



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.		
Well	Bane 27N1-9HZ		
Field	Wattenberg		
County	Weld		
State	Colorado		
Location:	Company	Kerr-McGee Oil & Gas Onshore, L.P.	
	Well	Bane 27N1-9HZ	
	Field	Wattenberg	
Location:	County	Weld	State Colorado
	API # : 05-123-41310		
	Other Services		
SEC 9 TWP 1N RGE 65W		JB/GR	
Permanent Datum	Ground Level	Elevation	4964'
Log Measured From	Kelly Bushing	25 FT	K.B. 4989'
Drilling Measured From	Kelly Bushing		D.F. ---
			G.L. 4964'

Date	2-SEPT-2015
Run Number	One
Depth Driller	11699 FT
Depth Logger	7372 FT
Bottom Logged Interval	7367 FT
Top Log Interval	Surface
Open Hole Size	7.875
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	232.9 °F
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	12:30 PM
Equipment Number	HD-0311
Location	Ft. Lupton, CO
Recorded By	R. Cameron
Witnessed By	Steve Vigil

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size (in)	Wgt (lbs/Ft)	Grade	Top	Bottom		
Surface Casing	9 5/8	36	36 ppf	Surface	1618 FT		
Intermediate #1							
Intermediate #2	5 1/2	17	HCP-110 LTC	Surface	11699 FT		
Liner							

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Log ran as per customer request
Casing Tally reported Marker Joint at 6474 FT
Recorded Marker Joint at 6428 FT 6441 FT
Log ran from as deep as possible in heel to Surface
Recorded with 2800 PSI Surface Induced Pressure
Logging tools were clean and free of debris upon completion of operations

Thank you for choosing FMC Technologies Completion Services, Inc.!!



Main Pass

Recorded with 2800 PSI Surface Induced Pressure

Database File: c:\warrior\data\0512341310_anadarko_bane 27n1-9hz_09-02-15_rbl\0512341310_anadarko_bane 27

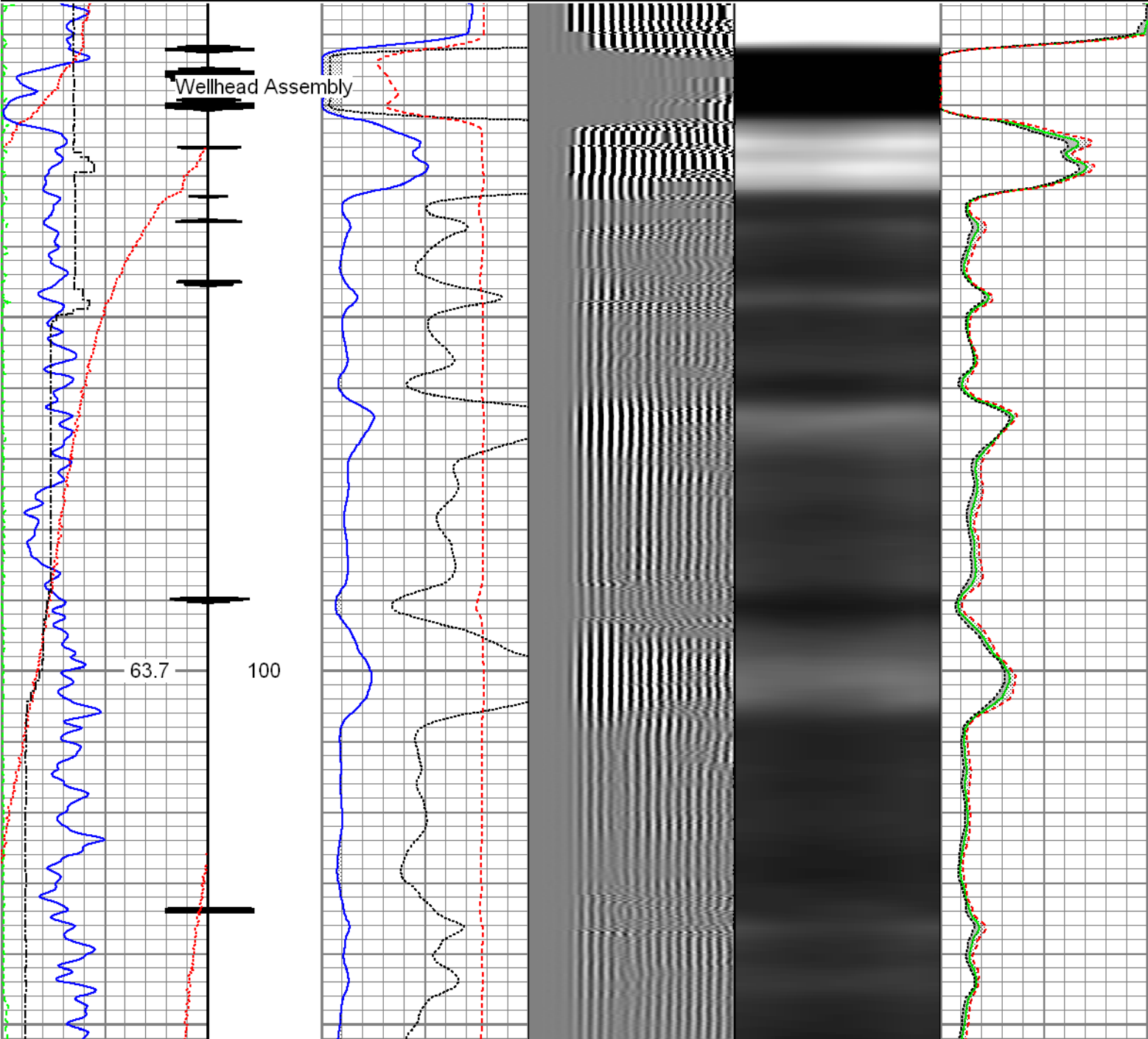
Dataset Pathname: pass4

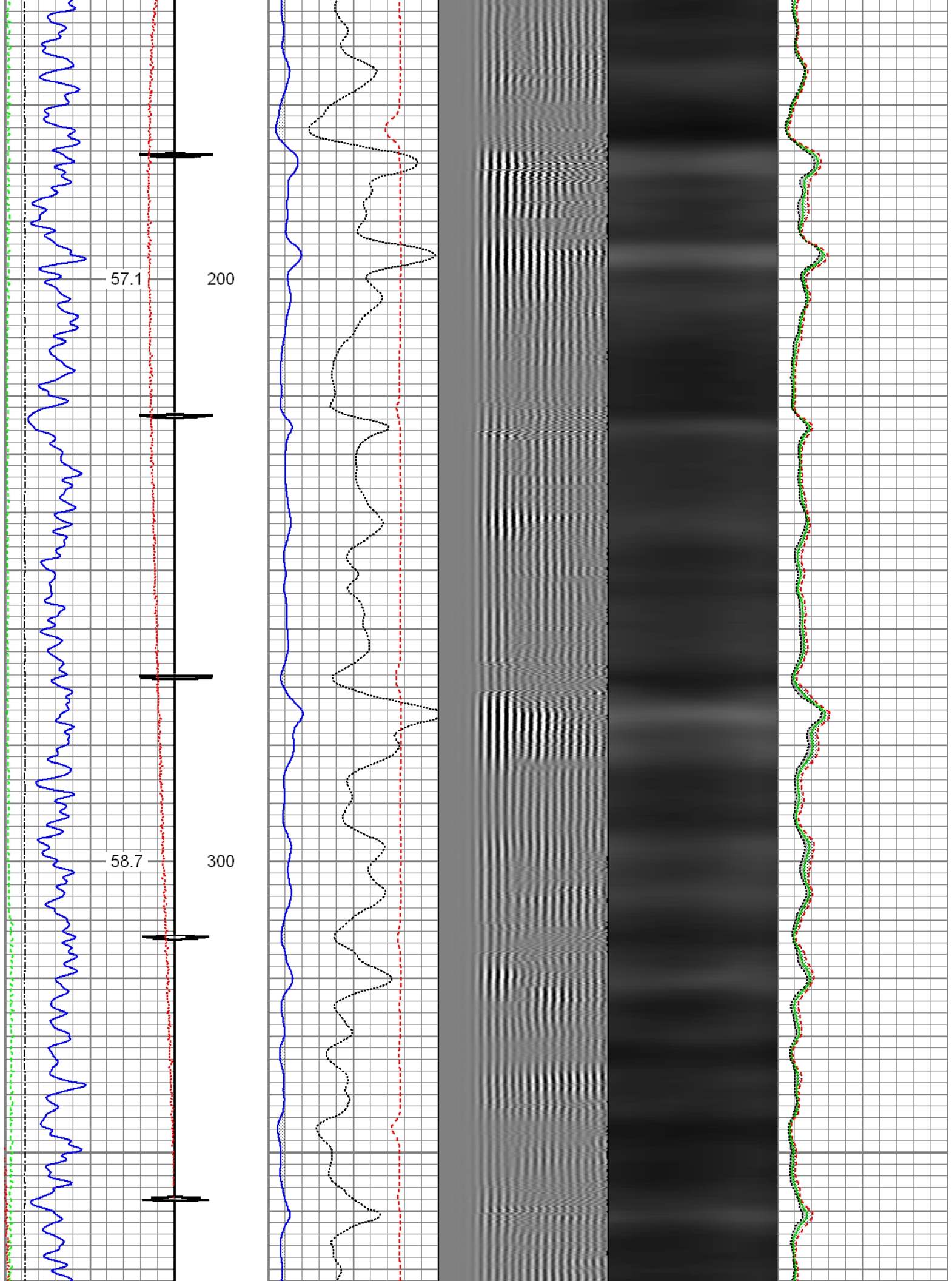
Presentation Format: radii

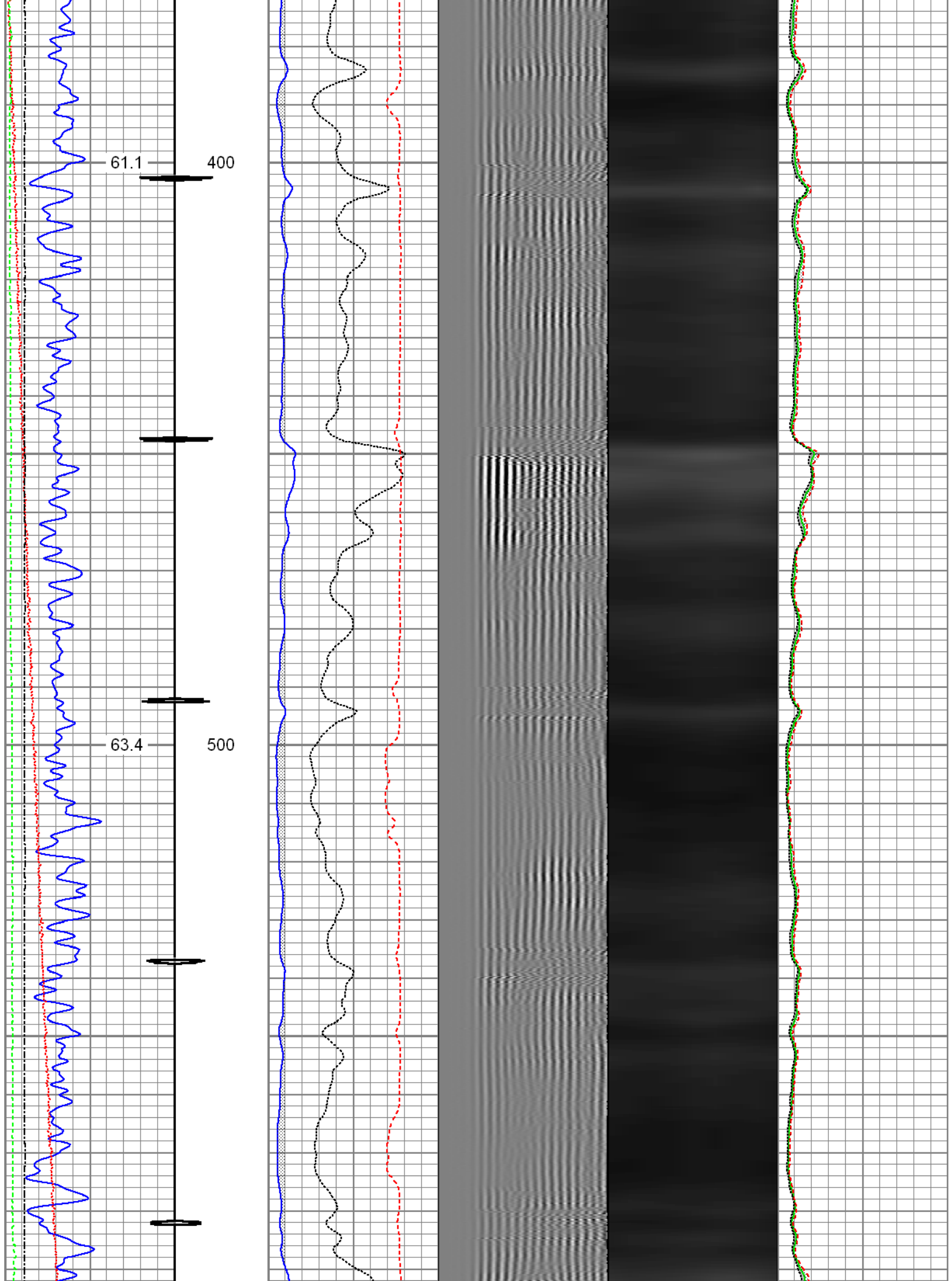
Dataset Creation: Wed Sep 02 12:56:08 2015 by Log 7.0 B1

