



Radial Cement Bond
Gamma Ray
Casing Collar Log

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

Well Buddy 7-13HZ

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-48452

Other Services
JBGR
RBP
RBL 0 PSI

SEC 7 TWP 1N RGE 67W

Elevation

Permanent Datum Ground Level Elevation 5072'

K.B. 5093'

Log Measured From Ground Level 0 FT

D.F. ---

Drilling Measured From Kelly Bushing

G.L. 5072'

Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Buddy 7-13HZ
Field Wattenberg
County Weld
State Colorado

Date	21-JUL-2019	Two		
Run Number		18195 FT		
Depth Driller		6926 FT		
Depth Logger		6911 FT		
Bottom Logged Interval		Surface		
Top Log Interval		7 875"		
Open Hole Size		Water		
Type Fluid		8.34 lb/gal		
Density / Viscosity		218°F		
Max. Recorded Temp.		See Log		
Estimated Cement Top		ROA		
Time Well Ready		08:56		
Time Logger on Bottom		HD-363		
Equipment Number		Platteville, CO		
Location		J. Morrison		
Recorded By		J. Blockberger		
Witnessed By	J. 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 6860 FT
Adjusted 0 FT to correlate with Marker Joint
Gauge Ring/Junk Basket ran to 7834 FT
Retrievable Bridge Plug set at 6929 FT
Log ran 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!!

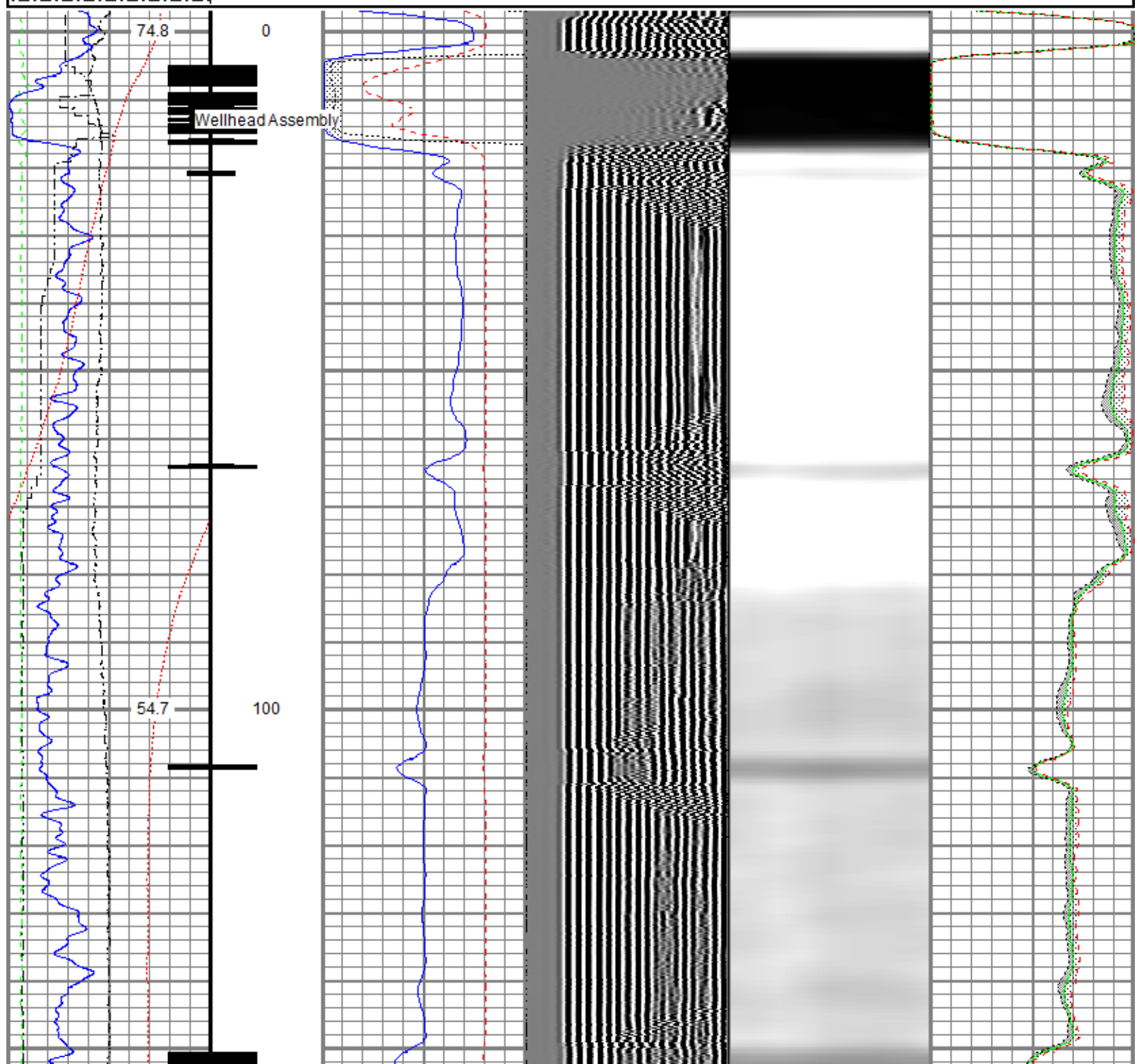
Main Pass

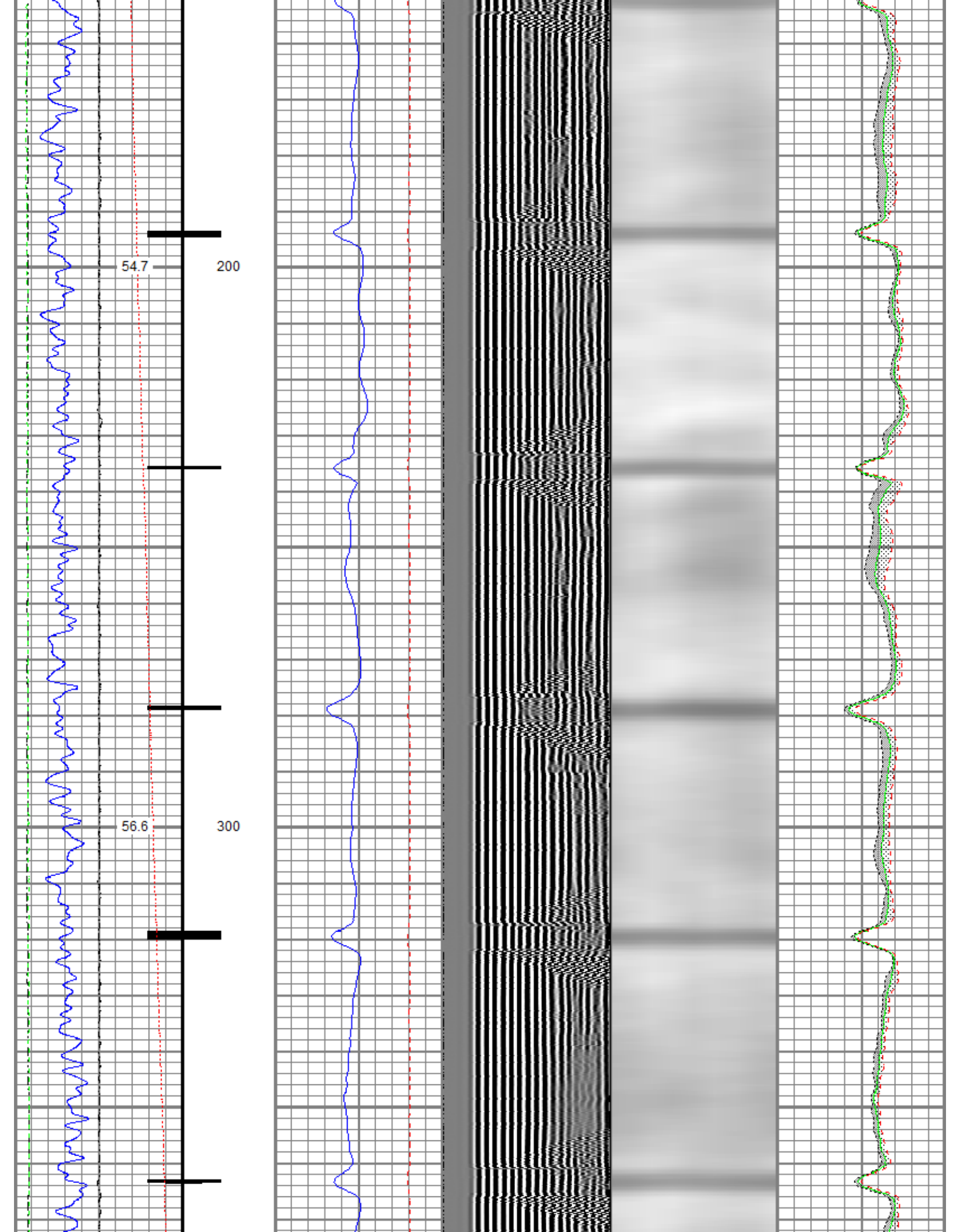


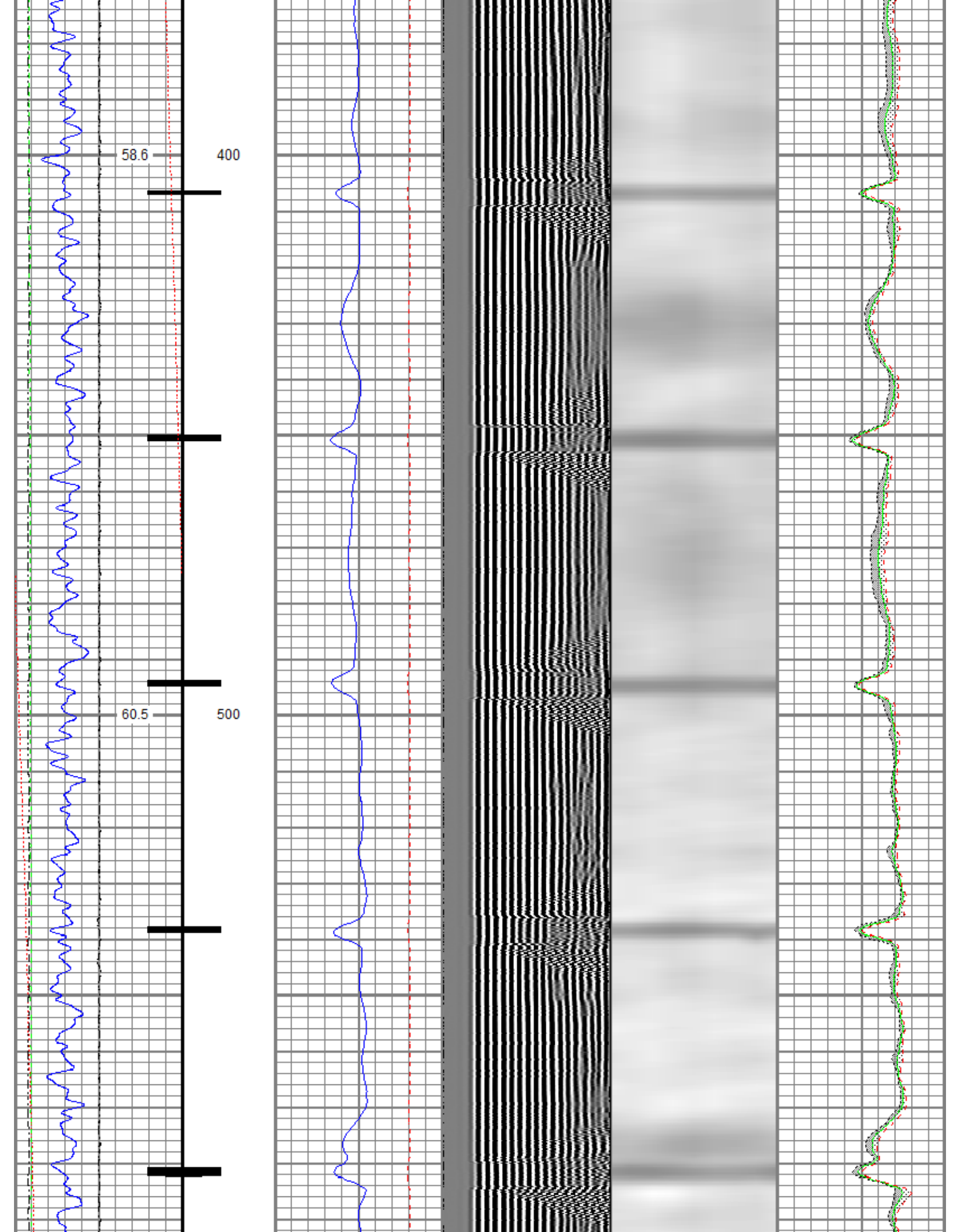
Recorded With 2800 PSI Surface Induced Pressure

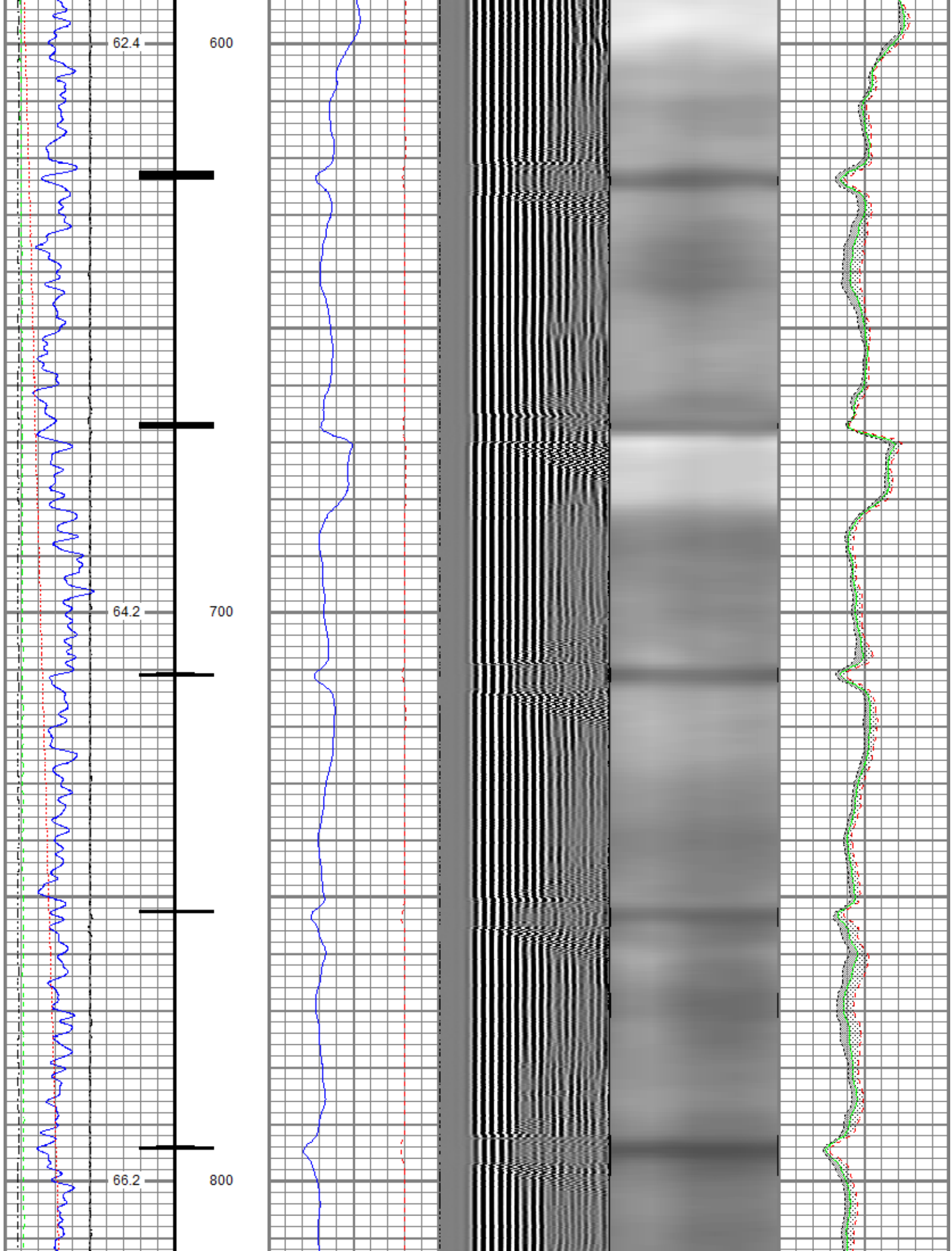
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Dataset Pathname	RCBL_2800PSI/Main.2
Presentation Format	ros_radri
Dataset Creation	Tue Jul 23 08:36:29 2019
Charted by	Depth in Feet scaled 1:240

