



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No:	Company	WILLIAMS PRODUCTION RMT COMPANY	
CH028046	Well	RU 333-6	
API No.	Field	RULISON	
05045181740000	Country	GARFIELD	
	State	COLORADO	
Location:		Other Services	
S&B T:75 R:93W PAD: RU 34-B Rte: W60RS SSD 576		SHL: 1018' FSL & 1948' FEL BHL: 1523' FSL & 1961' FEL SEC: 8 TWP: 75 RGE: 93W RPM	
Permanent Datum	G.L.	Elevation	7536.5 ft
Log Measured From	K.B.	26 ft	Above P. D.
Drill Measured From	KELLY BUSHING		
		KB	7582.5 ft
		DF	7561.5 ft
		GL	7536.5 ft

Date	17-DEC-2010
Run	ONE
Service Order	575665
Depth Driller	9812 ft
Depth Logger	9794 ft
Bottom Logged Interval	9794 ft
Top Logged Interval	SURFACE
Time Started	08:00
Time Finished	12:00
Operator Rig Time	4 HRS
Type of Fluid in Hole	WATER
Fluid Density	N/A
Fluid 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	240 degF
Reference Log	BA/SR-QH-ZOBN
Reference Log Date	27-NOV-10
Equipment	4271
Recorded By	TIM KAUFF
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		
7.875 in		

Casing Record				
Size	Weight	Grade	From	To
9.825 in	N/A	N/A	SURFACE	1102.7 ft
4.5 in	11.6 lbm/ft	N/A	SURFACE	9812 ft

Remarks
SHORT JOINT RECORDED @ 8483' - 8503'
BHT RECORDED 240"
THE CREW OF 4271 THANKS YOU.

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position

1	1	MANDREL	1426XA	10189154	CENTRALIZED
1	1	GAMMA RAY	2458XA	10417457	CENTRALIZED

MAIN SECTION PRIMARY PRESENTATION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	65.633	2218.000
RAL	Amp Gate Start Near	200.391	usec	65.633	2218.000
RAL	Amp Gate Start Radial	200.391	usec	65.633	2218.000
RAL	Amp Gate Width Far	25.000	usec	65.633	2218.000
RAL	Amp Gate Width Near	25.000	usec	65.633	2218.000
RAL	Amp Gate Width Radial	25.000	usec	65.633	2218.000
RAL	casing od	4.500	inches	65.633	2218.000
RAL	casing wt	11.600	lbm/ft	65.633	2218.000
RAL	FB Start Far	281.900	usec	65.633	2218.000
RAL	FB Start Near	175.391	usec	65.633	2218.000
RAL	FB Start Radial	175.391	usec	65.633	2218.000
RAL	FB Thresh Far	15.000	mv	65.633	2218.000
RAL	FB Thresh Near	4.000	mv	65.633	2218.000
RAL	FB Thresh Radial	10.000	mv	65.633	2218.000
RAL	Fluid Travel Time	200.000	usec/ft	65.633	2217.977

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 : PlatMgr, v5.4.504

Company : WILLIAMS PRODUCTION RMT COMPANY

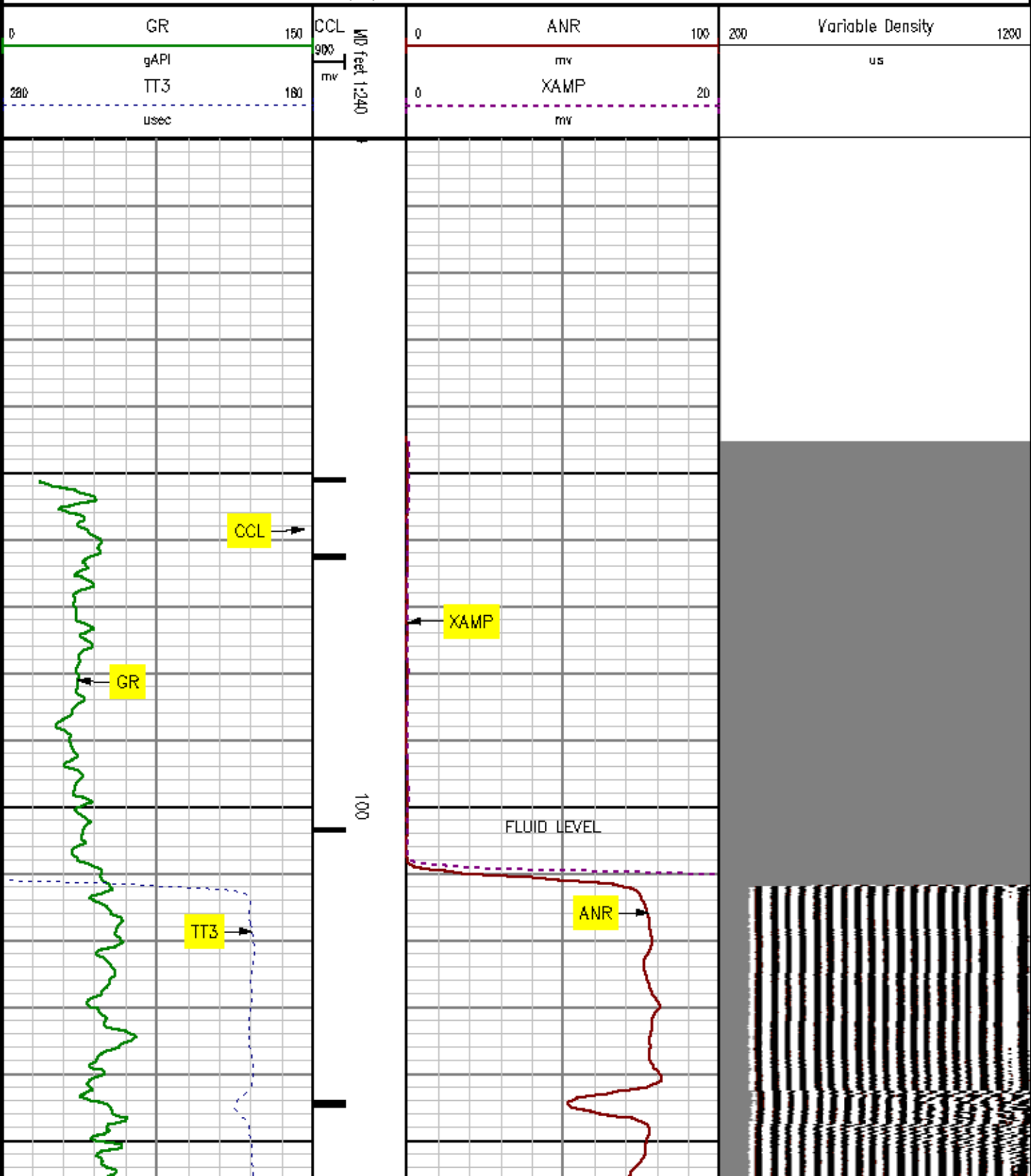
Well : RU 333-6

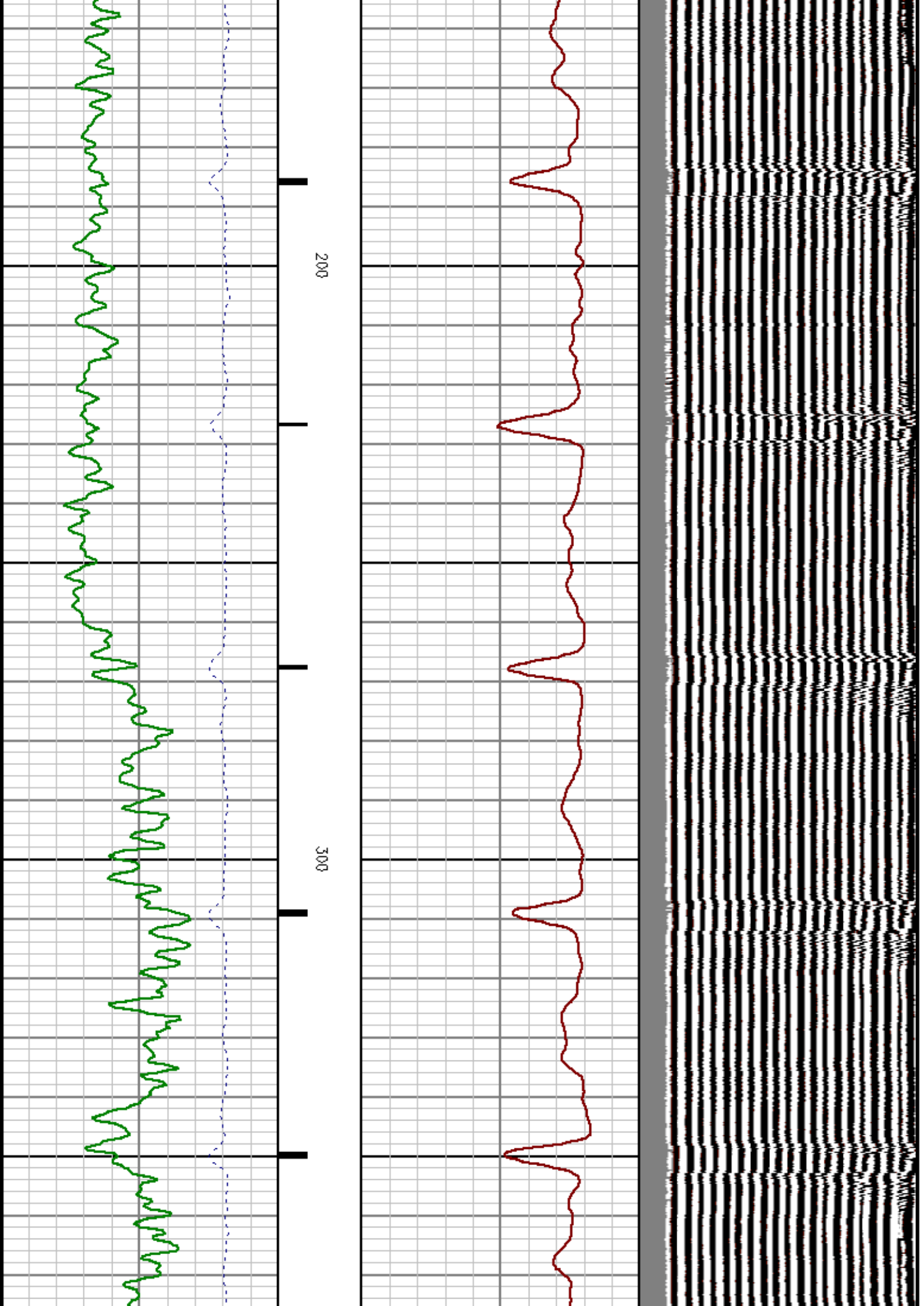
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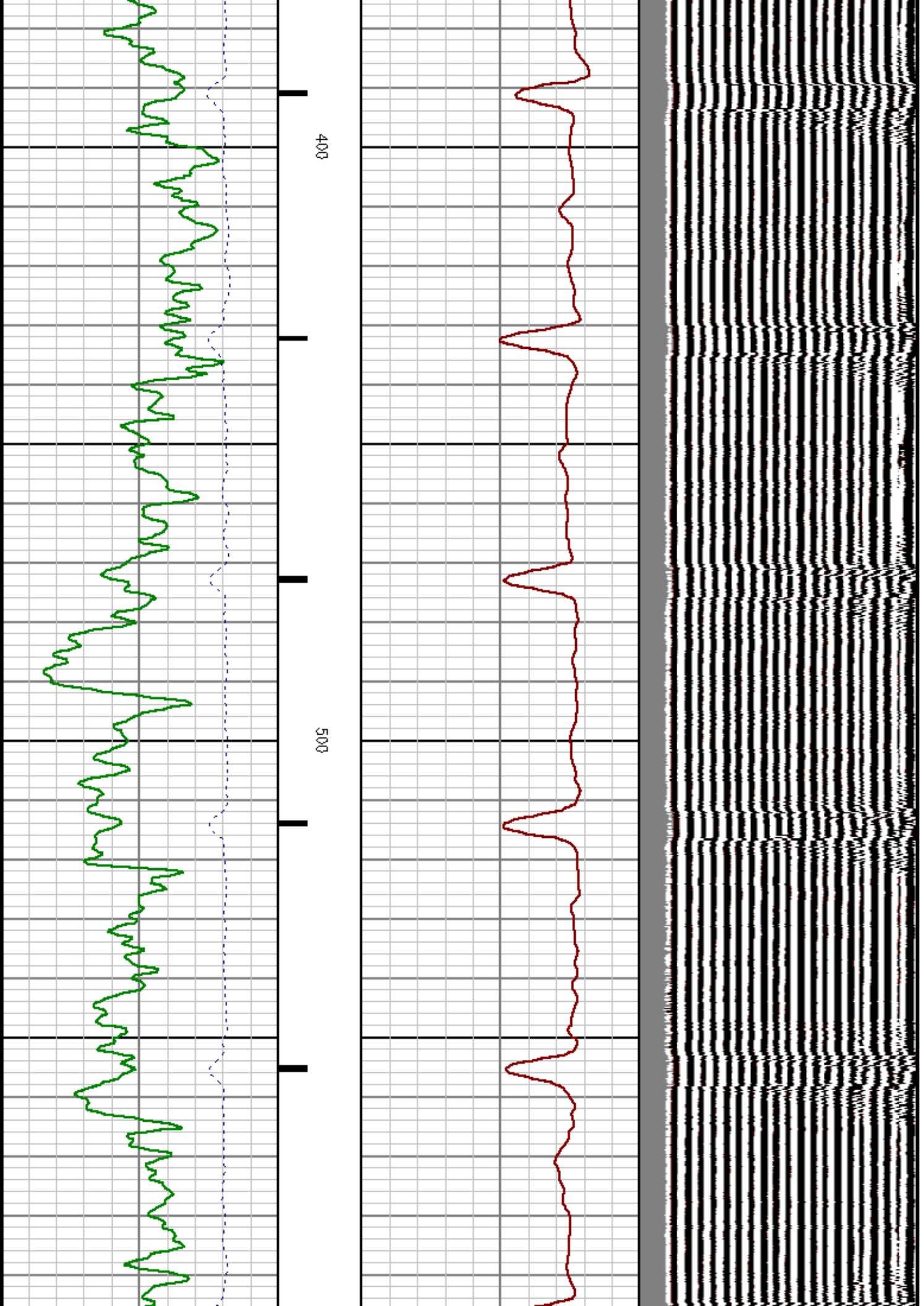
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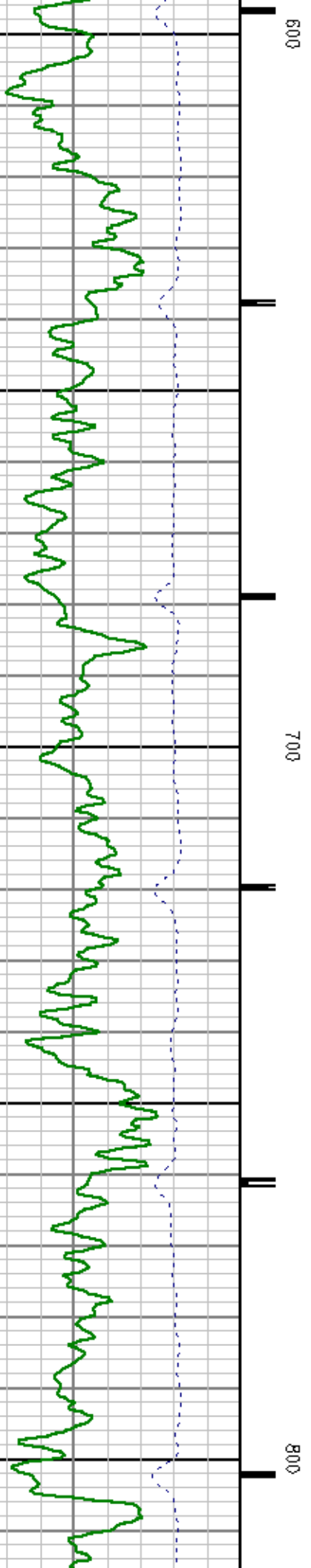
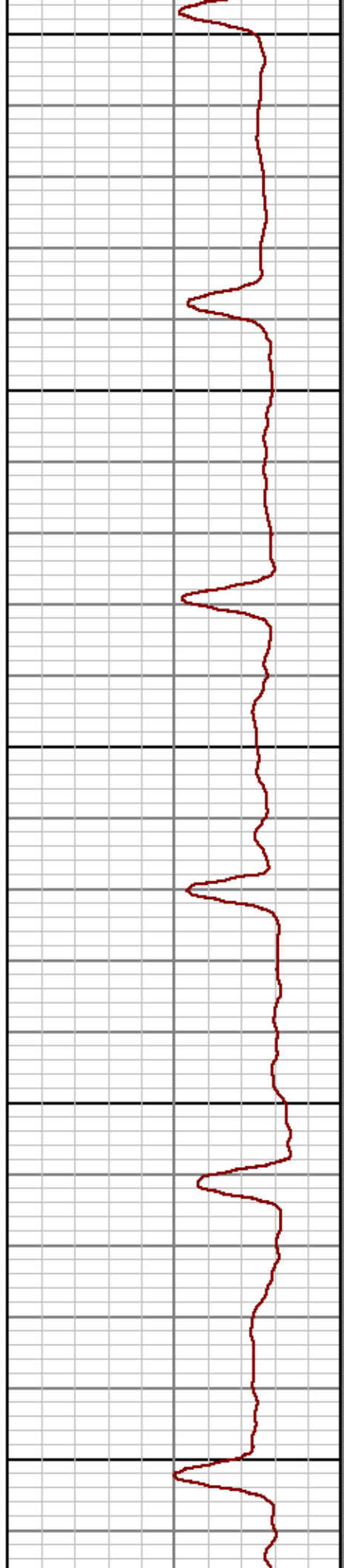
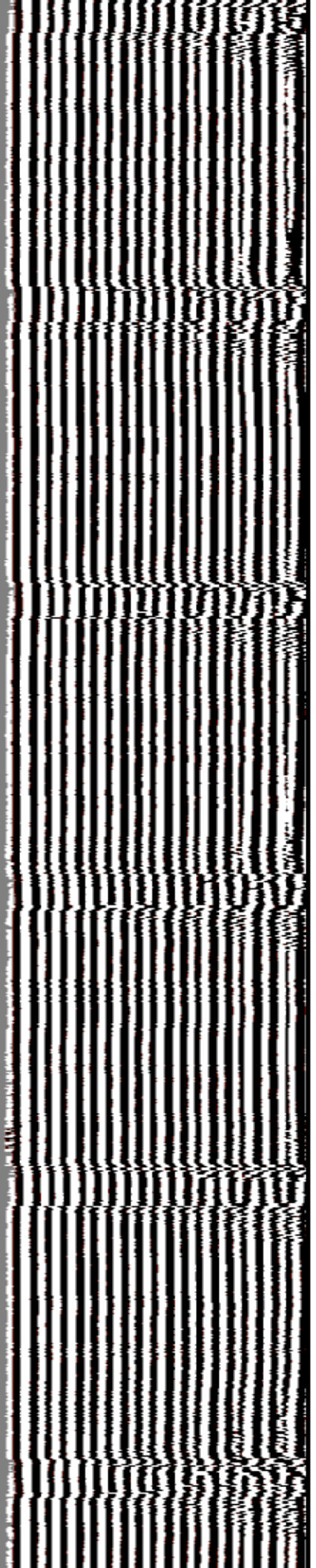
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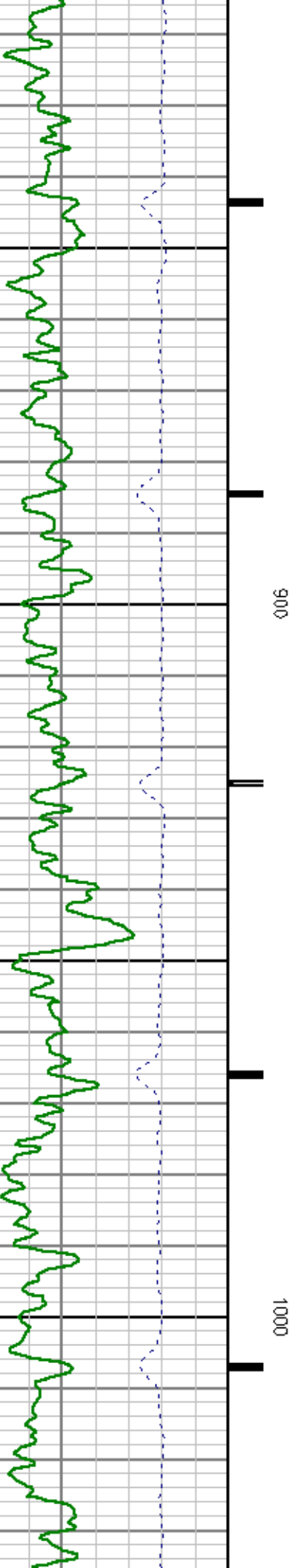
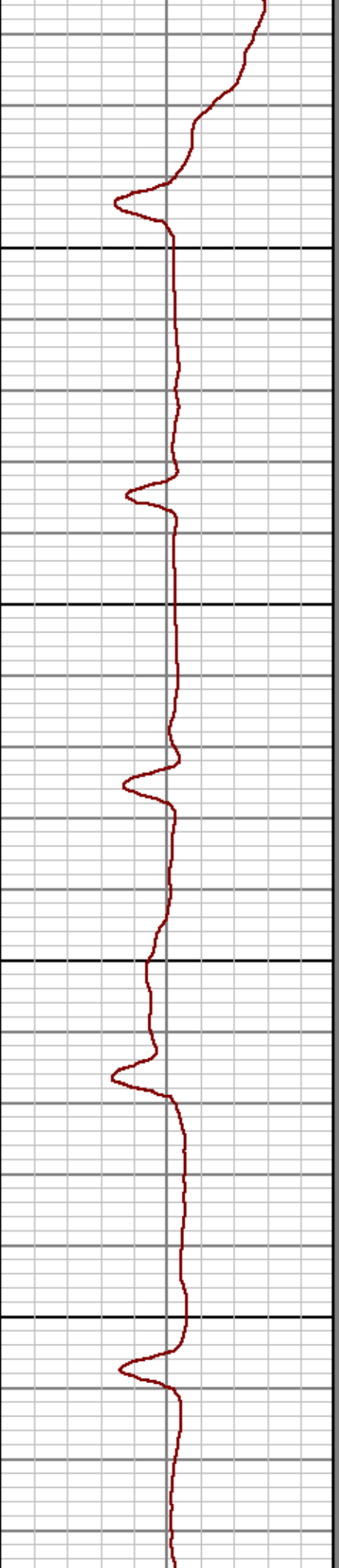
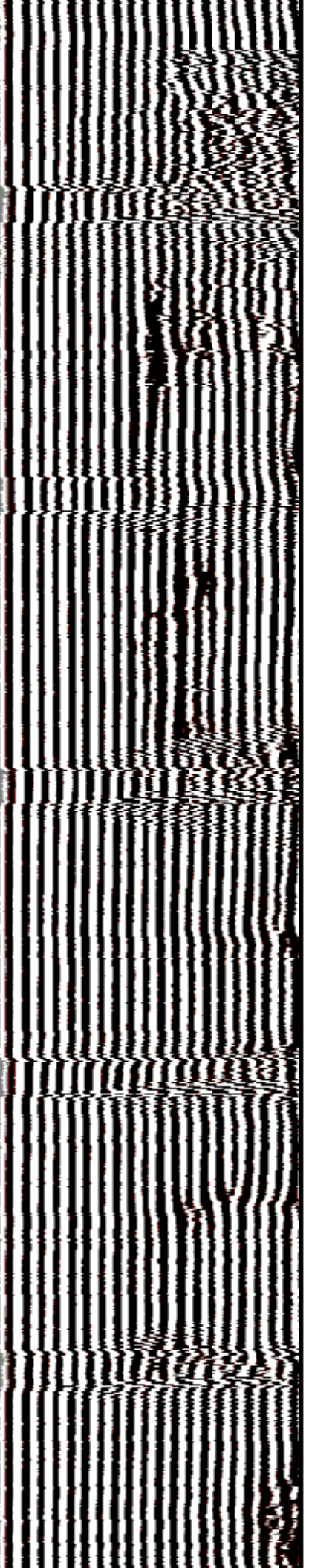
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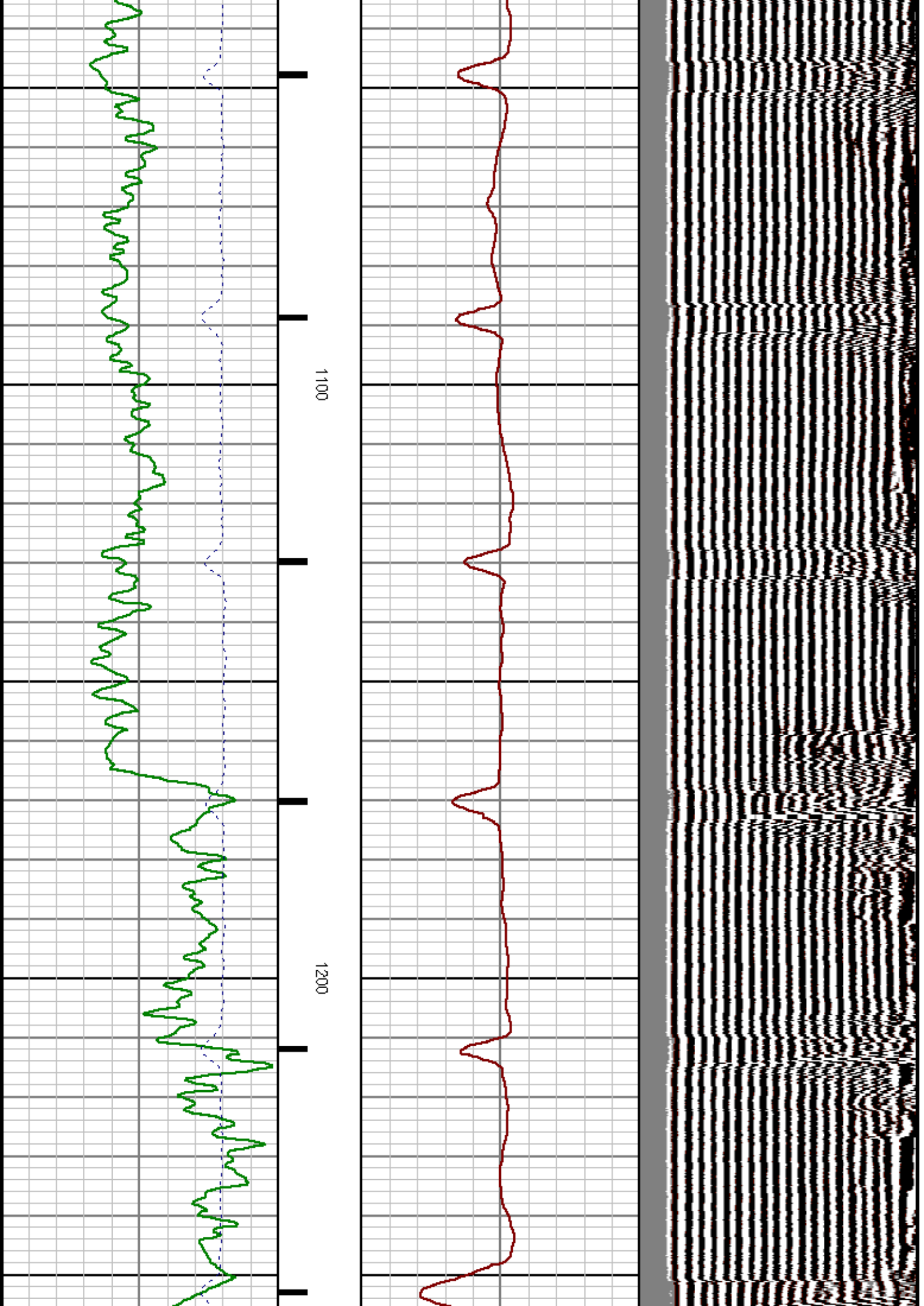


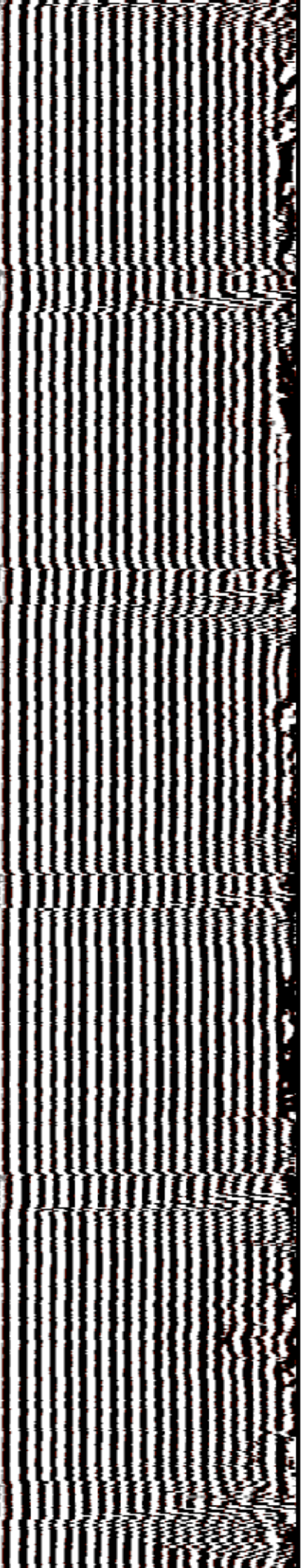






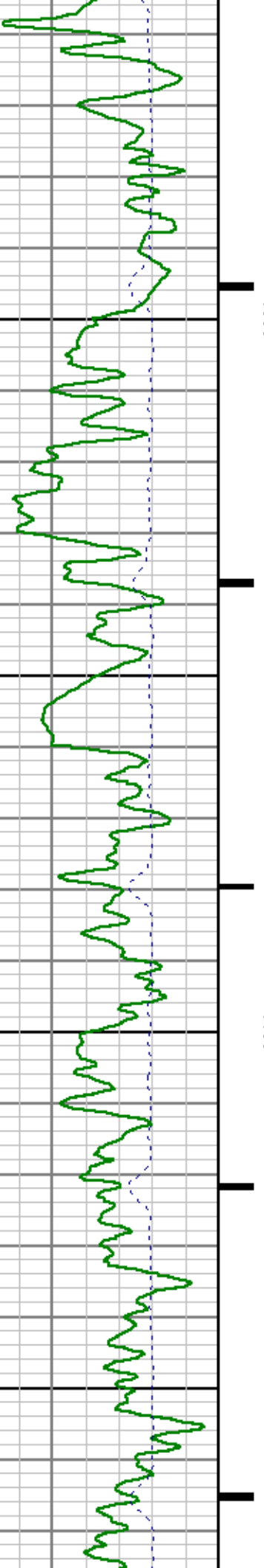


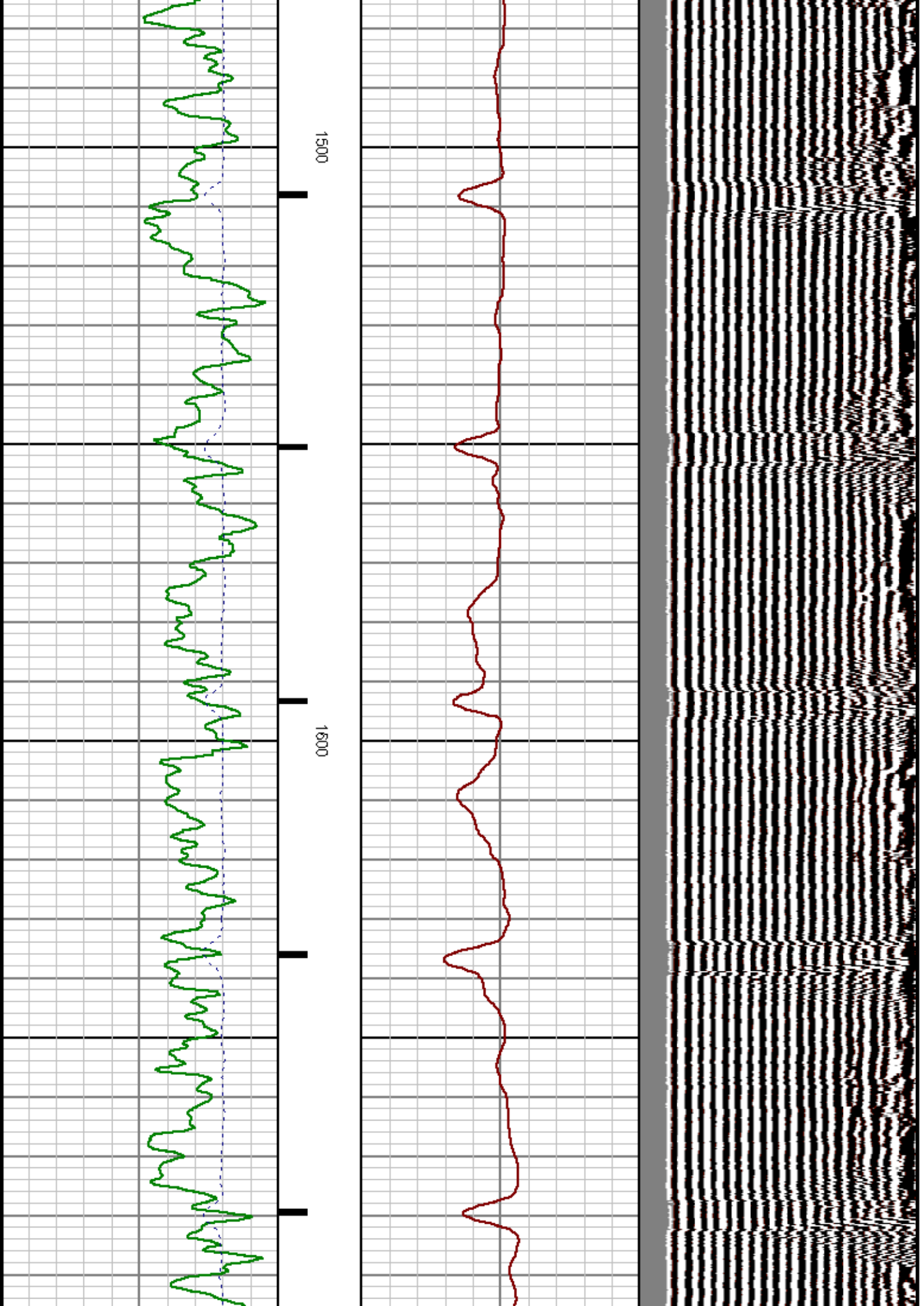


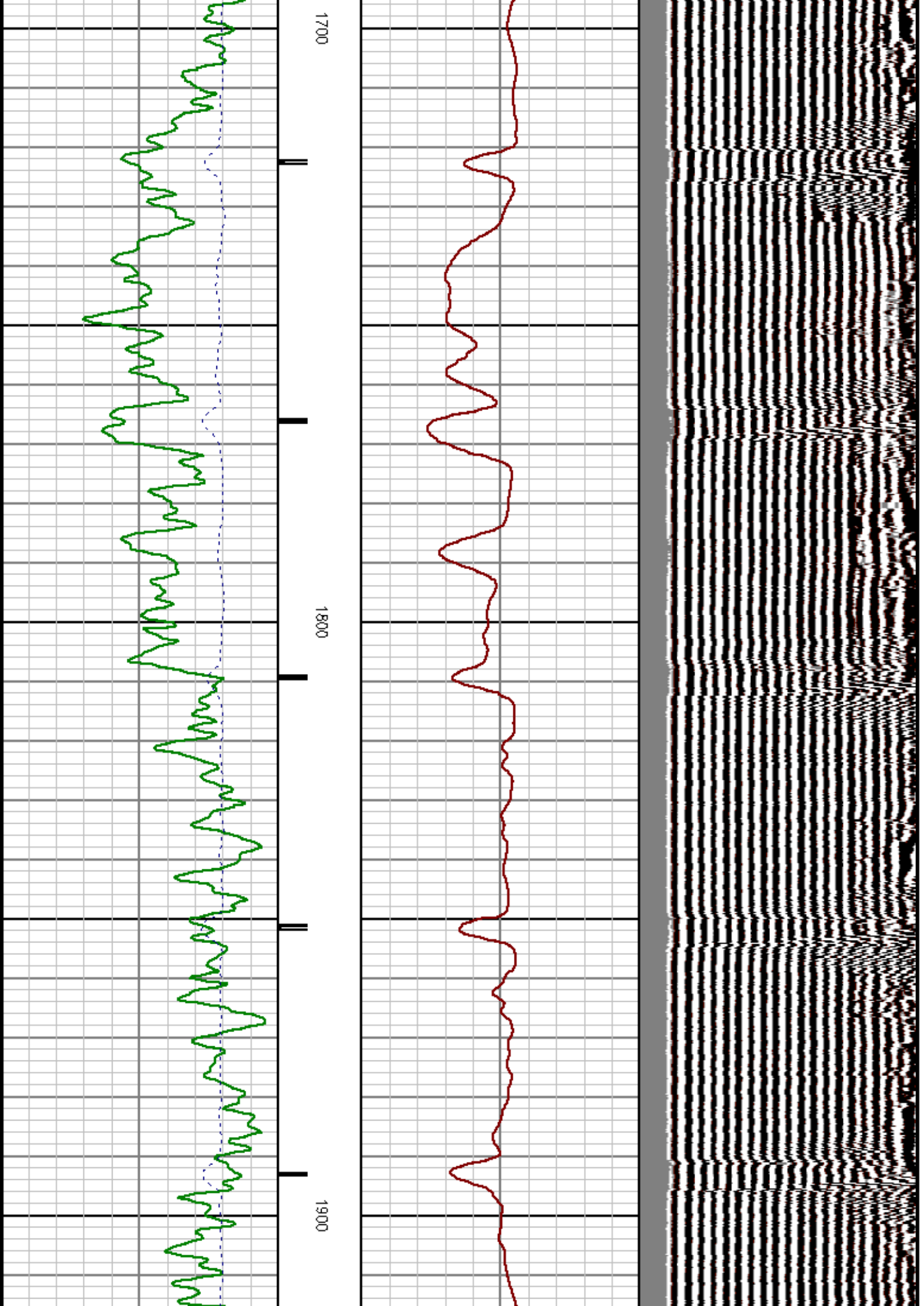


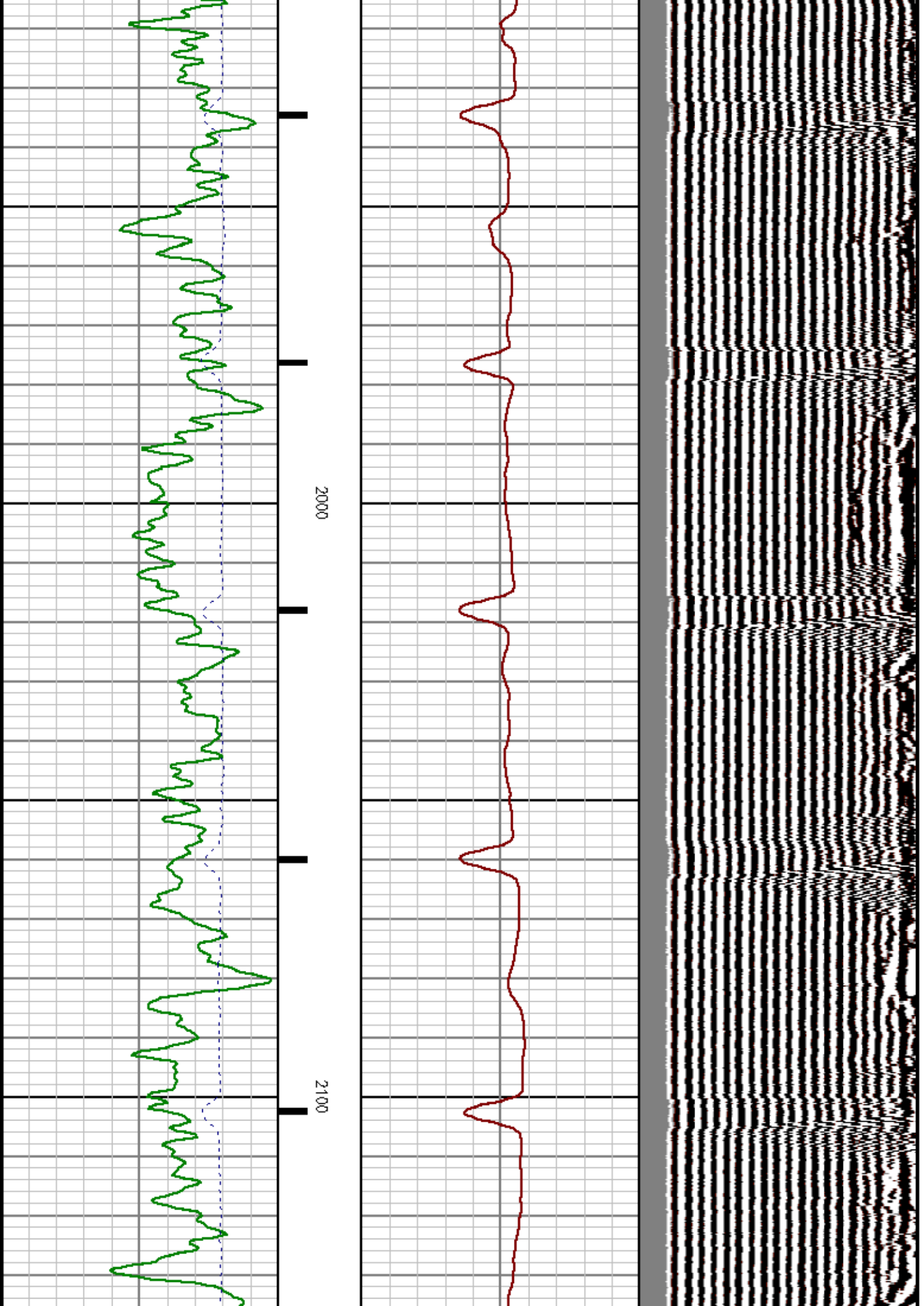
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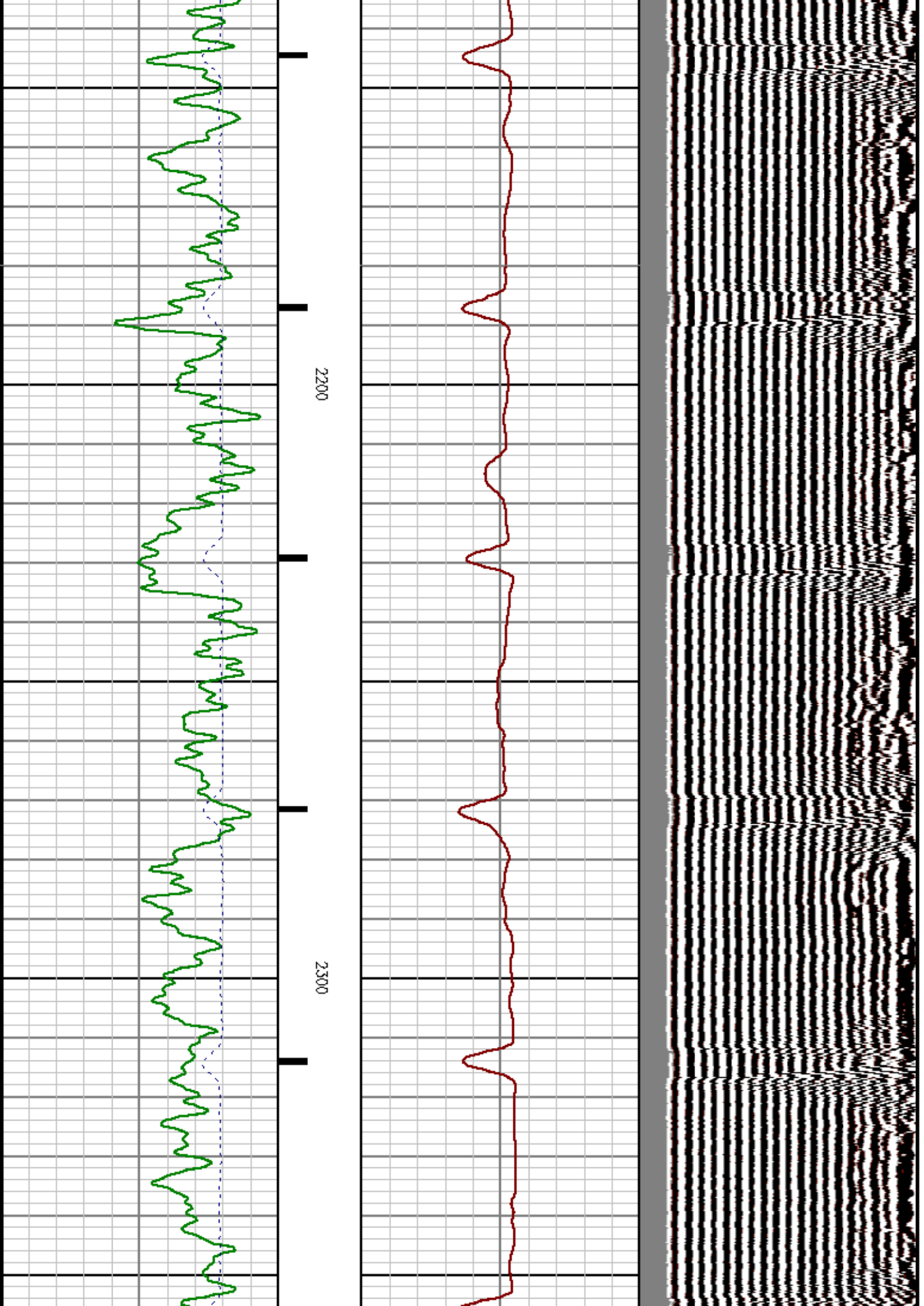
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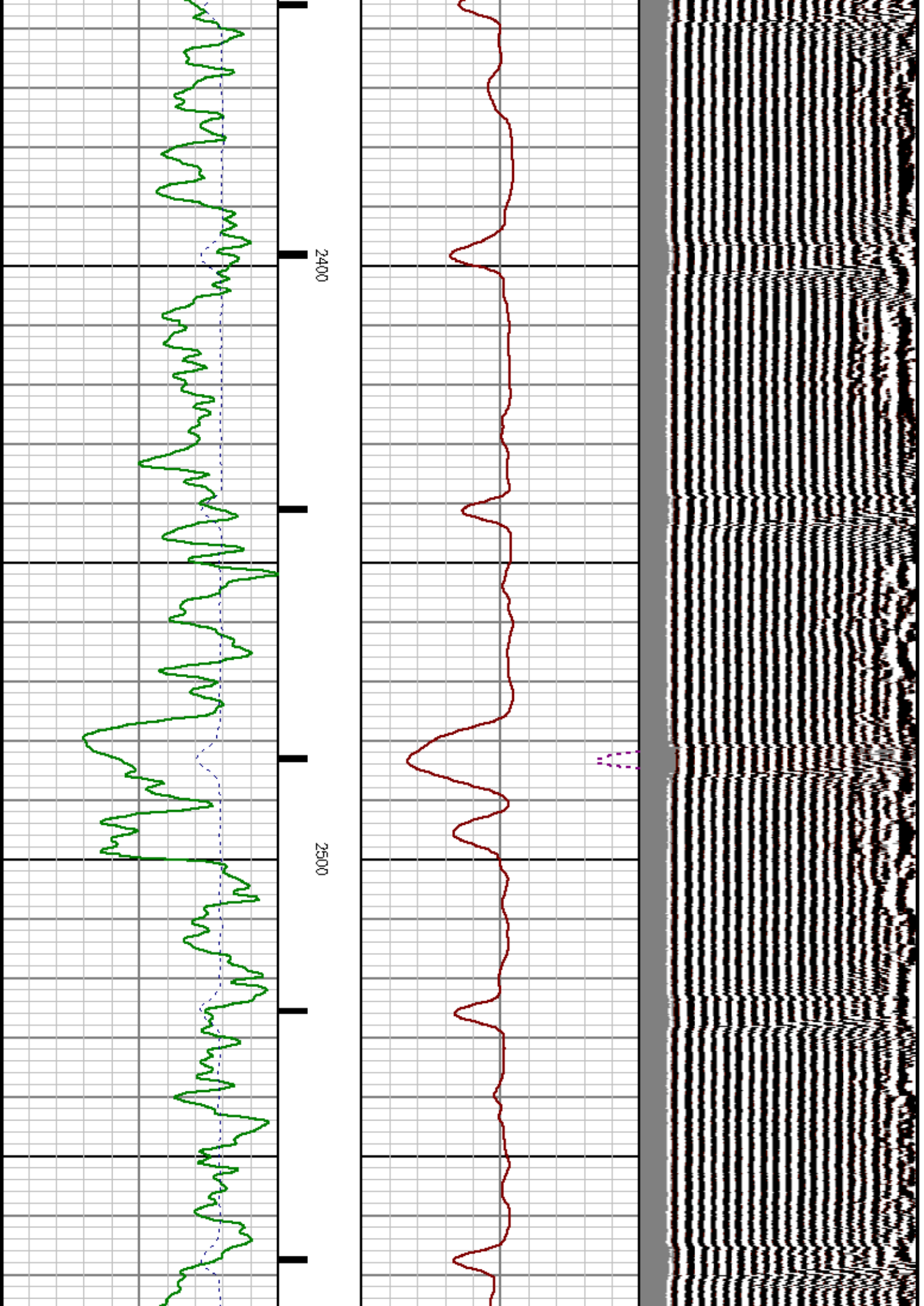


