



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.				
Well	Wilson Ranch 34N-27HZ				
Field	Wattenberg				
County	Weld				
State	Colorado				
Location:	API # : 05-123-41065				
SEC 26 TWP 4N RGE 68W	Other Services				
	Gauge Ring				
	Elevation				
	Permanent Datum Ground Level Elevation 5072'				
Log Measured From	Kelly Bushing 20 FT				
Drilling Measured From	Kelly Bushing				
		K.B. 5092'			
		D.F. 5091'			
		G.L. 5072'			

Date	26-Jan-2016
Run Number	Two
Depth Driller	16792 FT
Depth Logger	7343 FT
Bottom Logged Interval	7340 FT
Top Log Interval	Surface
Open Hole Size	7.875"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	225°F
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	15:26
Equipment Number	HD-0325
Location	Fort Lupton, CO
Recorded By	R. Cameron
Witnessed By	Levi McArthur

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	J-55	Surface	1849 FT		
Intermediate #1	5 1/2	17	HCP-110	Surface	16792 FT		
Intermediate #2							
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  
Depth referenced to Casing Tally reported Marker Joint at 6623 FT  
Adjusted log +2 FT to correlate with Marker Joint  
Gauge Ring/Junk Basket ran to 7390 FT with no debris  
Recorded with 2800 PSI Surface Induced Pressure  
Logging tools were clean and free of any debris upon completions of operations  
  
Thank you for choosing FMC Technologies Surface Integrated Services.



Main Pass

Recorded With 2800 PSI Surface Induced Pressure

Database File: c:\warrior\data\0512341065\_anadarko\_wilson ranch 34n-27hz\_01-26-16\_rbl\0512341065\_anadarko\_\

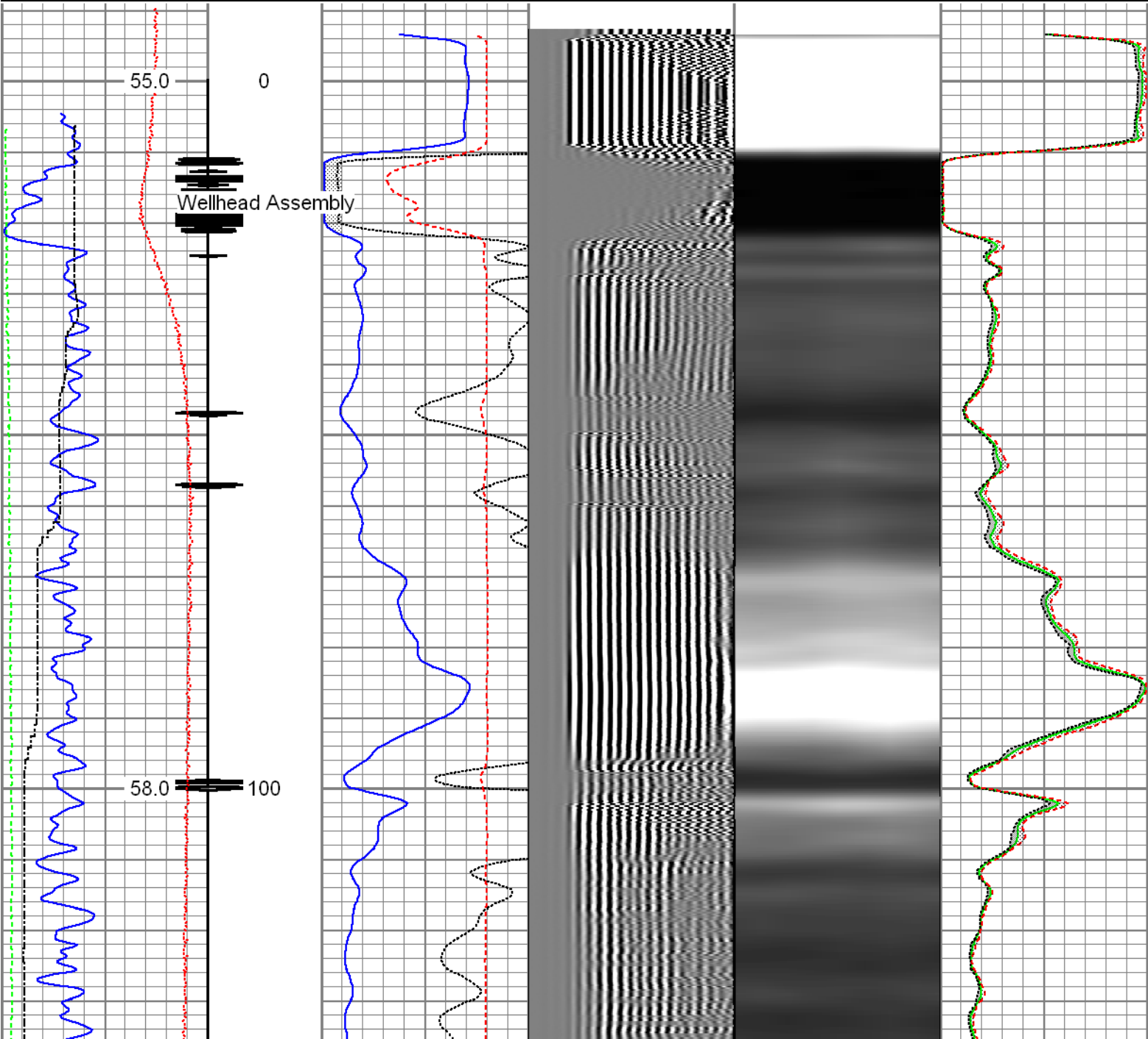
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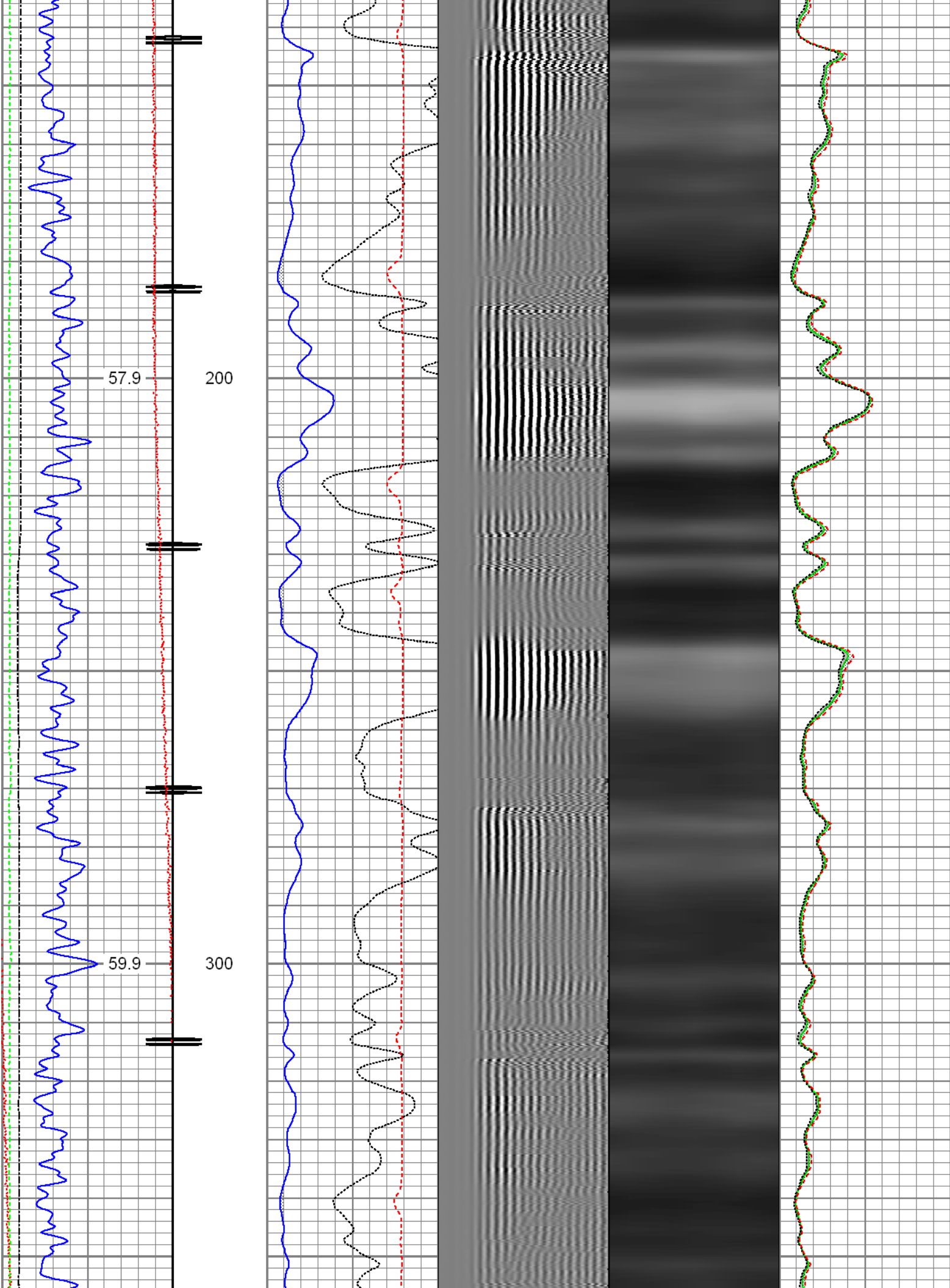
Presentation Format: radii

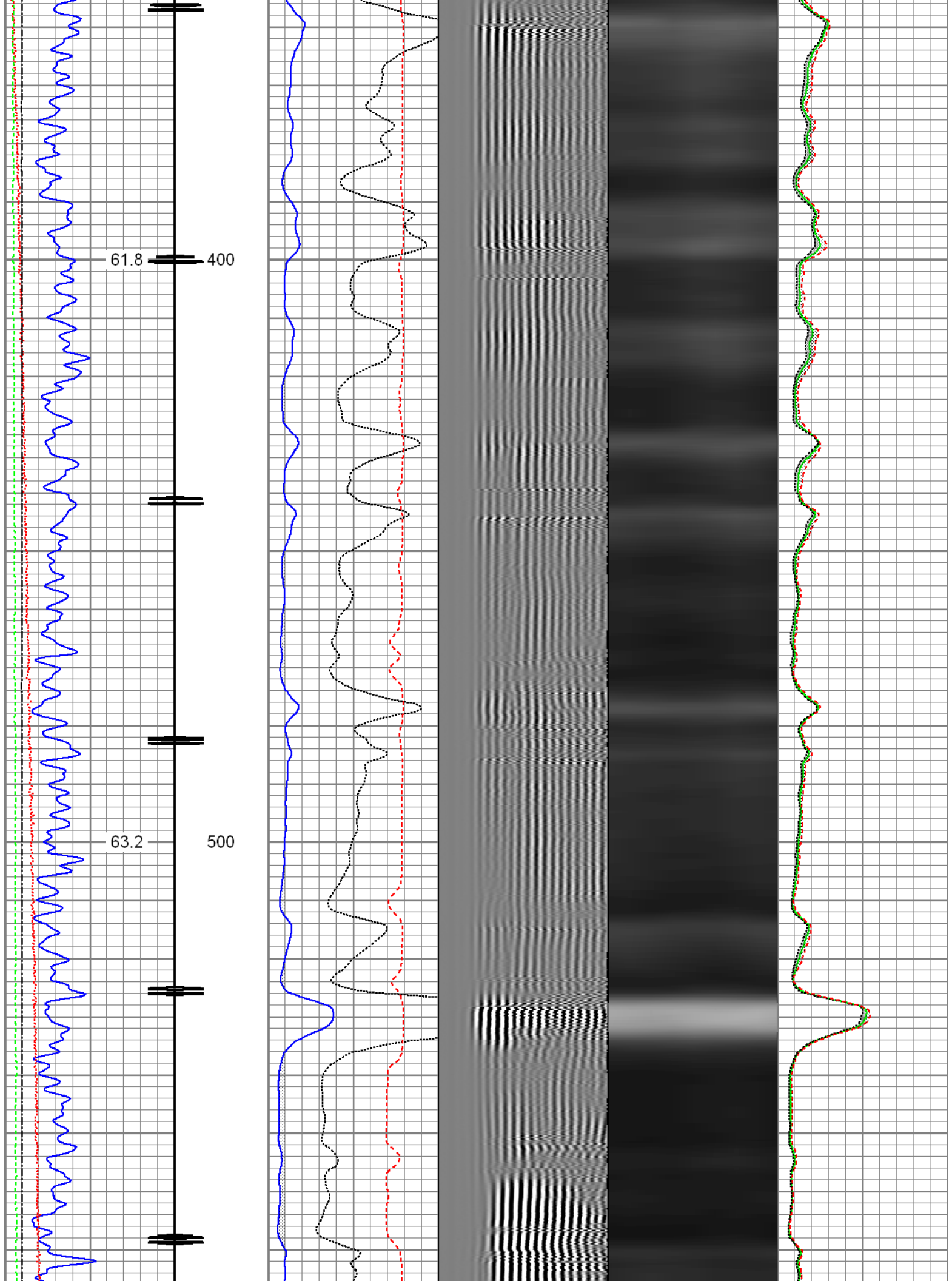
Dataset Creation: Sat Jan 30 08:56:48 2016 by Calc 7.0 B1

Charted by: Depth in Feet scaled 1:240

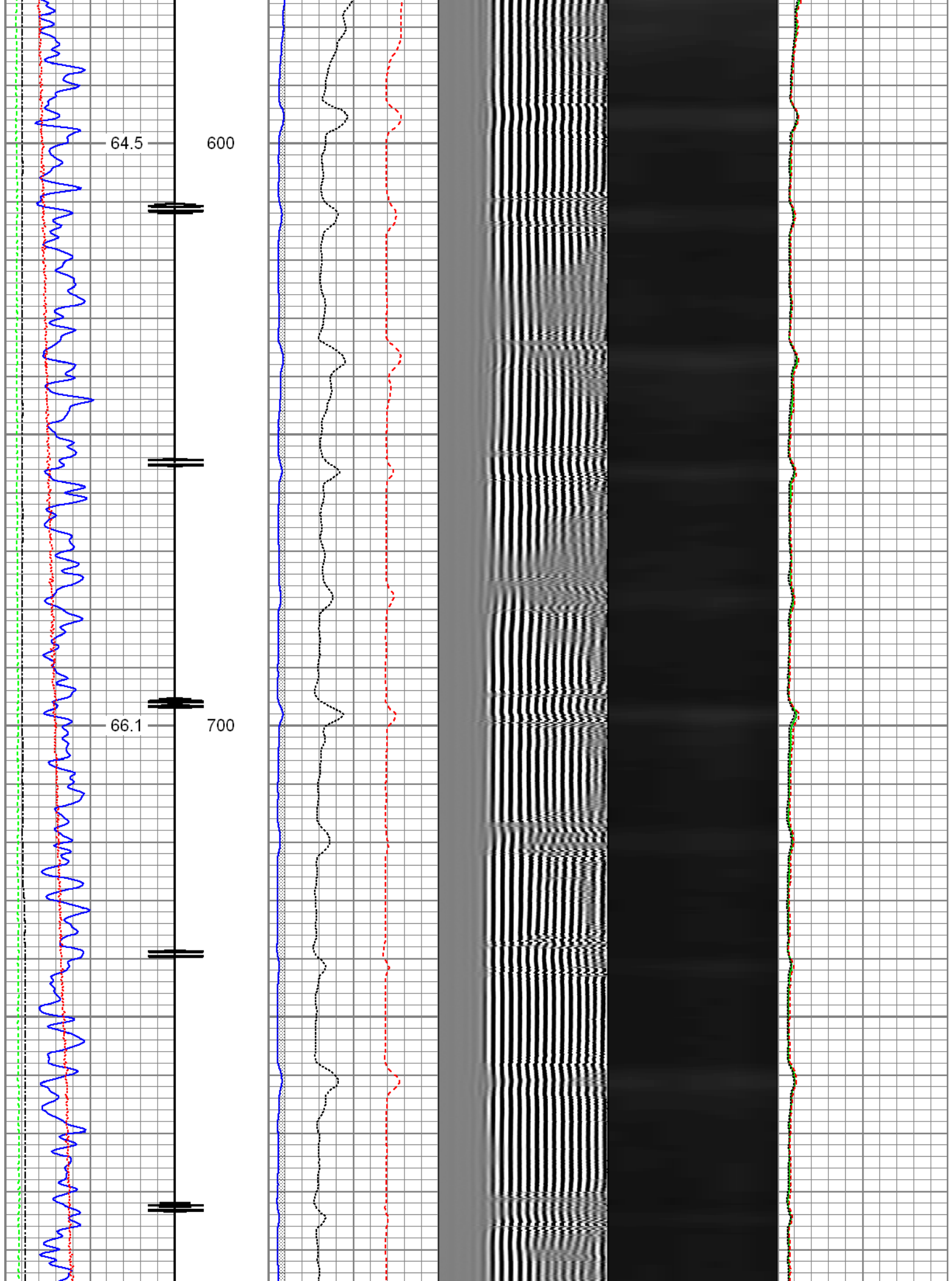
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150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

