



# RADIAL ANALYSIS BOND LOG

Baker Atlas

File No: 1725 Company: EXXONMOBIL PRODUCTION COMPANY

Well: FRU 197-33A7

Field: PICEANCE CREEK

County: RIO BLANCO State: COLORADO

API No: 05103113990000

Location

SHL: 831' FSL & 2394' FEL

Other Services

RPM

SEC 33 TWP 15 RGE 97W

GL Elevation 6386 ft

KB 29.4 ft Above P. D.

KELLY BUSHING

Elevations

KB 6417.4 ft

DF 6416.4 ft

GL 6386 ft

Permanent Datum  
Log Measured From  
Drill Measured From

Date: 21 APR 2010

Run: ONE

Service Order: 576800

Depth Driller: 12438 ft

Depth Logger: 12216 ft

Bottom Logged Interval: 12216 ft

Top Logged Interval: 2994 ft

Time Started: 17:30

Time Finished: 23:00

Operator Rig Time: 5.5 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: 46 fpm

Maximum Recorded Temperature: N/A

Reference Log

Reference Log Date: N/A

Equipment No.: 4271 Location: VERMIL, UT.

Recorded By: J. OSTLER

Witnessed By: MR. MIKE ROBERSON

- 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
9.875 in	SURFACE	8593 ft
8.125 in	SURFACE	12438 ft

## Casing Record

Size	Weight	Grade	From	To
7 in	26 lbm/ft	P-110	SURFACE	8593 ft
4.5 in	15.1 lbm/ft	P-110	SURFACE	12345 ft

## Remarks

THIS IS THE FIRST LOG OF THE WELL.  
WELL WAS LOGGED WITH 0 PSI AT THE WELL HEAD  
SHORT JOINT TOPS AT 6276', 7277', 8238', 9212', 10241', 11222'

## Equipment Data

Drill Bit	Drill Bit Size	Drill Bit Weight	Drill Bit Length	Drill Bit Manufacturer
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Run	Trip	Tool	Series Number	Serial Number	Position
1	1	VDL	1426XA	UNKNOWN	CENTRALIZED
1	1	GR/CCL/NEU	2459XA	450	CENTRALIZED

***MAIN SECTION***  
***PRIMARY PRESENTATION***  
*0 PSI*

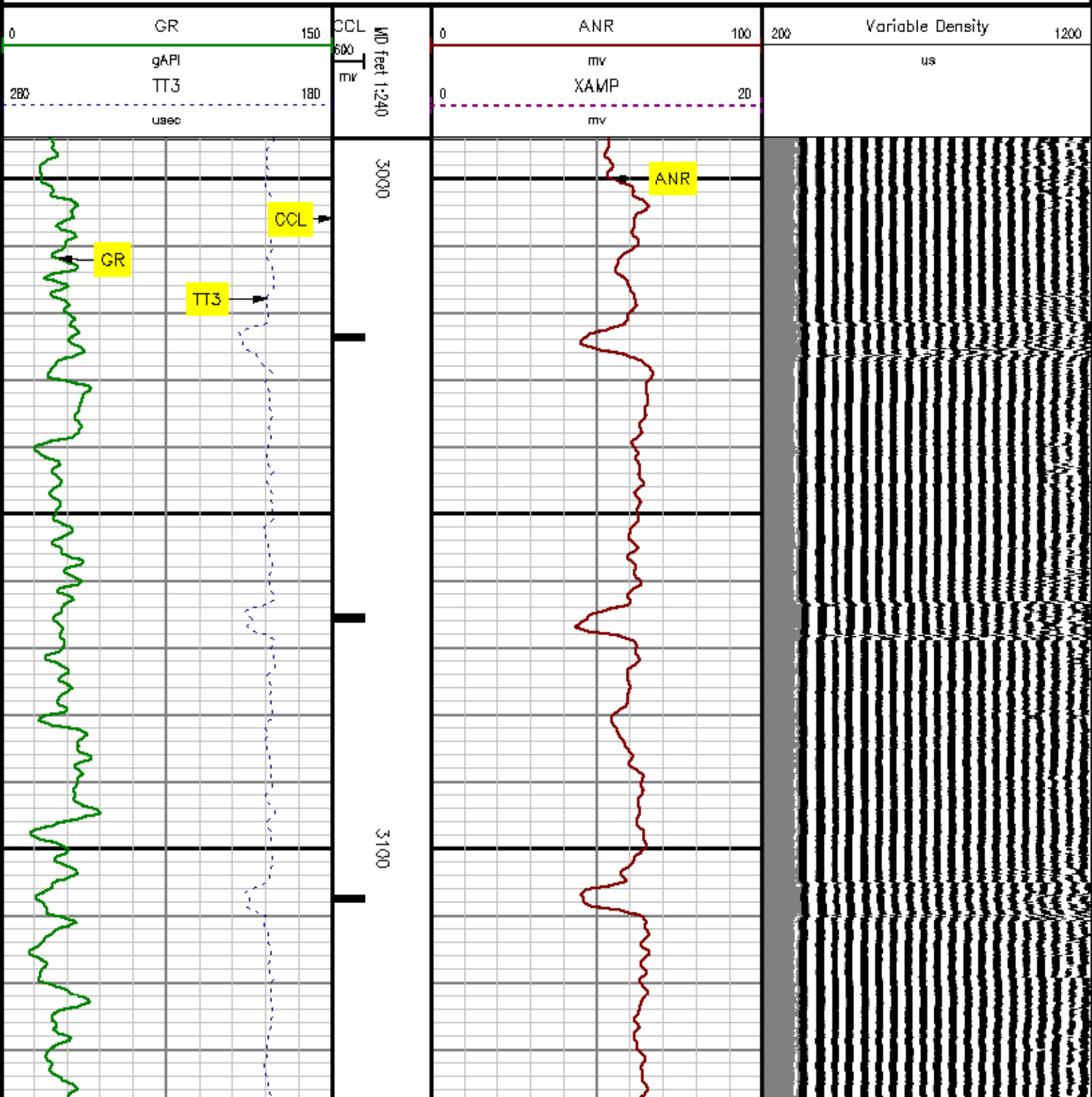
MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	314.263	usec	2993.750	12246.000
RAL	Amp Gate Start Near	197.754	usec	2993.750	12246.000
RAL	Amp Gate Start Radial	197.754	usec	2993.750	12246.000
RAL	Amp Gate Width Far	25.000	usec	2993.750	12246.000
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RAL	casing wt	15.100	lbm/ft	2993.750	12246.000
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RAL	Fluid Travel Time	200.000	usec/ft	2993.750	12245.750

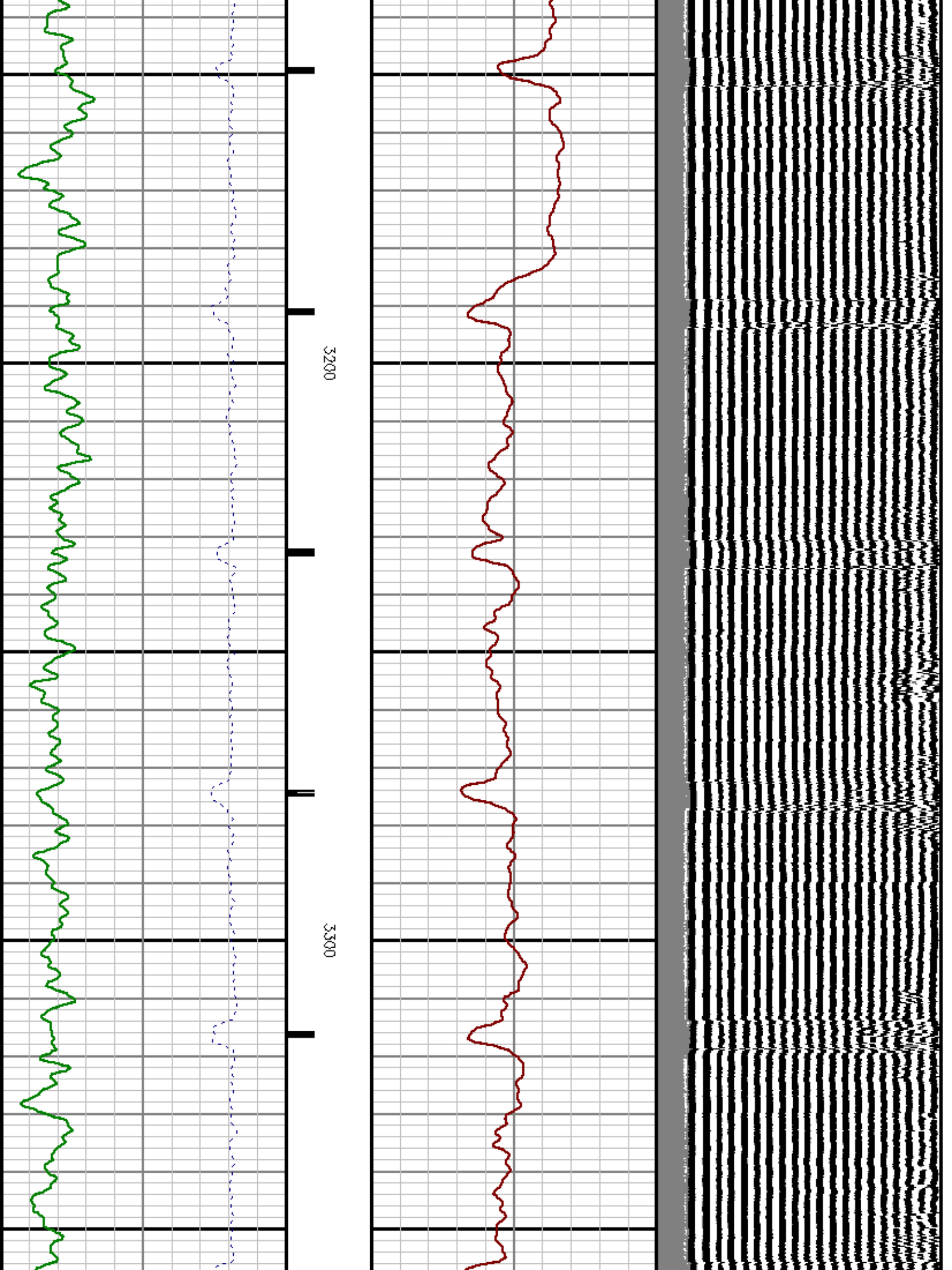
DEPTH OFFSETS  
(for Acquired Curves)

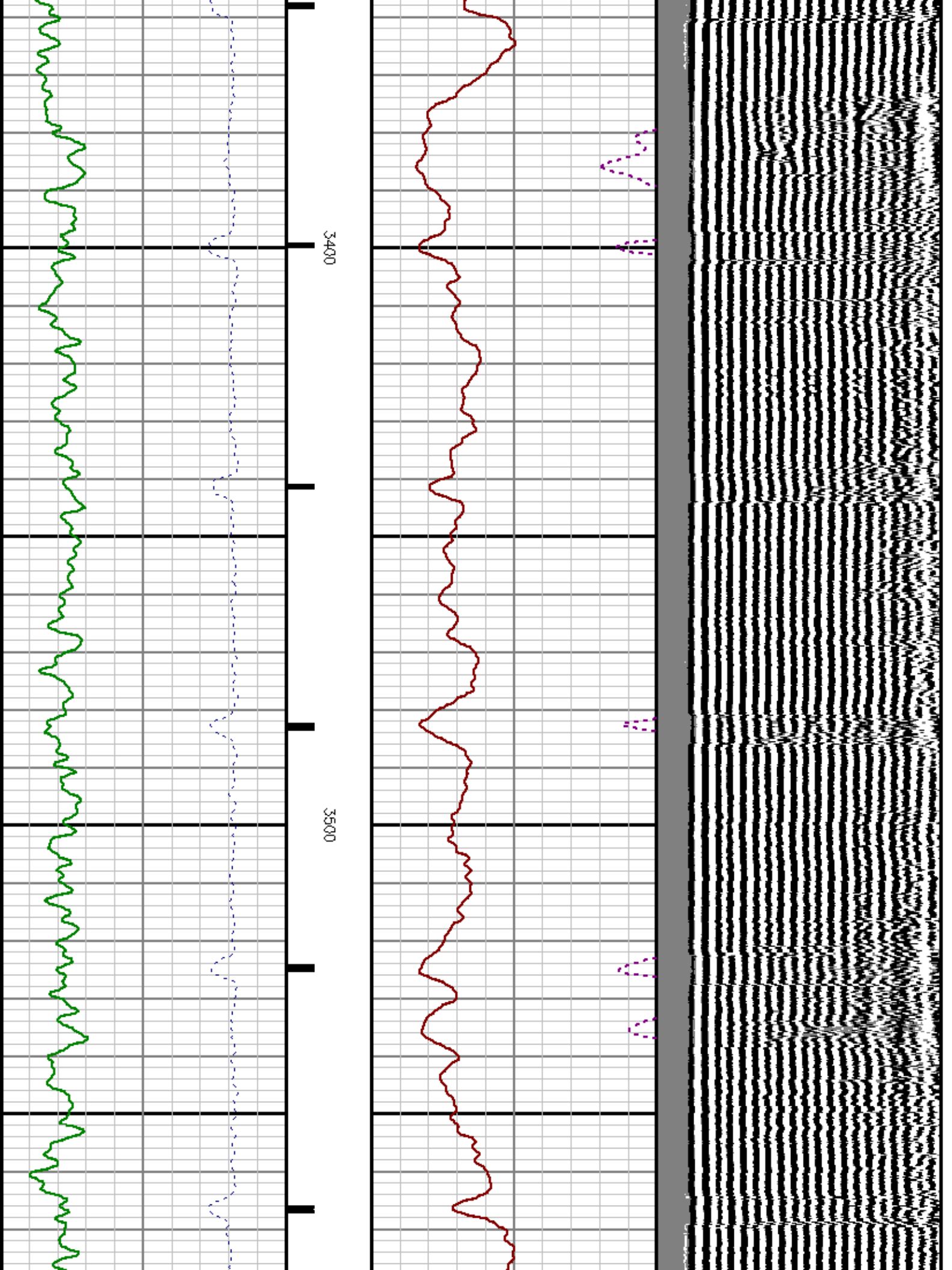
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1426XA	-15.360	ACAL	ANR	AR1	AR2	AR3	AR4
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		FPR3	FPR5	TT3	TTR1	TTR2	TTR3
		TTR4	TTR5	TTR6	TTR7	TTR8	XAMP
		AFAR	SIG	TT5			
1426XA	-14.360						

1426XA	-7.250	CCL
1426XA	-5.390	GR
1426XA	0.000	NEU

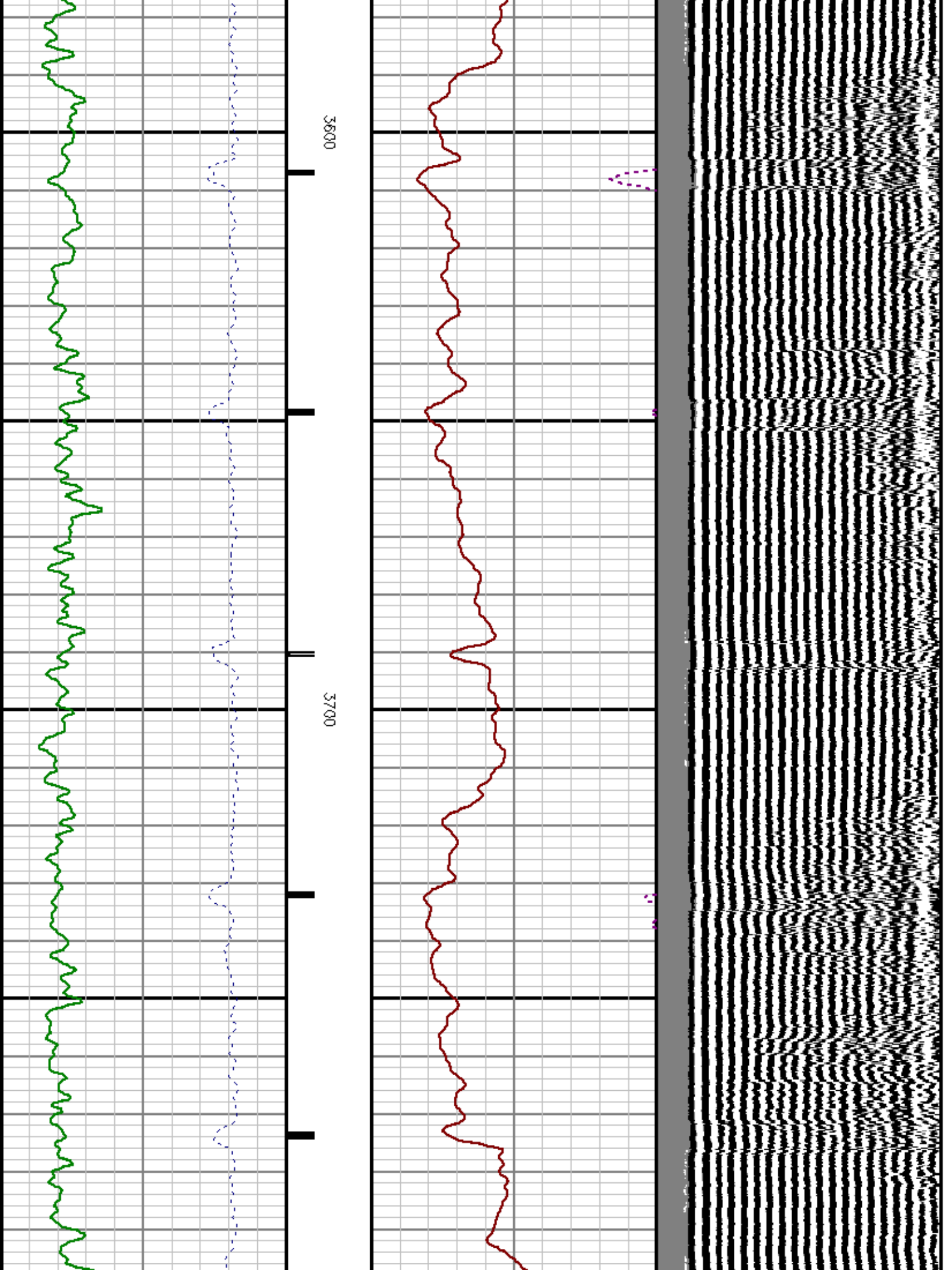
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 Plotted by : PlotMgr, v5.4.504  
 Company : EXXONMOBIL PRODUCTION COMPANY  
 Well : FRU 197-33A7  
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 Mode : PlotMgr 5.4.504  
 Interval : 2994.00 - 12224.00 feet UP  
 Created : 4/21/2010 7:12:58 PM