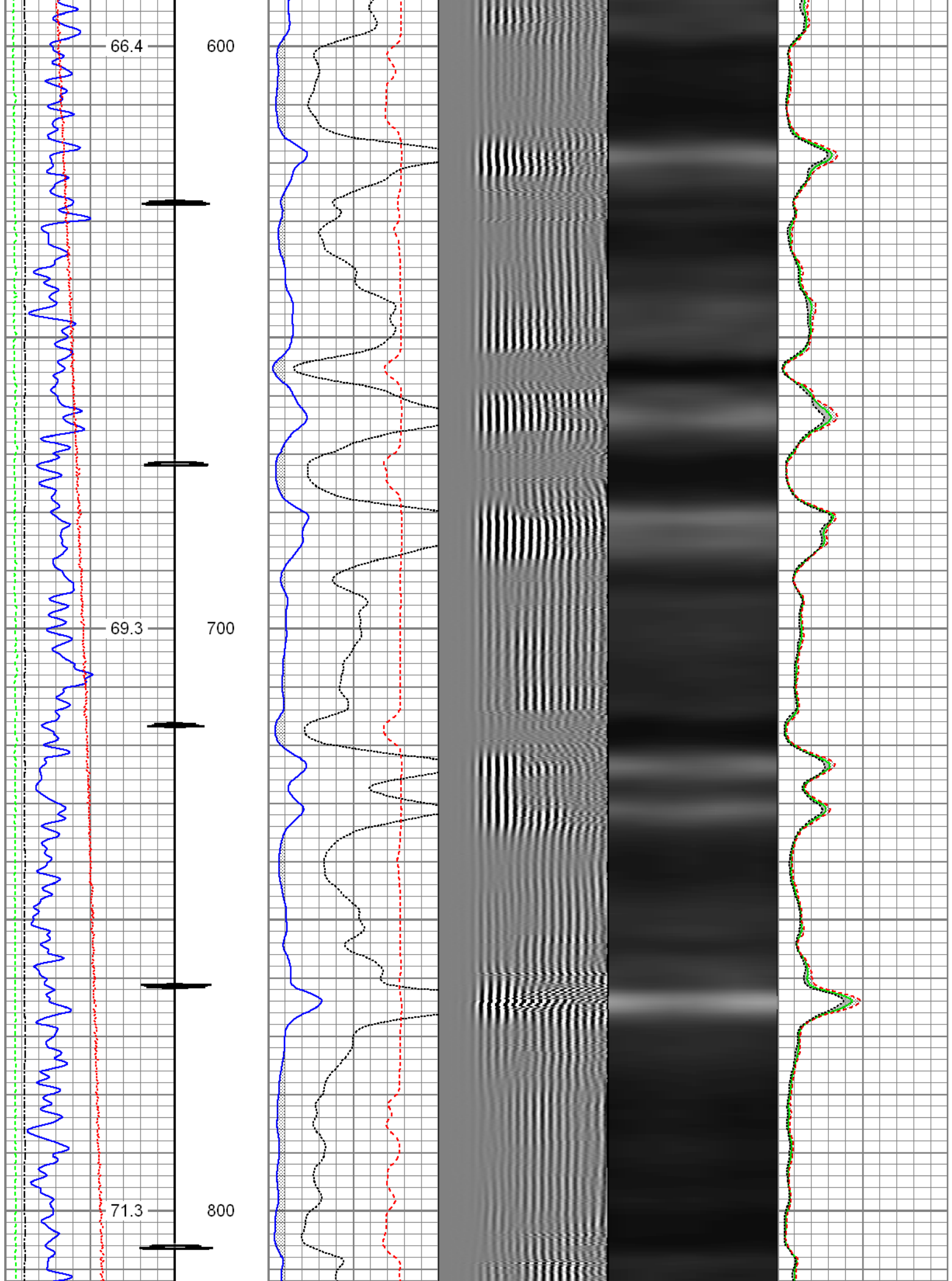
Charted by: Depth in Feet scaled 1:240

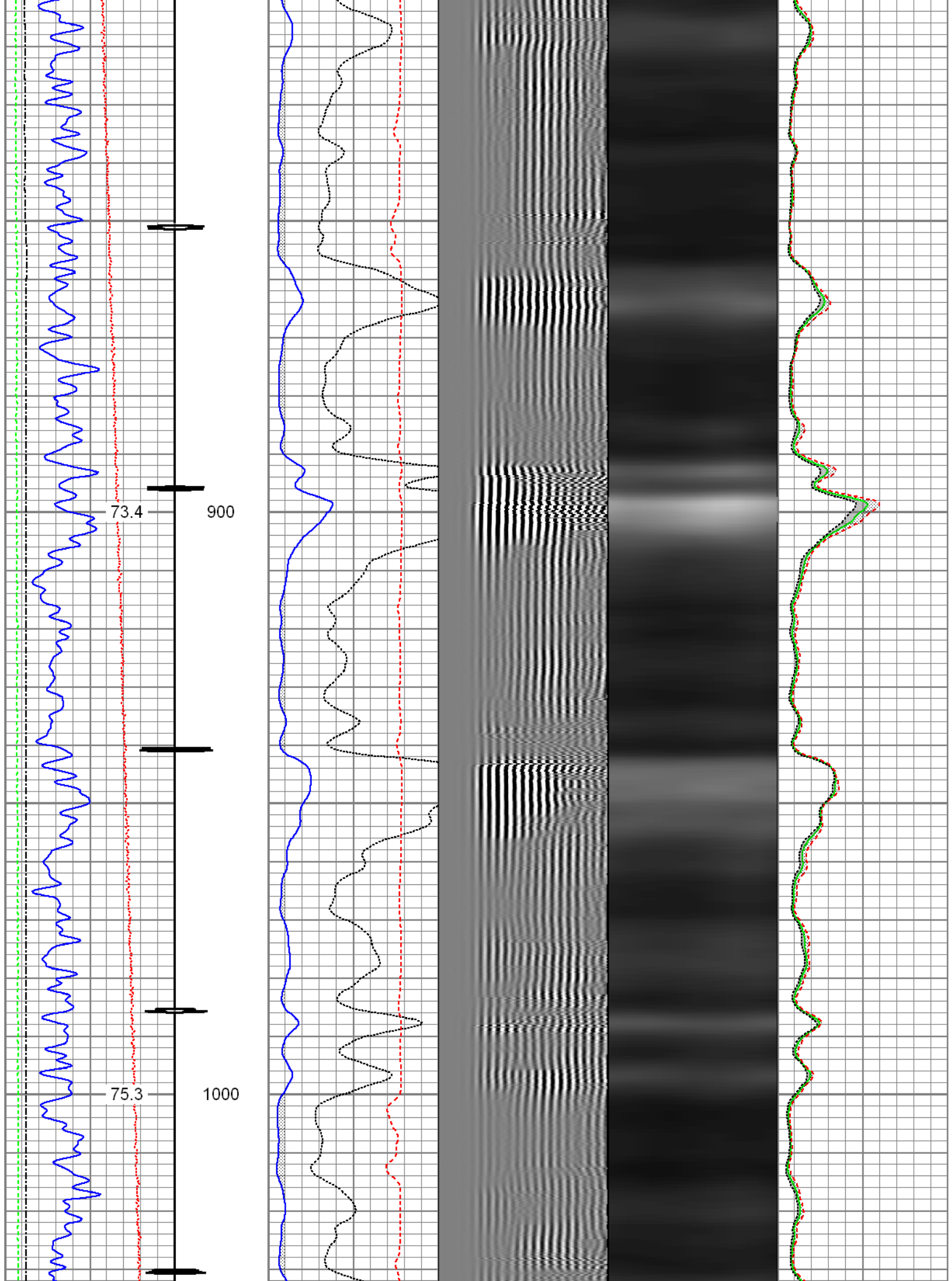
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150				
Line Tension				
0 (lb) 2000				

