



Radial Cement Bond Gamma Ray Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.		
Well	Powers 35N-22HZ		
Field	Wattenberg		
County	Weld		
State	Colorado		
Location:		API # : 05-123-41906	Other Services
SEC 22 TWP 2N RGE 65W			Gauge Ring
Permanent Datum	Ground Level	Elevation	
Log Measured From	Kelly Bushing	20 FT	
Drilling Measured From	Kelly Bushing		Elevation
			K.B. 4904'
			D.F. 4803'
			G.L. 4884'

Date	08-Dec-2015
Run Number	Two
Depth Driller	12823 FT
Depth Logger	7354 FT
Bottom Logged Interval	7349 FT
Top Log Interval	Surface
Open Hole Size	7.875"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	239°F
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	1430
Equipment Number	HD-0324
Location	Fort Lupton, CO
Recorded By	J. Amidei
Witnessed By	Mario Torres

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 8RD LTC	Surface	1874 FT		
Intermediate #1	5 1/2	17	P-110, HCP-110	Surface	12449 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 Kelly Bushing reported at 20 FT
Casing Tally reported Marker Joint at 6168 - 6191 FT
Recorded Marker Joint at 6127 - 6150 FT
Log ran from 7349 FT to surface
Recorded with 2800 PSI surface induced pressure

Thank you for choosing FMC Technologies Surface Integrated Services.



Main Pass

Recorded With 2800 PSI Surface Induced Pressure

Database File:0512341906_anadarko_powers 35n-22hz_12-08-15_rbl.db

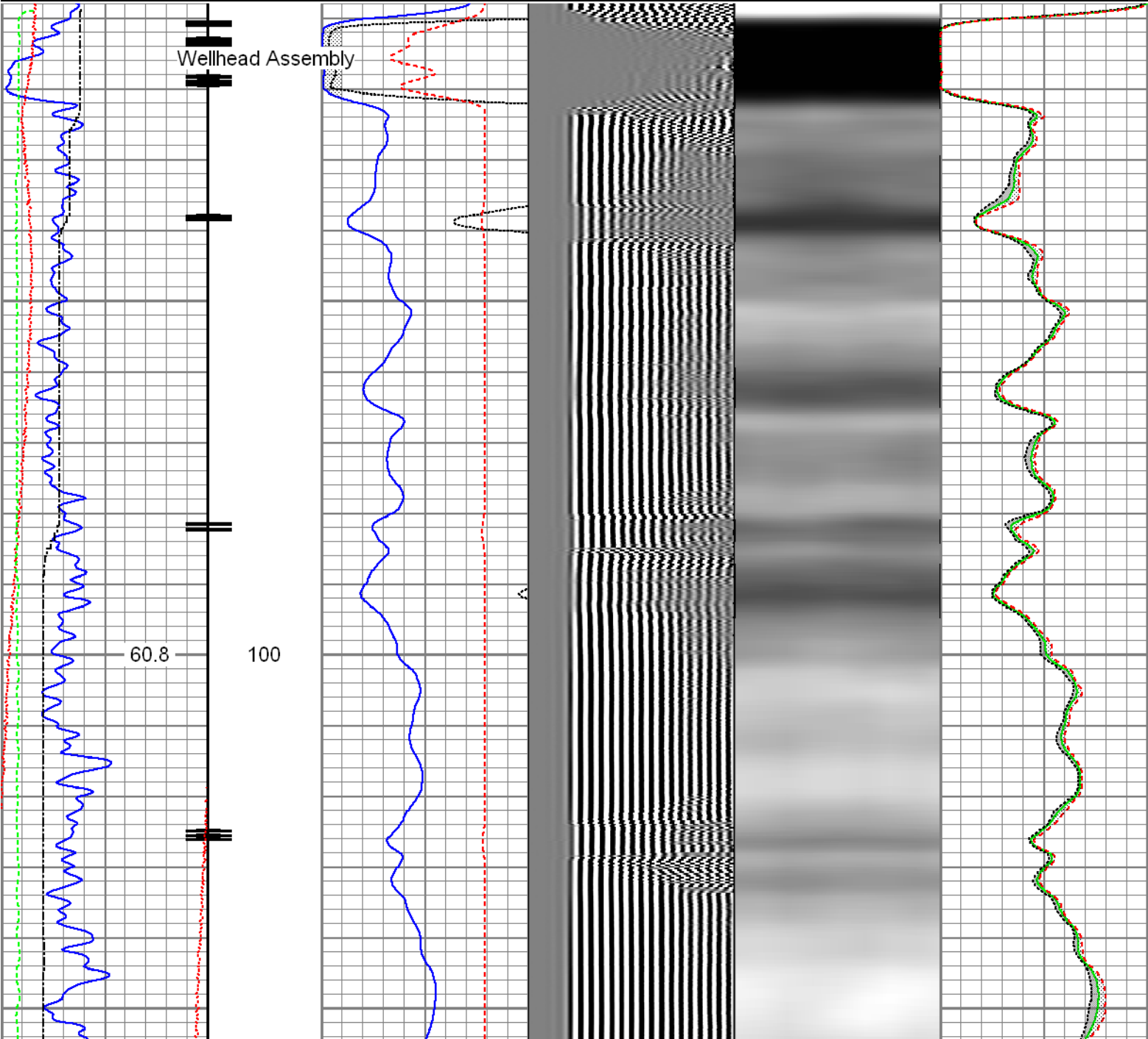
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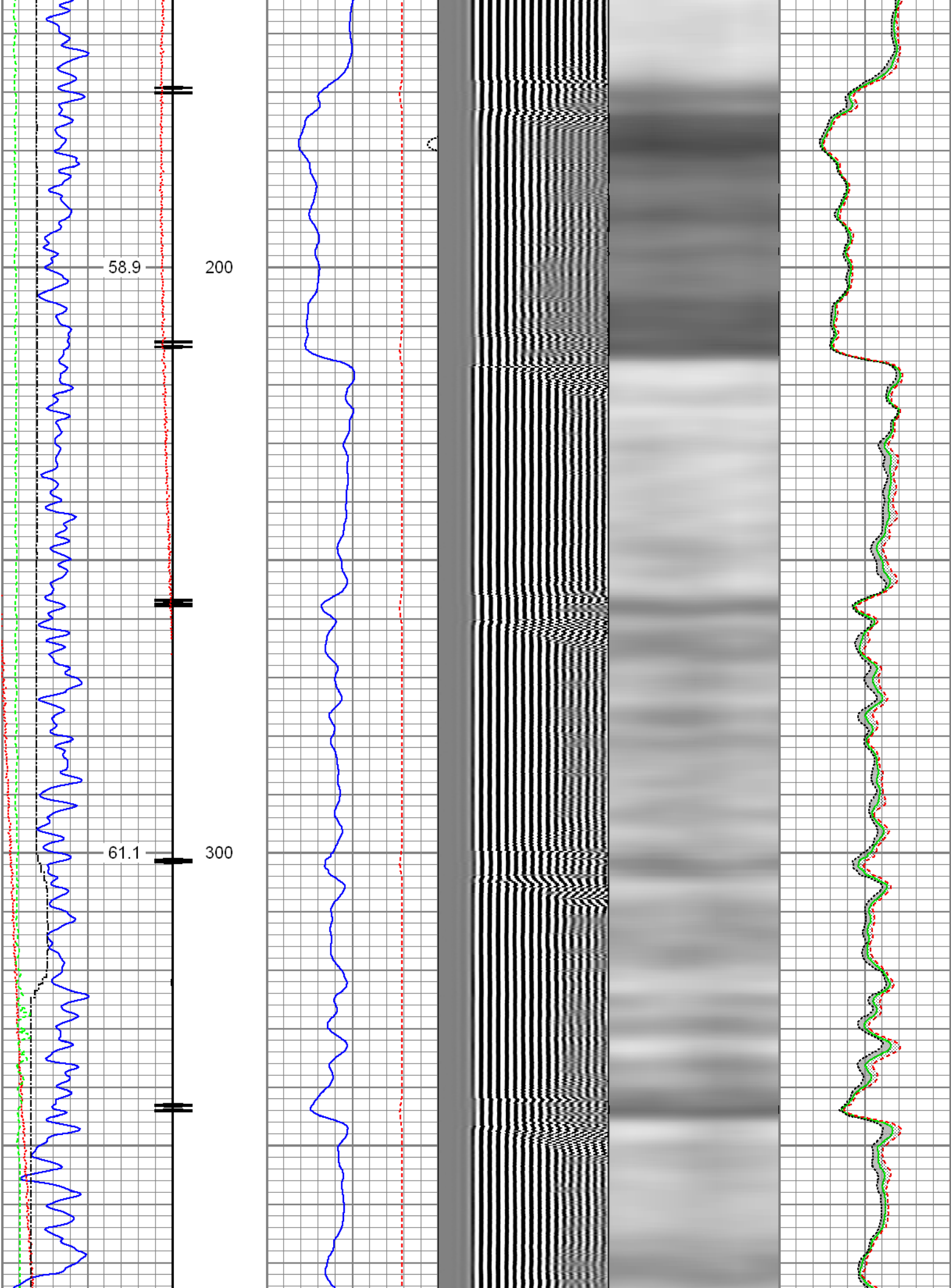
Presentation Format:radii

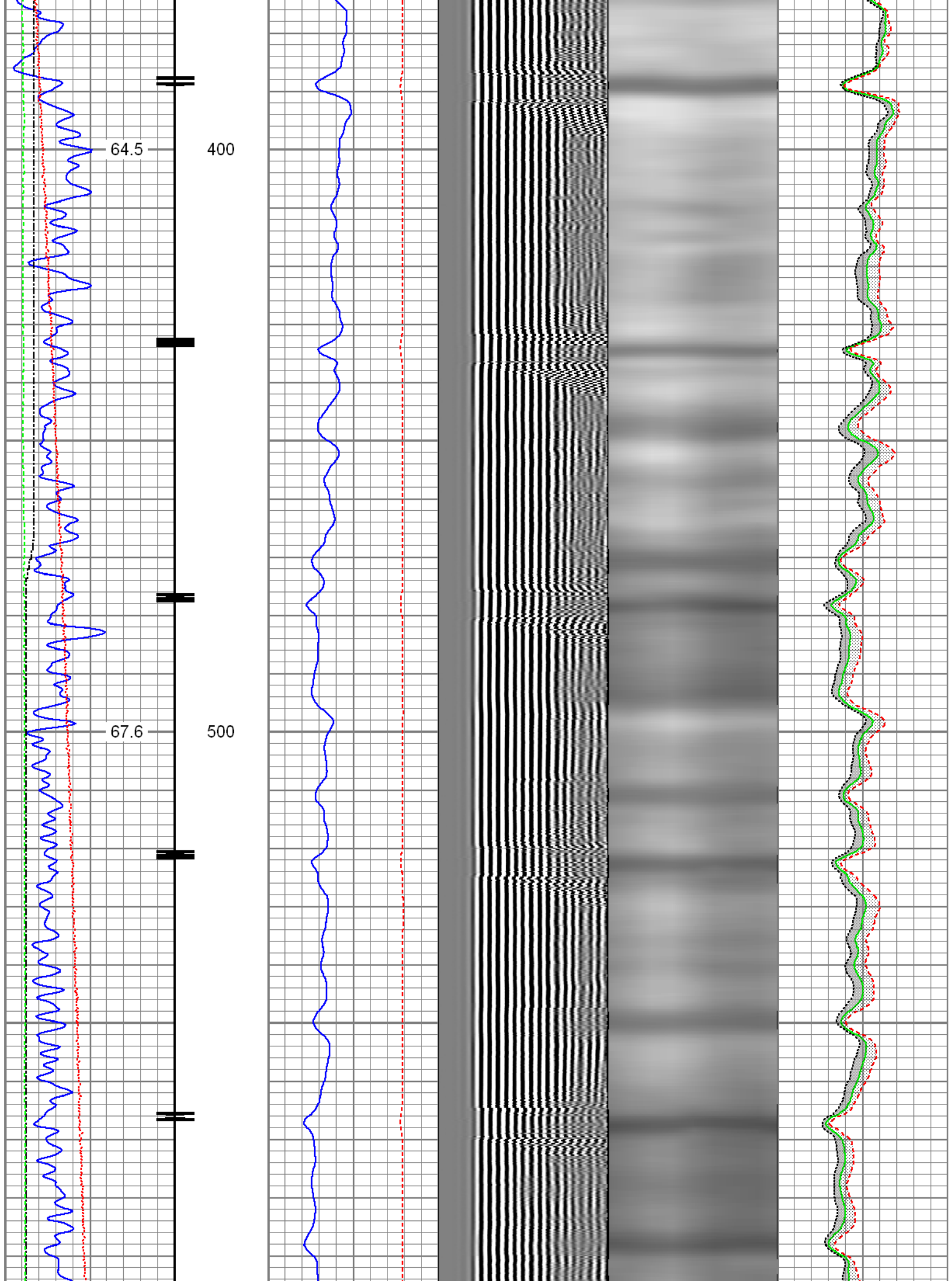
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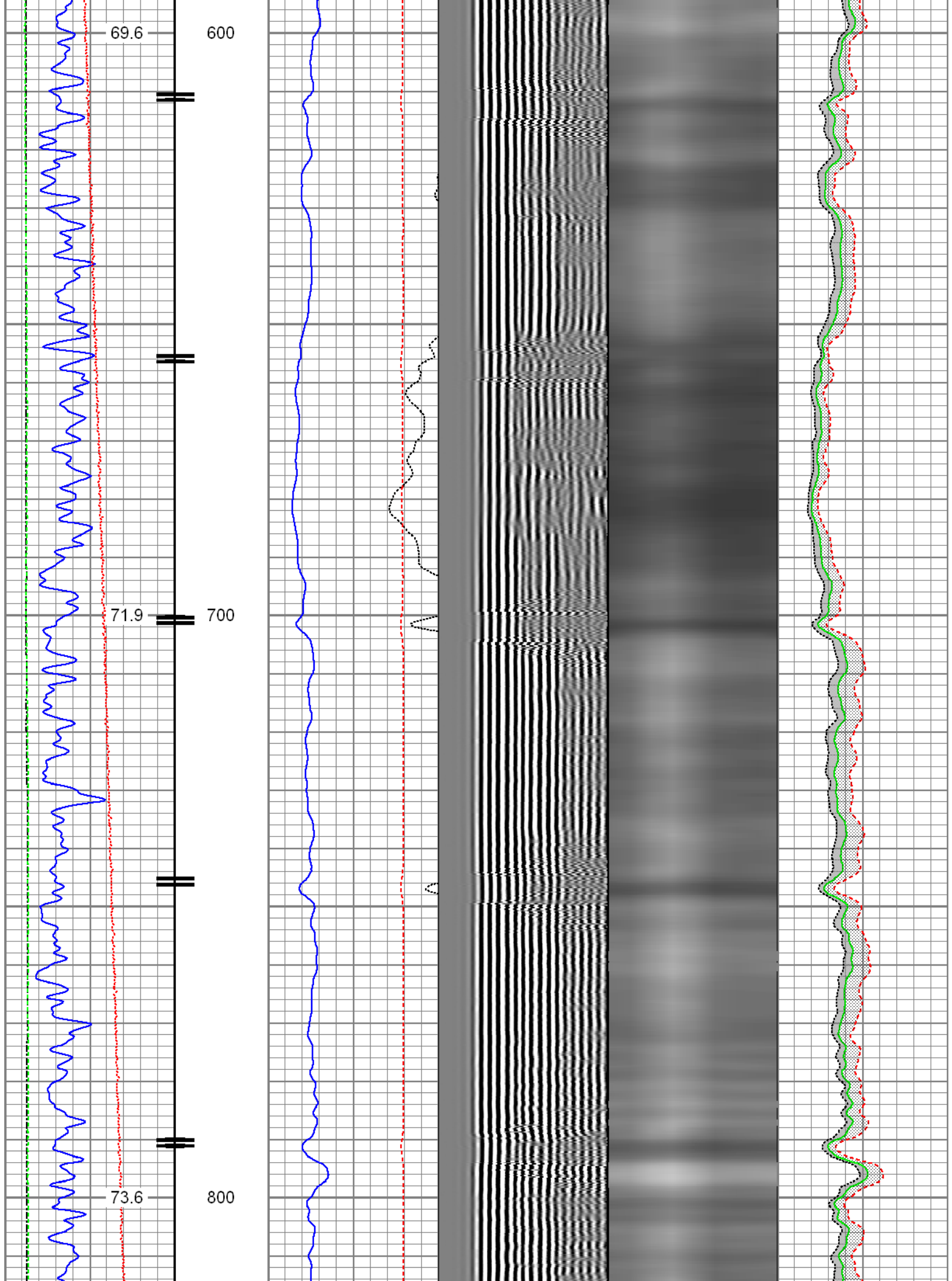
Charted by:Depth in Feet scaled 1:240

