



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.				
Well	Land Fed 30C-29HZ				
Field	Wattenberg				
County	Weld				
State	Colorado				
Company	Kerr-McGee Oil & Gas Onshore, L.P.	Well	Land Fed 30C-29HZ	Field	Wattenberg
County	Weld	State	Colorado		
Location:	API # : 05-123-42401		Other Services		
SEC 32 TWP 2N RGE 66W			Gauge Ring		
Permanent Datum	Ground Level	Elevation	Elevation		
Log Measured From	Kelly Bushing	20 FT	K.B. 4919'		
Drilling Measured From	Kelly Bushing		D.F. 4918'		
			G.L. 4899'		

Date 16-Aug-2016

Run Number	One		
Depth Driller	13230 FT		
Depth Logger	7772 FT		
Bottom Logged Interval	7767 FT		
Top Log Interval	Surface		
Open Hole Size	8.75"		
Type Fluid	Water		
Density / Viscosity	8.34 lbm/gal		
Max. Recorded Temp.	240°F		
Estimated Cement Top	Surface		
Time Well Ready	ROA		
Time Logger on Bottom	10:10		
Equipment Number	HD-0361		
Location	Fort Lupton, CO		
Recorded By	Wayne Wacker		
Witnessed By	Chris Hayes		

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	JD BTC	Surface	1890 FT
Intermediate #1	5 1/2	17	LTC	Surface	13221 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 6823 FT
Adjusted log +6 FT to correlate with Marker Joint
Log ran from 7772 FT to surface
Log ran with 2800 PSI surface induced pressure
Logging tools were clean and free of any debris upon completion of operations

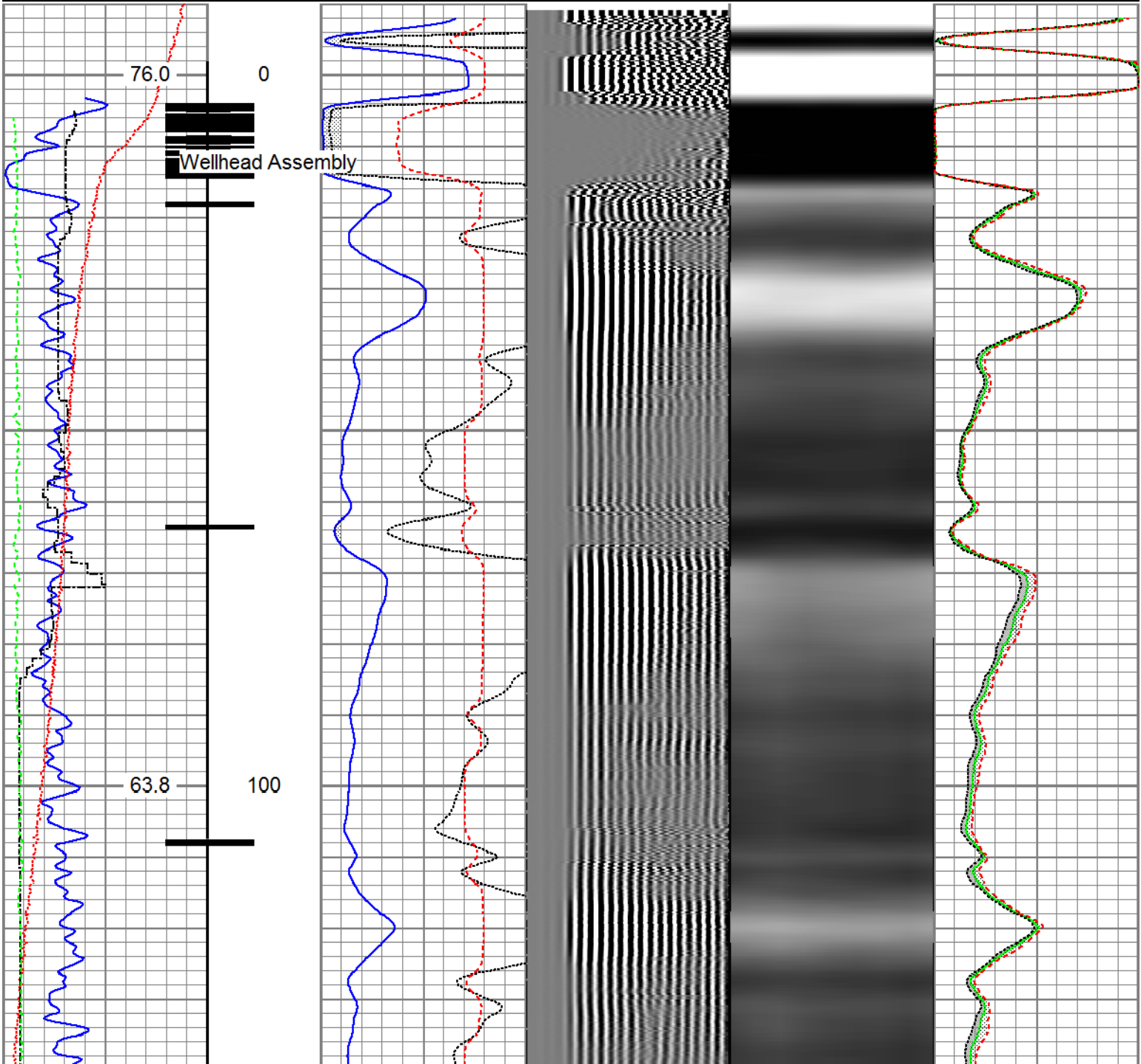
Thank you for choosing Reliance Oilfield Services, LLC!!

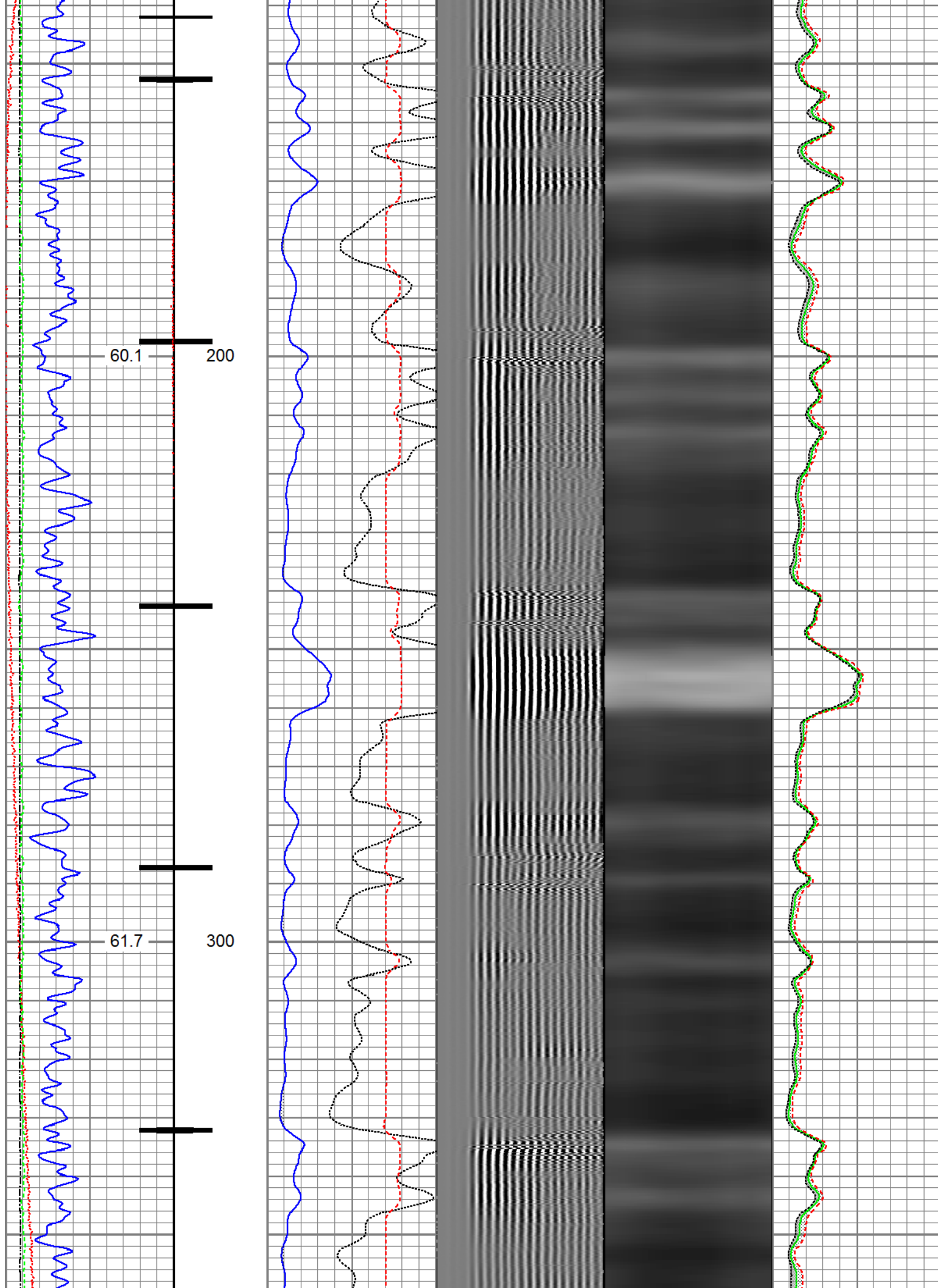


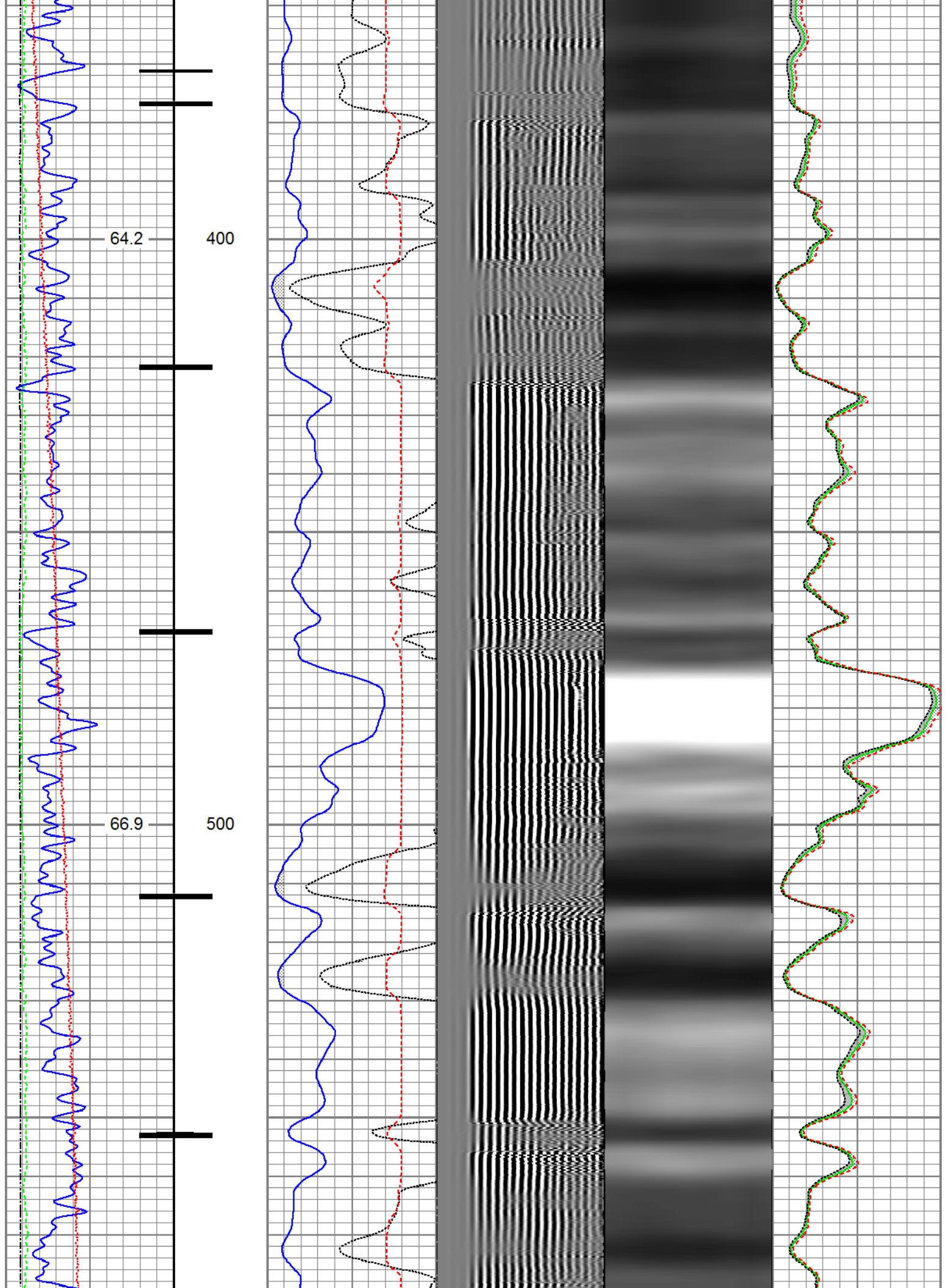
Main Pass

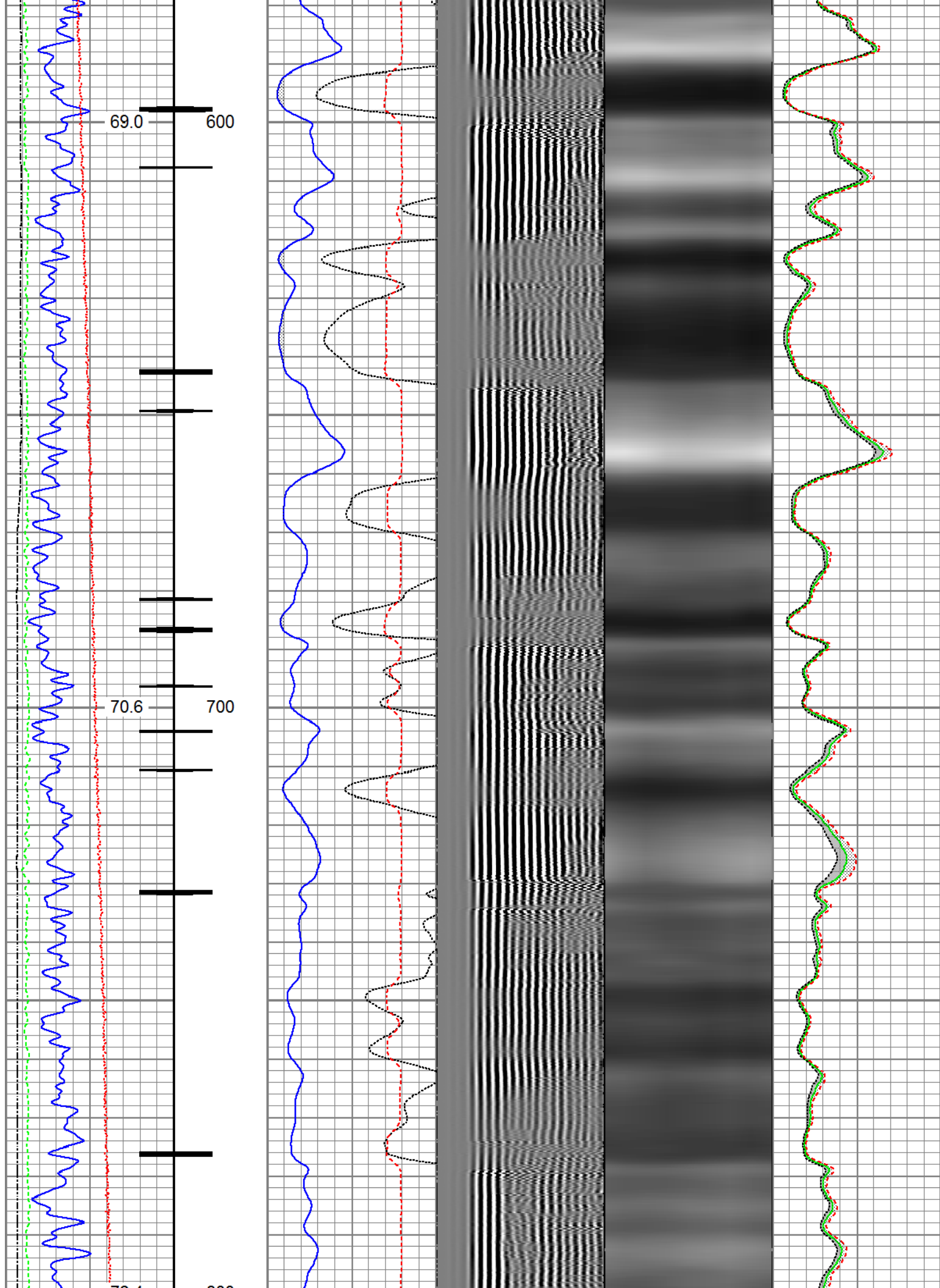
Recorded with 2800 PSI Surface Induced Pressure

