

County Weld State Colorado

G.L. 5112

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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.

Log ran as per customer request
Depth referenced to Casing Tally reported Marker Joint at 6951 FT
Adjusted +13 FT to correlate with Marker Joint
Gauge Ring/Junk Basket ran to 8065 FT
Retrievable Bridge Plug set at 7076 FT
Log ran with 0 PSI Surface Induced Pressure
Logging tools were clean and free of debris upon completion of operations

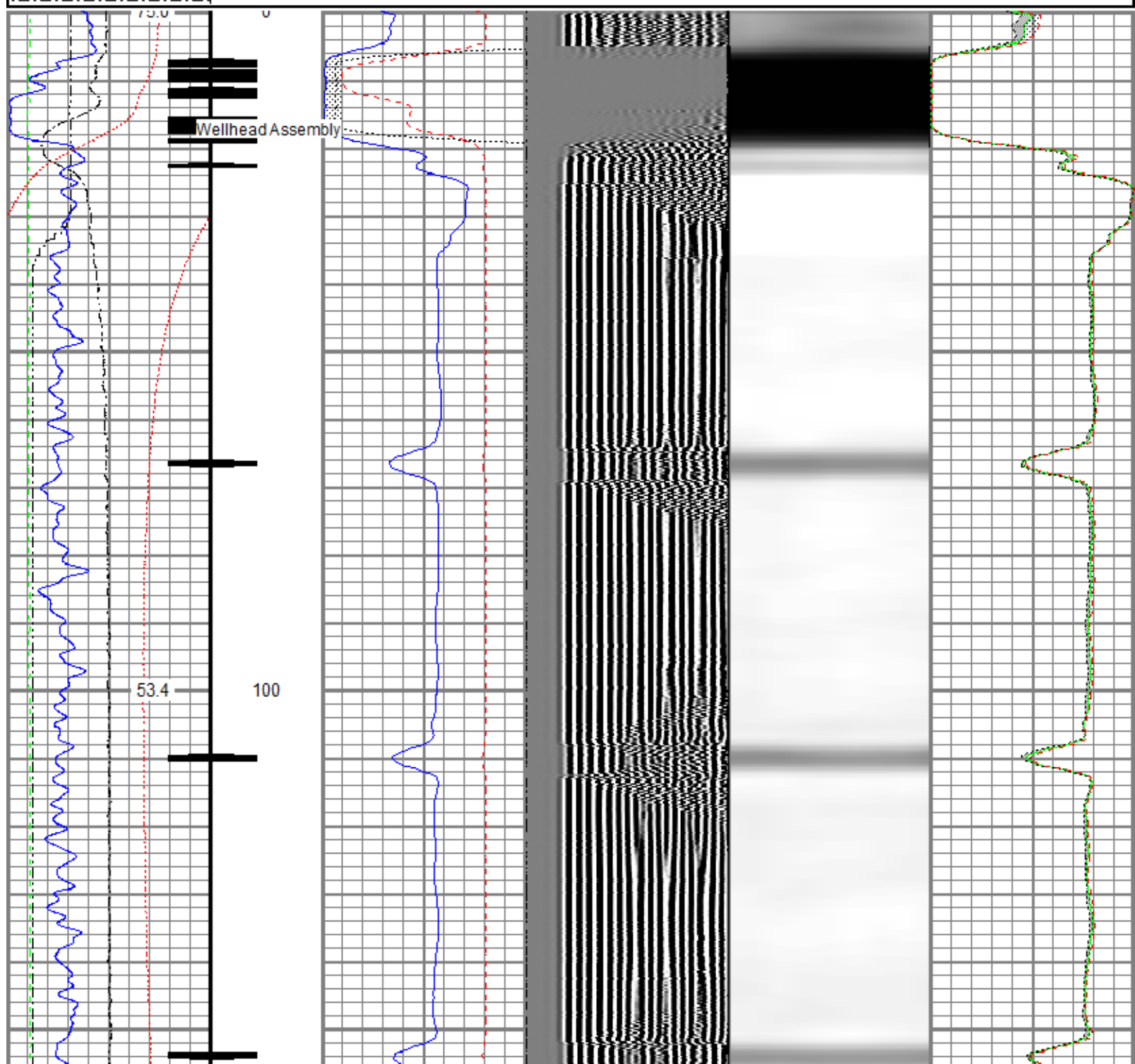
Thank you for choosing Reliance Oilfield Services, LLC!!

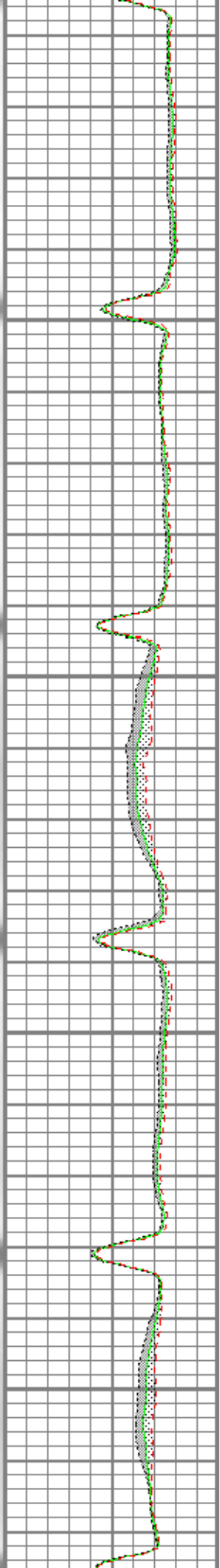
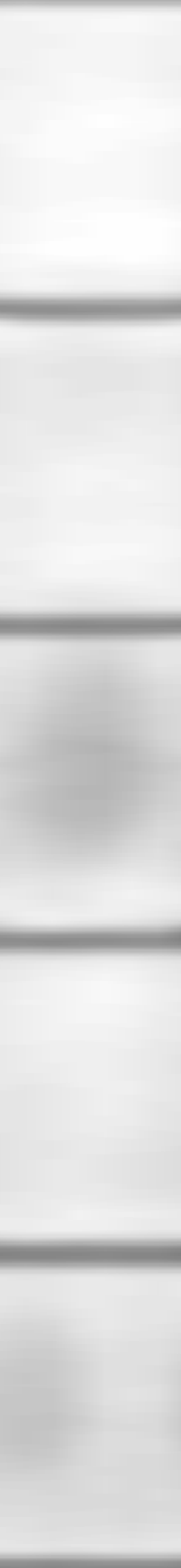
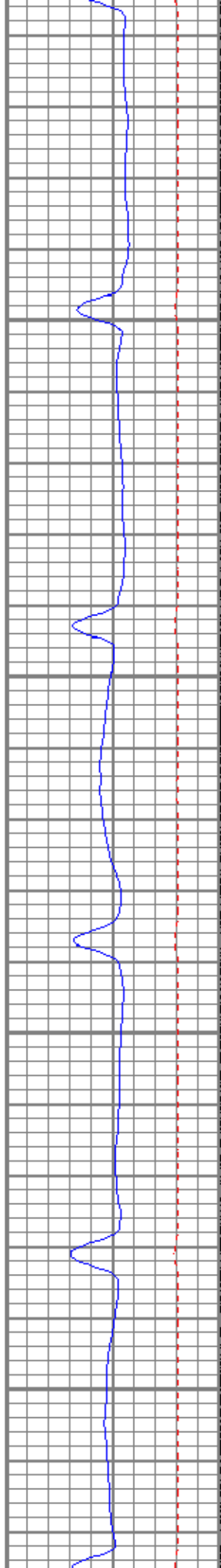
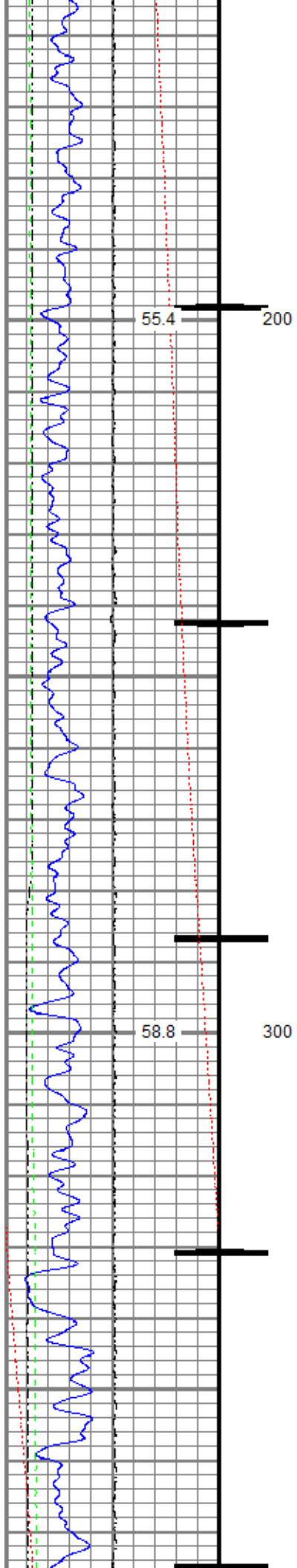
Main Pass