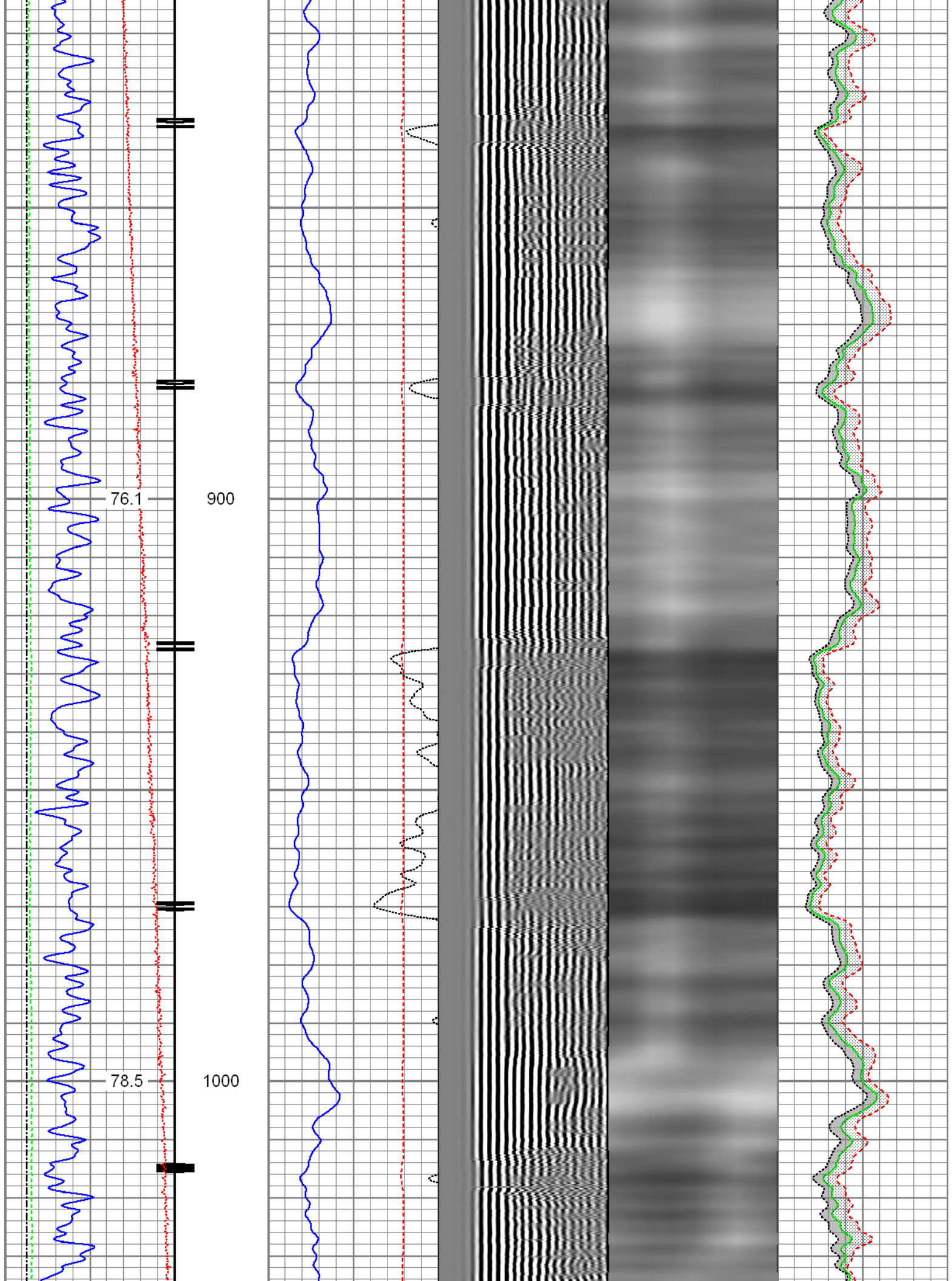
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150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

