



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: _____ Company **WILLIAMS PRODUCTION COMPANY**

API No: _____ Well **SG 424-28**

Field **GRAND VALLEY**

County **CARFIELD** State **COLORADO**

05045191890000

Location

SHL: 1235' FSL, 1512' FEL

BHL: 416' FSL, 2045' FWL (SESW)

S28 T7S R96W

PAD: SG 34-28

RIG: NABORS 574

SEC 28 TWP 7S RGE 96W

Other Services

NONE

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 567934

Depth Driller 5588 ft

Depth Logger 5587 ft

Bottom Logged Interval 5587 ft

Top Logged Interval SURFACE

Time Started 8:30

Time Finished 11:00

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 180 degF

Reference Log Date 08/SEP/10

Equipment No. 4271 Location 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	1381 ft
7.875 in	1381 ft	5588 ft

Casing Record

Size	Weight	Grade	From	To
9.625 in	36 lbm/ft	N/A	SURFACE	1381 ft
4.5 in	11.6 lbm/ft	P-110	SURFACE	5588 ft

Remarks

THIS LOG IS TIED INTO A BAKER ATLAS OPEN HOLE LOG DATED 08/SEPT/2010.
WELL WAS LOGGED WITH 0 PSI AT THE WELL HEAD.
SHORT JOINT AT 2135'-2158'.
BHT = 180 degF.

Equipment Data

Run	Trip	Tool	Series Number	Serial Number	Position
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MAIN SECTION
PRIMARY PRESENTATION

DEPTH OFFSETS

DEPTH OFFSETS

(for Acquired Curves)

Created by : MIXED

Plotted by : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION COMPANY

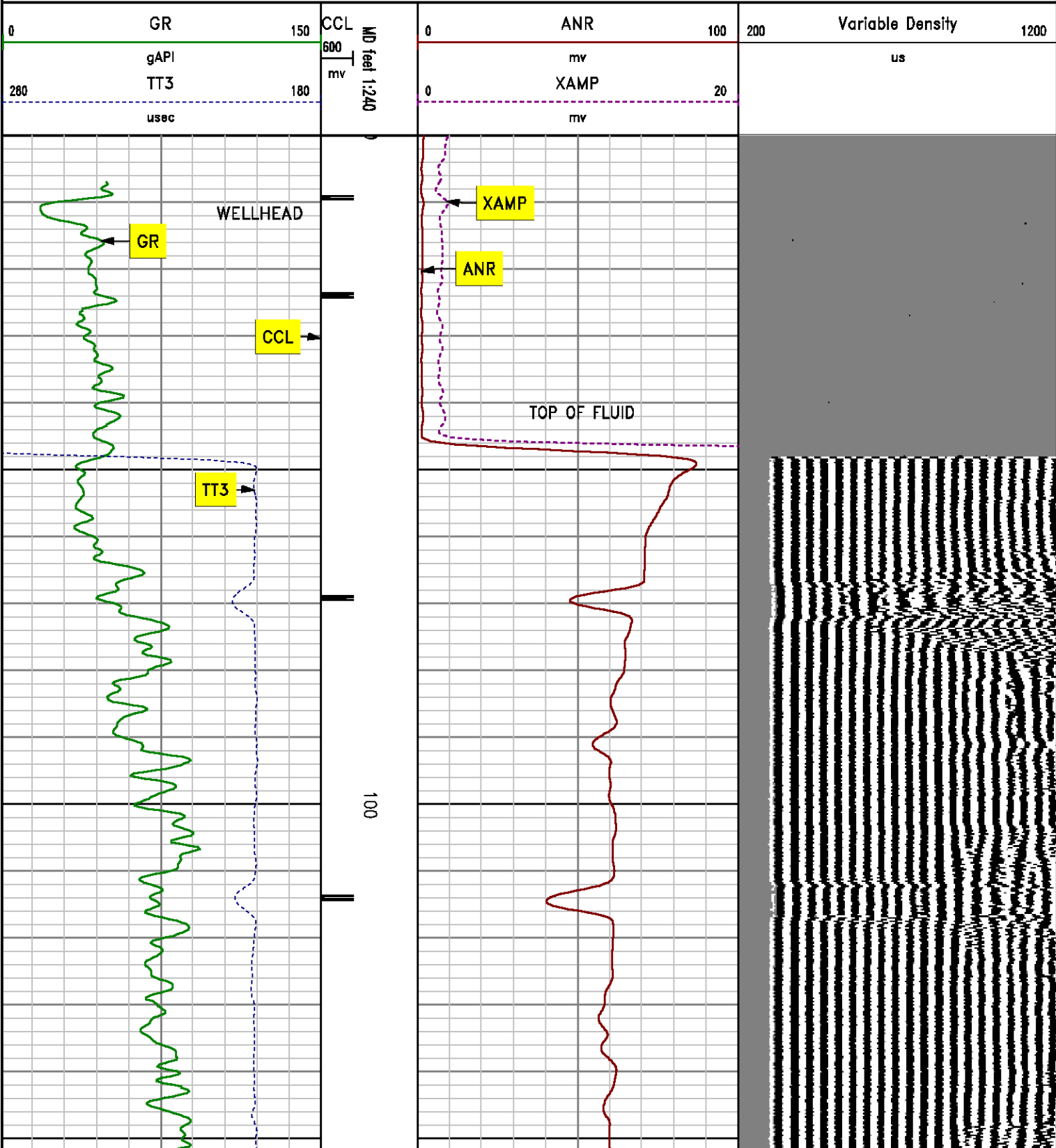
Well : SG 424-28

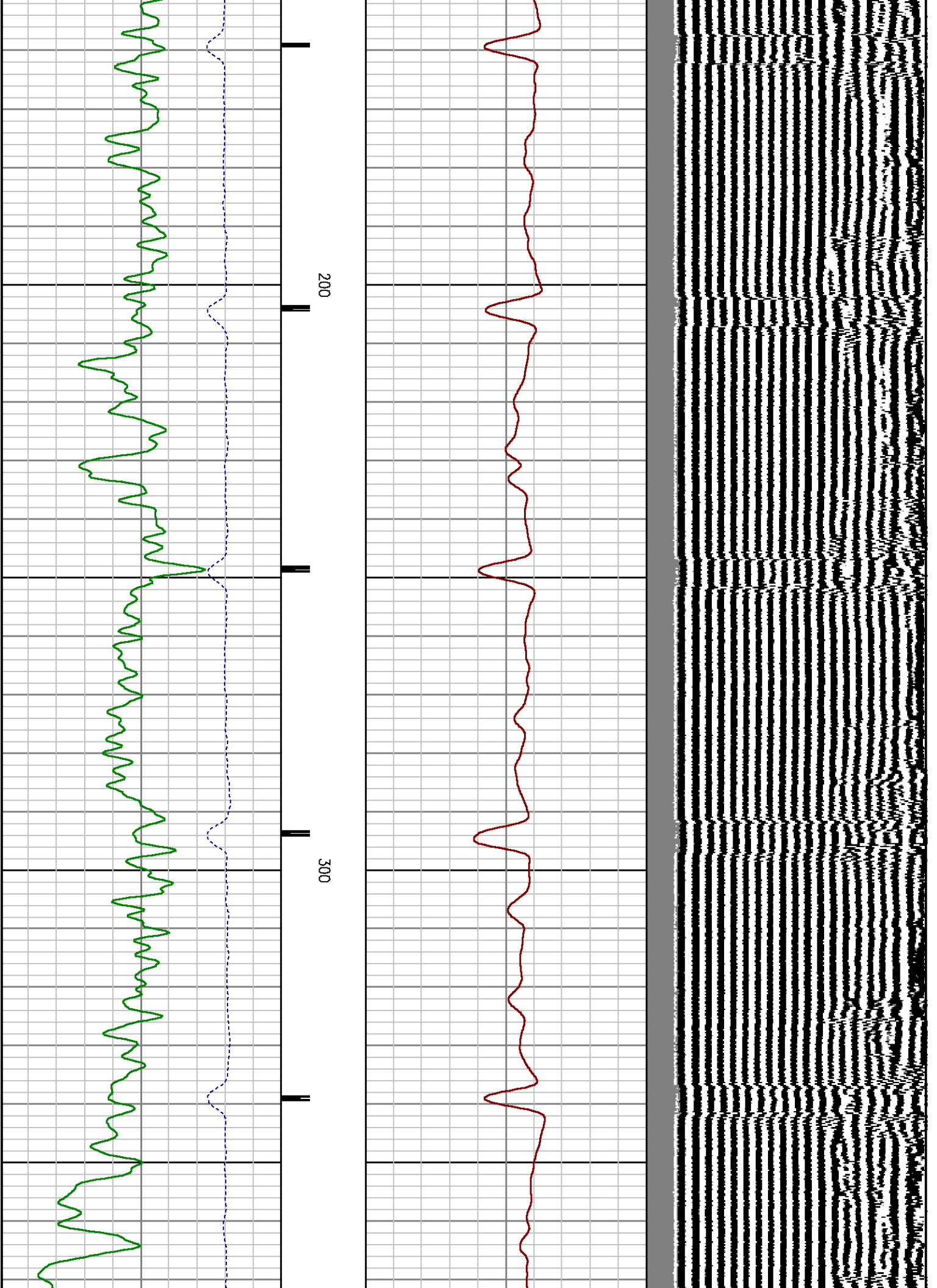
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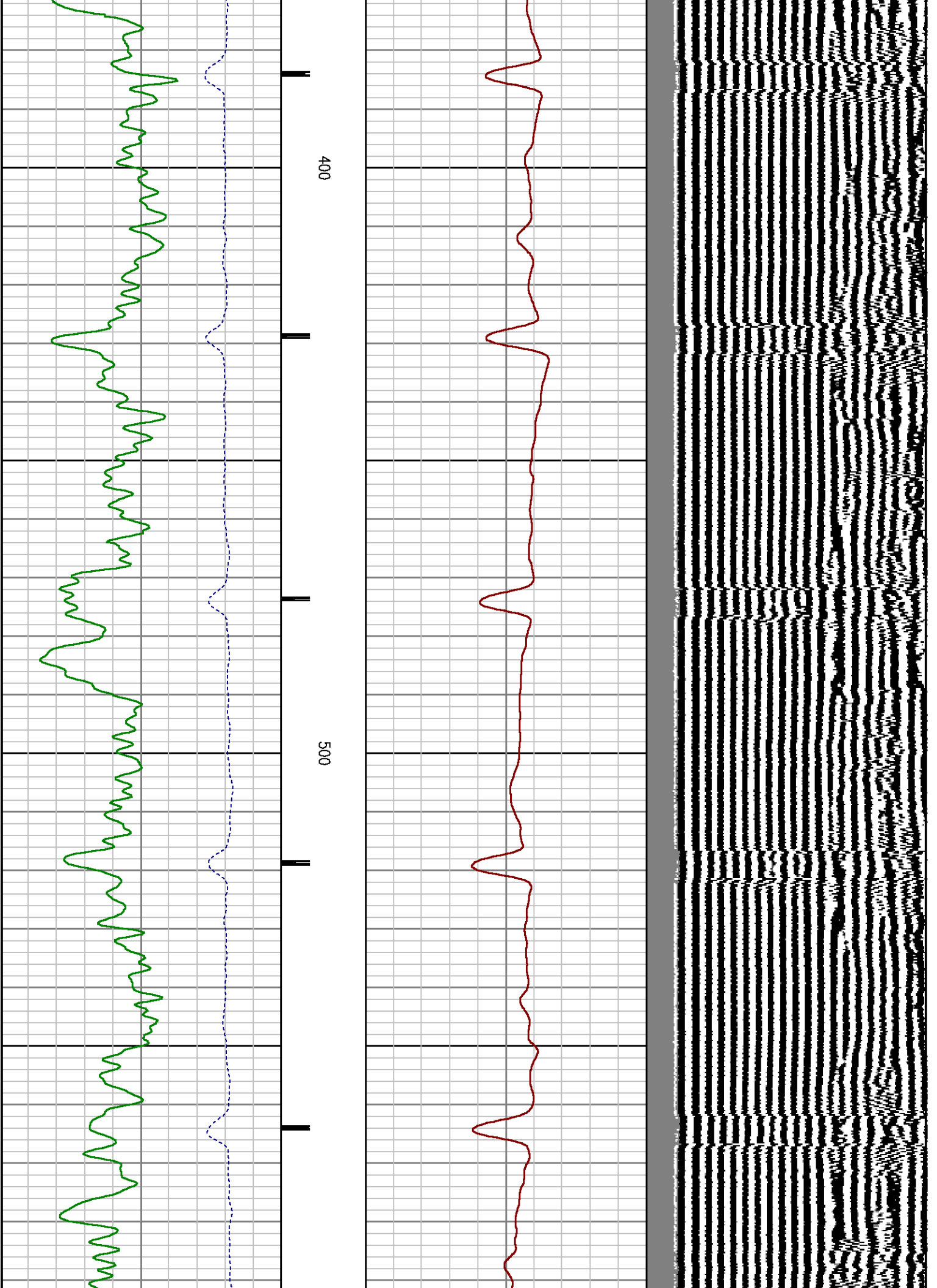
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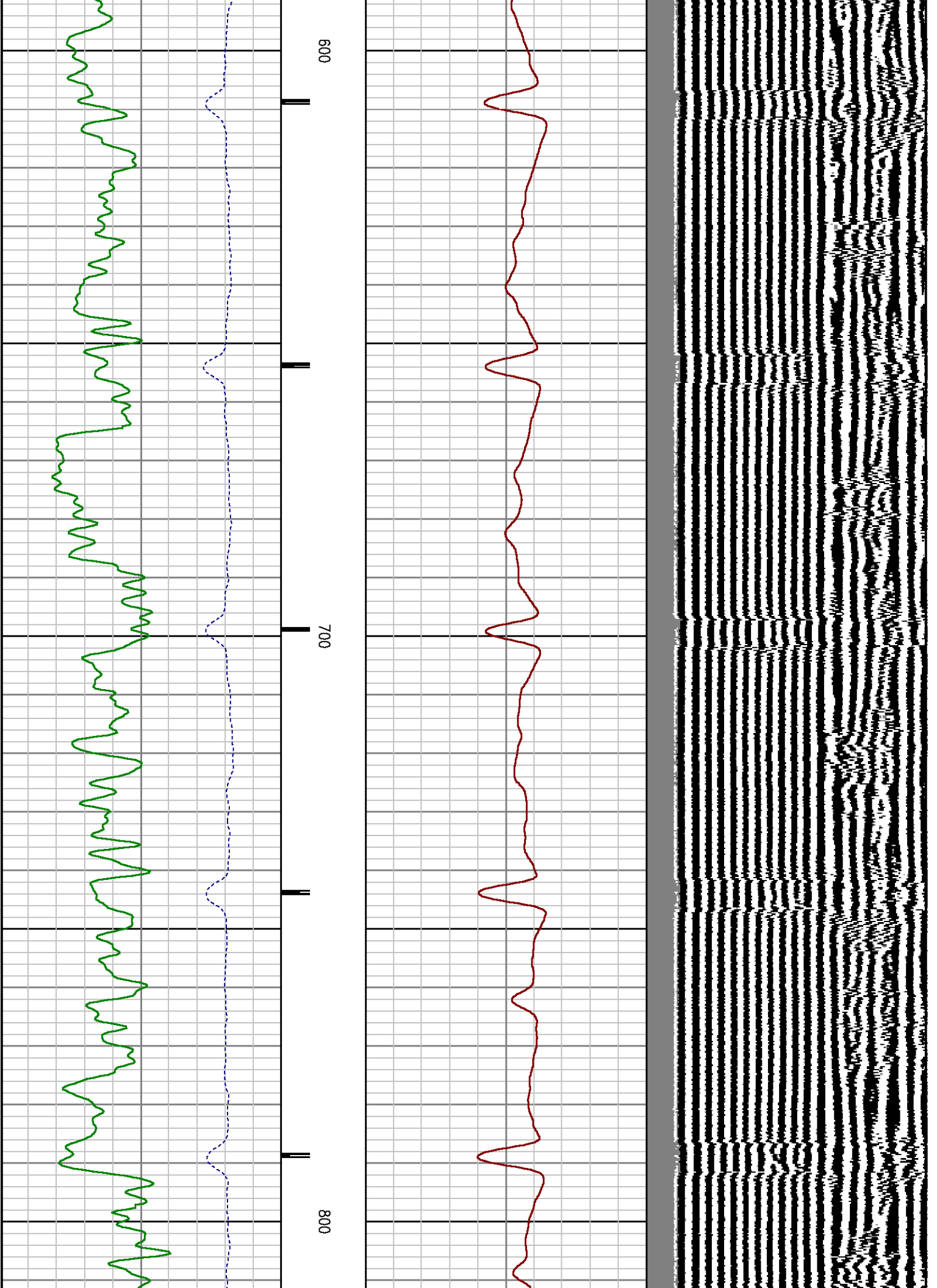
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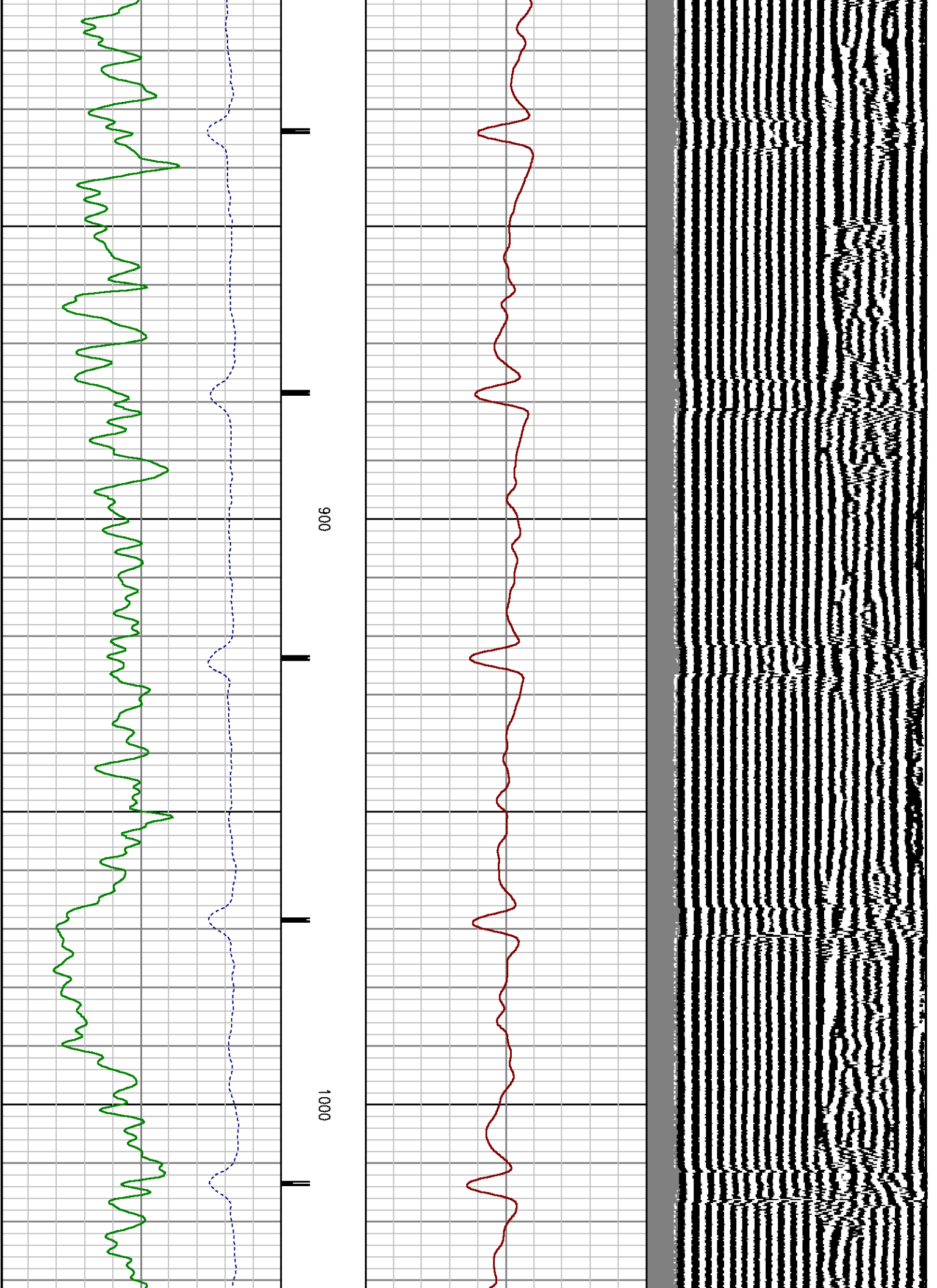
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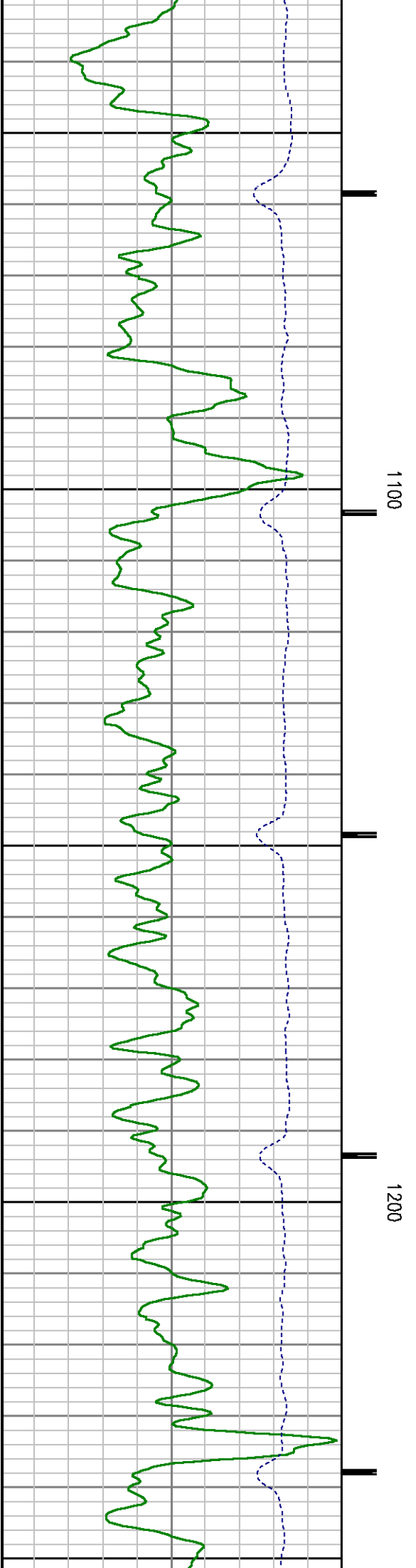
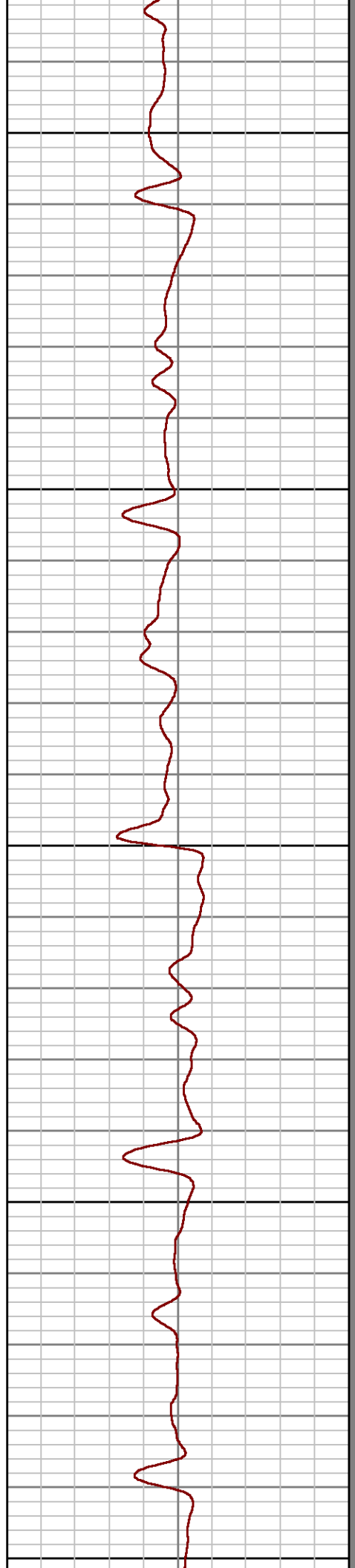
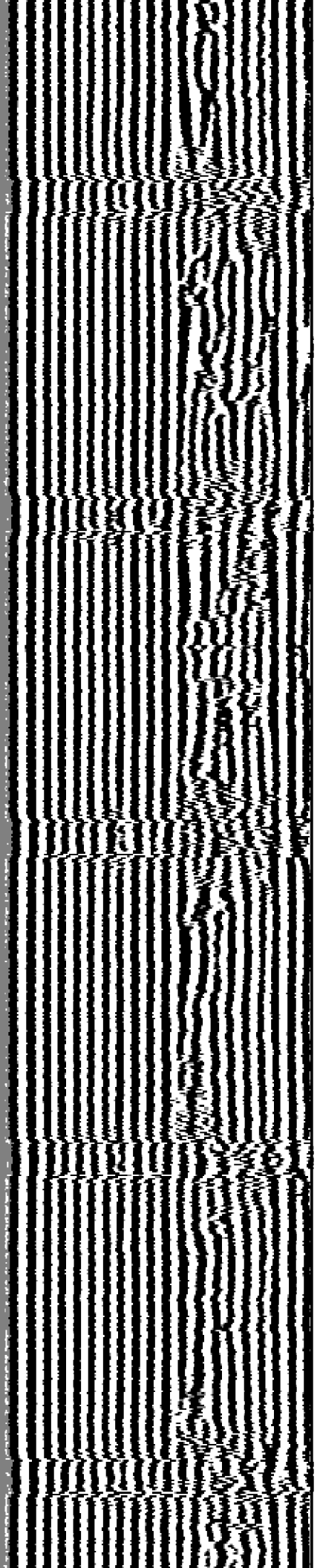


