



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: 1541	Company WILLIAMS PRODUCTION COMPANY	
API No: 003045178220000	Well KP 33-21	
	Field KOKOPELLI	
	County GARFIELD	
	State COLORADO	
21, 6S, 91W KP 33-21 PAD CYCLONE 3D	Location SHL: 1517' FSL & 2094' FEL BHL: 2472' FSL & 1980' FEL SEC 21 TWP 6S RGE 9W	Other Services RPM
Permanent Datum Log Measured From Drill Measured From	G.L. _____ Elevation K.B. _____ 23 ft Above P. D. KELLY BUSHING	Elevations KB 6995 ft DF 6994 ft GL 6972 ft

Date	06-JAN-2010
Run	ONE
Service Order	576404
Depth Driller	9080 ft
Depth Logger	8982 ft
Bottom Logged Interval	8982 ft
Top Logged Interval	SURFACE
Time Started	09:00
Time Finished	13:00
Operator Rig Time	4 HRS
Type of Fluid in Hole	WATER
Fluid Density	N/A
Salinity	N/A
Fluid Level	PULL
Logged Cement Top	N/A
Wellhead Pressure	0 psi
Maximum Hole Deviation	N/A
Nominal Logging Speed	45 fpm
Maximum Recorded Temperature	190 degF
Reference Log	BY/GR-OH-02H
Reference Log Date	29-DEC-08
Equipment No.	4271
Location	TIM KAUTT
Recorded By	VERNA,UT
Witnessed By	MR. JEFF BRADY

- 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
7.875 in		

Casing Record				
Size	Weight	Grade	From	To
4.5 in	11.6 lbm/ft	P-110	SURFACE	9080 ft

Remarks
OPEN HOLE BHT 190'
SHORT JOINT @ 5683' - 5684'
THE CREW OF 4271 THANKS YOU.

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	WANDREL	1428XA	496	CENTRALIZED

MAIN SECTION PRIMARY PRESENTATION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	23.879	9007.500
RAL	Amp Gate Start Near	200.391	usec	23.879	9007.500
RAL	Amp Gate Start Radial	200.391	usec	23.879	9007.500
RAL	Amp Gate Width Far	25.000	usec	23.879	9007.500
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RAL	Amp Gate Width Radial	25.000	usec	23.879	9007.500
RAL	casing od	4.500	inches	23.879	9007.500
RAL	casing wt	11.600	lbm/ft	23.879	9007.500
RAL	FB Start Far	291.900	usec	23.879	9007.500
RAL	FB Start Near	175.391	usec	23.879	9007.500
RAL	FB Start Radial	175.391	usec	23.879	9007.500
RAL	FB Thresh Far	15.000	mv	23.879	9007.500
RAL	FB Thresh Near	10.000	mv	23.879	9007.500
RAL	FB Thresh Radial	10.000	mv	23.879	9007.500
RAL	Fluid Travel Time	200.000	usec/ft	23.879	9007.500

DEPTH OFFSETS (for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-15.360	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	-14.360	AFAR	SIG	TT5			
1426XA	-7.250	CCL					
1426XA	-5.390	GR					
1426XA	0.000	NEU					

Created by : RAL, v4.8.007

Plotted by : PlatMgr, v5.4.504

Company : WILLIAMS PRODUCTION COMPANY

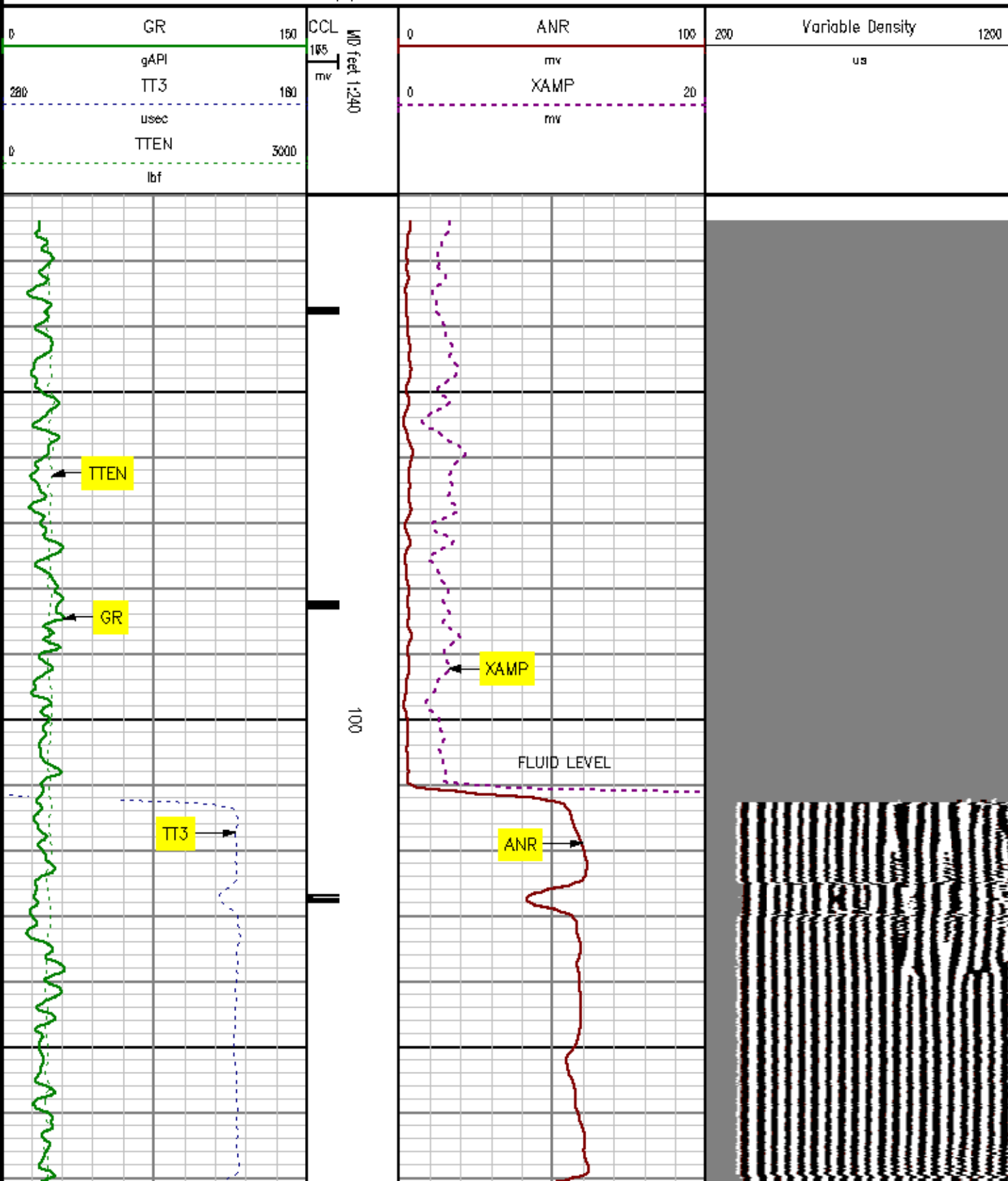
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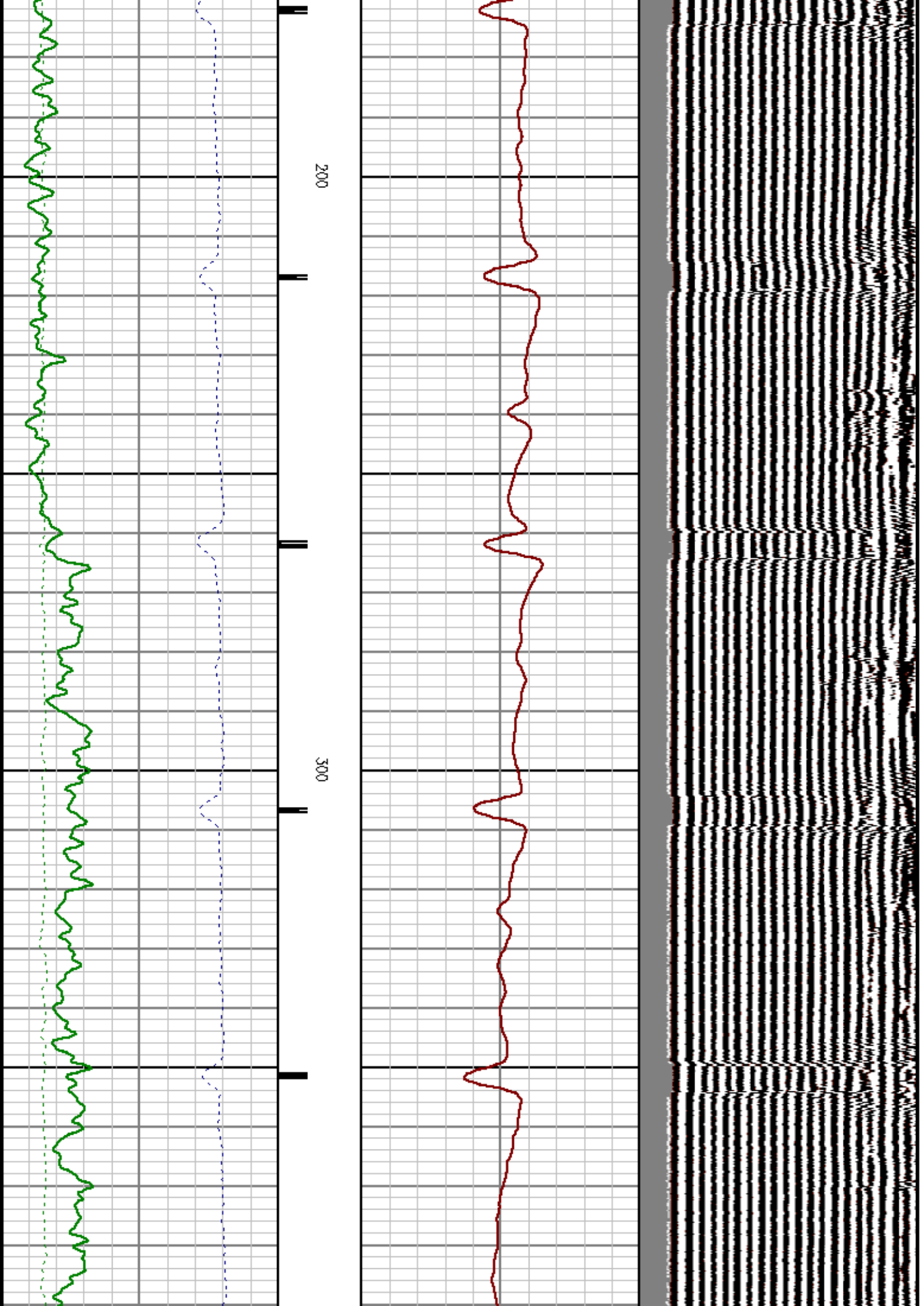
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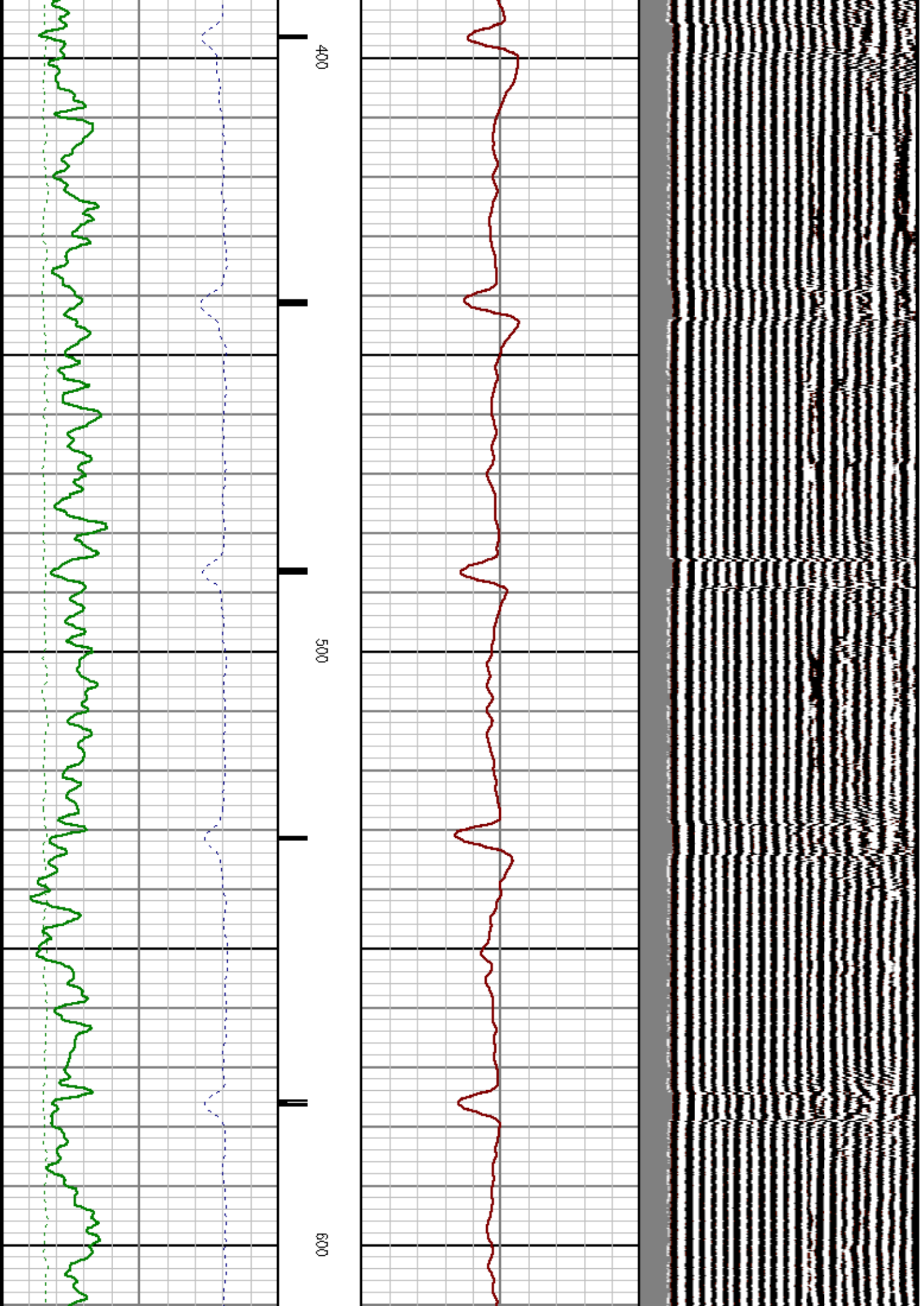
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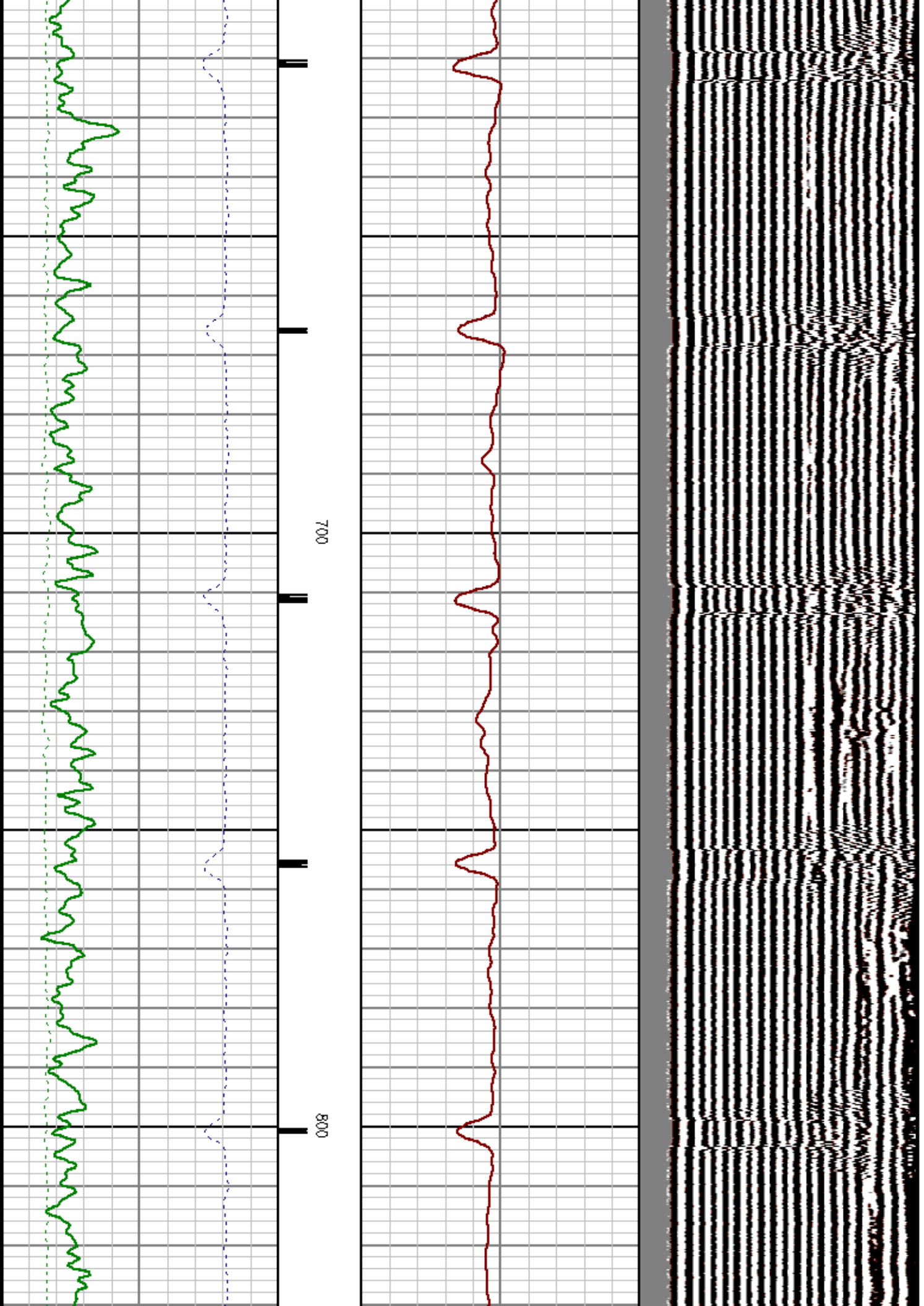
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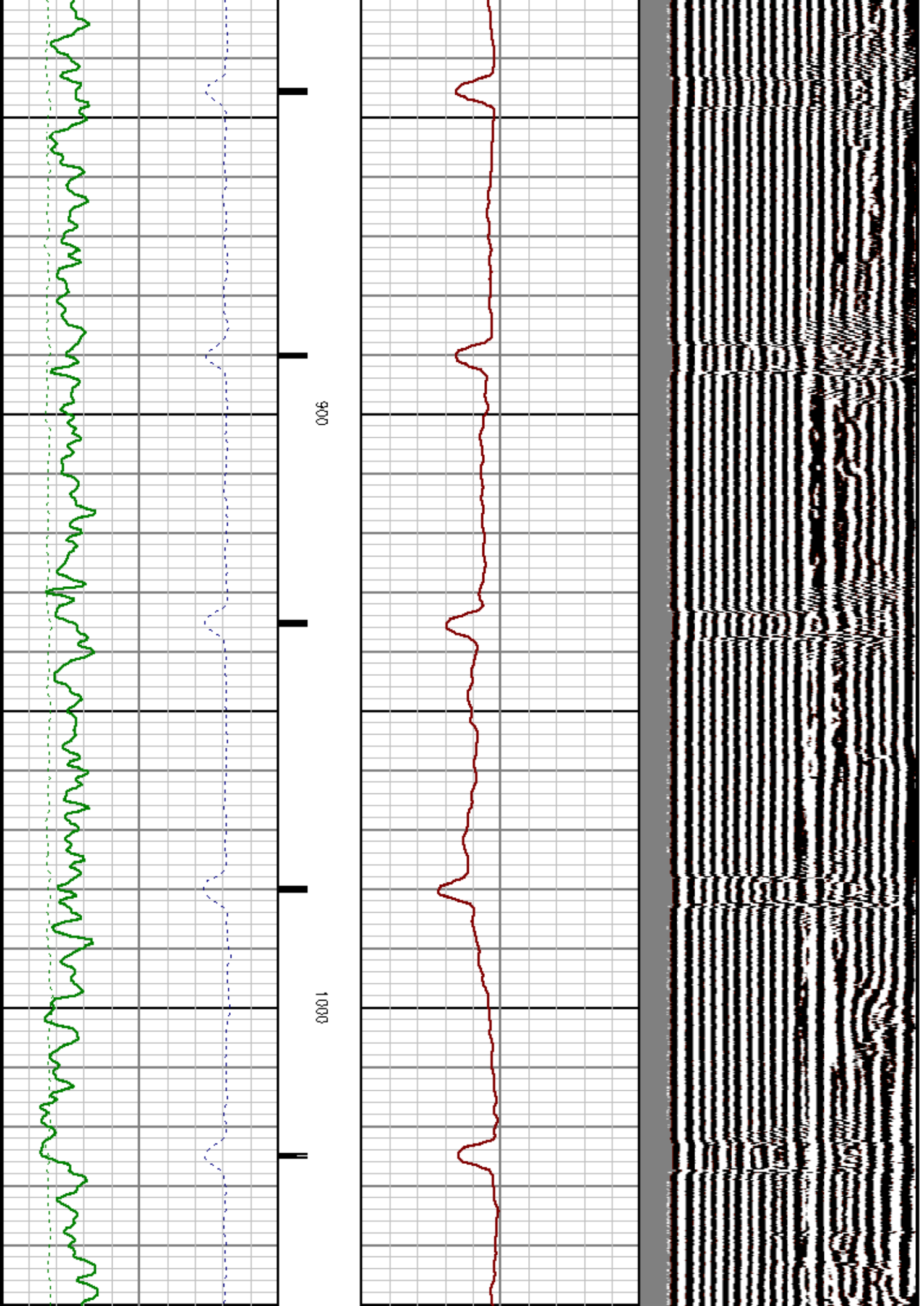
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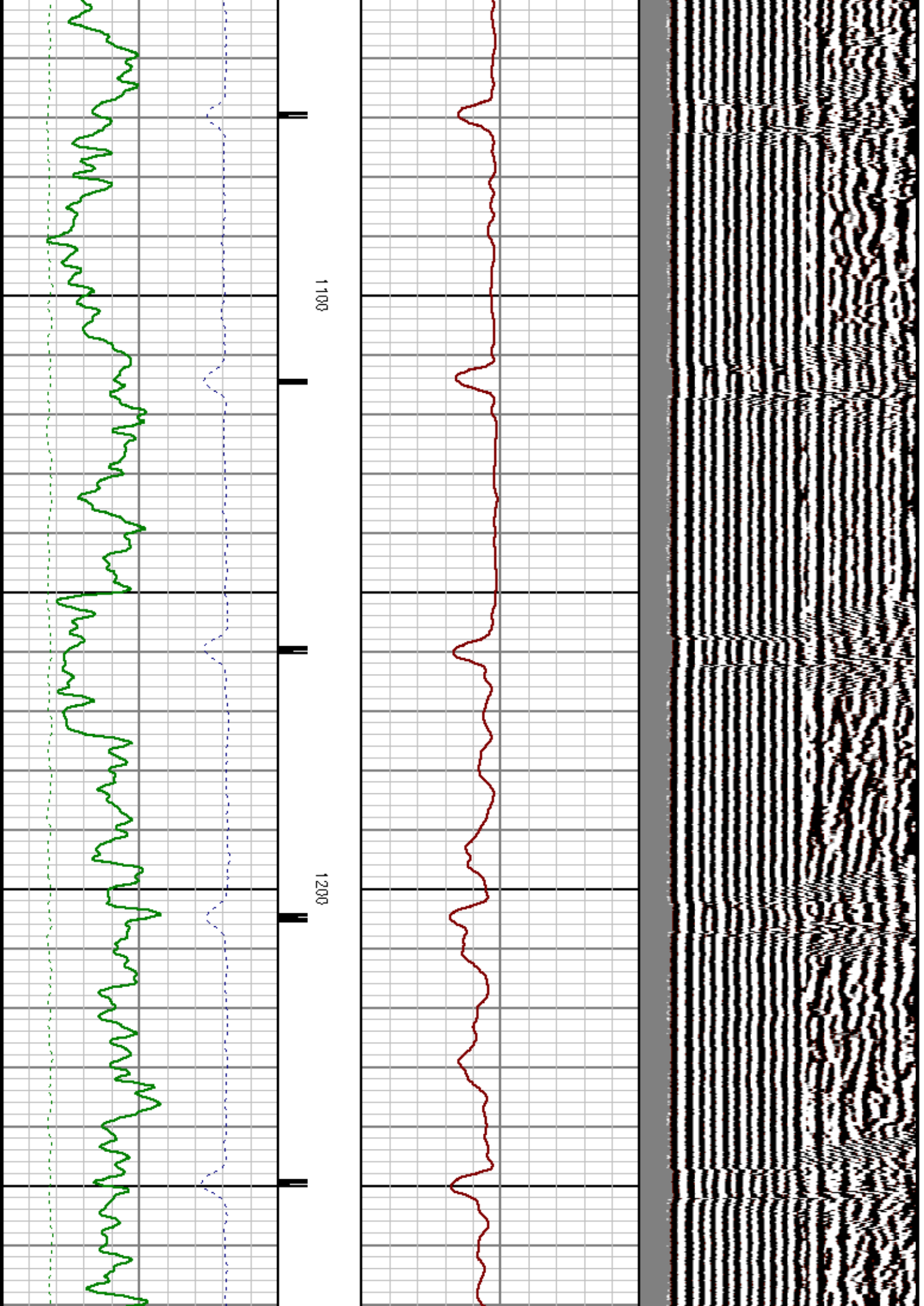


