



# RADIAL ANALYSIS BOND LOG

## Baker Atlas

File No: 1963	Company Well Field County	MARATHON OIL COMPANY 697-12A-1B GRAND VALLEY GARFIELD	State COLORADO
API No: 05-045-1503300			
Location SHL: 1543' NUL & 1554' FEL SEC 12 TWP 6S RGE 9W		Other Services DAL	
Permanent Datum Log Measured From Drill Measured From	G.L. _____ Elevation 8300 ft K.B. _____ 24 ft Above P. D. KELLY BUSHING	Elevations KB 9322 ft DF 8321 ft GL 8300 ft	

Date	07-JAN-2009	
Run	ONE	
Service Order	547431	
Depth Driller	9602 ft	
Depth Logger	9626 ft	
Bottom Logged Interval	9626 ft	
Top Logged Interval	2170 ft	
Time Started	00:00	
Time Finished	5:00	
Operator Rig Time	5 HRS	
Type of Fluid in Hole	WATER	
Fluid Density	N/A	
Salinity	N/A	
Fluid Level	PULL	
Logged Cement Top	2516 ft	
Wellhead Pressure	1000 psi	
Maximum Hole Deviation	N/A	
Nominal Logging Speed	40 fpm	
Maximum Recorded Temperature	N/A	
Reference Log	BY/REM	
Reference Log Date	2-05-08	
Equipment No.	8054	GRAND JCT., CO.
Recorded By	TIM KAUFF	
Witnessed By	MR. BILL ARENTT	

- 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
6.75 in	SURFACE	8481 ft
7.875 in	8481 ft	TD

Casing Record				
Size	Weight	Grade	From	To
4.5 in	11.6 lbm/ft	P-110	SURFACE	9589 ft
4.5 in	11.6 lbm/ft	P-110	SURFACE	9589 ft

Remarks
THE CREW OF 8054 THANKS YOU.

Equipment Data					
Run	Trip	Tool	Series Number	Serial Number	Position
1	1	MANDREL	1428XA	10218502	CENTRALIZED

**MAIN SECTION**  
**PRIMARY PRESENTATION**  
**1000# PSI**

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	2176.378	9668.000
RAL	Amp Gate Start Near	200.391	usec	2176.378	9668.000
RAL	Amp Gate Start Radial	200.391	usec	2176.378	9668.000
RAL	Amp Gate Width Far	25.000	usec	2176.378	9668.000
RAL	Amp Gate Width Near	25.000	usec	2176.378	9668.000
RAL	Amp Gate Width Radial	25.000	usec	2176.378	9668.000
RAL	casing od	4.500	inches	2176.378	9668.000
RAL	casing wt	11.600	lbm/ft	2176.378	9668.000
RAL	FB Start Far	291.900	usec	2176.378	9668.000
RAL	FB Start Near	175.391	usec	2176.378	9668.000
RAL	FB Start Radial	175.391	usec	2176.378	9668.000
RAL	FB Thresh Far	10.000	mv	2176.378	9668.000
RAL	FB Thresh Near	10.000	mv	2176.378	9668.000
RAL	FB Thresh Radial	10.000	mv	2176.378	9668.000
RAL	Fluid Travel Time	200.000	usec/ft	2176.378	9667.884

**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					

Created by : RAL, v4.8.007

Plotted by : PlotMgr, v5.4.504

Company : MARATHON OIL COMPANY

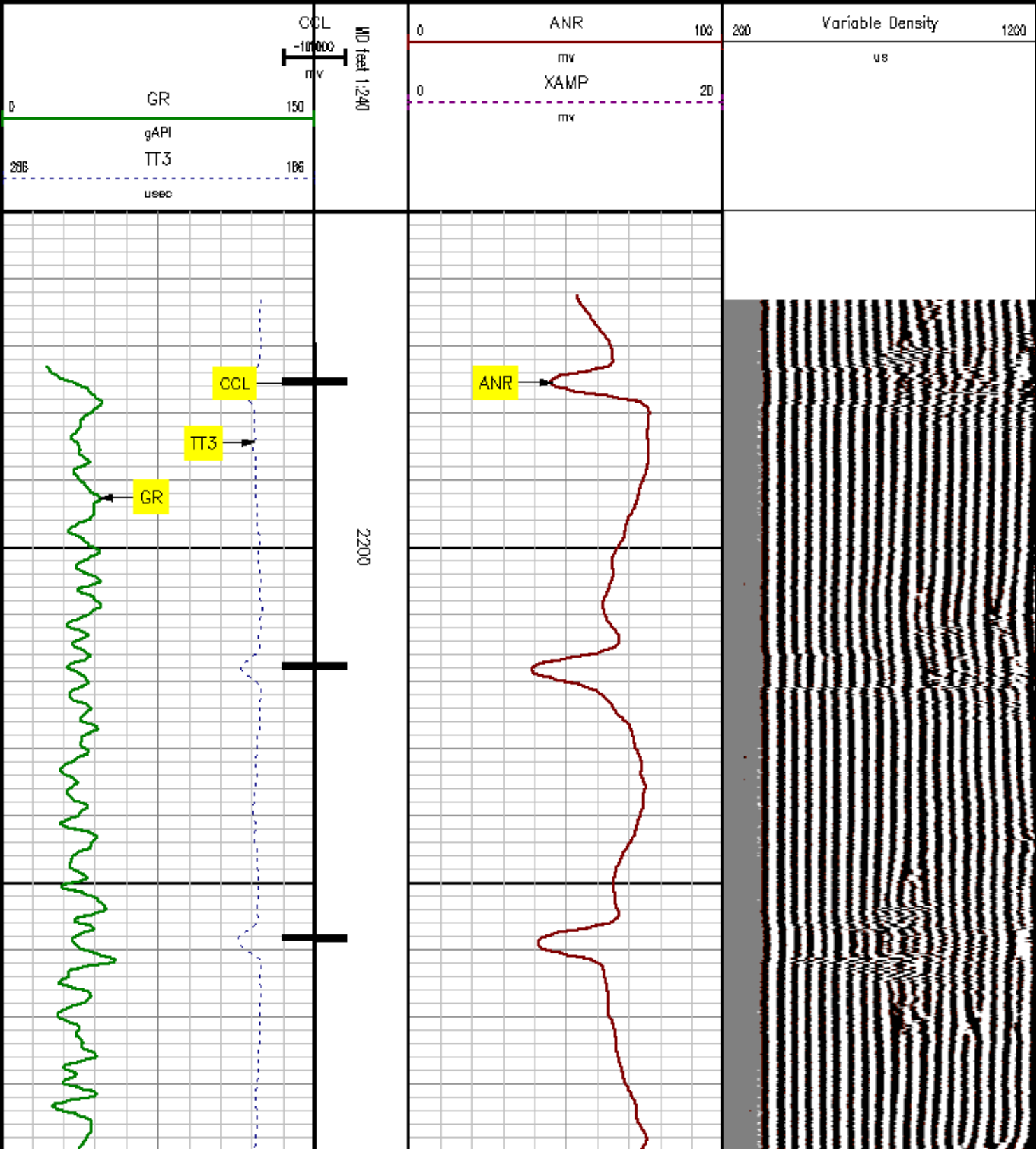
Well : 697-12A-18

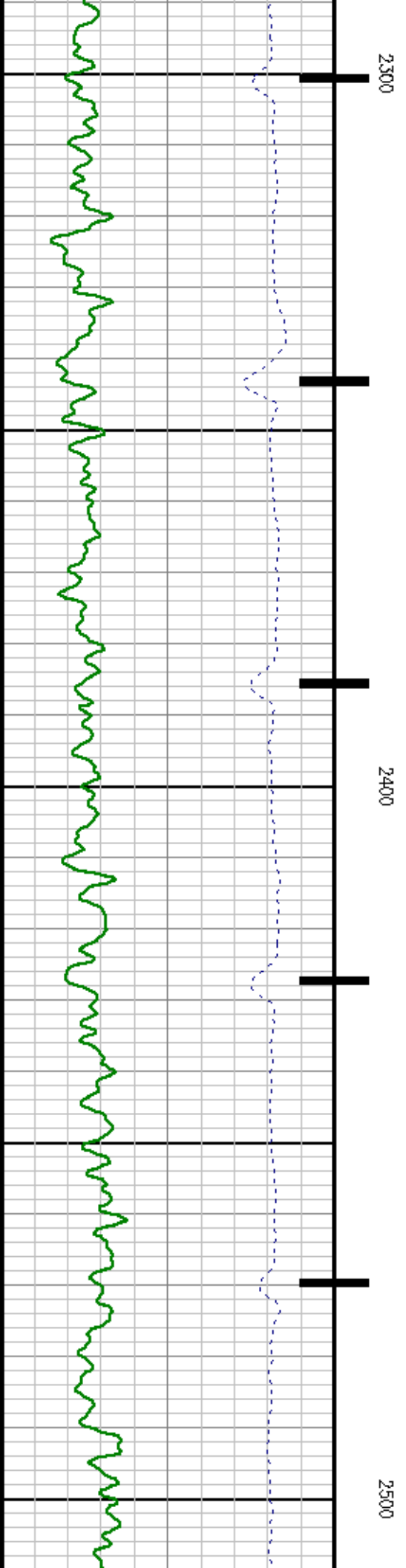
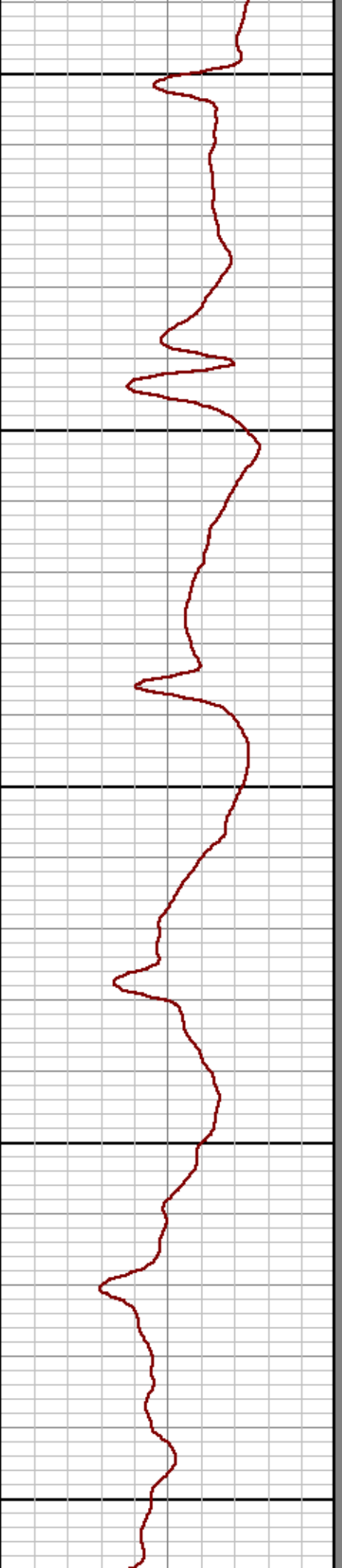
File Name : d:\welldata\18rad\main.xtf

Mode : PlotMgr 5.4.504

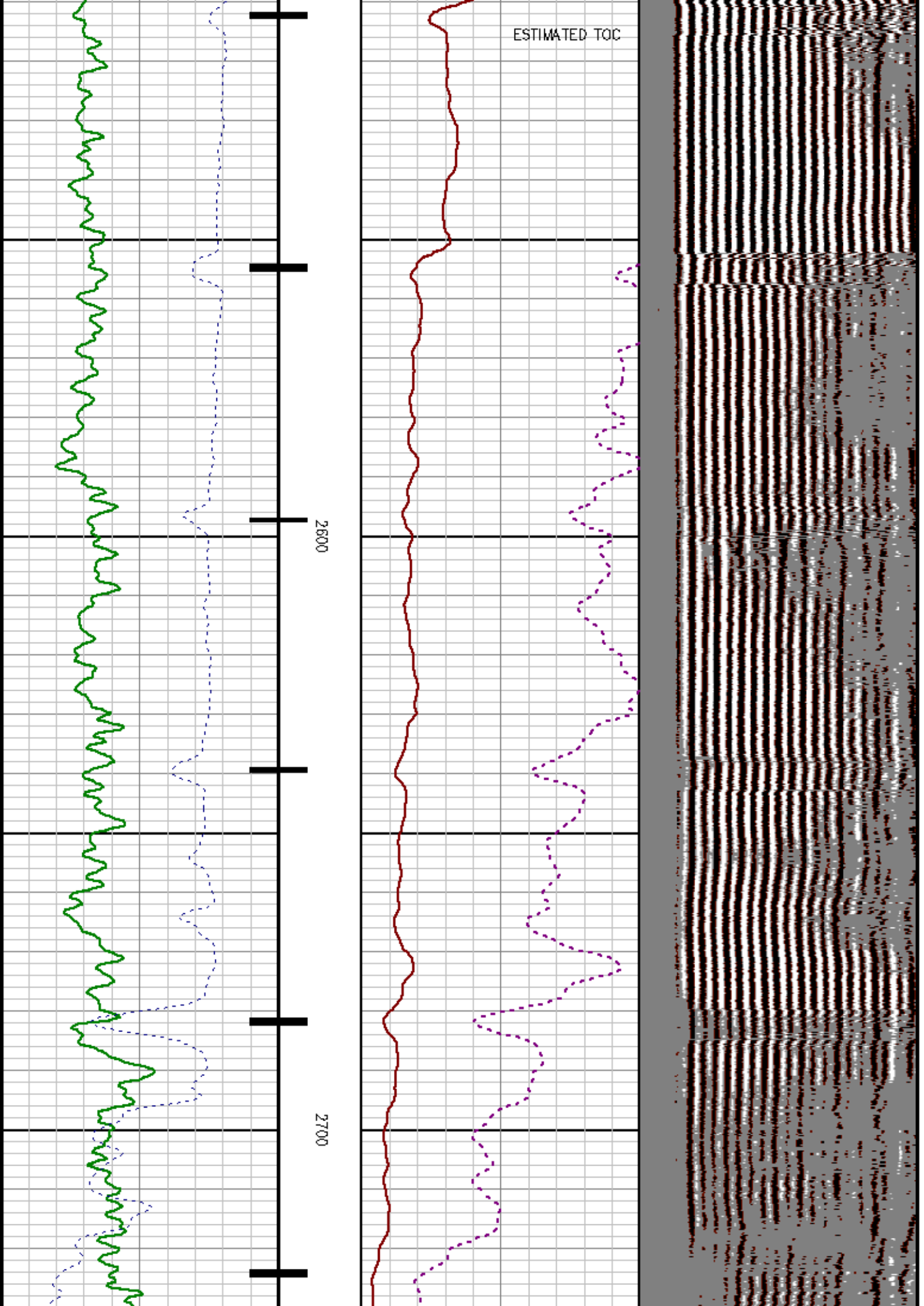
Interval : 2150.00 - 9658.00 feet UP

Created : 1/6/2009 10:34:34 PM

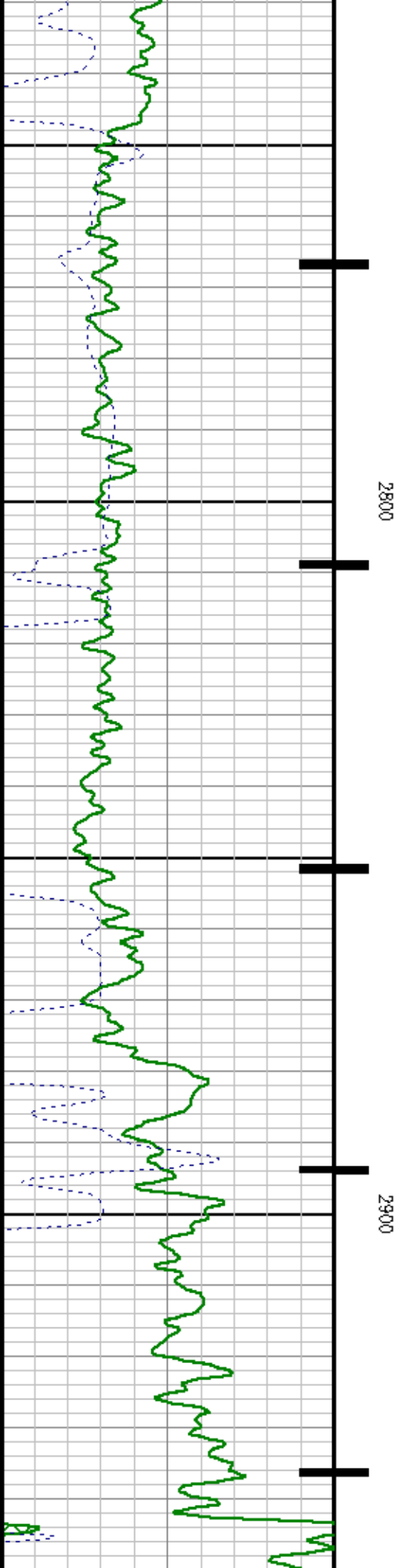
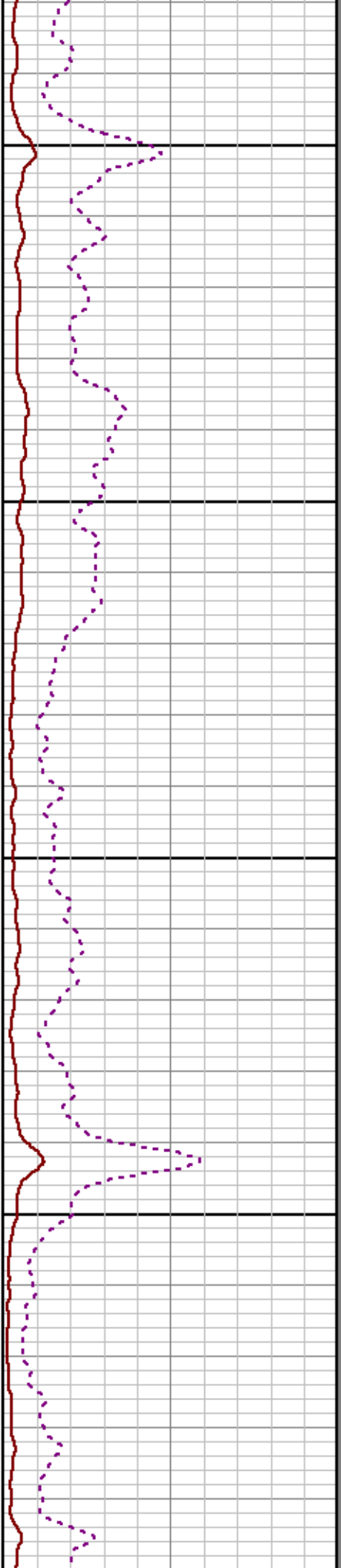
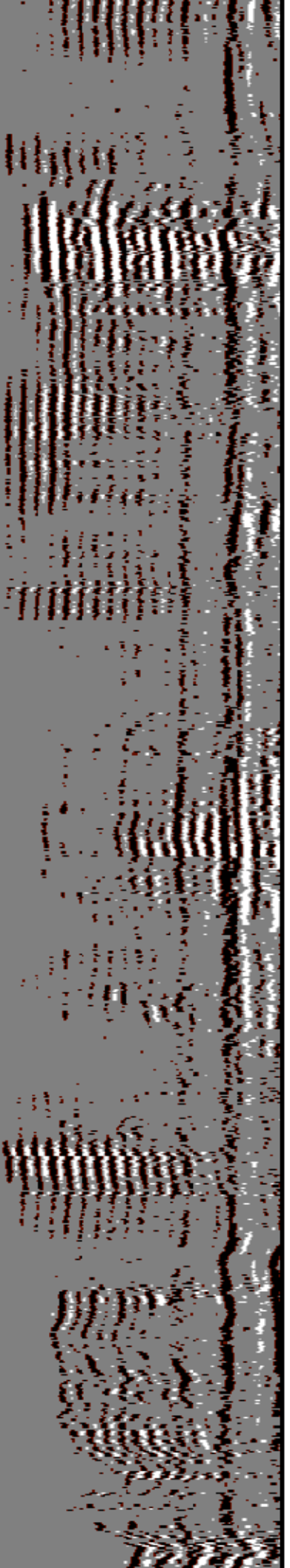


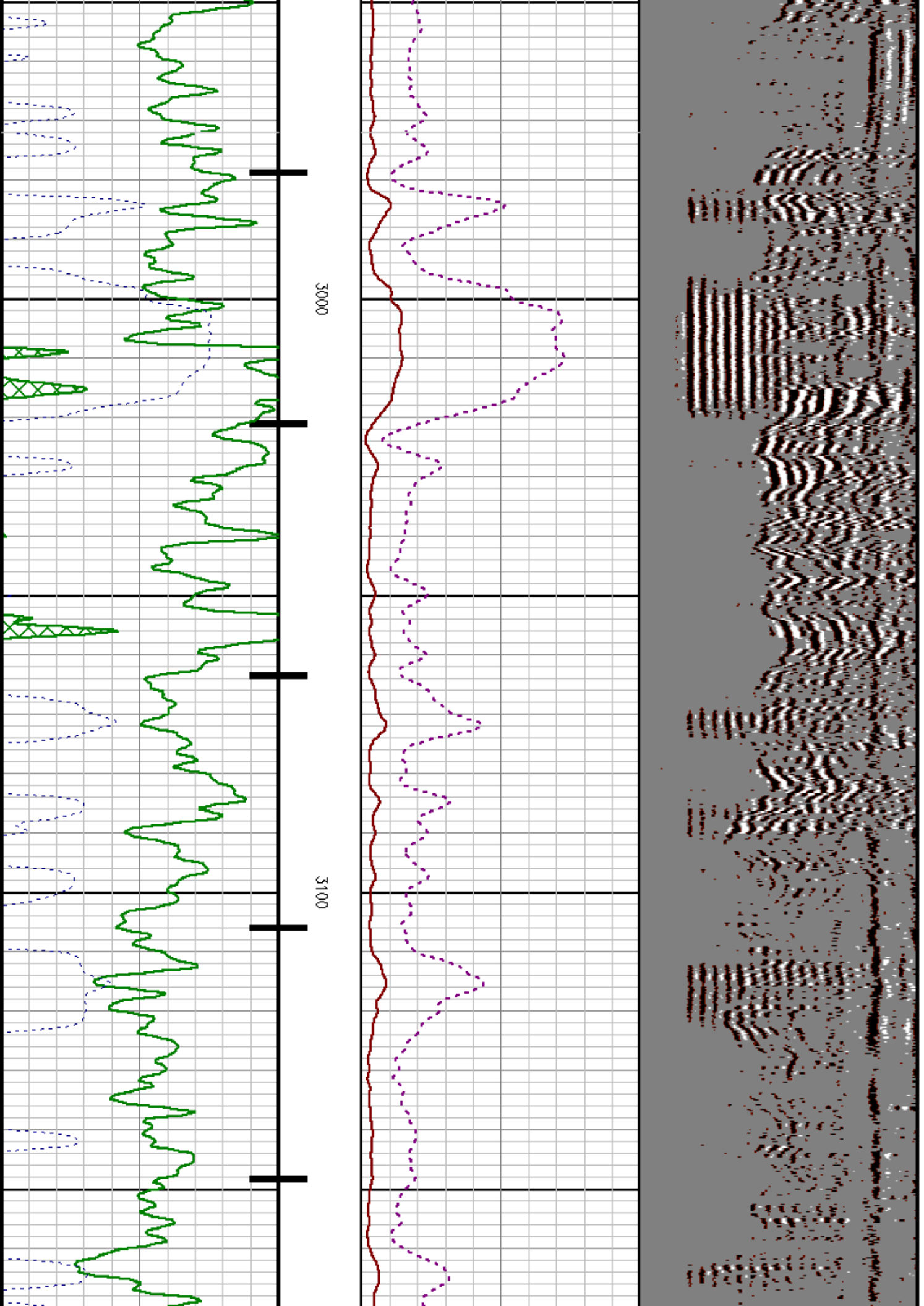


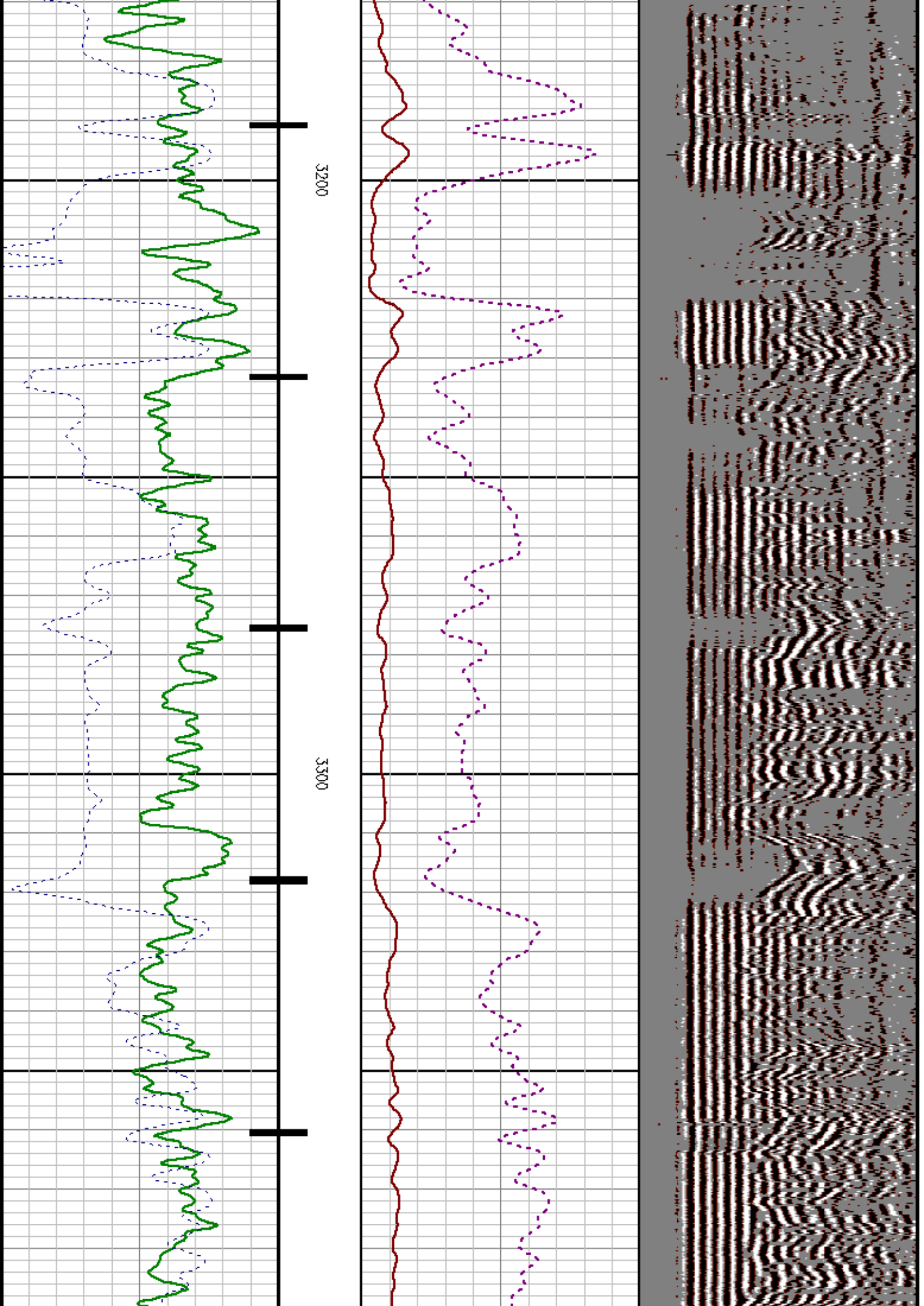
ESTIMATED TOC



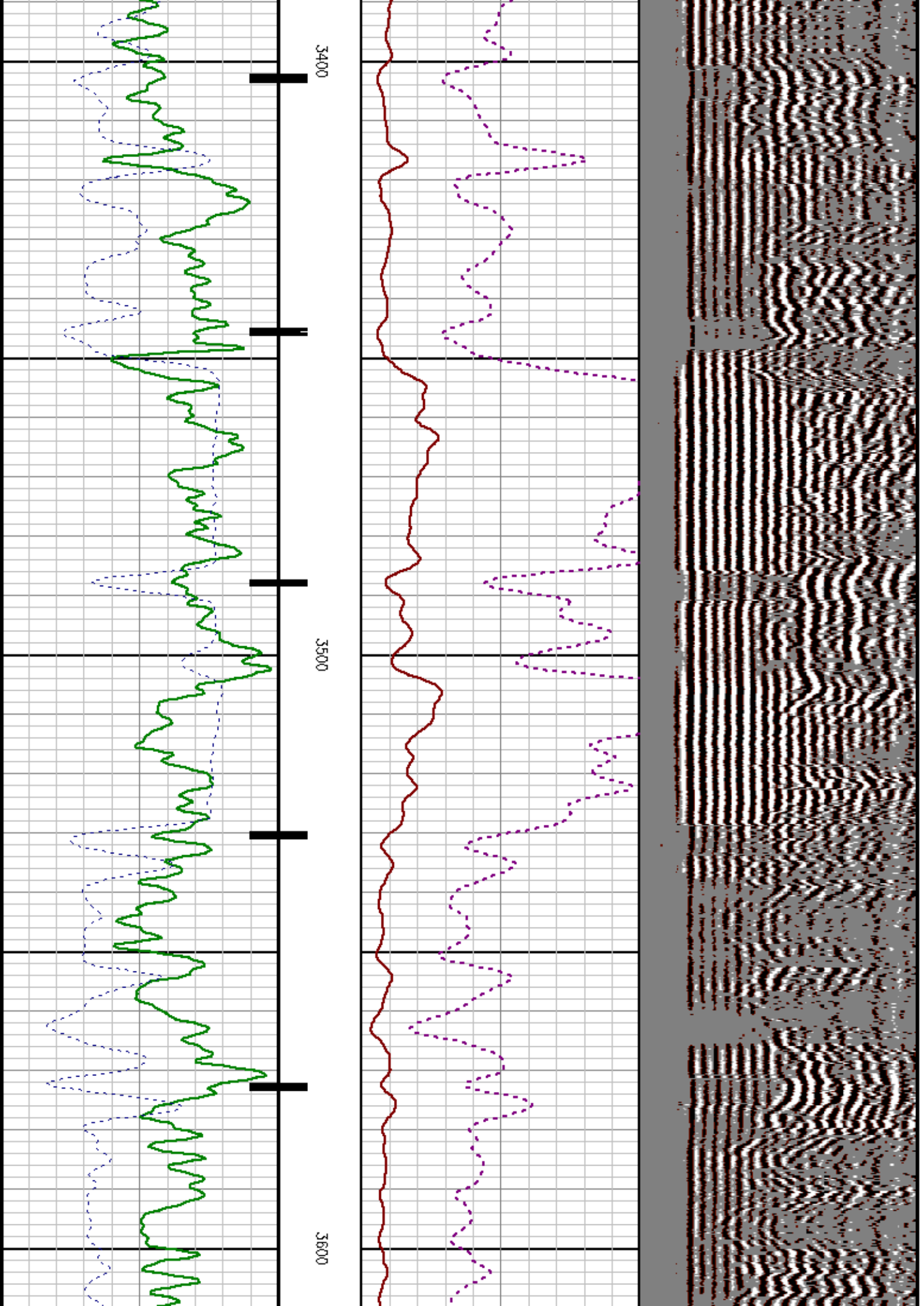


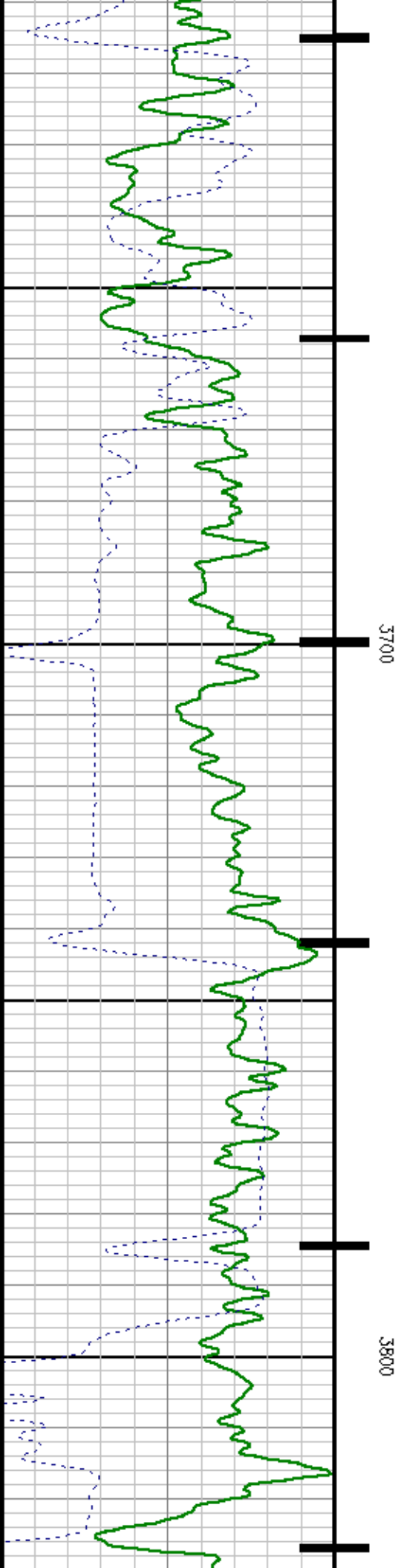
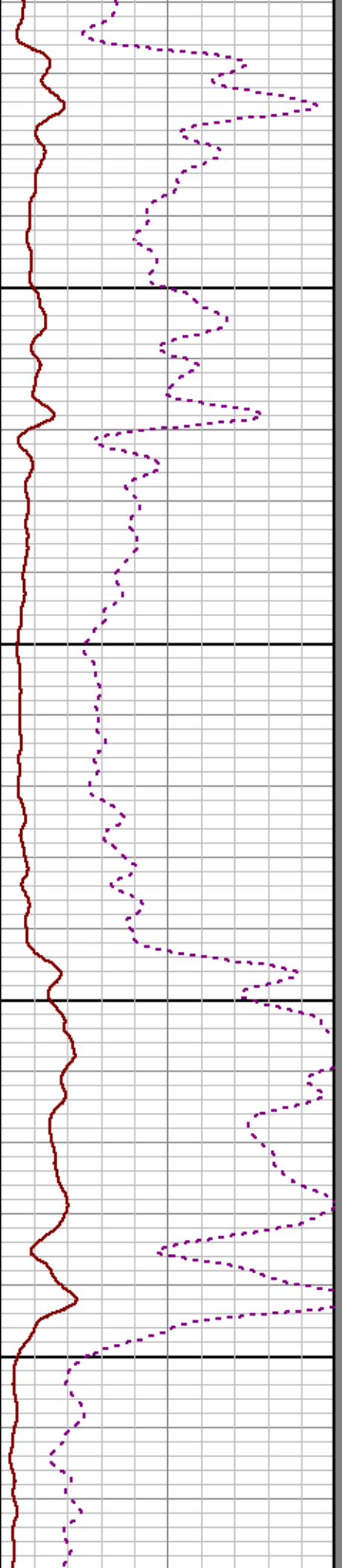
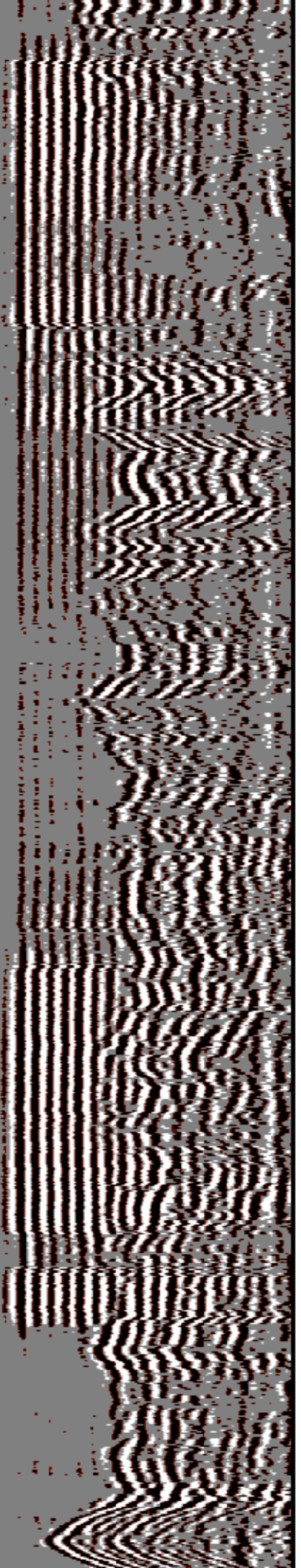






