



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: **WILLIAMS PRODUCTION COMPANY**

Company **SG 443-28**

Well **GRAND VALLEY**

Field **GRAND VALLEY**

County **GARFIELD**

State **COLORADO**

API No: **05045191760000**

Location

SHL: 1247' FSL, 1512' FEL

BHL: 1855' FSL, 661' FEL (NESE)

Other Services

RPM

S28 T7S R96W  
PAD: SG 34-28  
RIG: MABORS 574

SEC 28 TWP 7S RGE 96W

G.L. Elevation 5089 ft

K.B. 23 ft Above P. D.

KELLY BUSHING

Elevations

KB 5112 ft

DF 5111 ft

GL 5089 ft

Permanent Datum  
Log Measured From  
Drill Measured From

Date	19/SEP/10	
Run	ONE	
Service Order	567937	
Depth Driller	5232 ft	
Depth Logger	5173 ft	
Bottom Logged Interval	5173 ft	
Top Logged Interval	SURFACE	
Time Started	15:30	
Time Finished	18:00	
Operator Rig Time	2.5 hrs	
Type of Fluid in Hole	WATER	
Fluid Density	N/A	
Salinity	N/A	
Fluid Level	FULL	
Logged Cement Top	N/A	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	N/A	
Nominal Logging Speed	45 fpm	
Maximum Recorded Temperature	184 degF	
Reference Log	NONE	
Reference Log Date	N/A	
Equipment No.	4271	GRAND JUNCTION
Recorded By	JUSTIN WIESER	
Witnessed By	MR. DALE GOWEN	

- 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	SURFACE	1059 ft
7.875 In	1059ft	5232 ft

Casing Record				
Size	Weight	Grade	From	To
9.625 In	36 lbm/ft	N/A	SURFACE	1059 ft
4.5 In	11.6 lbm/ft	P-110	SURFACE	5232 ft

Remarks
THIS IS THE FIRST LOG OF THE WELL.
THE WELL WAS LOGGED WITH 0 psi AT THE WELL HEAD.
SHORT JOINT AT 1706'-1727'.
BHT = 184 degF.

Equipment Data

Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	10404539	CENTRALIZED
1	1	GR/CCL/TEL	2459XA	10417457	CENTRALIZED

*MAIN SECTION  
PRIMARY PRESENTATION*

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	25.460	5188.000
RAL	Amp Gate Start Near	200.391	usec	25.460	5188.000
RAL	Amp Gate Start Radial	200.391	usec	25.460	5188.000
RAL	Amp Gate Width Far	25.000	usec	25.460	5188.000
RAL	Amp Gate Width Near	25.000	usec	25.460	5188.000
RAL	Amp Gate Width Radial	25.000	usec	25.460	5188.000
RAL	casing od	4.500	inches	25.460	5188.000
RAL	casing wt	11.600	lbm/ft	25.460	5188.000
RAL	FB Start Far	291.900	usec	25.460	5188.000
RAL	FB Start Near	175.391	usec	25.460	5188.000
RAL	FB Start Radial	175.391	usec	25.460	5188.000
RAL	FB Thresh Far	15.000	mv	25.460	5188.000
RAL	FB Thresh Near	10.000	mv	25.460	5188.000
RAL	FB Thresh Radial	10.000	mv	25.460	5188.000
RAL	Fluid Travel Time	200.000	usec/ft	25.460	5187.616

DEPTH OFFSETS  
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	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	-11.360	AFAR	SIG	TT5			
1426XA	-7.250	CCL					
1426XA	-5.700	CD					

1426XA  
1426XA

-5.390  
0.000

GR  
NEU

Created by : MIXED

Plotted by : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION COMPANY

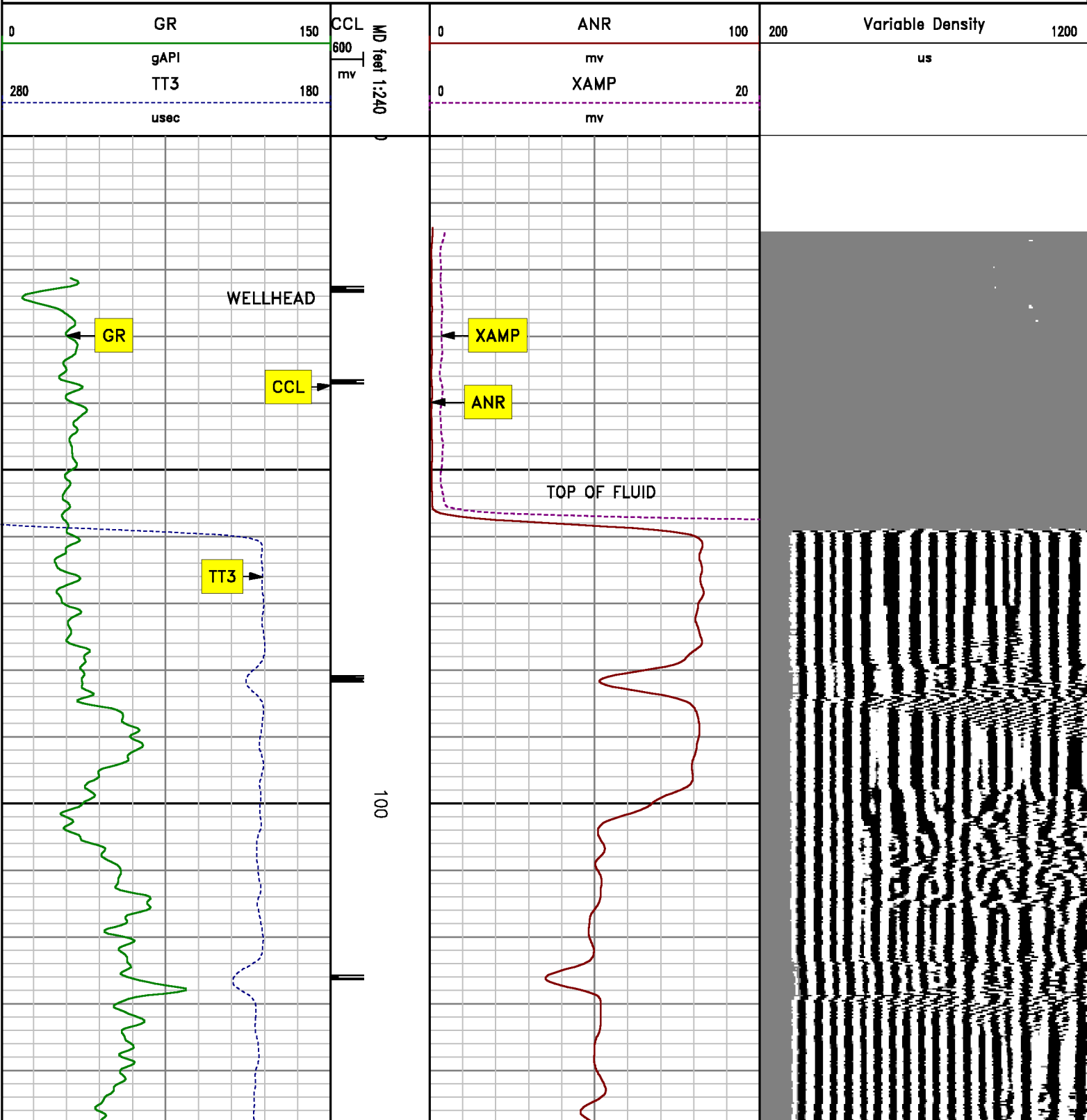
Well : SG 443-28

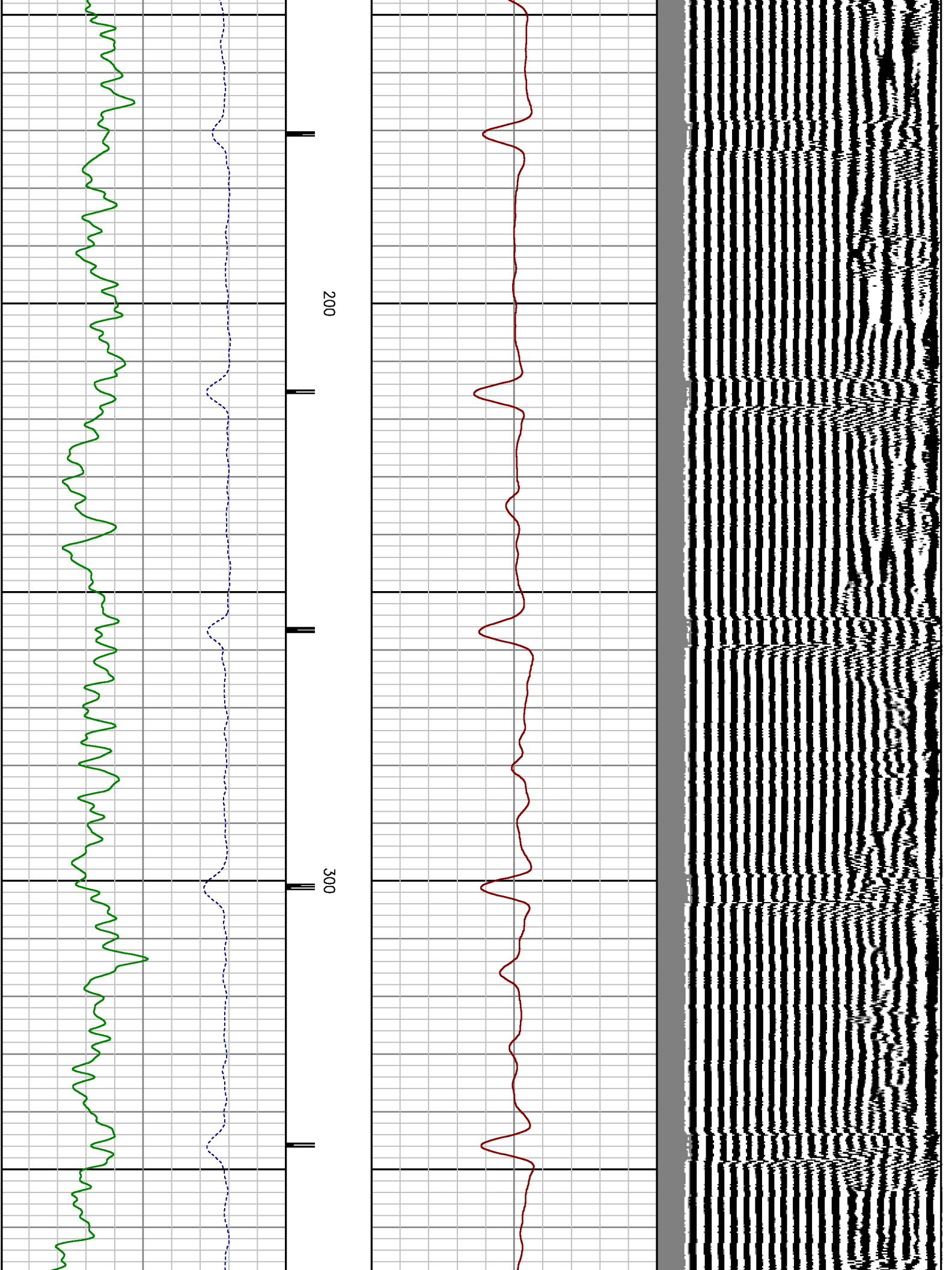
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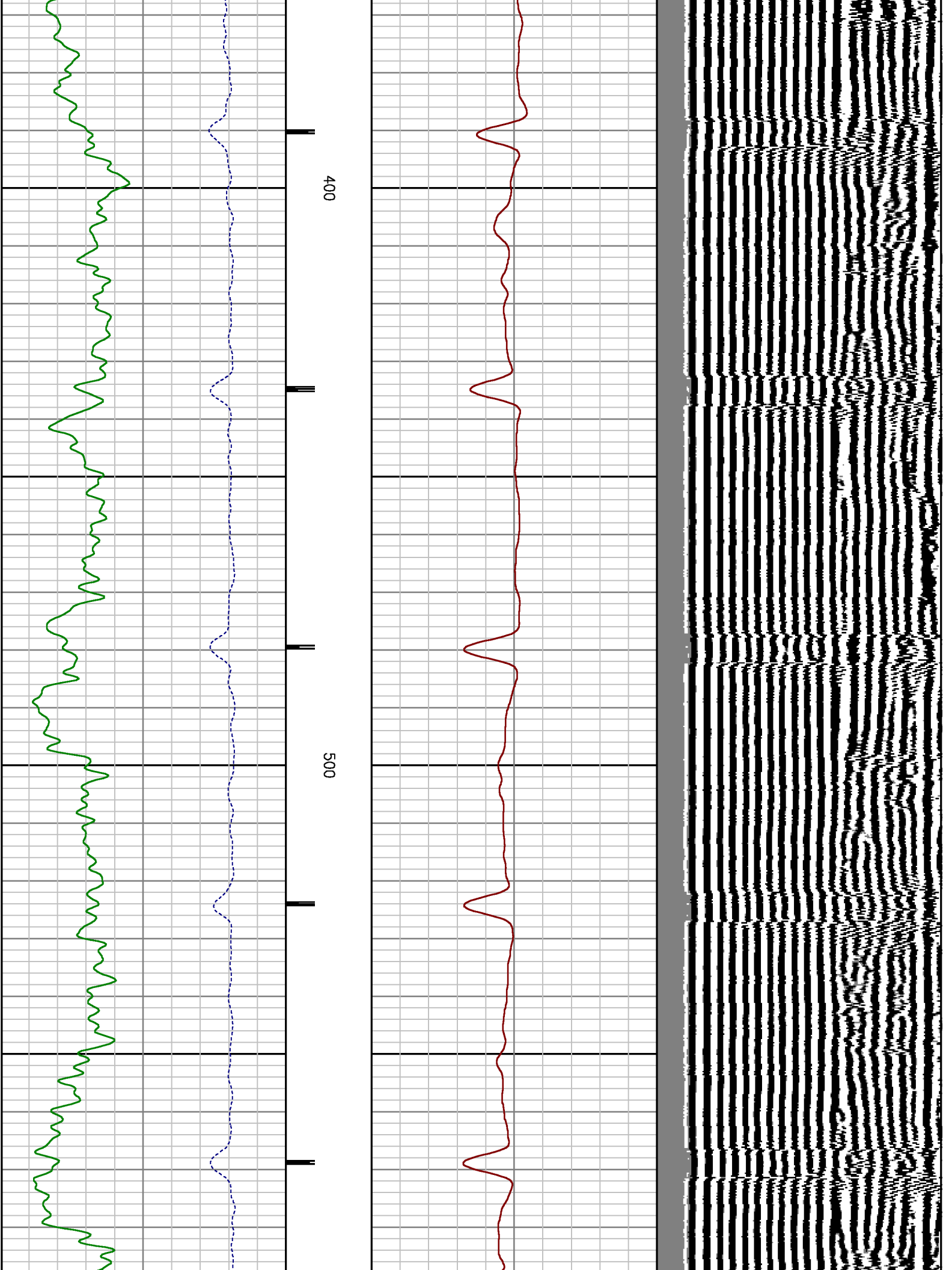
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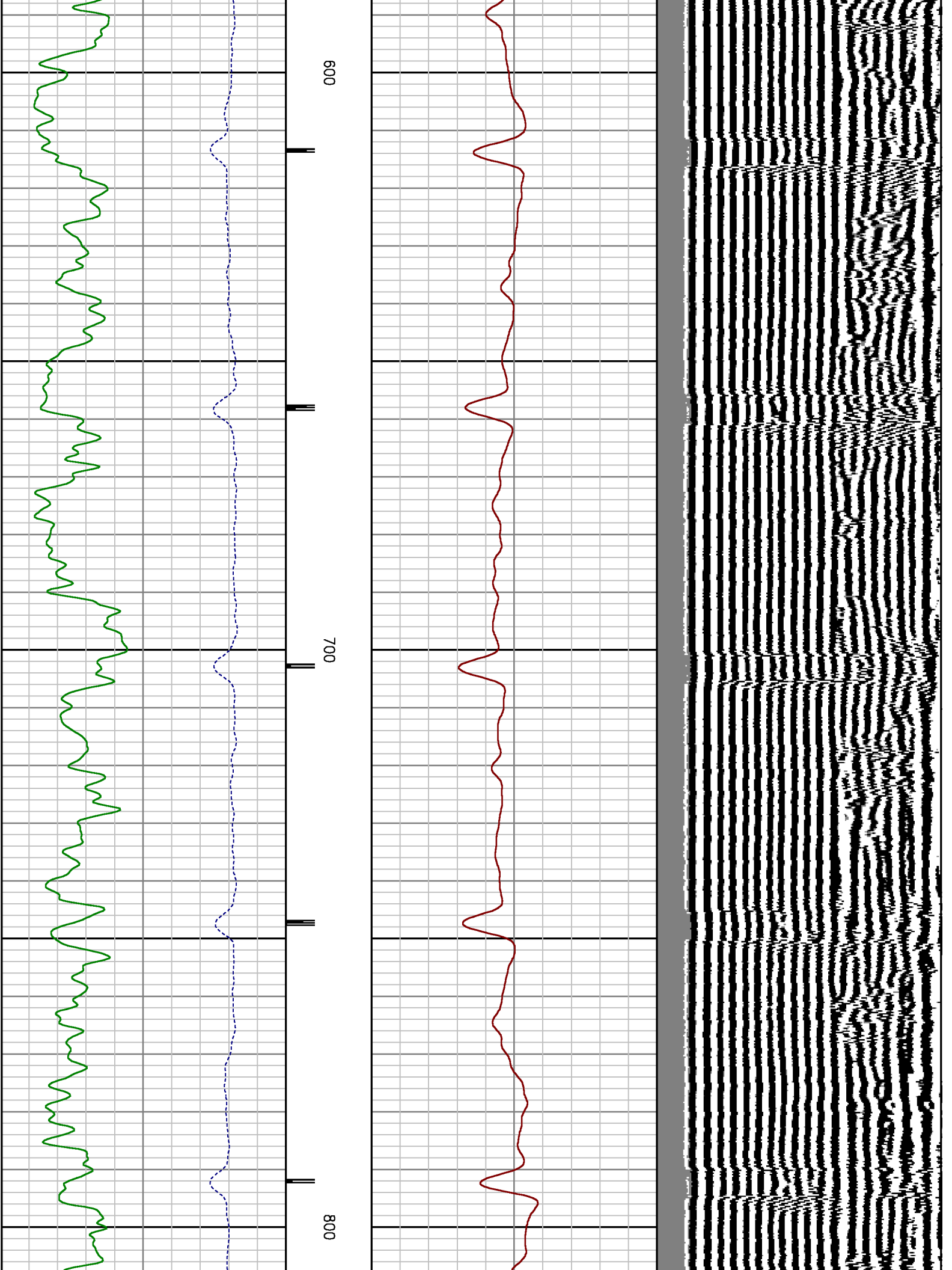
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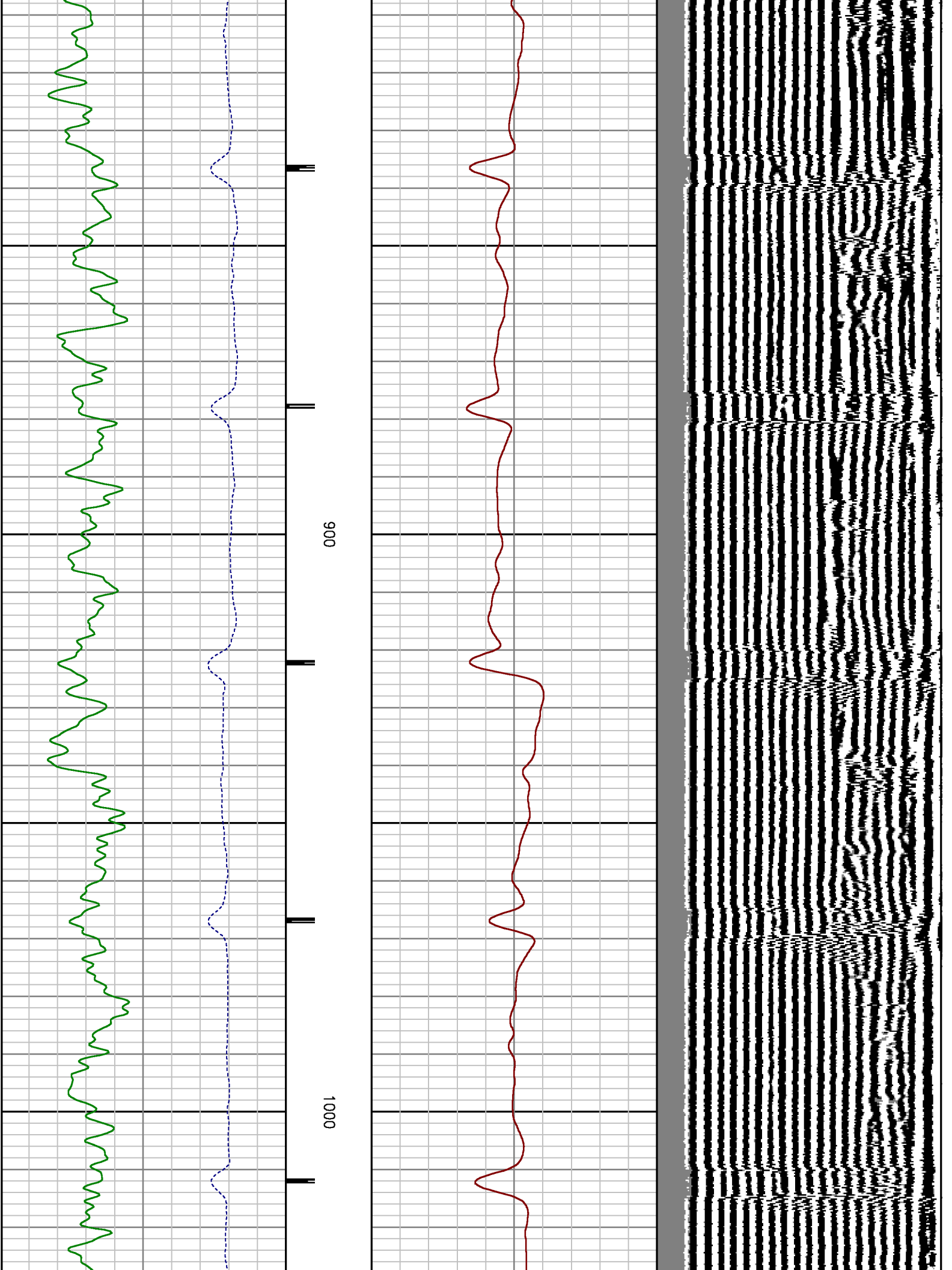