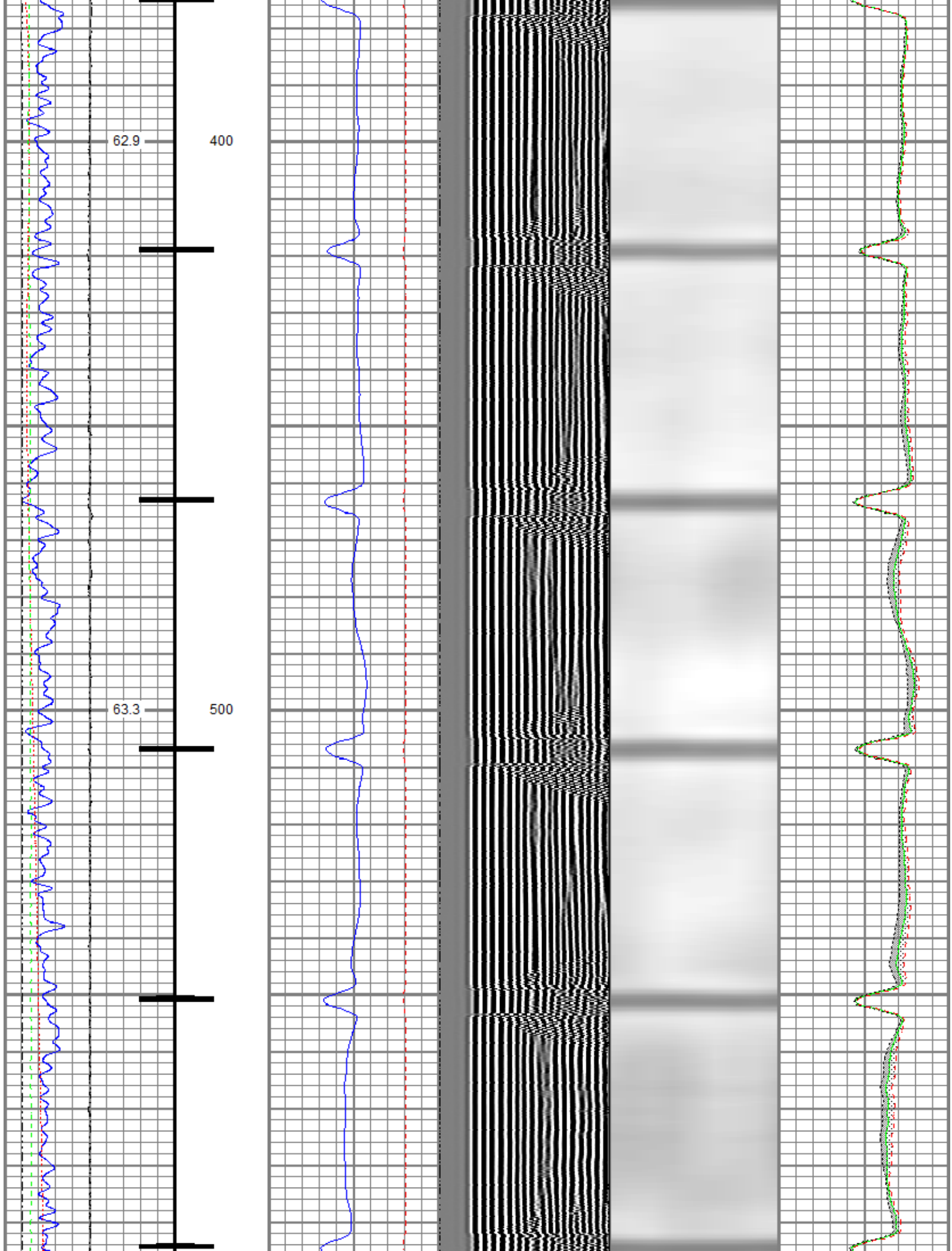


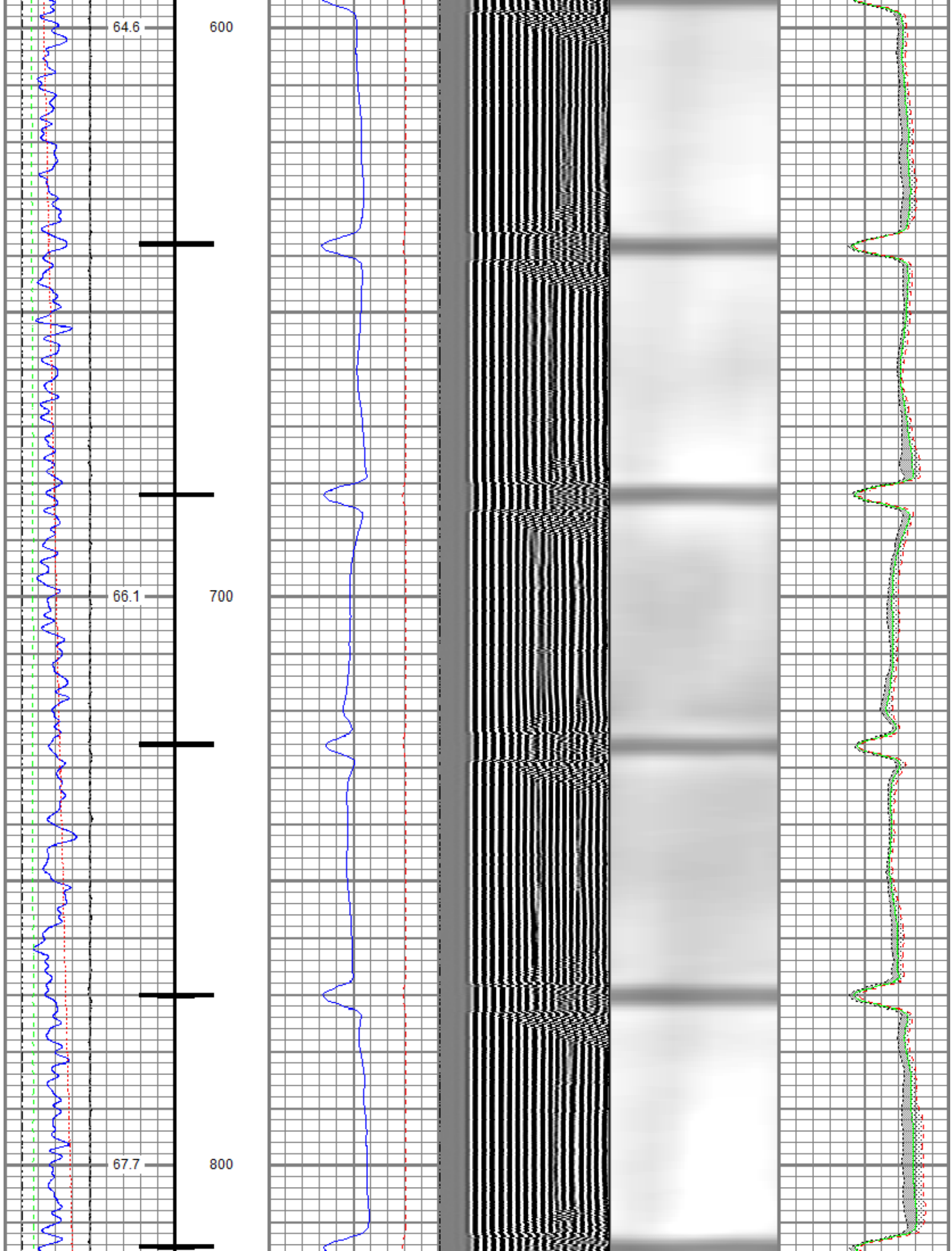
Database File new folder\0512349356_anadarko_ranger 7-19hz_rbl_07-29-19.db
 Dataset Pathname main.1
 Presentation Format ros_radrii
 Dataset Creation Mon Jul 29 10:03:11 2019
 Charted by Depth in Feet scaled 1:240

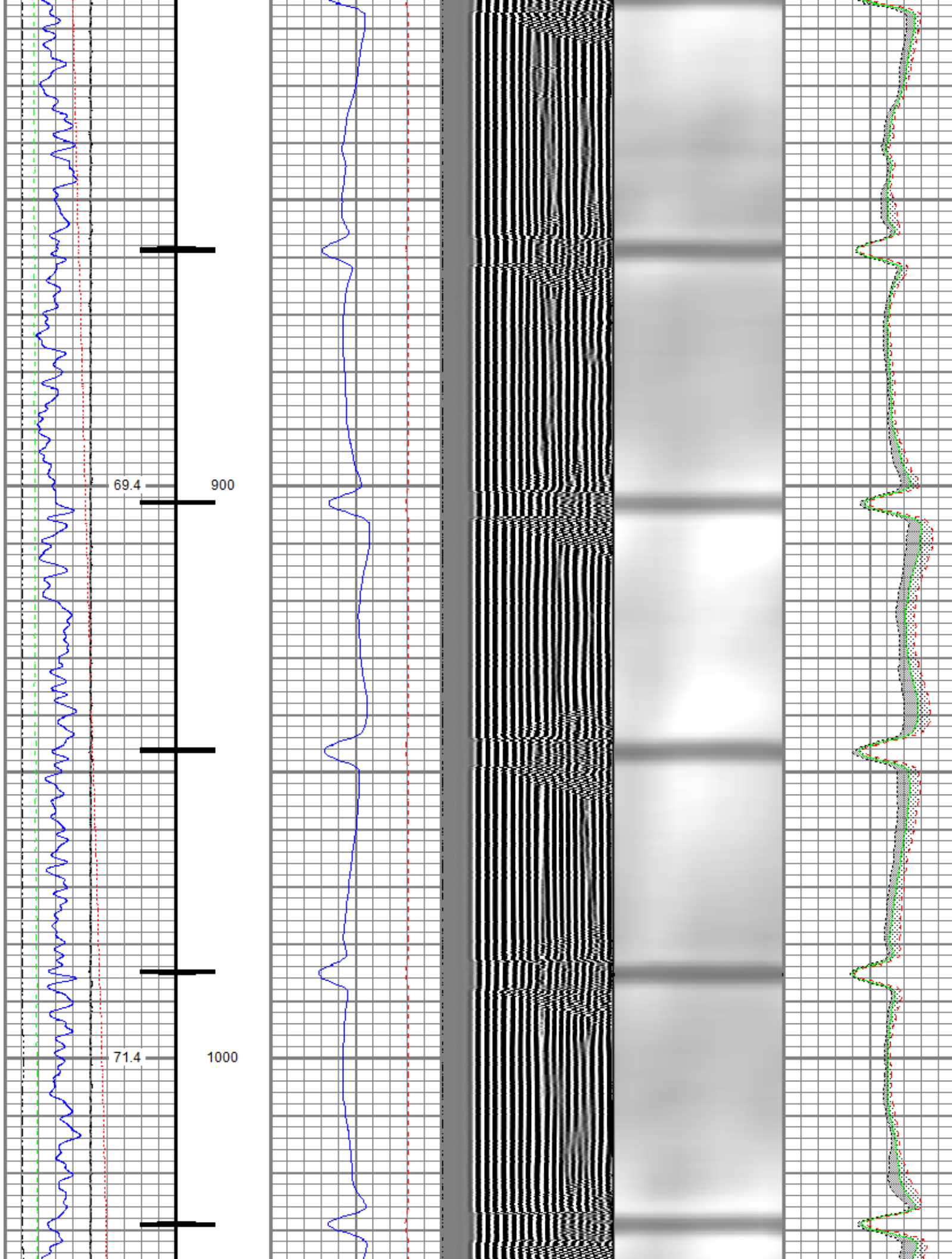
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200 (usec) 1200			Minimum Amplitude
Casing Collar Locator	0	(mV) 20			0	100
Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed	650	(usec) 150			0	100
-150 (ft/min)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