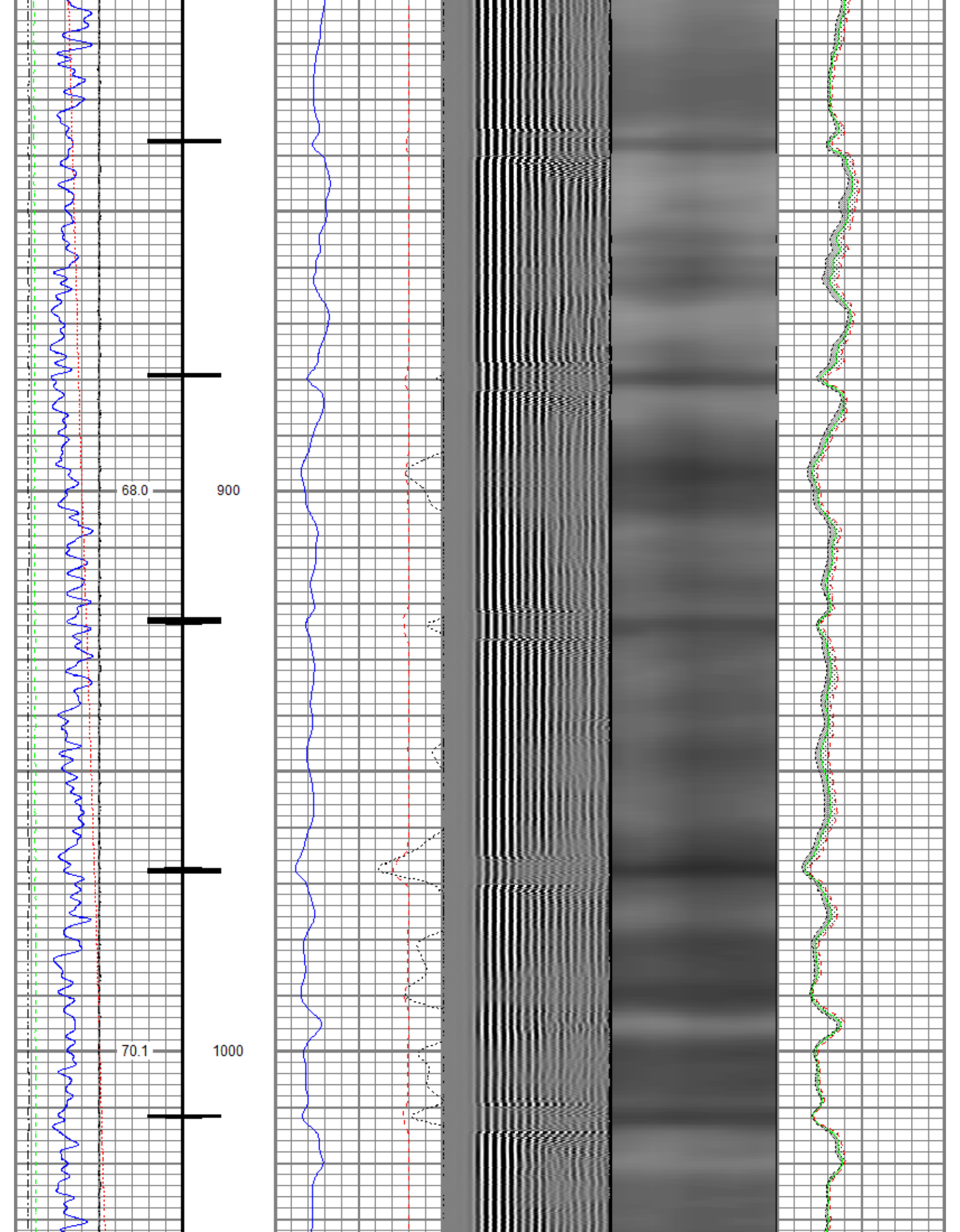
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200	1200		Minimum Amplitude
Casing Collar Locator	0	(mV) 20			0	100
Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed	650	(usec) 150			0	100
(ft/min) 150						
Line Tension (lb) 2000						
Differential Temperature						
(degF) 2						