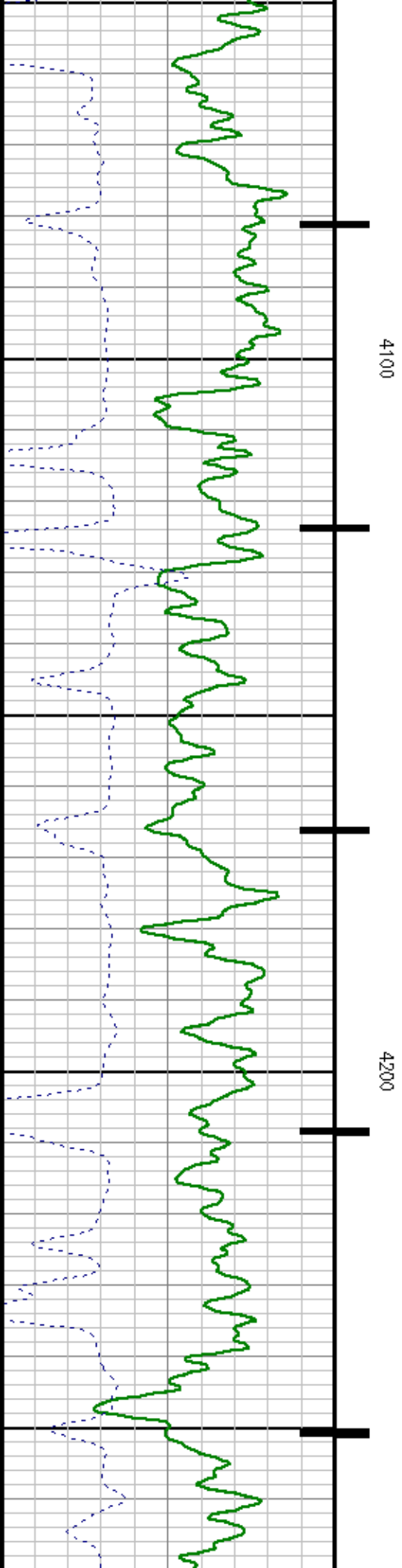
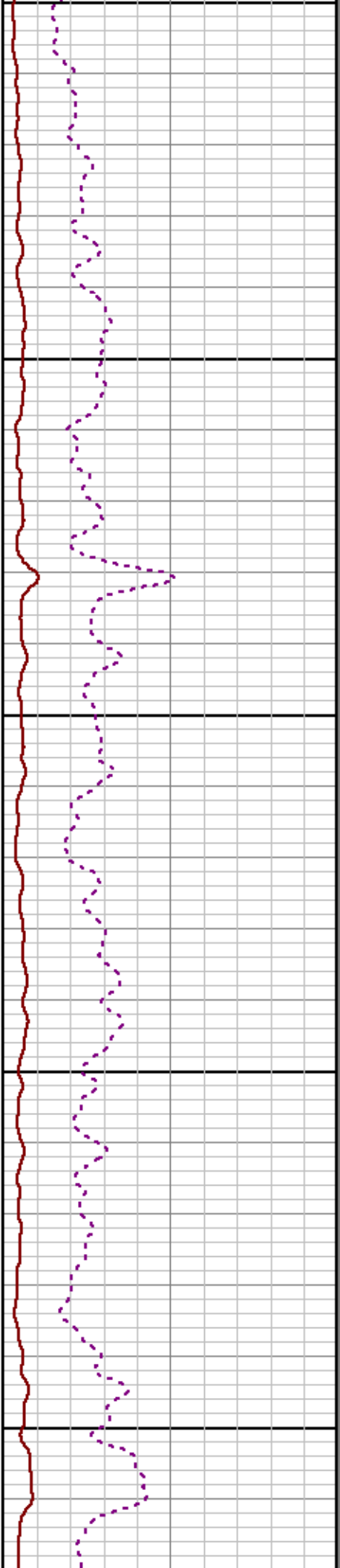
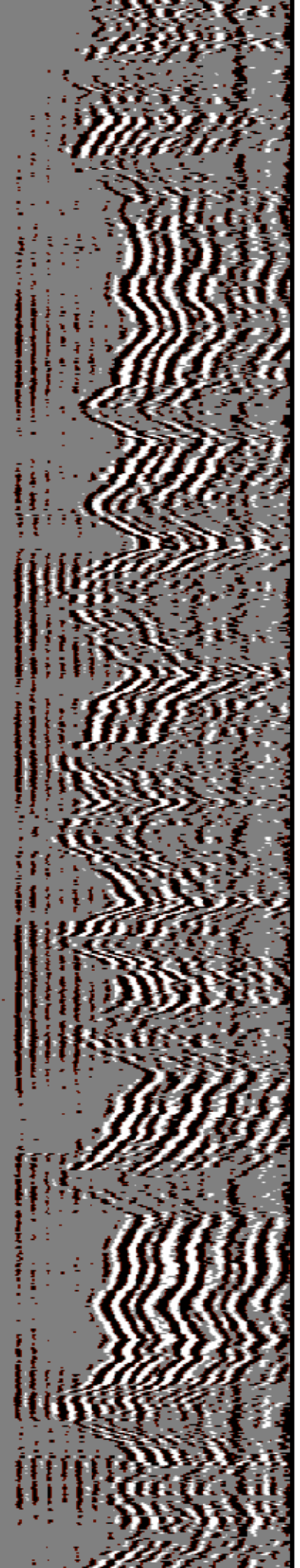


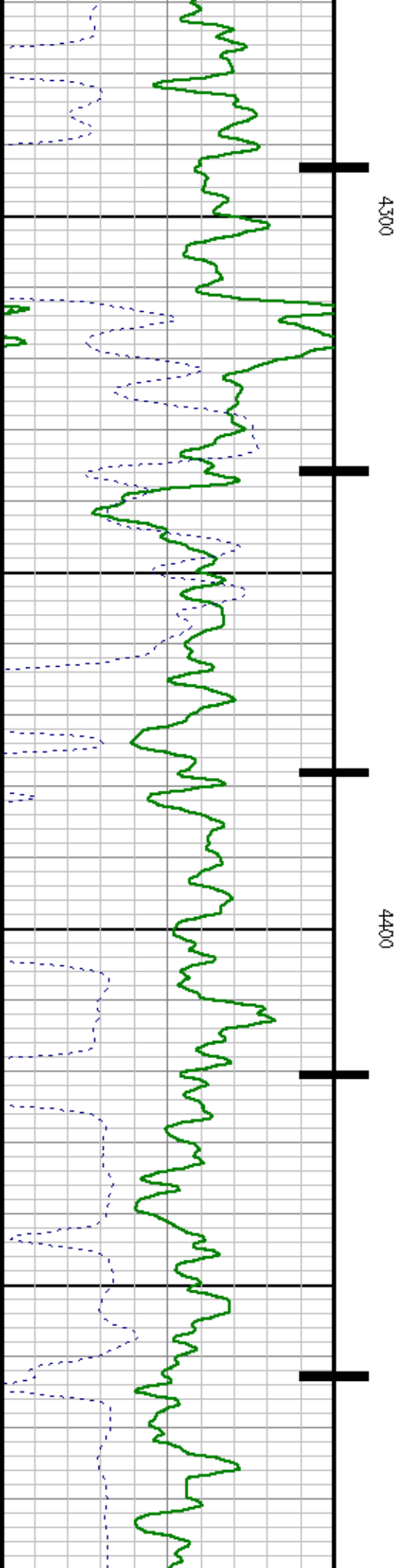
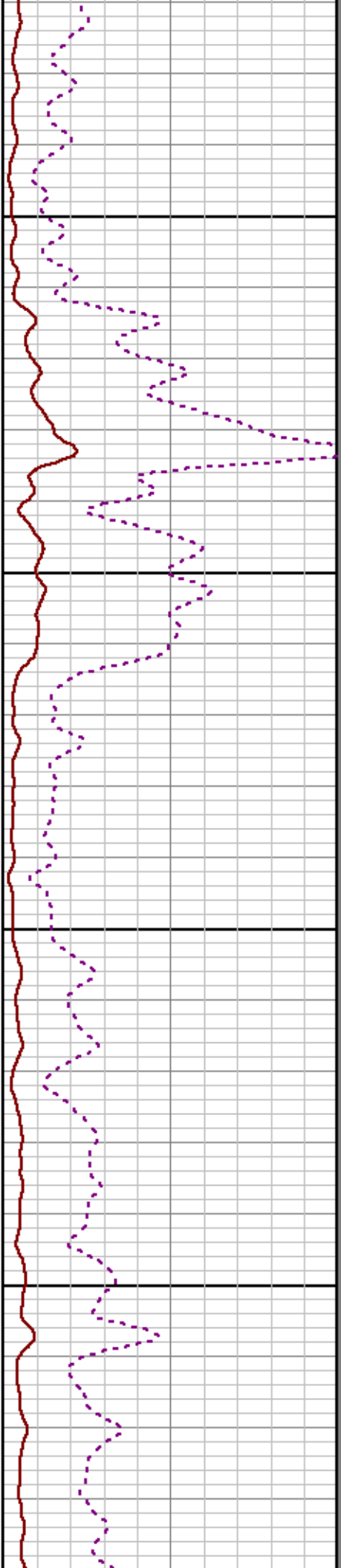
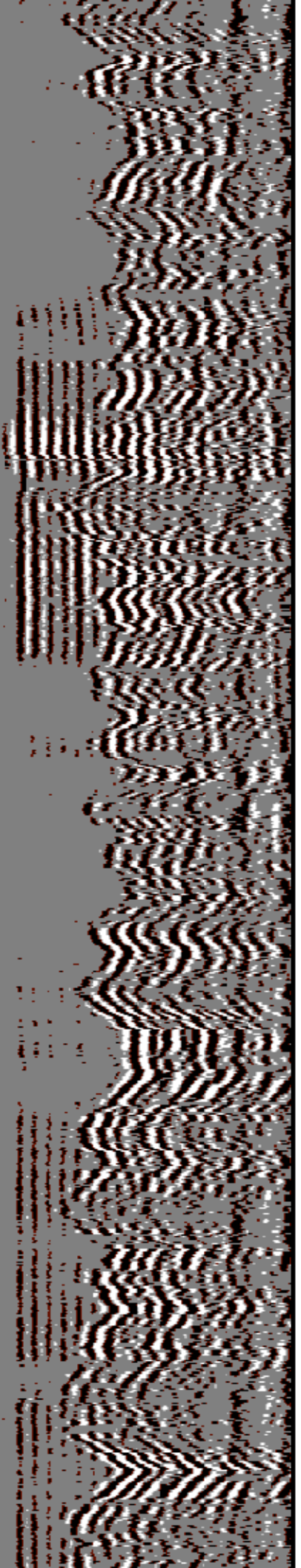




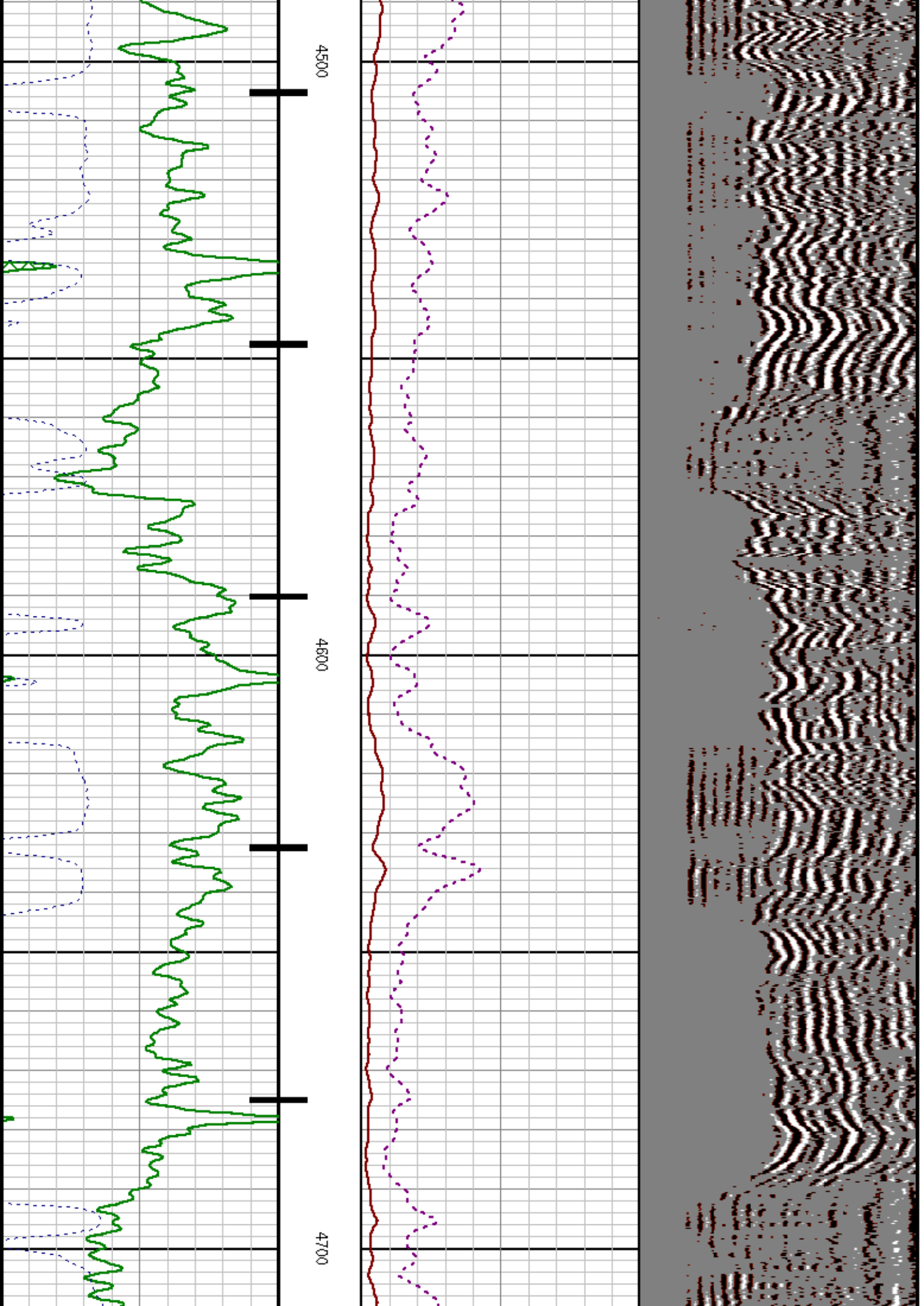


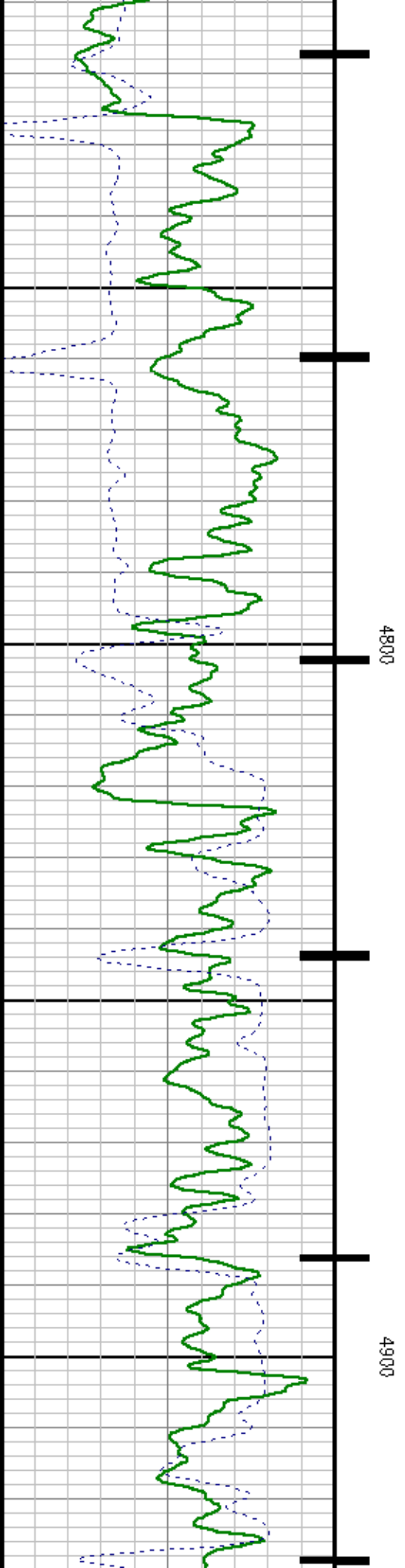
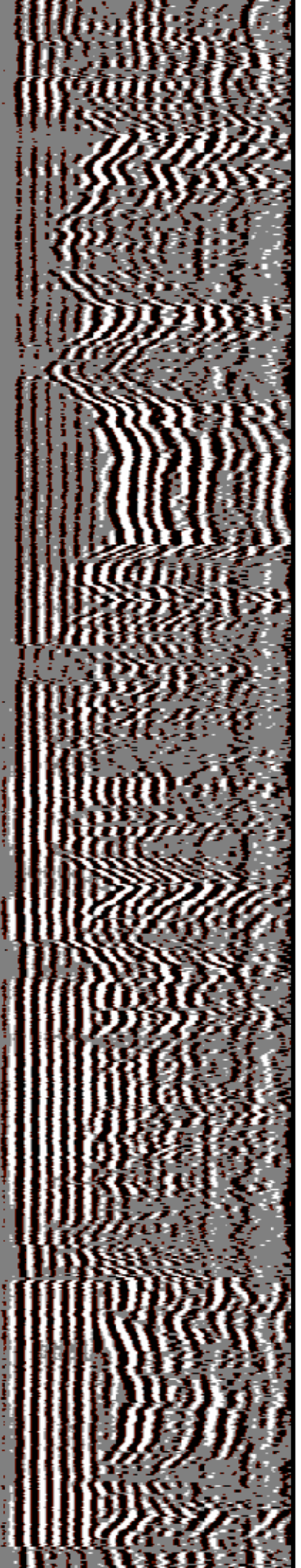


