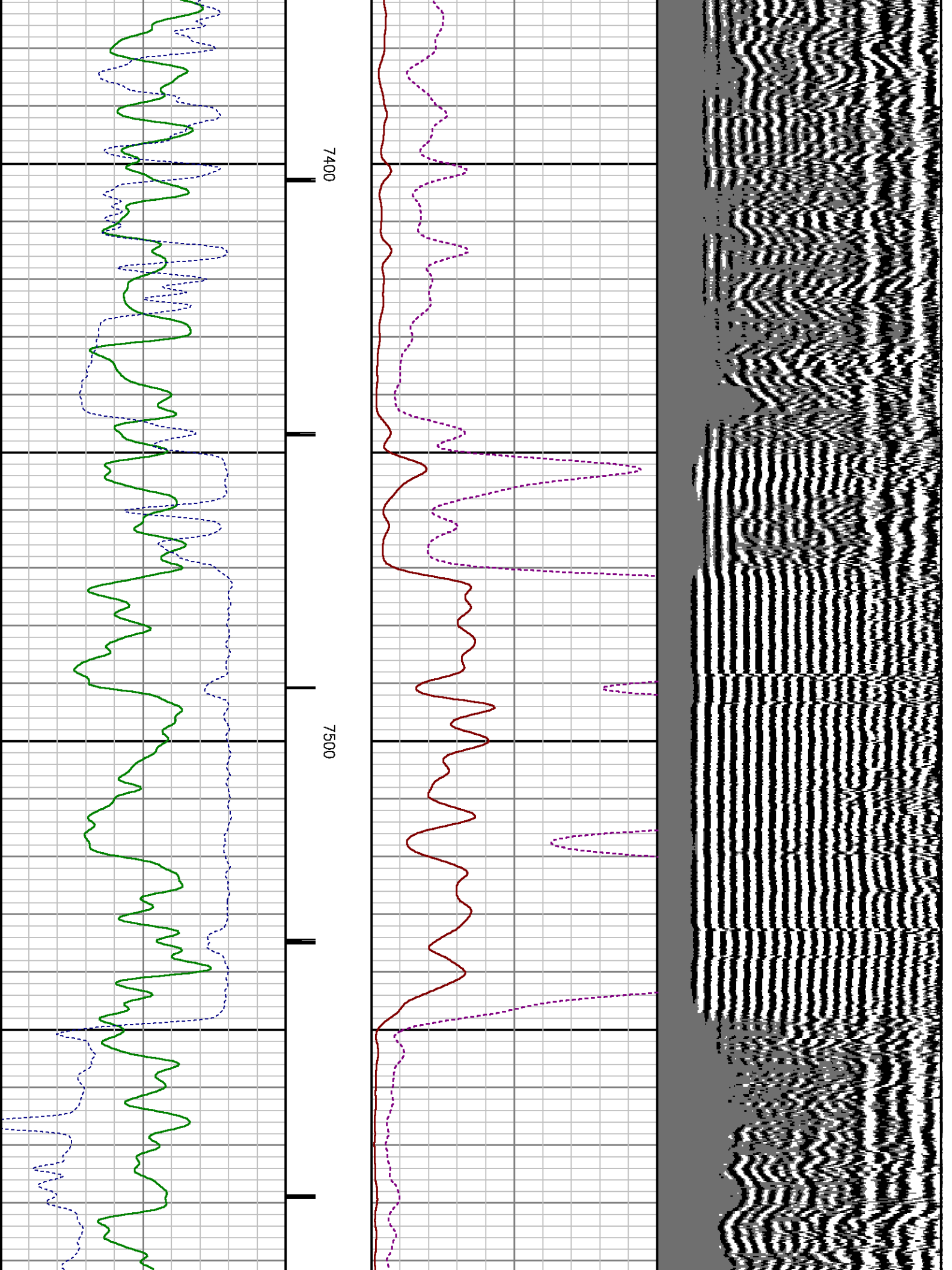


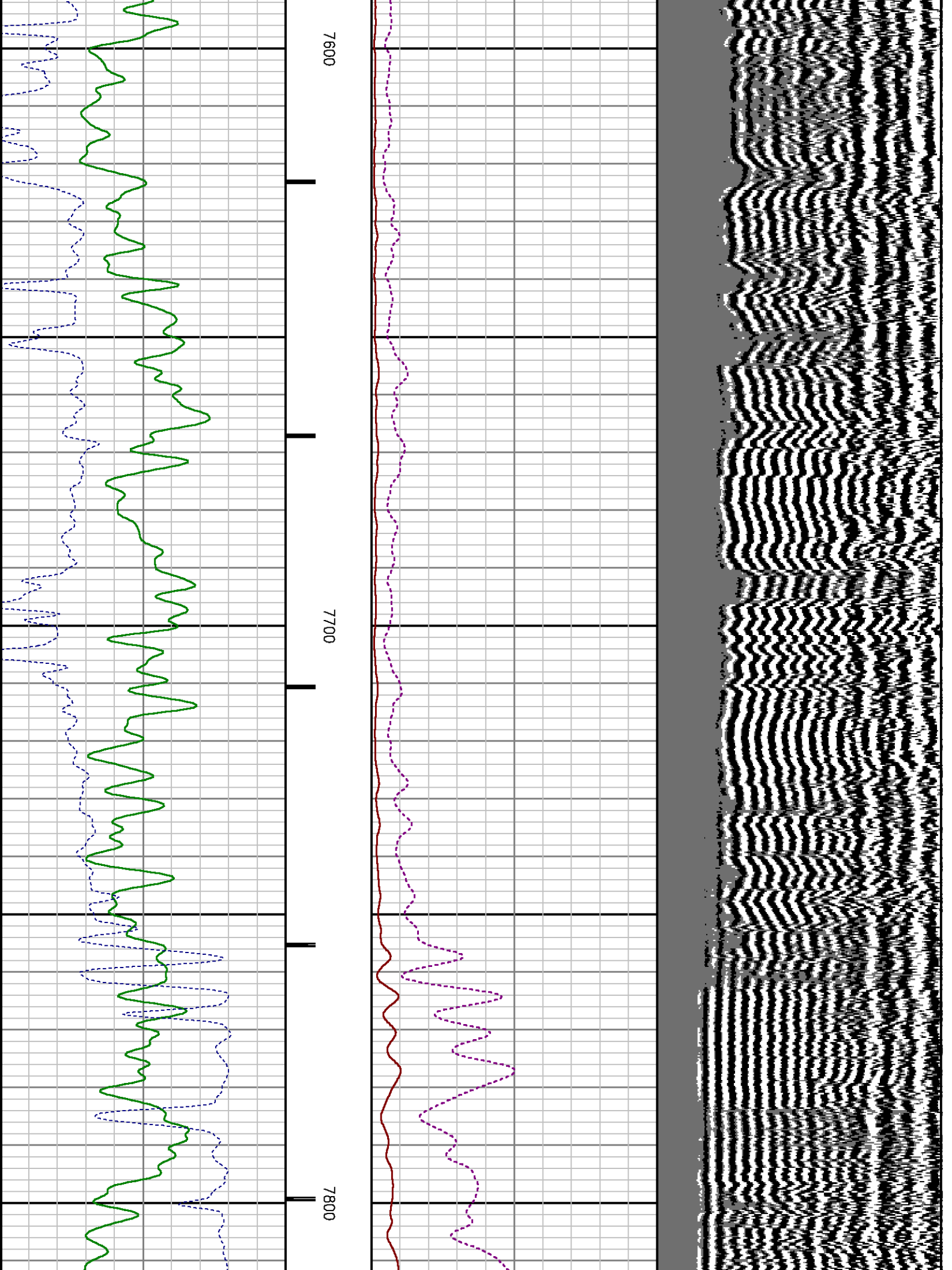


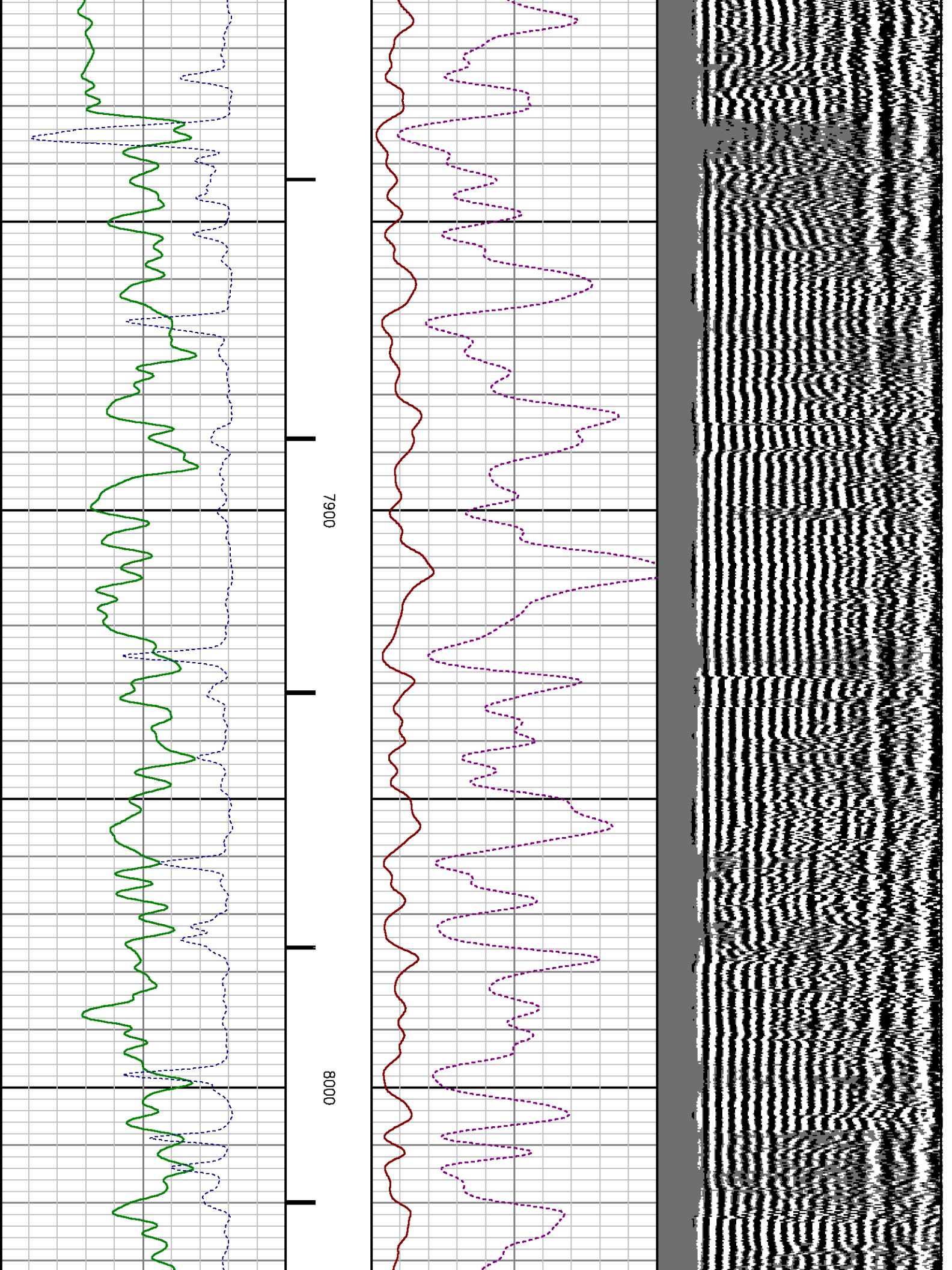


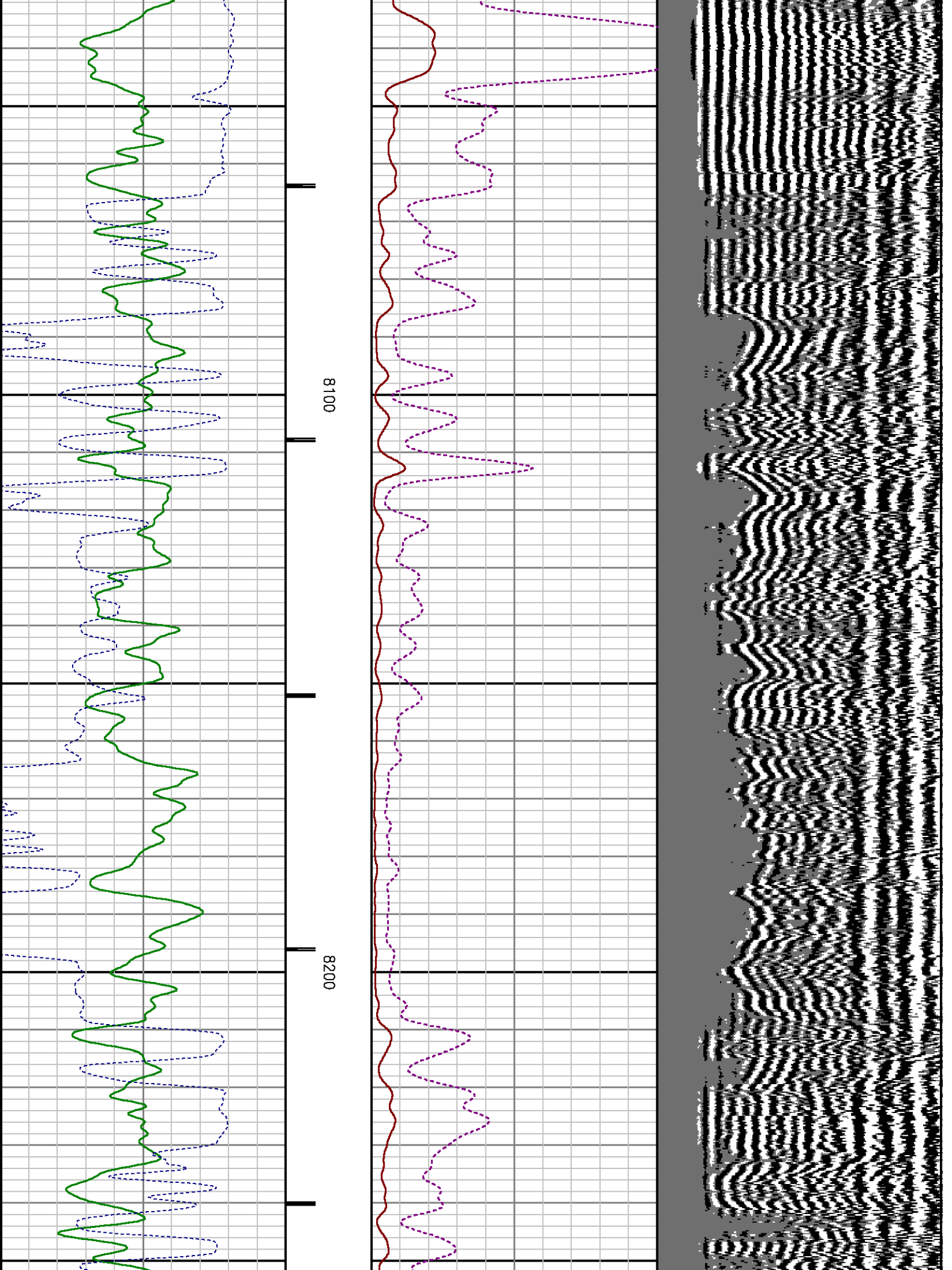




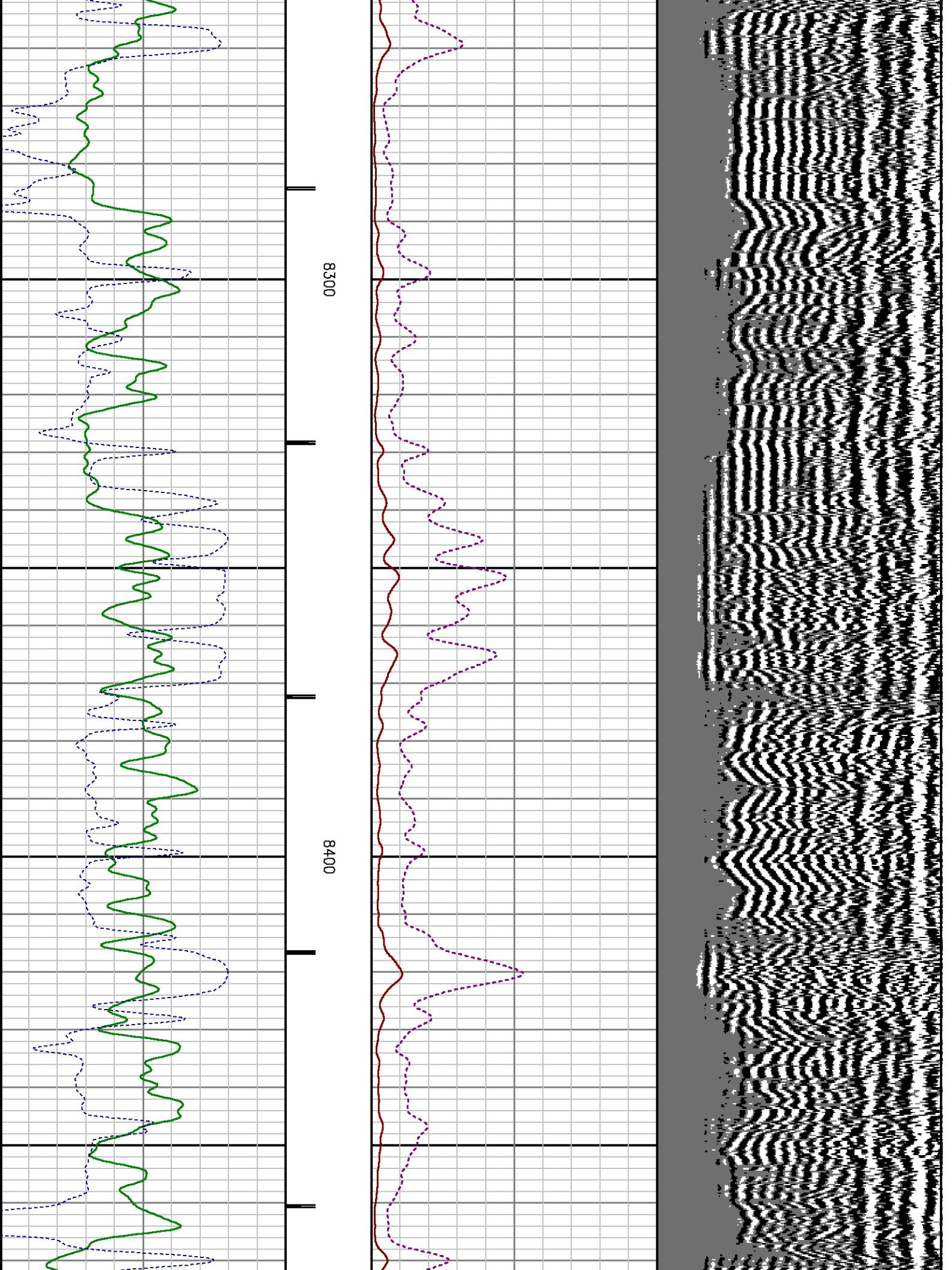


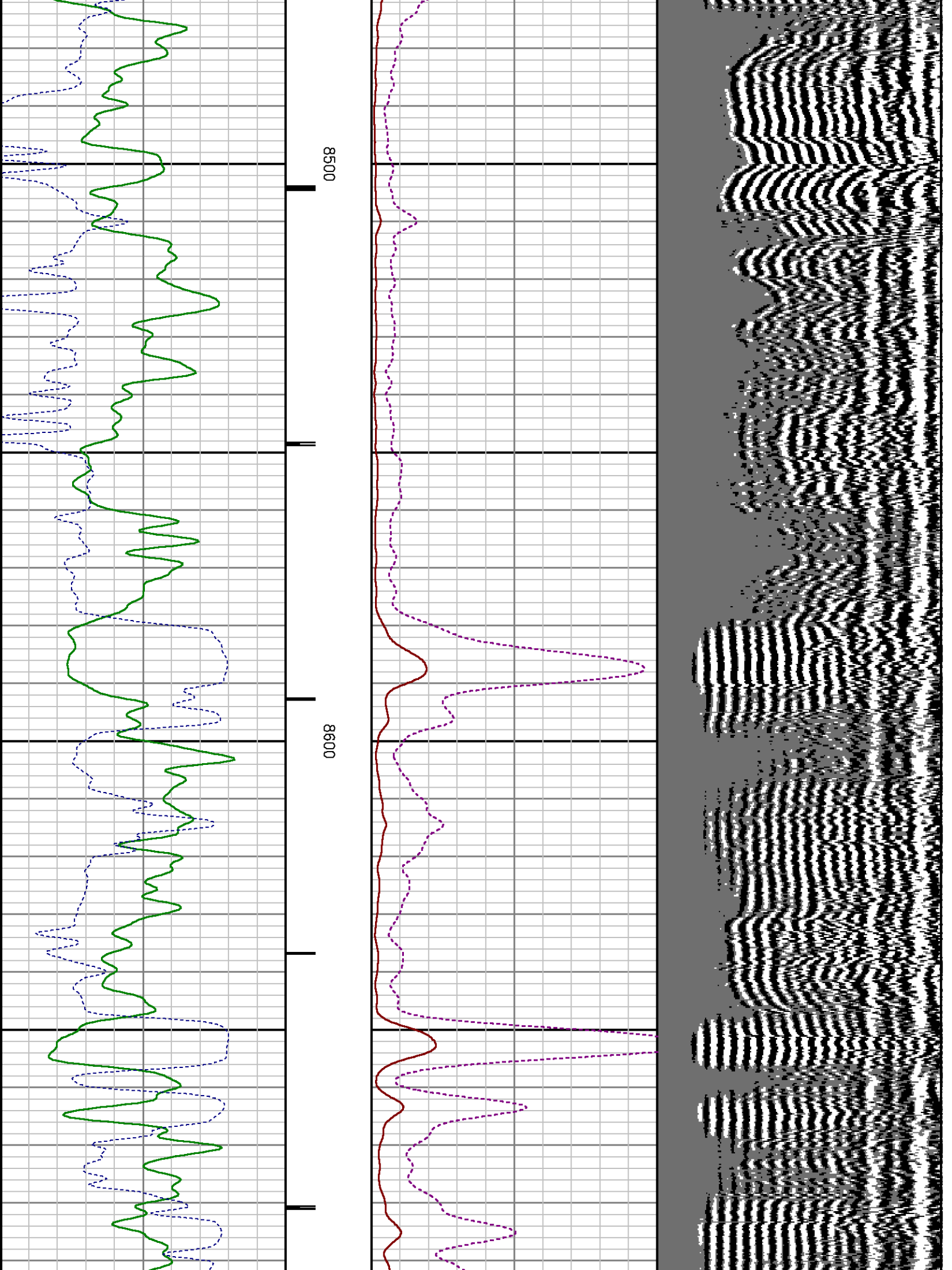




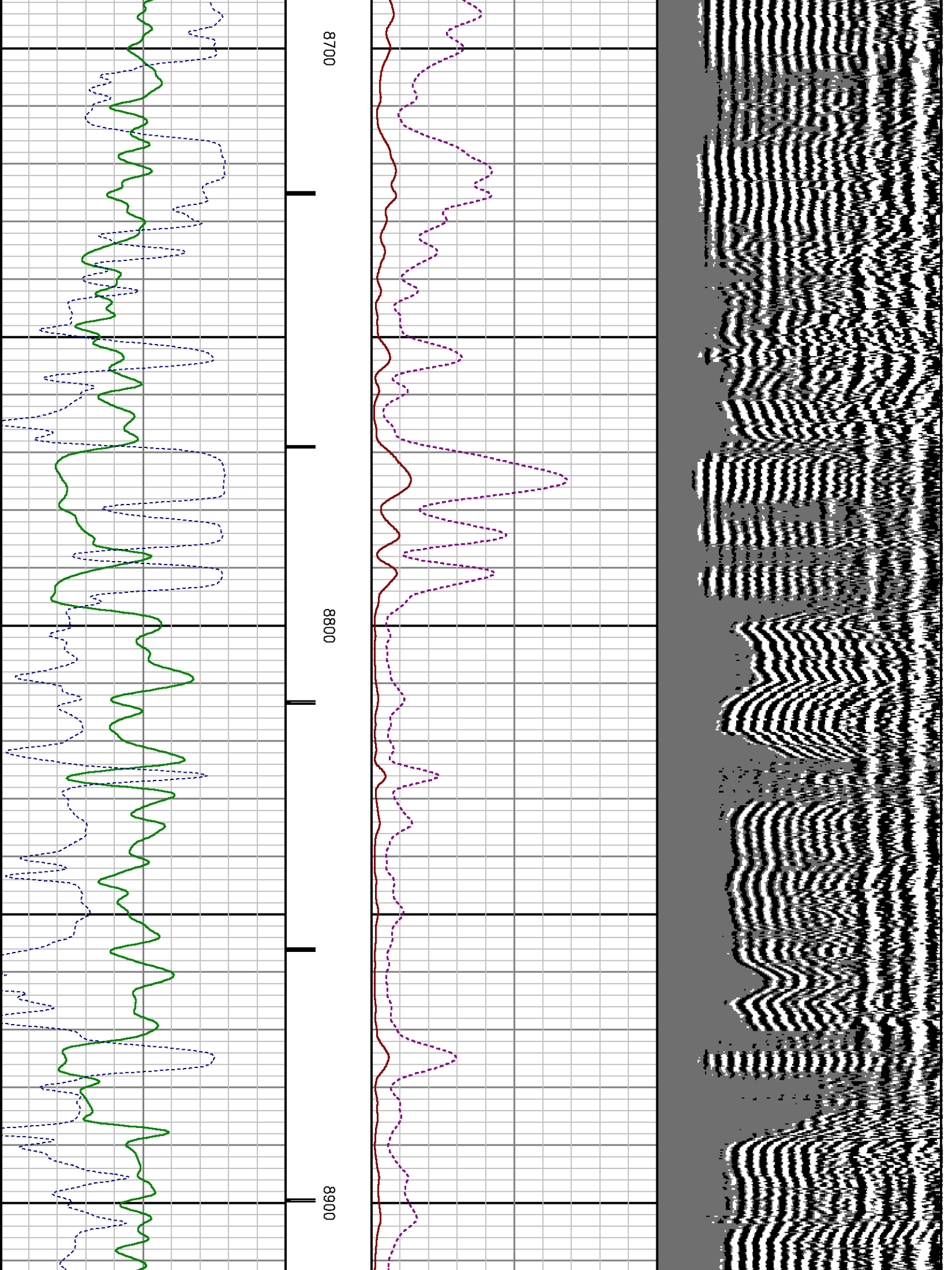


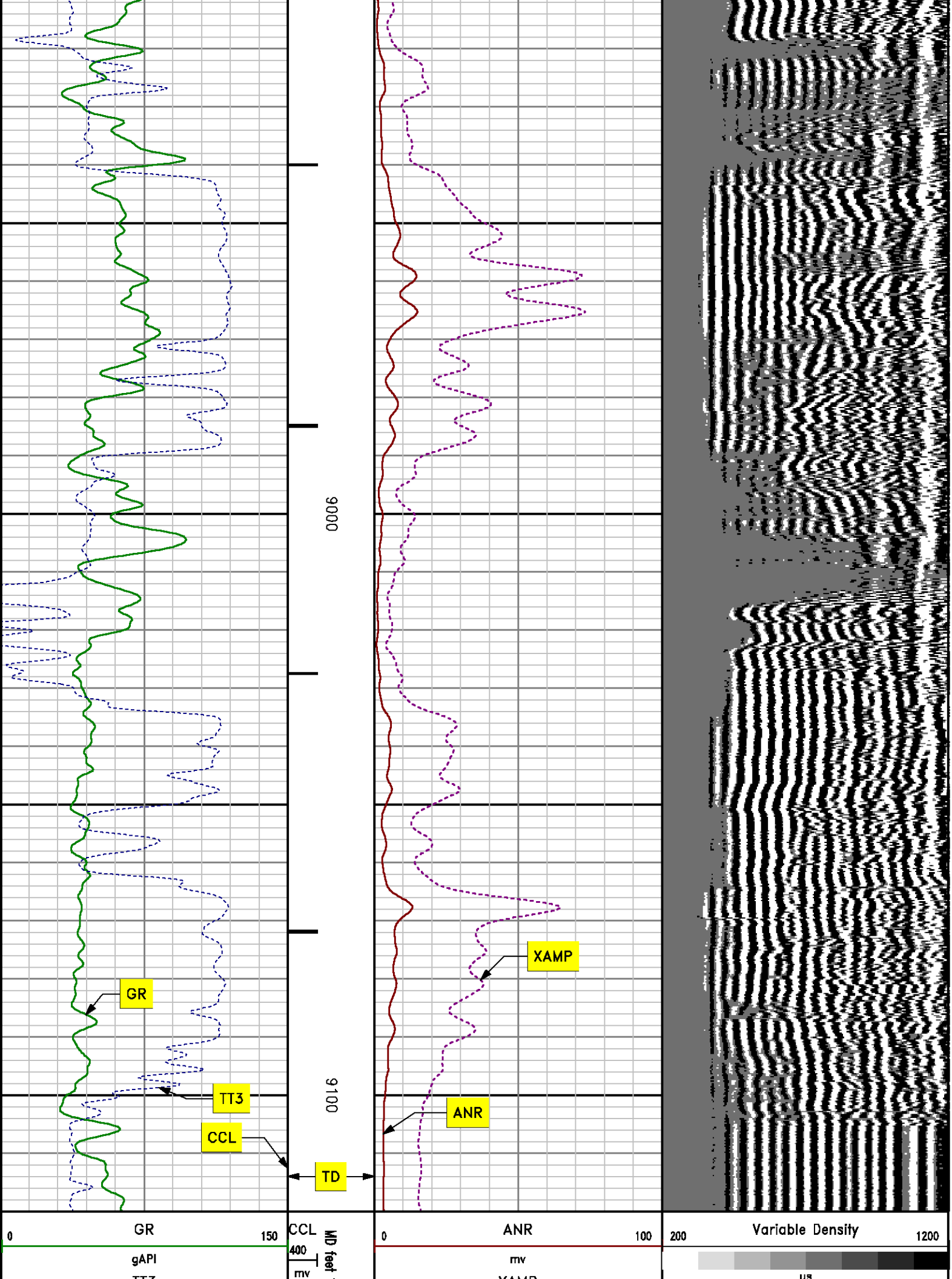












280	115	180	1:240	0	XAMP	20	40
	usec				mv		

# ***MAIN LOG SECONDARY PRESENTATION*** ***0 PSI***

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.653	usec	33.687	9136.750
RAL	Amp Gate Start Near	198.140	usec	33.687	9136.750
RAL	Amp Gate Start Radial	198.140	usec	33.687	9136.750