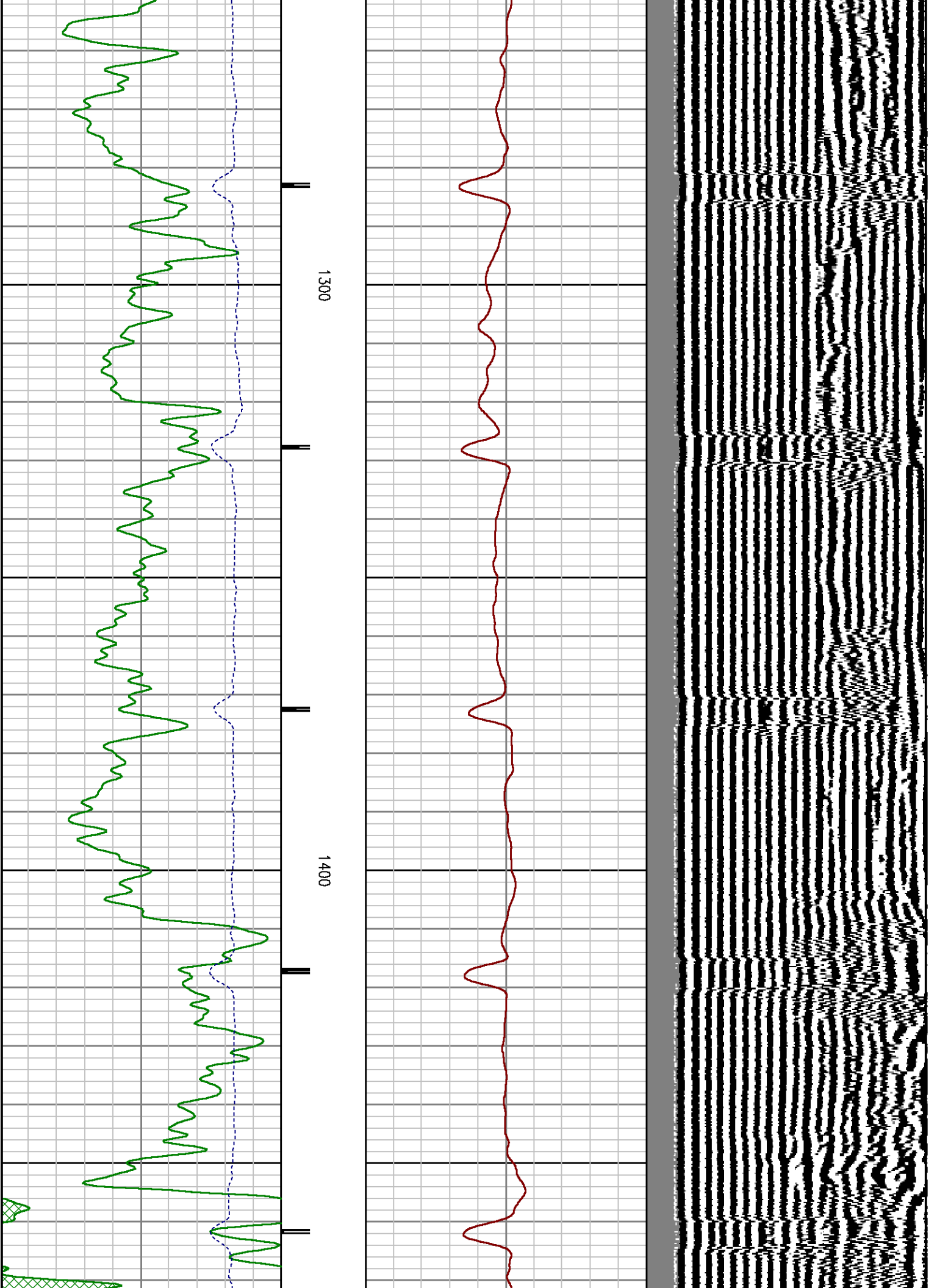


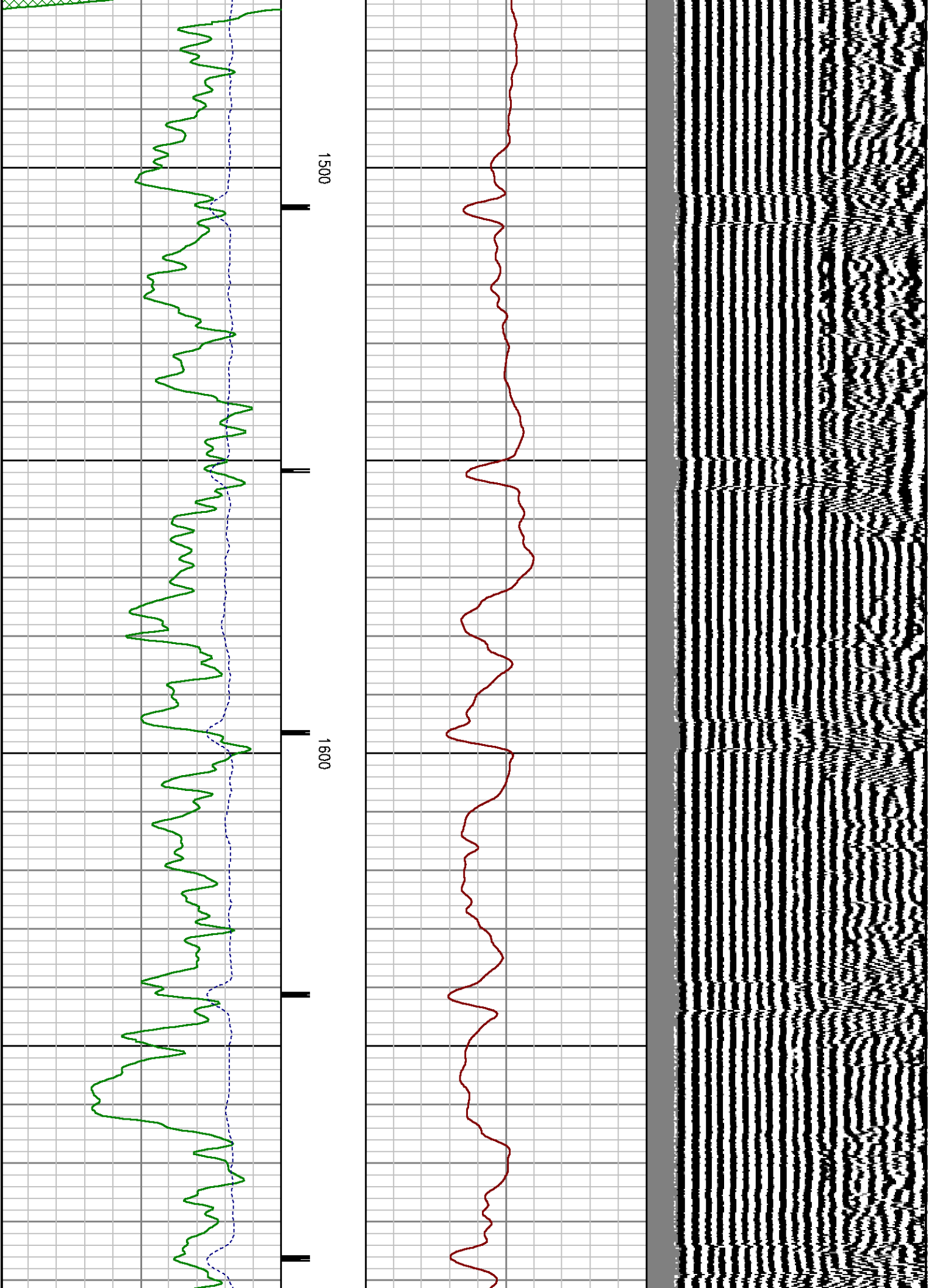


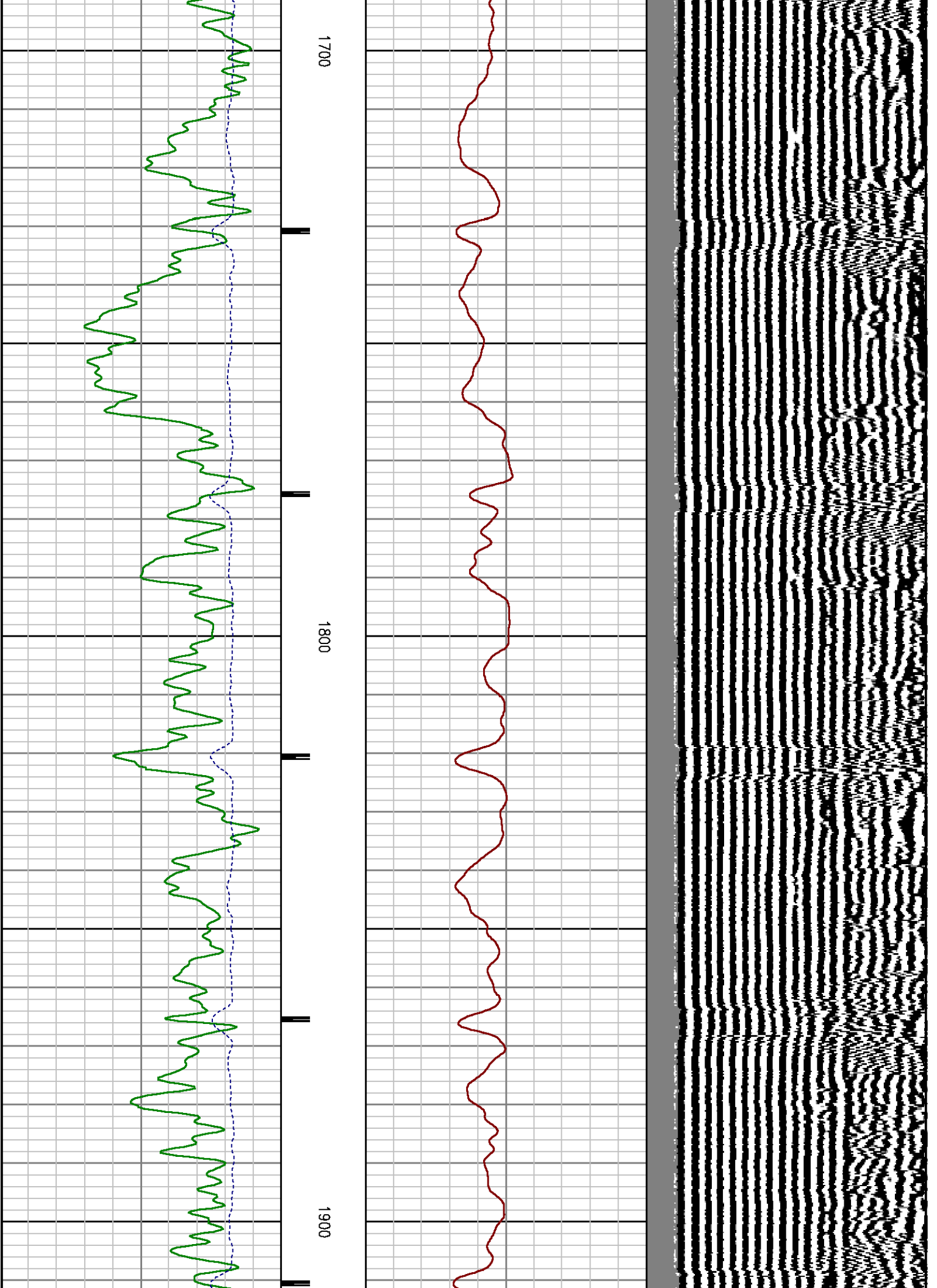


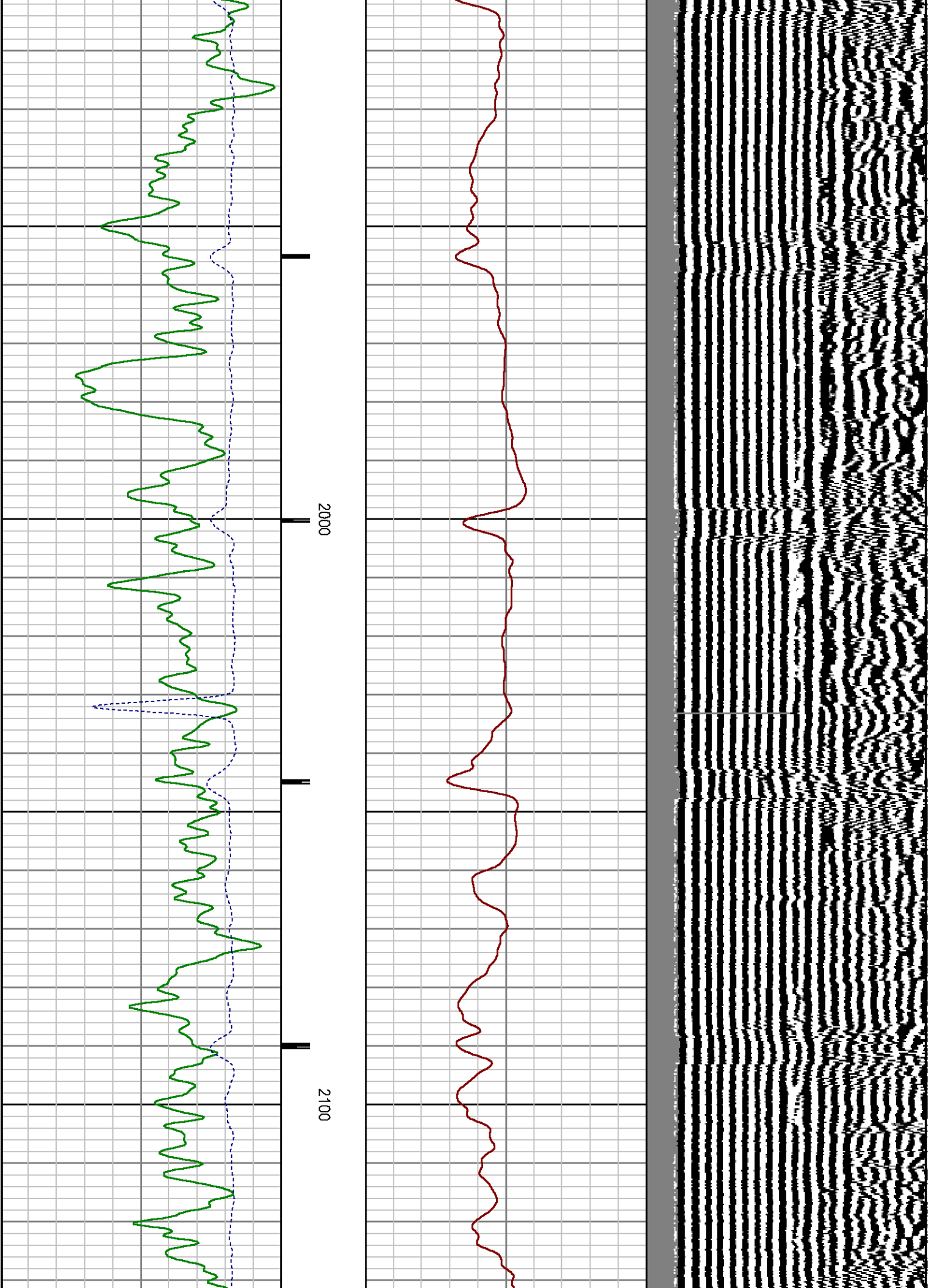


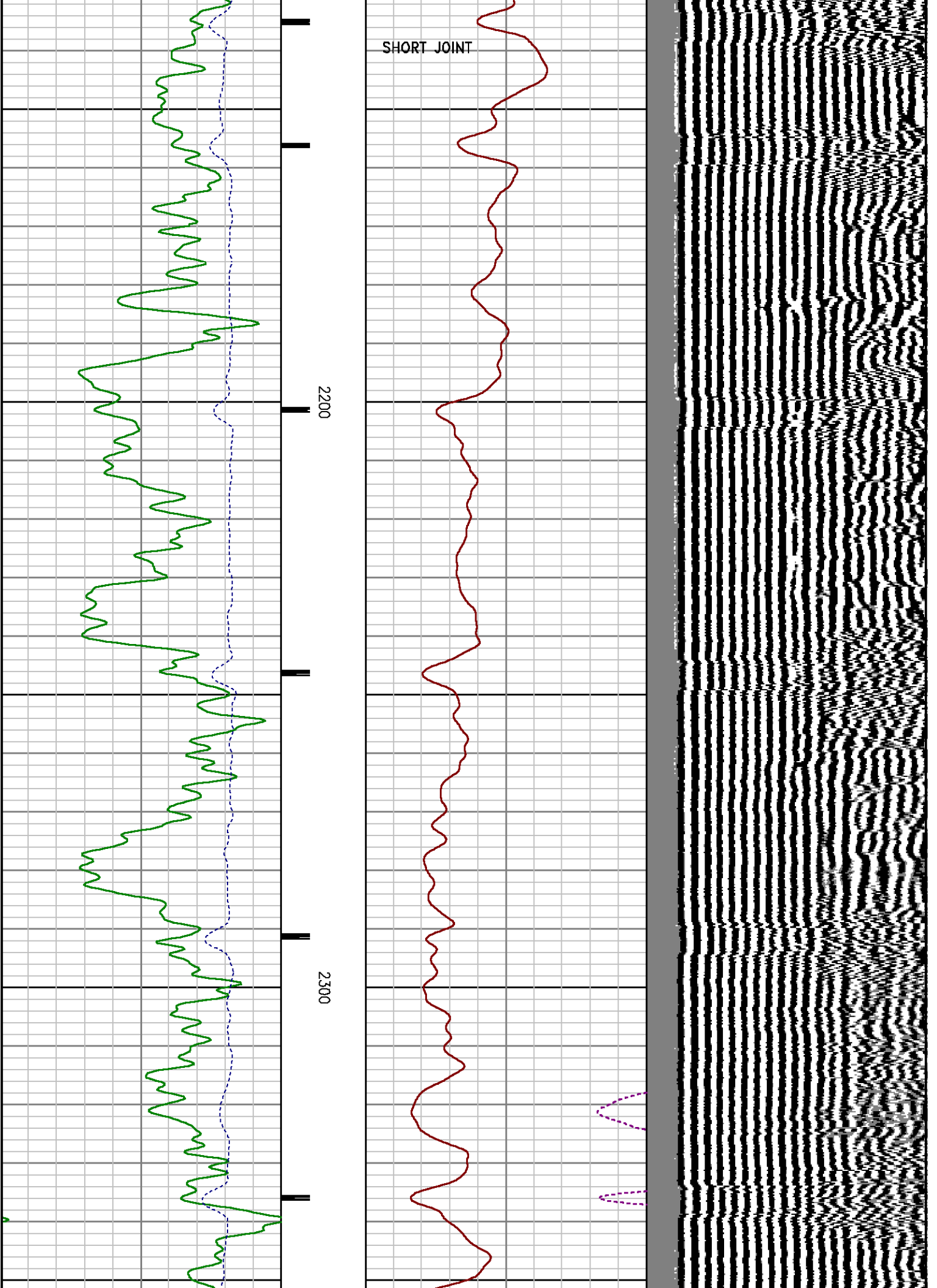


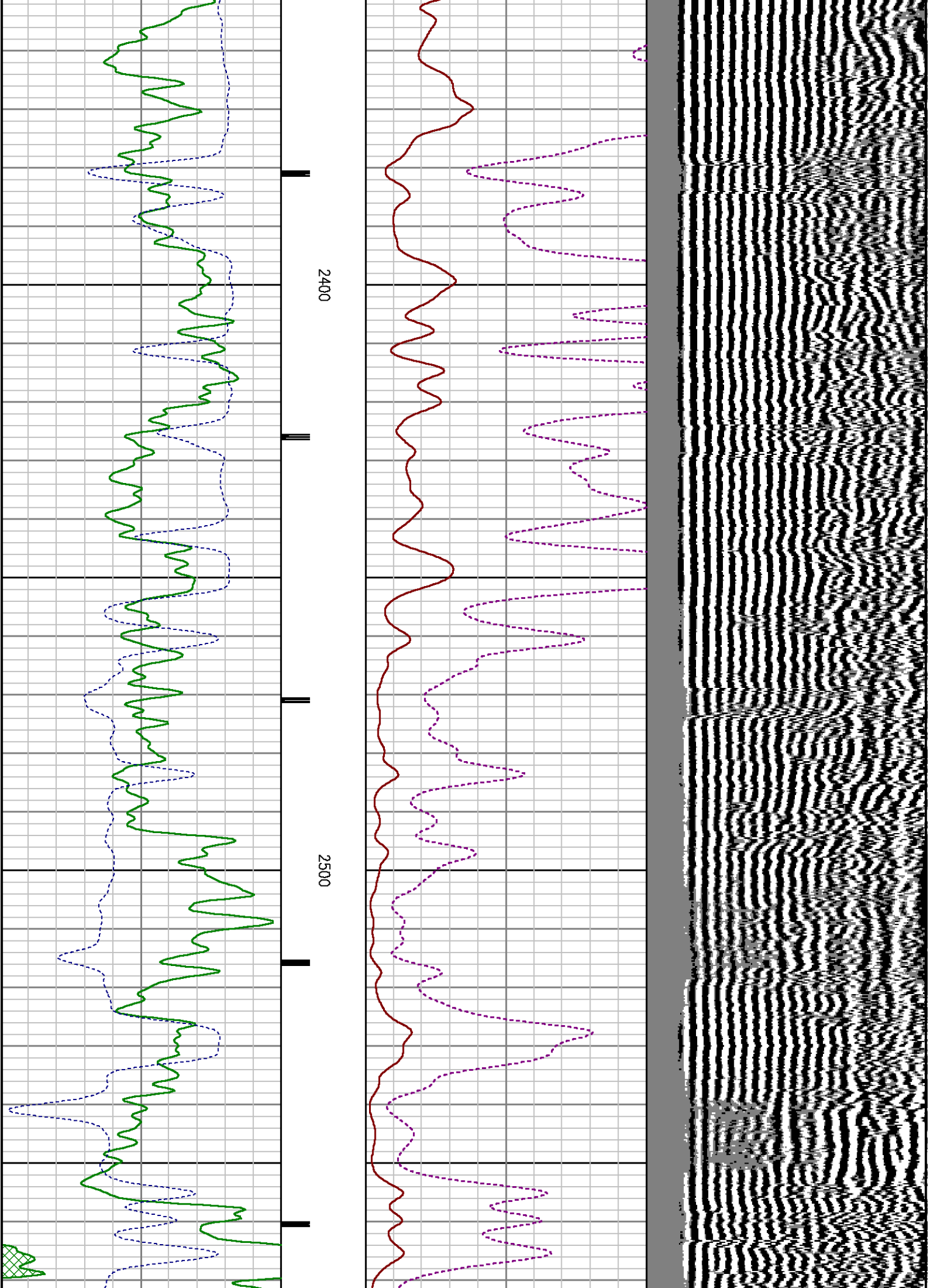


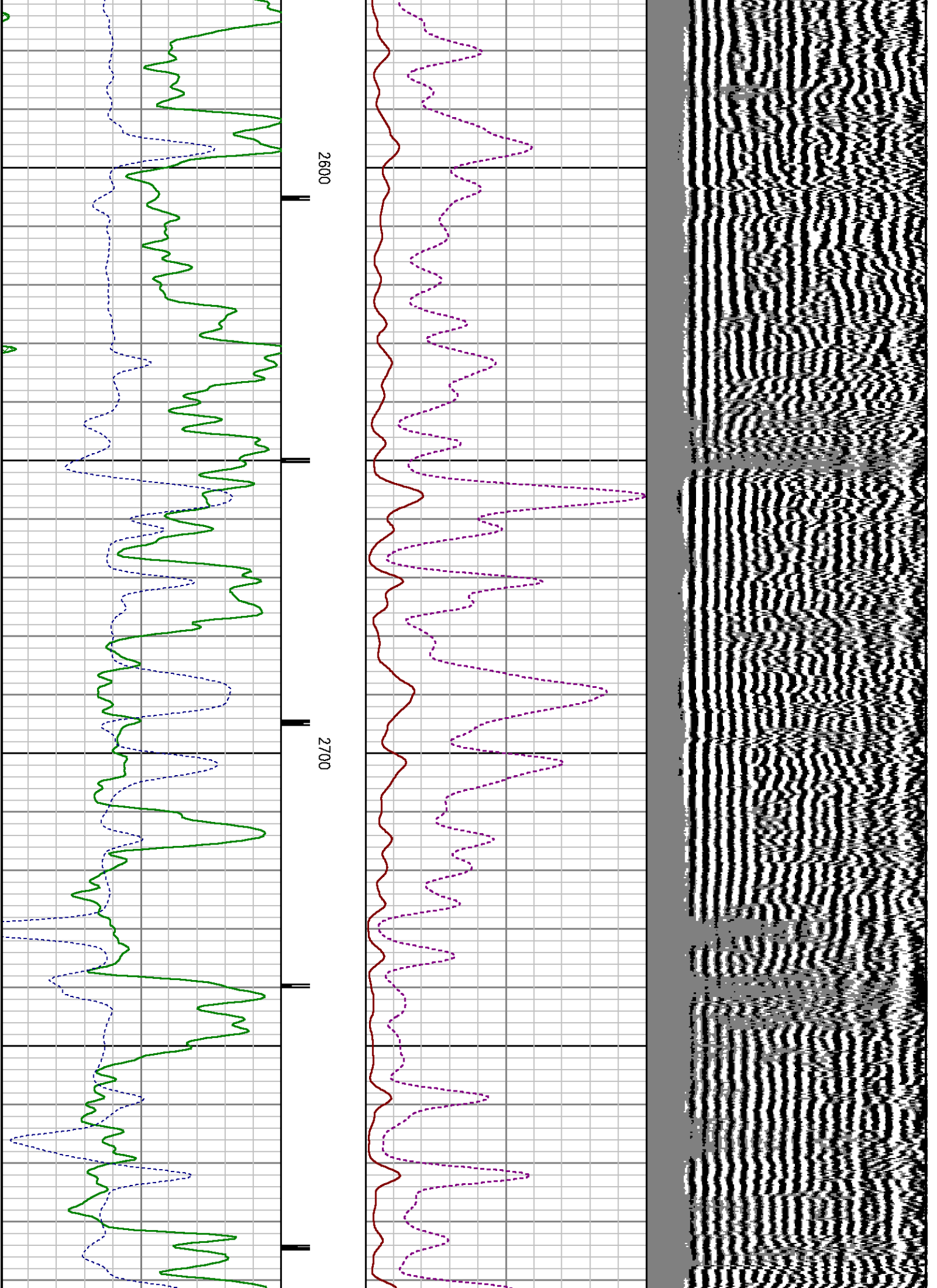


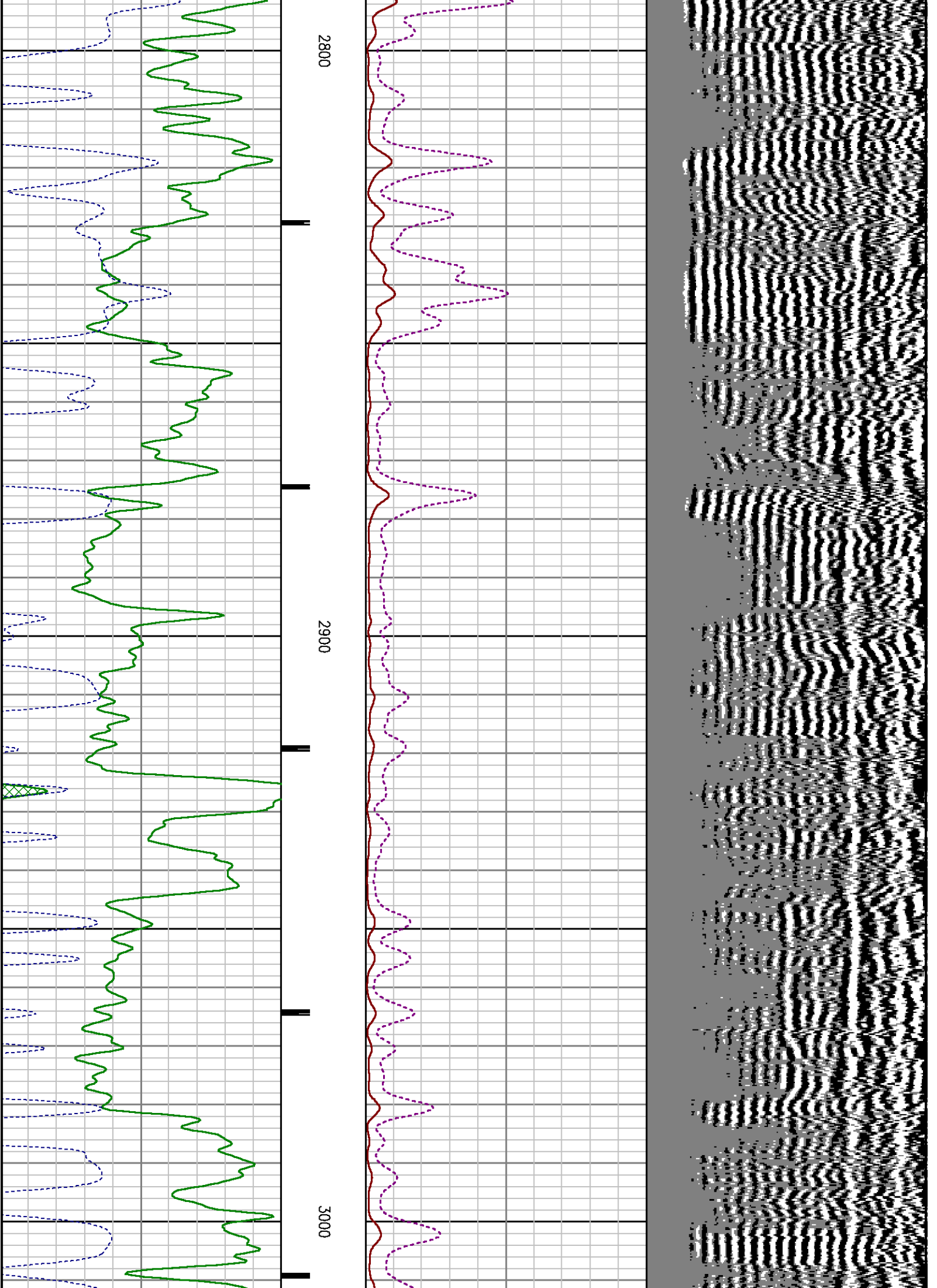


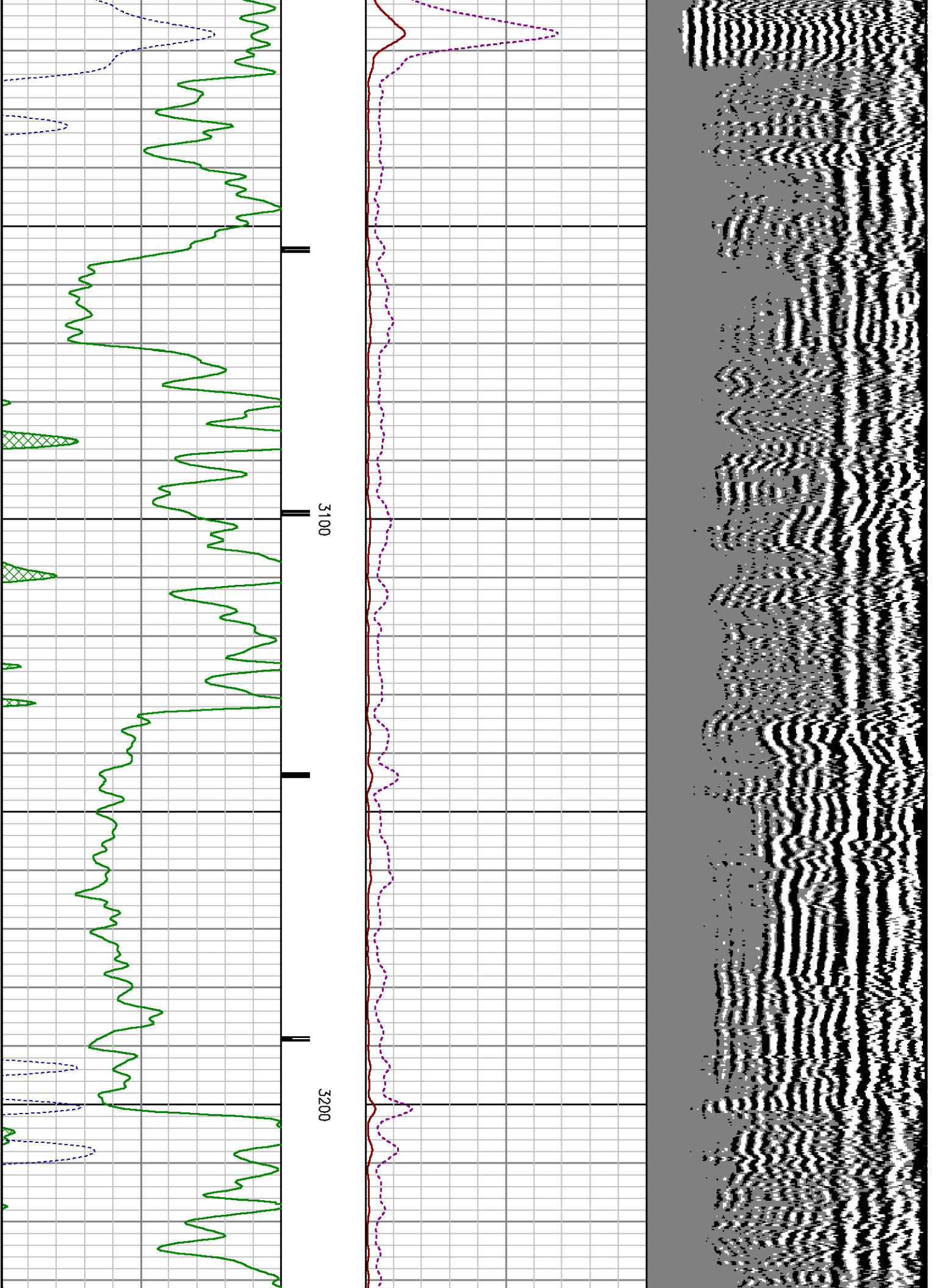


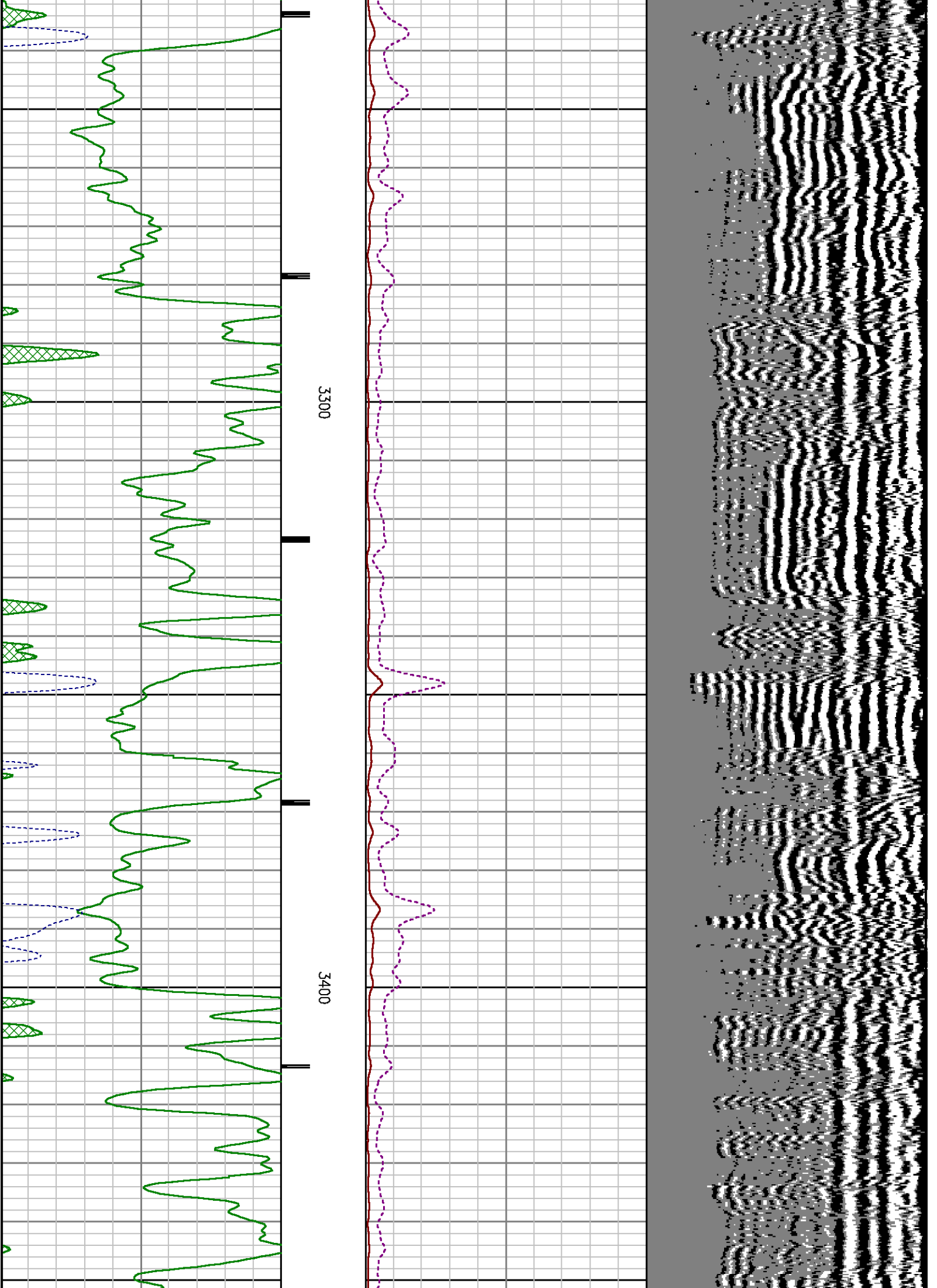


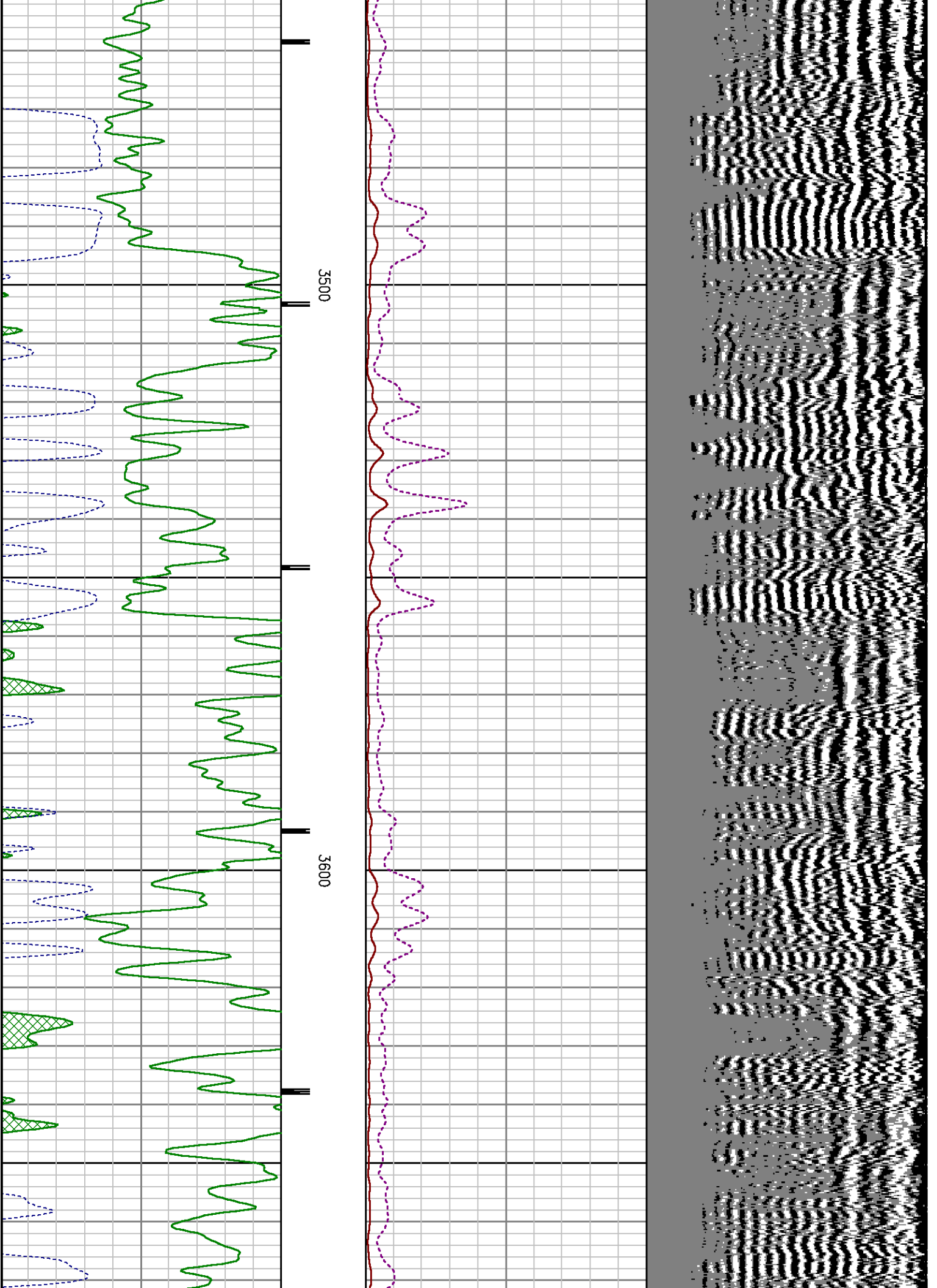


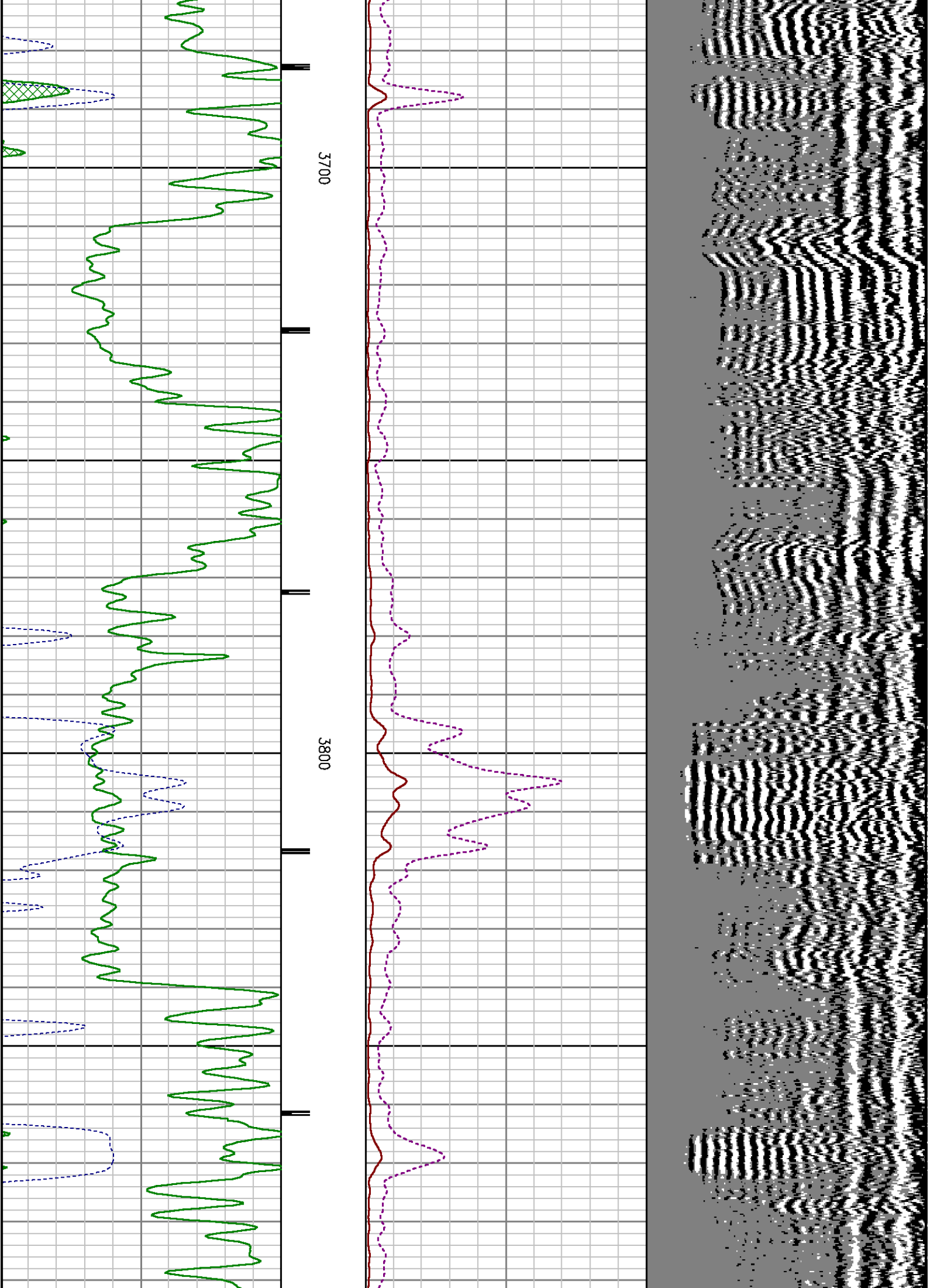


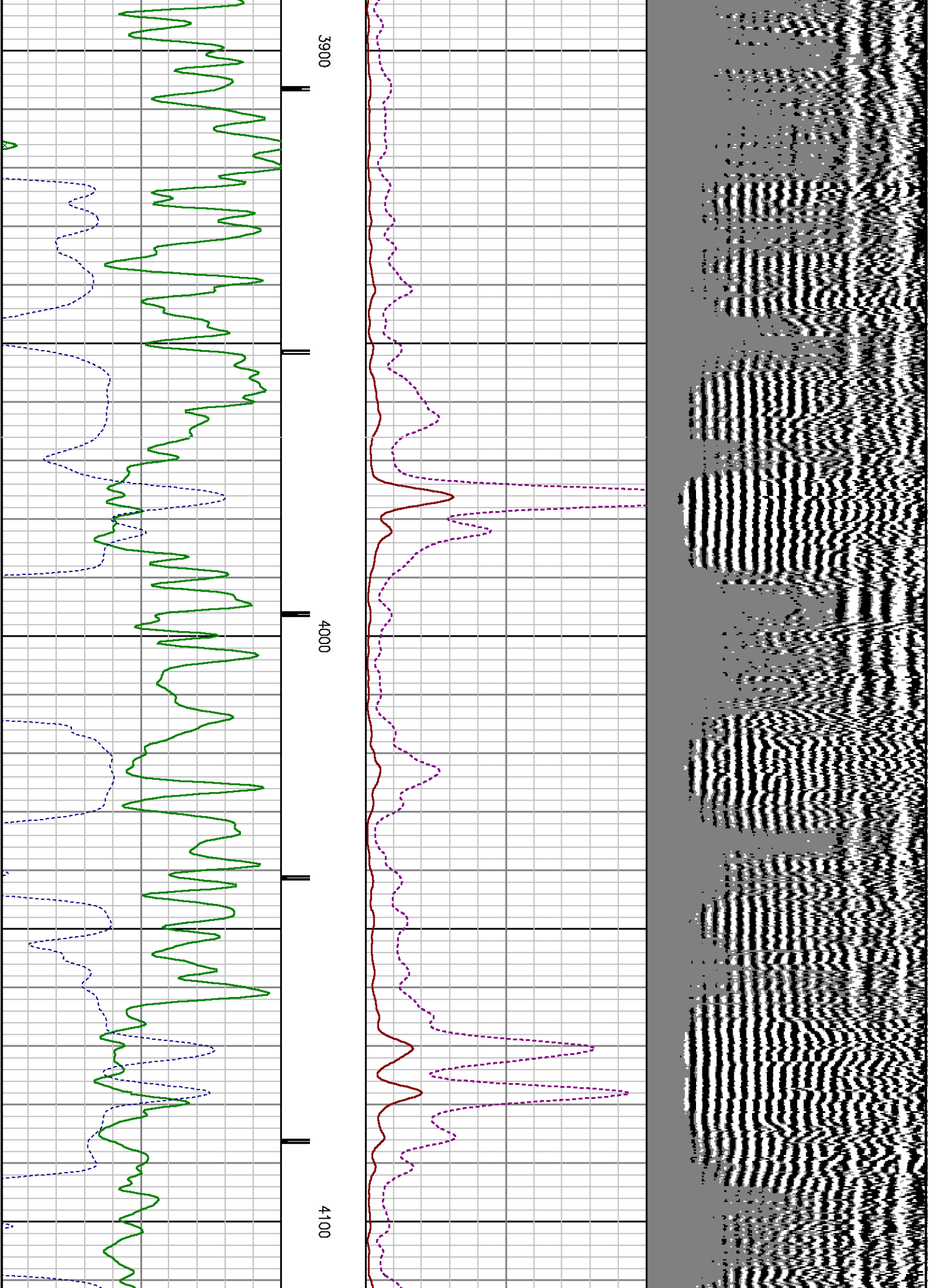


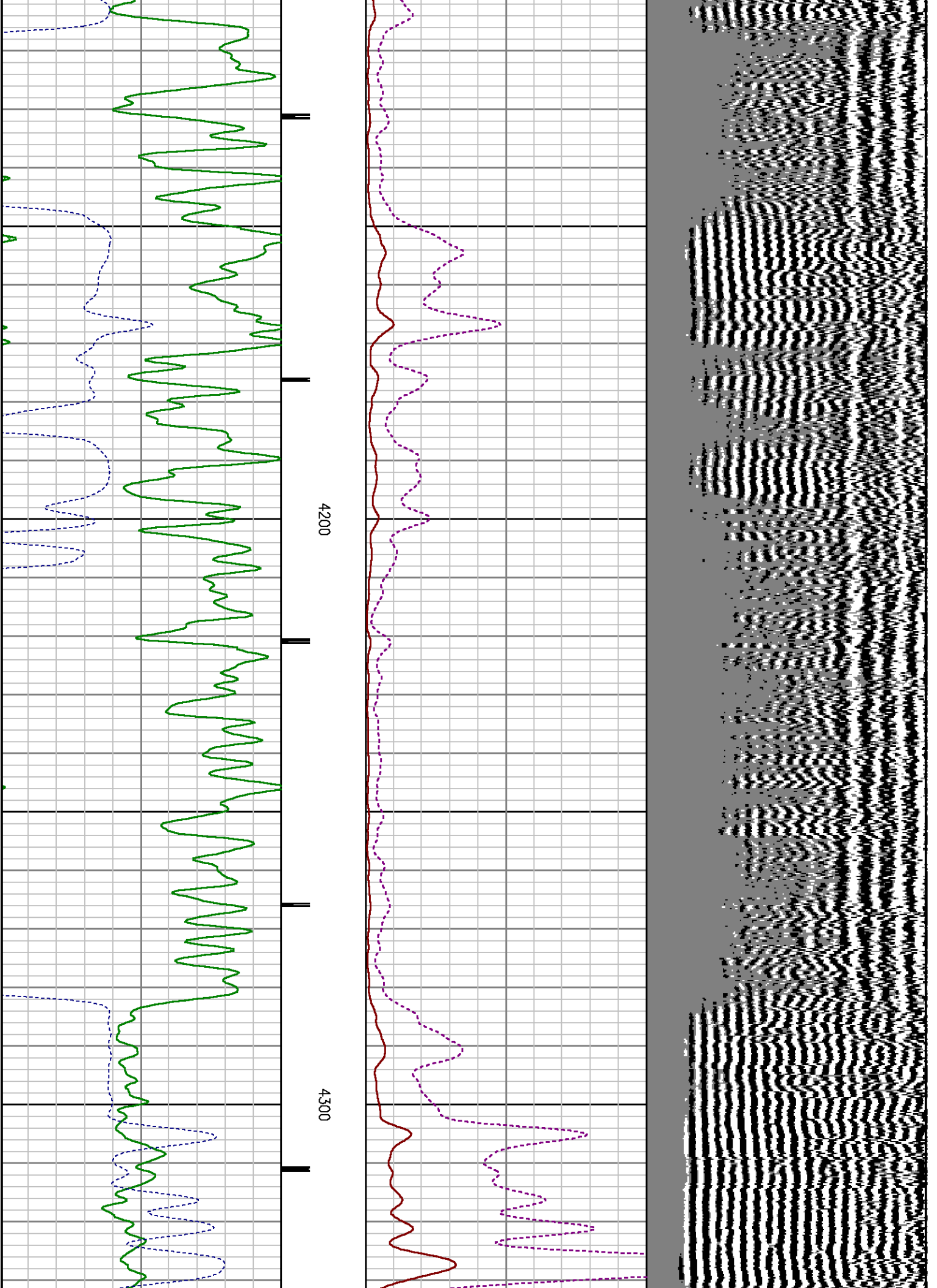


