



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.		
Well	Joker 27N2-9HZ		
Field	Wattenberg		
County	Weld		
State	Colorado		
Location:	Company	Kerr-McGee Oil & Gas Onshore, L.P.	
	Well	Joker 27N2-9HZ	
	Field	Wattenberg	
	County	Weld	
Other Services	State	Colorado	
	AP1 # :	05-123-41327	
	SEC 9	TWP 1N	RGE 65W
	Permanent Datum	Ground Level	Elevation 4970'
JB/GR	Log Measured From	Kelly Bushing	25 FT
	Drilling Measured From	Kelly Bushing	Elevation K.B. 4995' D.F. 4994' G.L. 4970'

Date	10-SEP-2015
Run Number	One
Depth Driller	11,852 FT
Depth Logger	7380 FT
Bottom Logged Interval	7375 FT
Top Log Interval	Surface
Open Hole Size	7.875"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	230°F
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	1:00 PM
Equipment Number	HD-0119
Location	Ft. Lupton, CO
Recorded By	J. Morrison
Witnessed By	Darrel Bothwell

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	1852 FT		
Intermediate #1	5 1/2	17	HCP-110	Surface	11,840 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
Casing Tally Reported Marker Joint at 6315 FT
Recorded Marker Joint at 6337-6360 FT
Gauge Ring/Junk Basket Ran to 7422 FT With No Debris Retrieved
Logged Ran 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

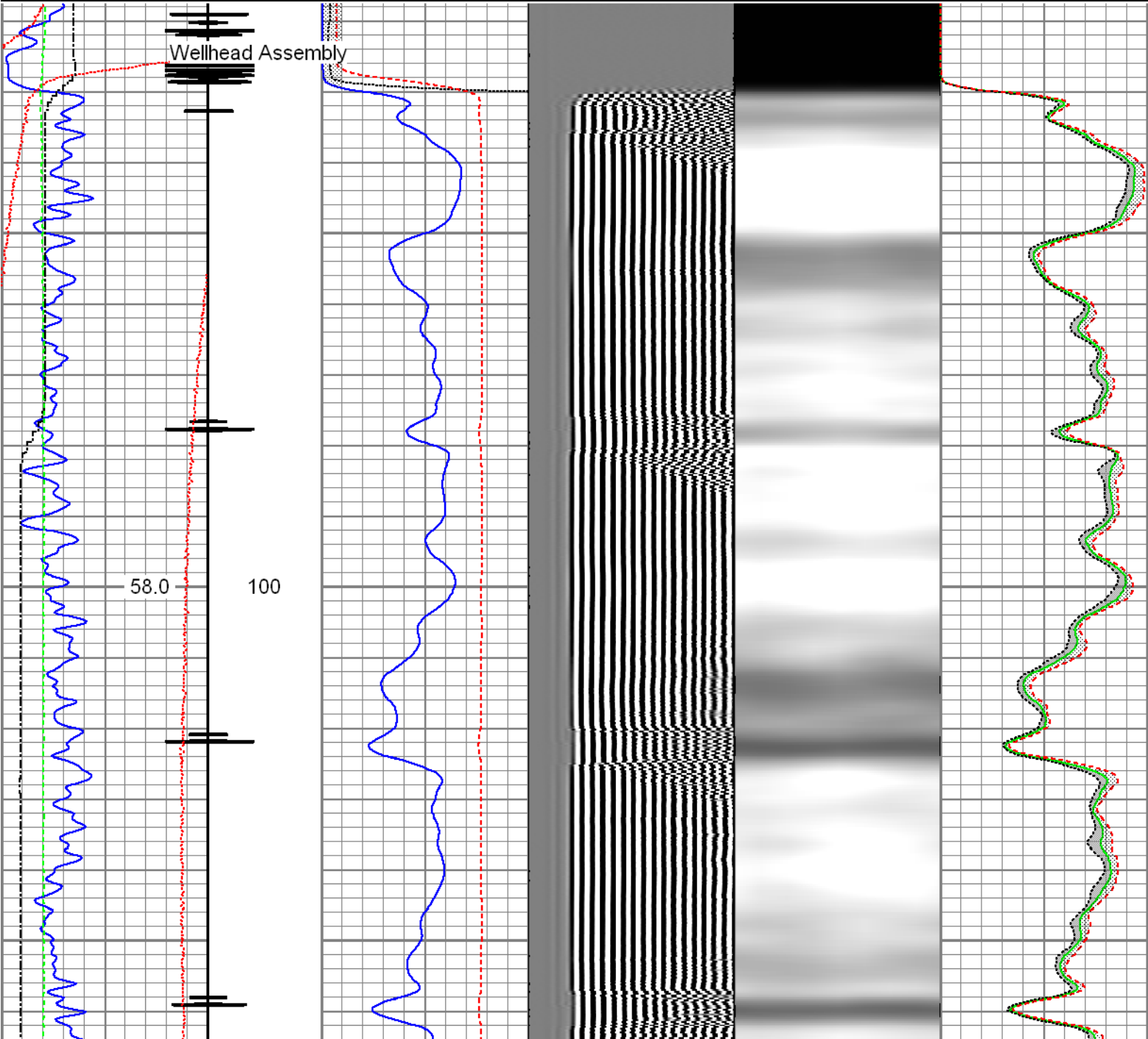
Thank you for choosing FMC Technologies Completion Services, Inc.!!

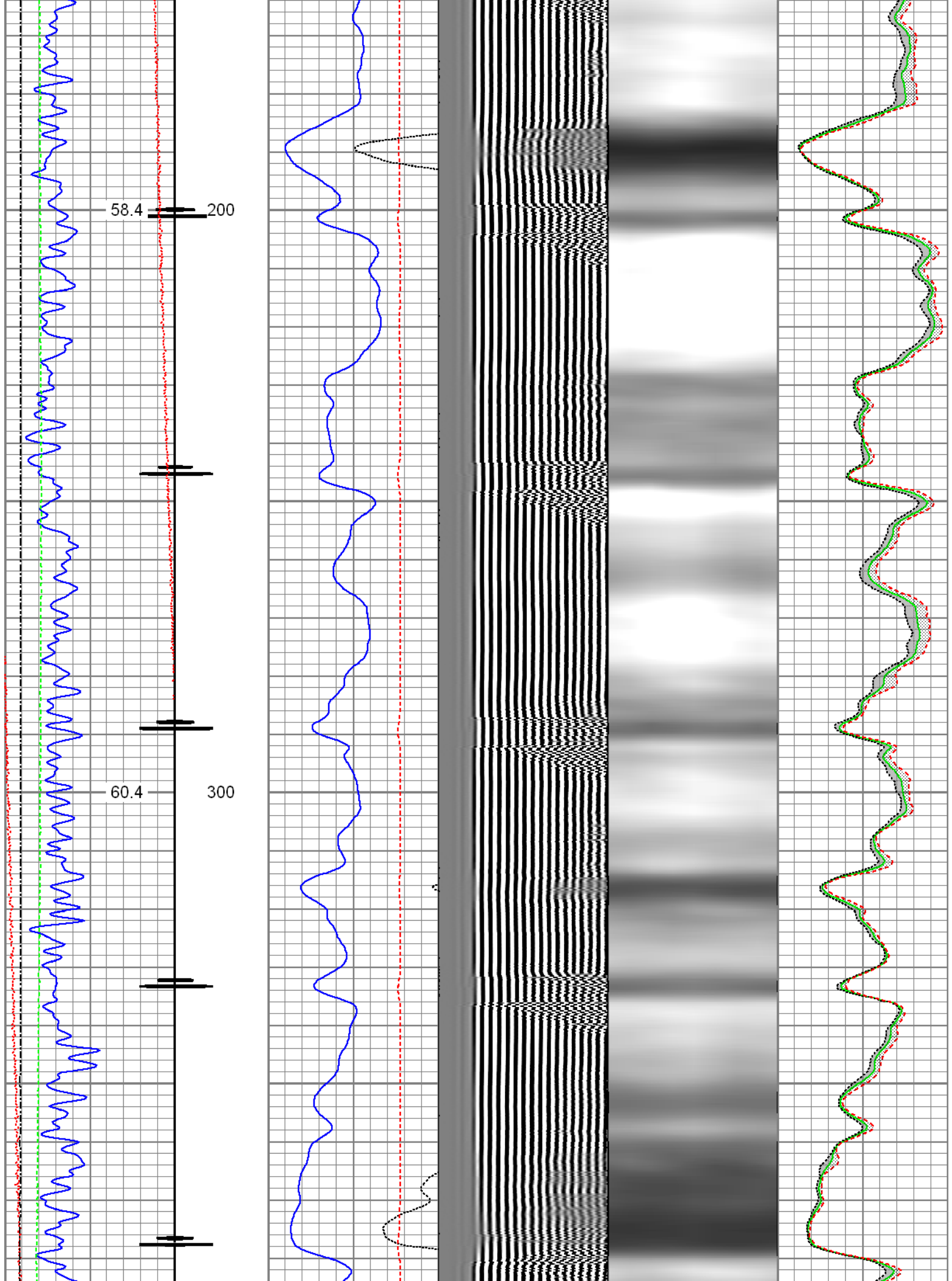


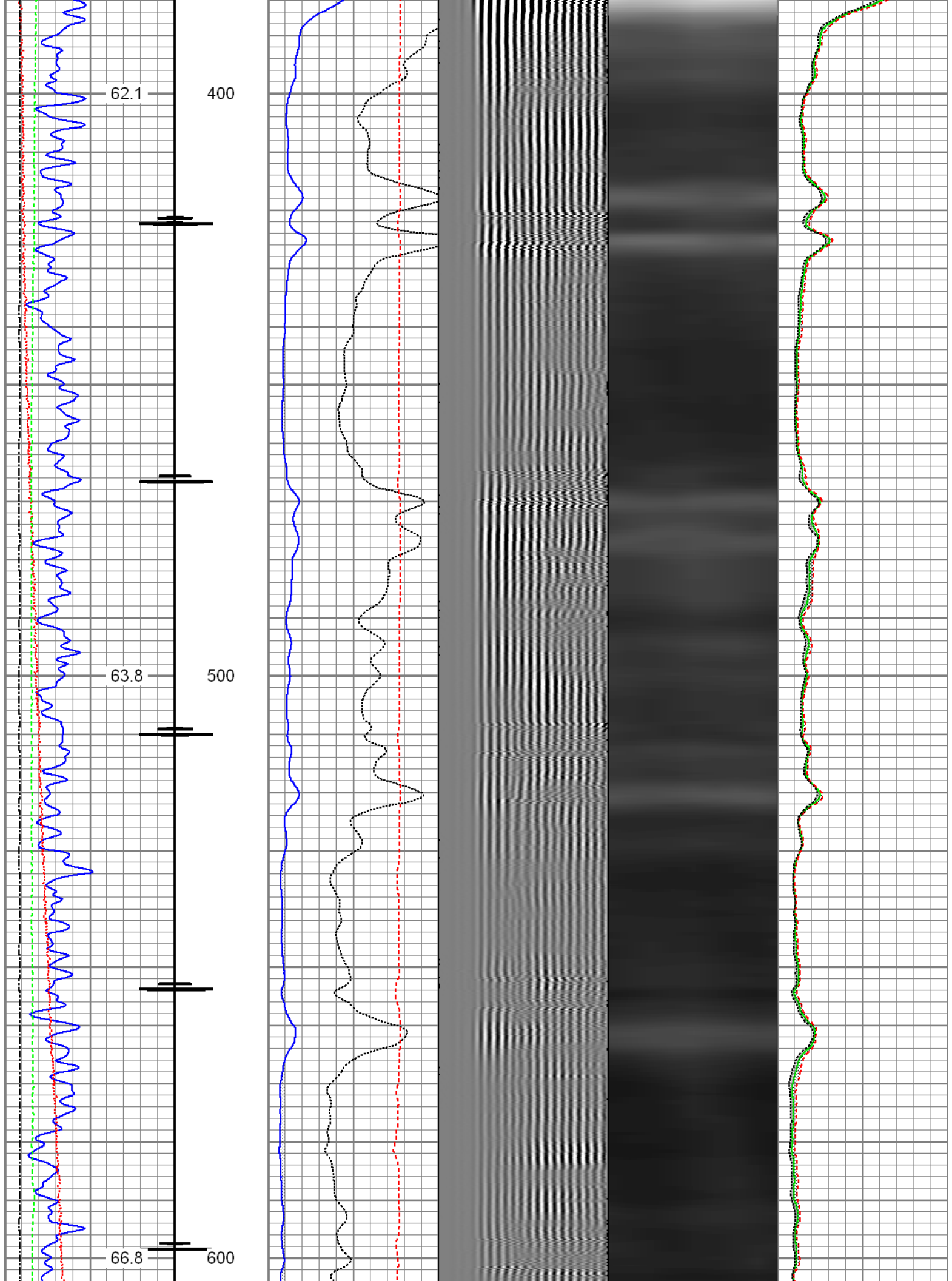
Main Pass

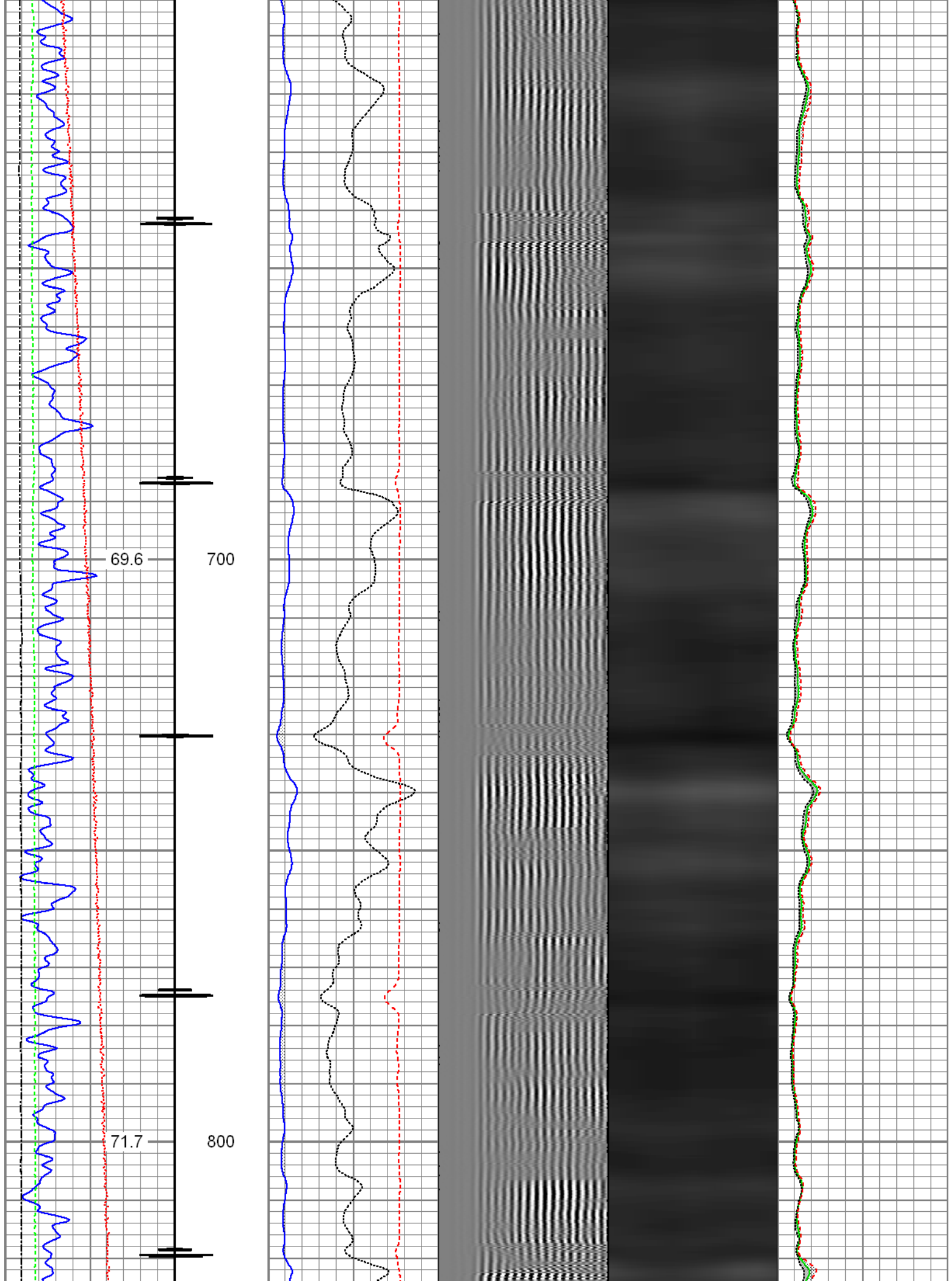
Recorded with 2800 PSI Surface Induced Pressure