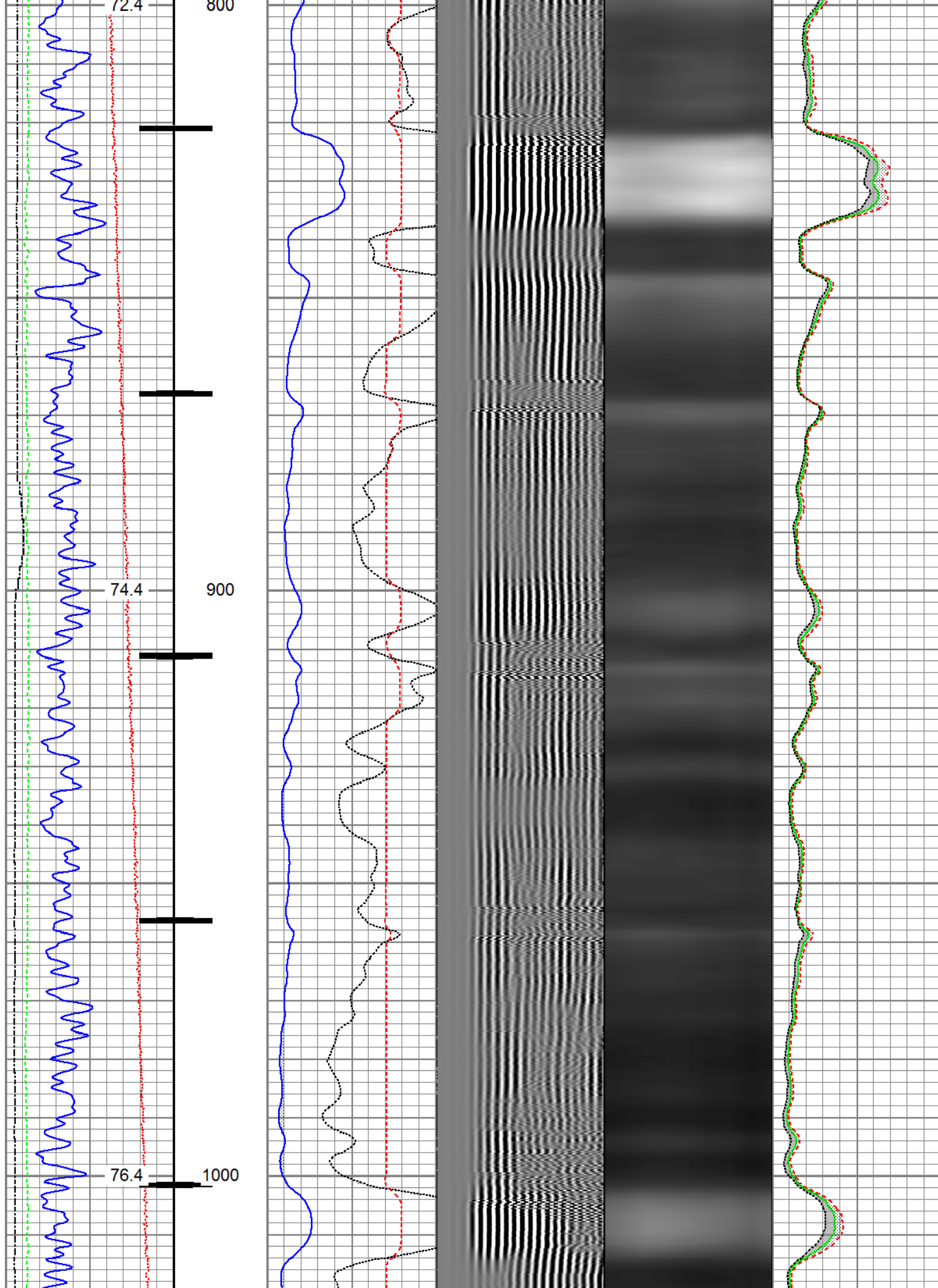
<div>Gamma Ray</div> <div>0 (GAPI) 120</div> <div>Casing Collar Locator</div>	<div>3' Amplitude</div> <div>0 (mV) 100</div> <div>3' Amplitude x 5</div> <div>0 (mV) 20</div> <div>3' Travel Time</div> <div>650 (usec) 150</div>	<div>5' Variable Density Log</div> <div>200 1200</div>	<div>Sector Map</div>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