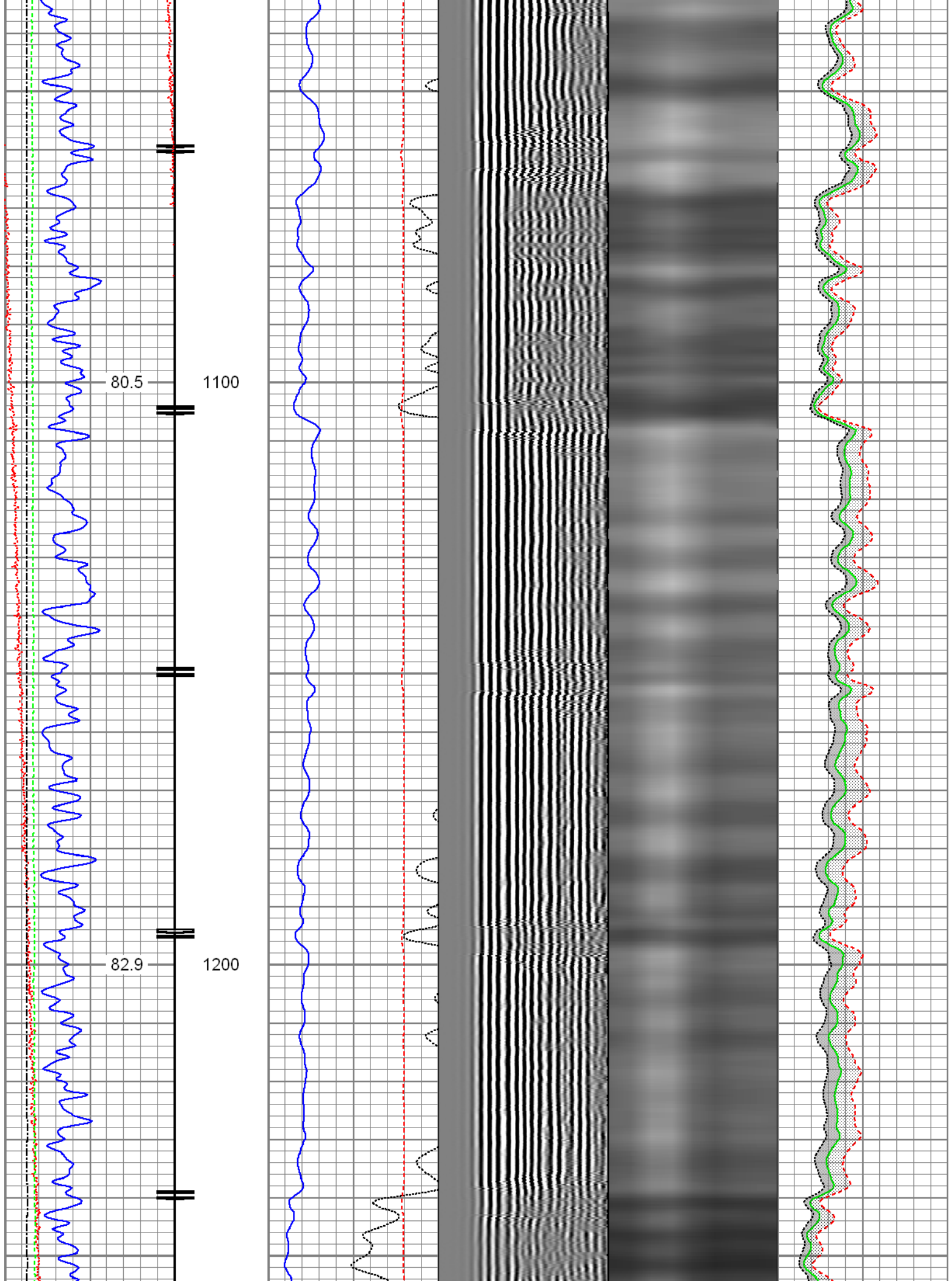


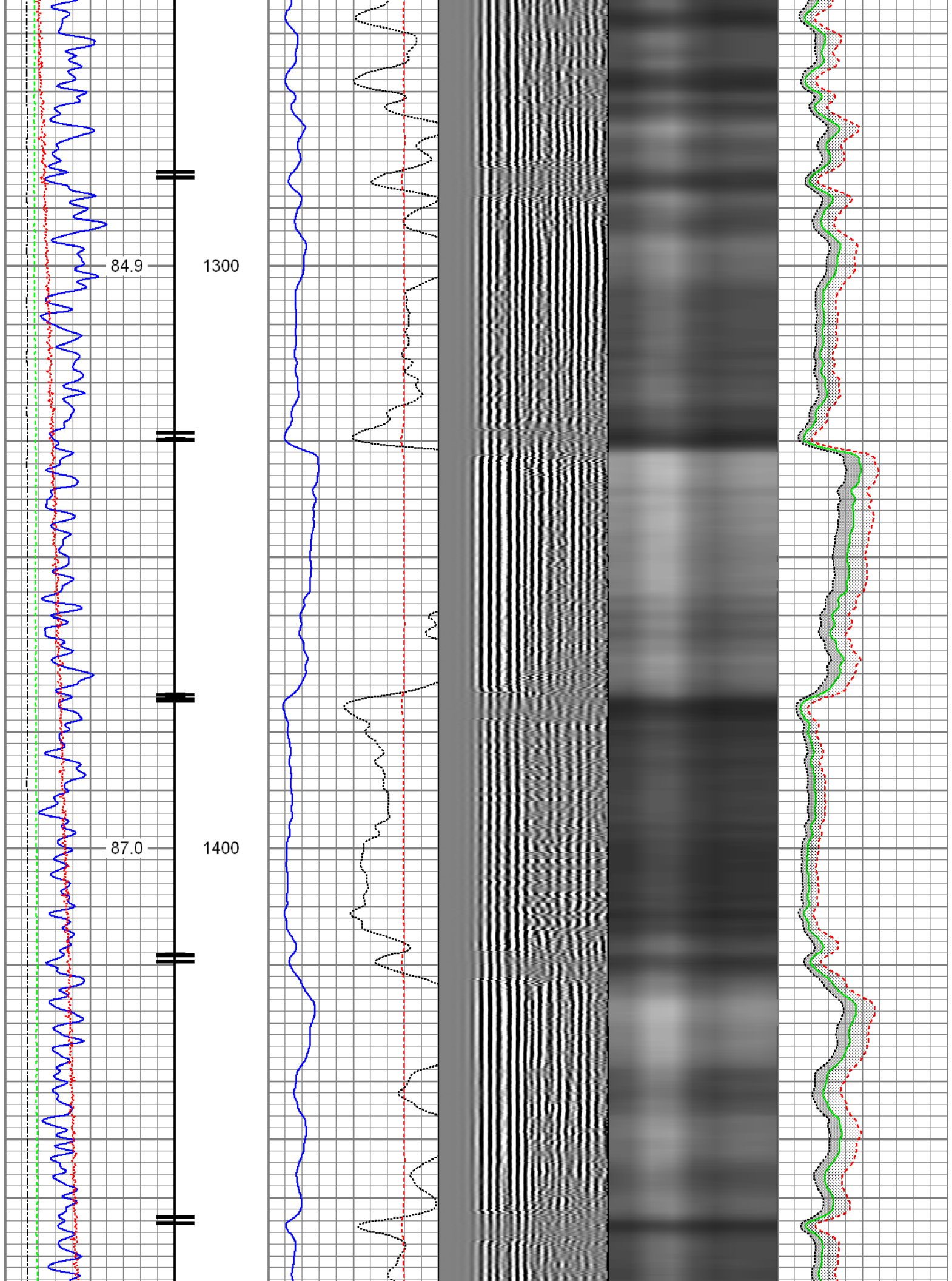


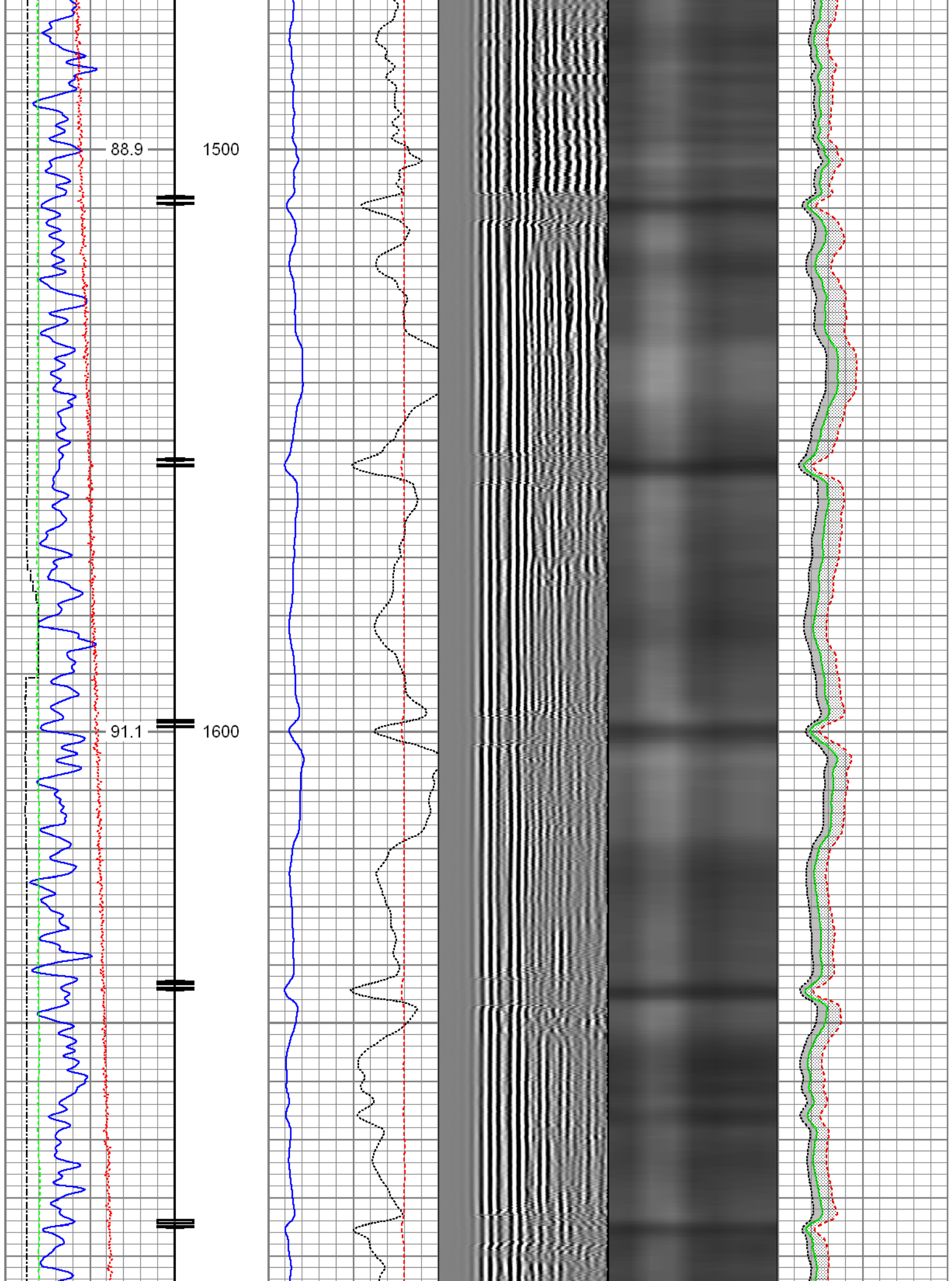


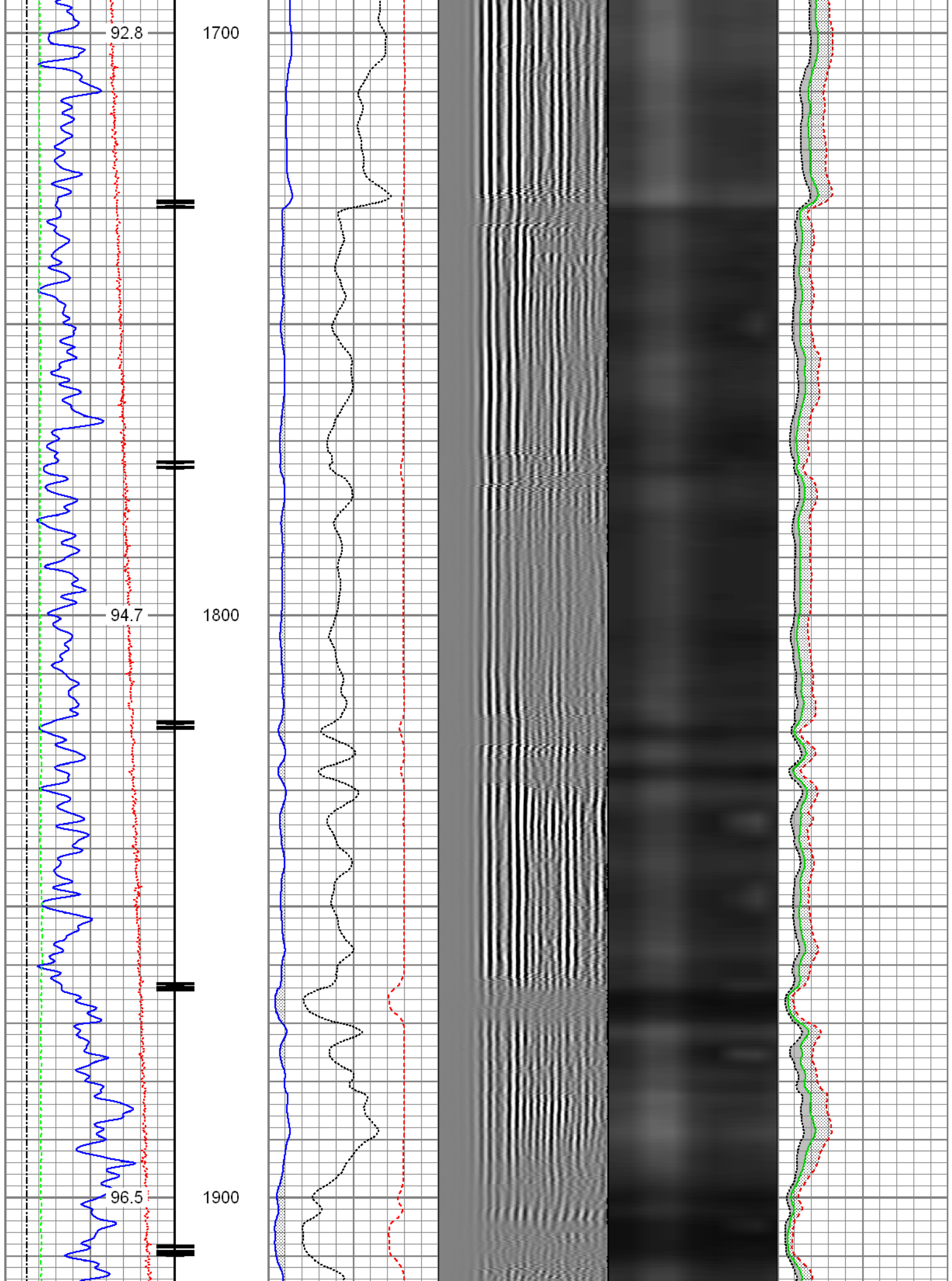


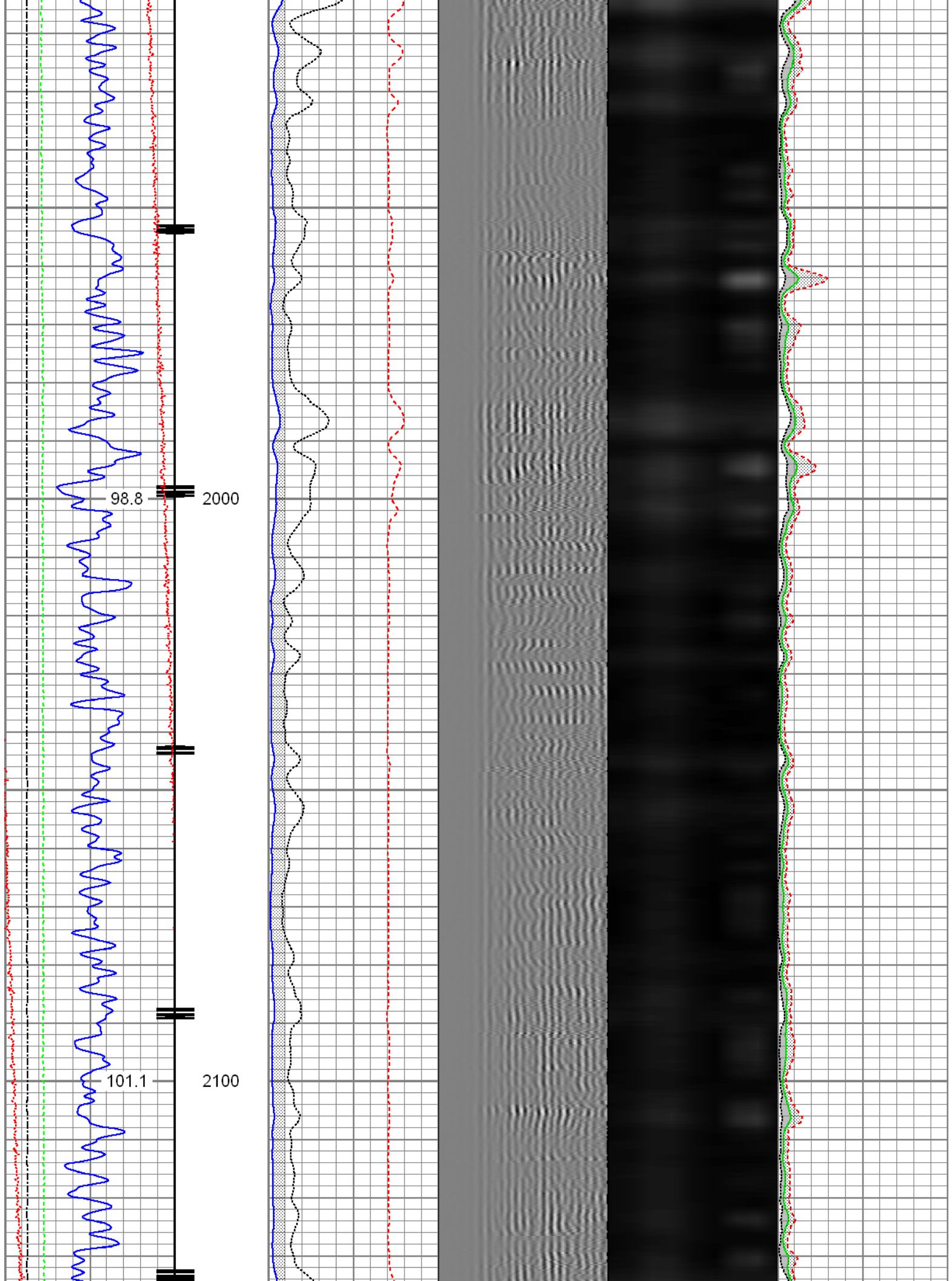


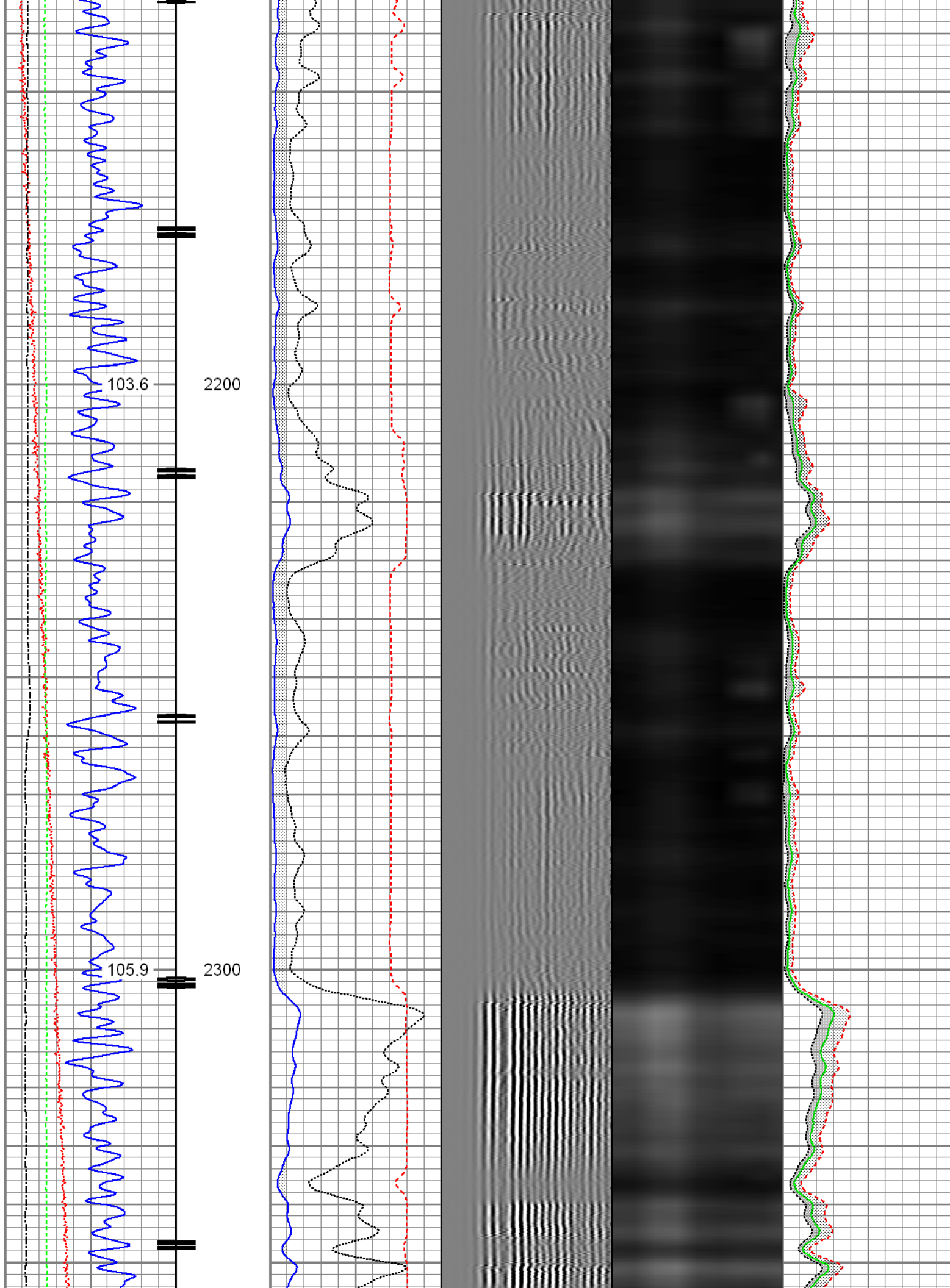


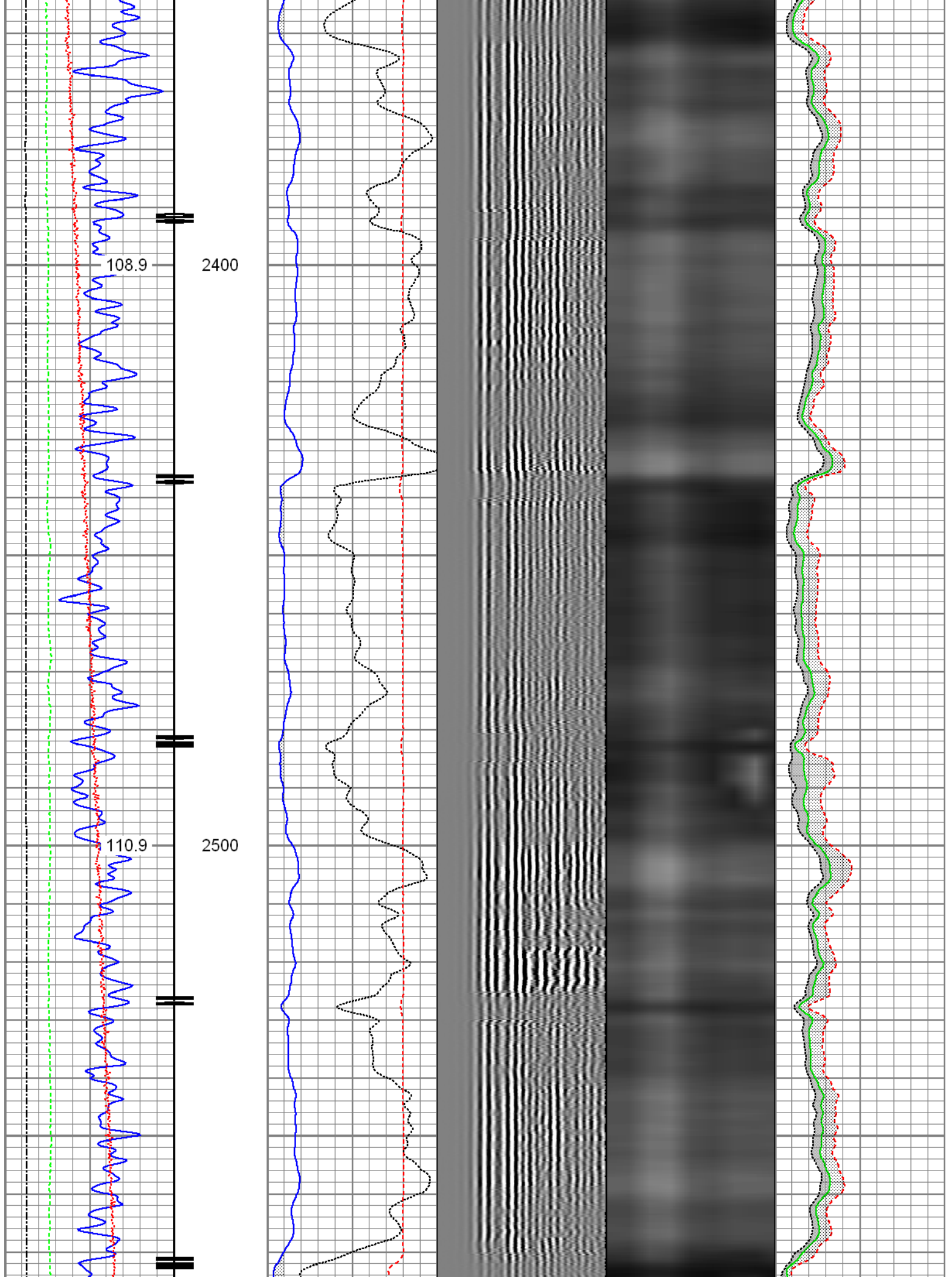


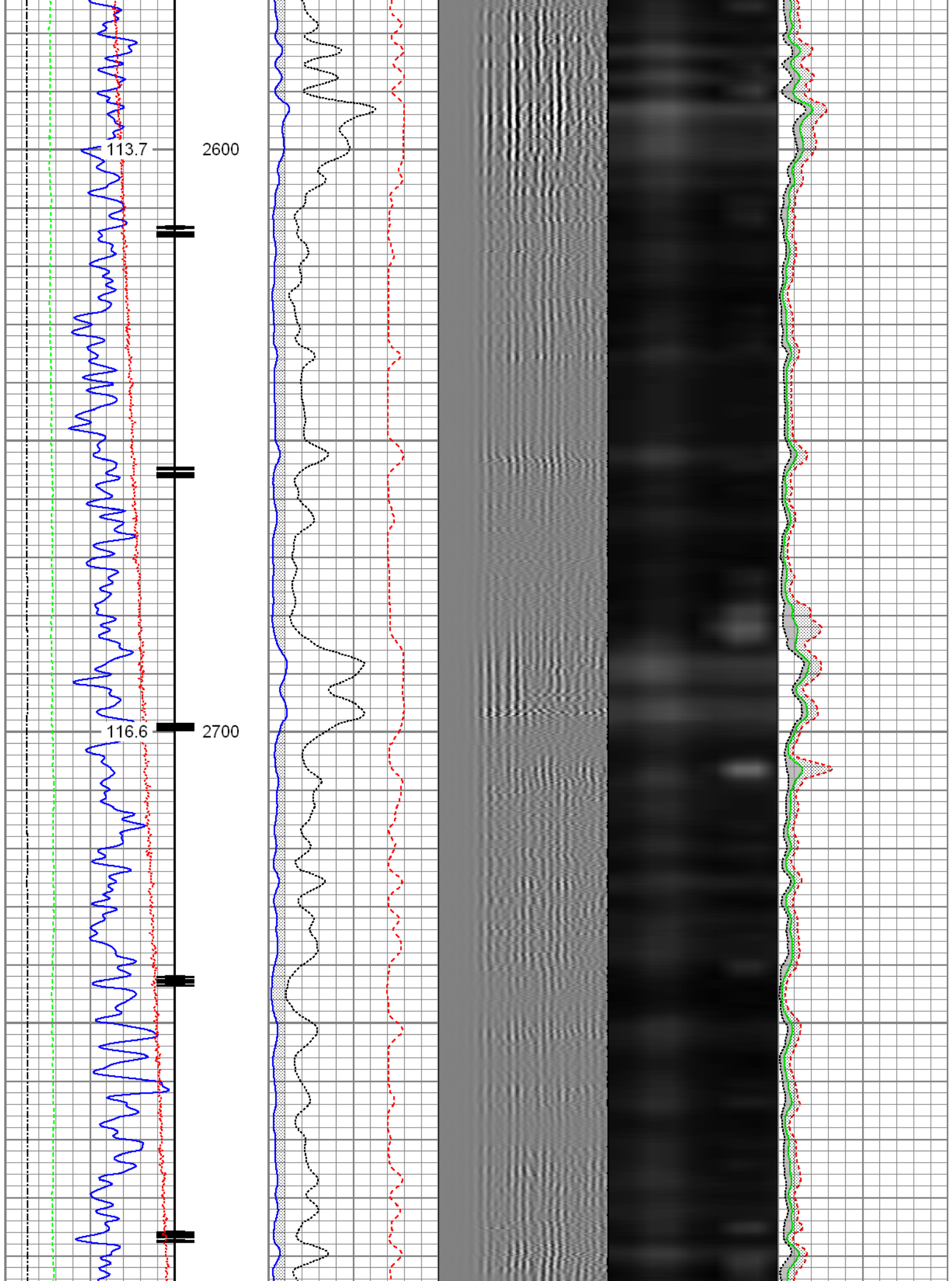


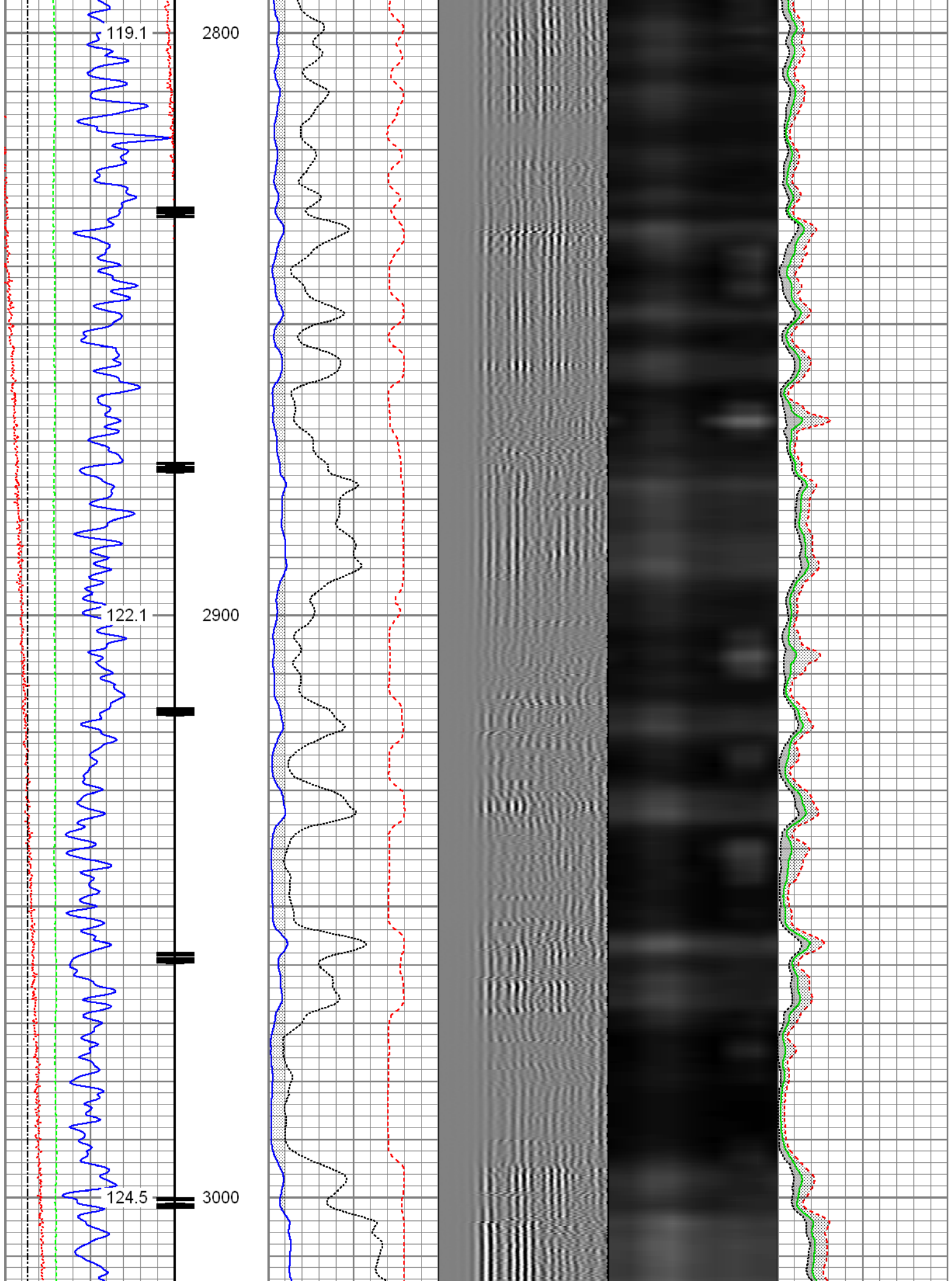


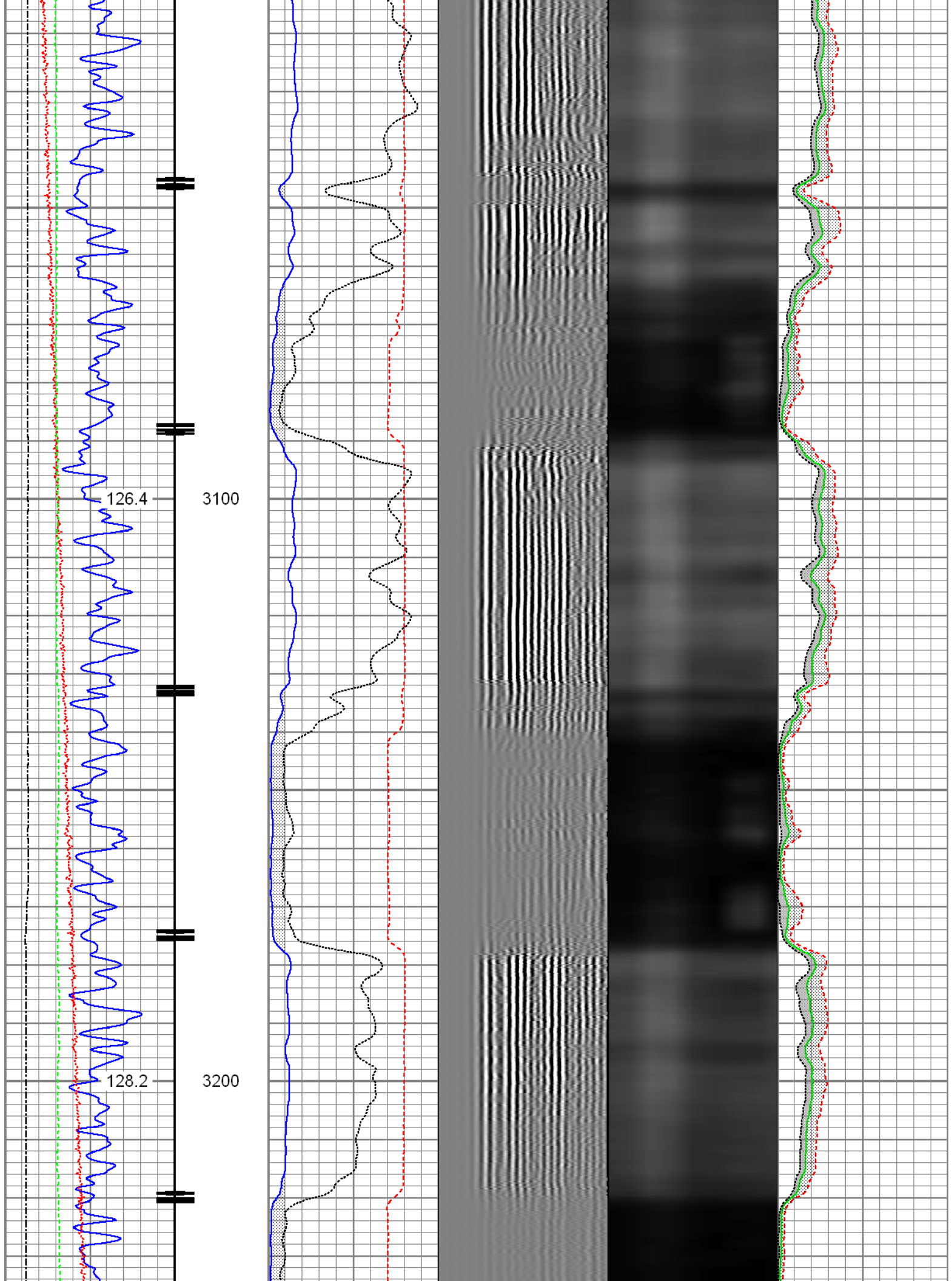


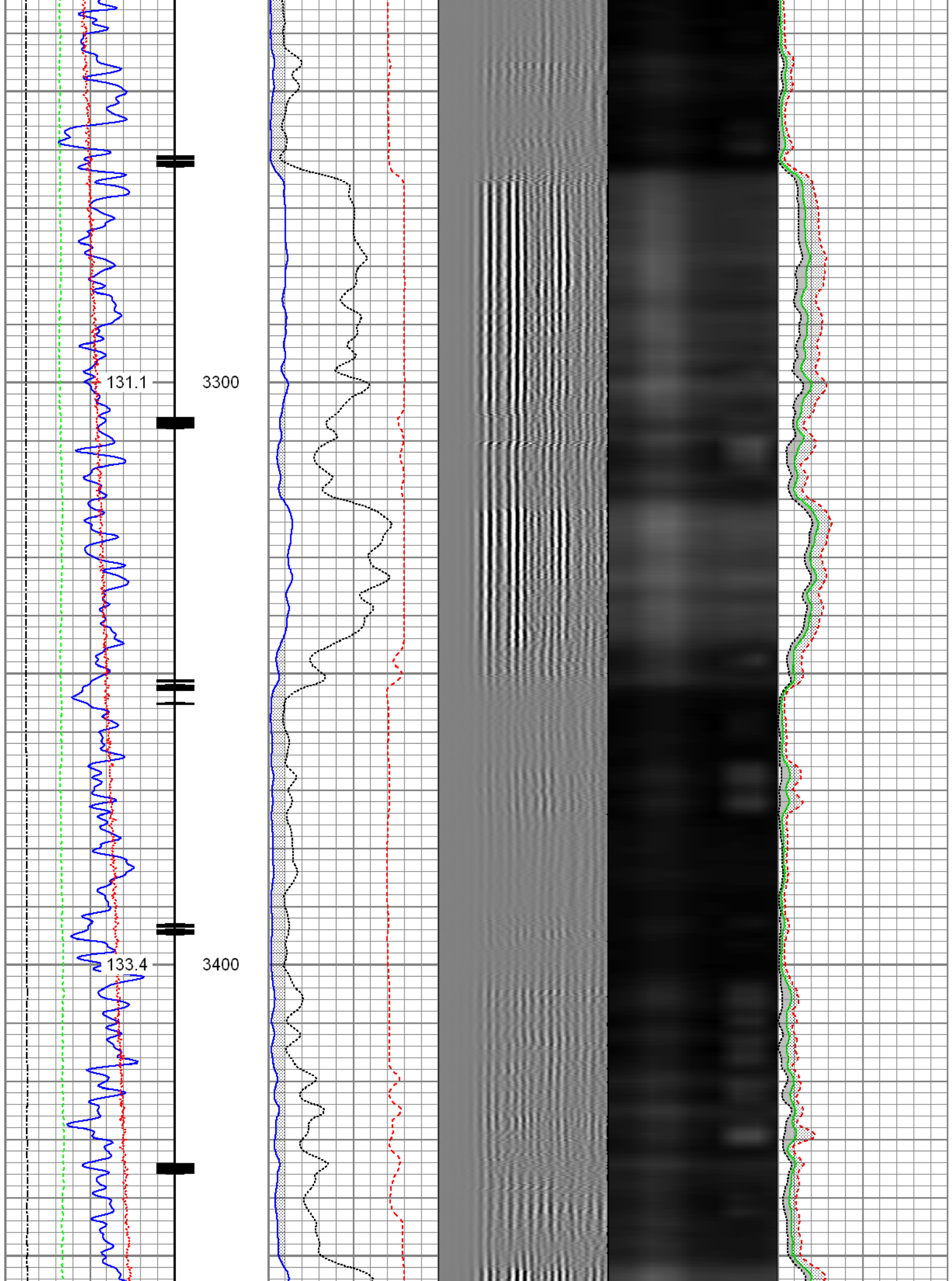


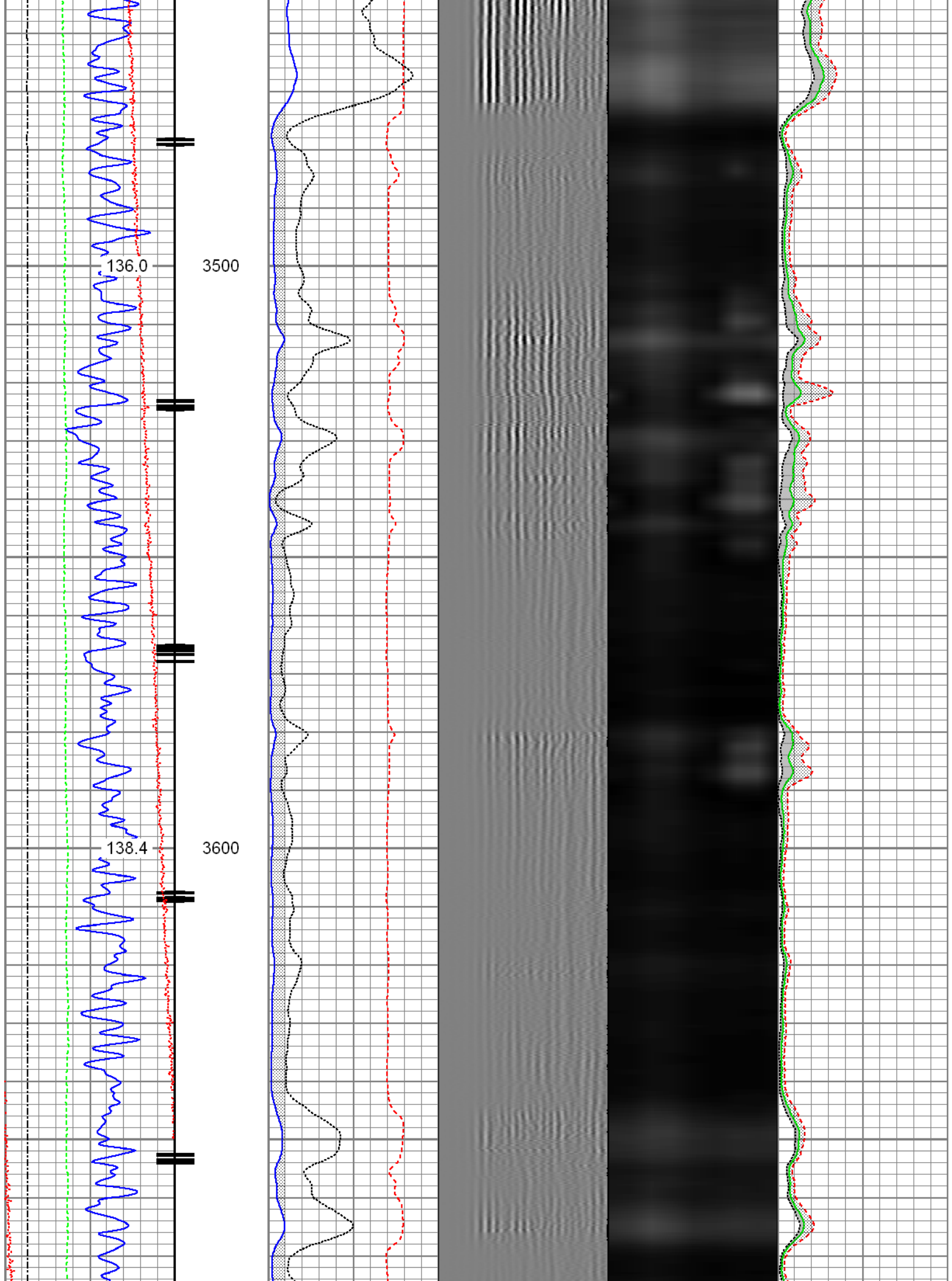


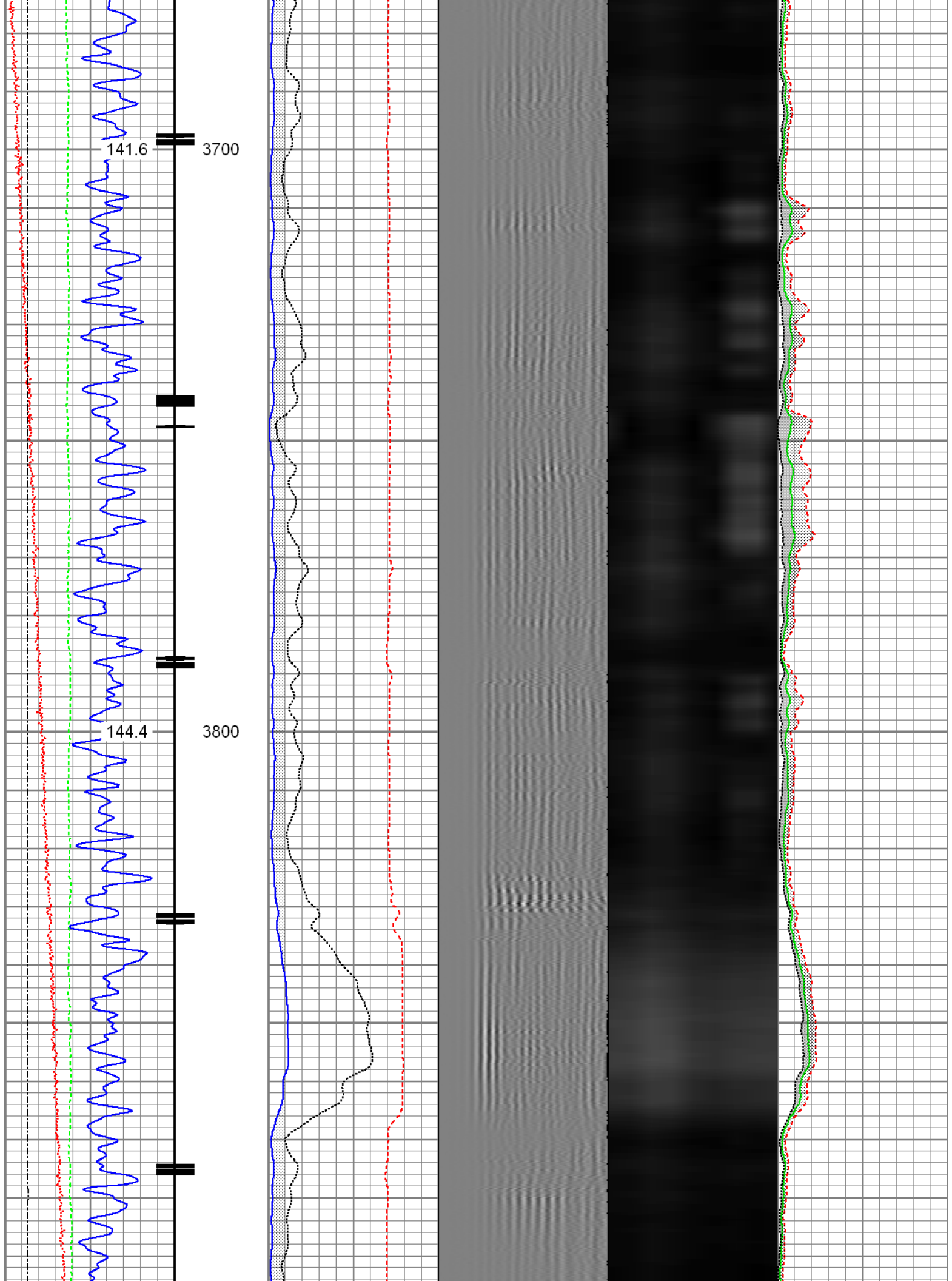


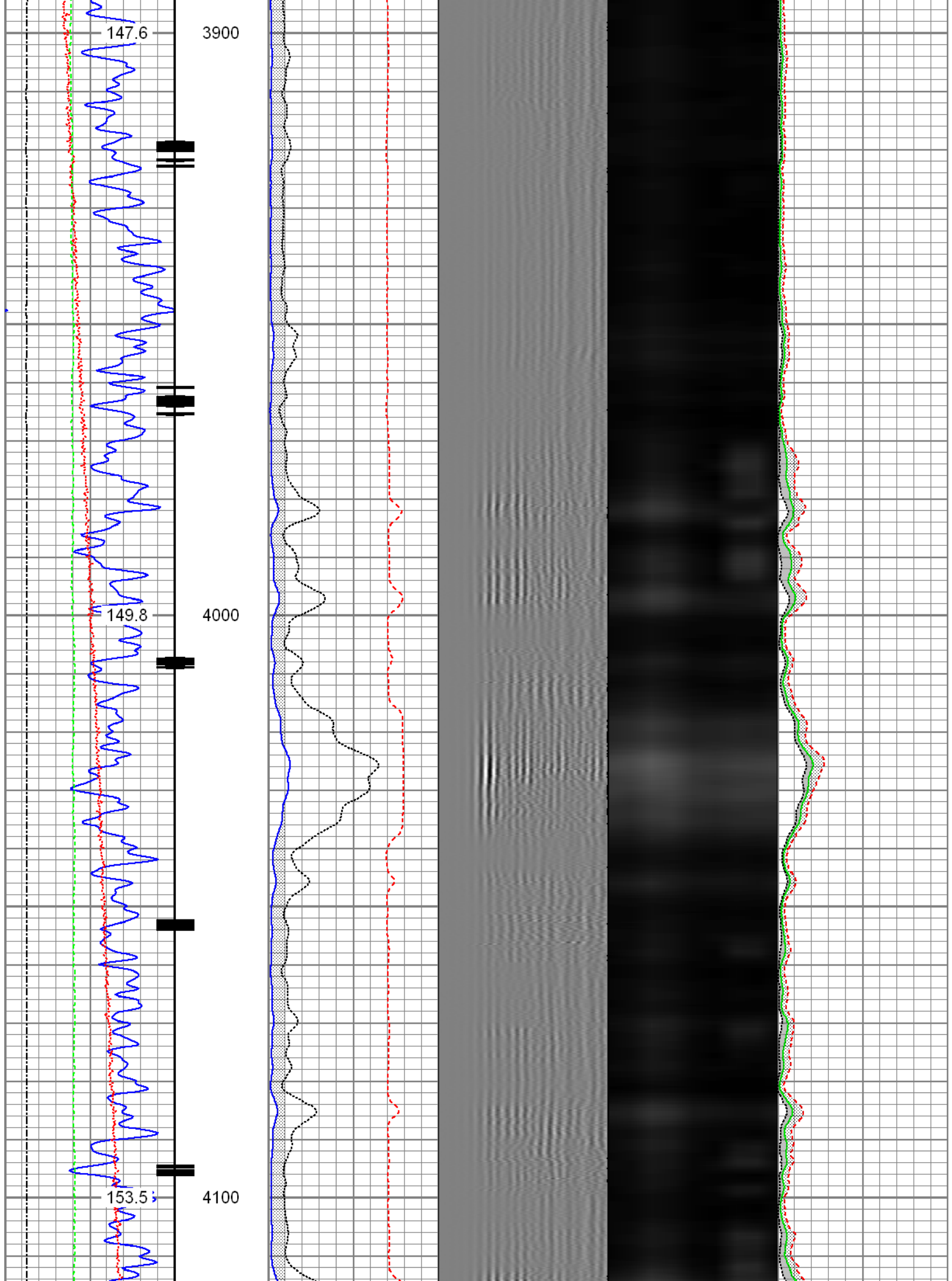


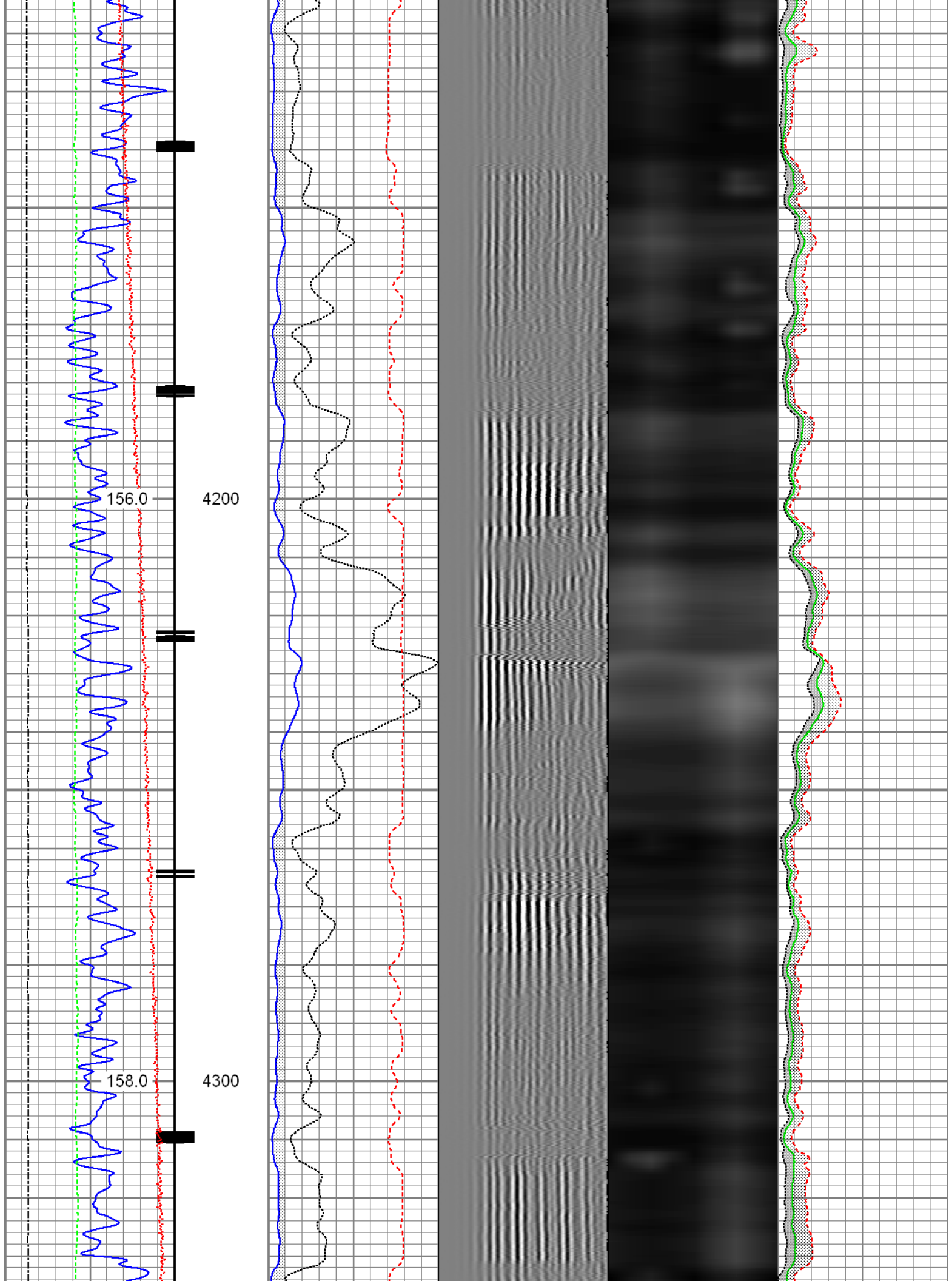