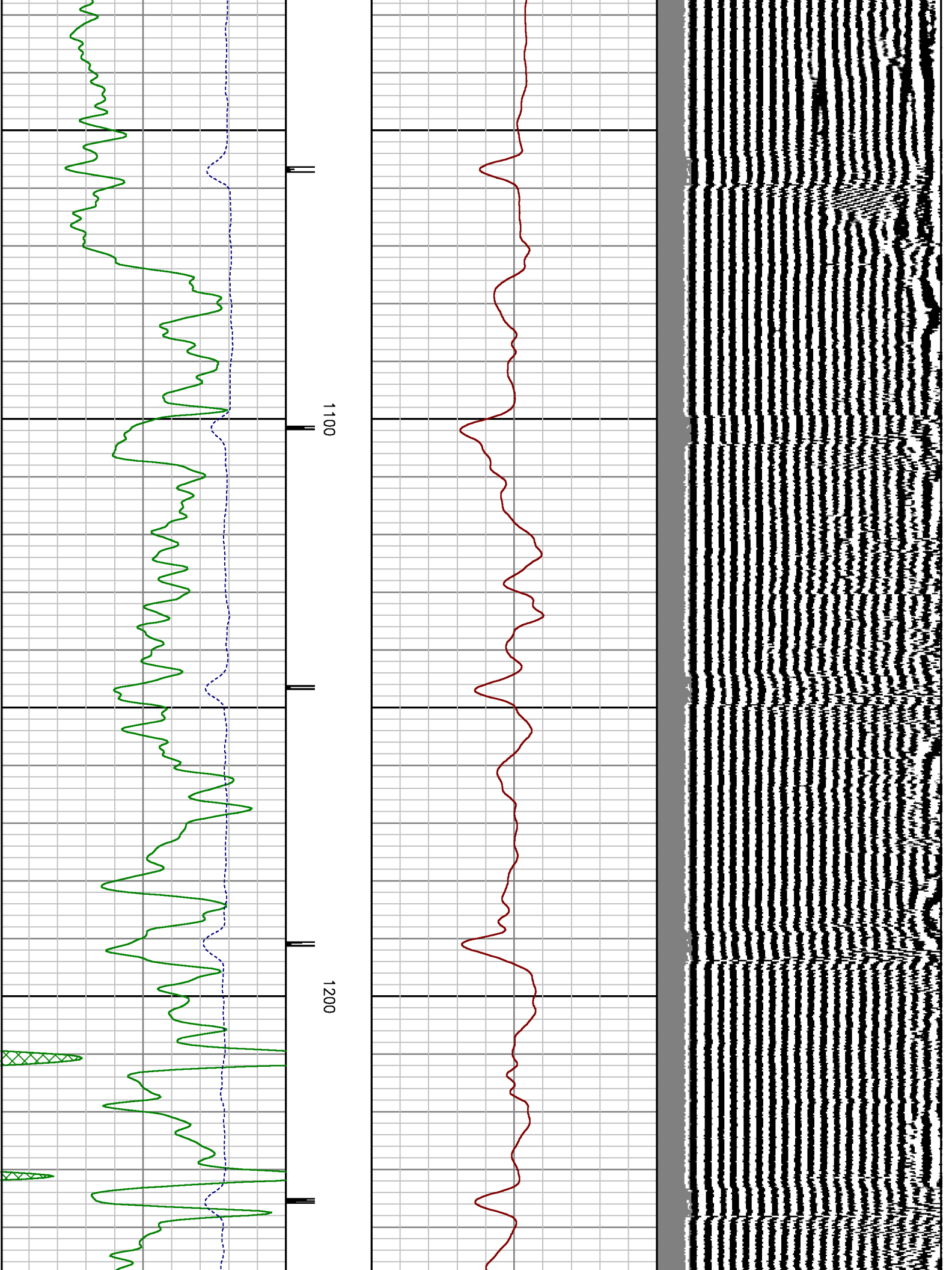


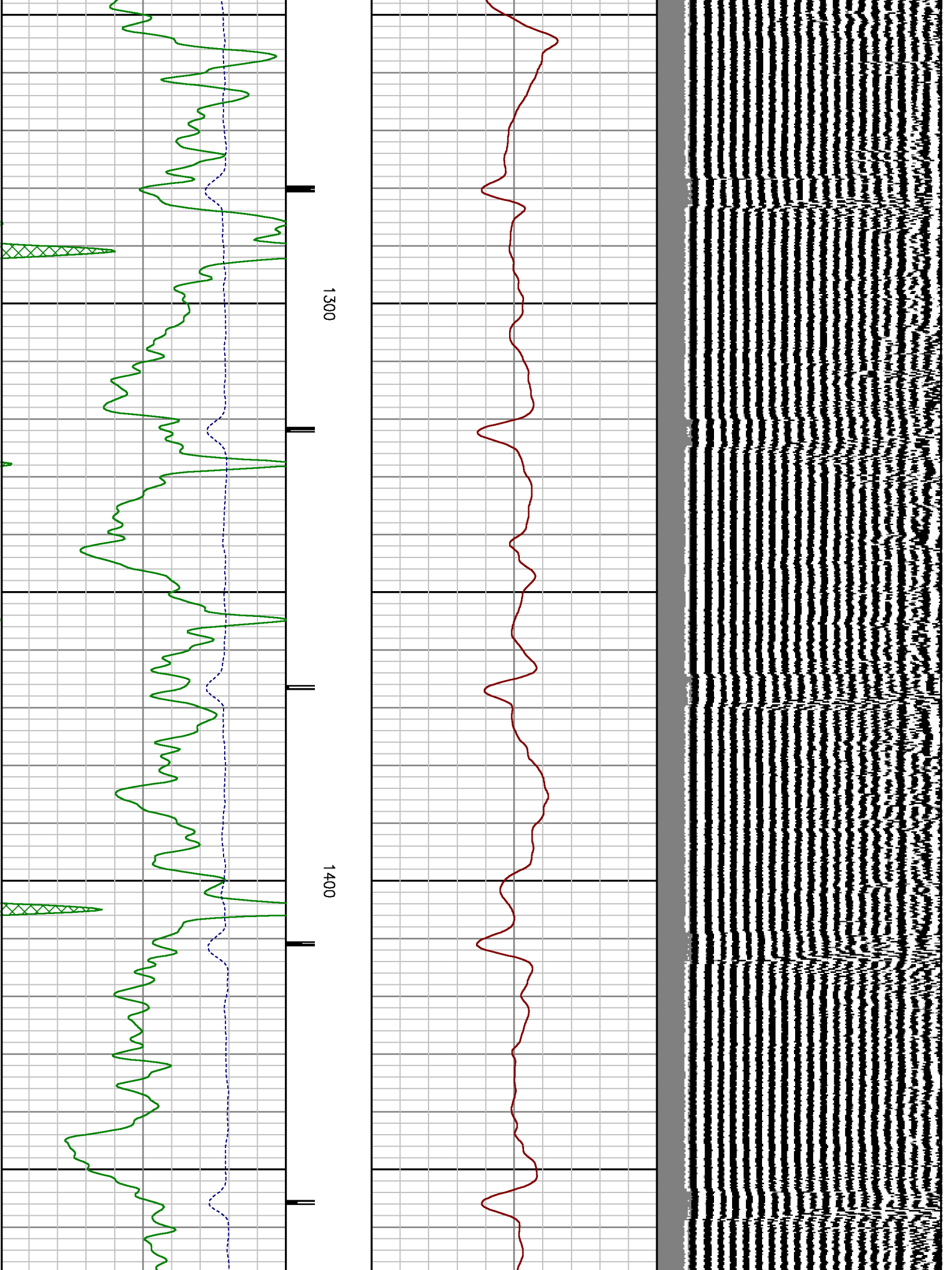


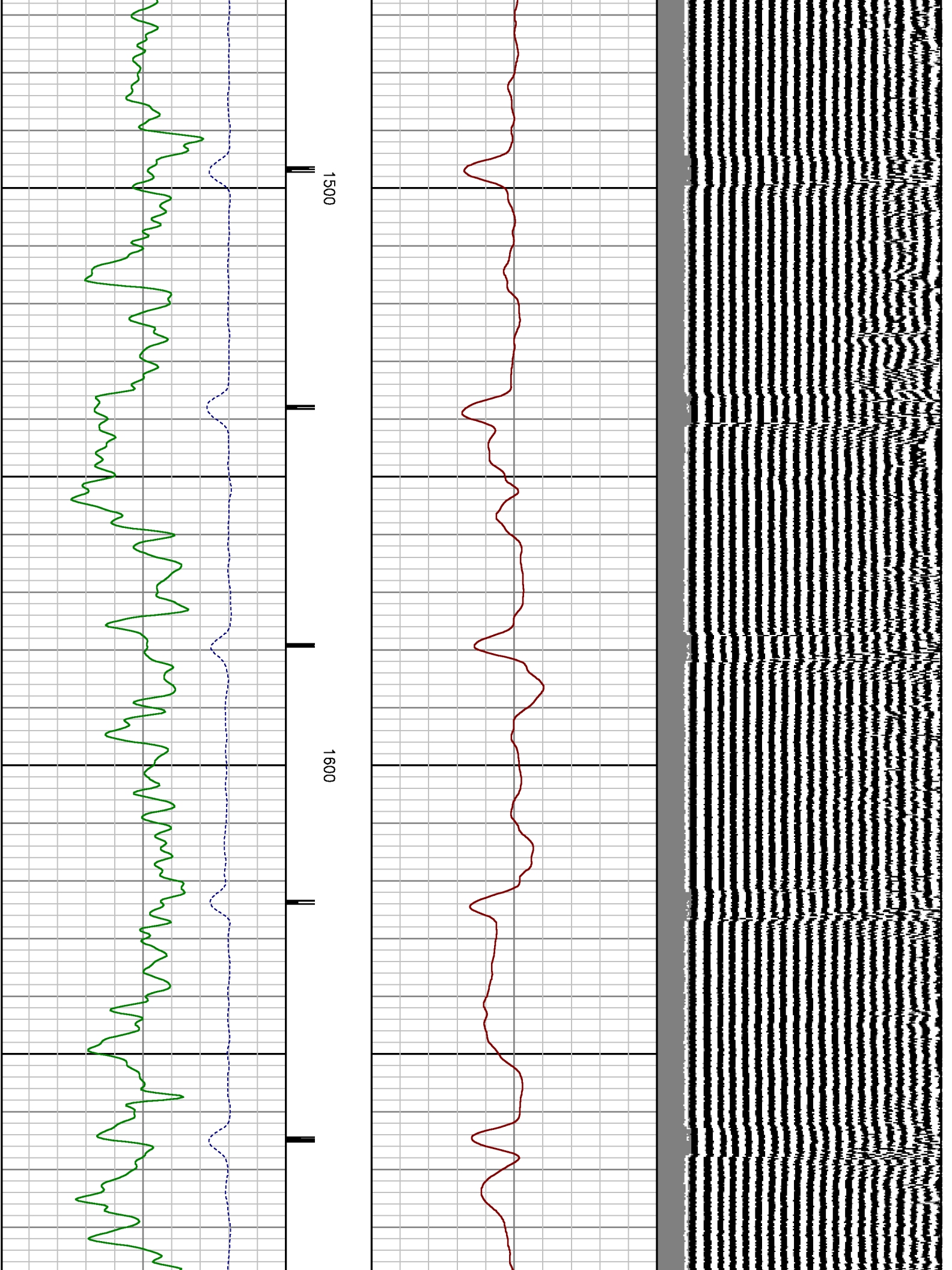




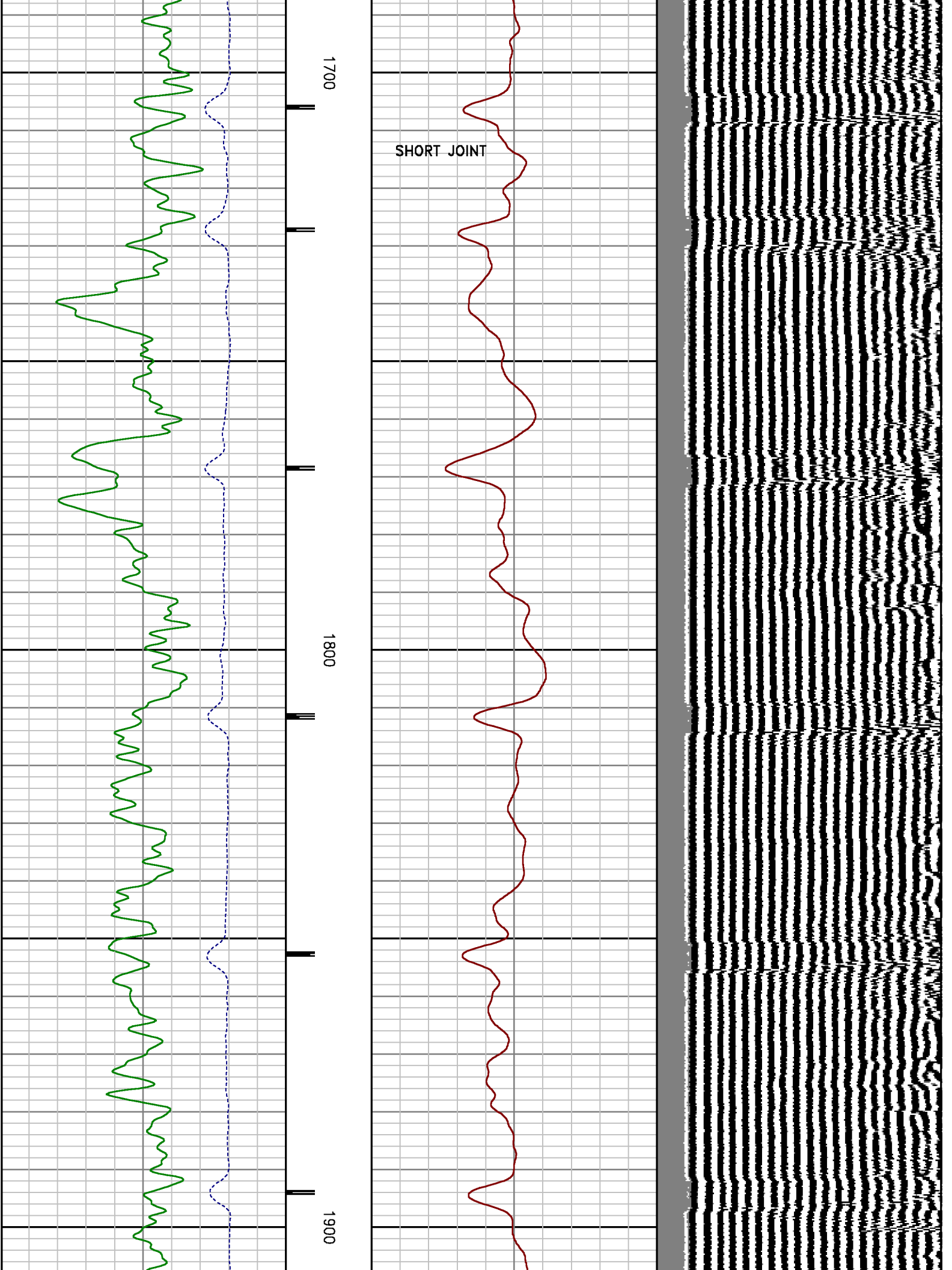


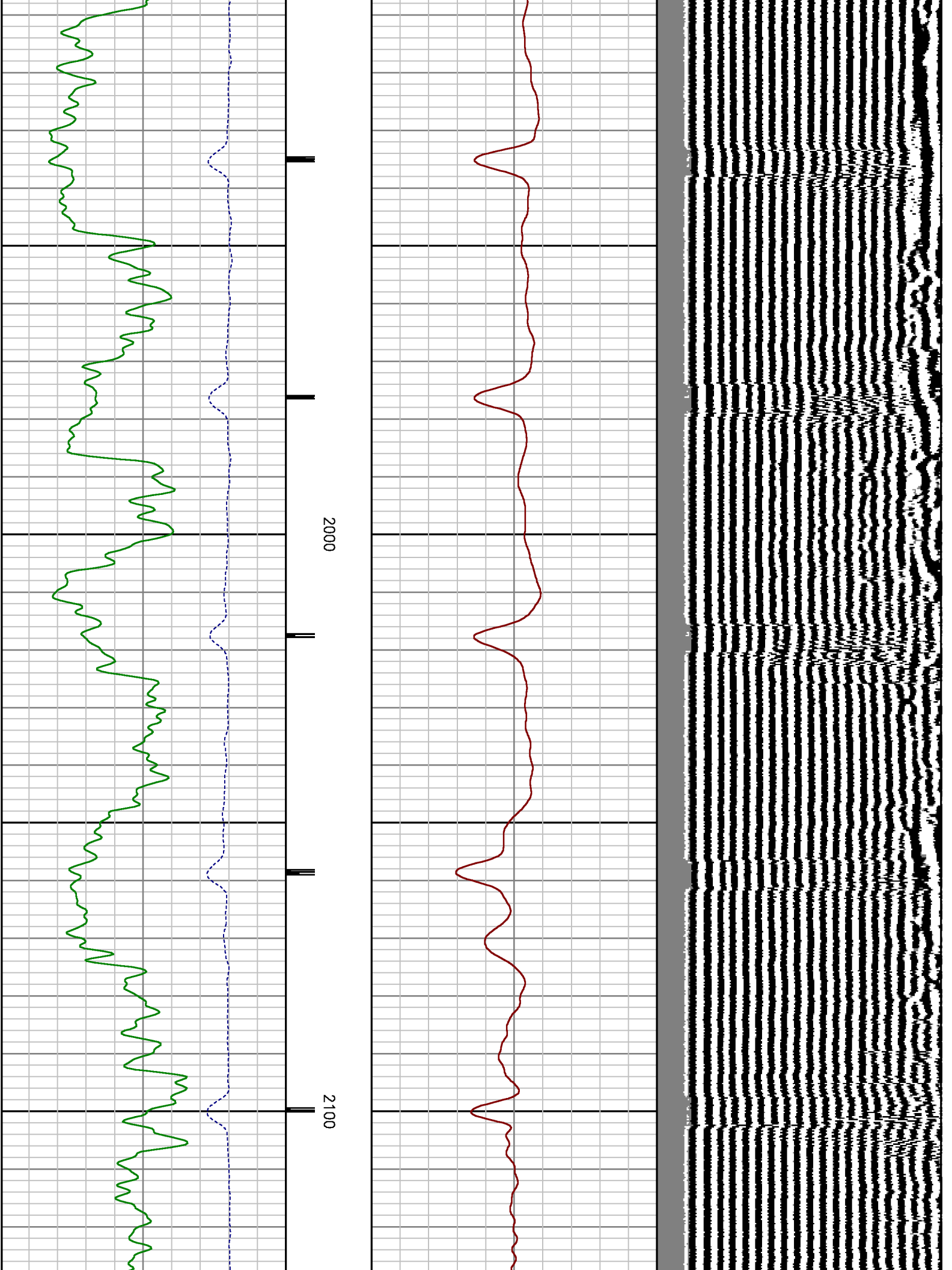




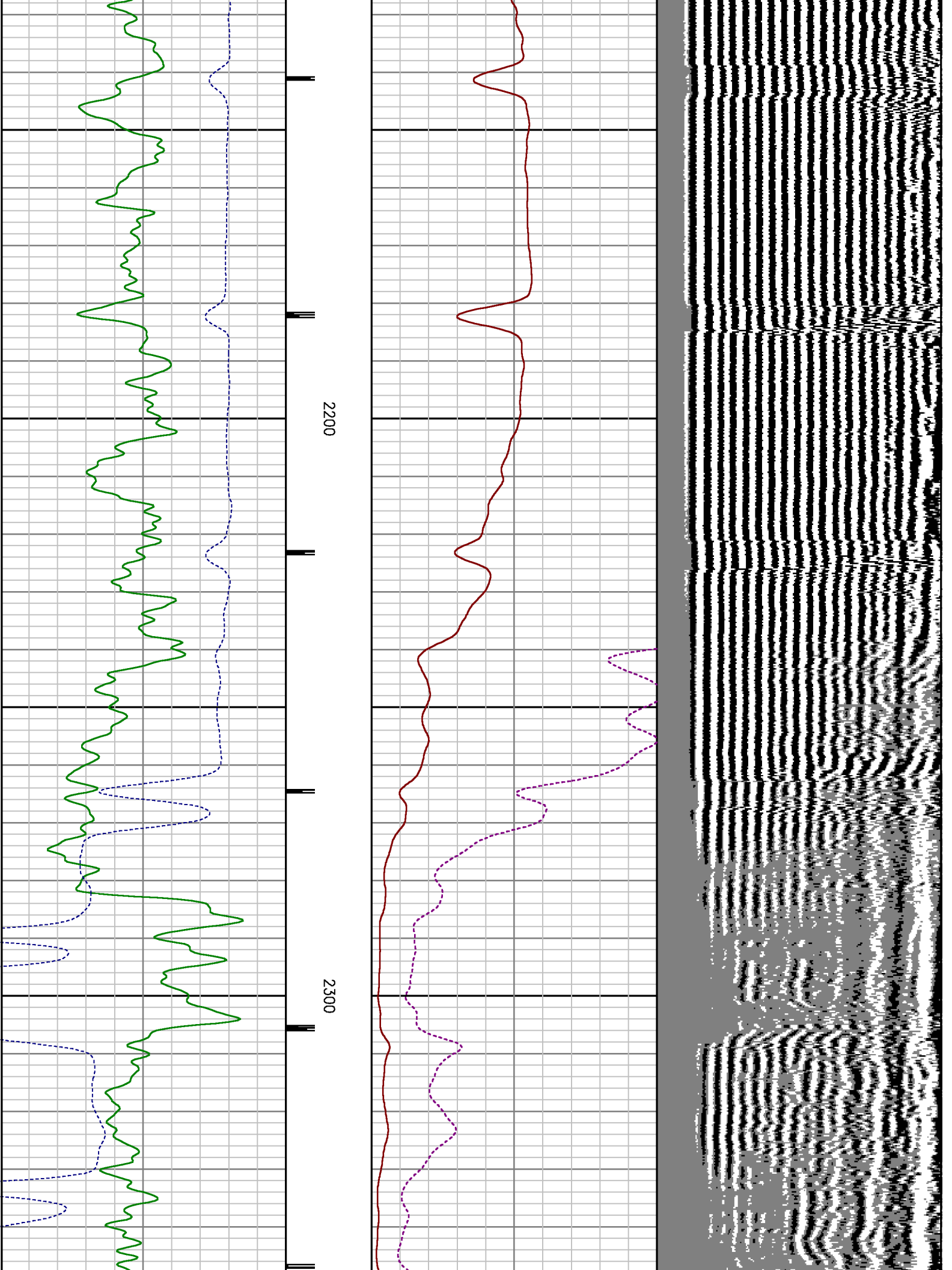


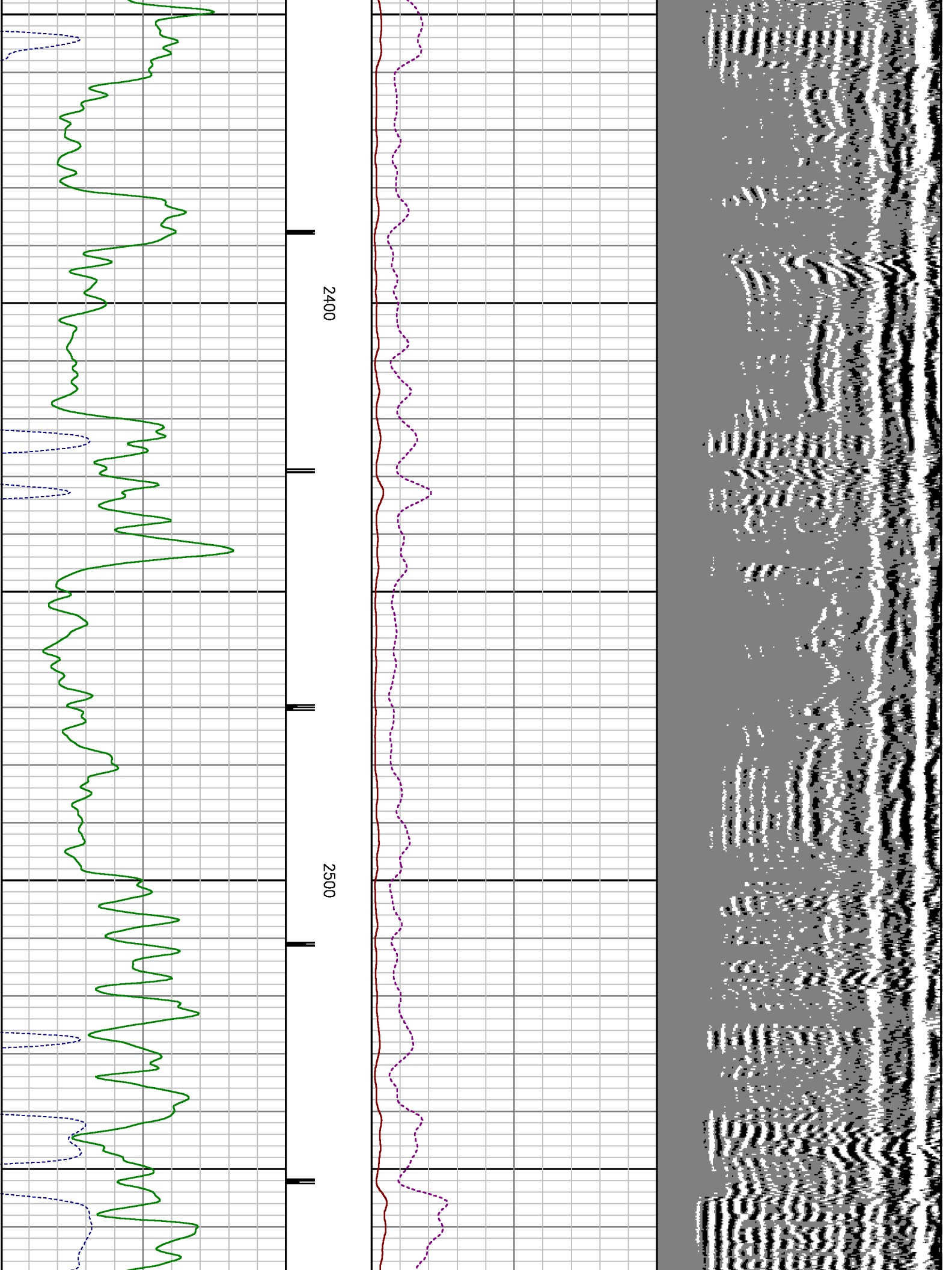


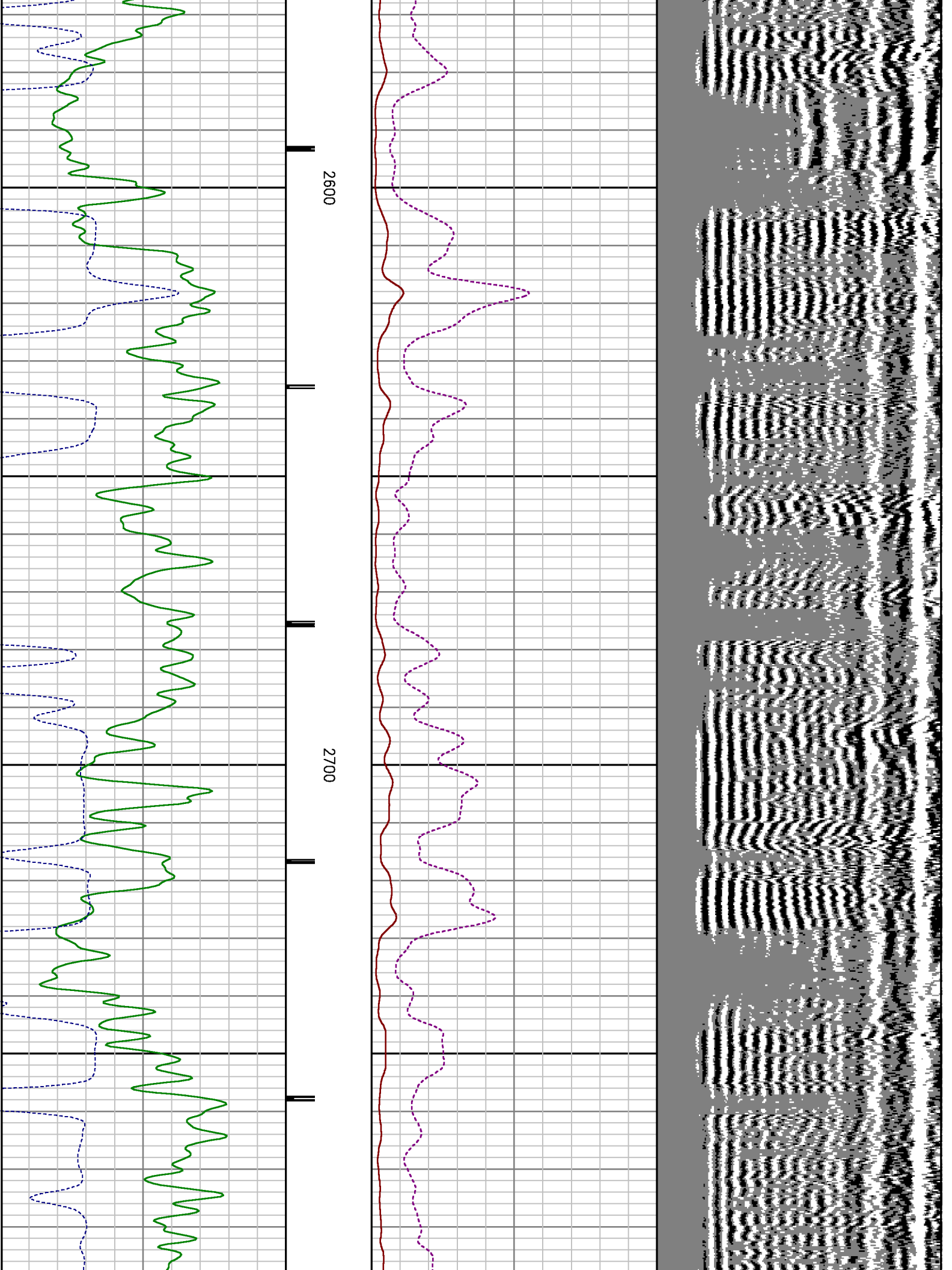