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RAL	FB Thresh Radial	4.000	mv	33.687	9136.750
RAL	Fluid Travel Time	200.000	usec/ft	33.687	9136.655

## **DEPTH OFFSETS** **(for Acquired Curves)**

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

Created by : RAL, v4.8.008

Plotted by : PlotMgr, v5.4.504

Company : WPX ENERGY

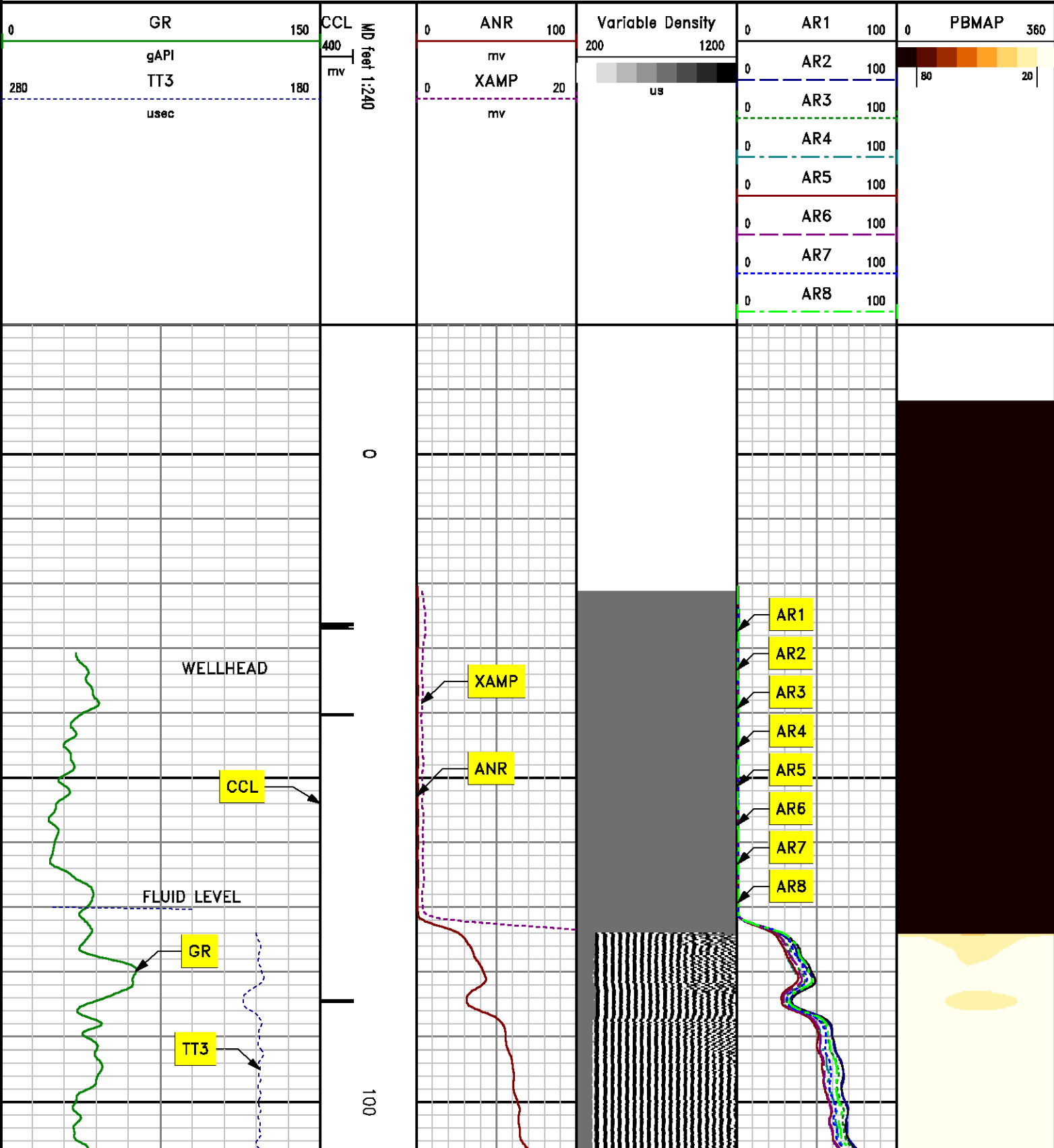
Well : HOEPPLI RWF 34-36

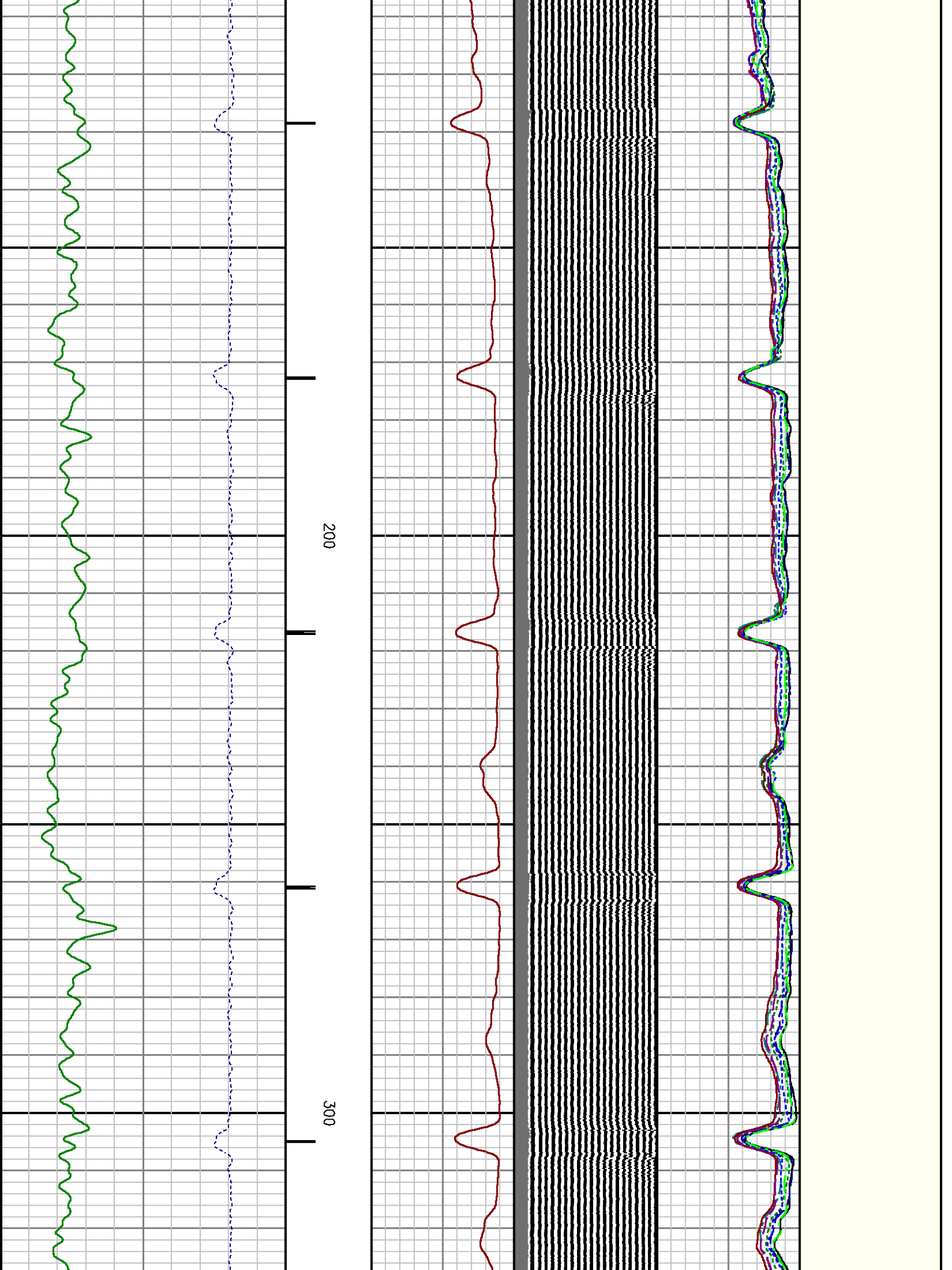
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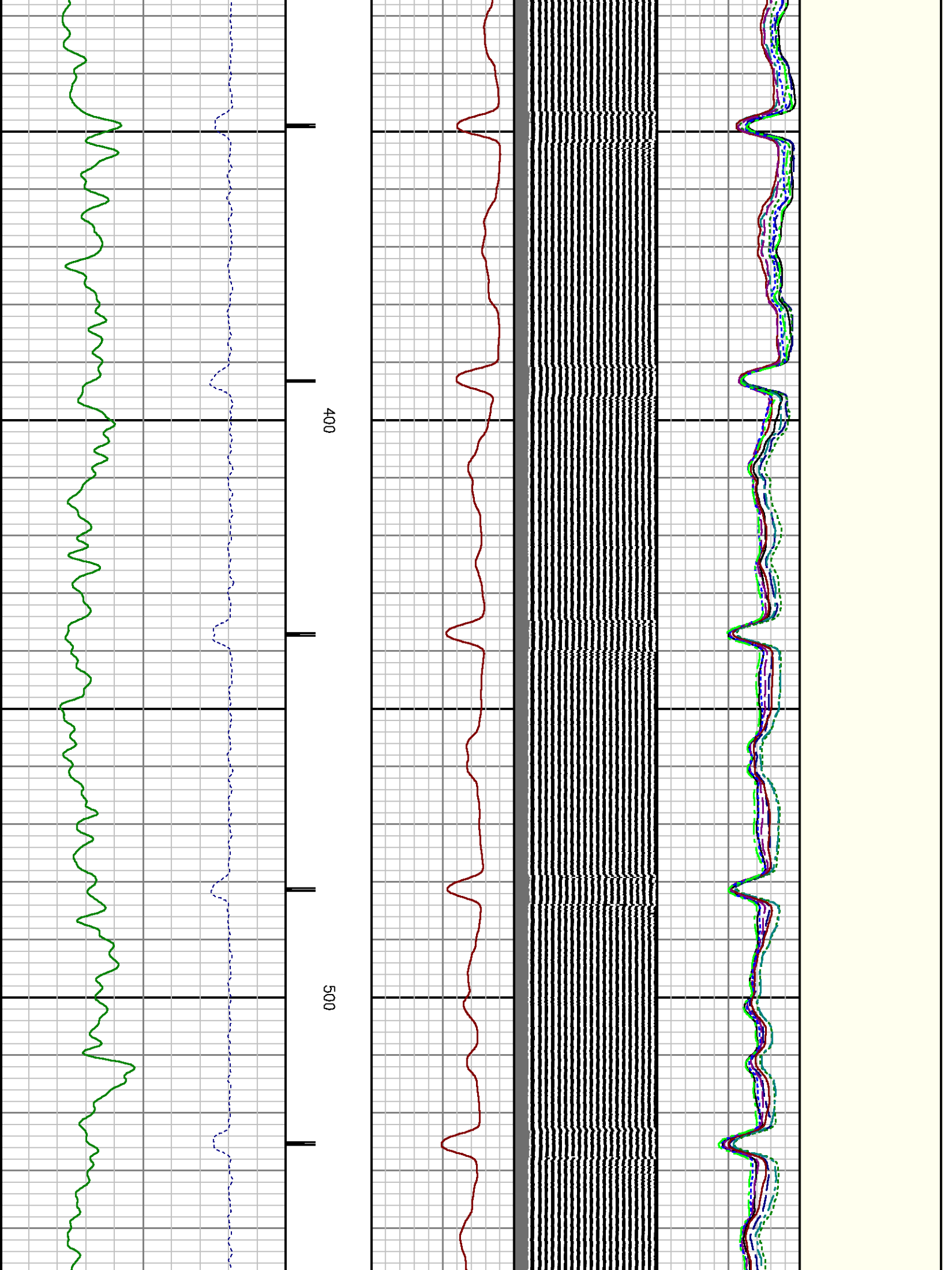
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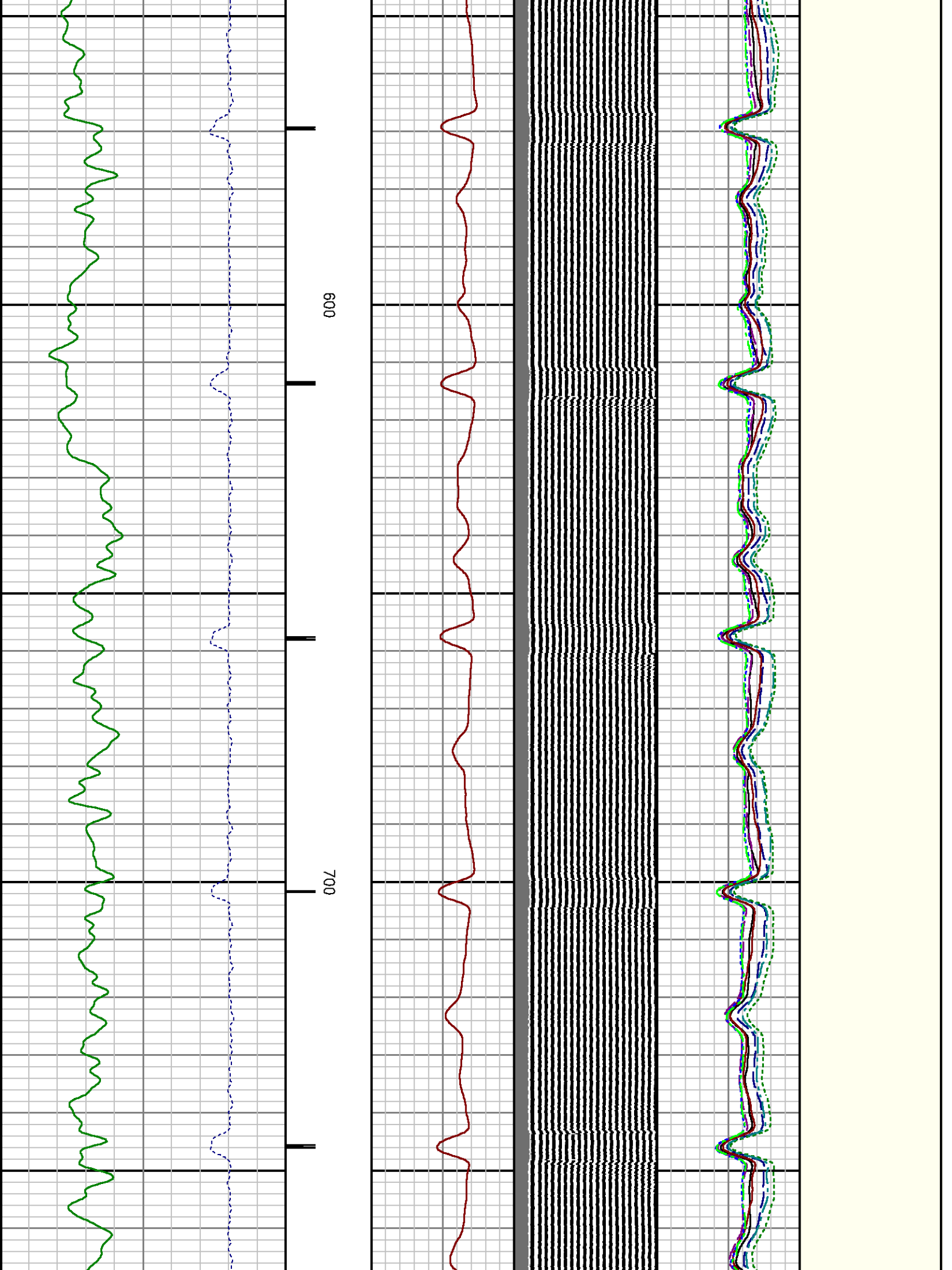
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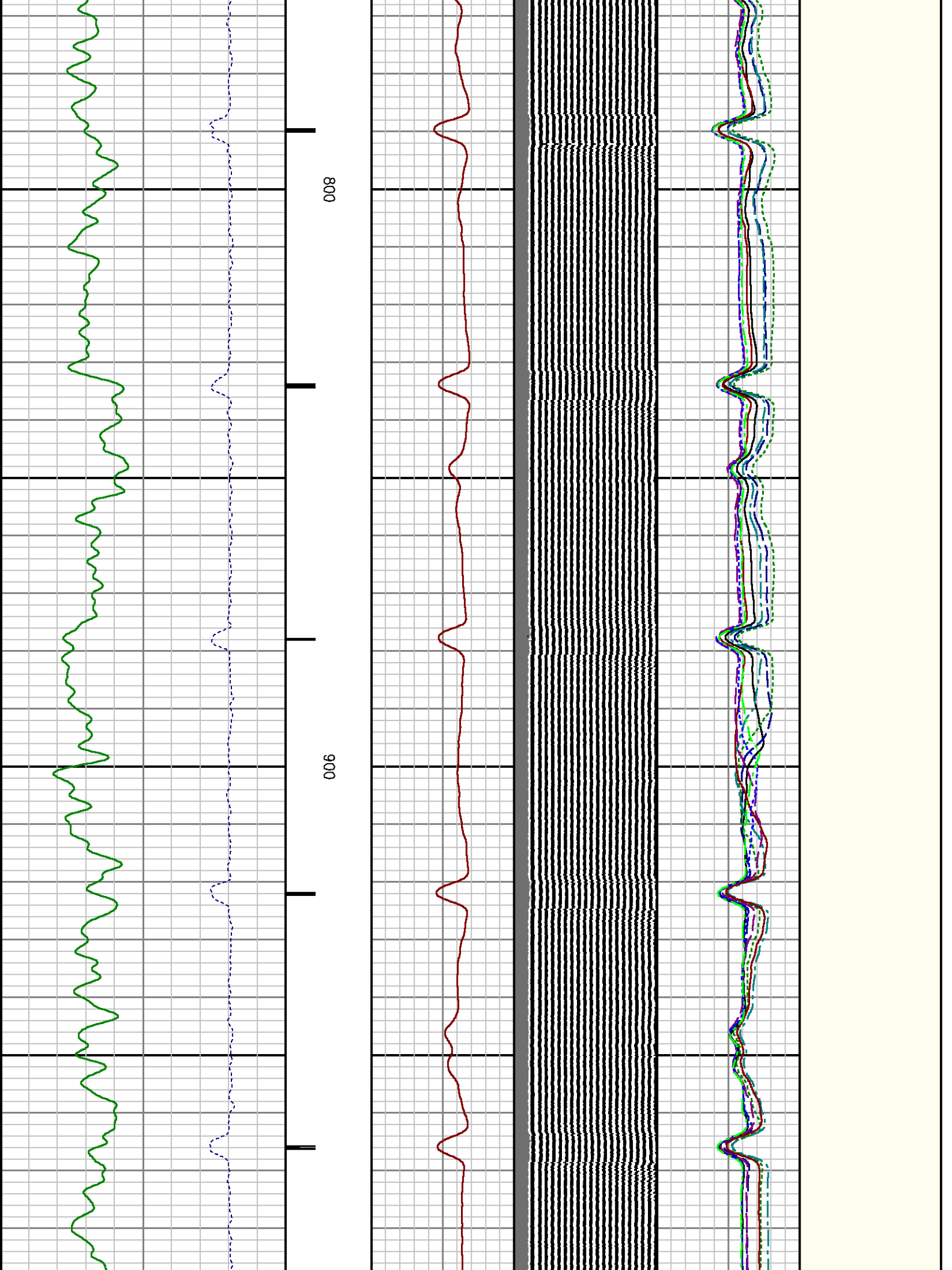


