



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.		
Well	Bane 27N2-9HZ		
Field	Wattenberg		
County	Weld		
State	Colorado		
Location:	Company	Kerr-McGee Oil & Gas Onshore, L.P.	
	Well	Bane 27N2-9HZ	
	Field	Wattenberg	
Location:	County	Weld	State Colorado
	API # : 05-123-41304		
	Other Services		
SEC 9 TWP 1N RGE 65W		JB/GR	
Permanent Datum	Ground Level	Elevation 4966'	
Log Measured From	Kelly Bushing	25 FT	
Drilling Measured From	Kelly Bushing	Elevation	
		K.B. 4991'	
		D.F. 4990'	
		G.L. 4966'	

Date	2-SEPT-2015
Run Number	One
Depth Driller	11980 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.	234.6 °F
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	2:15 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	1595 FT		
Intermediate #1							
Intermediate #2	5 1/2	17	HCP-110 LTC	Surface	11980 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 6473 FT
Recorded Marker Joint at 6446 FT 6467 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

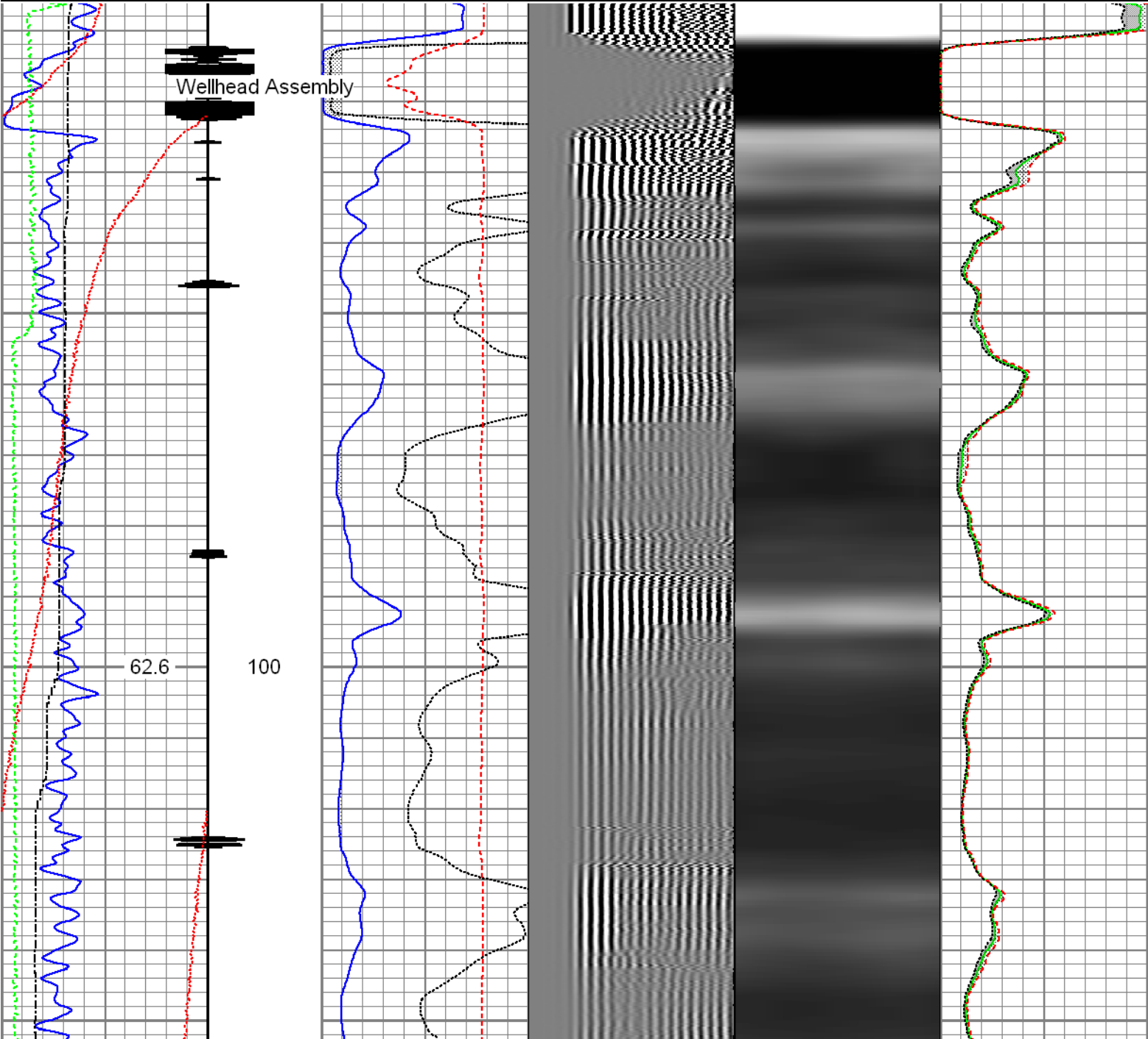
Thank you for choosing FMC Technologies Completion Services, Inc.!!

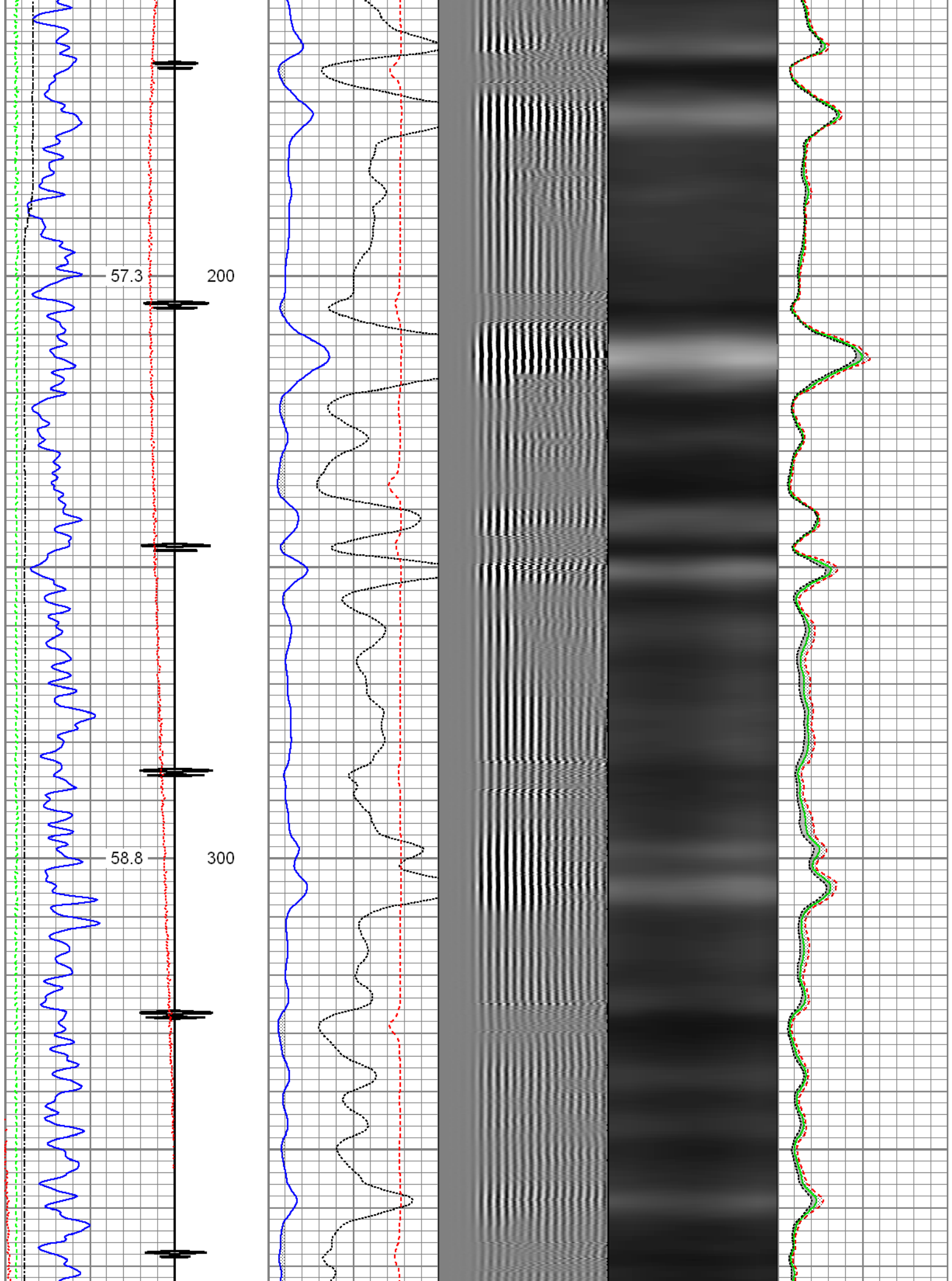


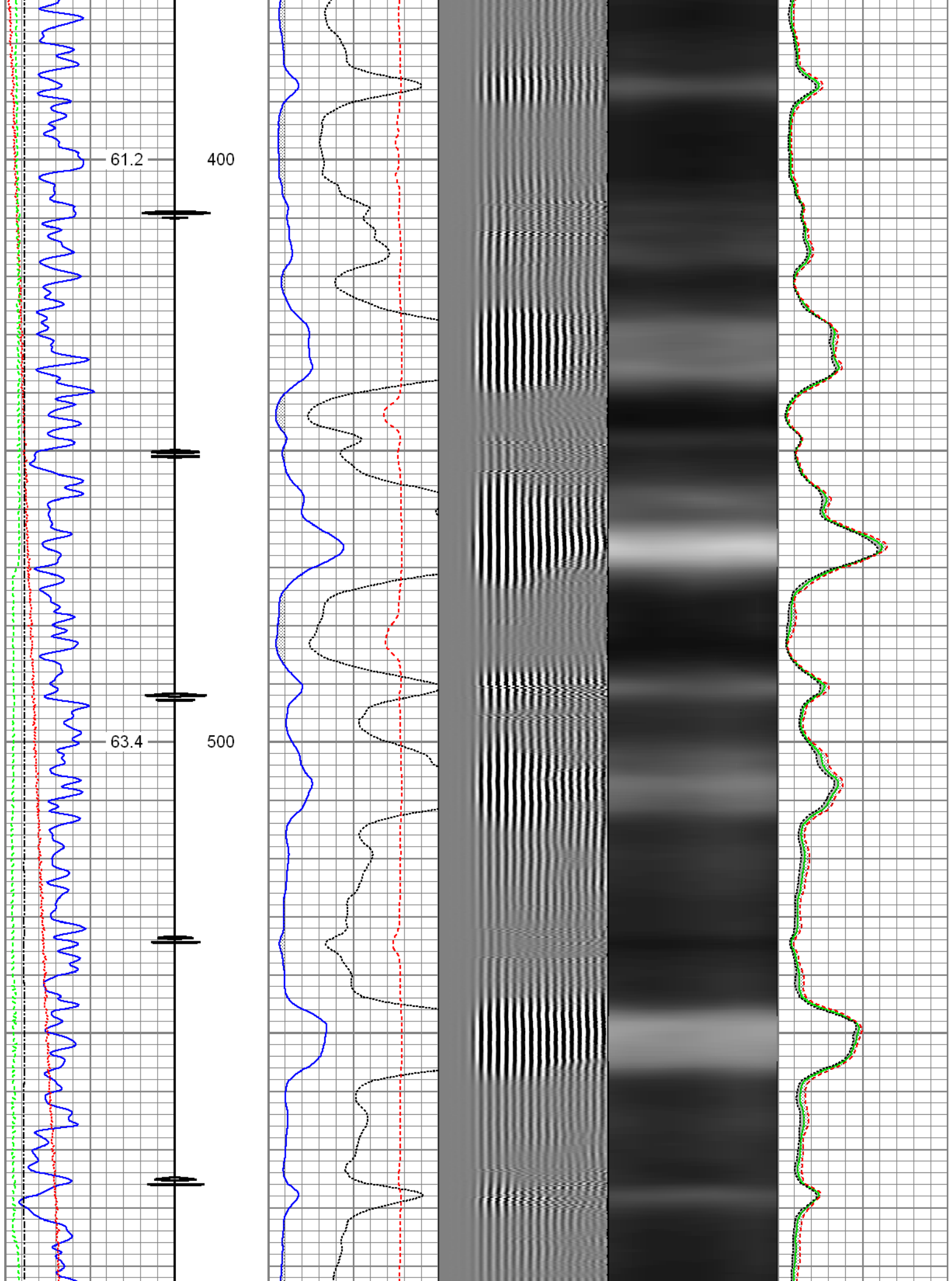
Main Pass

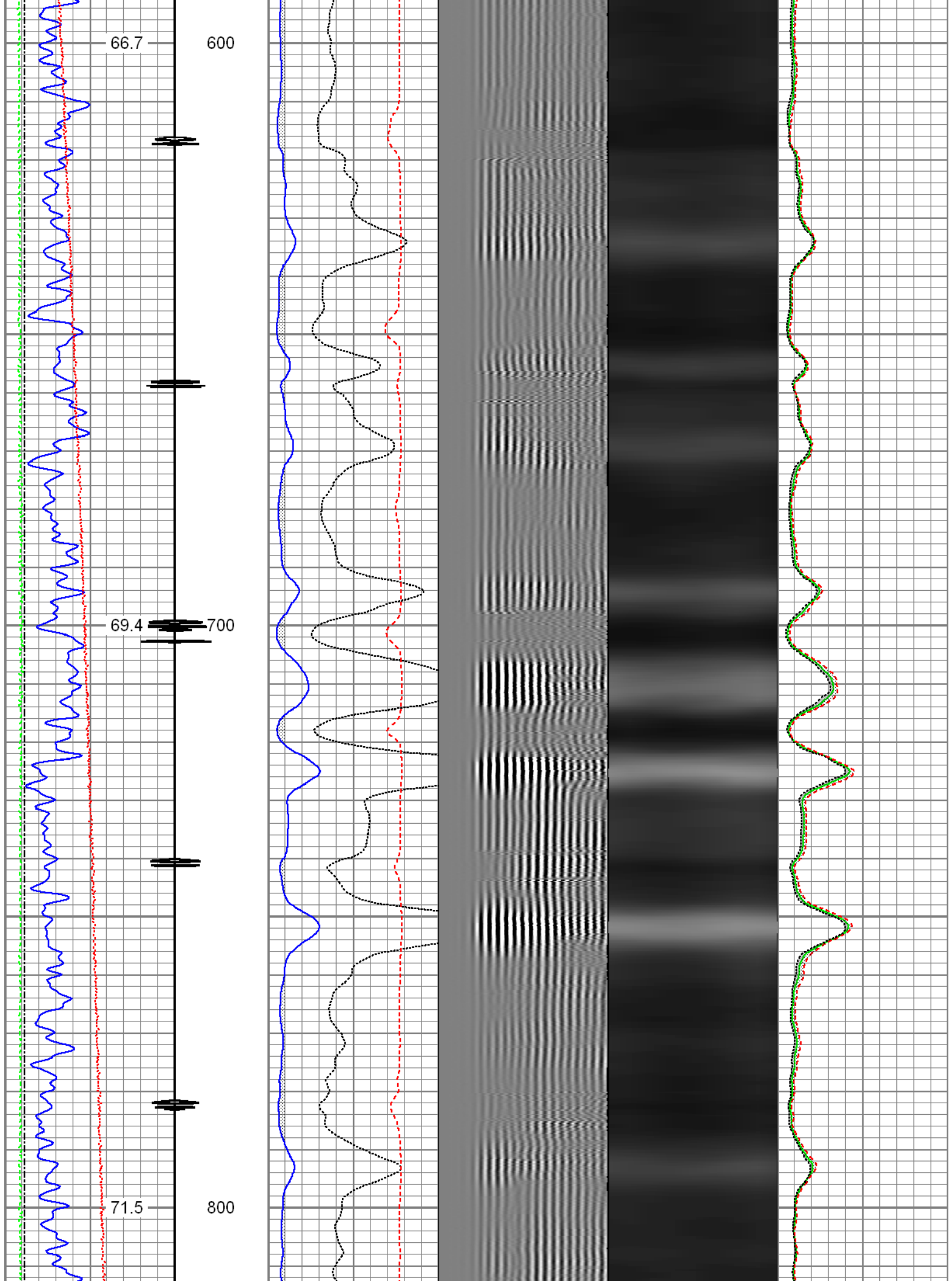
Recorded with 2800 PSI Surface Induced Pressure