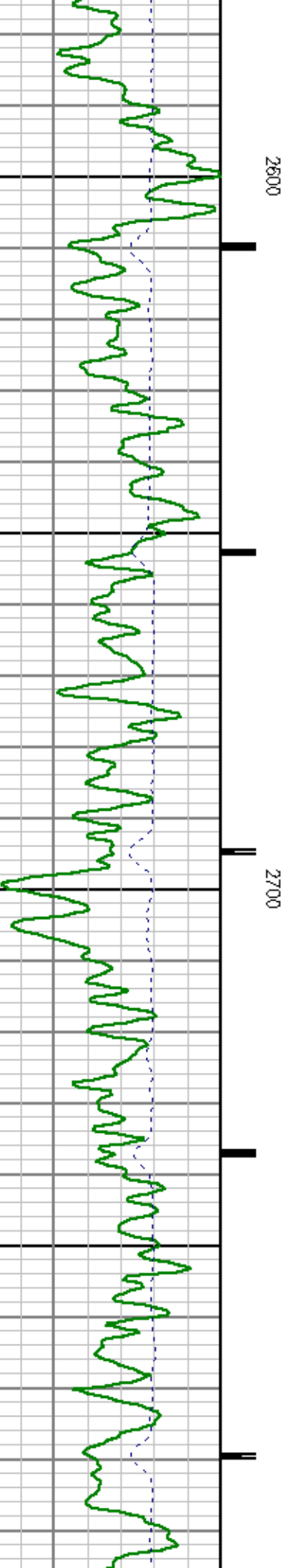
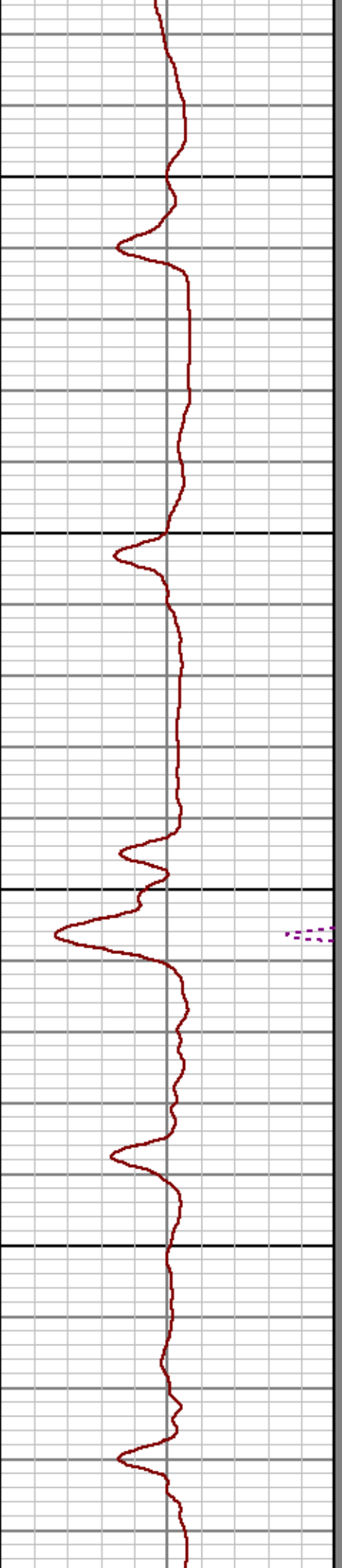
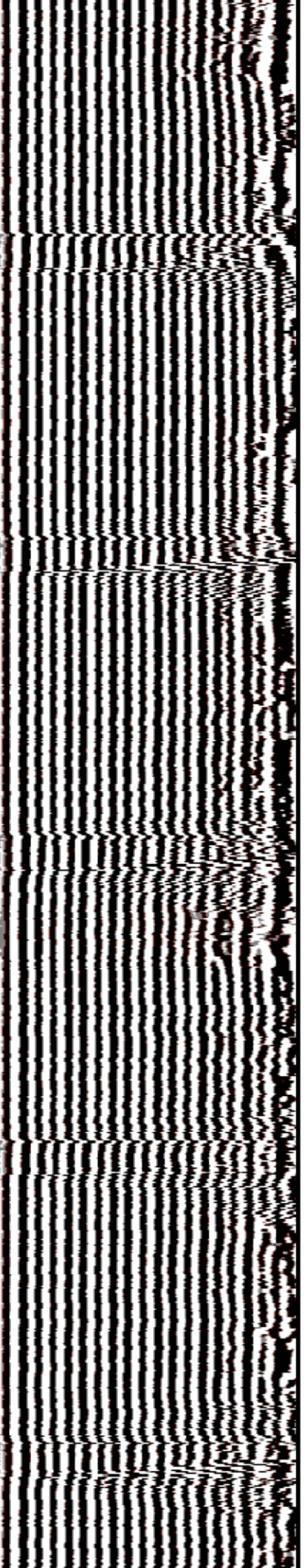


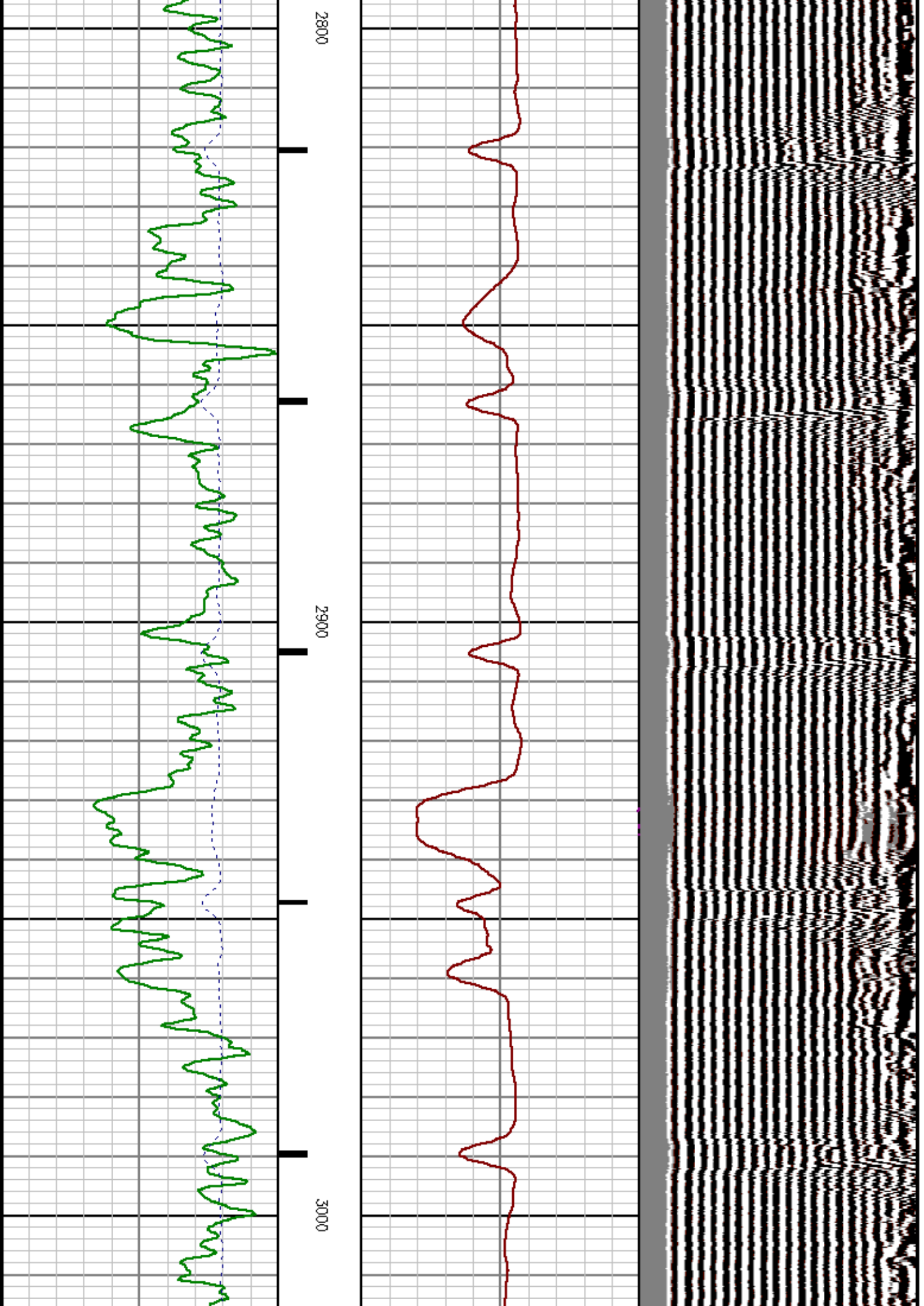


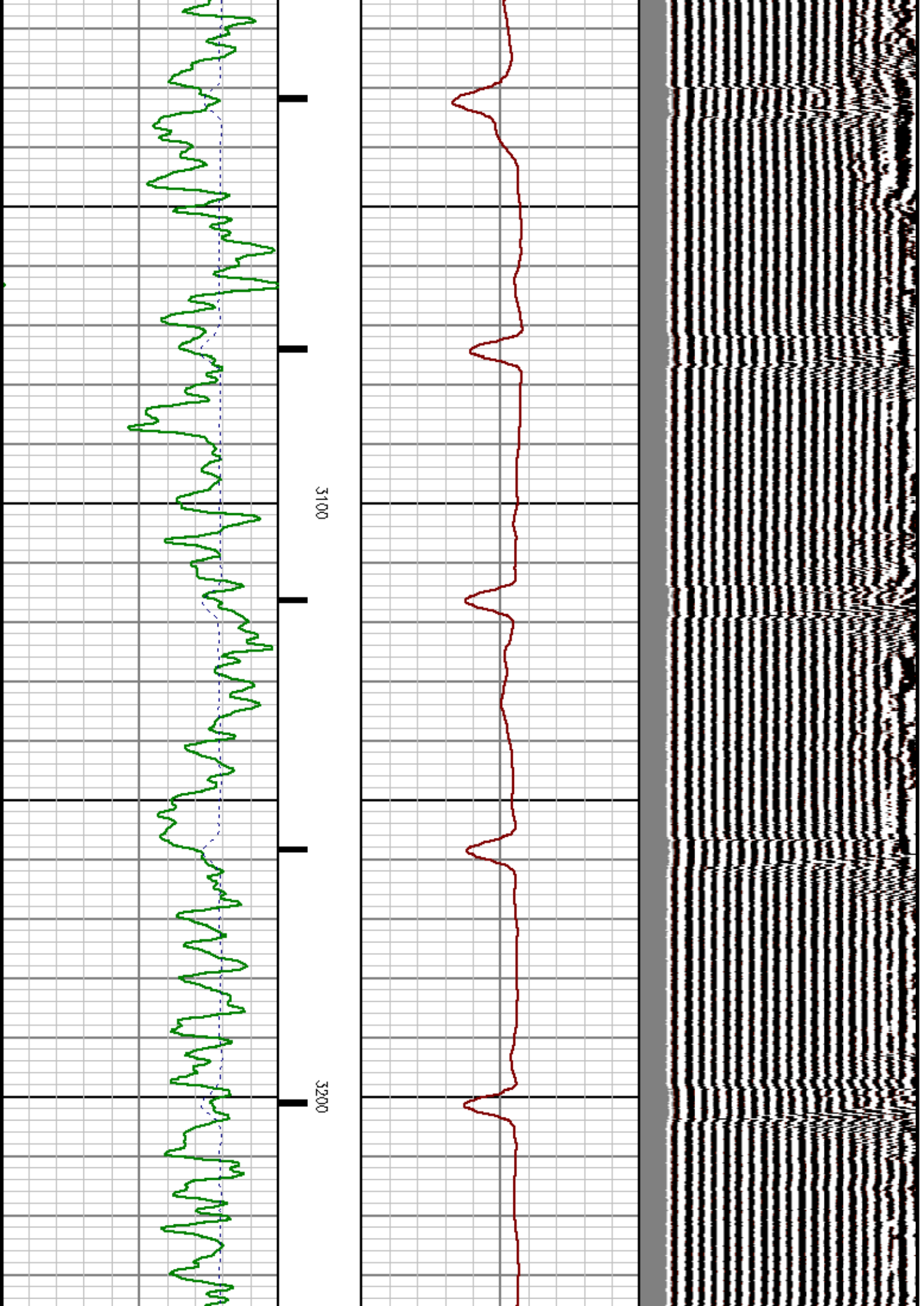


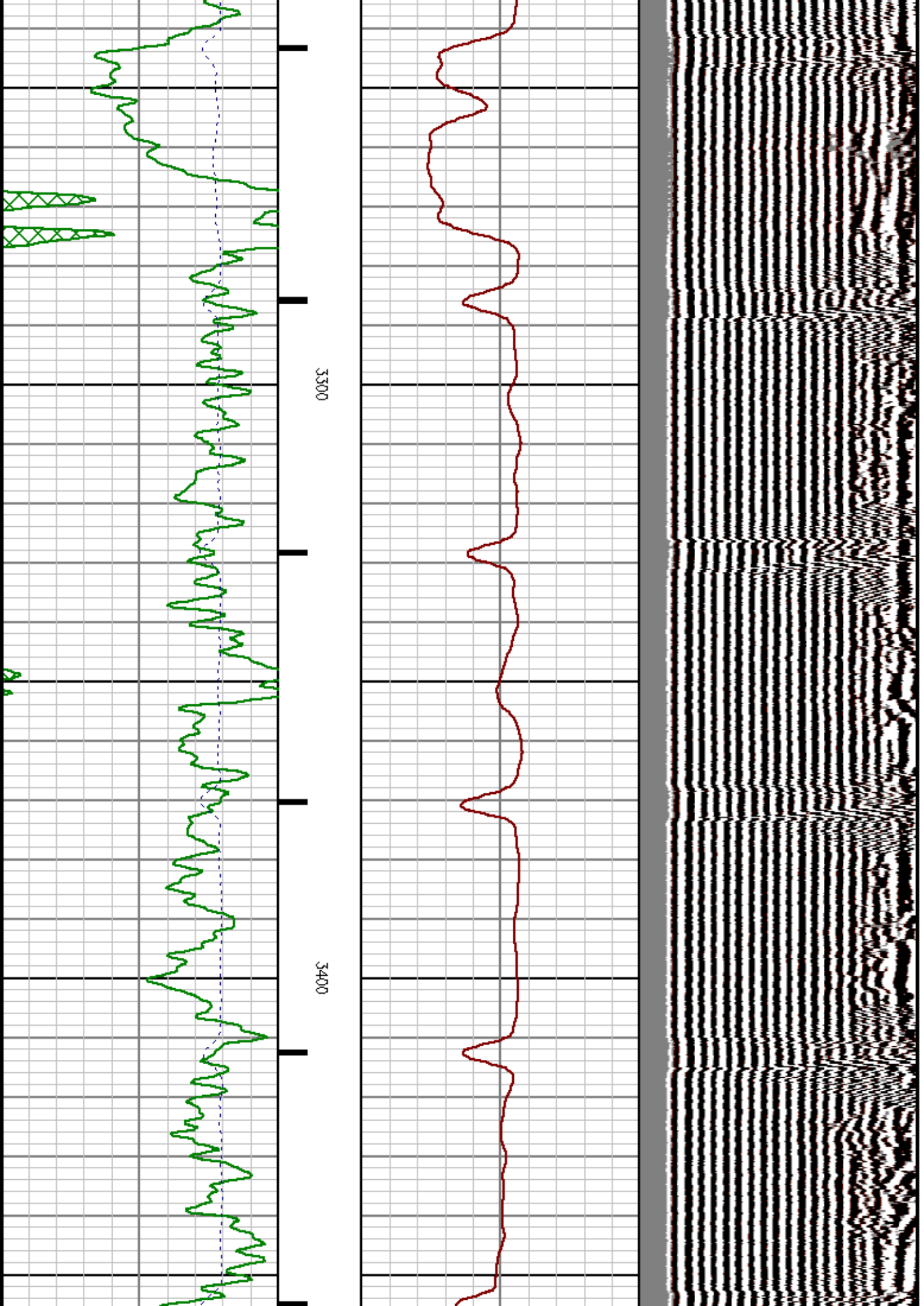


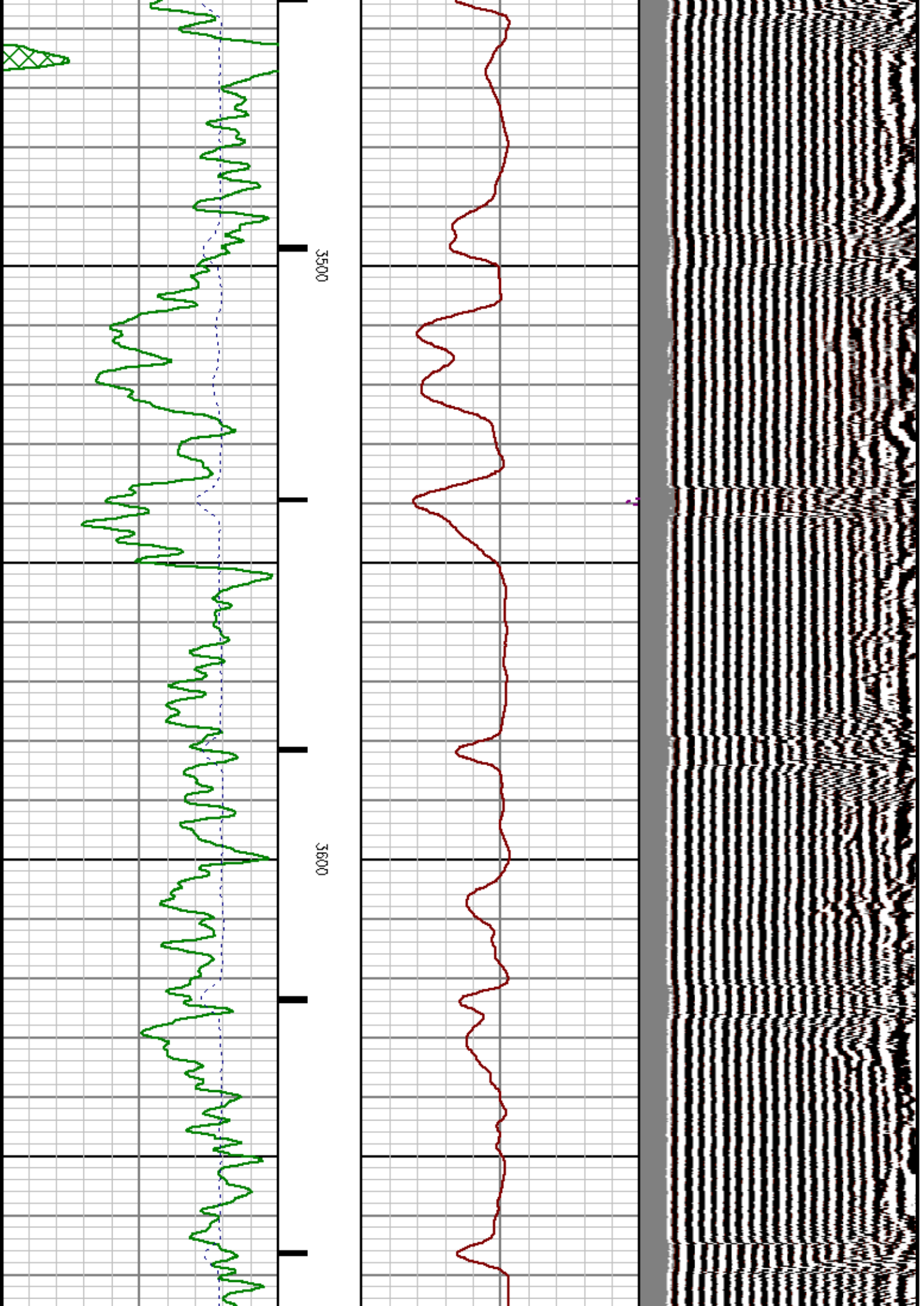


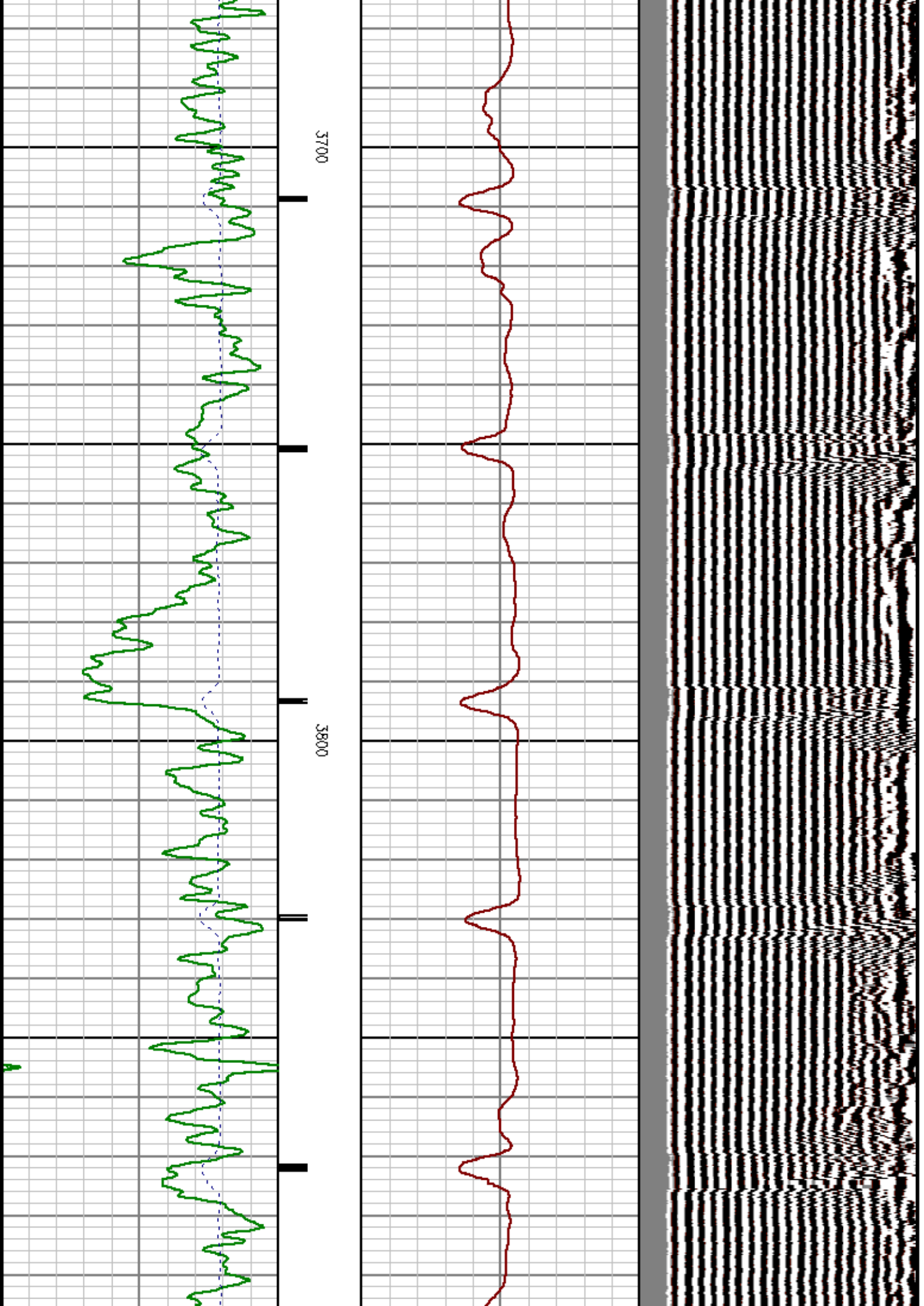


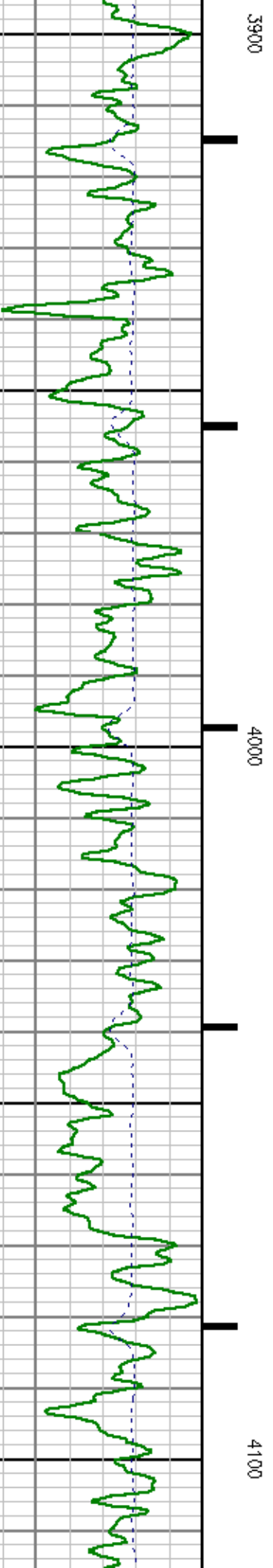
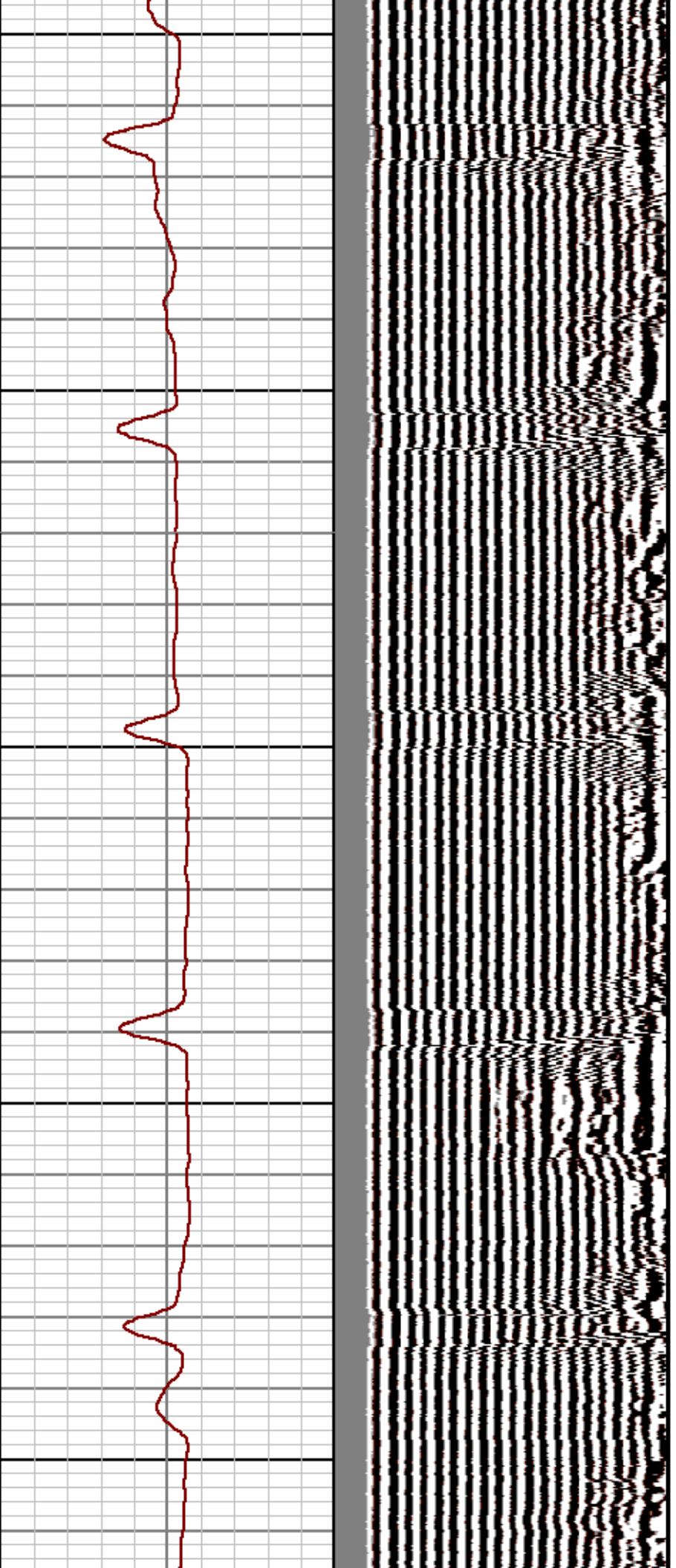


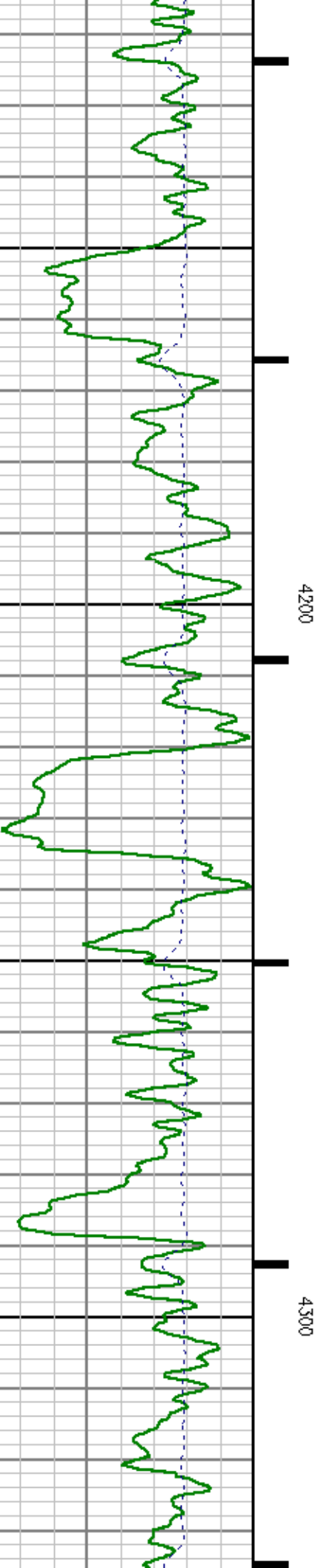
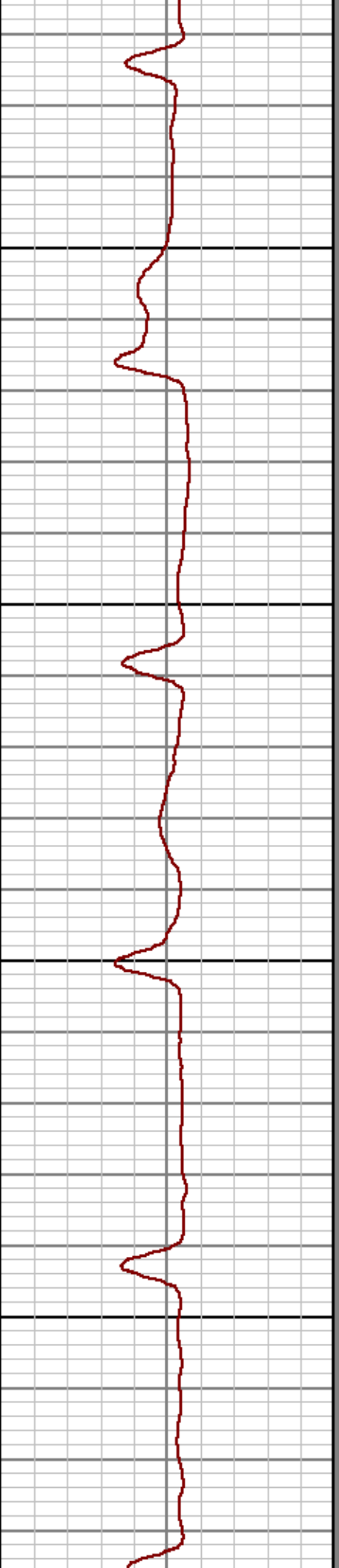
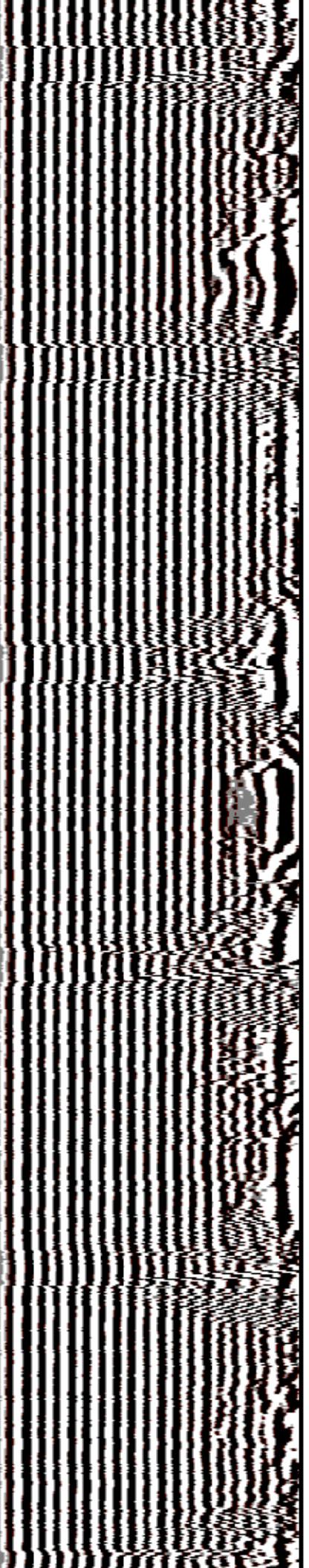