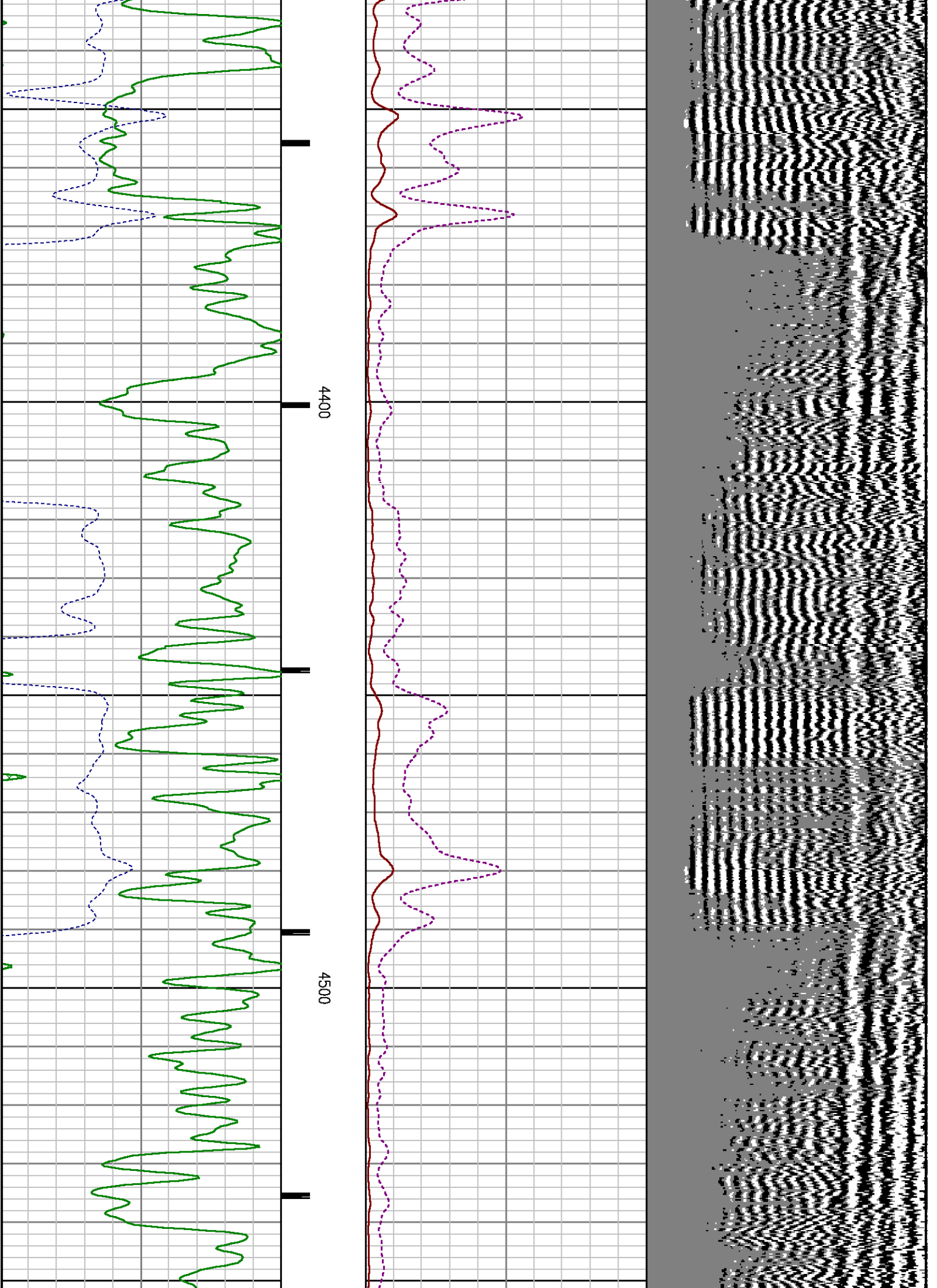


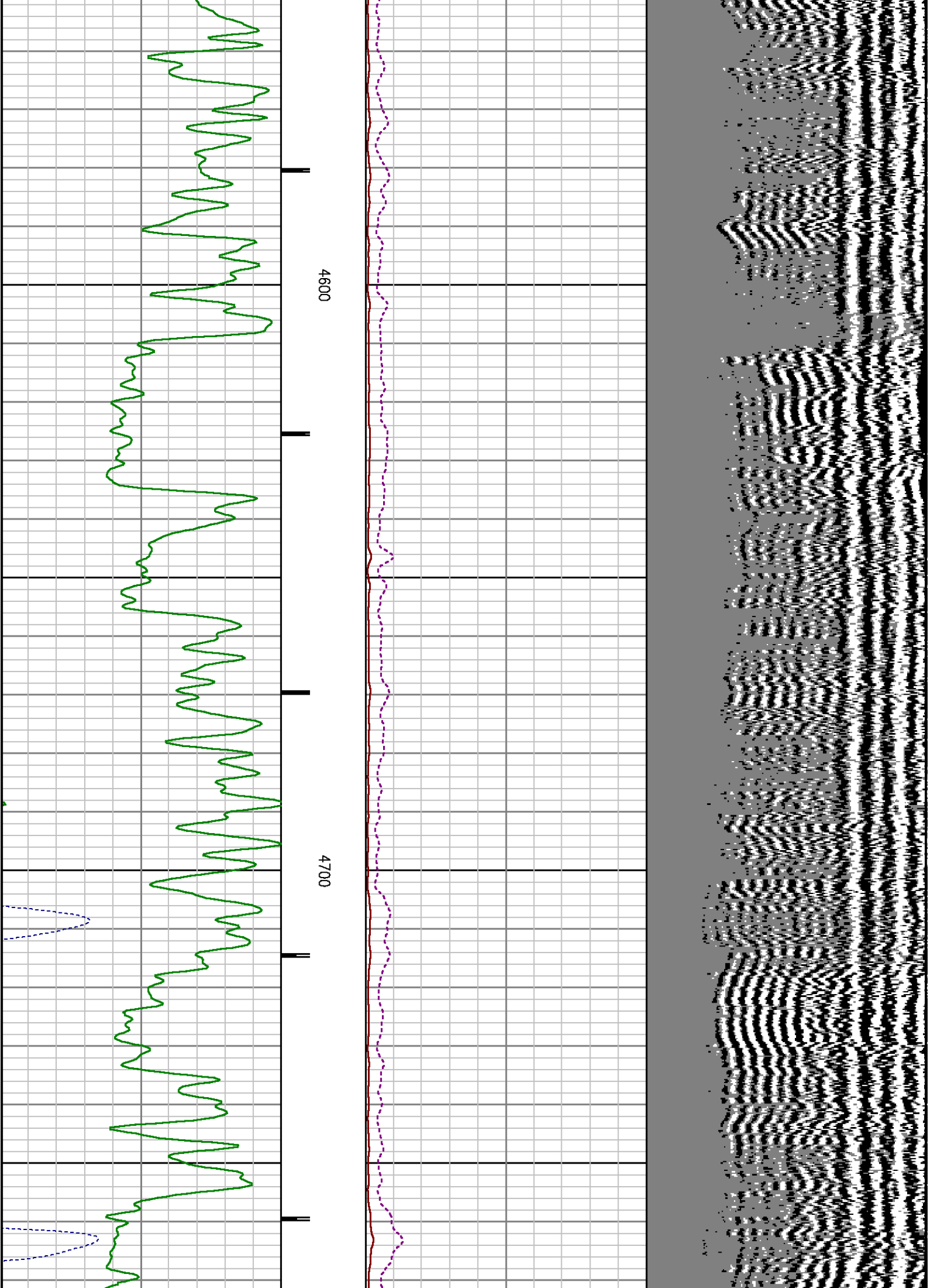


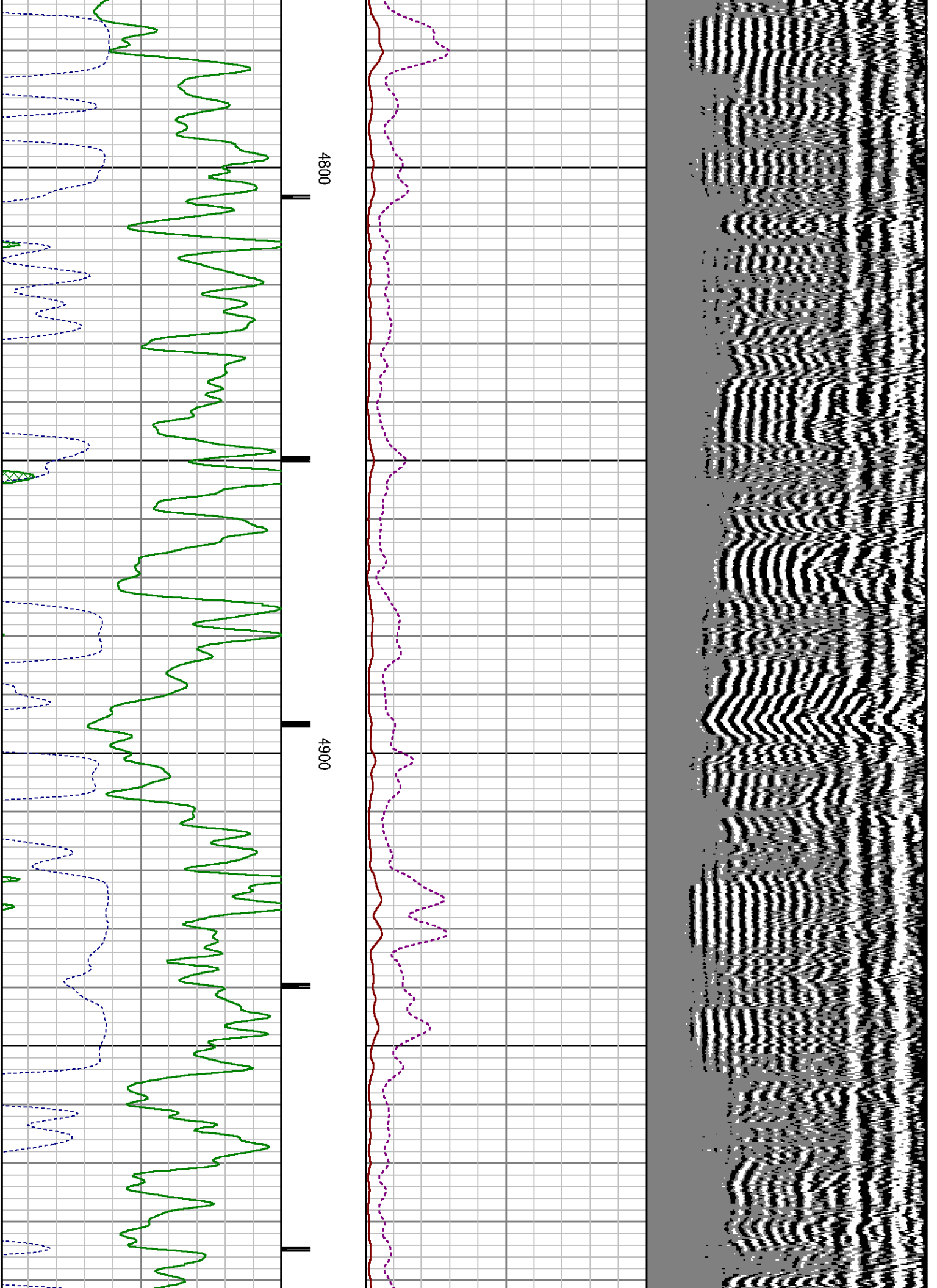


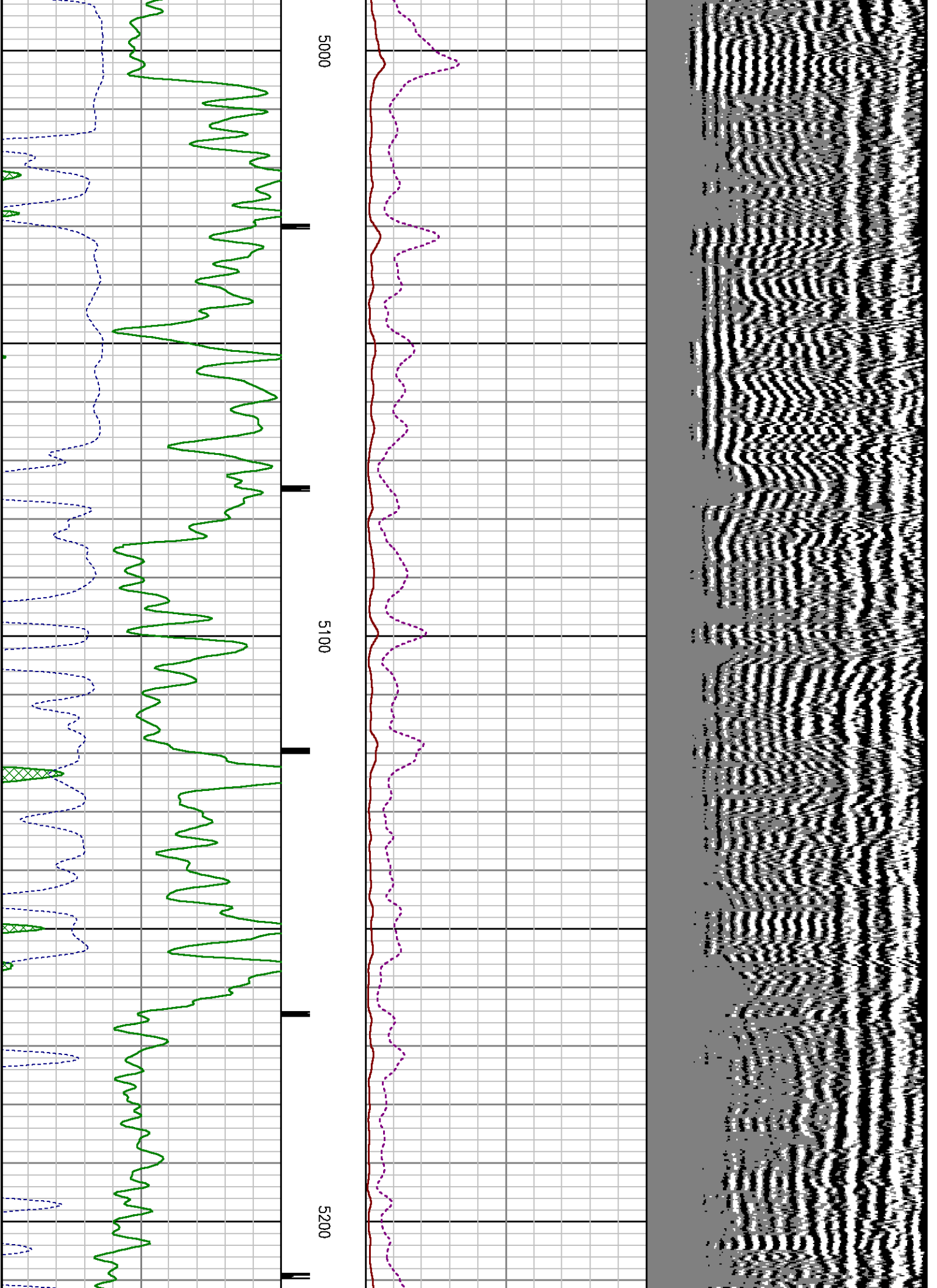


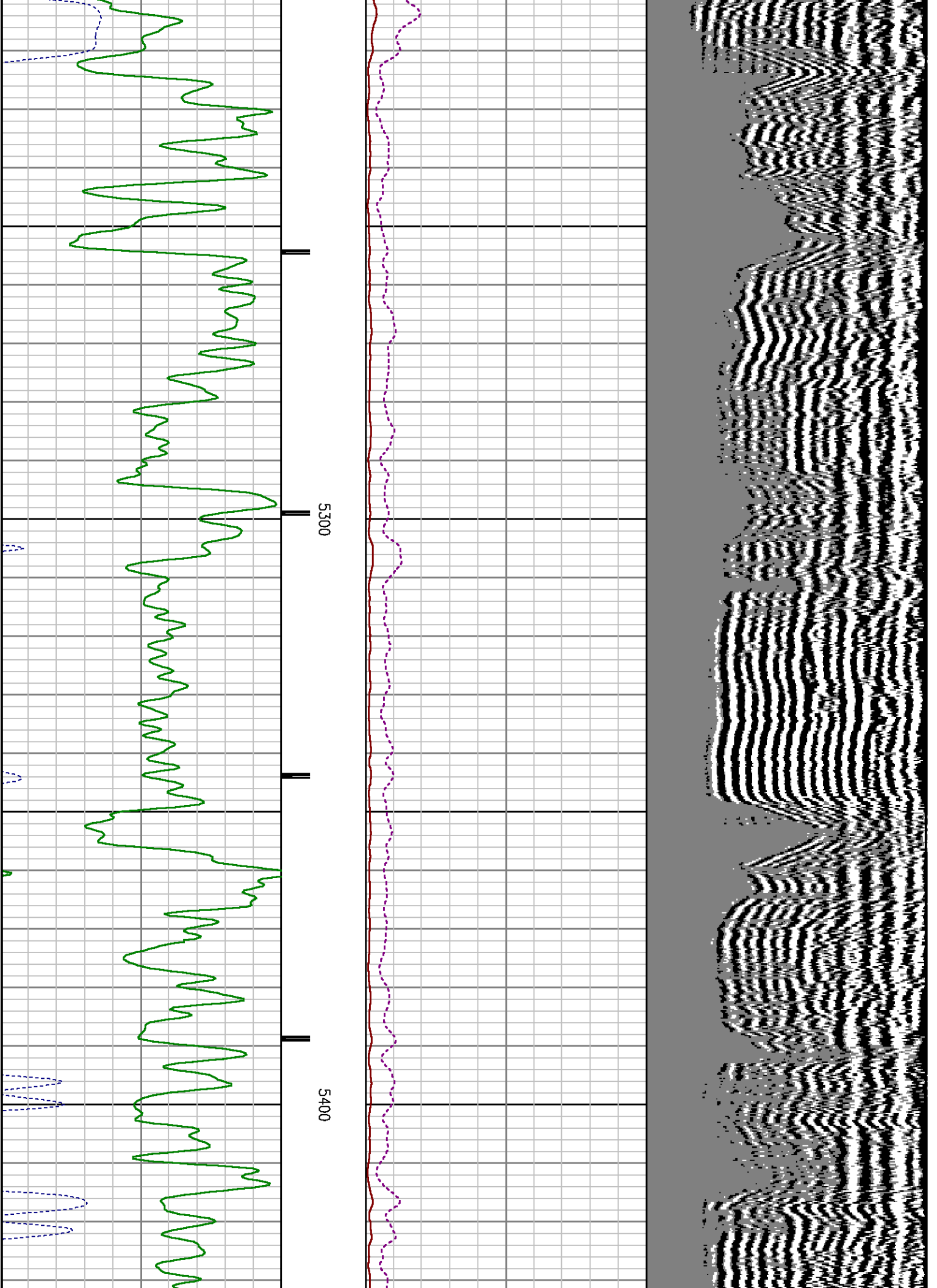


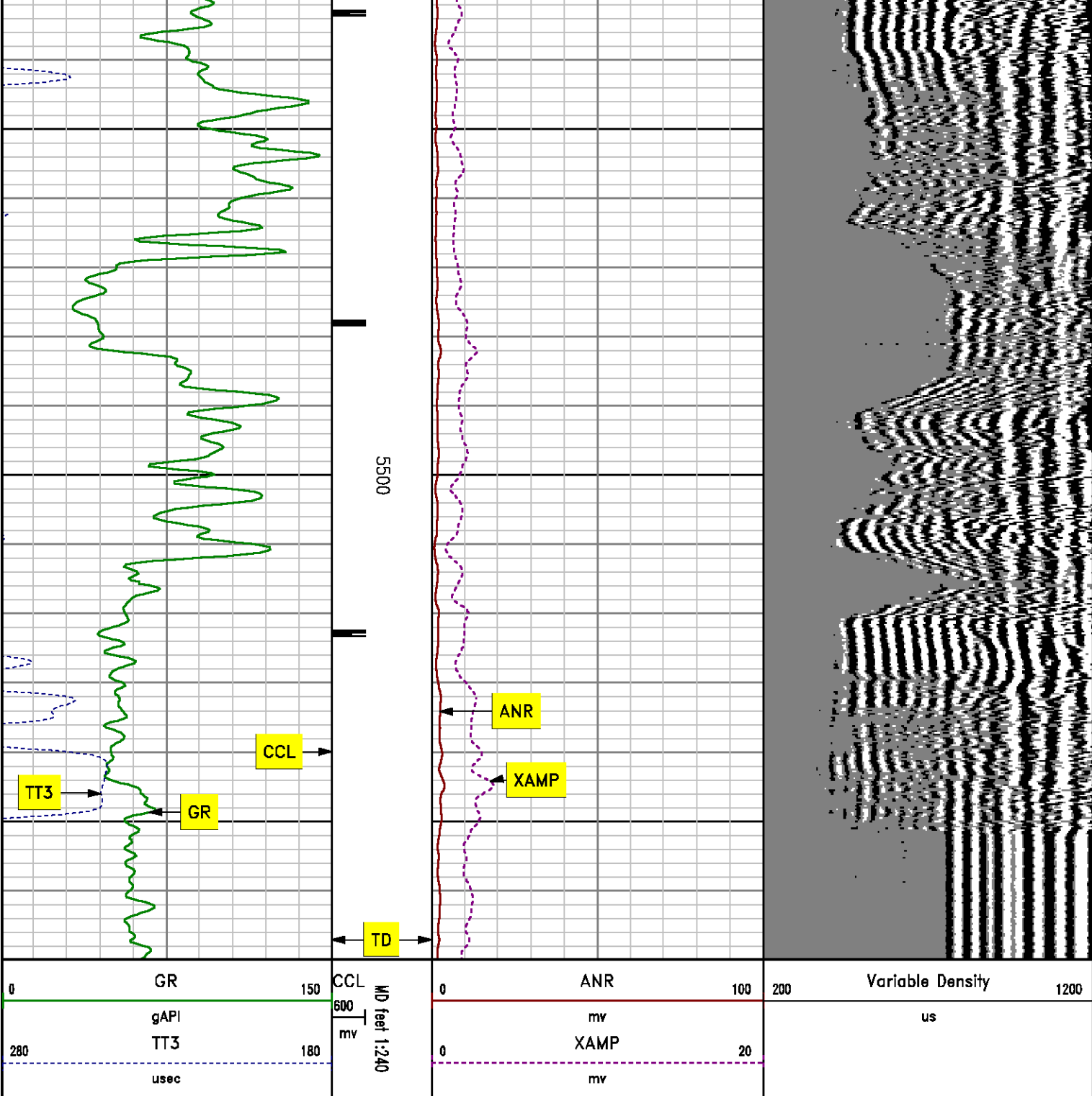












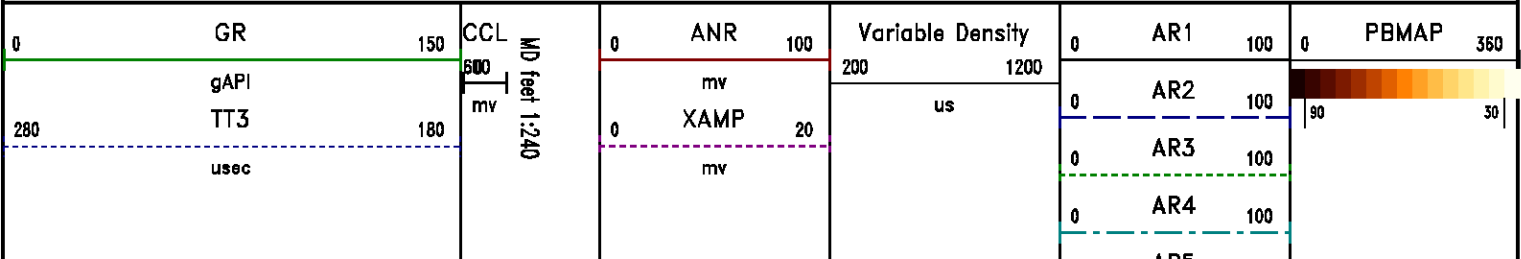
MAIN SECTION
SECONDARY PRESENTATION

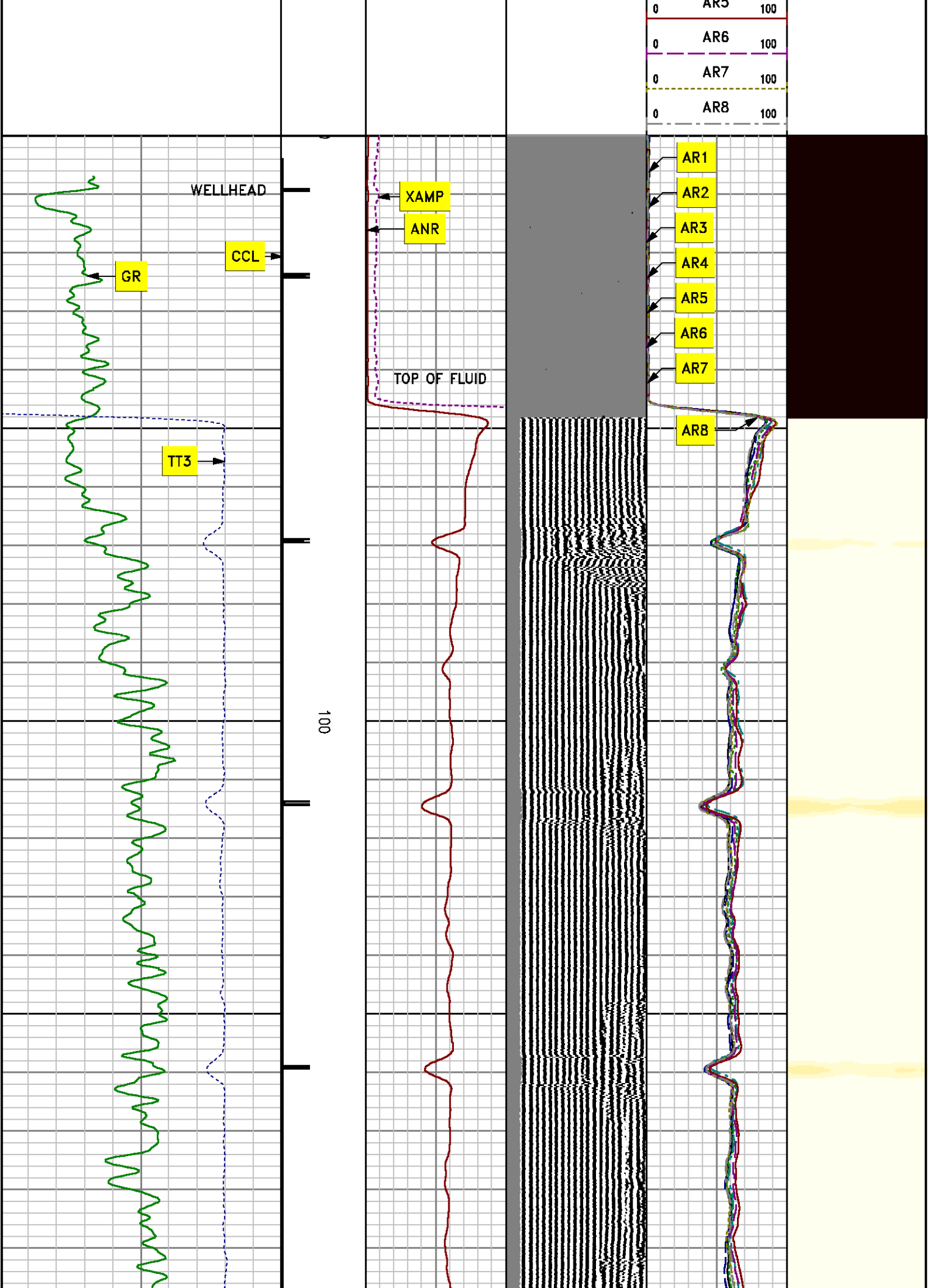
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	29.593	5581.000
RAL	Amp Gate Start Near	200.391	usec	29.593	5581.000
RAL	Amp Gate Start Radial	200.391	usec	29.593	5581.000
RAL	Amp Gate Width Far	25.000	usec	29.593	5581.000
RAL	Amp Gate Width Near	25.000	usec	29.593	5581.000
RAL	Amp Gate Width Radial	25.000	usec	29.593	5581.000
RAL	casing od	4.500	inches	29.593	5581.000
RAL	casing wt	11.600	lbm/ft	29.593	5581.000
RAL	FB Start Far	291.900	usec	29.593	5581.000
RAL	FB Start Near	175.391	usec	29.593	5581.000
RAL	FB Start Radial	175.391	usec	29.593	5581.000
RAL	FB Thresh Far	15.000	mv	29.593	5581.000
RAL	FB Thresh Near	10.000	mv	29.593	5581.000
RAL	FB Thresh Radial	10.000	mv	29.593	5581.000
RAL	Fluid Travel Time	200.000	usec/ft	29.593	5580.906