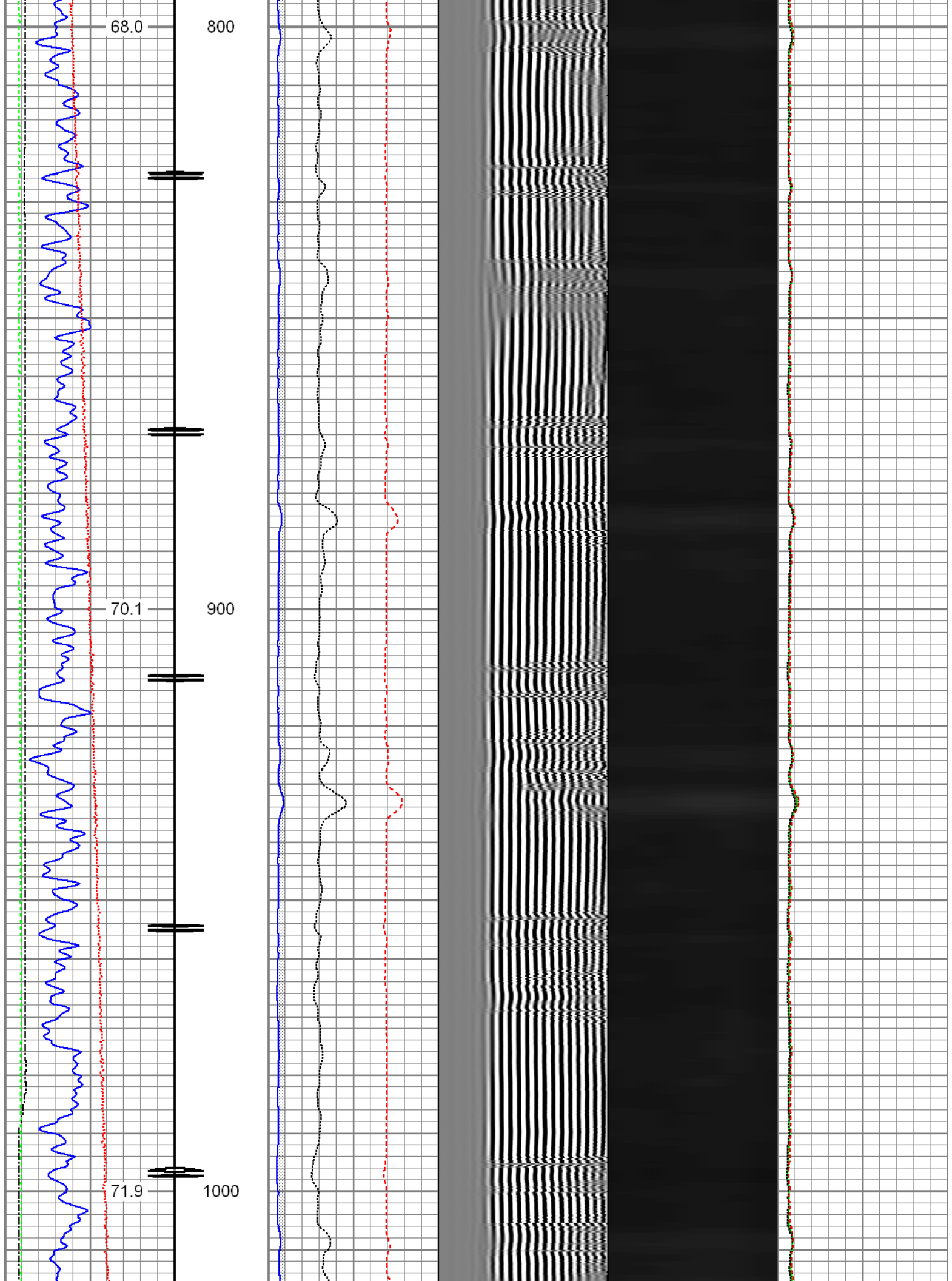


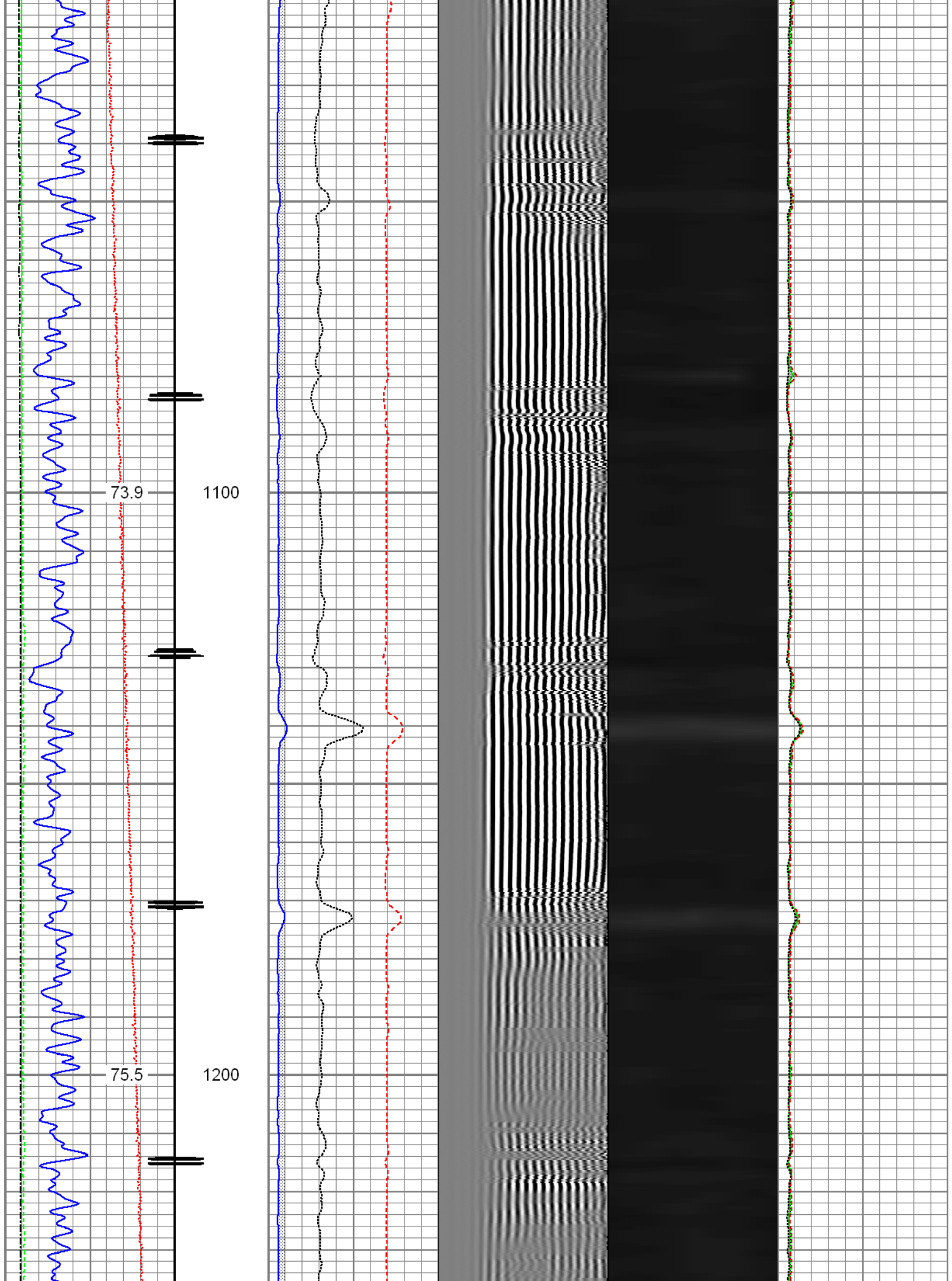


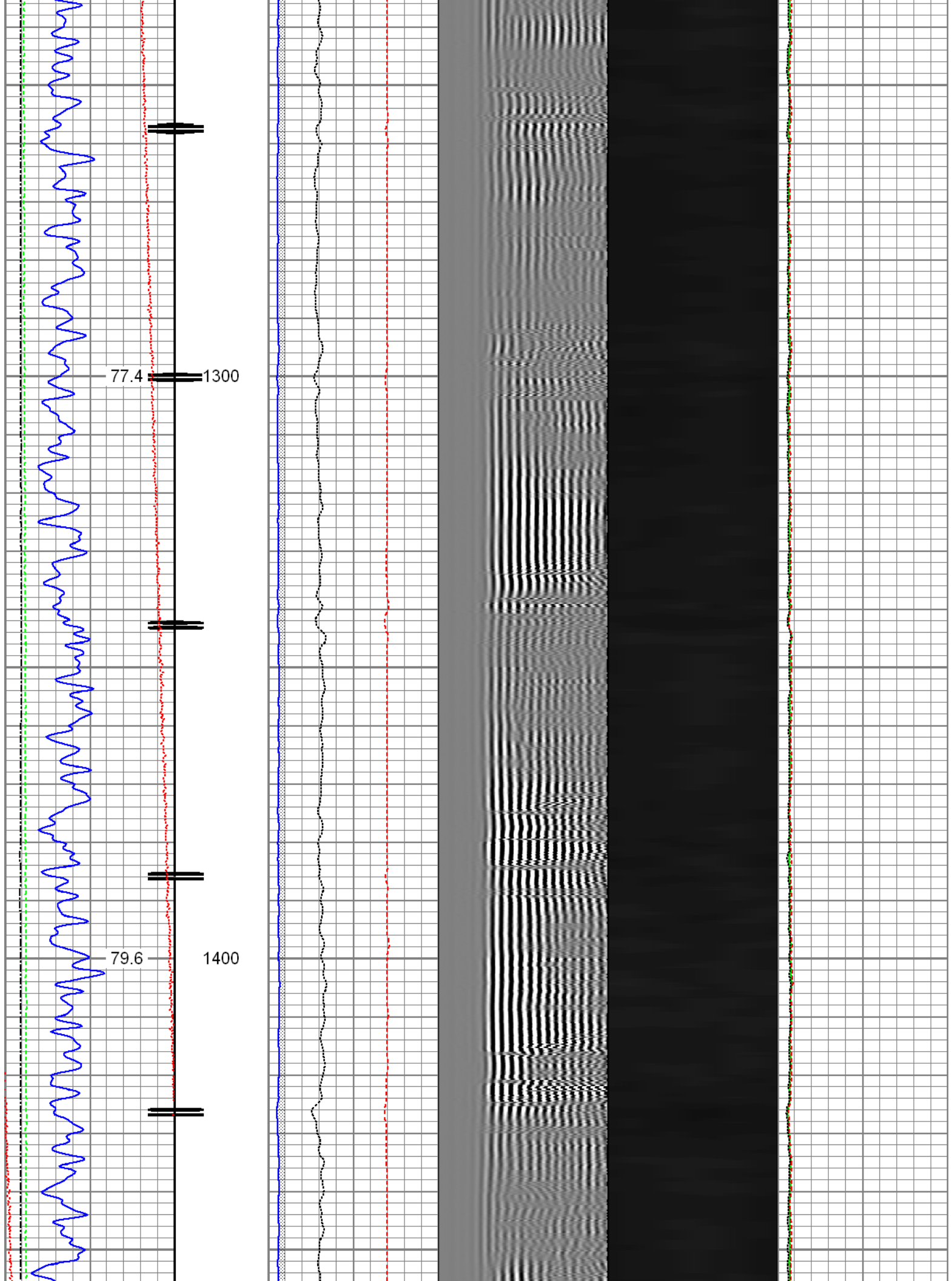




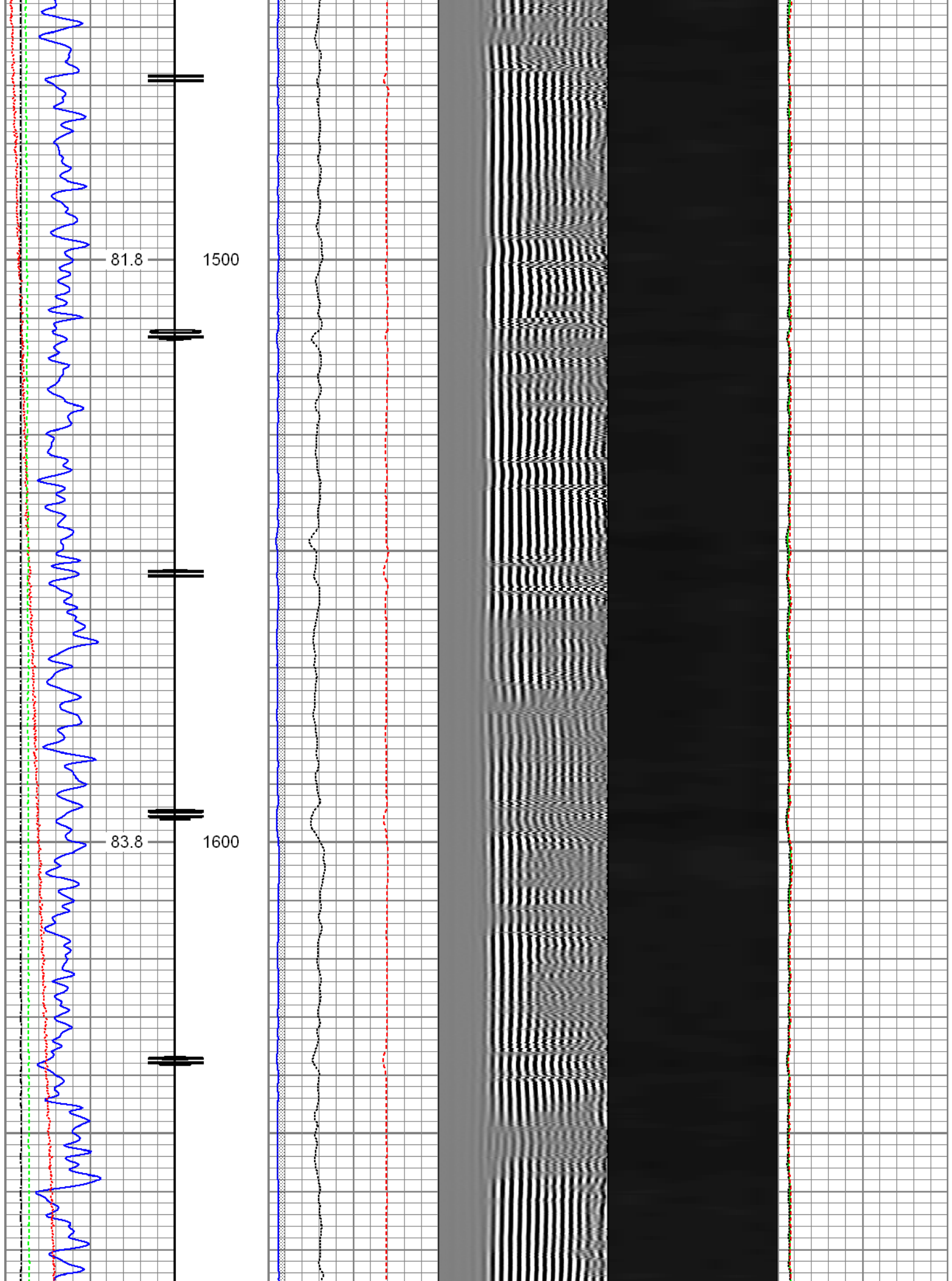


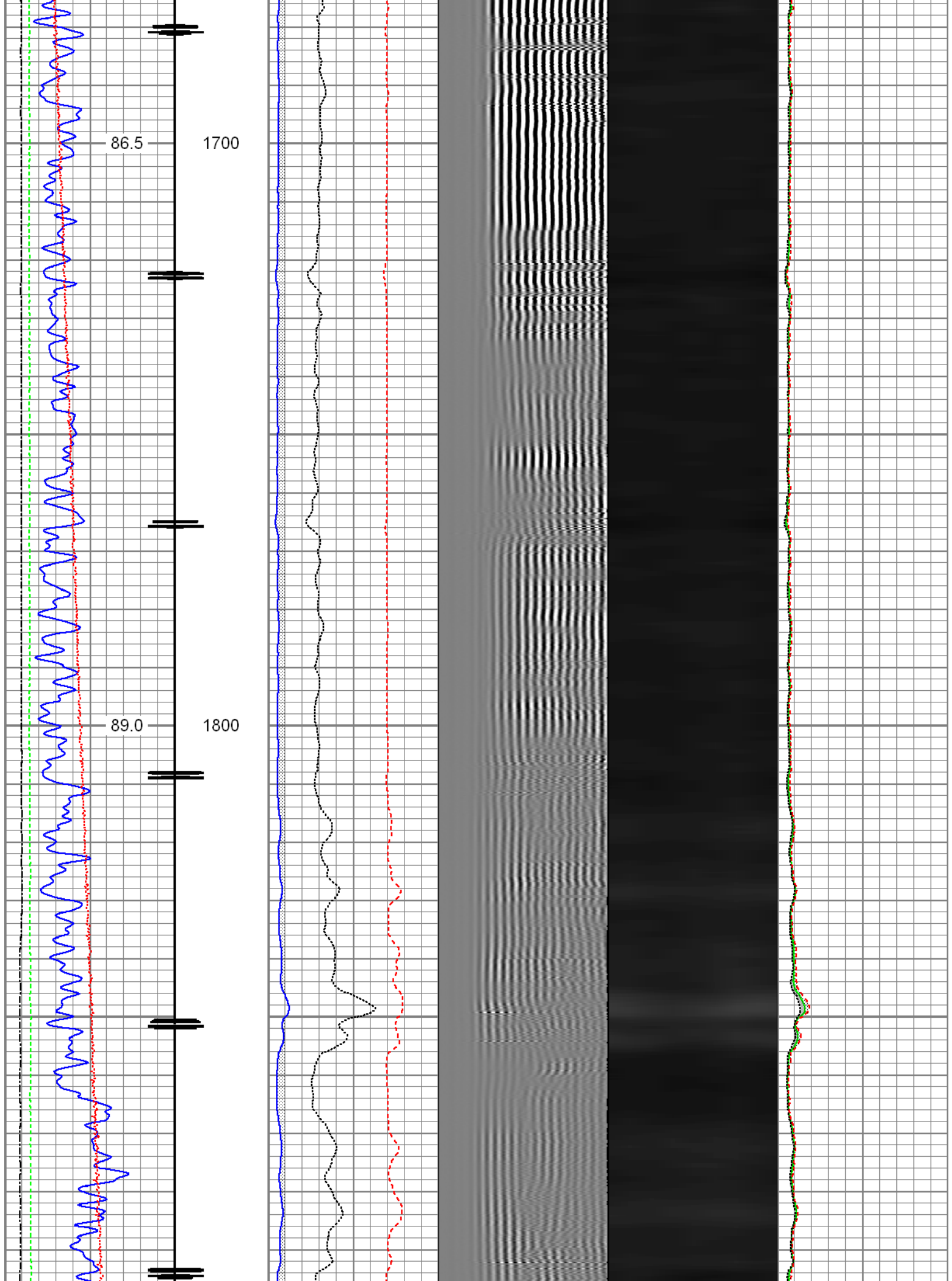


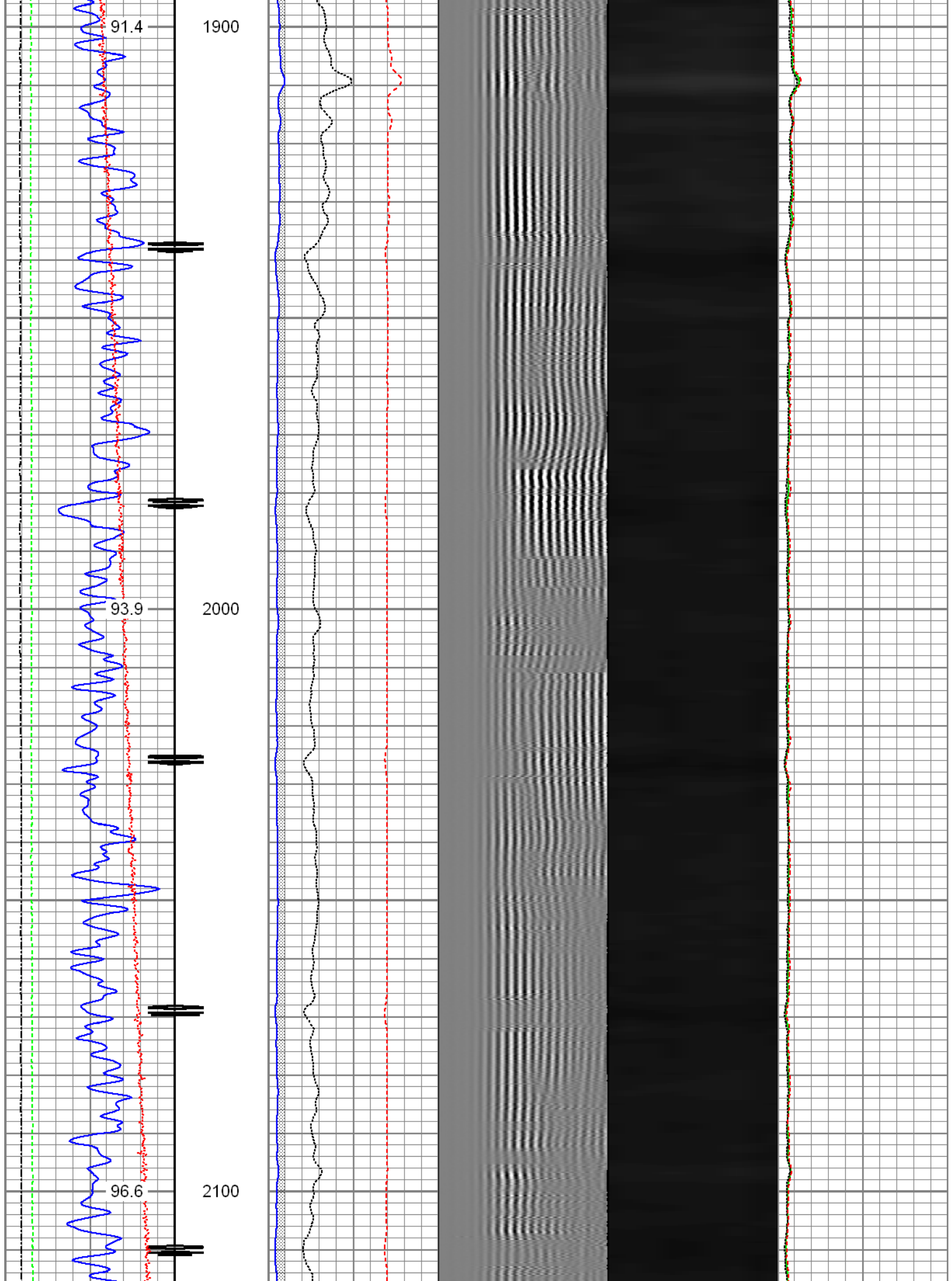


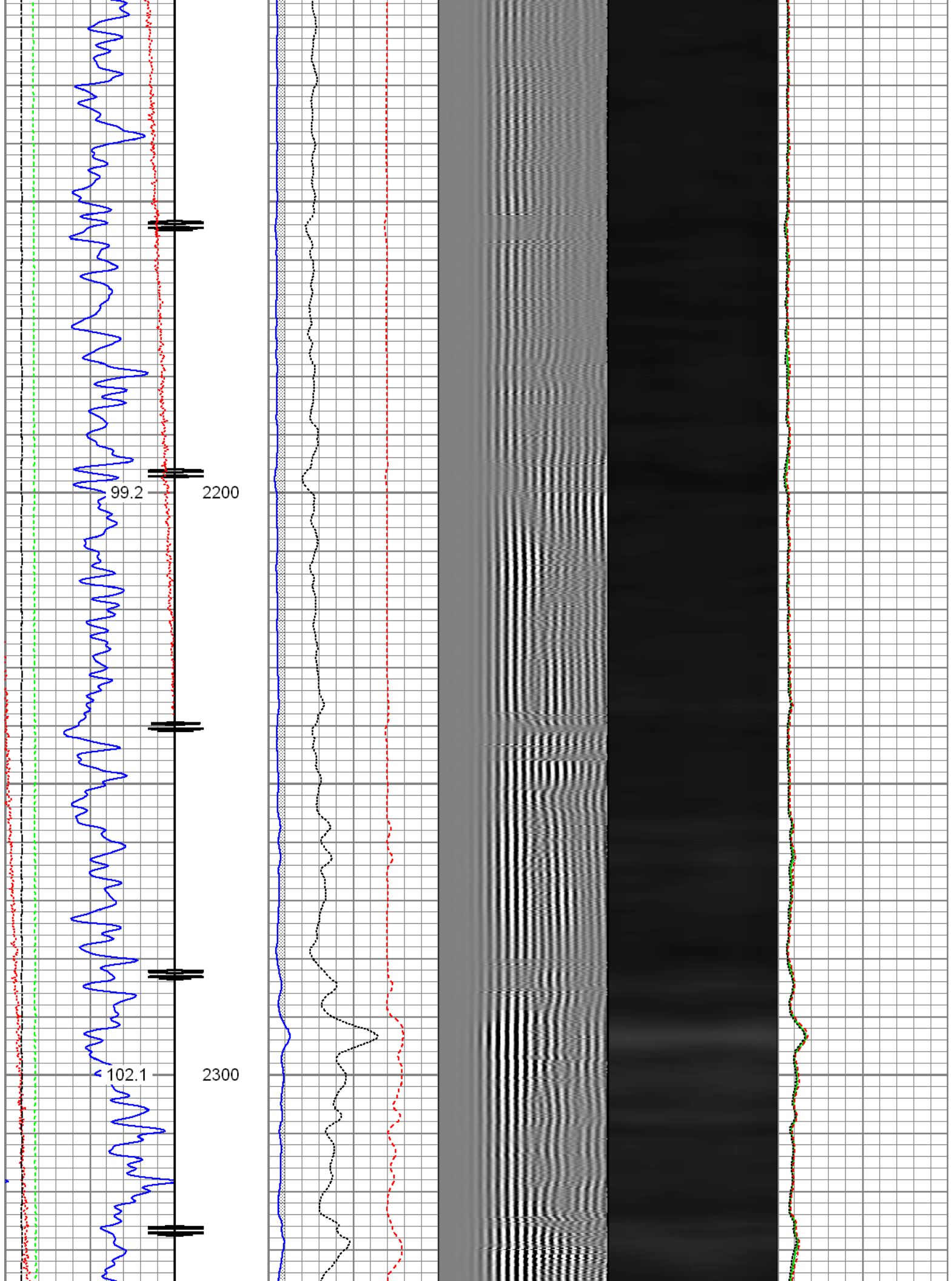




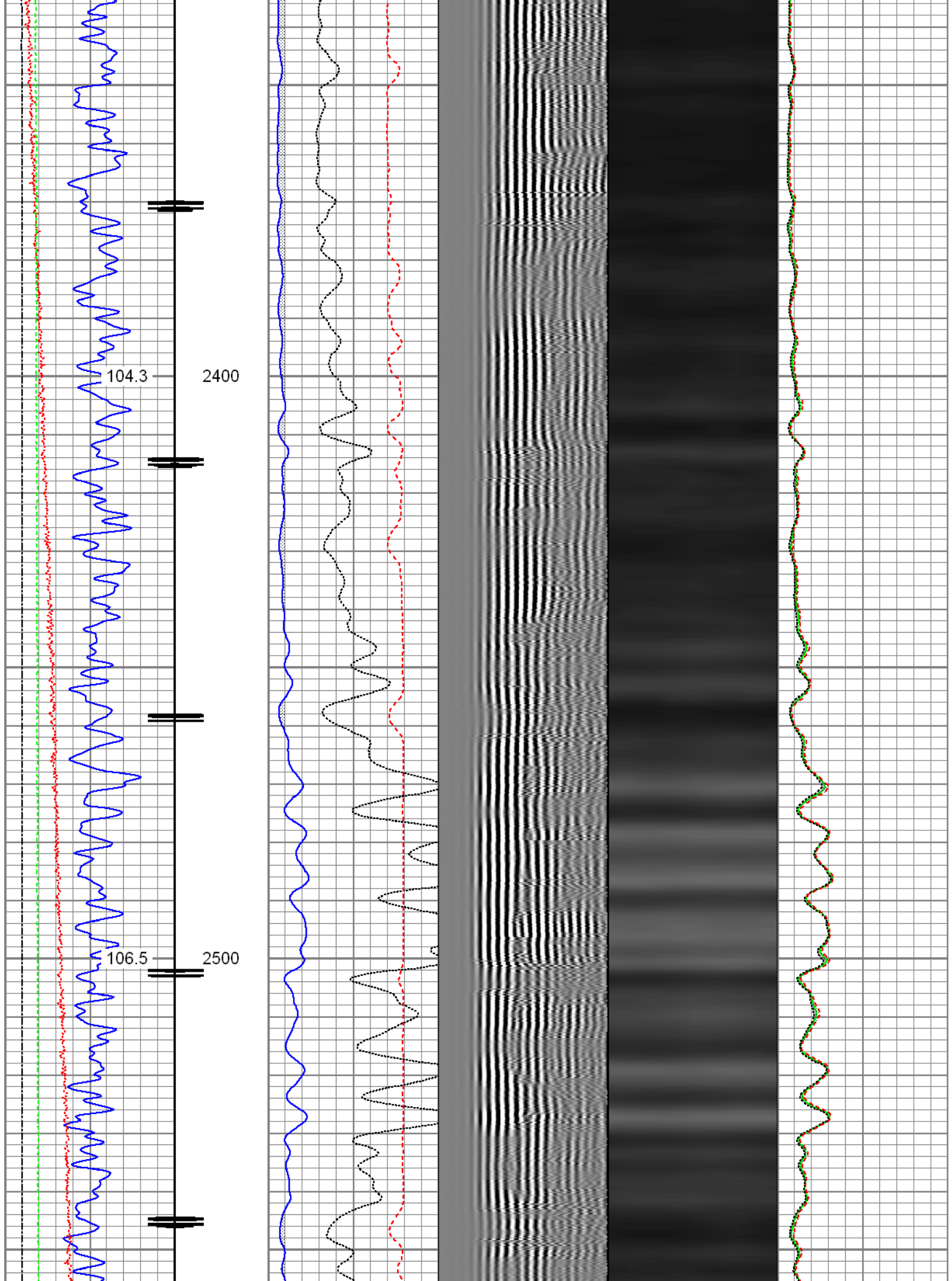


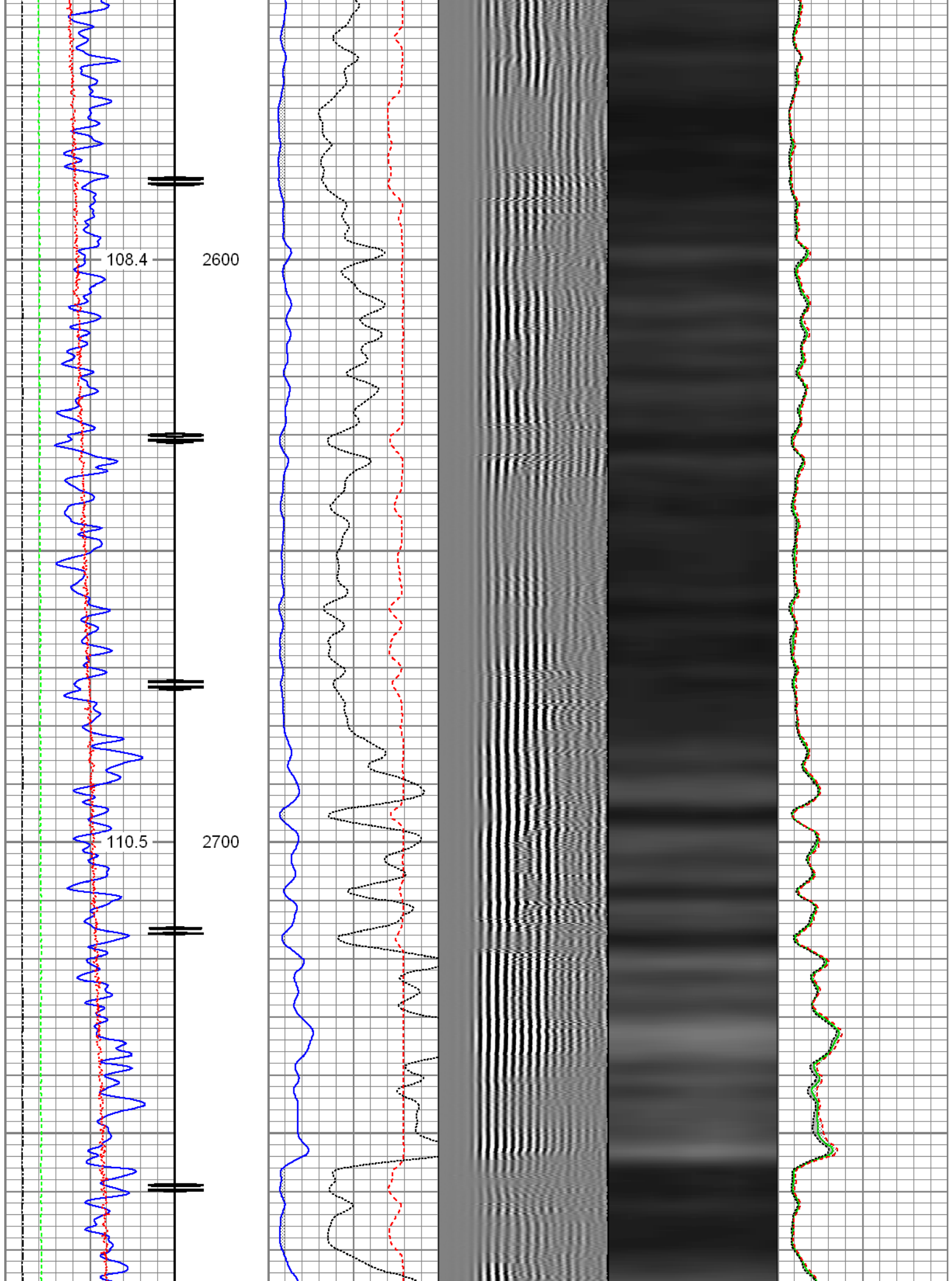


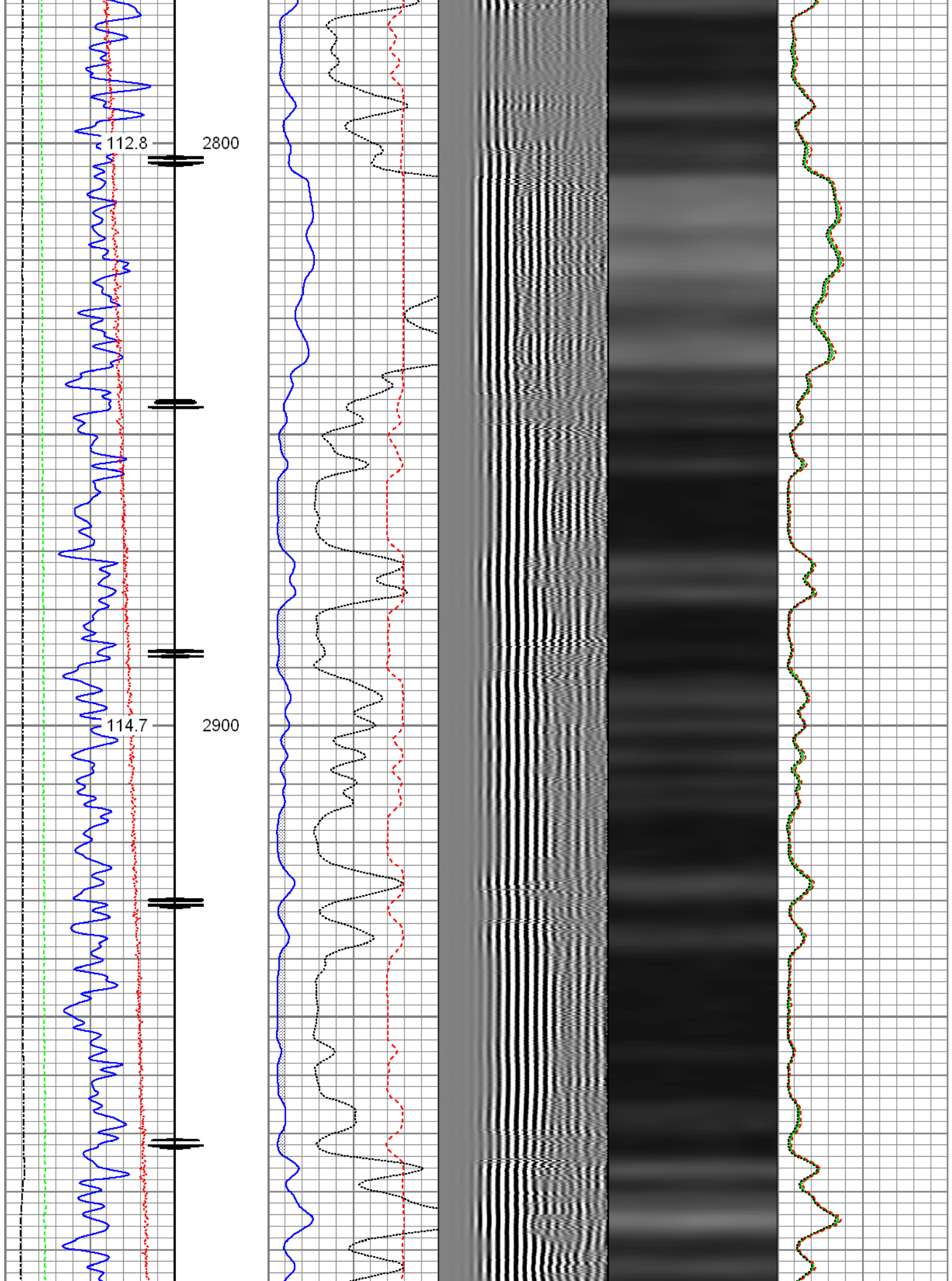




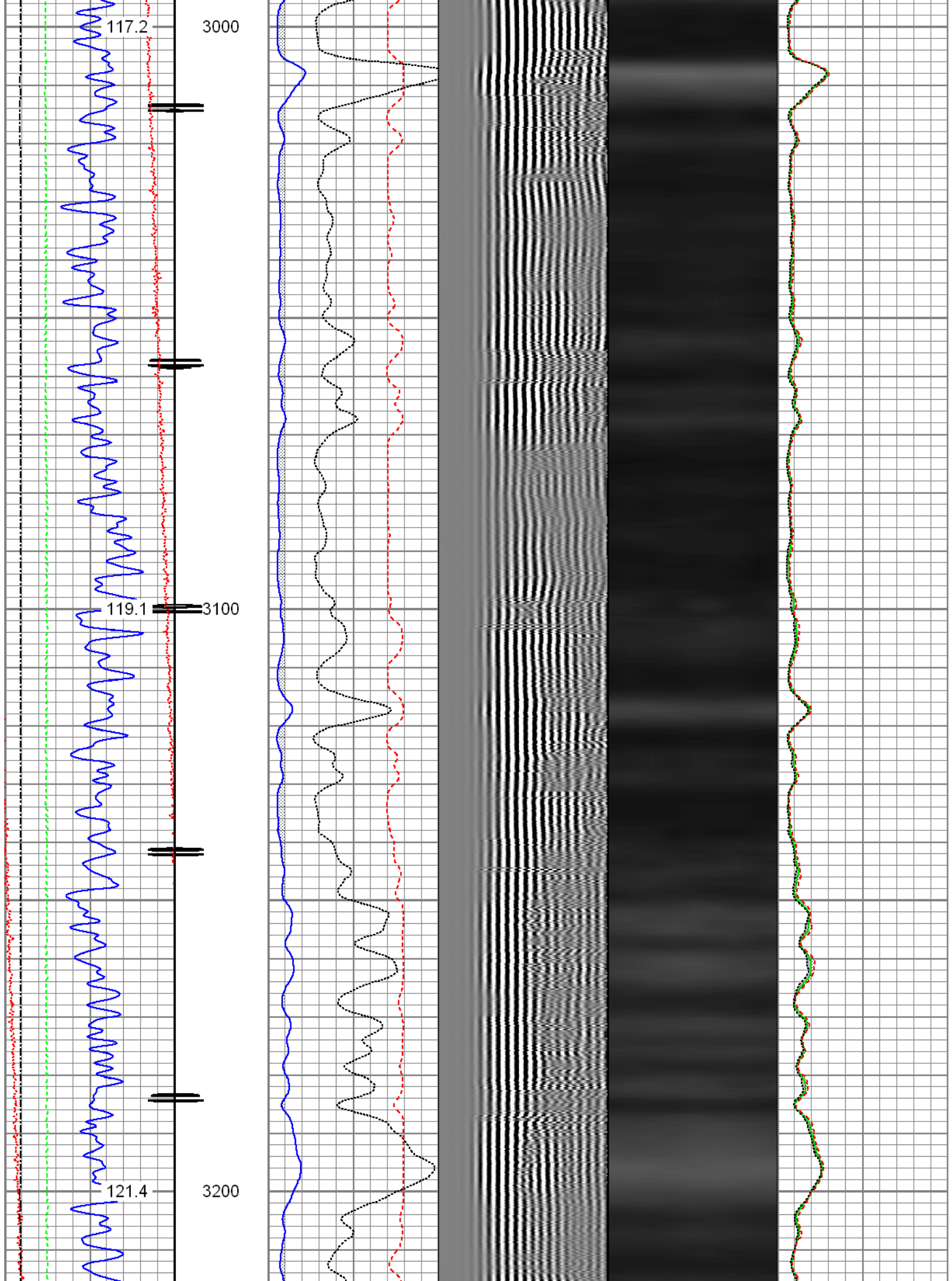




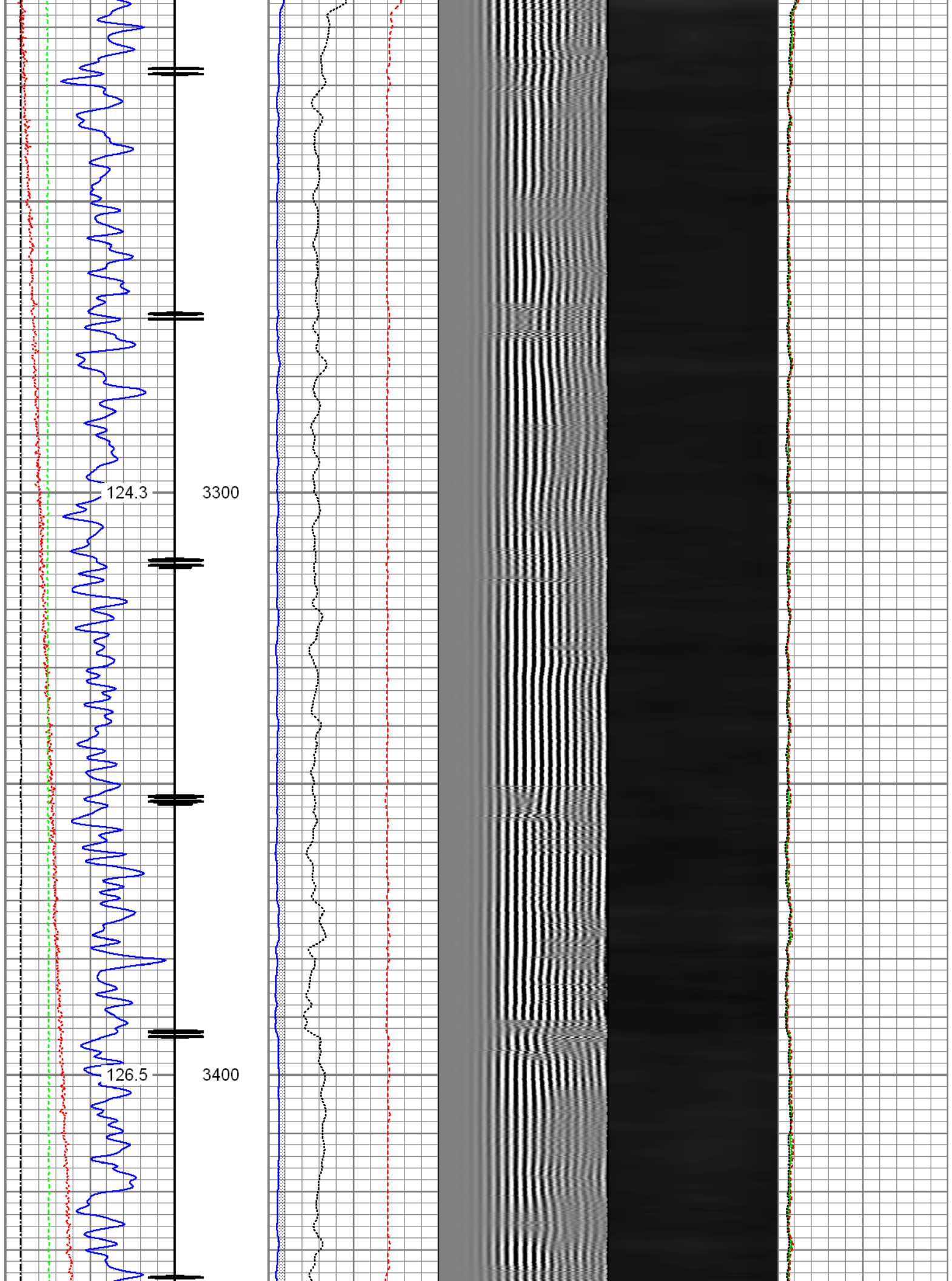


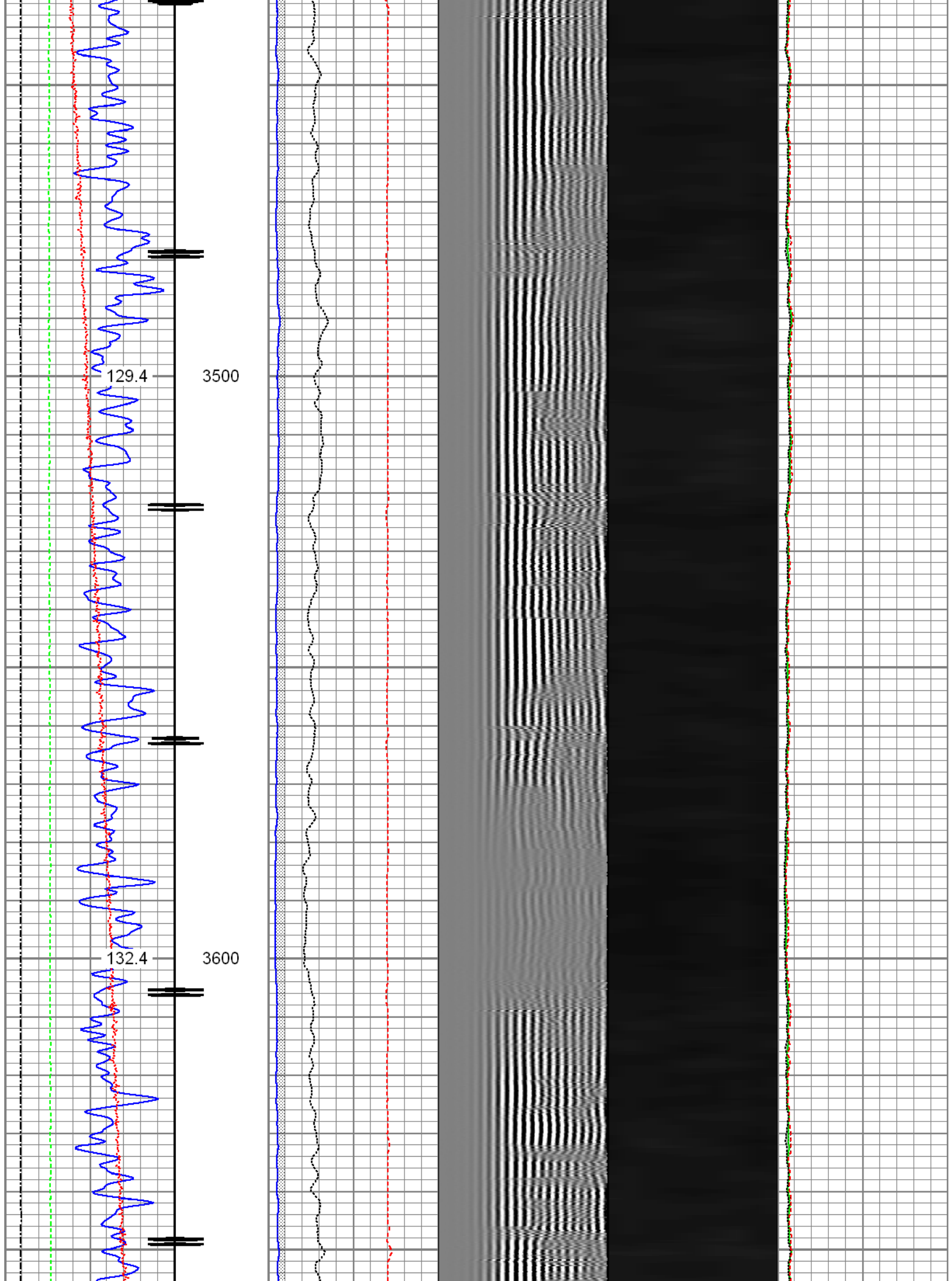


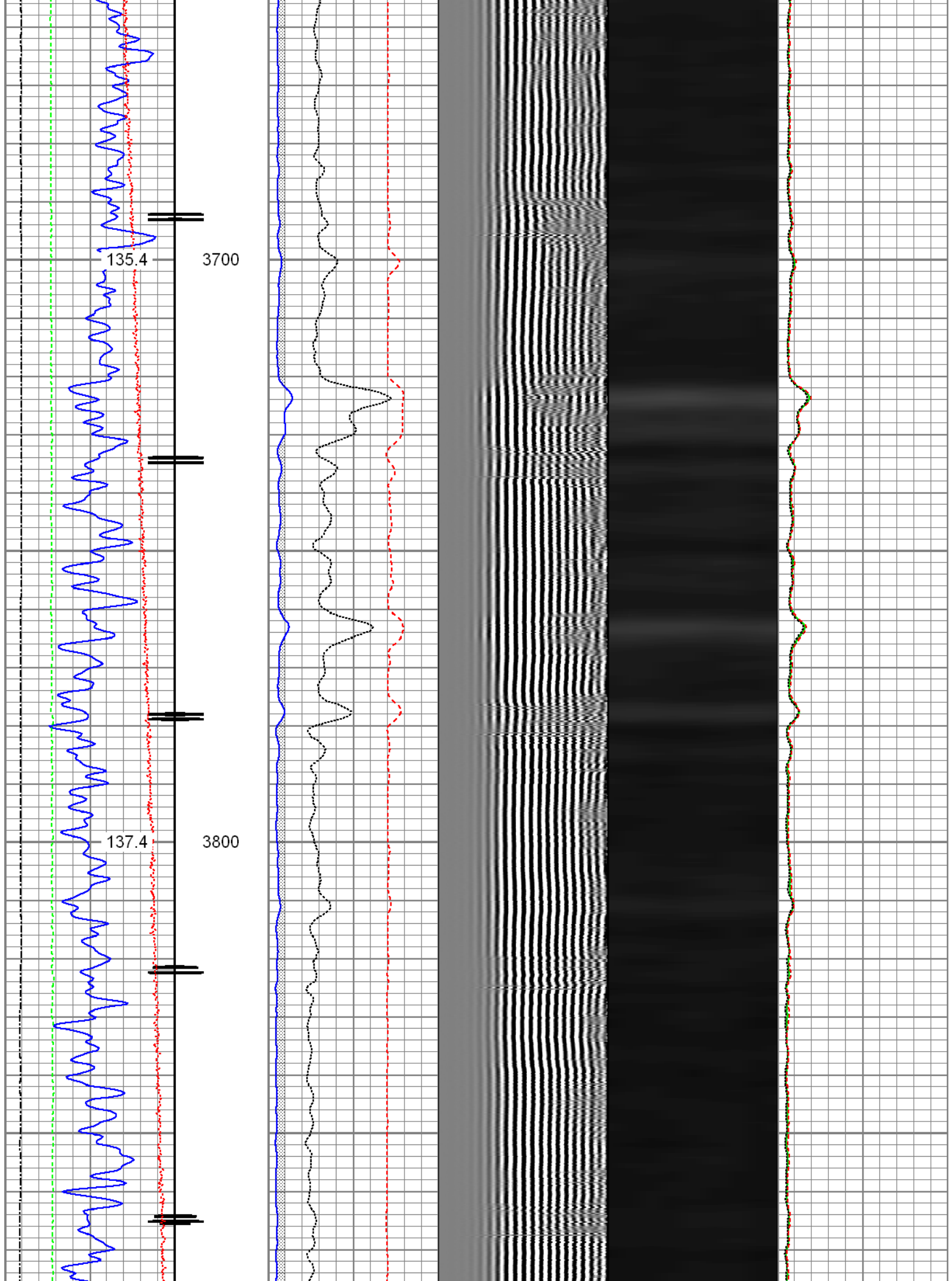


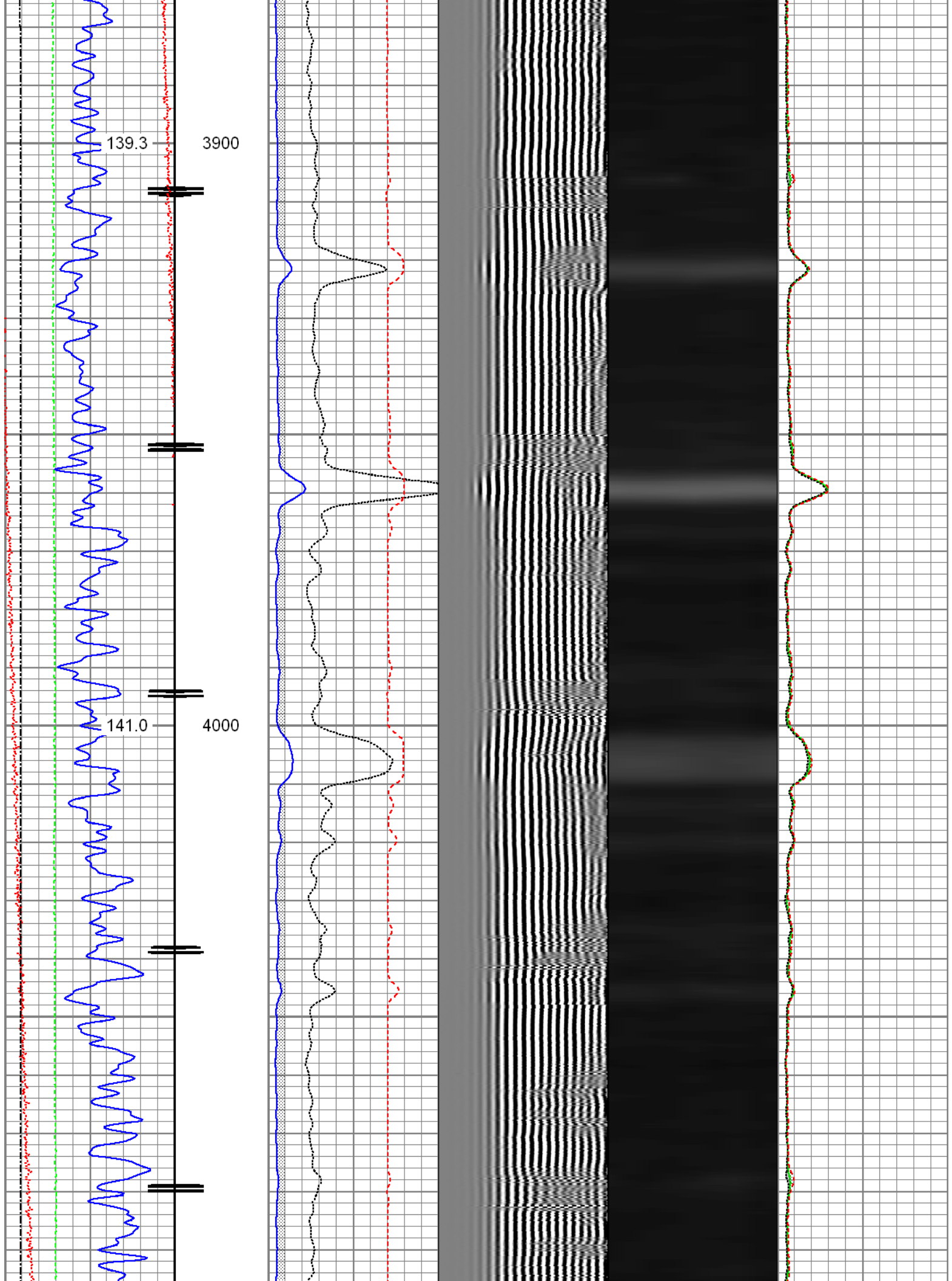