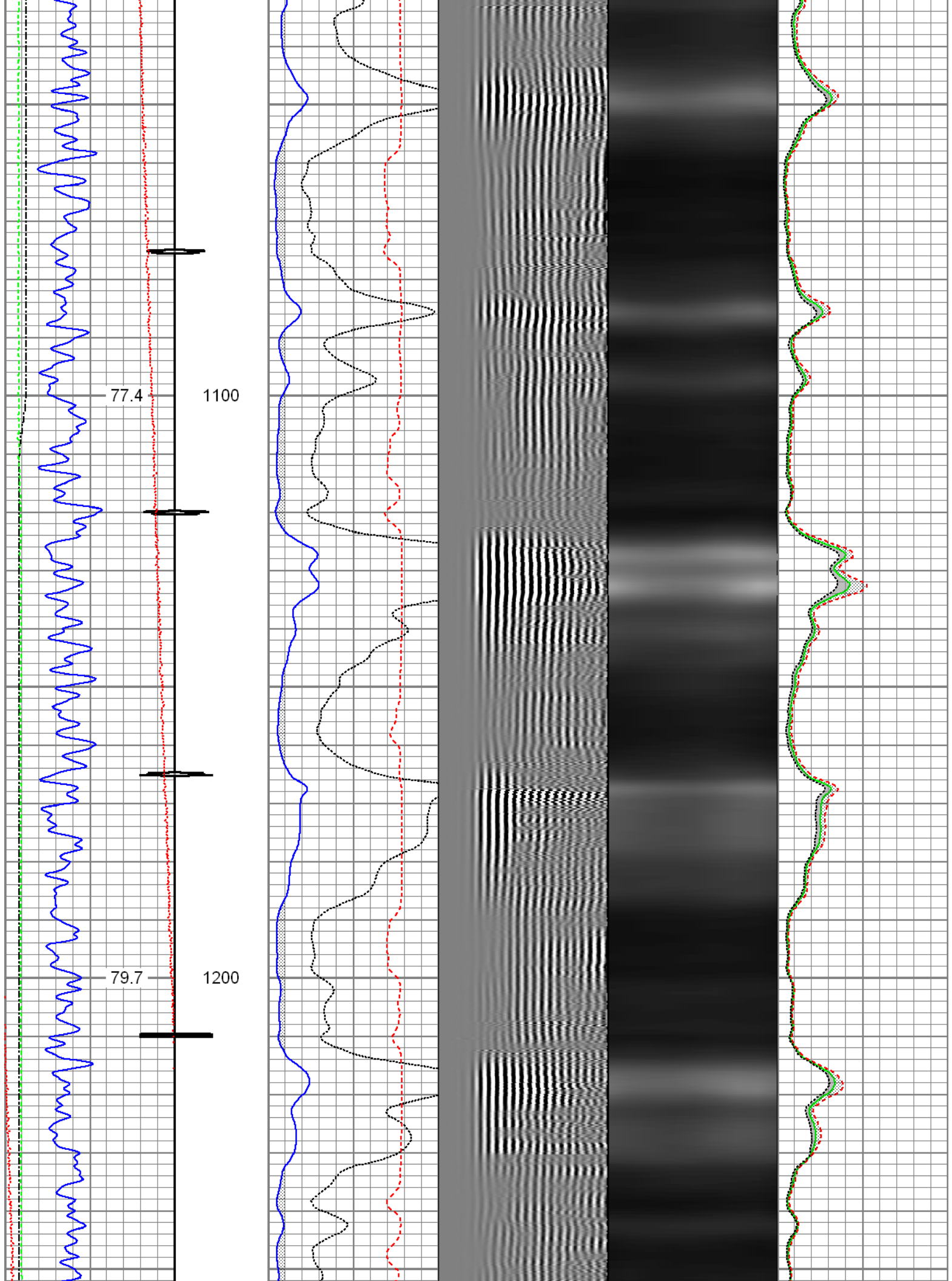


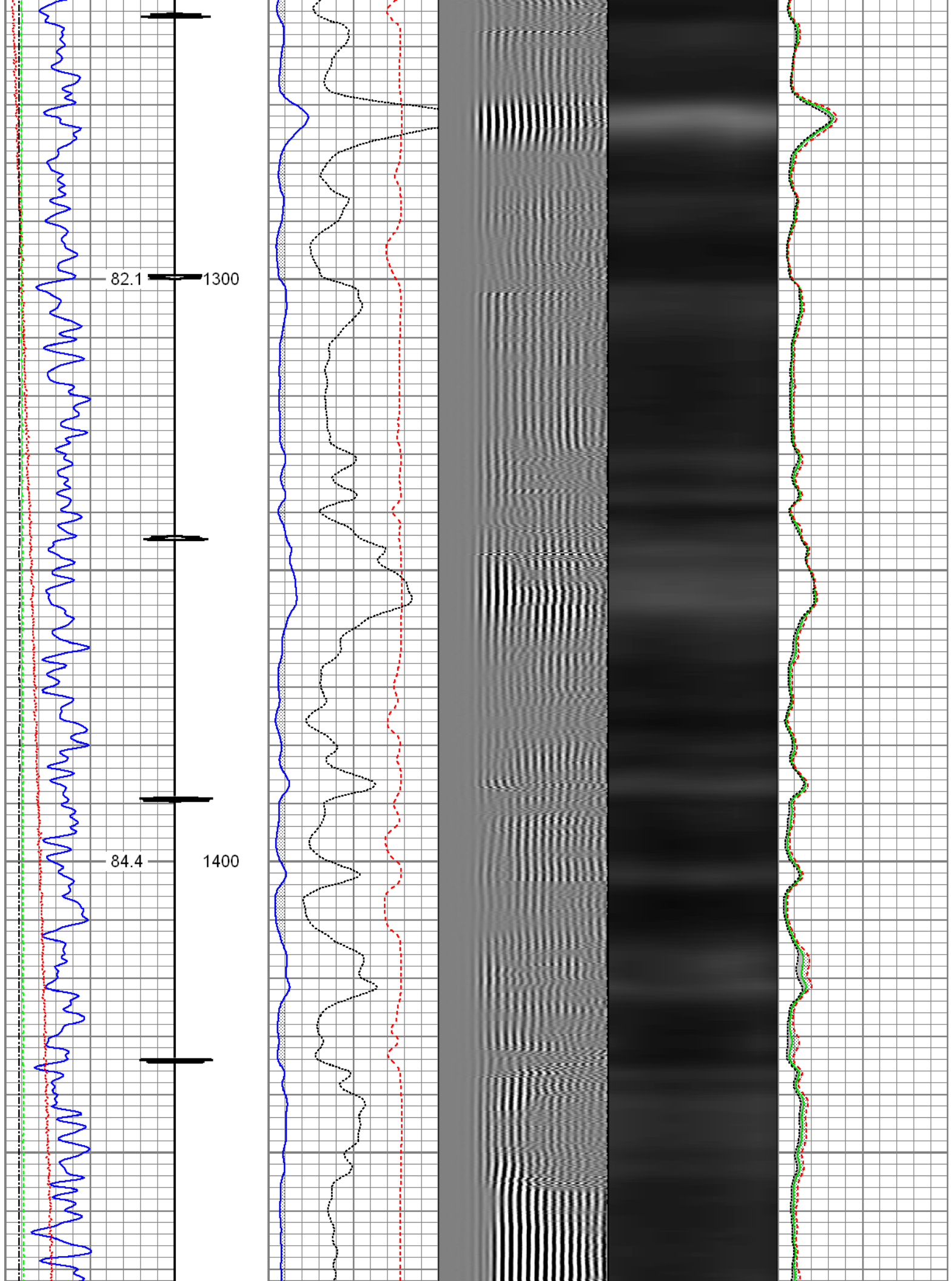


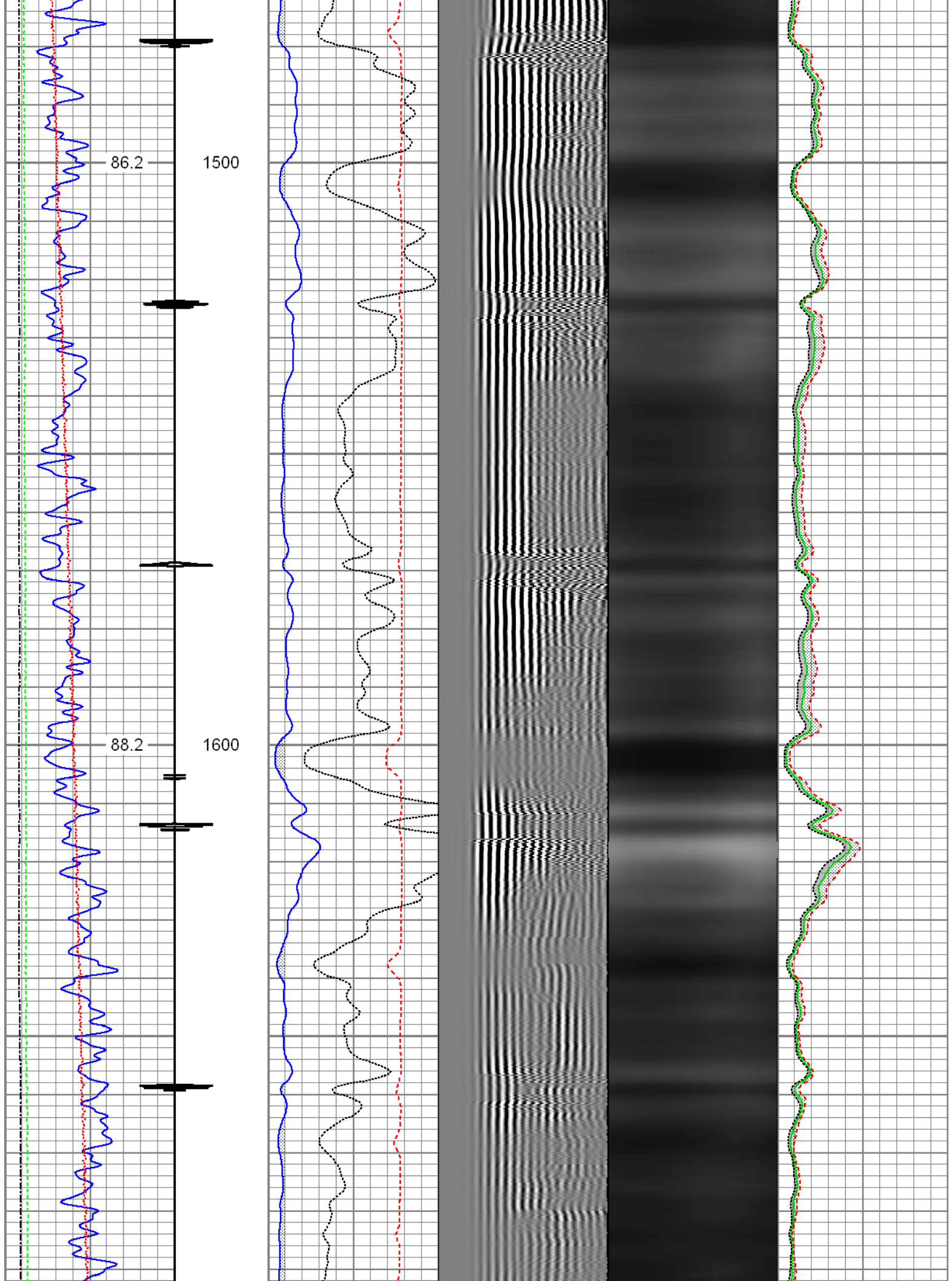


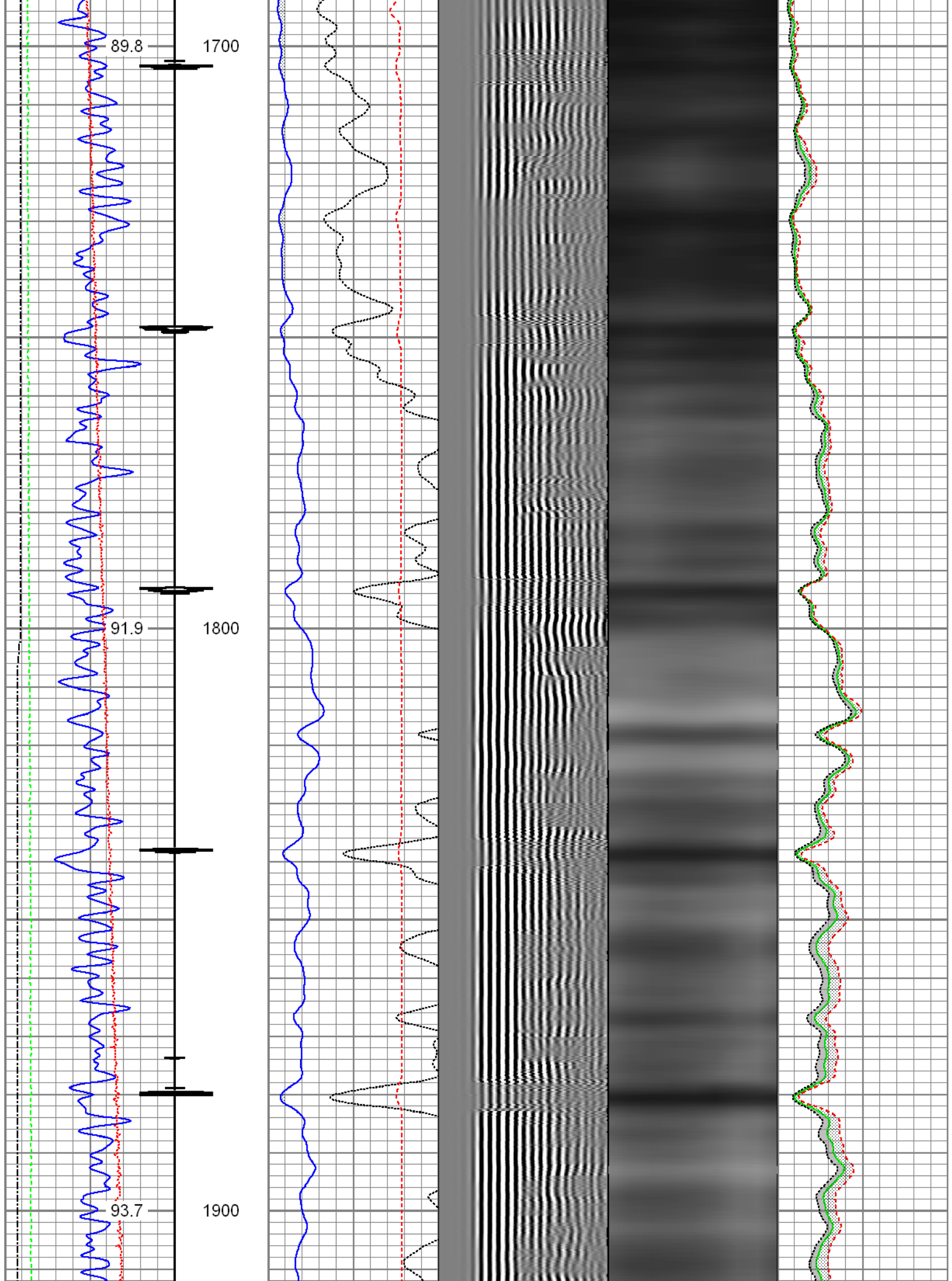


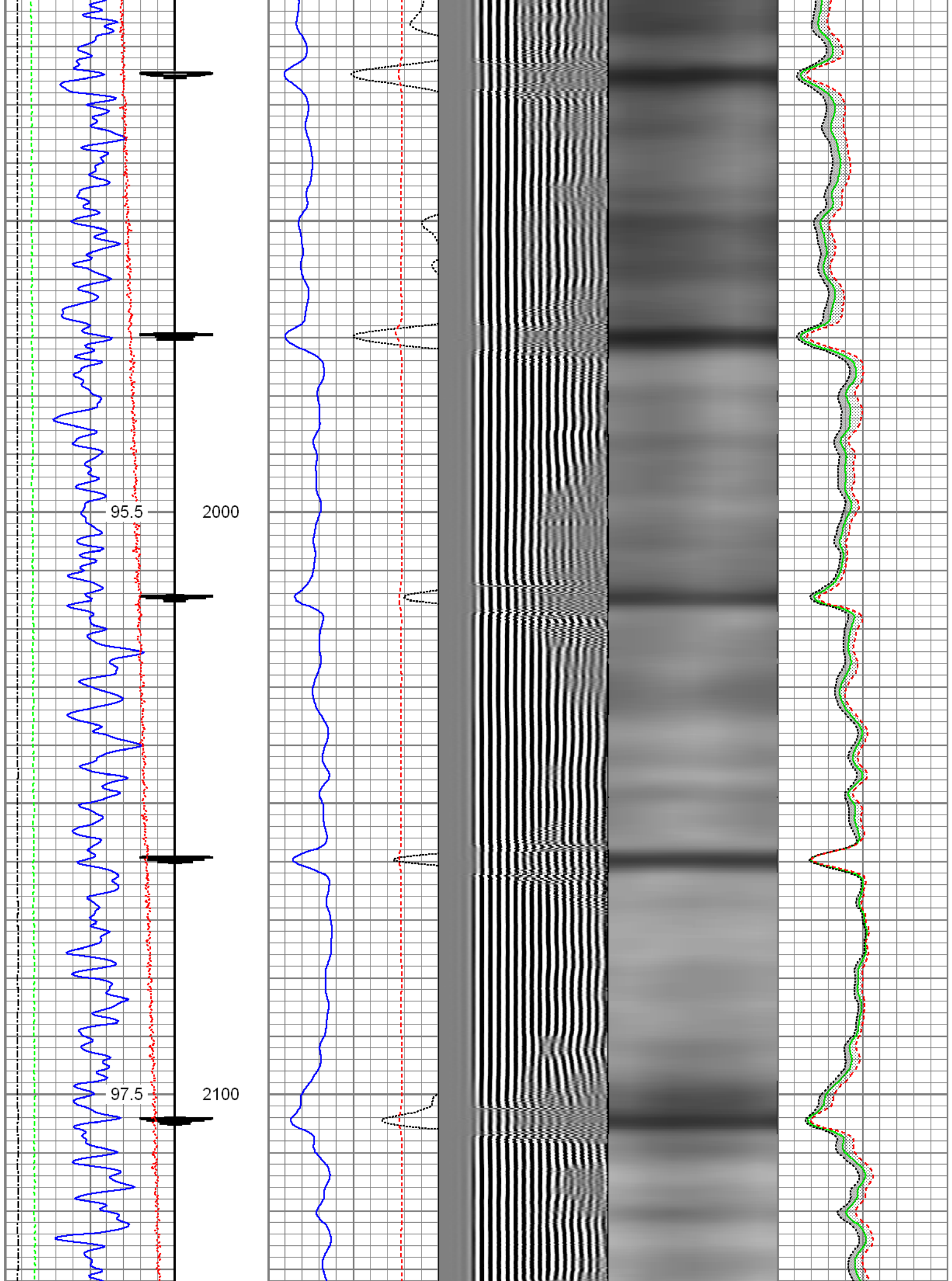


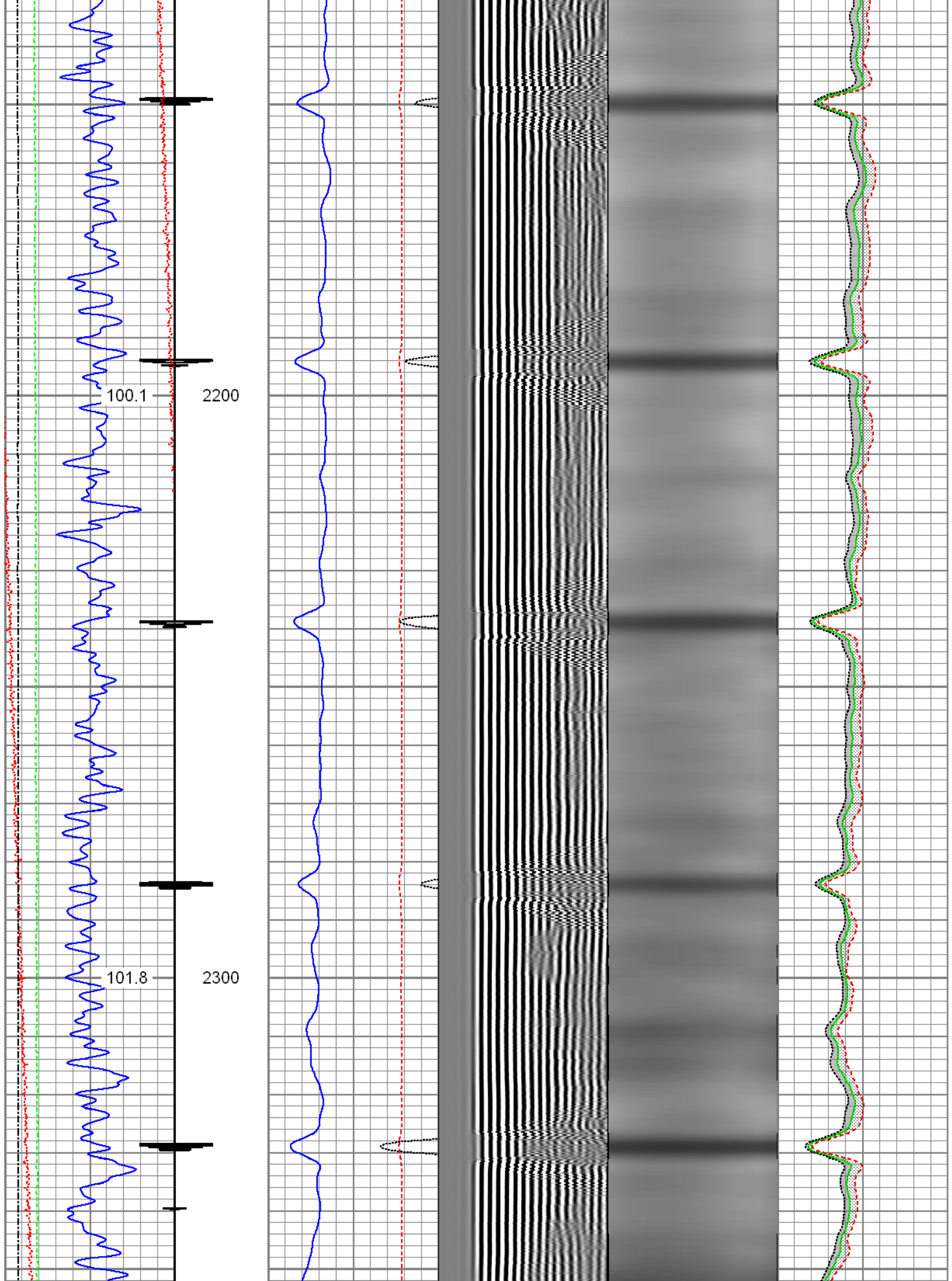


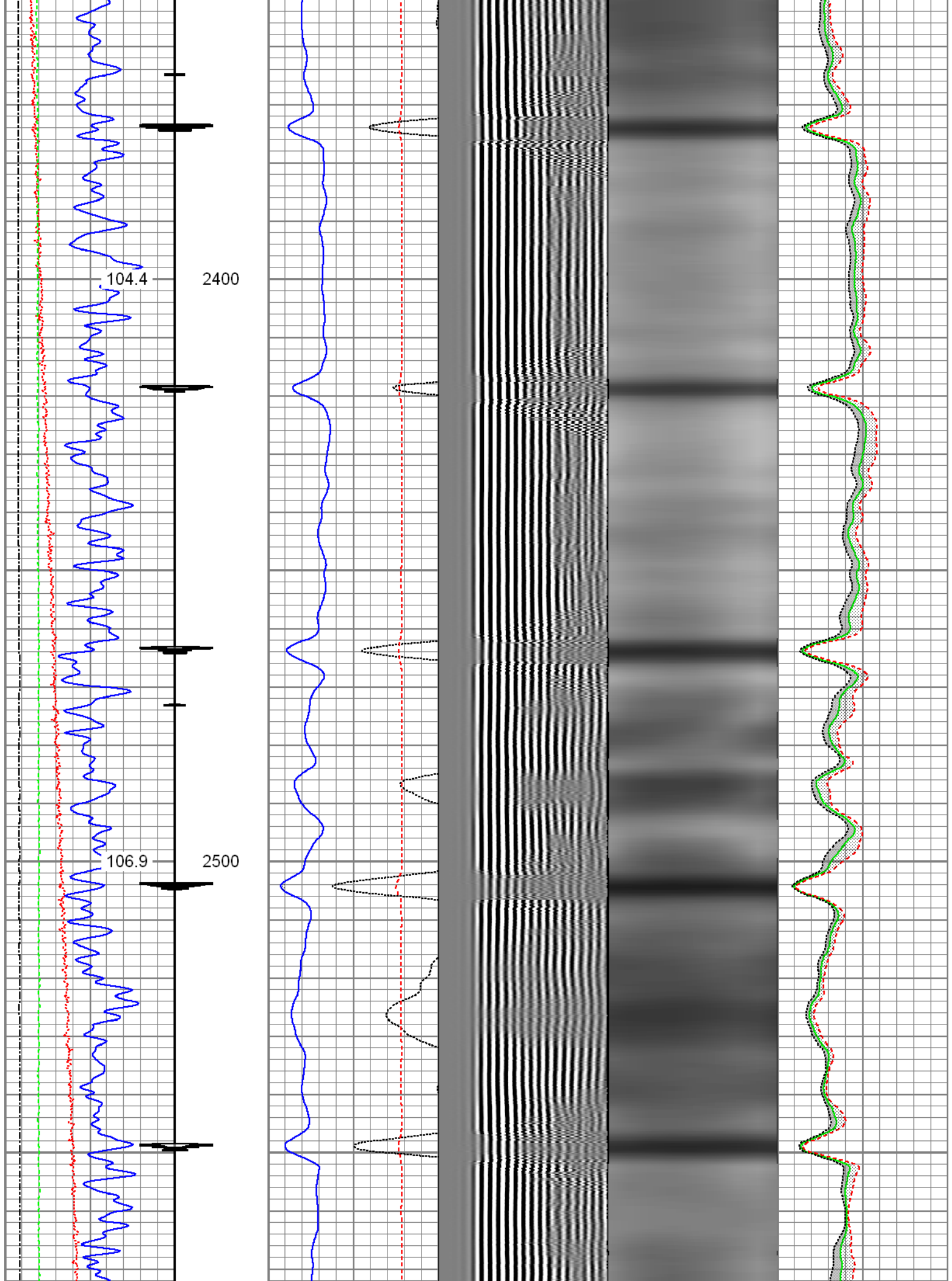


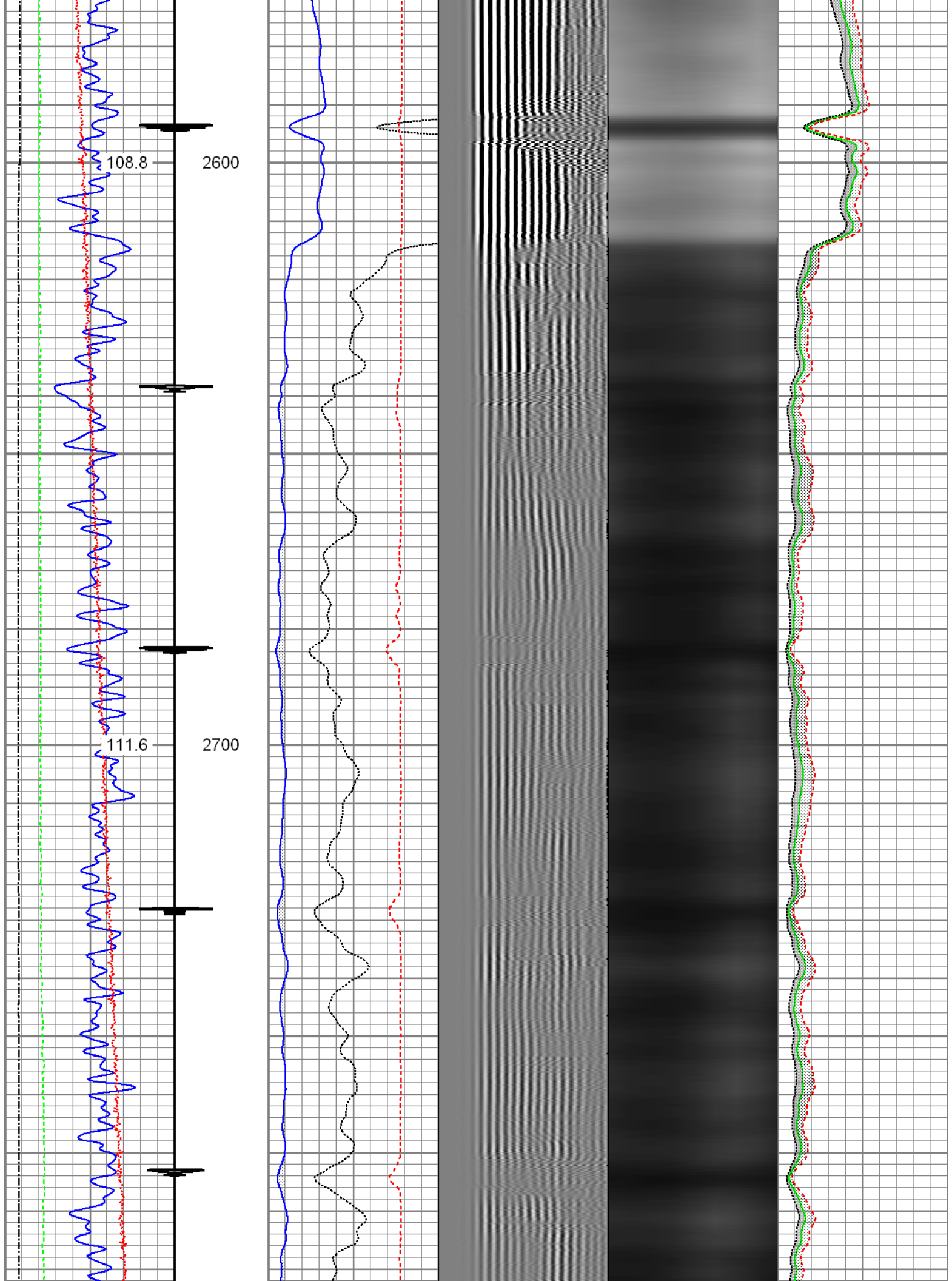


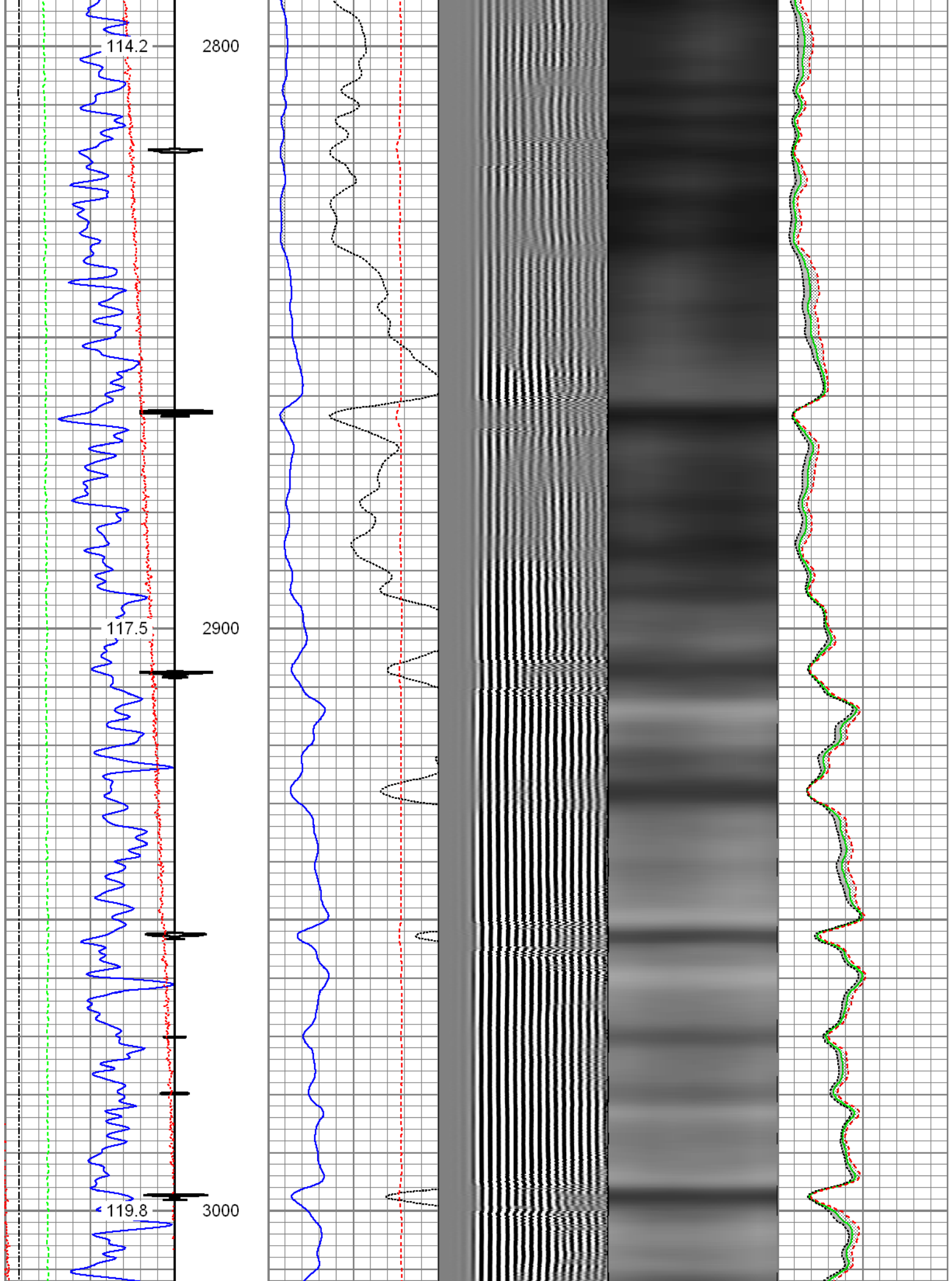


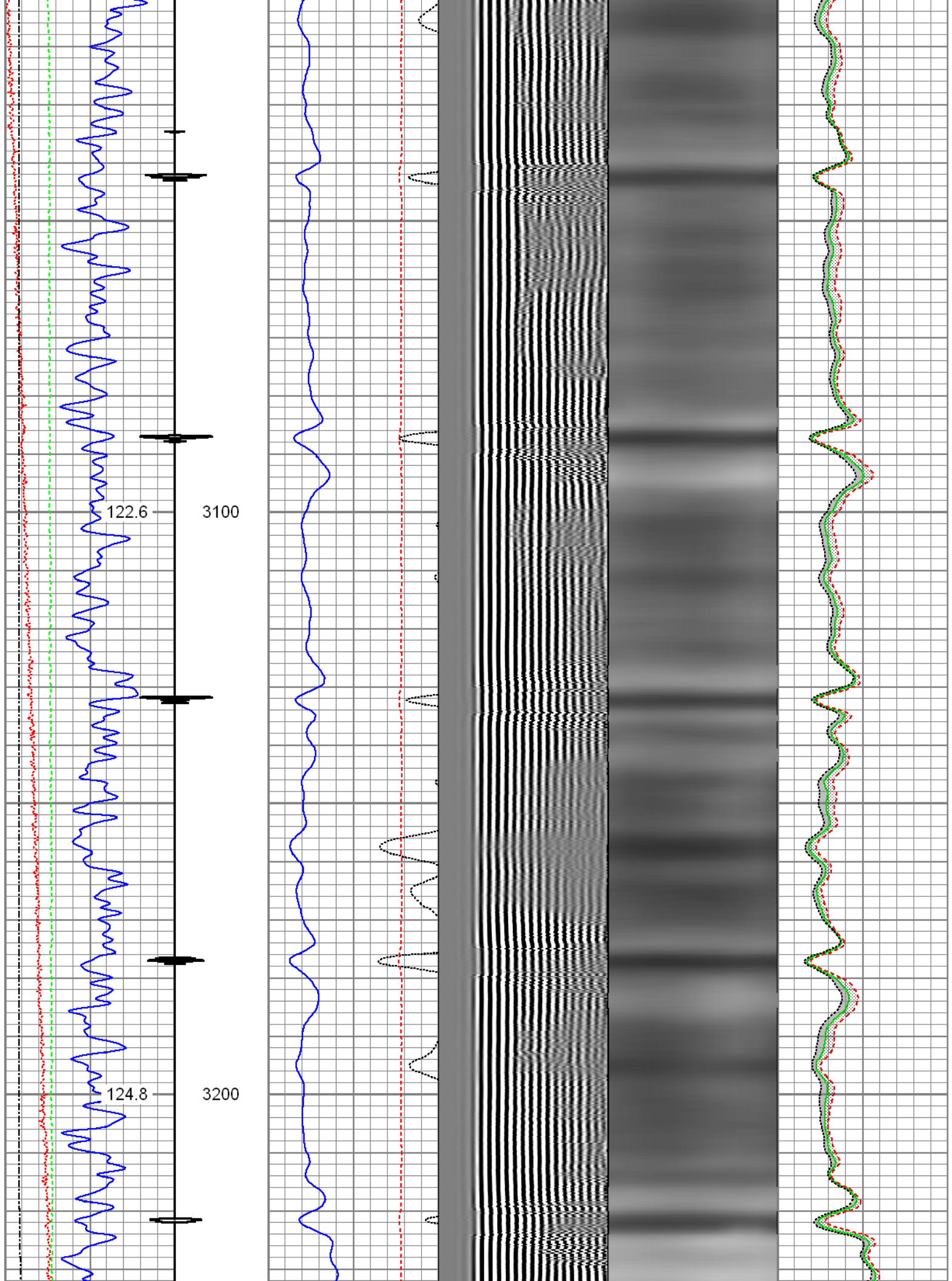


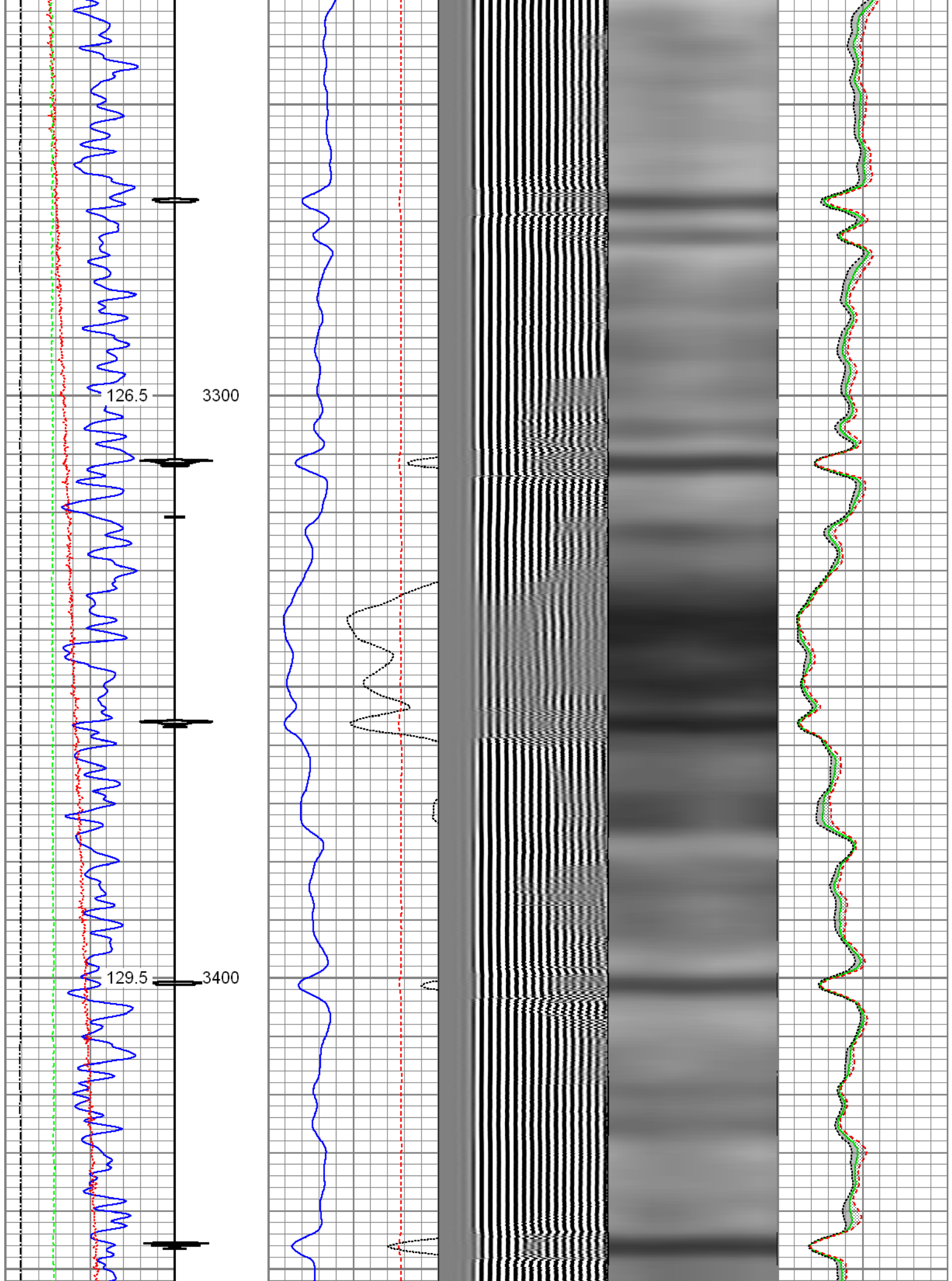


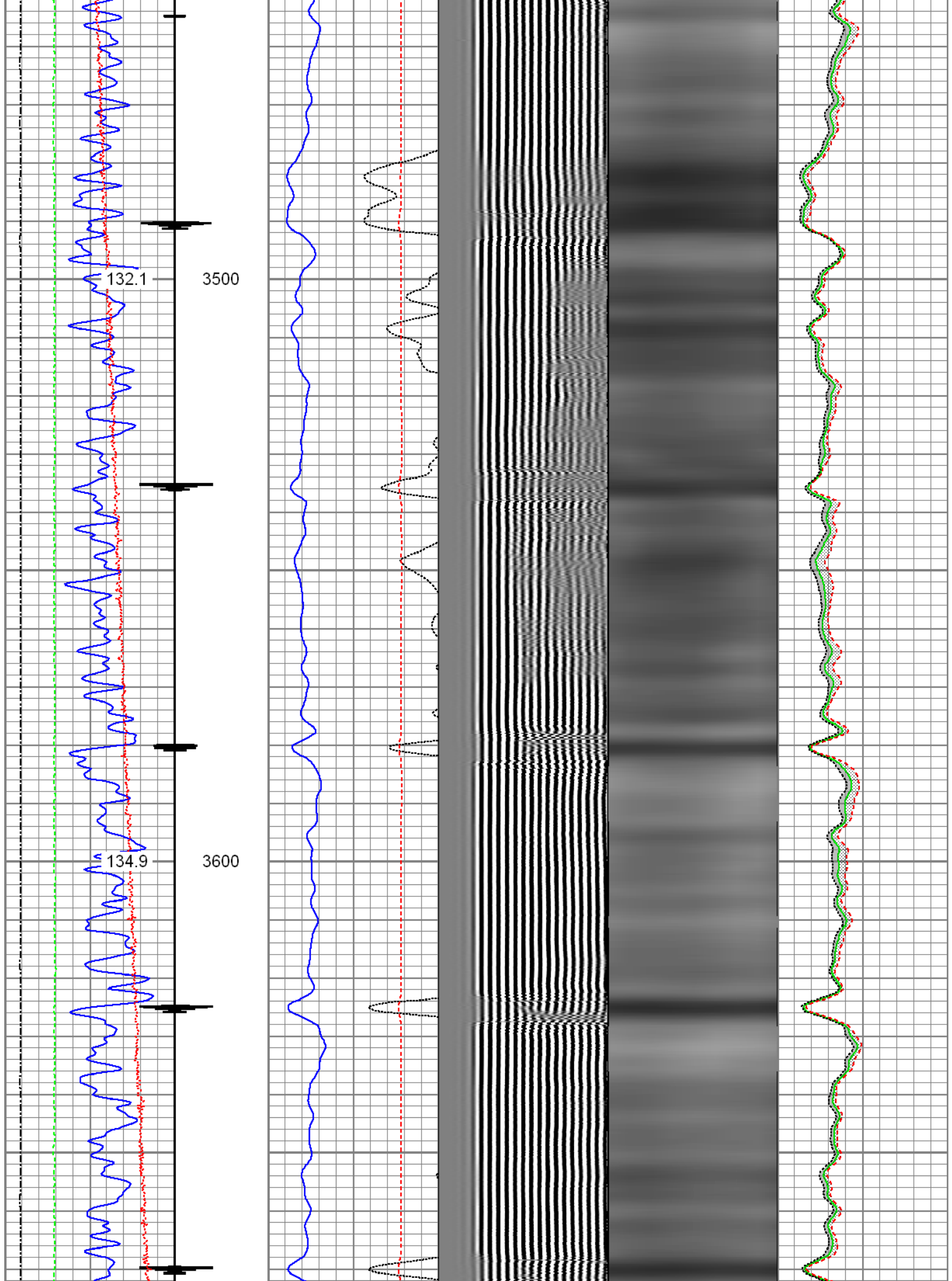


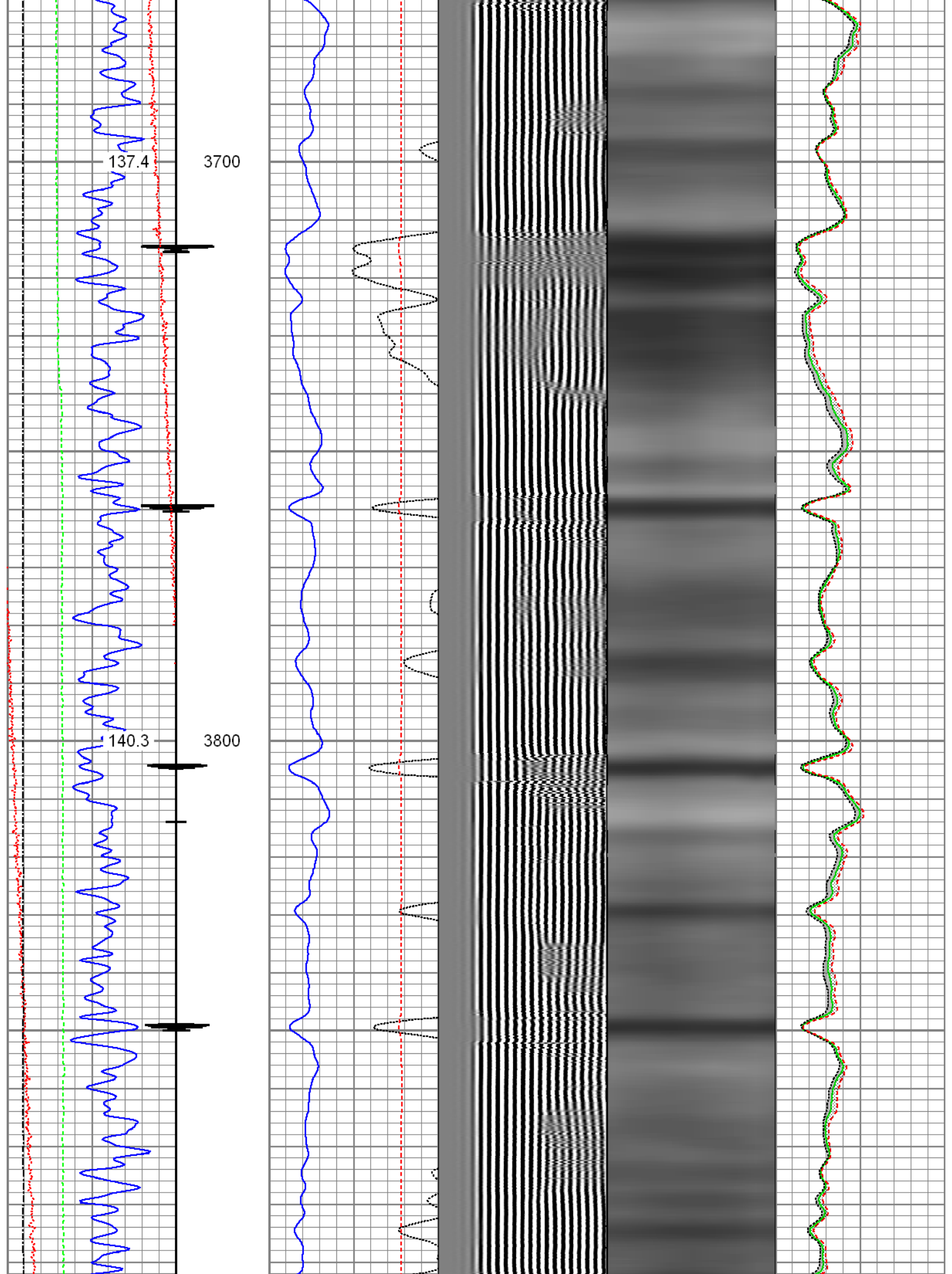


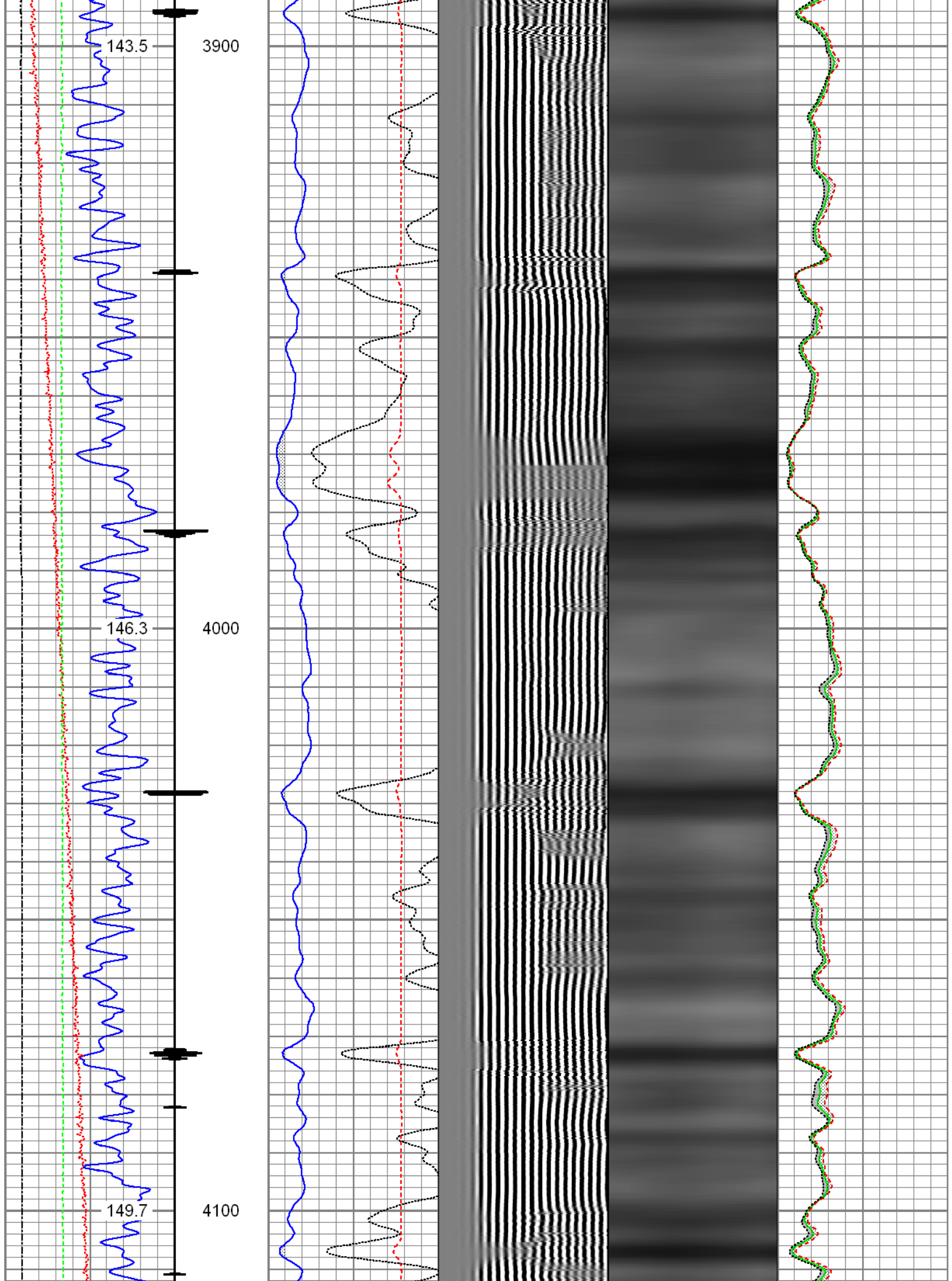