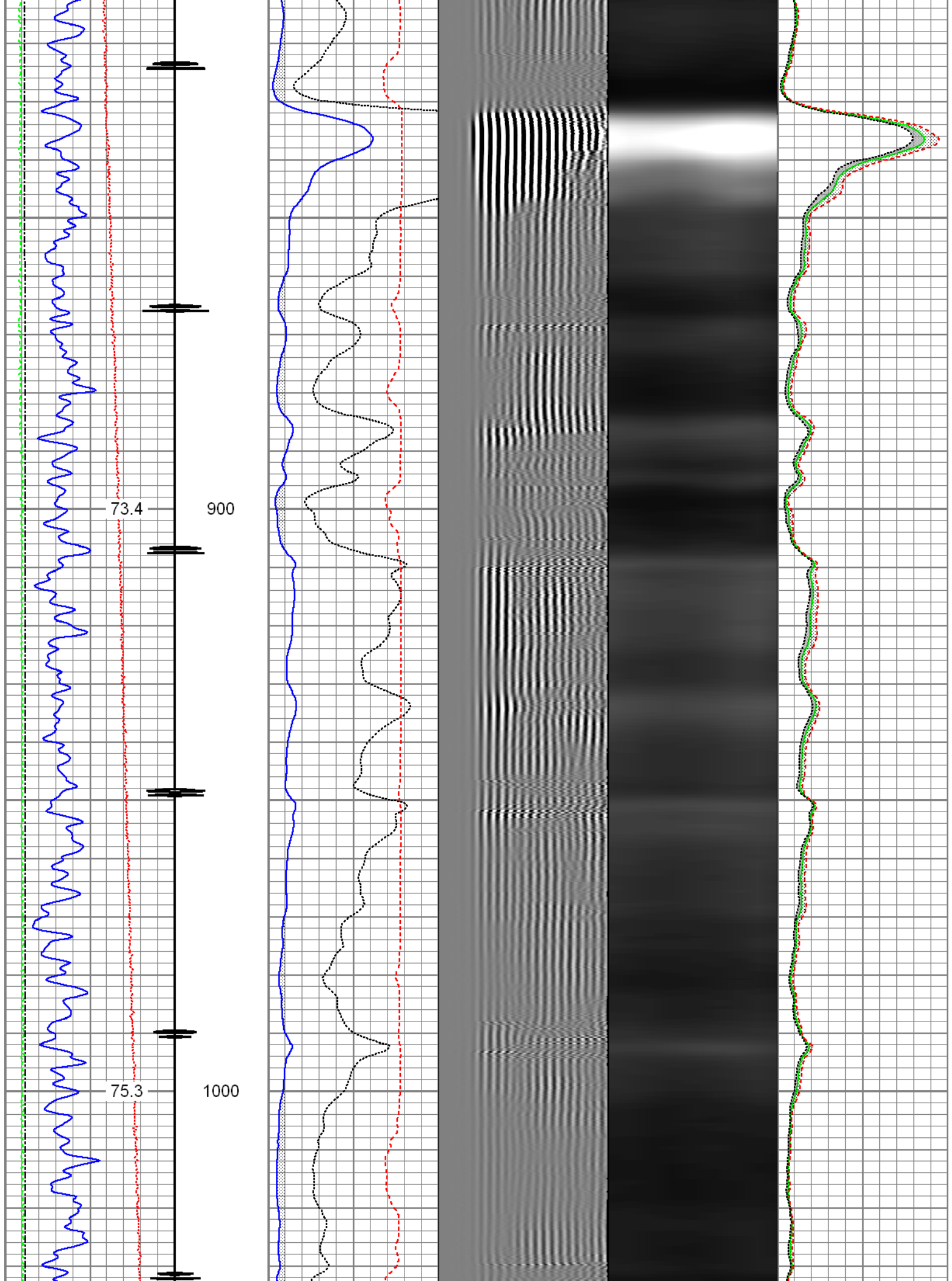
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150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

