



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Kerr-McGee Oil & Gas Onshore, L.P.

Well Castle Pines 19-8HZ

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-47718

Other Services
GR/JB
RBP
RBL 0 PSI

SEC 19 TWP 2N RGE 66W

Elevation

Permanent Datum
Log Measured From
Drilling Measured From

Ground Level
Kelly Bushing
Kelly Bushing

Elevation
K.B. 4902'
D.F. ---
G.L. 4876'

Company
Well
Field
County
State

Kerr-McGee Oil & Gas Onshore, L.P.
Castle Pines 19-8HZ
Wattenberg
Weld
Colorado

Date	15-MAR-2019			
Run Number	Two			
Depth Driller	18727 FT			
Depth Logger	6912 FT			
Bottom Logged Interval	6897 FT			
Top Log Interval	Surface			
Open Hole Size	---			
Type Fluid	Water			
Density / Viscosity	8.34 lb/gal			
Max. Recorded Temp.	225°F			
Estimated Cement Top	See Log			
Time Well Ready	ROA			
Time Logger on Bottom	9:05			
Equipment Number	HD-0325			
Location	Platteville, CO			
Recorded By	J. Morrison			
Witnessed By	John McCarthy			
Borehole Record				
Run Number	Bit	From	To	Size
				Weight
				From
				To
Tubing Record				
Casing Record	Size (in)	Wgt (lbs/ft)	Grade	Top
Surface Casing	9 5/8	36	J-55	Surface
Intermediate #1	5 1/2	17	HCP-110	Surface
Intermediate #2				
Inner				

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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 6828 FT
Adjusted -2 FT to correlate with Marker Joint
Gauge Ring/Junk Basket ran to 7620 FT with no debris
5.50" RBP Set at 6920 FT
Recorded with 2800 PSI Surface Induced Pressure
Logging tools were clean and free of debris upon completion of operations

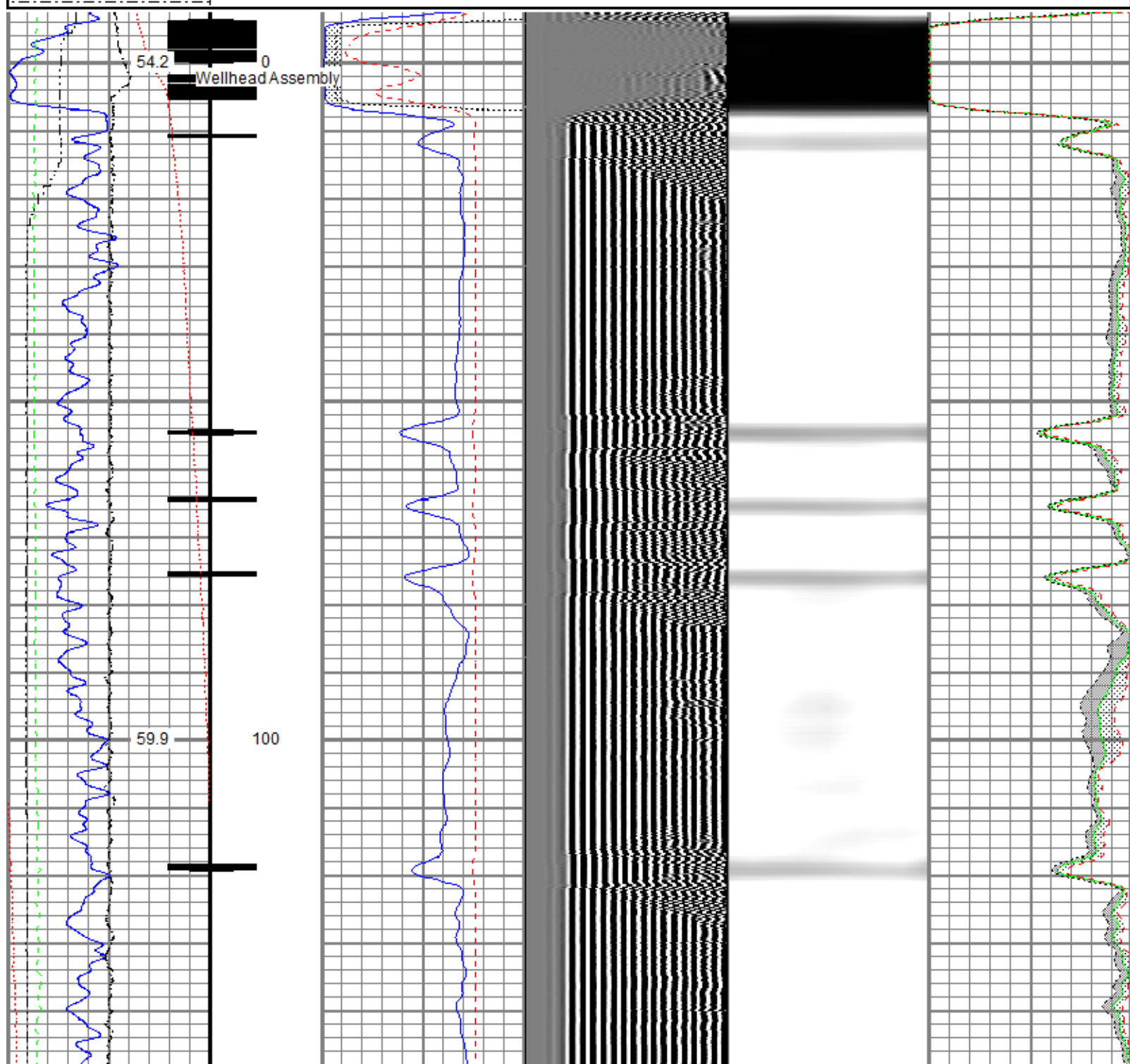
Thank you for choosing Reliance Oilfield Services, LLC!!

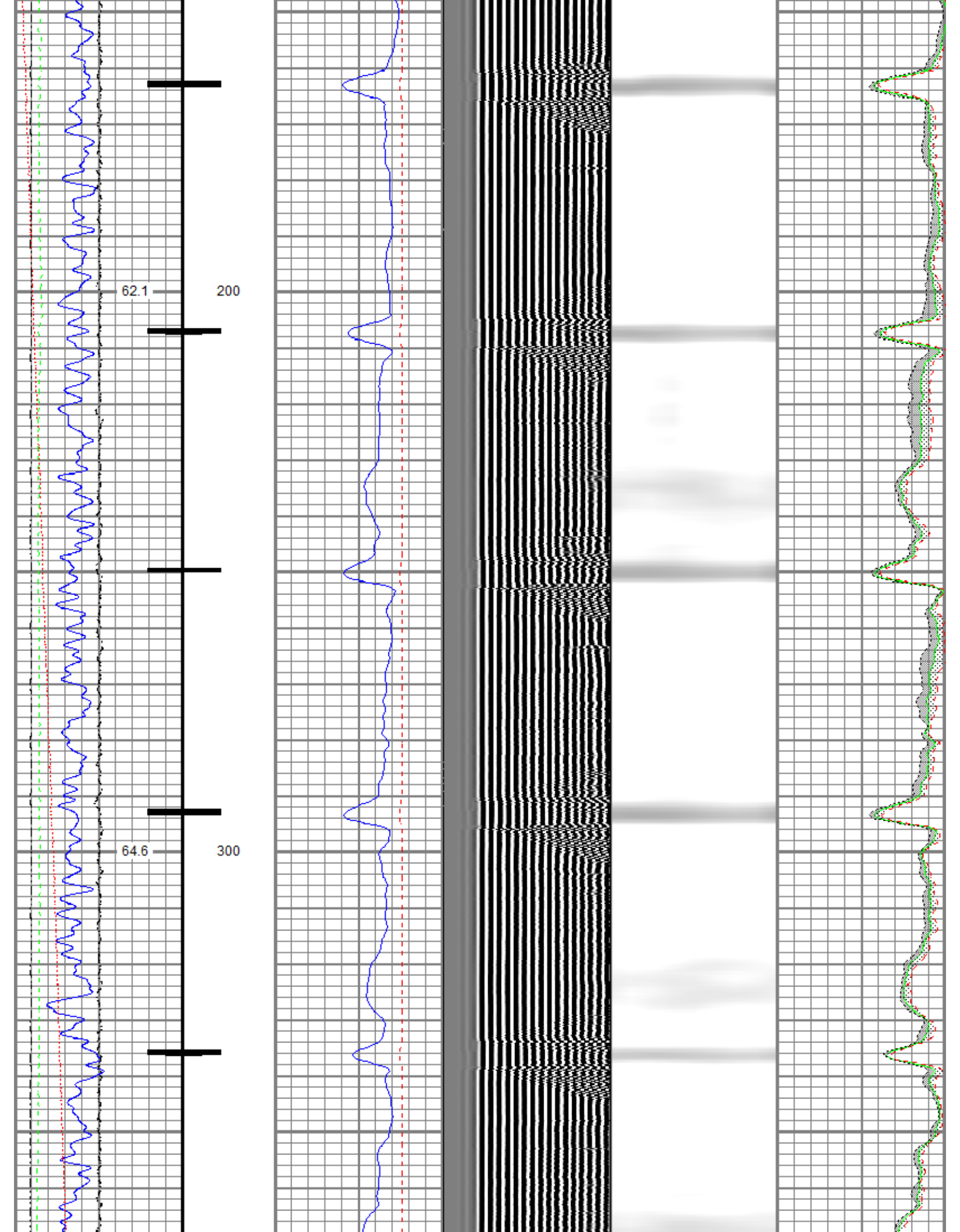
Main Pass

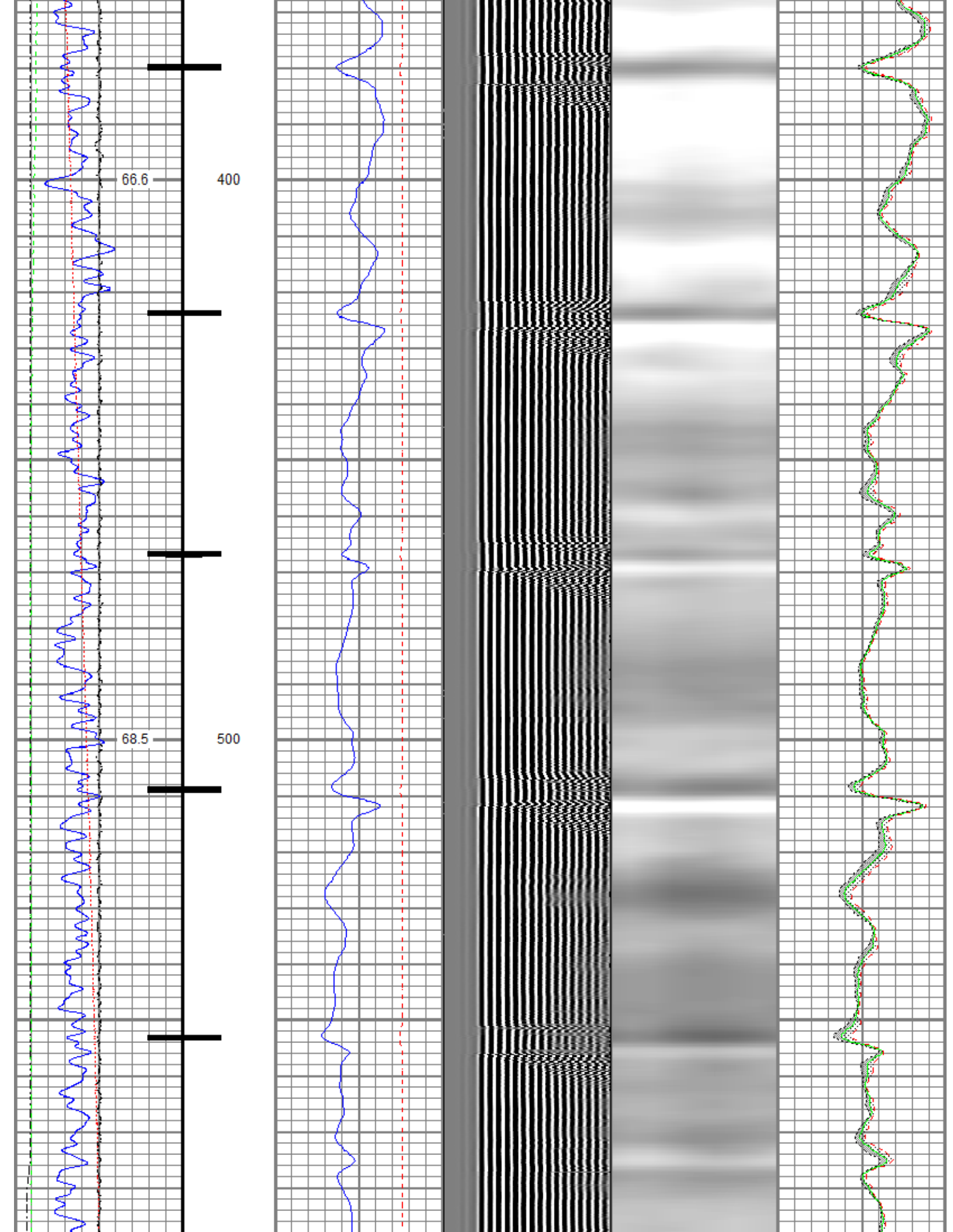


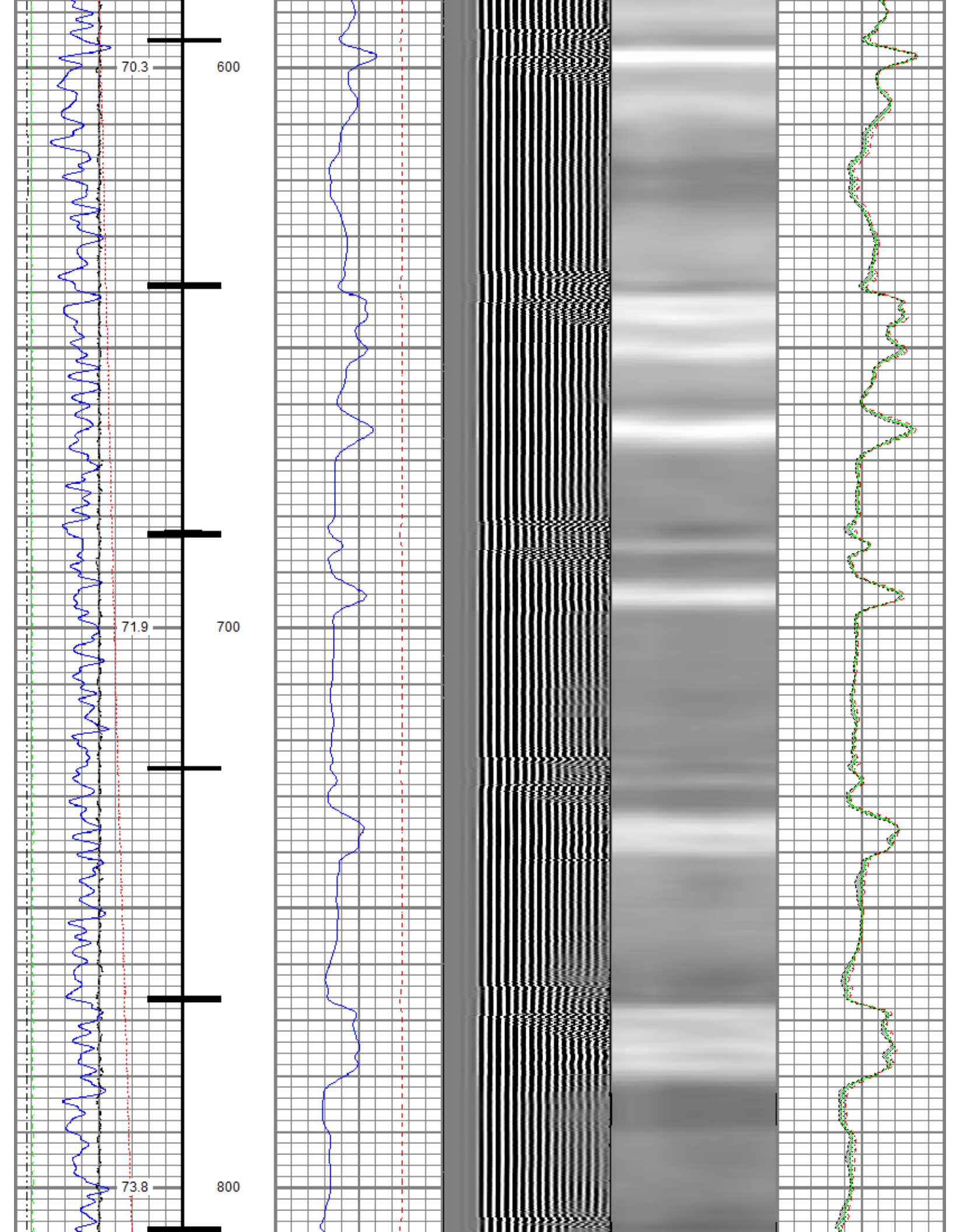
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Dataset Pathname	Main.3
Presentation Format	ros_radri
Dataset Creation	Sun Mar 17 17:32:58 2019
Charted by	Depth in Feet scaled 1:240