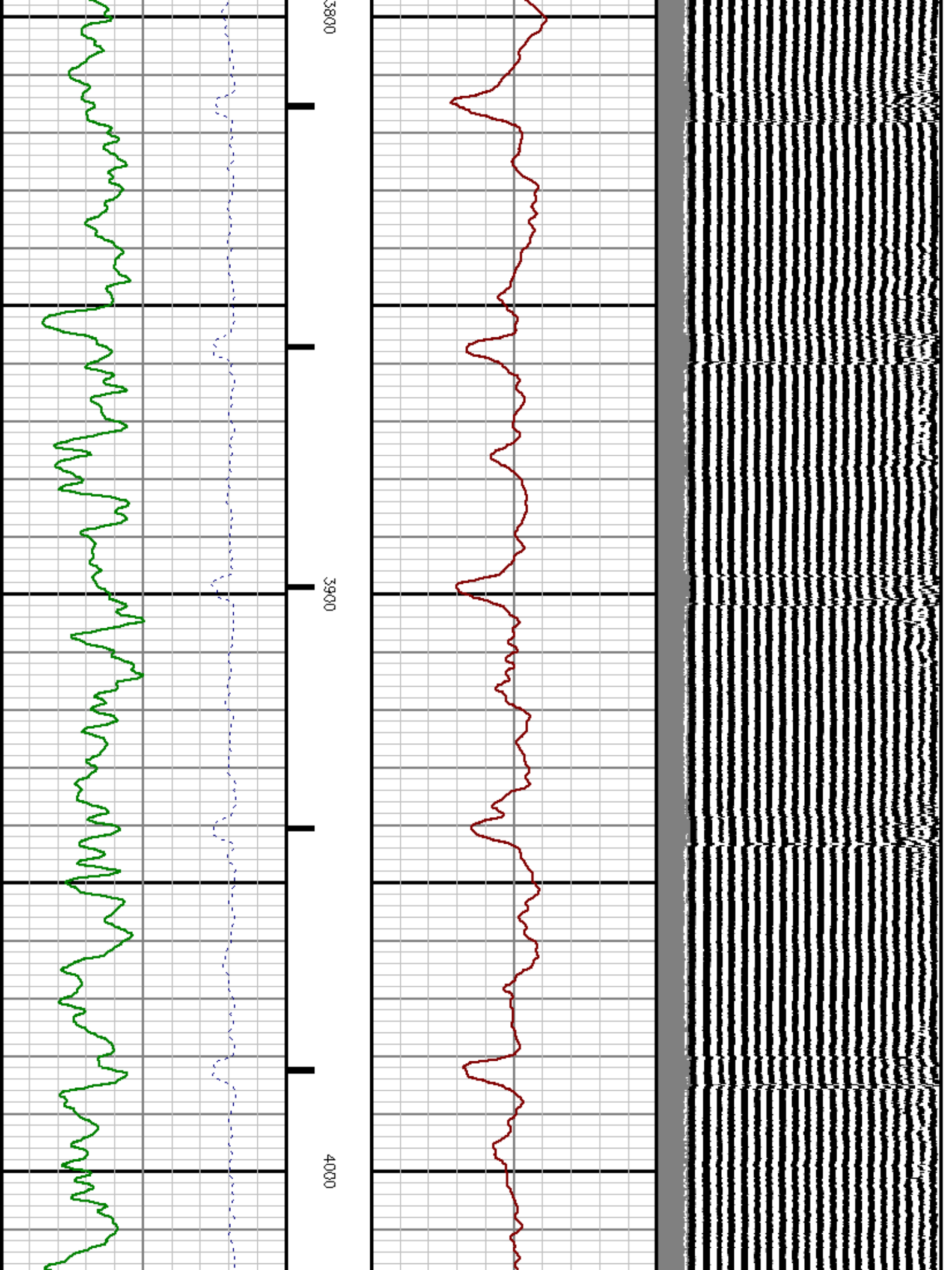


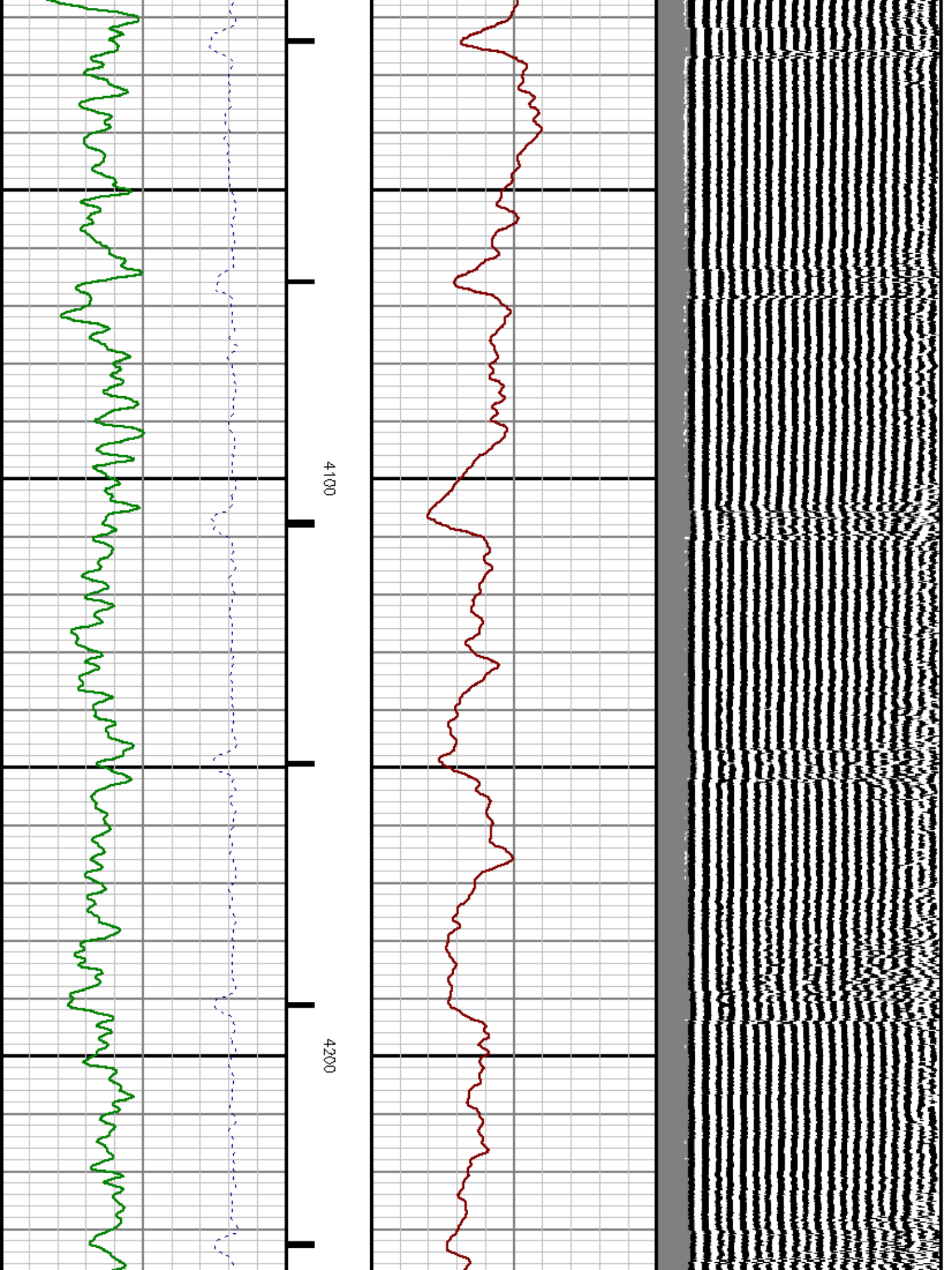




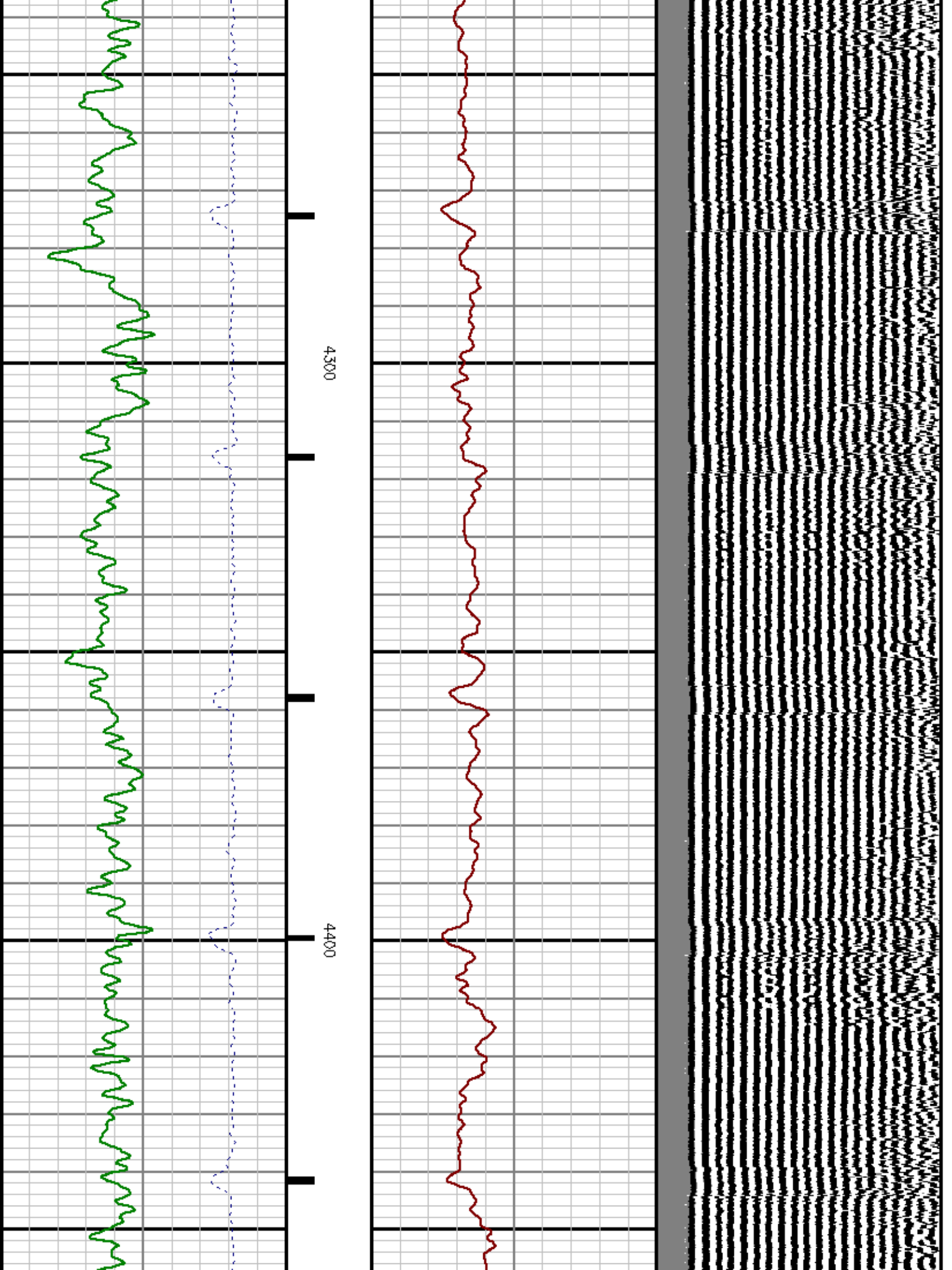


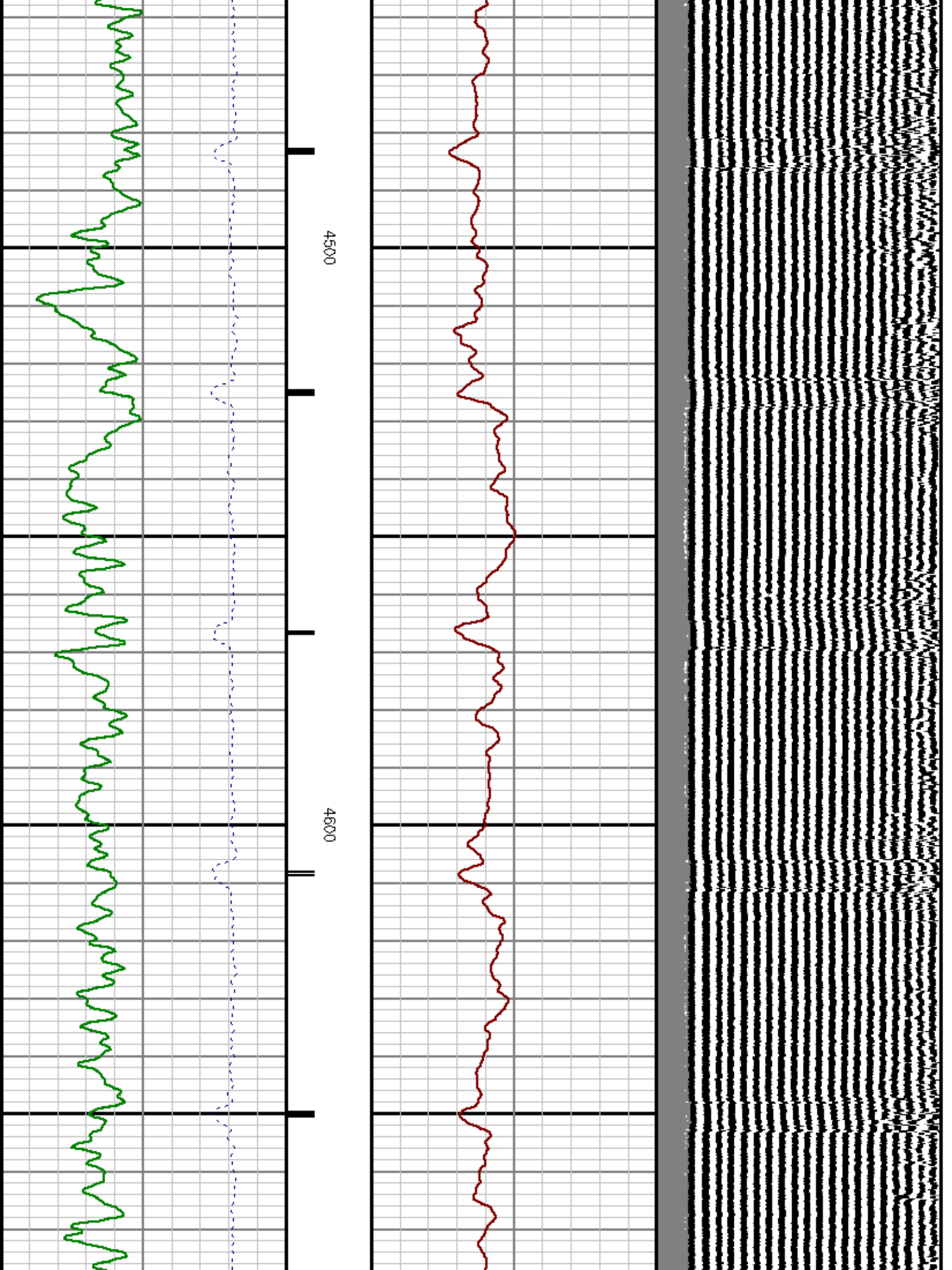


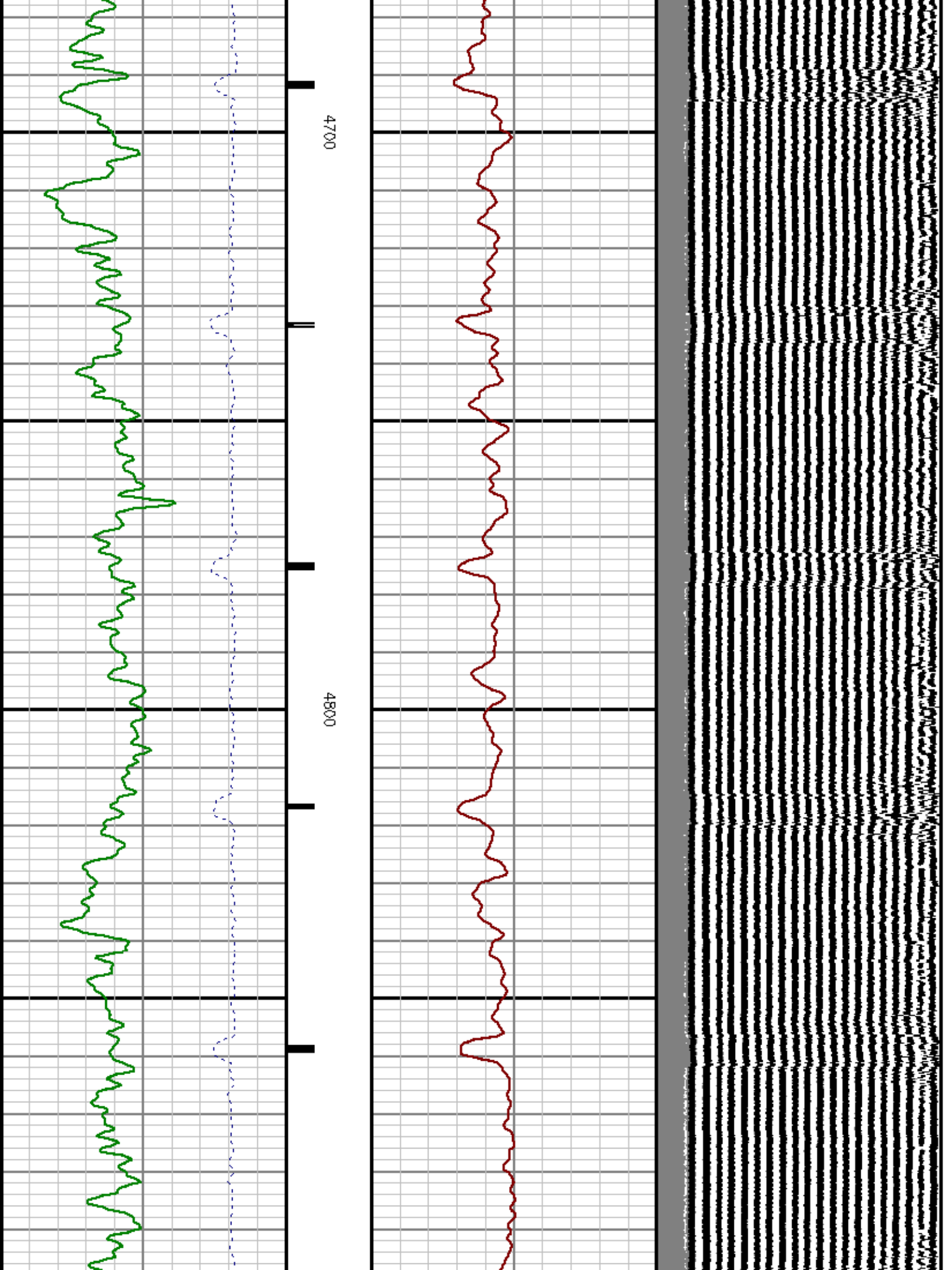


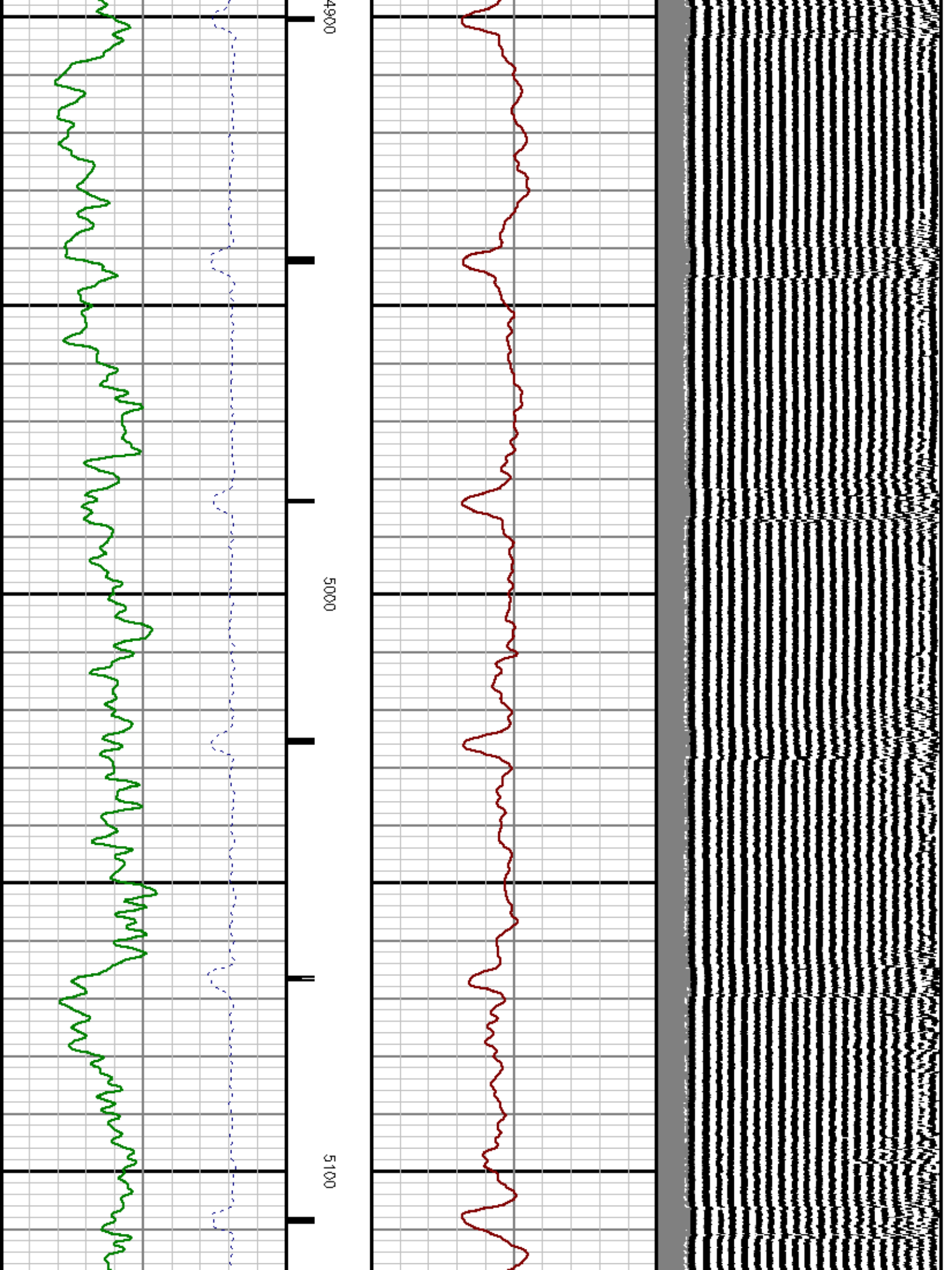




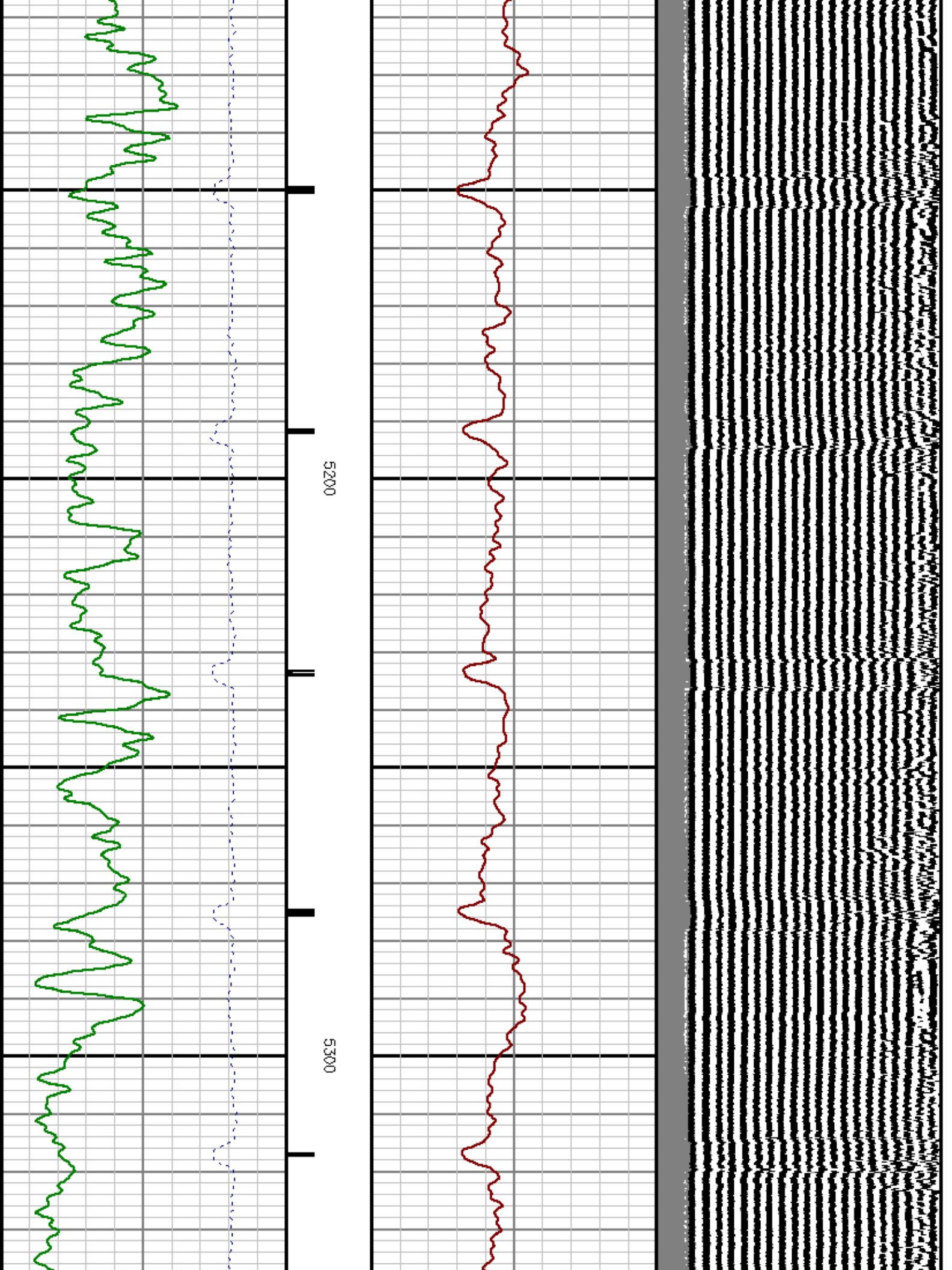




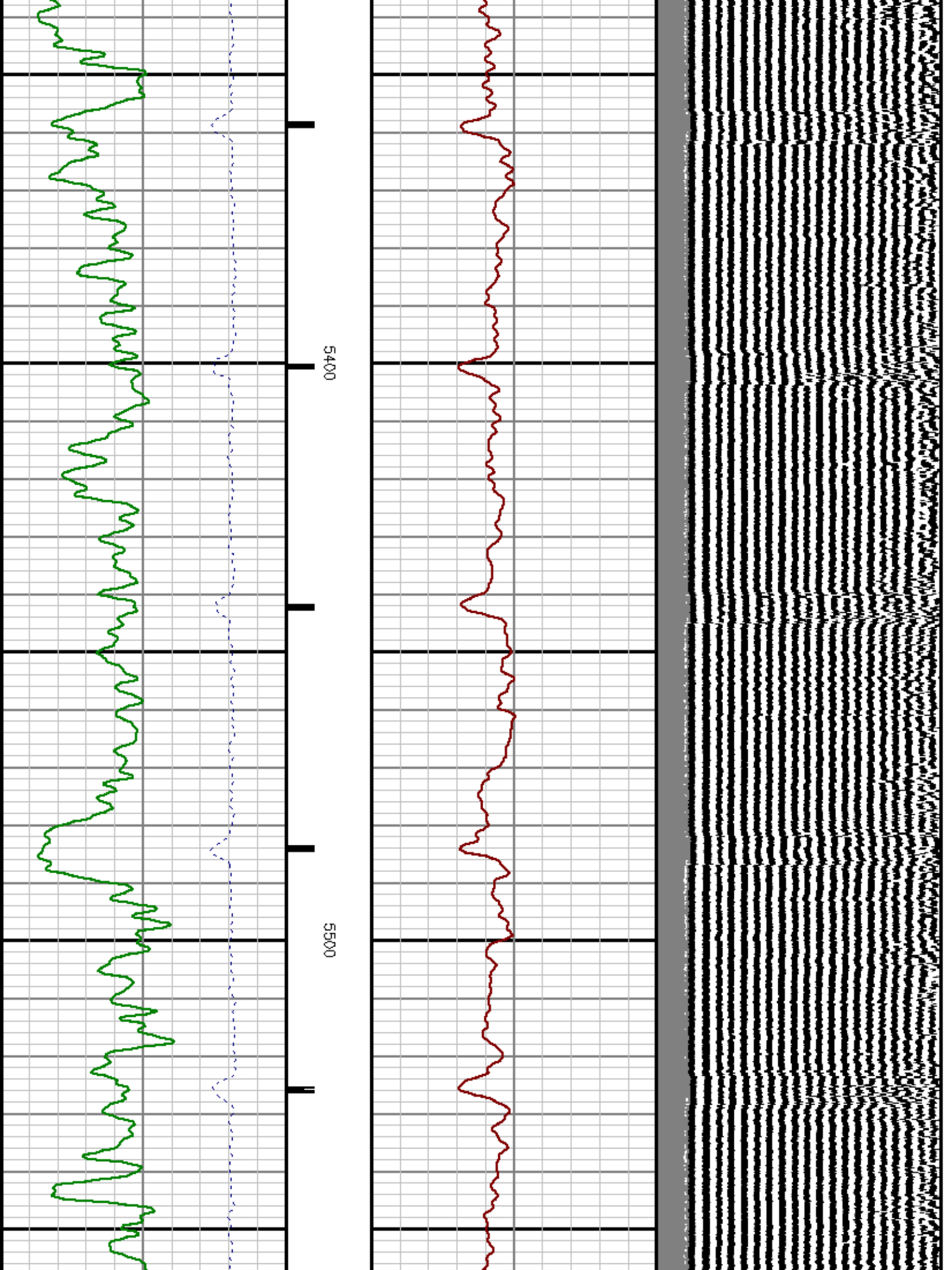


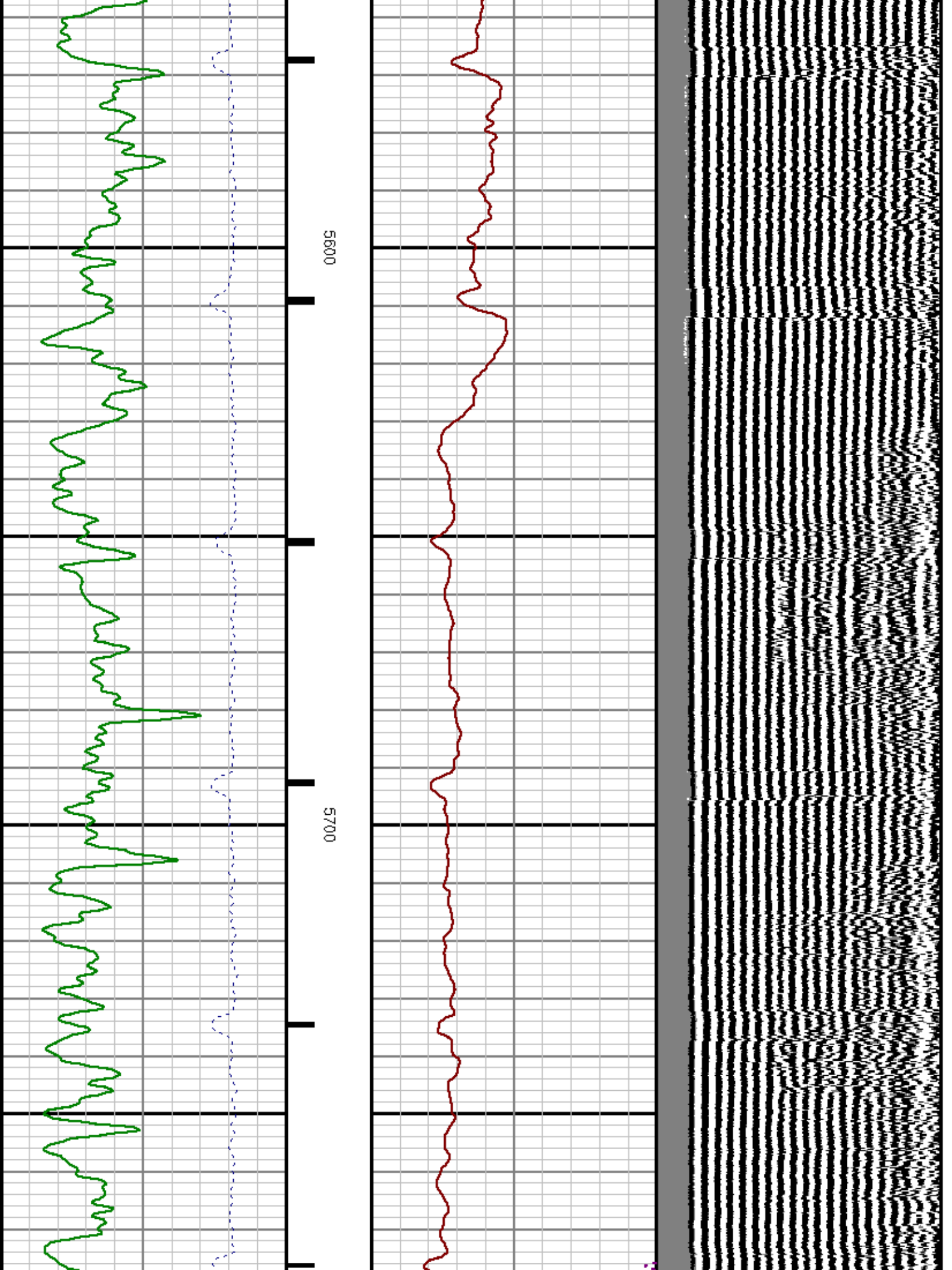


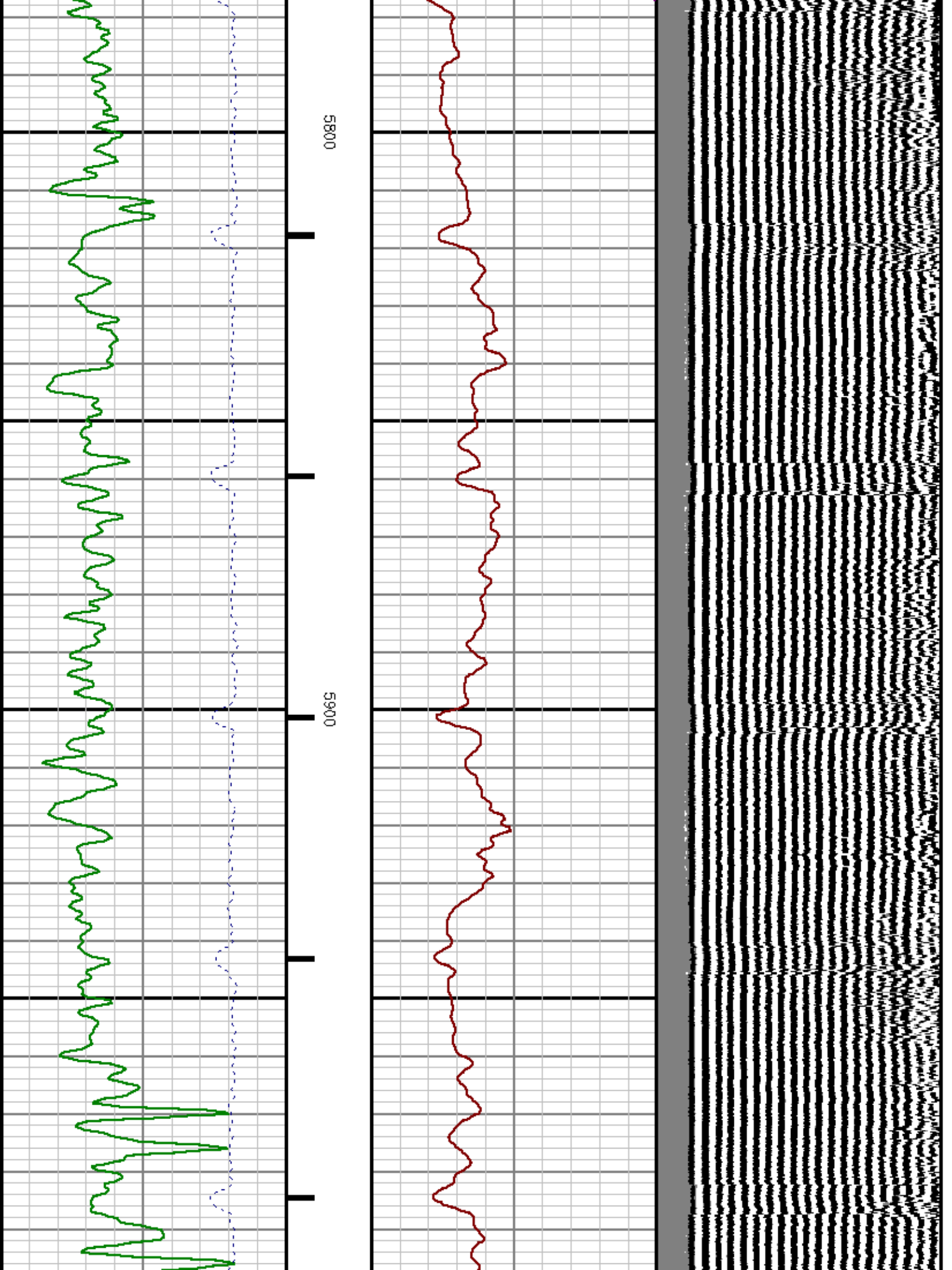


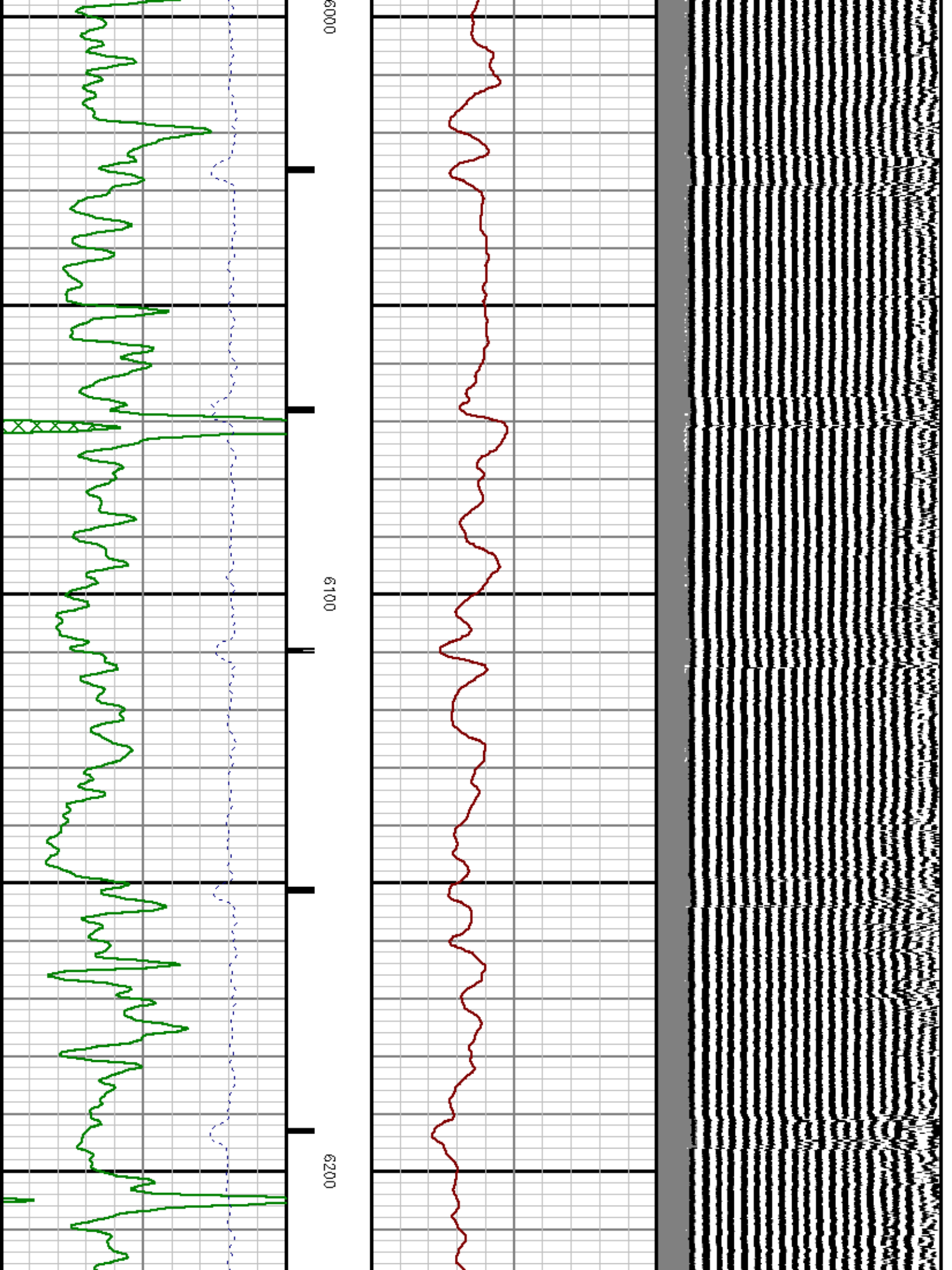




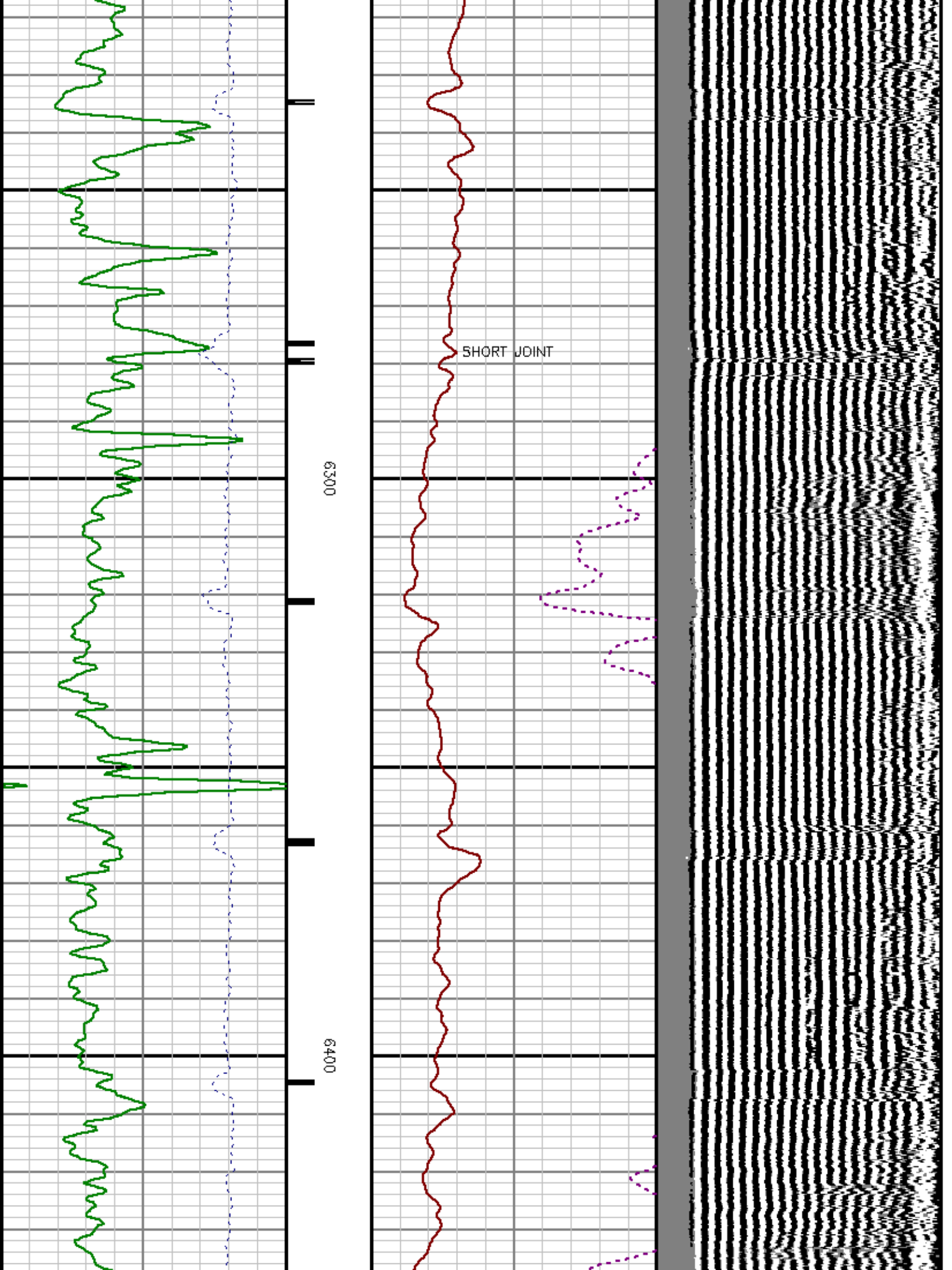




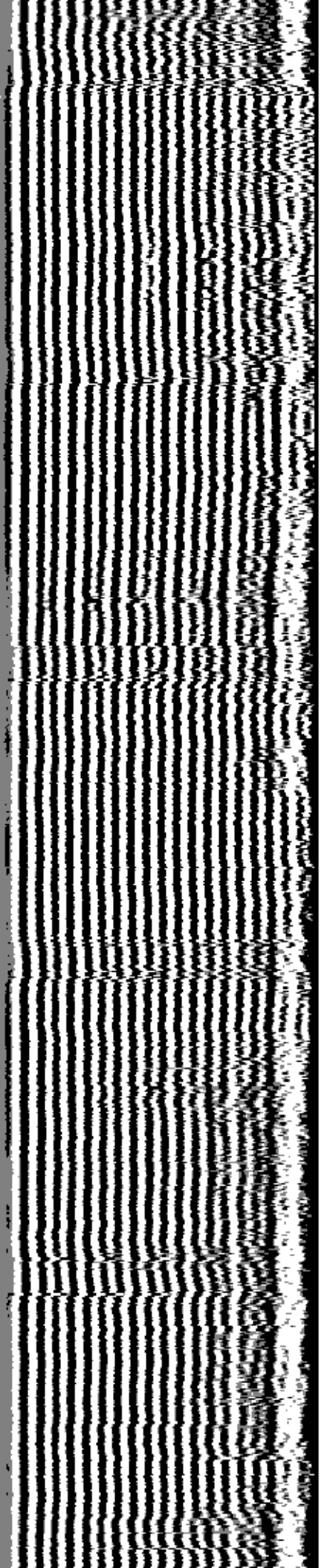
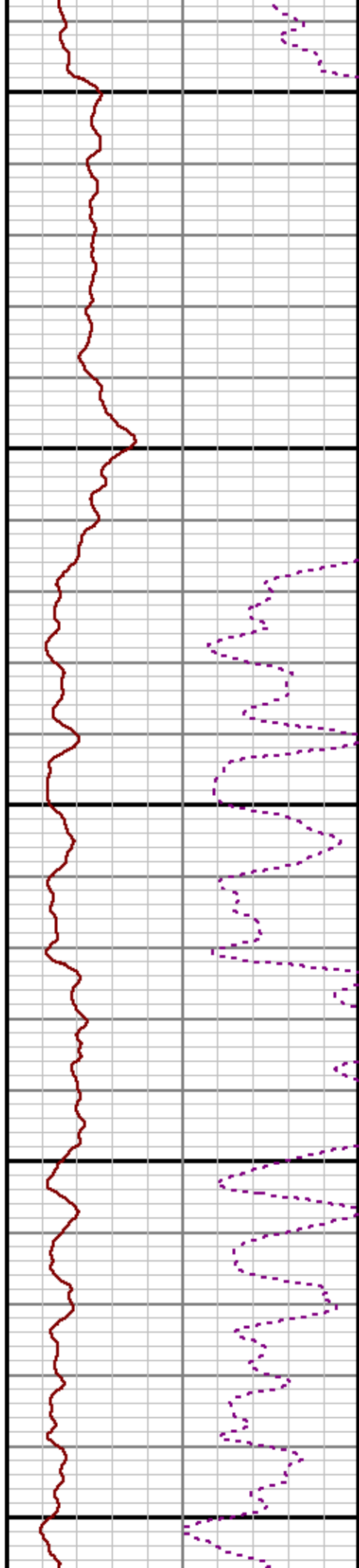
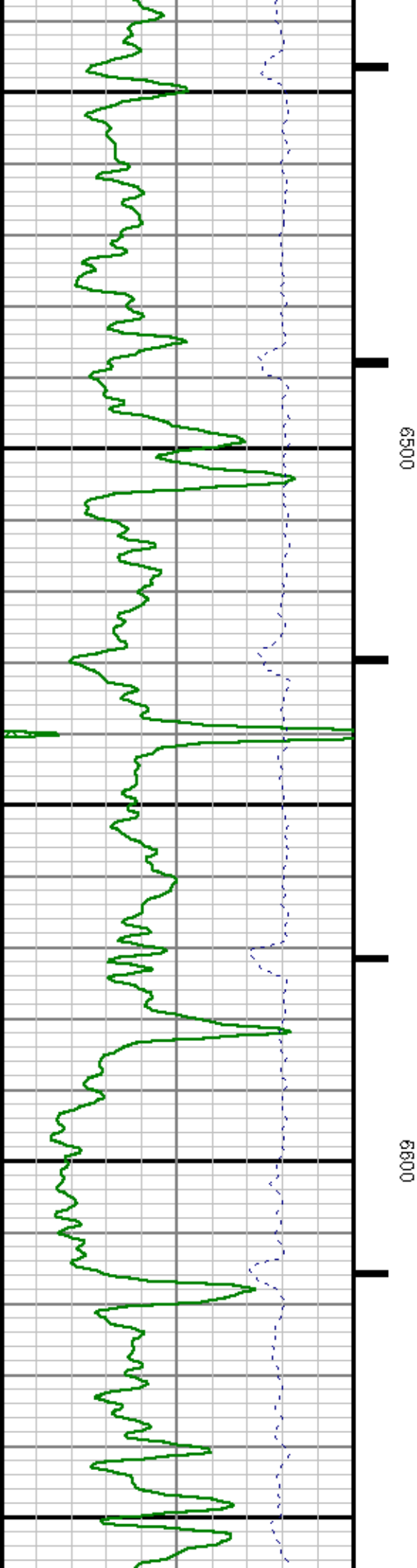


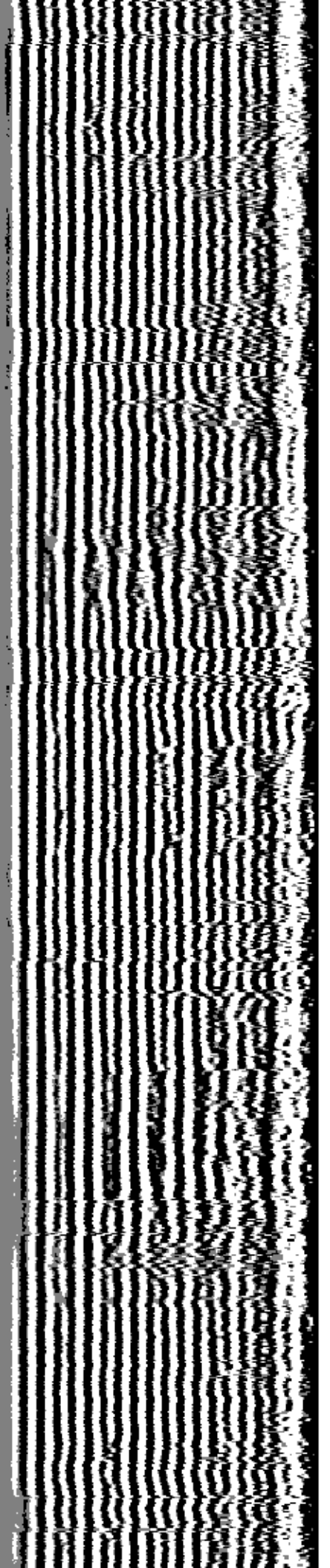
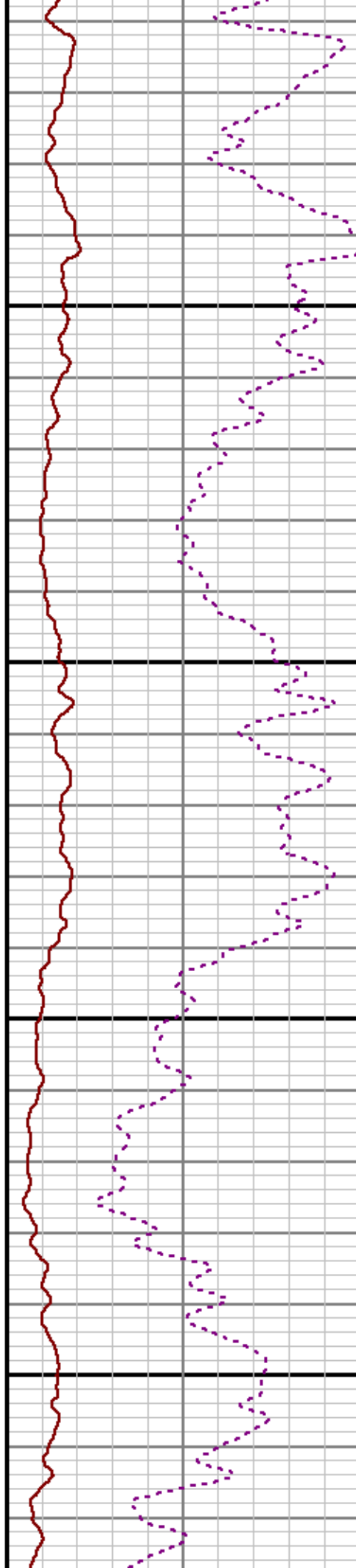
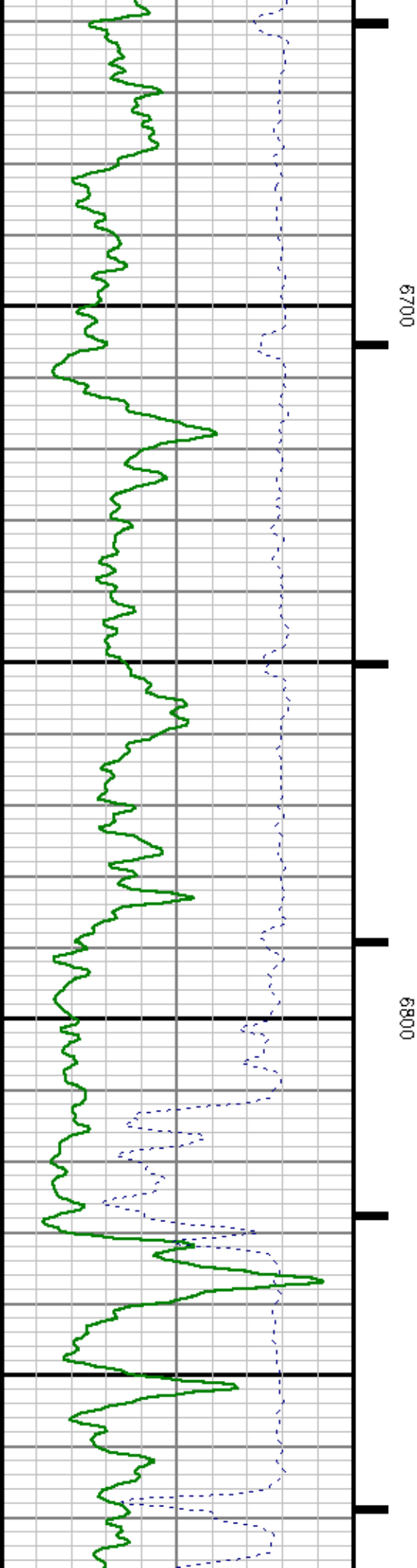


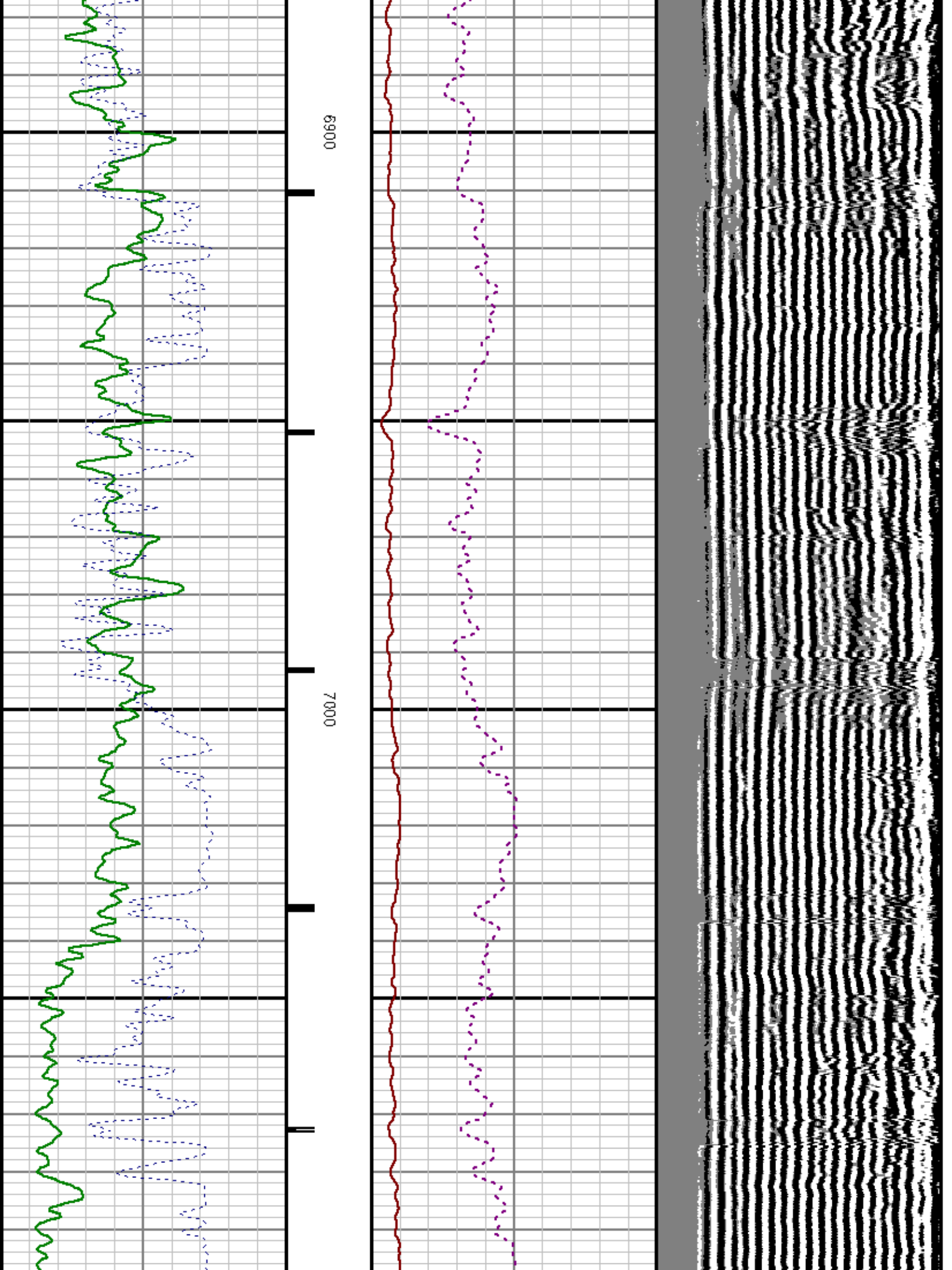




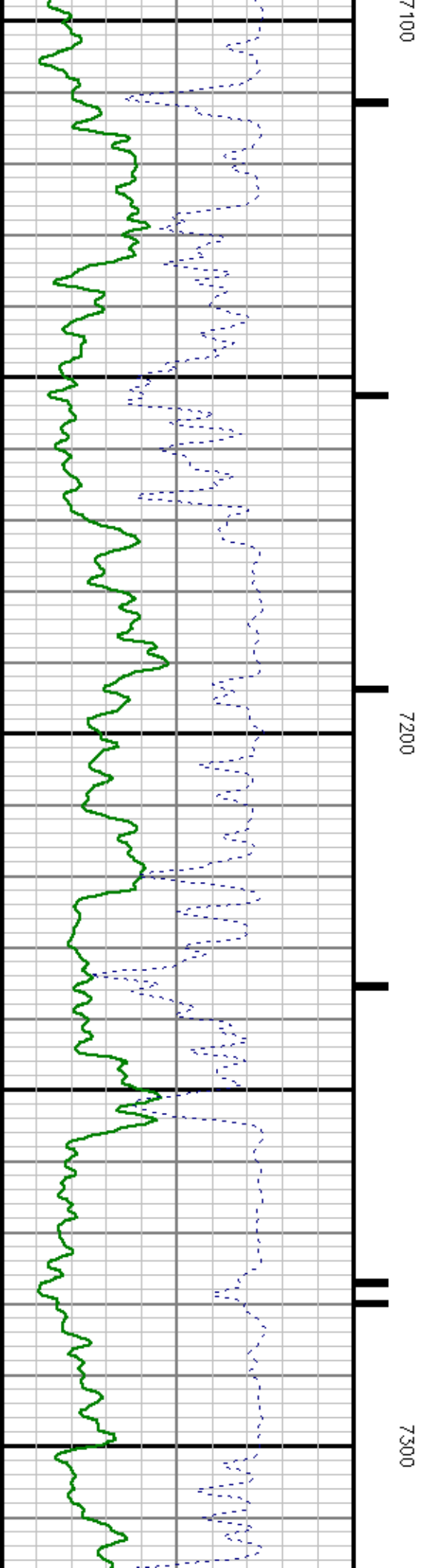
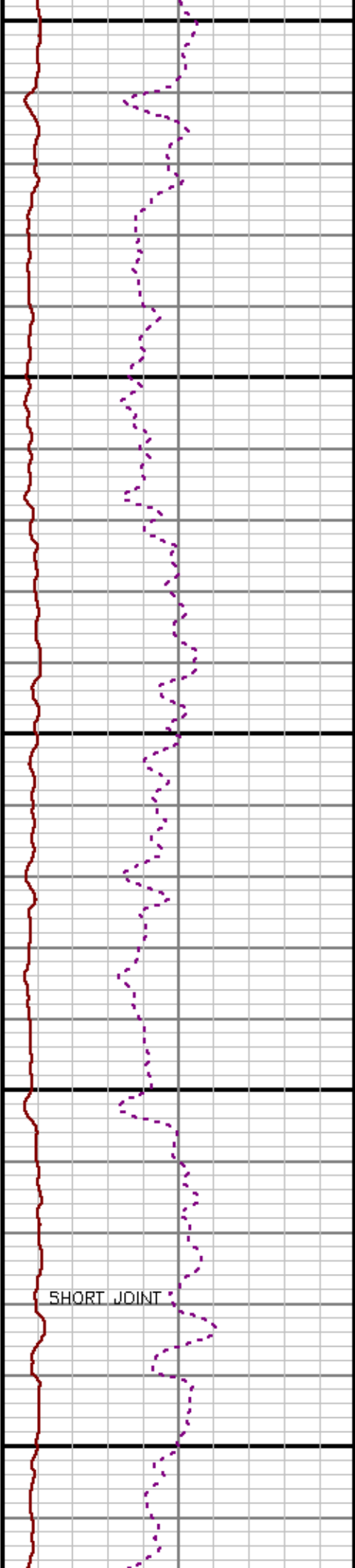
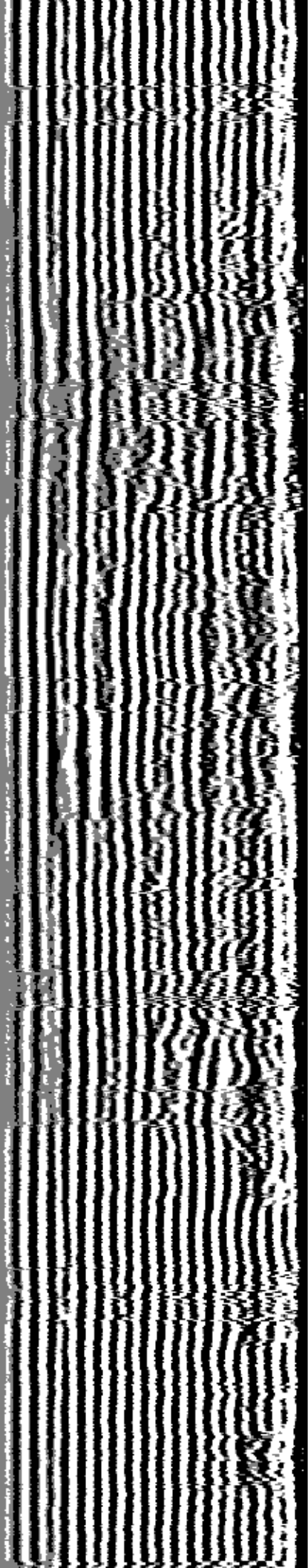


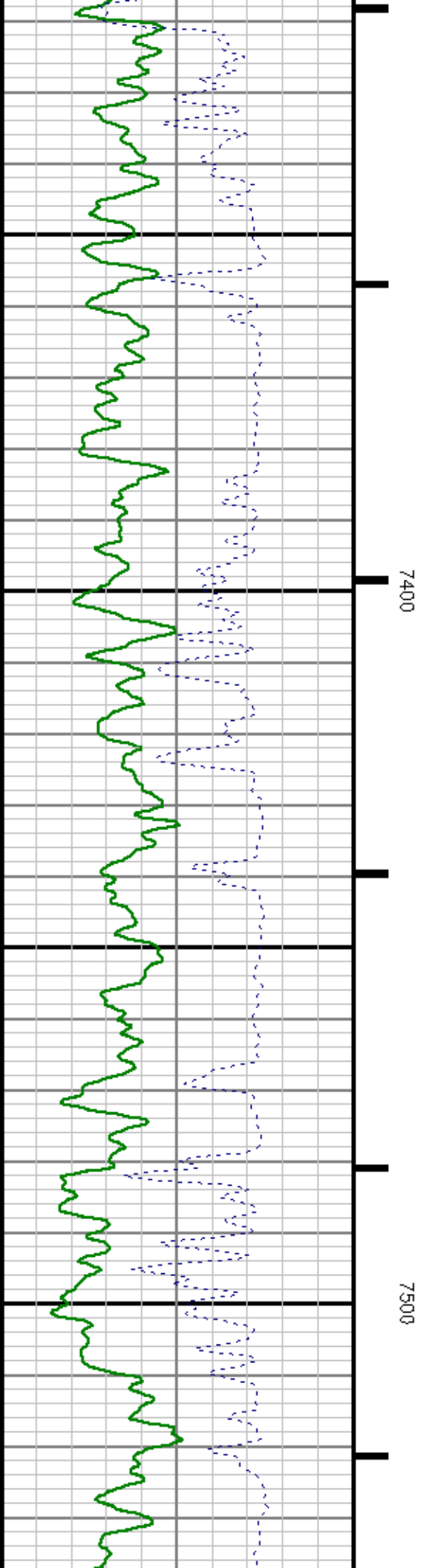
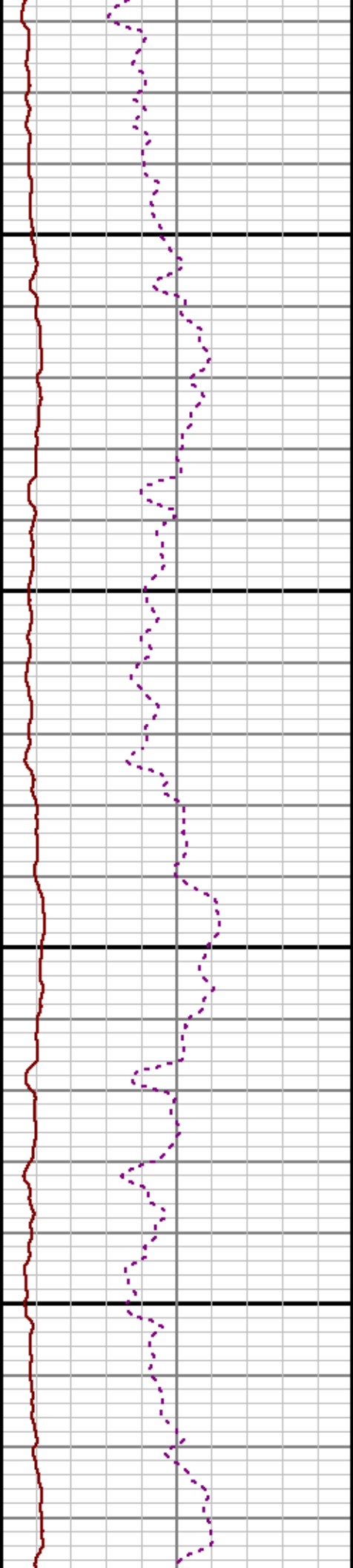
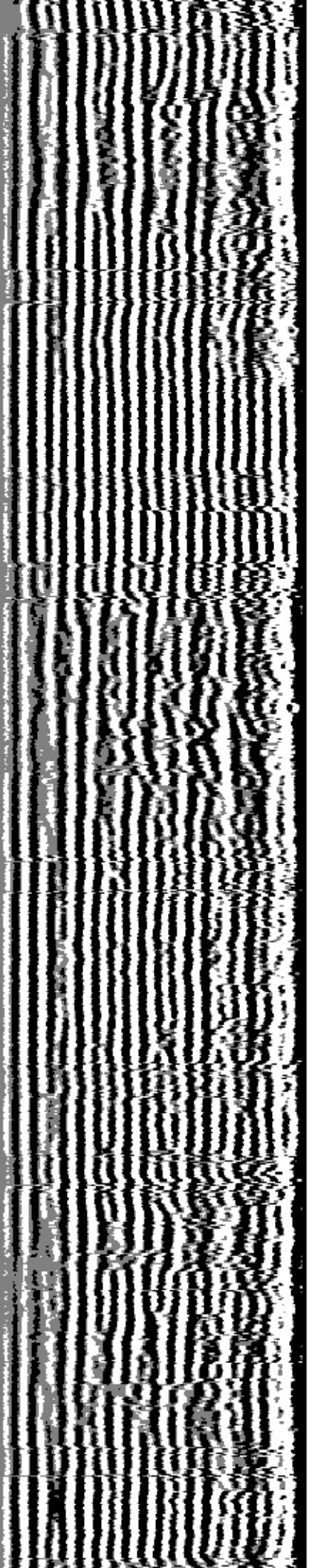




