



RADIAL ANALYSIS BOND LOG

Baker Atlas

File No:	1960	Company	WILLIAMS PRODUCTION RMT COMPANY	
API No:	0504518820000	Well	SP 13-14	
		Field	PARACHUTE	
		County	GARFIELD	State COLORADO
S: 14 T: 75 R: 95W		Location	Other Services	
PAD: FED 17-65		SHL: 1711' FHL & 470' FHL	NONE	
RIE: CYCLONE 17		BHL: 2318' FSL & 382' FEL		
	SEC 14	TWP 75	RGE 95W	
Permanent Datum	G.L.	Elevation	6750 ft	Elevations
Log Measured From	K.B.	21 ft	Above P. D.	KB 6771 ft
Drill Measured From	KELLY BUSHING			DF 6770 ft
				GL 6750 ft

Date	07-JULY-2010	
Run	ONE	
Service Order	557265	
Depth Driller	6197 ft	
Depth Logger	8110 ft	
Bottom Logged Interval	8110 ft	
Top Logged Interval	SURFACE	
Time Started	07:30	
Time Finished	11:00	
Operator Rig Time	3.5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	N/A	
Salinity	N/A	
Fluid Level	FULL	
Logged Cement Top	N/A	
Wellhead Pressure	0 psi	
Maximum Hole Deviation	N/A	
Nominal Logging Speed	45 fpm	
Maximum Recorded Temperature	220 degF	
Reference Log	BA/SR-CH-ZOBN	
Reference Log Date	25-JUN-10	
Equipment No.	4271	Location VERMILUT
Recorded By	TIM KAUFF	
Witnessed By	MR. KESTREL DICKERSON	

- 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	1113 ft
4.5 in	11.6 lbm/ft	N/A	SURFACE	8320 ft

Remarks
BHT RECORDED 220"
SHORT JOINT 844.35' - 4456'
THE CREW OF 4271 THANKS YOU.

Equipment Data				
Run	Trip	Tool	Series Number	Serial Number

1	1	MANDREL	1426XA	10417452	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	21.181	8136.500
RAL	Amp Gate Start Near	200.391	usec	21.181	8136.500
RAL	Amp Gate Start Radial	200.391	usec	21.181	8136.500
RAL	Amp Gate Width Far	25.000	usec	21.181	8136.500
RAL	Amp Gate Width Near	25.000	usec	21.181	8136.500
RAL	Amp Gate Width Radial	25.000	usec	21.181	8136.500
RAL	casing od	4.500	inches	21.181	8136.500
RAL	casing wt	11.600	lbm/ft	21.181	8136.500
RAL	FB Start Far	281.900	usec	21.181	8136.500
RAL	FB Start Near	175.391	usec	21.181	8136.500
RAL	FB Start Radial	175.391	usec	21.181	8136.500
RAL	FB Thresh Far	15.000	mv	21.181	8136.500
RAL	FB Thresh Near	10.000	mv	21.181	8136.500
RAL	FB Thresh Radial	10.000	mv	21.181	8136.500
RAL	Fluid Travel Time	200.000	usec/ft	21.181	8136.500

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 RMT COMPANY

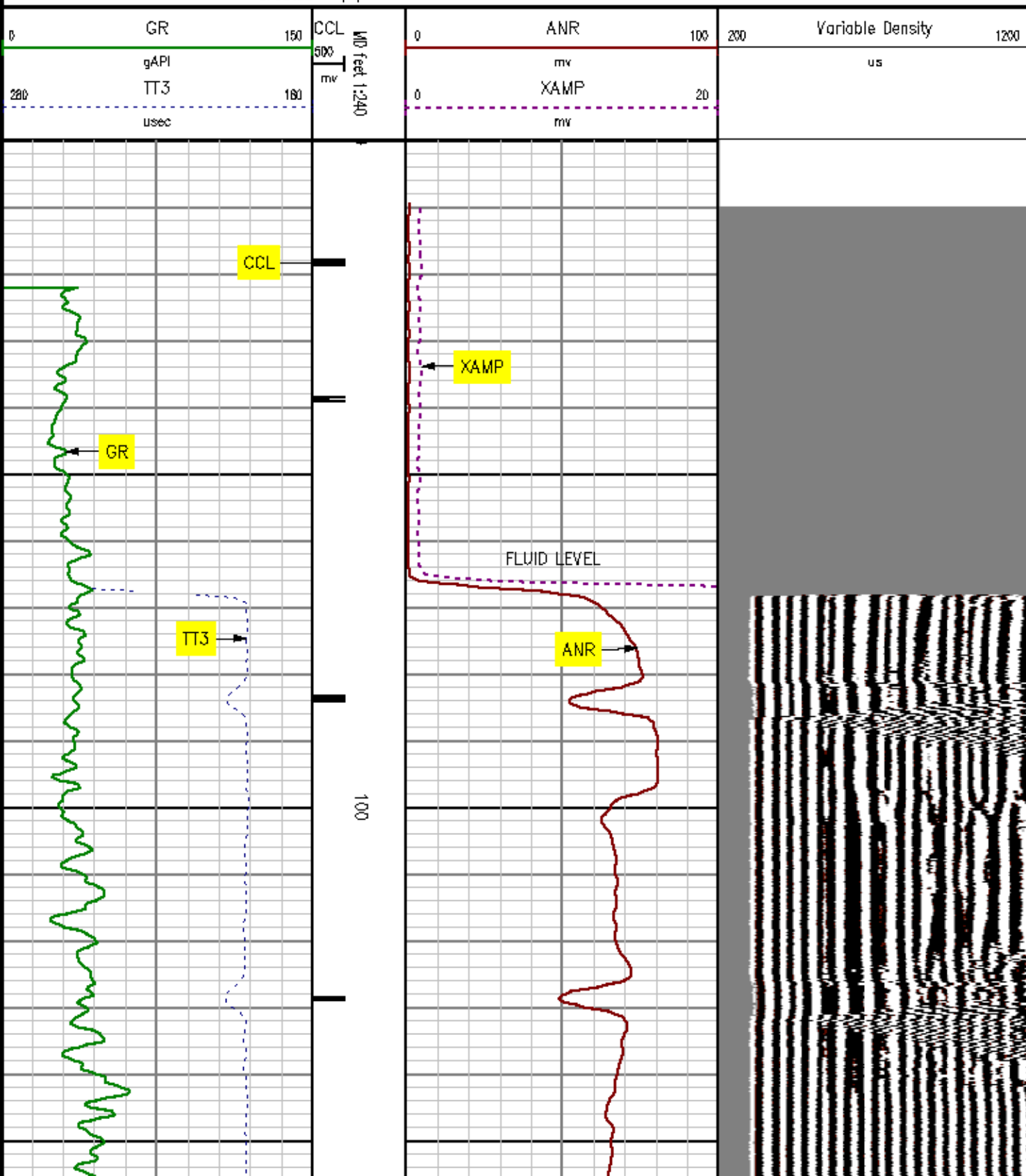
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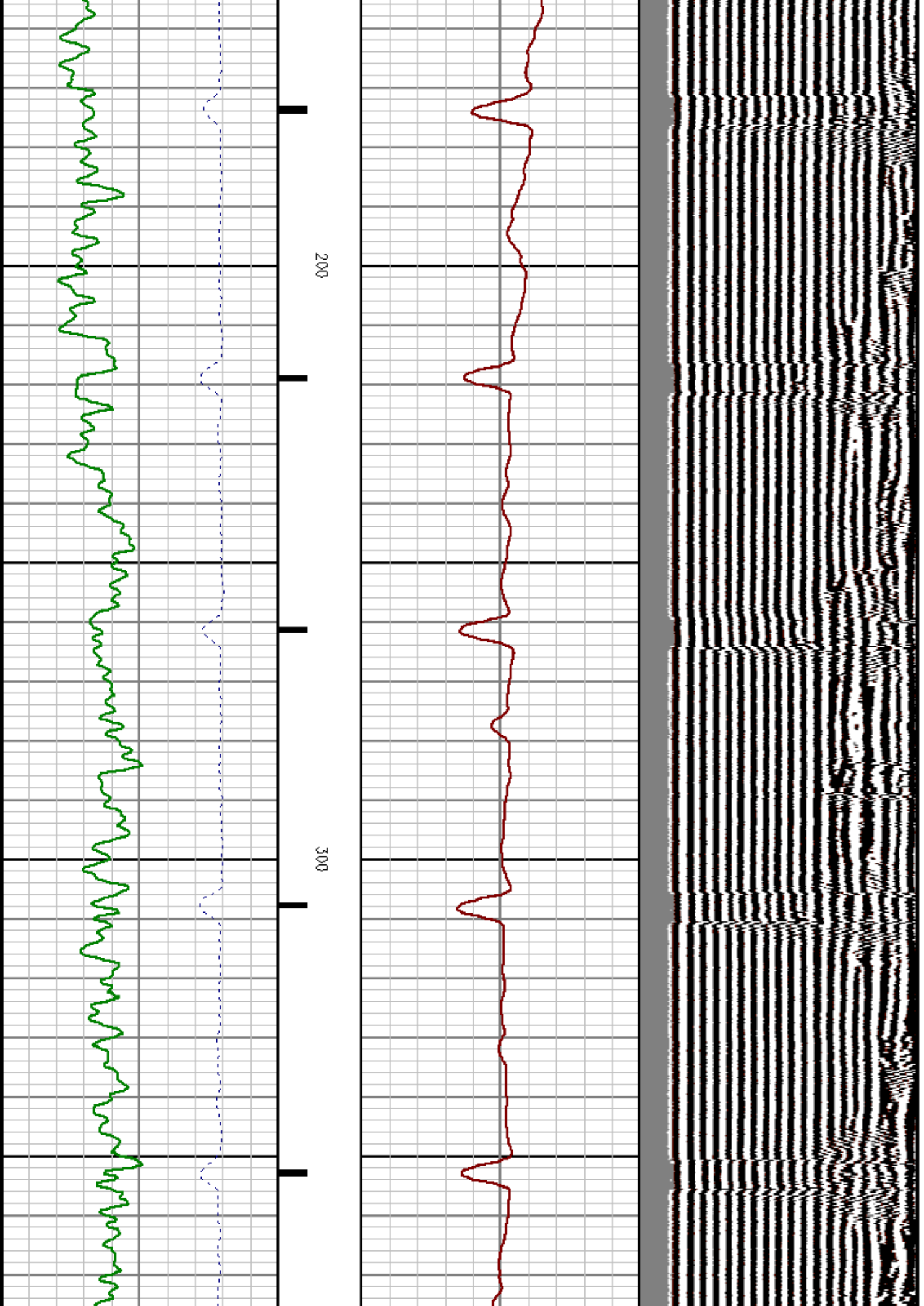
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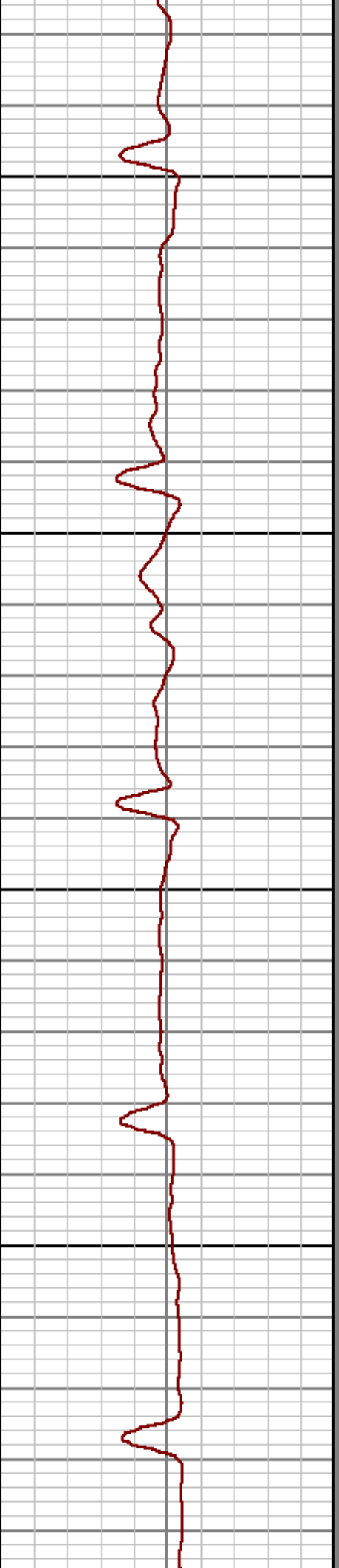
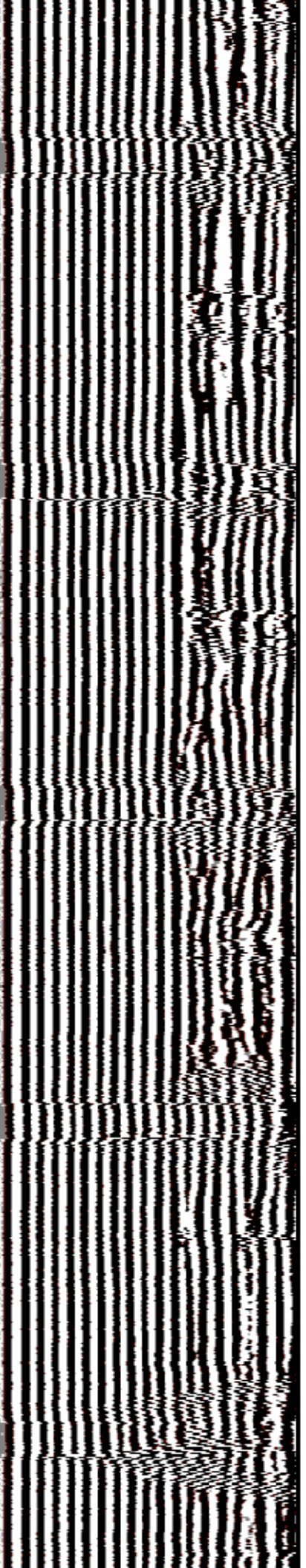
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Interval : 0.00 - 8136.50 feet UP

Created : 7/7/2010 8:17:56 AM

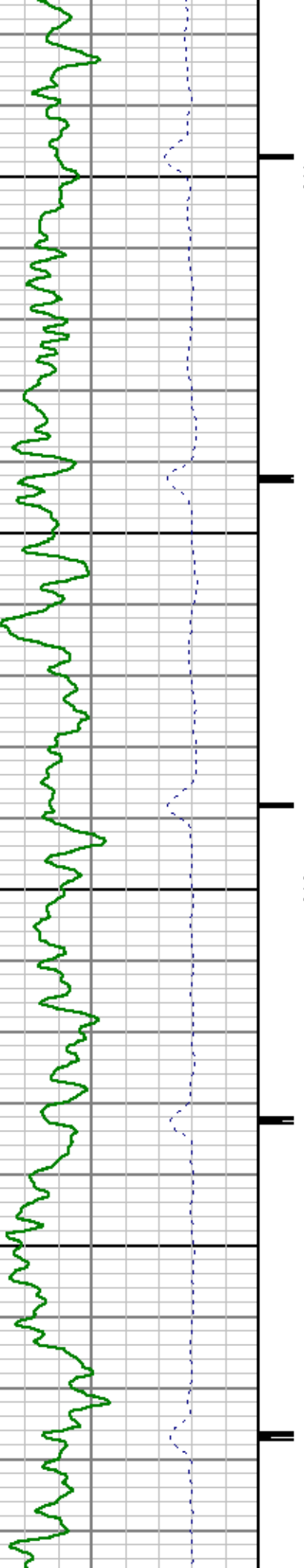


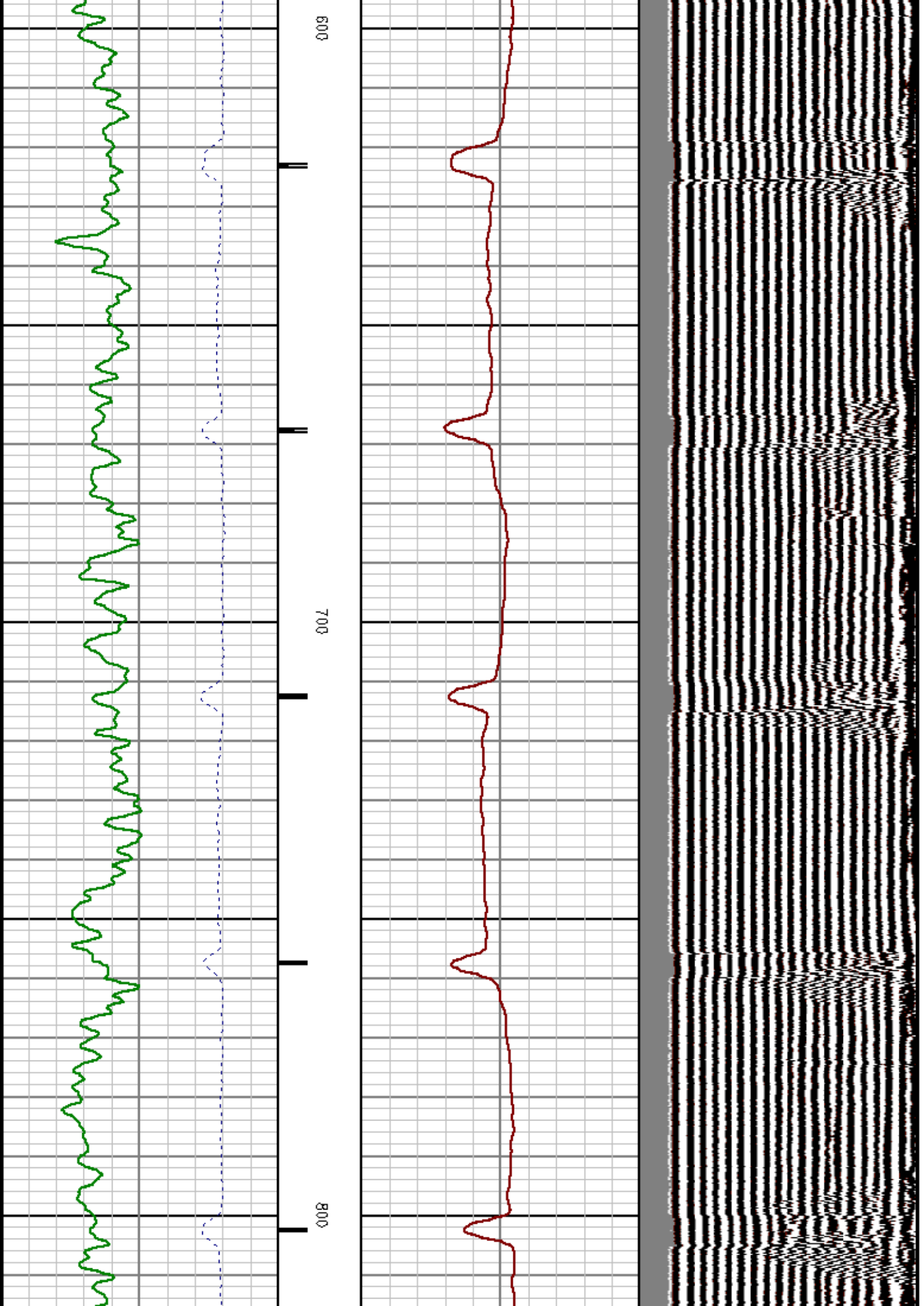


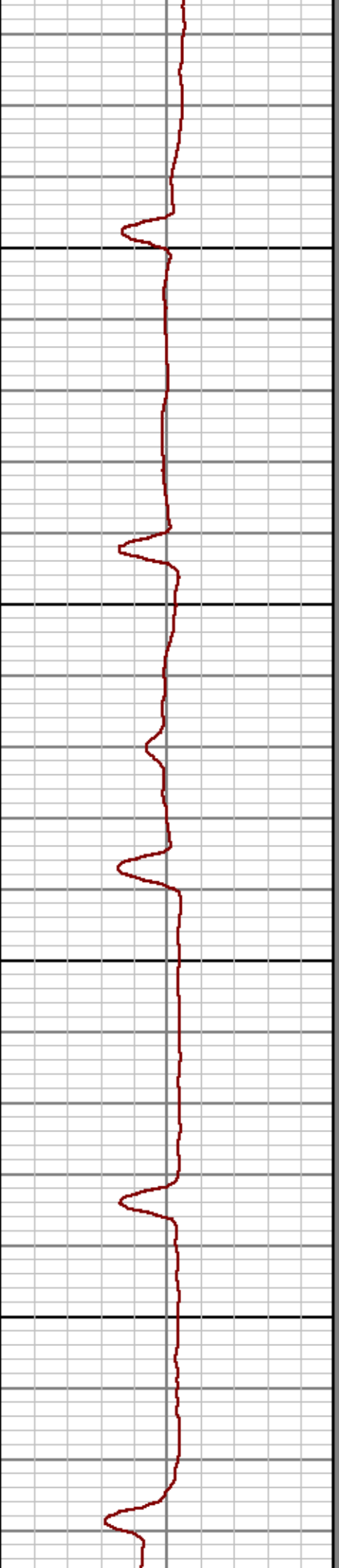


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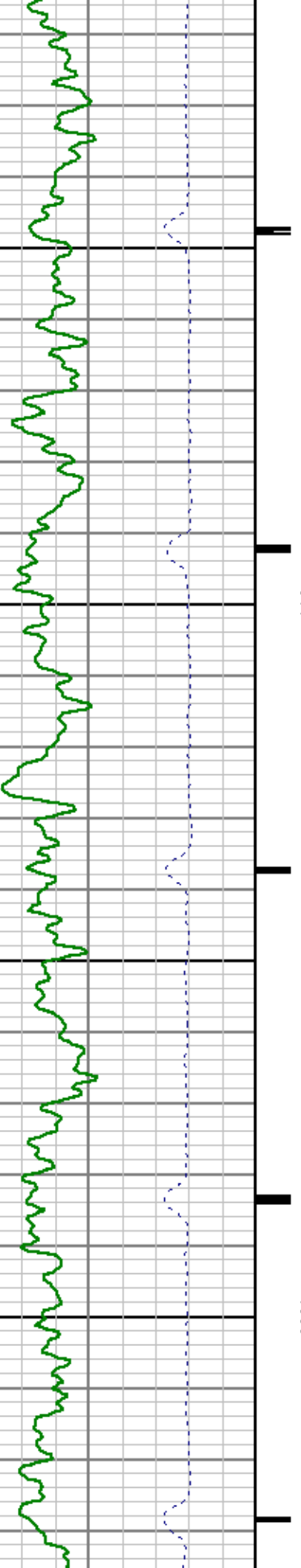


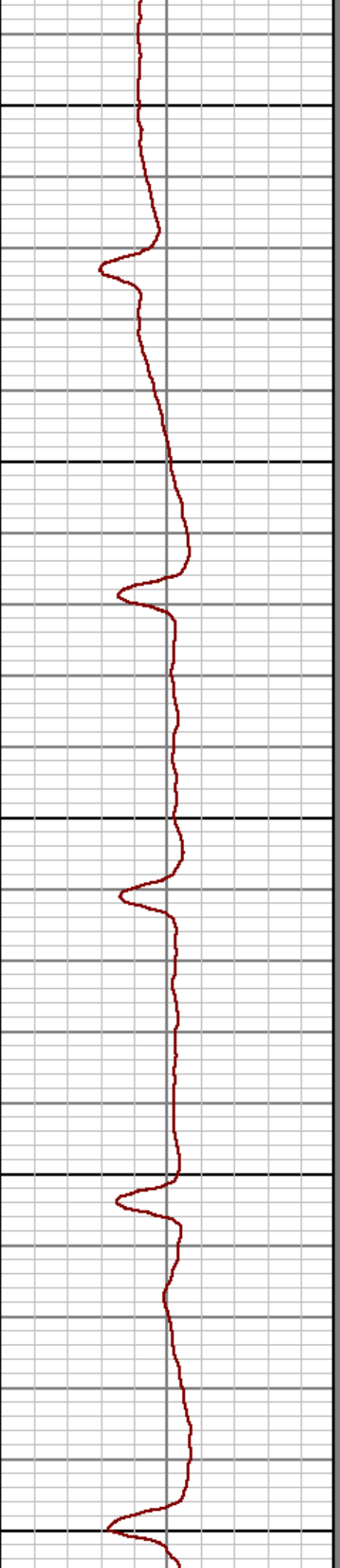
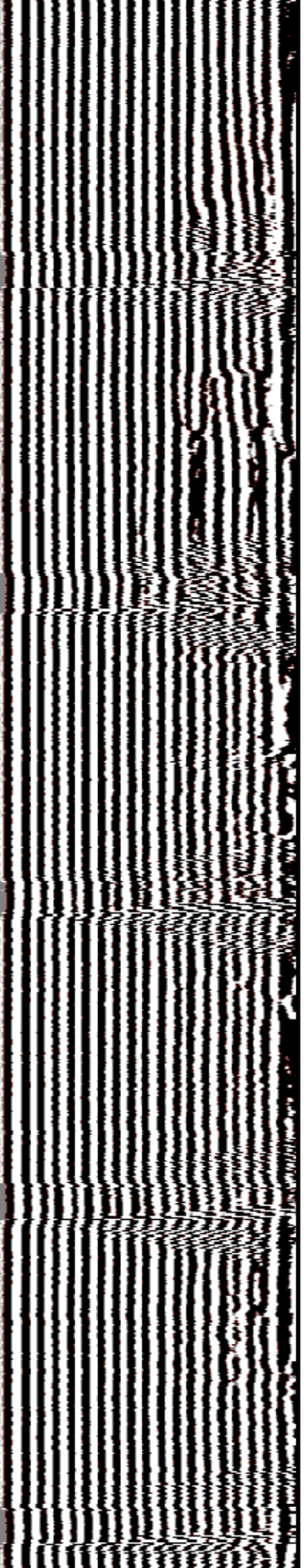




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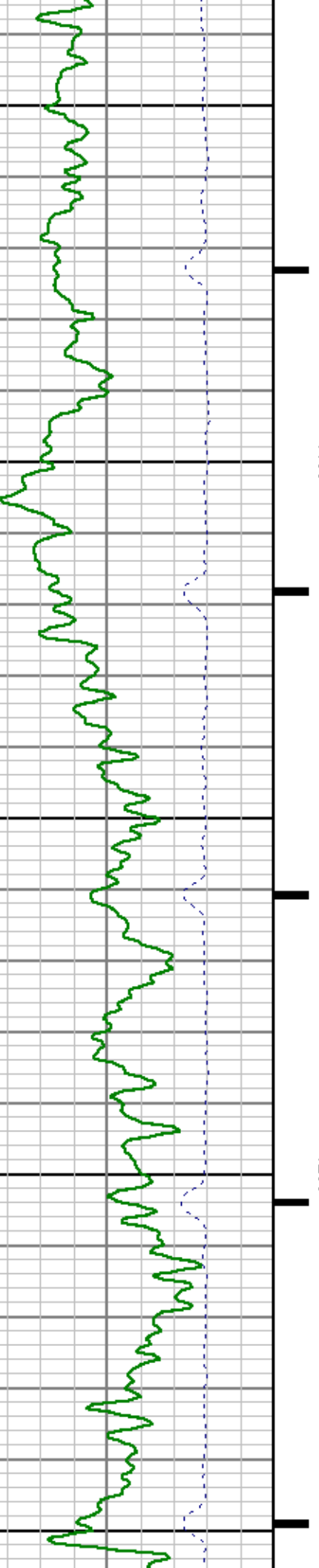
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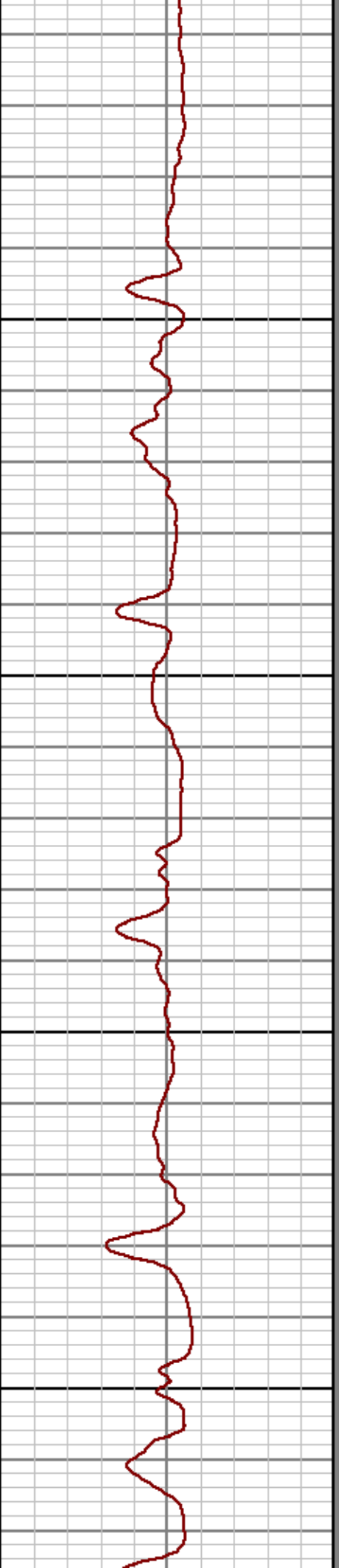
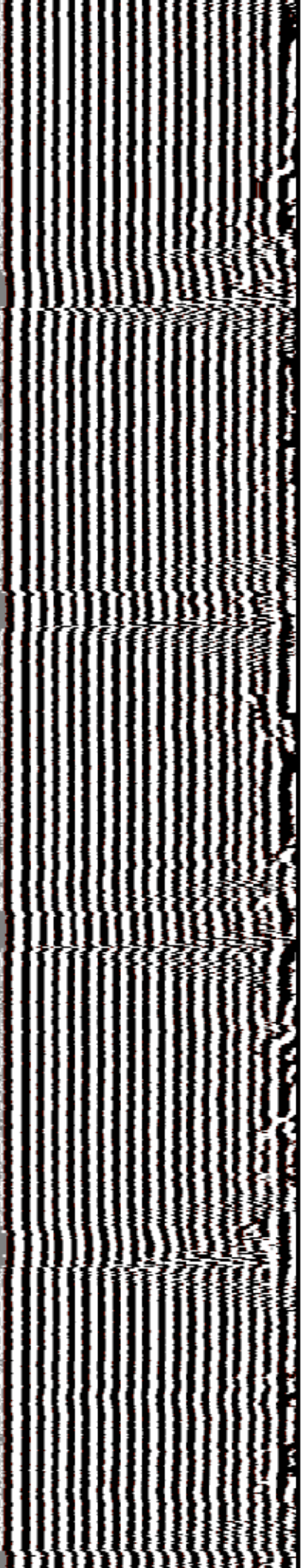




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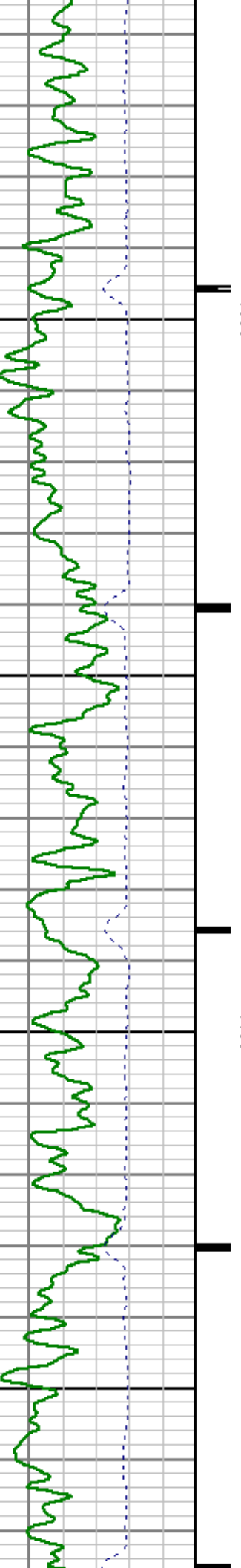
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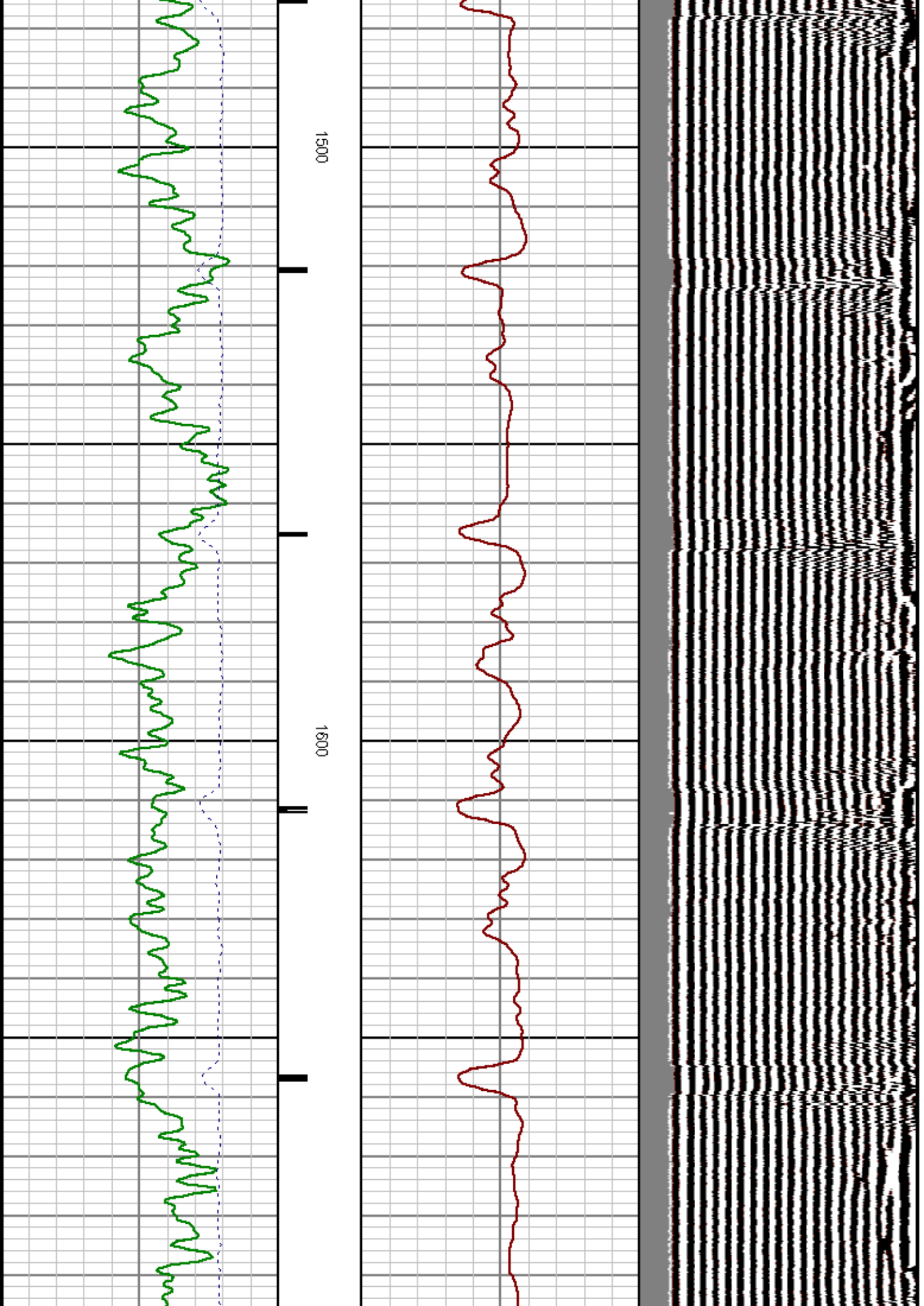