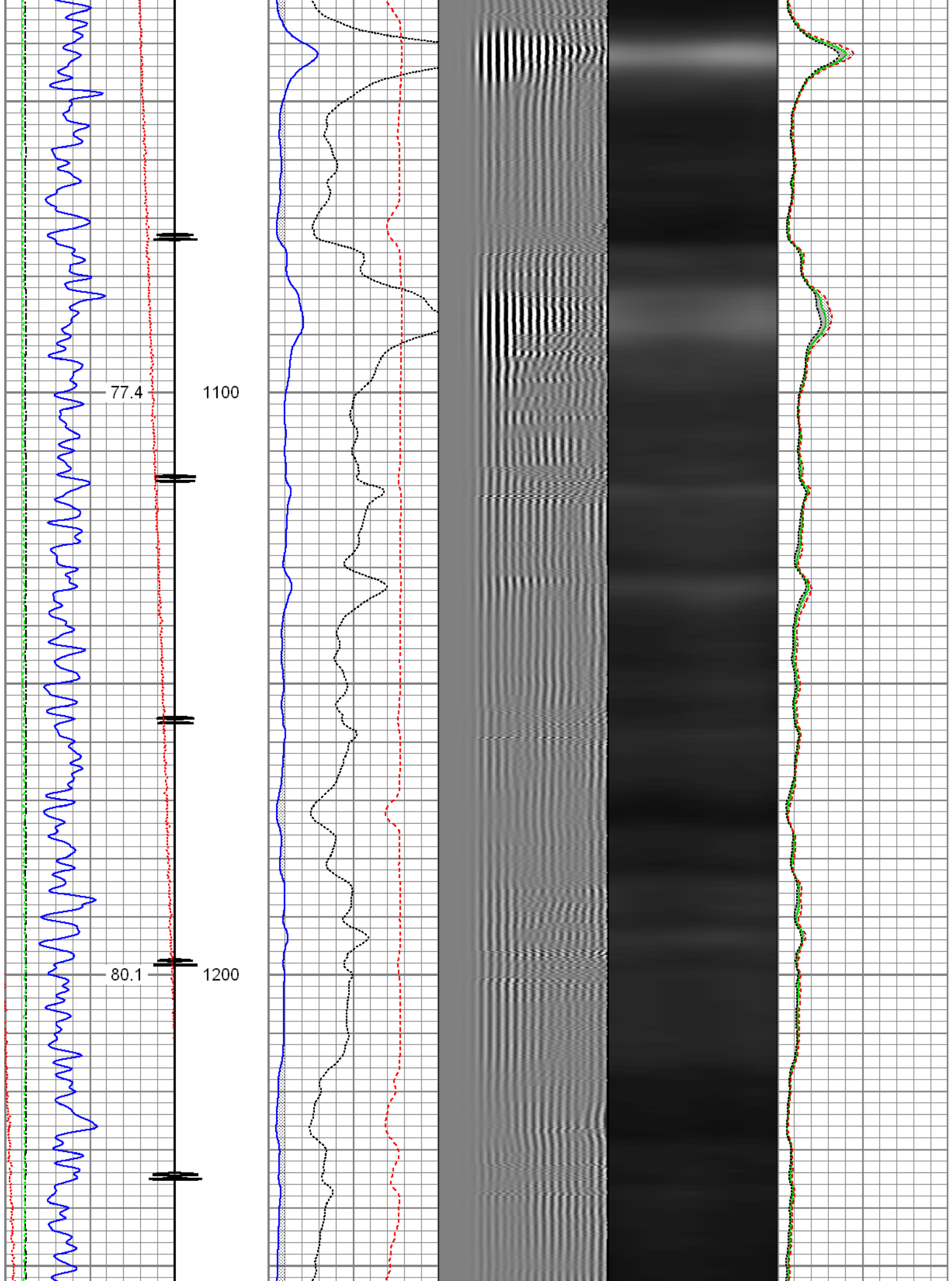


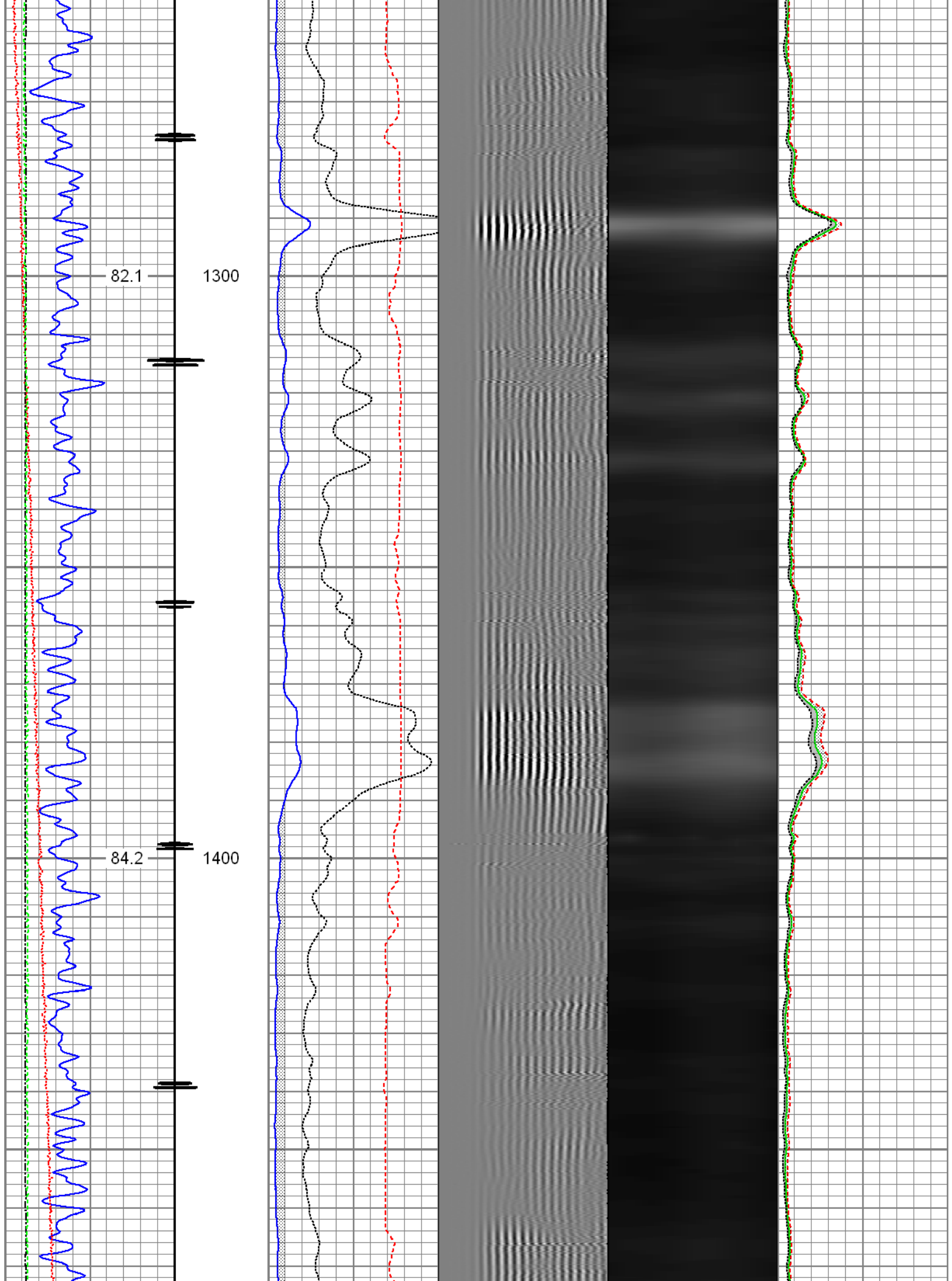


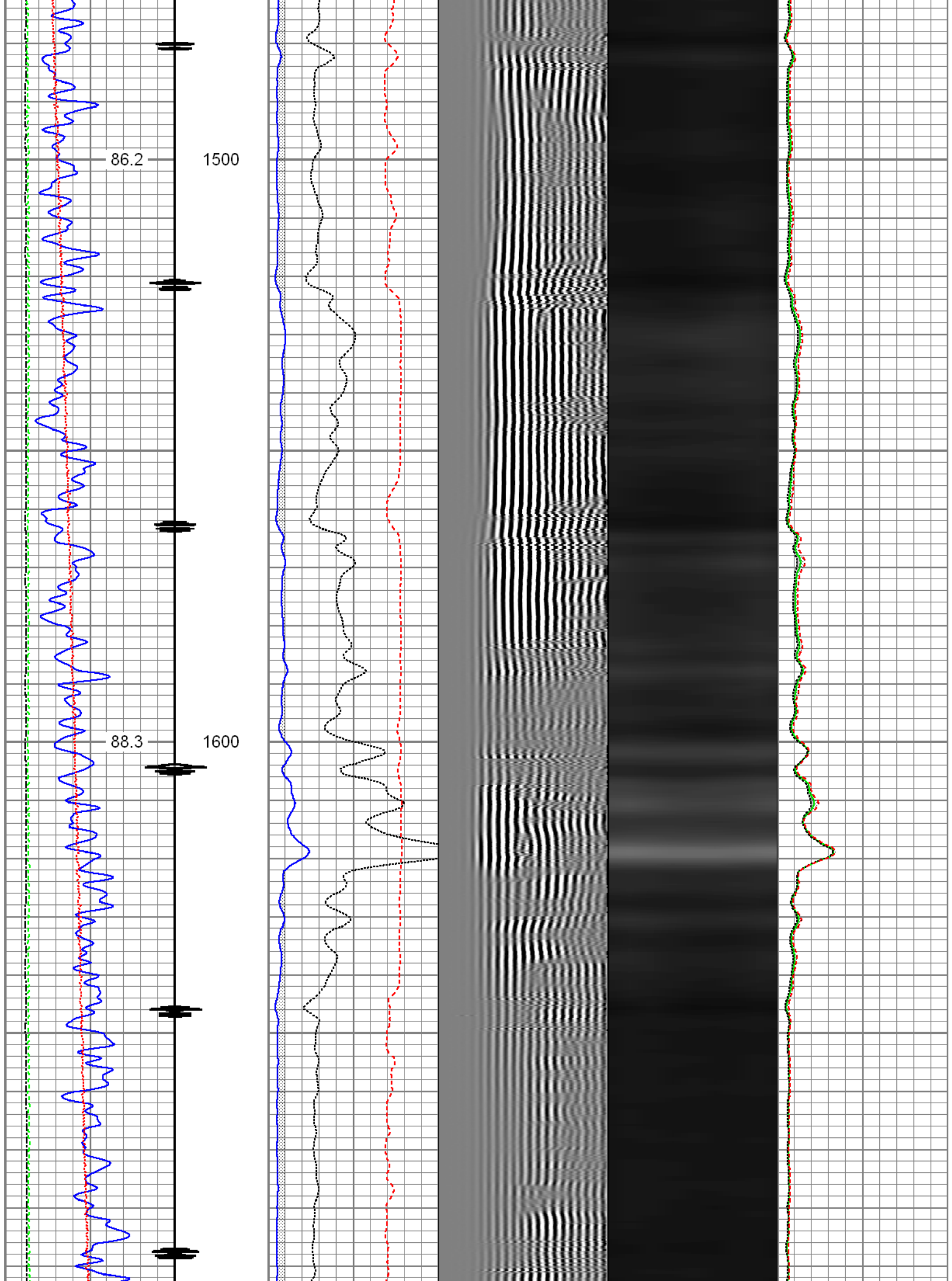


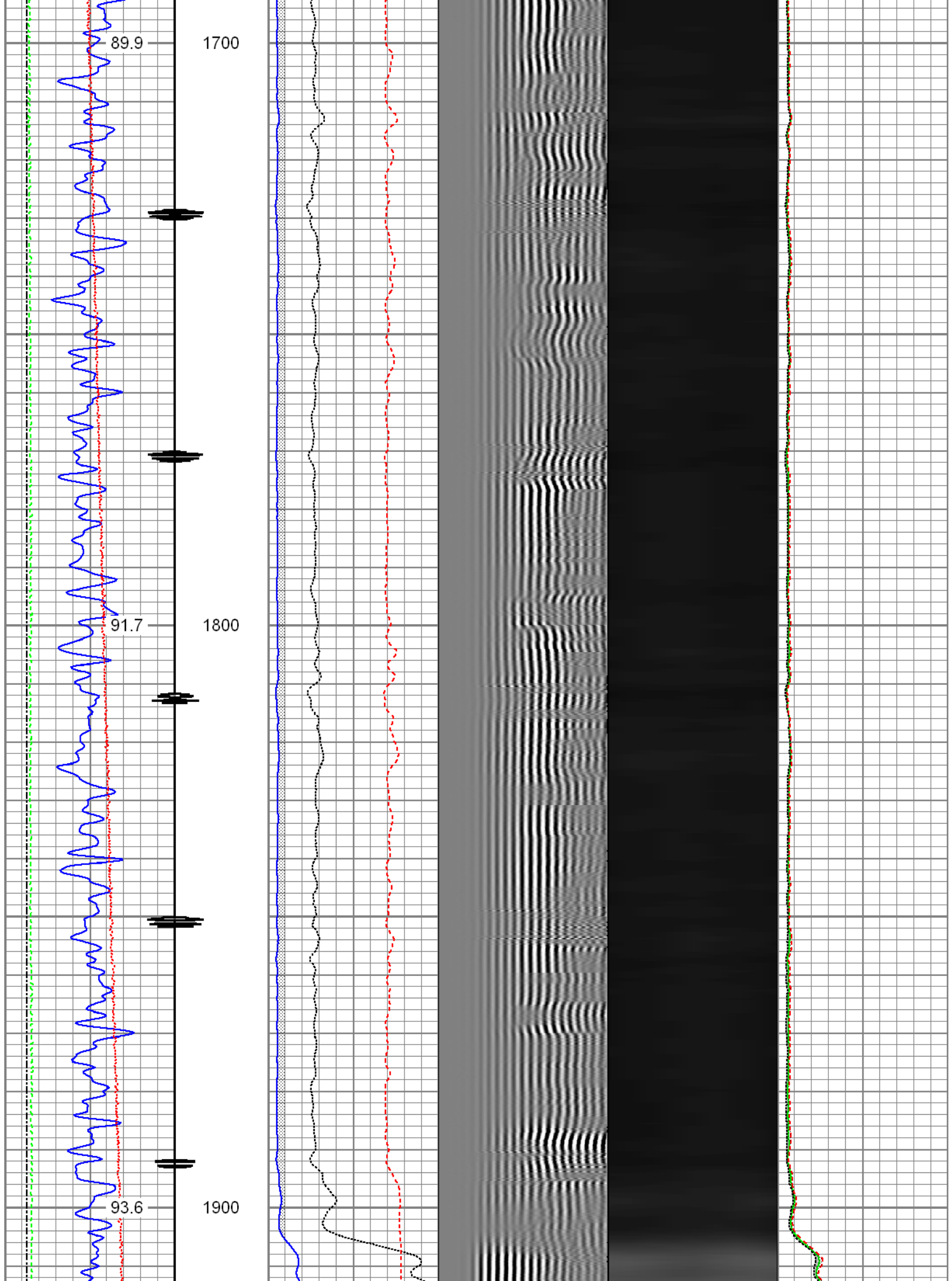


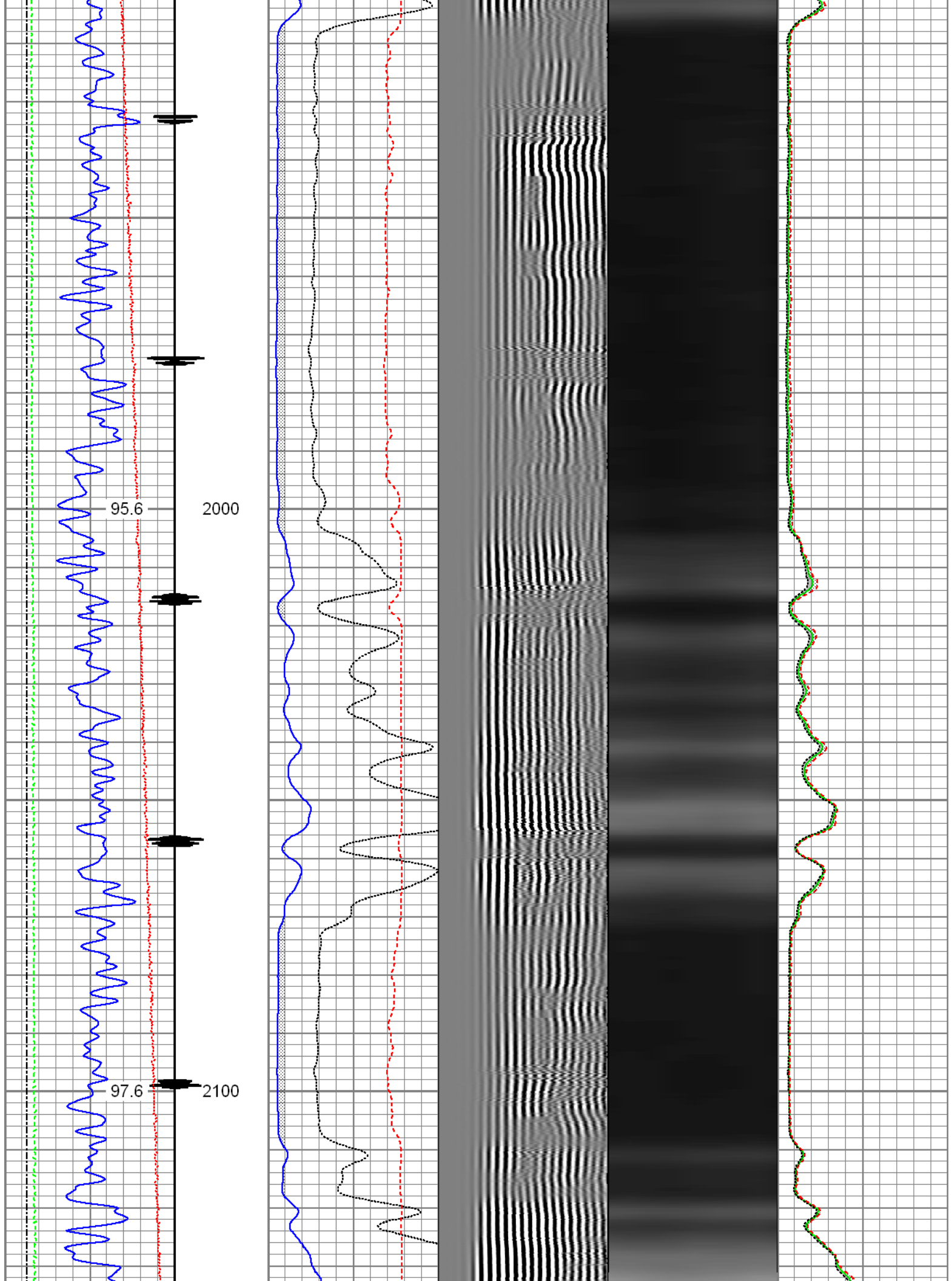


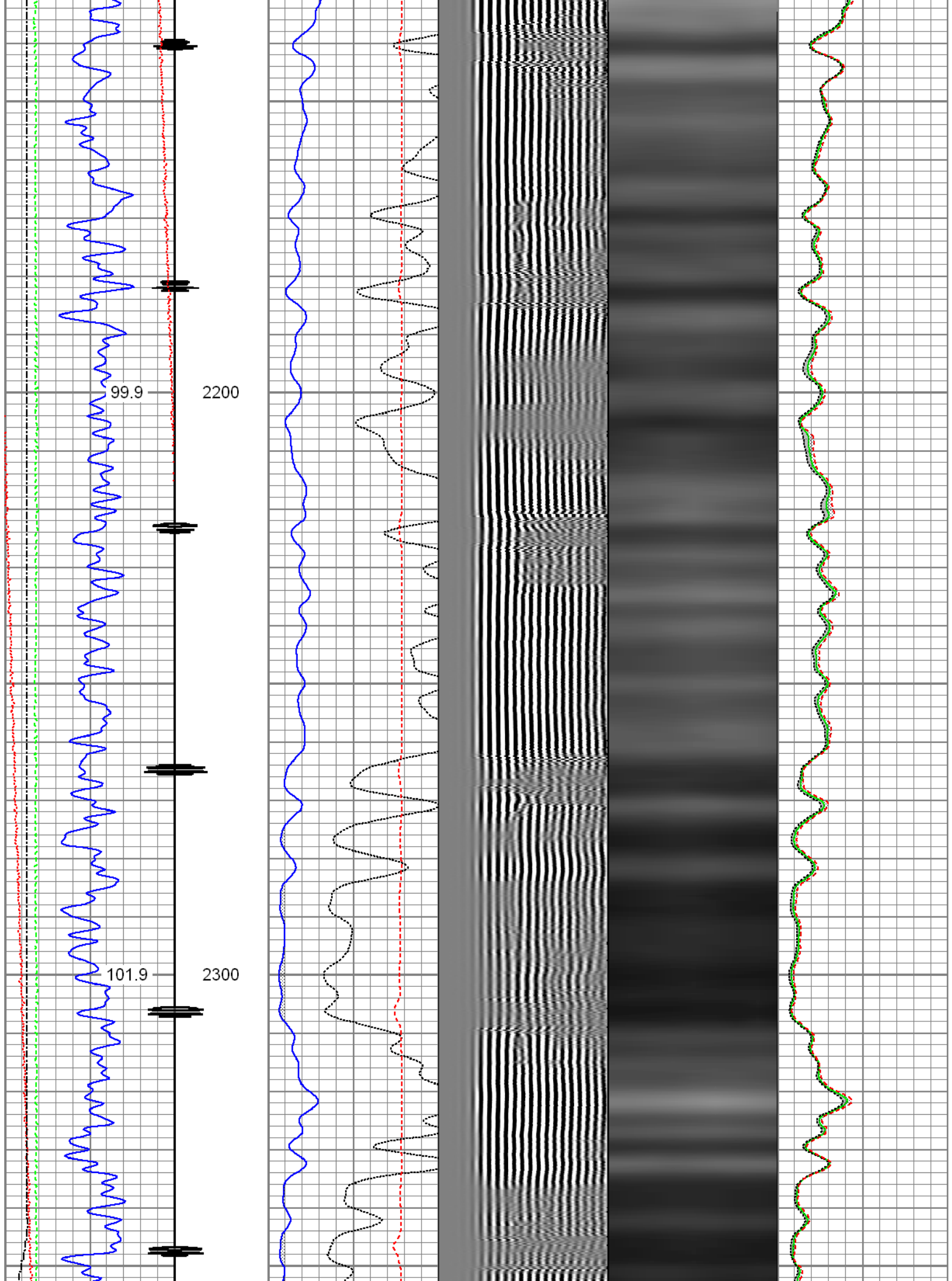


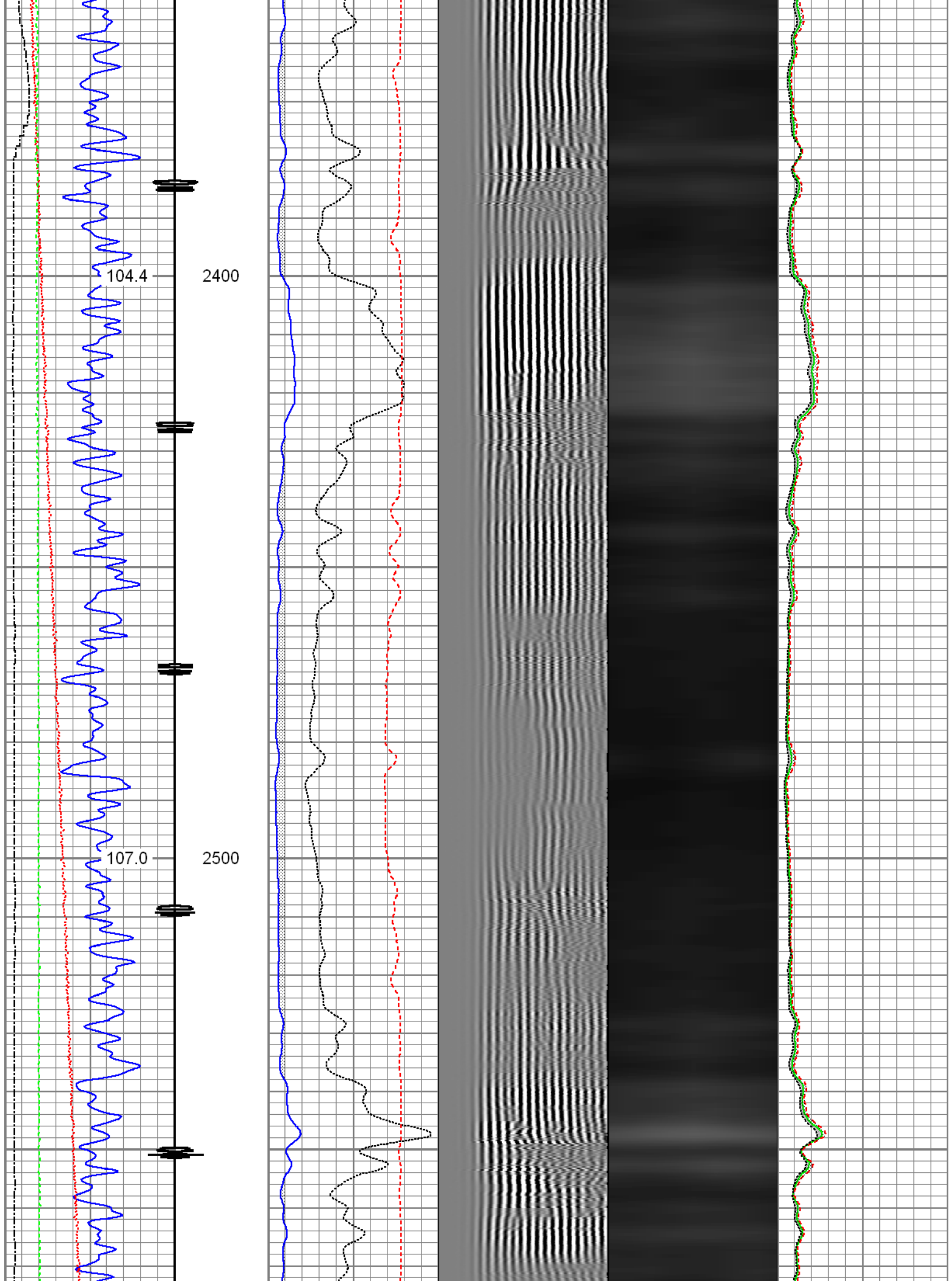


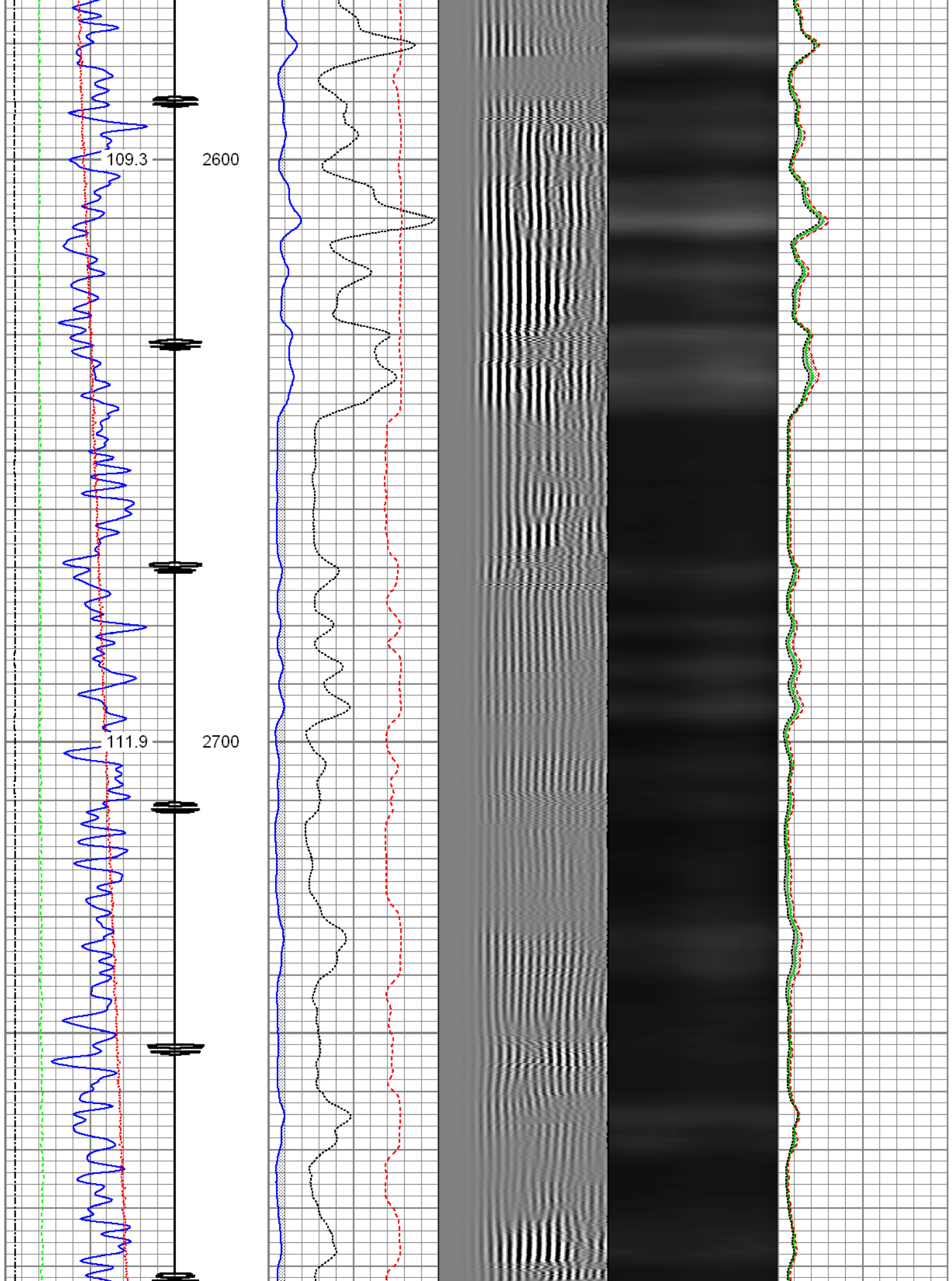


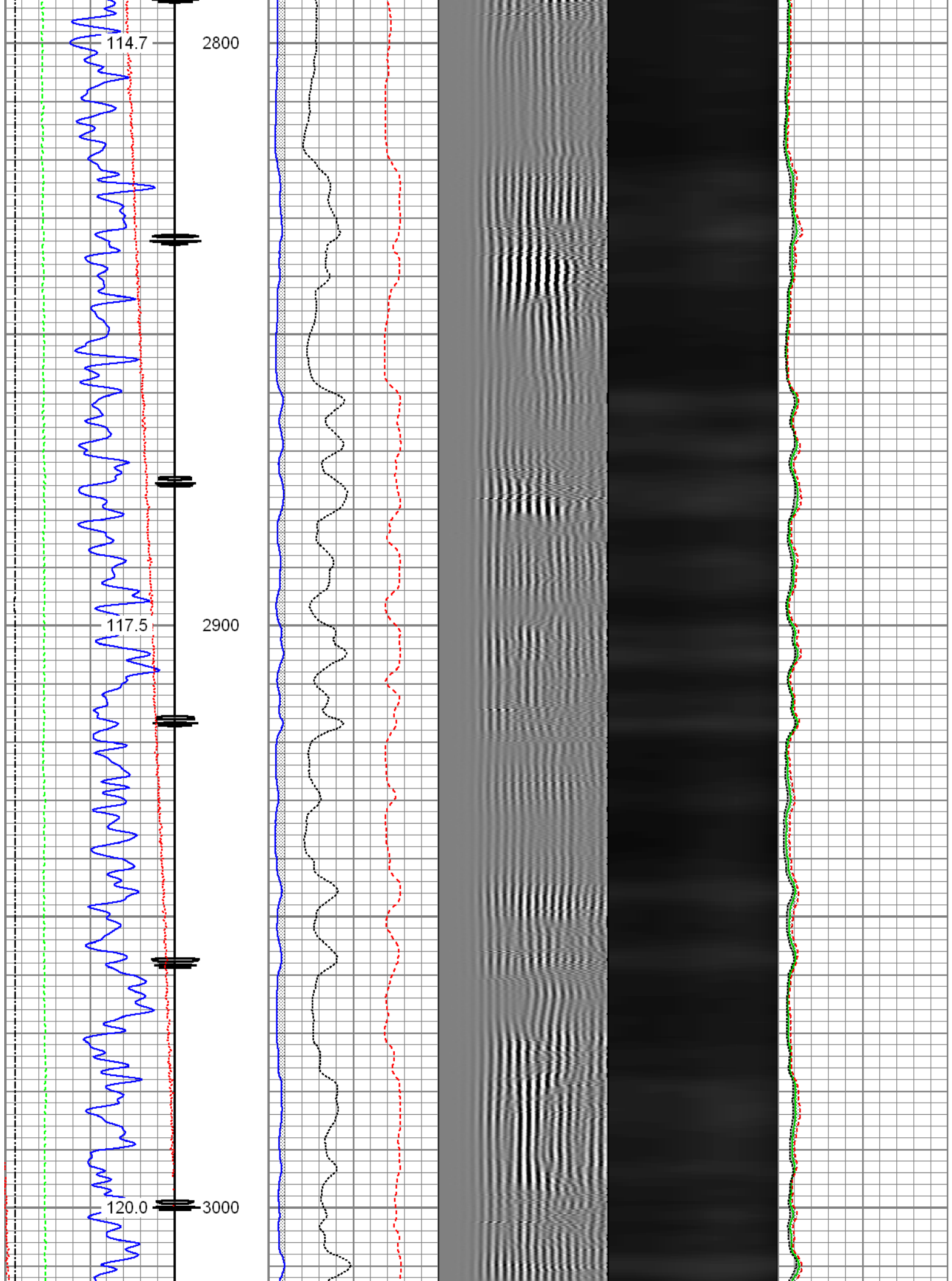


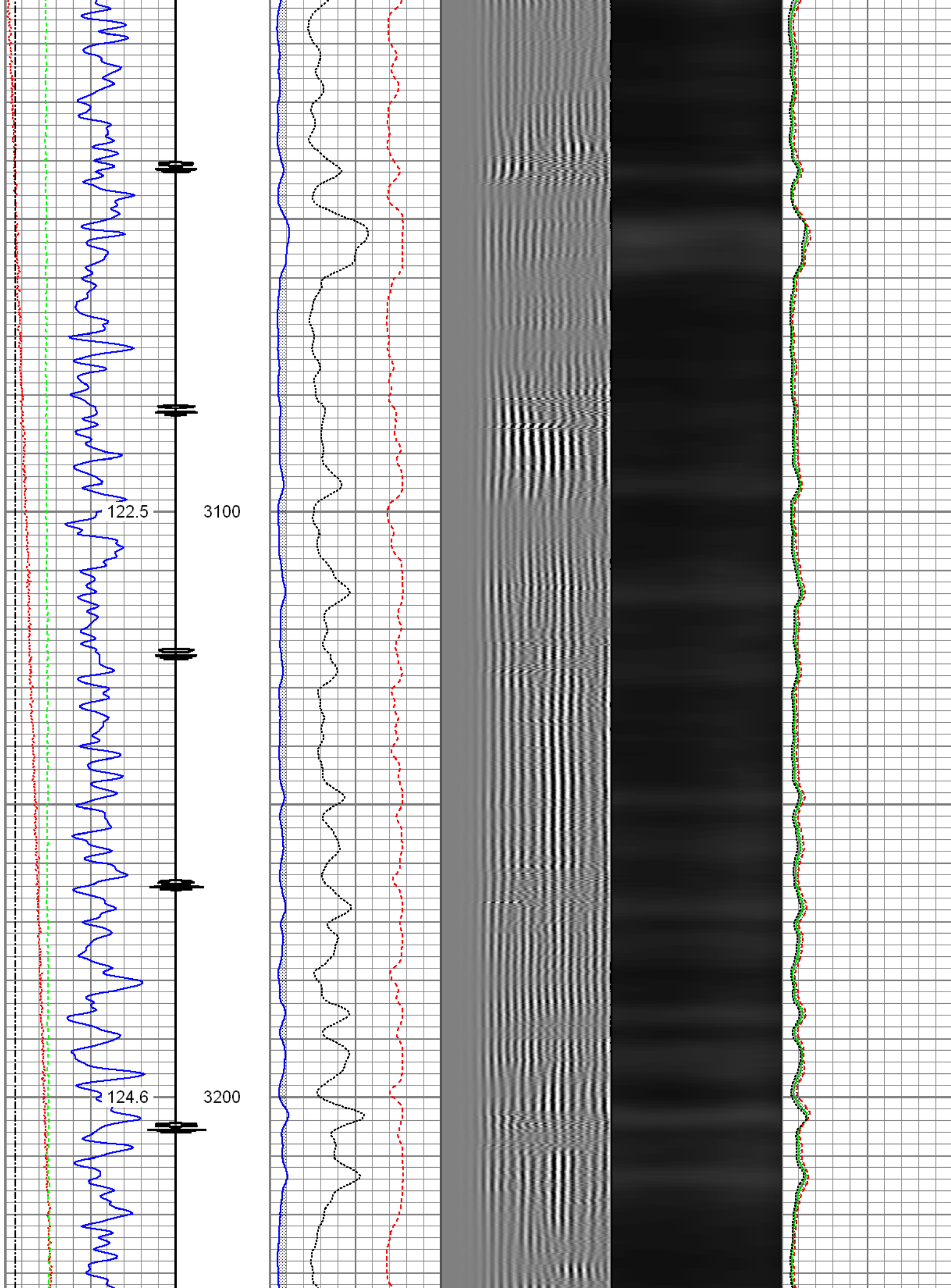


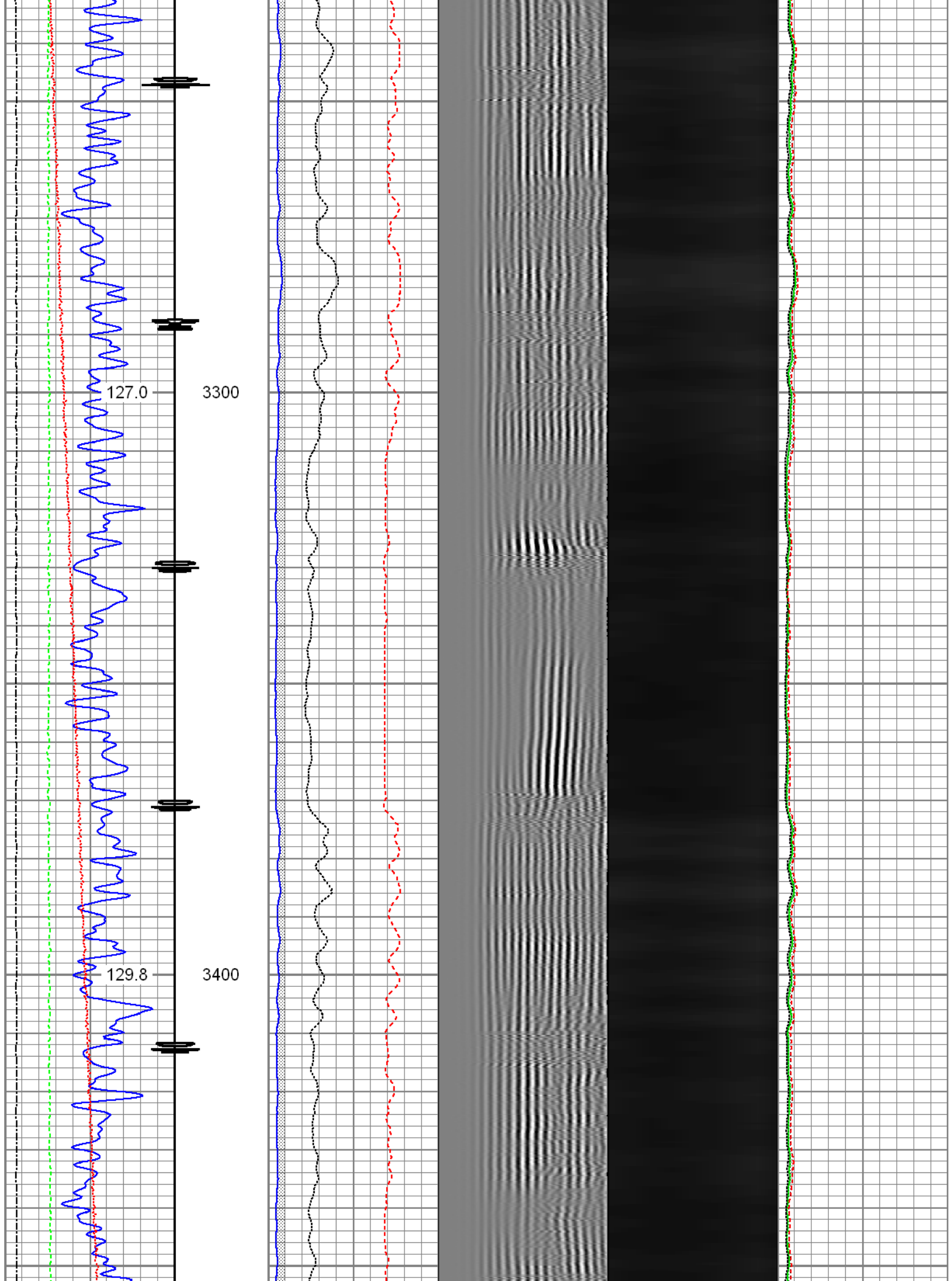