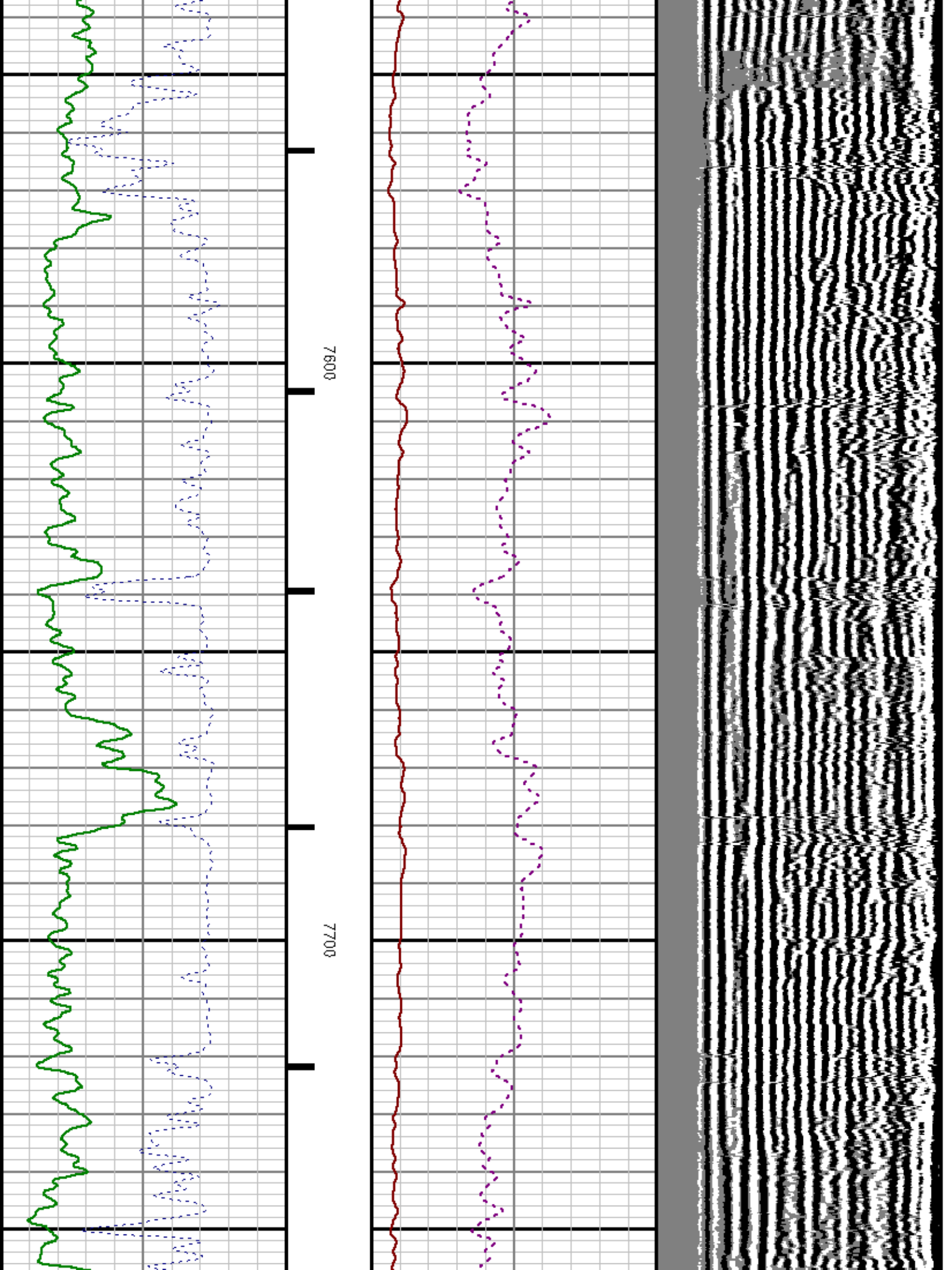


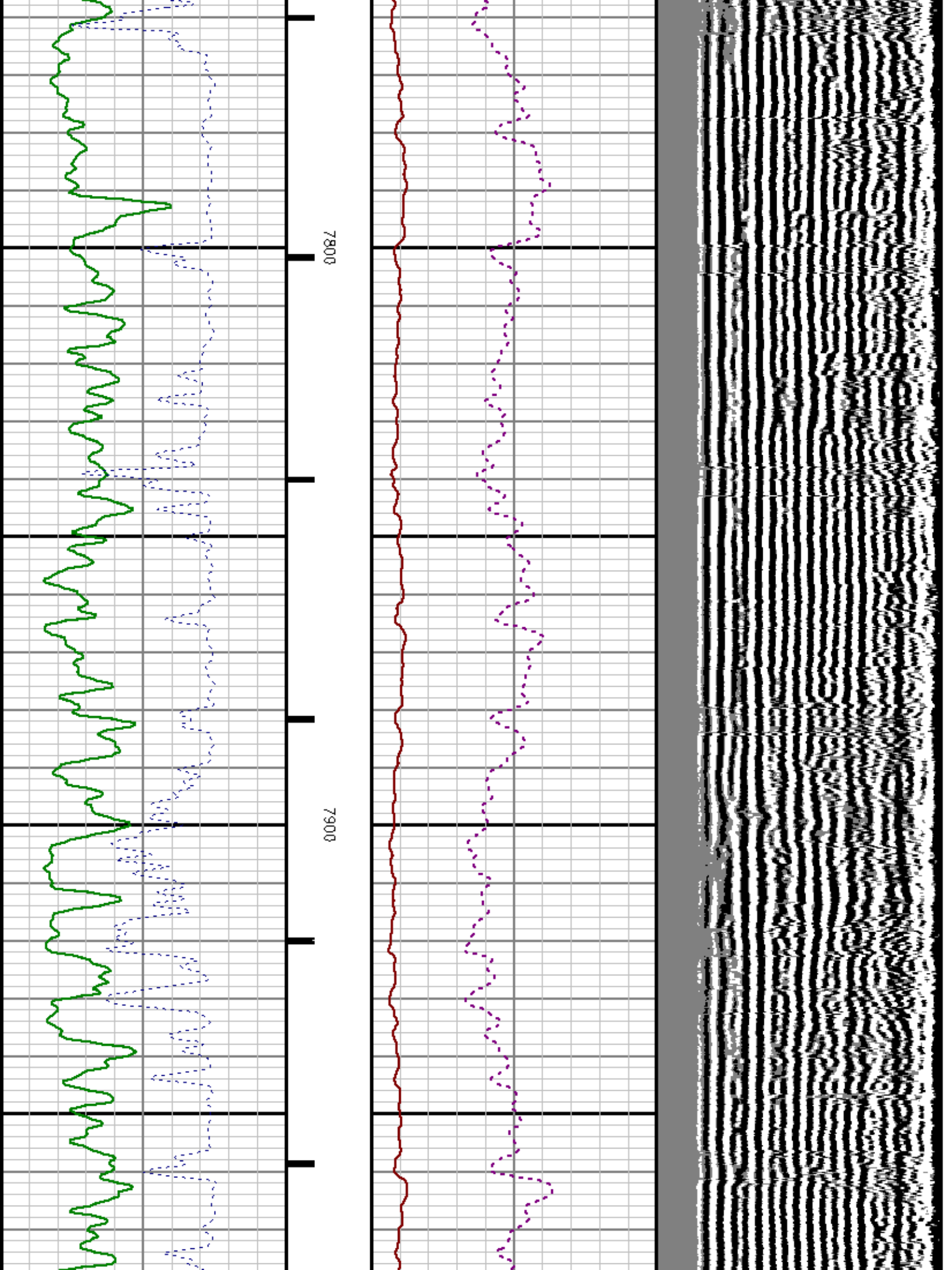


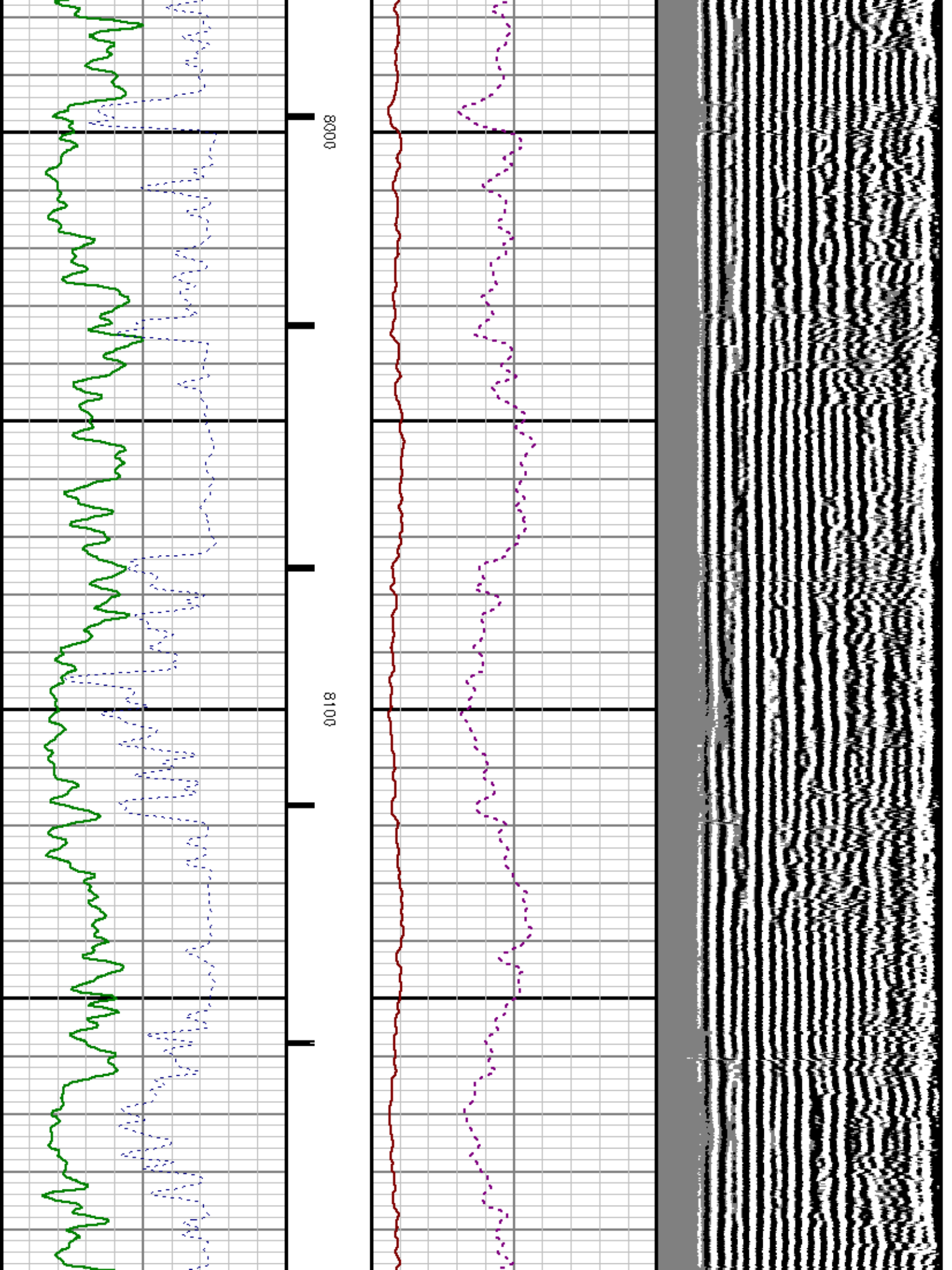




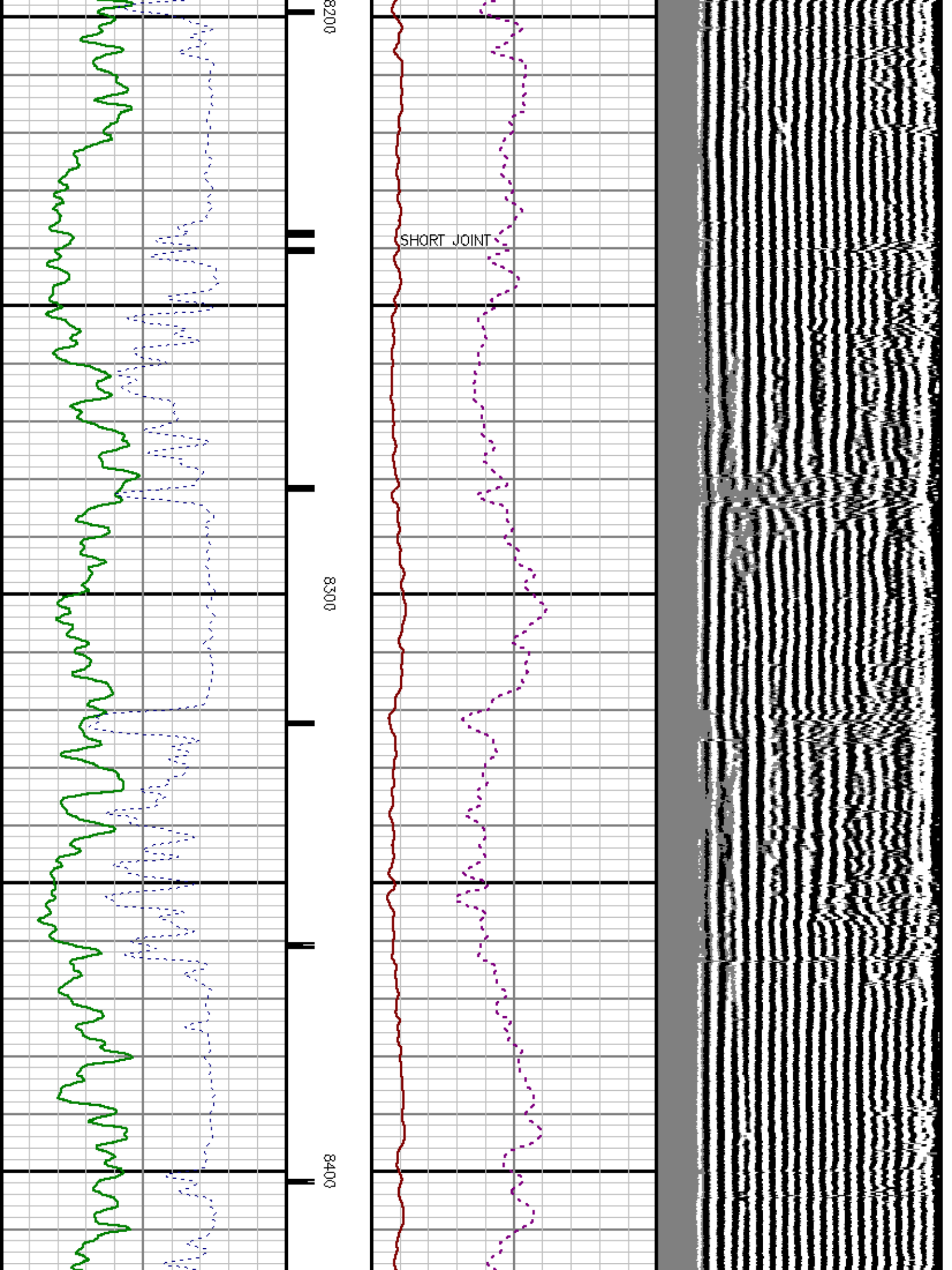


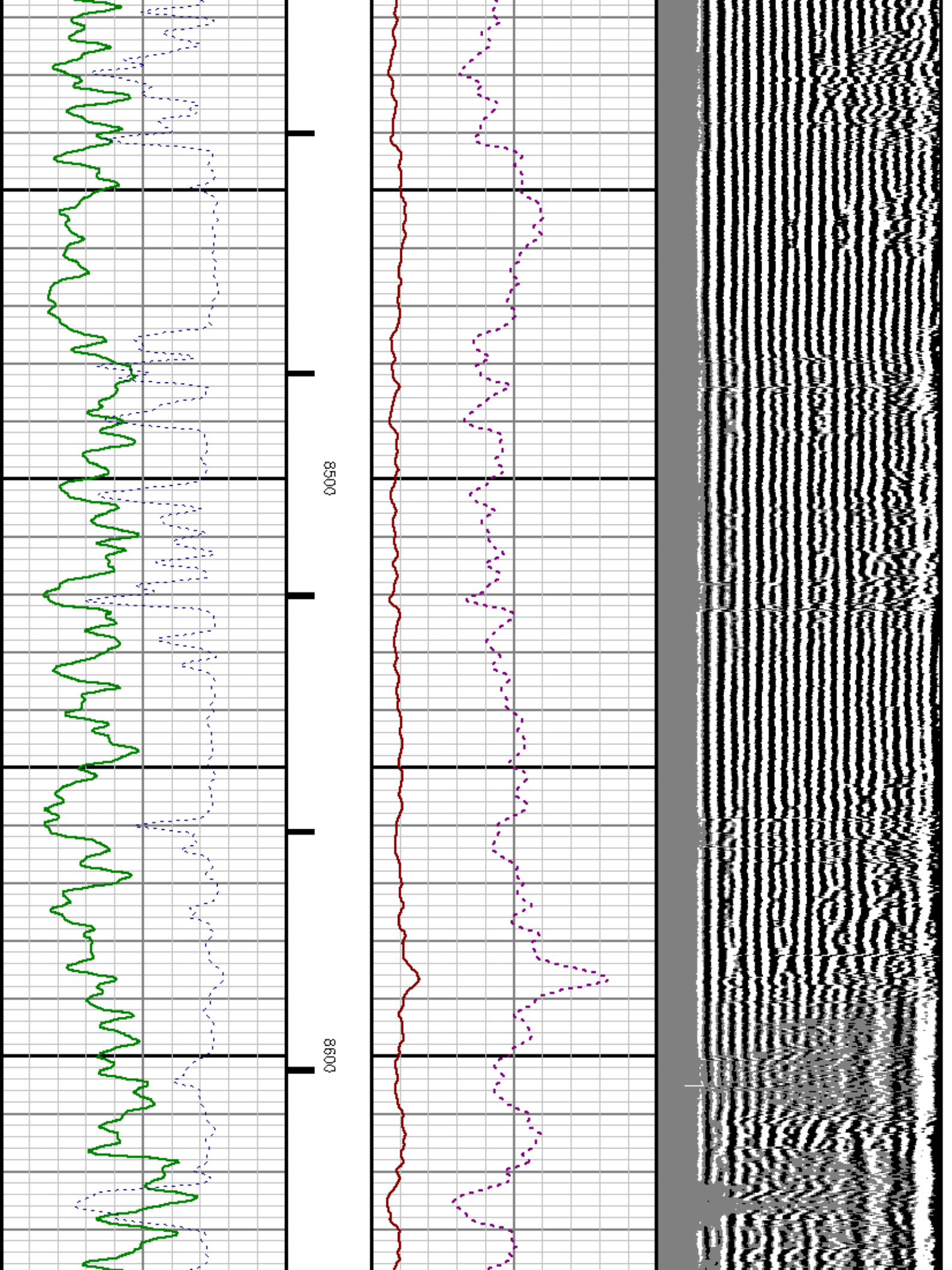




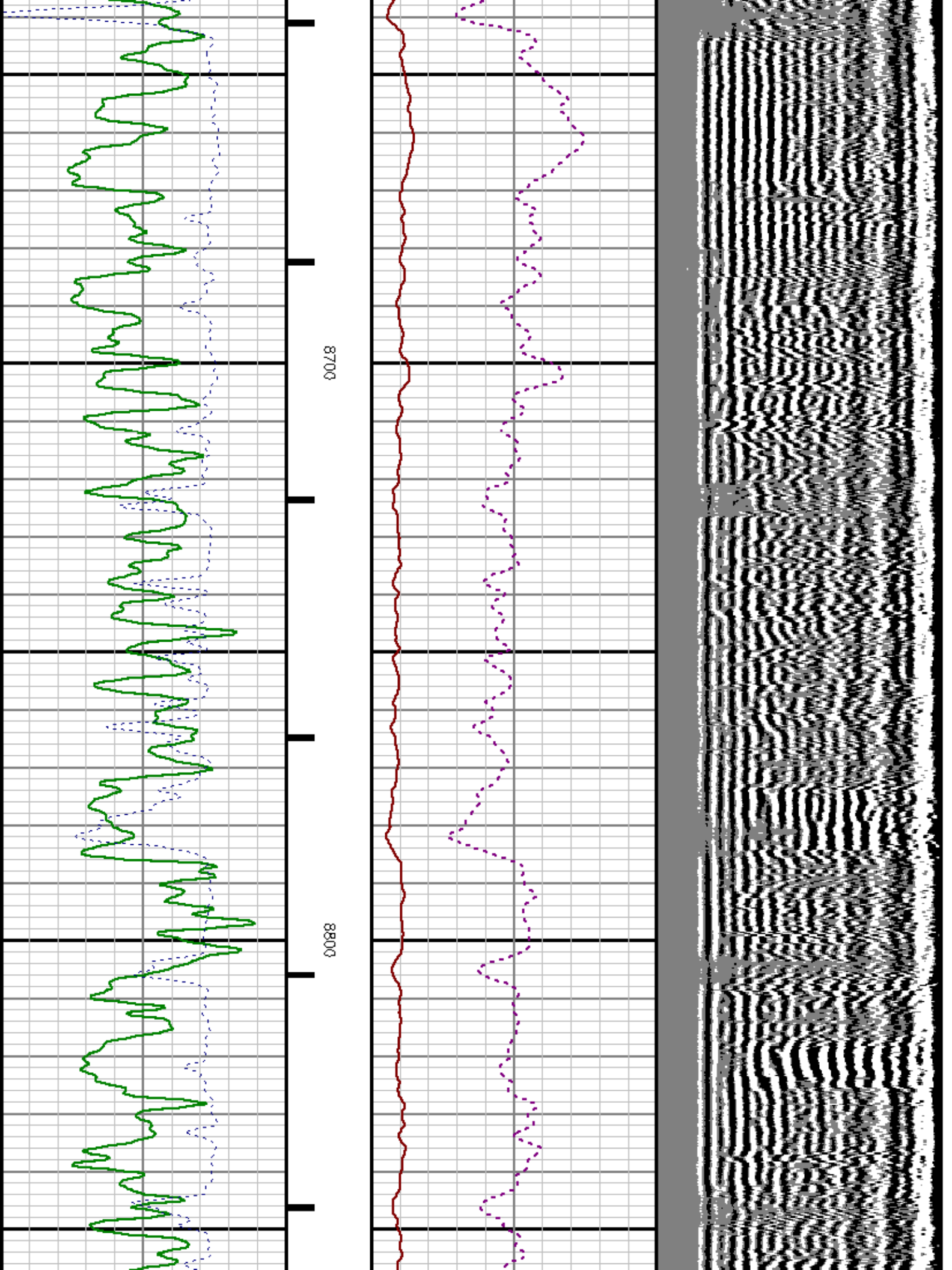


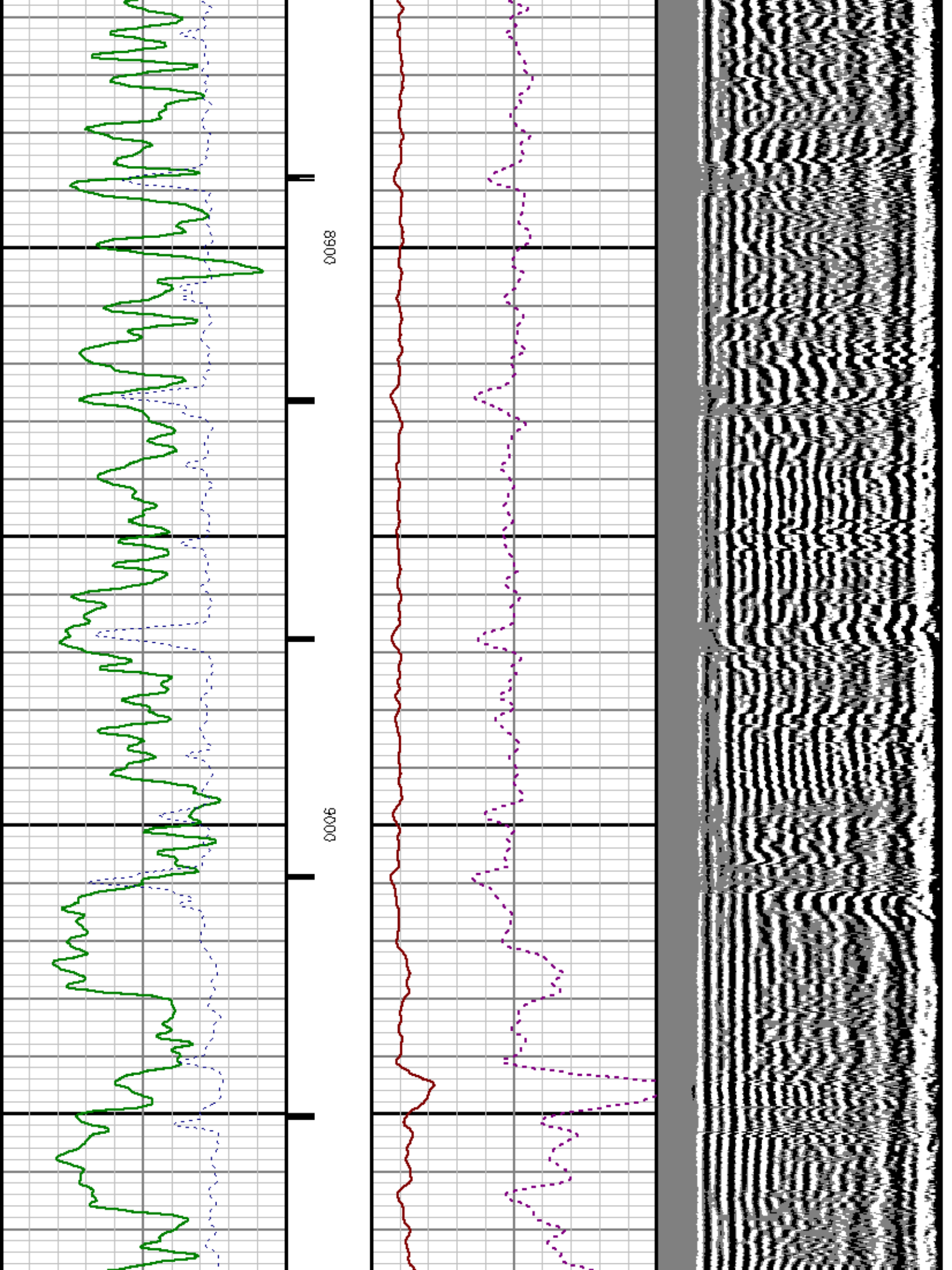


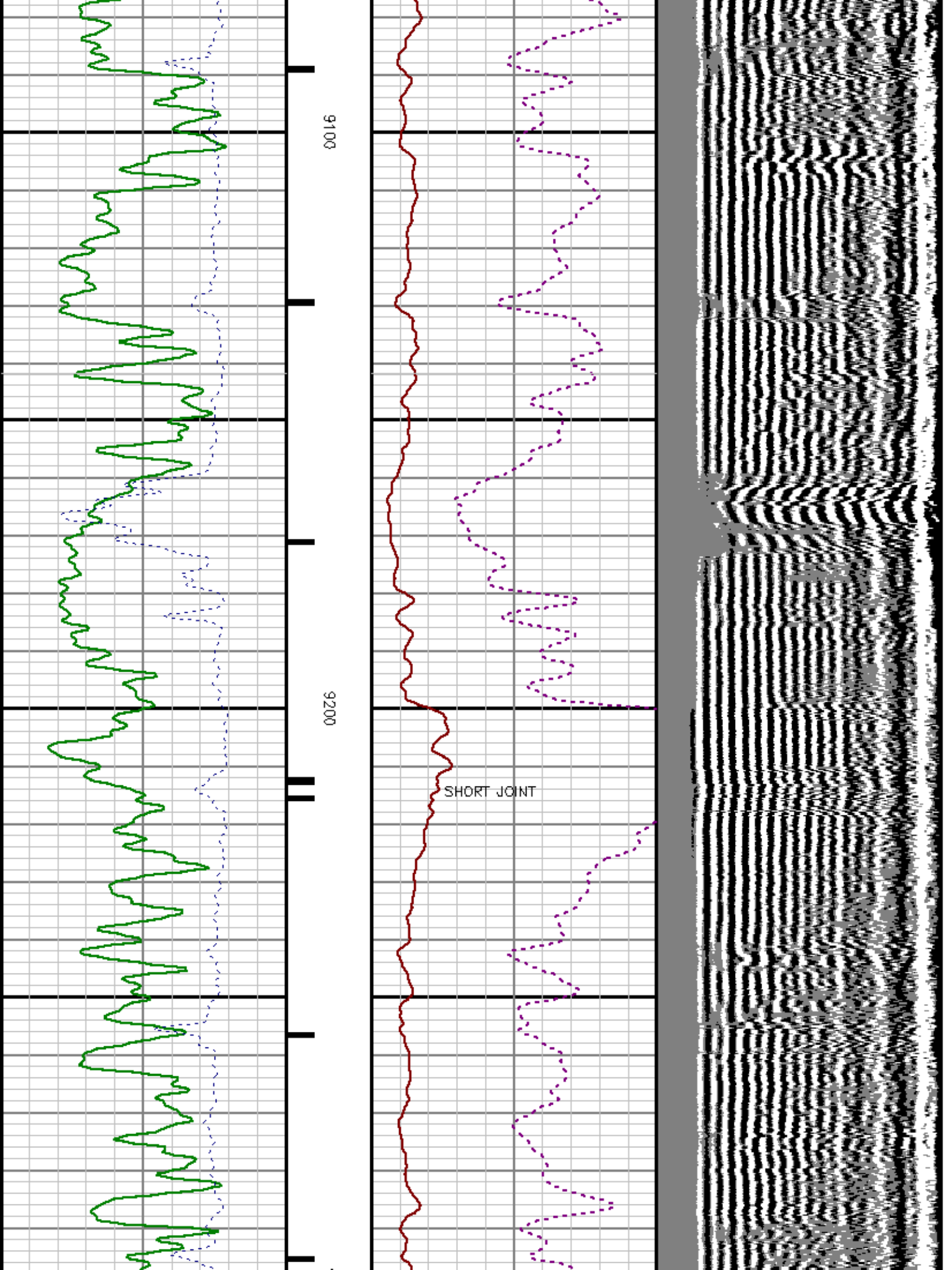




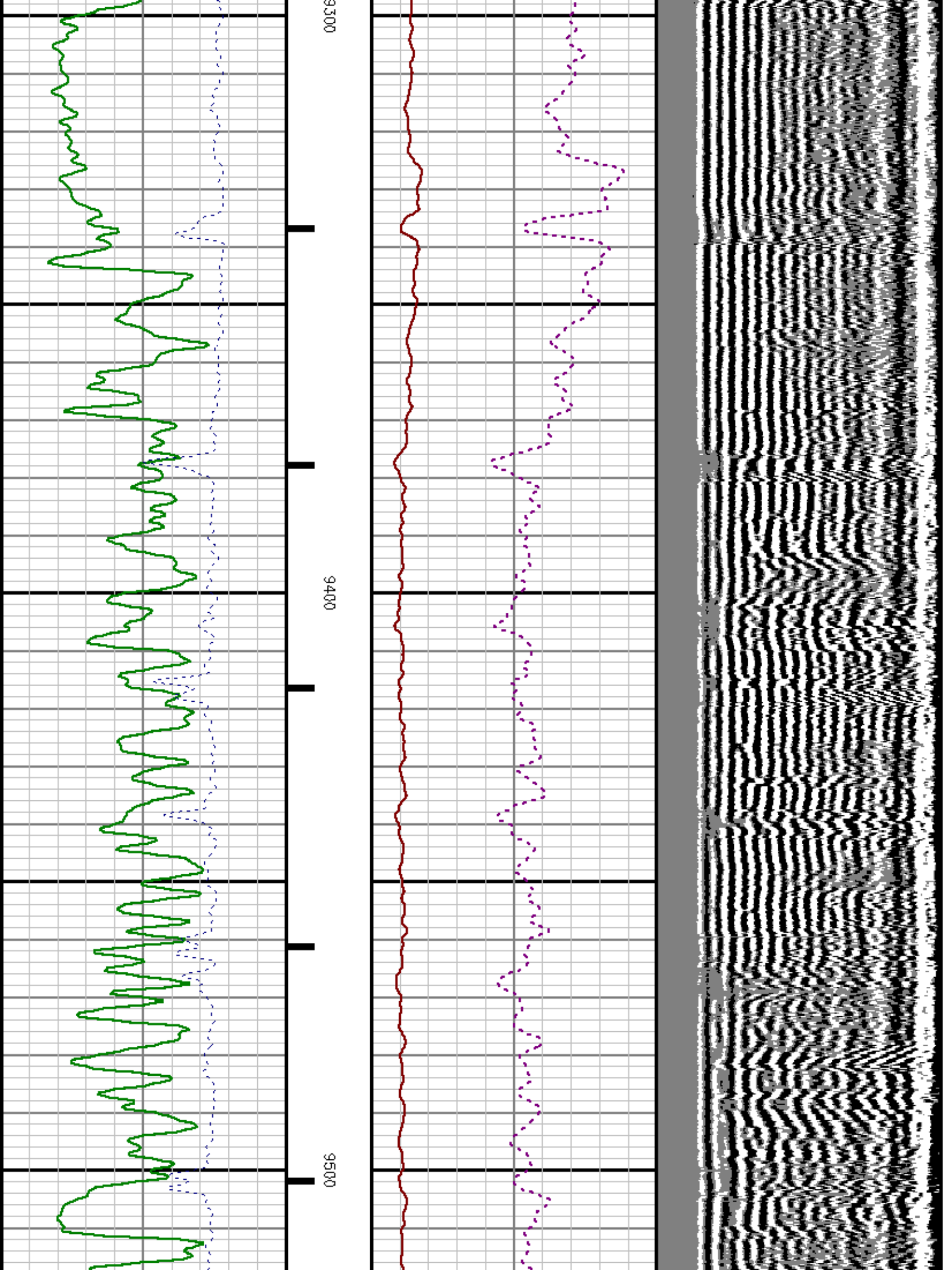




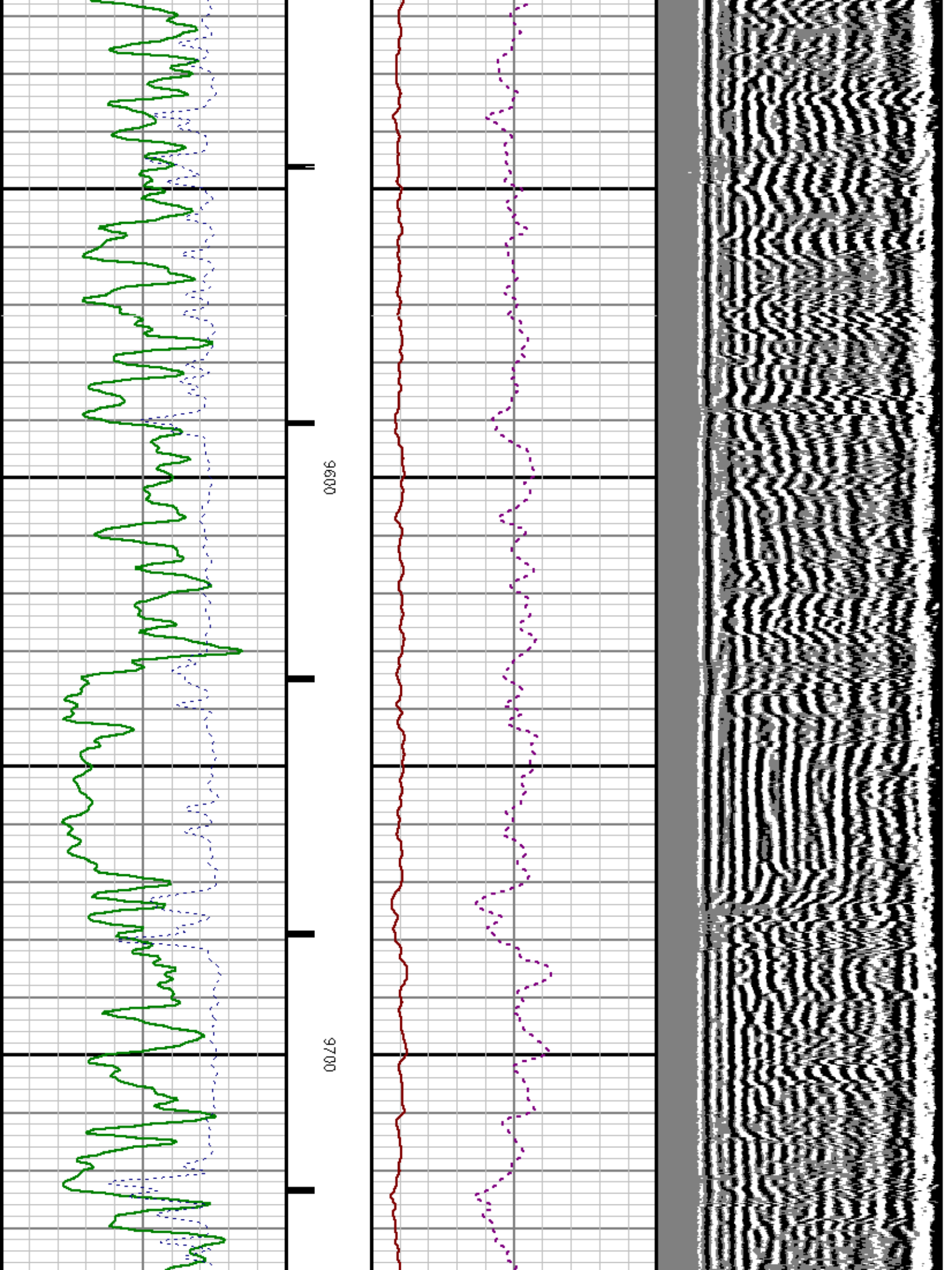


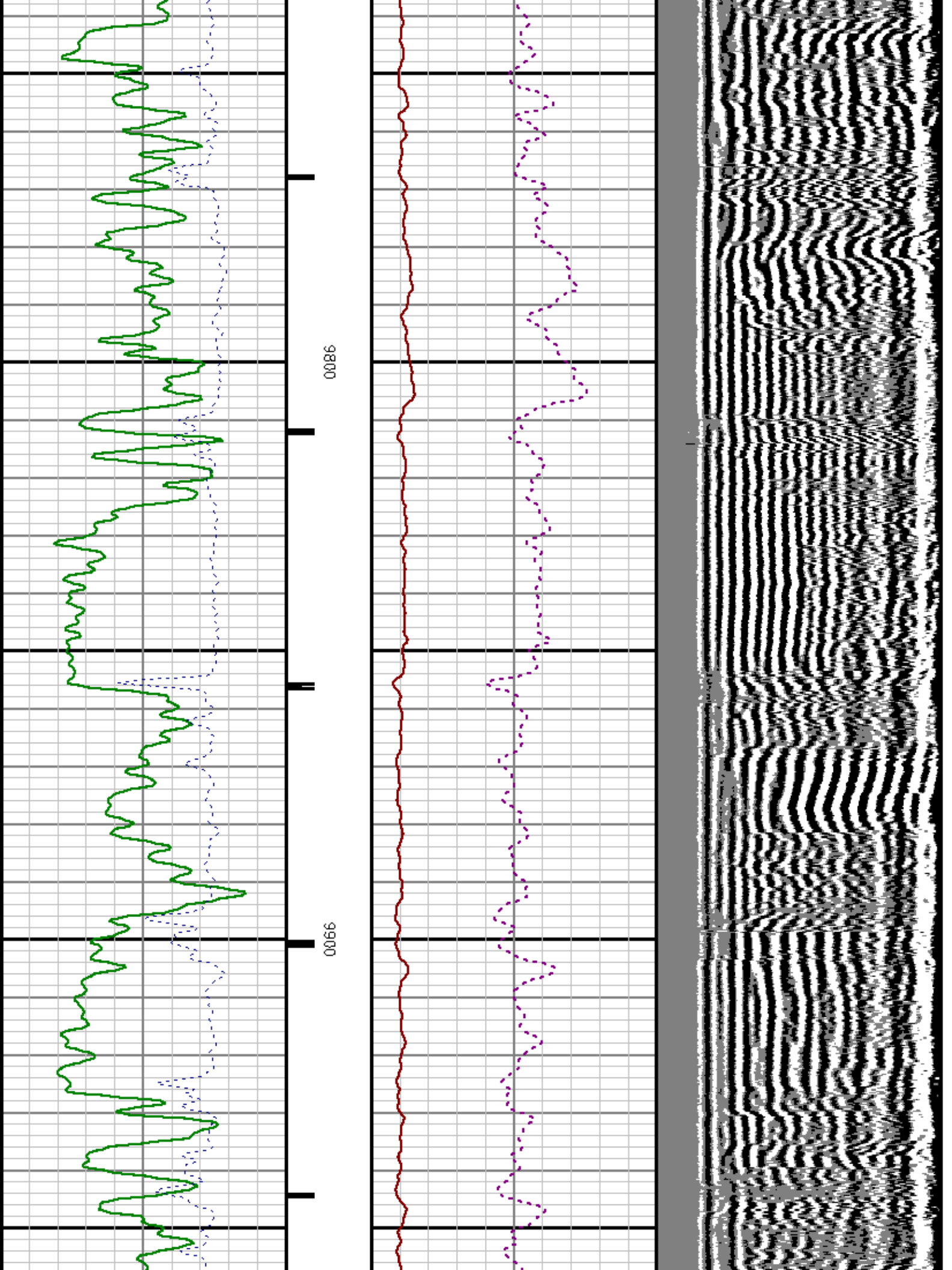


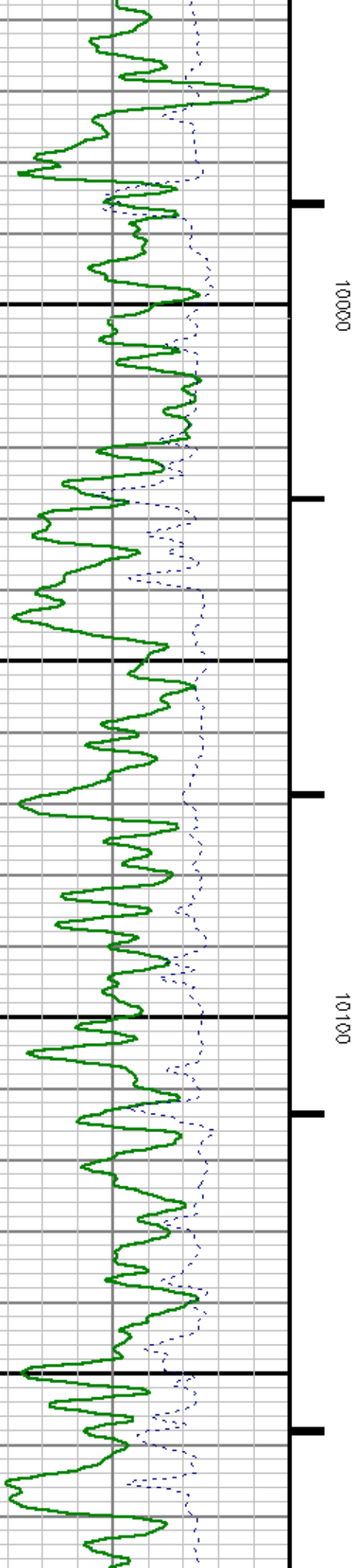
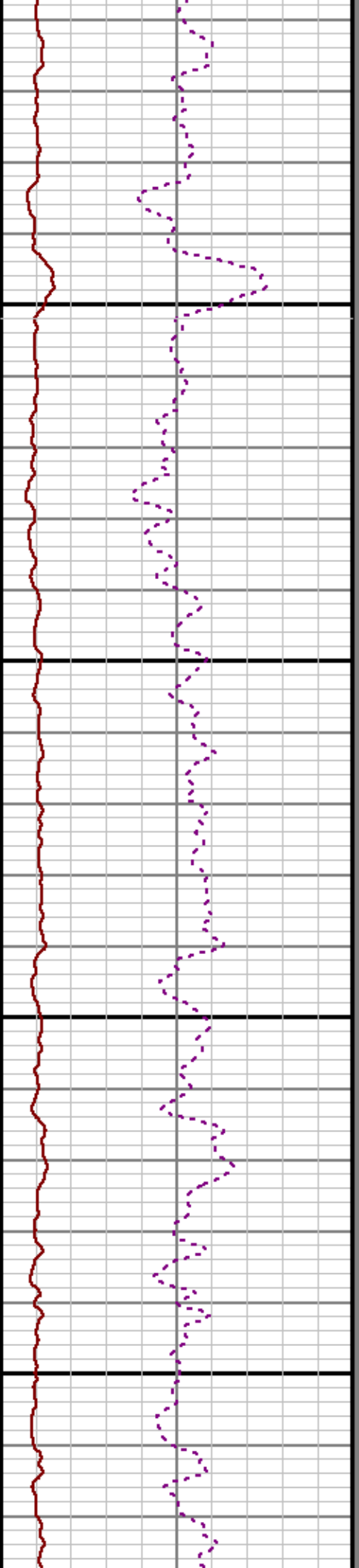
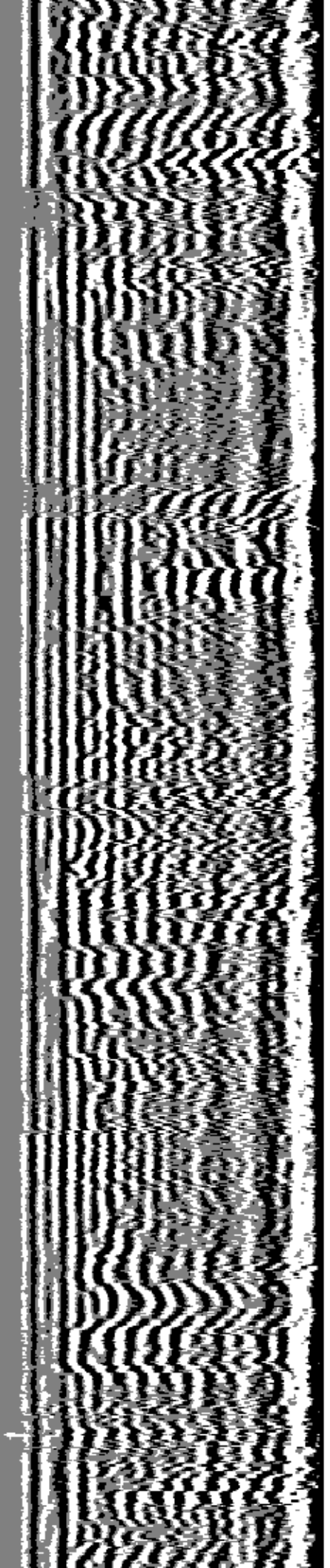




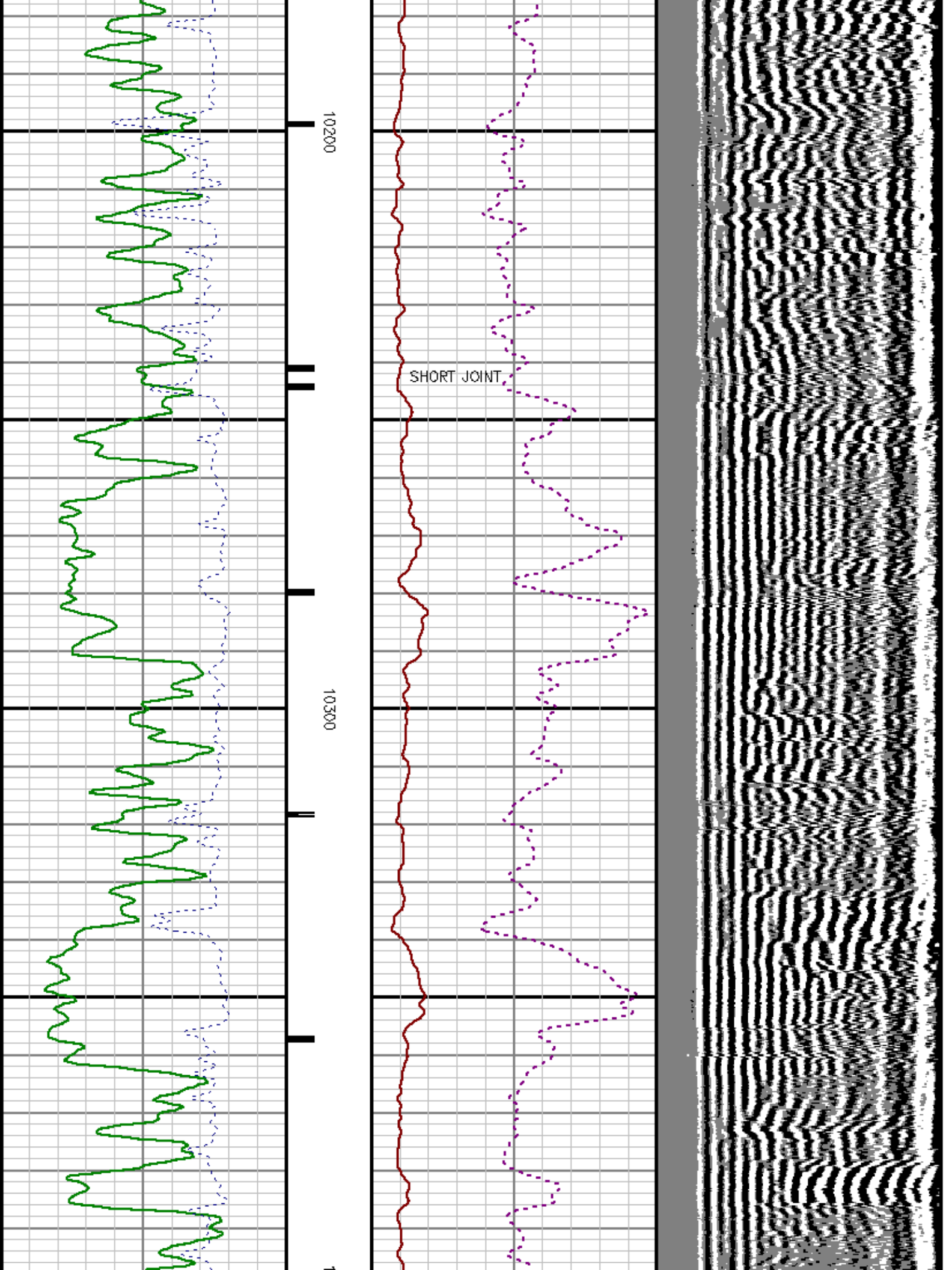




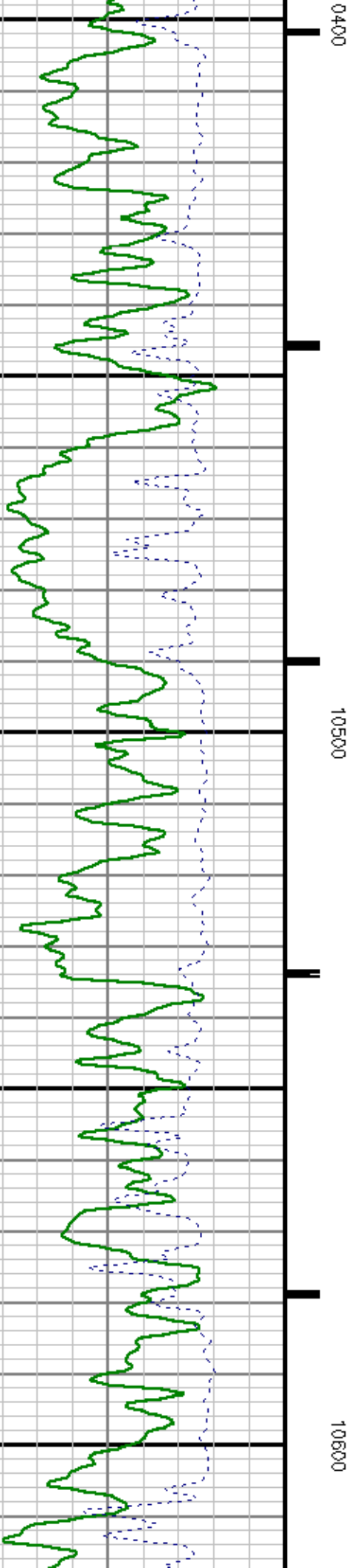
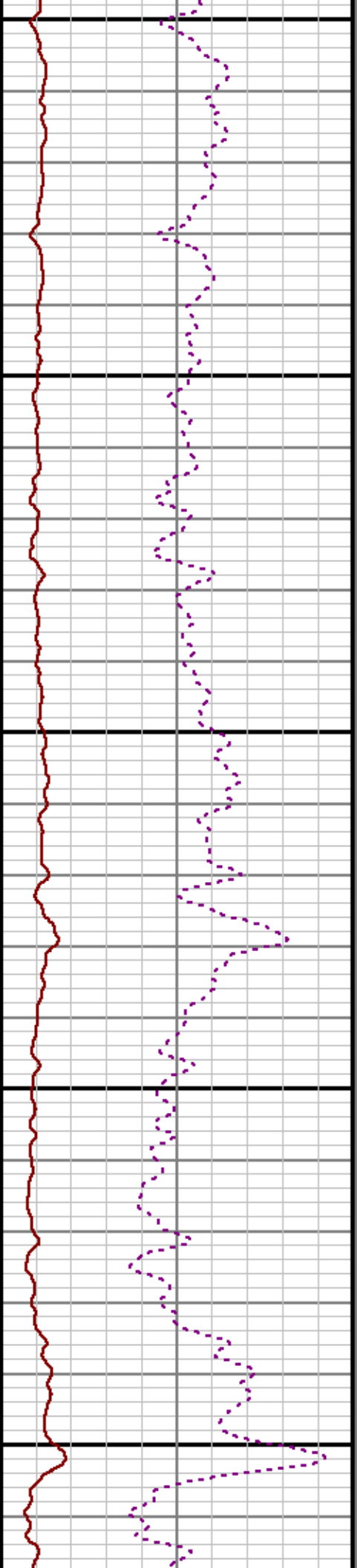
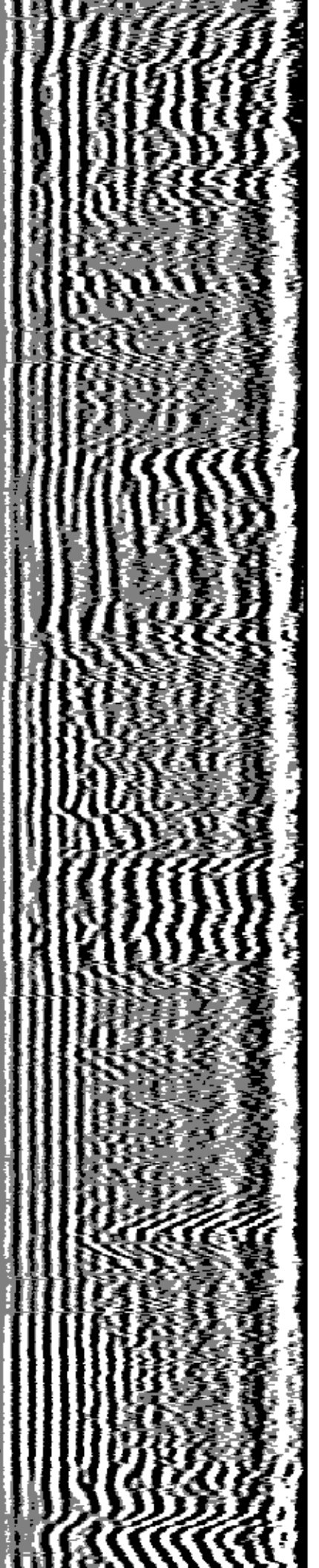