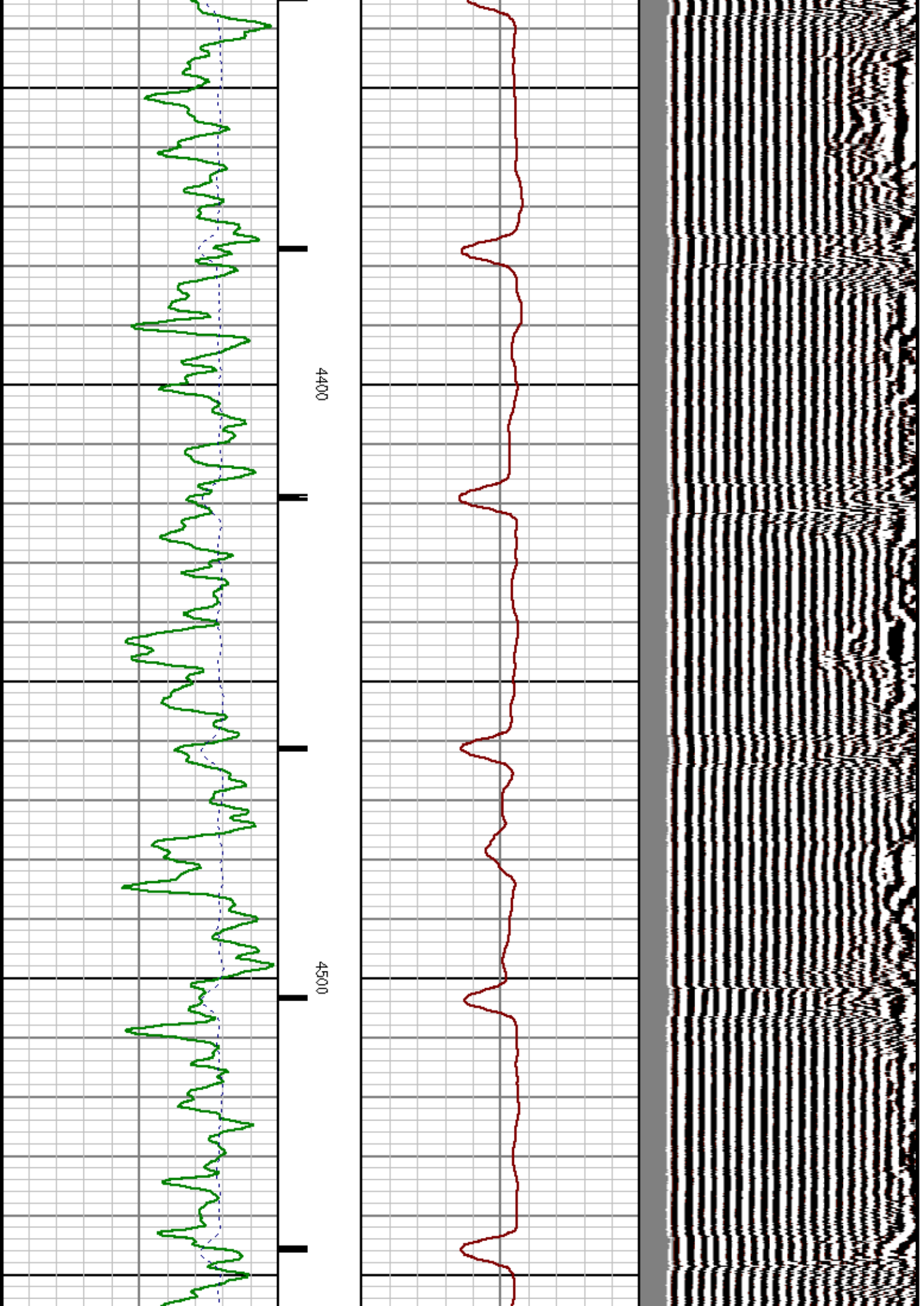


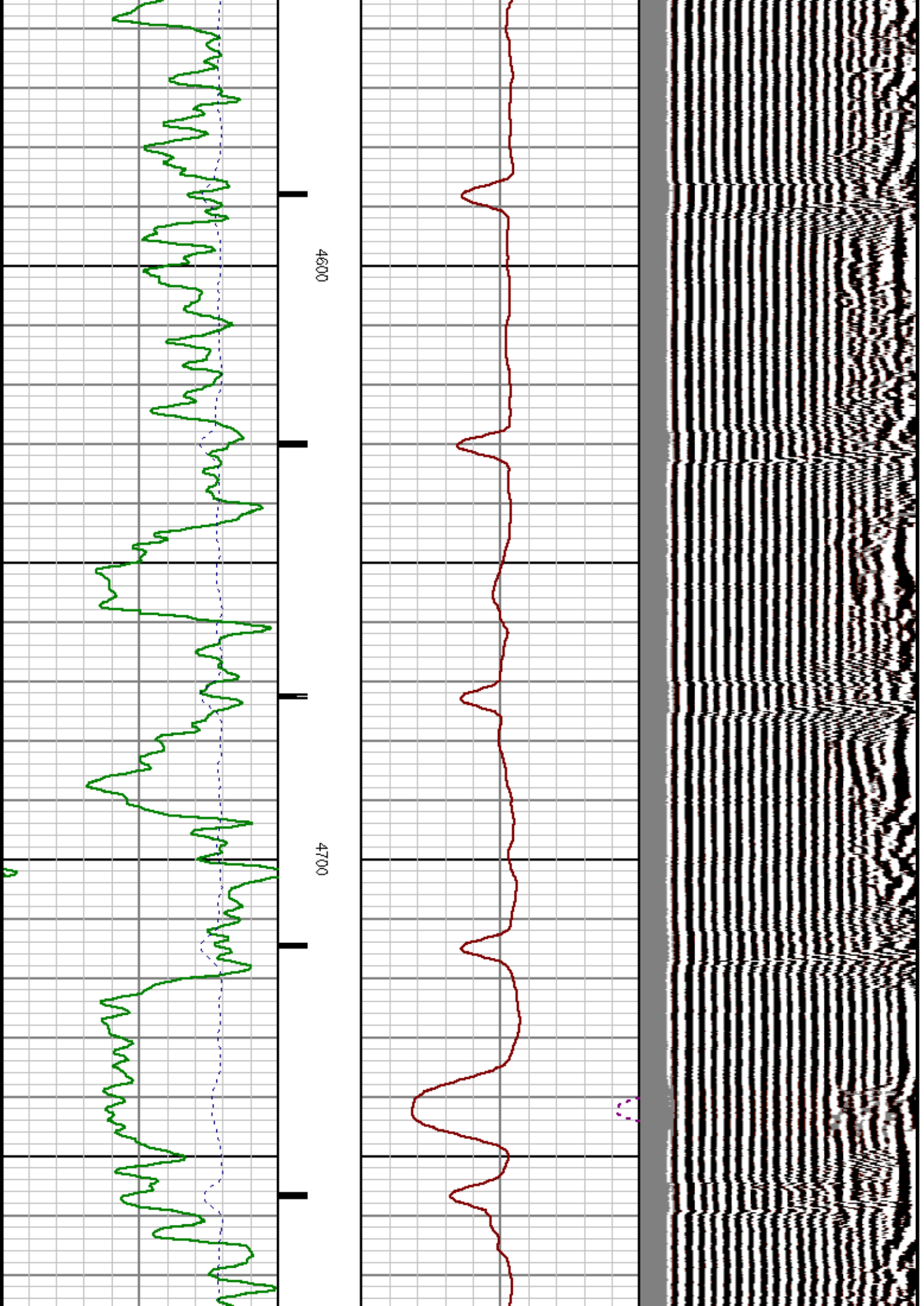


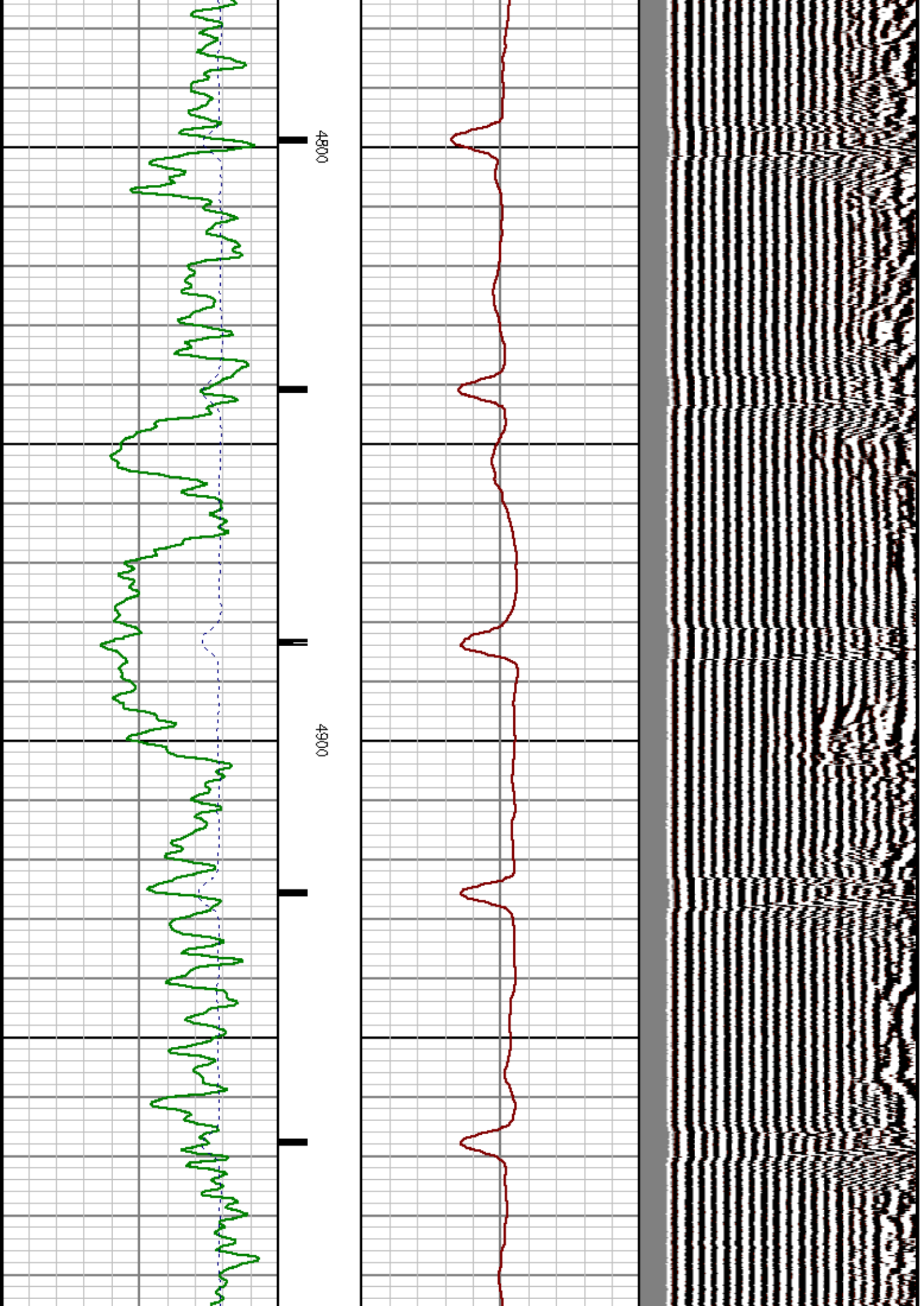


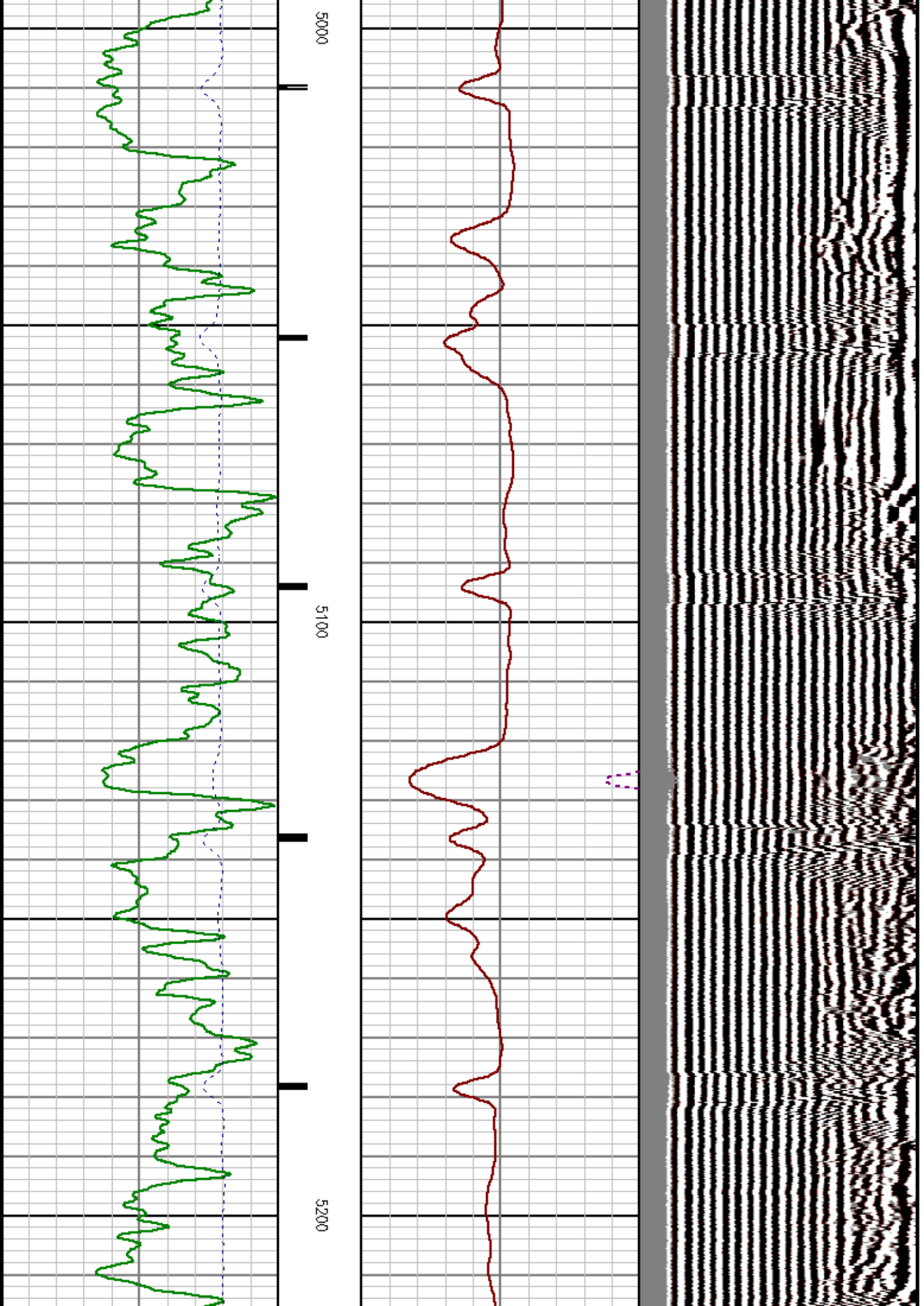


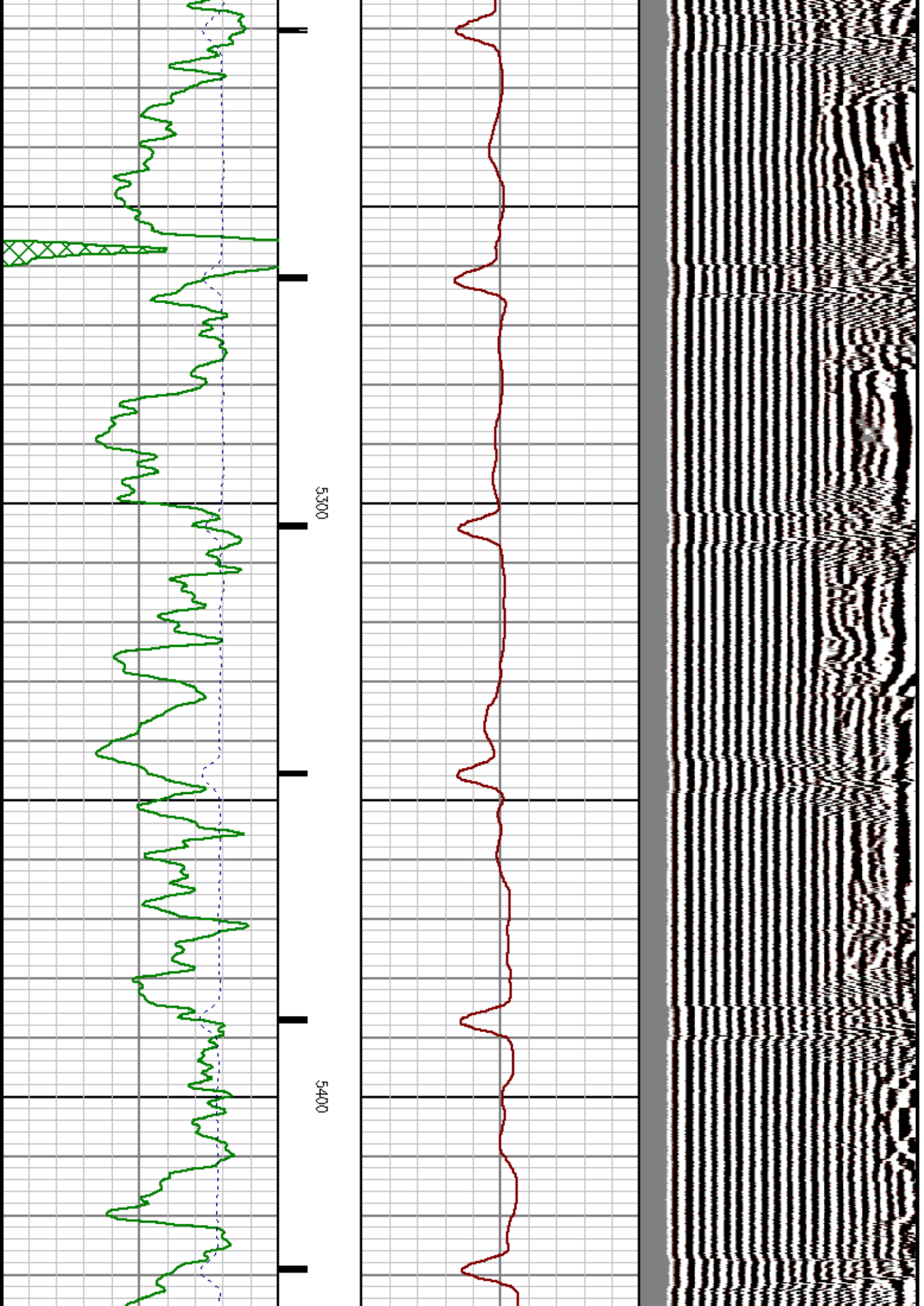


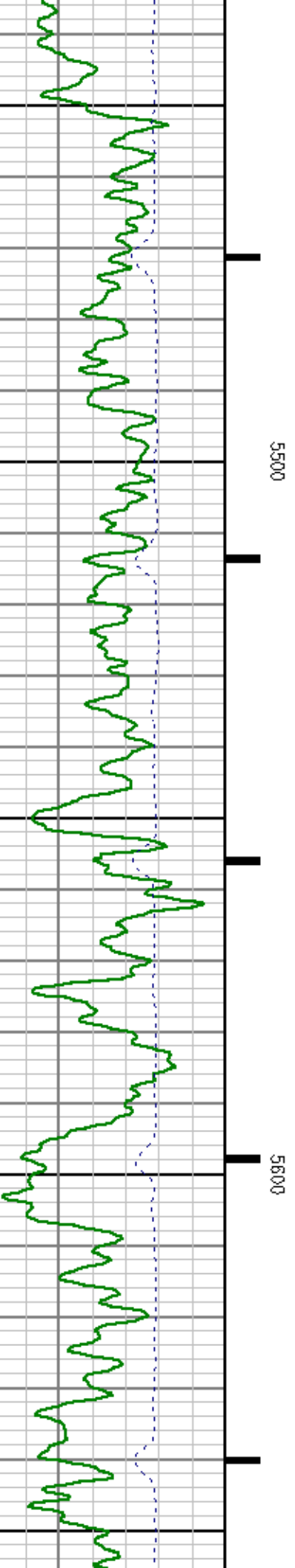
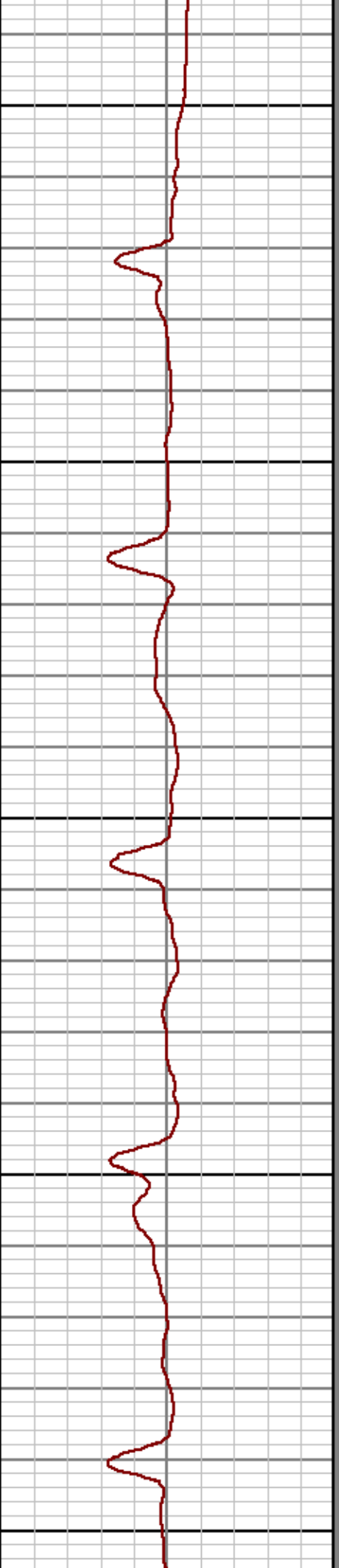
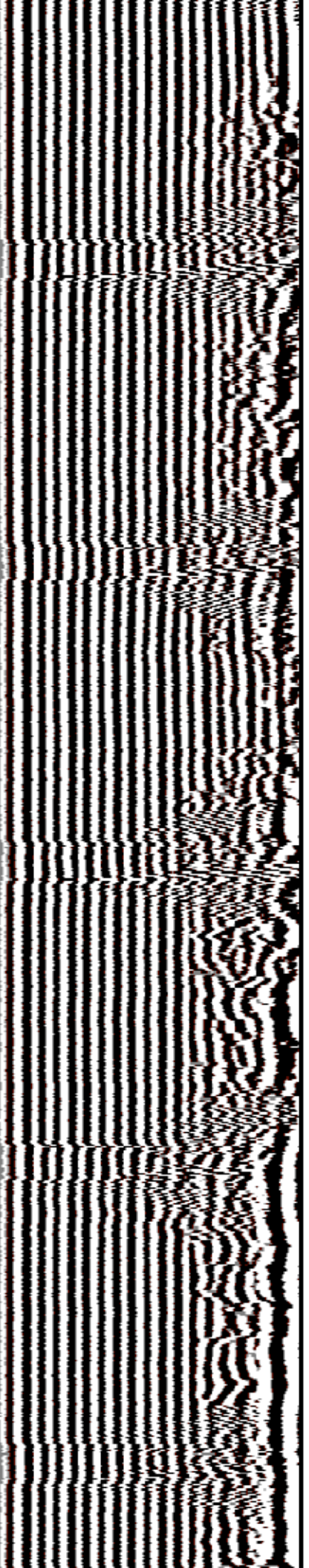