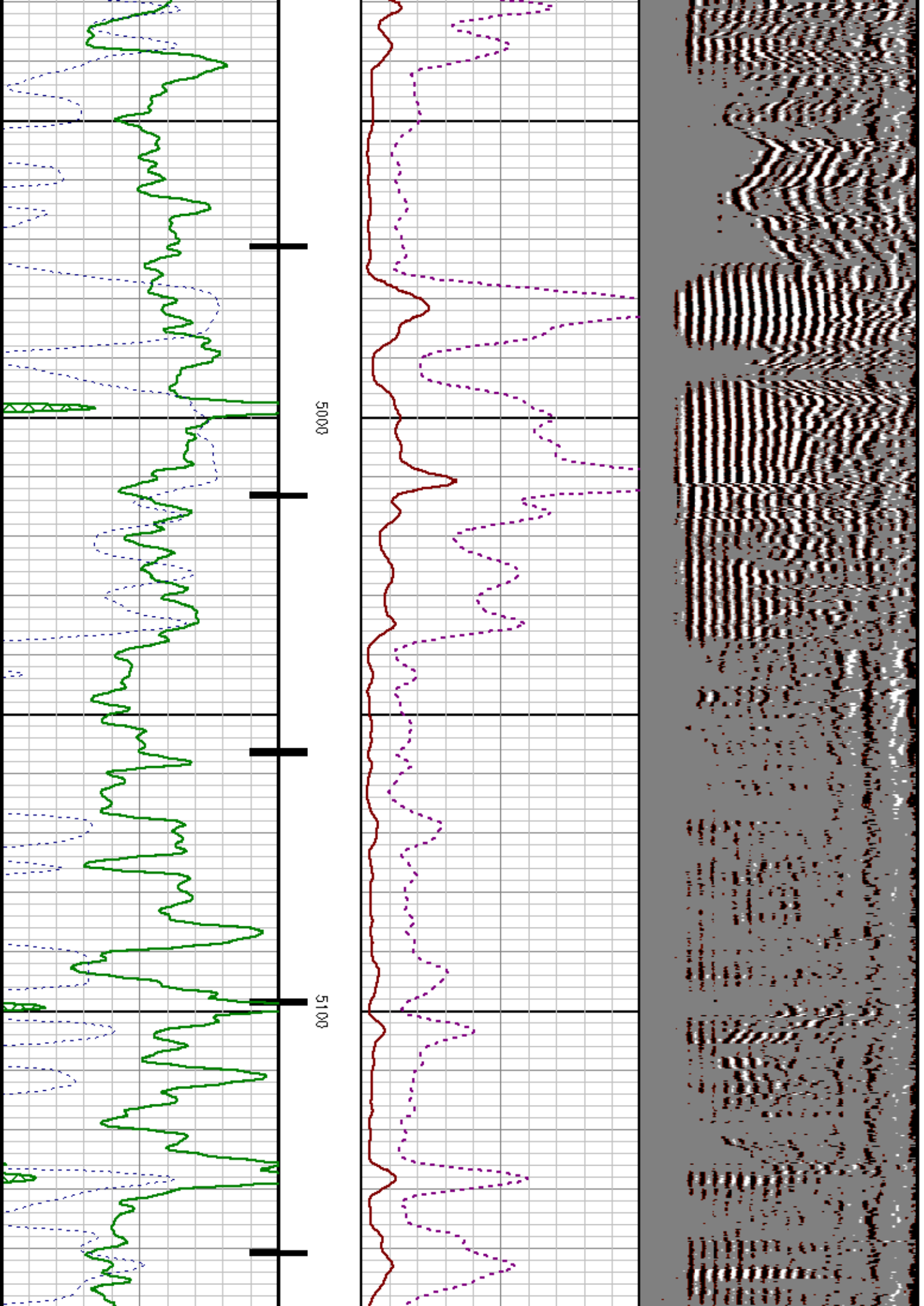




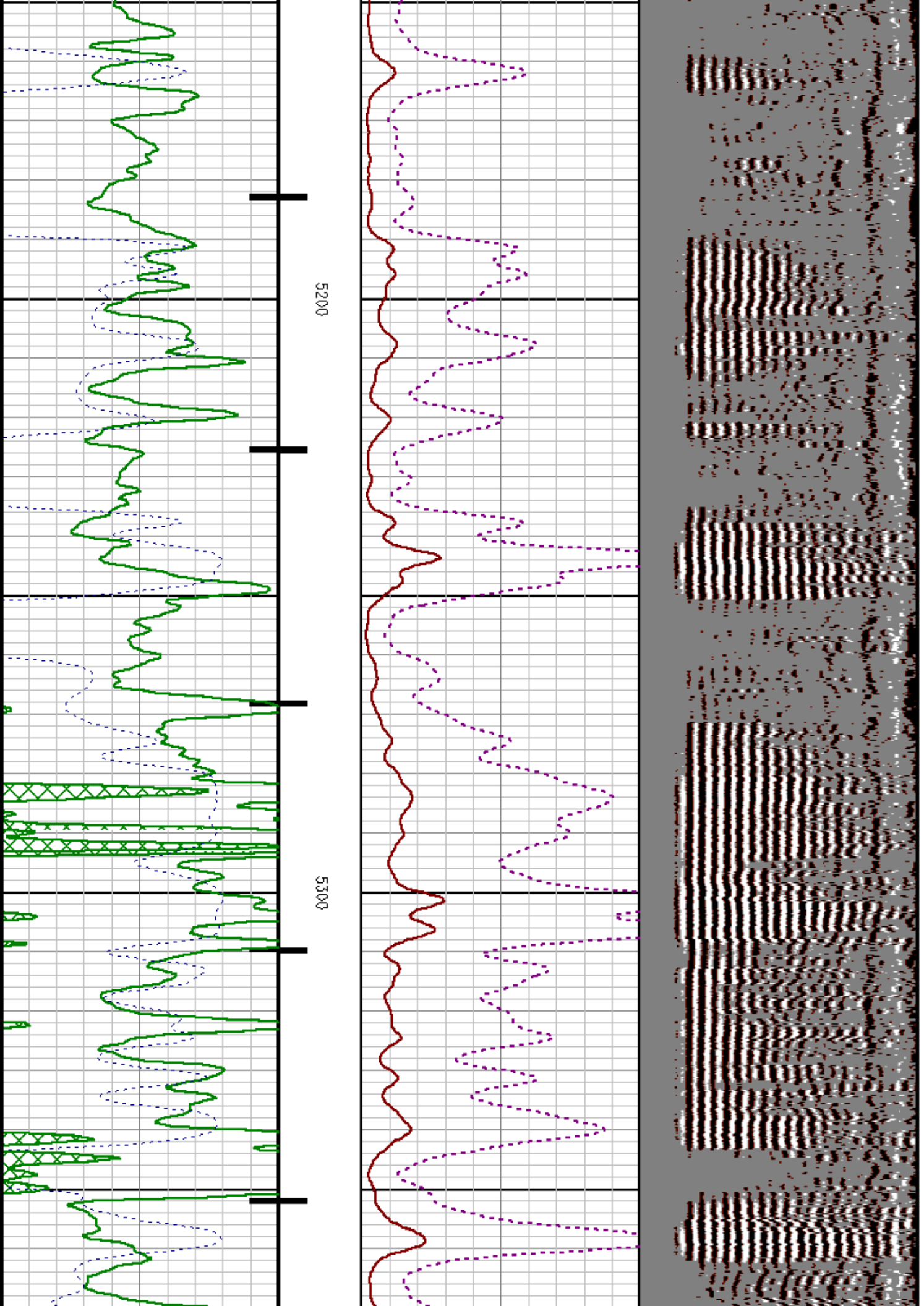


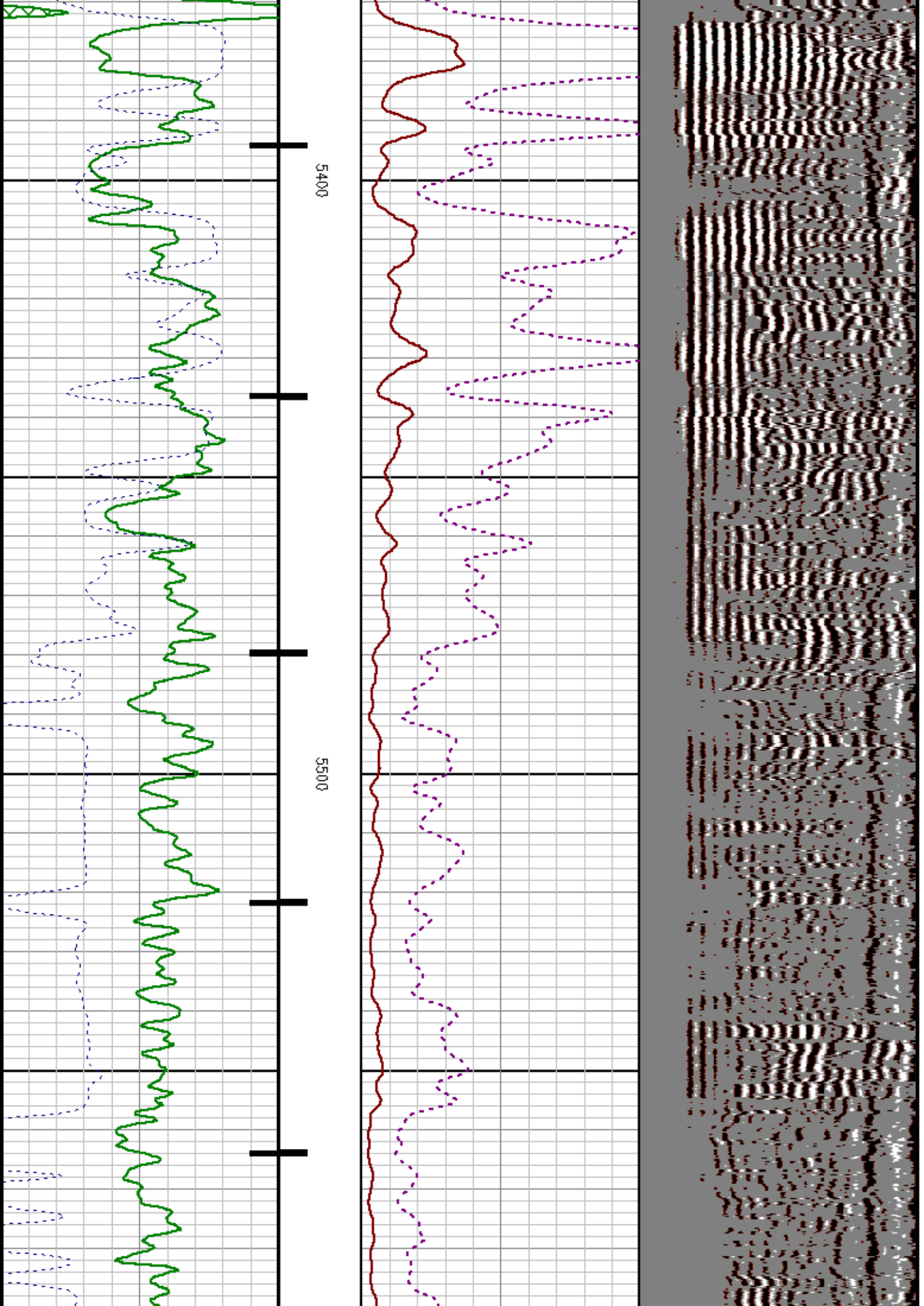




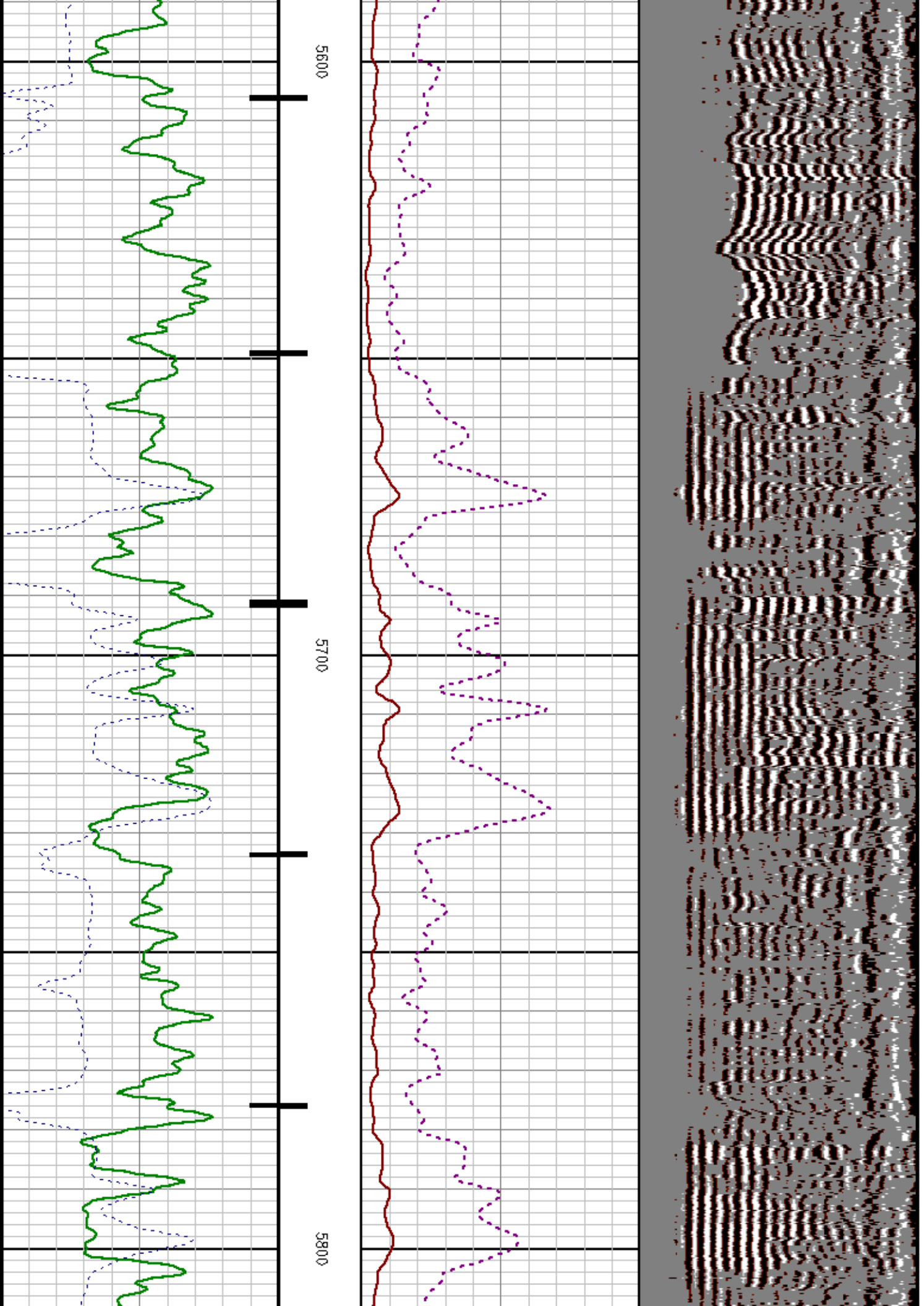


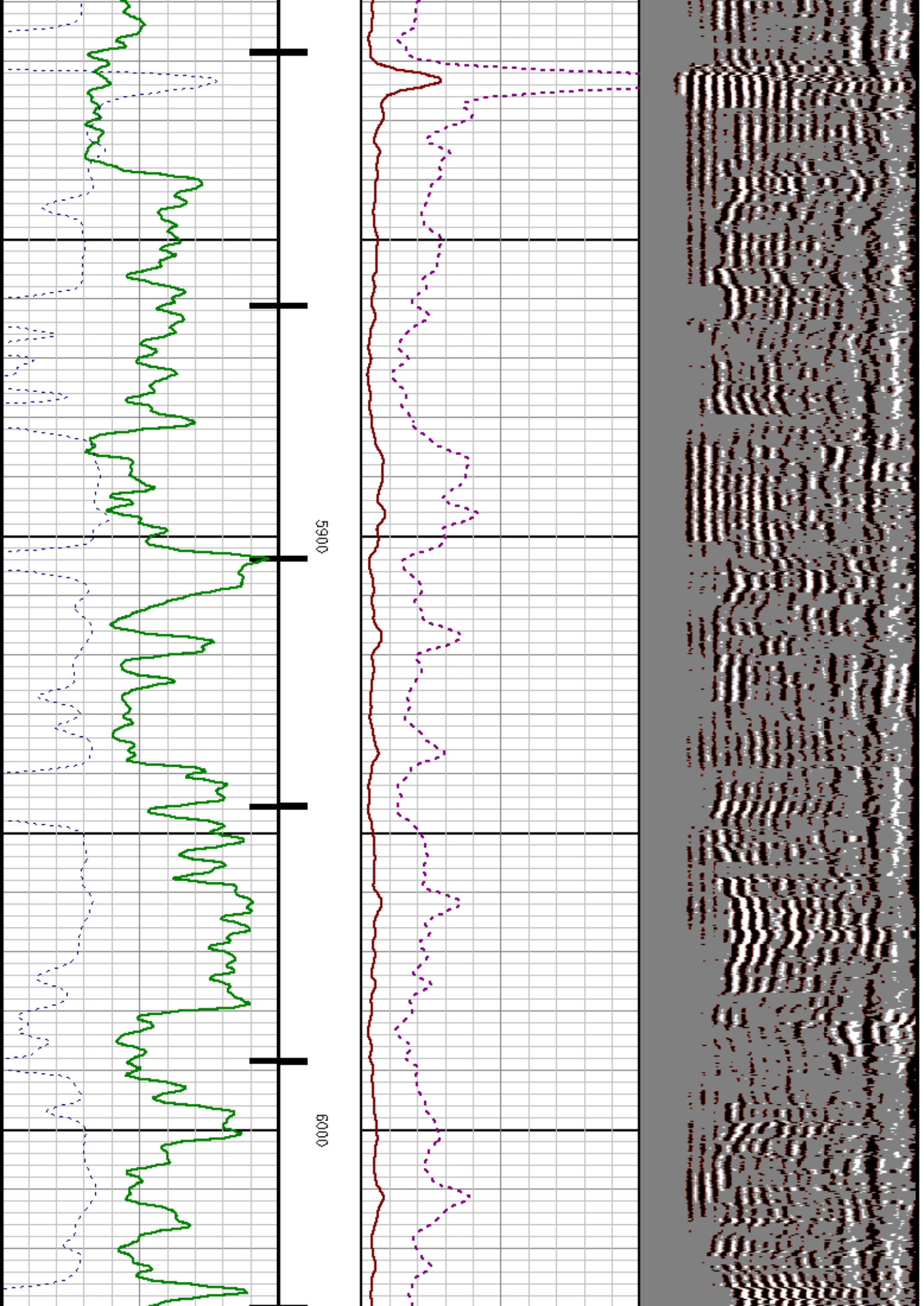


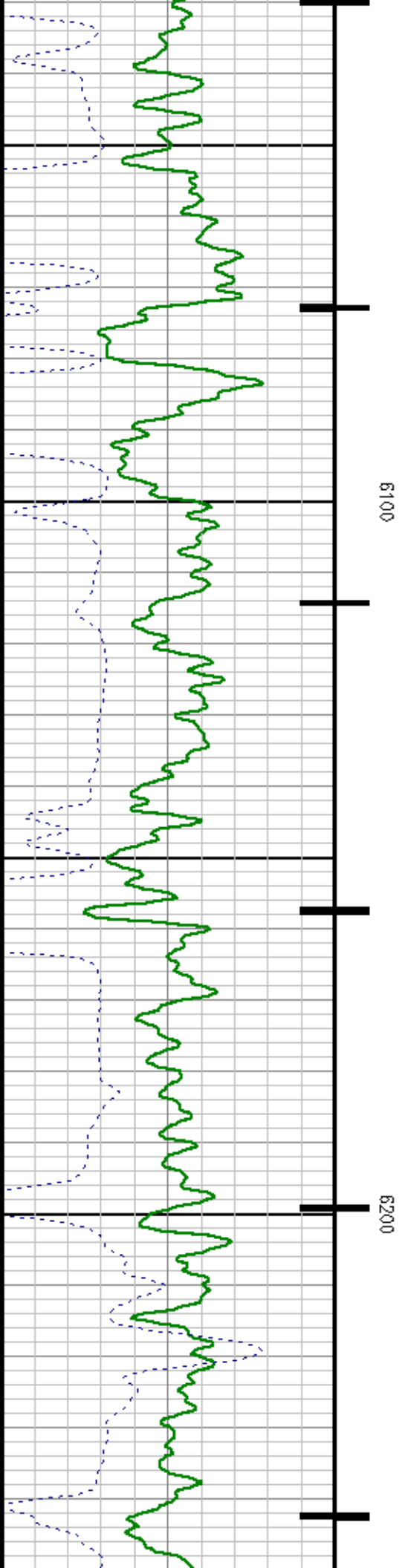
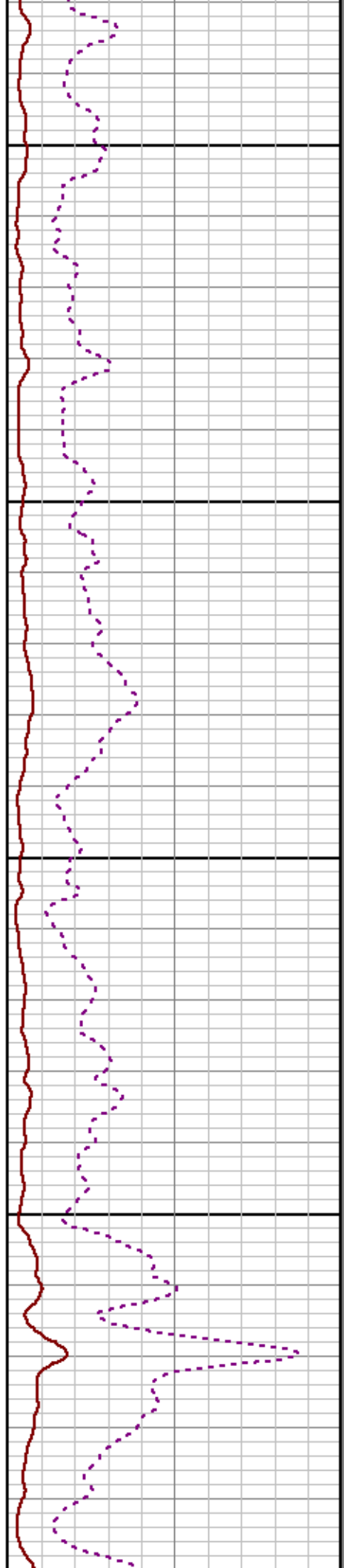
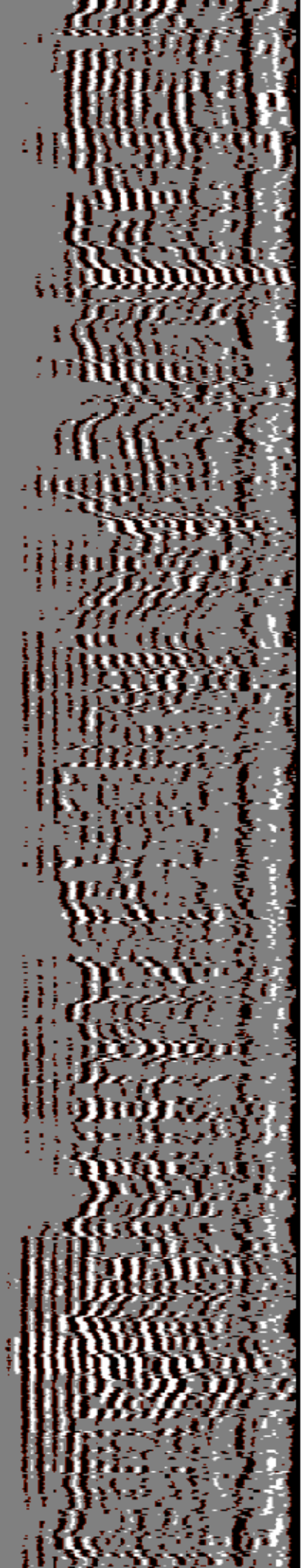