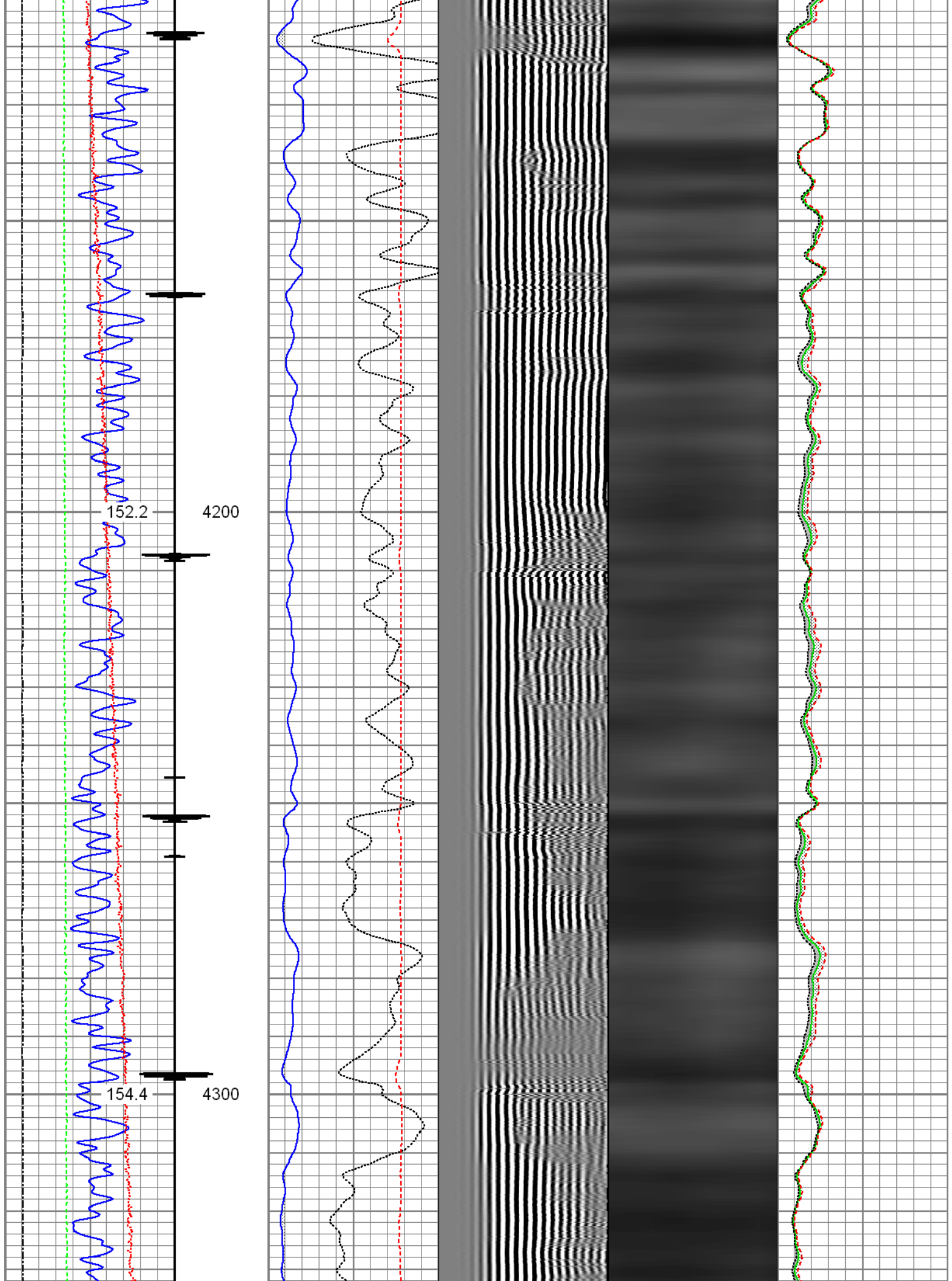


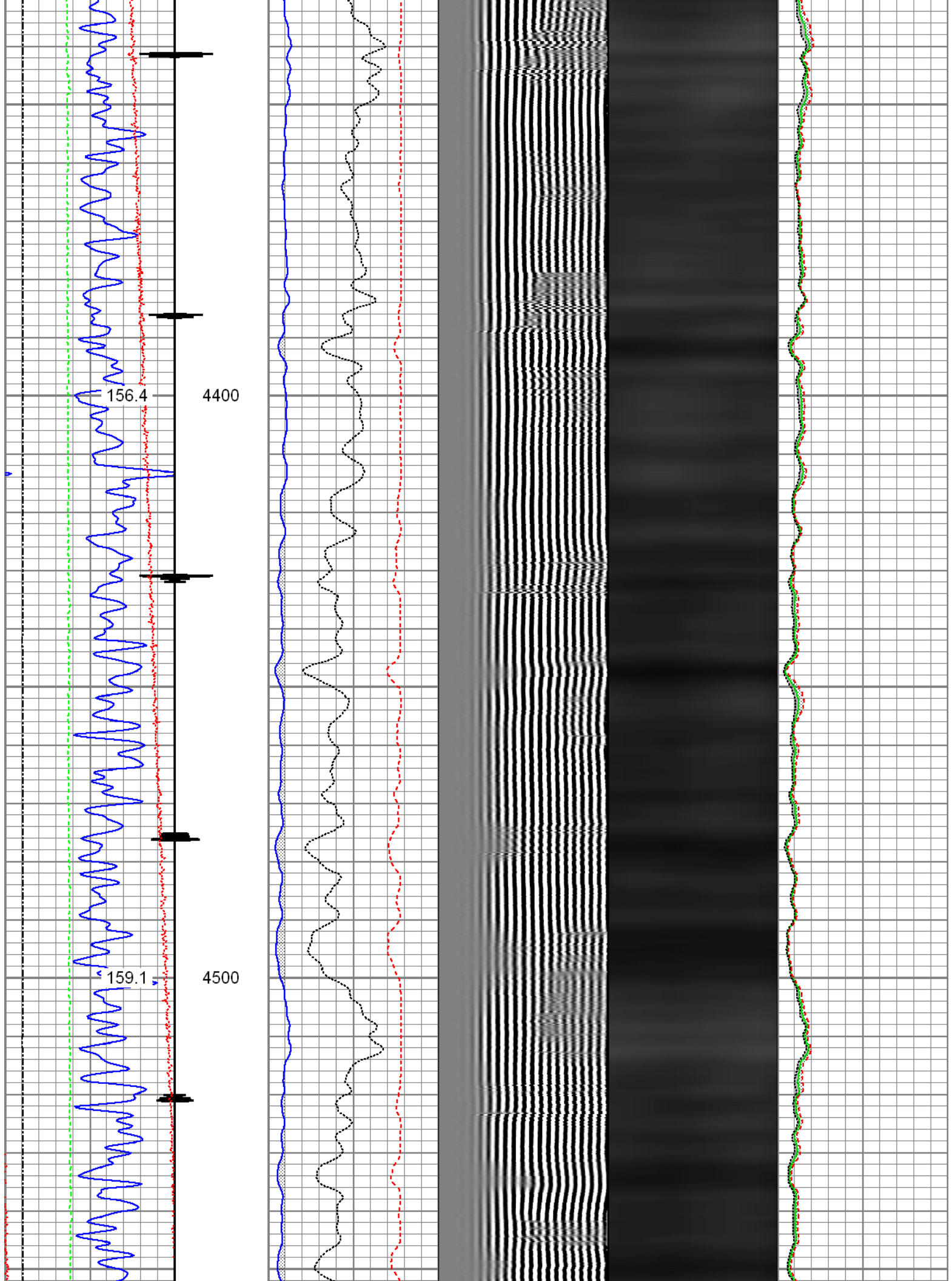


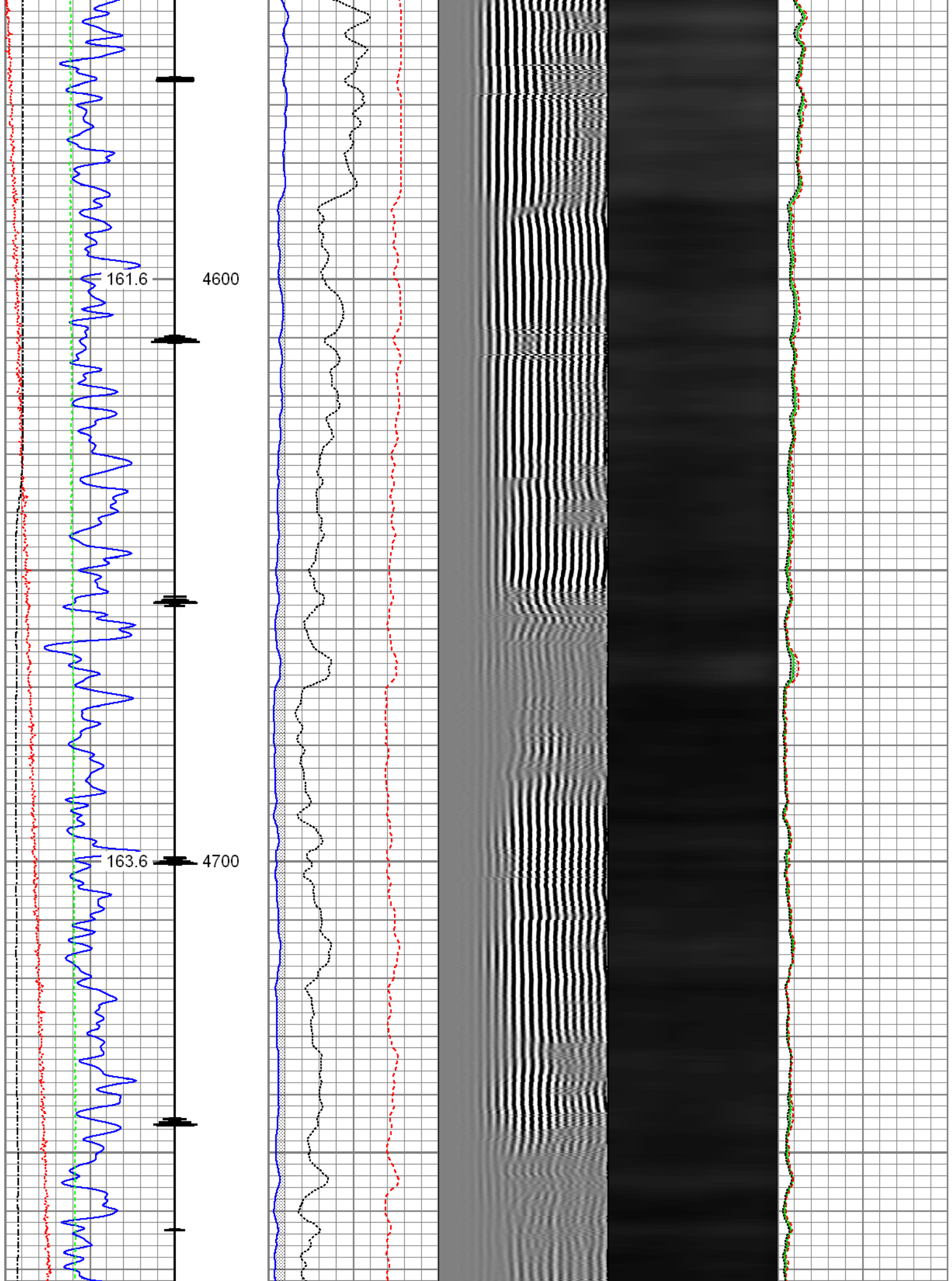


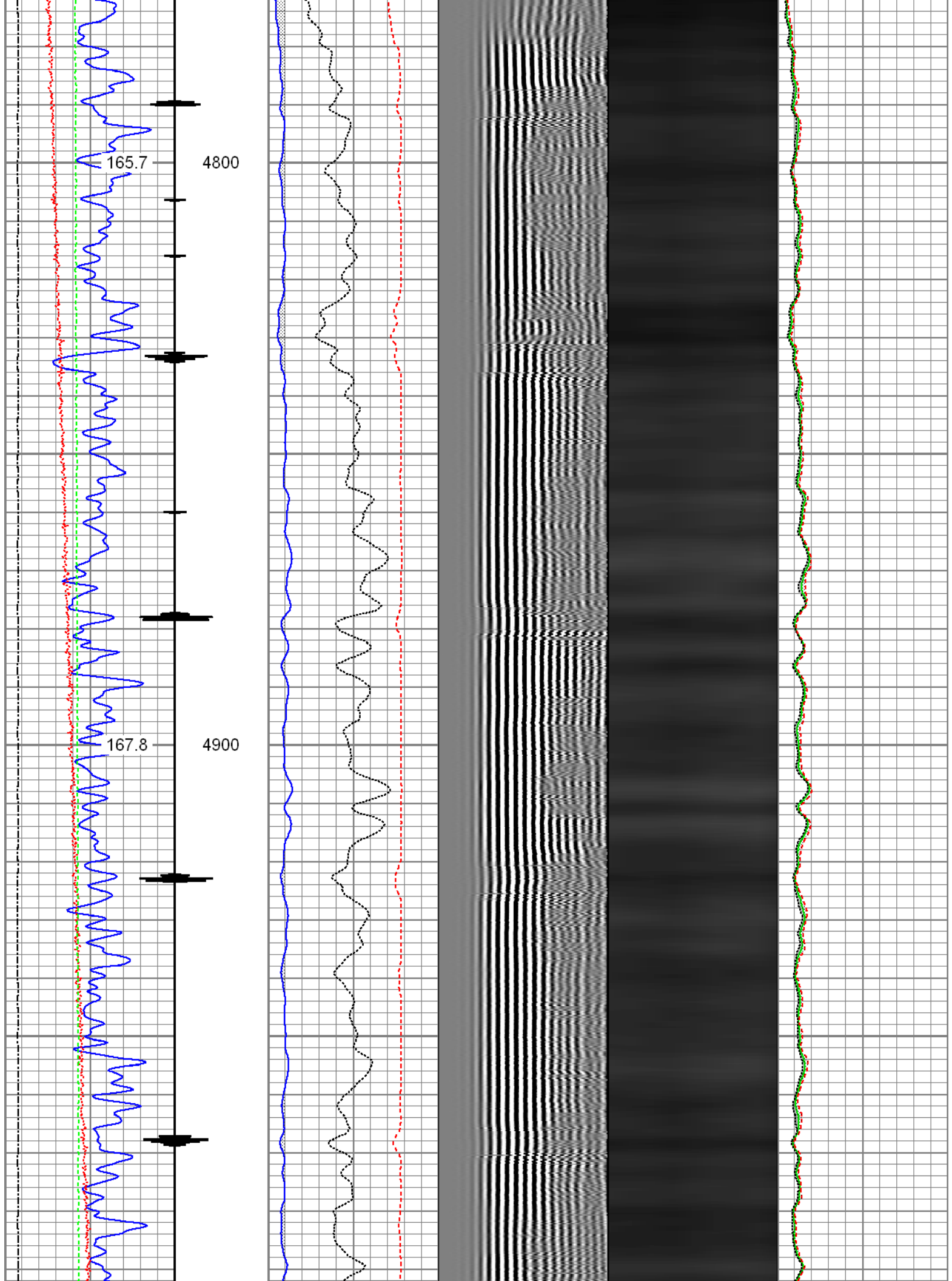


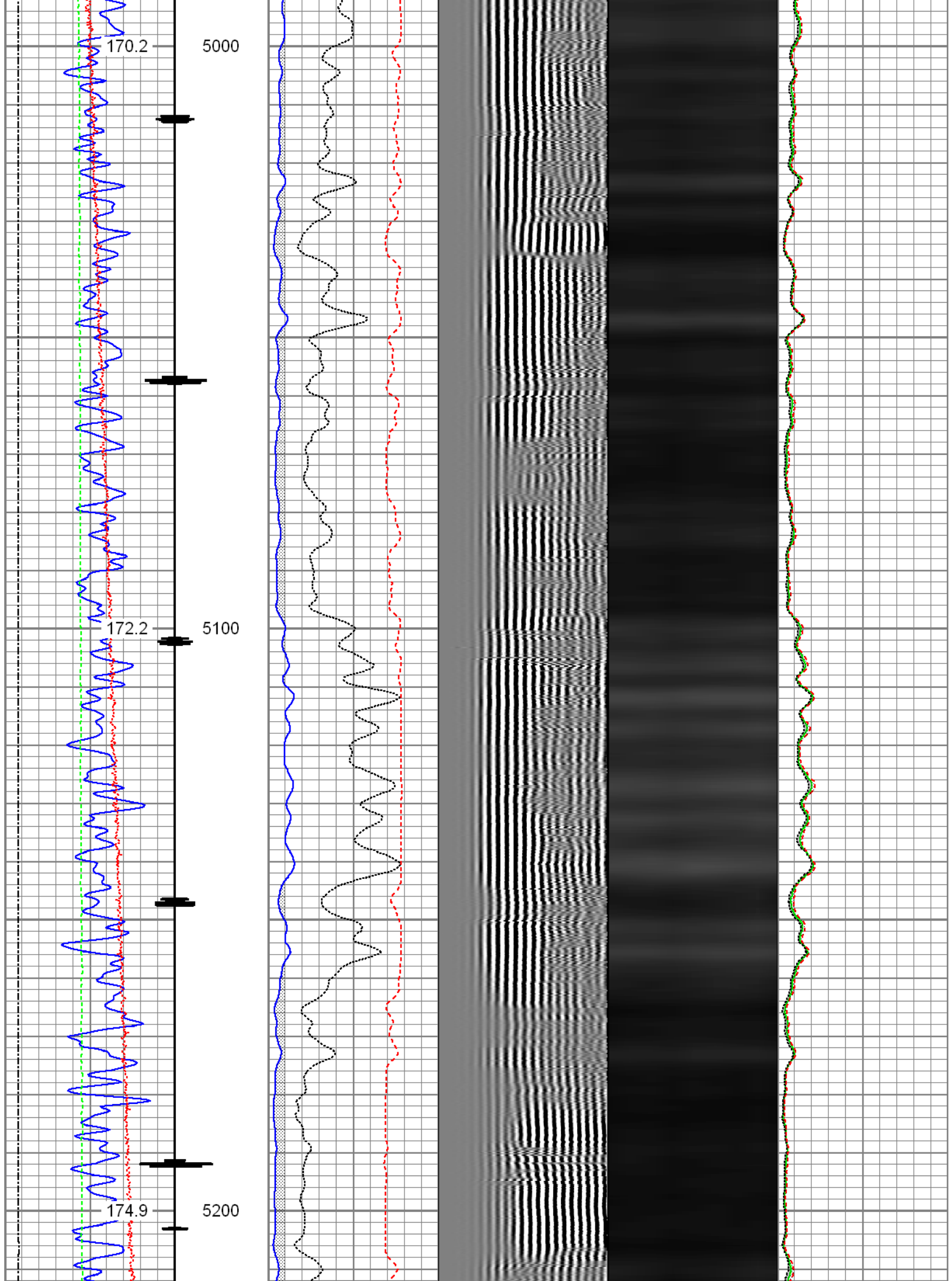


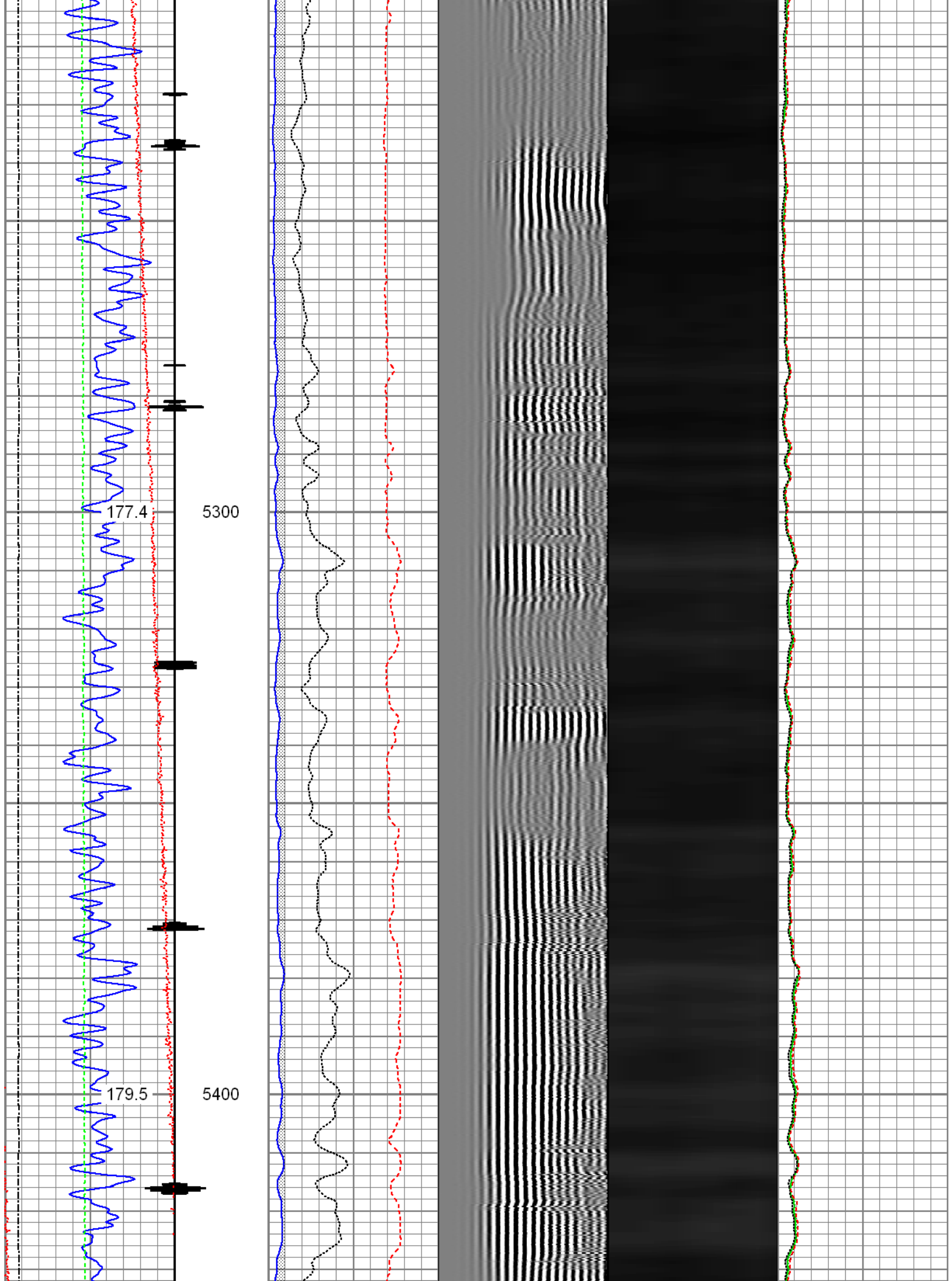


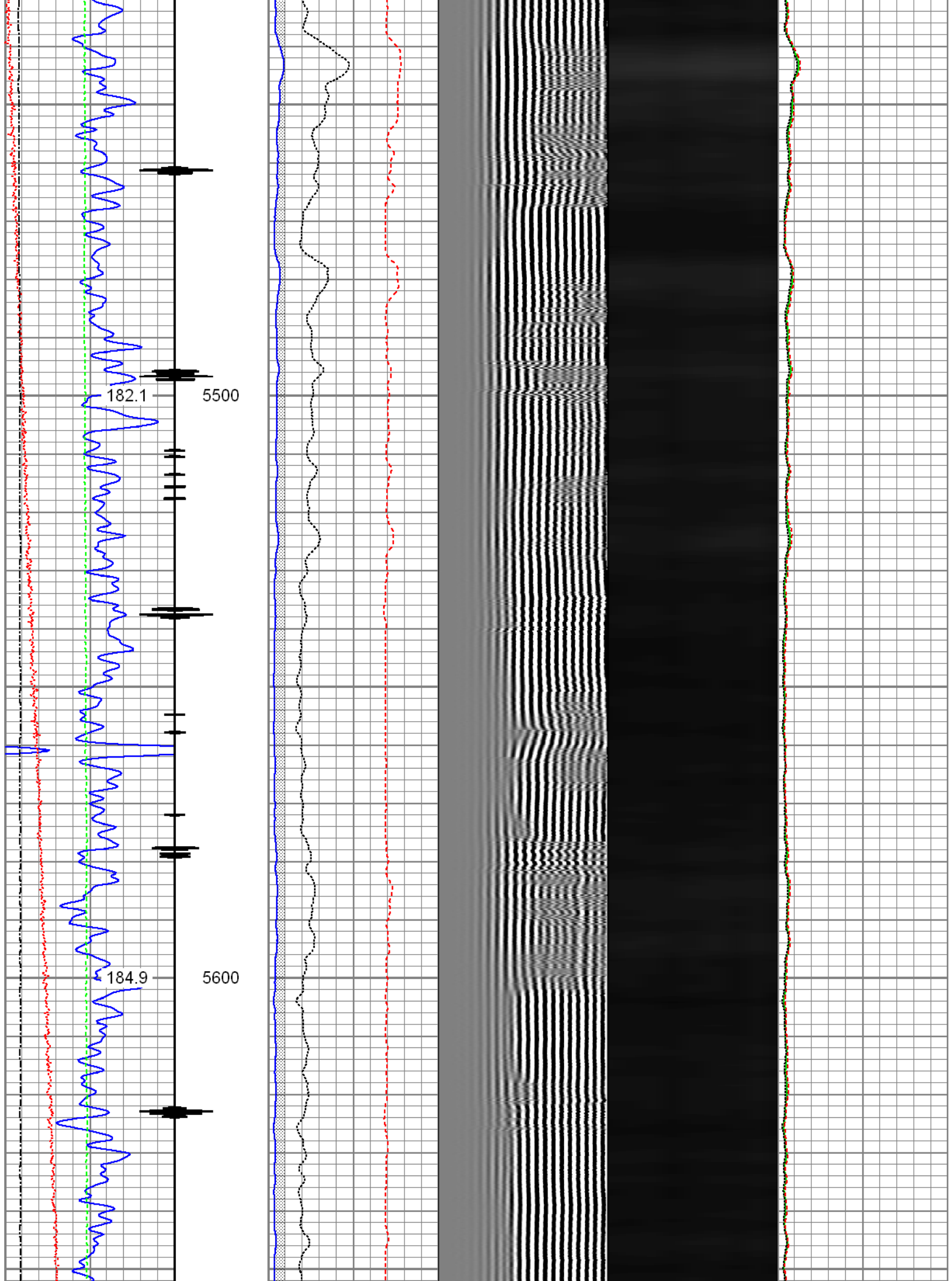


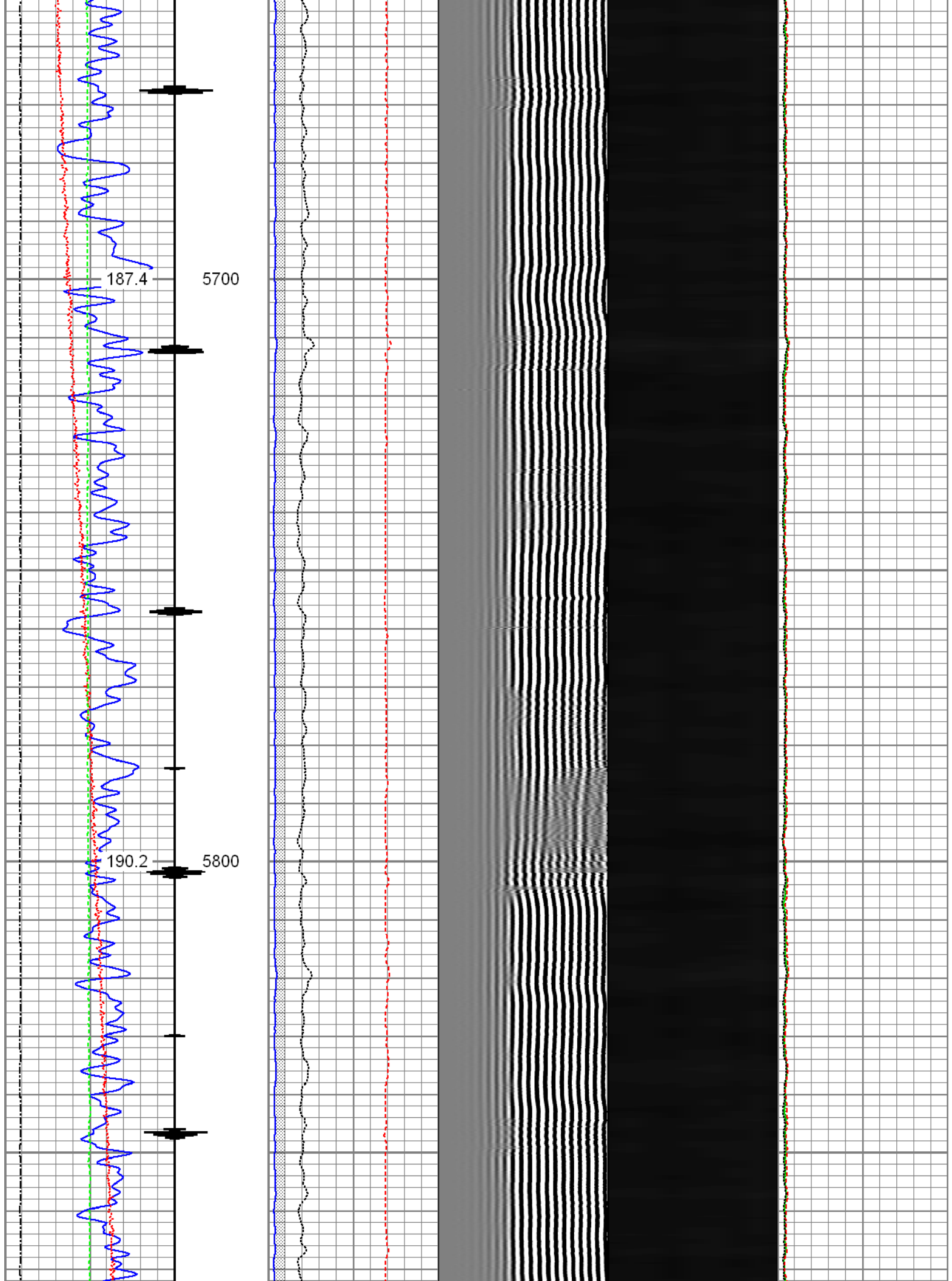


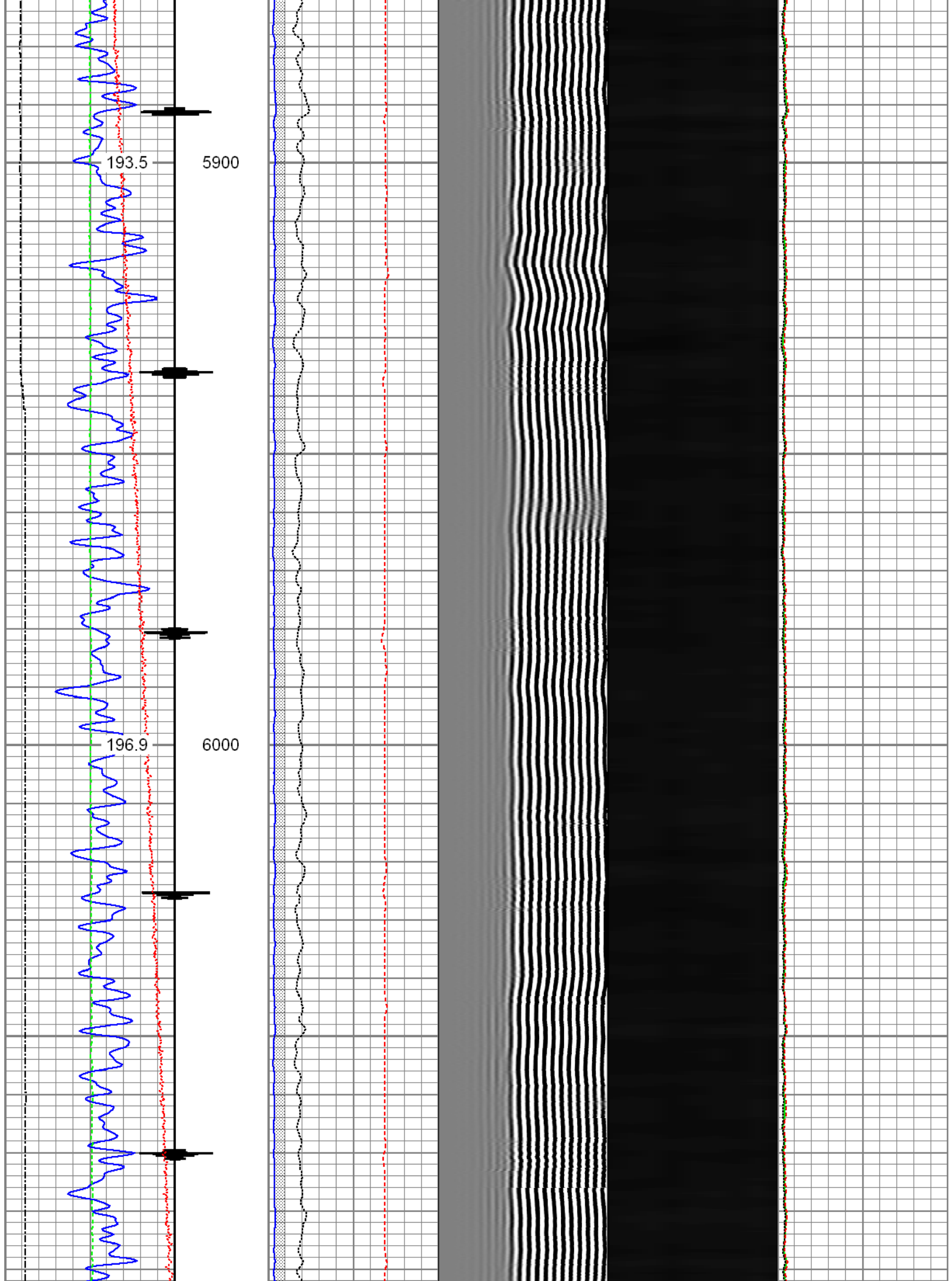


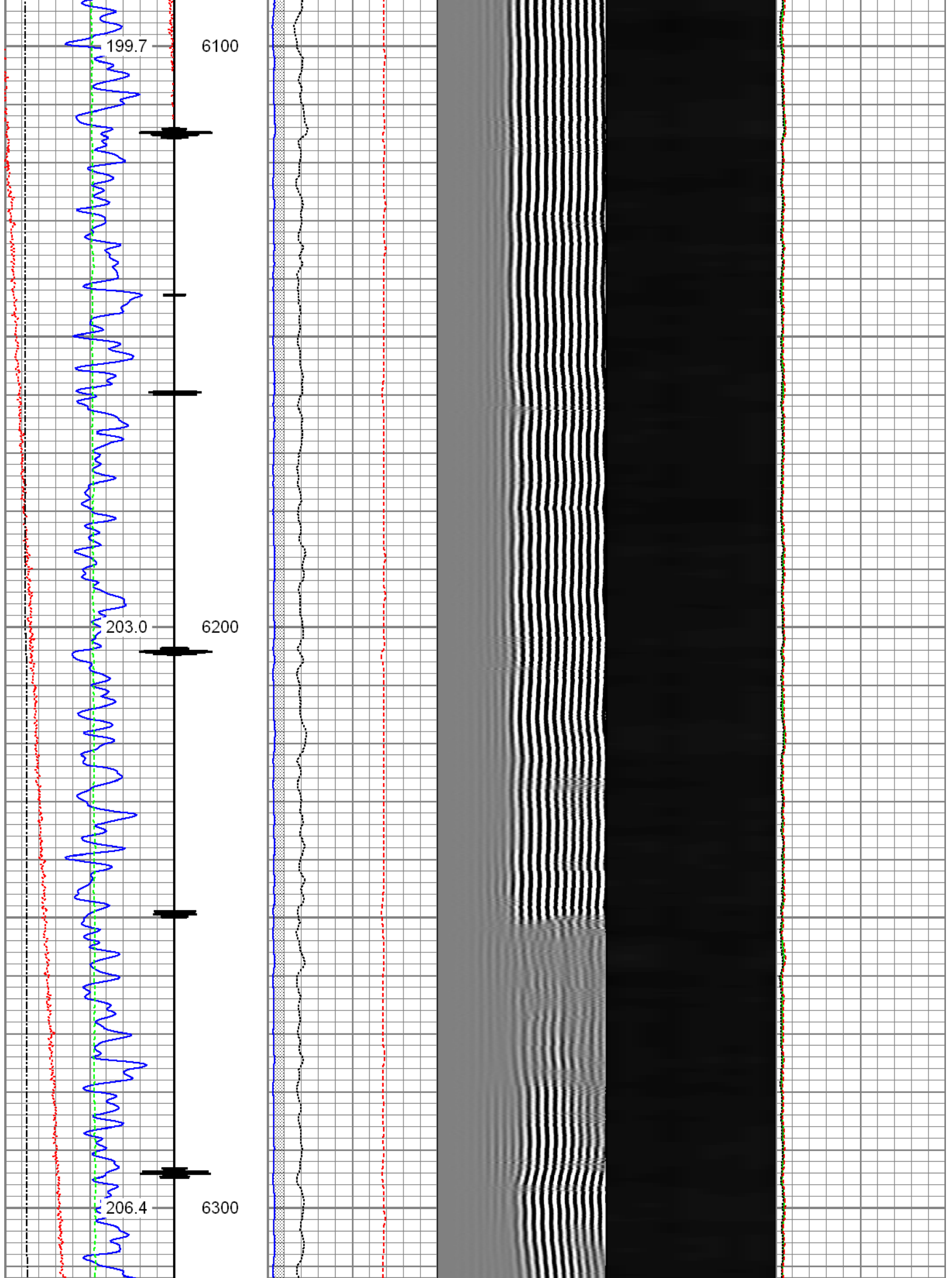


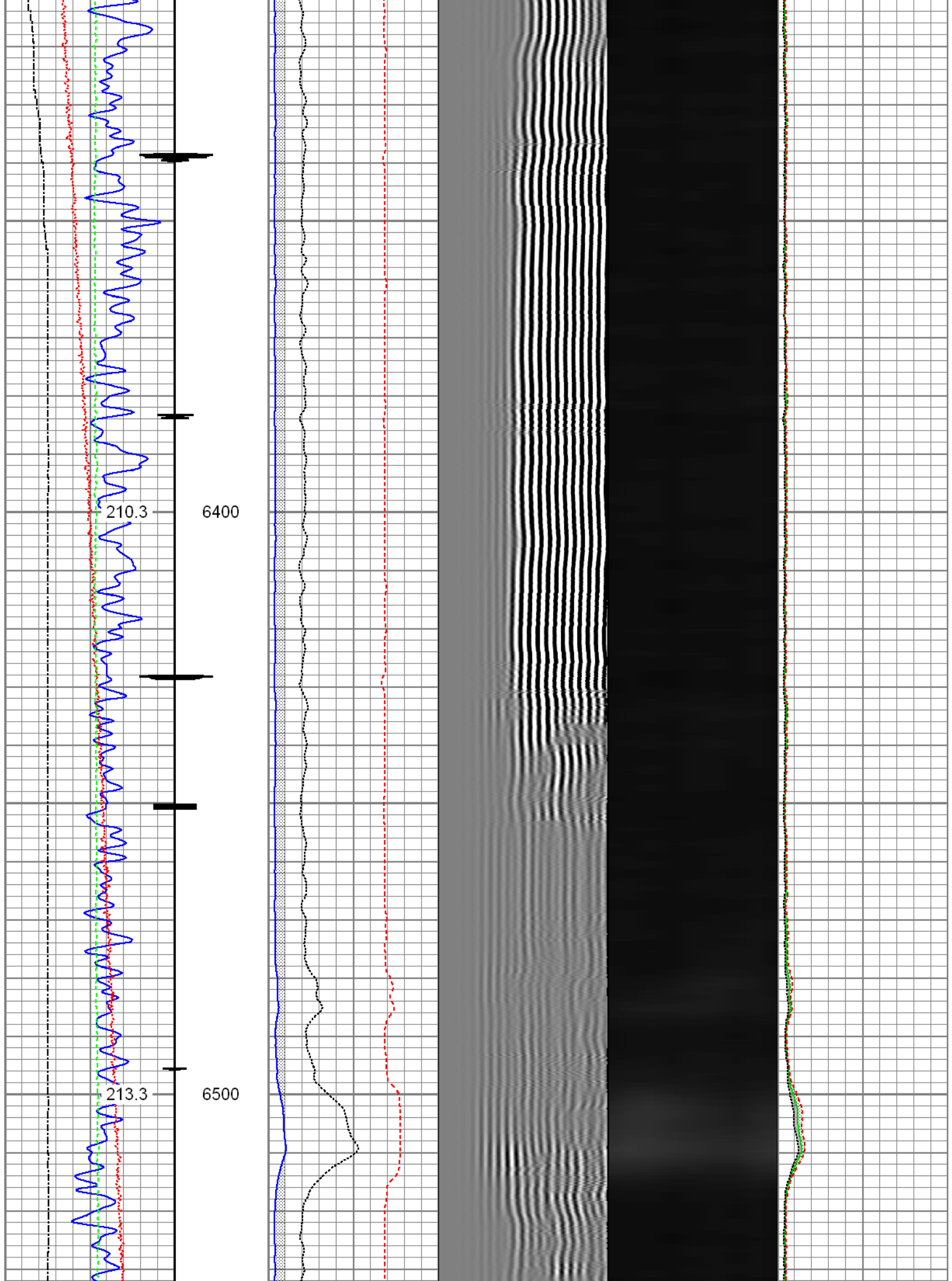


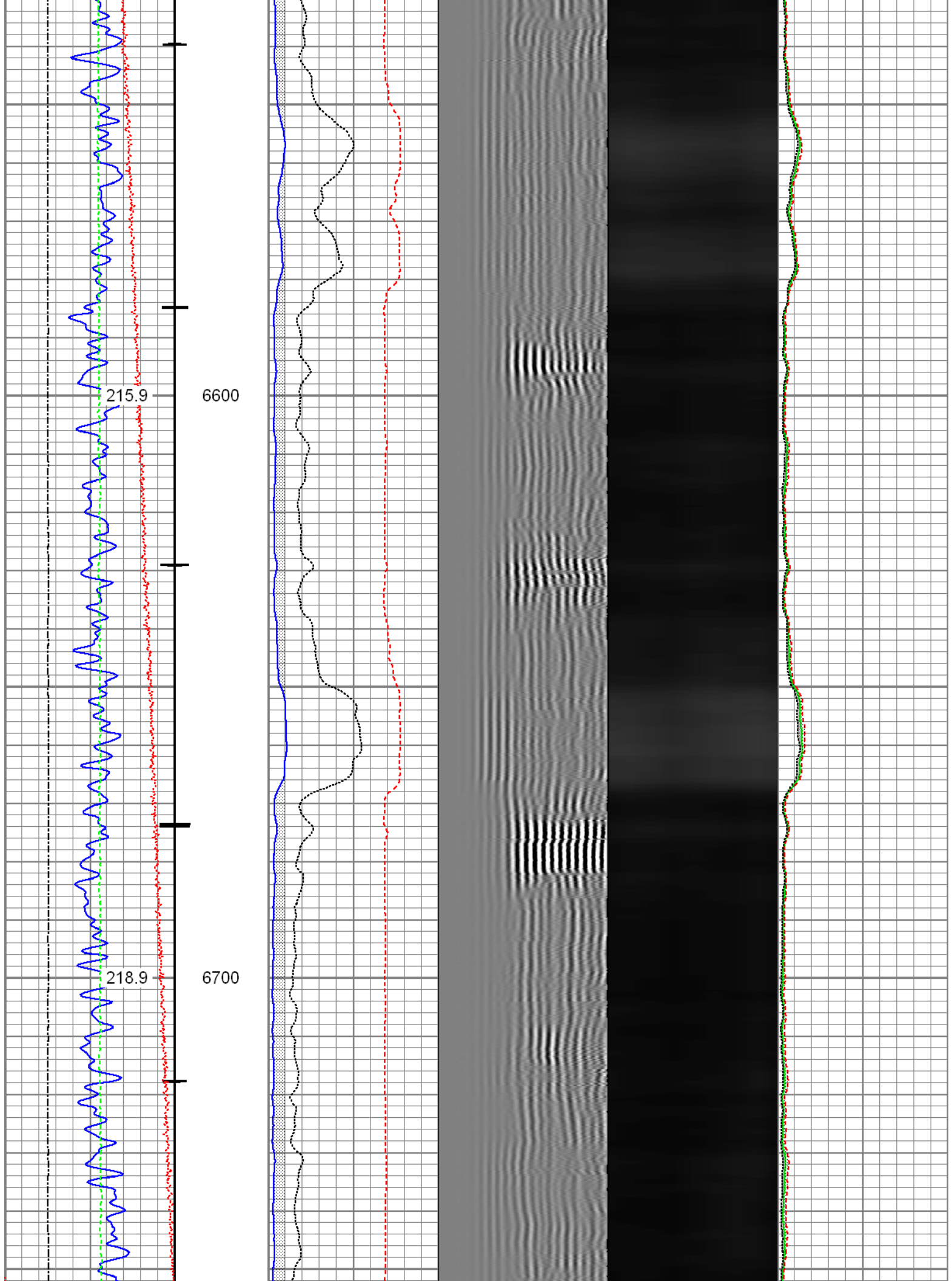


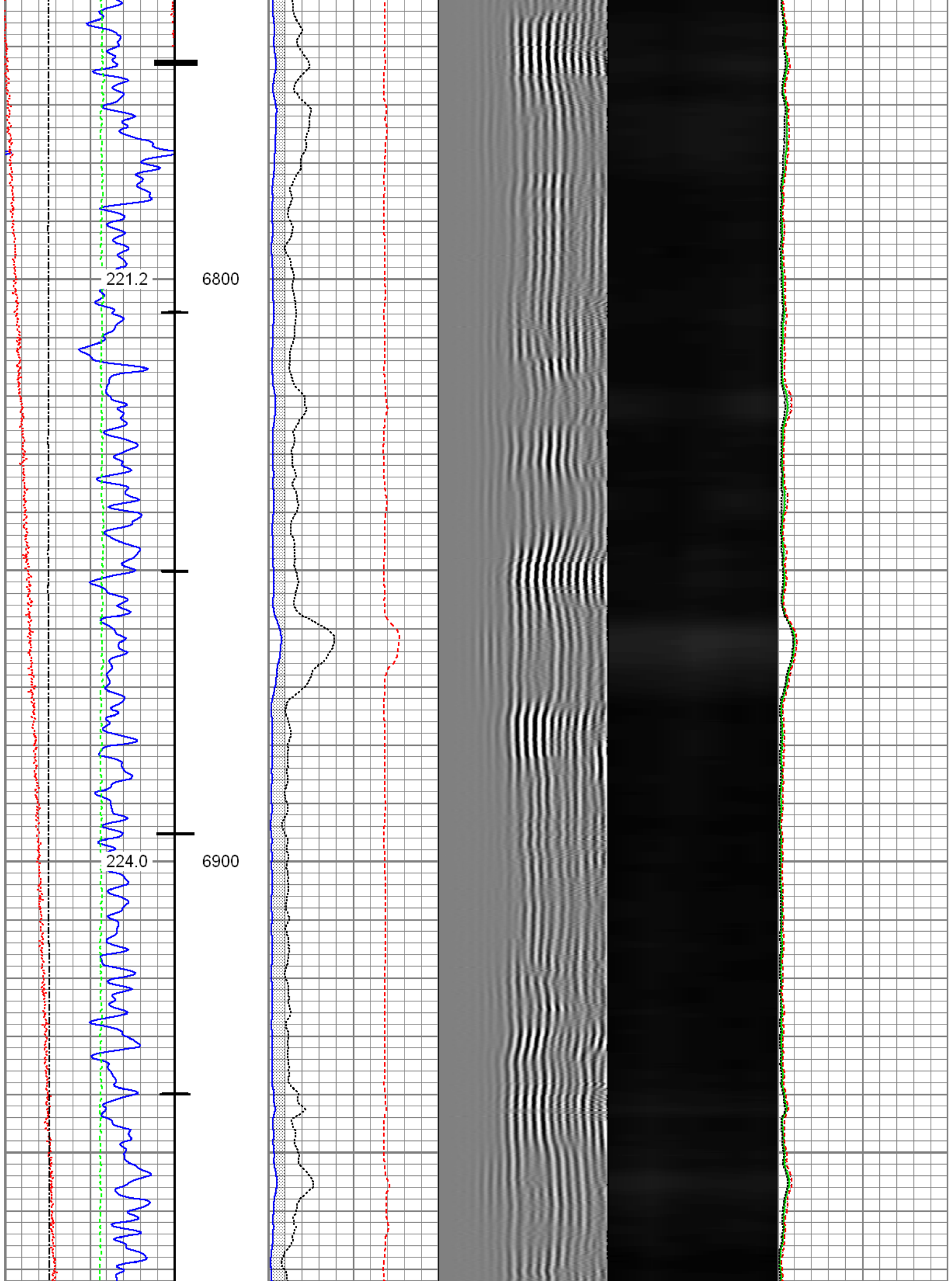


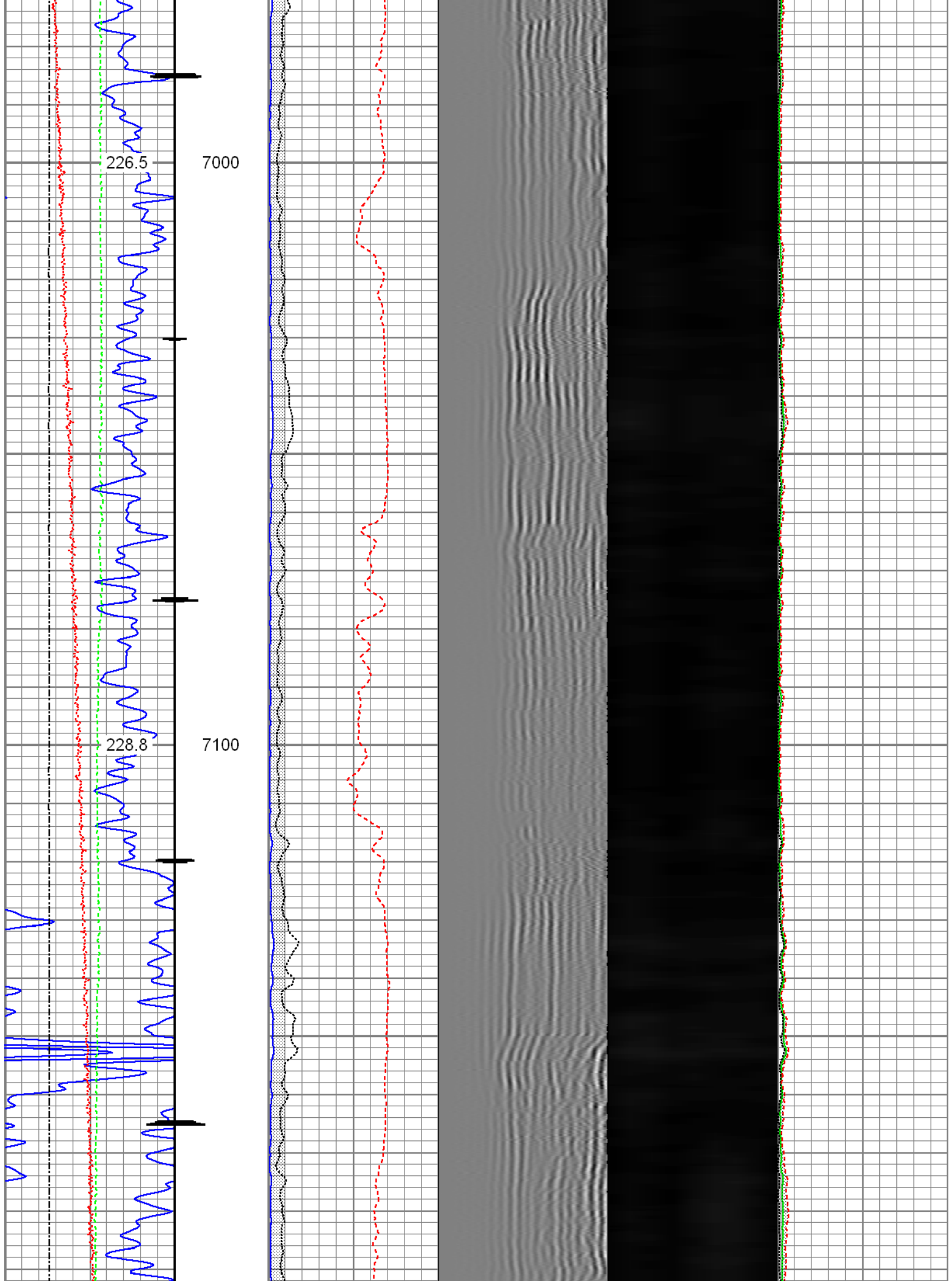