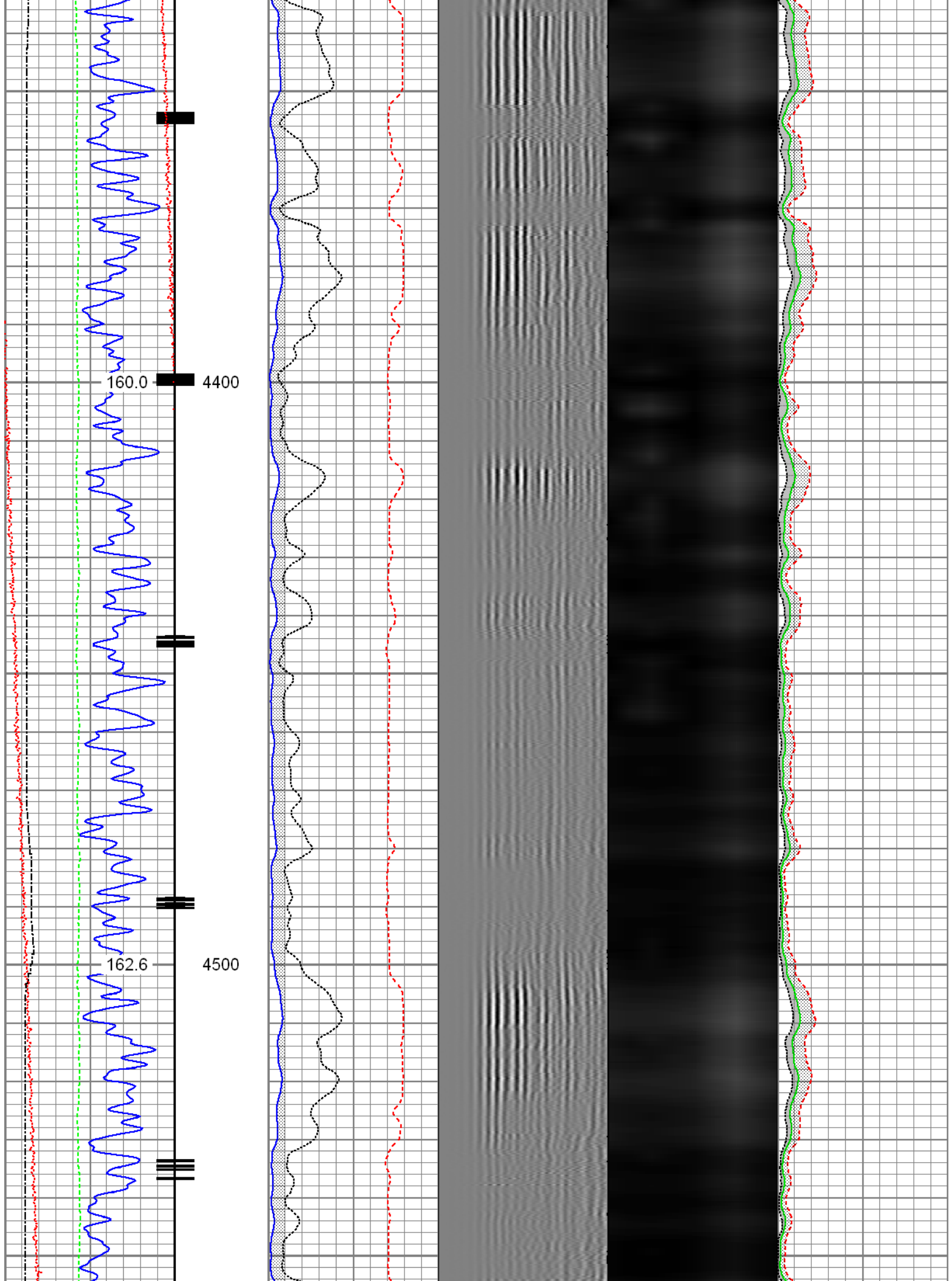


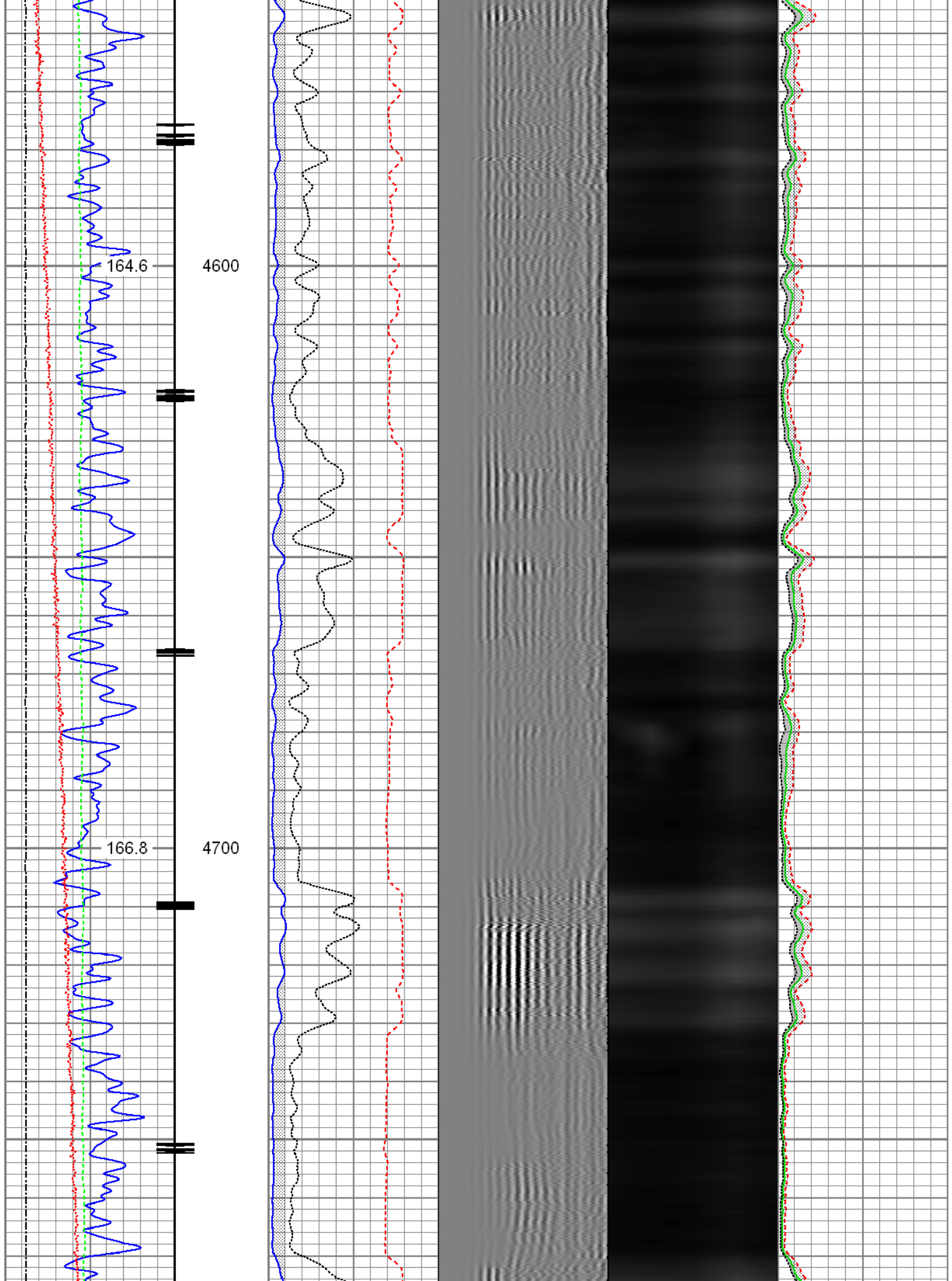


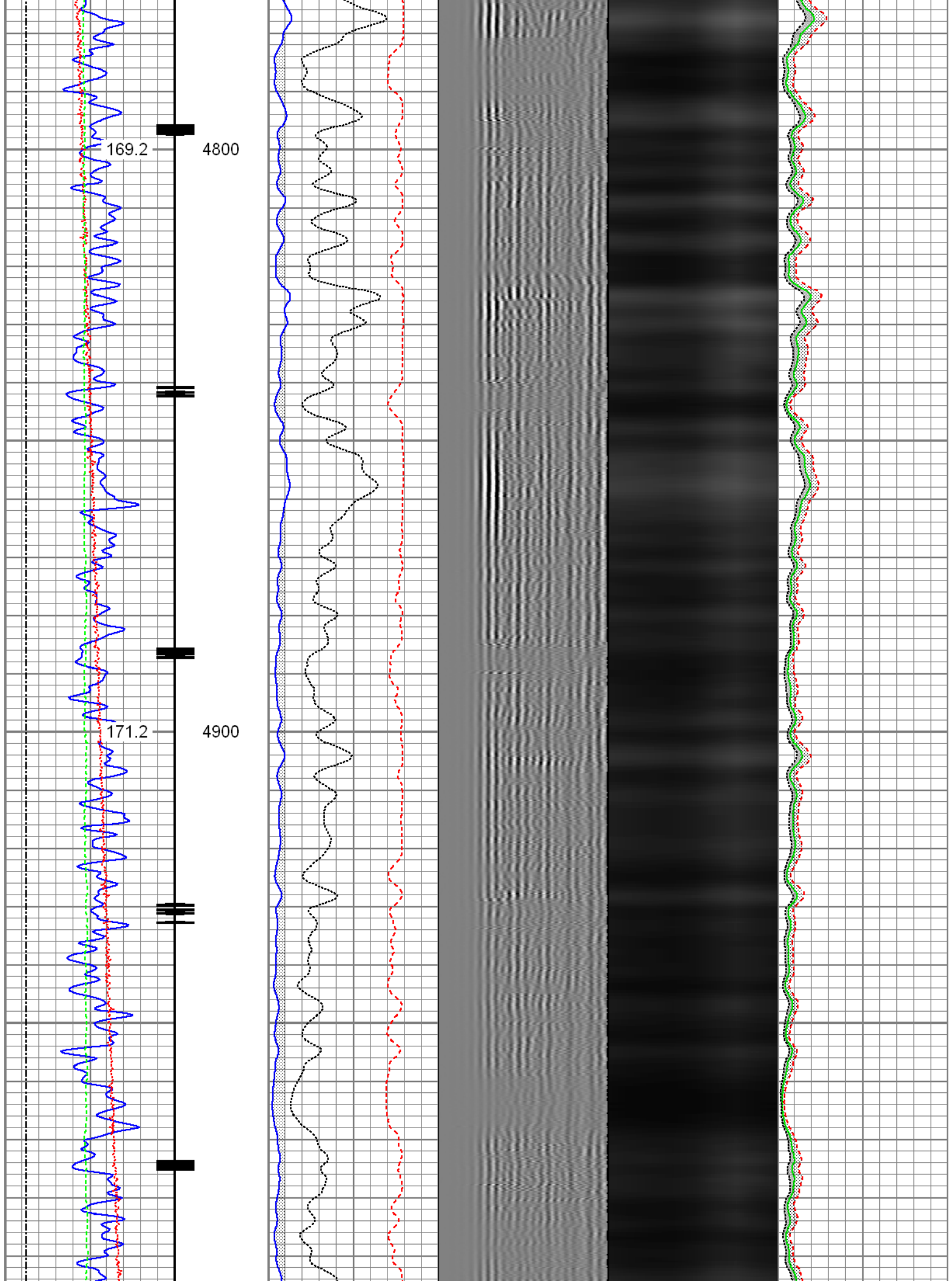


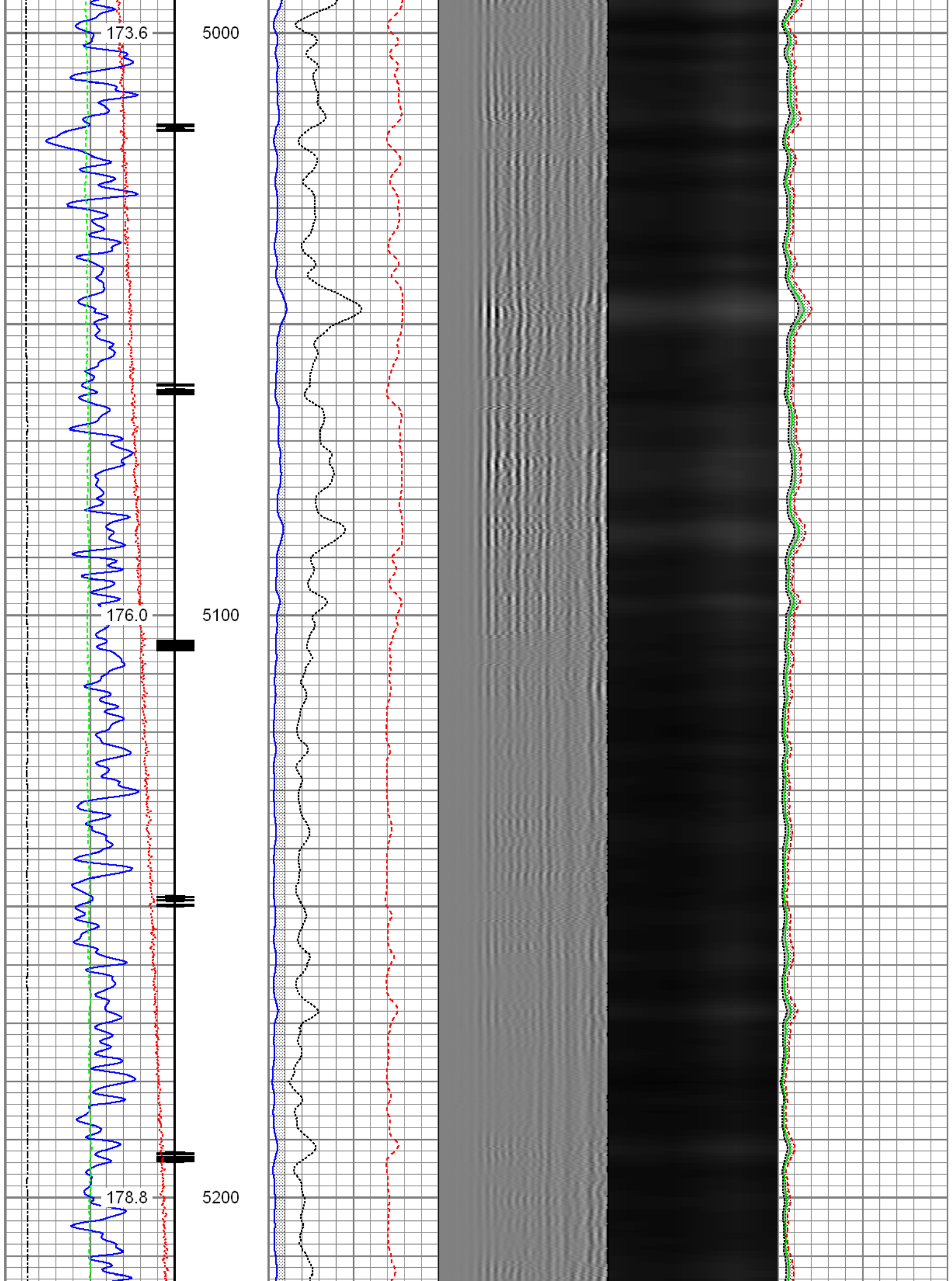


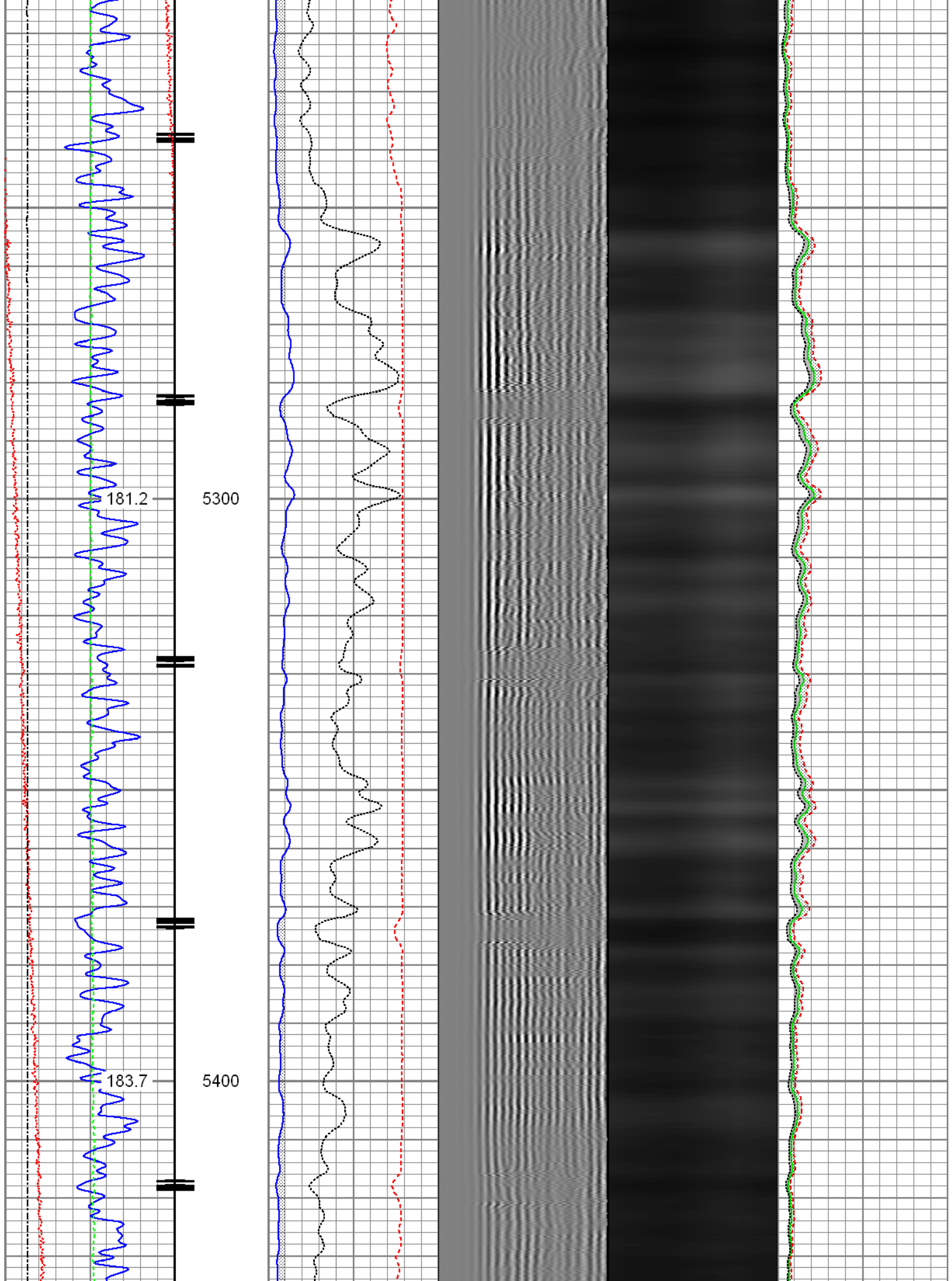


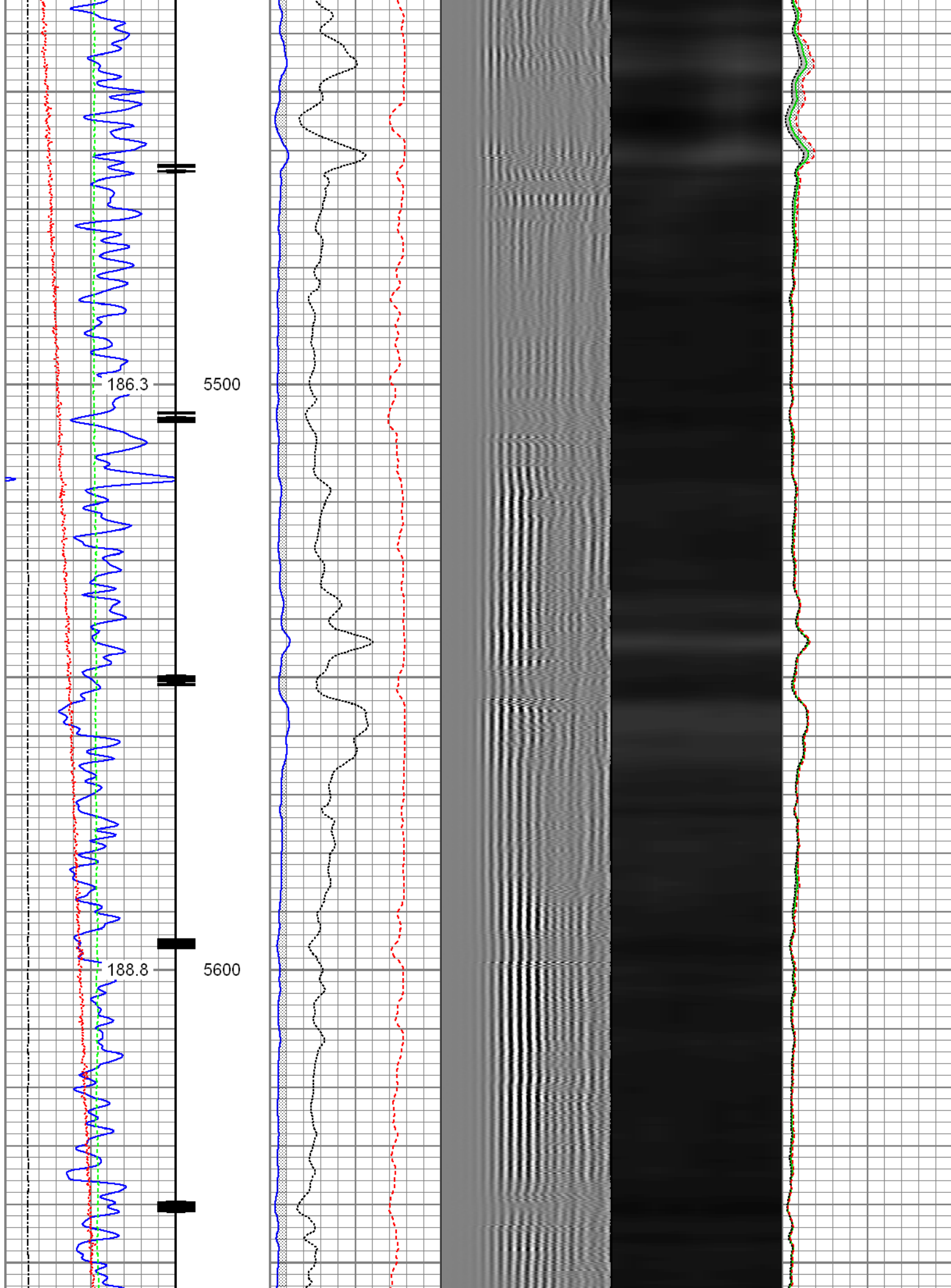


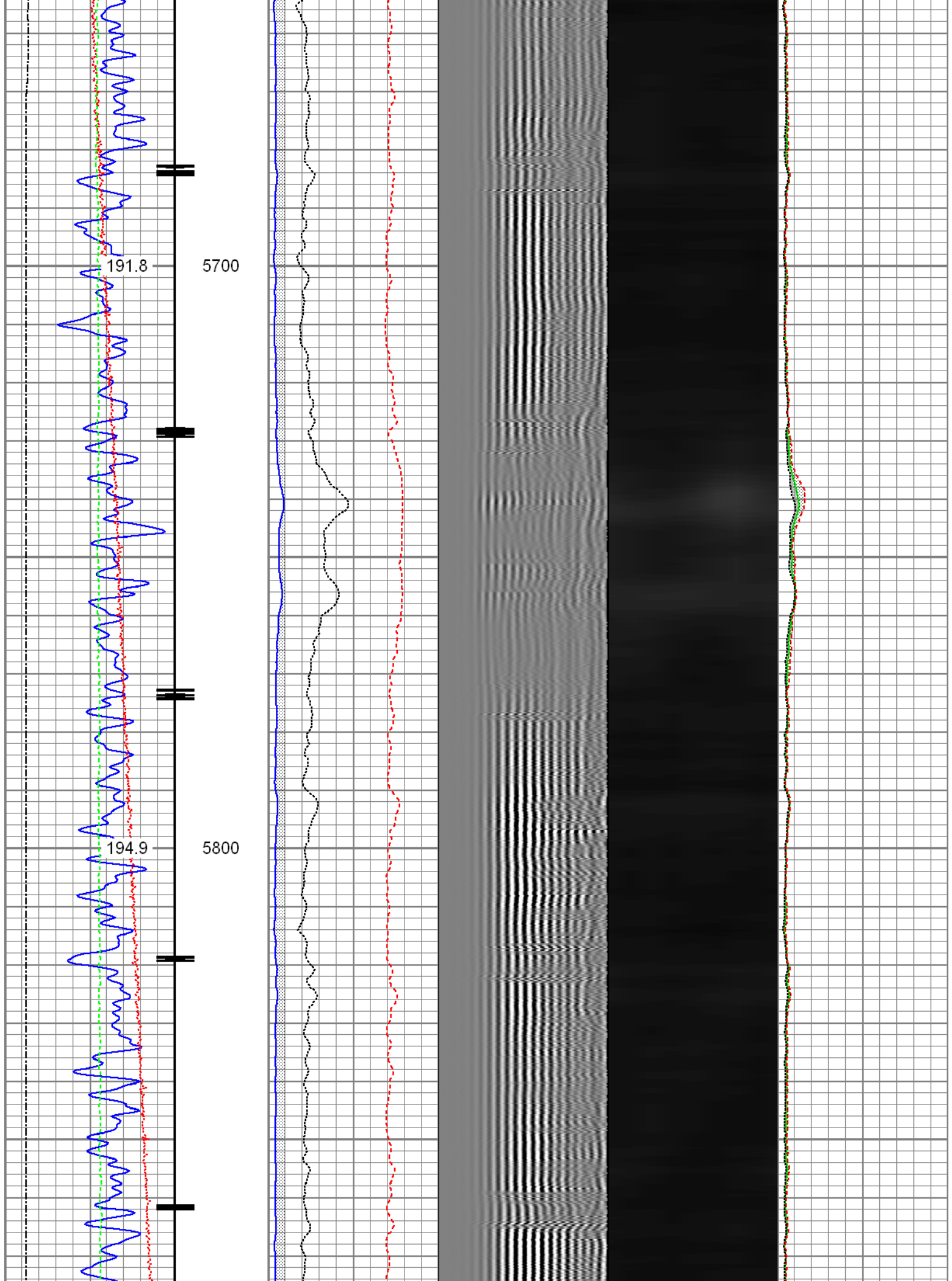


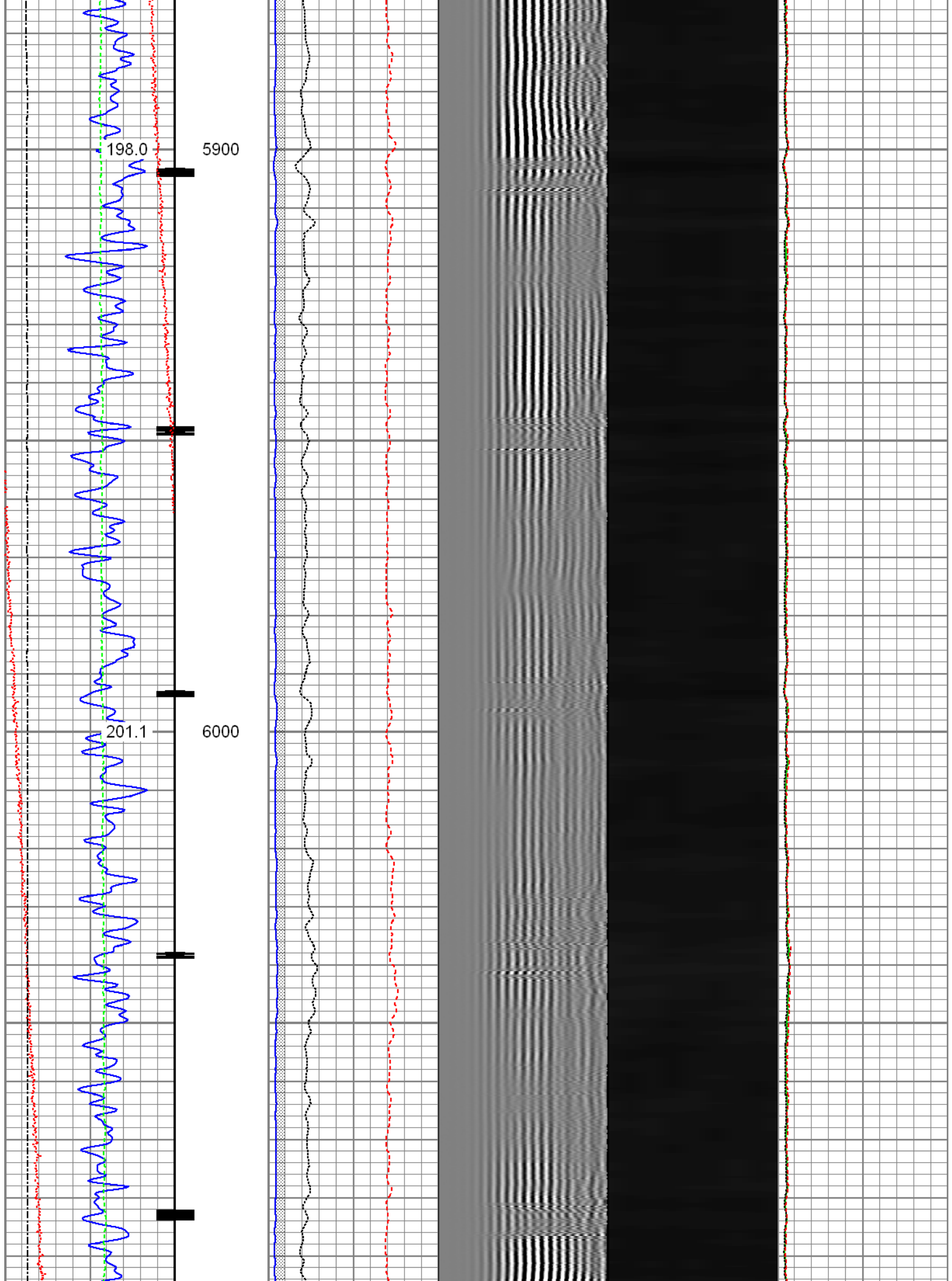


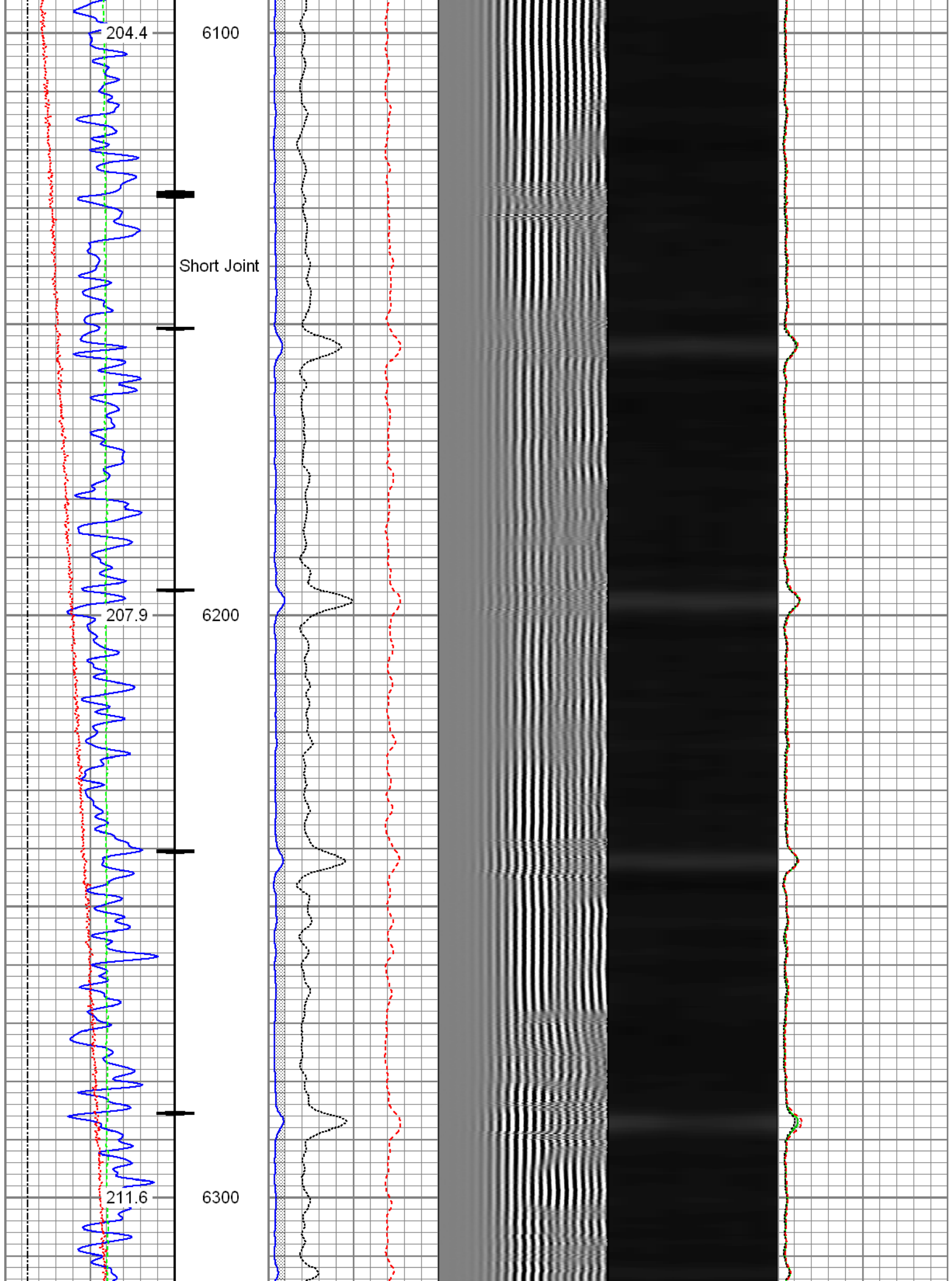


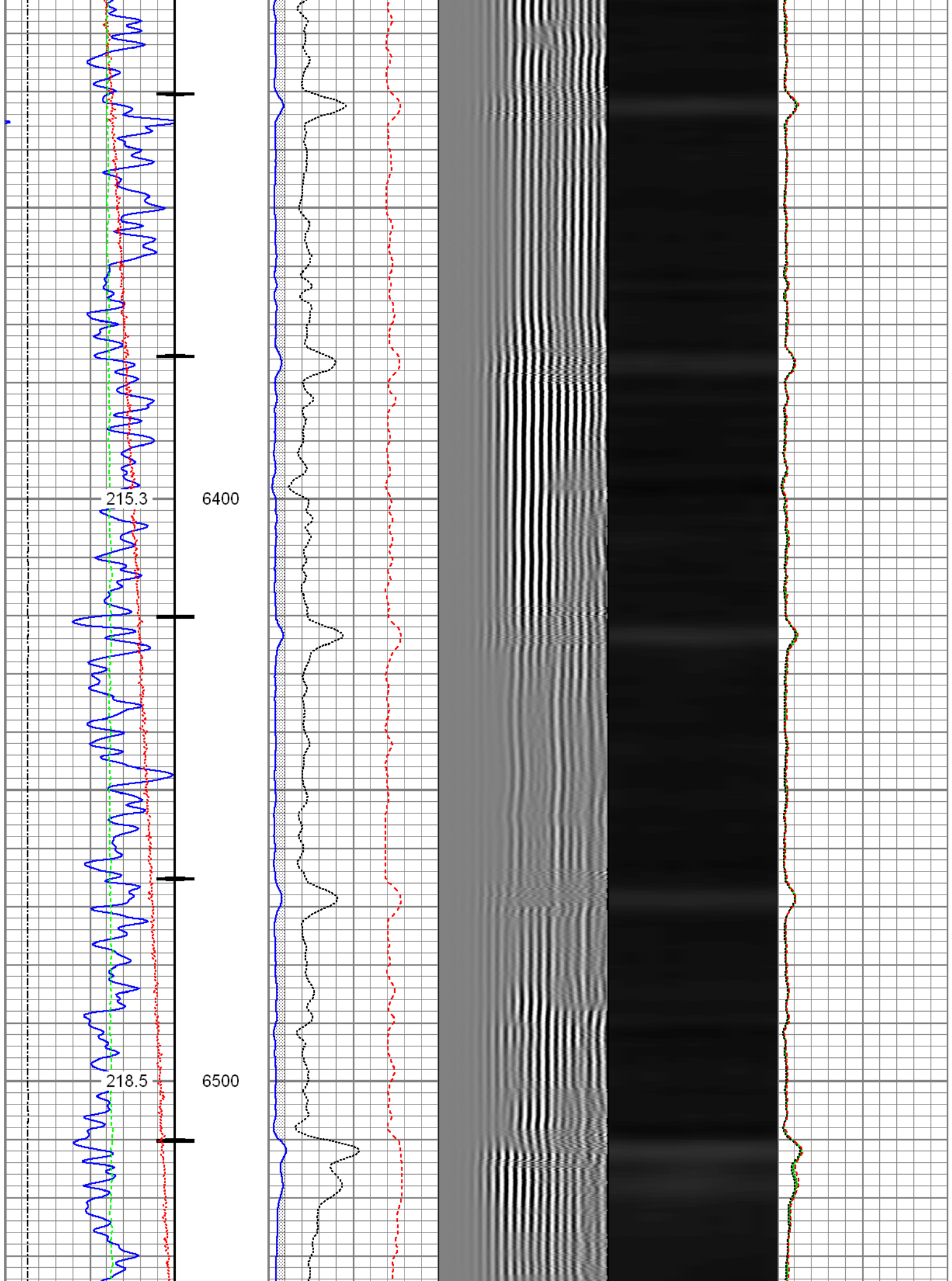


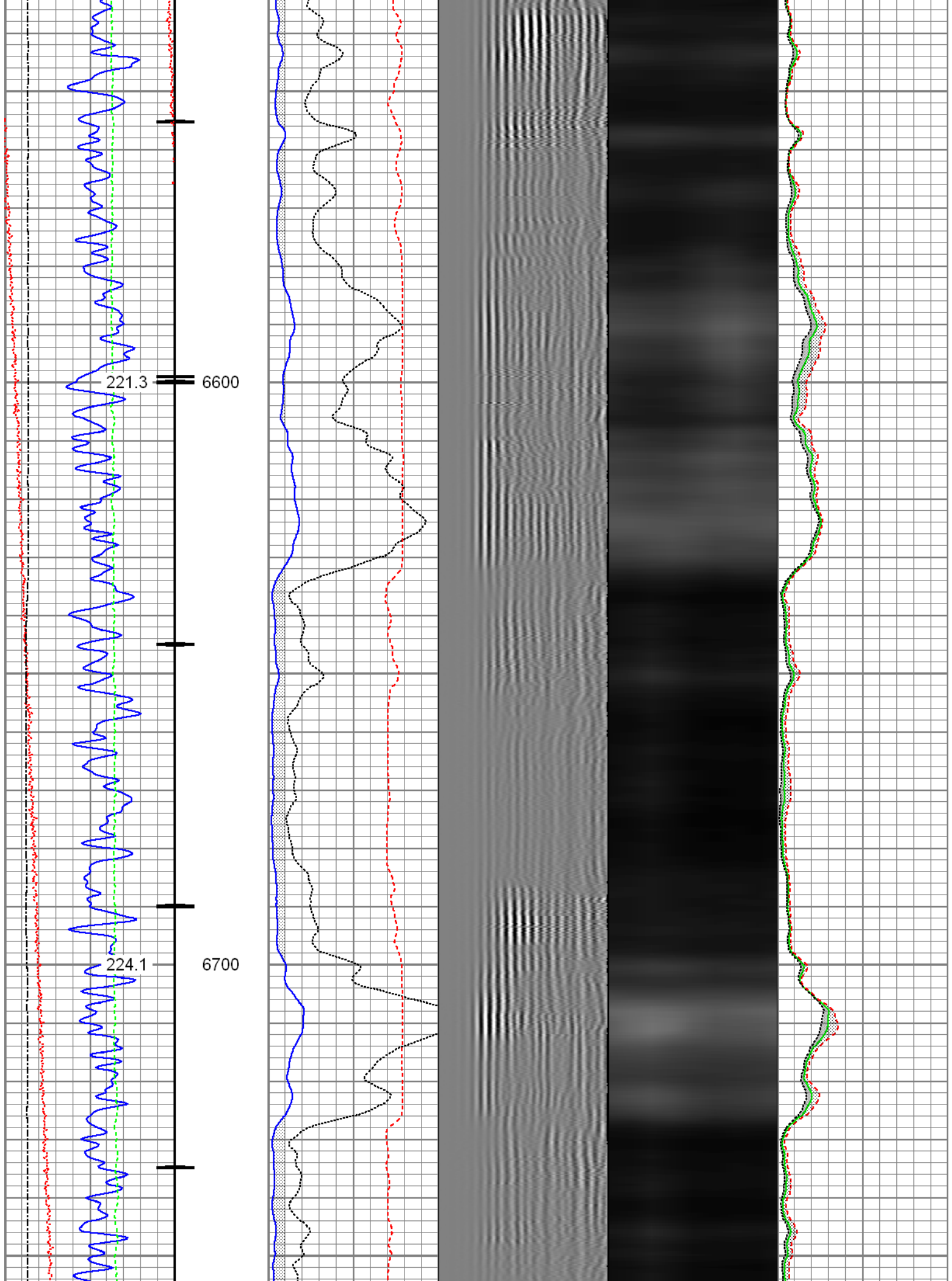


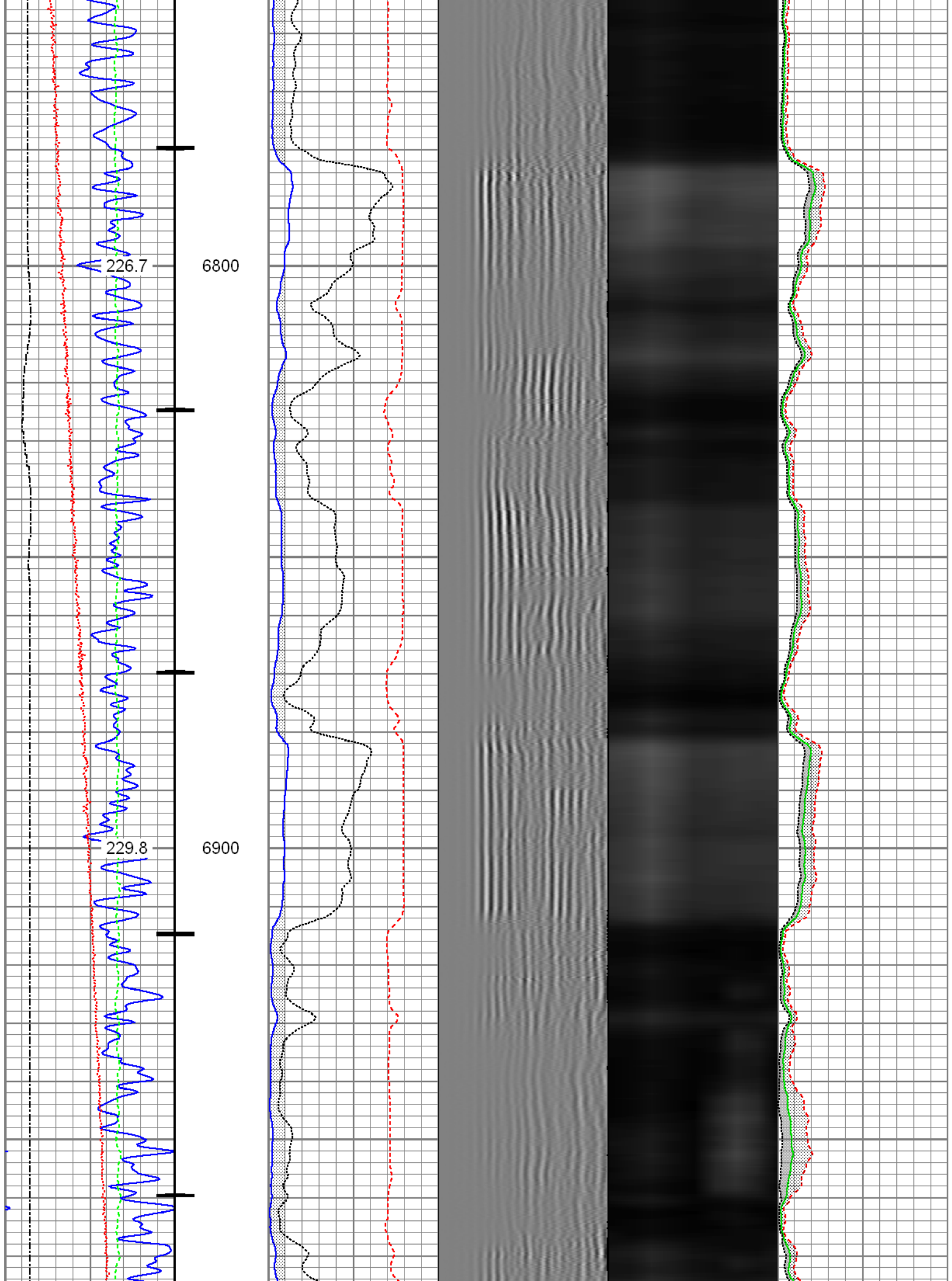


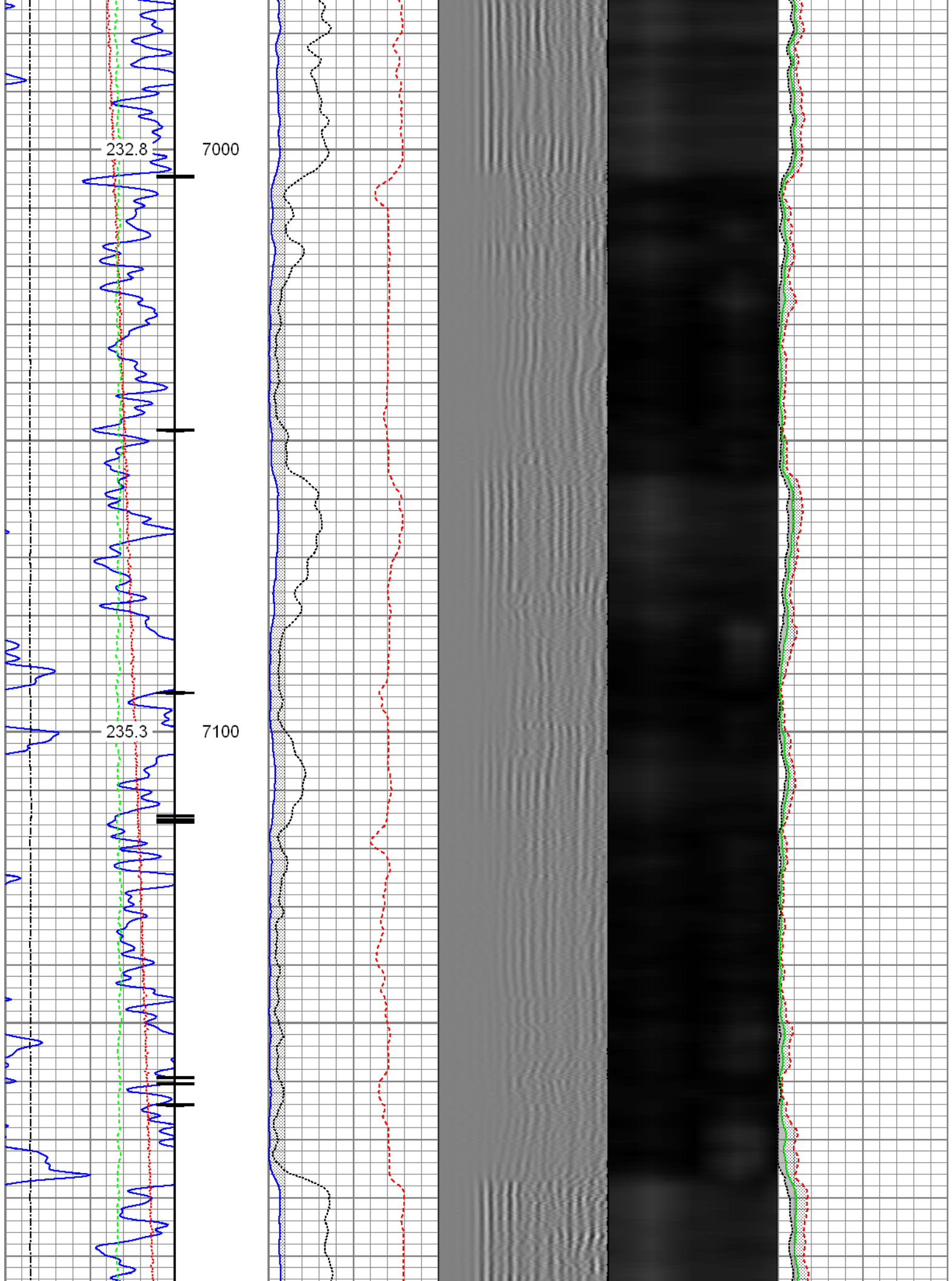


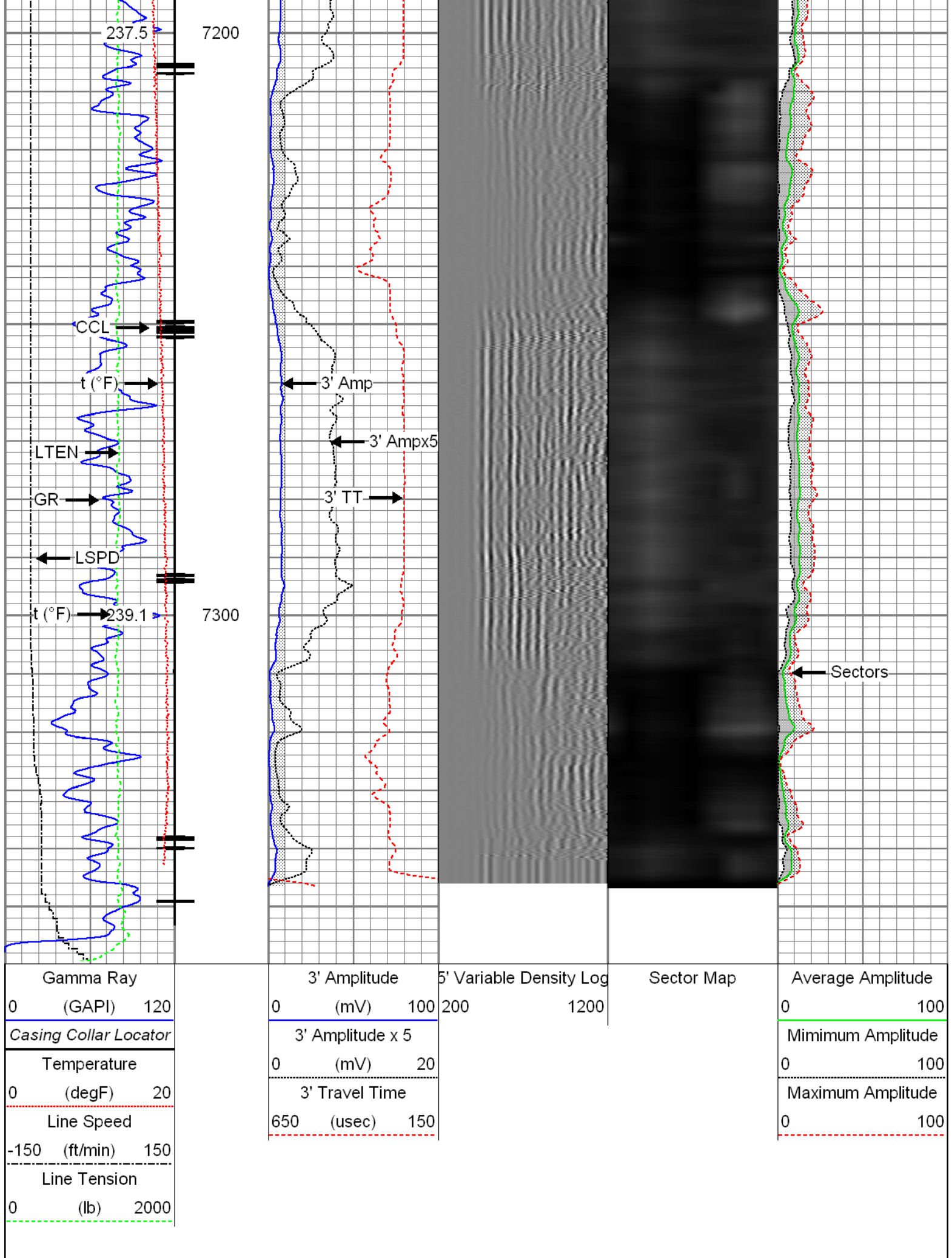