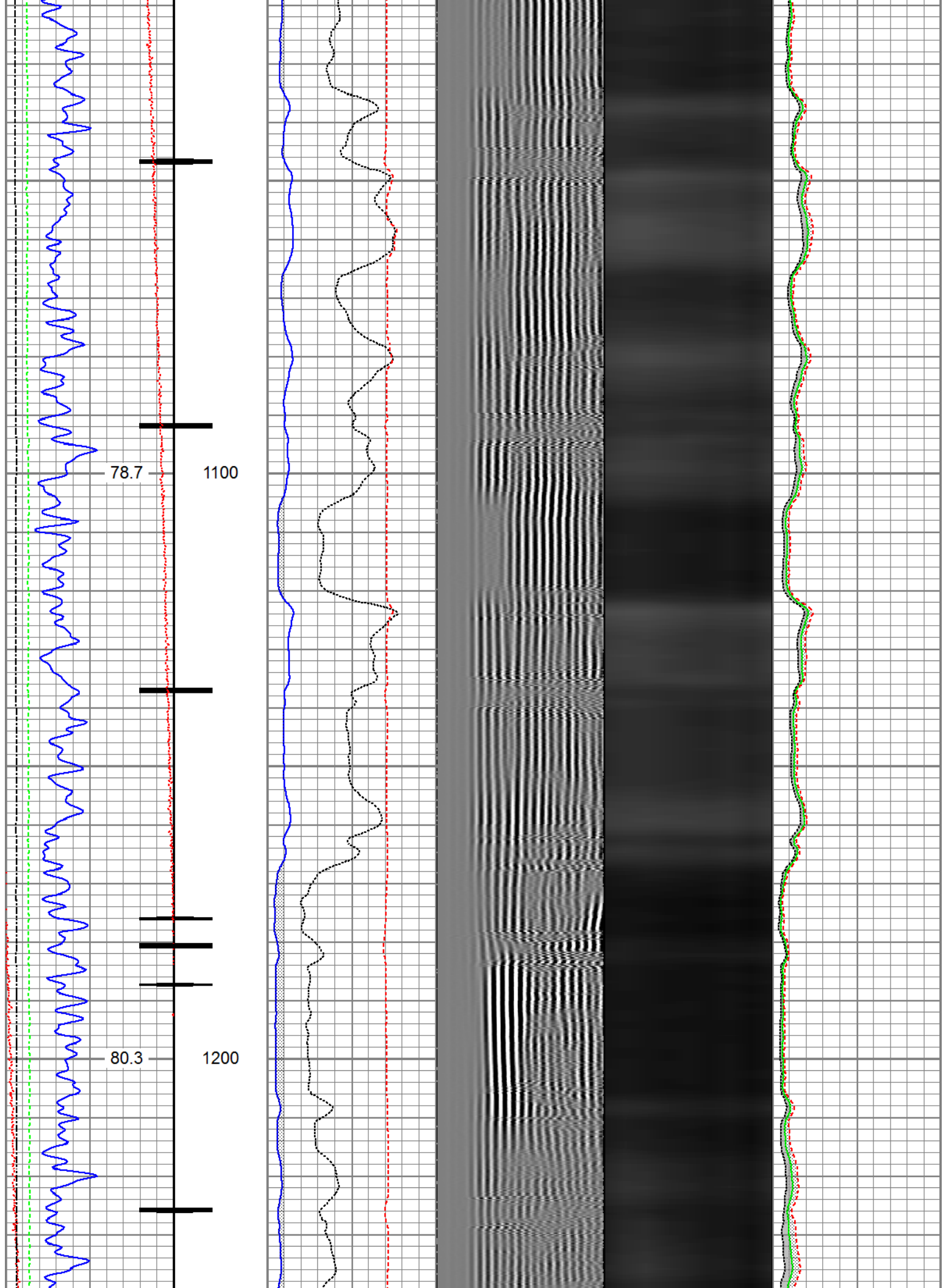


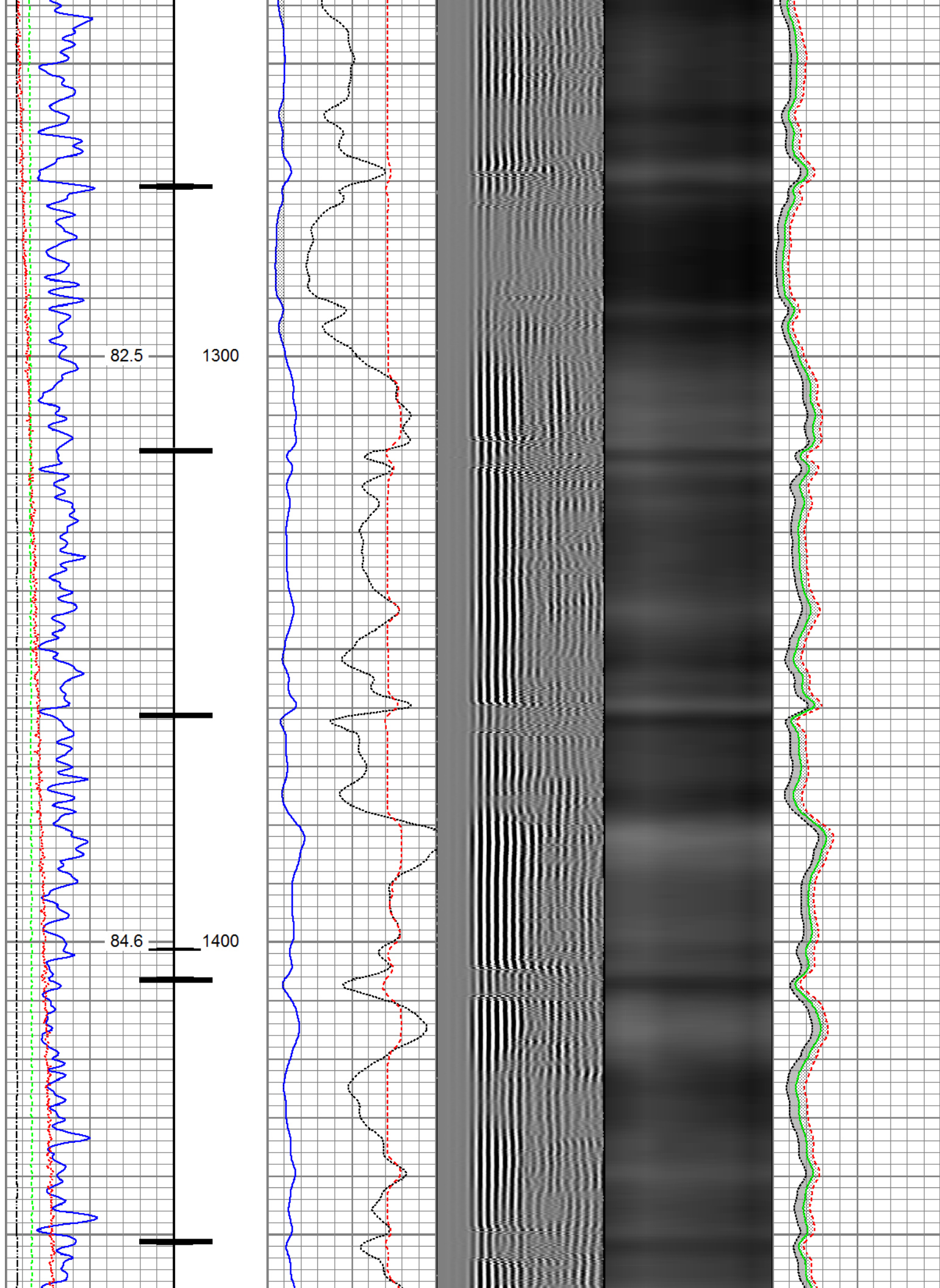


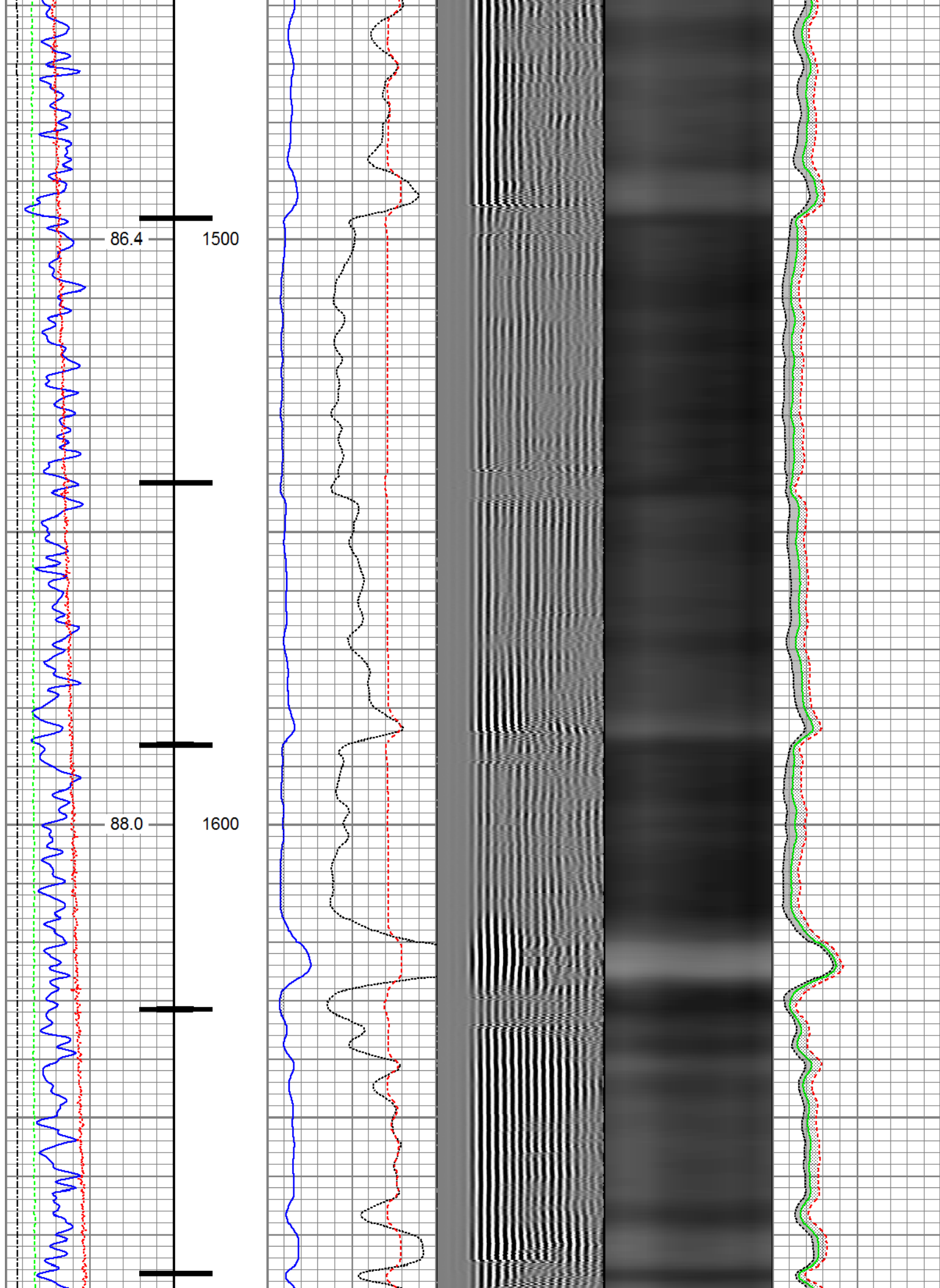


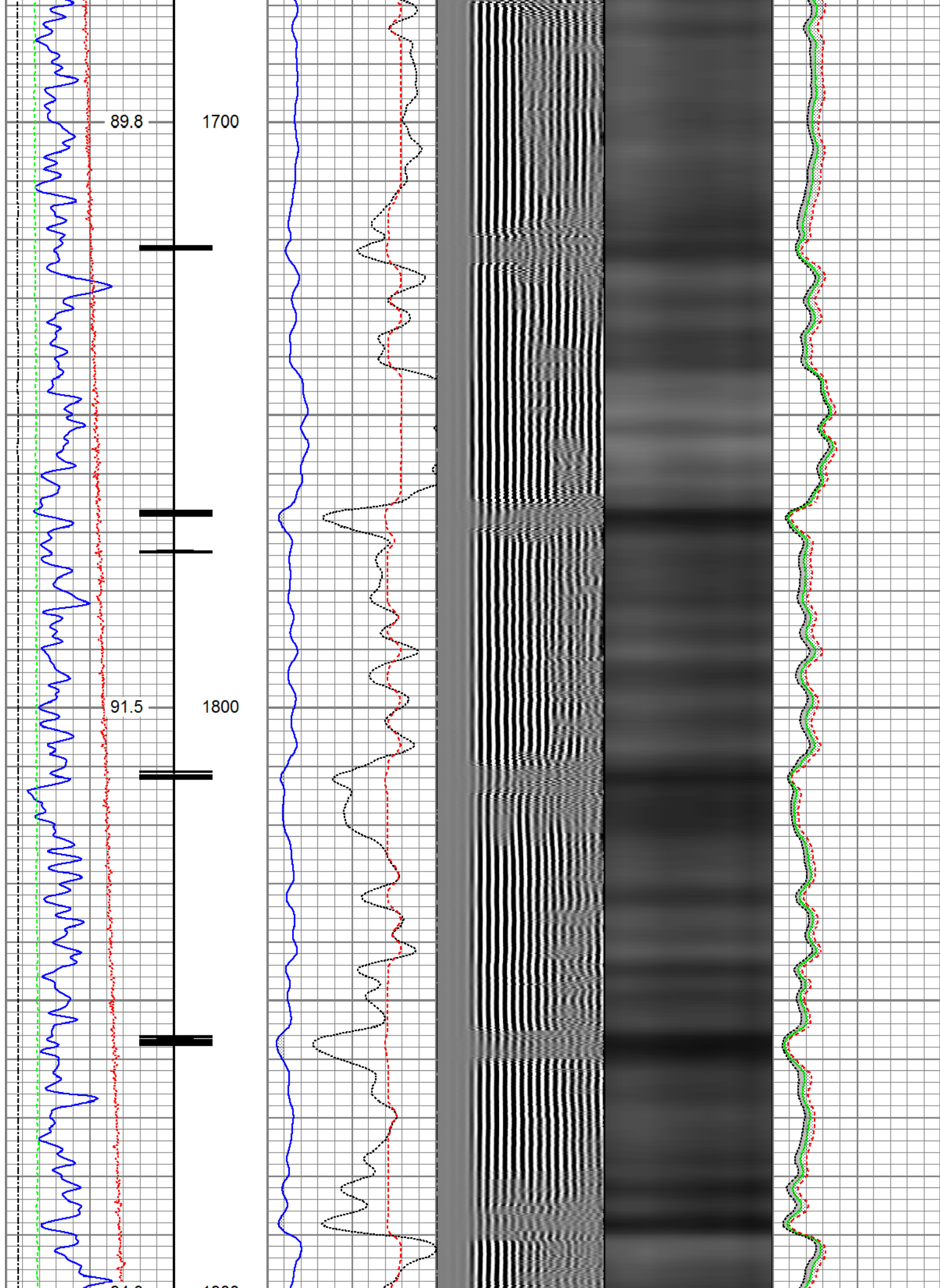


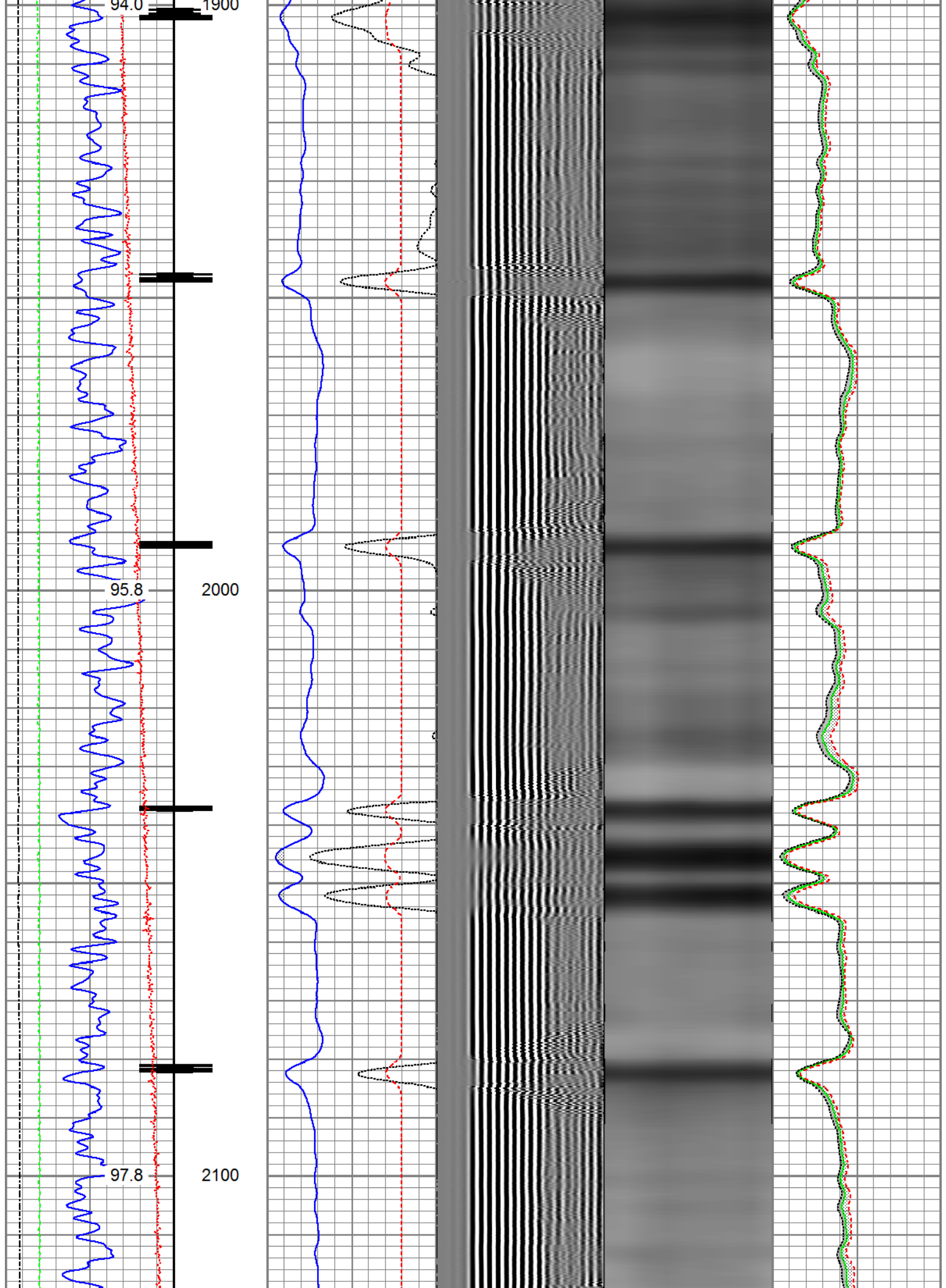


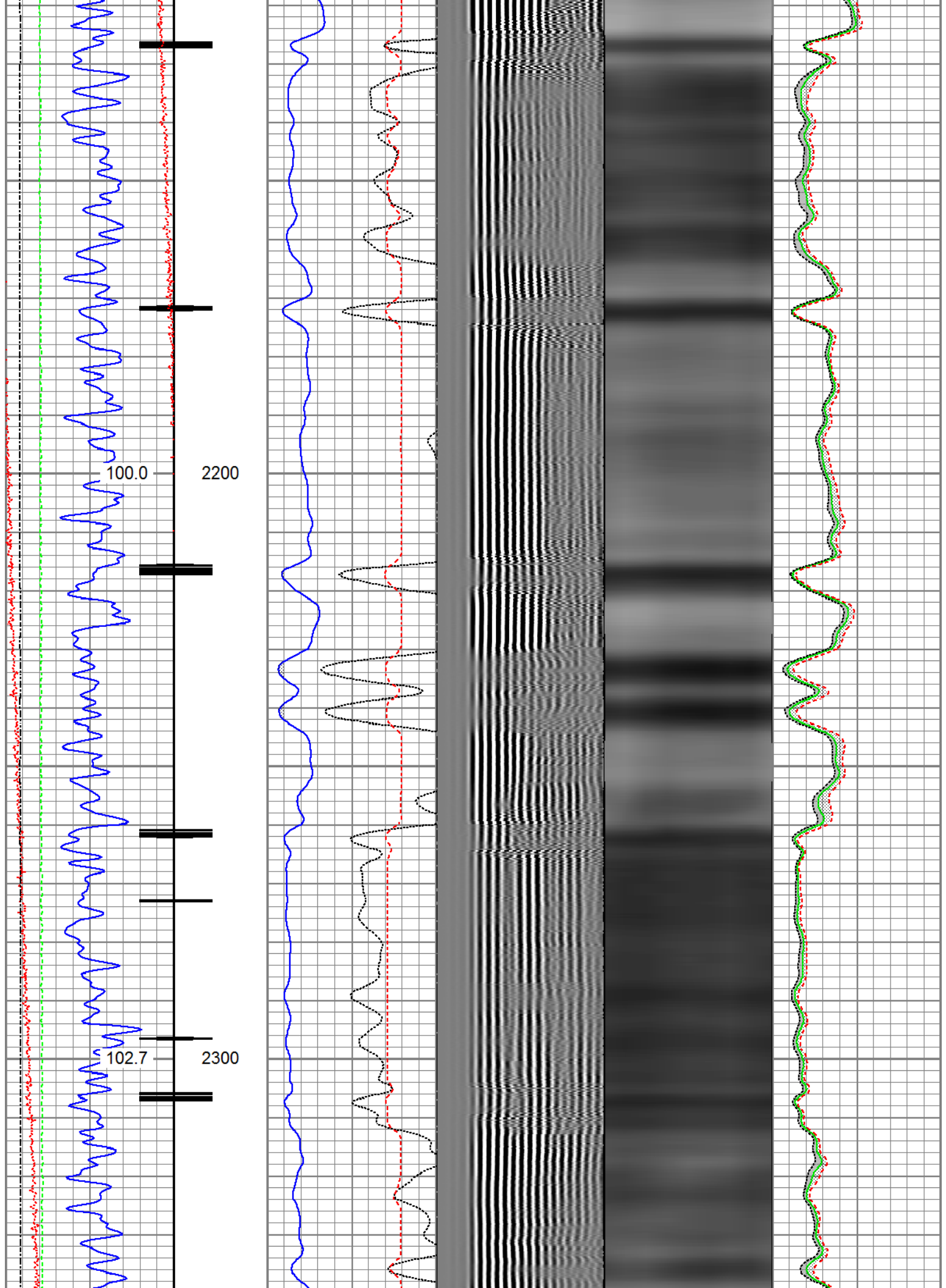


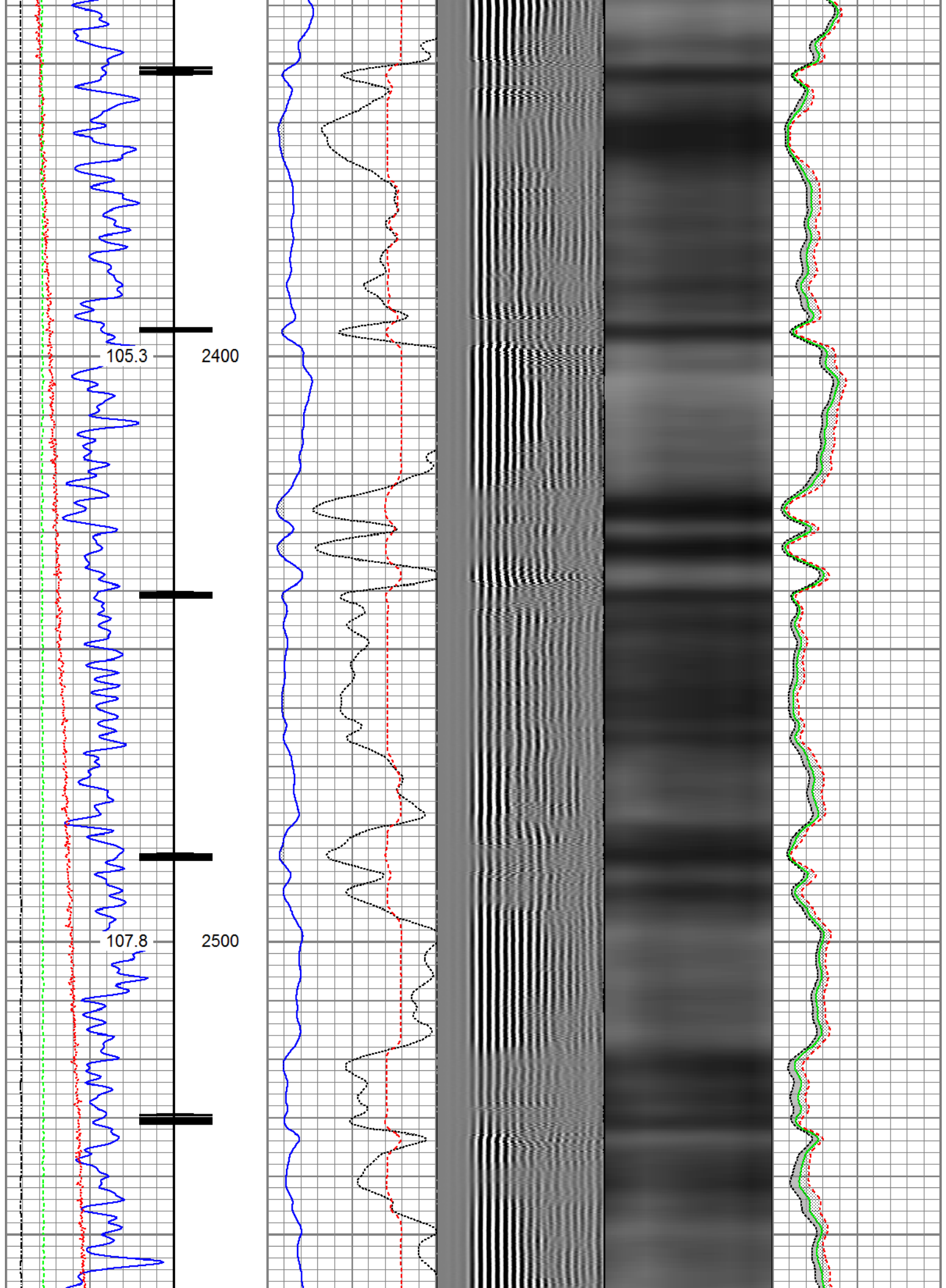


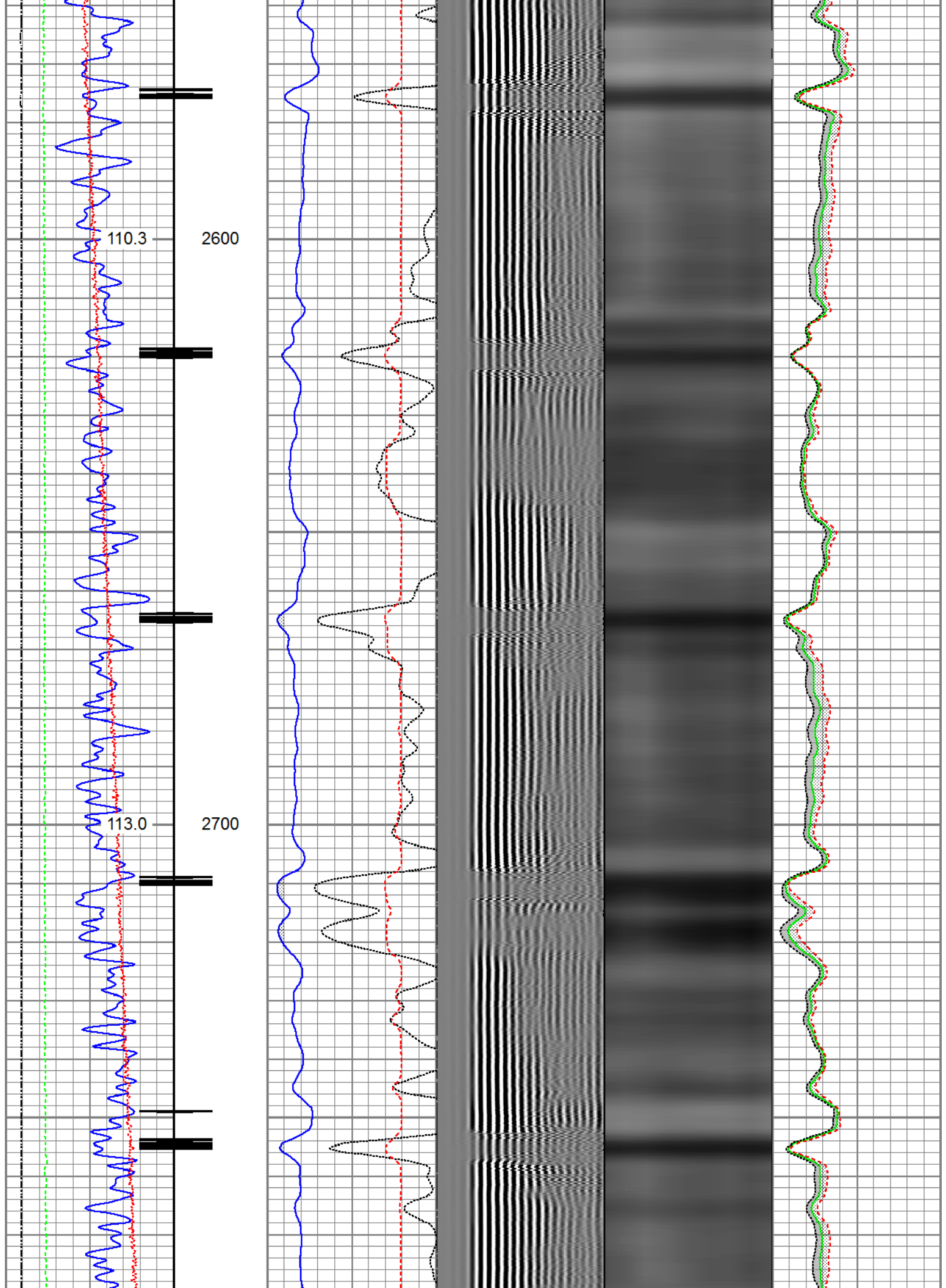


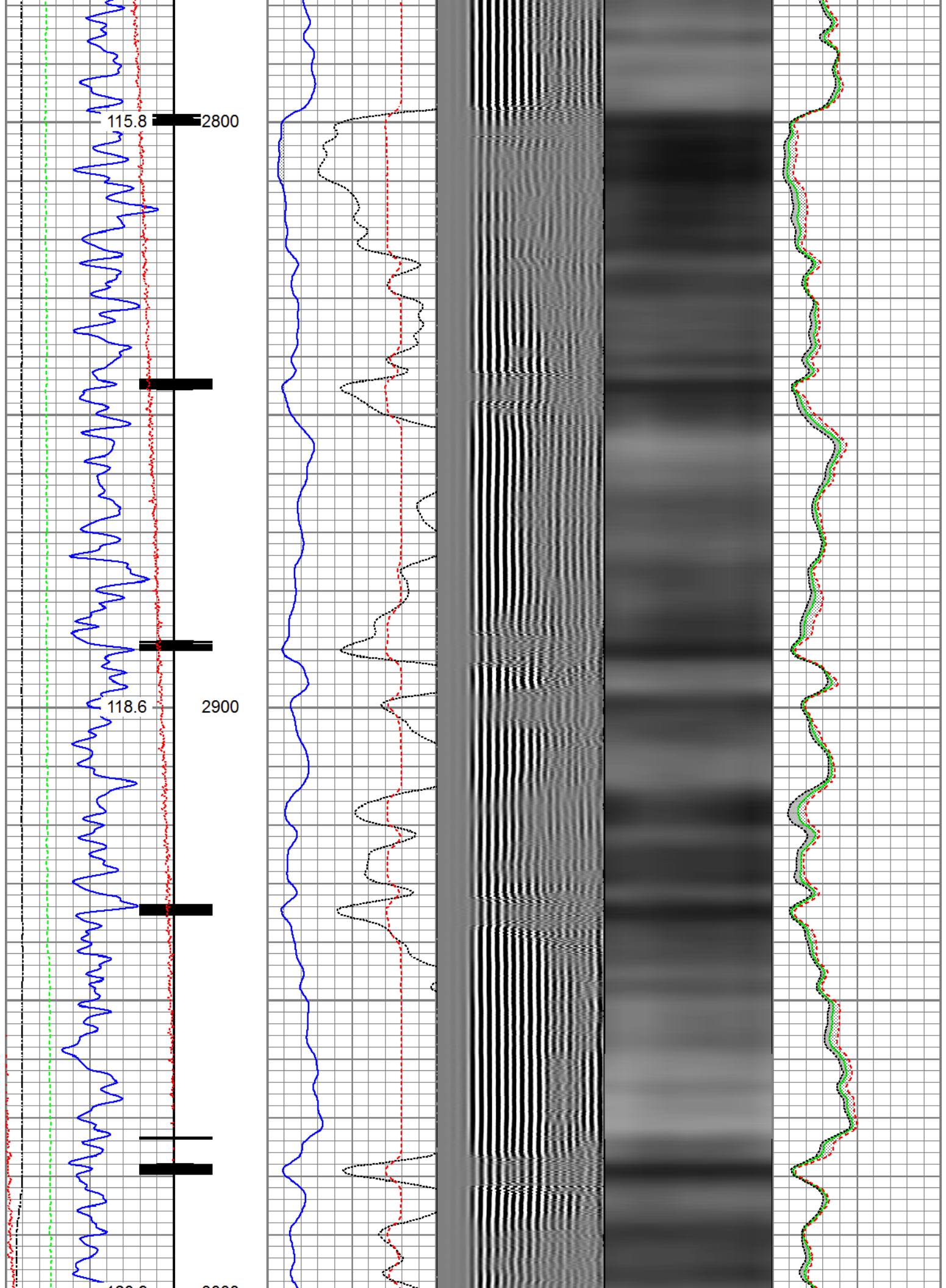


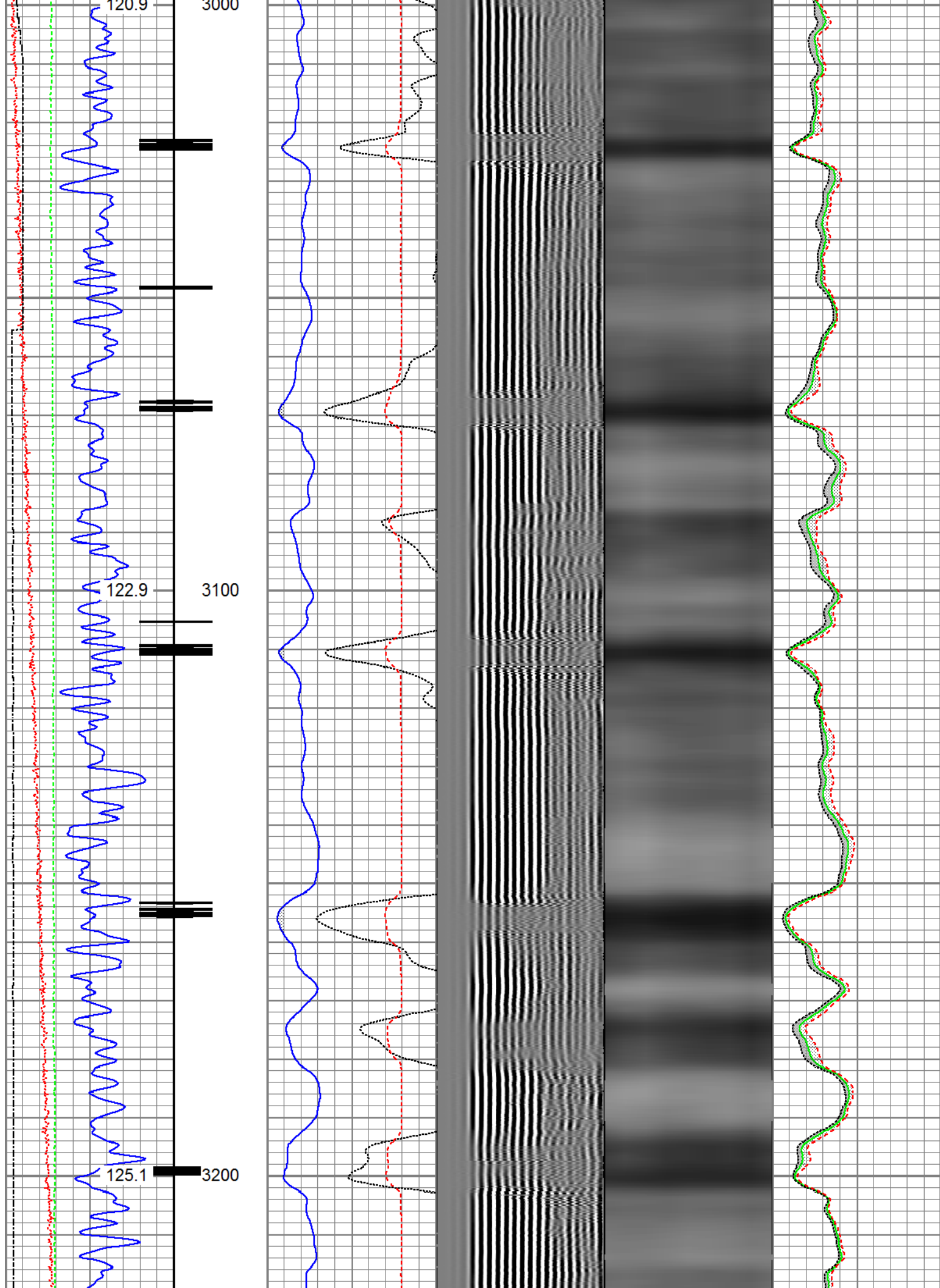


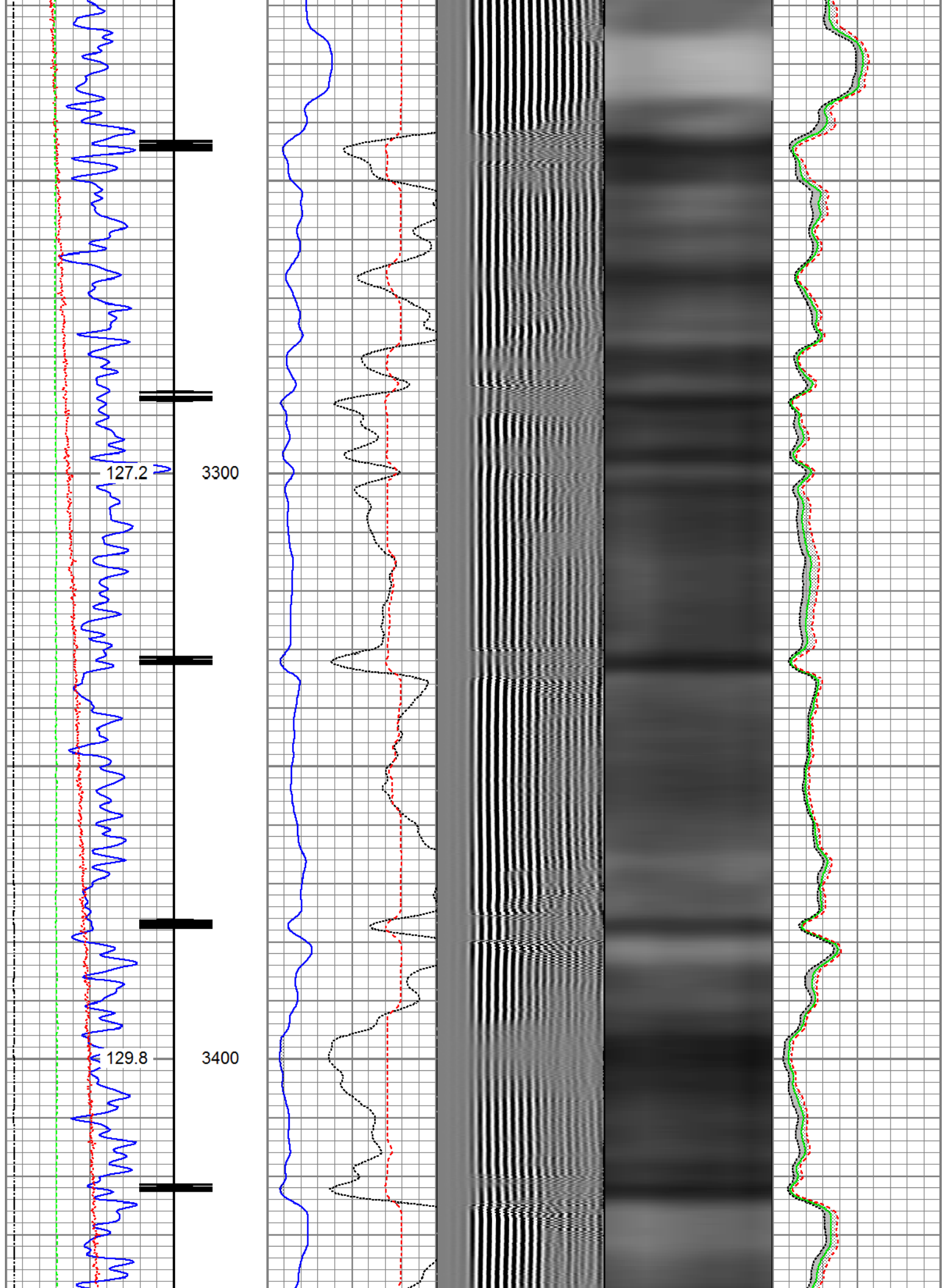


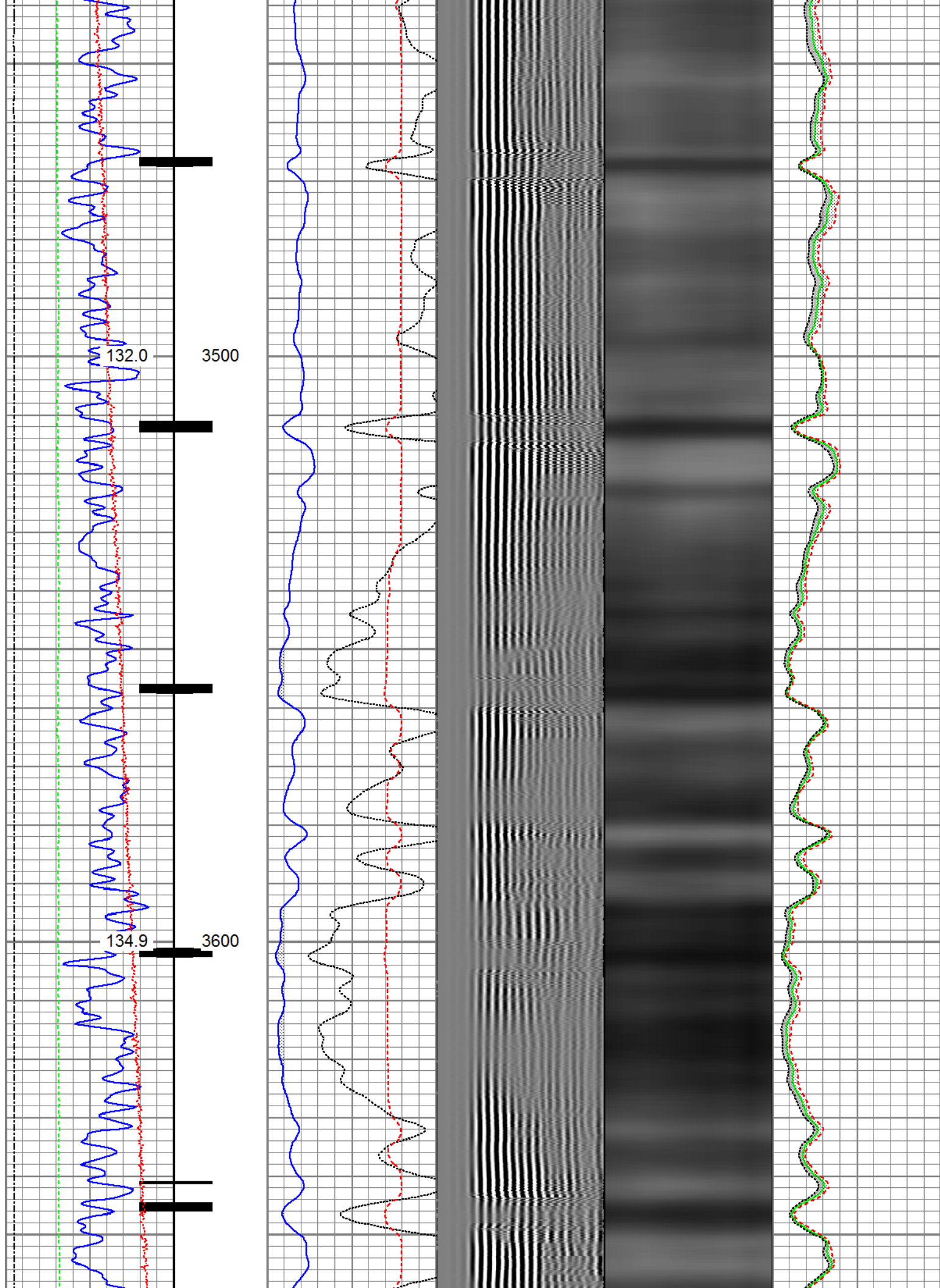


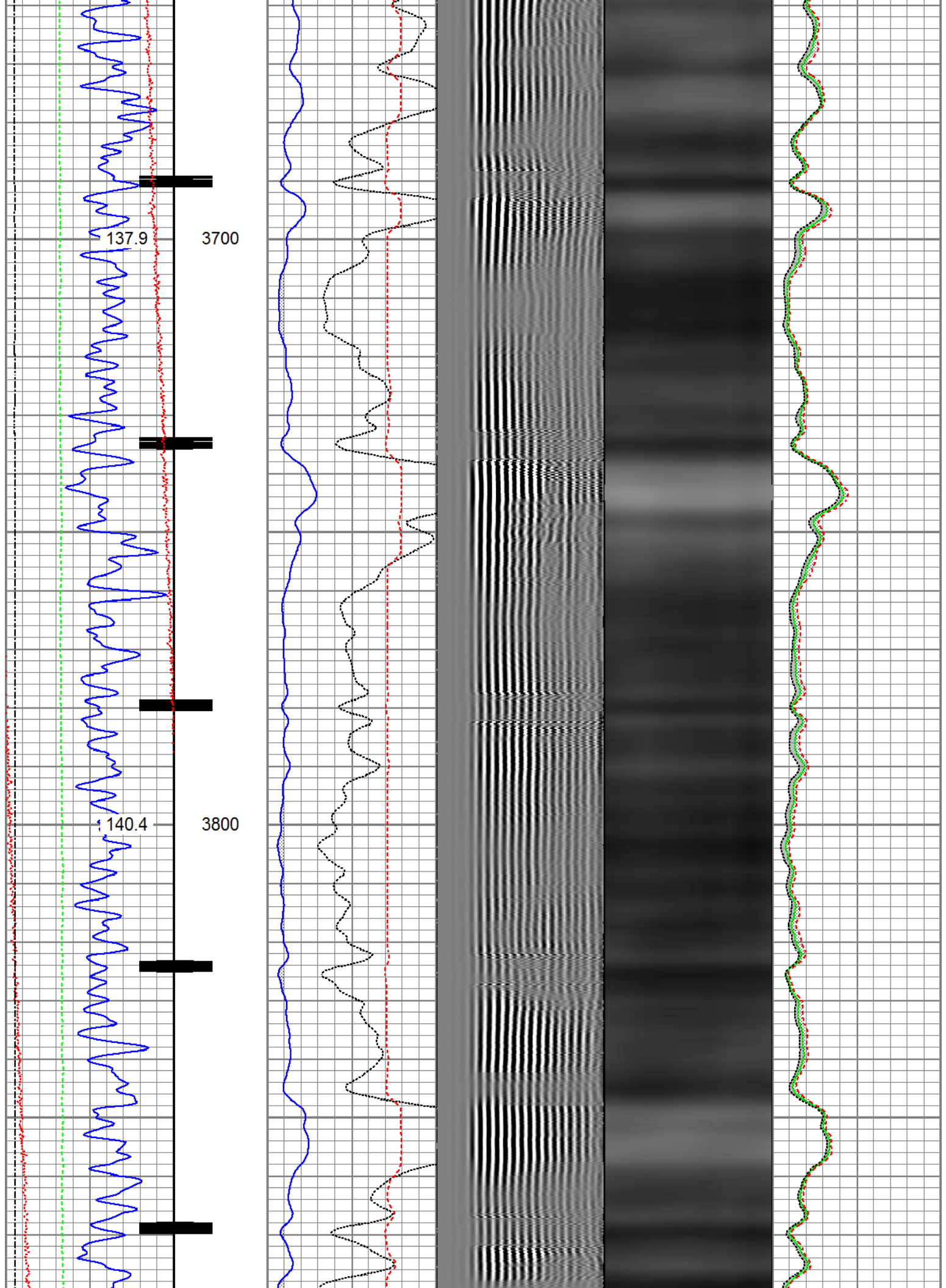


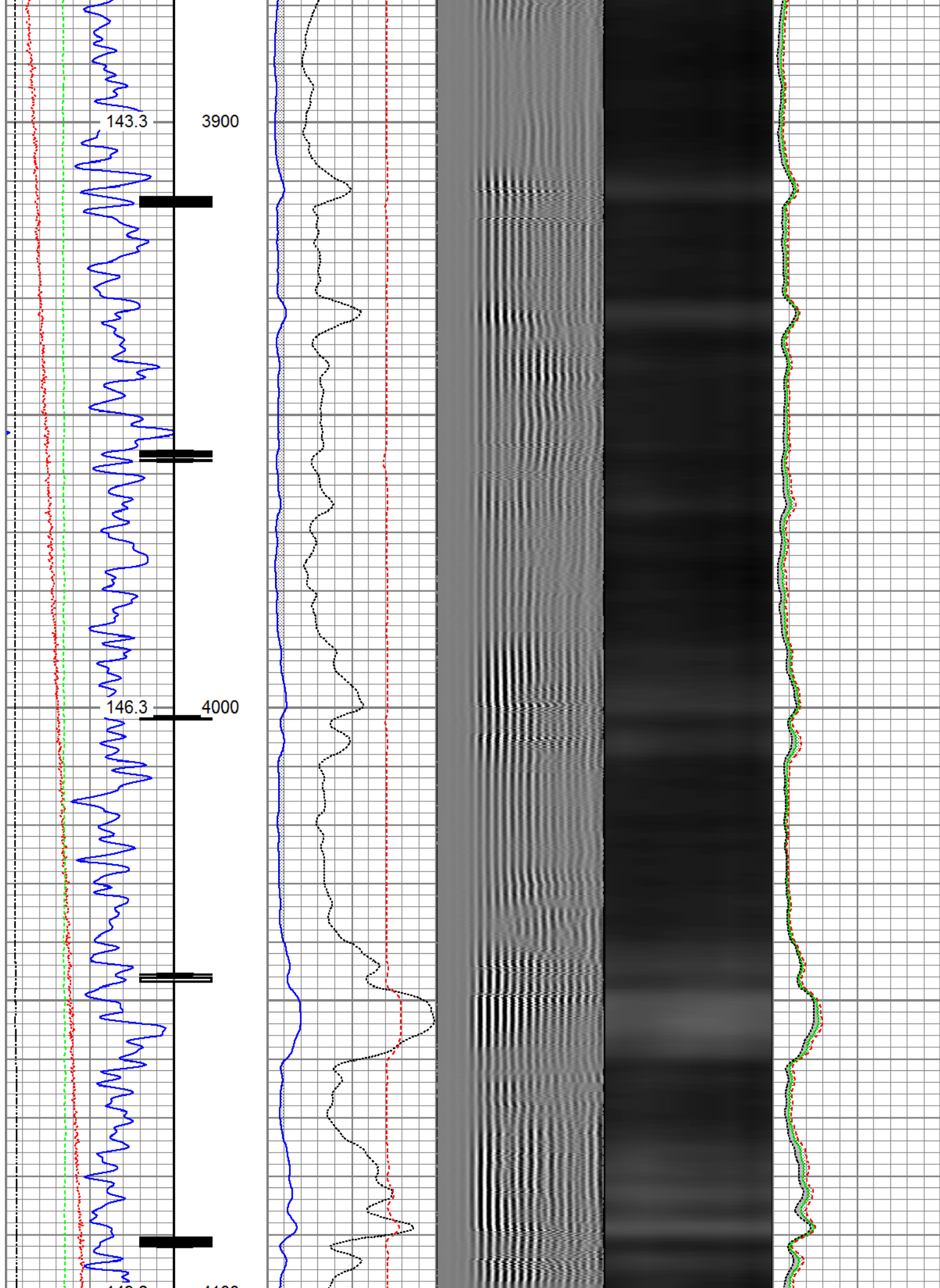


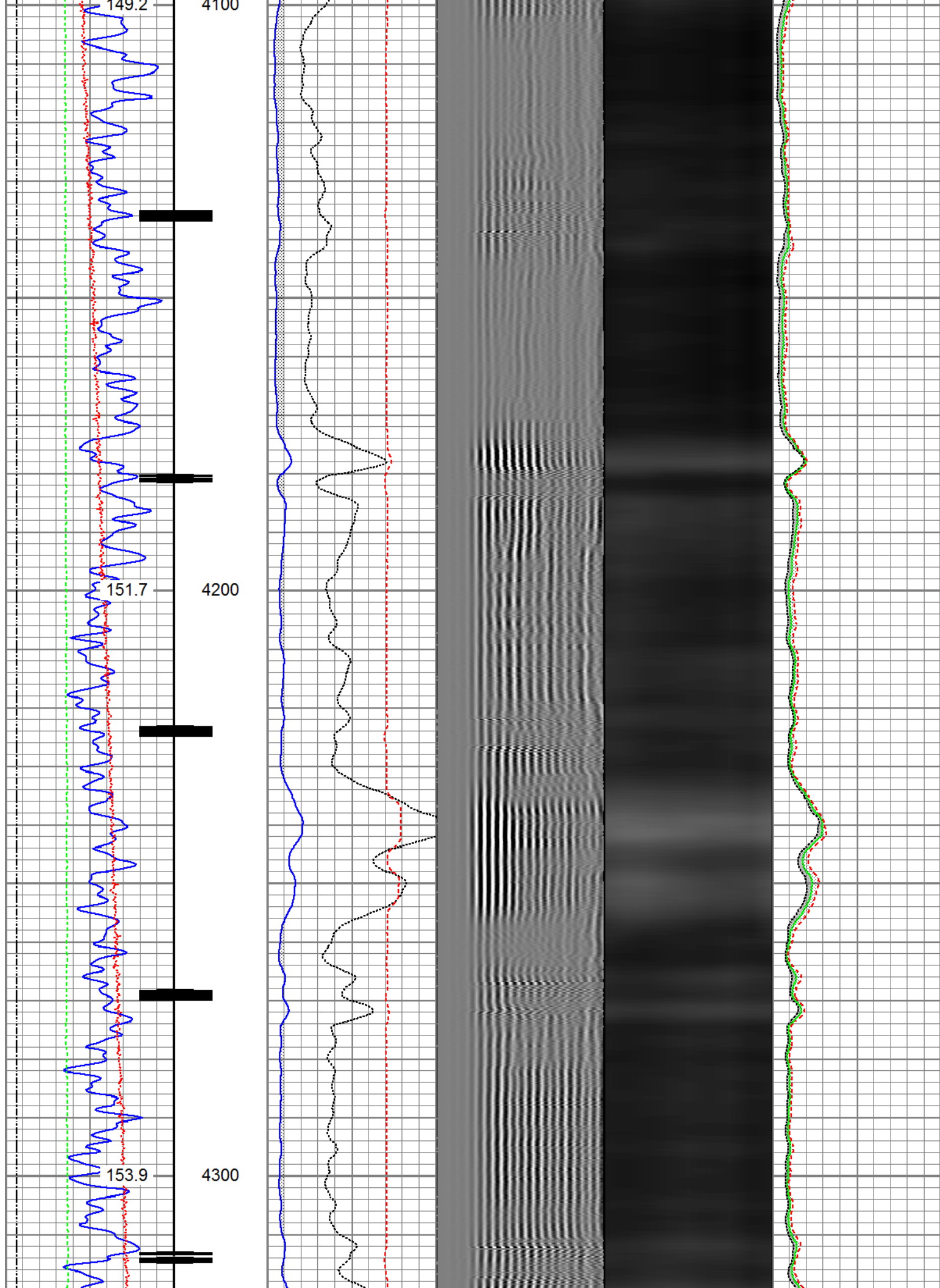


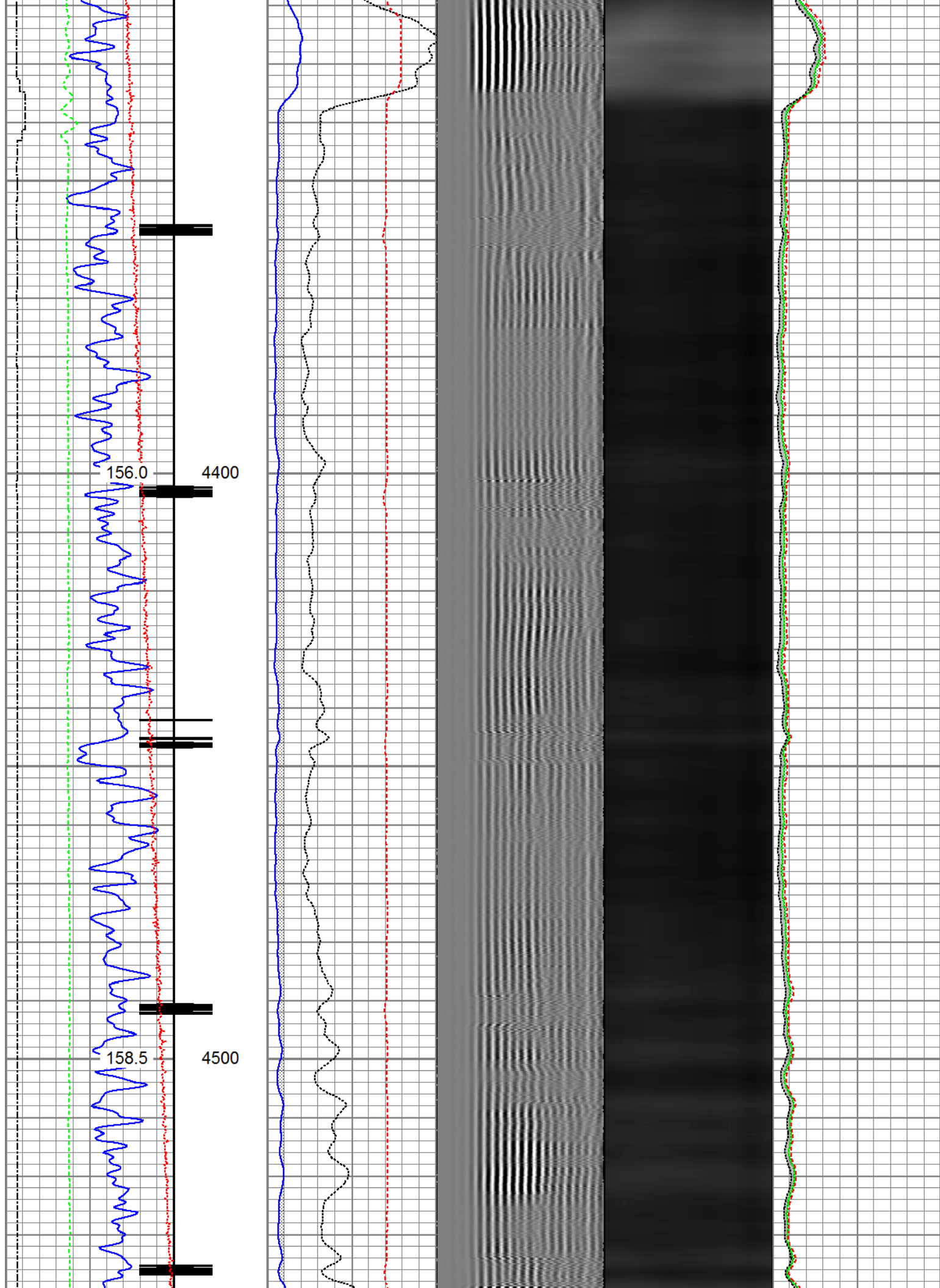


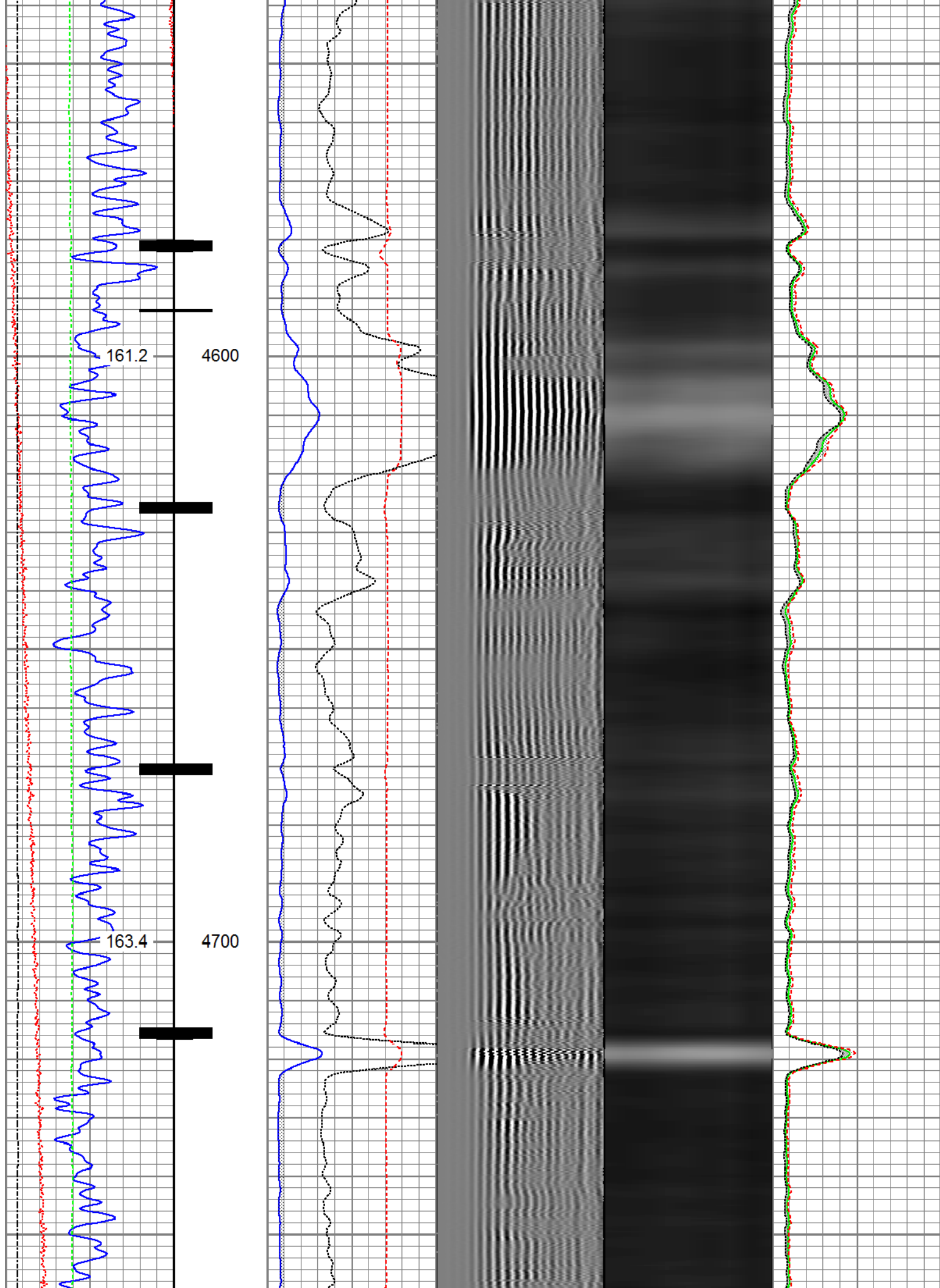