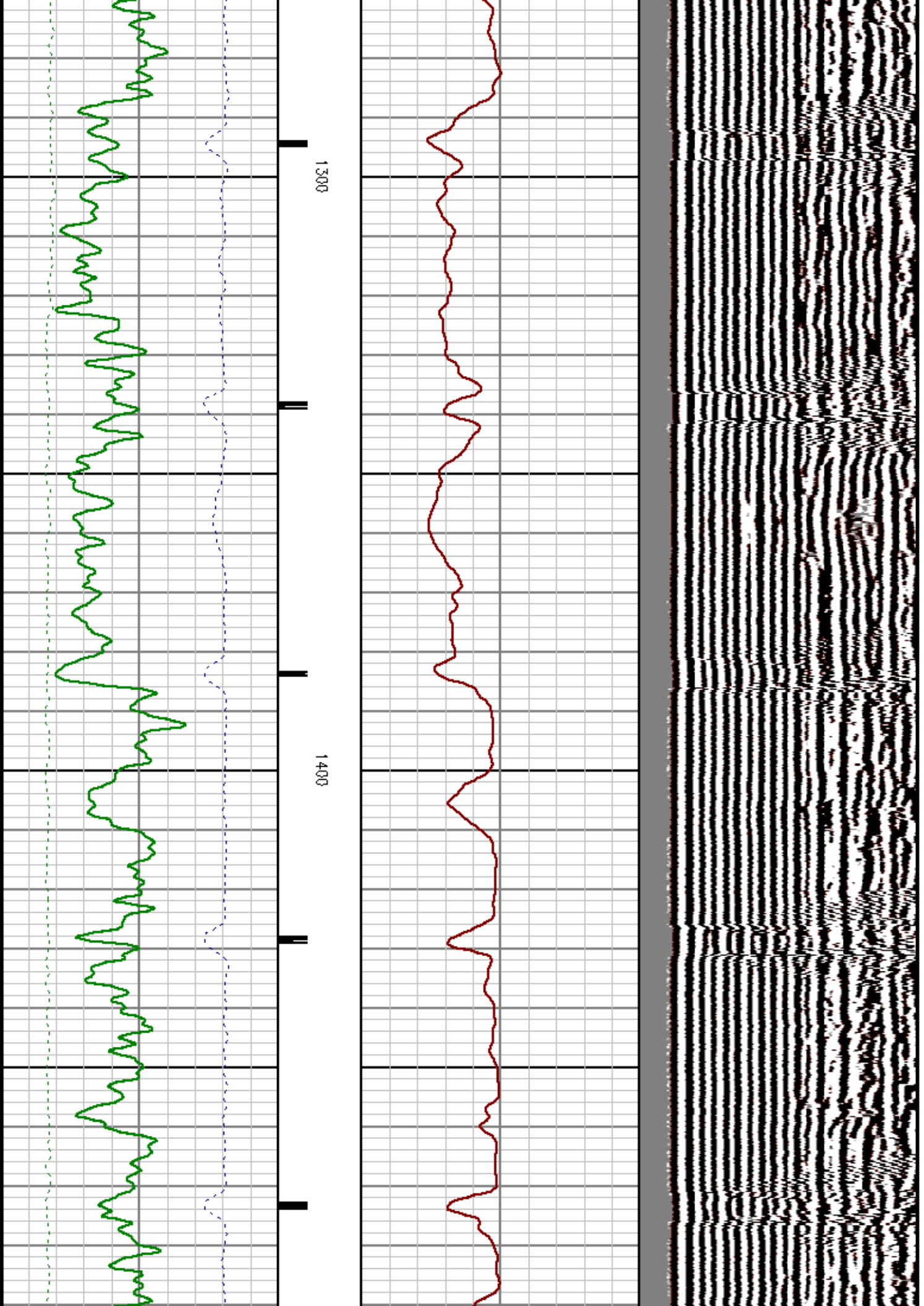


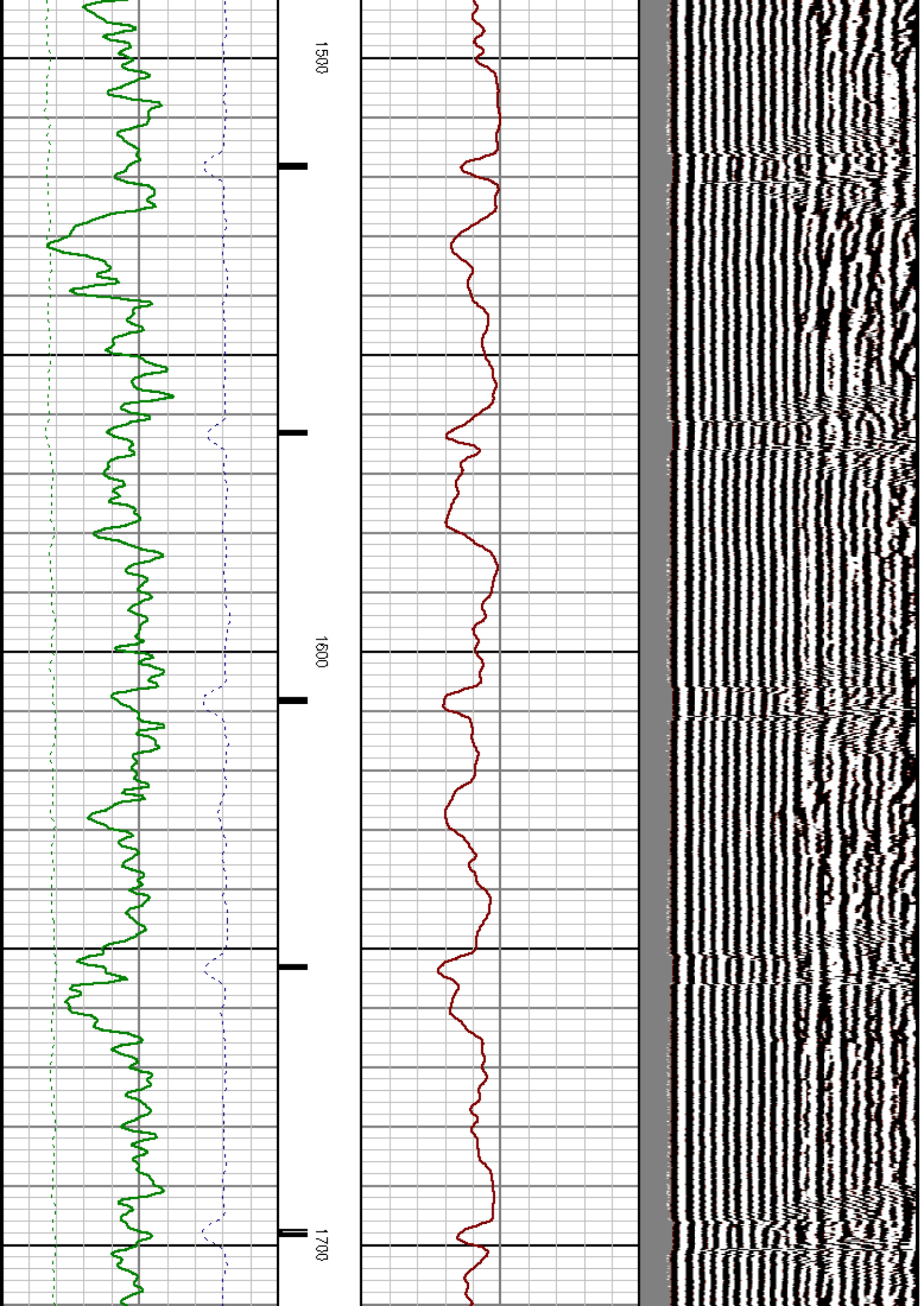


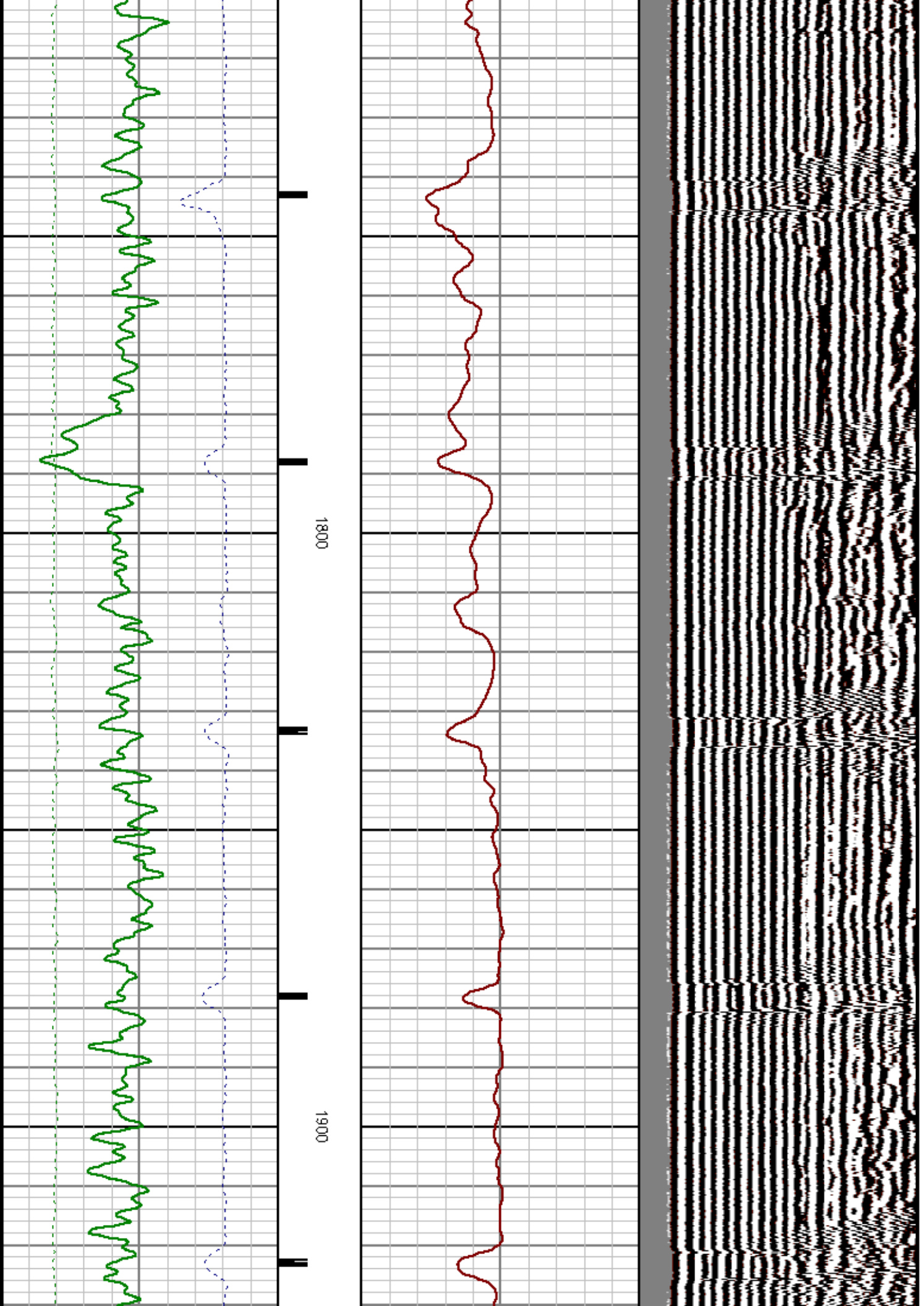


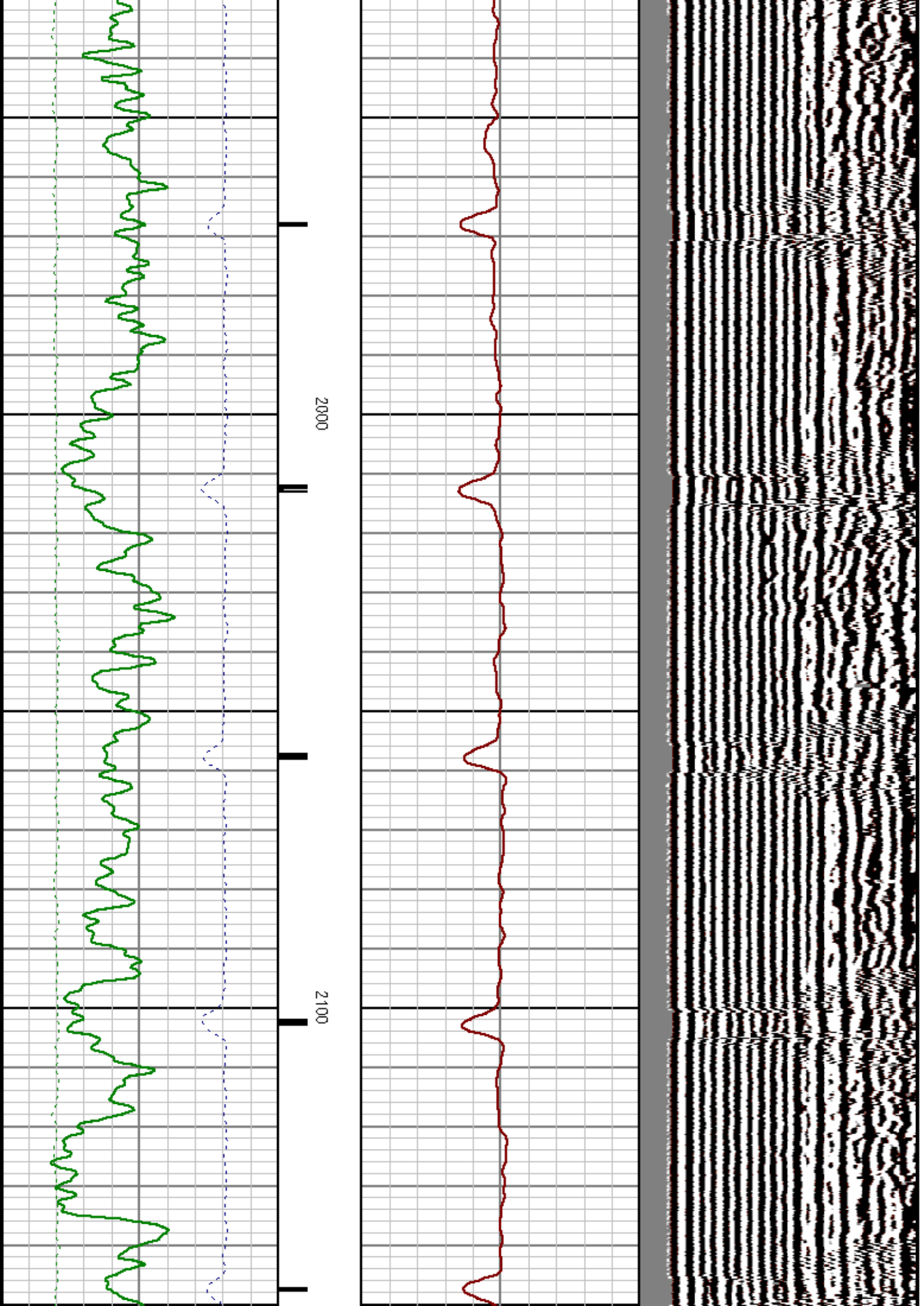


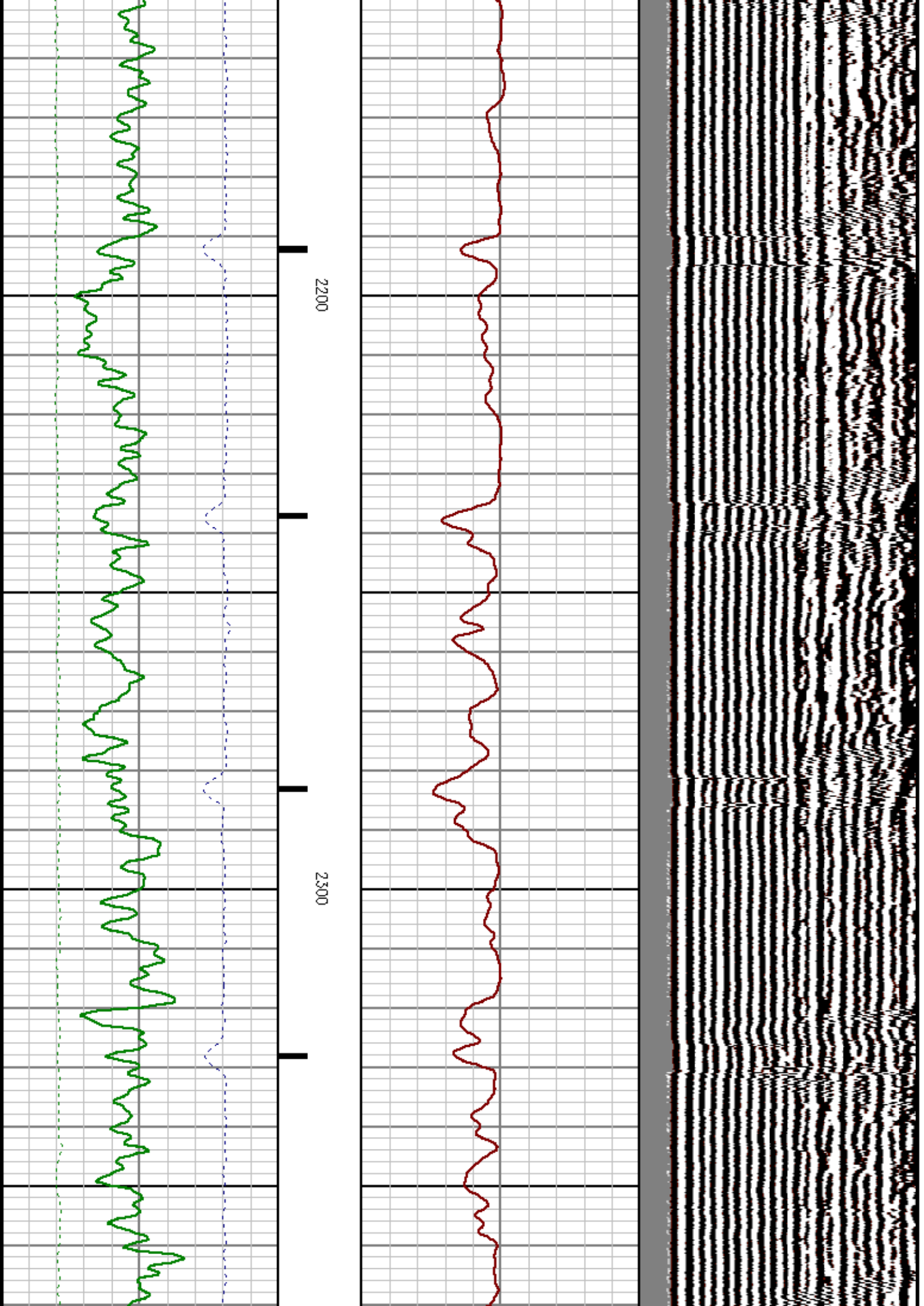


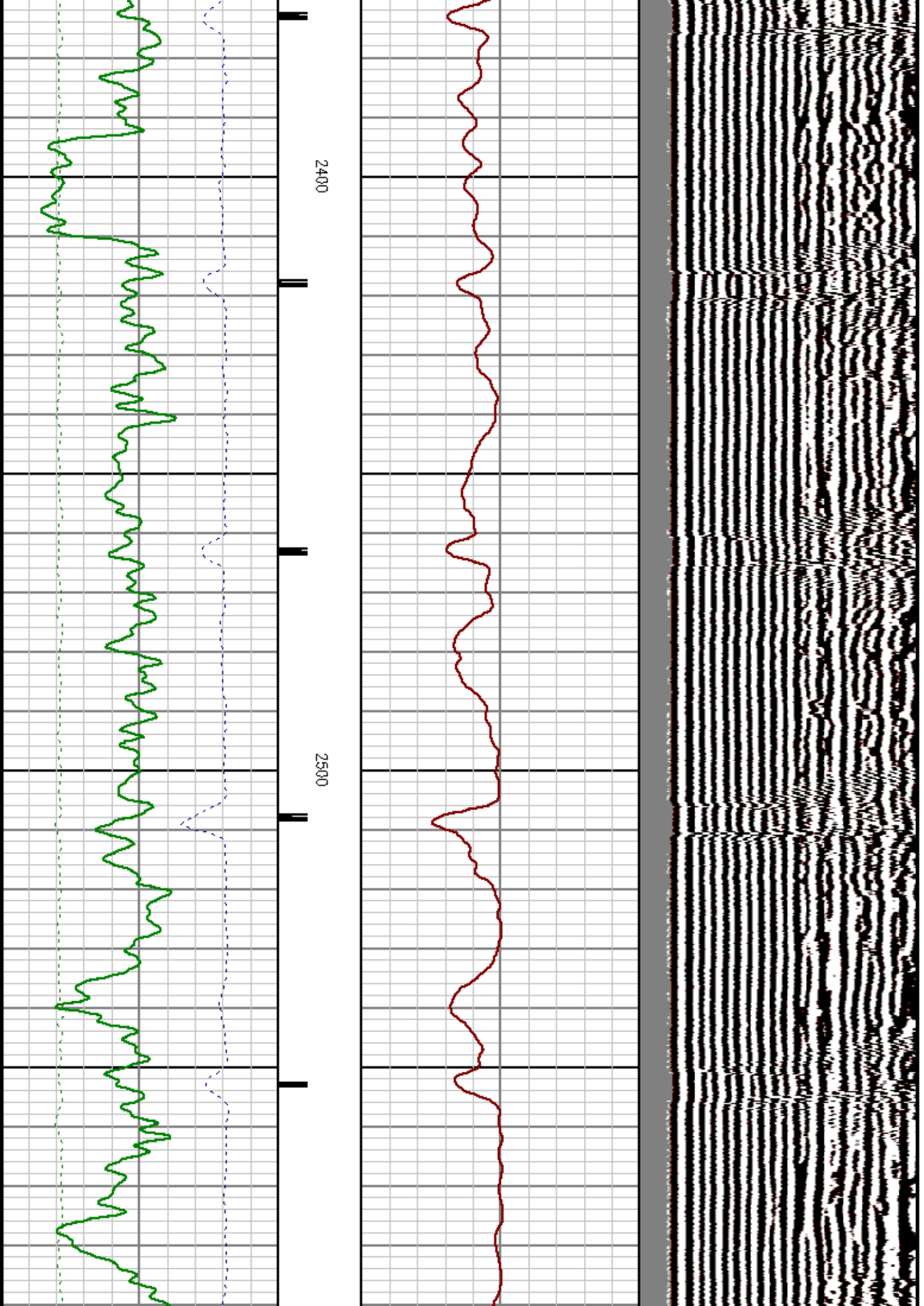


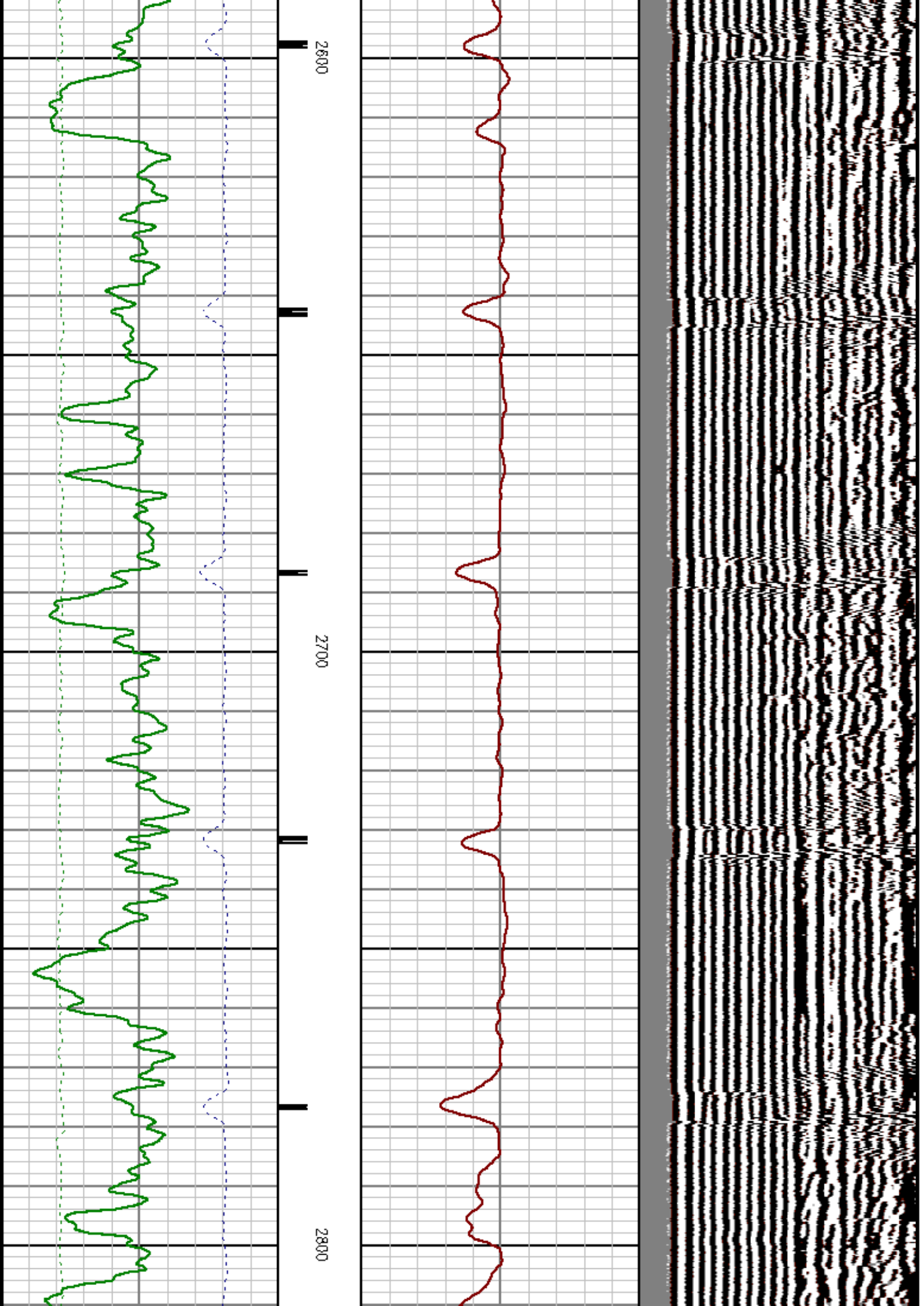


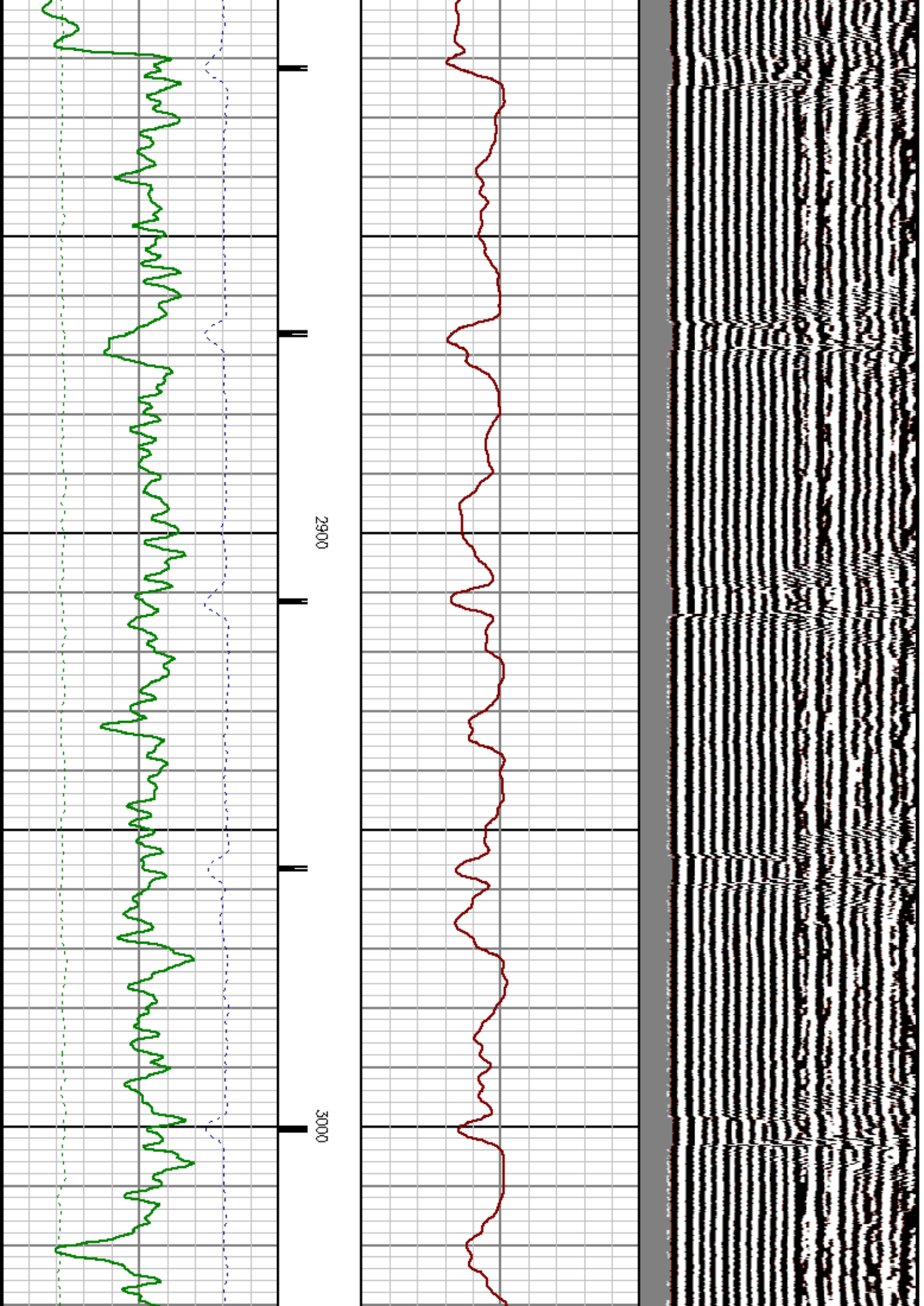


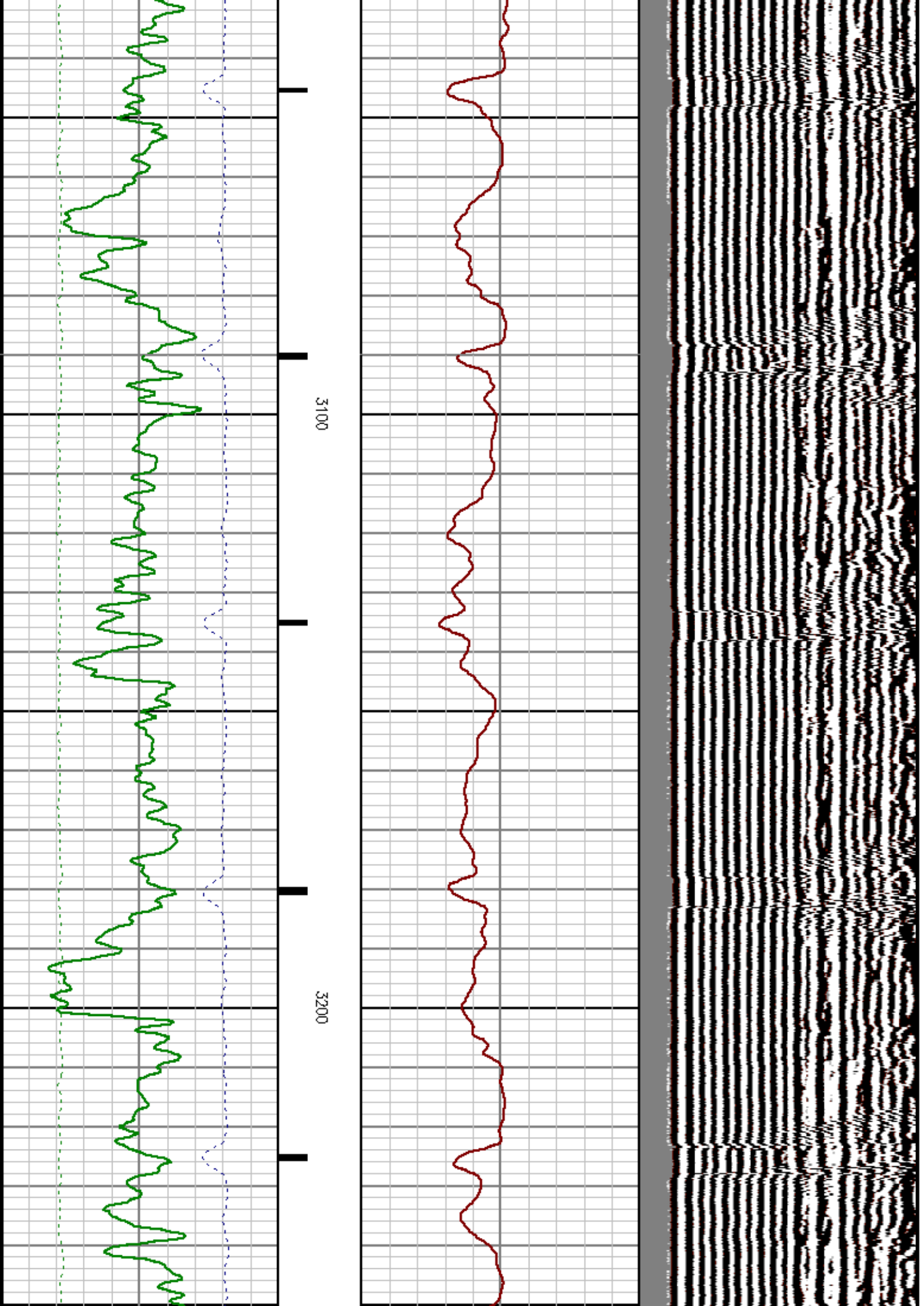


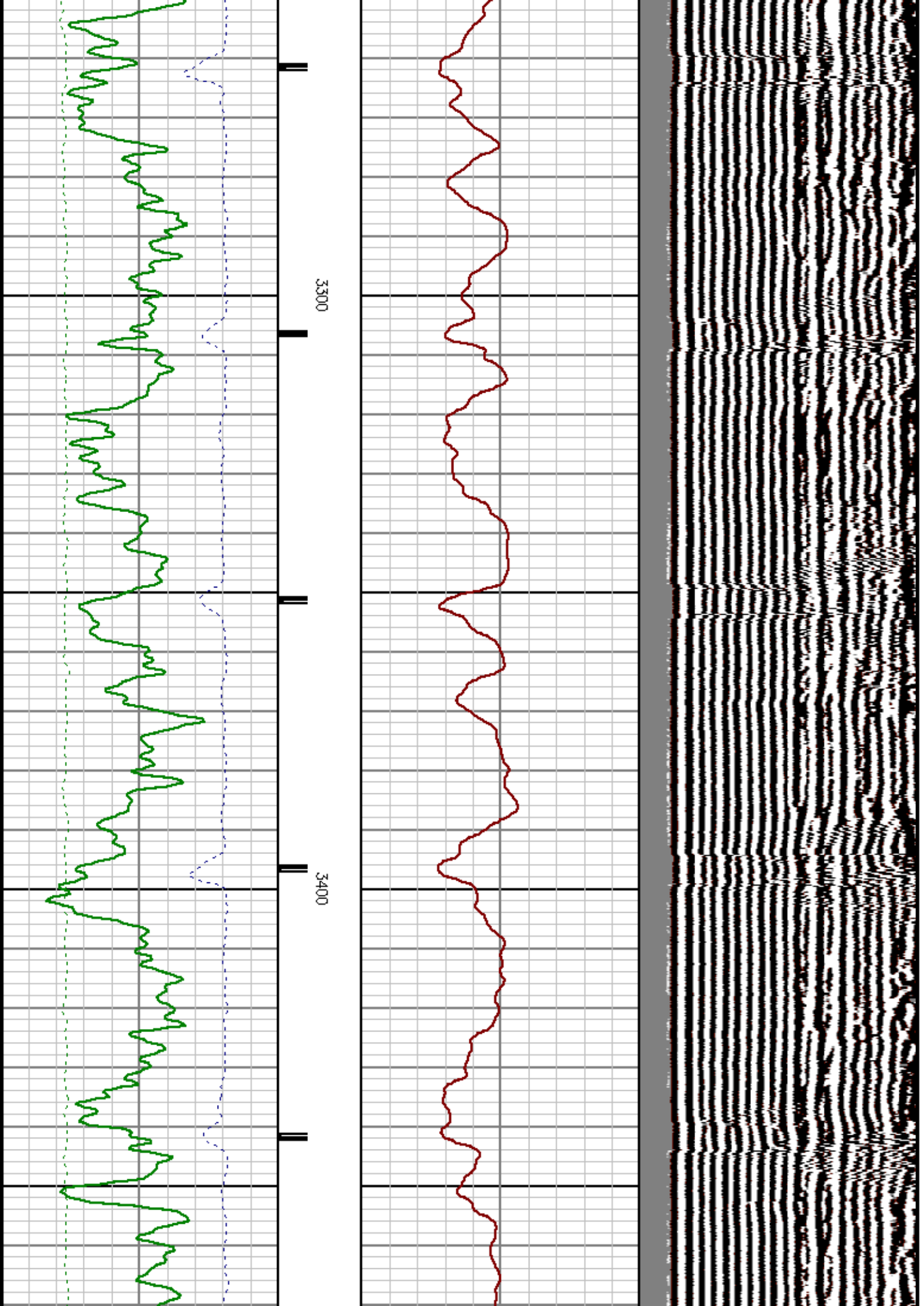


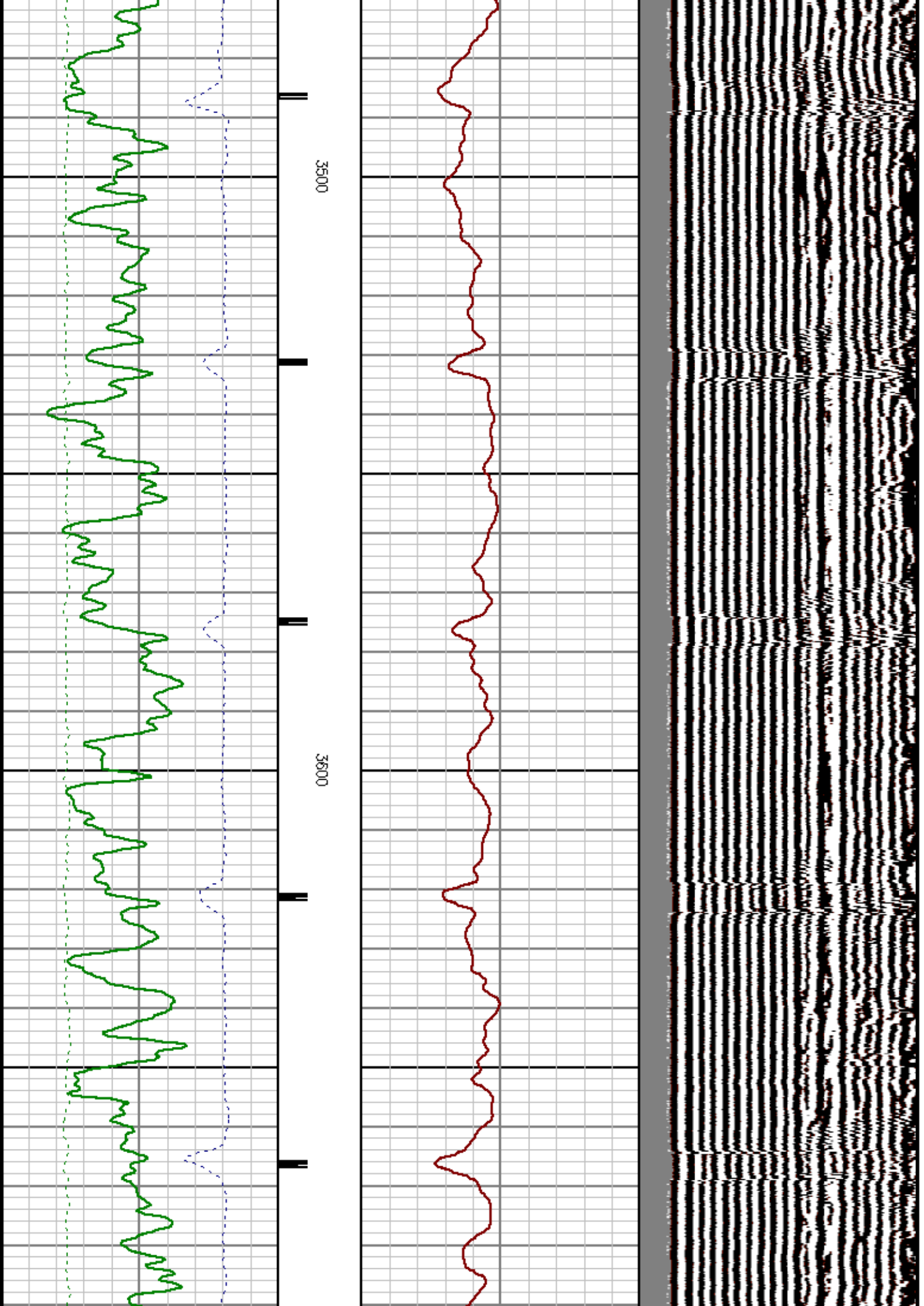


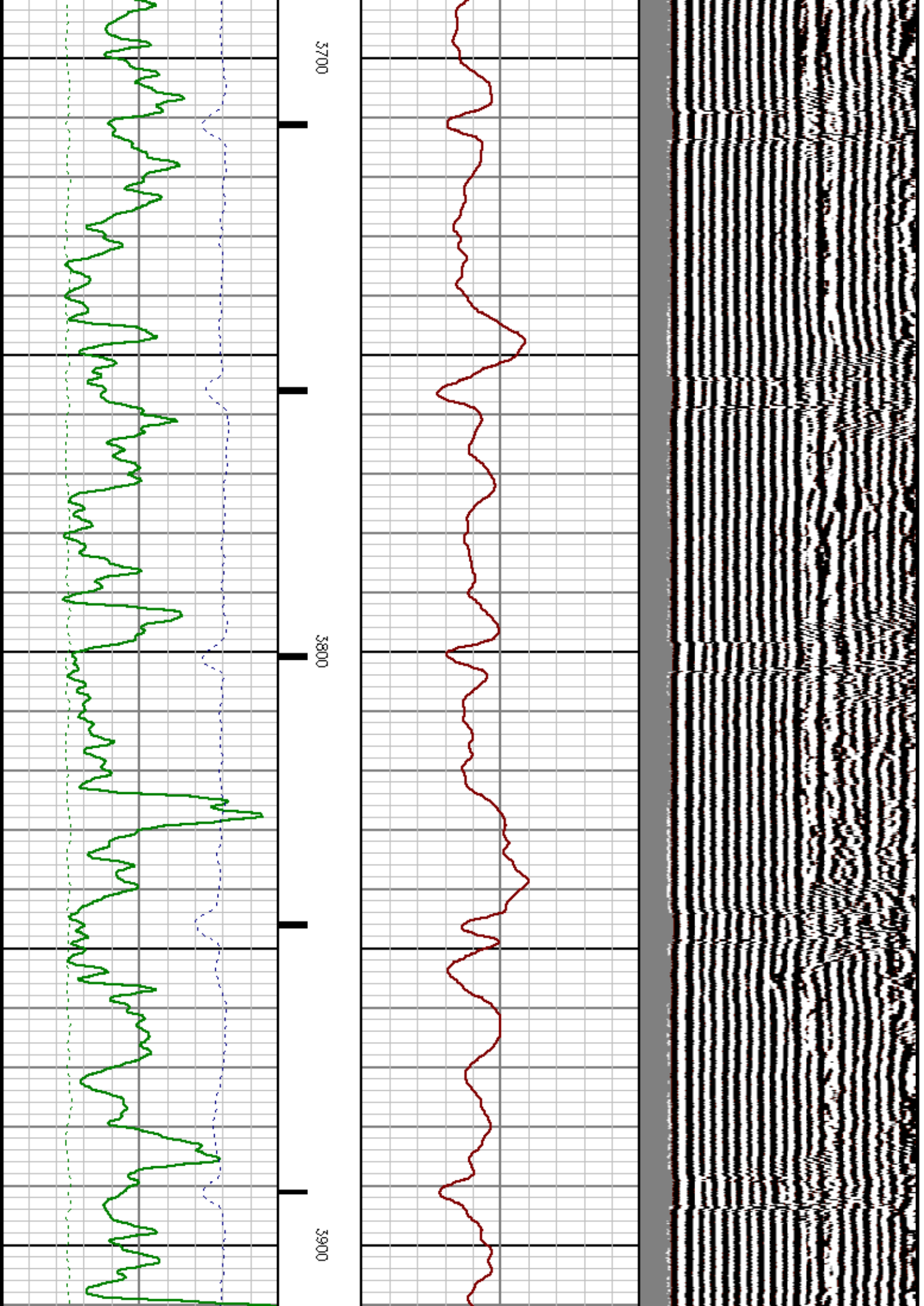


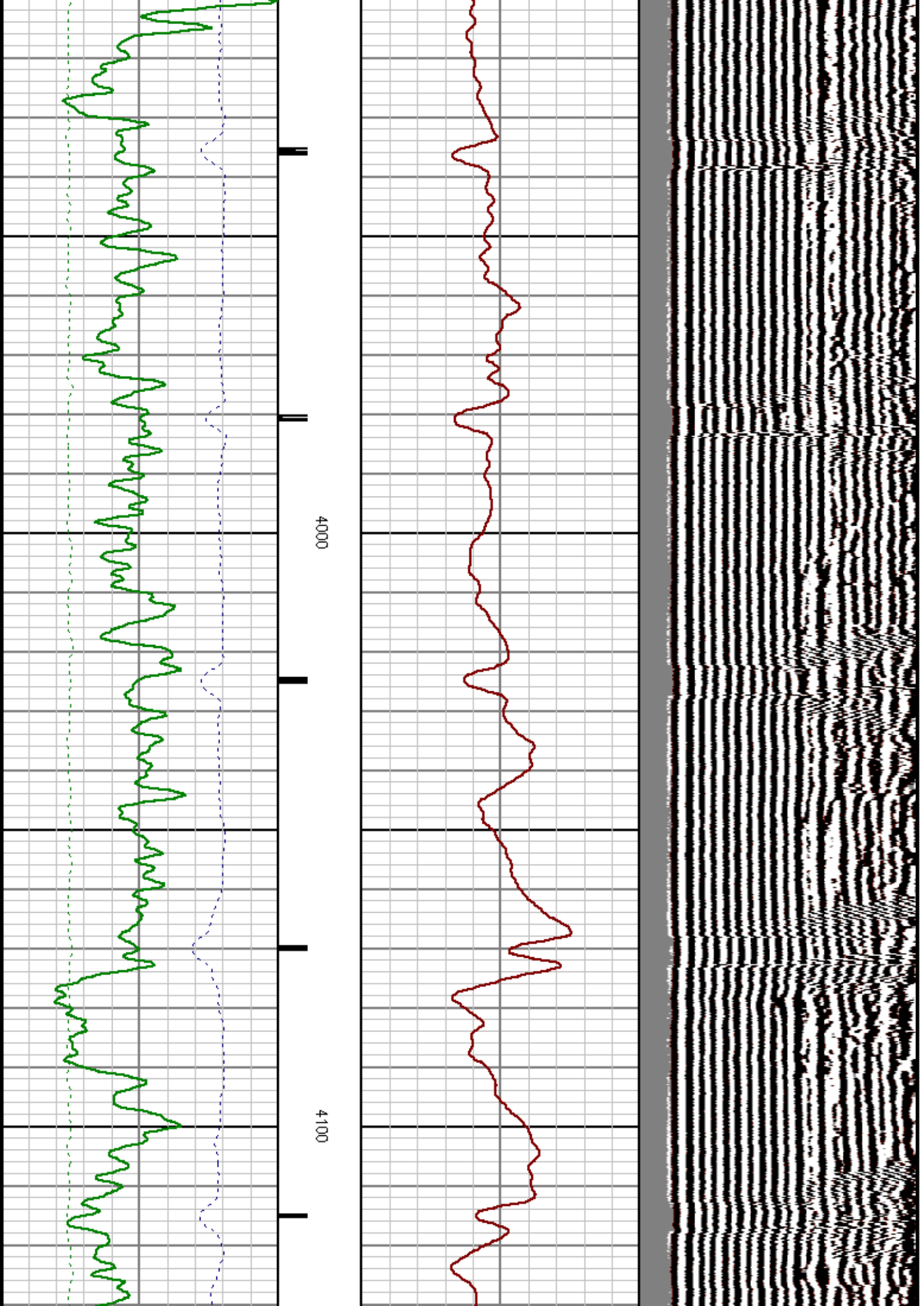


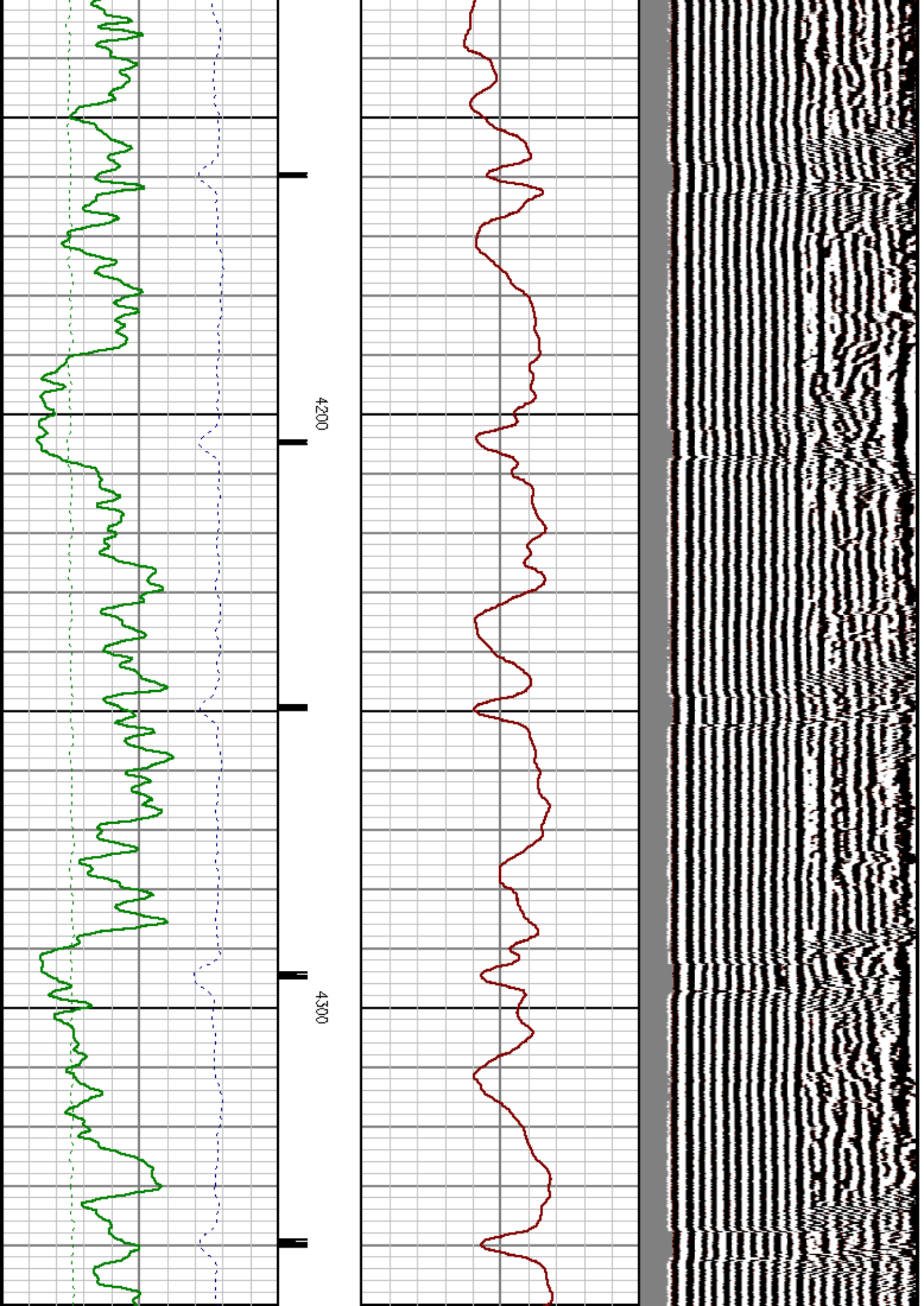


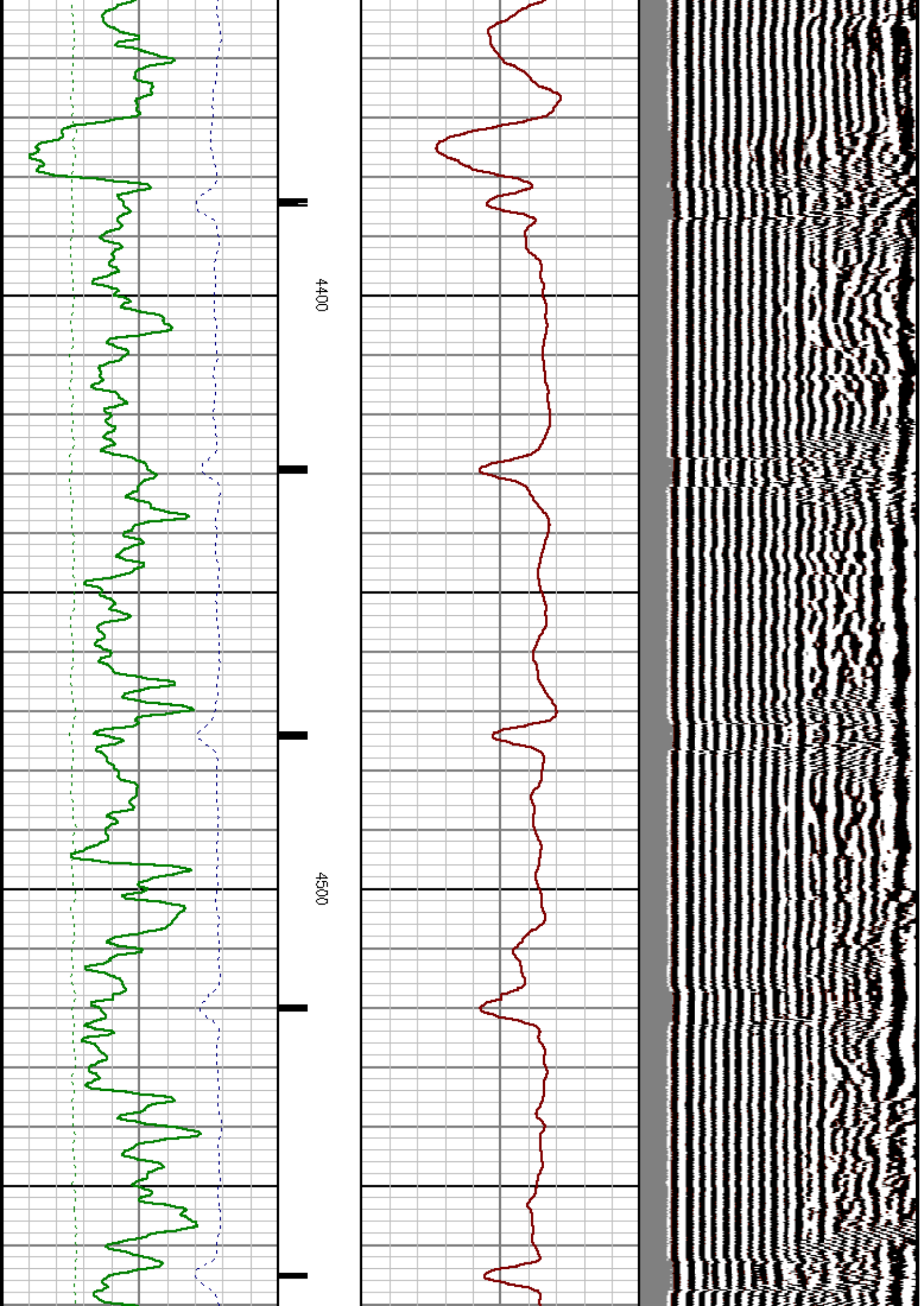


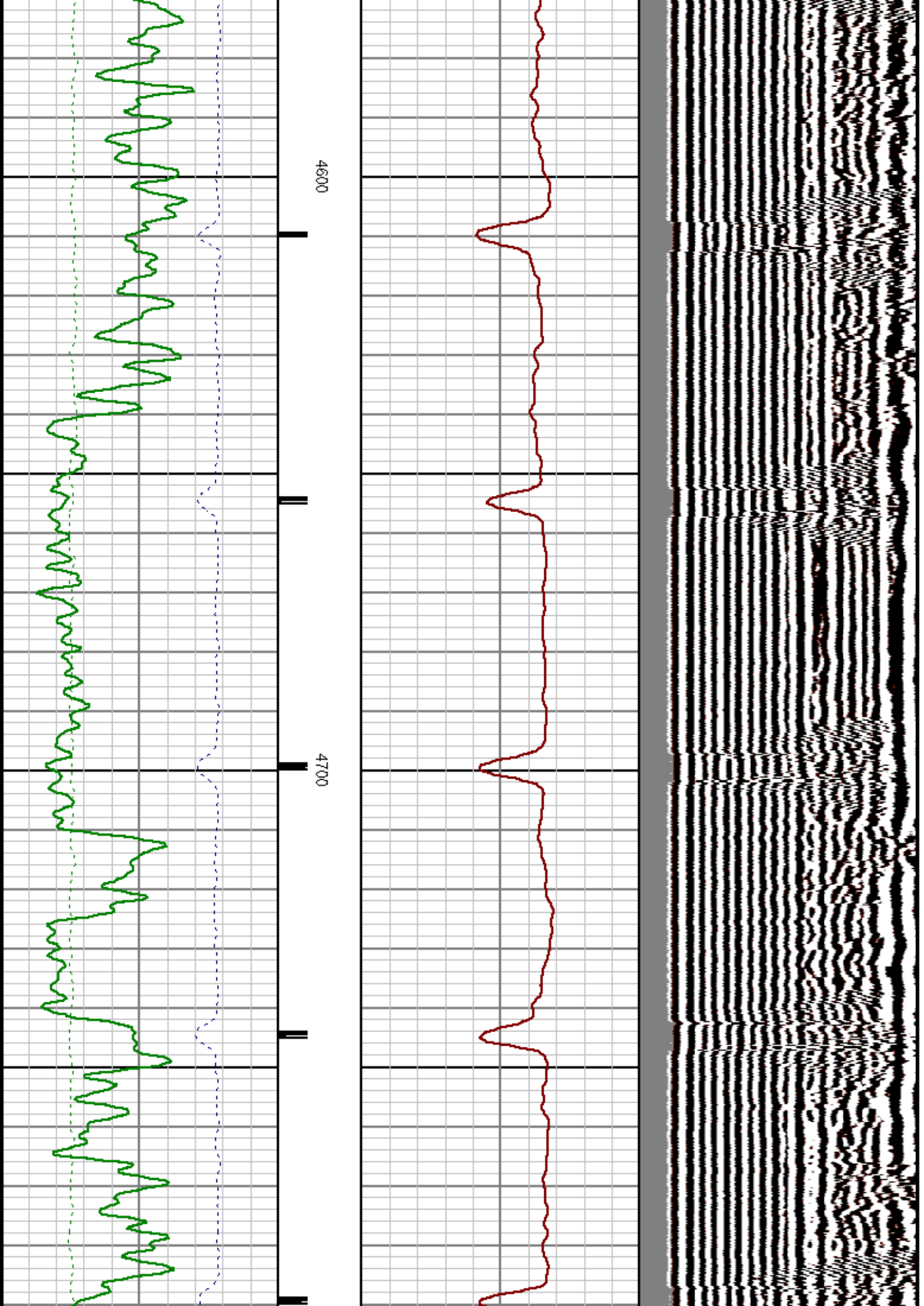