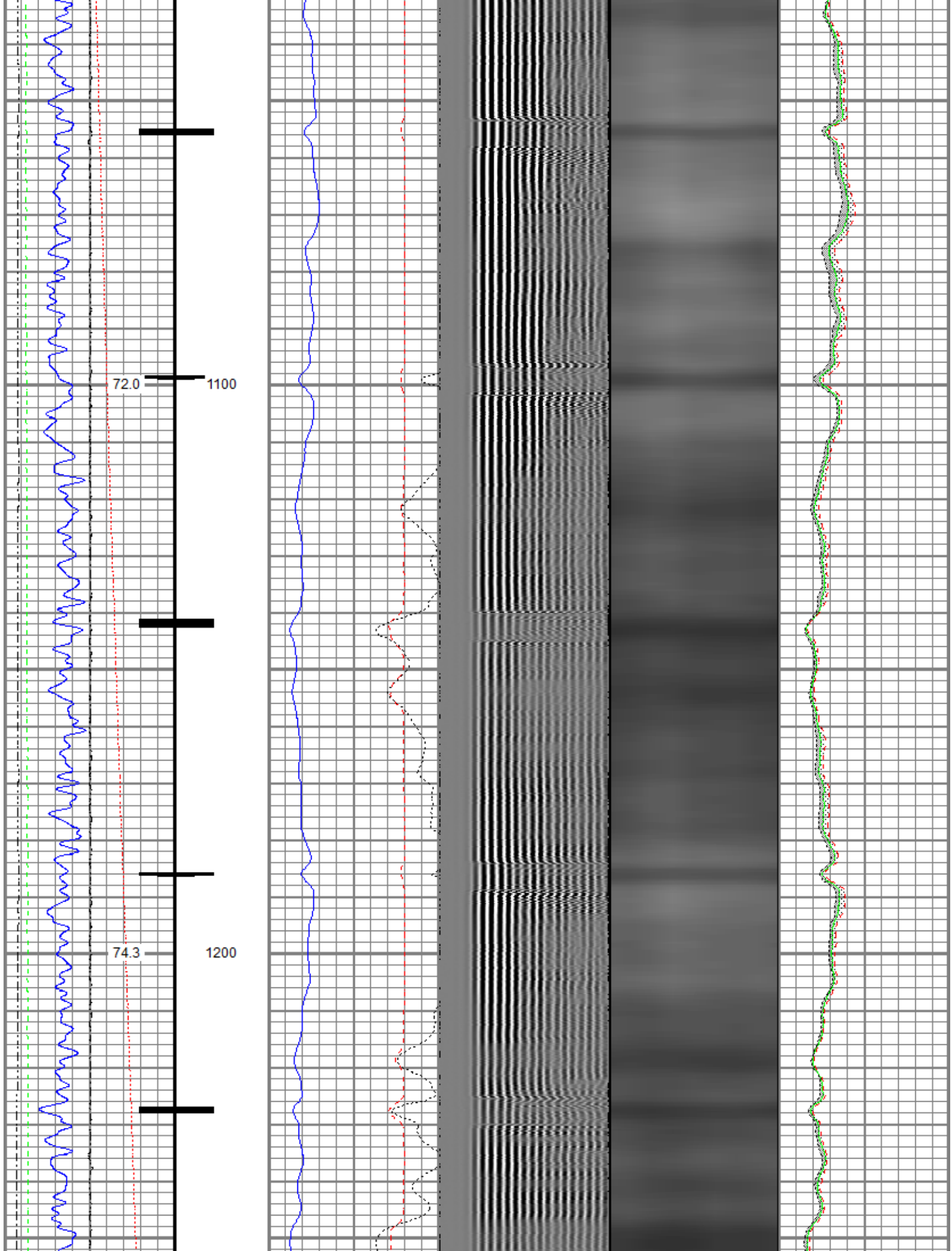


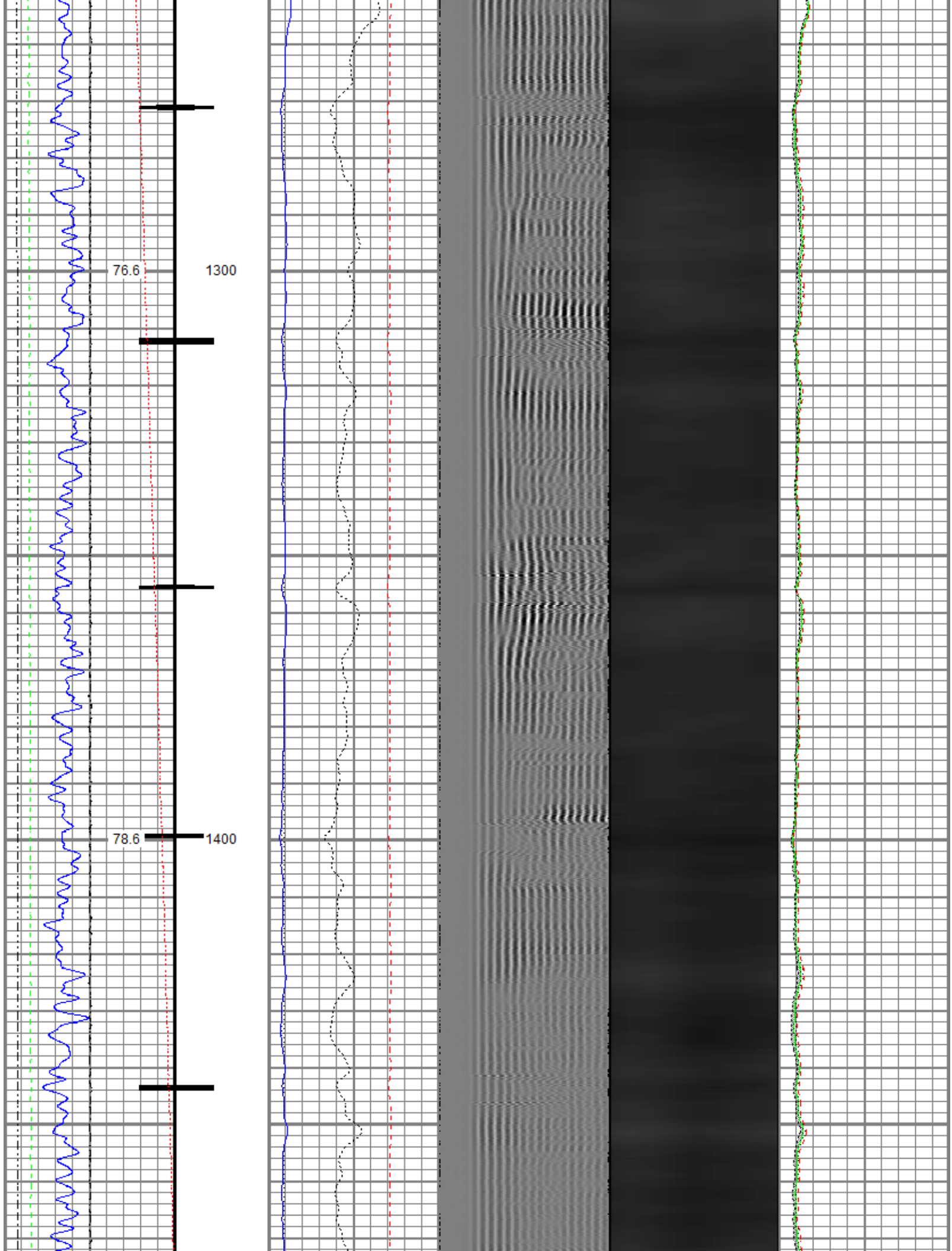


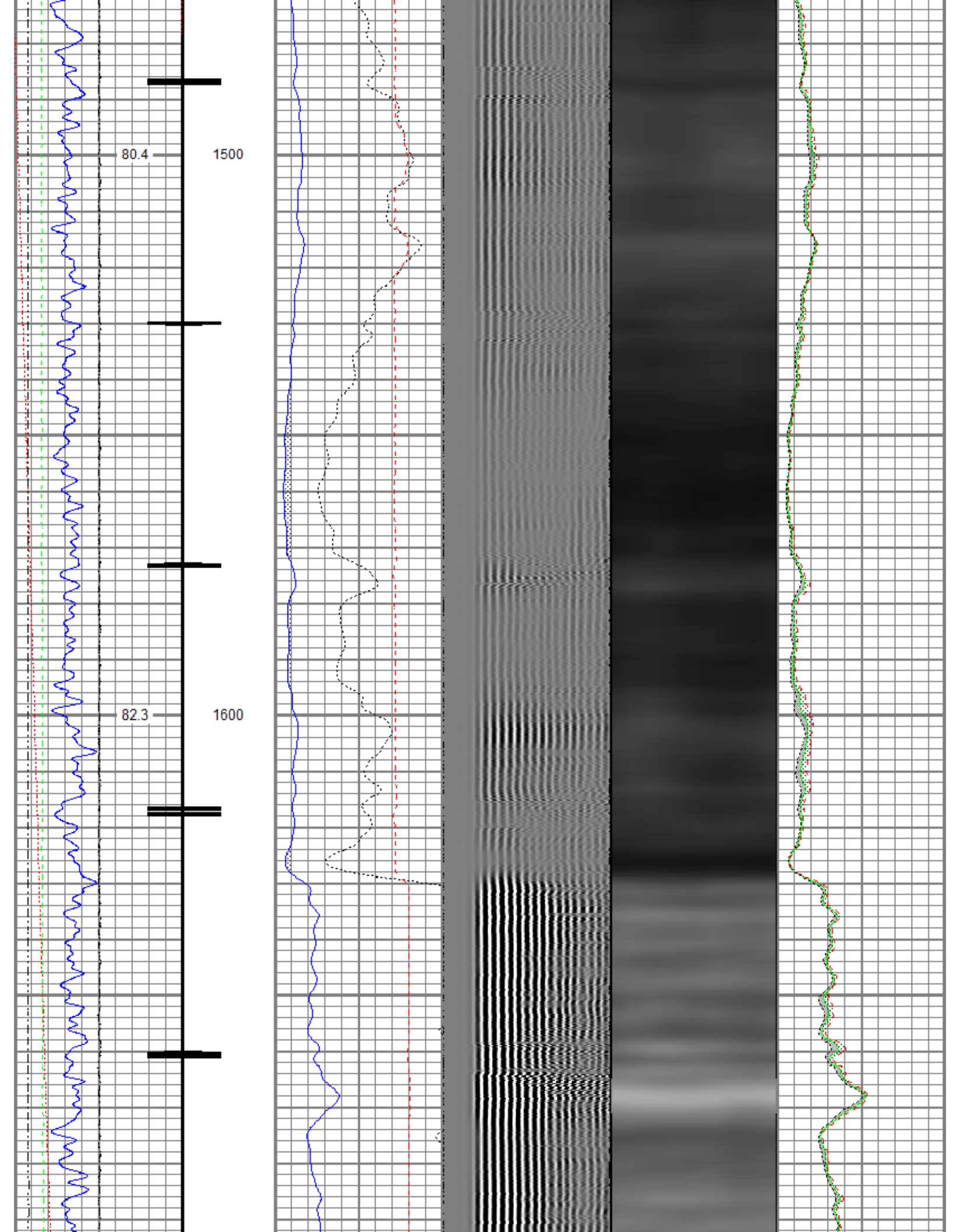


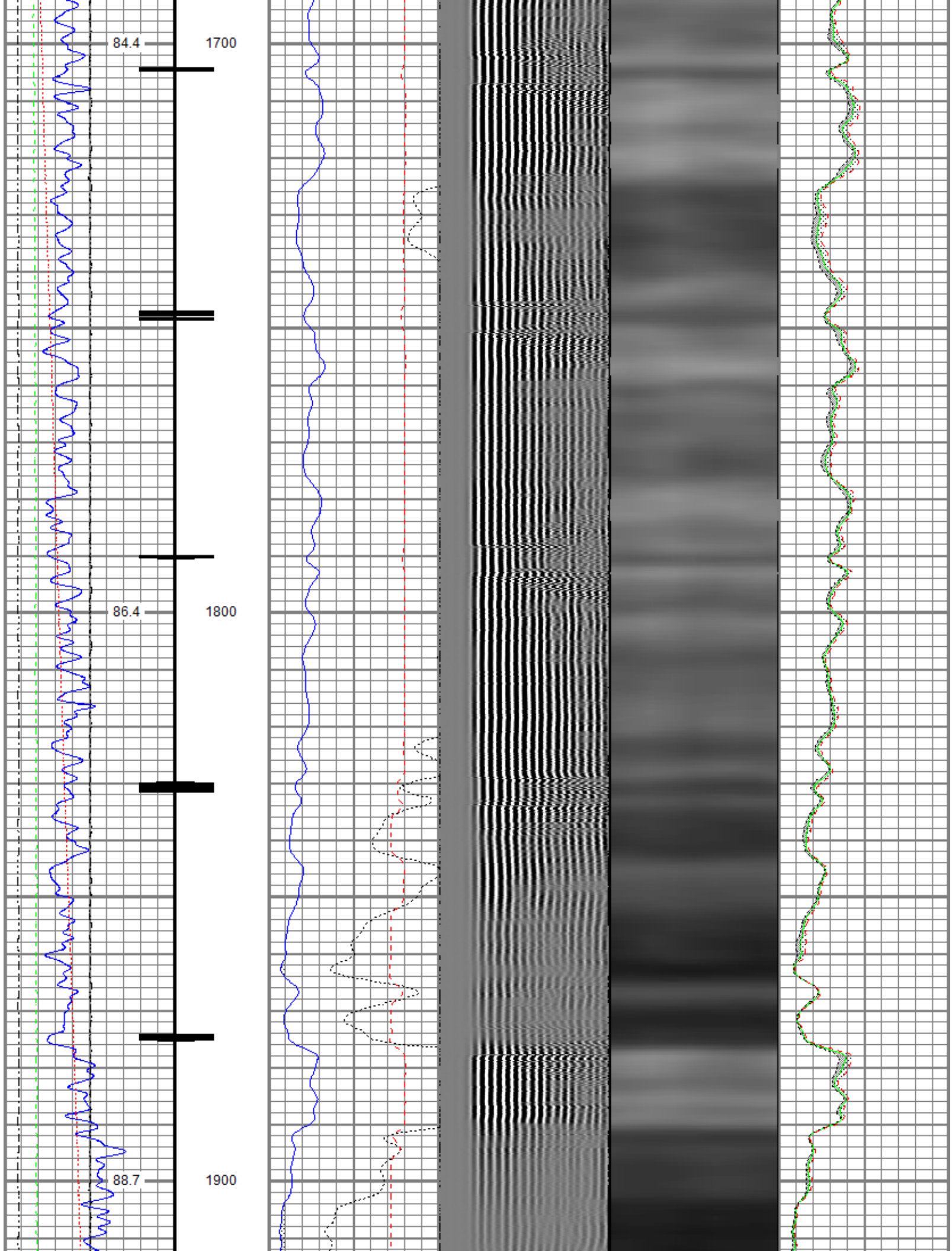


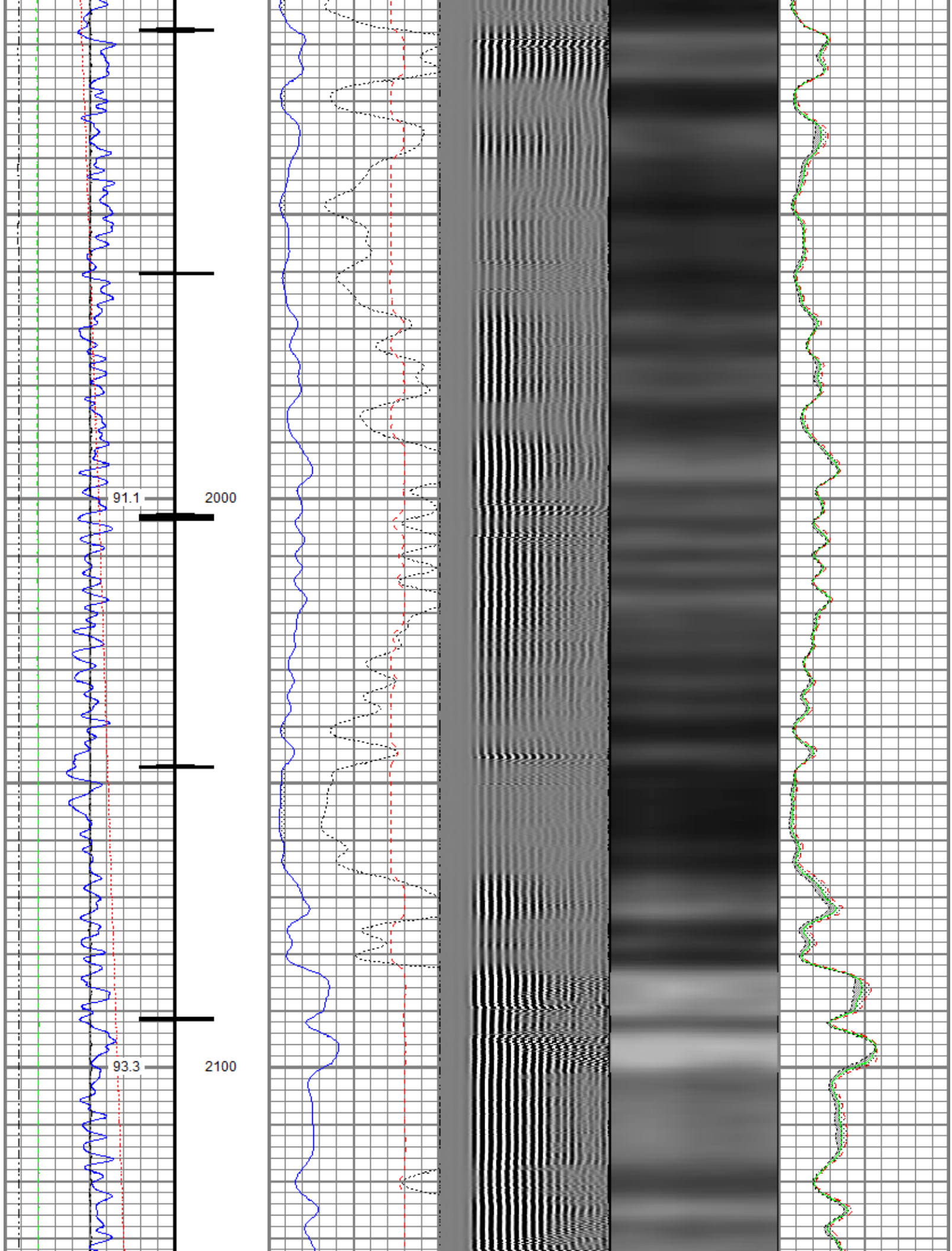


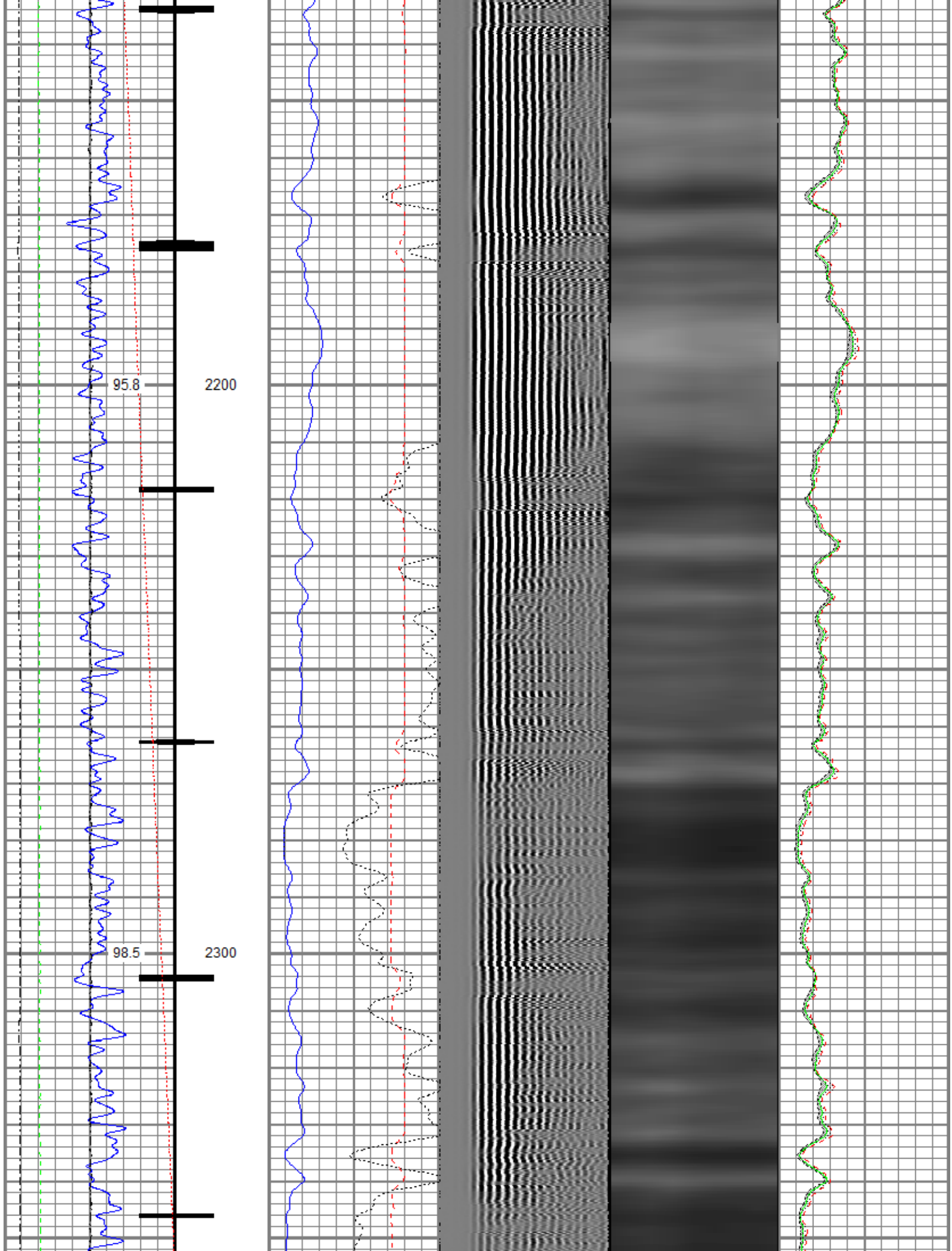


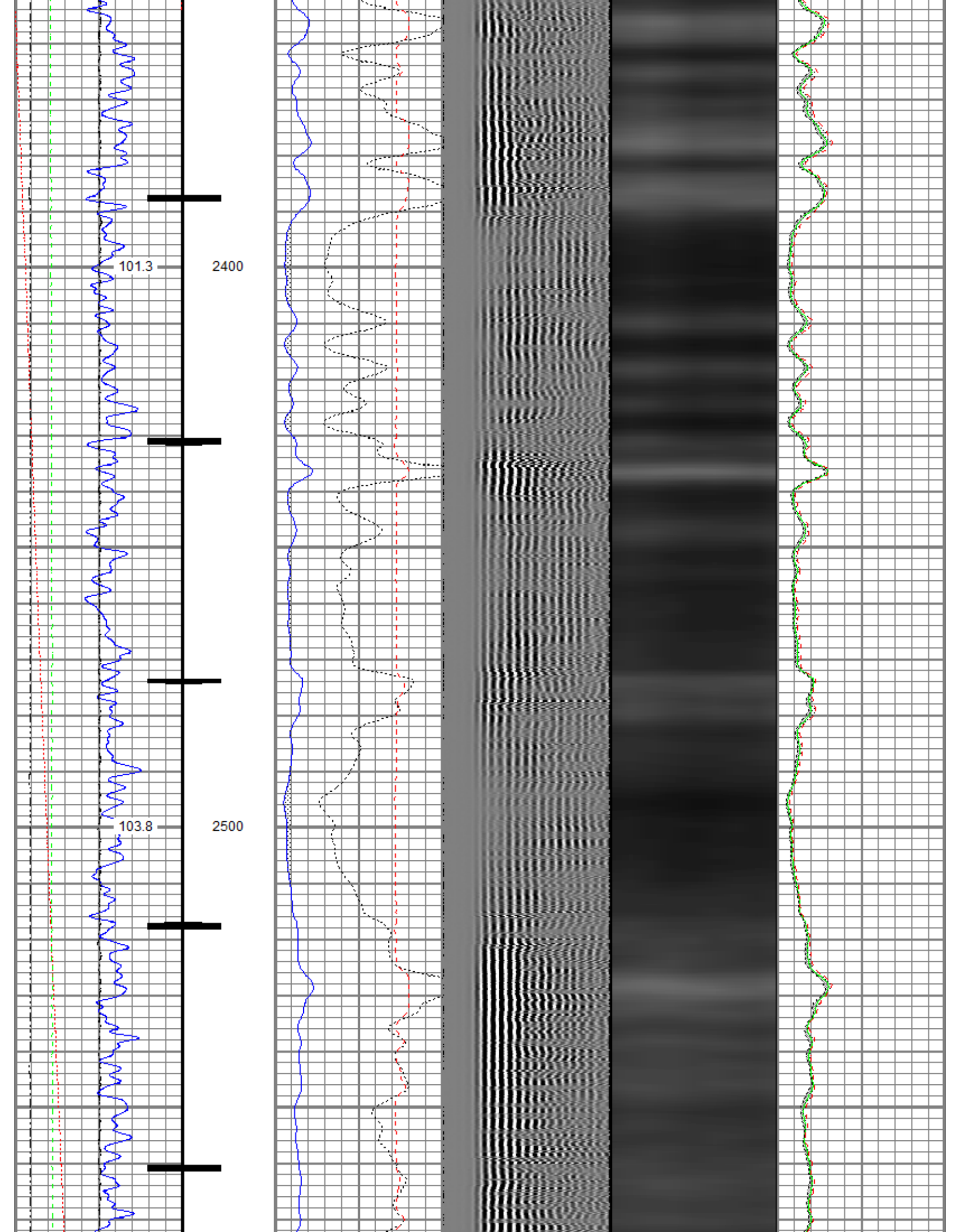


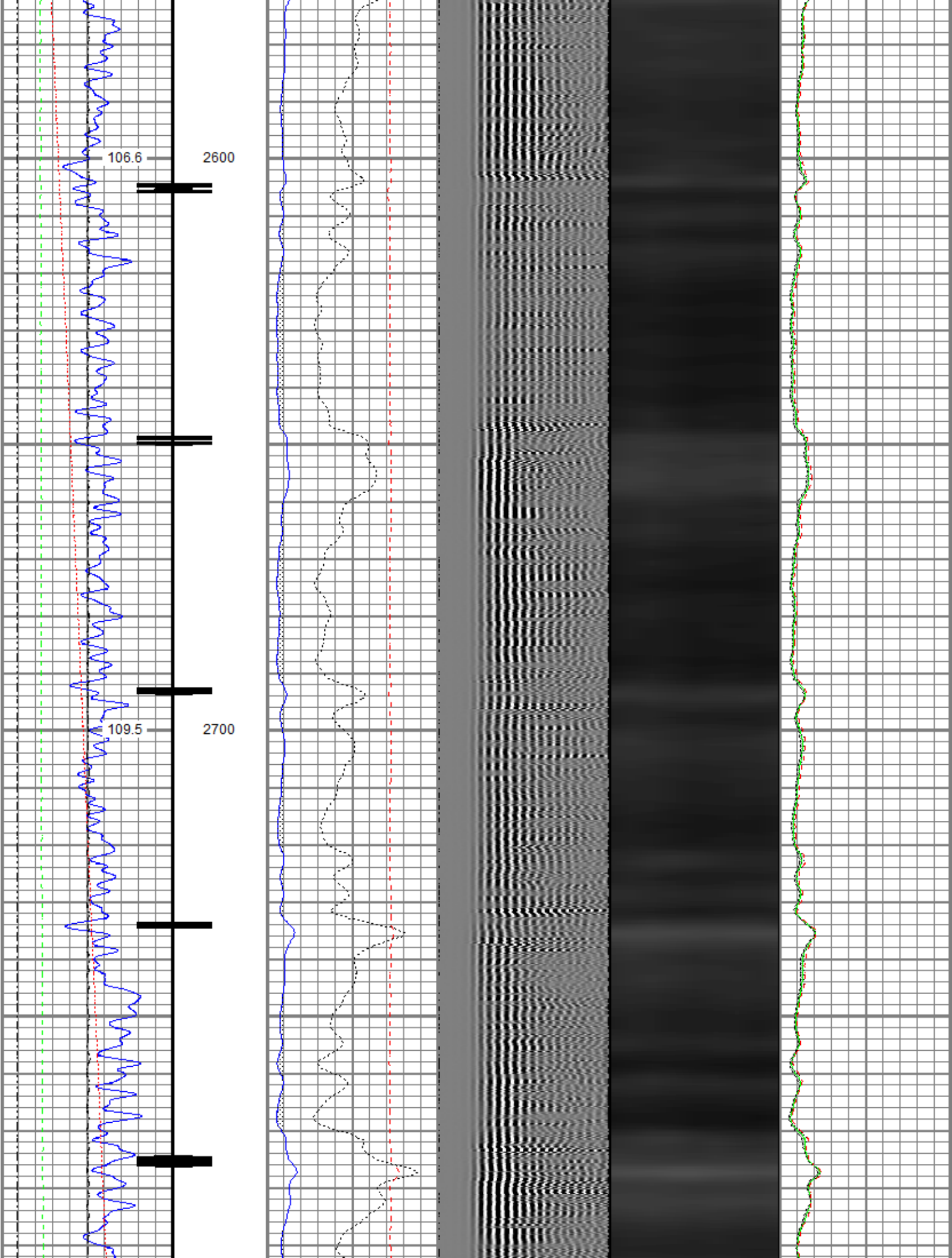


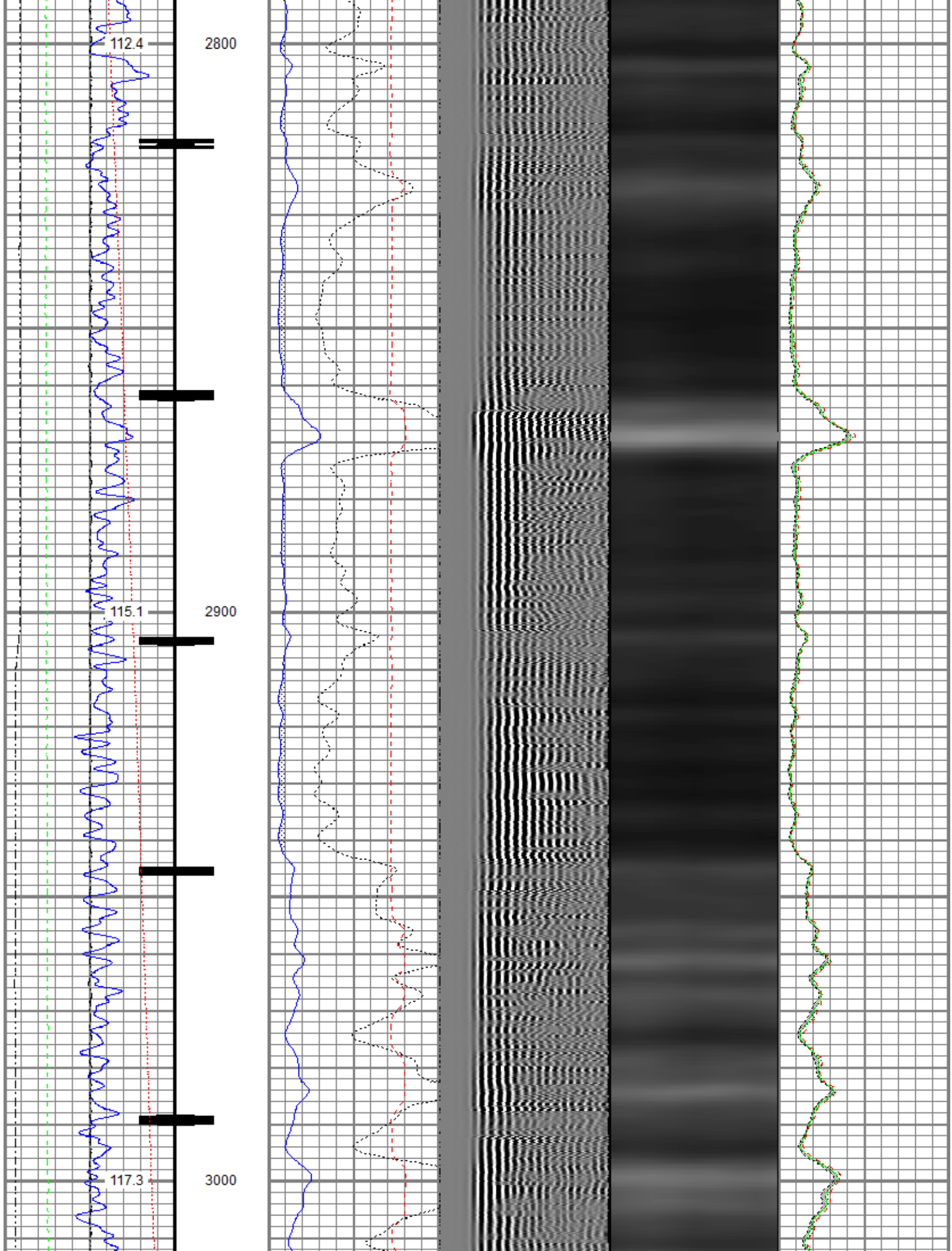


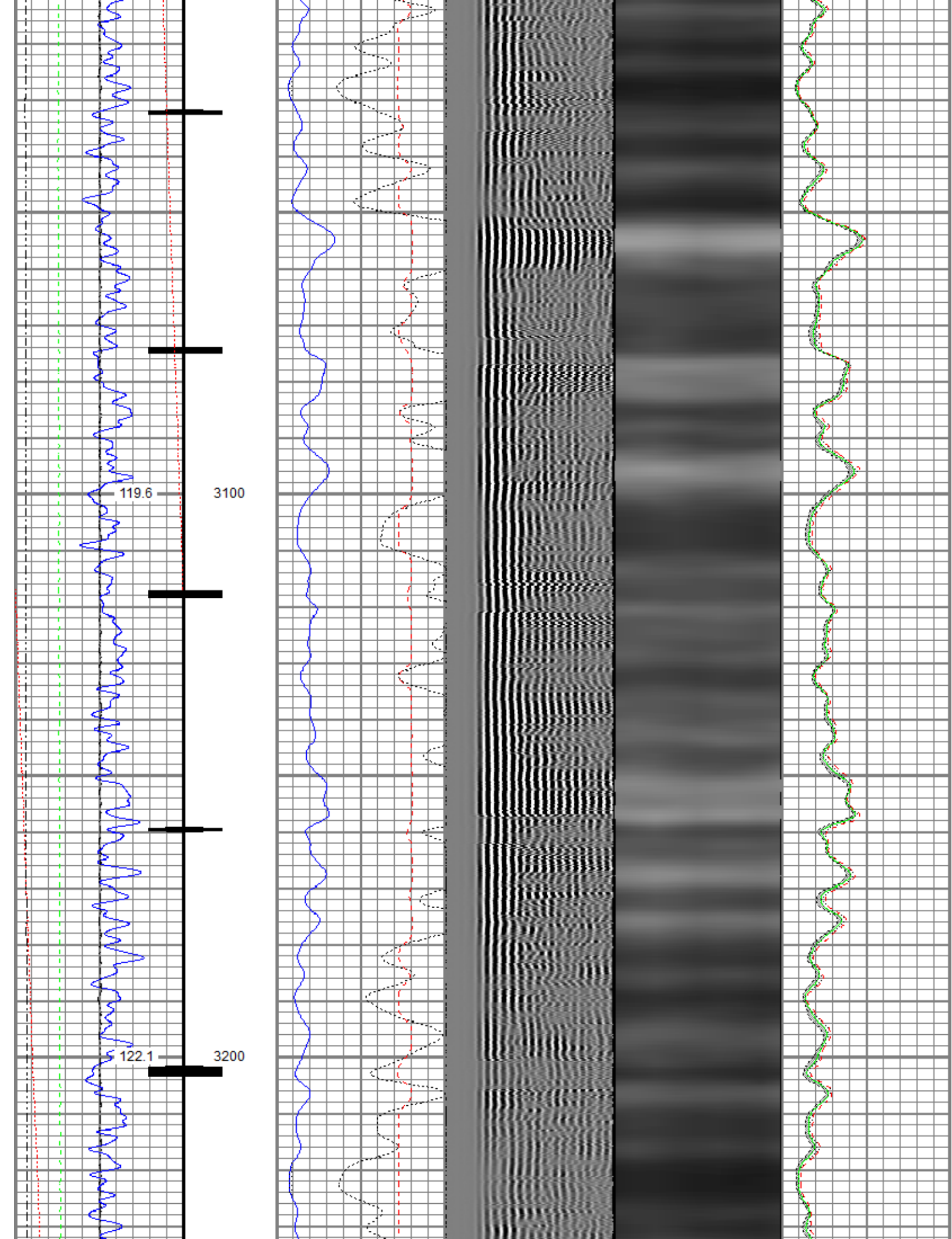


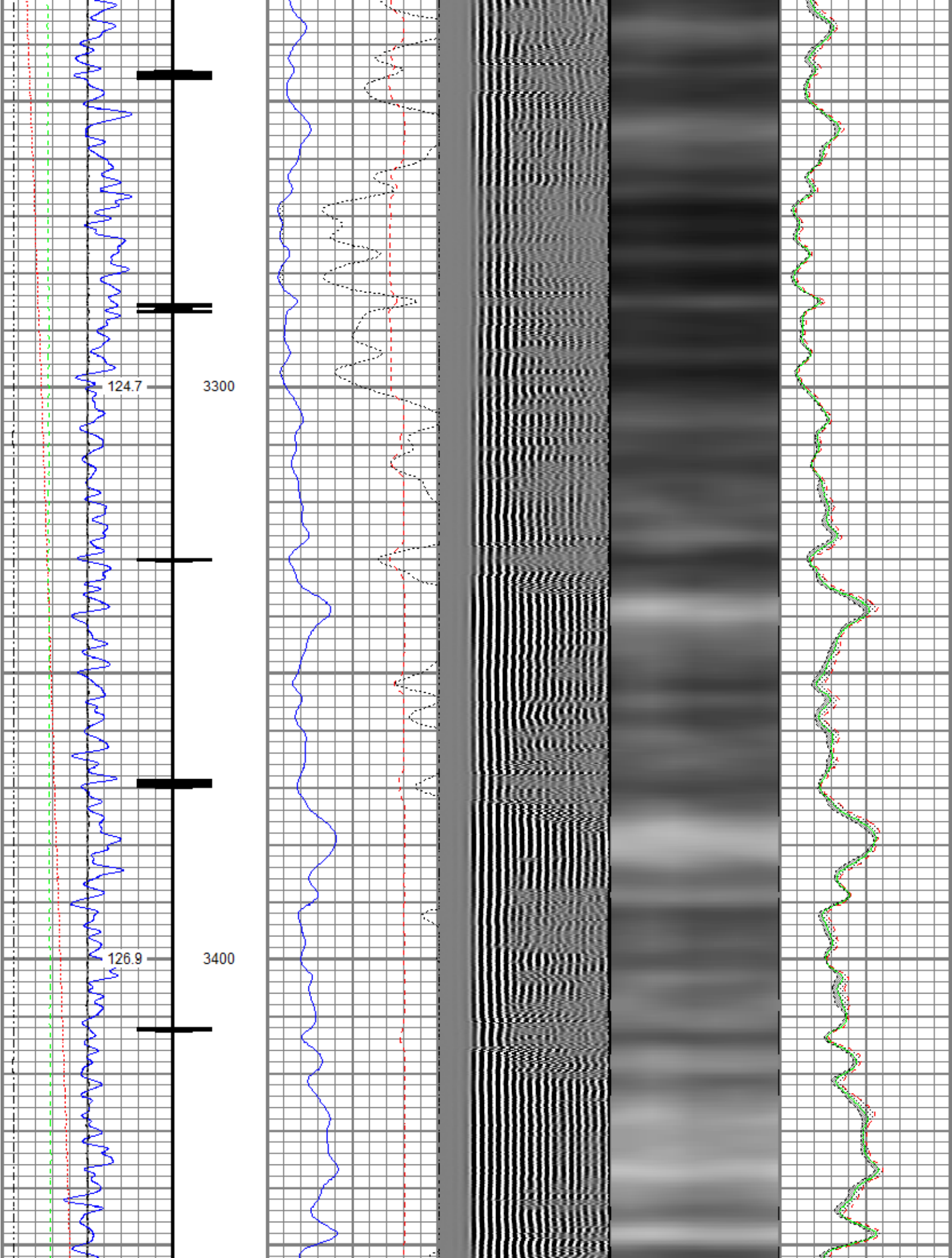


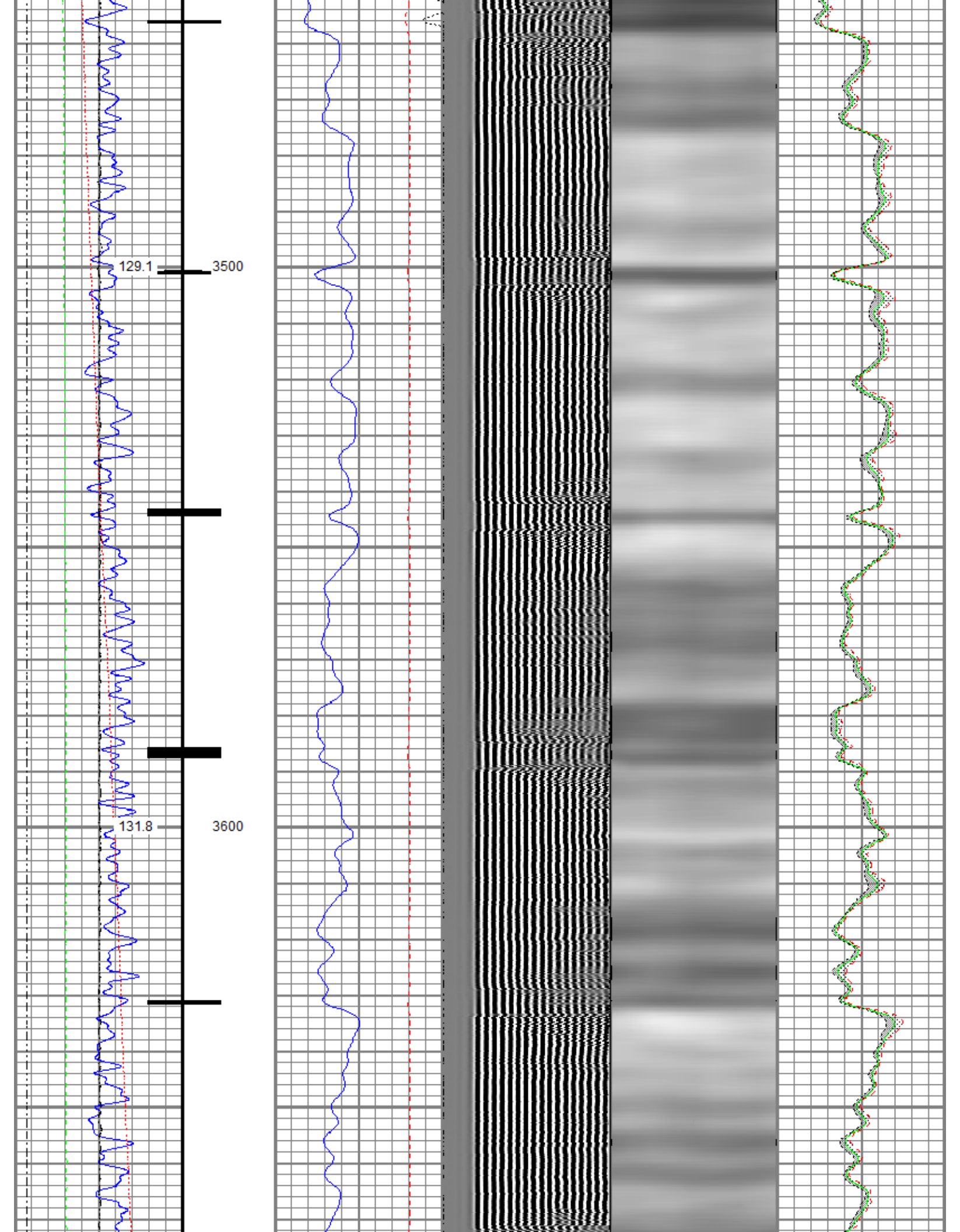


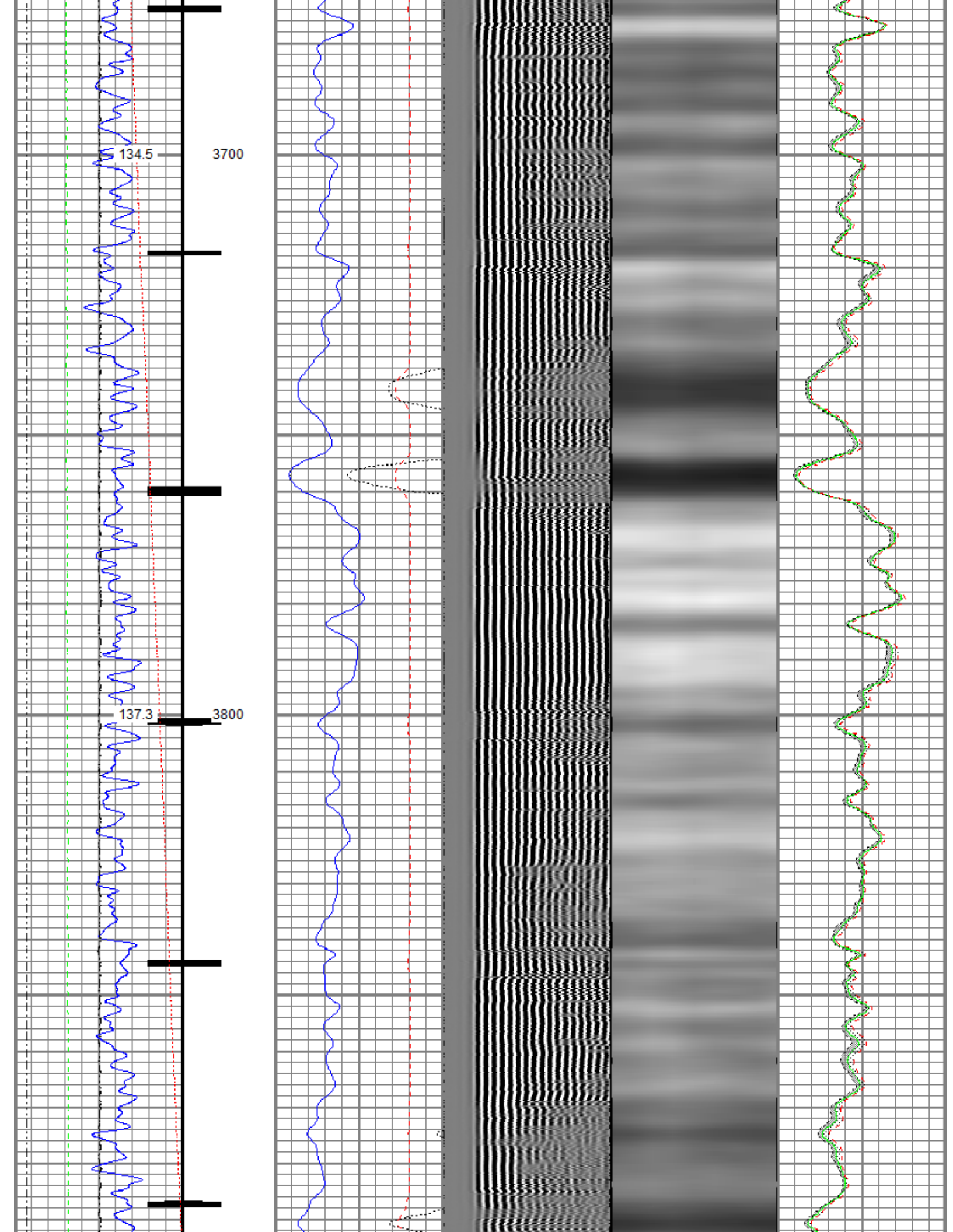


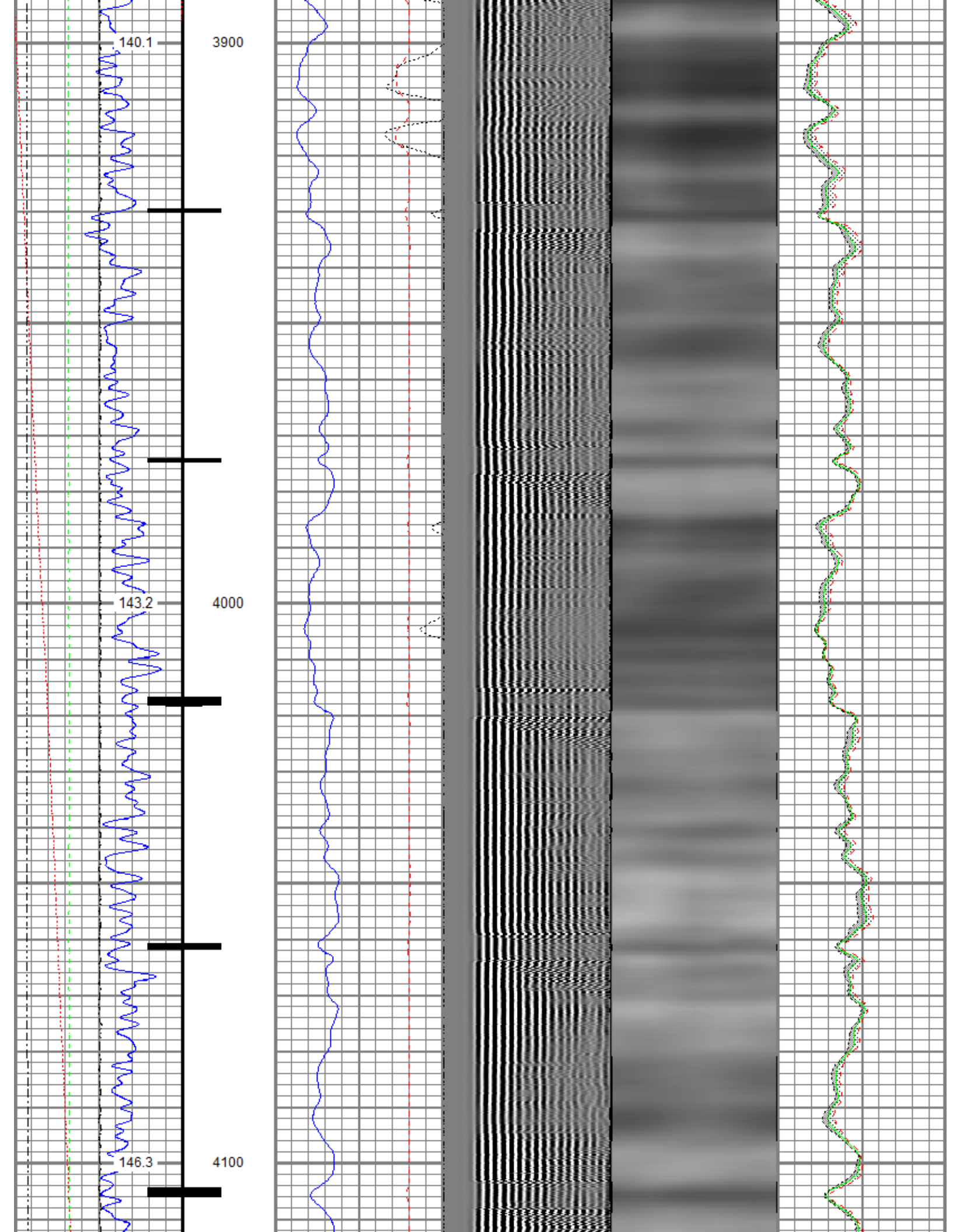


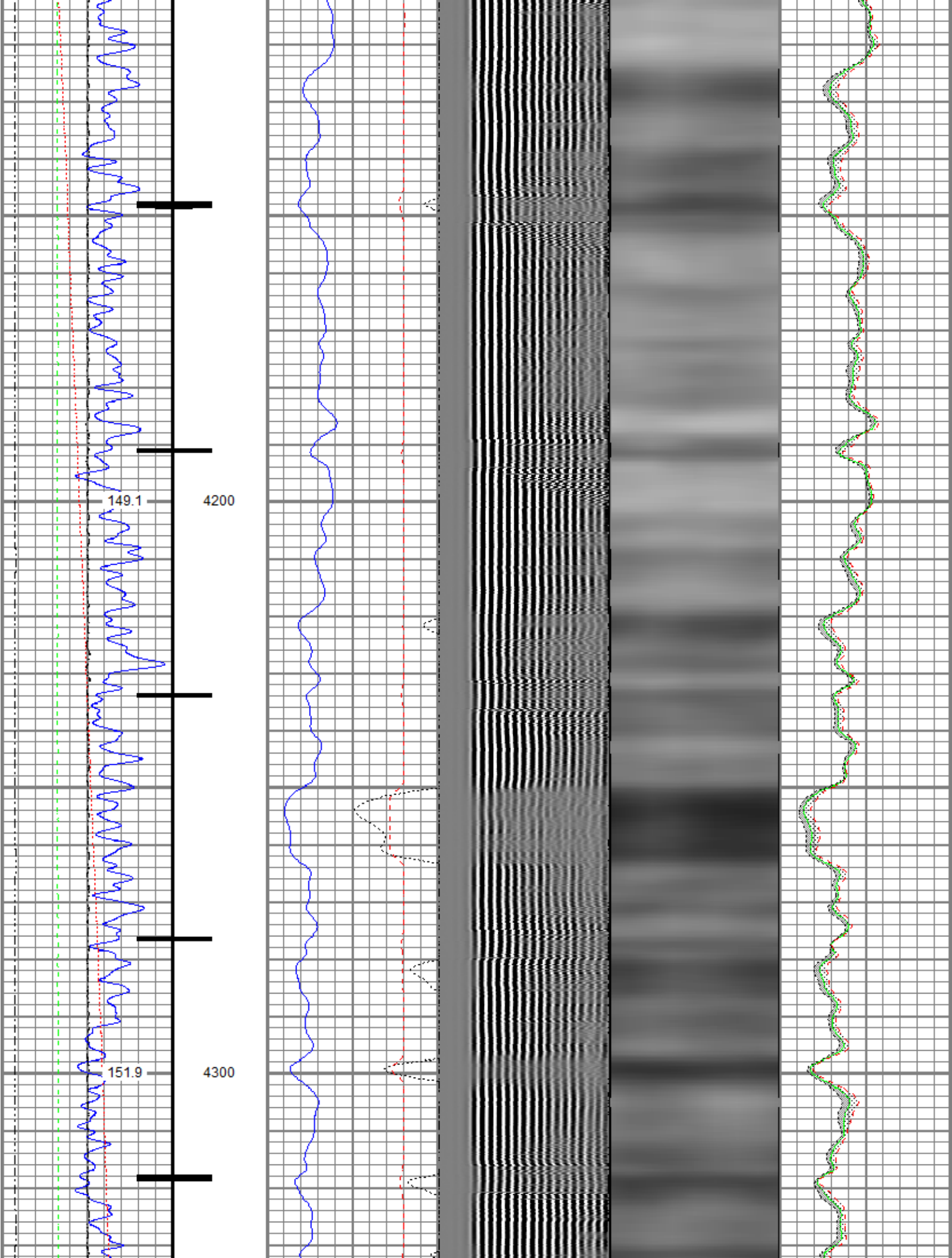