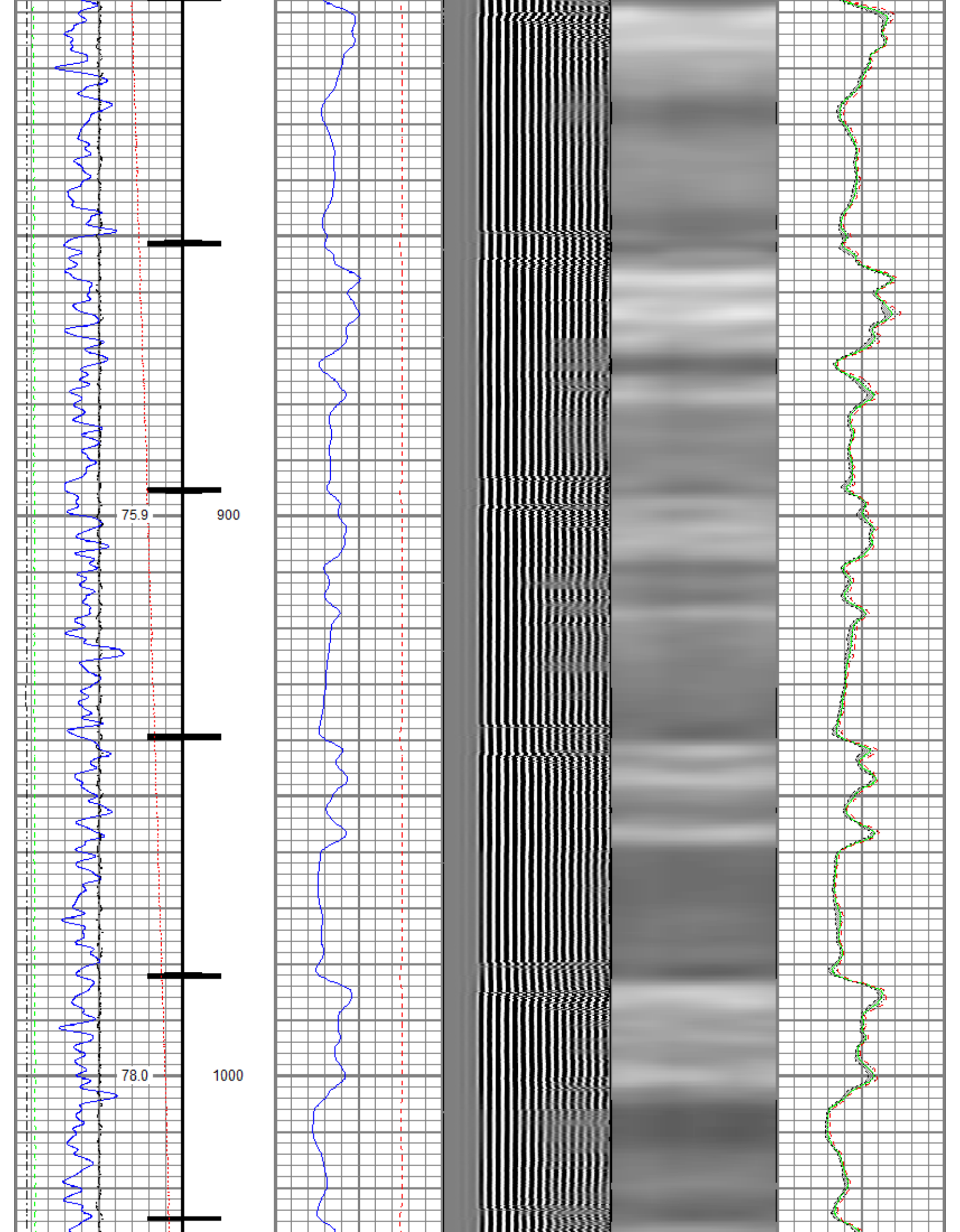
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200			Minimum Amplitude
Casing Collar Locator	0	(mV) 20			0	100
Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed	650	(usec) 150			0	100
(ft/min) 150						
Line Tension (lb) 2000						
Differential Temperature						
(degF) 2						