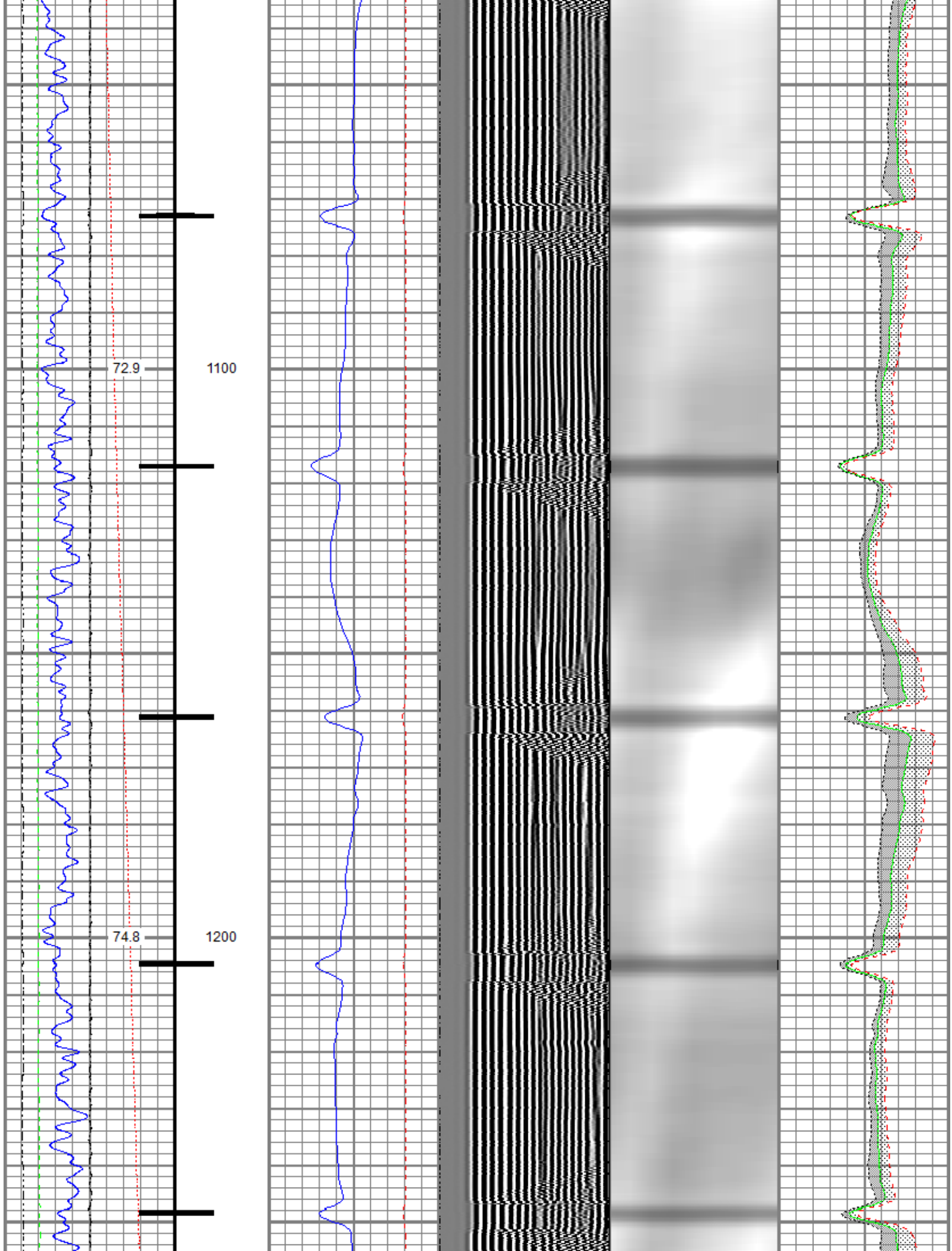


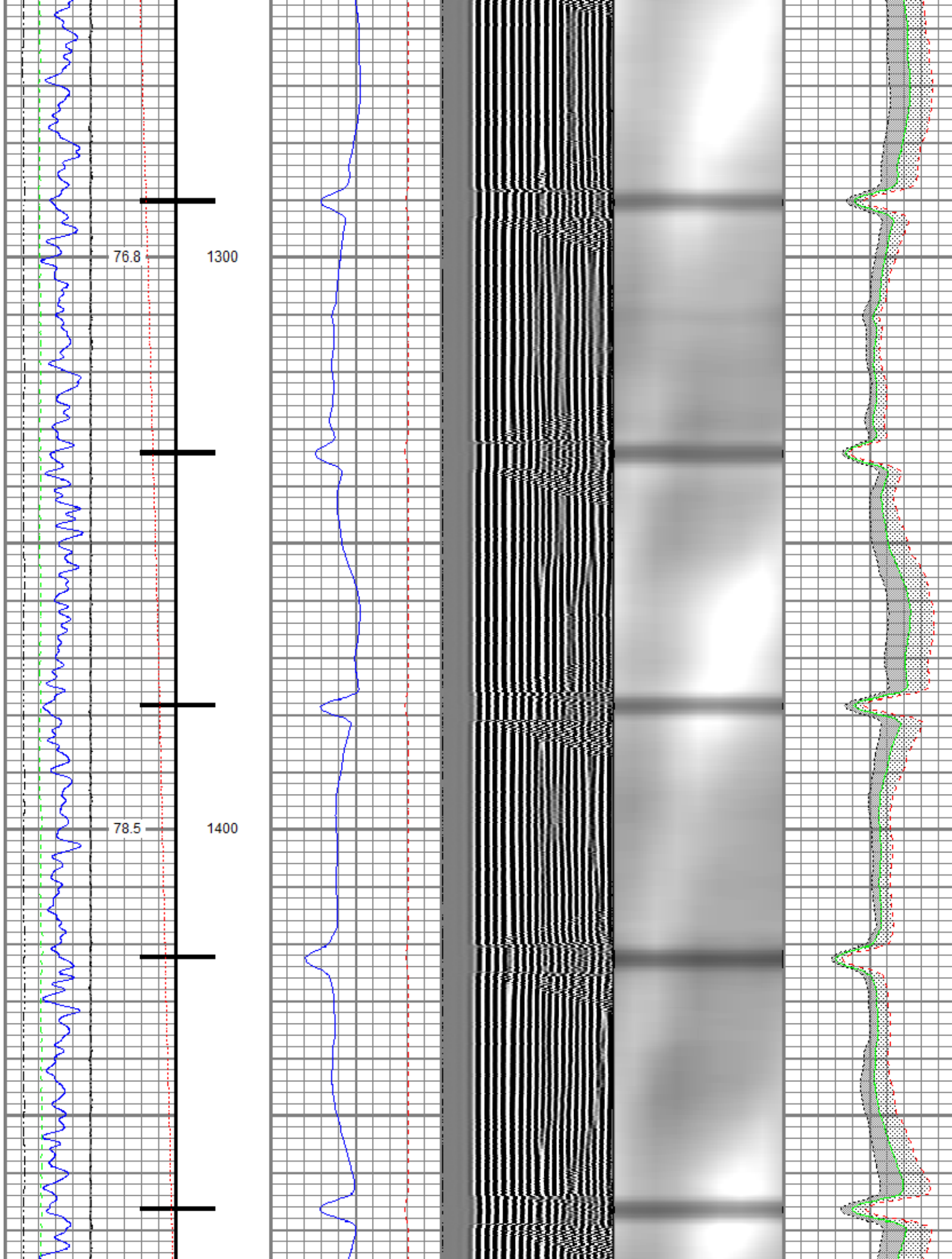


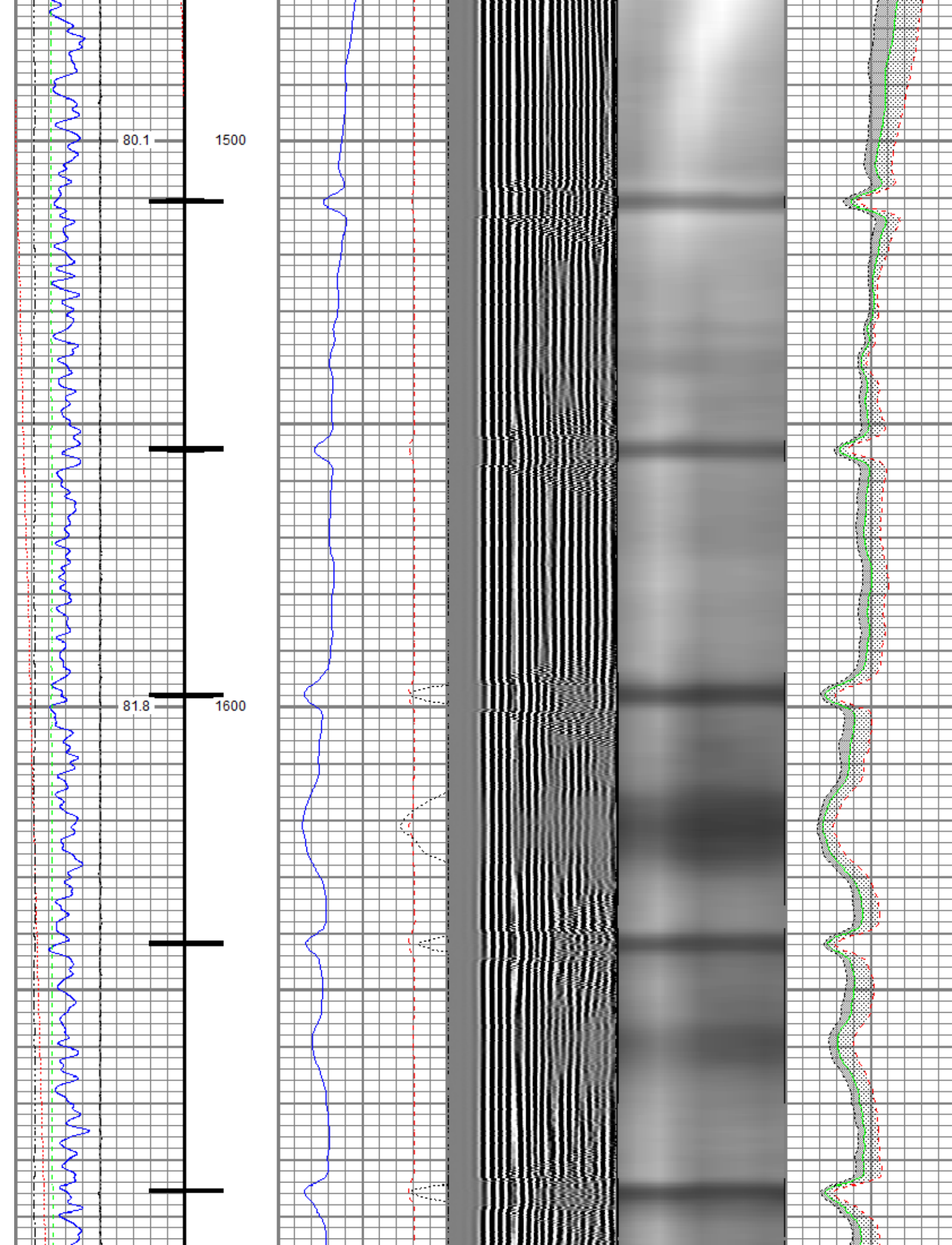