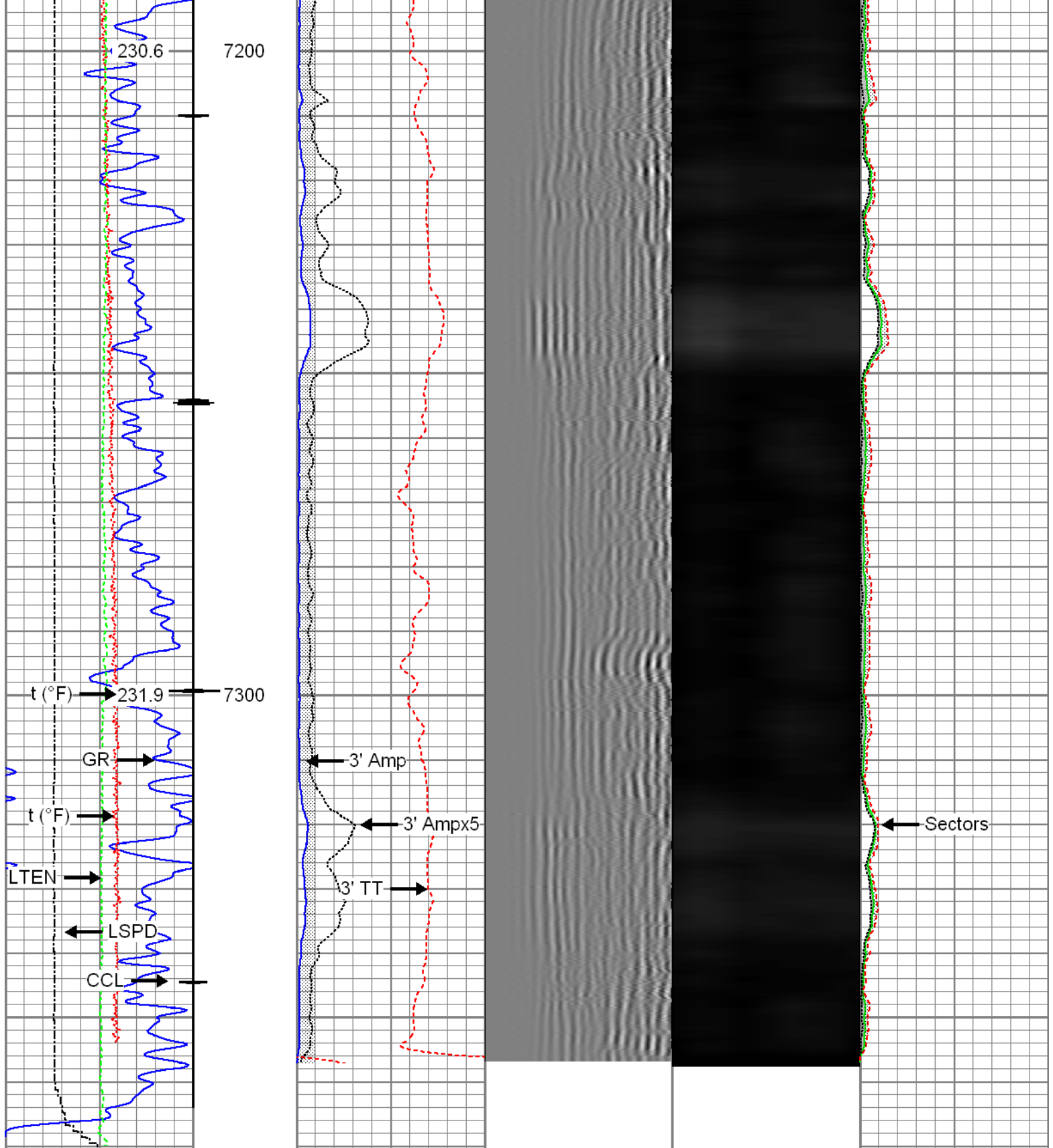













Gamma Ray (GAPI)	3' Amplitude (mV)	5' Variable Density Log	Sector Map	Average Amplitude
0 120	0 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5 (mV)			Minimum Amplitude
Temperature (degF)	0 20			0 100
Line Speed (ft/min)	3' Travel Time (usec)			Maximum Amplitude
-150 150	650 150			0 100
Line Tension (lb)				
0 2000				

(lb) 2000



Repeat Section

Recorded with 2800 PSI Surface Induced Pressure

Database File: c:\warrior\data\0512341310_anadarko_bane 27n1-9hz_09-02-15_rbl\0512341310_anadarko_bane 27

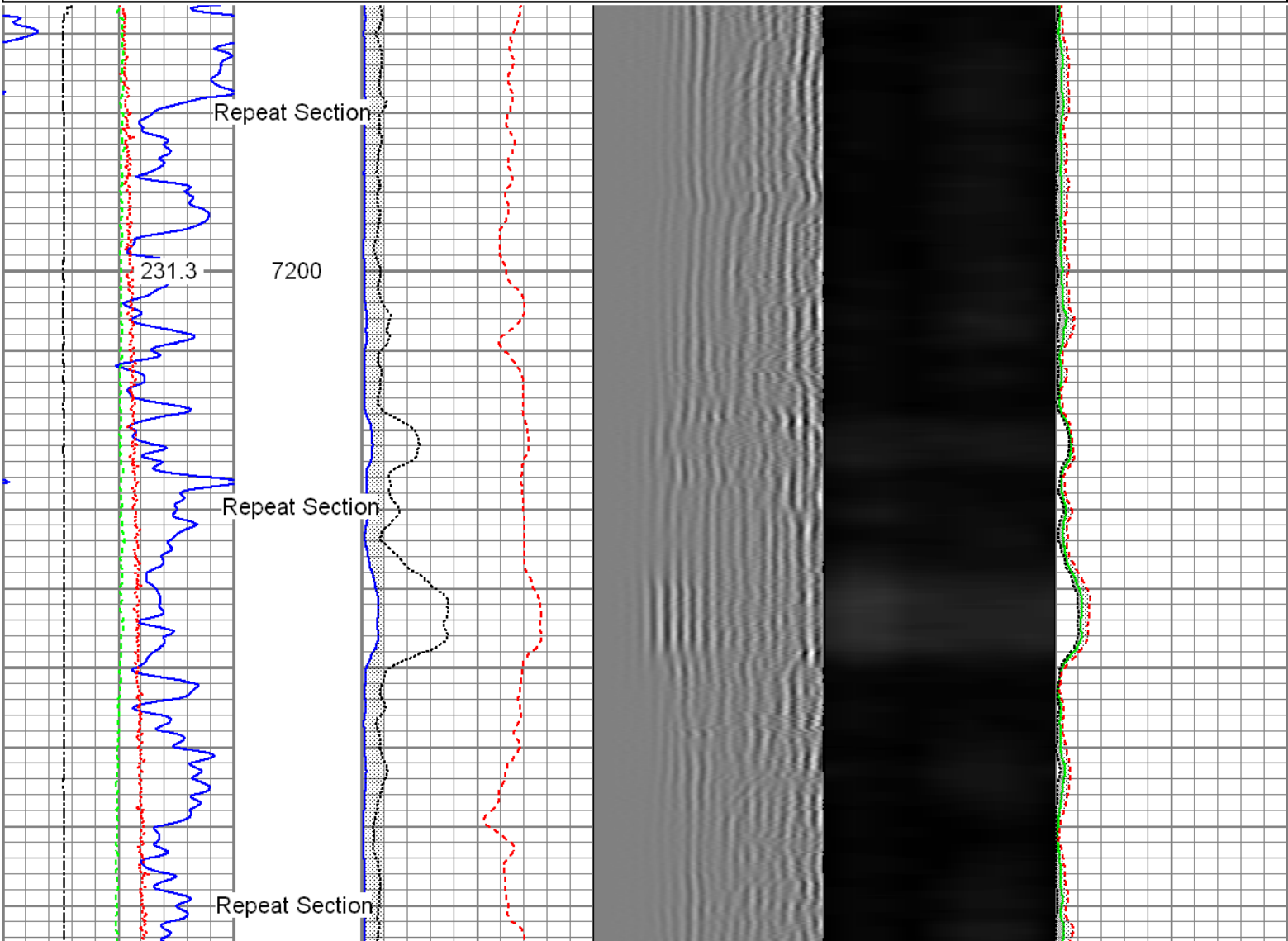