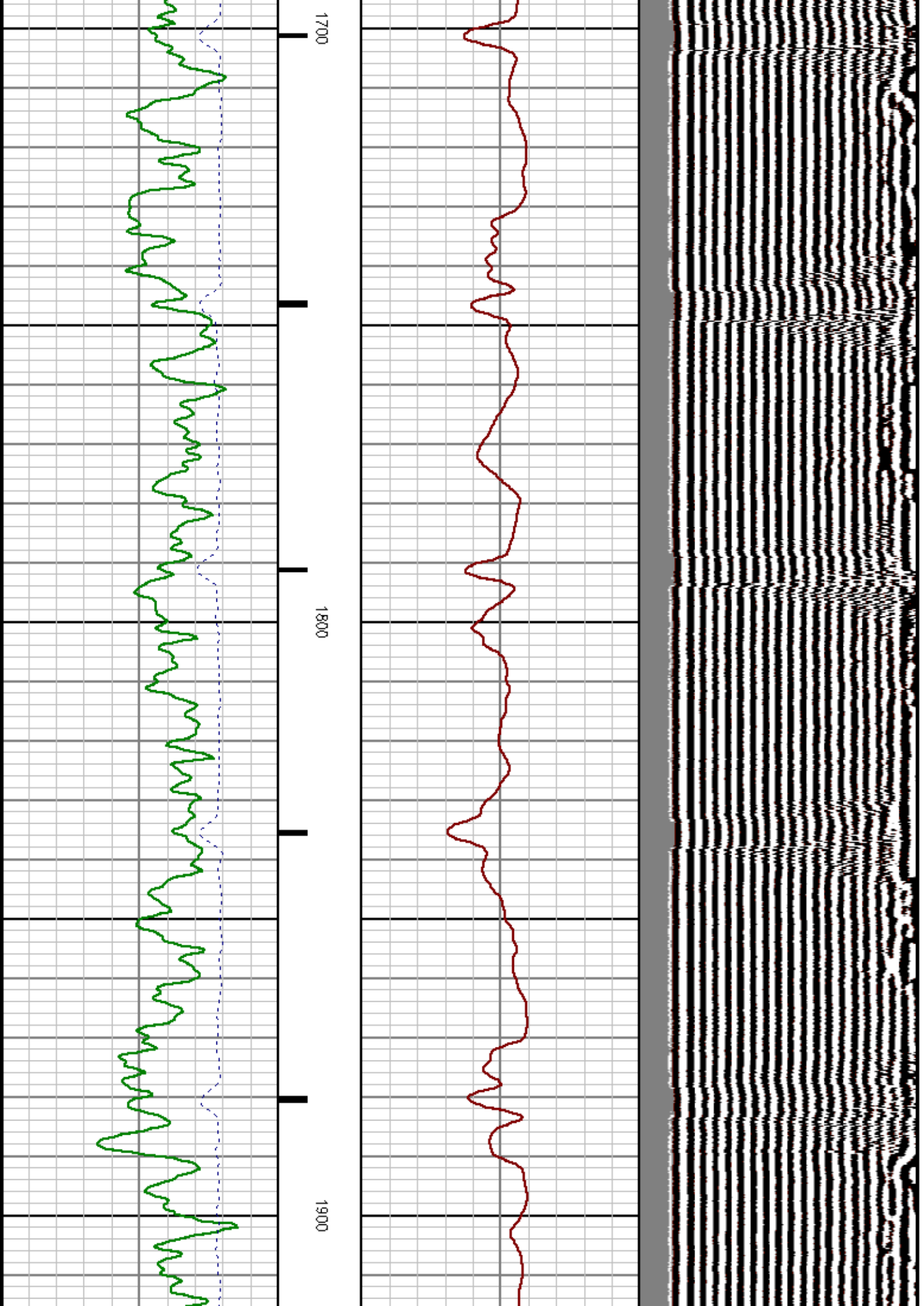


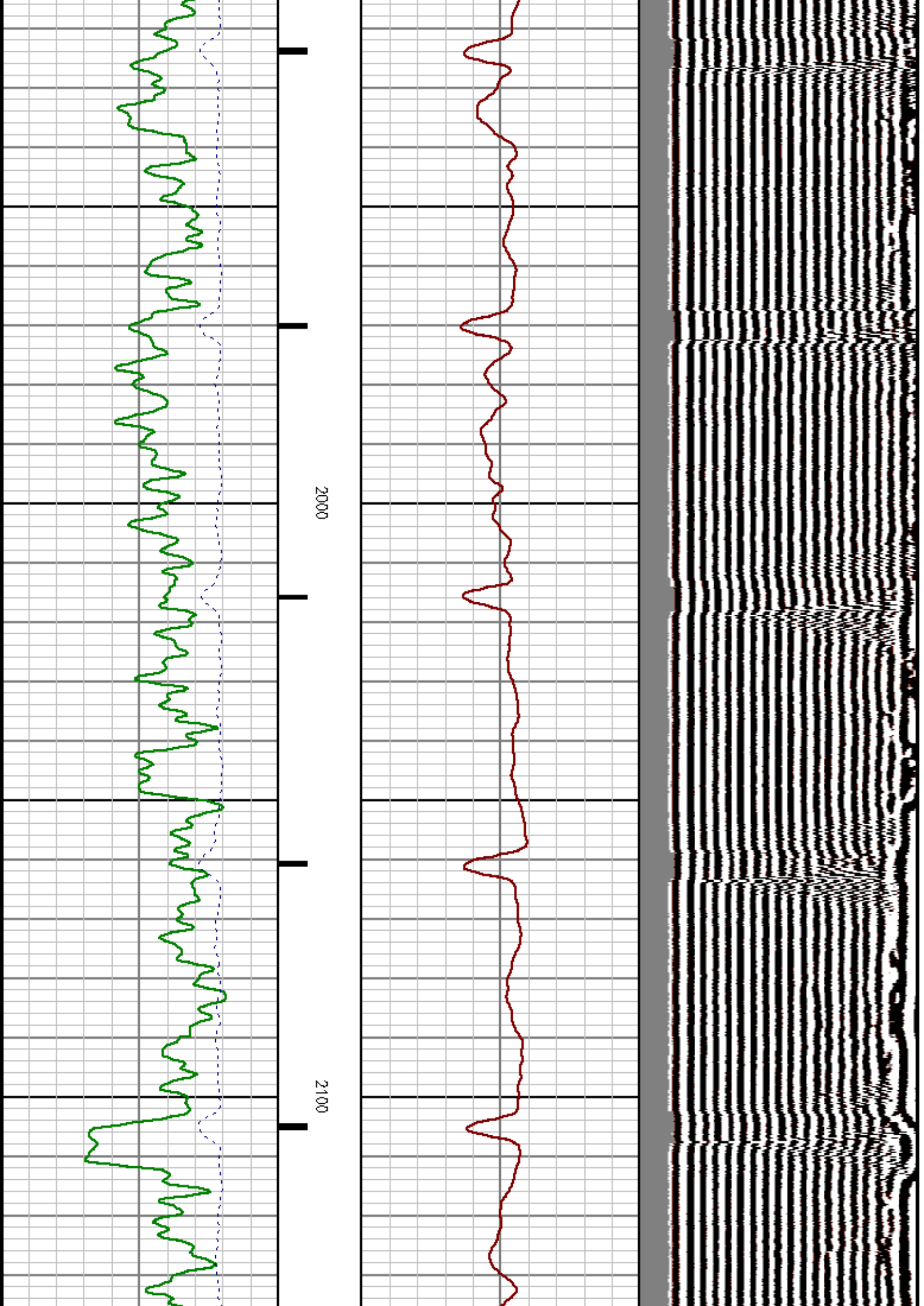
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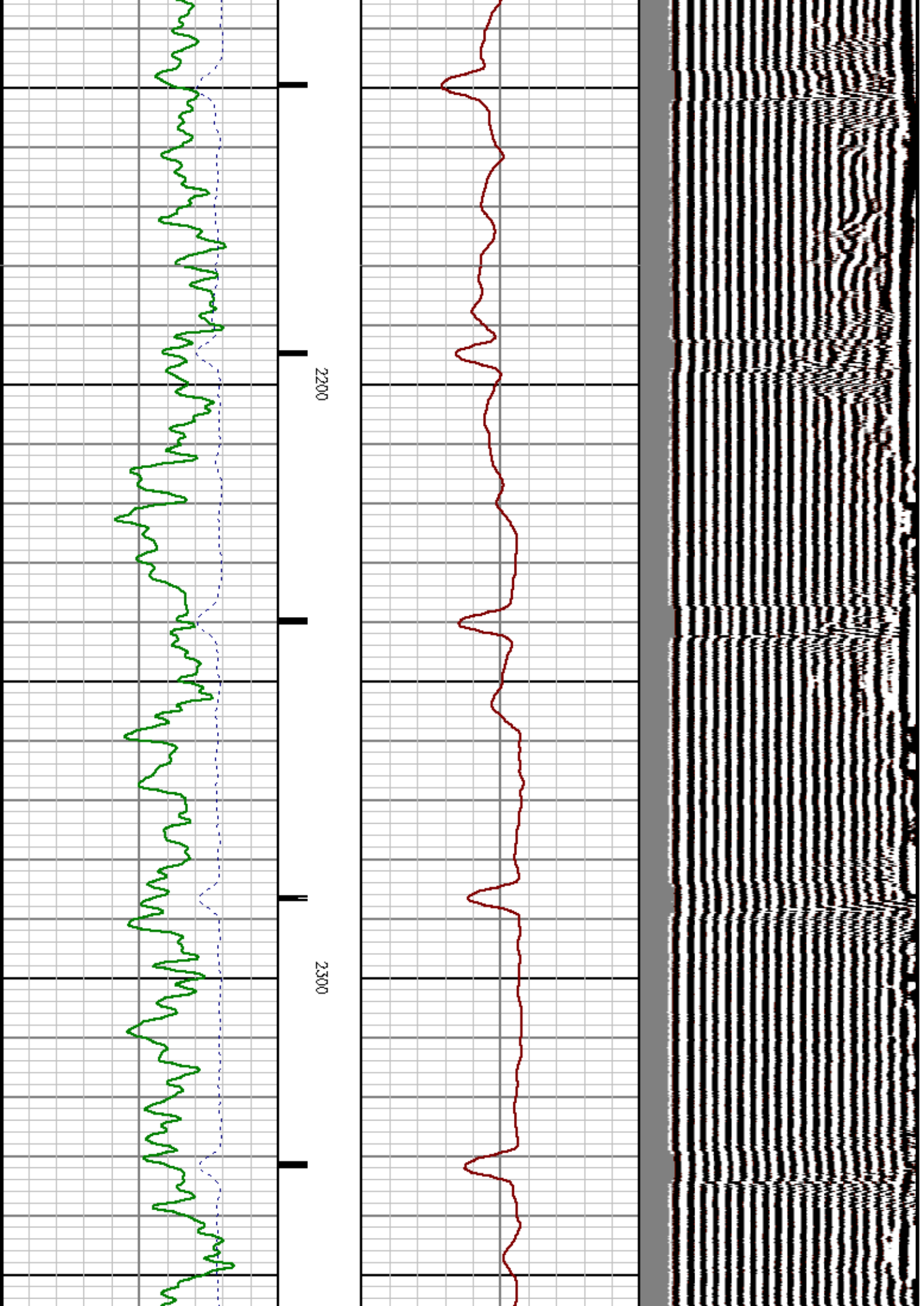
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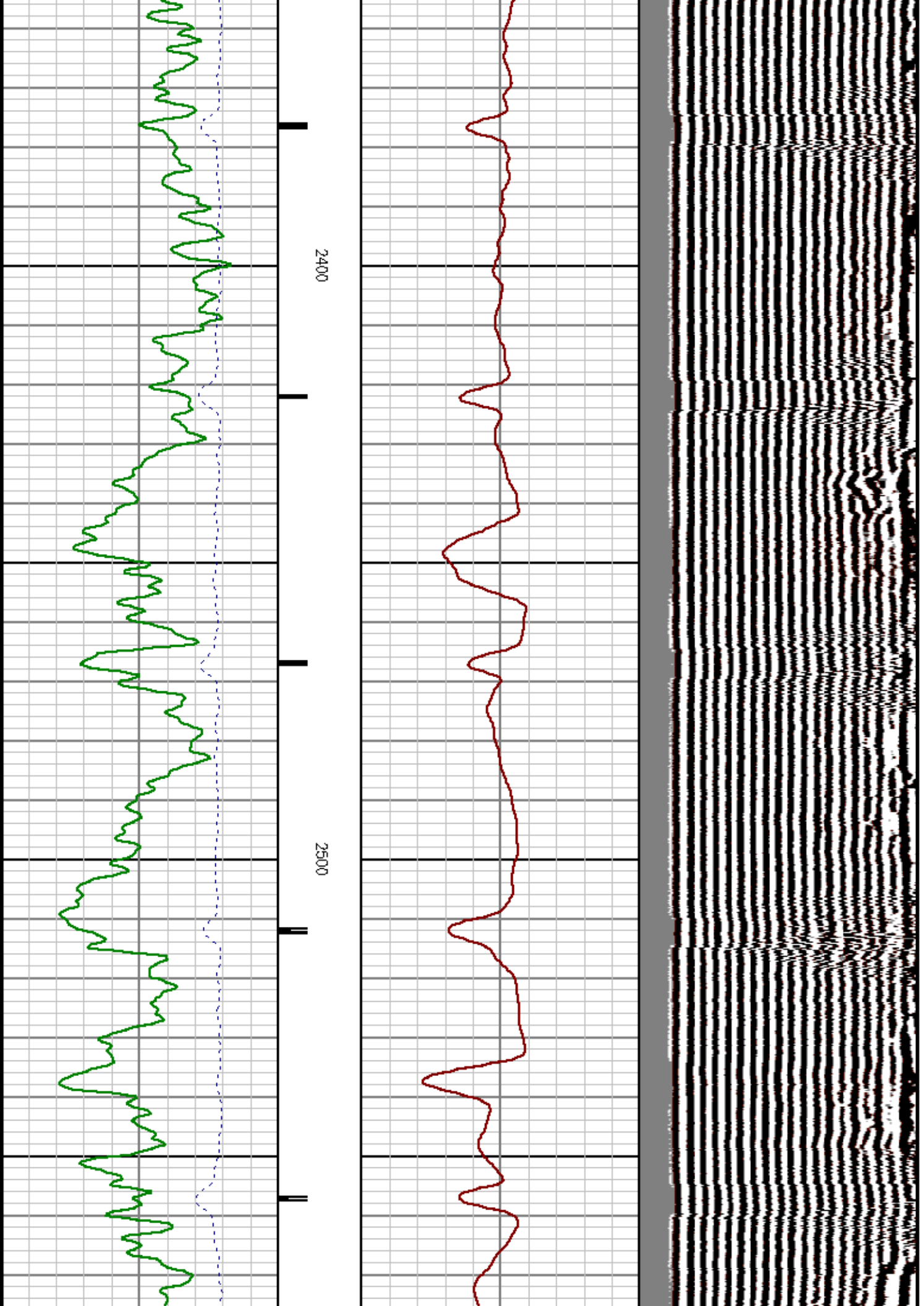