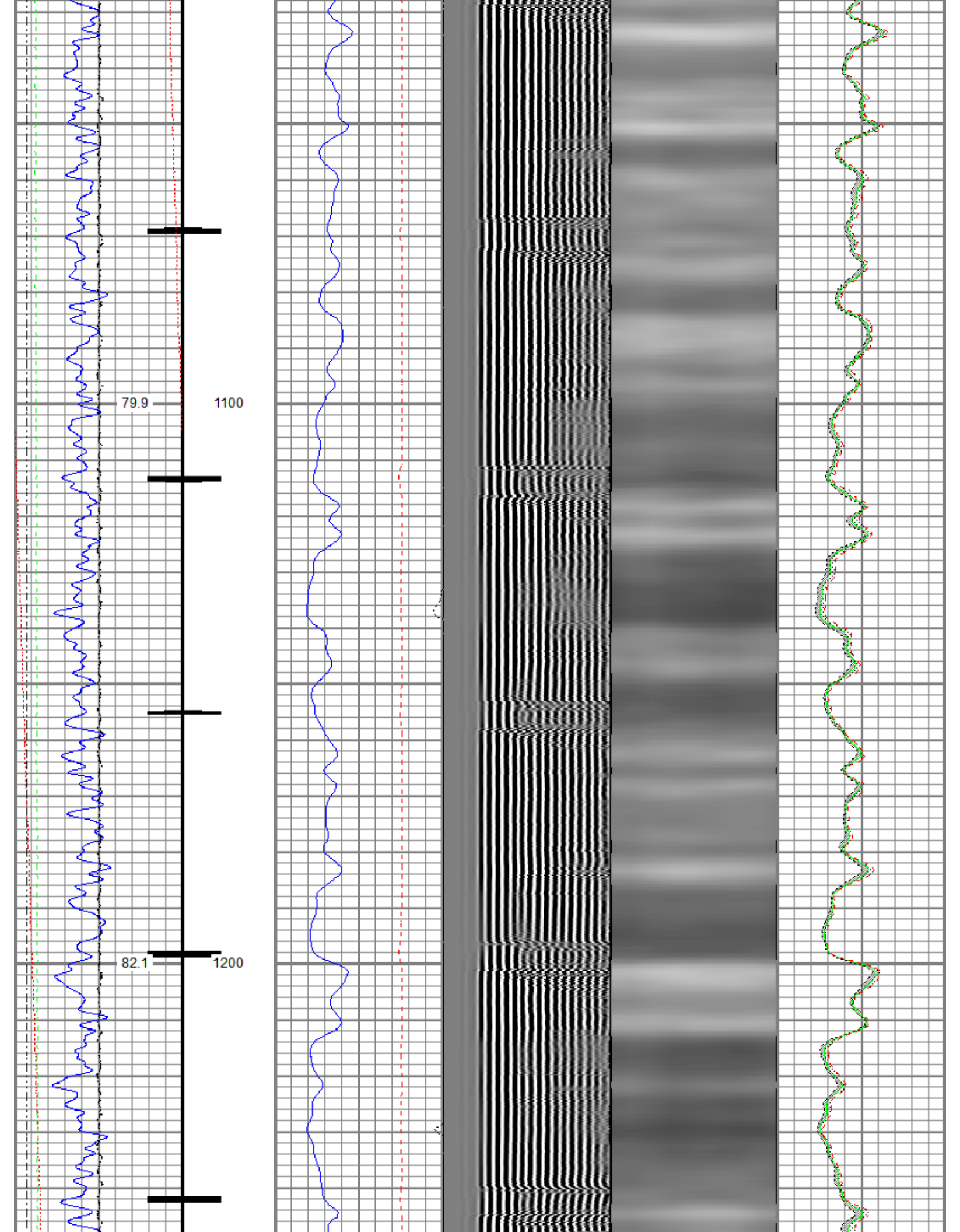


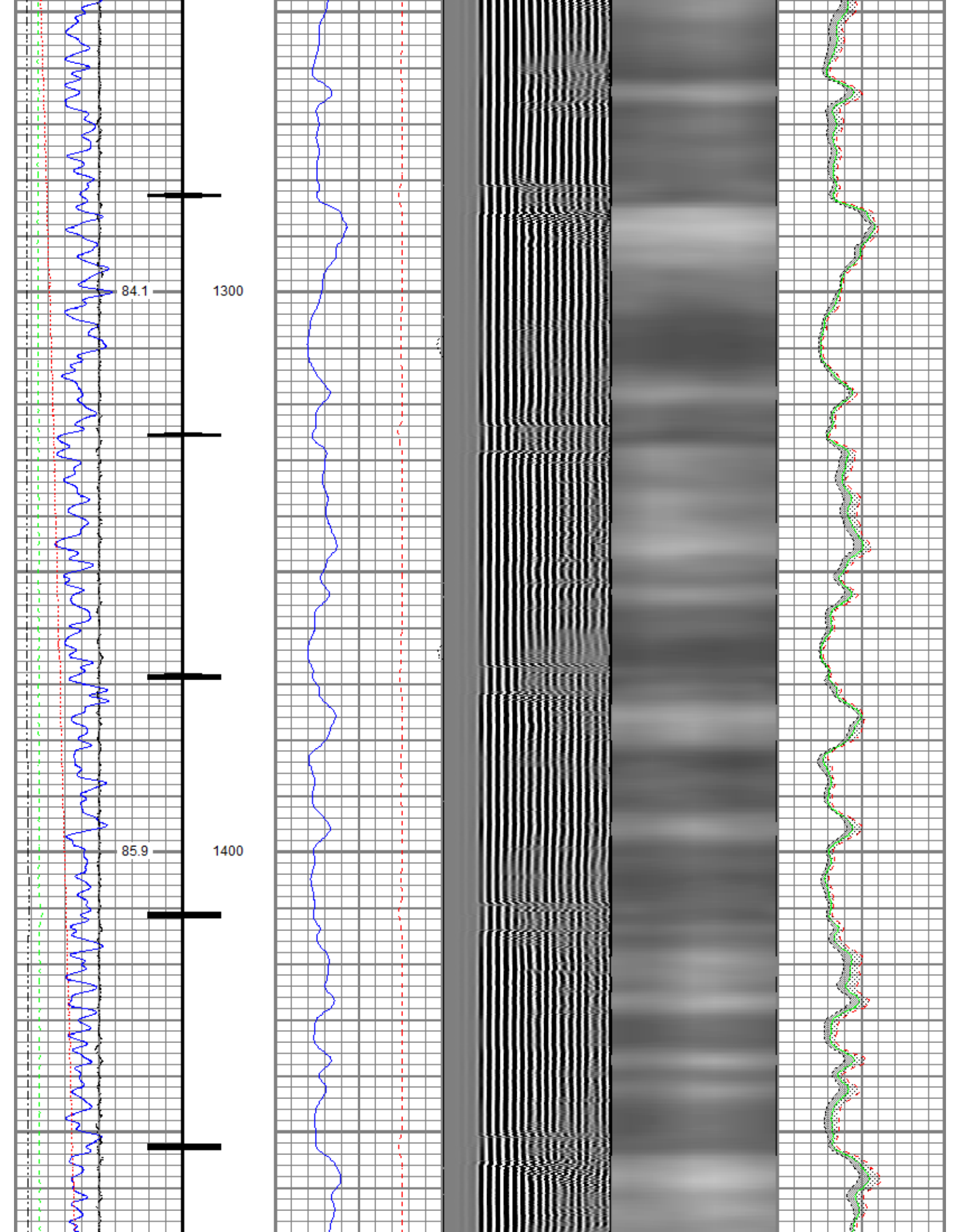


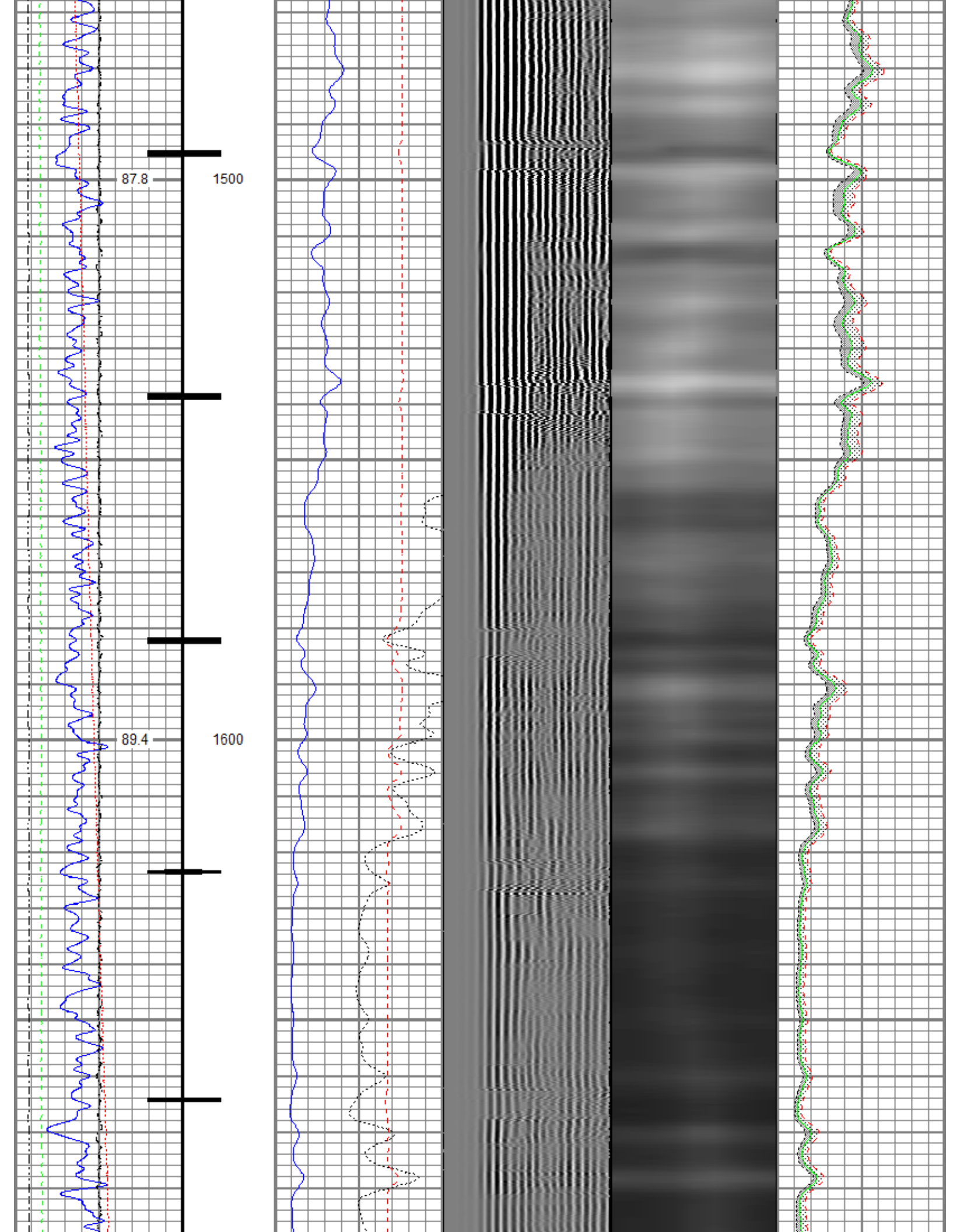


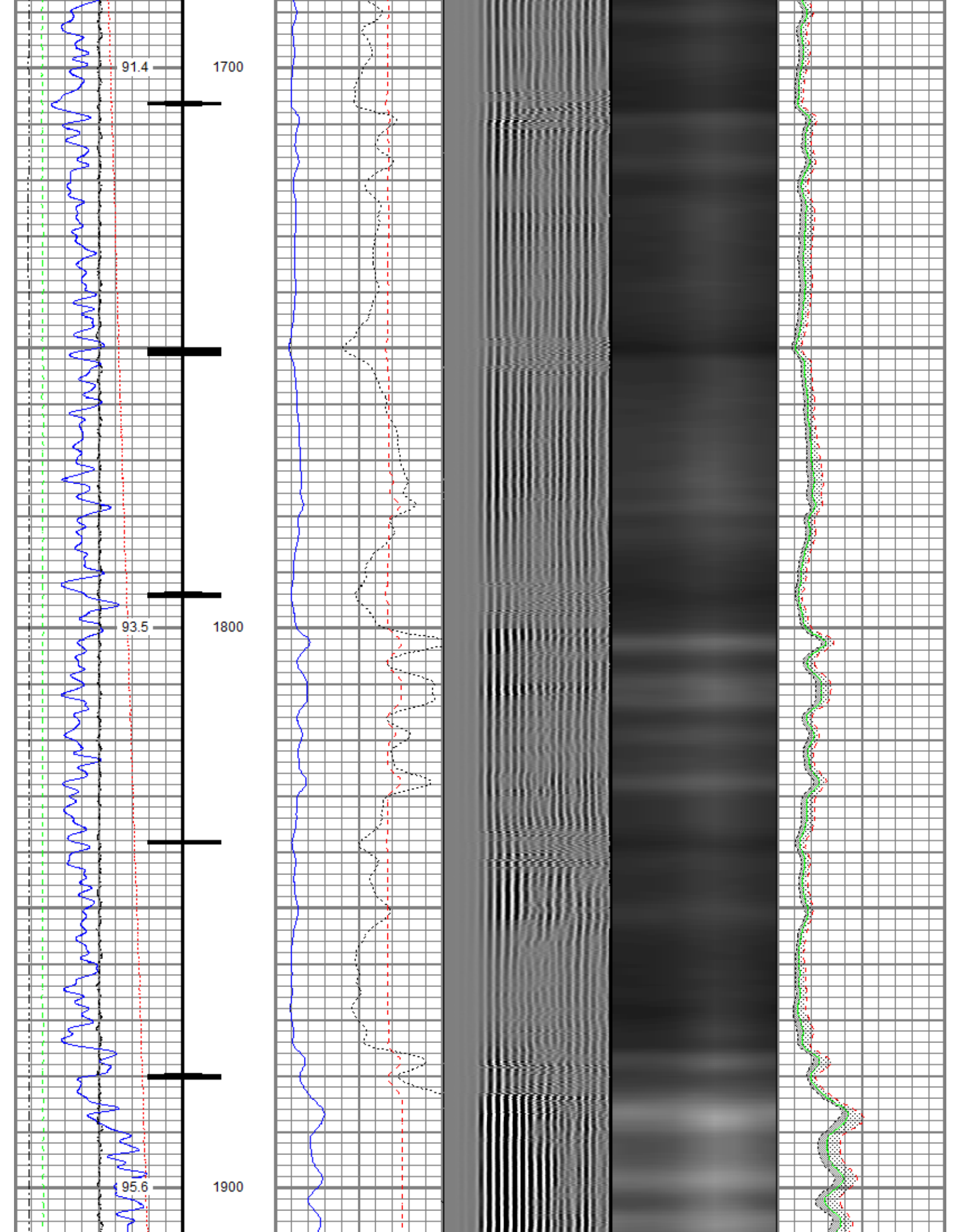


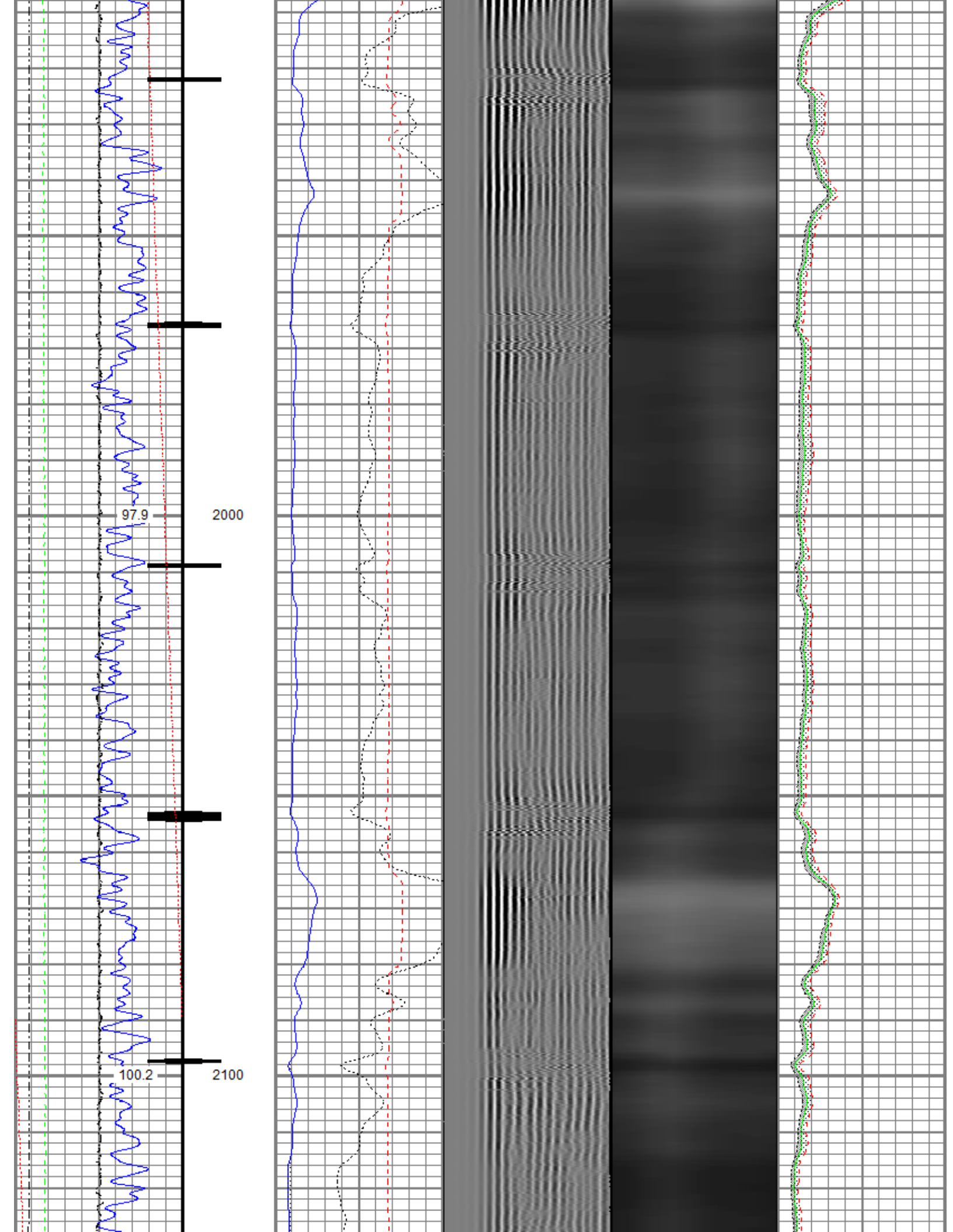


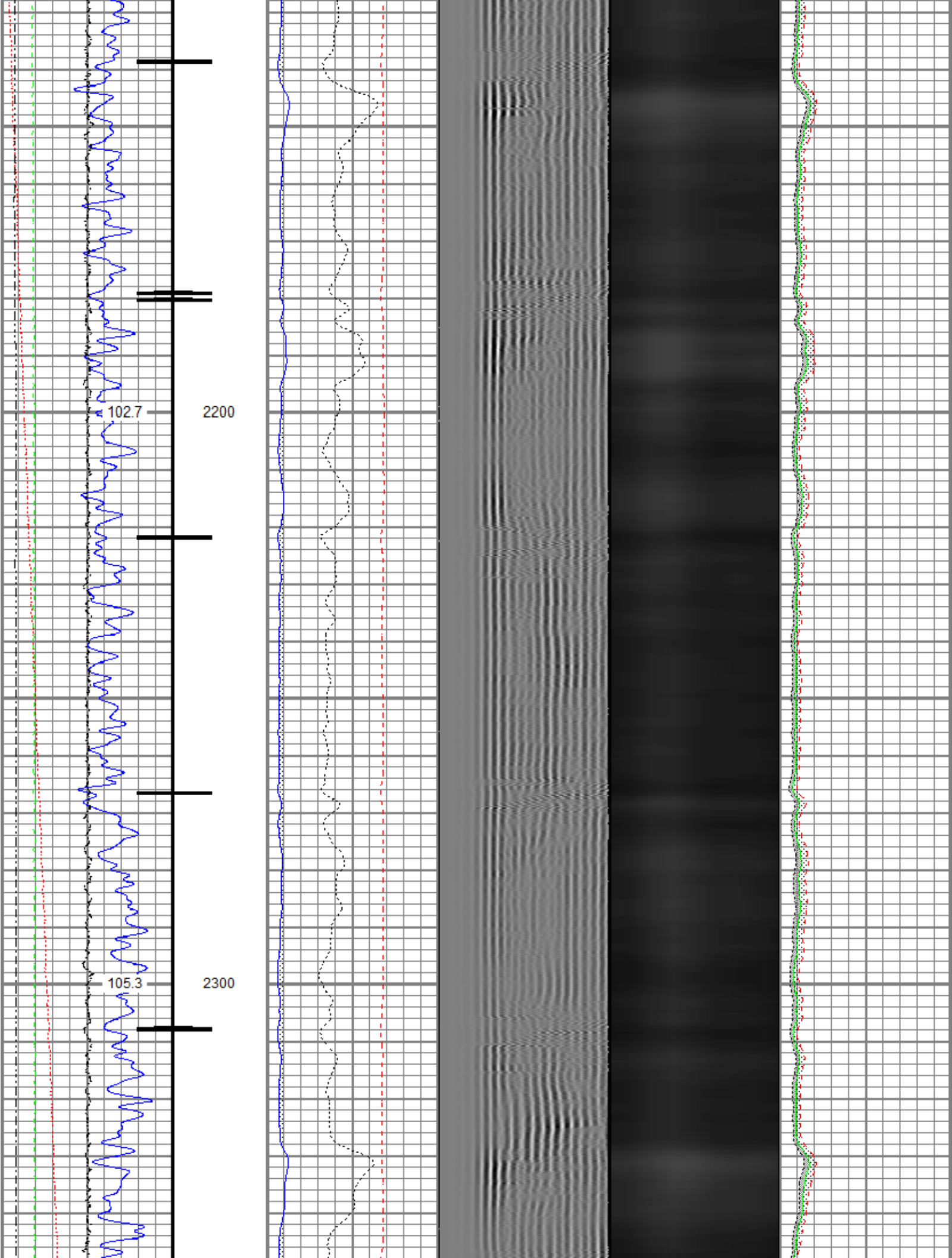