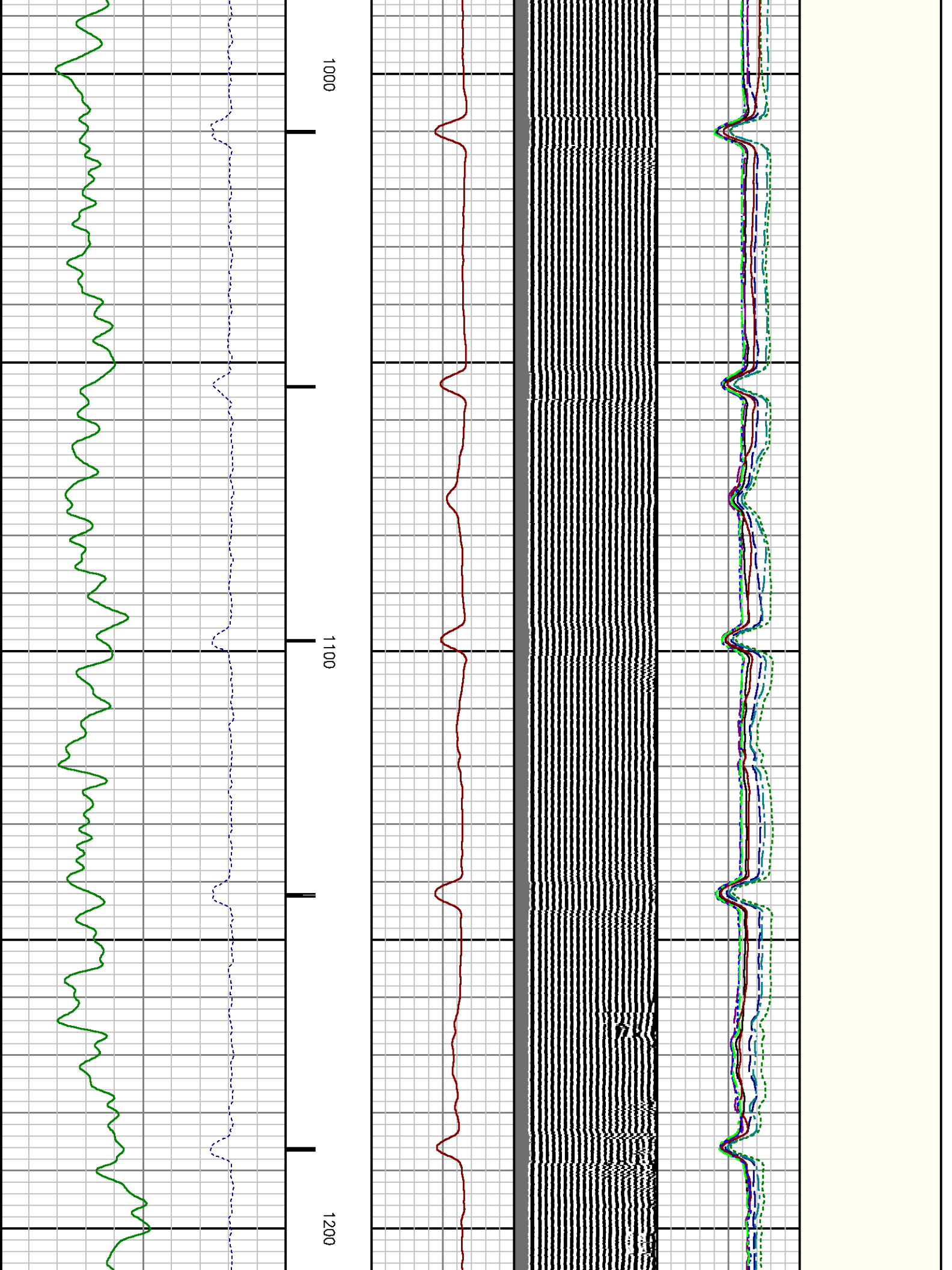


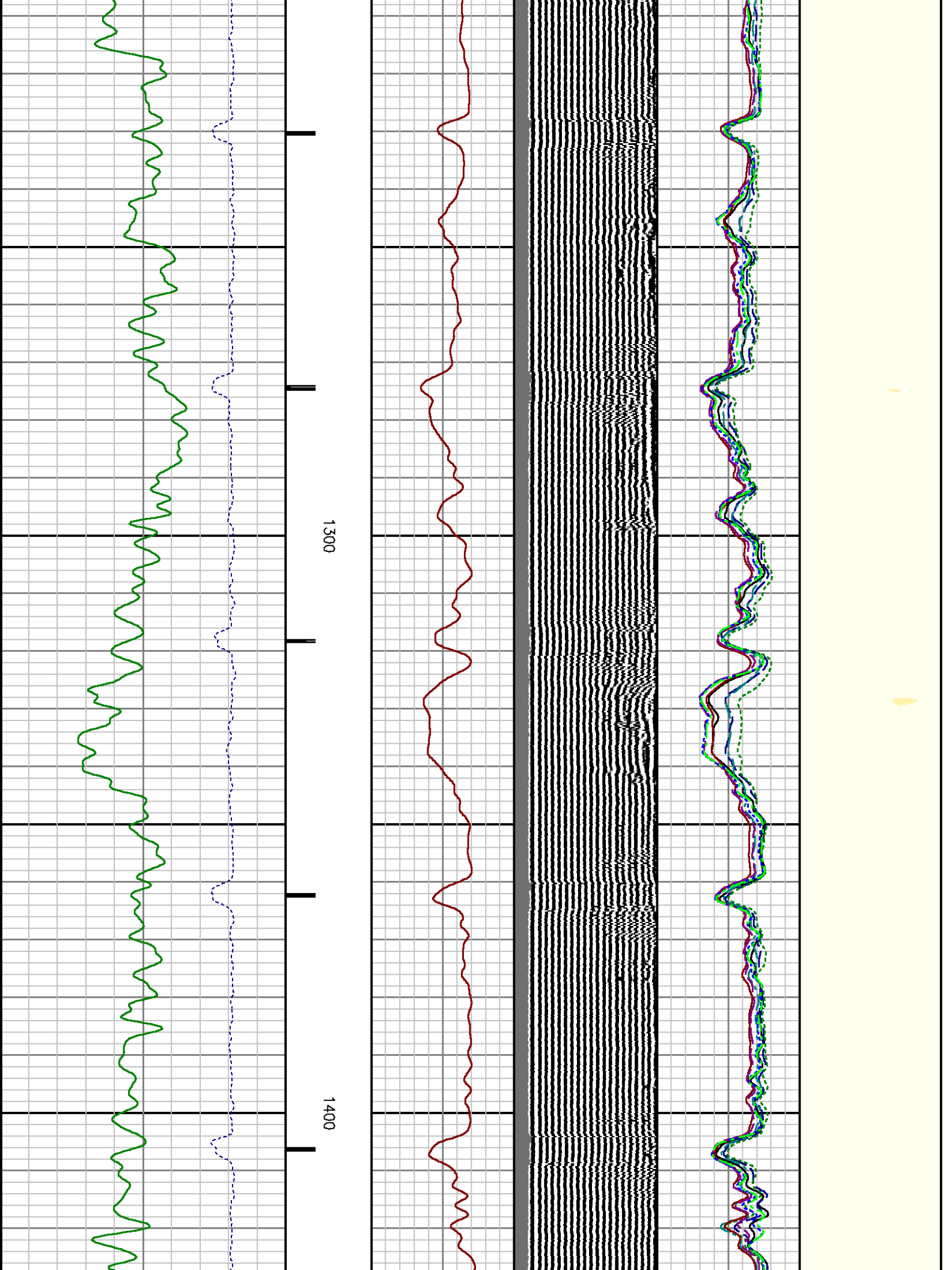


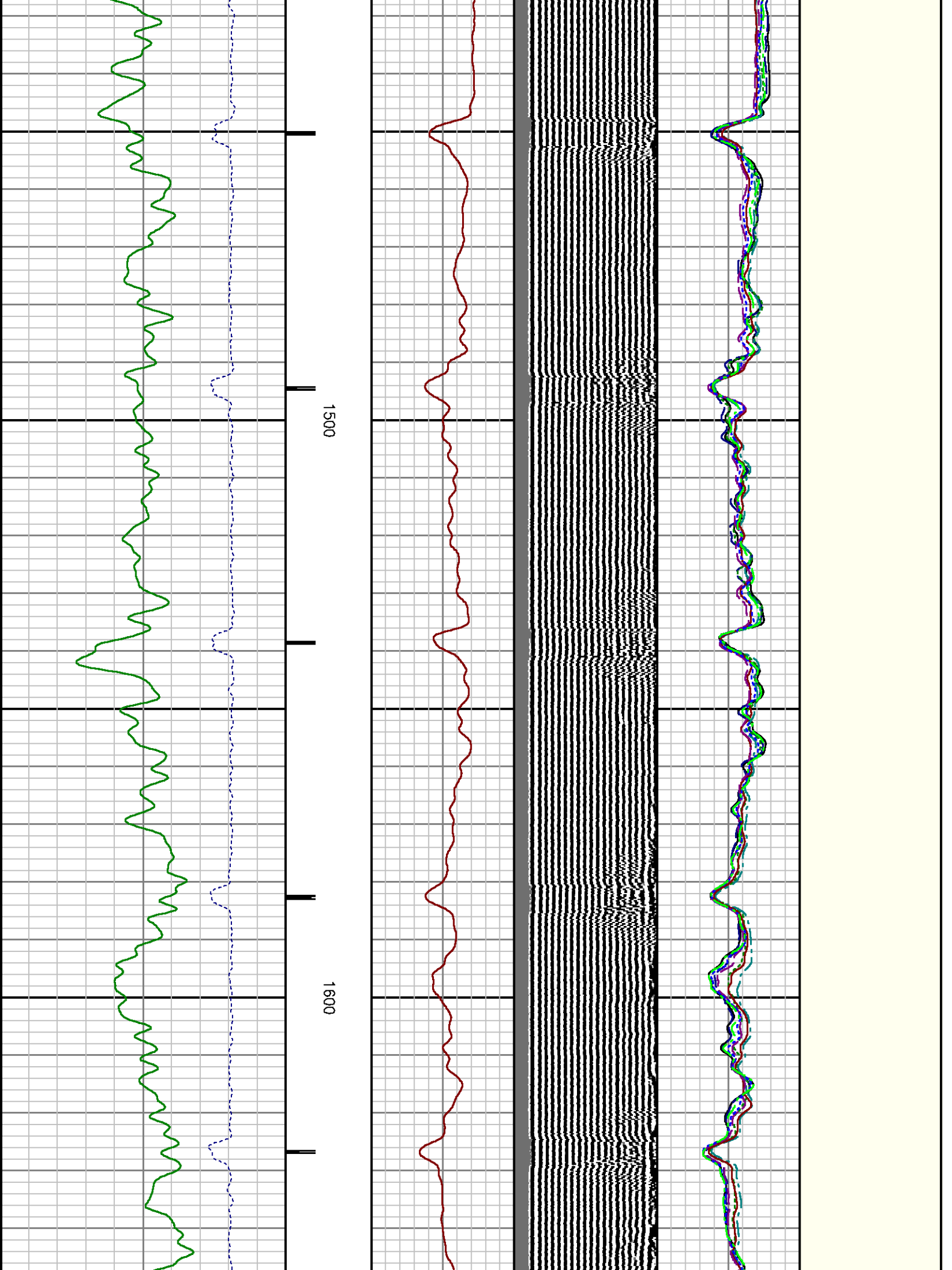


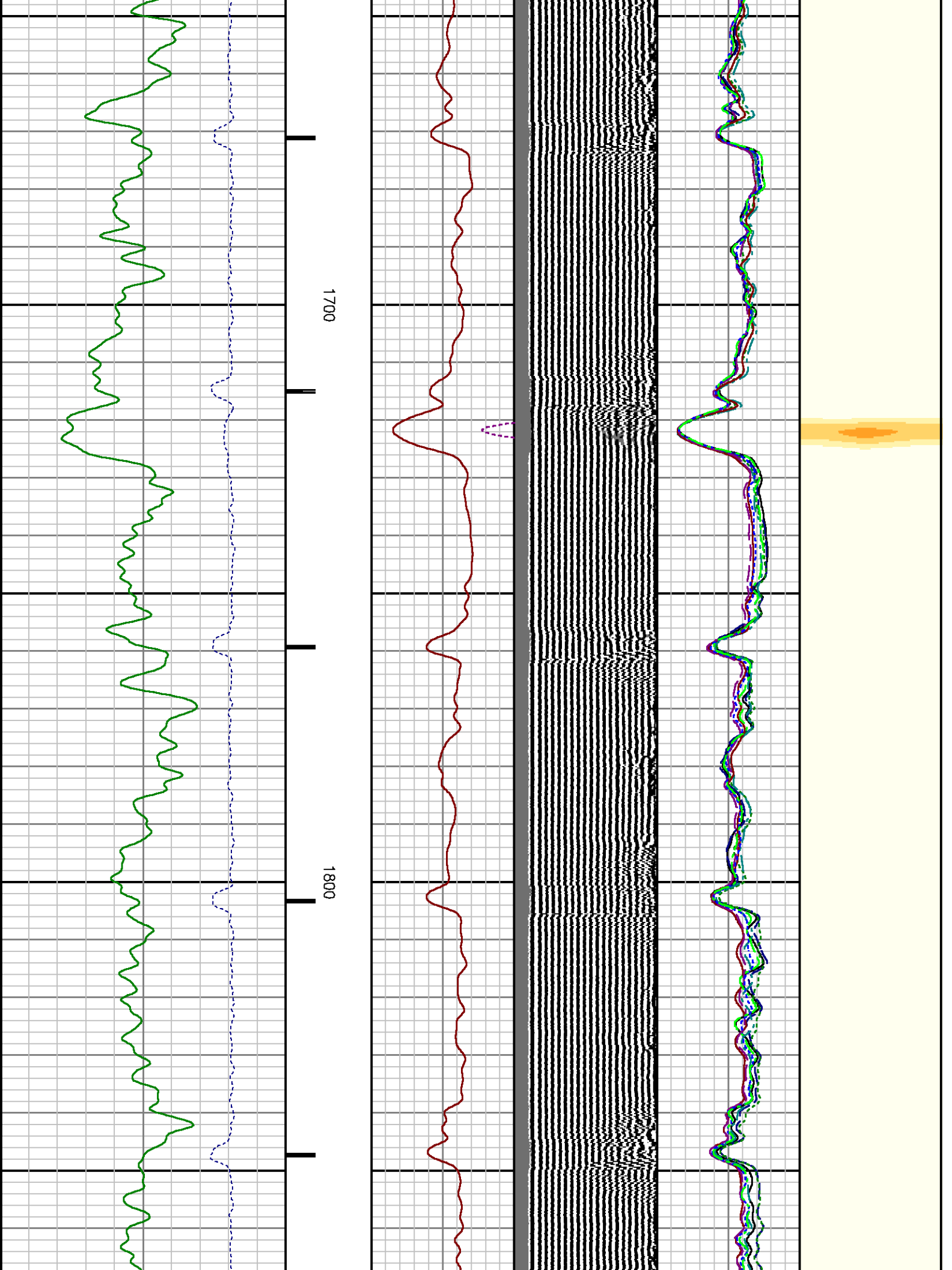




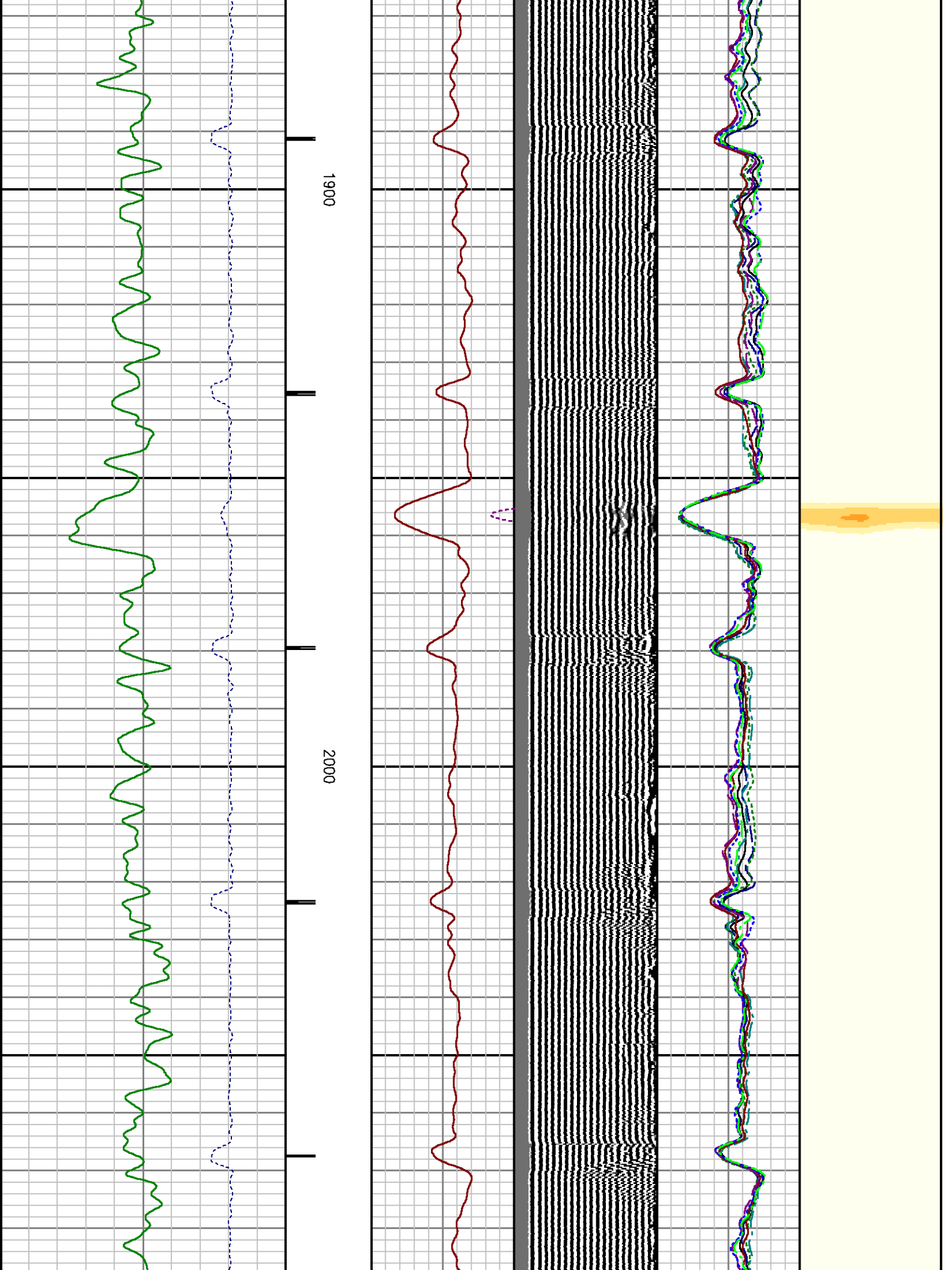


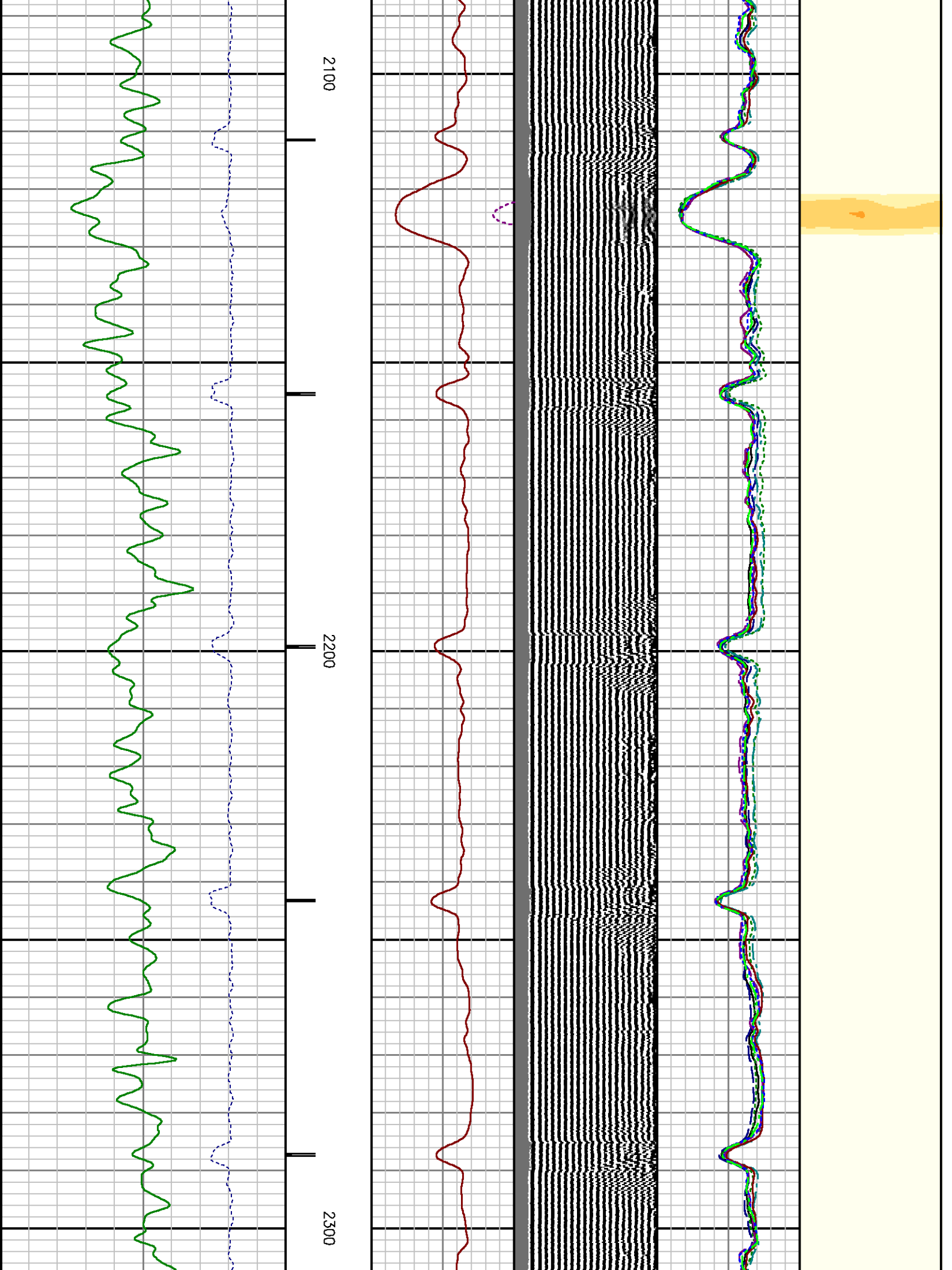


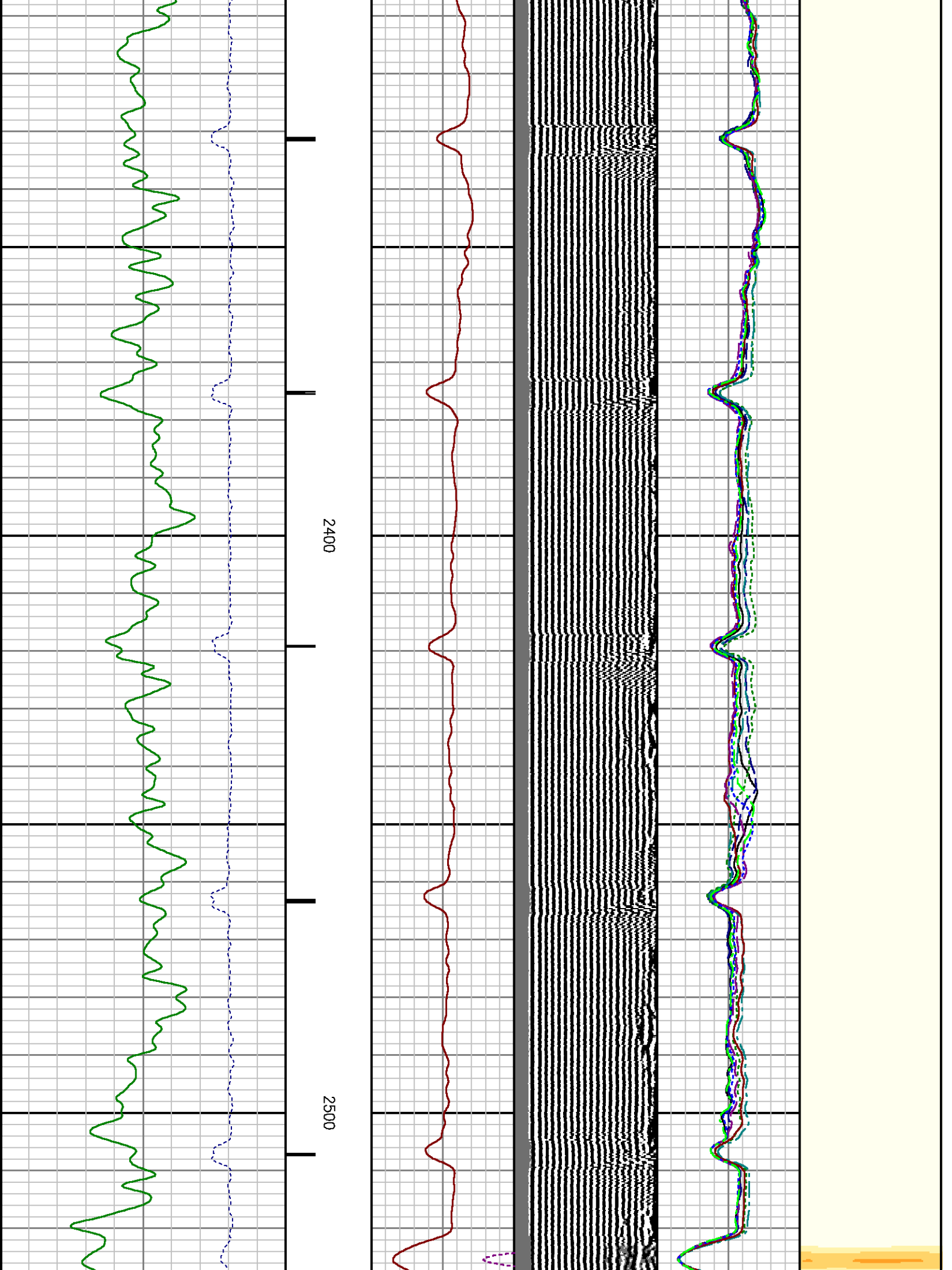