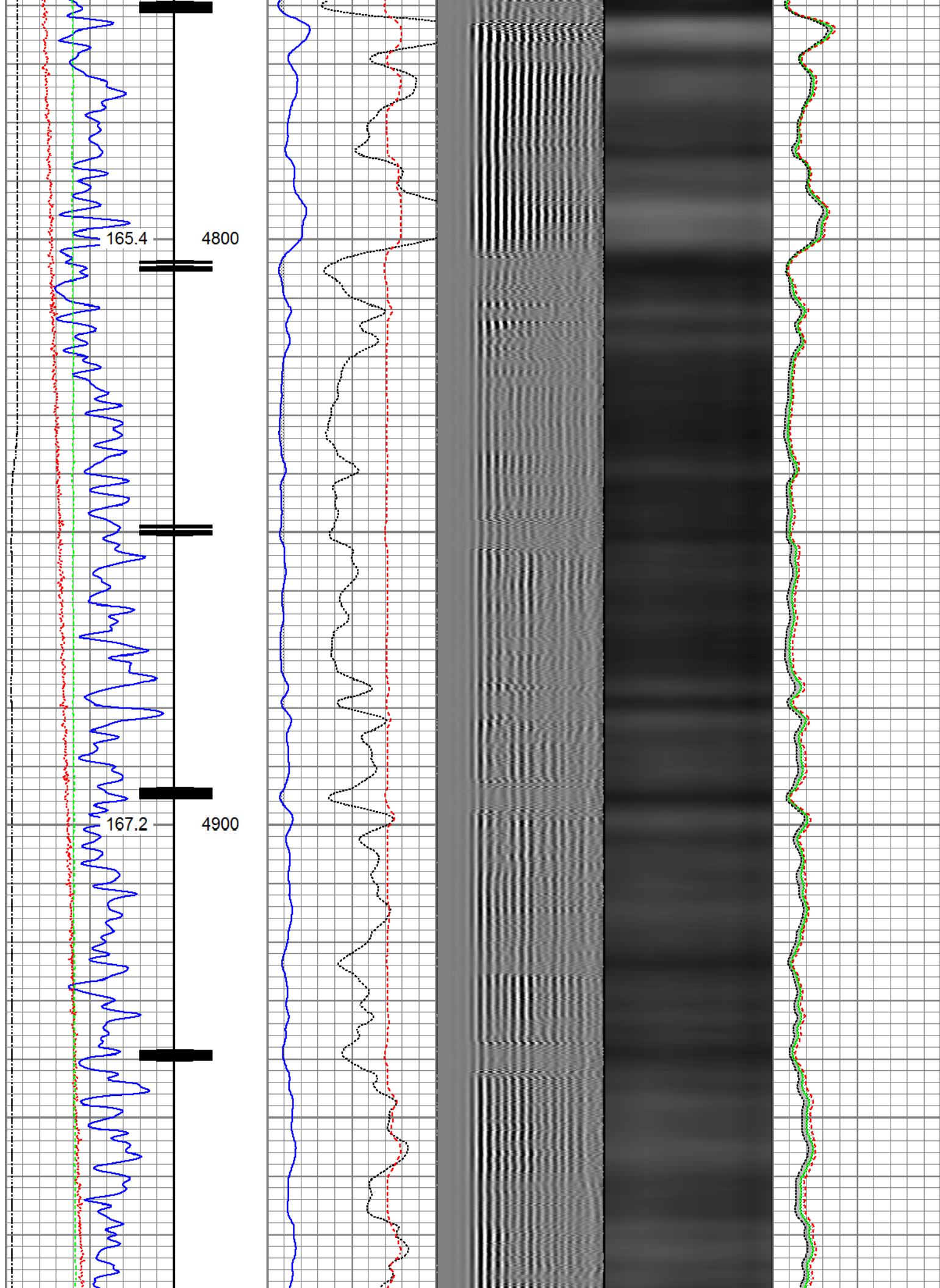


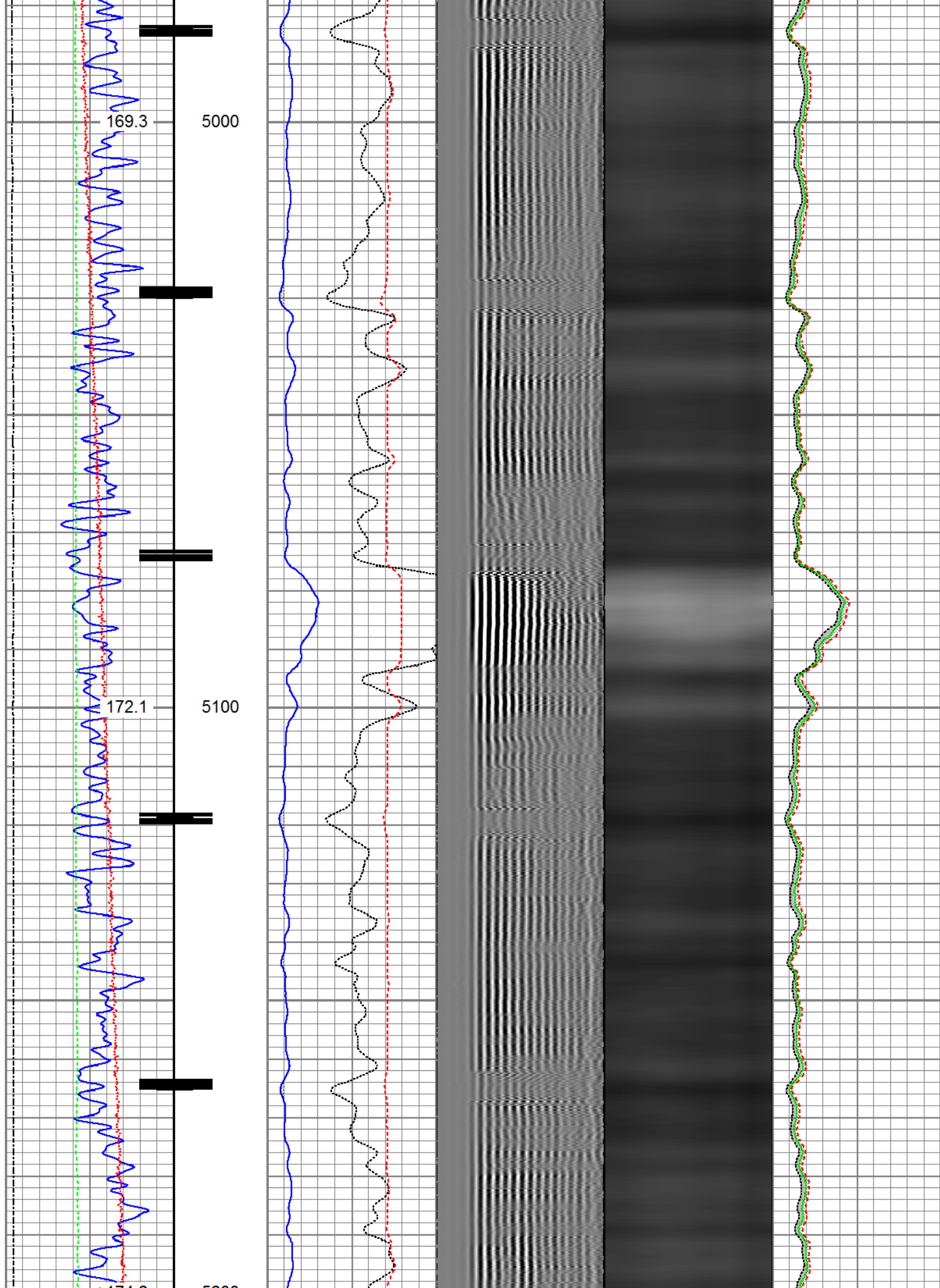


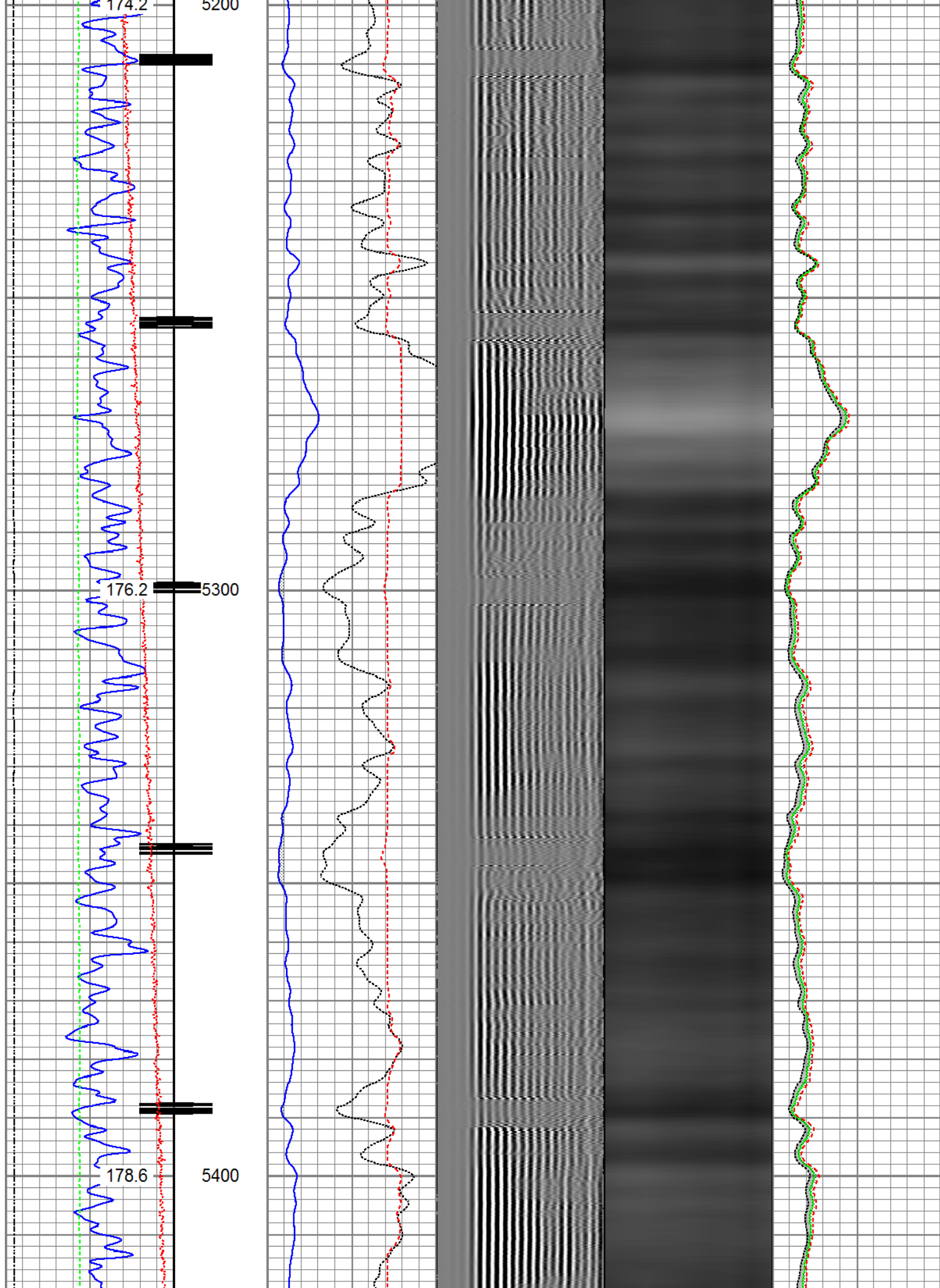


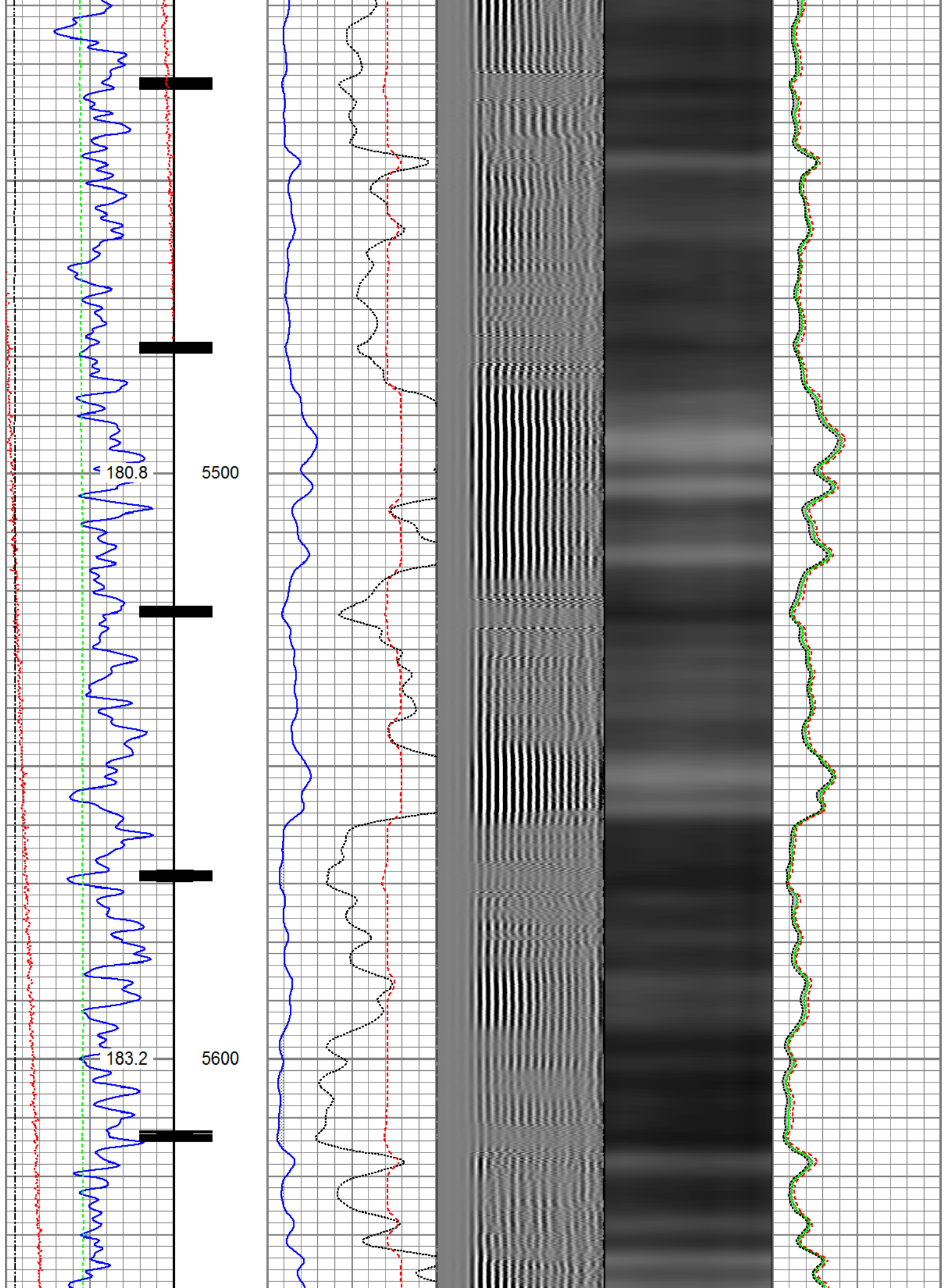


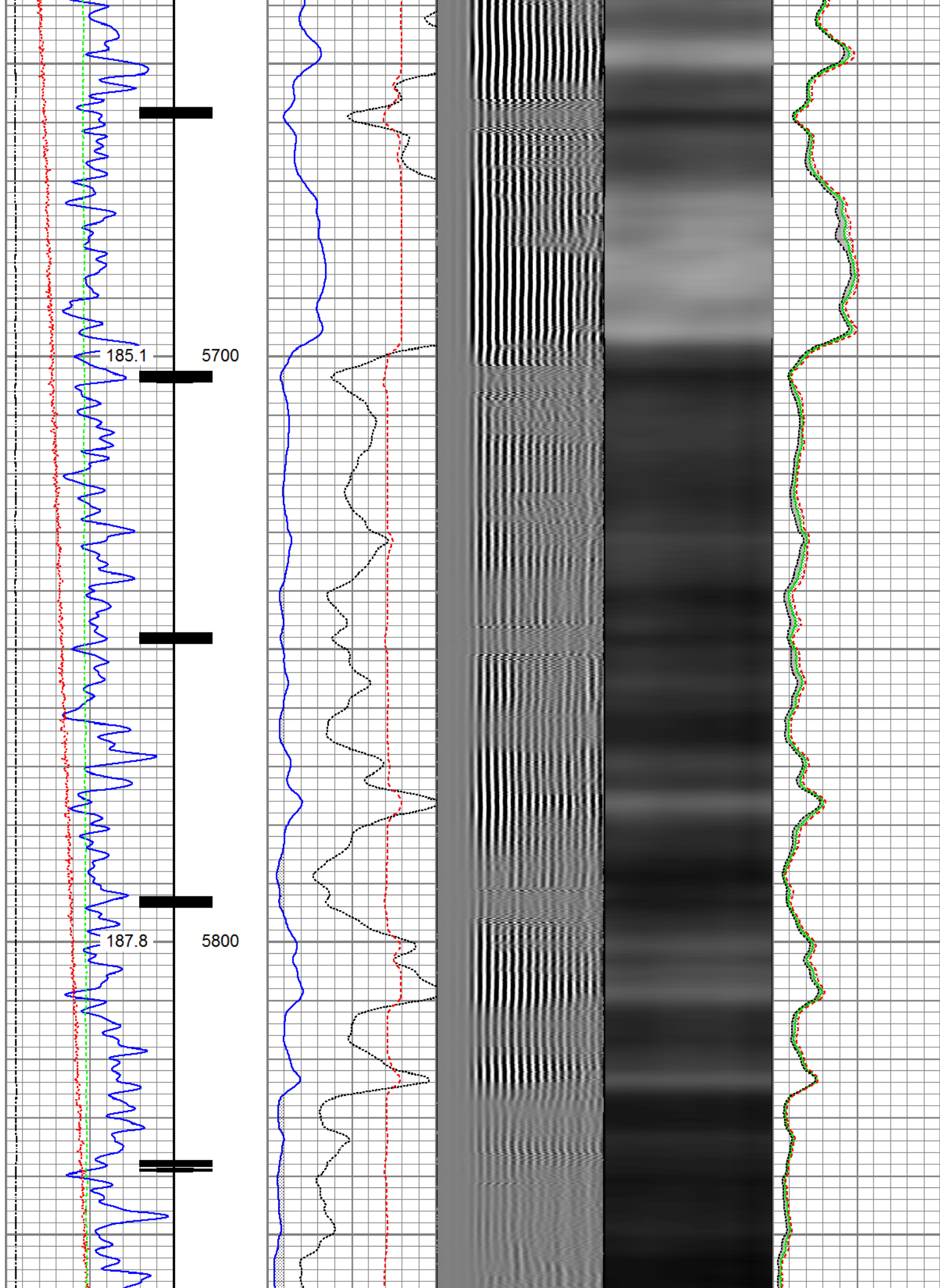


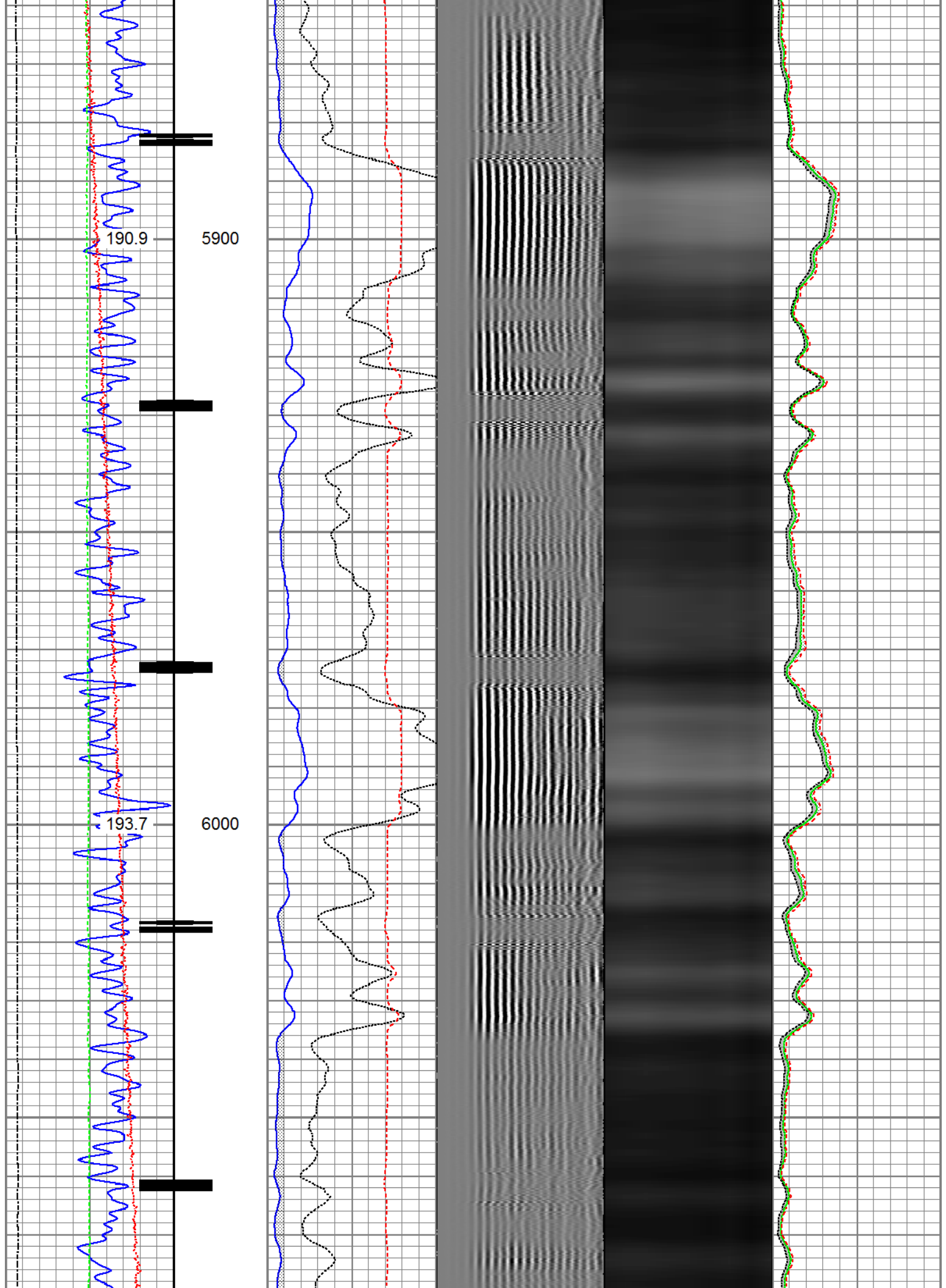


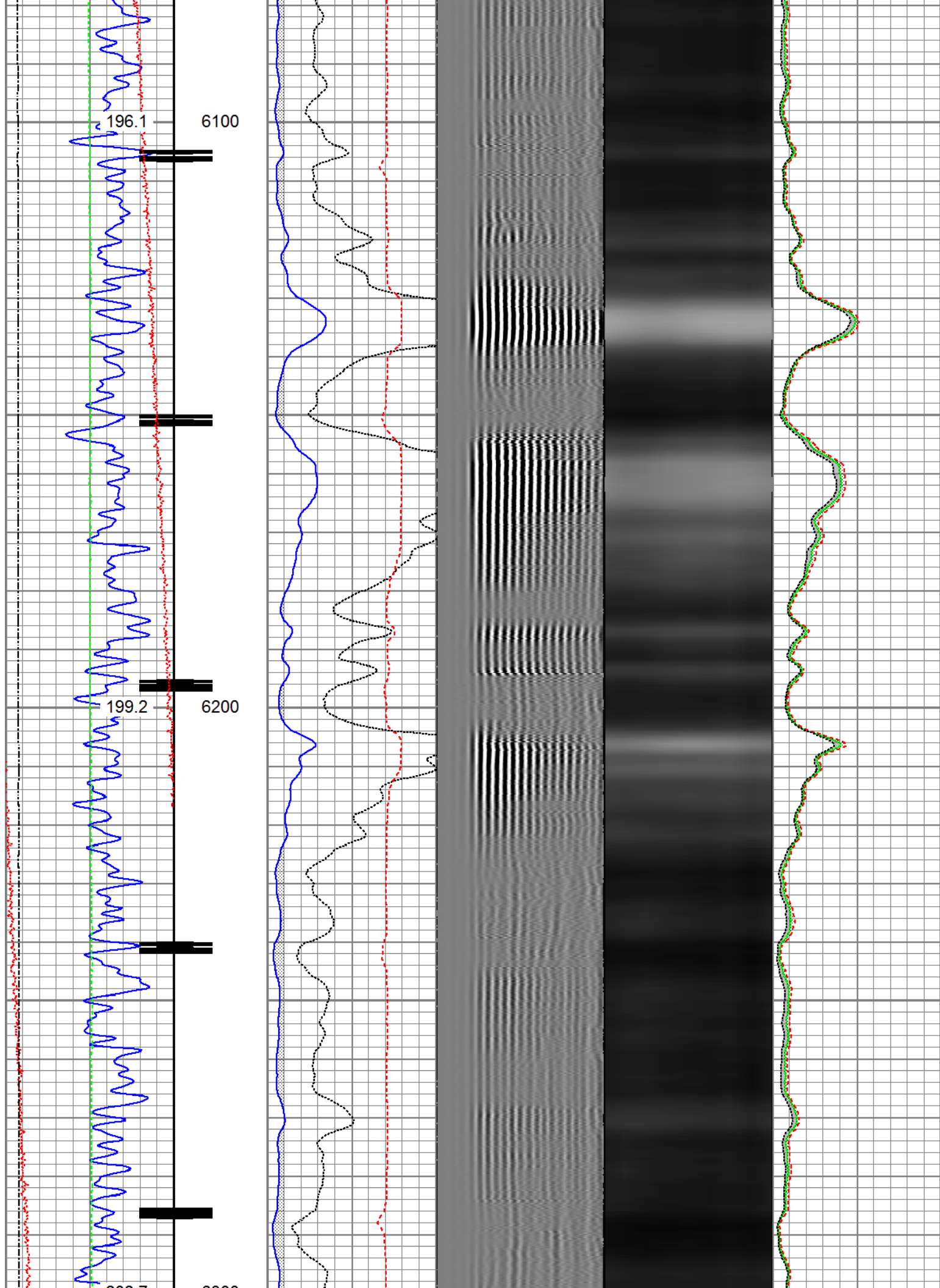


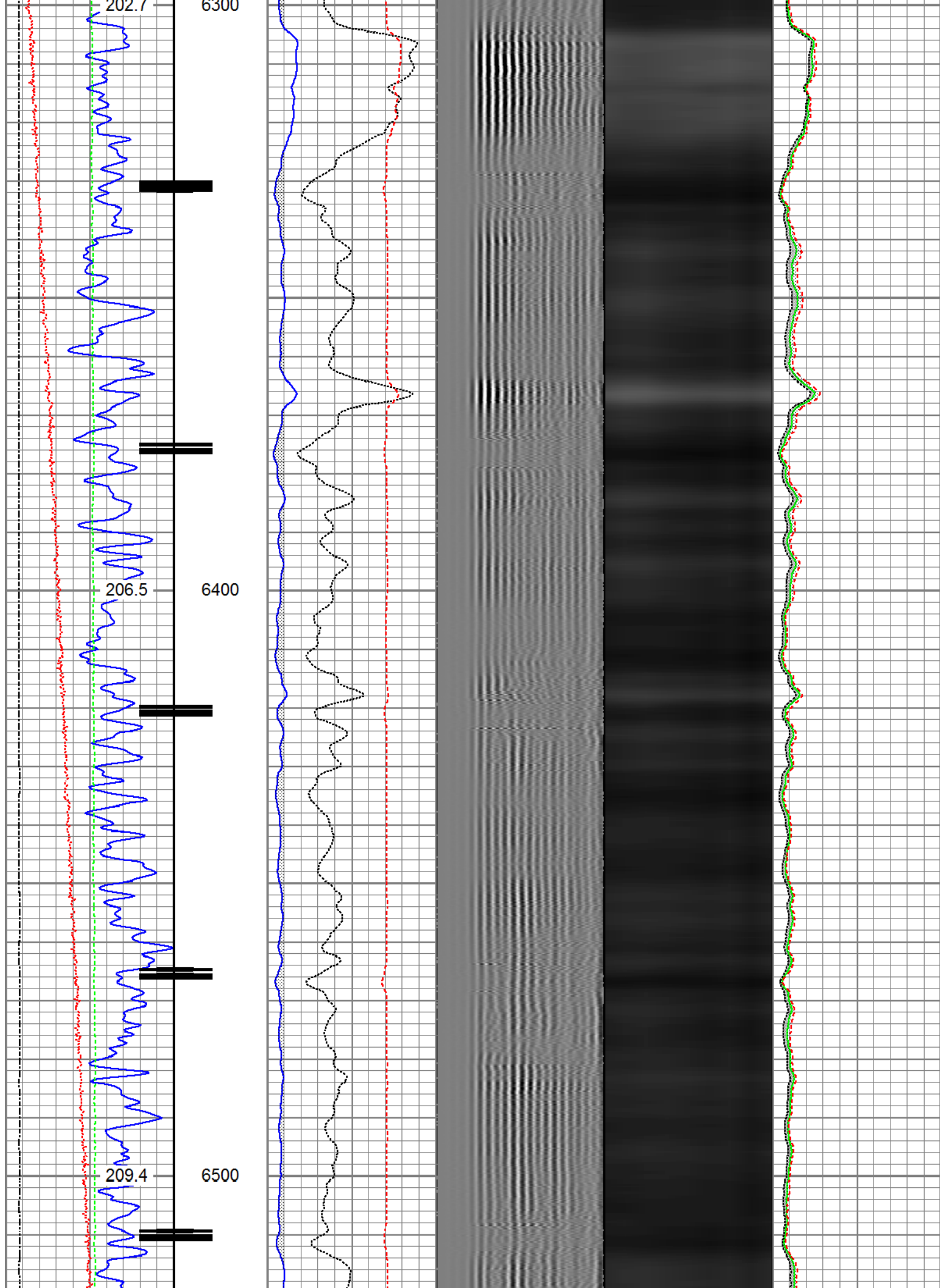


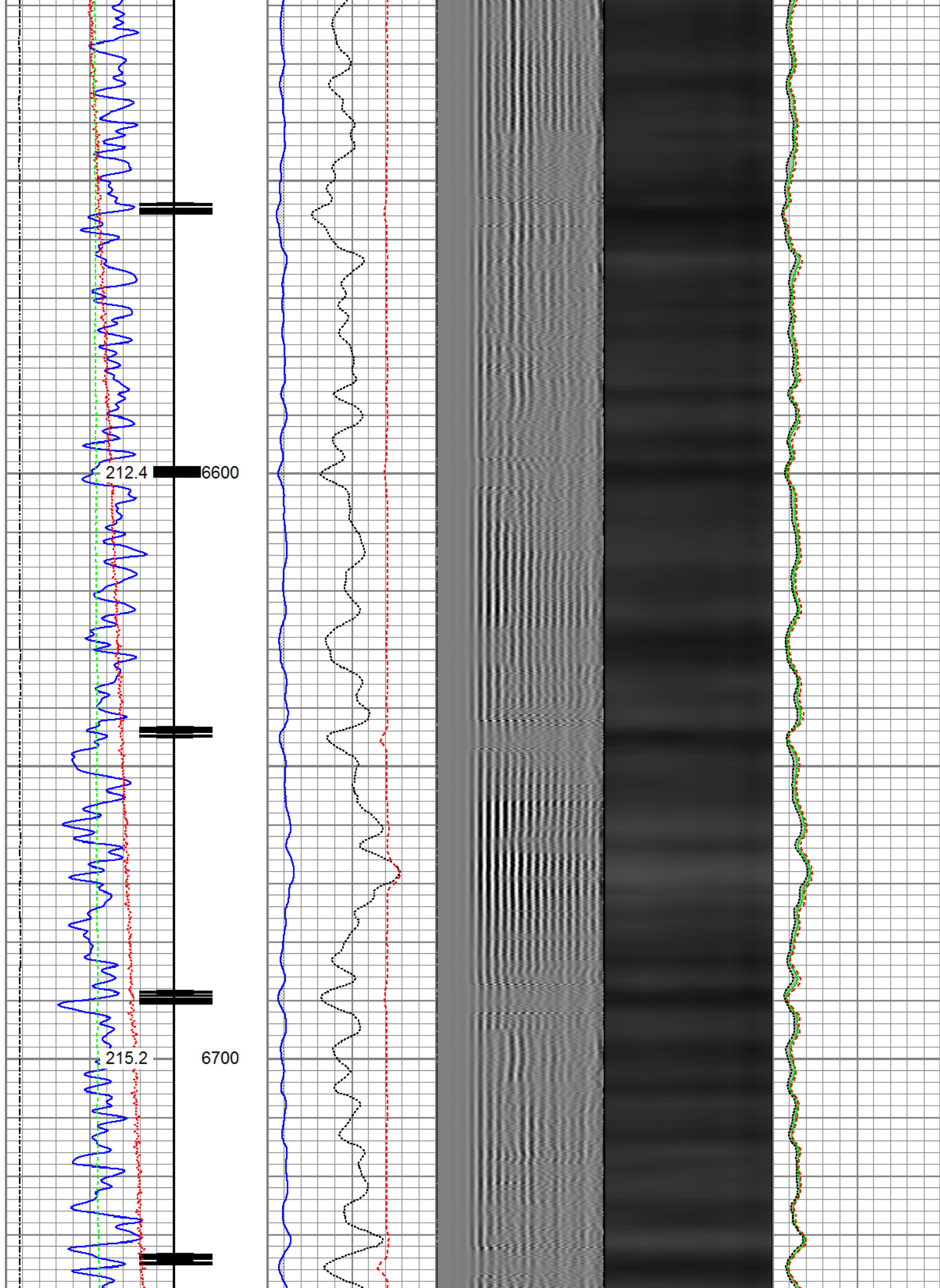


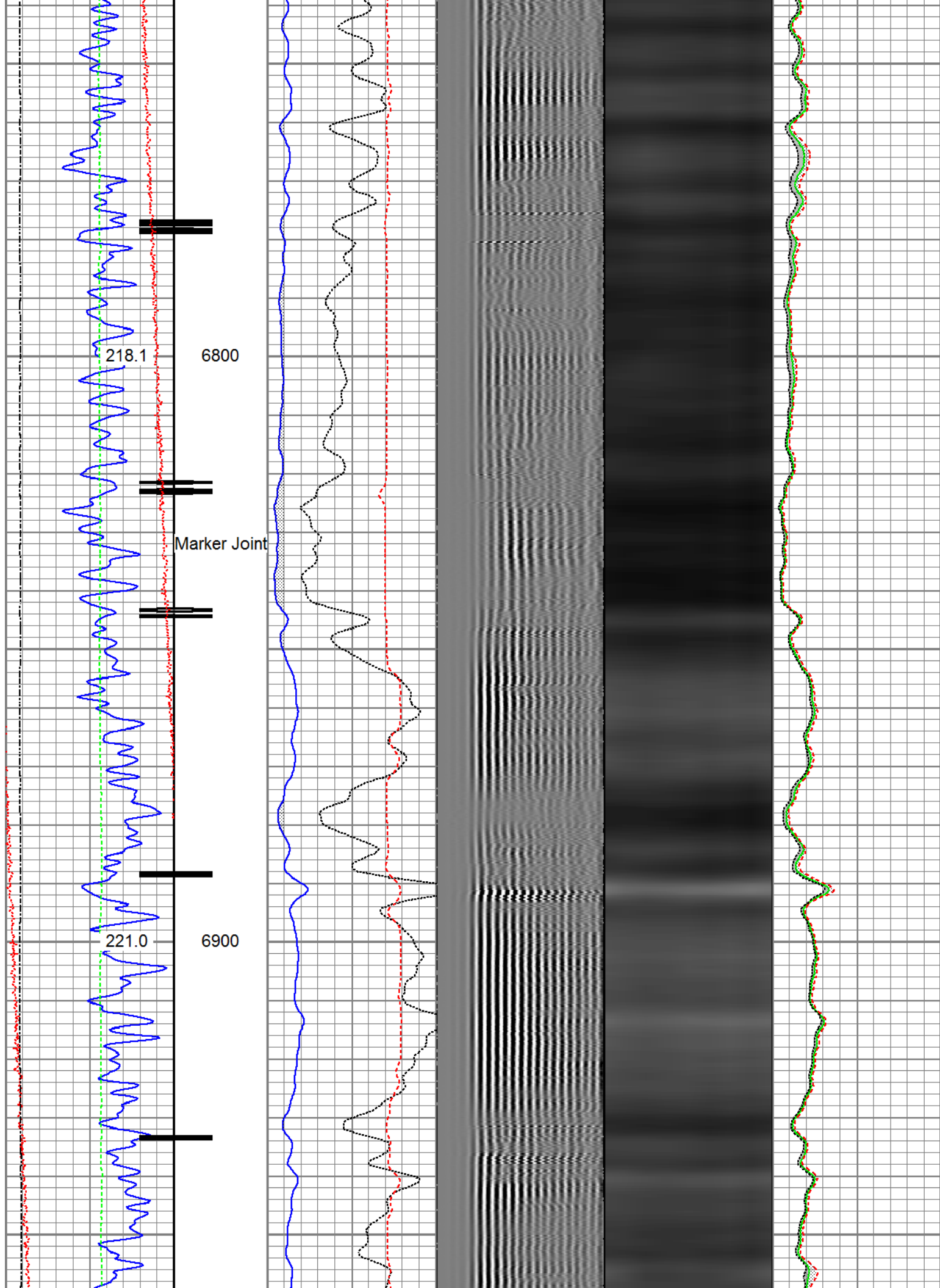


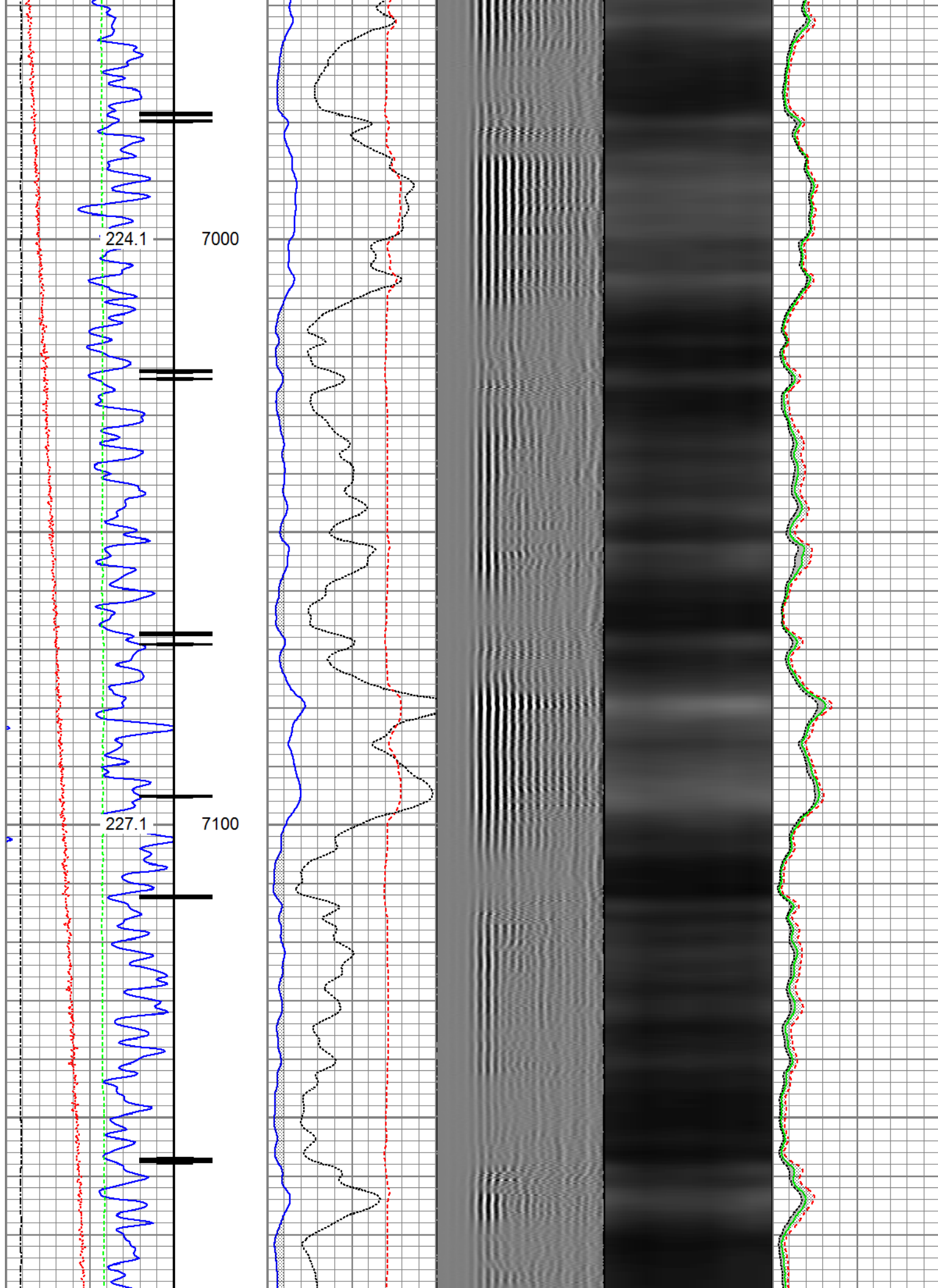


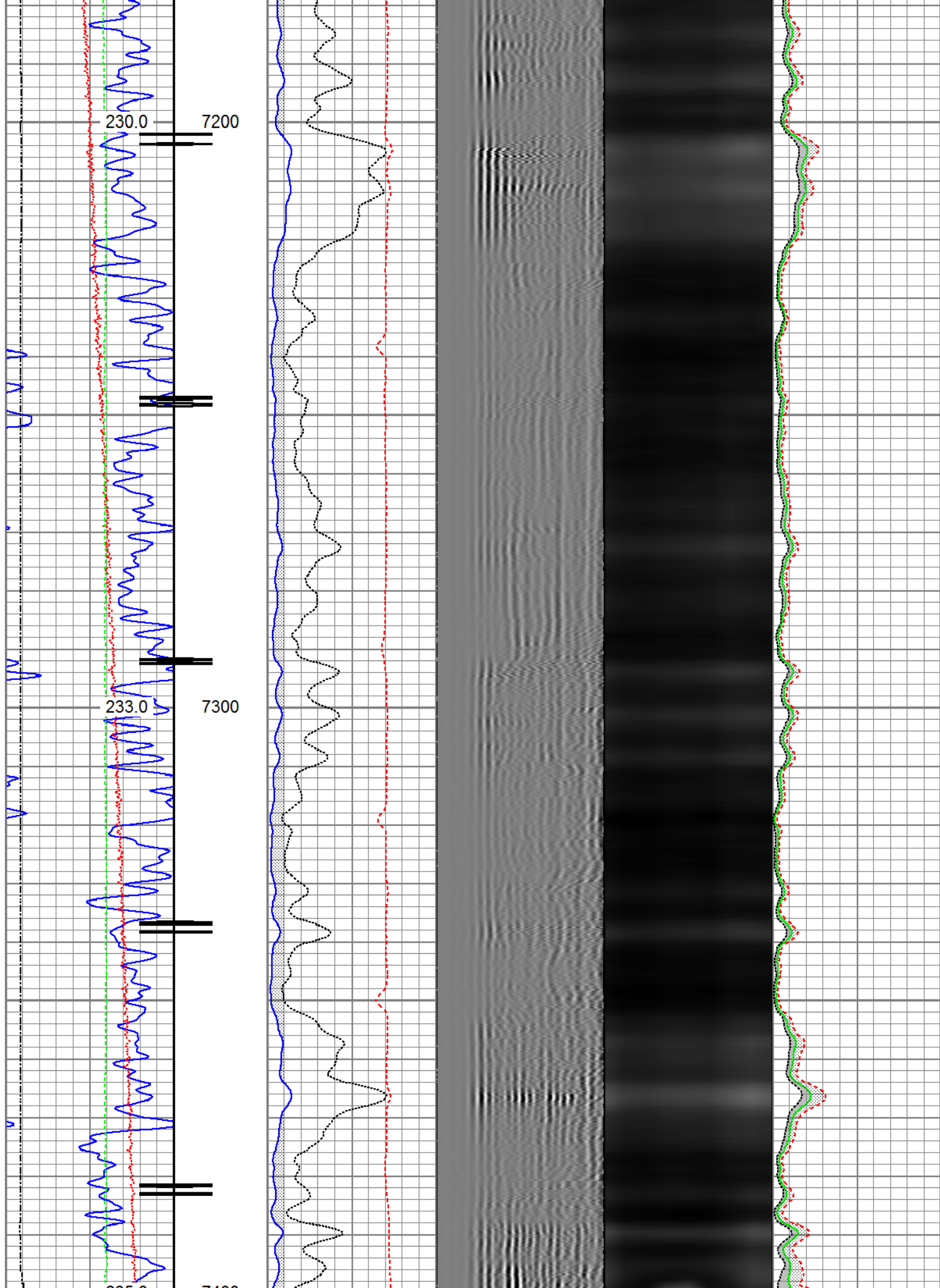


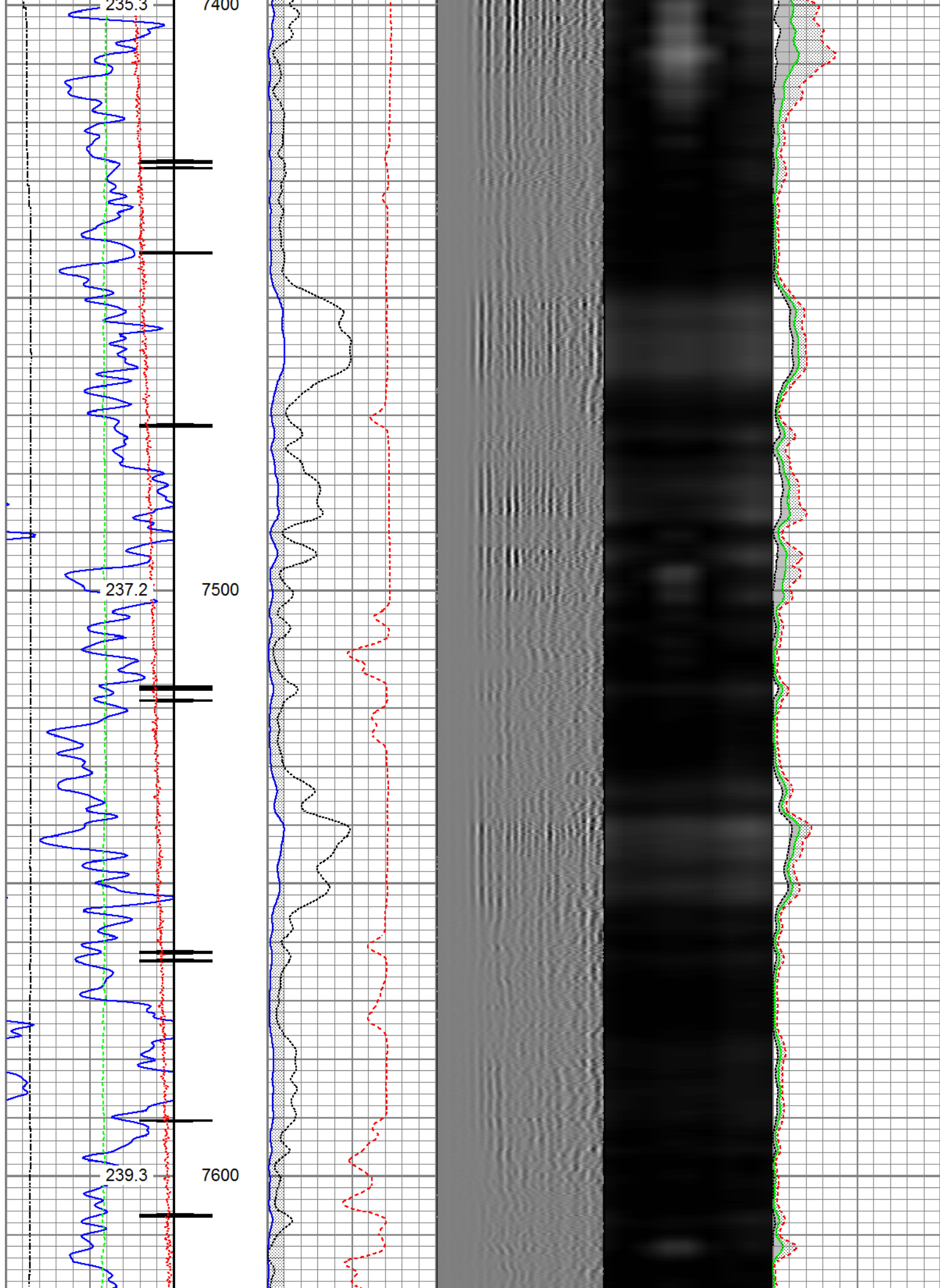


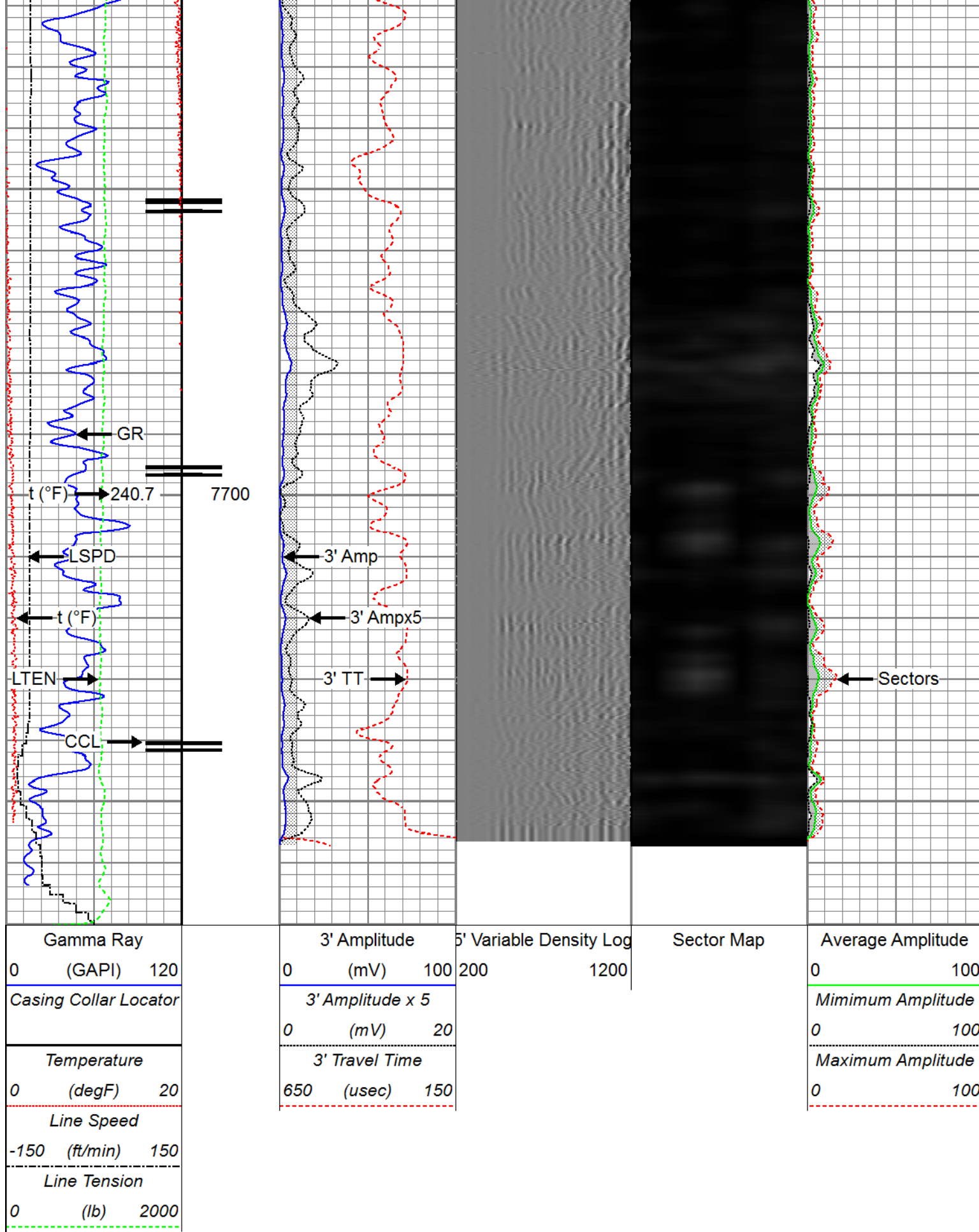






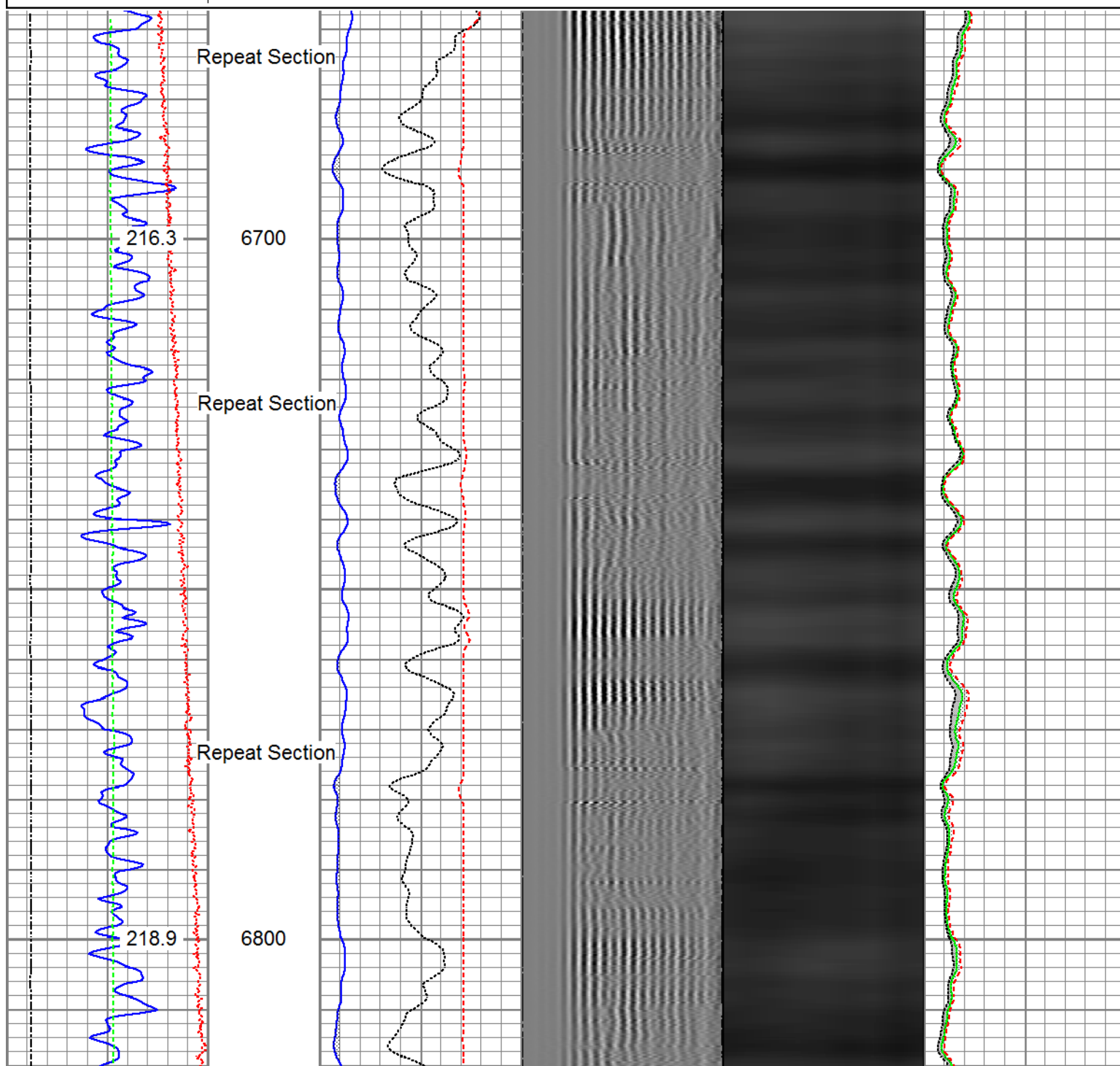


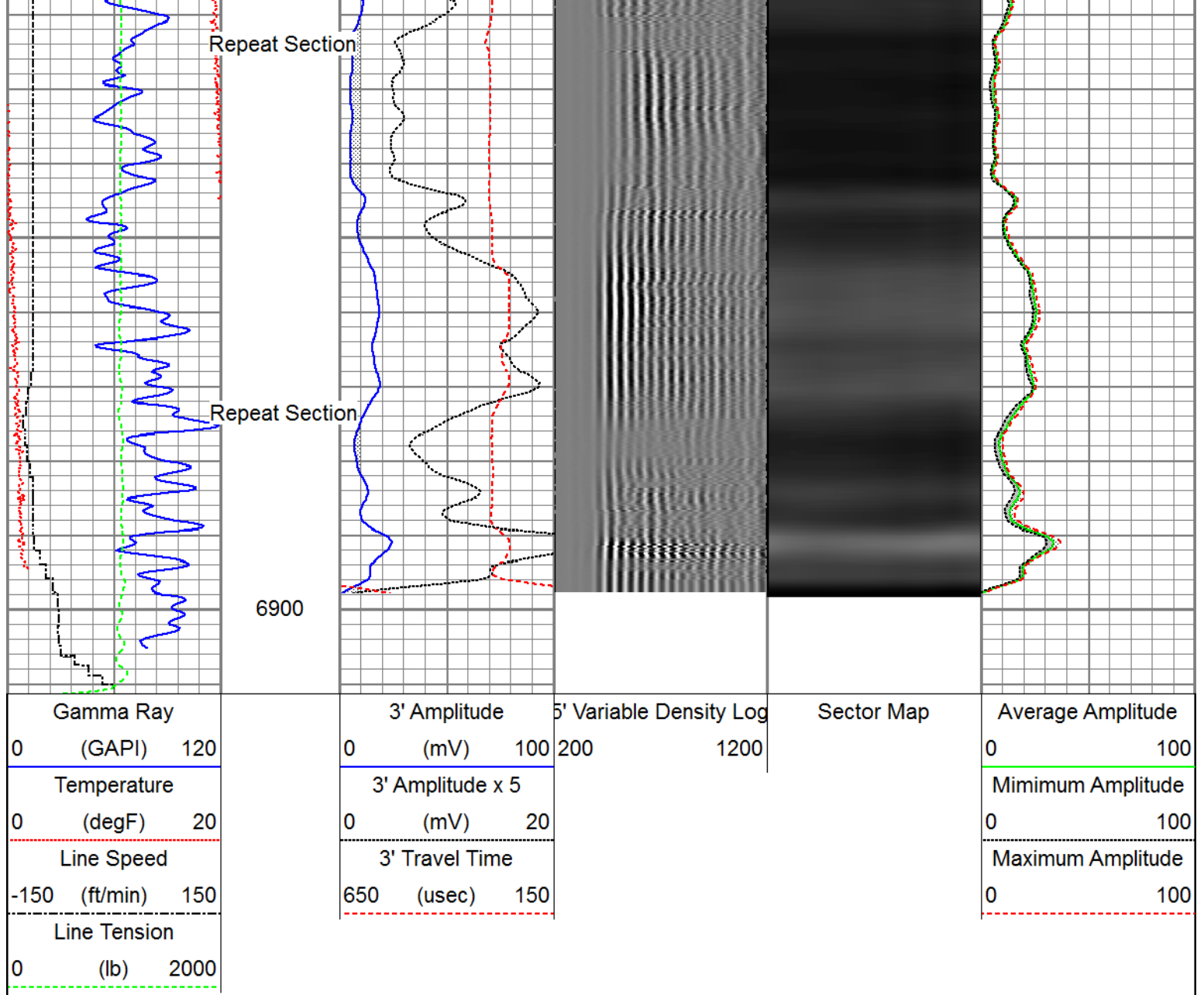