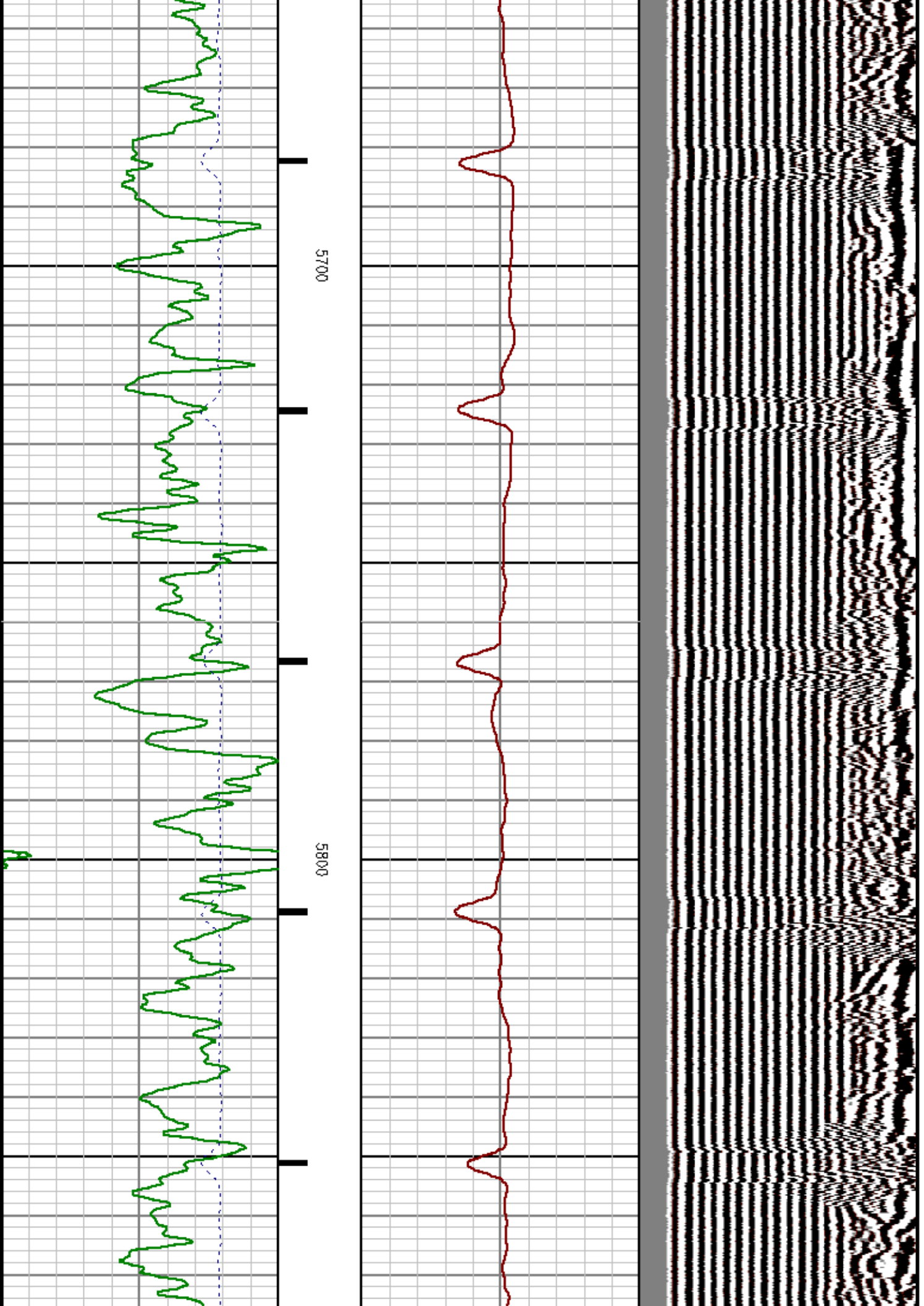


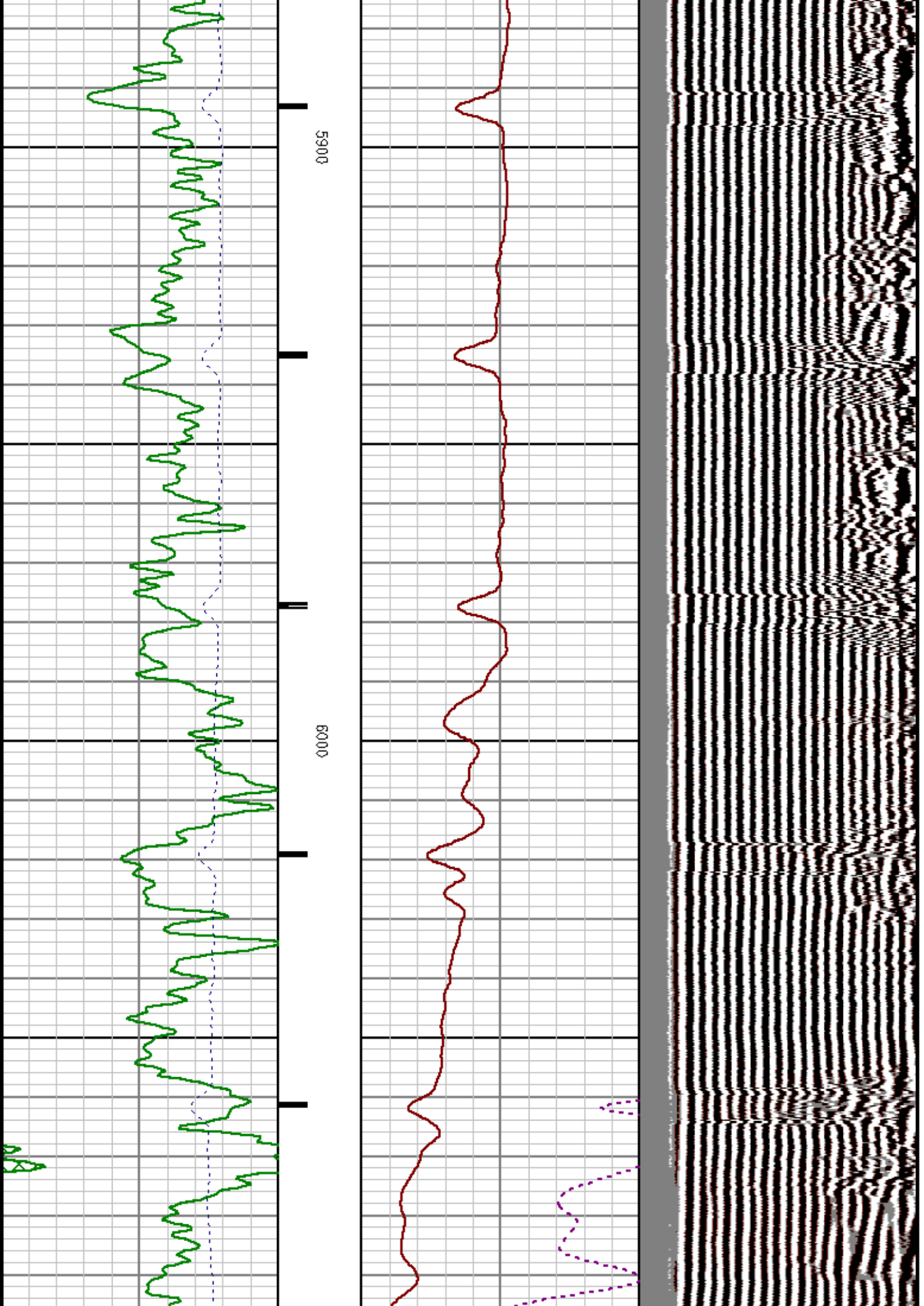


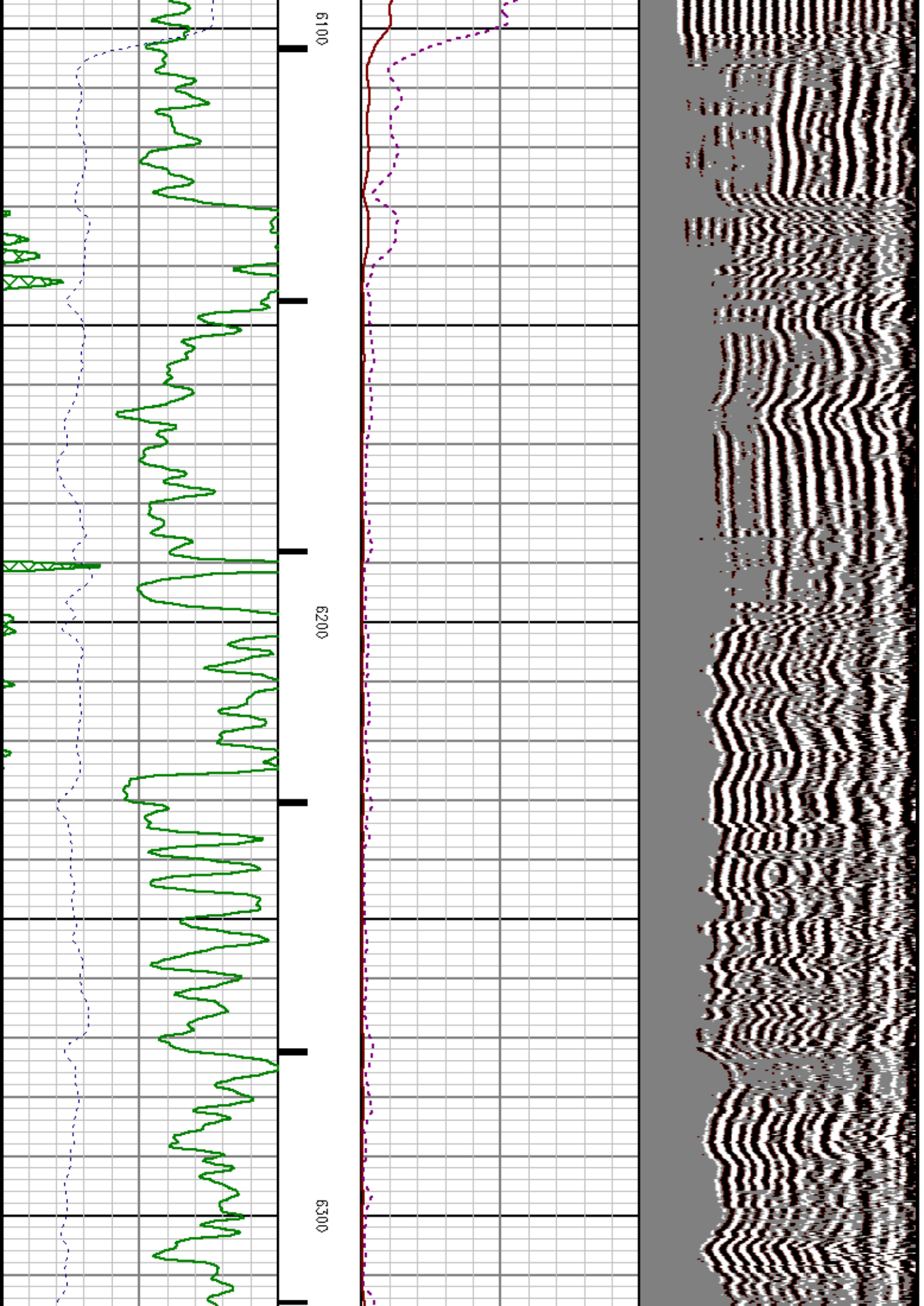


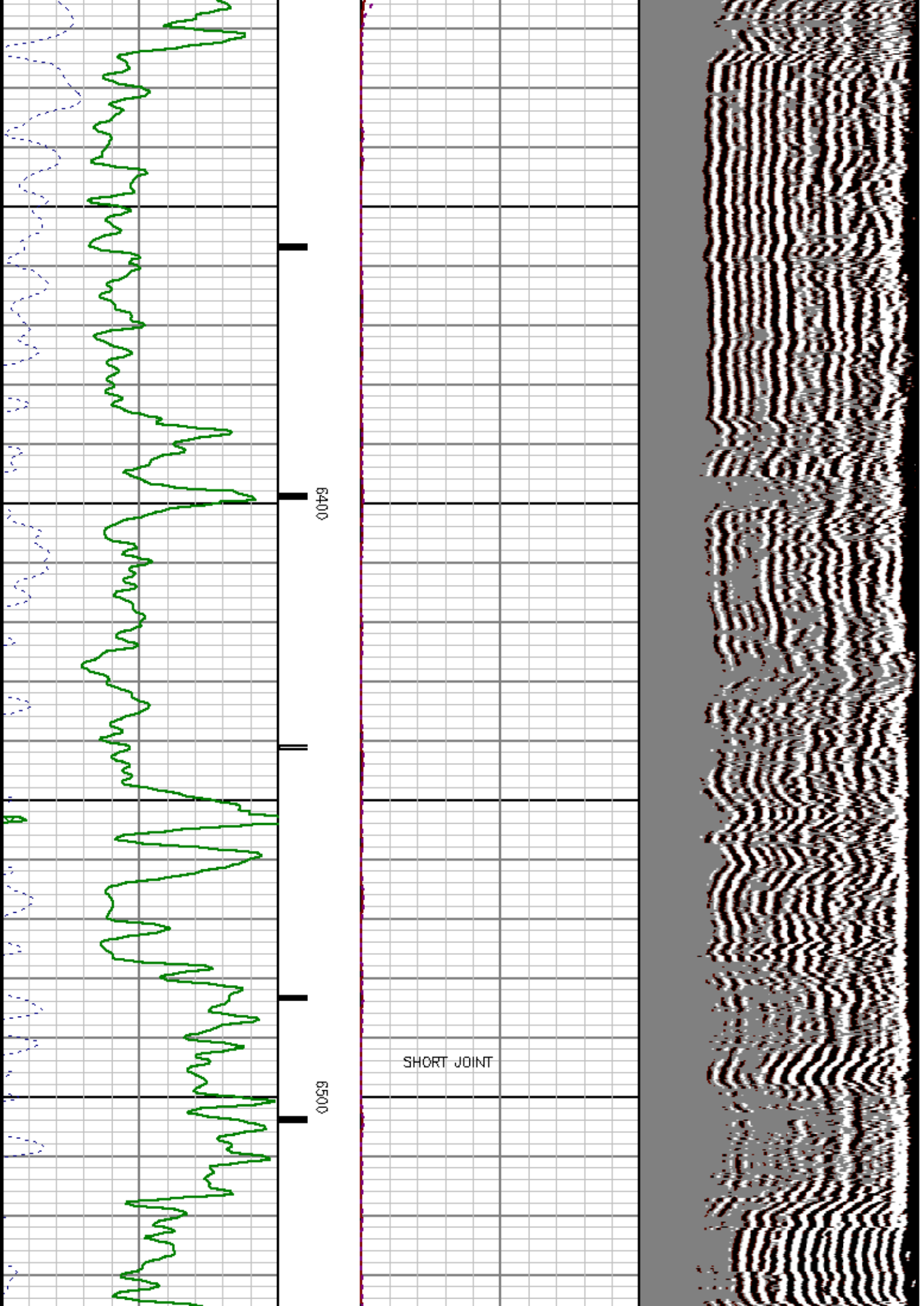


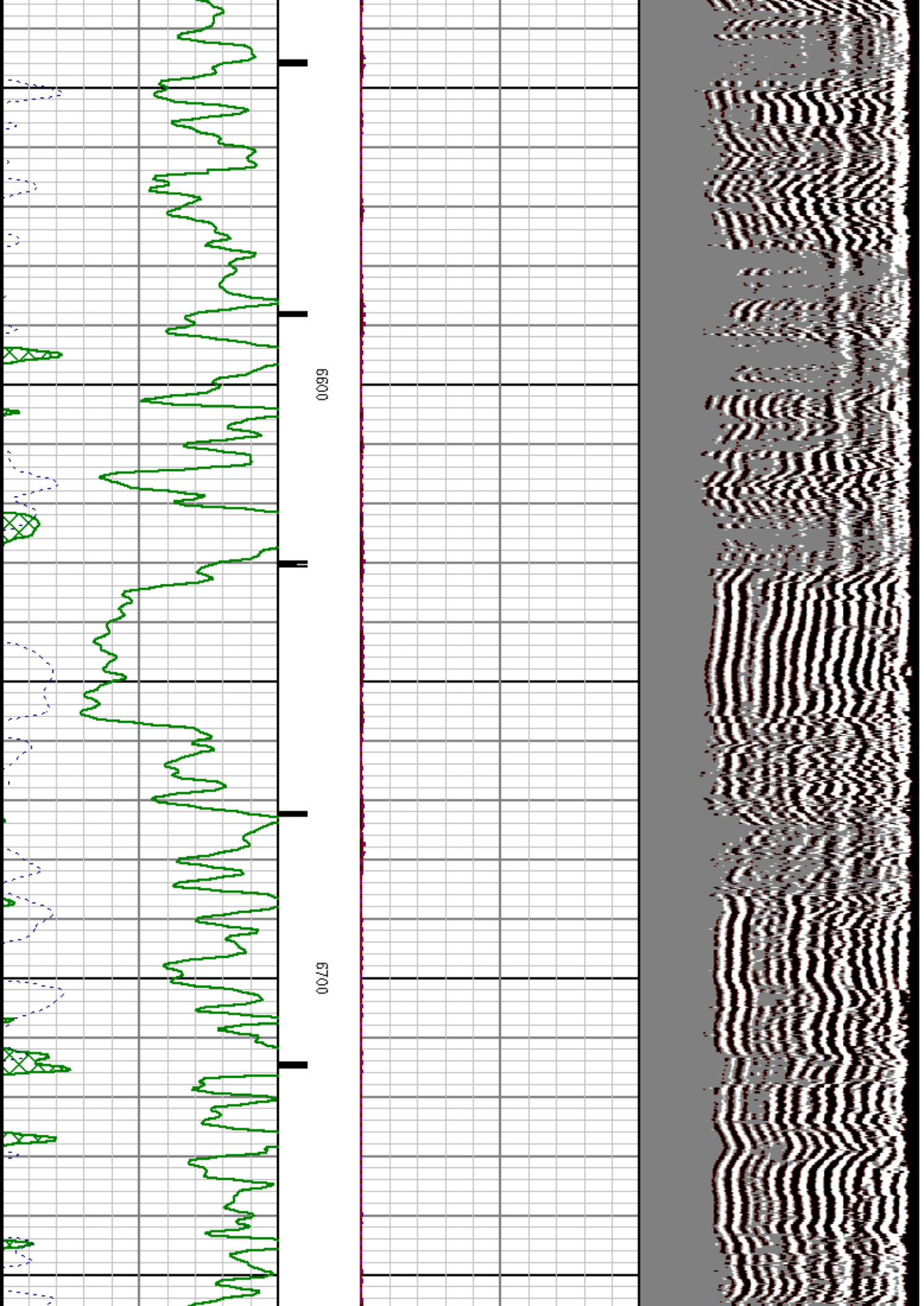


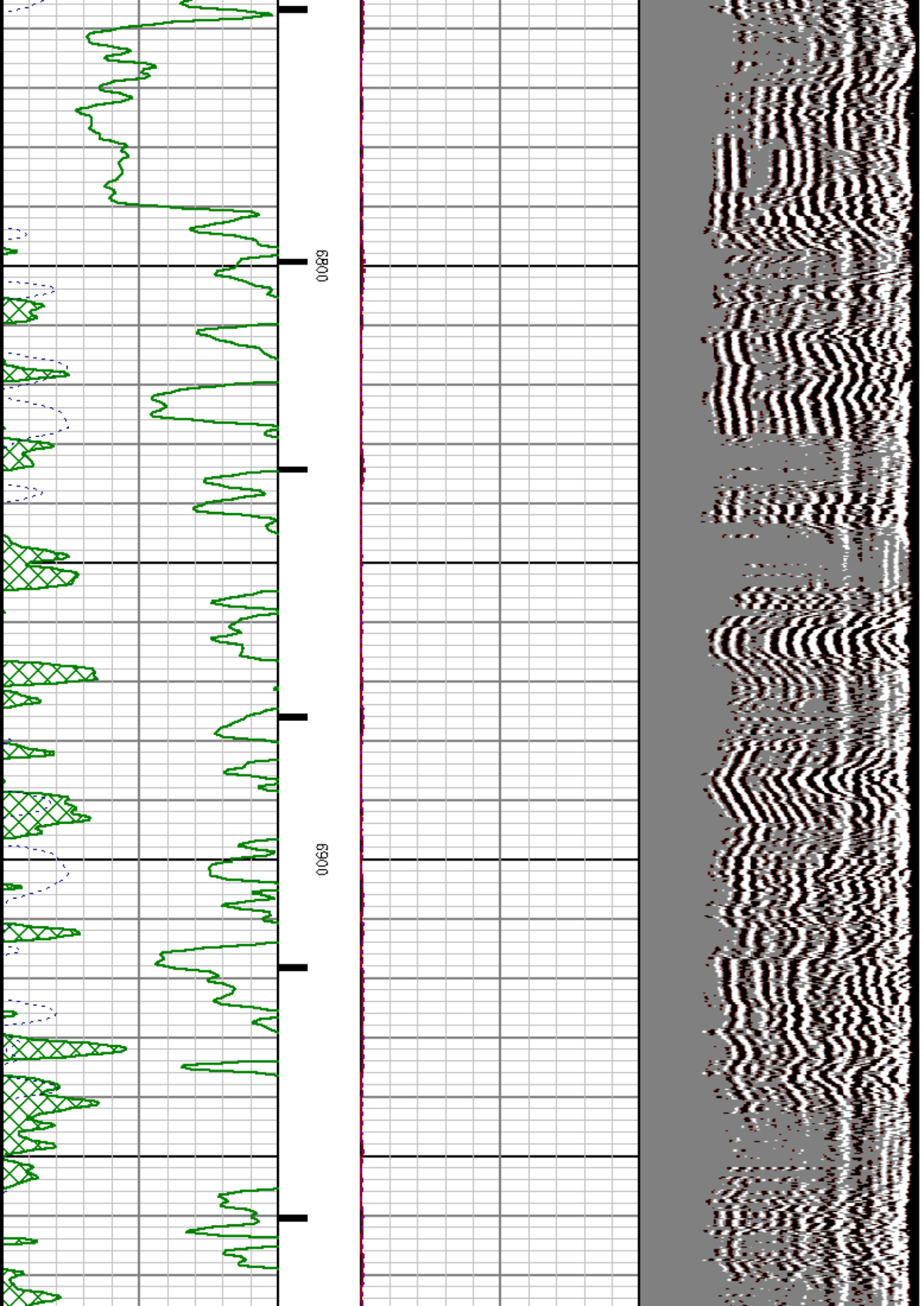


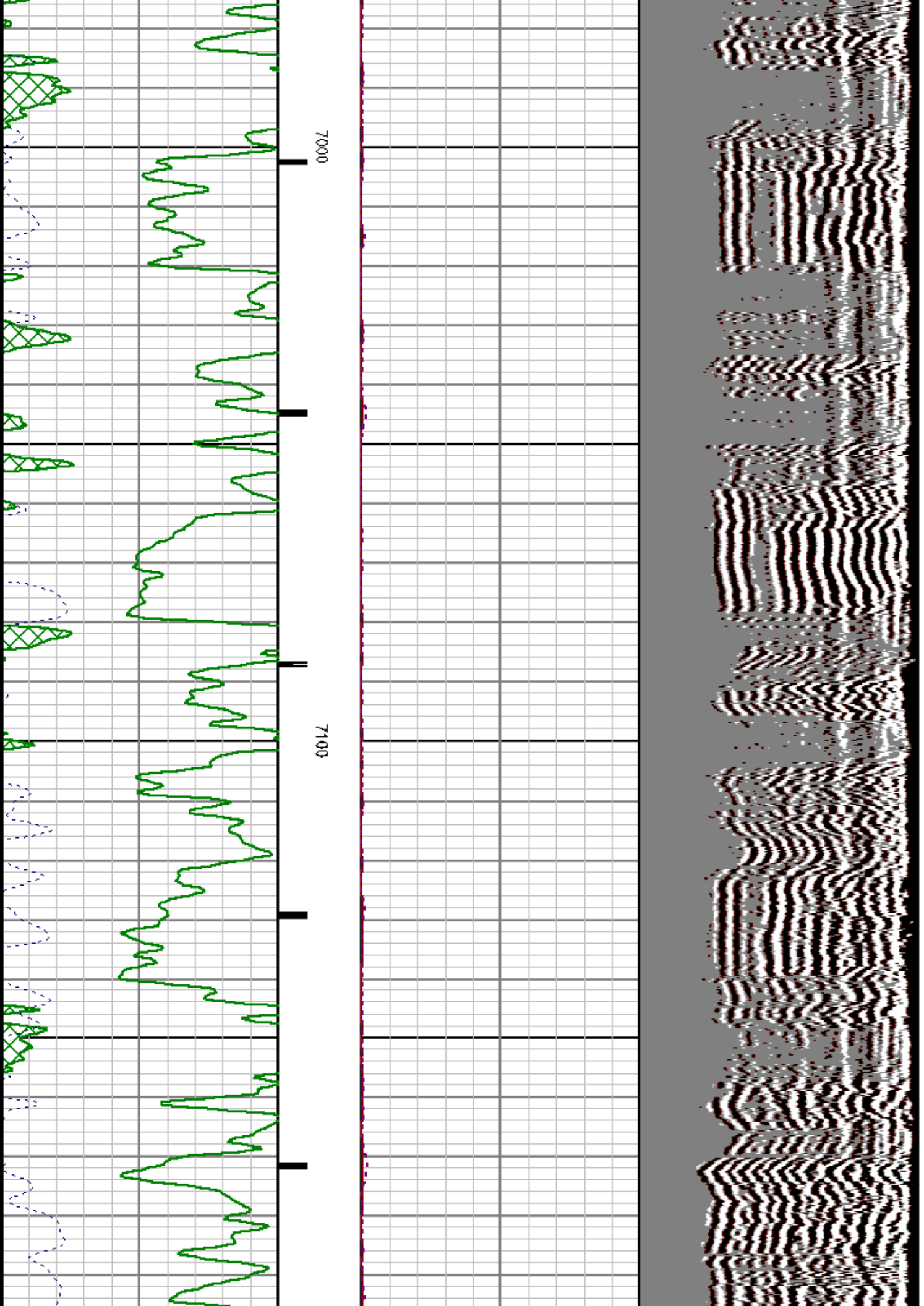


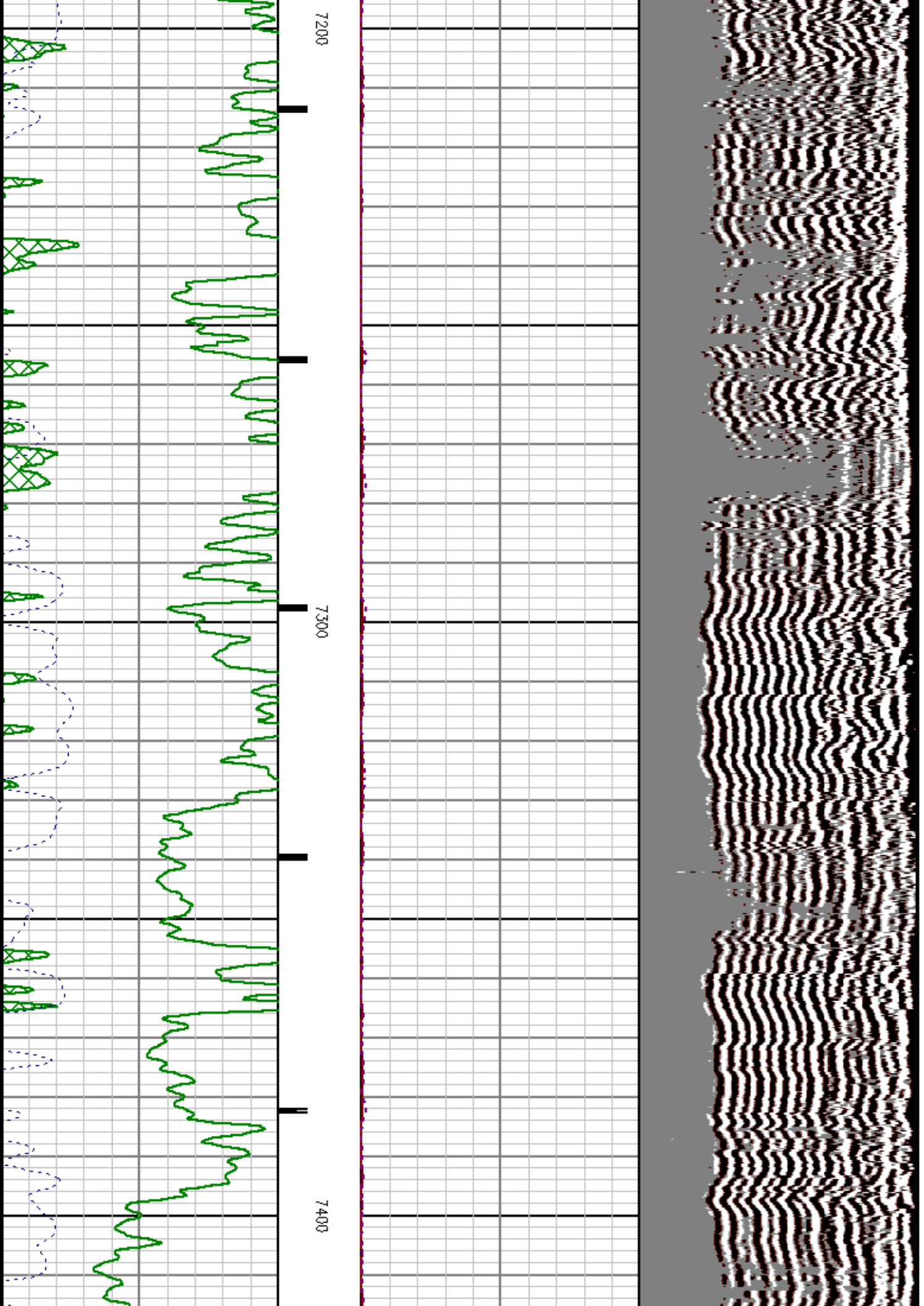


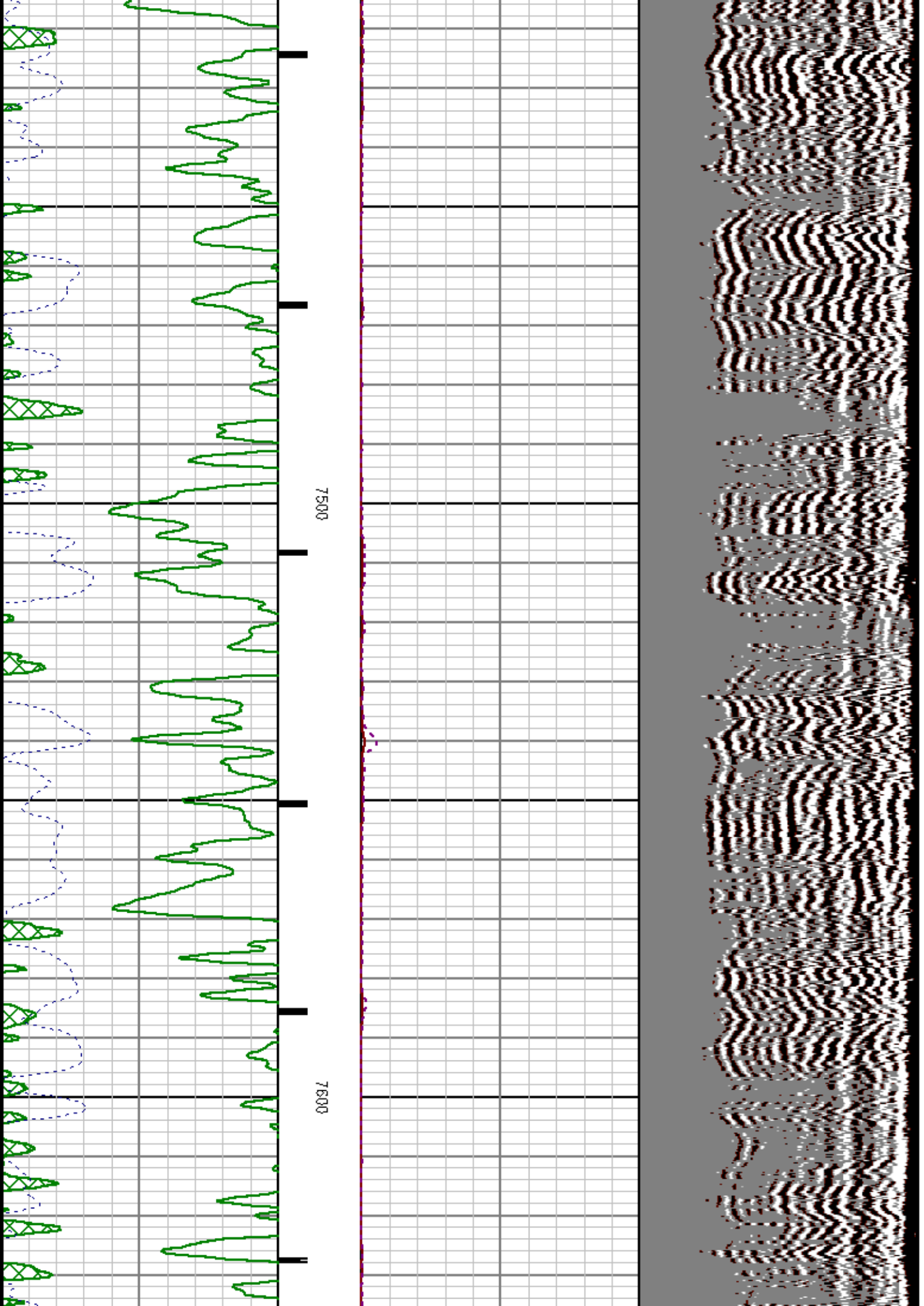


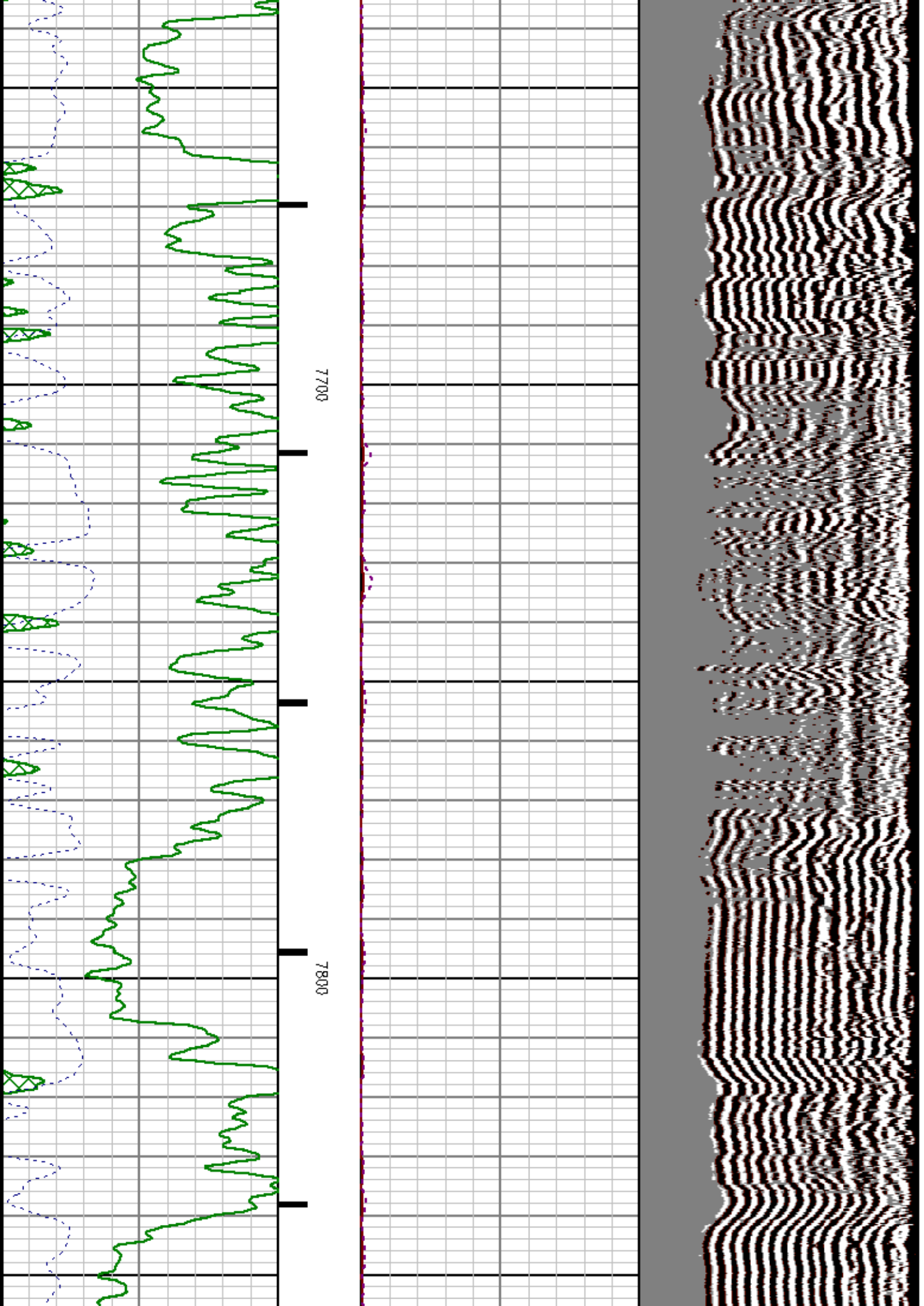


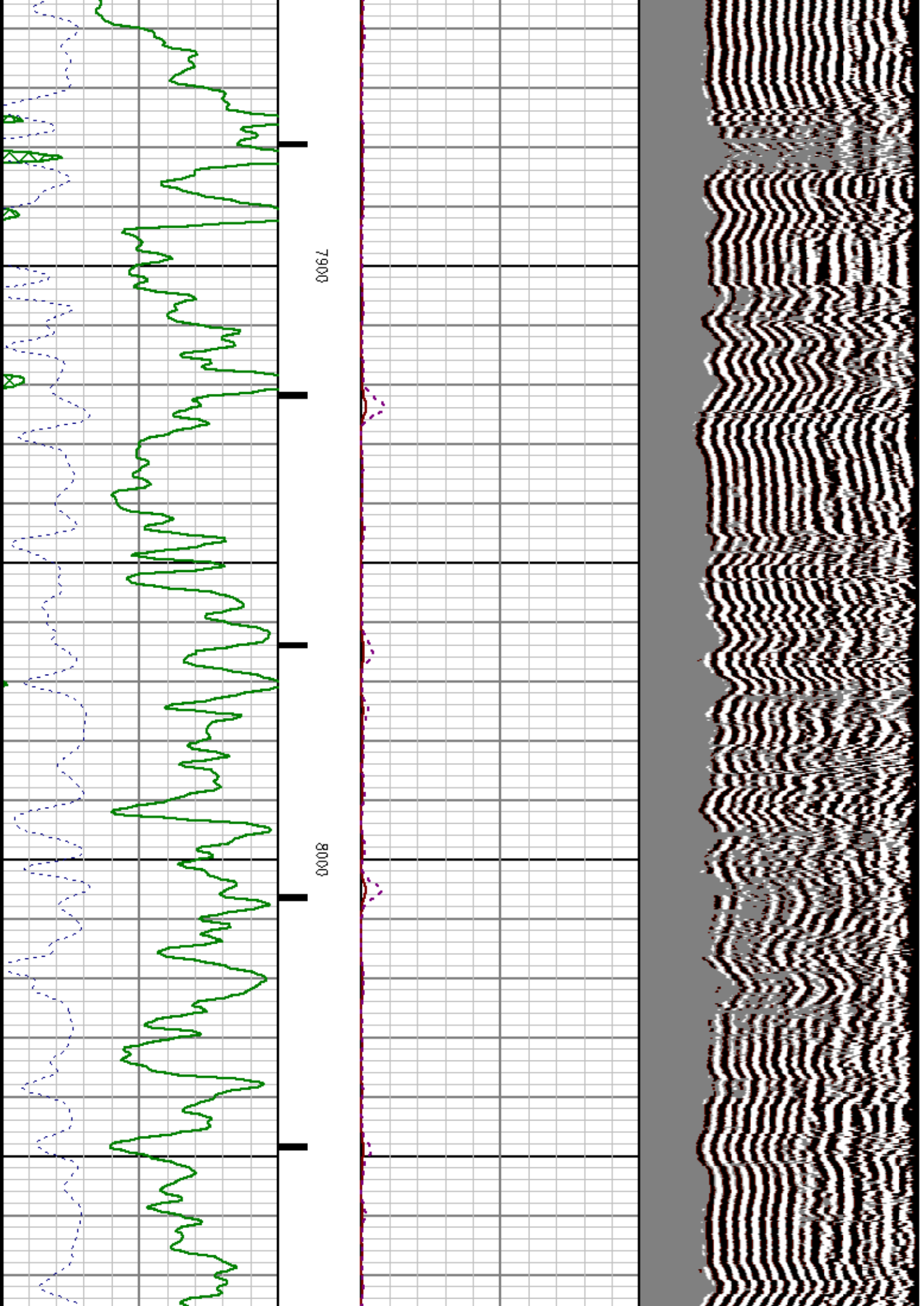


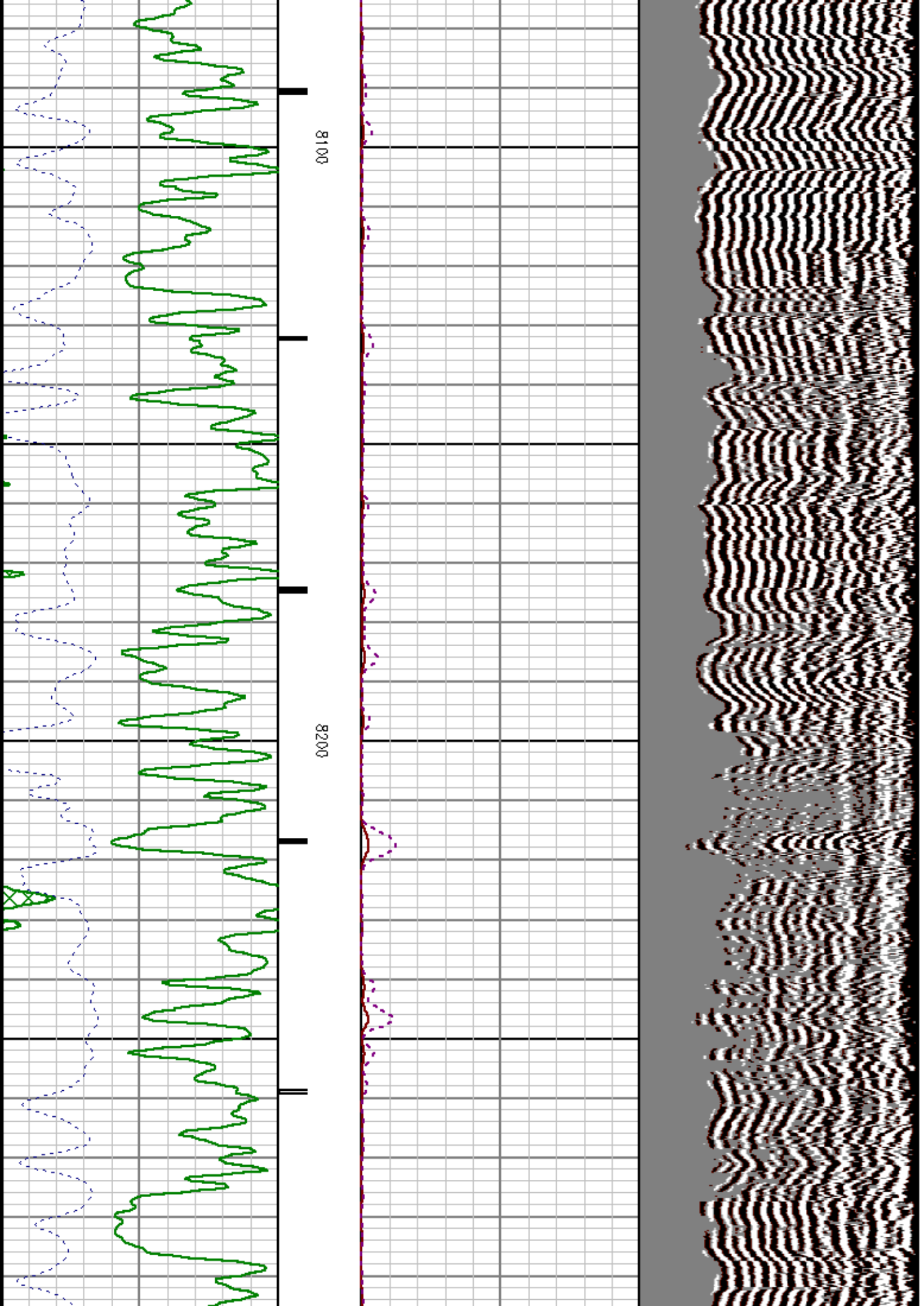


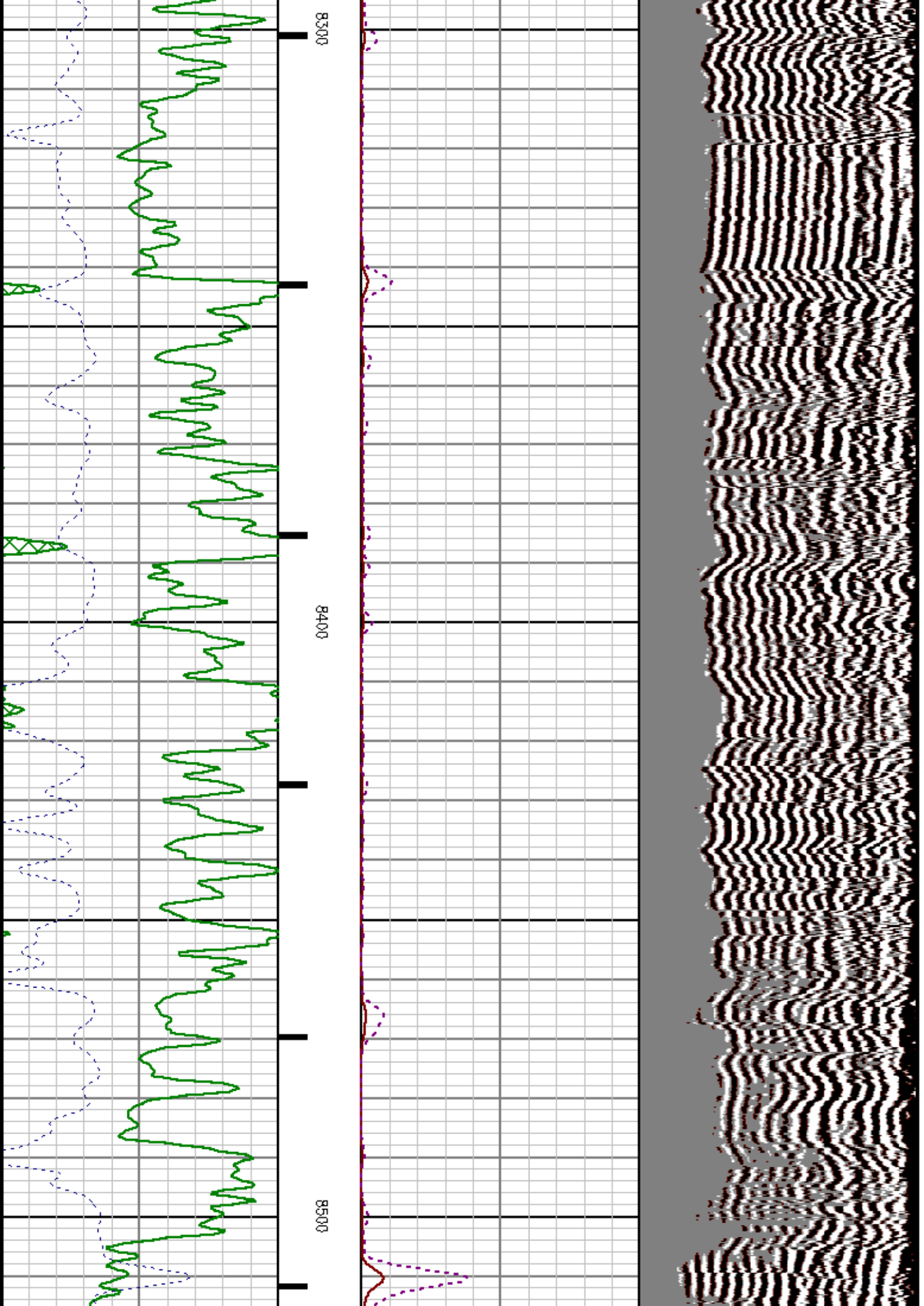


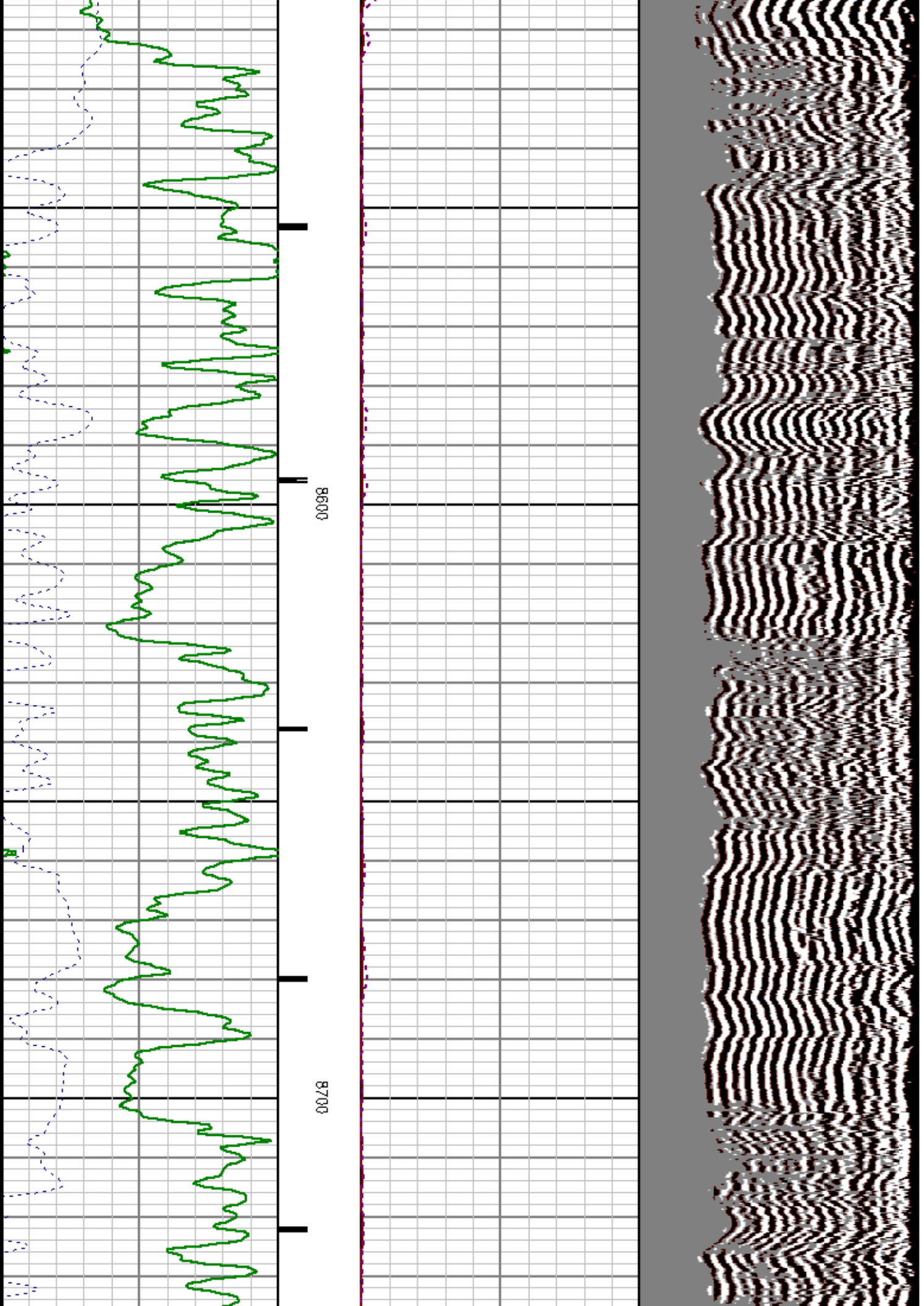


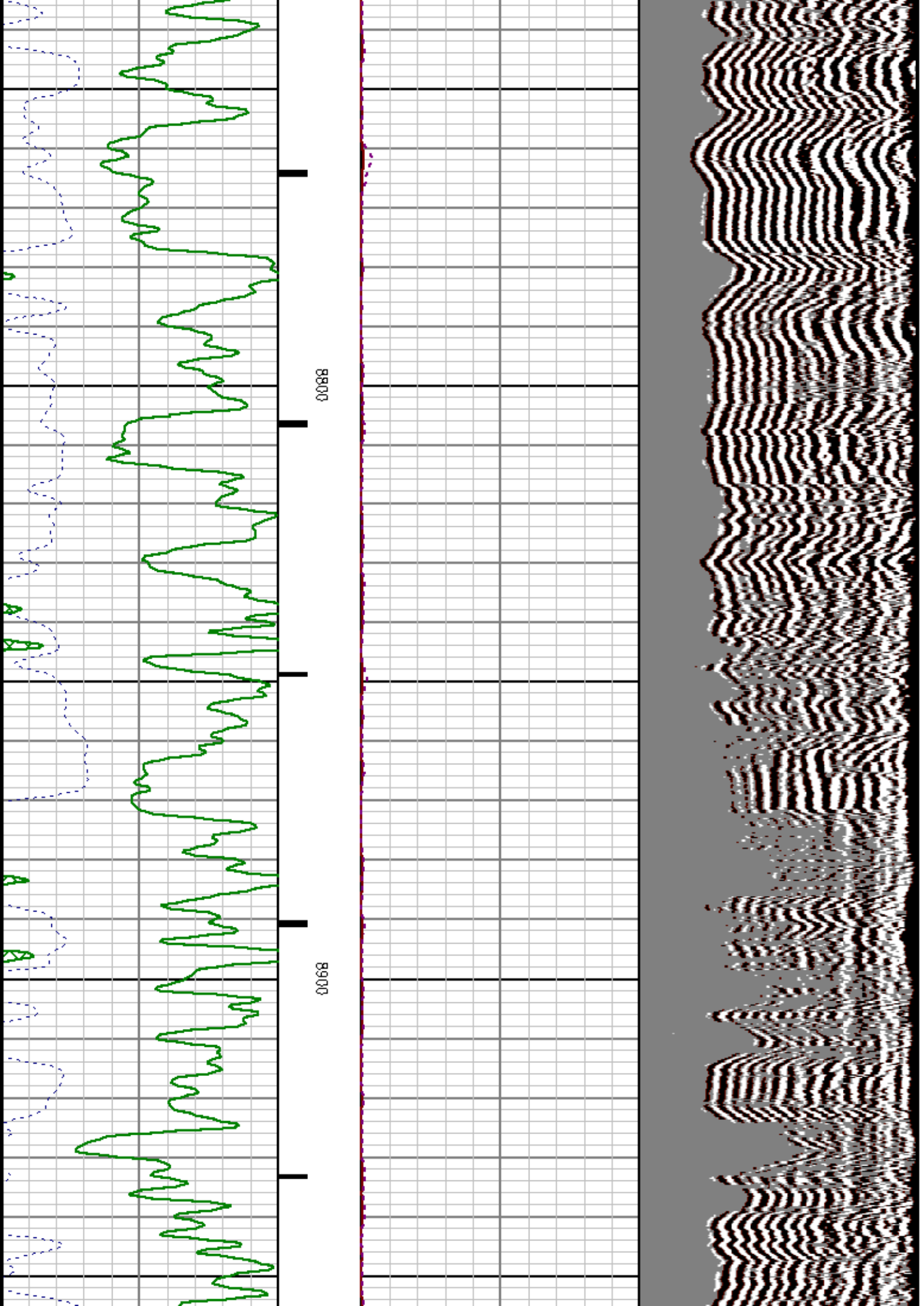


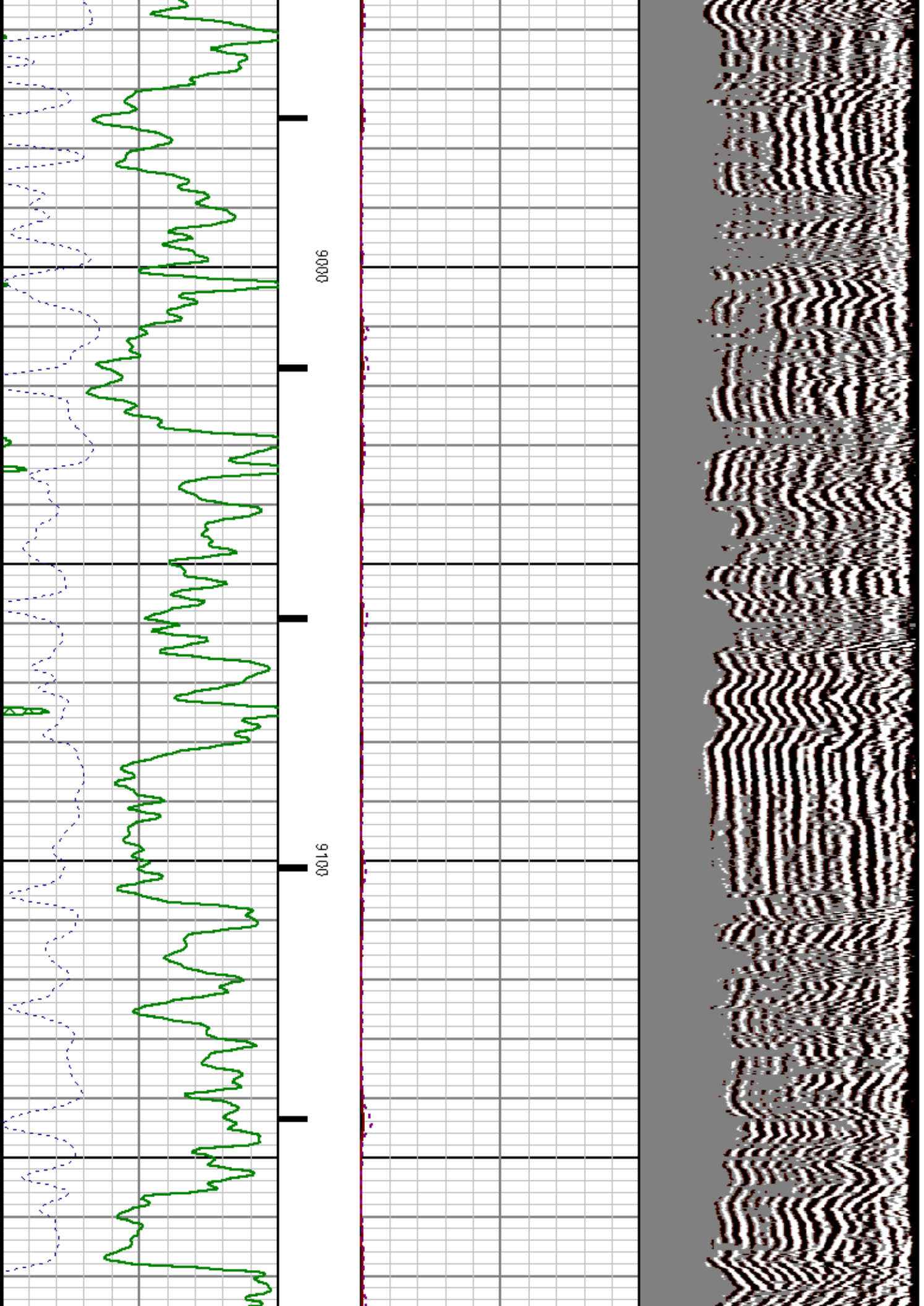


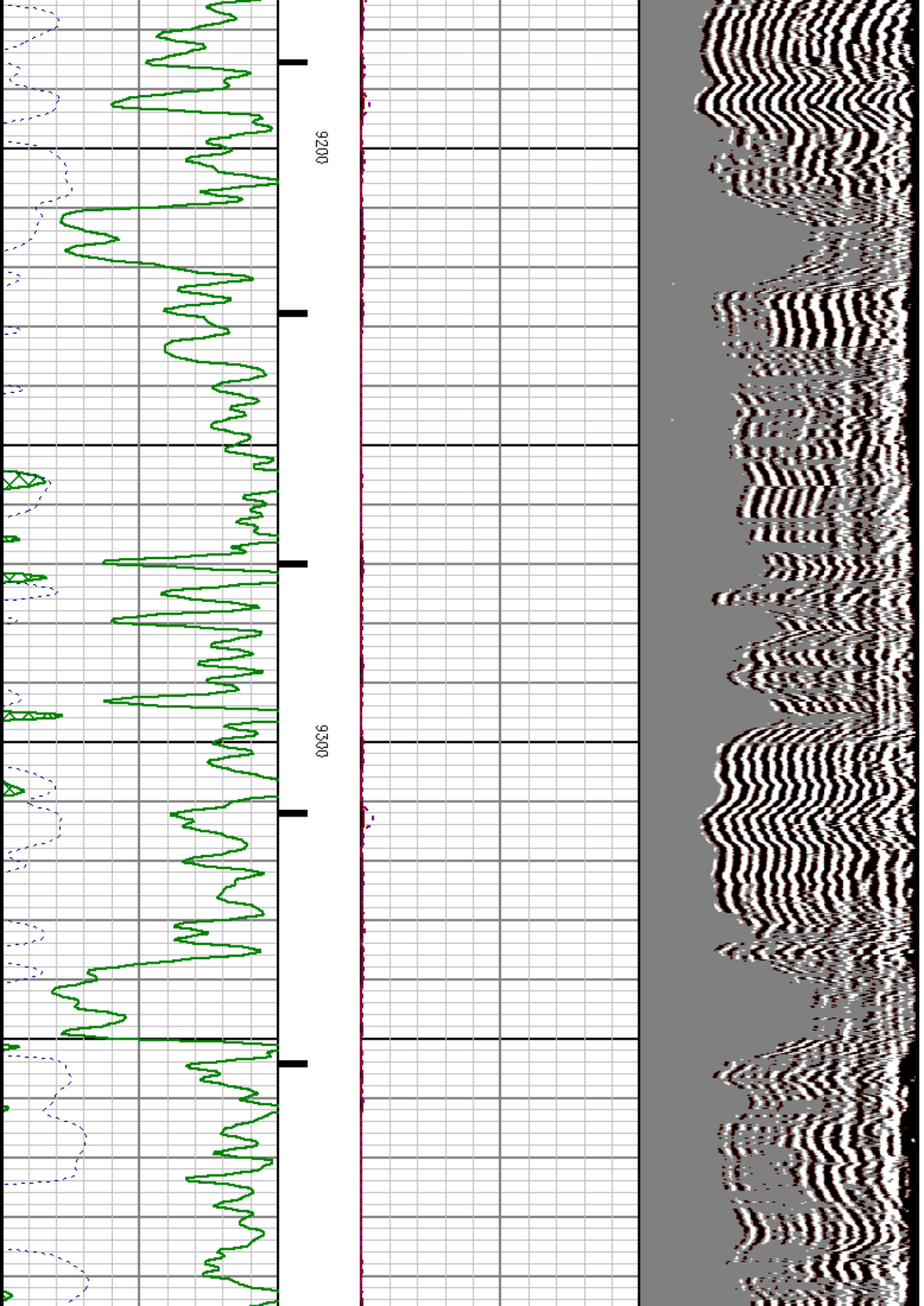


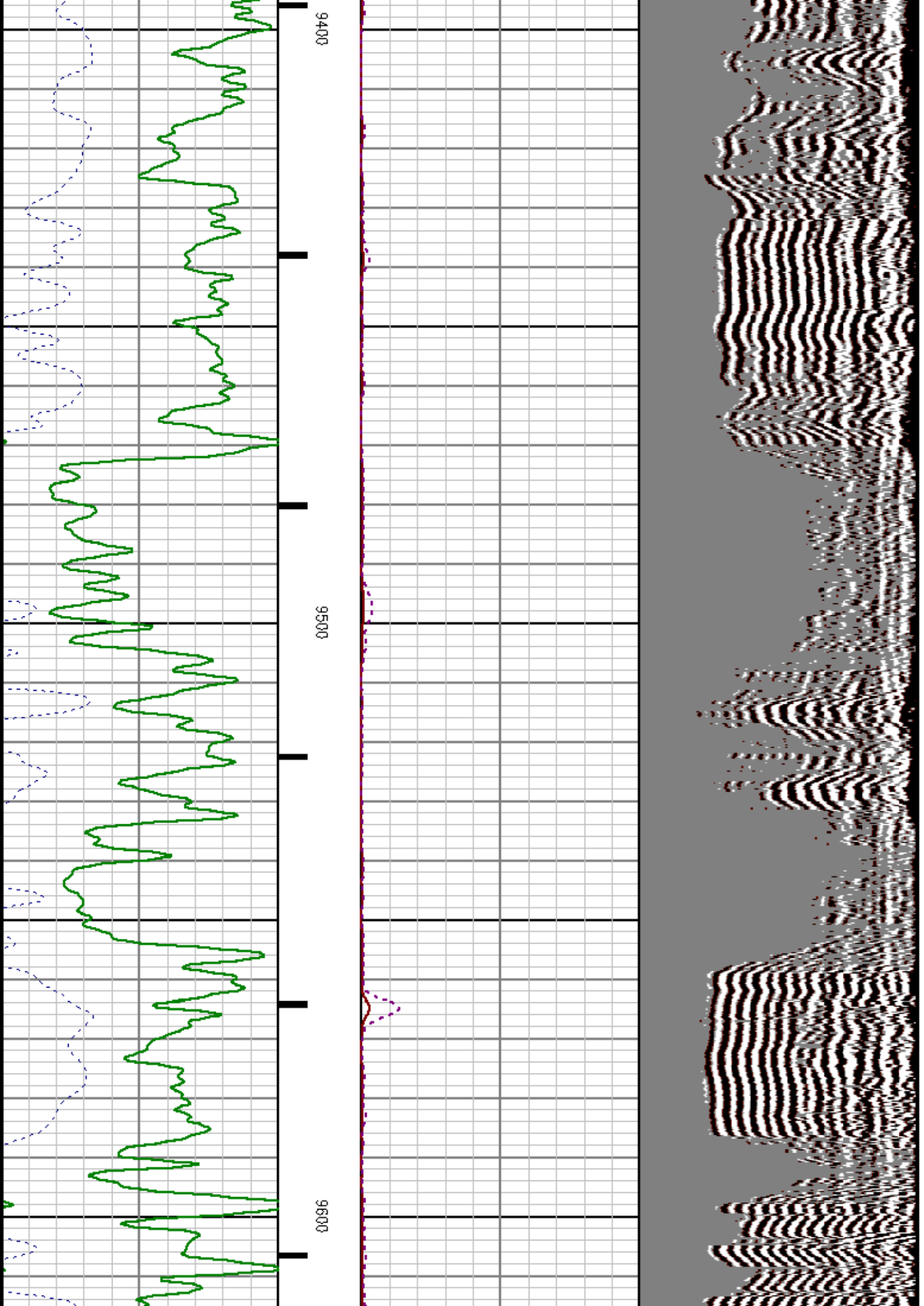


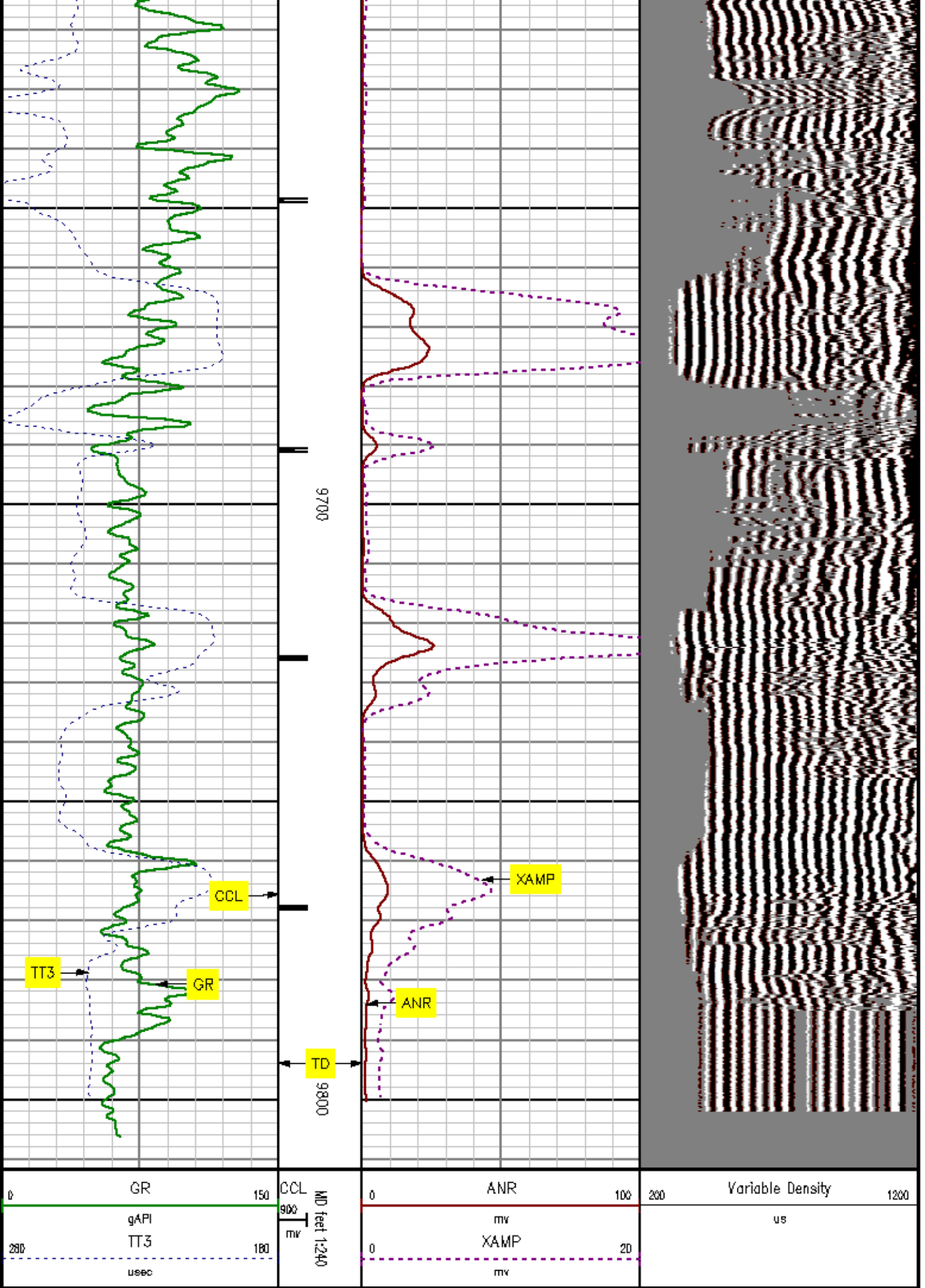












0	GR	150	CCL	MD feet 1:240	0	ANR	100	200	Variable Density	1200
280	gAPI		900		0	mv			us	
	TT3	180	mv		0	XAMP	20			
	usec					mv				