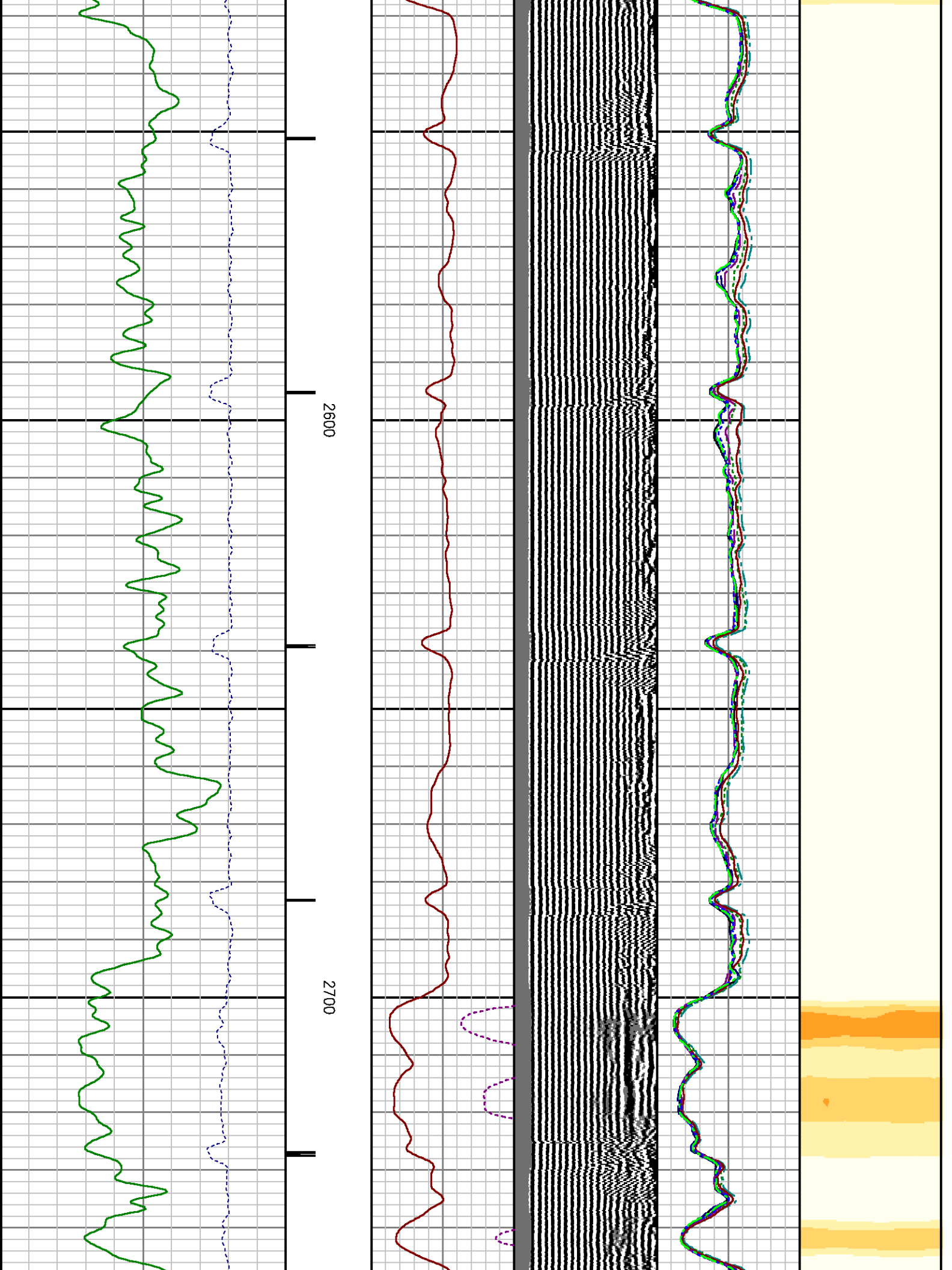


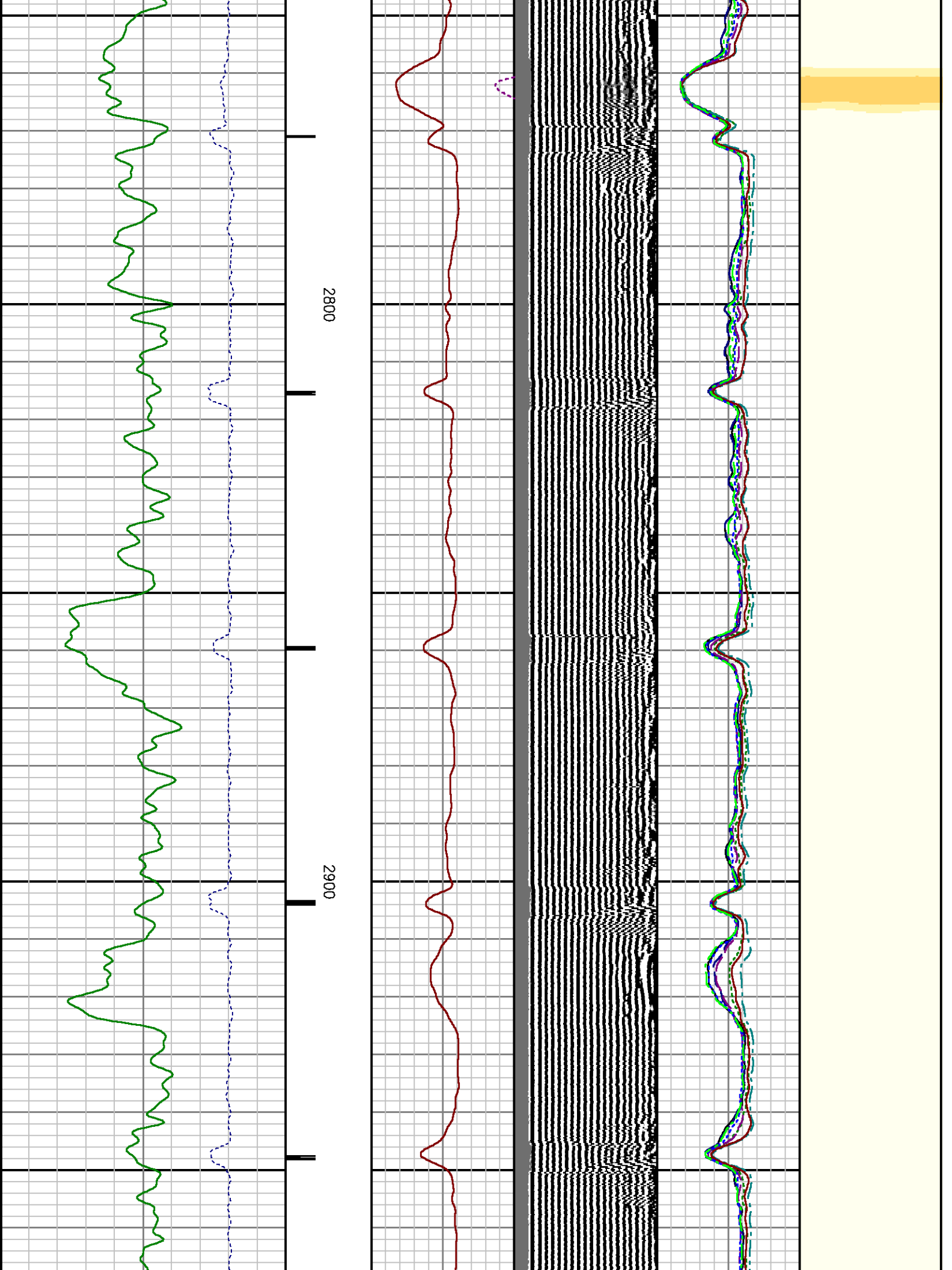


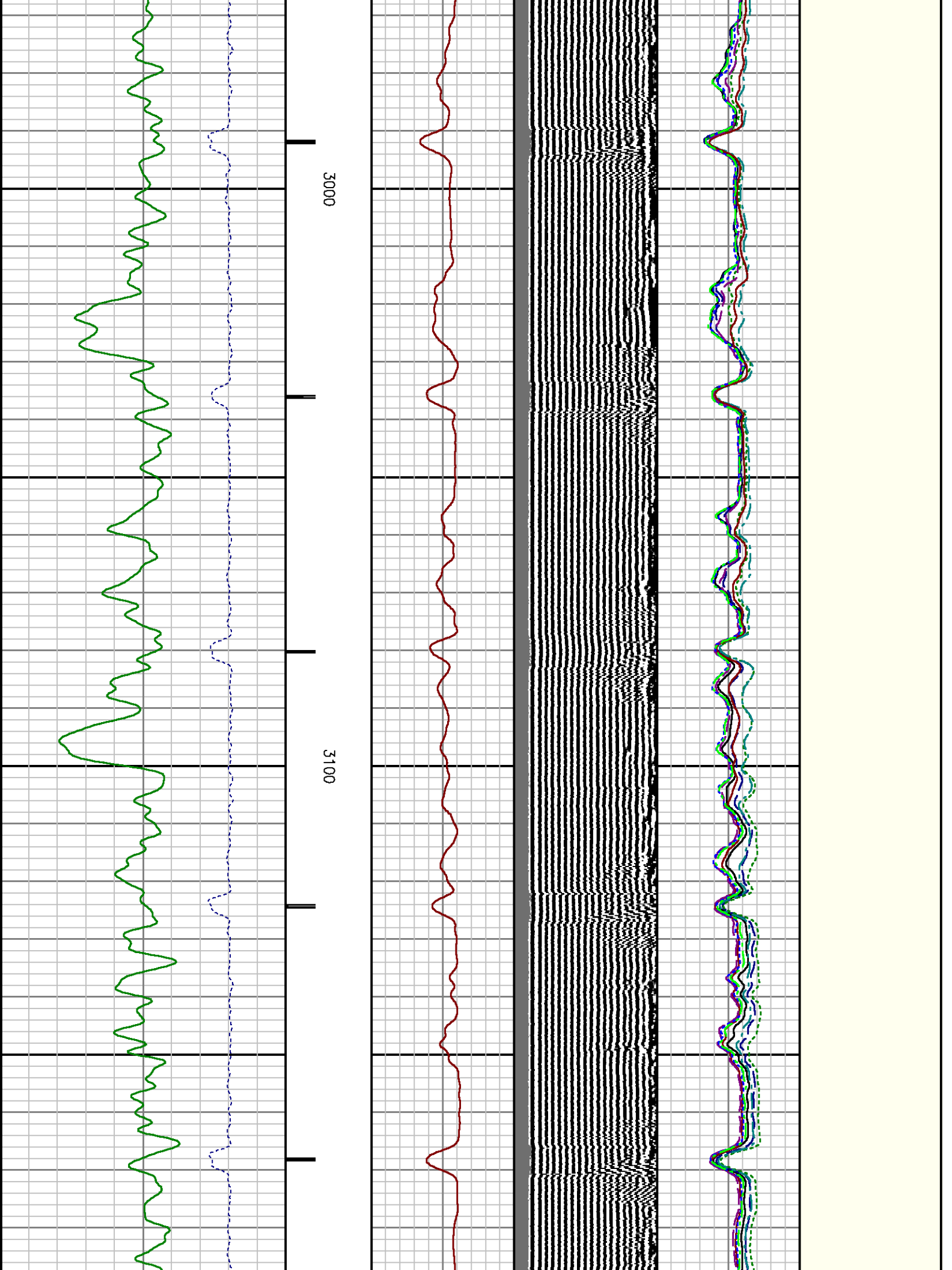




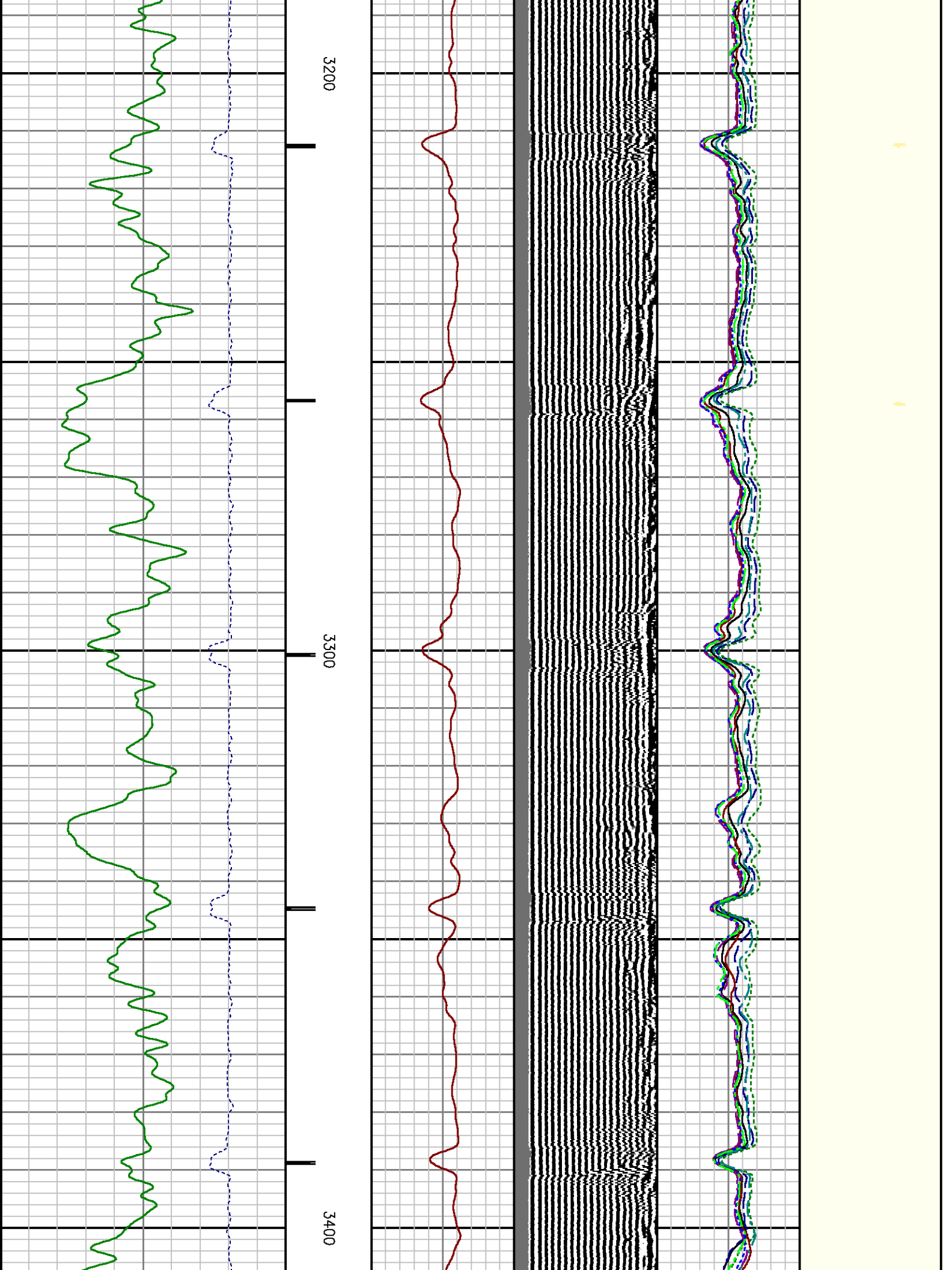


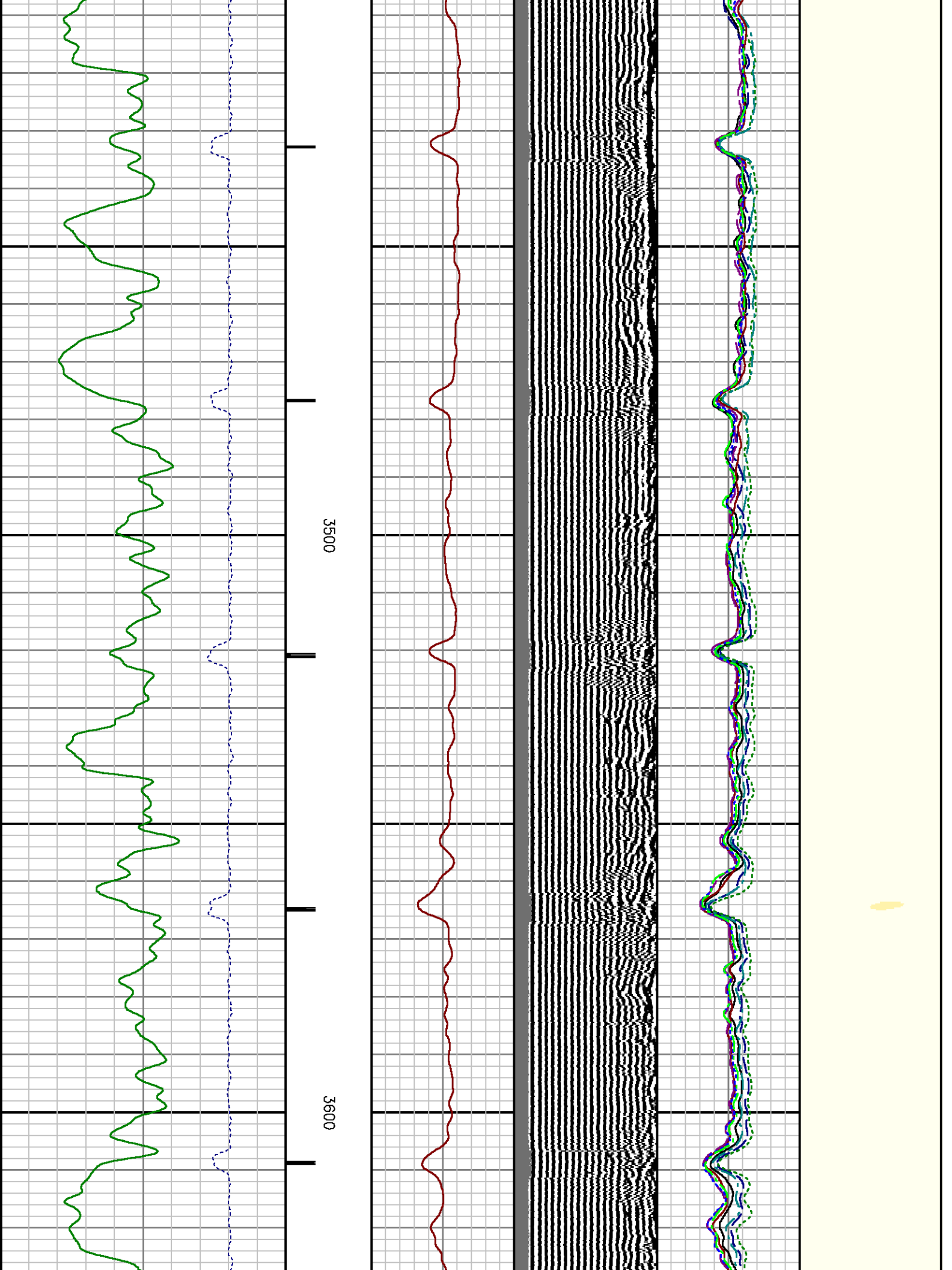


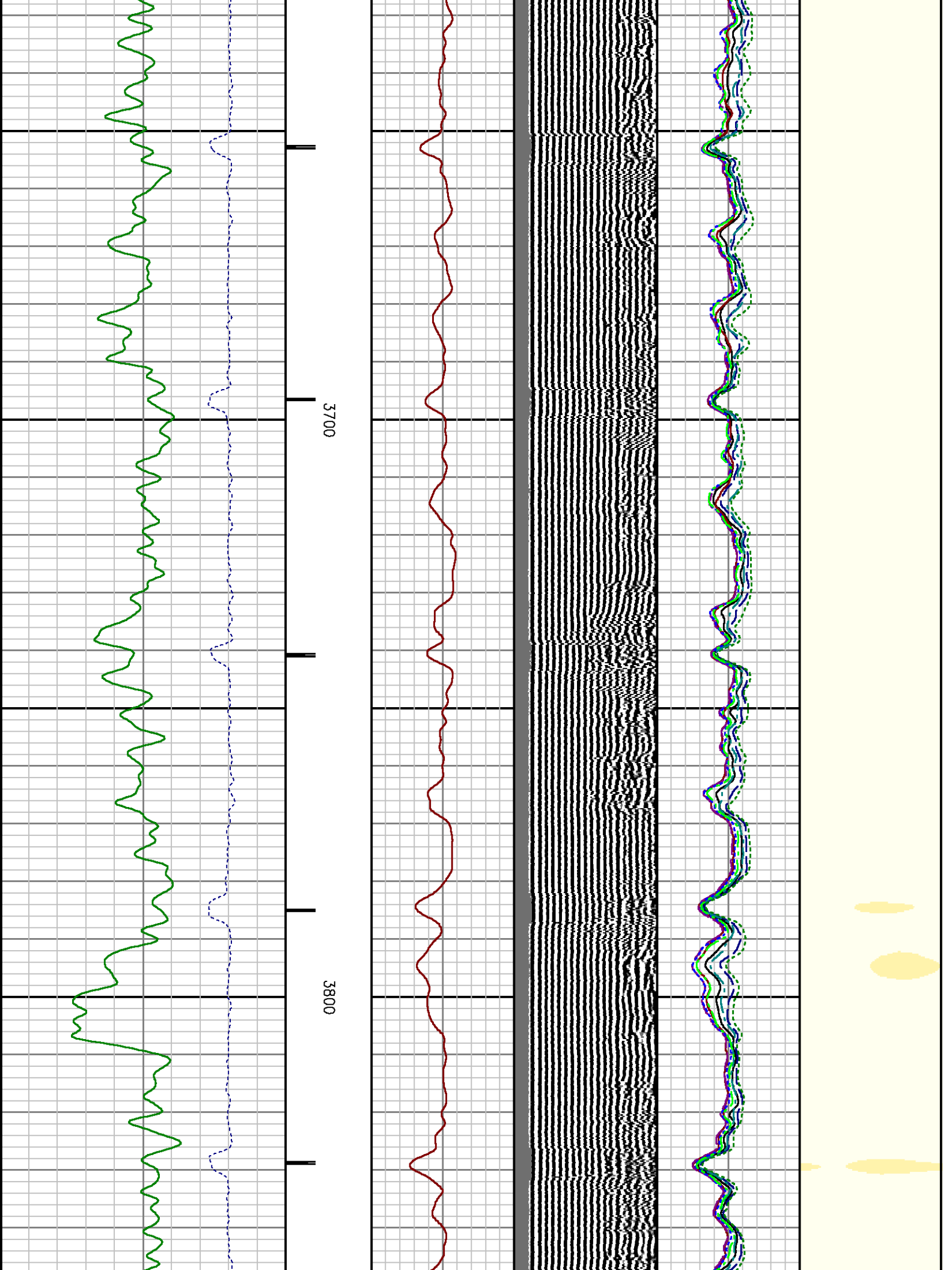


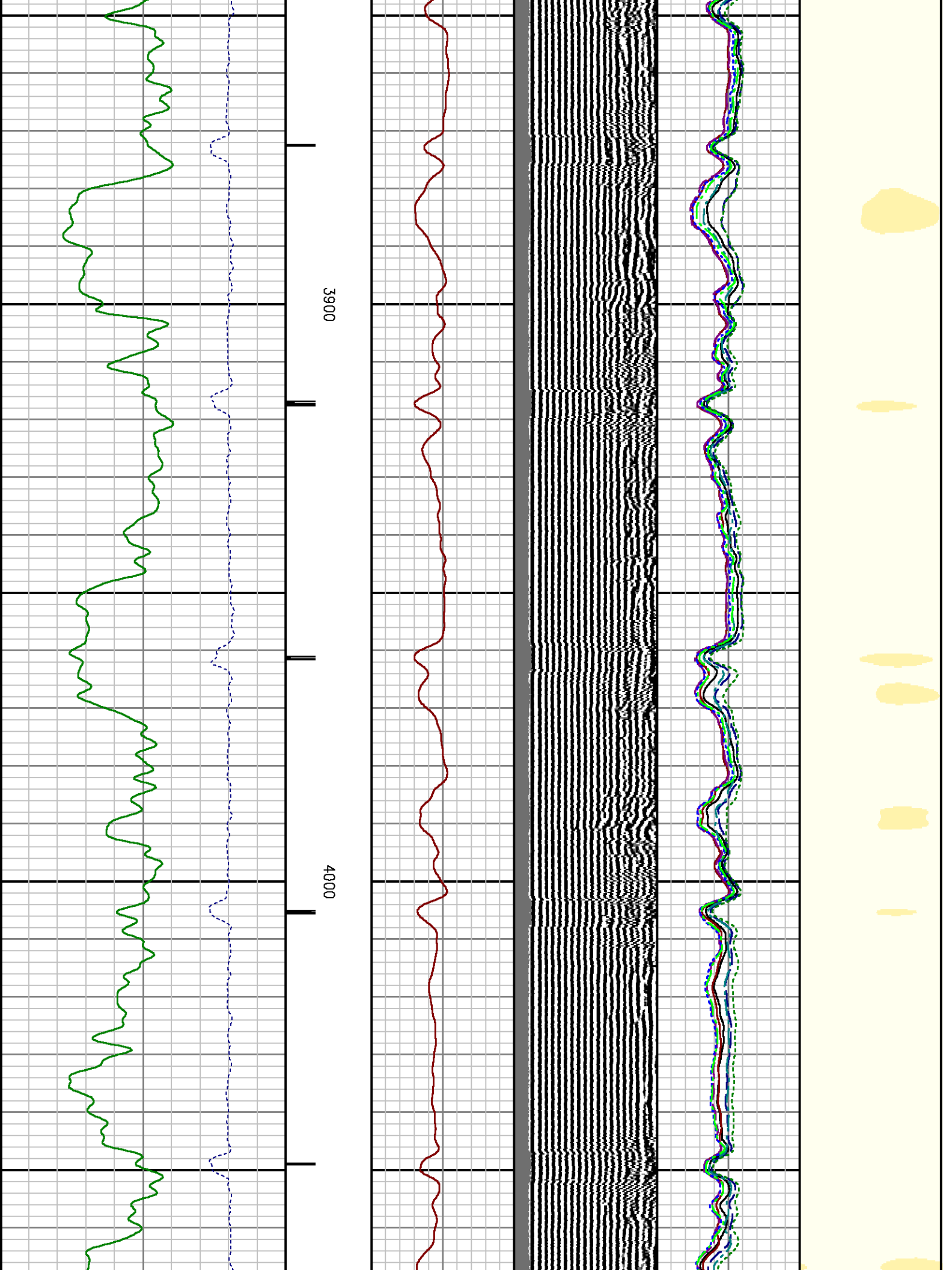


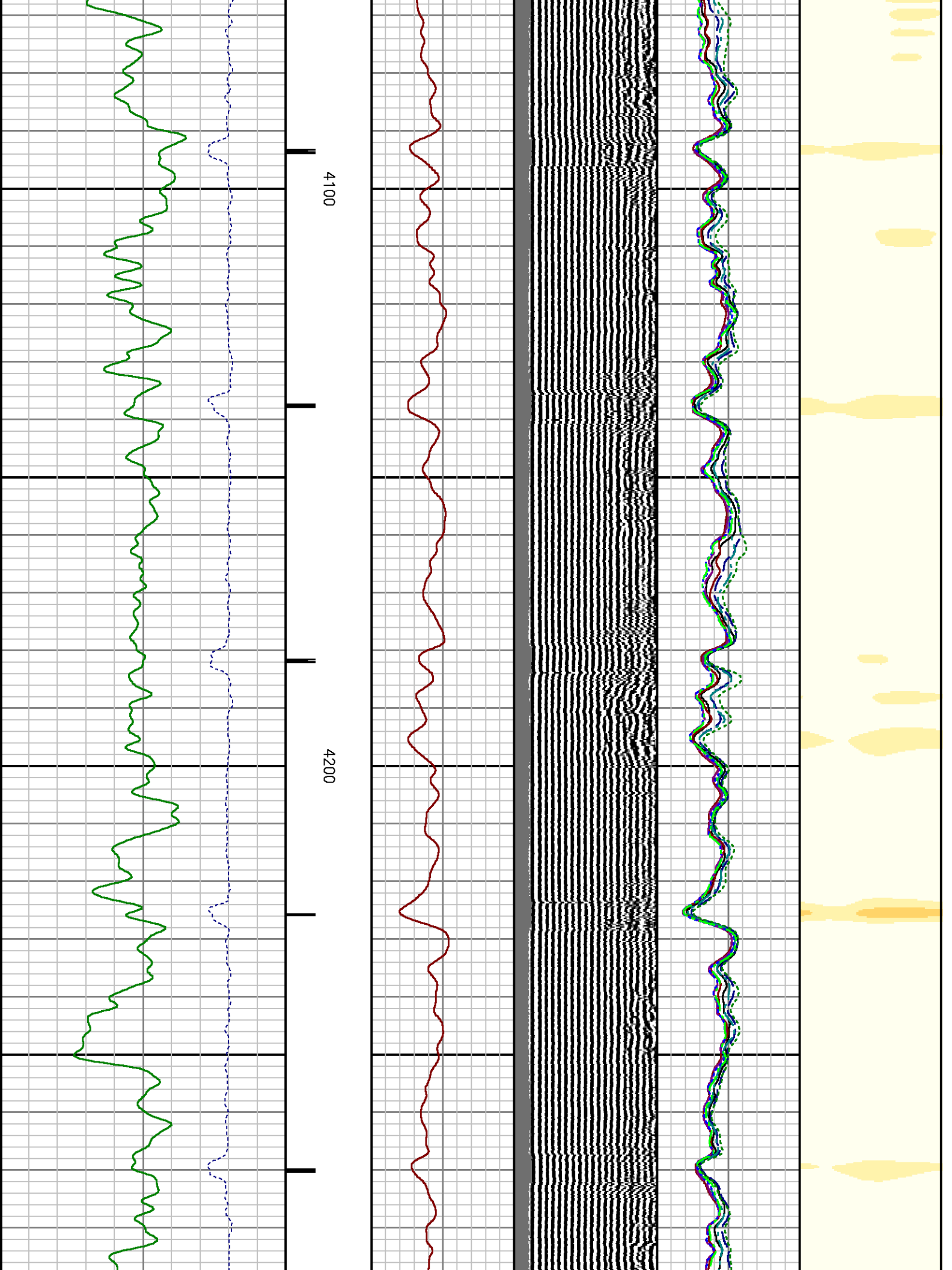