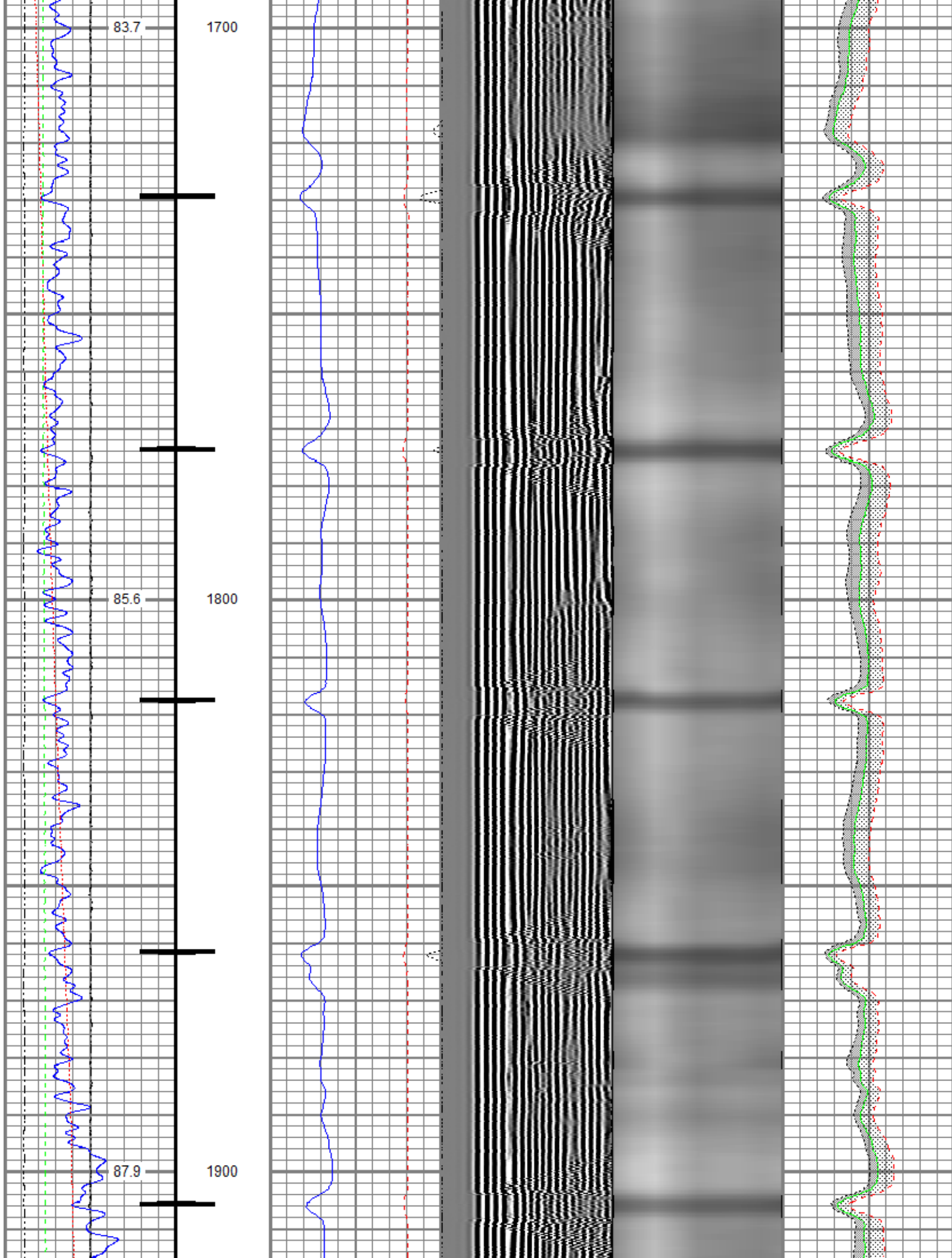


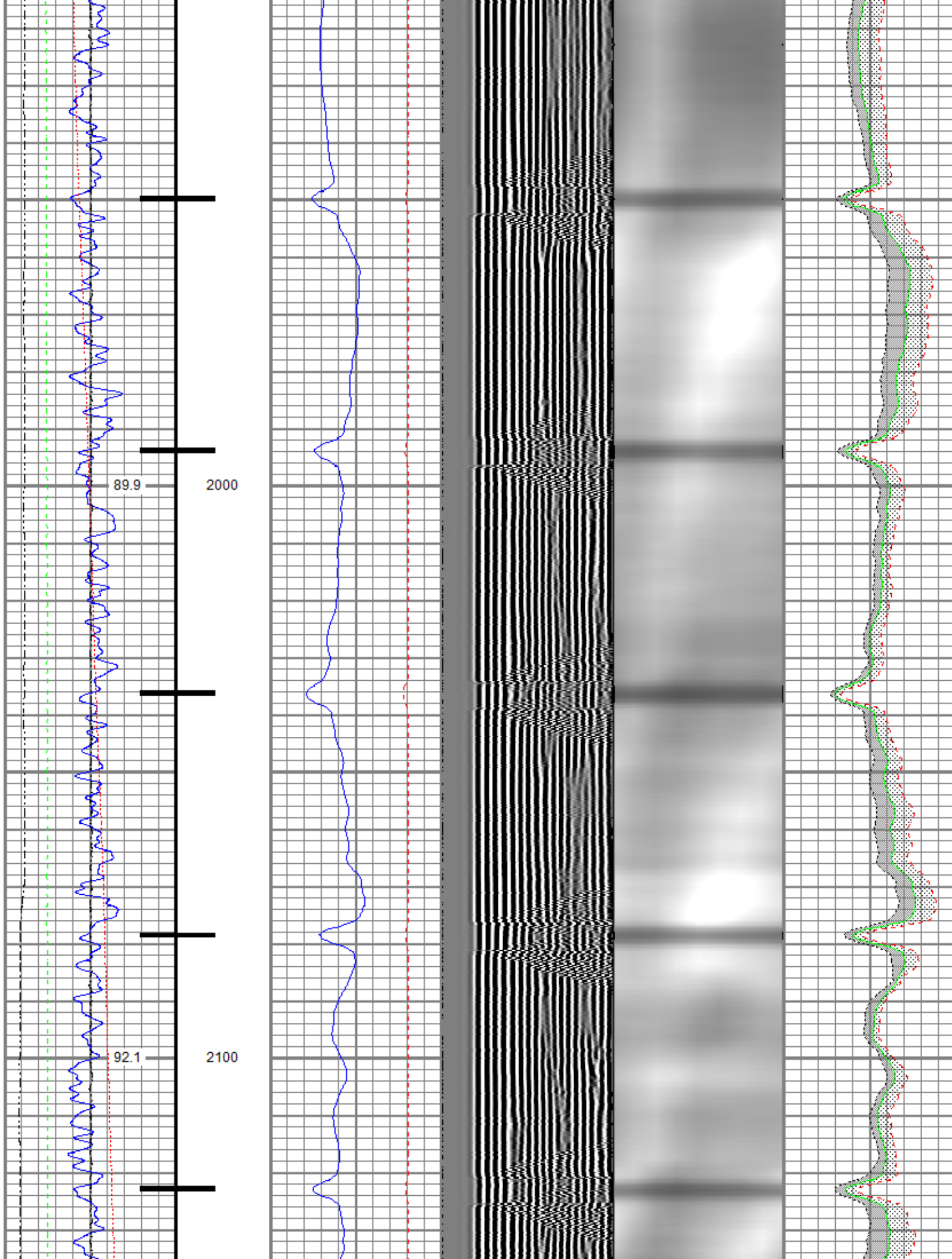