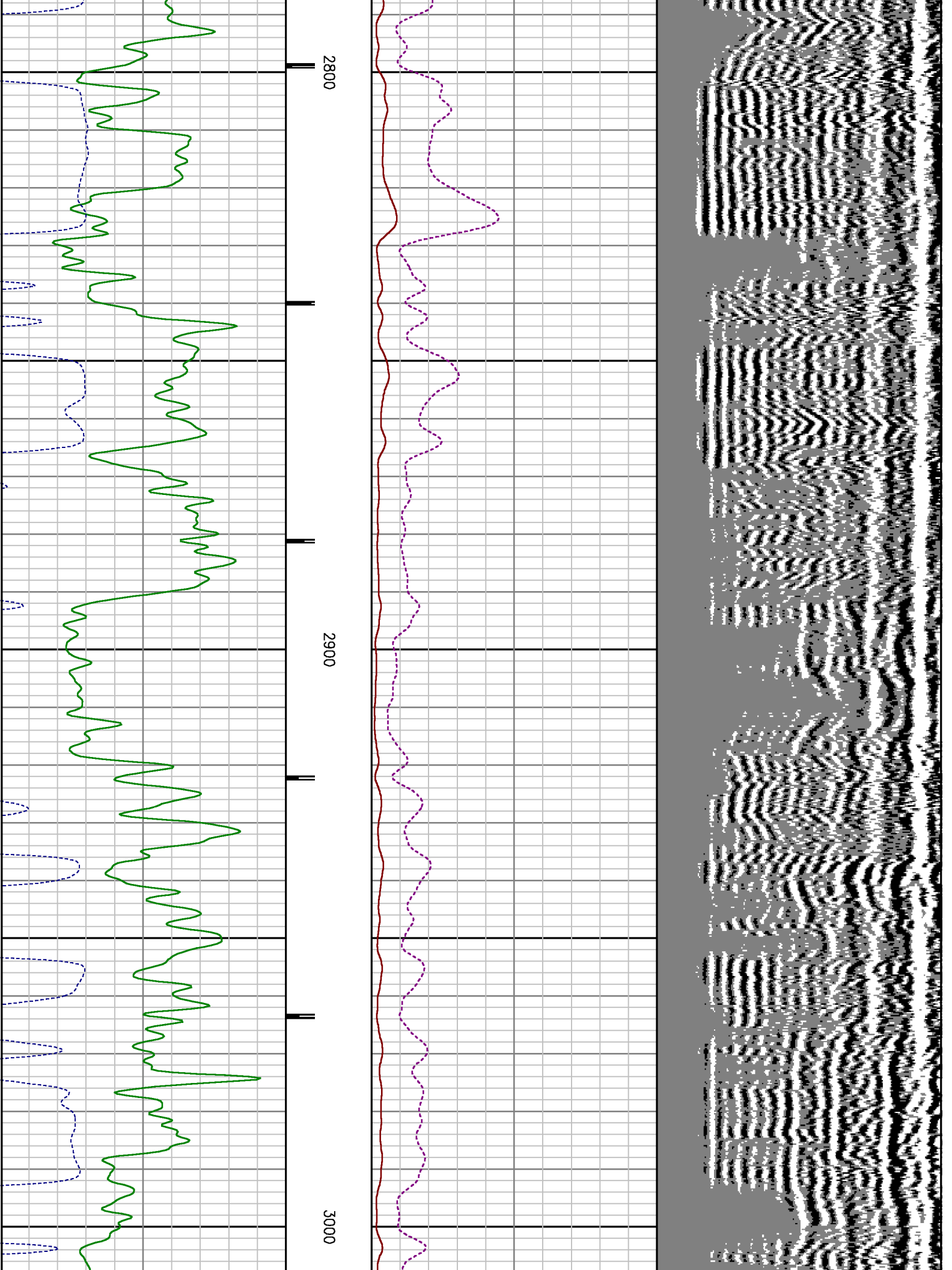


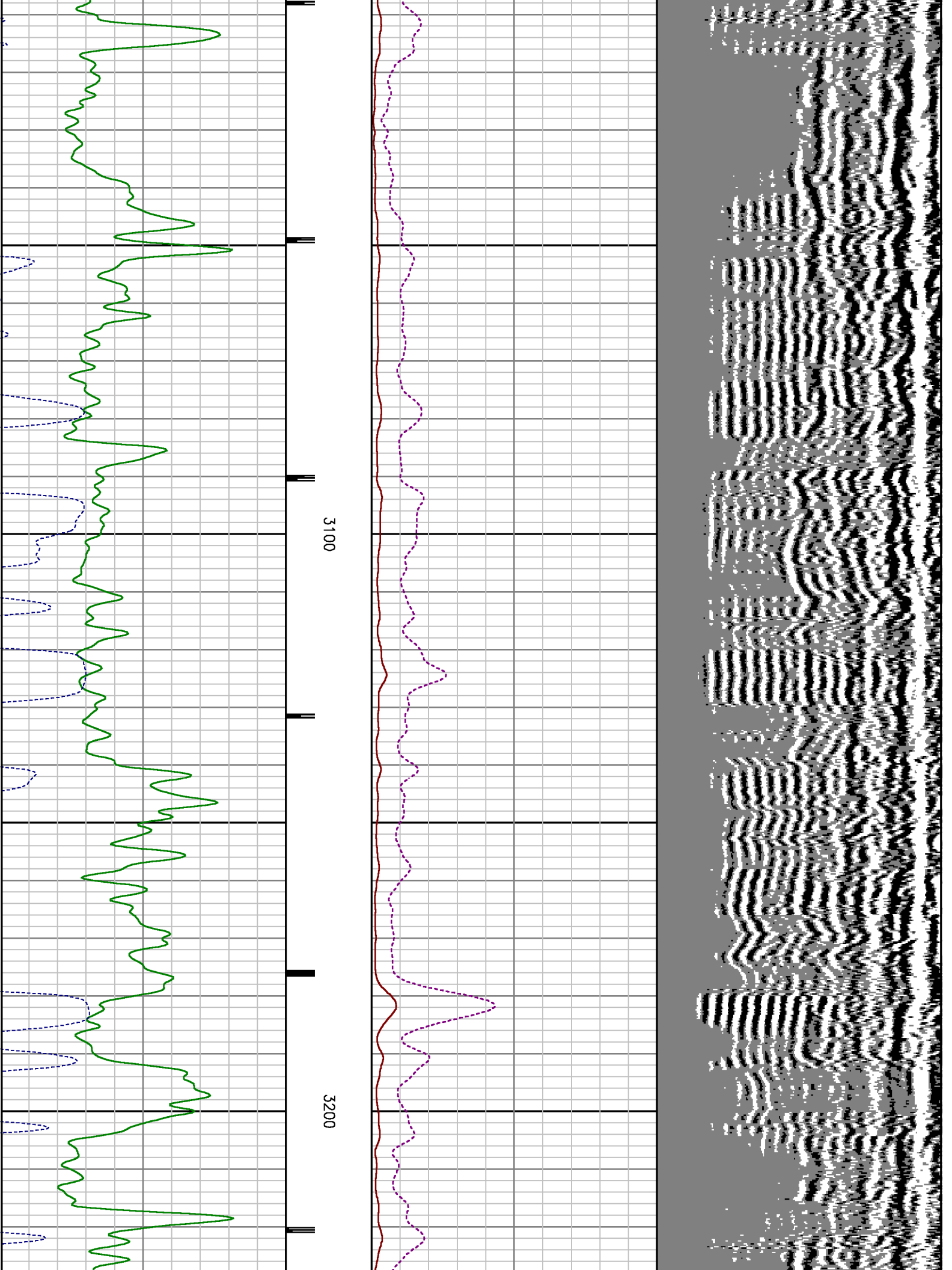




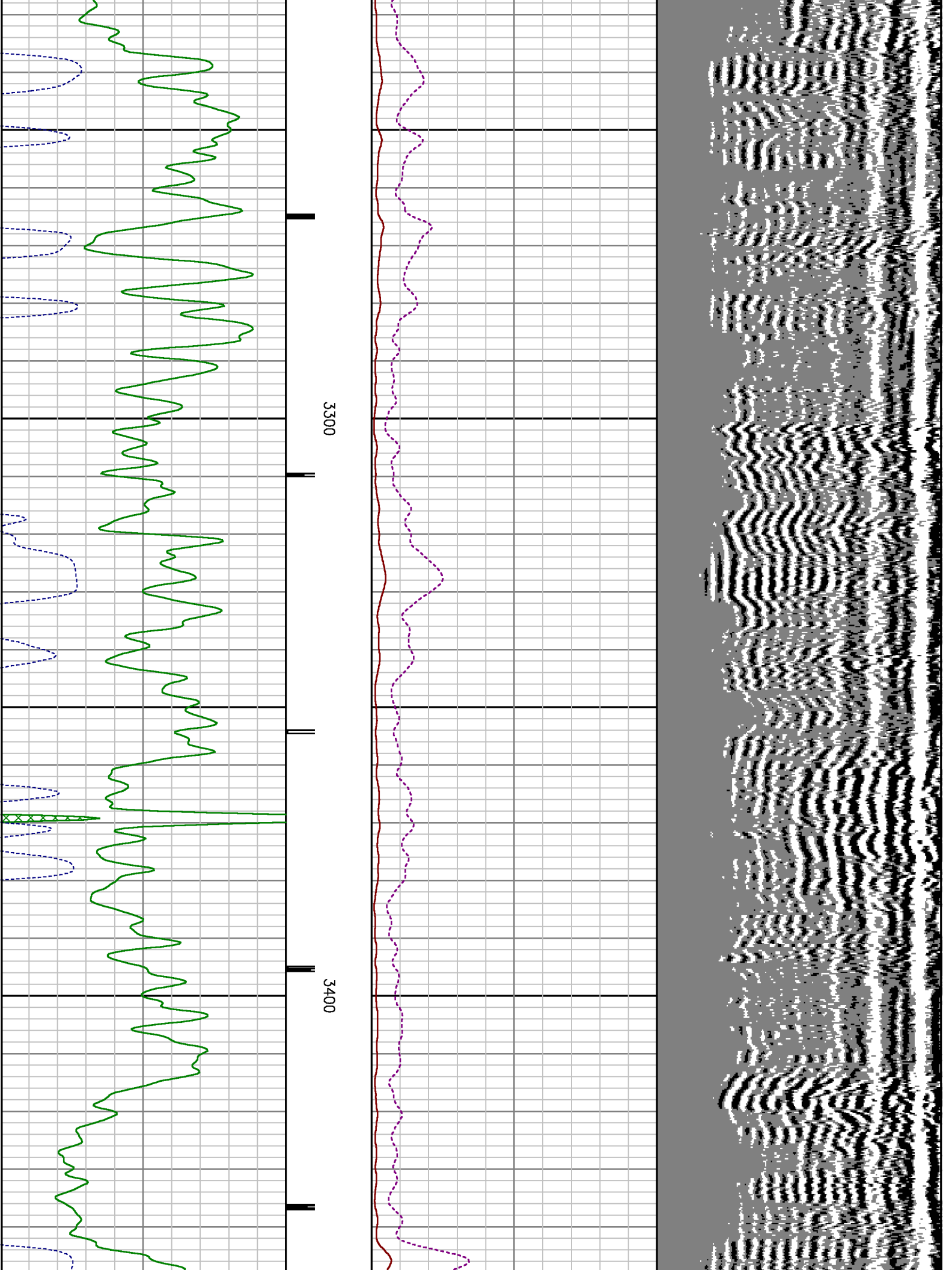


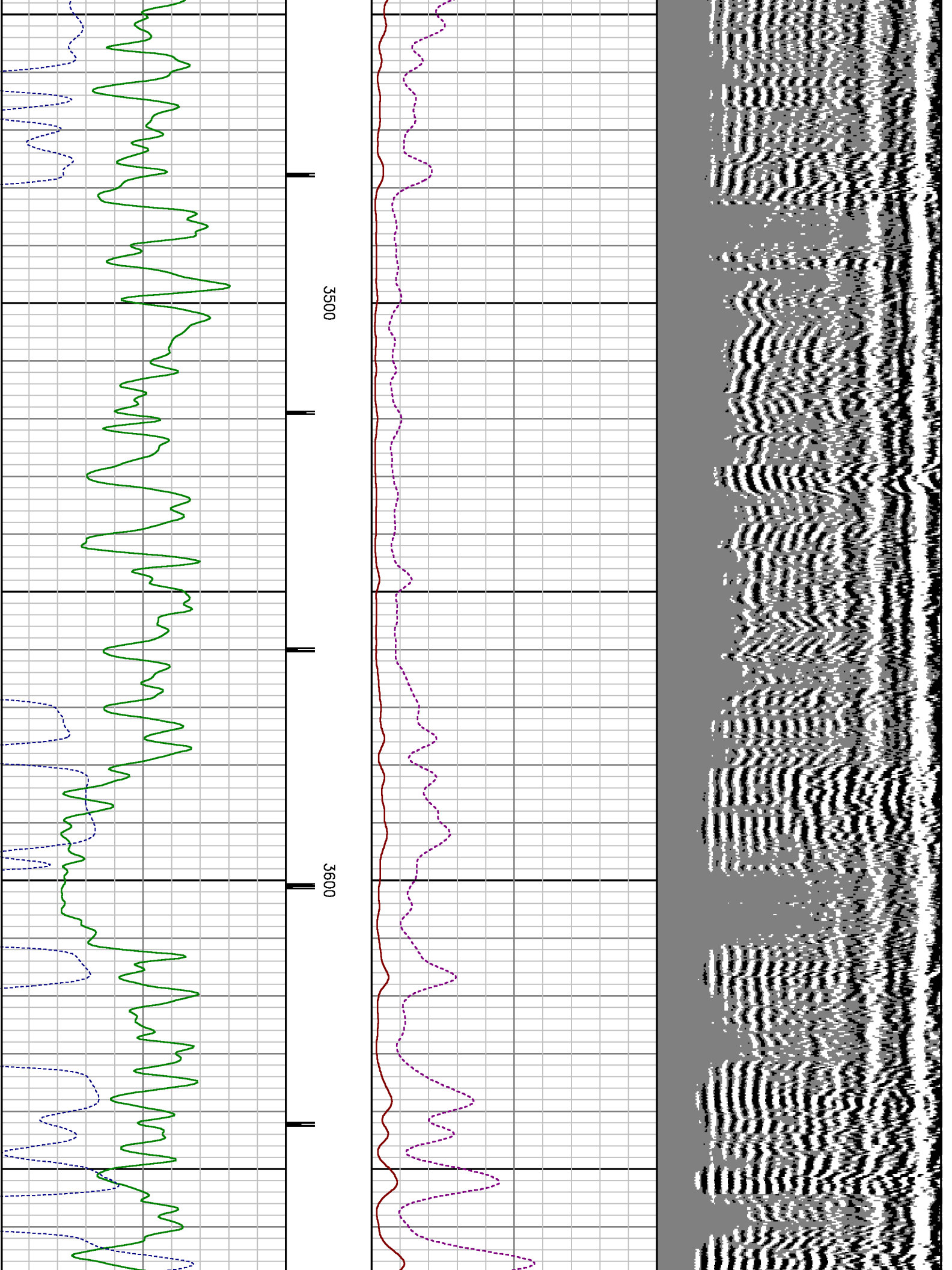


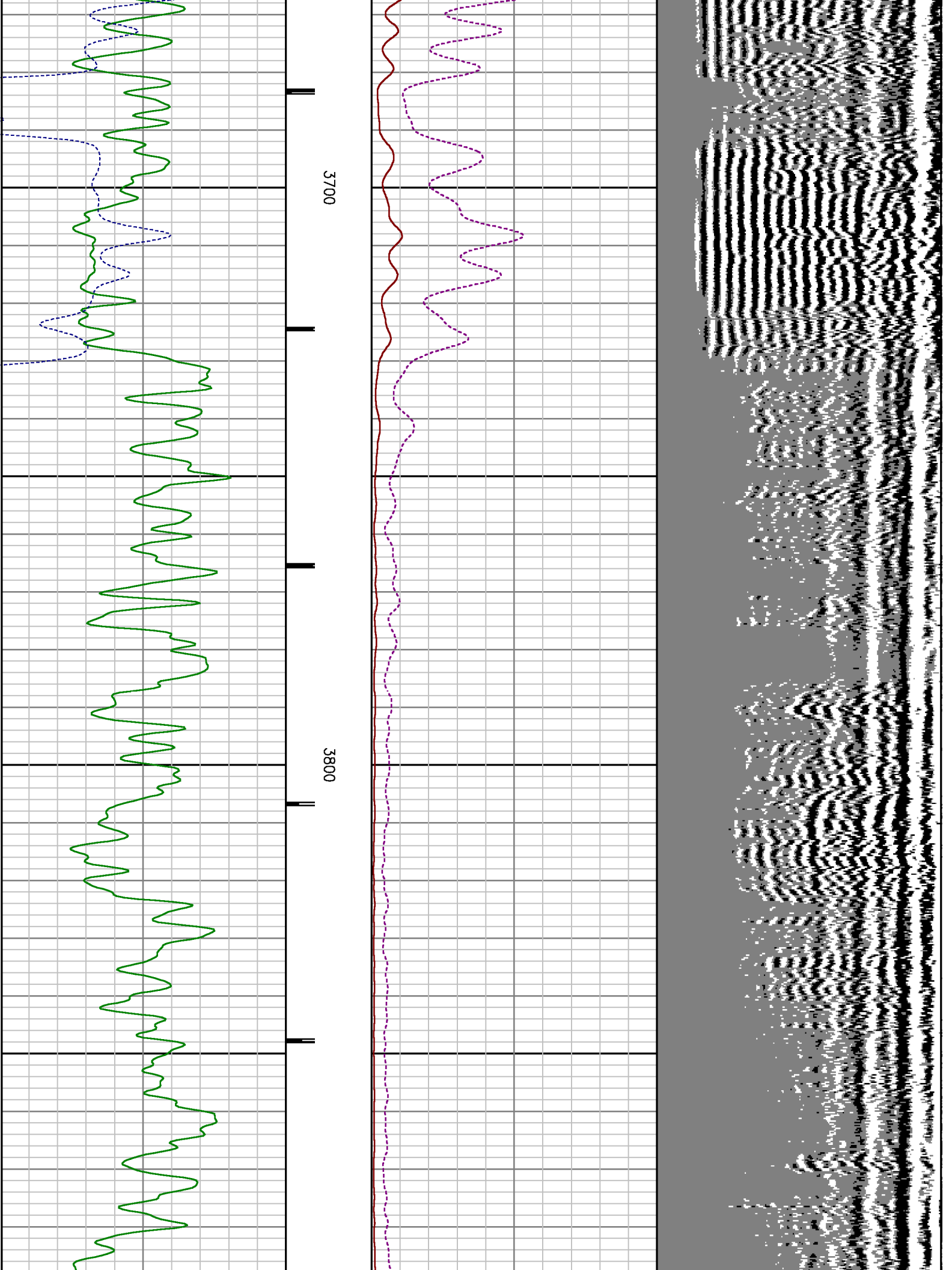




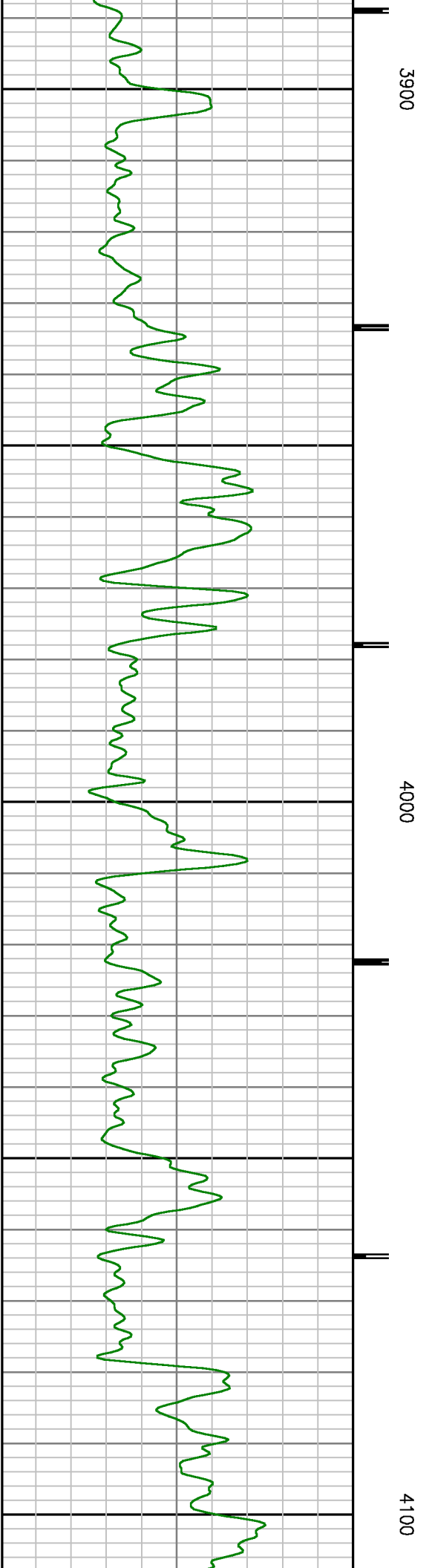
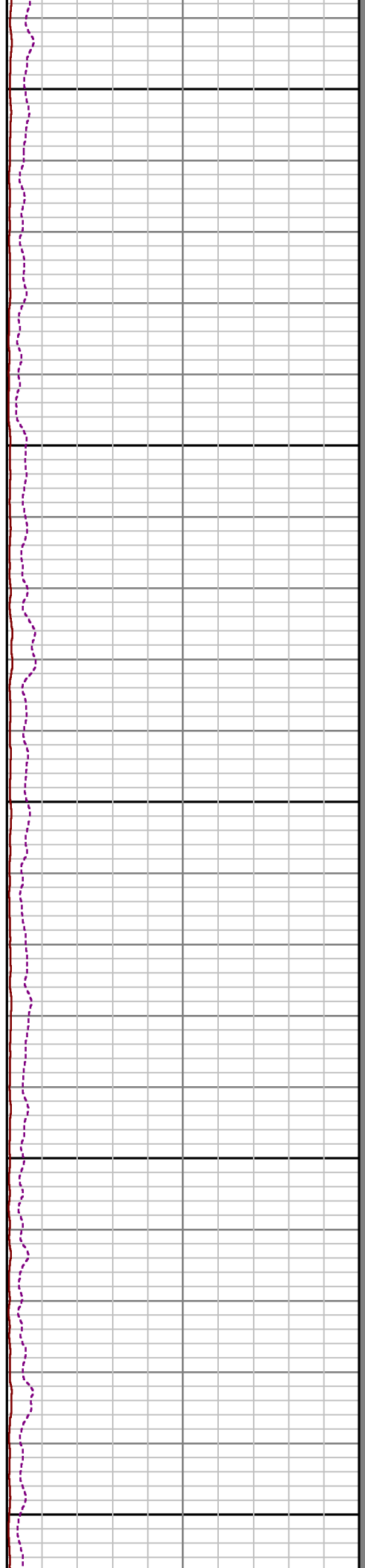
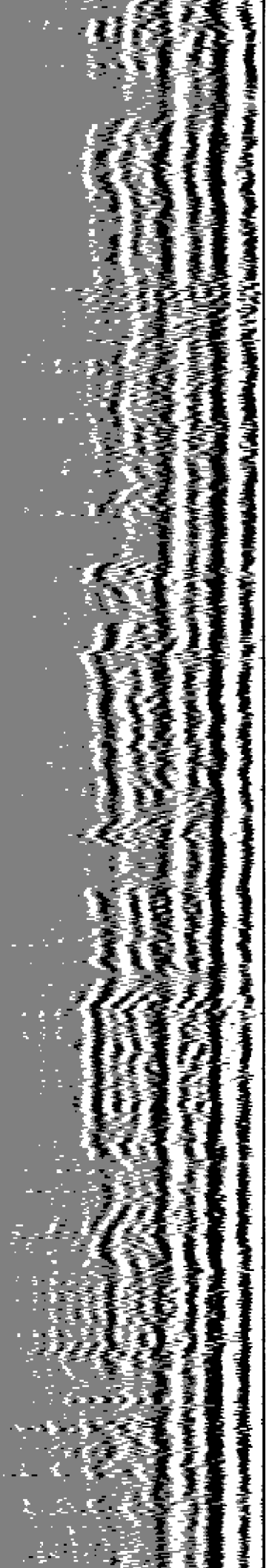