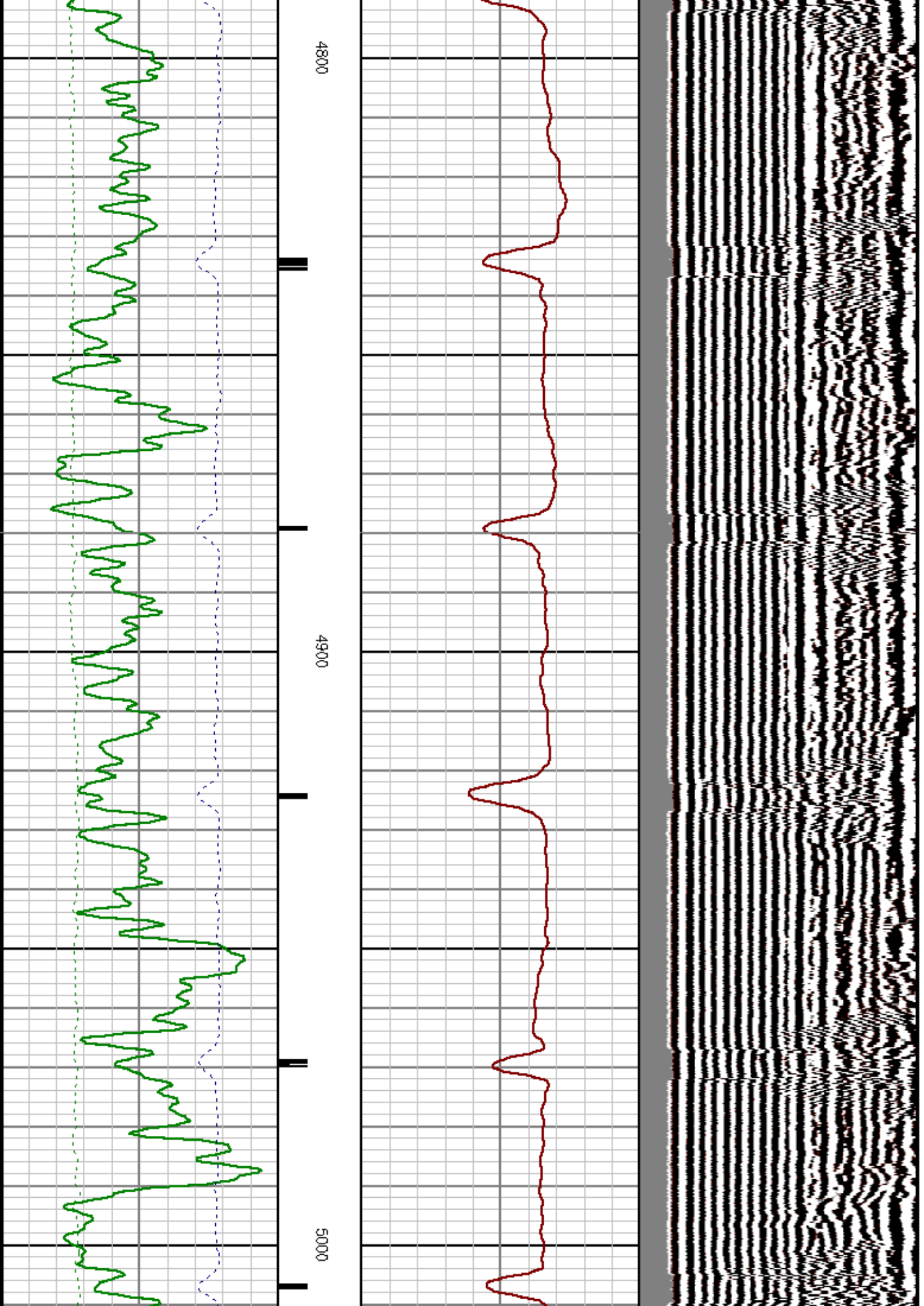


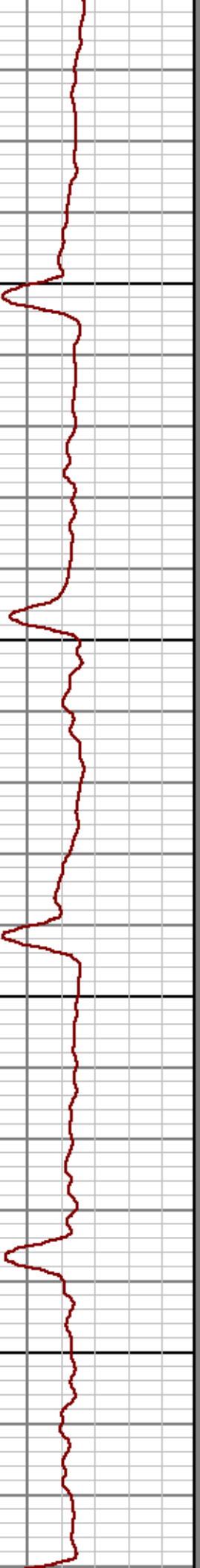
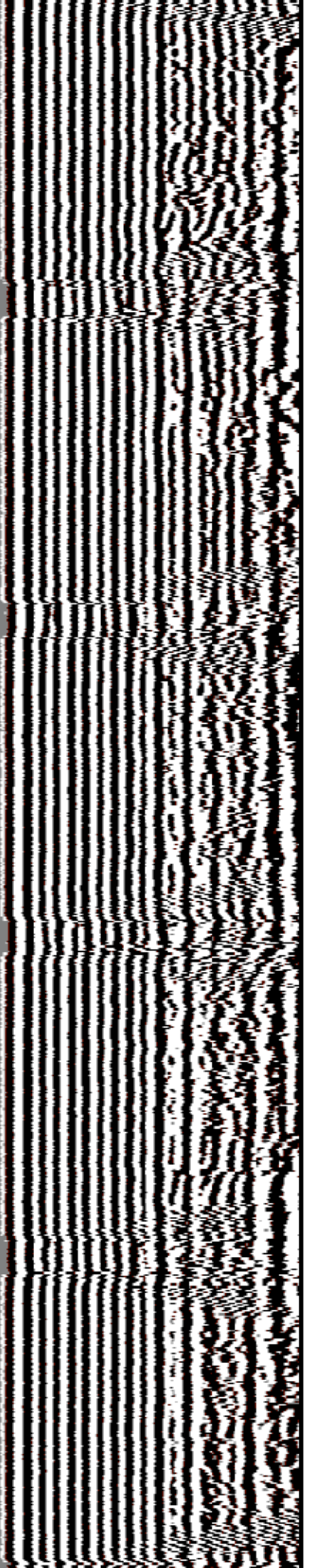






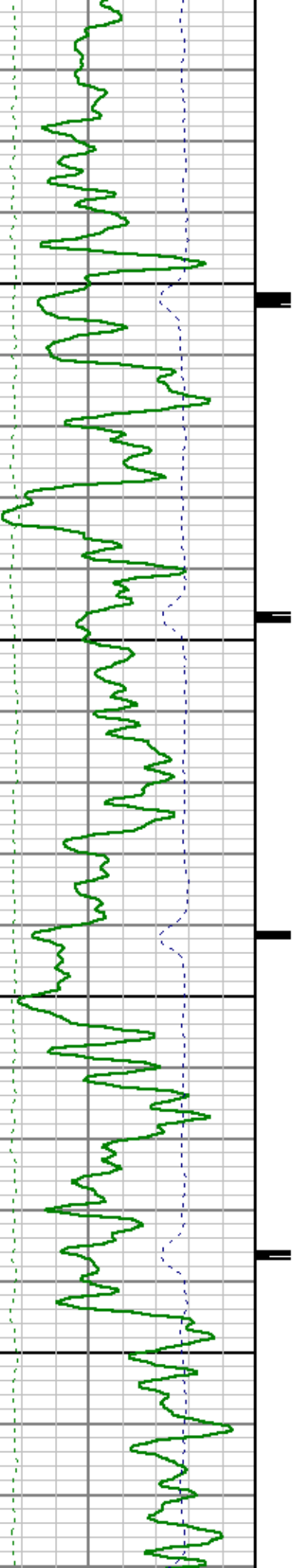


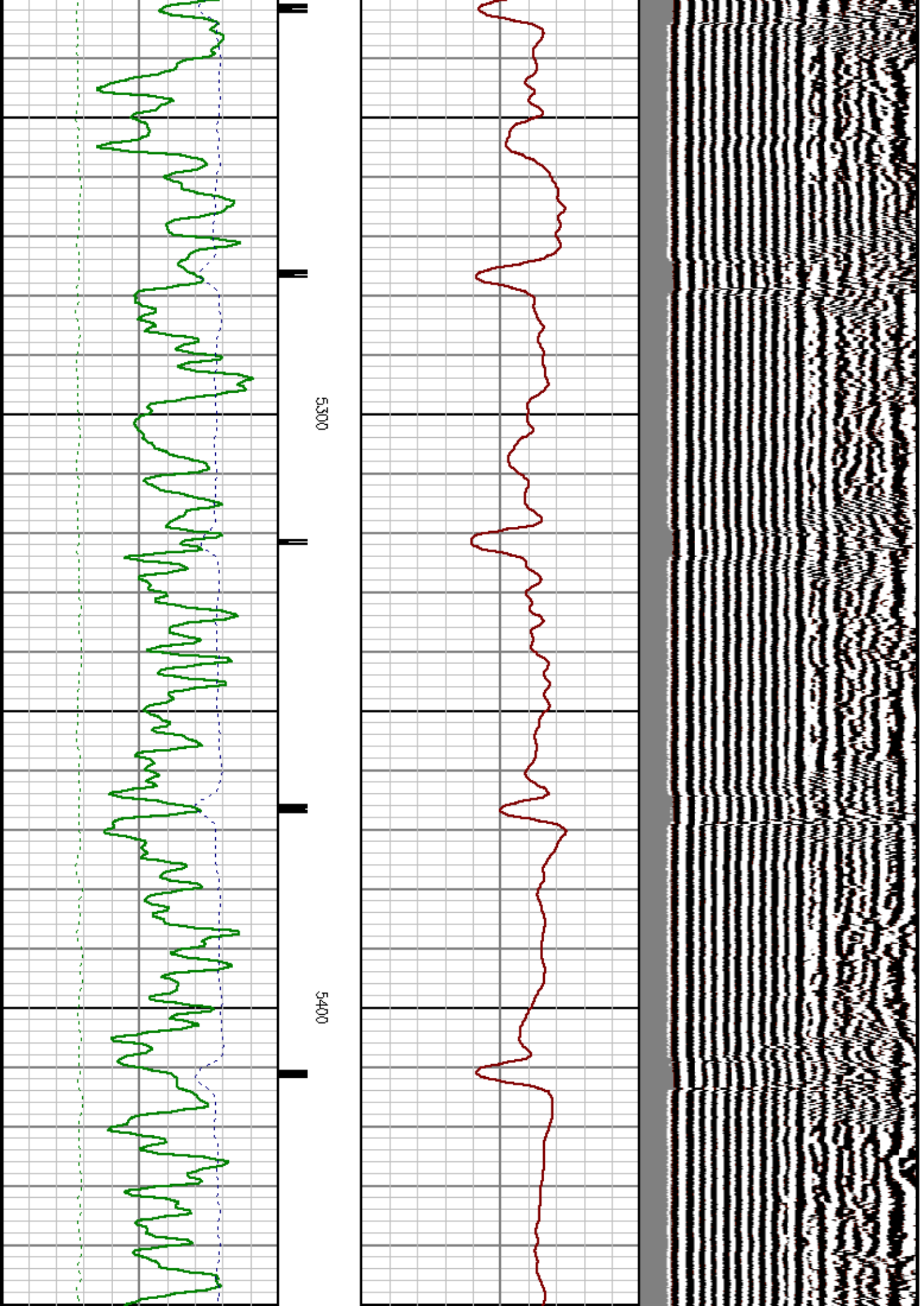


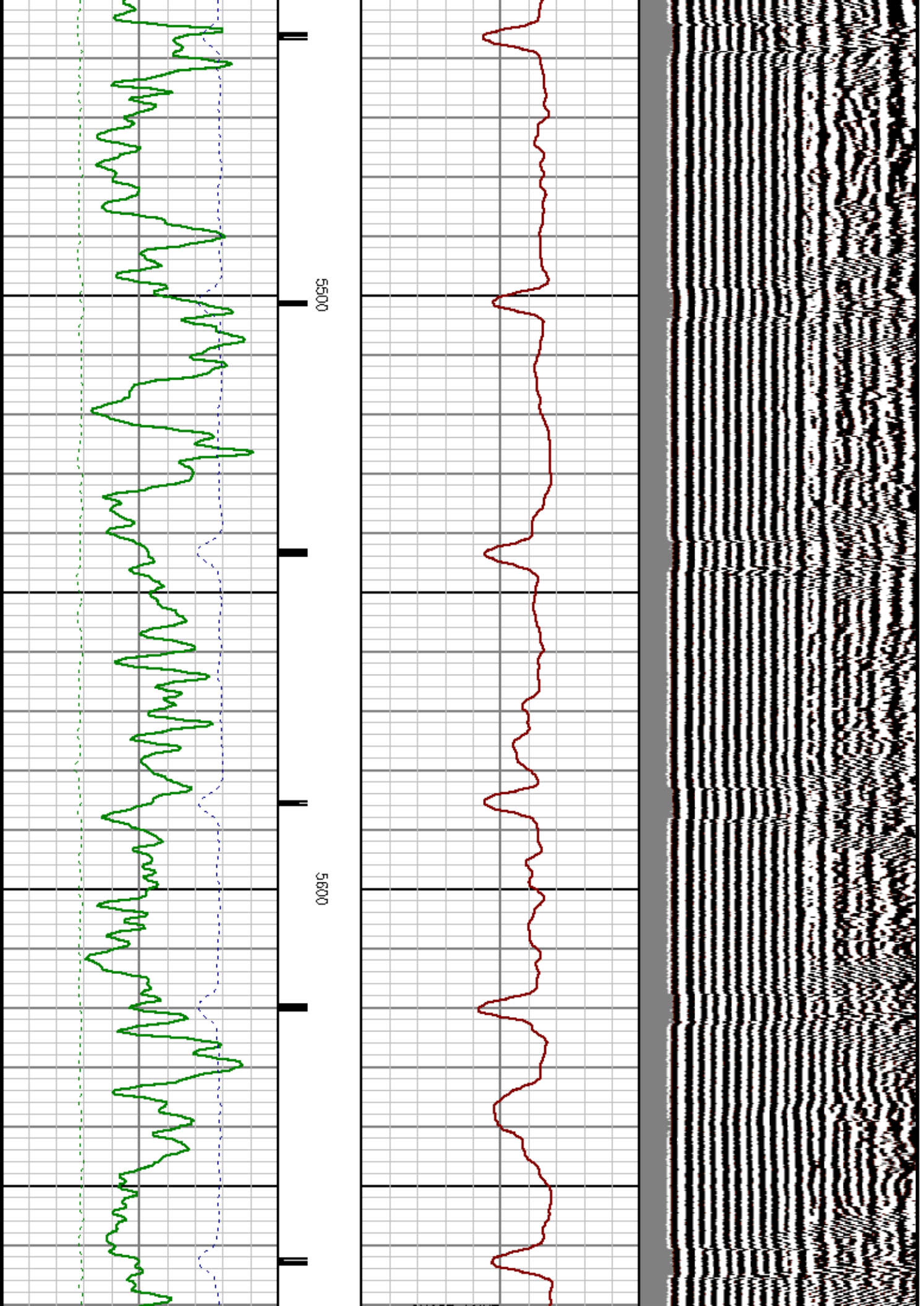


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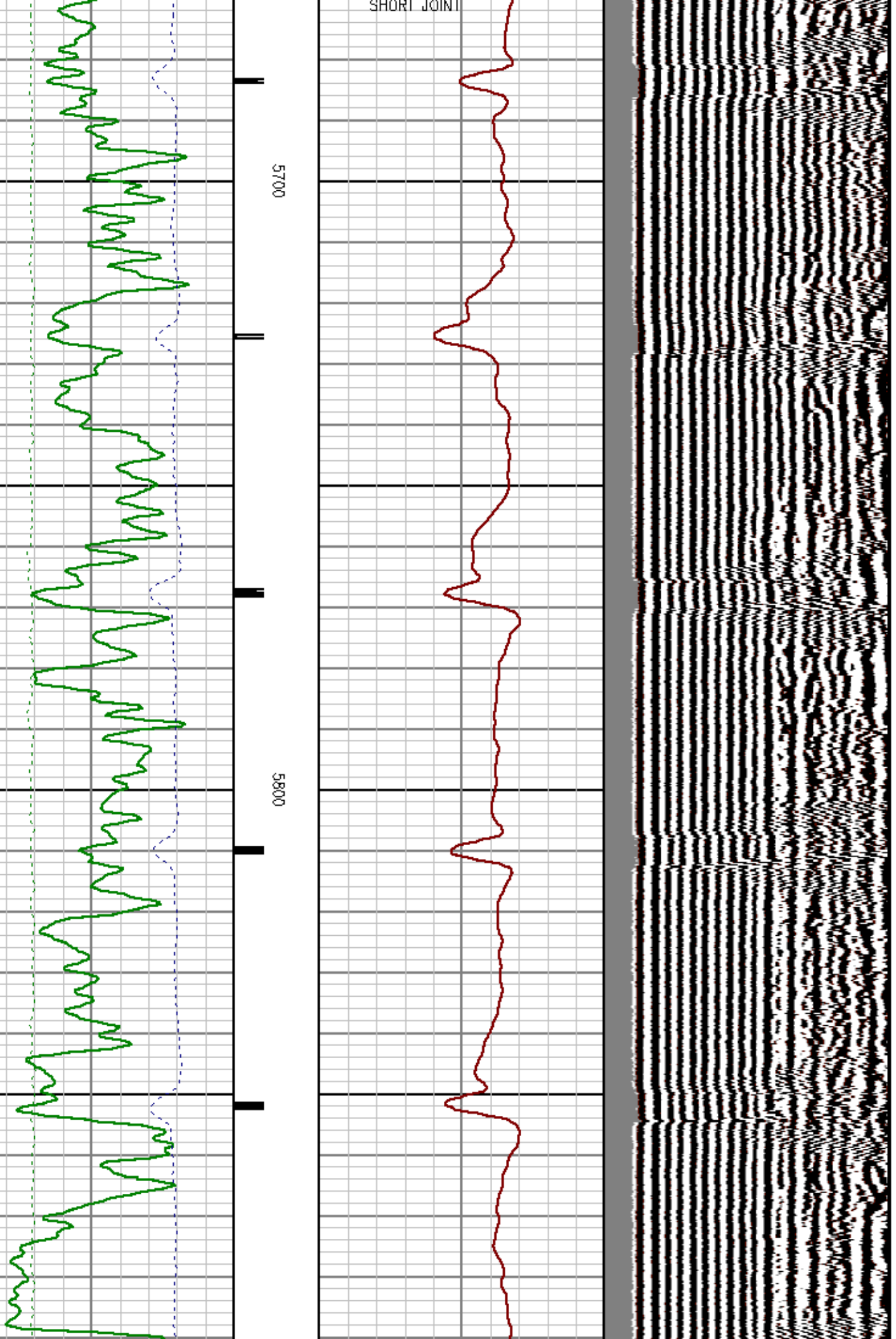


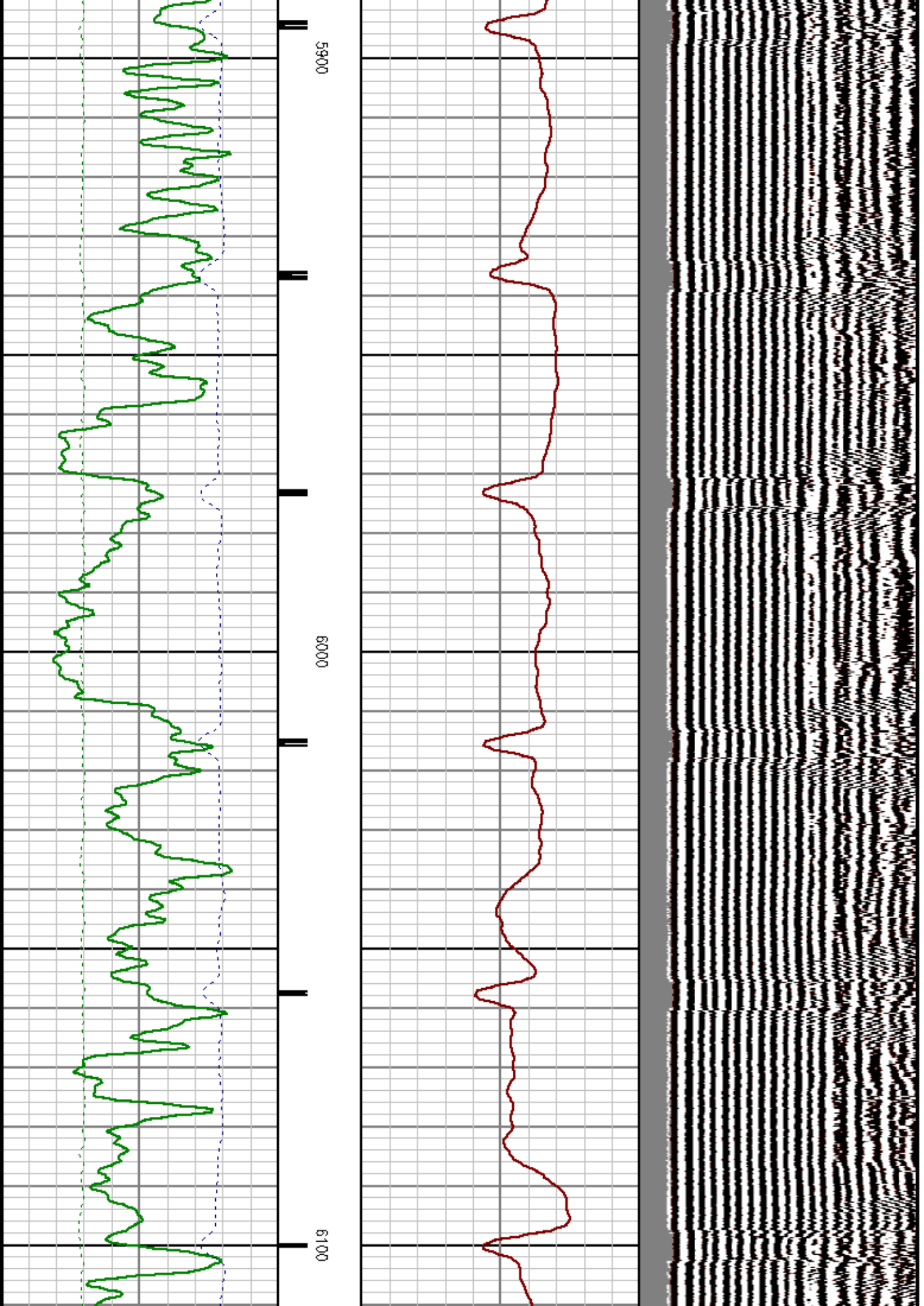


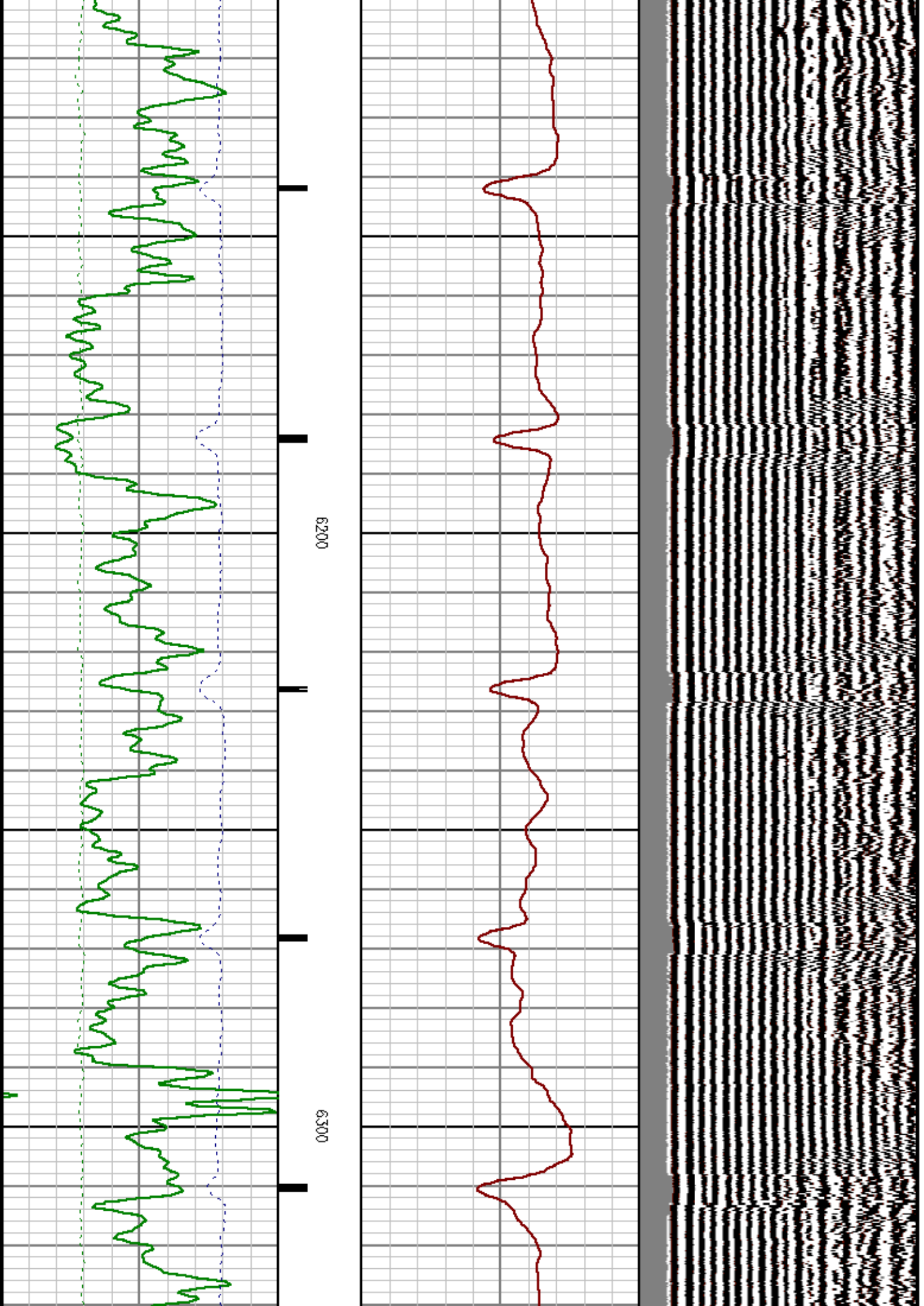
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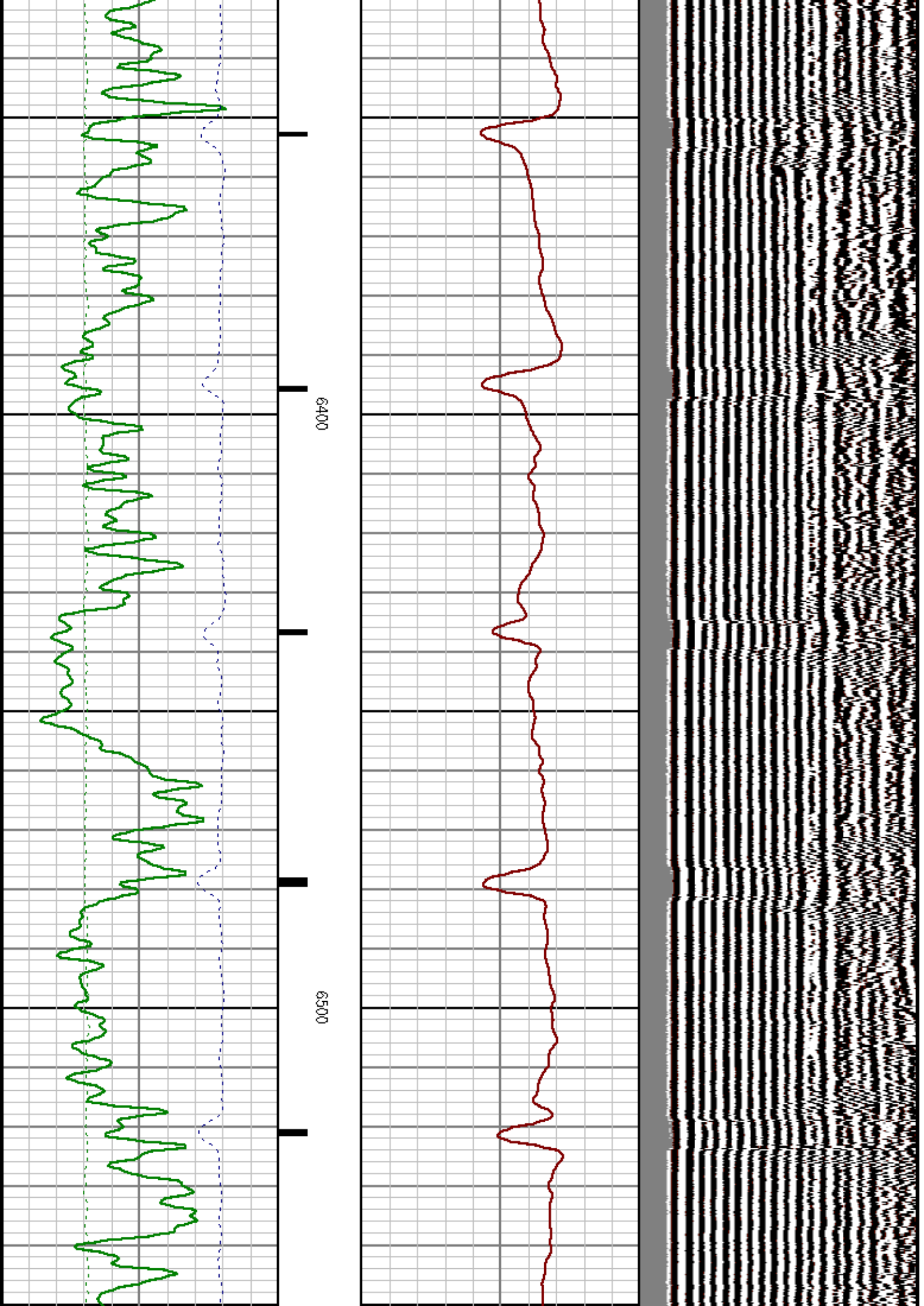
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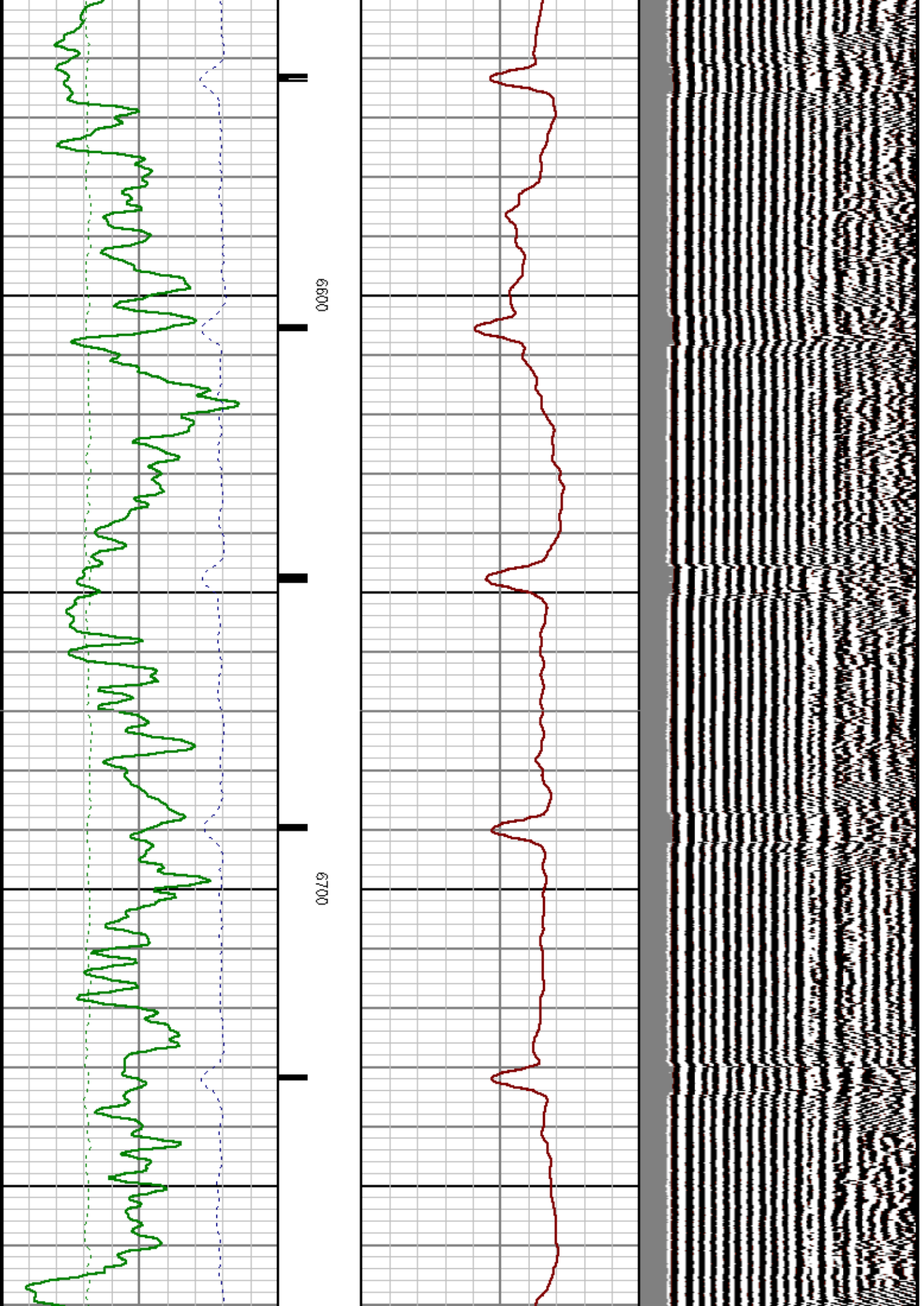
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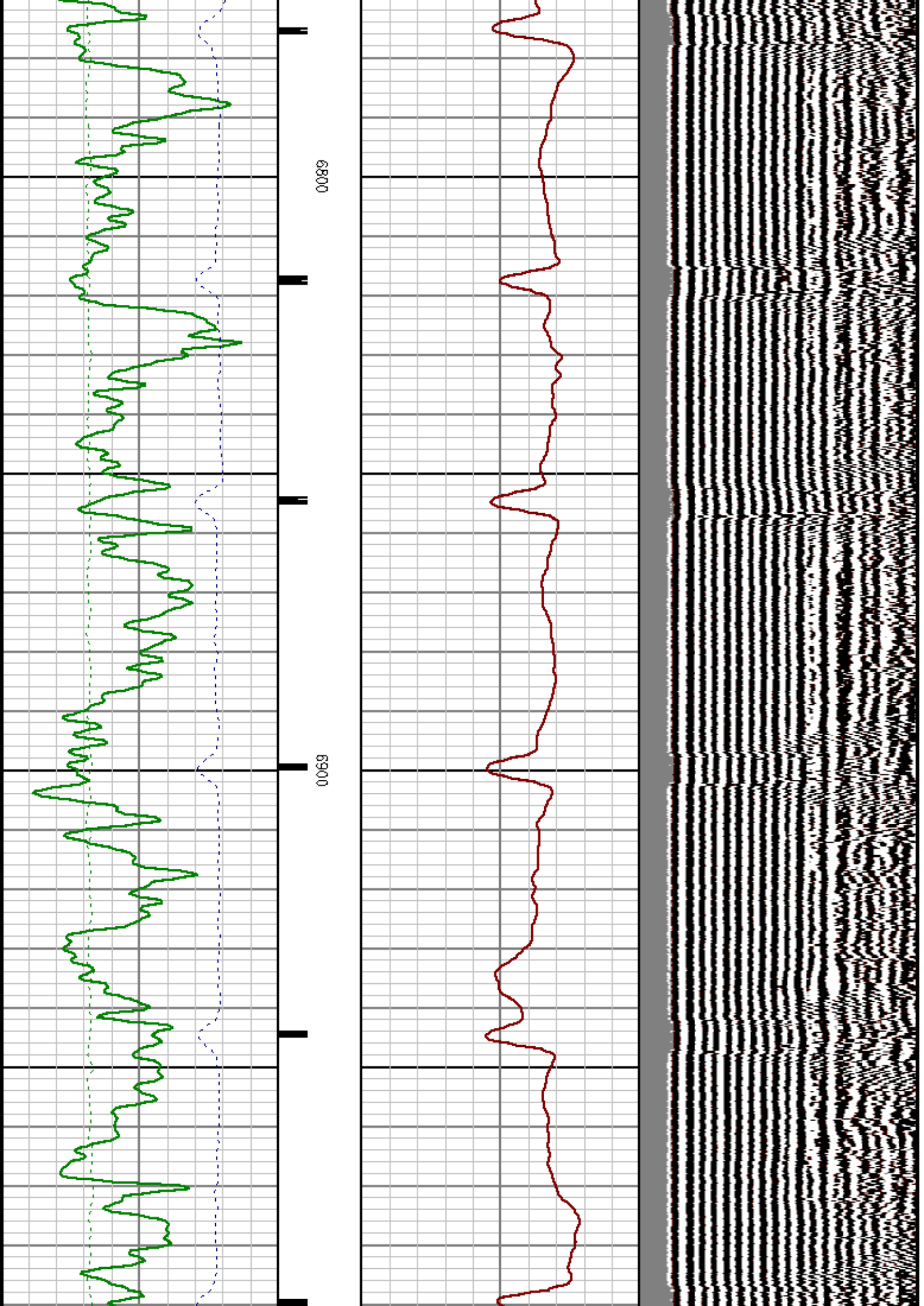