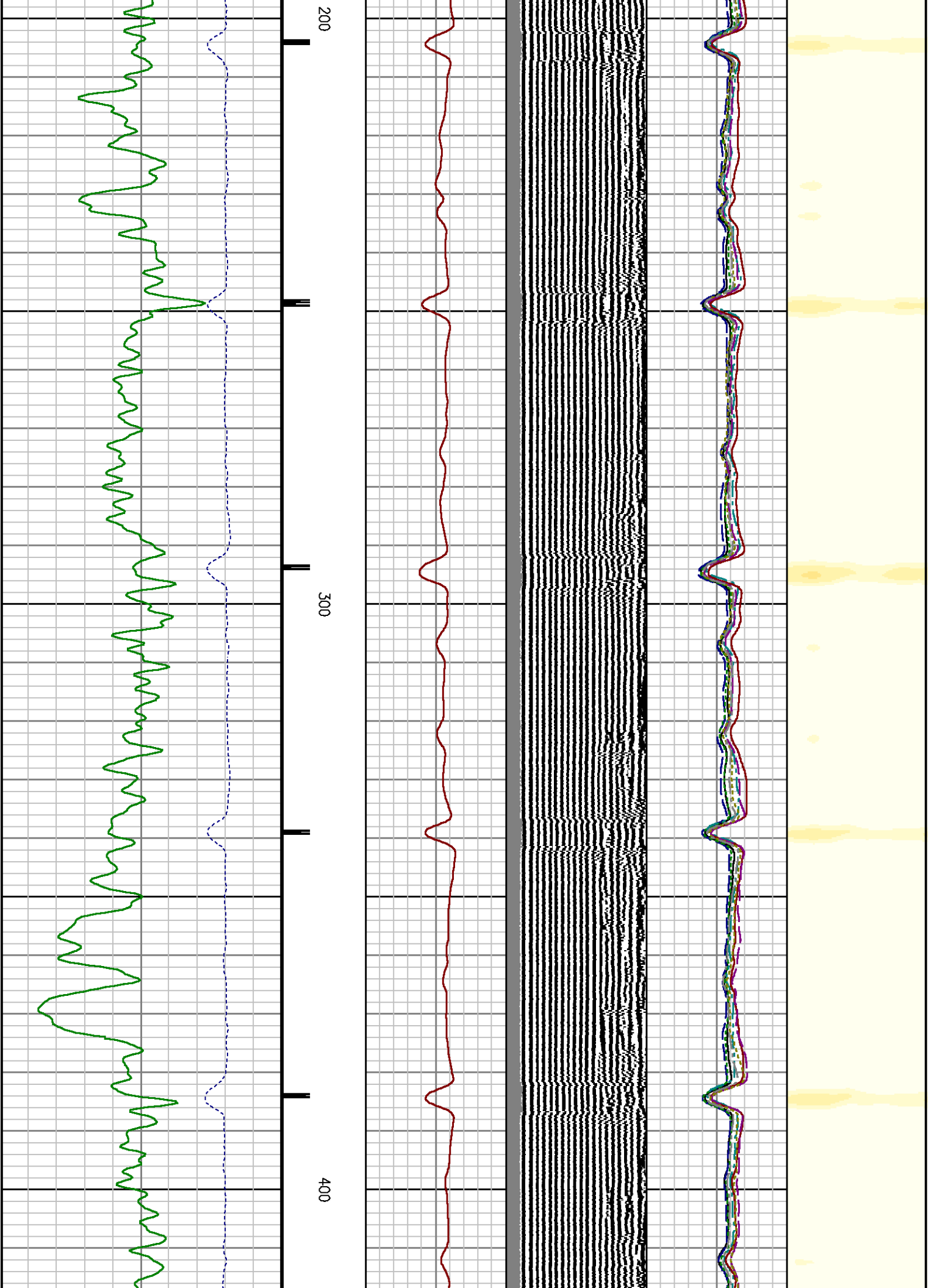
DEPTH OFFSETS
(for Acquired Curves)

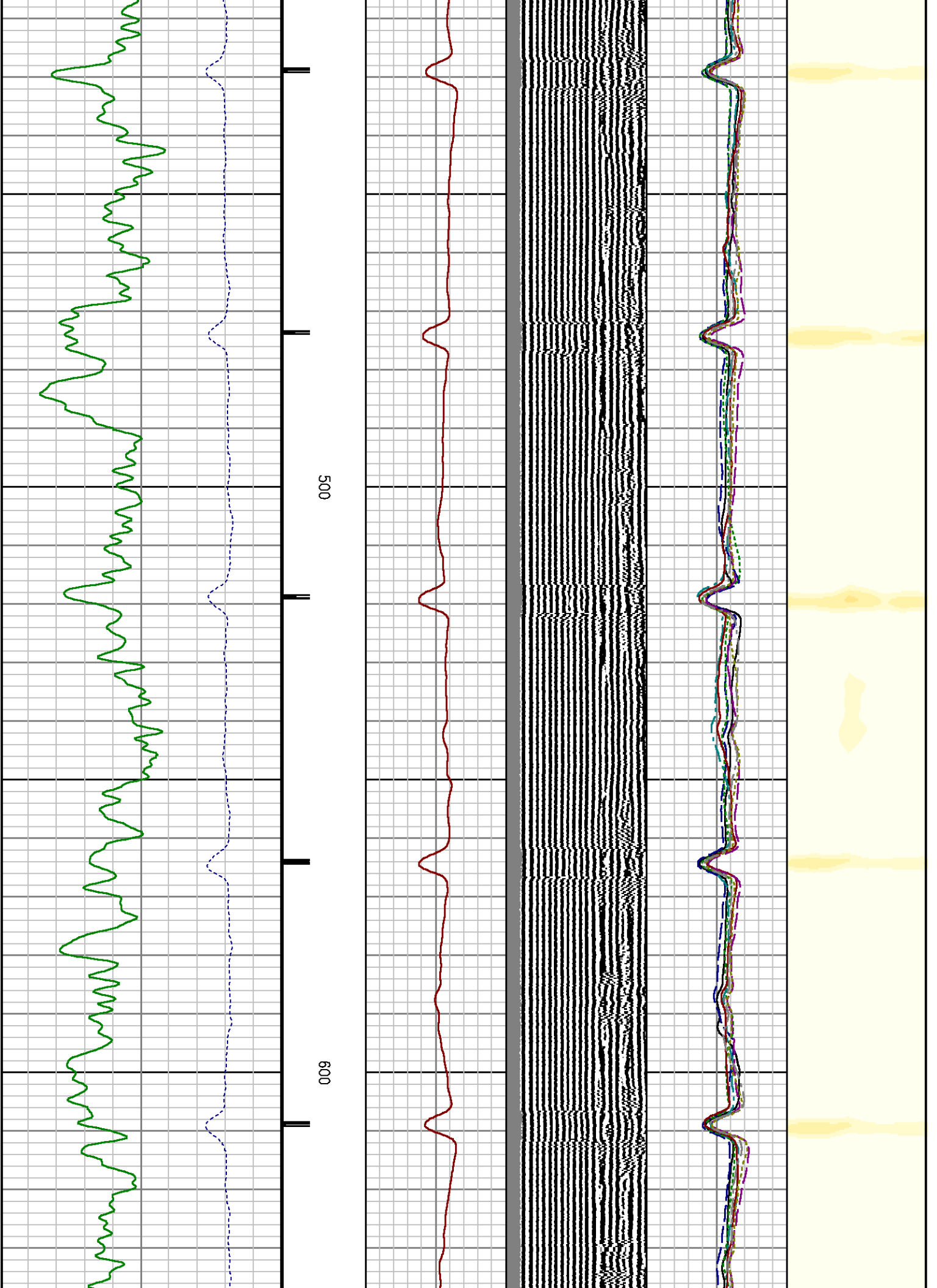
SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	AR8	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-11.360	AFAR	SIG	TT5			
1426XA	-7.250	CCL					
1426XA	-5.390	GR					
1426XA	0.000	NEU					

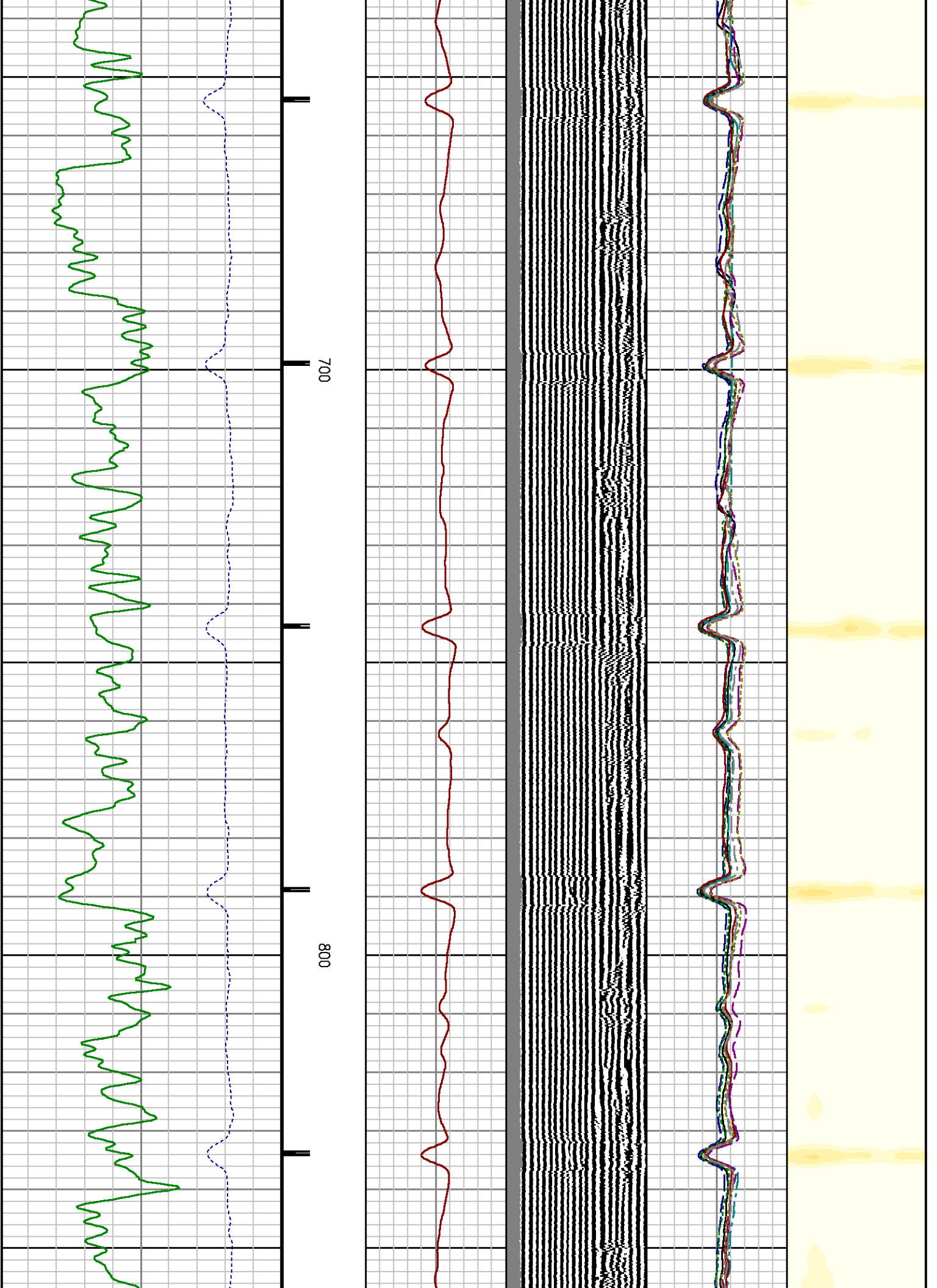
Created by : MIXED
Plotted by : PlotMgr, v5.4.504
Company : WILLIAMS PRODUCTION COMPANY
Well : SG 424-28
File Name : d:\welldata\424cbl\cbl_main.xtf
Made : PlotMgr 5.4.504
Interval : 0.00 - 5570.00 feet UP
Created : 9/19/2010 9:22:35 AM

