



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.		
Well	Bane 2N3-9HZ		
Field	Wattenberg		
County	Weld		
State	Colorado		
Location:	Company	Kerr-McGee Oil & Gas Onshore, L.P.	
	Well	Bane 2N3-9HZ	
	Field	Wattenberg	
	County	Weld	
Other Services	State	Colorado	
	API # :	05-123-41309	
	SEC 9	TWP 1N	RGE 65W
	Permanent Datum	Ground Level	Elevation 4965'
JB/GR	Log Measured From	Kelly Bushing 25 FT	
	Drilling Measured From	Kelly Bushing	
Elevation		K.B. 4990' D.F. 4989' G.L. 4965'	

Date	2-SEPT-2015
Run Number	One
Depth Driller	11935 FT
Depth Logger	7435 FT
Bottom Logged Interval	7430 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	11:03 AM
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	J55 LT&C	Surface	1602 FT		
Intermediate #1							
Intermediate #2	5 1/2	17	HCP-110 LTC	Surface	11935 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 6600 FT  
Recorded Marker Joint at 6567' FT- 6590 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\0512341309\_anadarko\_bane 2n3-9hz\_09-02-15\_rbl\0512341309\_anadarko\_bane 2n3

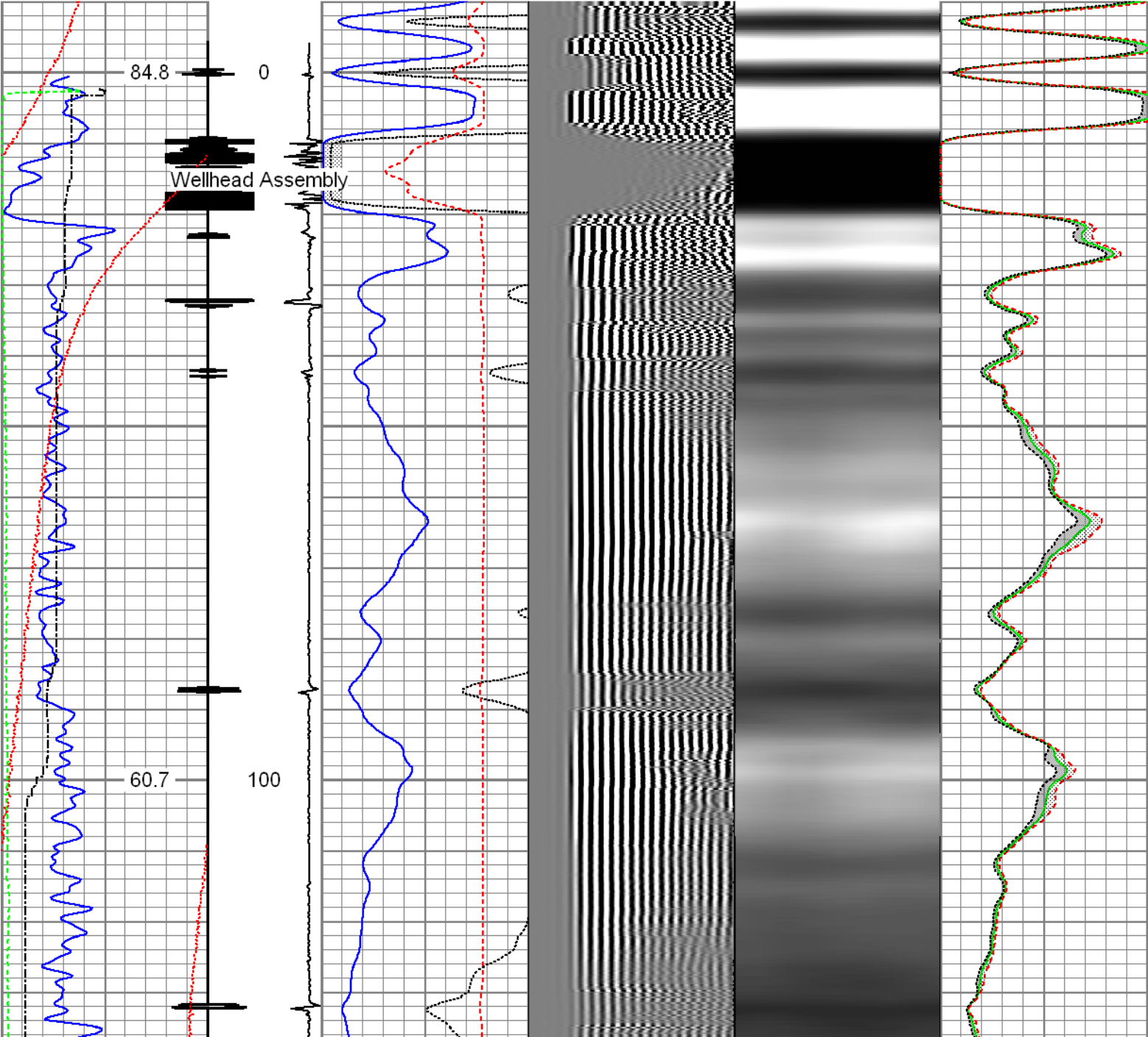
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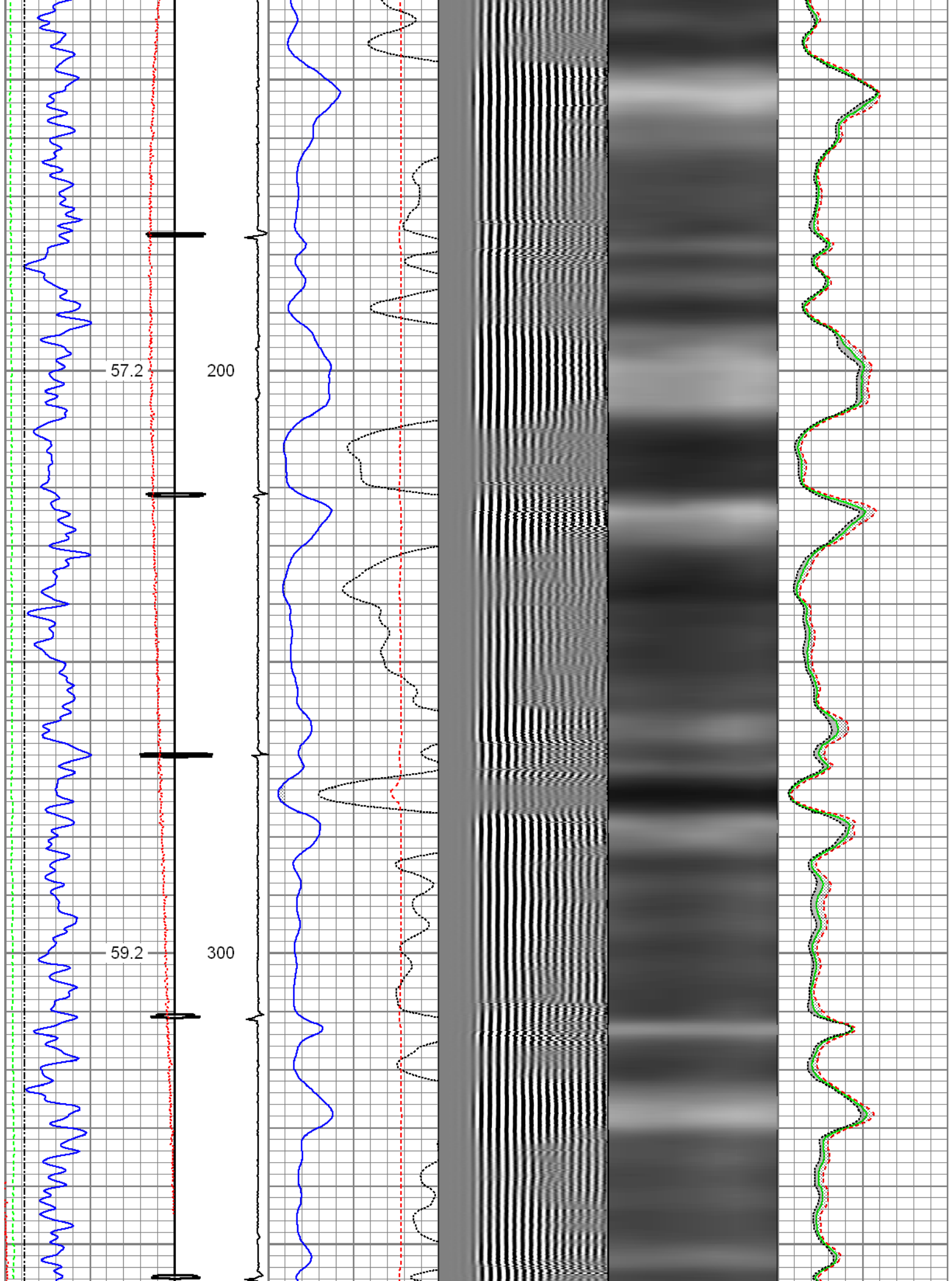
Presentation Format: radii

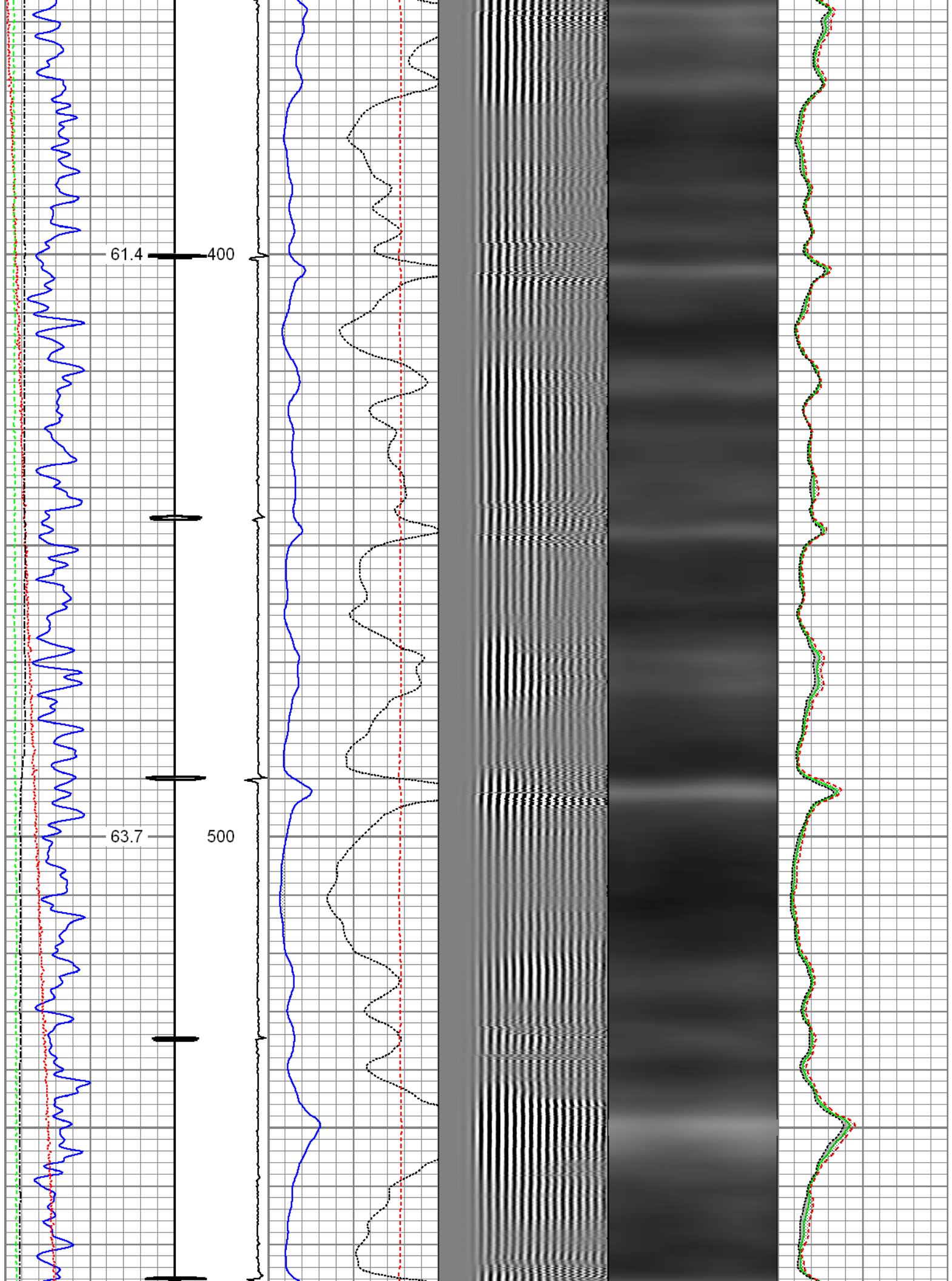
Dataset Creation: Wed Sep 02 11:06:27 2015 by Log 7.0 B1

Charted by: Depth in Feet scaled 1:240

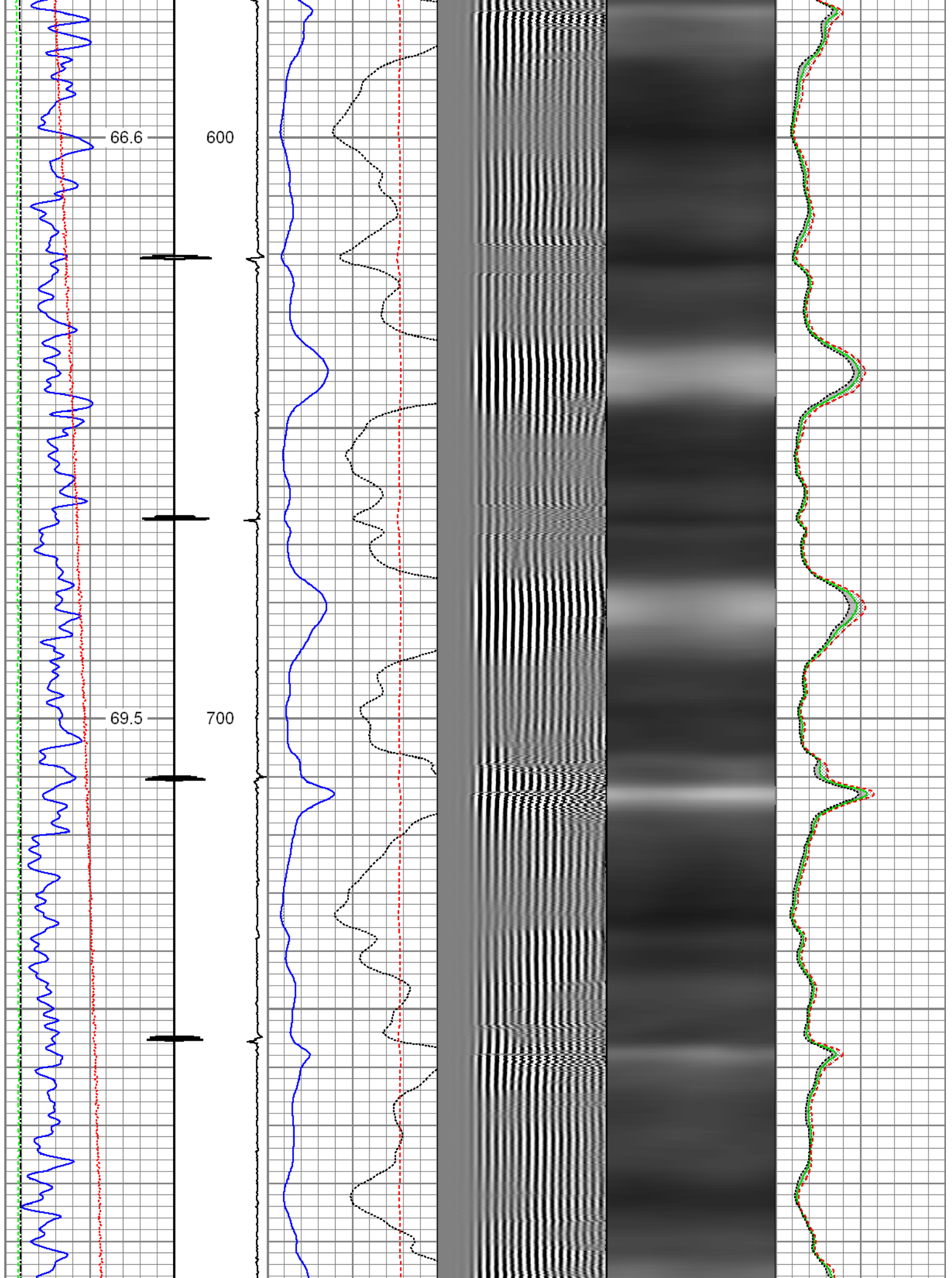
Gamma Ray	DCCL	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	-3 (mV) 3	0 (mV) 100	200 1200		0 100
Casing Collar Locator		3' Amplitude x 5			Mimimum Amplitude
Temperature		0 (mV) 20			0 100
0 (degF) 20		3' Travel Time			Maximum Amplitude
Line Speed		650 (usec) 150			0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