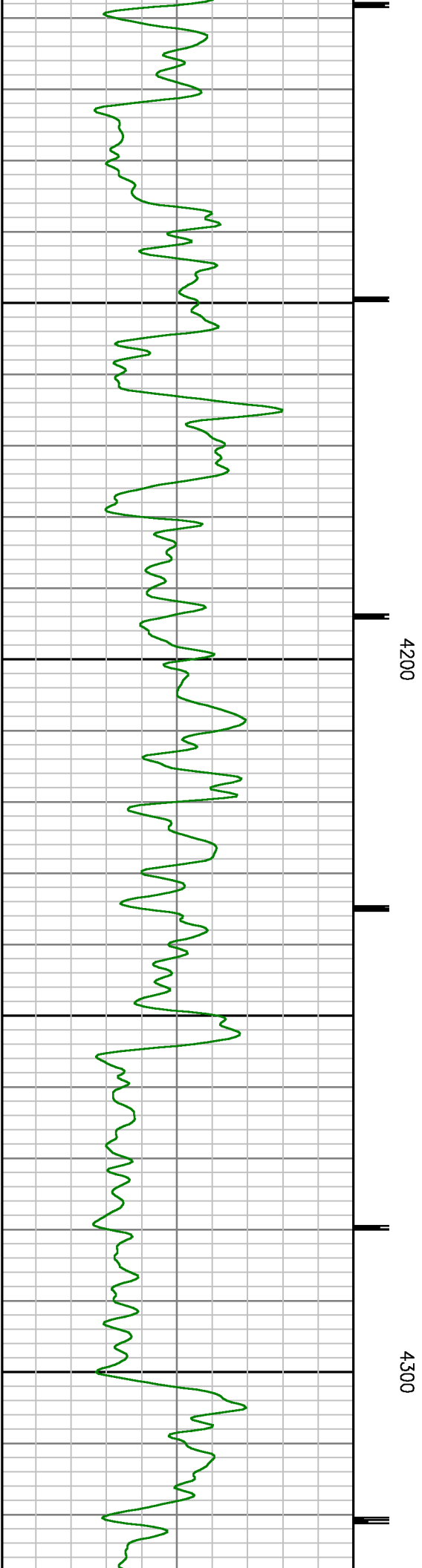
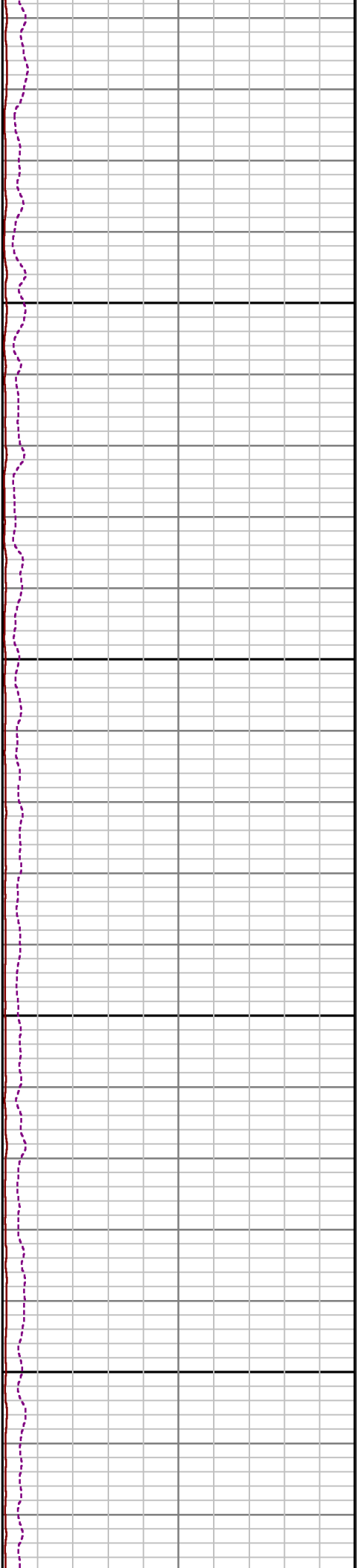
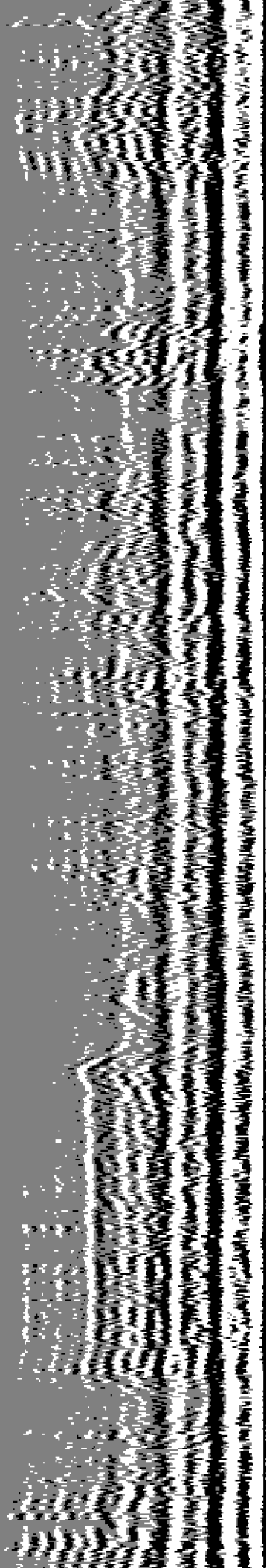


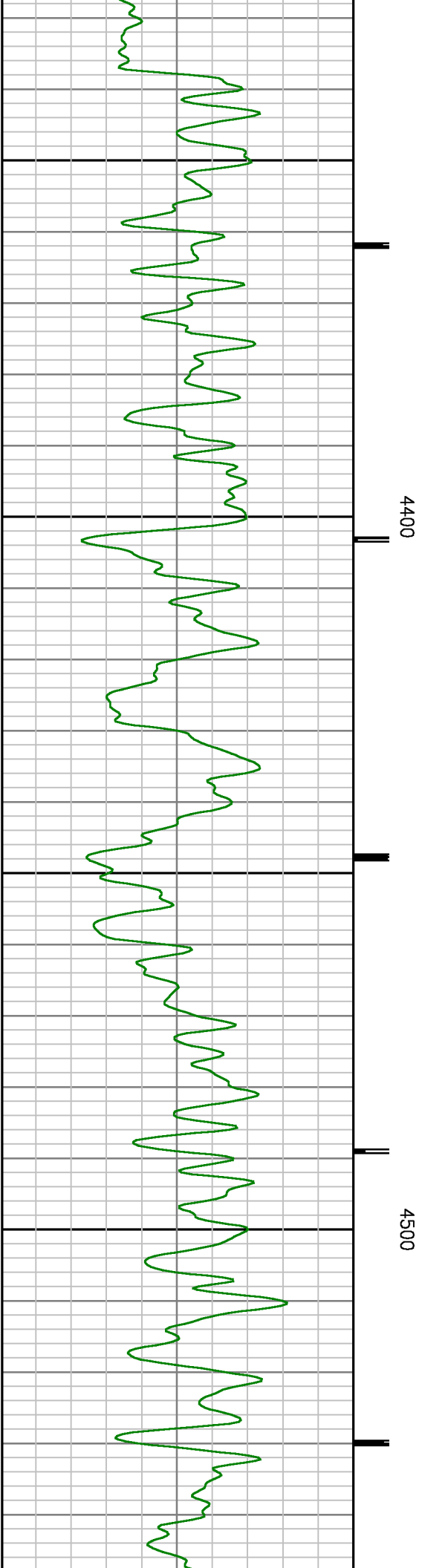
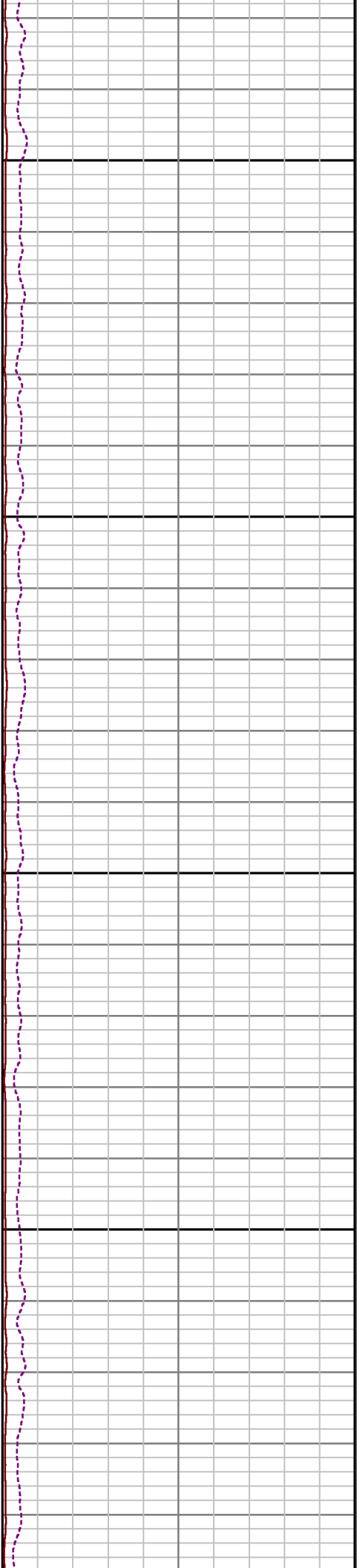
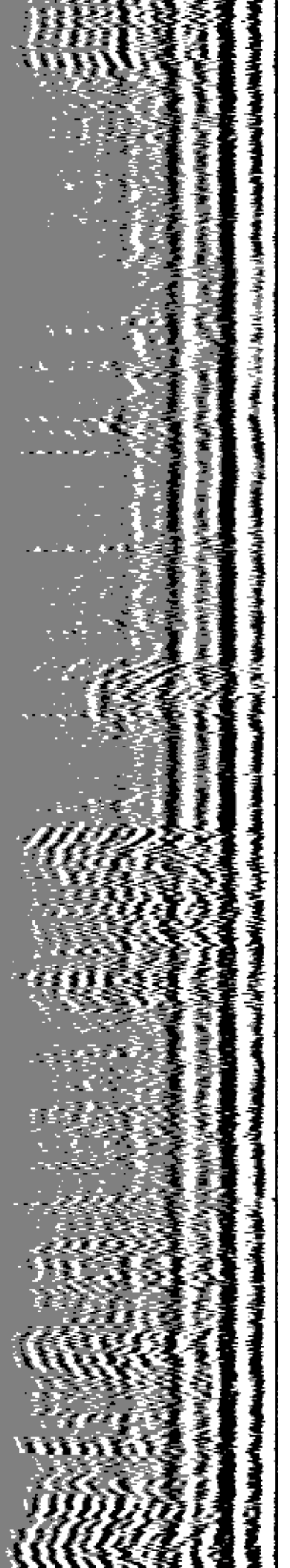


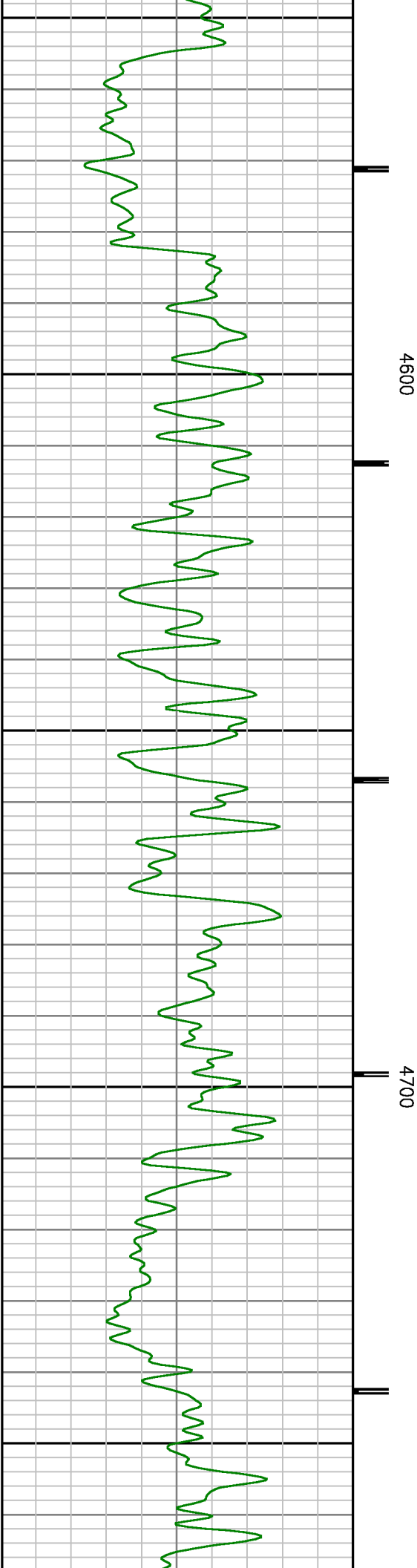
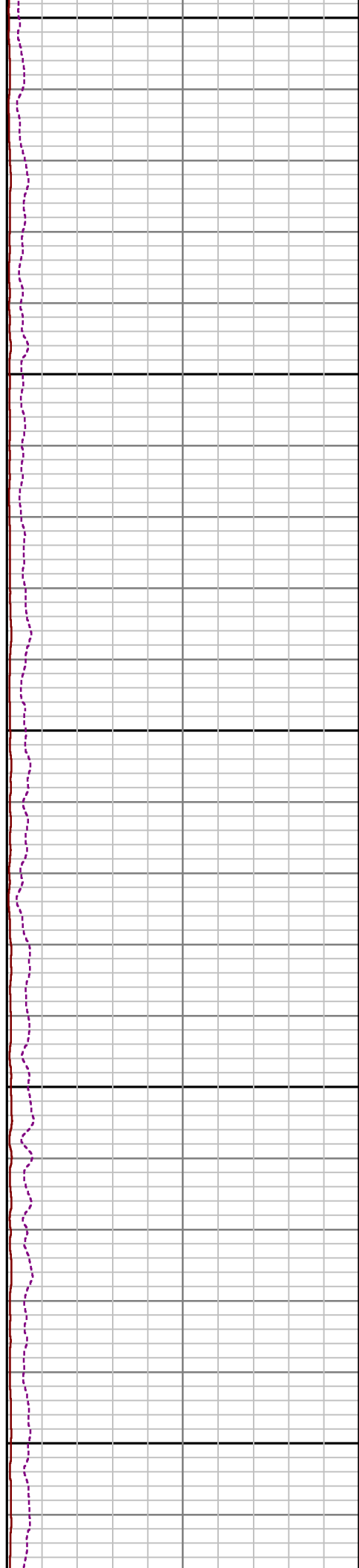
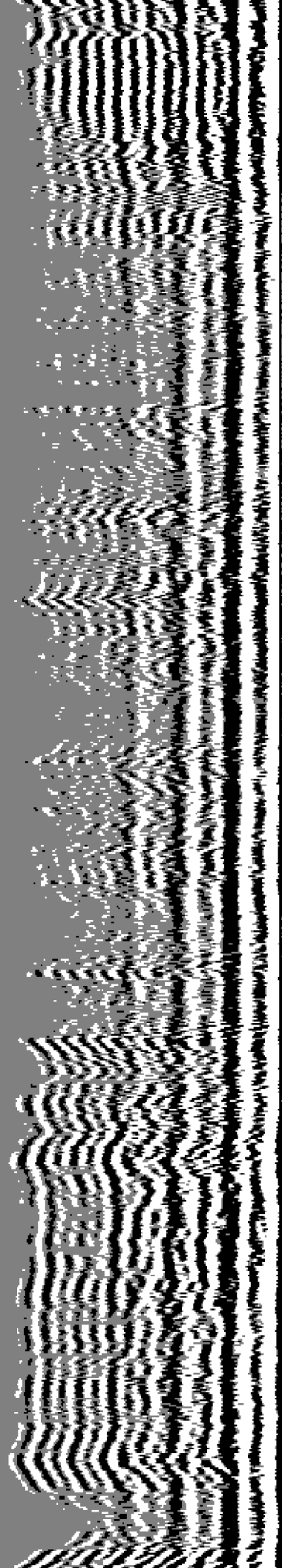


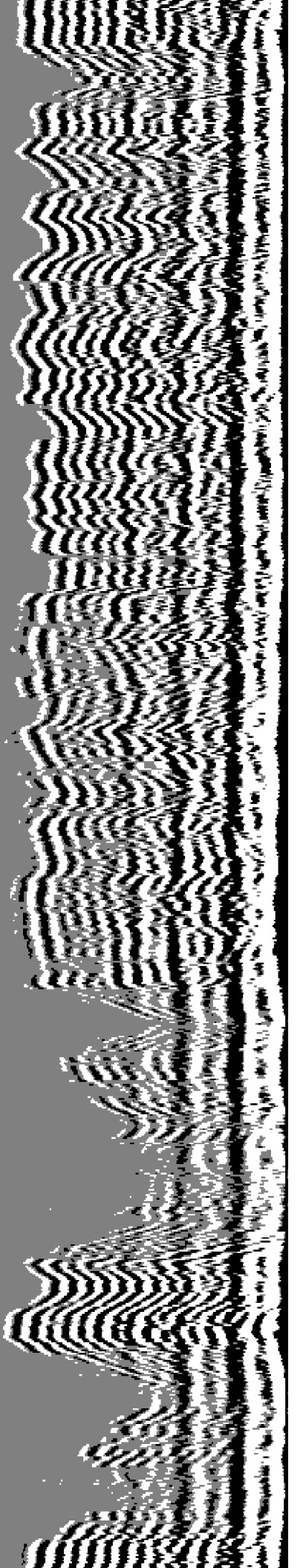






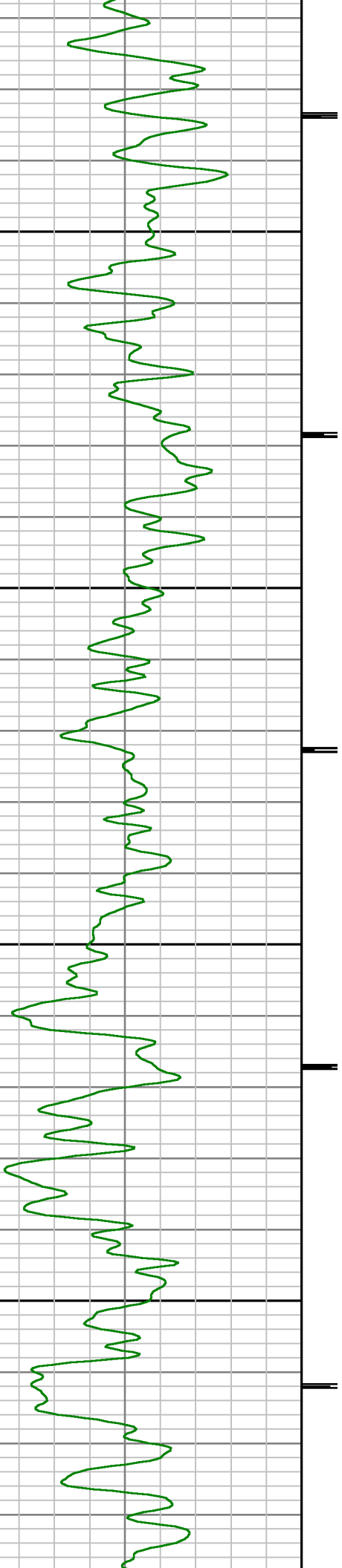


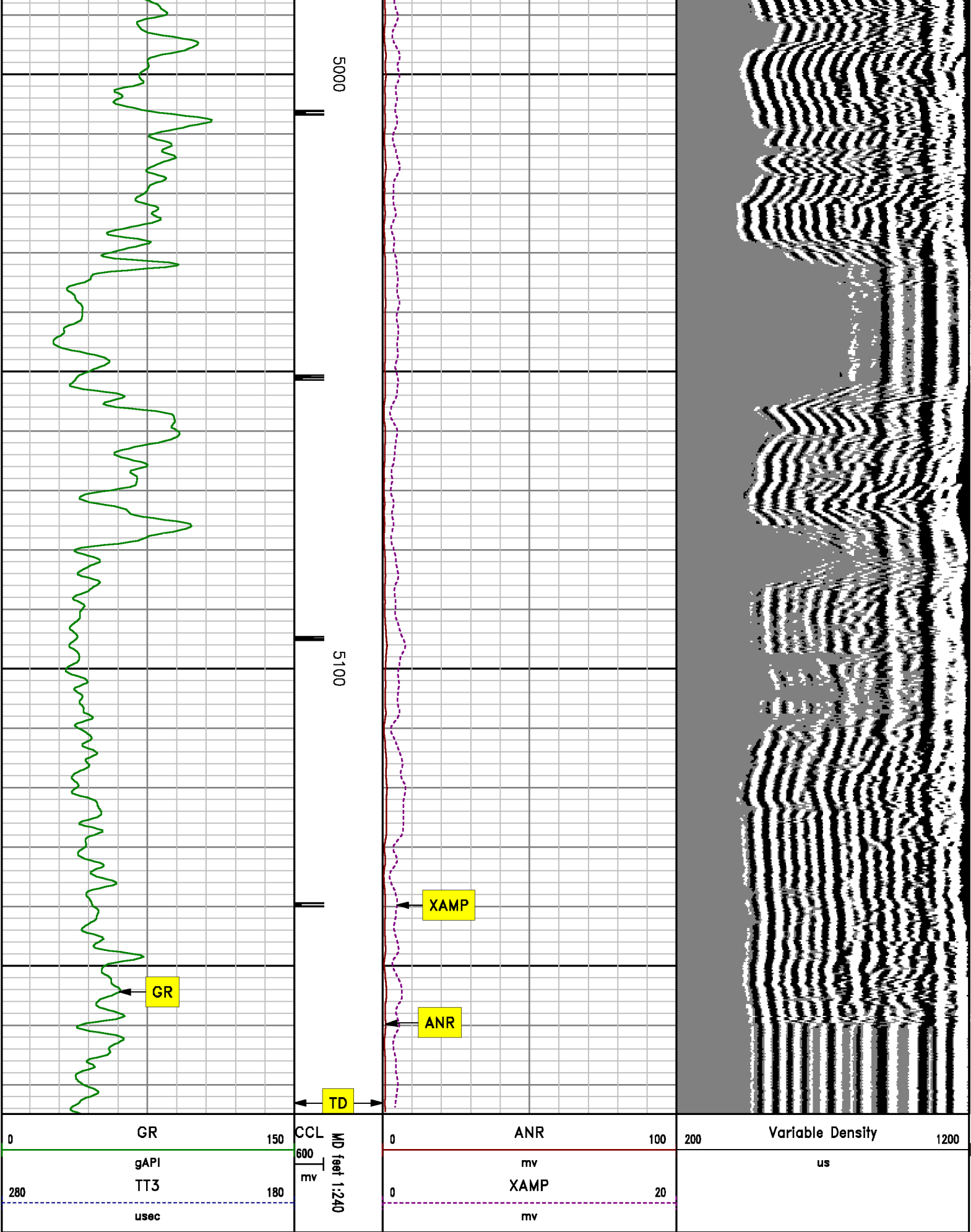




4800

4900





# MAIN SECTION

## SECONDARY PRESENTATION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	25.460	5188.000
RAL	Amp Gate Start Near	200.391	usec	25.460	5188.000
RAL	Amp Gate Start Radial	200.391	usec	25.460	5188.000
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RAL	casing wt	11.600	lbm/ft	25.460	5188.000
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RAL	Fluid Travel Time	200.000	usec/ft	25.460	5187.616

### DEPTH OFFSETS

(for Acquired Curves)