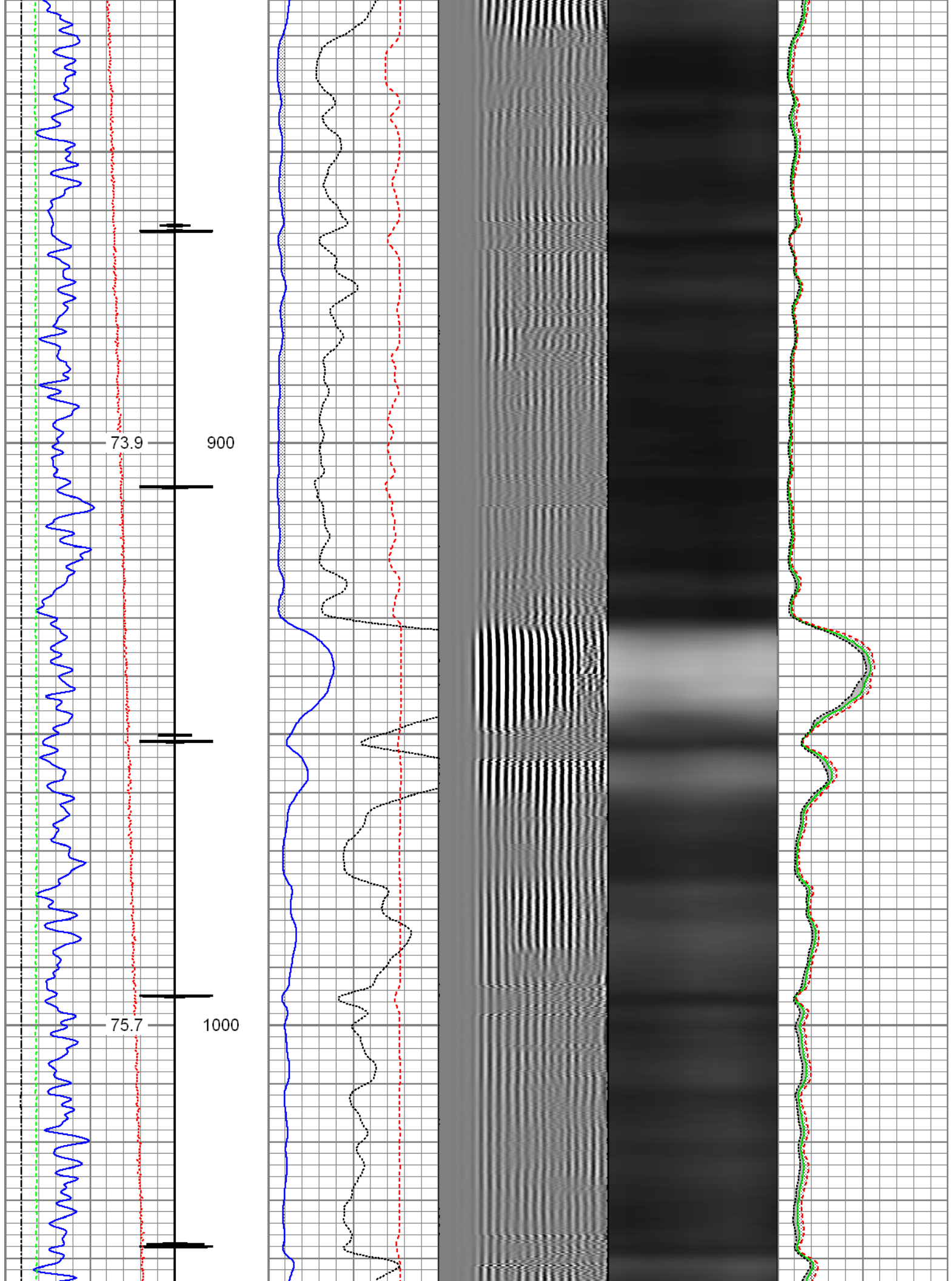
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150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