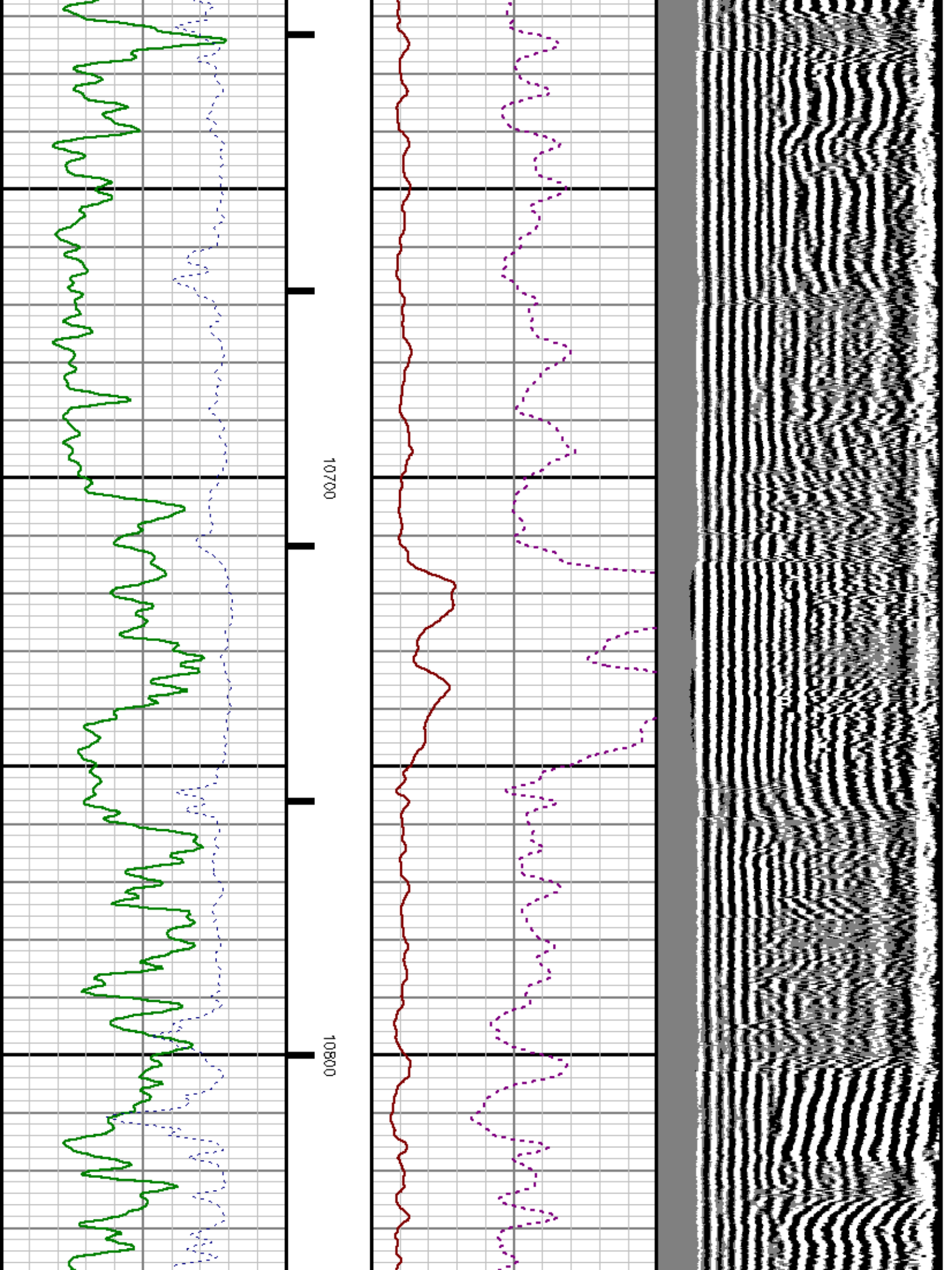


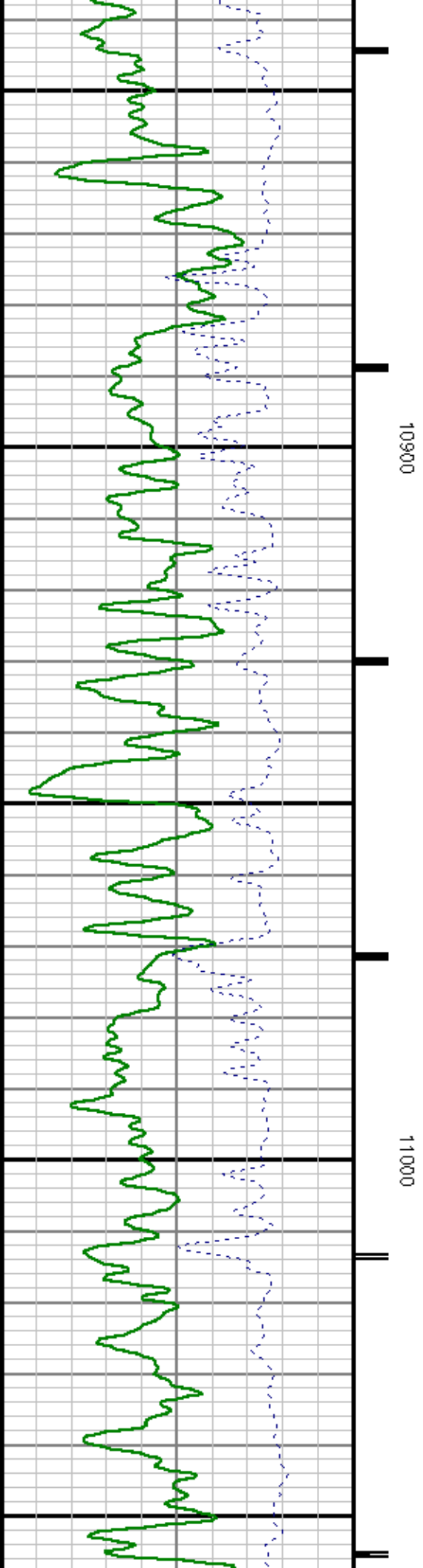
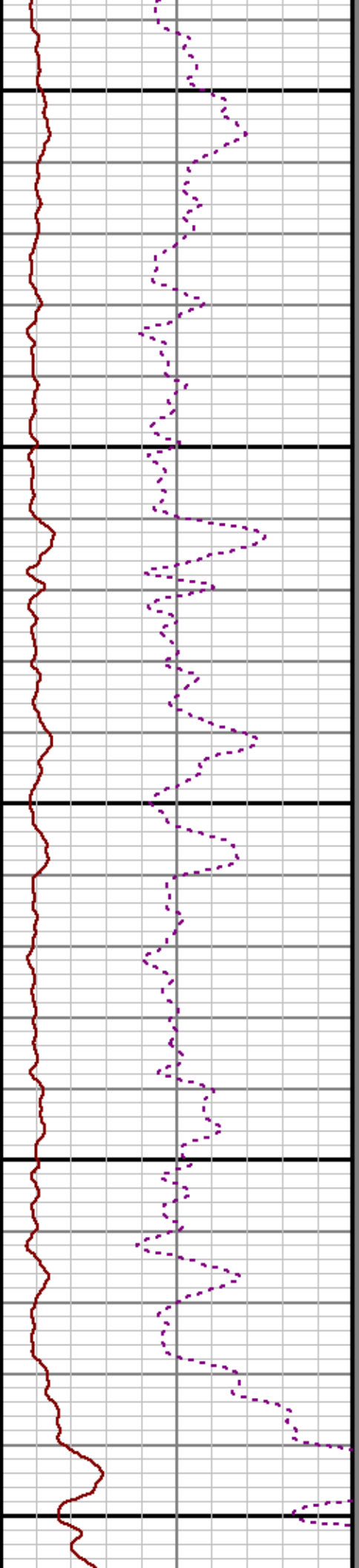
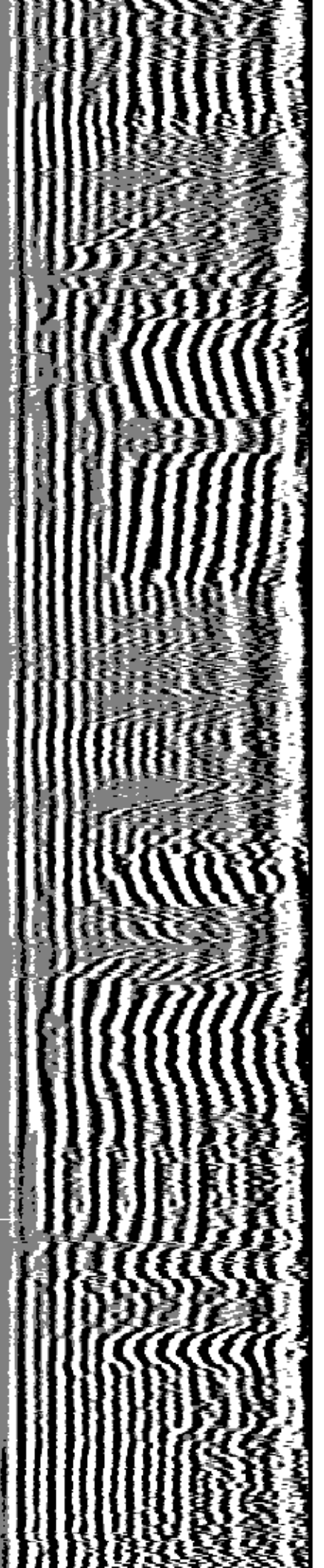




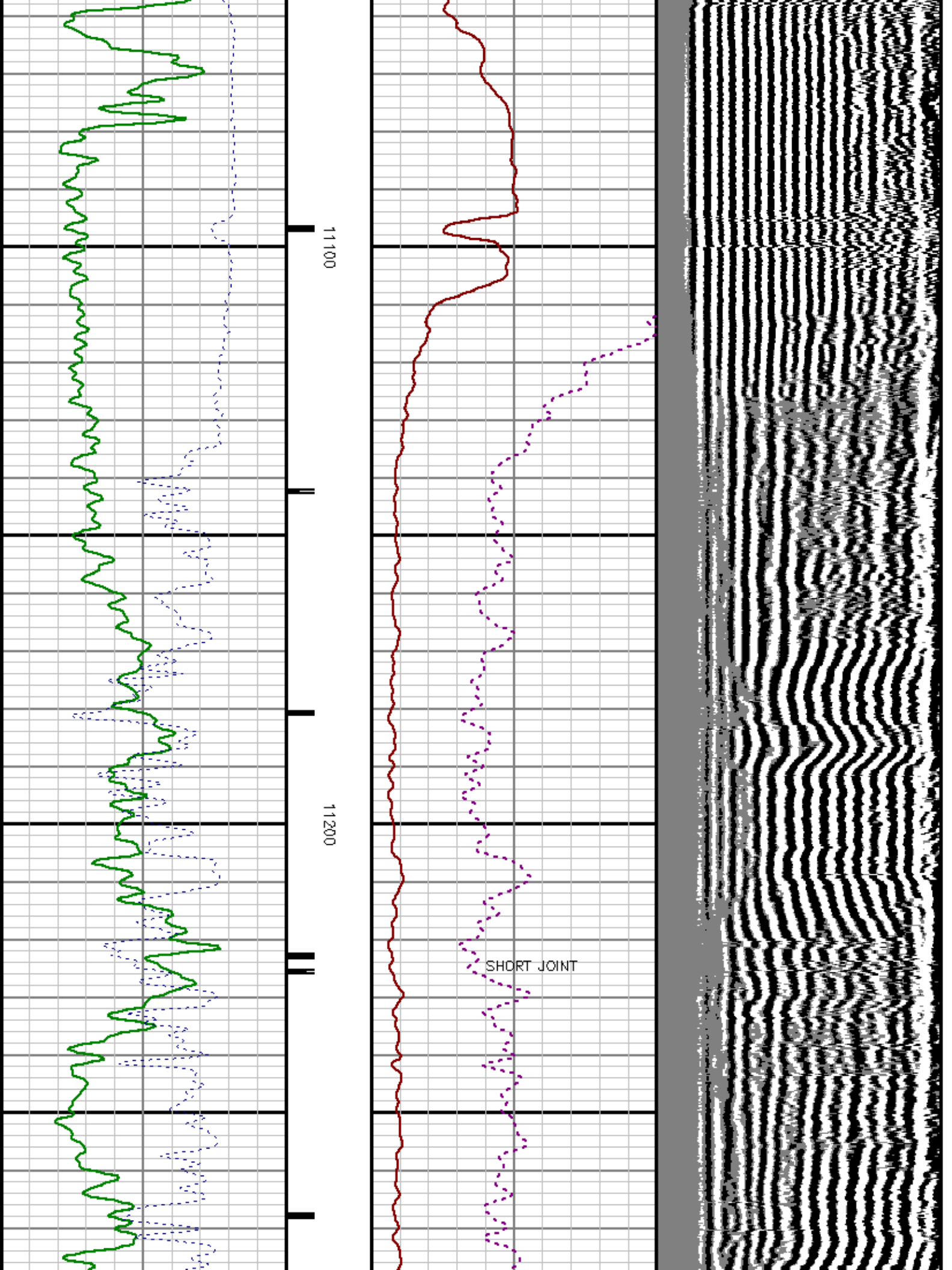




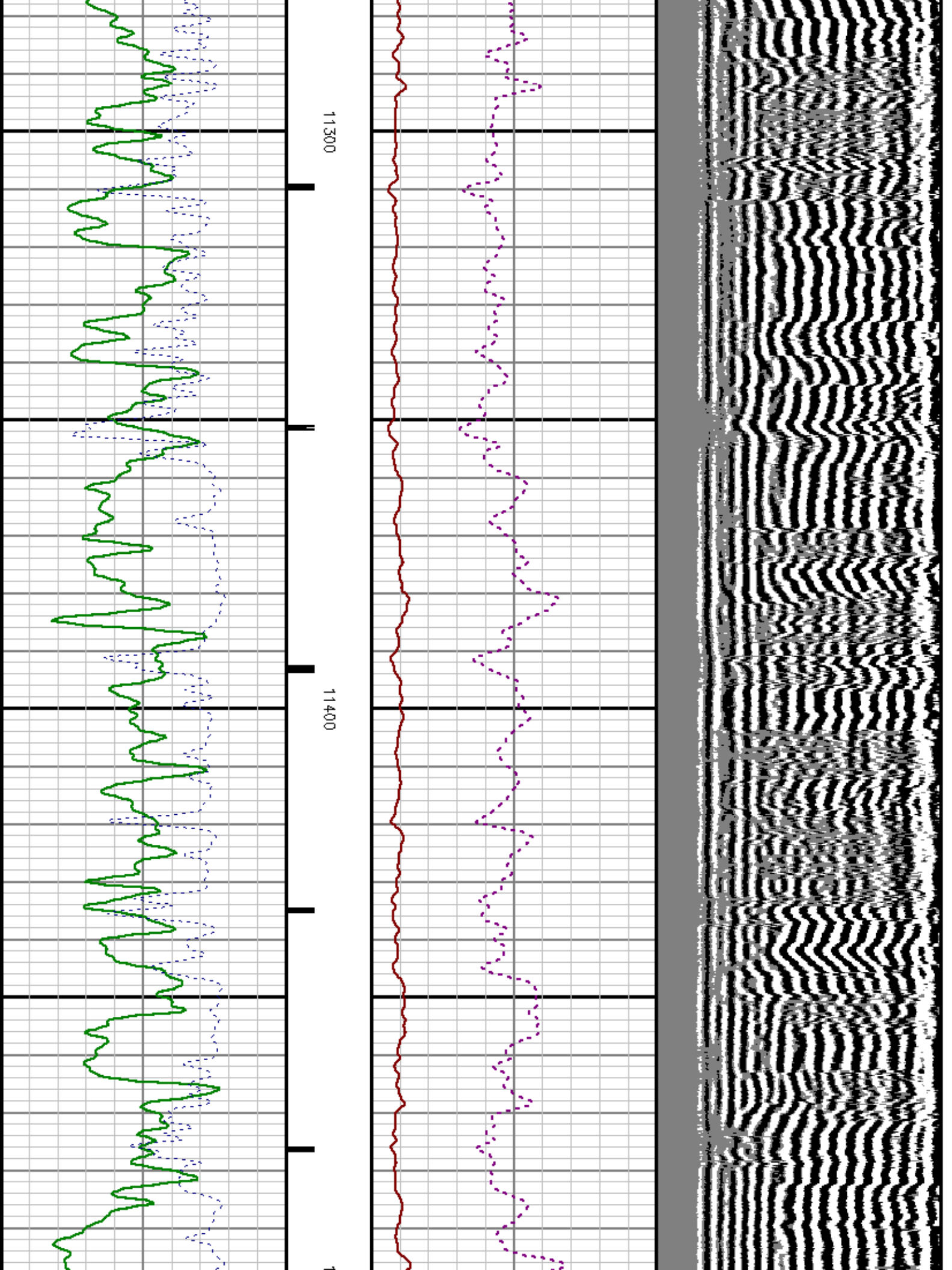


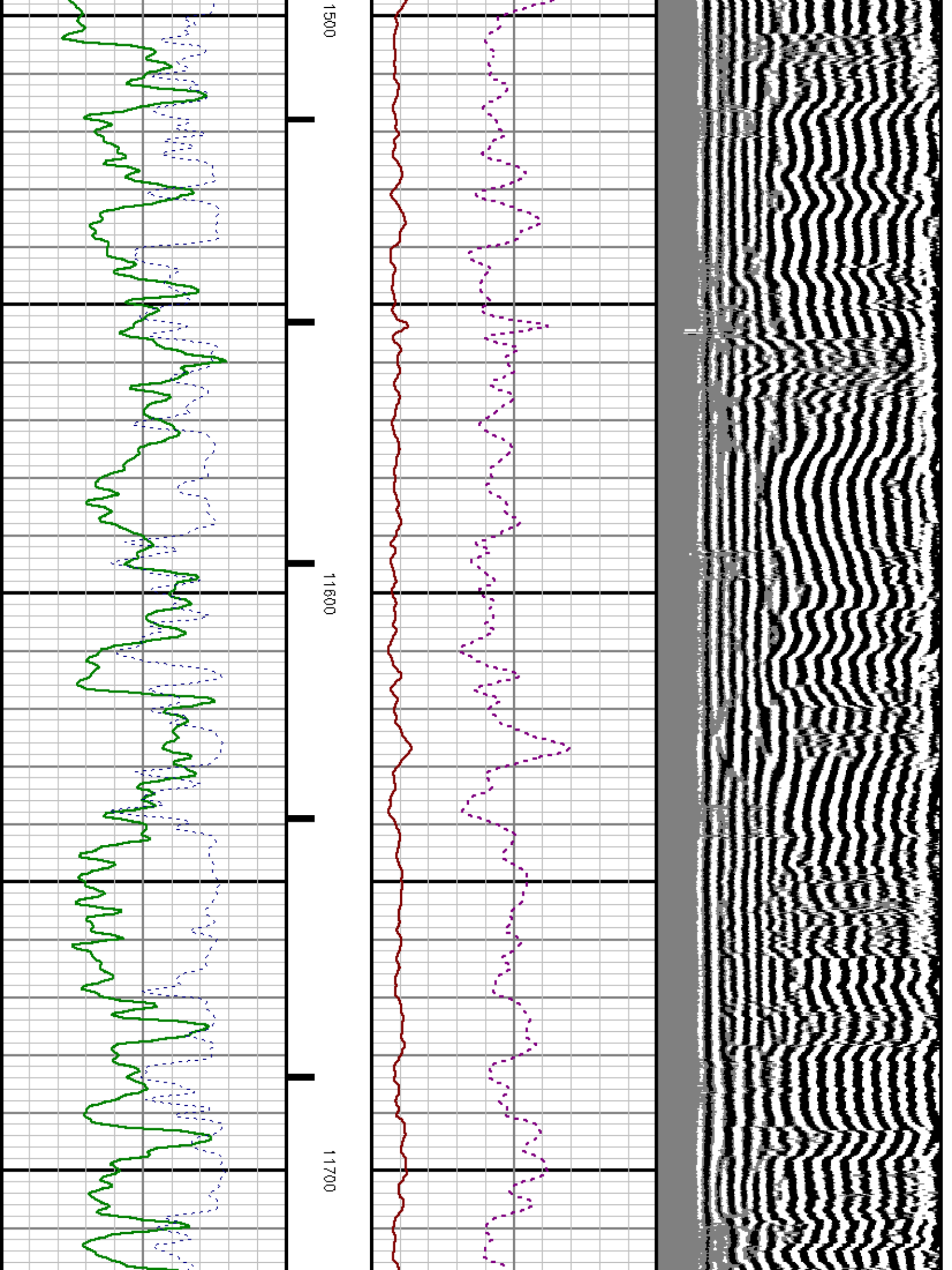


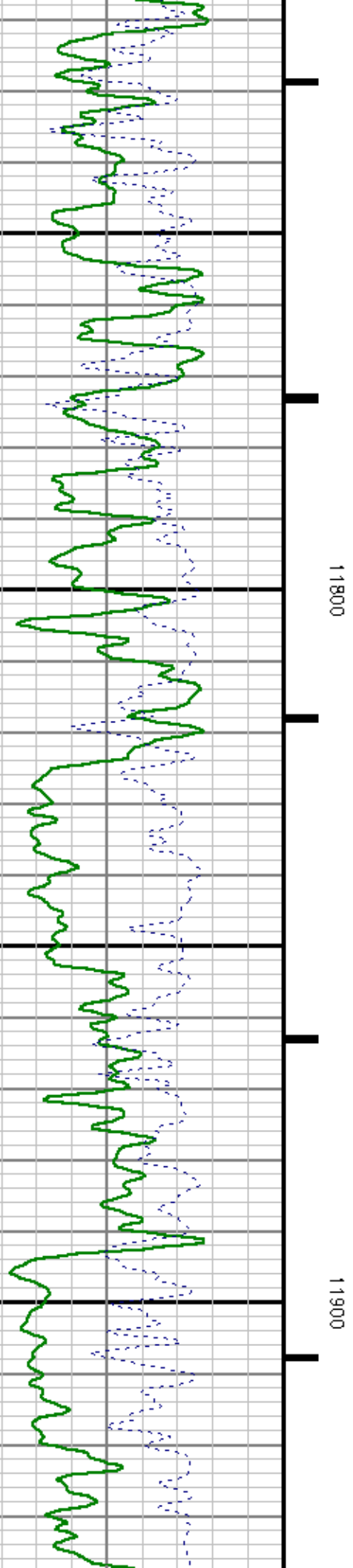
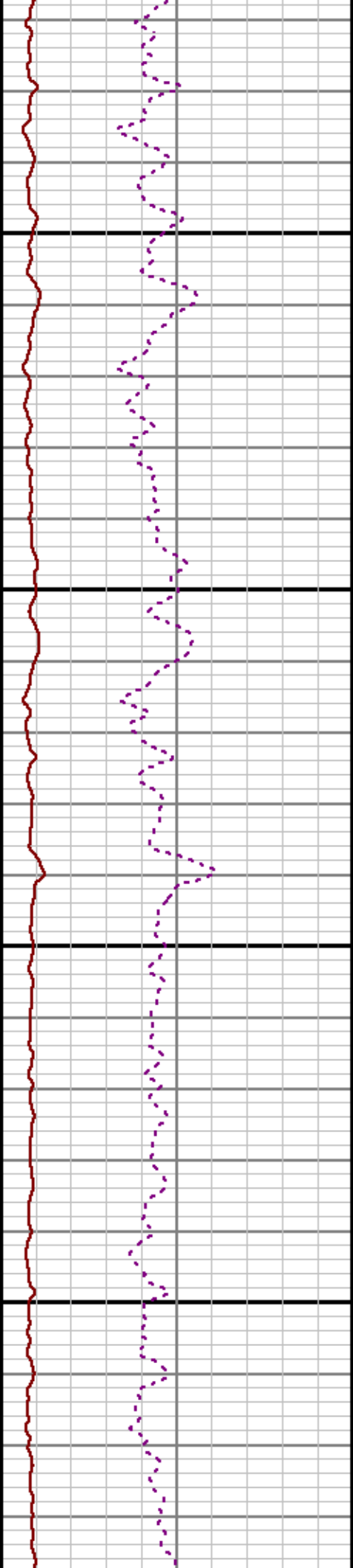
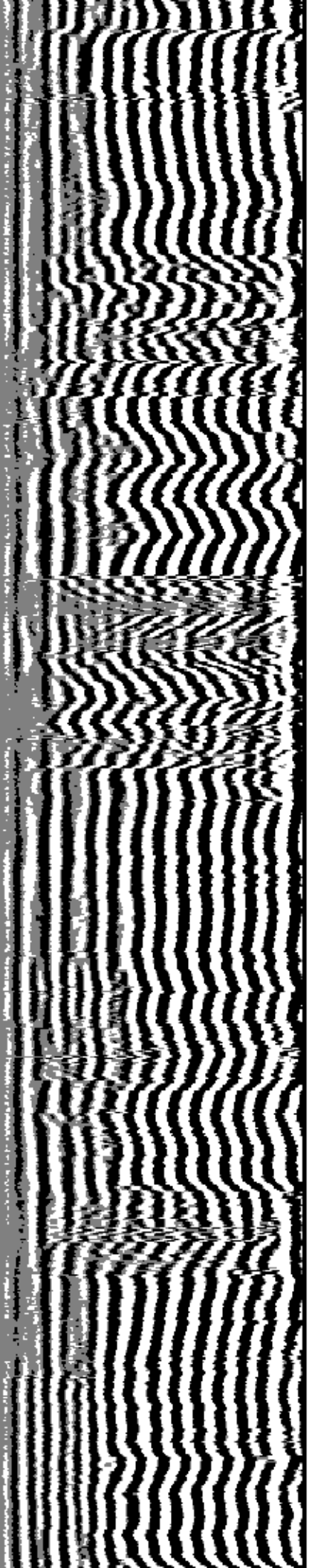




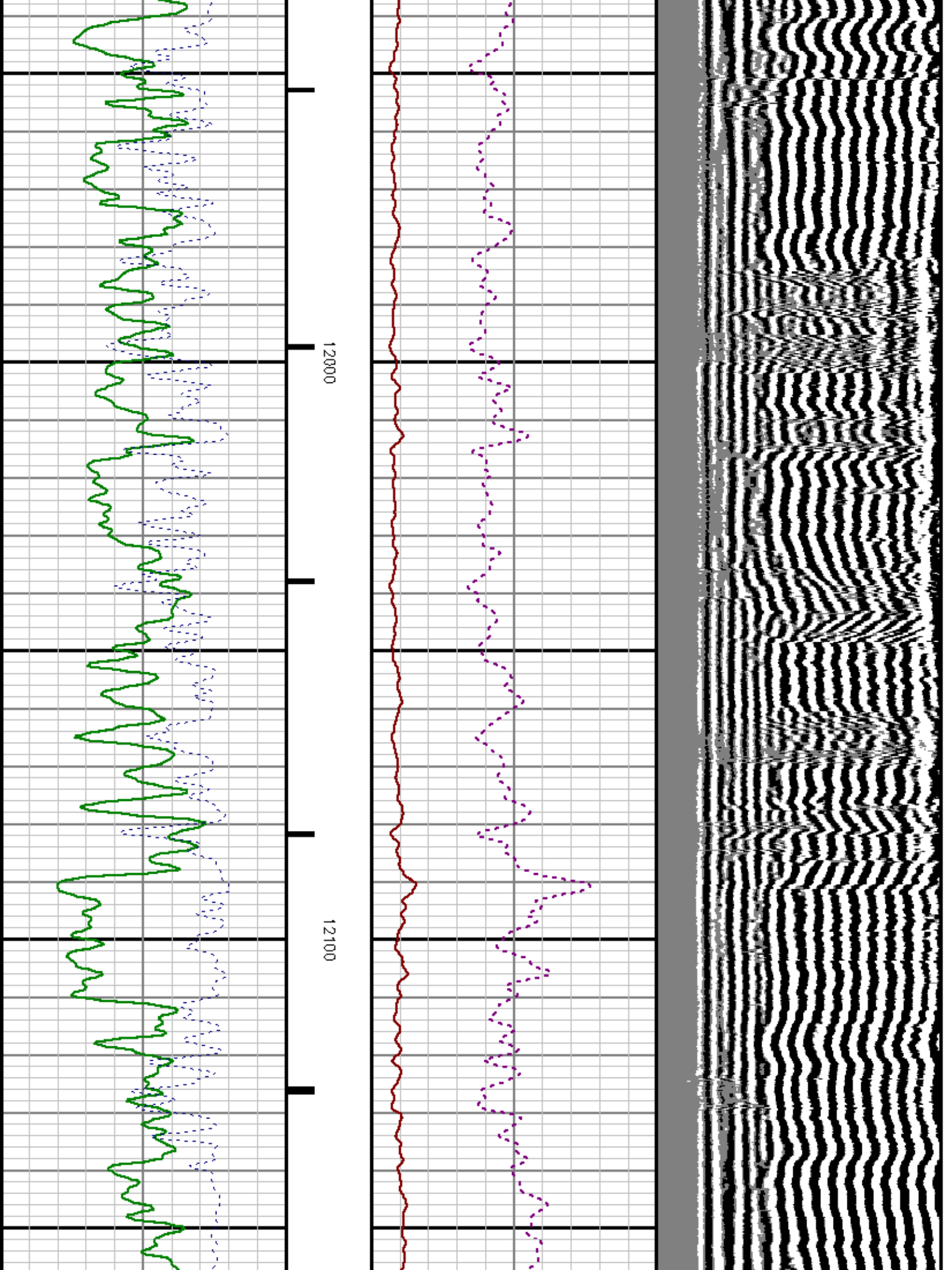




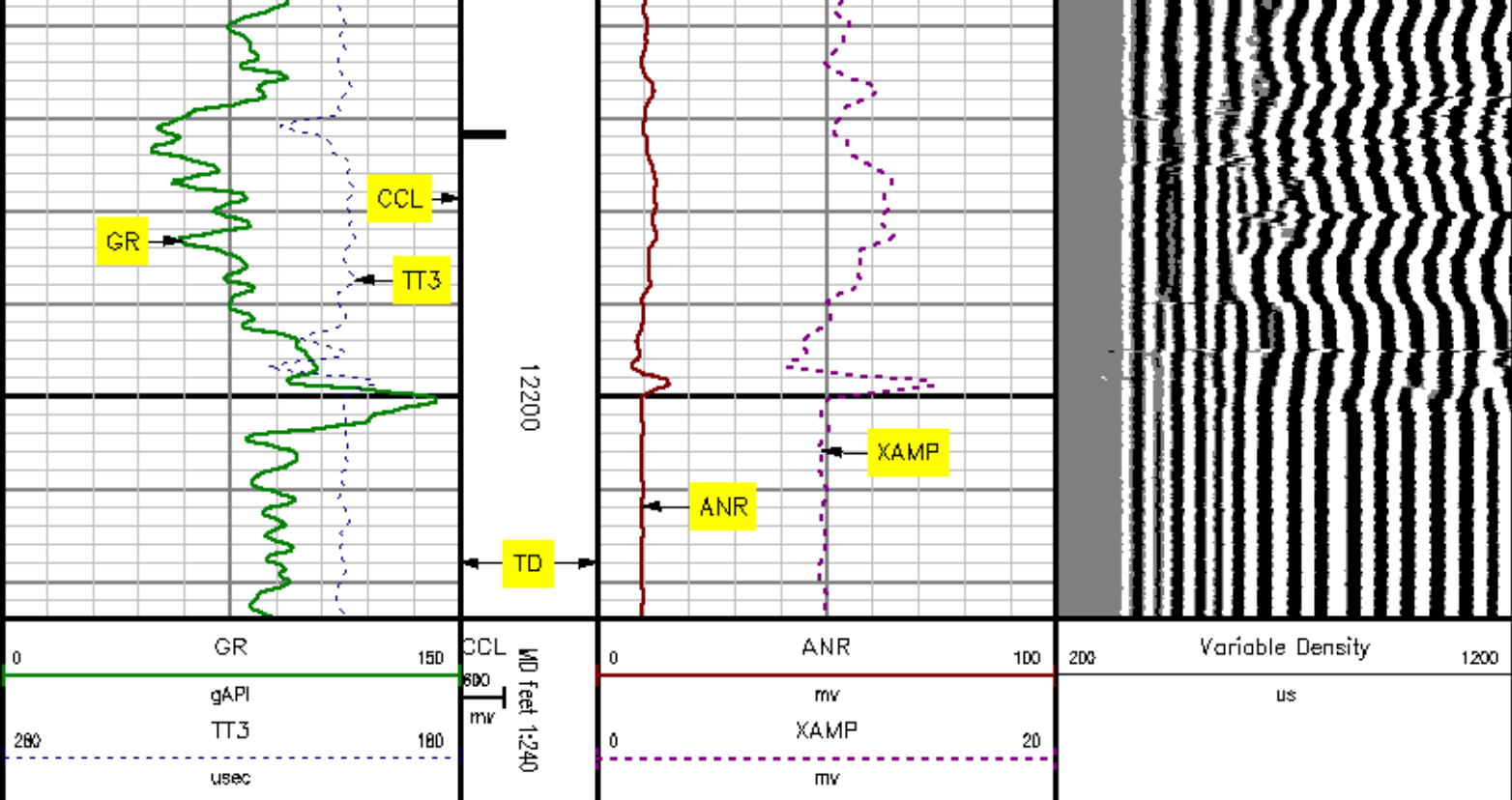












*MAIN SECTION  
SECONDARY PRESENTATION  
0 PSI*

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(for 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	-14.360	AFAR	SIG	TT5			
1426XA	-7.250	CCL					
1426XA	-5.390	GR					
1426XA	0.000	NEU					

Created by : MIXED

Plotted by : PlotMgr, v5.4.5D4

Company : EXXONMOBIL PRODUCTION COMPANY

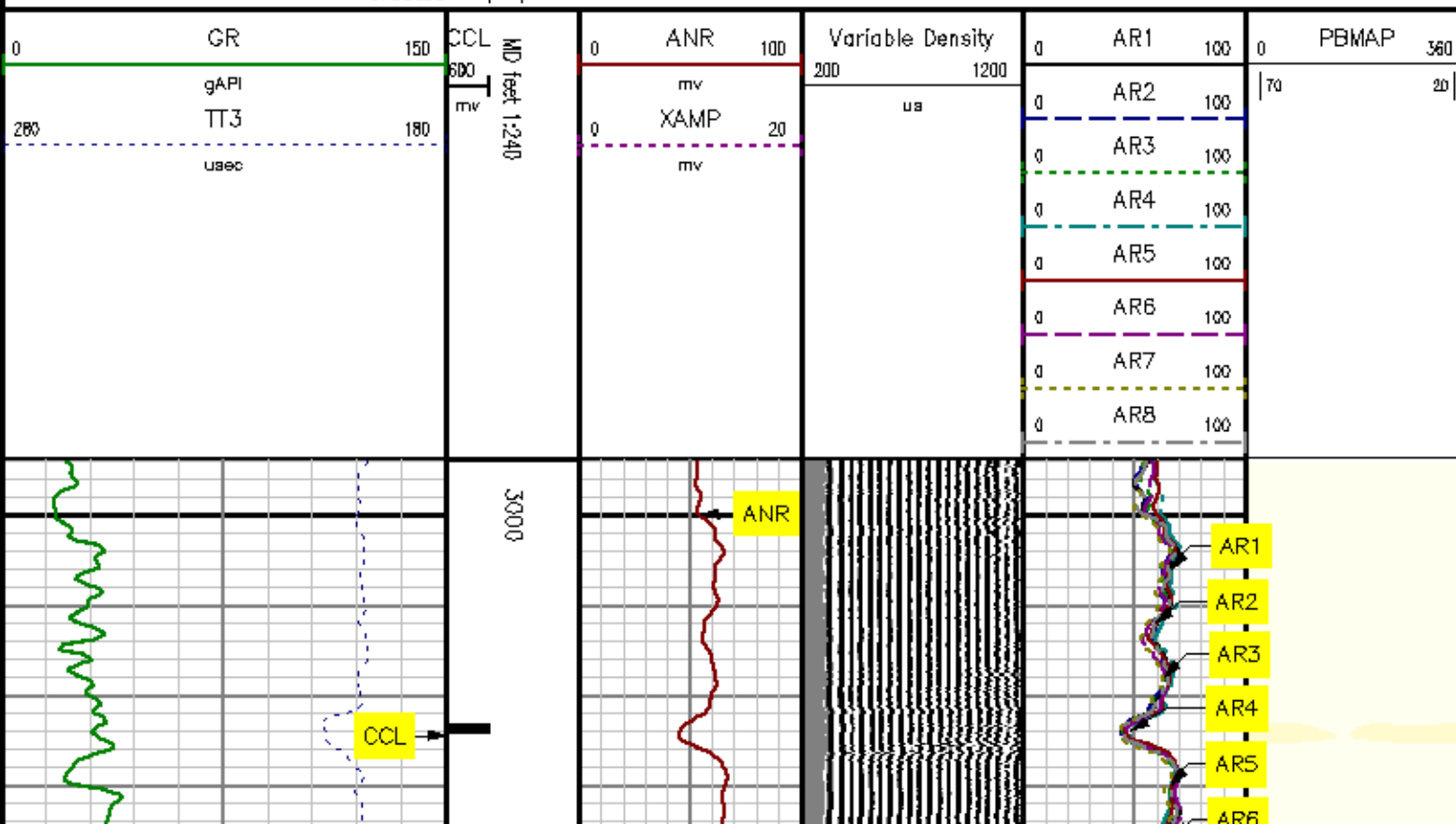
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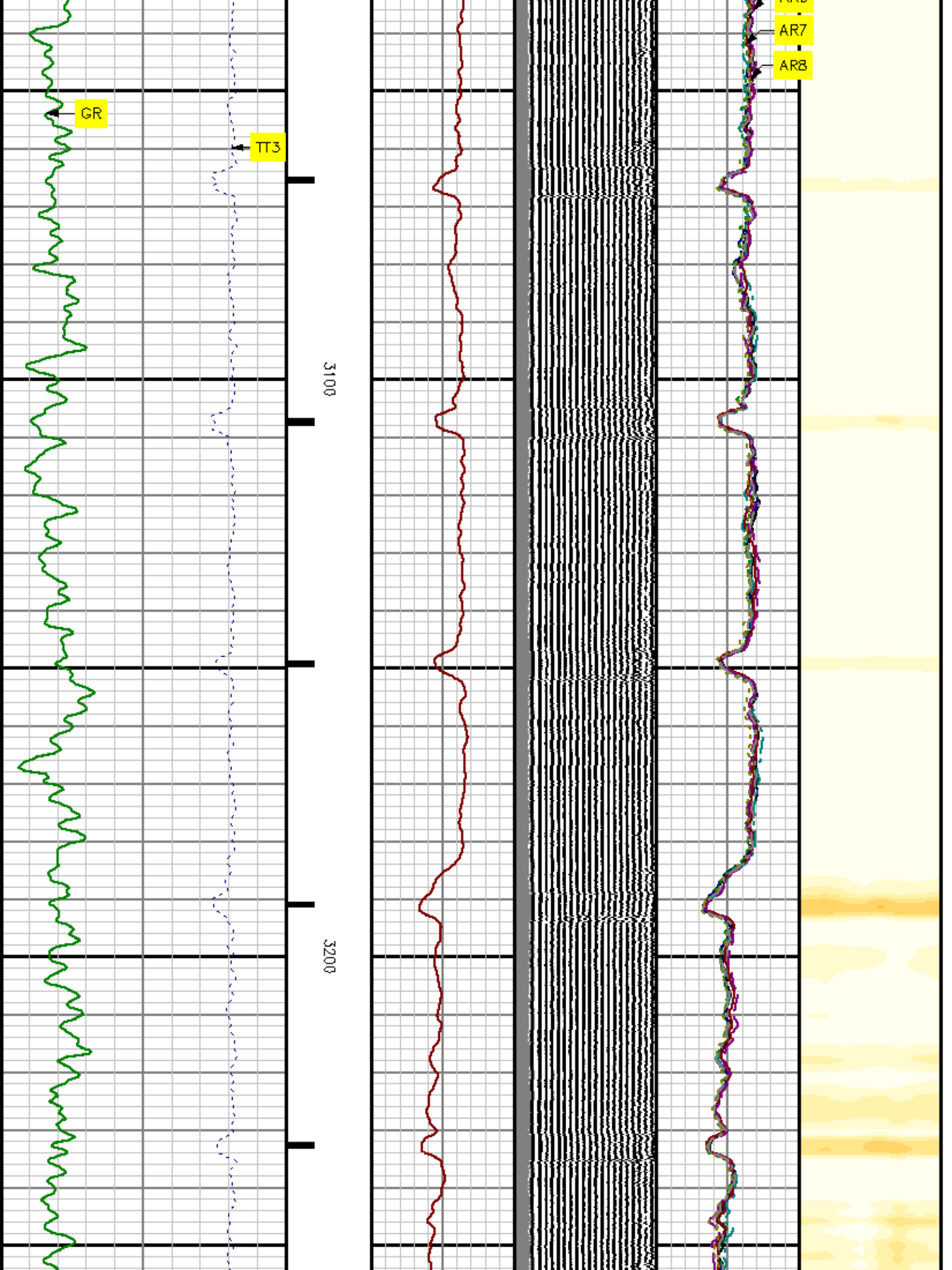
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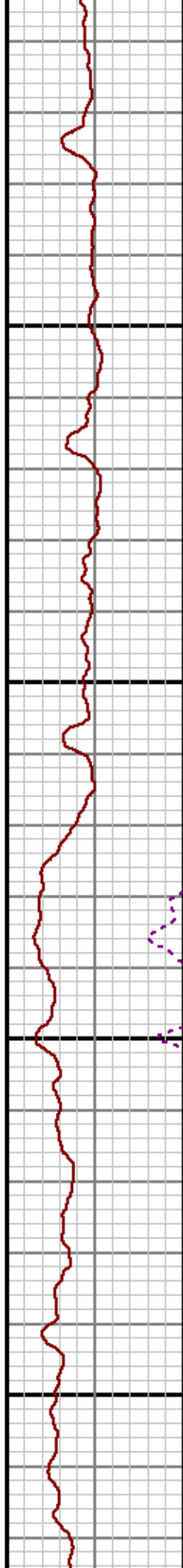
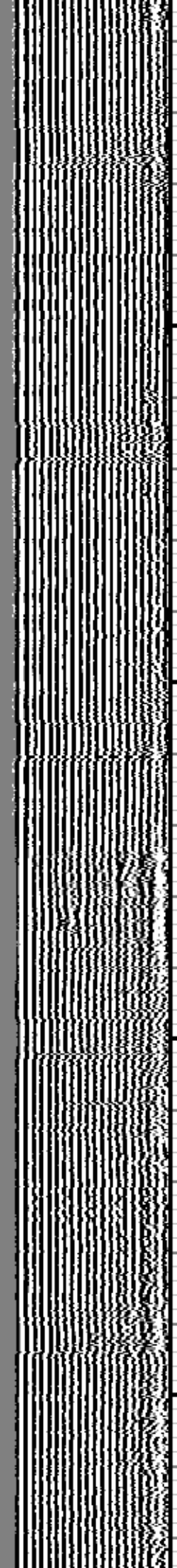
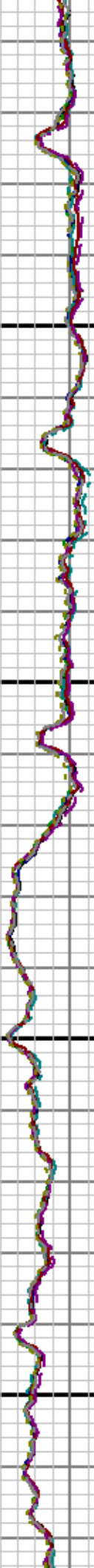
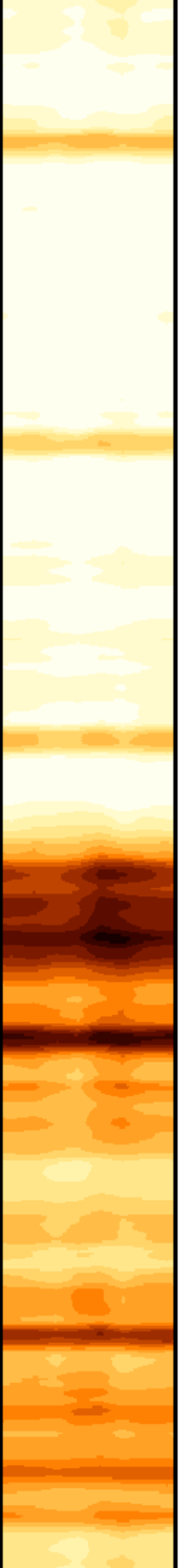
Mode : PlotMgr 5.4.5D4