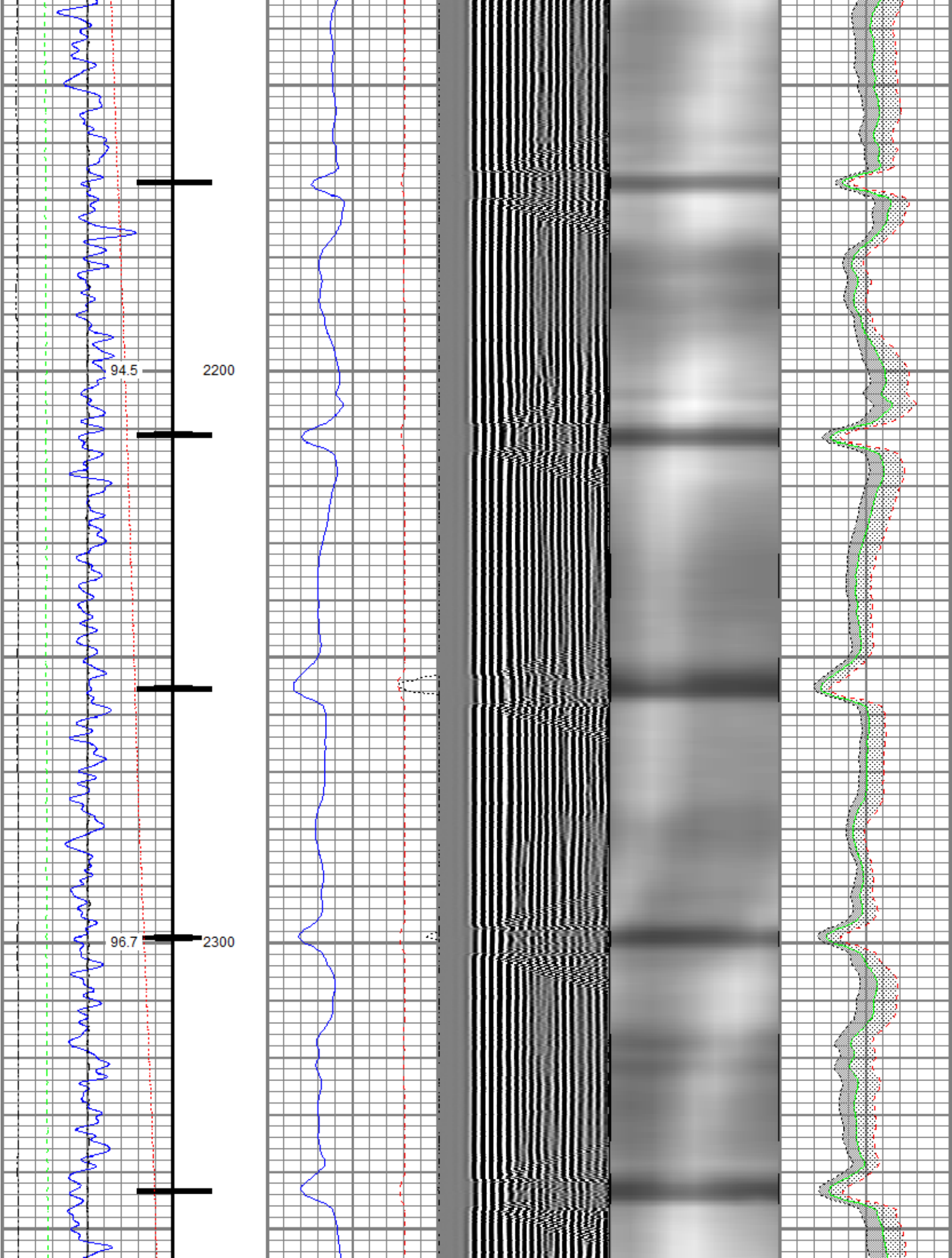


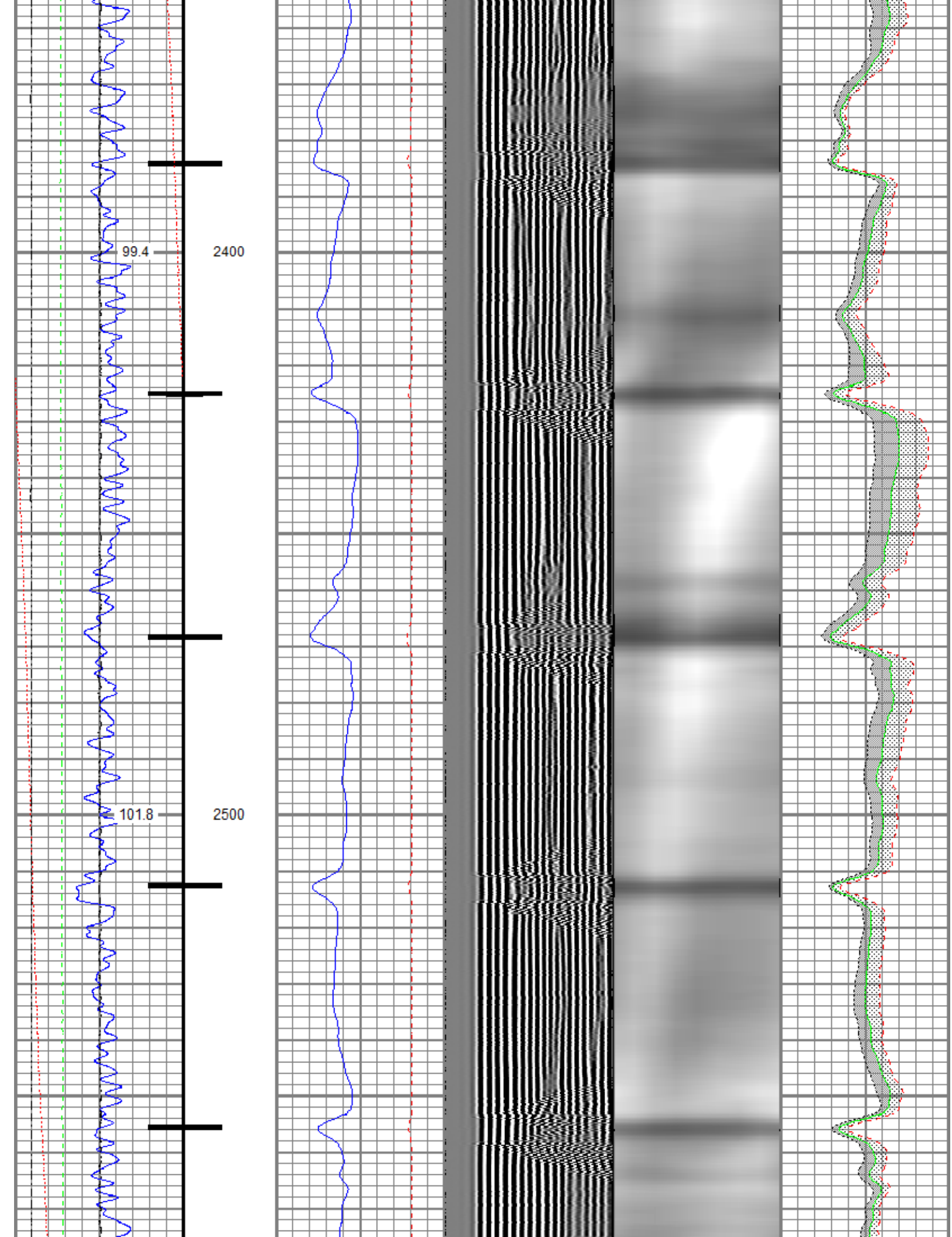


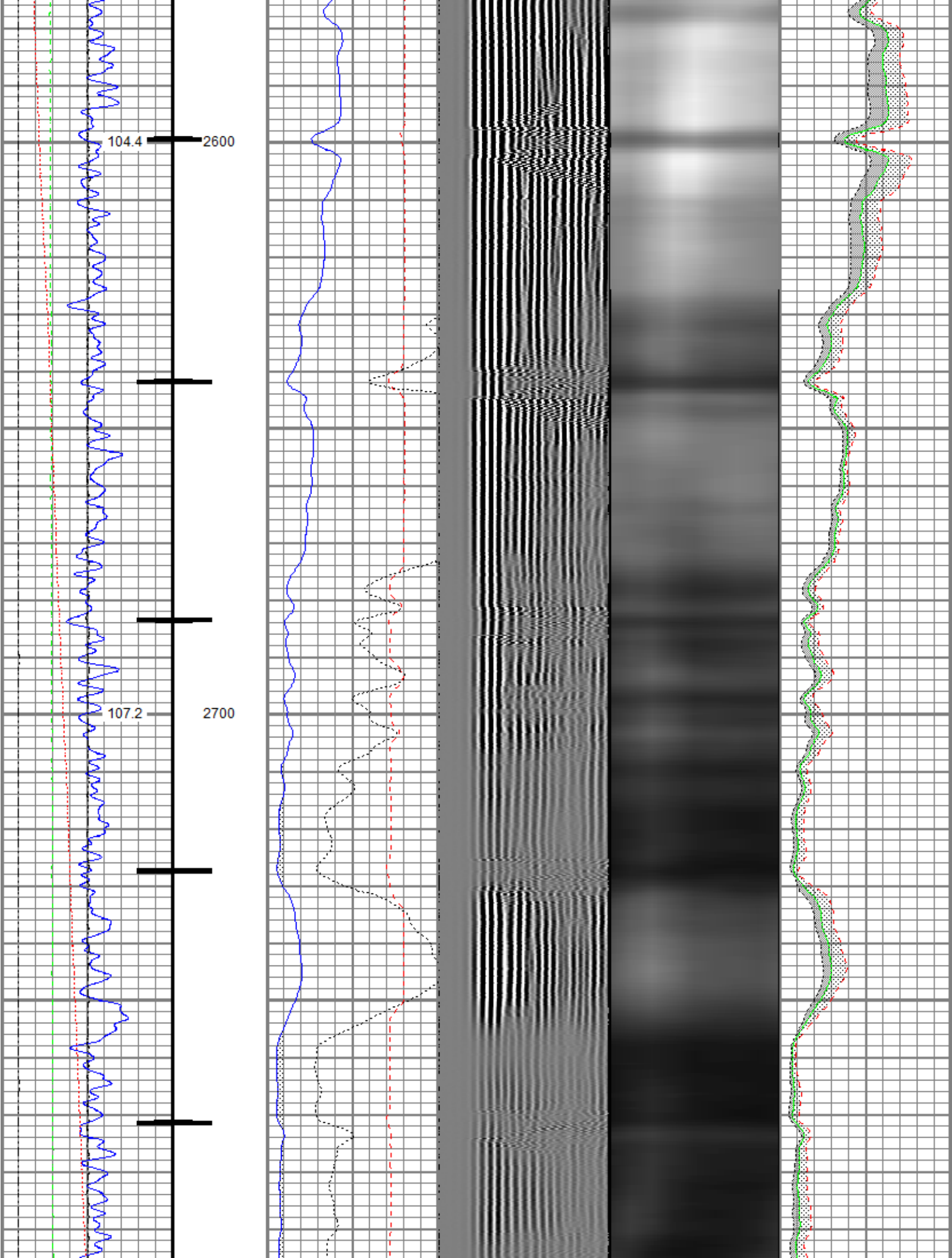