MAIN SECTION

SECONDARY PRESENTATION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
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RAL	FB Thresh Radial	10.000	mv	65.633	2218.000
RAL	Fluid Travel Time	200.000	usec/ft	65.633	2217.977

DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
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		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	GCL					
1426XA	-5.390	GR					
1426XA	0.000	NEU					

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Plotted by : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION RMT COMPANY

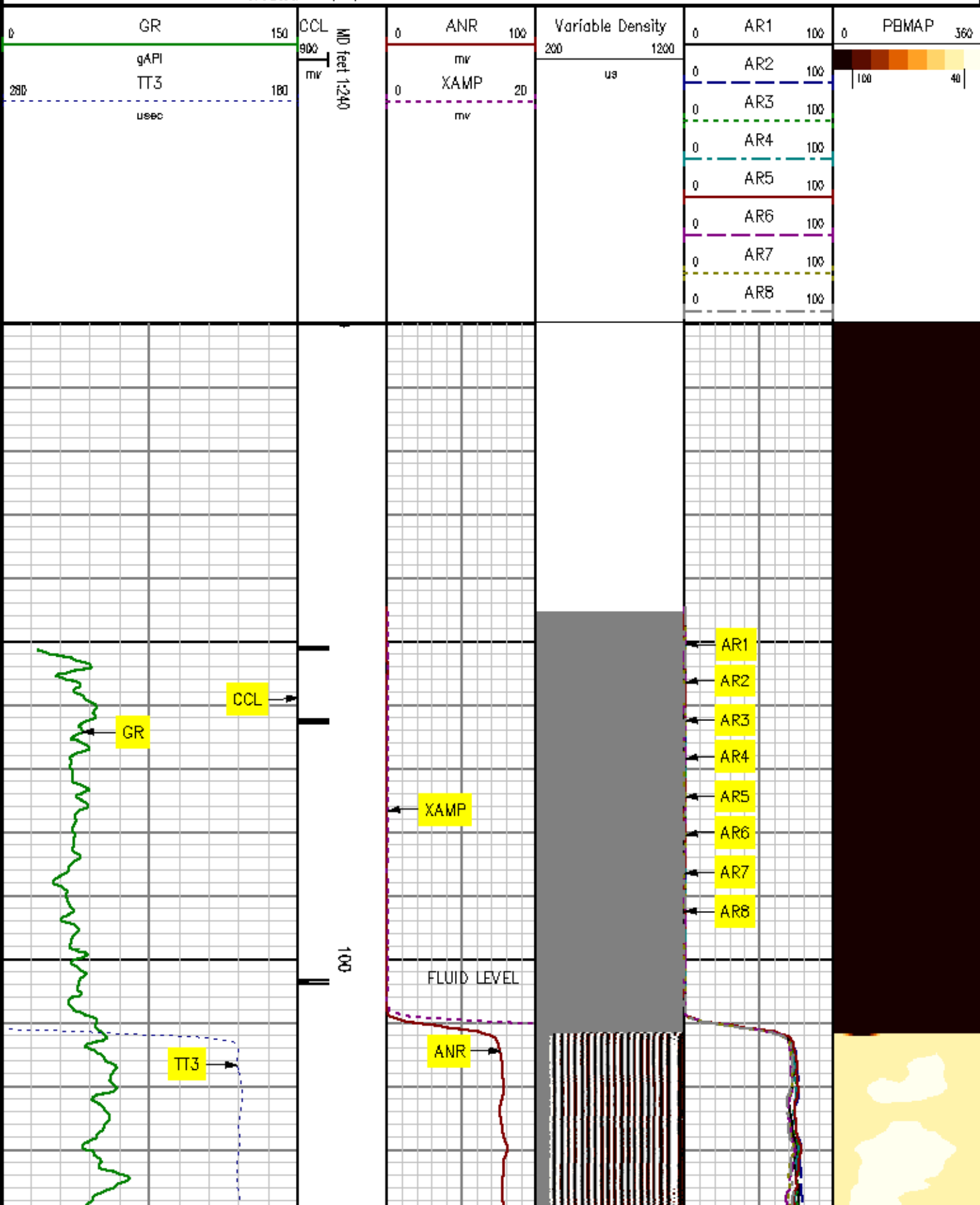
Well : RU 333-6

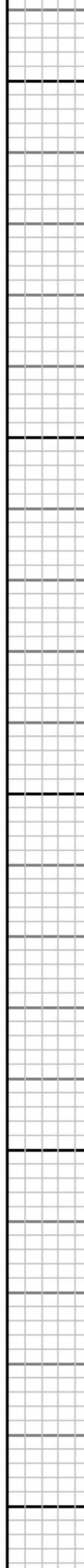
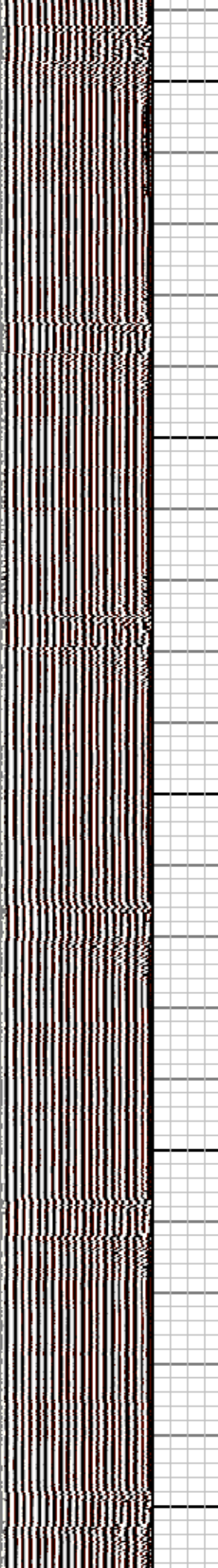
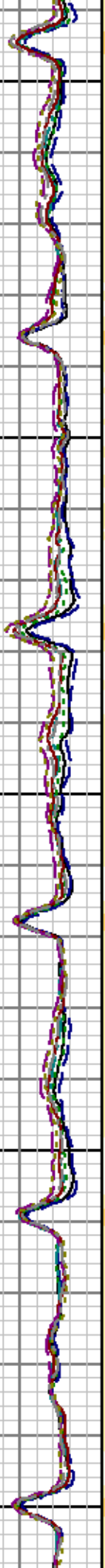
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Mode : PlotMgr 5.4.504

Interval : 0.00 - 9812.00 feet UP

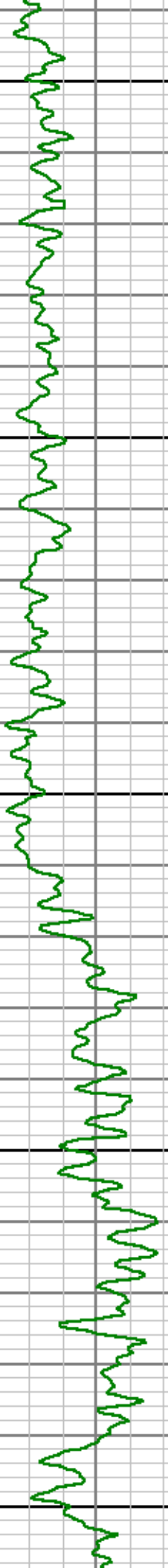
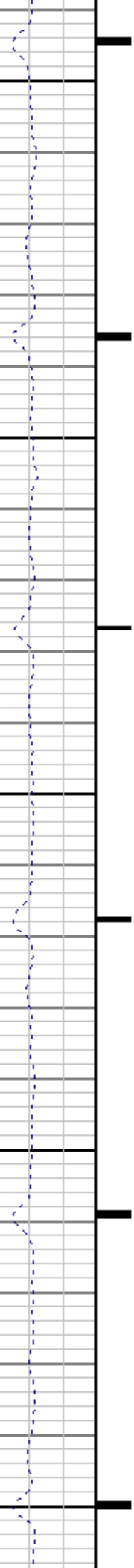
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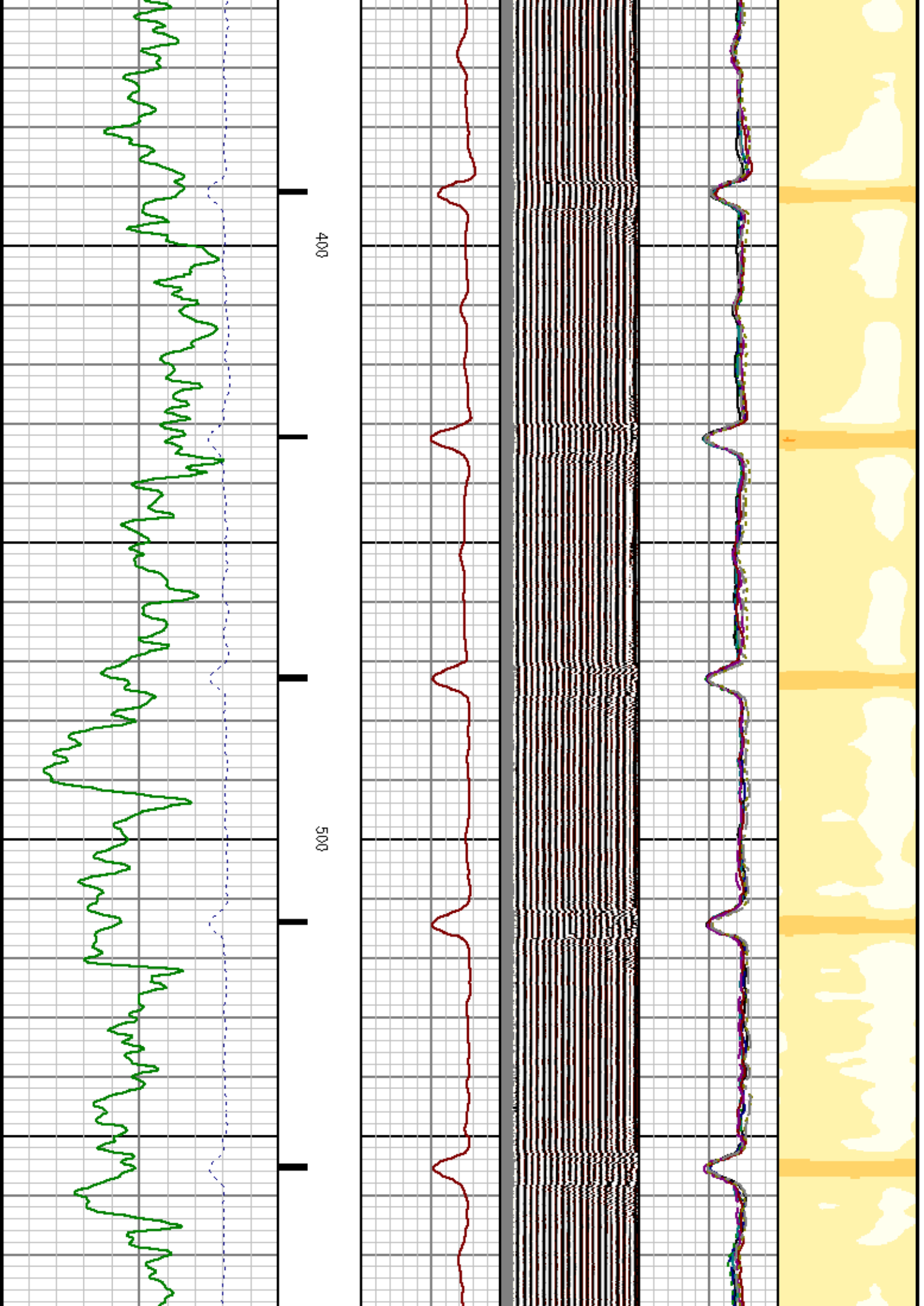


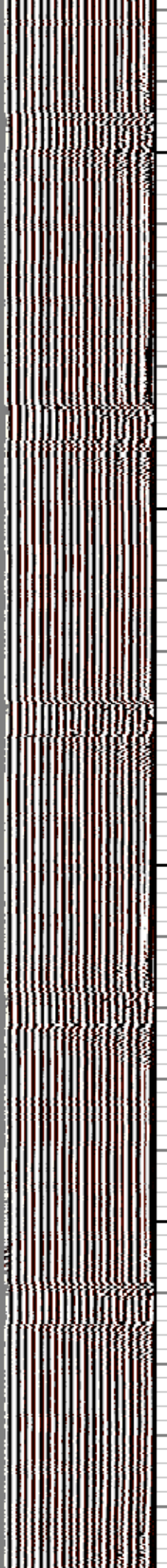
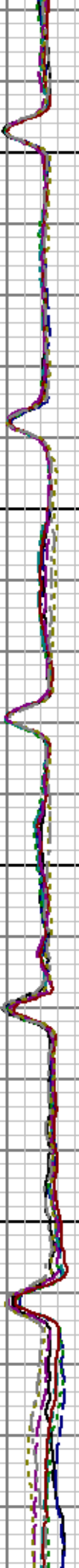
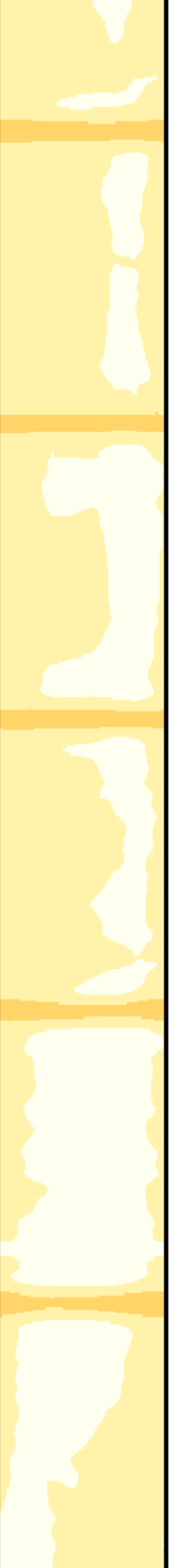


200

300



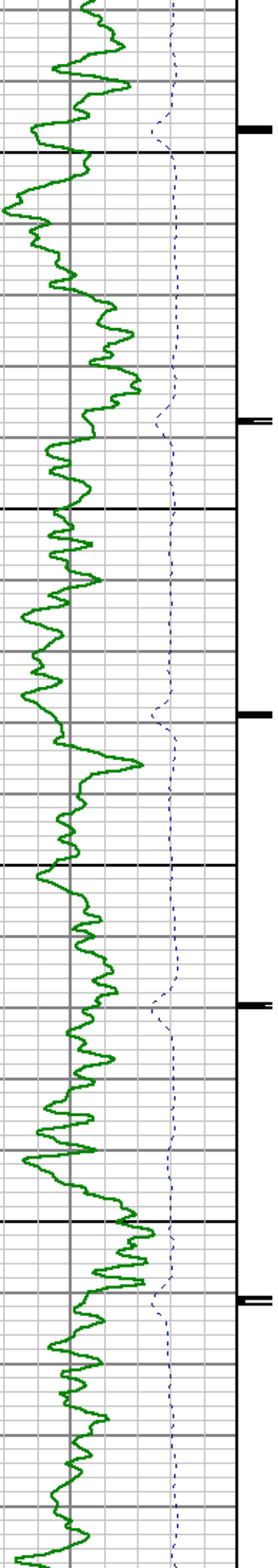


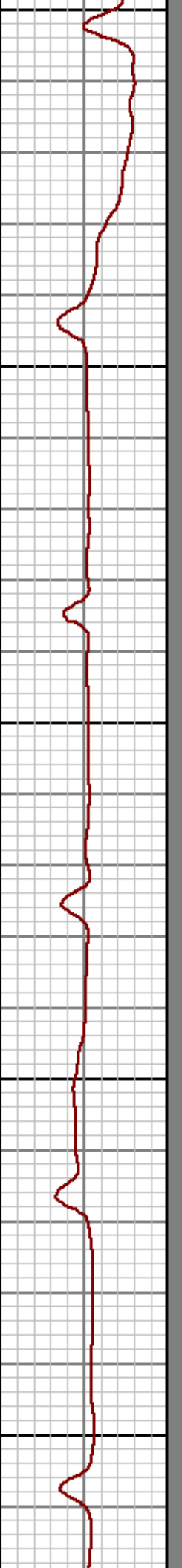
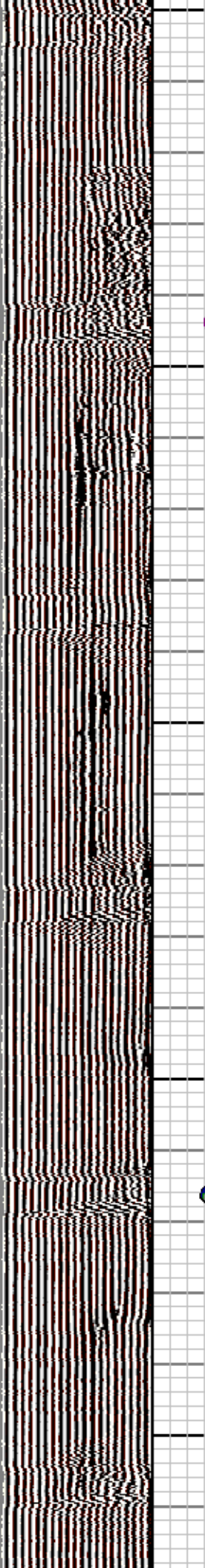
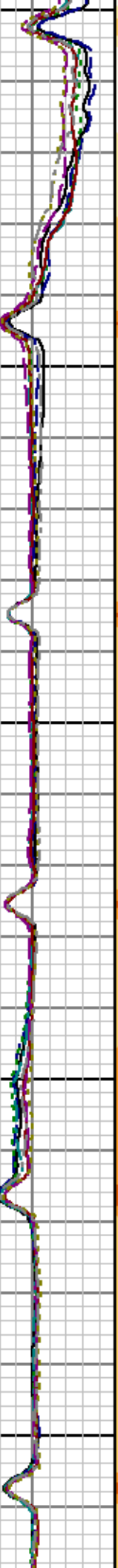


600

700

8

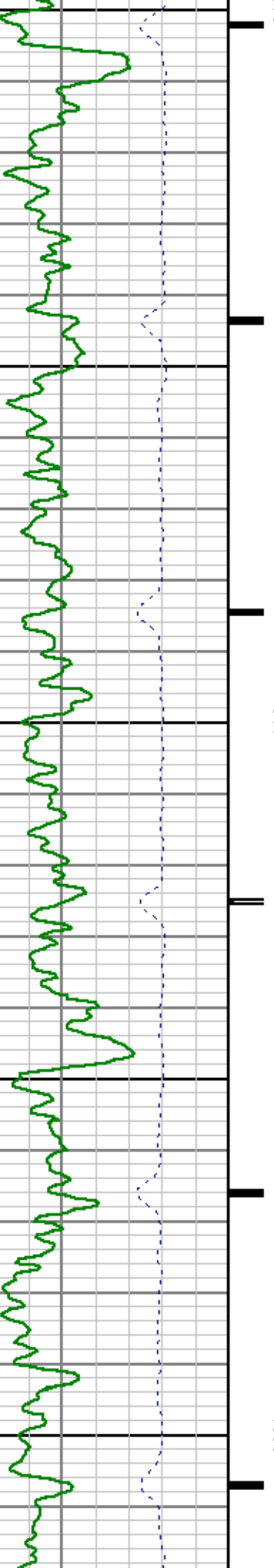


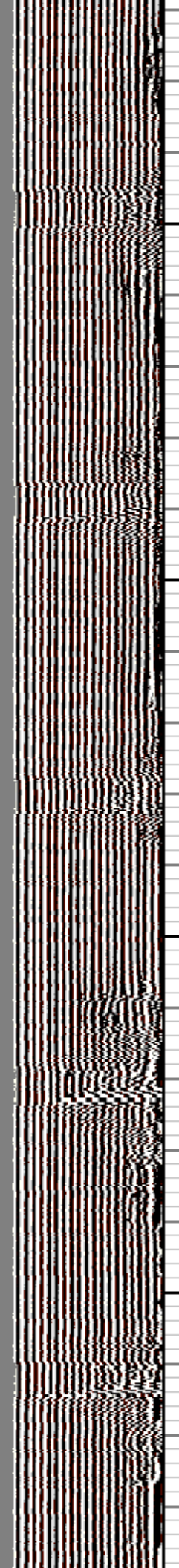


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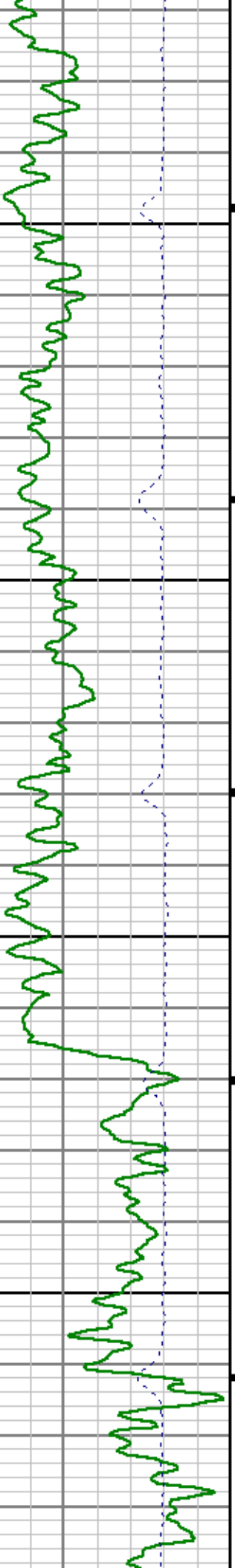
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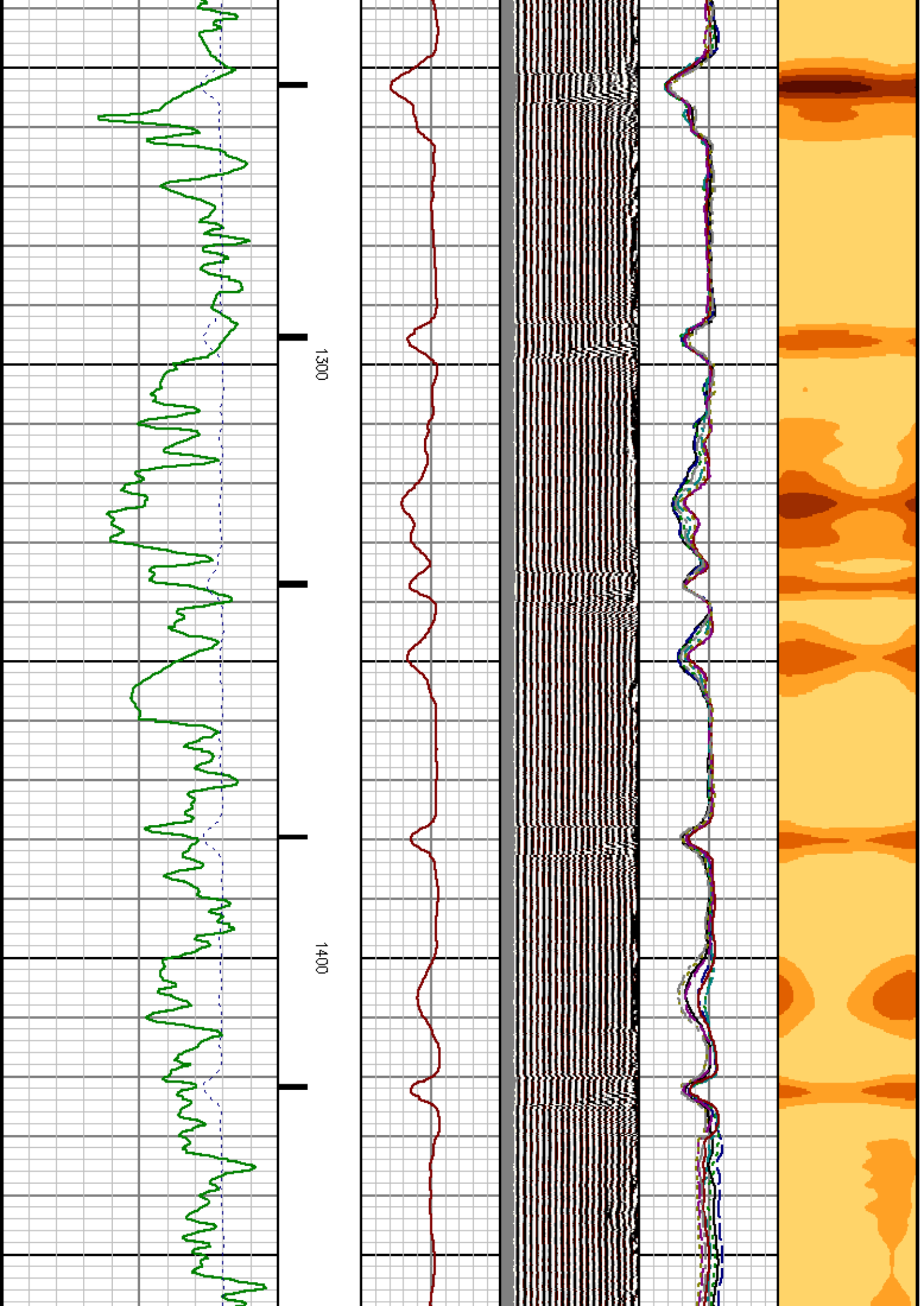


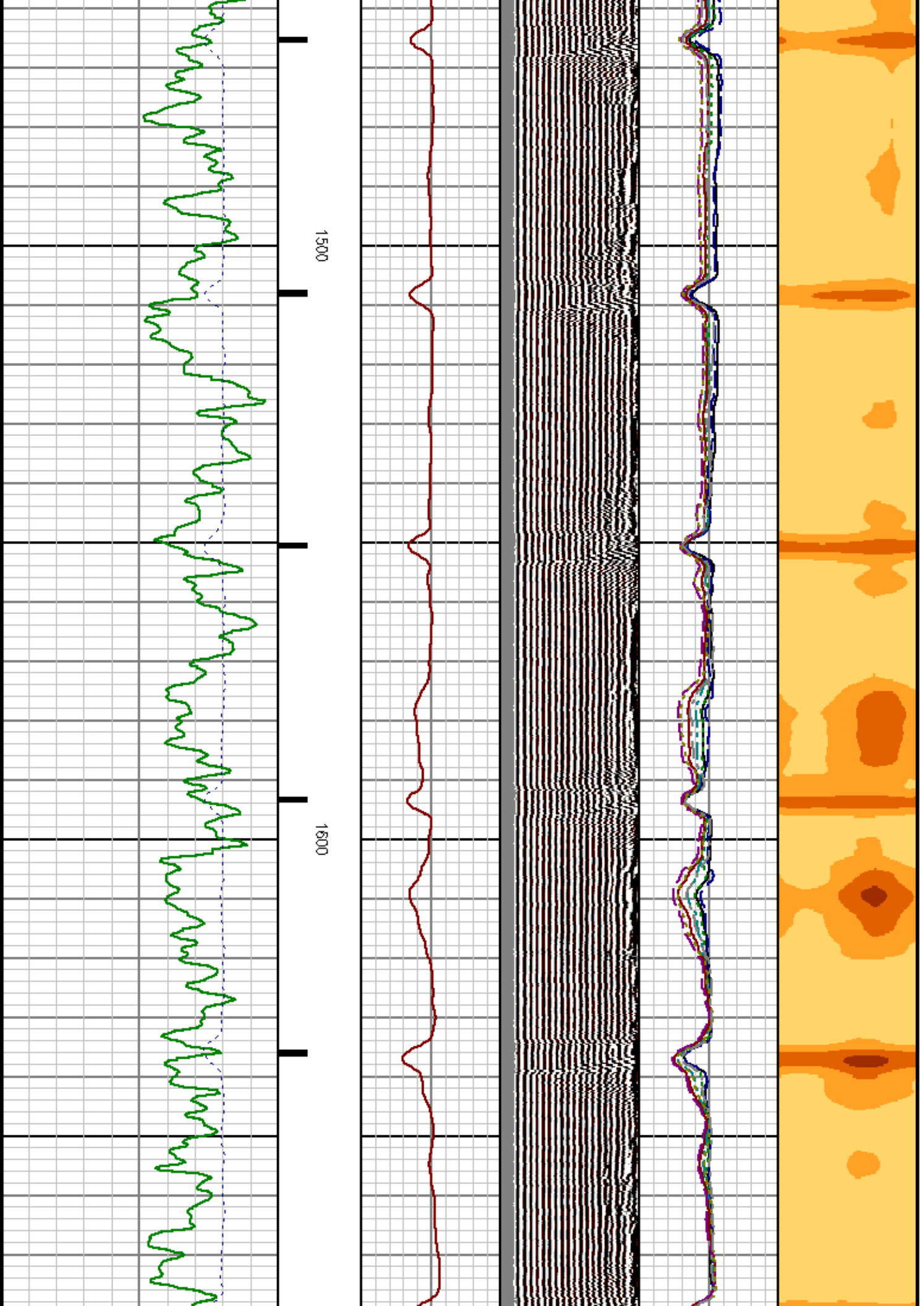


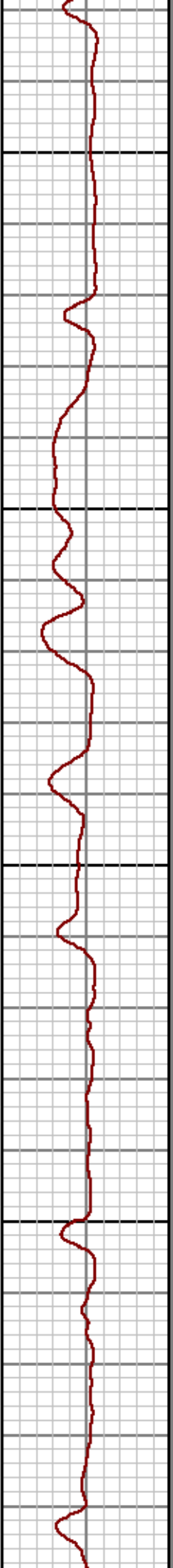
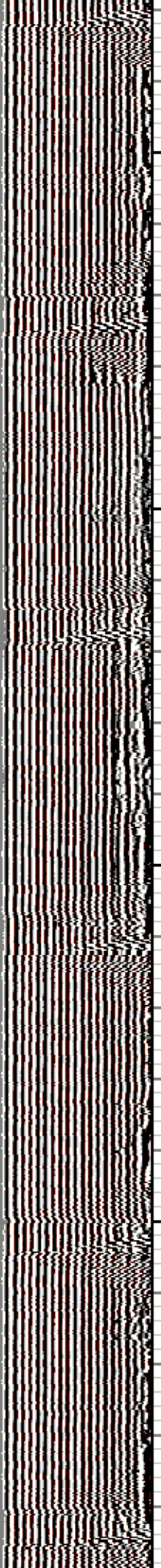
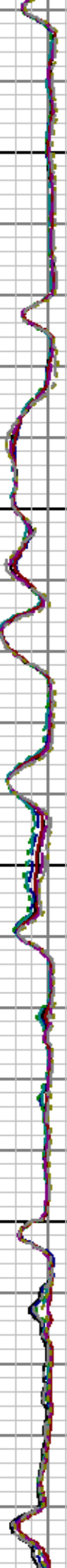
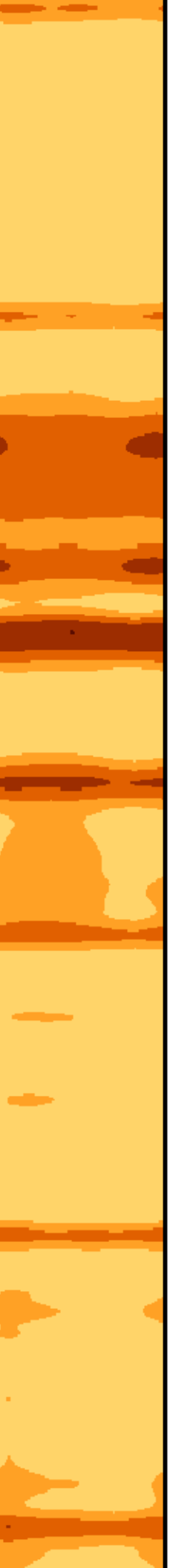
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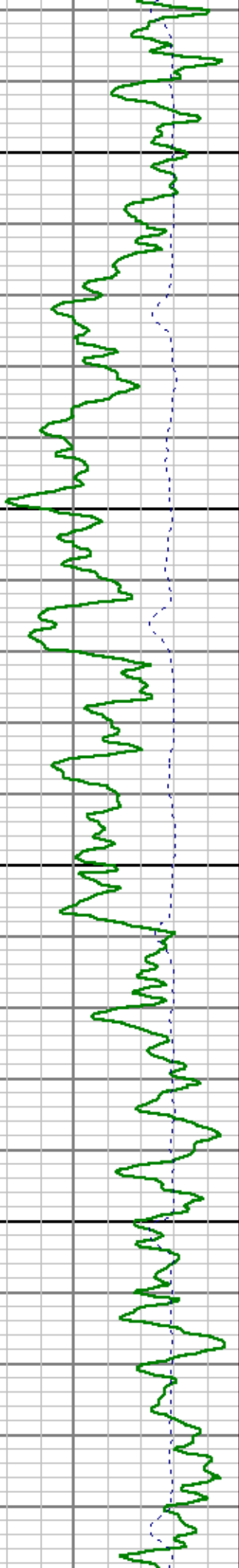


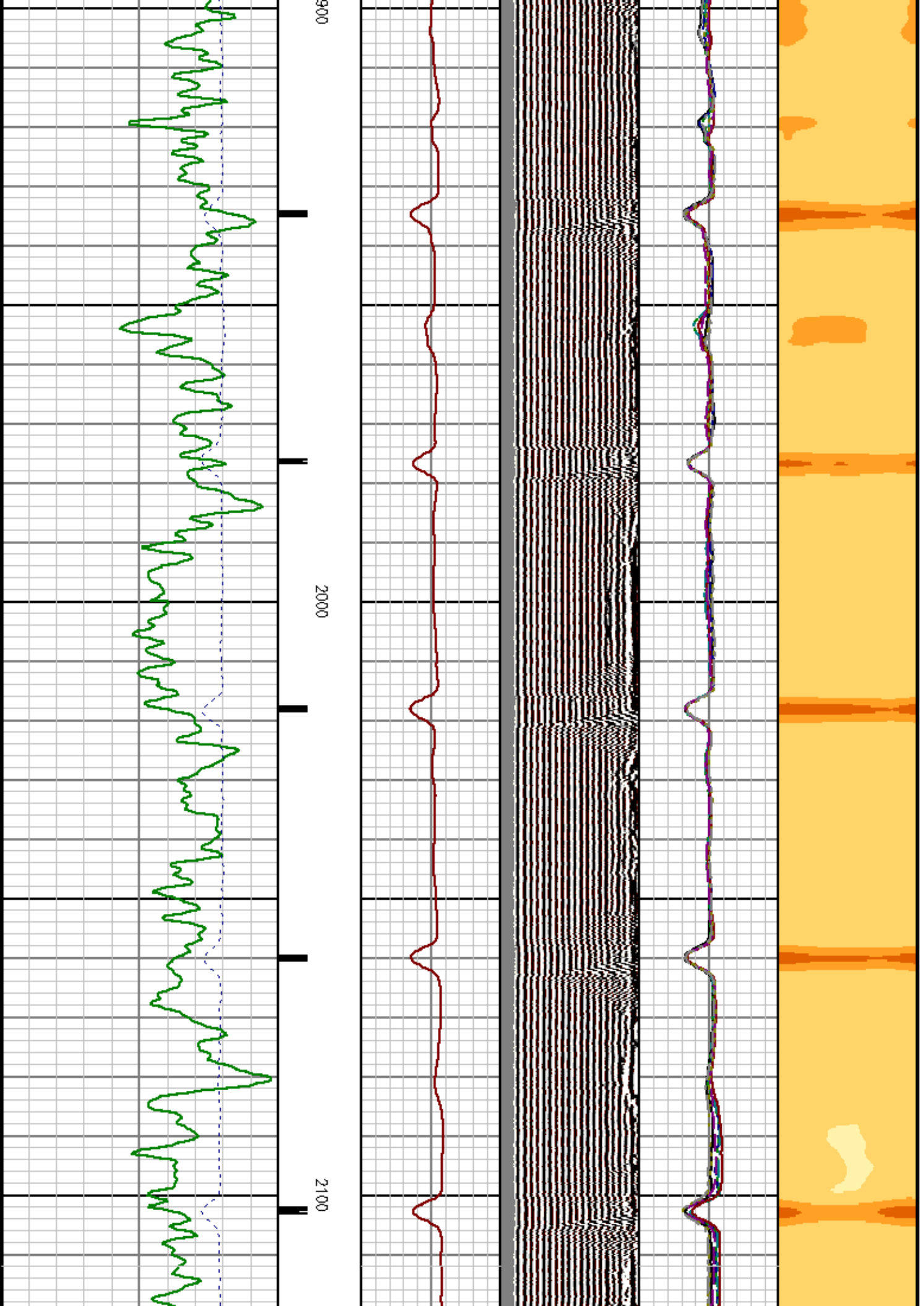


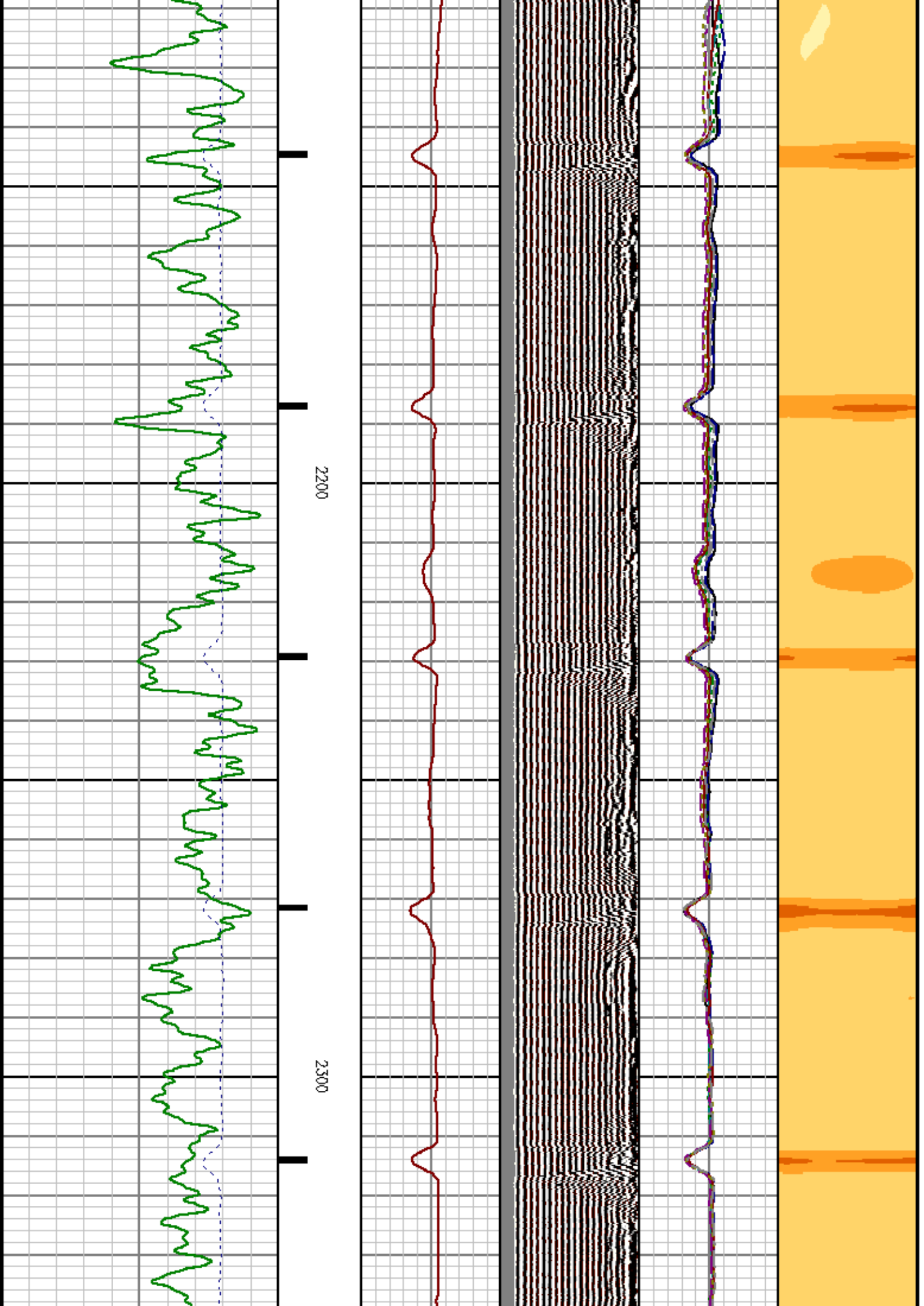
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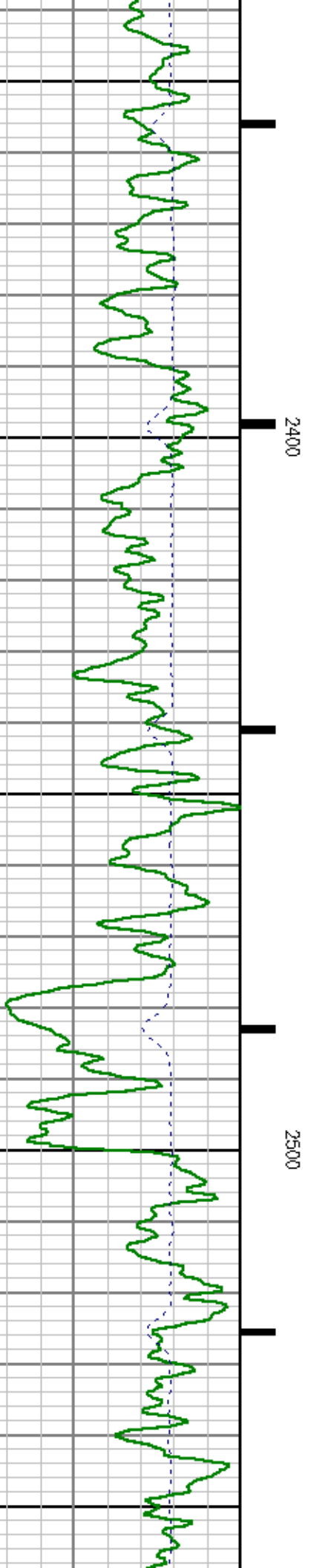
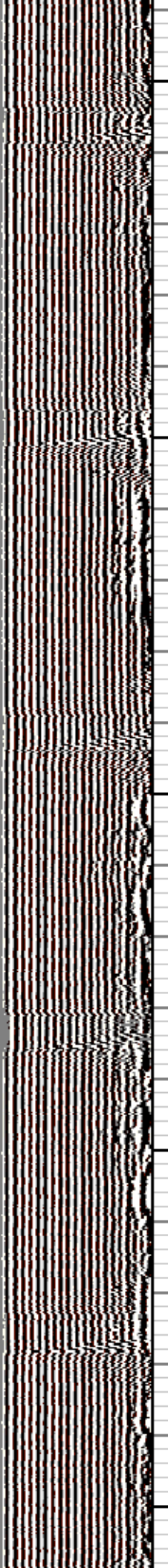
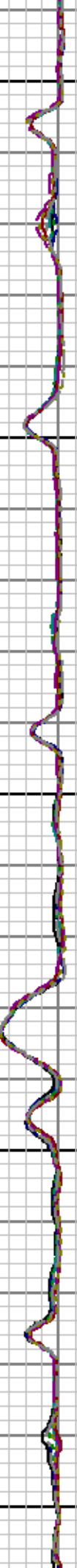
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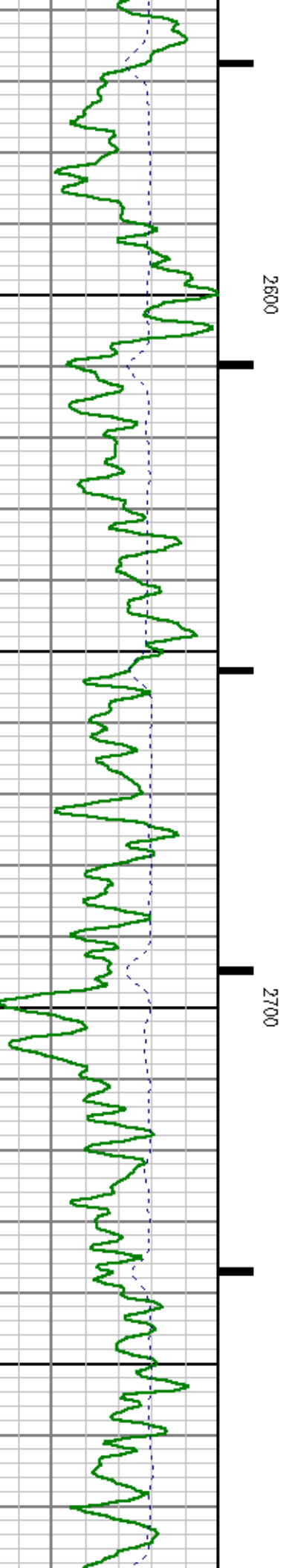
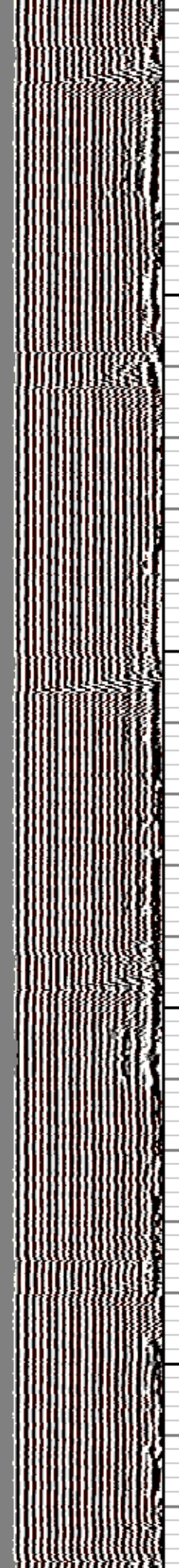
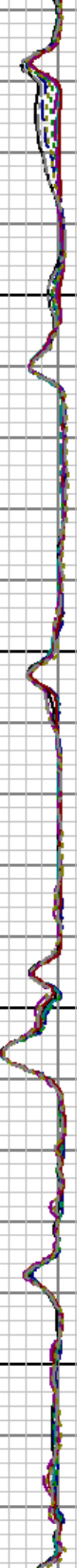
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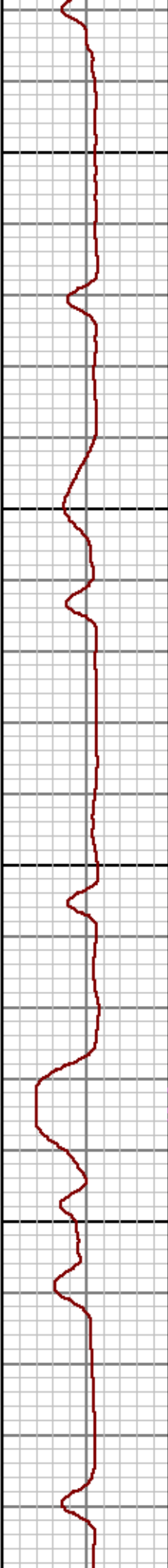
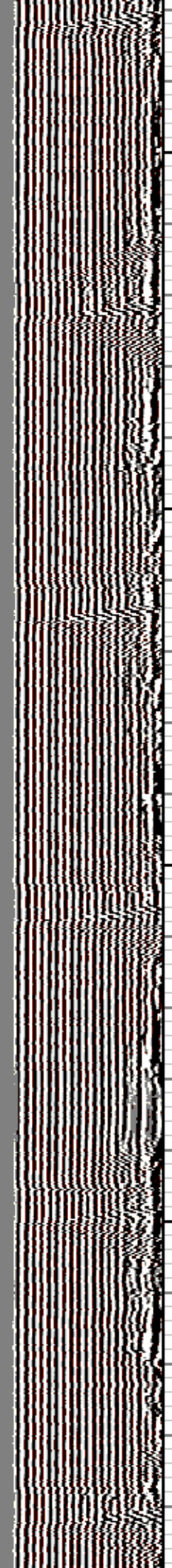
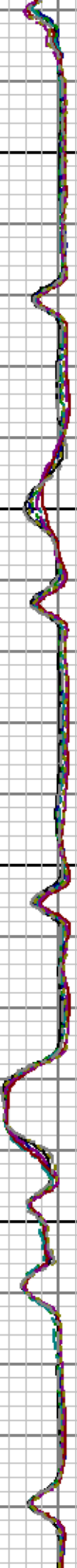