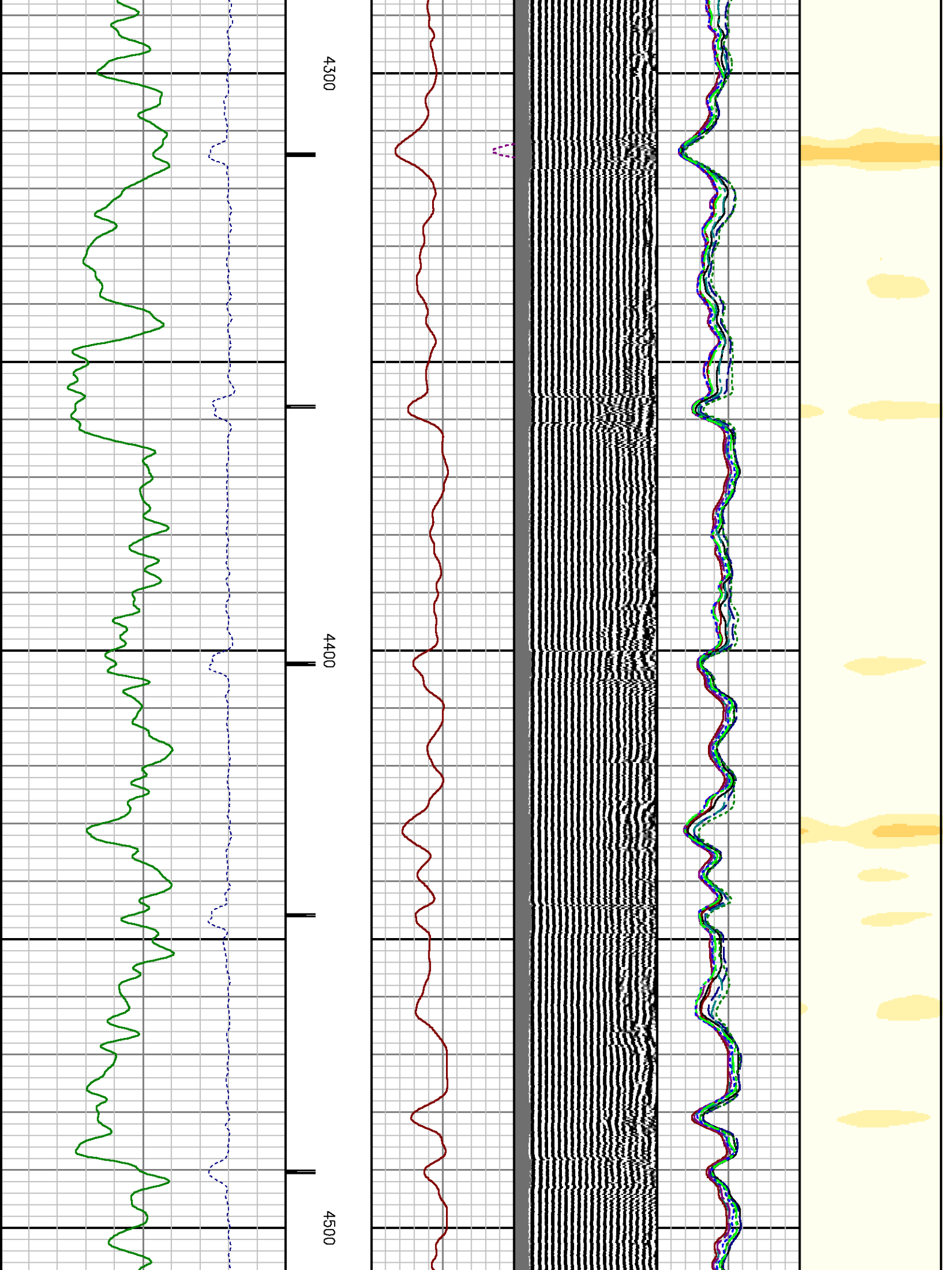




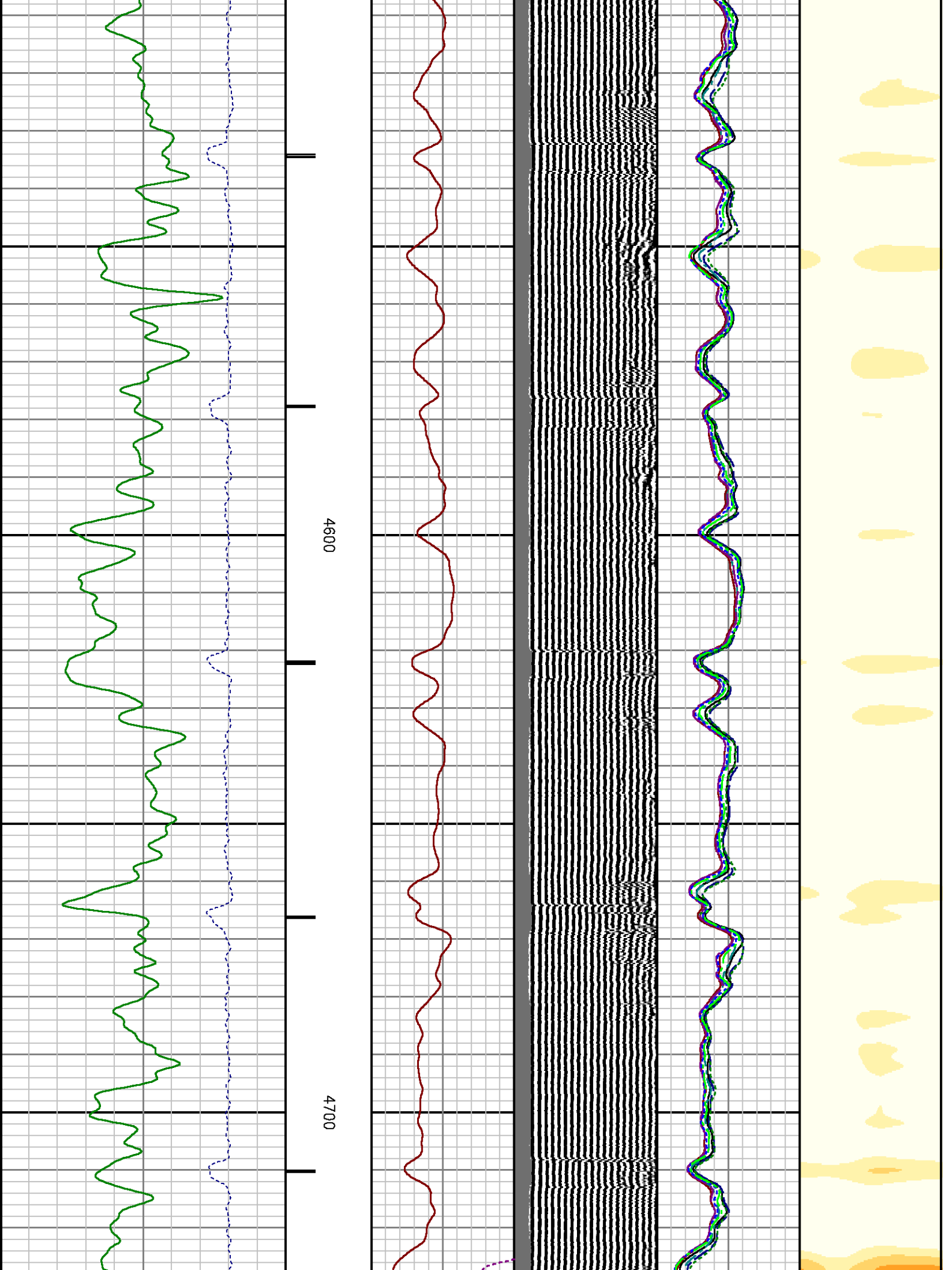


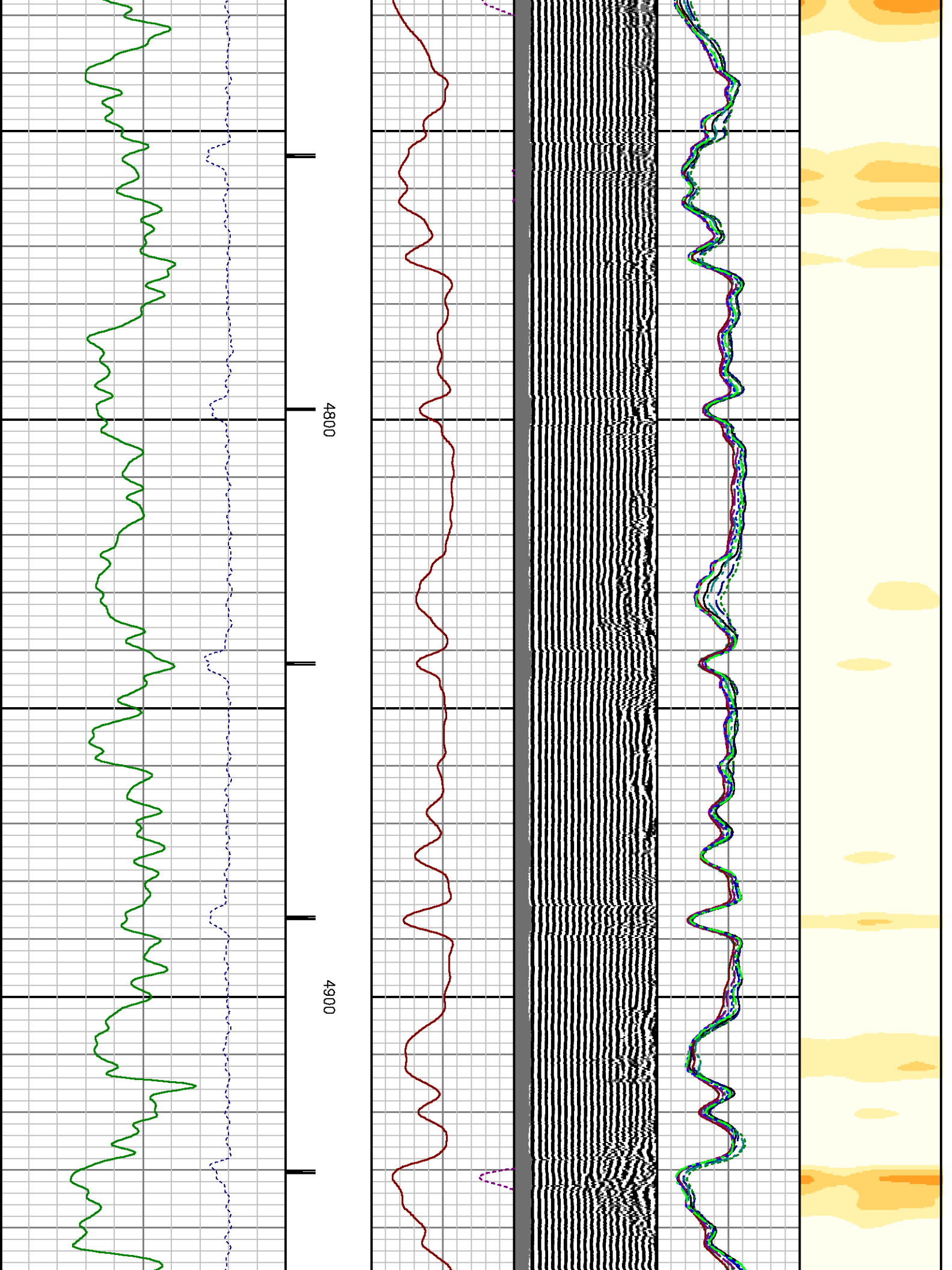


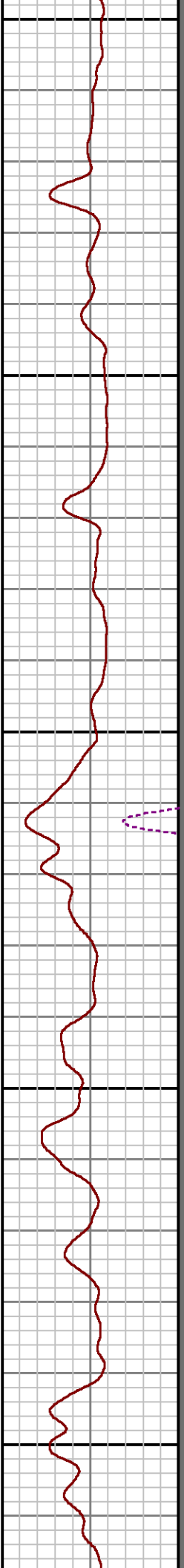
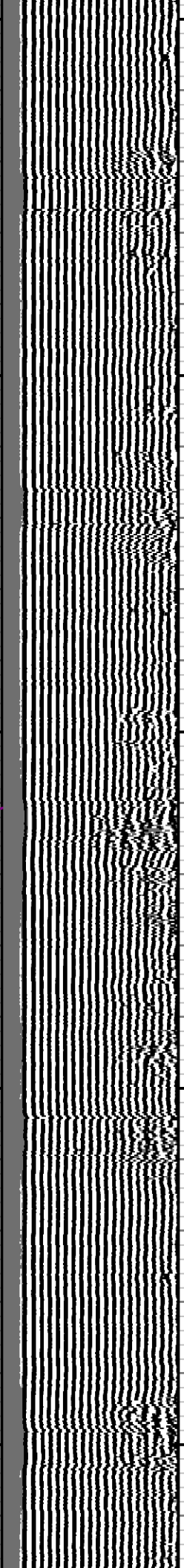
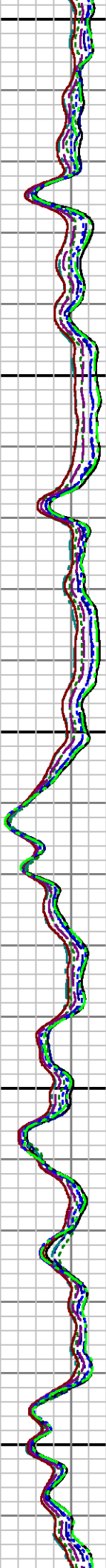
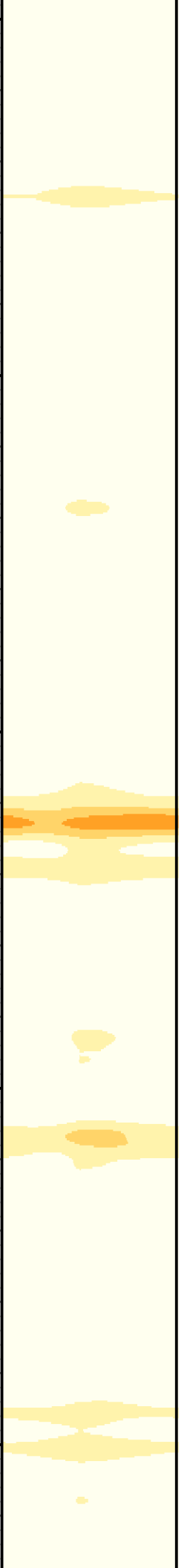