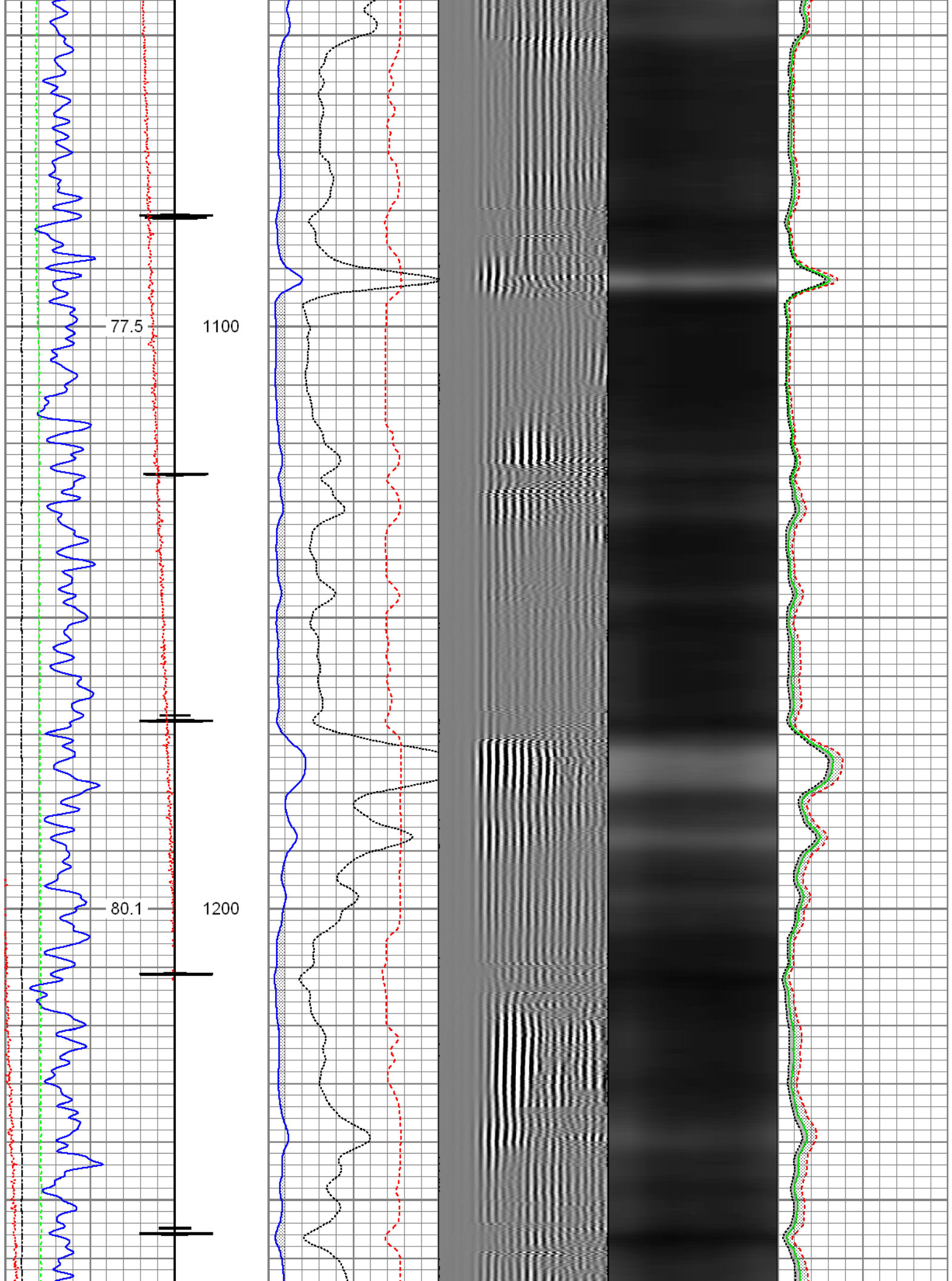


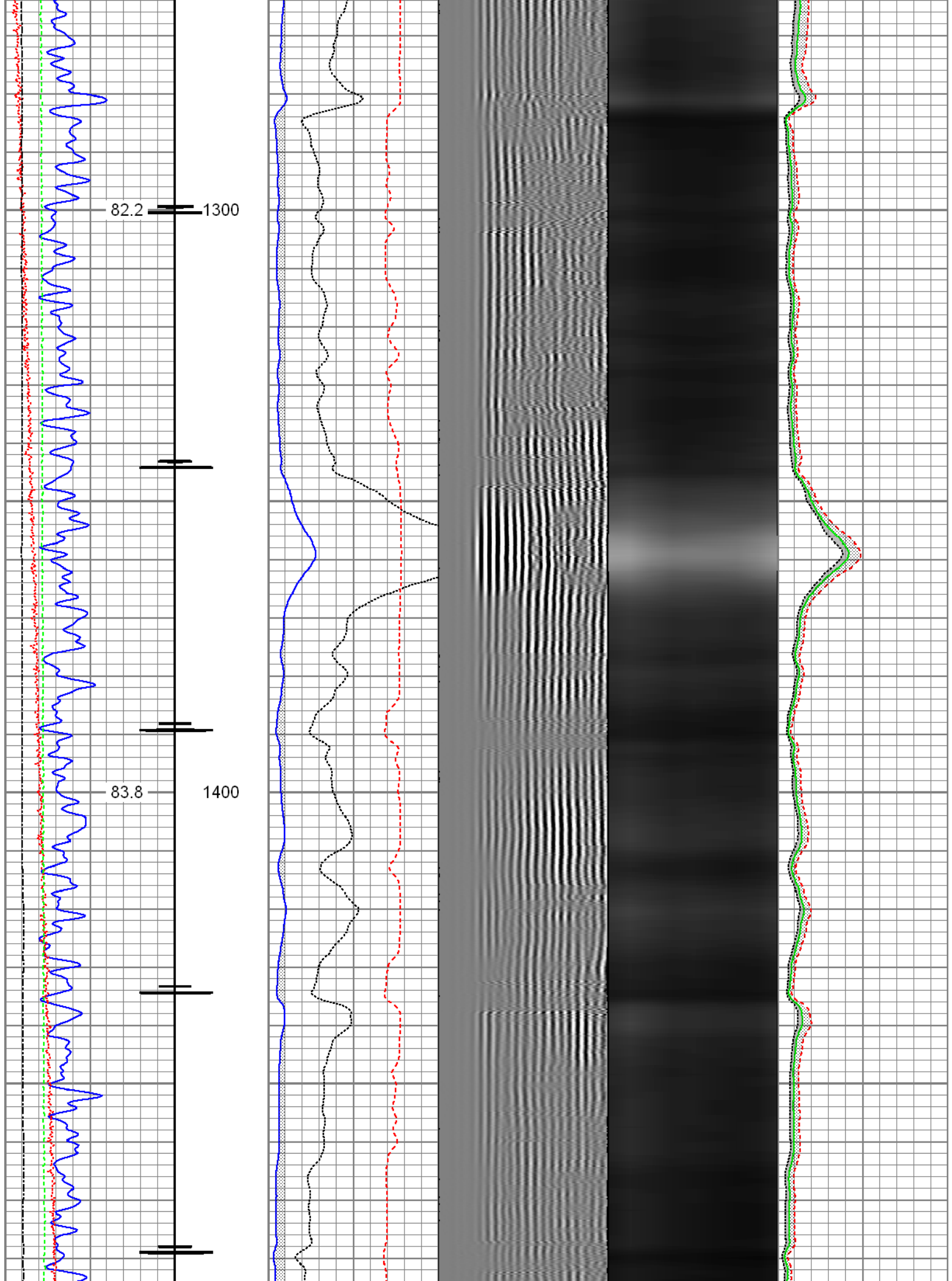


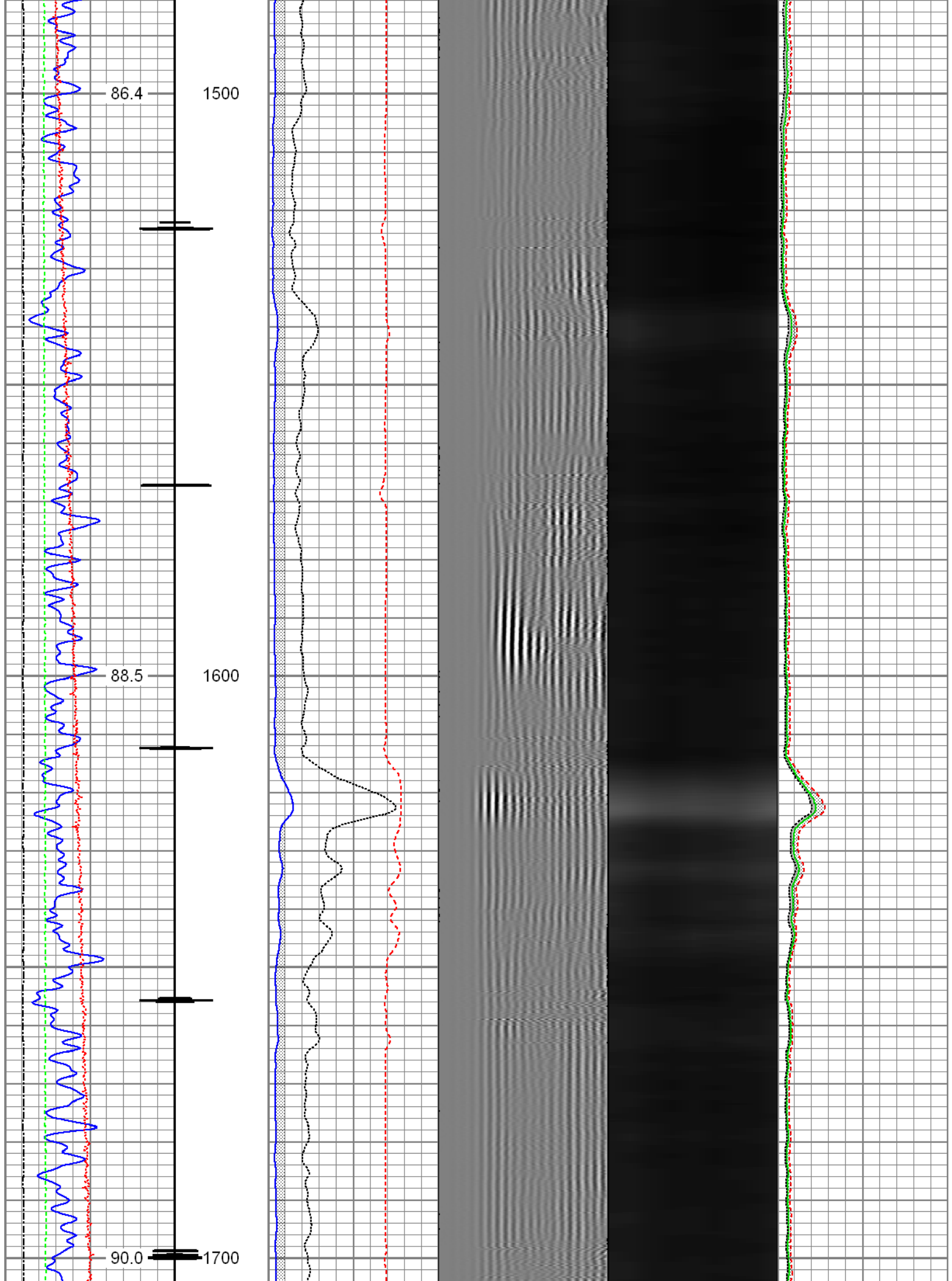


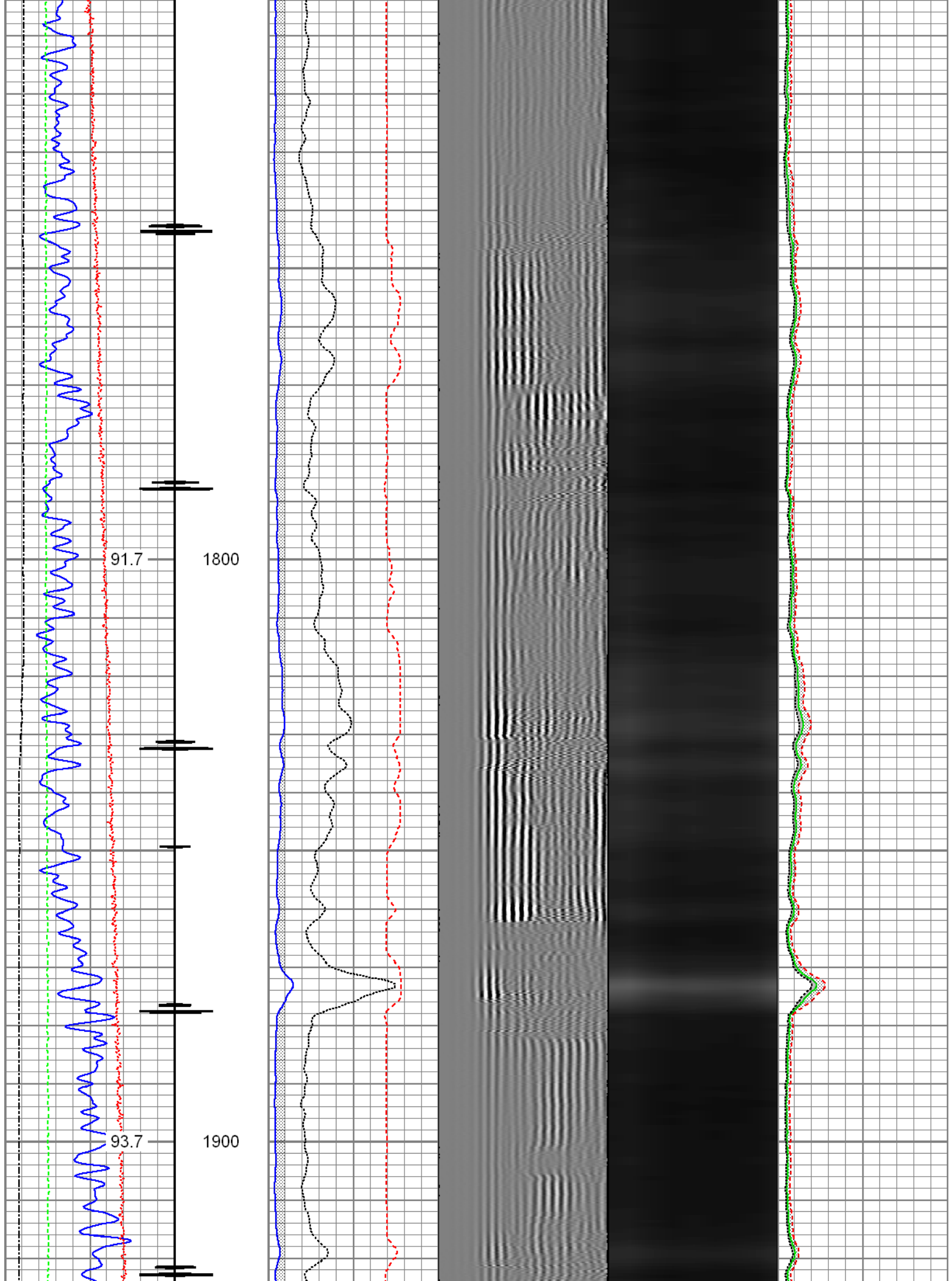


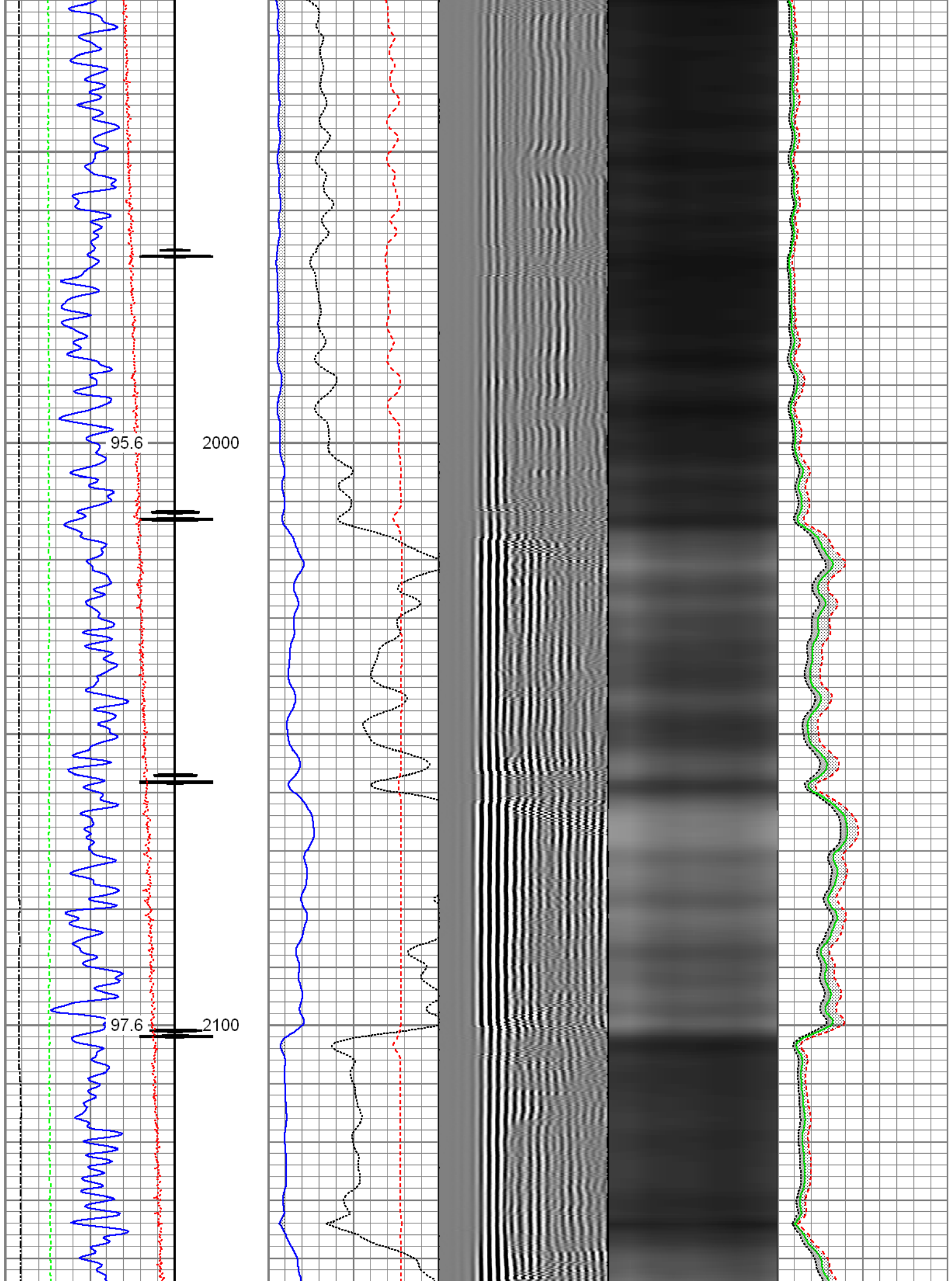


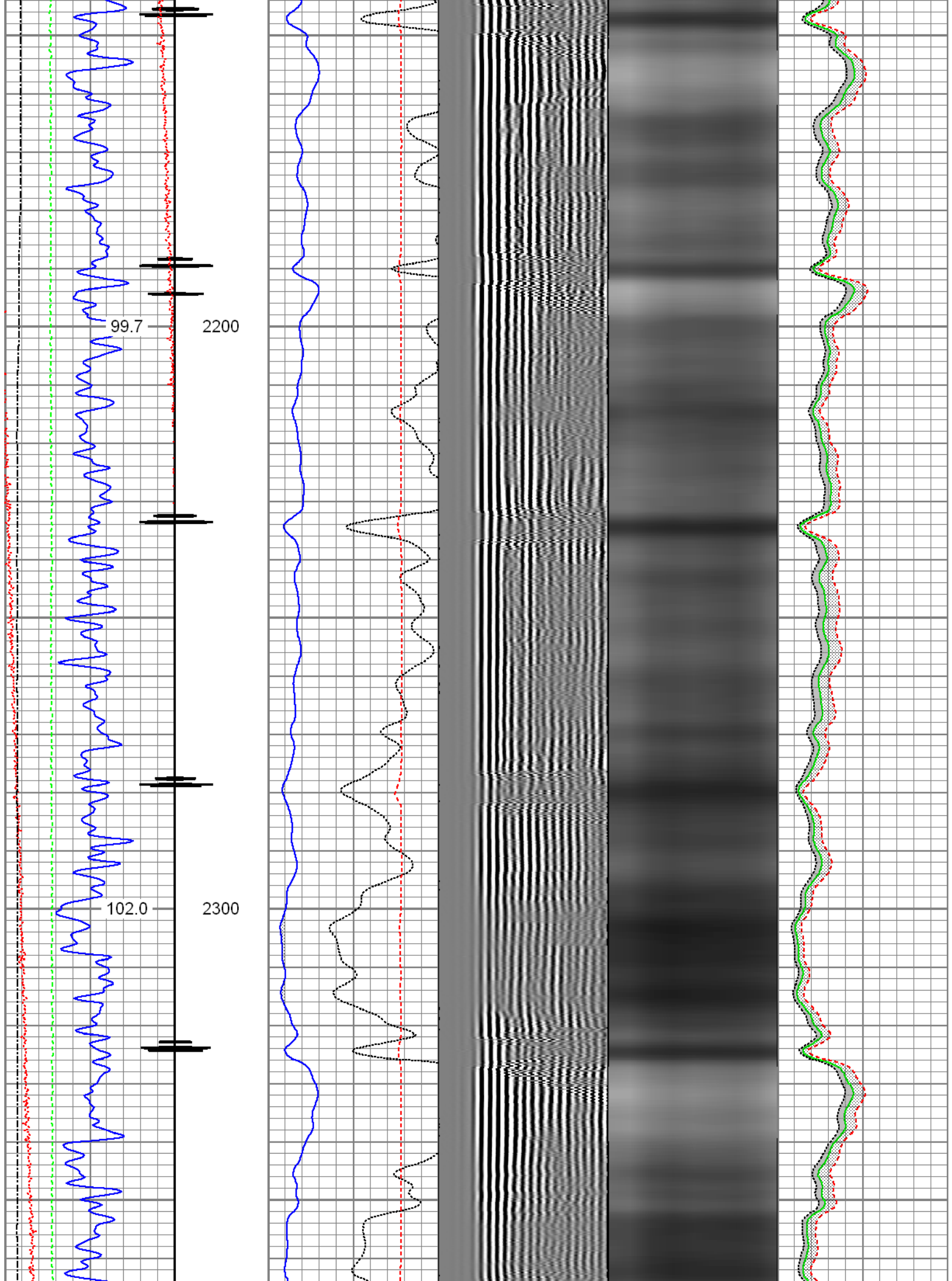


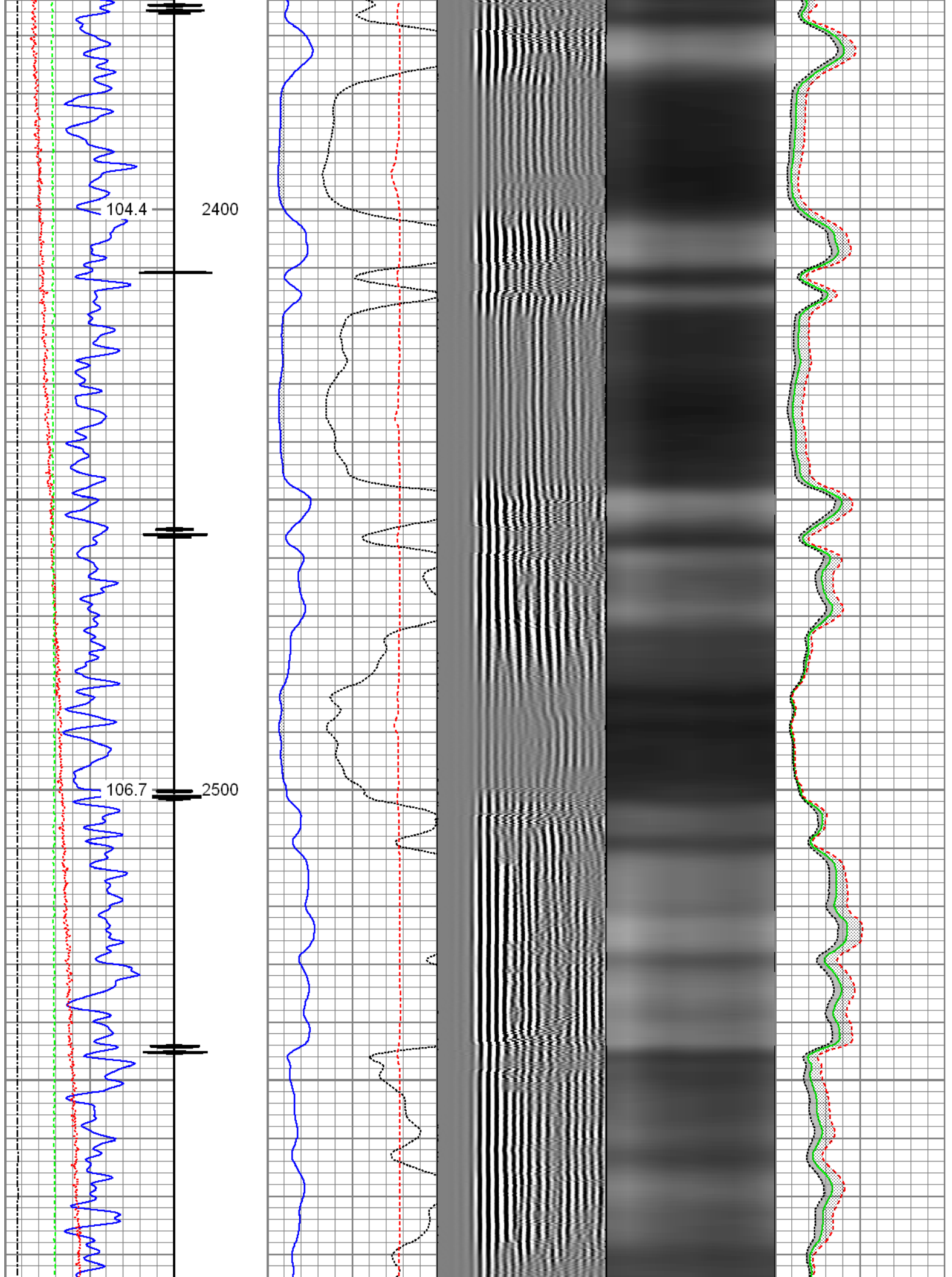


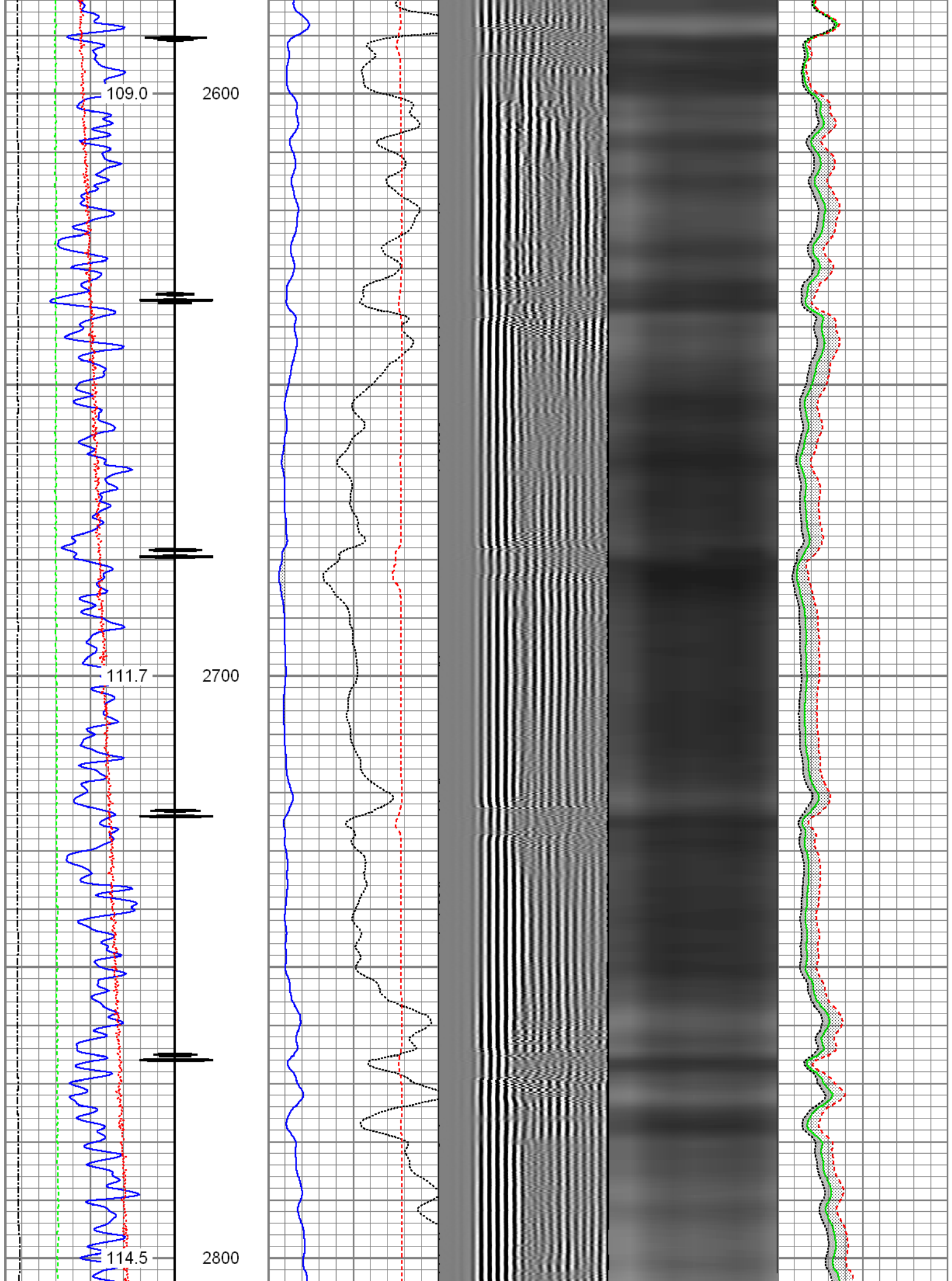


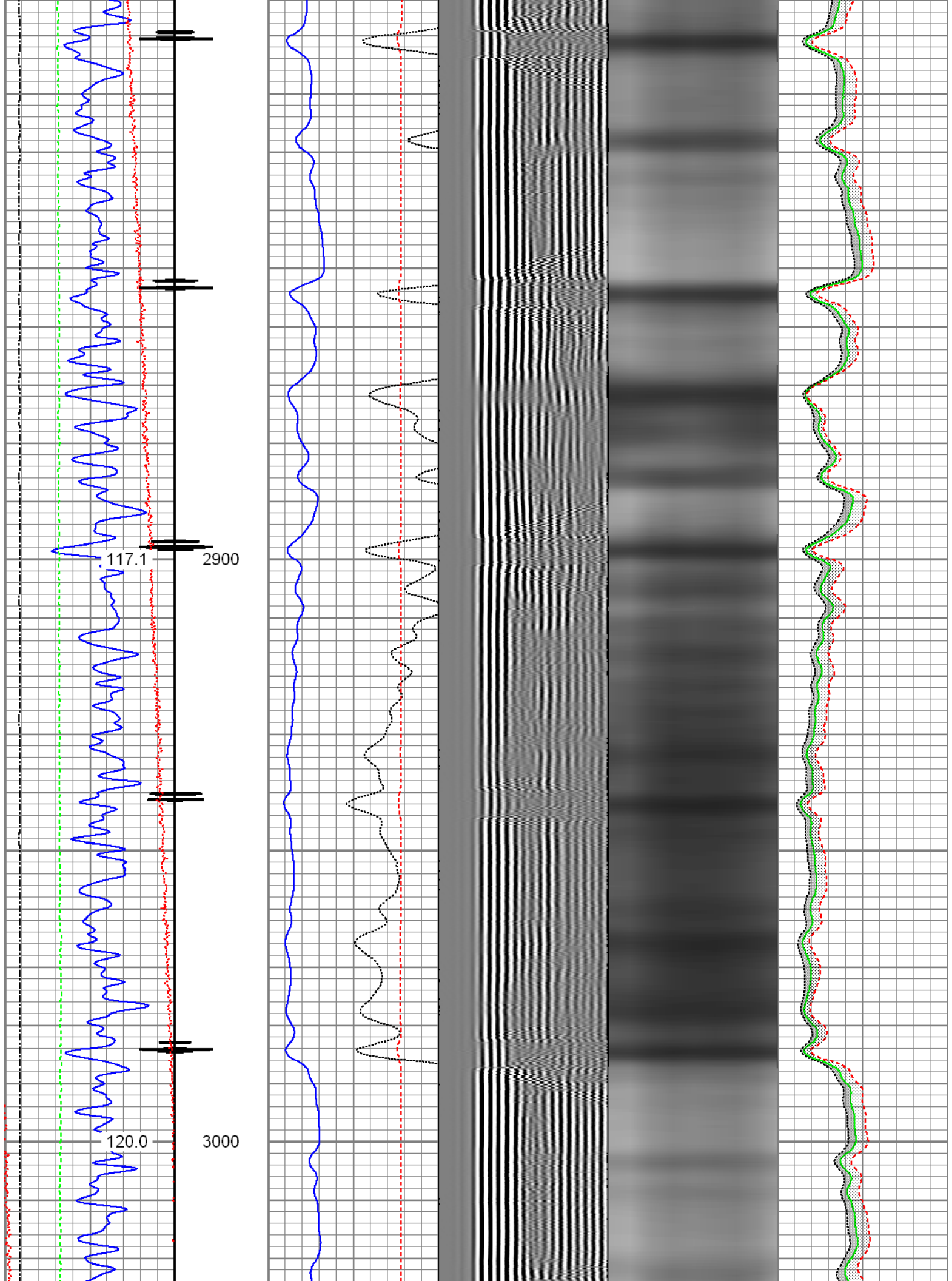


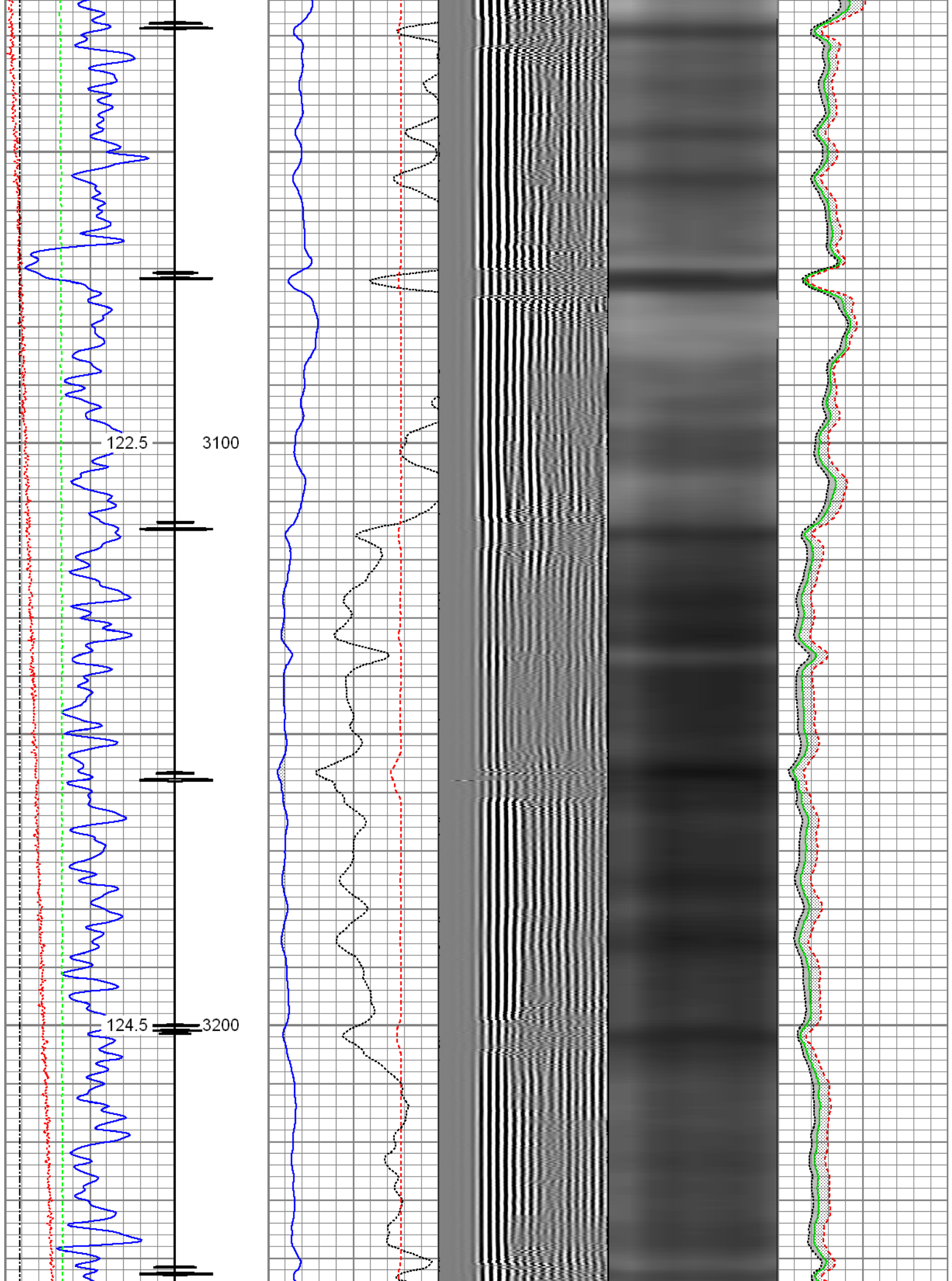


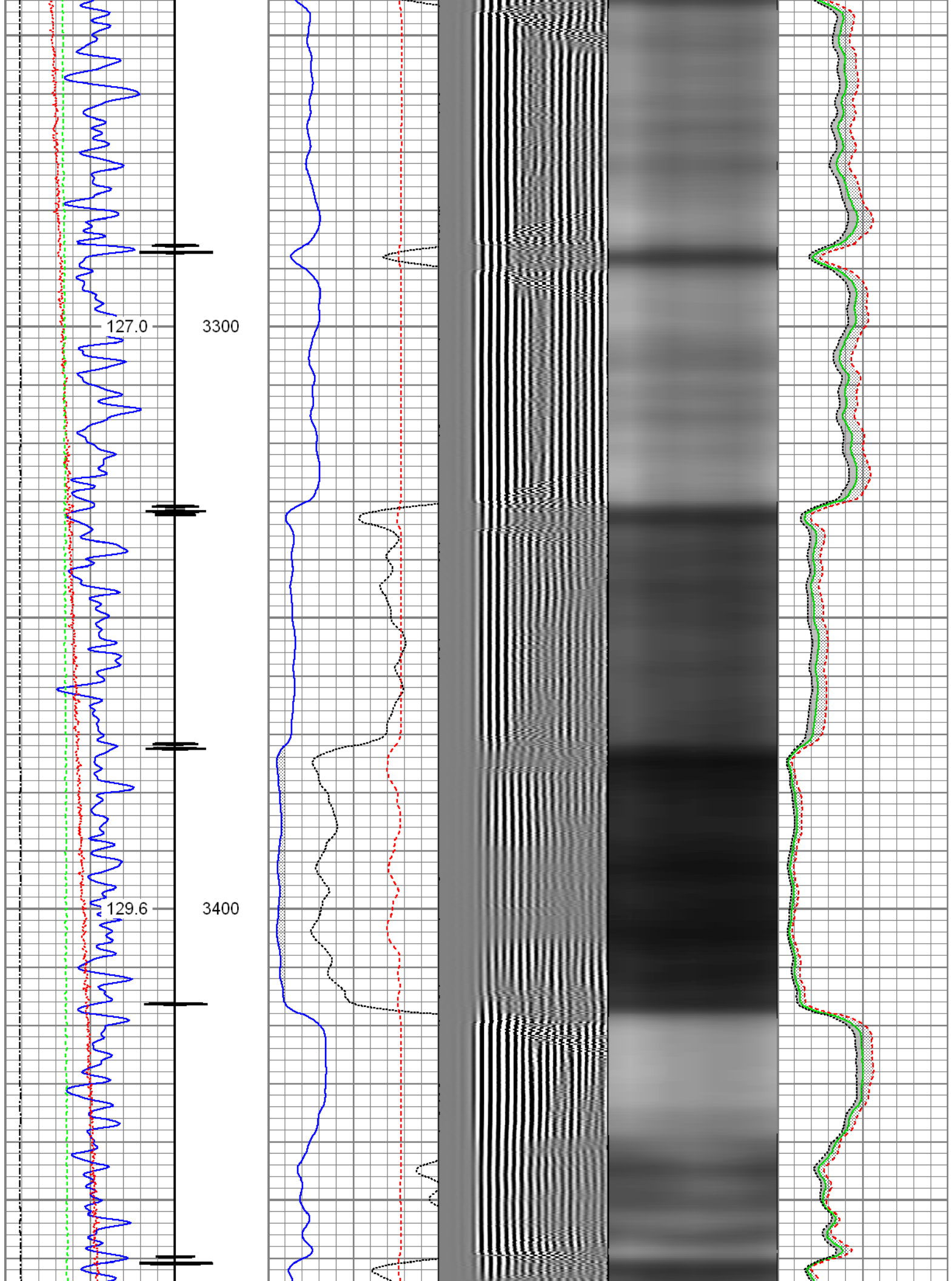