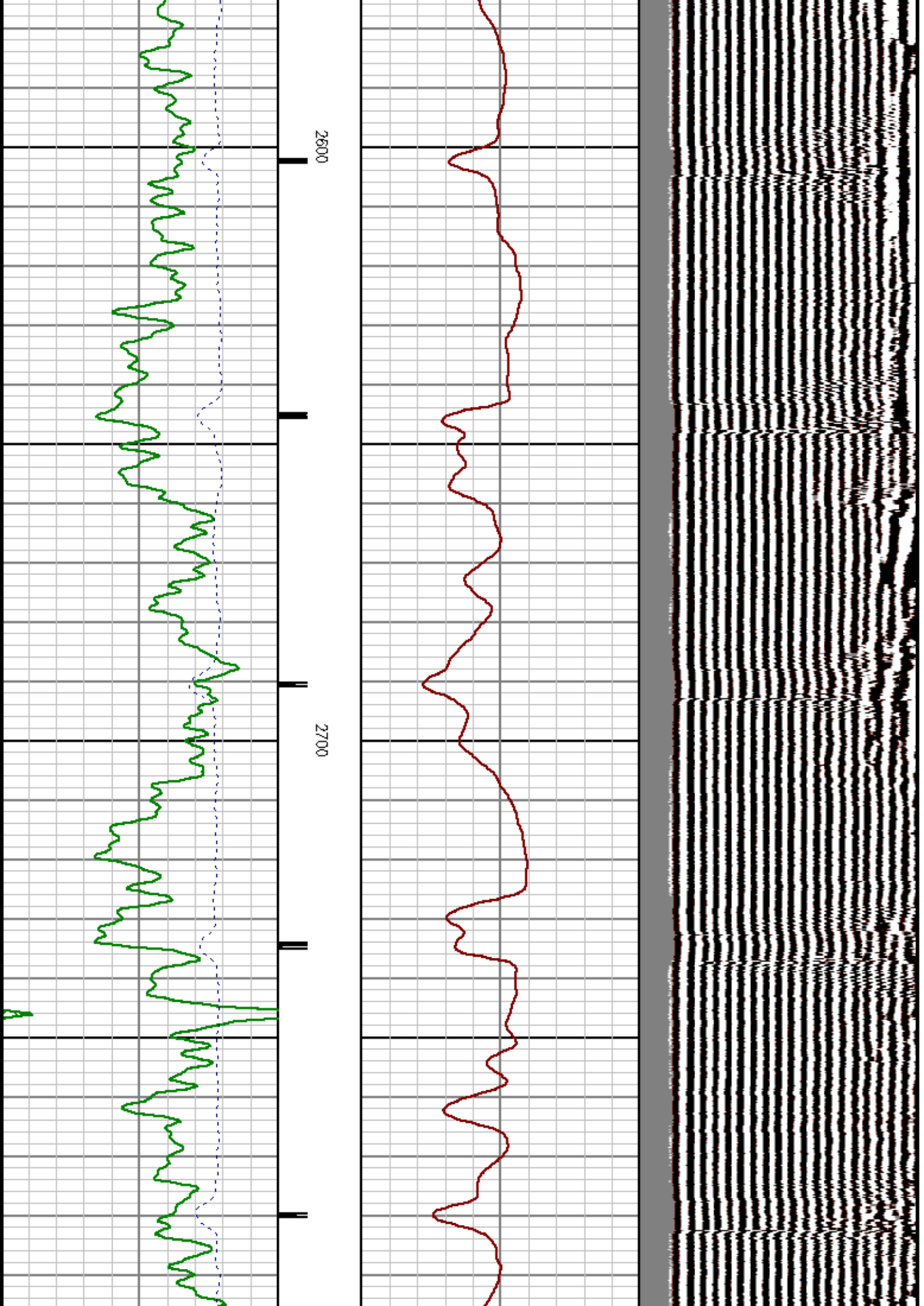


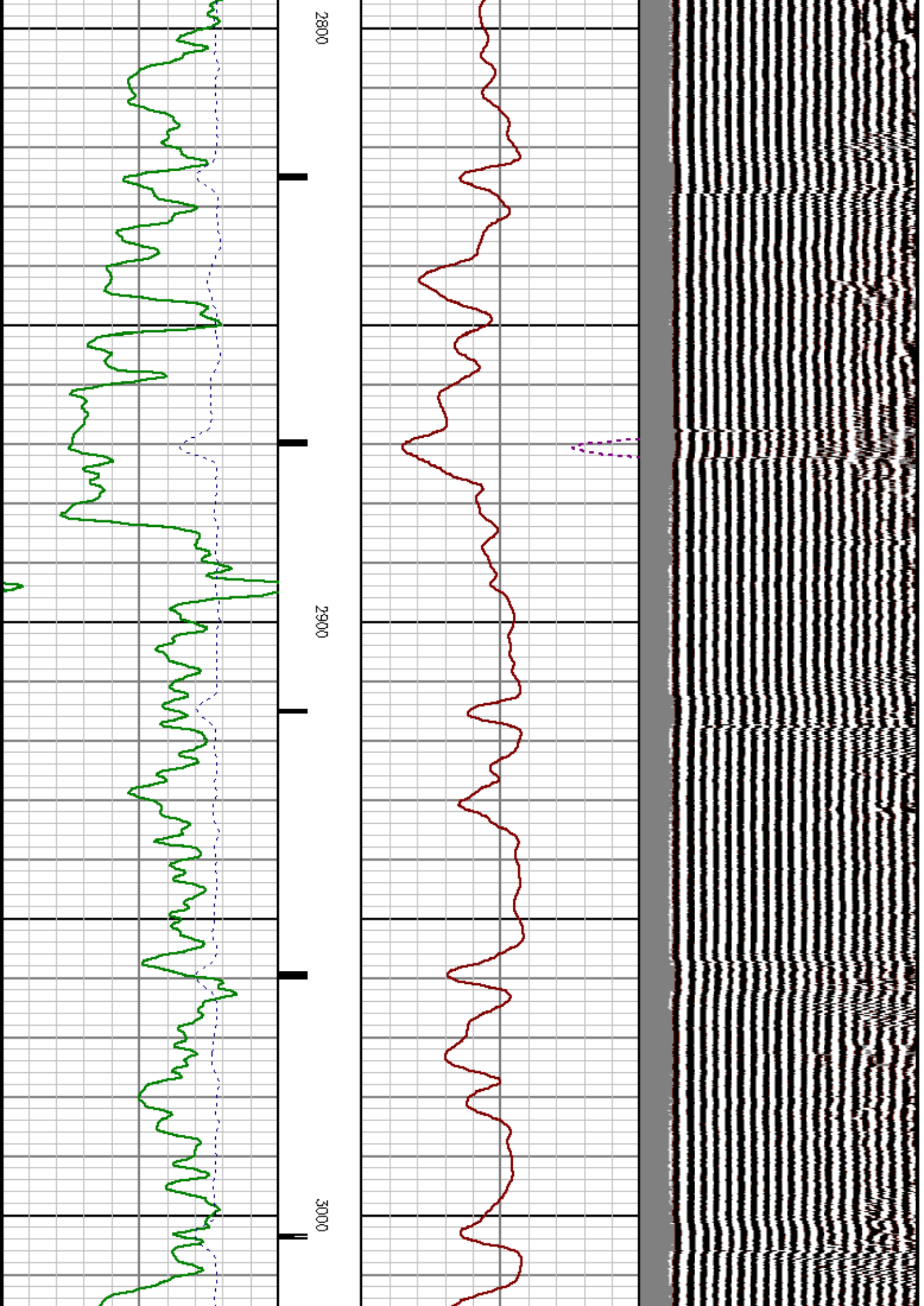


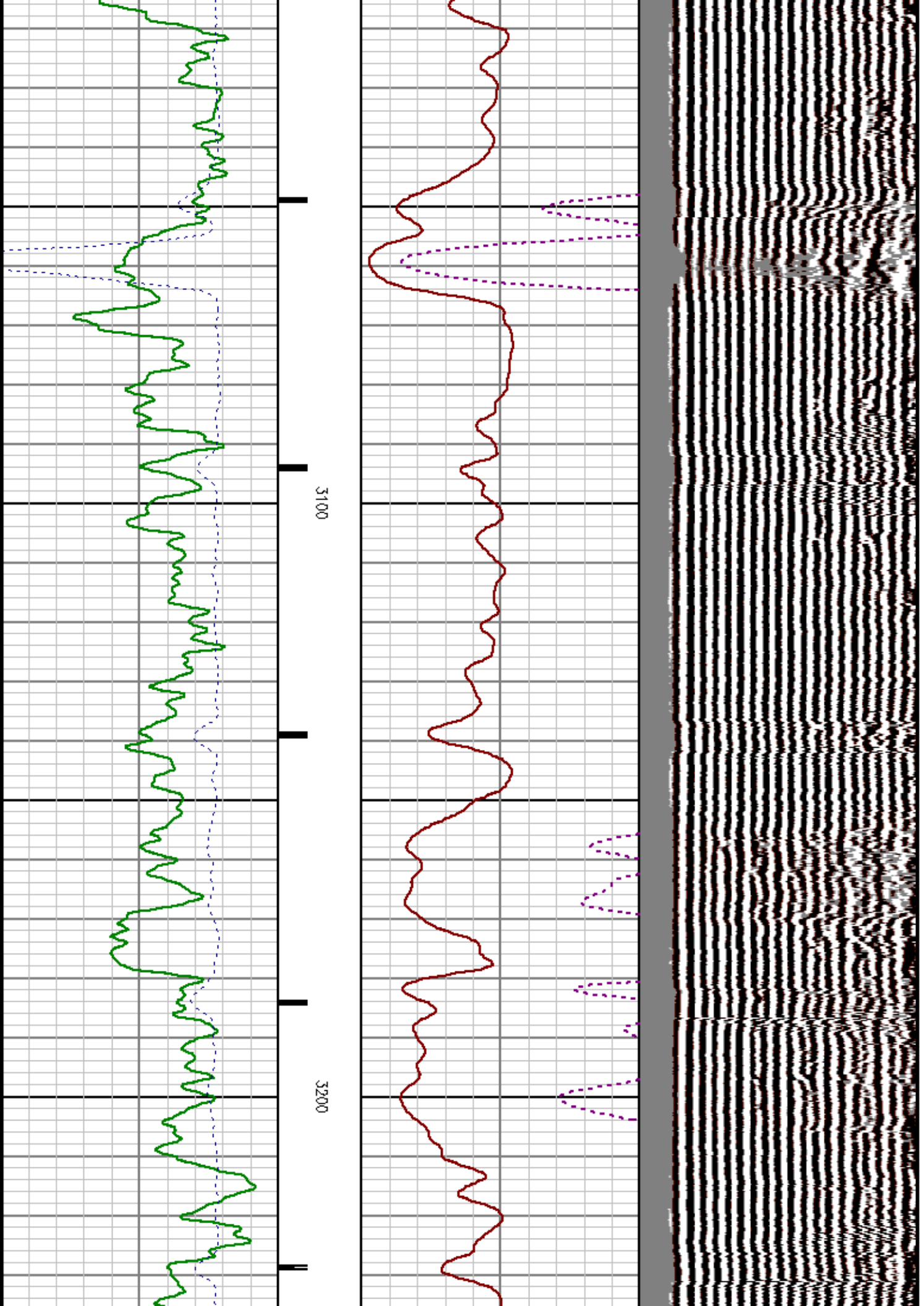


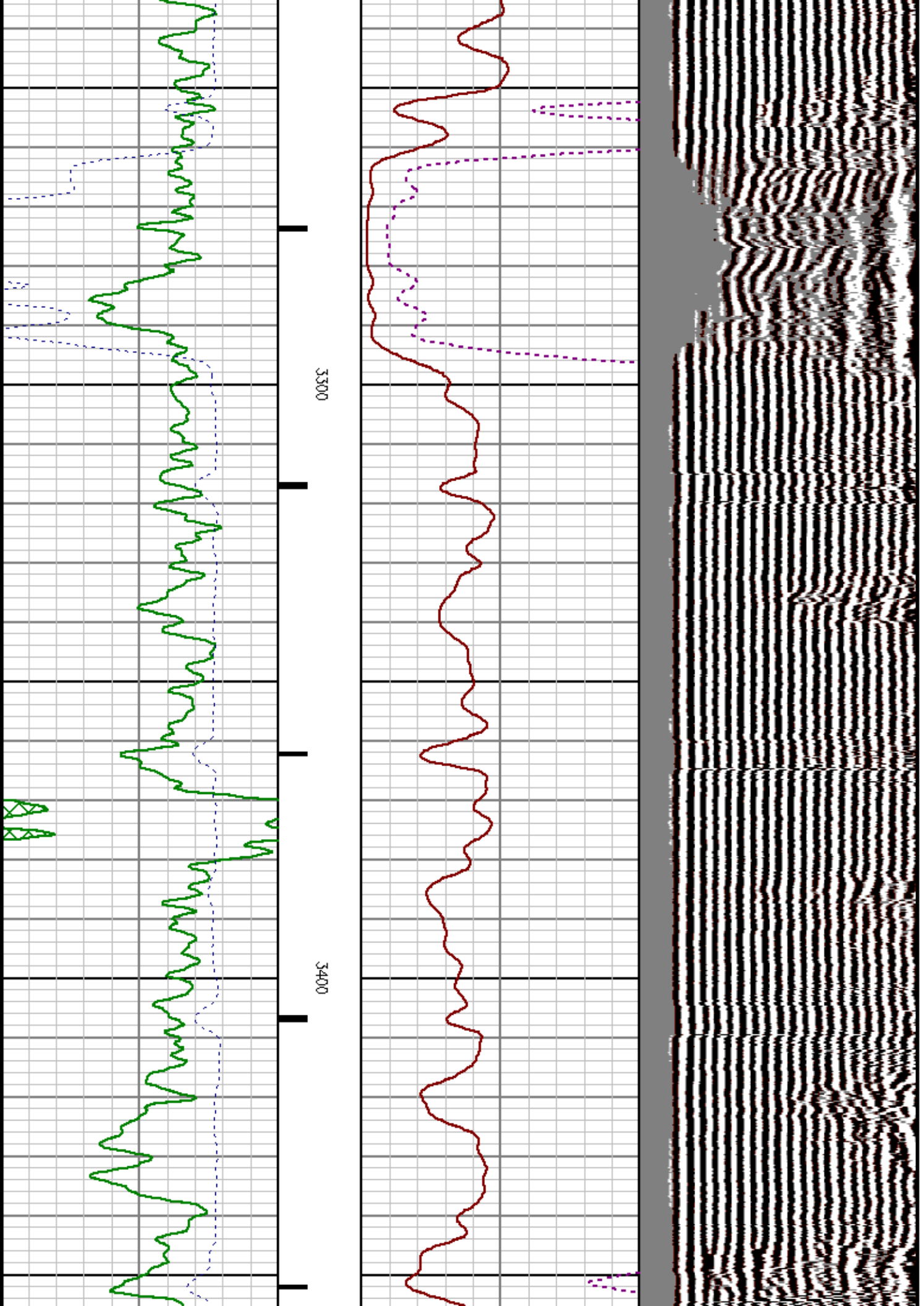


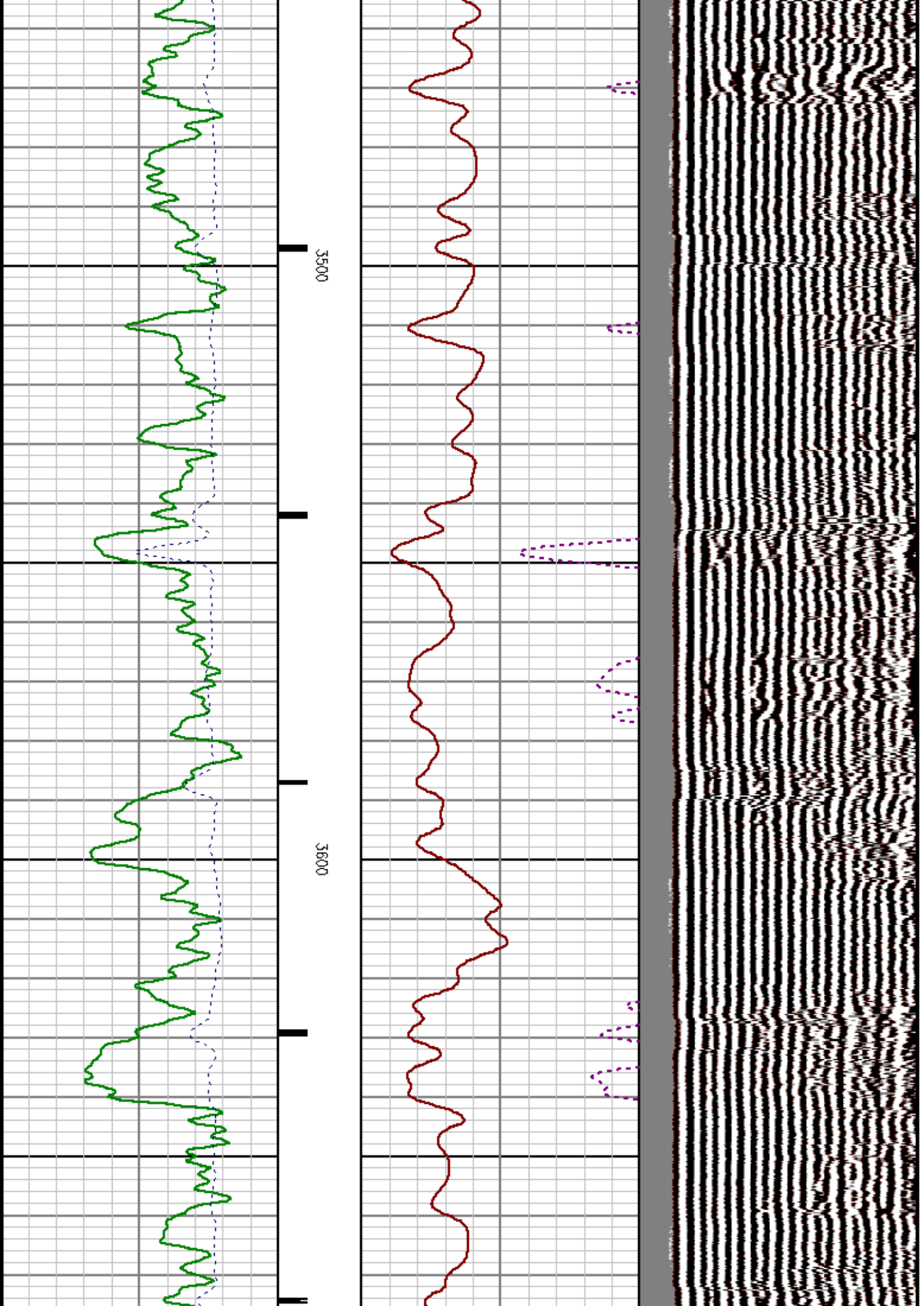


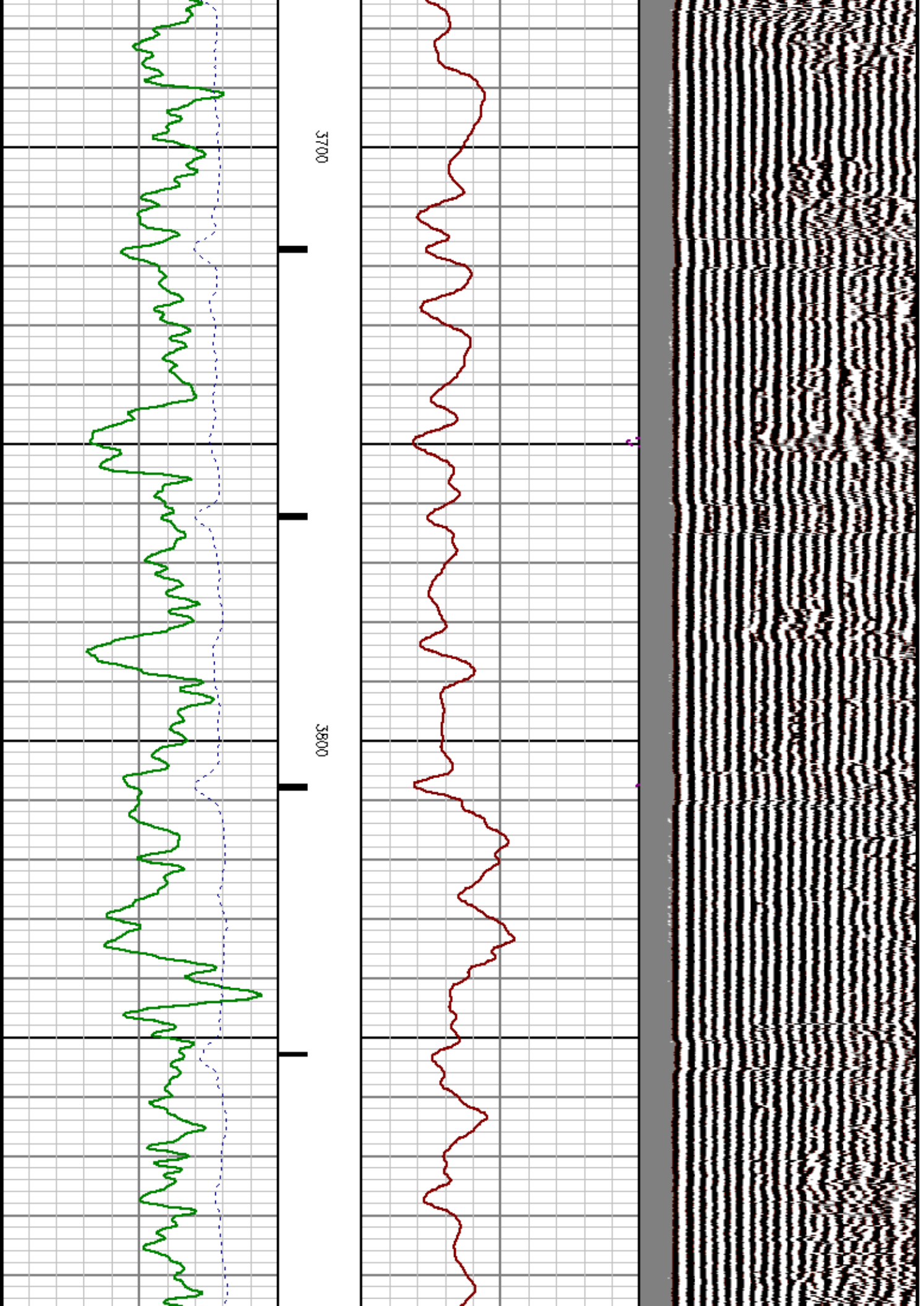


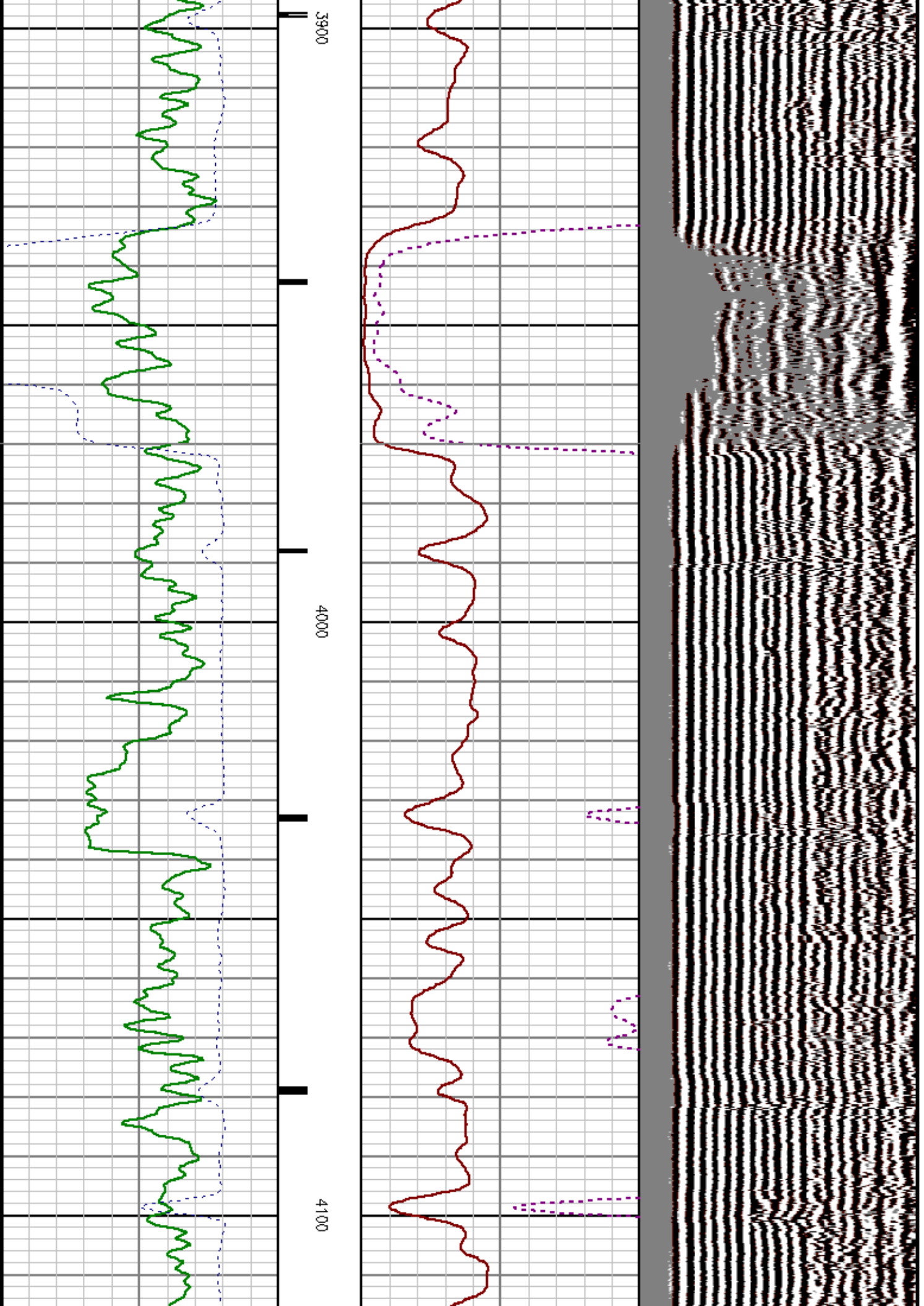


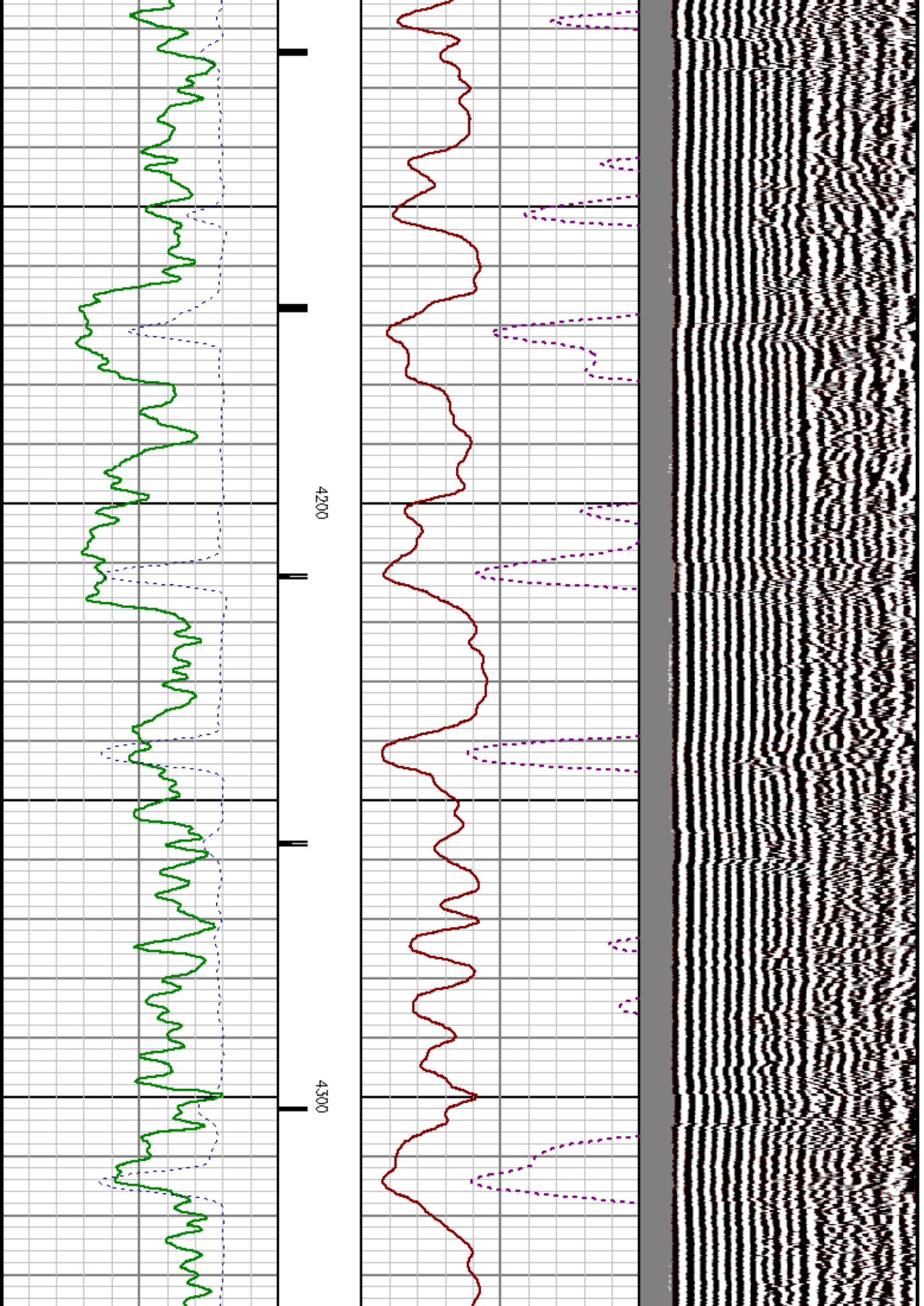


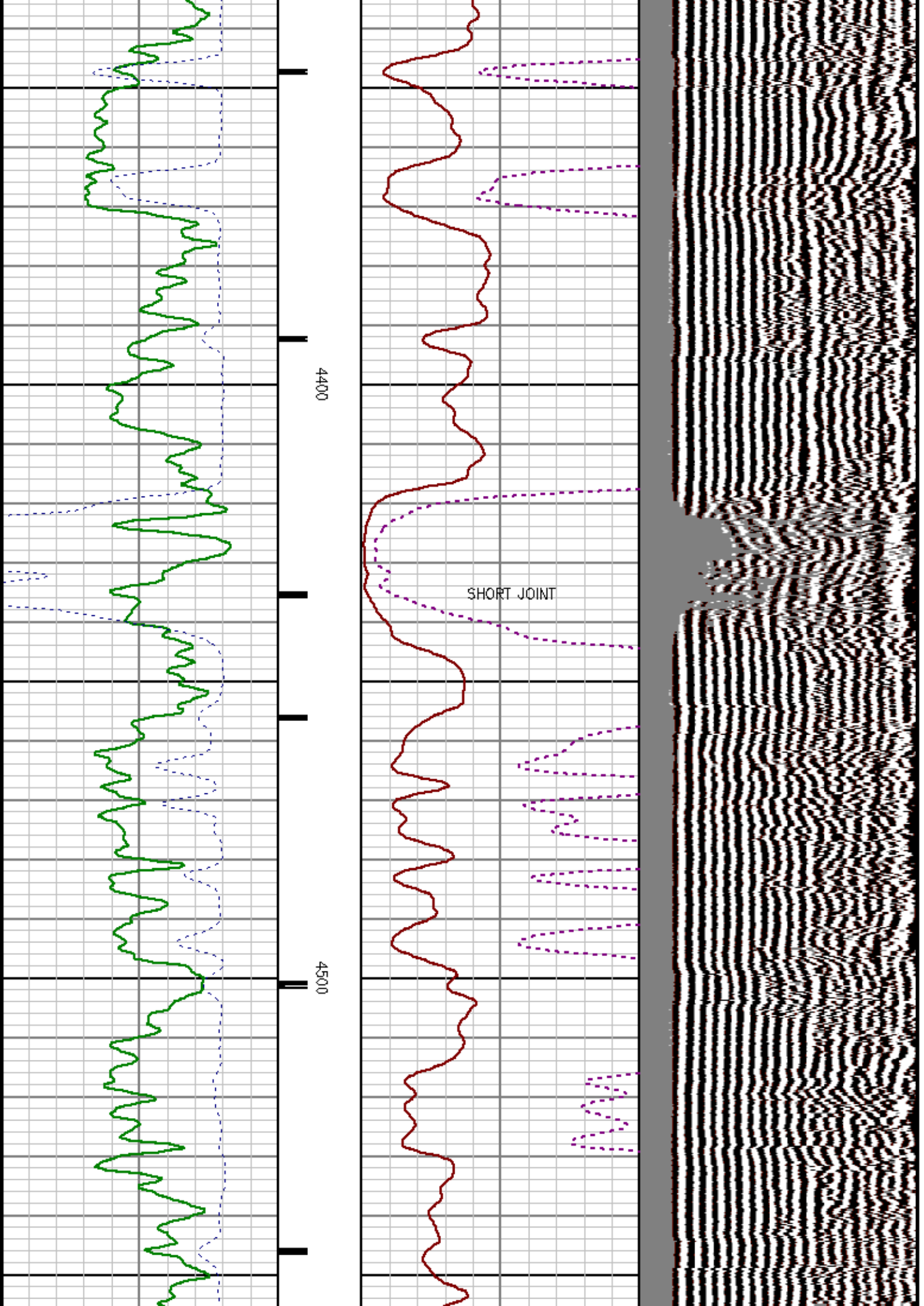


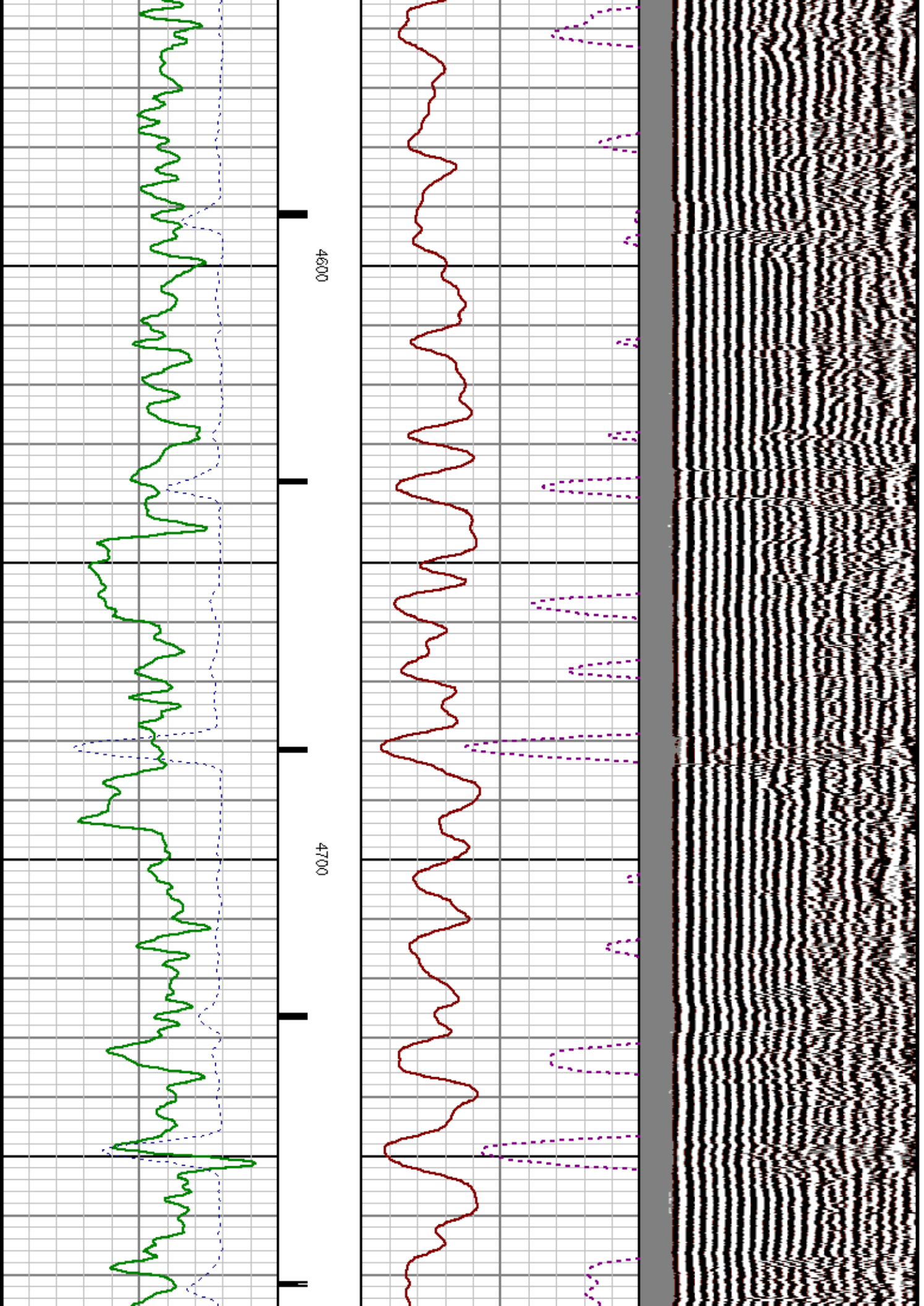


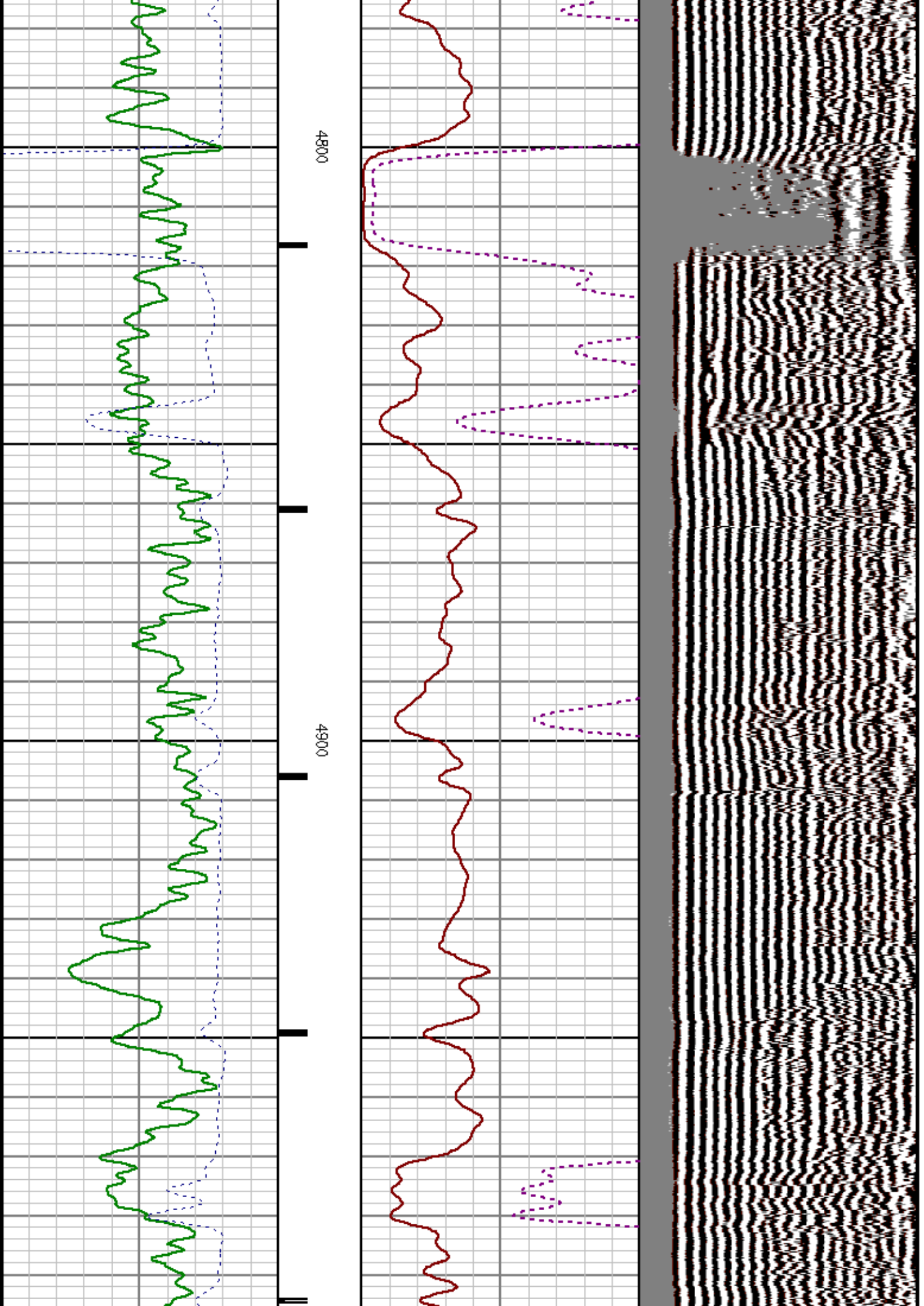


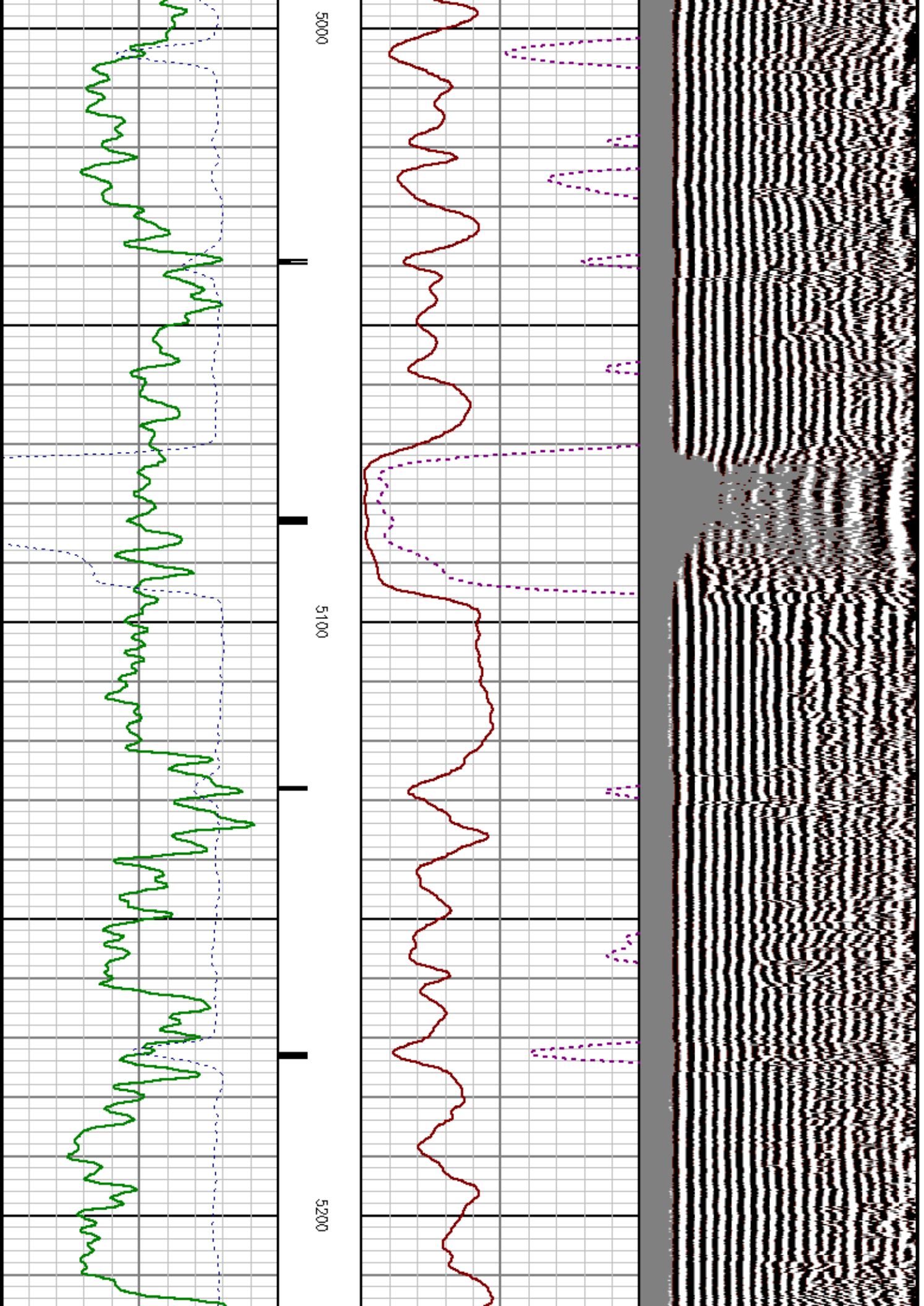


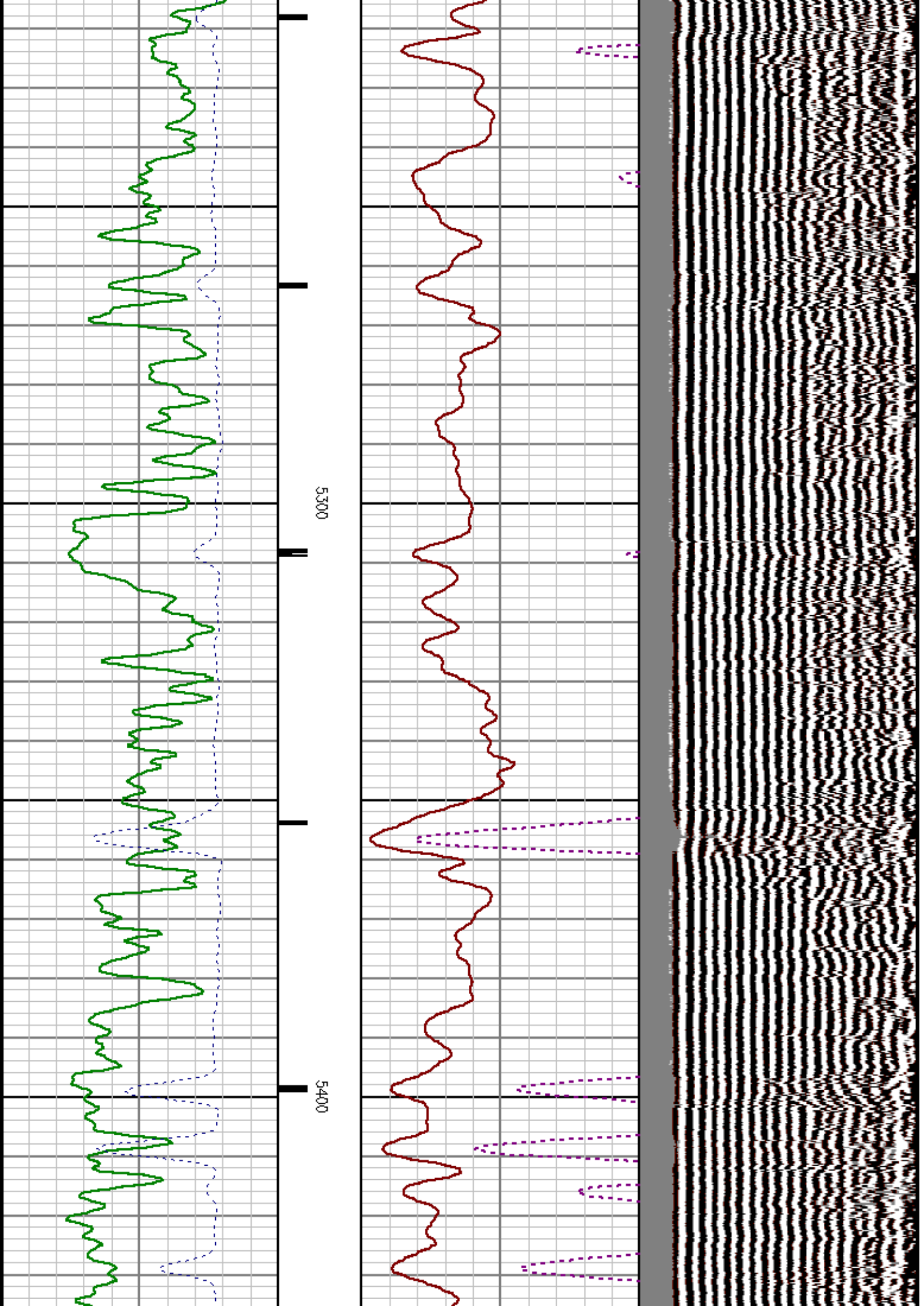


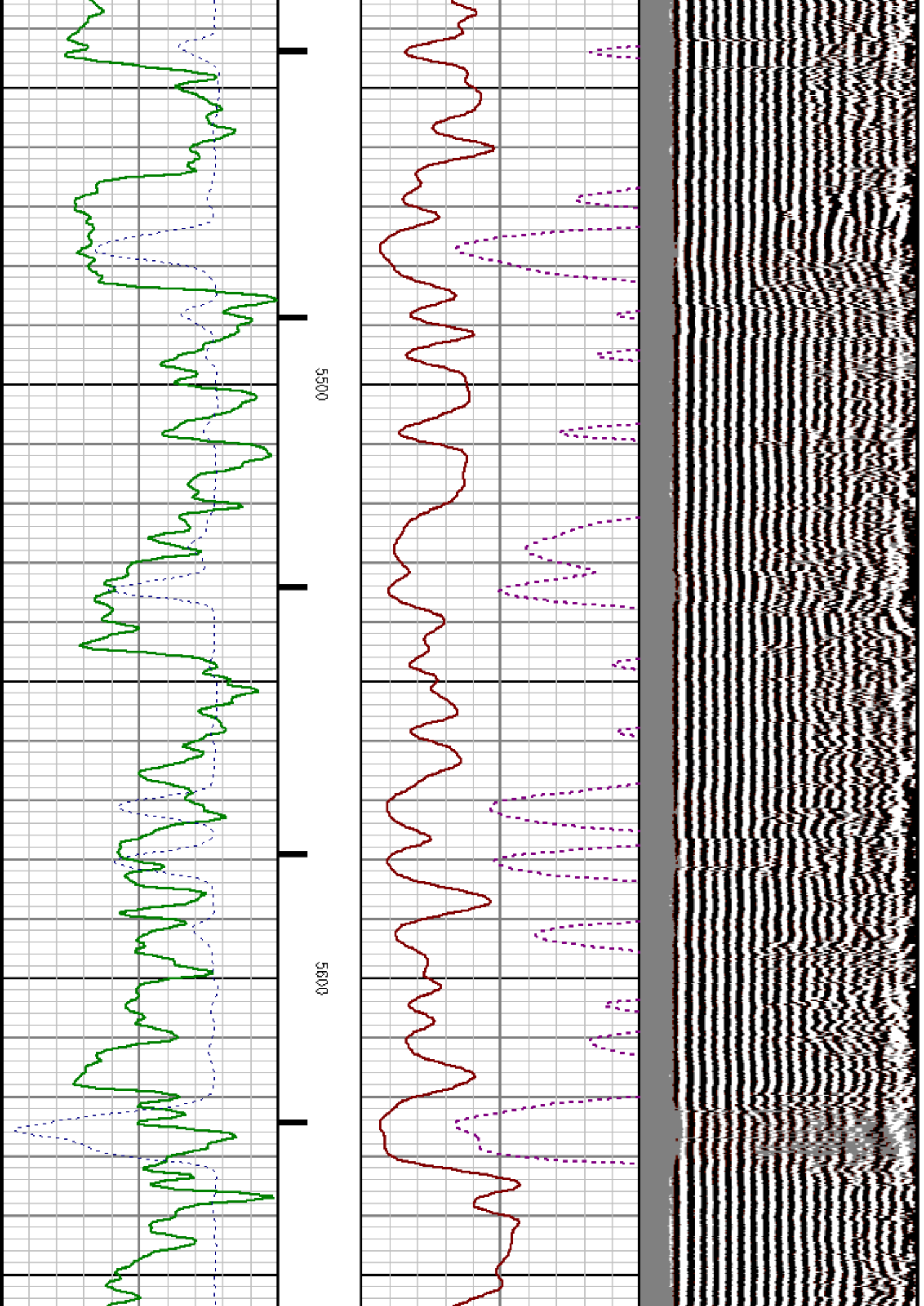


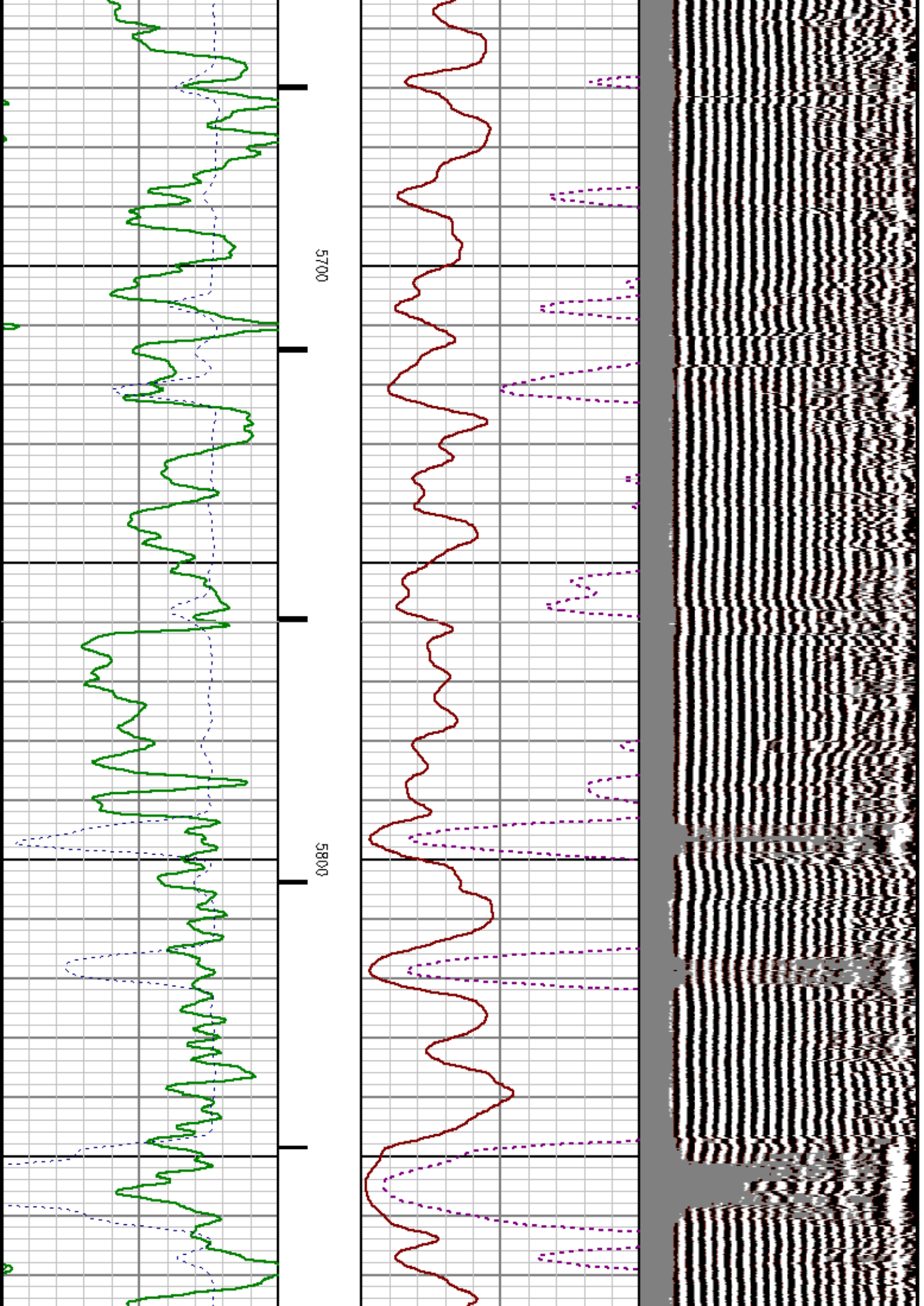


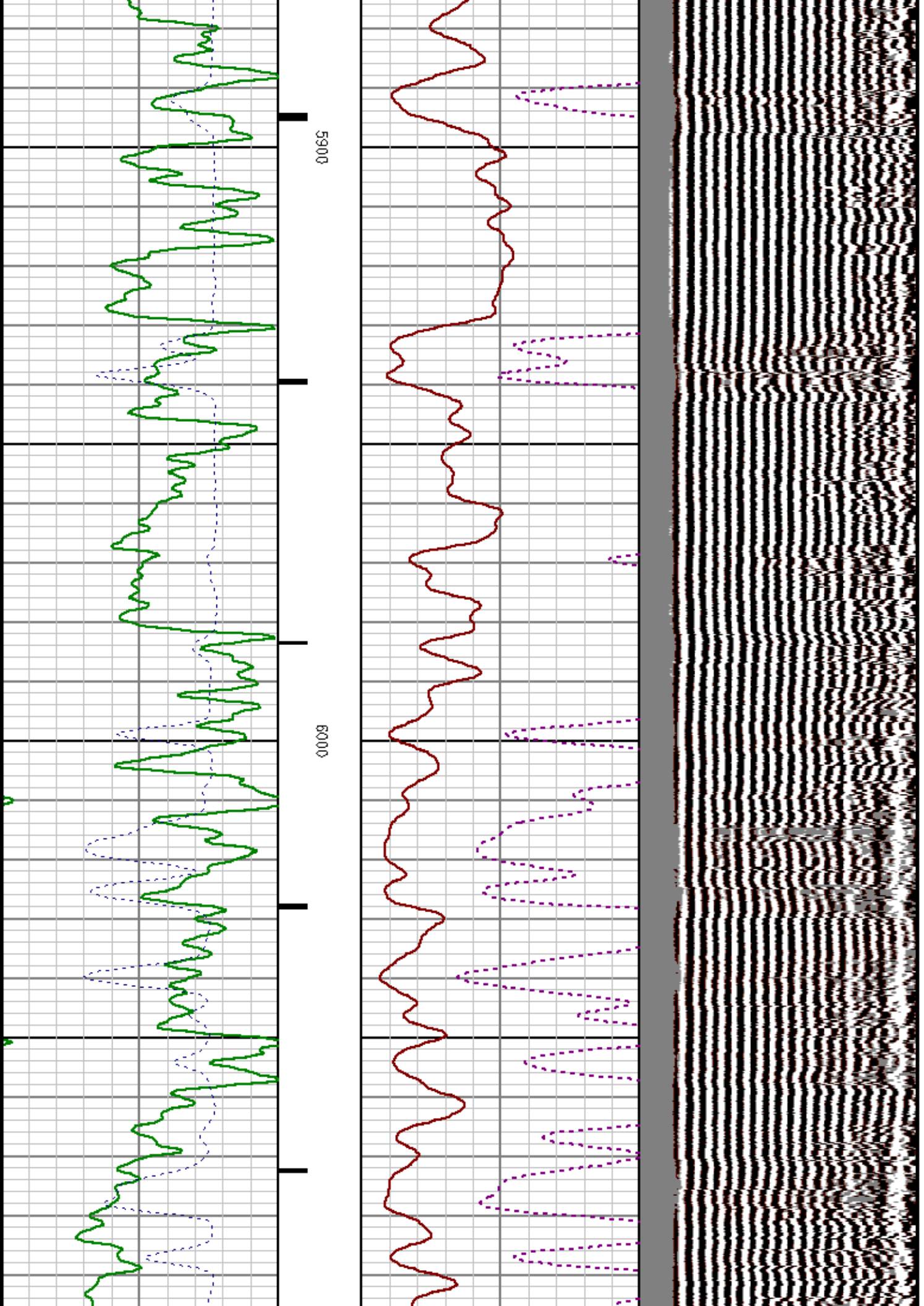


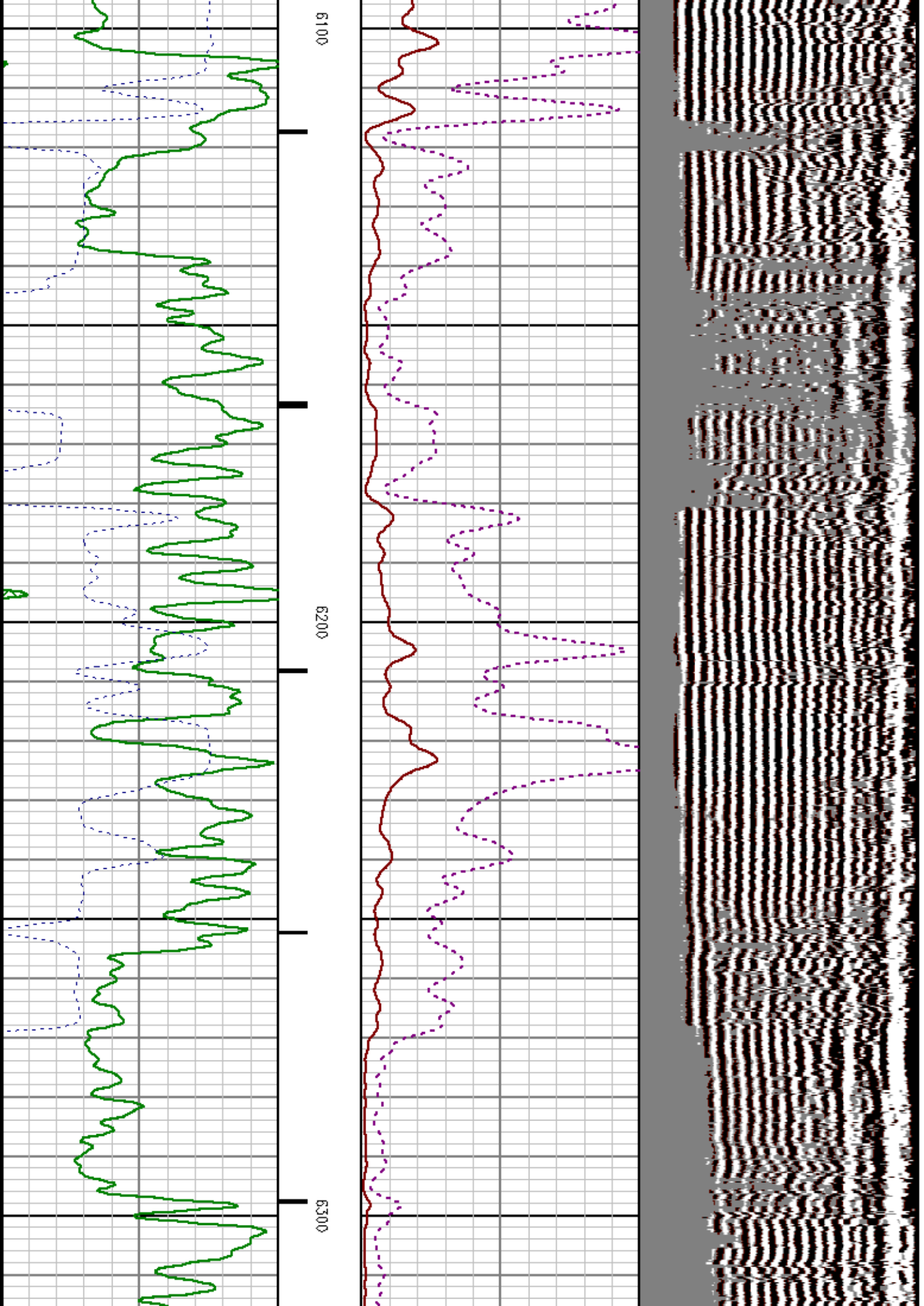


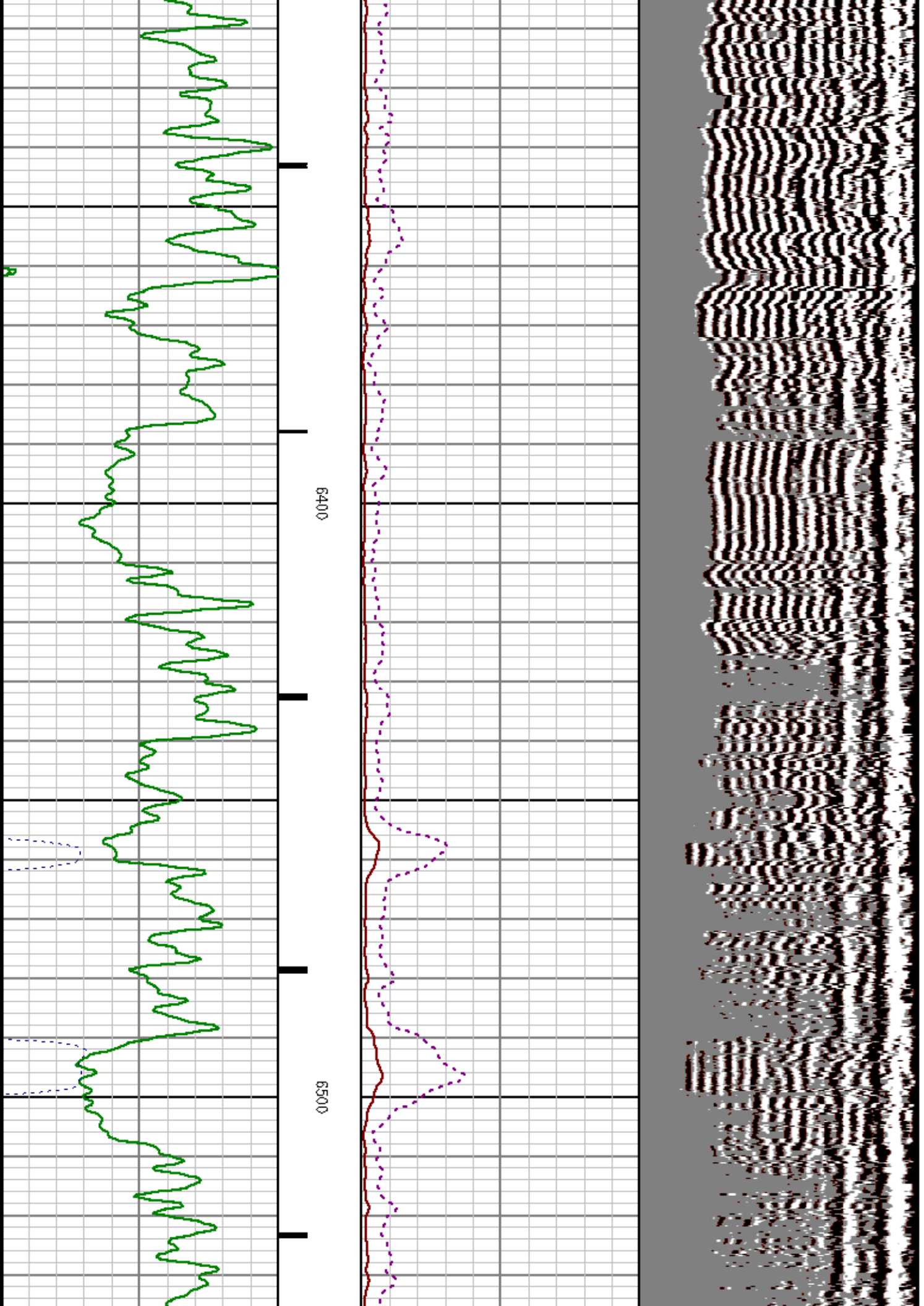


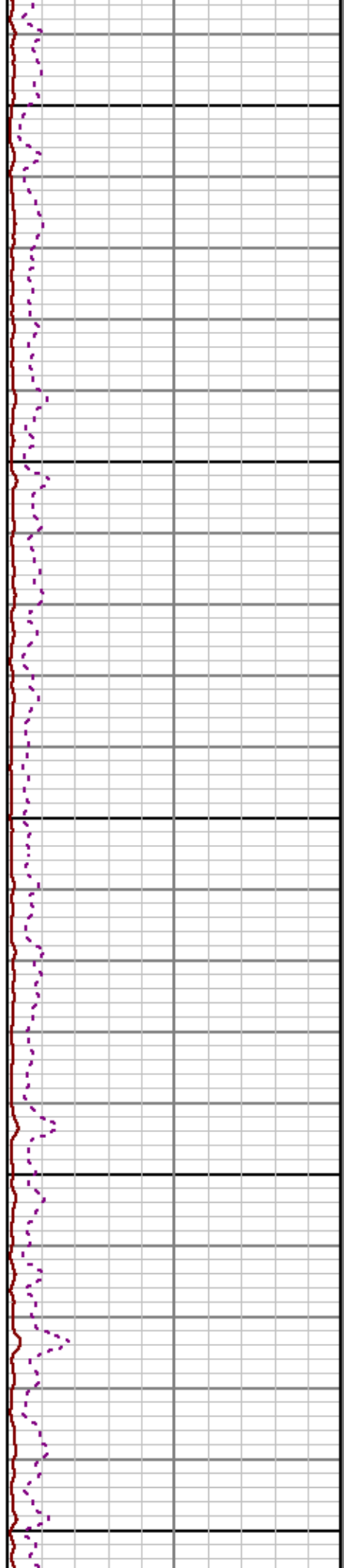
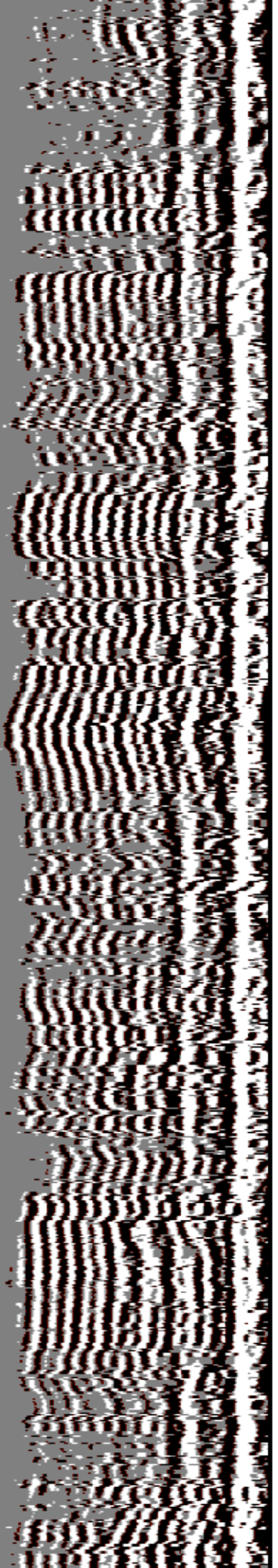






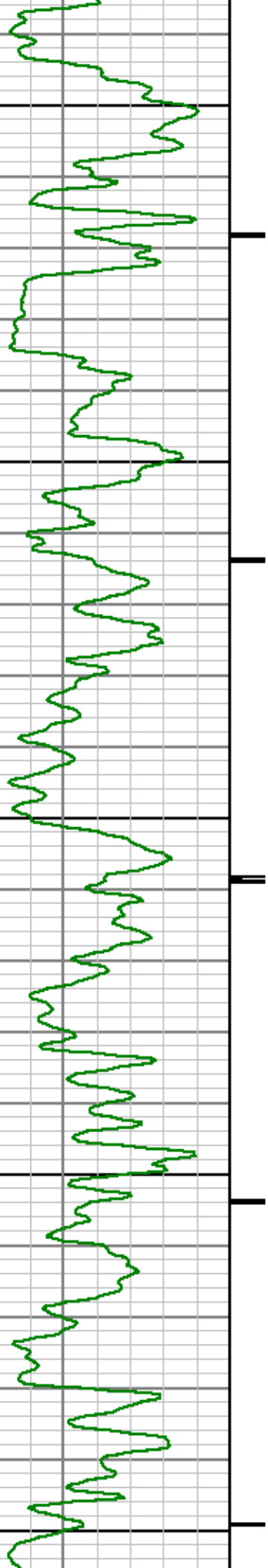


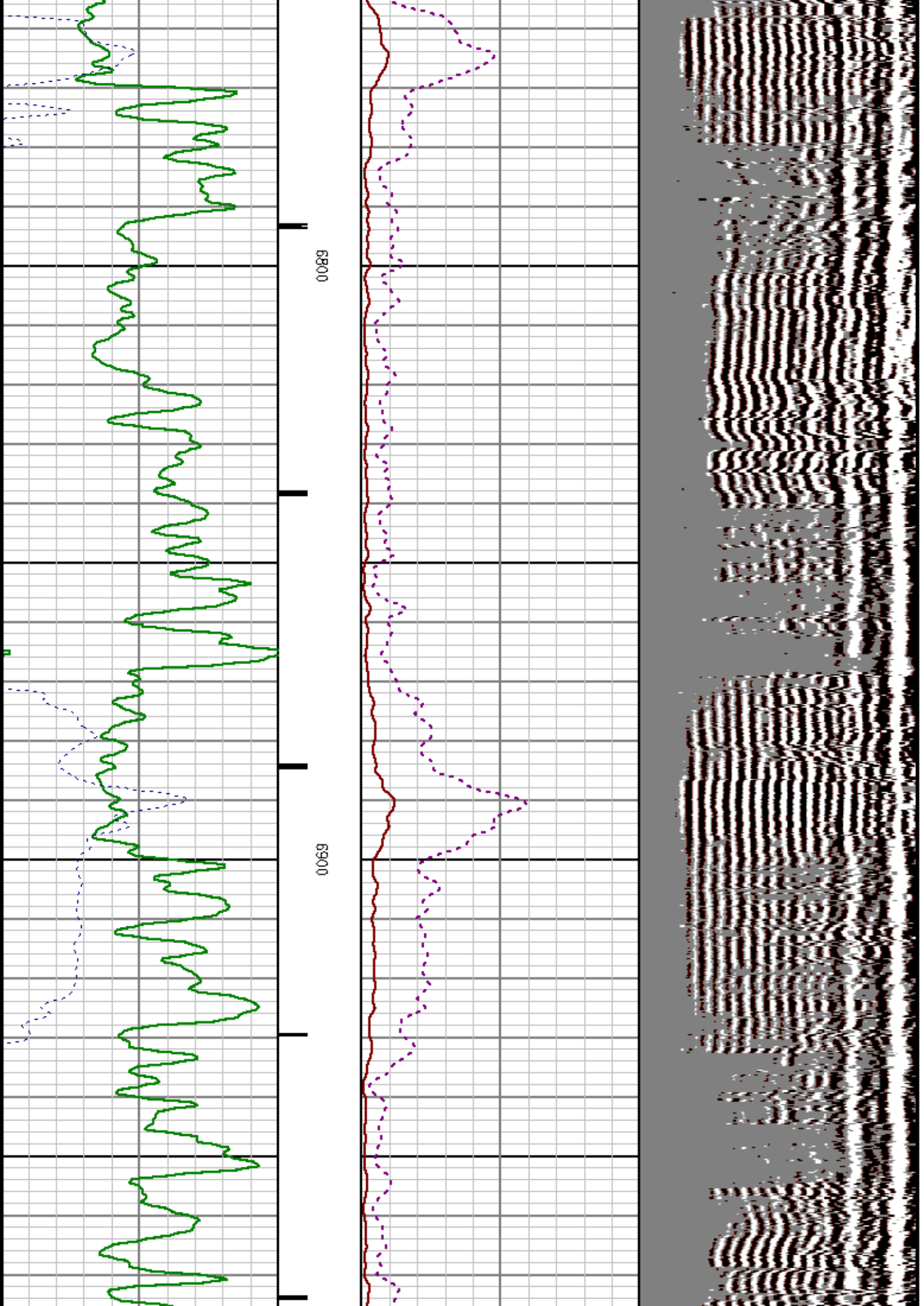