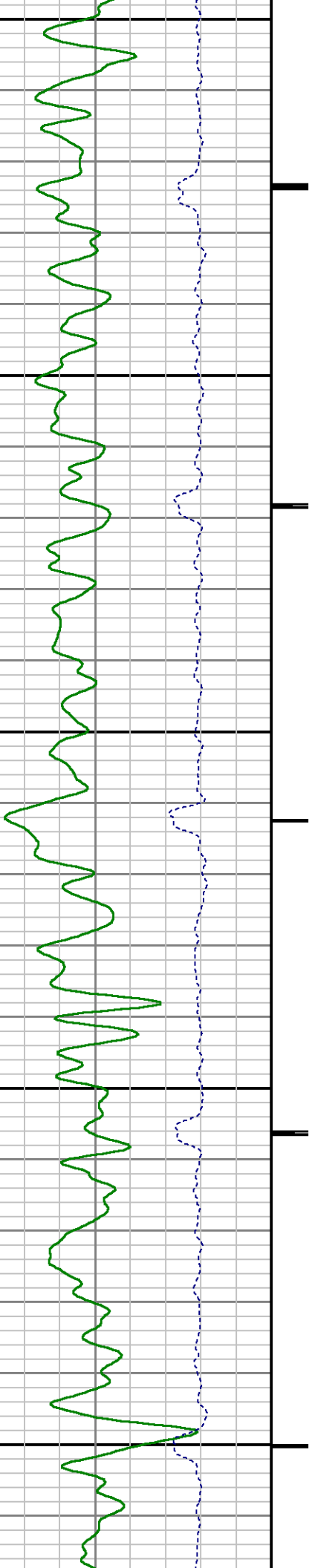


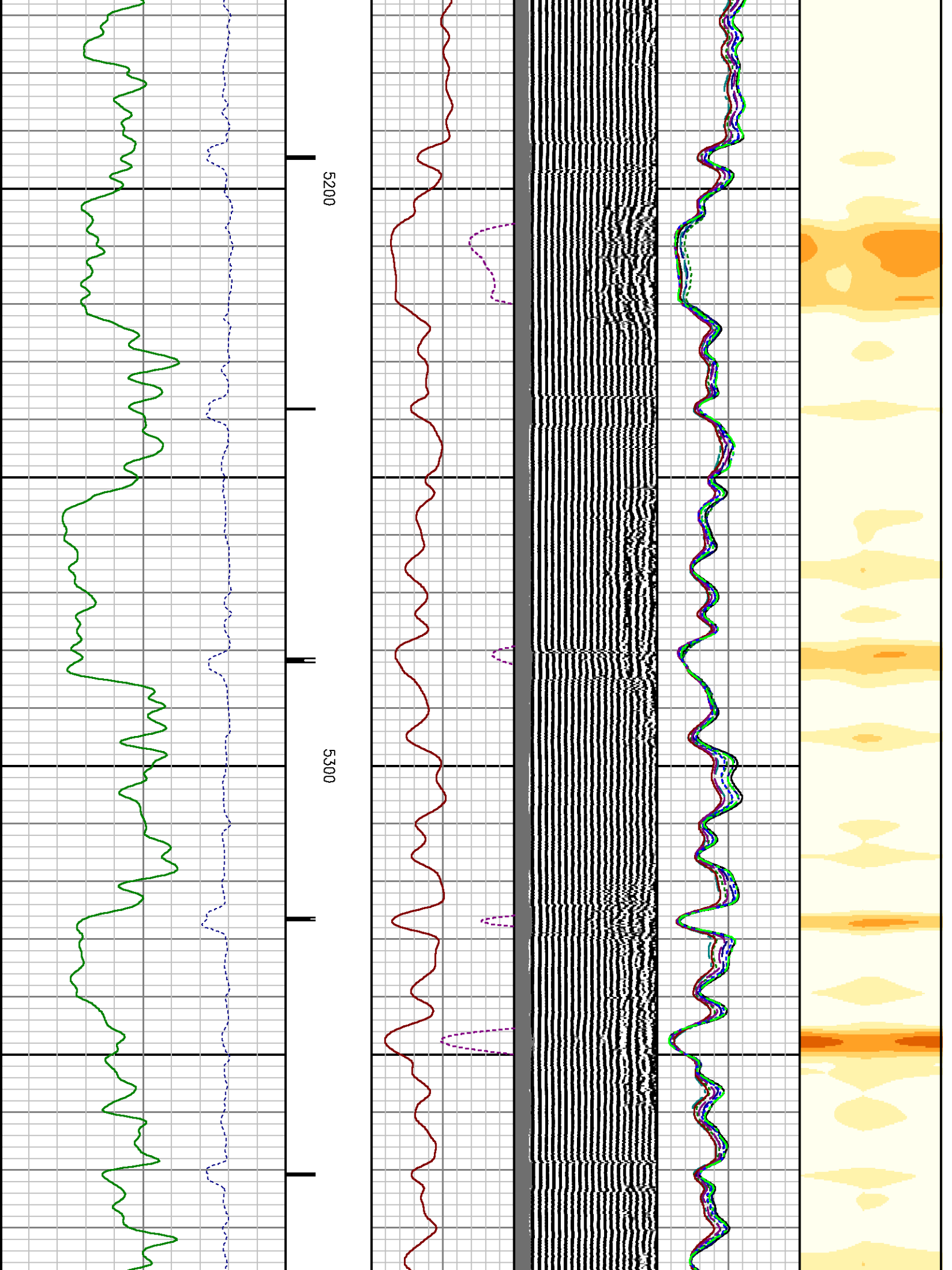


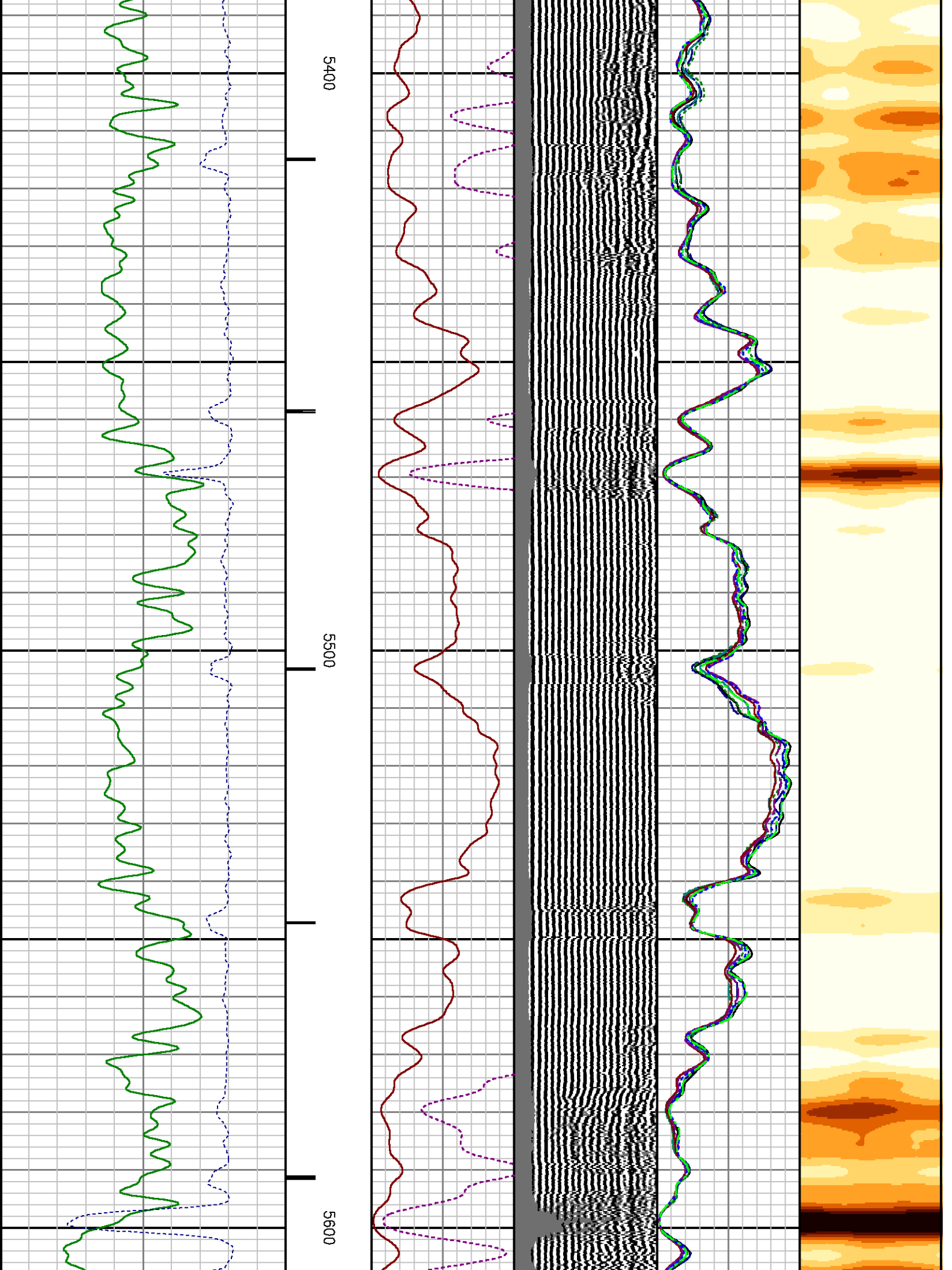


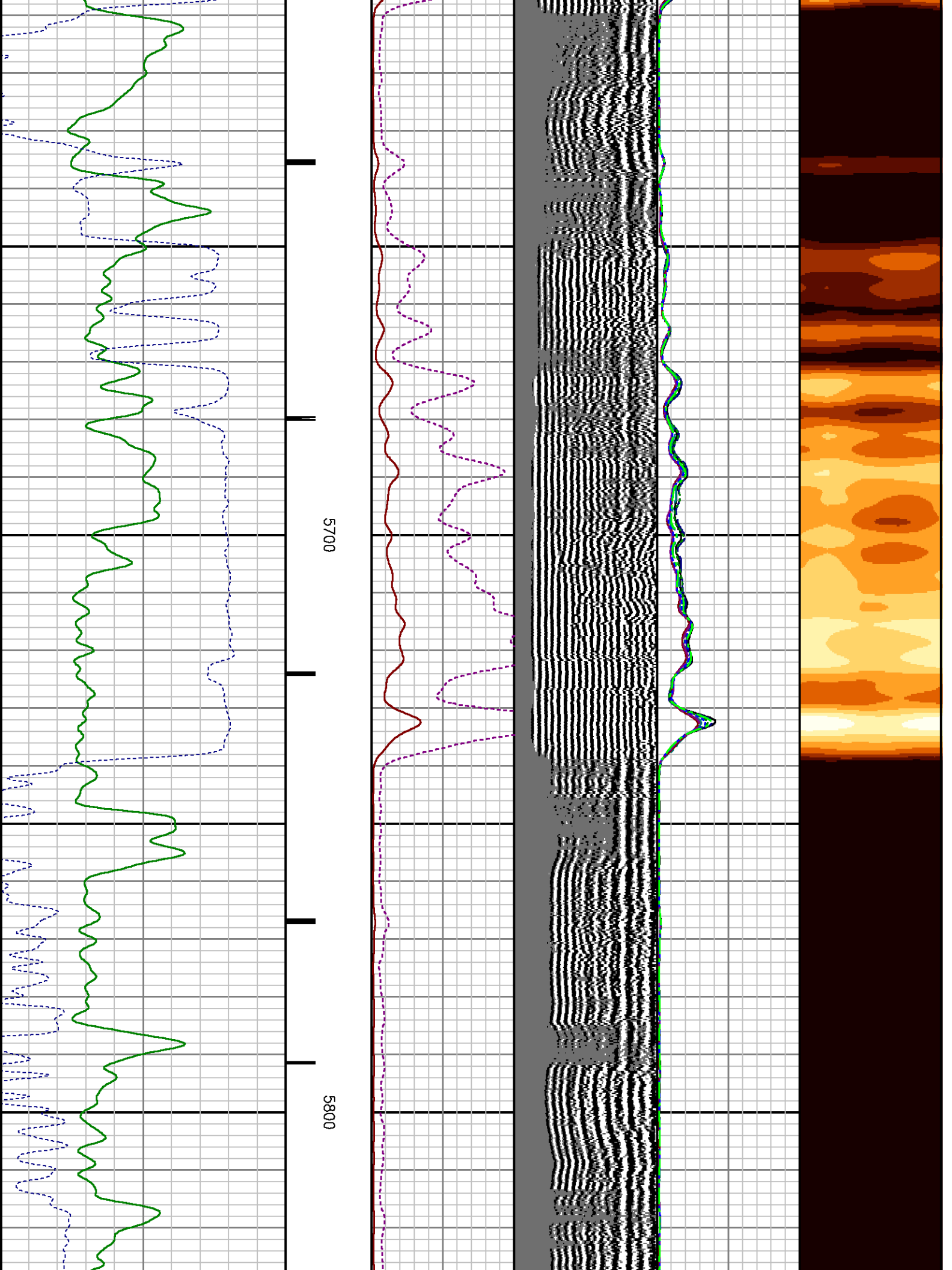
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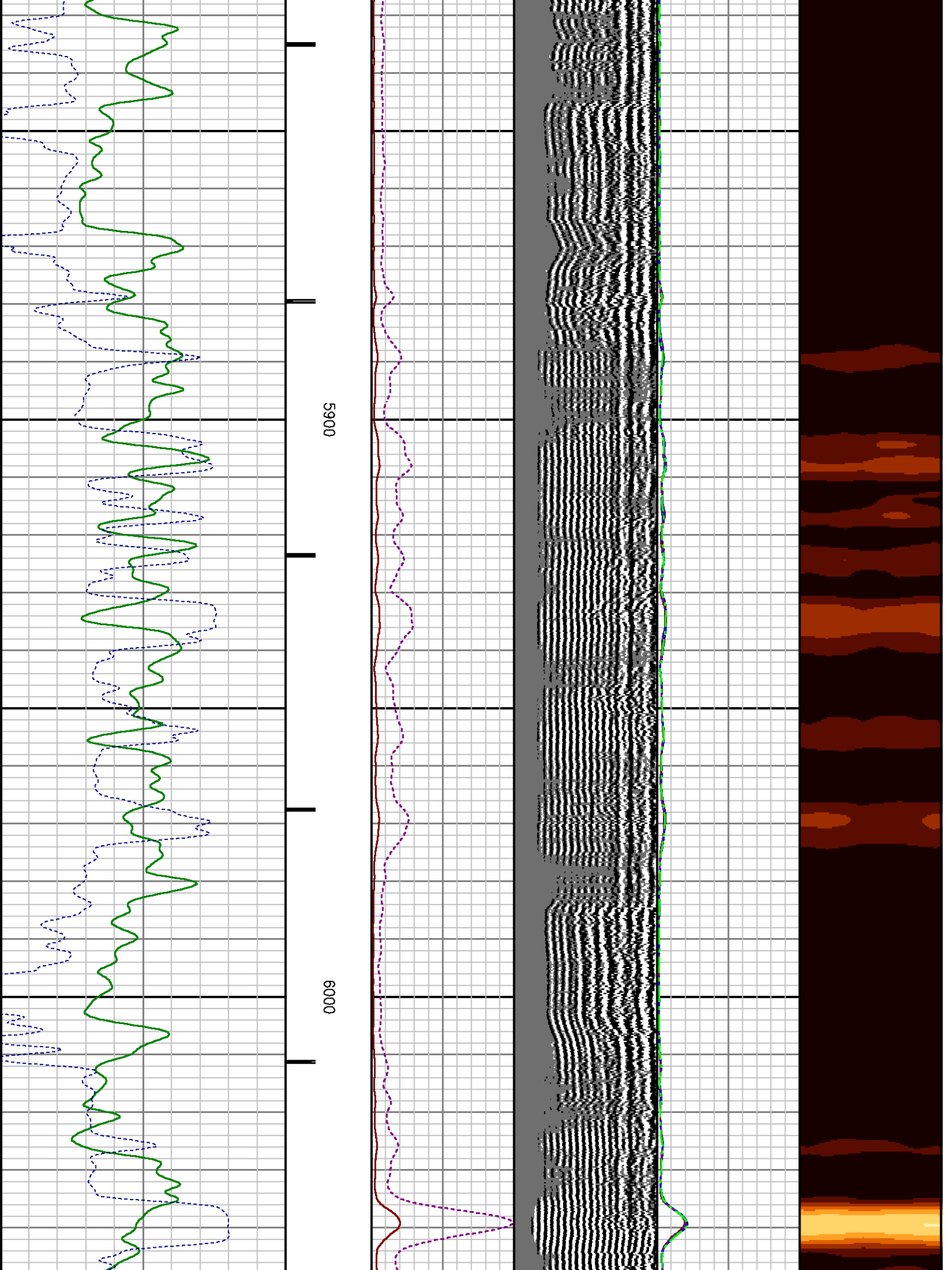