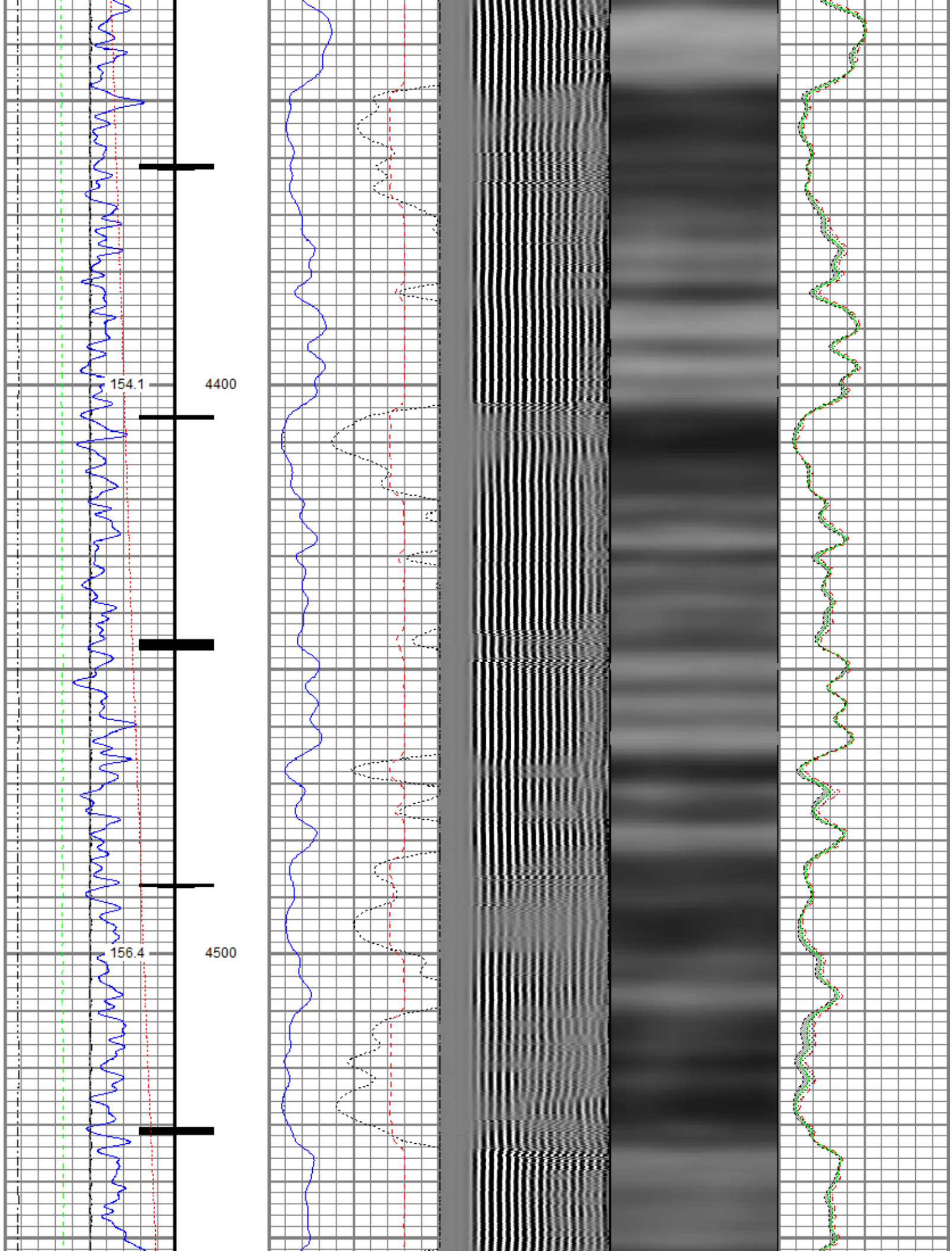


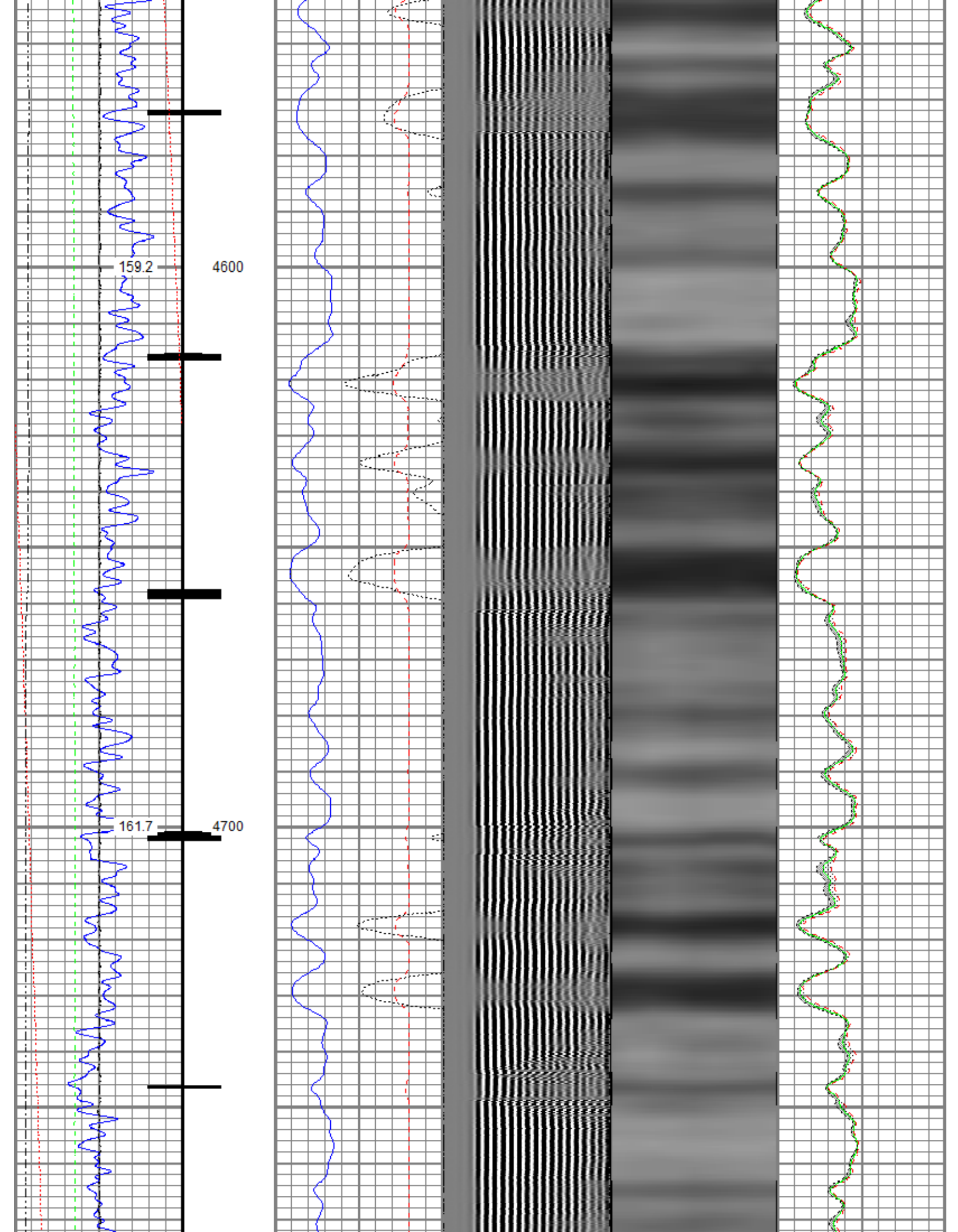


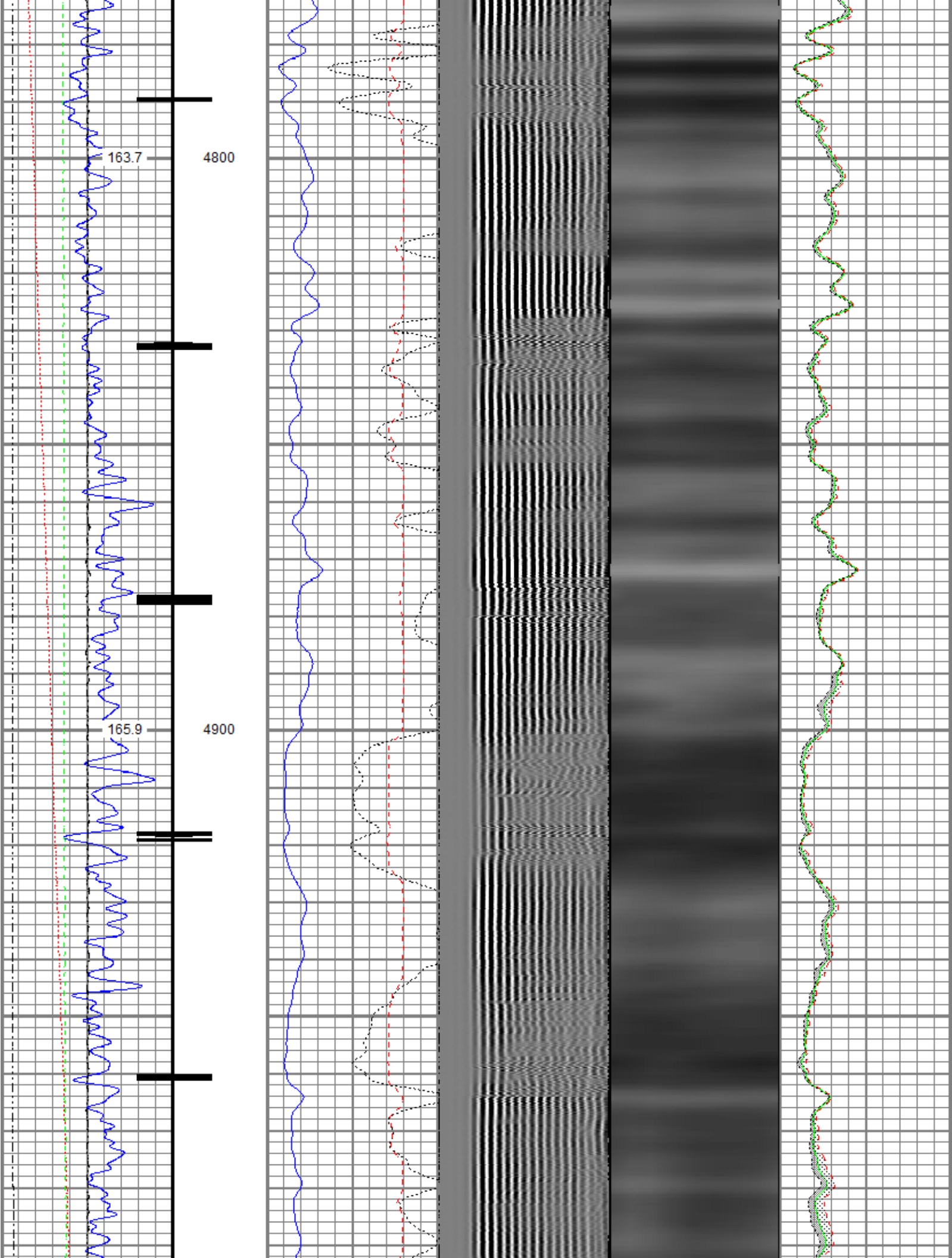


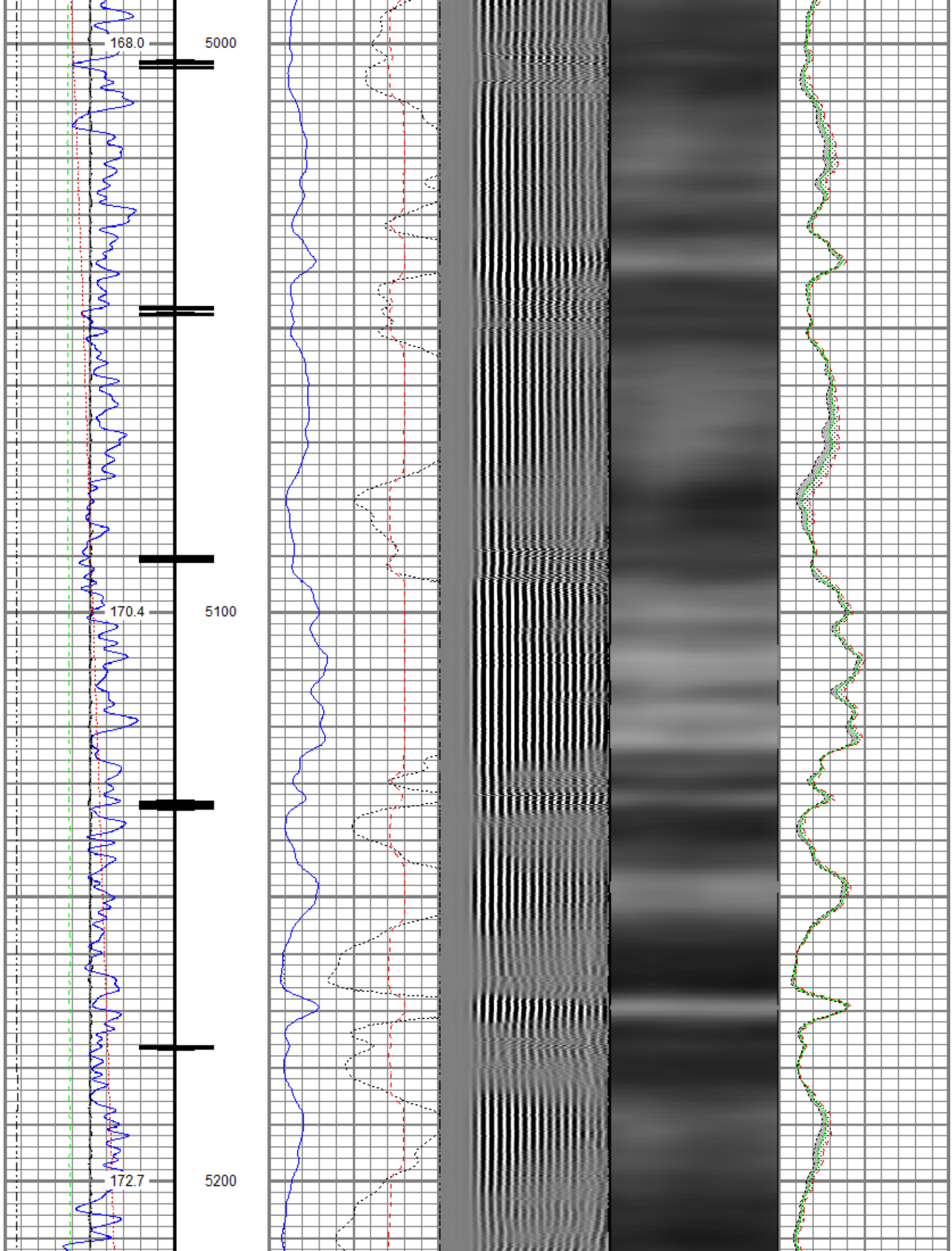


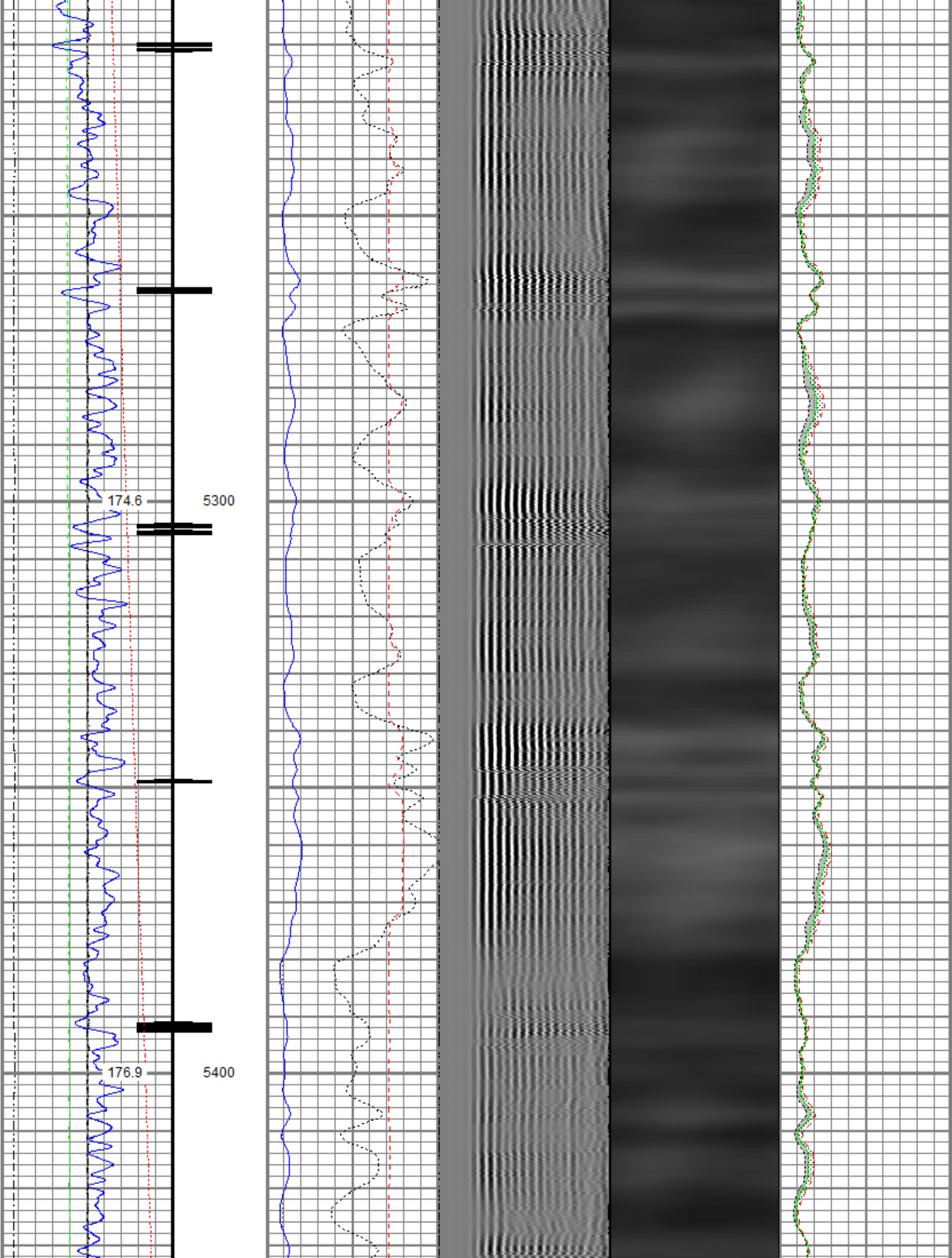


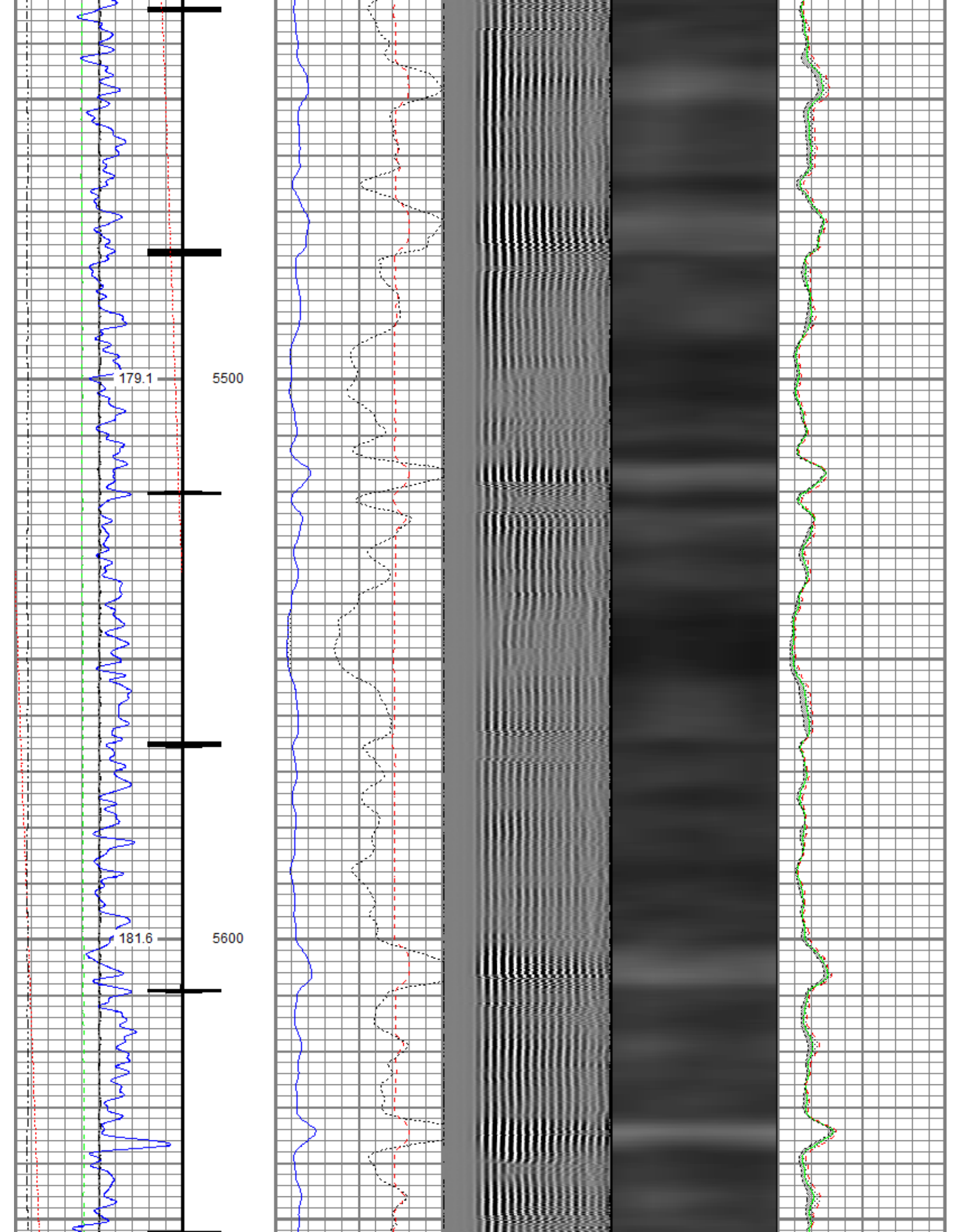


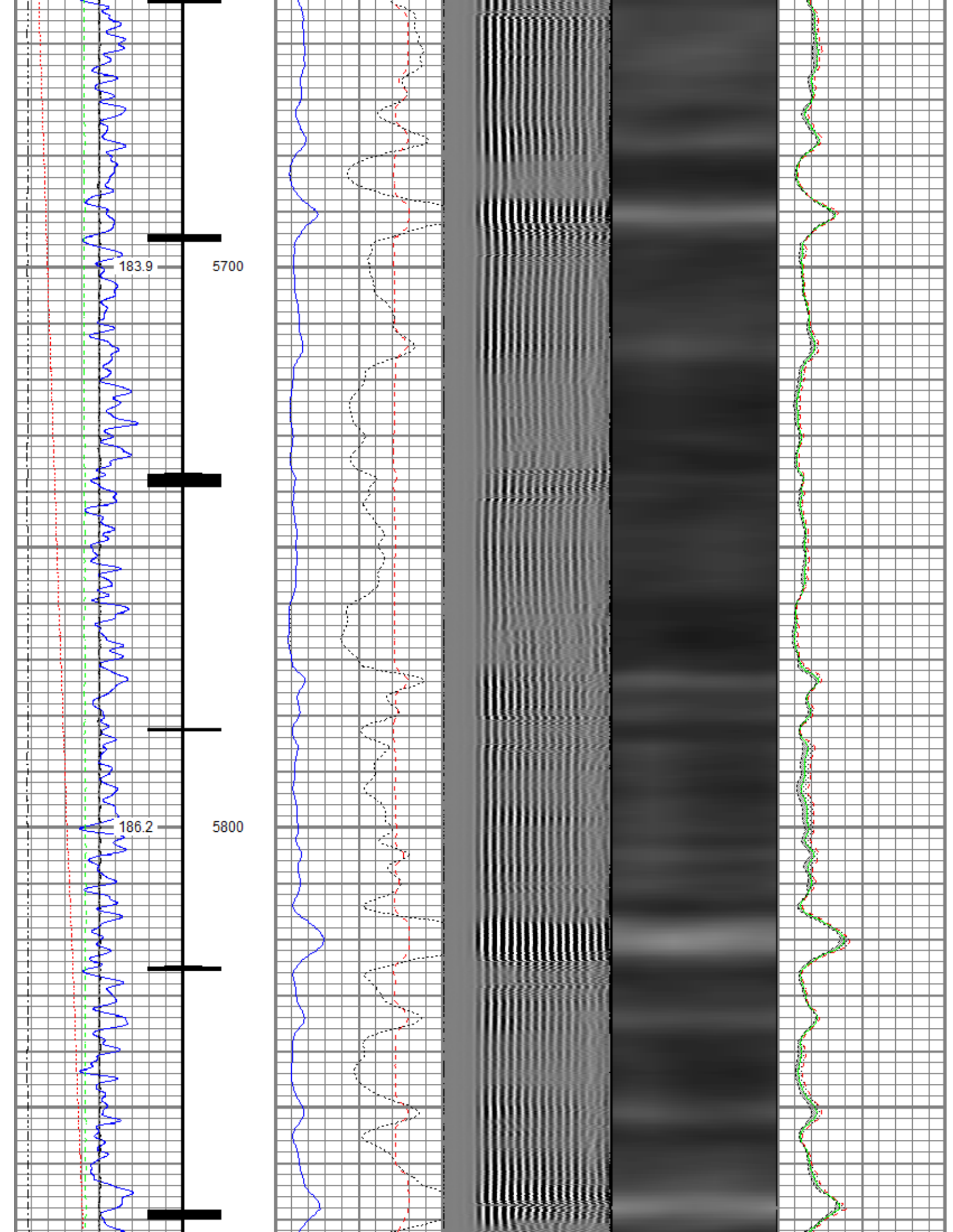


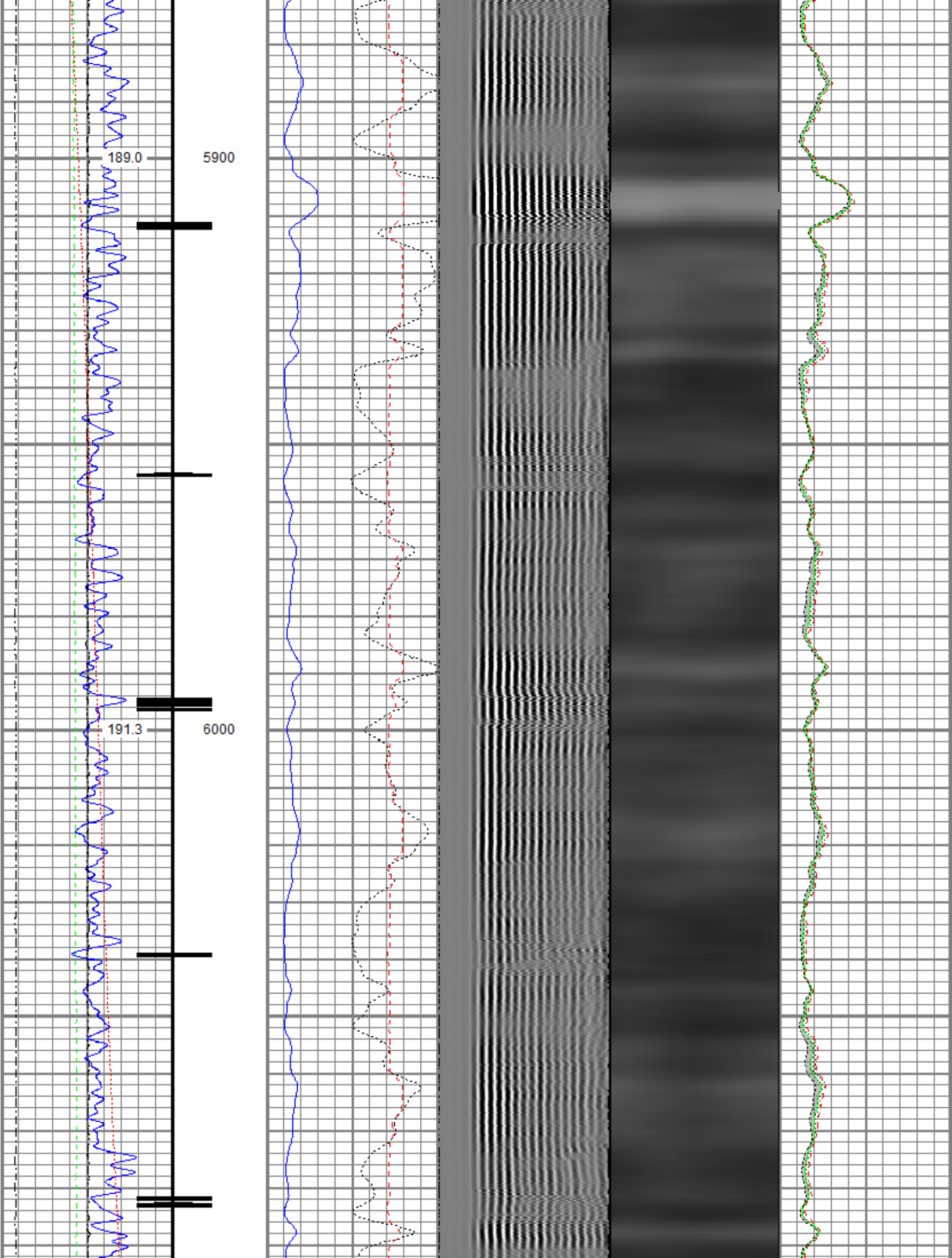


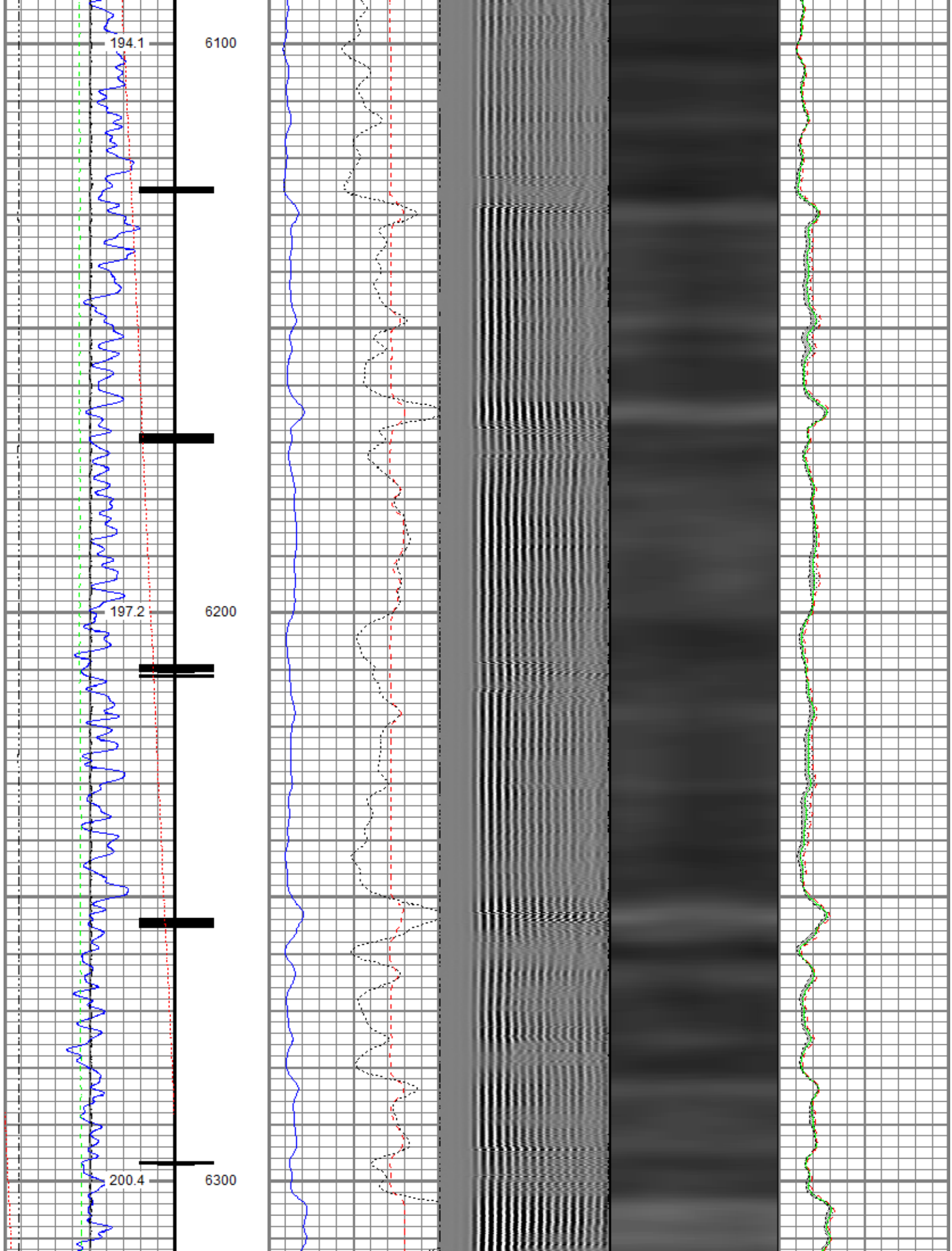


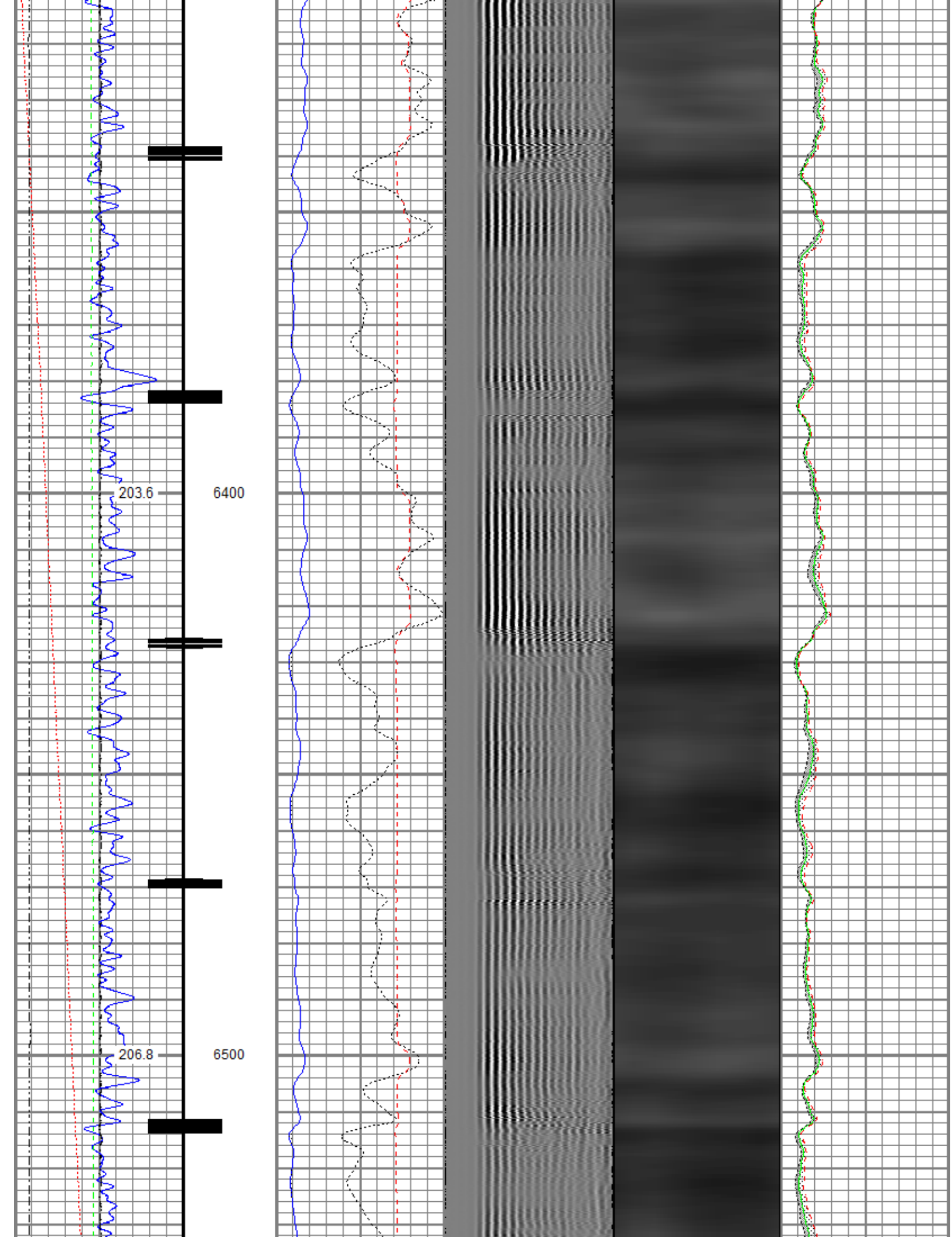


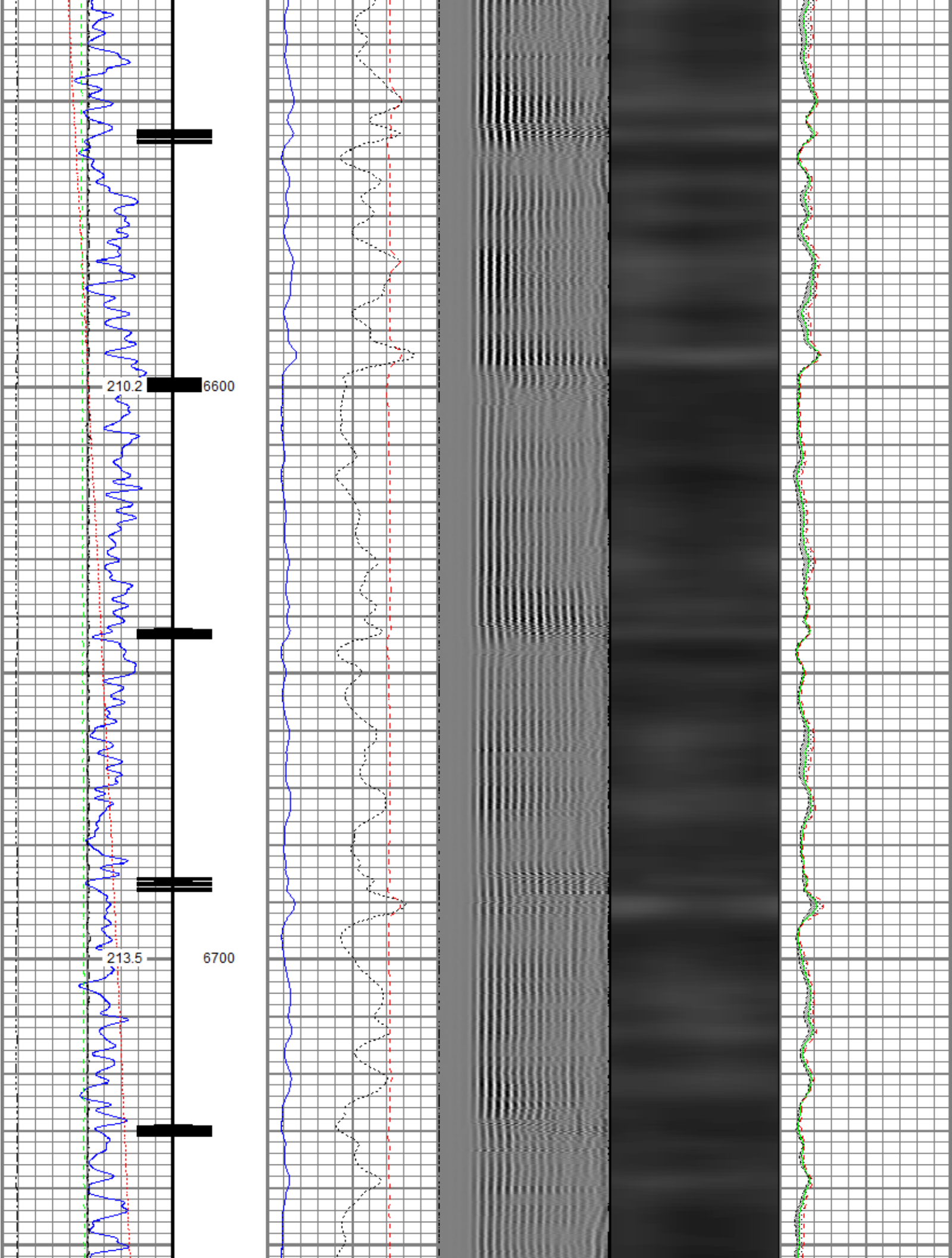


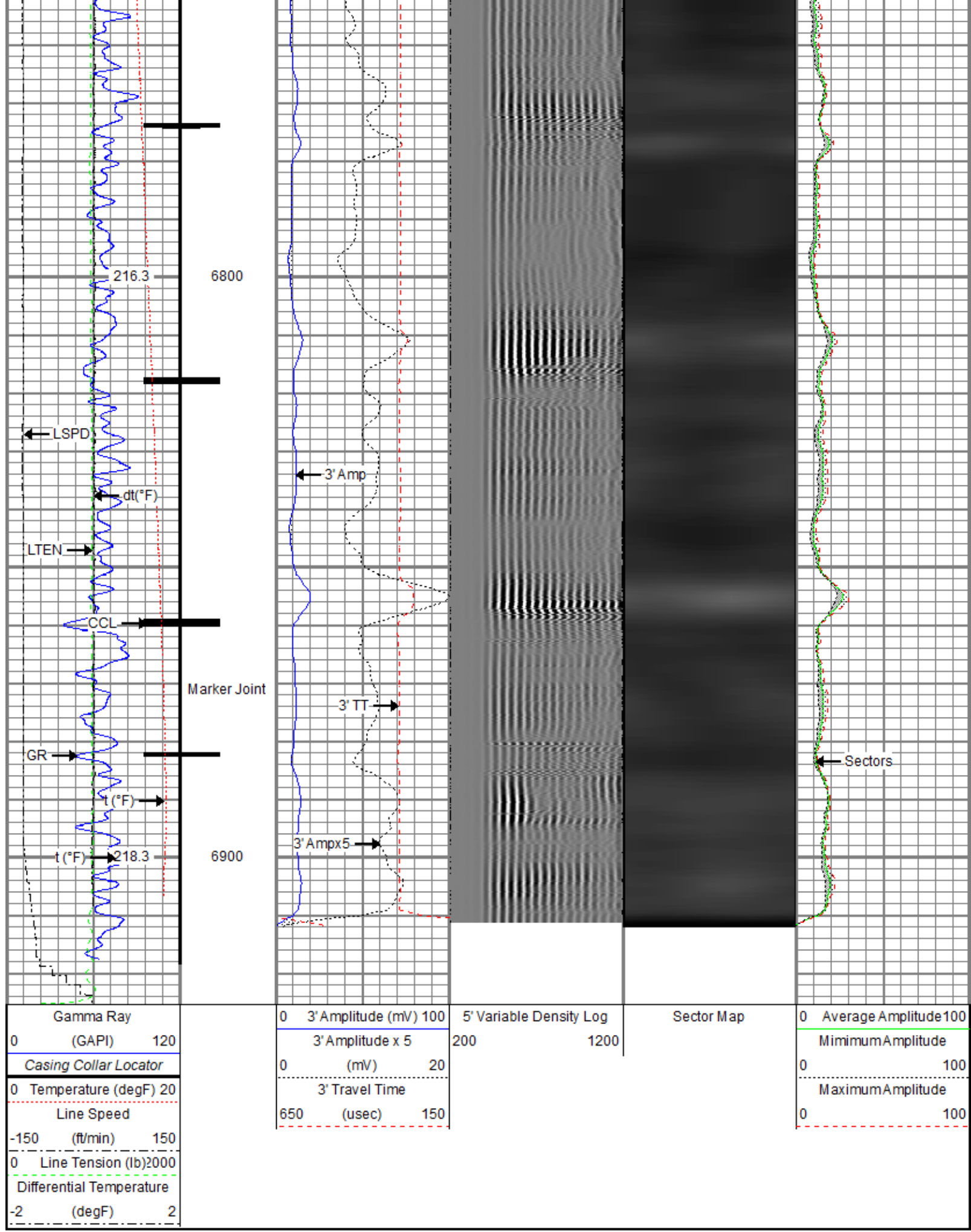






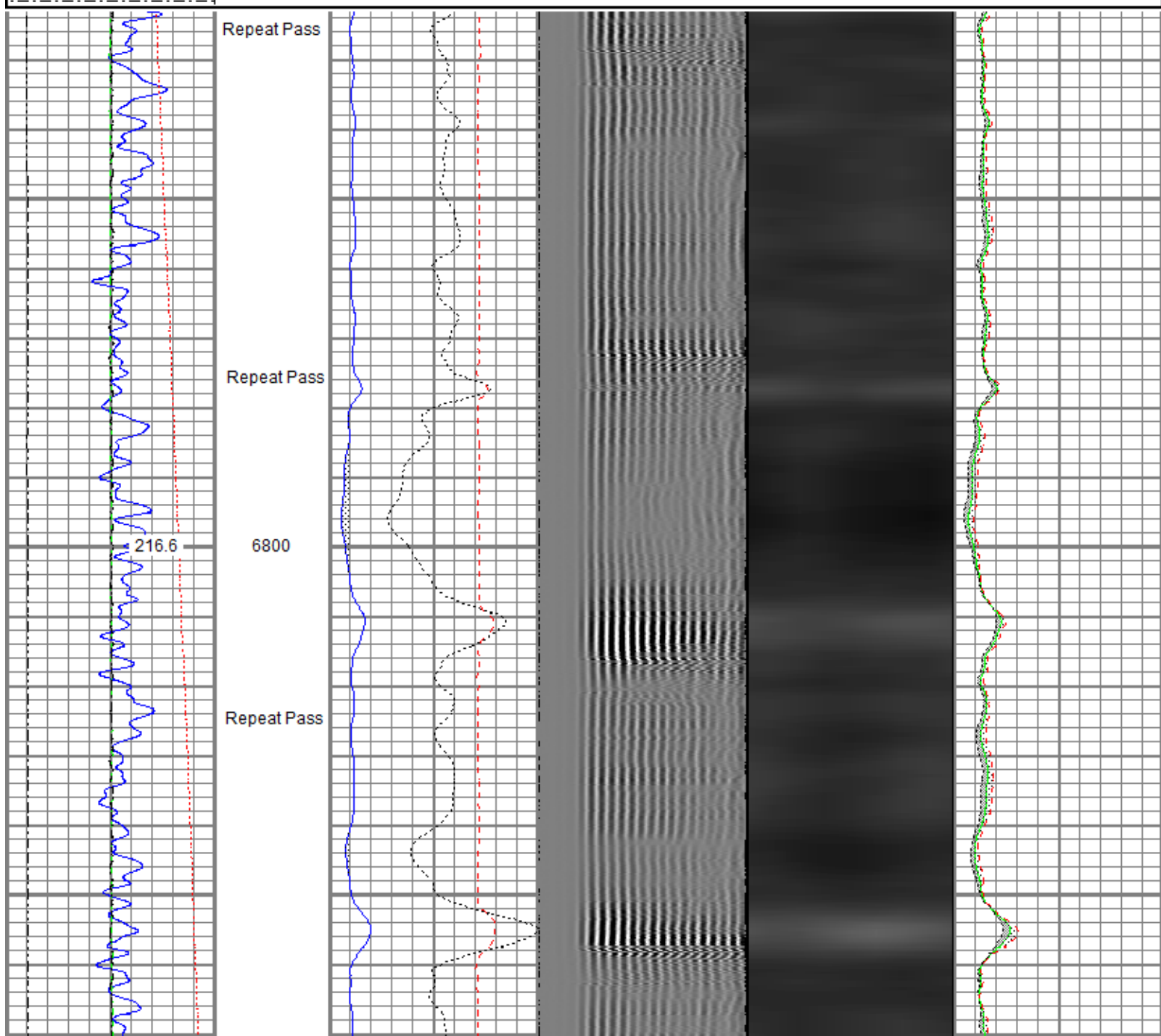


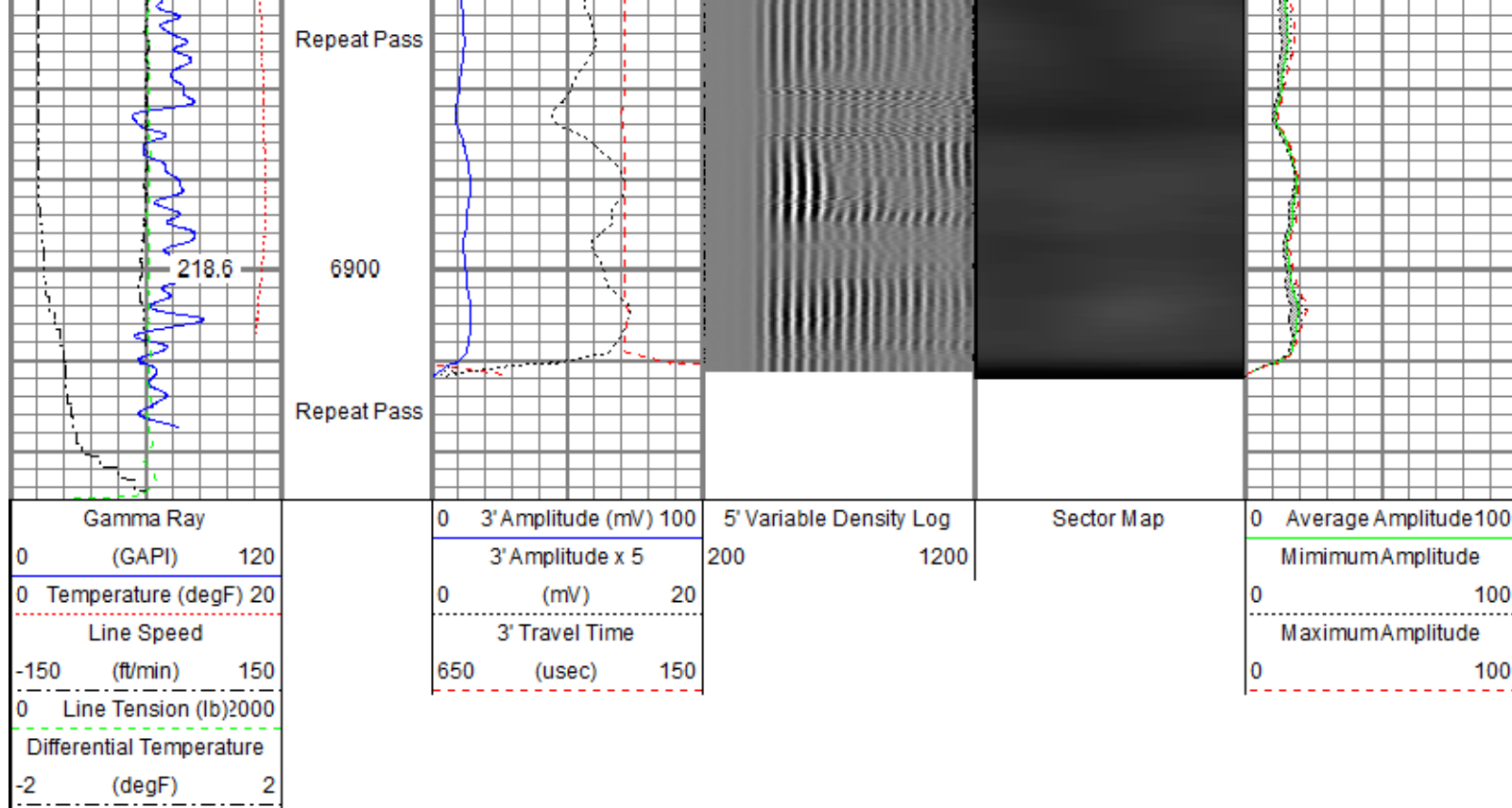





Database File	anadarko\0512348452_anadarko_buddy 7-13hz_rbl_07-21-19\processed_0512348452_anadarko_buddy 7-13hz_rbl_07-21-19