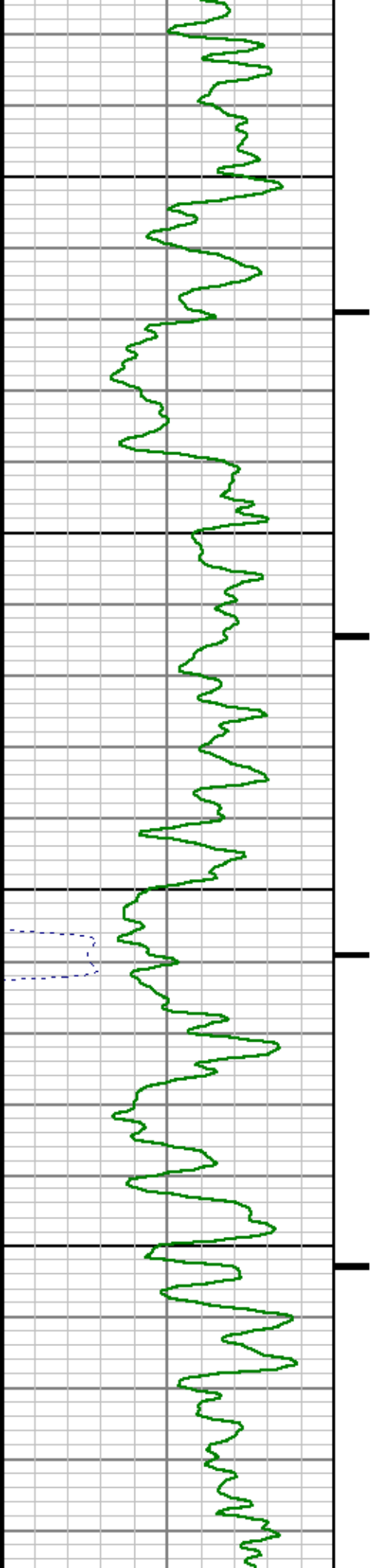
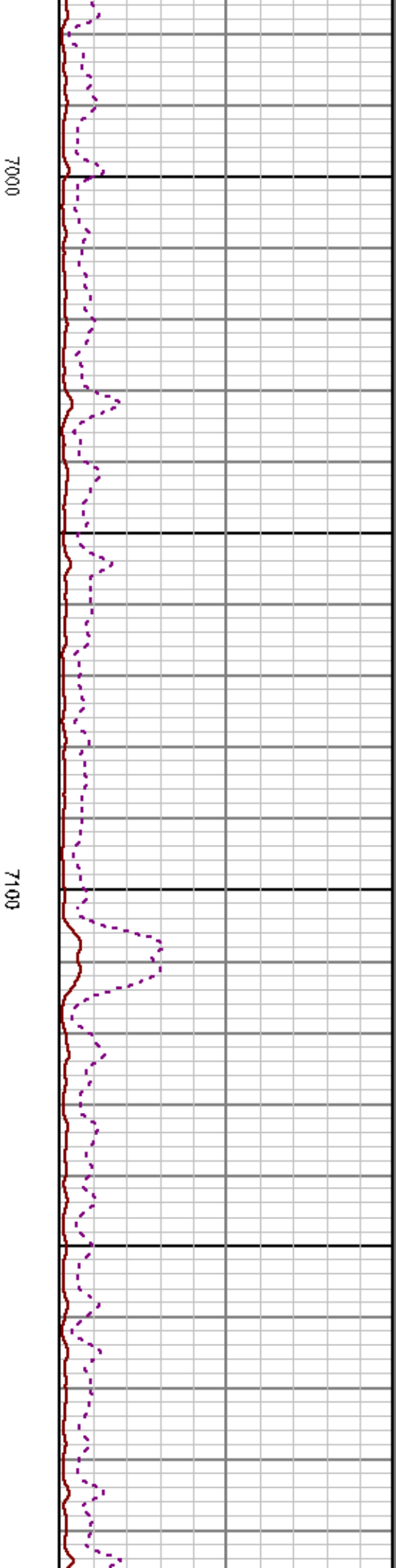
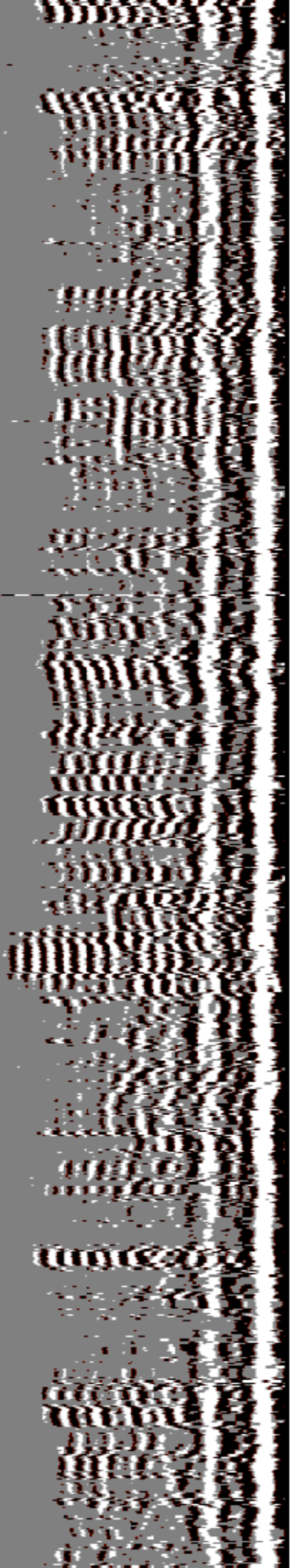


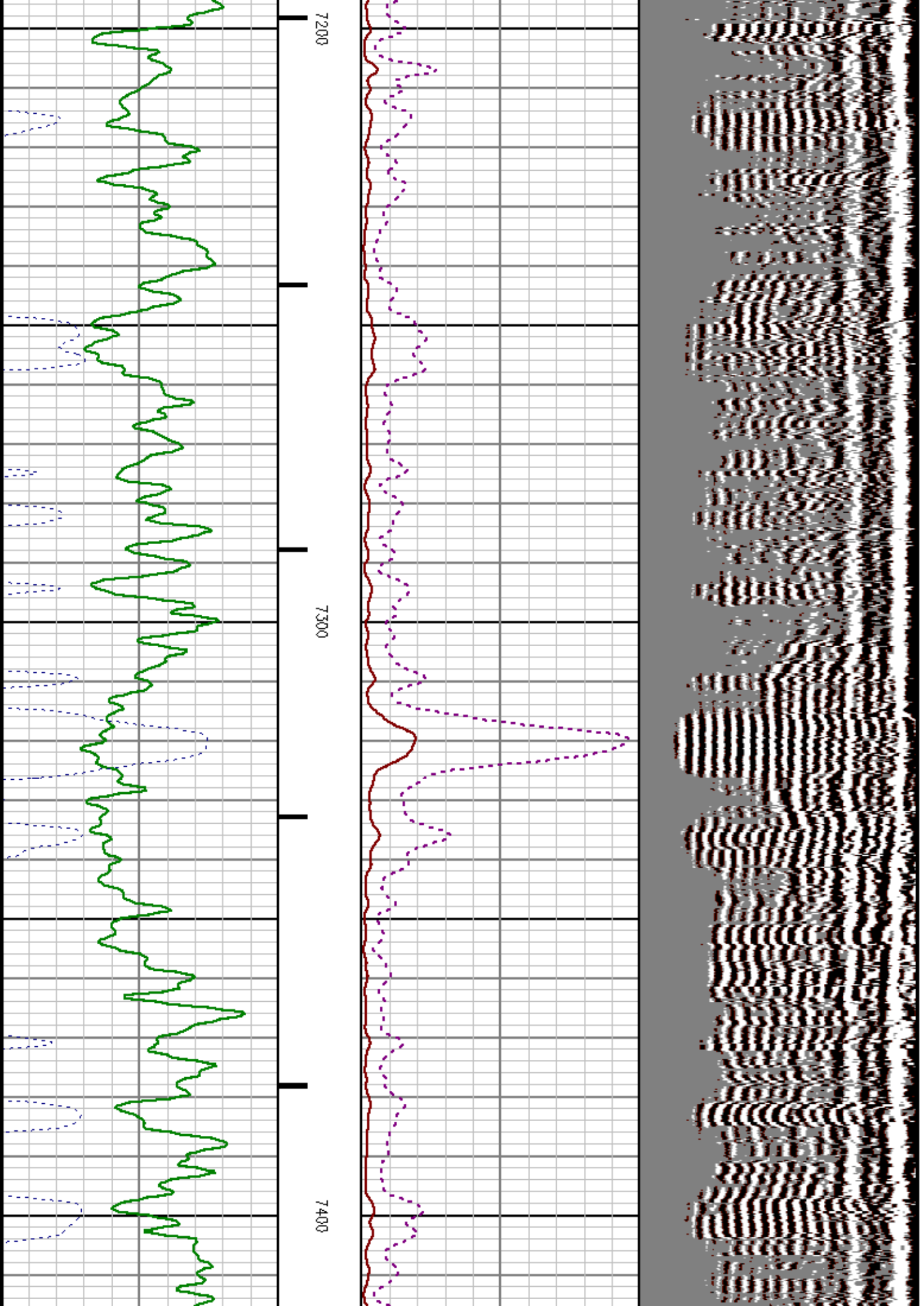
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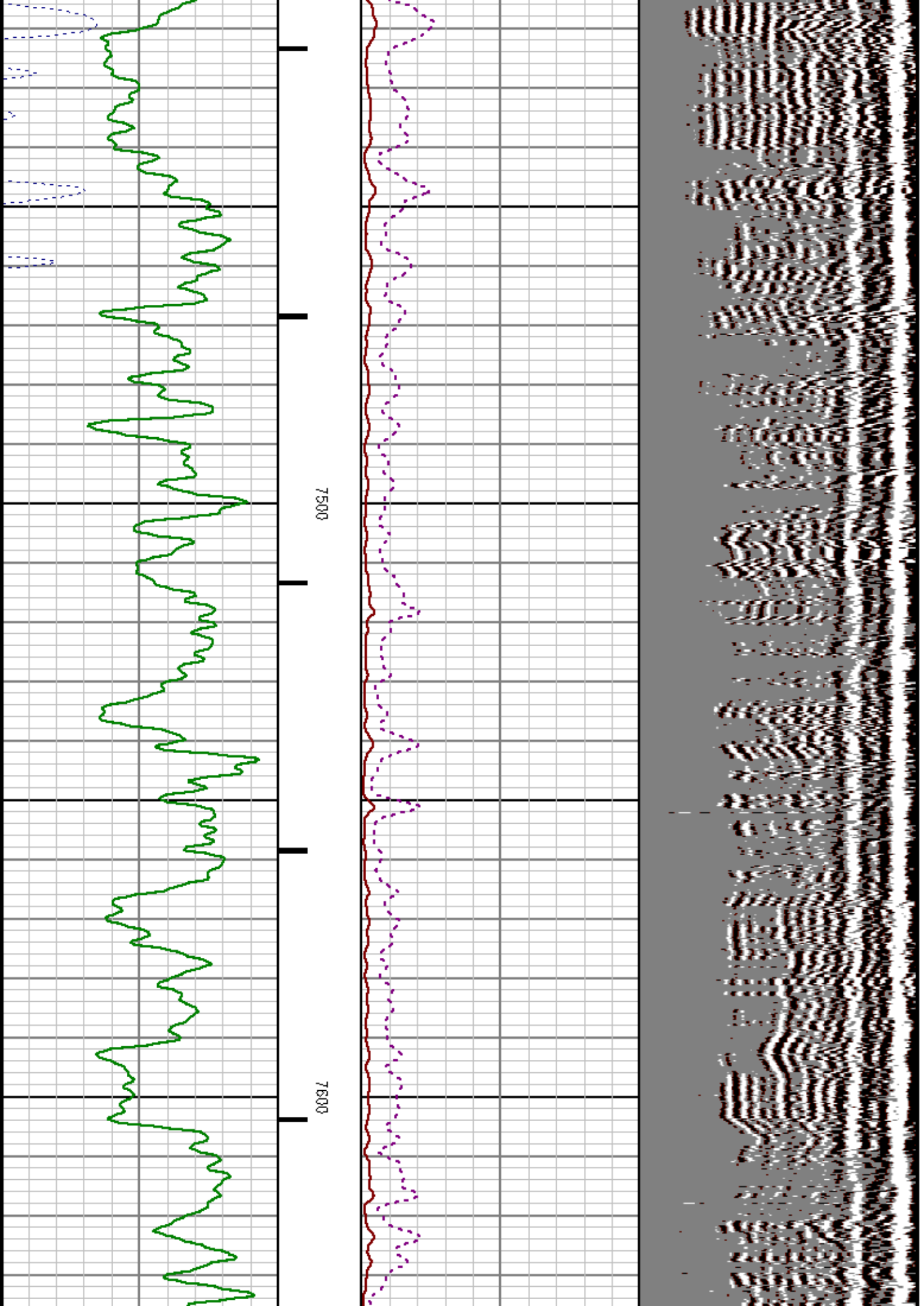
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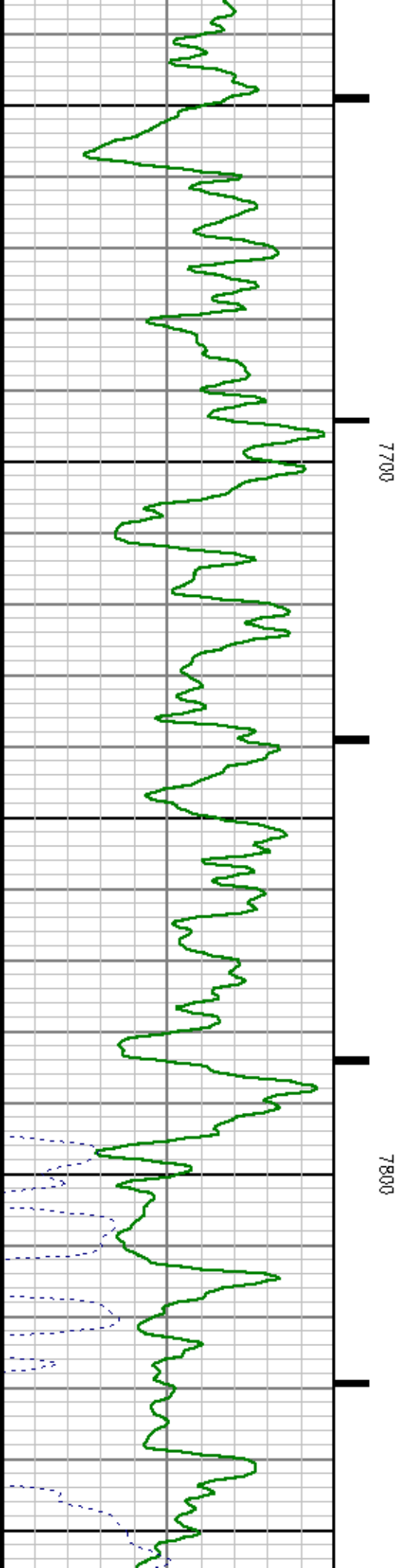
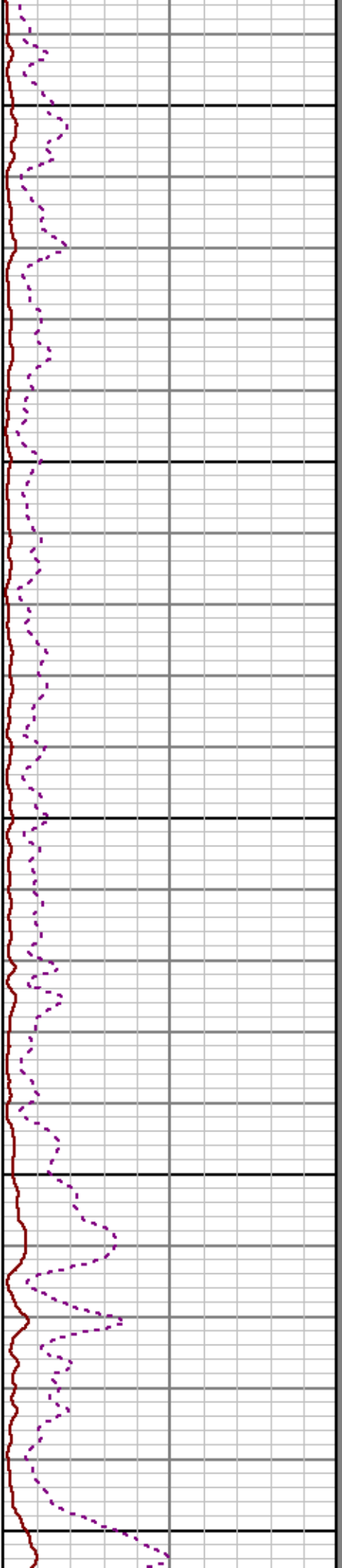
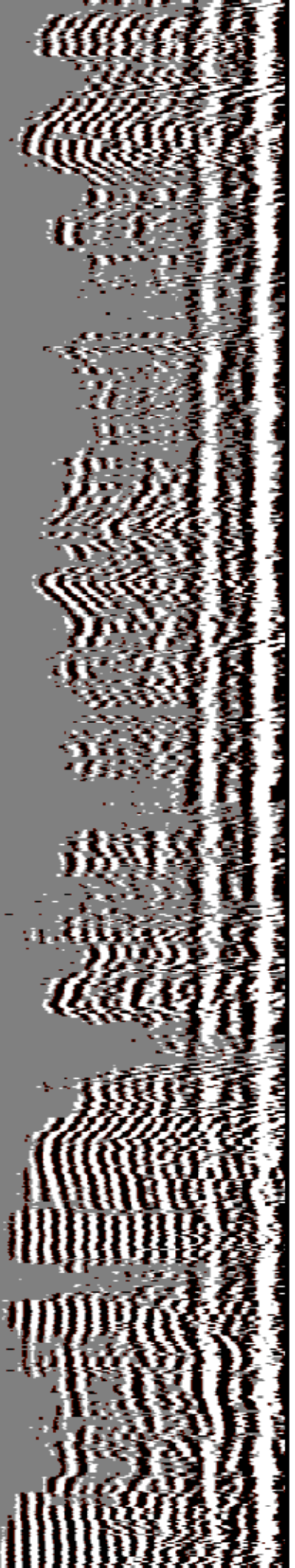


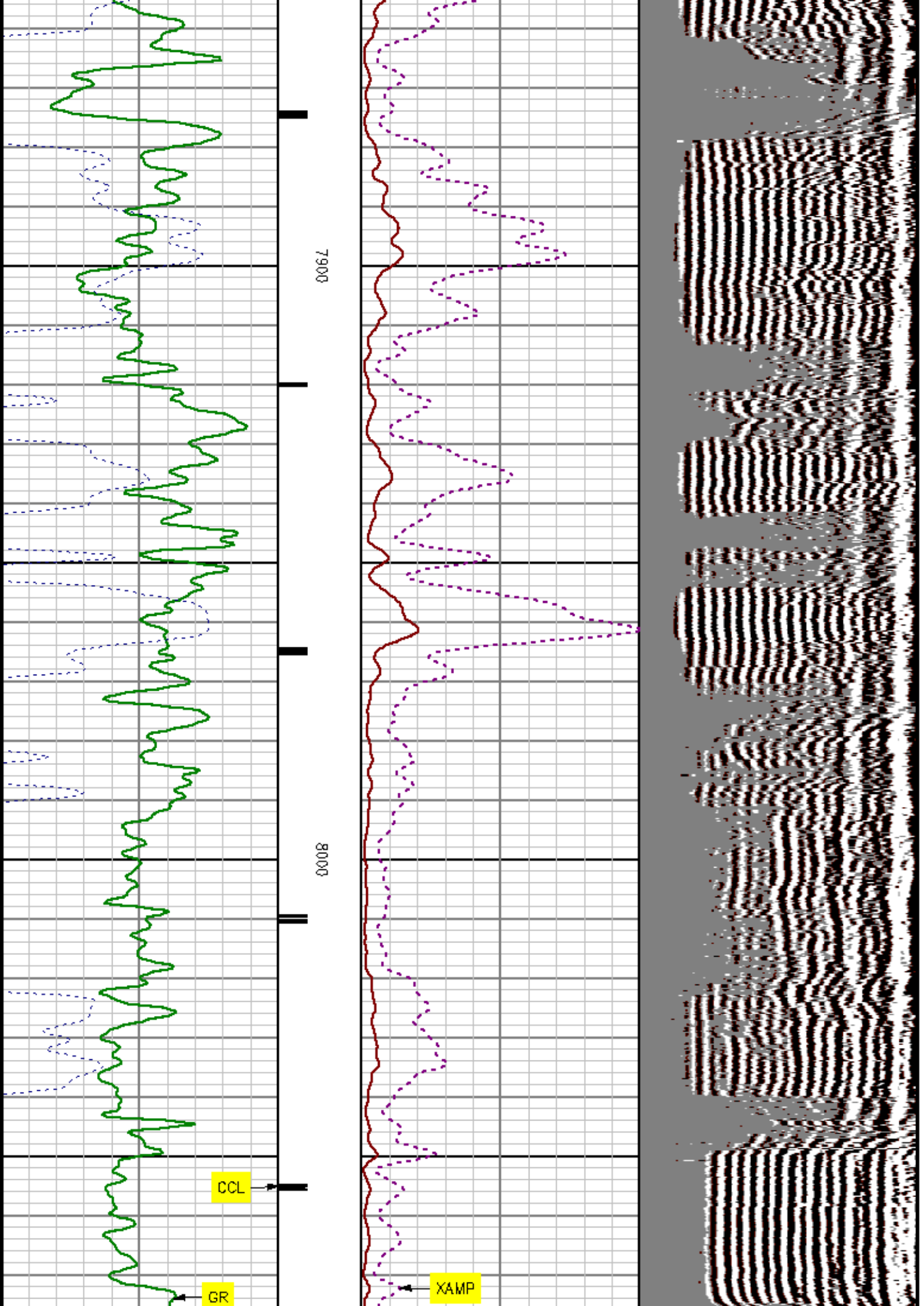


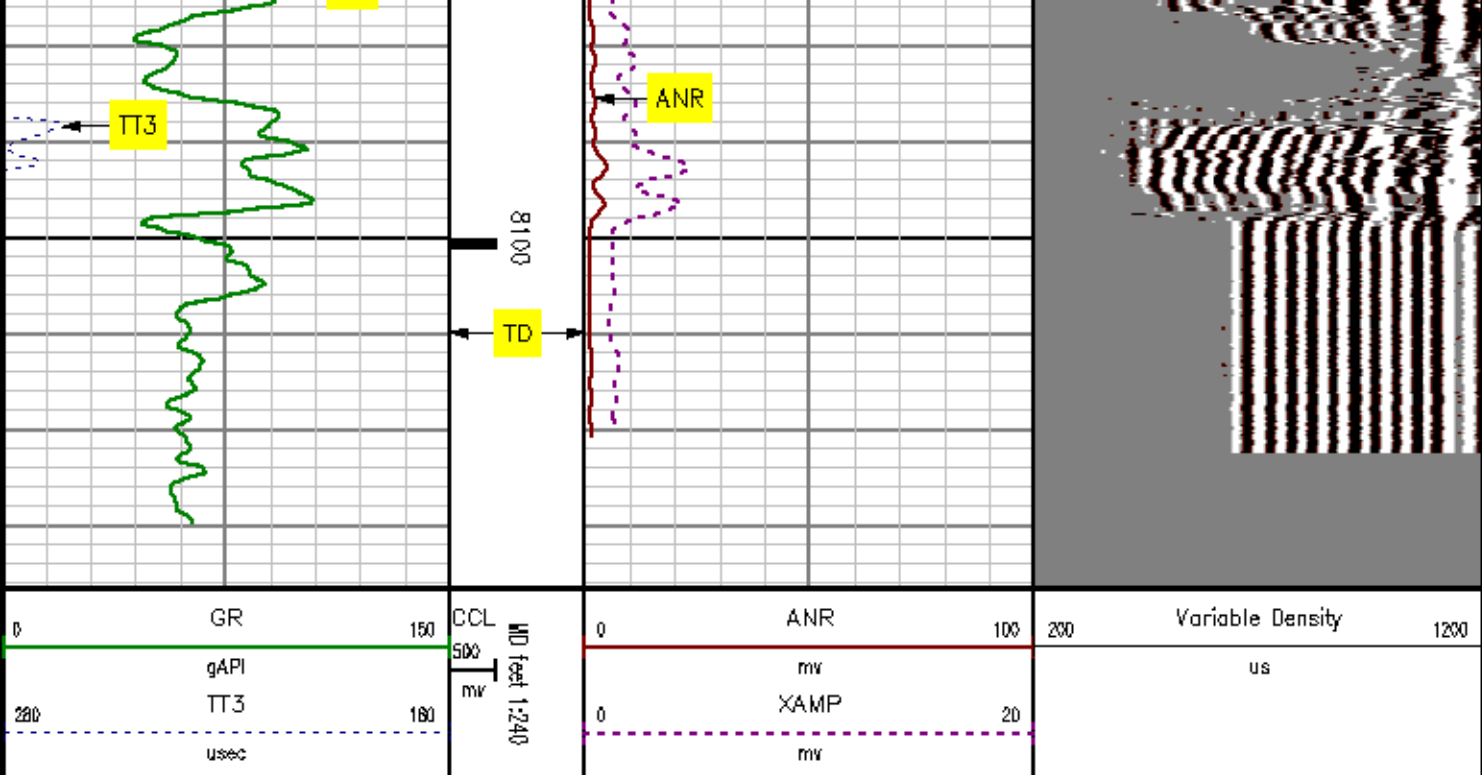












MAIN SECTION SECONDARY PRESENTATION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	21.181	8136.500
RAL	Amp Gate Start Near	200.391	usec	21.181	8136.500
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RAL	Fluid Travel Time	200.000	usec/ft	21.181	8136.500

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 : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION RMT COMPANY