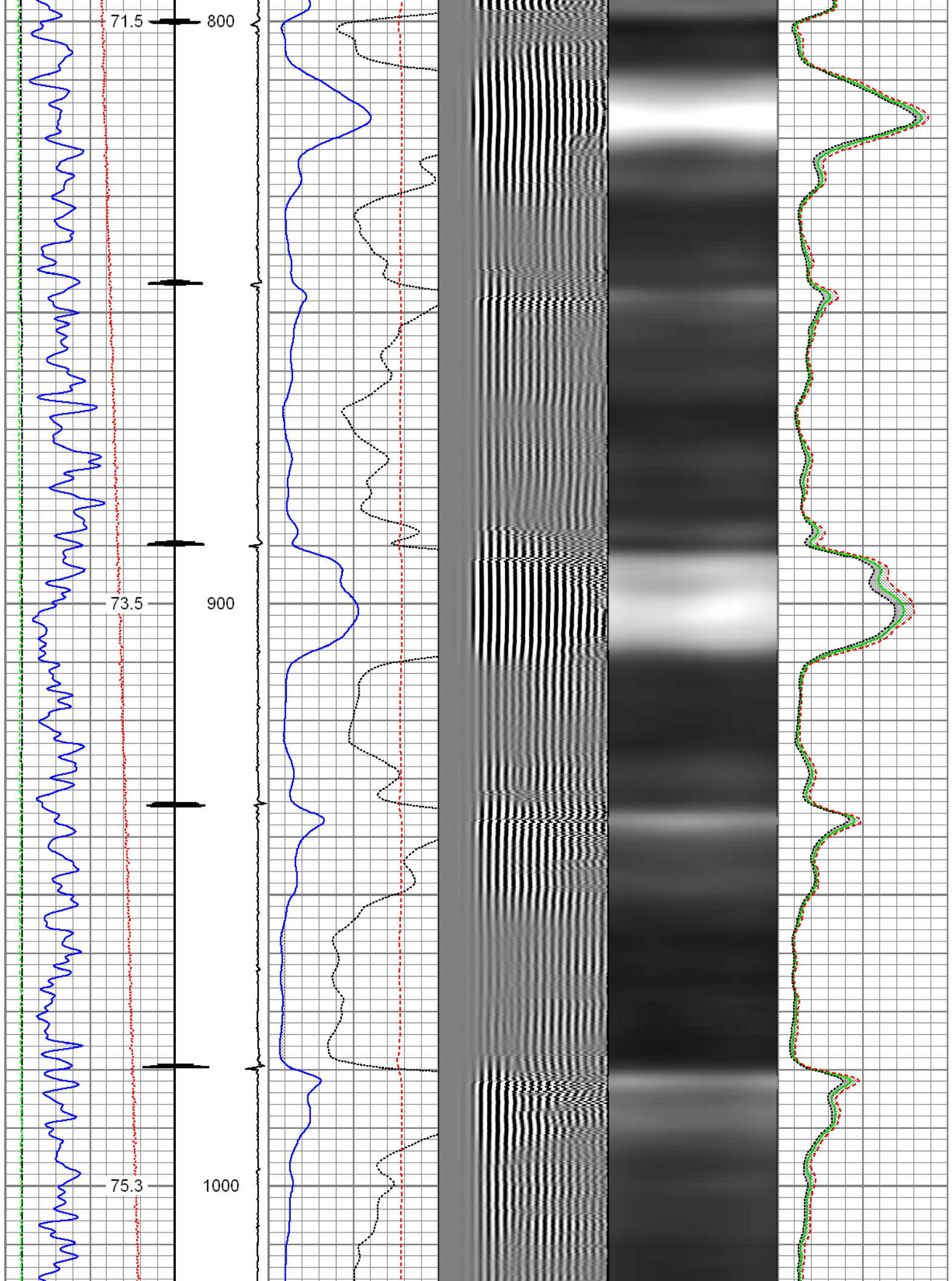


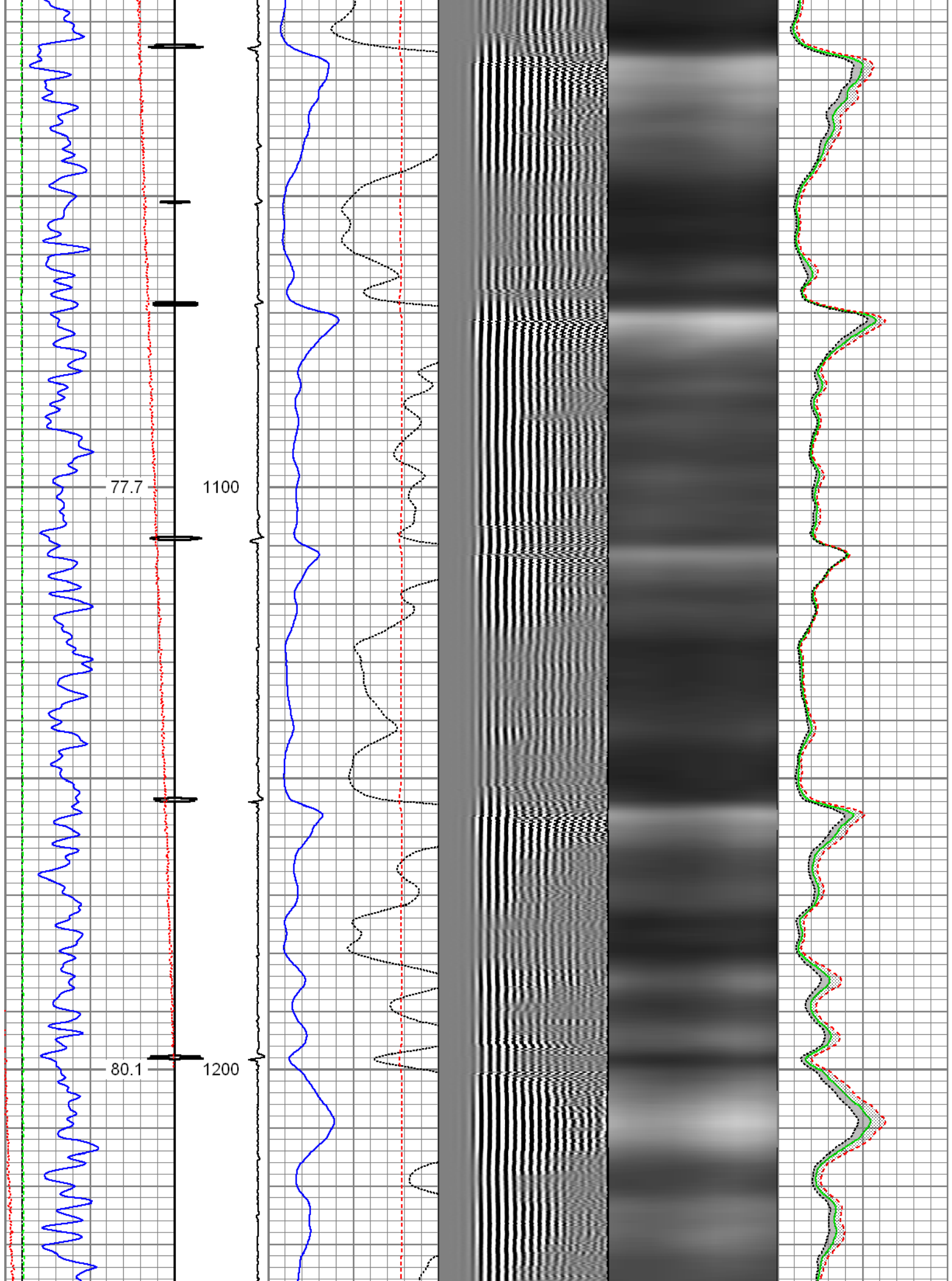




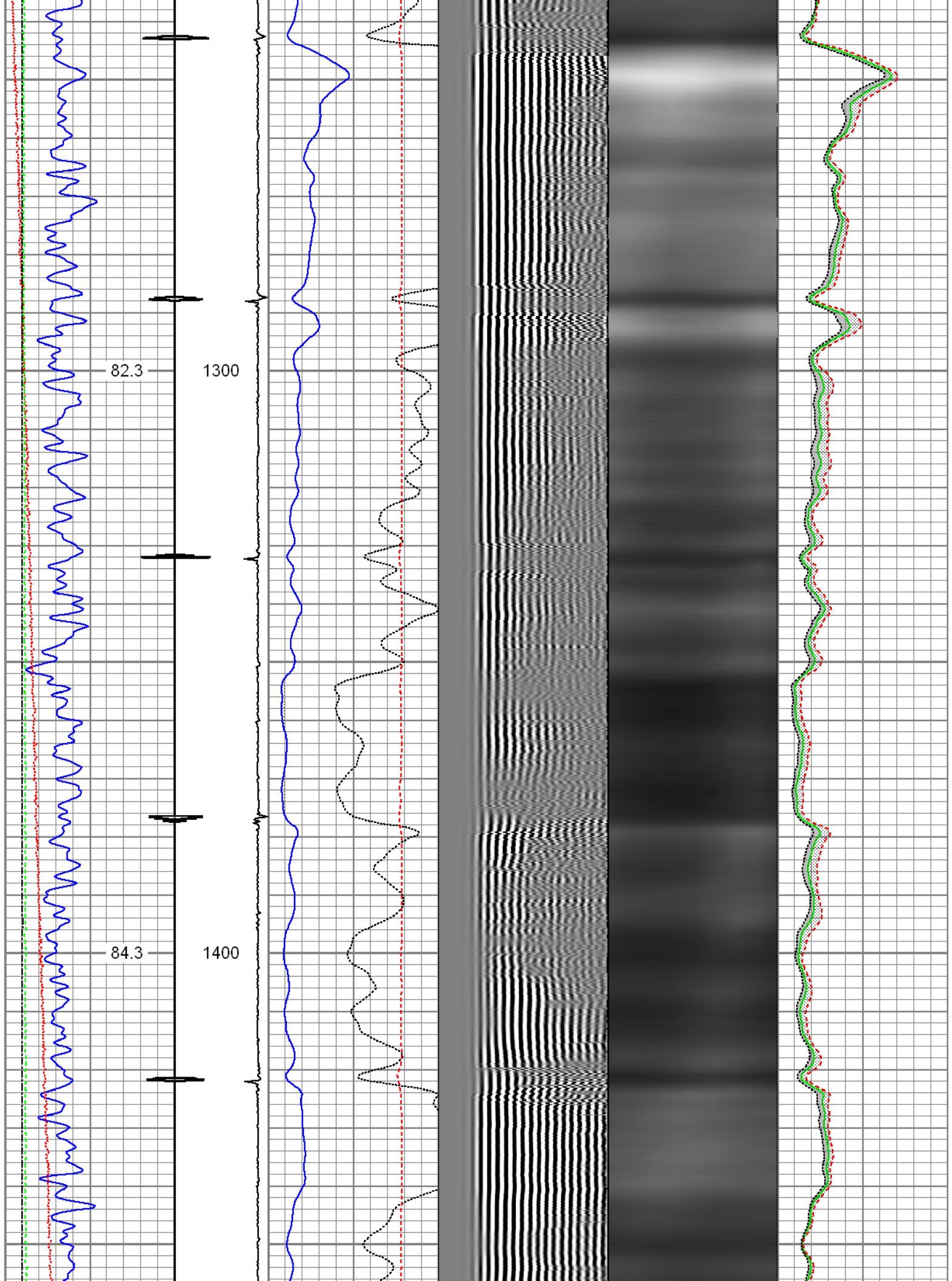




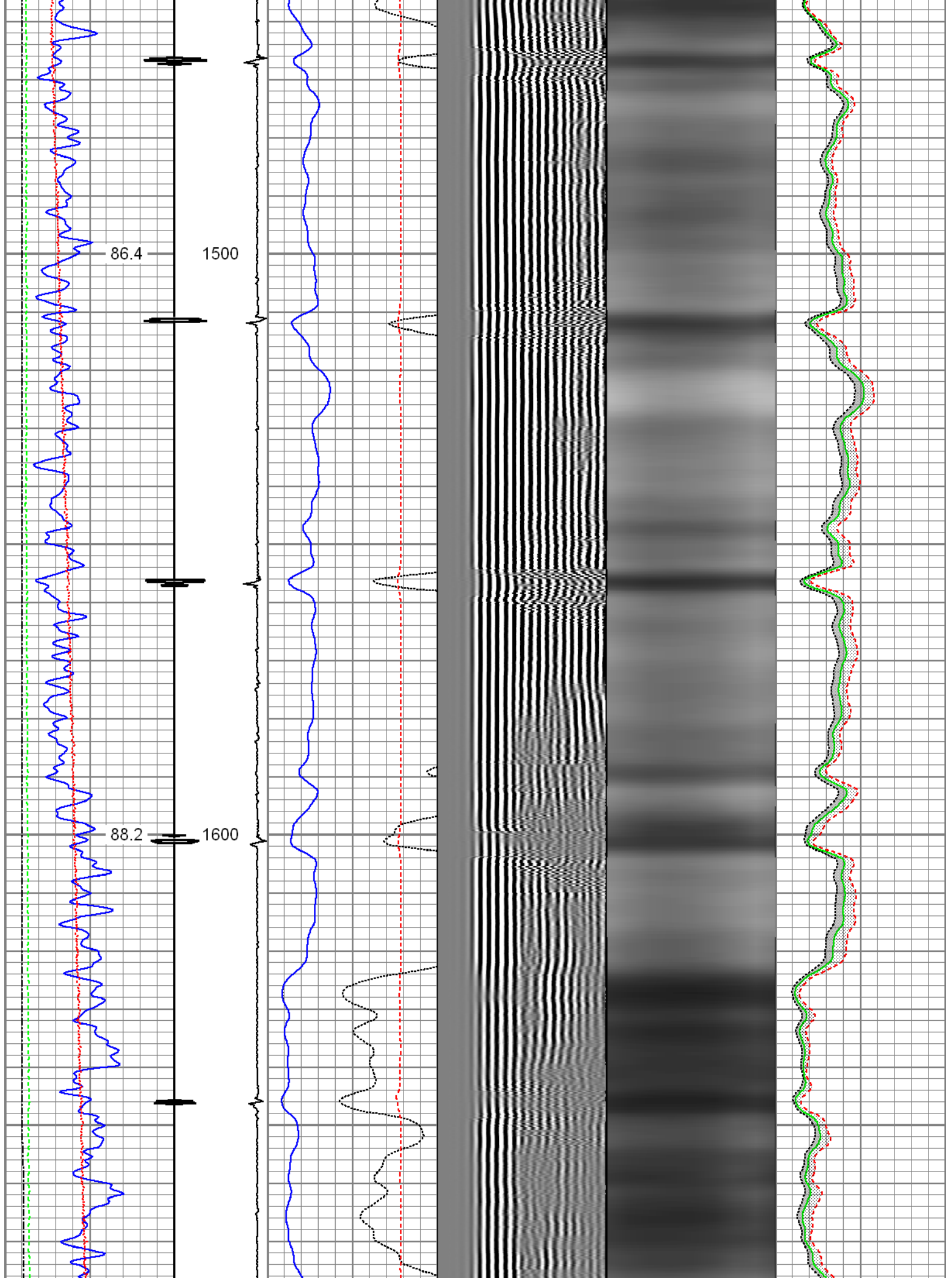


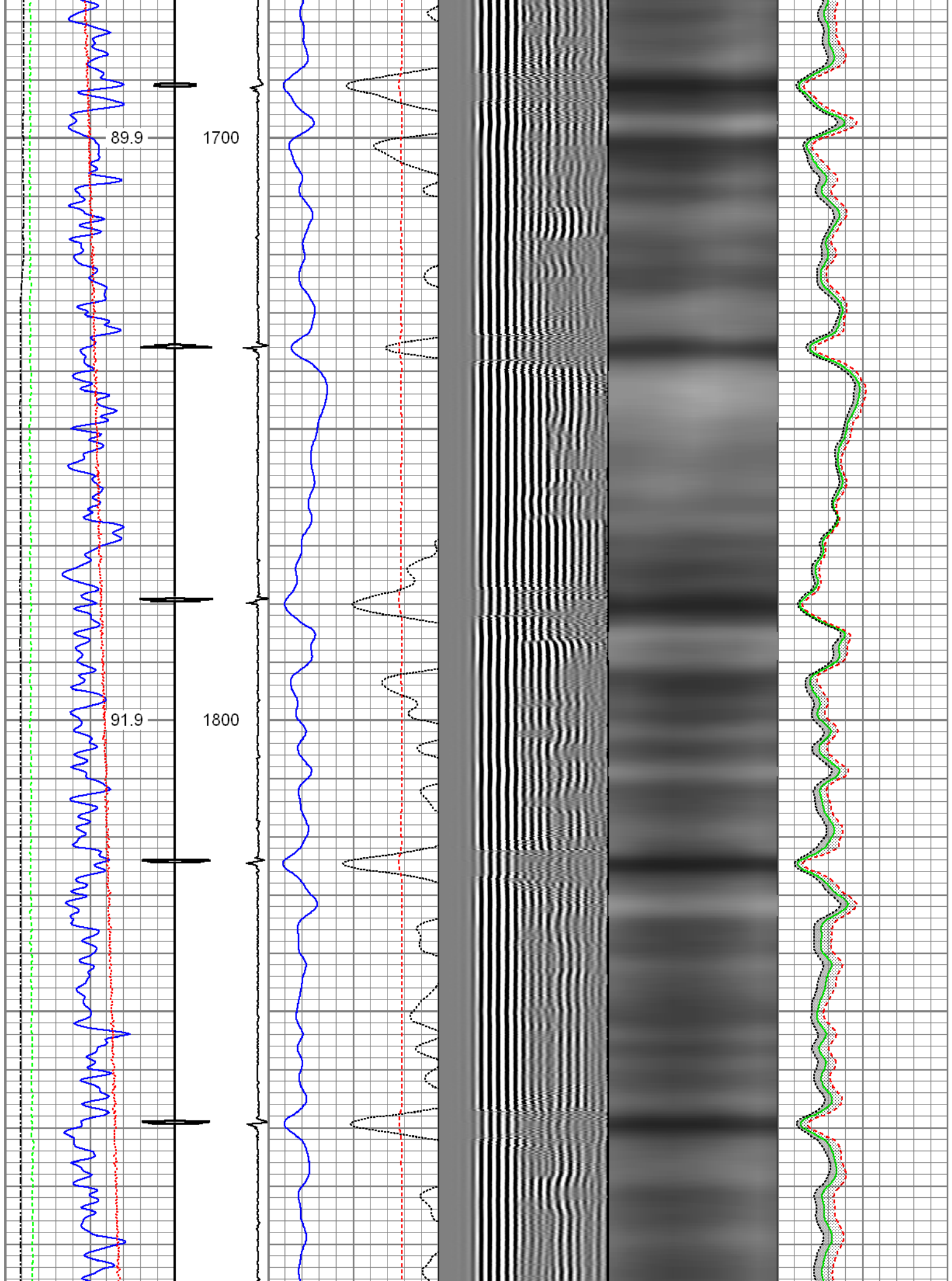


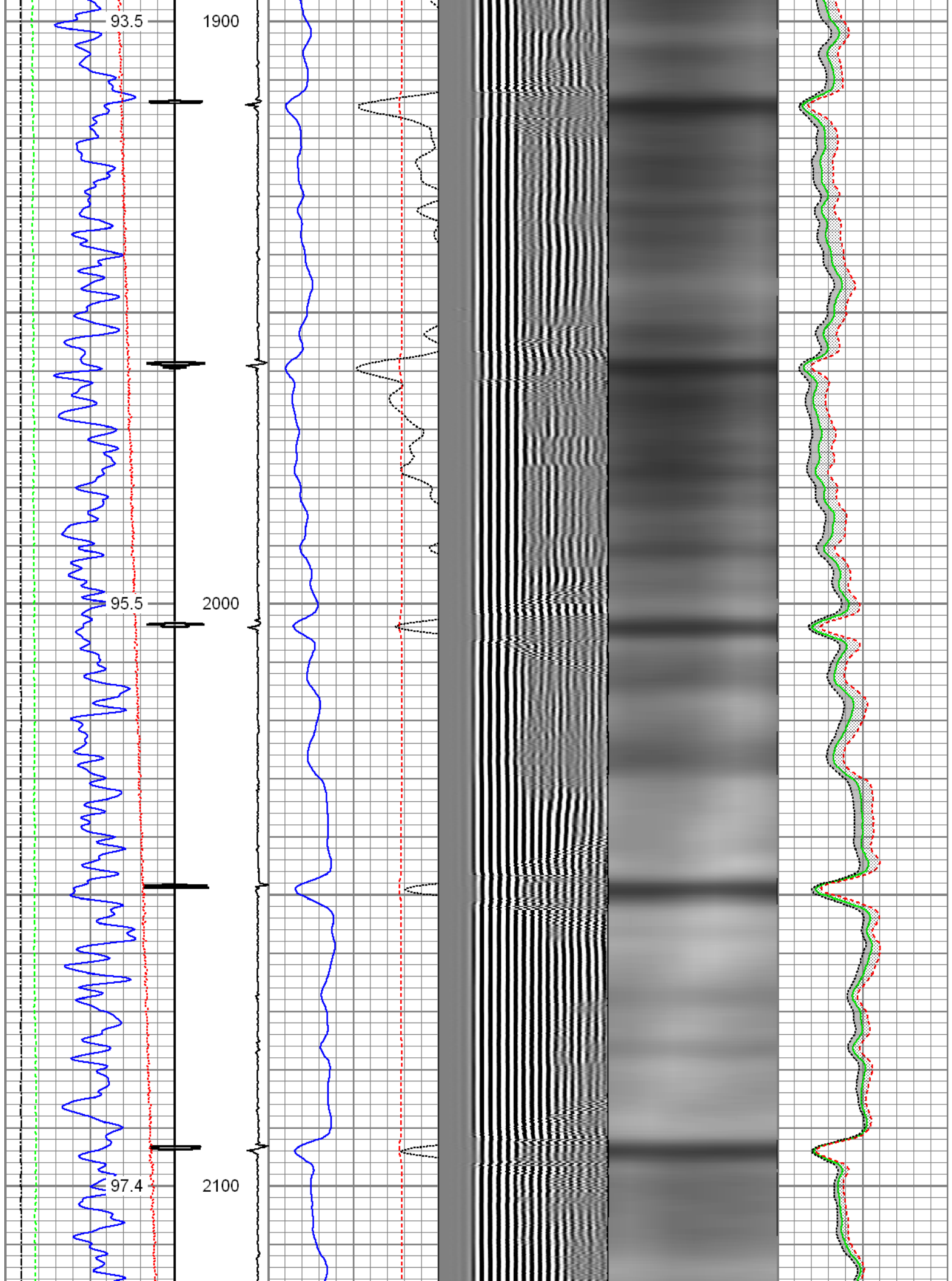




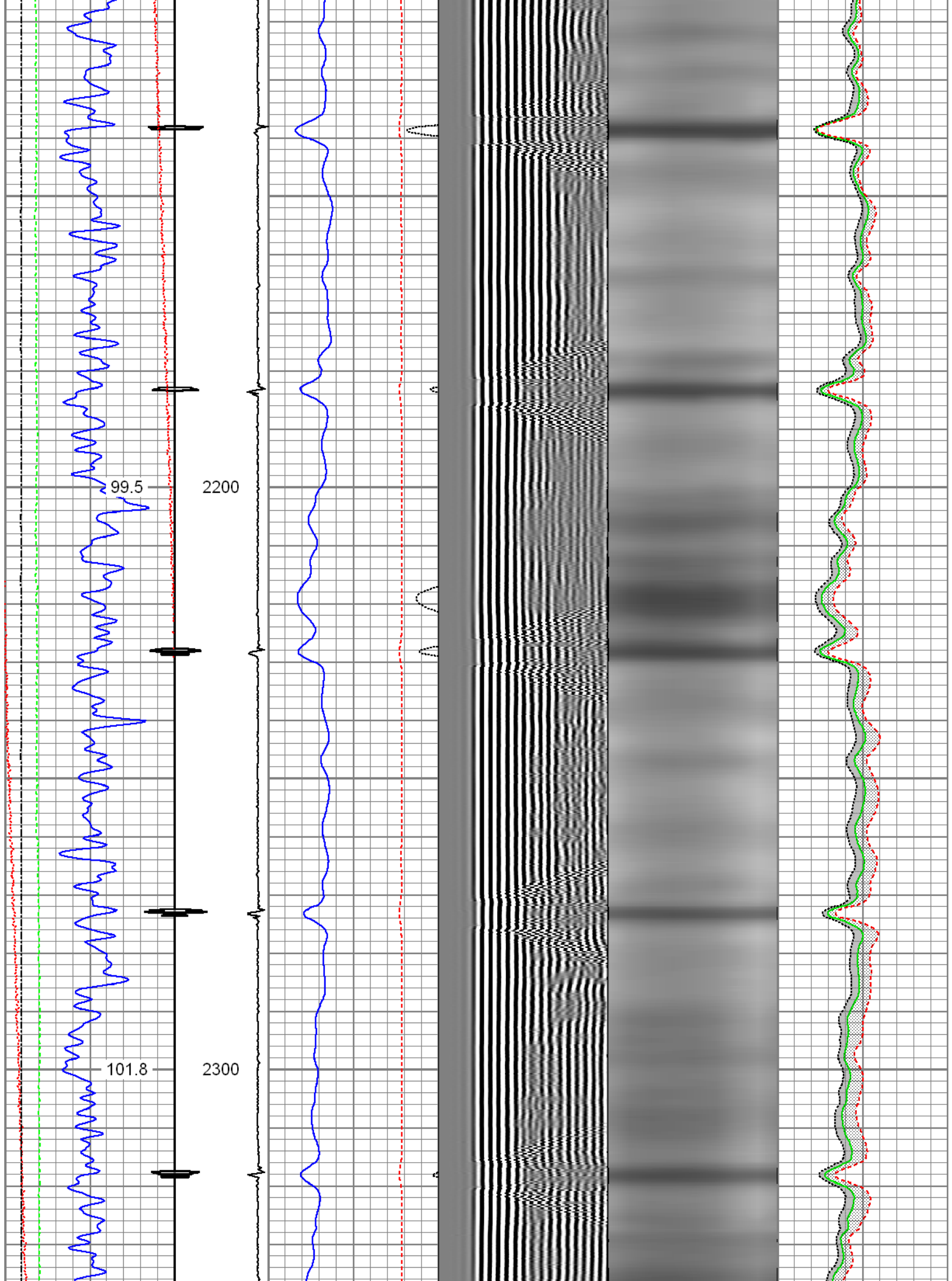




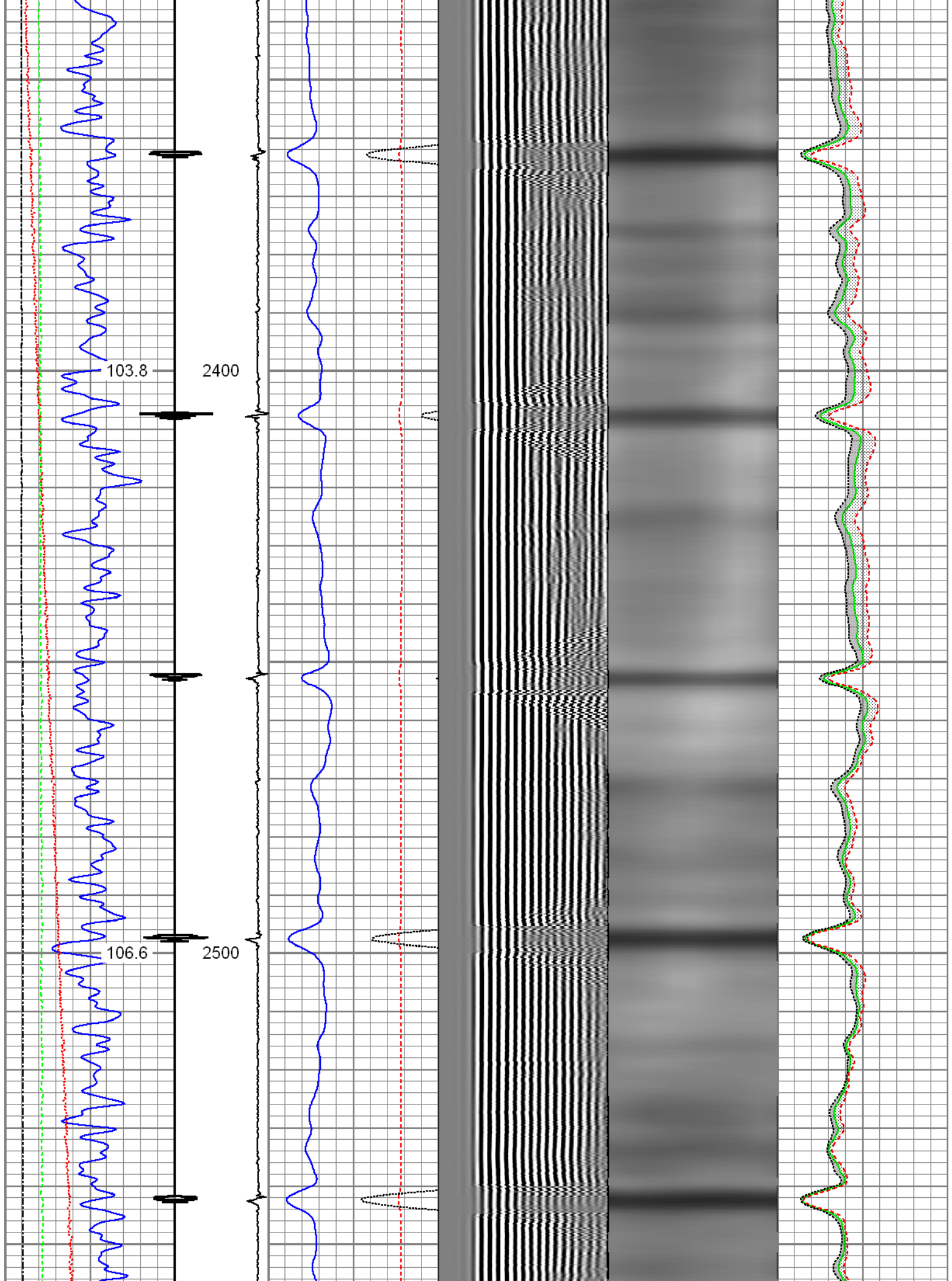


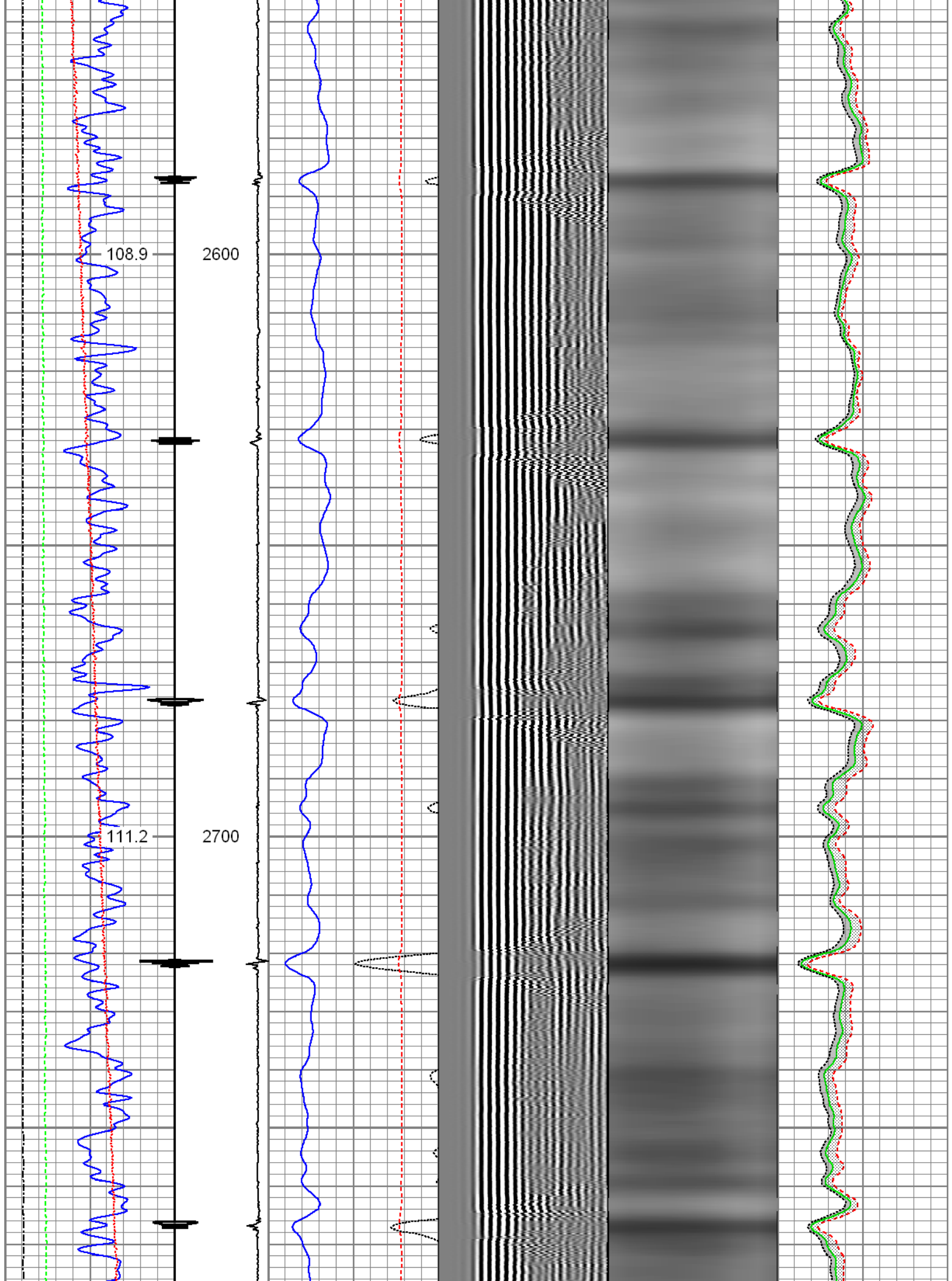


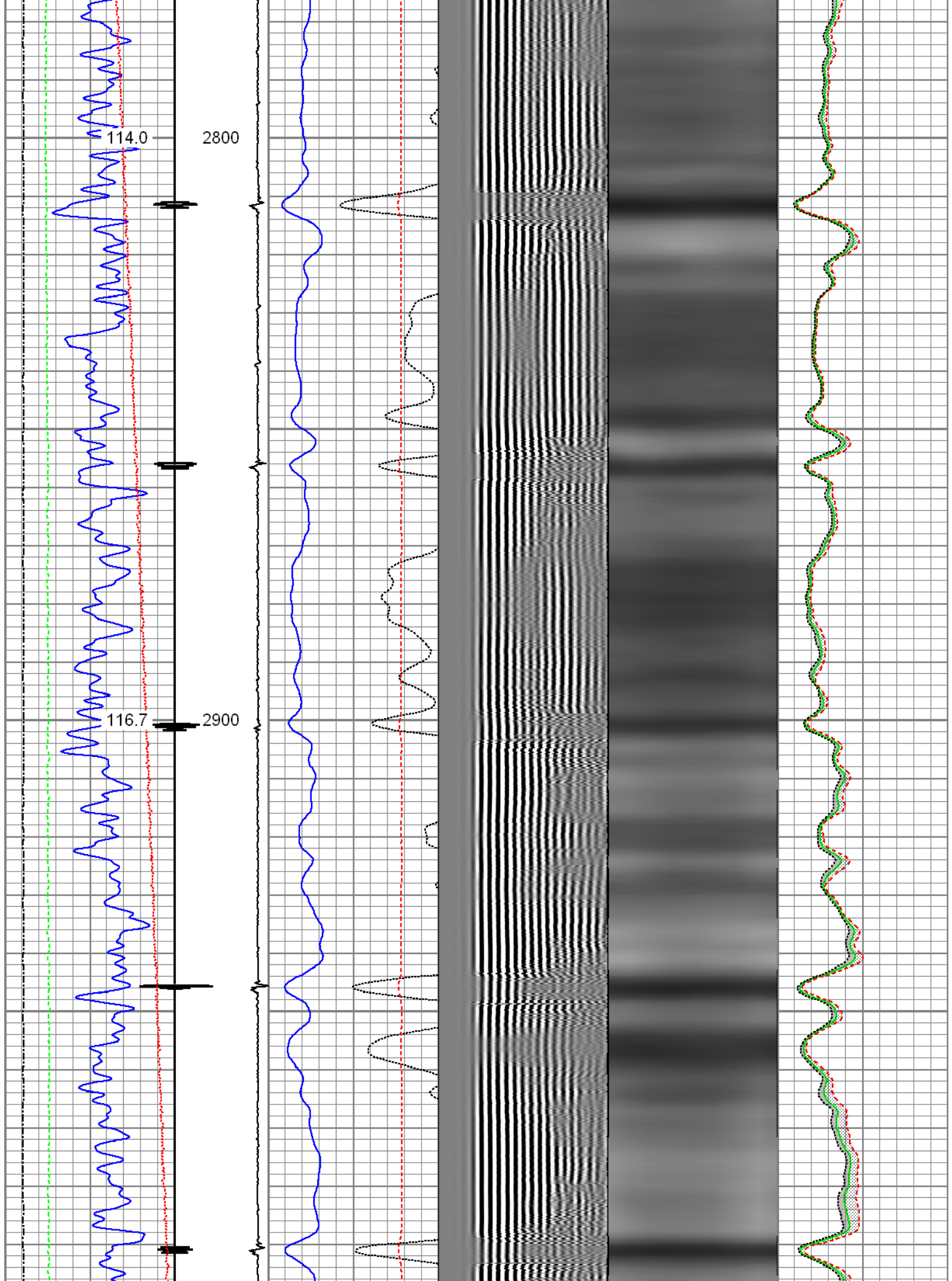