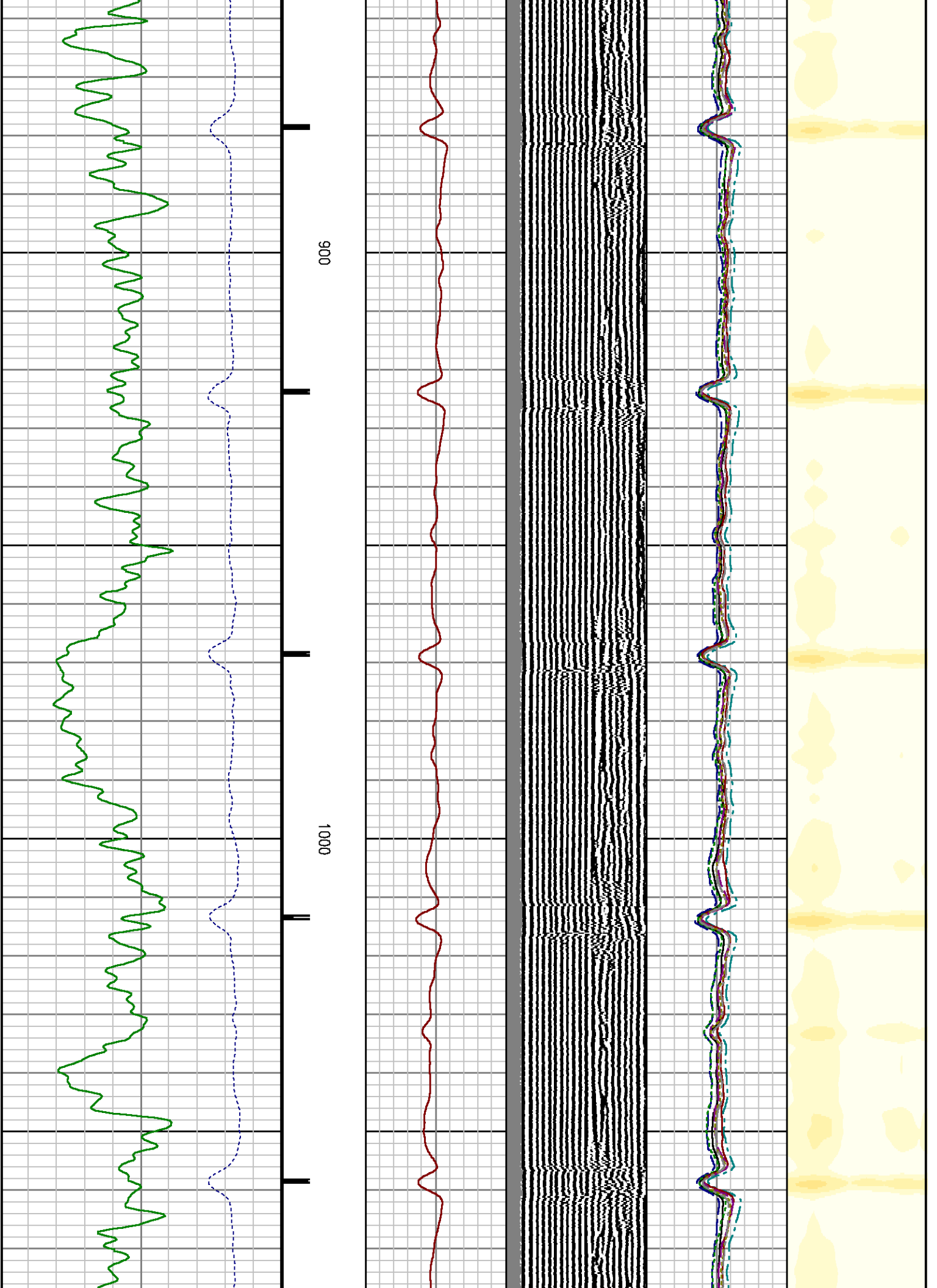


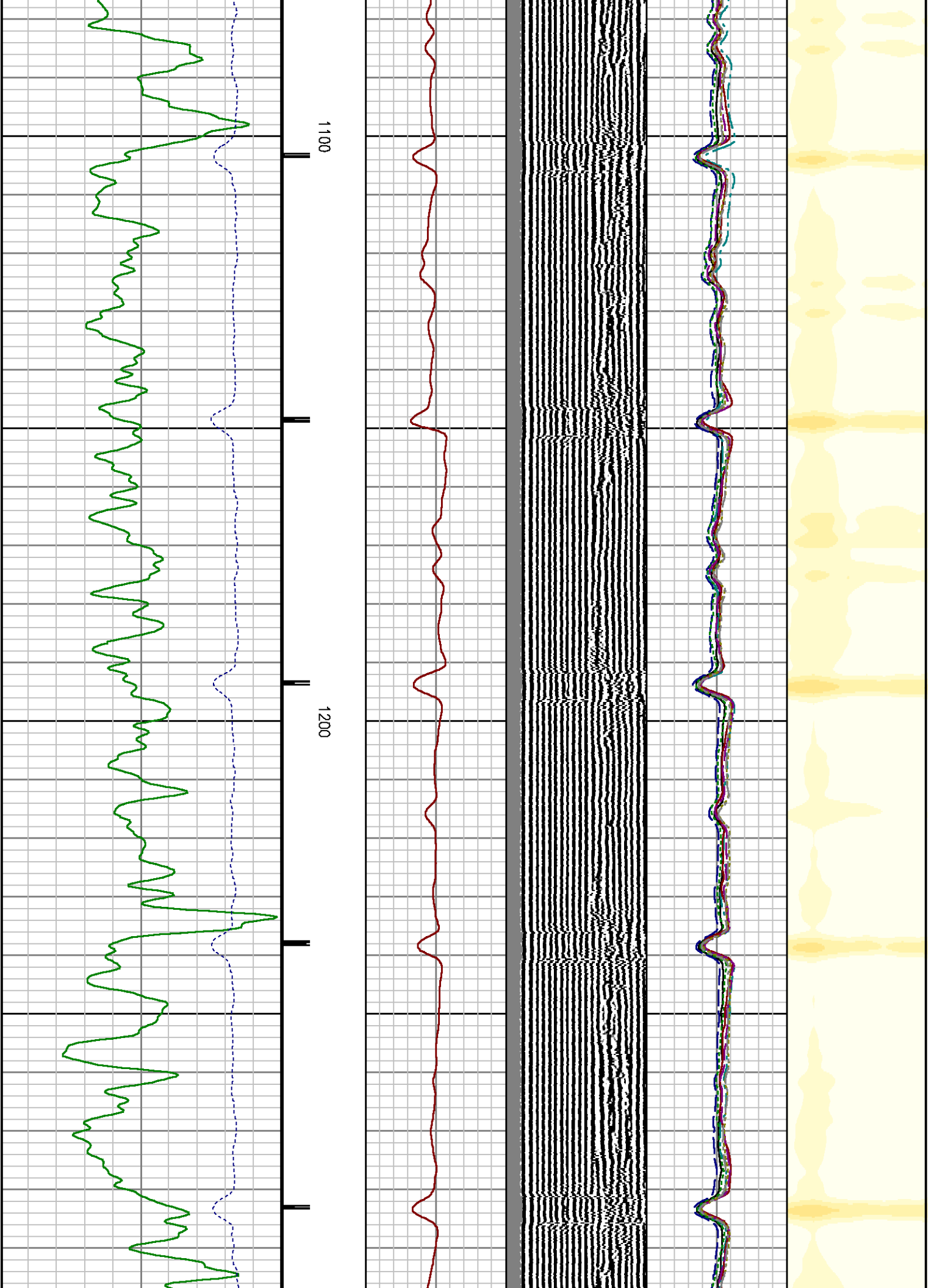


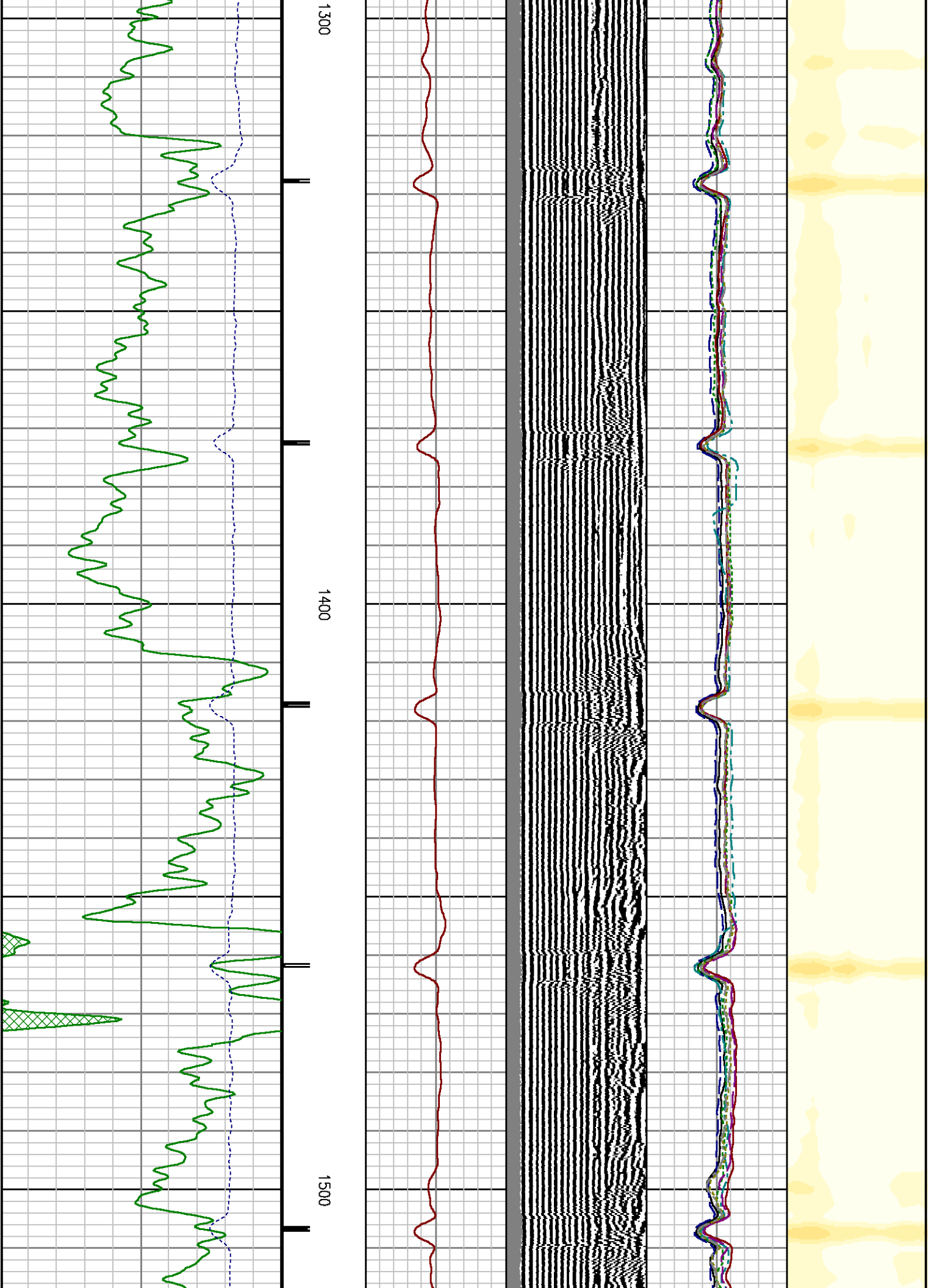


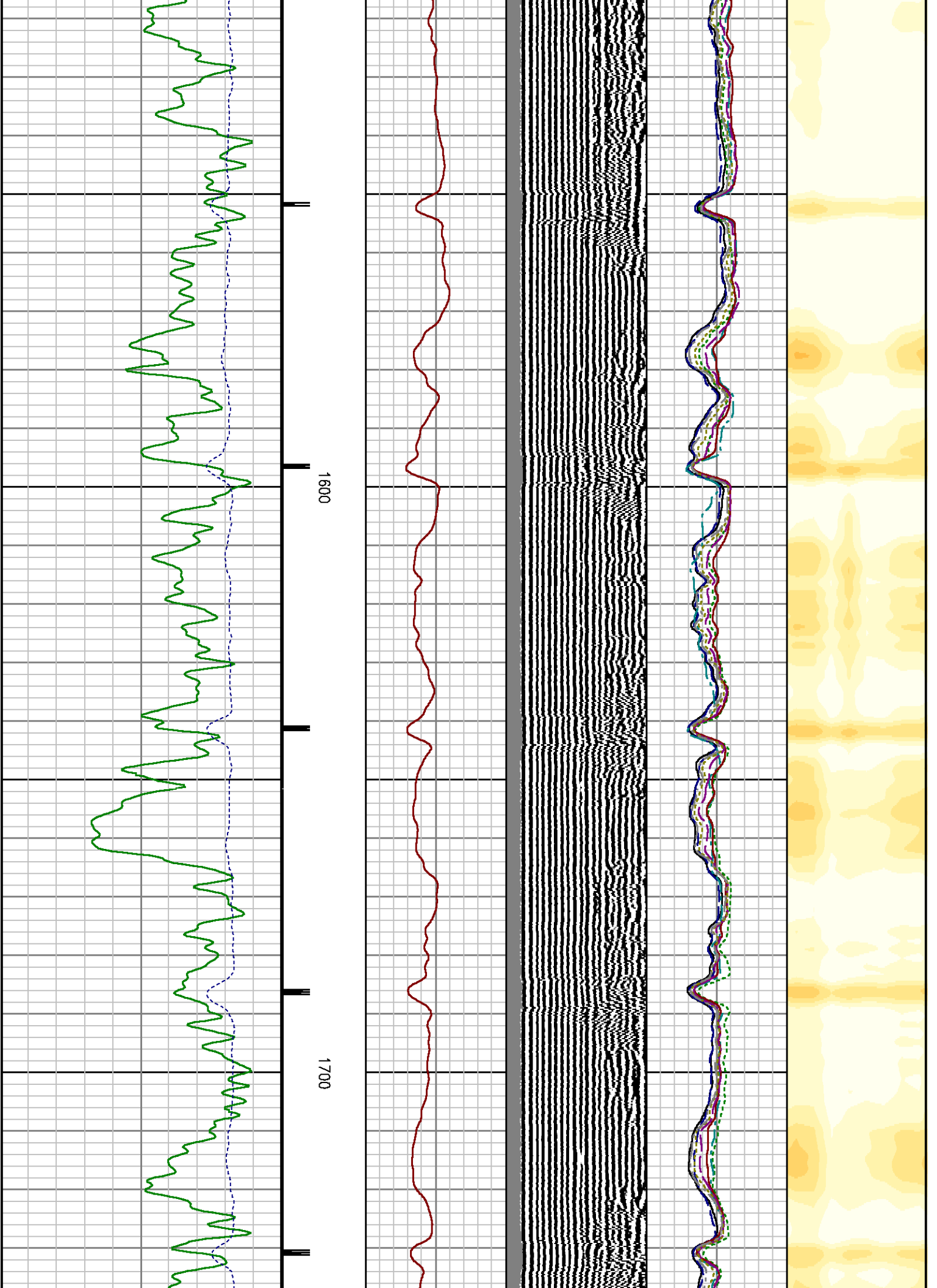


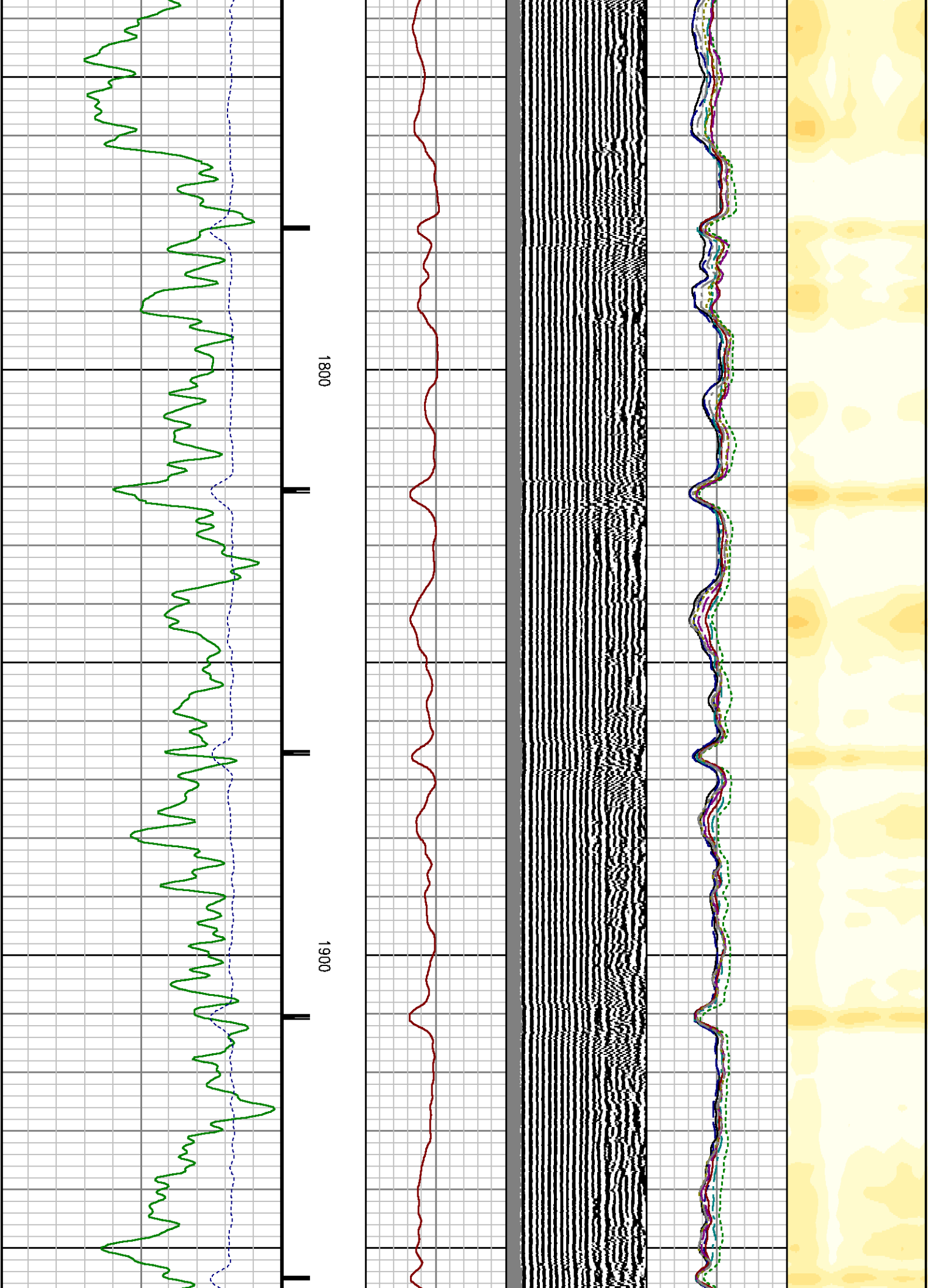


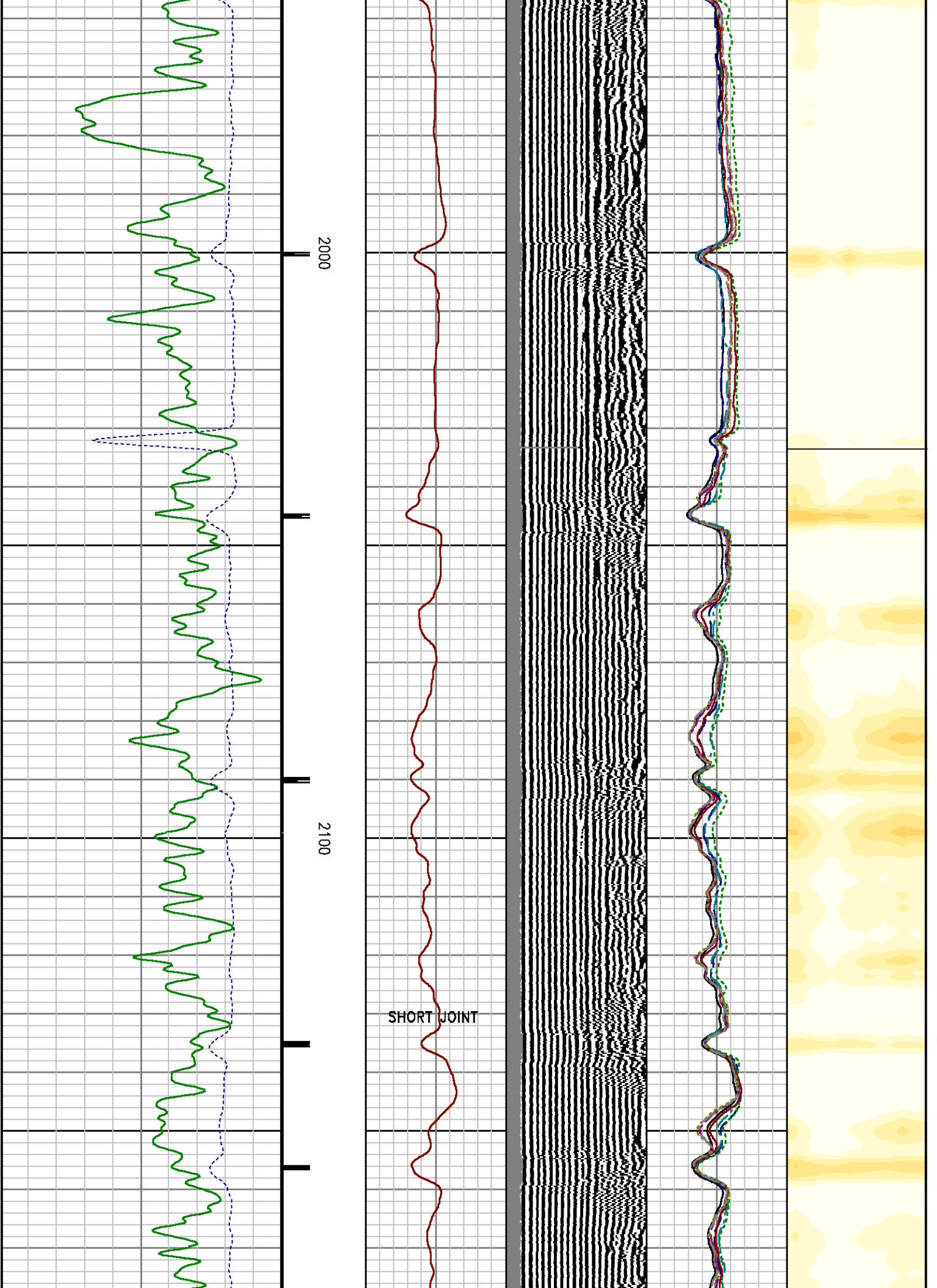


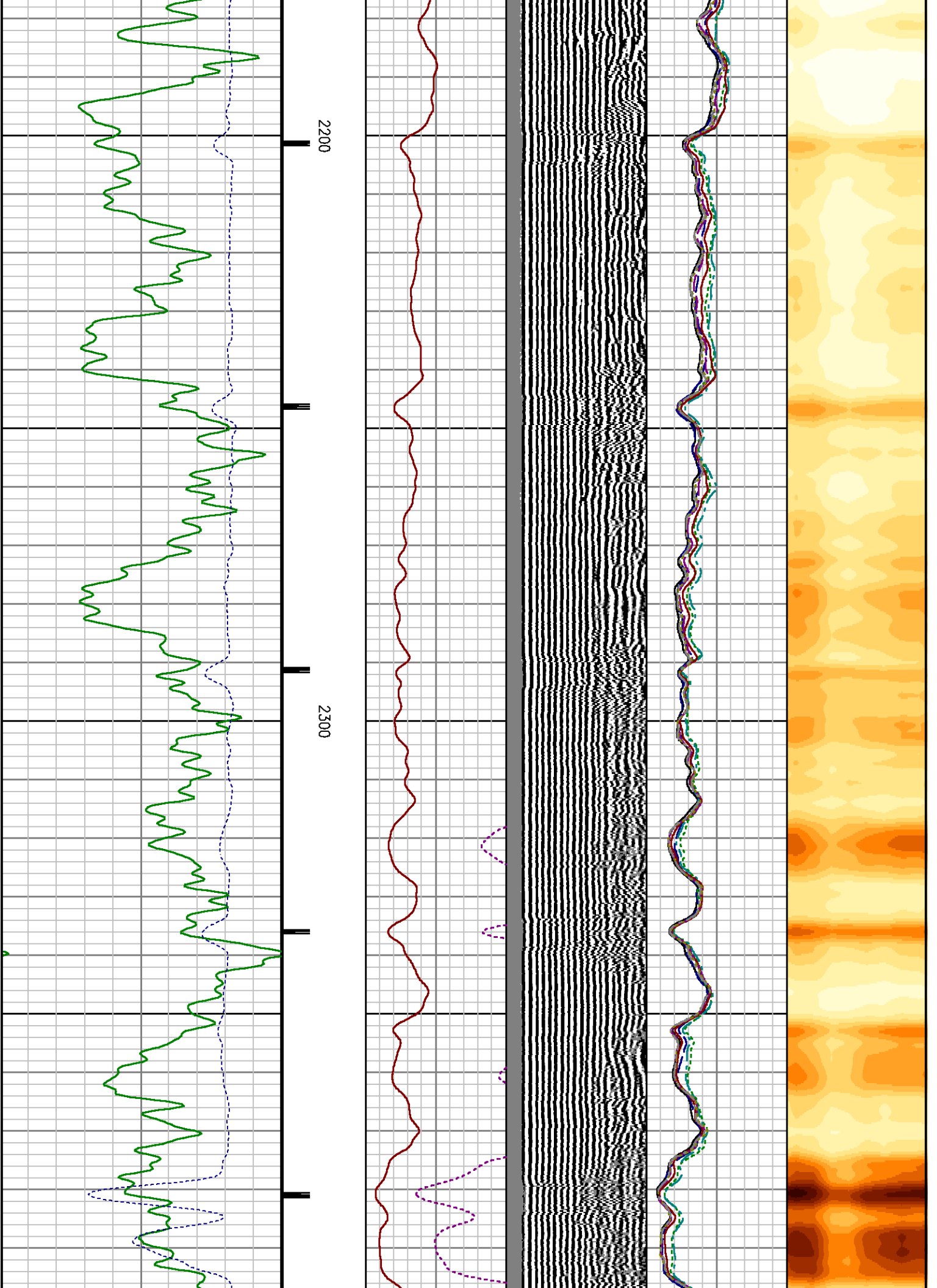


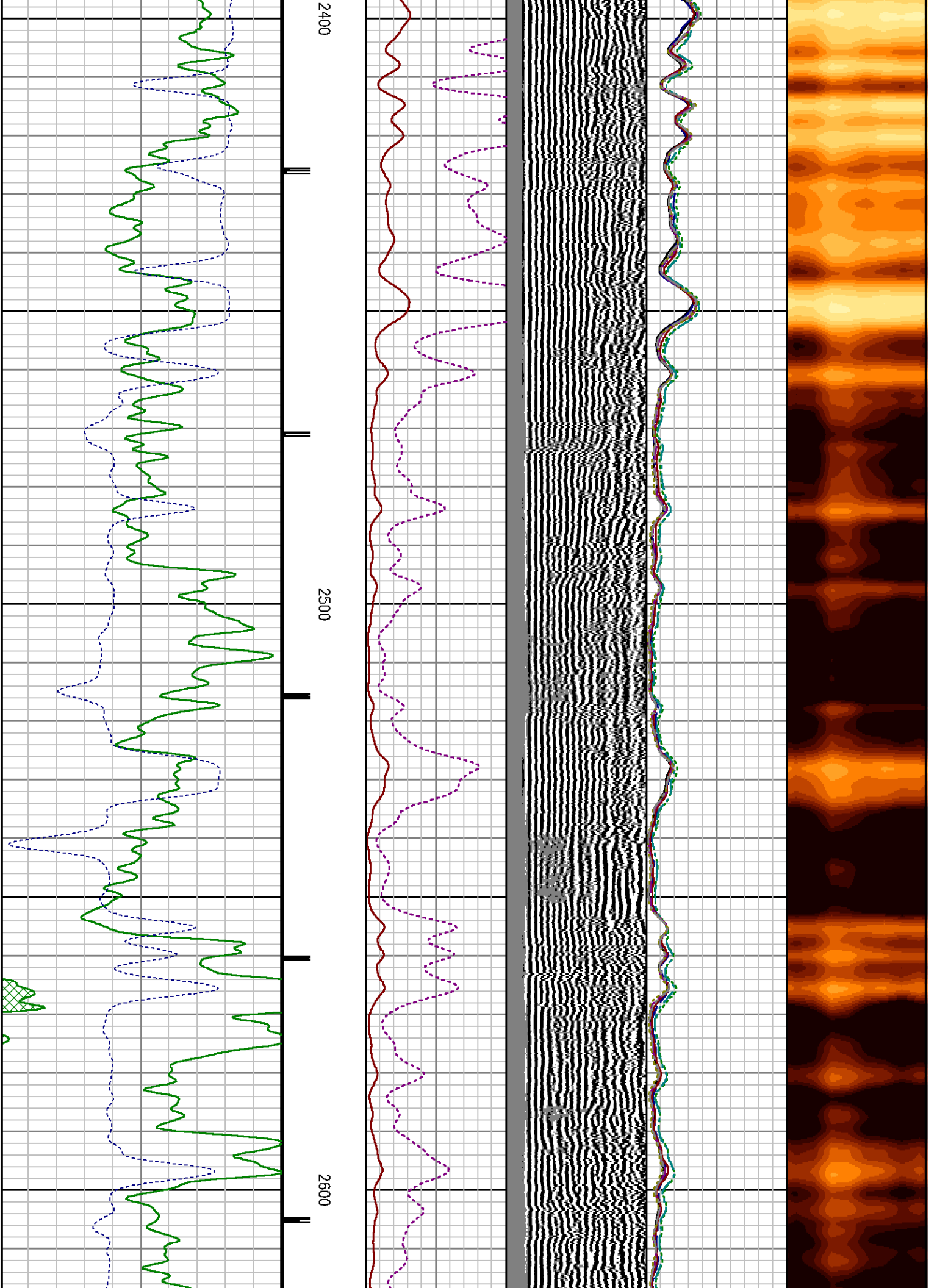


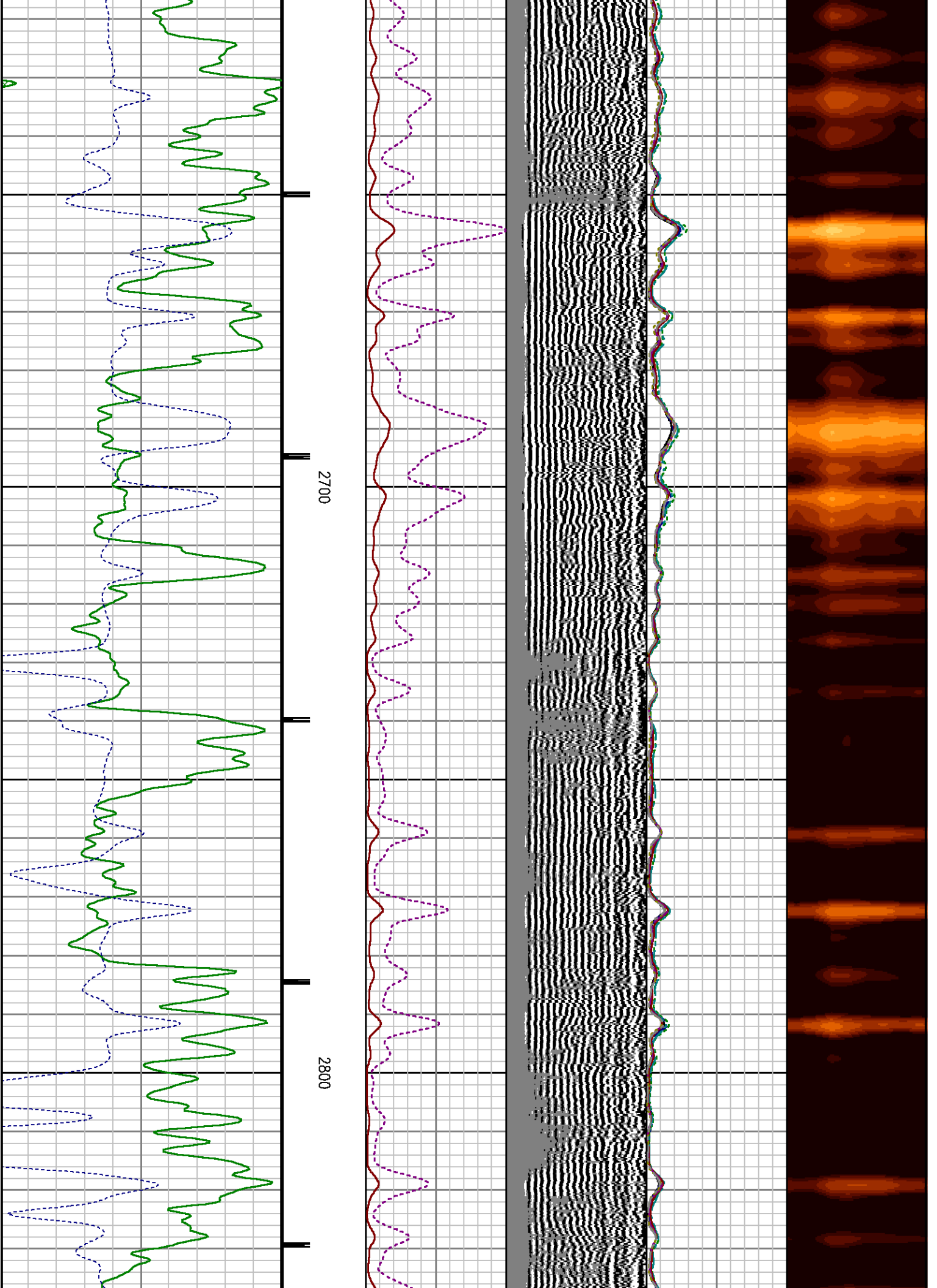


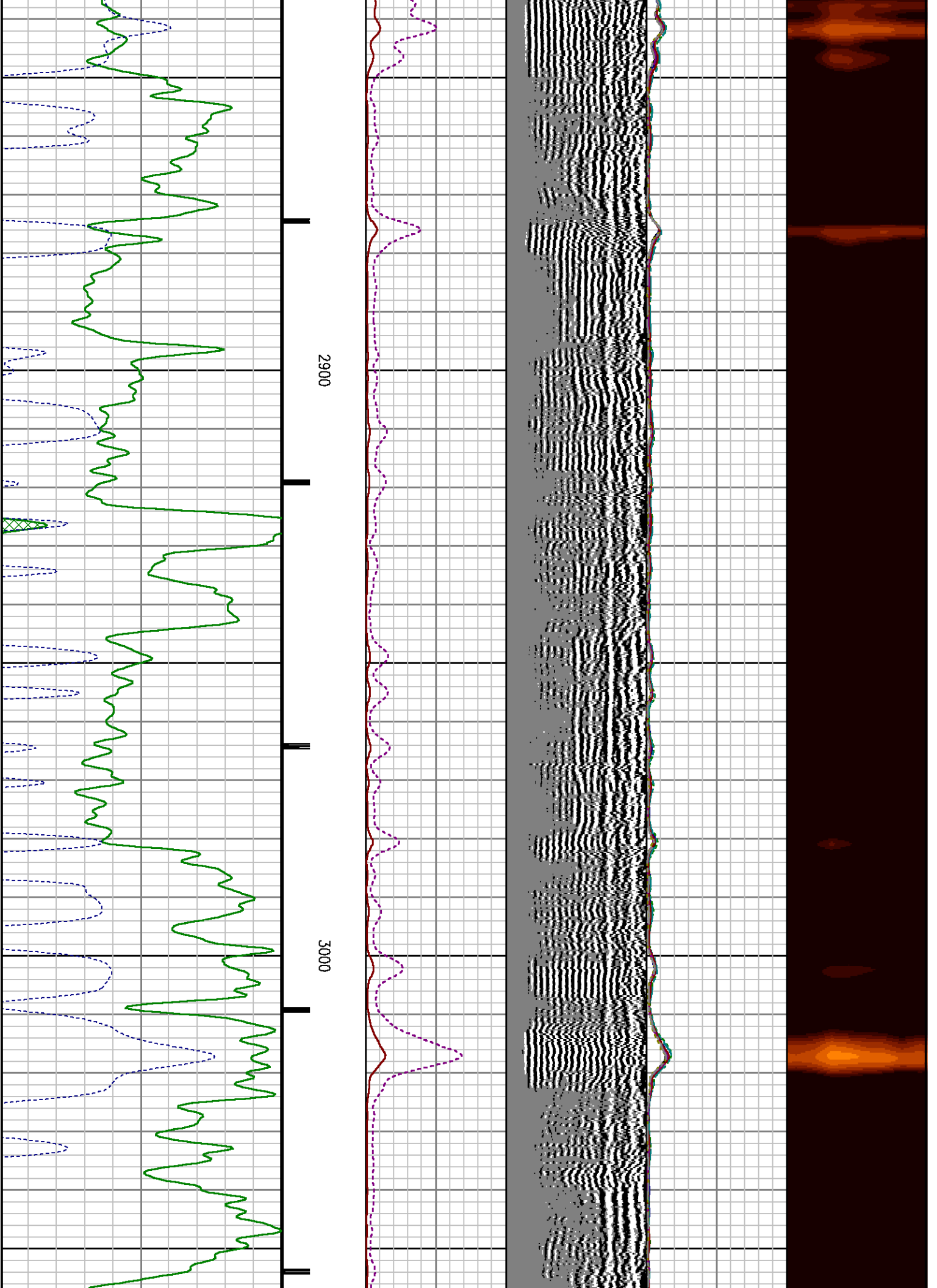


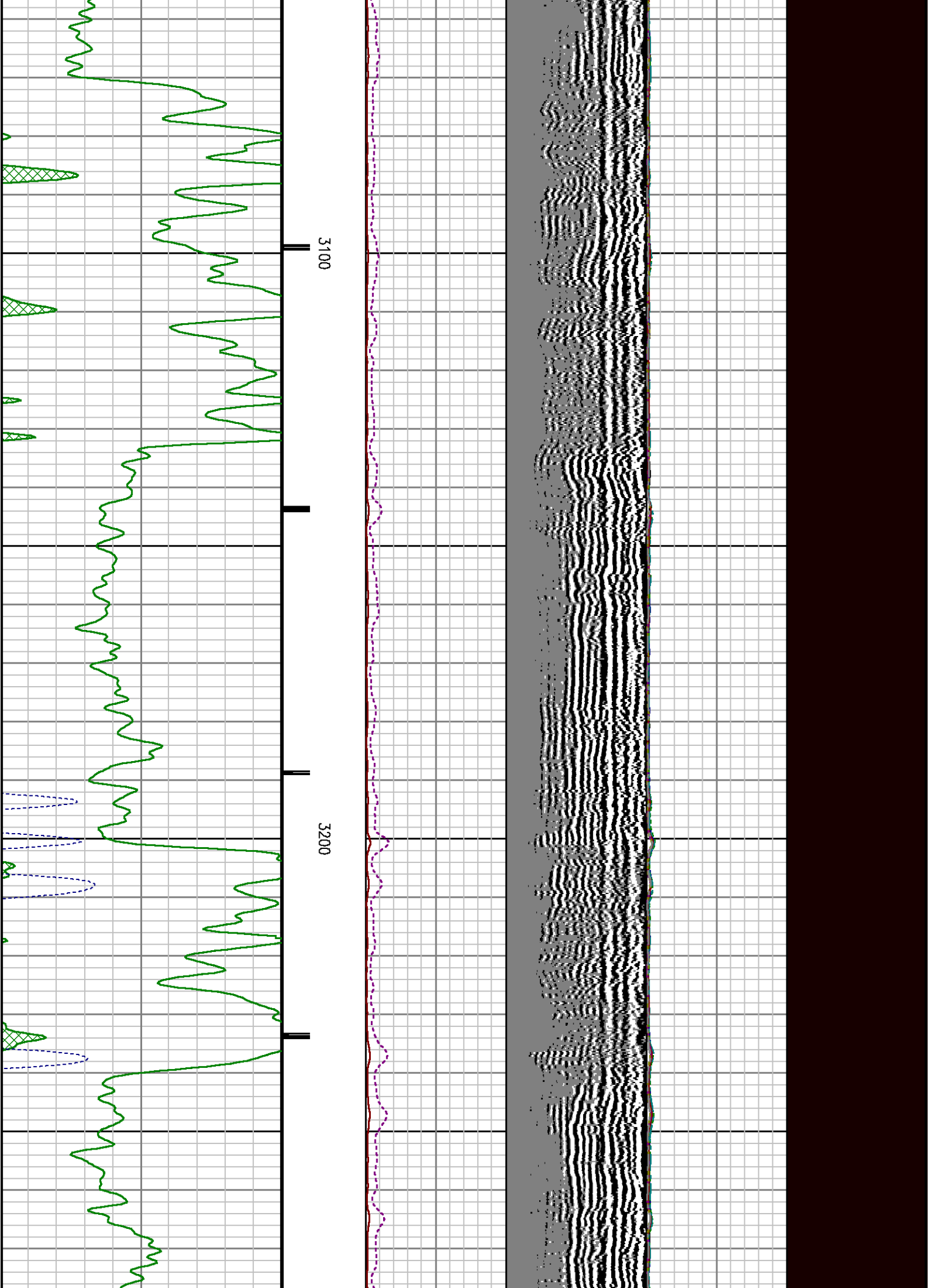


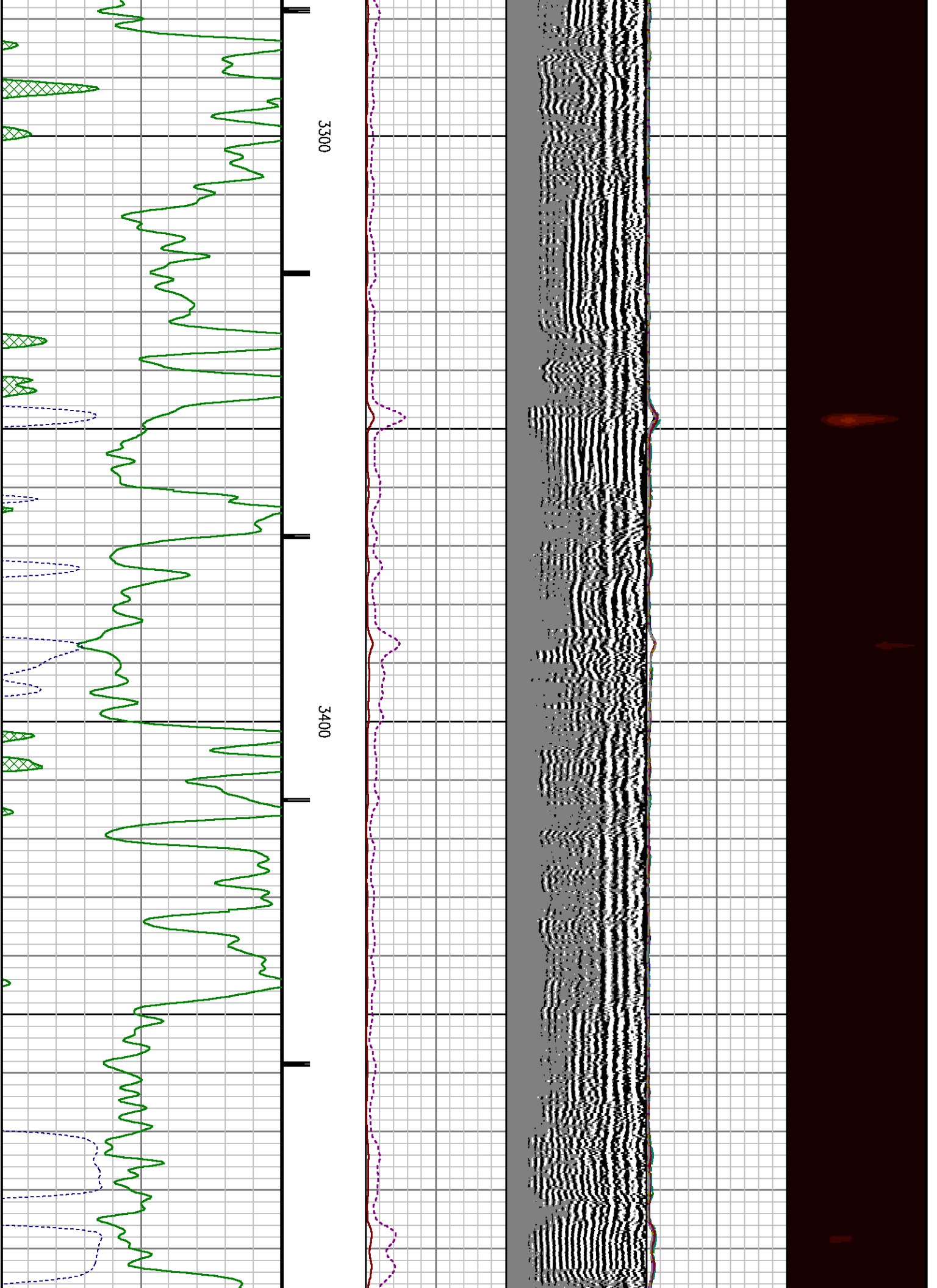


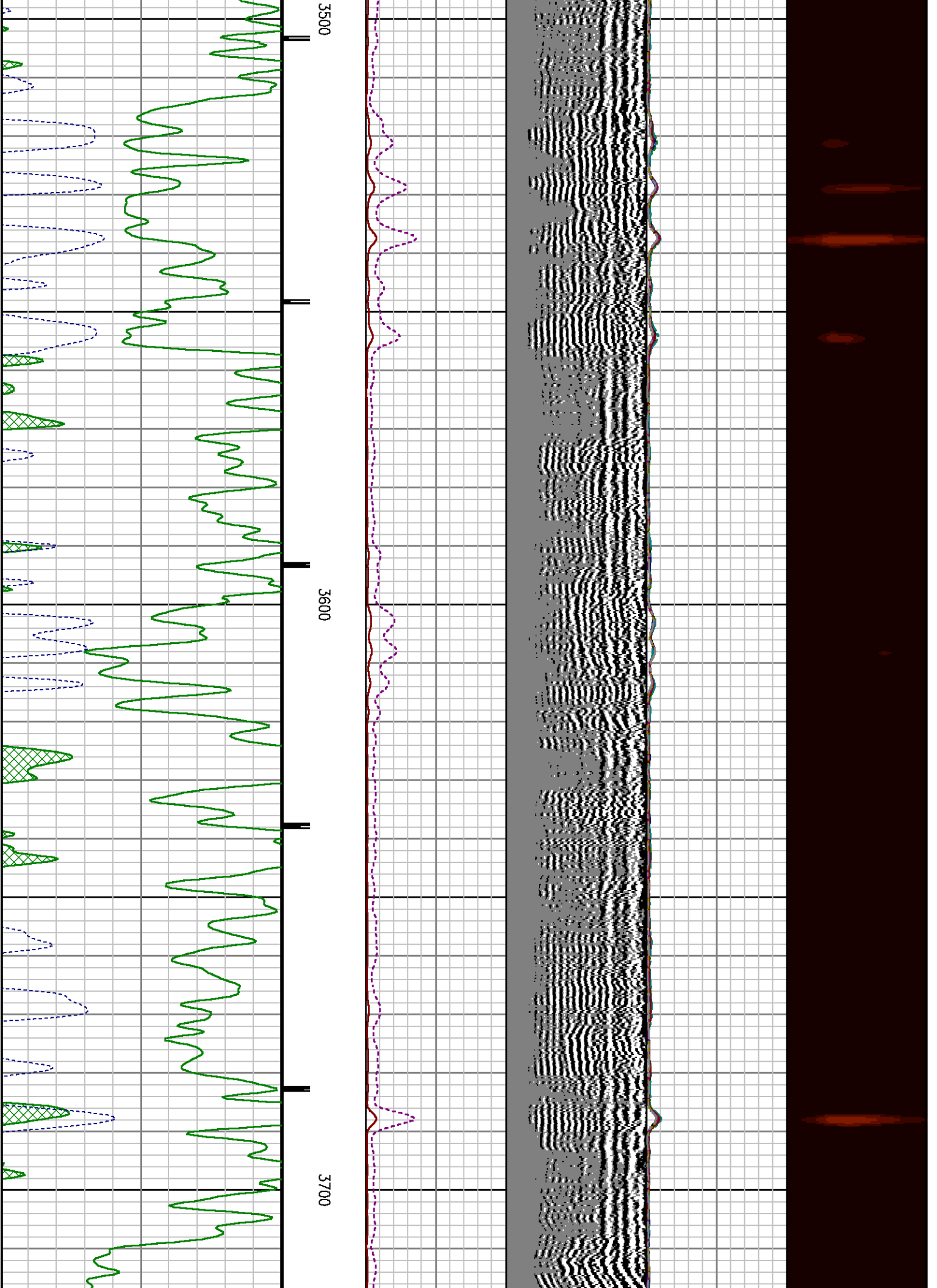


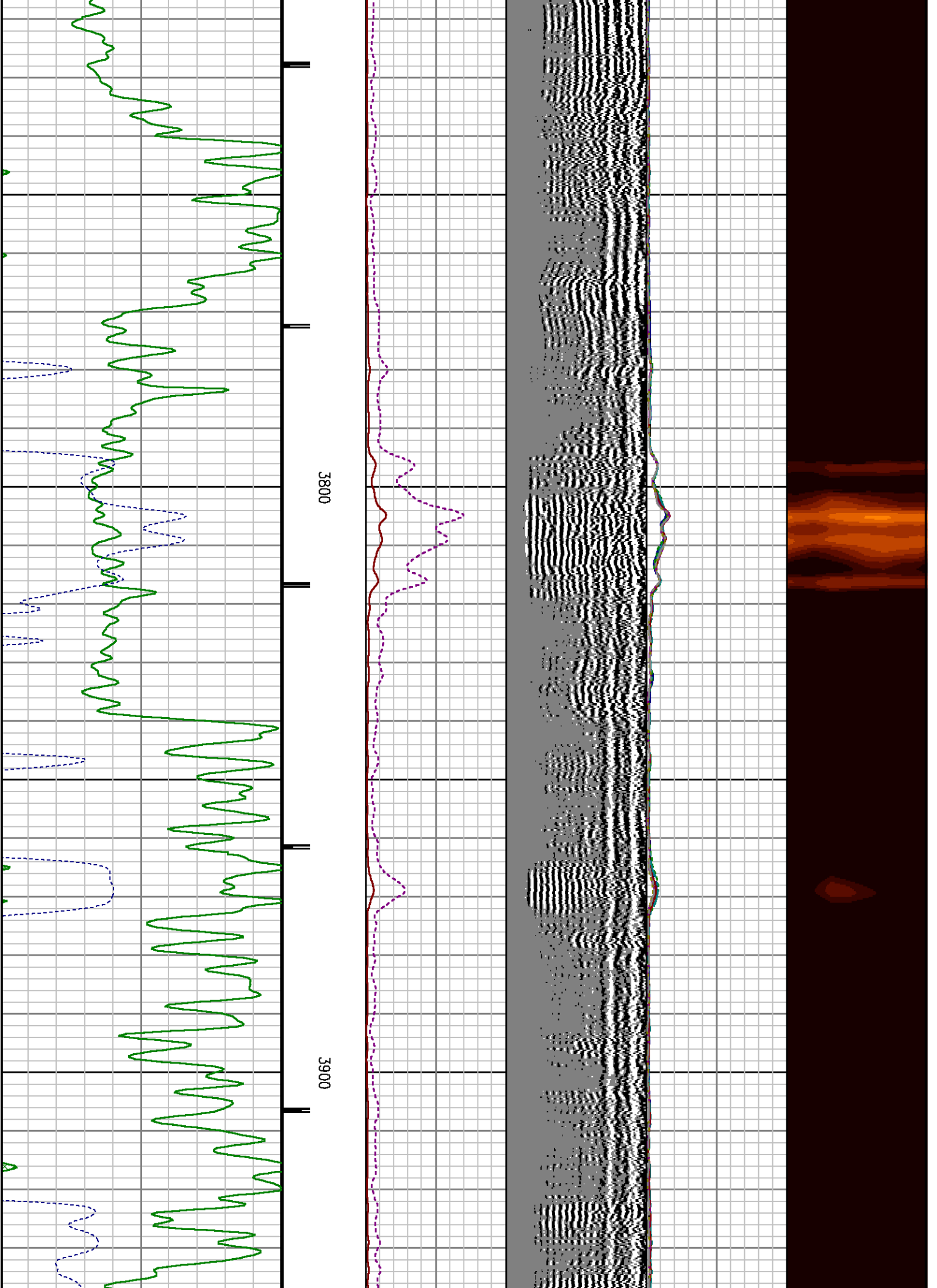


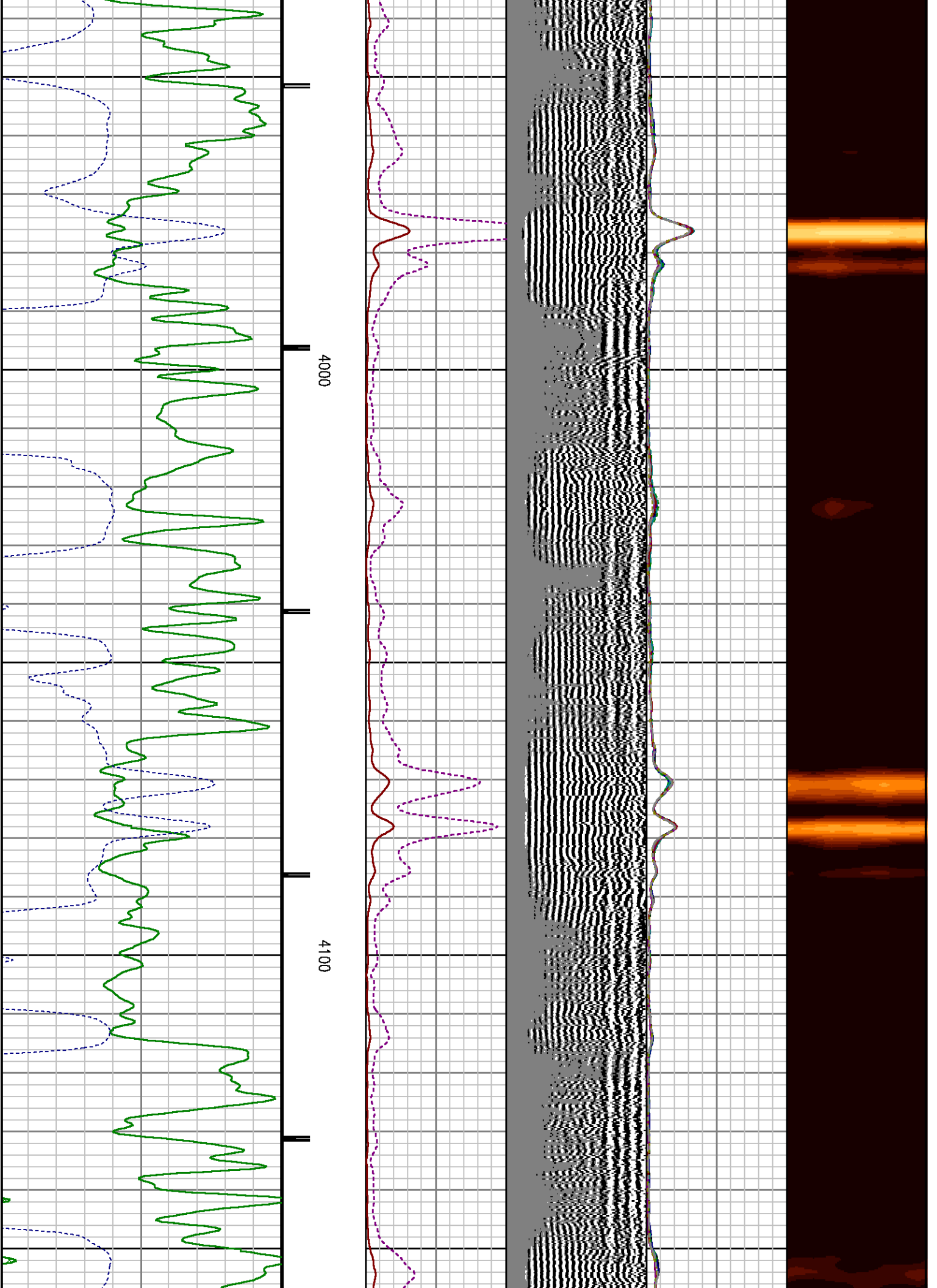


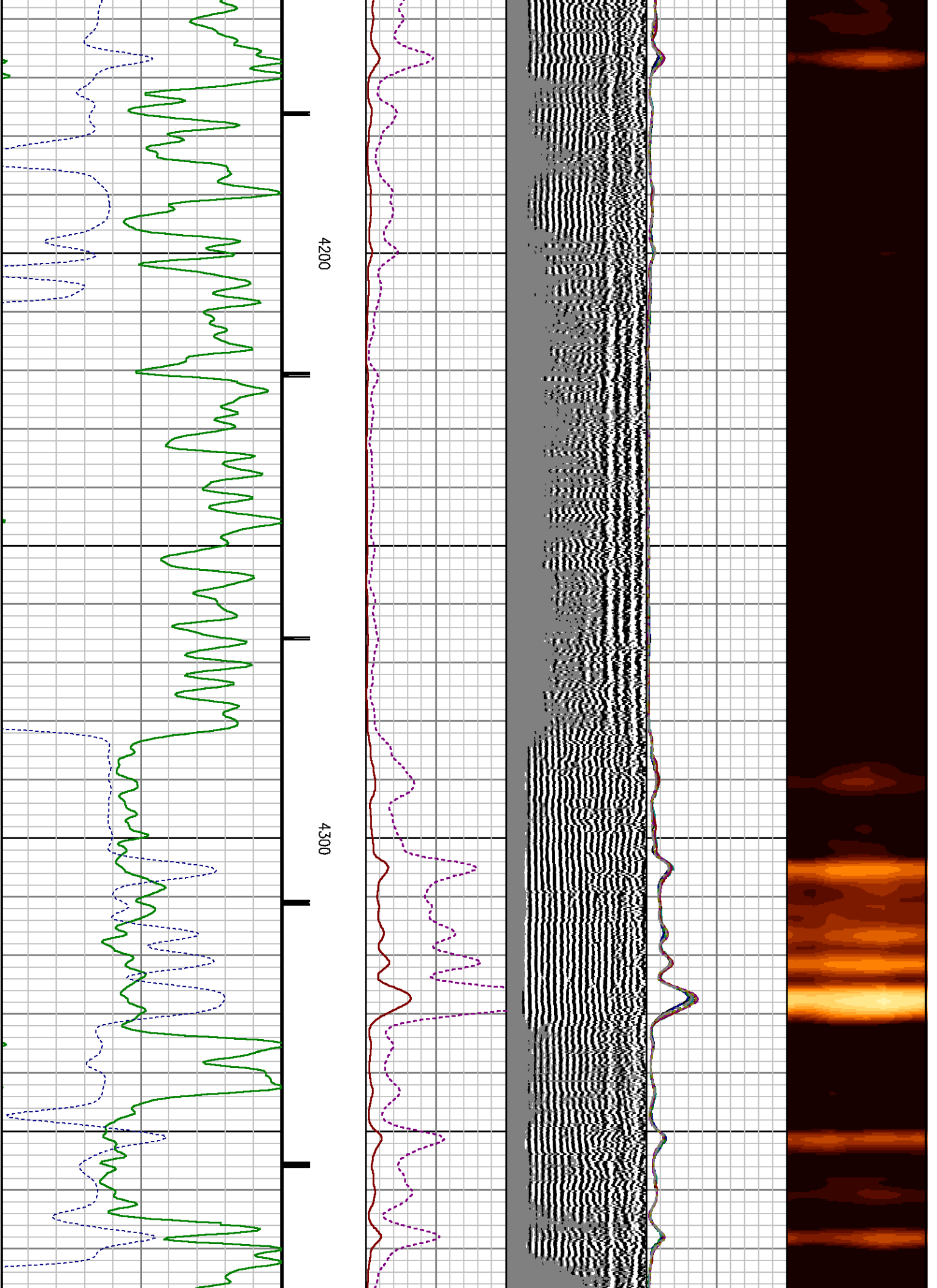


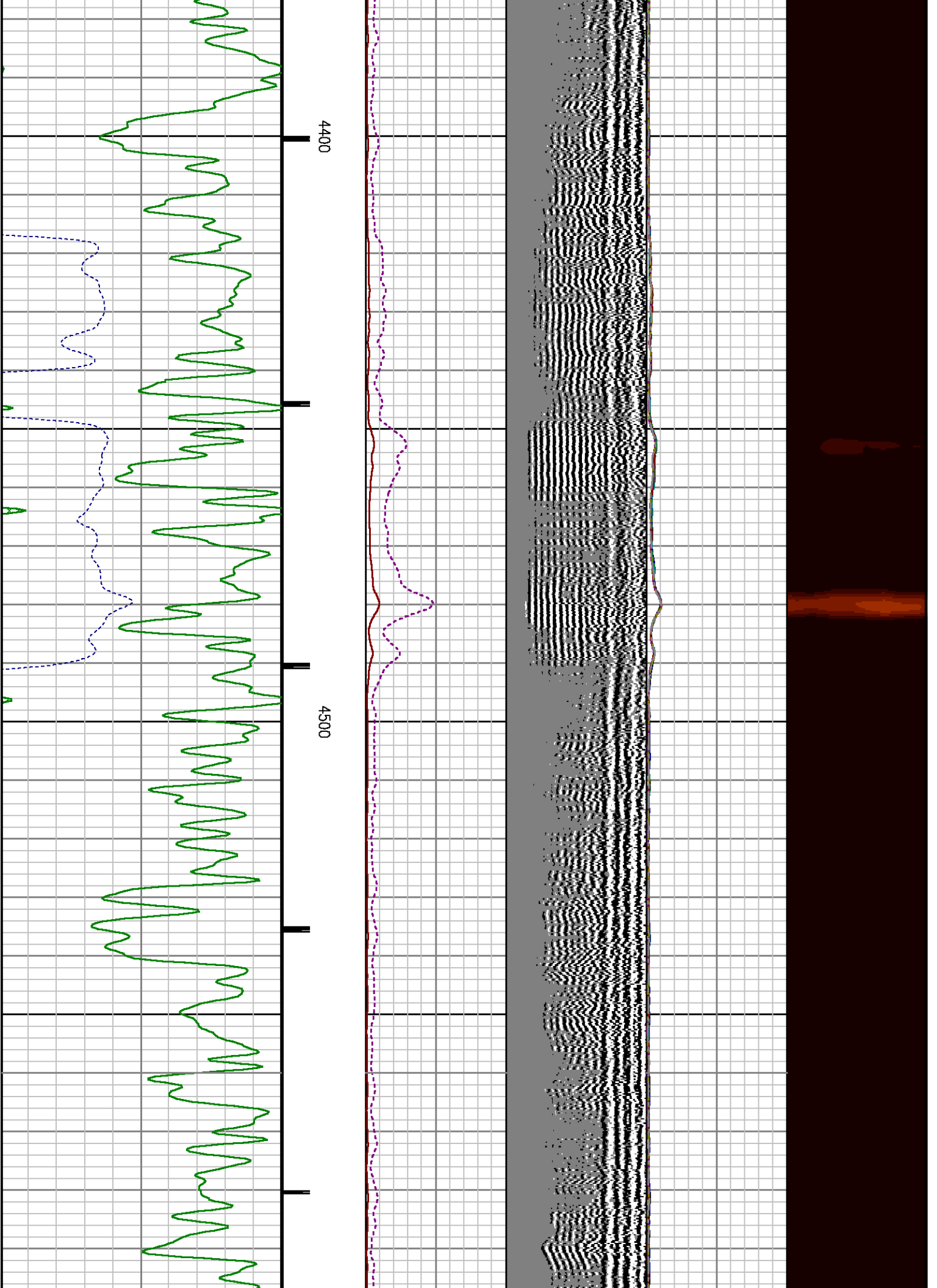


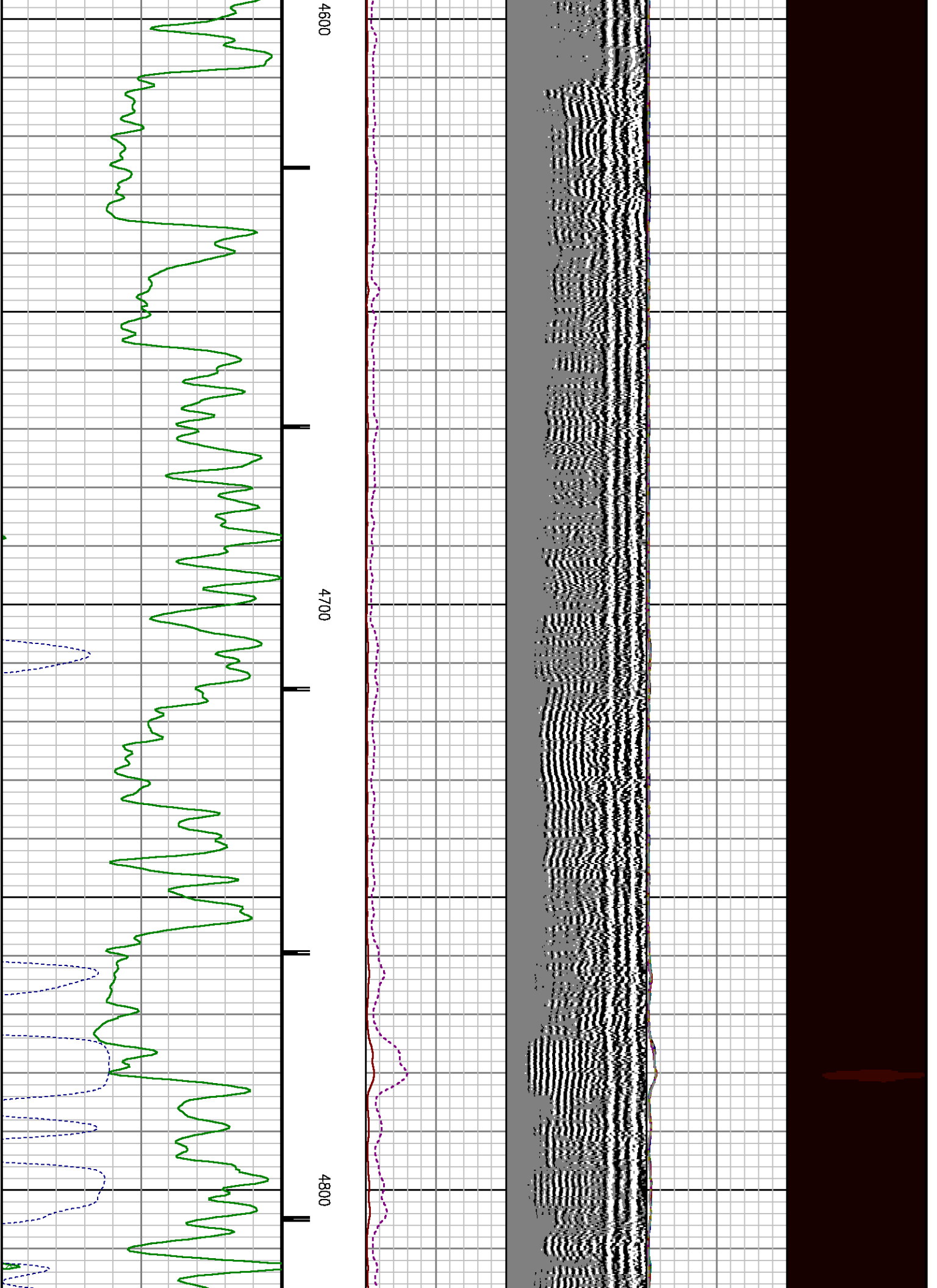


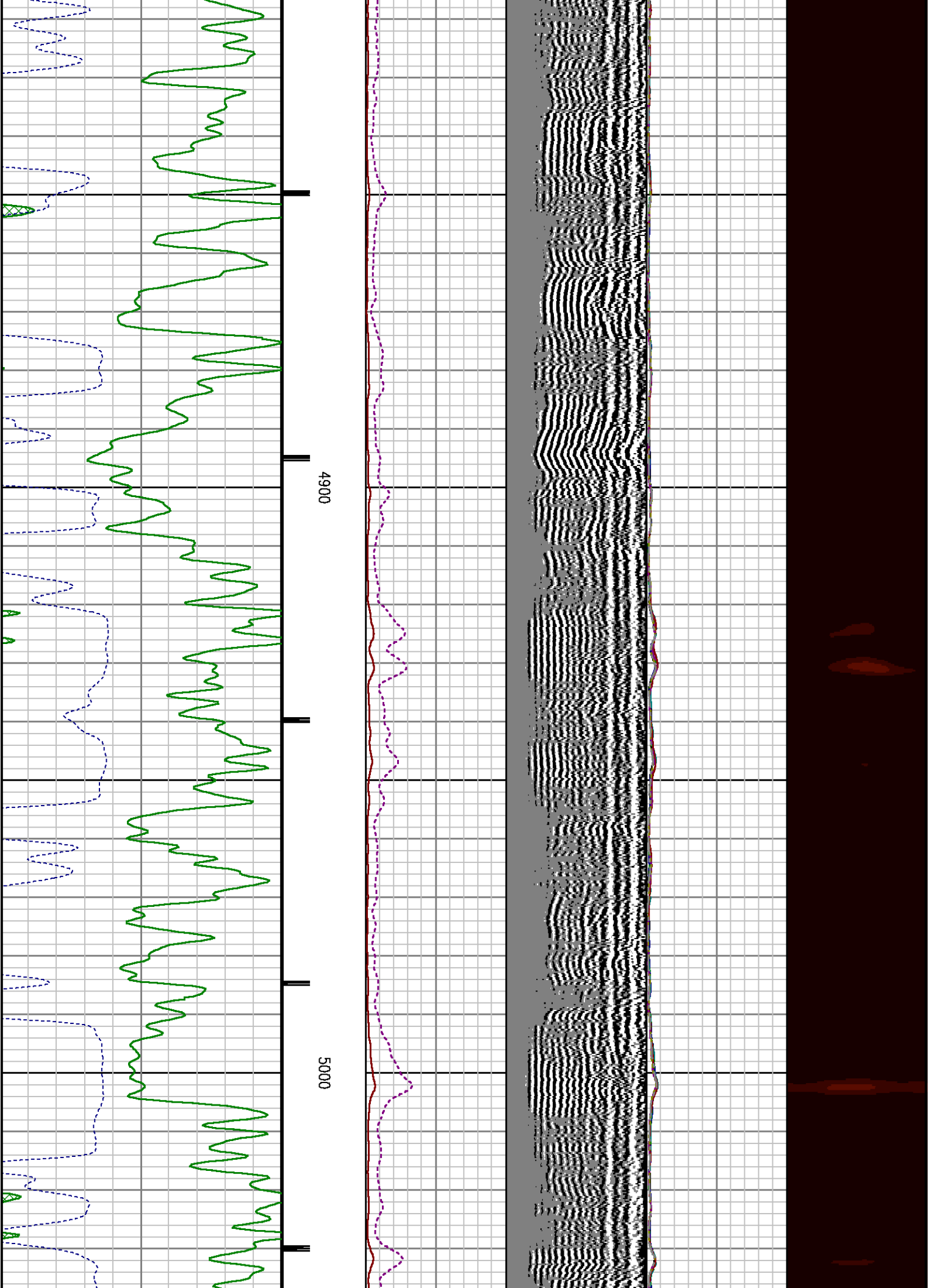


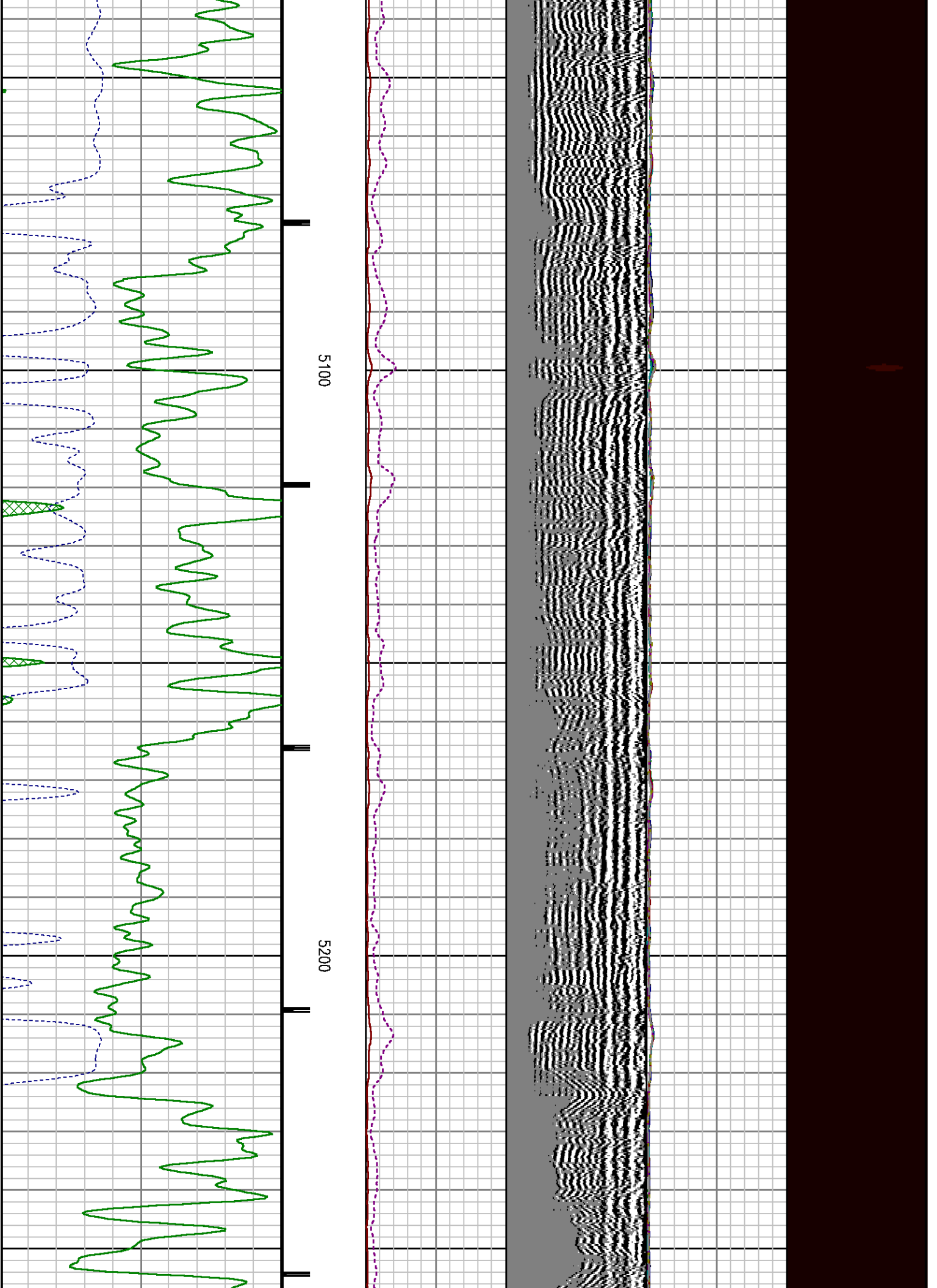


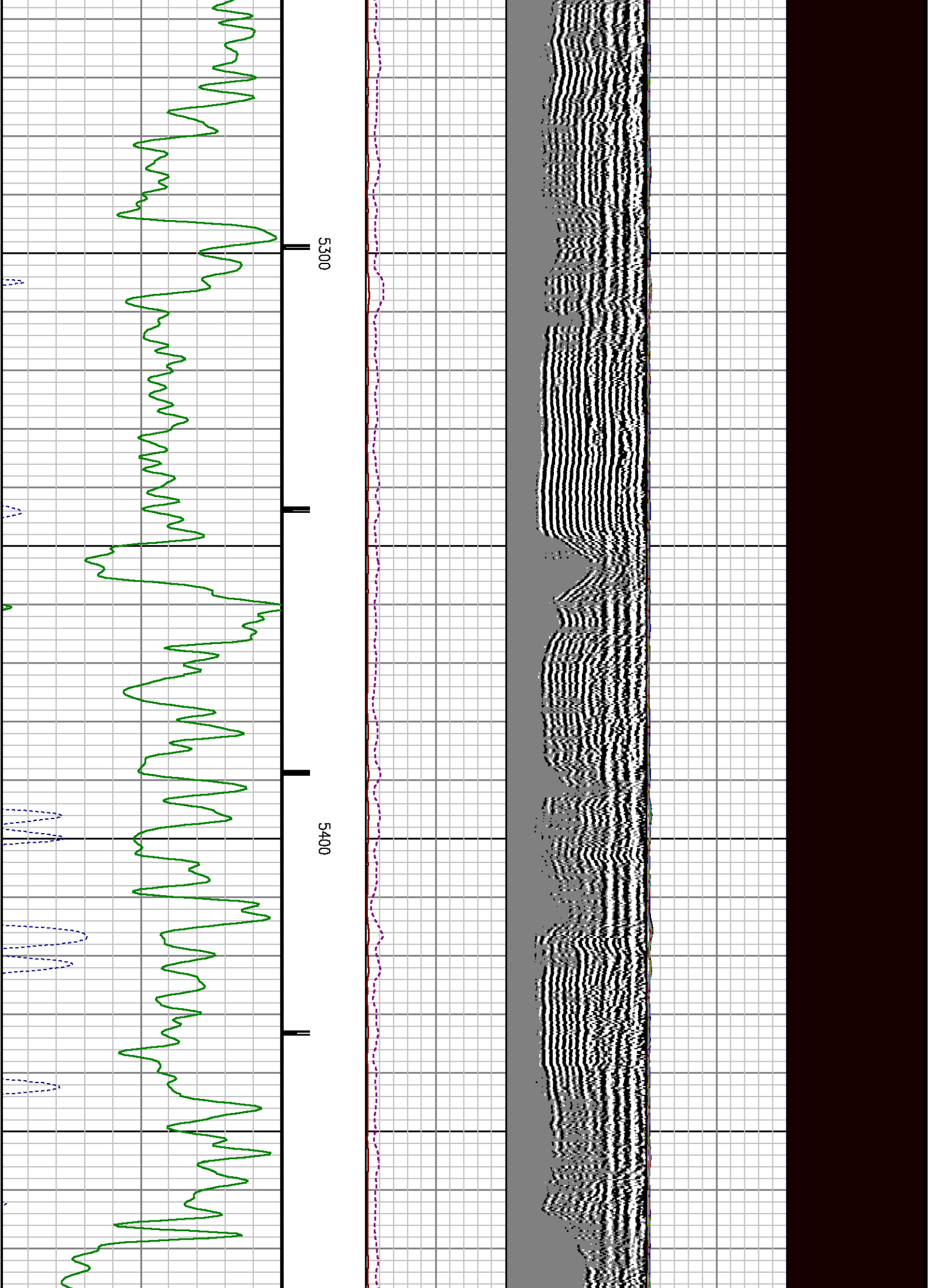


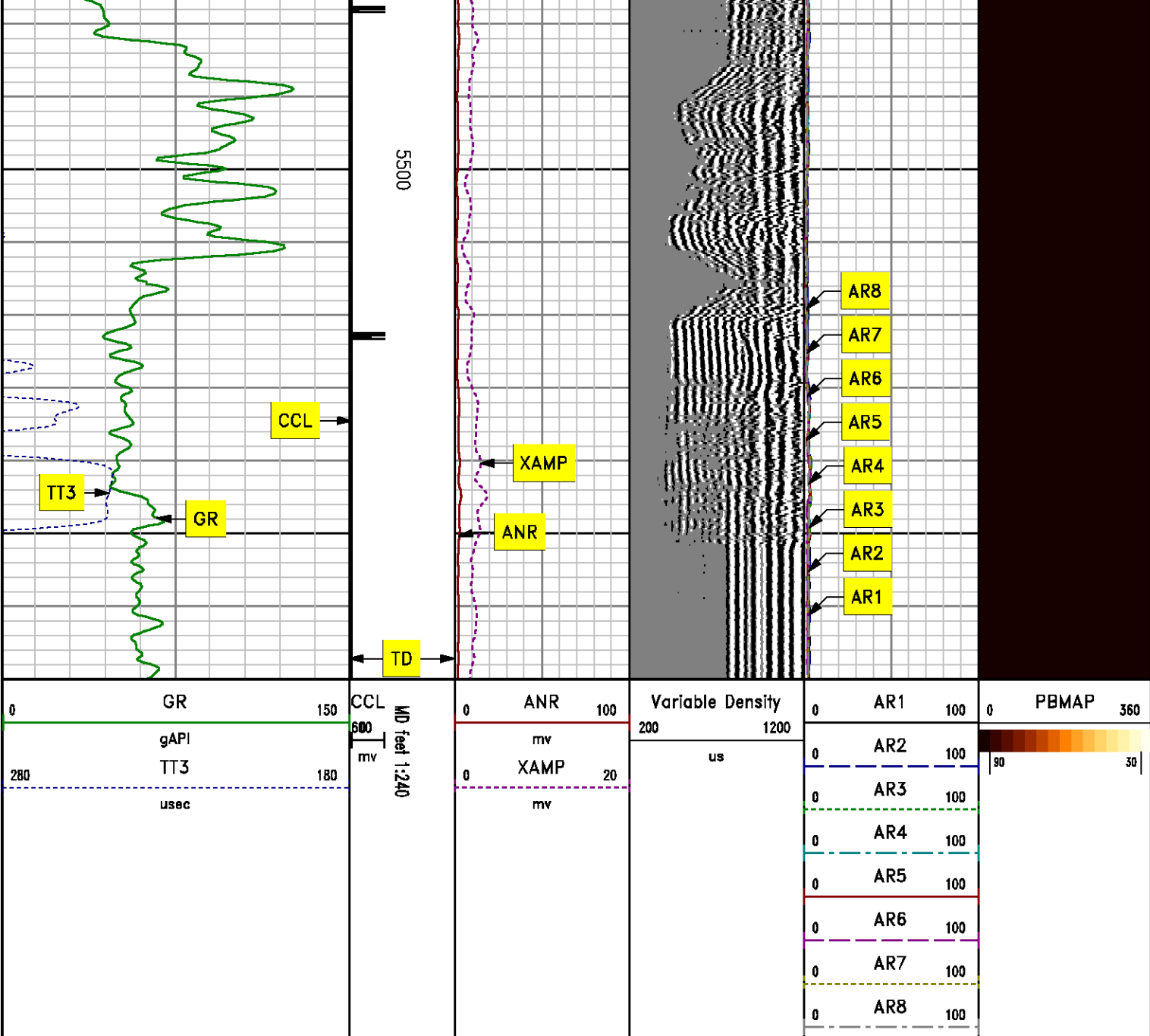












MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	5199.750	5582.000
RAL	Amp Gate Start Near	200.391	usec	5199.750	5582.000
RAL	Amp Gate Start Radial	200.391	usec	5199.750	5582.000

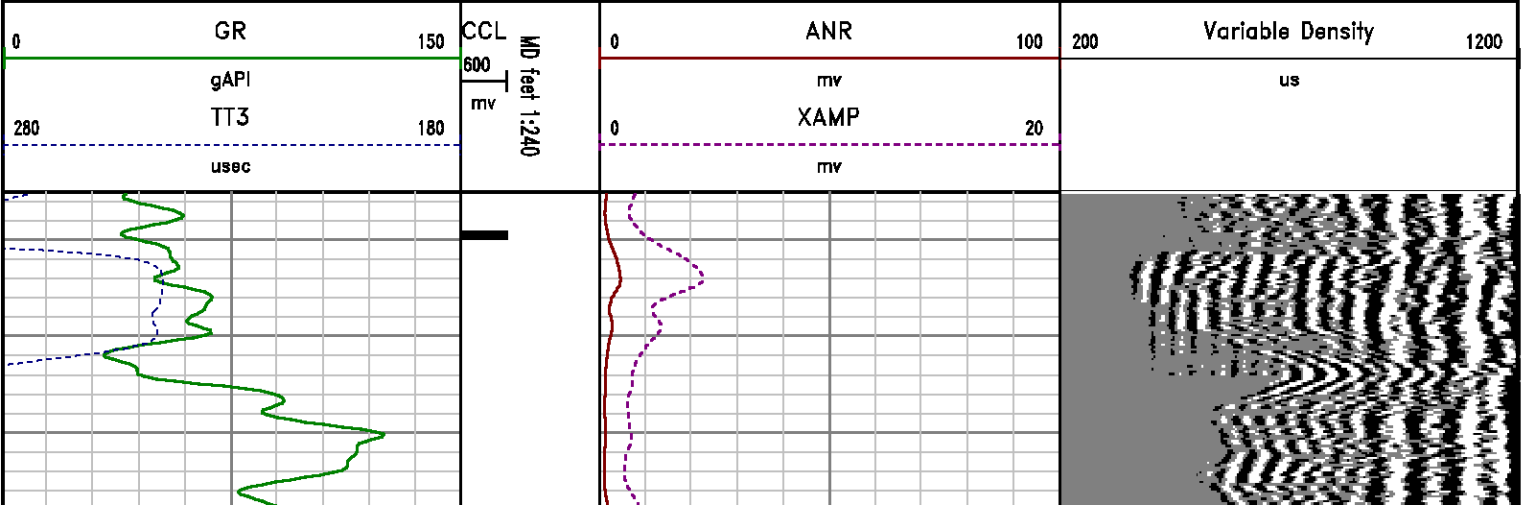
RAL	Amp Gate Width Far	25.000	usec	5199.750	5582.000
RAL	Amp Gate Width Near	25.000	usec	5199.750	5582.000
RAL	Amp Gate Width Radial	25.000	usec	5199.750	5582.000
RAL	casing od	4.500	inches	5199.750	5582.000
RAL	casing wt	11.600	lbm/ft	5199.750	5582.000
RAL	FB Start Far	291.900	usec	5199.750	5582.000
RAL	FB Start Near	175.391	usec	5199.750	5582.000
RAL	FB Start Radial	175.391	usec	5199.750	5582.000