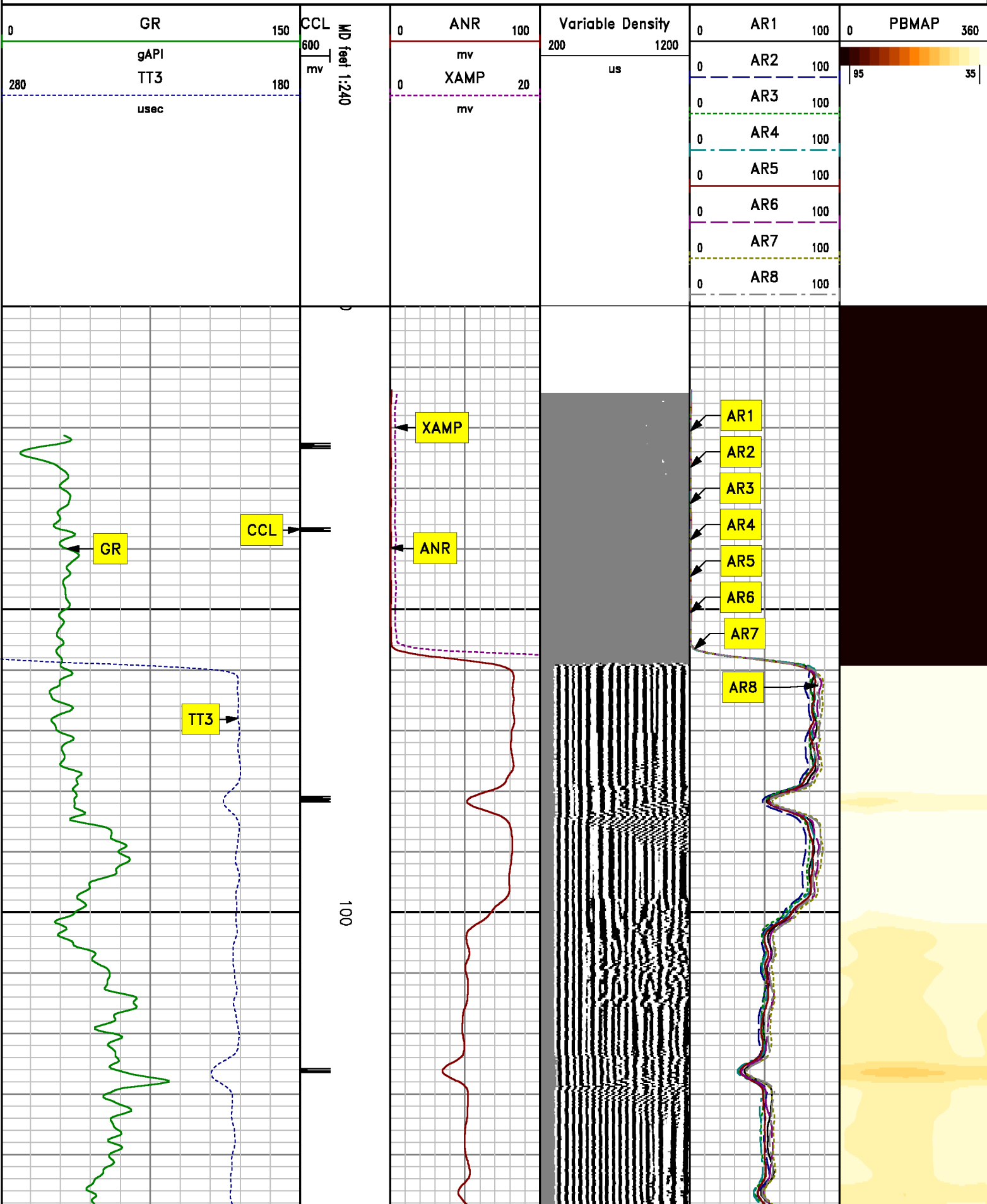
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-11.360	AFAR	SIG	TT5			
1426XA	-7.250	CCL					
1426XA	-5.390	GR					
1426XA	0.000	NEU					

Created by : MIXED

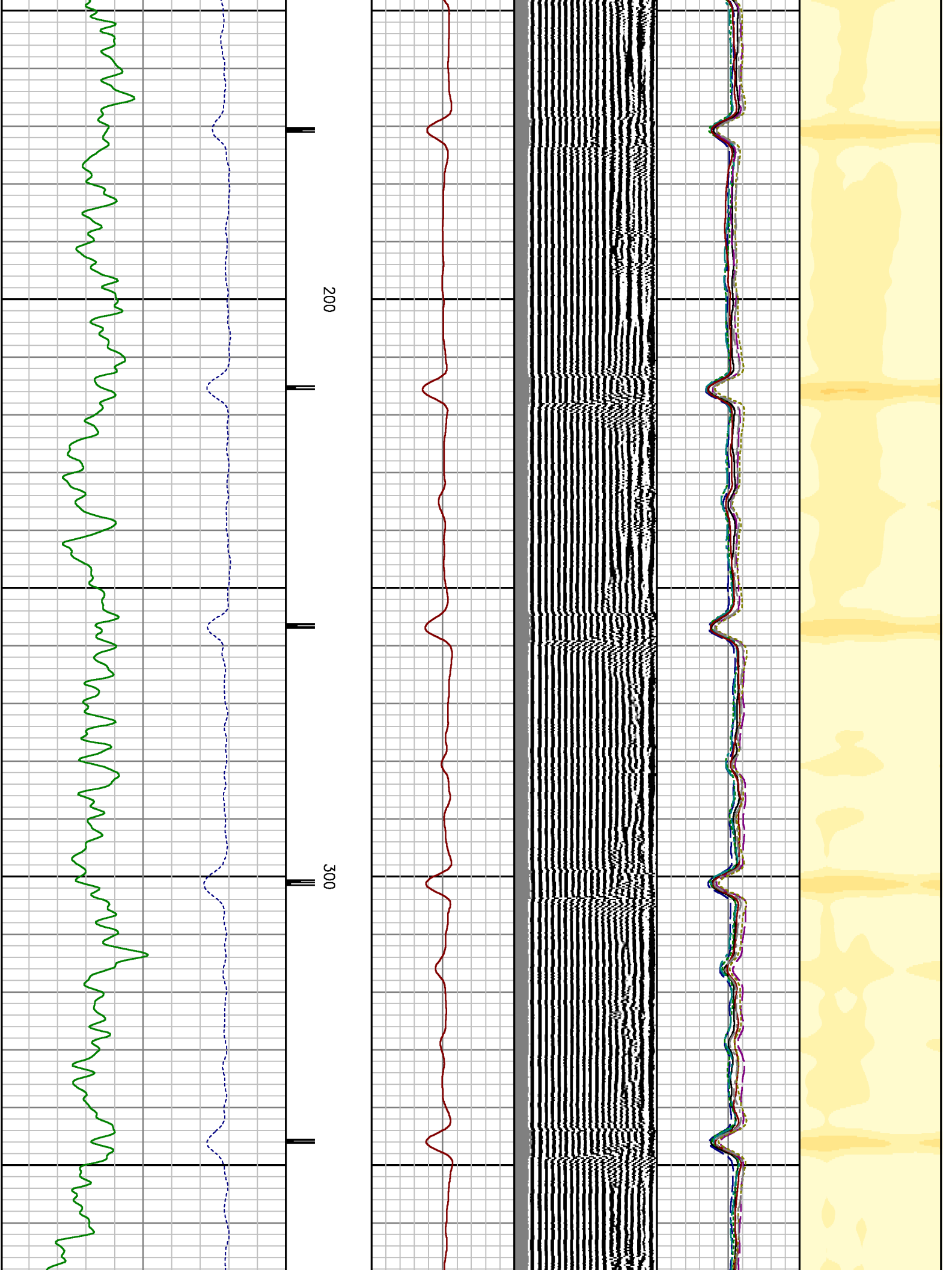
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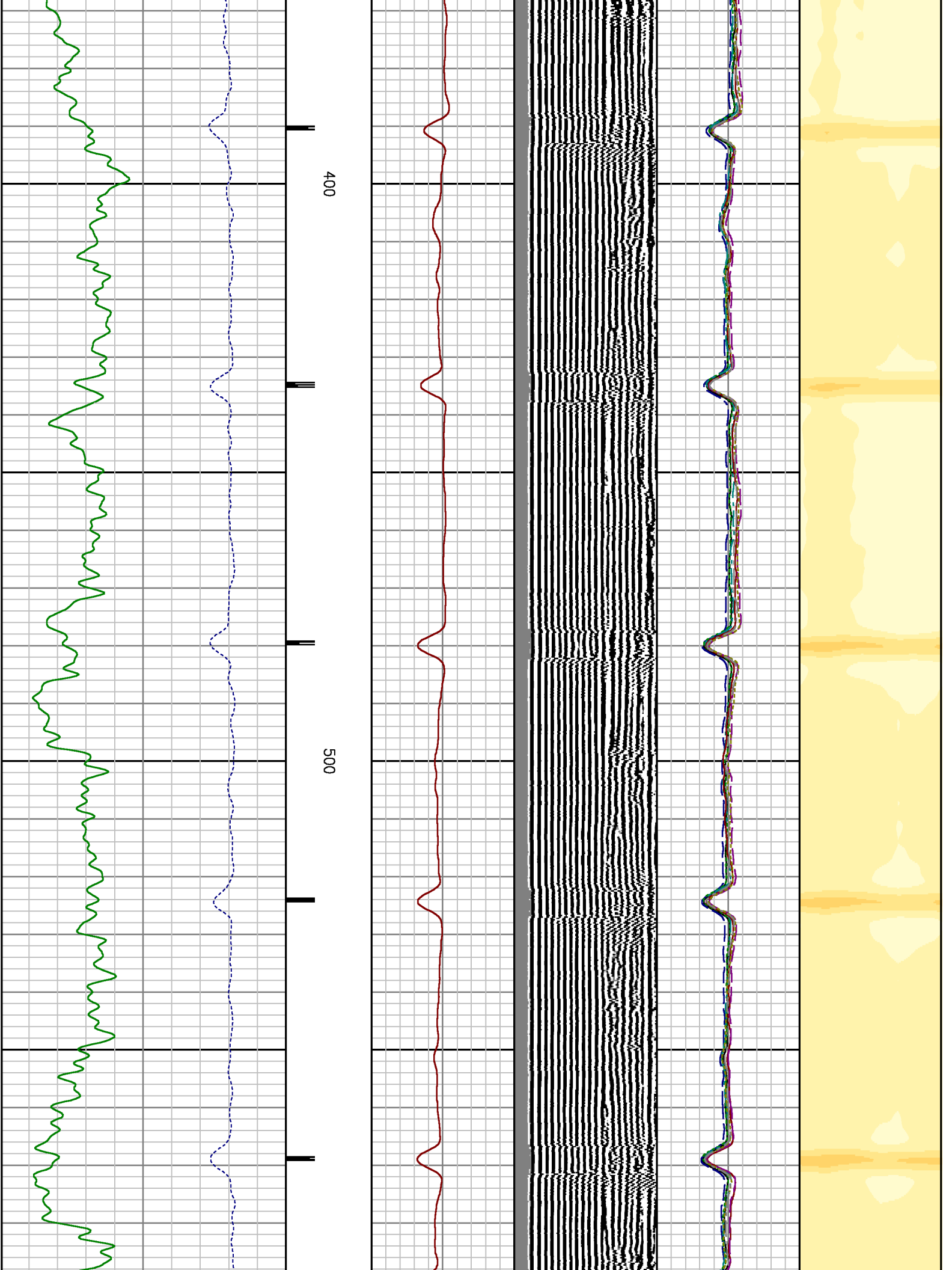
Company : WILLIAMS PRODUCTION COMPANY

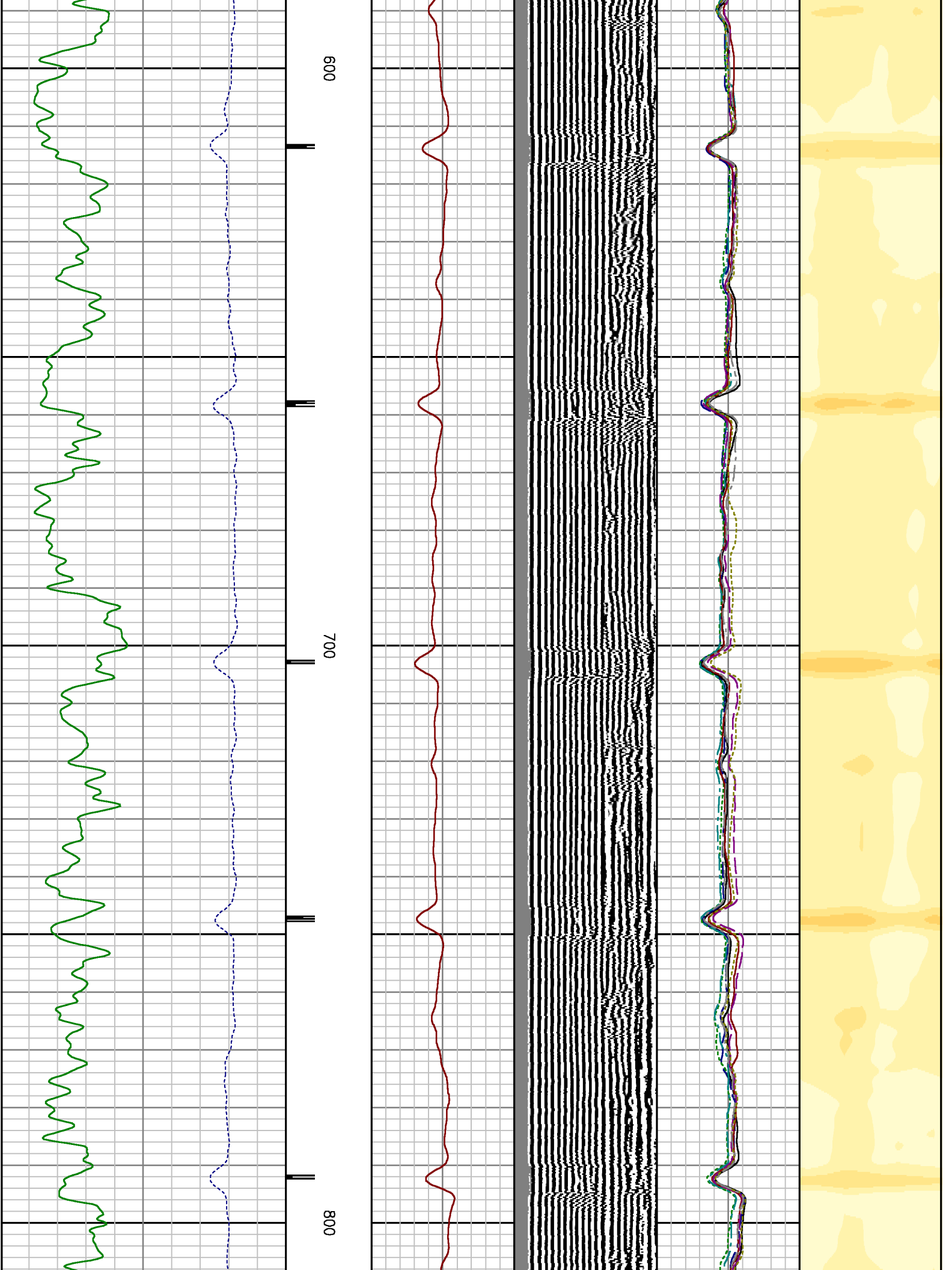
Company : WILLETAMS PRODUCTION COMPANY  
 Well : SG 443-28  
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 Mode : PlotMgr 5.4.504  
 Interval : 0.00 - 5175.00 feet UP  
 Created : 9/19/2010 4:07:02 PM