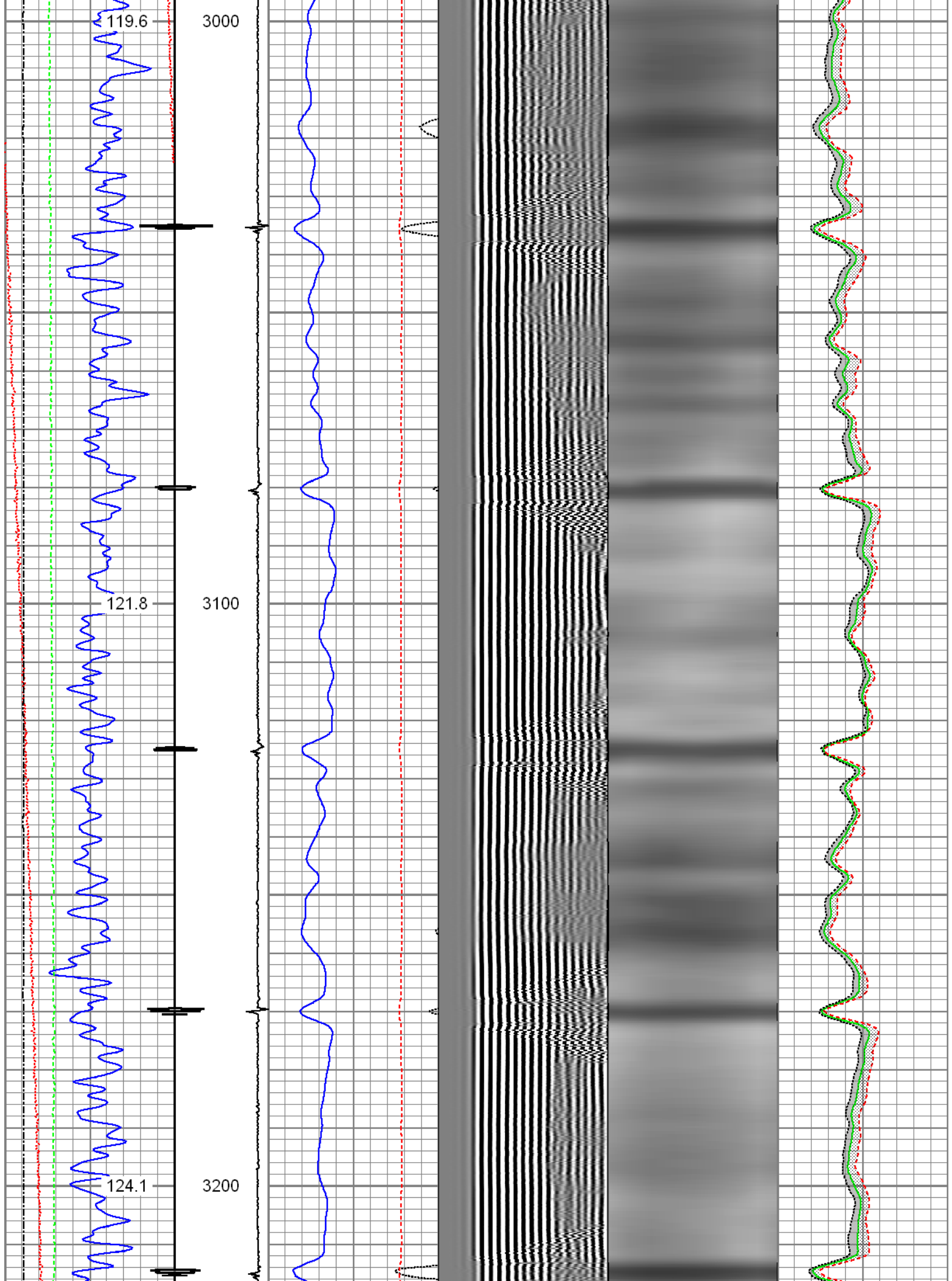




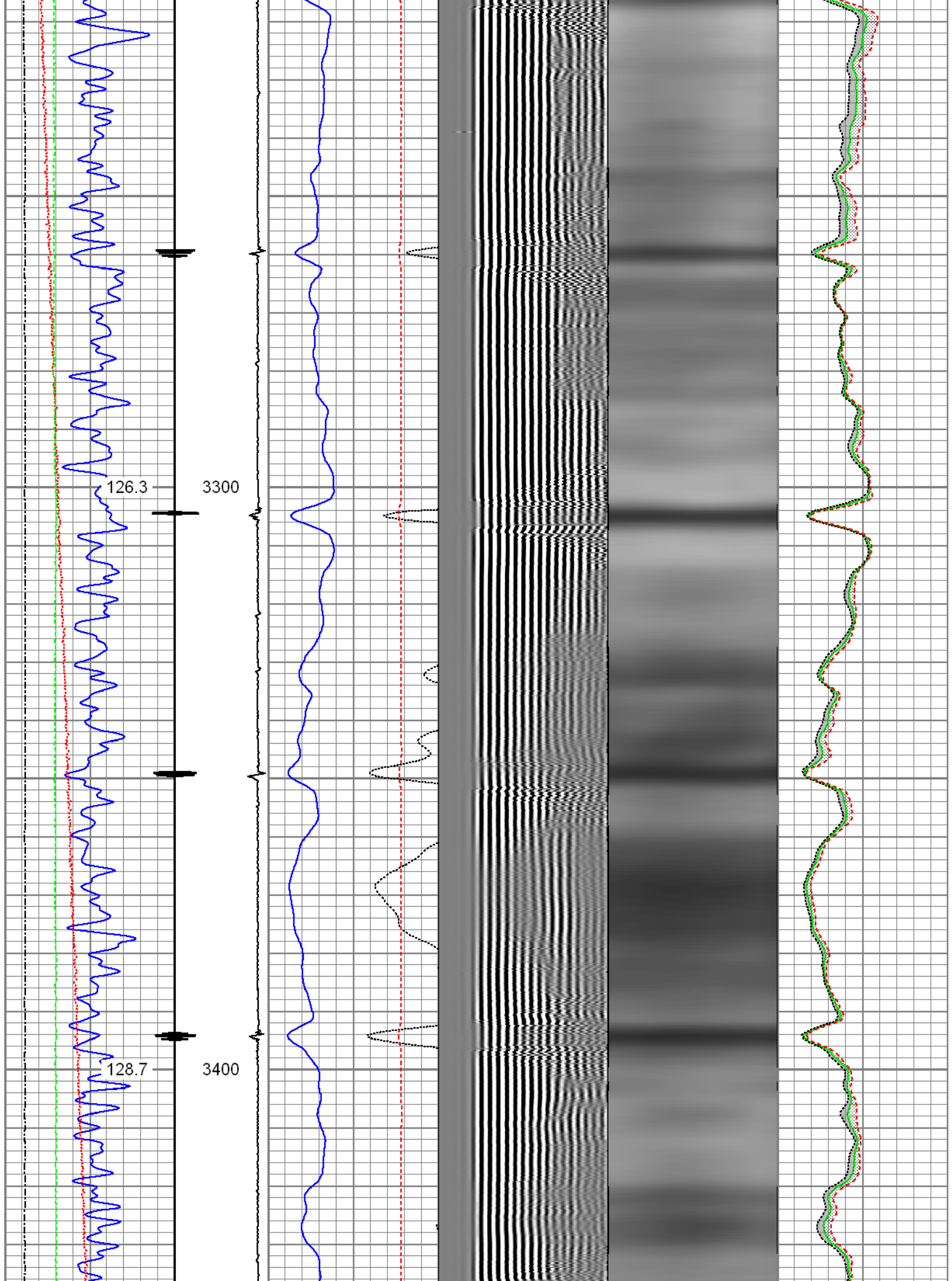


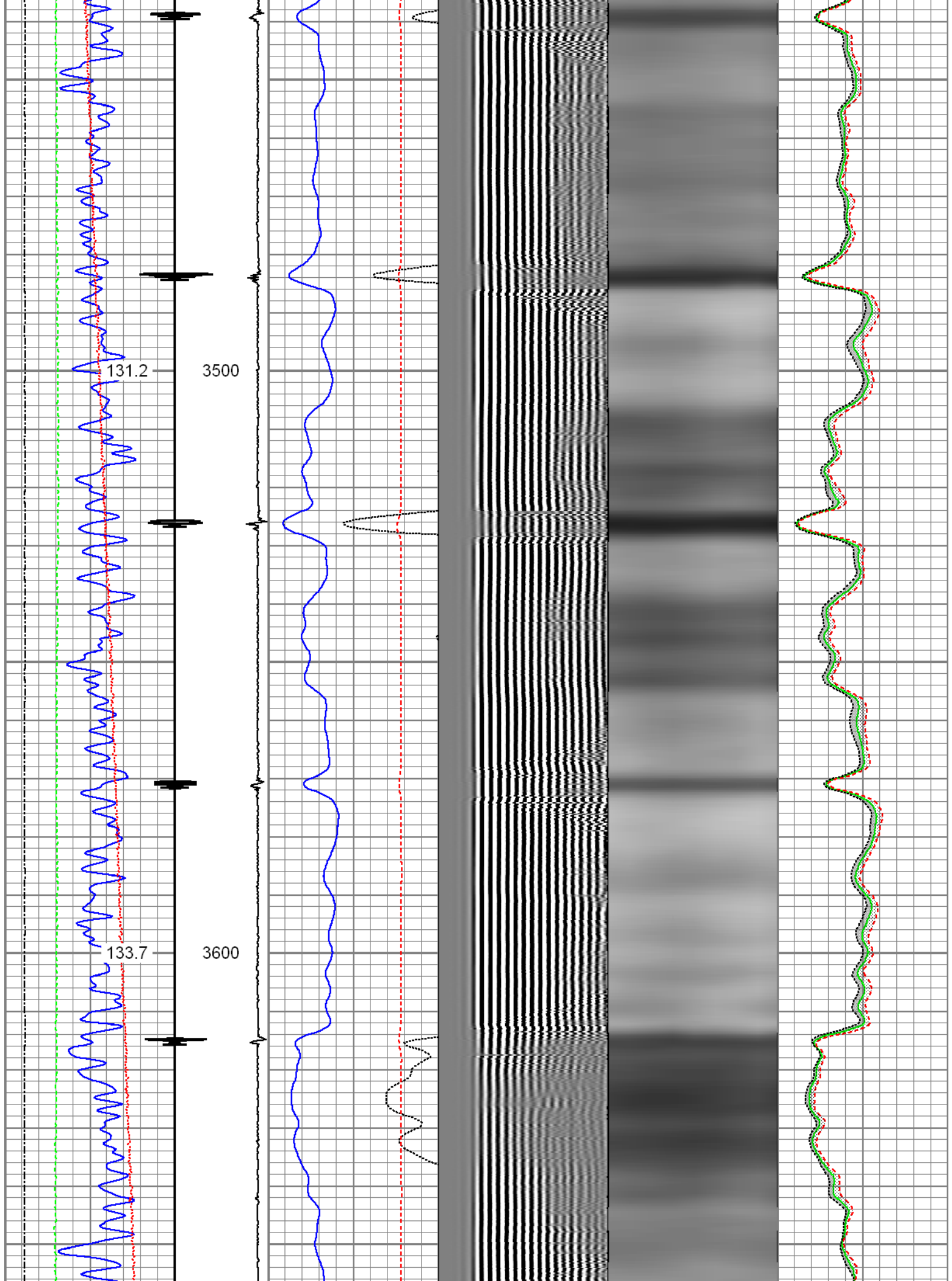


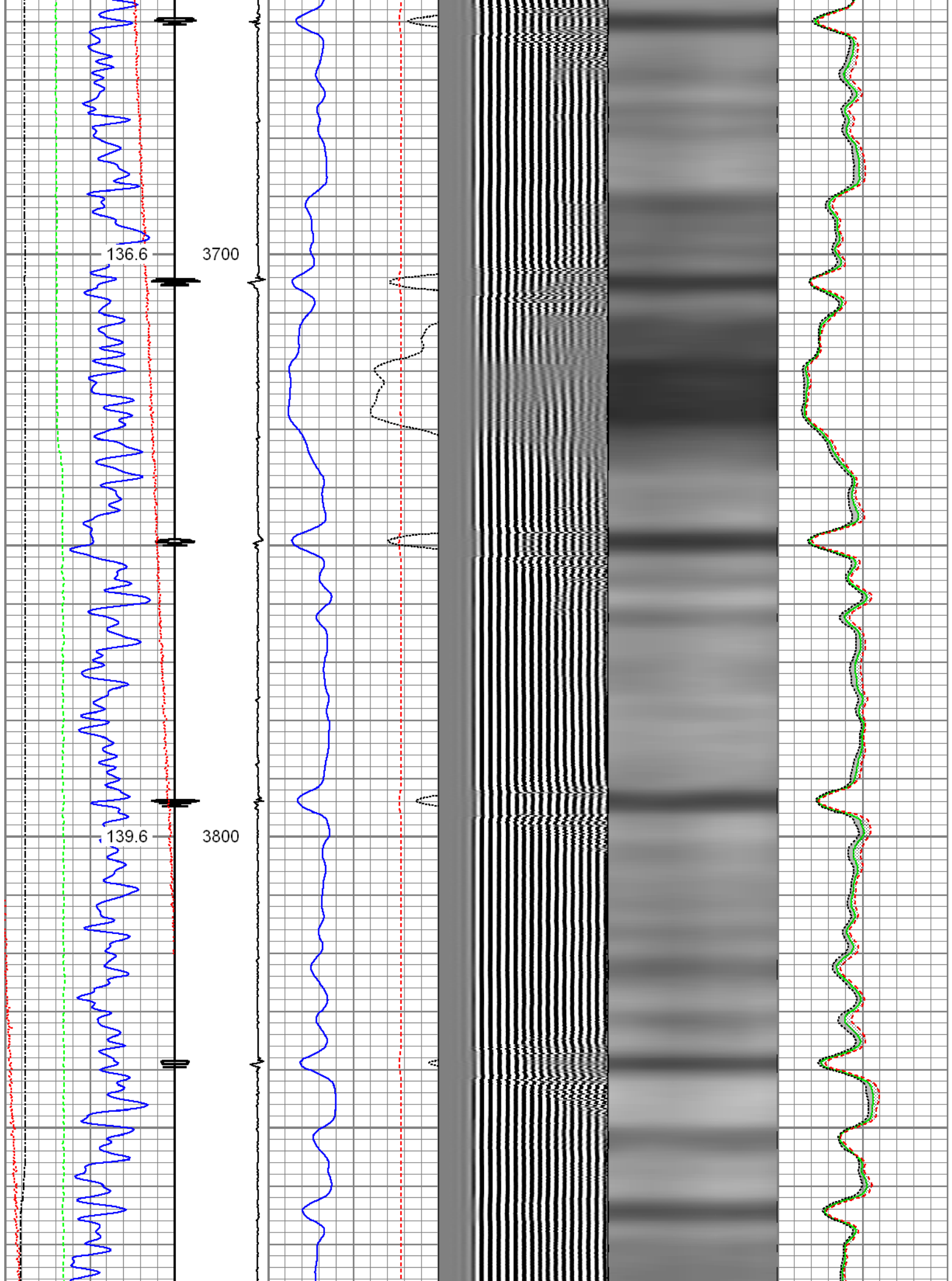


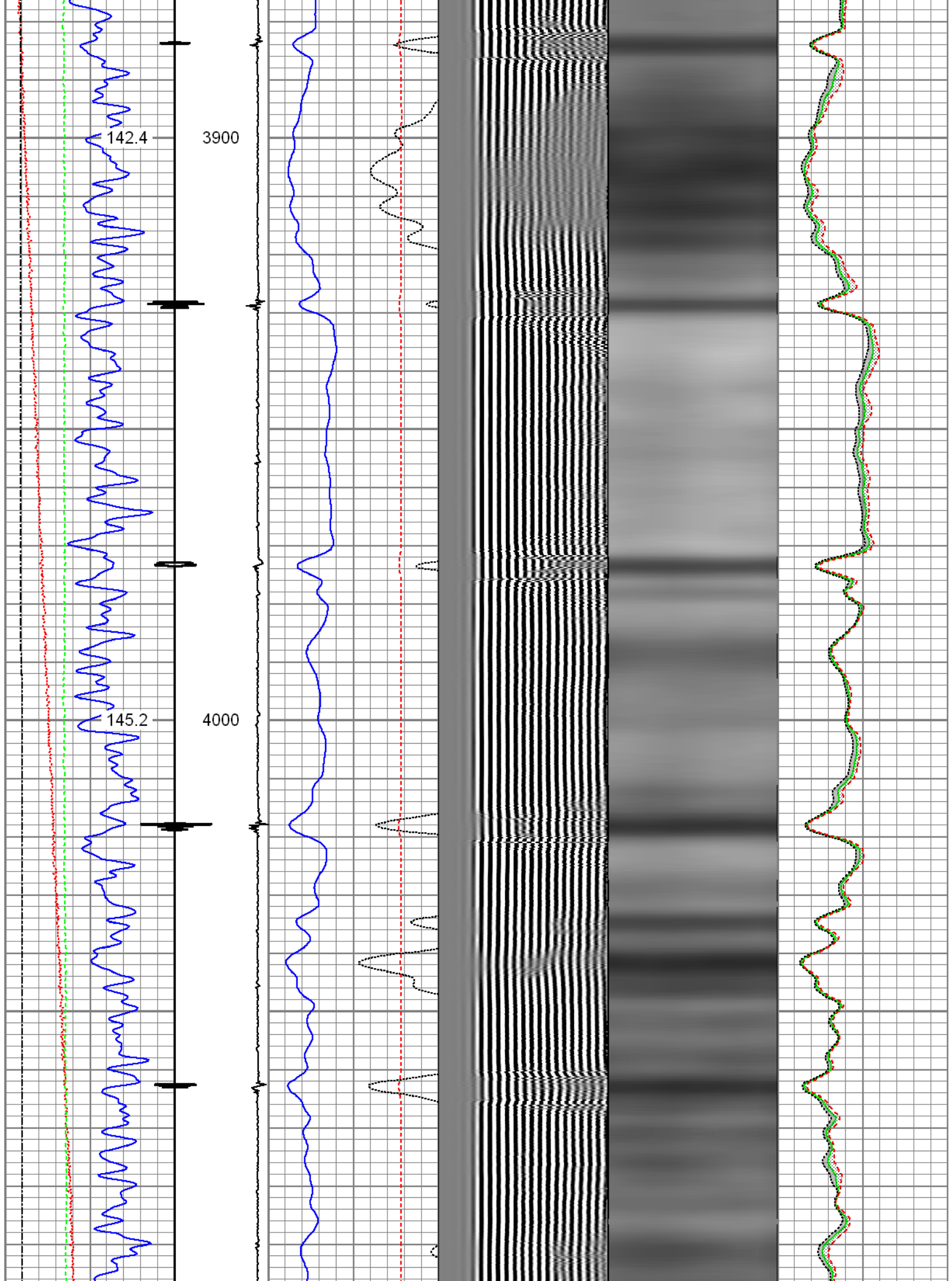




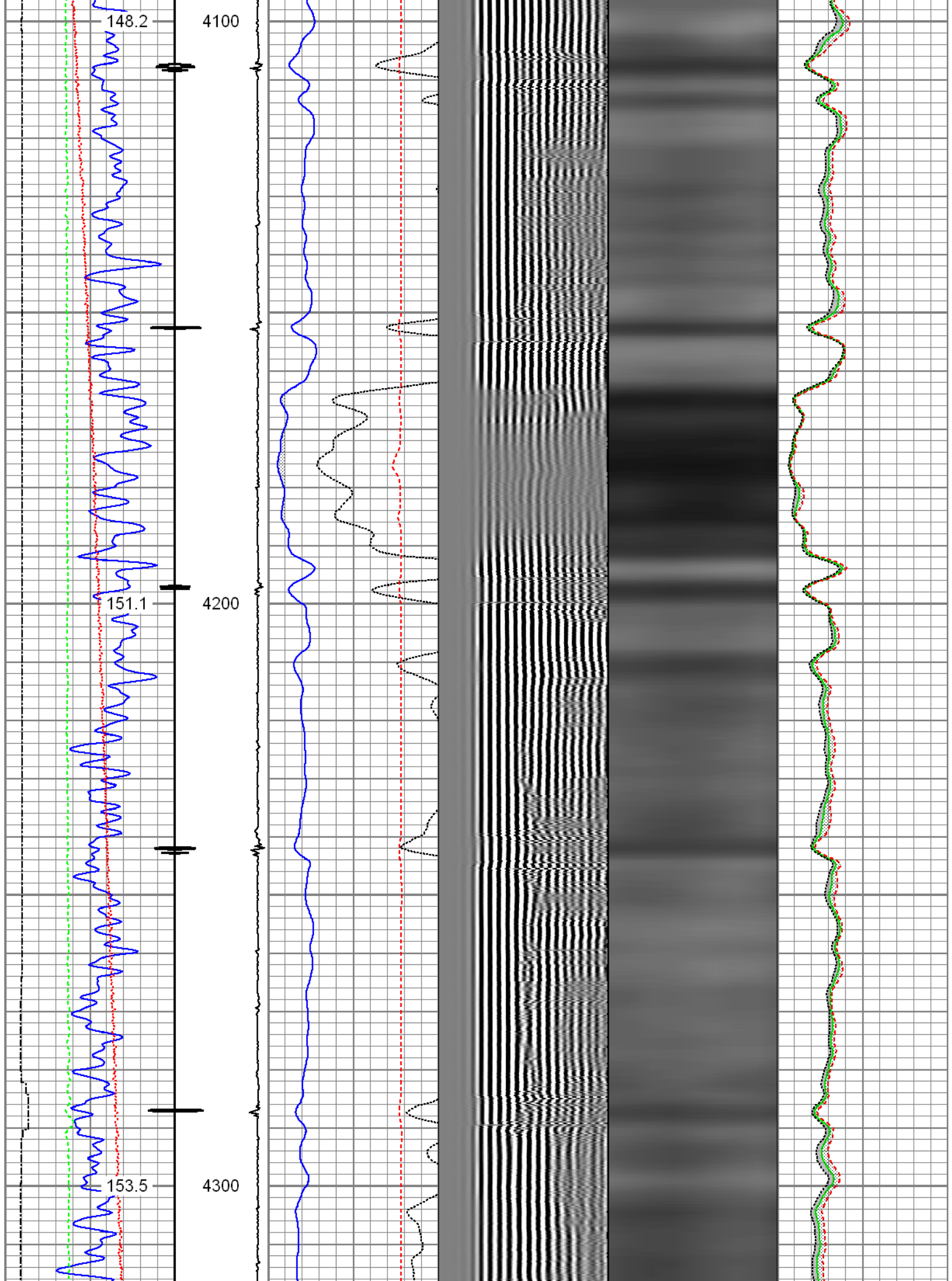


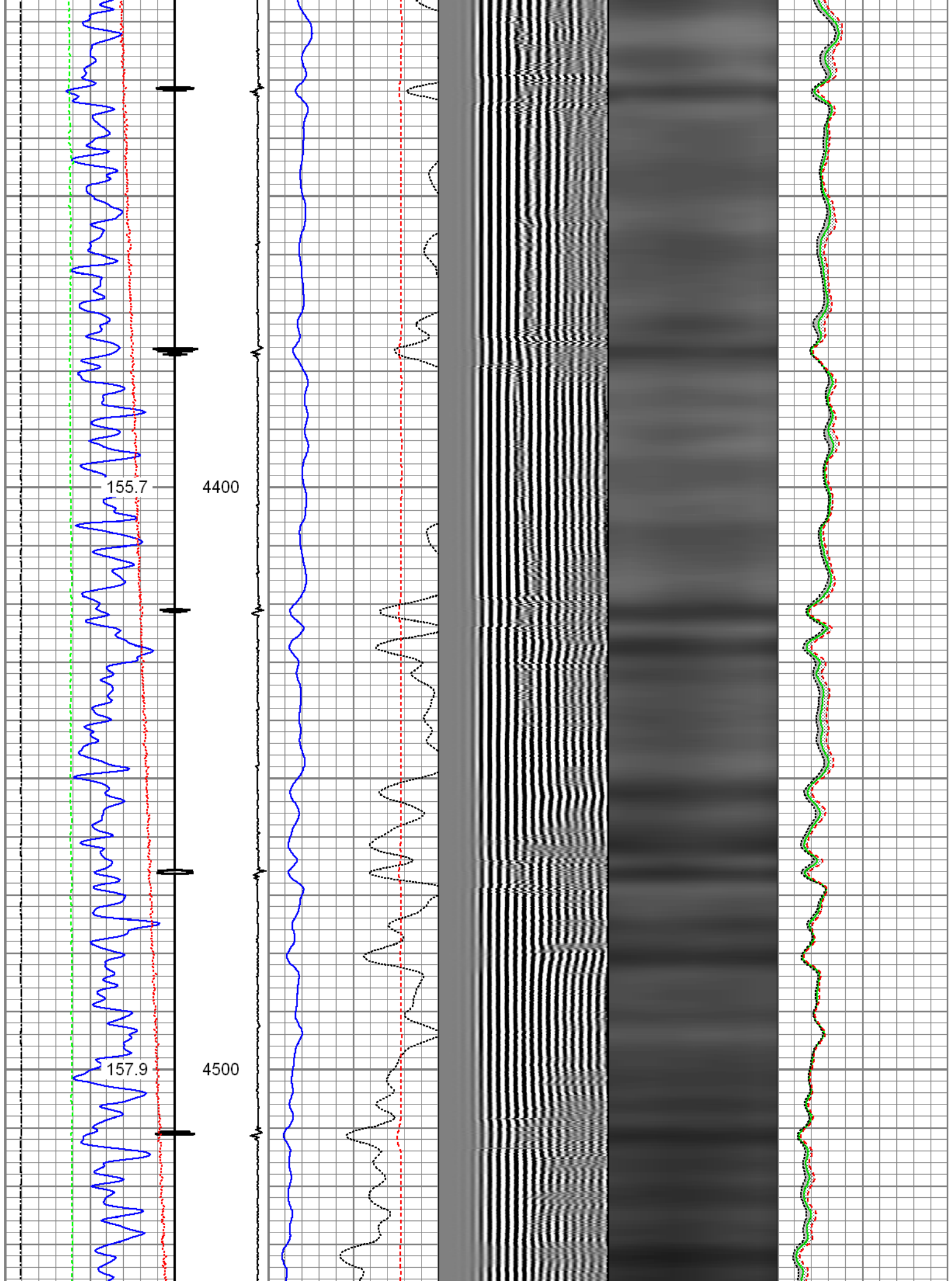


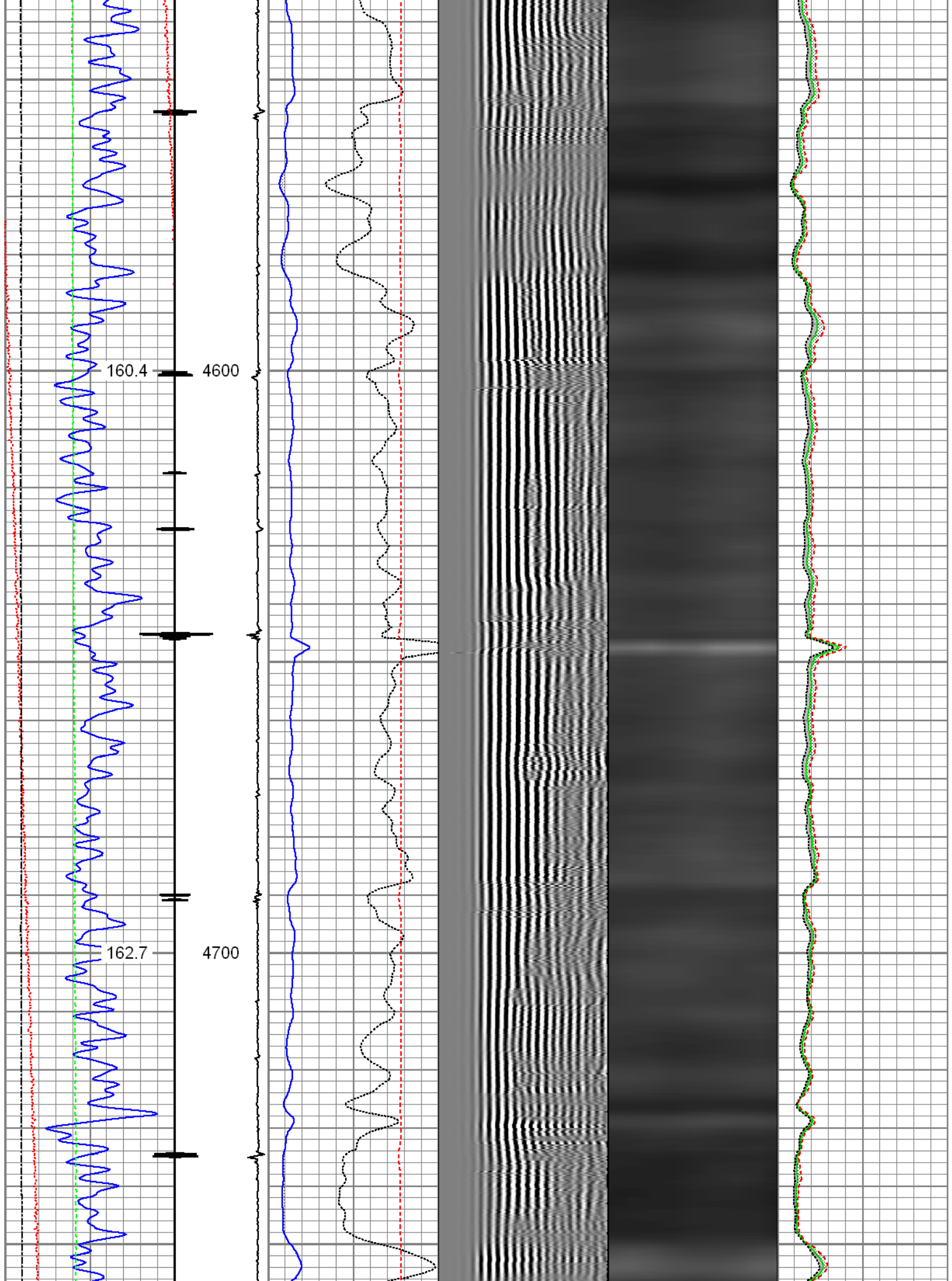




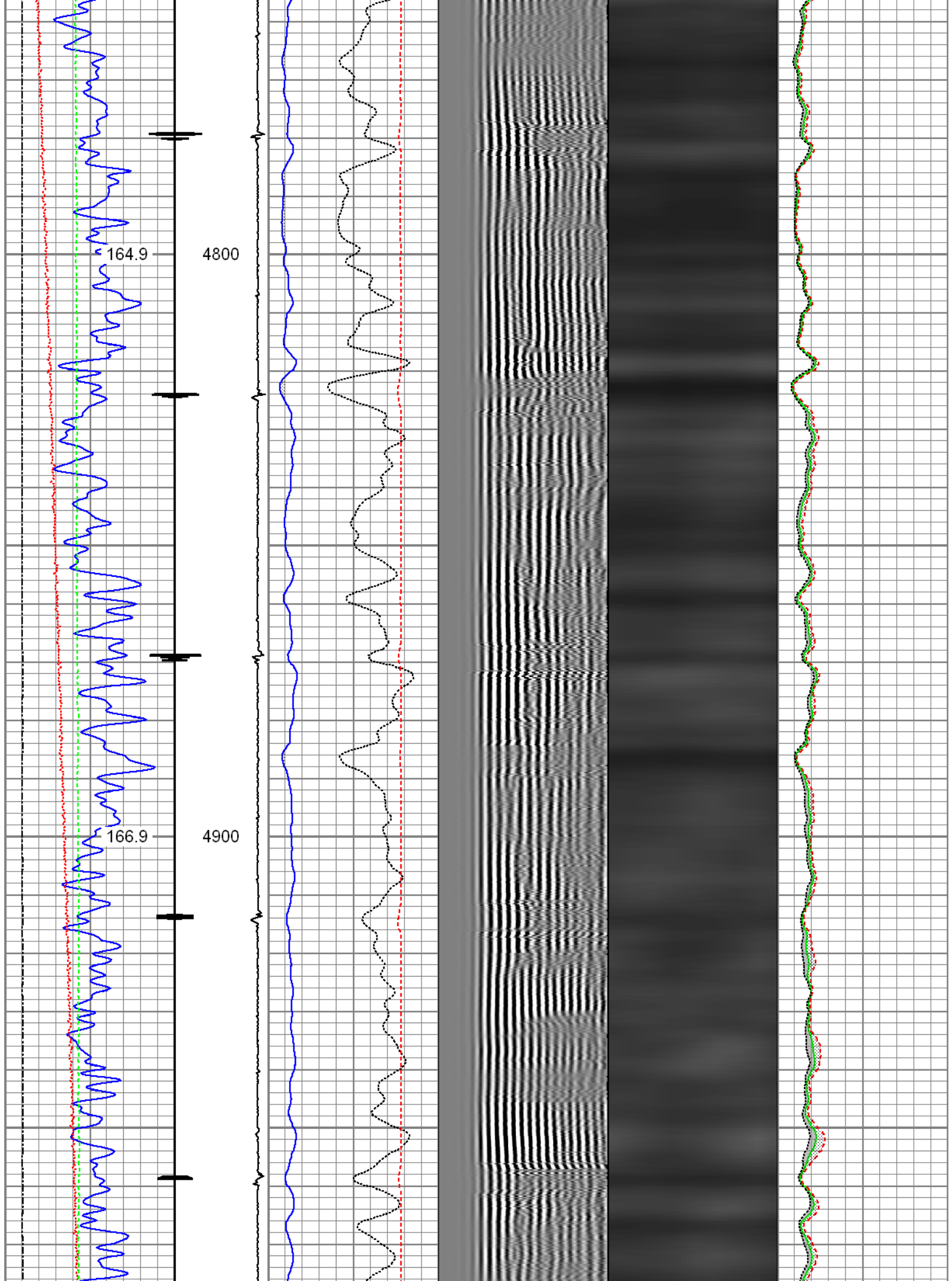


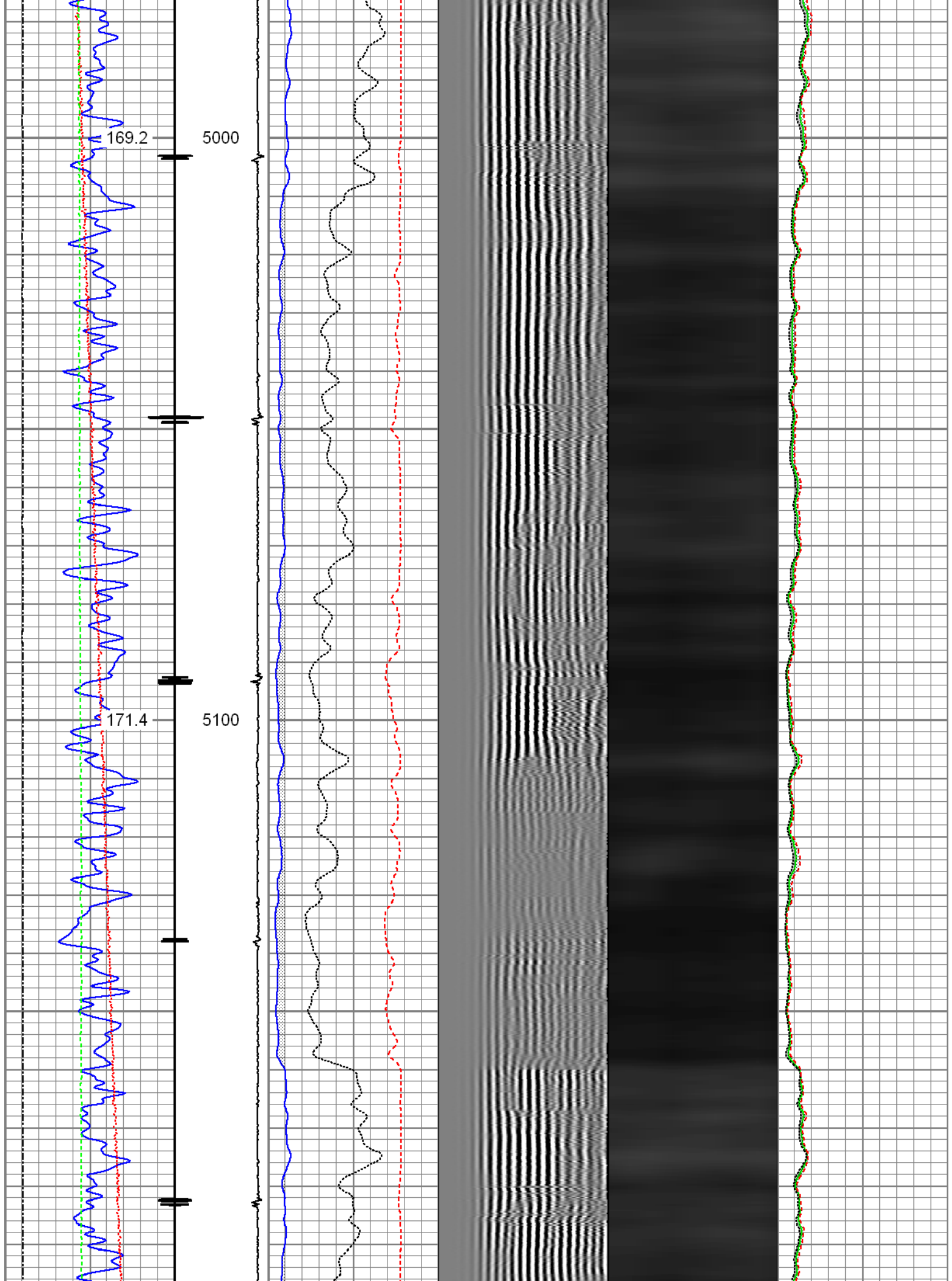


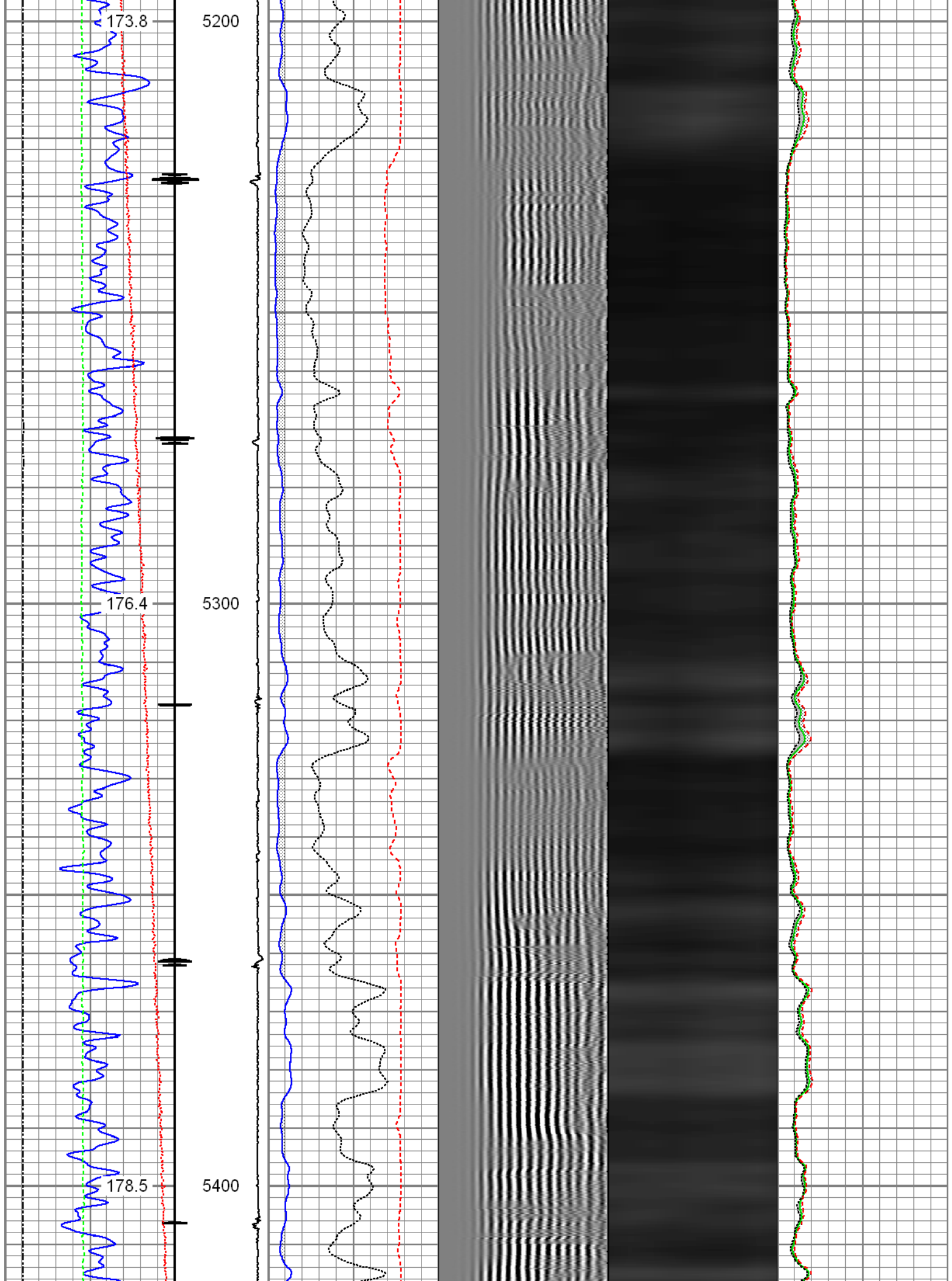