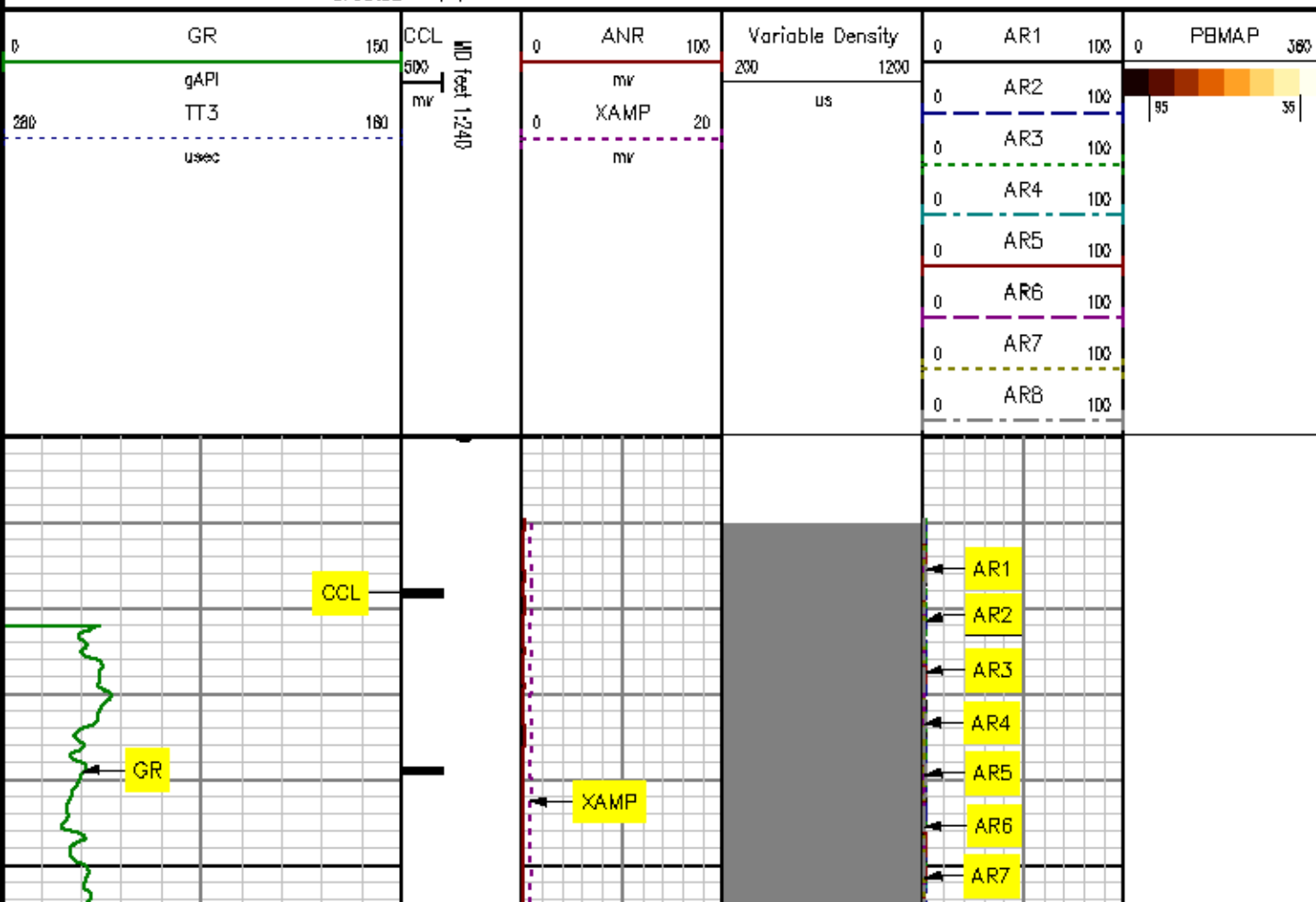
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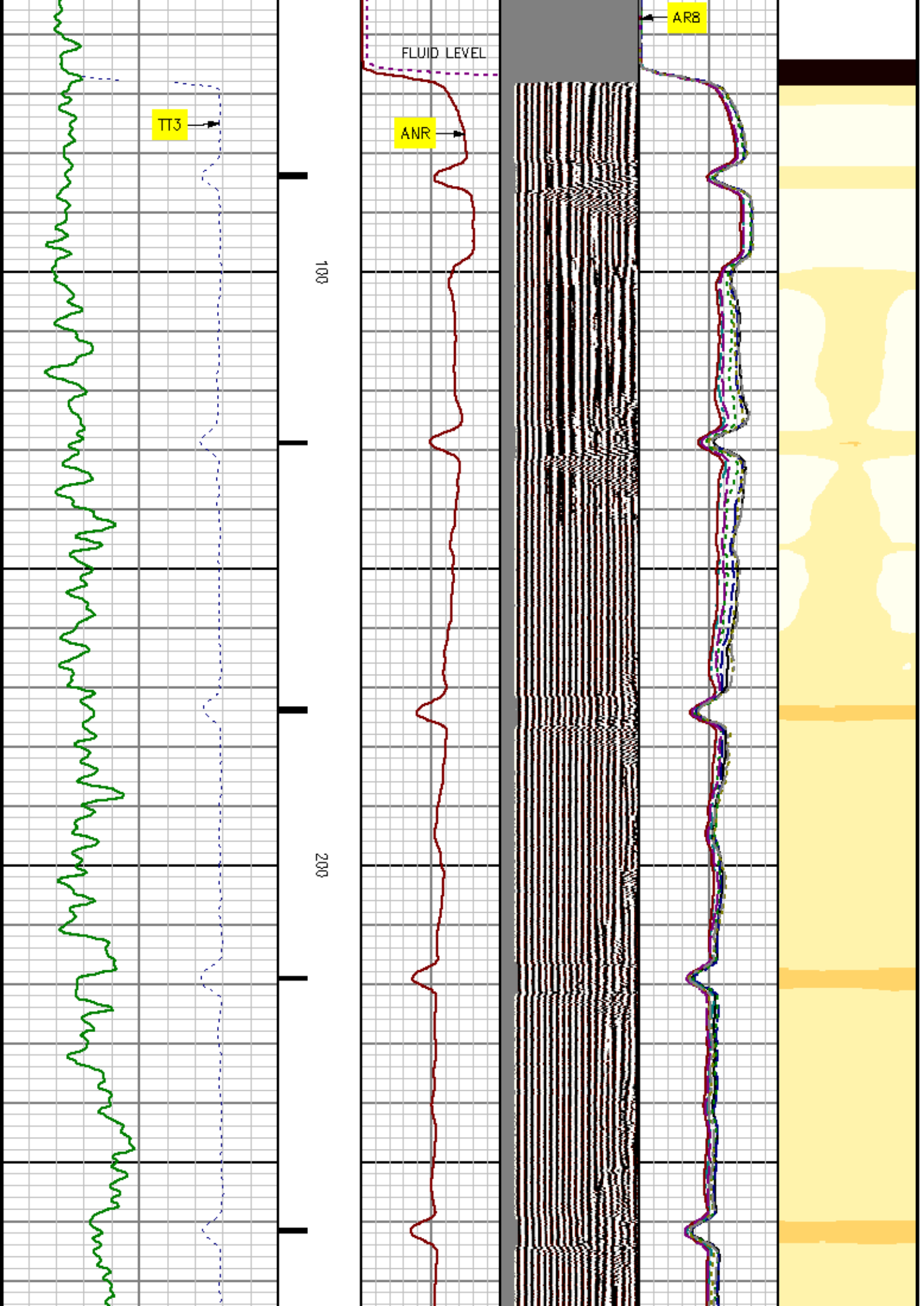
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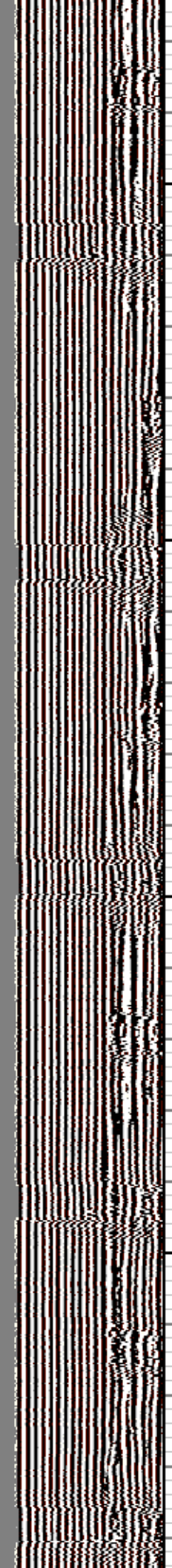
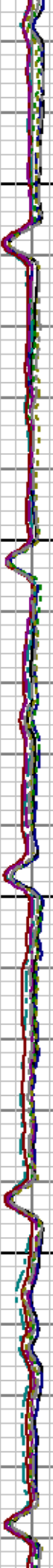
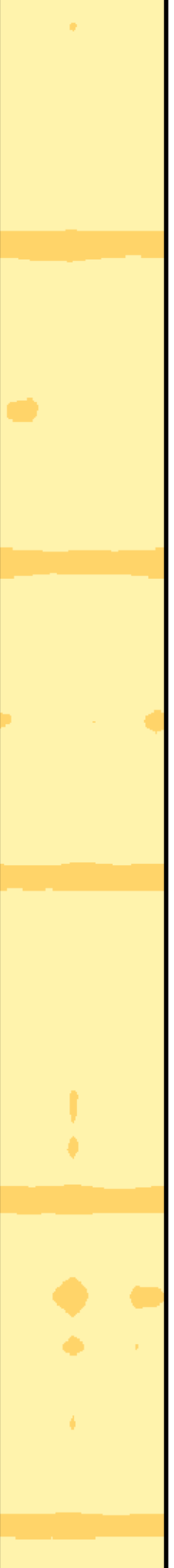
Mode : PlotMgr 5.4.504

Interval : 0.00 - 8136.50 feet UP

Created : 7/7/2010 8:17:56 AM

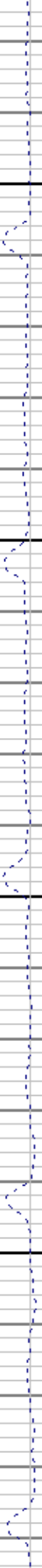


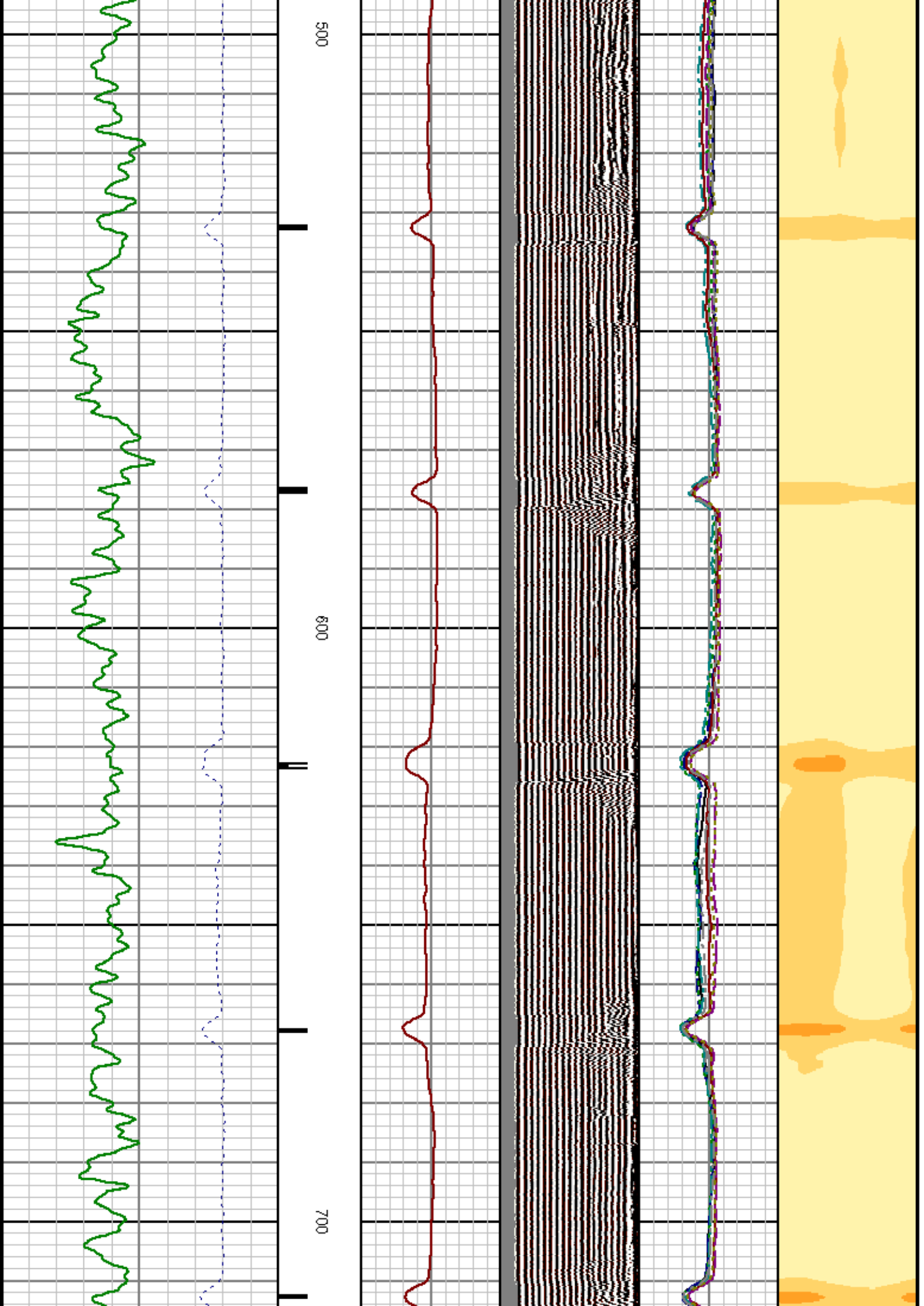


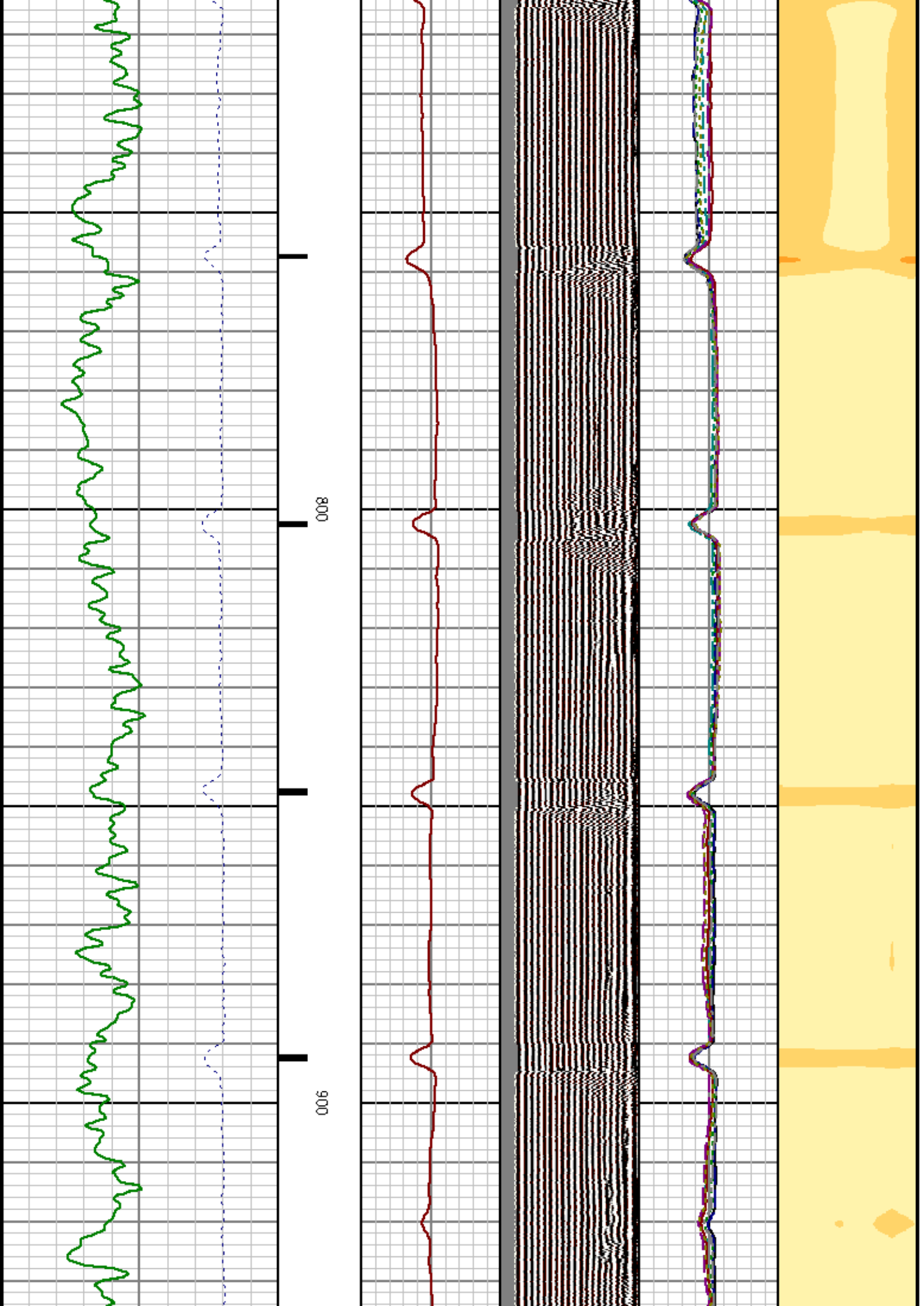


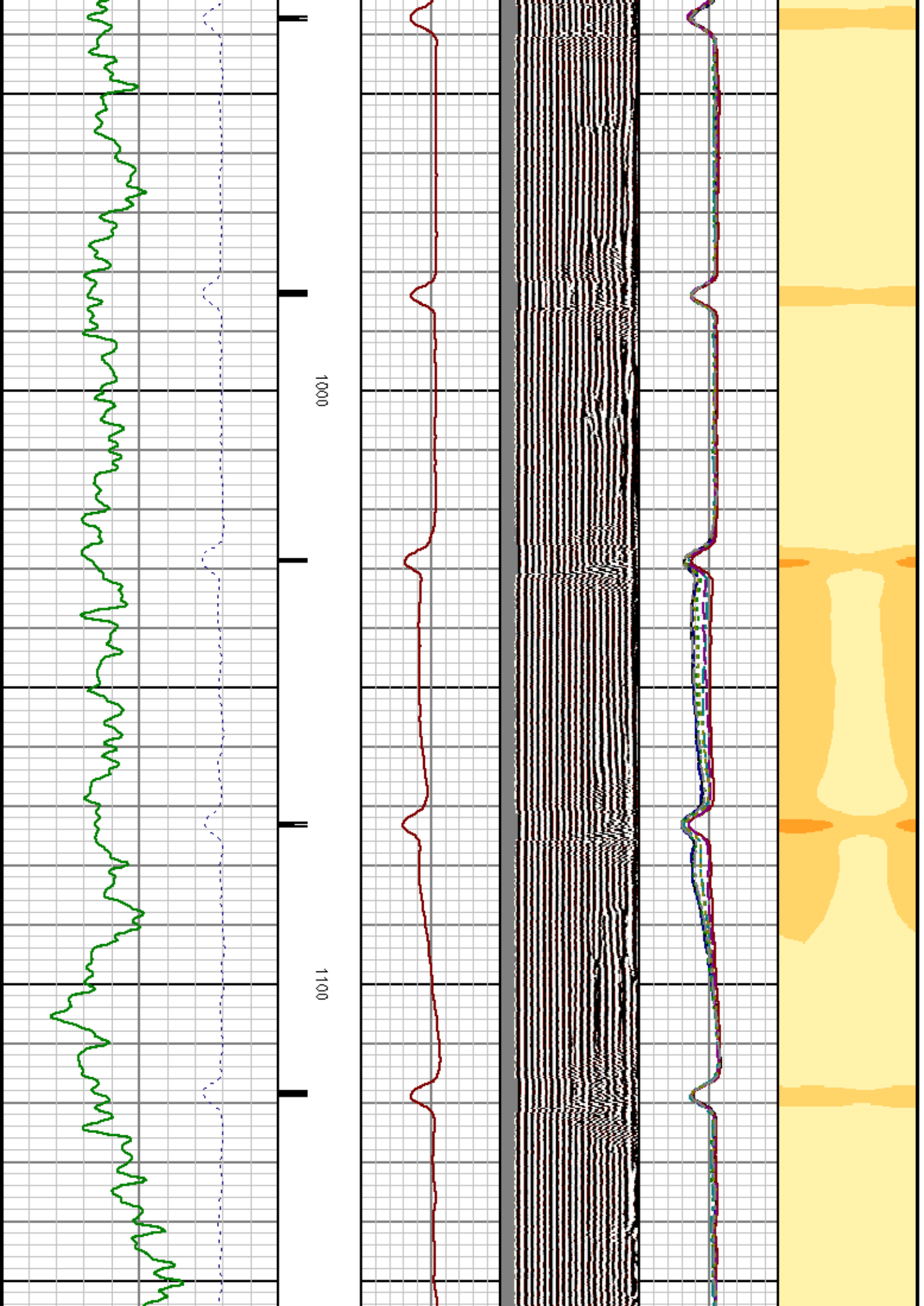
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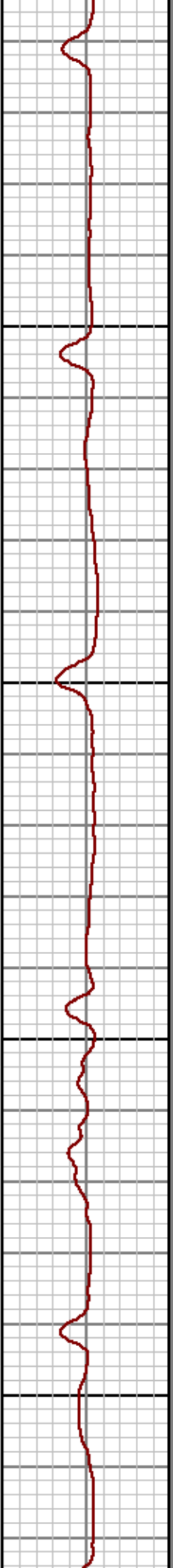
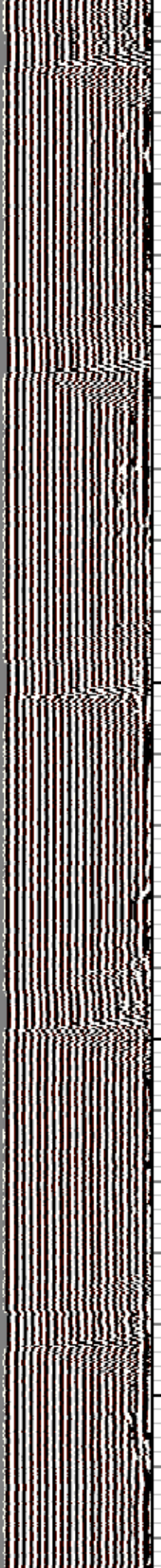
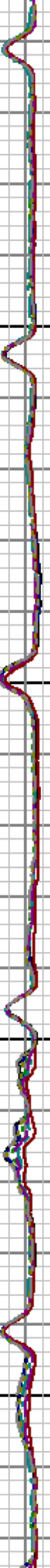
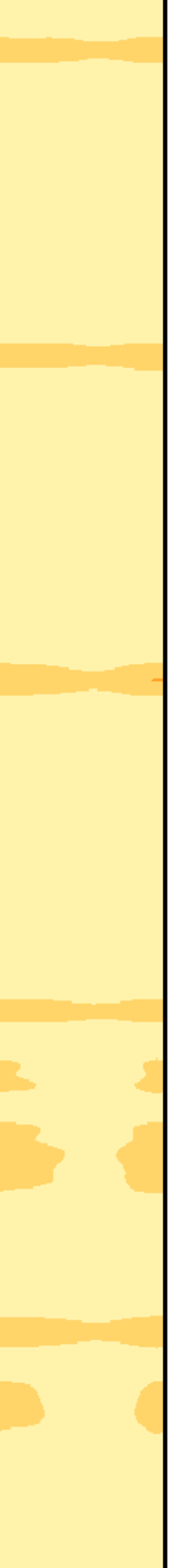
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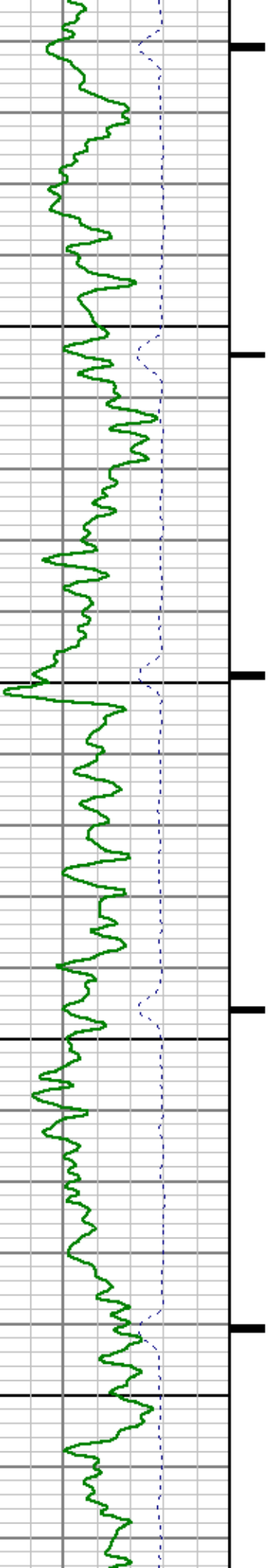


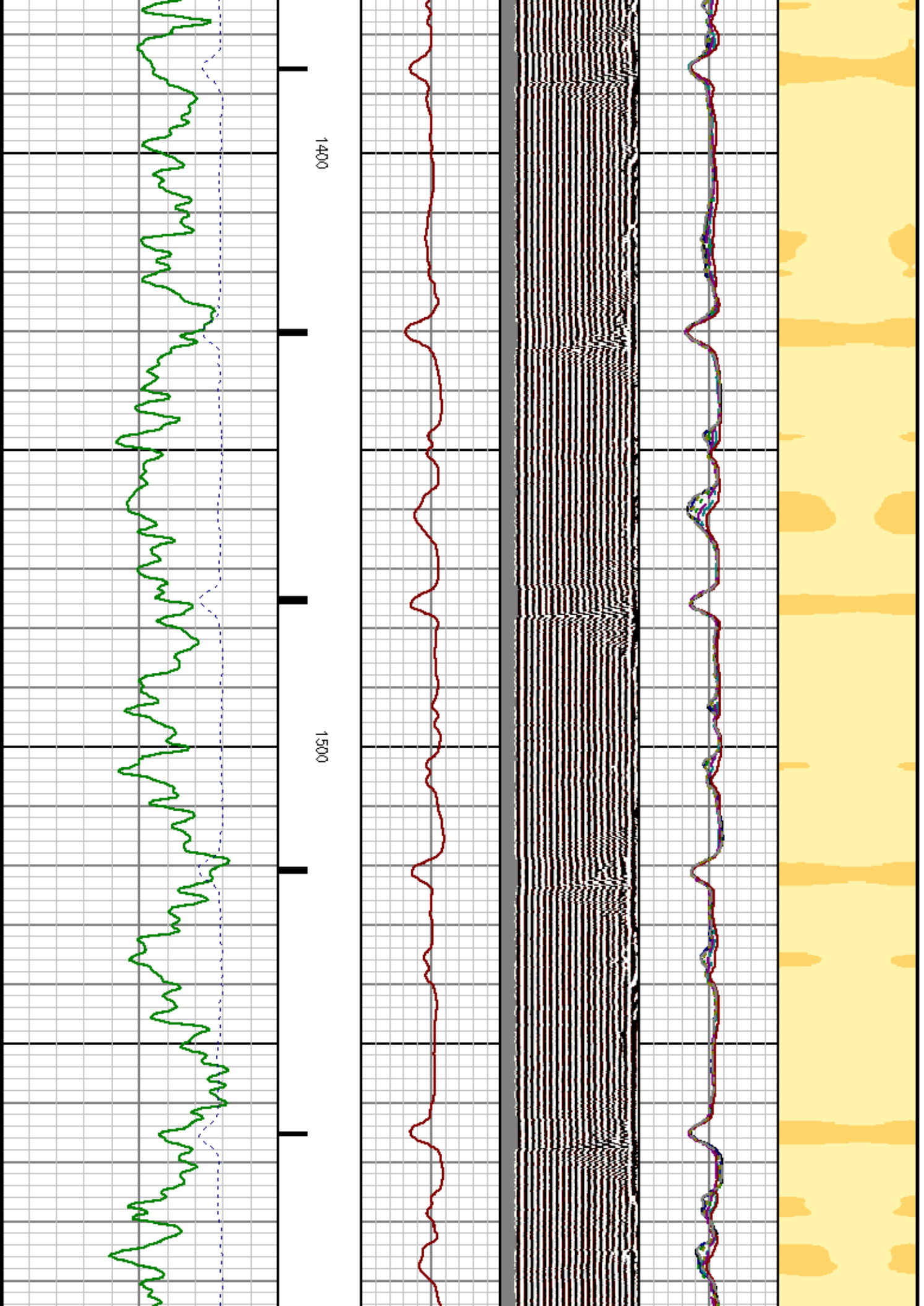


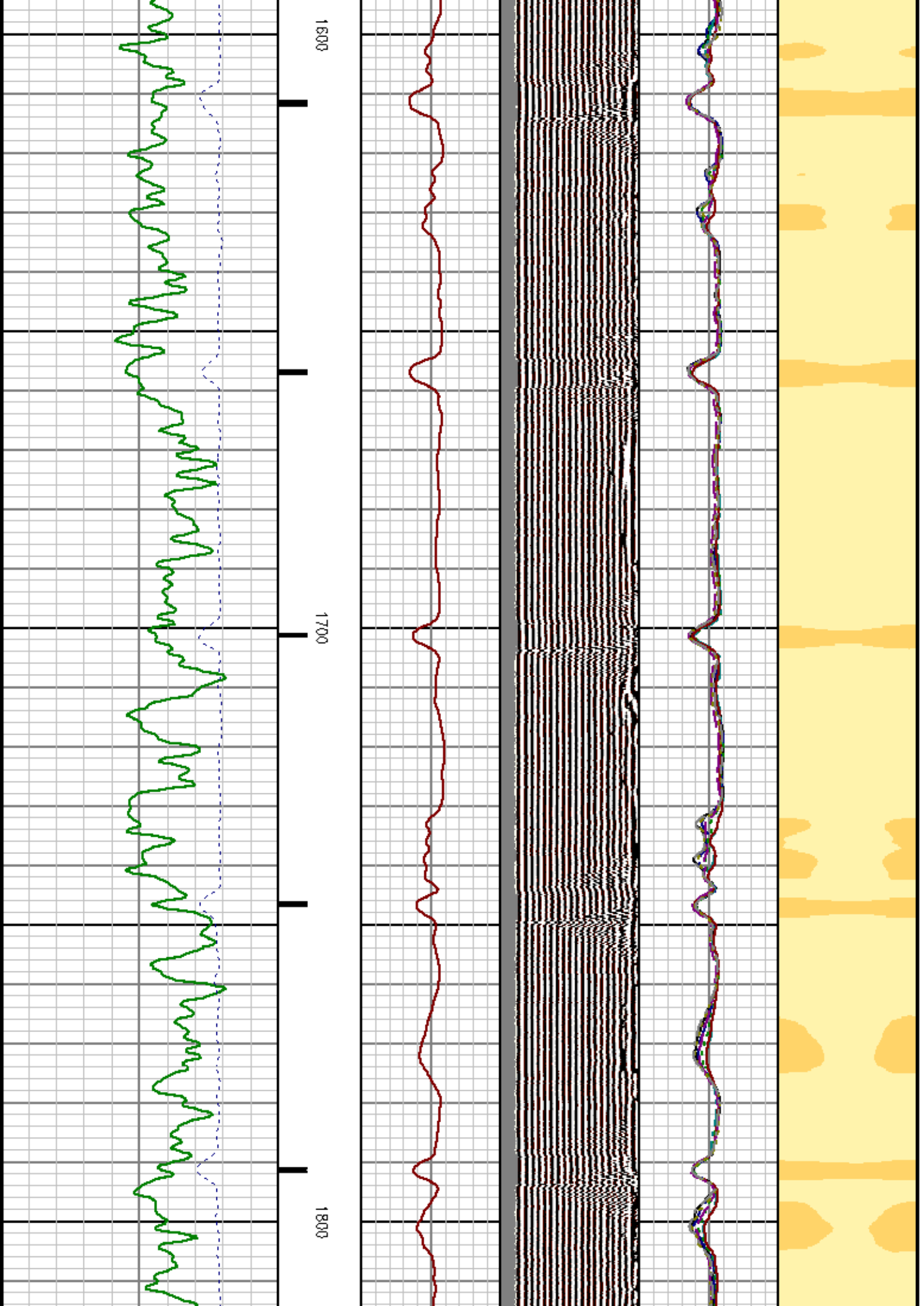


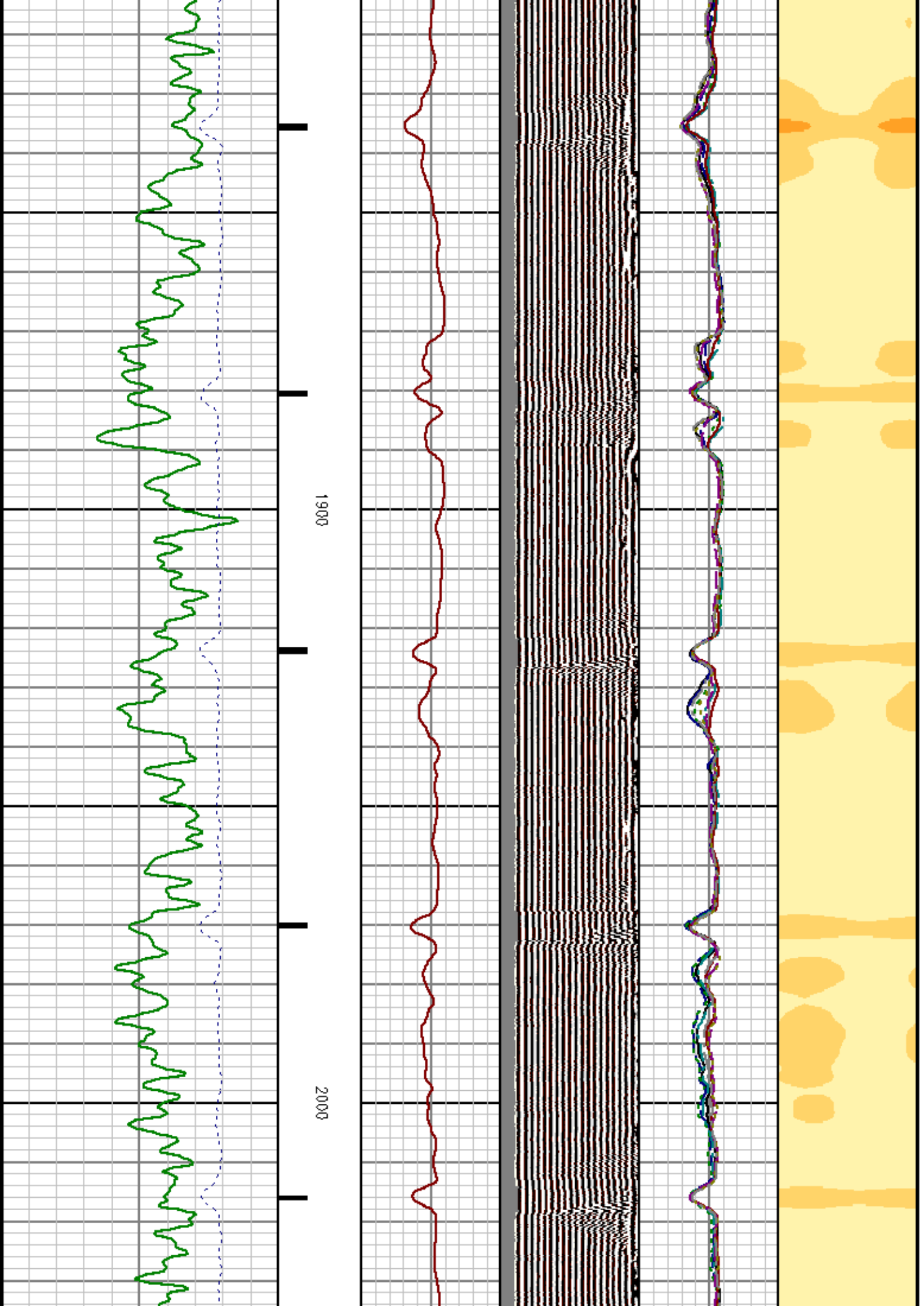
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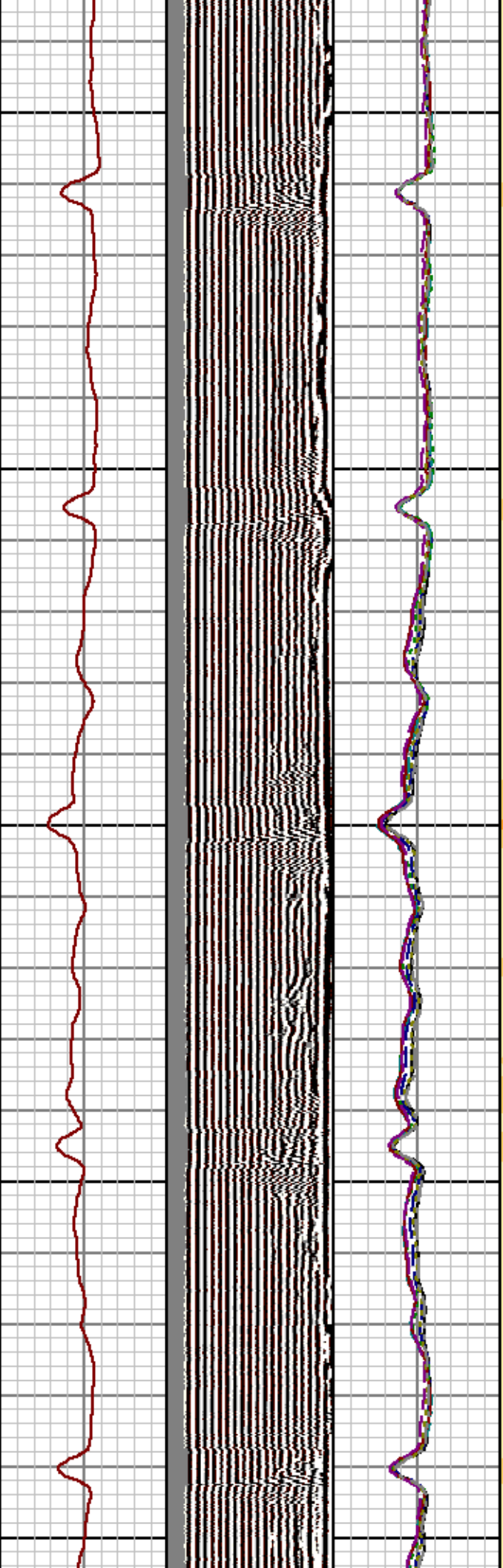
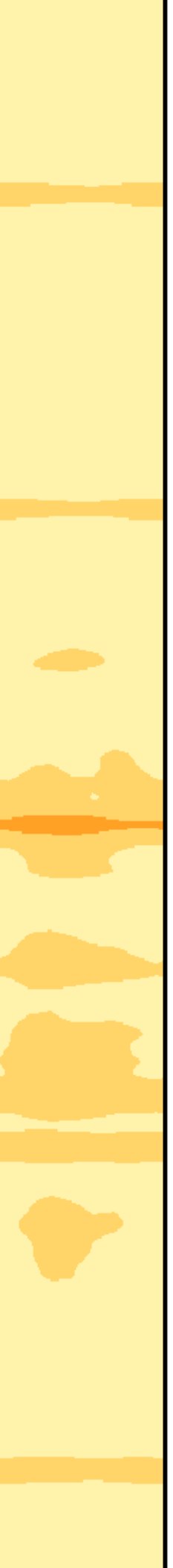
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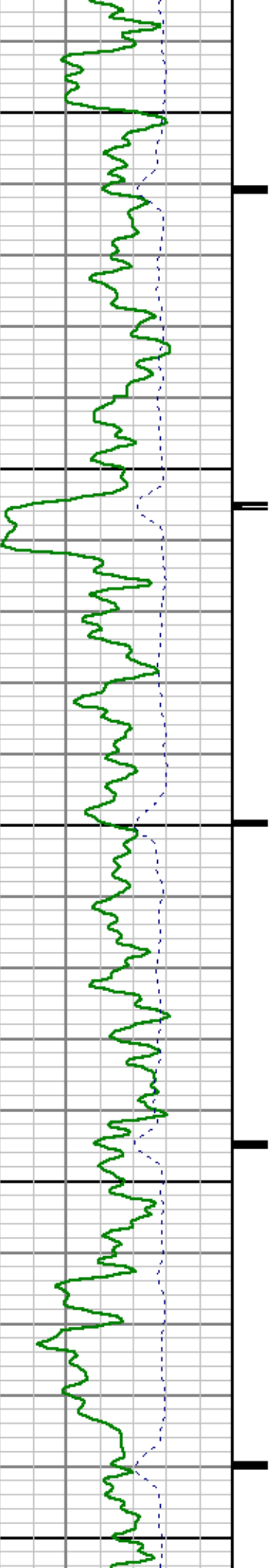