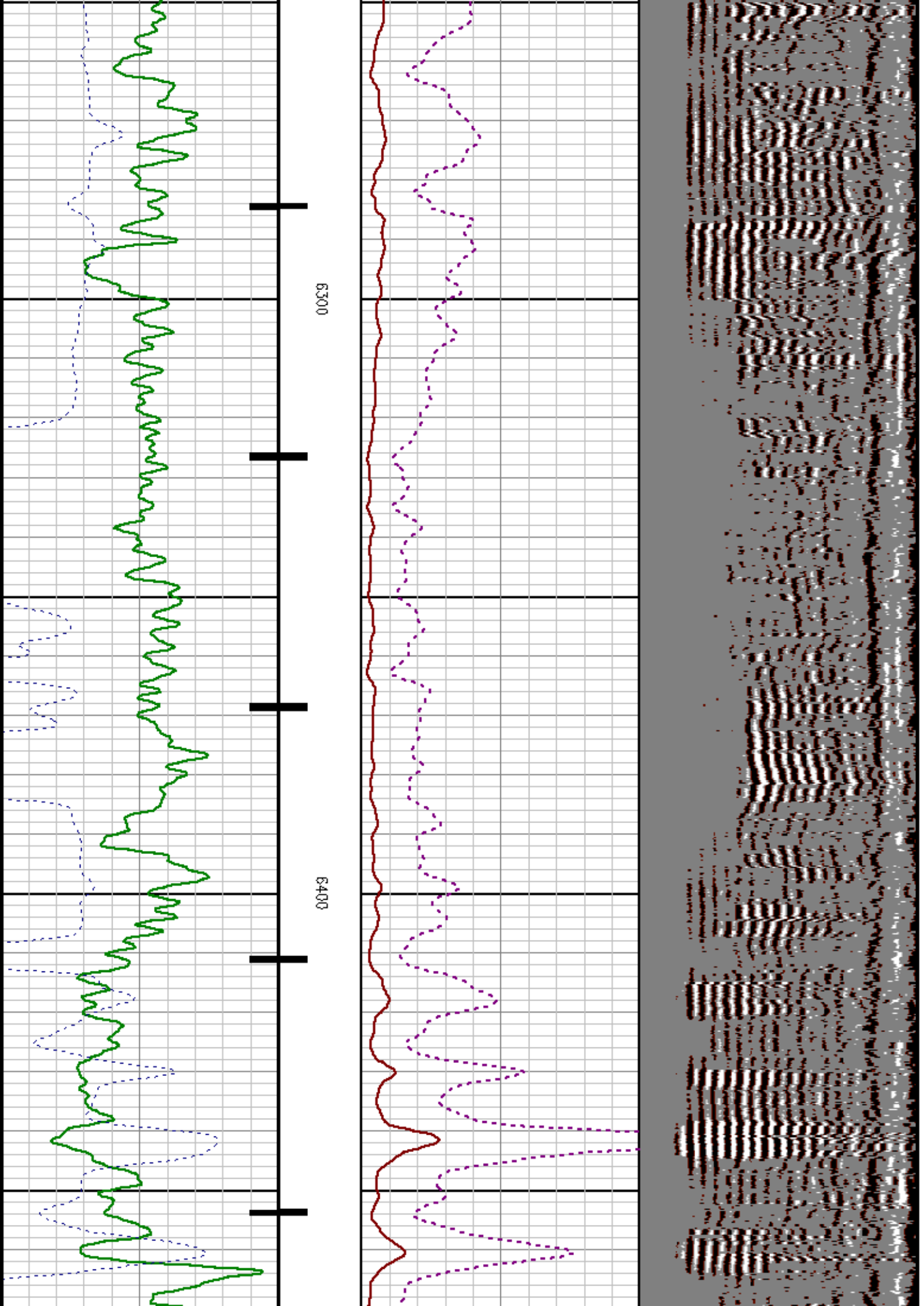


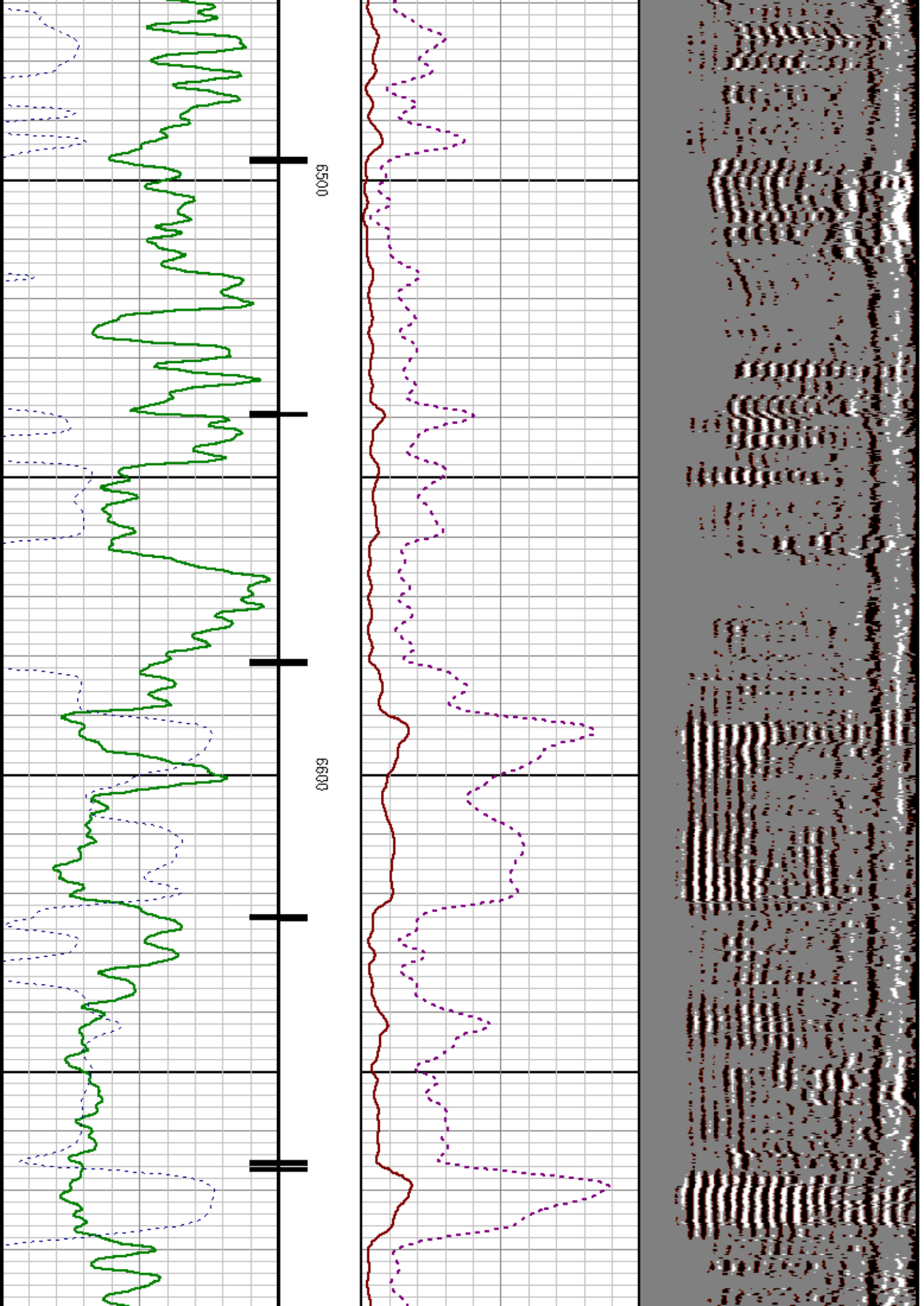




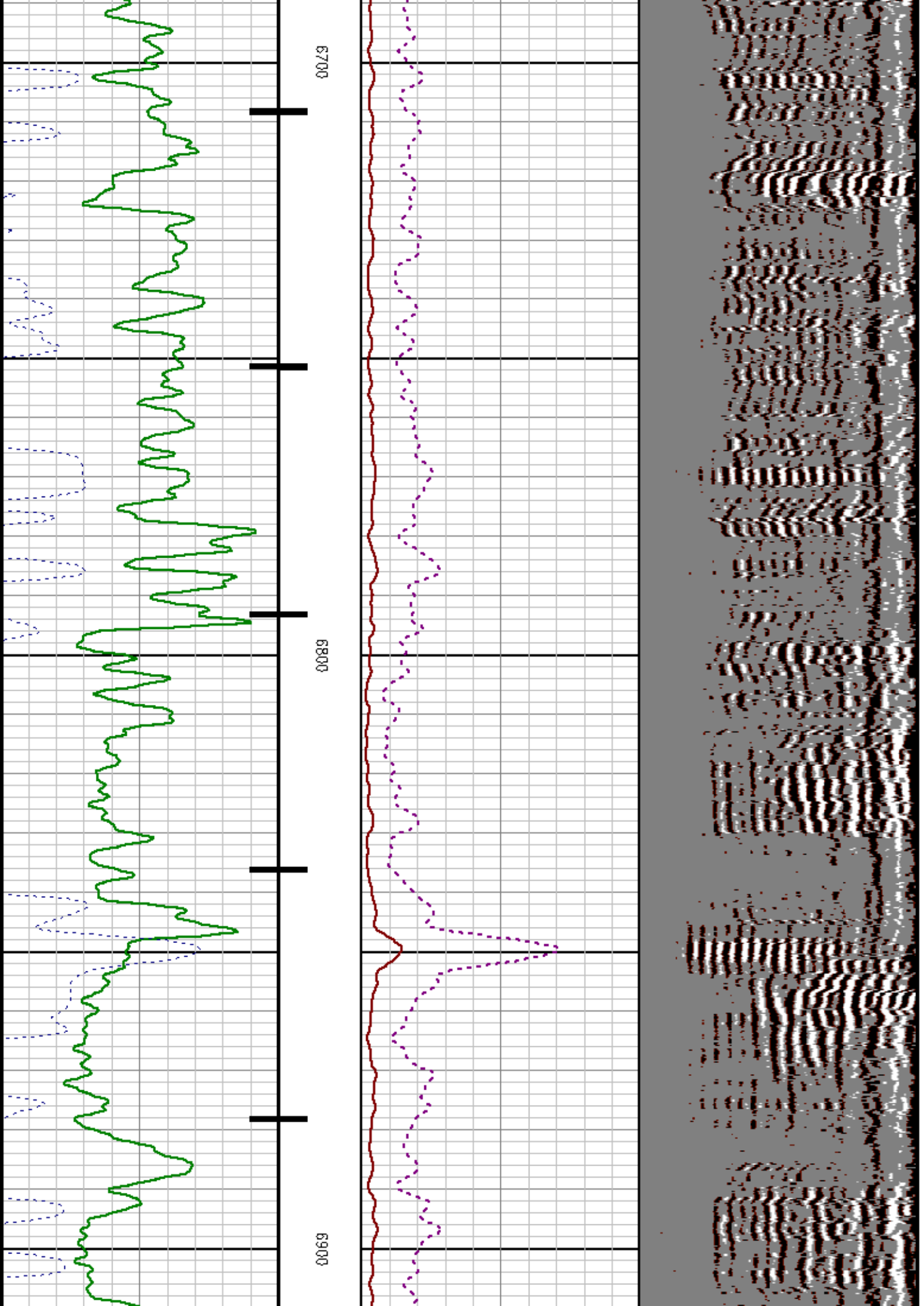


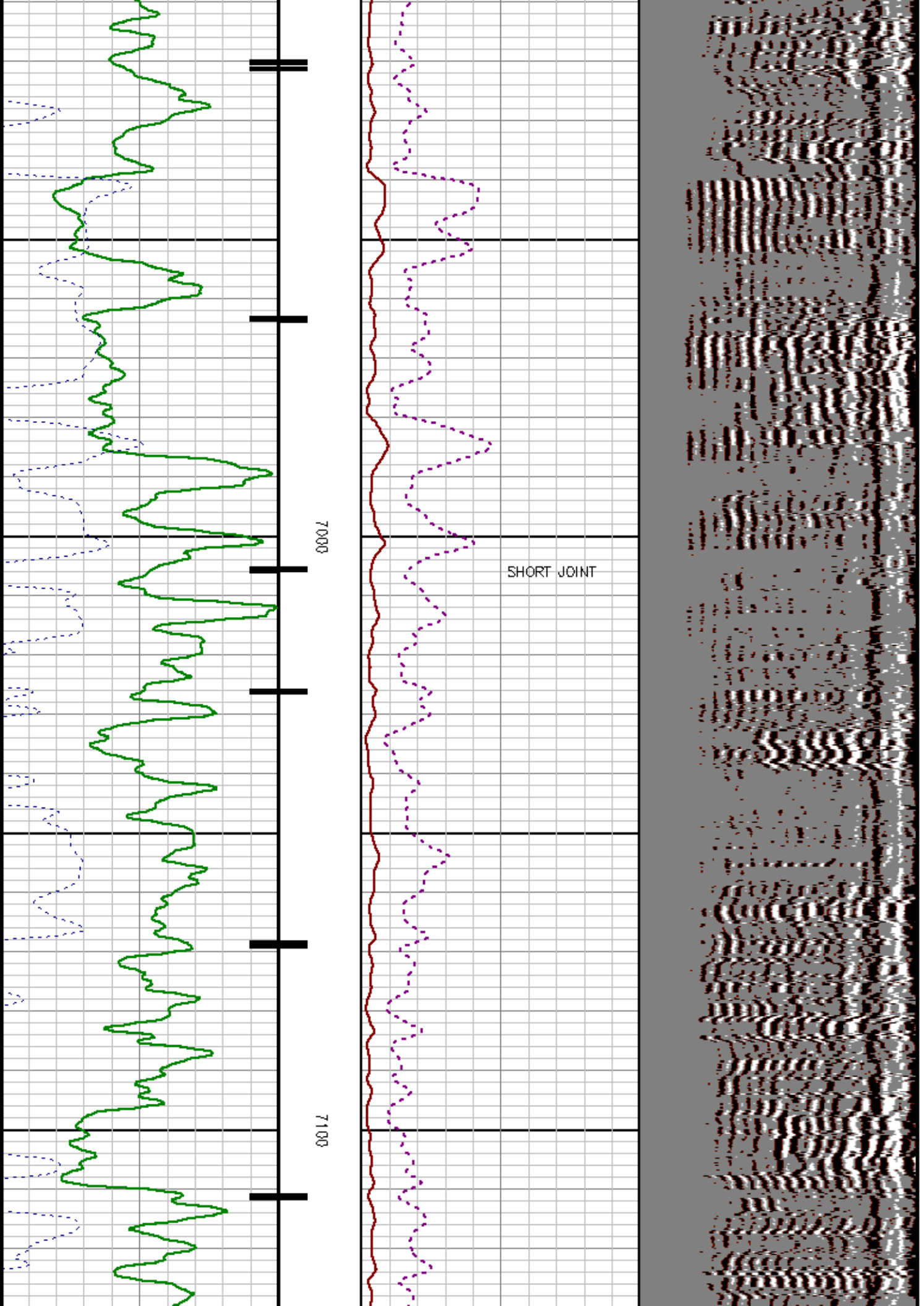


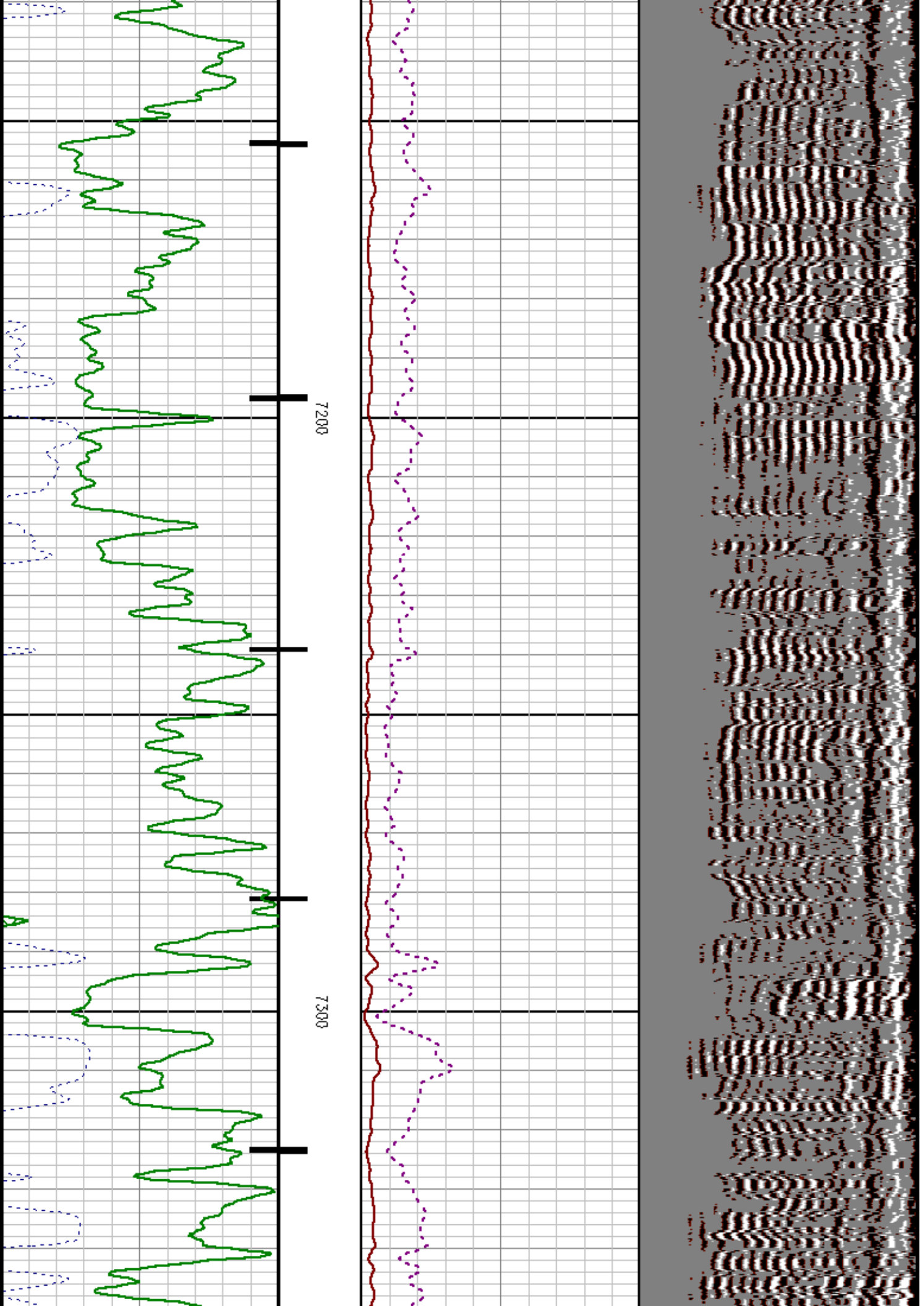


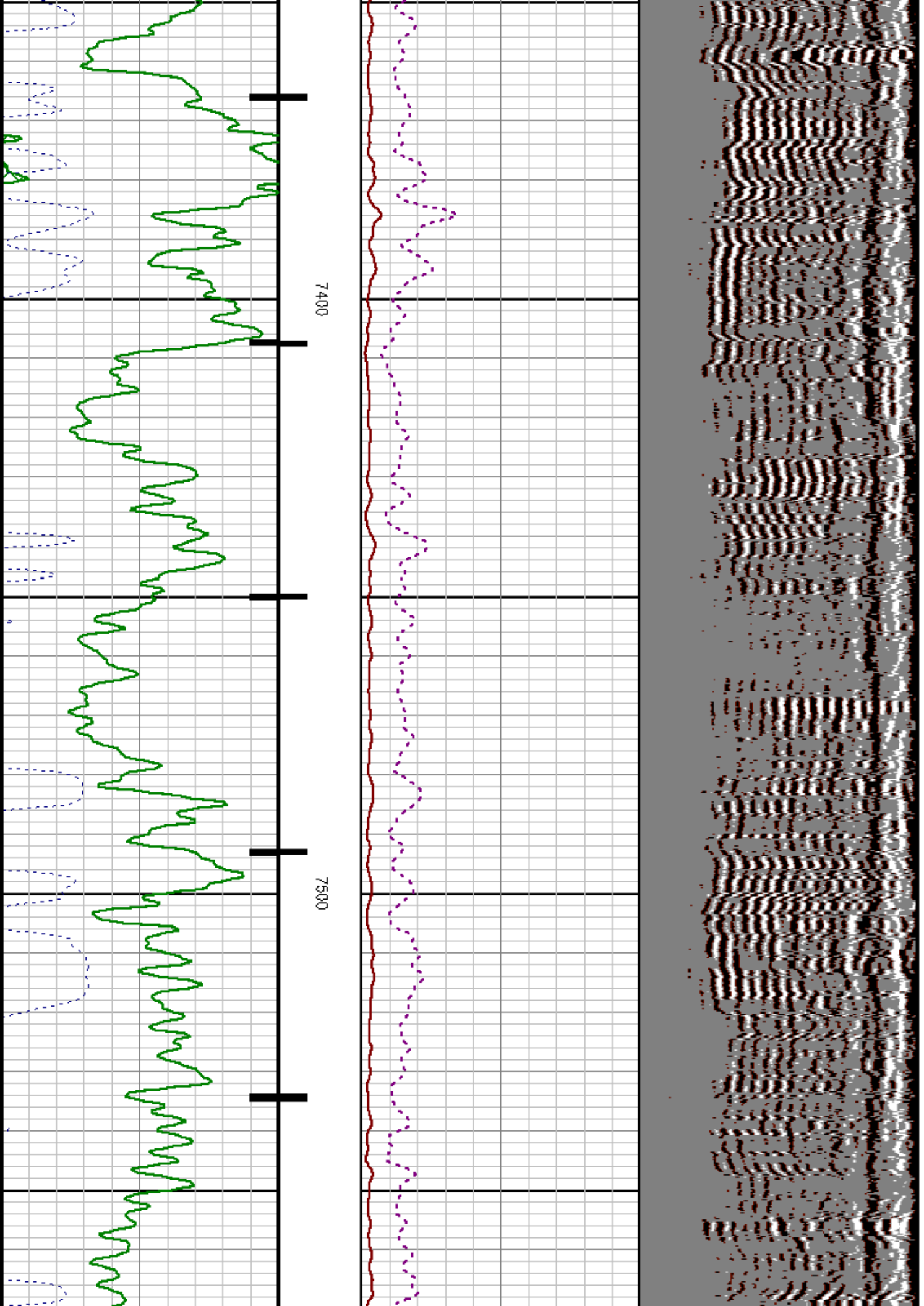




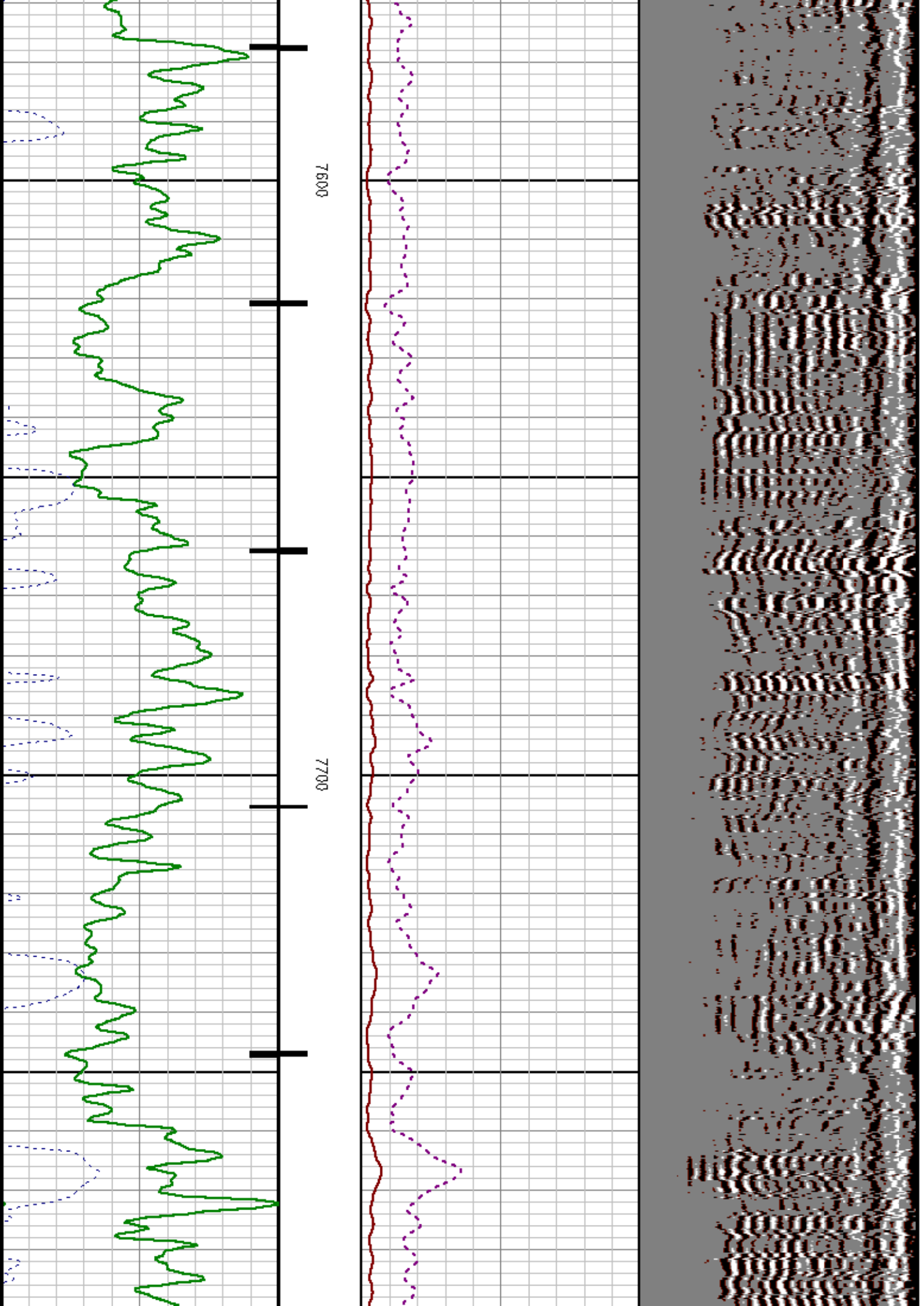




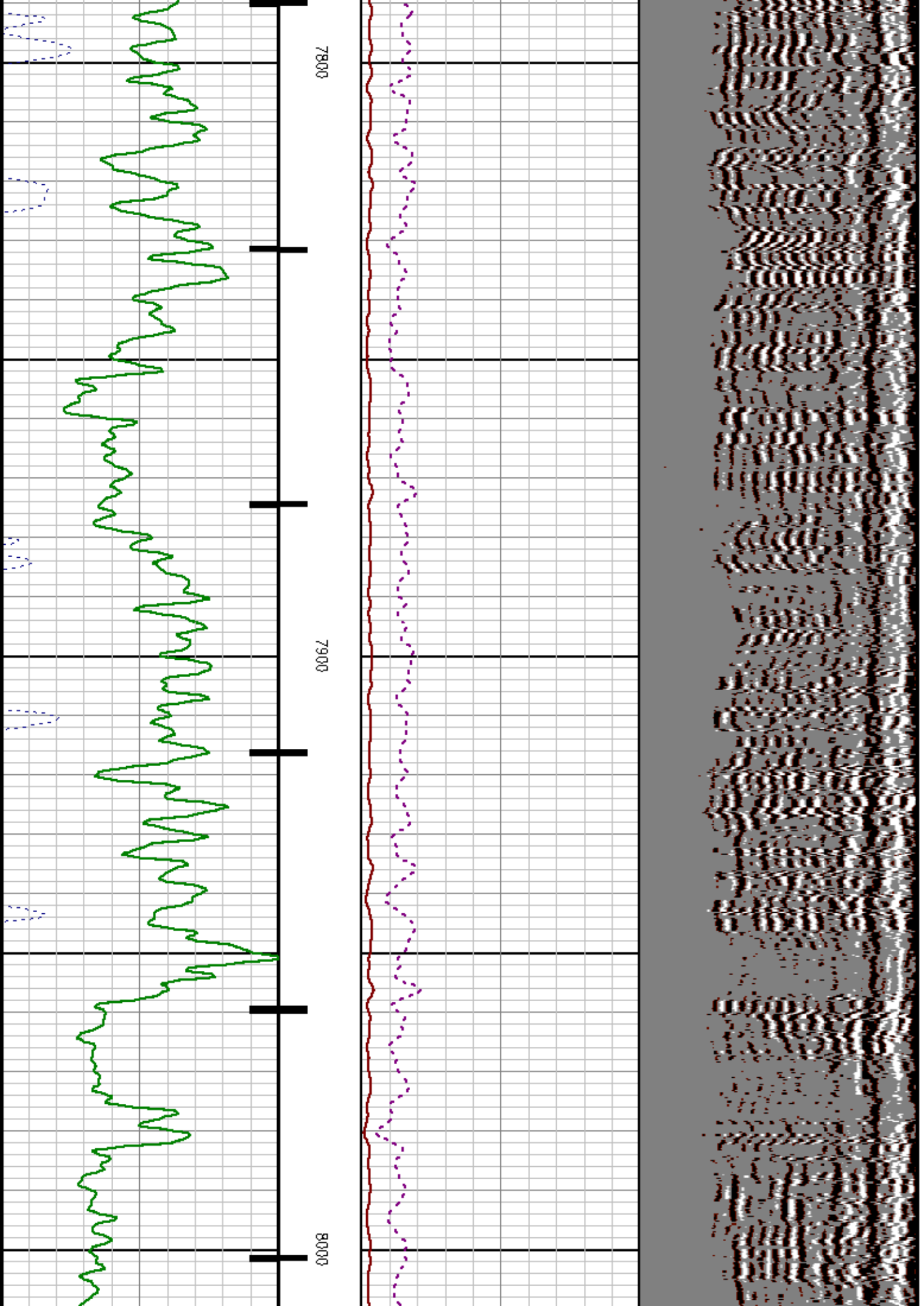


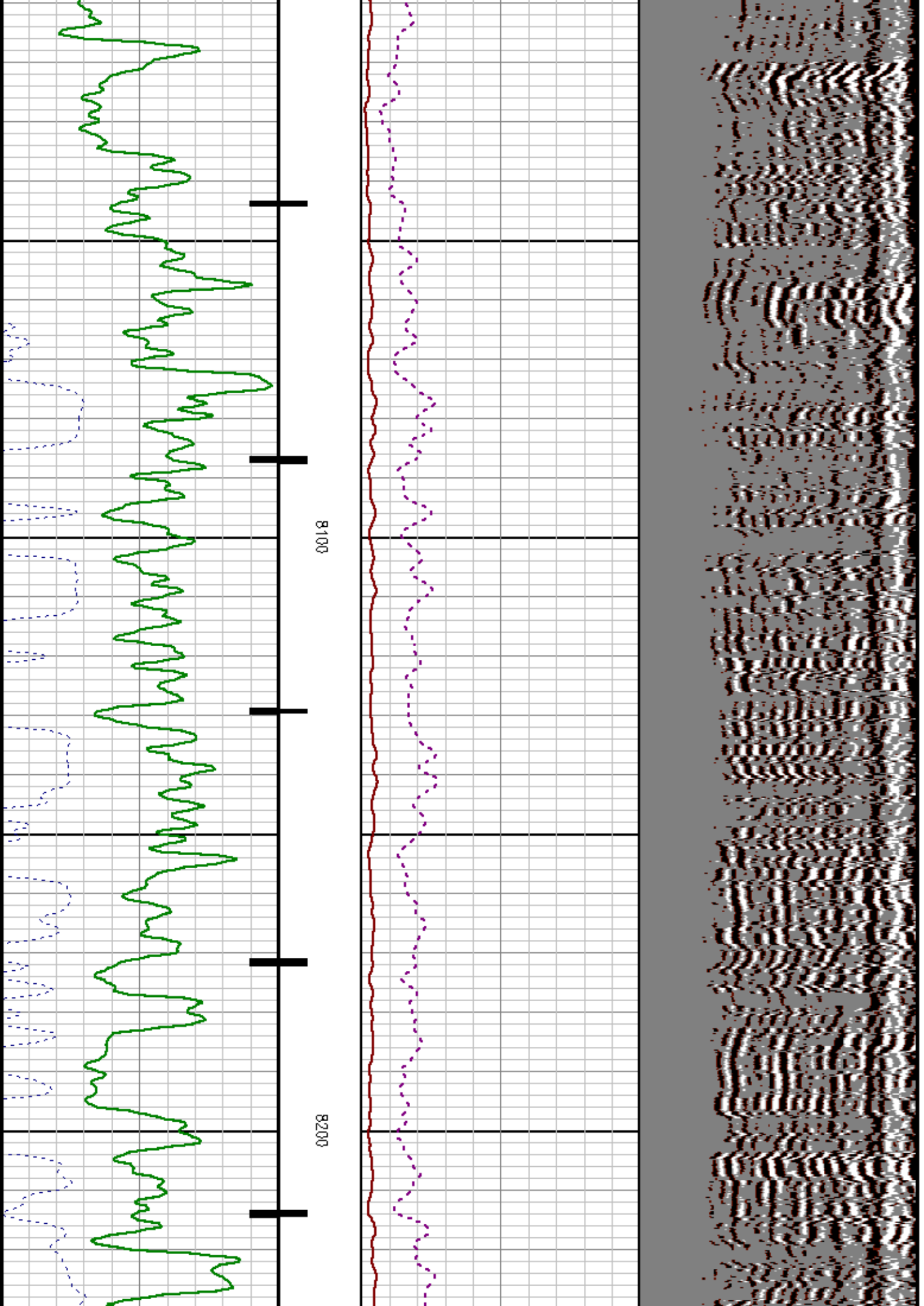


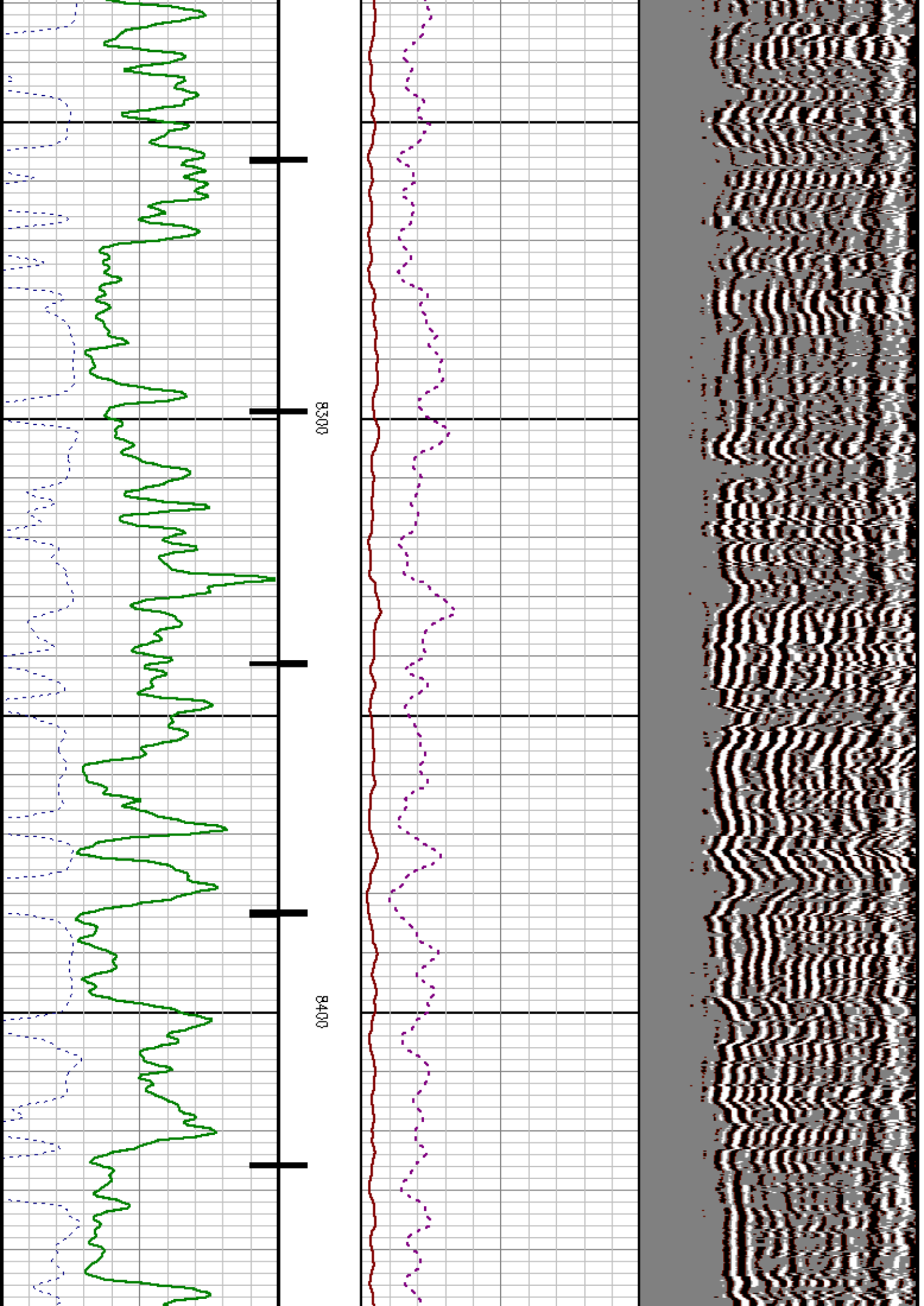




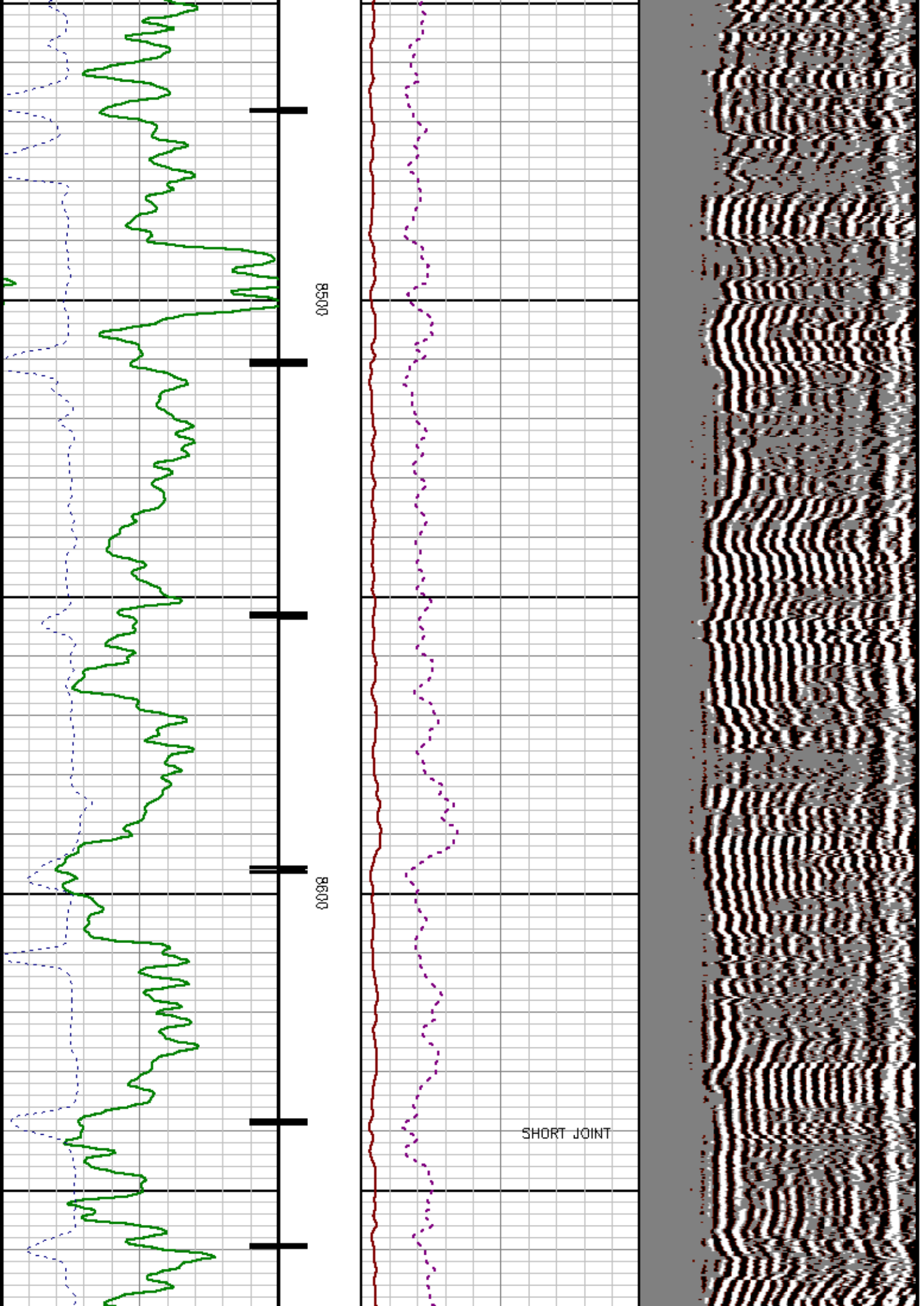




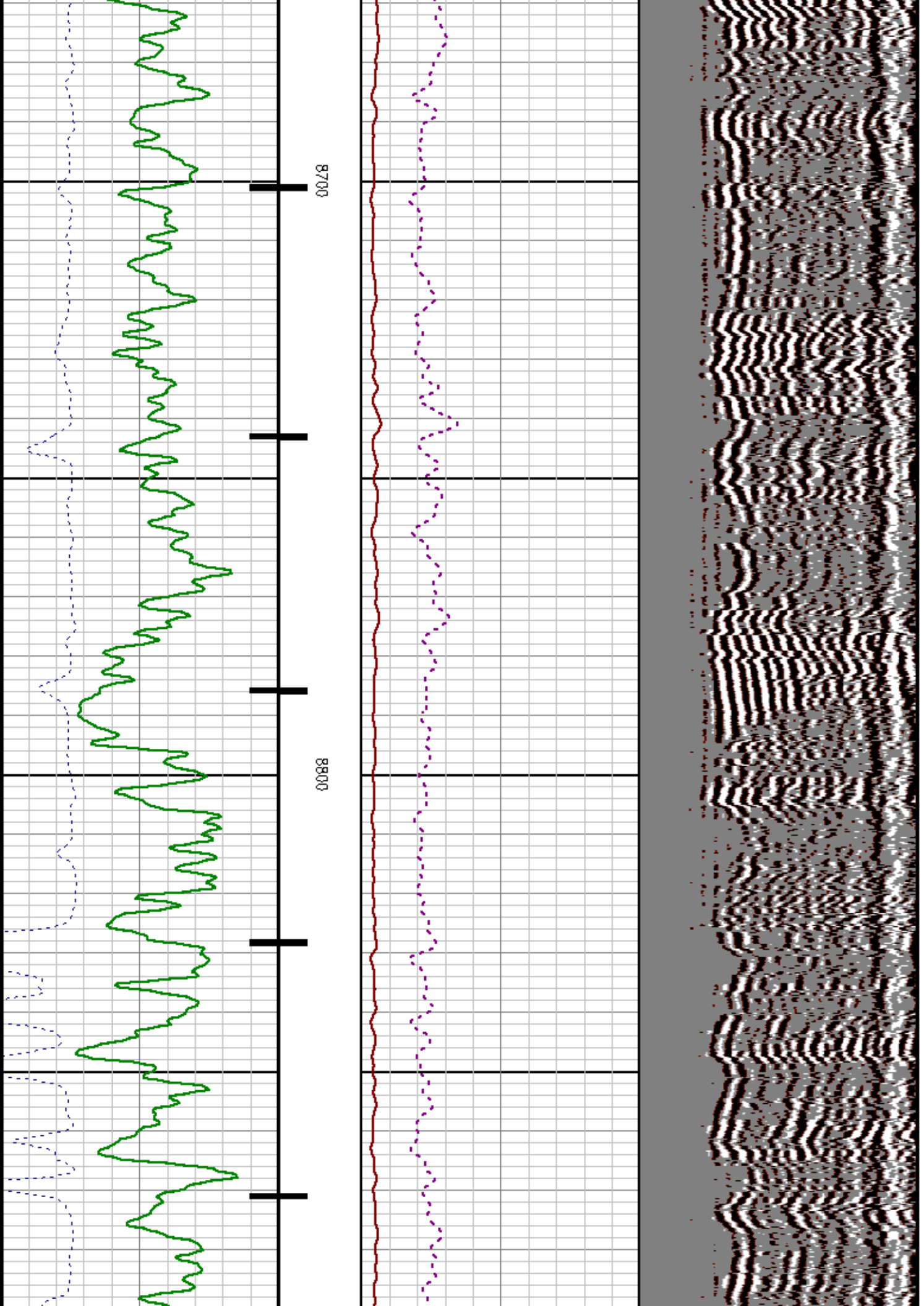


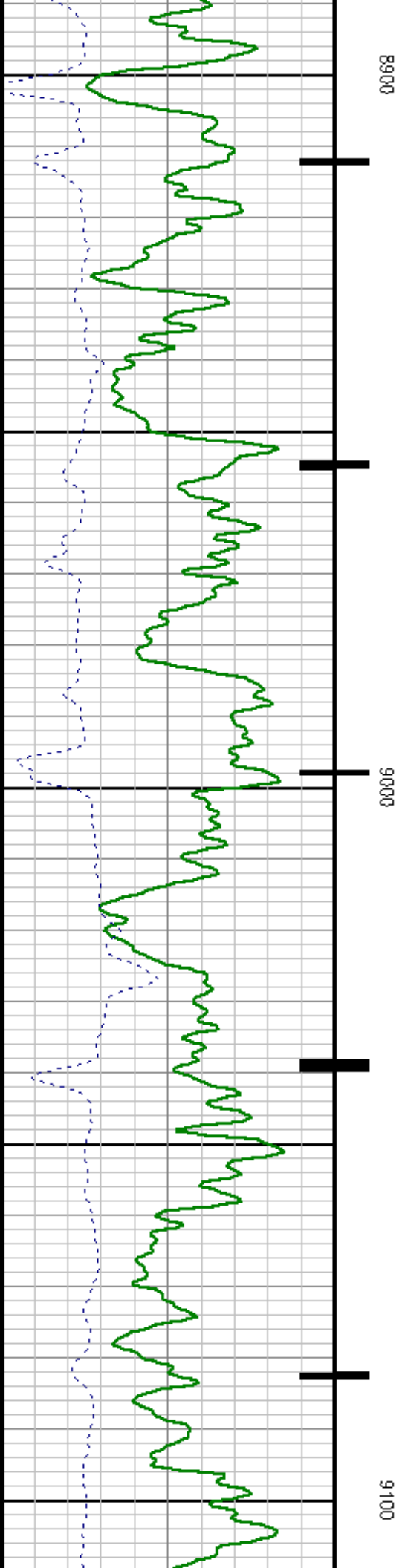
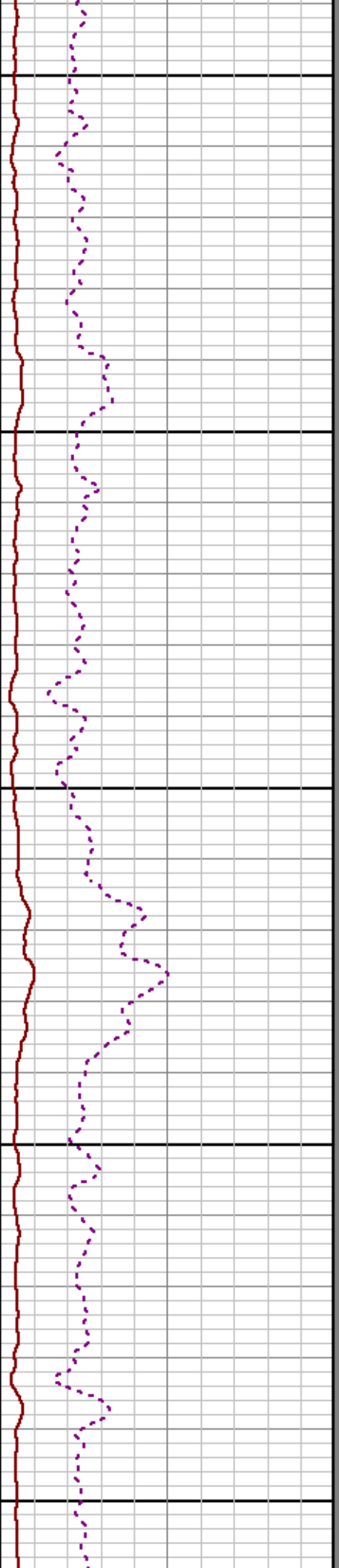
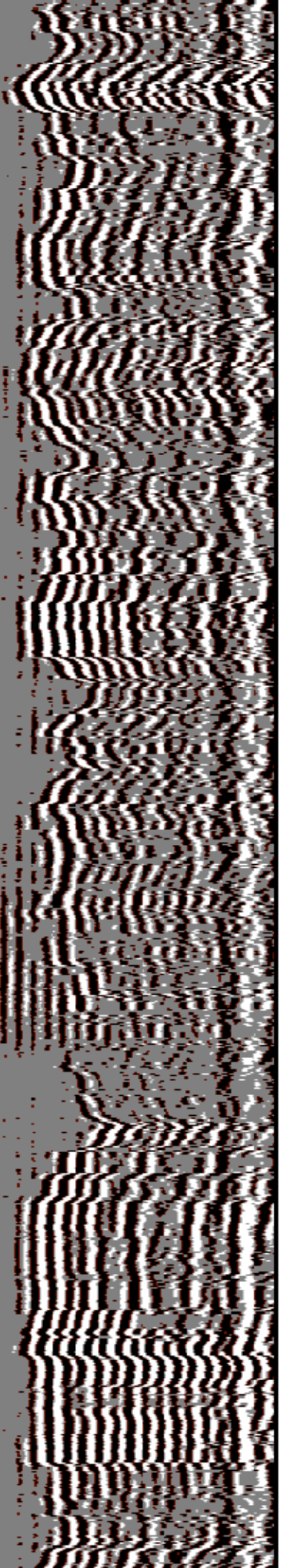


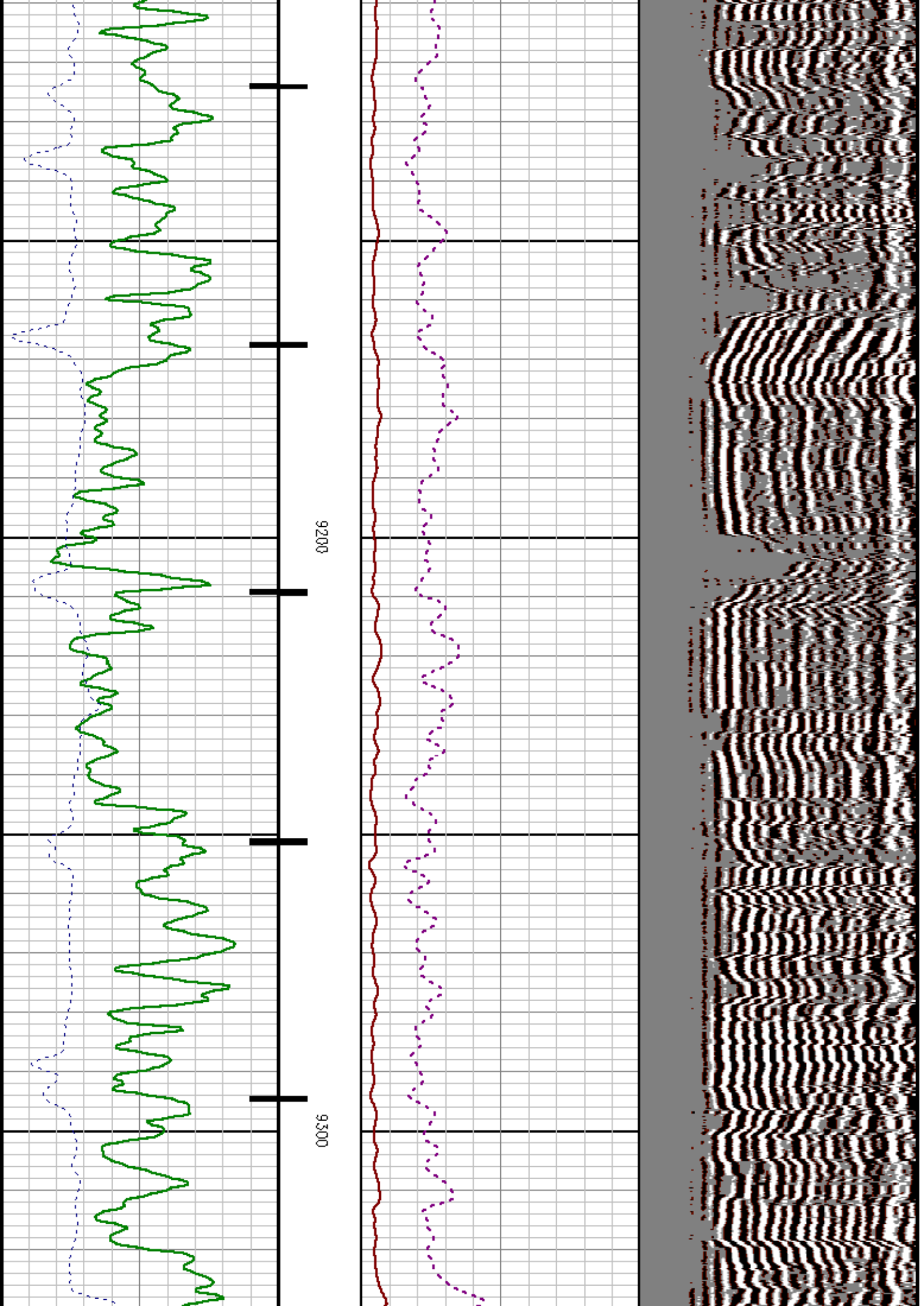




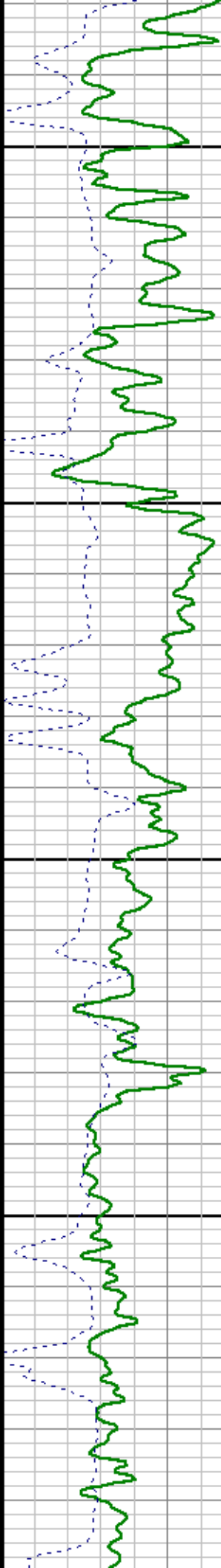
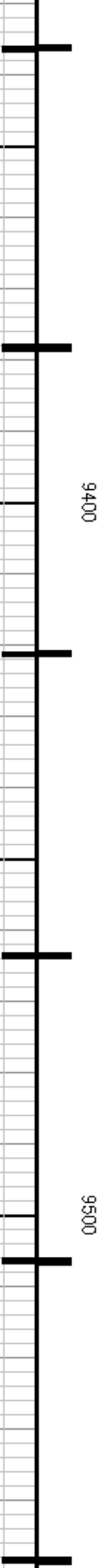
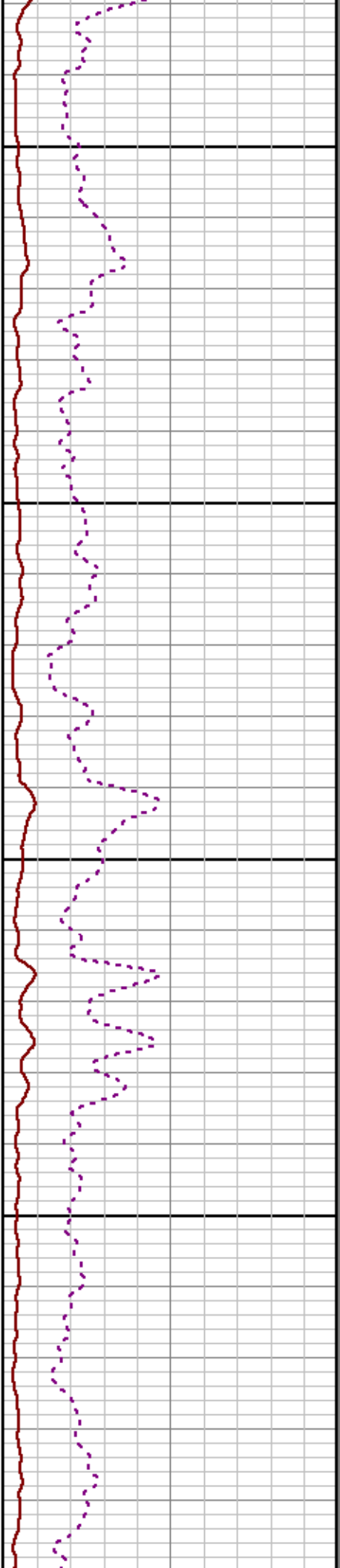
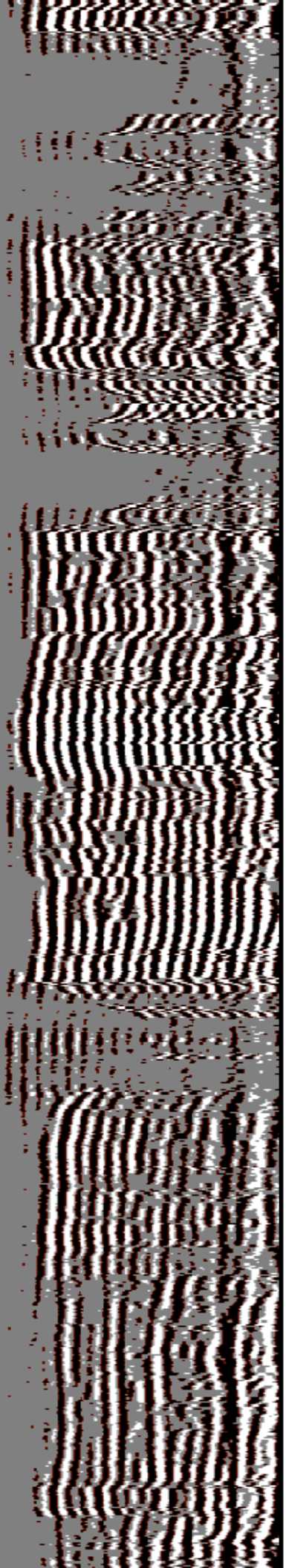




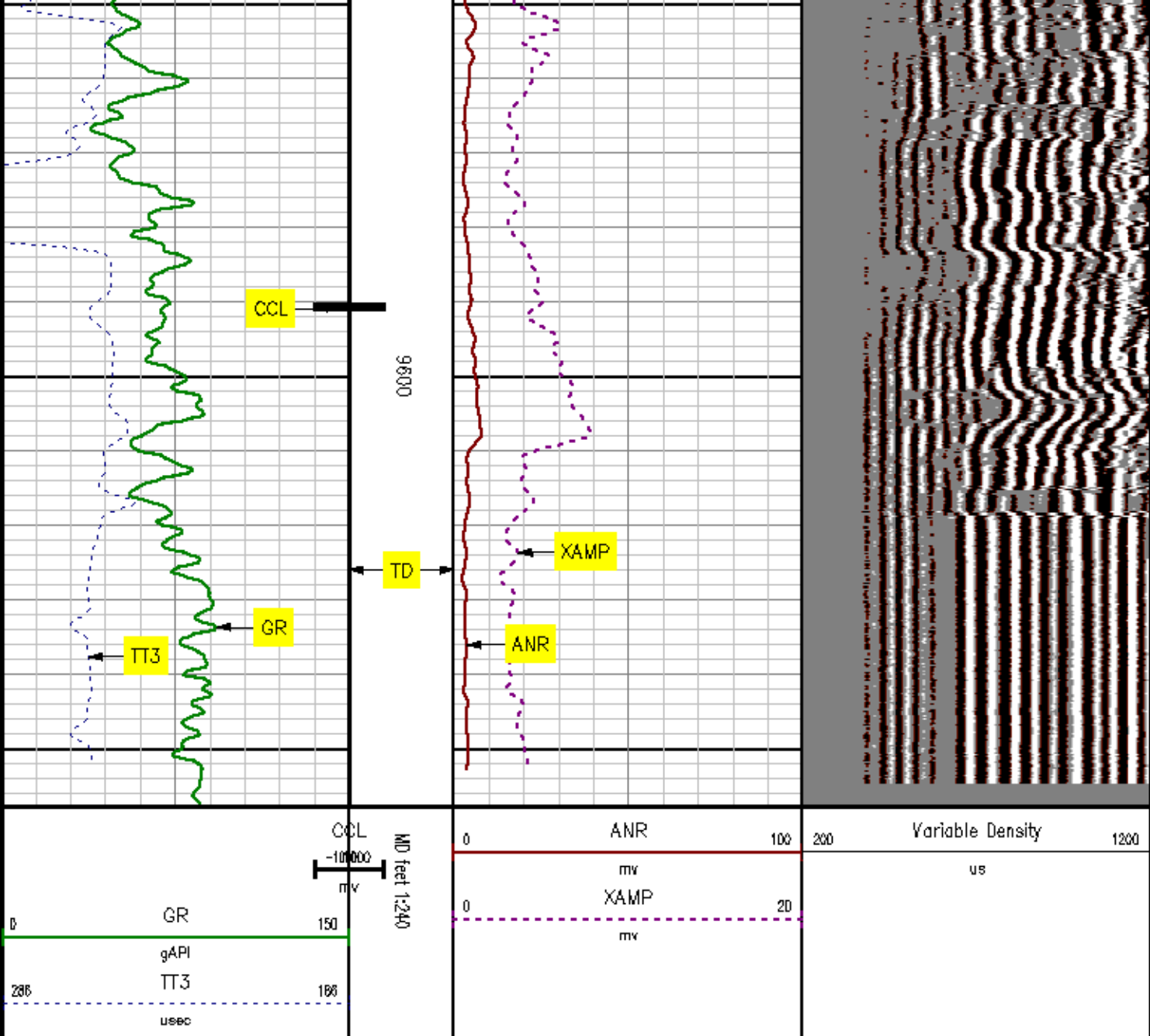












# MAIN SECTION SECONDARY PRESENTATION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start For	316.900	usec	2176.378	9668.000

RAL	Amp Gate Start Near	200.391	usec	2176.378	9668.000
RAL	Amp Gate Start Radial	200.391	usec	2176.378	9668.000
RAL	Amp Gate Width Far	25.000	usec	2176.378	9668.000
RAL	Amp Gate Width Near	25.000	usec	2176.378	9668.000
RAL	Amp Gate Width Radial	25.000	usec	2176.378	9668.000
RAL	casing od	4.500	inches	2176.378	9668.000
RAL	casing wt	11.600	lbm/ft	2176.378	9668.000
RAL	FB Start Far	291.900	usec	2176.378	9668.000
RAL	FB Start Near	175.391	usec	2176.378	9668.000
RAL	FB Start Radial	175.391	usec	2176.378	9668.000
RAL	FB Thresh Far	10.000	mv	2176.378	9668.000
RAL	FB Thresh Near	10.000	mv	2176.378	9668.000
RAL	FB Thresh Radial	10.000	mv	2176.378	9668.000
RAL	Fluid Travel Time	200.000	usec/ft	2176.378	9667.884

## DEPTH OFFSETS (for Acquired Curves)

SERIES	DEPTH OFFSET	ACQUIRED CURVES							
		ACAL	ANR	AR1	AR2	AR3	AR4		
1426XA	-15.360	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 : MARATHON OIL COMPANY