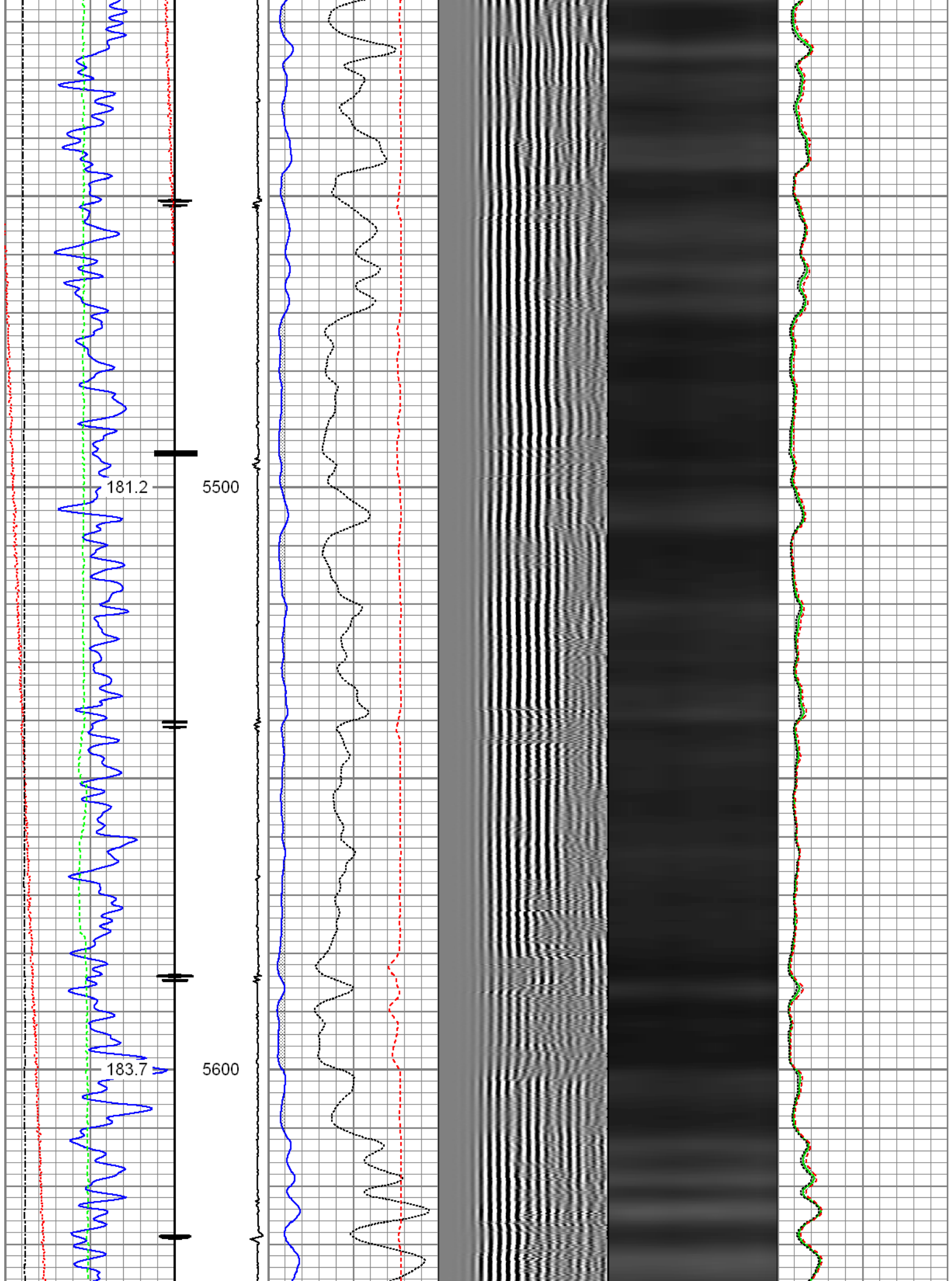


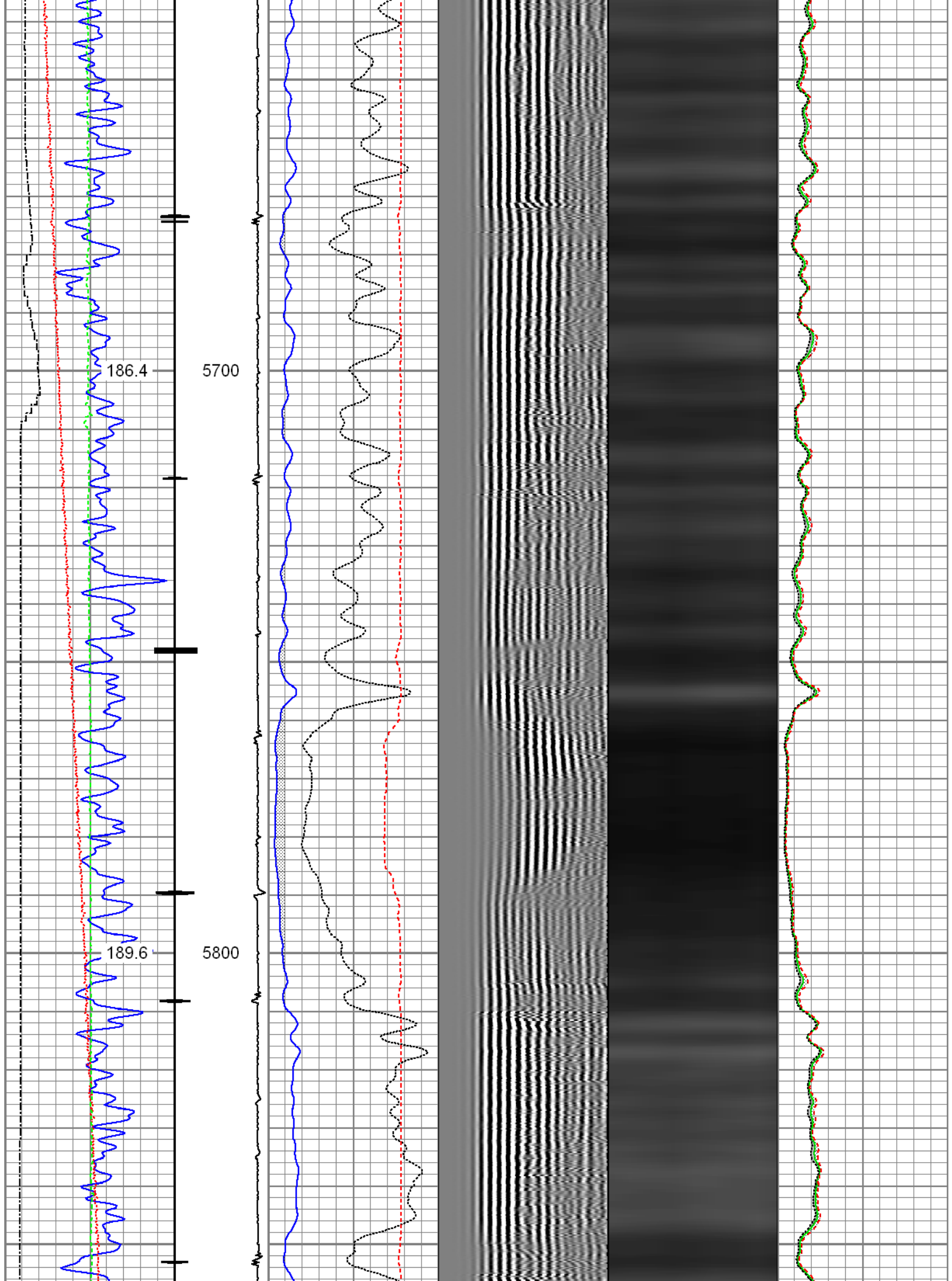


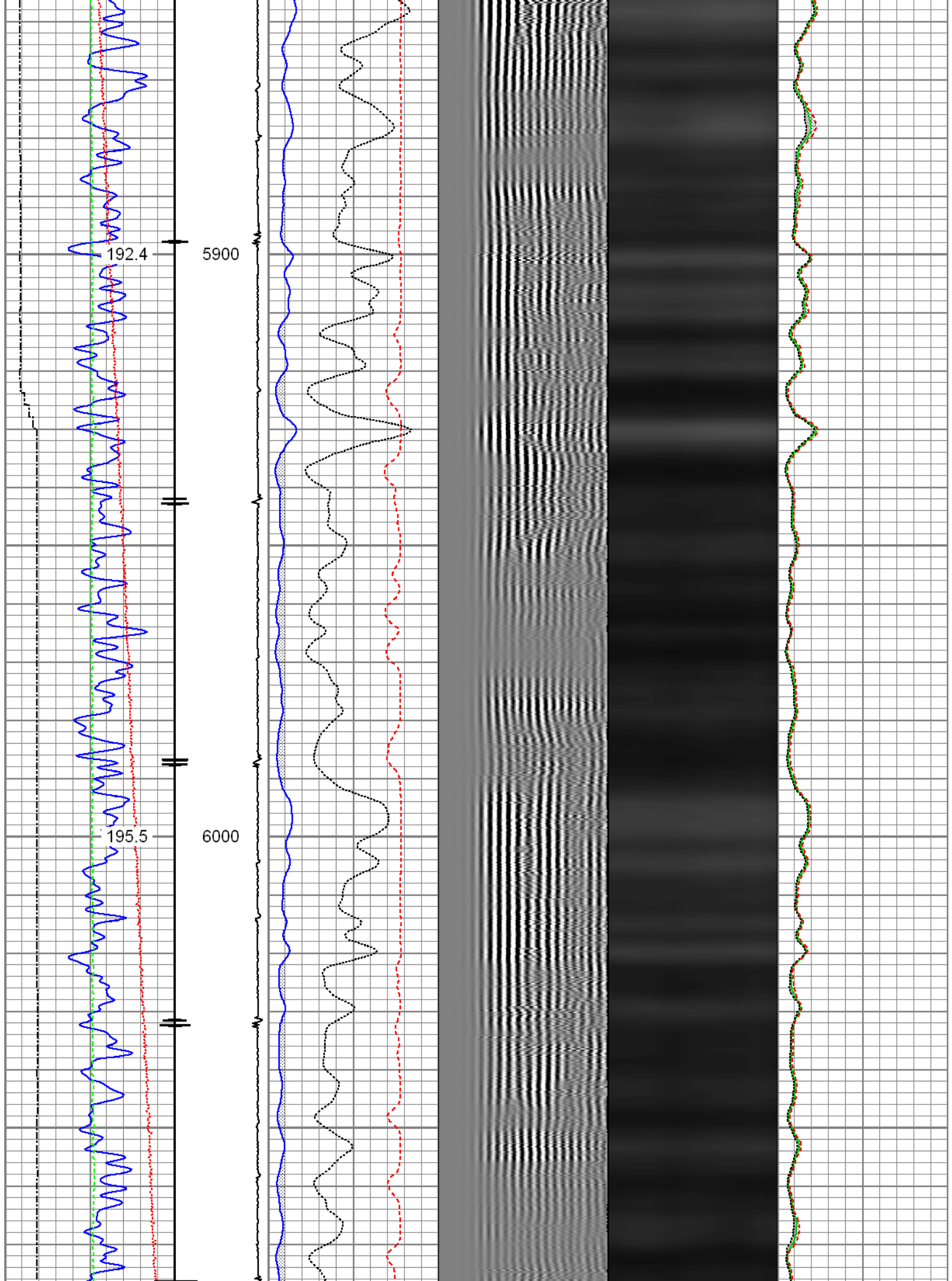




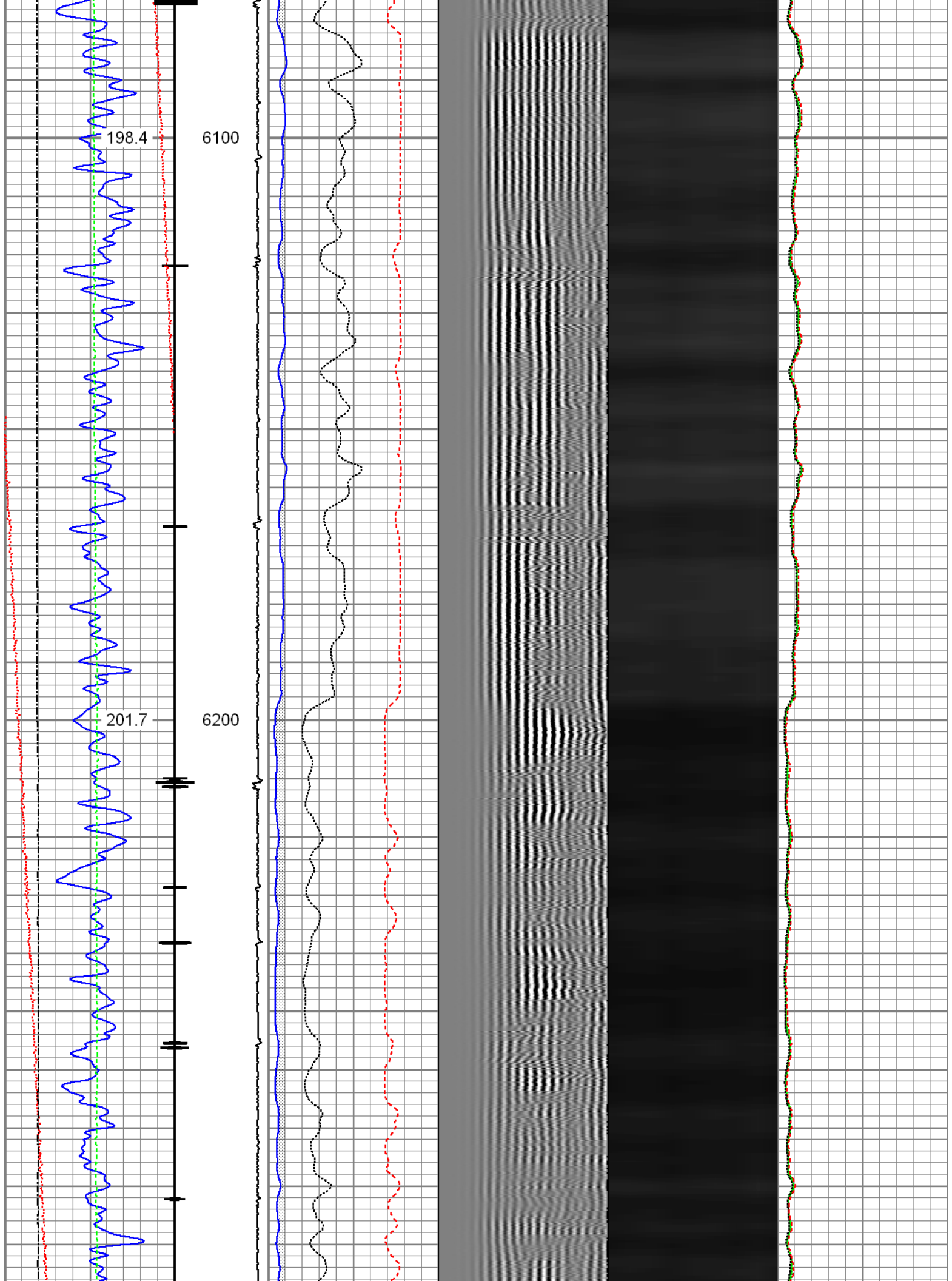


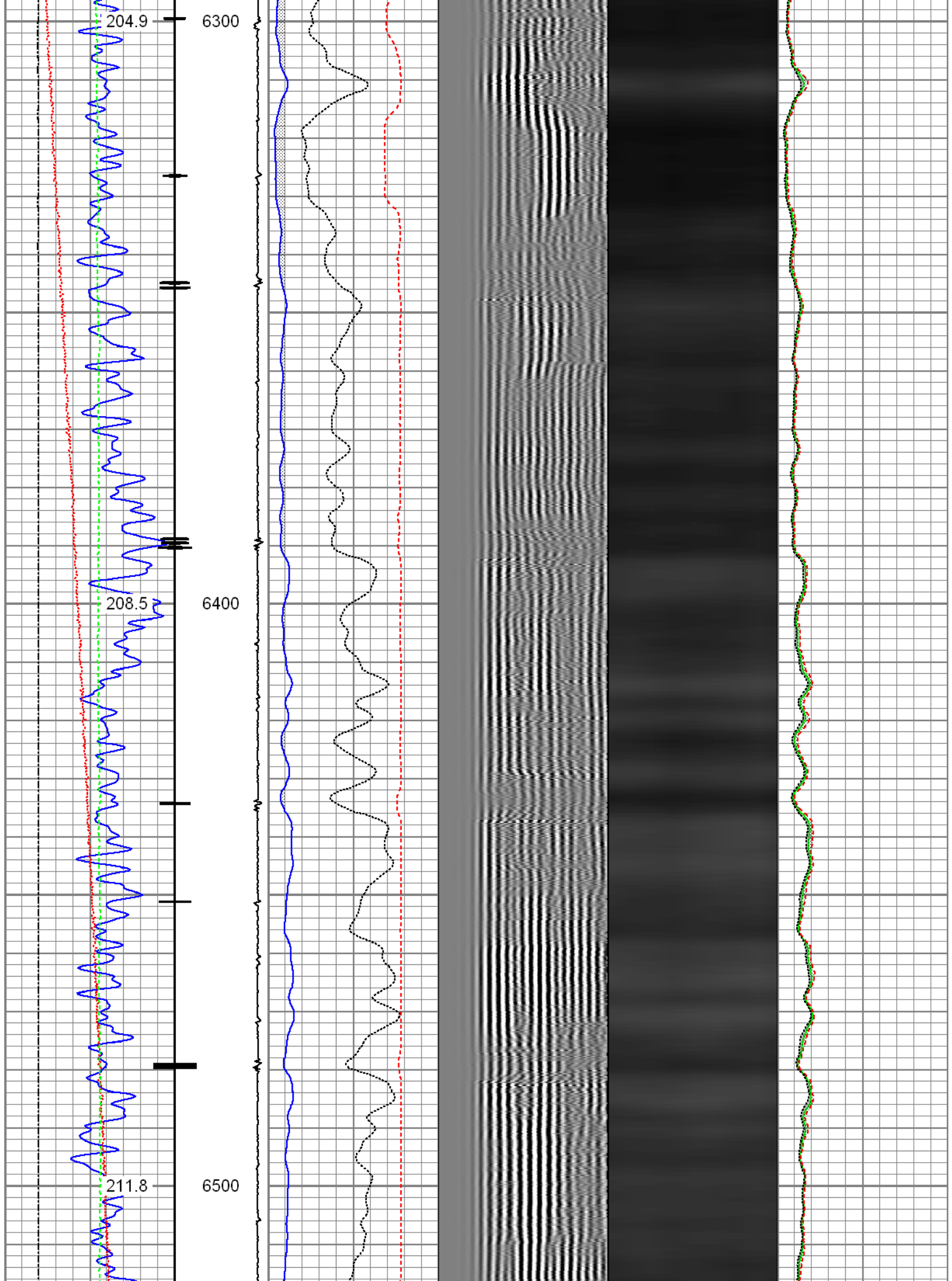


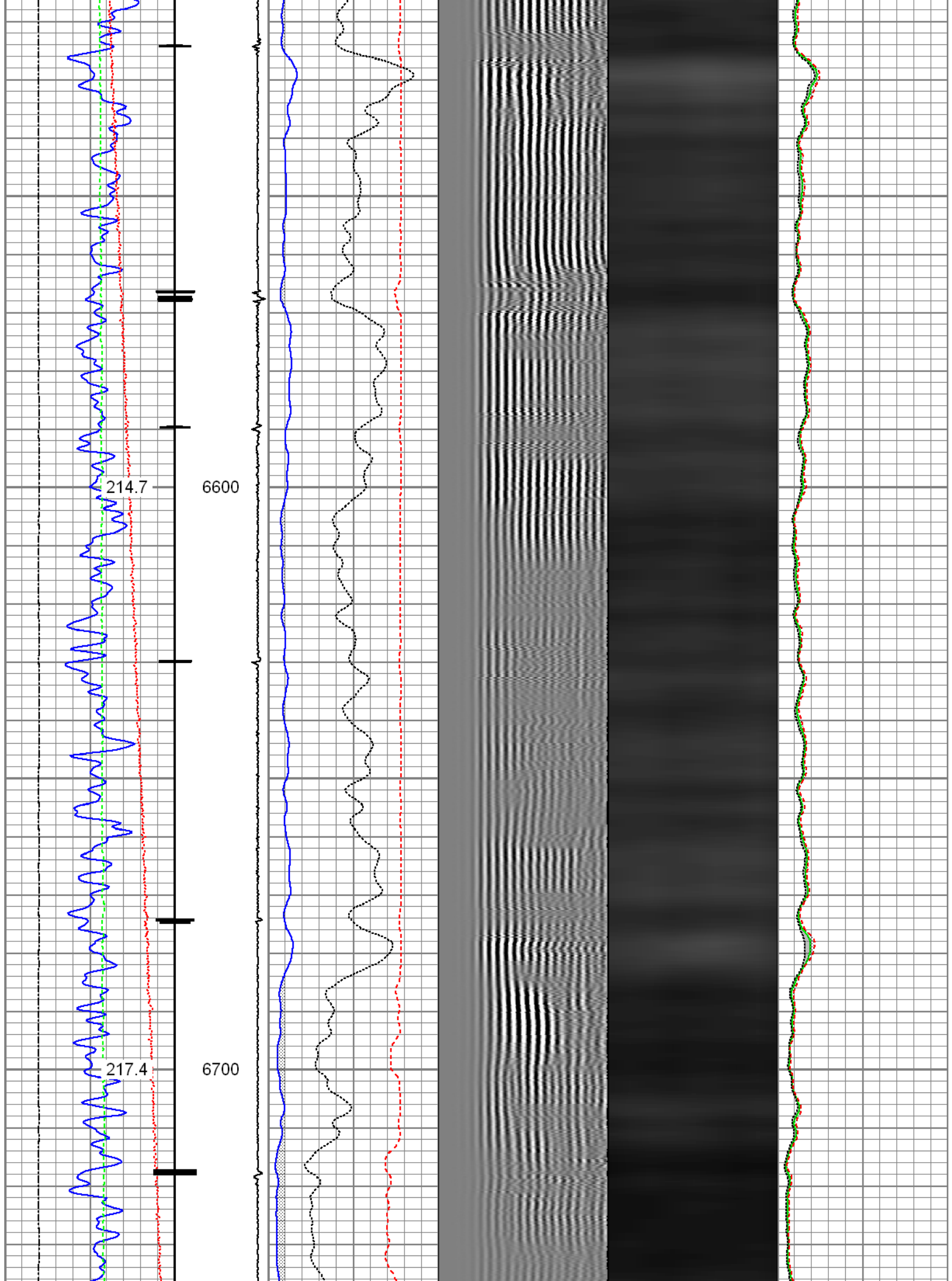




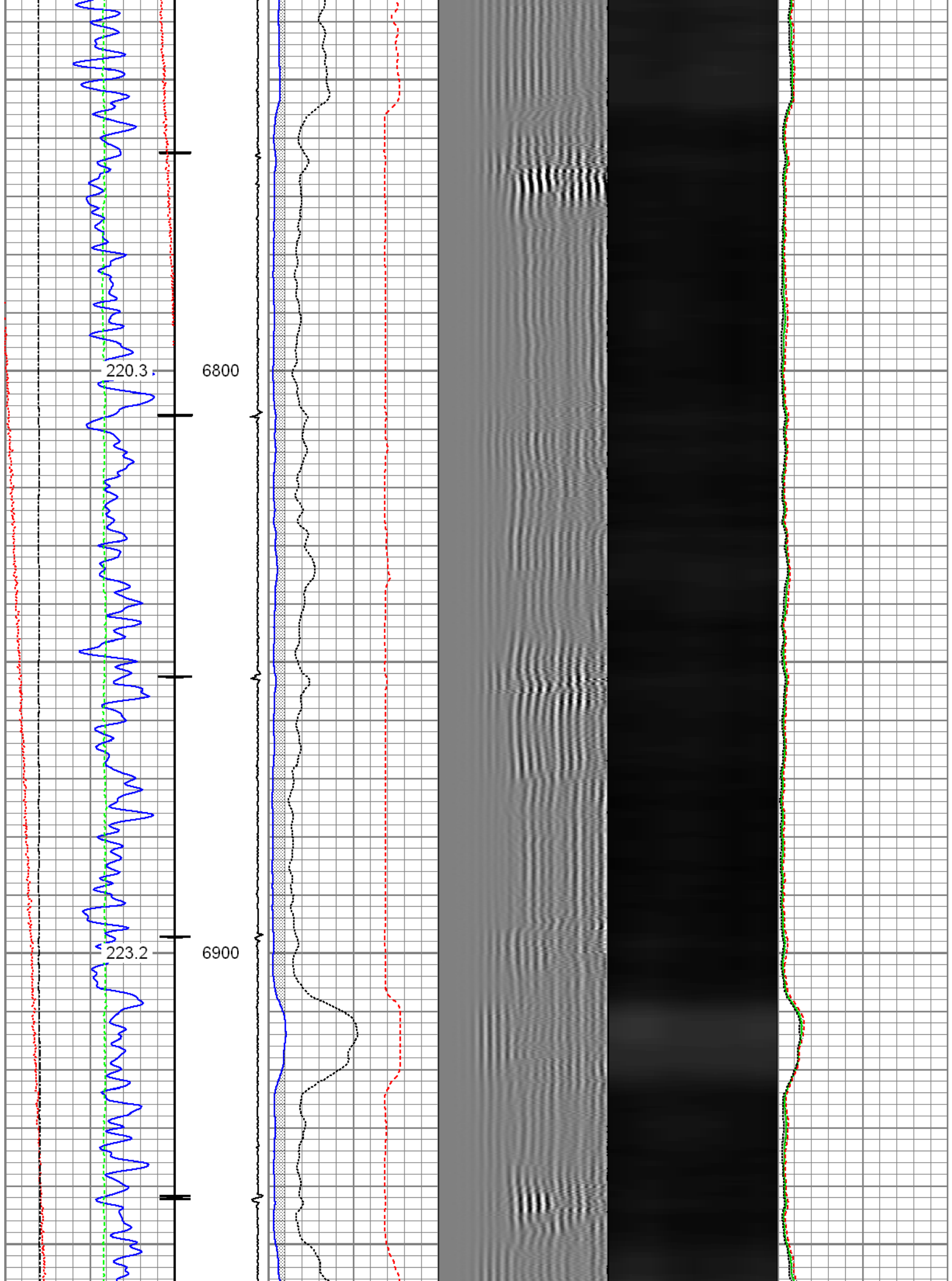


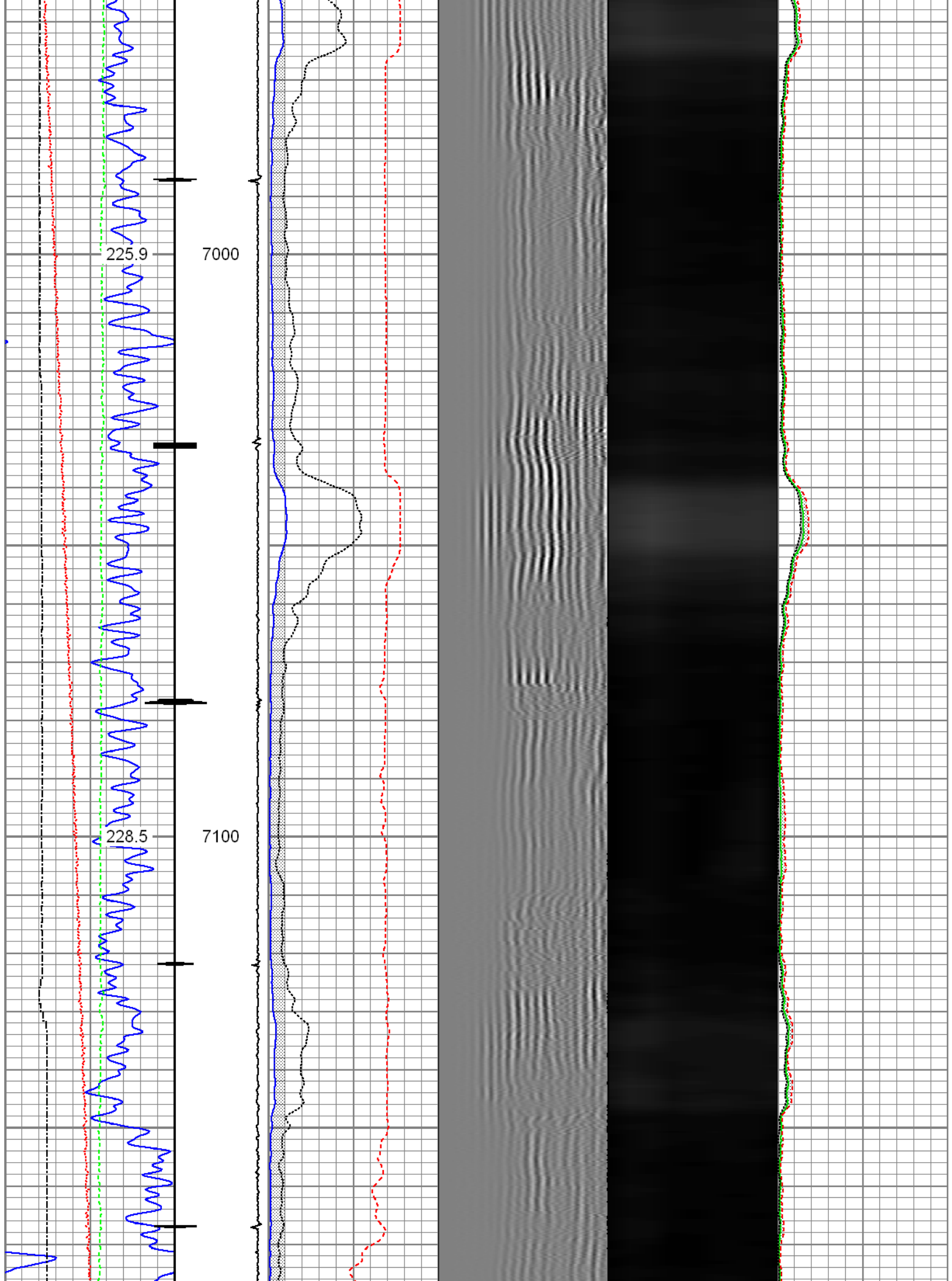


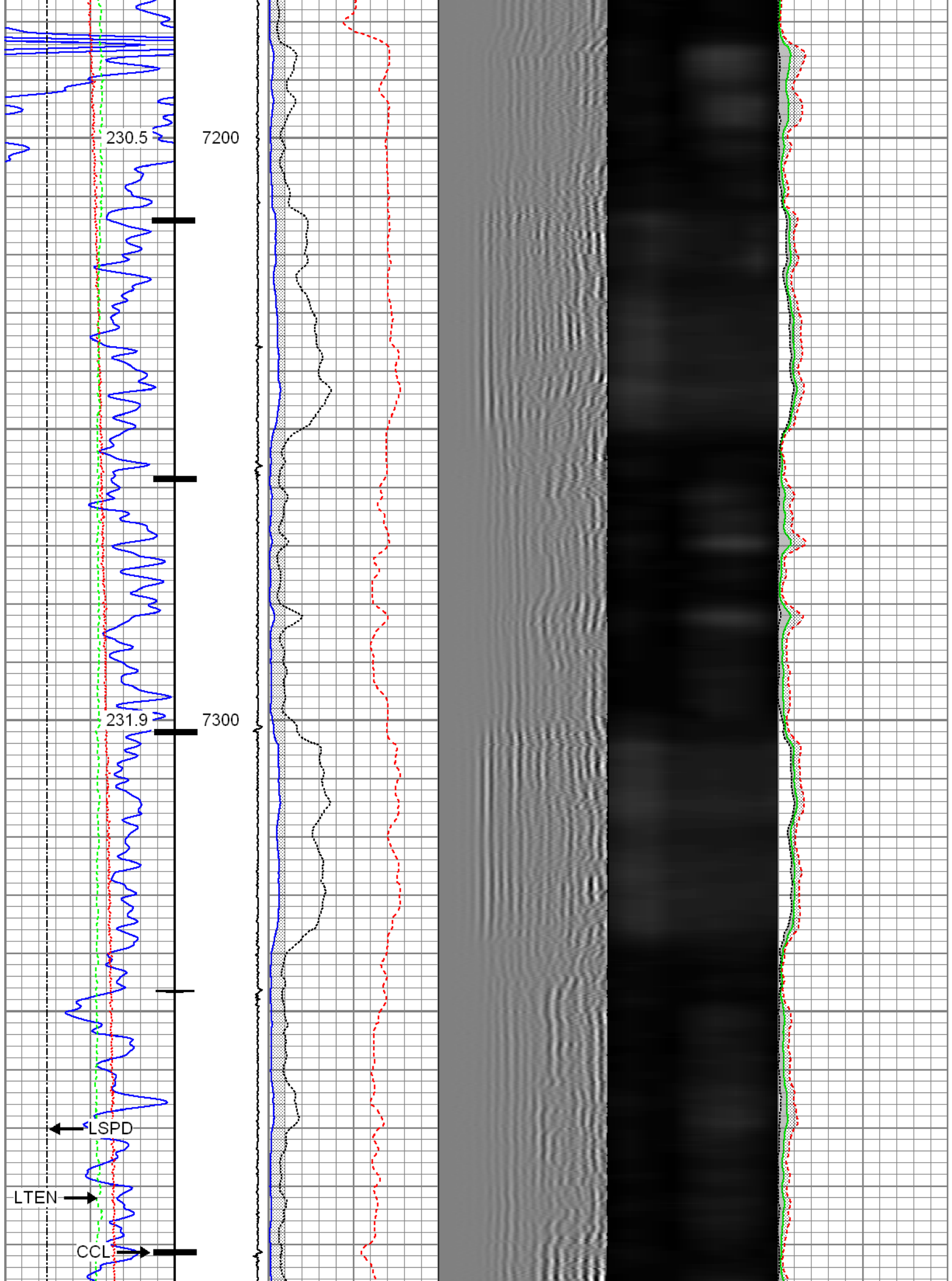




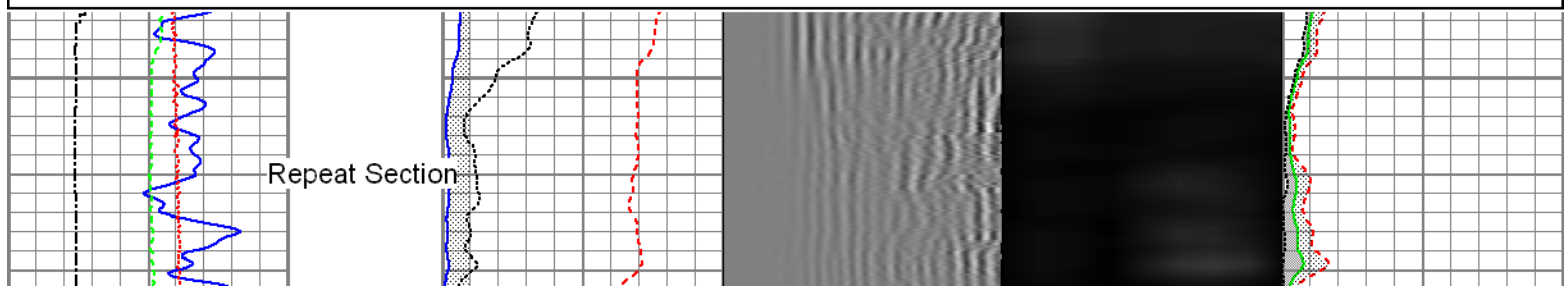