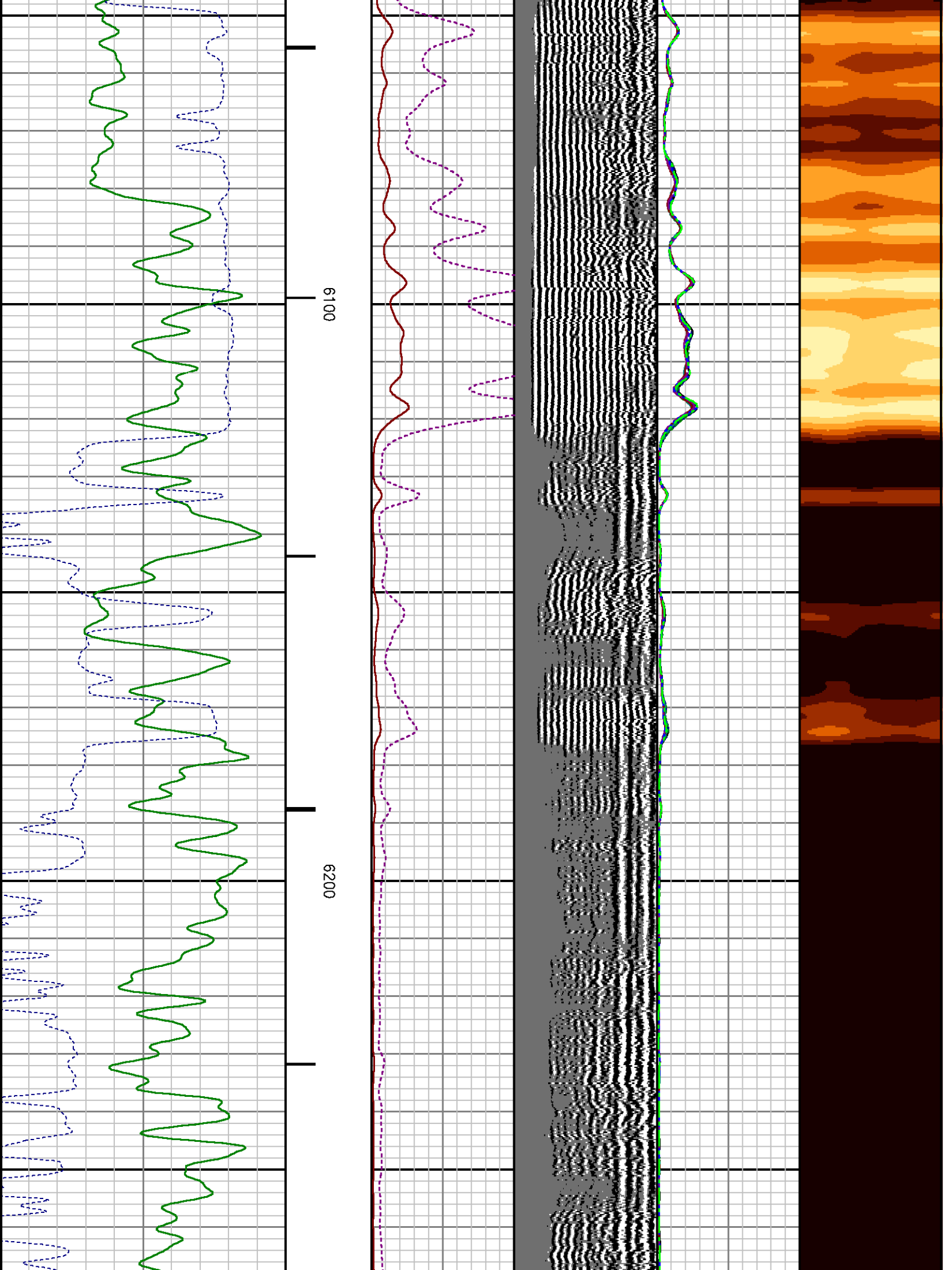


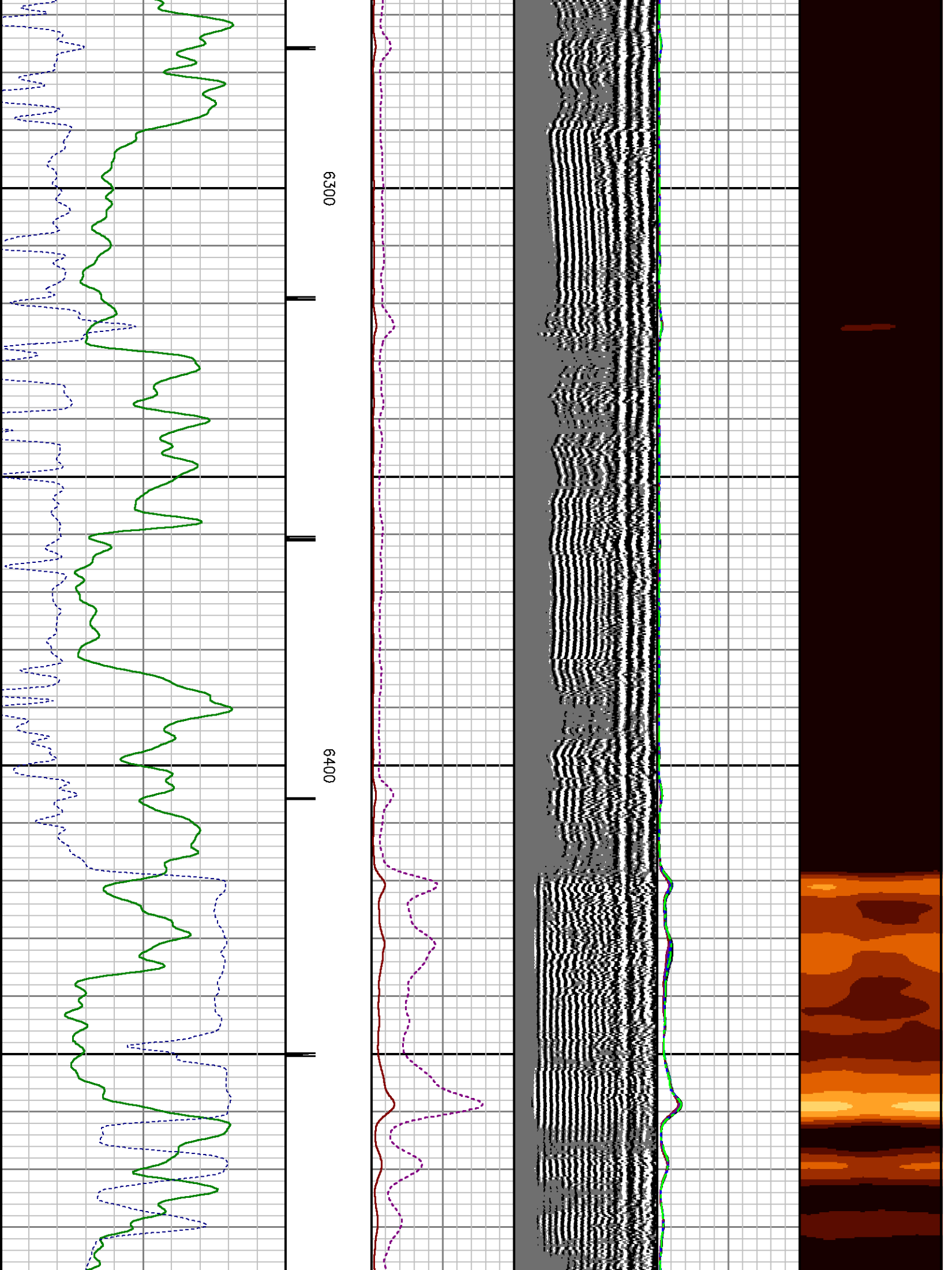


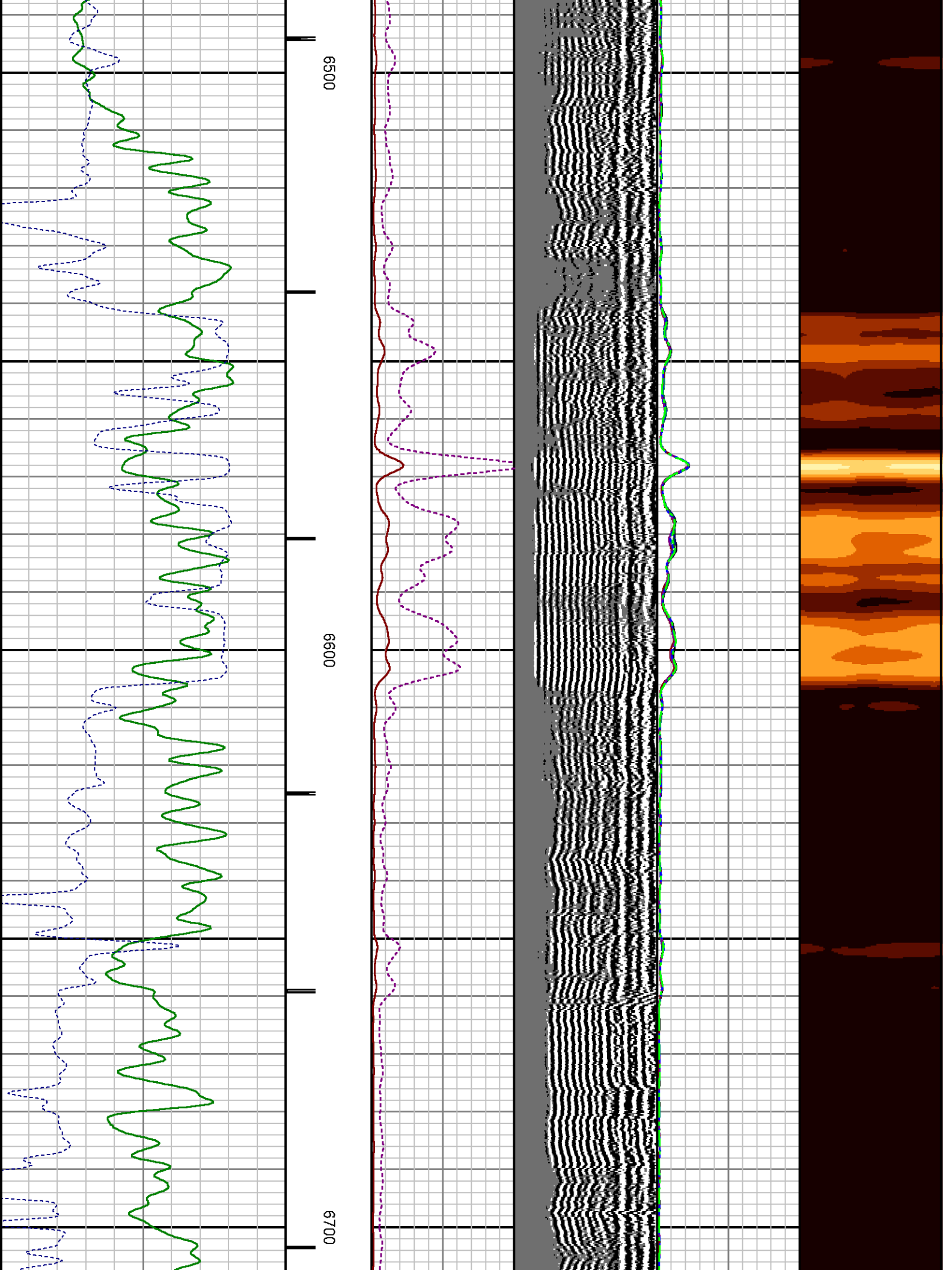


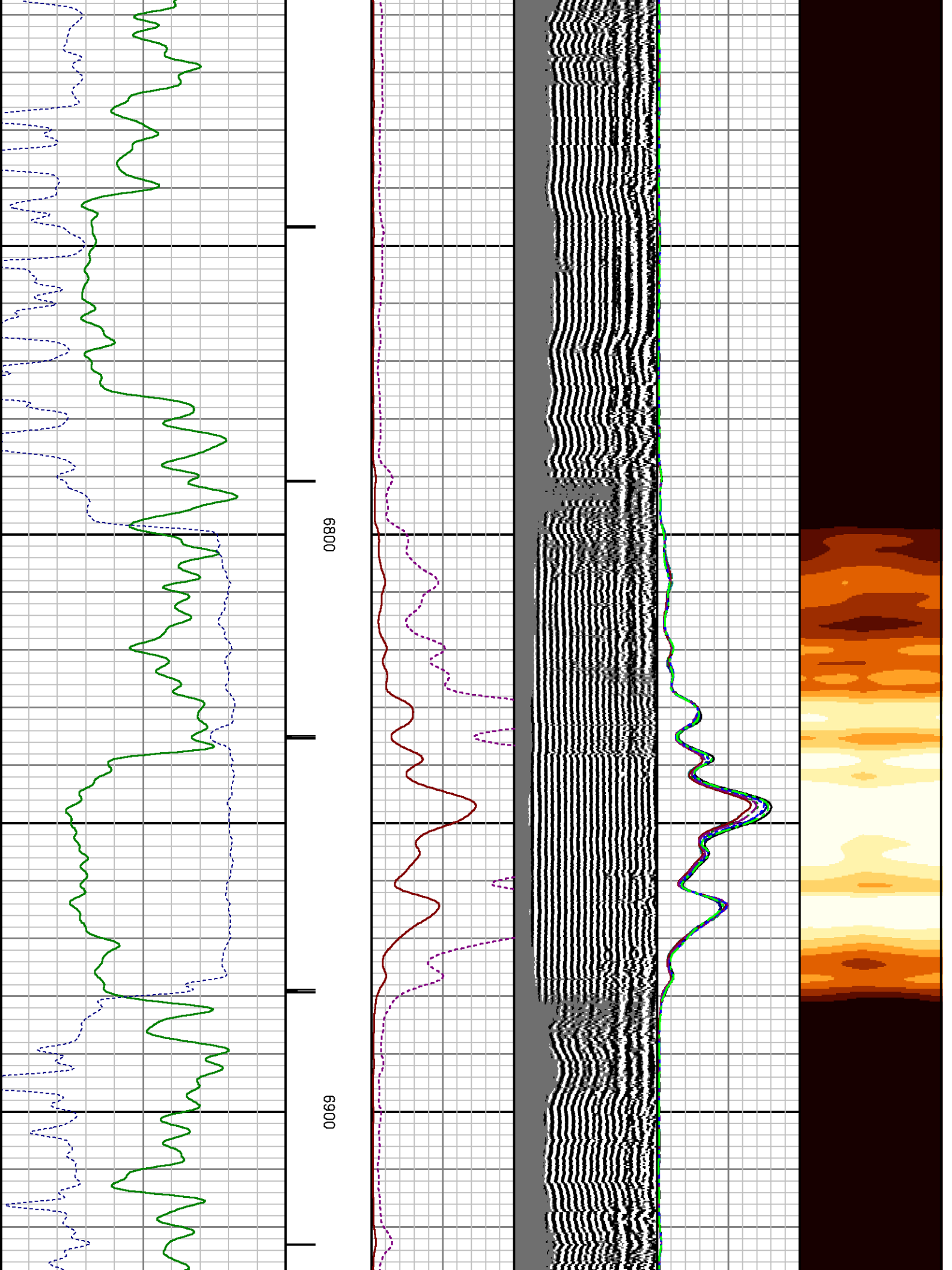




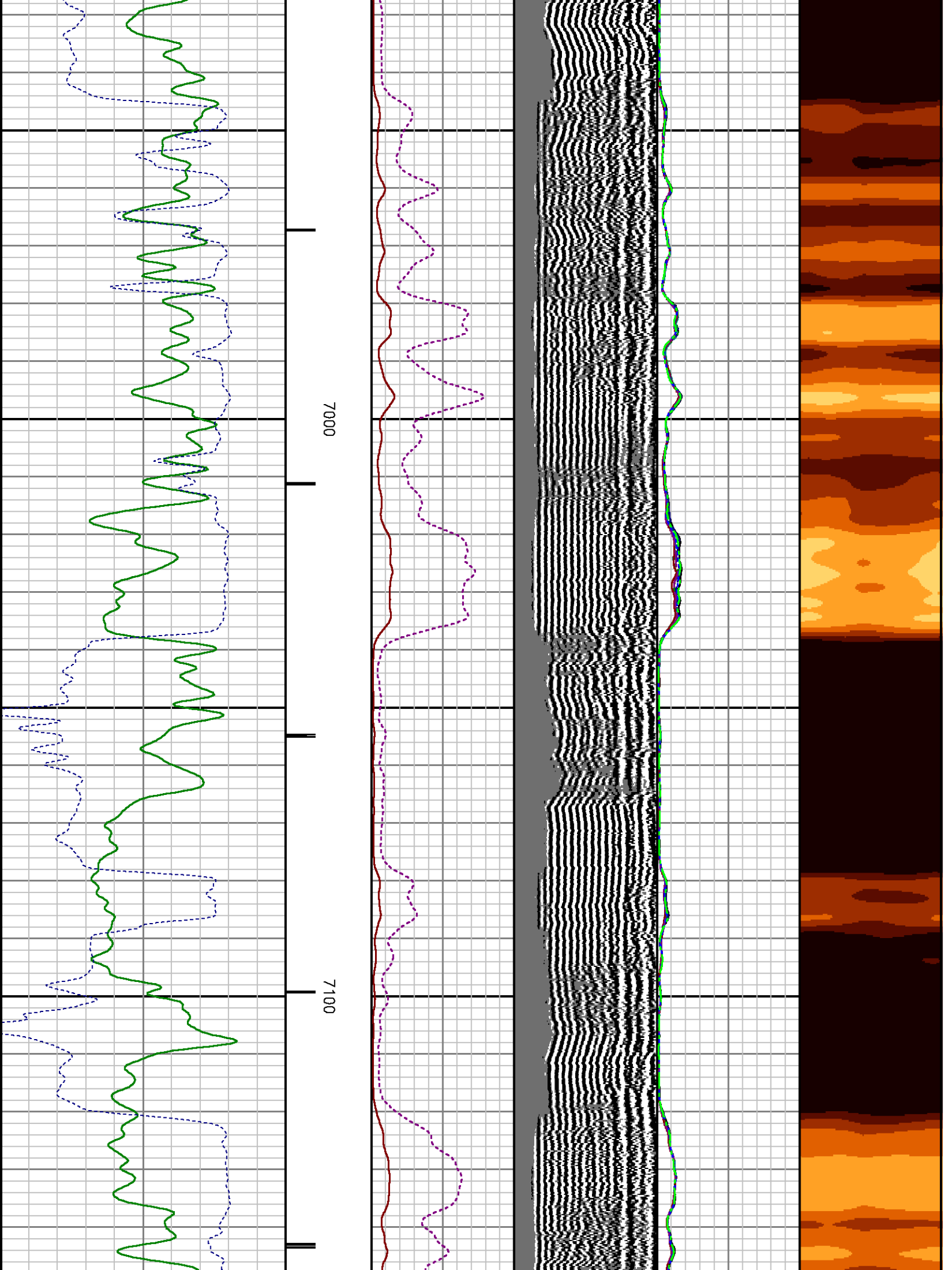




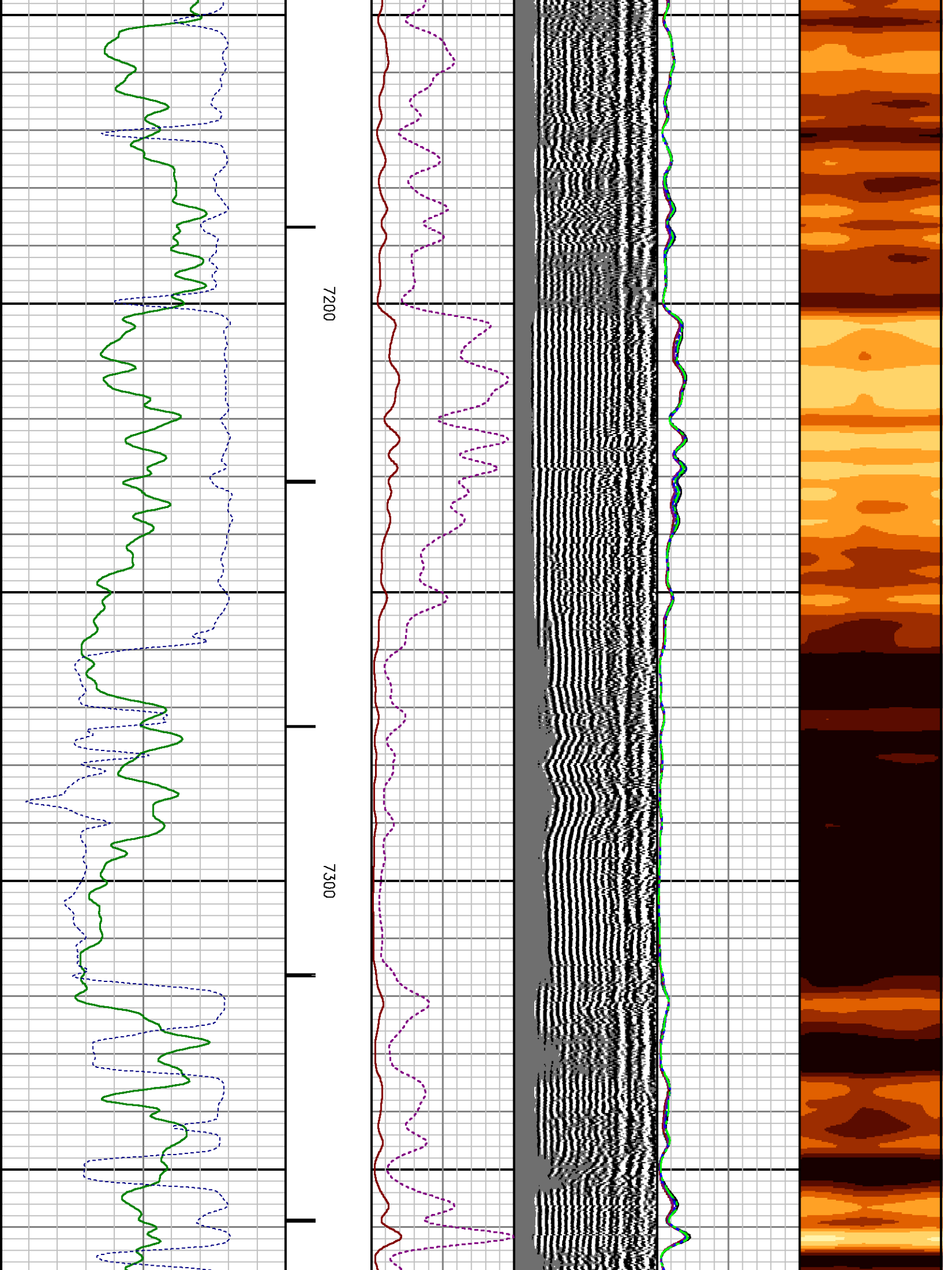


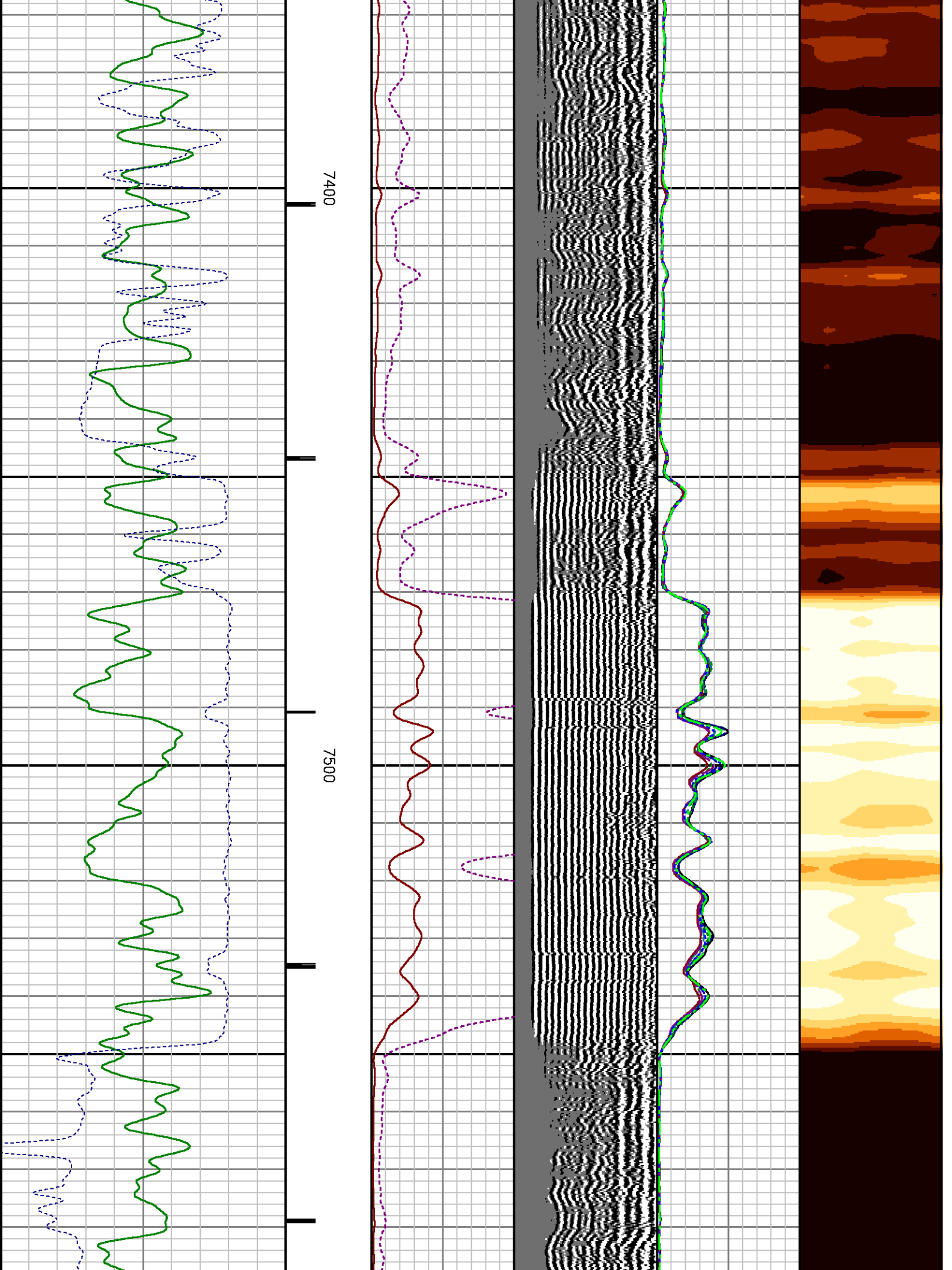


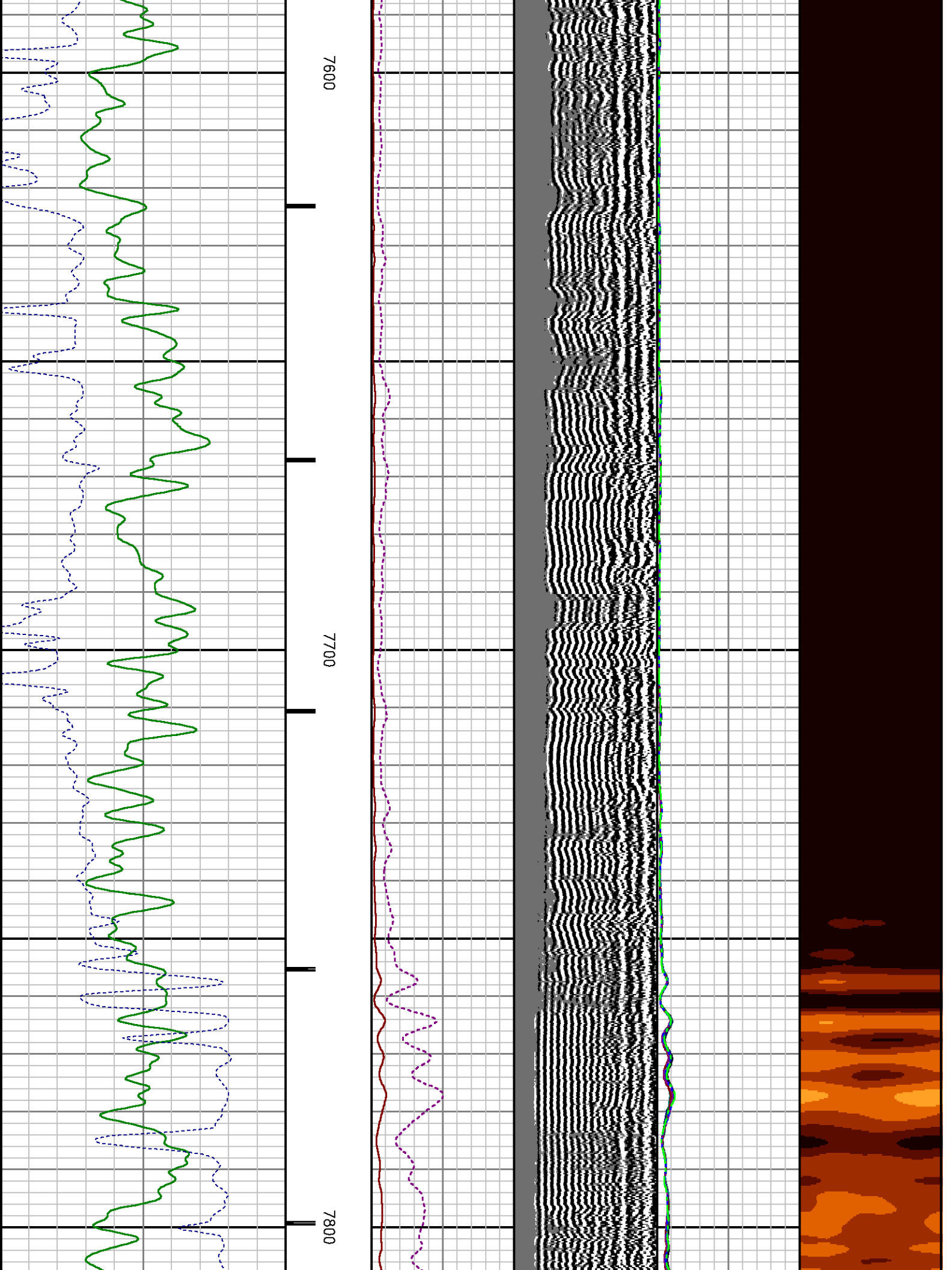


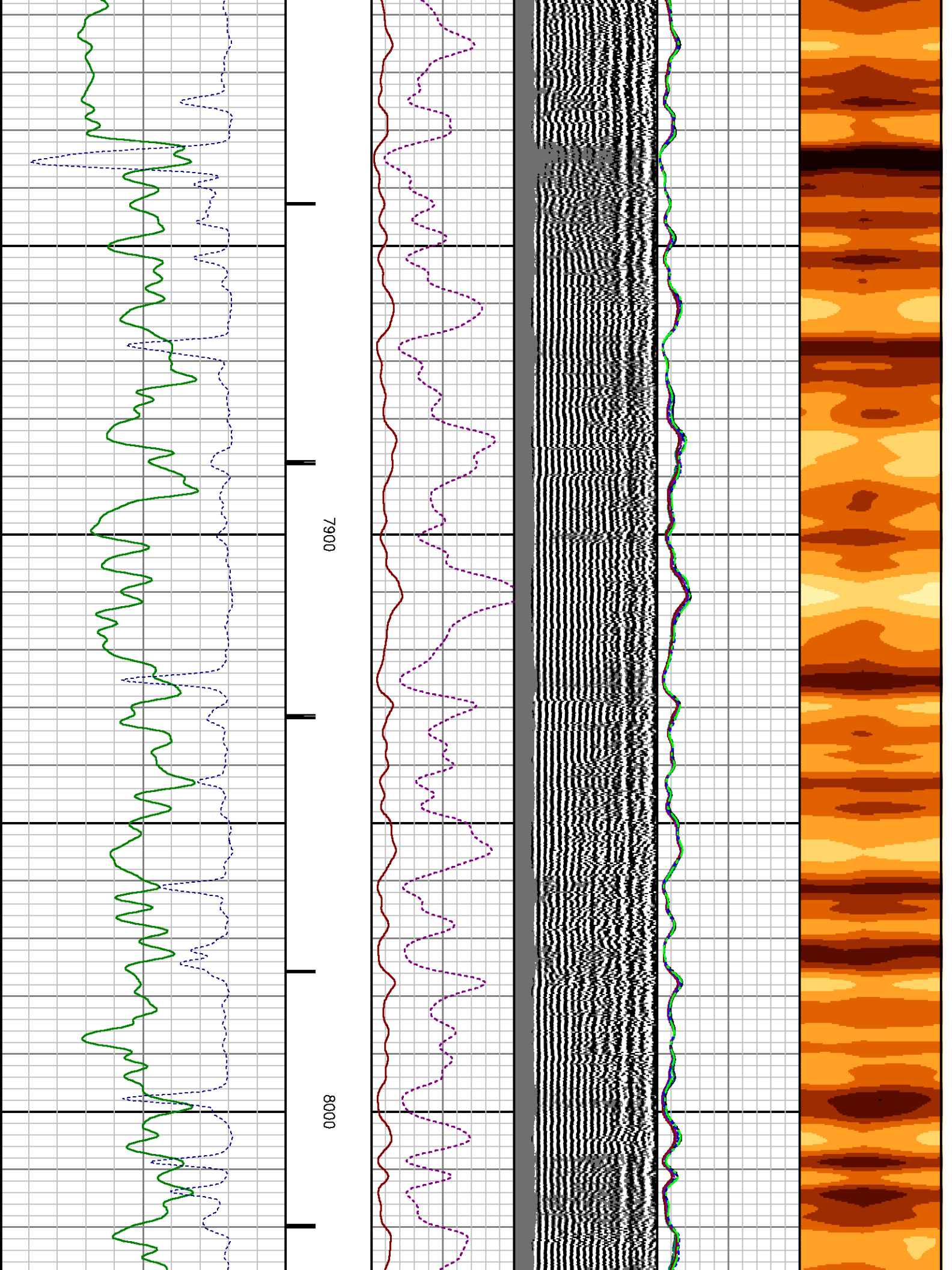


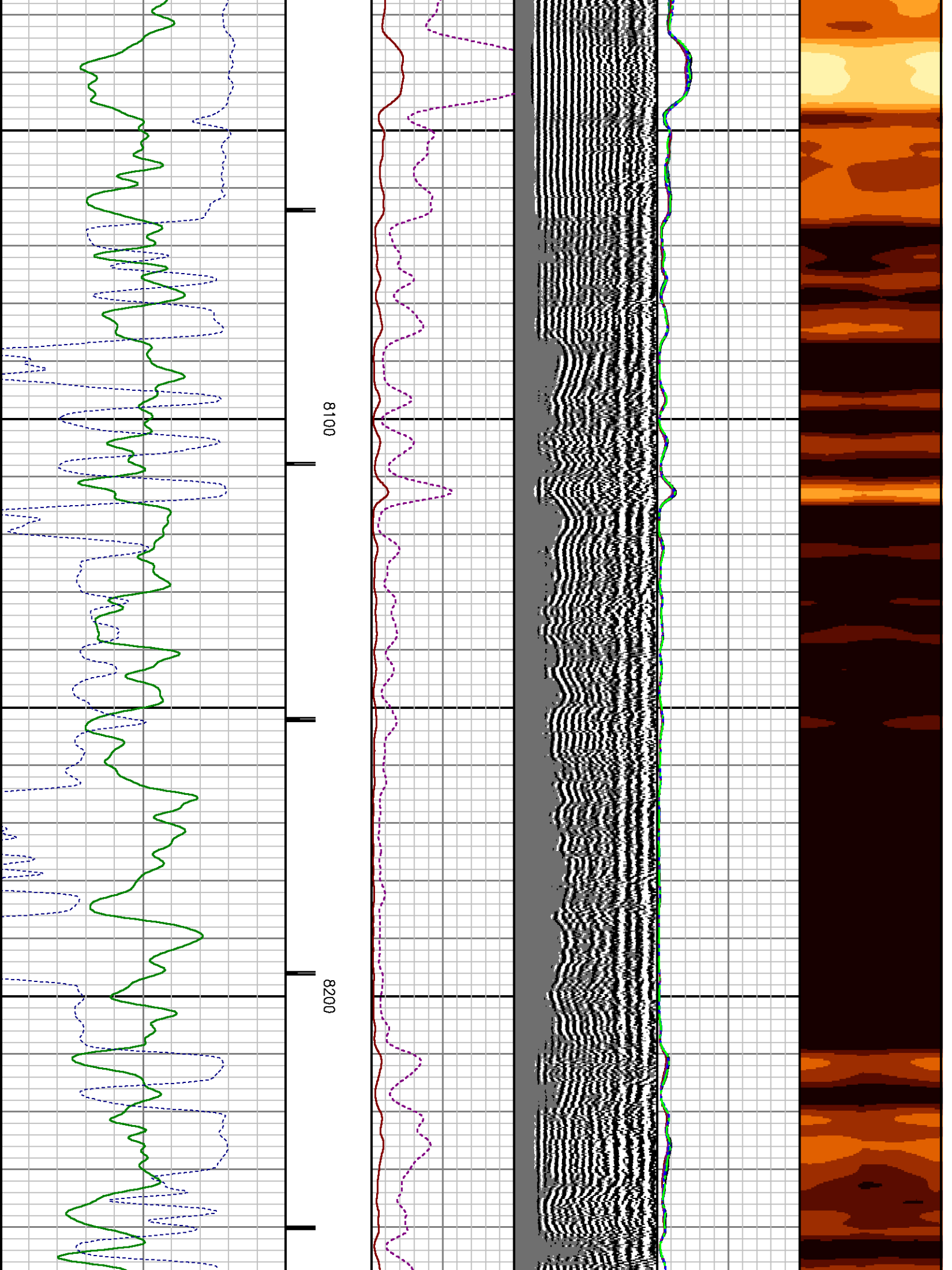




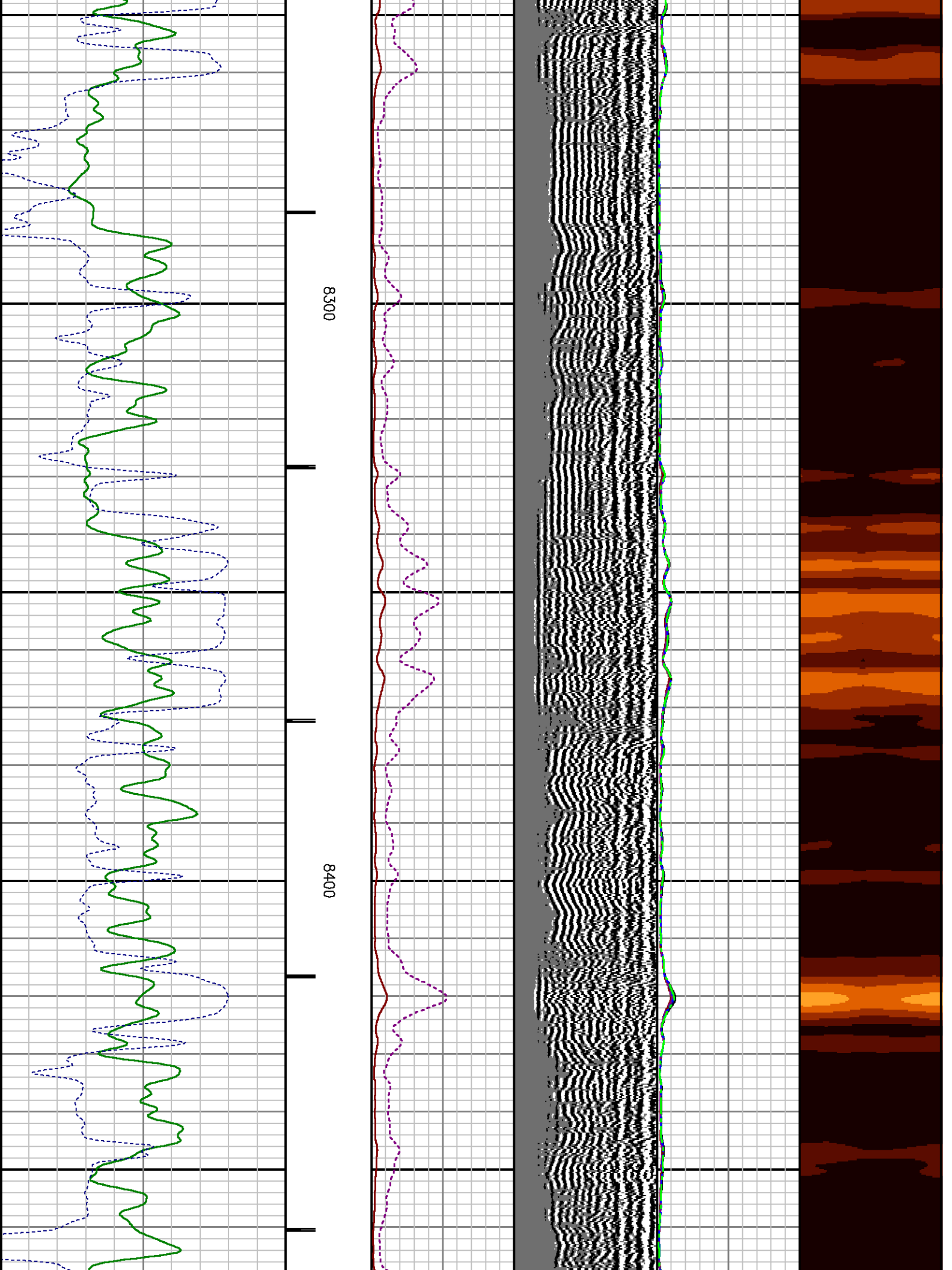




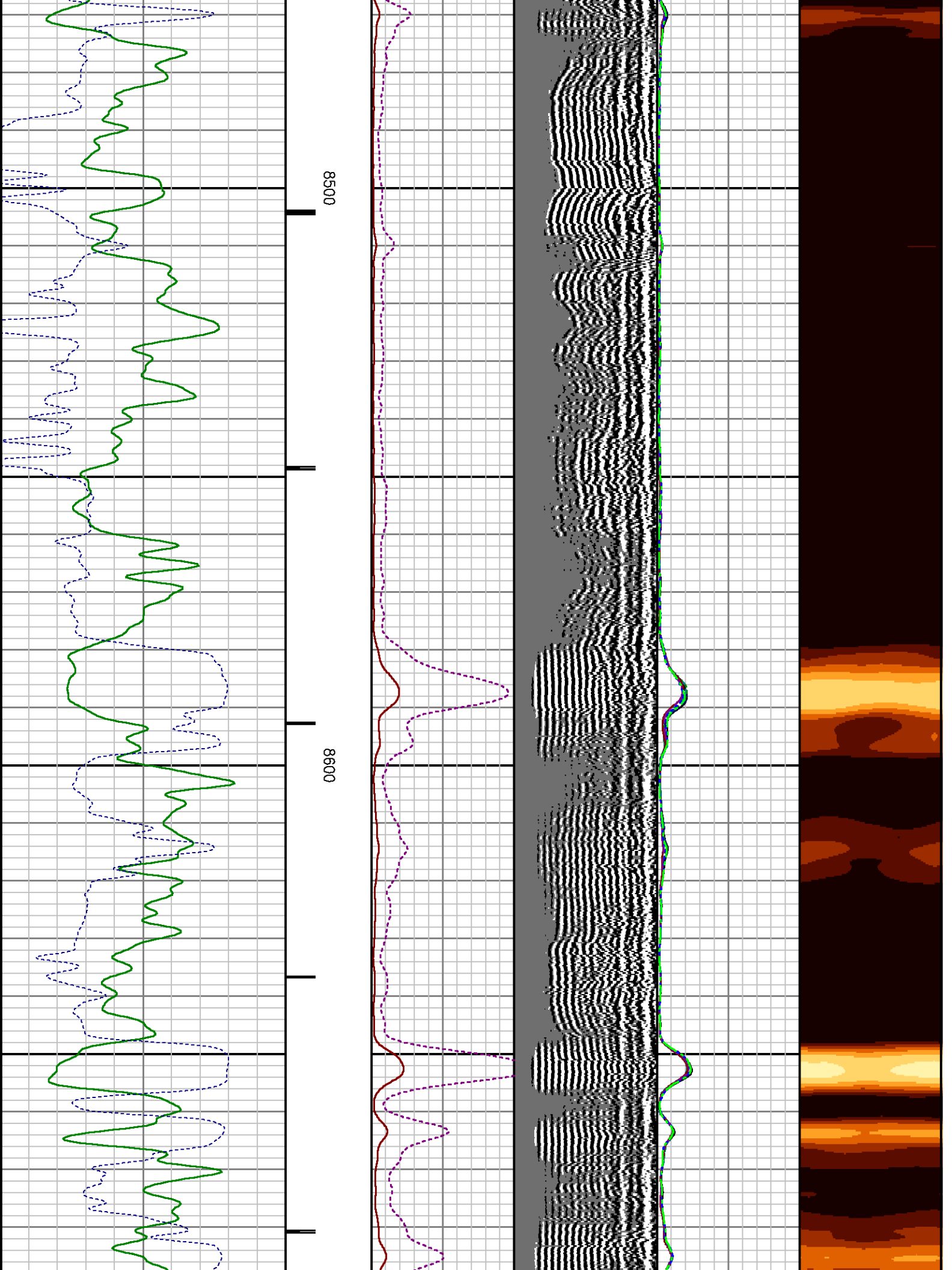


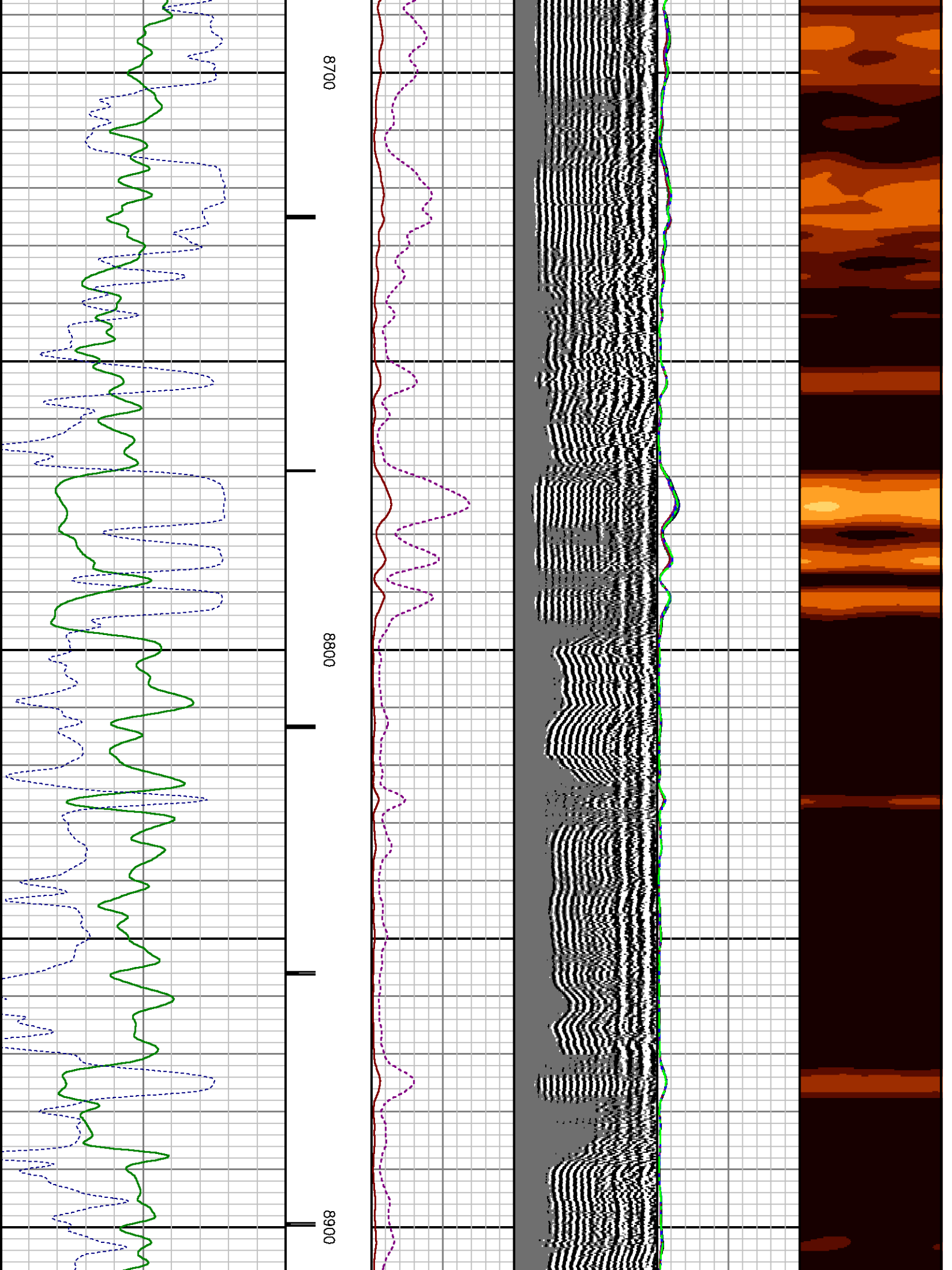


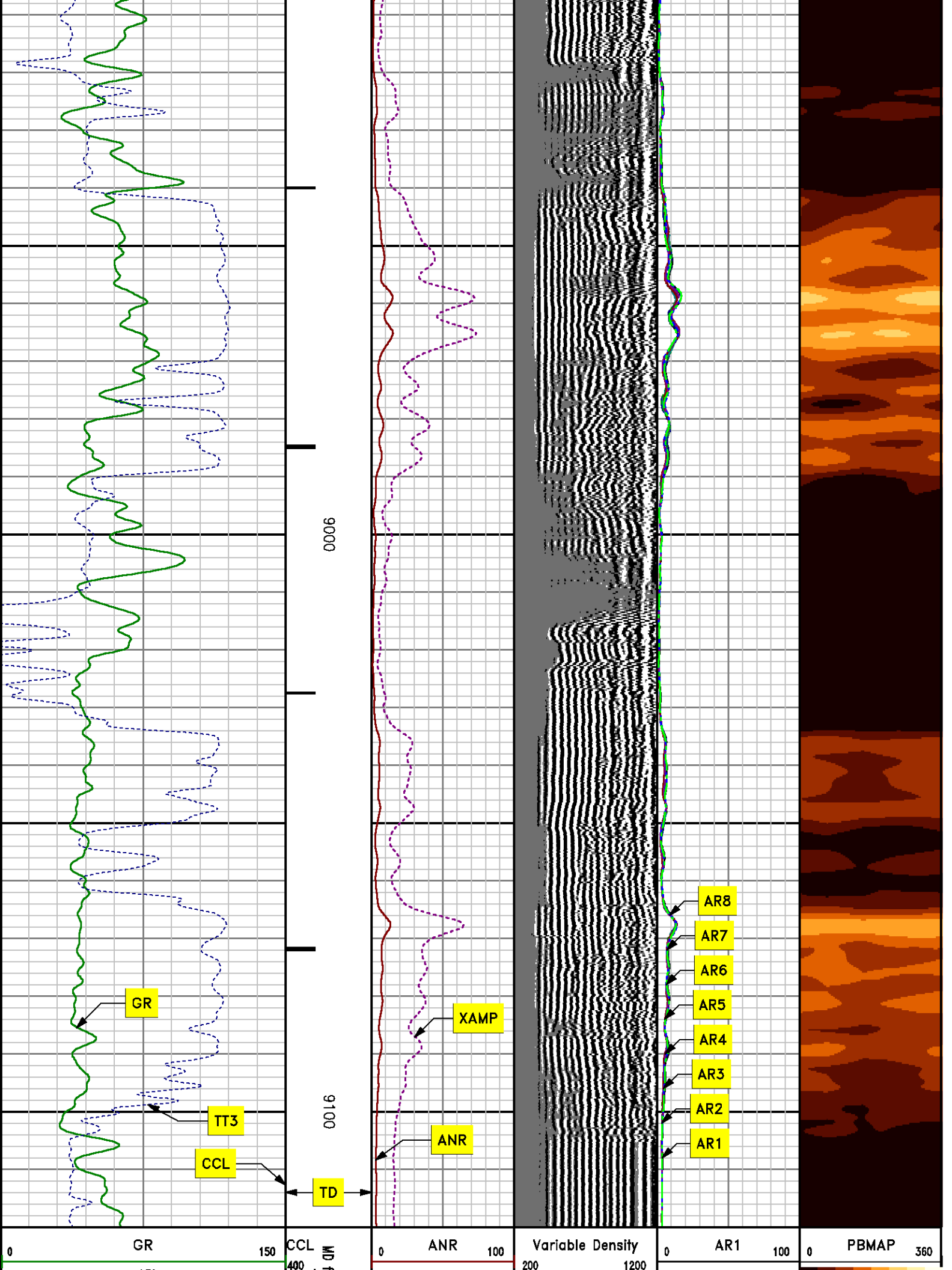


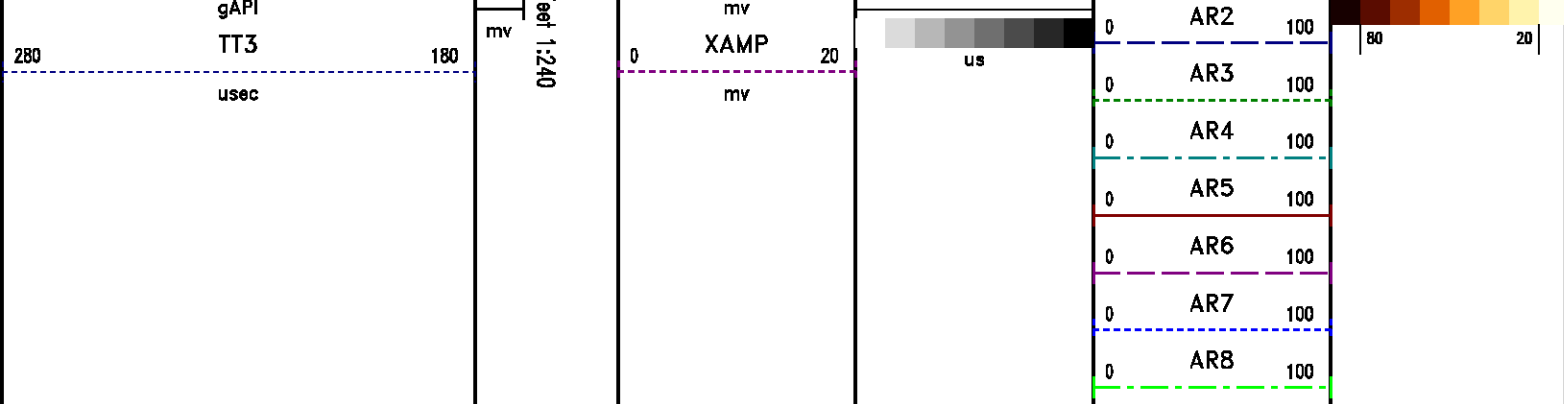












*REPEAT PASS*  
*0 PSI*

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	305.653	usec	8799.812	9118.000
RAL	Amp Gate Start Near	198.140	usec	8799.812	9118.000
RAL	Amp Gate Start Radial	198.140	usec	8799.812	9118.000
RAL	Amp Gate Width Far	25.000	usec	8799.812	9118.000
RAL	Amp Gate Width Near	25.000	usec	8799.812	9118.000
RAL	Amp Gate Width Radial	25.000	usec	8799.812	9118.000
RAL	casing od	4.500	inches	8799.812	9118.000
RAL	casing wt	11.600	lbm/ft	8799.812	9118.000
RAL	FB Start Far	291.900	usec	8799.812	9118.000
RAL	FB Start Near	175.391	usec	8799.812	9118.000
RAL	FB Start Radial	175.391	usec	8799.812	9118.000
RAL	FB Thresh Far	10.000	mv	8799.812	9118.000
RAL	FB Thresh Near	4.000	mv	8799.812	9118.000
RAL	FB Thresh Radial	4.000	mv	8799.812	9118.000
RAL	Fluid Travel Time	200.000	usec/ft	8799.812	9117.999

**DEPTH OFFSETS**  
(for Acquired Curves)

SERIES

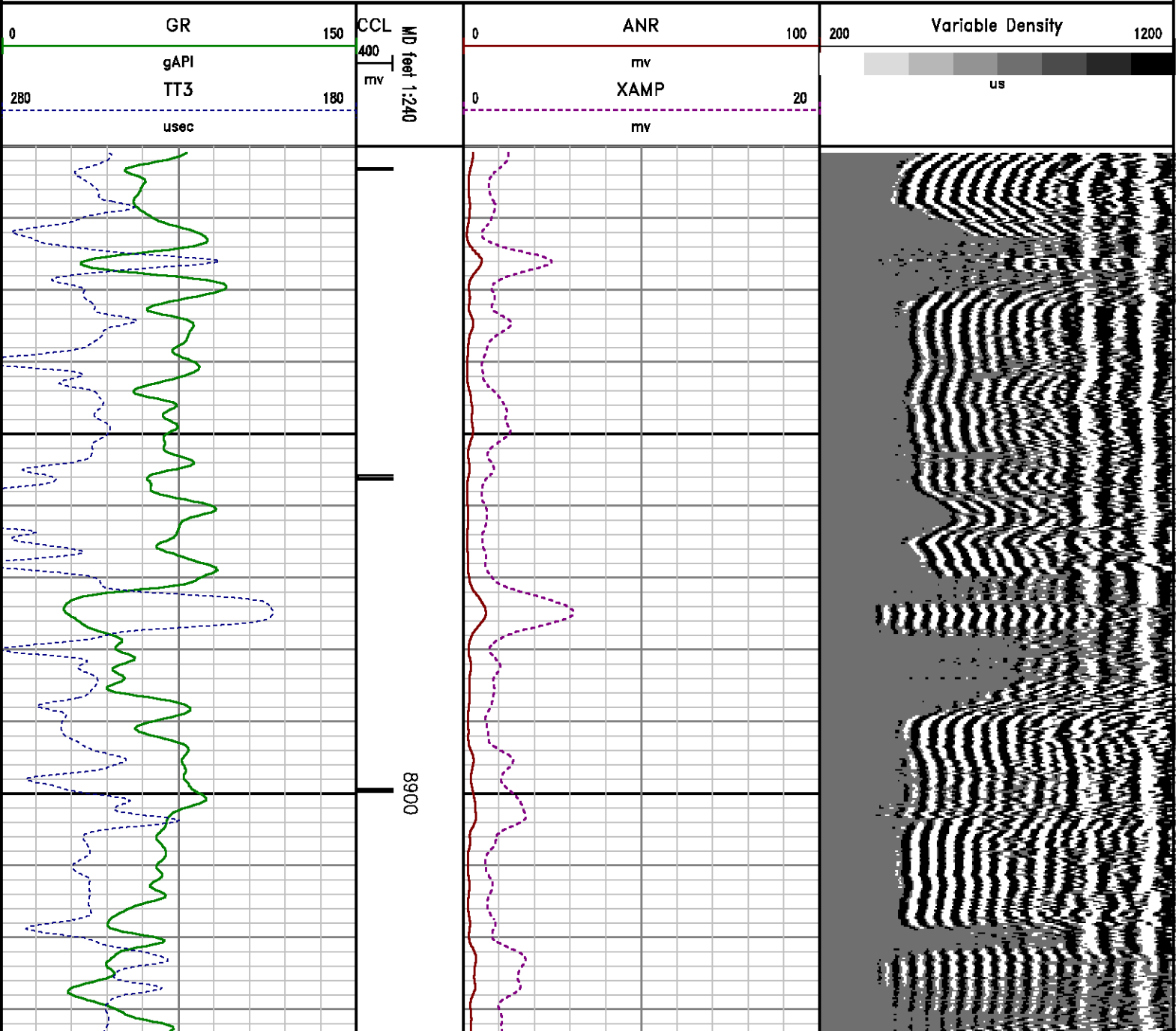
DEPTH OFFSET

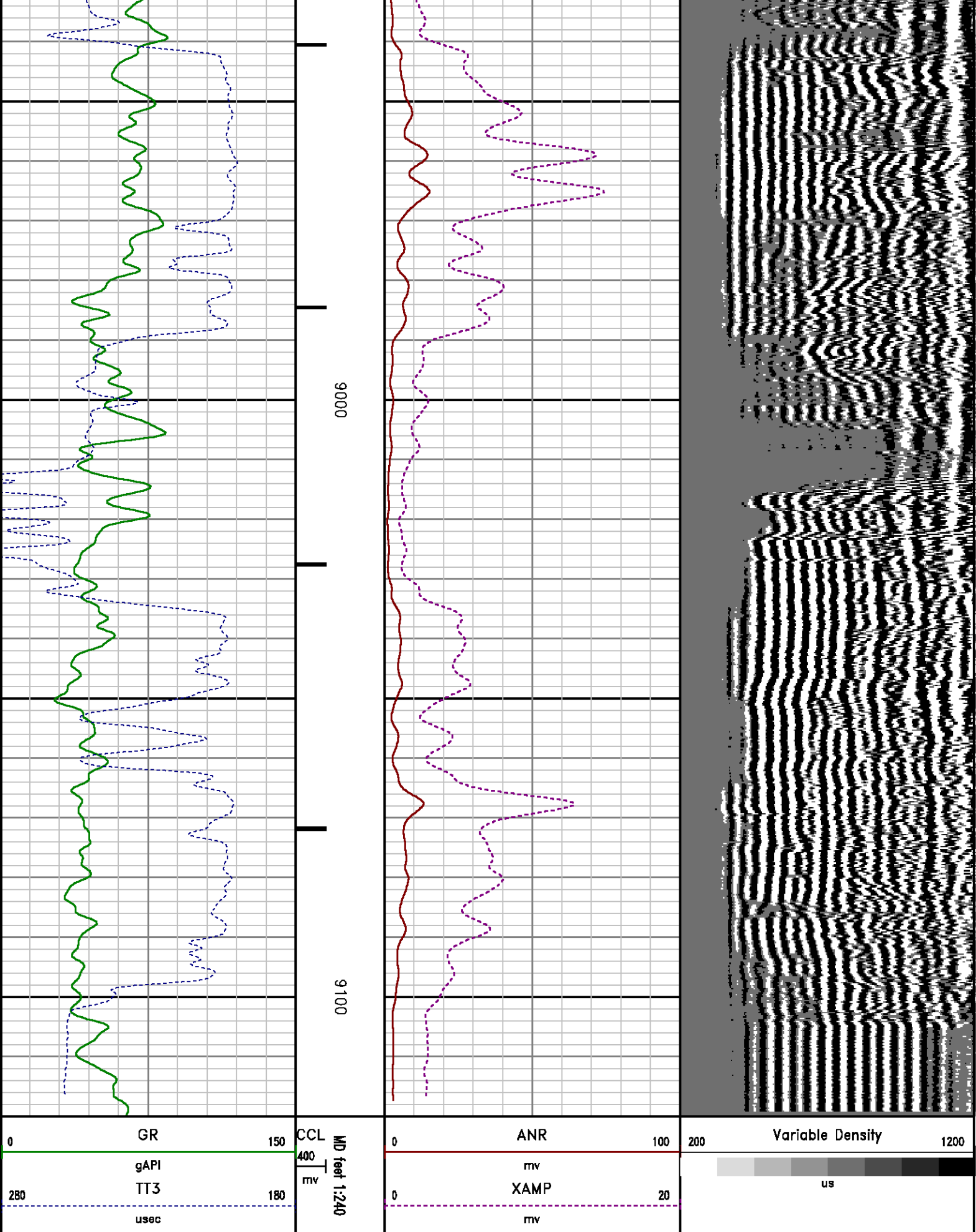
ACQUIRED CURVES

1426XA -11.000  
 1426XA -10.040  
 1355XA -5.620  
 1355XA -1.500  
 1355XA 0.000

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			
CCL					
GR					
TEMP					

Created by : RAL, v4.8.008  
 Plotted by : PlotMgr, v5.4.504  
 Company : WPX ENERGY  
 Well : HOEPPLI RWF 34-36  
 File Name : d:\welldata\cb134\repeat.xtf  
 Mode : PlotMgr 5.4.504  
 Interval : 8810.00 - 9120.00 feet UP  
 Created : 7/22/2013 8:19:24 AM