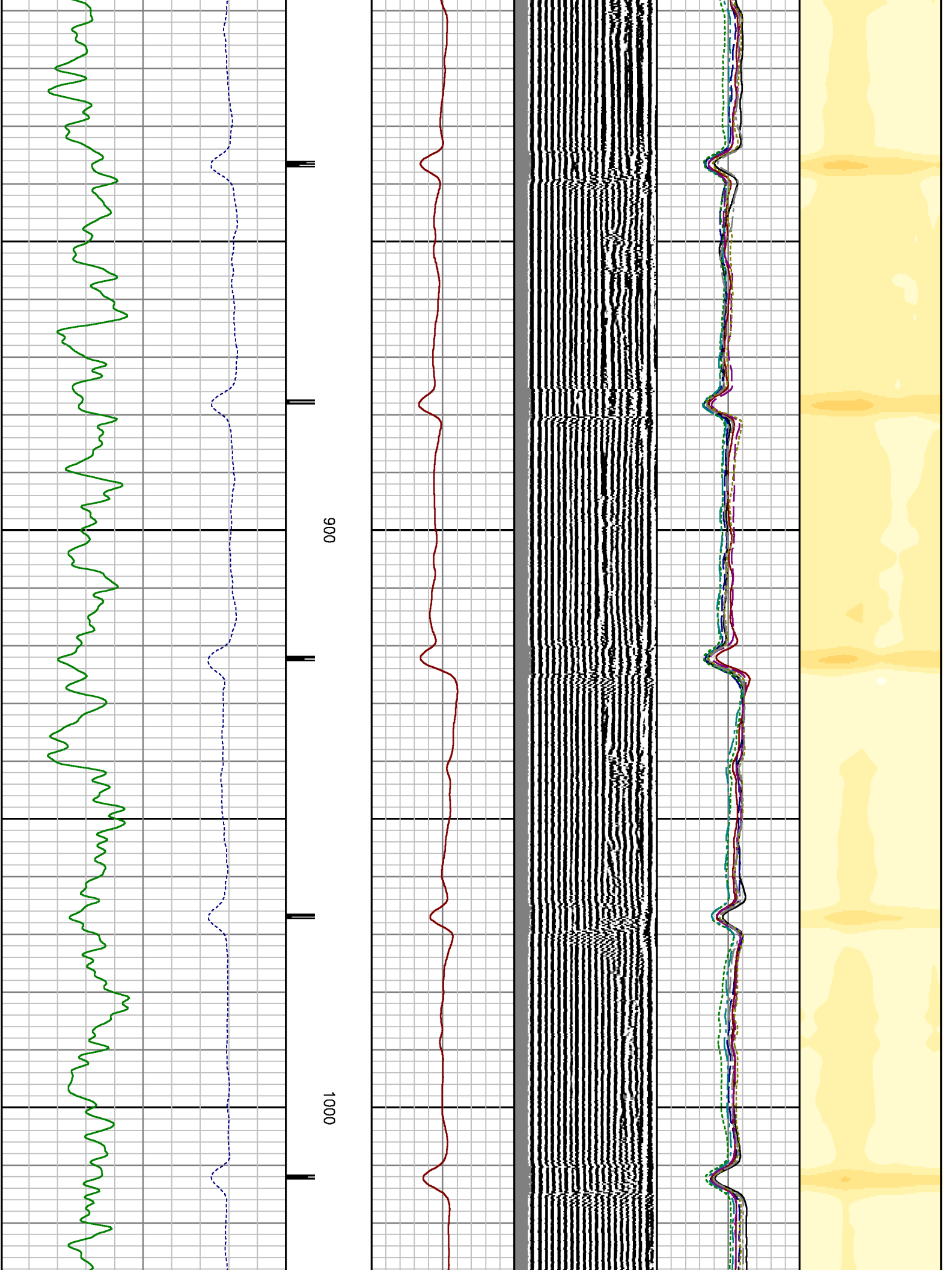


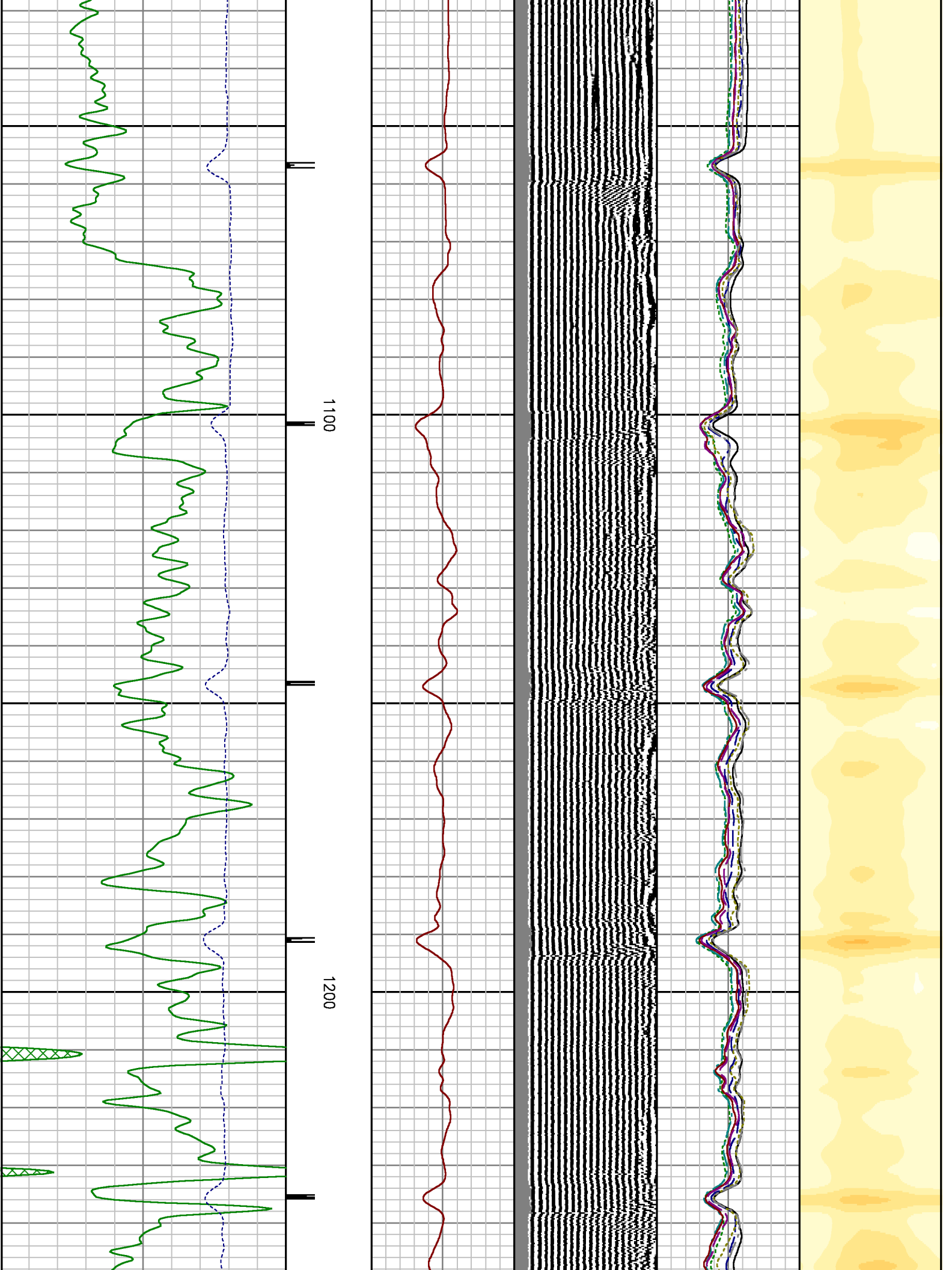


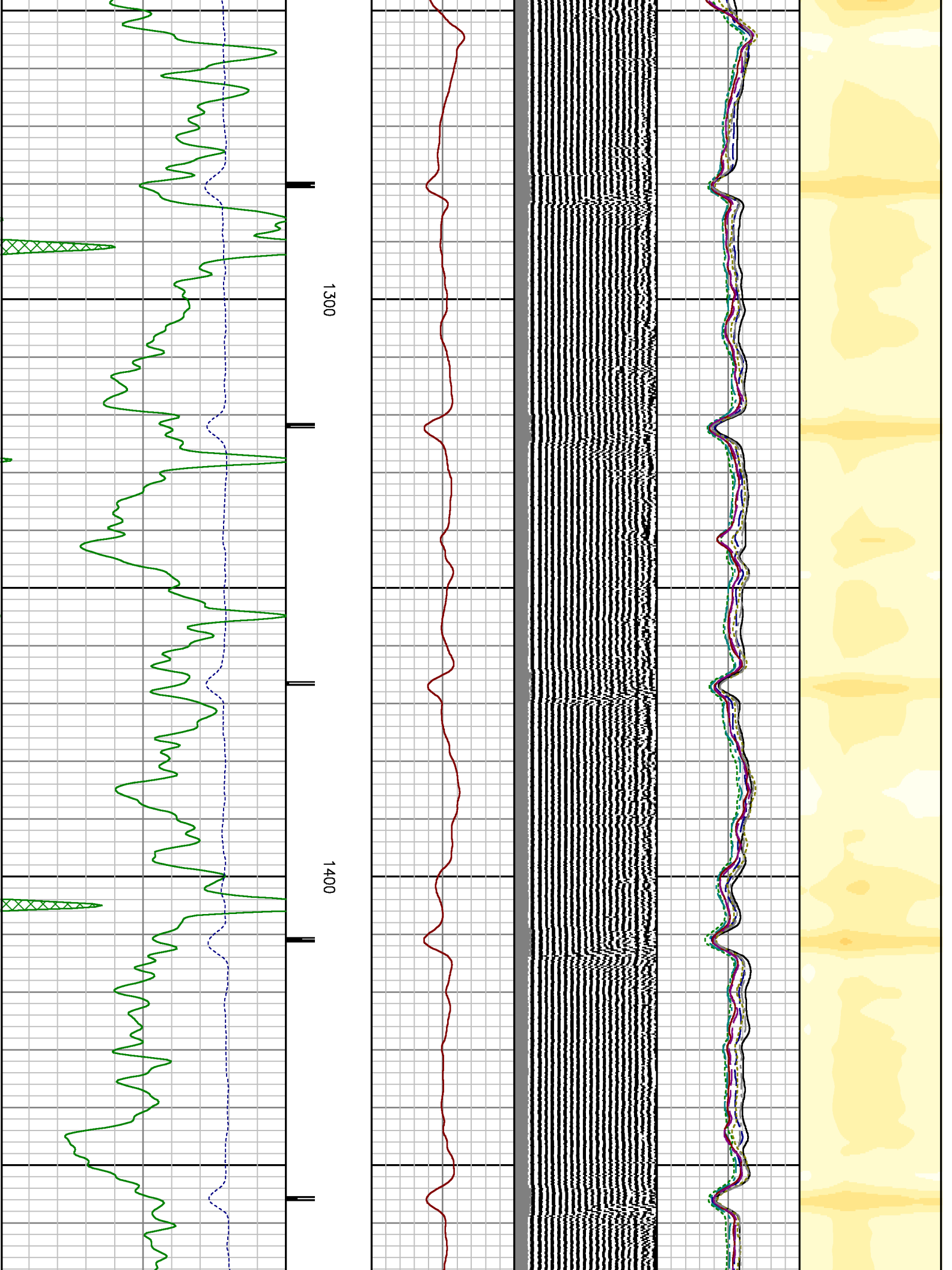




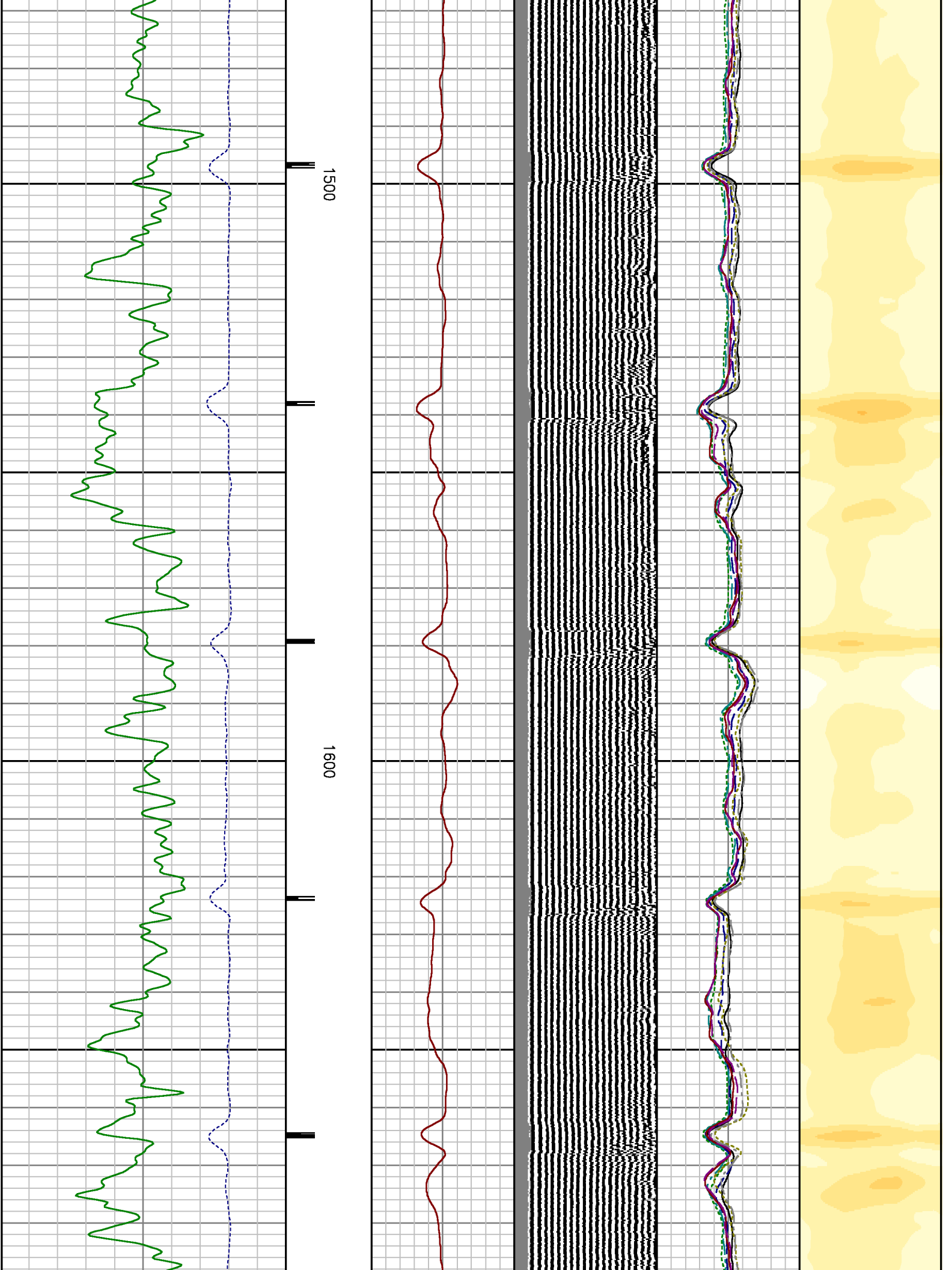


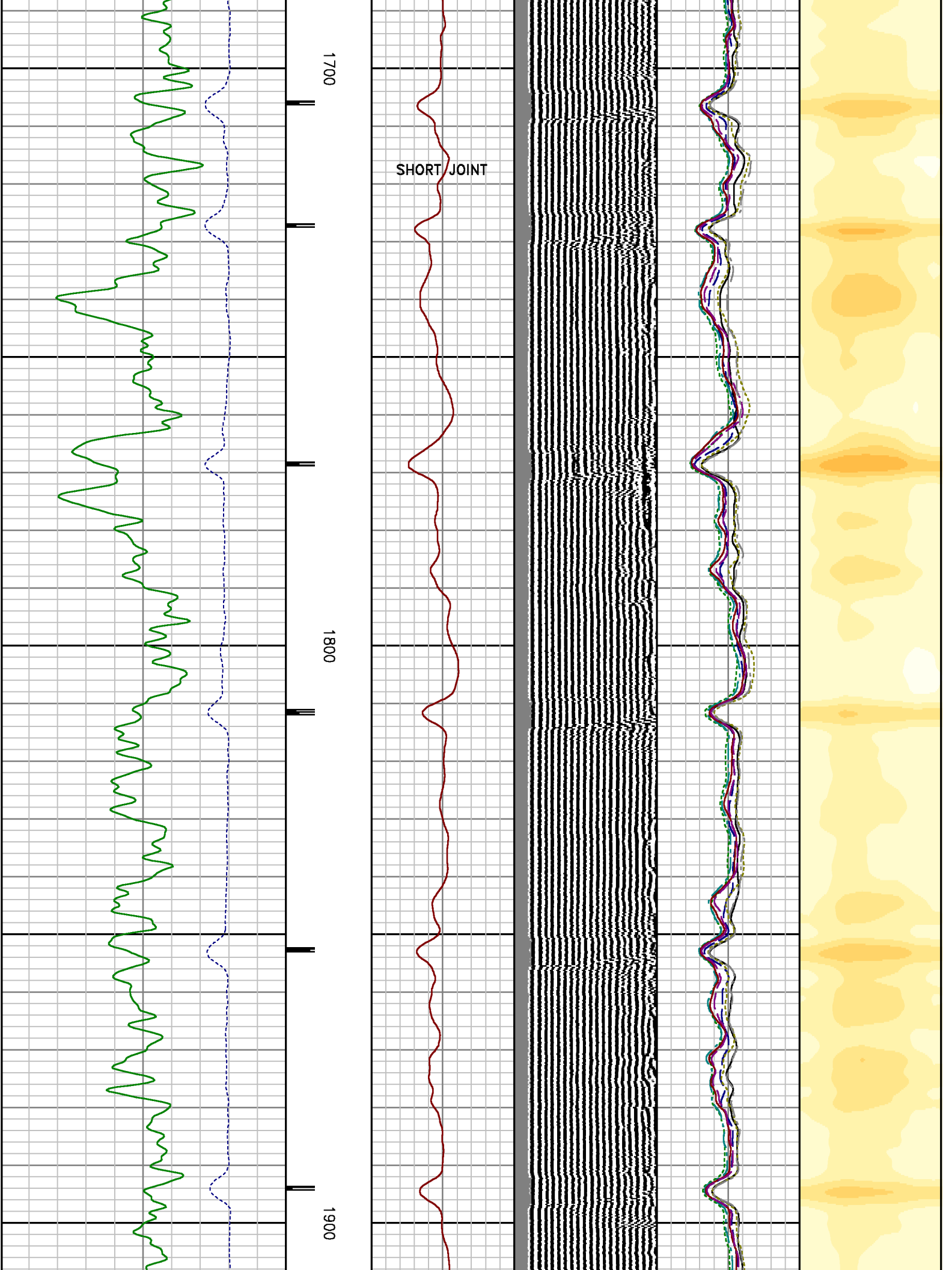




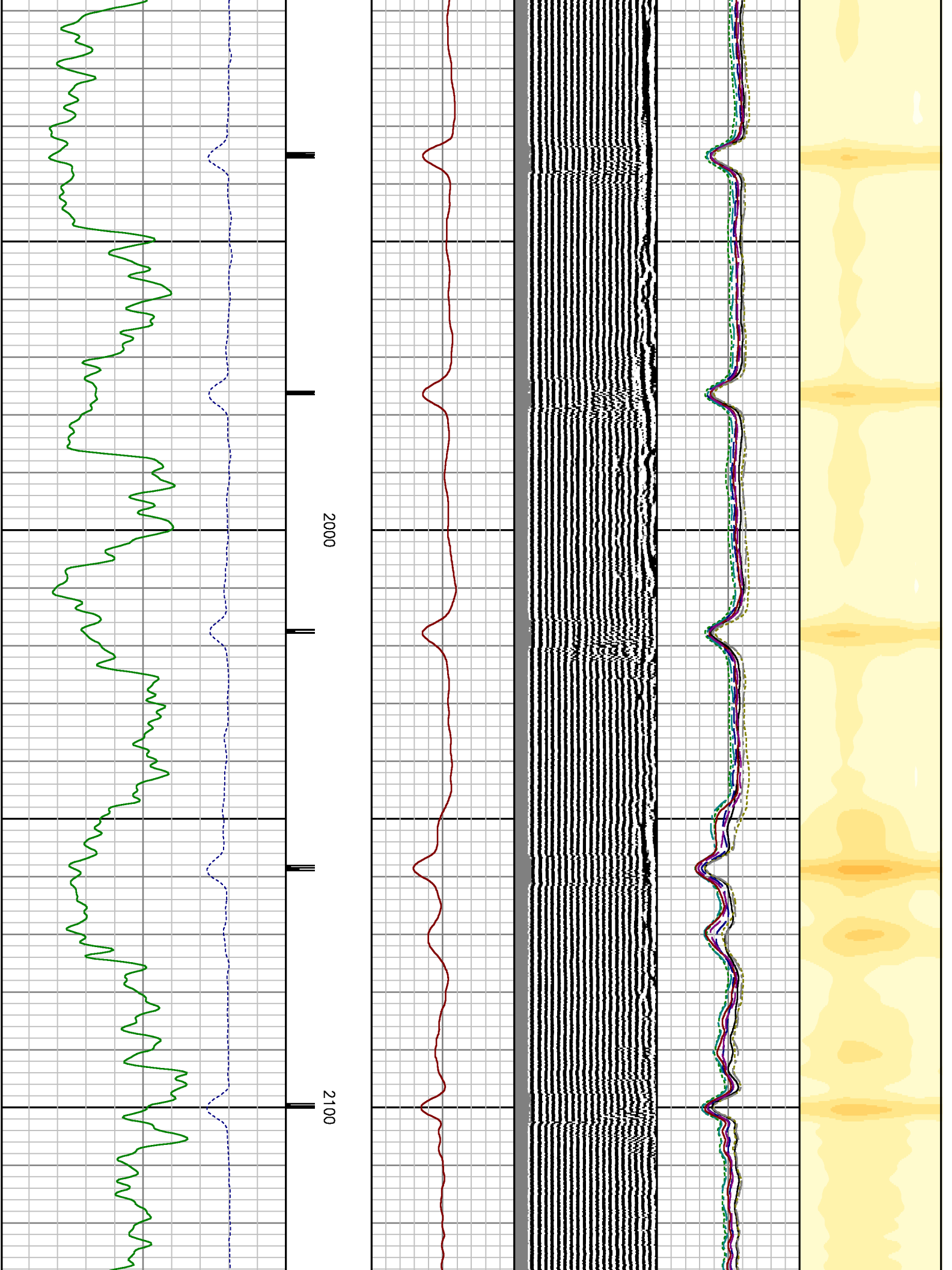


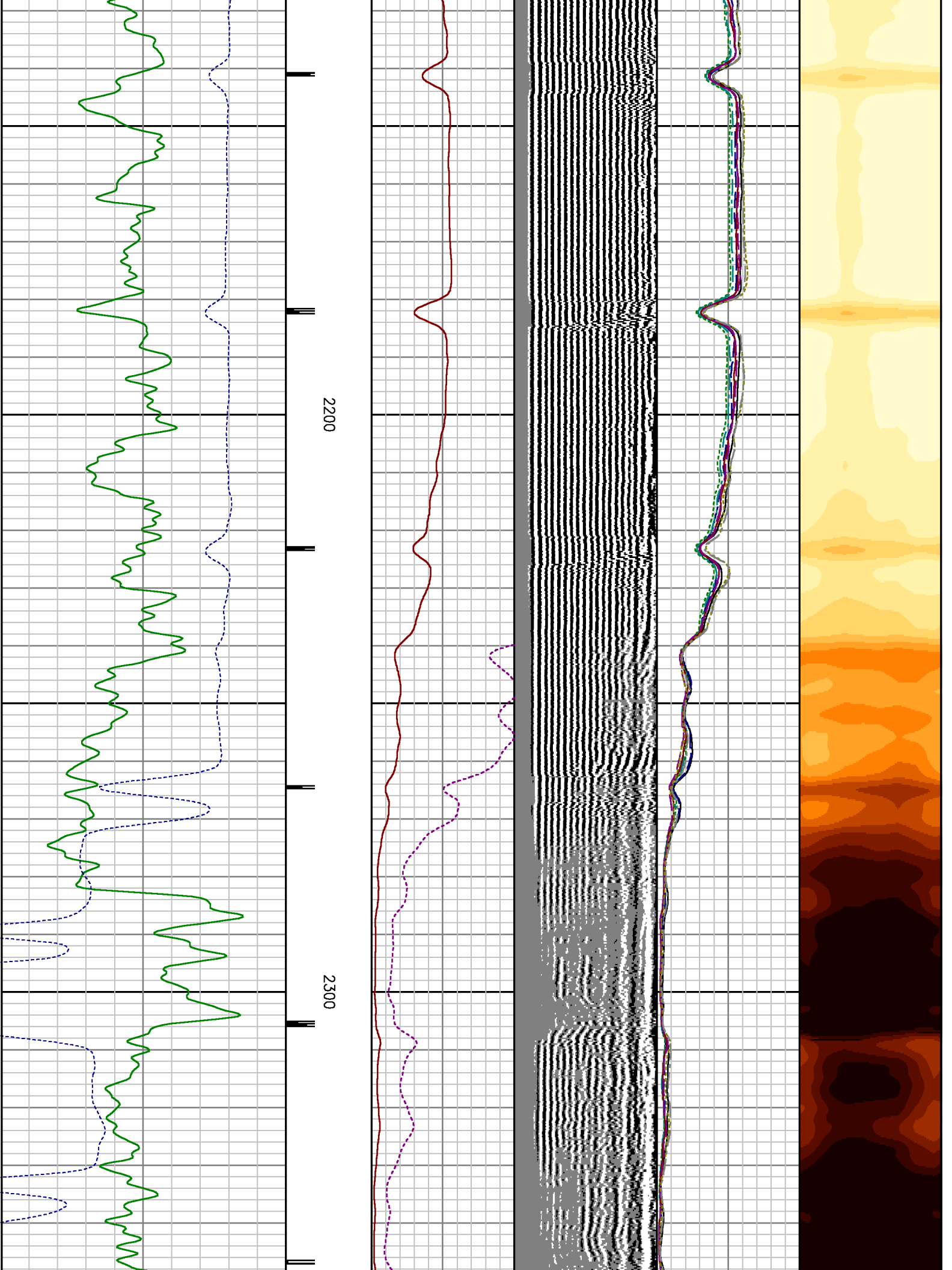


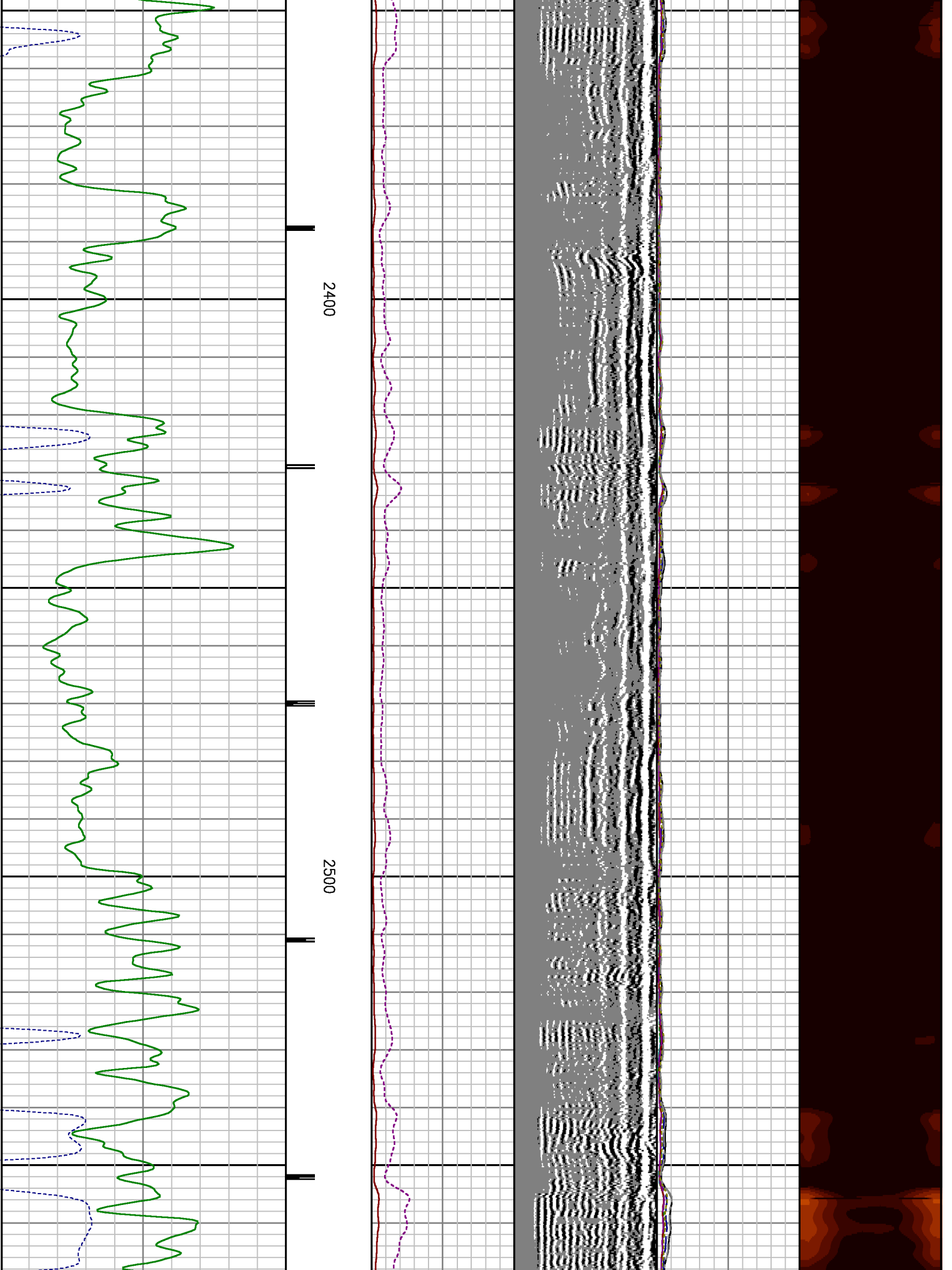


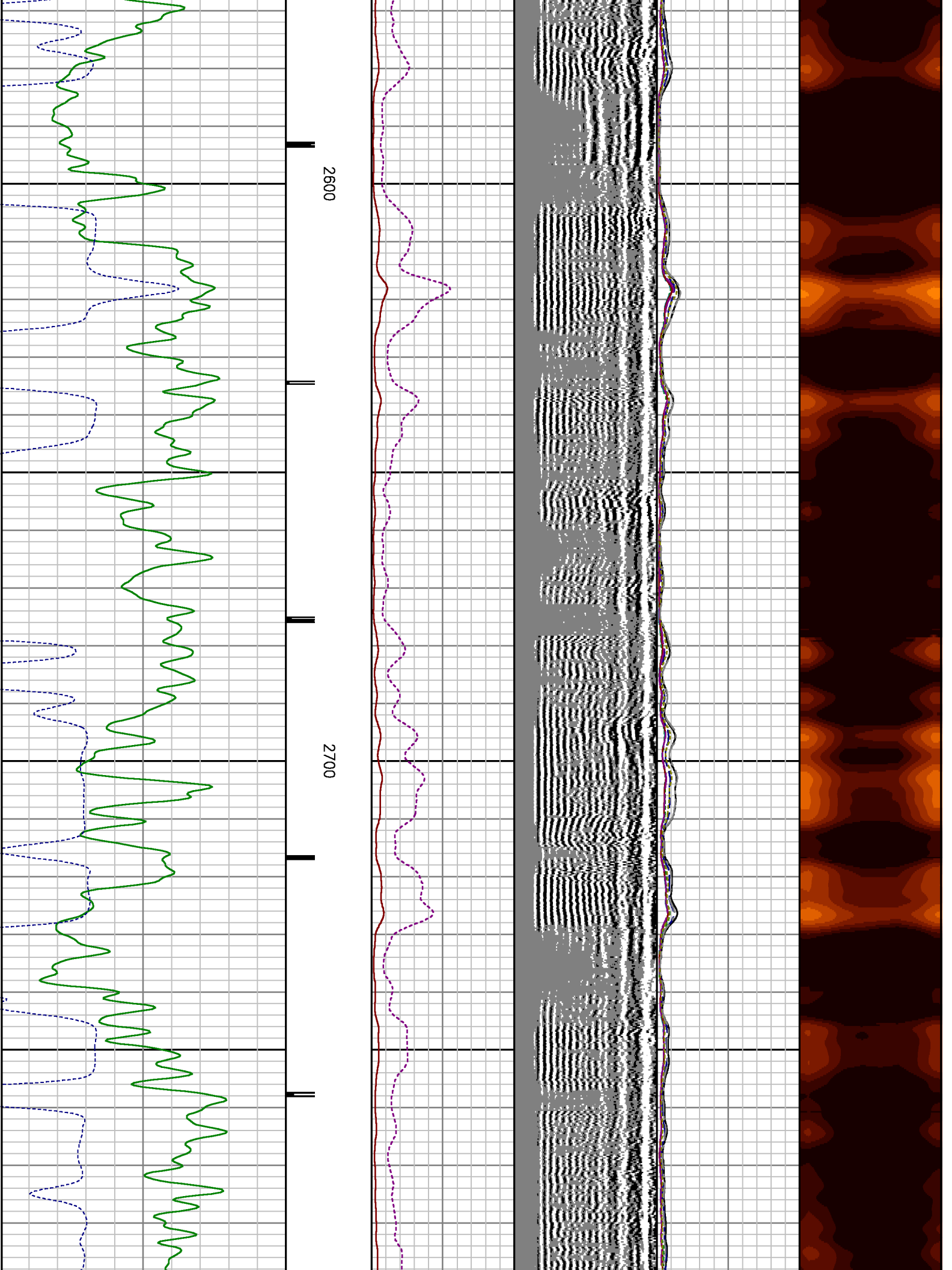


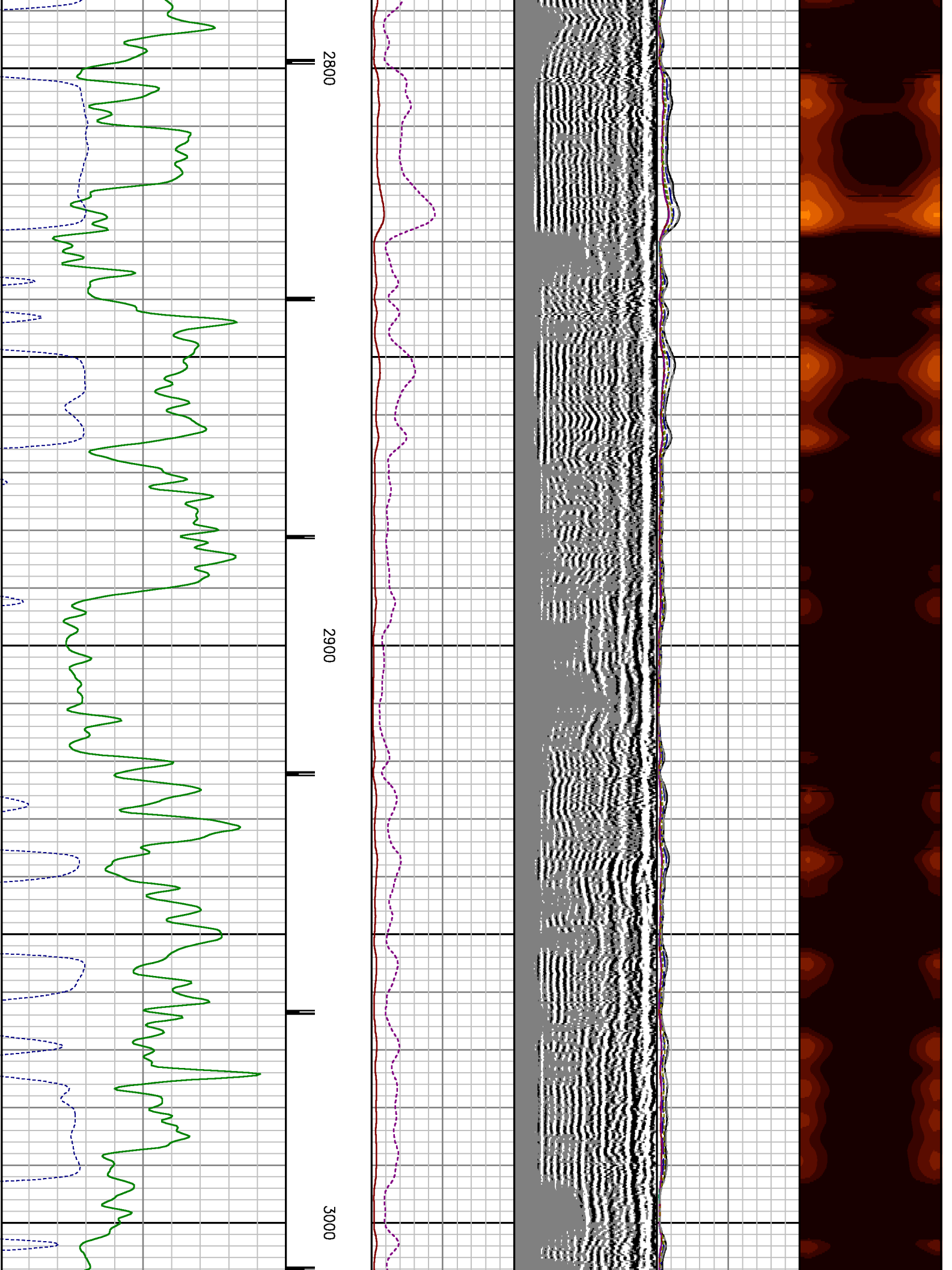


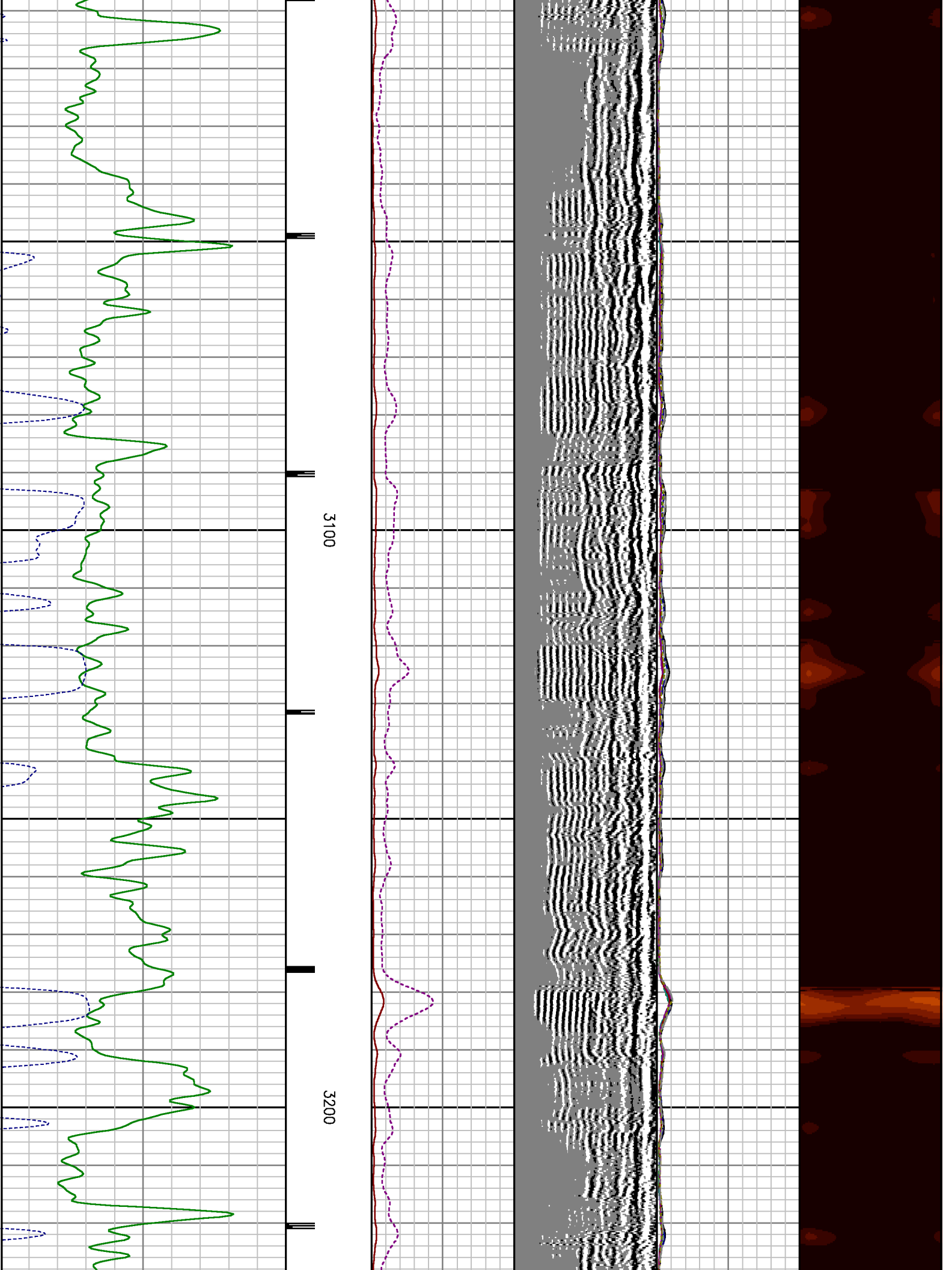




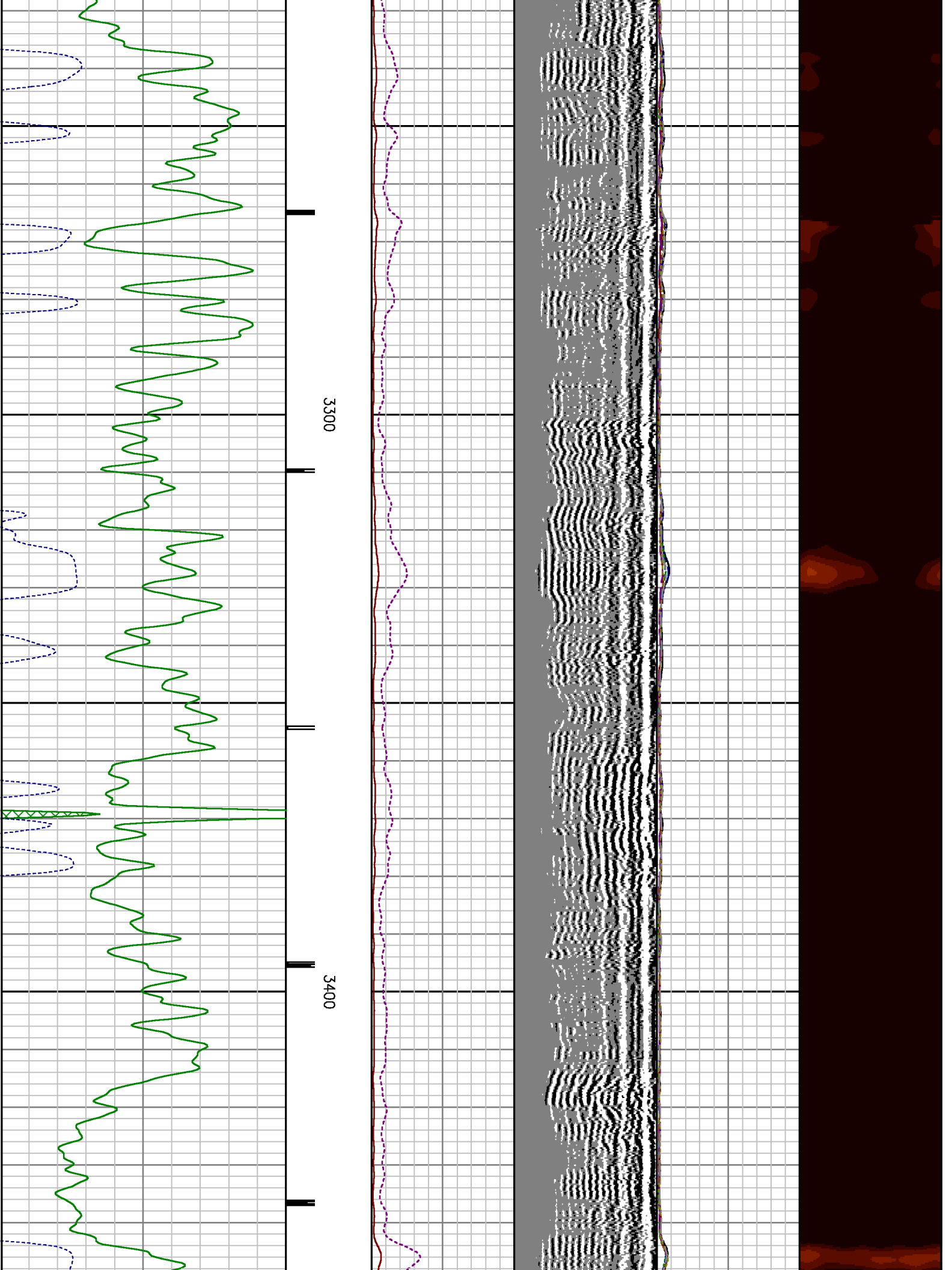


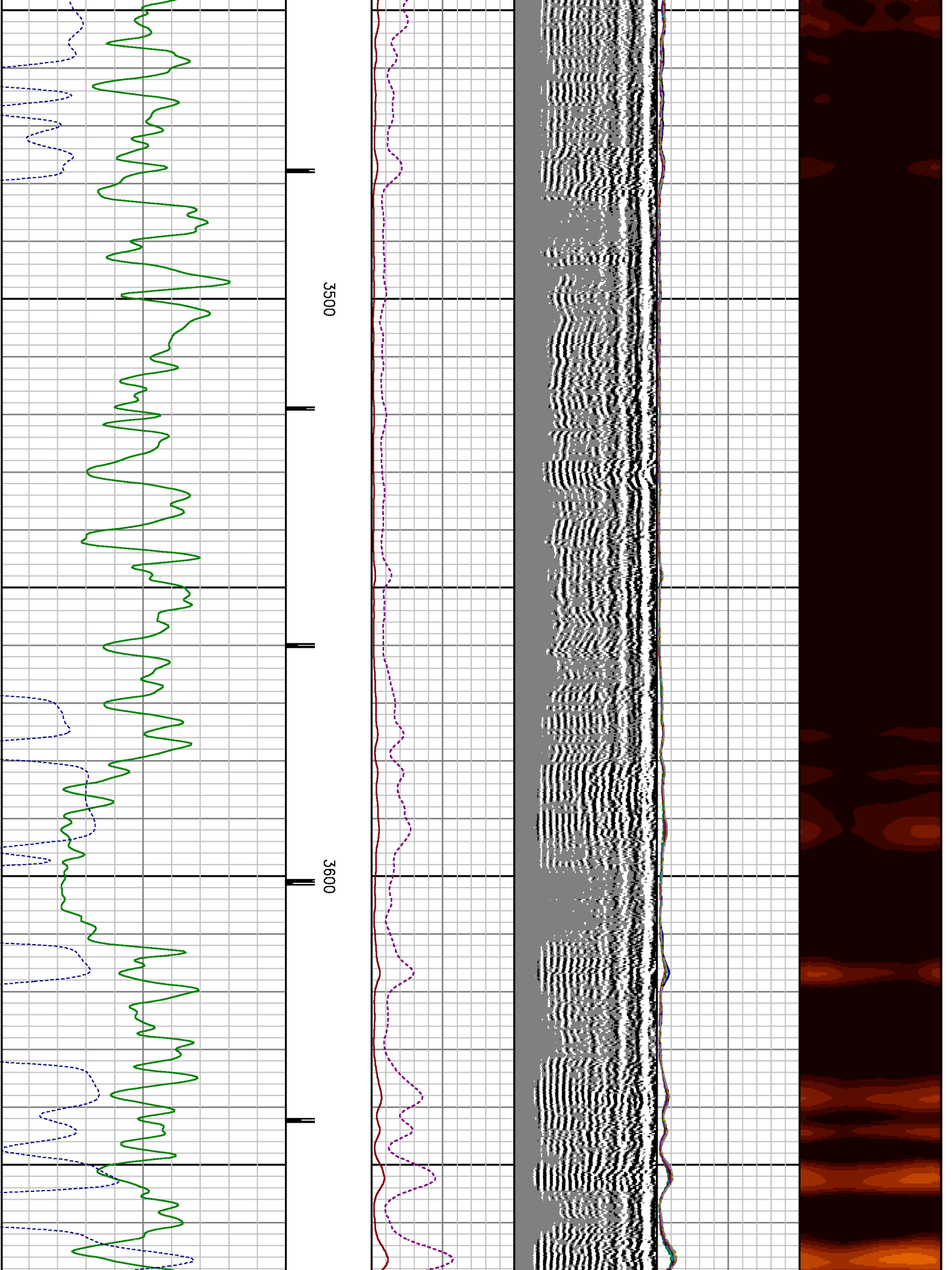


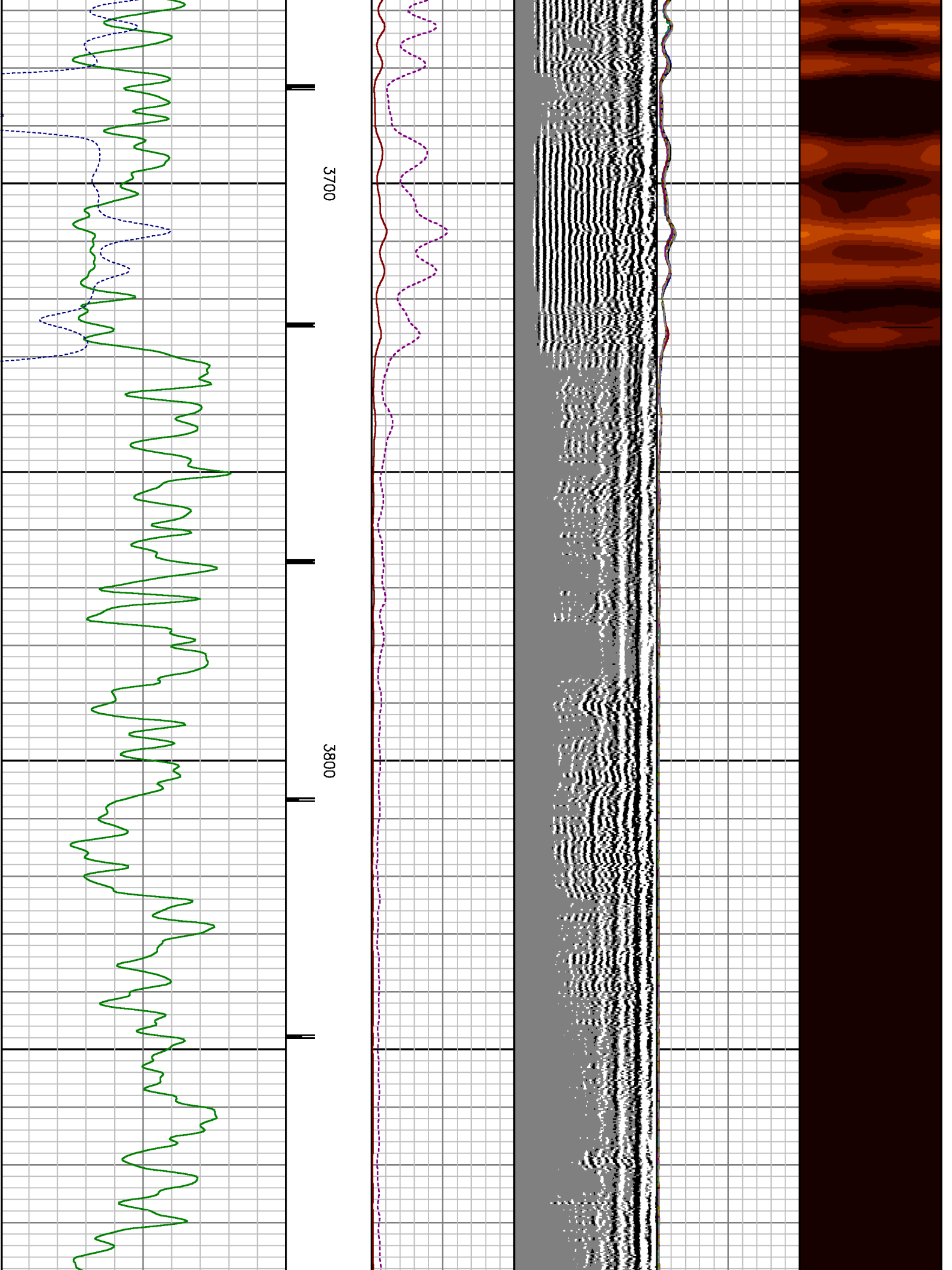


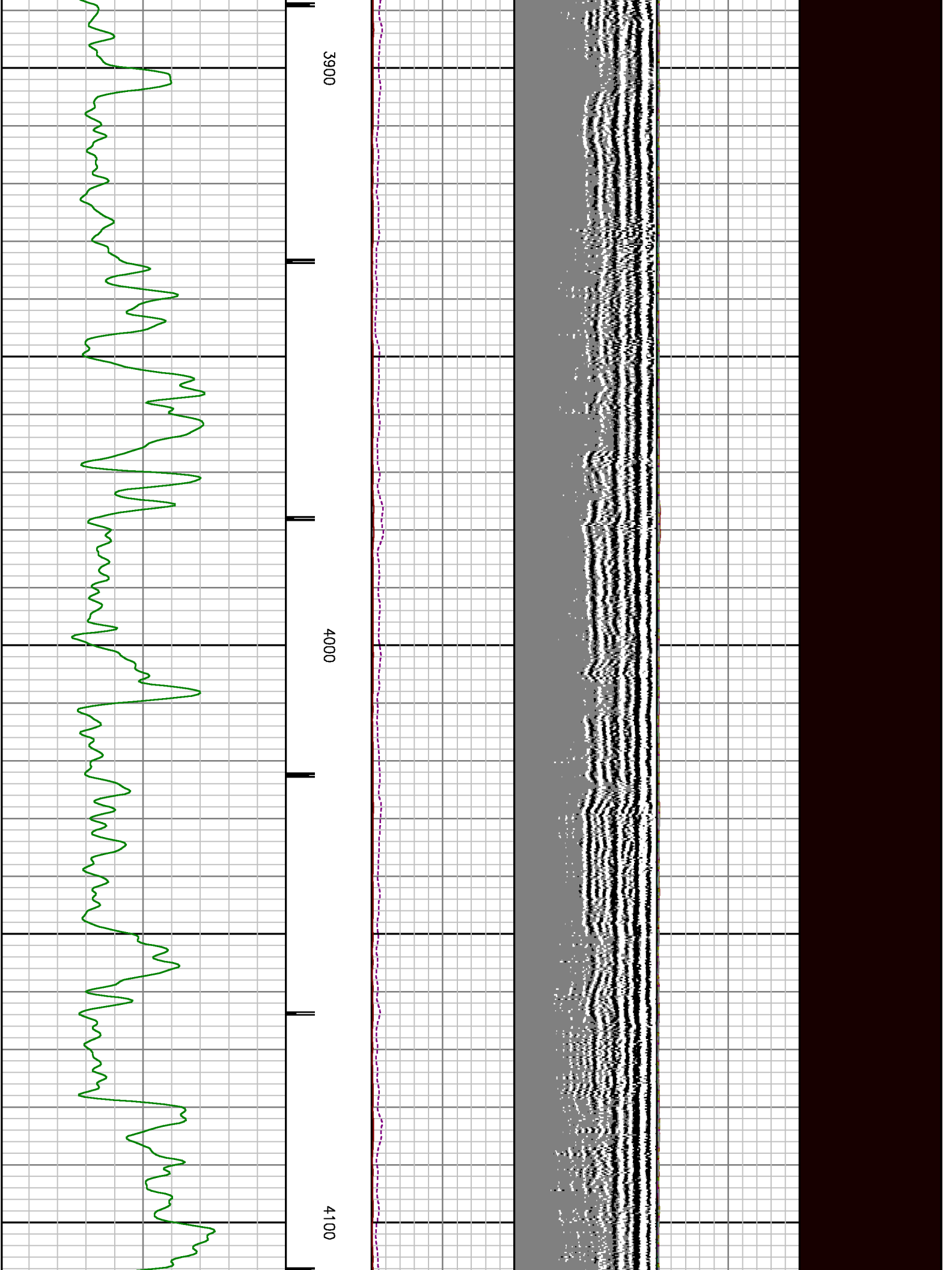


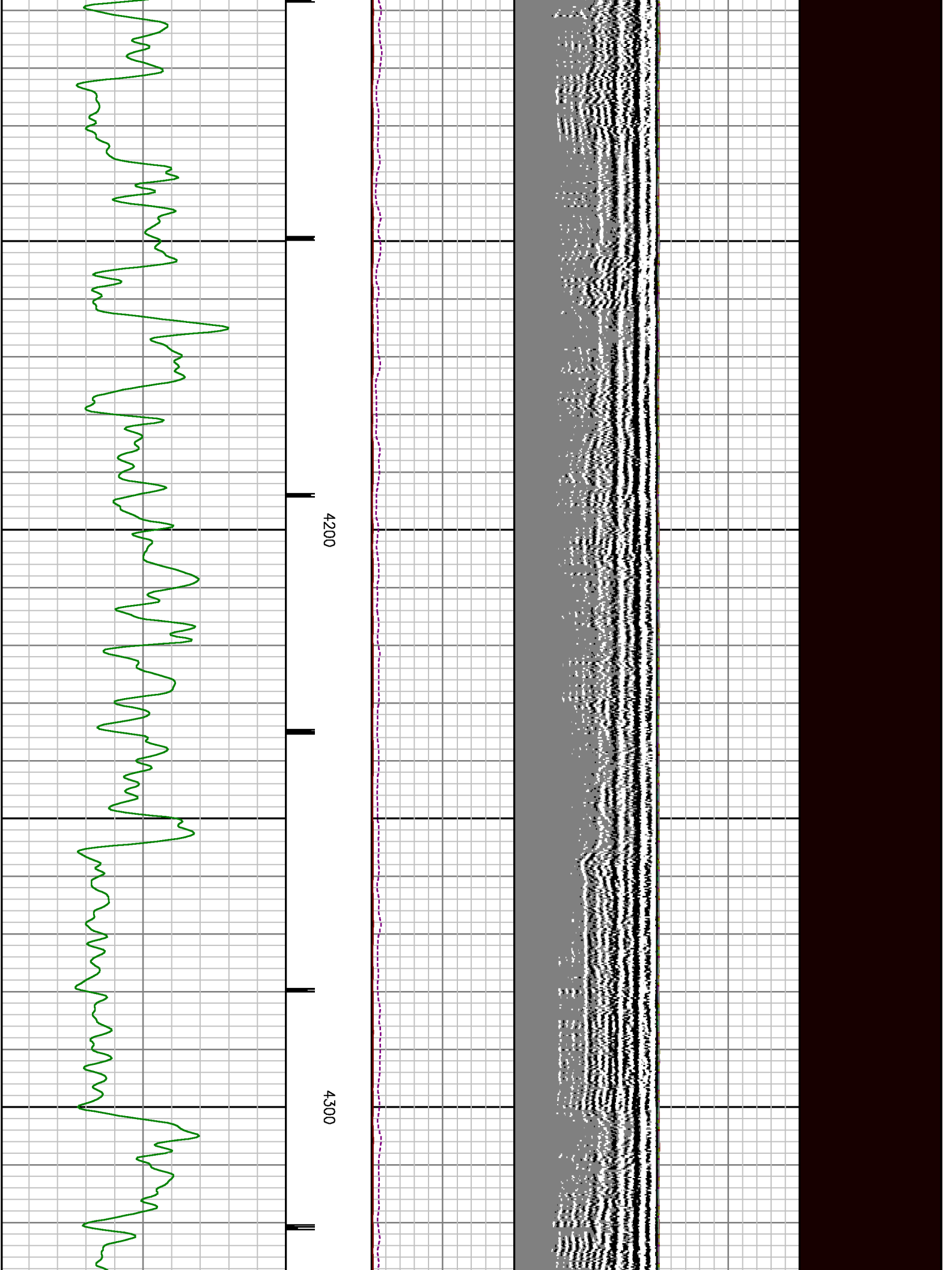


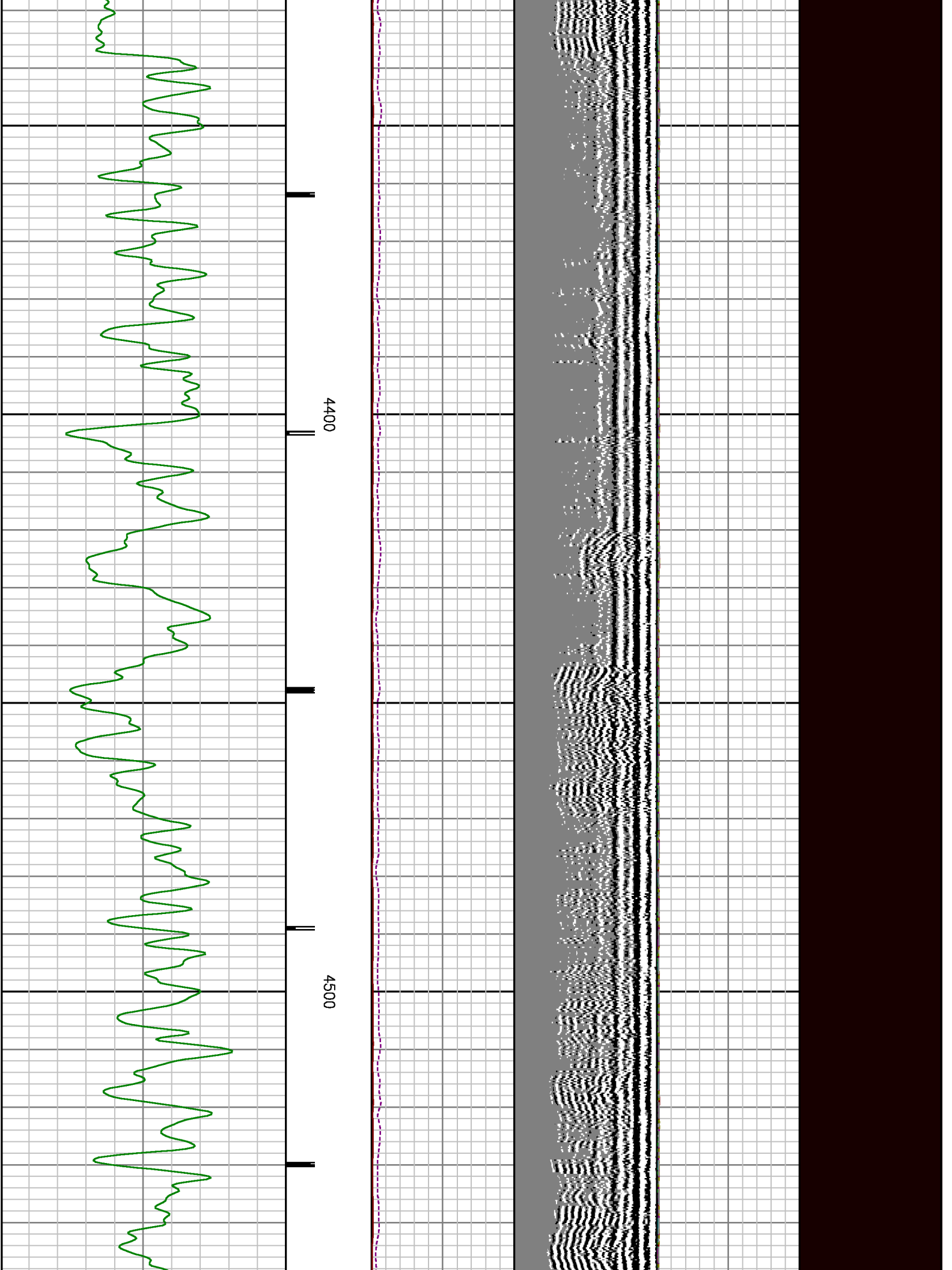




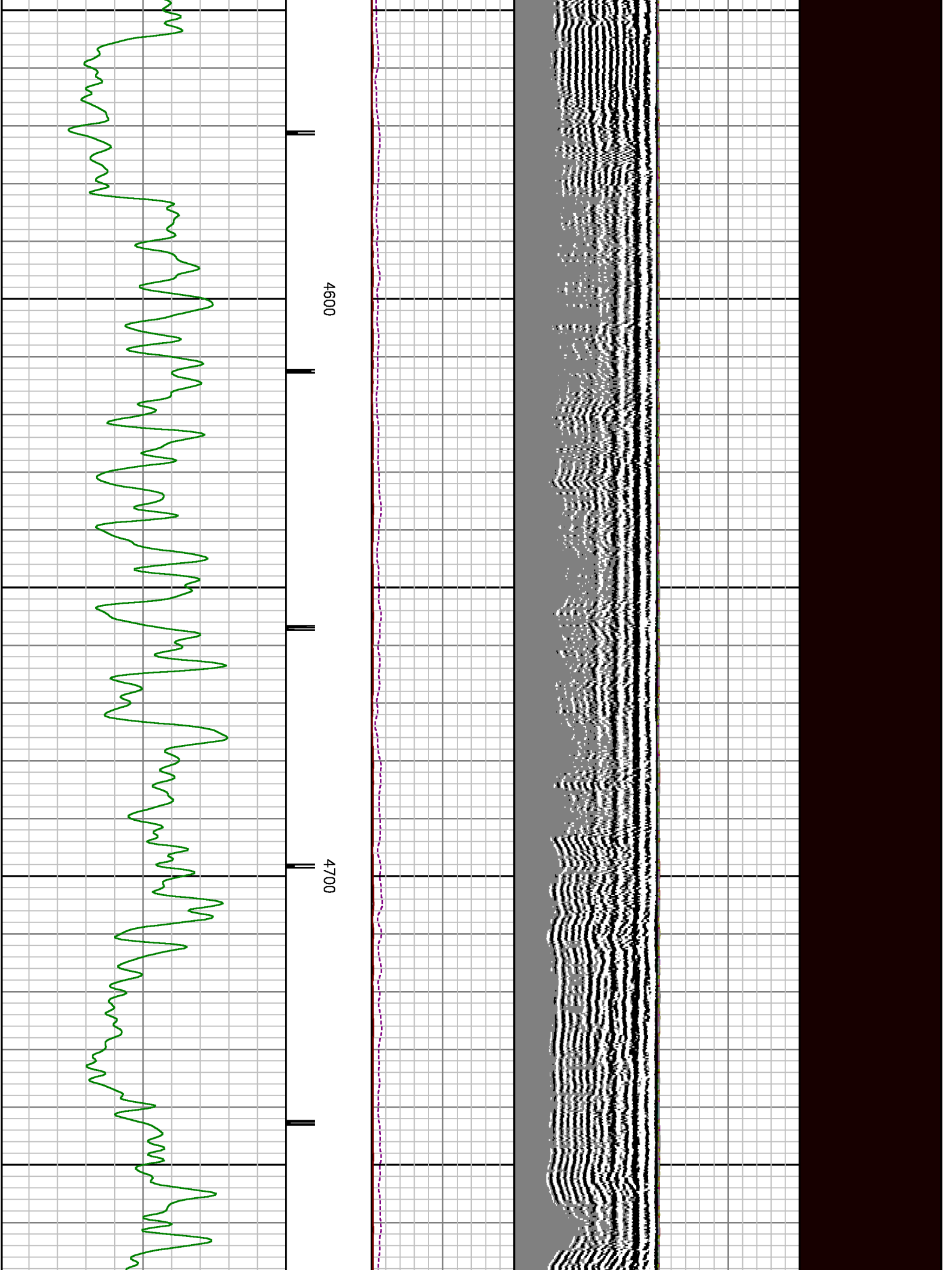


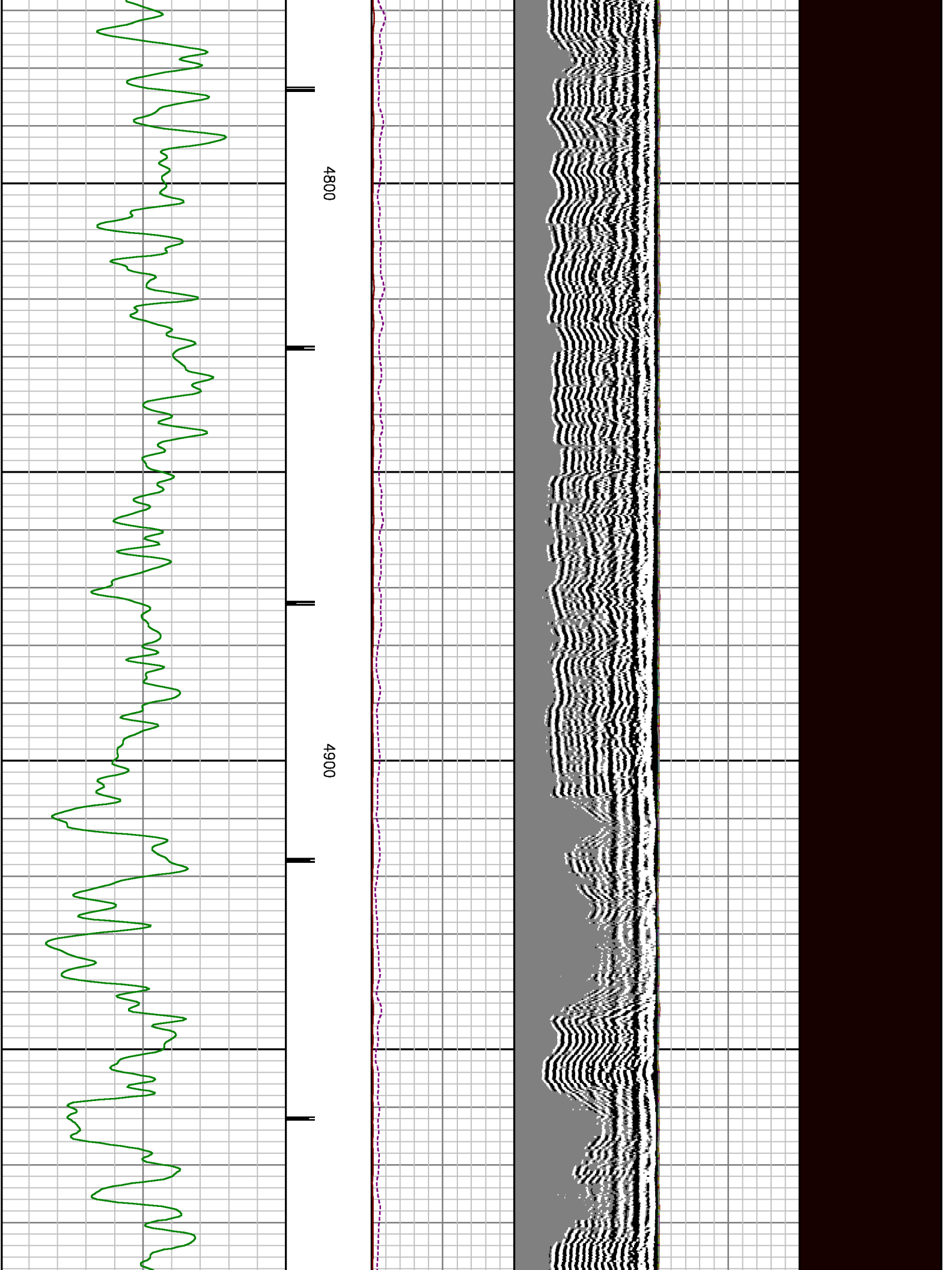


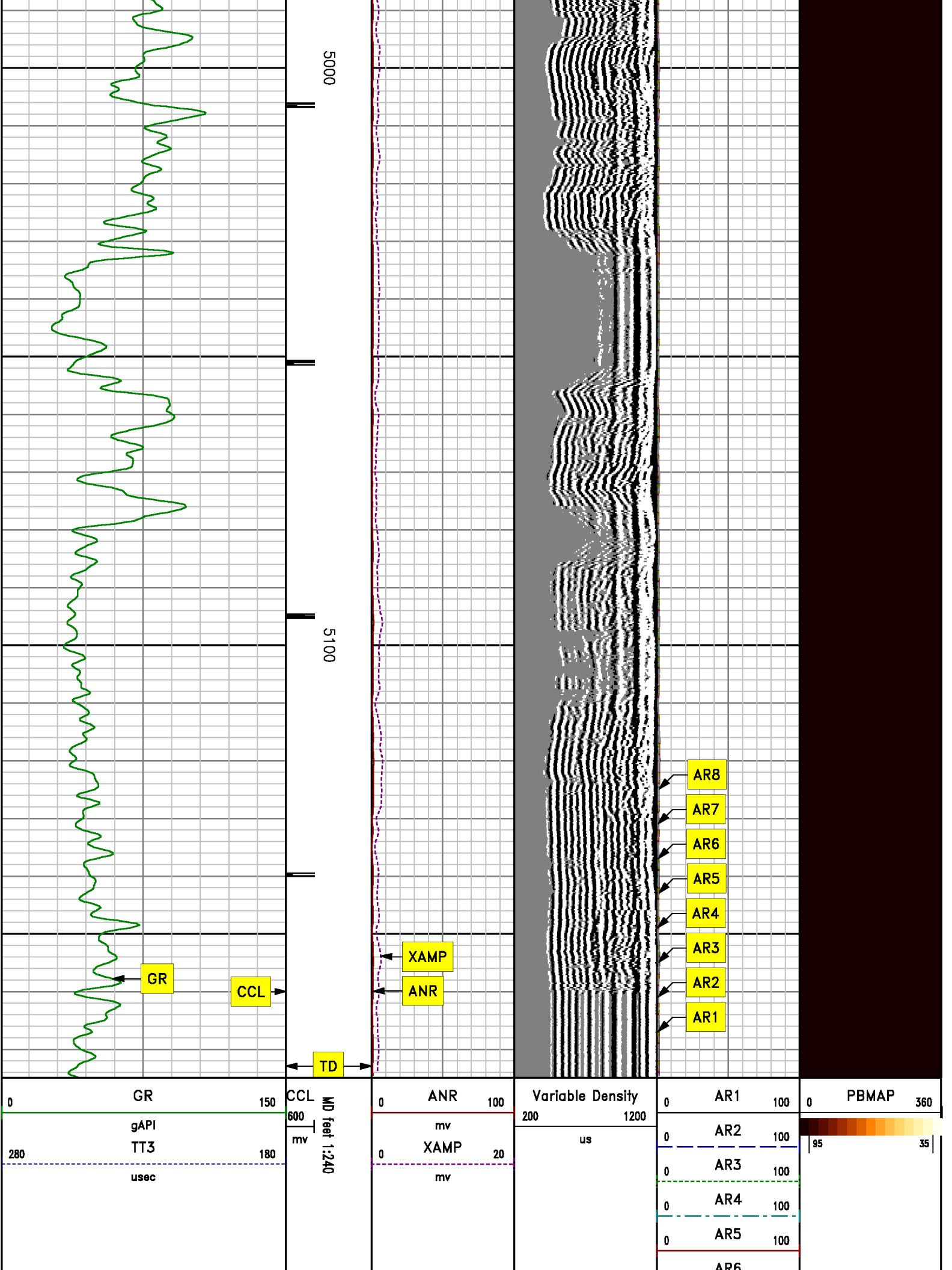












				0	AR6	100
				0	AR7	100
				0	AR8	100

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	4882.804	5183.000
RAL	Amp Gate Start Near	200.391	usec	4882.804	5183.000
RAL	Amp Gate Start Radial	200.391	usec	4882.804	5183.000
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RAL	casing od	4.500	inches	4882.804	5183.000
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RAL	FB Start Radial	175.391	usec	4882.804	5183.000
RAL	FB Thresh Far	15.000	mv	4882.804	5183.000
RAL	FB Thresh Near	10.000	mv	4882.804	5183.000
RAL	FB Thresh Radial	10.000	mv	4882.804	5183.000
RAL	Fluid Travel Time	200.000	usec/ft	4882.804	5182.800

DEPTH OFFSETS							
(for Acquired Curves)							
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	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	-11.360	AFAR	SIG	TT5			