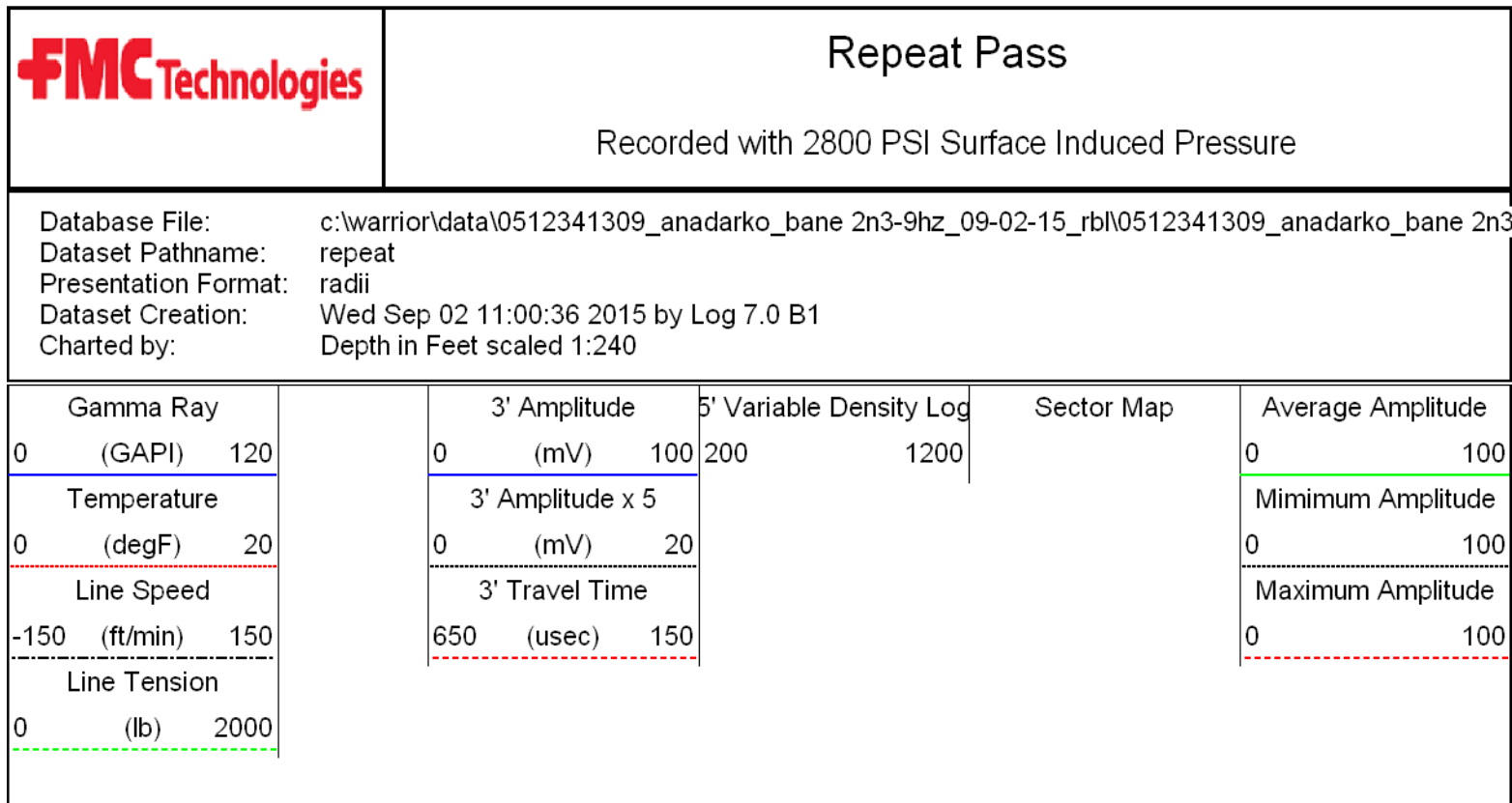
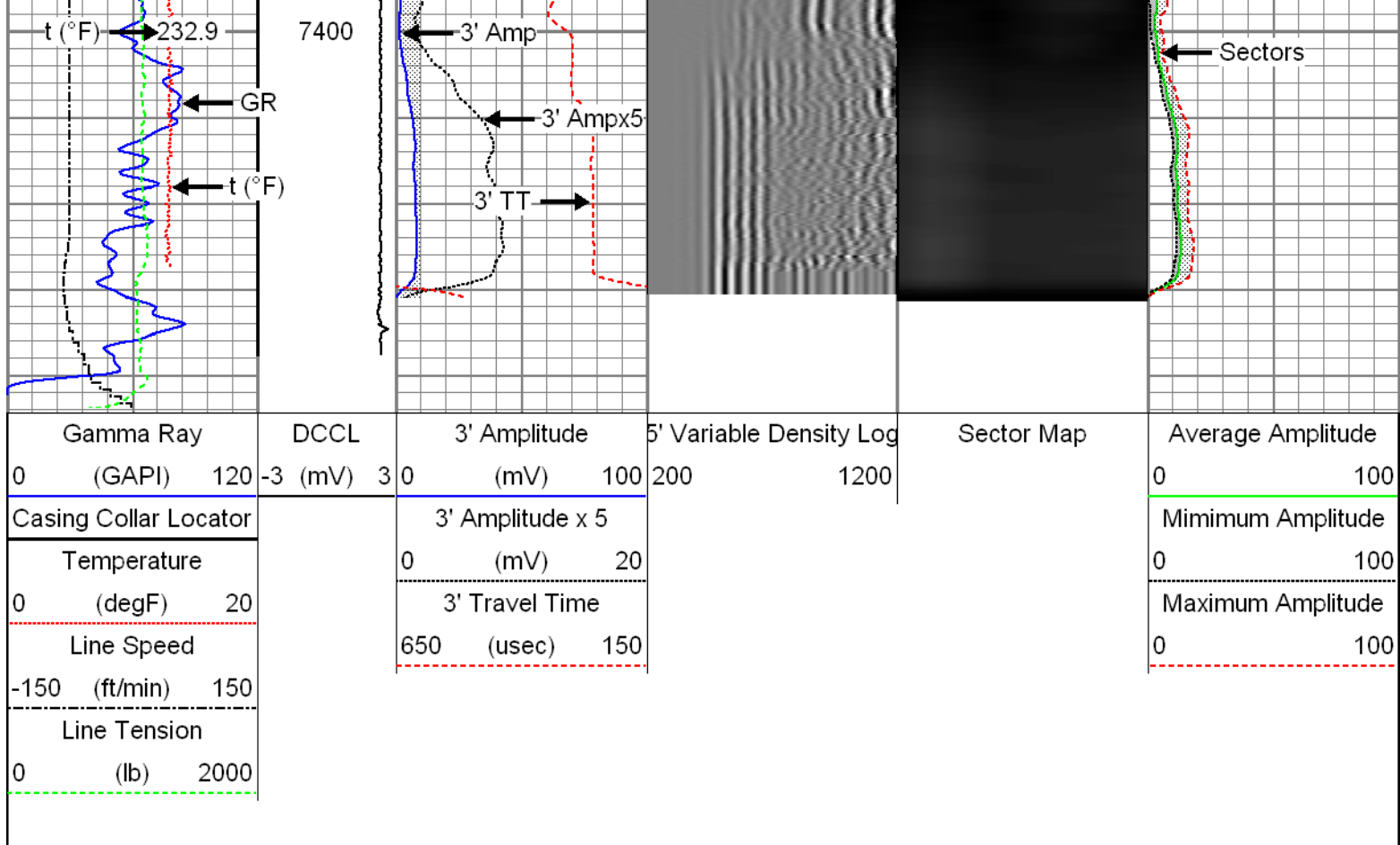


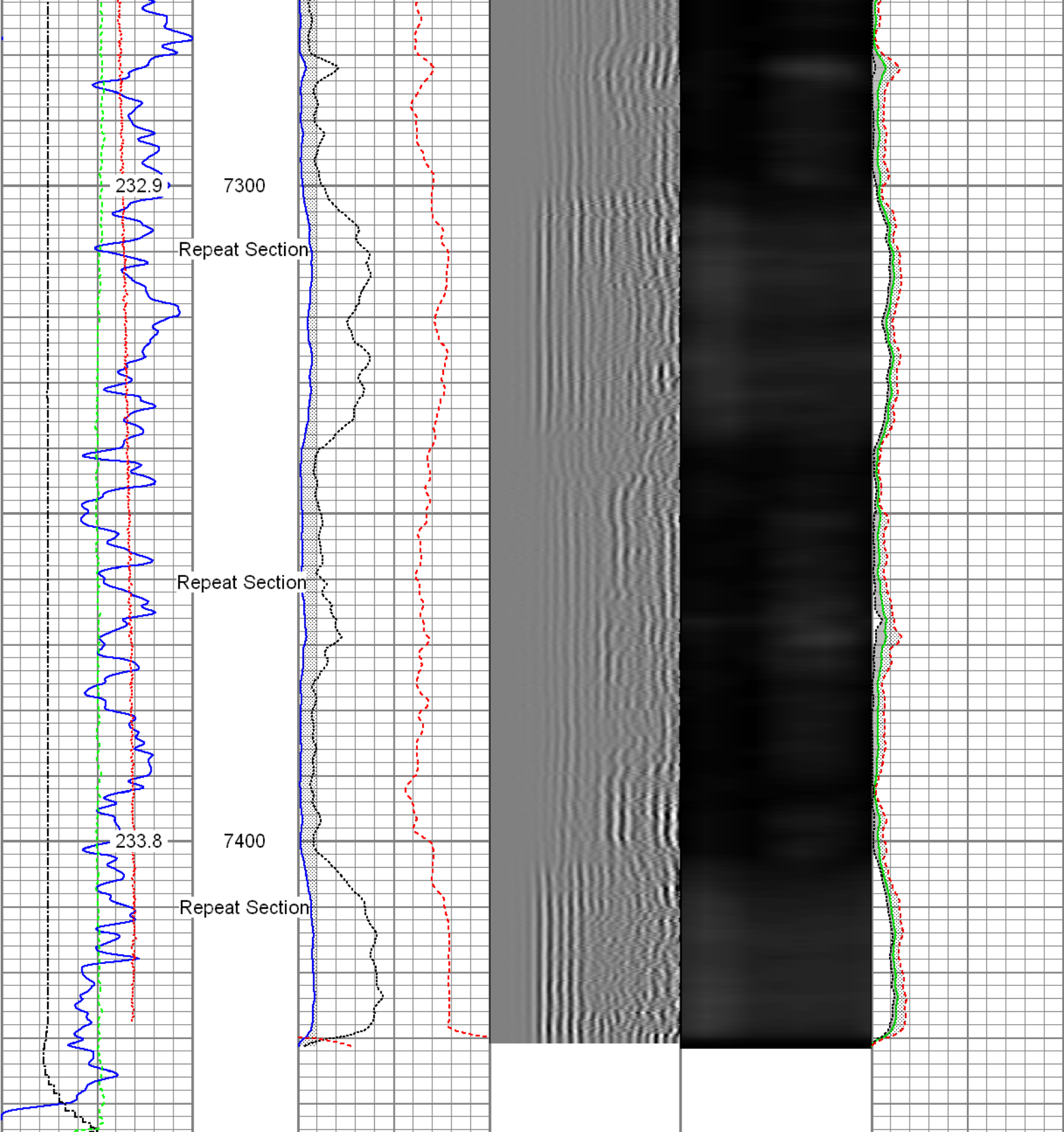













Gamma Ray		3' Amplitude		5' Variable Density Log		Sector Map		Average Amplitude	
0	(GAPI) 120	0	(mV) 100	200	1200			0	100
Temperature		3' Amplitude x 5						Minimum Amplitude	
0	(degF) 20	0	(mV) 20					0	100
Line Speed		3' Travel Time						Maximum Amplitude	