# CALIBRATION SUMMARY

## RALSHP

Shop Calibration: C:\case\calver\RALSHP\106JUL21 shp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Jul 21 07:58:14 2013 TOOL SERIES: 1426XA ASSET: 106 SEQ: JUL21

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

RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	219	216	30	166	25	0.060	100.00	0.18
3 Ft. Receiver	220	216	30	166	25	-0.479	100.00	0.18
5 Ft. Receiver	328	323	30	260	25	0.339	150.00	0.19
Radial #1	219	216	30	166	25	-0.958	100.00	0.18
Radial #2	219	216	30	166	25	0.035	100.00	0.18
Radial #3	220	216	30	166	25	-0.135	100.00	0.18
Radial #4	220	216	30	166	25	-0.549	100.00	0.18
Radial #5	220	216	30	166	25	-0.139	100.00	0.18
Radial #6	220	216	30	166	25	-0.456	100.00	0.18
Radial #7	219	216	30	166	25	-0.416	100.00	0.18
Radial #8	220	216	30	166	25	-0.339	100.00	0.18

## RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\106JUL21 fld.cal

### WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Jul 21 07:59:39 2013 TOOL SERIES: 1426XA ASSET: 106 SEQ: JUL21

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

RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	166	25	0.005	0.000	0.99	100.000
3 Ft. Receiver	200	30	-1.348			
5 Ft. Receiver	317	30	-1.966			
Radial #1	200	30	-2.443			
Radial #2	200	30	-1.949			
Radial #3	200	30	-1.620			
Radial #4	200	30	-1.818			

Radial #1	200	30	-1.591
Radial #5	200	30	-1.620
Radial #6	200	30	-1.254
Radial #7	200	30	-1.557
Radial #8	200	30	

## 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

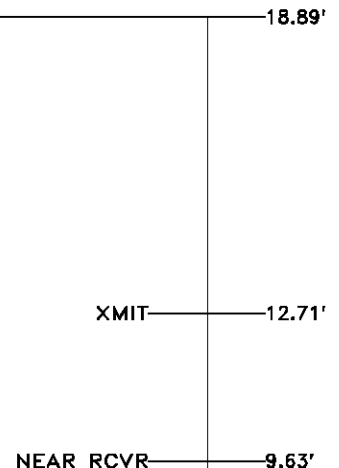
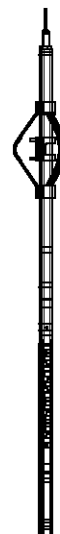
DATE/TIME PERFORMED: Thu Jun 27 10:52:46 2013 TOOL SERIES: 2459XA ASSET: 209 SEQ: J7

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



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



FAR RCVR	7.71'
CCL	5.79'
GR	1.67'
TEMP	0.17'
	0.00'

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



Company	WPX ENERGY		
Well	HOEPPLI RWF 34-36		
Field	RULISON		
County	GARFIELD	State	COLORADO

File No:	CH074543
API No:	05045215490000

#### Location

SHL: 2619' FNL & 2598' FEL  
BHL: 950' FSL & 1882' FEL

#### Elevations

KB 6554 ft  
DF  
GL 6528 ft

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

SEC 36 TWP 6S RGE 94W

04957

Baker Atlas