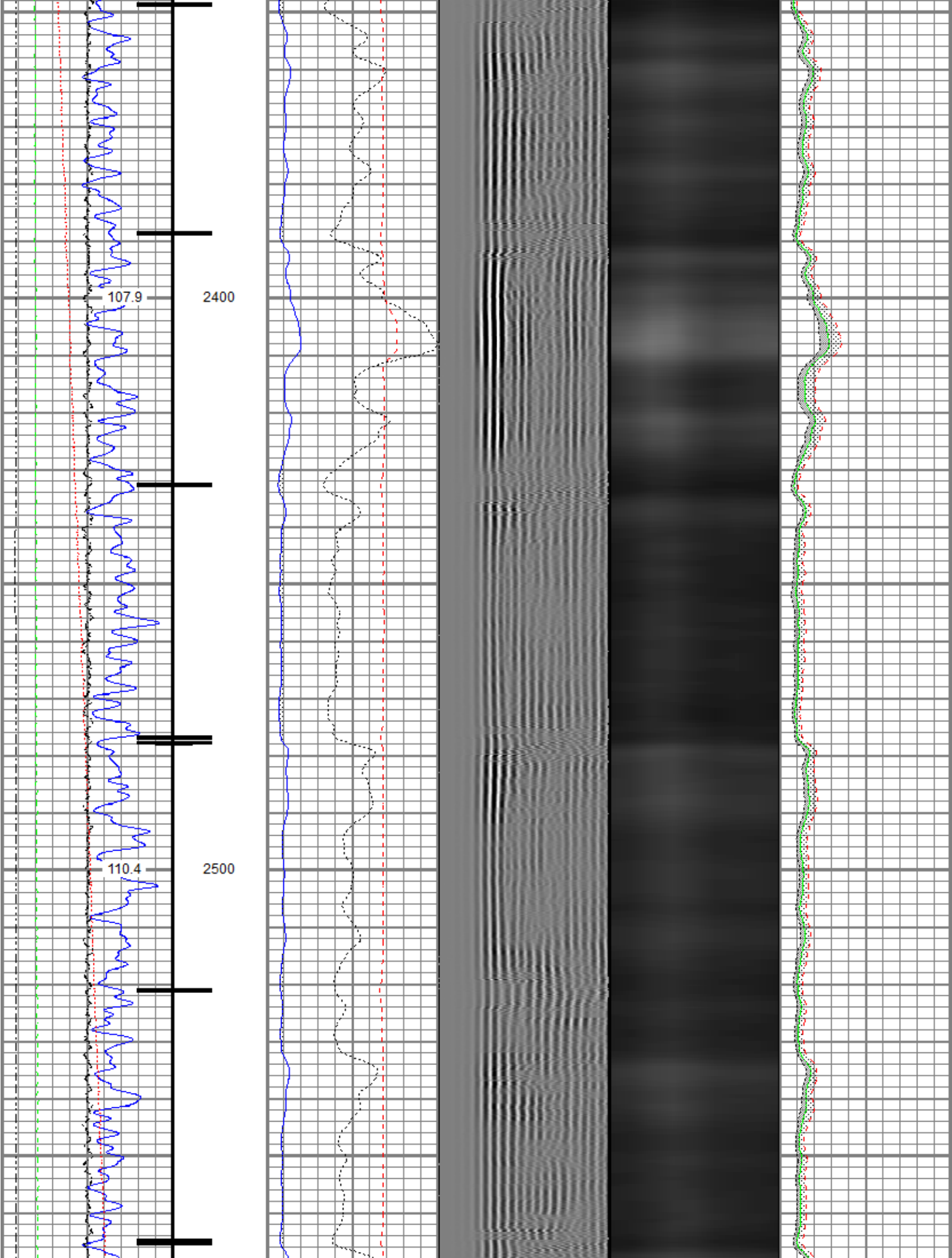


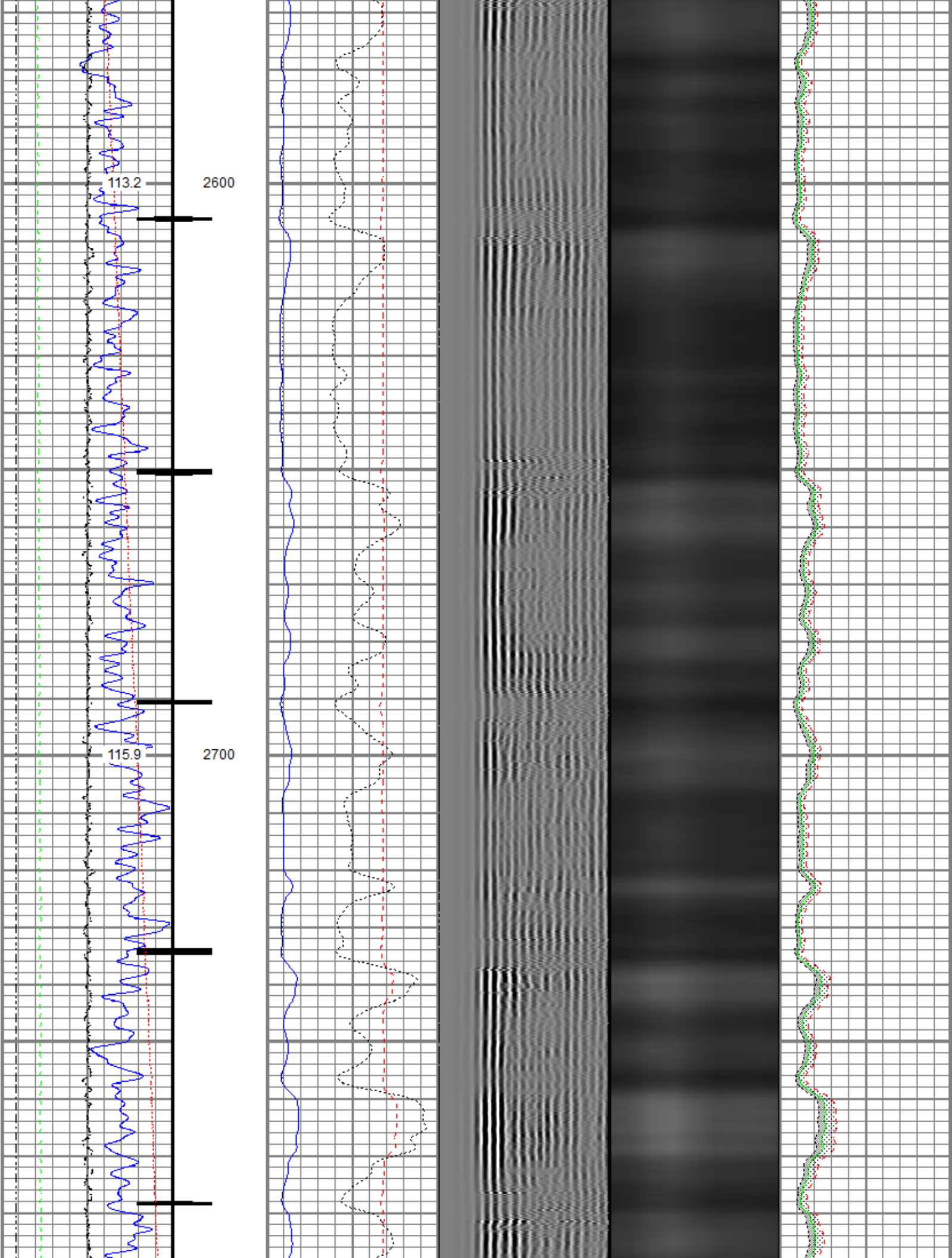


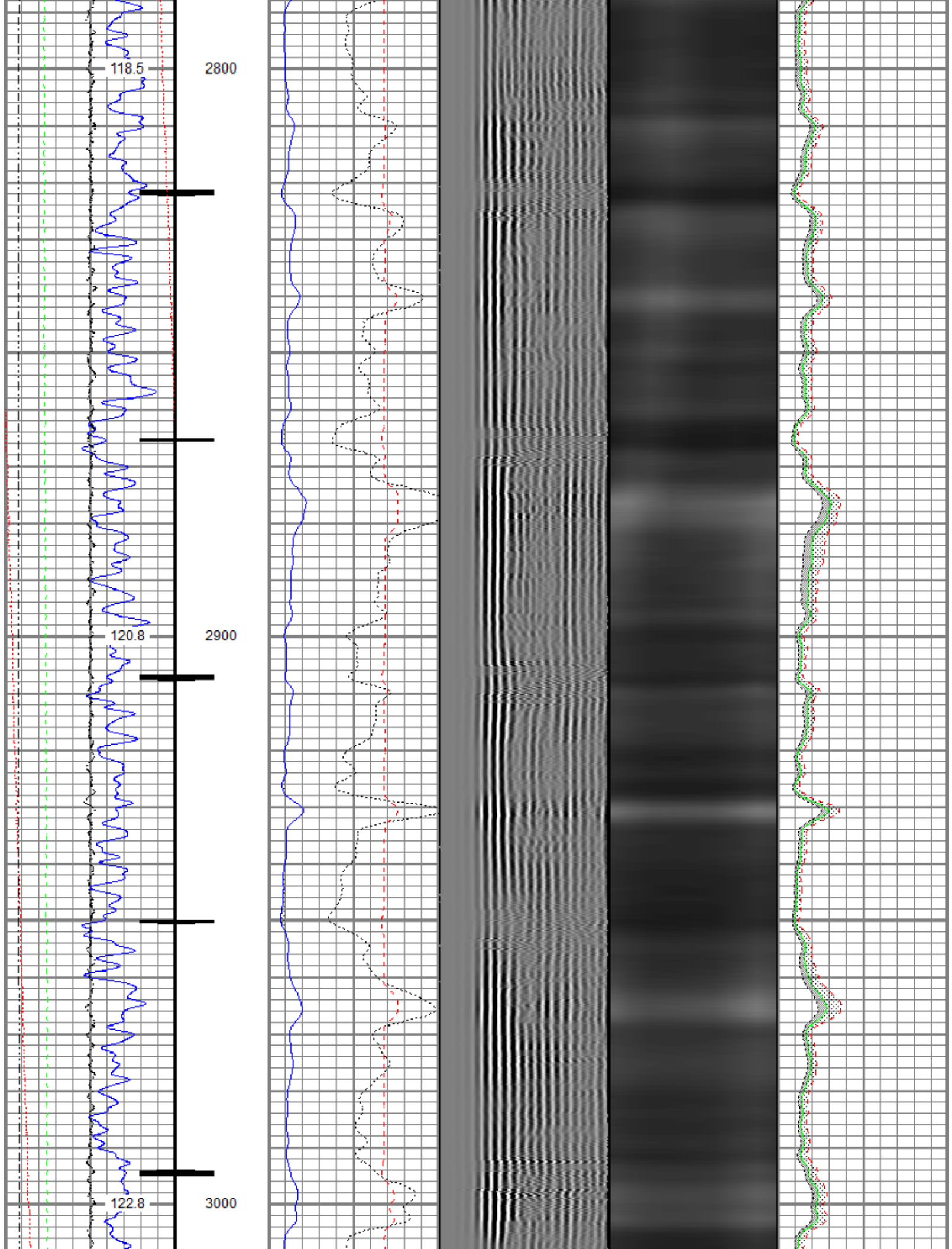


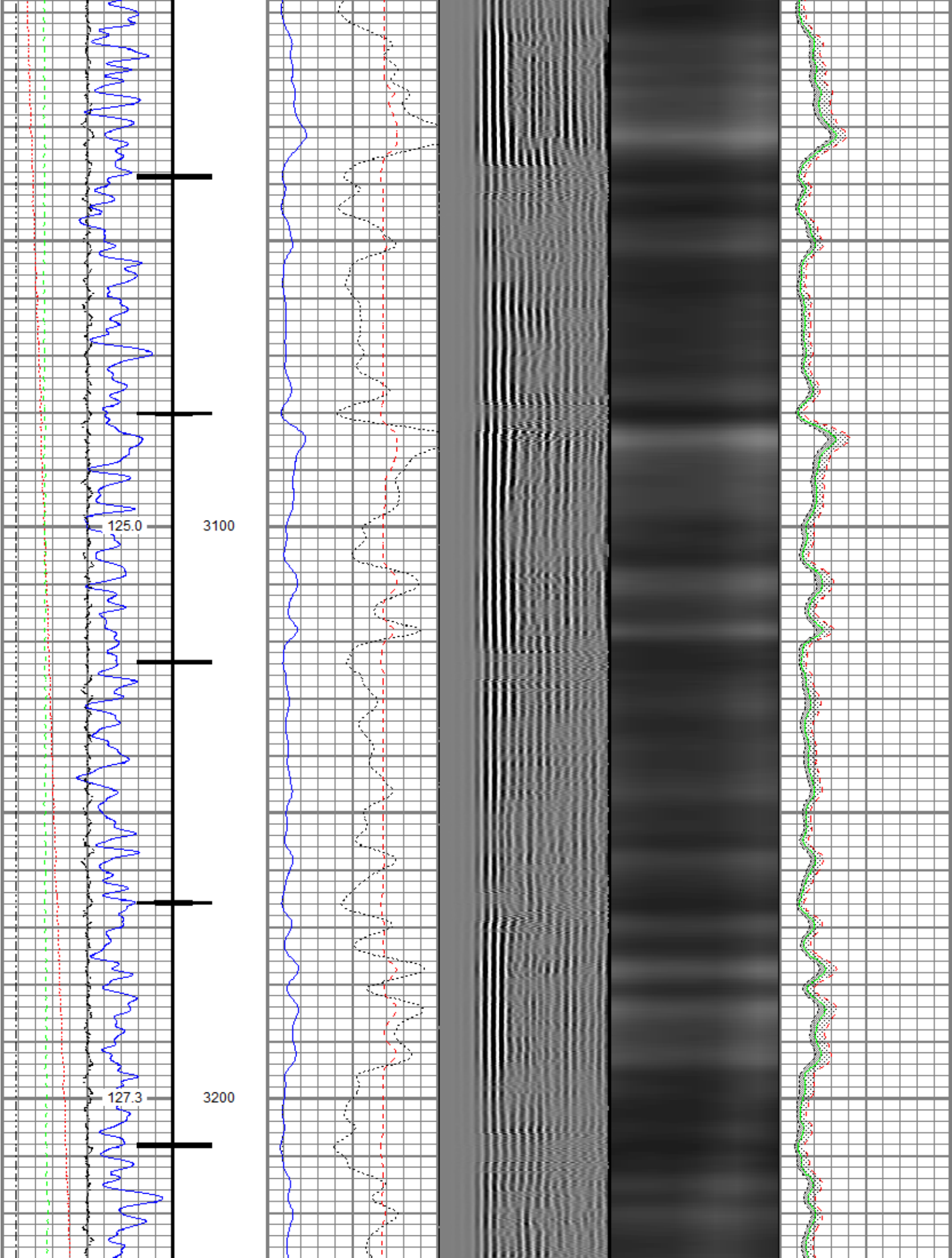


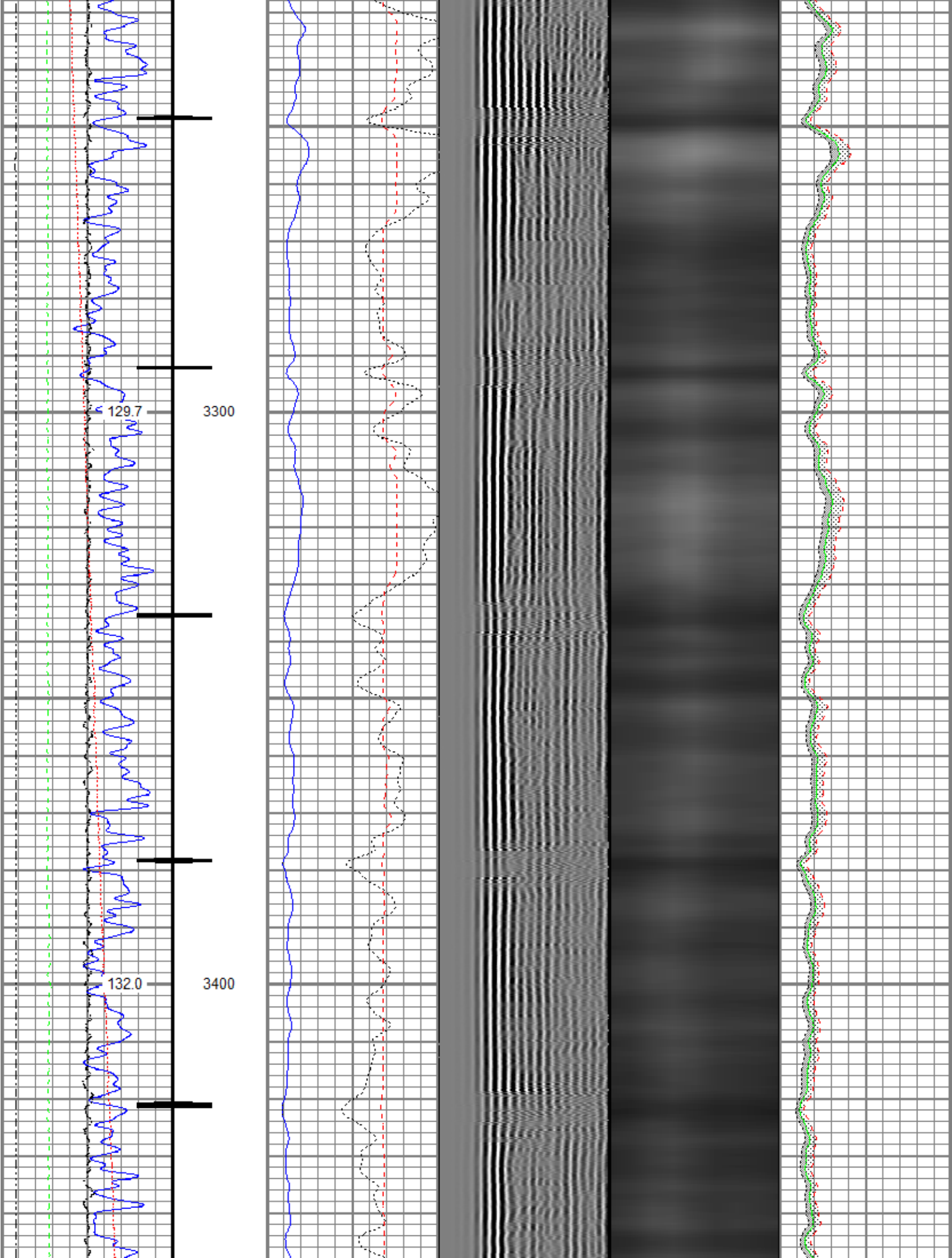