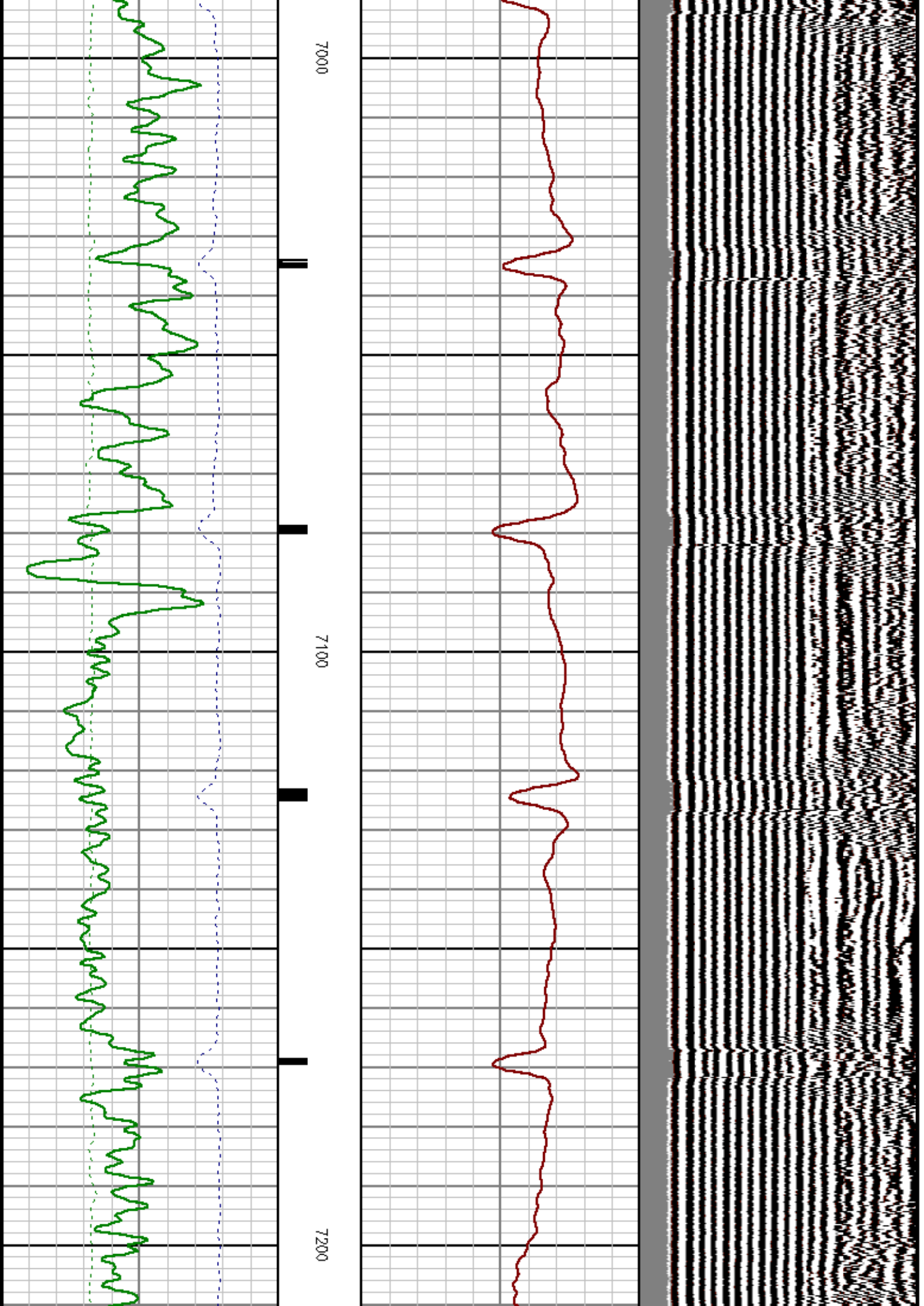


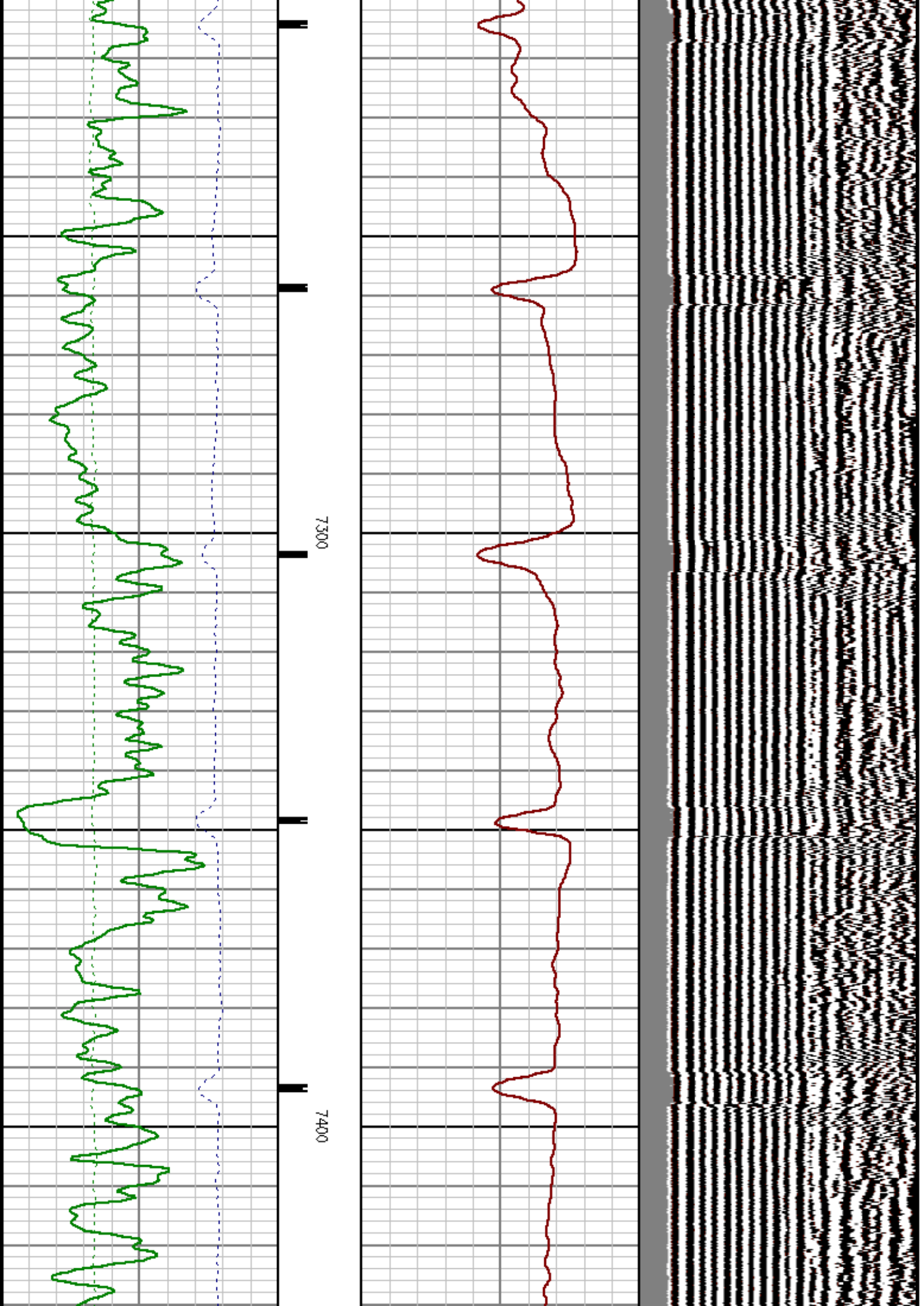


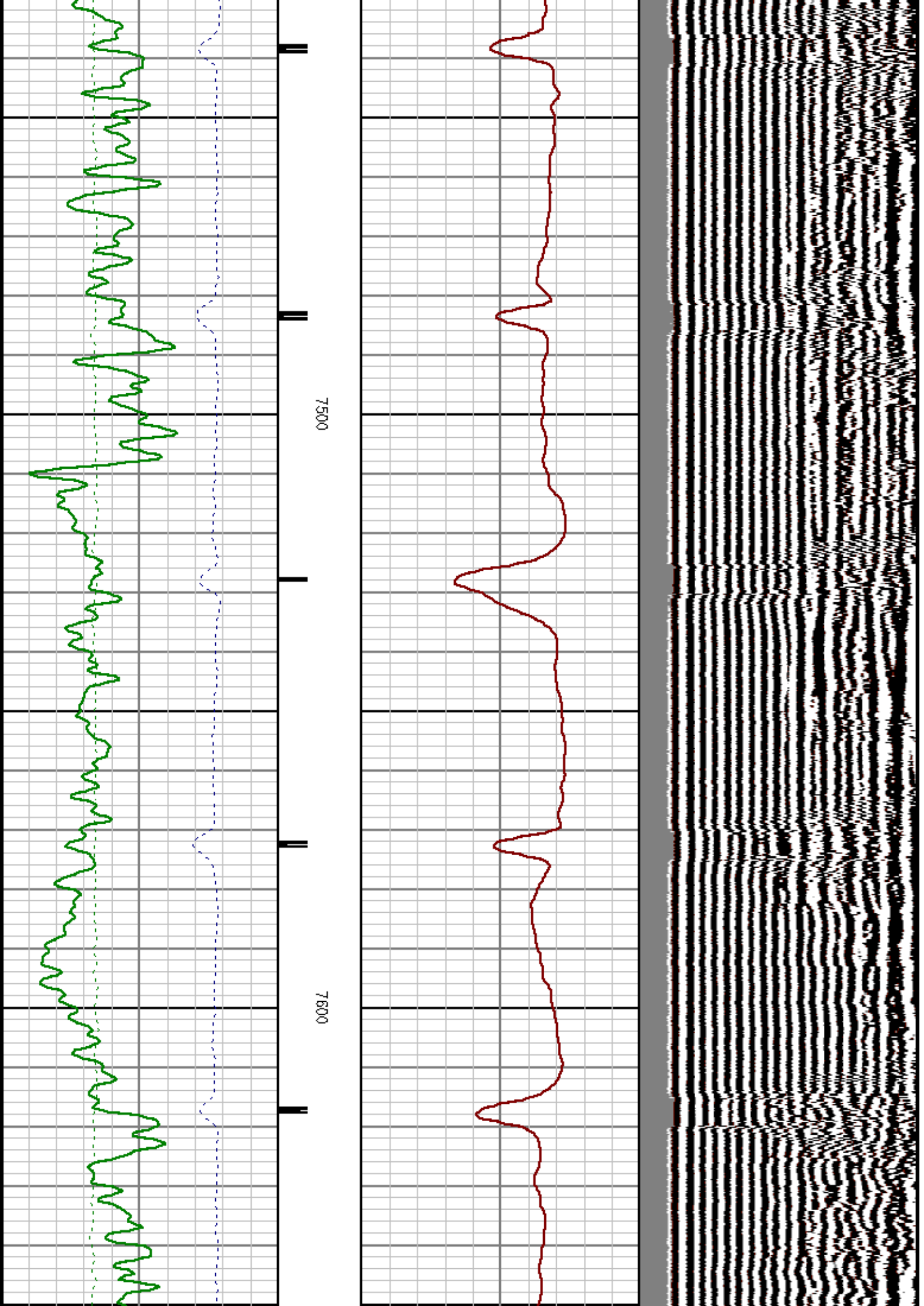


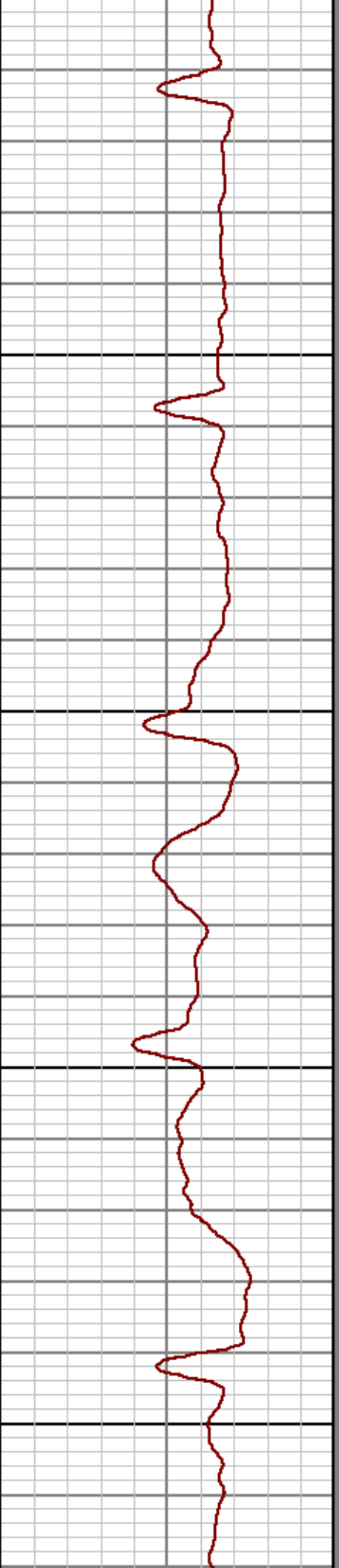






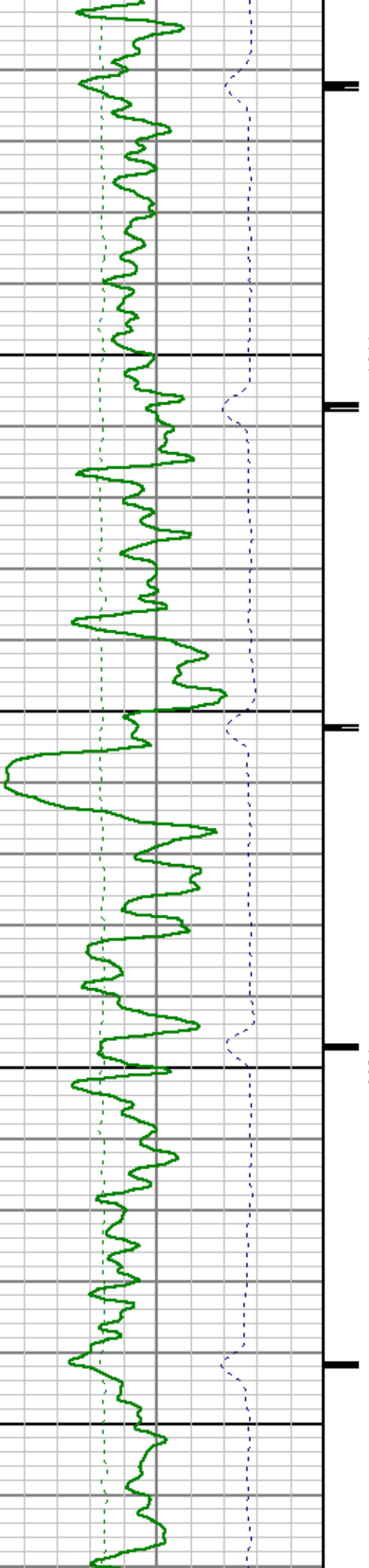


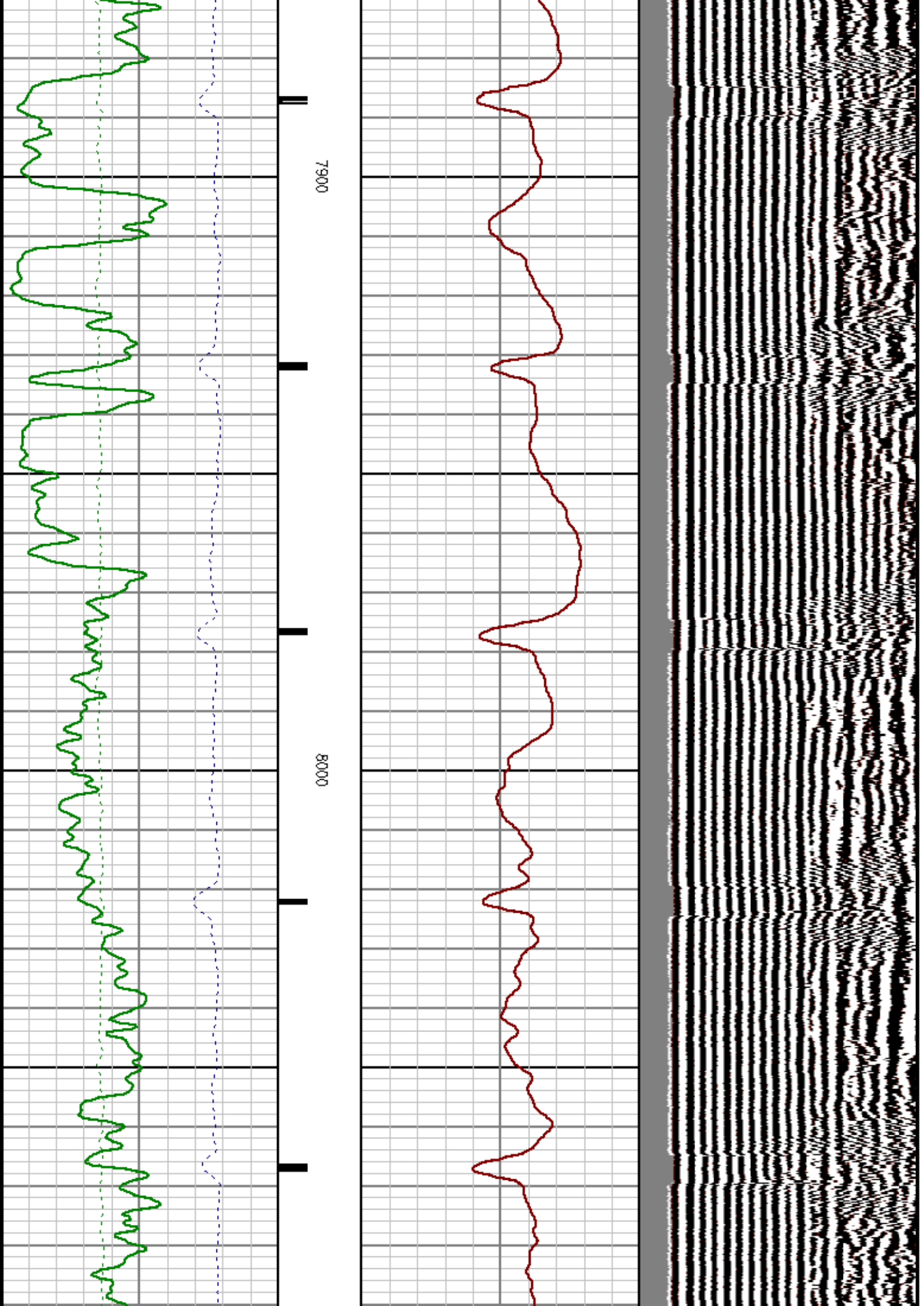


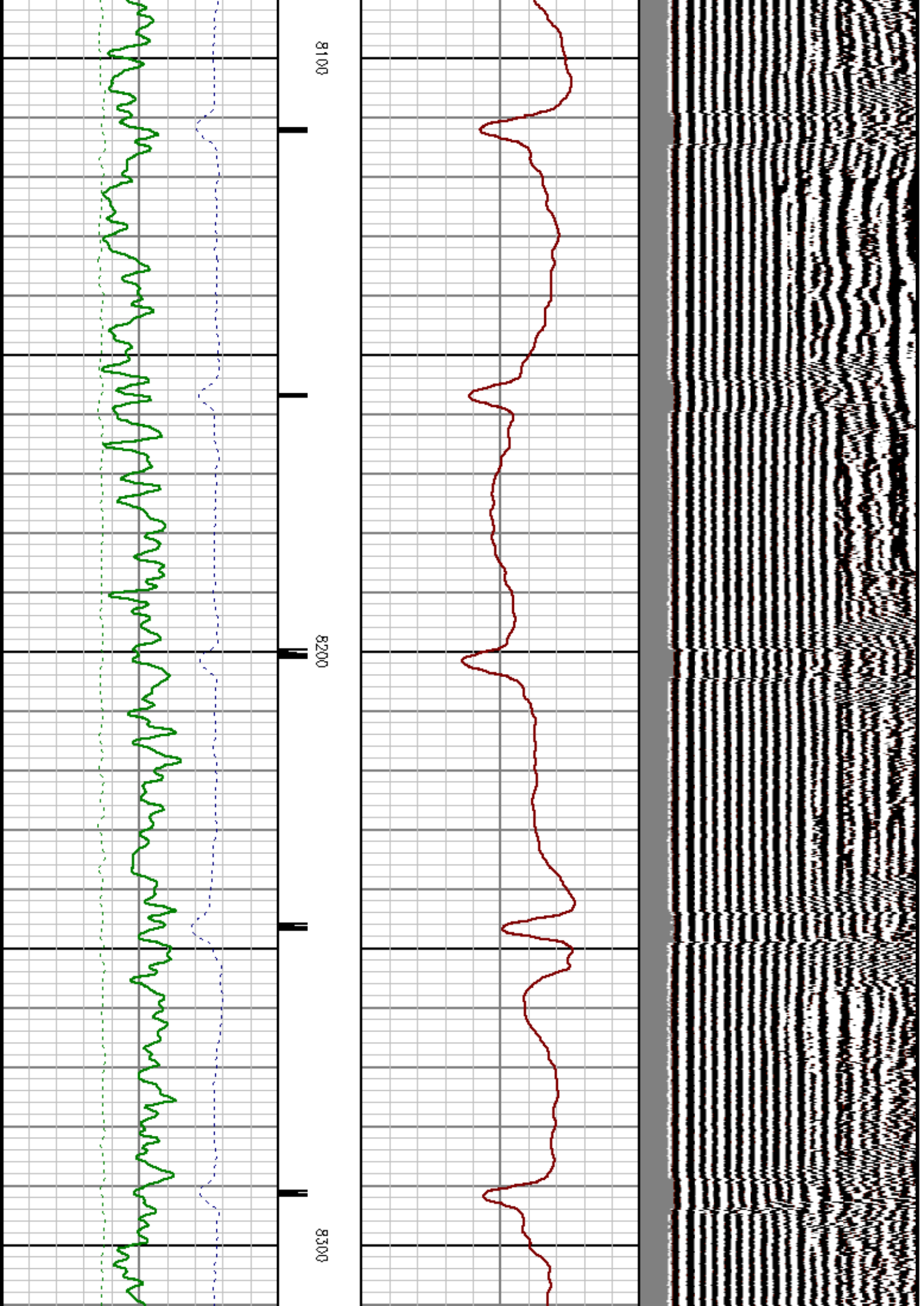


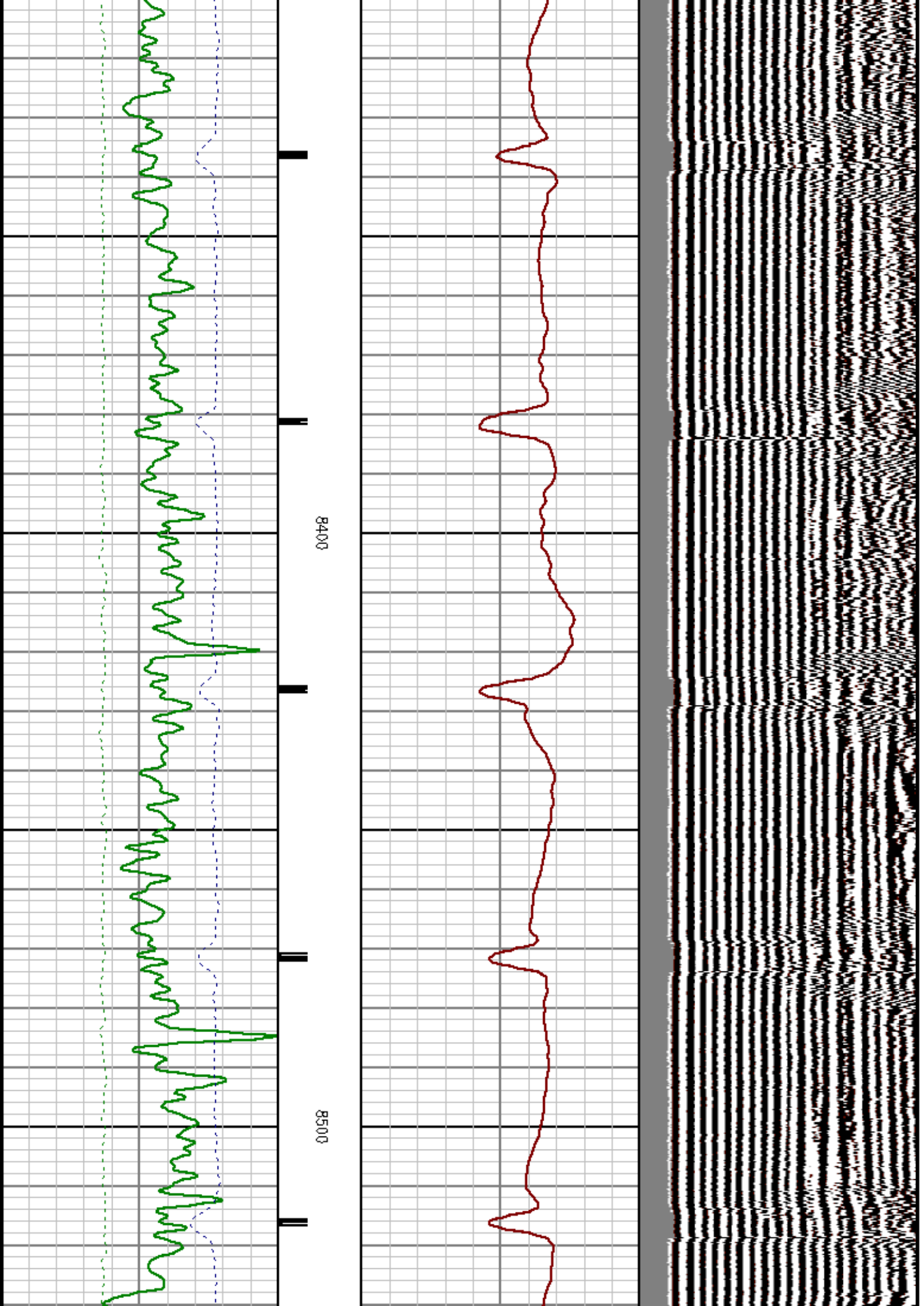
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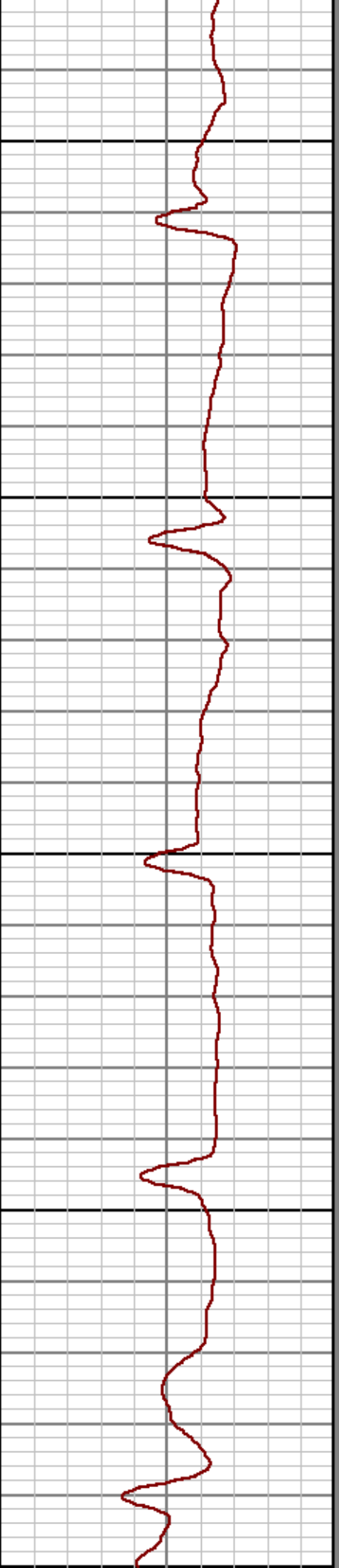
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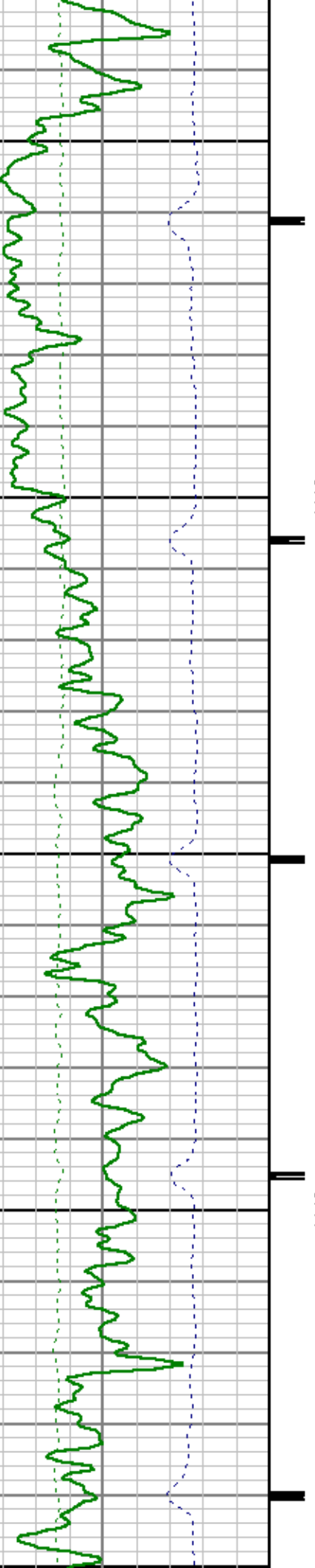


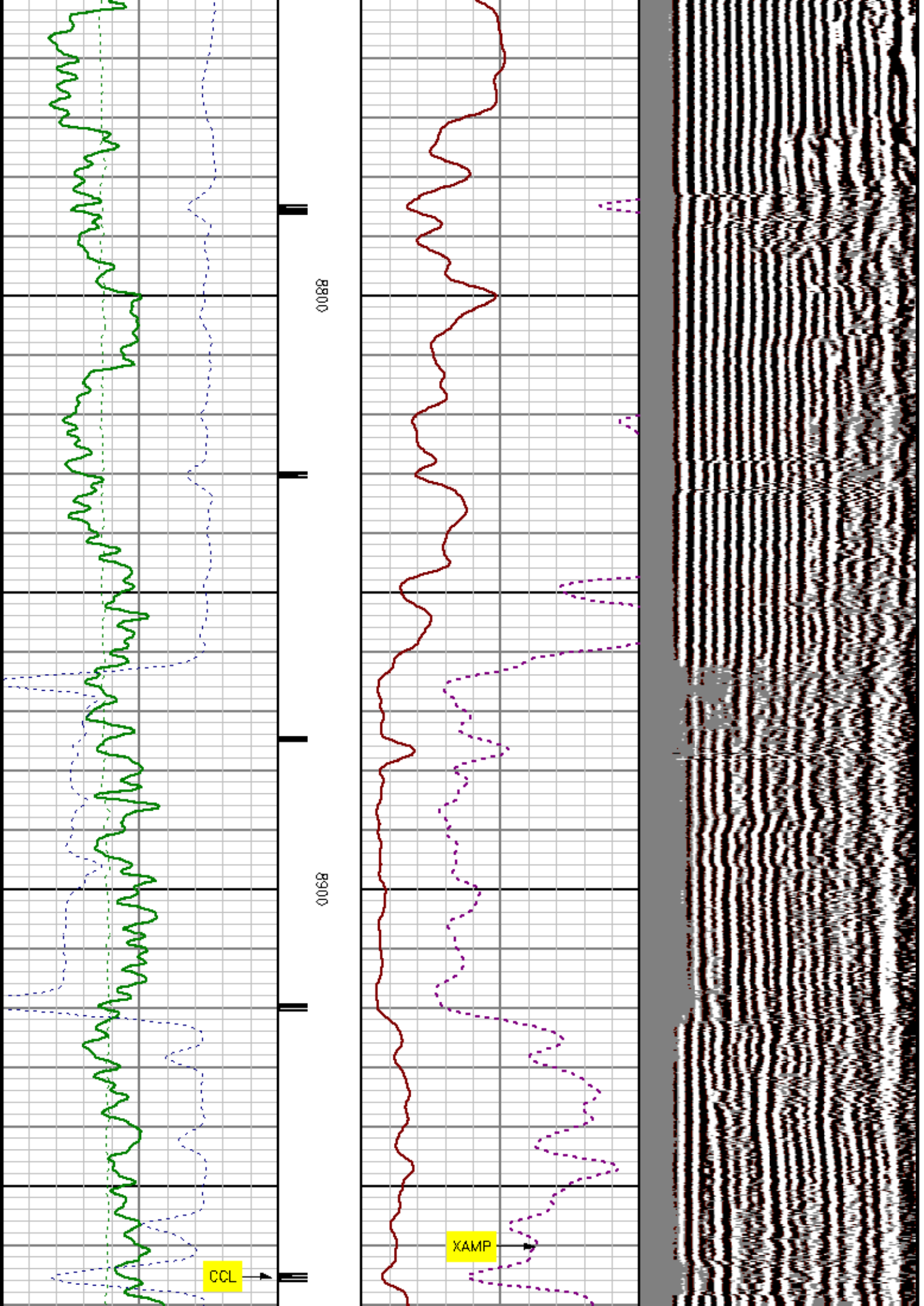


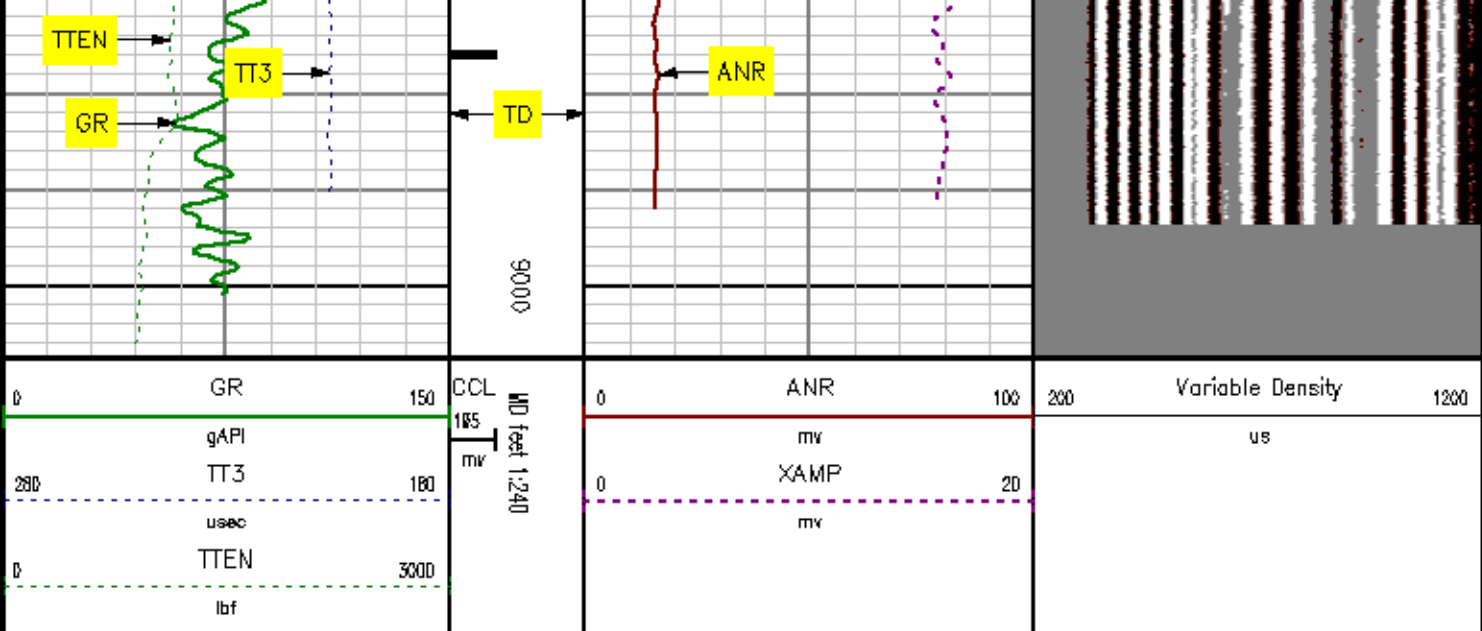


8600

8700







MAIN SECTION SECONDARY PRESENTATION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	23.879	9007.500
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DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-15.360	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	ARB	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
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1426XA	-14.360	AFAR	SIG	TT5			
1426XA	-7.250	CCL					
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1426XA	0.000	NEU					