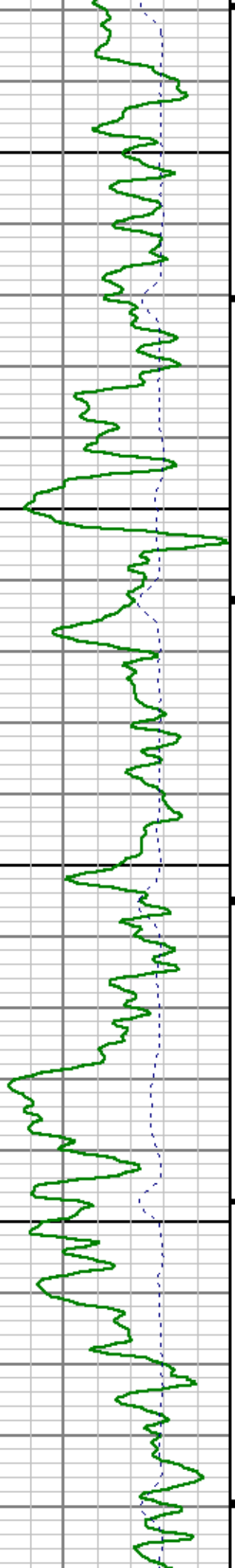


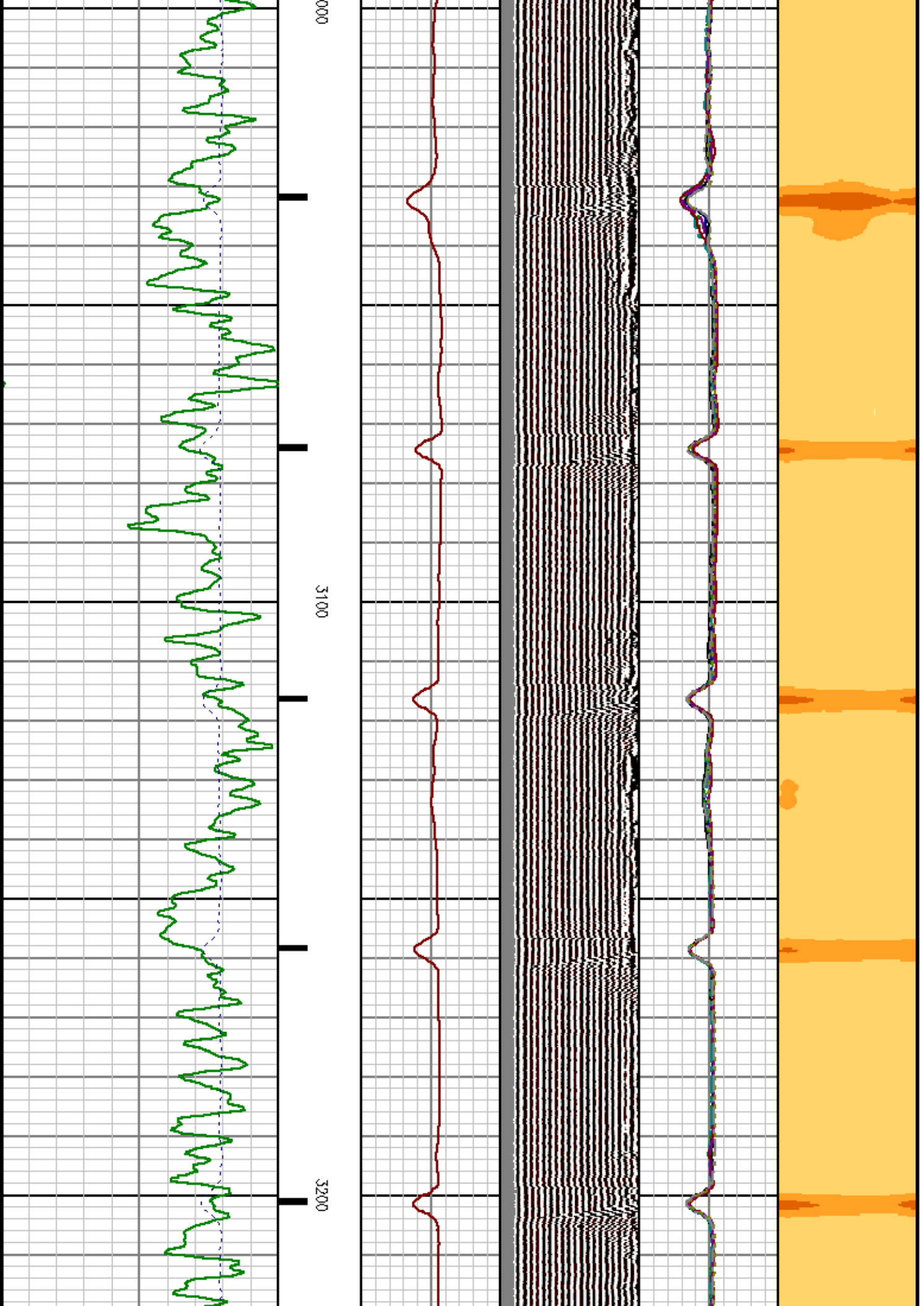


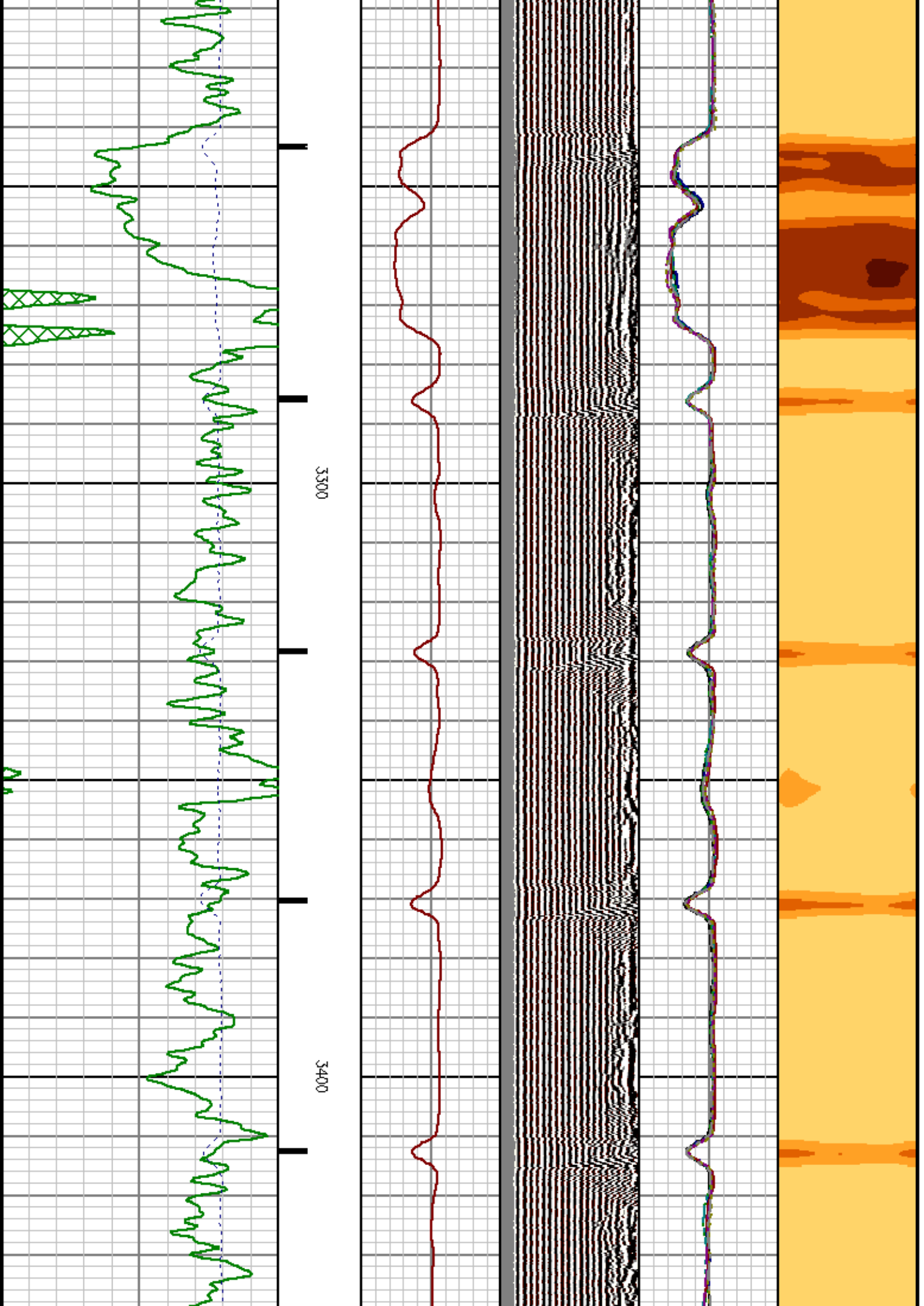
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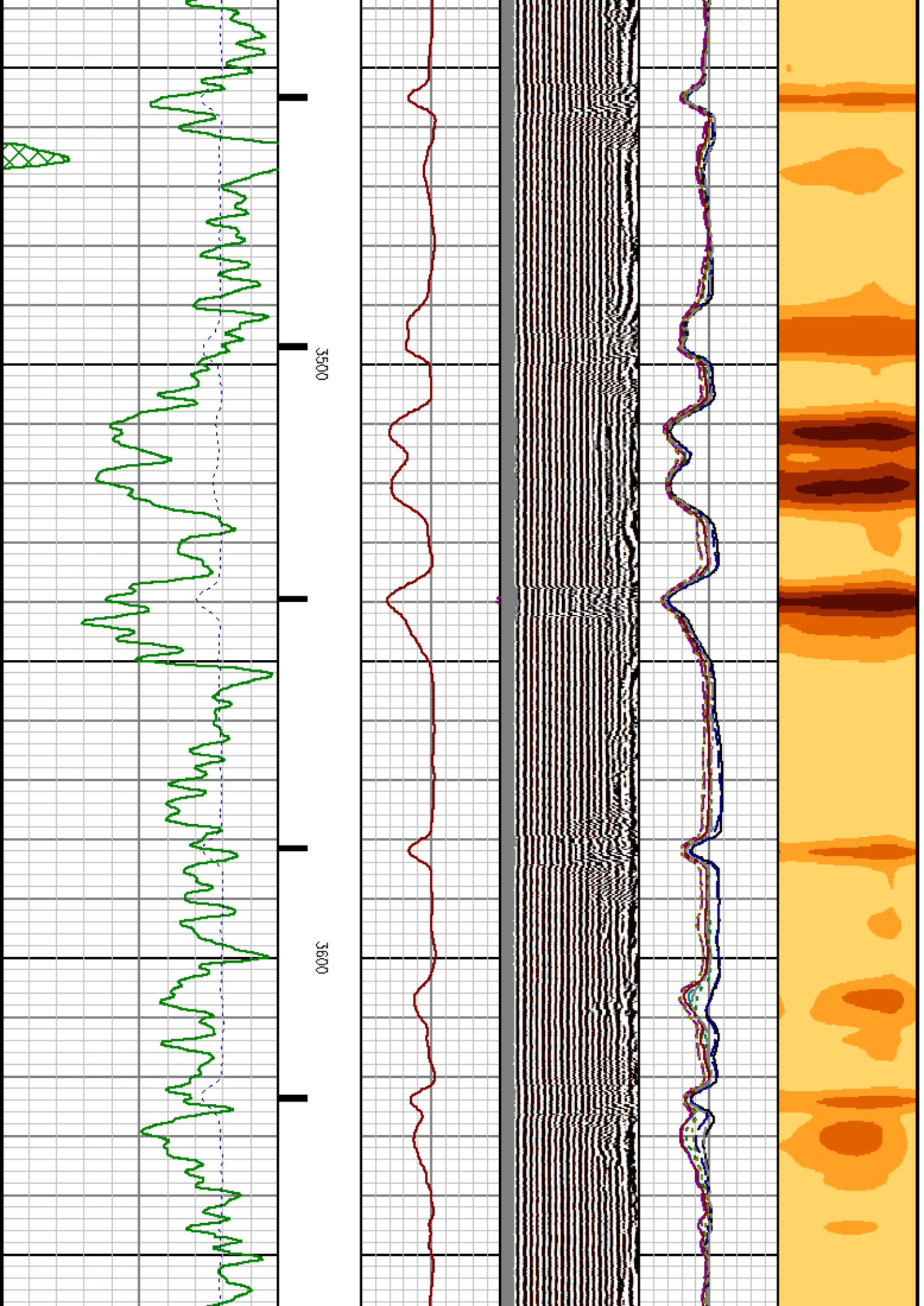
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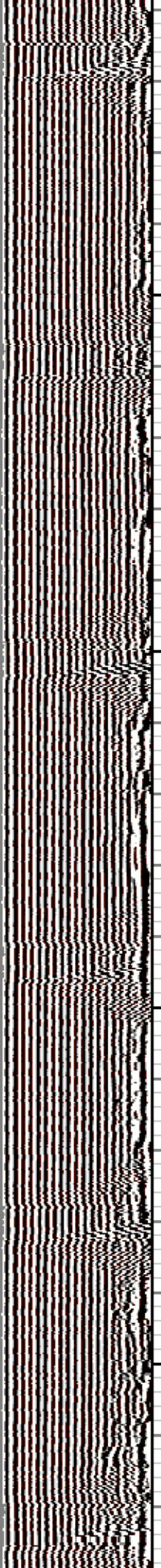
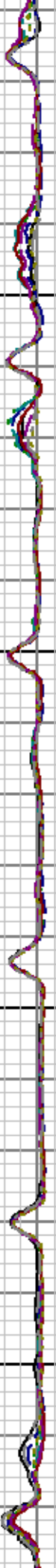
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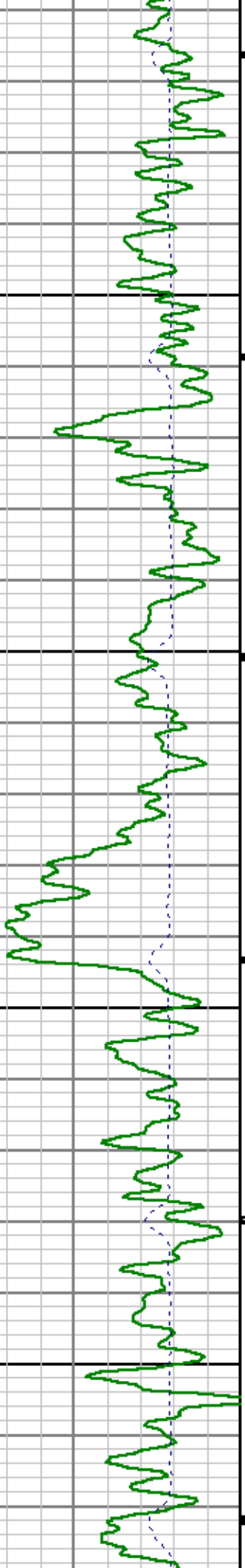


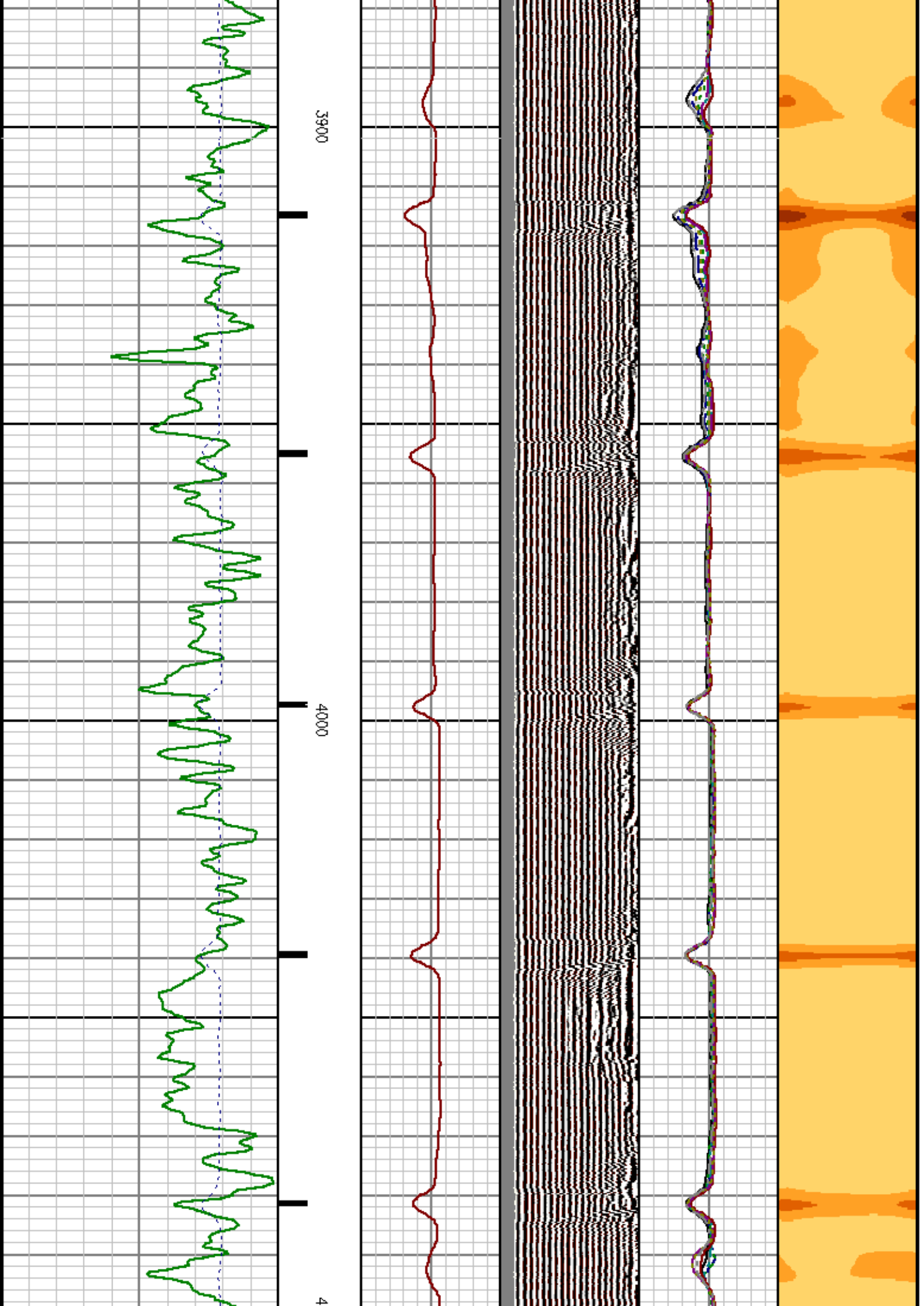


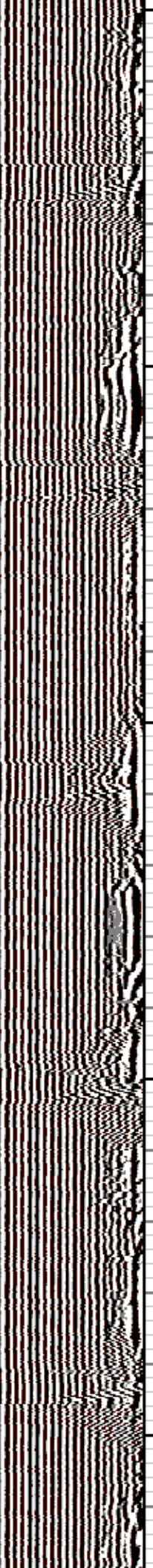
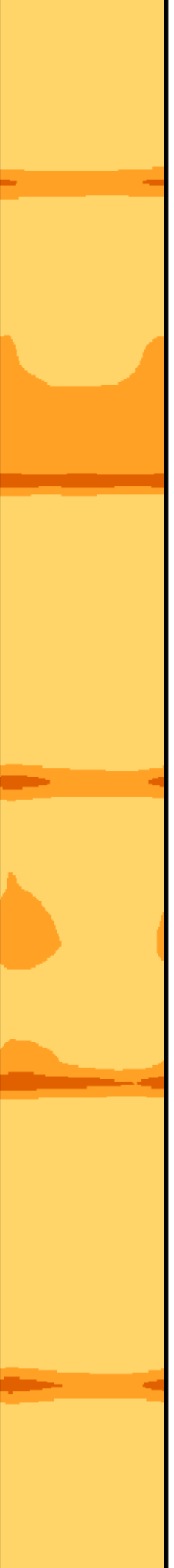


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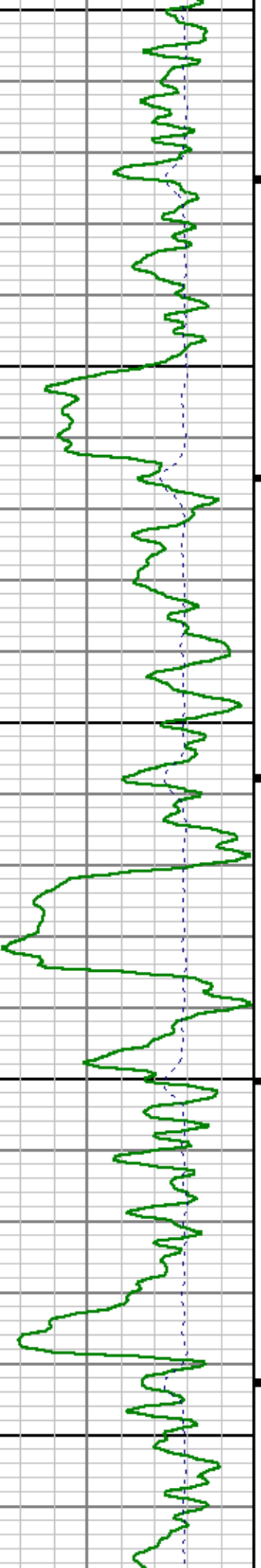


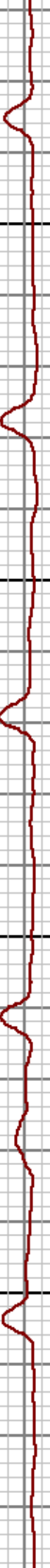
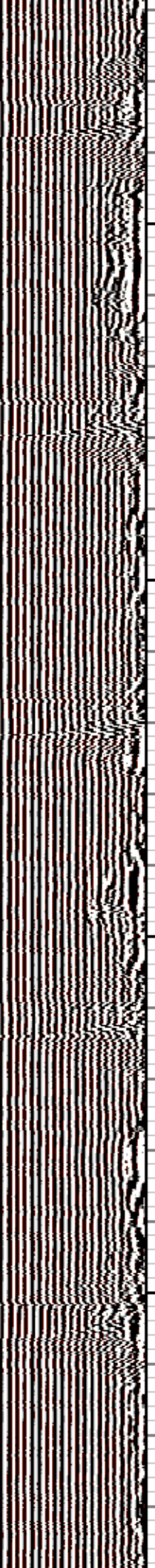
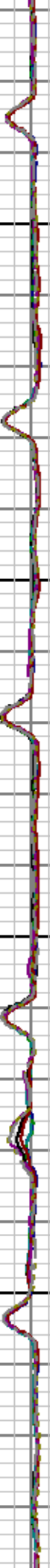


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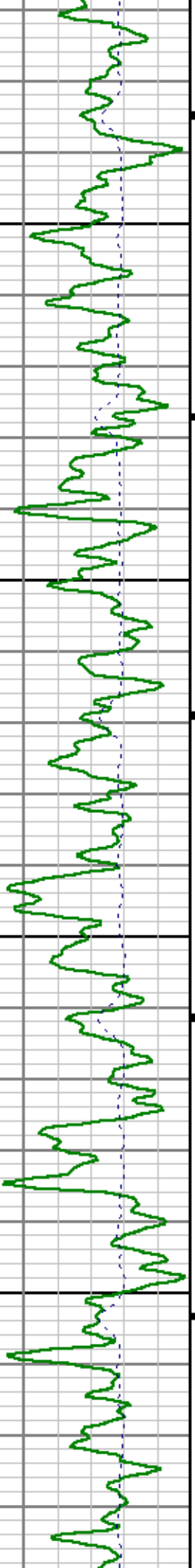
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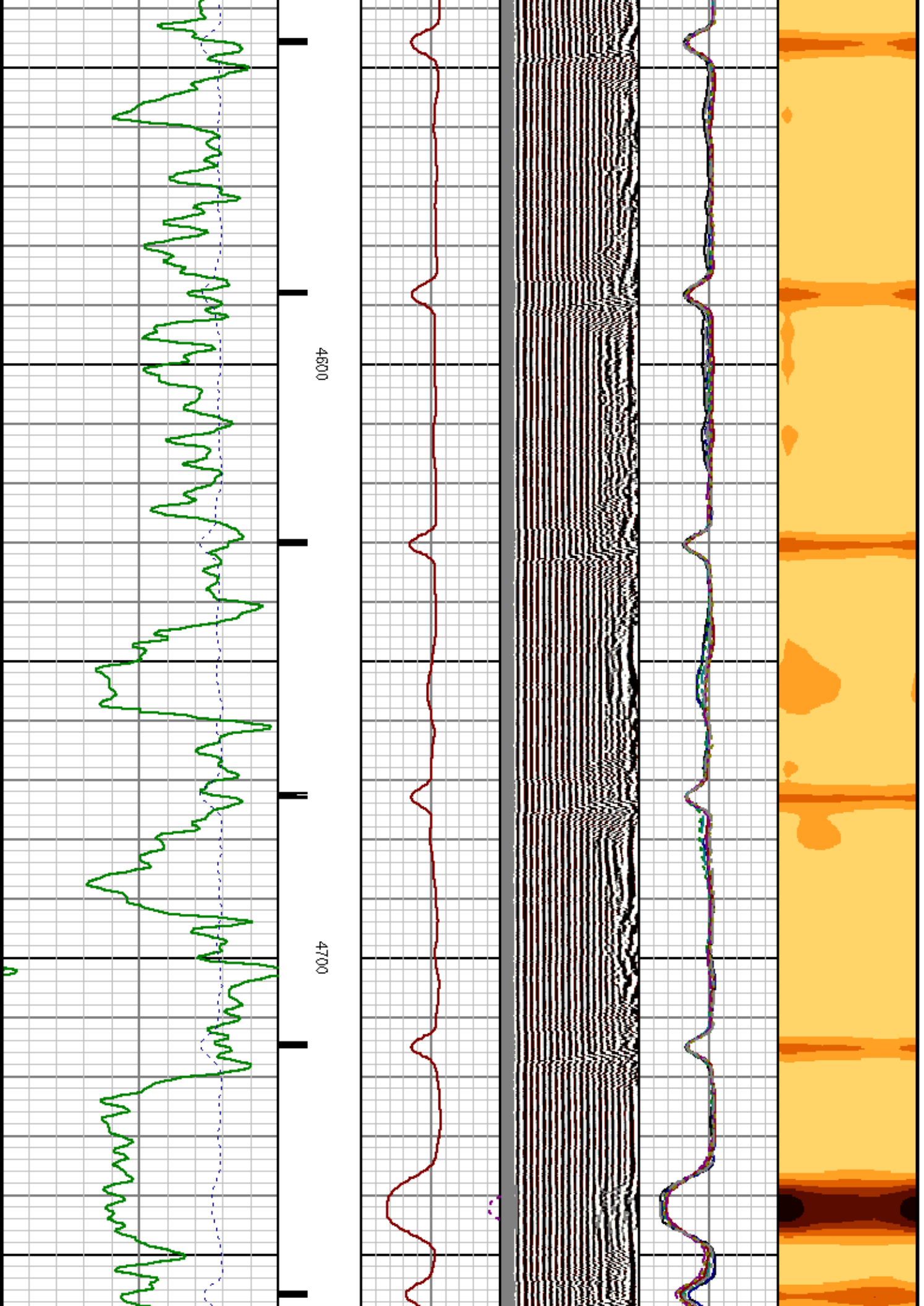


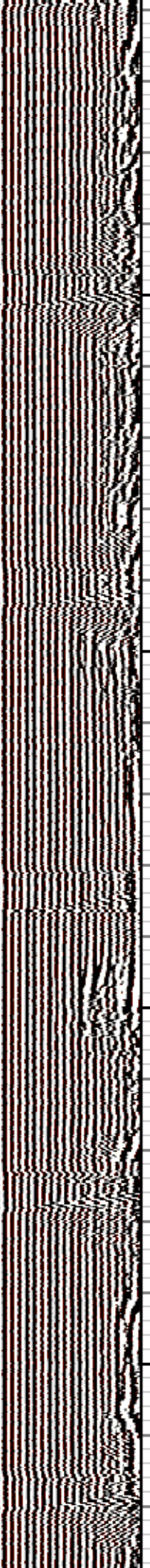
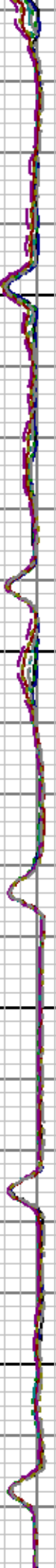
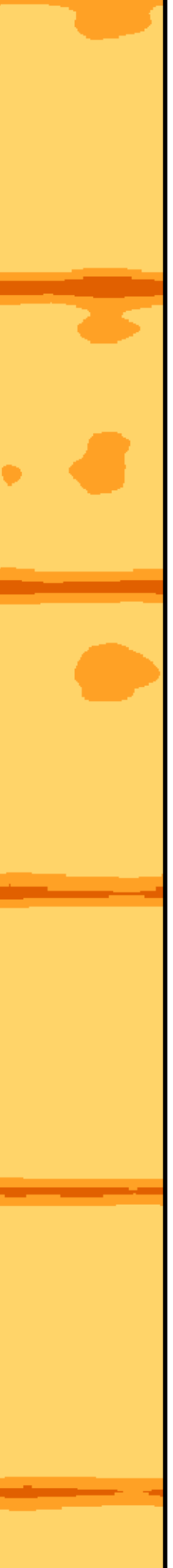


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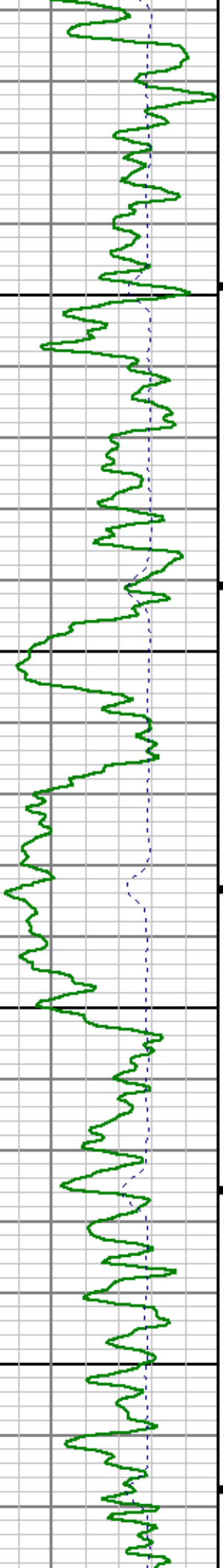


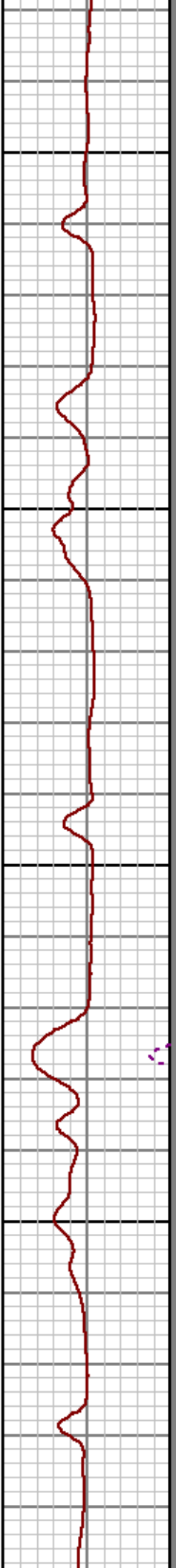
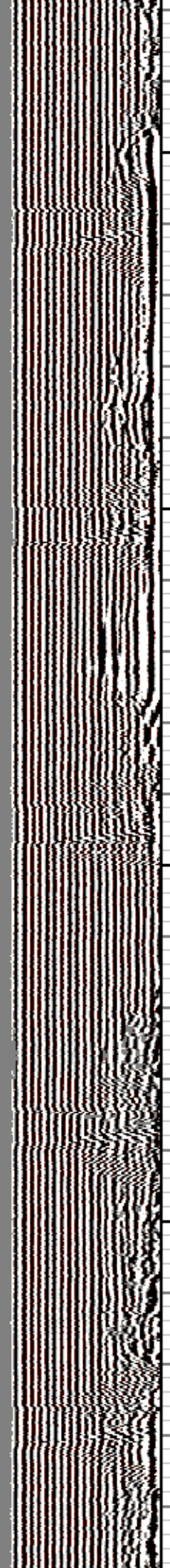
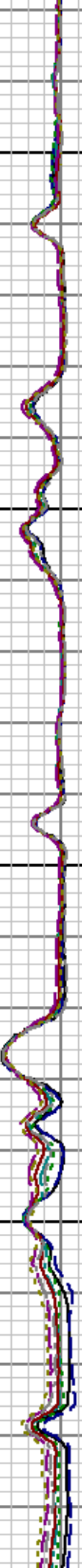
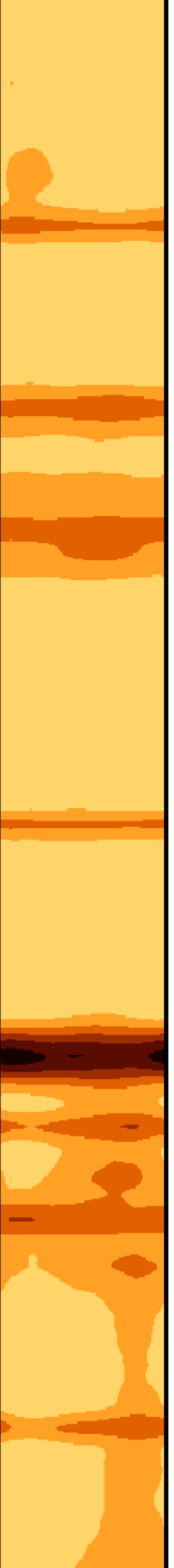




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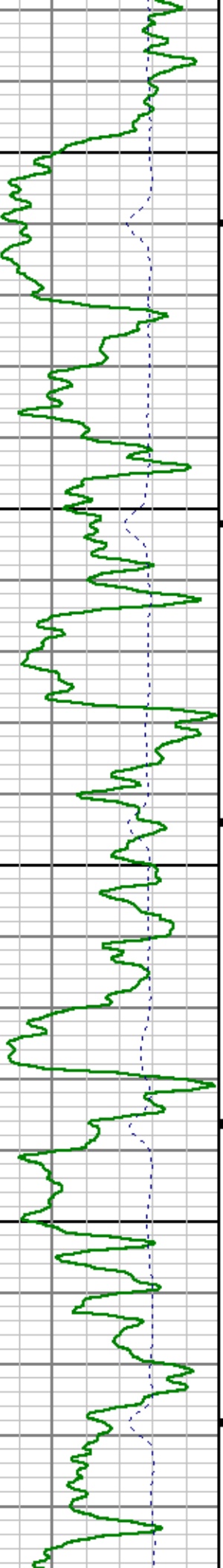


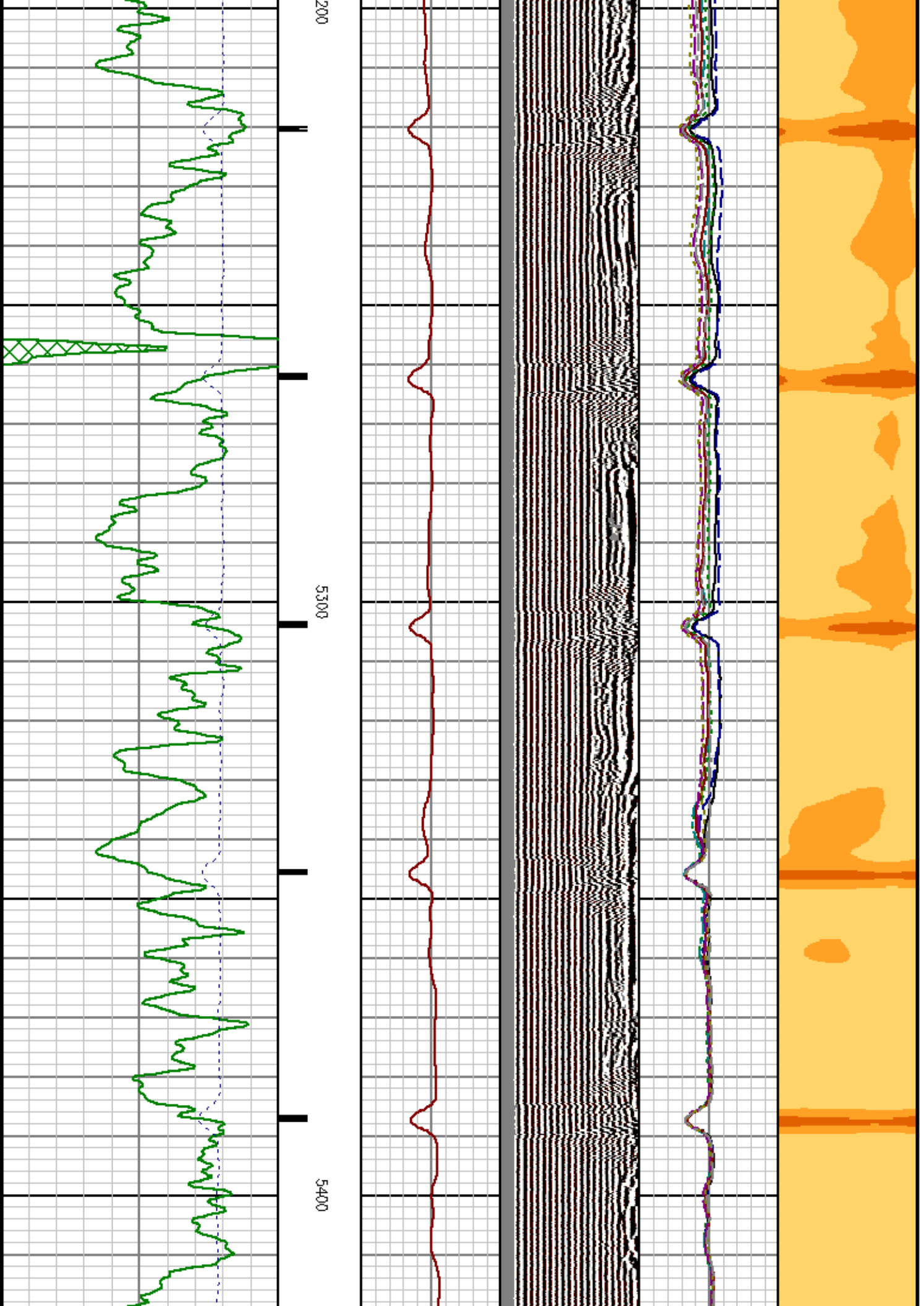


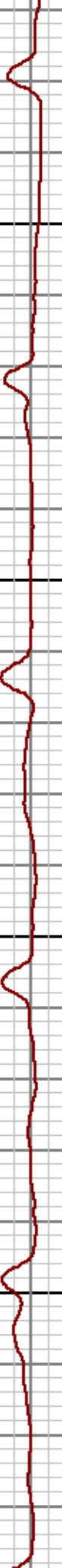
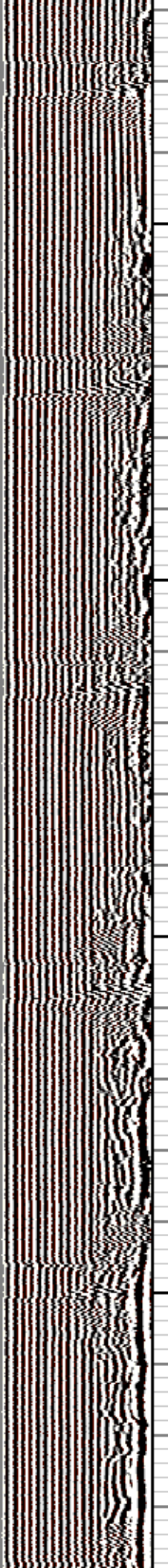
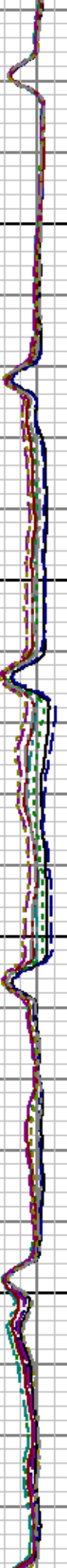
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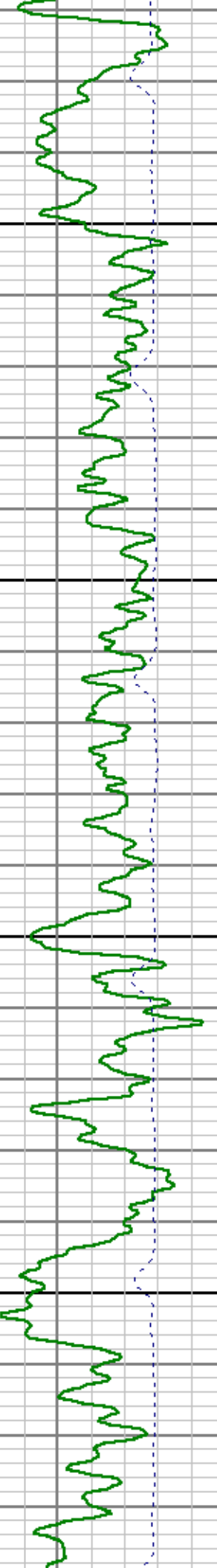