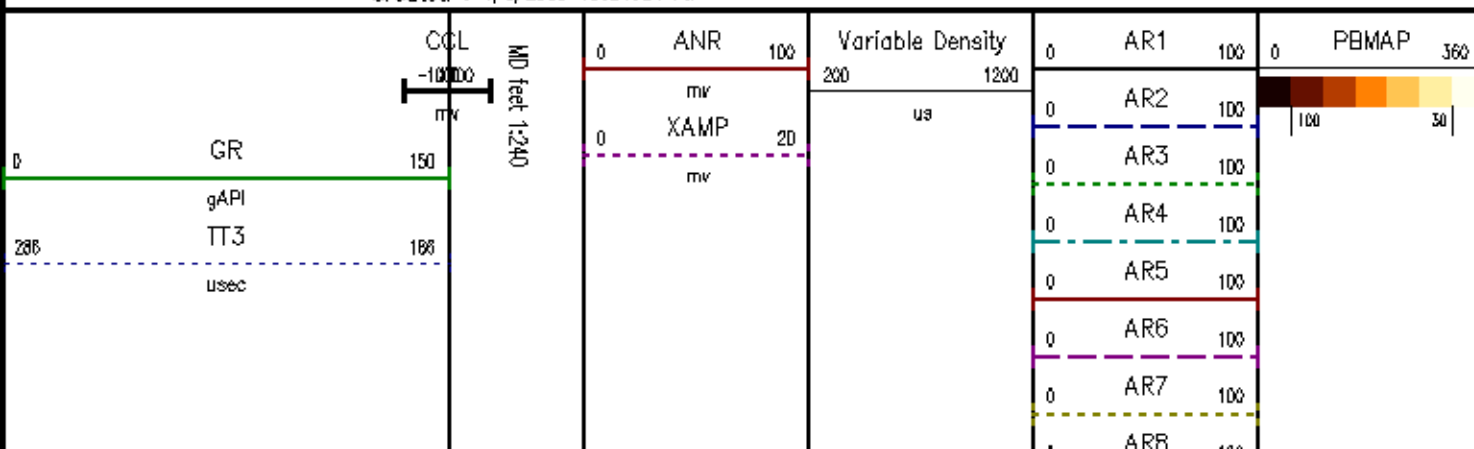
Well : 697-12A-18

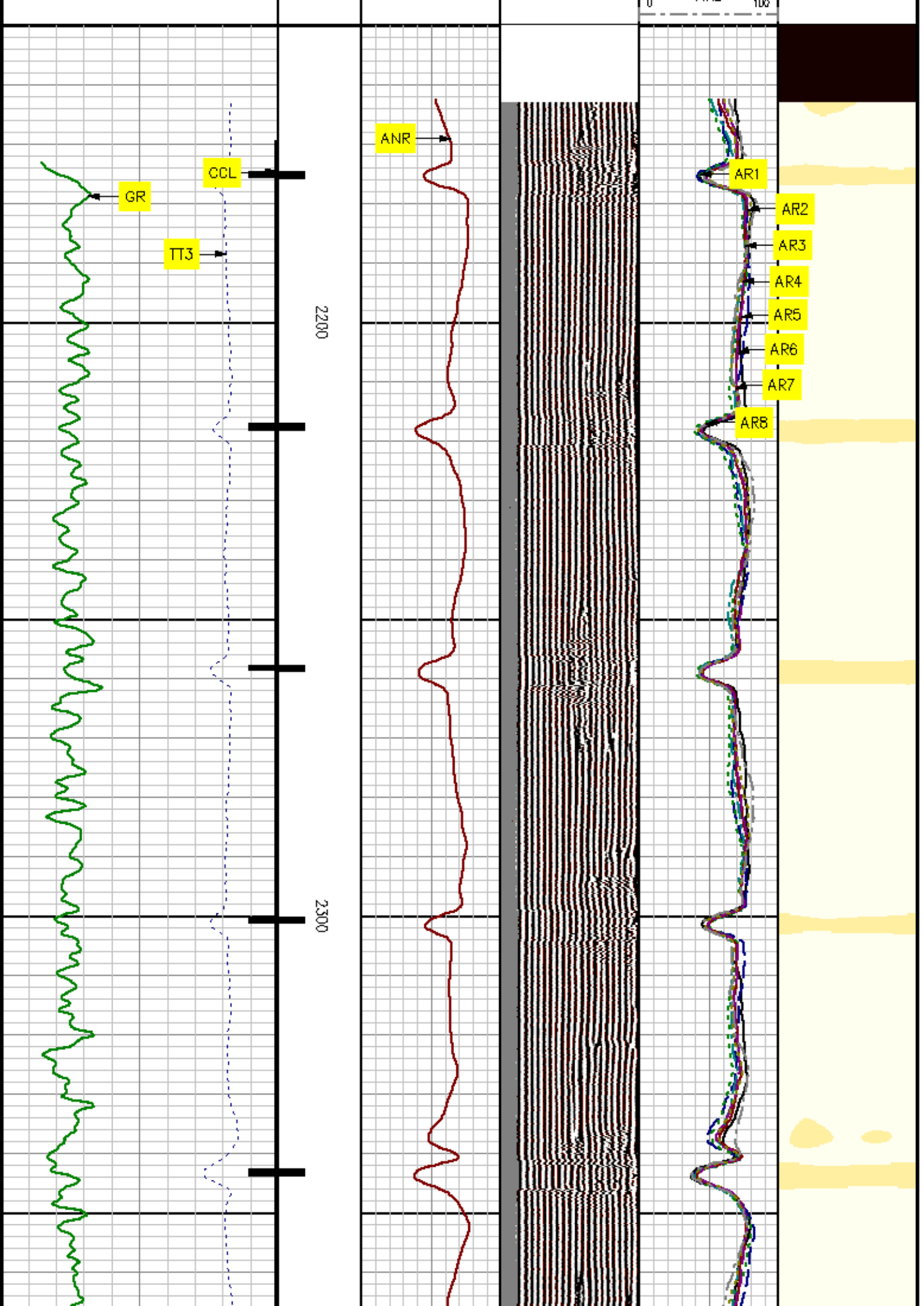
File Name : d:\welldata\18rad\main.xtf

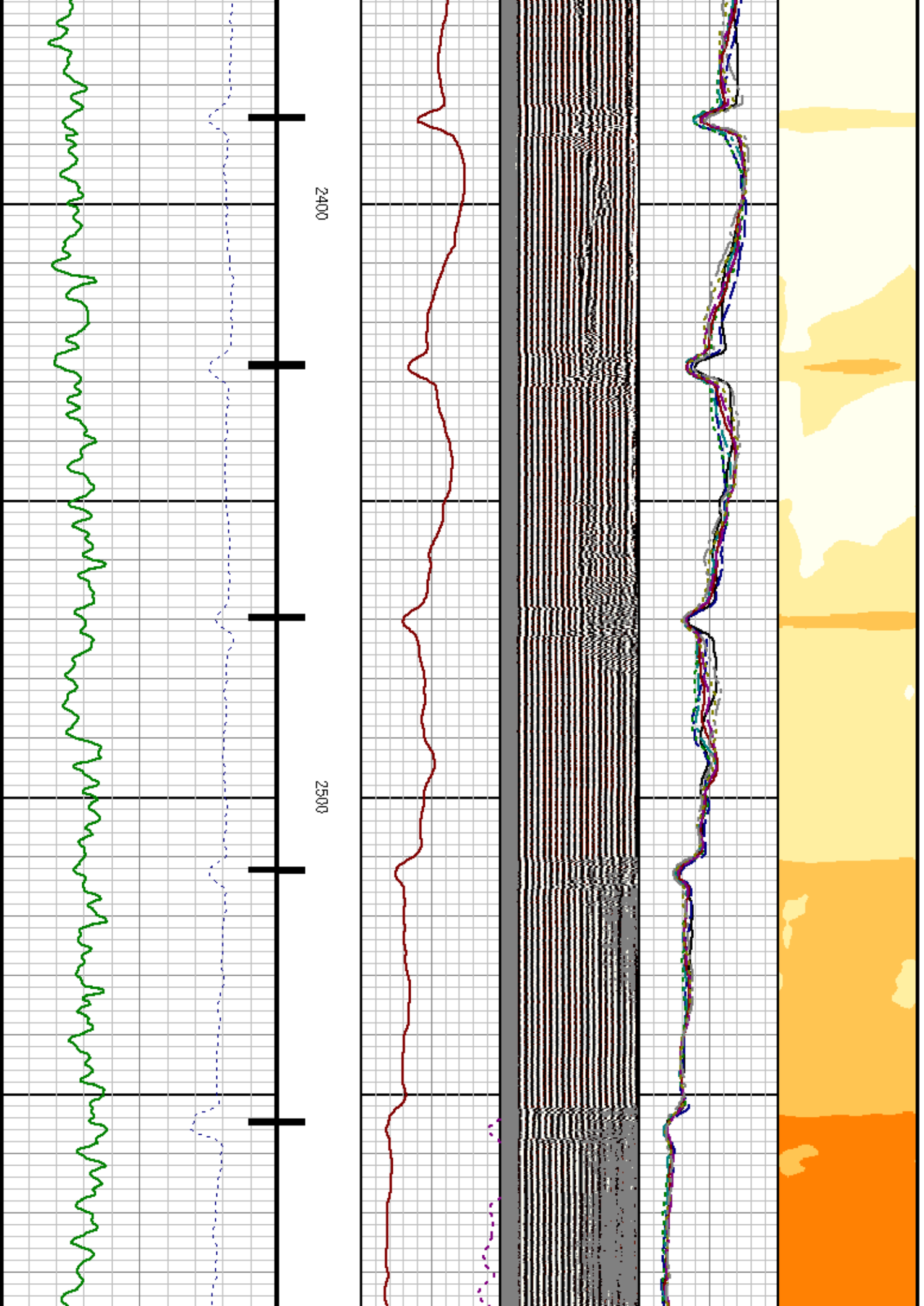
Mode : PlotMgr 5.4.504

Interval : 2150.00 - 9669.00 feet UP

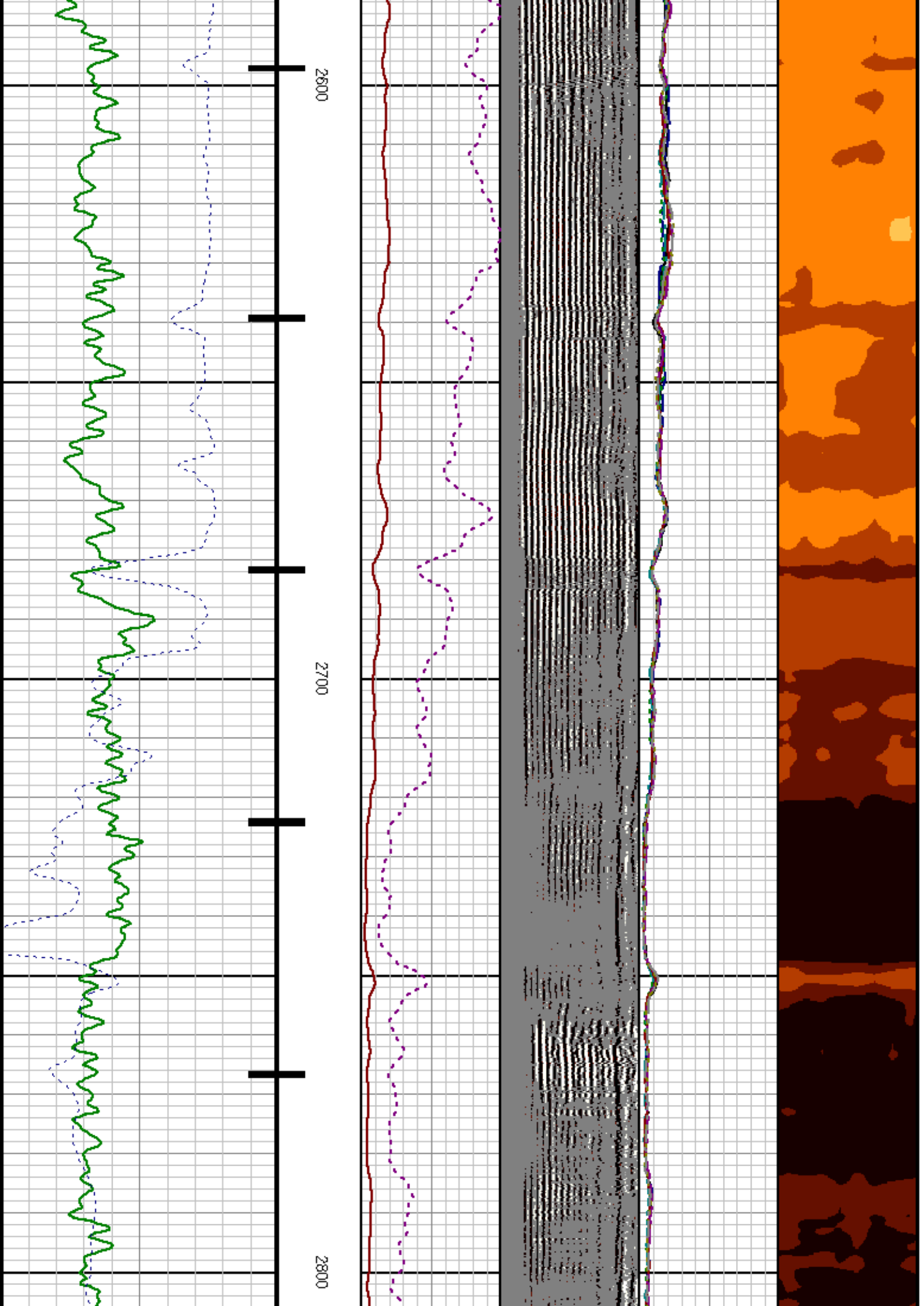
Created : 1/6/2009 10:34:34 PM

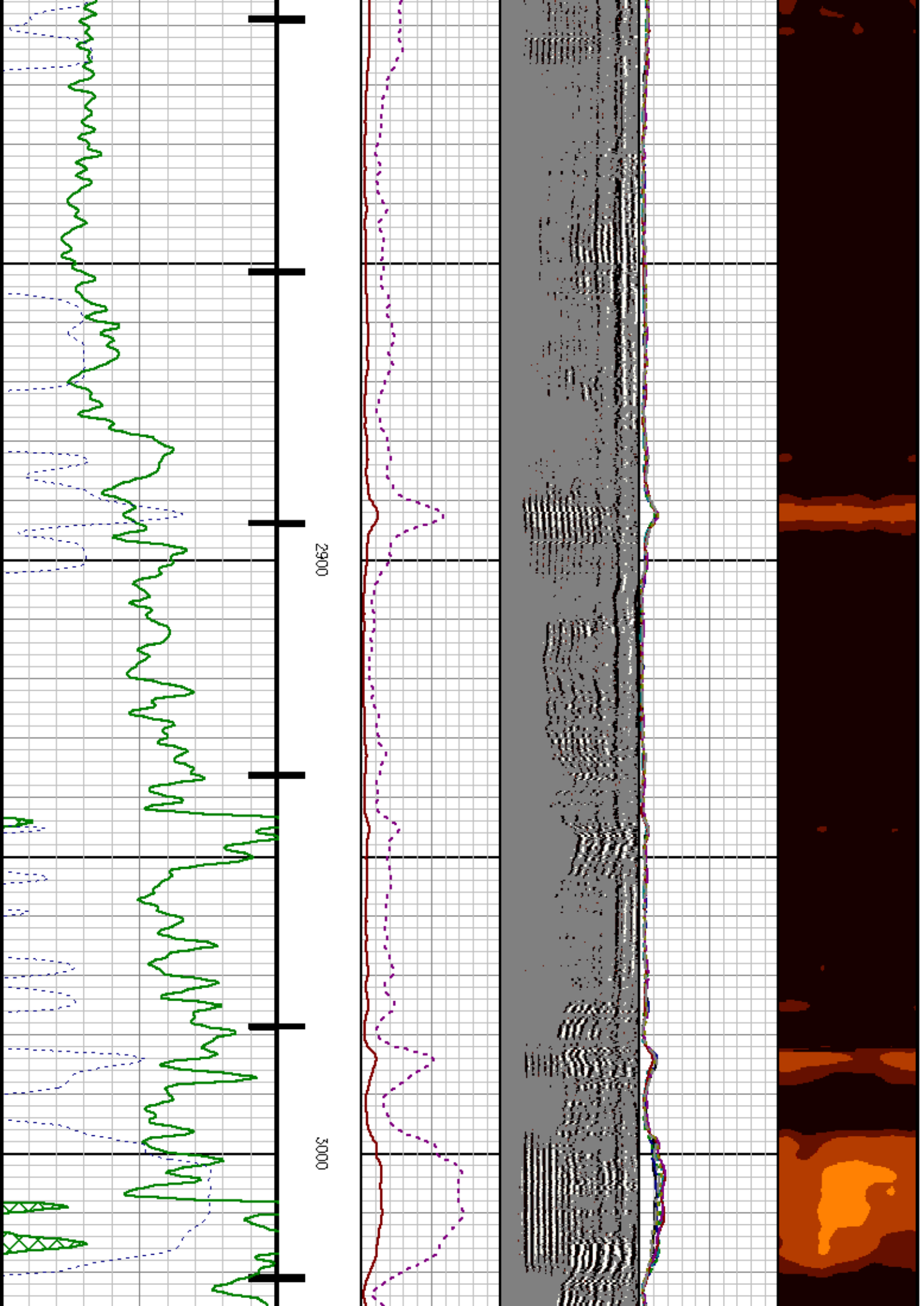


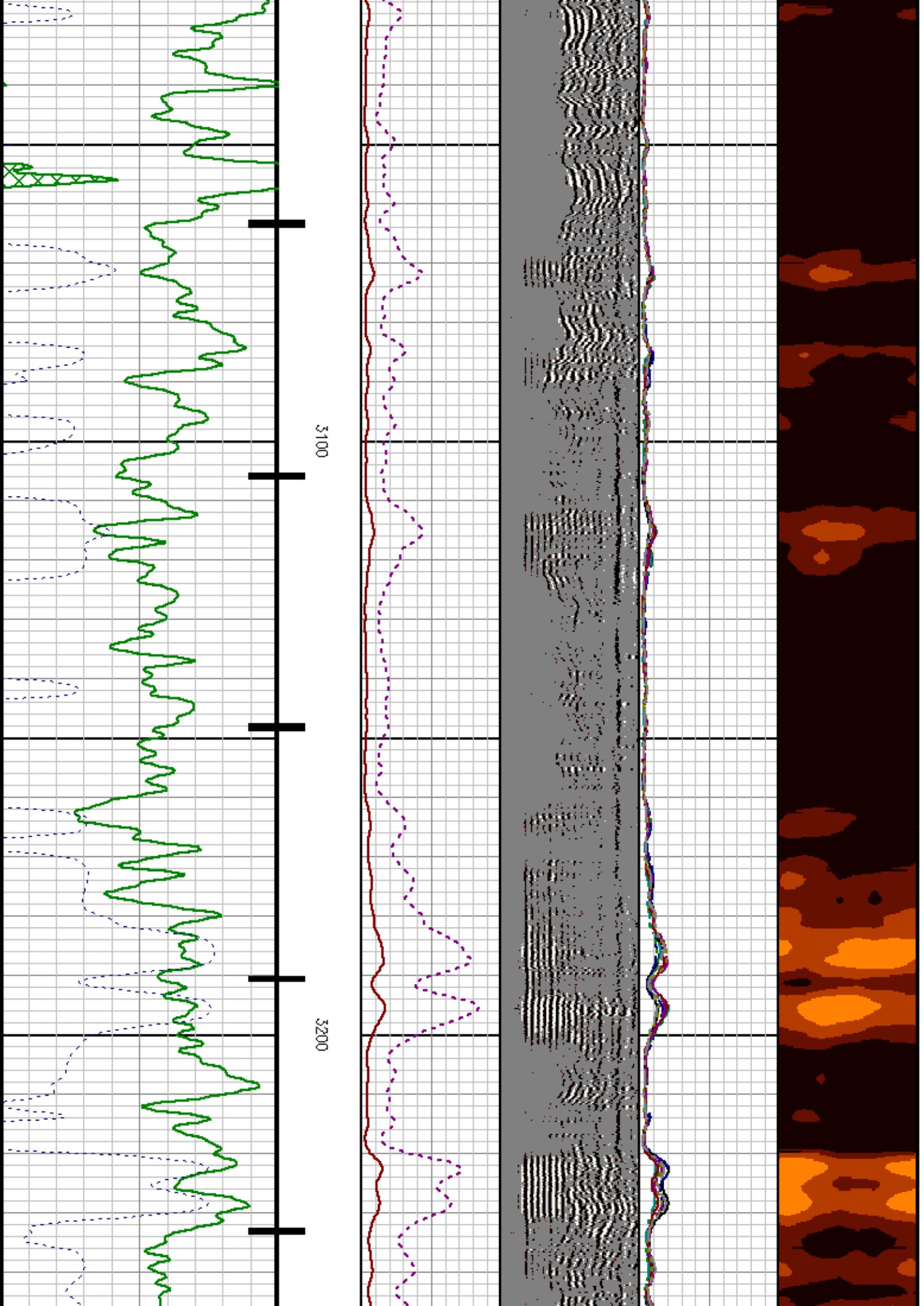


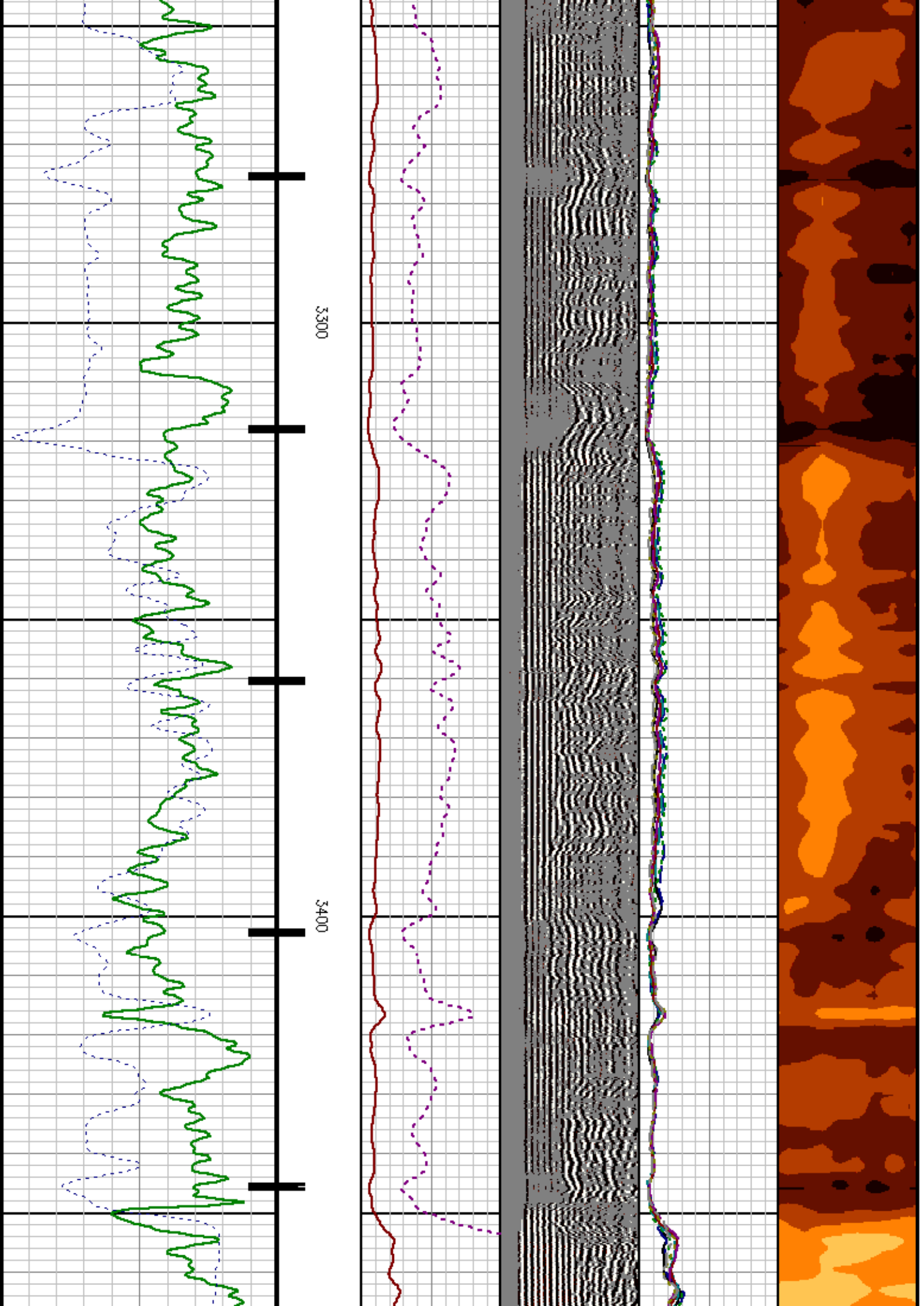




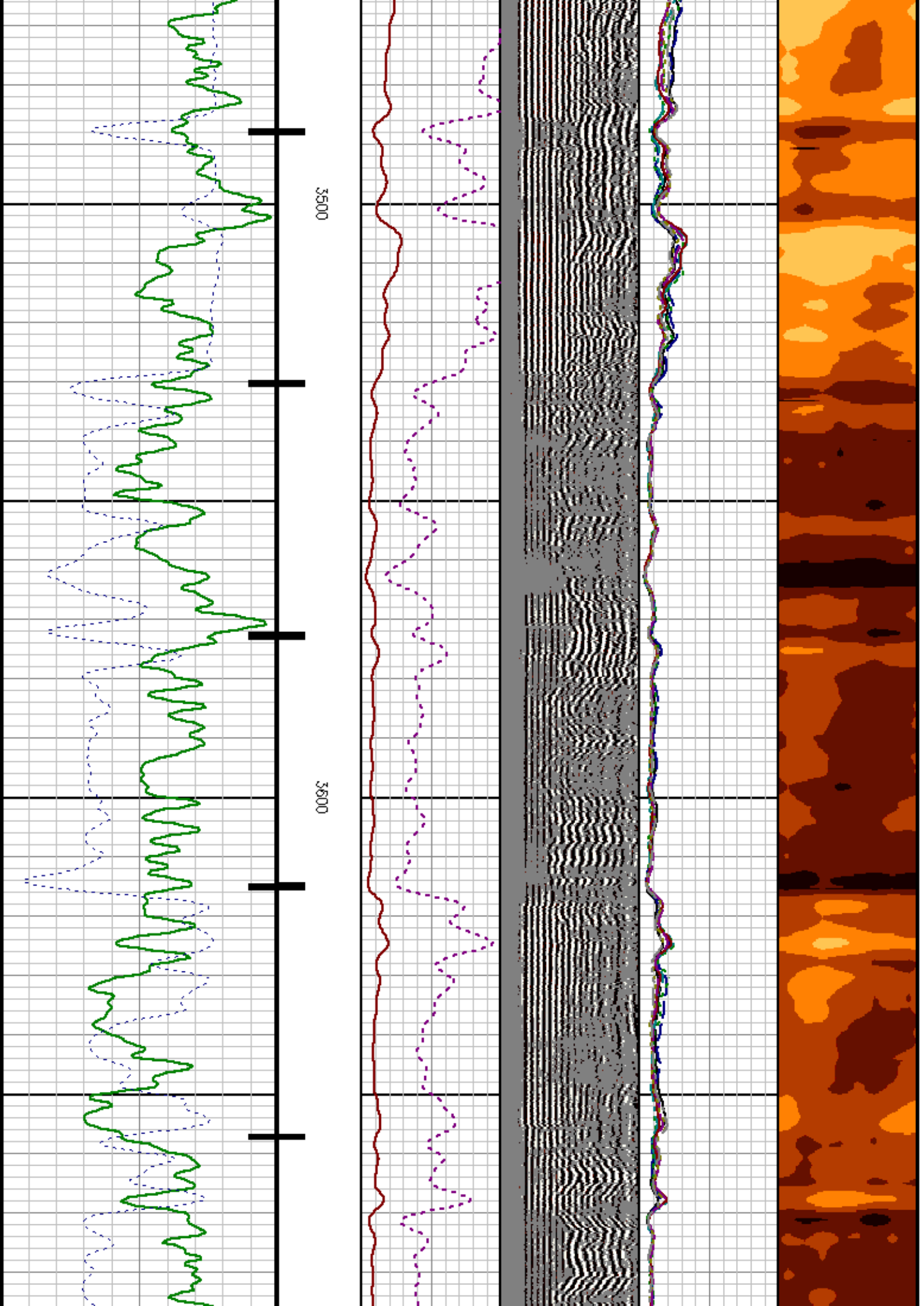


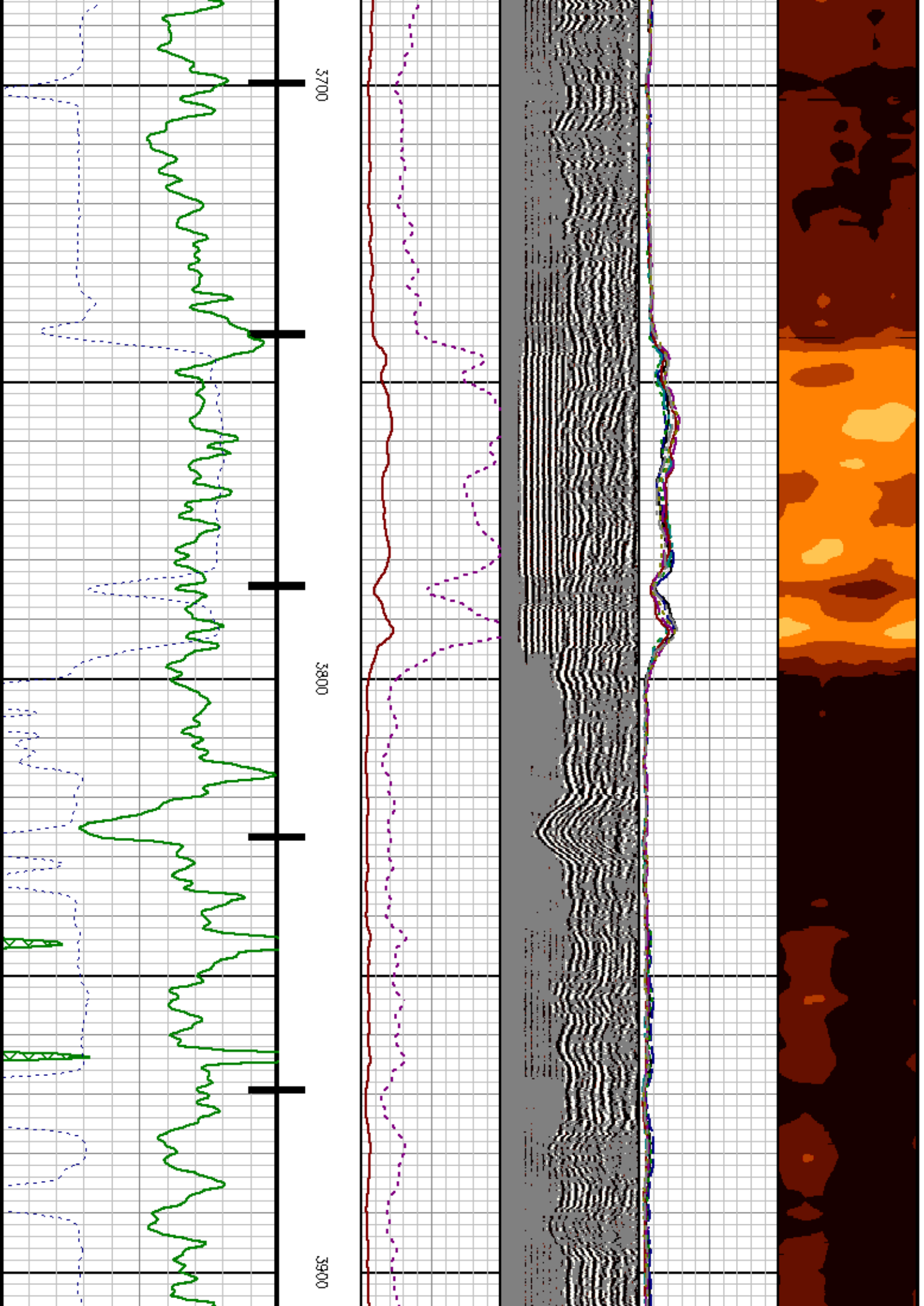


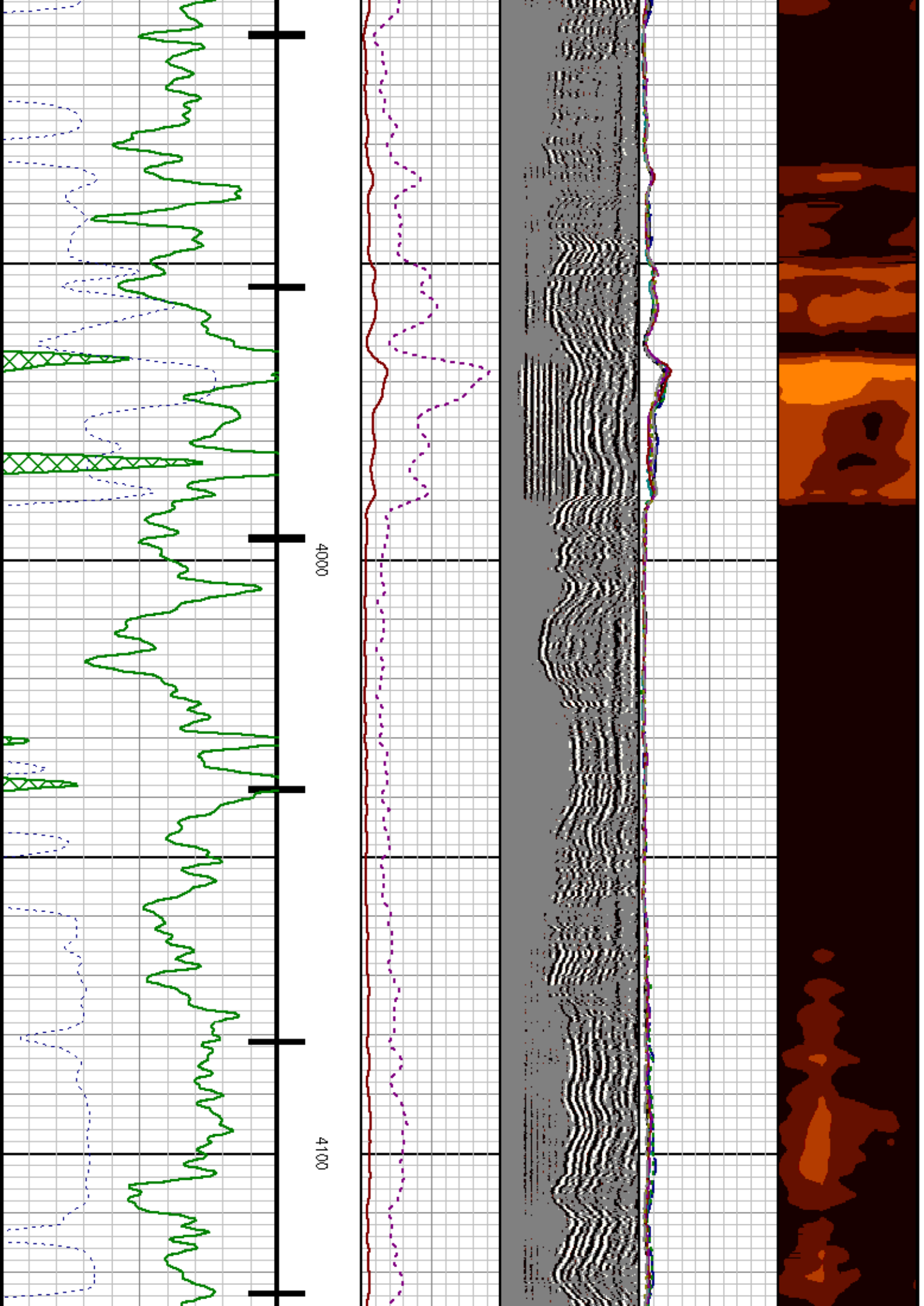


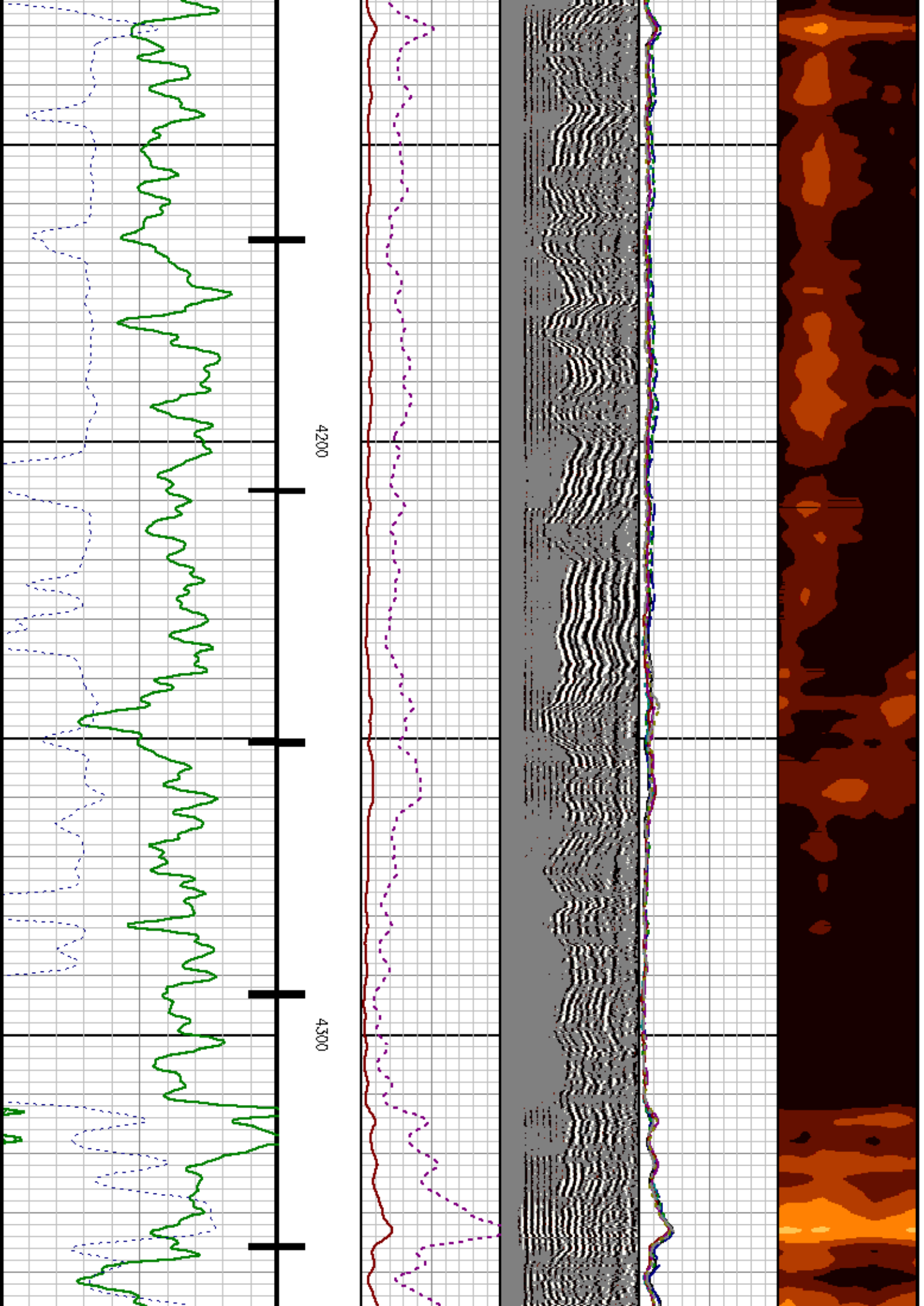




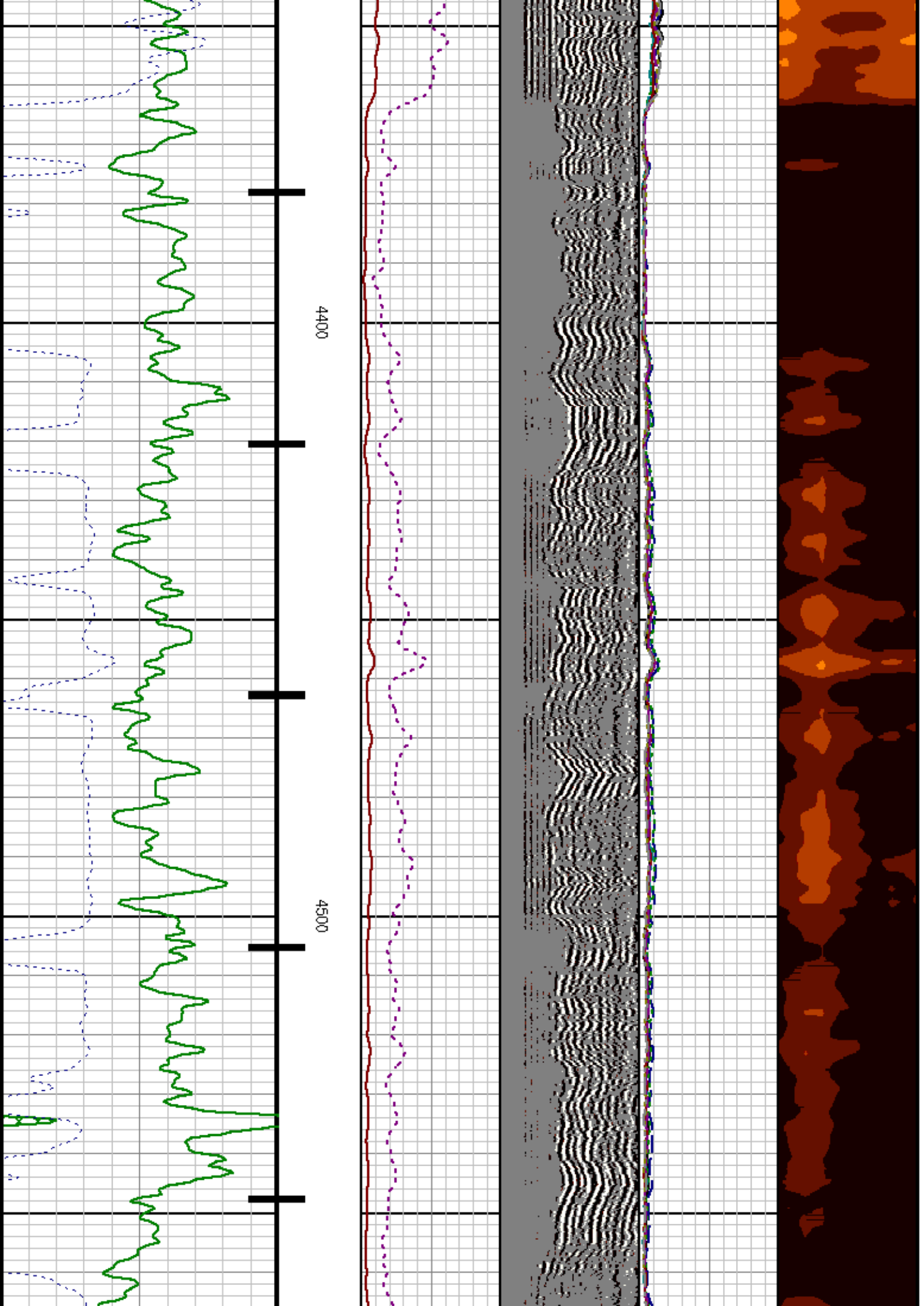


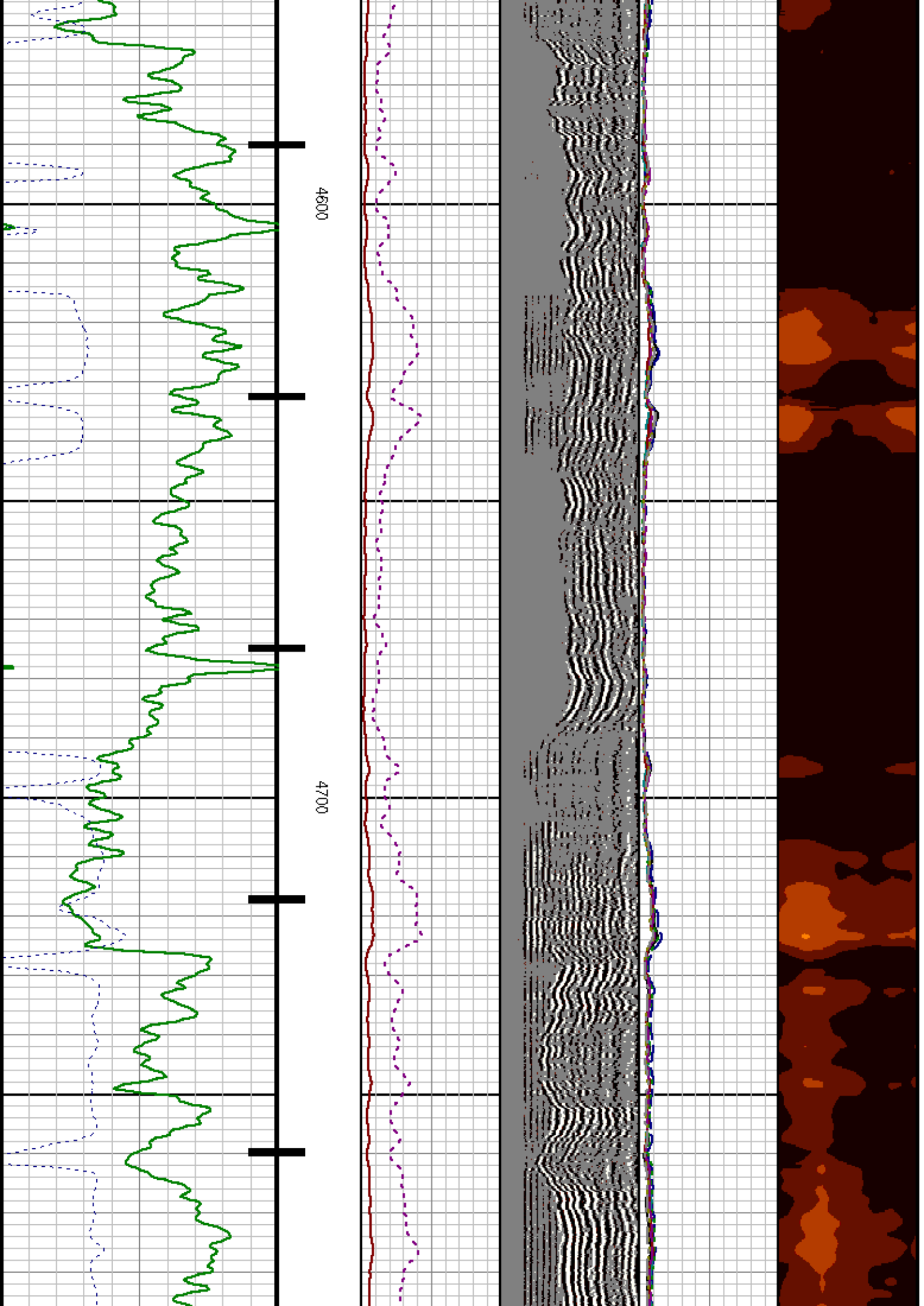


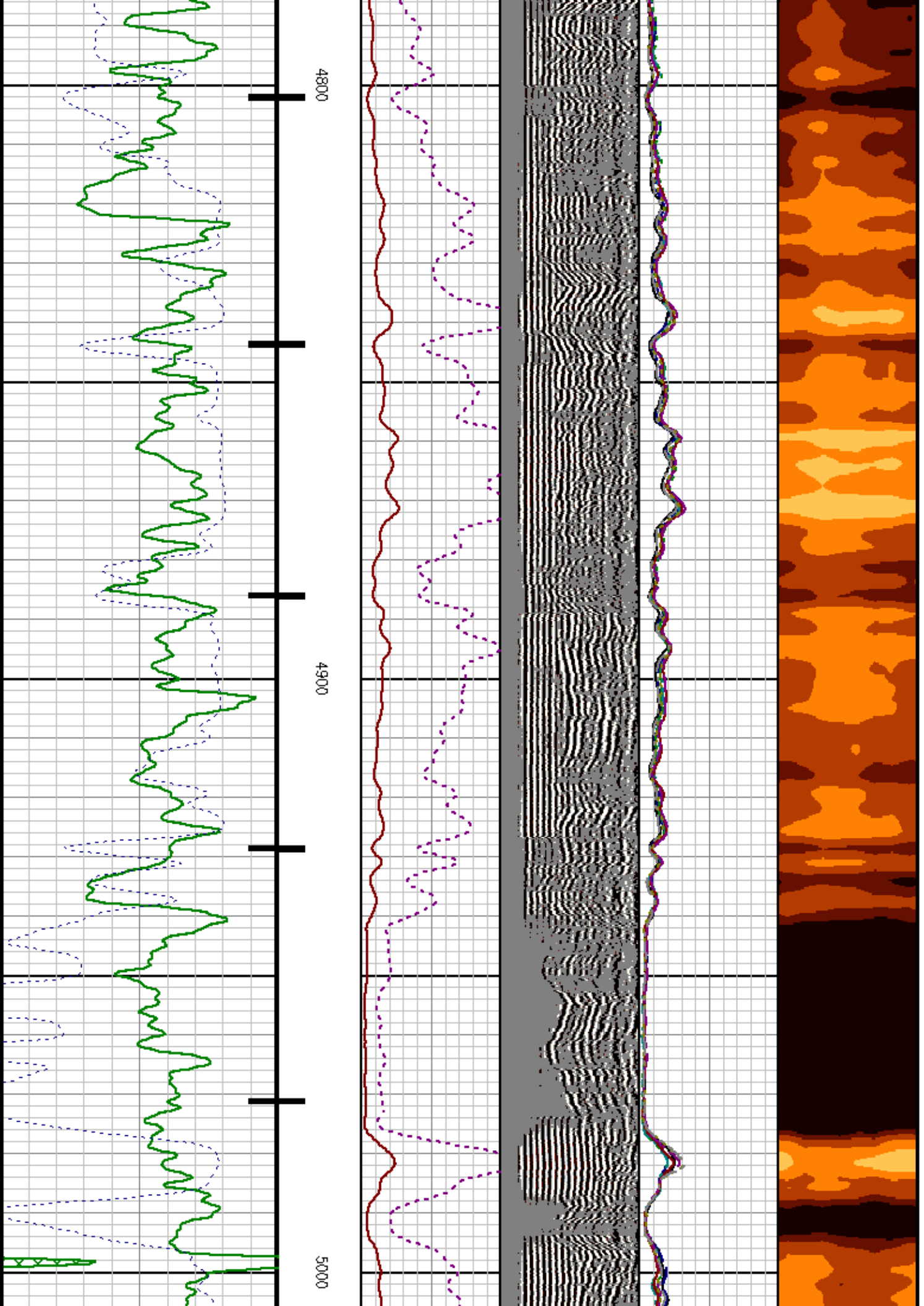


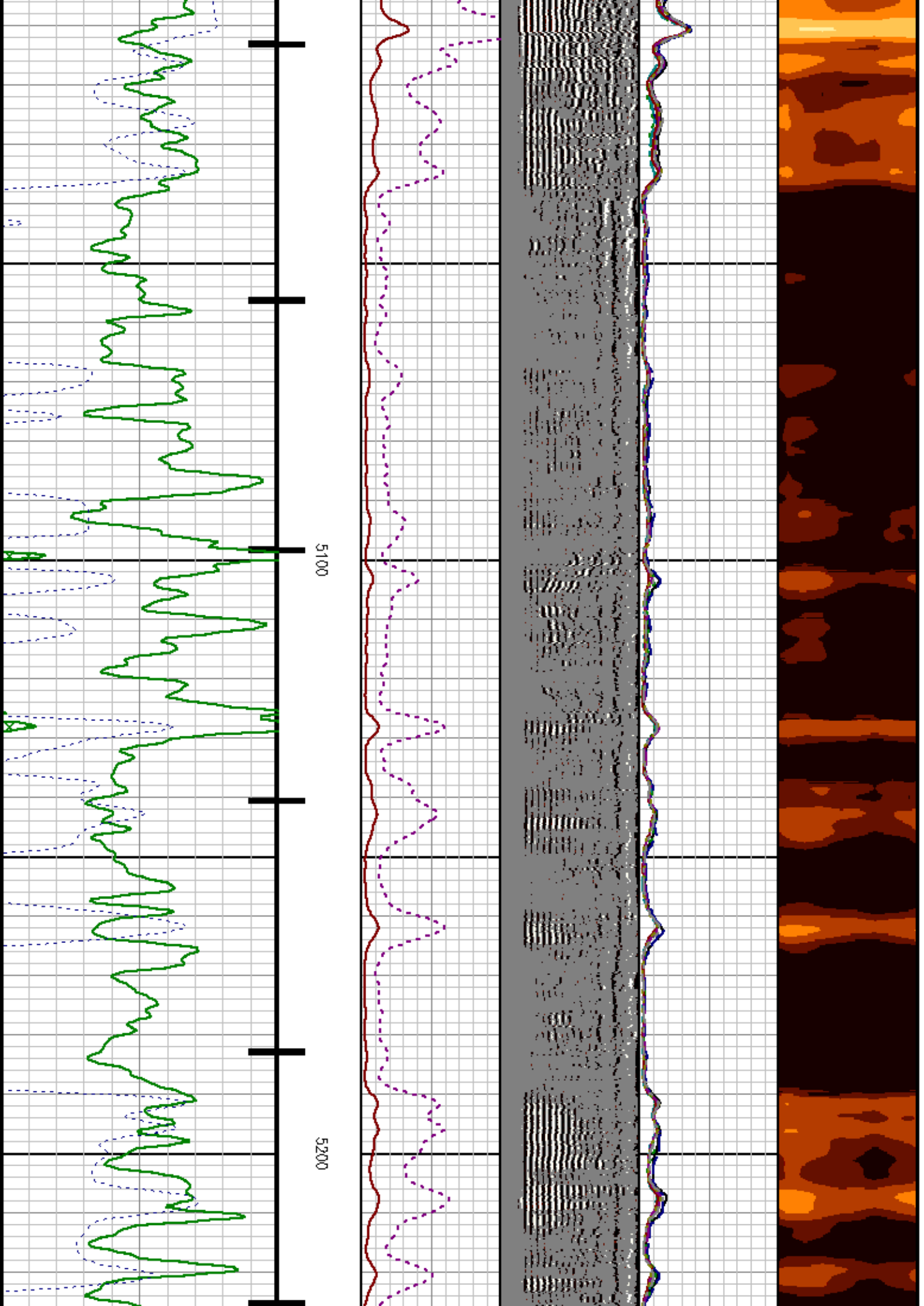




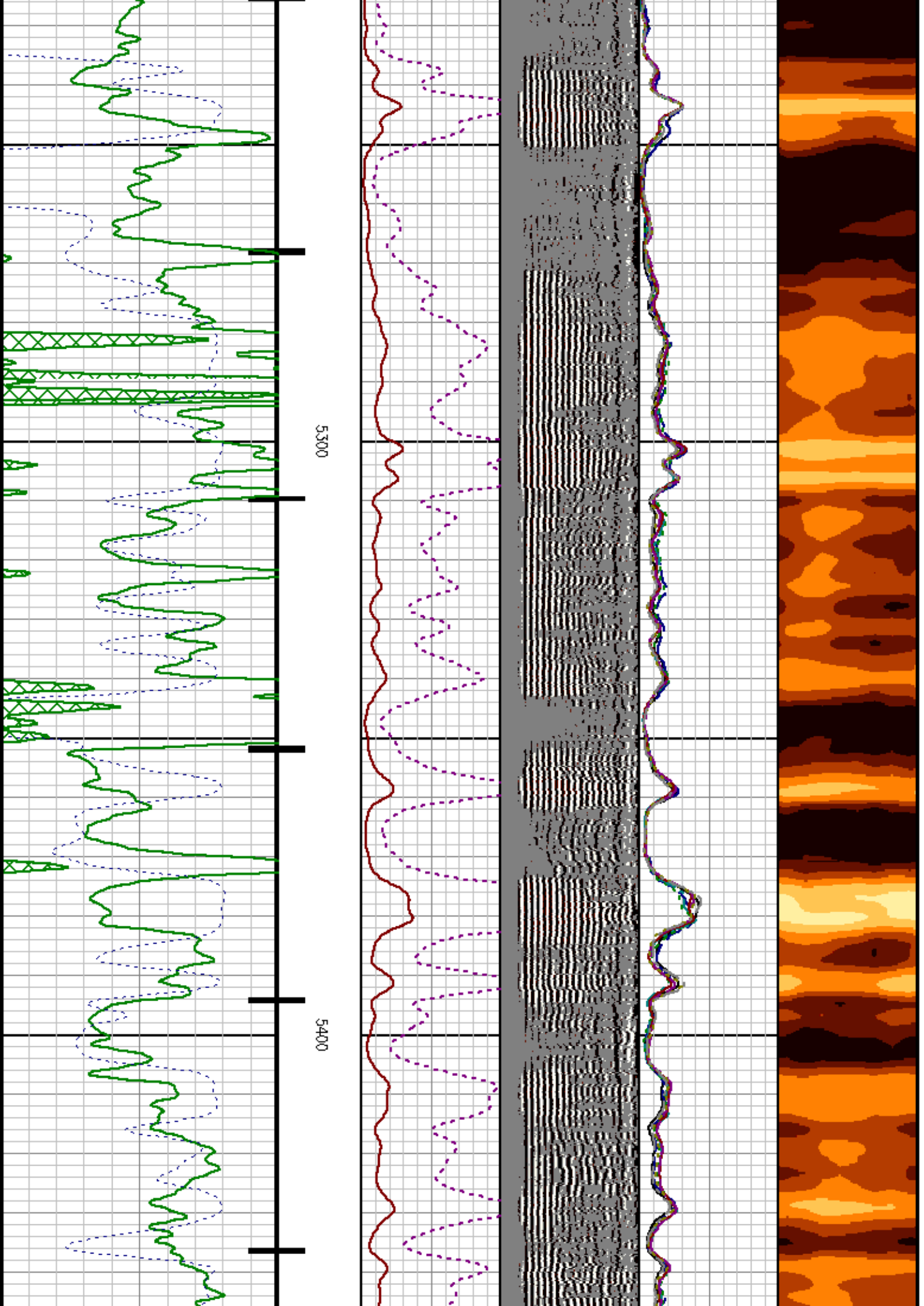


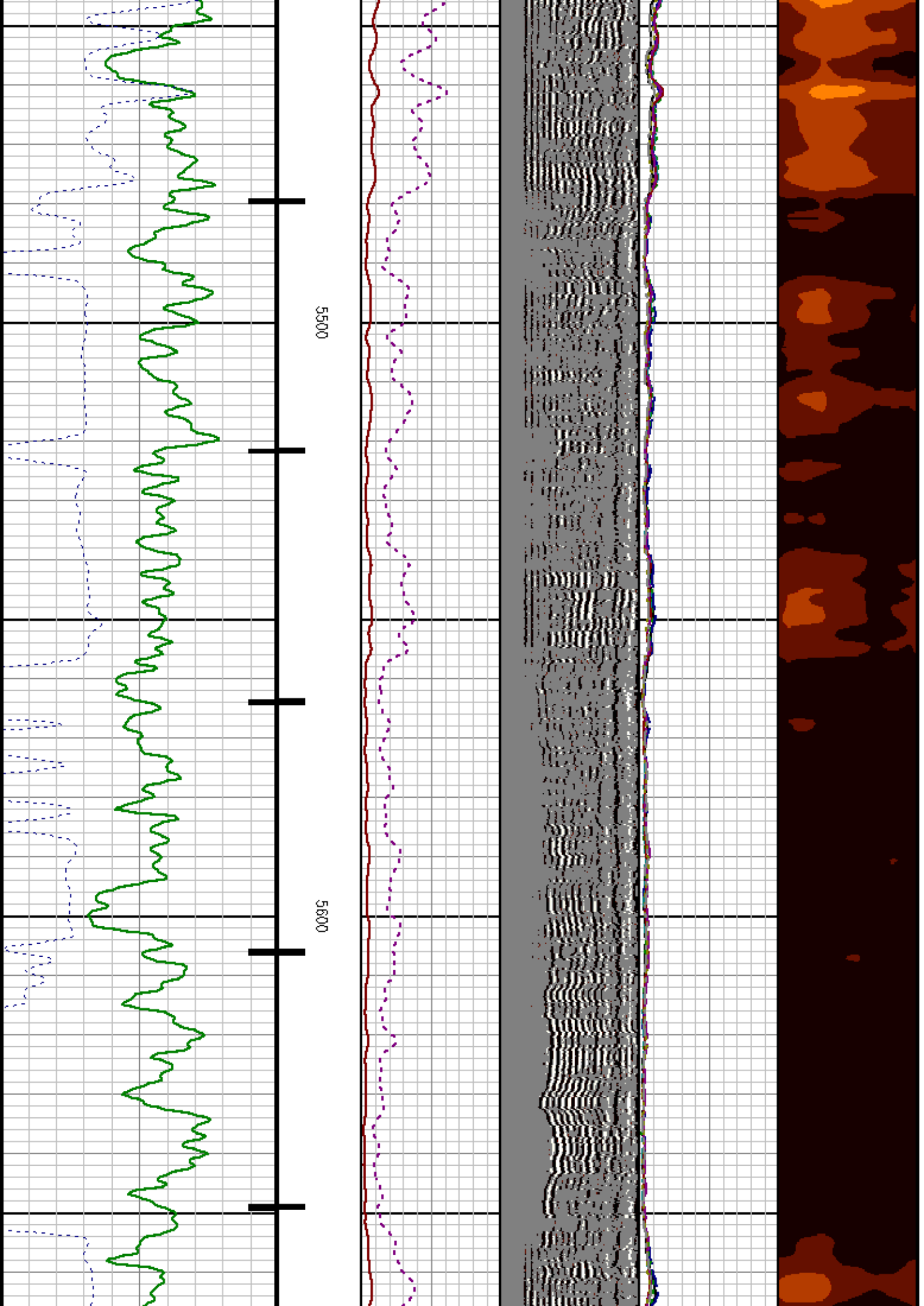


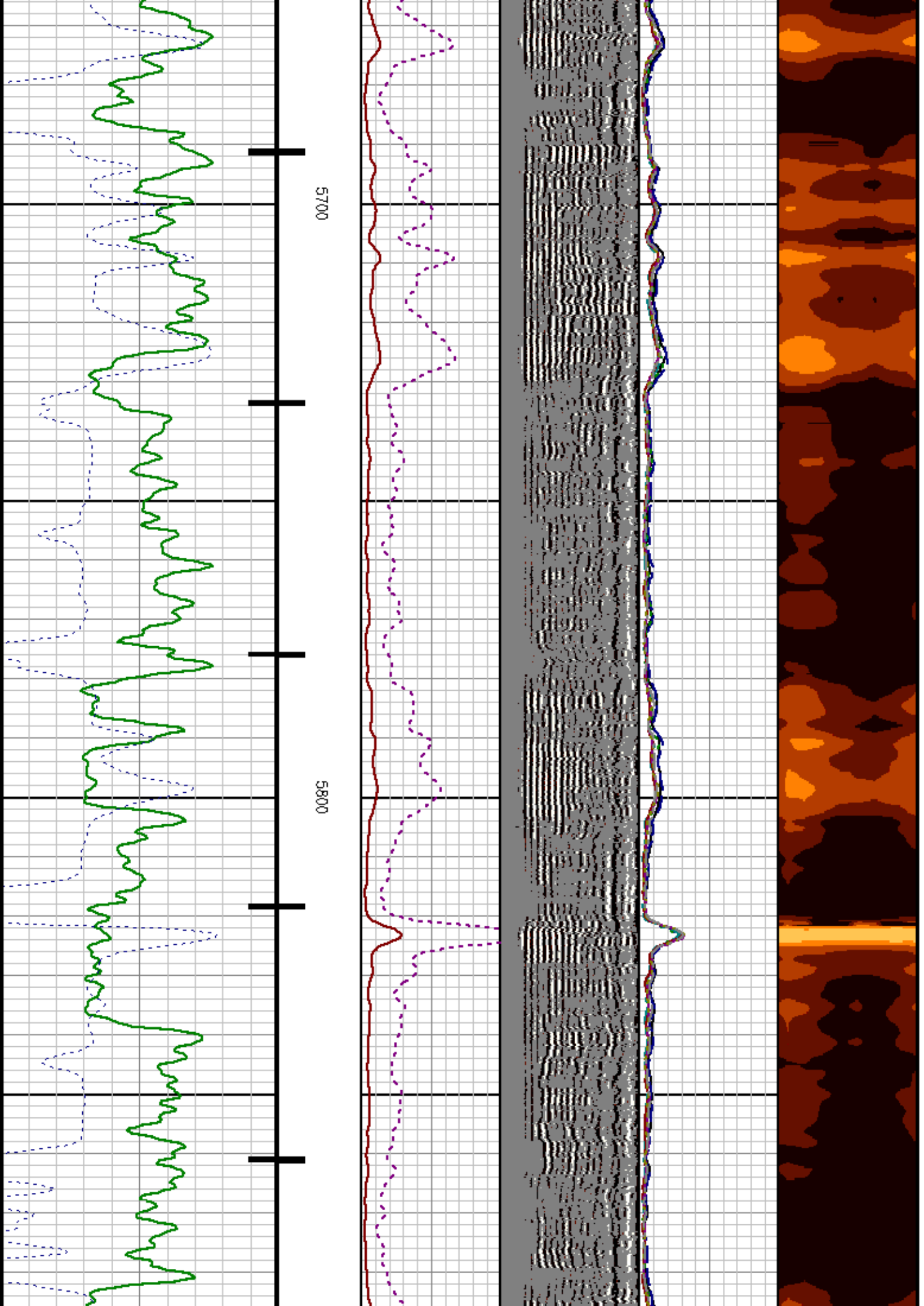


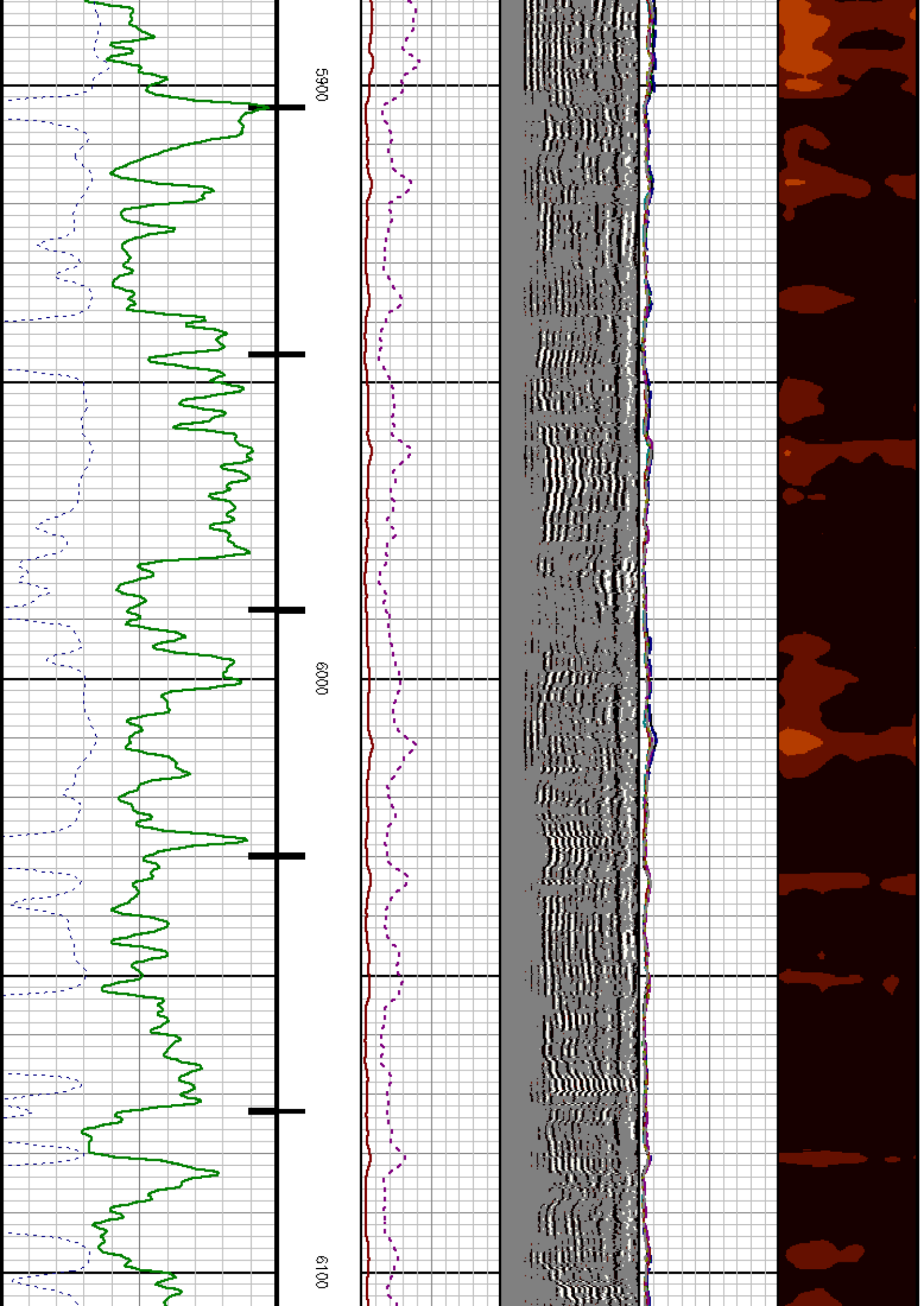




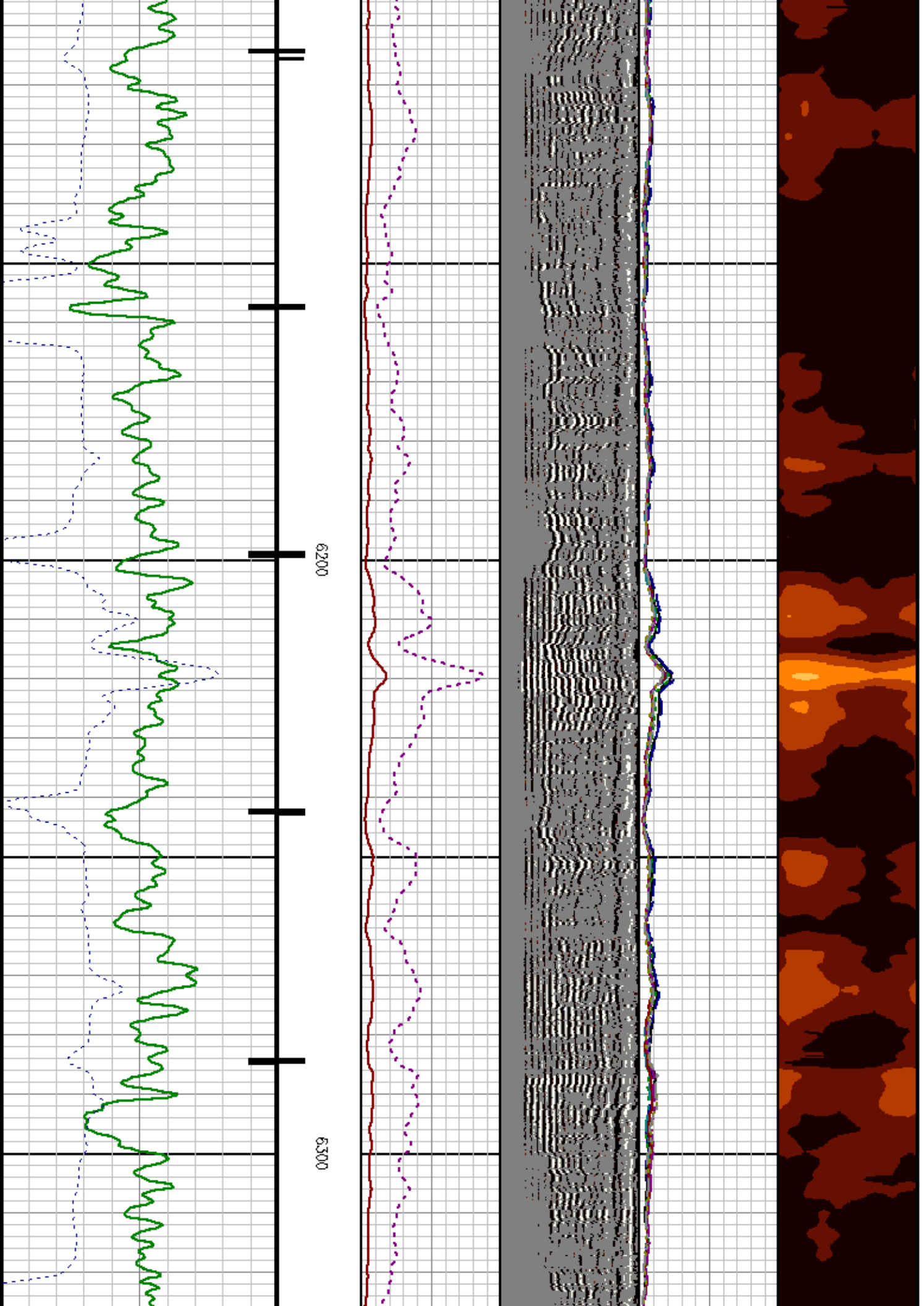


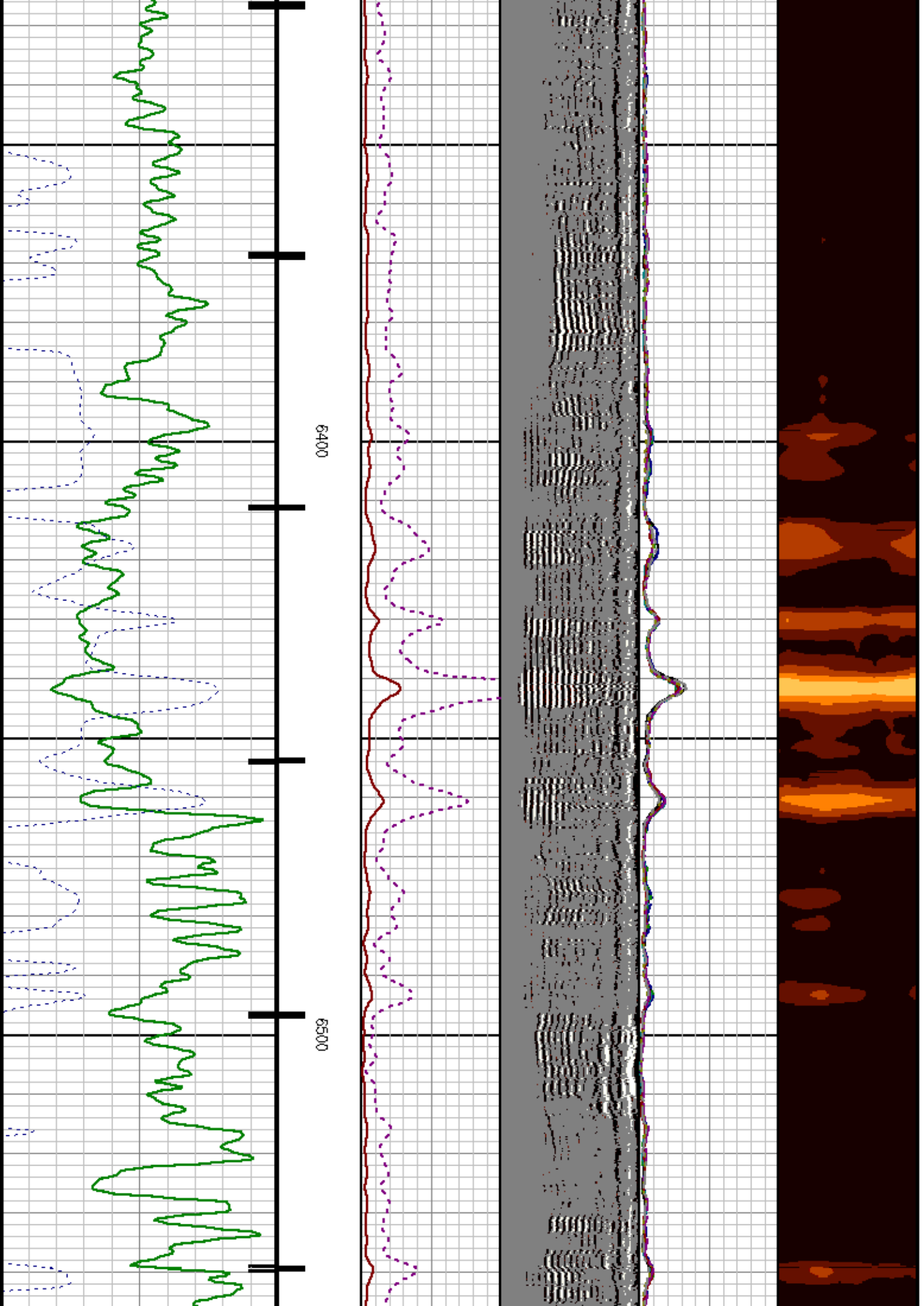


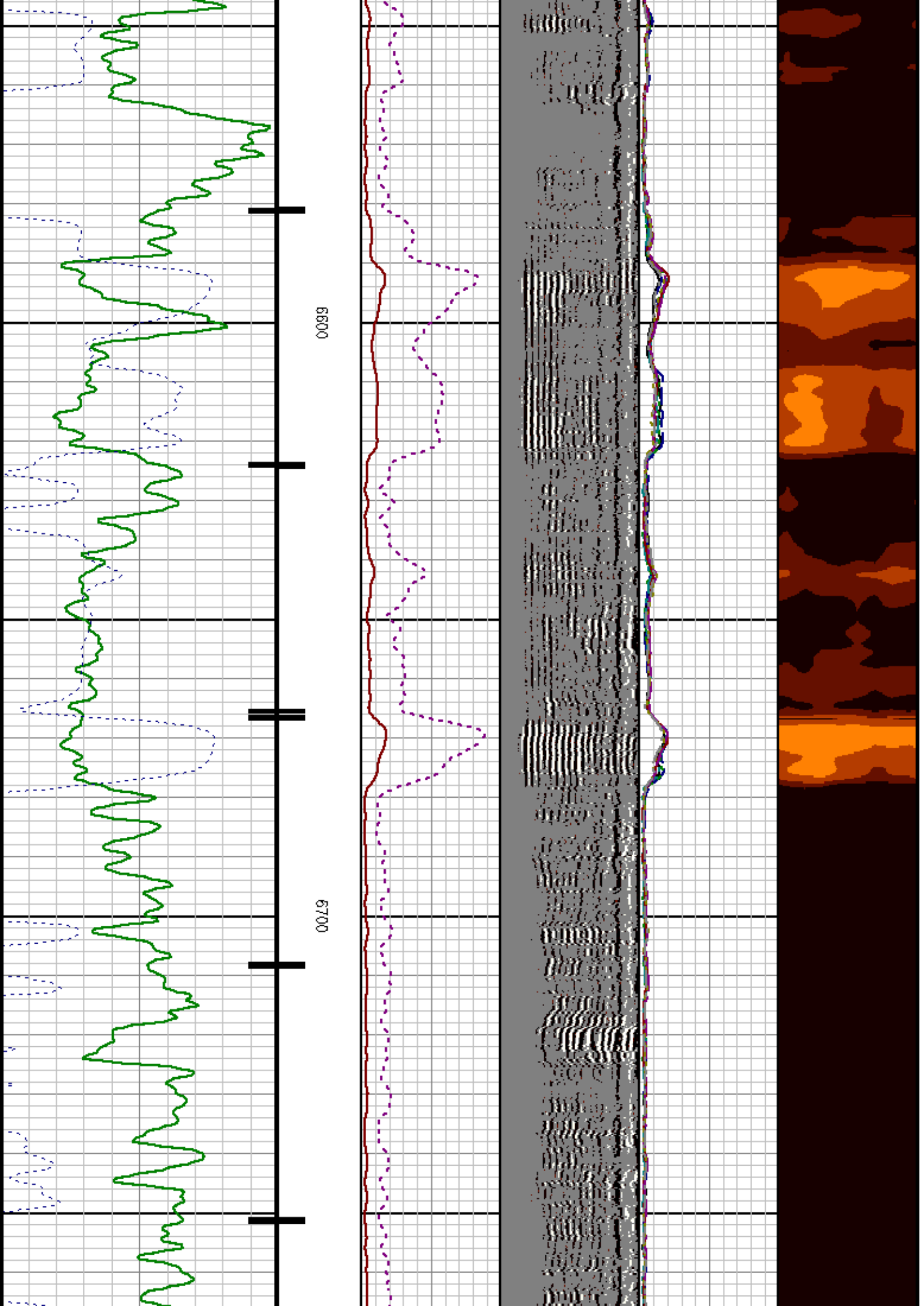


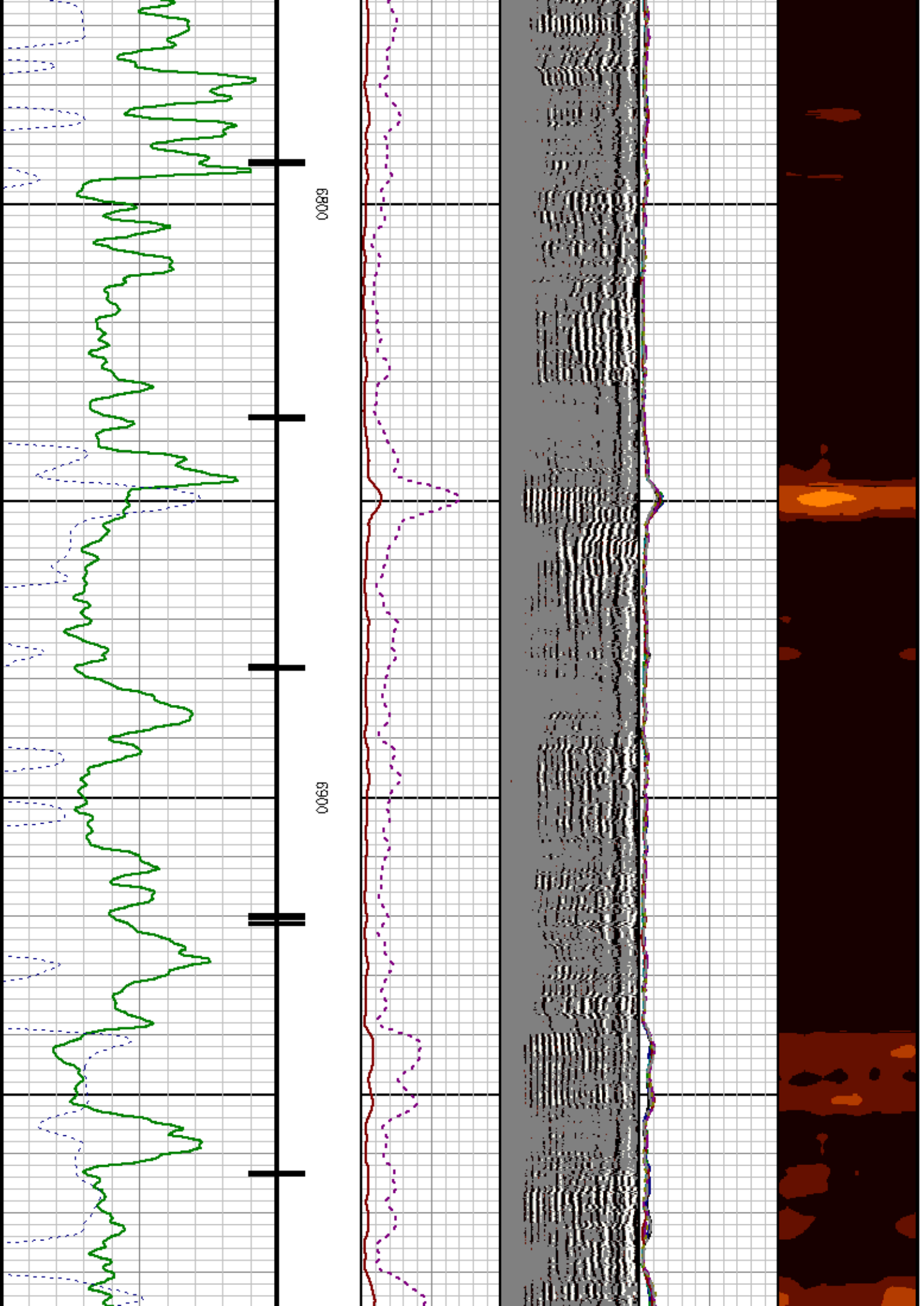




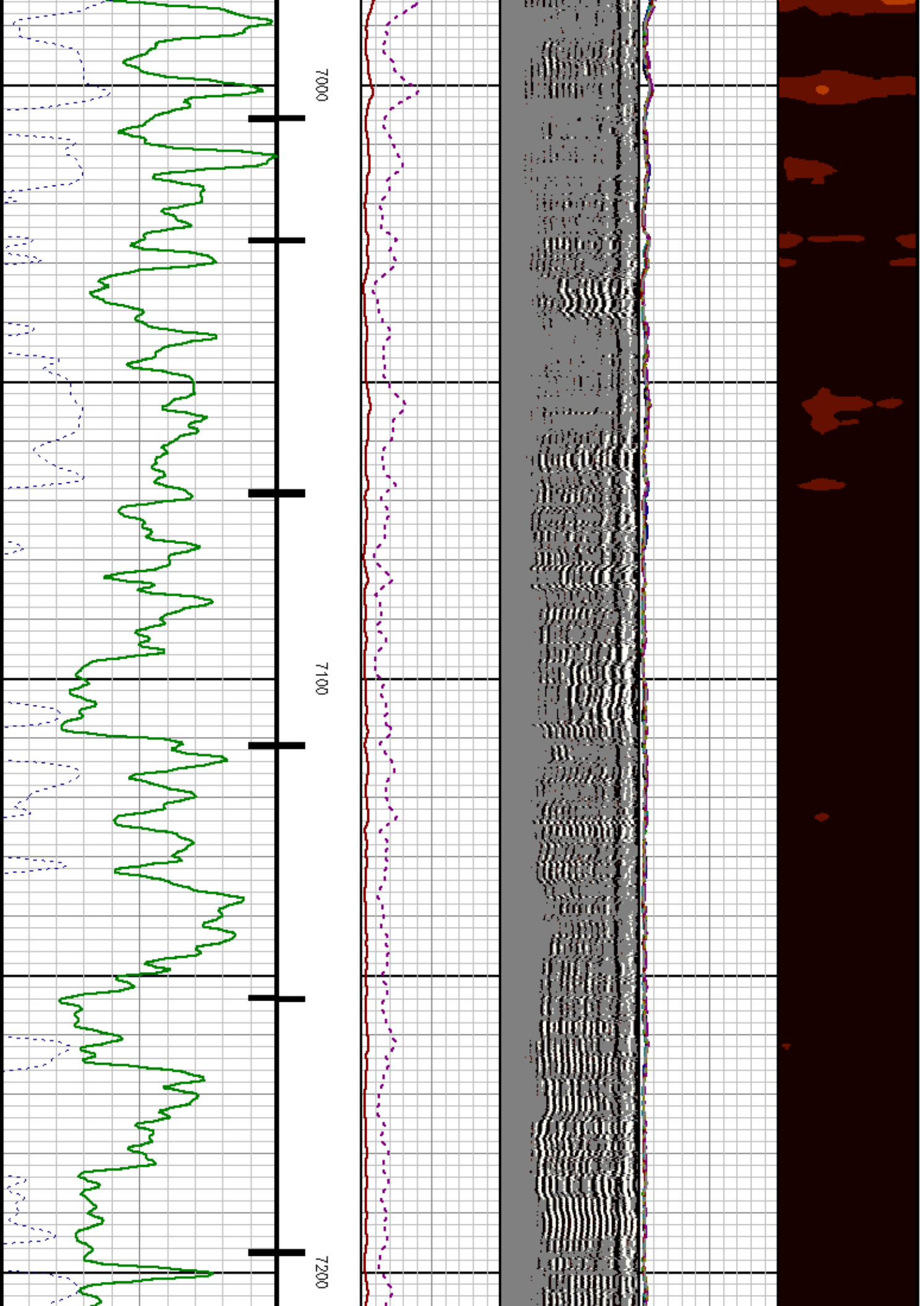


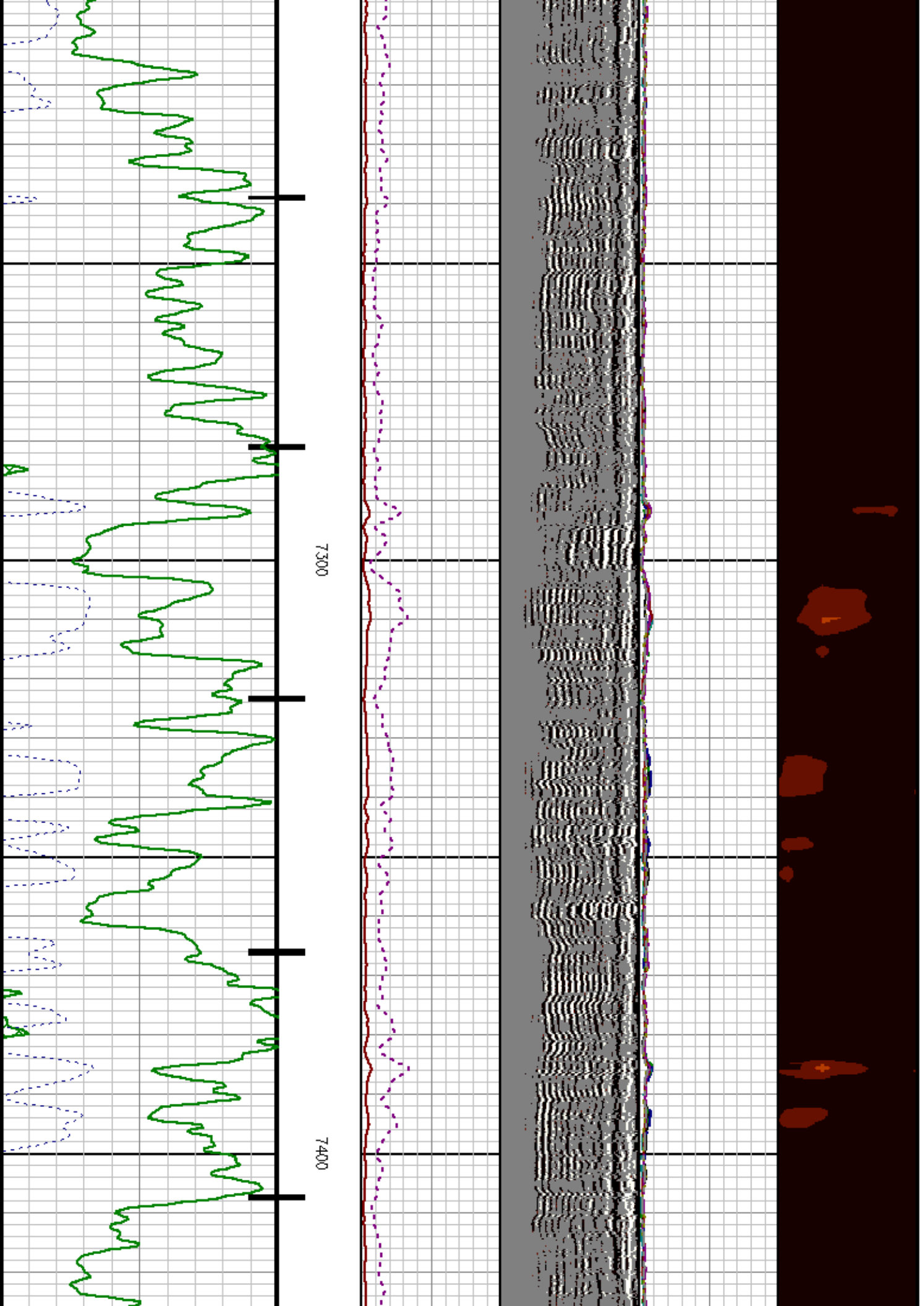