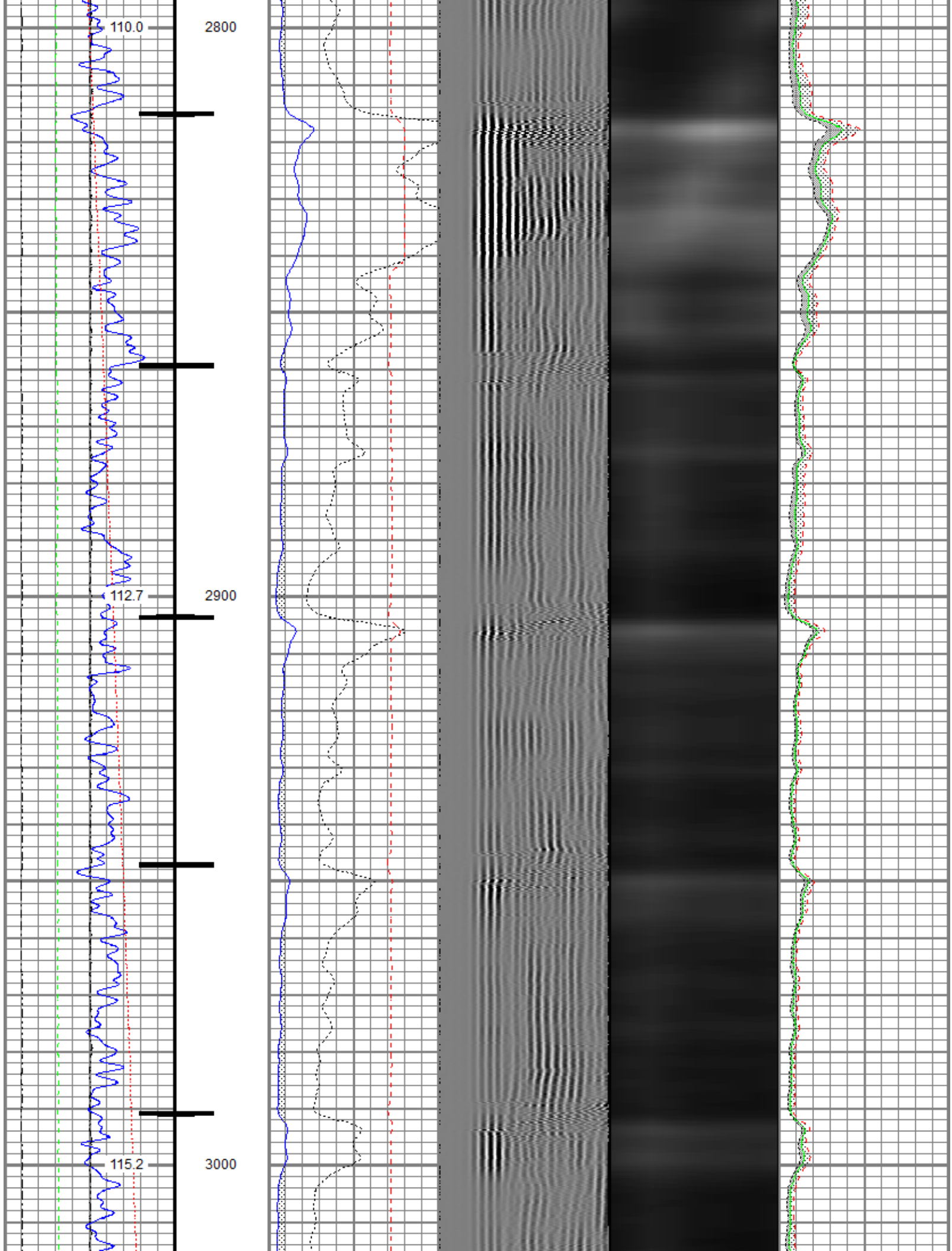


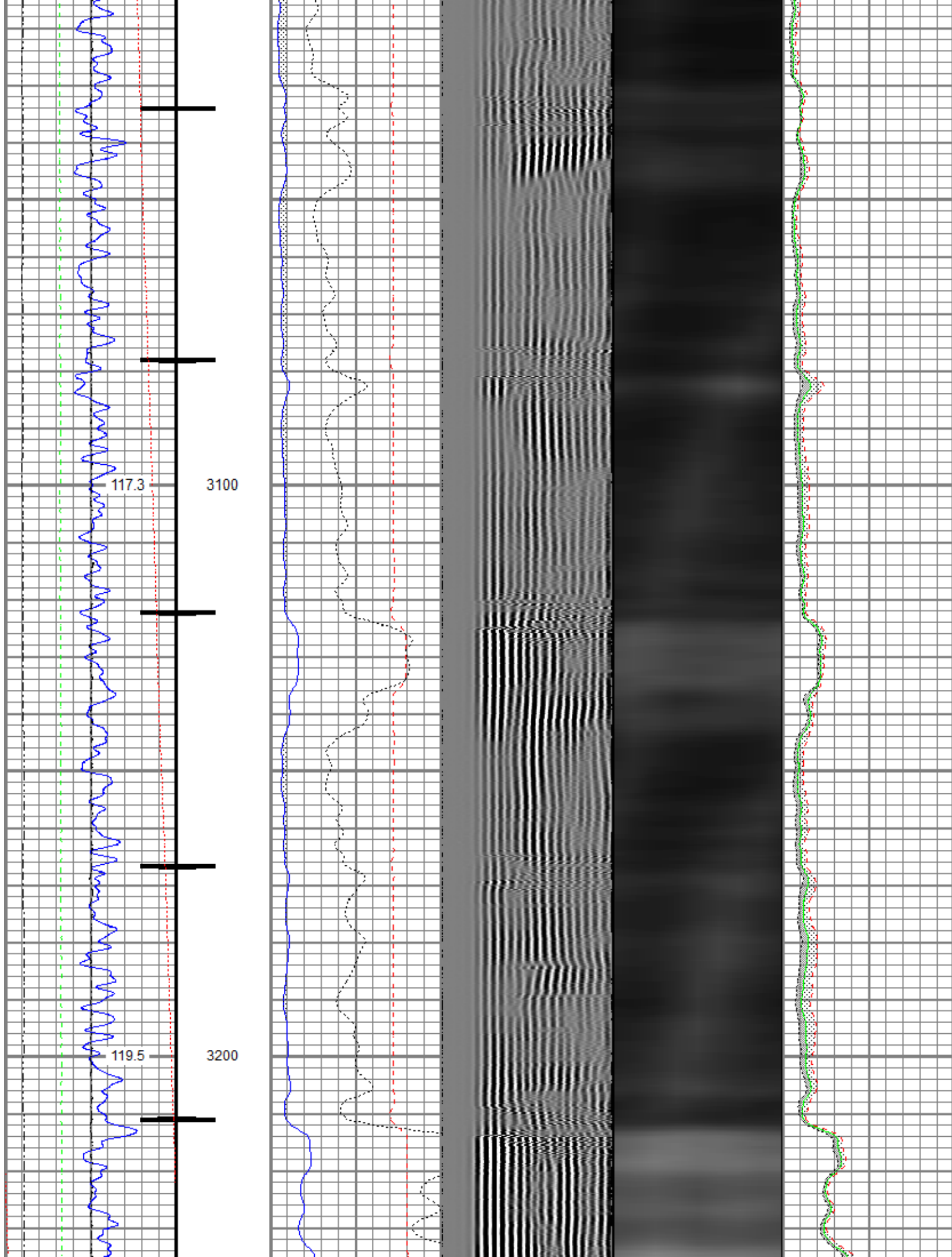


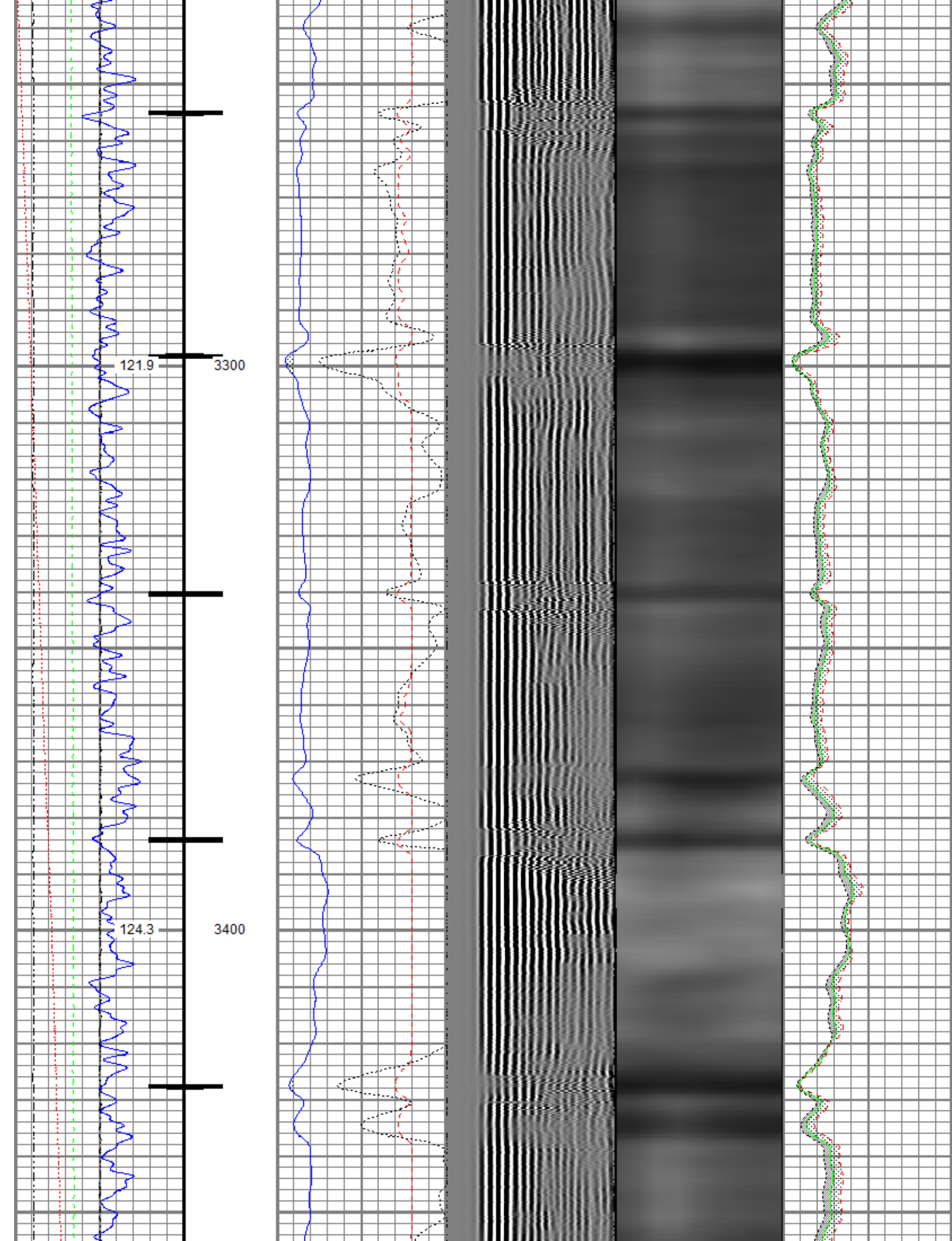