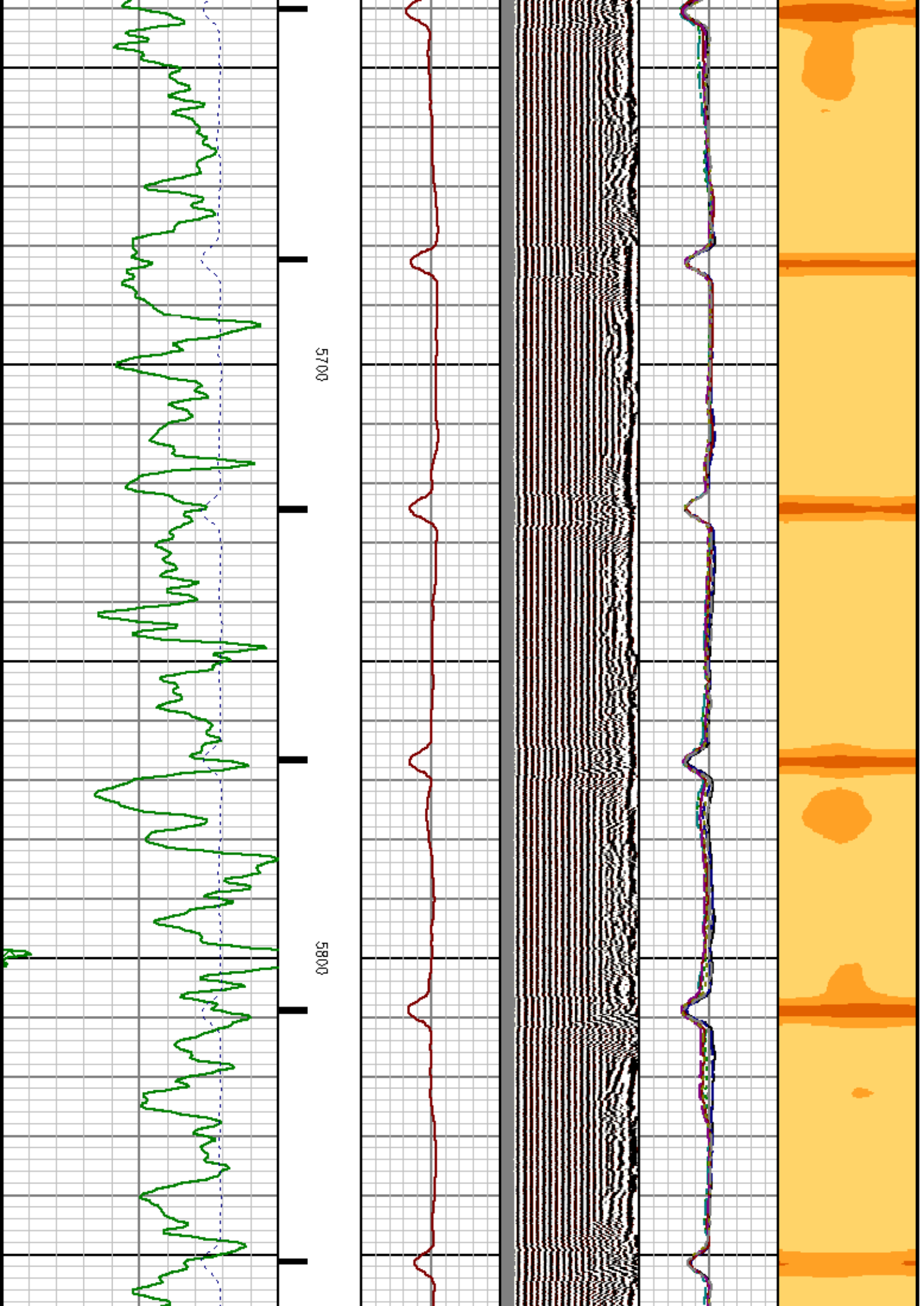


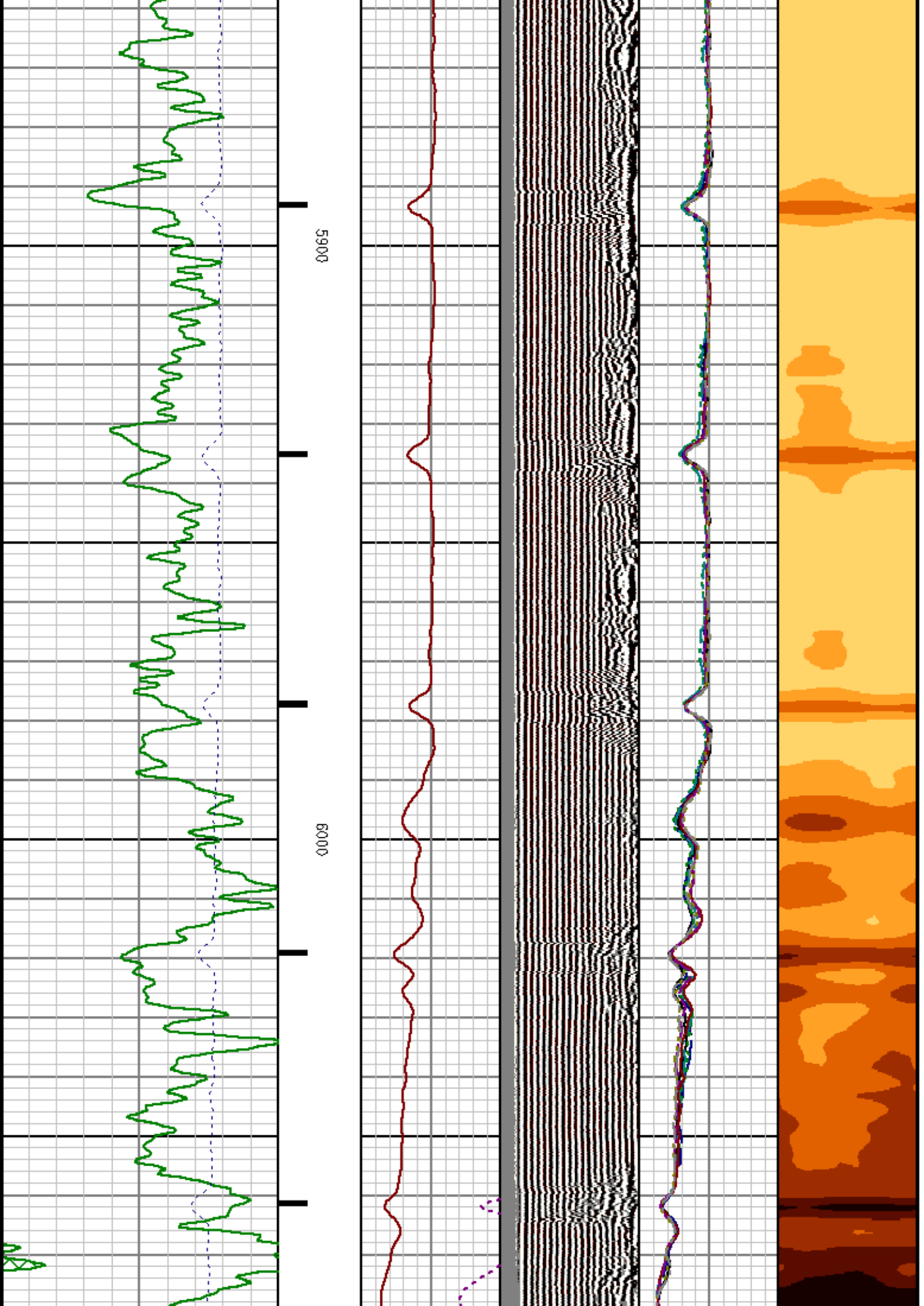


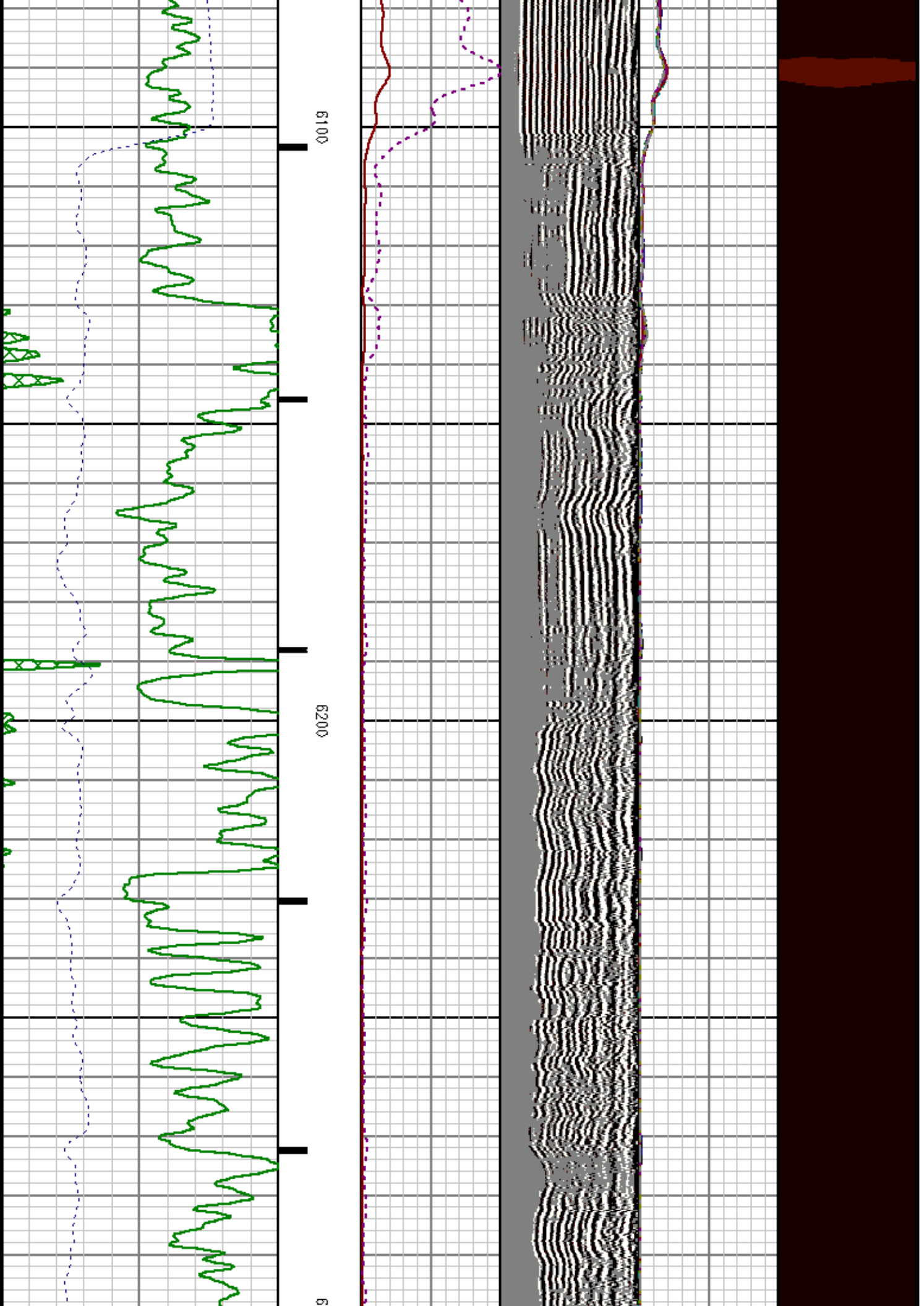
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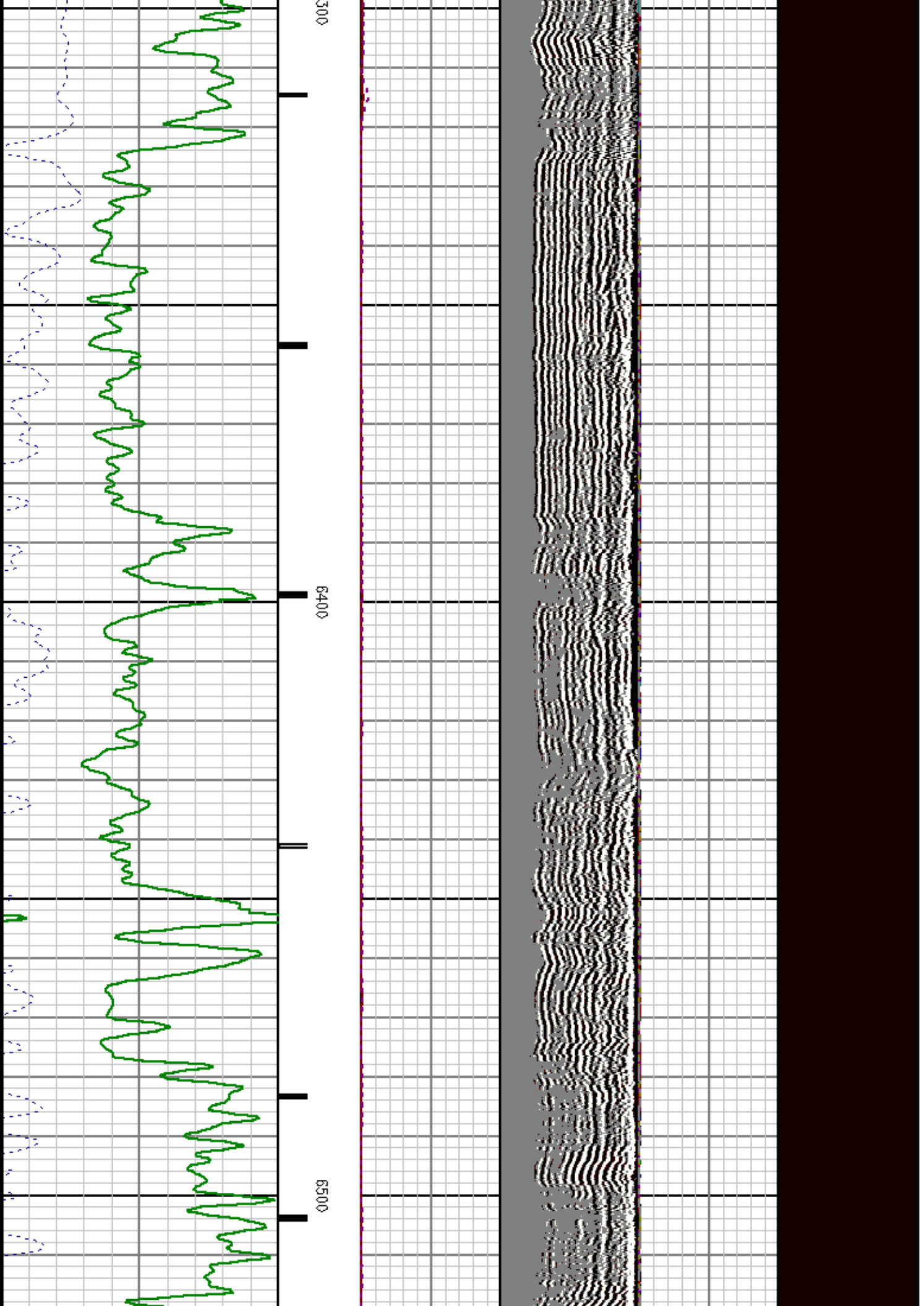
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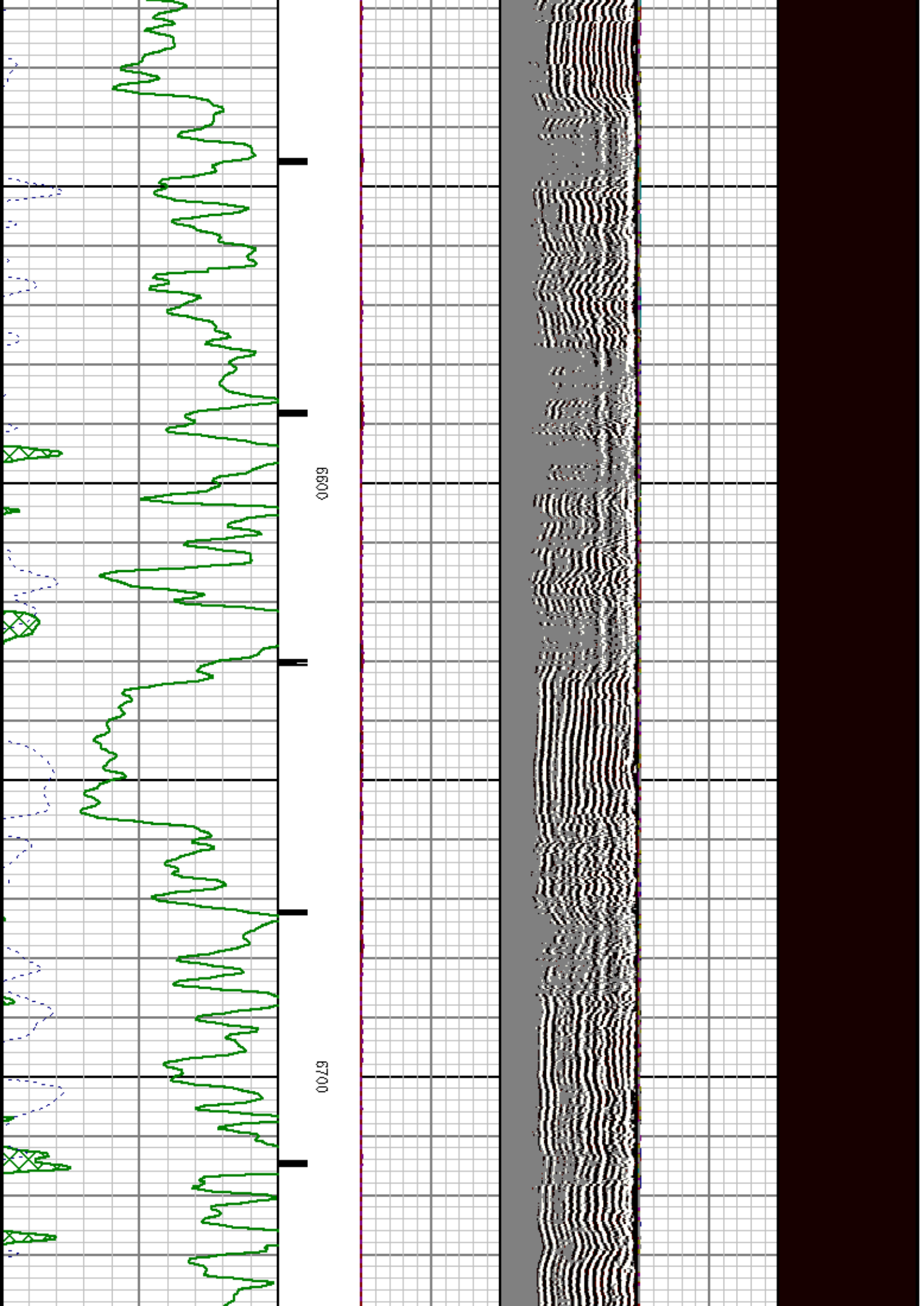