RAL	FB Thresh Far	15.000	mv	5199.750	5582.000
RAL	FB Thresh Near	10.000	mv	5199.750	5582.000
RAL	FB Thresh Radial	10.000	mv	5199.750	5582.000
RAL	Fluid Travel Time	200.000	usec/ft	5199.750	5581.562

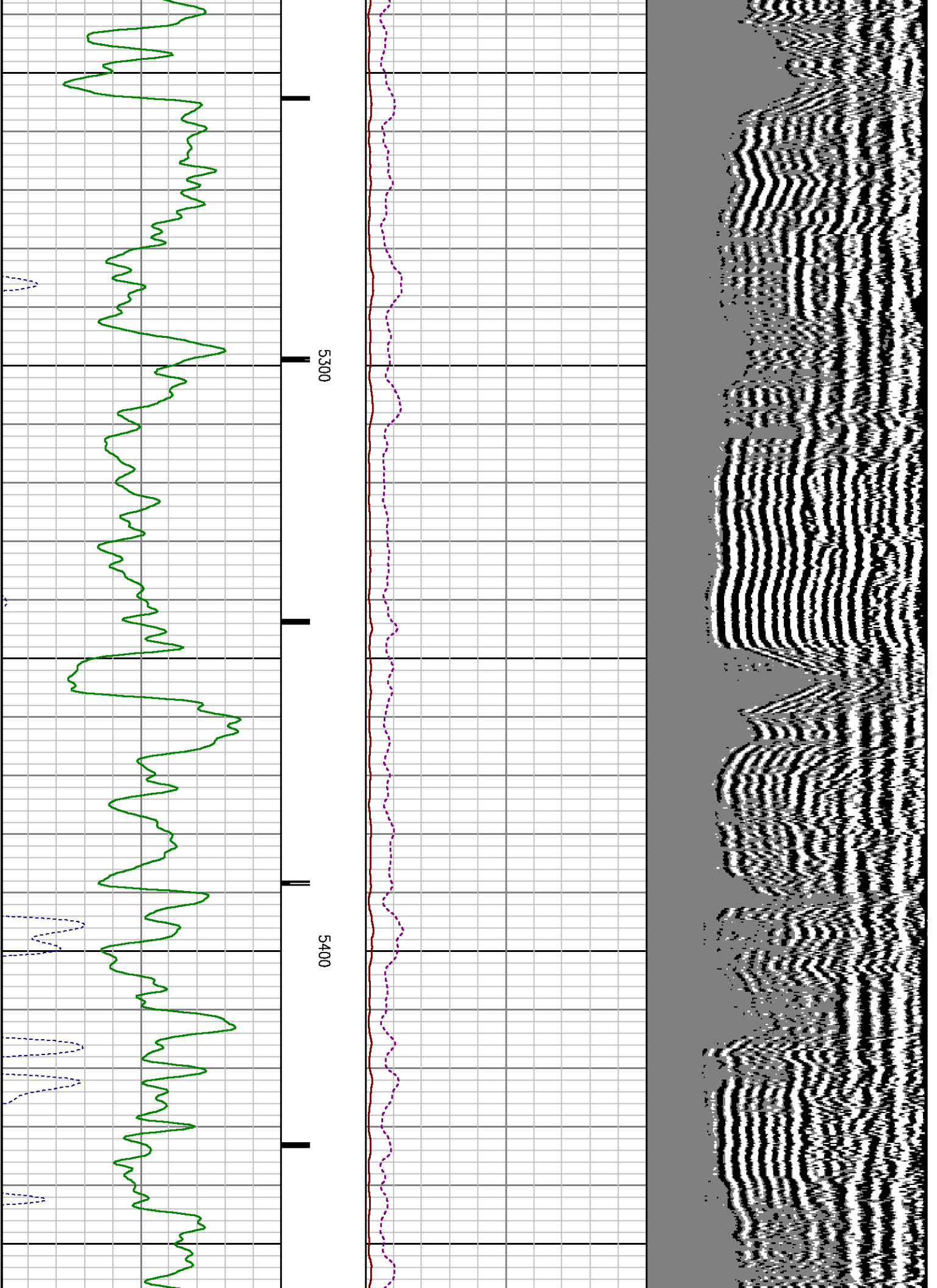
DEPTH OFFSETS

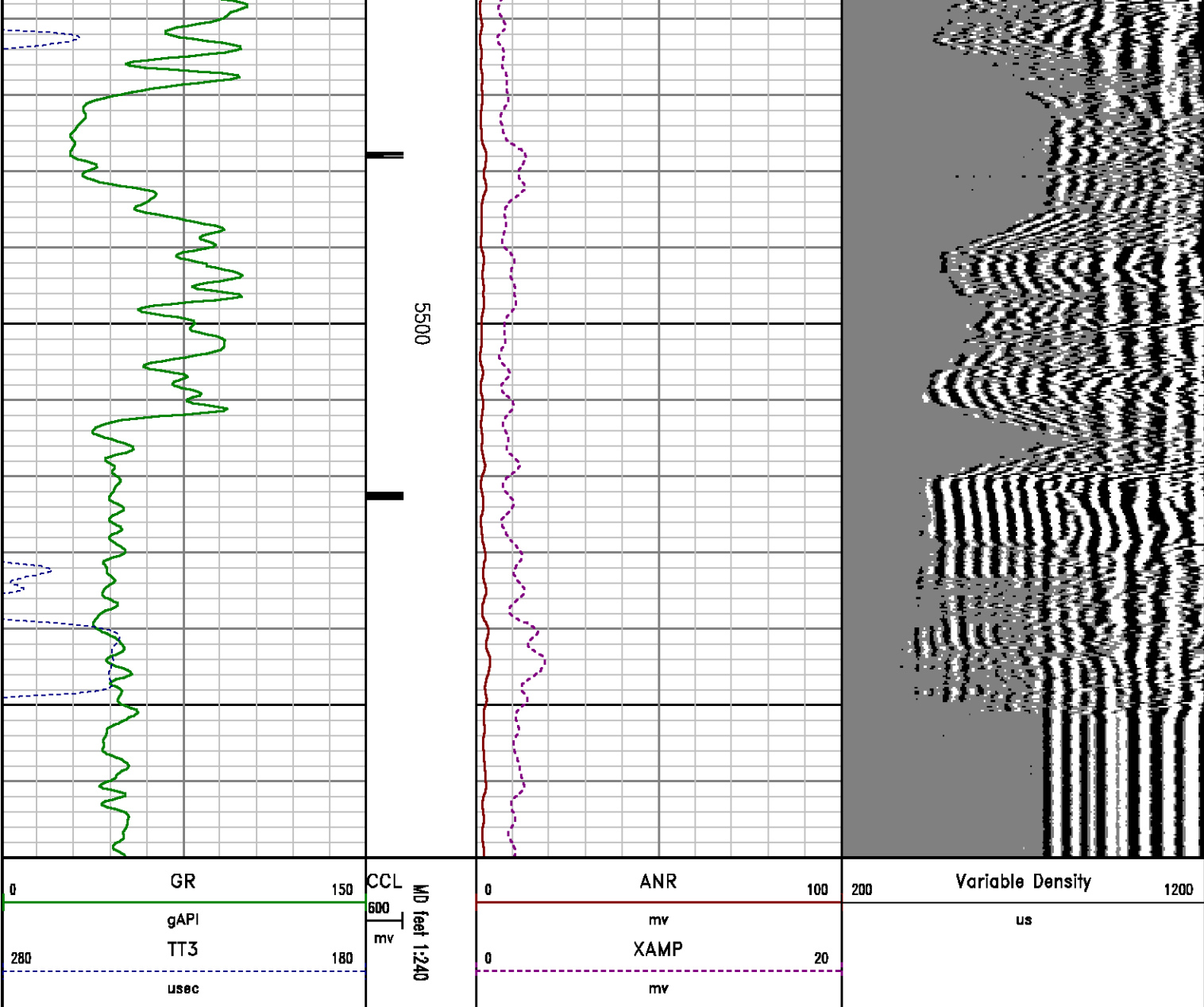
(for Acquired Curves)

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 424-28
 File Name : d:\welldata\424cbl\cbl_repeat.xtf
 Mode : PlotMgr 5.4.504
 Interval : 5205.00 - 5570.00 feet UP
 Created : 9/19/2010 9:11:45 AM







CALIBRATION SUMMARY

GAMMA RAY

Calibration File: C:\case\calver\GR\457S1.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Aug 30 10:46:45 2010 TOOL SERIES: 1426XA ASSET: 457 SEQ: S1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K DA612	94.49	353.29	0.715	67.54	252.54	185.00

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\957S19_shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Sep 19 08:31:03 2010 TOOL SERIES: 1426XA ASSET: 957 SEQ: S19

Tool Delay [usec]	Tank OD in	Tank Wt lbm/ft	Tank ID in					
-52.00	5.50	15.50	4.95					
RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	220	216	30	47	109	0.090	100.00	0.24
3 Ft. Receiver	218	216	30	111	67	-0.310	100.00	0.23
5 Ft. Receiver	328	324	30	99	161	0.057	150.00	0.26
Radial #1	221	216	30	114	60	-0.302	100.00	0.23
Radial #2	222	216	30	114	60	0.252	100.00	0.23
Radial #3	221	216	30	114	60	0.105	100.00	0.23
Radial #4	219	216	30	114	60	-0.081	100.00	0.23
Radial #5	218	216	30	114	60	-0.297	100.00	0.23
Radial #6	216	216	30	114	60	0.218	100.00	0.23