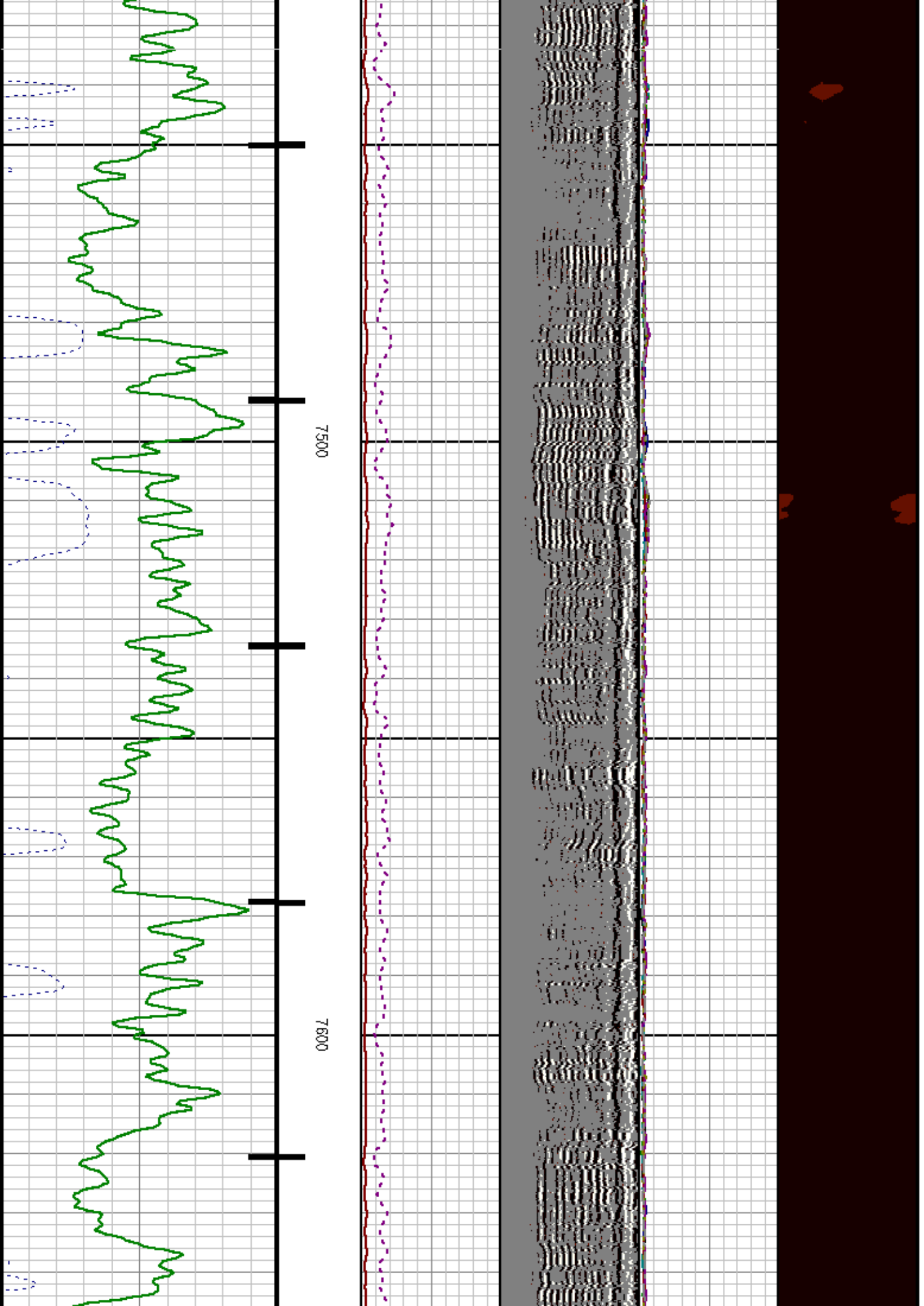


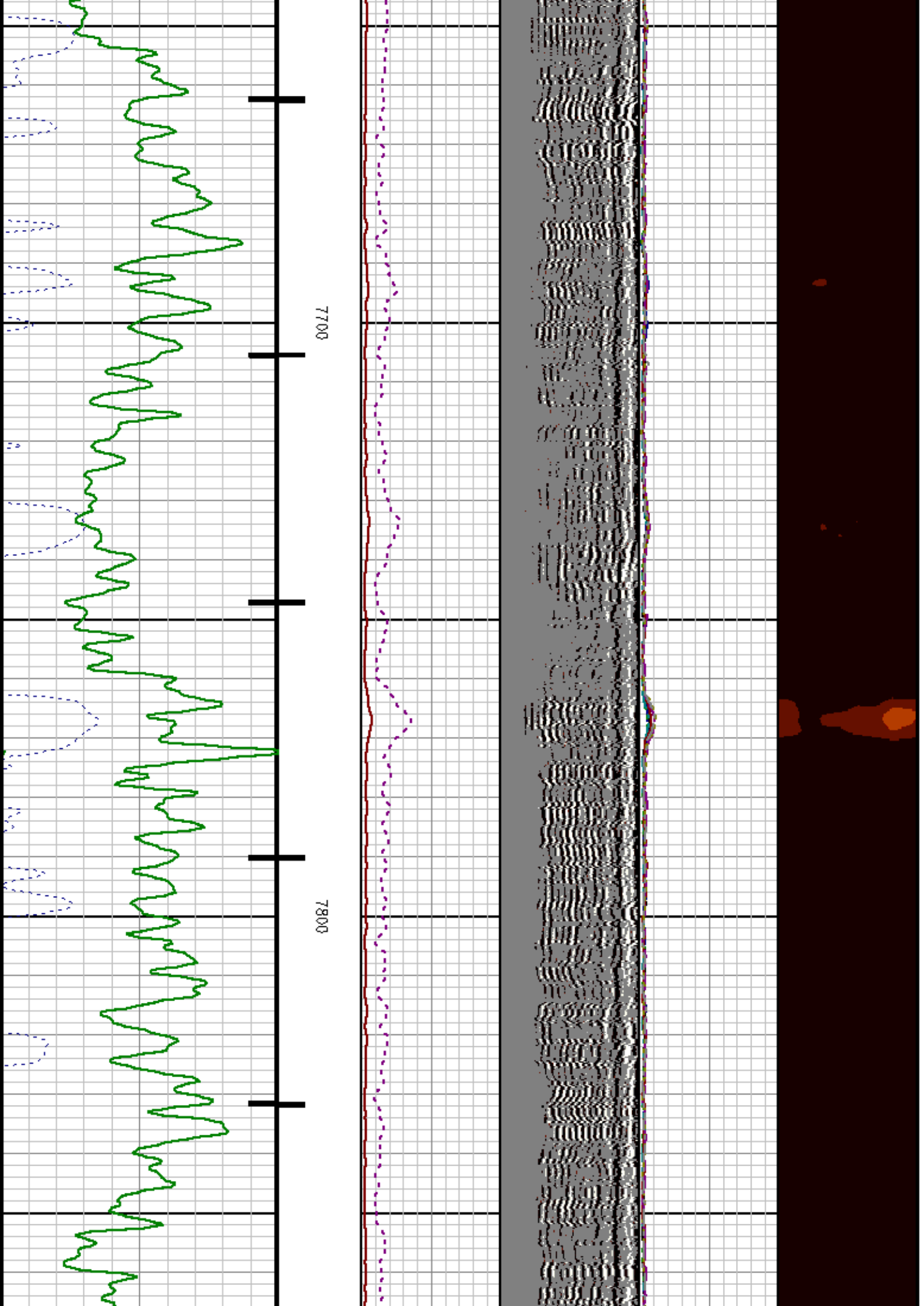




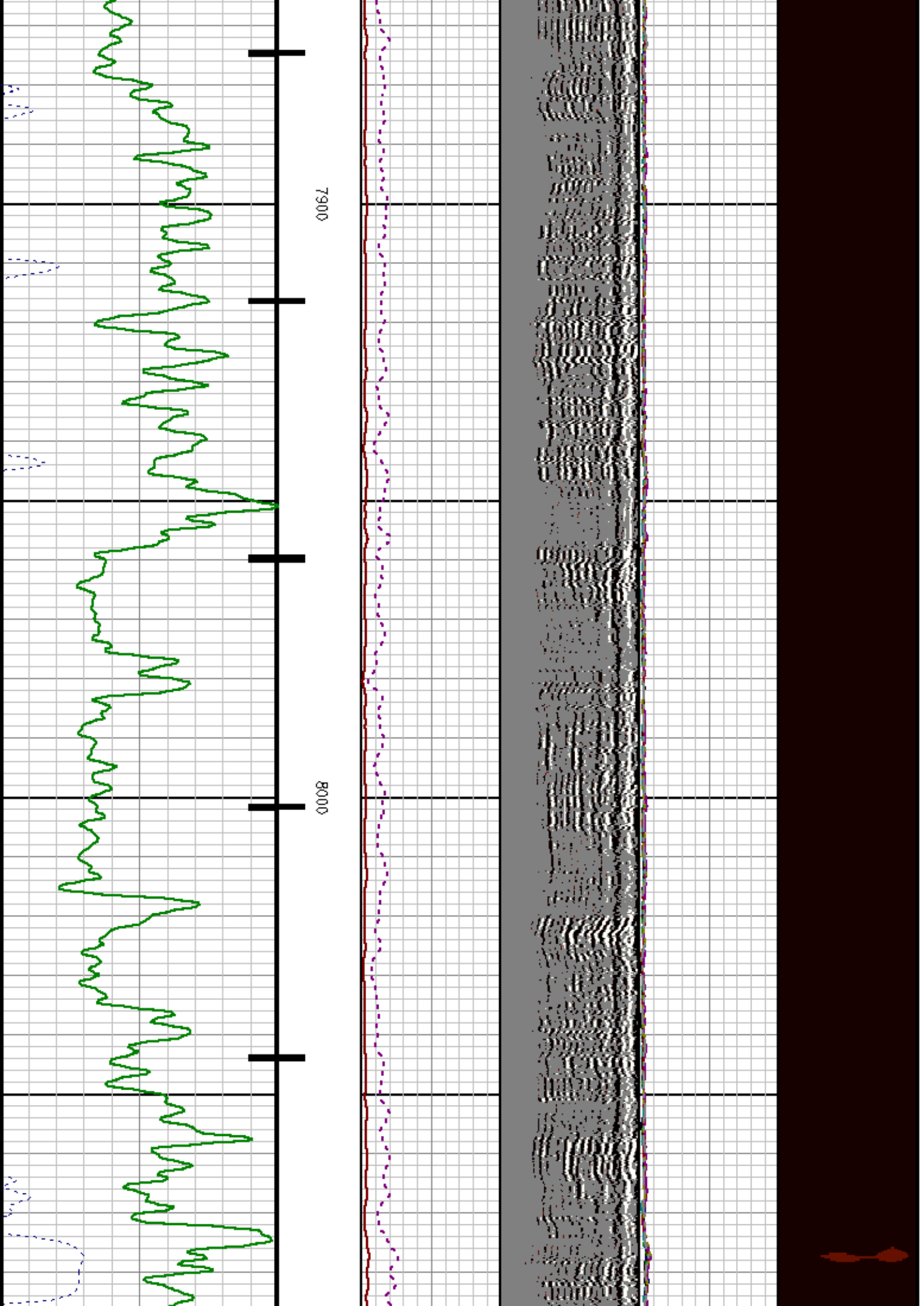


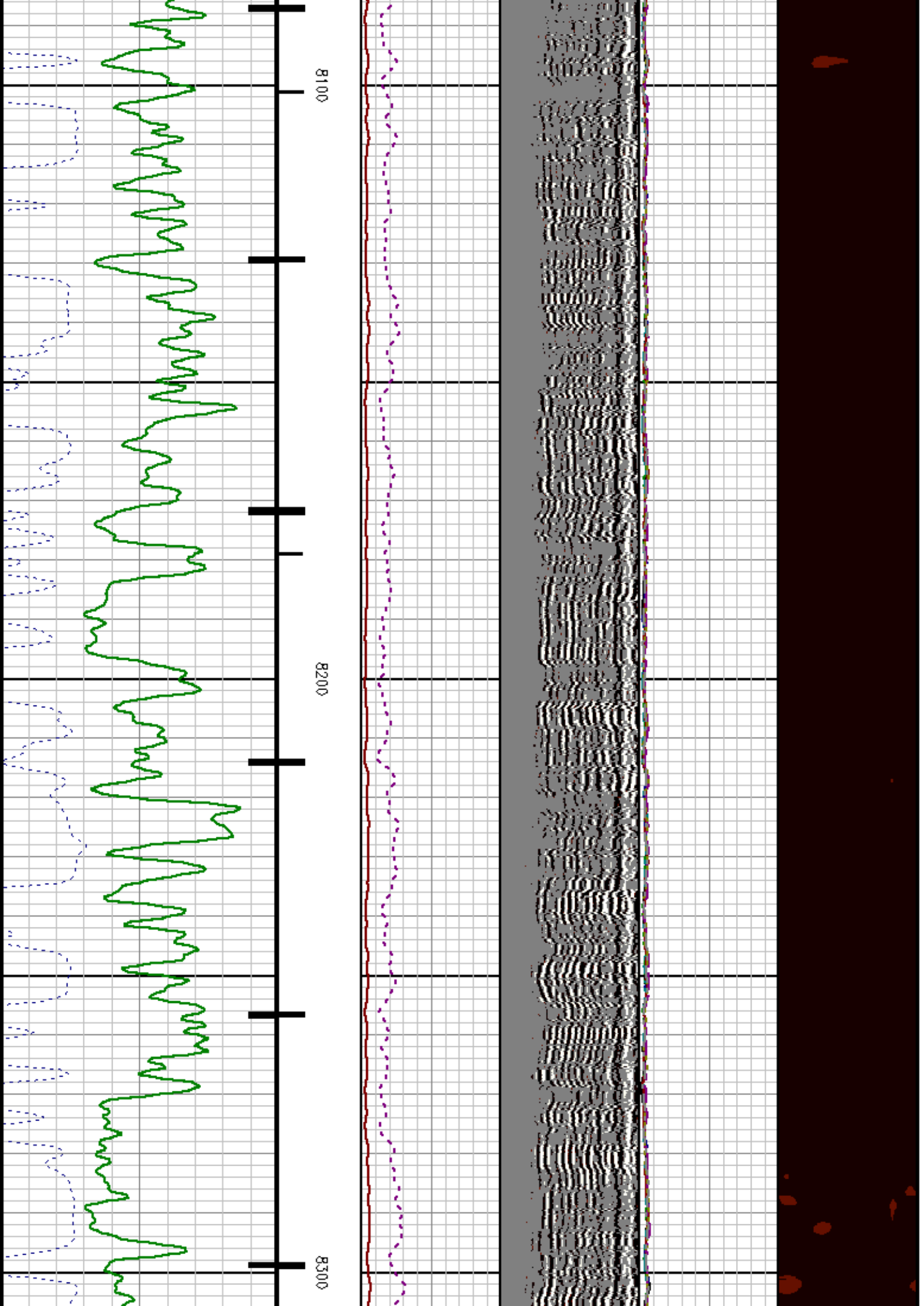


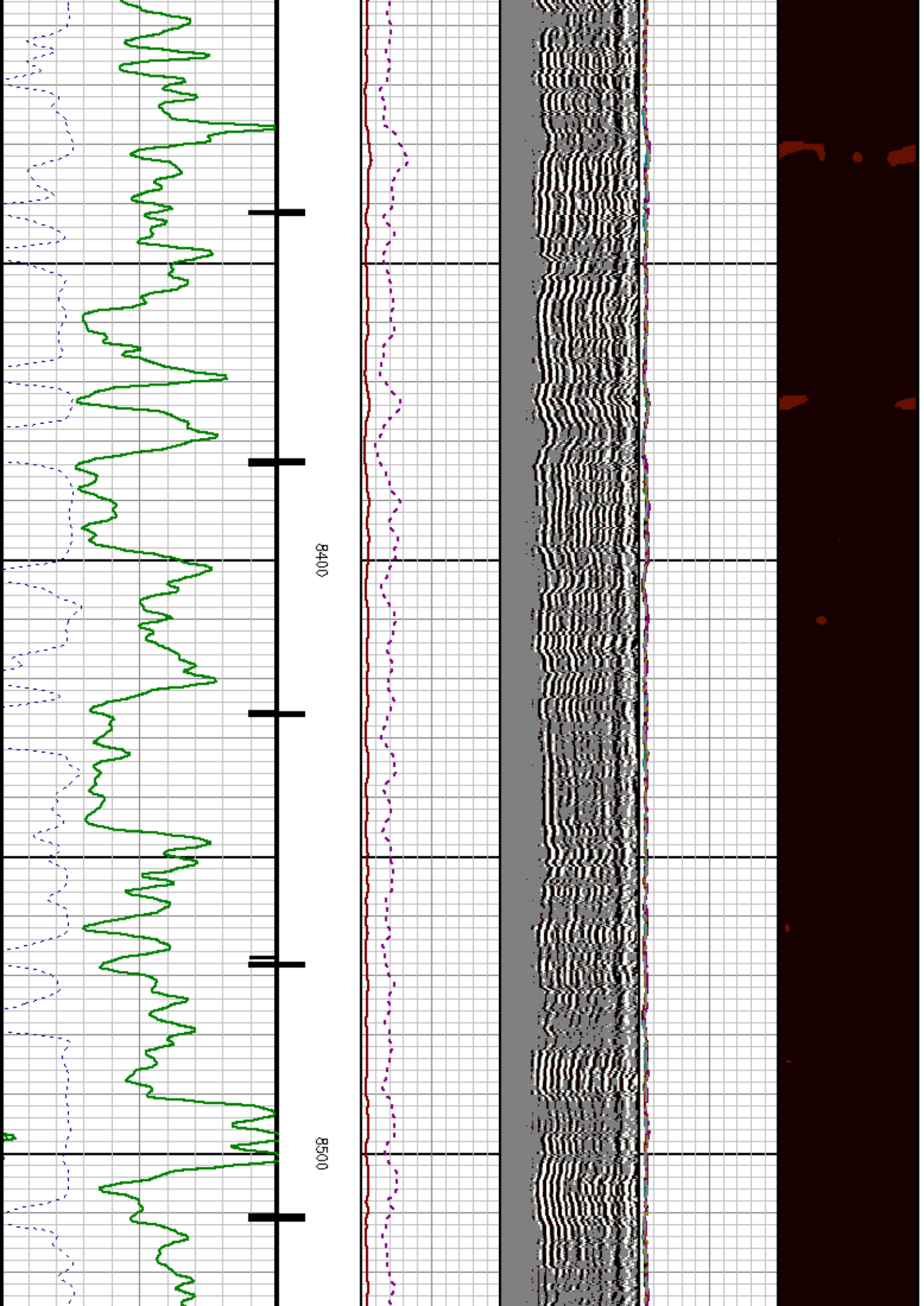


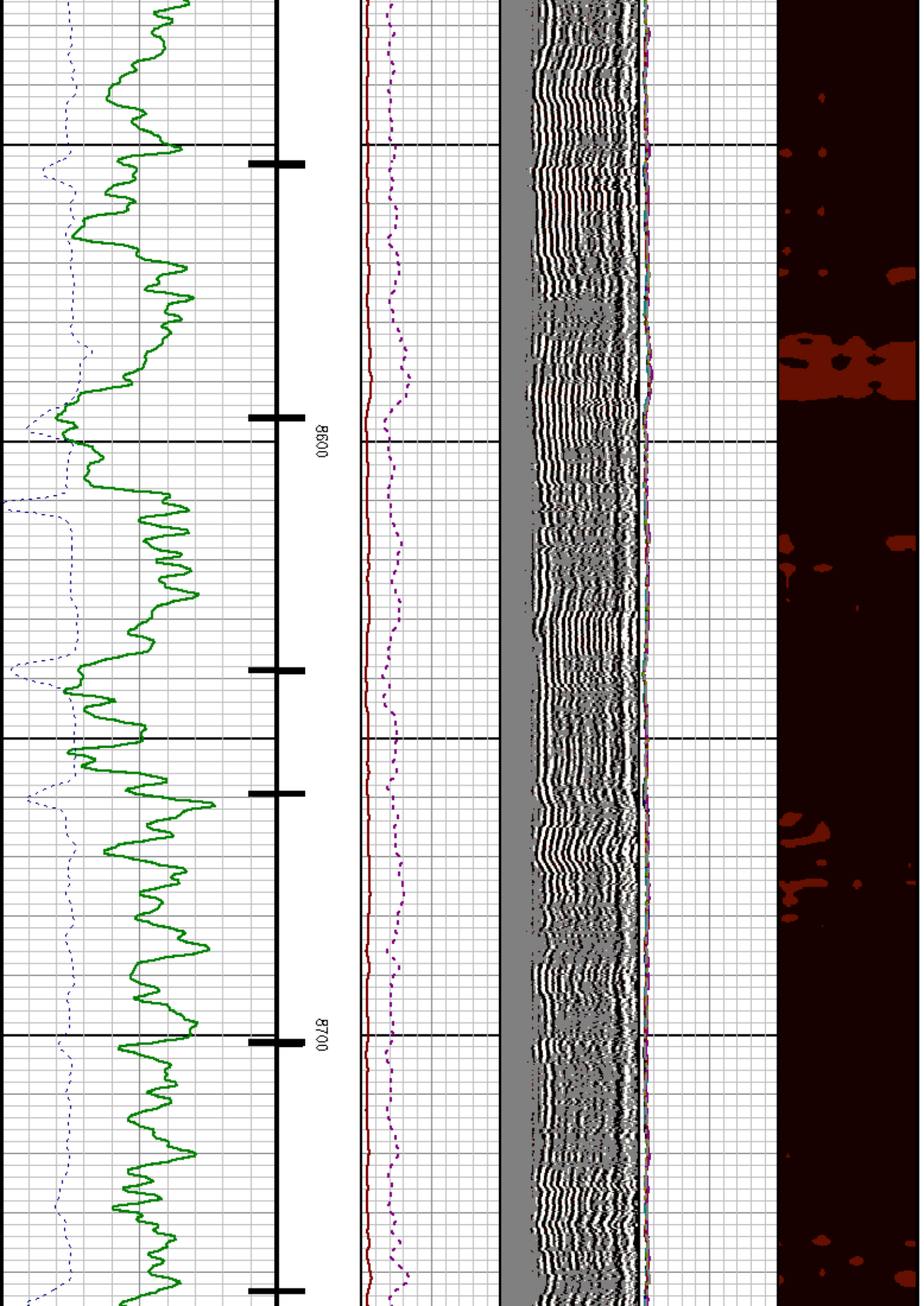




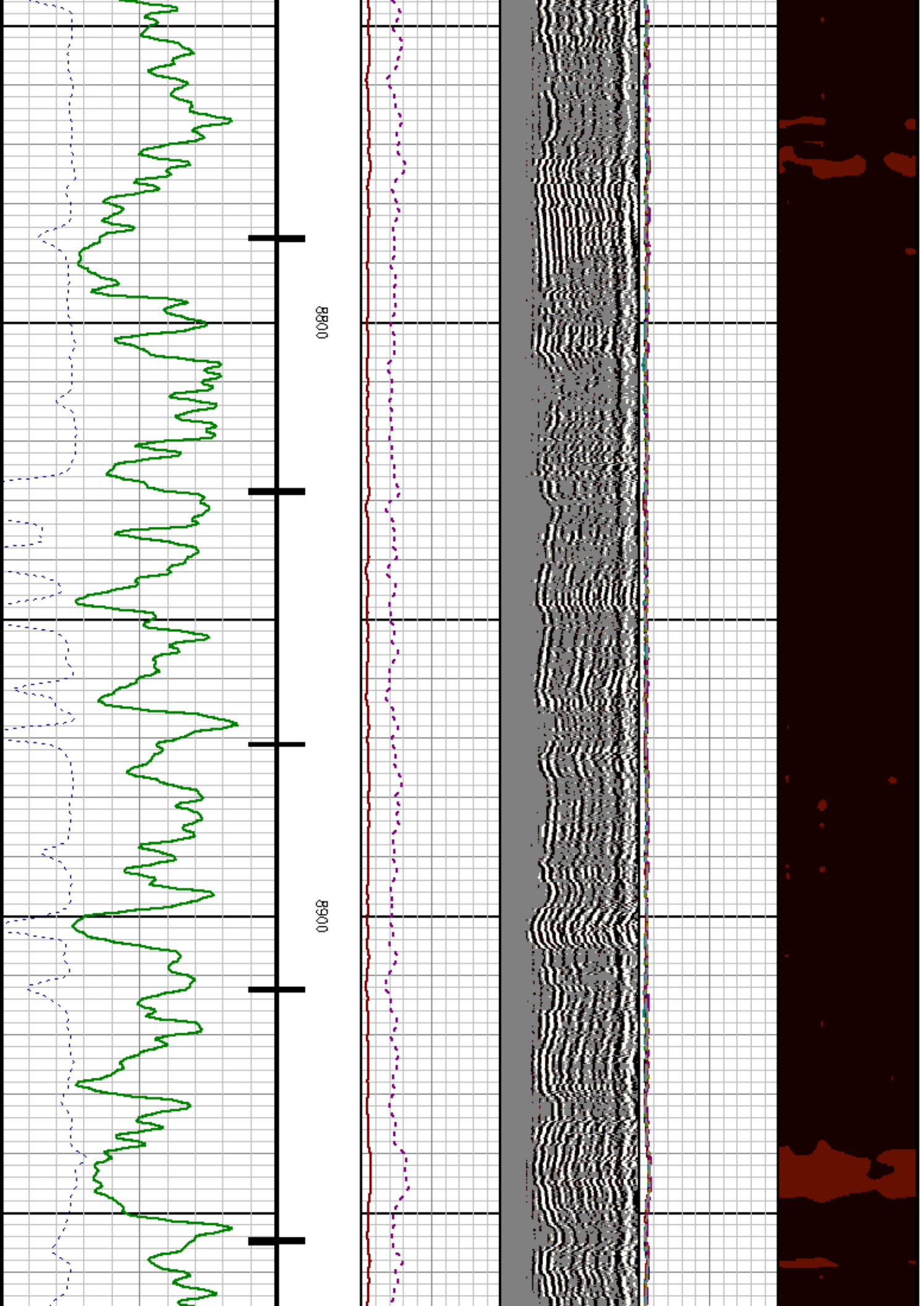


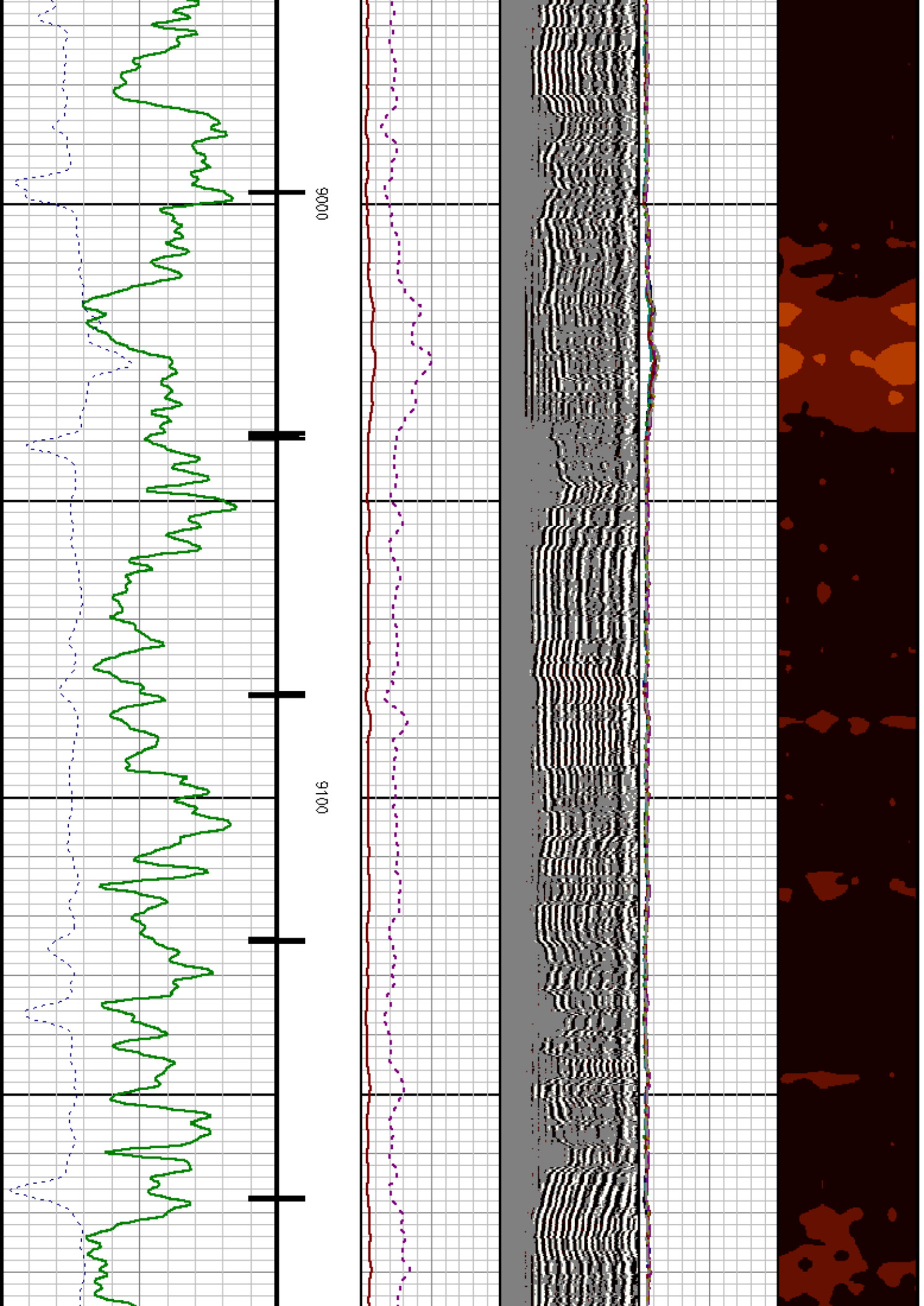


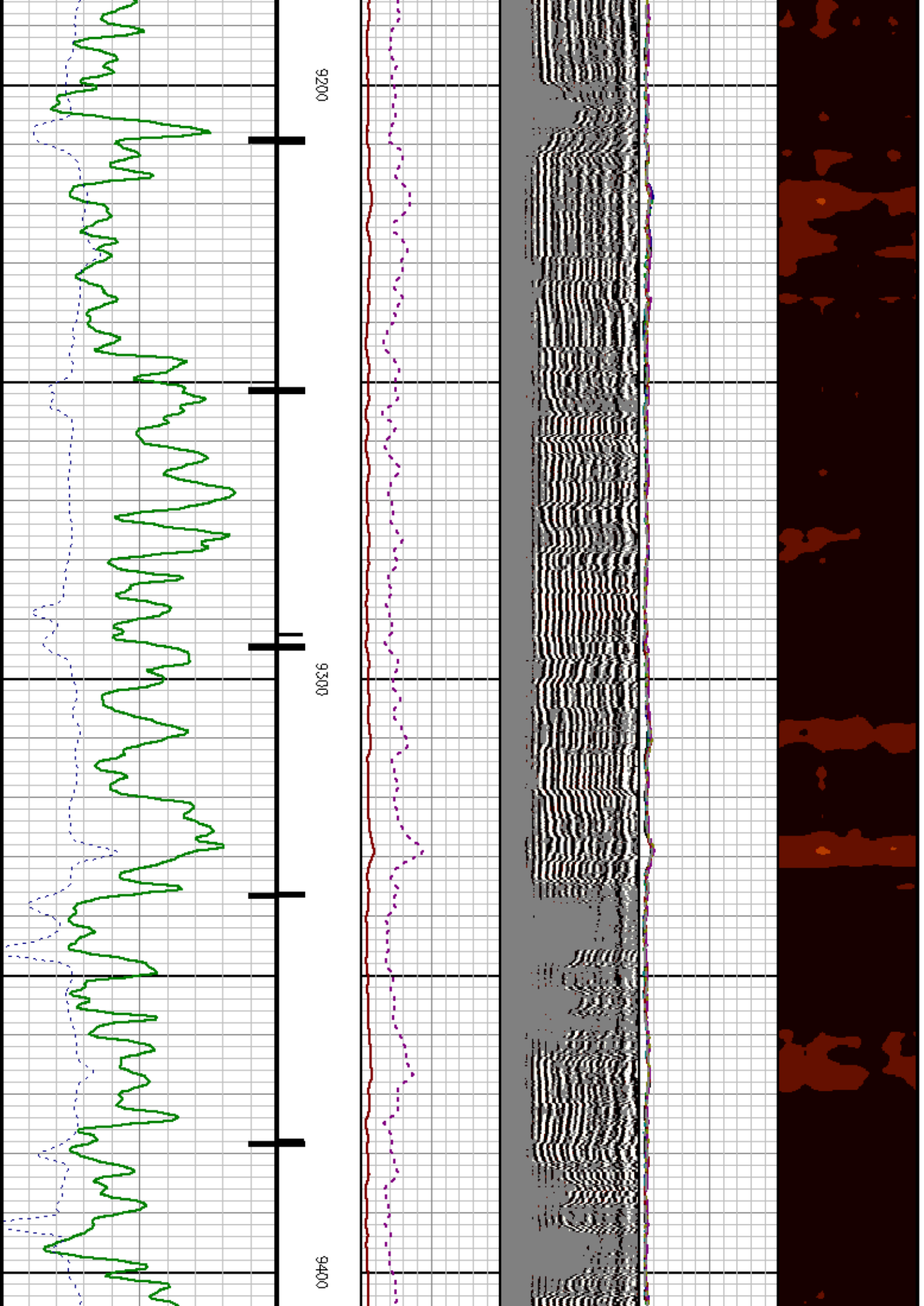


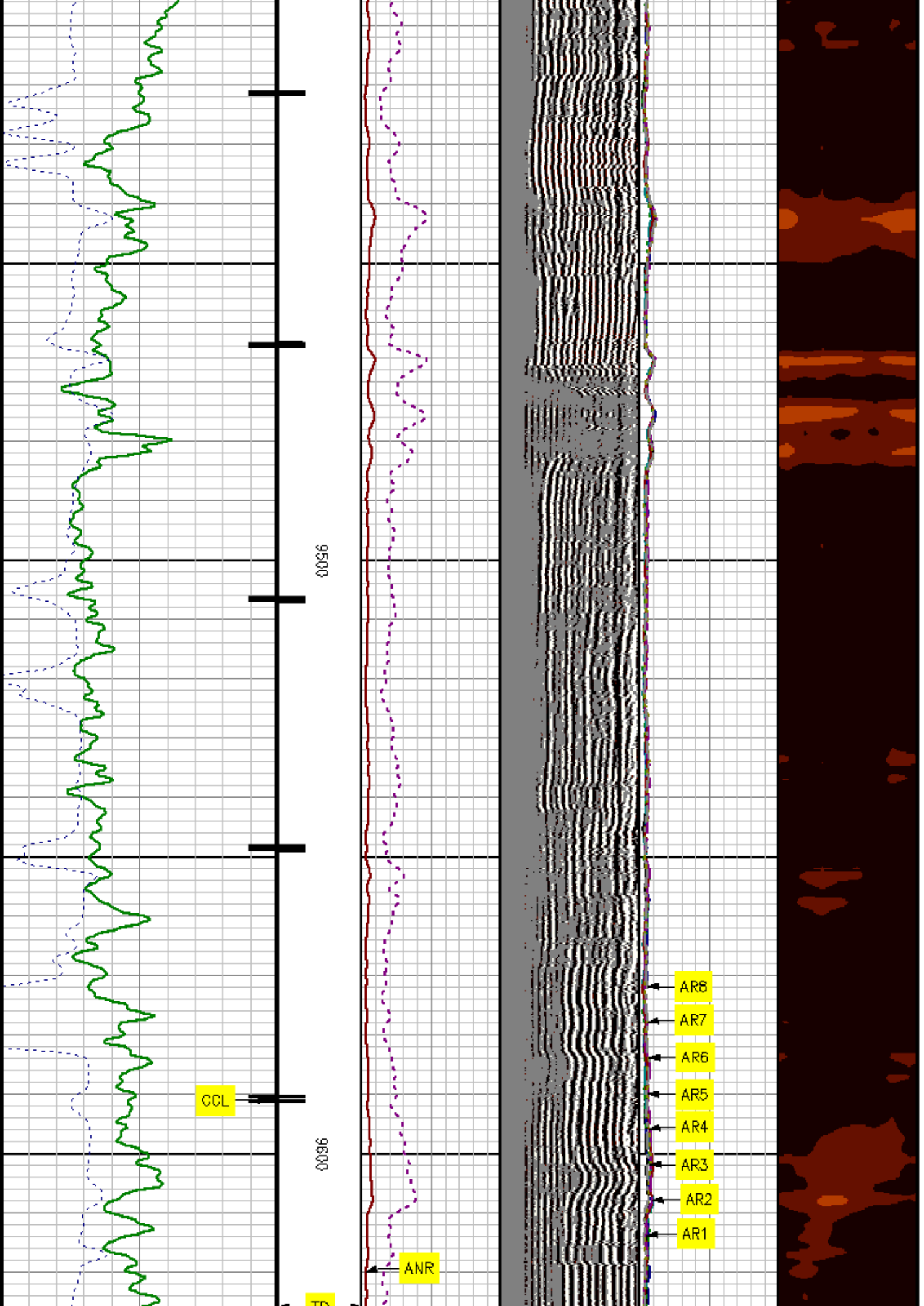




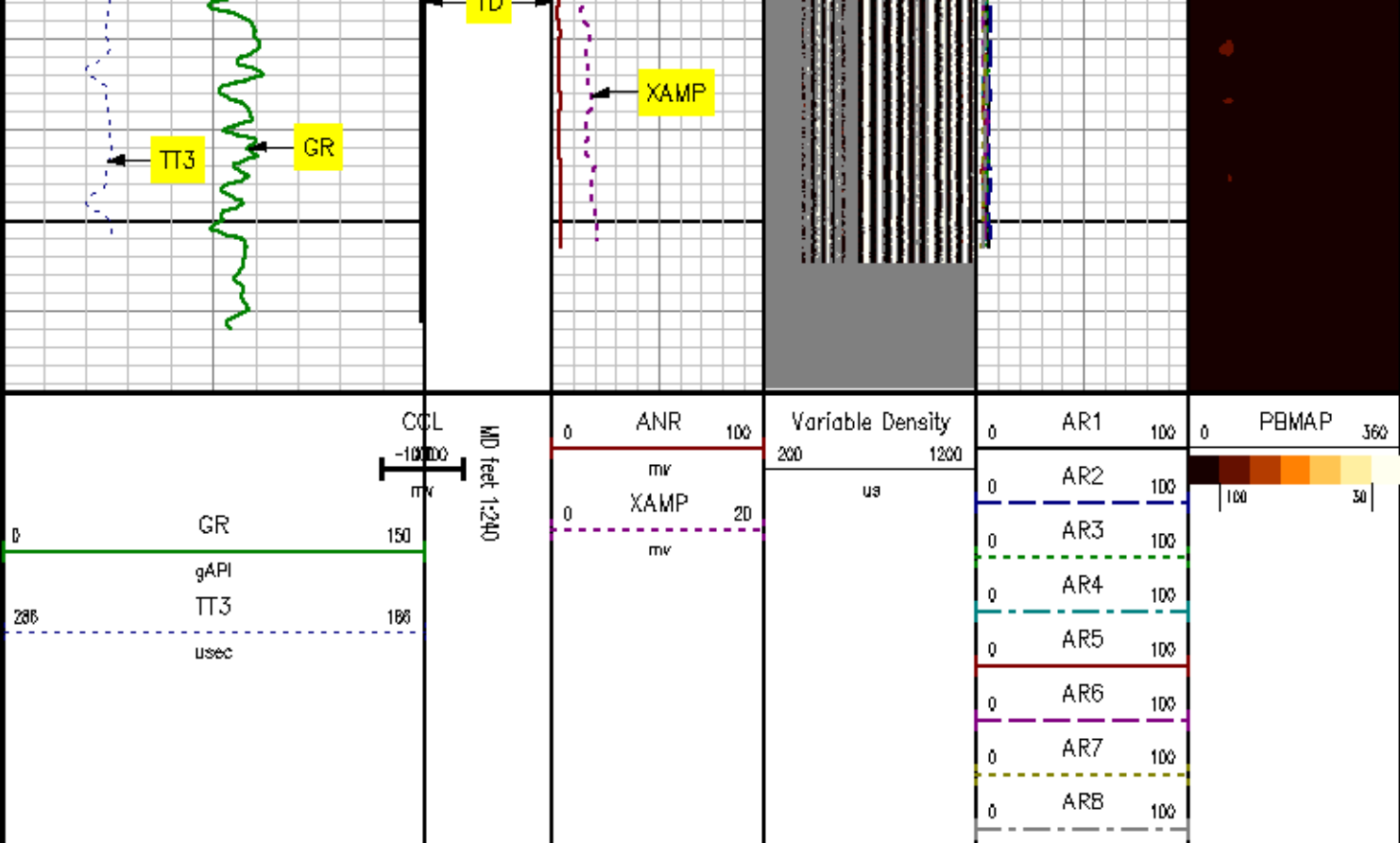












REPEAT SECTION

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	TOP	BOTTOM
RAL	Amp Gate Start Far	316.900	usec	9377.000	9660.000
RAL	Amp Gate Start Near	200.391	usec	9377.000	9660.000
RAL	Amp Gate Start Radial	200.391	usec	9377.000	9660.000
RAL	Amp Gate Width Far	25.000	usec	9377.000	9660.000
RAL	Amp Gate Width Near	25.000	usec	9377.000	9660.000
RAL	Amp Gate Width Radial	25.000	usec	9377.000	9660.000
RAL	casing od	4.500	inches	9377.000	9660.000
RAL	casing wt	11.600	lbm/ft	9377.000	9660.000
RAL	FB Start Far	291.900	usec	9377.000	9660.000
RAL	FB Start Near	175.391	usec	9377.000	9660.000
RAL	FB Start Radial	175.391	usec	9377.000	9660.000
RAL	FB Thresh Far	10.000	mv	9377.000	9660.000
RAL	FB Thresh Near	10.000	mv	9377.000	9660.000