Created by : RAL, v4.8.007

Plotted by : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION COMPANY

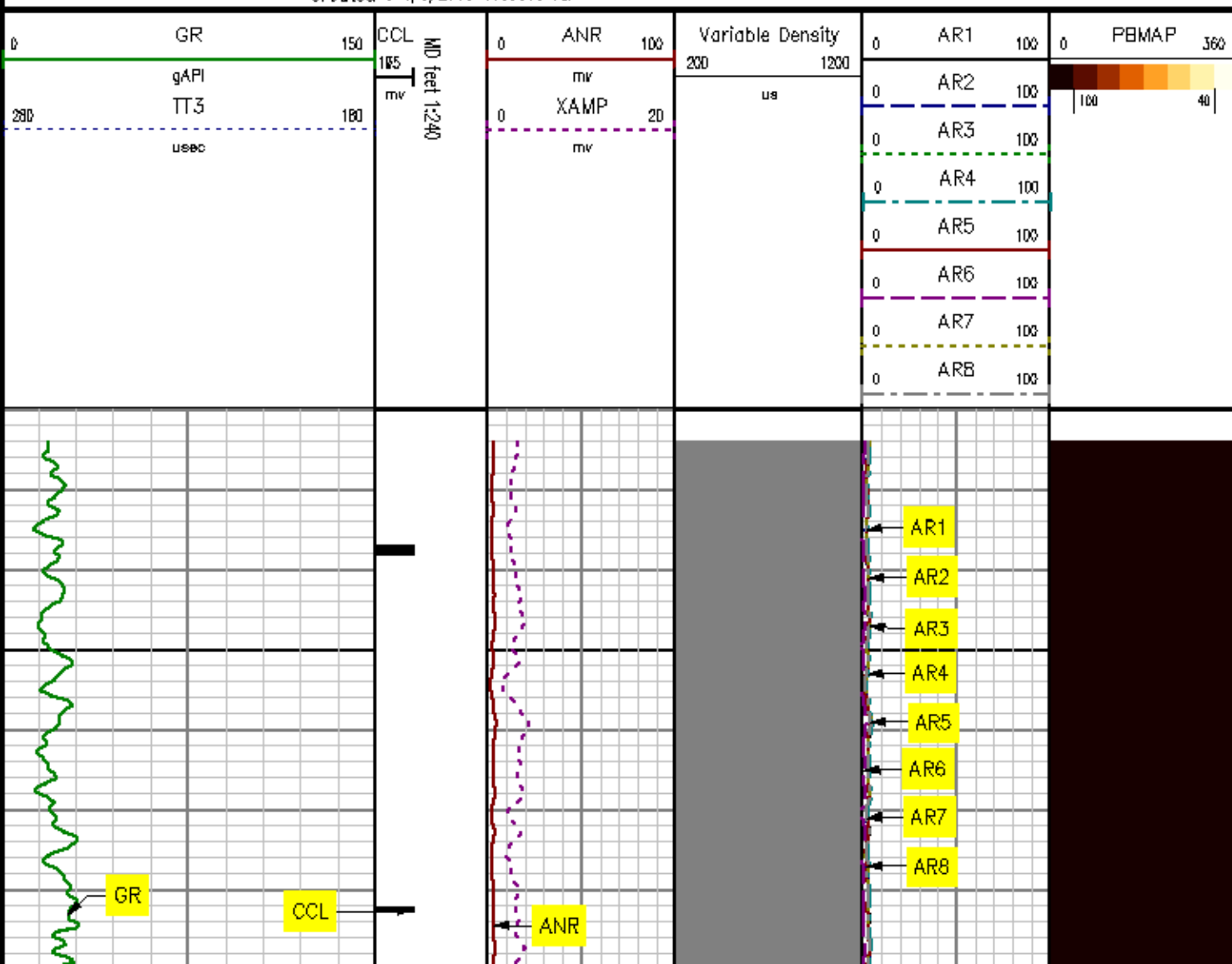
Well : KP 33-21

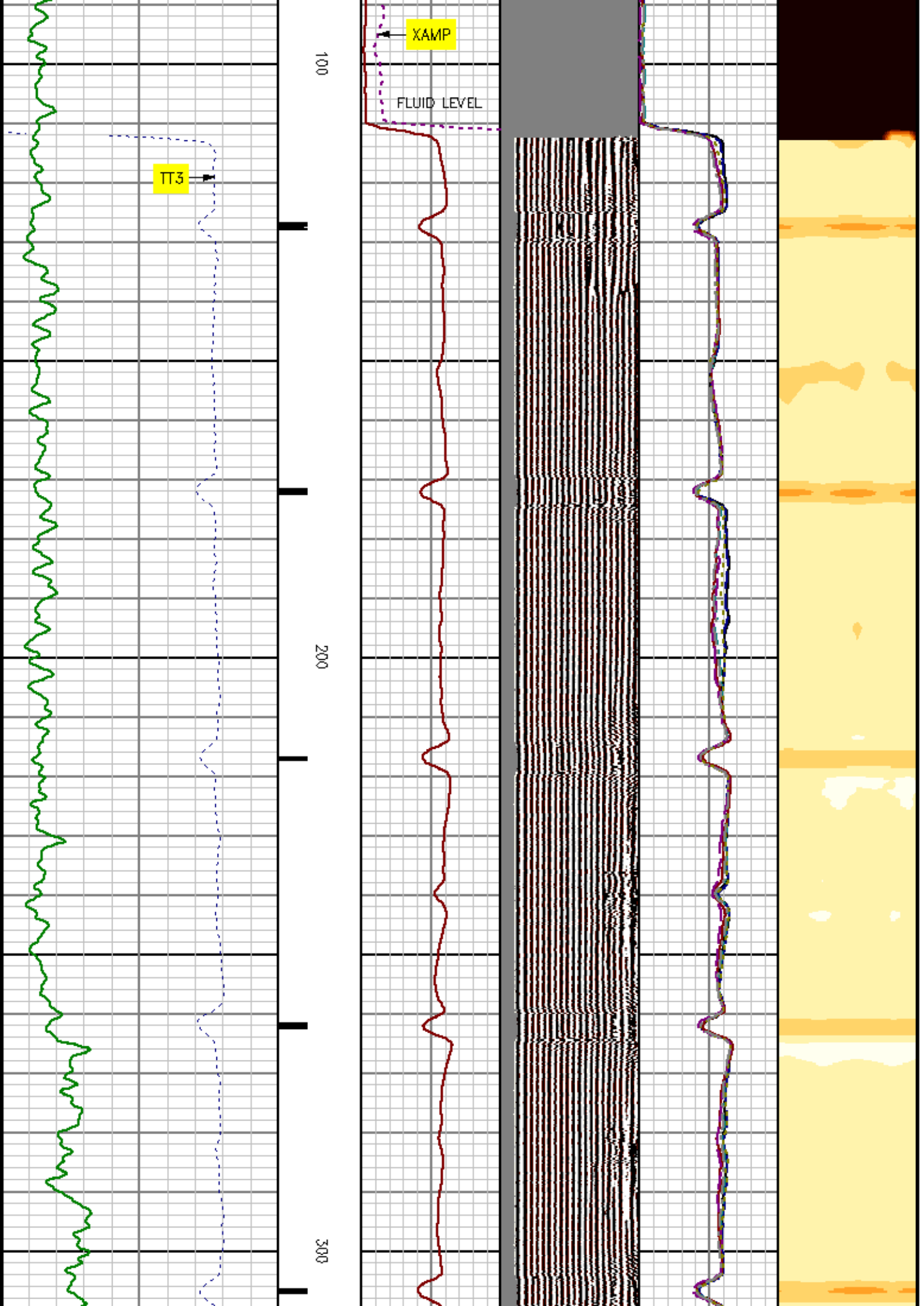
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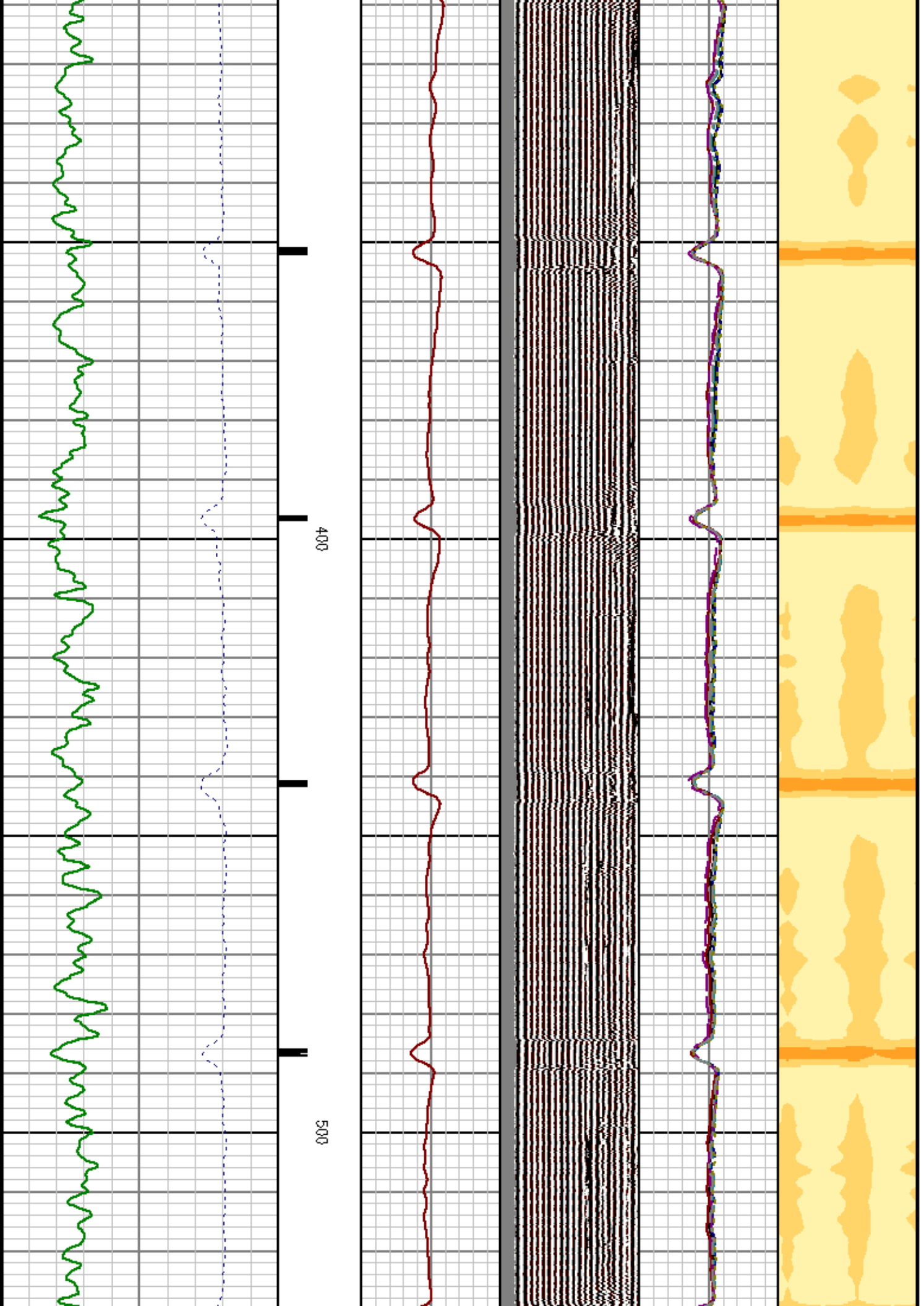
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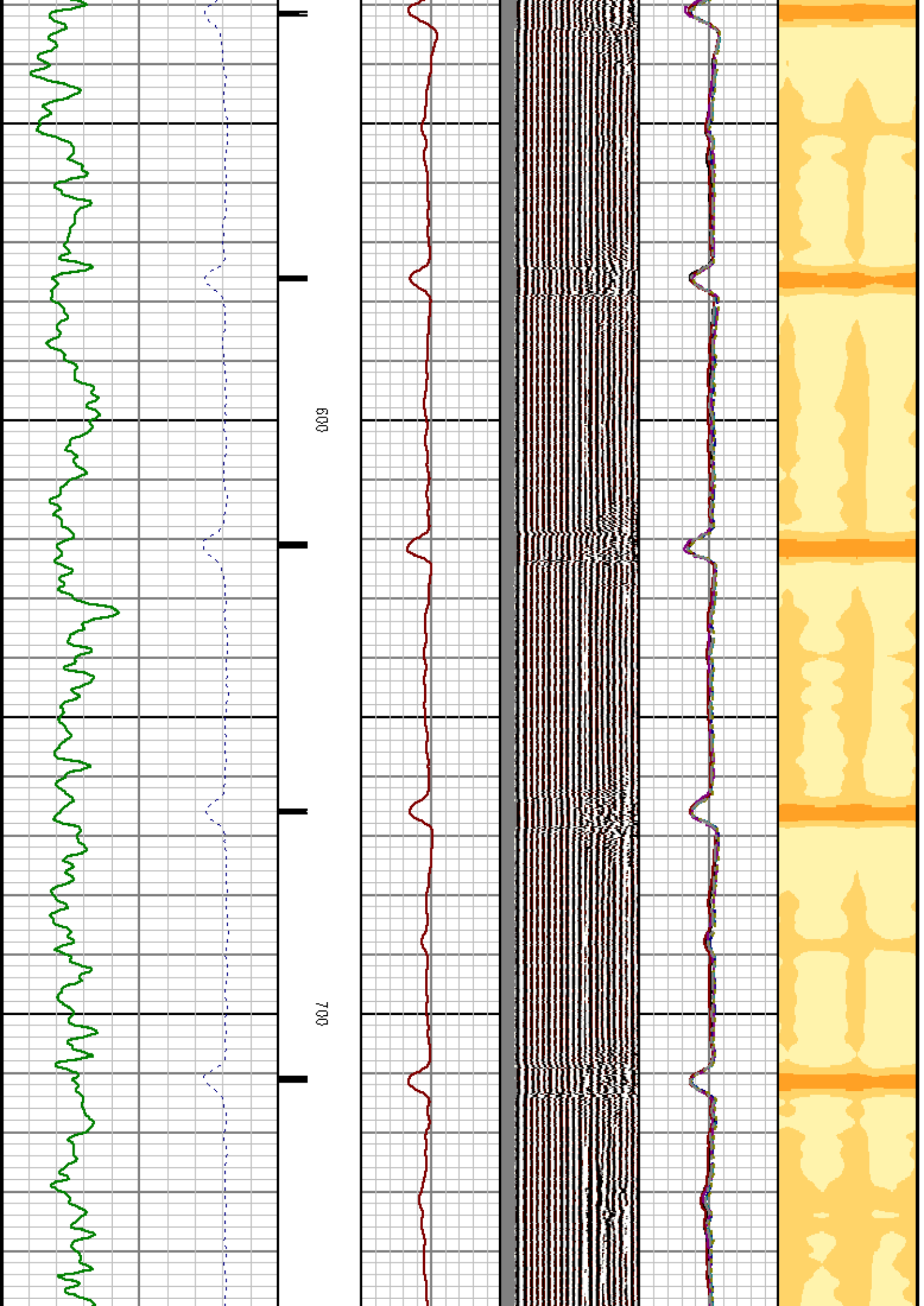
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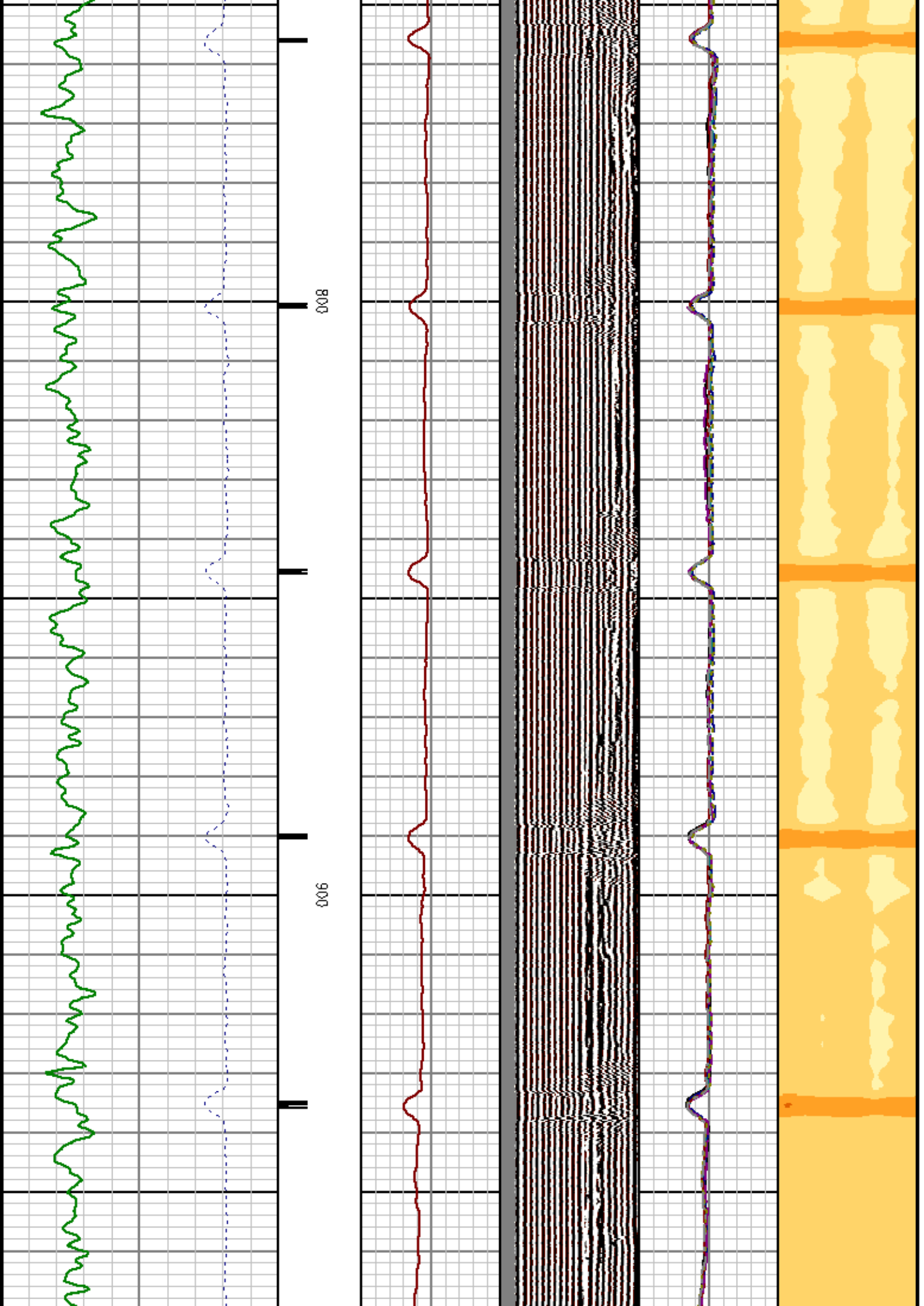
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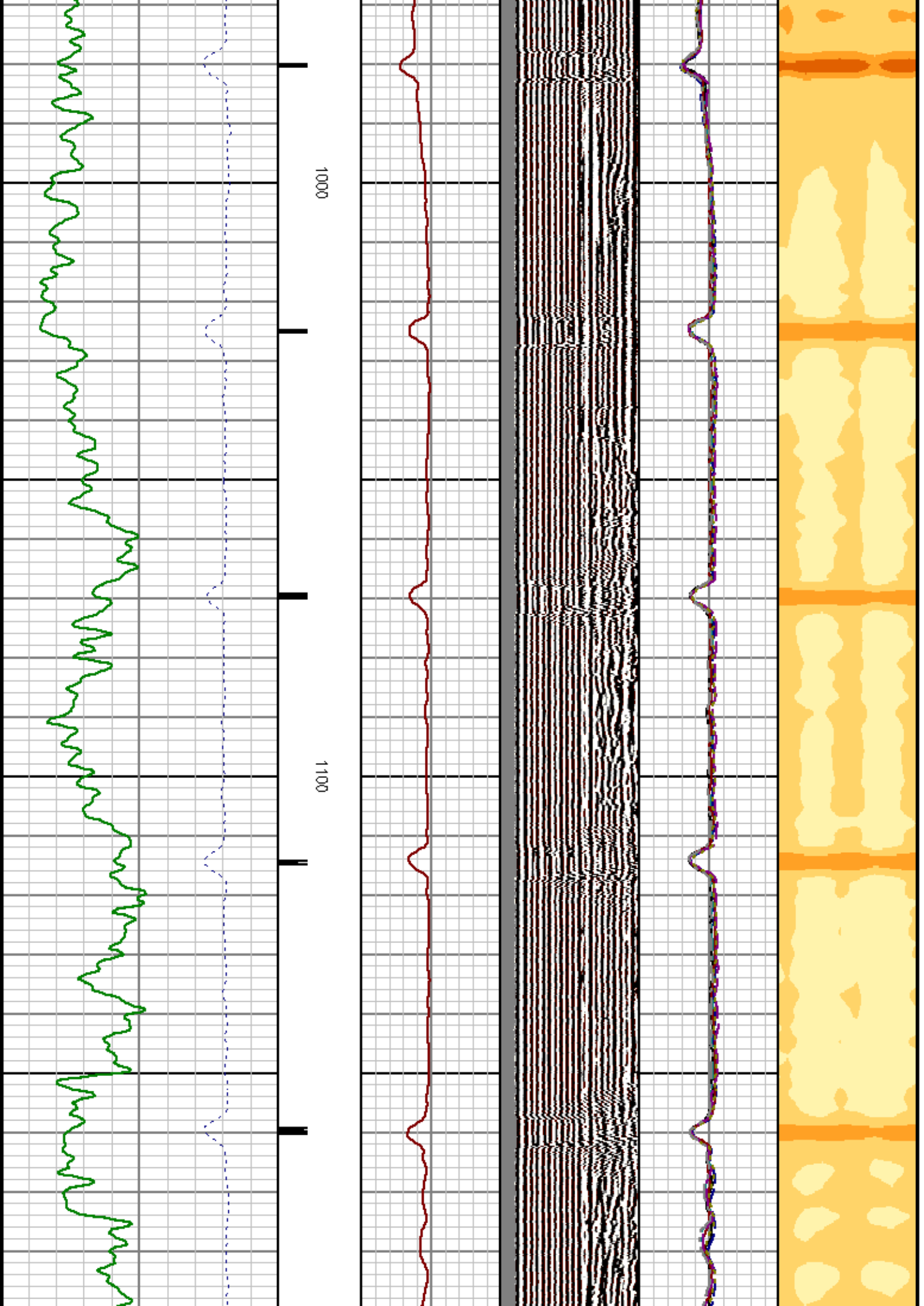


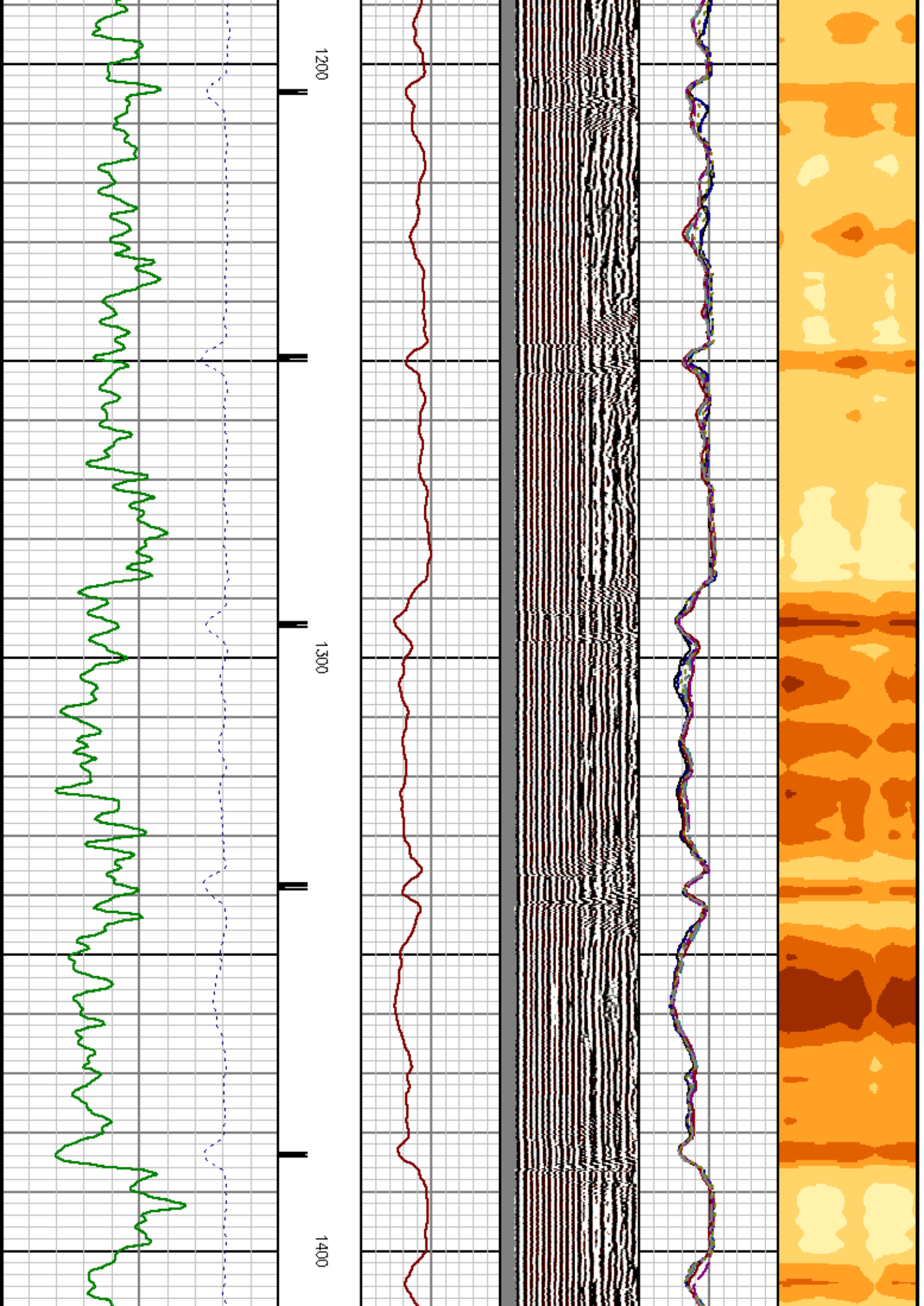


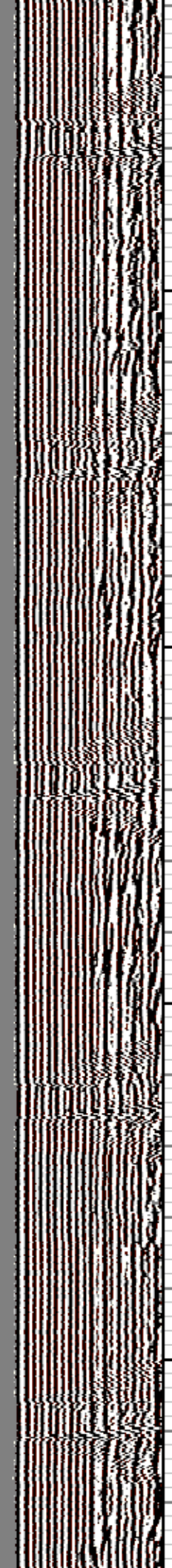
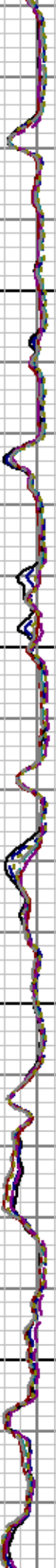
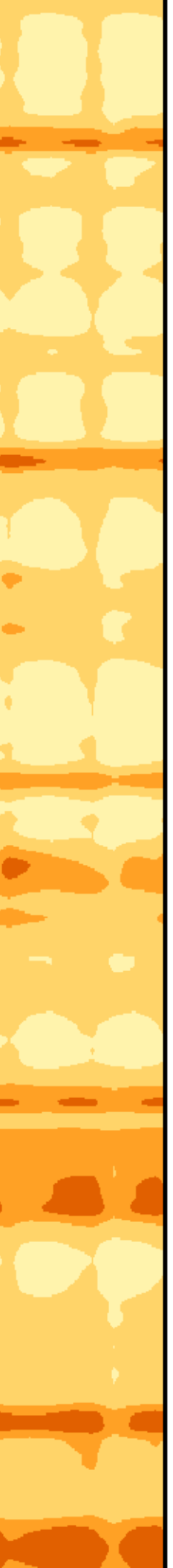








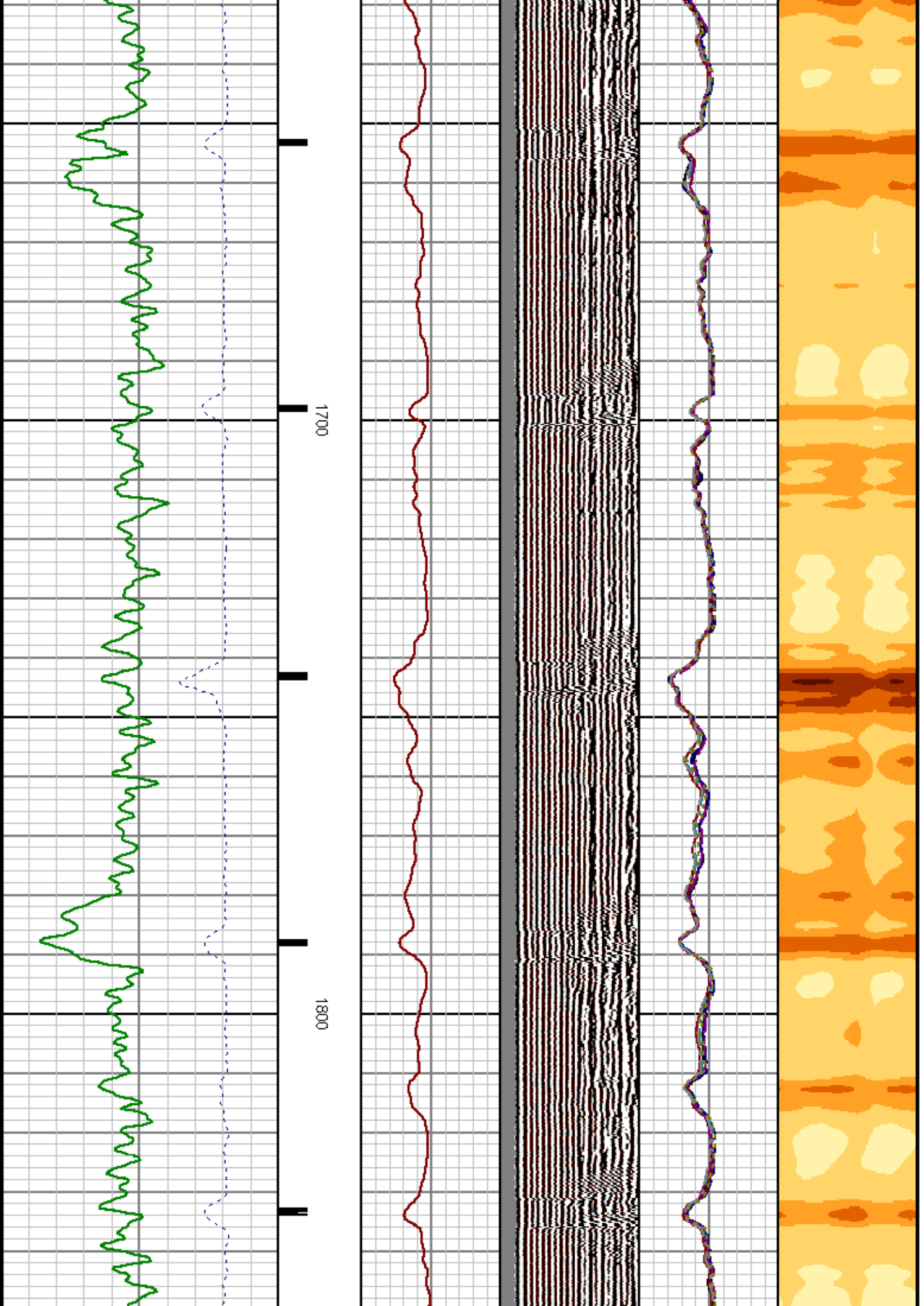


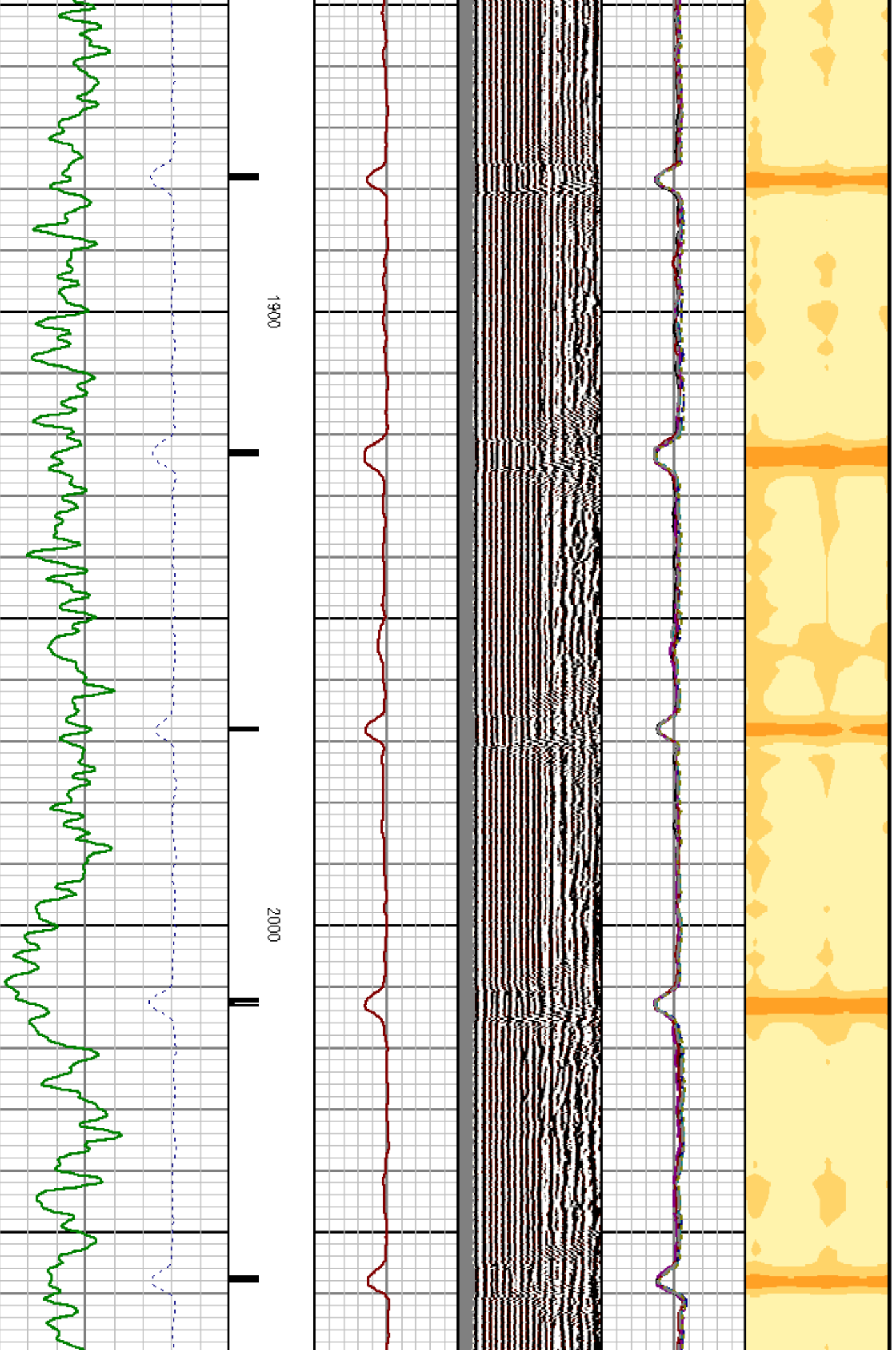


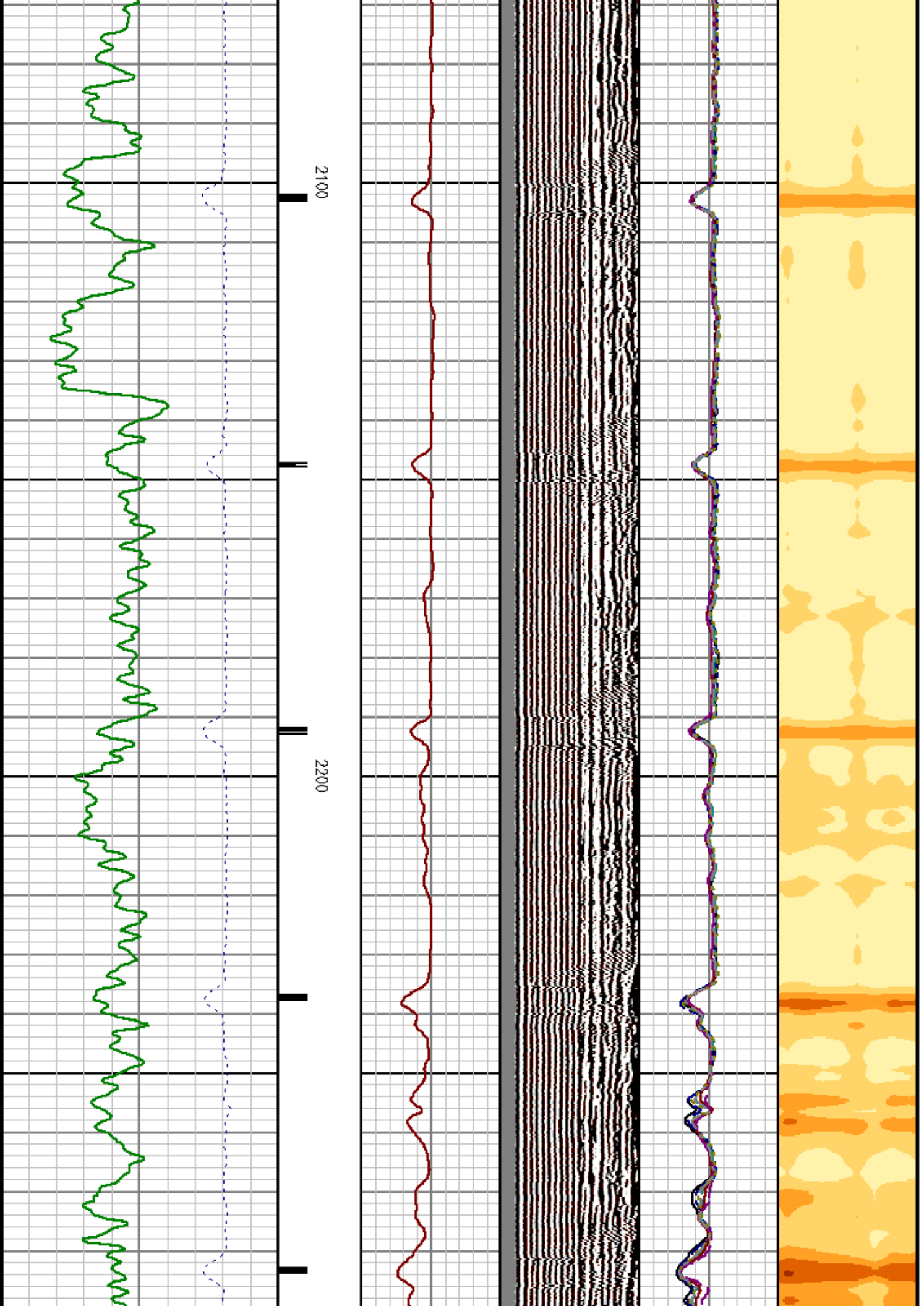
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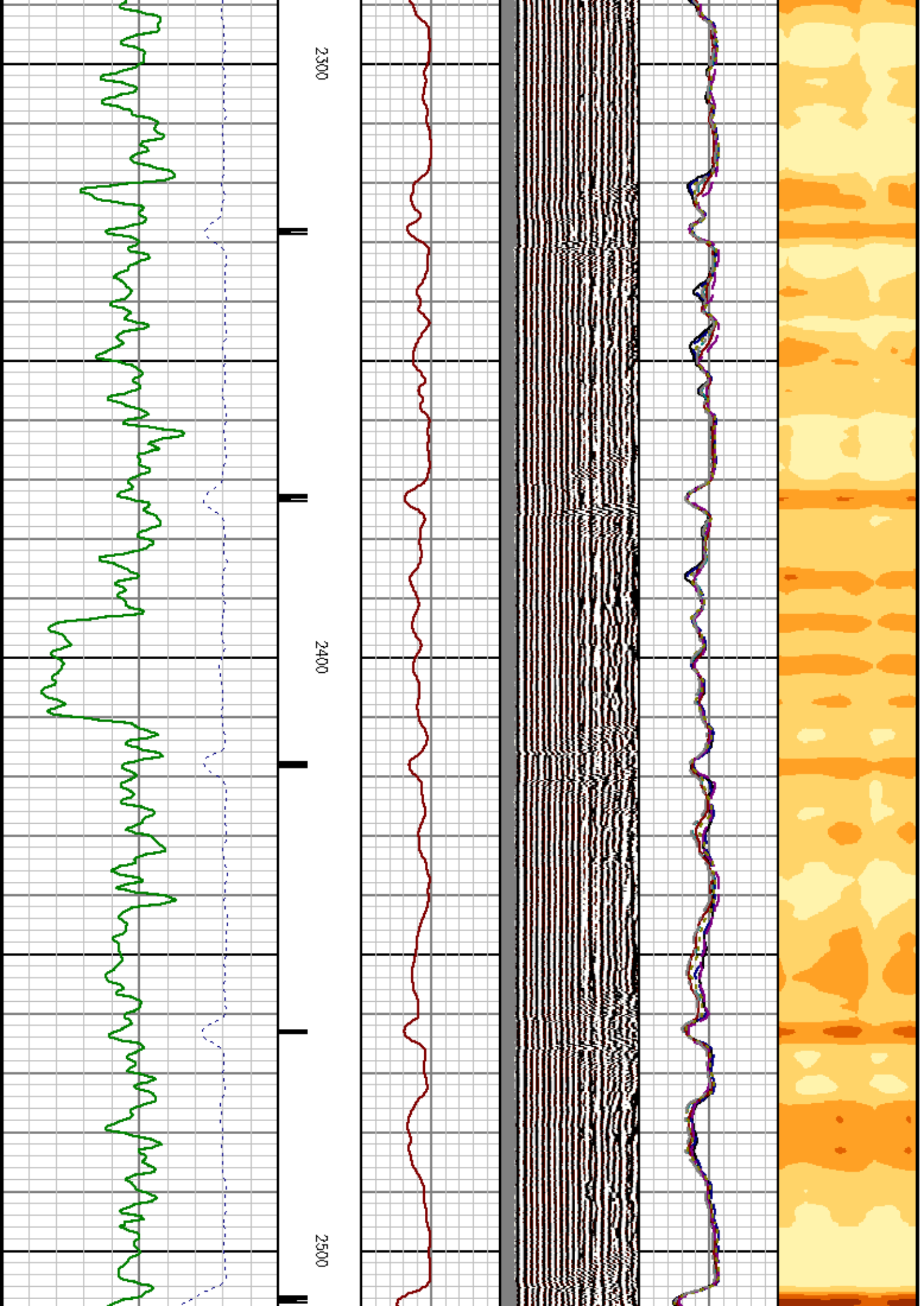
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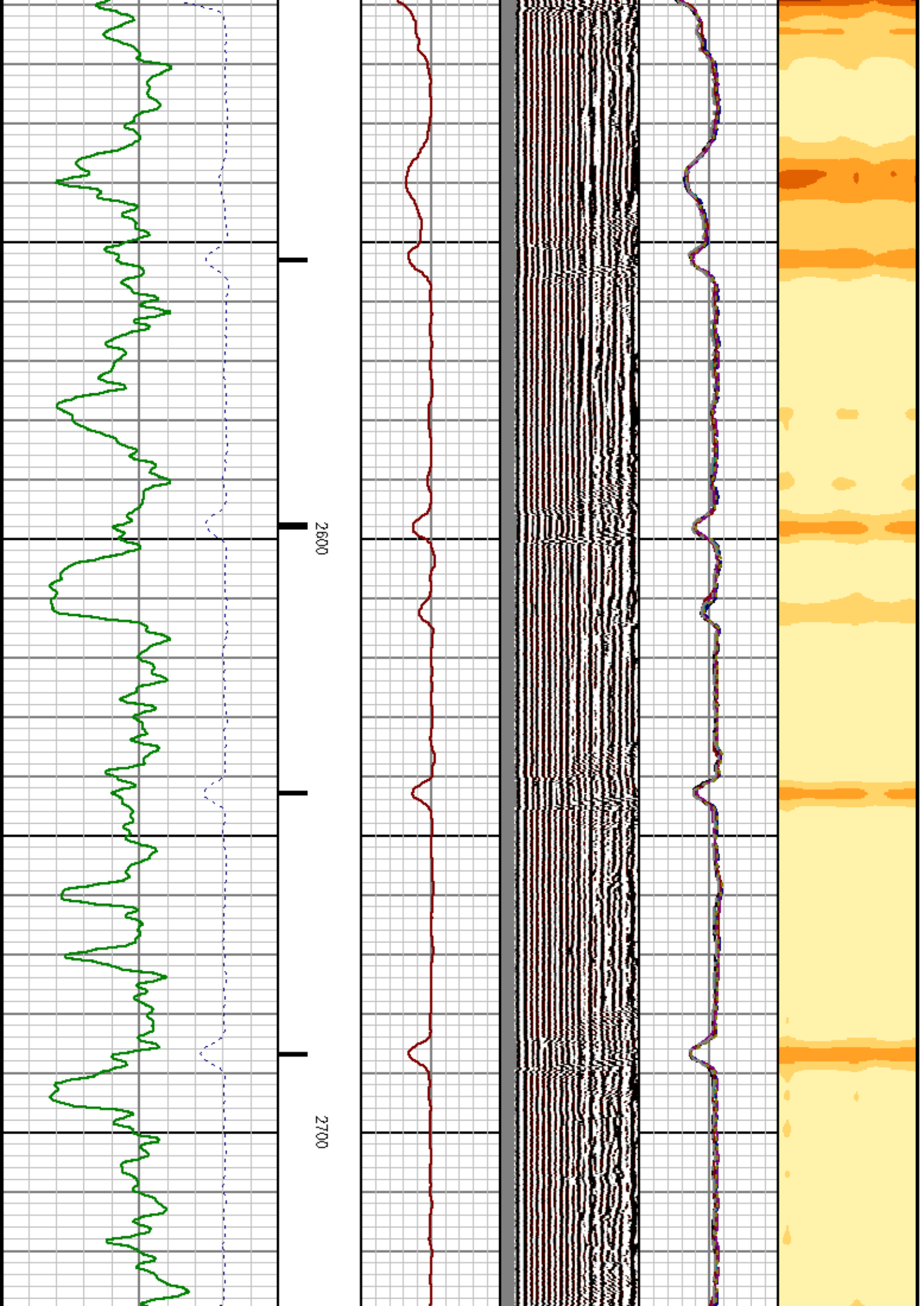