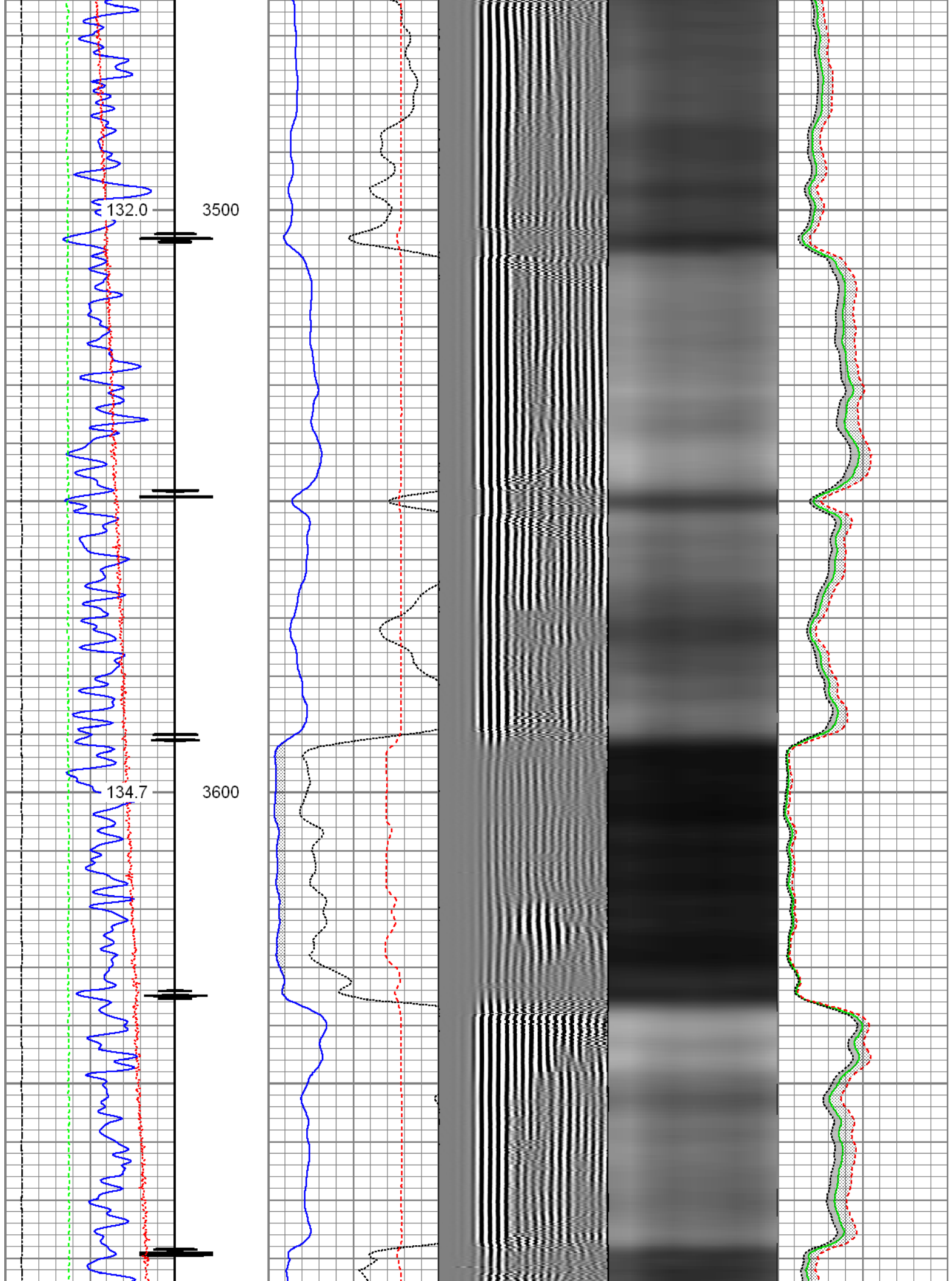


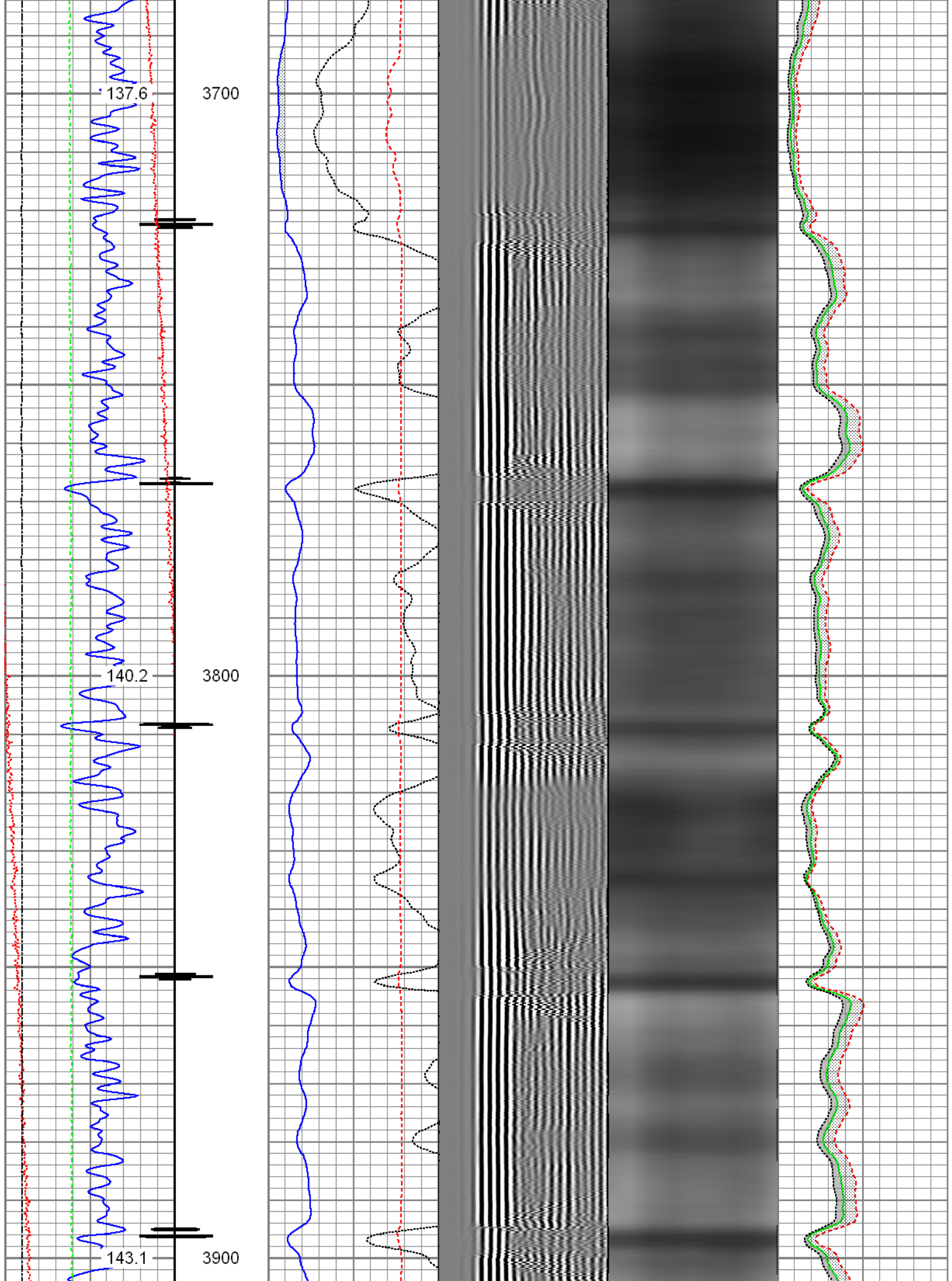


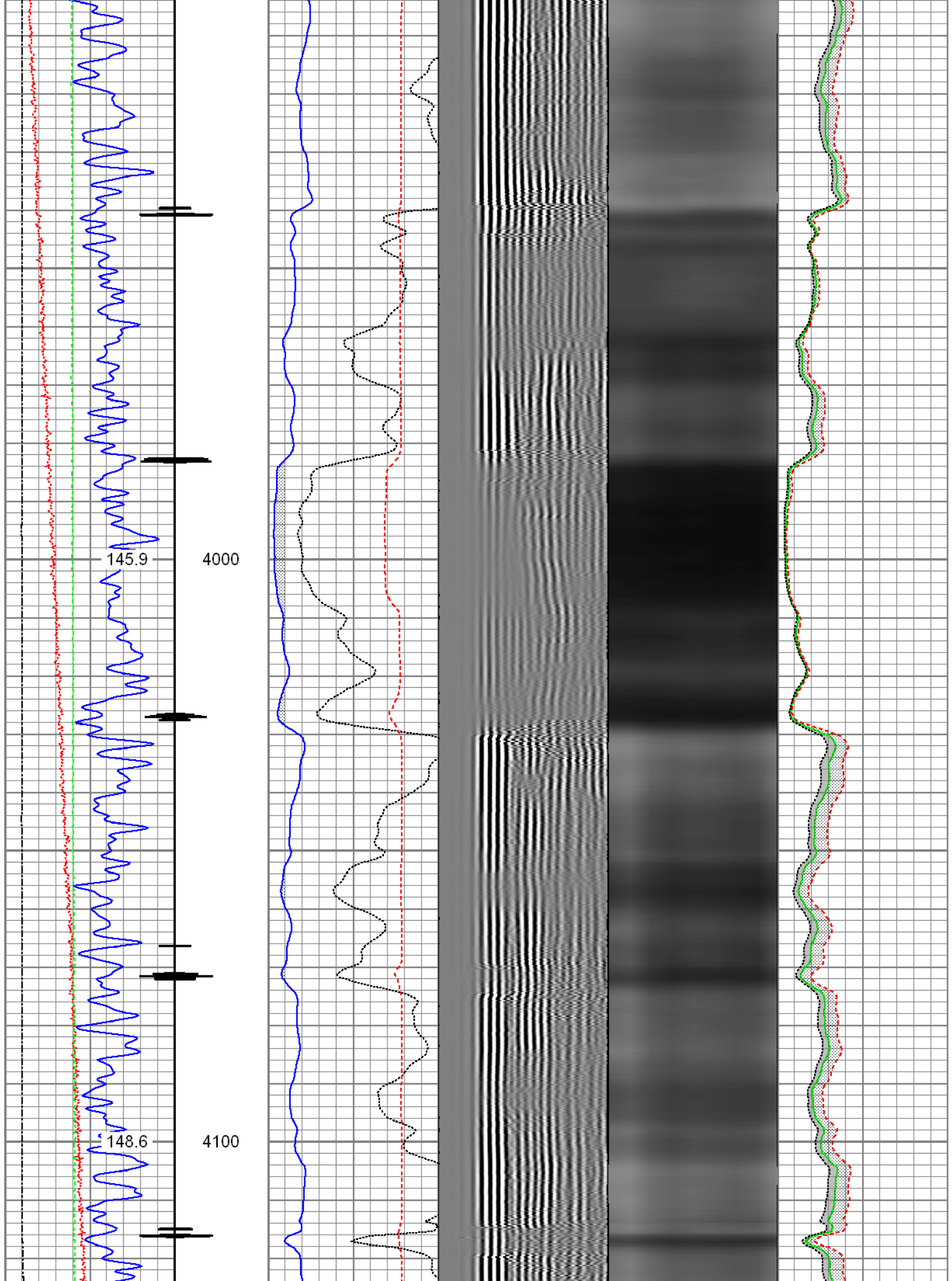


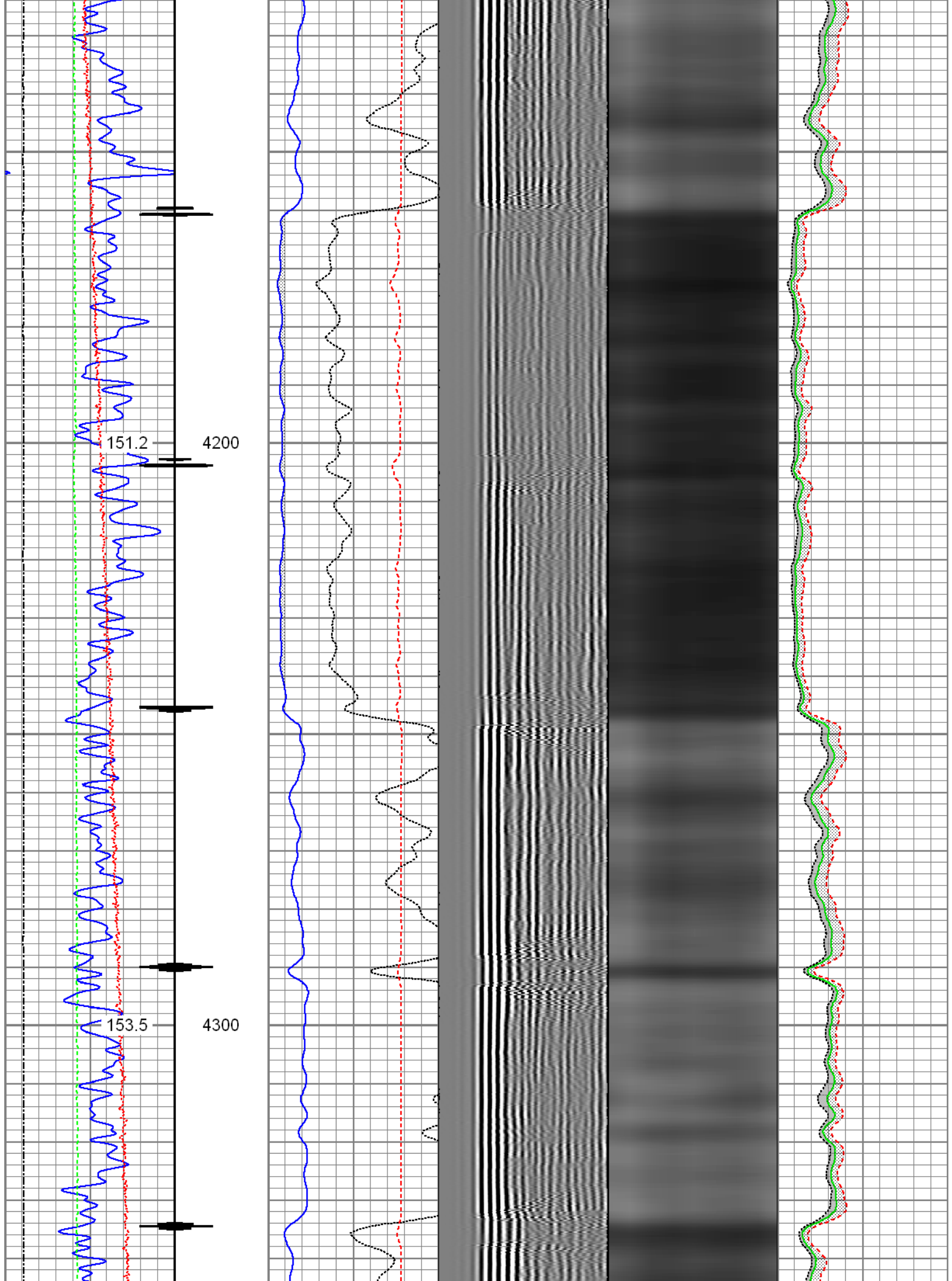


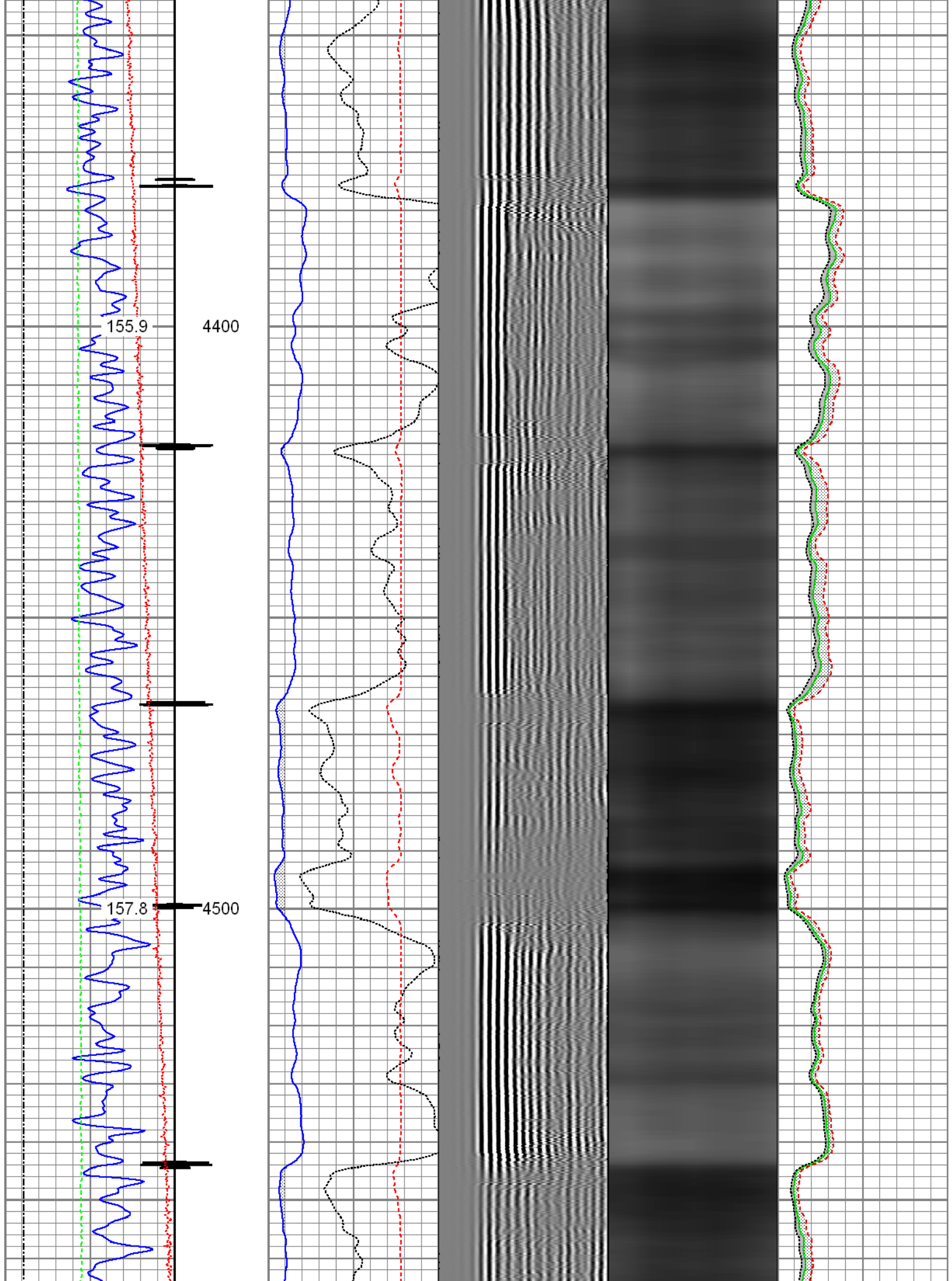


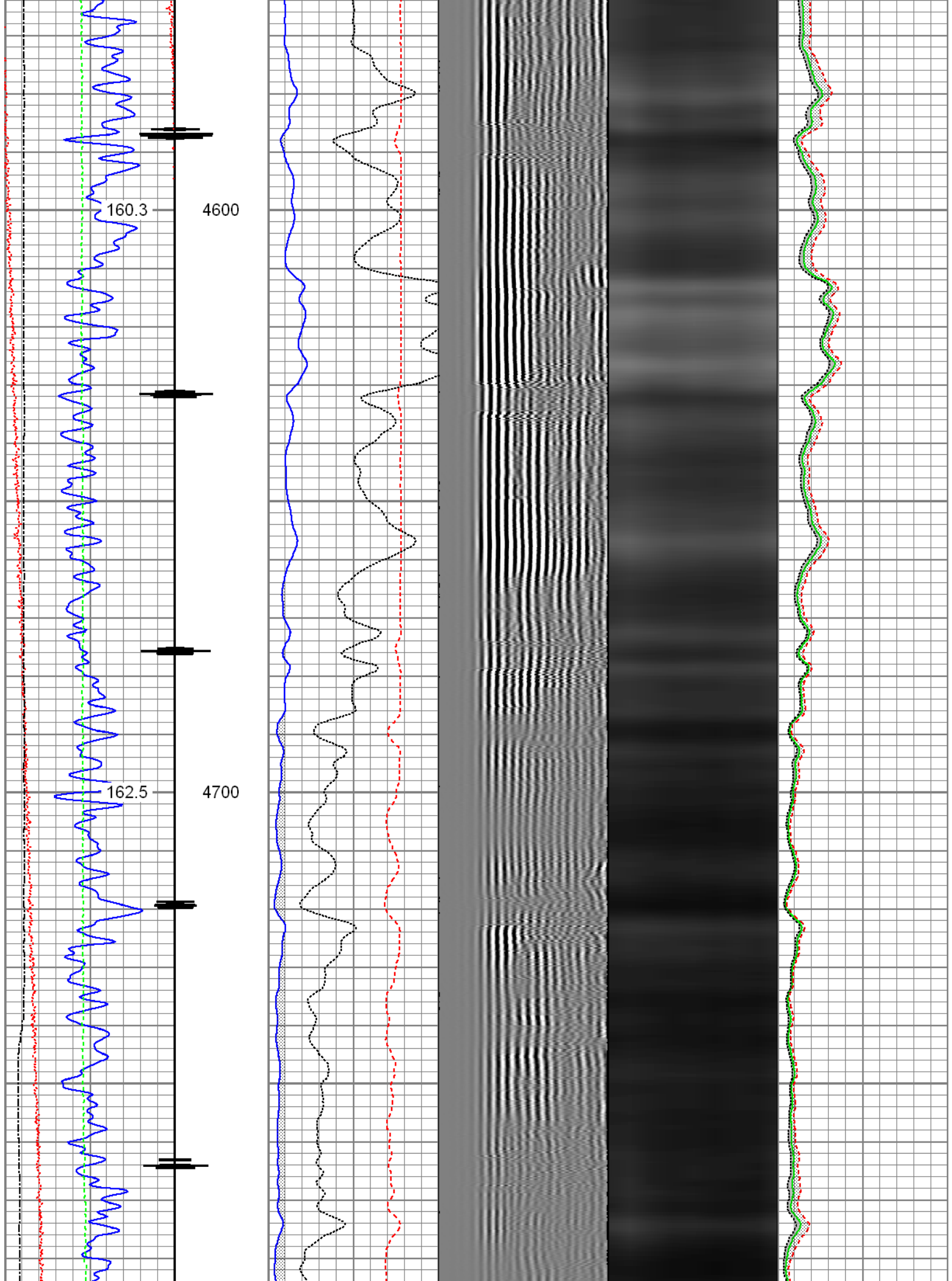


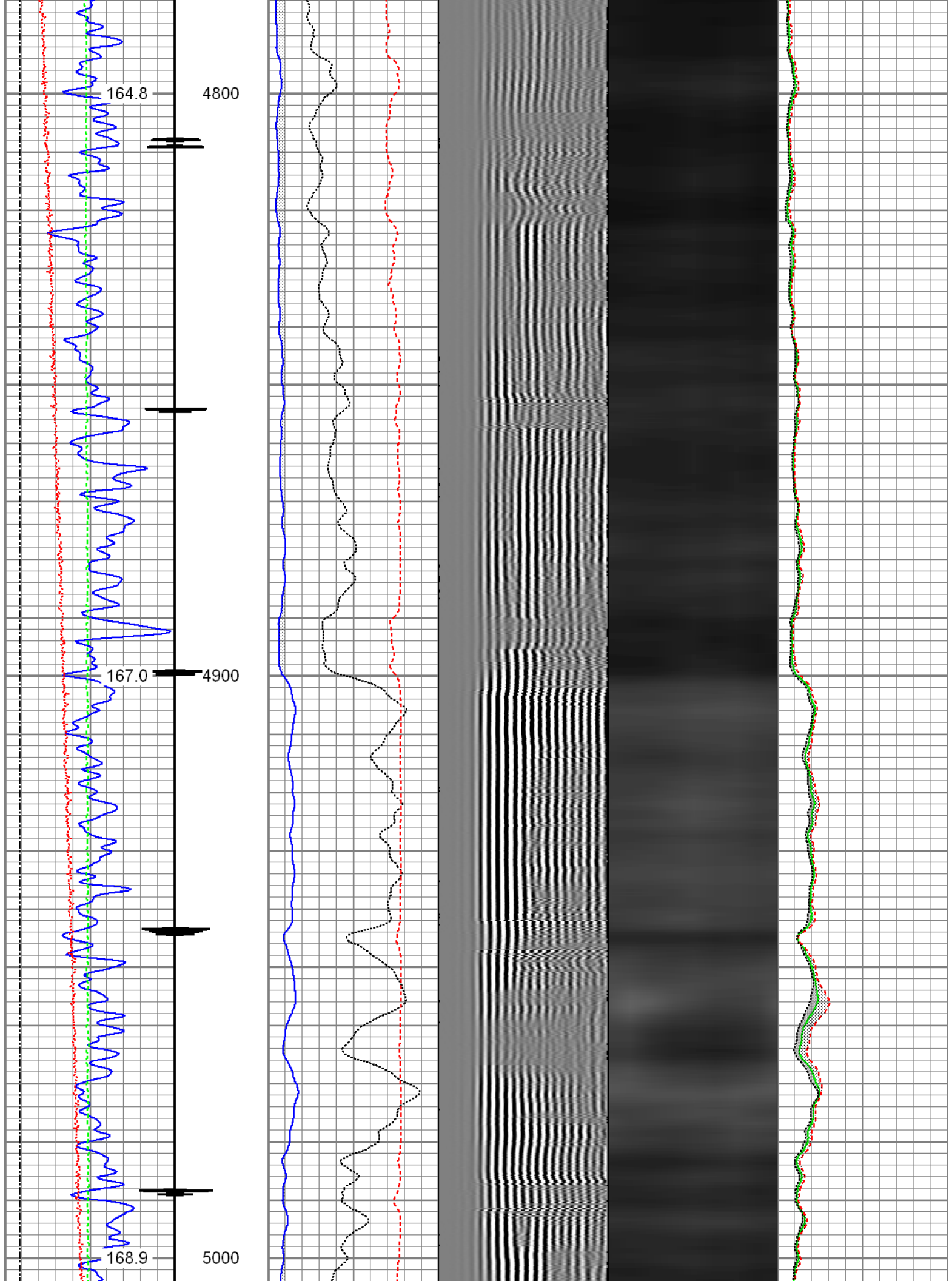


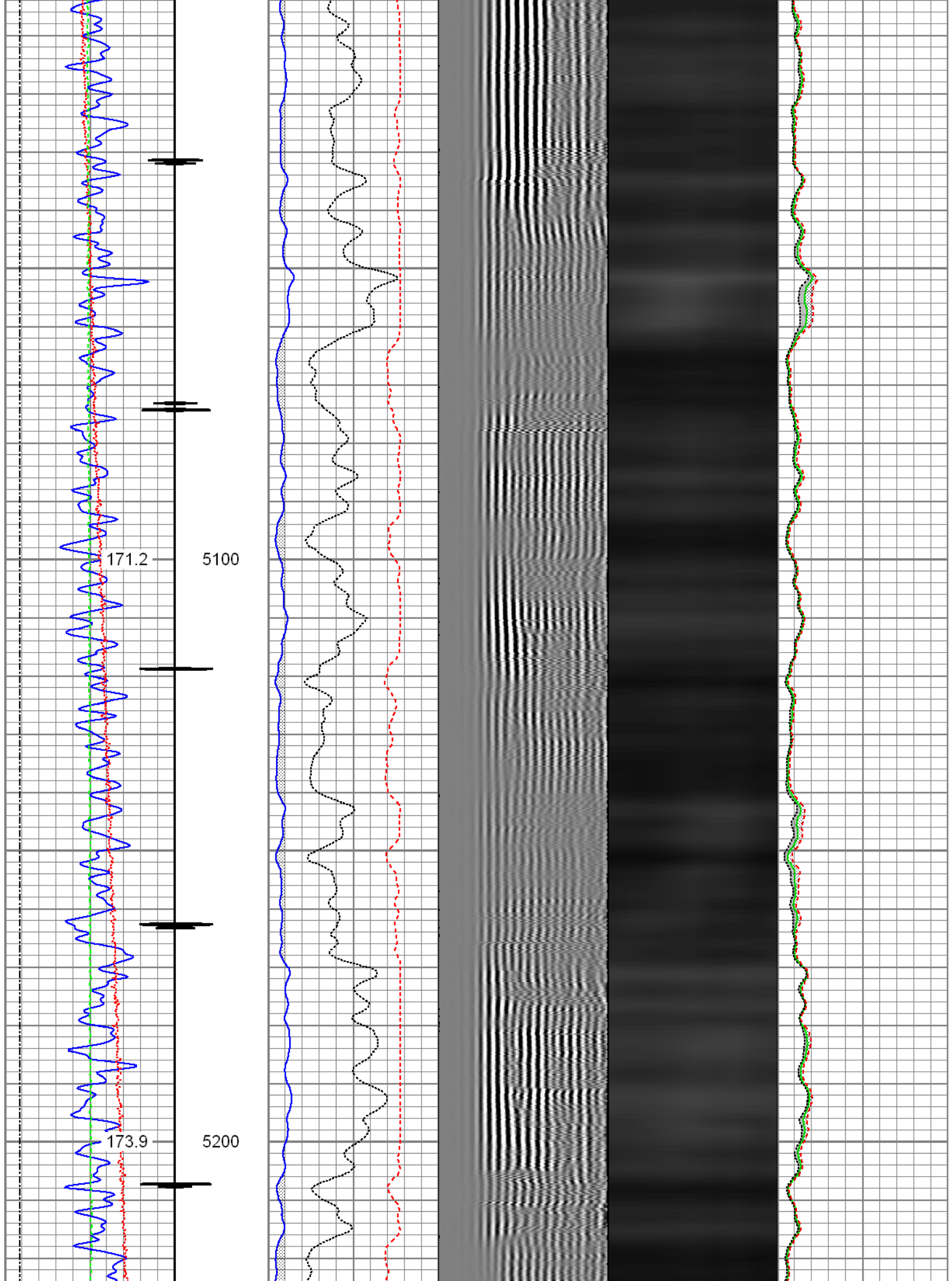


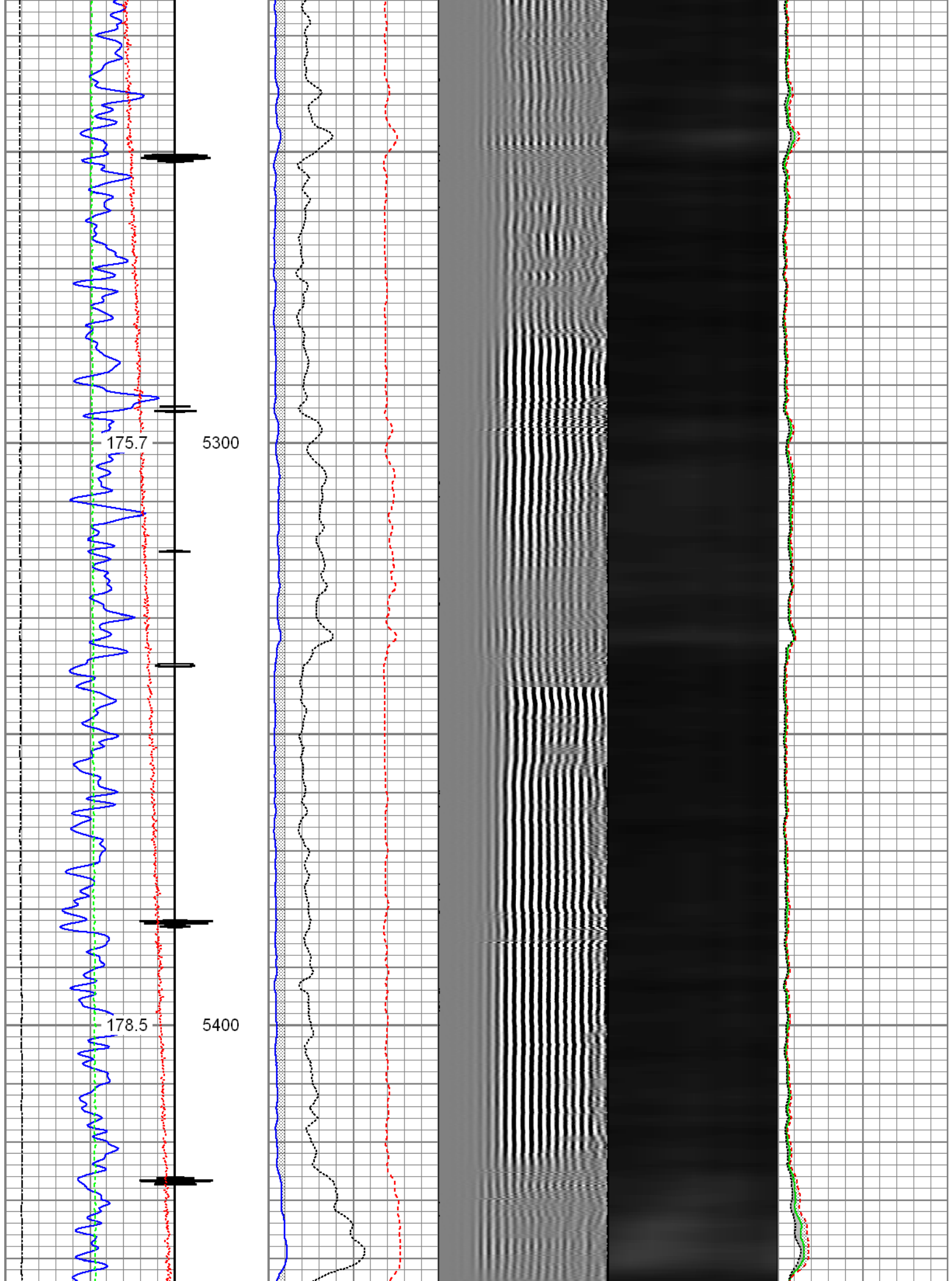


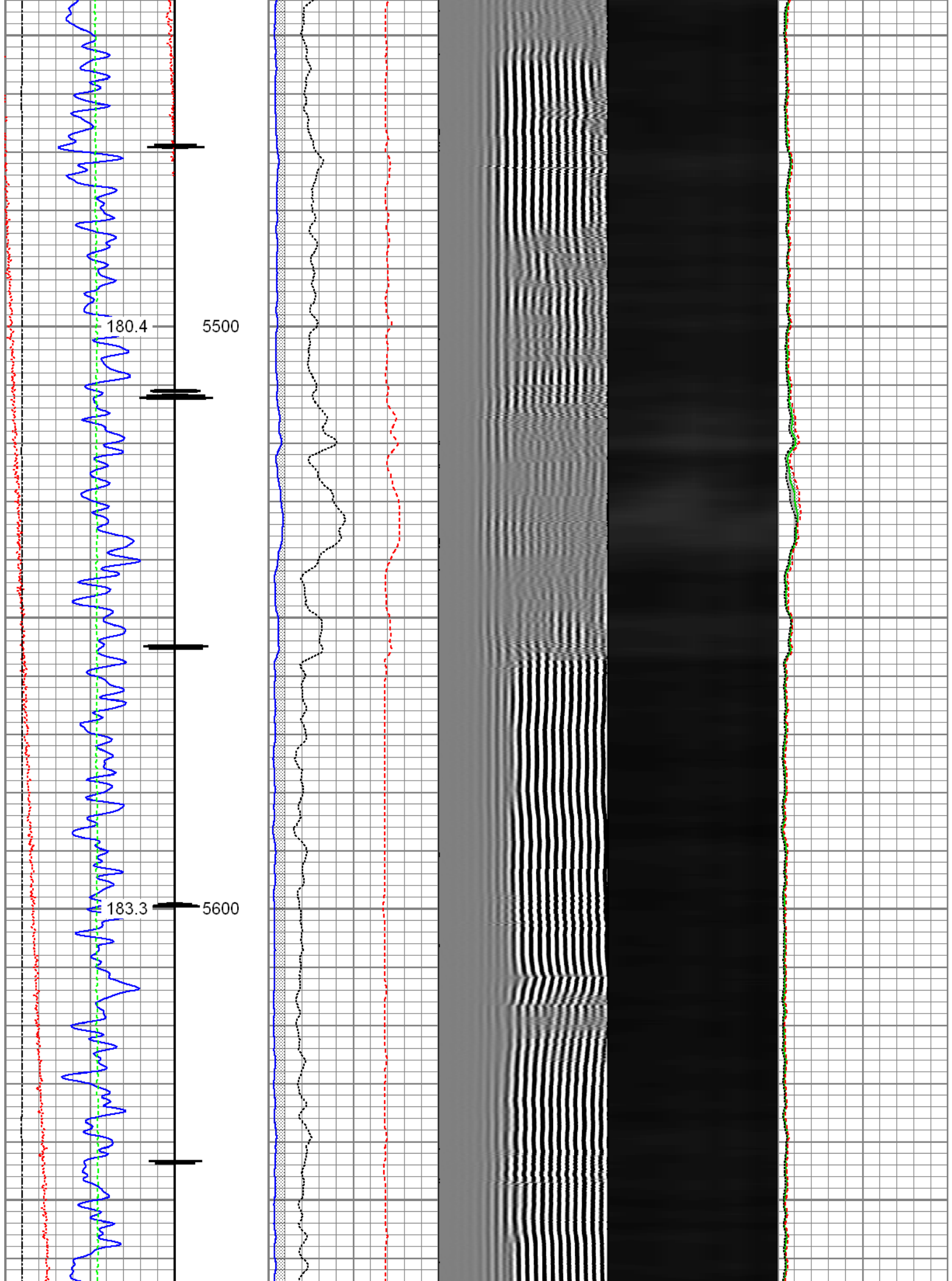