RAL	FB Thresh Radial	10.000	mv	9377.000	9660.000
RAL	Fluid Travel Time	200.000	usec/ft	9377.000	9659.998

# 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 : MARATHON OIL COMPANY

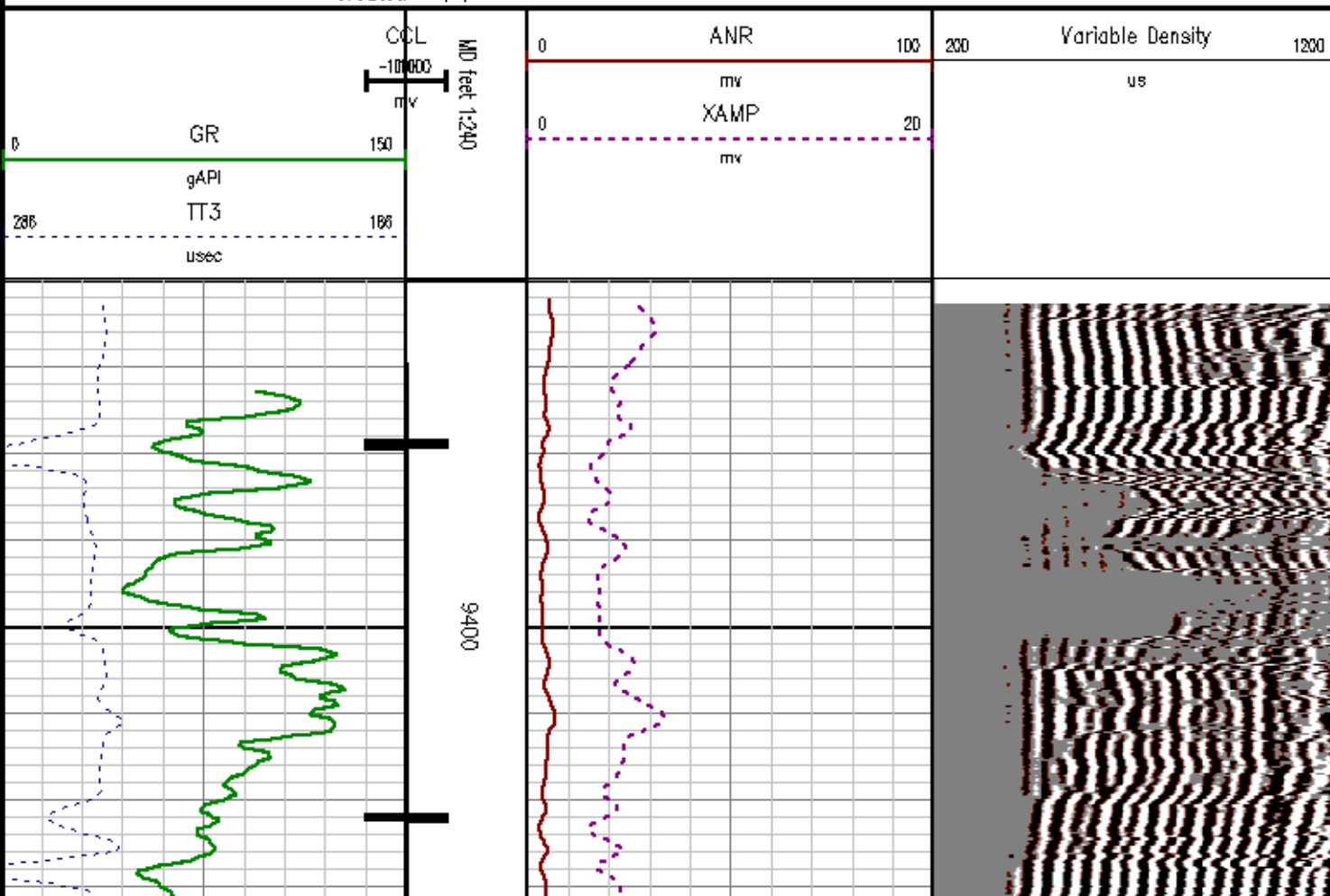
Well : 697-12A-18

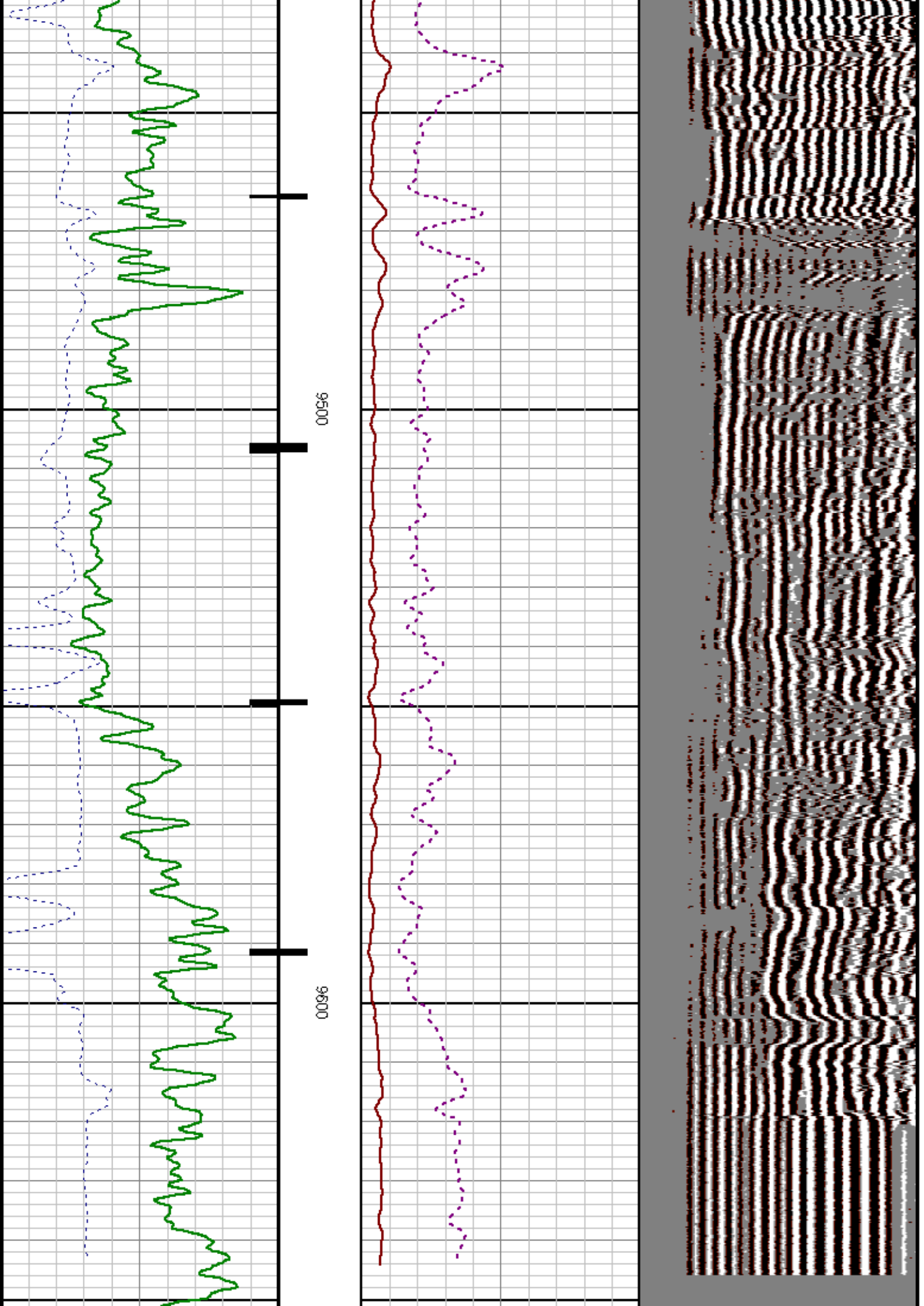
File Name : d:\well\data\18rad\repeat.xtf

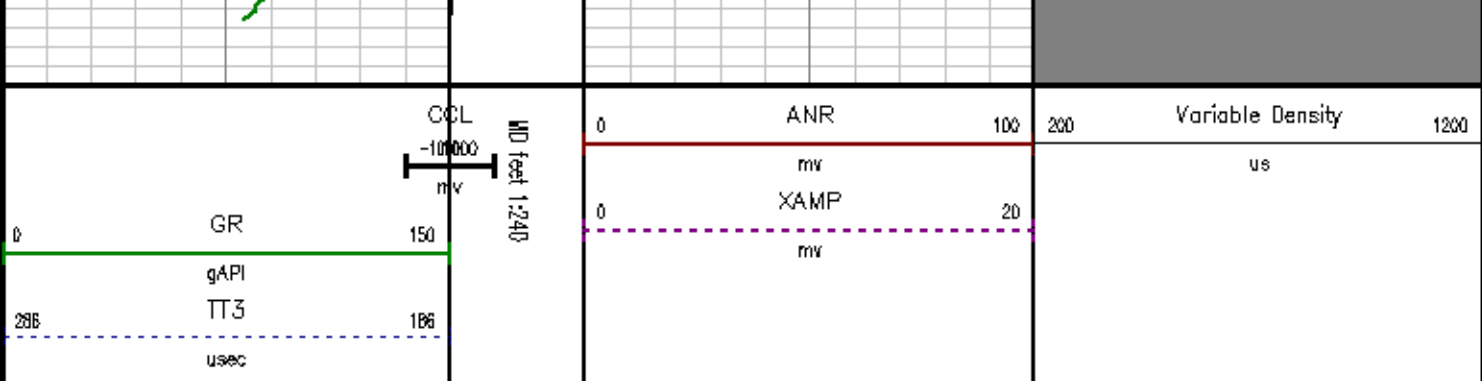
Mode : PlotMgr 5.4.504

Interval : 9360.00 - 9660.00 feet UP

Created : 1/6/2009 10:22:37 PM







## CALIBRATION SUMMARY

*RALSHP*

Shop Calibration: C:\case\calver\RALSHP\502J1\_sbp.cal

### SHOP CALIBRATION SUMMARY

DATE/TIME PERFORMED: Mon Jan 05 15:43:25 2009 TOOL SERIES: 1428XA ASSET: 502 SEQ: J1

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	221	216	30	166	25	-0.158	100.00	0.13
3 Ft. Receiver	205	216	30	166	25	5.605	100.00	0.13
5 Ft. Receiver	329	332	30	282	25	-21.680	100.00	0.09
Radial #1	223	216	30	166	25	7.519	100.00	0.13
Radial #2	222	216	30	166	25	3.342	100.00	0.13
Radial #3	221	216	30	166	25	4.129	100.00	0.13
Radial #4	220	216	30	166	25	7.139	100.00	0.13
Radial #5	217	216	30	166	25	3.724	100.00	0.13
Radial #6	218	216	30	166	25	-1.160	100.00	0.13
Radial #7	219	216	30	166	25	2.463	100.00	0.13
Radial #8	222	216	30	166	25	3.061	100.00	0.13