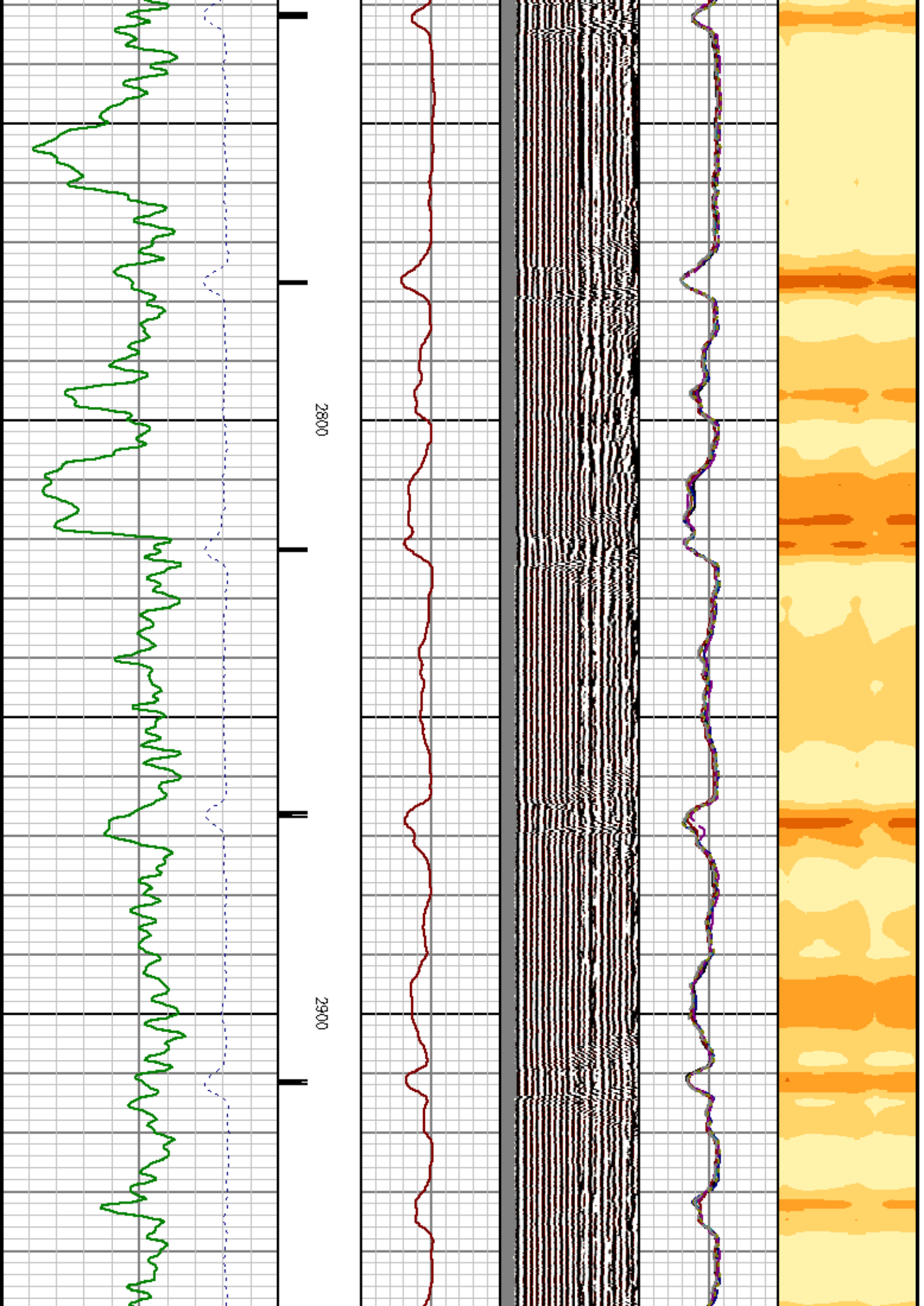


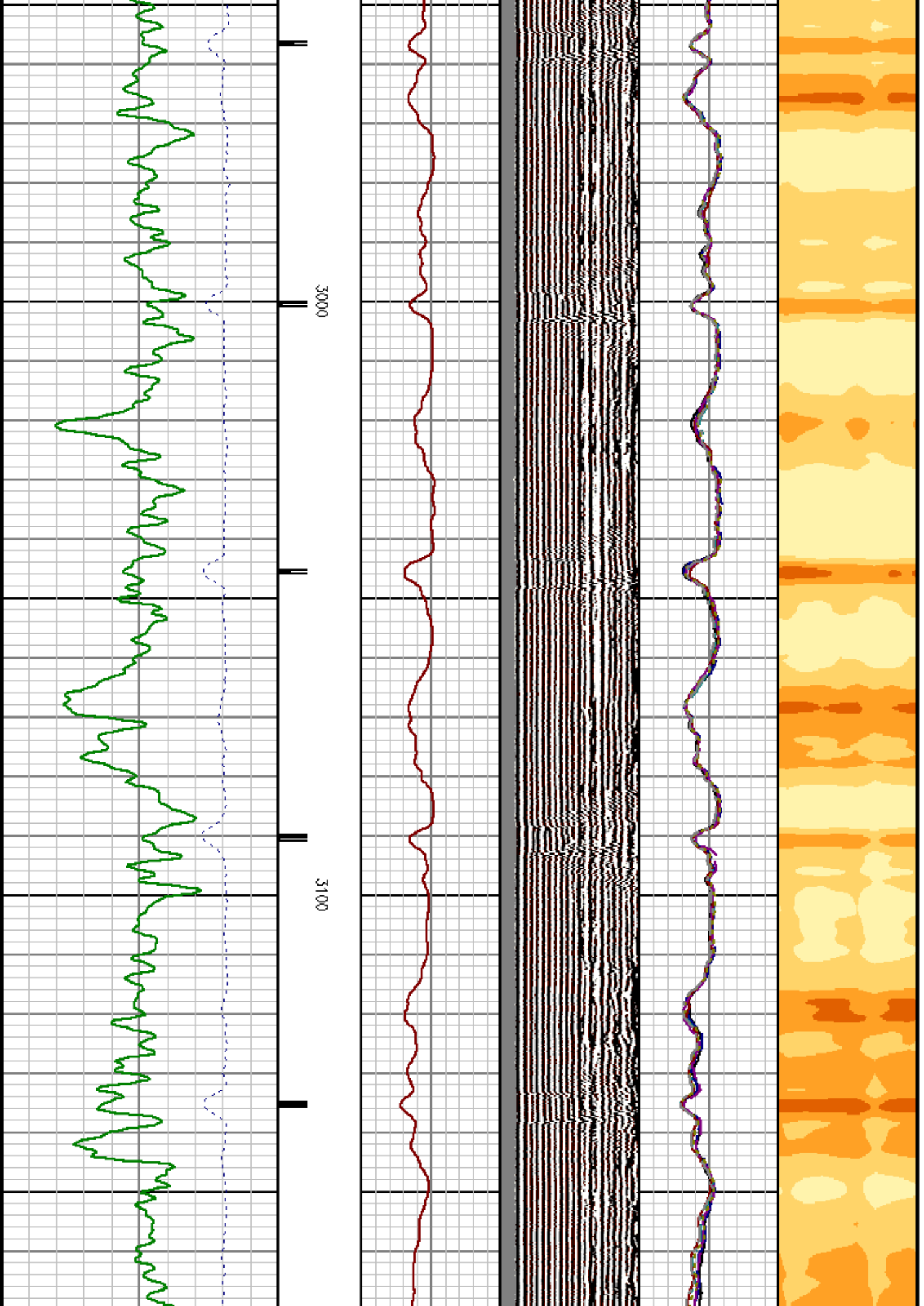


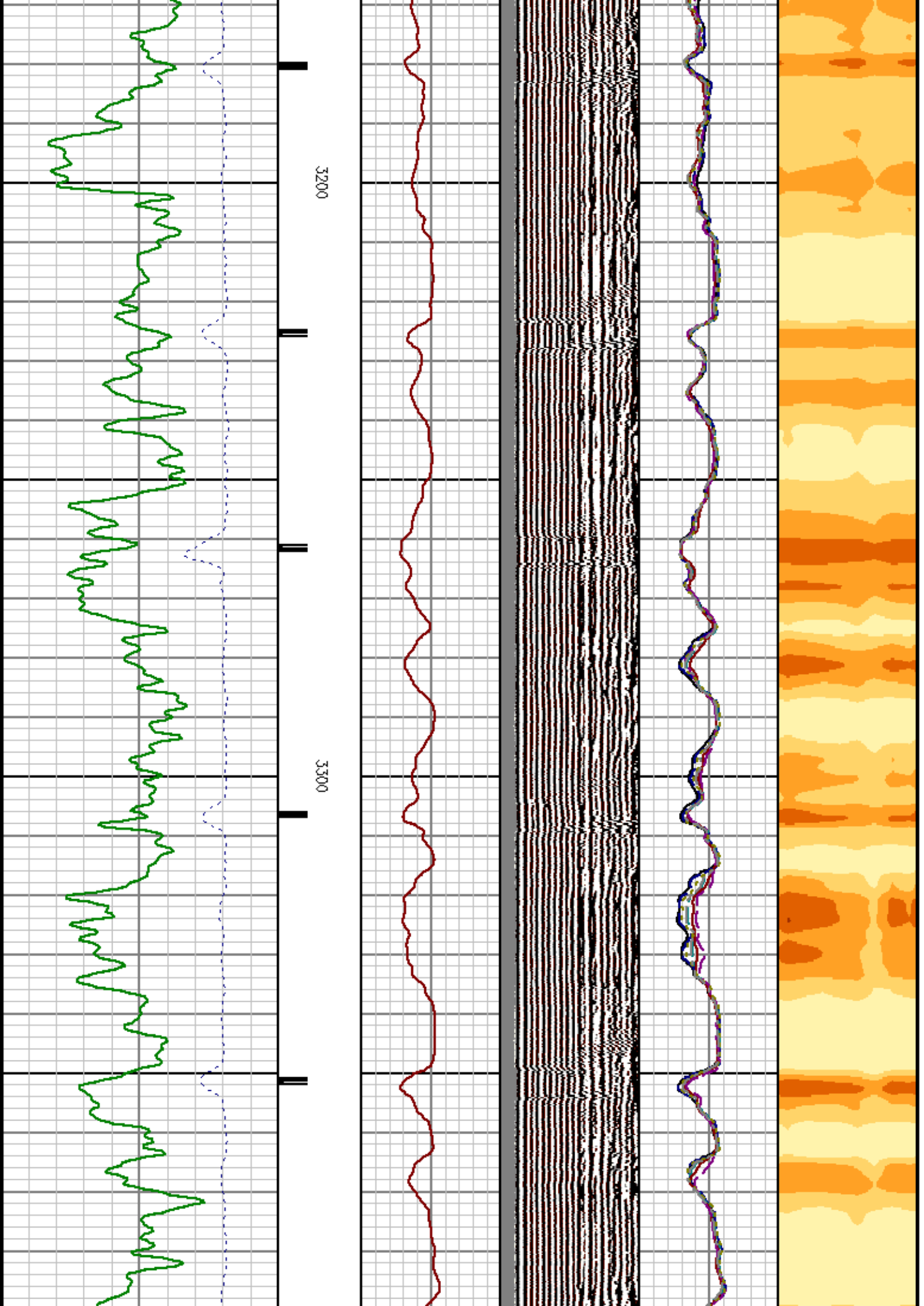


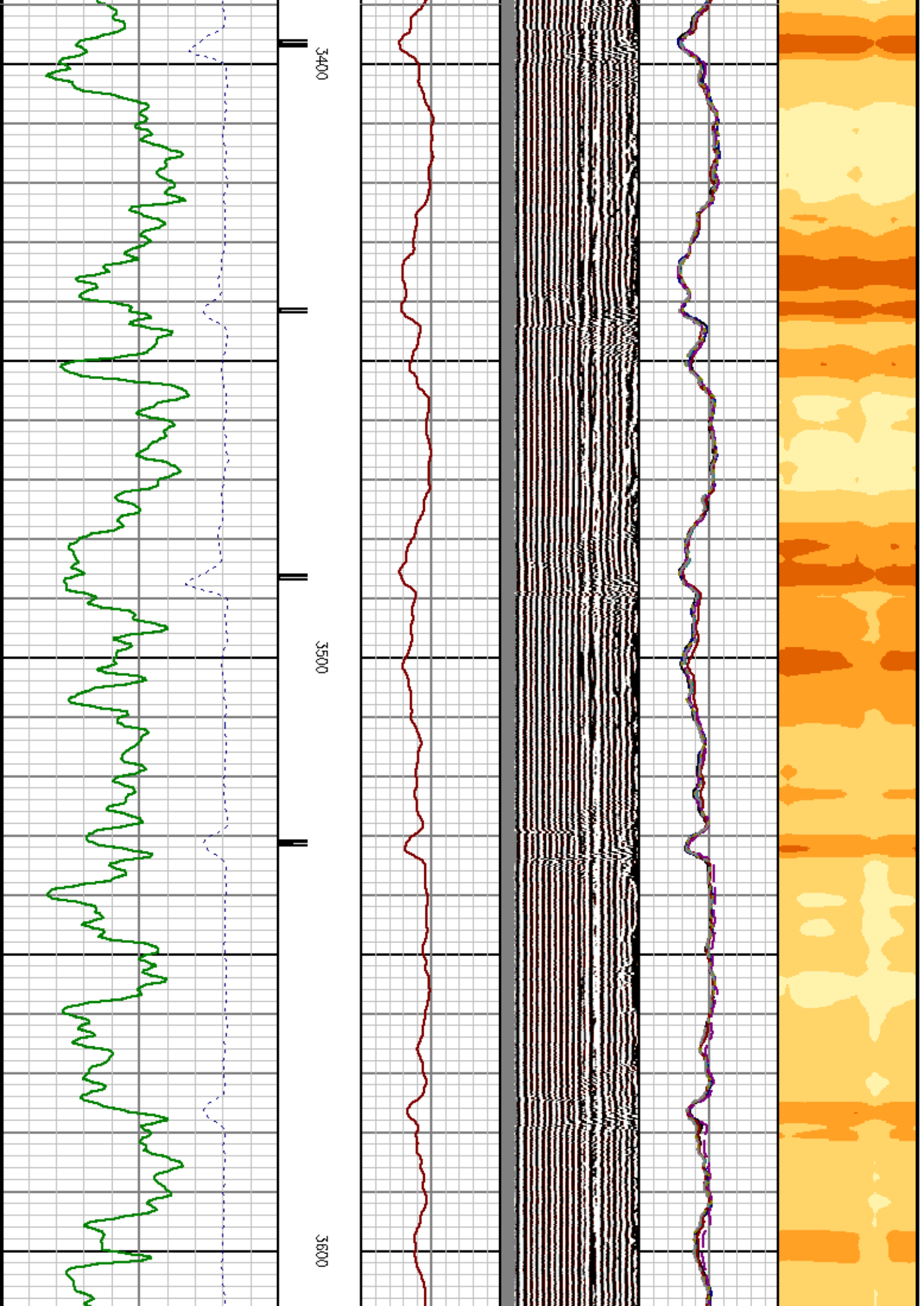


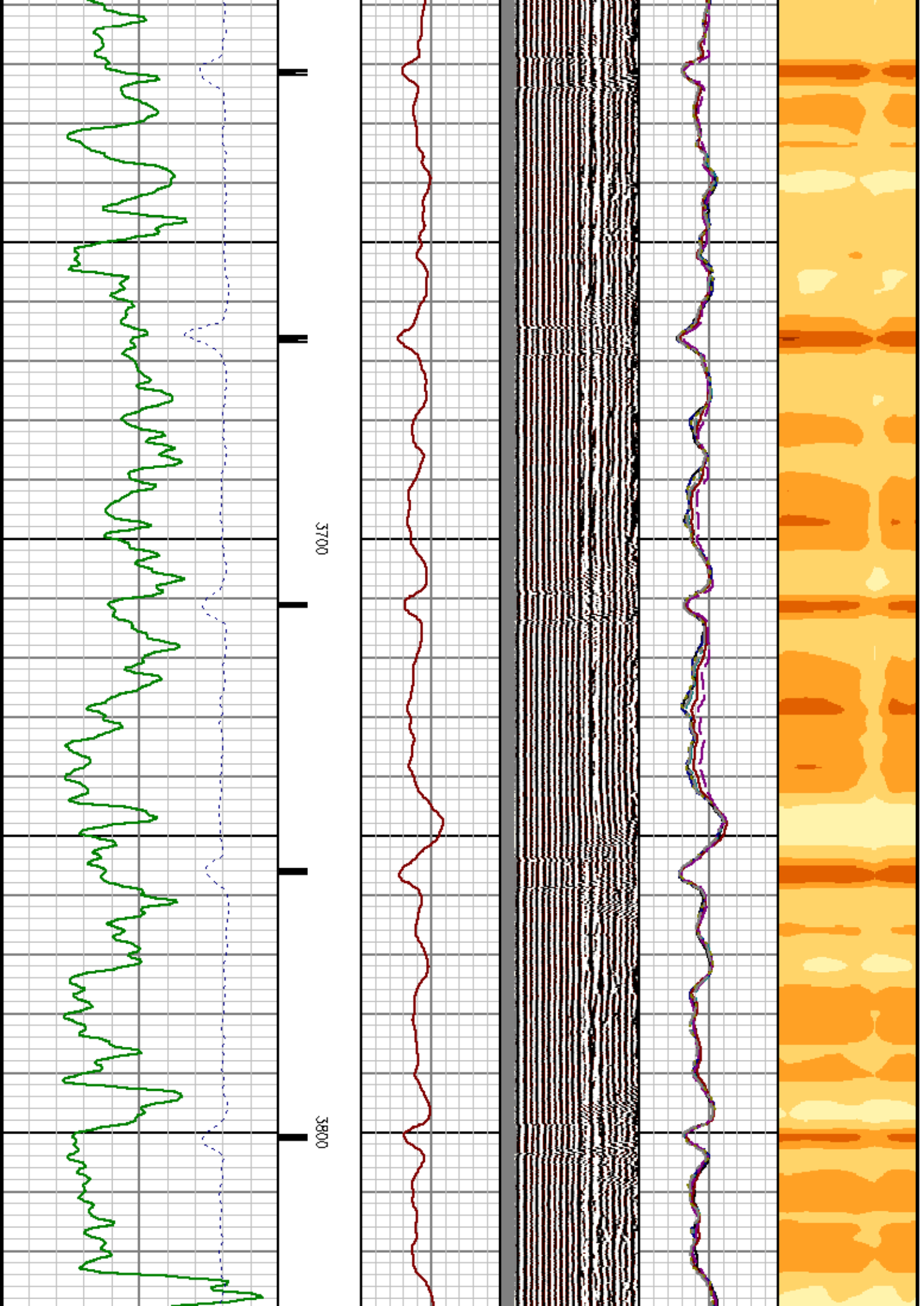


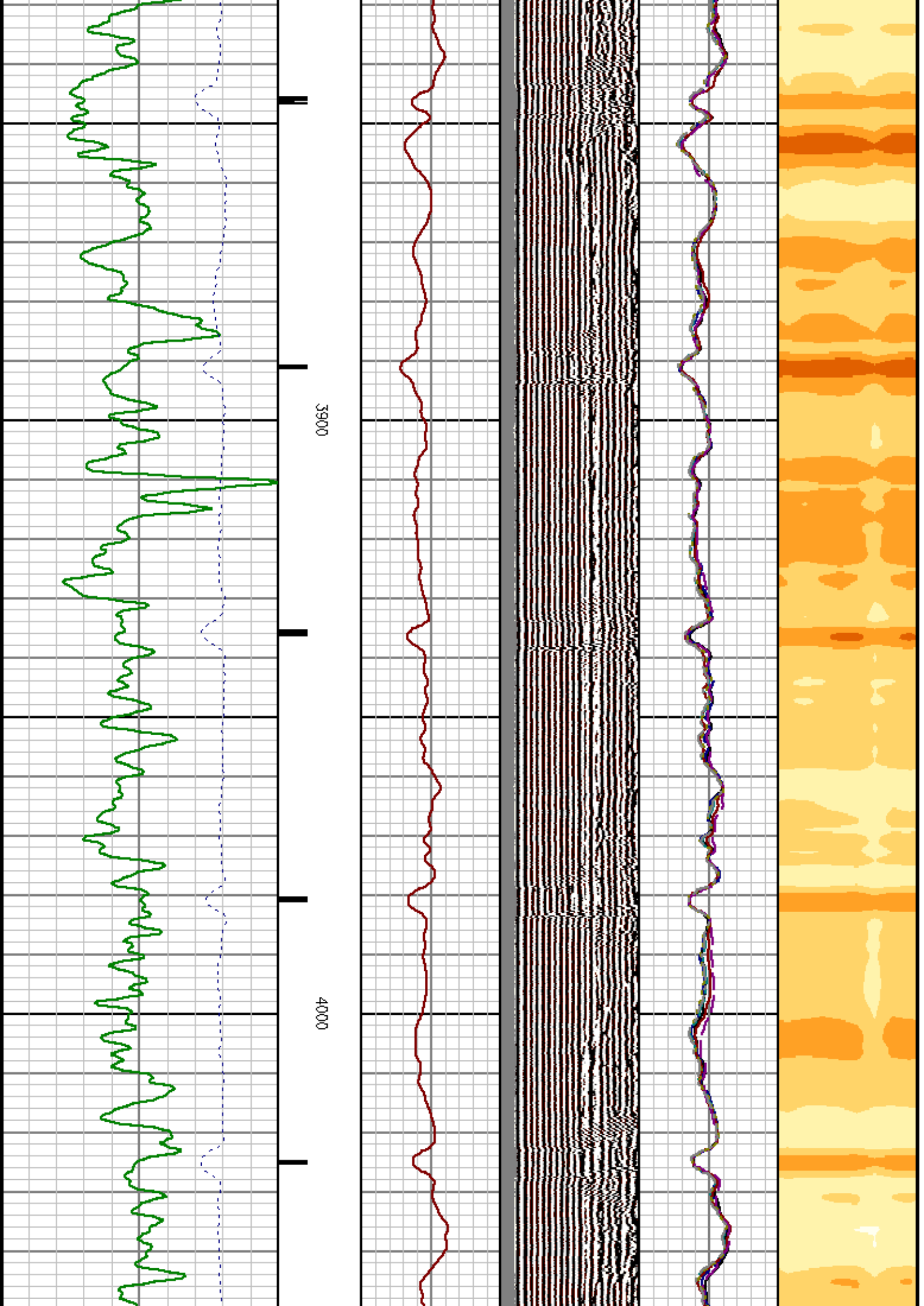


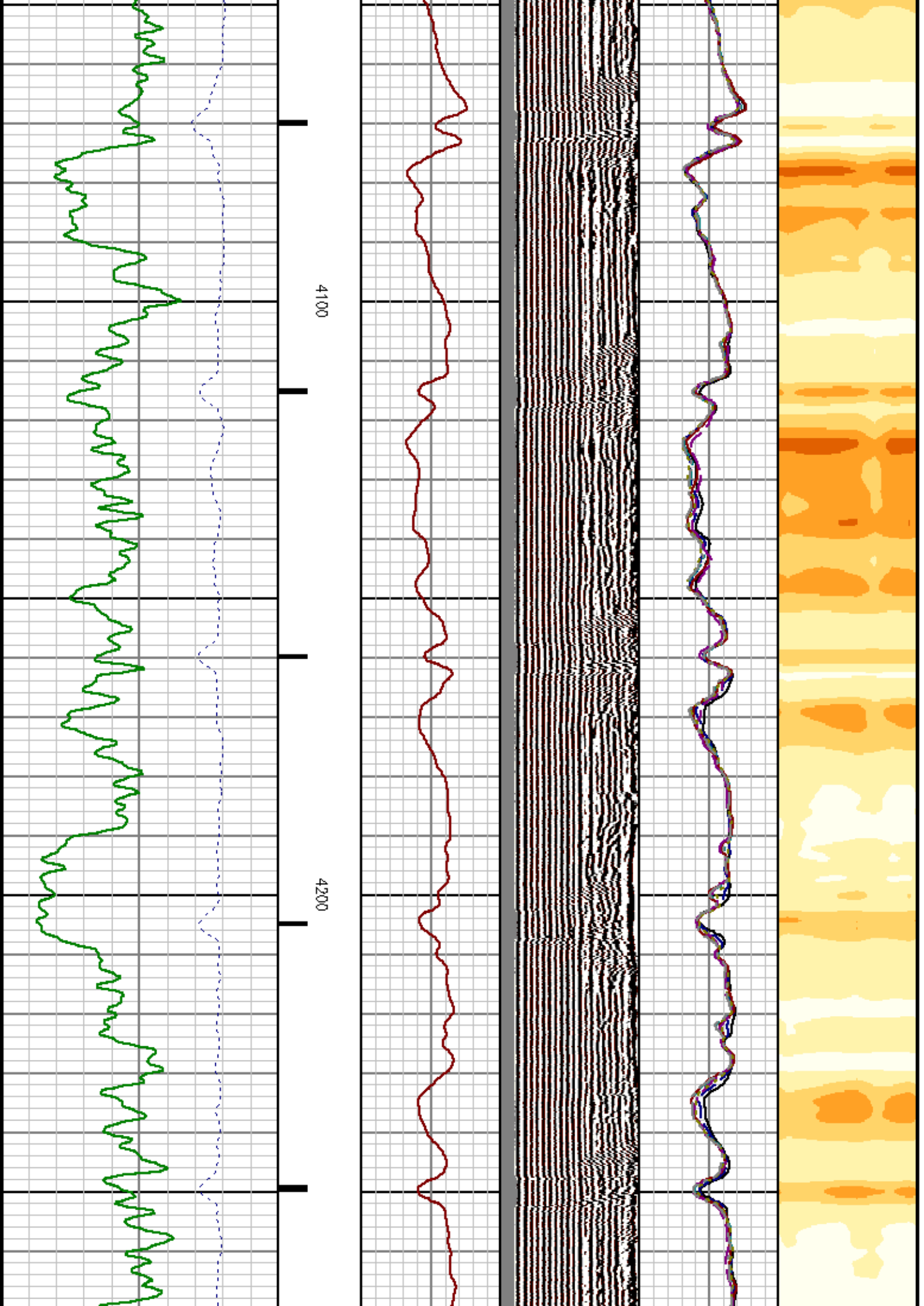


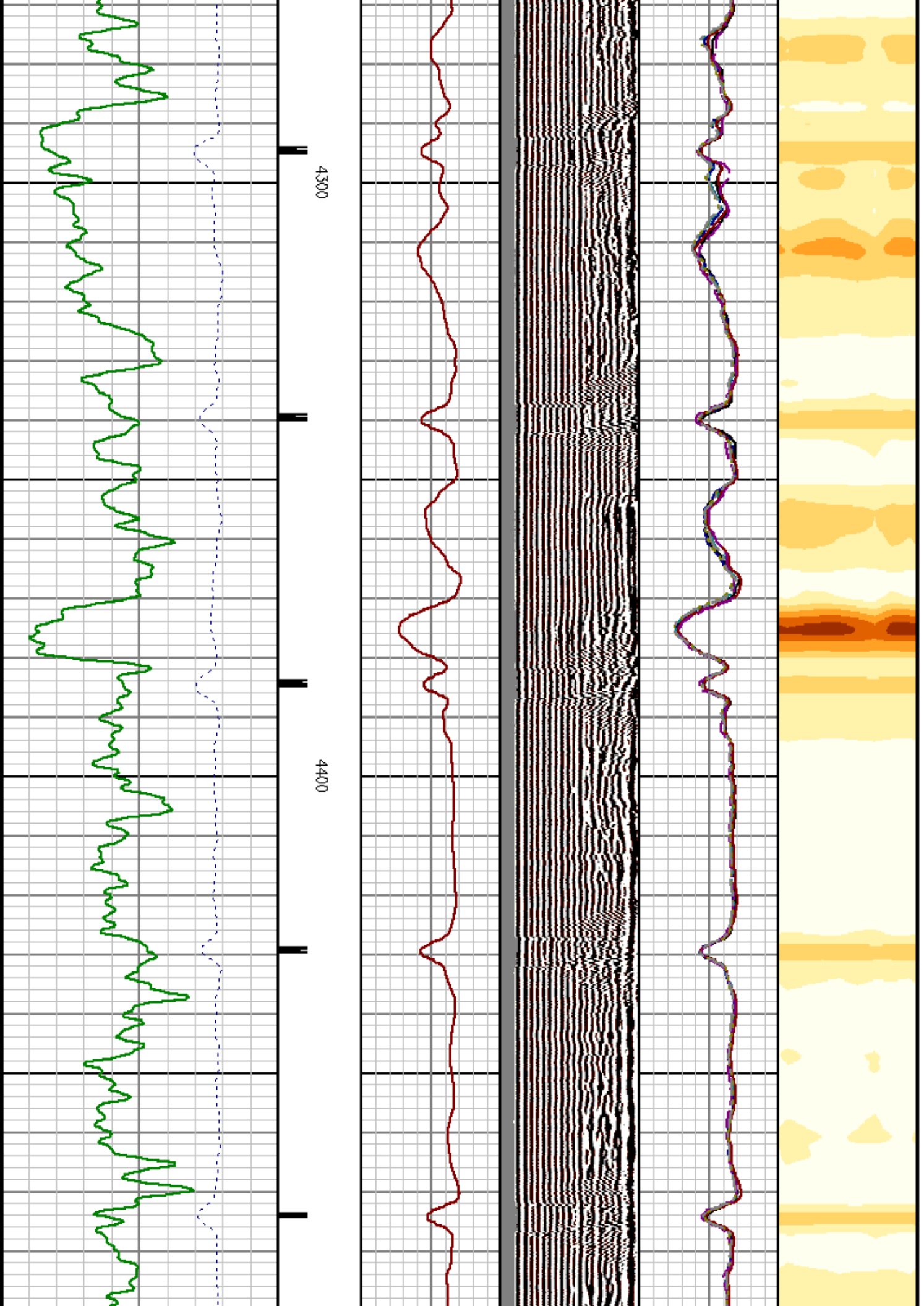


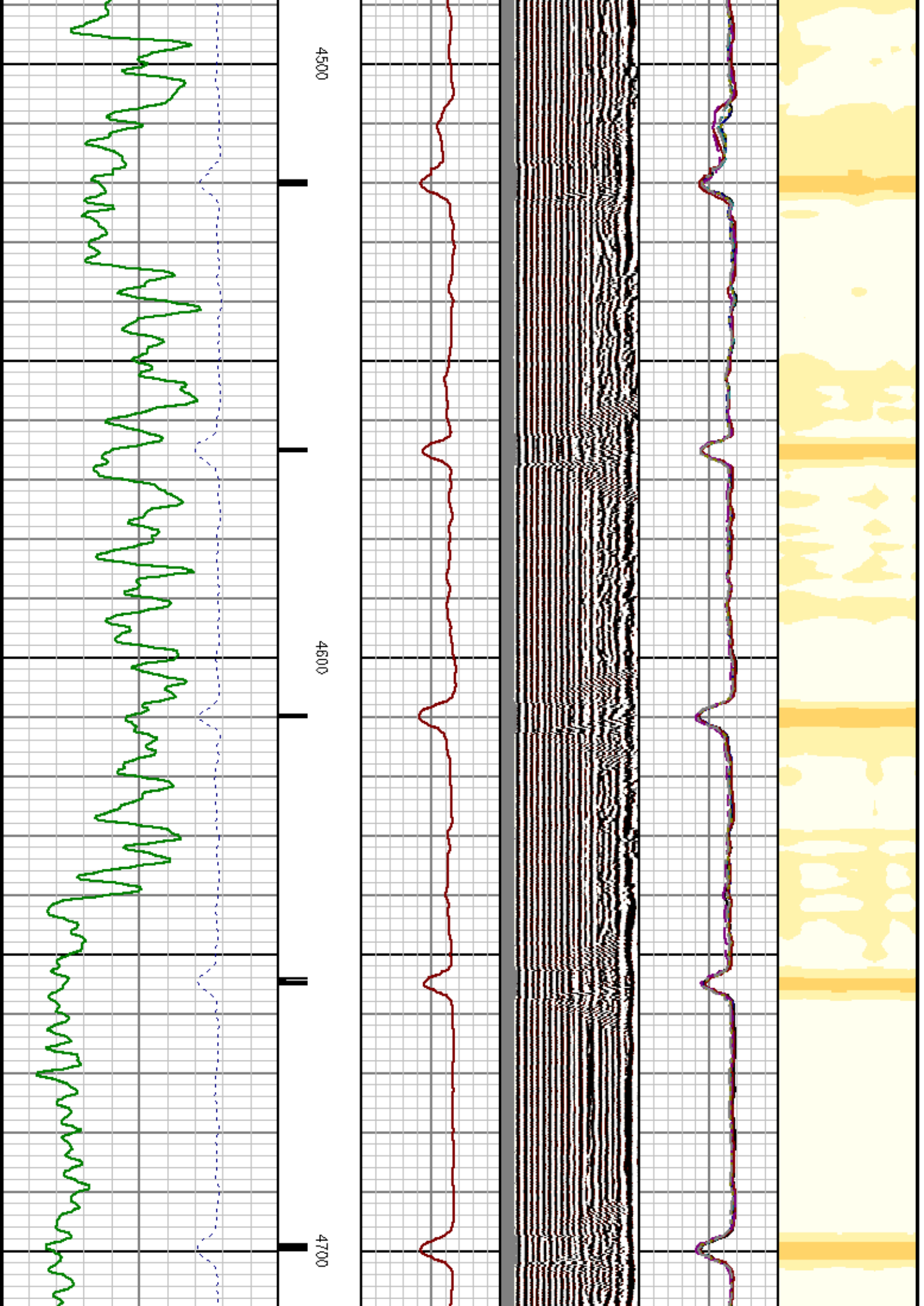


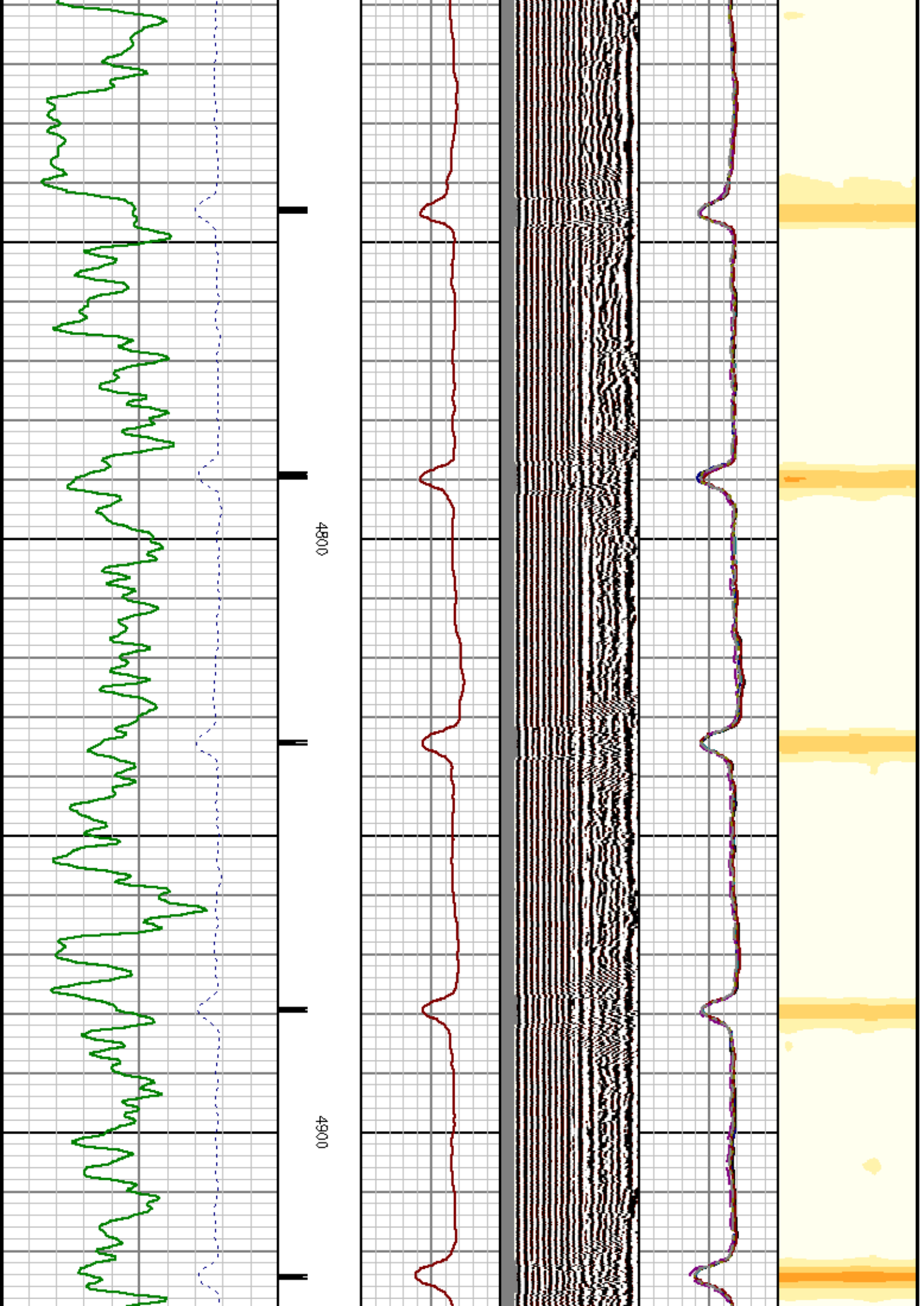


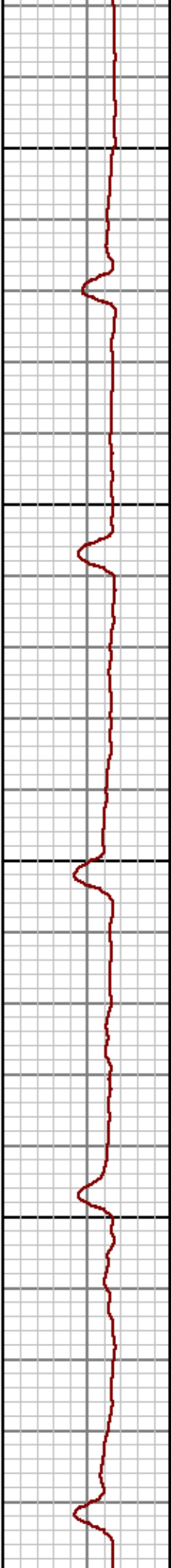
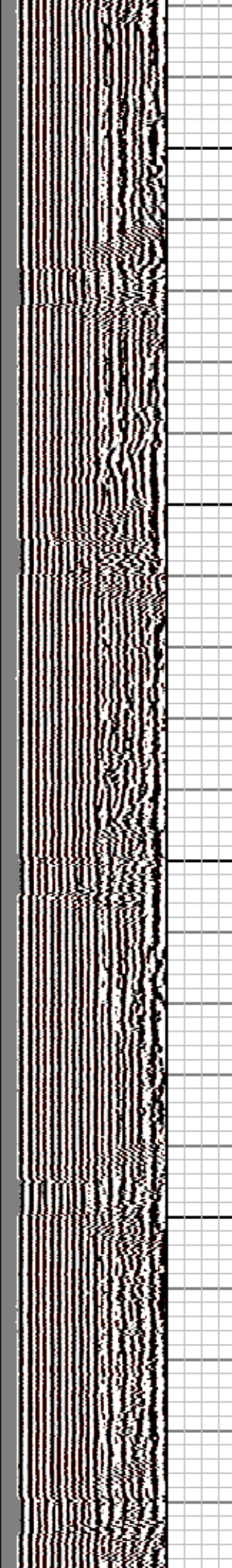
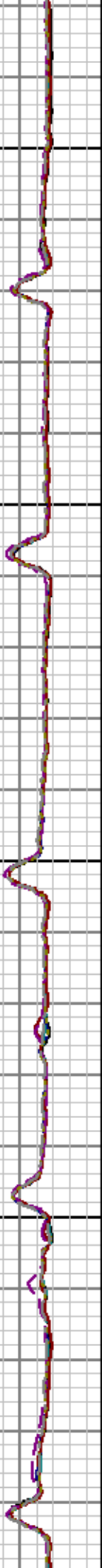
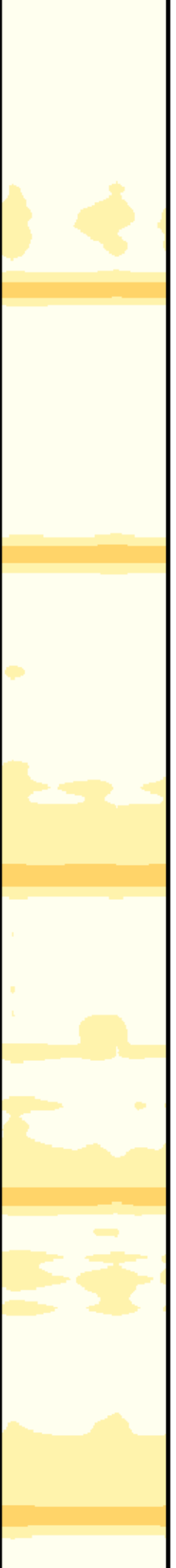