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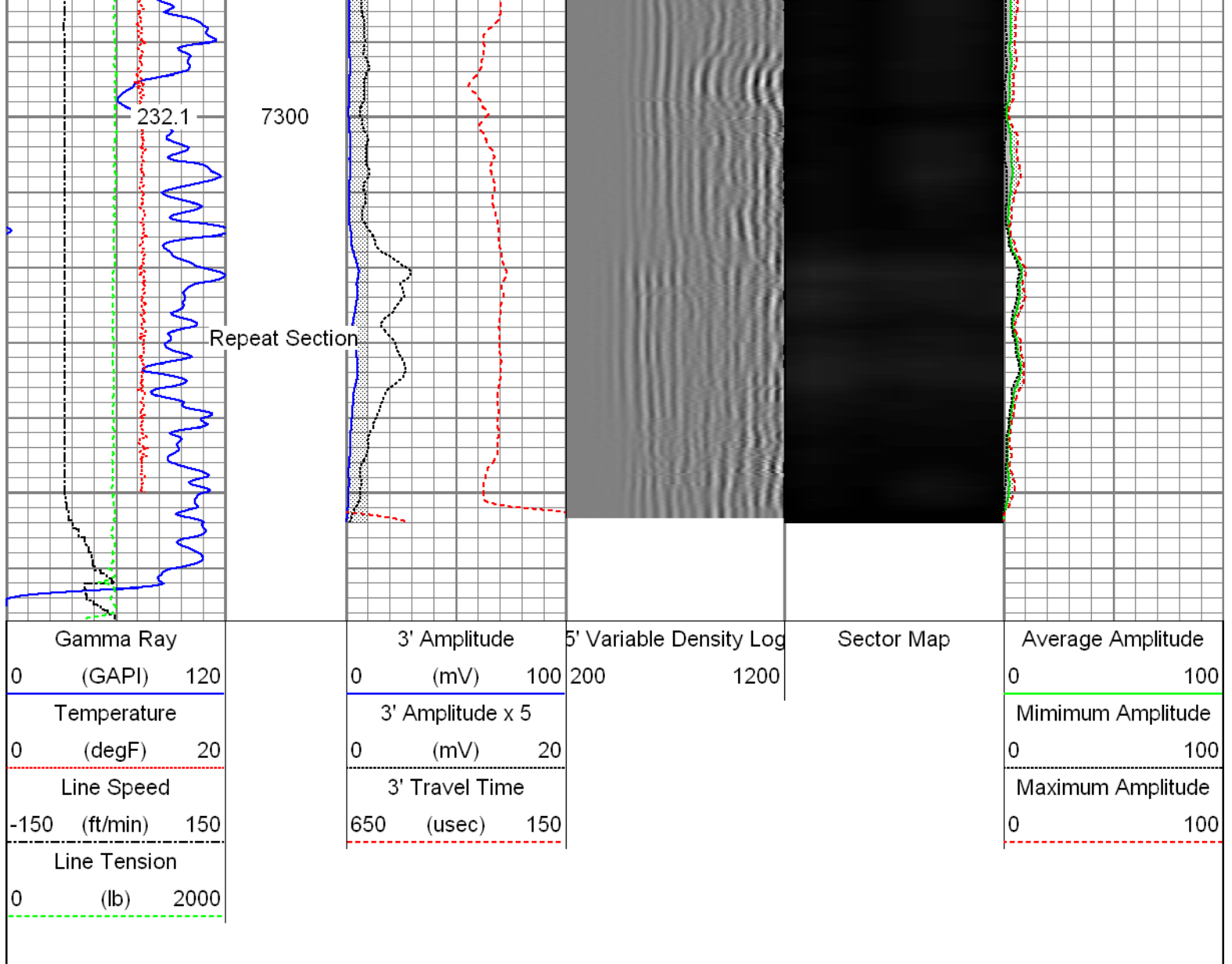
Presentation Format: radii

Dataset Creation: Wed Sep 02 12:50:16 2015 by Log 7.0 B1

Charted by: Depth in Feet scaled 1:240

Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Temperature	3' Amplitude x 5			Minimum Amplitude
0 (degF) 20	0 (mV) 20			0 100
Line Speed	3' Travel Time			Maximum Amplitude
-150 (ft/min) 150	650 (usec) 150			0 100
Line Tension				
0 (lb) 2000				





Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Head/Volt	19.49					
Temp	16.72					