*GAMMA RAY #2*

Calibration File: C:\case\calver\GR\10218510J2.cal



DATE/TIME PERFORMED: Mon Jan 05 19:46:53 2009 TOOL SERIES: 1426XA ASSET: 10218510 SEQ: J2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K DA857	114.22	483.64	0.264	30.10	130.10	100.00

Verification File: C:\case\calver\GR\10218510\J2.VP

PRIMARY LOG VERIFICATION

DATE/TIME PERFORMED: Mon Jan 05 19:47:56 2009 TOOL SERIES: 1426XA ASSET: 10218510 SEQ: J2

Calibrator #	Background [cps]	Calibrator On [cps]	Multiplicative	Background [api]	Calibrator On [api]	Differential [api]
S2K DA857	111.56	469.78	0.264	29.40	123.81	94.41

## 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'



30.00'

XMIT 20.94'

NEAR RCVR 17.85'

FAR RCVR 15.94'

CCL 11.34'

GR 9.49'

Measure Point	1.21' NEU
Measure Point	8.60' GR
Measure Point	8.46' OCL

NEU 4.09'



0.00'

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> 	<b>Company</b> MARATHON OIL COMPANY	<b>File No:</b> 1863
	<b>Well</b> 697-12A-18	<b>API No:</b>
	<b>Field</b> GRAND VALLEY	<b>API No:</b> 05-045-1503300
	<b>County</b> GARFIELD <b>State</b> COLORADO	
<b>Location</b> SHL: 1543' FNL & 1854' FEL		<b>Elevations</b> KB 8322 ft DF 8321 ft GL 8300 ft
SEC 12 TWP 8S RGE 97W		