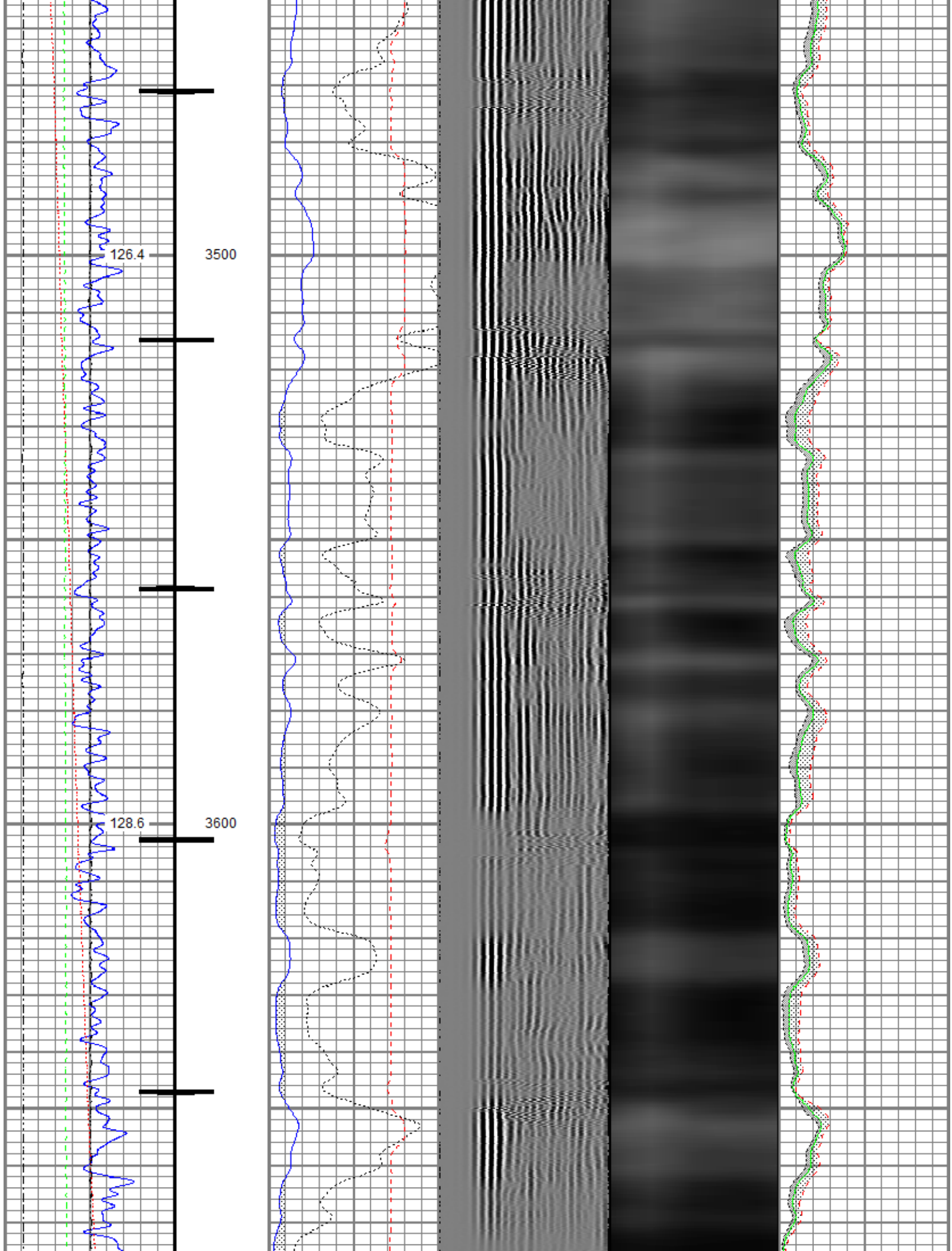


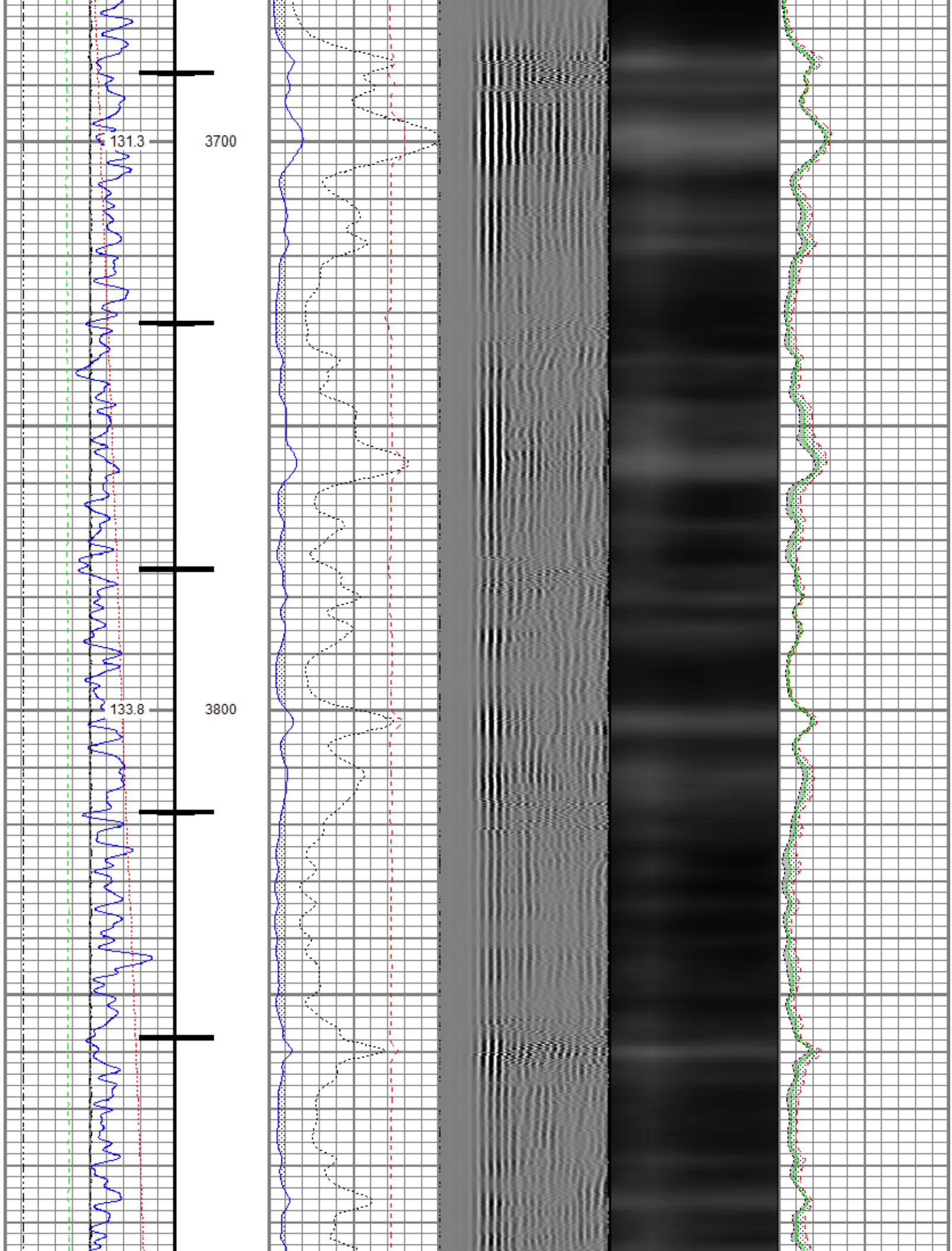