-150	(ft/min) 150	650	(usec) 150					0	100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

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
HeadVolt	19.49		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
Temp	16.72					
WV3FT	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
WVFCAL	14.55					
WVFS1	14.55					
WVFS2	14.55					
WVFS3	14.55					
WVFS4	14.55					
WVFS5	14.55					
WVFS6	14.55					
WVFS7	14.55					
WVFS8	14.55					
WV5FT	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
			Probe_CCL_GR-2.75"Digital (FW1211-081) Probe 2-3/4" Digital CCL / Gamma Ray Combined	4.54	2.75	55.00
GR	3.77		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00



## Calibration Report

Database File: c:\warrior\data\0512341309\_anadarko\_bane 2n3-9hz\_09-02-15\_rb\0512341309\_anadarko\_bane 2n3-9  
 Dataset Pathname: main  
 Dataset Creation: Wed Sep 02 11:06:27 2015 by Log 7.0 B1

## Gamma Ray Calibration Report

Serial Number: FW1211-081  
 Tool Model: 2.75"Digital  
 Performed: Fri Aug 28 07:53:28 2015

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
 Calibrator Reading: 1.0 cps

Sensitivity: 0.6000 GAPI/cps

## Segmented Cement Bond Log Calibration Report

Serial Number: FW1302-001  
 Tool Model: 2-3/4"

Calibration Casing Diameter: 5.500 in  
 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 2N3-9HZ
	Field	Wattenberg
	County	Weld
	State	Colorado