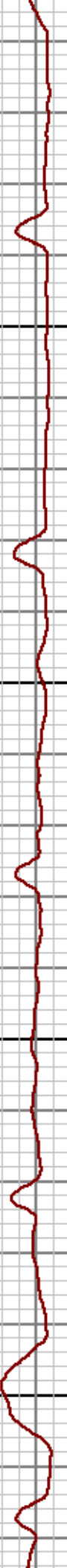
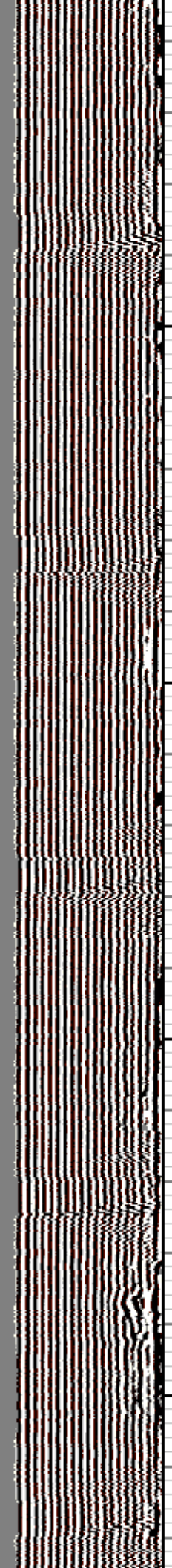
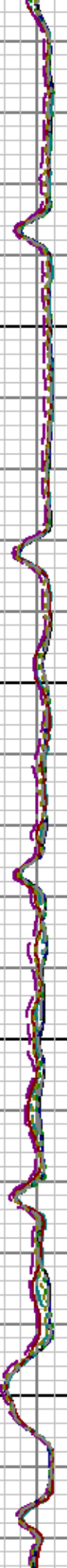




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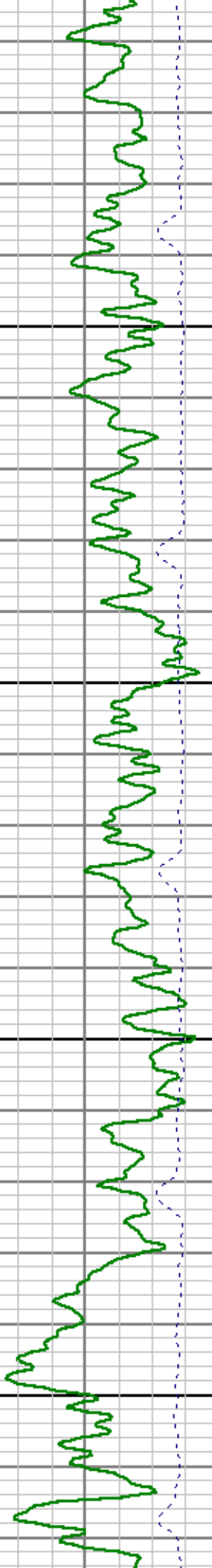
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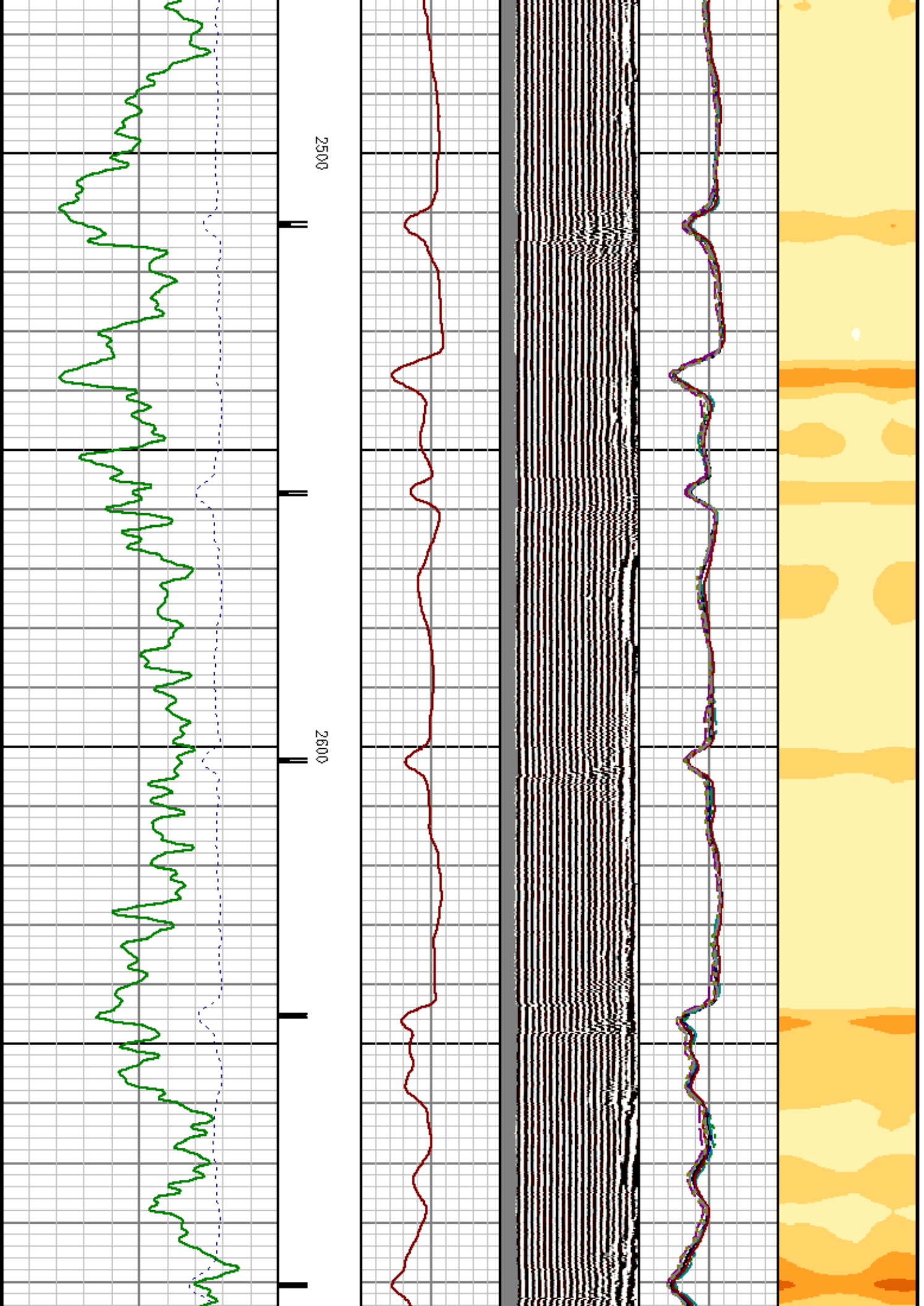


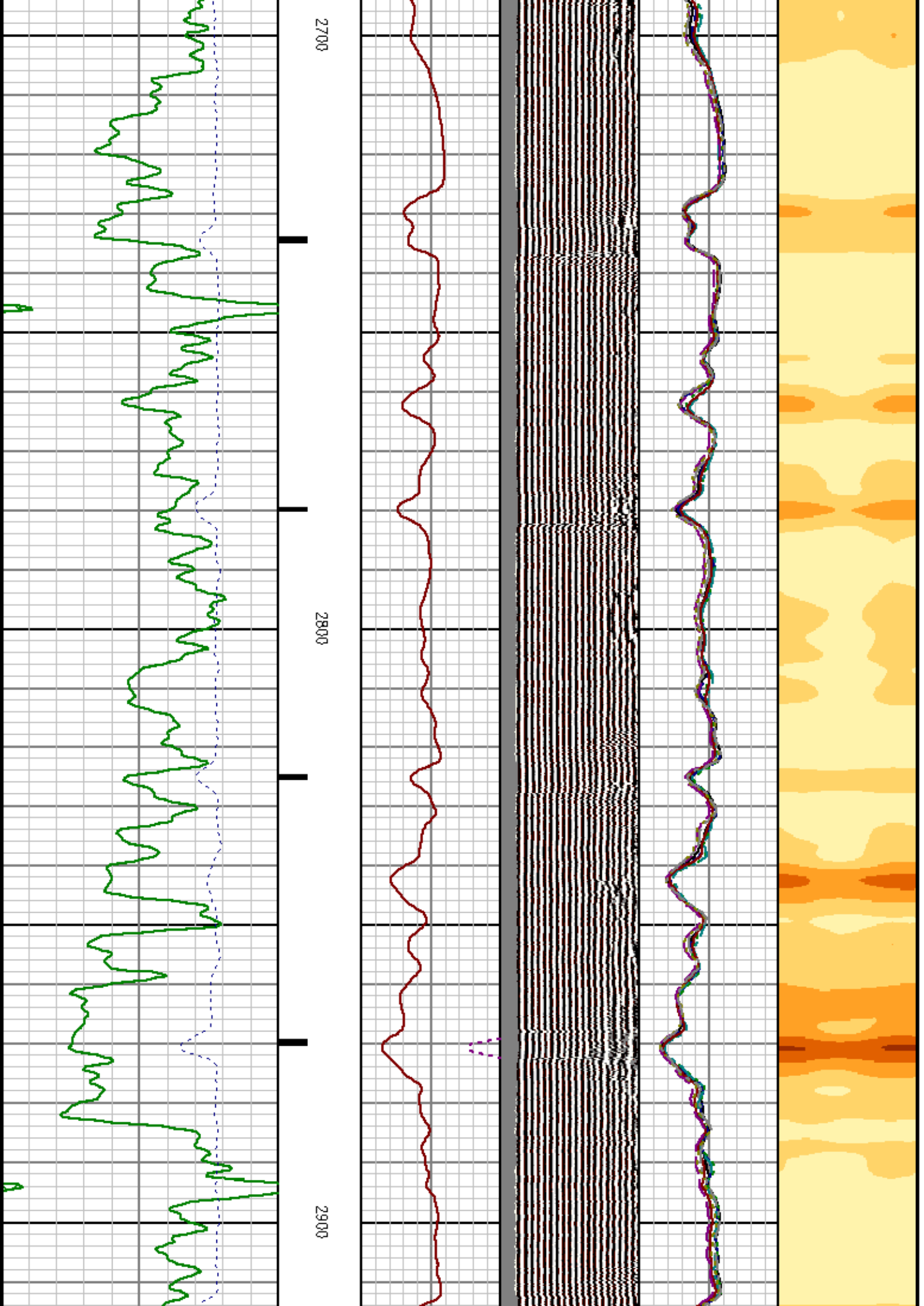


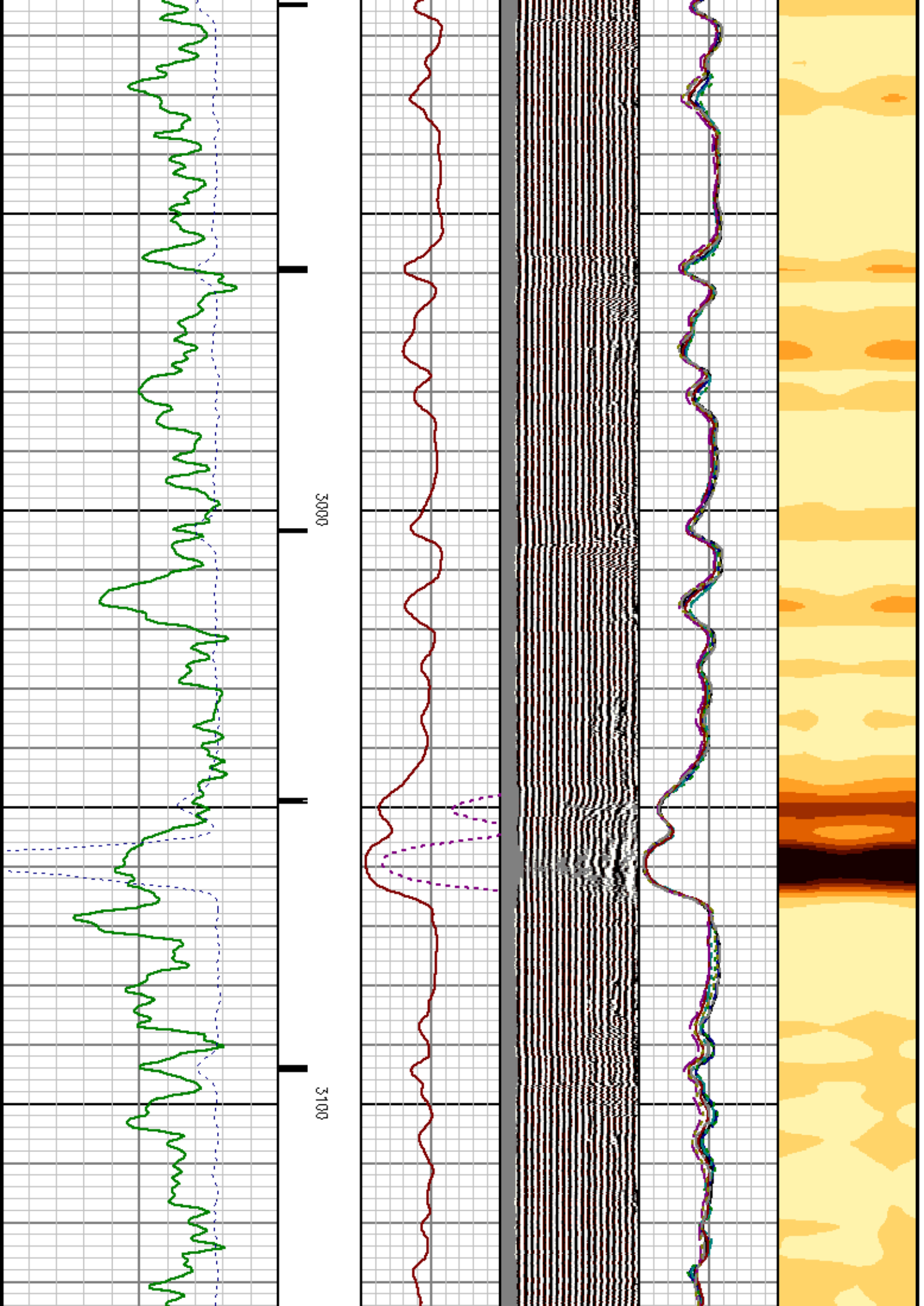
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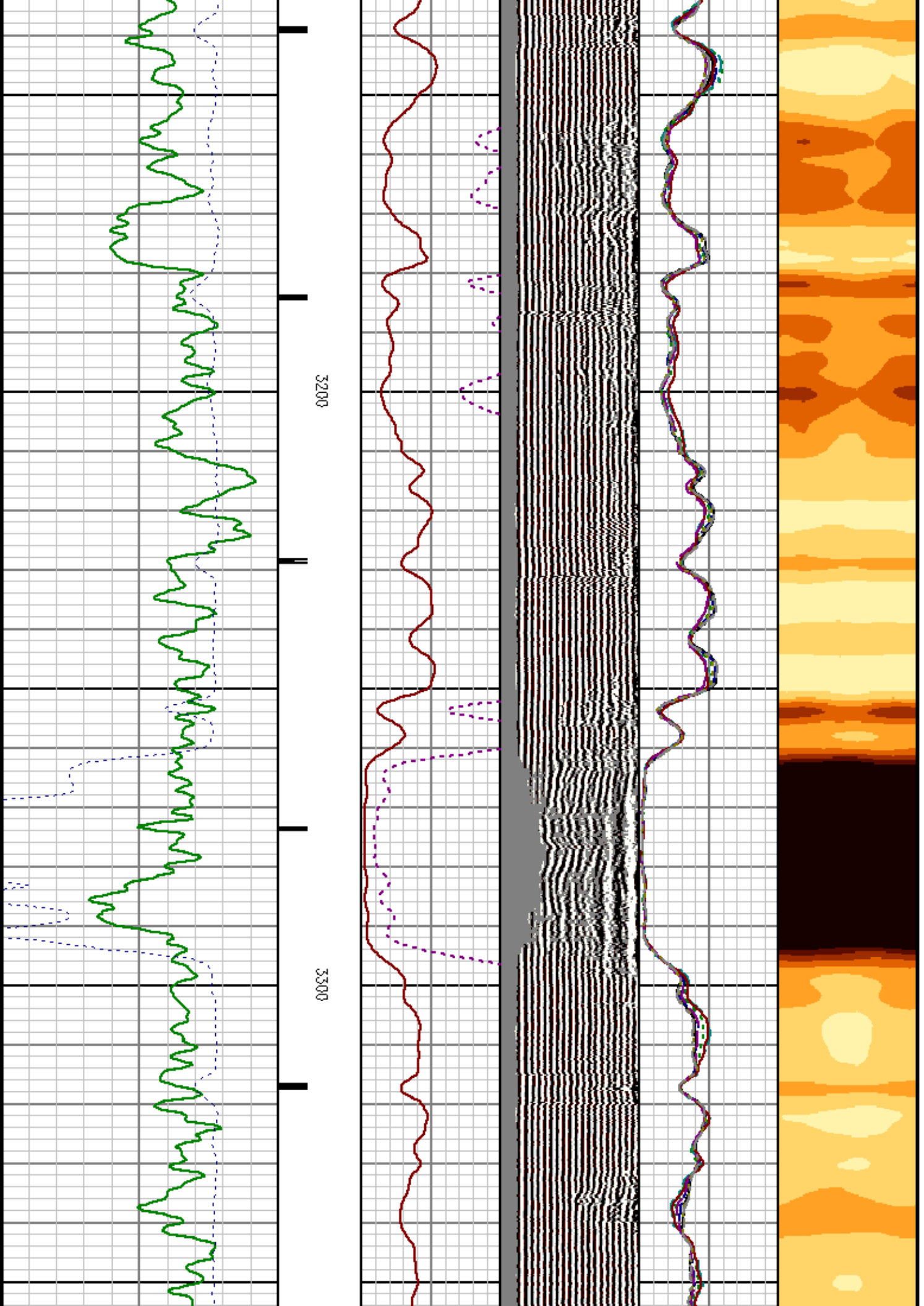
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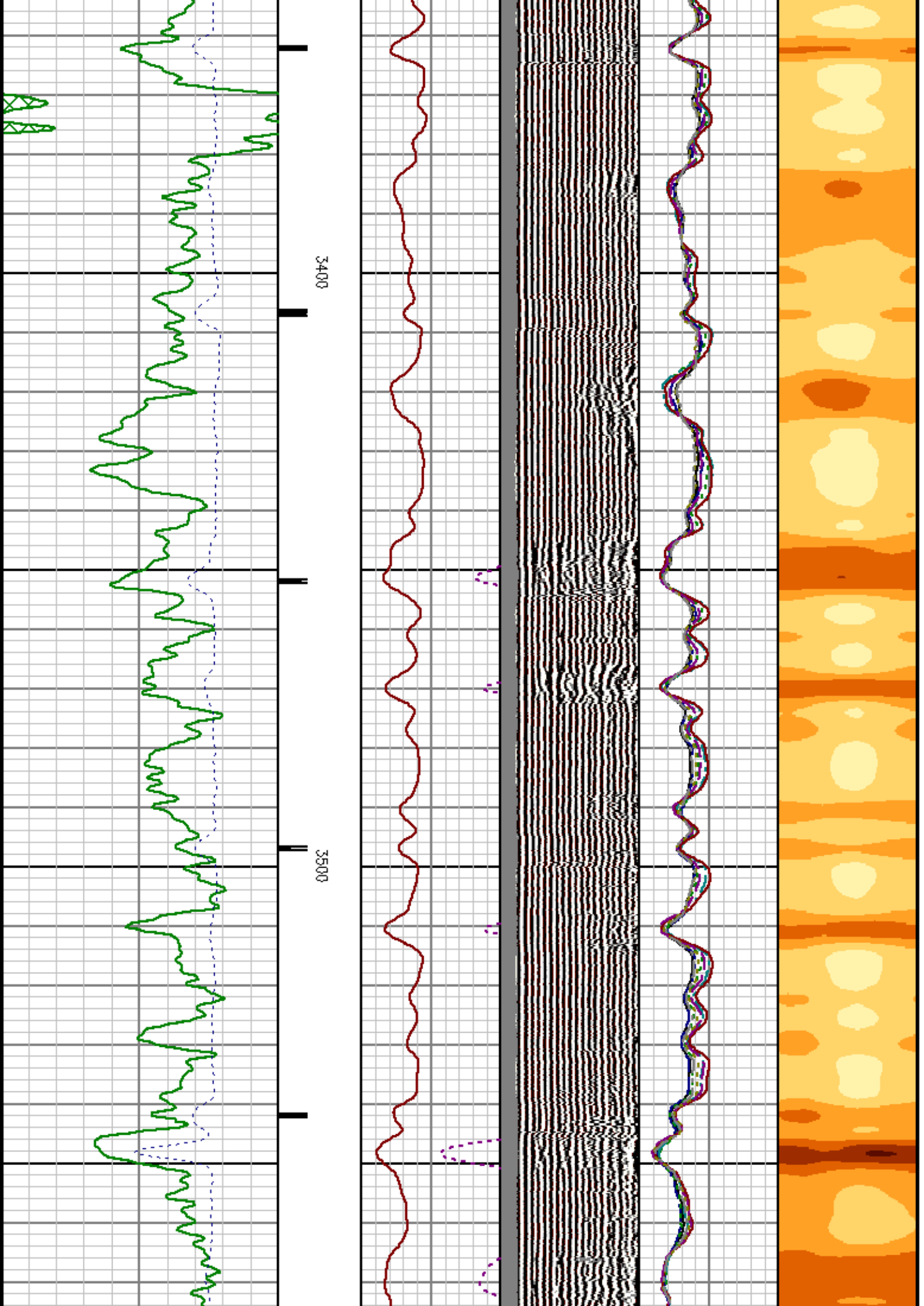


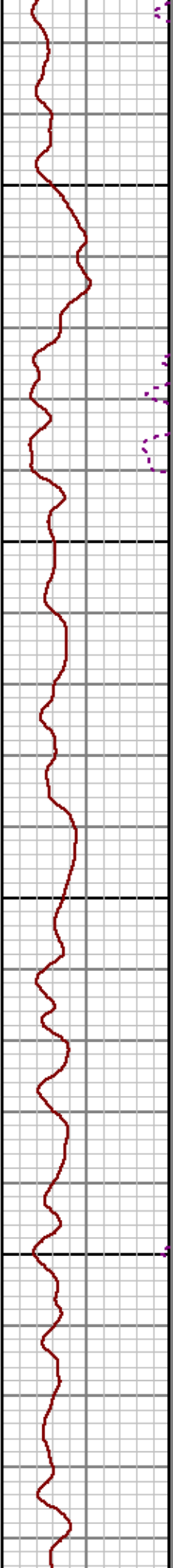
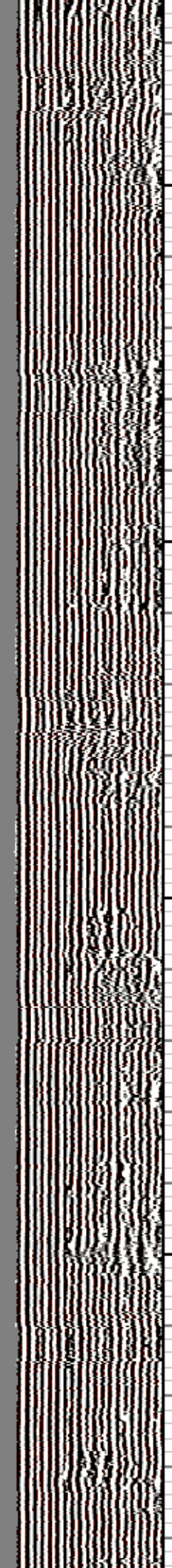
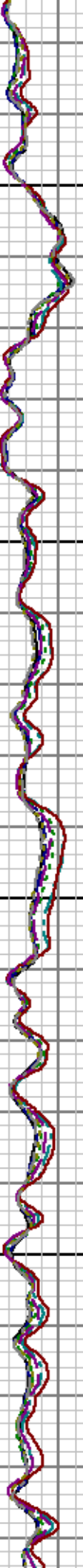