Dataset Pathname	RCBL_2800PSI/Repeat.2
Presentation Format	ros_radri
Dataset Creation	Tue Jul 23 08:33:47 2019
Charted by	Depth in Feet scaled 1:240

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





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
			Probe Radii-2750 RBT (120855) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
TEMP	17.04					
WVFS8	14.81					
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 (FW1810-044) 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_0512348452_anadarko_buddy 7-13hz_rbl_07-21-19.db: field/well/RCBL_2800PSI/Main.2 Total length: 23.86 ft Total weight: 223.60 lb O.D.: 2.75 in						

Calibration Report	
Database File	c:\programdata\warrior\data\anadarko\0512348452_anadarko_buddy 7-13hz_rbl_07-21-19\processed_0512348452_anadarko_
Dataset Pathname	RCBL_2800PSI/Main.2
Dataset Creation	Tue Jul 23 08:36:29 2019

Gamma Ray Calibration Report		
Serial Number:	FW1810-044	
Tool Model:	2750 6PB	
Performed:	Sat Nov 10 12:23:27 2018	
Calibrator Value:	637.0	GAPI
Background Reading:	105.3	cps
Calibrator Reading:	1221.0	cps
Sensitivity:	0.5709	GAPI/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	120855	
Tool Model:	2750 RBT	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	37.871	ft