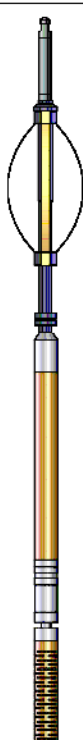


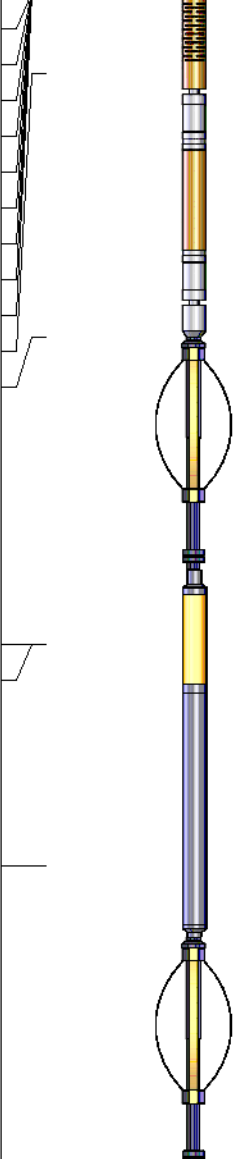
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Dataset Pathname	repeat.3
Presentation Format	ros_radrii
Dataset Creation	Thu Aug 18 13:48:43 2016
Charted by	Depth in Feet scaled 1:240

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	Length (ft)	O.D. (in)	Weight (lb)
Temp	16.72		Titan_Electric_Cable_Heads-Titan_1-11/16" 1.03 Electric Cable Head with 1" Fishing Neck	1.03	1.69	5.40
			Probe_ELine_BowSpring_Centralizer-P_EB2.8875 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.8875	2.75	20.00
			Probe_RADII-C-P_RBT_2750 (FW1305-0989.19 Probe 2-3/4" Sector Cement Bond Tool with	89.19	2.75	105.00
WVES8	14.55					