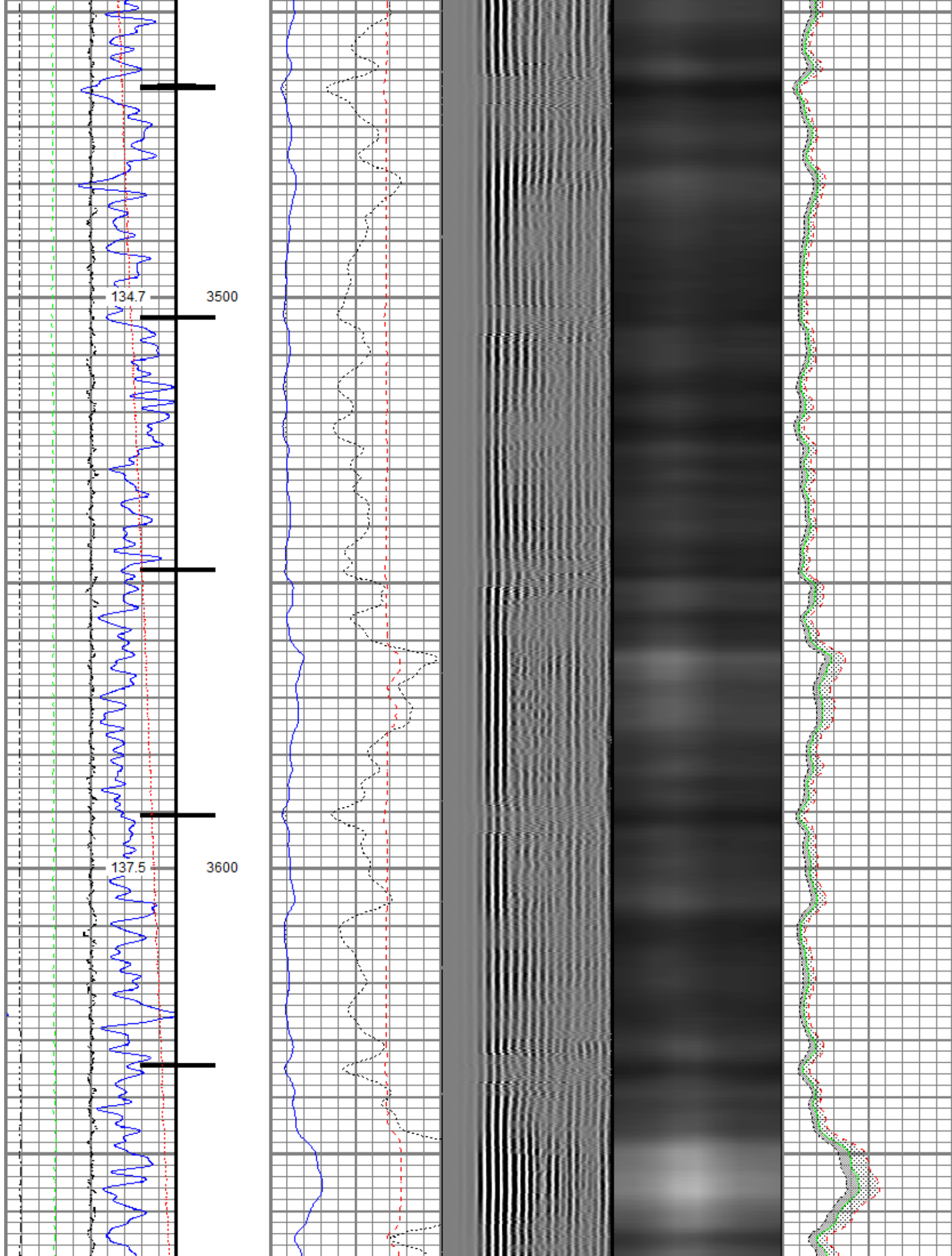


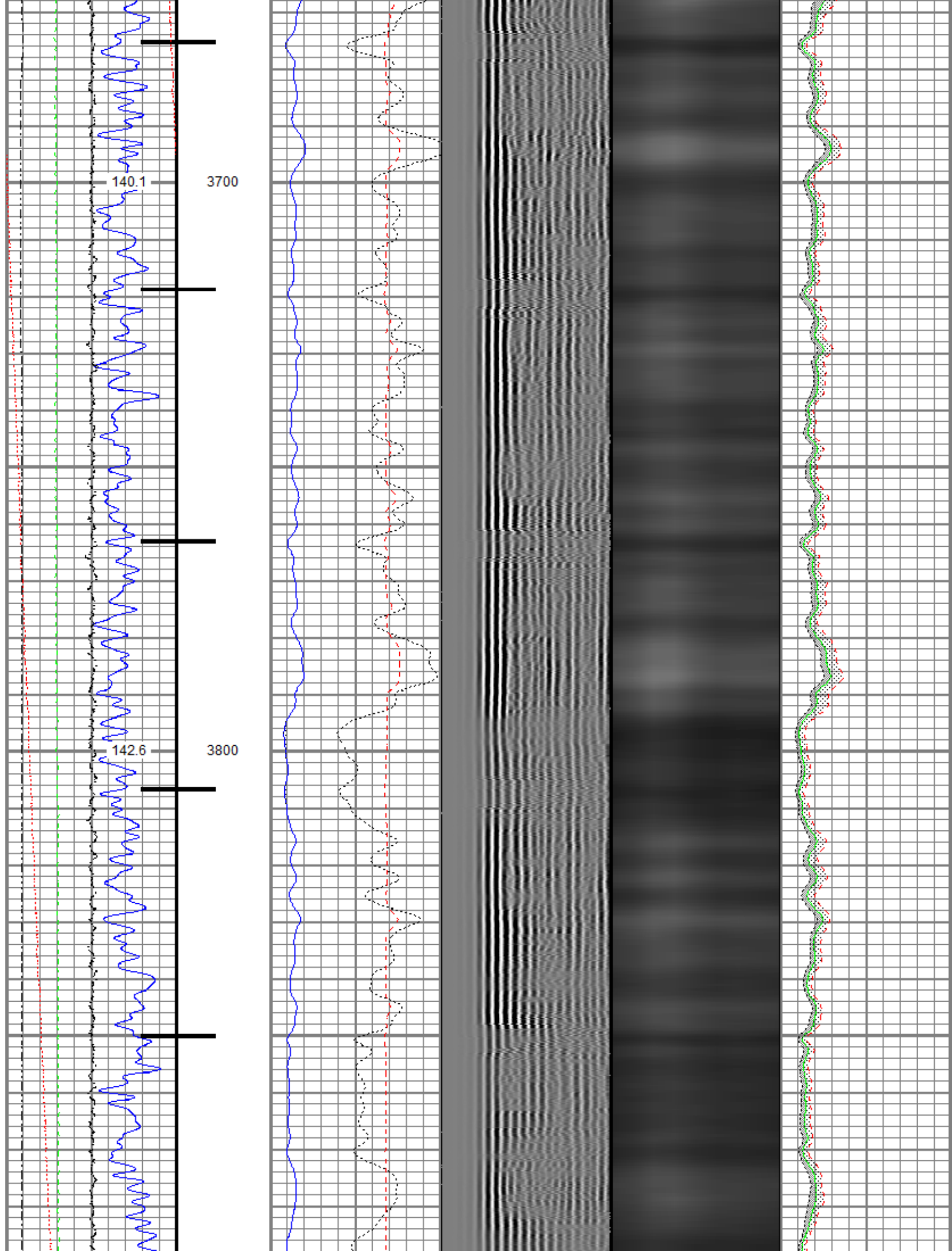


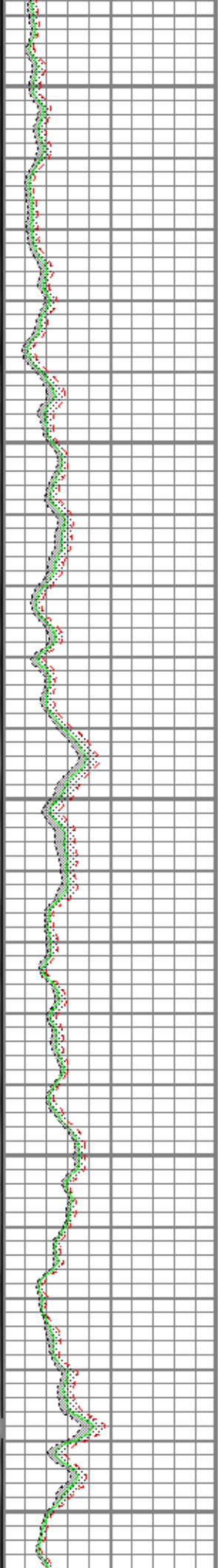
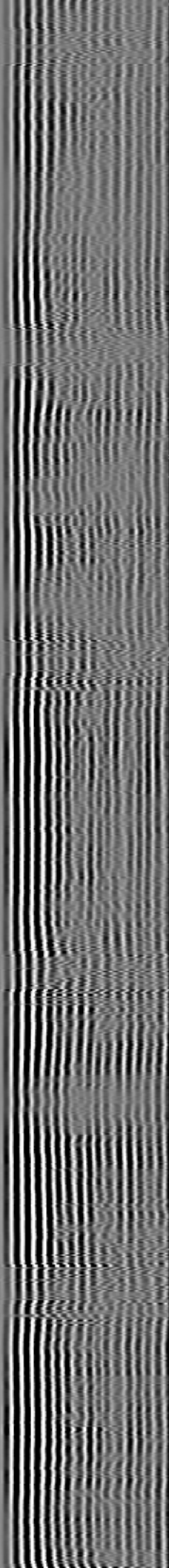
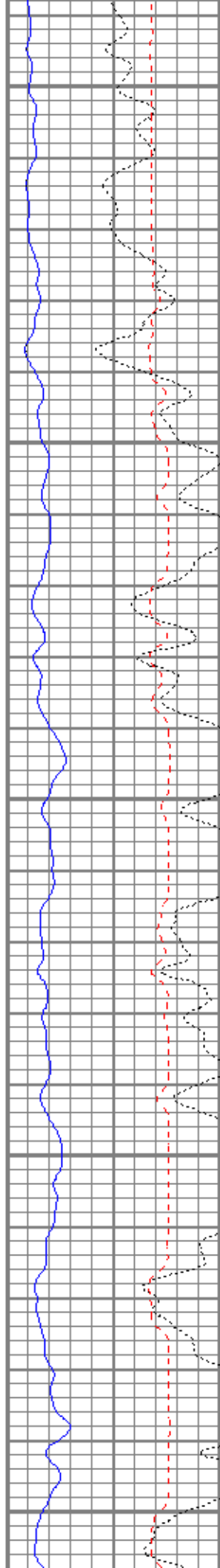
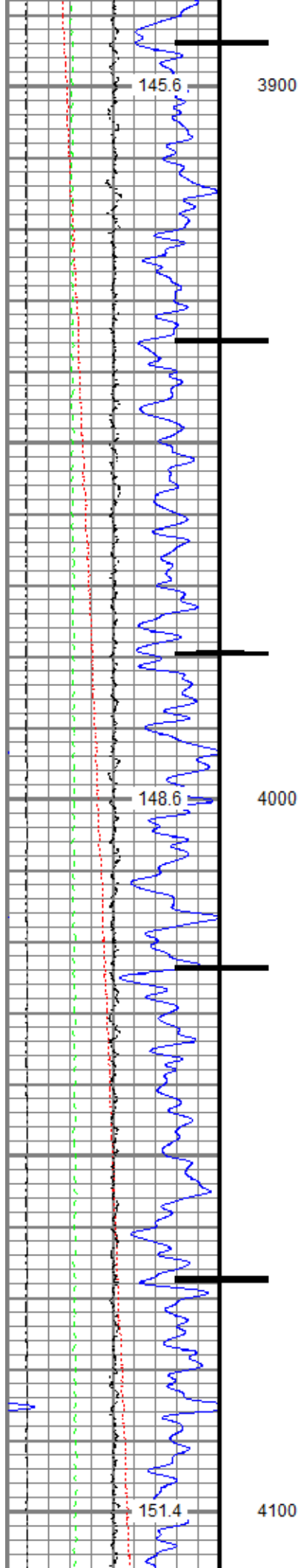