Master Calibration, performed (Derived):						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.002	0.598	0.800	71.921	119.400	0.551
CAL	0.668	0.668				
5'	0.001	0.572	0.800	71.921	124.590	0.634
SUM						
S1	0.003	0.616	0.000	100.000	163.140	-0.418
S2	0.002	0.654	0.000	100.000	153.409	-0.356

S3	0.002	0.661	0.000	100.000	151.939	-0.365
S4	0.002	0.637	0.000	100.000	157.563	-0.335
S5	0.003	0.613	0.000	100.000	163.934	-0.421
S6	0.002	0.580	0.000	100.000	173.043	-0.385
S7	0.002	0.578	0.000	100.000	173.642	-0.397
S8	0.003	0.586	0.000	100.000	171.366	-0.496

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.668	0.668	1.000	0.000

Air Zero Calibration, performed Sun Jul 21 06:28:28 2019:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.005		0.000		-0.000	
5'	0.005		0.000		0.001	
SUM						
S1	0.003		0.000		0.001	
S2	0.005		0.000		-0.000	
S3	0.005		0.000		0.000	
S4	0.006		0.000		-0.000	
S5	0.005		0.000		0.000	
S6	0.006		0.000		-0.000	
S7	0.006		0.000		-0.000	
S8	0.005		0.000		0.000	

Temperature Calibration Report

Serial Number: 120855
Tool Model: 2750 RBT
Performed: Mon Oct 01 11:32:15 2018

	Reference	Reading
Low Reference:	100.00 degF	112.30 degF
High Reference:	350.00 degF	394.75 degF
Gain:	0.89	
Offset:	0.60	
Delta Spacing	1	



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