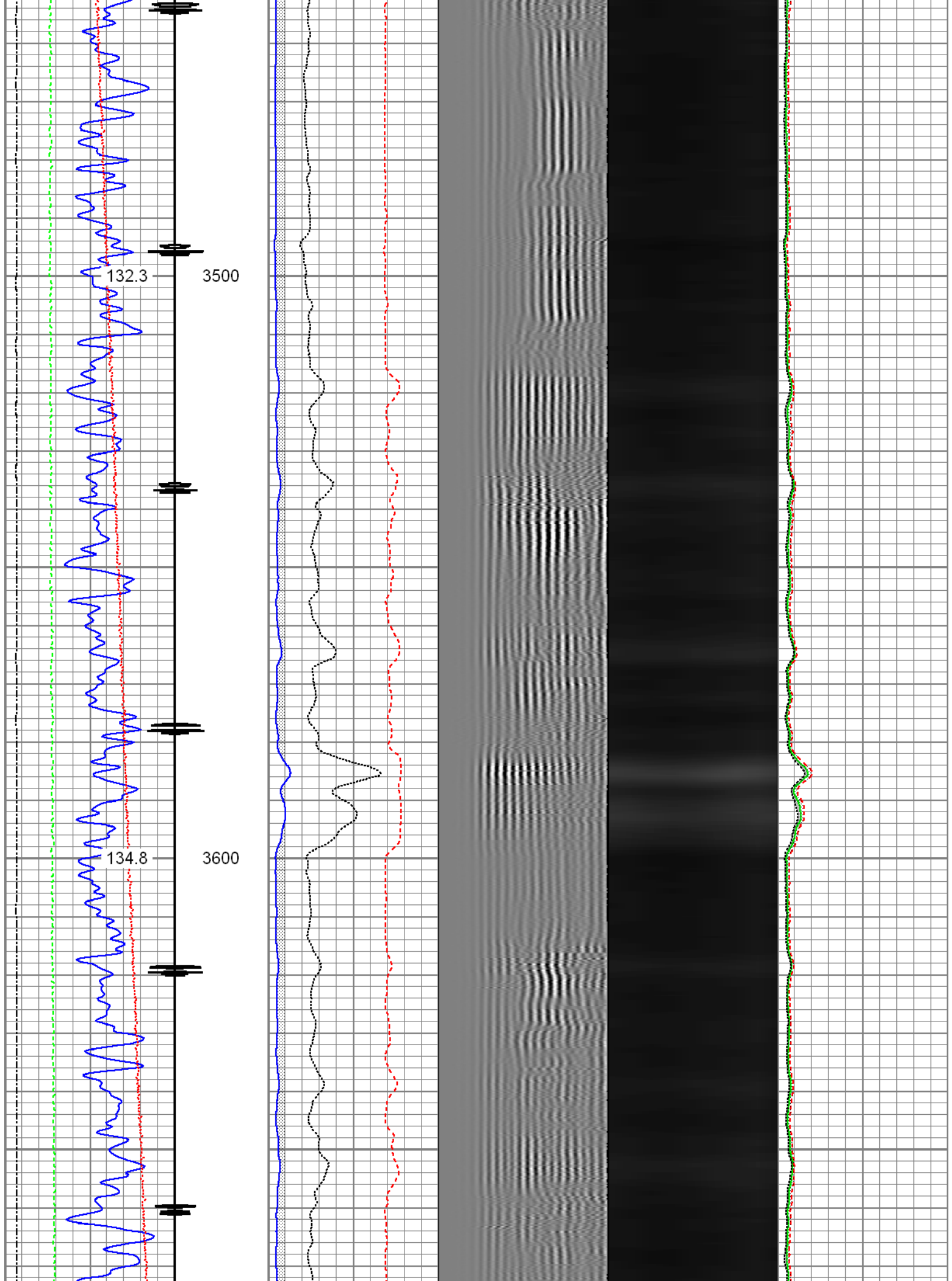


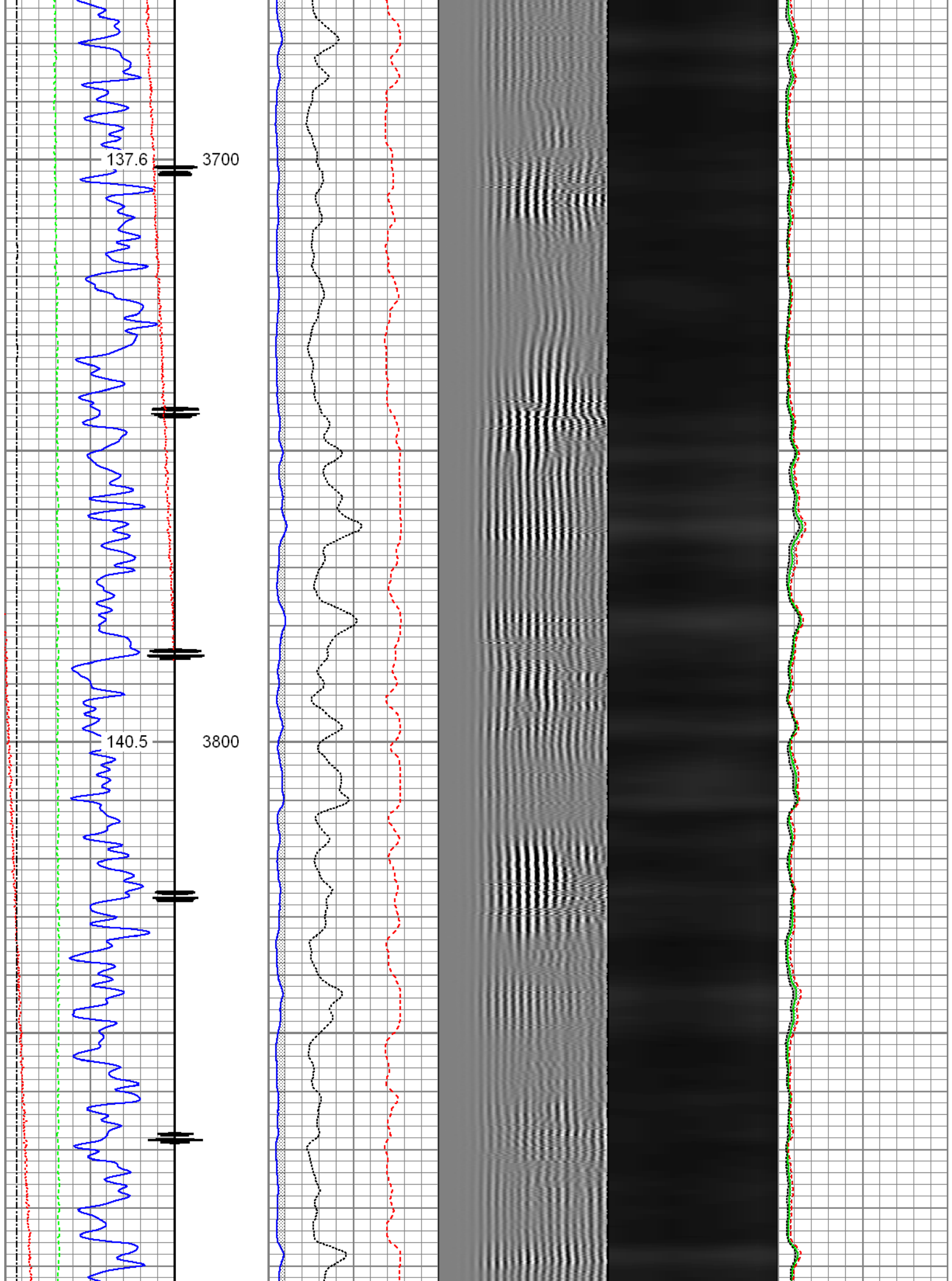


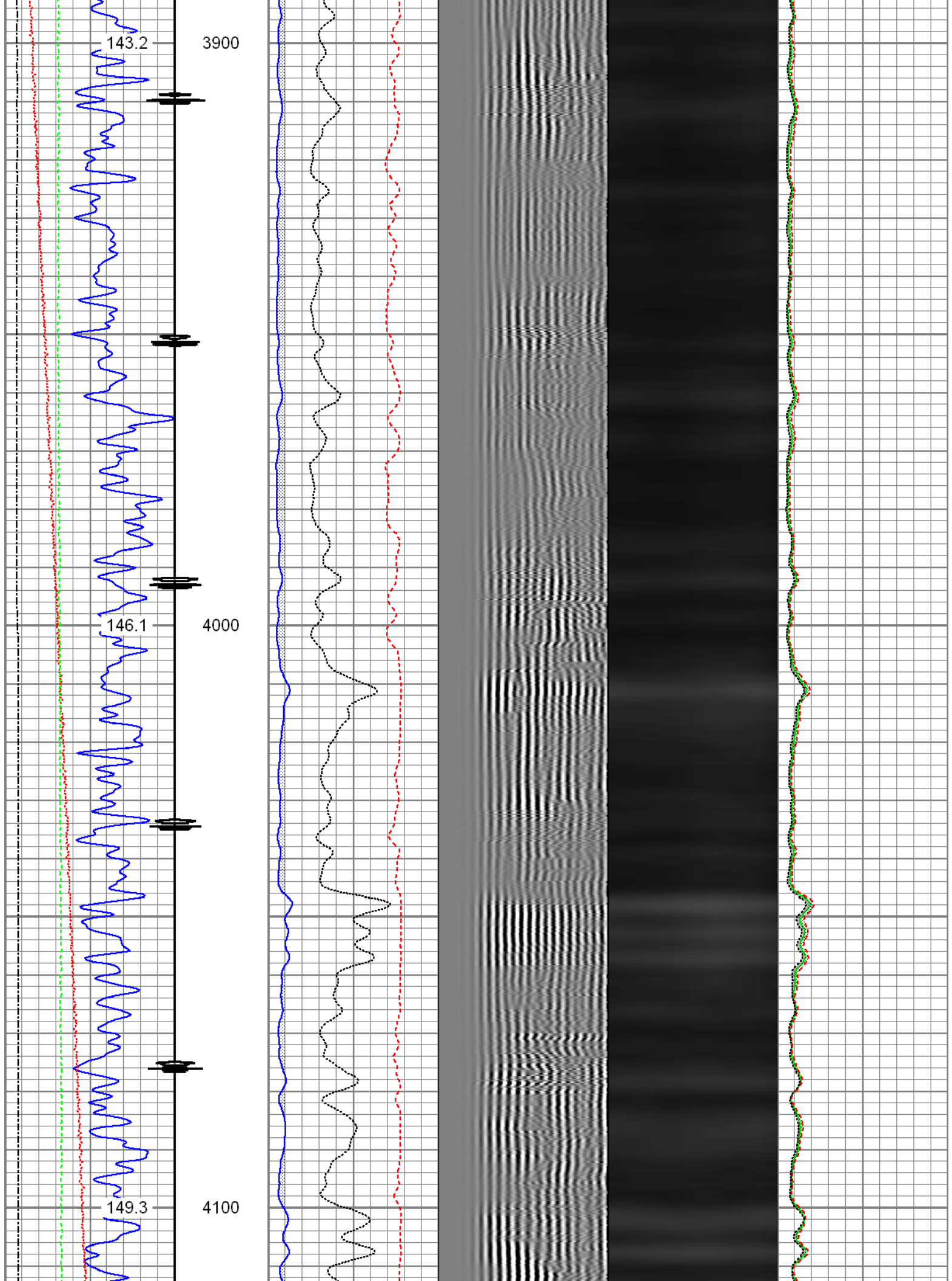


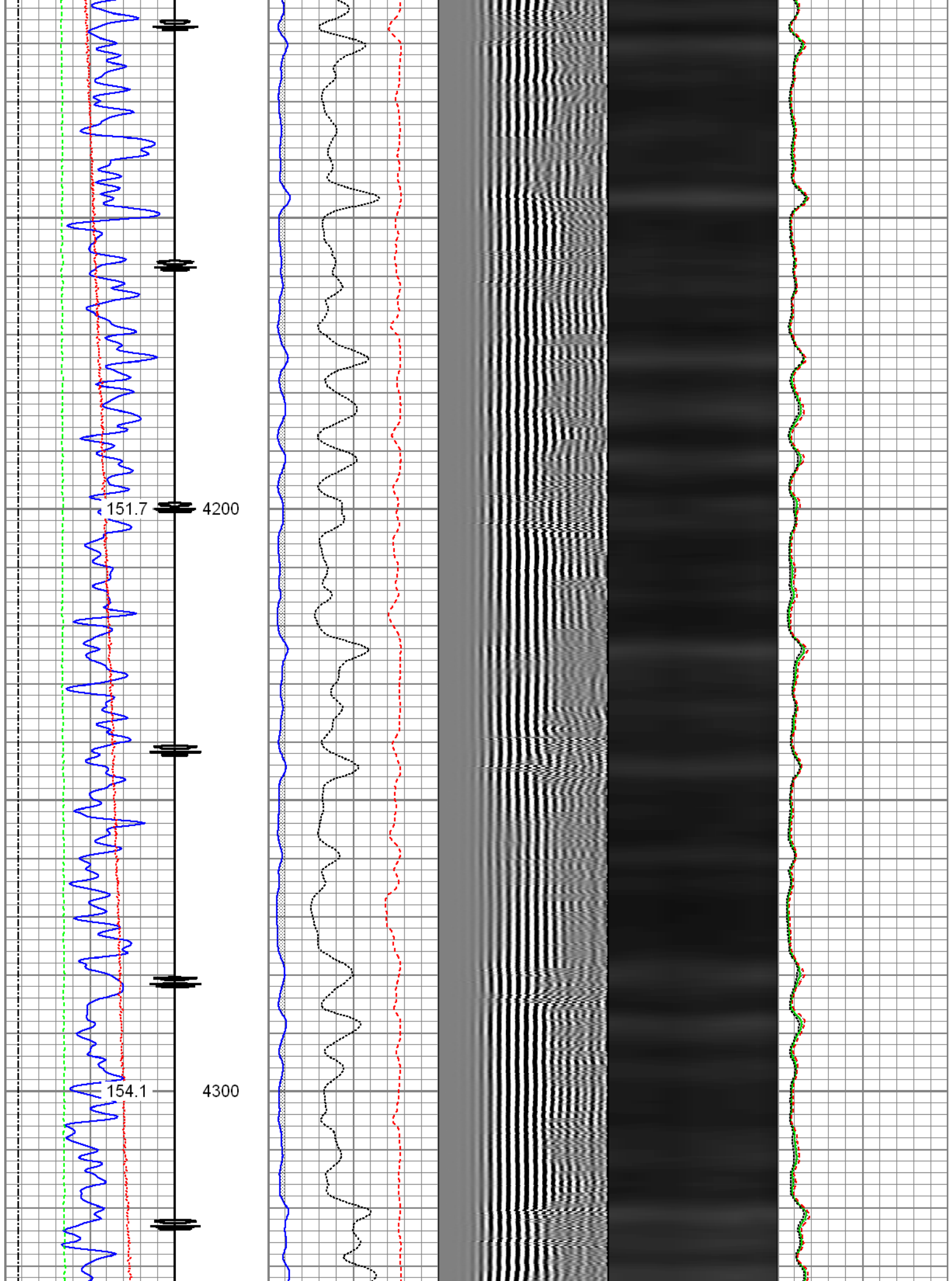


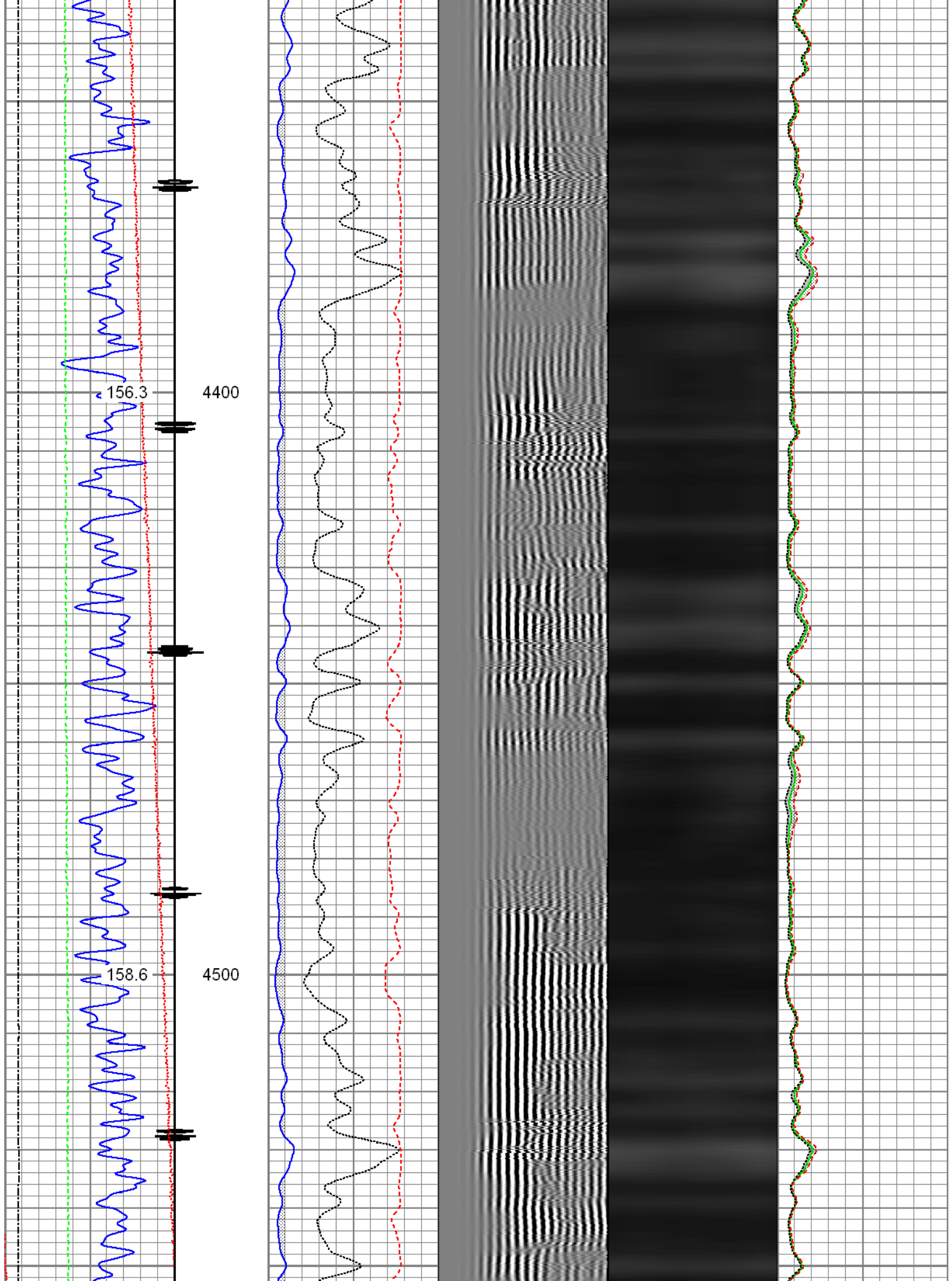


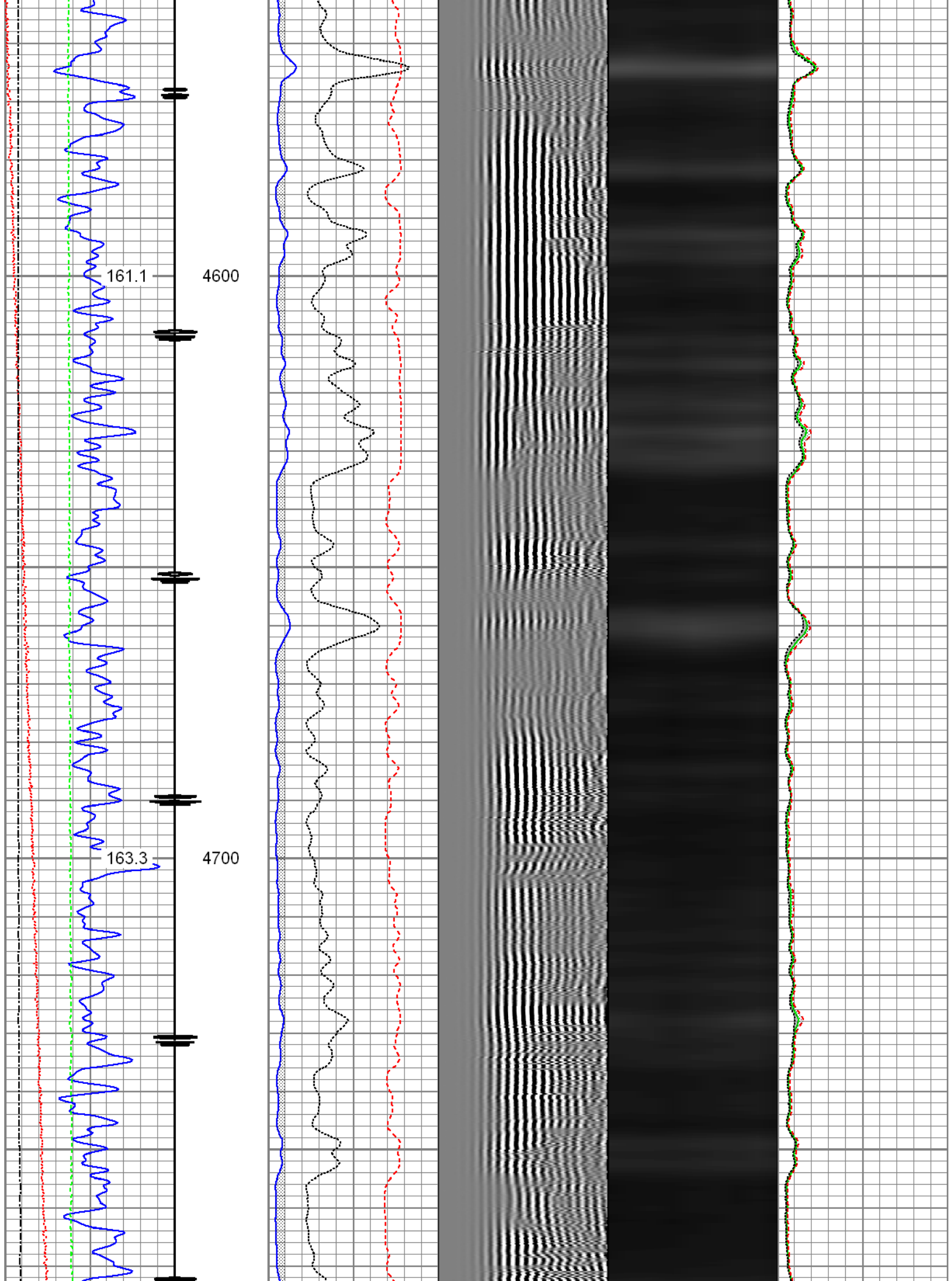


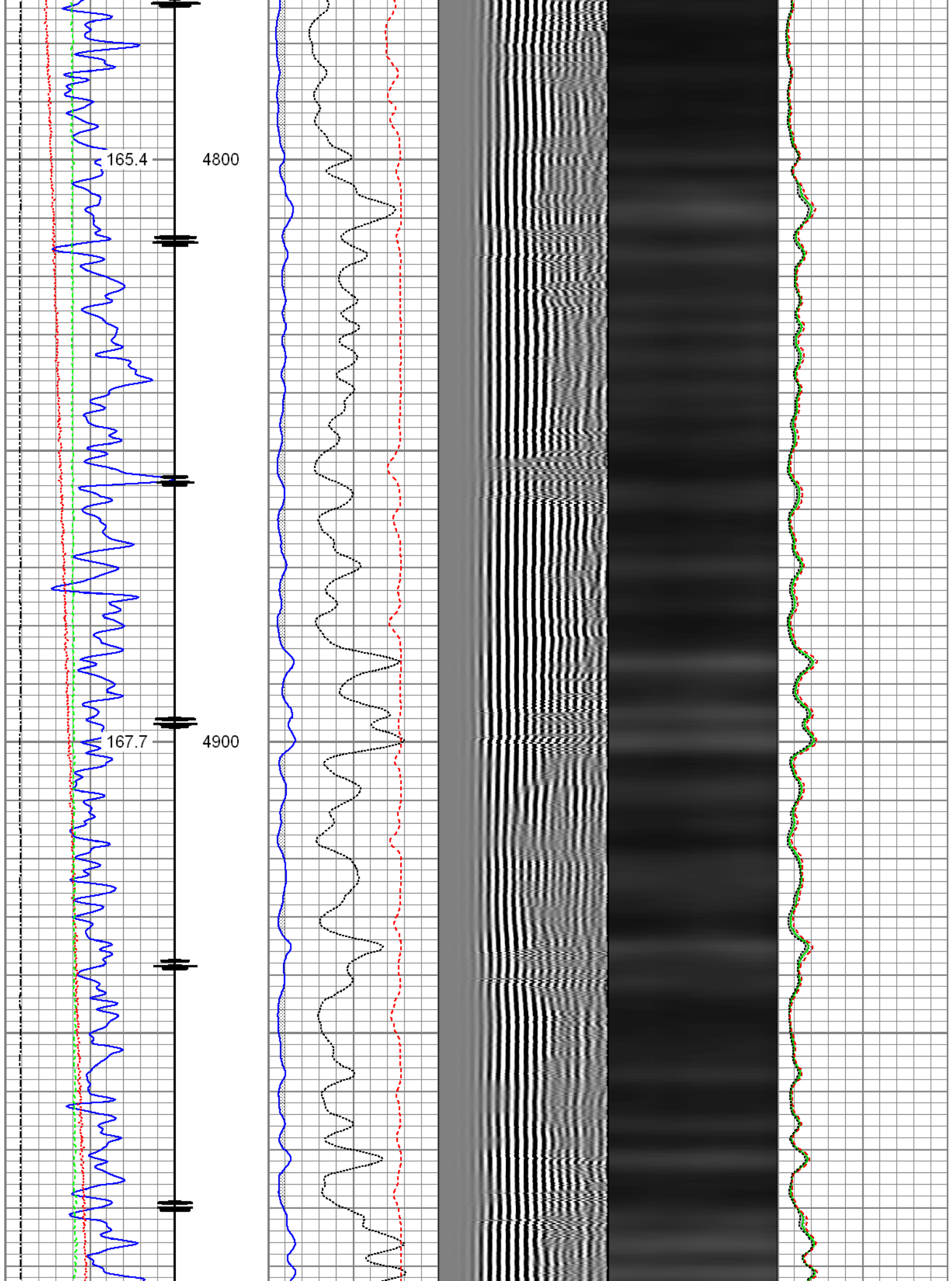


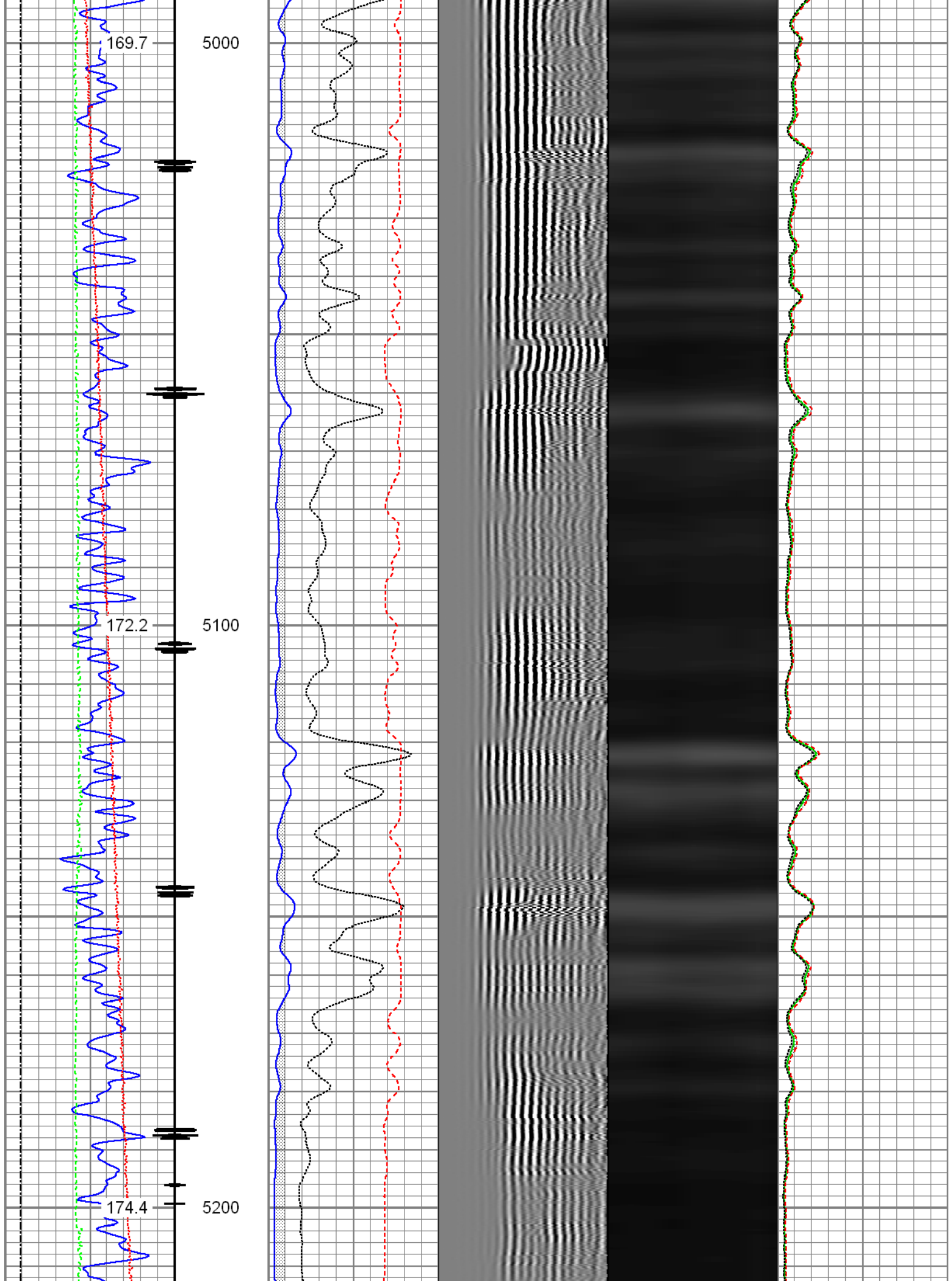


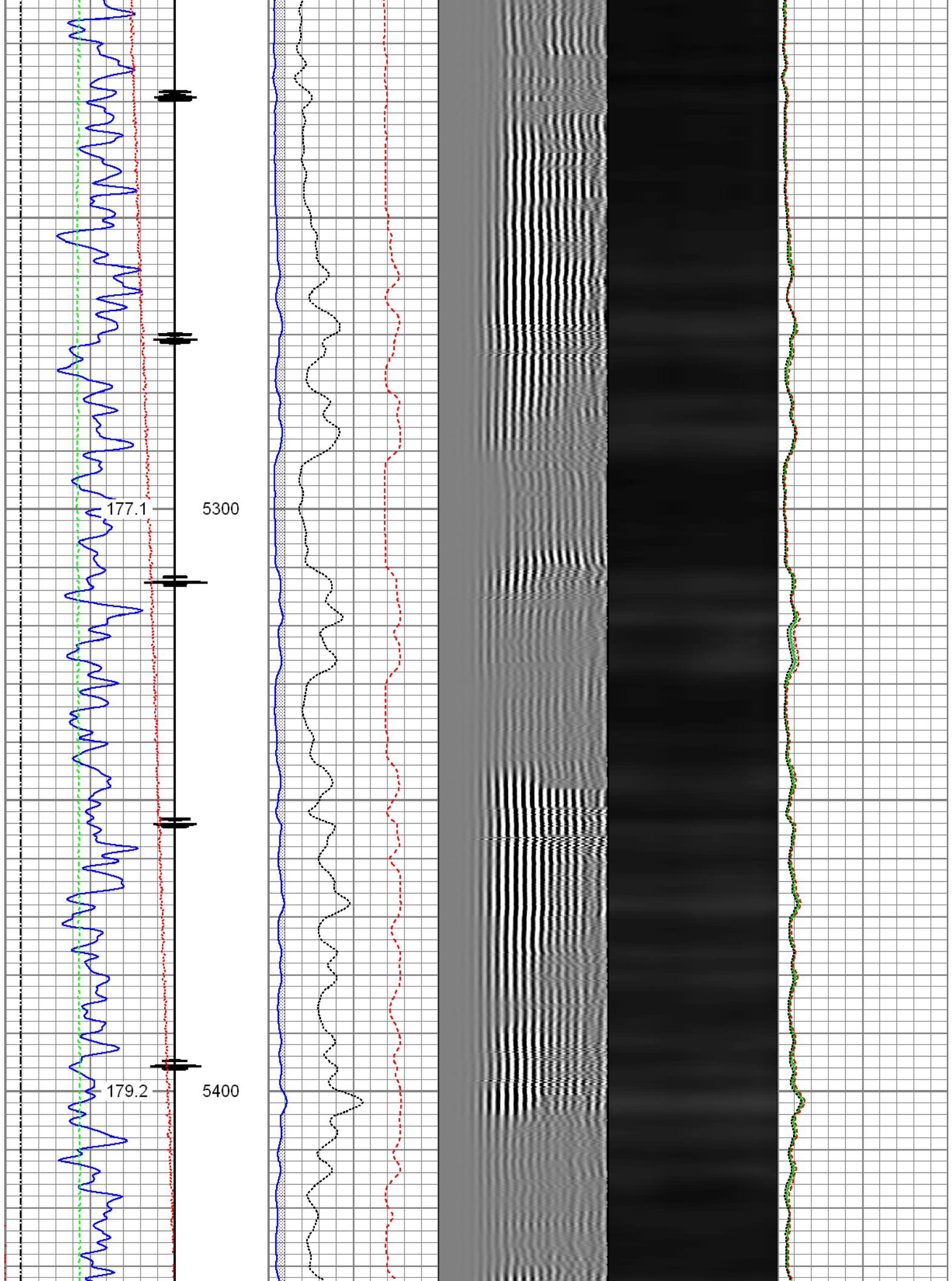


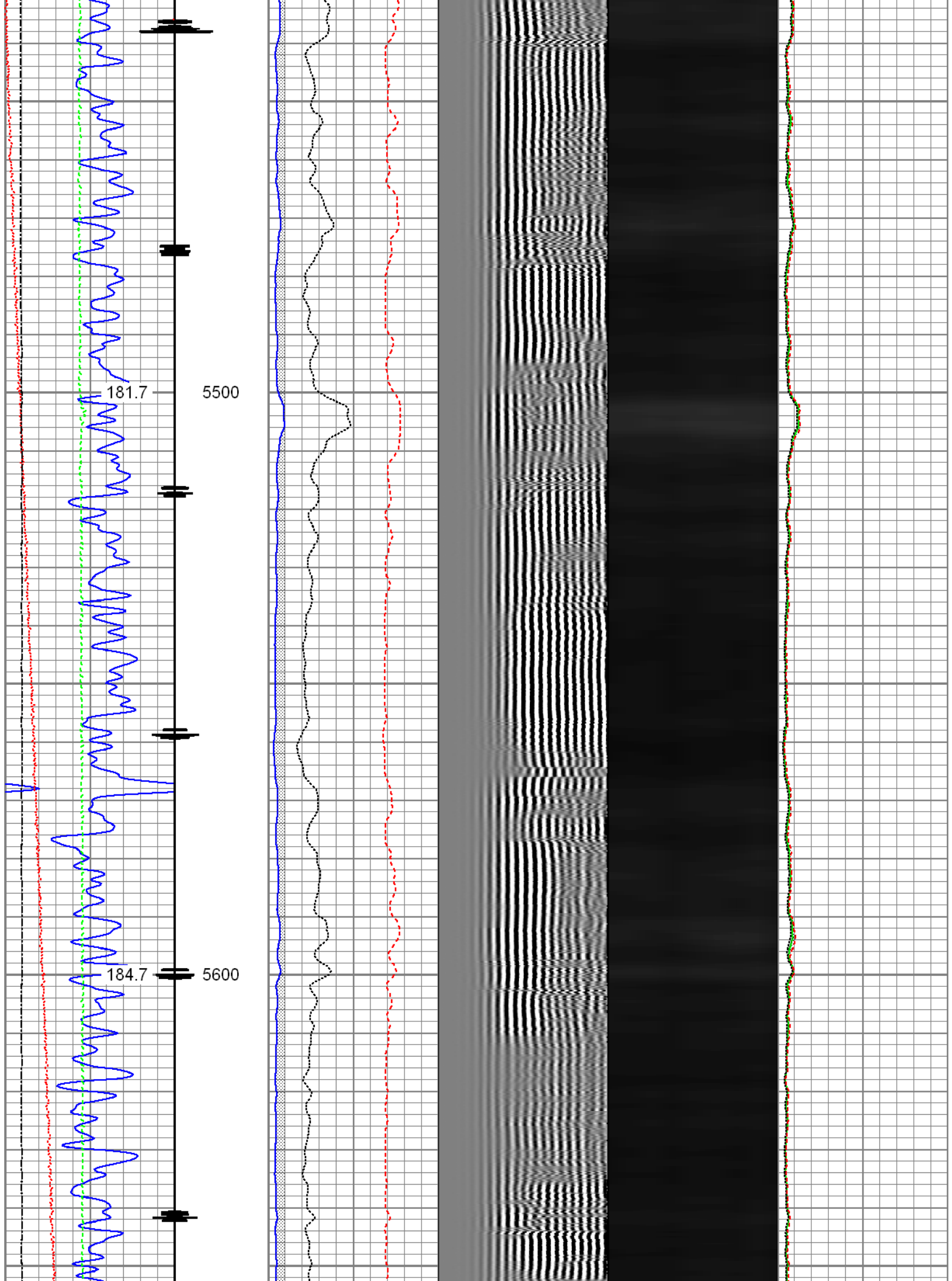


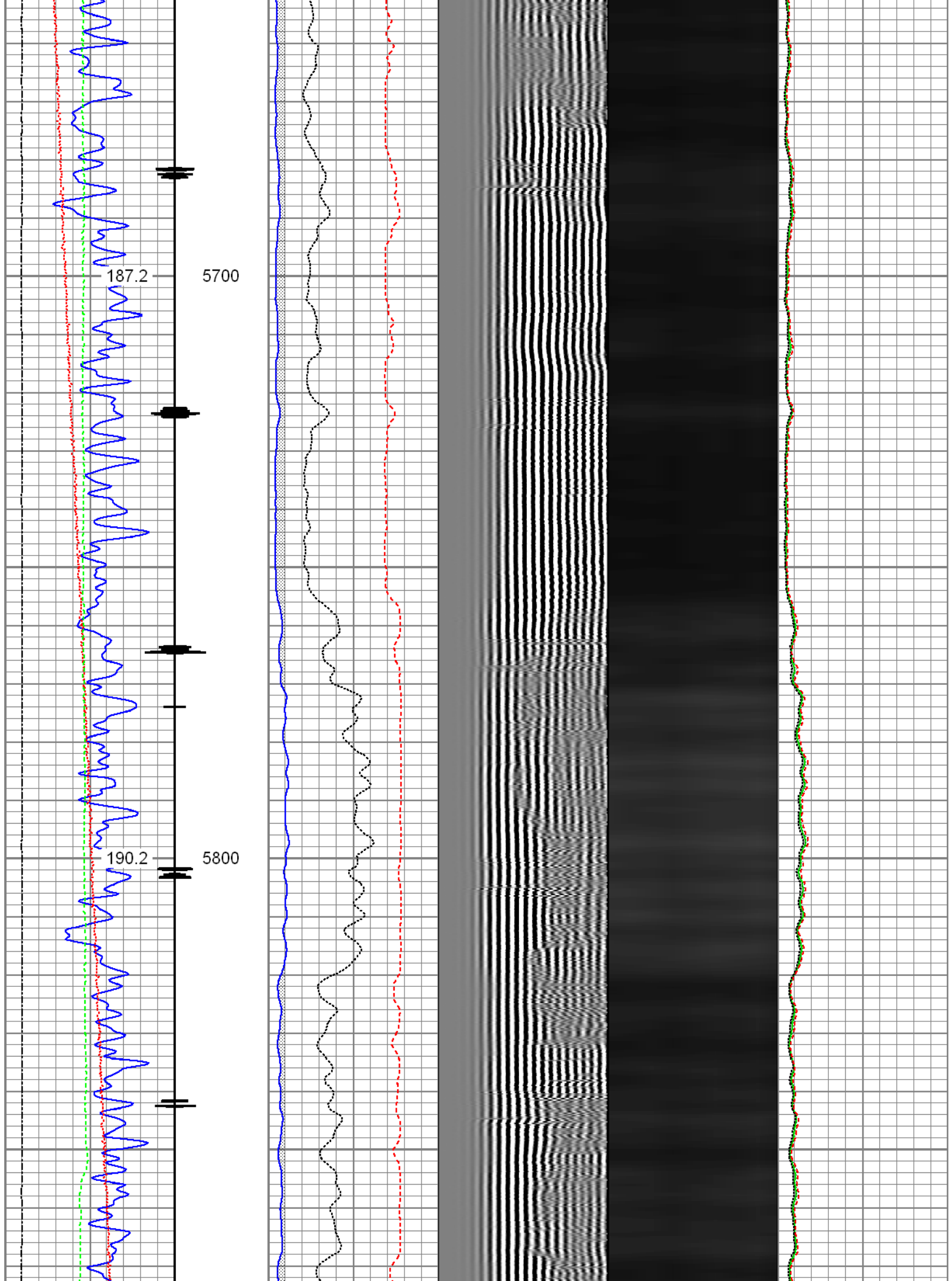