1426XA	-7.250	CCL					
1426XA	-5.390	GR					
1426XA	0.000	NEU					

Created by : RAL, v4.8.007

Plotted by : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION COMPANY

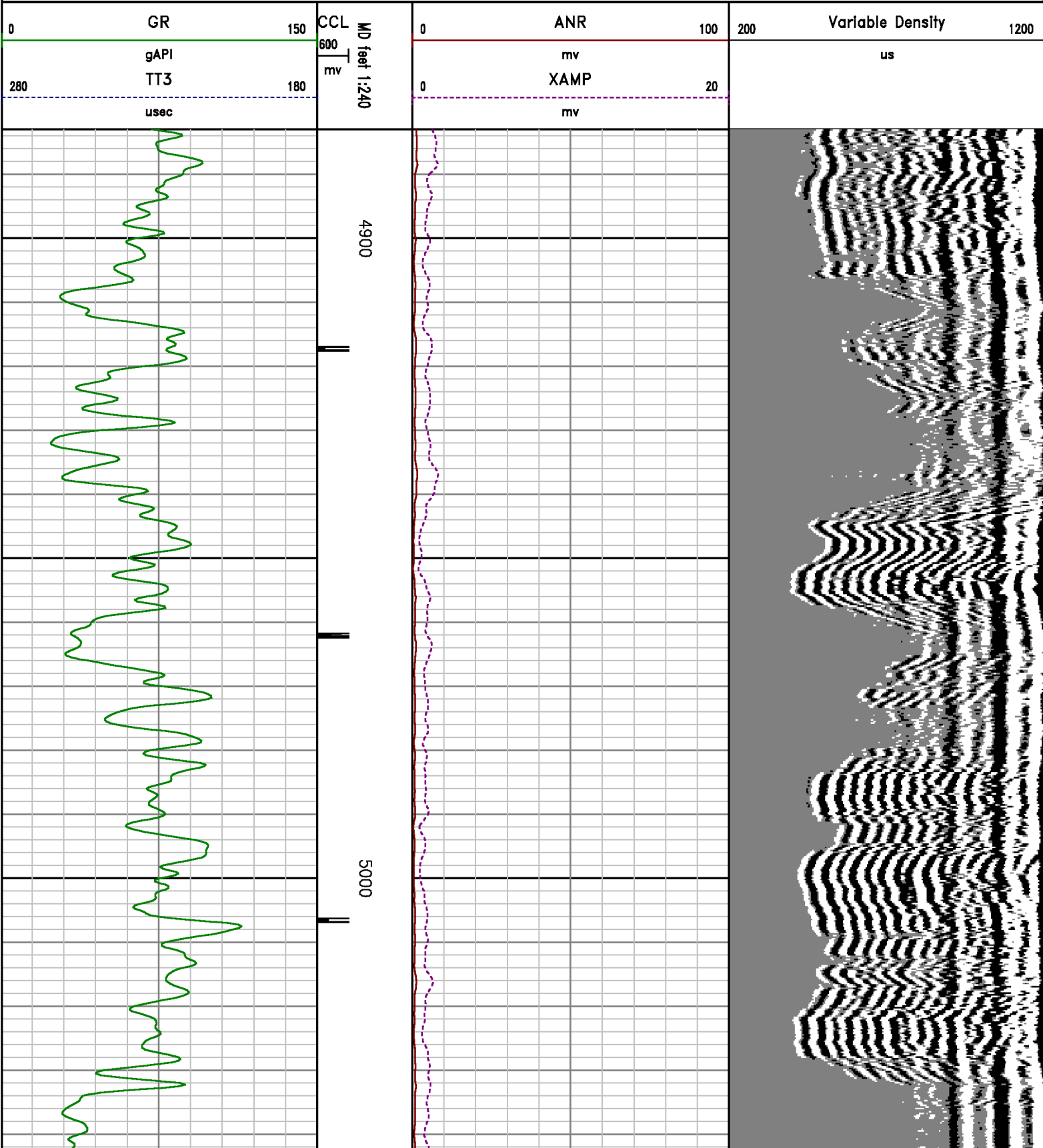
Well : SG 443-28

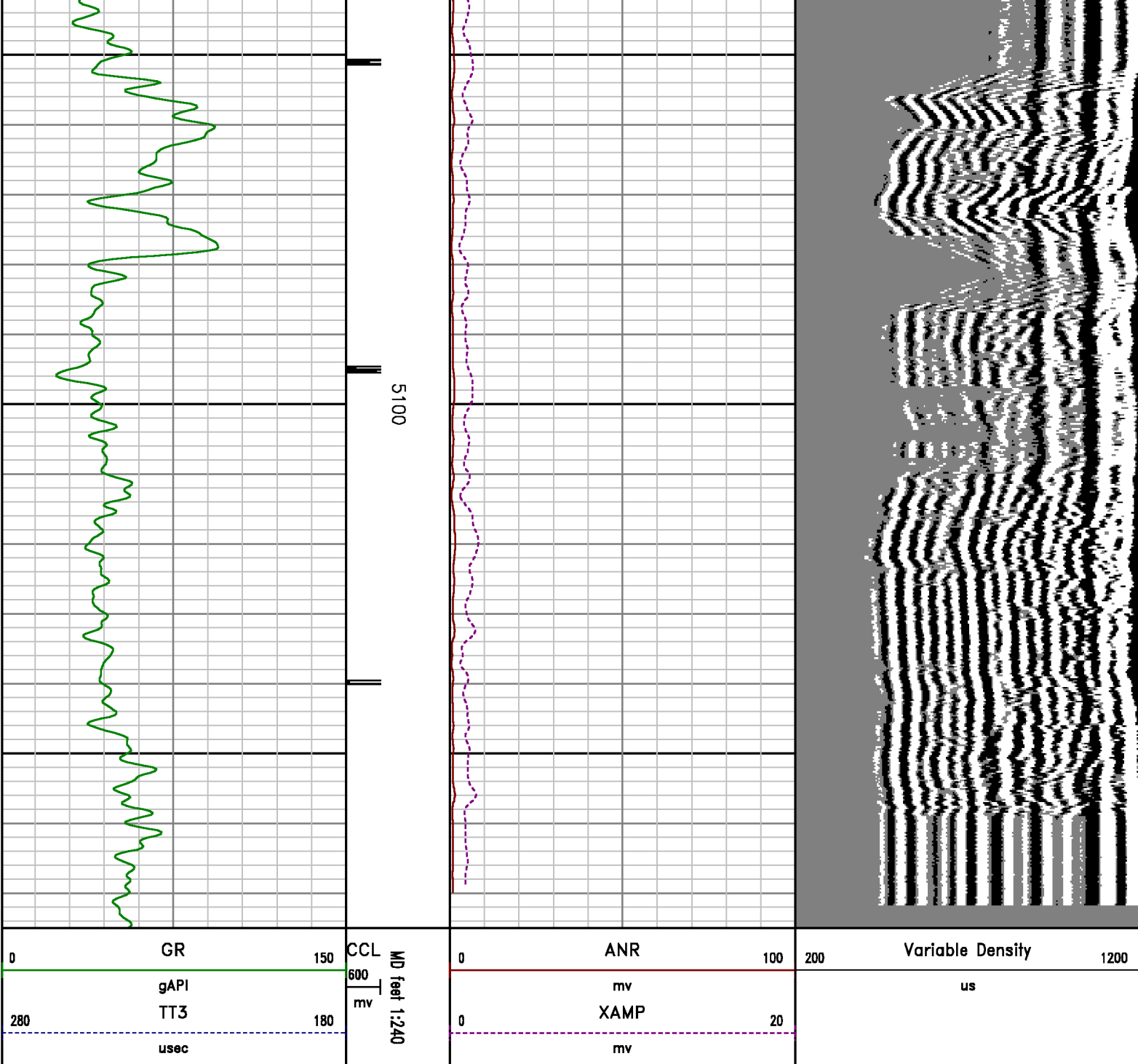
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Mode : PlotMgr 5.4.504

Interval : 4883.00 - 5175.00 feet UP

Created : 9/19/2010 3:58:30 PM





## CALIBRATION SUMMARY

## GAMMA RAY



## CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Sep 07 10:34:38 2009 TOOL SERIES: 1426XA ASSET: 457 SEQ: S1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K DA905	38.98	222.36	0.545	21.26	121.26	100.00

Verification File: C:\case\calver\GR\457S1.VP

## PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Mon Aug 30 10:48:09 2010 TOOL SERIES: 1426XA ASSET: 457 SEQ: S1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K DA612	96.62	354.81	0.715	69.07	253.64	184.57

*RALSHP*

Shop Calibration: C:\case\calver\RALSHP\539S19\_shp.cal

## SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Sep 19 11:08:58 2010 TOOL SERIES: 1426XA ASSET: 539 SEQ: S19

Tool Delay [usec]	-52.00	Tank OD In	5.50	Tank Wt lbm/ft	15.50	Tank ID In	4.95
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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	51	118	0.244	100.00	0.21
3 Ft. Receiver	218	216	30	81	95	-0.071	100.00	0.21
5 Ft. Receiver	326	322	30	100	165	0.396	150.00	0.22
Radial #1	219	216	30	82	95	0.583	100.00	0.21
Radial #2	219	216	30	82	95	0.386	100.00	0.21
Radial #3	219	216	30	82	95	0.179	100.00	0.21
Radial #4	219	216	30	82	95	-0.207	100.00	0.21
Radial #5	218	216	30	82	95	0.125	100.00	0.21