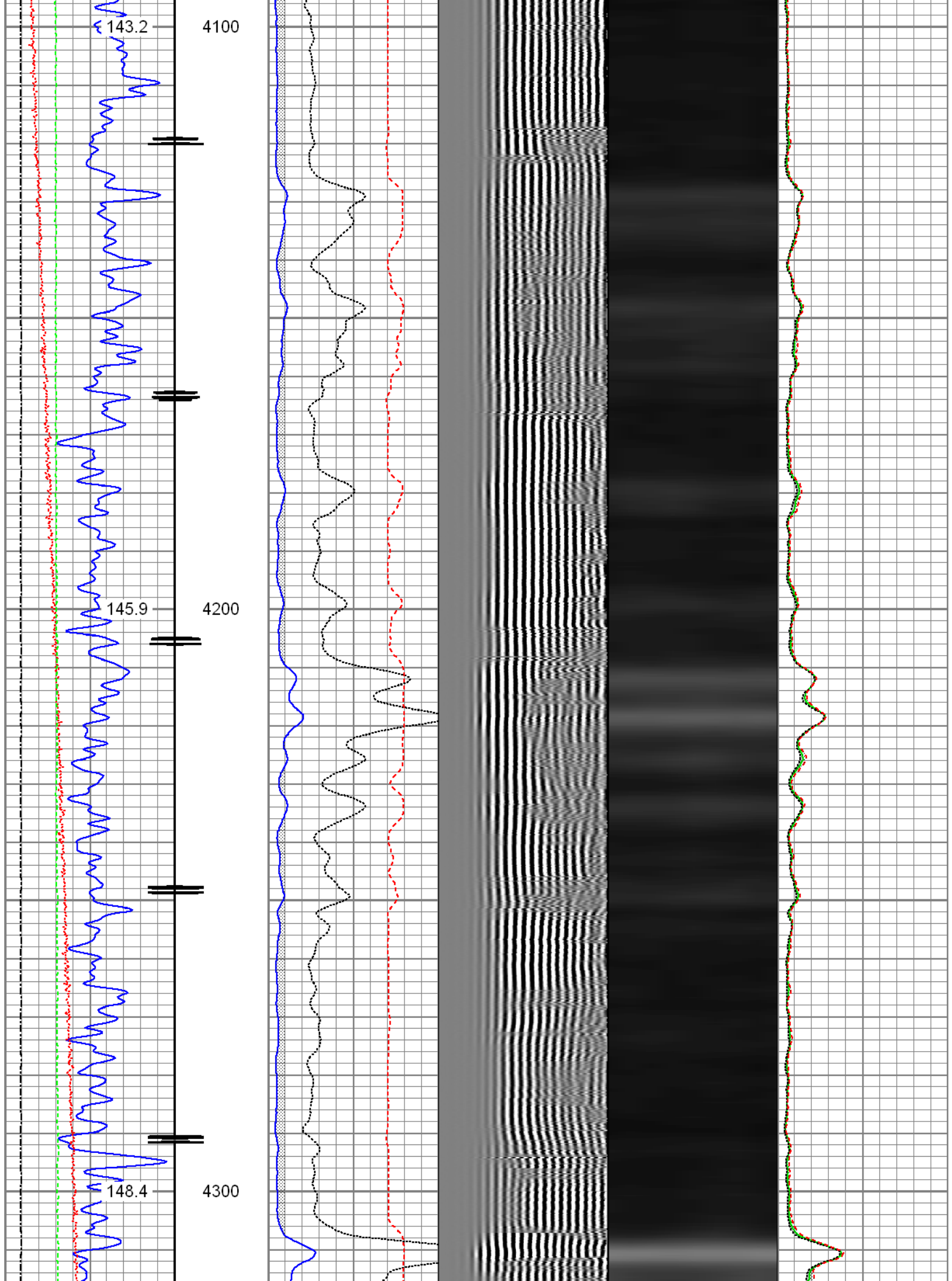


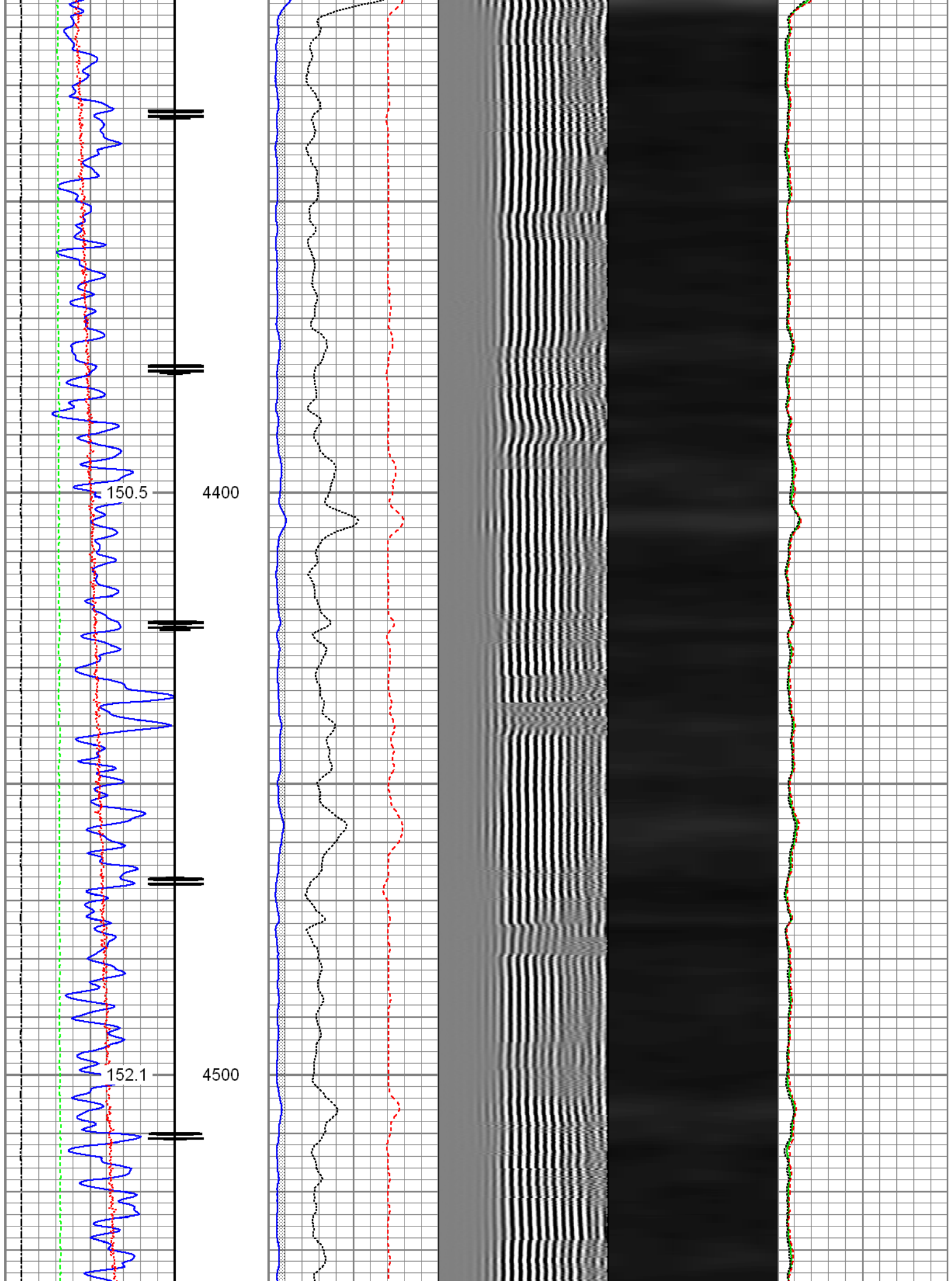


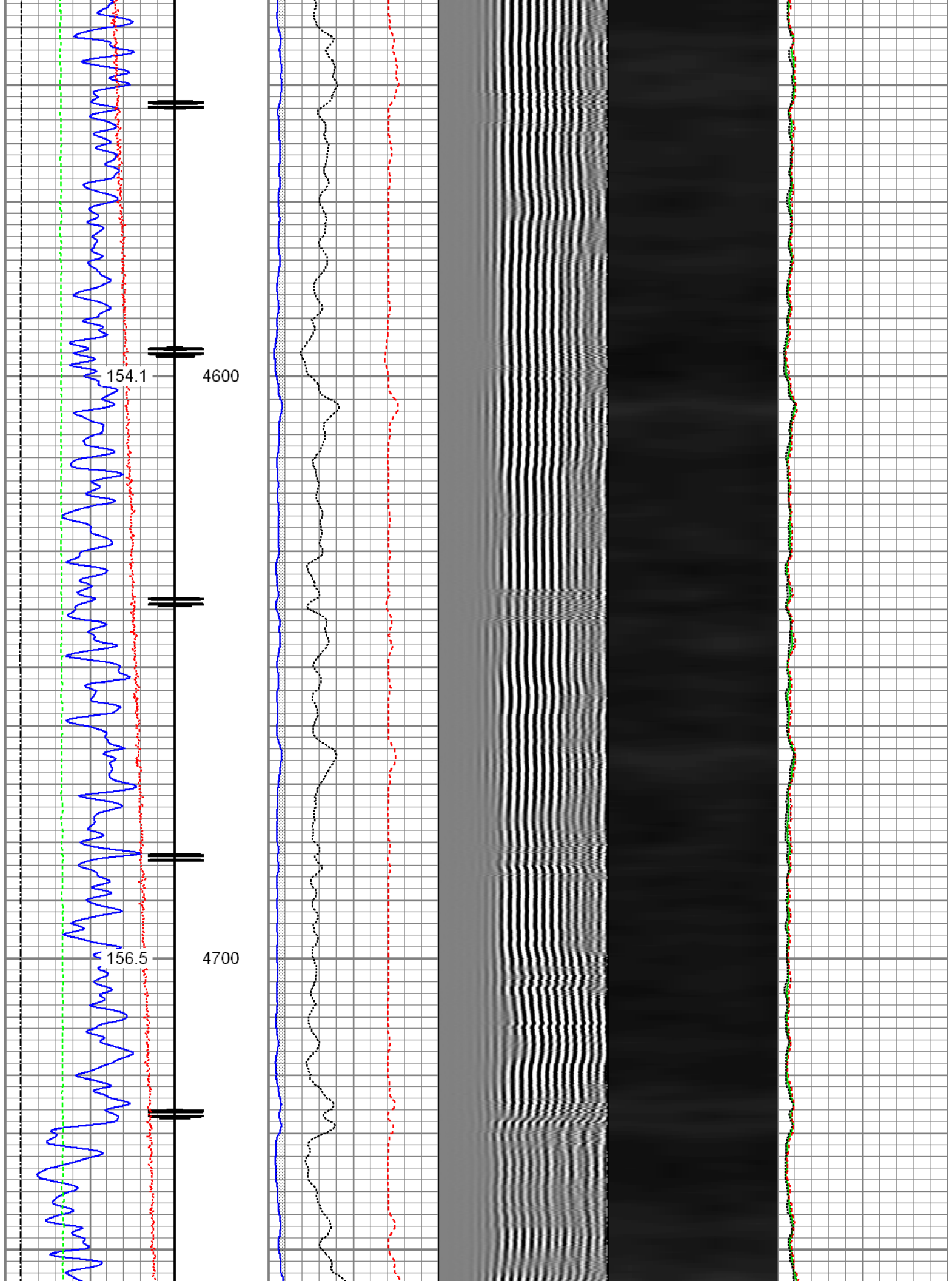


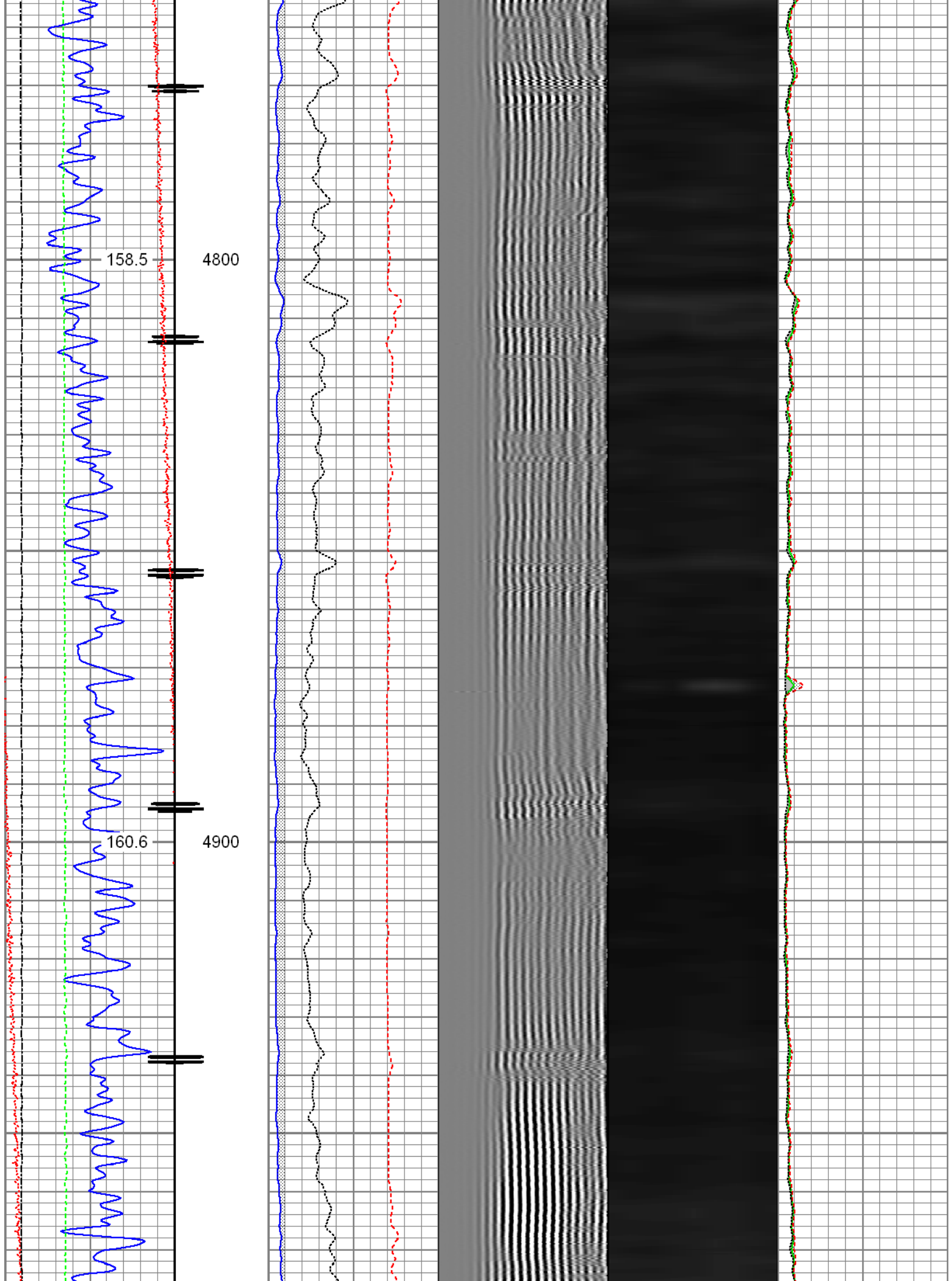




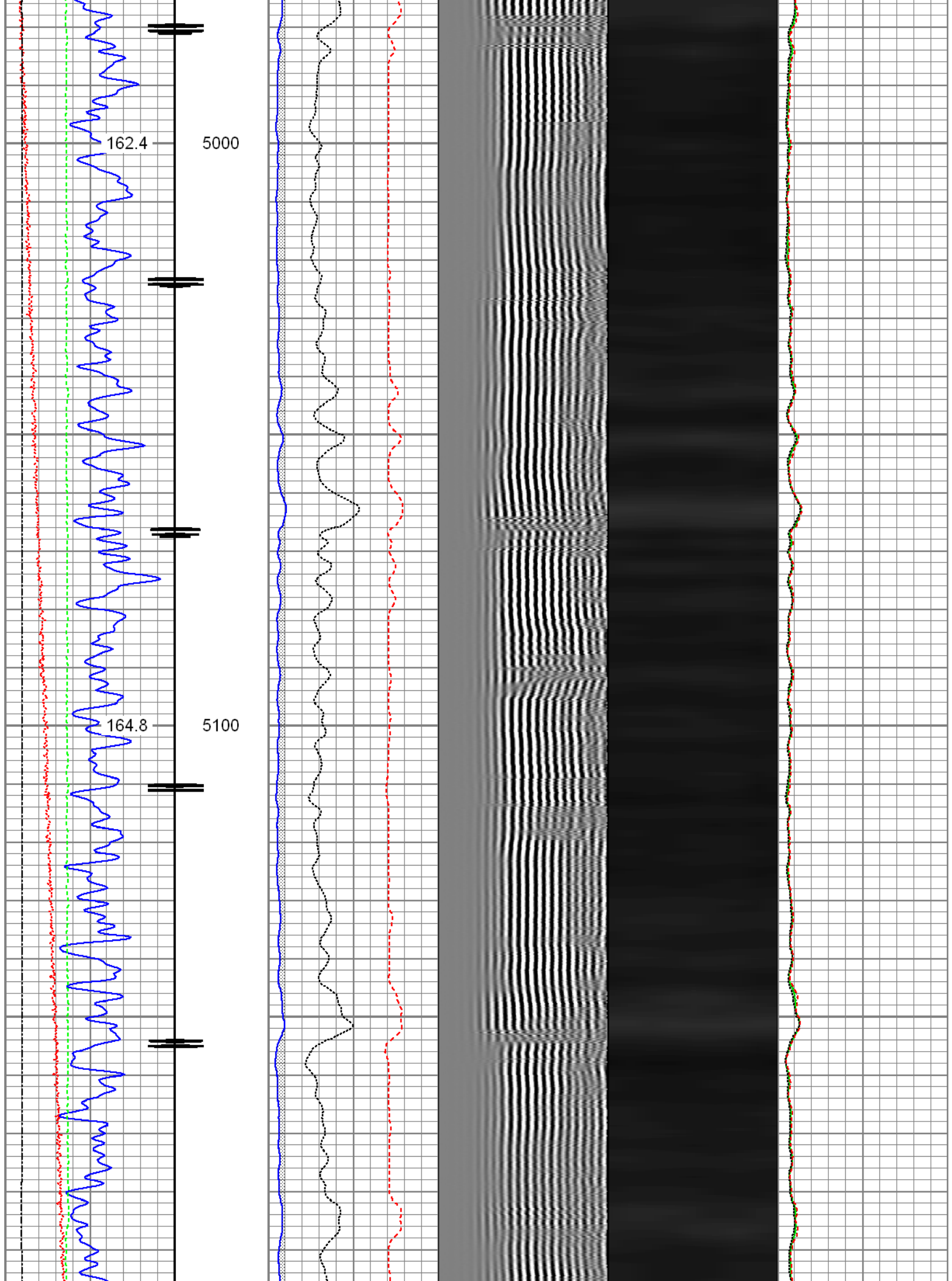


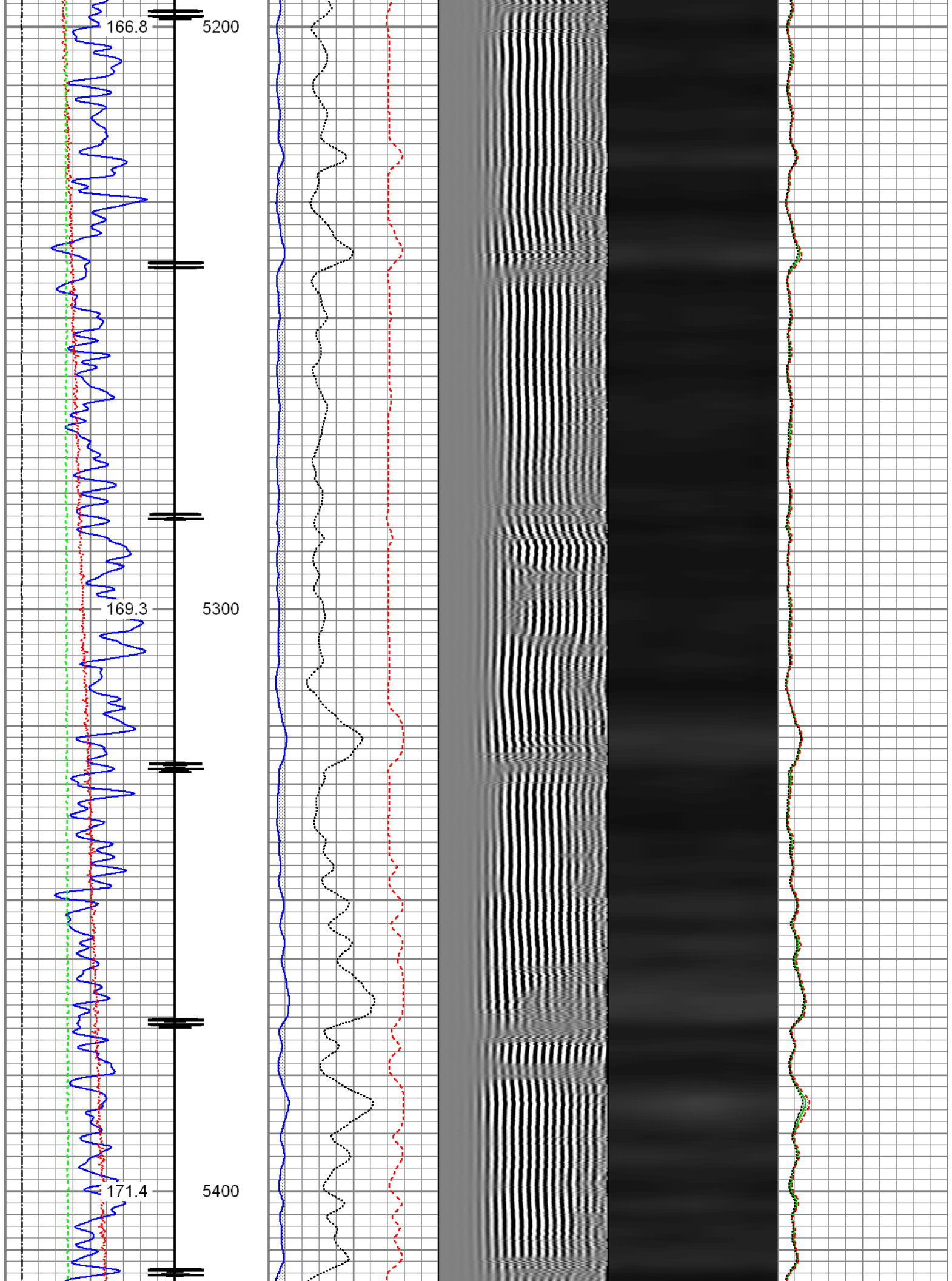


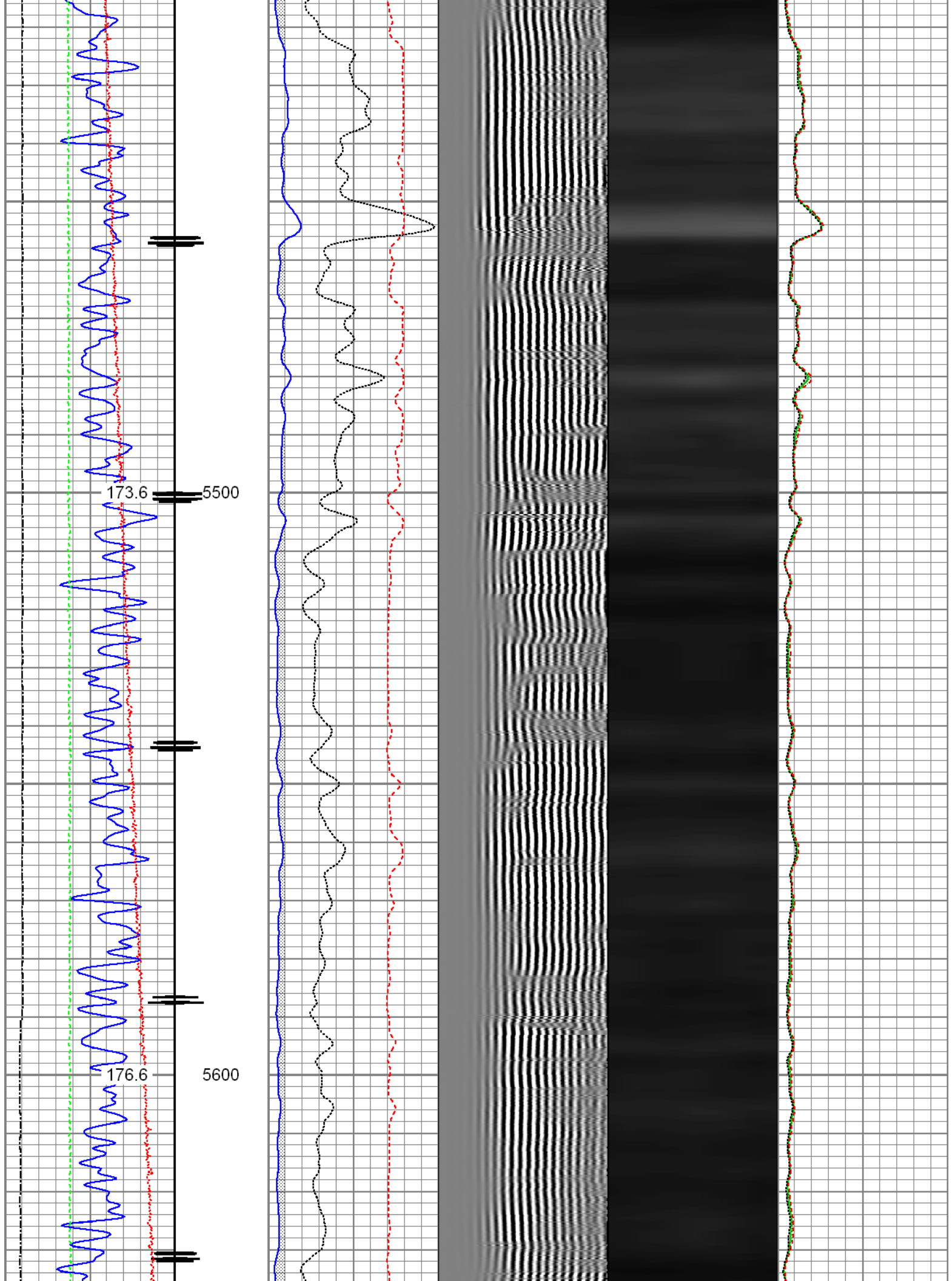


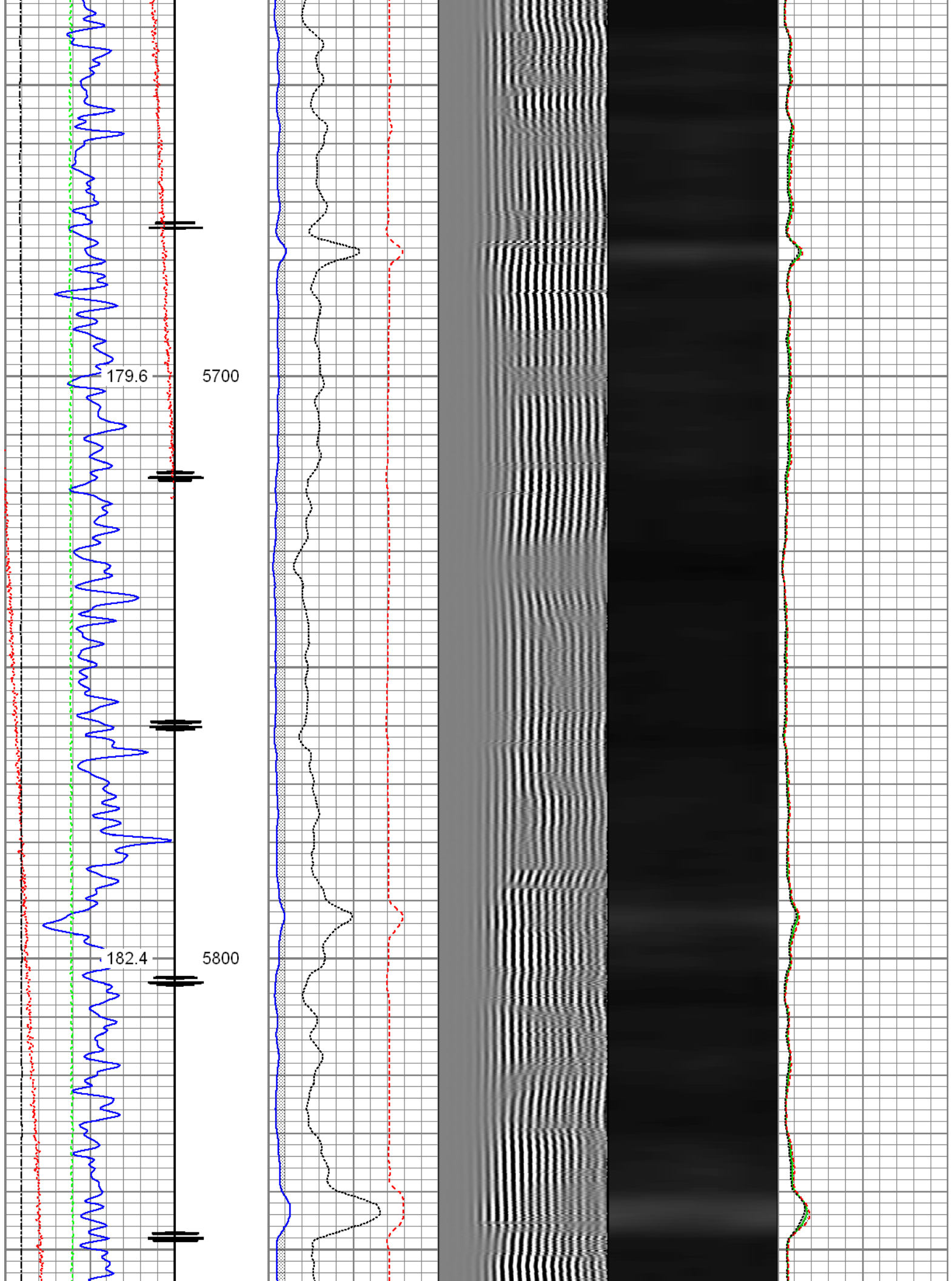




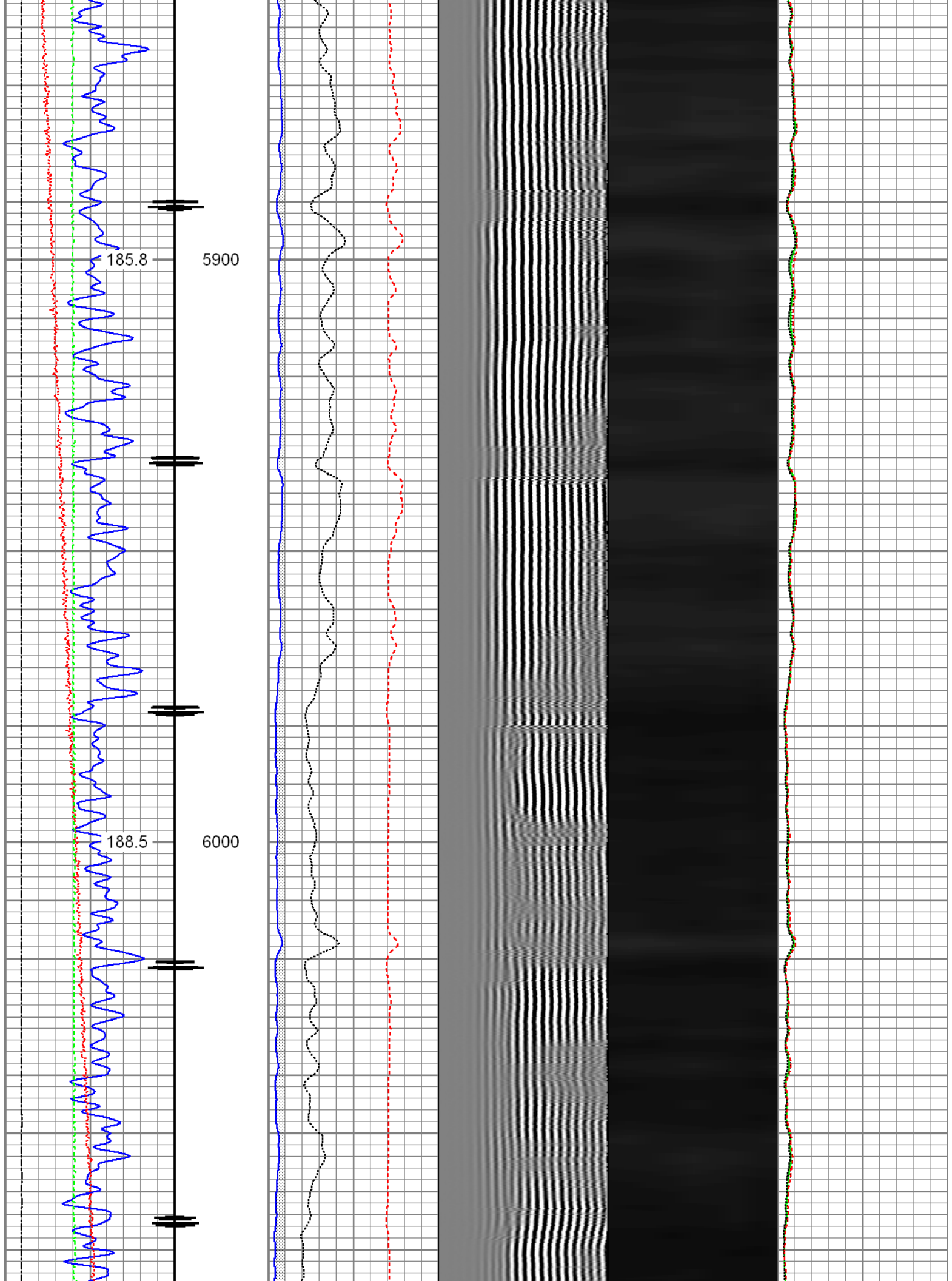


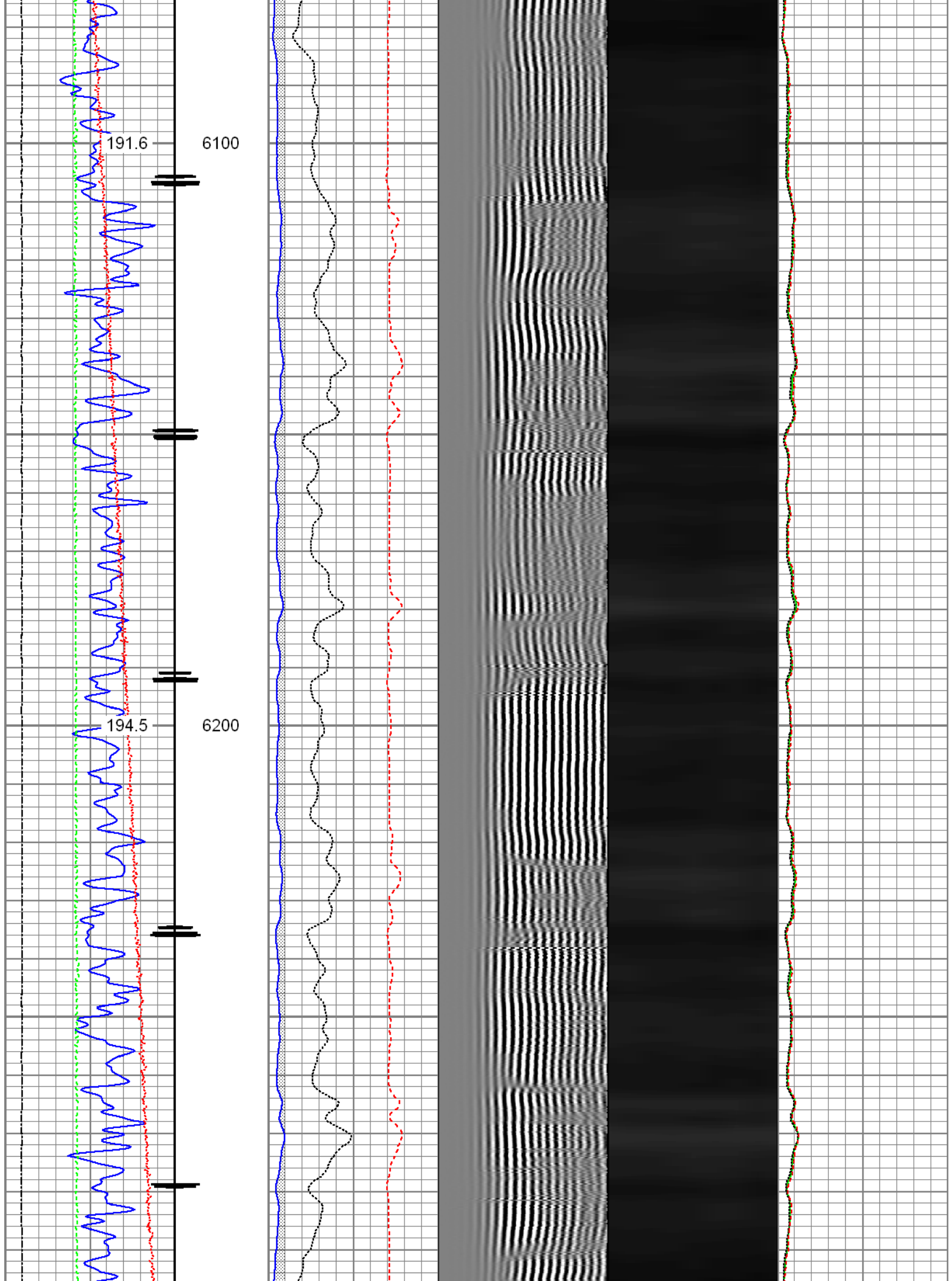


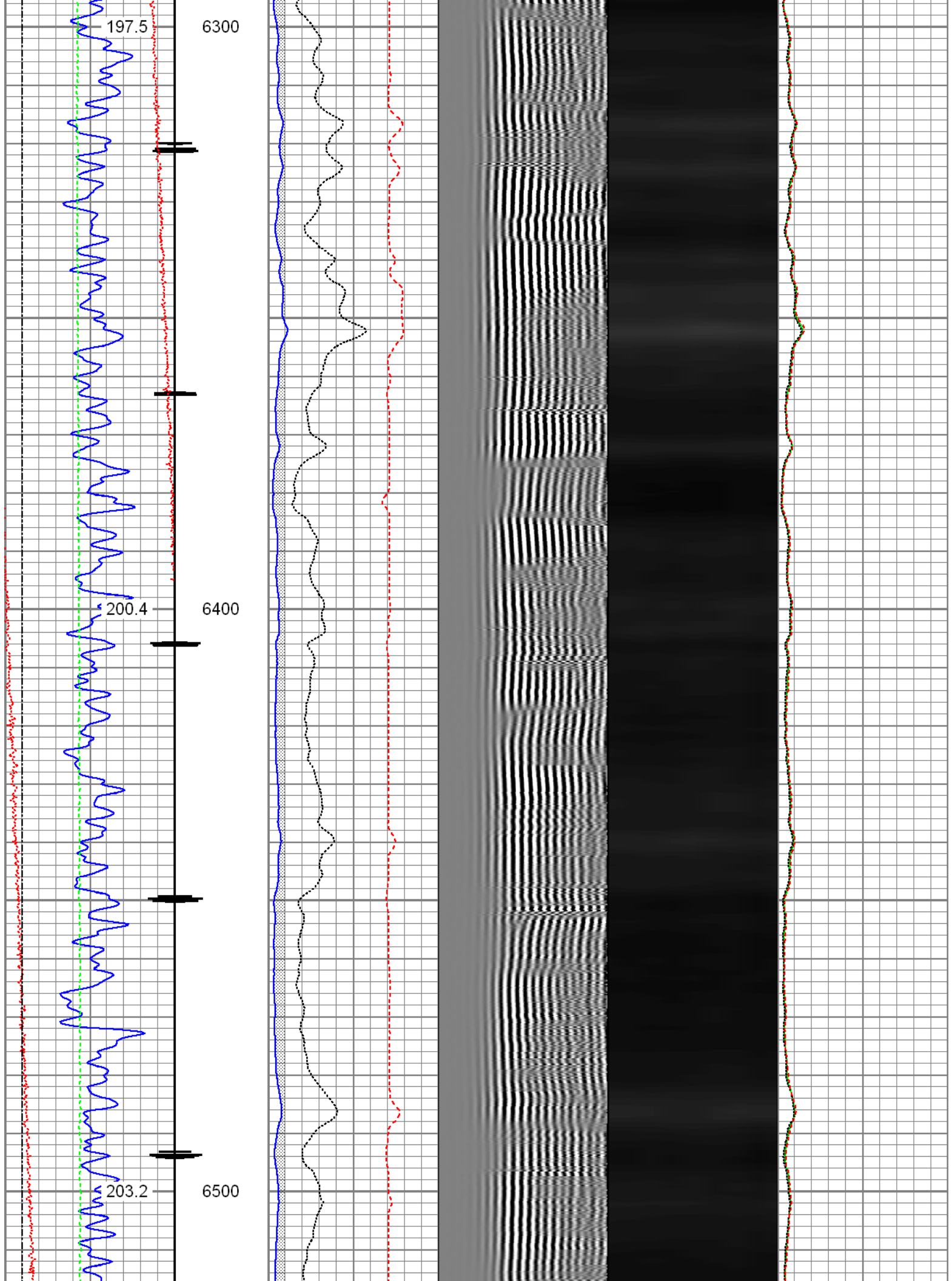


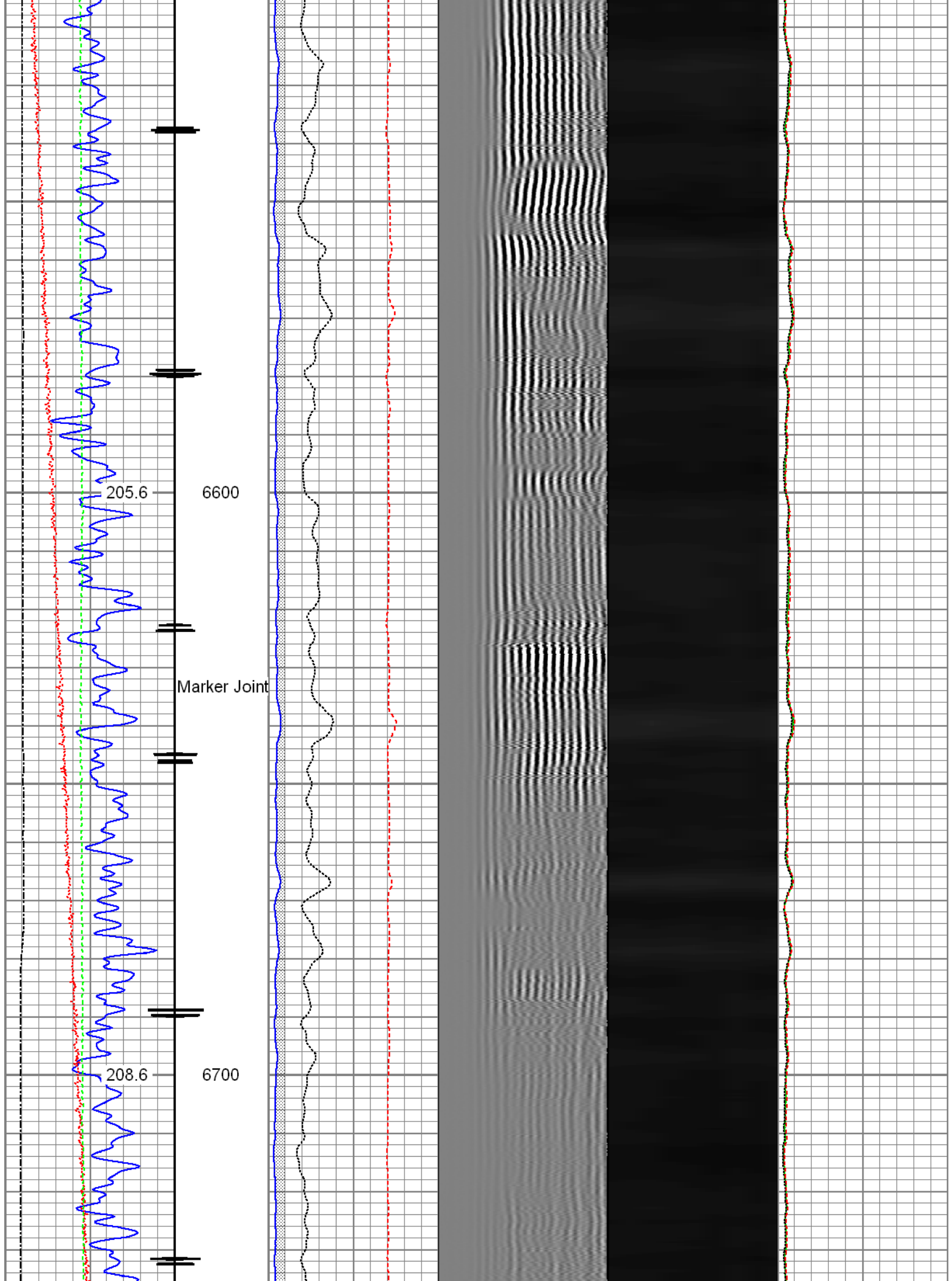




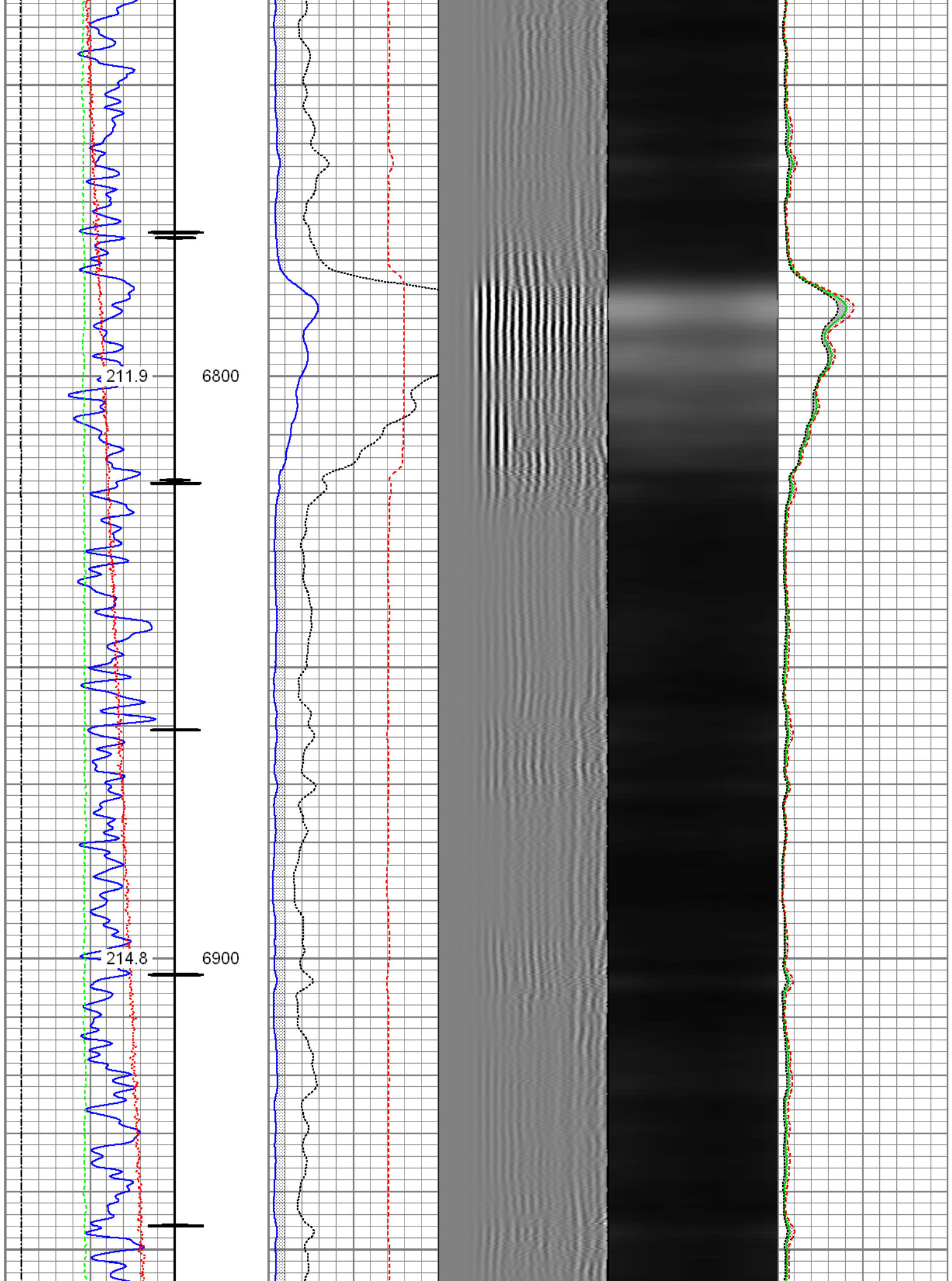


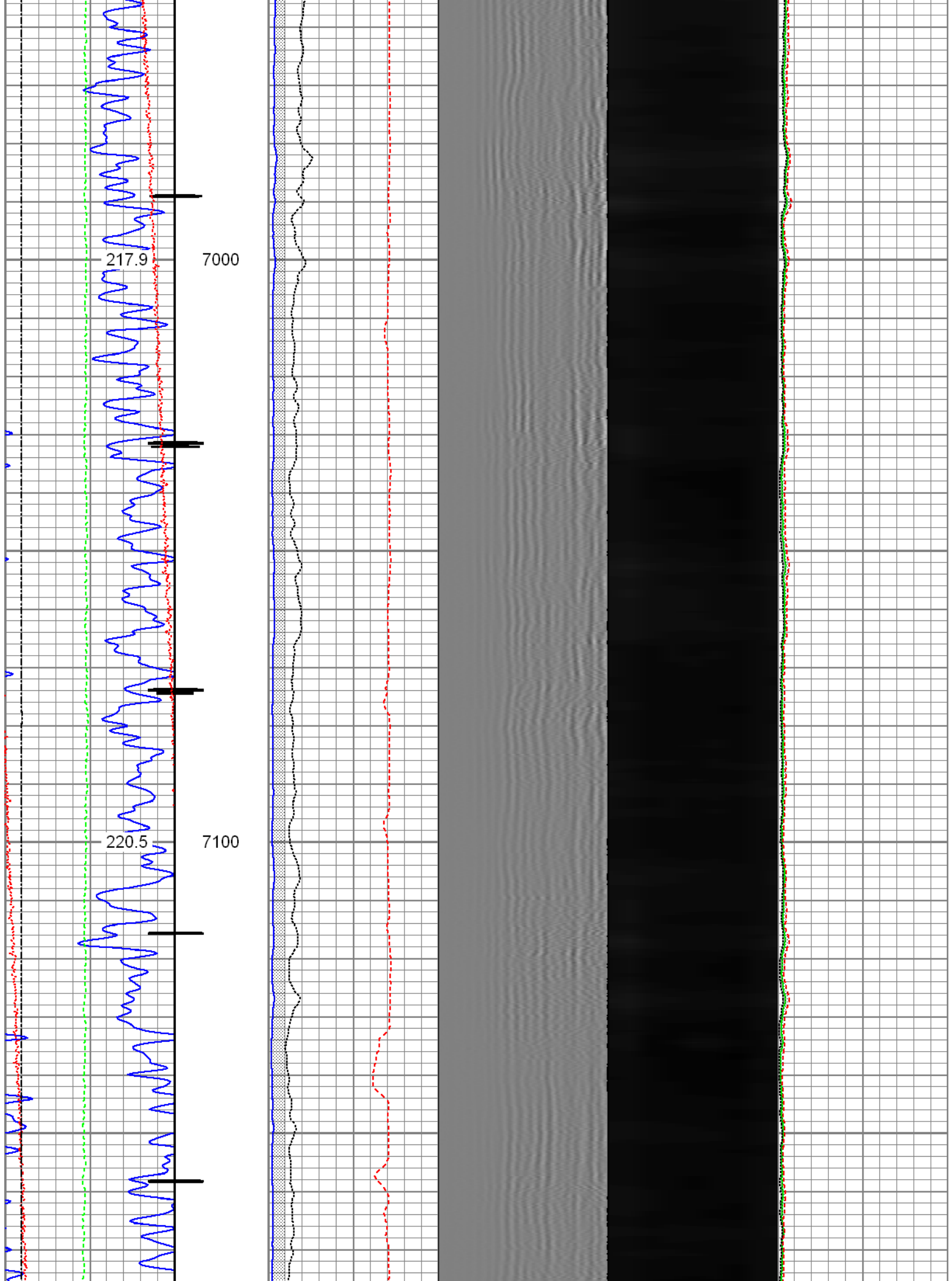