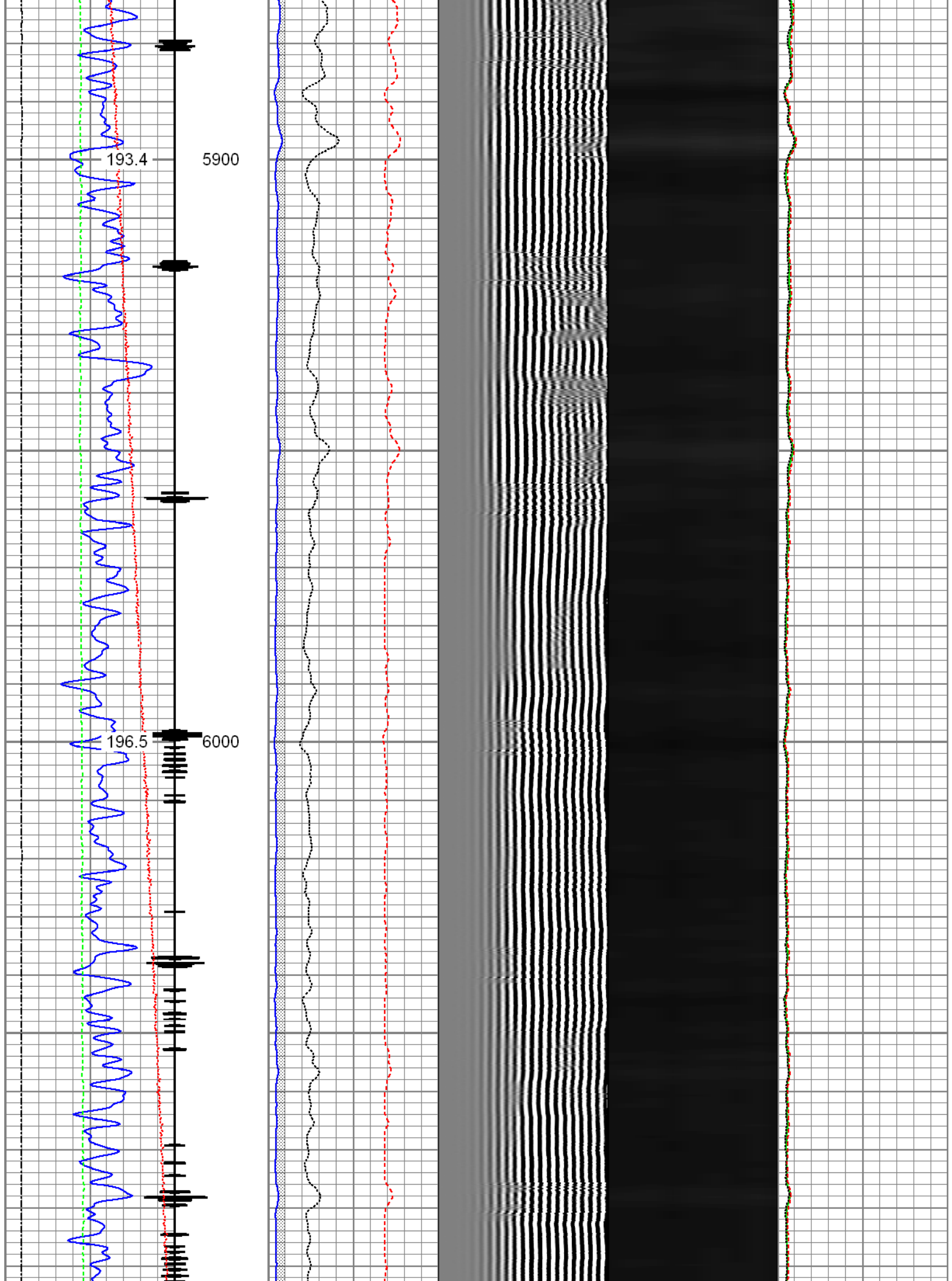


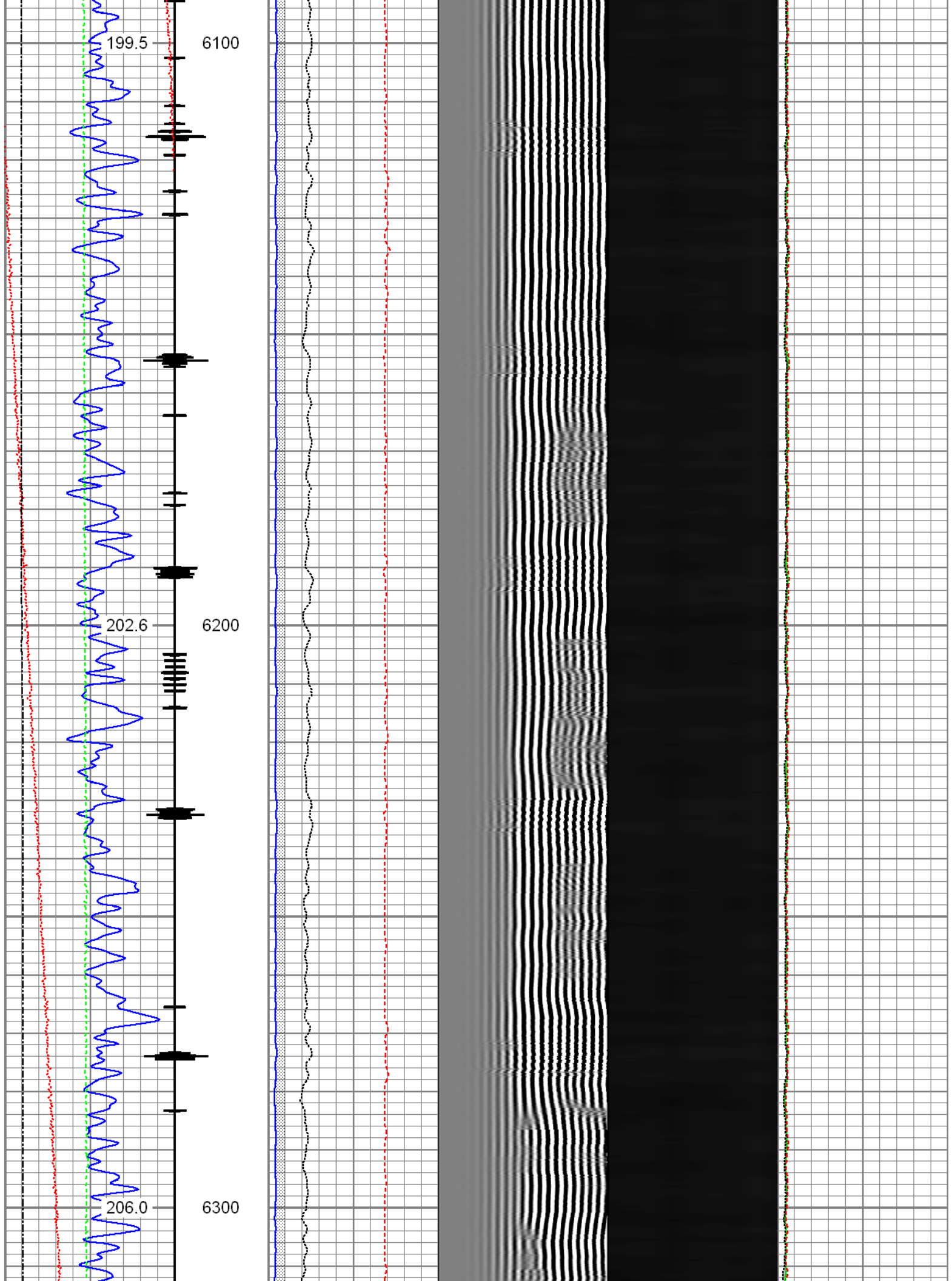


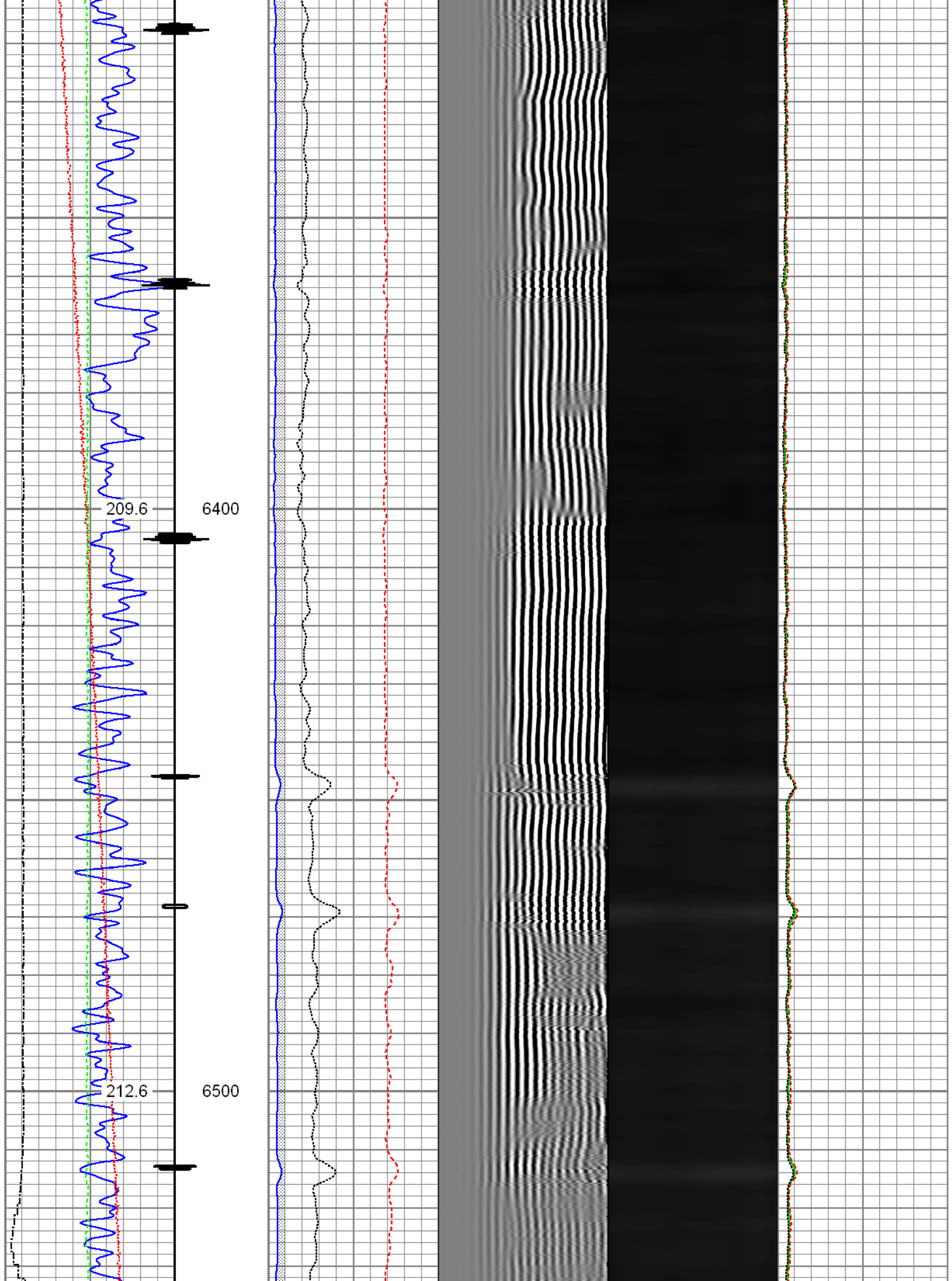


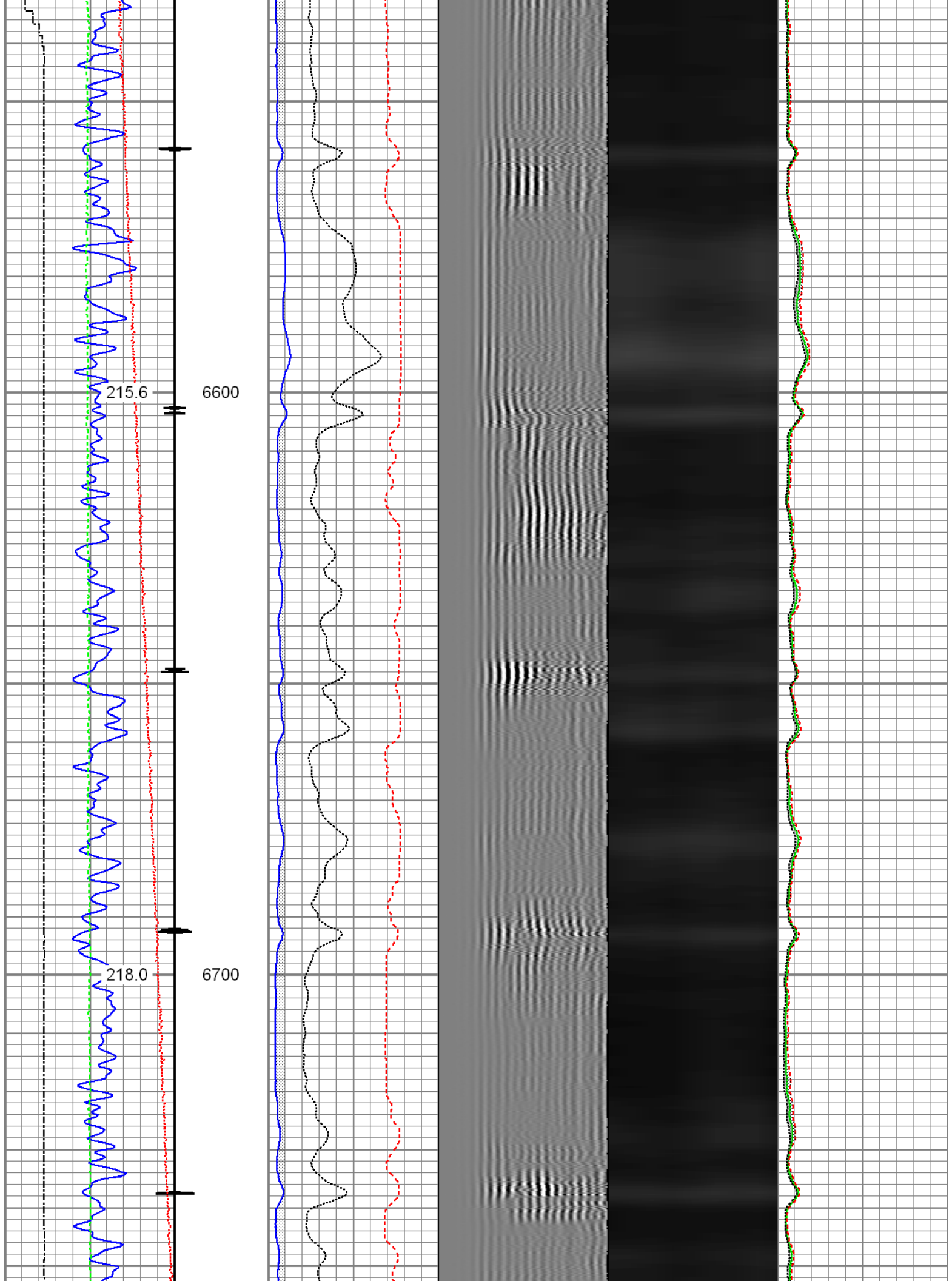


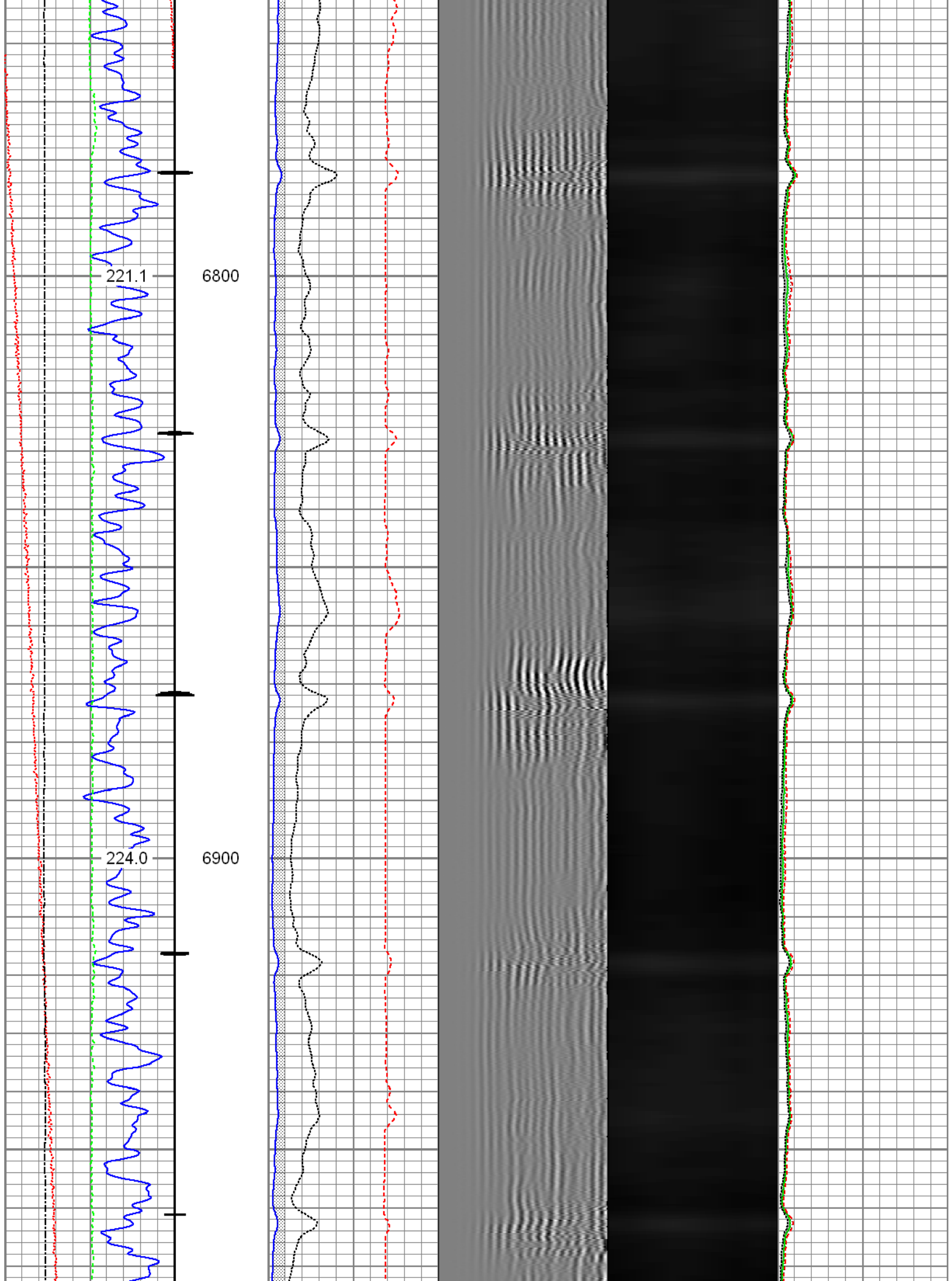


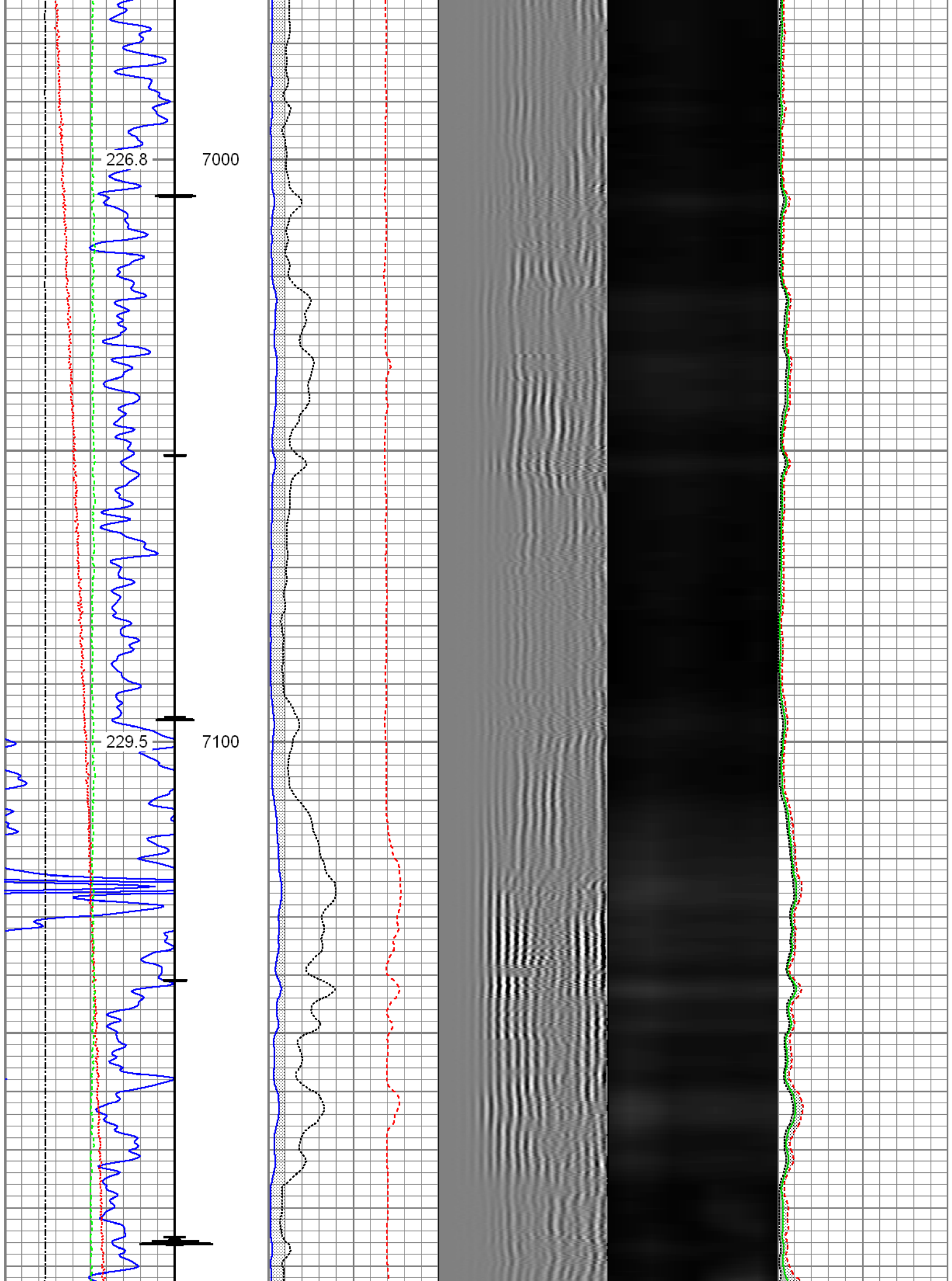


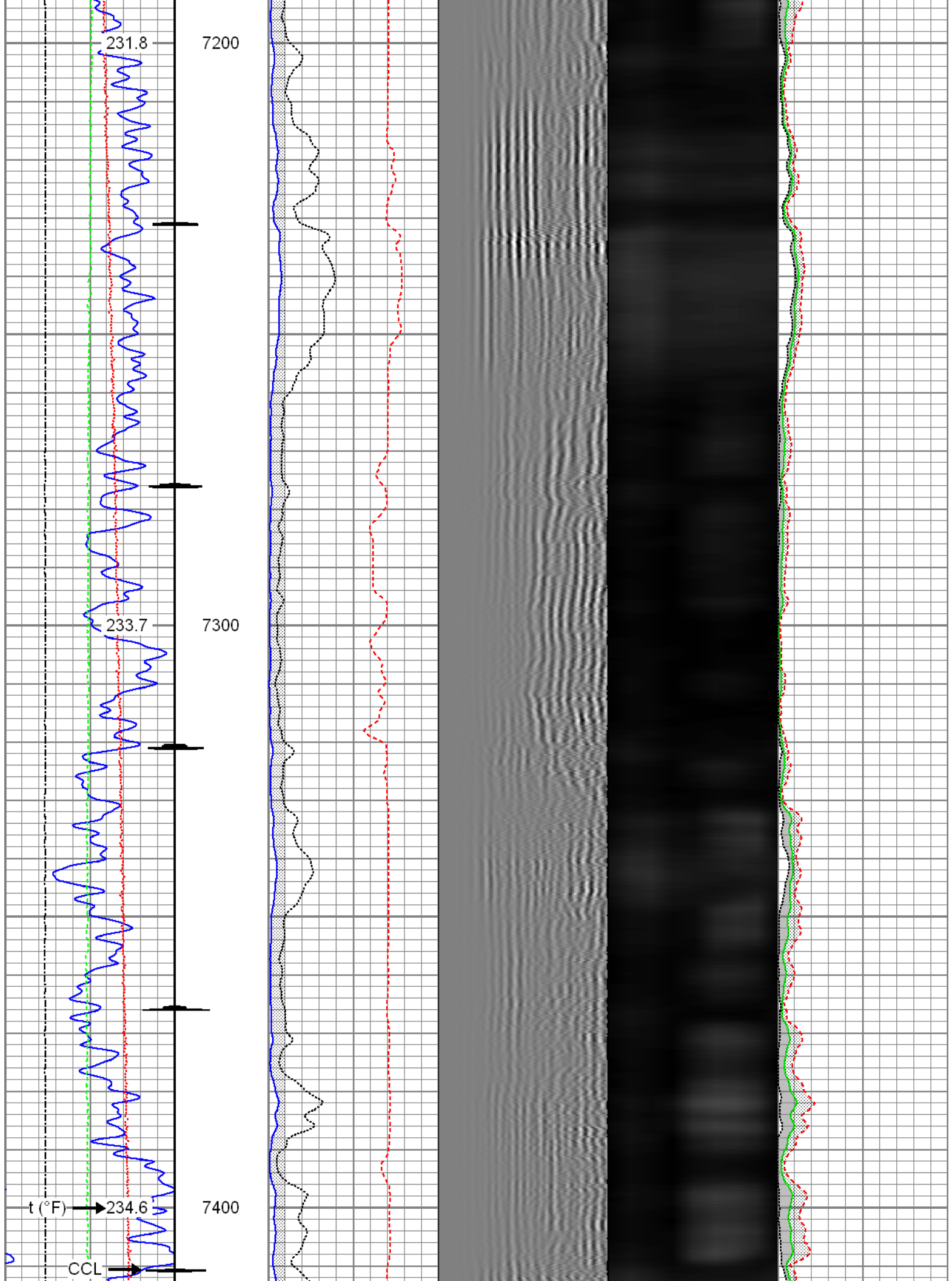


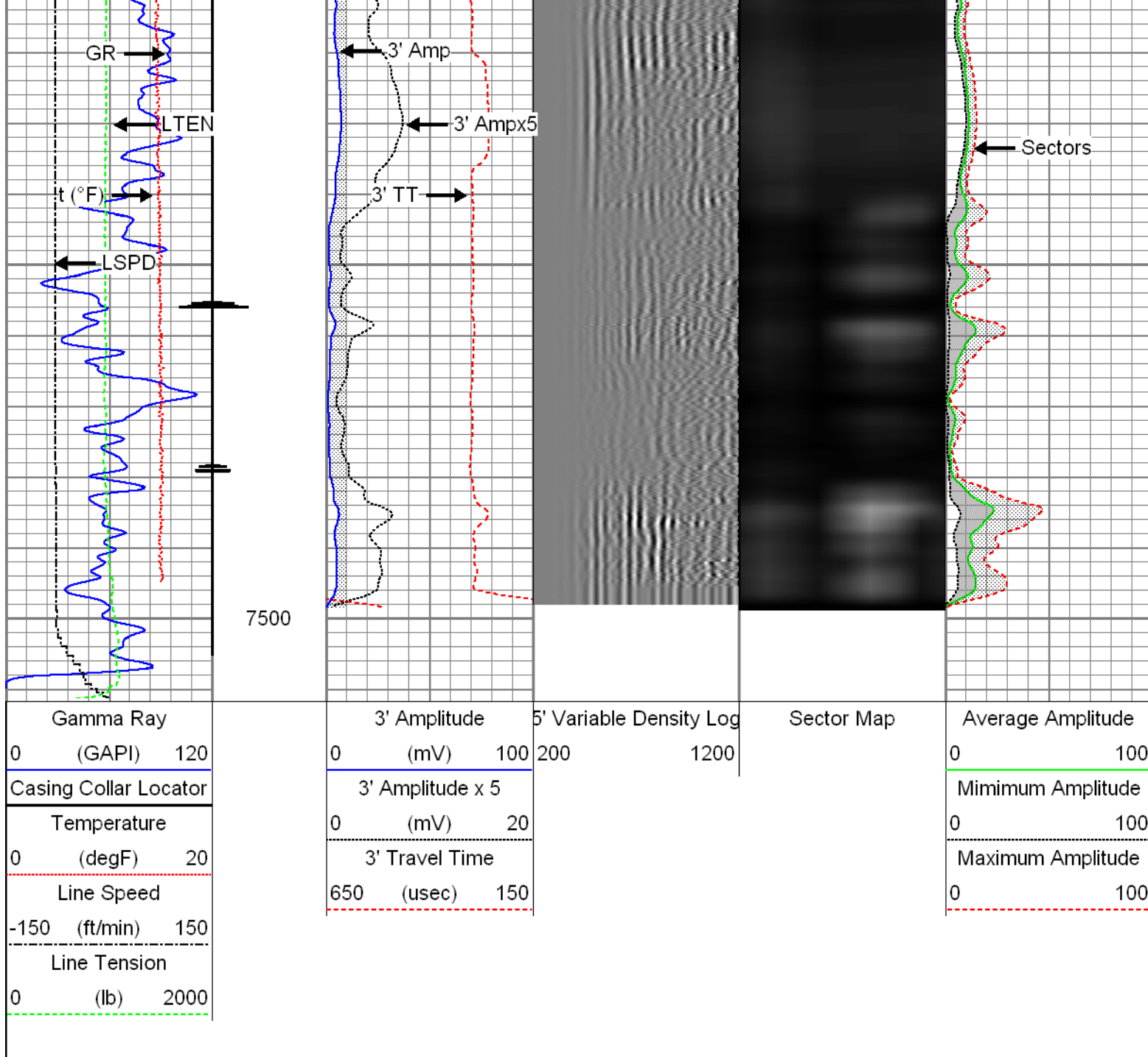




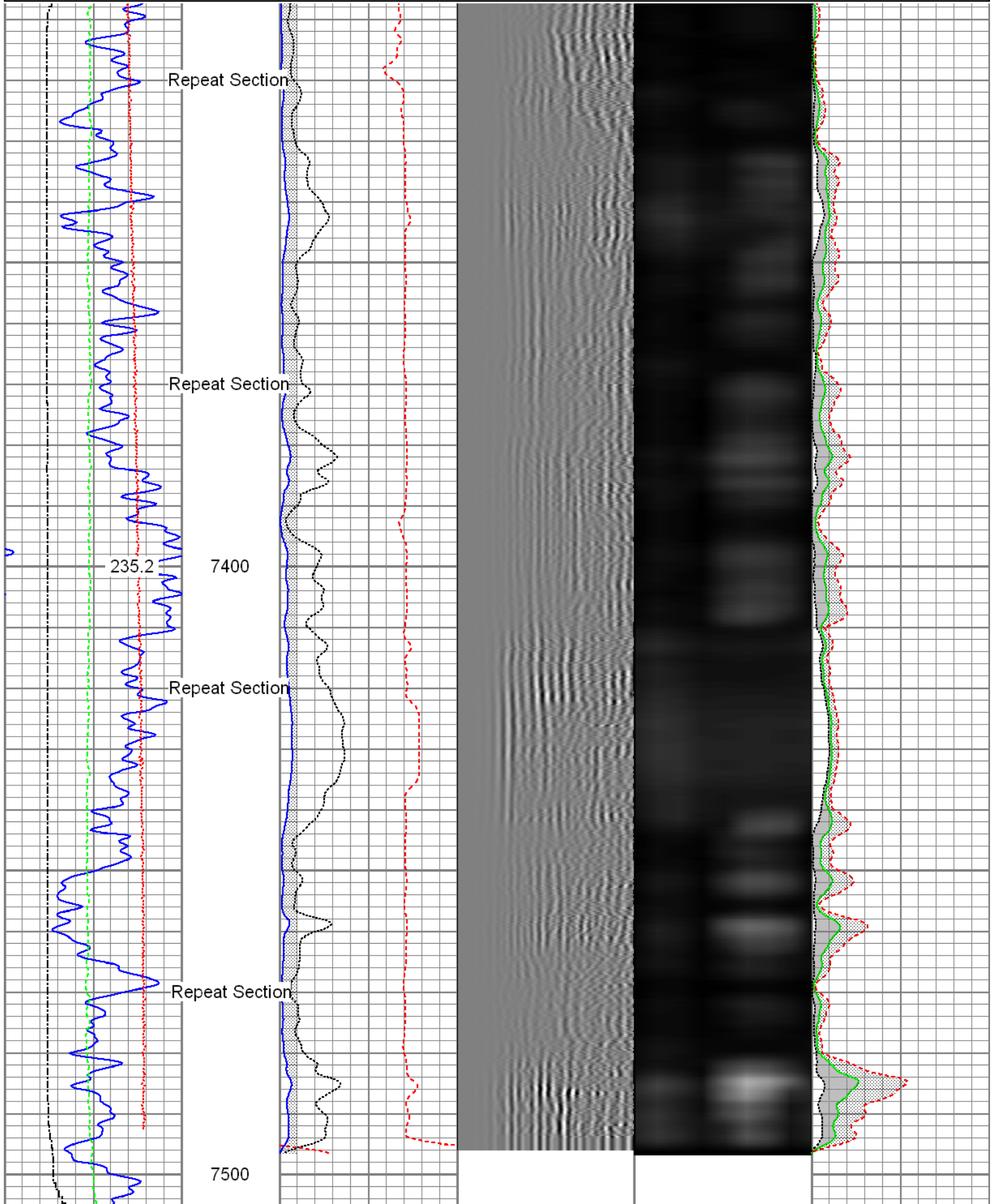
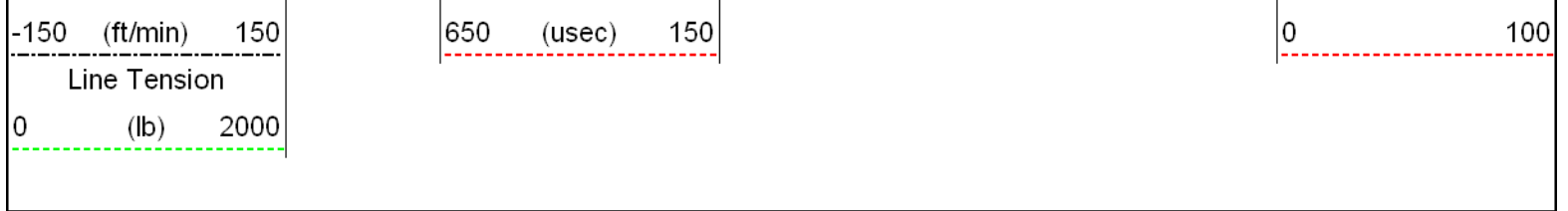