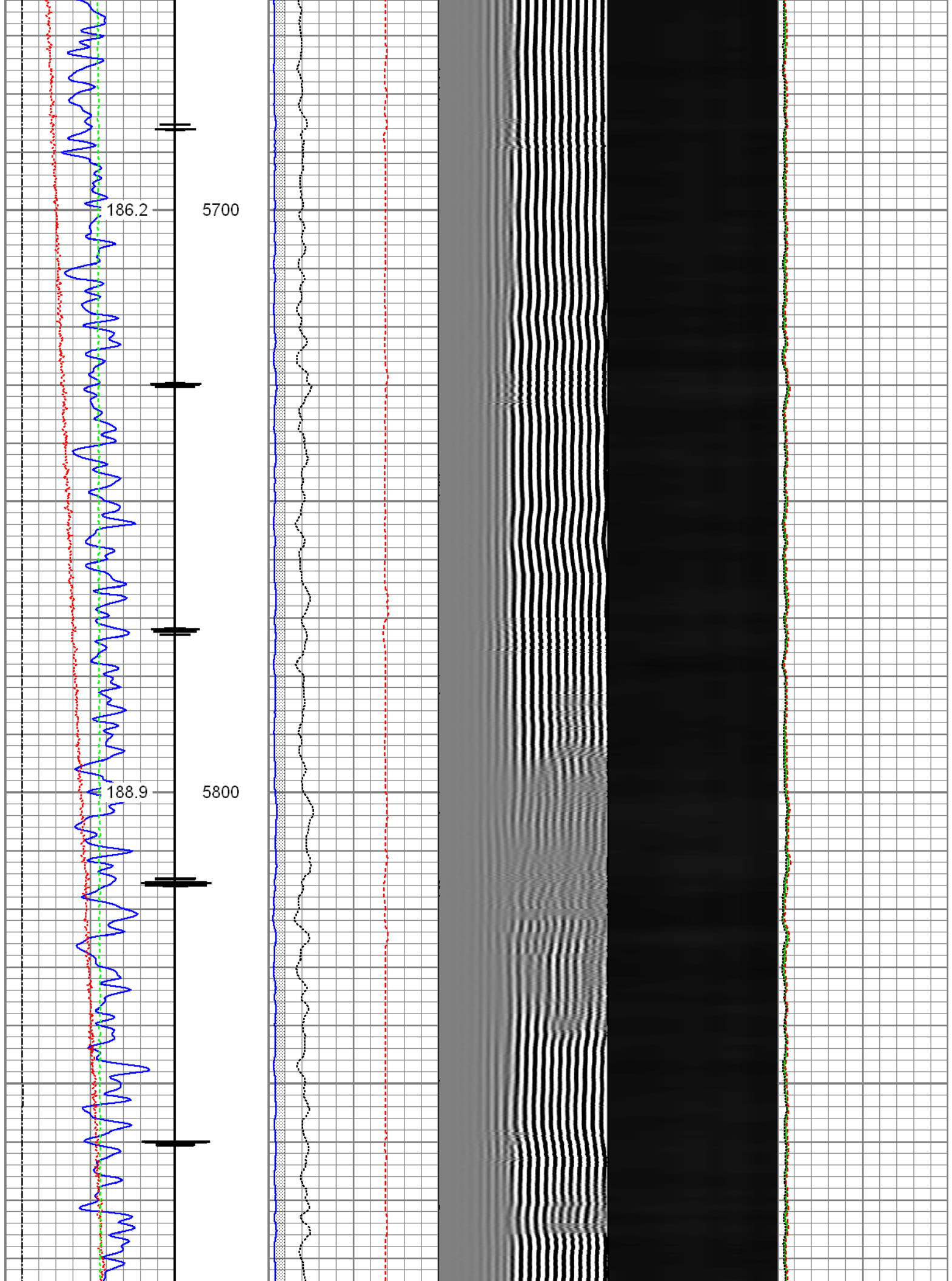


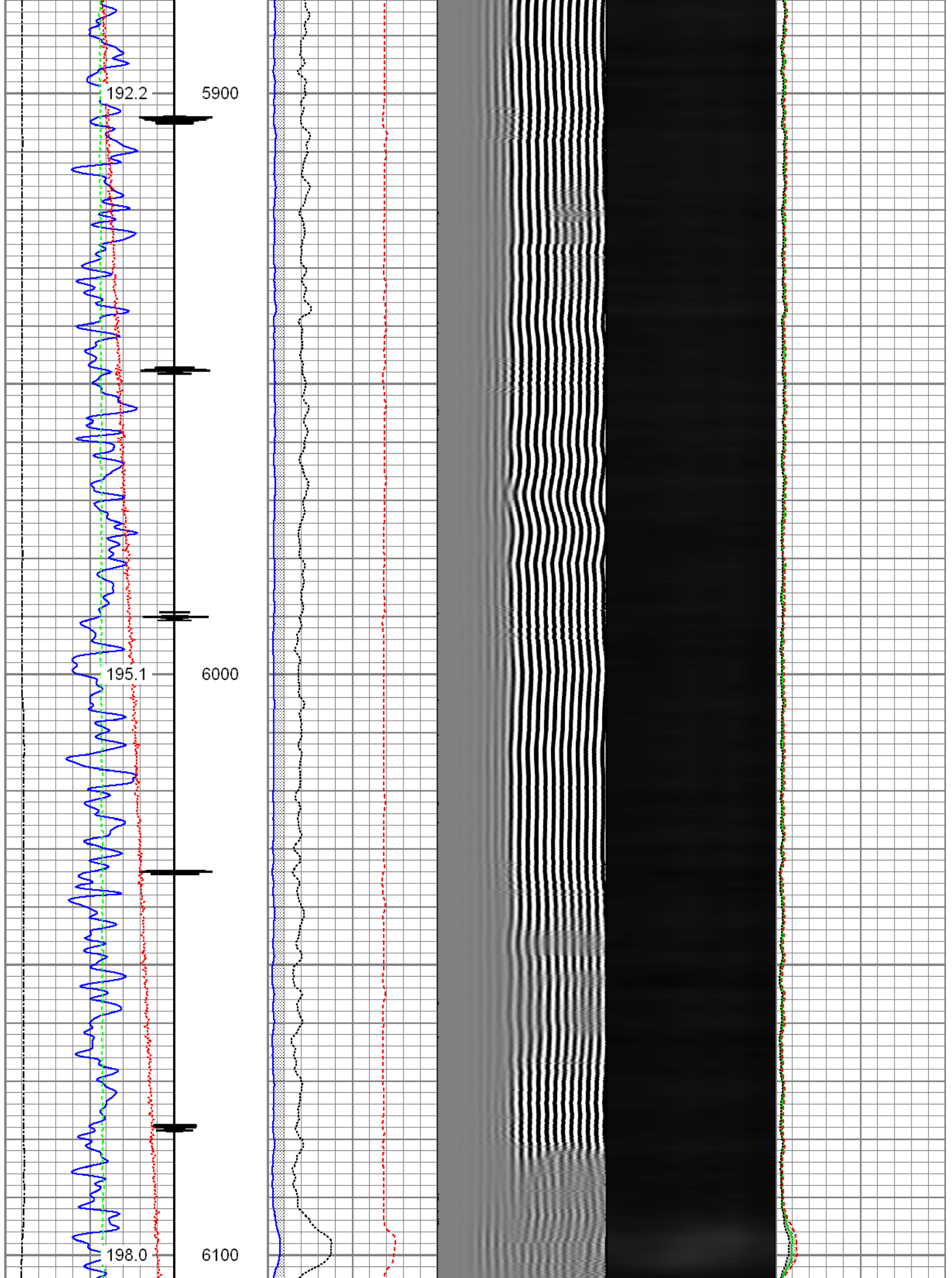


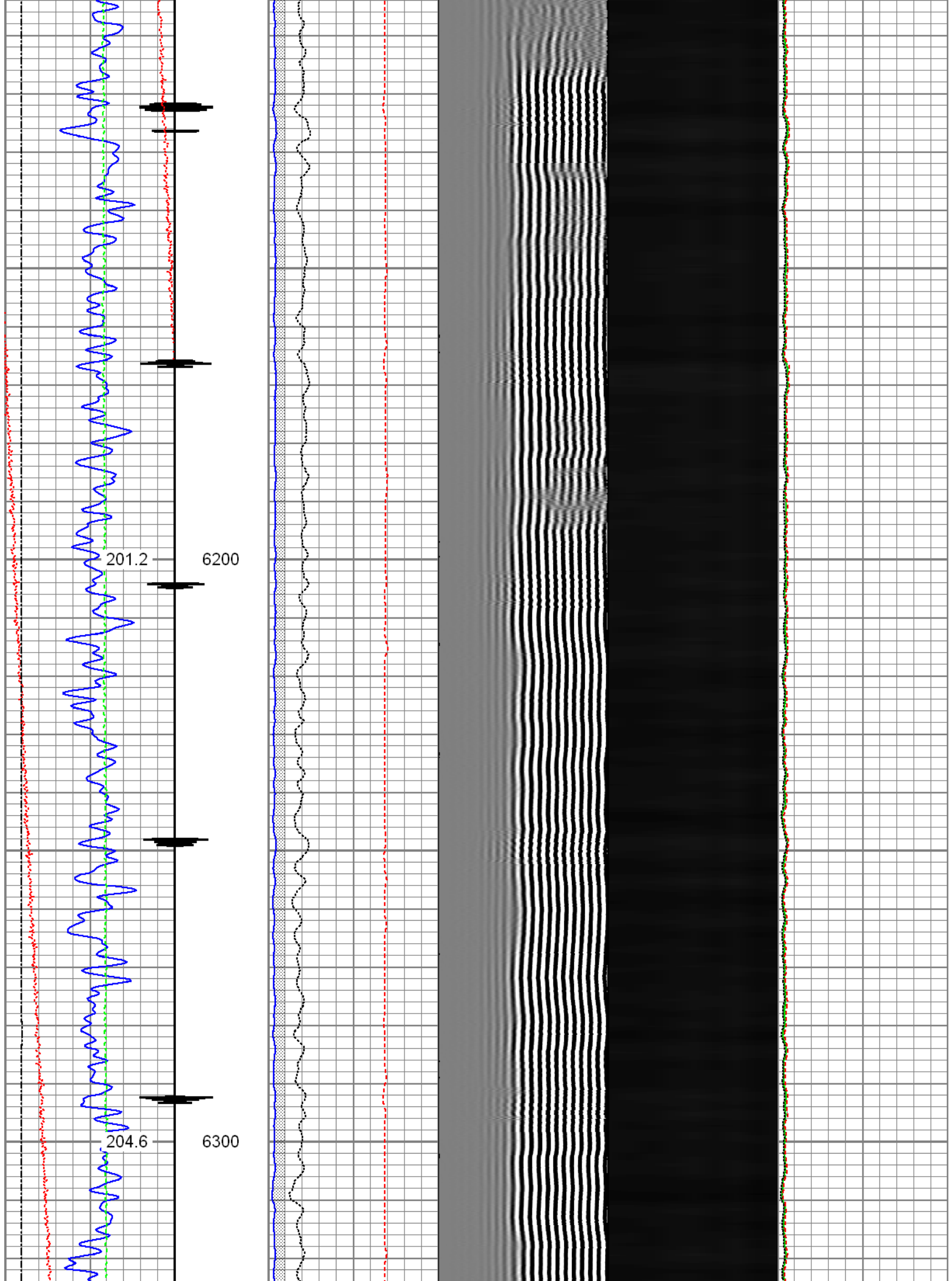


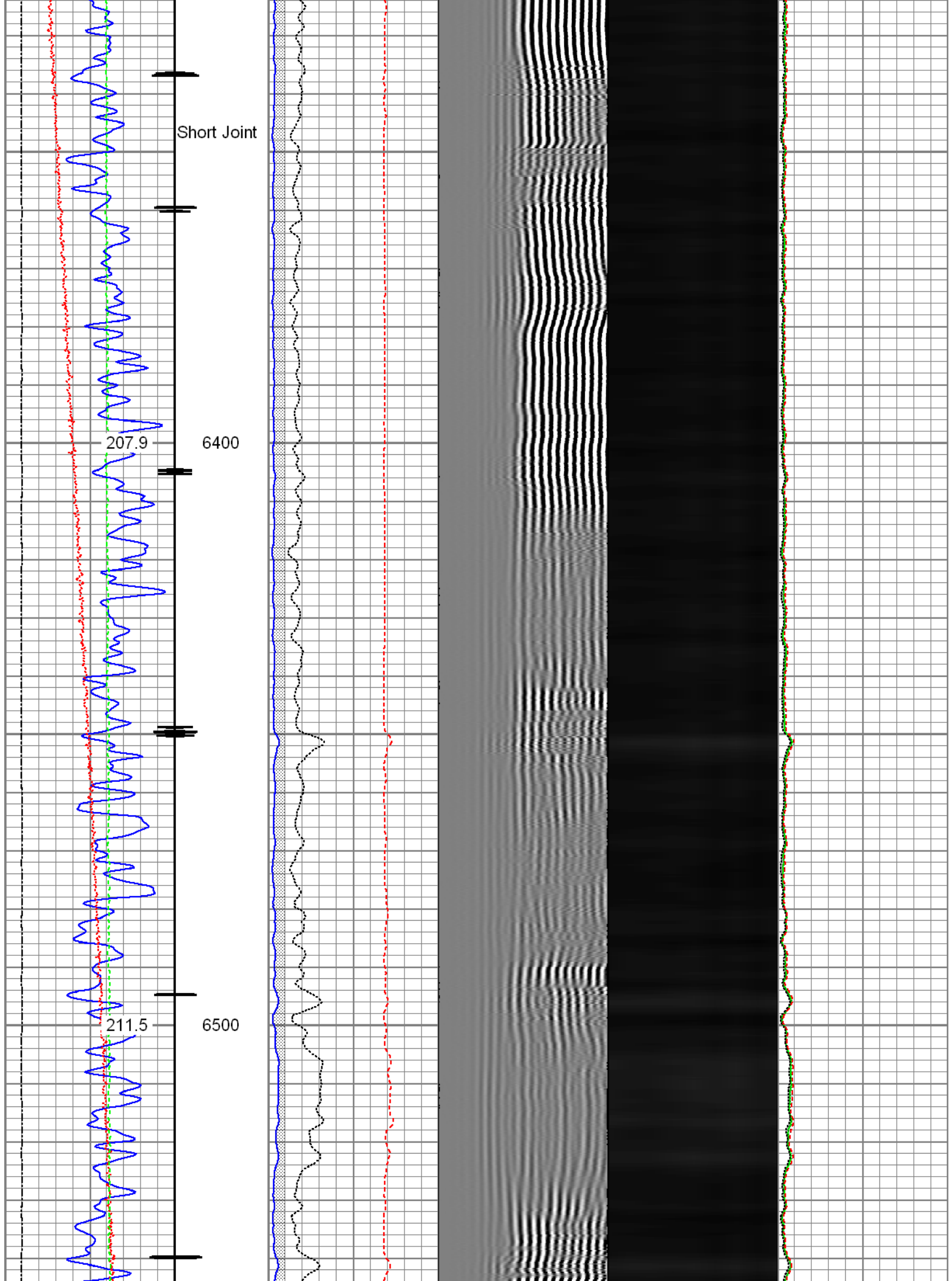


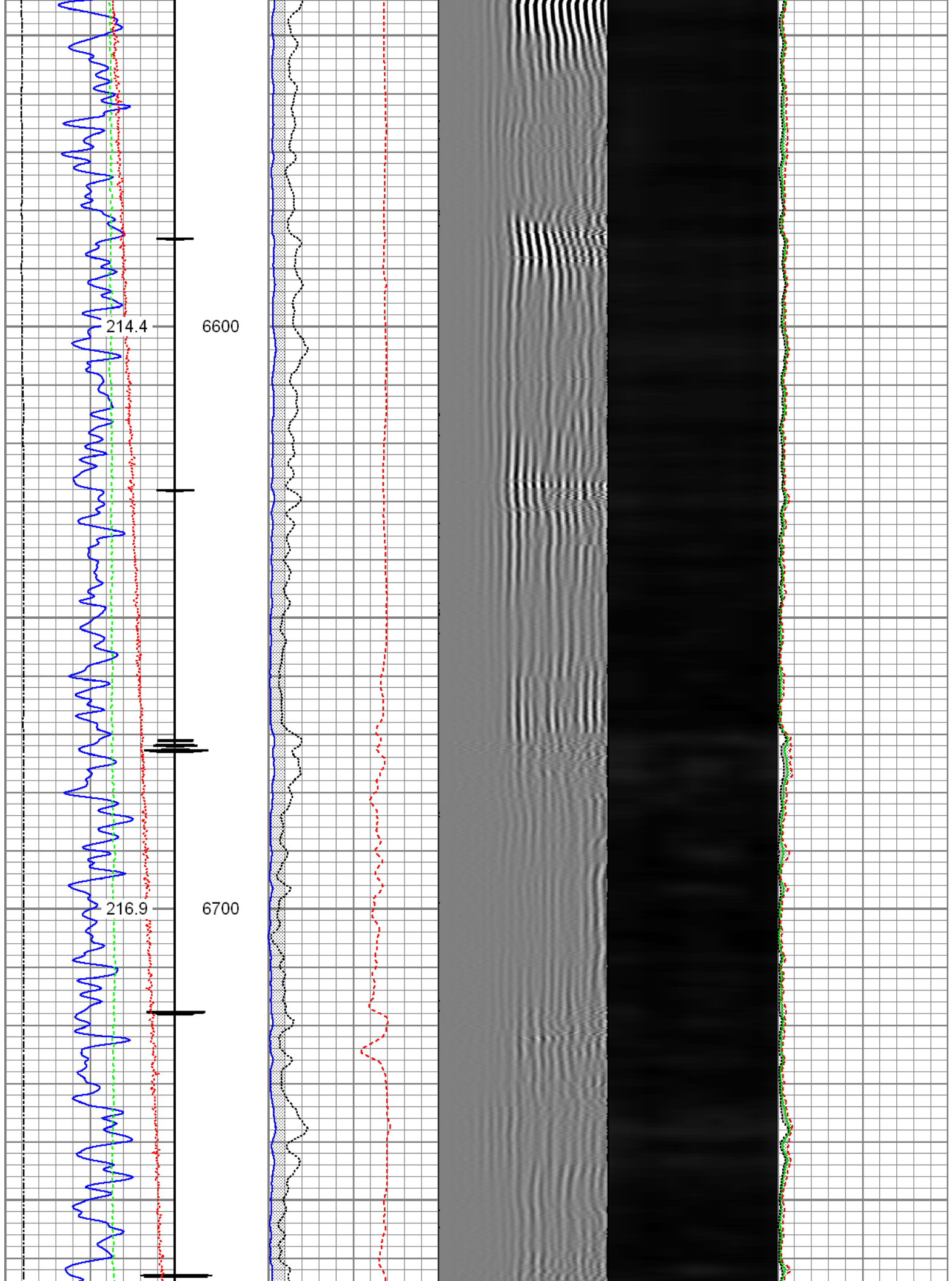


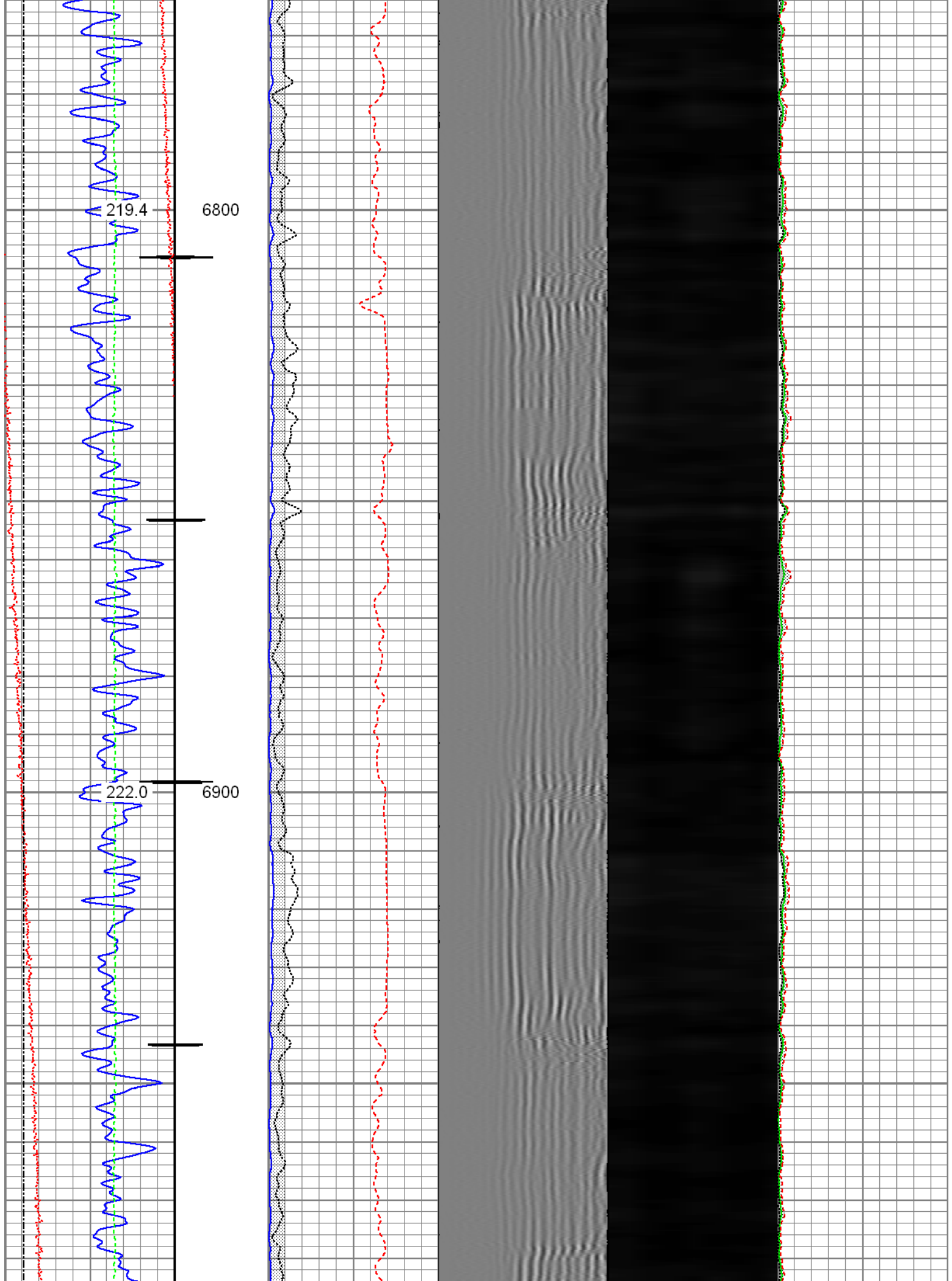


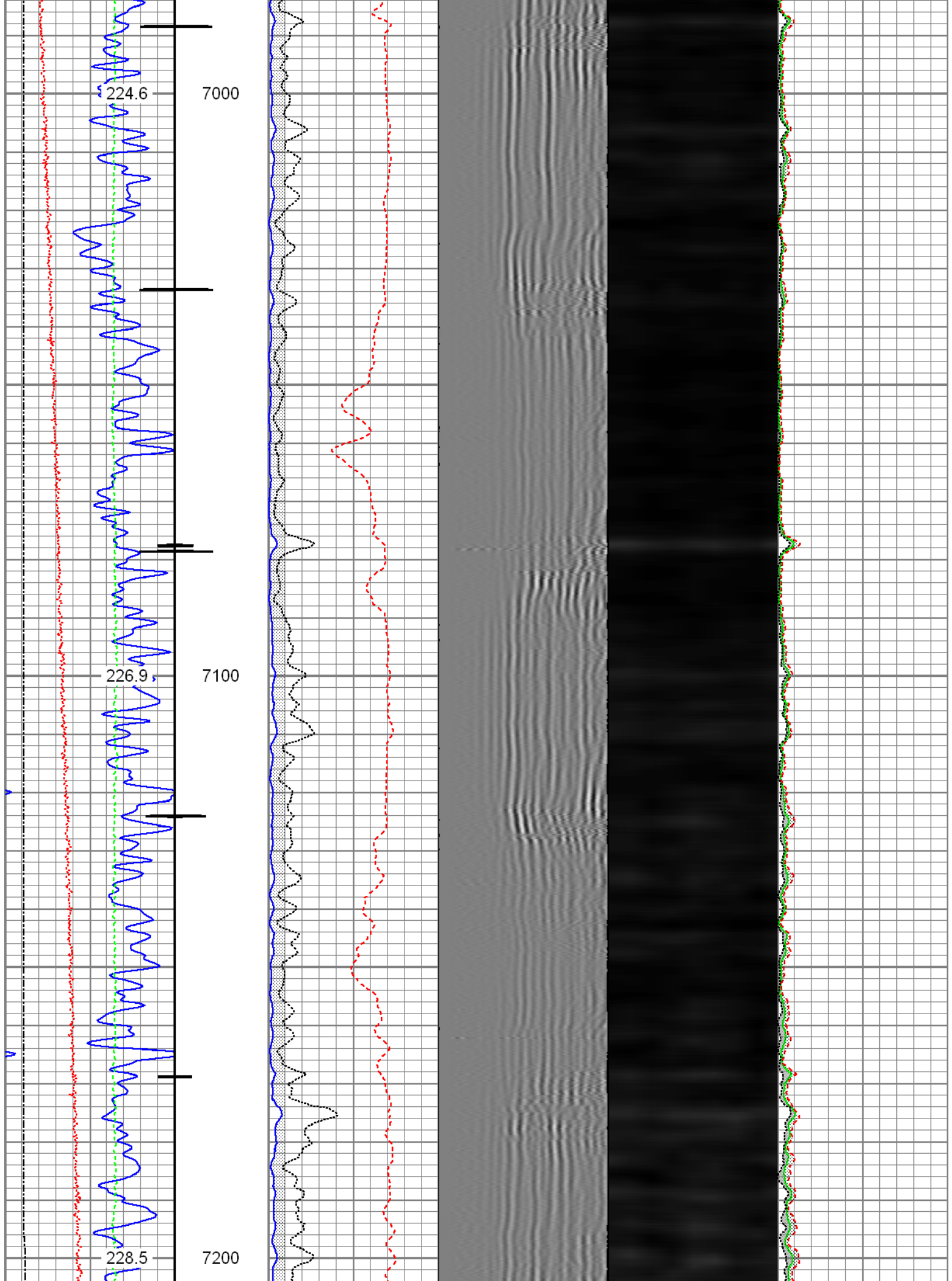


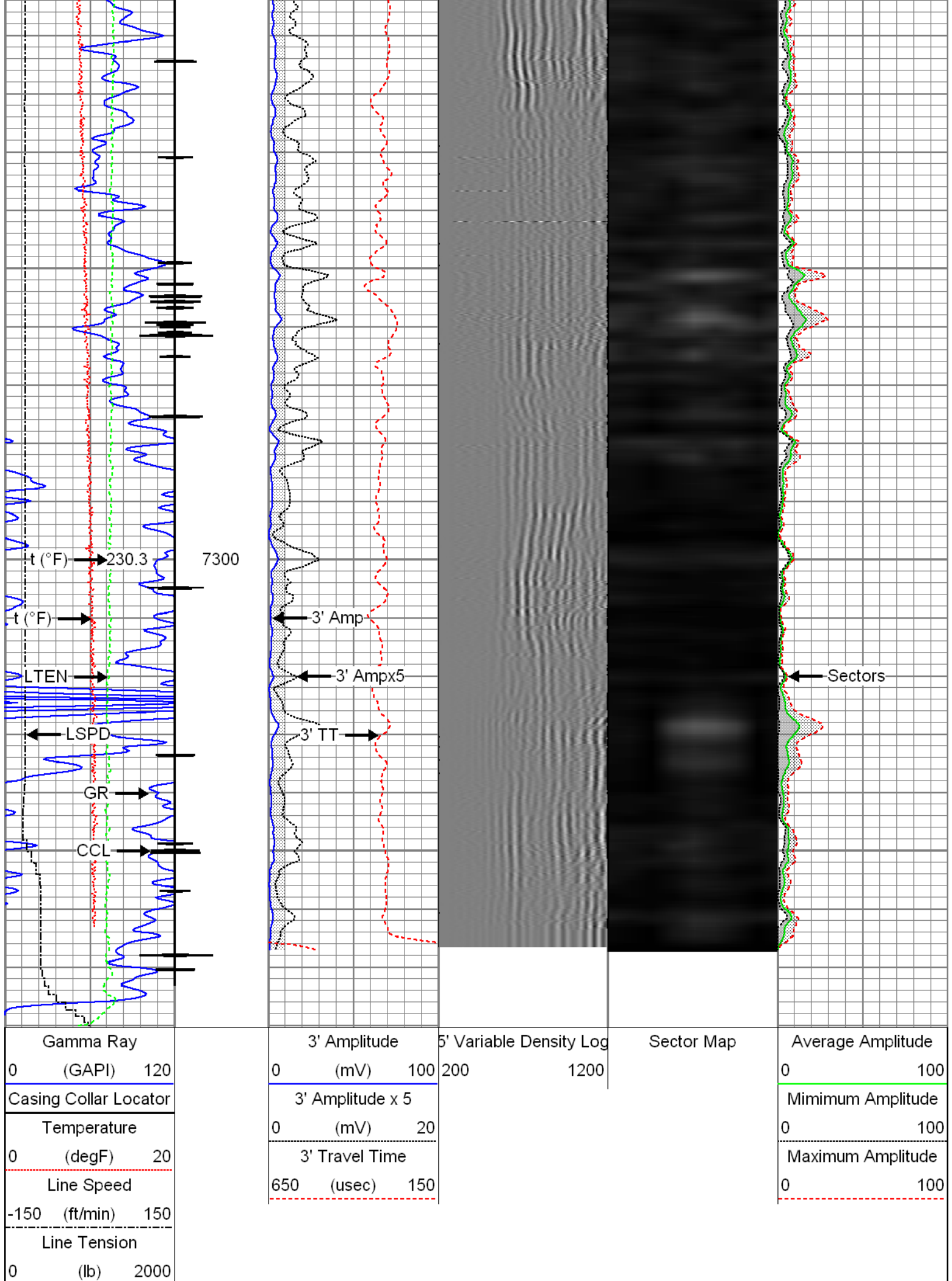












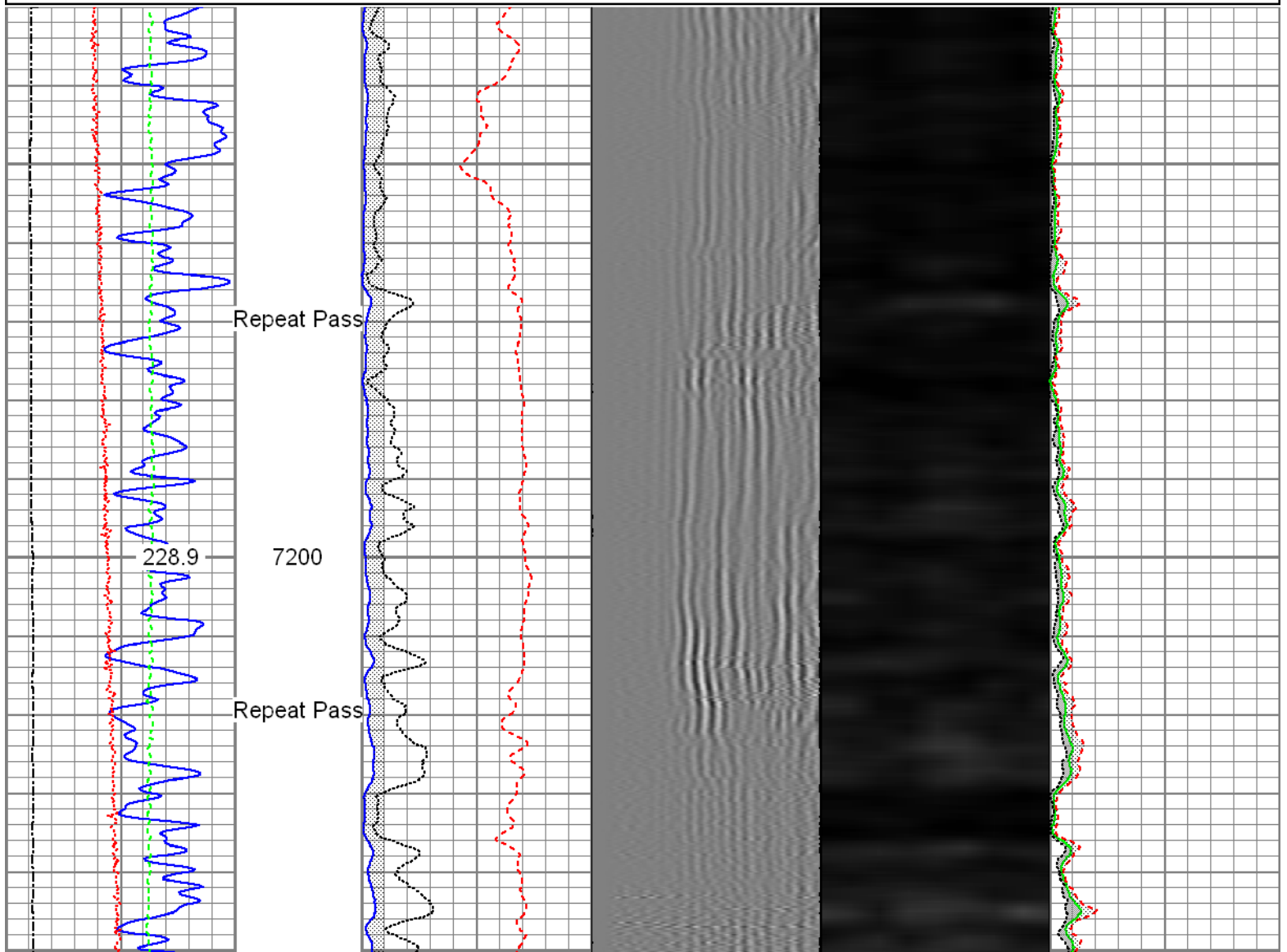


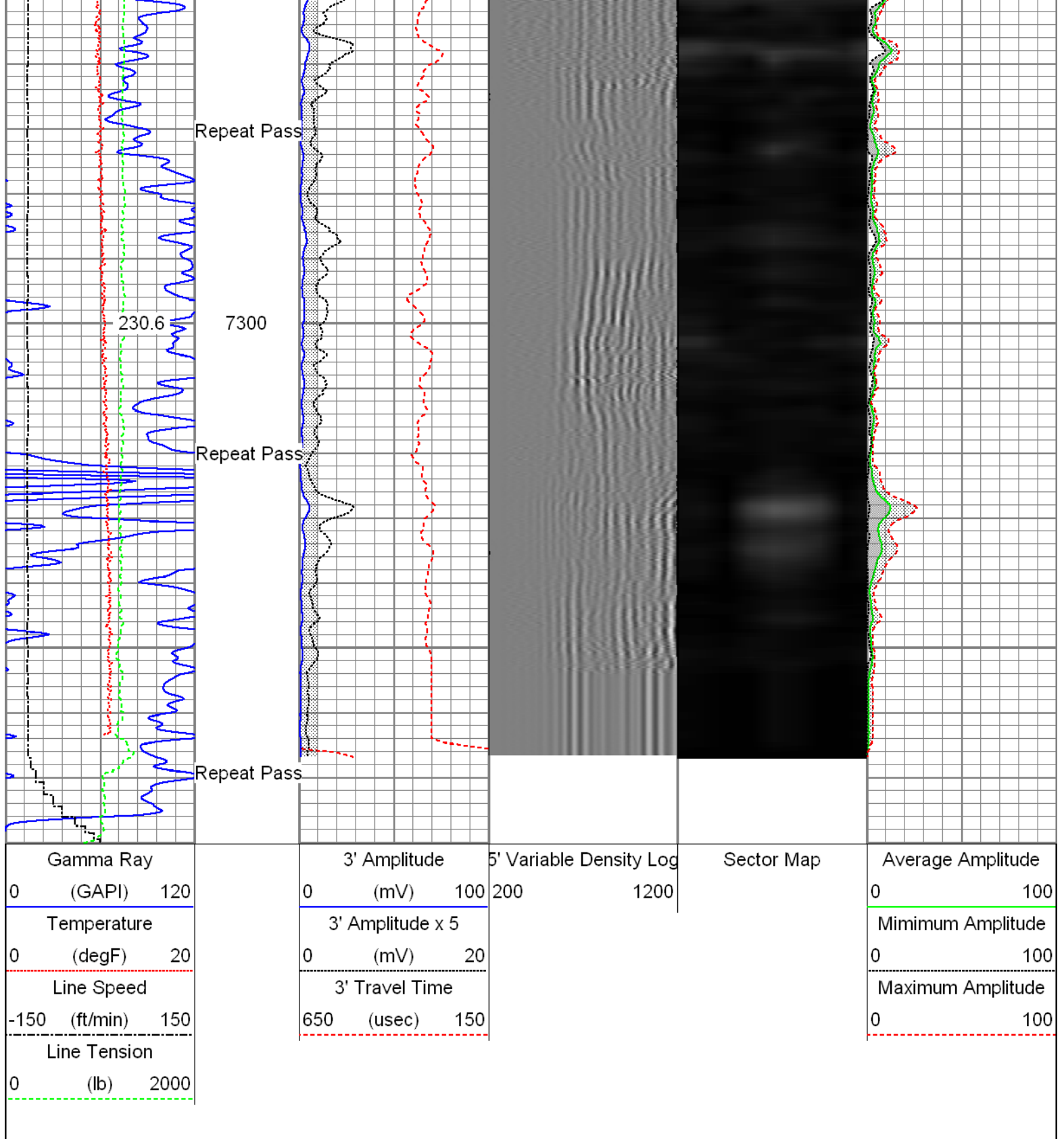
Repeat Pass

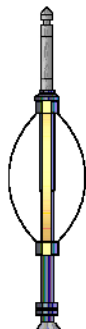