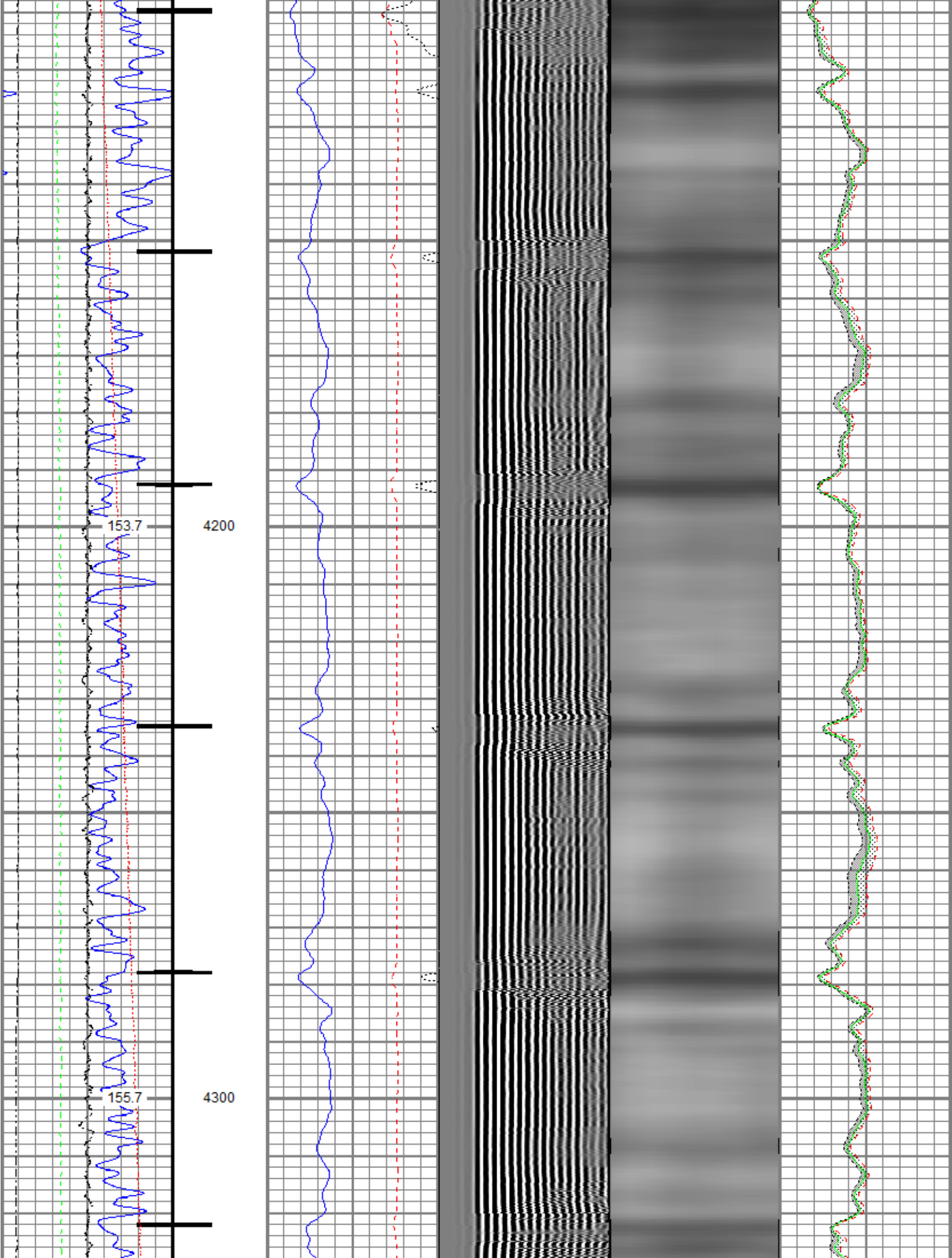


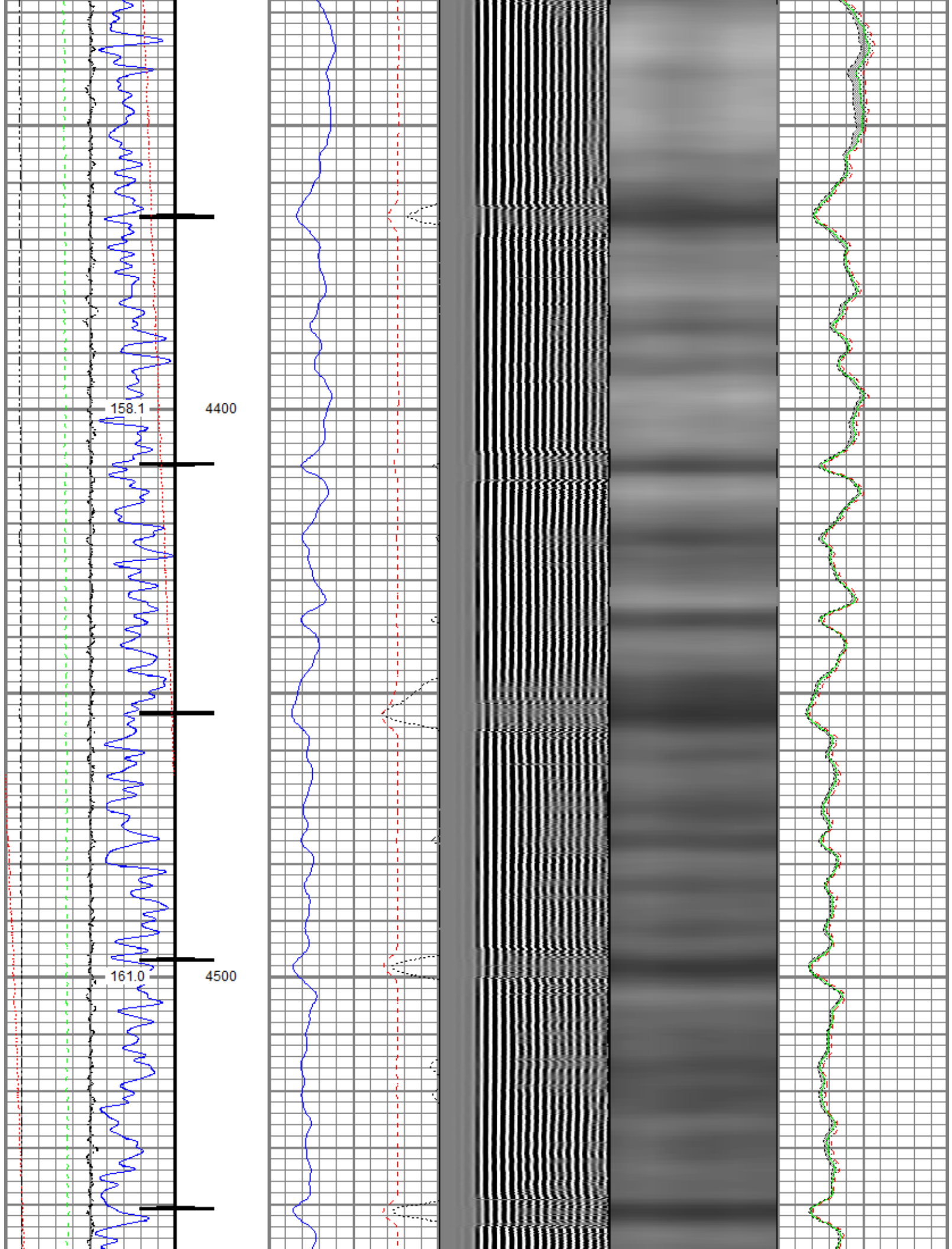


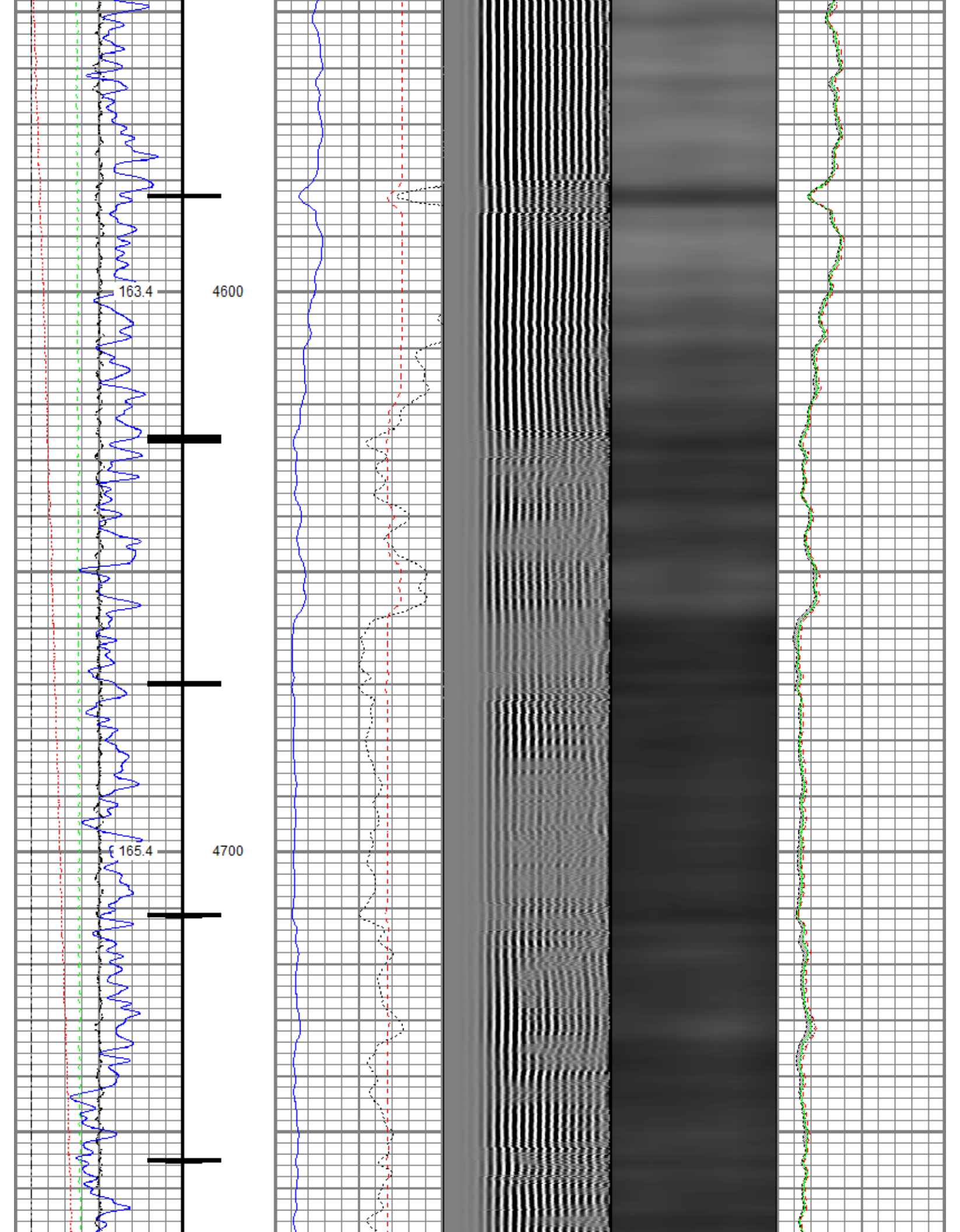


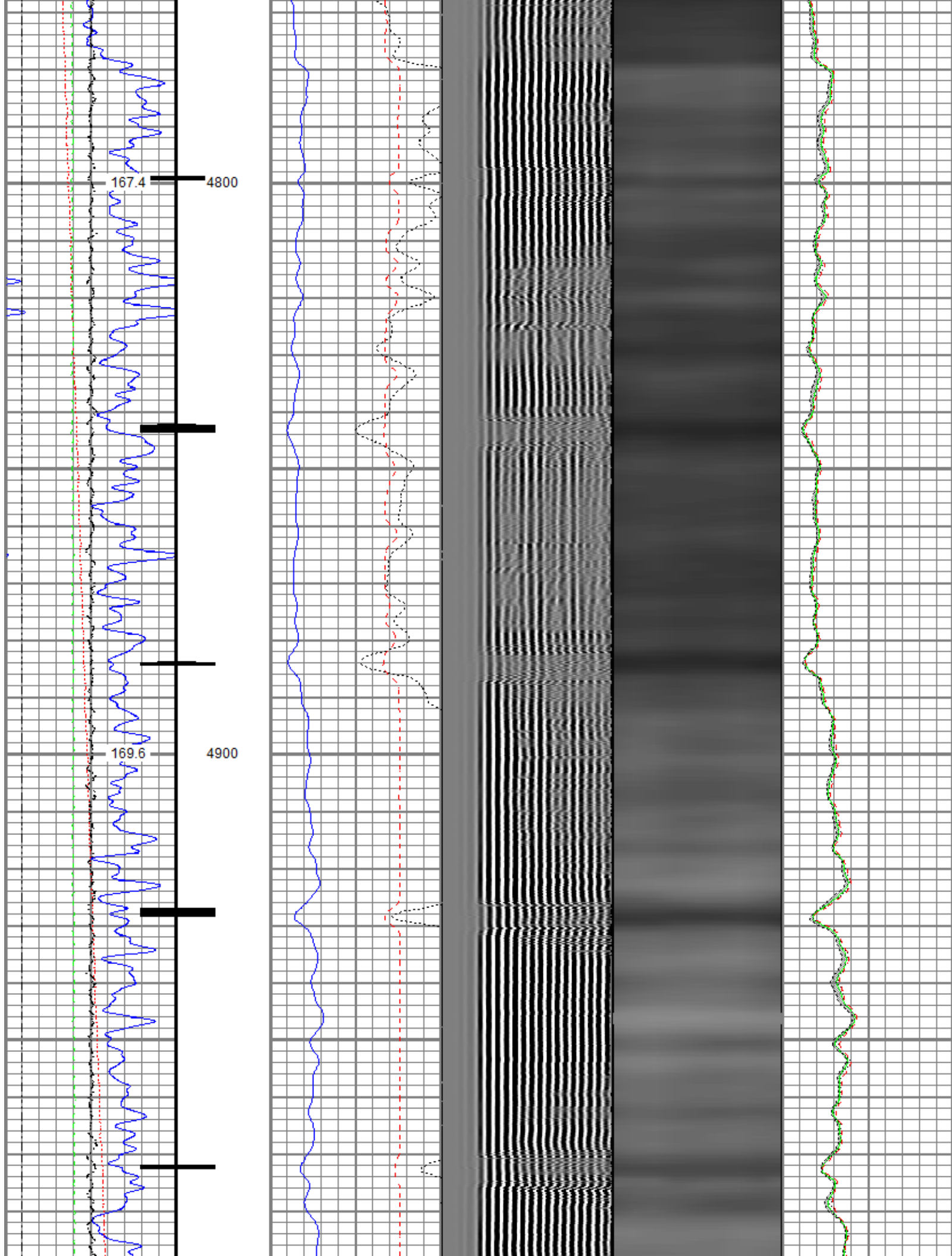


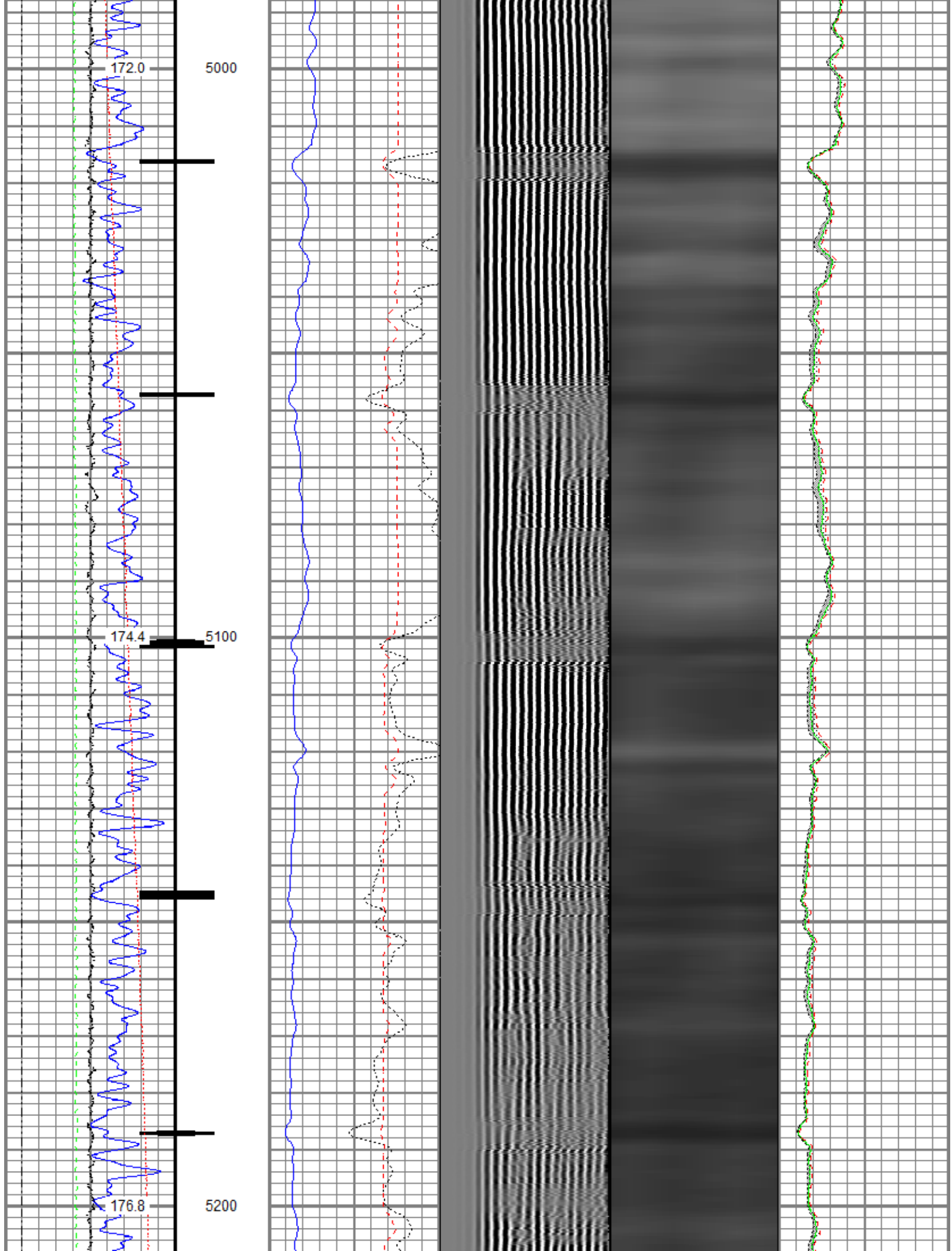


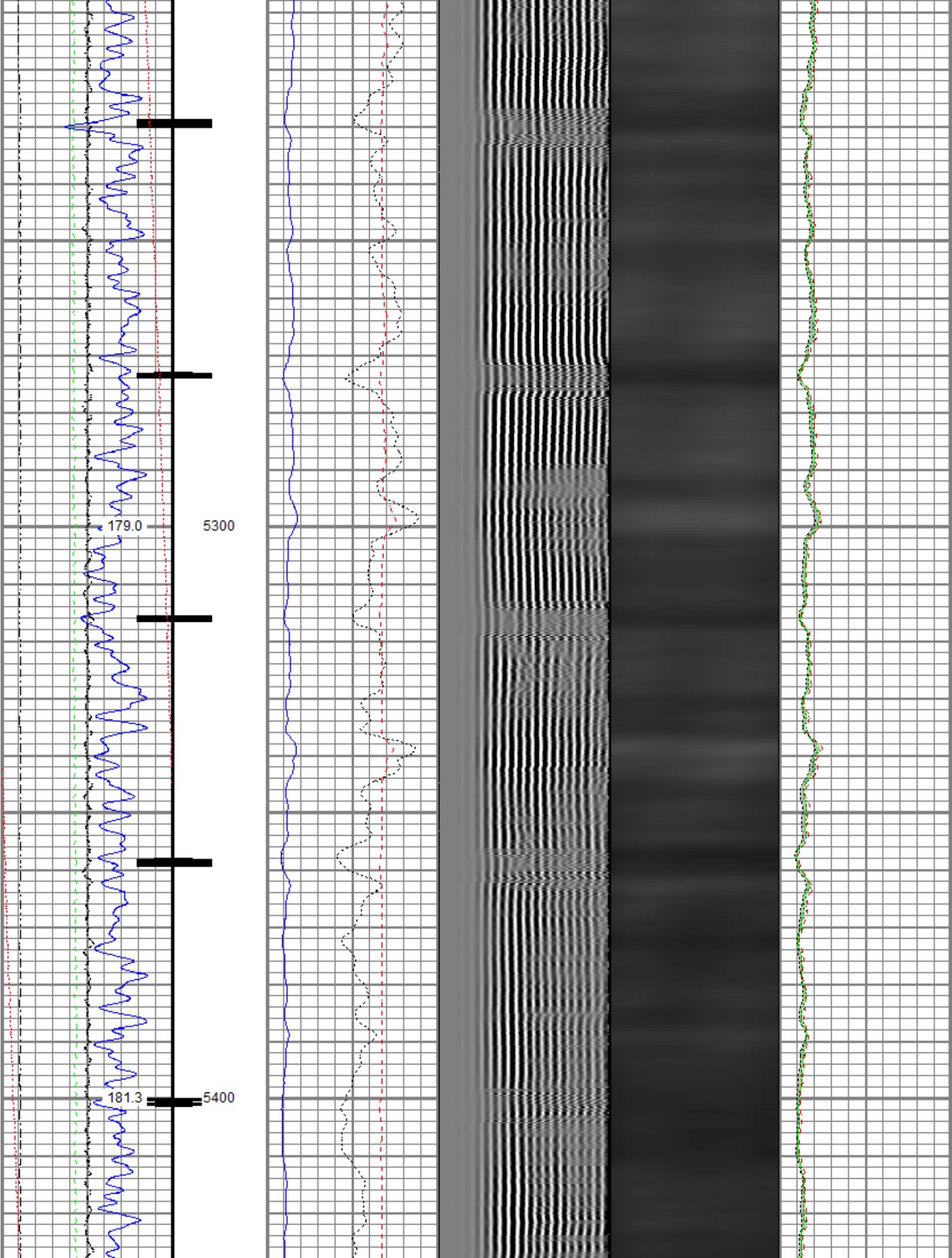


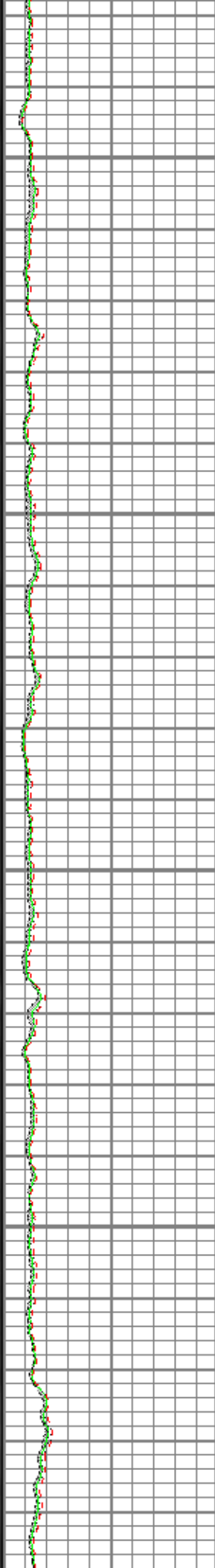
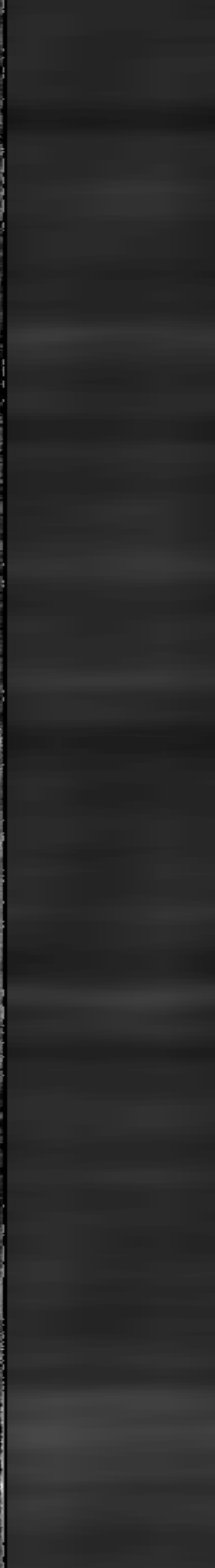
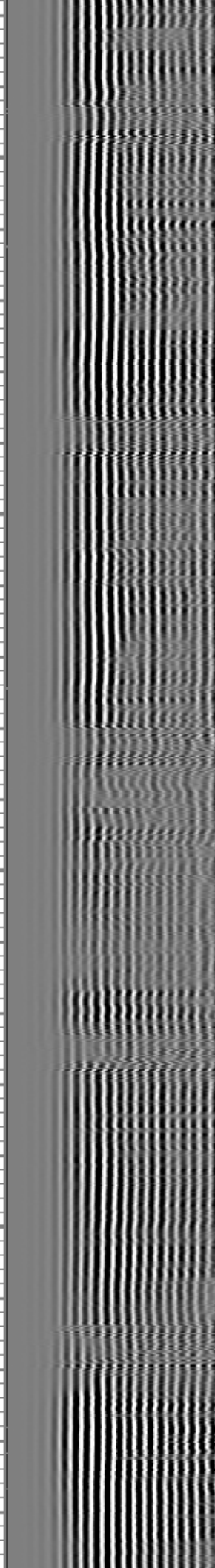
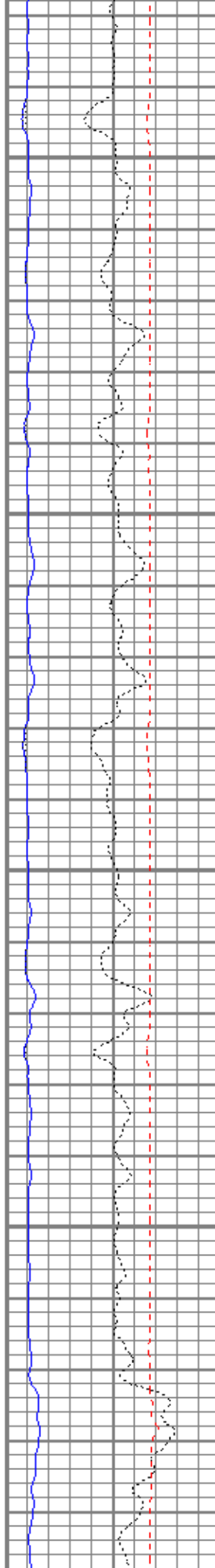
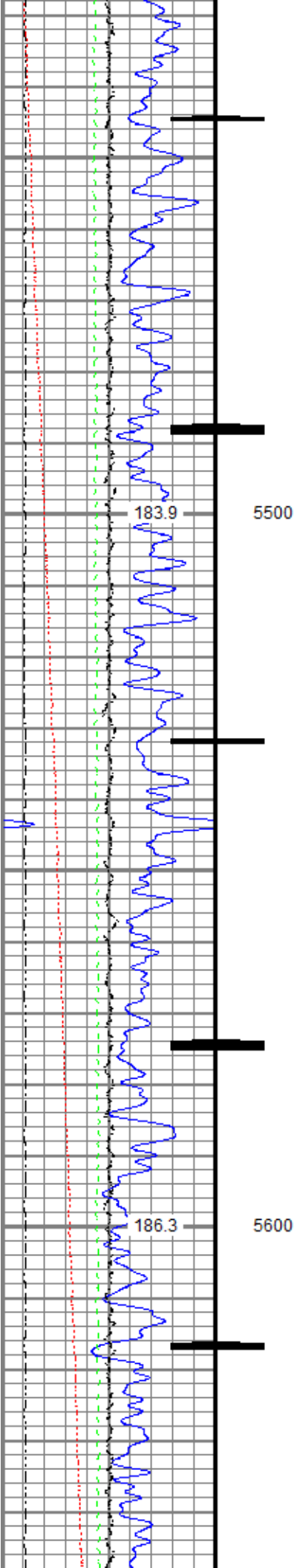