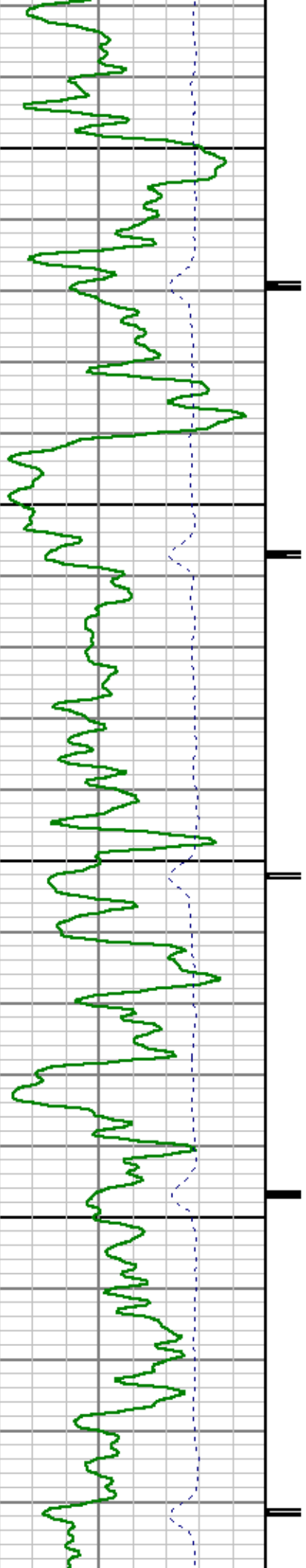


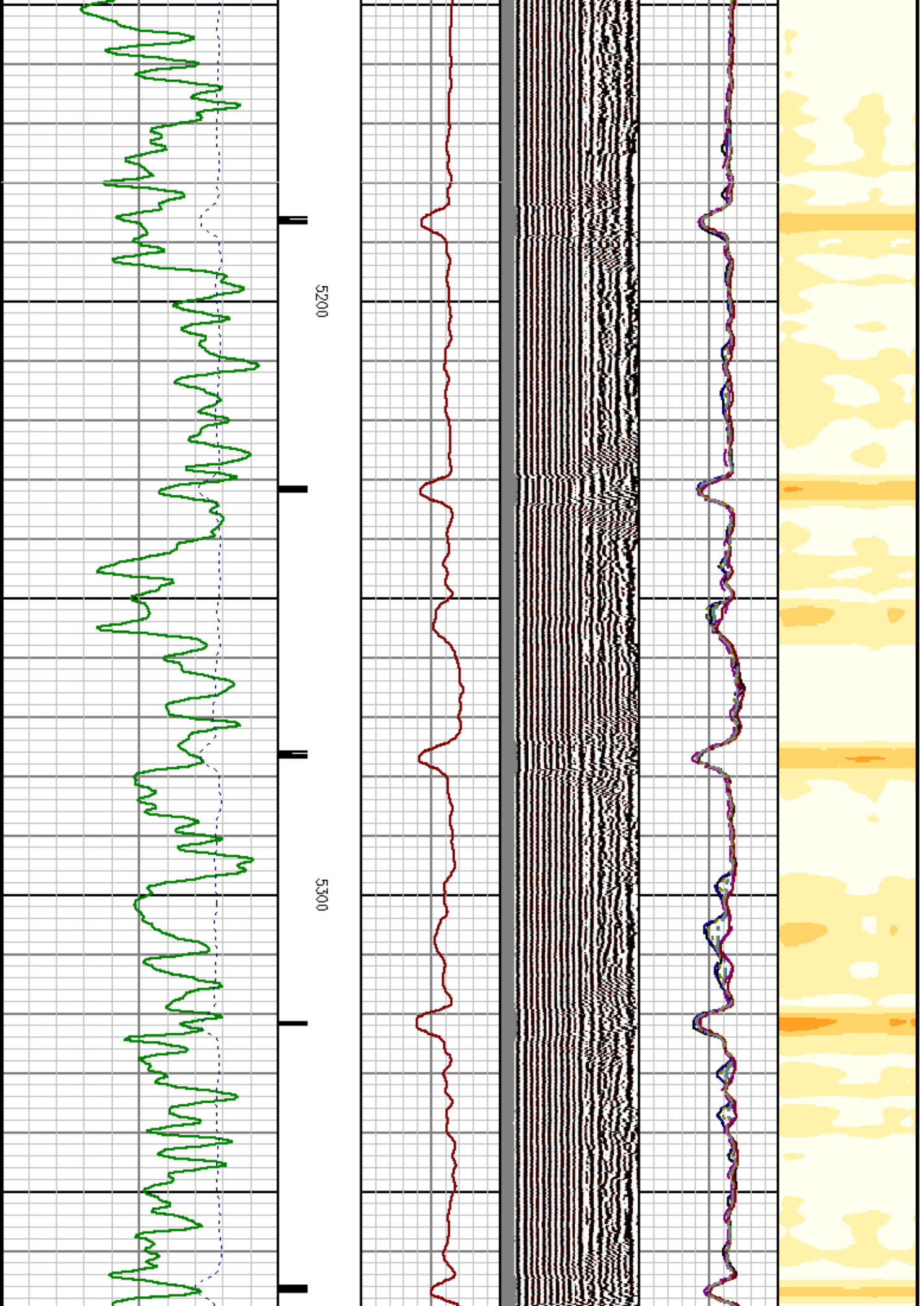
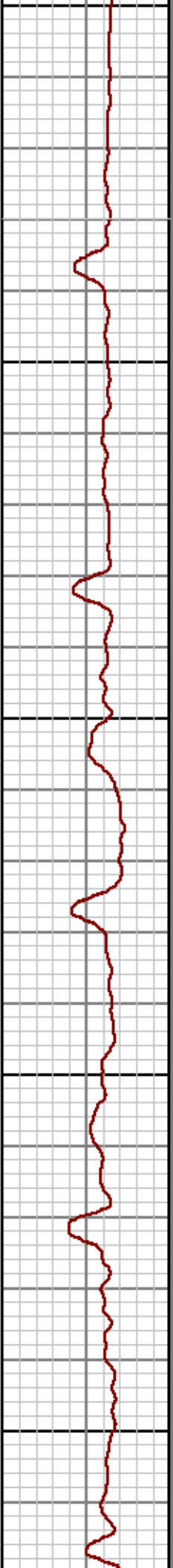
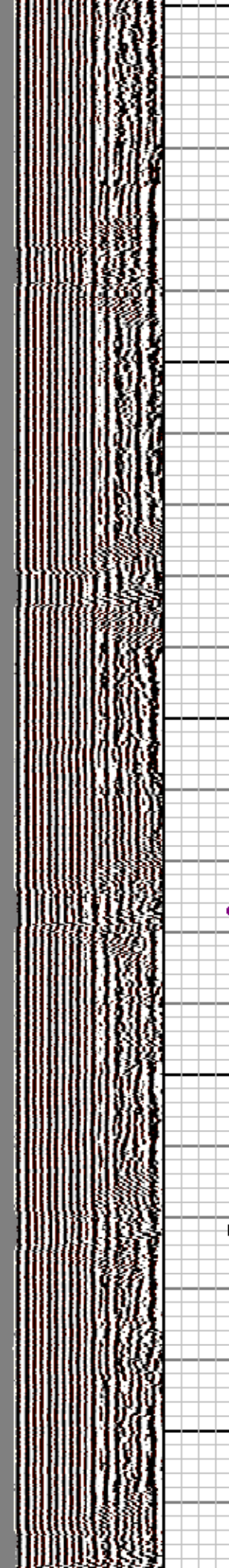
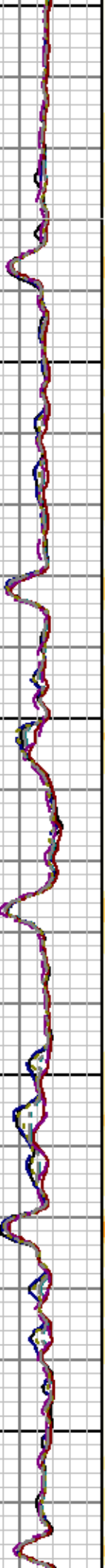
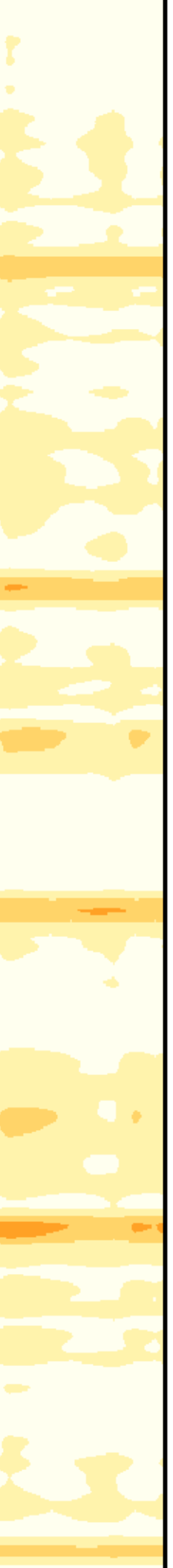


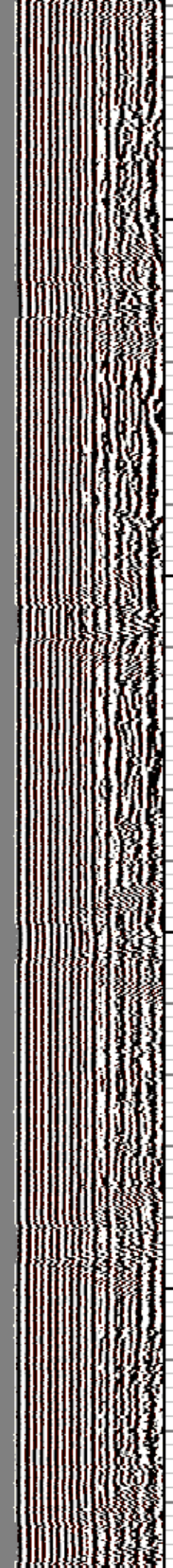
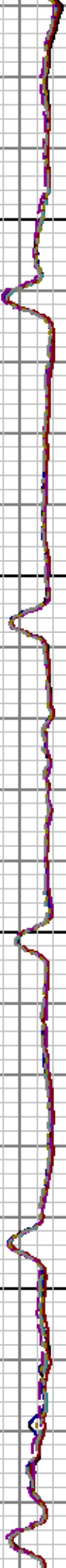
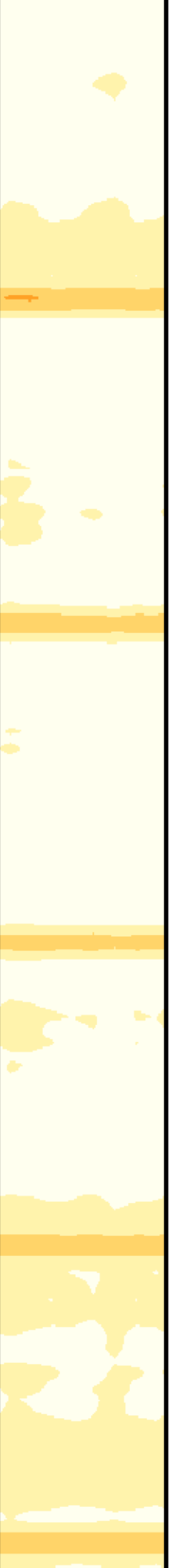


5000

5100



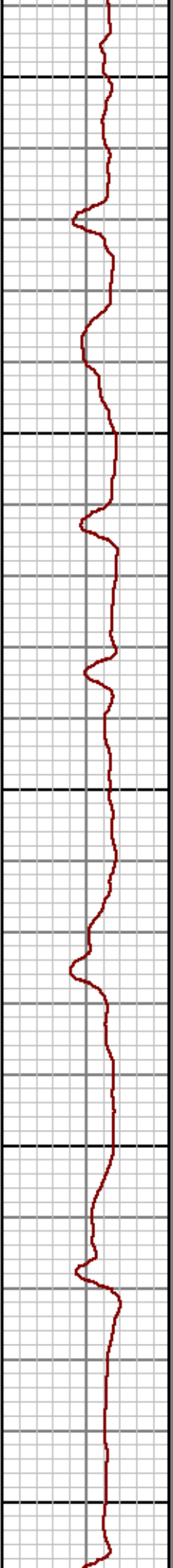
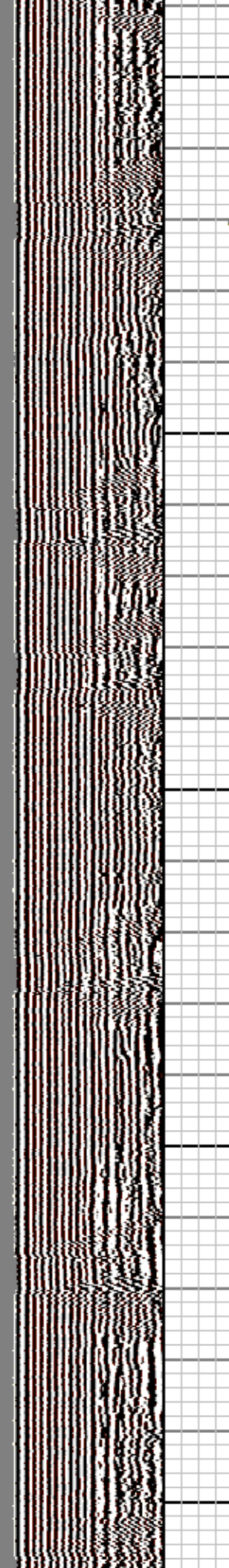
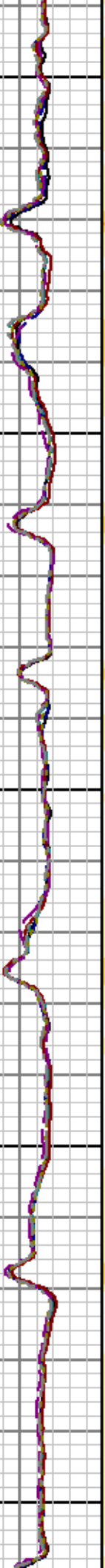




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5500

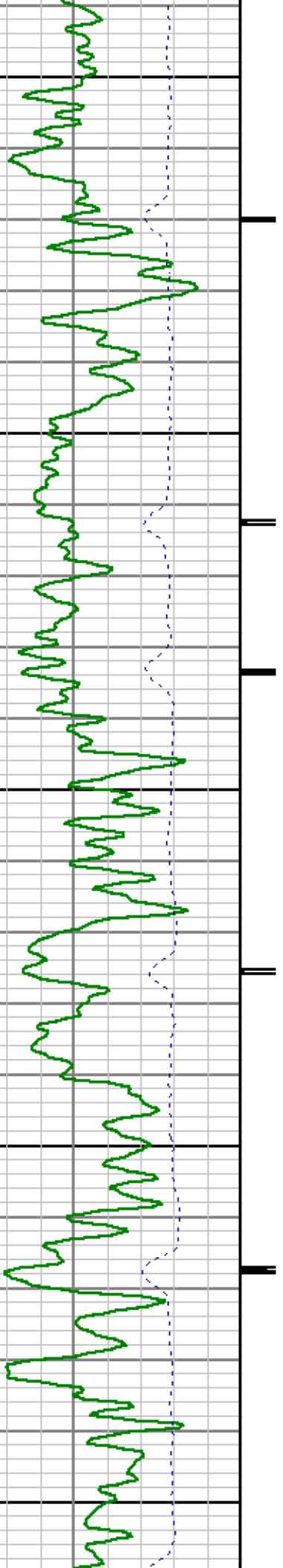


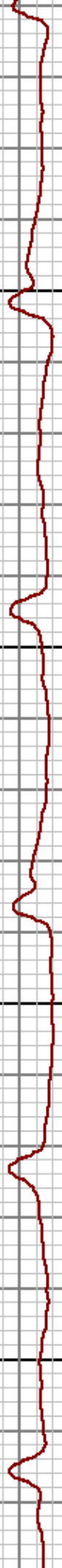
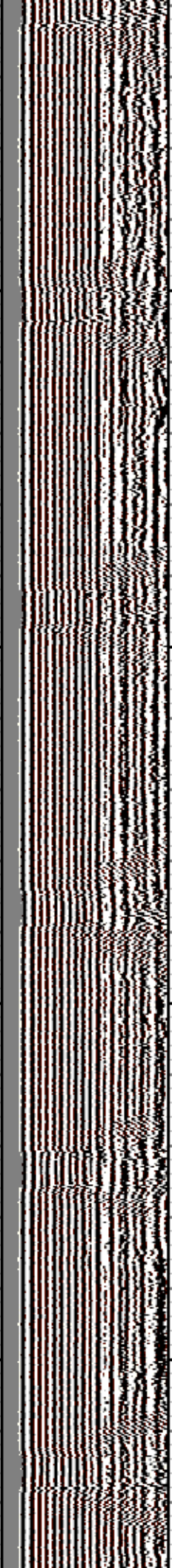
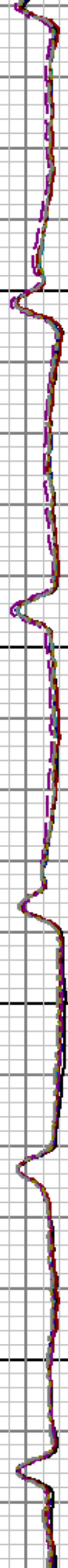
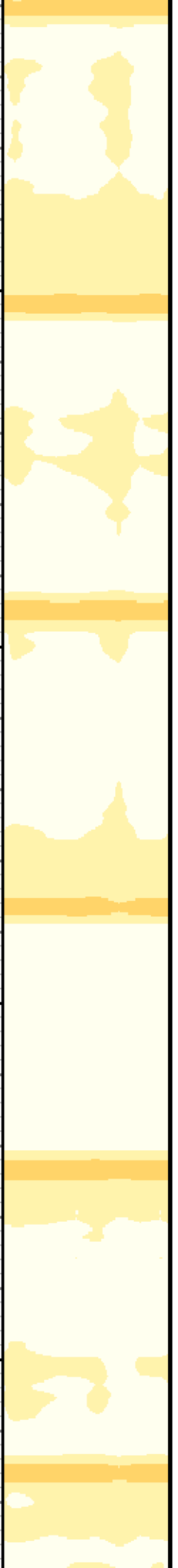


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5700

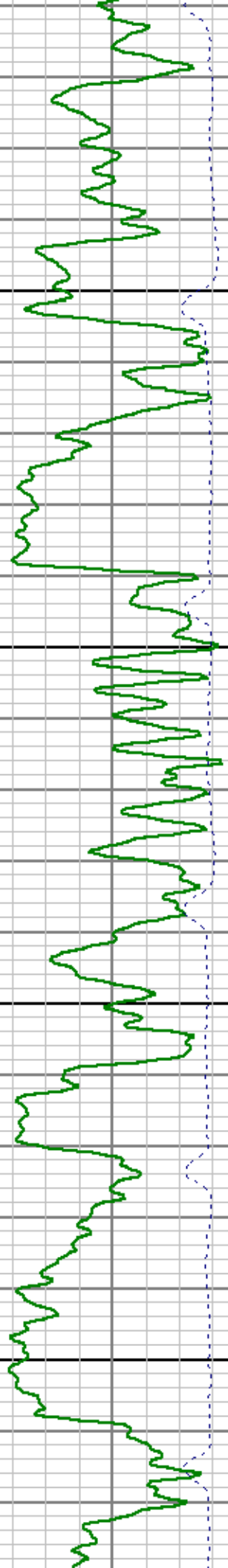
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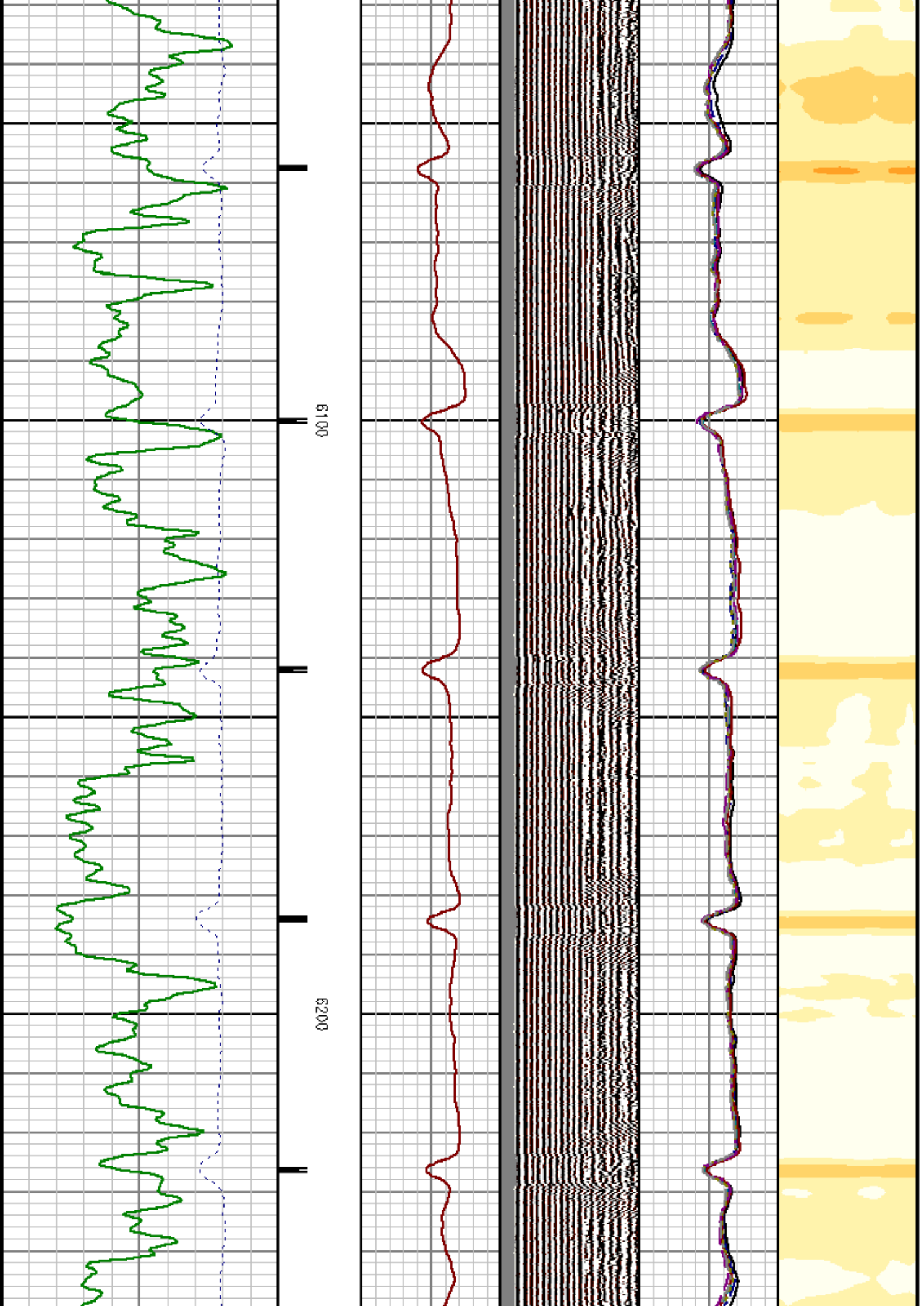


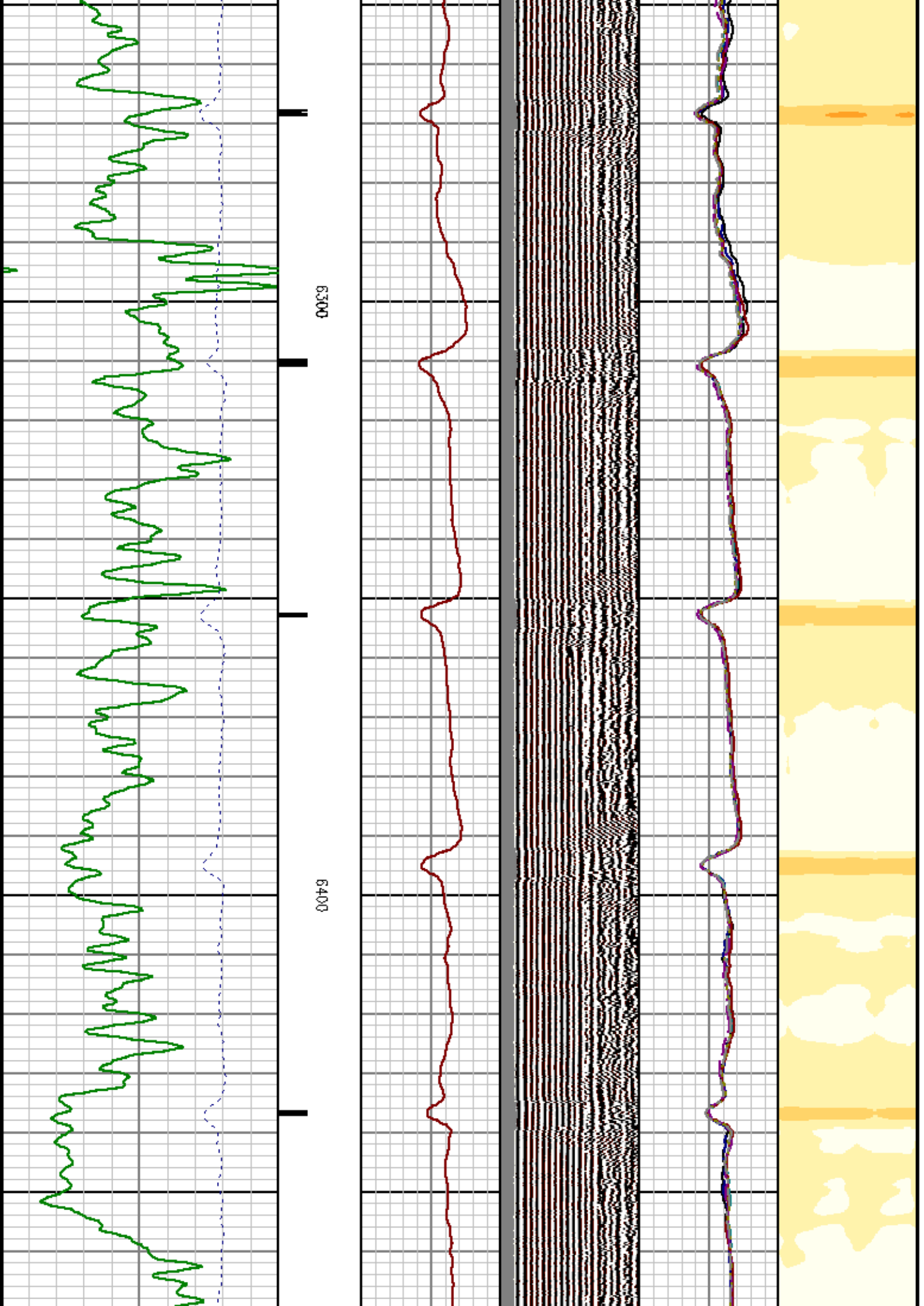


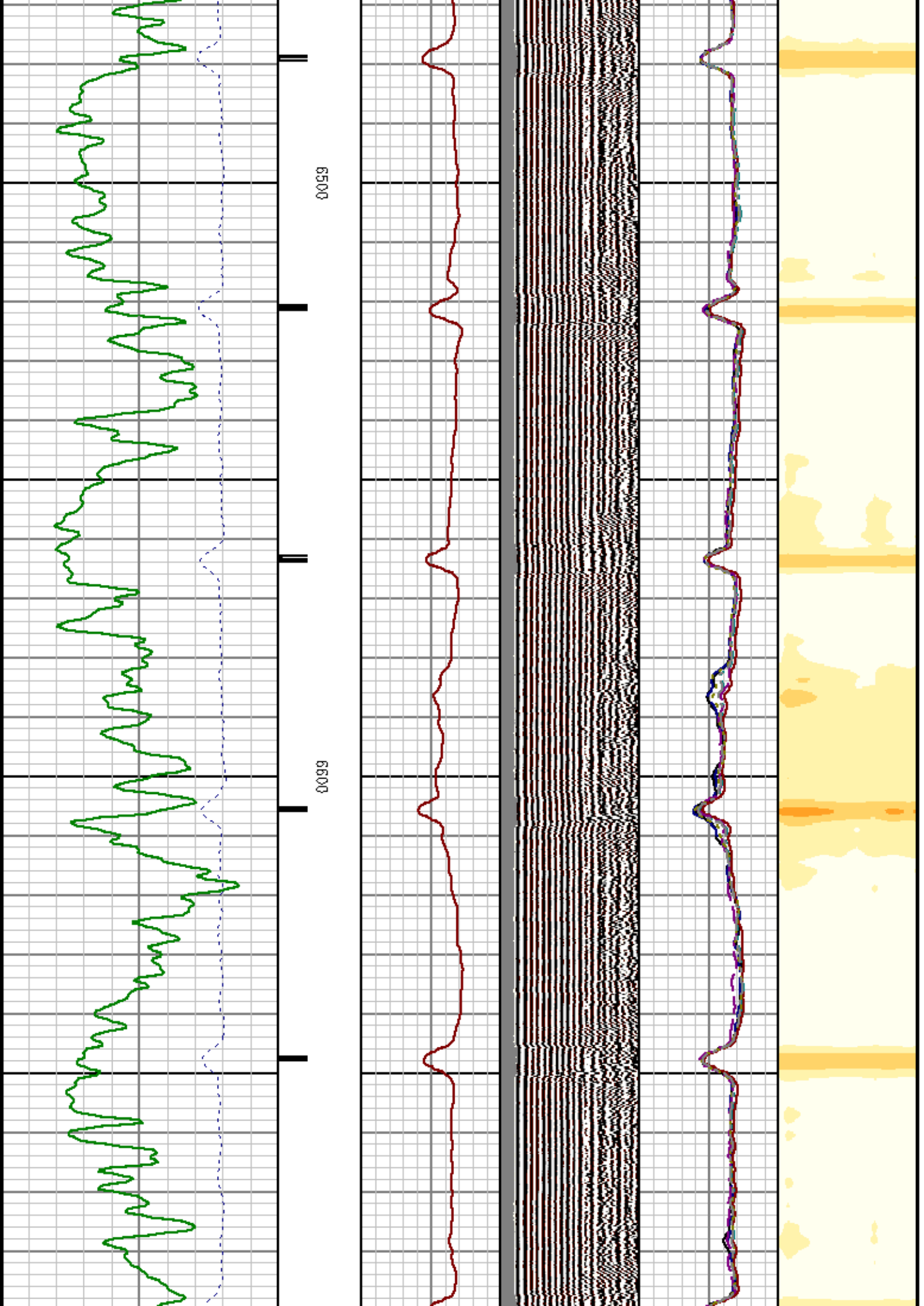
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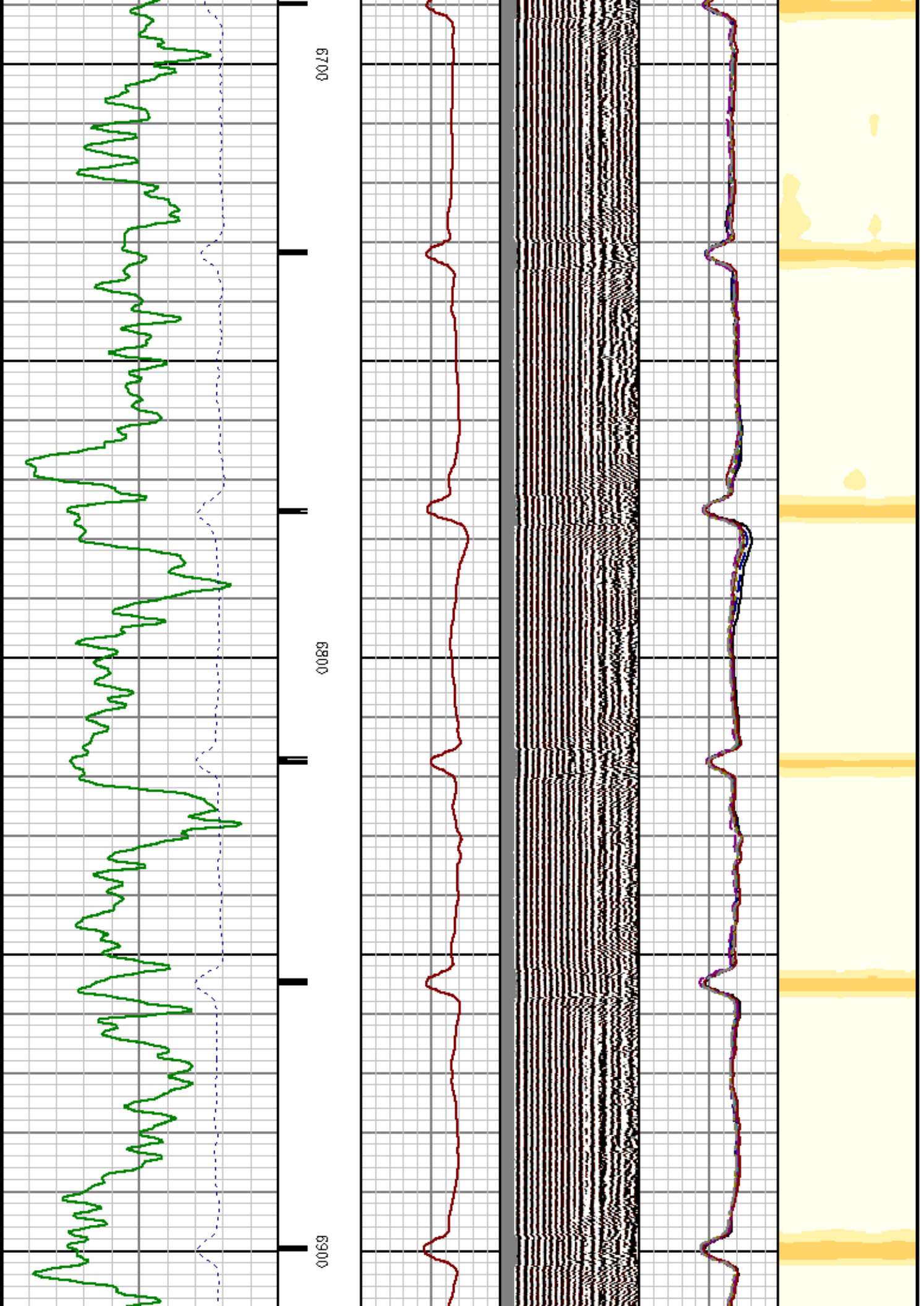
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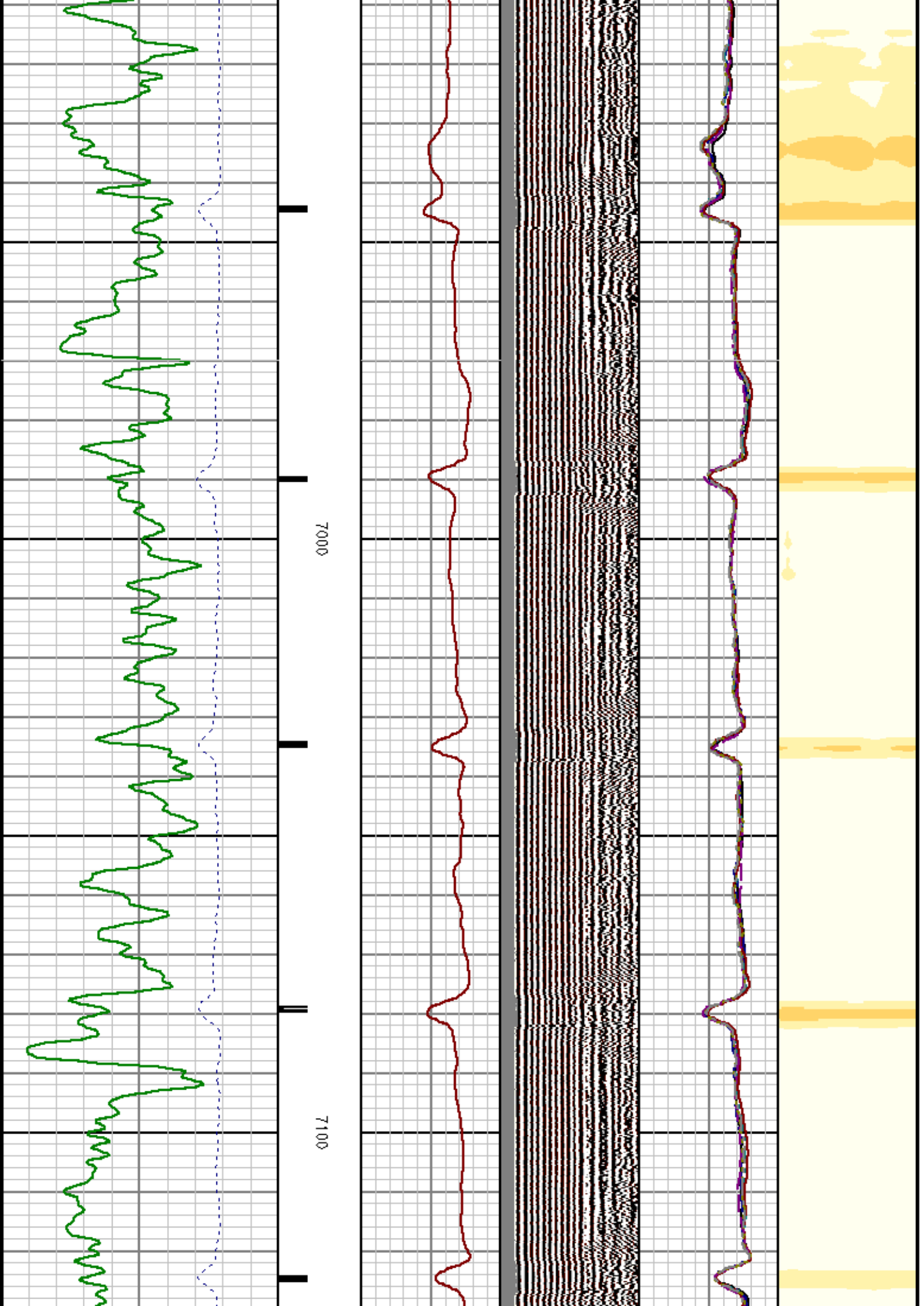