Recorded with 2800 PSI Surface Induced Pressure

Database File: c:\warrior\data\0512341327_anadarko_joker 27n2-9hz_09-10-15_rbl\0512341327_anadarko_joker 27
Dataset Pathname: repeat
Presentation Format: radii
Dataset Creation: Thu Sep 10 12:50:24 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 -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

[illegible]

Performed: Wed Sep 02 09:43:00 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: FW1305-098
 Tool Model: 2-3/4"
 Calibration Casing Diameter: 5.500 in
 Calibration Depth: 69.187 ft

Master Calibration, performed Thu Sep 10 09:27:41 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.001	0.691	0.800	71.921	102.775	0.932
CAL	0.729	0.783				
5'	0.002	0.702	0.800	71.921	101.502	0.645
SUM						
S1	-0.003	0.693	0.000	100.000	143.591	0.479
S2	-0.002	0.694	0.000	100.000	143.838	0.225
S3	-0.001	0.692	0.000	100.000	144.314	0.199
S4	-0.001	0.691	0.000	100.000	144.556	0.143
S5	-0.001	0.689	0.000	100.000	144.919	0.177
S6	-0.001	0.691	0.000	100.000	144.546	0.138
S7	-0.001	0.696	0.000	100.000	143.430	0.210
S8	-0.002	0.692	0.000	100.000	144.142	0.229

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	0.729	0.783	1.000	0.000

Air Zero Calibration, performed Thu Sep 10 09:27:15 2015:

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



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