WVF3FT WVFCAL	14.55 14.55		Probe_RADII-C-2-3/4" (FW1302-001) Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.19	2.75	105.00

Calibration Depth: 914.080 ft

Master Calibration, performed Wed Sep 02 10:39:33 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.004	0.705	0.800	71.921	101.520	0.389
CAL	0.004	0.857				
5'	0.004	0.611	0.800	71.921	117.197	0.305
SUM						
S1	0.004	0.690	0.000	100.000	145.957	-0.641
S2	0.004	0.721	0.000	100.000	139.476	-0.550
S3	0.004	0.744	0.000	100.000	135.157	-0.564
S4	0.004	0.742	0.000	100.000	135.488	-0.556
S5	0.004	0.719	0.000	100.000	139.891	-0.541
S6	0.004	0.690	0.000	100.000	145.711	-0.603
S7	0.004	0.681	0.000	100.000	147.630	-0.575
S8	0.004	0.690	0.000	100.000	145.835	-0.602

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.004	0.857	1.000	0.000

Air Zero Calibration, performed Wed Sep 02 10:39:55 2015:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.004		0.000		0.000	
5'	0.004		0.000		0.000	
SUM						
S1	0.004		0.000		0.000	
S2	0.004		0.000		-0.000	
S3	0.004		0.000		-0.000	
S4	0.004		0.000		-0.000	
S5	0.004		0.000		0.000	
S6	0.004		0.000		0.000	
S7	0.004		0.000		-0.000	
S8	0.004		0.000		0.000	



Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Bane 27N1-9HZ
Field Wattenberg
County Weld
State Colorado