Interval : 2003.75 - 12224.00 feet UP

Created : 4/21/2010 7:12:58 PM

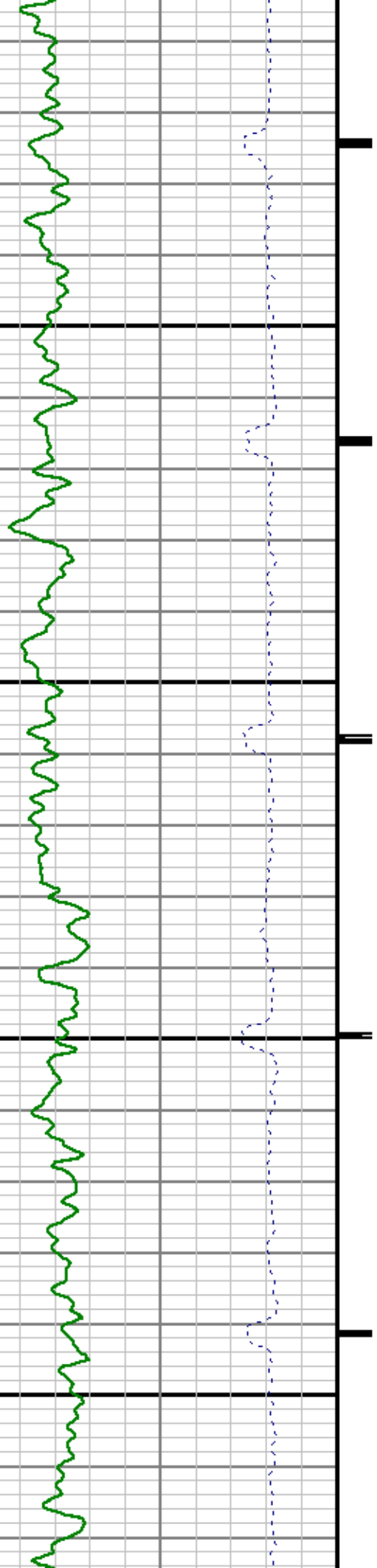




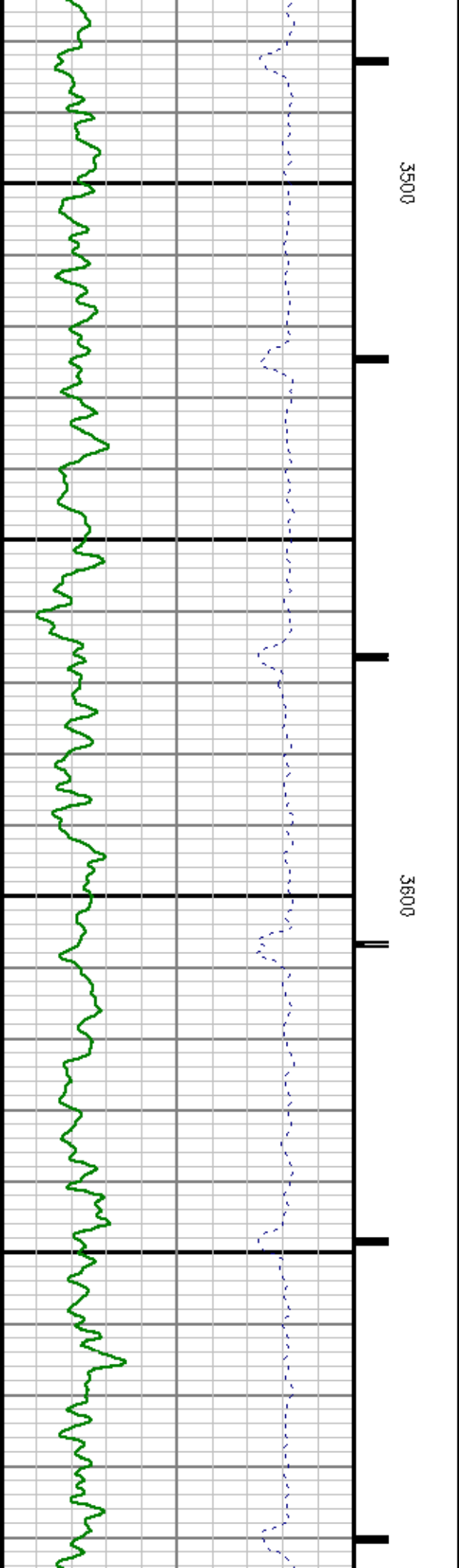
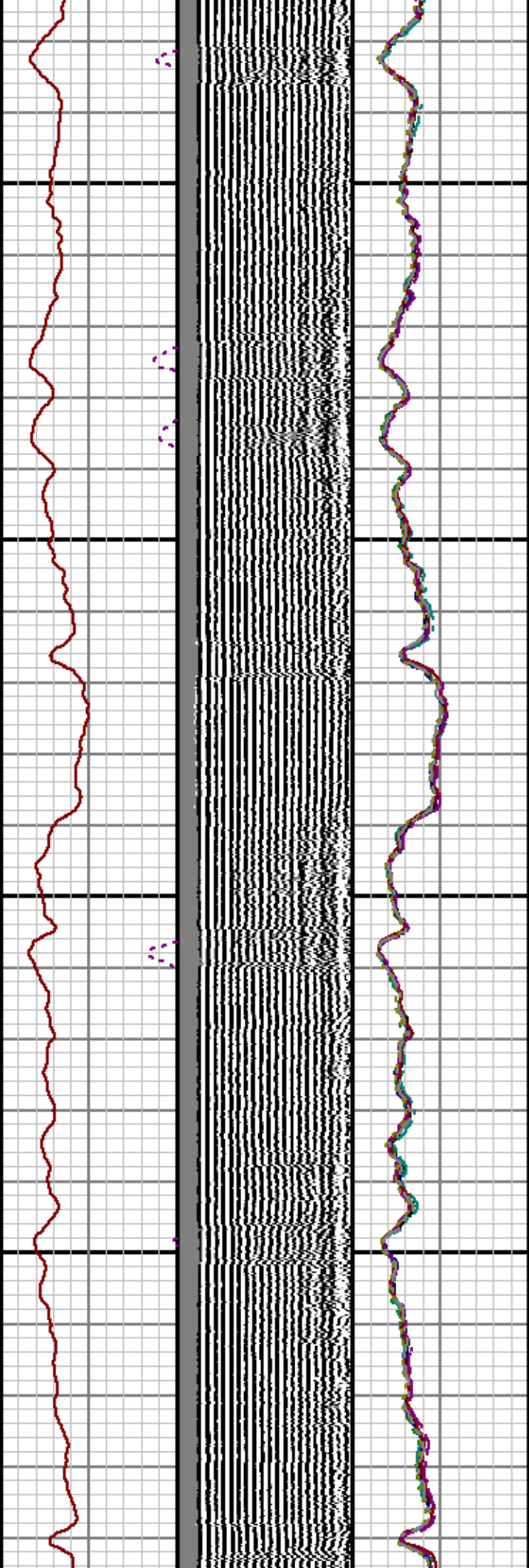


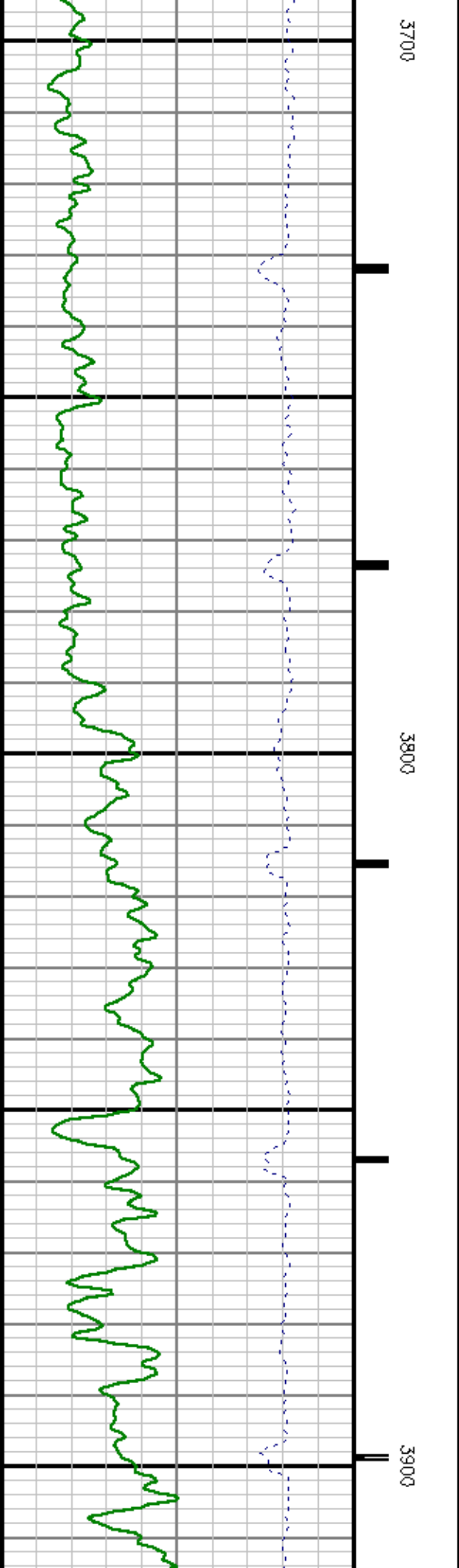
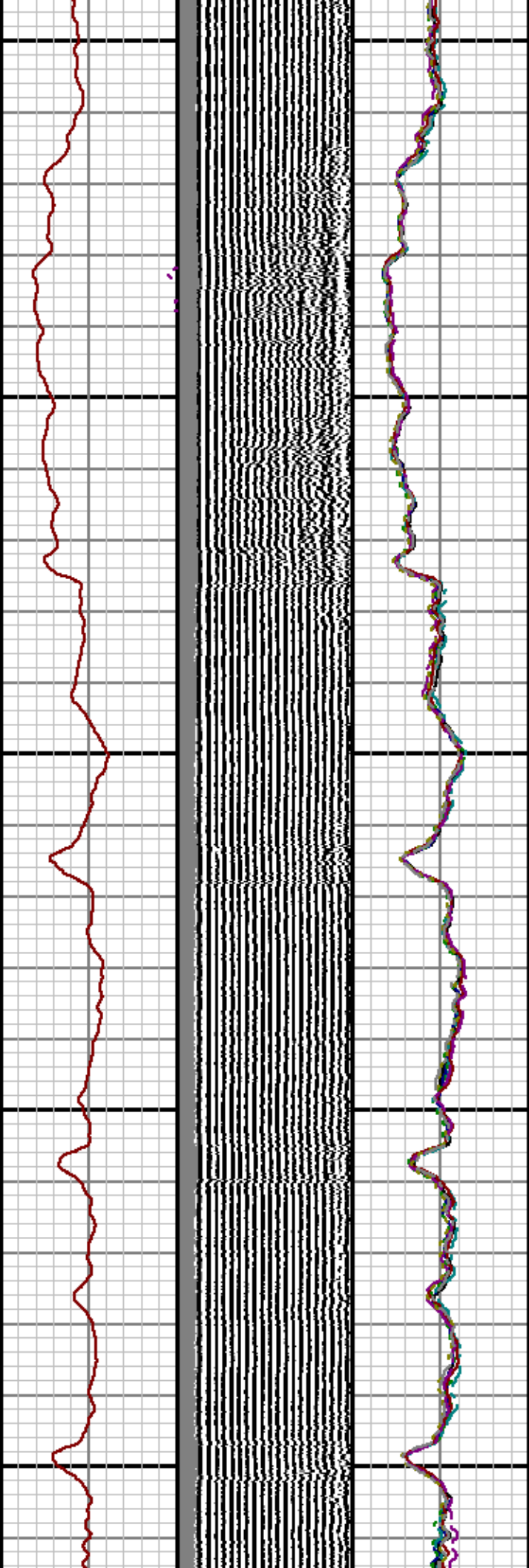
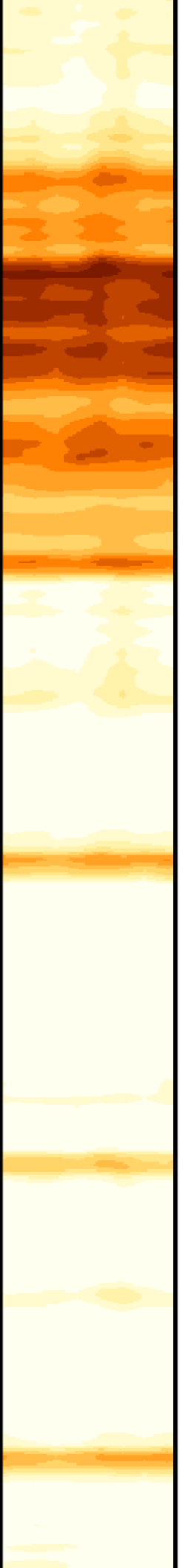
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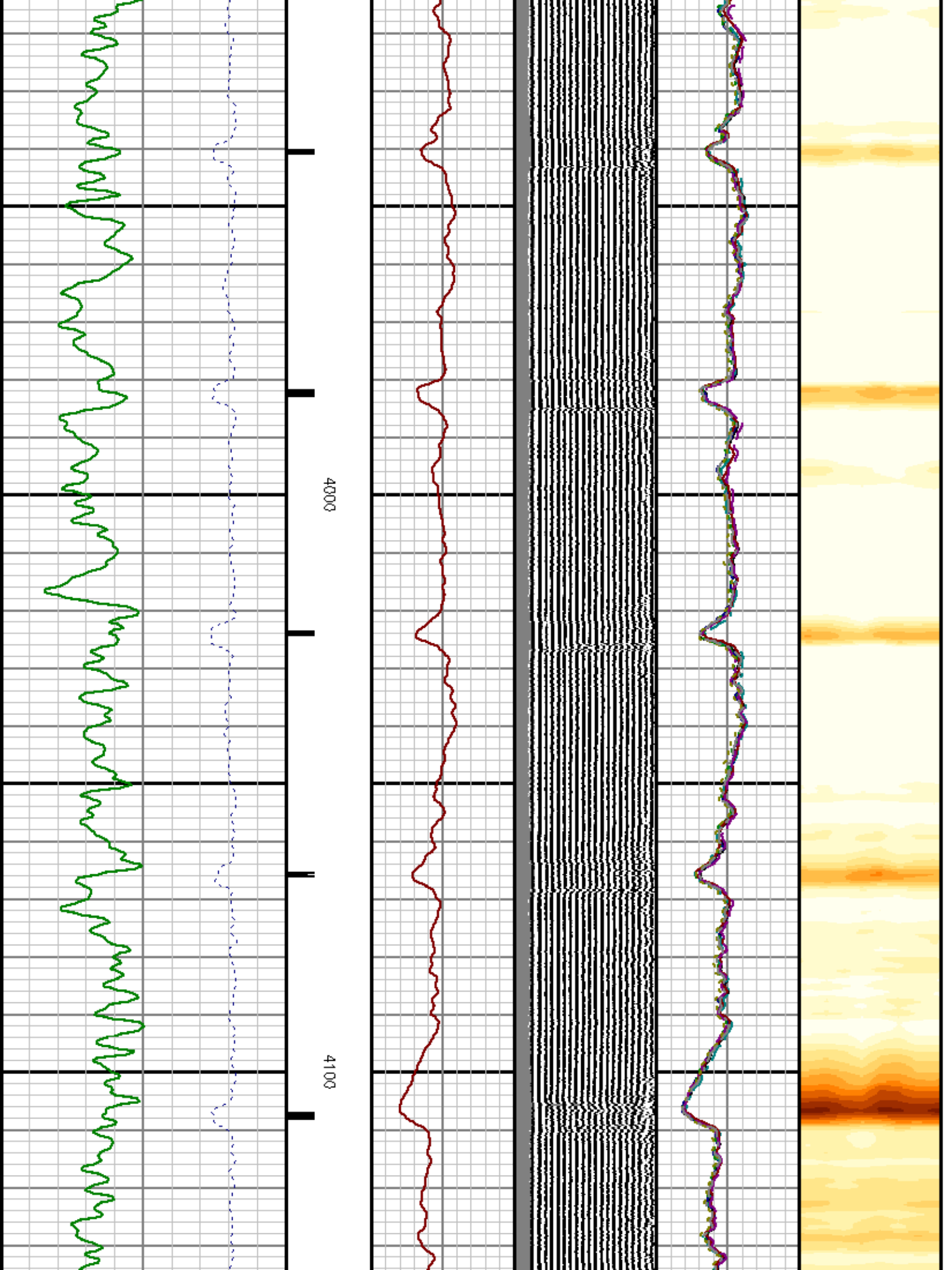
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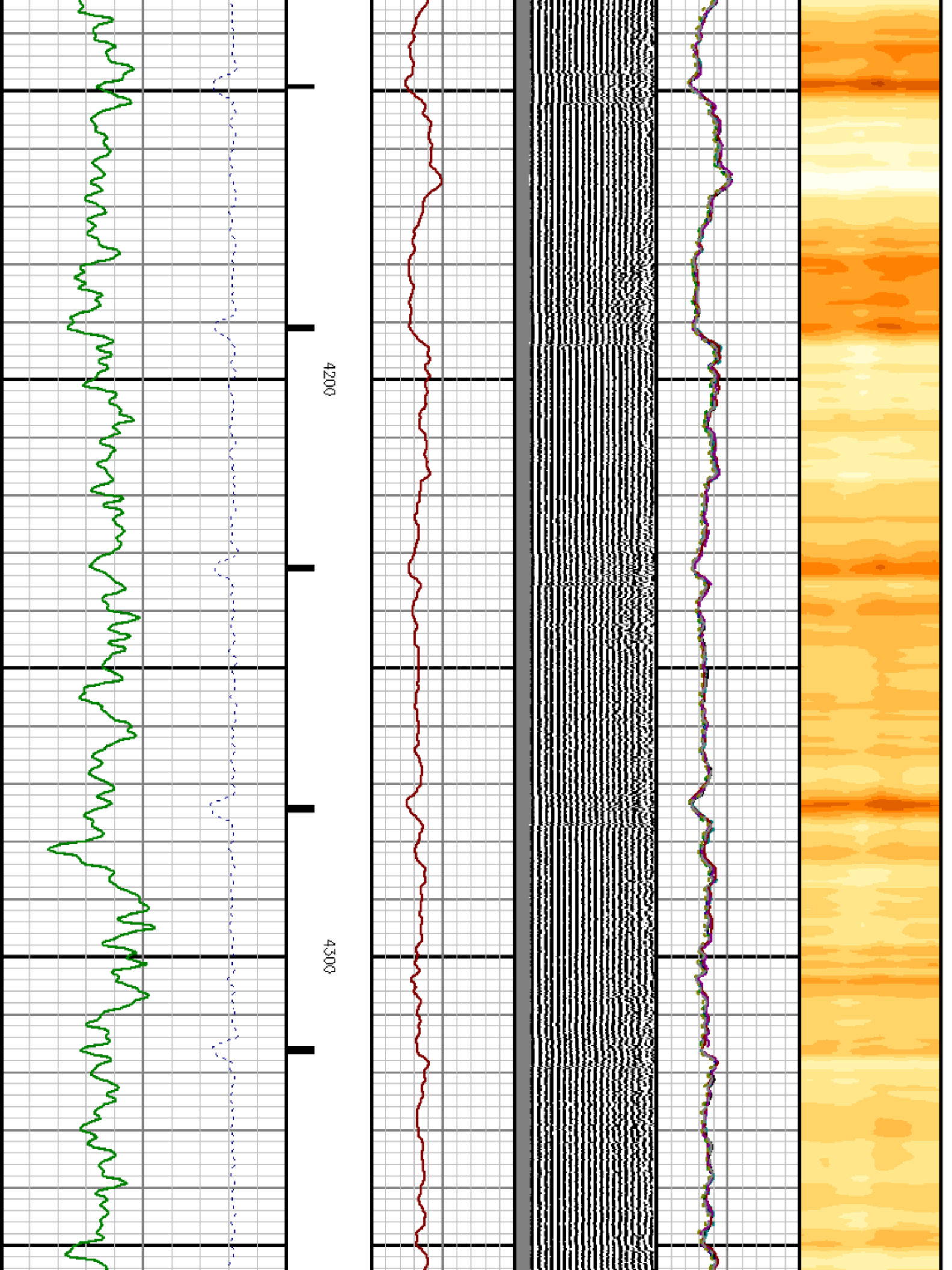




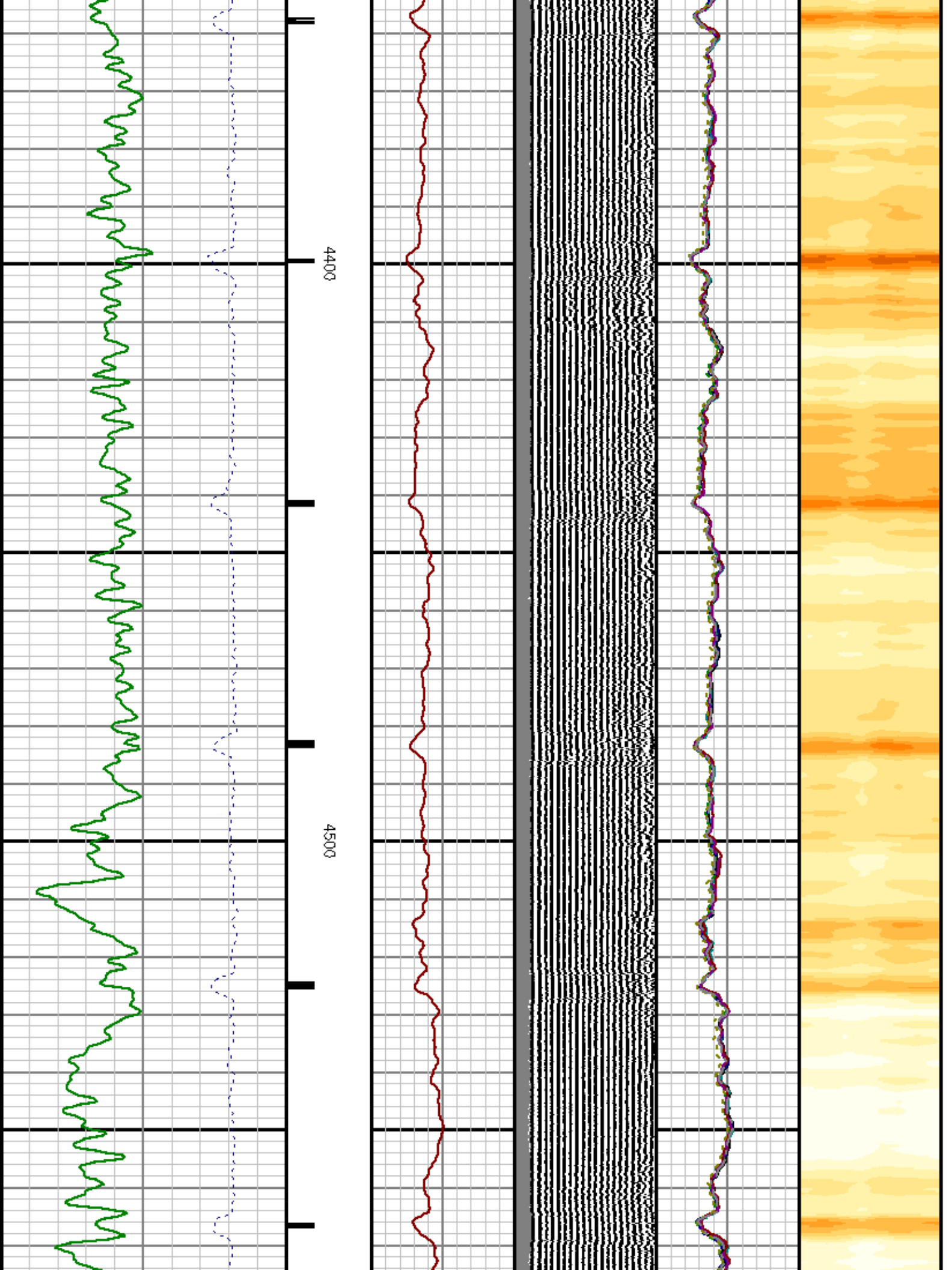


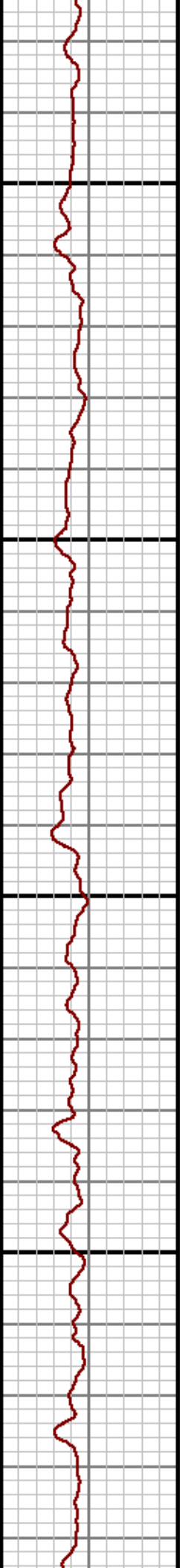
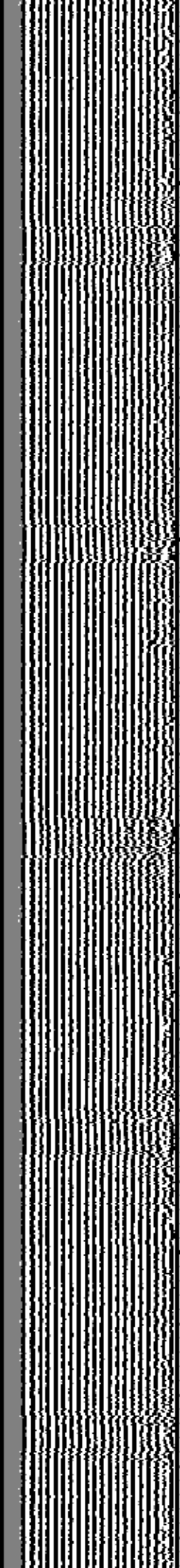
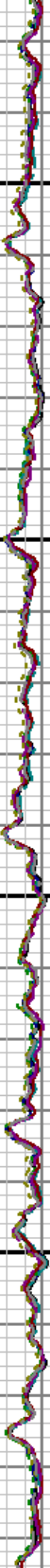
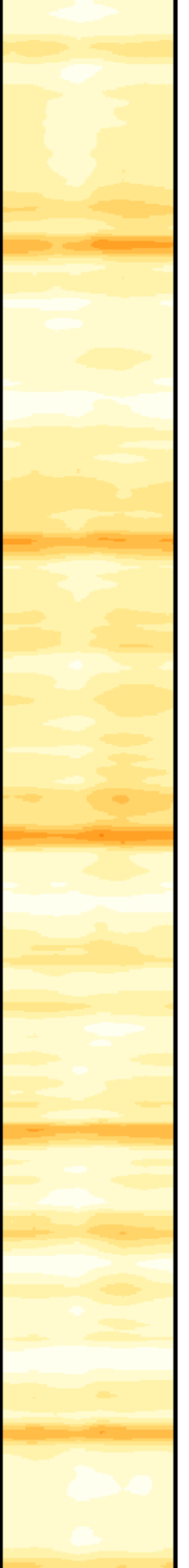






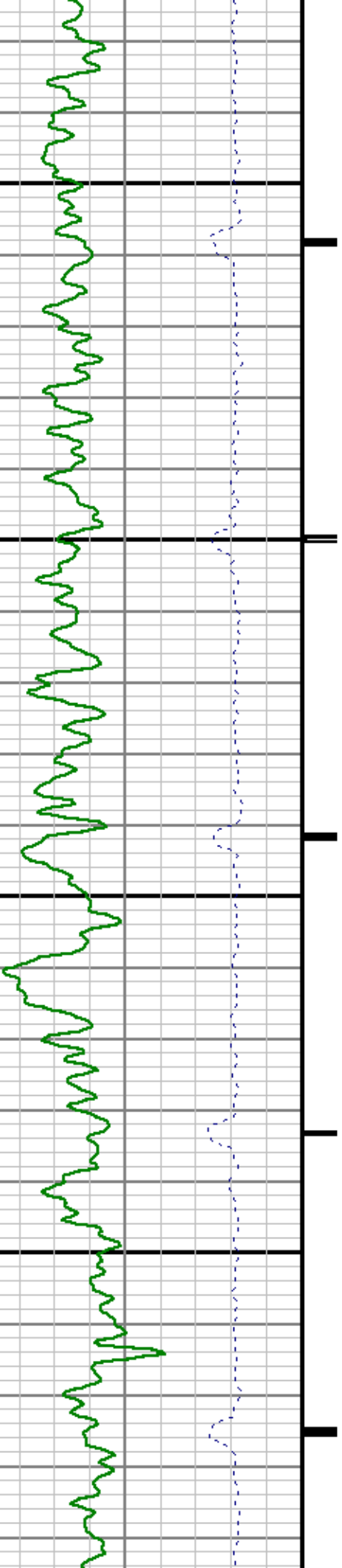


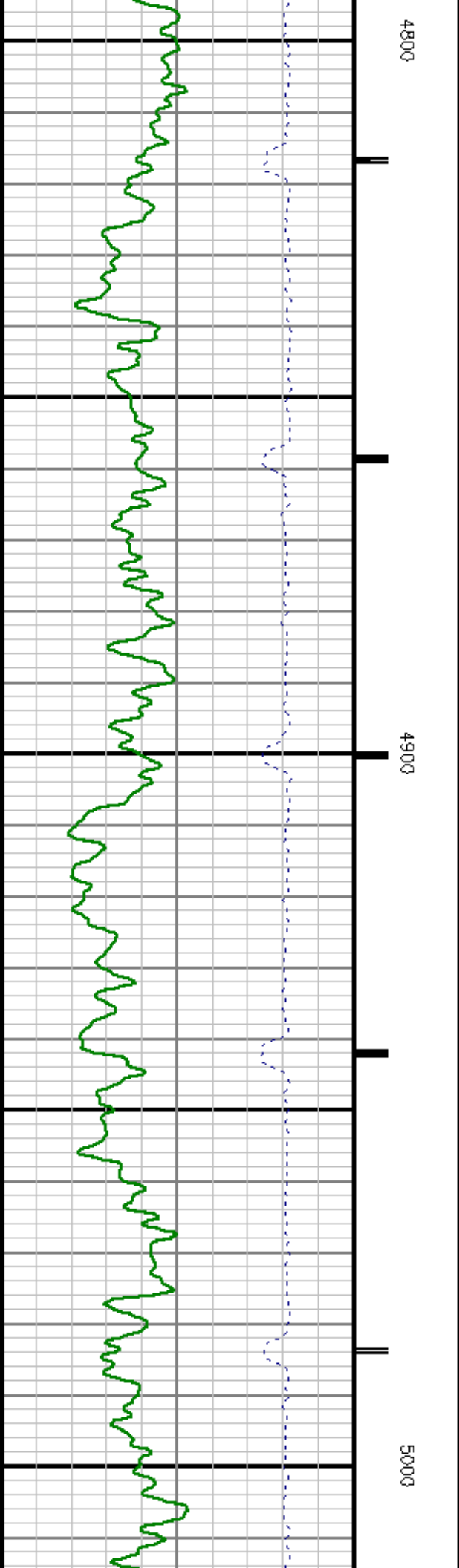
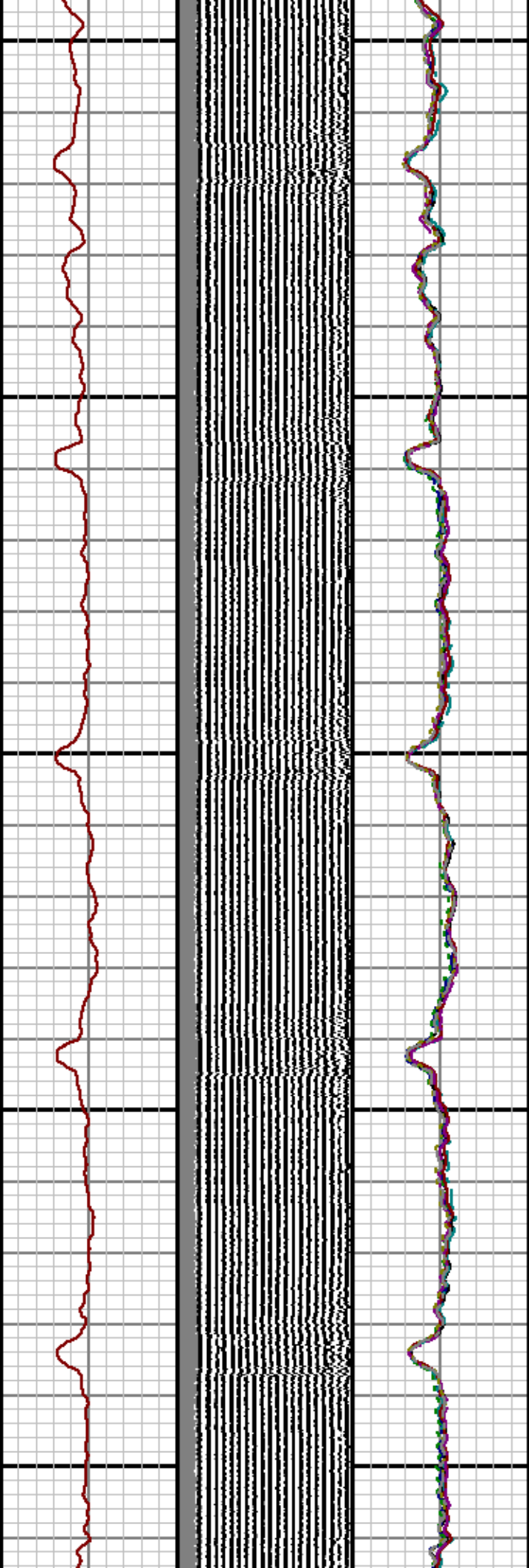
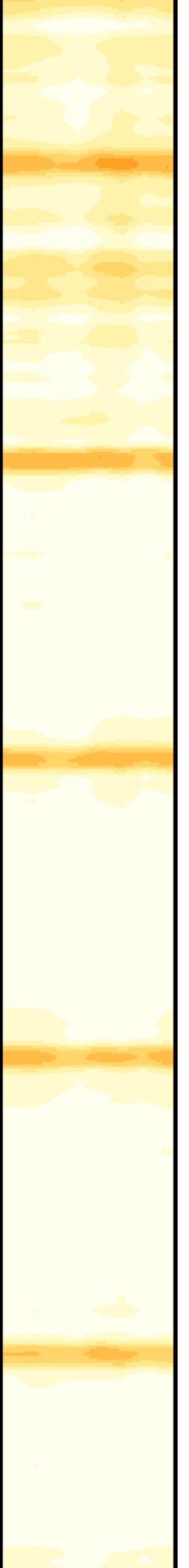


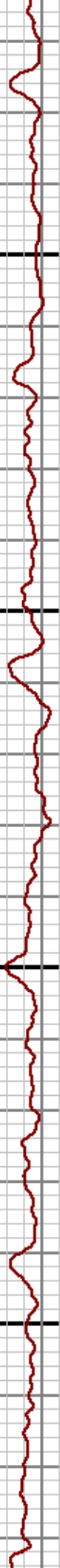
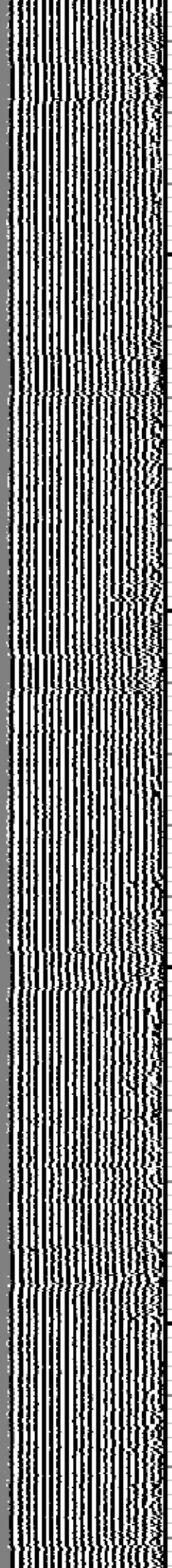
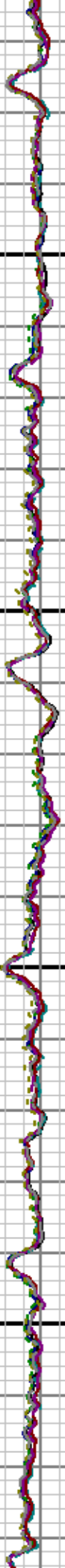
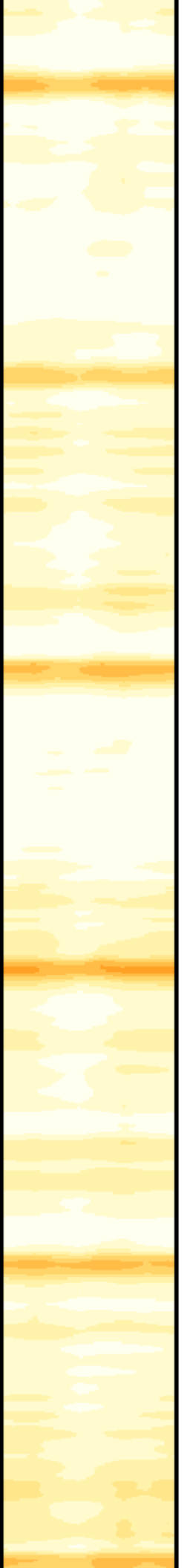


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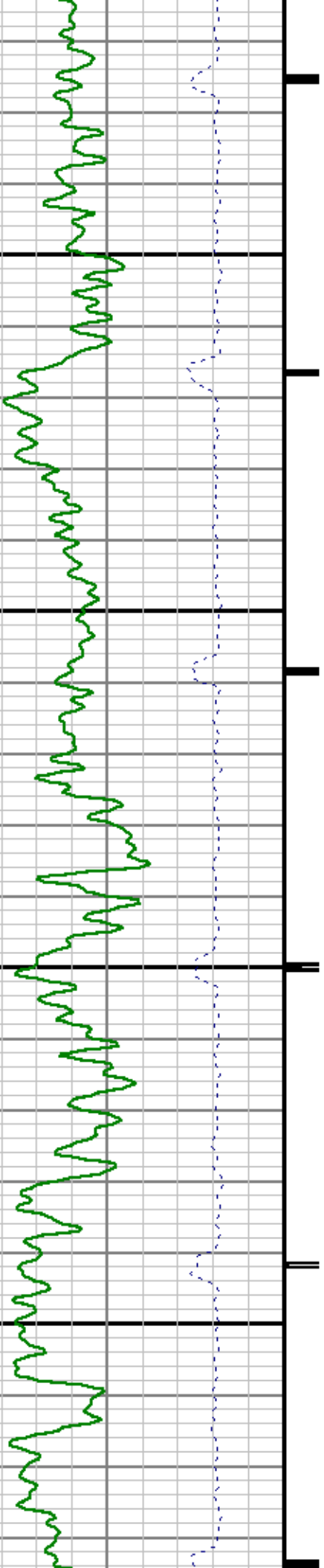




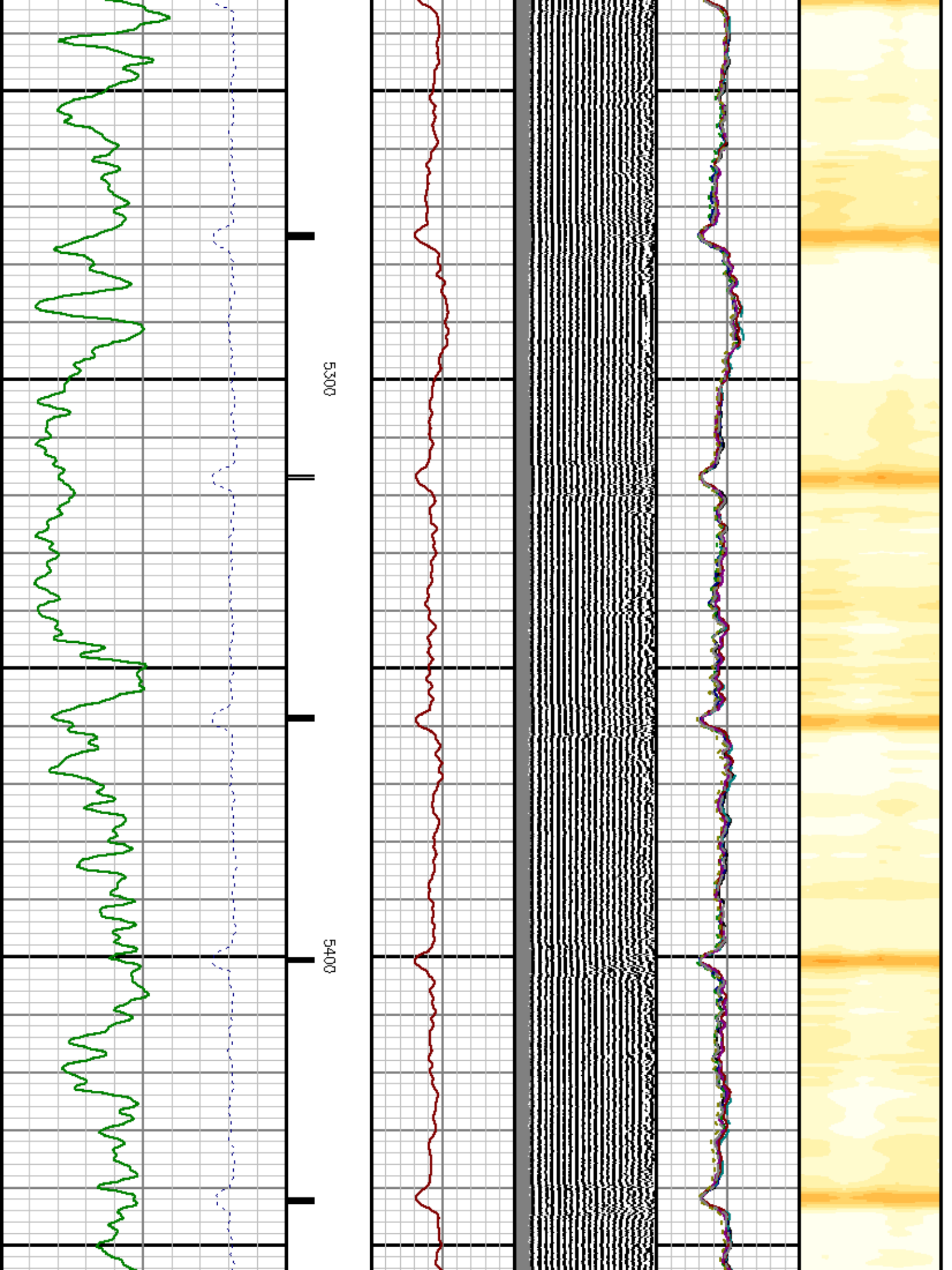


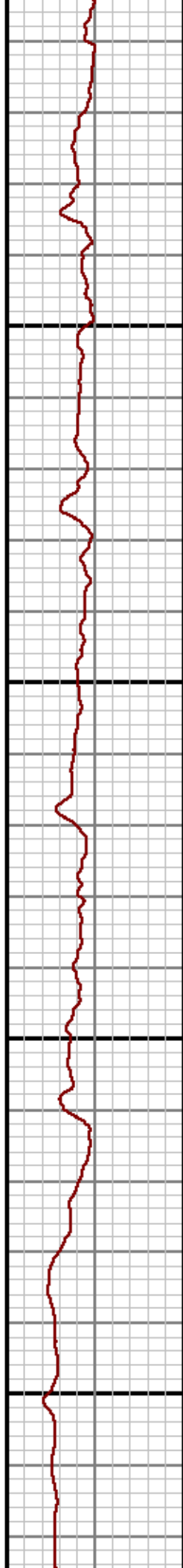
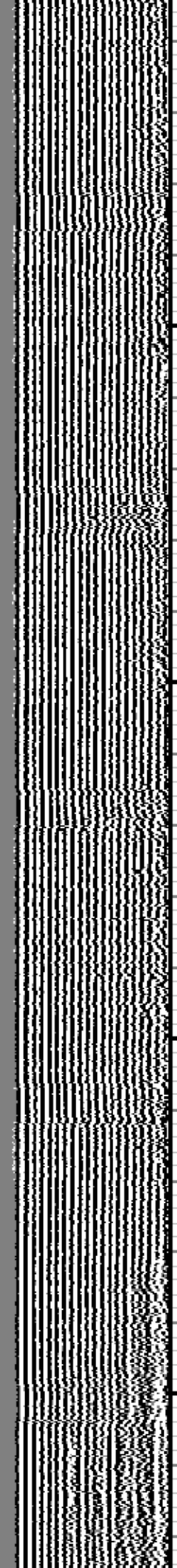
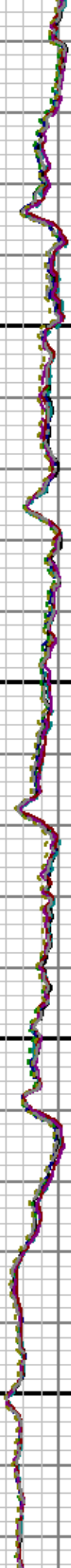
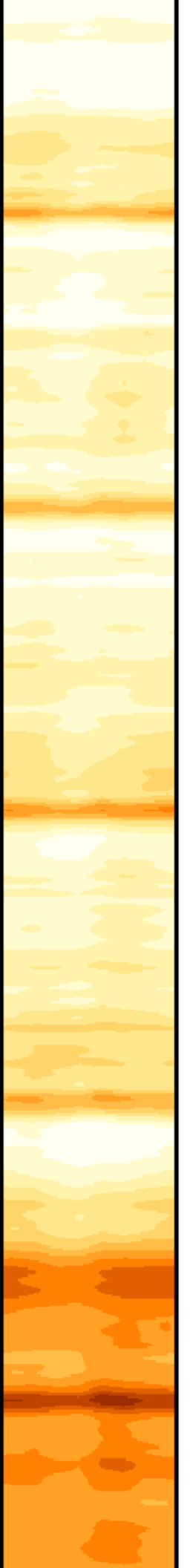
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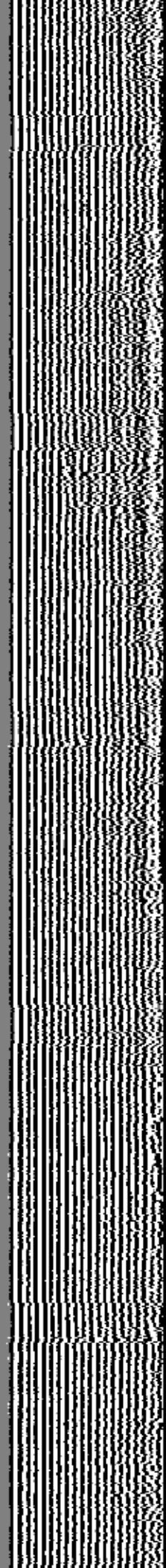
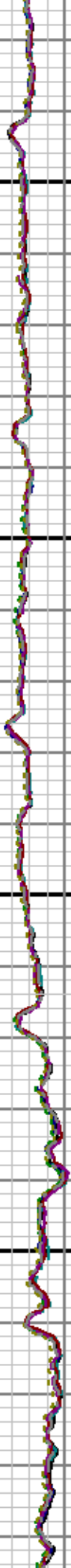