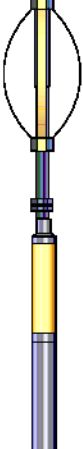


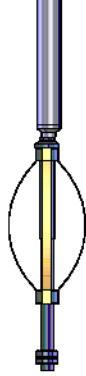


FMC Technologies		Repeat Section			
		Recorded with 2800 PSI Surface Induced Pressure			
Database File: c:\warrior\data\0512341304_anadarko_bane 27n2-9hz_09-02-15_rbl\0512341304_anadarko_bane 27 Dataset Pathname: pass2 Presentation Format: radii Dataset Creation: Wed Sep 02 14:37:27 2015 by Log 7.0 B1 Charted by: Depth in Feet scaled 1:240					
Gamma Ray 0 (GAPI) 120	3' Amplitude 0 (mV) 100	5' Variable Density Log 200 1200	Sector Map	Average Amplitude 0 100	
Temperature 0 (degF) 20	3' Amplitude x 5 0 (mV) 20			Minimum Amplitude 0 100	
Line Speed	3' Travel Time			Maximum Amplitude	



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					
WVF3FT	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					
WVF5FT	13.55					
CCL DCCL	6.51		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
	6.51		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
Dataset: 0512341304_anadarko_bane 27n2-9hz_09-02-15_rbl.db: field/well/run1/pass4 Total Length: 23.40 ft Total Weight: 194.00 lb O.D. 2.75 in					

Calibration Report	
Database File:	c:\warrior\data\0512341304_anadarko_bane 27n2-9hz_09-02-15_rbl\0512341304_anadarko_bane 27n2-9hz_09-02-15_rbl
Dataset Pathname:	pass4
Dataset Creation:	Wed Sep 02 14:41:51 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 27N2-9HZ
Field	Wattenberg
County	Weld
State	Colorado