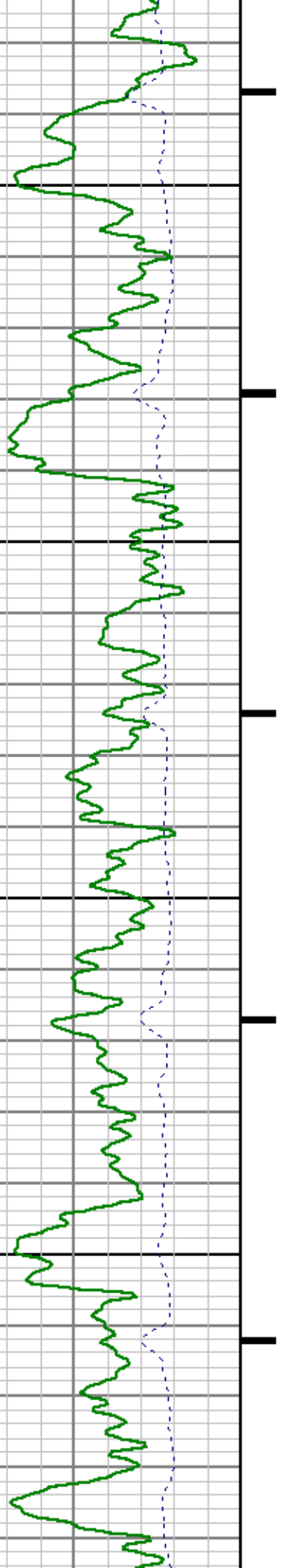


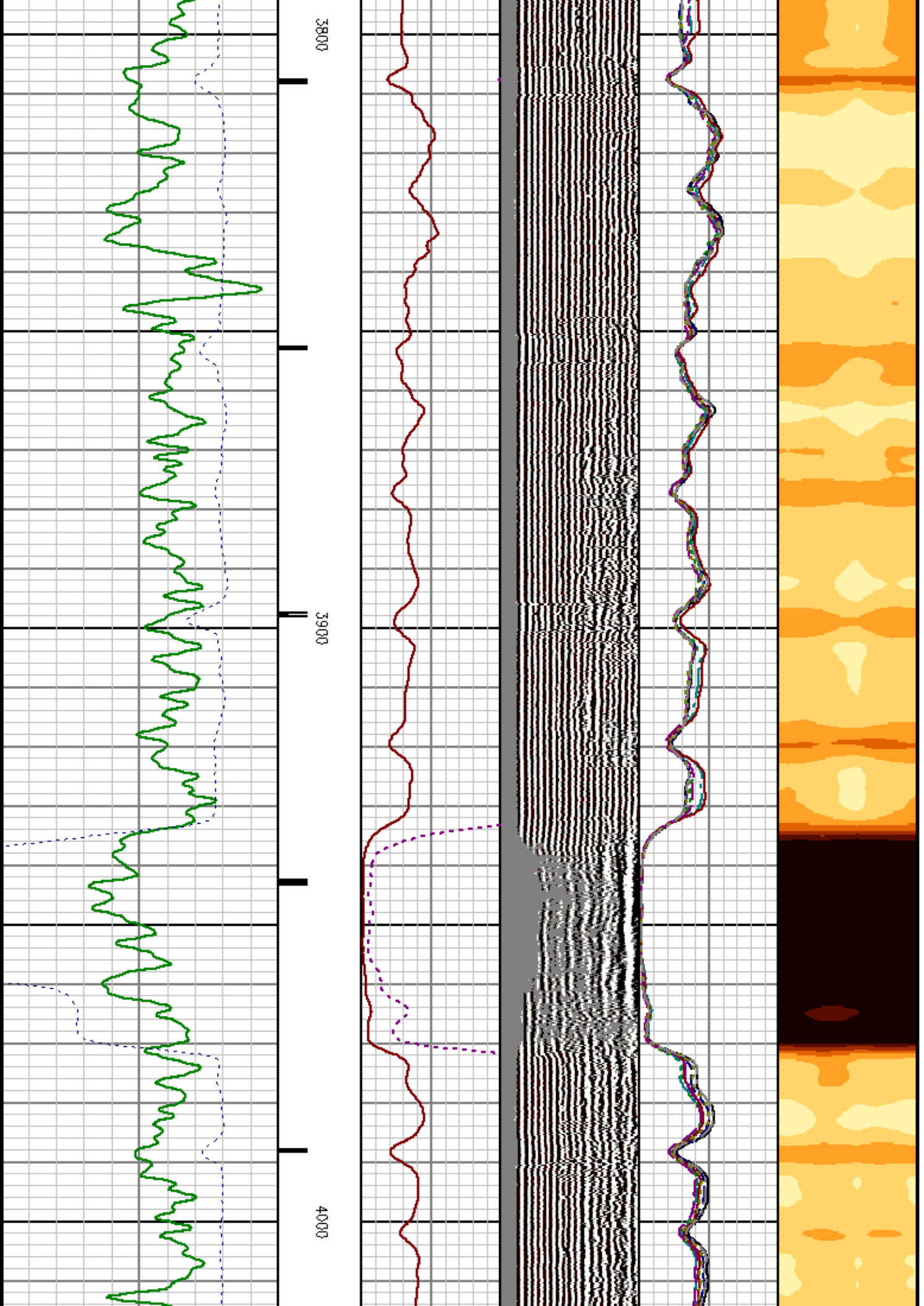


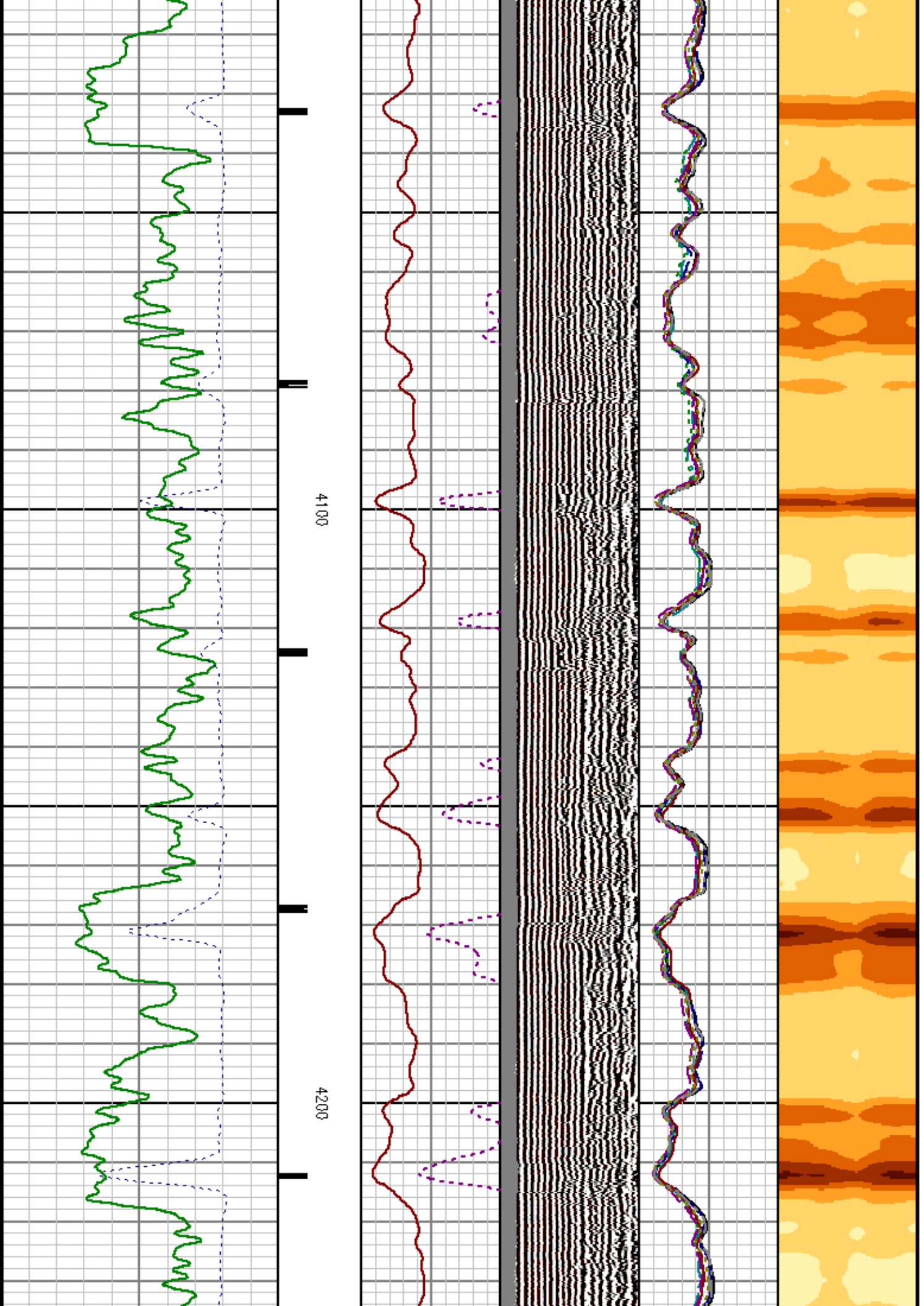


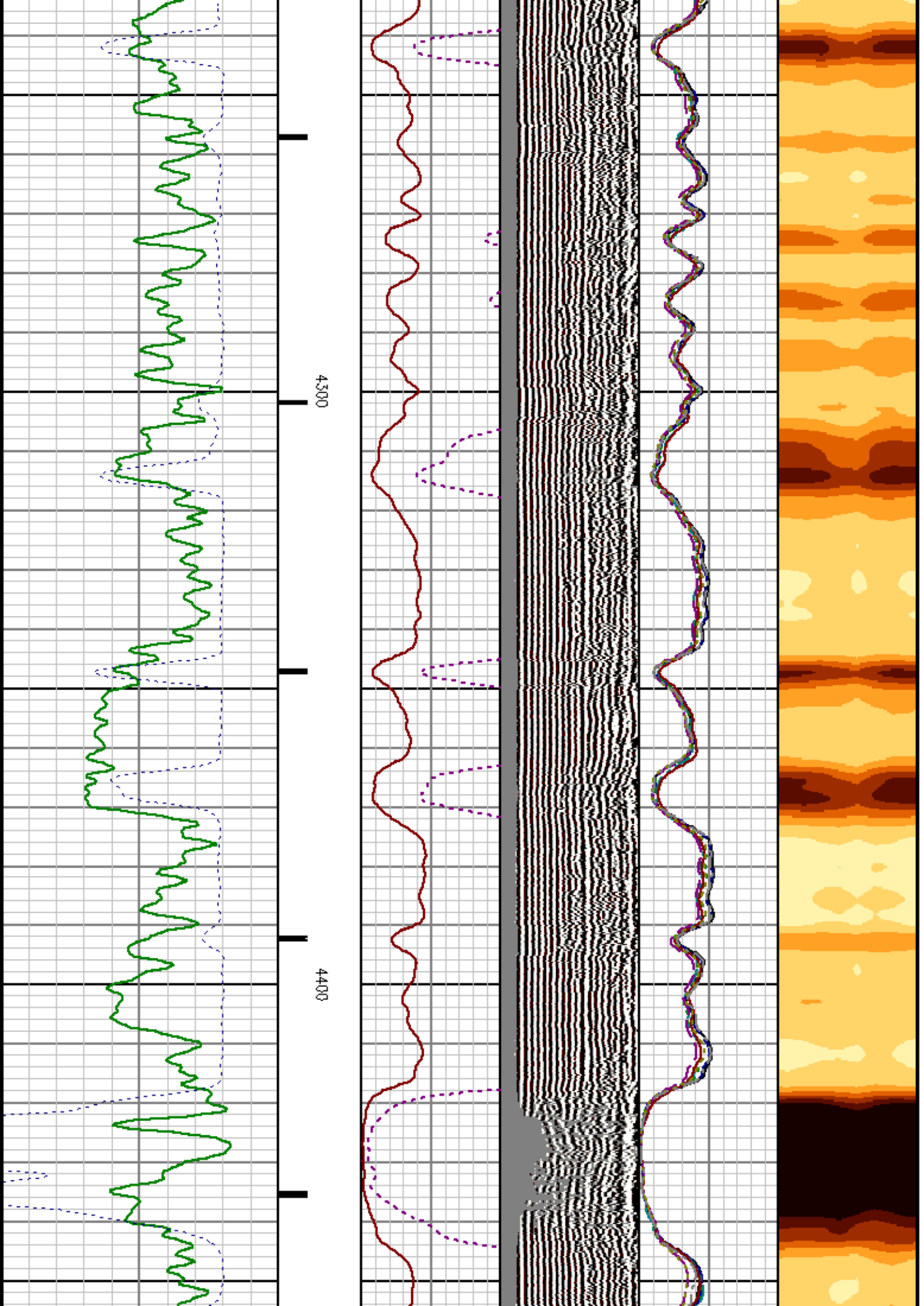
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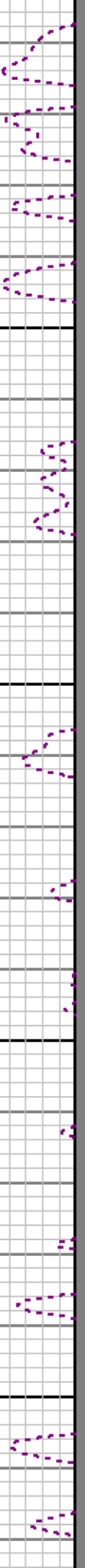
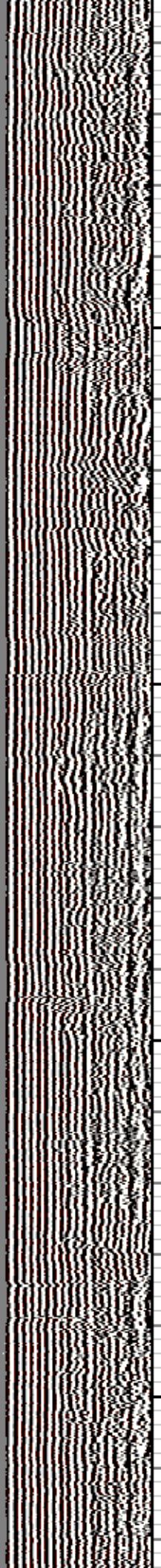
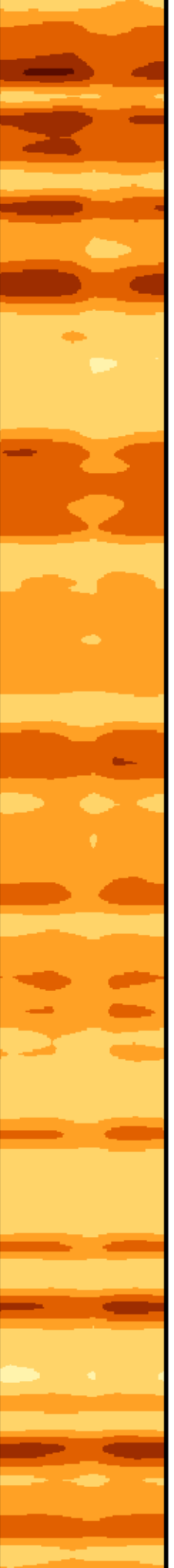
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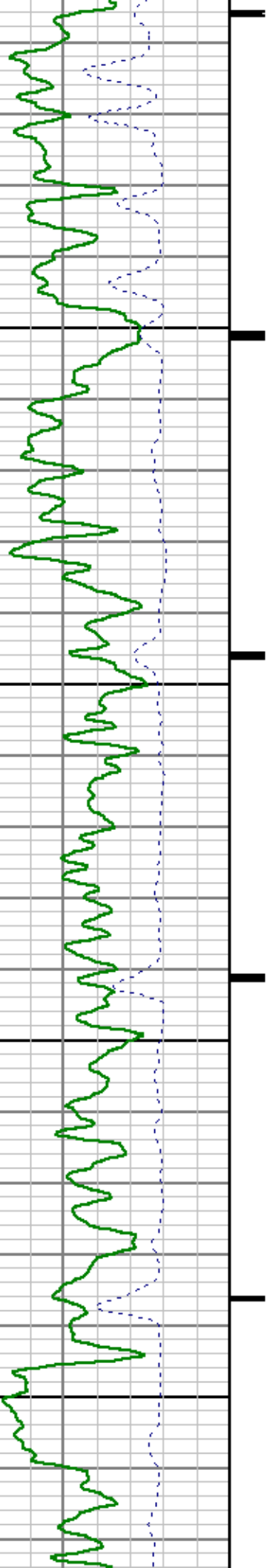


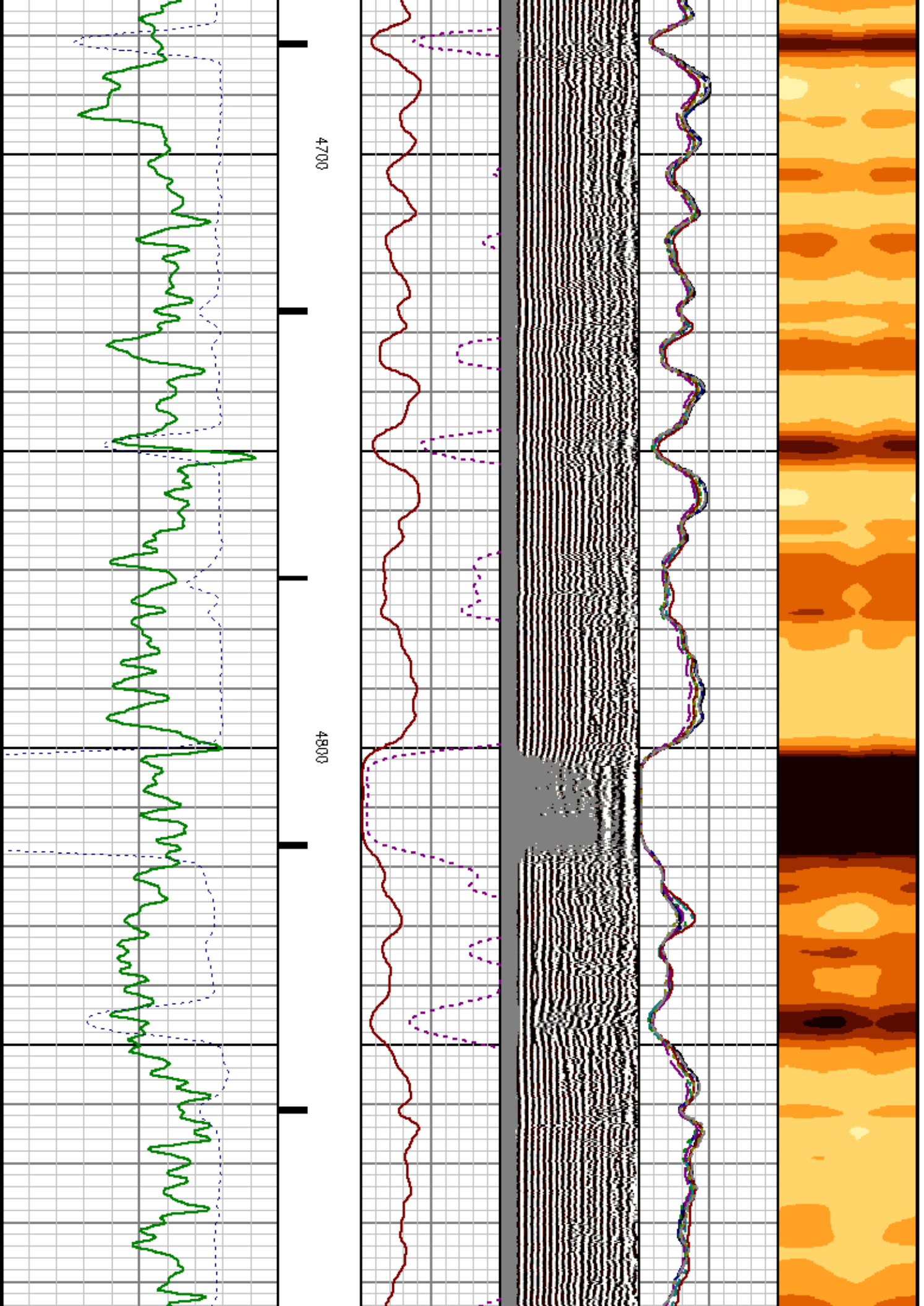


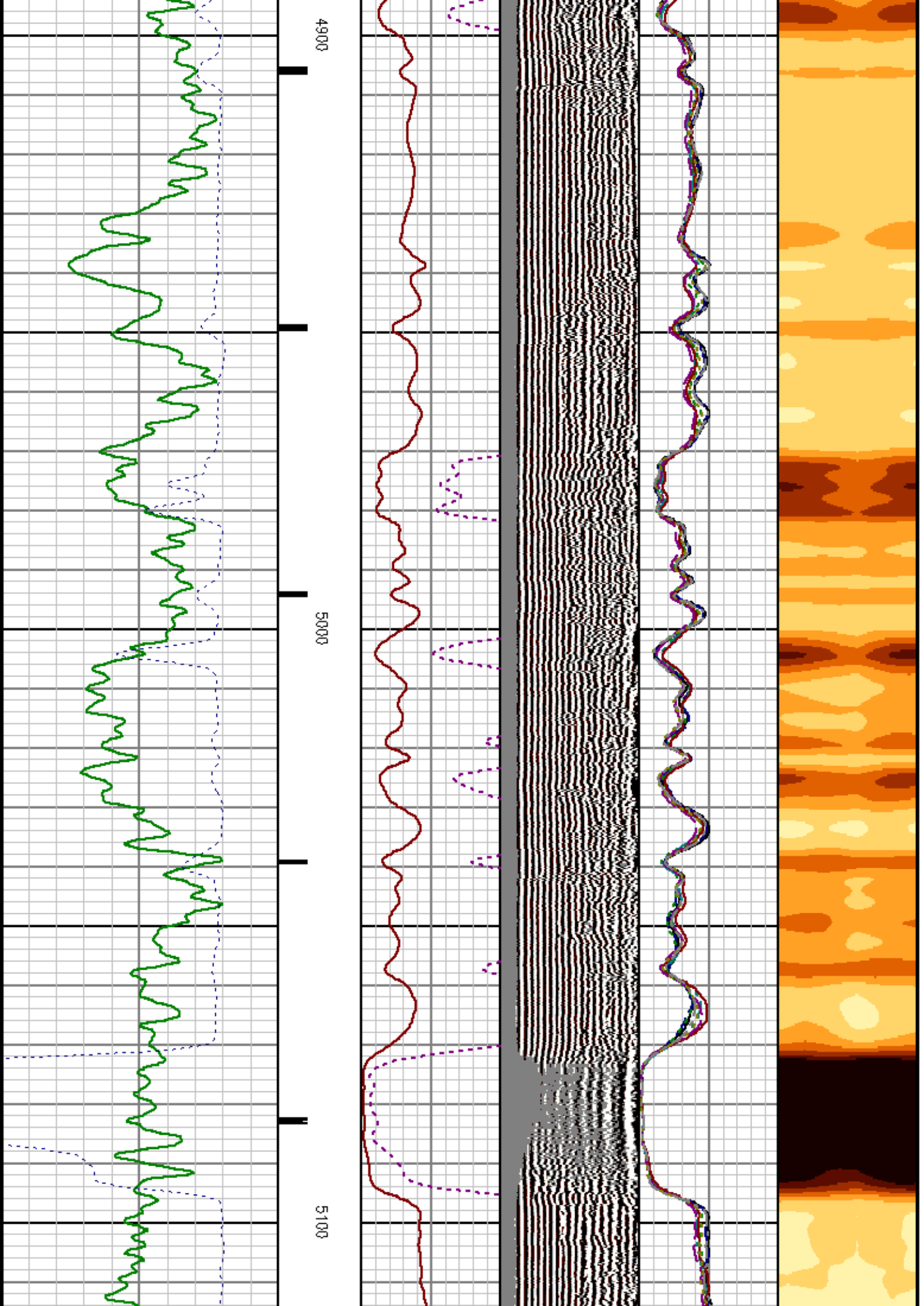


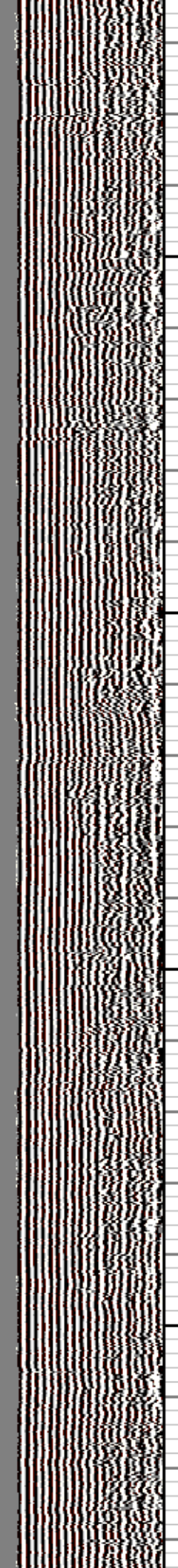
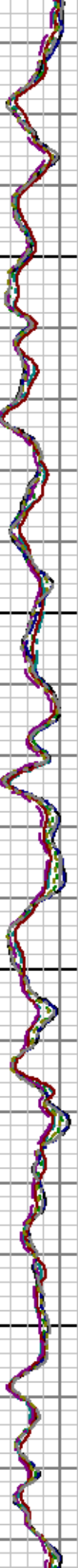
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4600



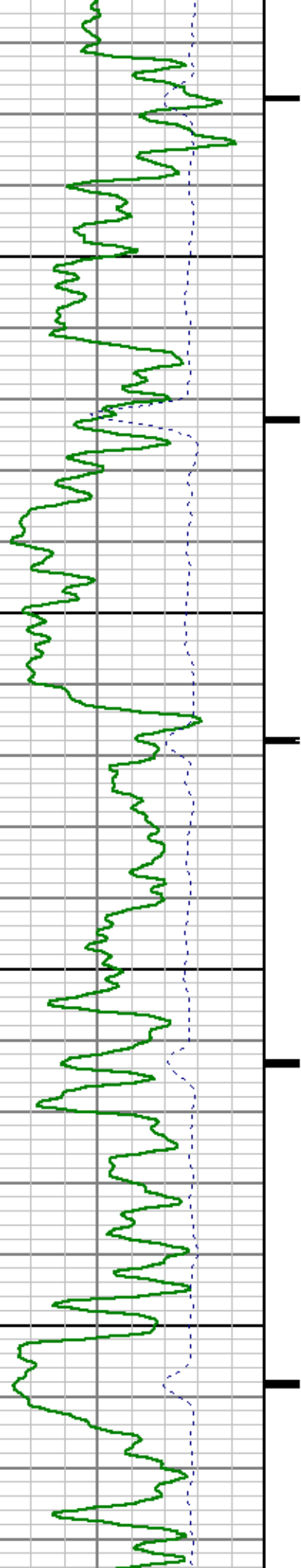


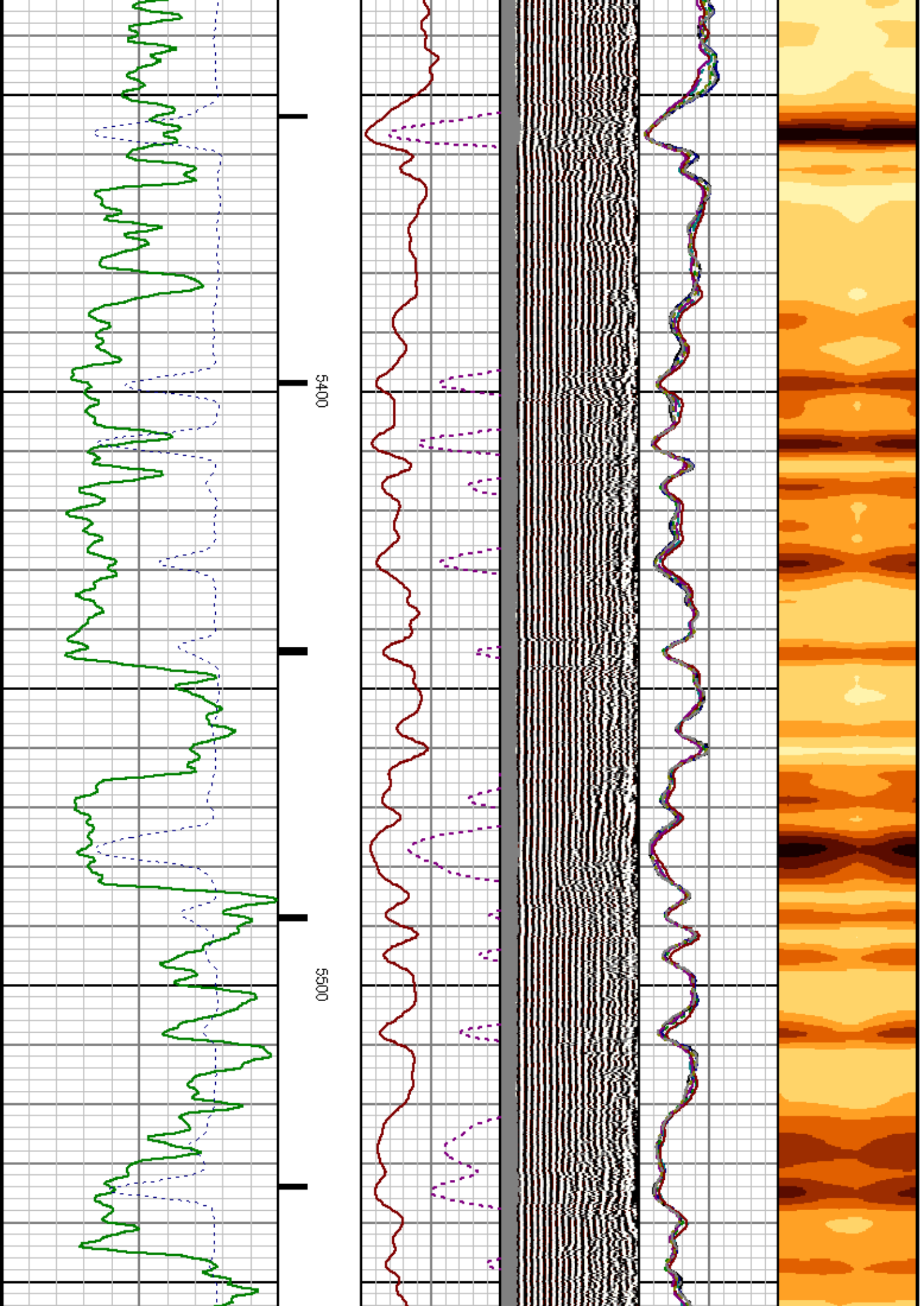


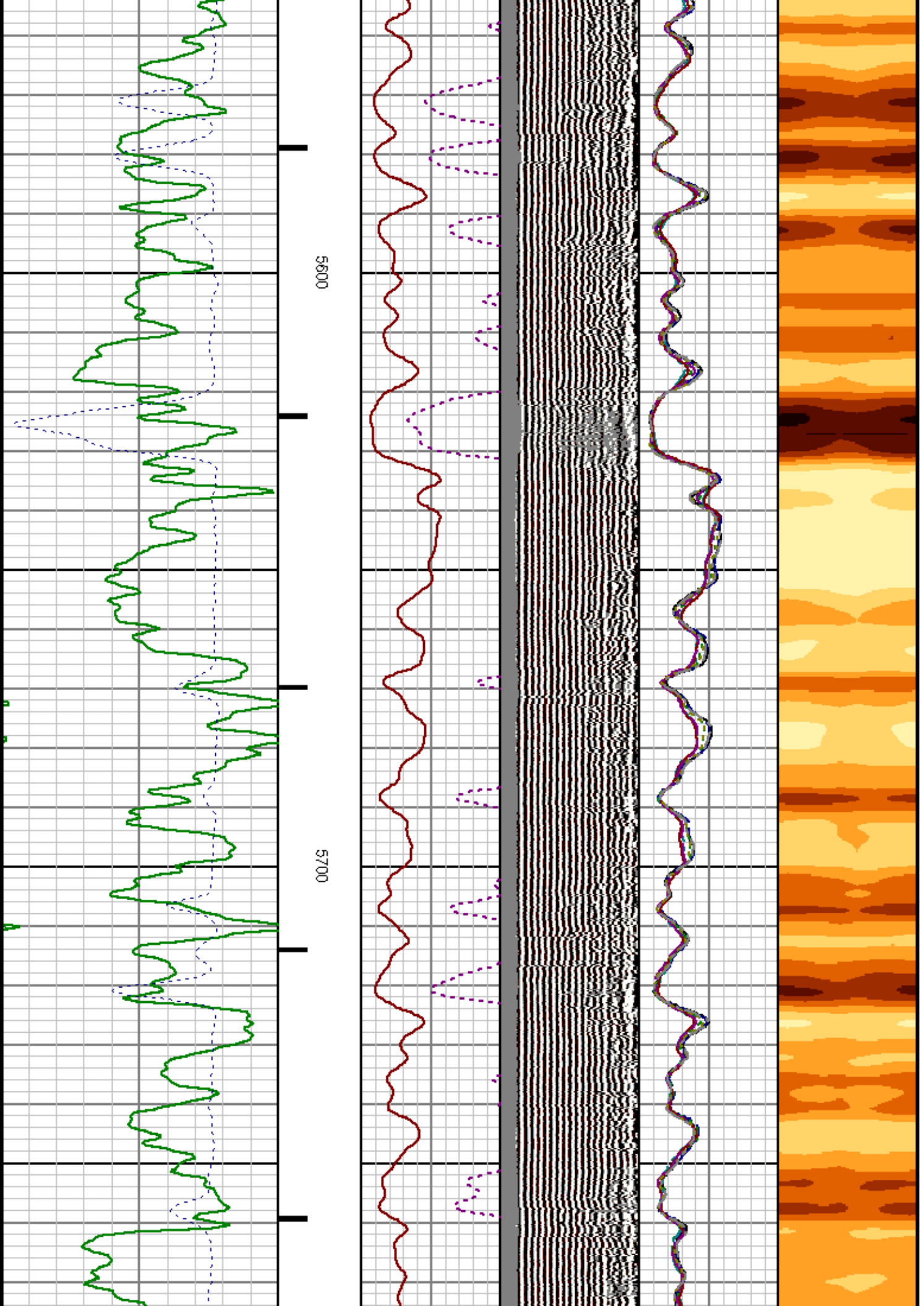


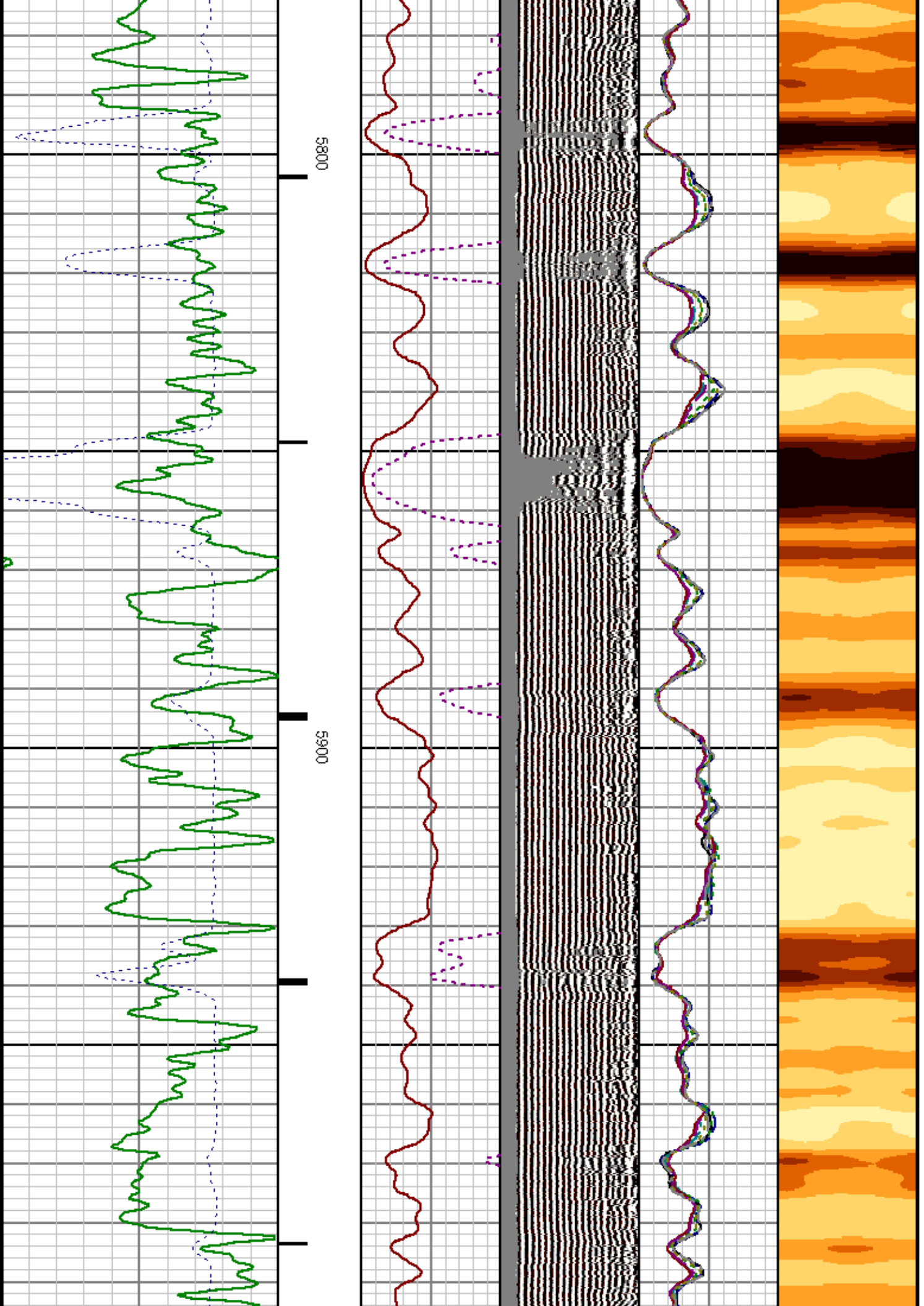
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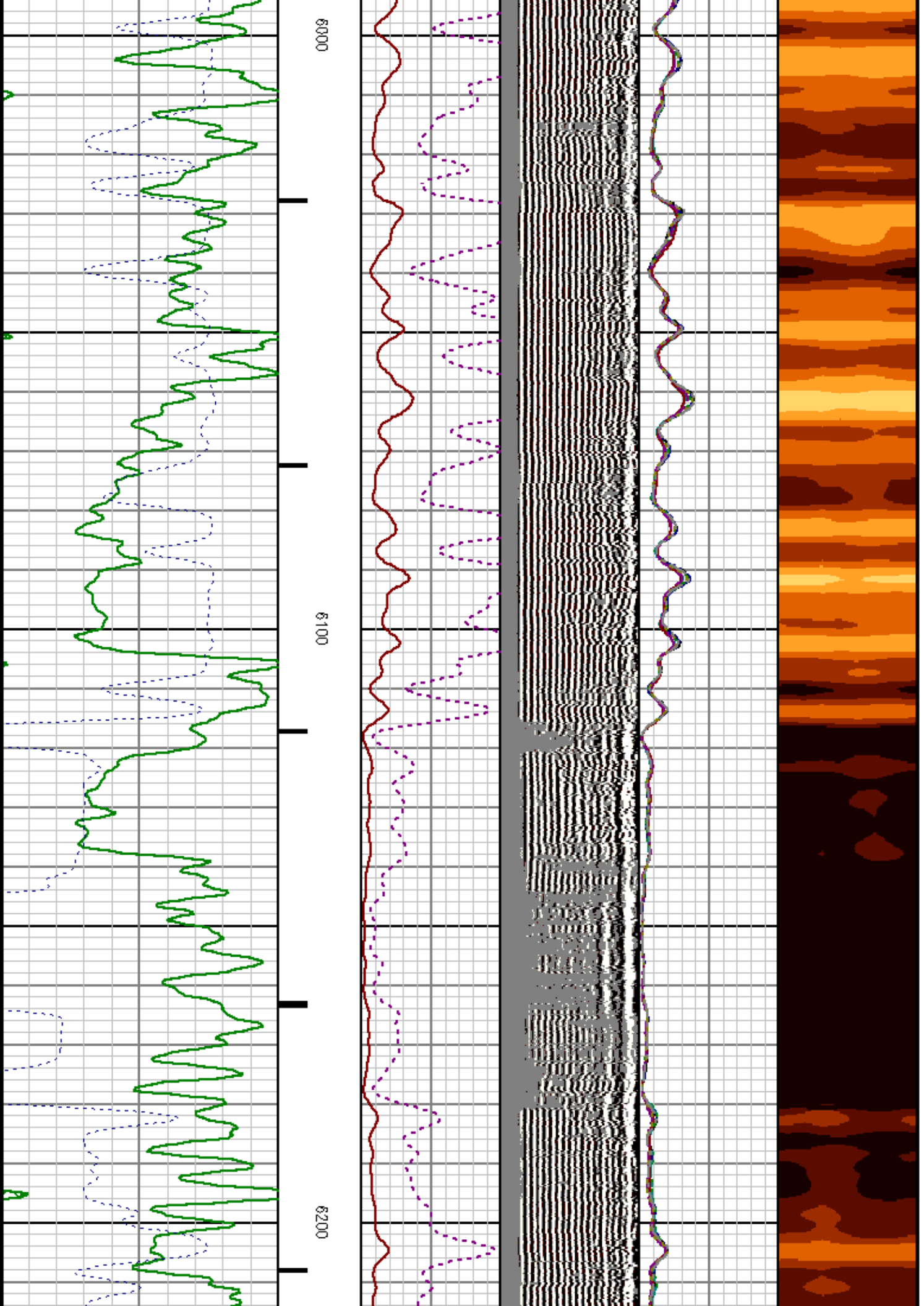
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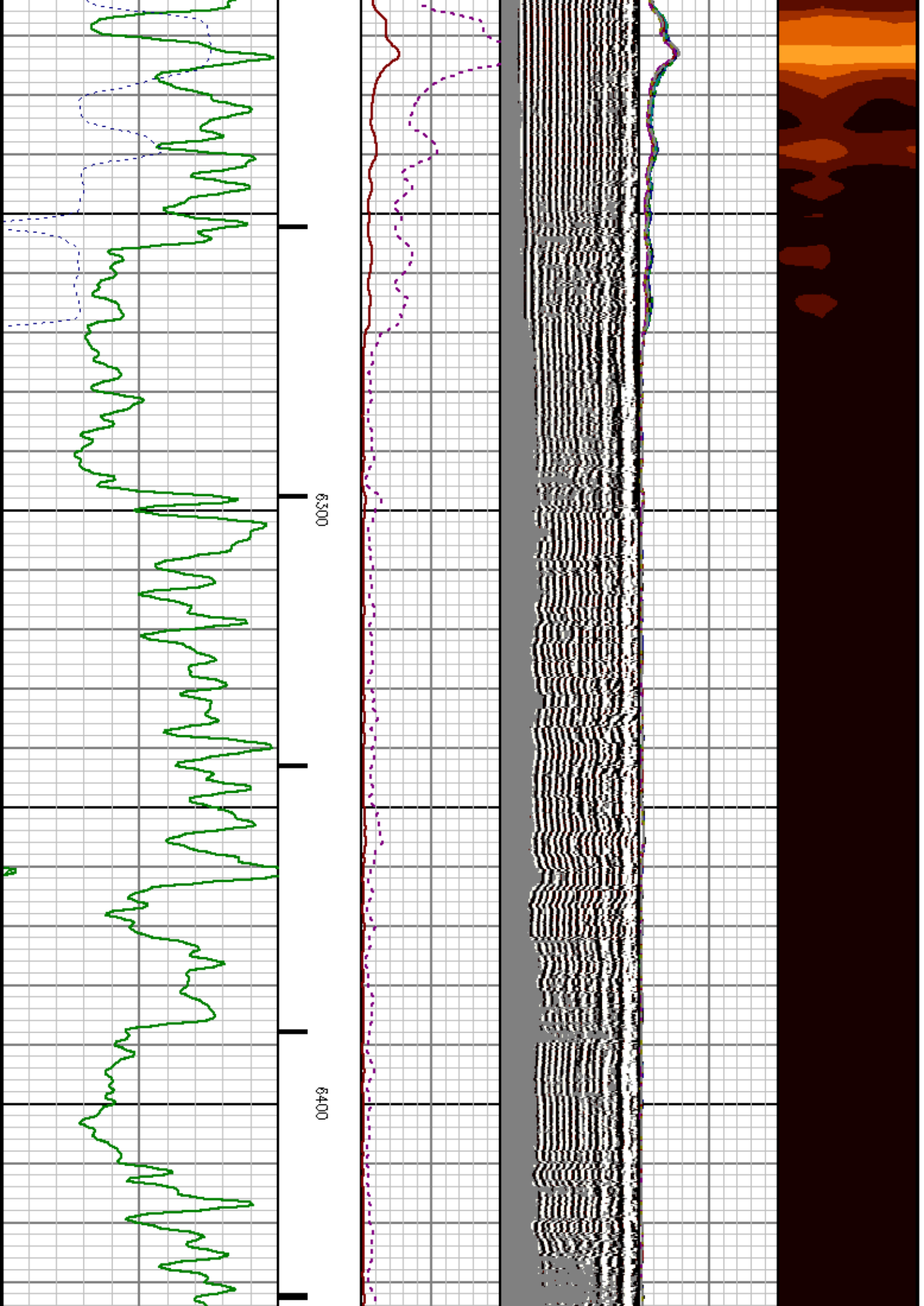