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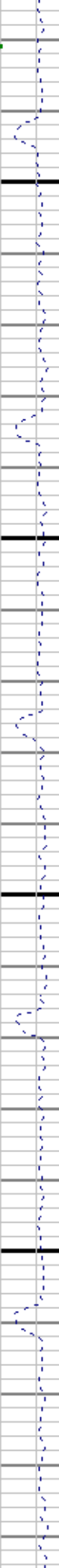
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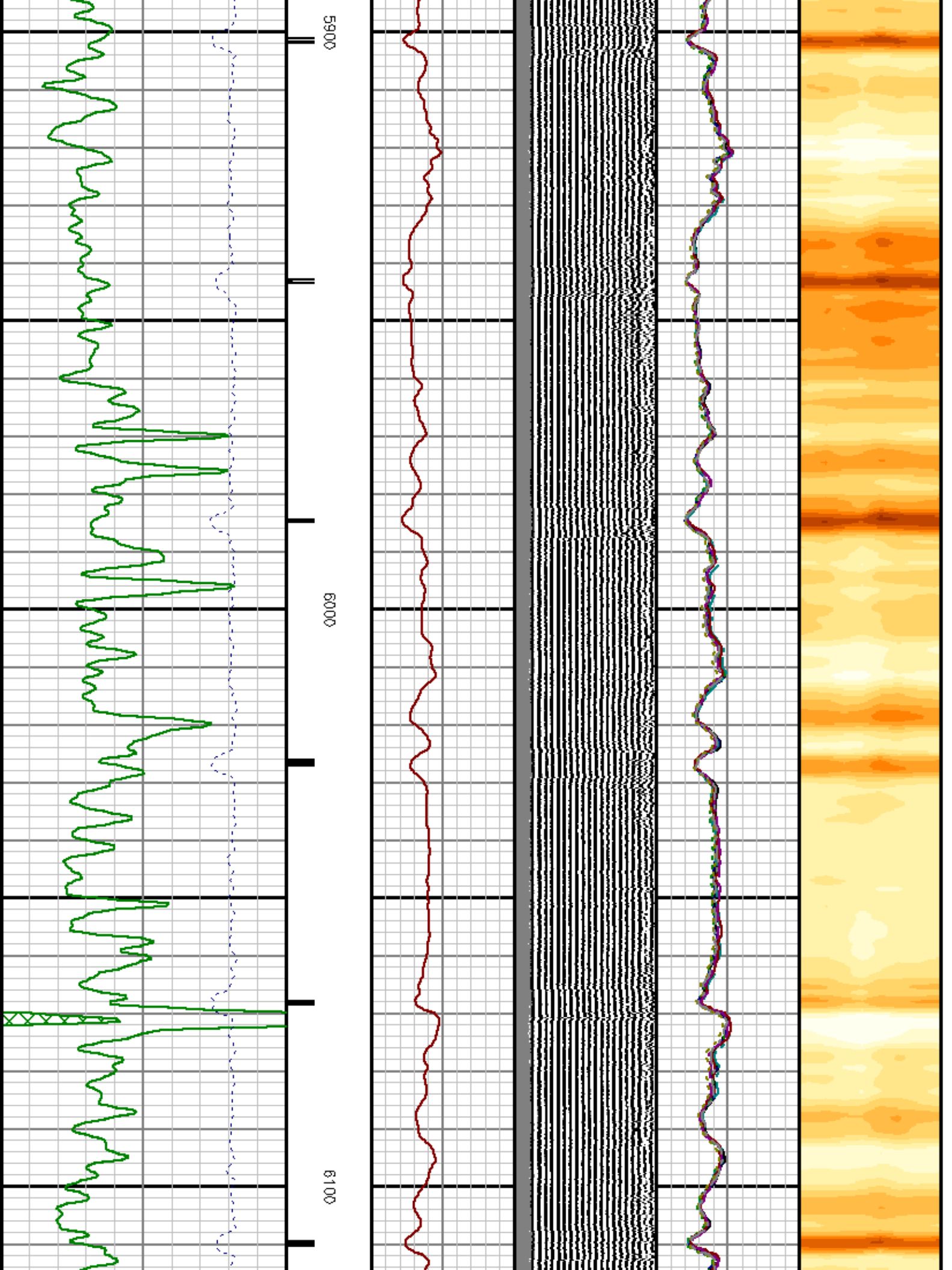




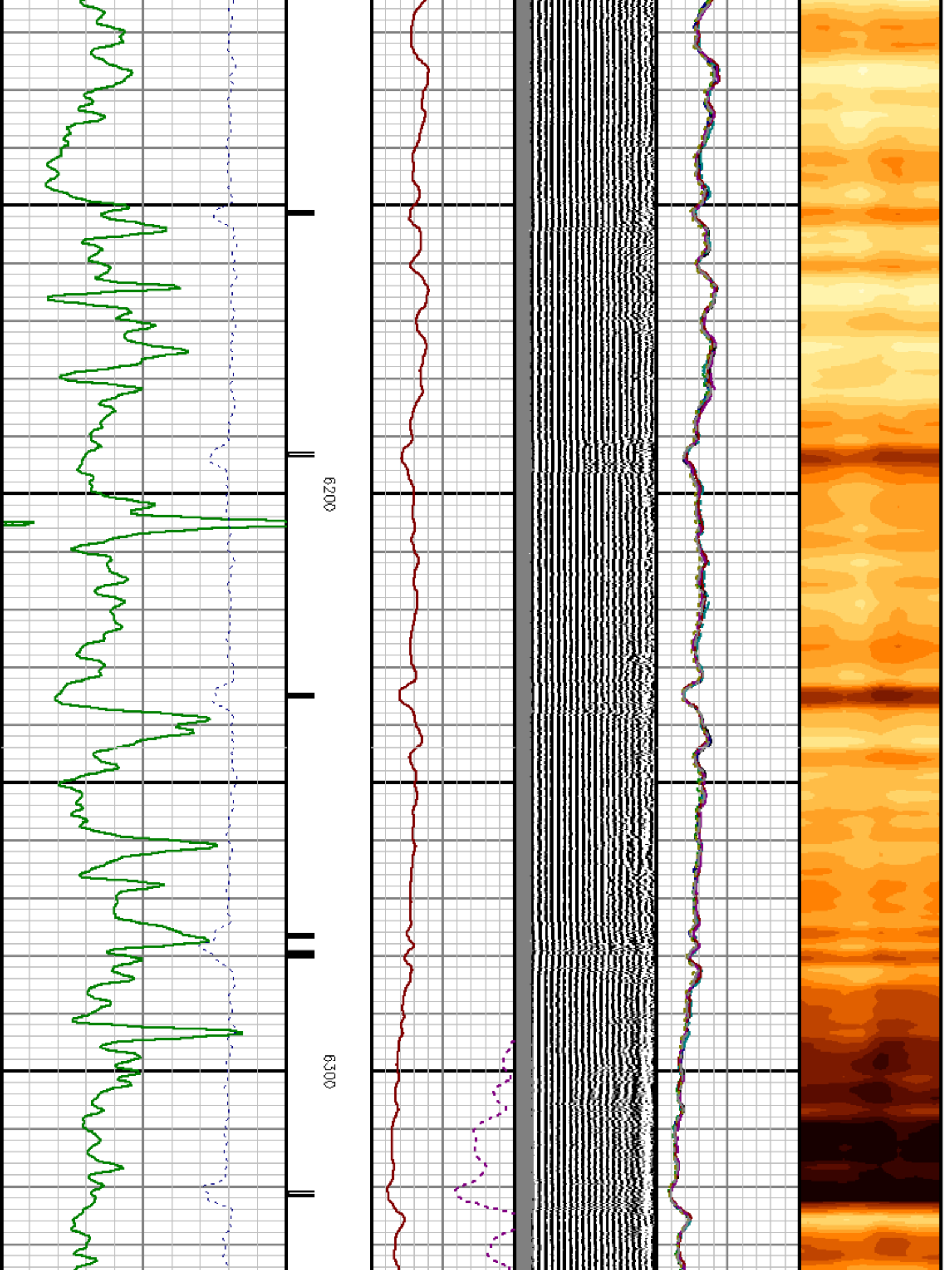
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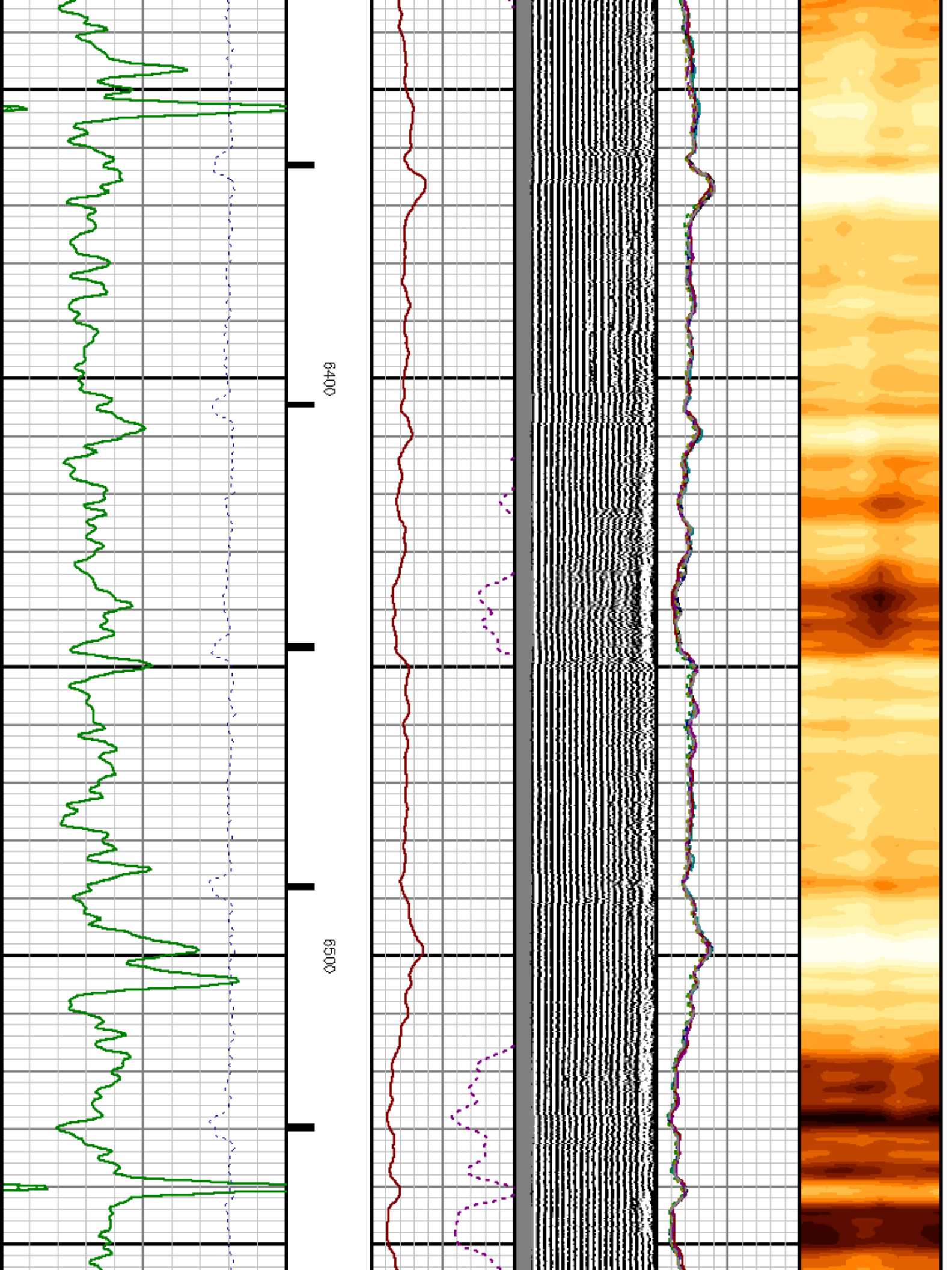
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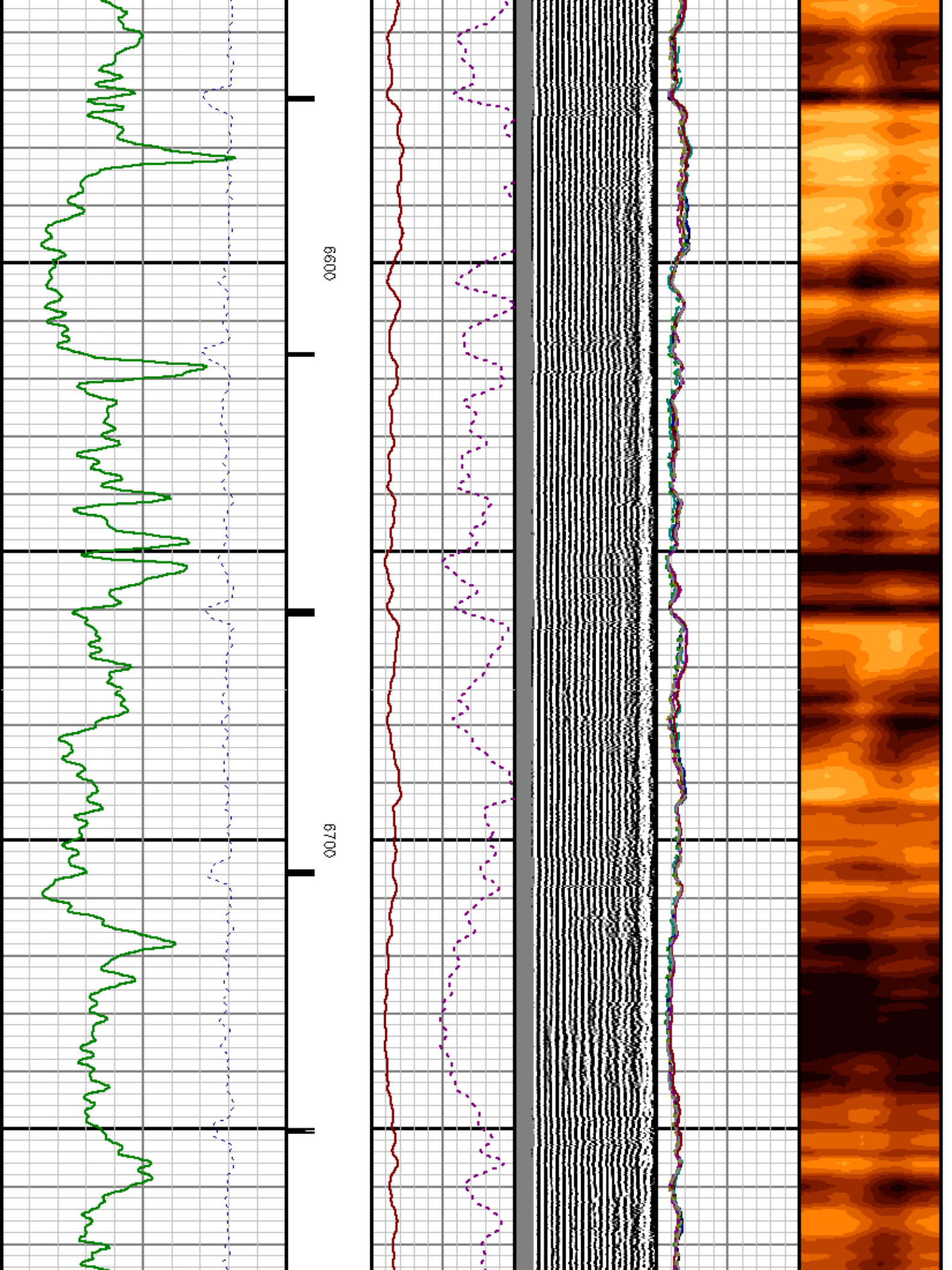


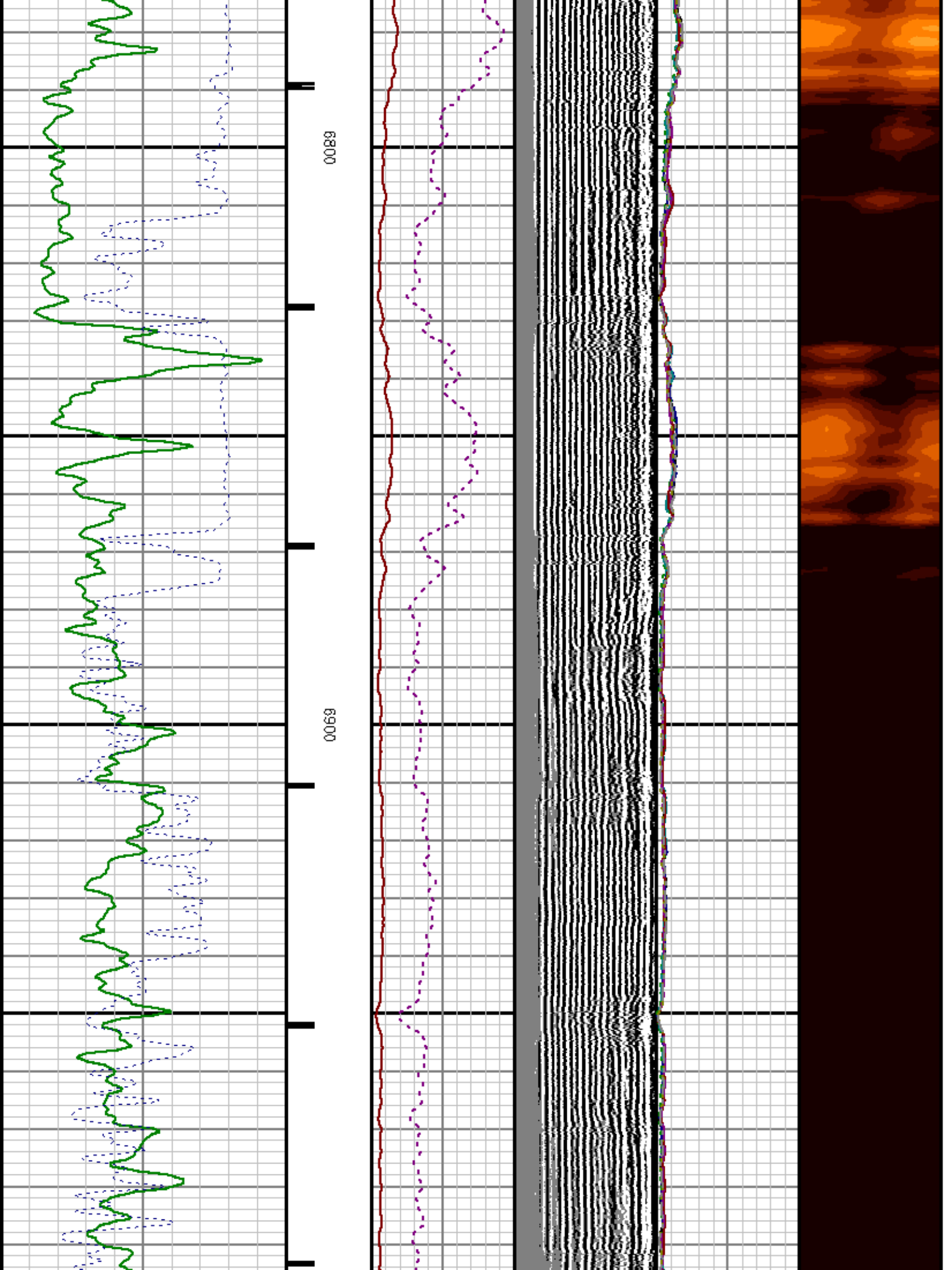




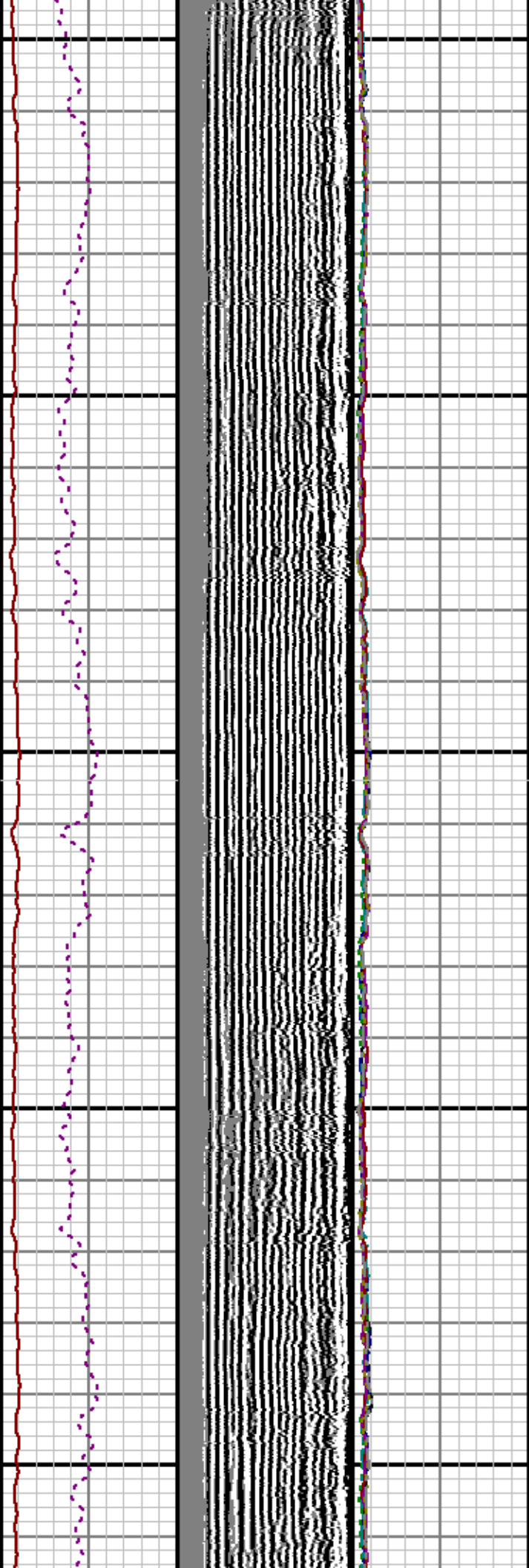








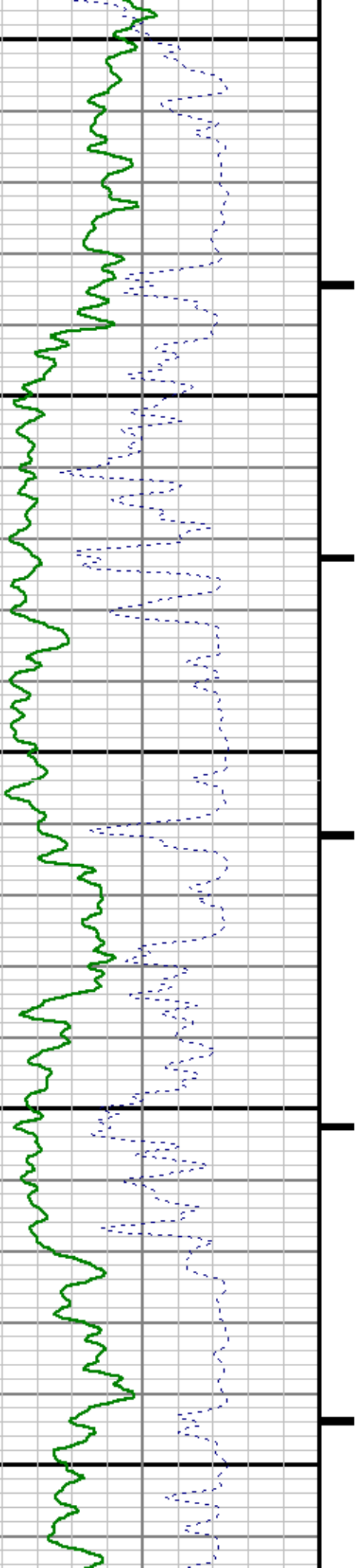


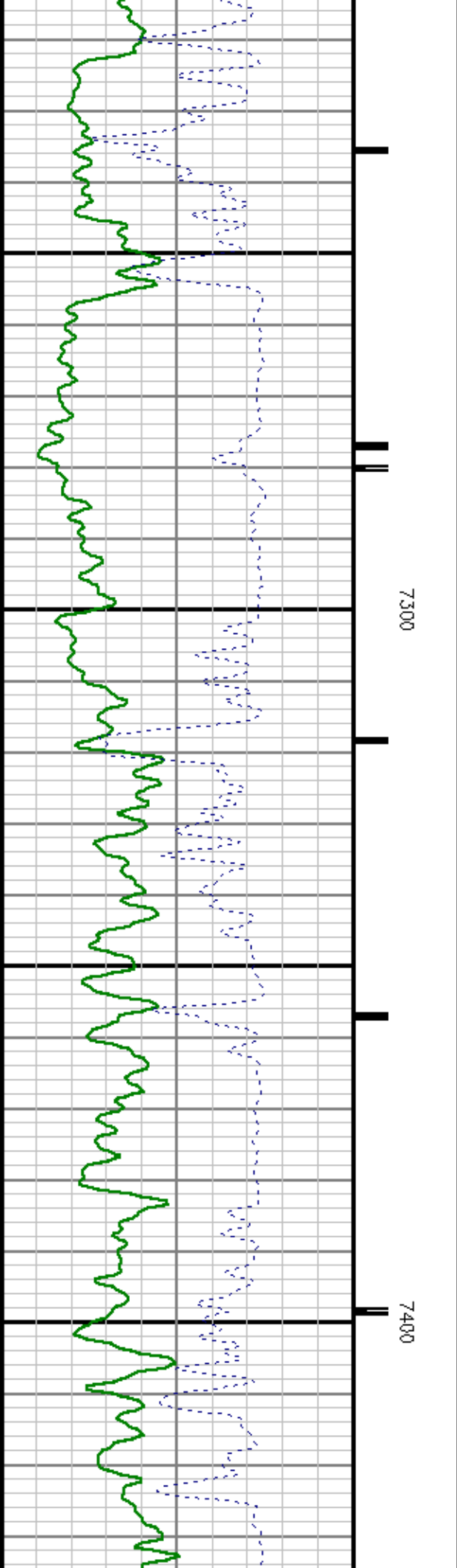
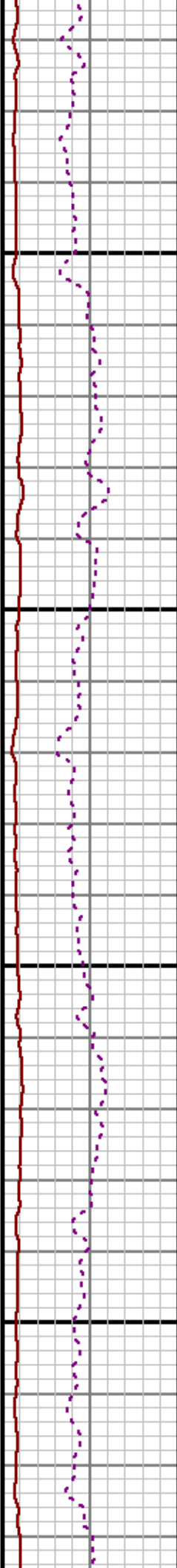
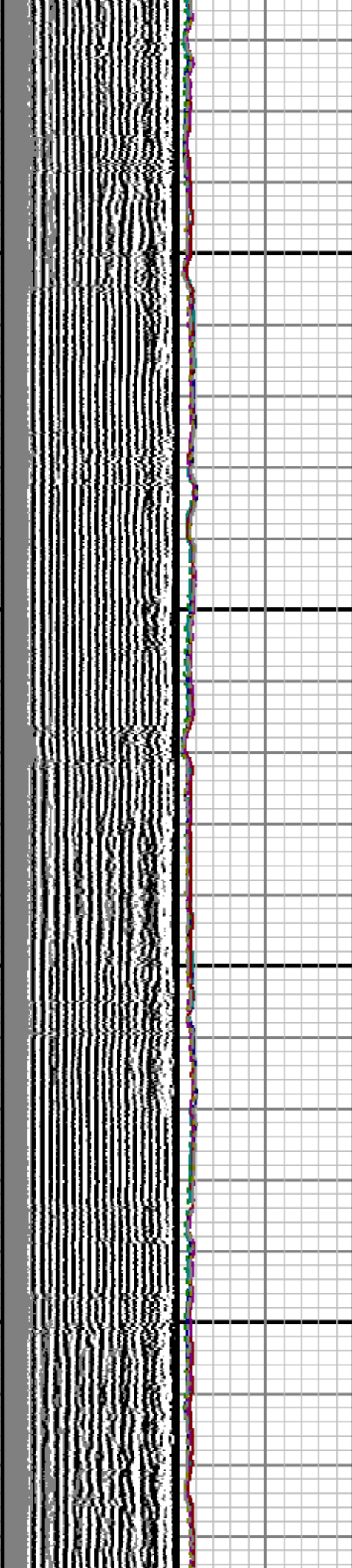


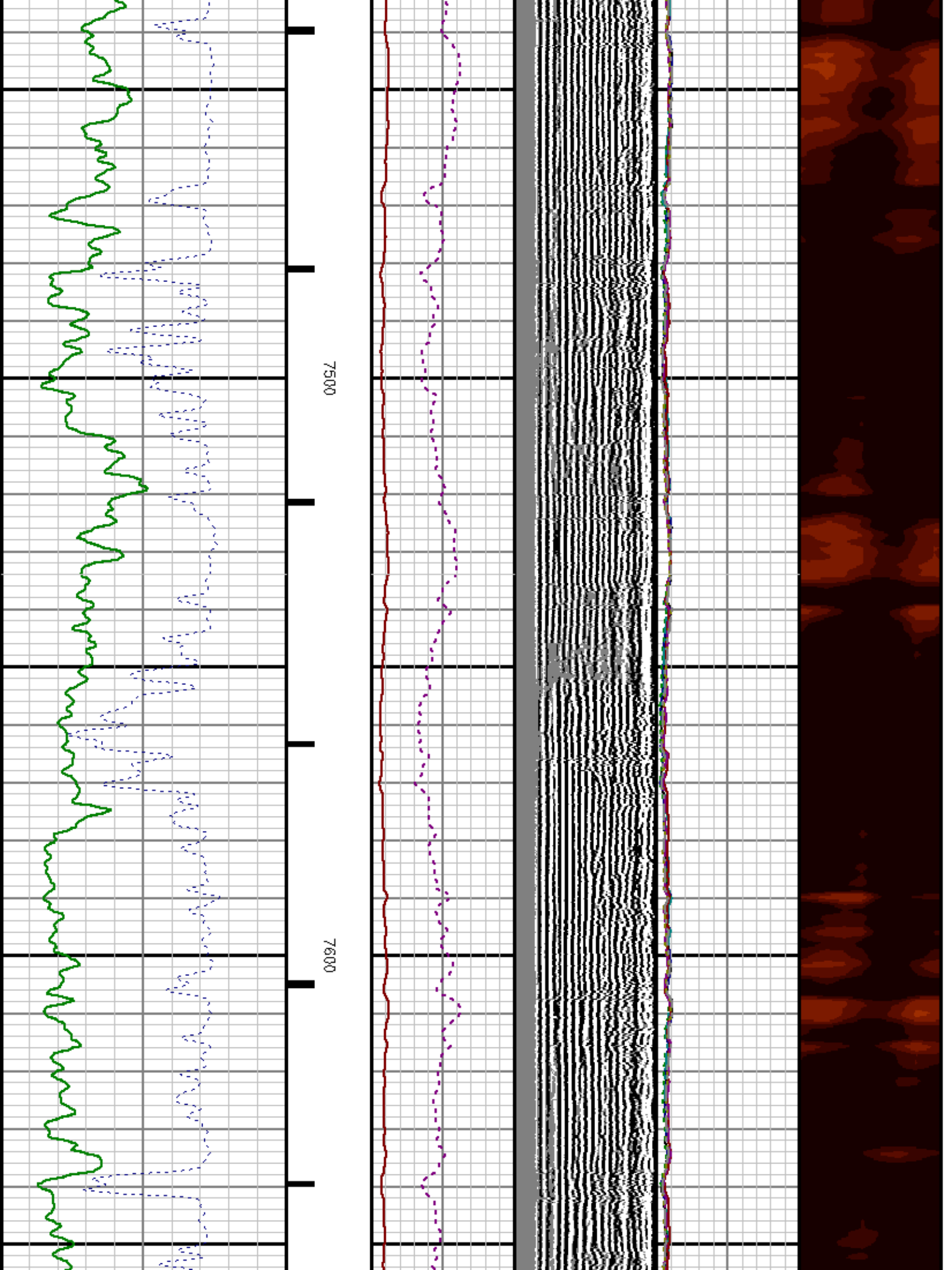
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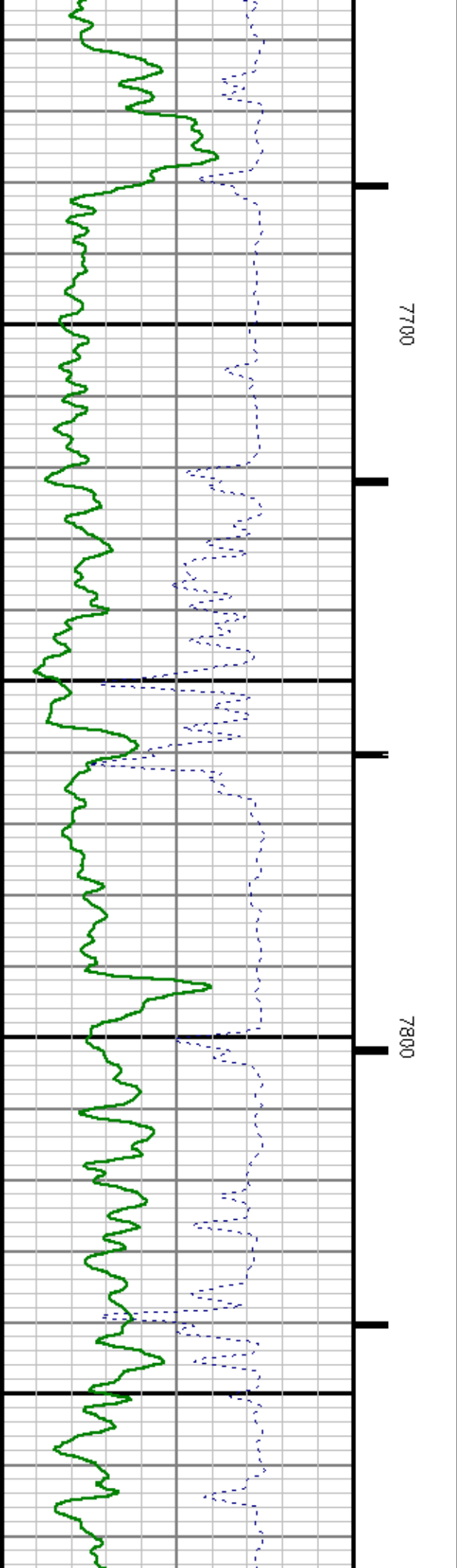
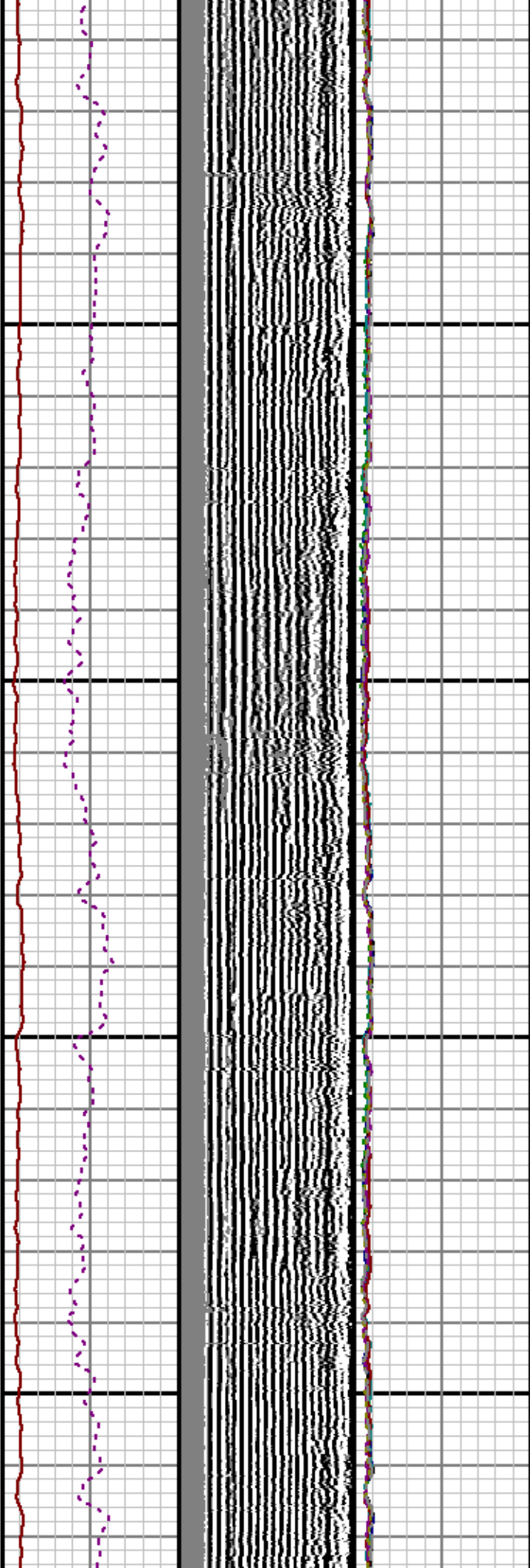
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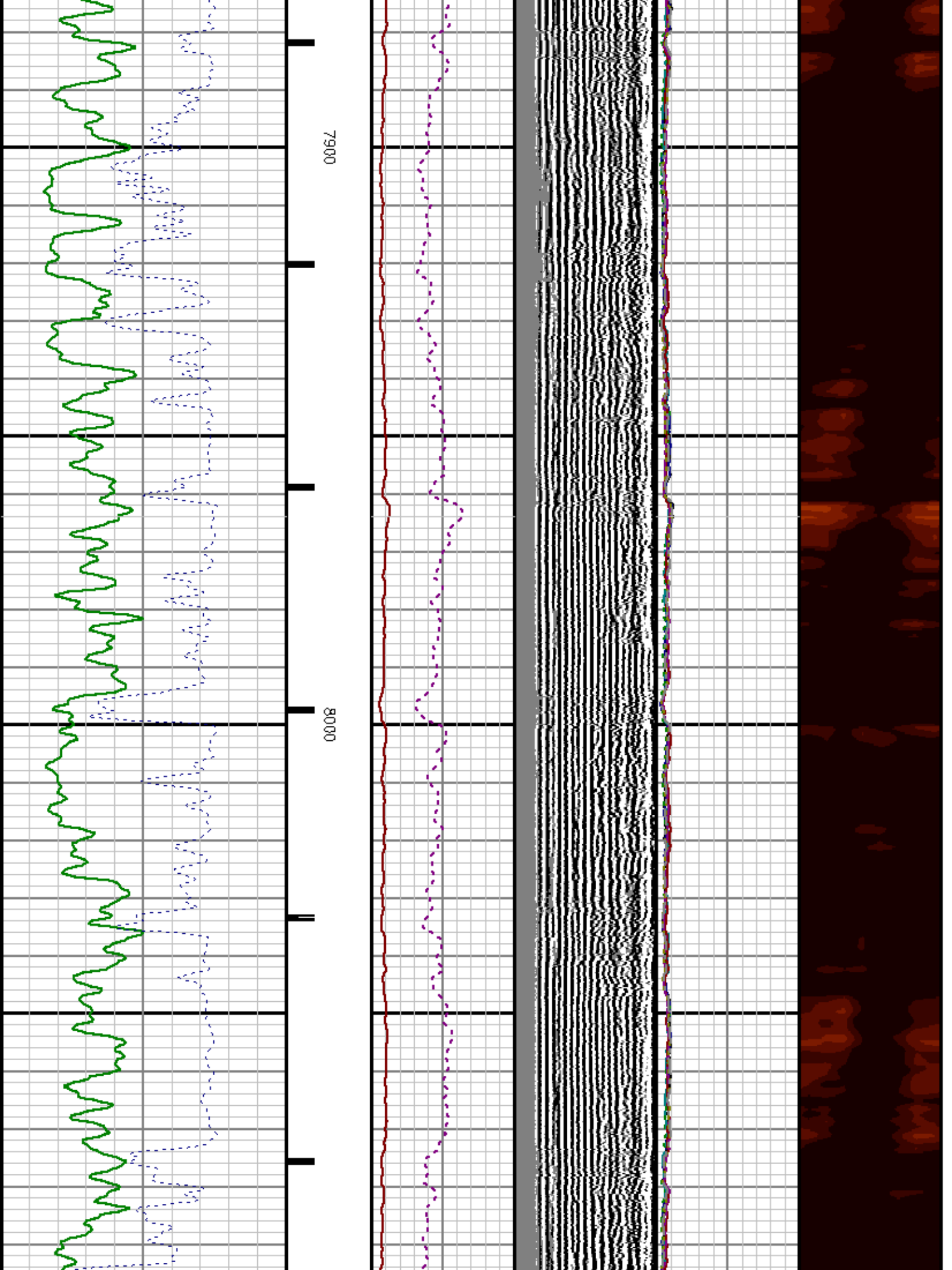


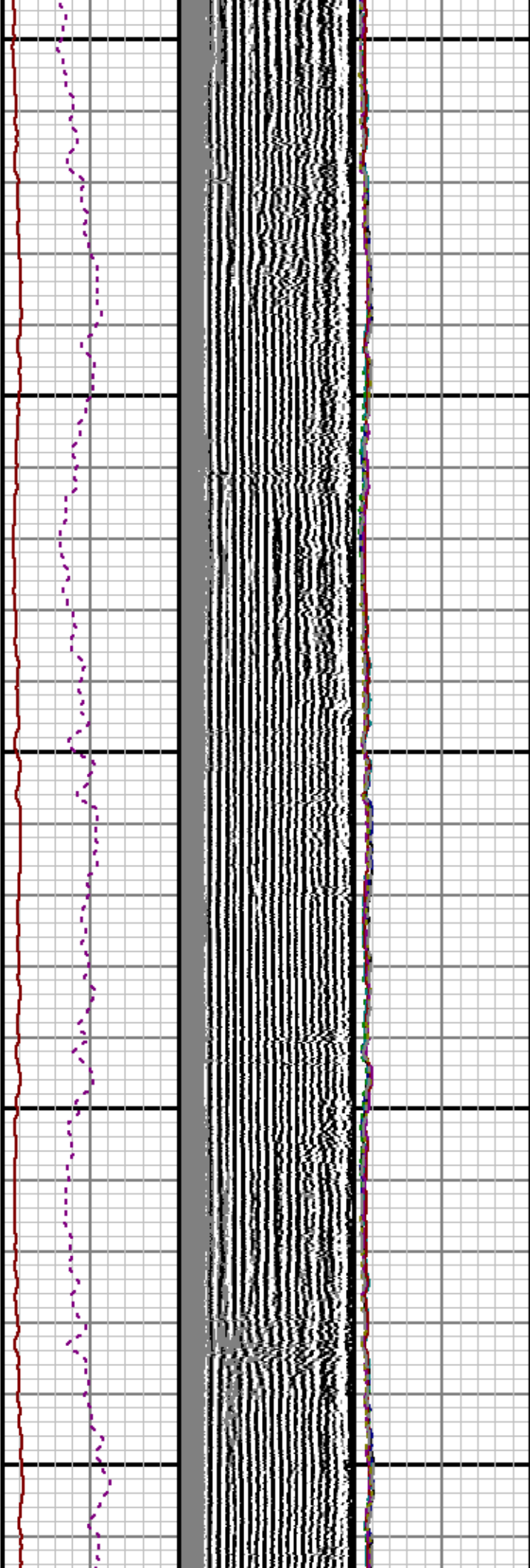








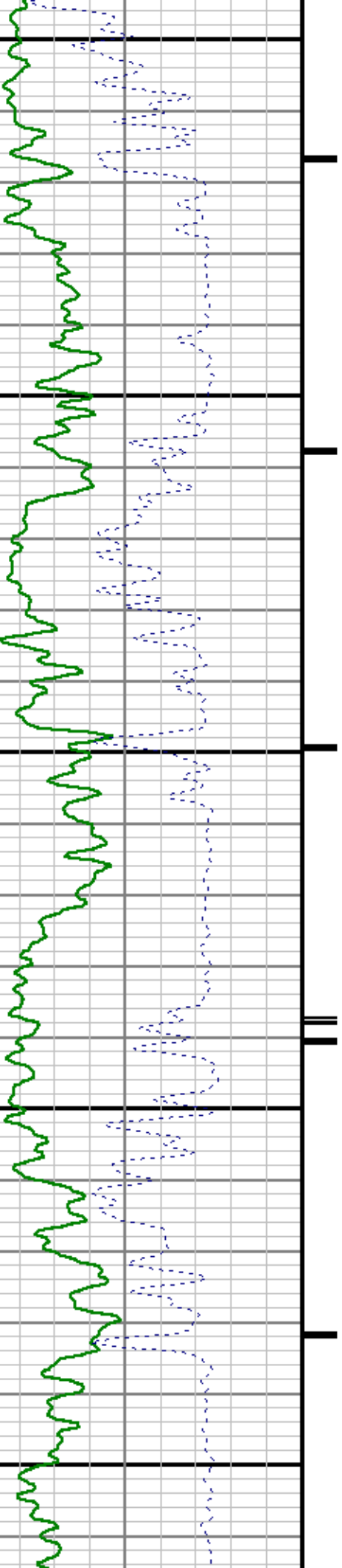


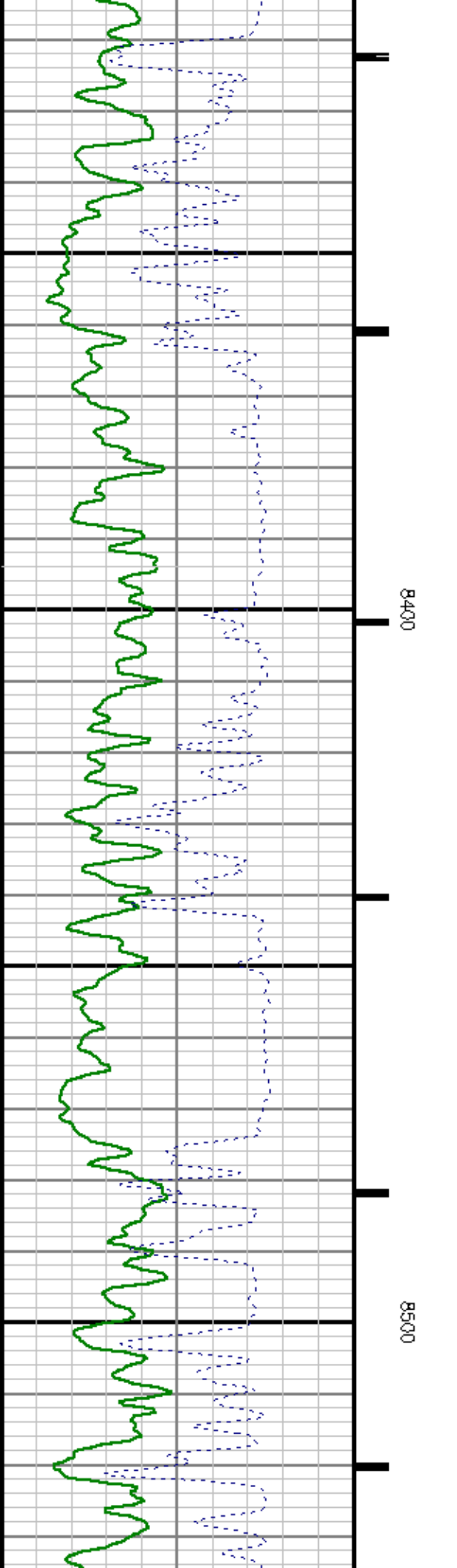
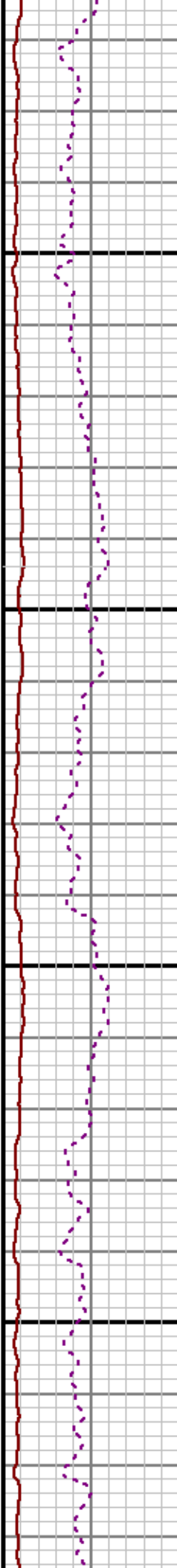
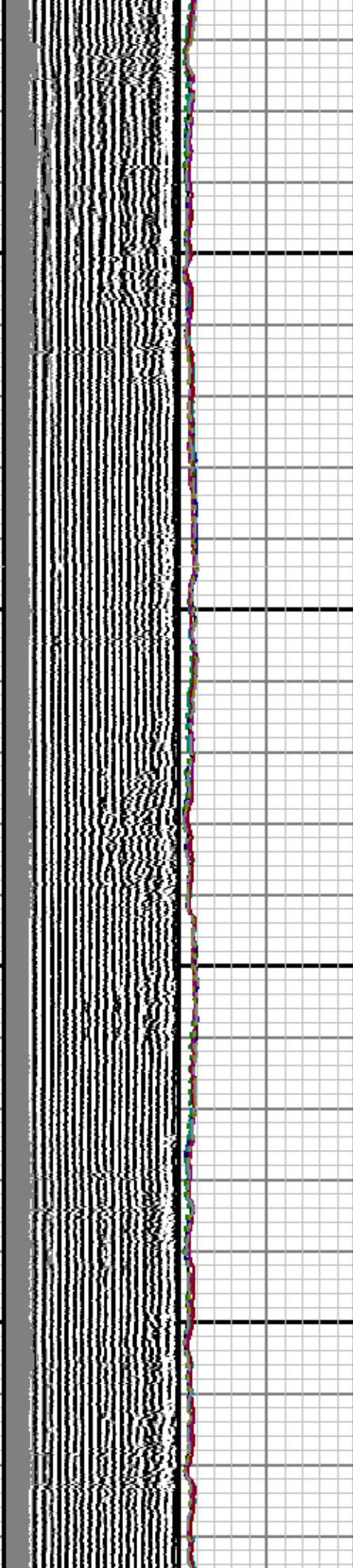