WVFS7	14.55		Temperature Probe					
WVFS6	14.55							
WVFS5	14.55							
WVFS4	14.55							
WVFS3	14.55							
WVFS2	14.55							
WVFS1	14.55							
WVFCAL	14.55							
WVF3FT	14.55							
WVF5FT	13.55							
HeadVolt	10.30							
		Probe_ELine_BowSpring_Centralizer-P_EB	2.8875	2.75	20.00			
		Probe 2-3/4" Electric Inline Bowspring Centralizer						
DCCL	6.51	Probe_GR_CCL-P_CGR_2750_S (FW1211-4.54)	2.75	55.00				
CCL	6.51							
		Probe 2-3/4" Digital CCL / Gamma Ray Combined						
GR	3.77	Probe_ELine_BowSpring_Centralizer-P_EB	2.8875	2.75	20.00			
		Probe 2-3/4" Electric Inline Bowspring Centralizer						
Dataset: processed_0512342401_anadarko_land fed 30c-29hz_08-16-16_rbl_w8.db: field/well/run1/main.3 Total length: 23.40 ft Total weight: 225.40 lb O.D.: 2.75 in								

Calibration Report		
Database File	c:\programdata\warrior\data\0512342401_anadarko_land fed 30c-29hz_08-16-16_rbl_w8\processed_0	
Dataset Pathname	main.3	
Dataset Creation	Thu Aug 18 13:38:34 2016	
Gamma Ray Calibration Report		
Serial Number:	FW1211-081	
Tool Model:	P_CGR_2750_S	
Performed:	Sat Feb 06 11:31:52 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.6	cps
Sensitivity:	0.6061	GAPI/cps
Segmented Cement Bond Log Calibration Report		
Serial Number:	FW1305-098	
Tool Model:	P_RBT_2750	

Calibration Casing Diameter:	5.500	in
Calibration Depth:	499.763	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.011	0.611	0.800	71.921	118.582	-0.550
CAL	0.738	0.738				
5'	0.012	0.520	0.800	71.921	140.006	-0.857
SUM						
S1	0.017	0.630	0.000	100.000	163.034	-2.770
S2	0.016	0.666	0.000	100.000	153.714	-2.420
S3	0.014	0.661	0.000	100.000	154.554	-2.091
S4	0.010	0.630	0.000	100.000	161.247	-1.583
S5	0.010	0.611	0.000	100.000	166.477	-1.667
S6	0.012	0.592	0.000	100.000	172.418	-2.126
S7	0.009	0.578	0.000	100.000	175.917	-1.665
S8	0.022	0.598	0.000	100.000	173.710	-3.908

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.738	0.738	1.000	0.000

Air Zero Calibration, performed Tue Aug 16 09:28:45 2016:

	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



Company	Kerr-McGee Oil & Gas Onshore, L.P.
Well	Land Fed 30C-29HA
Field	Wattenberg
County	Weld
State	Colorado