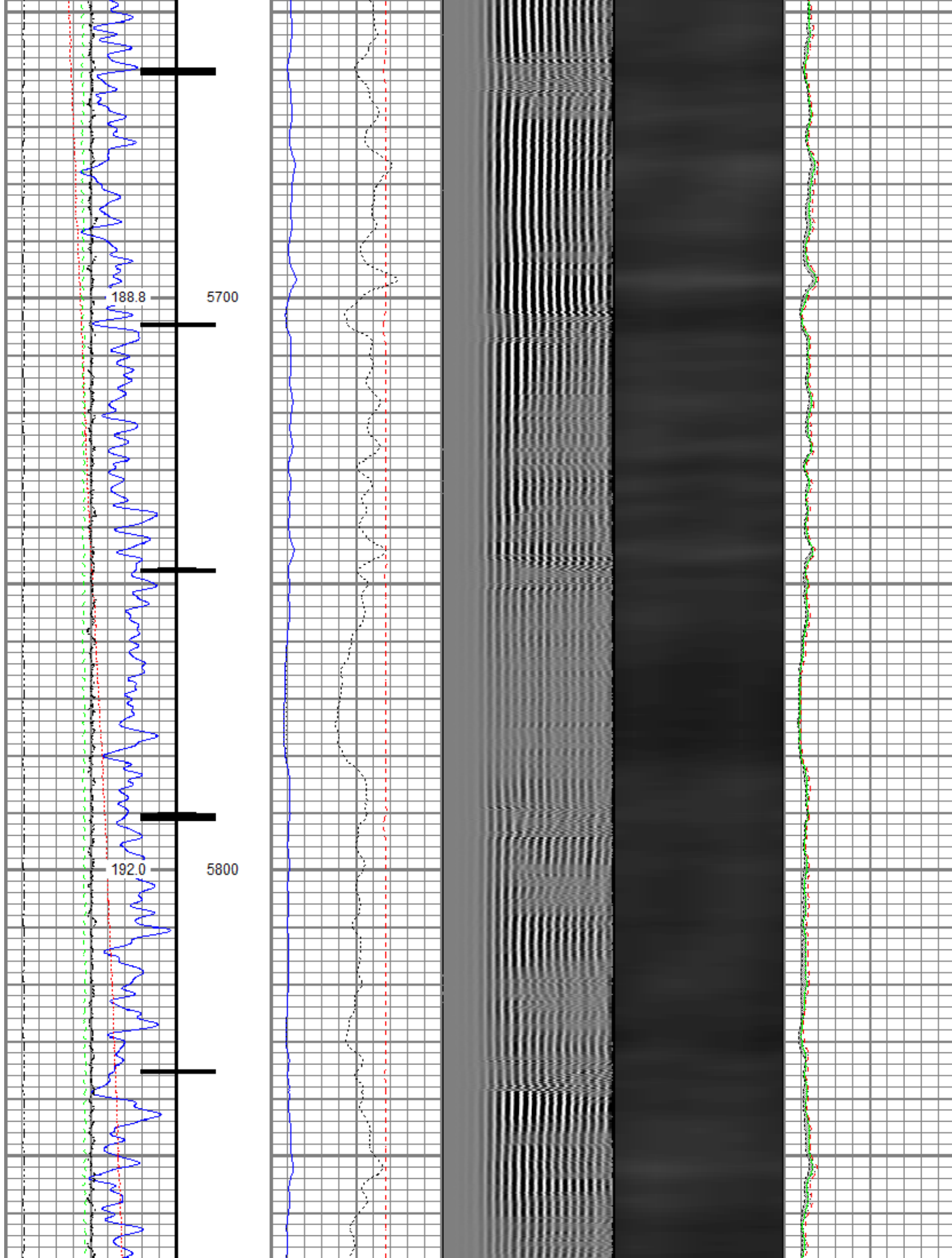


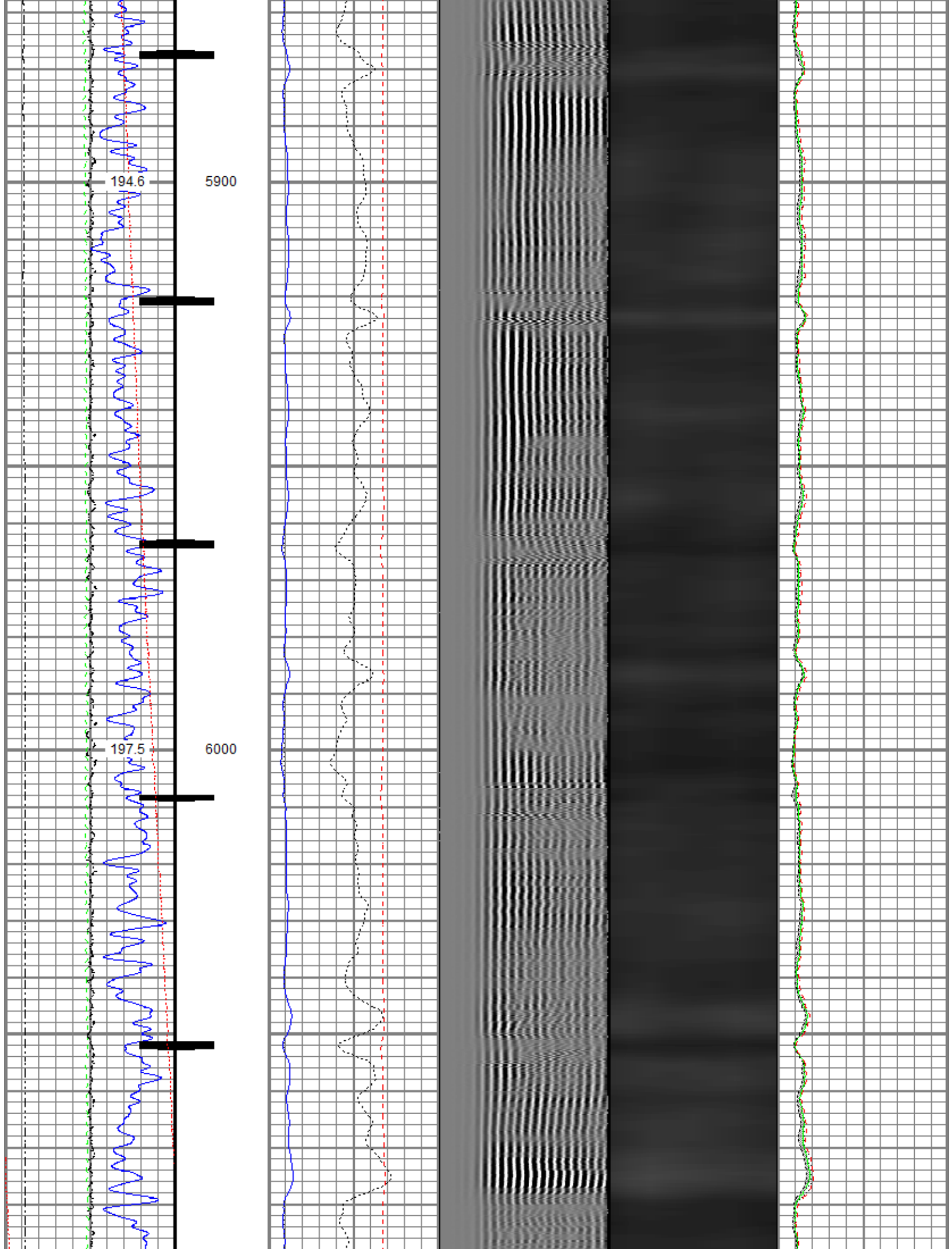


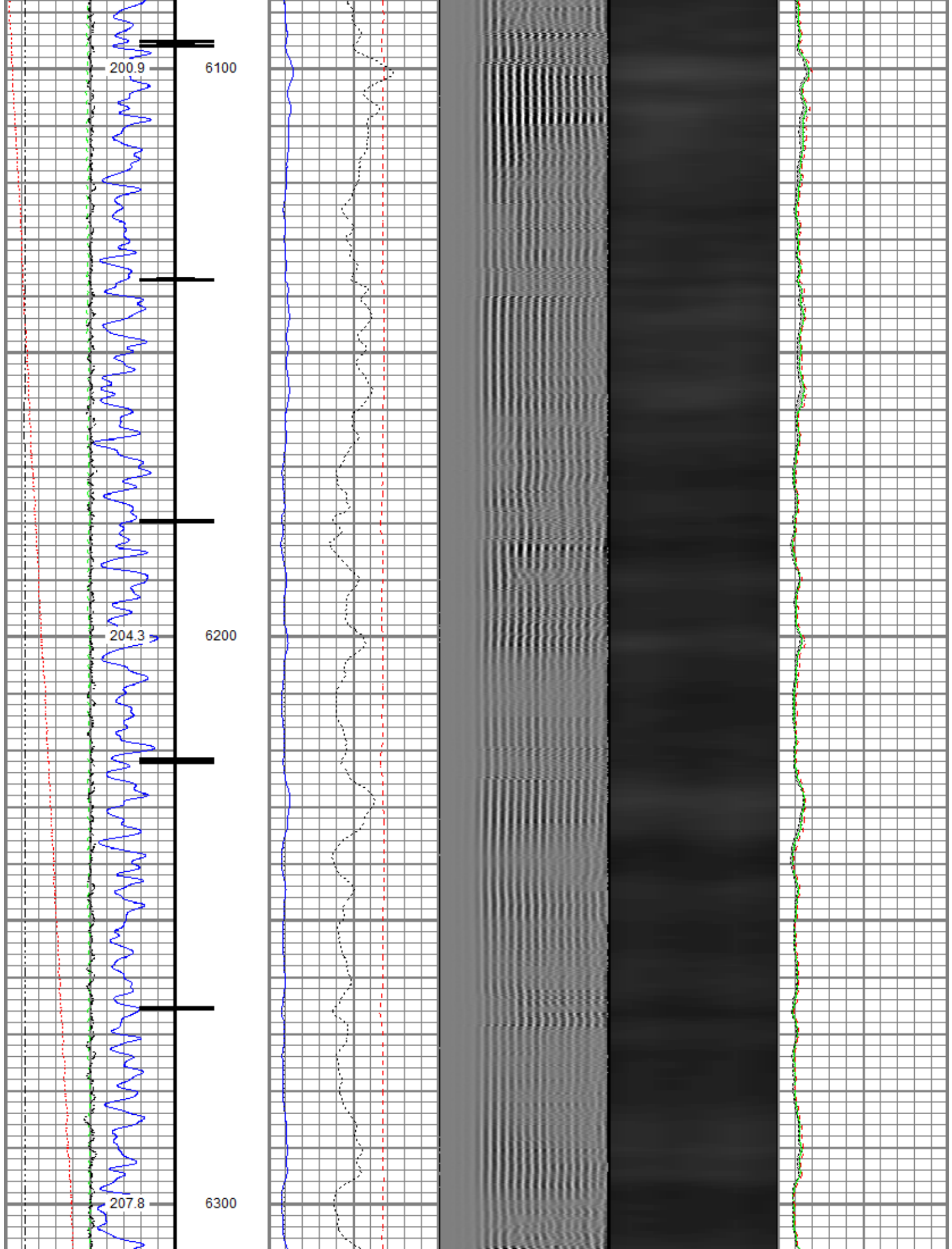


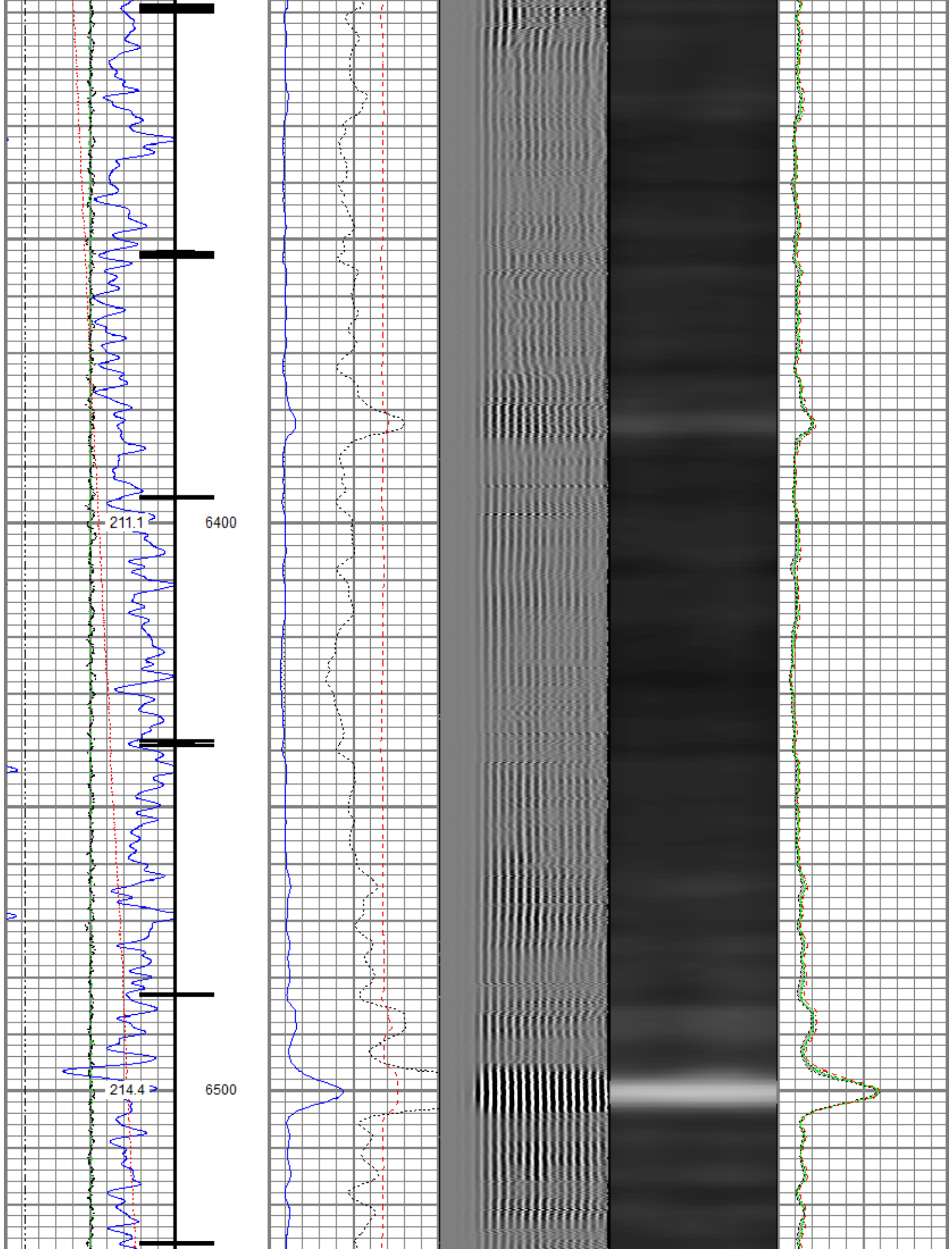


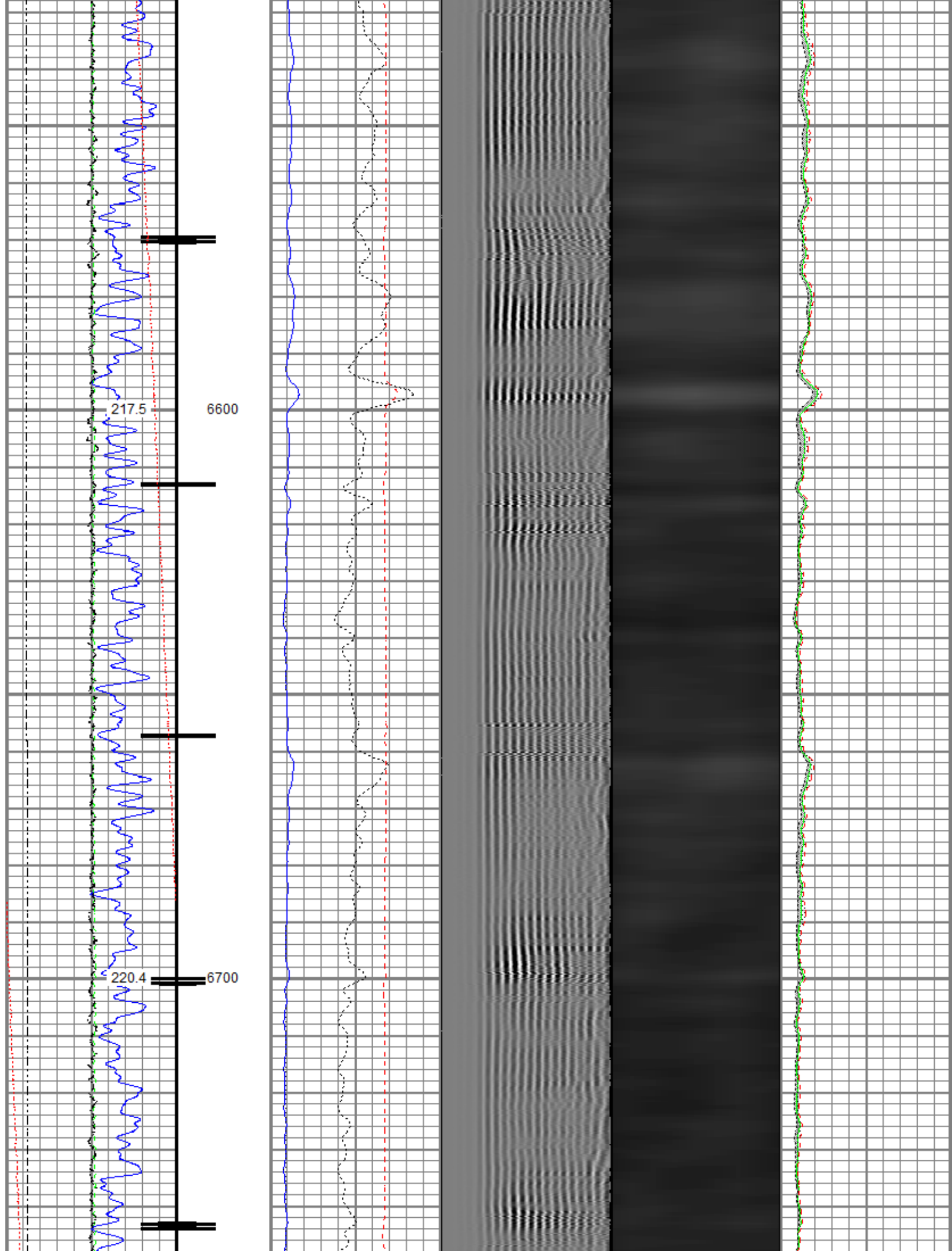


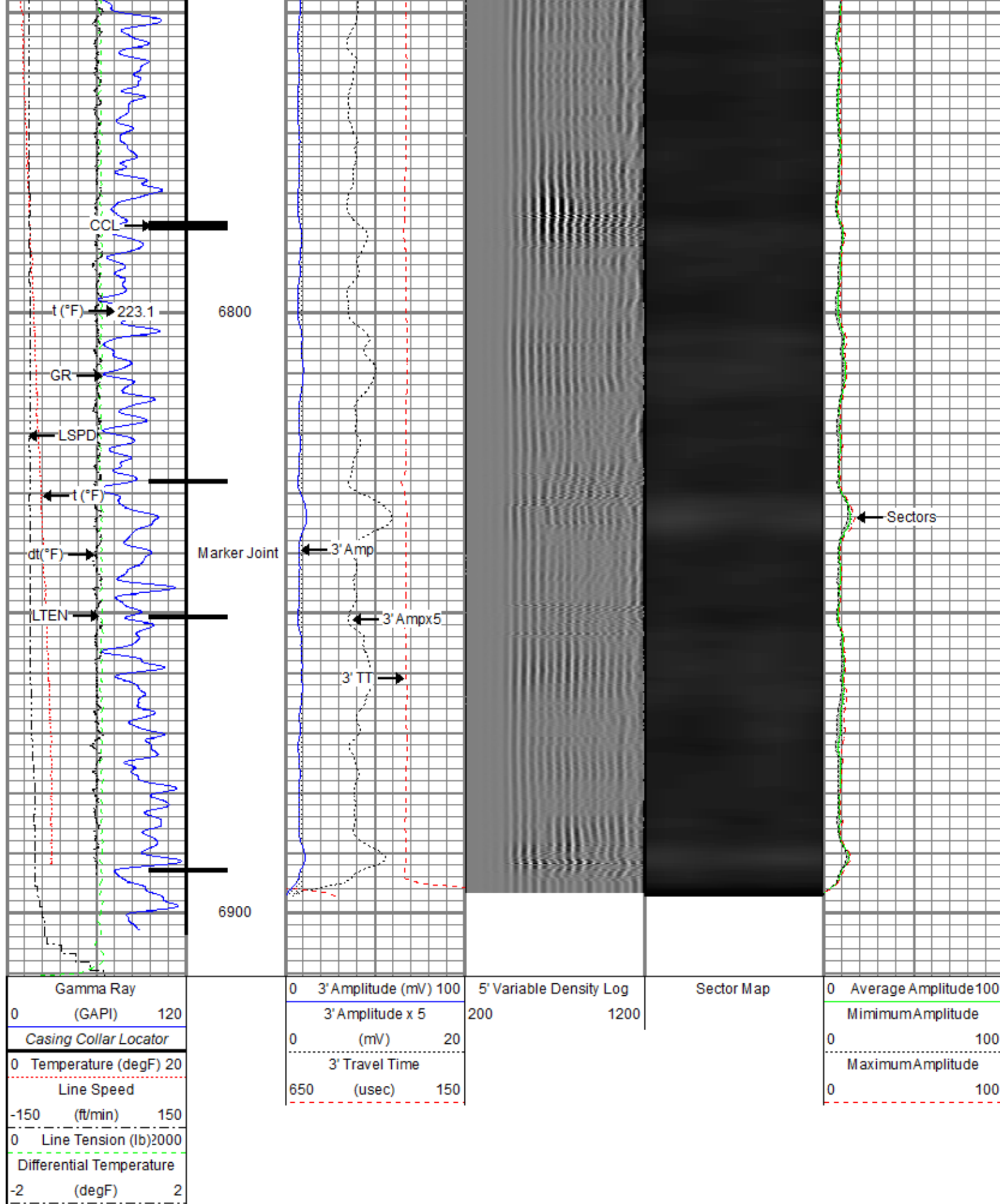










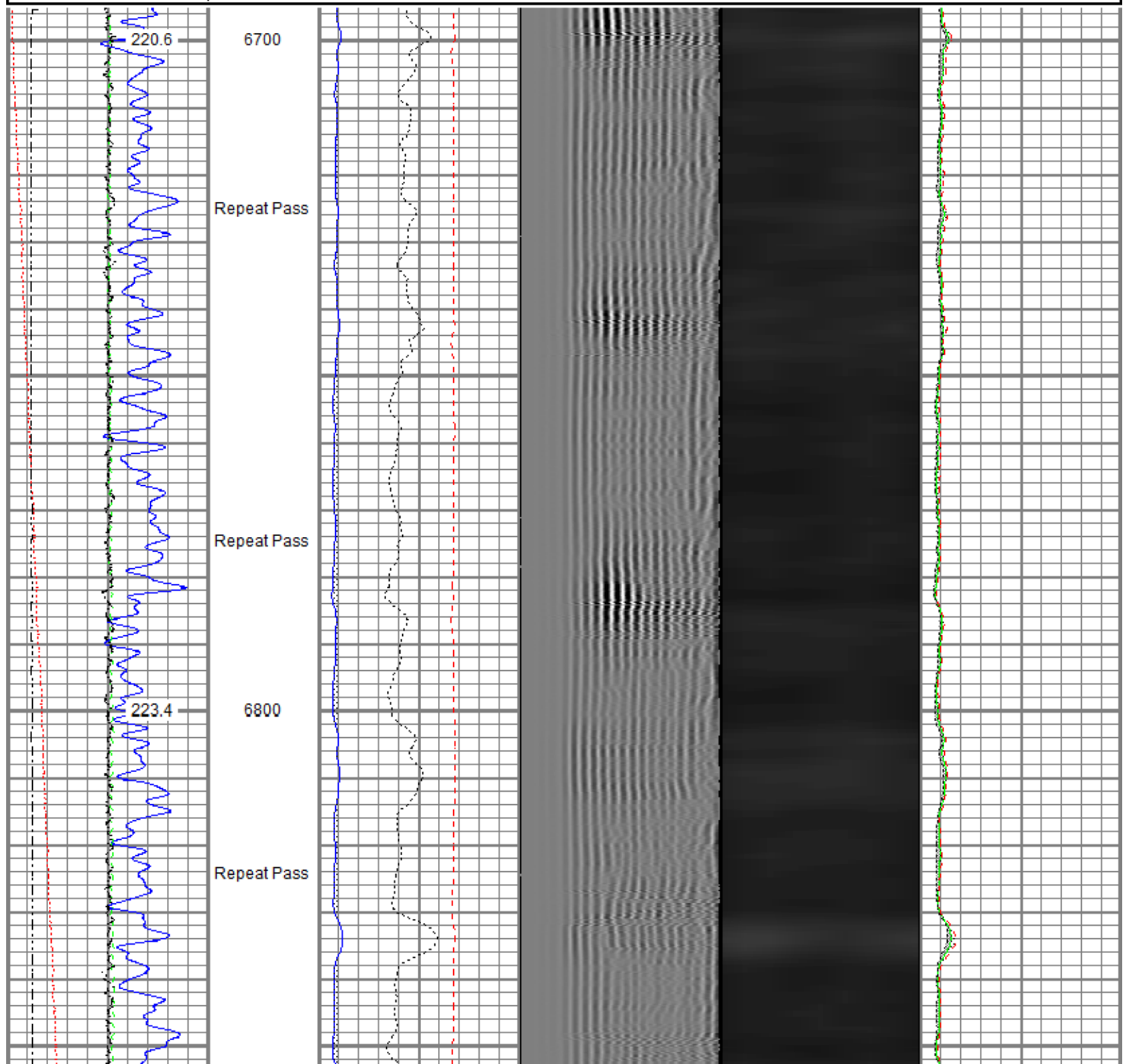


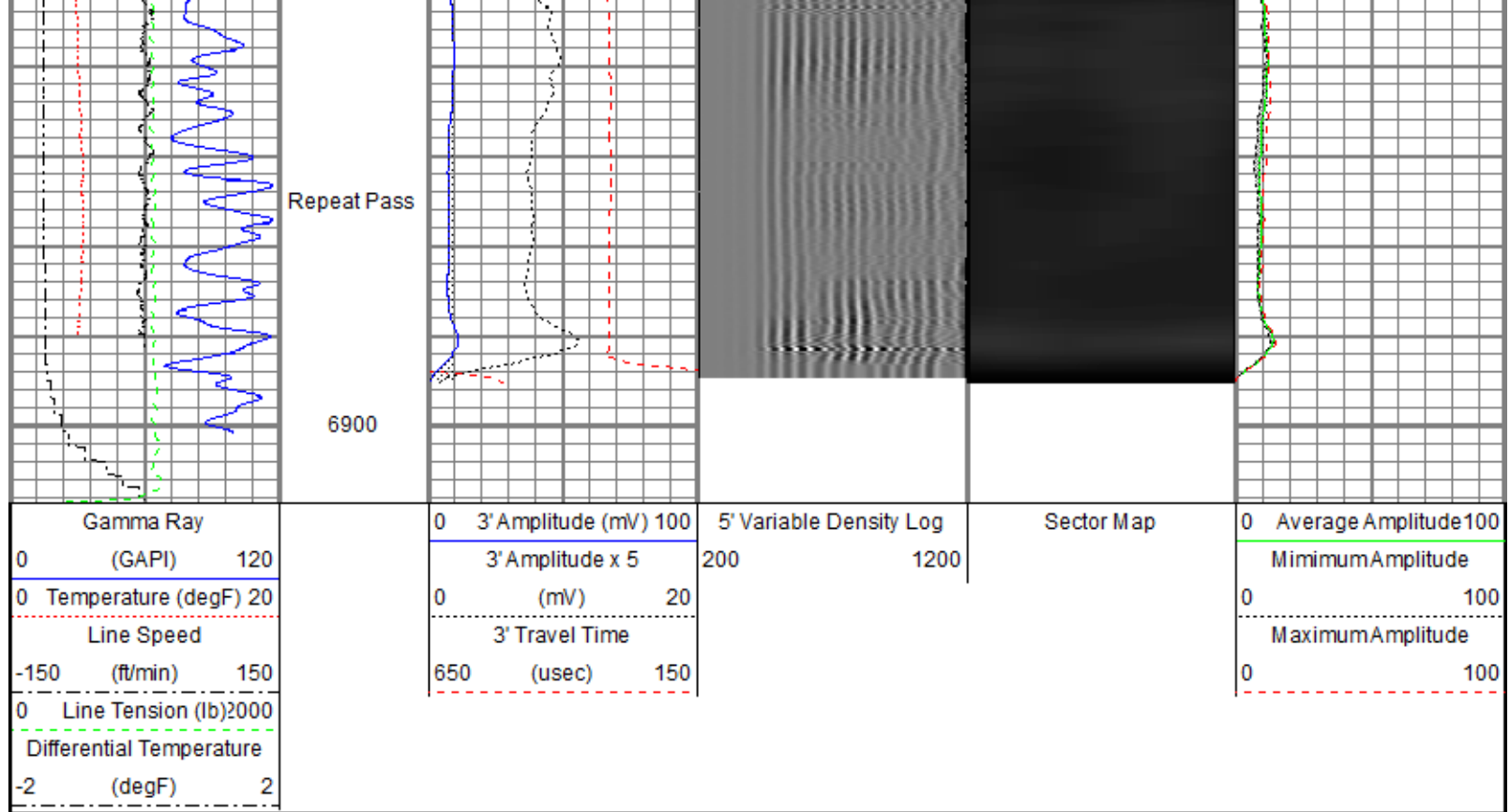
Repeat Pass

Recorded With 2800 PSI Surface Induced Pressure


Database File anadarko\0512347718_anadarko_castle pines 19-8hz_rbl_03-15-19\processed_0512347718_anadarko_castle pines 19-8hz
 Dataset Pathname Repeat.3
 Presentation Format ros_radrii
 Dataset Creation Sun Mar 17 17:48:52 2019
 Charted by Depth in Feet scaled 1:240

Gamma Ray (GAPI) 120	0 3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0 Average Amplitude 100
0 Temperature (degF) 20	3' Amplitude x 5 (mV) 20	200 1200		Minimum Amplitude
Line Speed (ft/min) 150	3' Travel Time (usec) 150			0 100
0 Line Tension (lb) 2000				Maximum Amplitude
Differential Temperature (degF) 2				0 100





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan CHD-14375 GO Titan 1-7/16" Assembled Electric Cable Head w/ 1" Fishing Neck	1.03	1.44	3.60
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
TEMP	17.04					
WVFS8	14.81		Probe Radii-2750 RBT (FW1308-091) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
WVFS7	14.81					
WVFS6	14.81					
WVFS5	14.81					
WVFS4	14.81					
WVFS3	14.81					
WVFS2	14.81					
WVFS1	14.81					
WVFCAL	14.81					
WVF3FT	14.81					
WVF5FT	13.81					

			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
CCL\$2	6.80					
CCL\$1	6.80					
GR	5.46		Probe GR-CCL-2750 6PB (101001) Probe 2-3/4" rev.1 Digital Scintillation Gamma Ray/CCL Combined with 6 Pin Bottom for CNT	4.80	2.75	55.00
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
Dataset: processed_0512347718_anadarko_castle pines 19-8hz_rbl_03-15-19_2800 psi.db: field/well/run1/Main.3 Total length: 23.86 ft Total weight: 223.60 lb O.D.: 2.75 in						

Calibration Report						