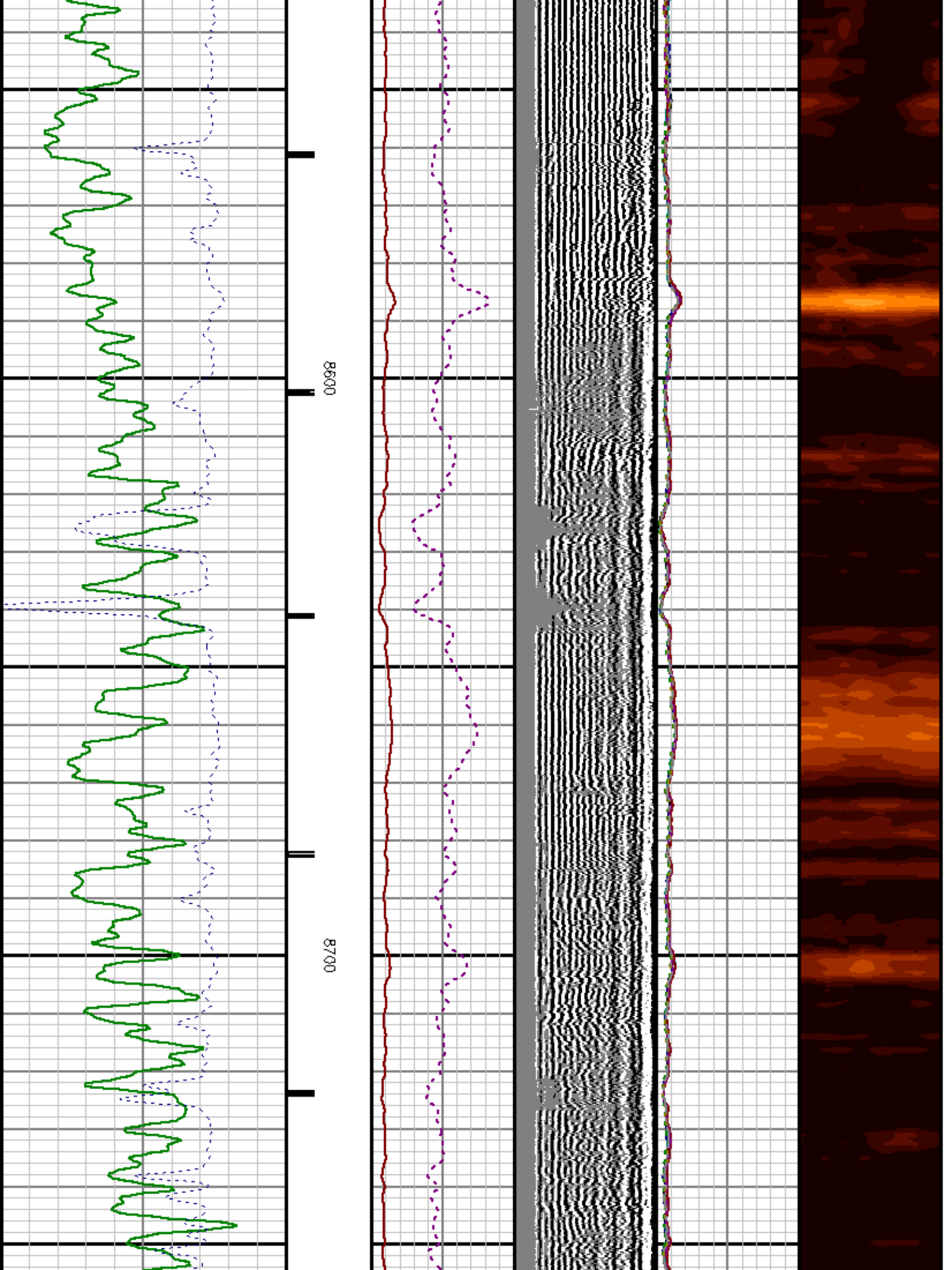
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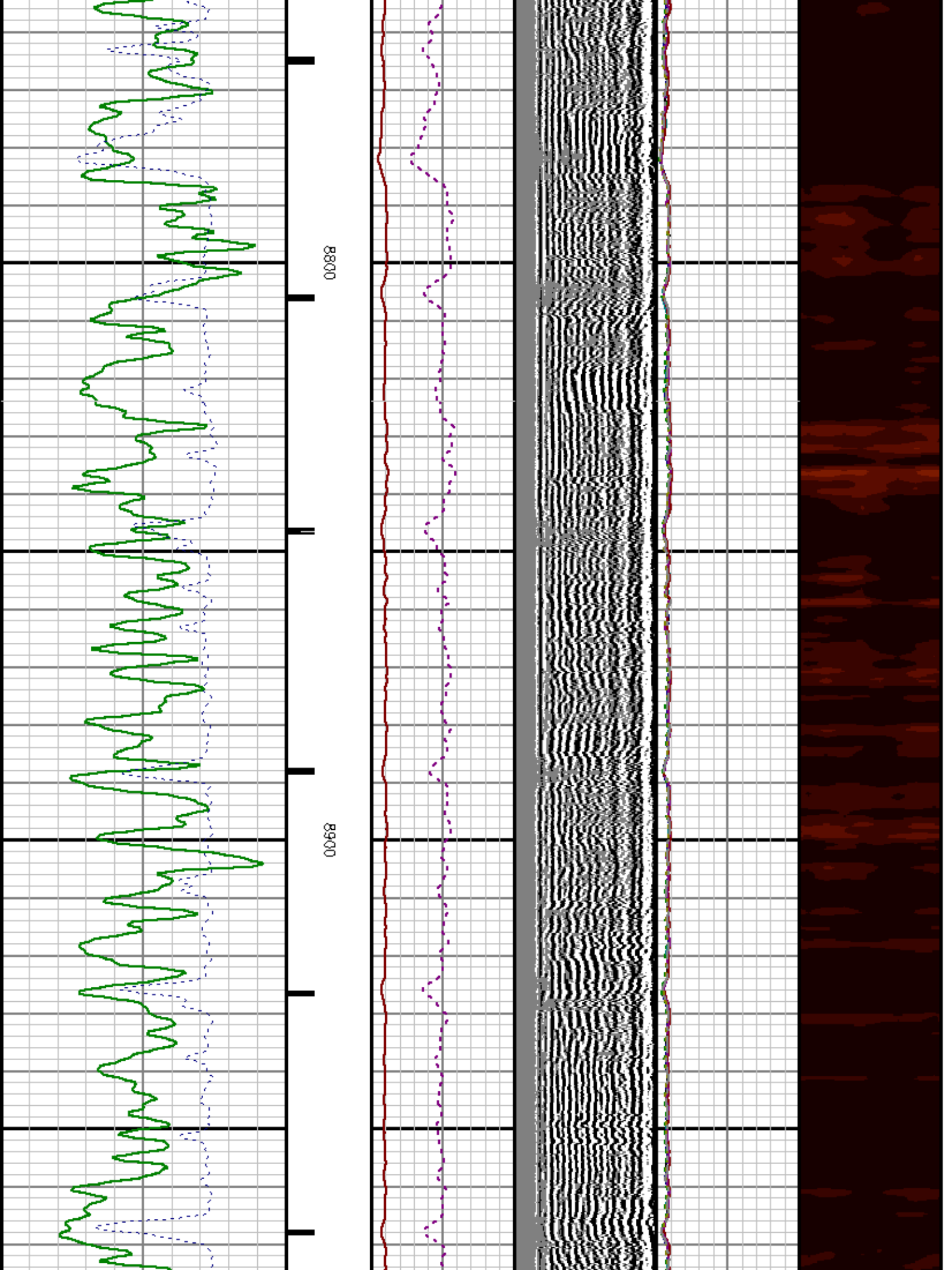
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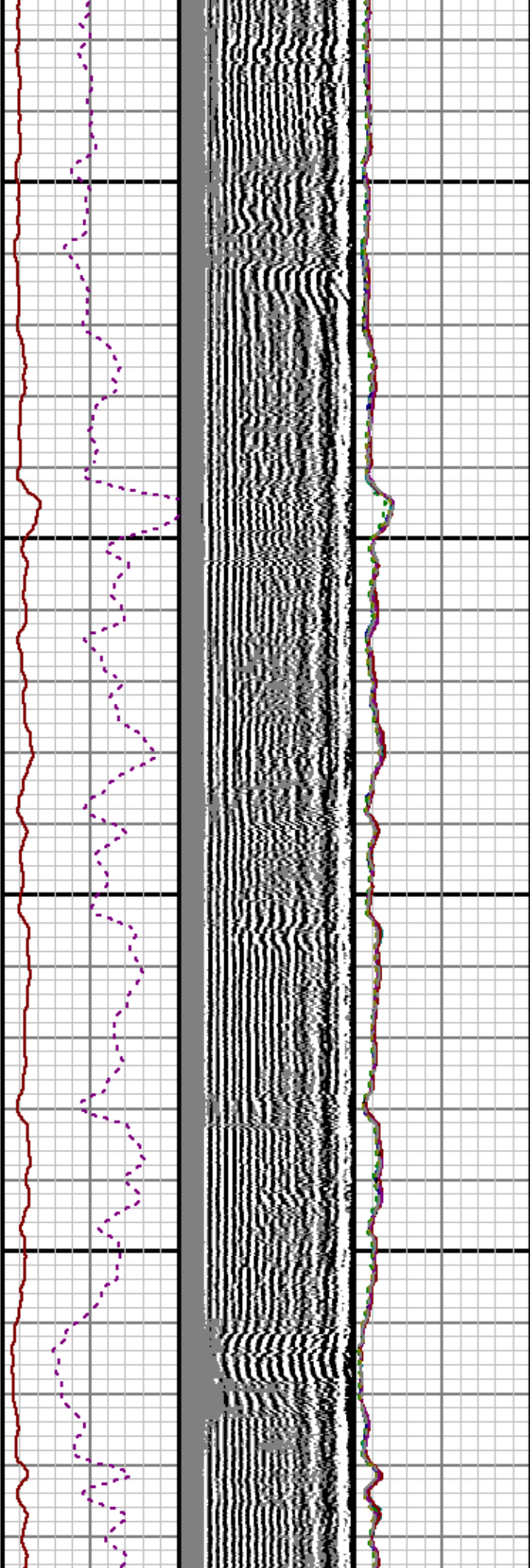
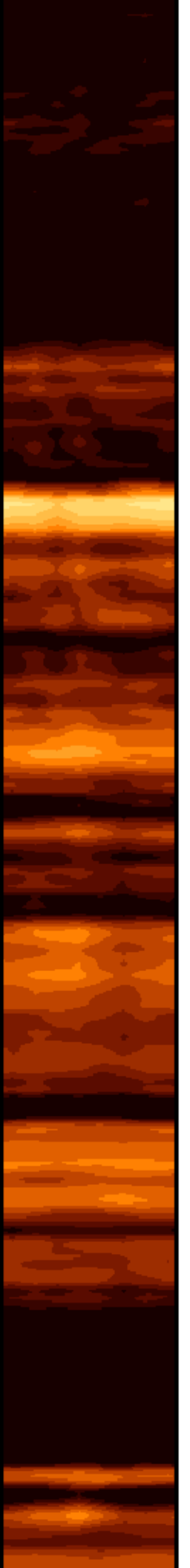






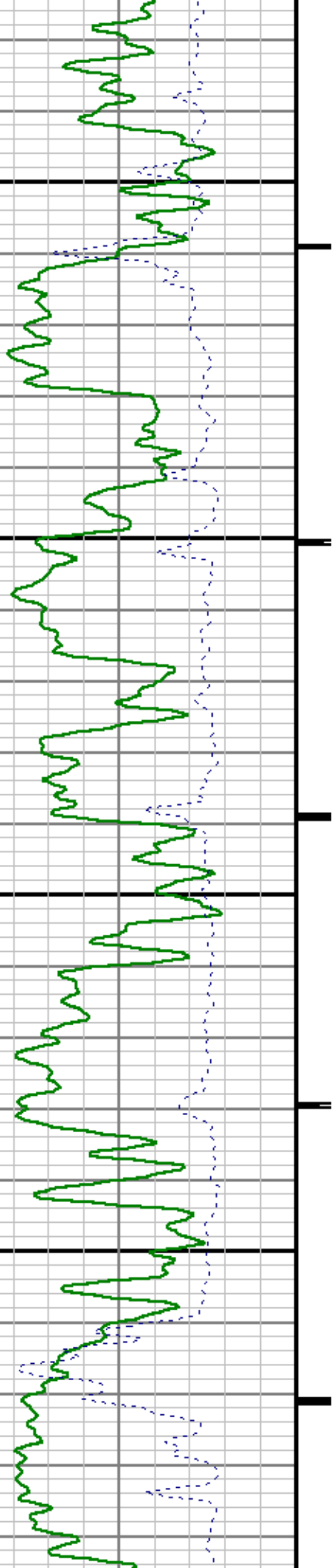


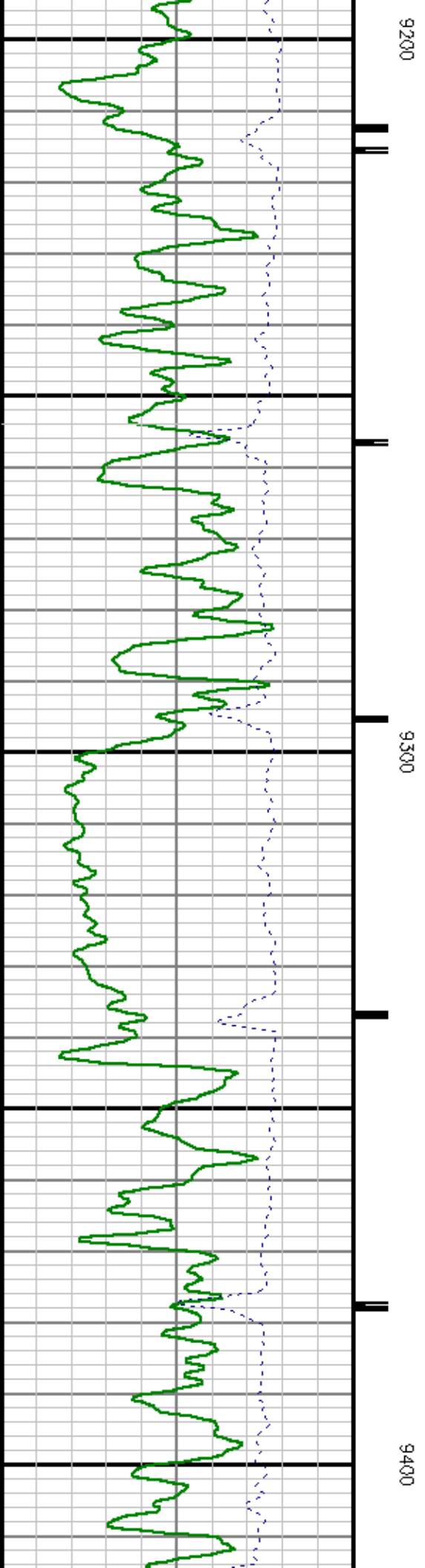
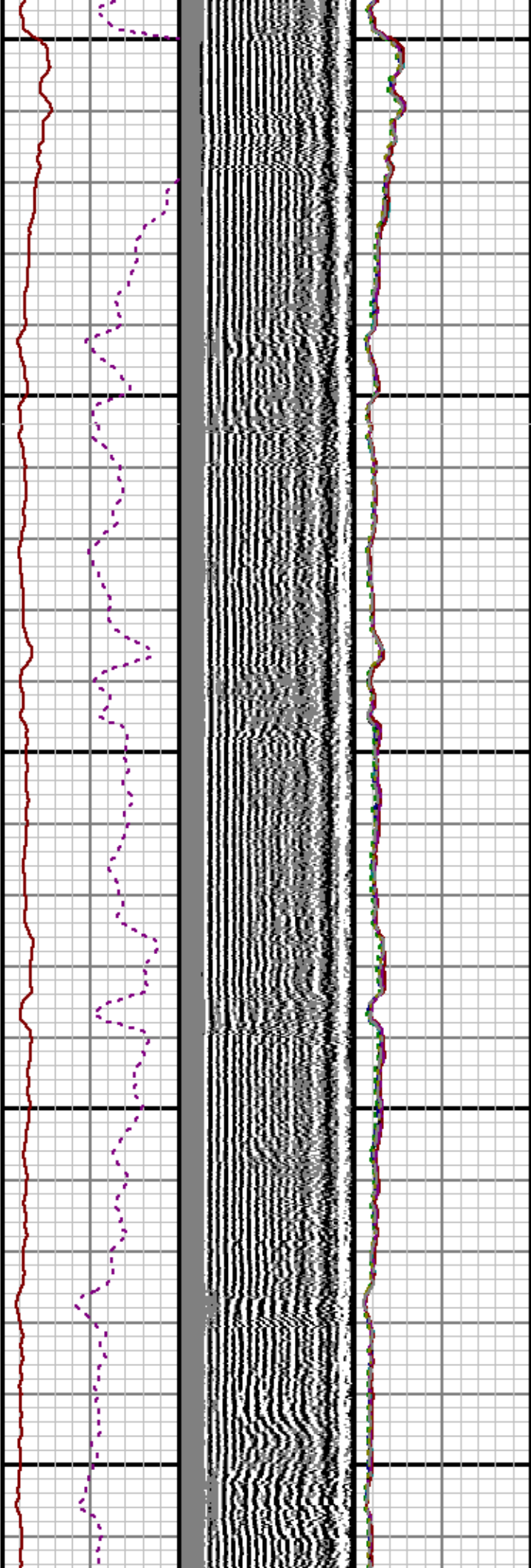


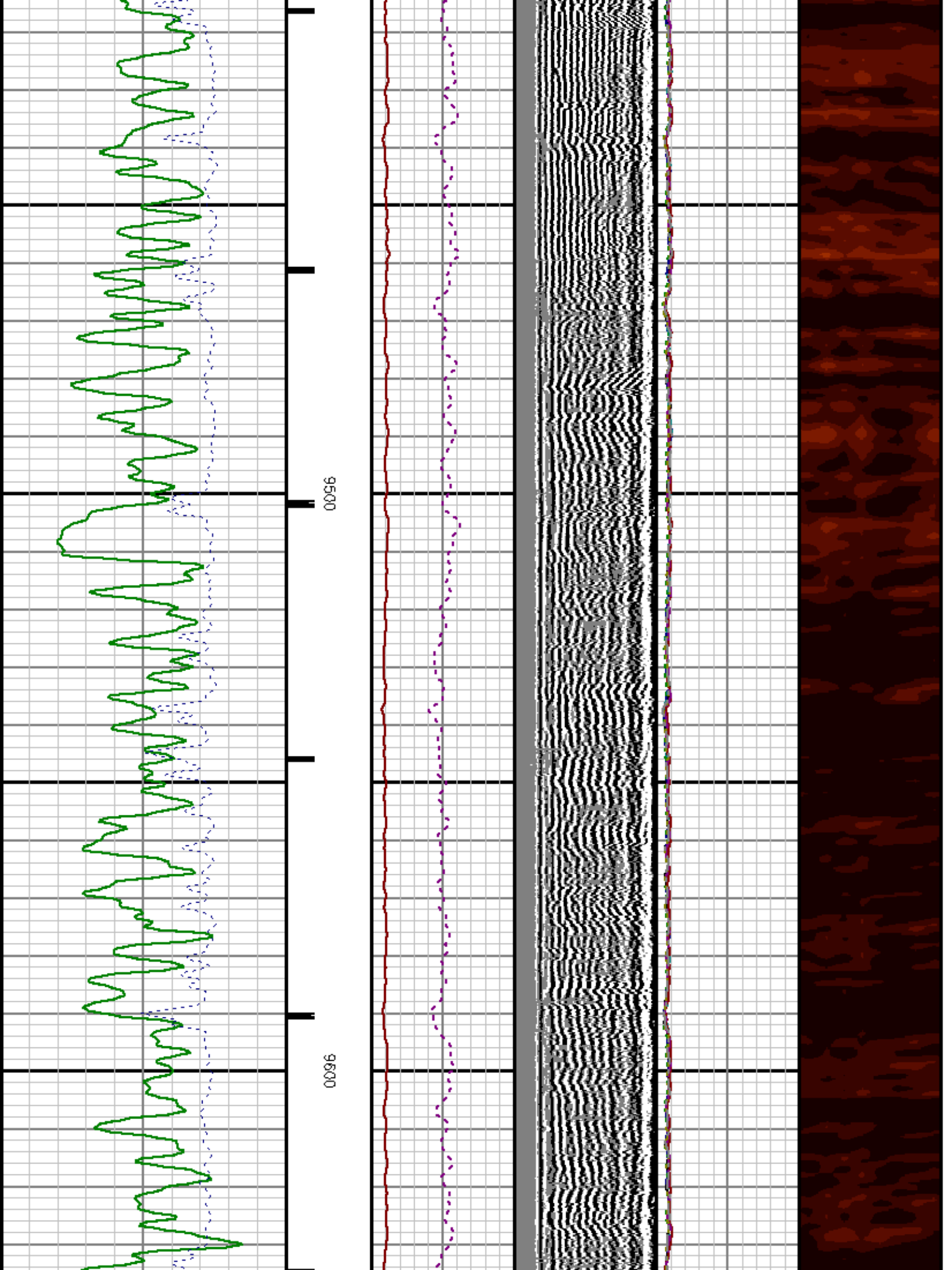


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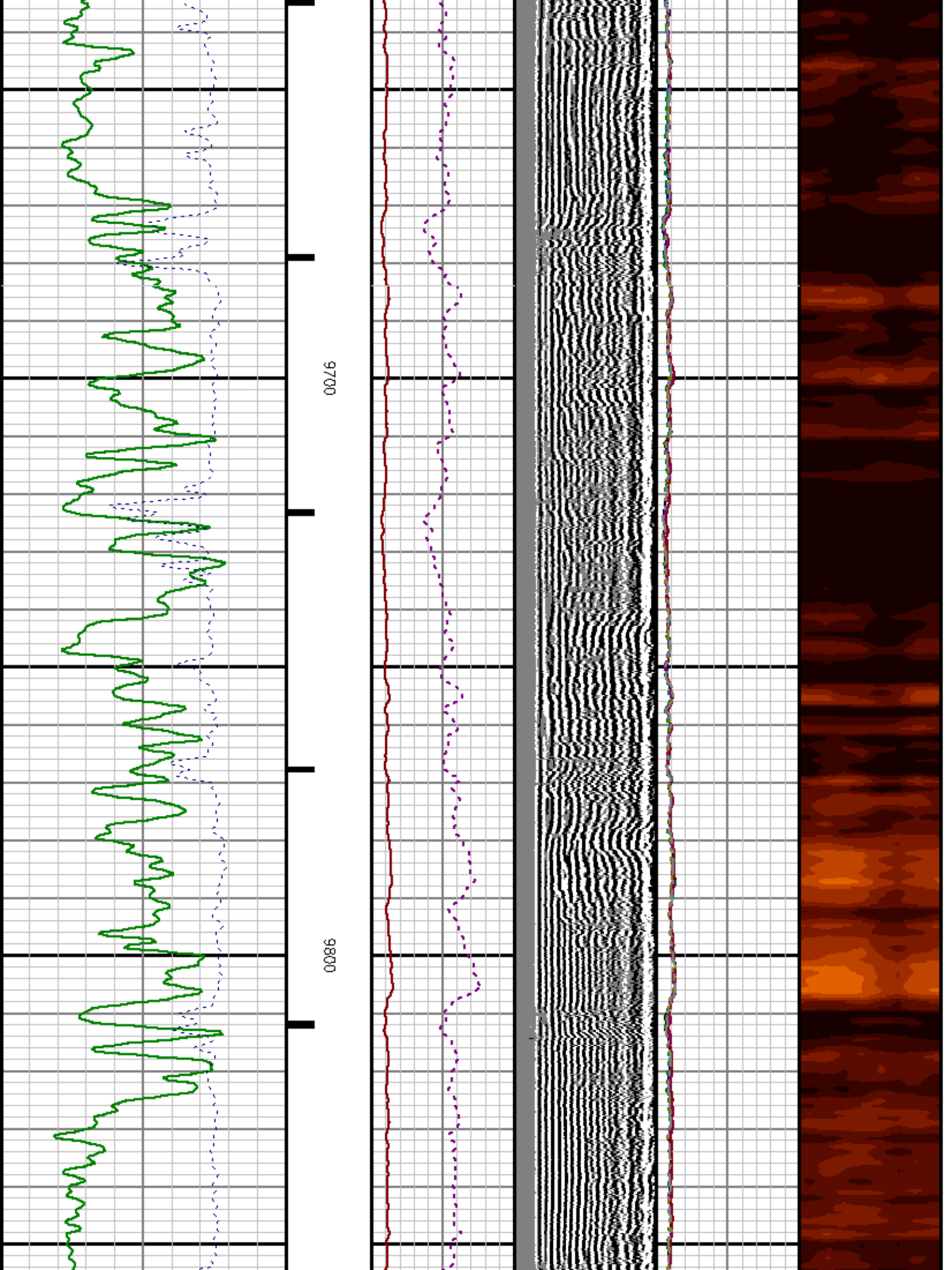
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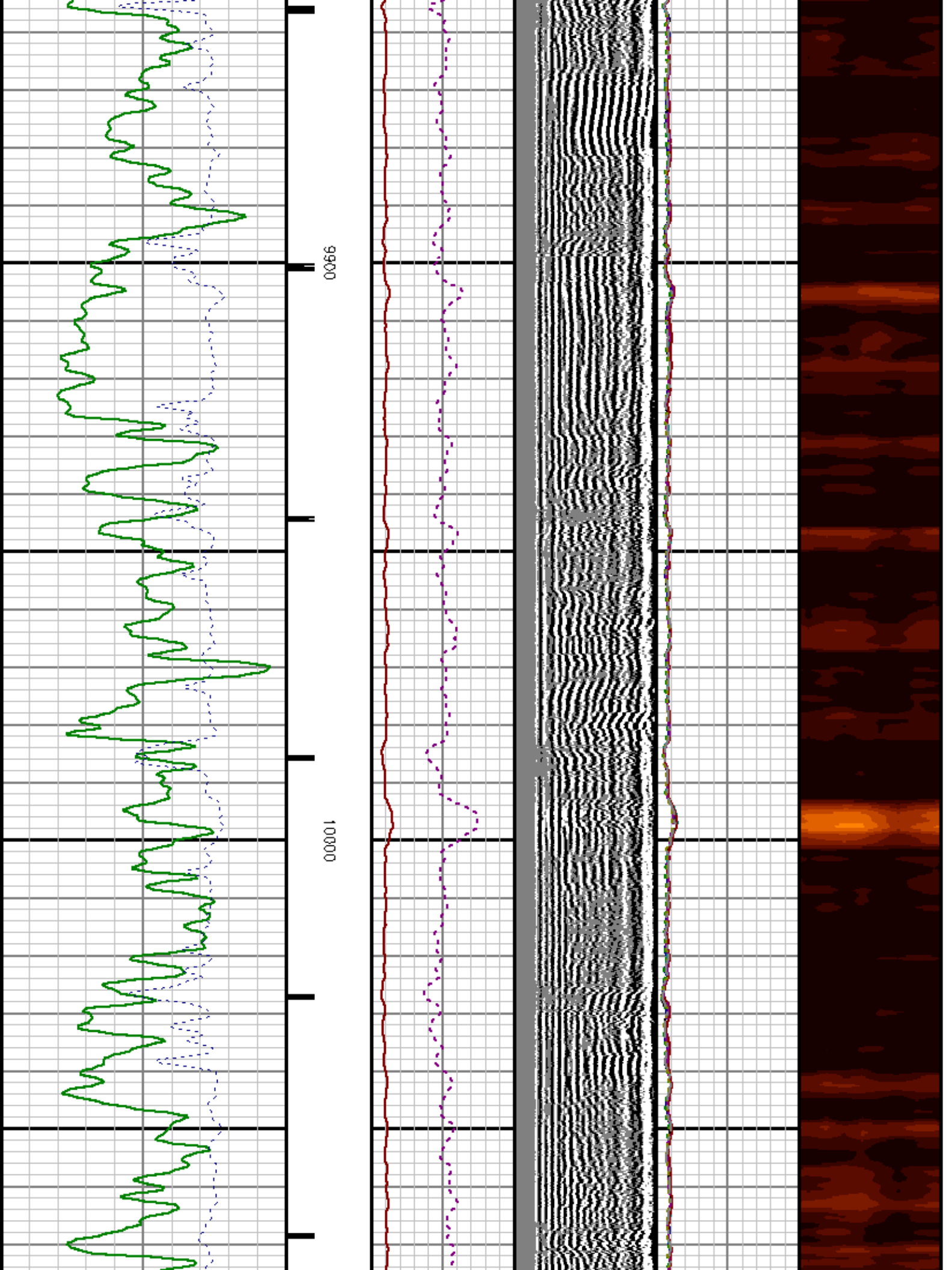


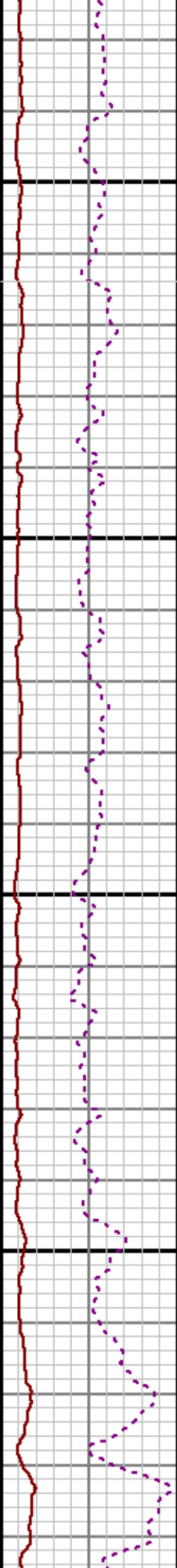
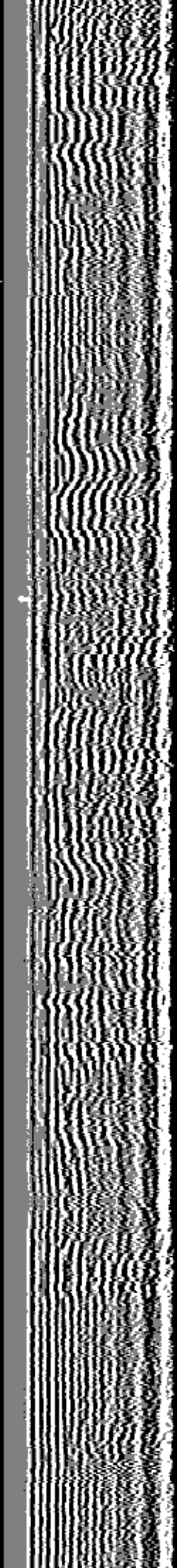
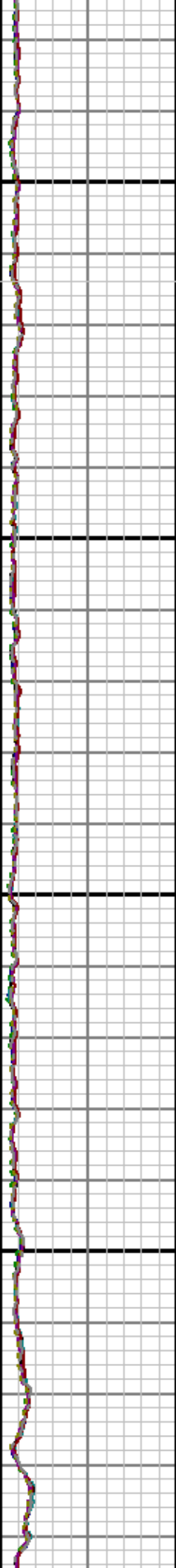






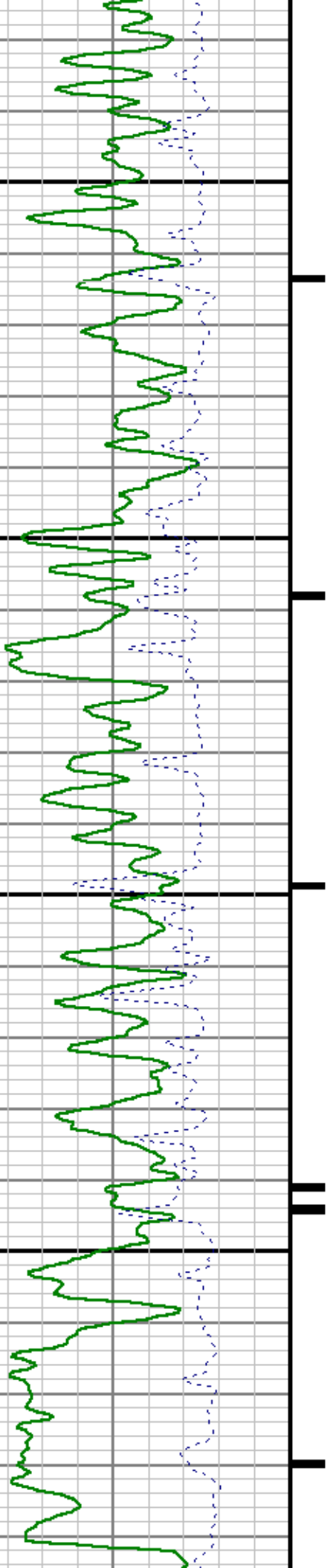


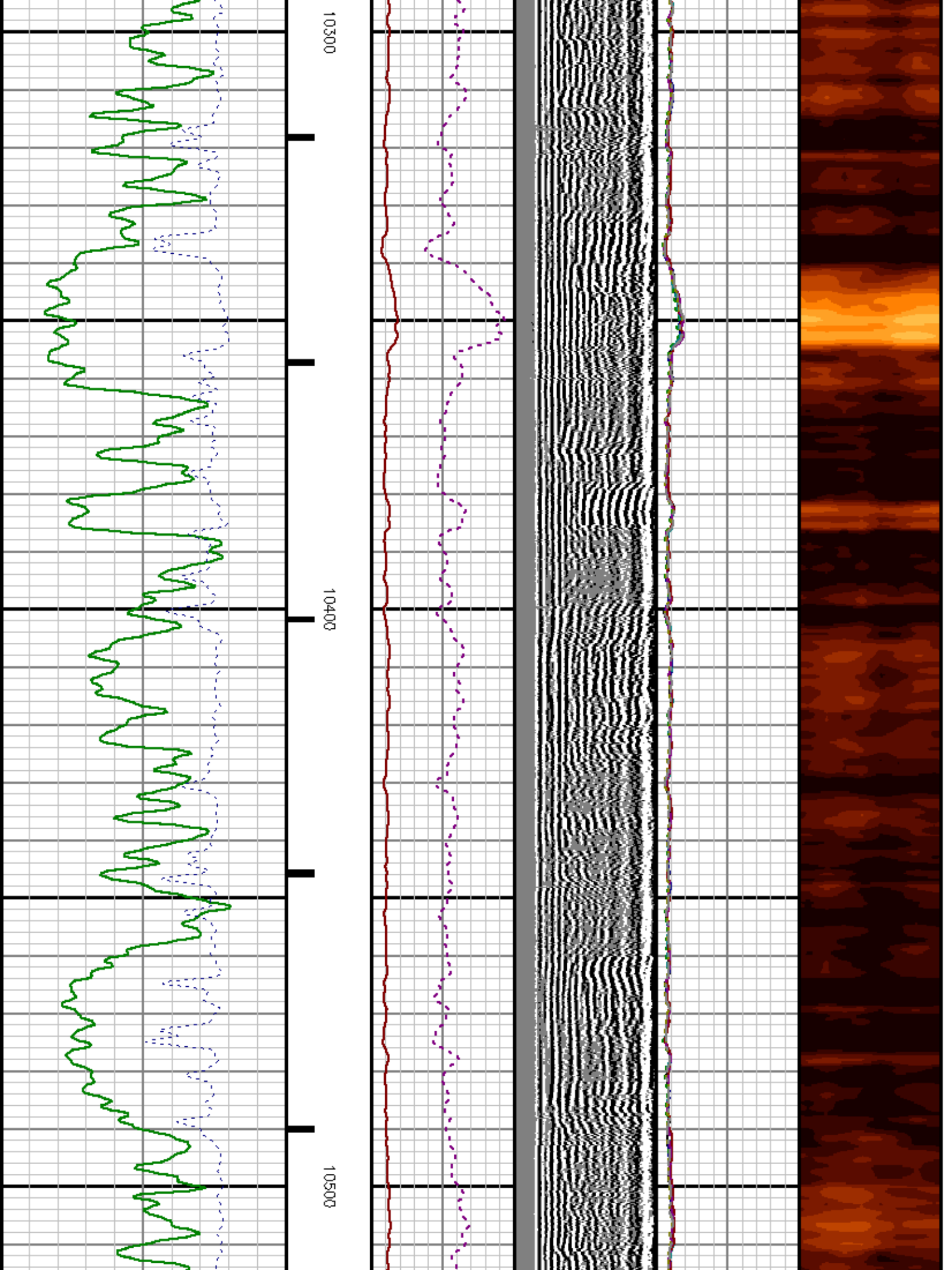




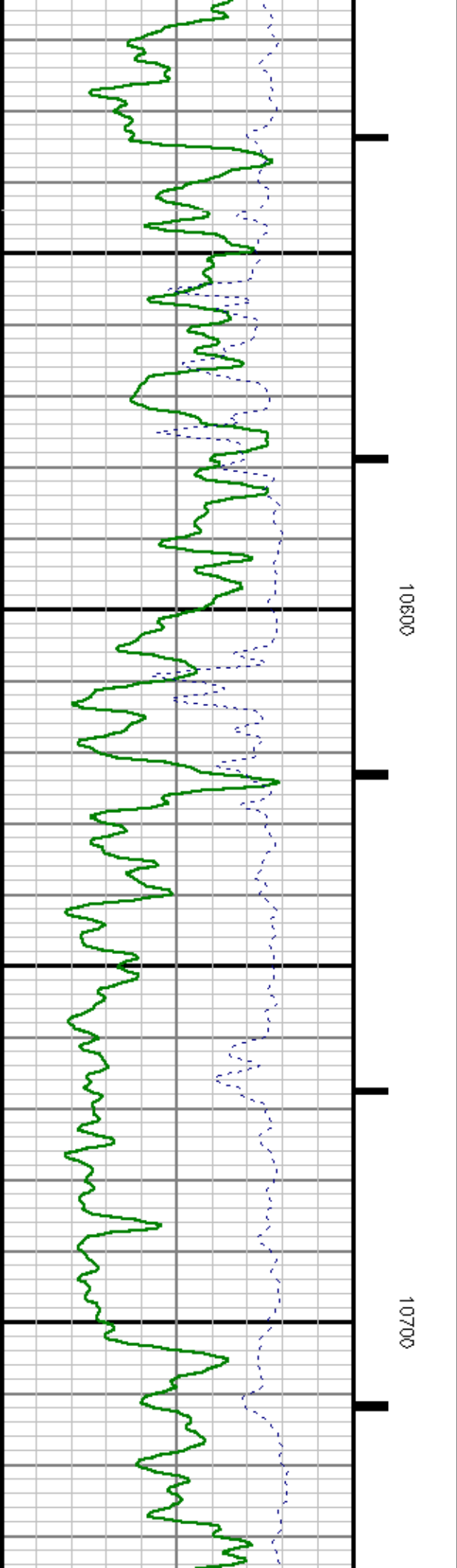
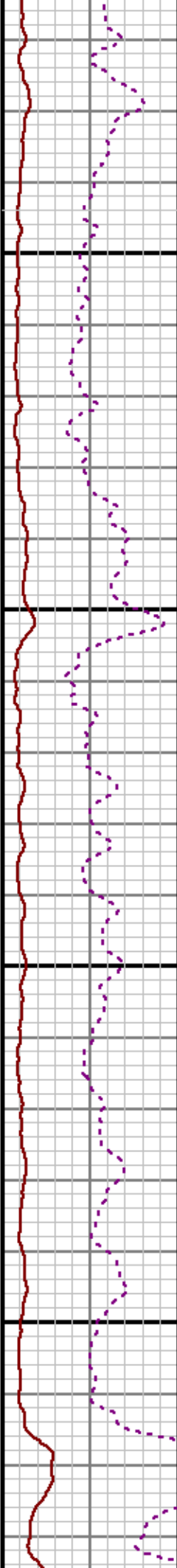
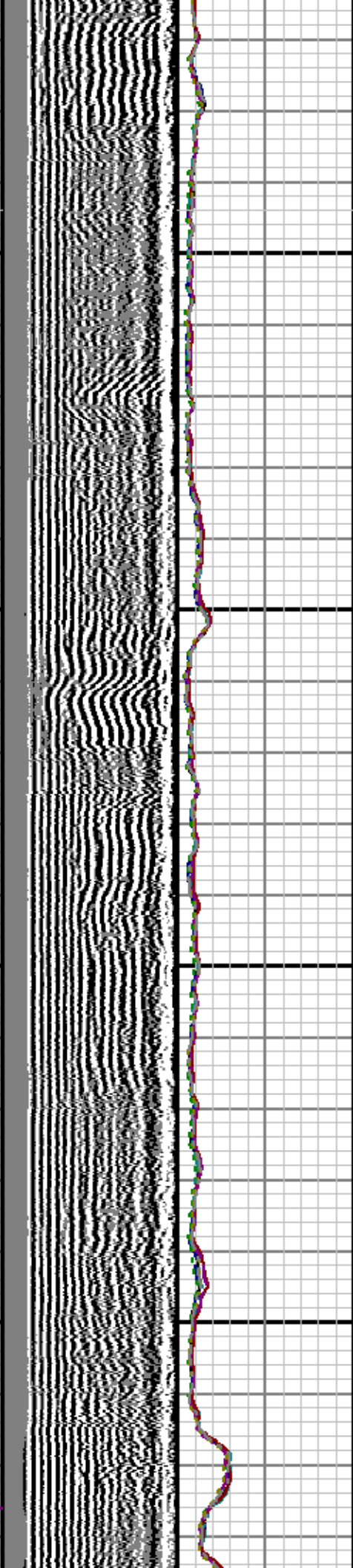
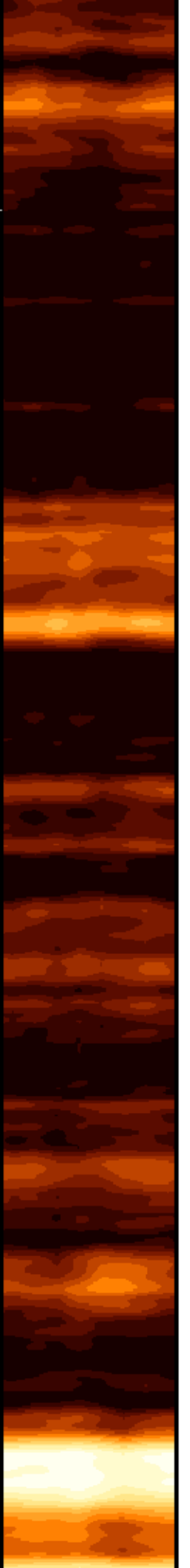
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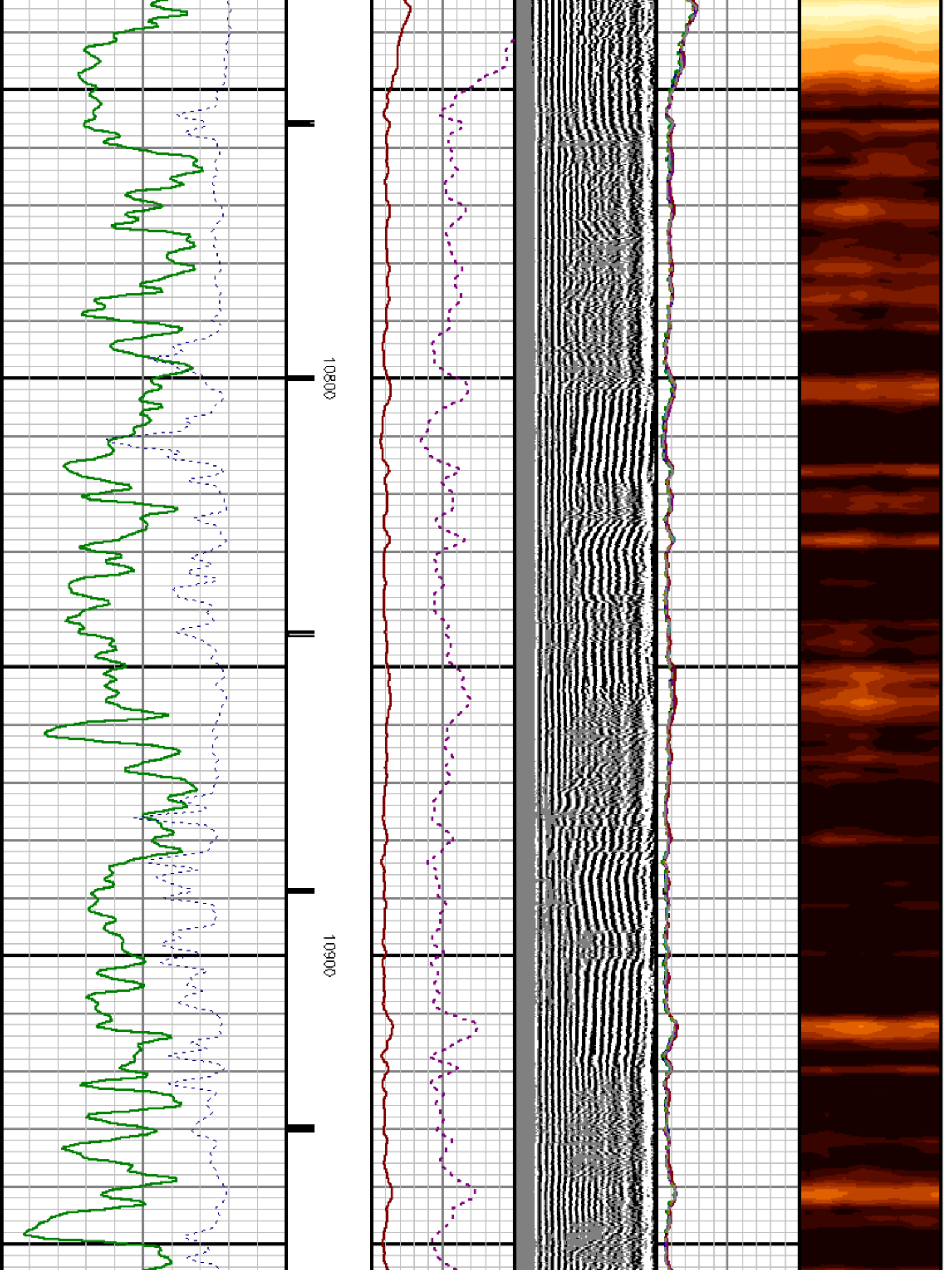
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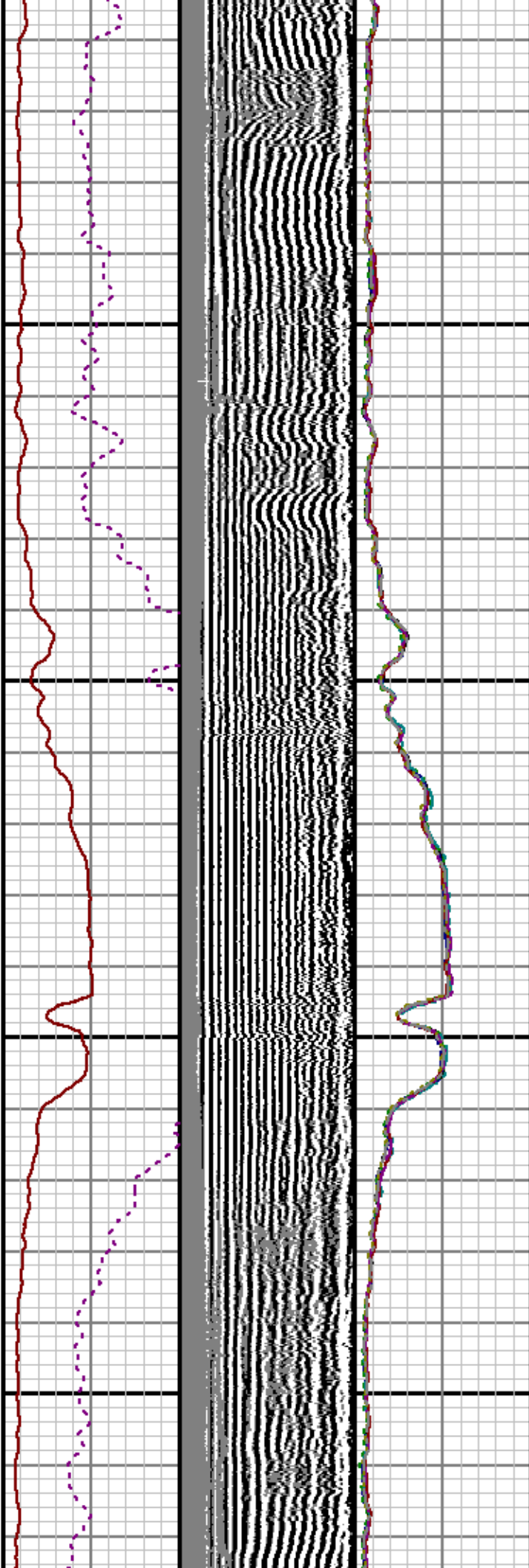