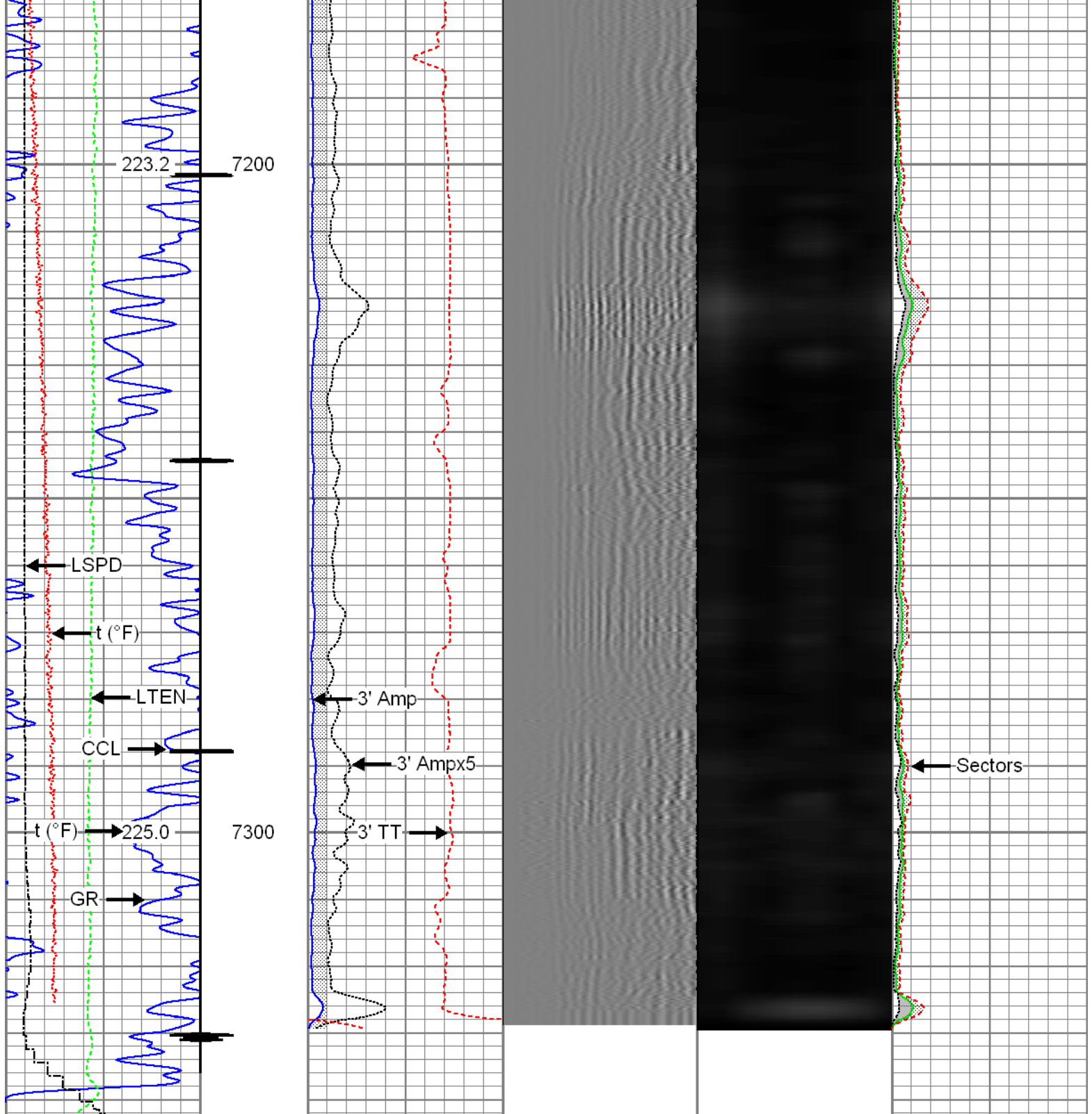










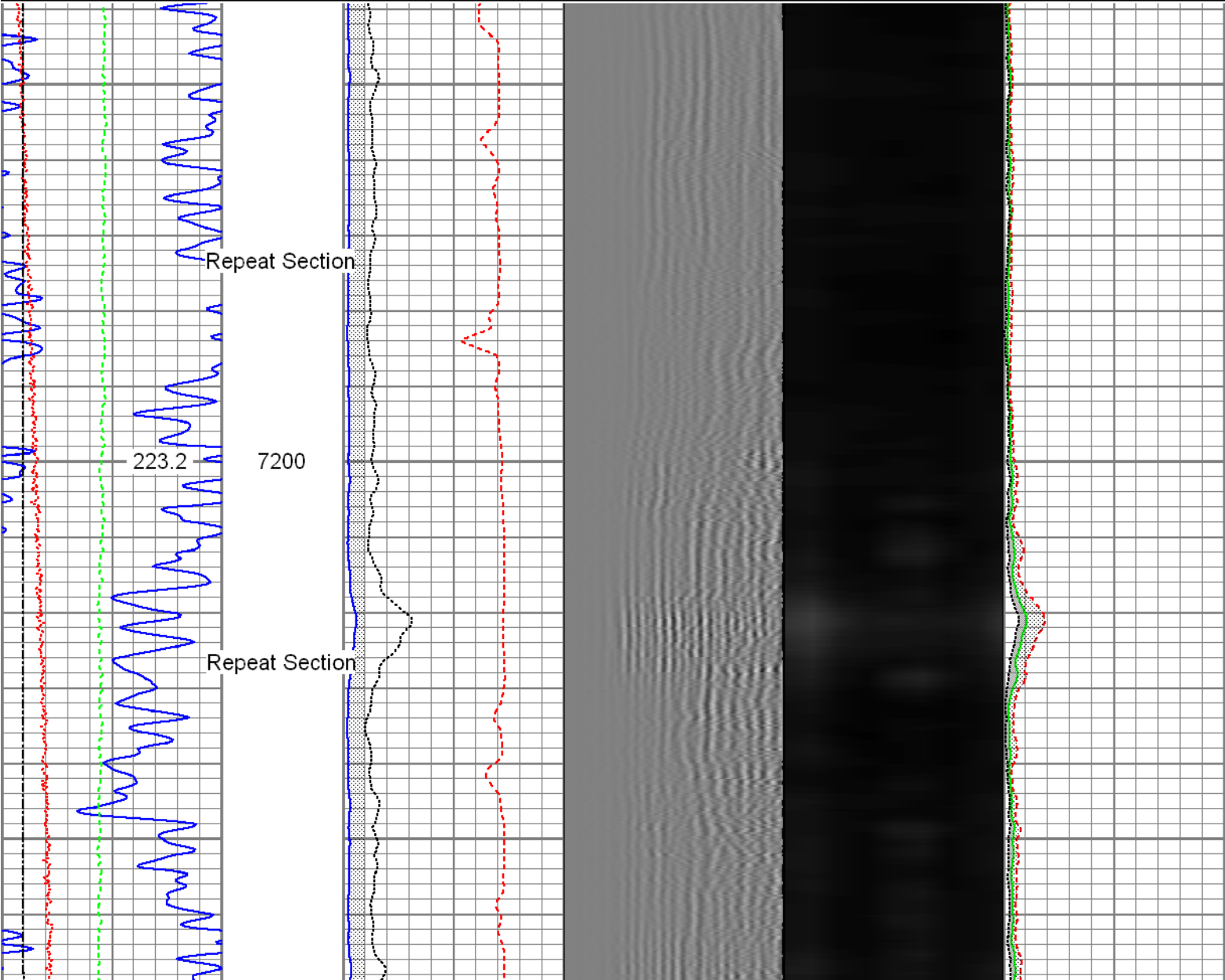


Gamma Ray 0 (GAPI) 120	3' Amplitude 0 (mV) 100	5' Variable Density Log 200 1200	Sector Map	Average Amplitude 0 100
Casing Collar Locator	3' Amplitude x 5 0 (mV) 20			Minimum Amplitude 0 100
Temperature 0 (degF) 20	3' Travel Time 650 (usec) 150			Maximum Amplitude 0 100
Line Speed -150 (ft/min) 150		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

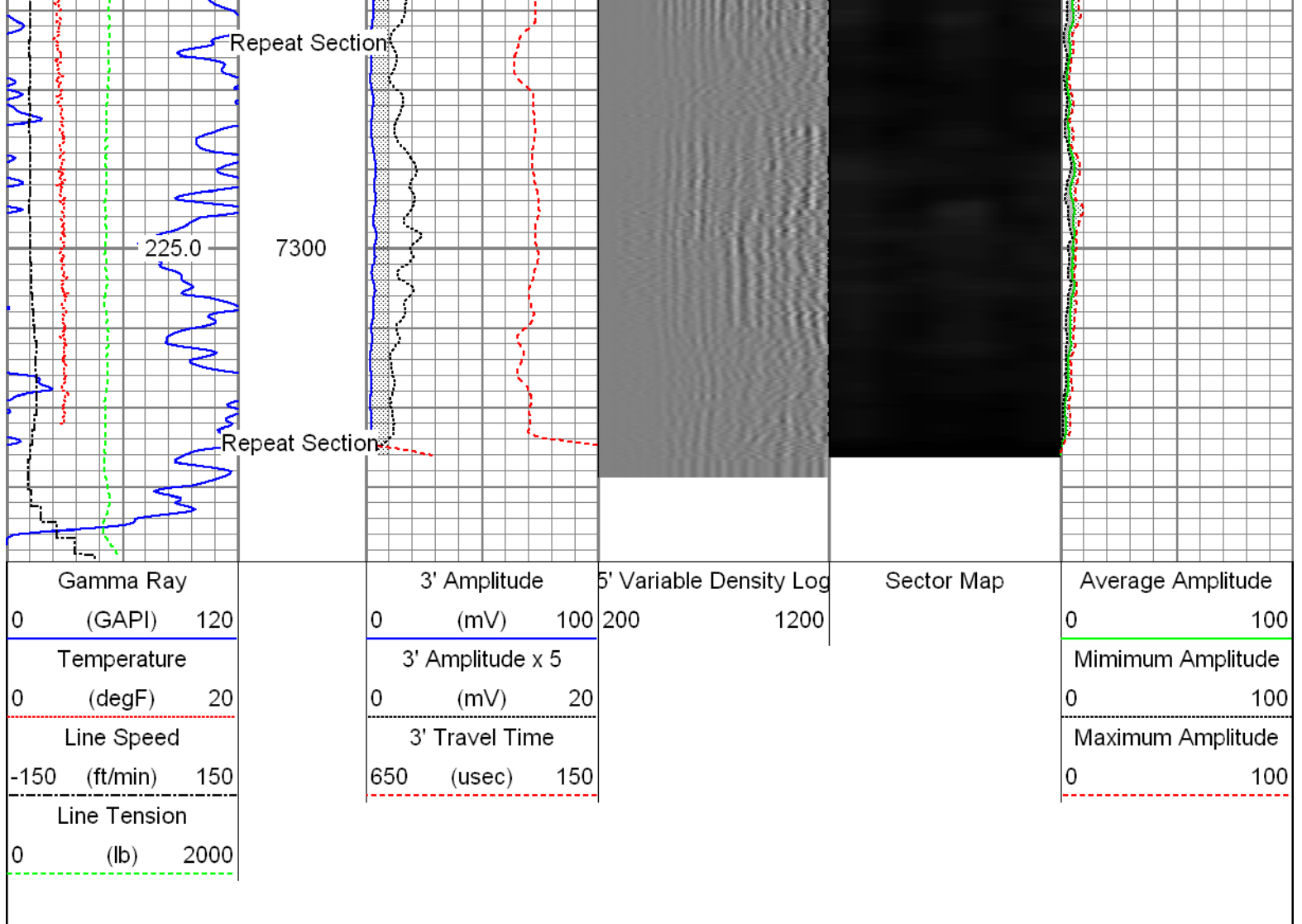
Database File:
Dataset Pathname:
Presentation Format:
Dataset Creation:
Charted by:

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radii  
Sat Jan 30 08:58:41 2016 by Calc 7.0 B1  