Database File	c:\programdata\warrior\data\anadarko\0512347718_anadarko_castle pines 19-8hz_rbl_03-15-19\processed_0512347718_anad					
Dataset Pathname	Main.3					
Dataset Creation	Sun Mar 17 17:32:58 2019					
Gamma Ray Calibration Report						
Serial Number:	101001					
Tool Model:	2750 6PB					
Performed:	Mon Oct 01 11:32:32 2018					
Calibrator Value:	637.0	GAPI				
Background Reading:	100.6	cps				
Calibrator Reading:	981.1	cps				
Sensitivity:	0.7235	GAPI/cps				
Segmented Cement Bond Log Calibration Report						
Serial Number:	FW1308-091					
Tool Model:	2750 RBT					
Calibration Casing Diameter:	5.500	in				
Calibration Depth:	-46.715	ft				
Master Calibration, performed (Derived):						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.002	0.570	0.800	71.921	125.224	0.544
CAL	0.731	0.728				
5'	0.002	0.488	0.800	71.921	146.350	0.566
SUM						
S1	0.002	0.569	0.000	100.000	176.436	-0.306
S2	0.001	0.585	0.000	100.000	171.308	-0.245

S3	0.002	0.600	0.000	100.000	167.079	-0.288
S4	0.002	0.600	0.000	100.000	167.052	-0.304
S5	0.002	0.602	0.000	100.000	166.705	-0.341
S6	0.002	0.588	0.000	100.000	170.906	-0.410
S7	0.002	0.560	0.000	100.000	179.329	-0.374
S8	0.002	0.566	0.000	100.000	177.512	-0.393

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.731	0.728	1.000	0.000

Air Zero Calibration, performed Fri Mar 15 06:46:35 2019:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.007		0.000		0.000	
5'	0.008		0.000		0.000	
SUM						
S1	0.004		0.000		-0.000	
S2	0.008		0.000		-0.000	
S3	0.007		0.000		-0.000	
S4	0.007		0.000		-0.000	
S5	0.007		0.000		-0.000	
S6	0.007		0.000		0.000	
S7	0.007		0.000		-0.000	
S8	0.007		0.000		0.000	

Temperature Calibration Report

Serial Number: FW1308-091
Tool Model: 2750 RBT
Performed: Mon Oct 01 11:32:16 2018

	Reference	Reading
Low Reference:	100.00 degF	104.72 degF
High Reference:	350.00 degF	392.24 degF

Gain: 0.87
Offset: 8.94
Delta Spacing: 1



Company: Kerr-McGee Oil & Gas Onshore, L.P.
Well: Castle Pines 19-8HZ
Field: Wattenberg
County: Weld
State: Colorado