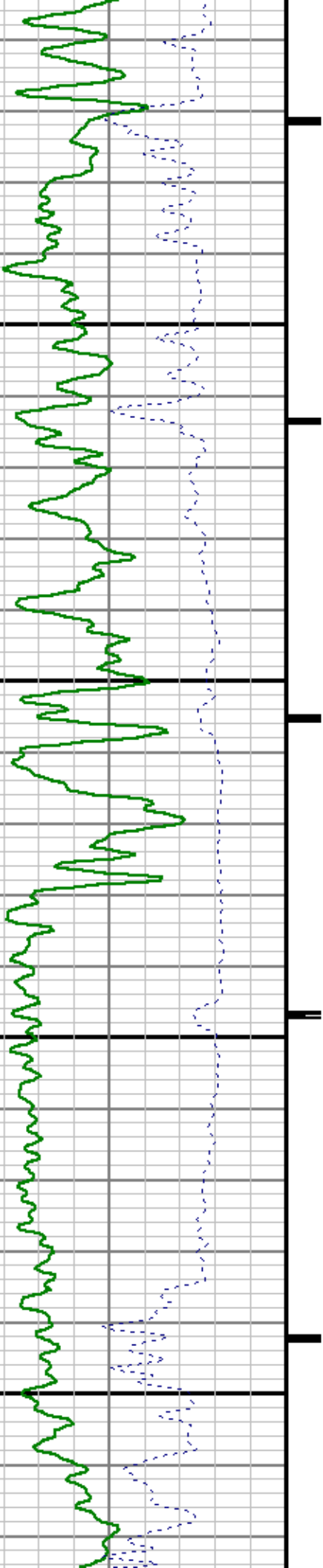


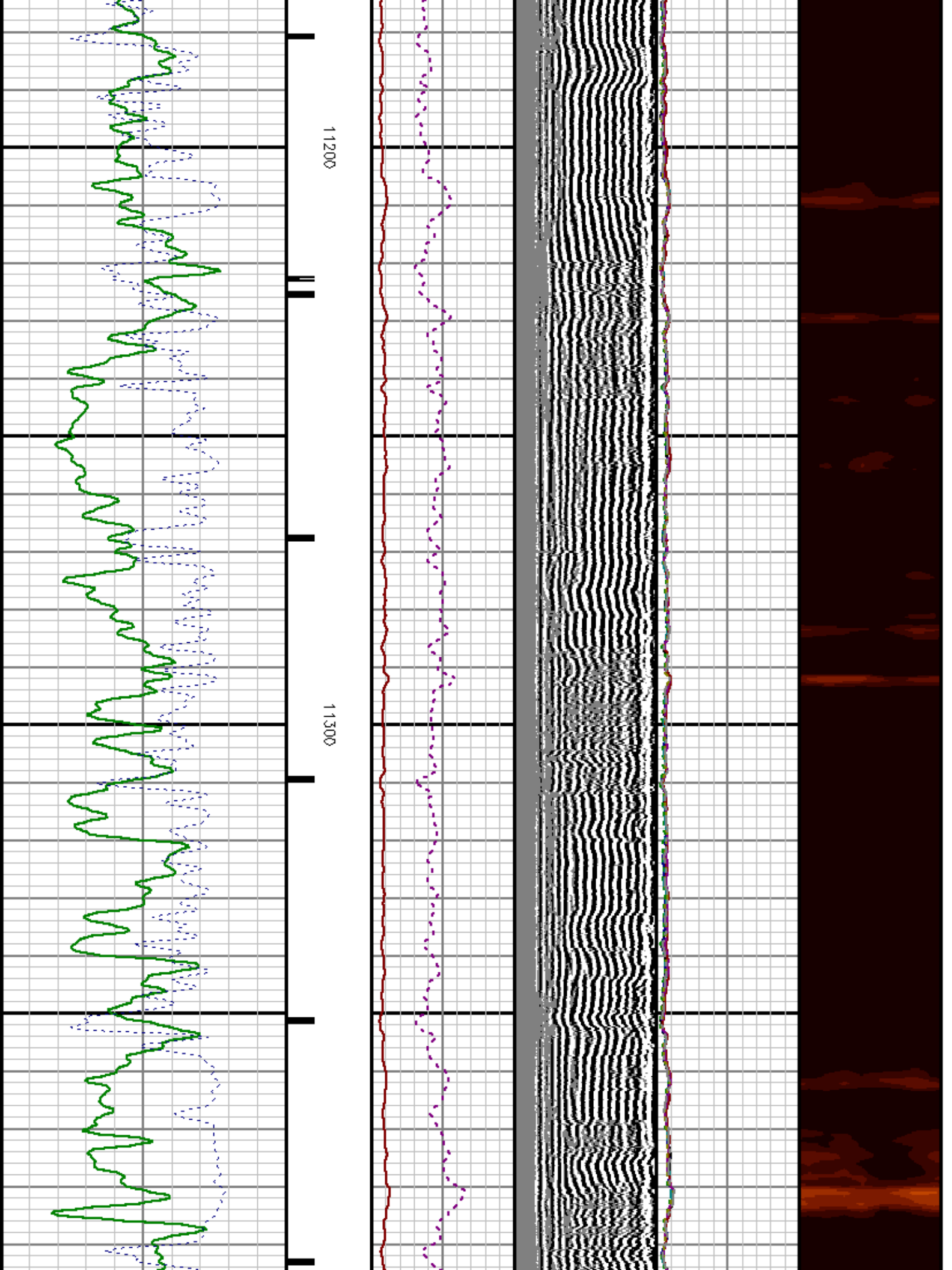




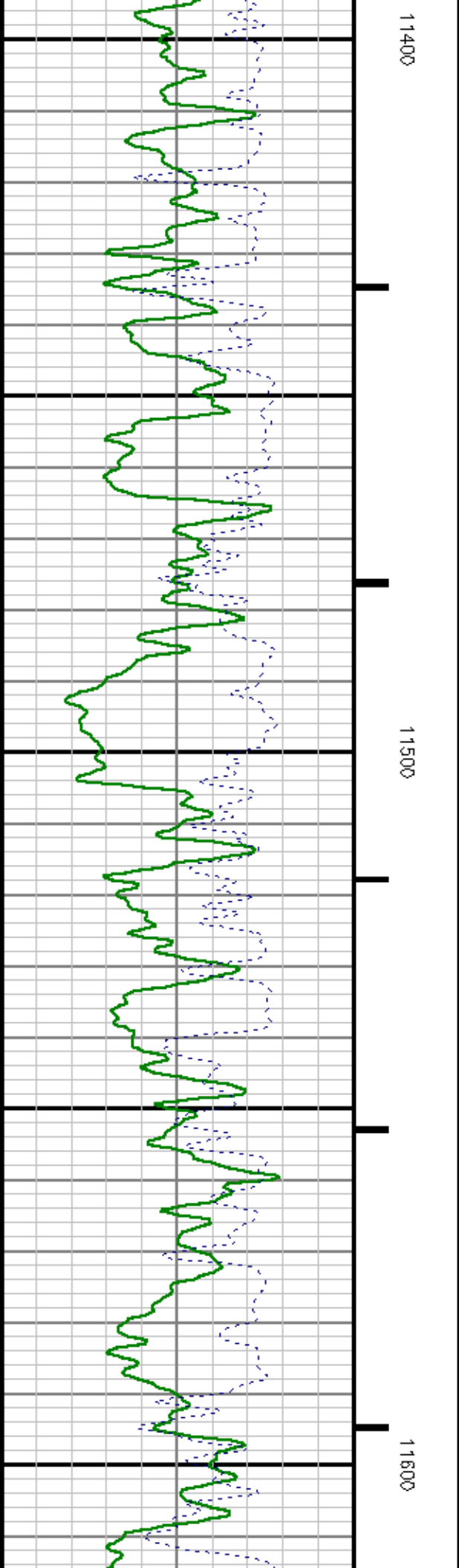
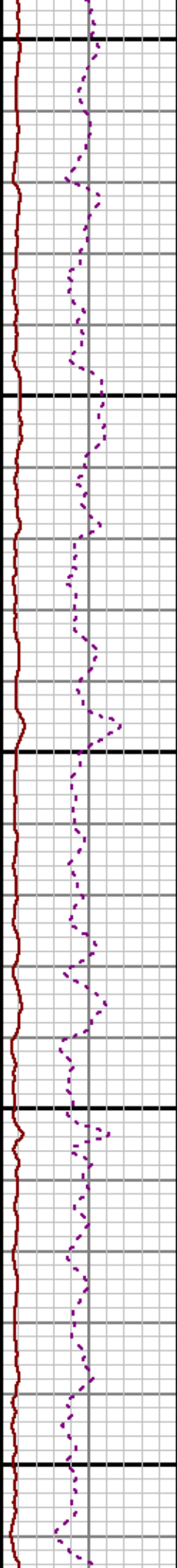
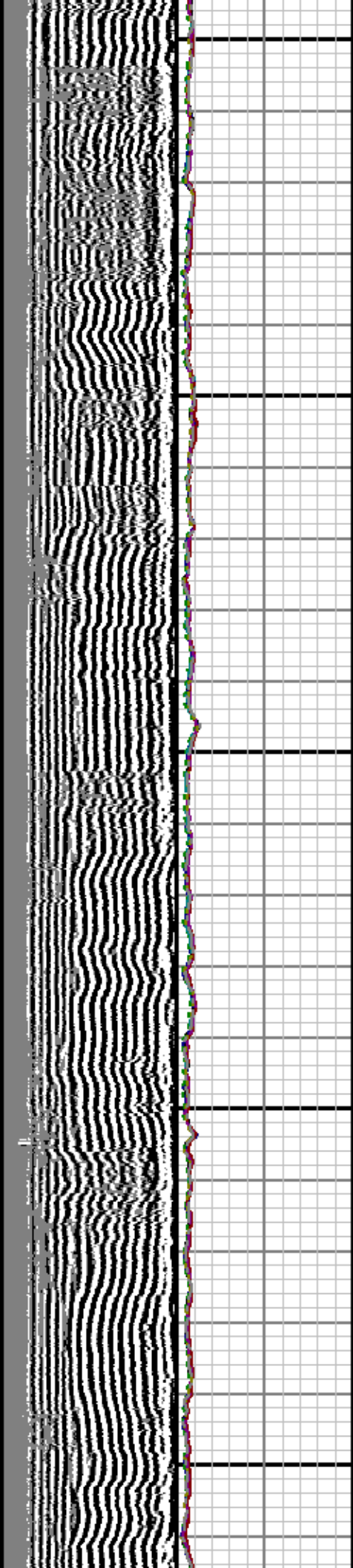
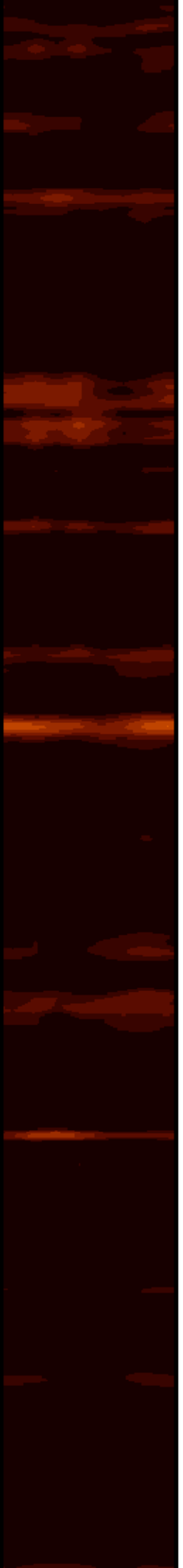
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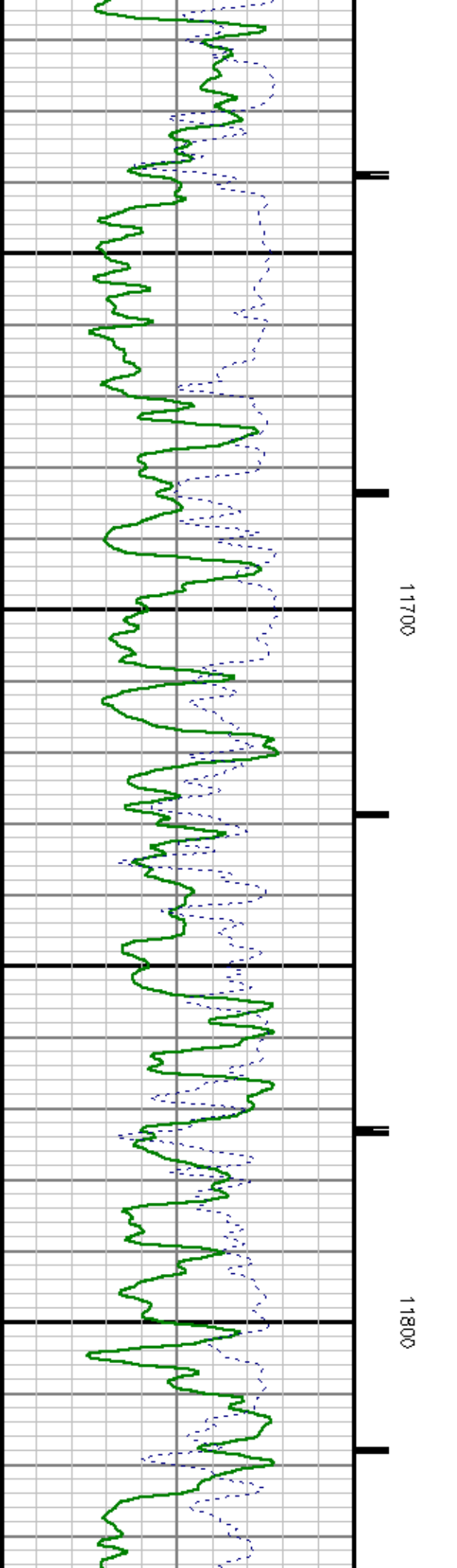
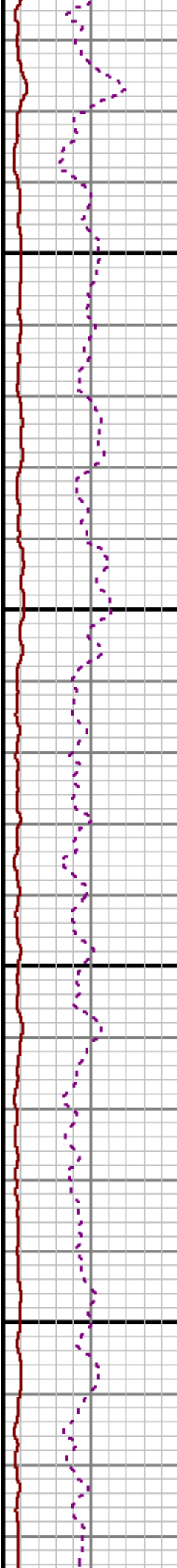
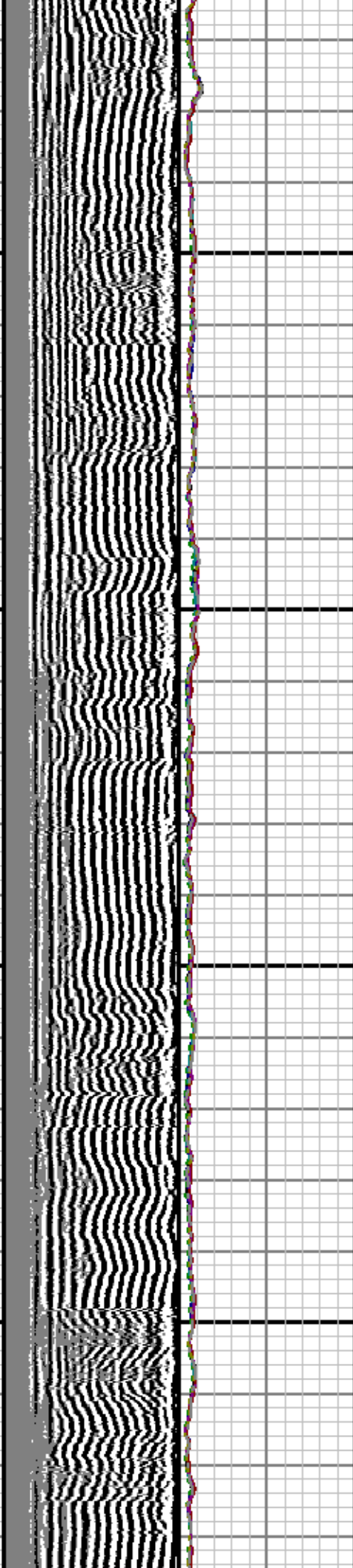
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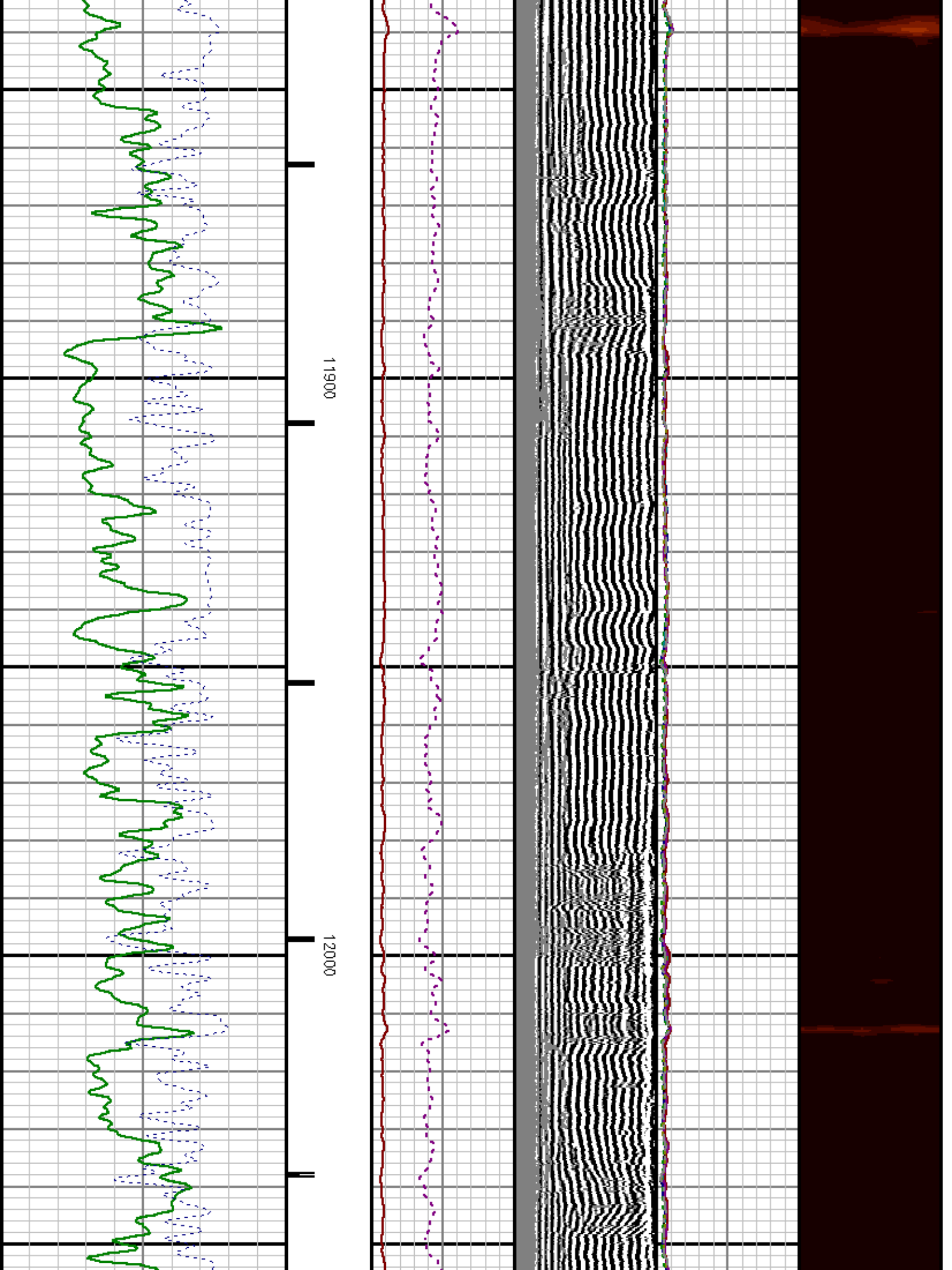


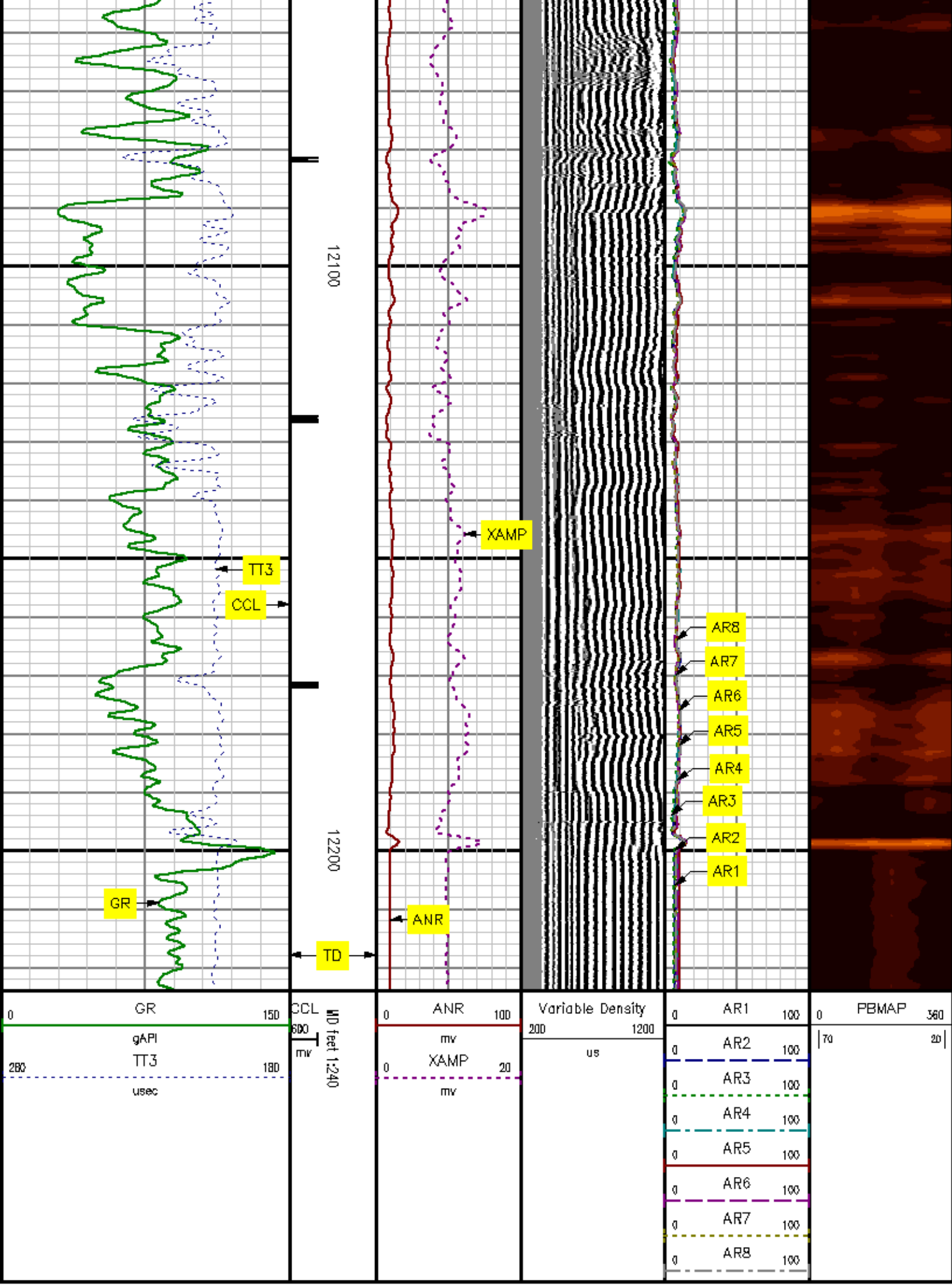














# REPEAT SECTION

0 PSI

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	314.263	usec	11680.993	12213.000
RAL	Amp Gate Start Near	197.754	usec	11680.993	12213.000
RAL	Amp Gate Start Radial	197.754	usec	11680.993	12213.000
RAL	Amp Gate Width Far	25.000	usec	11680.993	12213.000
RAL	Amp Gate Width Near	25.000	usec	11680.993	12213.000
RAL	Amp Gate Width Radial	25.000	usec	11680.993	12213.000
RAL	casing od	4.500	inches	11680.993	12213.000
RAL	casing wt	15.100	lbm/ft	11680.993	12213.000
RAL	FB Start Far	269.263	usec	11680.993	12213.000
RAL	FB Start Near	172.754	usec	11680.993	12213.000
RAL	FB Start Radial	172.754	usec	11680.993	12213.000
RAL	FB Thresh Far	10.000	mv	11680.993	12213.000
RAL	FB Thresh Near	4.000	mv	11680.993	12213.000
RAL	FB Thresh Radial	4.000	mv	11680.993	12213.000
RAL	Fluid Travel Time	200.000	usec/ft	11680.993	12212.618

## DEPTH OFFSETS

(for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES					
		ACAL	ANR	AR1	AR2	AR3	AR4
1426XA	-15.360	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, v4.6.007

Plotted by : PlotMgr, v5.4.504

Company : EXXONMOBIL PRODUCTION COMPANY

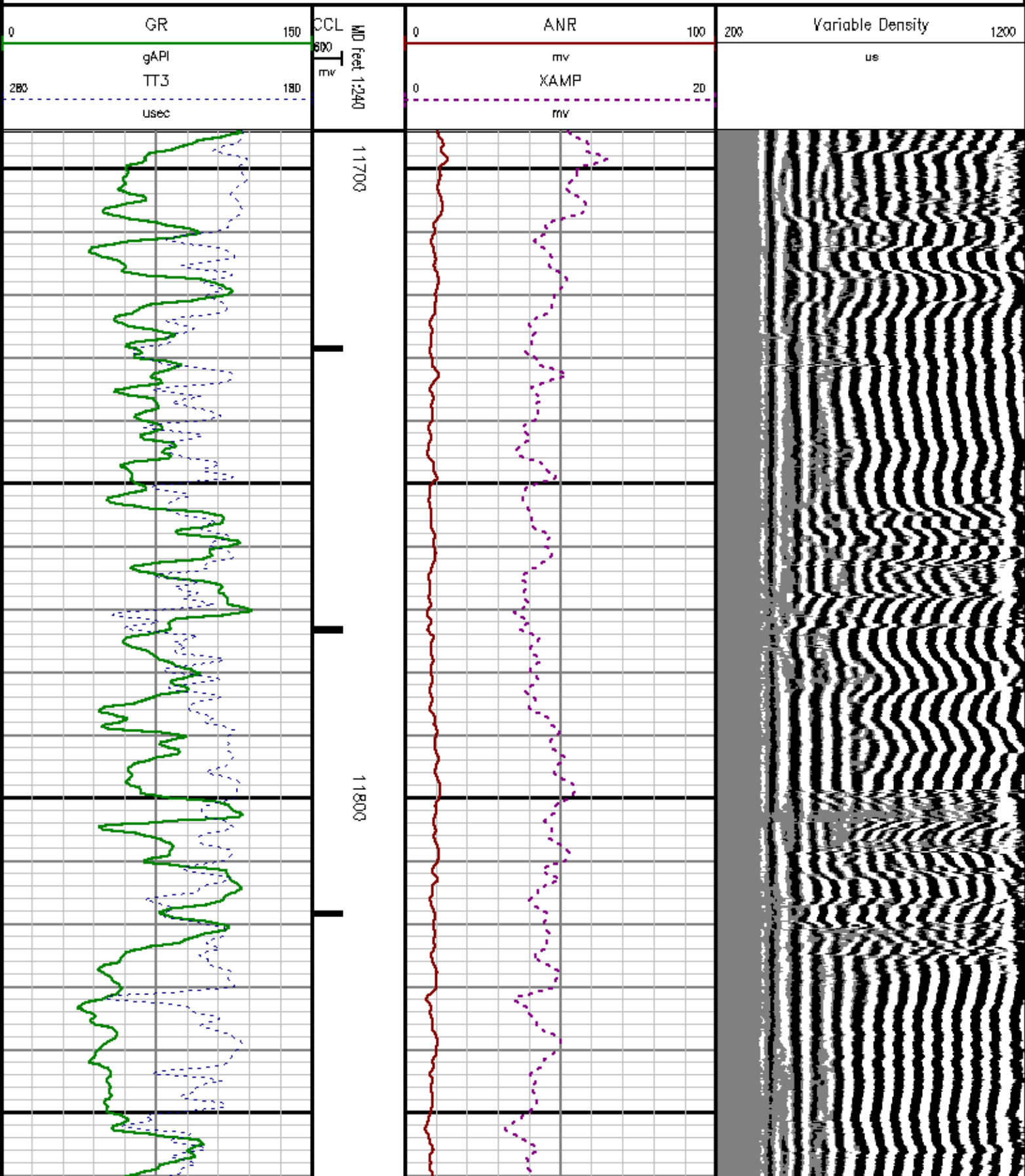
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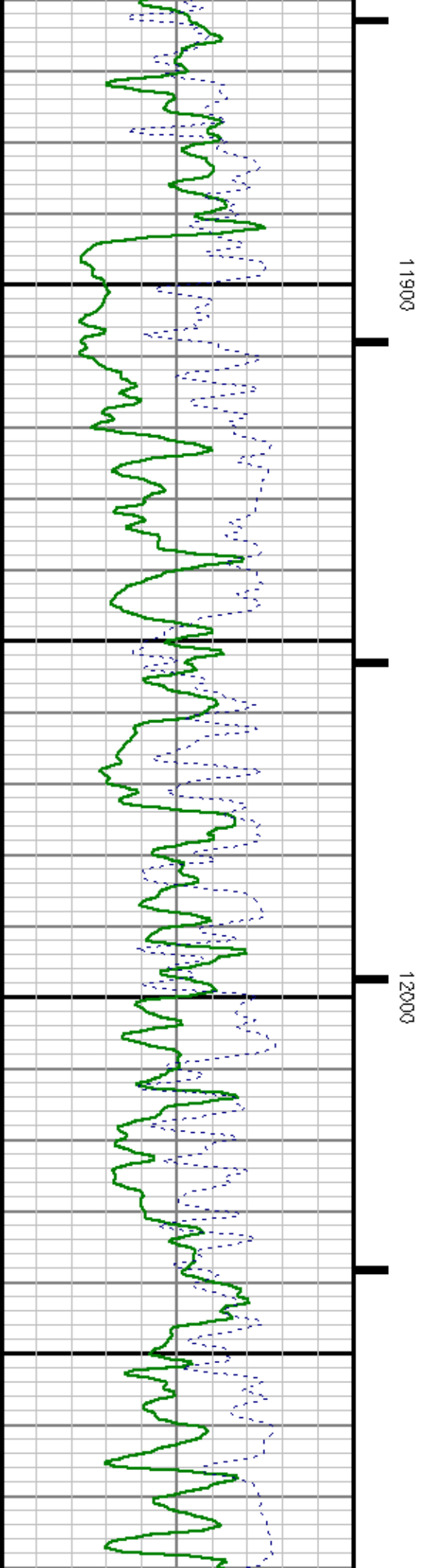
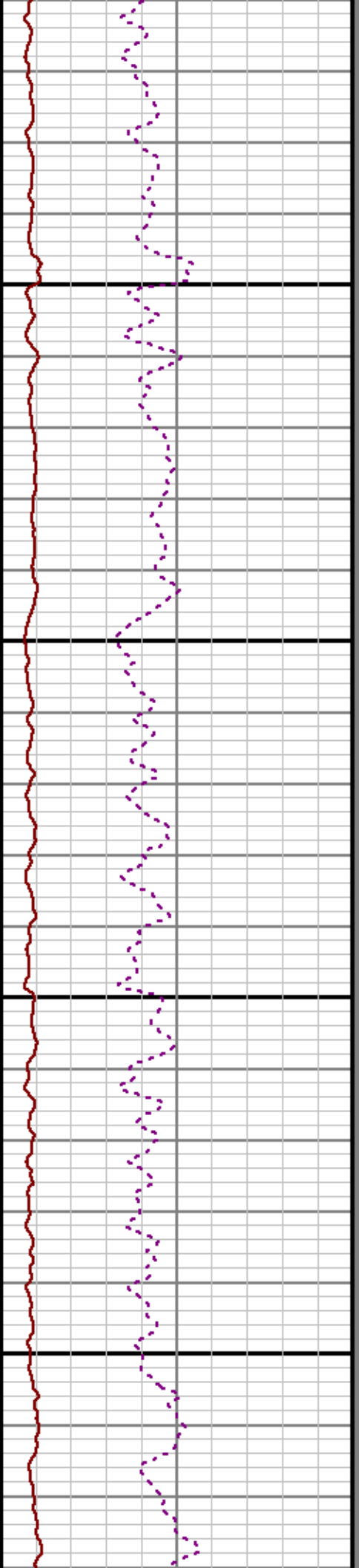
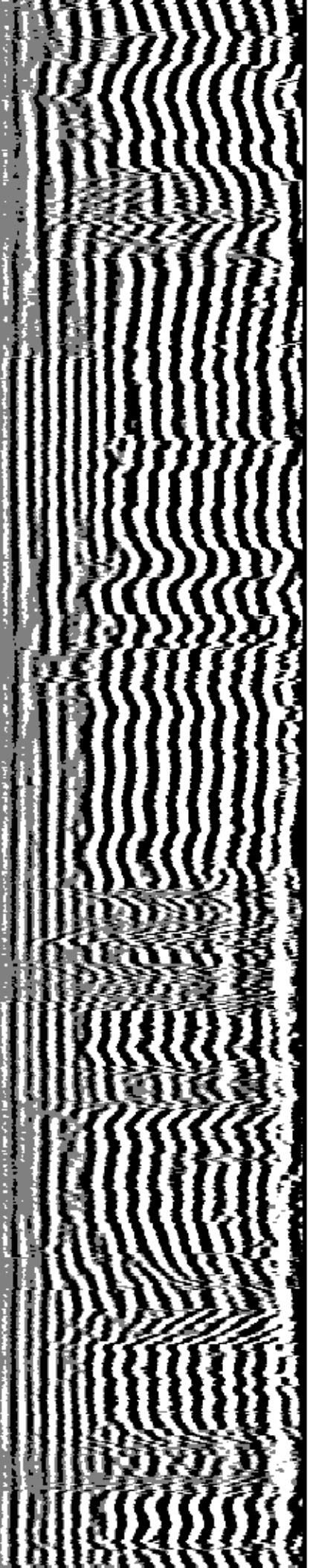
File Name : d:\well\data\rada7\repeat.xtf

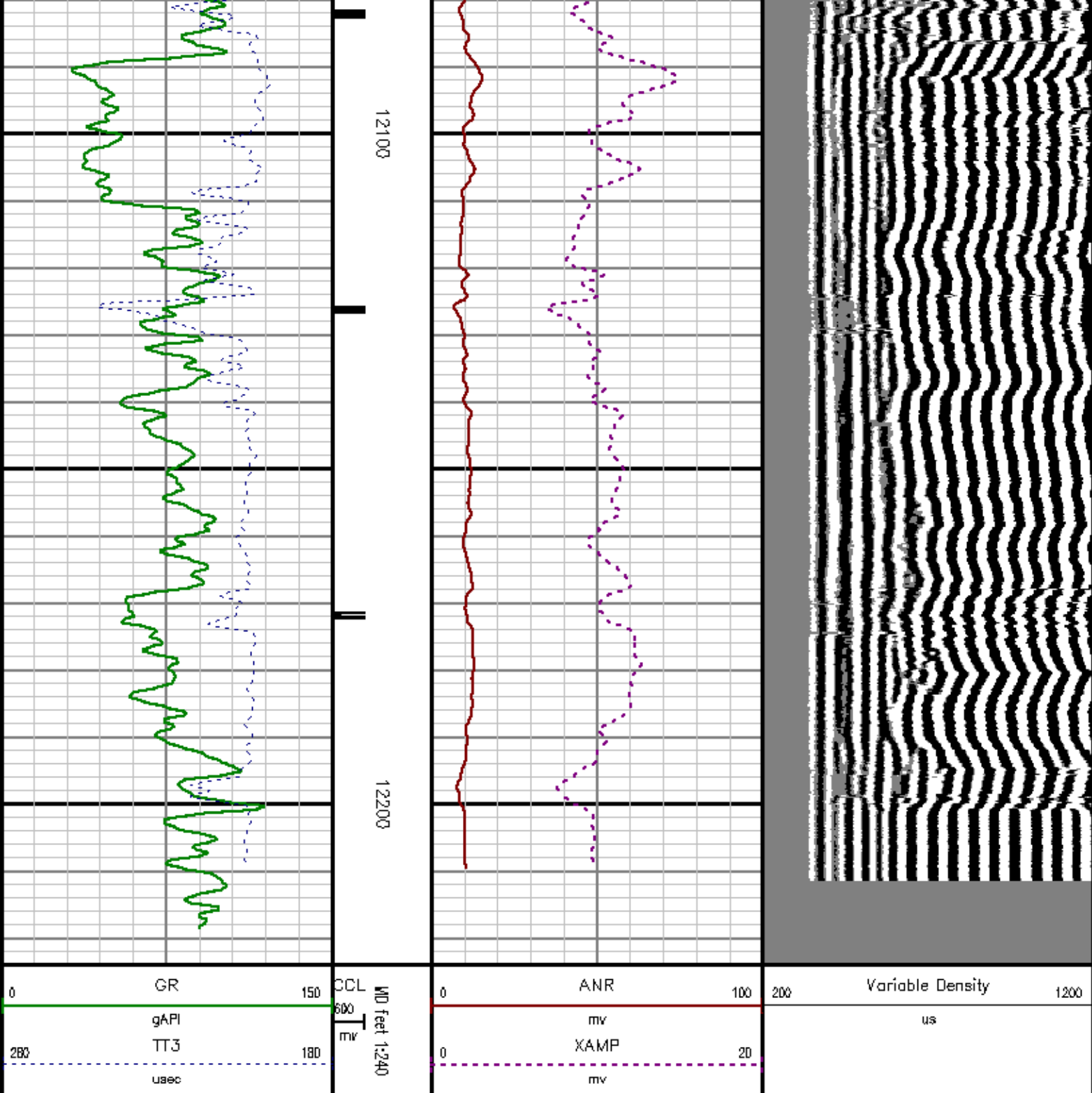
Mode : PlotMgr 5.4.504

Interval : 11694.00 - 12224.00 feet UP

Created : 4/21/2010 6:58:18 PM







*CALIBRATION SUMMARY*

*GAMMA RAY*



Calibration File: C:\case\calver\GR\450A1.cal

## CALIBRATION SUMMARY

DATE/TIME PERFORMED: Thu Apr 08 03:38:56 2010 TOOL SERIES: 2469XA ASSET: 450 SEQ: A1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
52K DA905	59.82	301.96	0.764	45.71	230.71	185.00

Verification File: C:\case\calver\GR\450A1.VP

## PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Thu Apr 08 03:43:20 2010 TOOL SERIES: 2469XA ASSET: 450 SEQ: A1

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
52K DA905	58.62	302.13	0.764	44.79	230.84	186.05

*RALSHP*

Shop Calibration: C:\case\calver\RALSHP\1000A21\_ahp.cal

## SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Apr 21 17:54:02 2010 TOOL SERIES: 1426XA ASSET: 1000 SEQ: A21

Tool Delay [usec]	-54.00	Tank OD in	5.50	Tank Wt lbm/ft	15.50	Tank ID in	4.95
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RECEIVER	Travel Time [usec]	Amp. Gate Start [usec]	Amp. Gate Width [usec]	Zero Gate Start [usec]	Zero Gate Width [usec]	Zero Amp. [mV]	Amp Ref. [mV]	Shop Factor
CAL Pulse	217	216	30	147	25	0.012	100.00	0.21
3 Ft. Receiver	219	216	30	156	25	0.106	100.00	0.20
5 Ft. Receiver	327	326	30	264	25	1.039	150.00	0.22
Radial #1	218	216	30	158	25	0.143	100.00	0.20
Radial #2	218	216	30	158	25	0.233	100.00	0.20
Radial #3	219	216	30	158	25	0.321	100.00	0.20
Radial #4	220	216	30	158	25	-0.023	100.00	0.20
Radial #5	220	216	30	158	25	-0.483	100.00	0.20
Radial #6	219	216	30	158	25	-0.106	100.00	0.20
Radial #7	218	216	30	158	25	0.014	100.00	0.20
Radial #8	218	216	30	158	25	-0.018	100.00	0.20

*RALFLD*

Wellbore Calibration: C:\case\calver\RALFLD\1000A21 fld.cal

## WELL SITE CALIBRATION SUMMARY

DATE/TIME PERFORMED: Wed Apr 21 18:00:25 2010 TOOL SERIES: 1426XA ASSET: 1000 SEQ: A21

Tool Delay [usec]	-54.00	Casing OD in	4.50	Casing Wt lbm/ft	15.10	Casing ID in	3.83
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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	147	25	0.081	0.000	1.00	100.000
3 Ft. Receiver	198	25	-0.489			
5 Ft. Receiver	314	25	-0.058			
Radial #1	198	25	-0.921			
Radial #2	198	25	-0.848			
Radial #3	198	25	-0.663			
Radial #4	198	25	-1.019			
Radial #5	198	25	-1.079			
Radial #6	198	25	-1.000			
Radial #7	198	25	-1.100			
Radial #8	198	25	-0.934			

## TOOL DIAGRAM

### OTA SHORT CABLE HEAD

#### CENTRALIZER

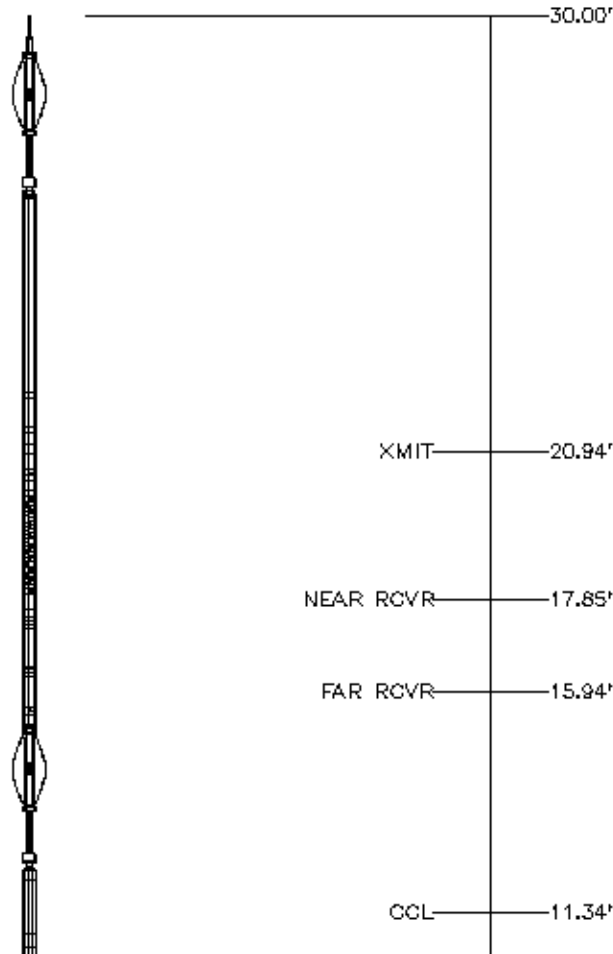
Series	RALCENT
Mnemonic	CENT
Diameter	3.12"
Weight	20.00 lb

### PROBE 2 3/4 DUAL RECEIVER RADII

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

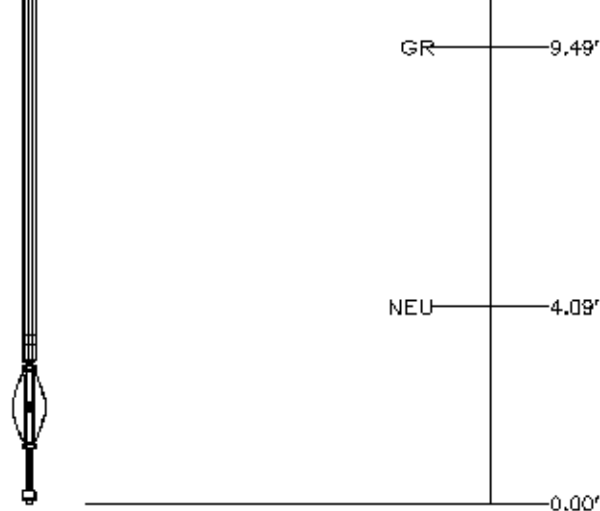
#### CENTRALIZER

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



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

 <b>Baker Atlas</b> 	Company		EXXONMOBIL PRODUCTION COMPANY		File No:
	Well		FRU 197-33A7		1725
	Field		PICEANCE CREEK		API No:
	County		RIO BLANCO	State	COLORADO
	Location		SHL: 631' FSL & 2364' FEL		05103113990000
				Elevations	
				KB	6417.4 ft
				DF	6416.4 ft
				GL	6388 ft
		SEC	33	TWP	1S
				RGE	97W