Depth in Feet scaled 1:240

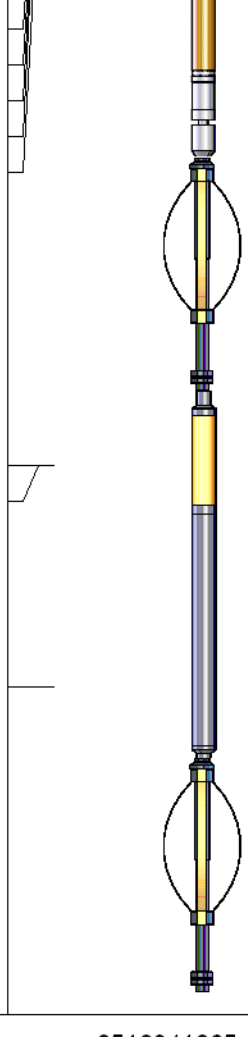
Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120		0 (mV) 100	200 1200		0 100
Temperature		3' Amplitude x 5			Mimimum Amplitude
0 (degF) 20		0 (mV) 20			0 100
Line Speed		3' Travel Time			Maximum Amplitude
-150 (ft/min) 150		650 (usec) 150			0 100
Line Tension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







Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			<b>T_CH14375_1_GO</b> Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			<b>Probe_IL_BS_Cent</b> Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
HeadVolt	19.49					