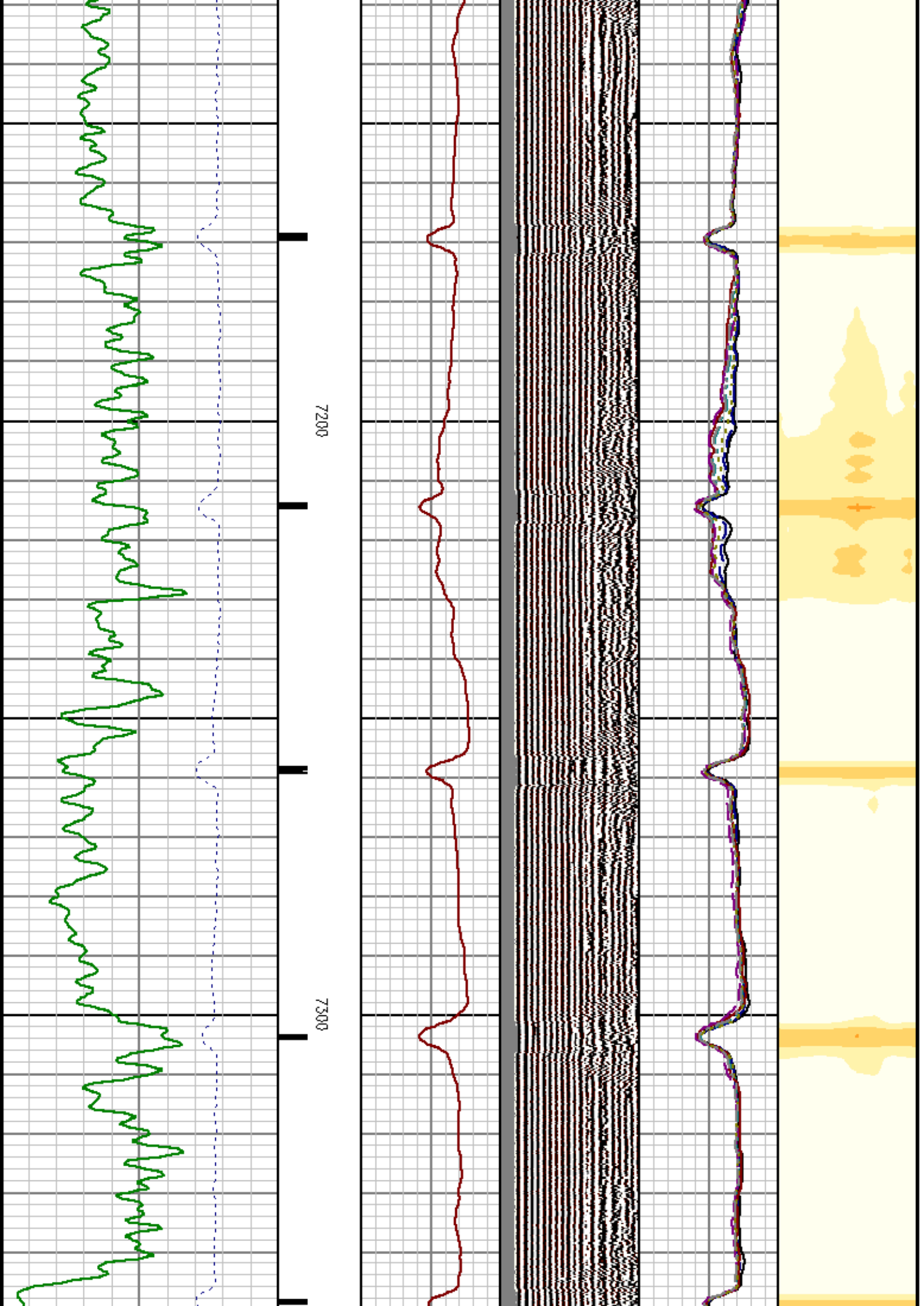


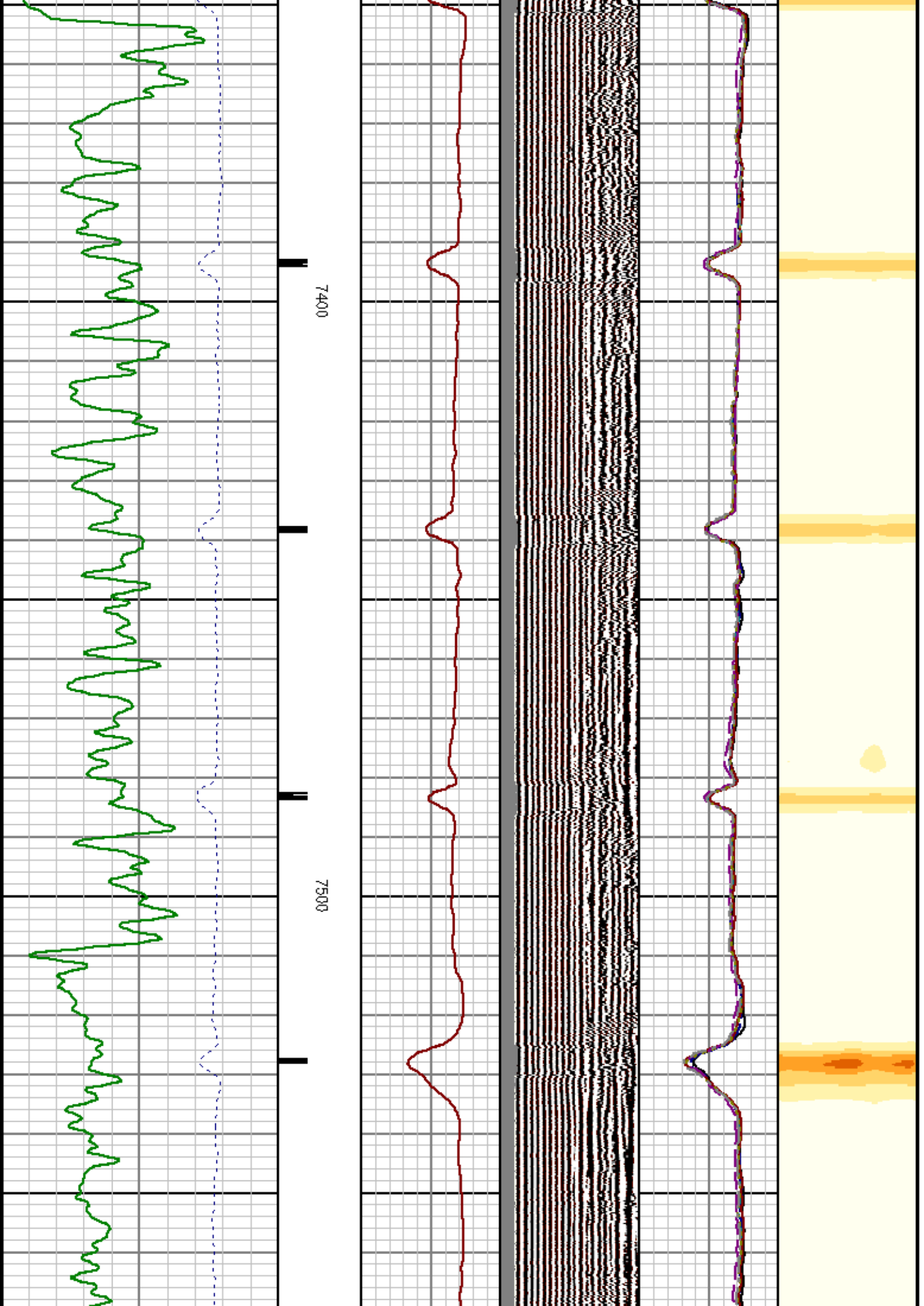


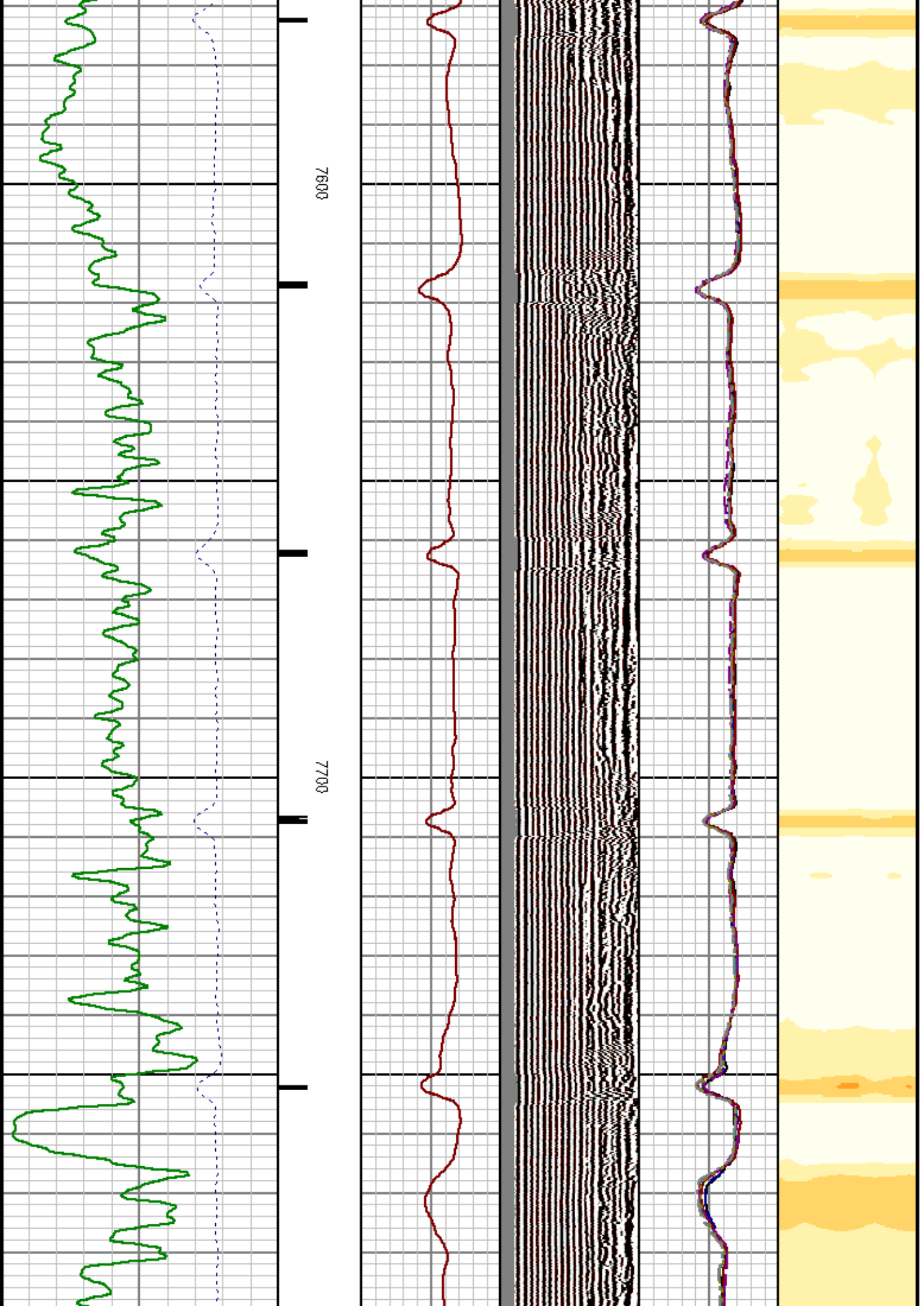


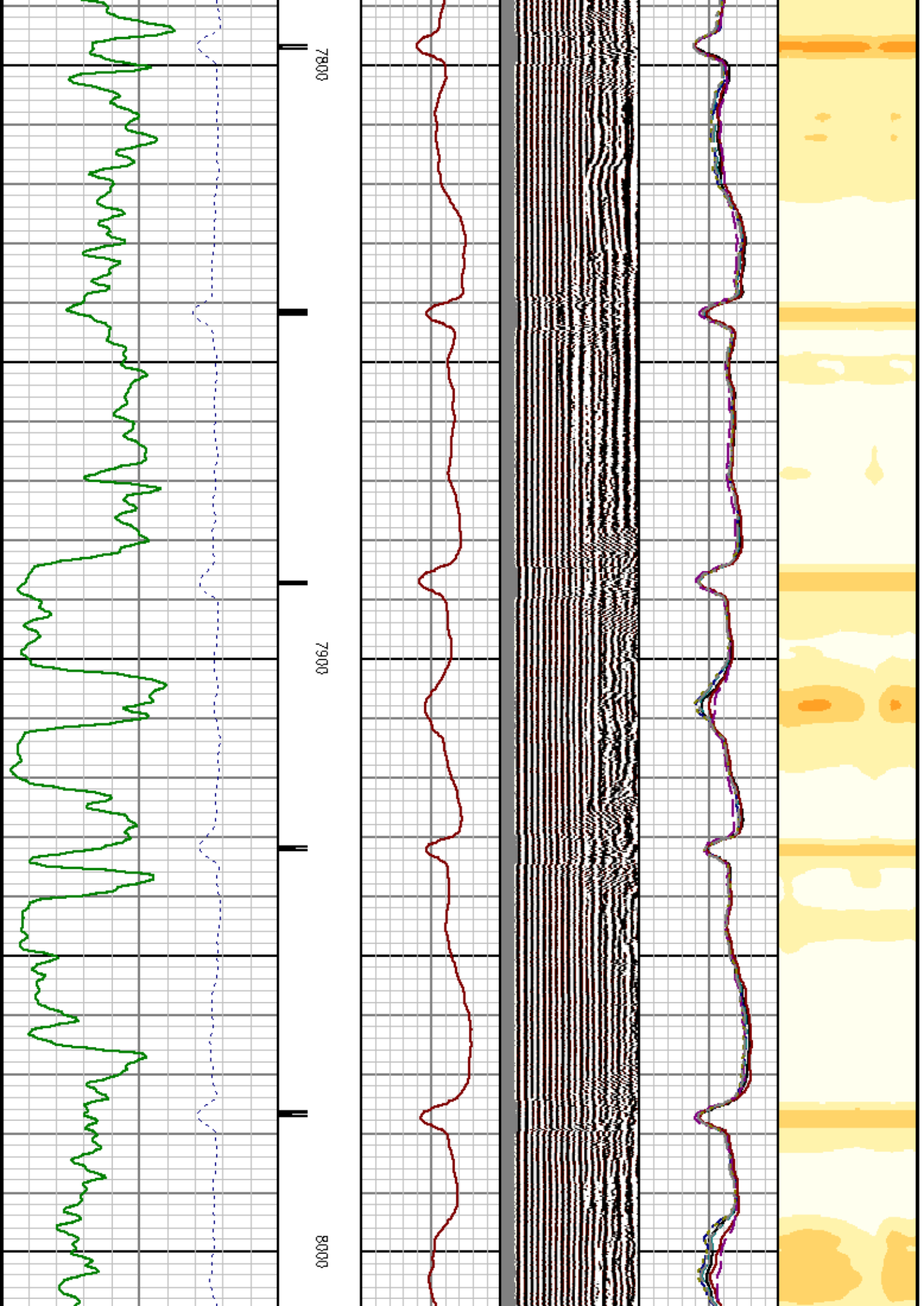


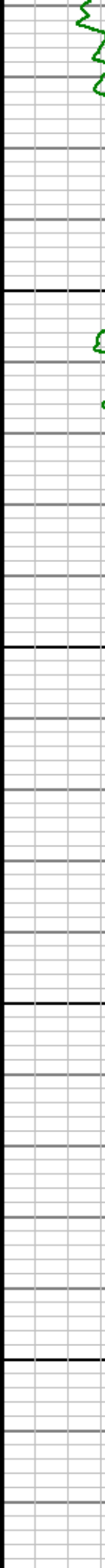
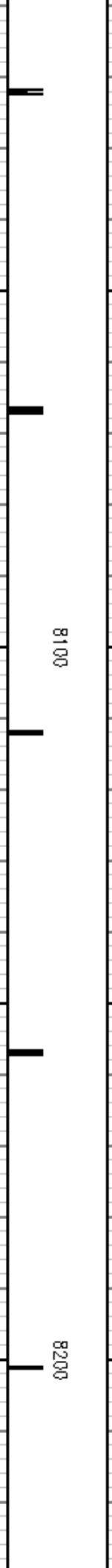
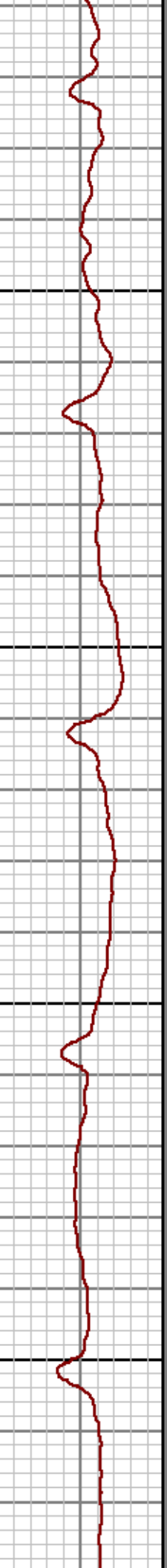
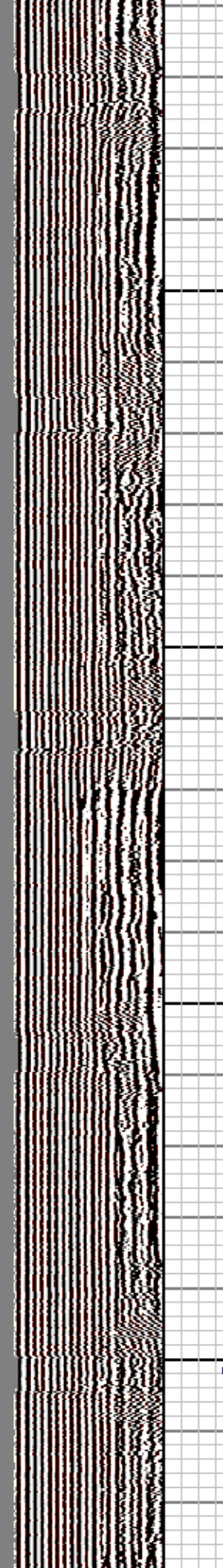
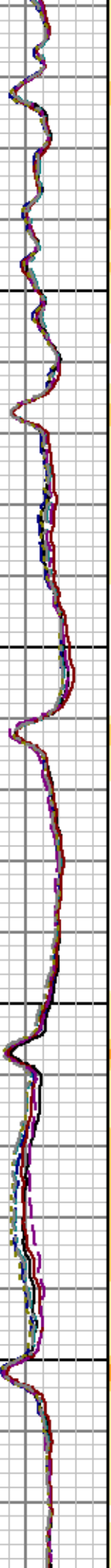




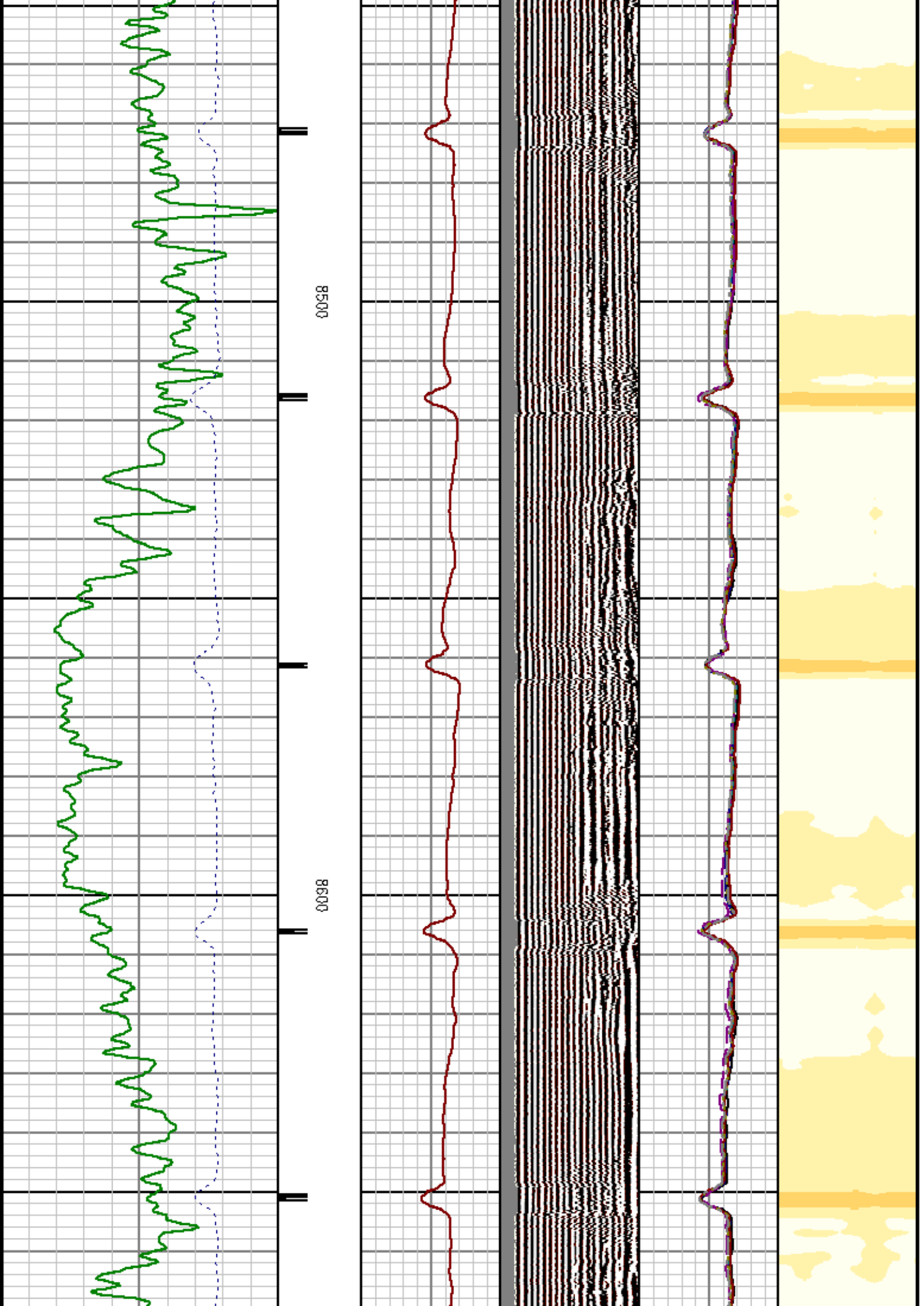


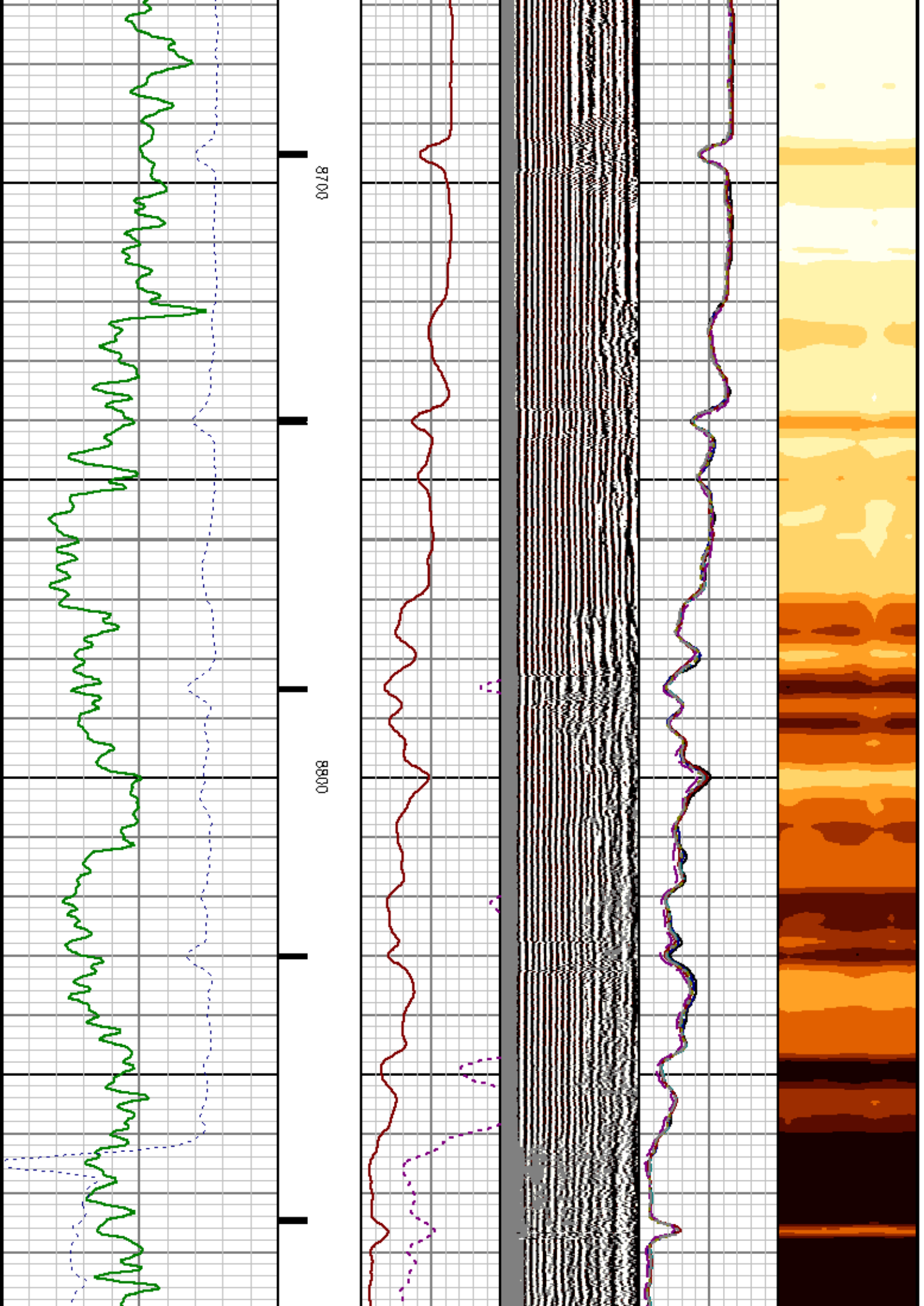


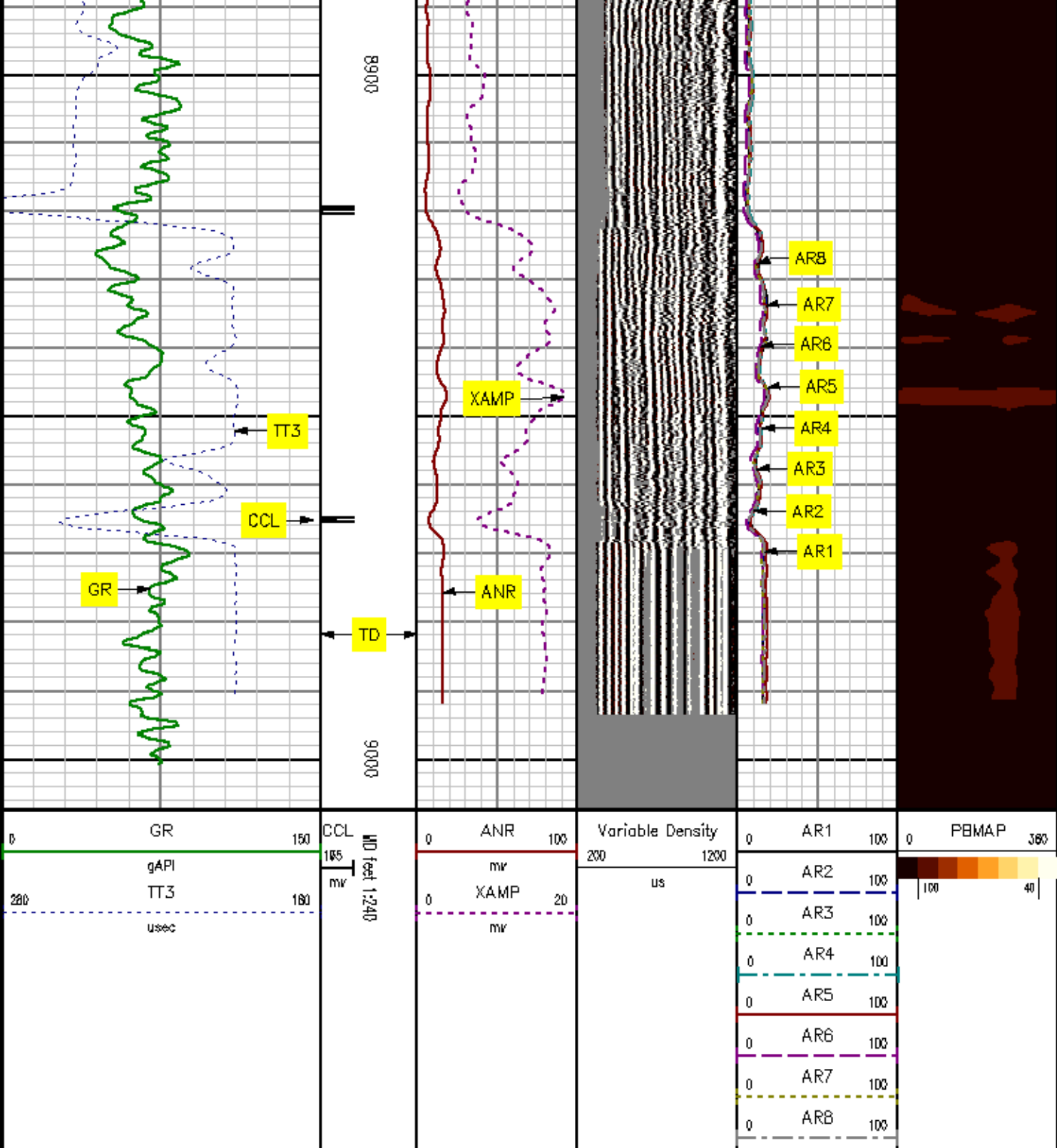










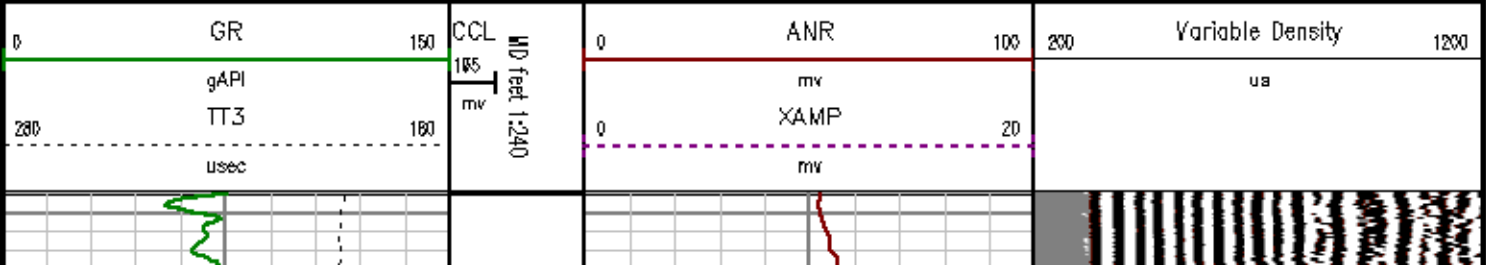


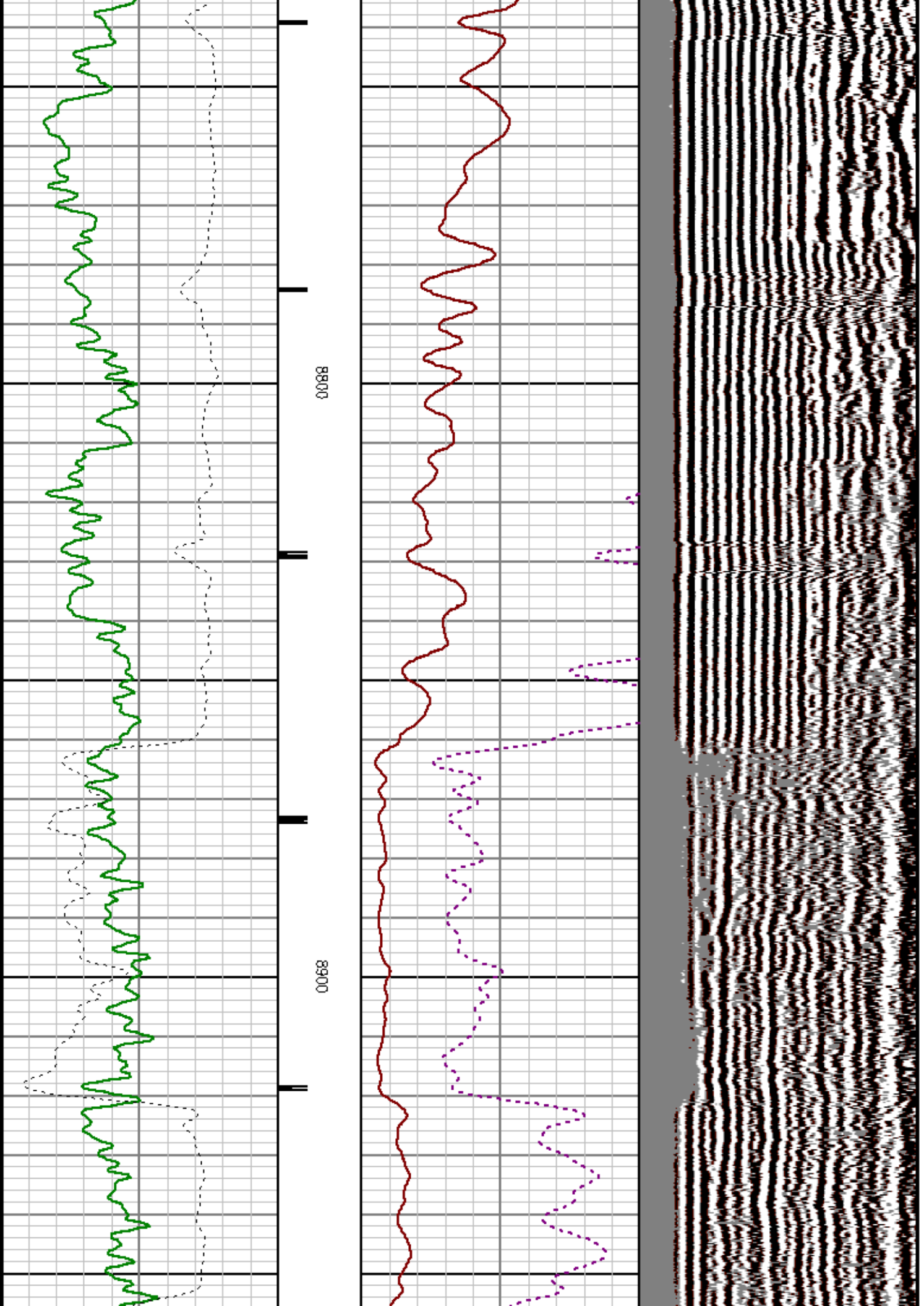
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	8728.000	8998.000
RAL	Amp Gate Start Near	200.391	usec	8728.000	8998.000
RAL	Amp Gate Start Radial	200.391	usec	8728.000	8998.000
RAL	Amp Gate Width Far	25.000	usec	8728.000	8998.000
RAL	Amp Gate Width Near	25.000	usec	8728.000	8998.000
RAL	Amp Gate Width Radial	25.000	usec	8728.000	8998.000
RAL	casing od	4.500	inches	8728.000	8998.000
RAL	casing wt	11.600	lbm/ft	8728.000	8998.000
RAL	FB Start Far	291.900	usec	8728.000	8998.000
RAL	FB Start Near	175.391	usec	8728.000	8998.000
RAL	FB Start Radial	175.391	usec	8728.000	8998.000
RAL	FB Thresh Far	15.000	mv	8728.000	8998.000
RAL	FB Thresh Near	10.000	mv	8728.000	8998.000
RAL	FB Thresh Radial	10.000	mv	8728.000	8998.000
RAL	Fluid Travel Time	200.000	usec/ft	8728.000	8998.000

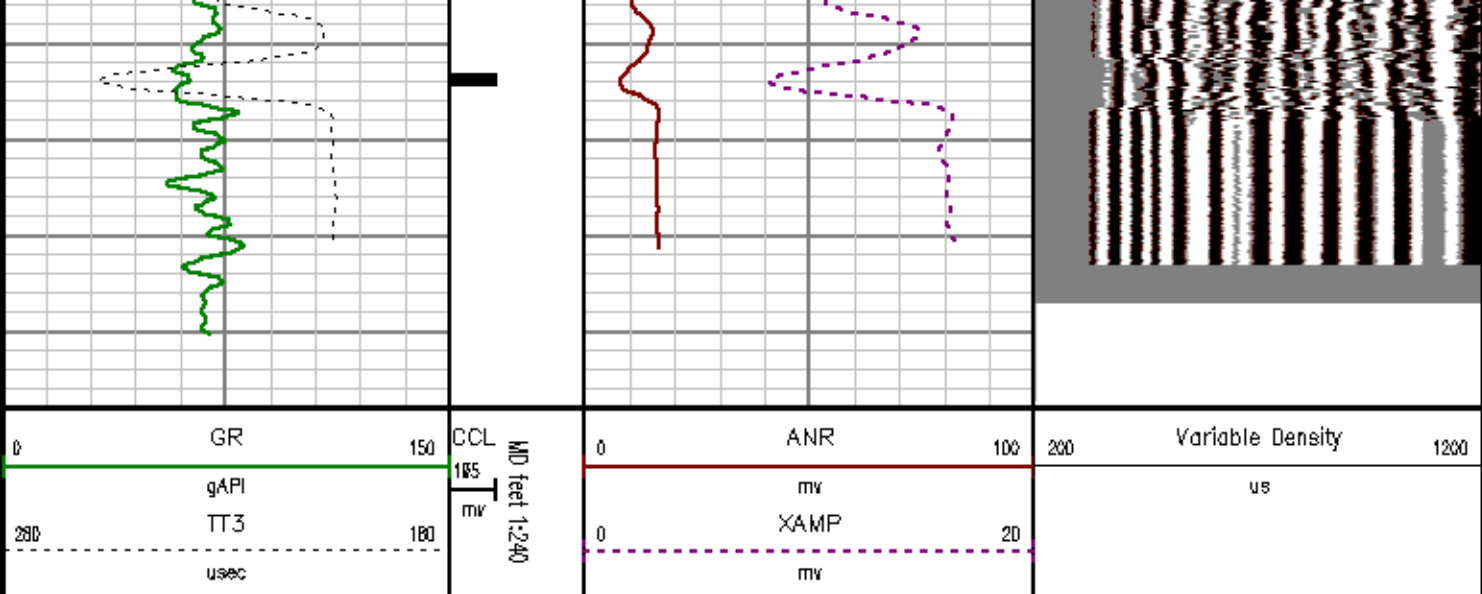
DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES							
1426XA	-15.360	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	-14.360	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 : KP 33-21
File Name : d:\welldata\33rad\repeat1.ktf
Mode : PlotMgr 5.4.504
Interval : 8728.00 - 8998.00 feet UP
Created : 1/5/2010 1:19:41 PM







CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\49BJ4_sbp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Dec 31 10:39:53 2009 TOOL SERIES: 1426XA ASSET: 496 SEQ: J4

Tool Delay [uSec] -54.00 Tank OD in 5.50 Tank Wt lbm/ft 15.50 Tank ID in 4.95

RECEIVER	Travel Time [uSec]	Amp. Gate Start [uSec]	Amp. Gate Width [uSec]	Zero Gate Start [uSec]	Zero Gate Width [uSec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	218	216	30	166	25	0.024	100.00	0.24
3 Ft. Receiver	216	216	30	155	37	0.594	100.00	0.24
5 Ft. Receiver	325	332	30	253	25	0.013	150.00	0.28
Radial #1	218	216	30	146	29	0.014	100.00	0.24
Radial #2	218	216	30	146	29	0.048	100.00	0.24
Radial #3	218	216	30	148	29	-0.268	100.00	0.23
Radial #4	217	216	30	148	29	0.019	100.00	0.23
Radial #5	217	216	30	148	29	0.028	100.00	0.23
Radial #6	216	216	30	146	29	-0.151	100.00	0.24
Radial #7	216	216	30	146	29	0.188	100.00	0.24
Radial #8	218	216	30	146	29	-0.137	100.00	0.24

RALSHP

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\496J4 fld.cal

WELLBITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Dec 31 10:41:24 2009 TOOL SERIES: 1426XA ASSET: 496 SEQ: J4

Tool Delay [usec] -54.00 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	0.078	0.000	1.00	100.000
3 Ft. Receiver	200	25	2.211			
5 Ft. Receiver	317	25	2.953			
Radial #1	200	25	2.702			
Radial #2	200	25	2.500			
Radial #3	200	25	2.569			
Radial #4	200	25	2.634			
Radial #5	200	25	2.202			
Radial #6	200	25	2.173			
Radial #7	200	25	2.064			
Radial #8	200	25	1.937			

GAMMA RAY #2

Calibration File: C:\case\calver\GR\457J1.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Jan 01 10:54:54 2010 TOOL SERIES: 1426XA ASSET: 457 SEQ: J1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K DA856	26.13	170.31	1.283	33.53	218.53	185.00

TOOL DIAGRAM

OTA SHORT CABLE HEAD

CENTRALIZER

Series RALCENT
Mnemonic CENT
Diameter 3.12"



30.00'

Weight 20.00 lb

PROBE 2 3/4 DUAL RECEIVER RADII (1426XA)

CENTRALIZER

Series RALCENT
Mnemonic CENT
Diameter 3.12"
Weight 20.00 lb

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

XMIT 20.94'

NEAR RCVR 17.85'

FAR RCVR 15.94'

CCL 11.34'

GR 9.49'

NEU 4.09'

0.00'

Total Length: 30.00'

Total Weight: Not Available

Max Diameter: 0' 3.12"



Baker Atlas

CASE

Company

WILLIAMS PRODUCTION COMPANY

Well

KP 33-21

Field

KOKOPELLI

County

GARFIELD

State

COLORADO

Location

SHL: 1517' FSL & 2084' FEL

BHL: 2472' FSL & 1930' FEL

Elevations

KB 6965 ft

DF 6964 ft

GL 6972 ft

File No:

154-1

API No:

05045179220000

21, 6S, 91W

KP 33-21 PAD

CYCLONE 30

SEC 21

TWP 6S

RGE 91W