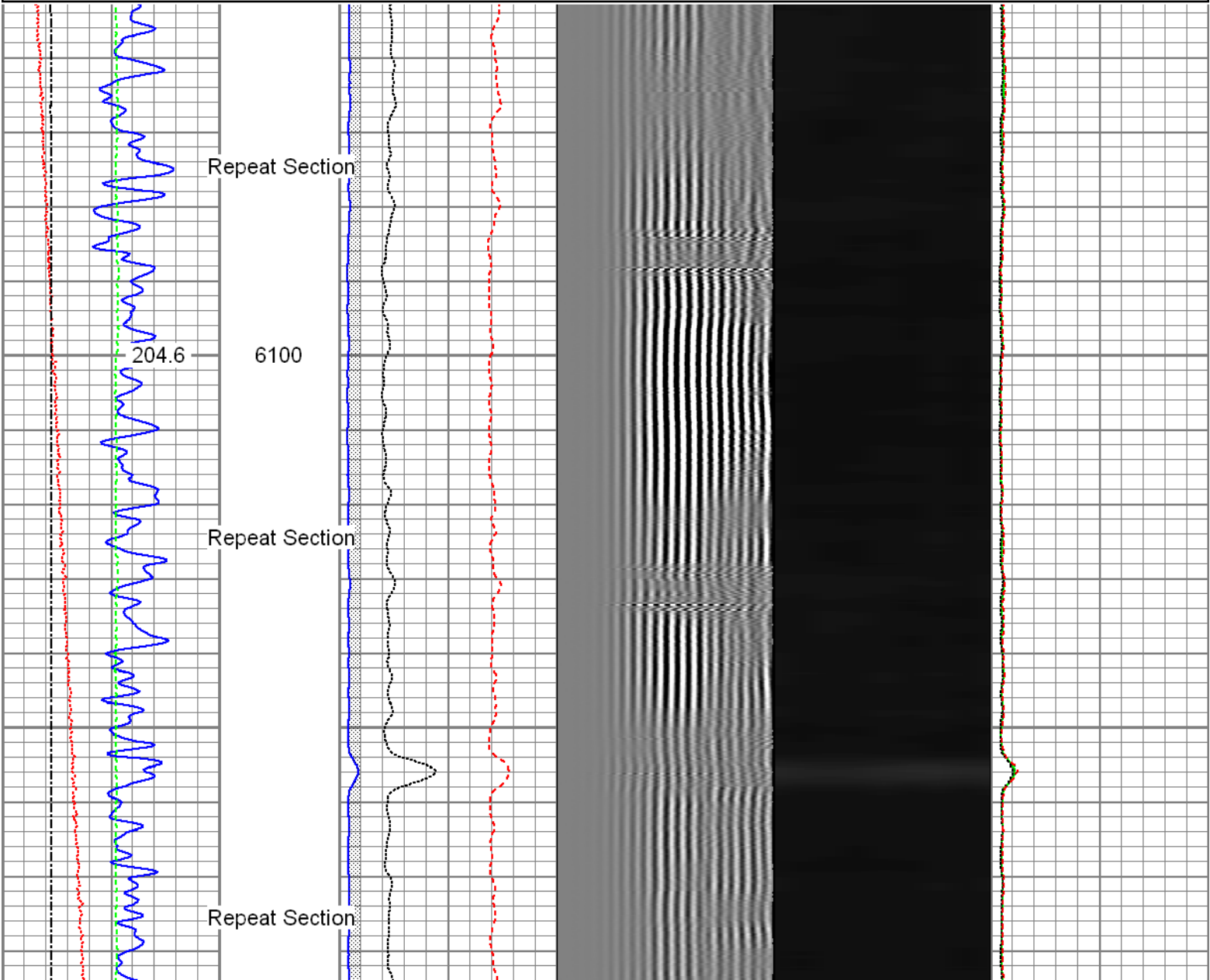


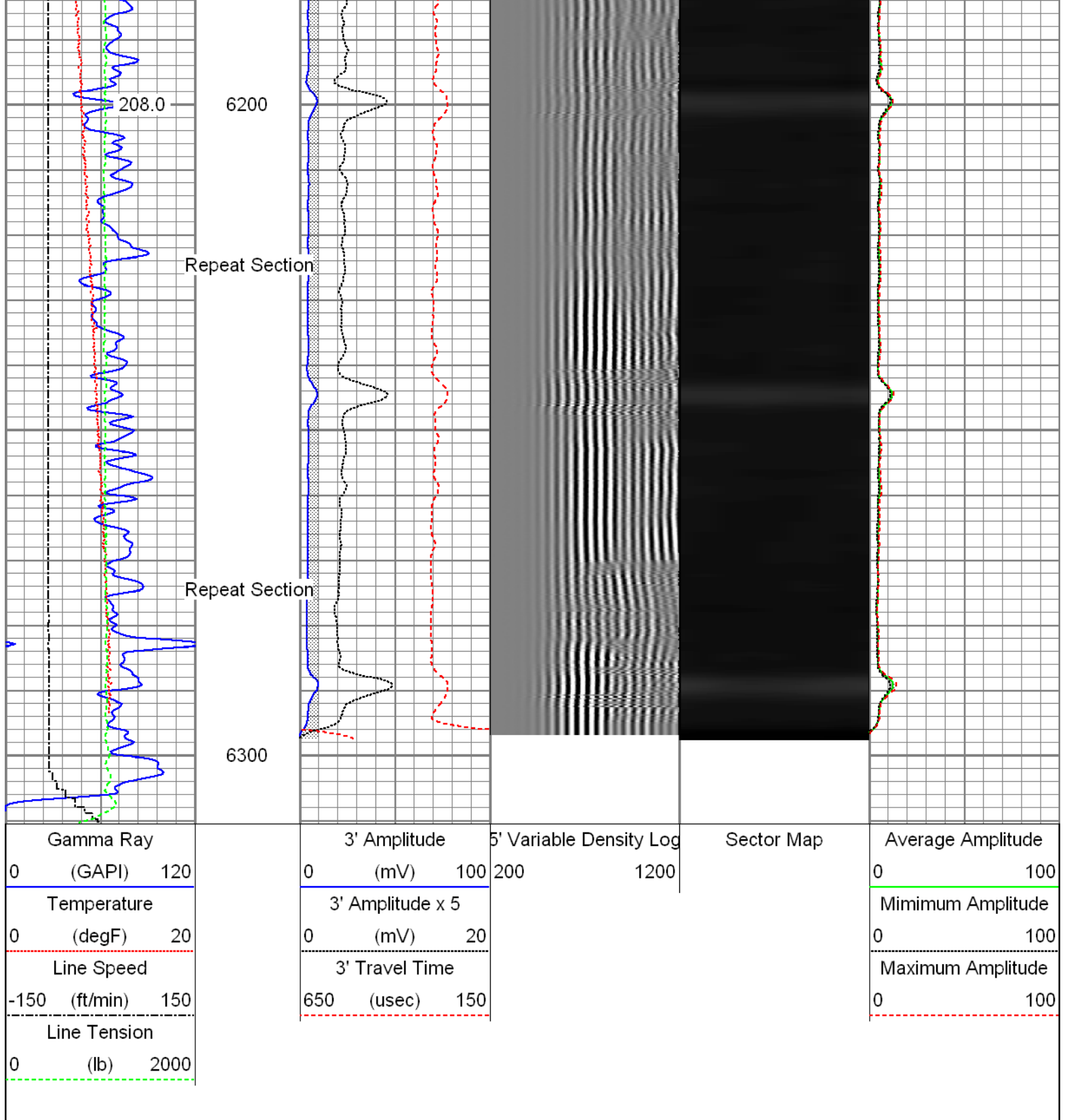


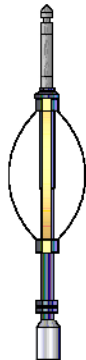


Database File: 0512341906_anadarko_powers 35n-22hz_12-08-15_rbl.db
 Dataset Pathname: pass2.1
 Presentation Format: radii
 Dataset Creation: Wed Dec 09 16:24:45 2015 by Calc SCH 120430
 Charted by: Depth in Feet scaled 1:240

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 -150 (ft/min) 150	3' Travel Time 650 (usec) 150			Maximum Amplitude 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" (FW1302-002) 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					
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