Temp	16.72					
WVF3FT	14.55		<b>Probe_RADII-C-2-3/4" (FW1305-096)</b> Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.19	2.75	105.00
WVFCAL	14.55					
WVFS1	14.55					
WVFS2	14.55					
WVFS3	14.55					
WVFS4	14.55					

	Tool Joint Depth	Log	Probe	Length	Weight	O.D.
WVFS4	14.55					
WVFS5	14.55					
WVFS6	14.55					
WVFS7	14.55					
WVFS8	14.55					
WVF5FT	13.55					
CCL DCCL	6.51 6.51		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
GR	3.77		Probe_CCL_GR-2.75" Digital (FW1212-026) Probe 2-3/4" Digital CCL / Gamma Ray Combined	4.54	2.75	55.00
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Dataset: 0512341065_Anadarko_Wilson Ranch 34N-27HZ_01-26-16_RBL.db: field/well/run1/pass4.1 Total Length: 23.40 ft Total Weight: 194.00 lb O.D.: 2.75 in						

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.001	0.547	0.800	71.921	130.178	0.658
CAL	0.006	0.610				
5'	0.000	0.486	0.800	71.921	146.329	0.763
SUM						
S1	0.001	0.534	0.000	100.000	187.357	-0.109
S2	0.001	0.535	0.000	100.000	187.191	-0.109
S3	0.001	0.540	0.000	100.000	185.550	-0.241
S4	0.001	0.548	0.000	100.000	182.869	-0.272
S5	0.002	0.563	0.000	100.000	178.208	-0.338
S6	0.002	0.582	0.000	100.000	172.297	-0.347
S7	0.002	0.576	0.000	100.000	174.173	-0.286
S8	0.001	0.555	0.000	100.000	180.671	-0.208

Internal Reference Calibration, performed Tue Jan 26 12:25:35 2016:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.006	0.608	0.006	0.610	1.004	0.000

Air Zero Calibration, performed Tue Jan 26 12:24:58 2016:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.006		0.000		-0.000	
5'	0.006		0.000		-0.000	
SUM						
S1	0.006		0.000		0.000	
S2	0.006		0.000		0.000	
S3	0.006		0.000		0.000	
S4	0.006		0.000		0.000	
S5	0.006		0.000		0.000	
S6	0.006		0.000		0.000	
S7	0.006		0.000		-0.000	
S8	0.006		0.000		-0.000	



Company Kerr-McGee Oil & Gas Onshore, L.P.  
 Well Wilson Ranch 34N-27HZ  
 Field Wattenberg  
 County Weld  
 State Colorado