Radial #7	217	216	30	114	60	0.430	100.00	0.23
Radial #8	220	216	30	114	60	-0.195	100.00	0.23

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\957S19 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Sun Sep 19 08:34:53 2010 TOOL SERIES: 1426XA ASSET: 957 SEQ: S19

Tool Delay [usec]	Casing OD in	Casing Wt lbm/ft	Casing ID in				
-52.00	4.50	11.60	4.00				
RECEIVER	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Full Amp. [mV]	Wellsite Factor	Amp. Ref [mV]	
CAL Pulse	47	109	-0.016	0.000	1.00	100.000	
3 Ft. Receiver	200	25	-2.047				
5 Ft. Receiver	317	25	-1.073				

Radial #1	200	25	-2.316
Radial #2	200	25	-2.475
Radial #3	200	25	-0.756
Radial #4	200	25	-1.059
Radial #5	200	25	-0.651
Radial #6	200	25	-0.519
Radial #7	200	25	-1.104
Radial #8	200	25	-0.692

TOOL DIAGRAM

OTA SHORT CABLE HEAD

PROBE 2 3/4 DUAL RECEIVER RADII

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

Probe GR/CCL/NEU

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

CENTRALIZER

Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb



	24.32'
XMIT	18.13'
NEAR RCVR	15.05'
FAR RCVR	13.13'
CCL	11.43'
GR	9.57'
NEU	4.18'
	0.00'

Total Length: 24.32'

Total Weight: Not Available

Max Diameter: 0' 3.12"



Baker Atlas

SG 424-28

Company	WILLIAMS PRODUCTION COMPANY		
Well	SG 424-28		
Field	GRAND VALLEY		
County	GARFIELD	State	COLORADO

File No:
API No:
05045191890000

Location
SHL: 1235' FSL, 1512' FEL
BHL: 416' FSL, 2045' FWL (SESW)
SEC 28 TWP 7S RGE 96W

Elevations
KB 5112 ft
DF 5111 ft
GL 5089 ft

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