CCL	6.51					
DCCL	6.51					
			Probe_CCL_GR-2.75"Digital (FW1307-038) 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: 0512341906_anadarko_powers 35n-22hz_12-08-15_rbl.db: field/well/run1/pass4.1 Total Length: 23.40 ft Total Weight: 194.00 lb O.D. 2.75 in						

Calibration Report	
Database File:	0512341906_anadarko_powers 35n-22hz_12-08-15_rbl.db
Dataset Pathname:	pass4.1
Dataset Creation:	Wed Dec 09 16:10:54 2015 by Calc SCH 120430

Gamma Ray Calibration Report

Serial Number:	FW1307-038
Tool Model:	2.75"Digital
Performed:	Mon Dec 07 13:38:50 2015

Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6300	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1302-002	
Tool Model:	2-3/4"	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	-36.106	ft

Master Calibration, performed Wed Dec 09 16:10:52 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	0.625	0.800	71.921	115.310	-0.135
CAL	0.685	0.784				
5'	0.008	0.540	0.800	71.921	133.711	-0.314
SUM						
S1	0.005	0.580	0.000	100.000	173.898	-0.854
S2	0.009	0.590	0.000	100.000	172.034	-1.489
S3	0.008	0.629	0.000	100.000	160.988	-1.334
S4	0.008	0.664	0.000	100.000	152.540	-1.227
S5	0.010	0.683	0.000	100.000	148.439	-1.421
S6	0.009	0.661	0.000	100.000	153.244	-1.324
S7	0.008	0.619	0.000	100.000	163.766	-1.323
S8	0.009	0.603	0.000	100.000	168.333	-1.585

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	0.685	0.784	1.000	0.000

Air Zero Calibration, performed Tue Dec 08 08:58:55 2015:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.008		0.000			-0.000
5'	0.008		0.000			-0.000
SUM						
S1	0.004		0.000			0.001
S2	0.008		0.000			0.001
S3	0.008		0.000			0.000
S4	0.008		0.000			0.000
S5	0.008		0.000			0.000
S6	0.008		0.000			0.000
S7	0.008		0.000			0.000
S8	0.008		0.000			0.000



Company	Ken-McGee Oil & Gas Onshore, L.P.
Well	Powers 35N-22HZ
Field	Wattenberg
County	Weld
State	Colorado