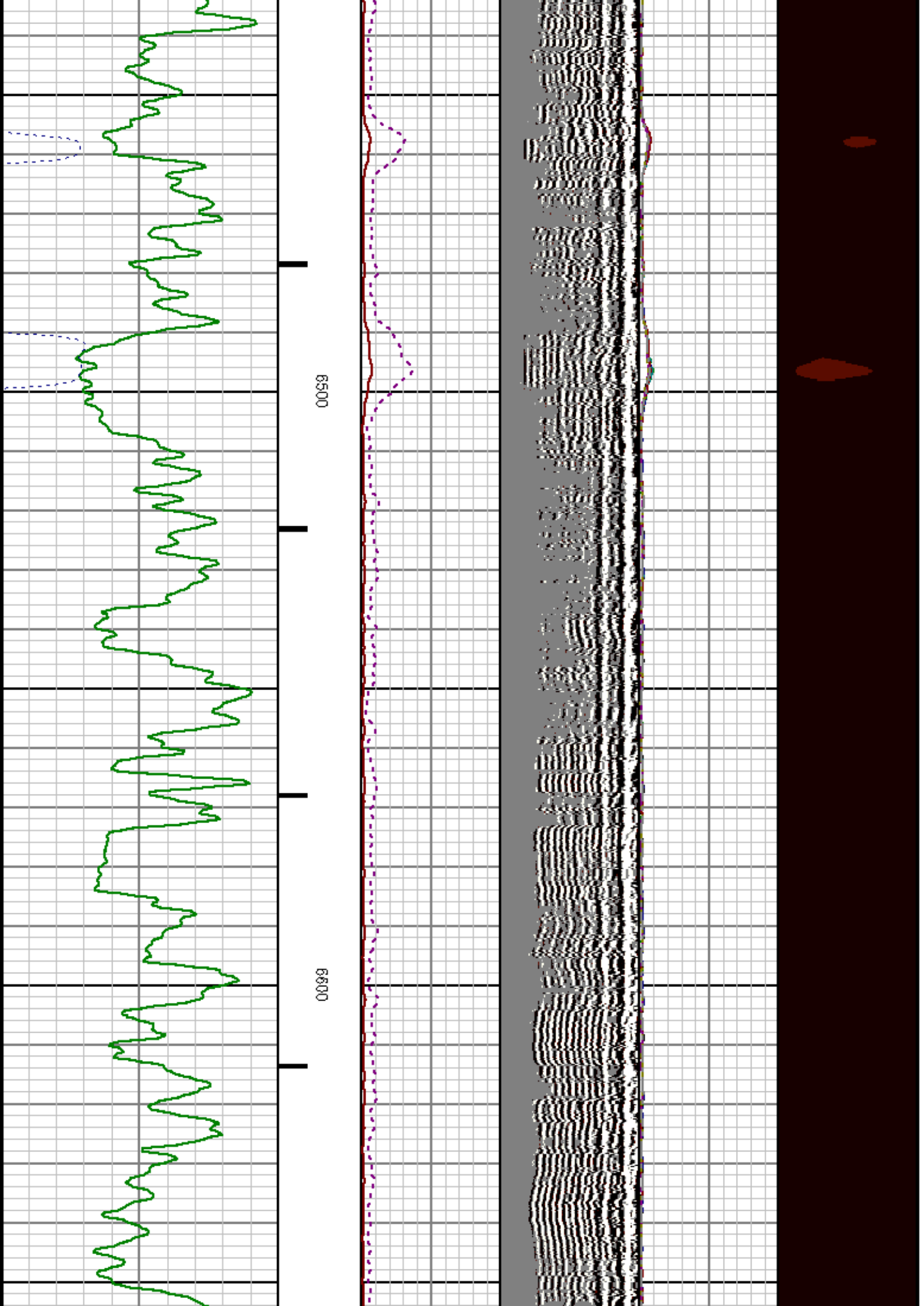


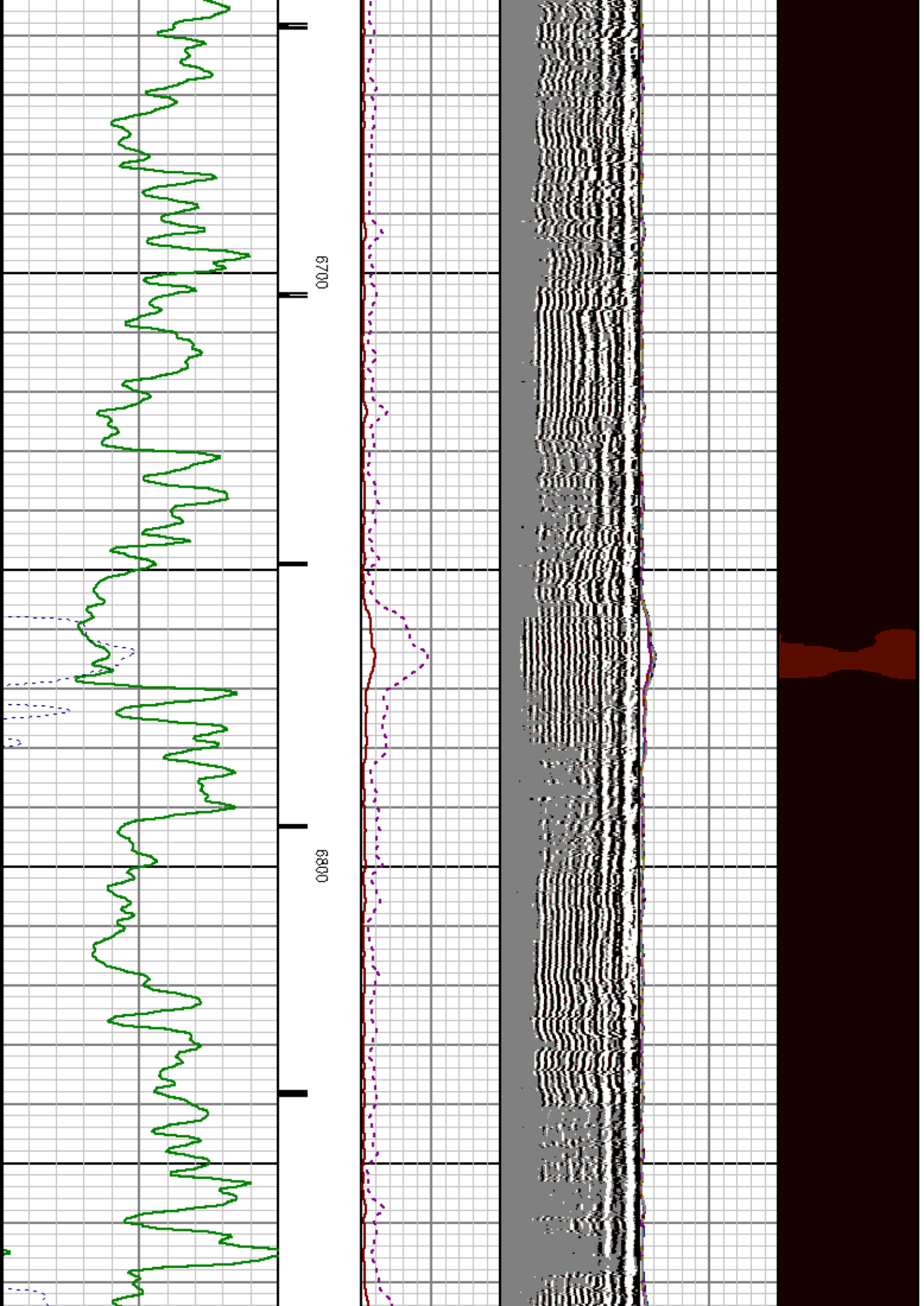


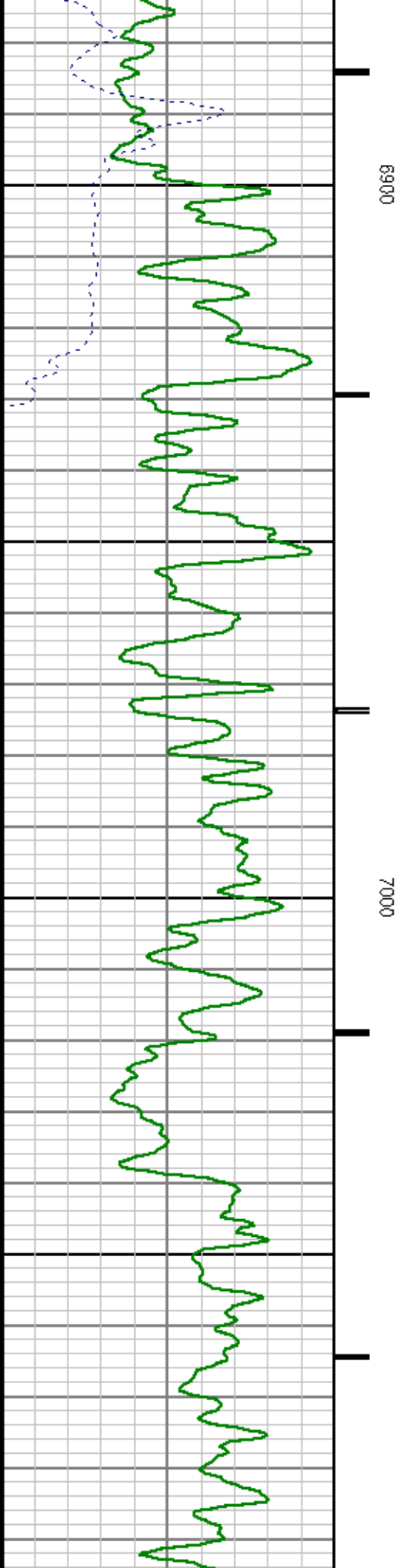
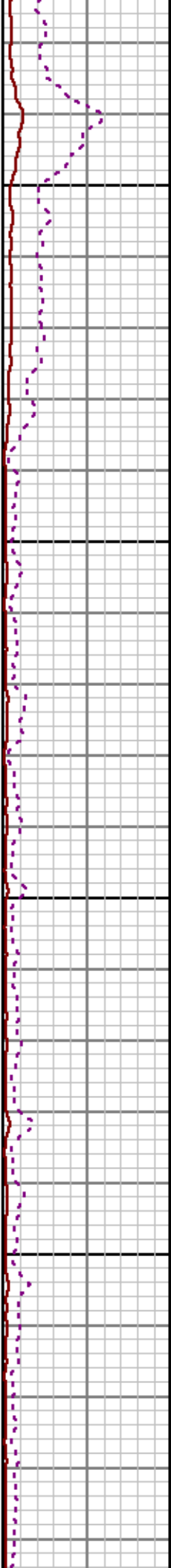
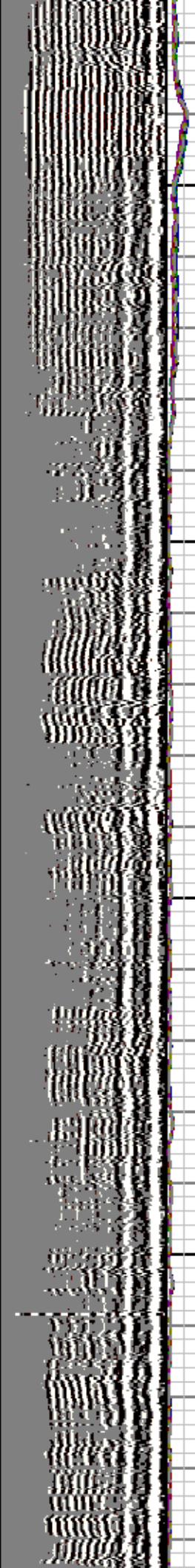


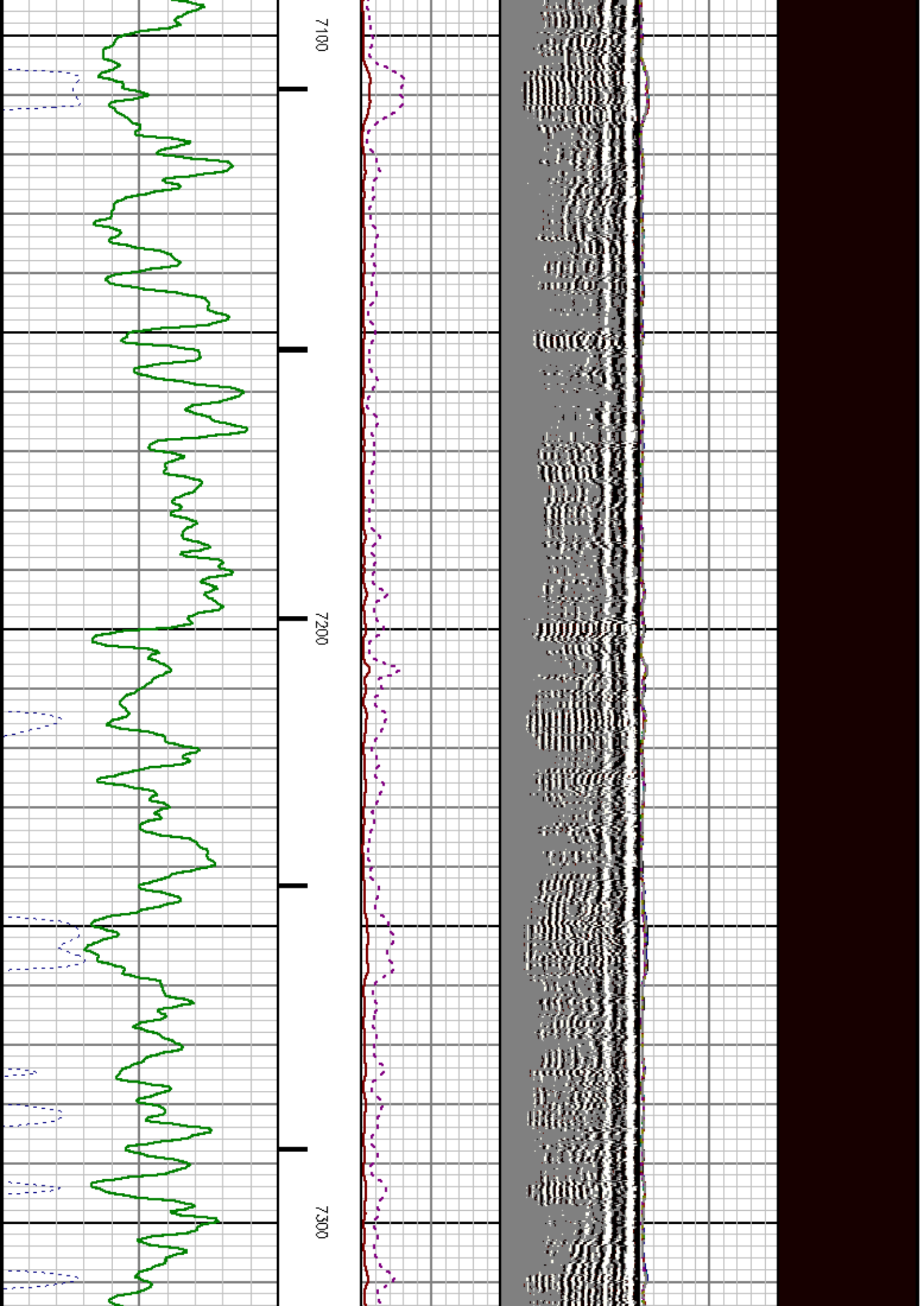


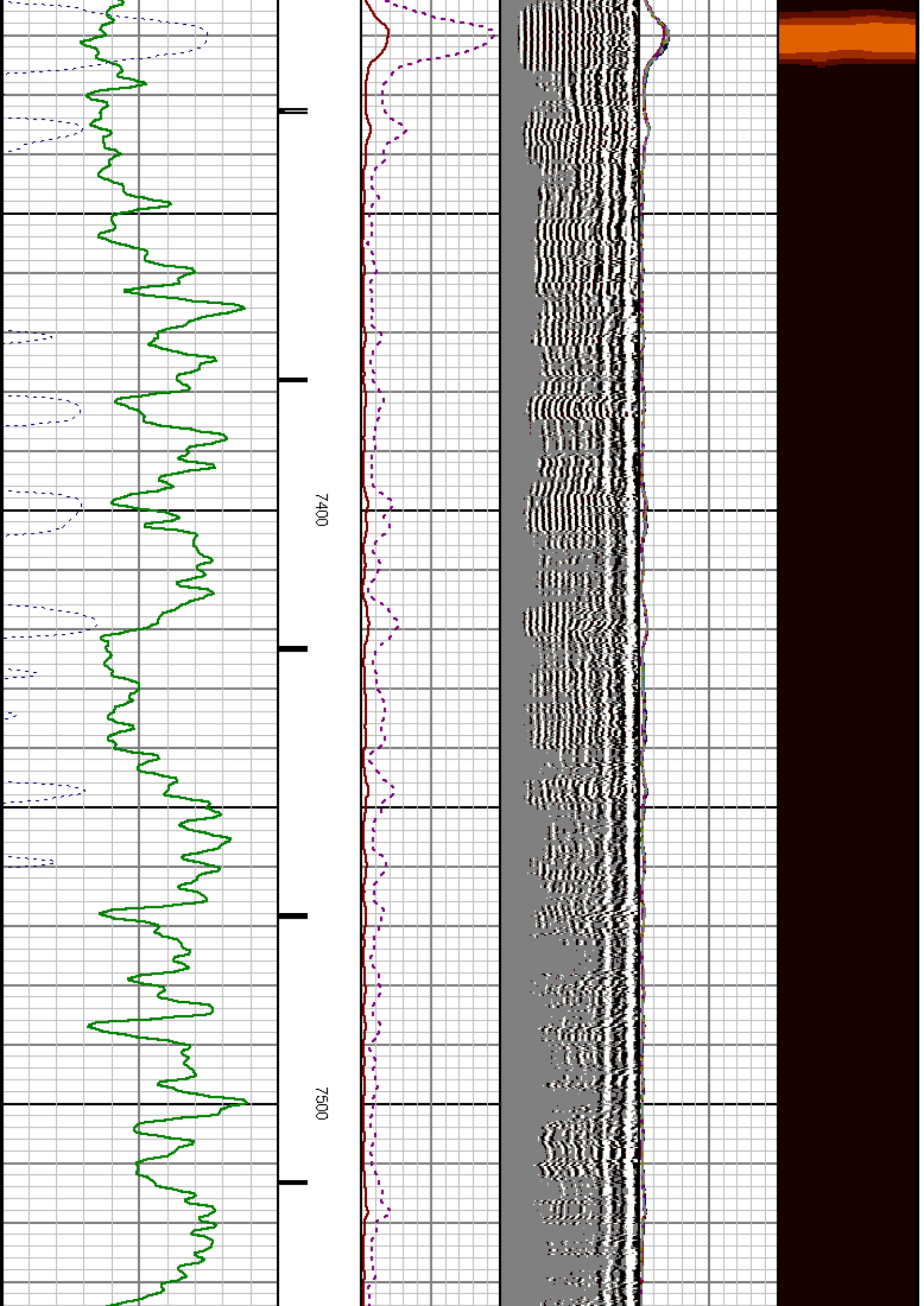


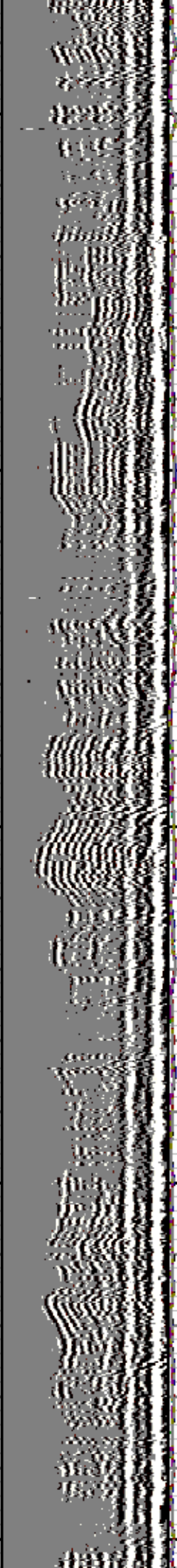








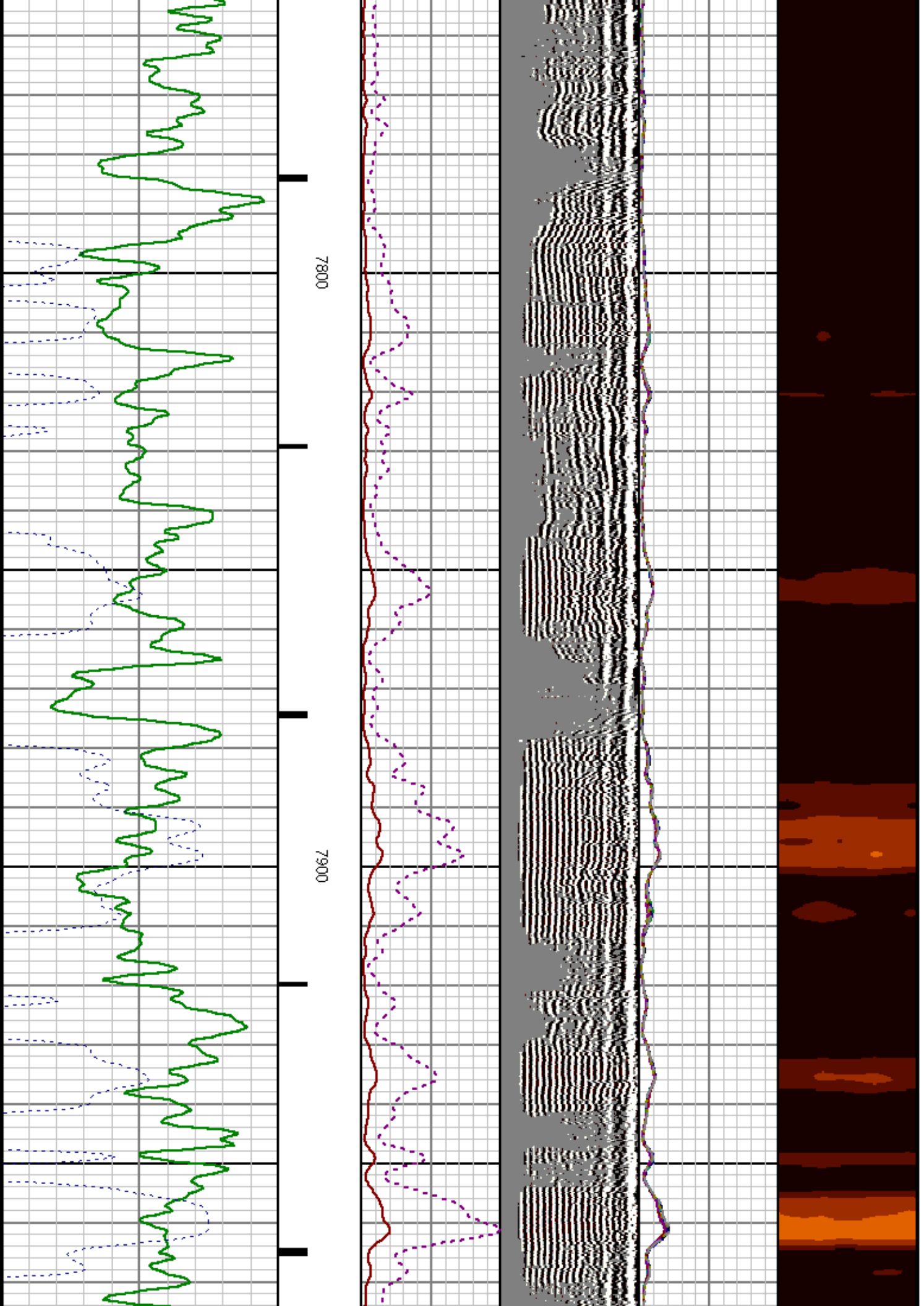


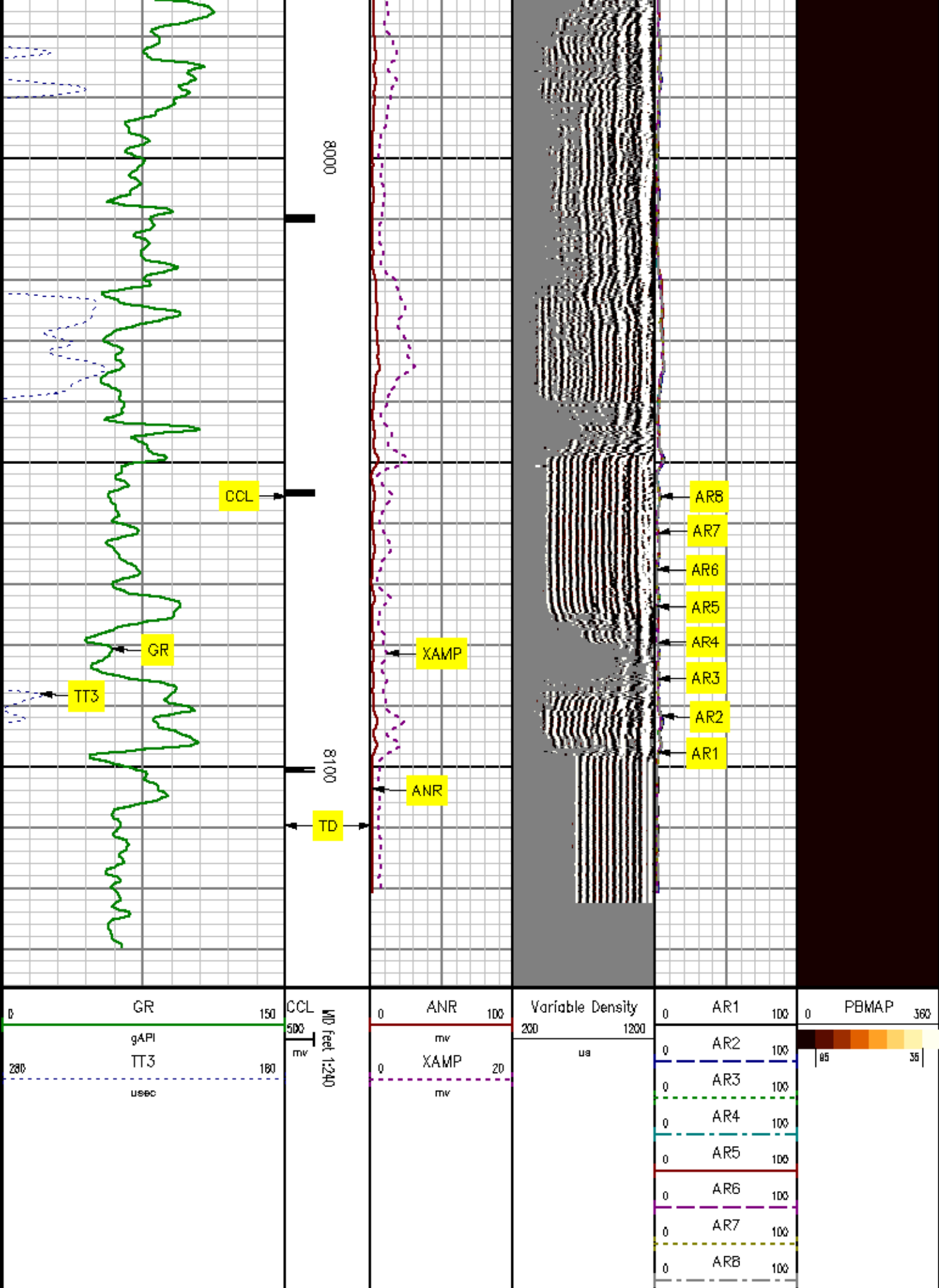


7600

7700







REPEAT SECTION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	318.900	usec	7875.031	8140.500
RAL	Amp Gate Start Near	200.391	usec	7875.031	8140.500
RAL	Amp Gate Start Radial	200.391	usec	7875.031	8140.500
RAL	Amp Gate Width Far	25.000	usec	7875.031	8140.500
RAL	Amp Gate Width Near	25.000	usec	7875.031	8140.500
RAL	Amp Gate Width Radial	25.000	usec	7875.031	8140.500
RAL	casing od	4.500	inches	7875.031	8140.500
RAL	casing wt	11.800	lbm/ft	7875.031	8140.500
RAL	FB Start Far	291.900	usec	7875.031	8140.500
RAL	FB Start Near	175.391	usec	7875.031	8140.500
RAL	FB Start Radial	175.391	usec	7875.031	8140.500
RAL	FB Thresh Far	15.000	mv	7875.031	8140.500
RAL	FB Thresh Near	10.000	mv	7875.031	8140.500
RAL	FB Thresh Radial	10.000	mv	7875.031	8140.500
RAL	Fluid Travel Time	200.000	usec/ft	7875.031	8140.437

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
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
1426XA	-14.360	AFAR	SIG	TT5			
1426XA	-7.250	GCL					
1426XA	-5.390	GR					
1426XA	0.000	NEU					

Created by : RAL, v4.8.007

Plotted by : PlotMgr, v5.4.504

Company : WILLIAMS PRODUCTION RMT COMPANY

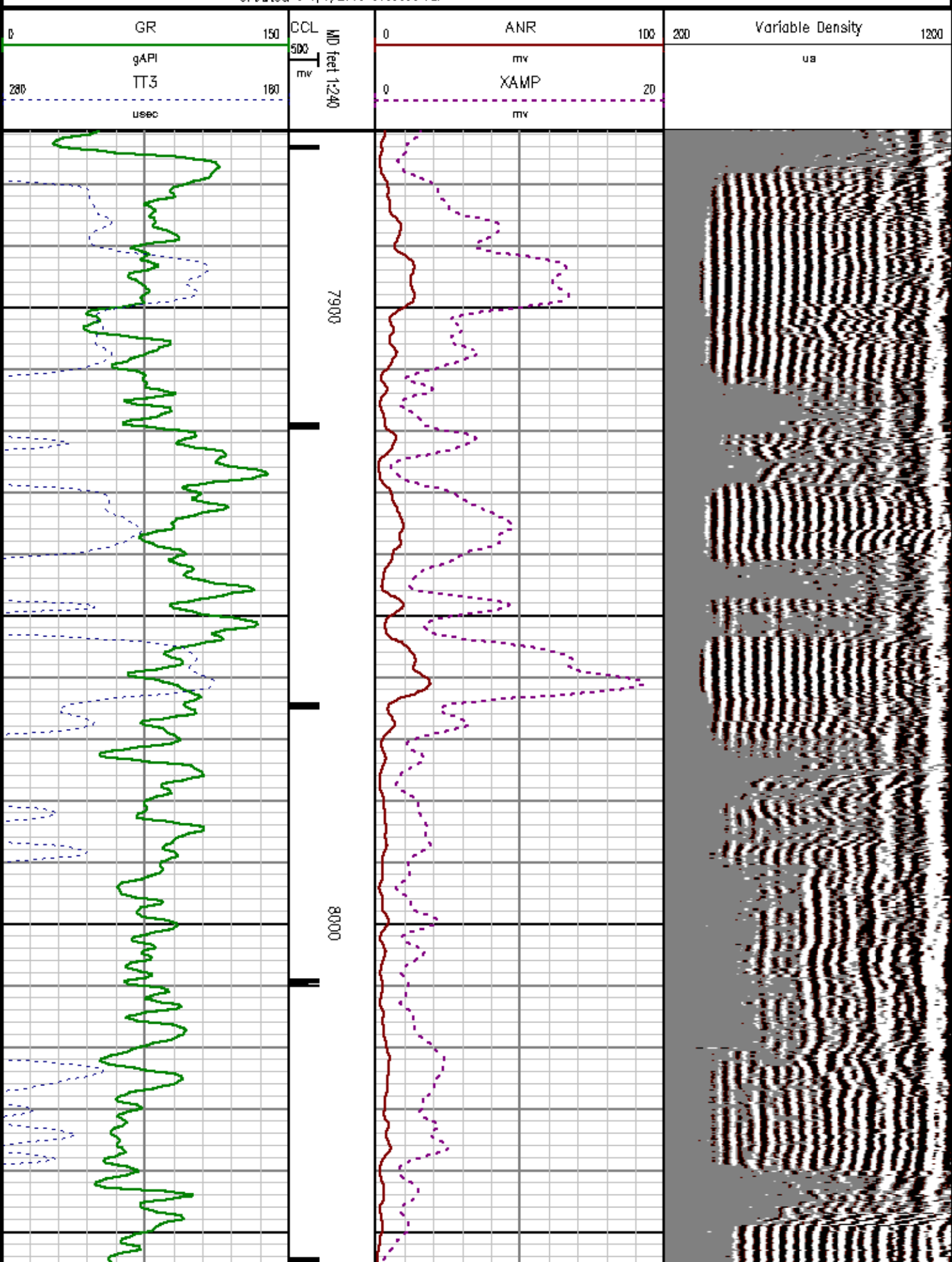
Well : SP 13-14

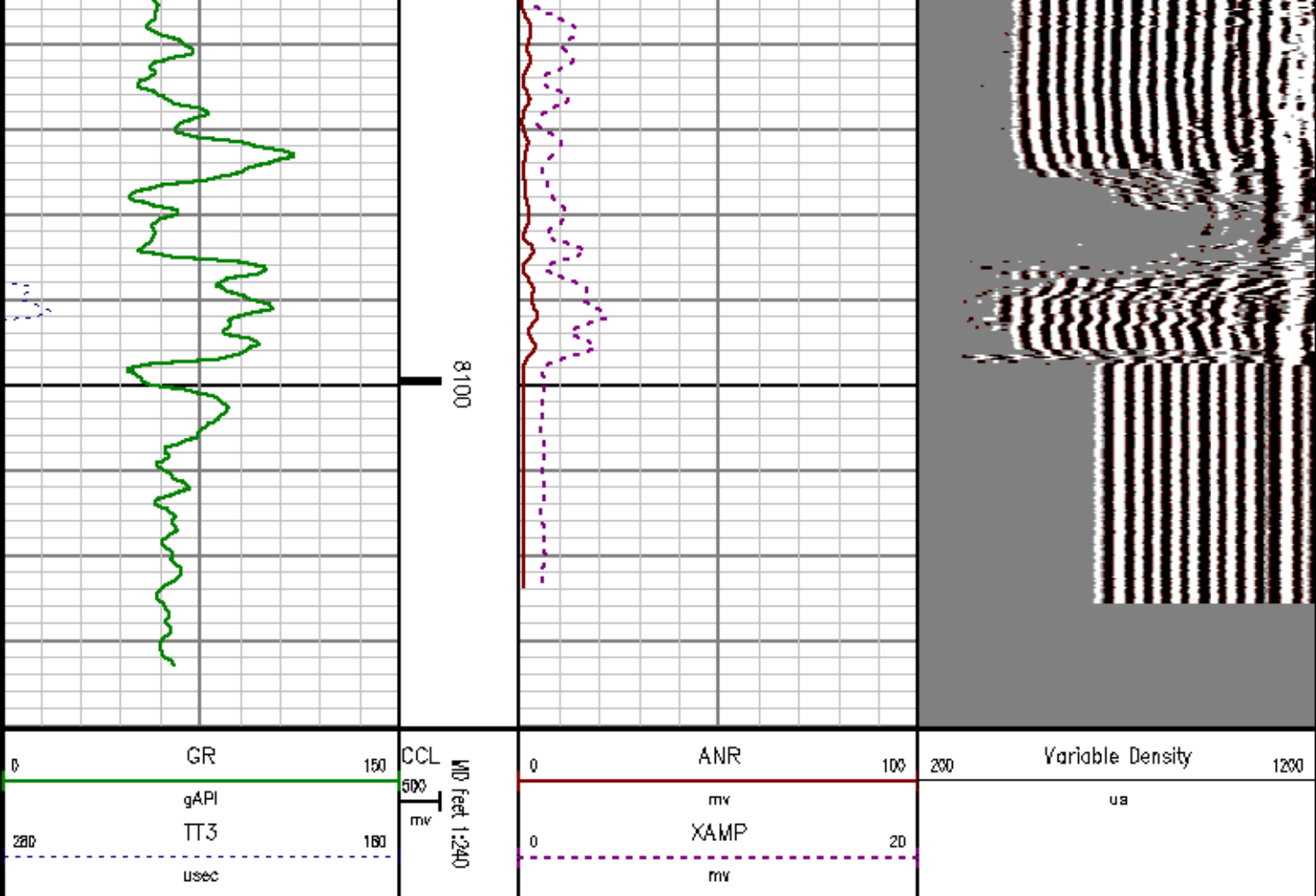
File Name : d:\welldata\13rad\repeat.txt

Mode : PlotMgr 5.4.504

Interval : 7871.50 - 8140.50 feet UP

Created : 7/7/2010 8:08:58 AM





CALIBRATION SUMMARY

RALSHP

Shop Calibration: C:\case\calver\RALSHP\452T1.shp.cal

SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Jul 02 16:08:53 2010 TOOL SERIES: 1426XA ASSET: 452 SEQ: T1

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	-0.207	100.00	0.20
3 Ft. Receiver	219	216	30	166	25	0.092	100.00	0.20
5 Ft. Receiver	327	324	30	256	25	0.544	150.00	0.22
Radial #1	218	216	30	166	25	0.564	100.00	0.20
Radial #2	218	216	30	166	25	0.466	100.00	0.20

Radial #3	220	216	30	166	25	0.969	100.00	0.20
Radial #4	221	216	30	166	25	0.318	100.00	0.20
Radial #5	221	216	30	166	25	-0.805	100.00	0.20
Radial #6	220	216	30	166	25	-0.251	100.00	0.20
Radial #7	218	216	30	166	25	0.287	100.00	0.20
Radial #8	219	216	30	166	25	-0.039	100.00	0.20

RALFLD

Wellsite Calibration: C:\case\calver\RALFLD\452T1 fld.cal

WELLSITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Fri Jul 02 16:10:24 2010 TOOL SERIES: 1426XA ASSET: 452 SEQ: T1

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	-0.012	0.000	1.00	100.000
3 Ft. Receiver	200	25	0.635			
5 Ft. Receiver	254	25	0.187			
Radial #1	200	25	0.053			
Radial #2	200	25	0.248			
Radial #3	200	25	0.327			
Radial #4	200	25	0.196			
Radial #5	200	25	0.016			
Radial #6	200	25	0.345			
Radial #7	200	25	0.282			
Radial #8	200	25	0.311			

GAMMA RAY

Calibration File: C:\case\calver\GR\457J2.cal

CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Jun 10 13:52:08 2010 TOOL SERIES: 1426XA ASSET: 457 SEQ: J2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K DA612	57.02	322.80	0.696	39.69	224.69	185.00

Verification File: C:\case\calver\GR\457J2.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu Jun 10 13:53:17 2010 TOOL SERIES: 1426XA ASSET: 457 SEQ: J2

Calibrator #	Background	Calibrator On	Multiplicative	Background	Calibrator On	Differential
	[cps]	[cps]		[api]	[api]	[api]
S2K DA612	61.38	319.45	0.696	42.72	222.36	179.64

TOOL DIAGRAM

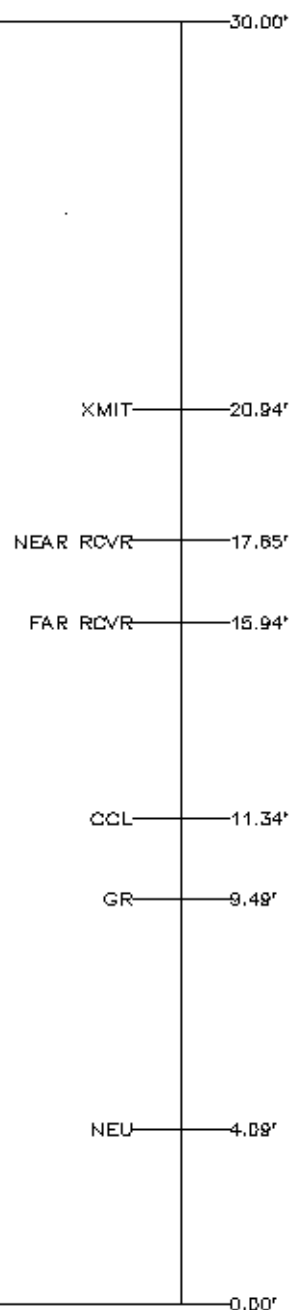
OTA SHORT CABLE HEAD	
CENTRALIZER	
Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb

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

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	6.80' GR
Measure Point	8.46' CCL

CENTRALIZER	
Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb



Total Length: 30.00'
 Total Weight: Not Available
 Max Diameter: 0' 3.12"



Baker Atlas

CASE

Company	WILLIAMS PRODUCTION RMT COMPANY		
Well	SP 13-14		
Field	PARACHUTE		
County	GARFIELD	State	COLORADO

File No:	1960
API No:	05045188290000

Location

SHL: 1711' FML & 470' FML
BHL: 2316' FSL & 382' FEL

SEC 14 TWP 7S RGE 96W

Elevations

KB 8771 ft
DF 8770 ft
GL 8750 ft

S:14 T:7S R:96W
RAD: FED 17-95
RIG: CYCLONE 17