Radial #6	216	216	30	82	95	0.051	100.00	0.21
Radial #7	216	216	30	82	95	-0.057	100.00	0.21
Radial #8	218	216	30	82	95	-0.308	100.00	0.21

*RALFLD*

Wellsite Calibration: C:\case\calver\RALFLD\539S19 fld.cal

## WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Sep 19 11:12:43 2010 TOOL SERIES: 1426XA ASSET: 539 SEQ: S19

Tool Delay [usec]	-52.00	Casing OD In	4.50	Casing Wt lbm/ft	11.60	Casing ID In	4.00
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RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]
CAL Pulse	51	118	-0.041	0.000	1.00	100.000
3 Ft. Receiver	200	25	0.389			
5 Ft. Receiver	317	25	1.919			
Radial #1	200	25	0.052			
Radial #2	200	25	0.279			
Radial #3	200	25	0.396			
Radial #4	200	25	0.175			
Radial #5	200	25	-0.289			
Radial #6	200	25	0.139			
Radial #7	200	25	-0.041			
Radial #8	200	25	0.100			

## TOOL DIAGRAM

OTA SHORT CABLE HEAD

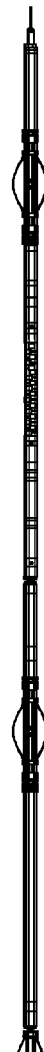
### PROBE 2 3/4 DUAL RECEIVER RADII

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

### Probe GR/CCL/NEU

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

CENTRALIZER



24.32'

XMIT 18.13'

NEAR RCVR 15.05'

FAR RCVR 13.13'

CCL 11.43'

GR 9.57'

NEU 4.18'

Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb



0.00'

Total Length: 24.32'  
Total Weight: Not Available  
Max Diameter: 0' 3.12"



Baker Atlas



Company	WILLIAMS PRODUCTION COMPANY		
Well	SG 443-28		
Field	GRAND VALLEY		
County	GARFIELD	State	COLORADO

File No:
API No:
05045191760000

Location	Elevations
SHL: 1247' FSL, 1512' FEL	KB 5112 ft
BHL: 1855' FSL, 661' FEL (NESE)	DF 5111 ft
	GL 5089 ft
SEC 28 TWP 7S RGE 96W	

S28 T7S R96W
PAD: SG 34-28
RIG: NABORS 574