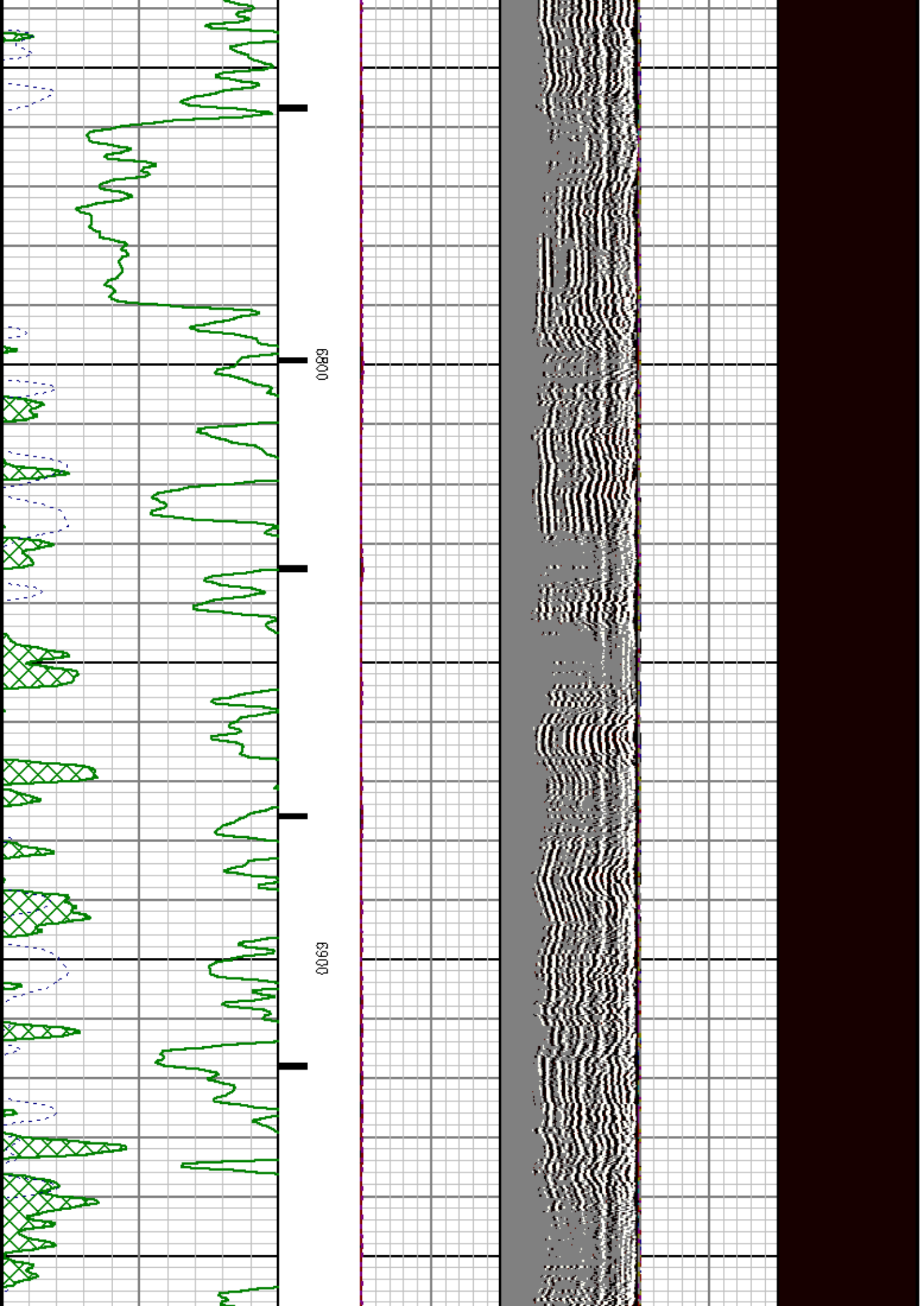


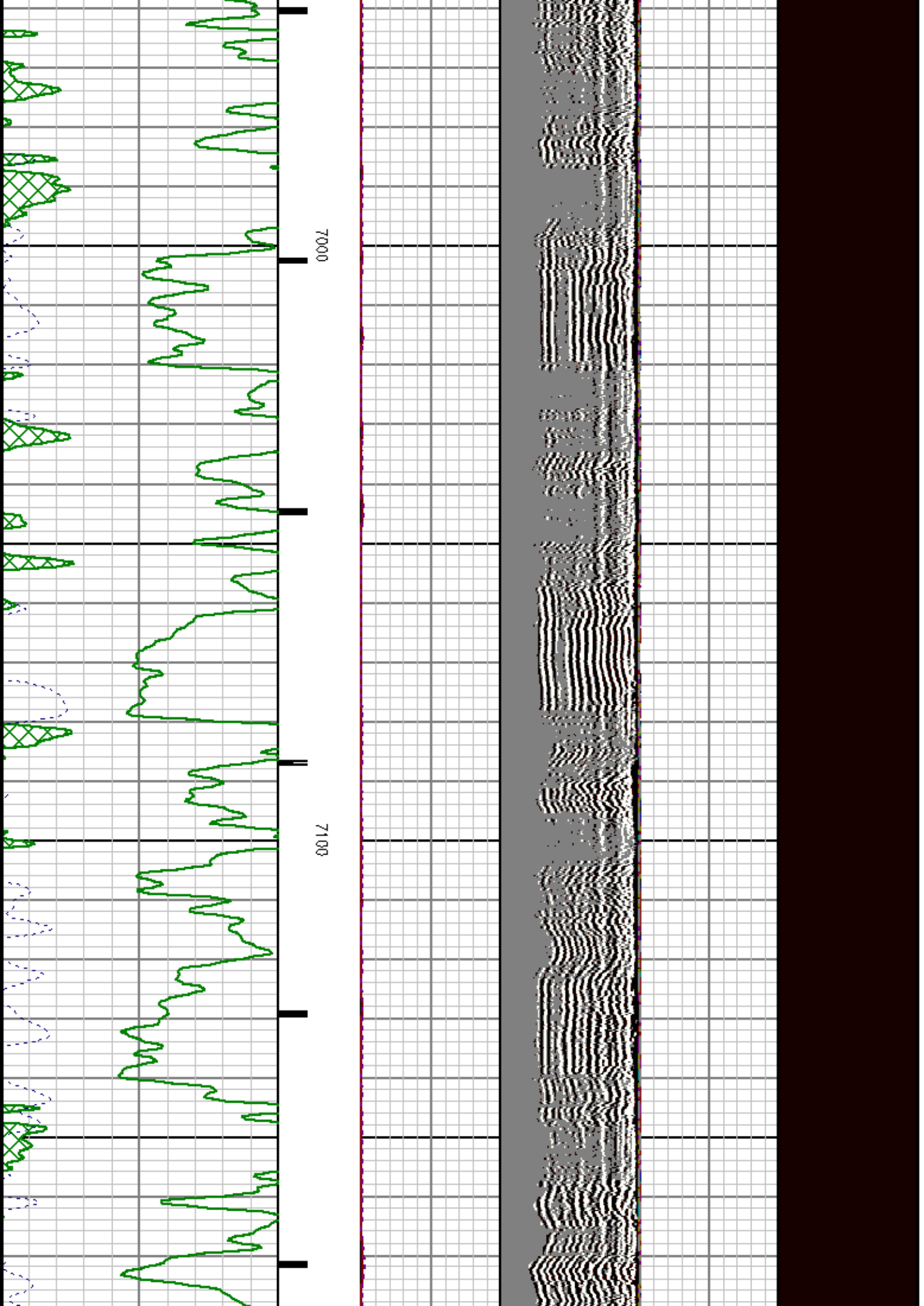


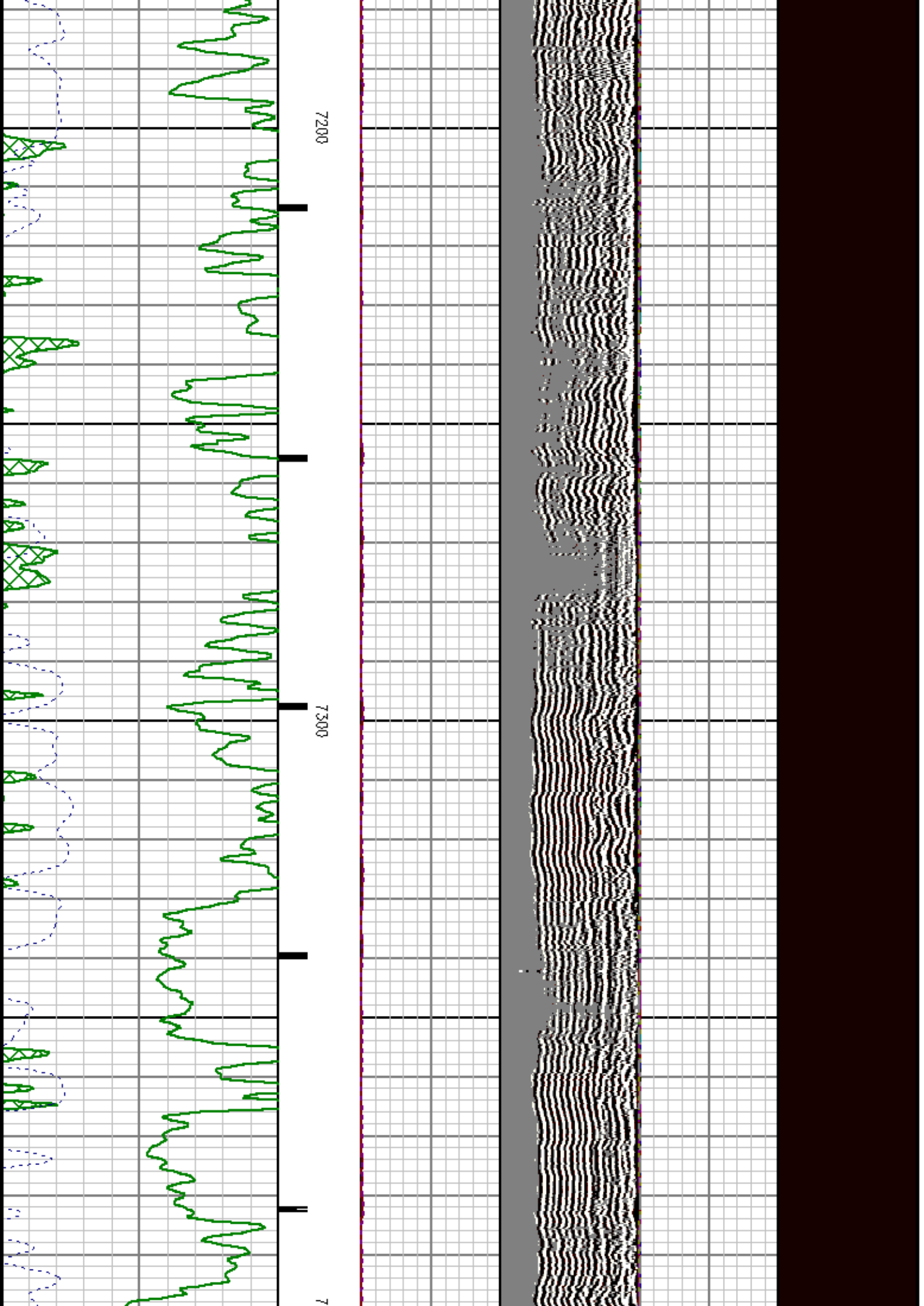


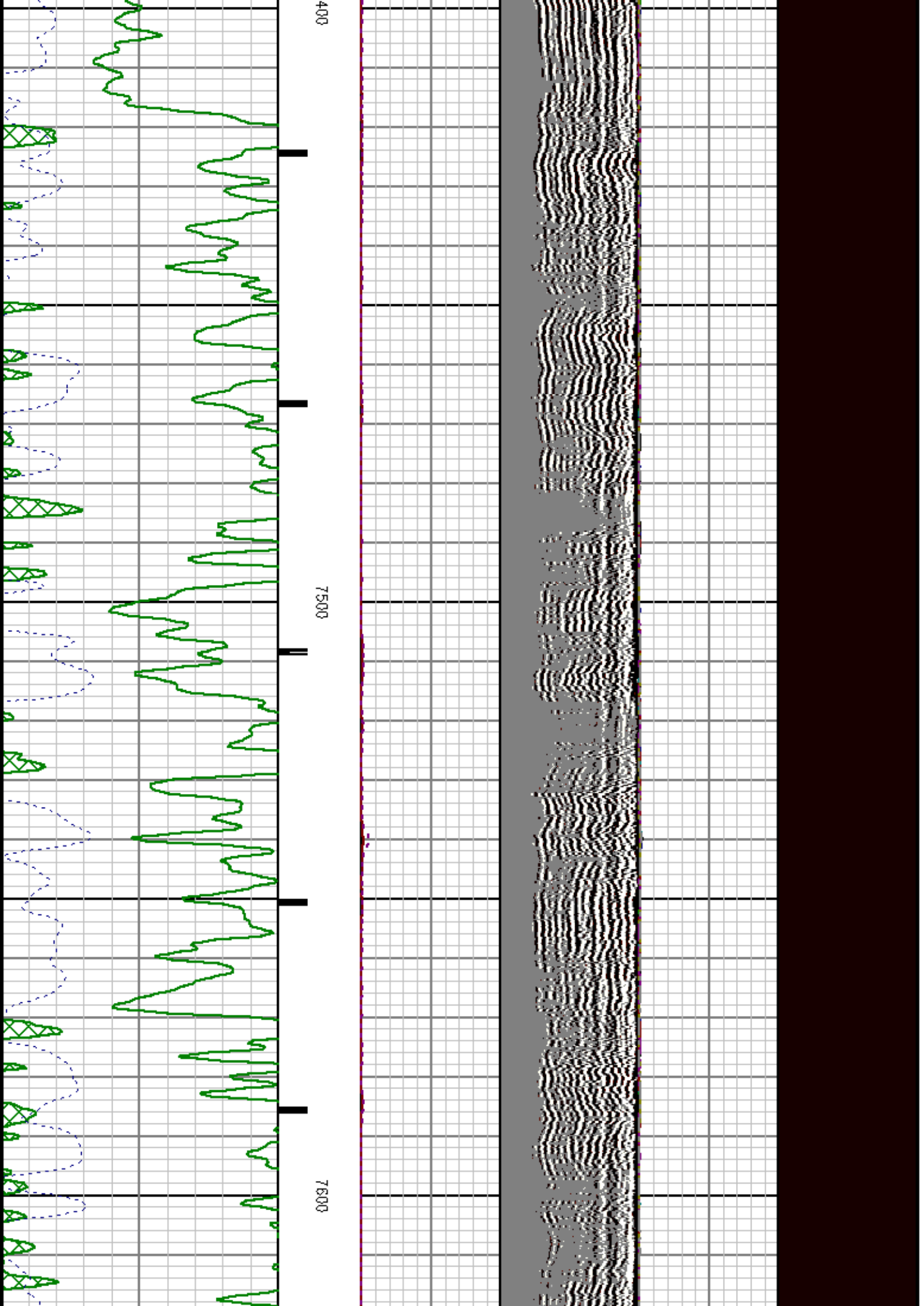


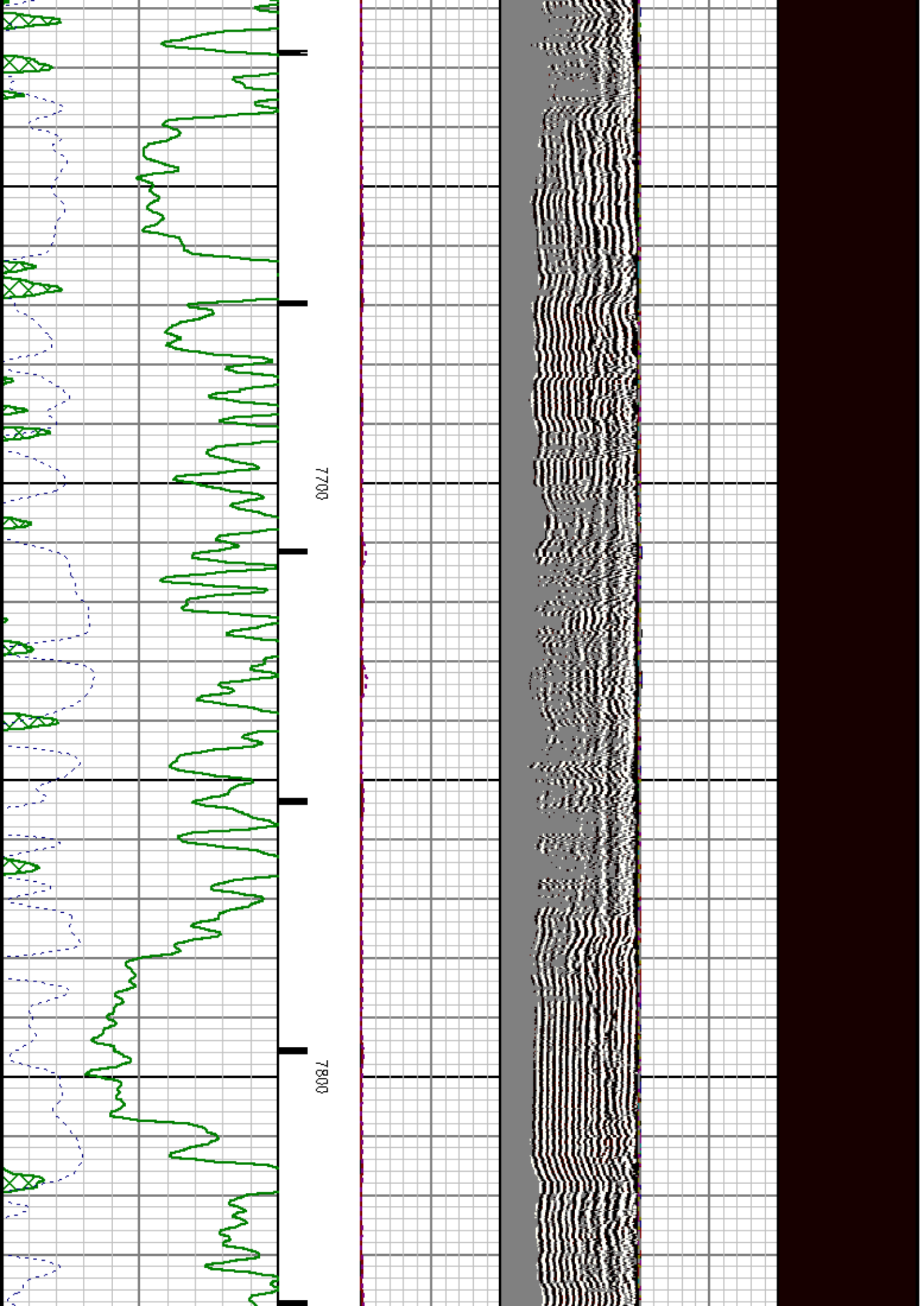


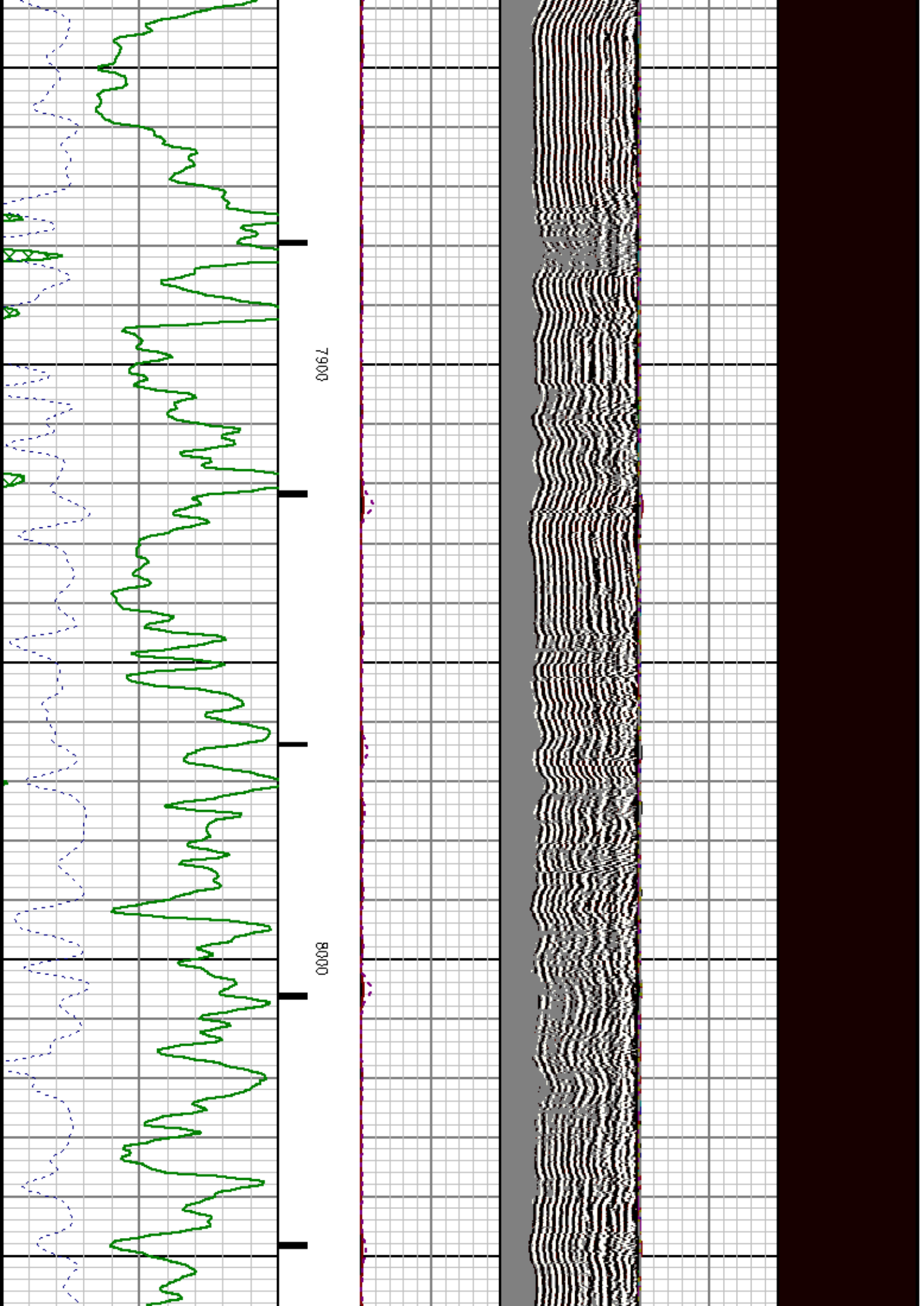


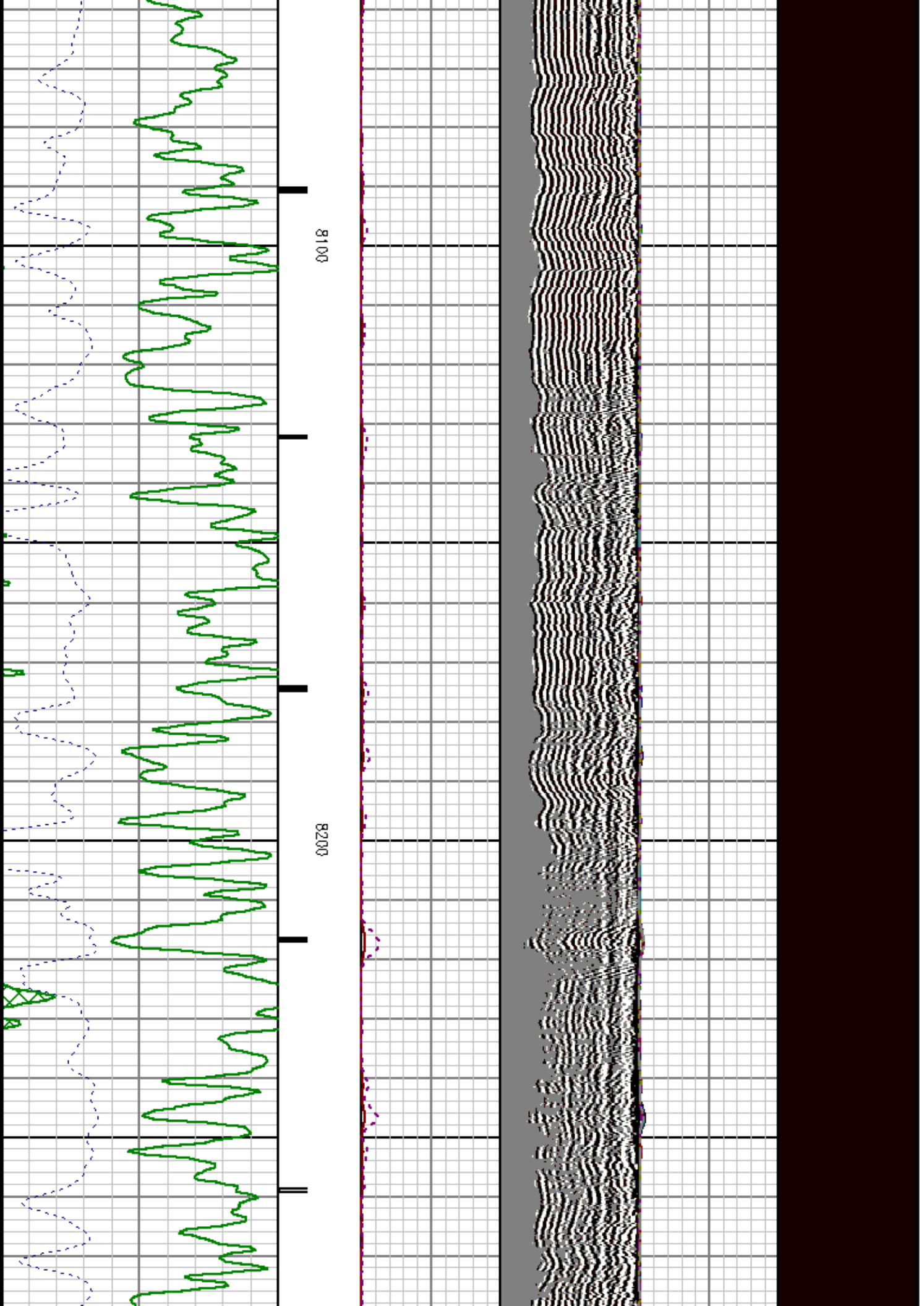


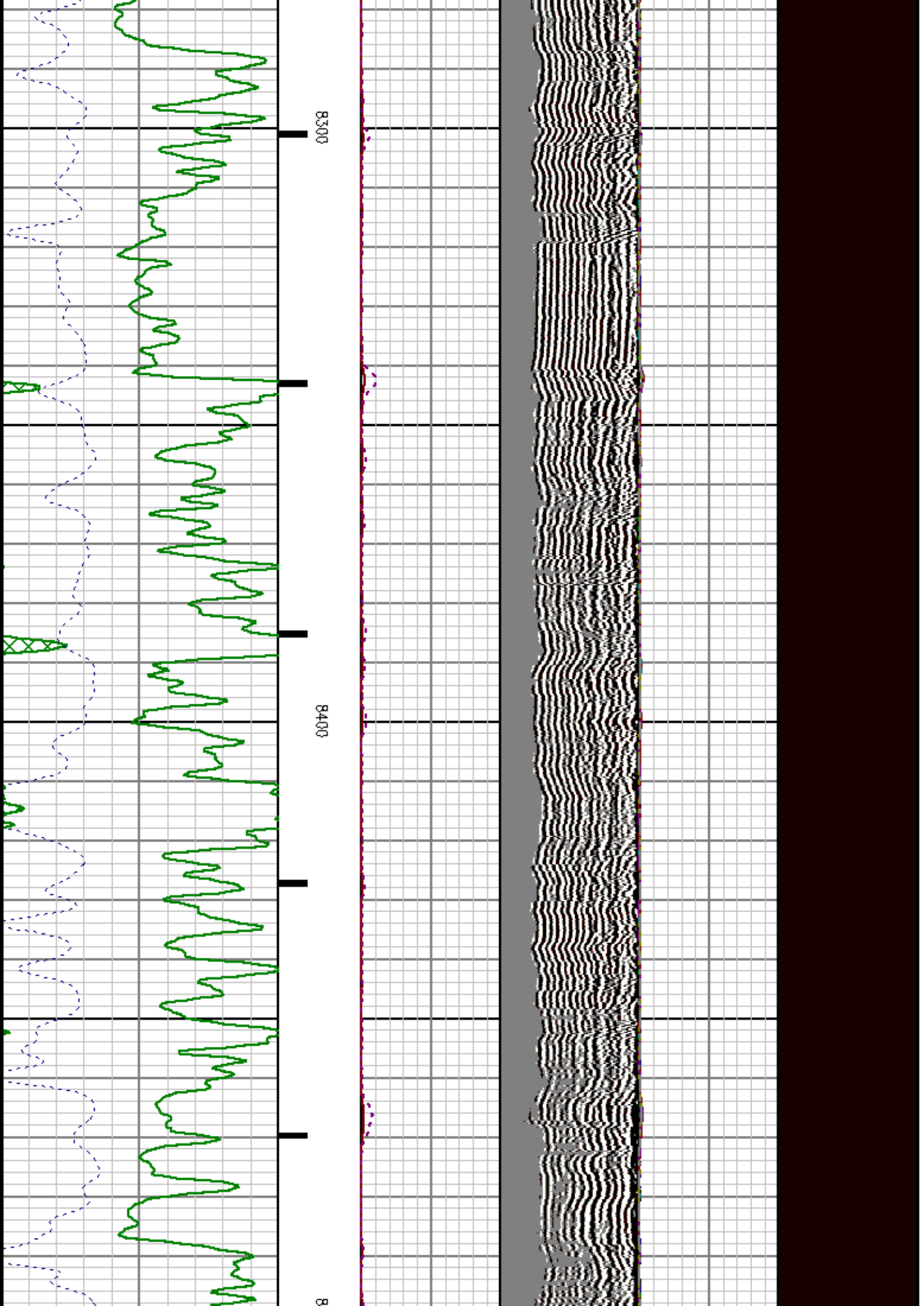


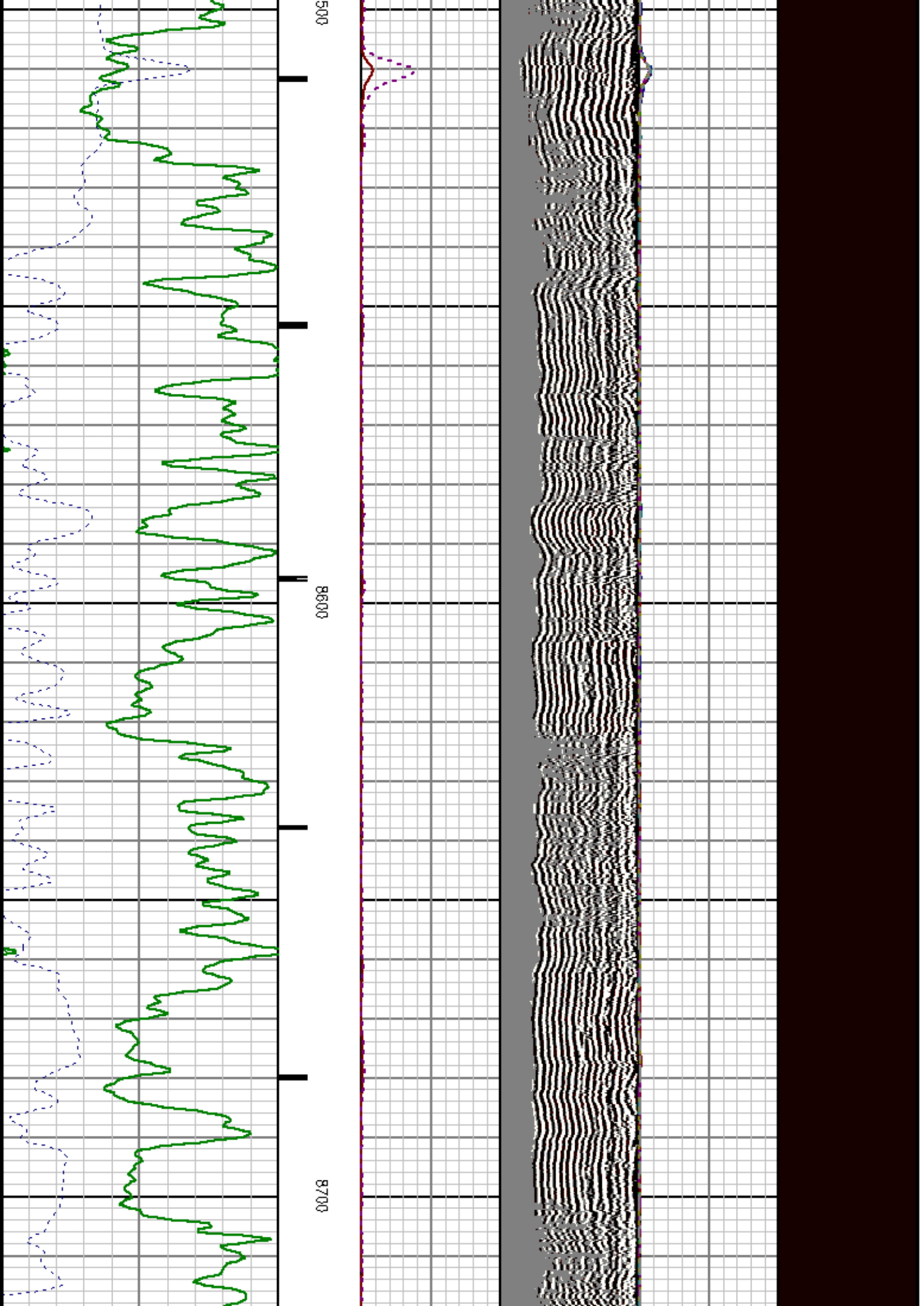


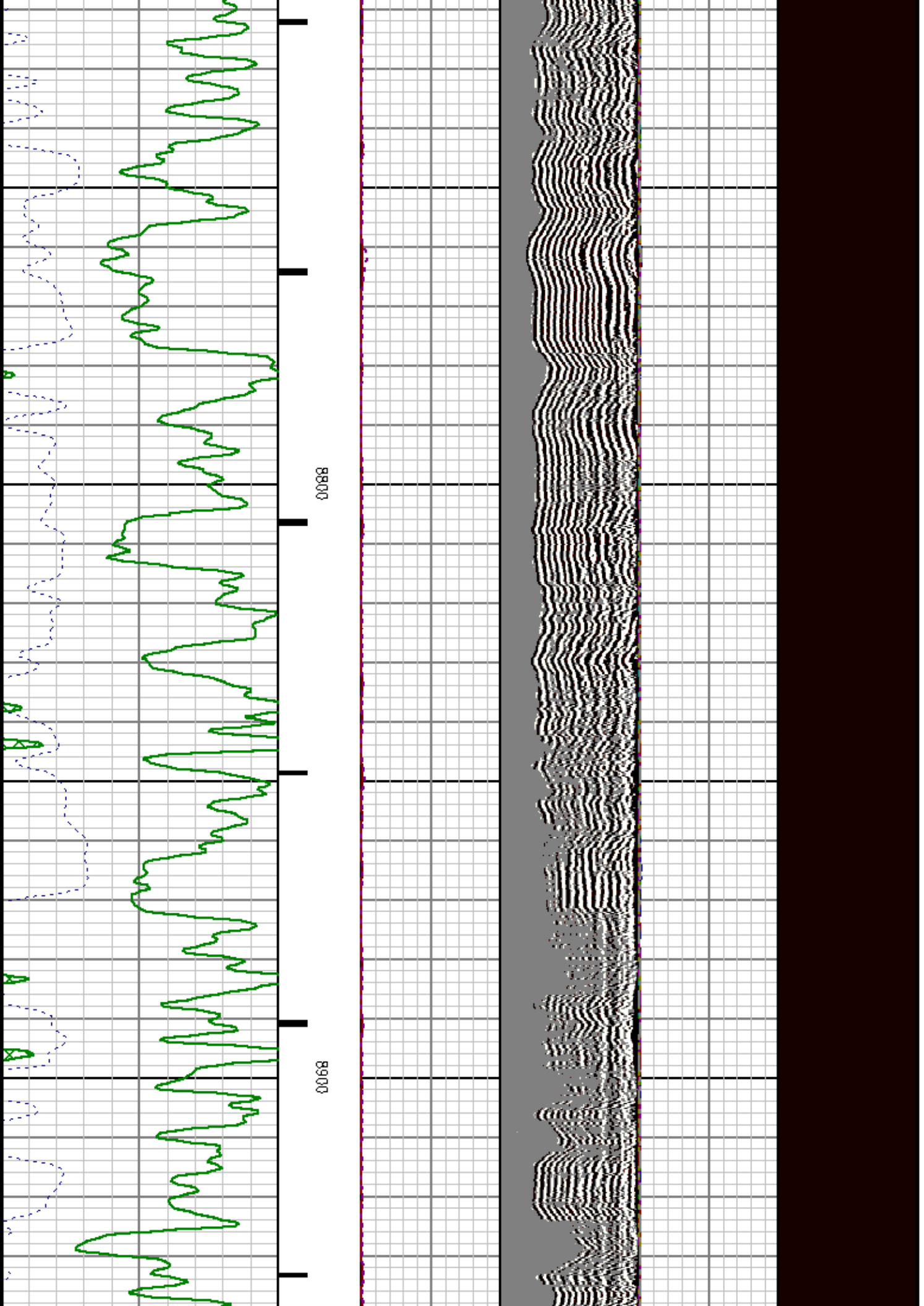


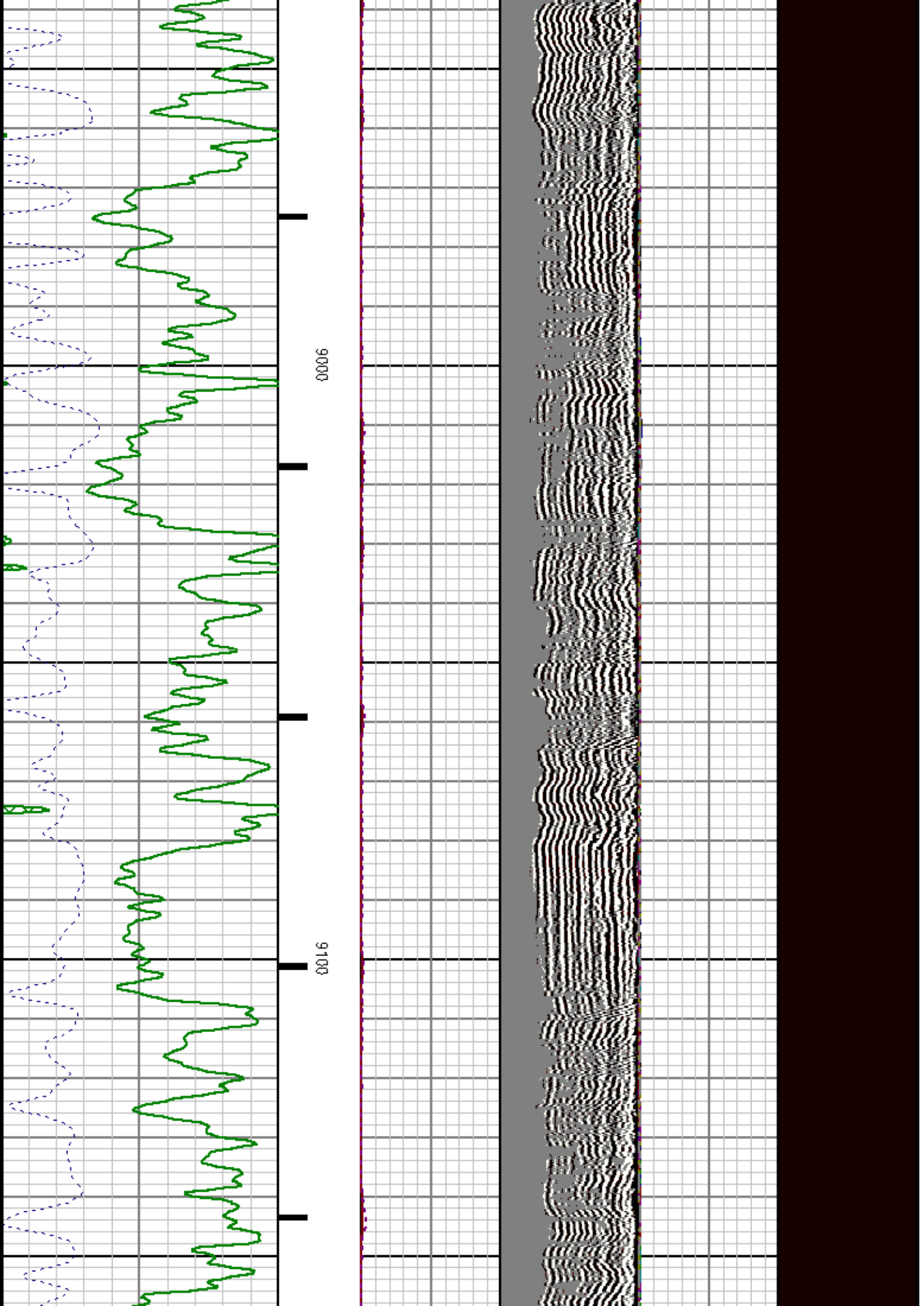


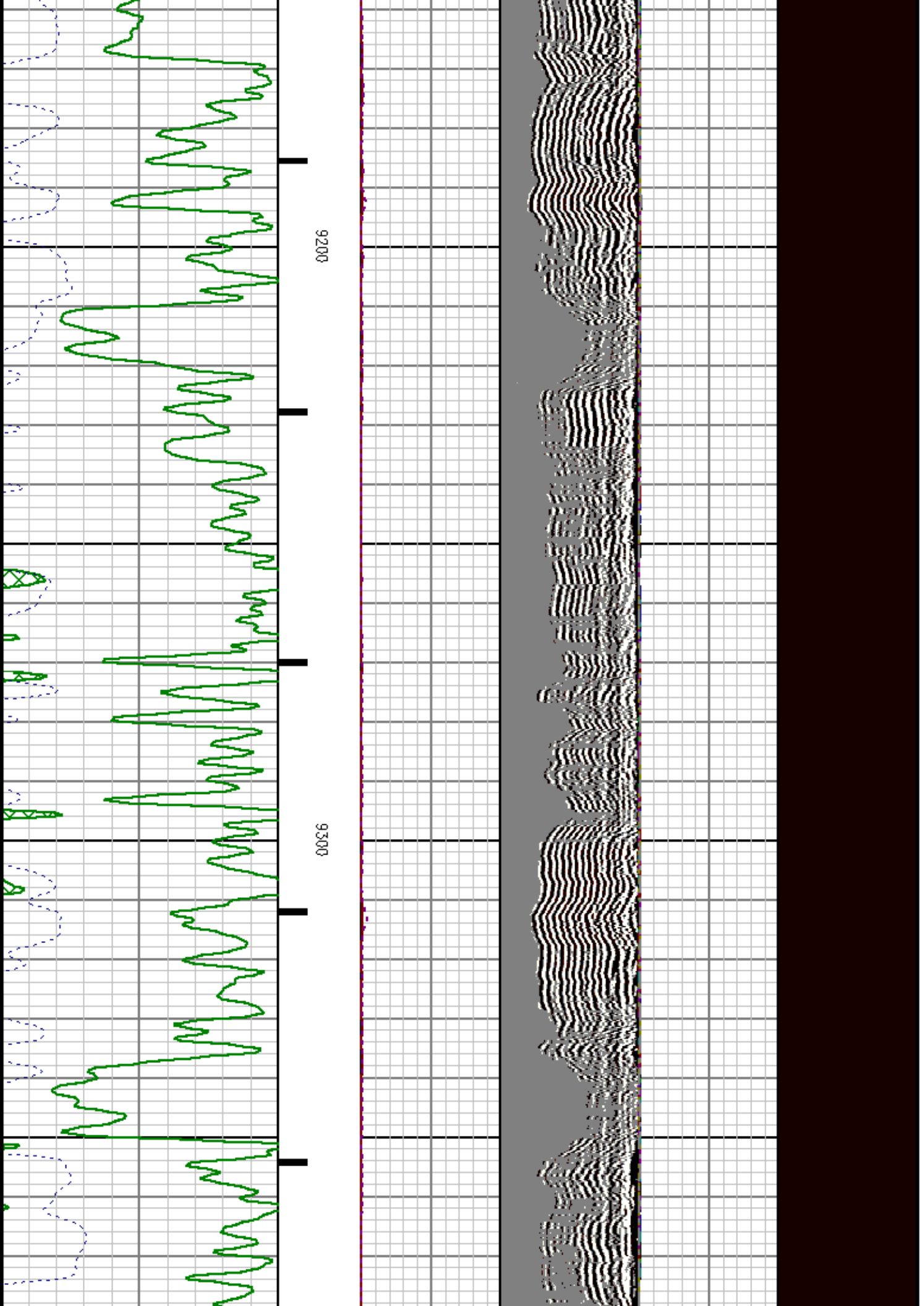


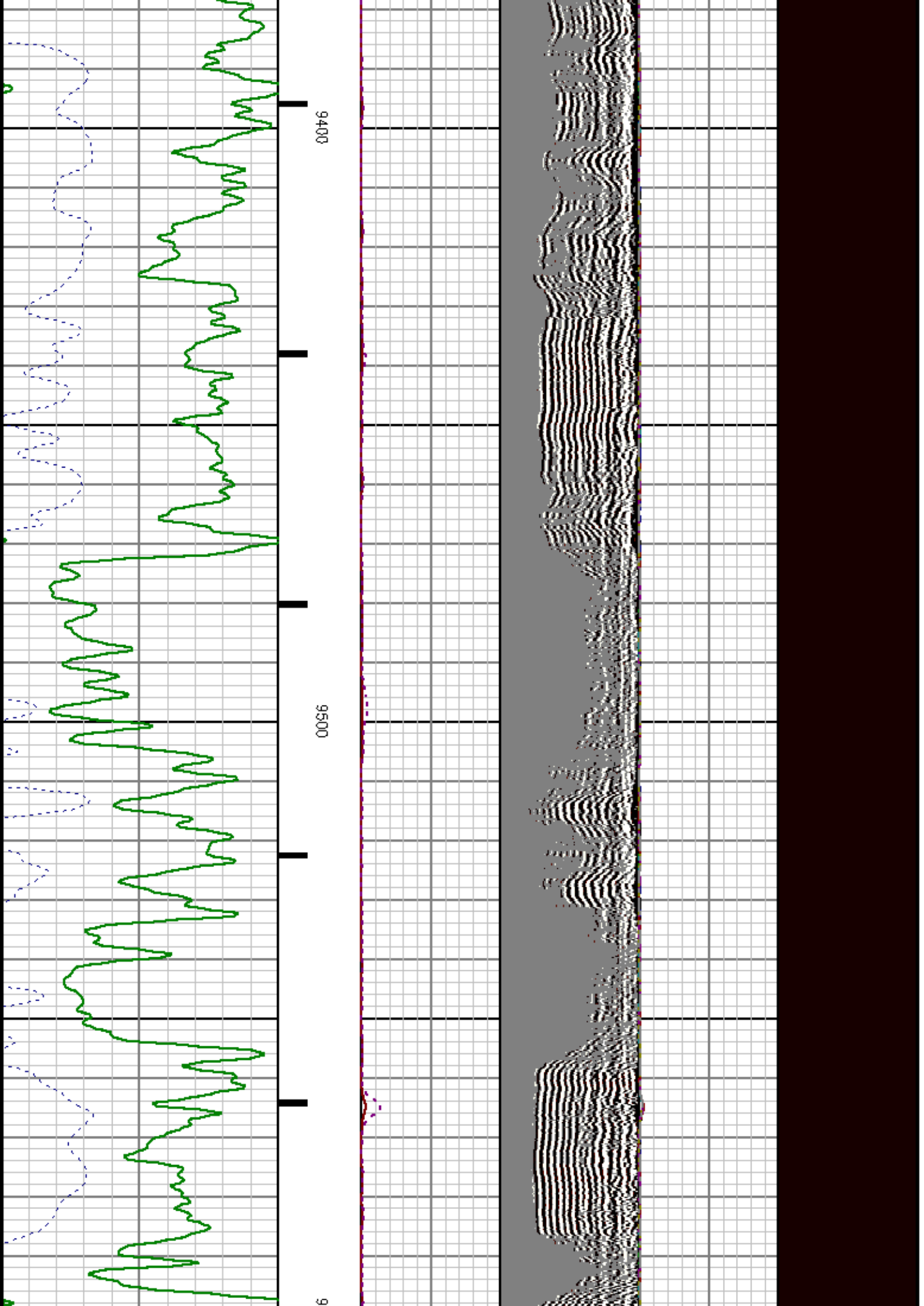


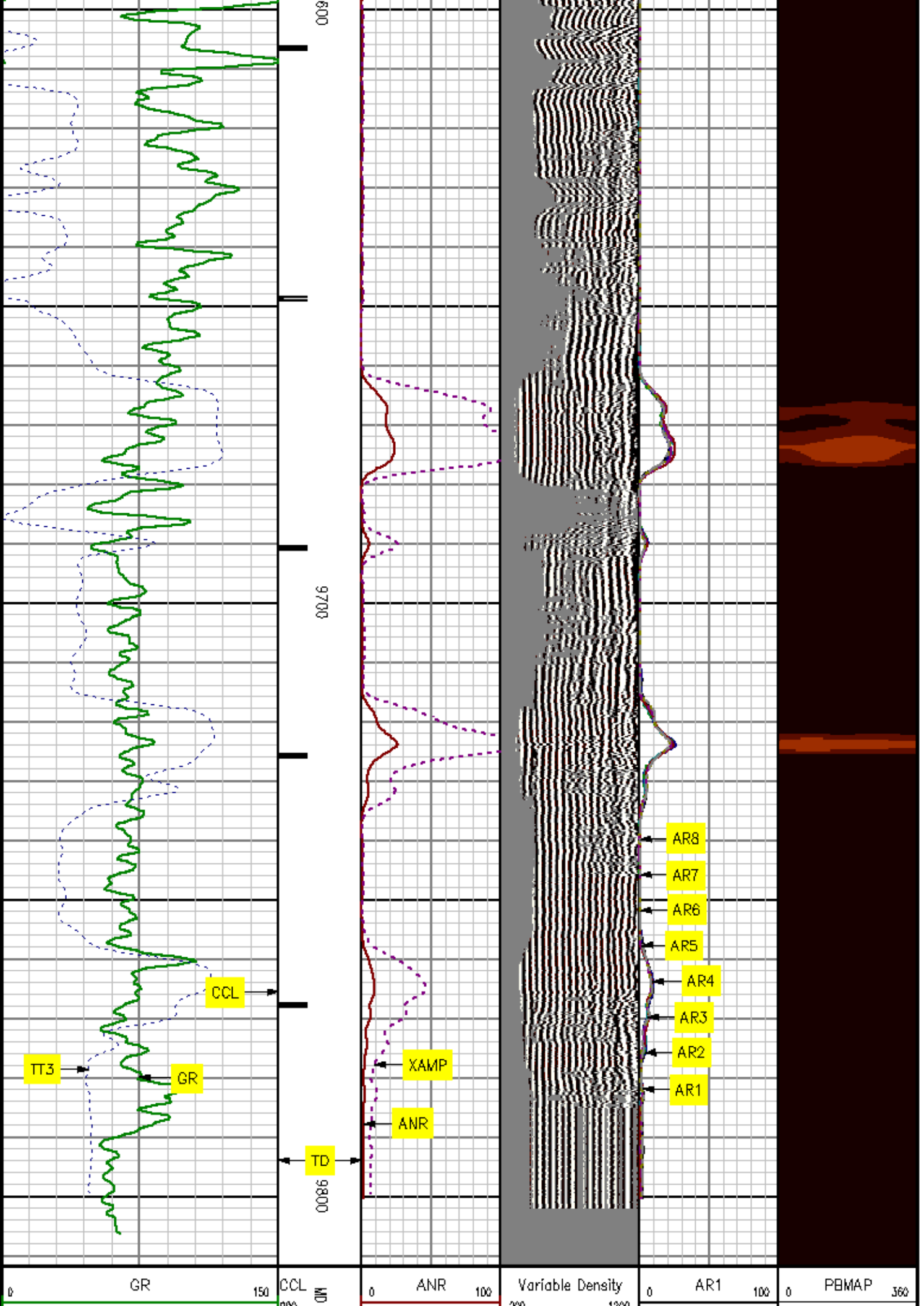


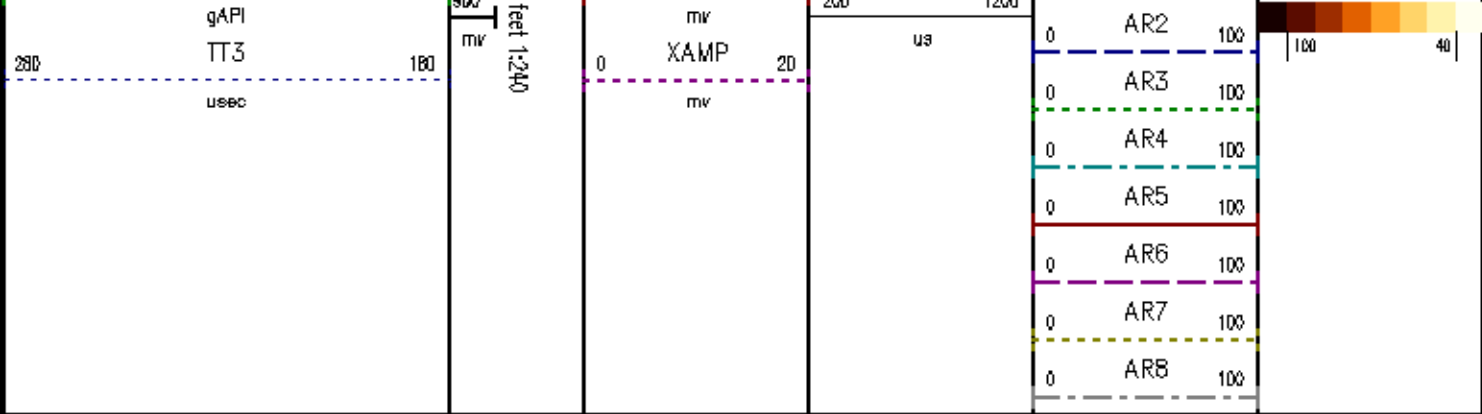












REPEAT SECTION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	9546.750	9813.000
RAL	Amp Gate Start Near	200.391	usec	9546.750	9813.000
RAL	Amp Gate Start Radial	200.391	usec	9546.750	9813.000
RAL	Amp Gate Width Far	25.000	usec	9546.750	9813.000
RAL	Amp Gate Width Near	25.000	usec	9546.750	9813.000
RAL	Amp Gate Width Radial	25.000	usec	9546.750	9813.000
RAL	casing od	4.500	inches	9546.750	9813.000
RAL	casing wt	11.600	lbm/ft	9546.750	9813.000
RAL	FB Start Far	291.900	usec	9546.750	9813.000
RAL	FB Start Near	175.391	usec	9546.750	9813.000
RAL	FB Start Radial	175.391	usec	9546.750	9813.000
RAL	FB Thresh Far	15.000	mv	9546.750	9813.000
RAL	FB Thresh Near	4.000	mv	9546.750	9813.000
RAL	FB Thresh Radial	10.000	mv	9546.750	9813.000
RAL	Fluid Travel Time	200.000	usec/ft	9546.750	9812.905

DEPTH OFFSETS
(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
1426XA	-12.360	ACAL	ANR	AR1	AR2	AR3	AR4
		AR5	AR6	AR7	ARB	CHV	FPR2
		FPR3	FPR5	TT3	TTR1	TTR2	TTR3

1426XA -11.360
 1426XA -7.250
 1426XA -5.390
 1426XA 0.000

TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
AFAR	SIG	TT5			
CCL					
GR					
NEU					

Created by : RAL, v4.8.007

Plotted by : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION RMT COMPANY

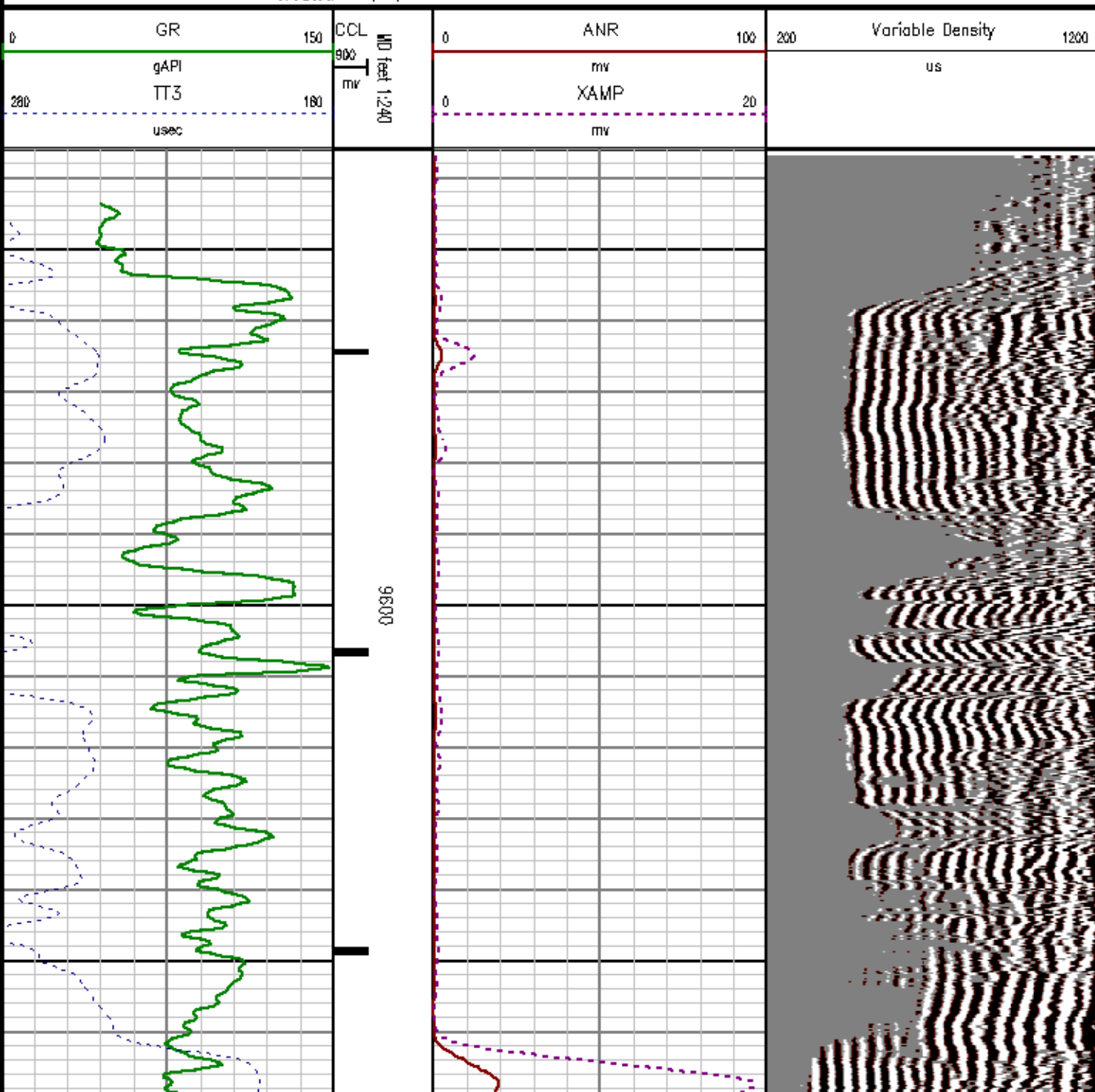
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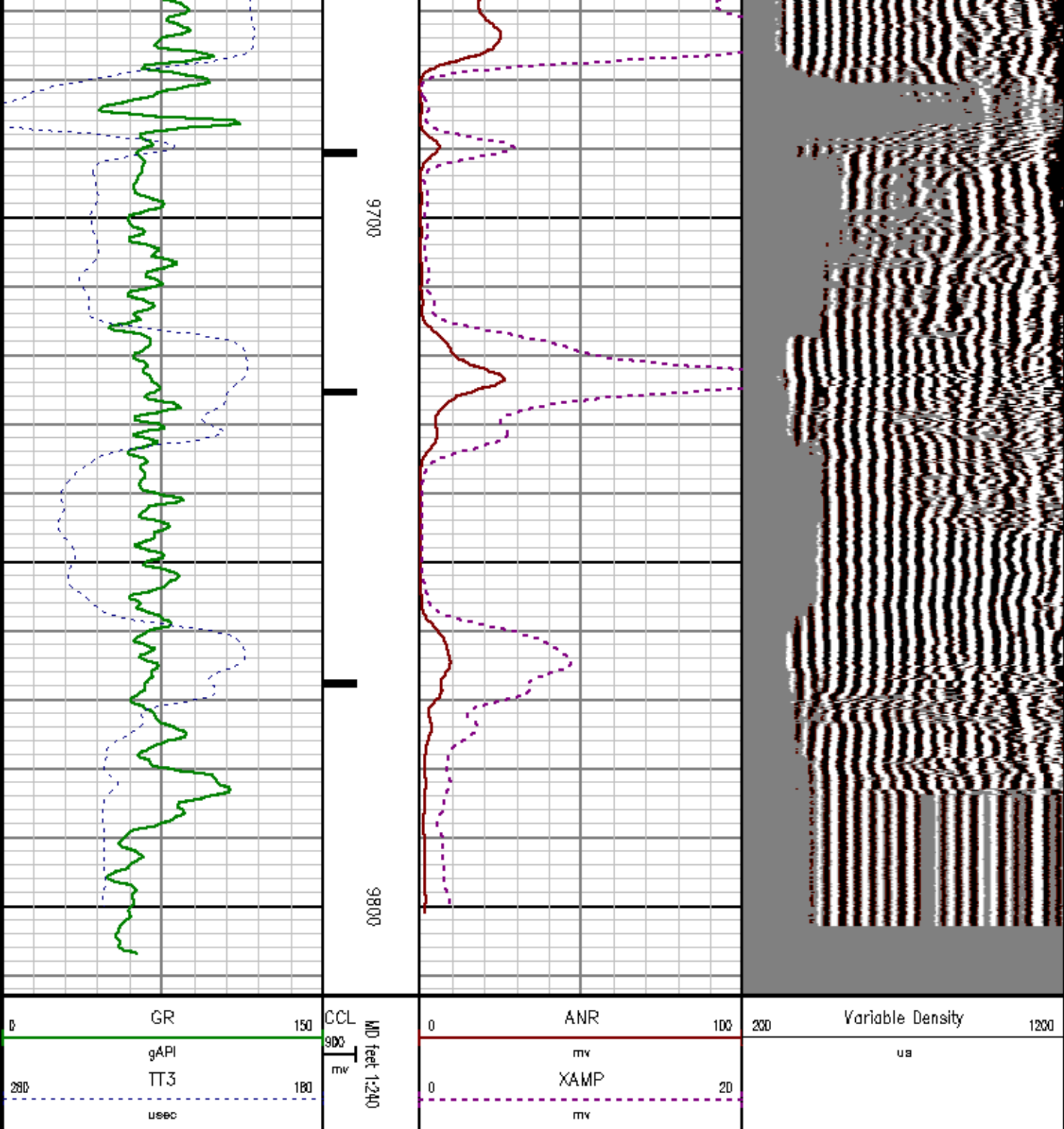
File Name : d:\welldata\333rad\repeat.xtf

Mode : PlotMgr 5.4.504

Interval : 9536.00 - 9813.00 feet UP

Created : 12/17/2010 8:36:01 AM





CALIBRATION SUMMARY

RALSHP

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Dec 14 11:05:00 2010

TOOL SERIES:

1426XA

ASSET:

134

SEQ: 02

Tool Delay [usec]	-54.00	Tank OD in	5.50	Tank Wt lbm/ft	15.60	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	216	216	30	166	25	-0.499	100.00	0.27
3 Ft. Receiver	216	216	30	166	25	0.324	100.00	0.26
5 Ft. Receiver	326	322	30	205	25	0.167	150.00	0.31
Radial #1	216	216	30	166	25	0.007	100.00	0.26
Radial #2	216	216	30	166	25	-0.641	100.00	0.26
Radial #3	216	216	30	166	25	-0.626	100.00	0.26
Radial #4	216	216	30	166	25	-0.714	100.00	0.26
Radial #5	216	216	30	166	25	-0.516	100.00	0.26
Radial #6	216	216	30	166	25	-0.233	100.00	0.26
Radial #7	215	216	30	166	25	0.451	100.00	0.26
Radial #8	217	216	30	166	25	-0.074	100.00	0.26

RALFLD

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Tue Dec 14 11:06:14 2010

TOOL SERIES:

1426XA

ASSET:

134

SEQ: 02

Tool Delay [usec]	-54.00	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	166	25	-0.002	0.000	0.89	100.000
3 Ft. Receiver	164	25	-0.346			
5 Ft. Receiver	255	25	0.039			
Radial #1	164	25	-0.410			
Radial #2	164	25	-0.446			
Radial #3	164	25	-0.372			
Radial #4	164	25	-0.395			
Radial #5	164	25	-0.484			
Radial #6	164	25	-0.518			
Radial #7	164	25	-0.521			
Radial #8	164	25	-0.535			

GAMMA RAY

Calibration File: C:\case\calver\GR\457D1.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED:		Sat Dec 11 10:52:41 2010		TOOL SERIES:		1426XA		ASSET:		457		SEQ:		D1	
Calibrator #		Background		Calibrator On		Multiplicative		Background		Calibrator On		Differential			
		[cps]		[cps]				[api]		[api]		[api]			
S2K WA612		76.84		299.78		0.830		63.77		248.77		185.00			

Verification File: C:\case\calver\GR\457D1.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED:		Sat Dec 11 10:54:12 2010		TOOL SERIES:		1426XA		ASSET:		457		SEQ:		D1	
Calibrator #		Background		Calibrator On		Multiplicative		Background		Calibrator On		Differential			
		[cps]		[cps]				[api]		[api]		[api]			
S2K WA612		85.91		291.56		0.830		71.29		241.95		170.65			

TOOL DIAGRAM

OTA SHORT CABLE HEAD

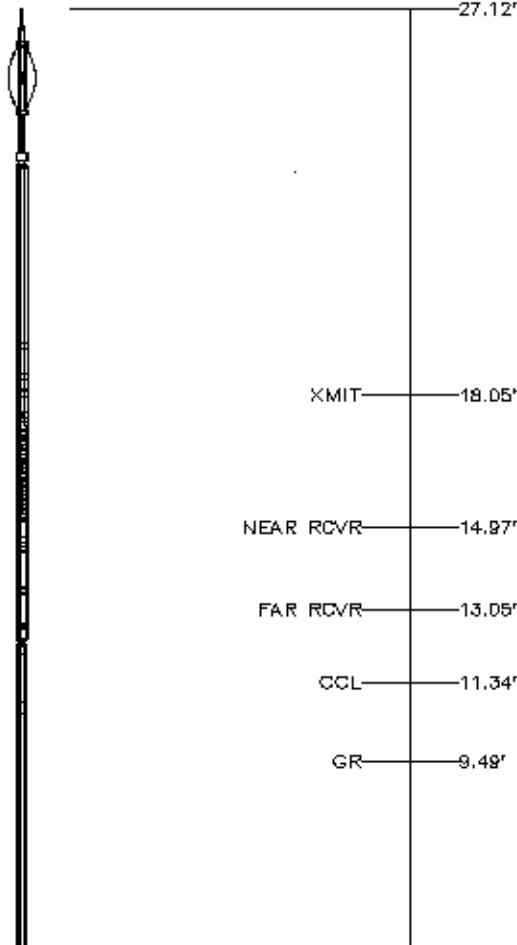
CENTRALIZER

Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb

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

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	8.48' CCL



NEU 4.09'

0.00'

CENTRALIZER

Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb

Total Length: 27.12'
 Total Weight: Not Available
 Max Diameter: 0' 3.12"



Company WILLIAMS PRODUCTION RMT COMPANY

Well RU 333-6

Field RULISON

County GARFIELD State COLORADO

File No:

CH028048

API No:

05045181740000

Location:

SHL: 1018' FSL & 1948' FEL

BHL: 1523' FSL & 1951' FEL

Elevations

KB 7562.5 ft

DF 7561.5 ft

GL 7536.5 ft

S:6 T:7S R:93W

PAD: RU 34-6

RIG: HARBORS SSD 576

SEC: 6 TWP: 75 RGE: 93W

CASE

Baker Atlas