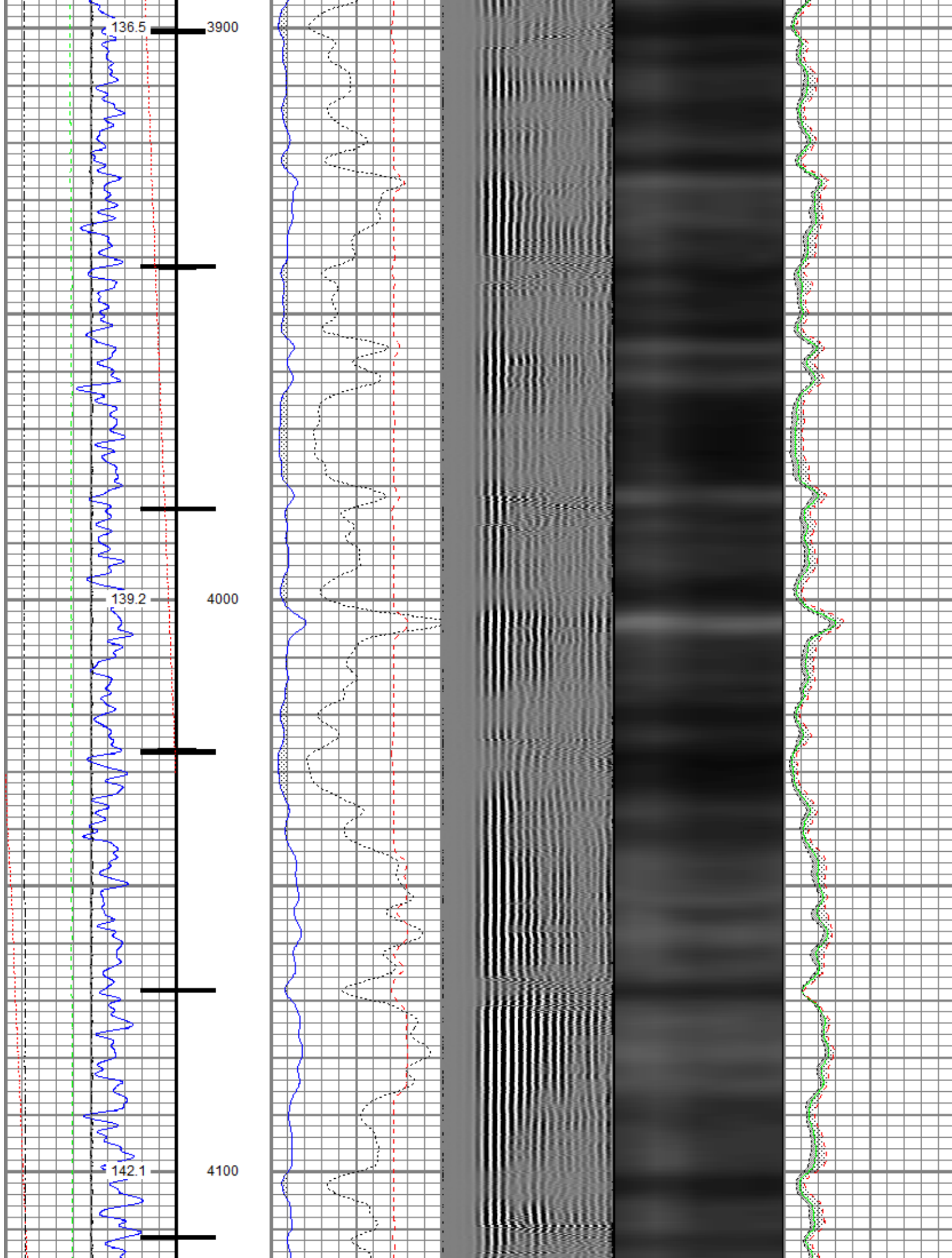


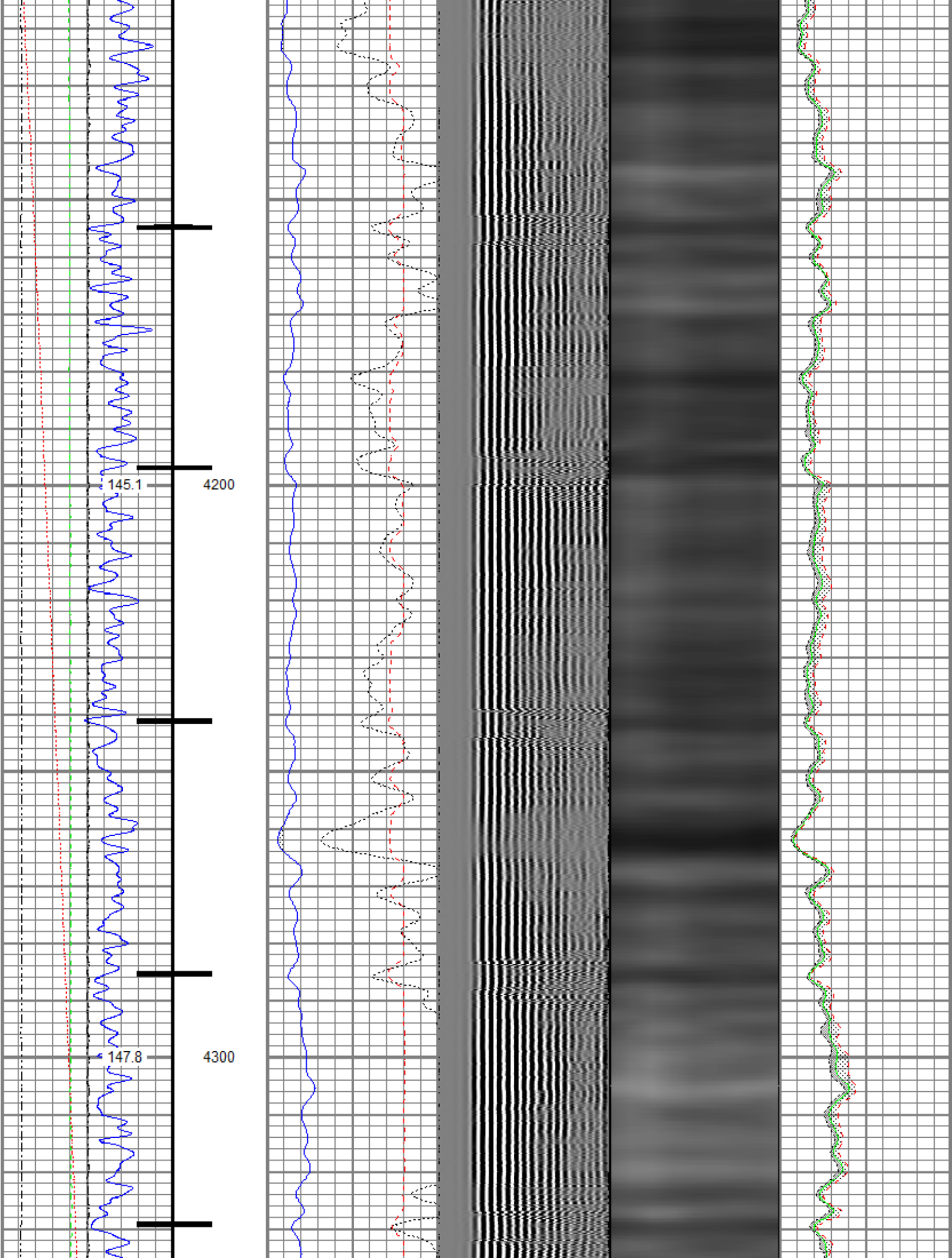


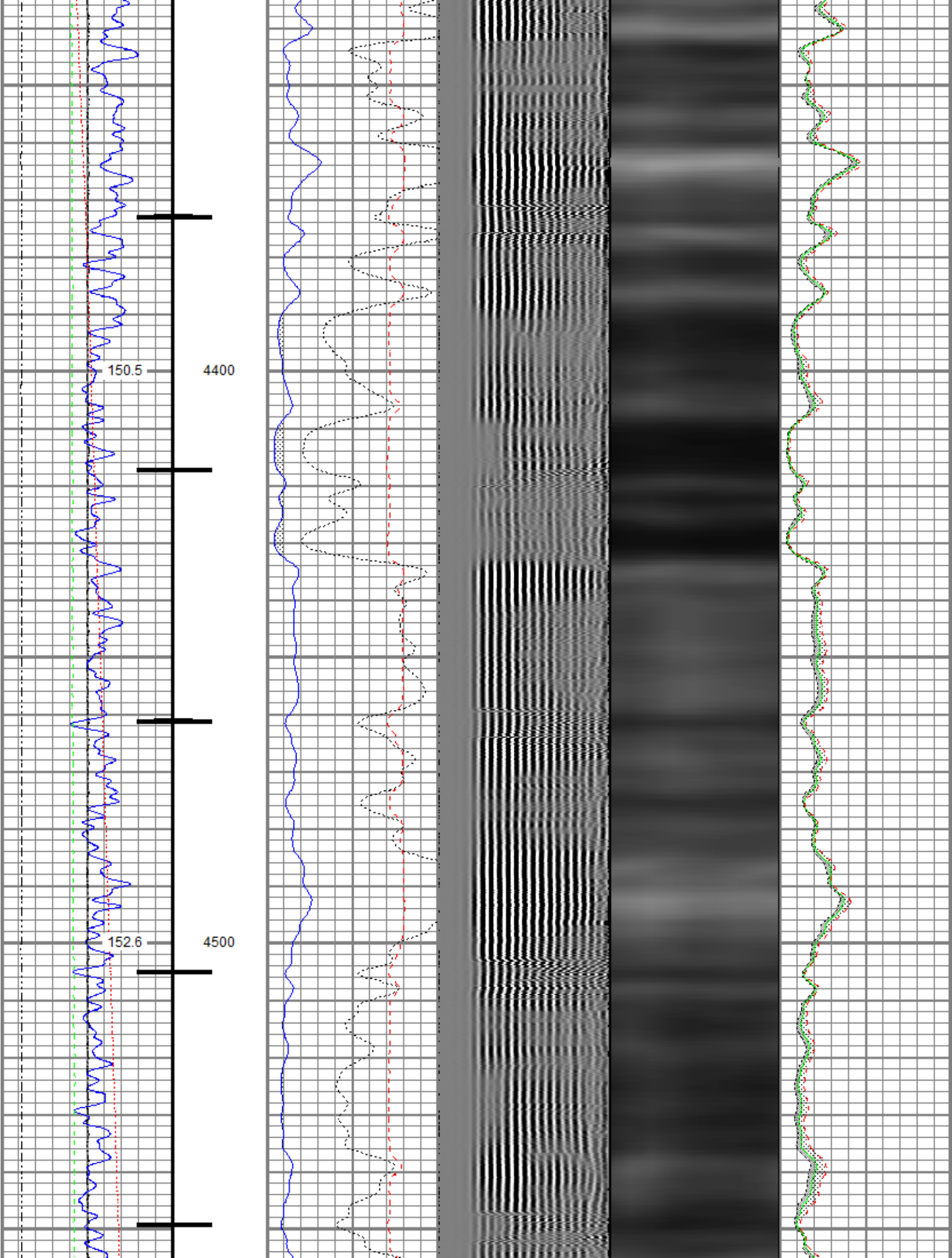


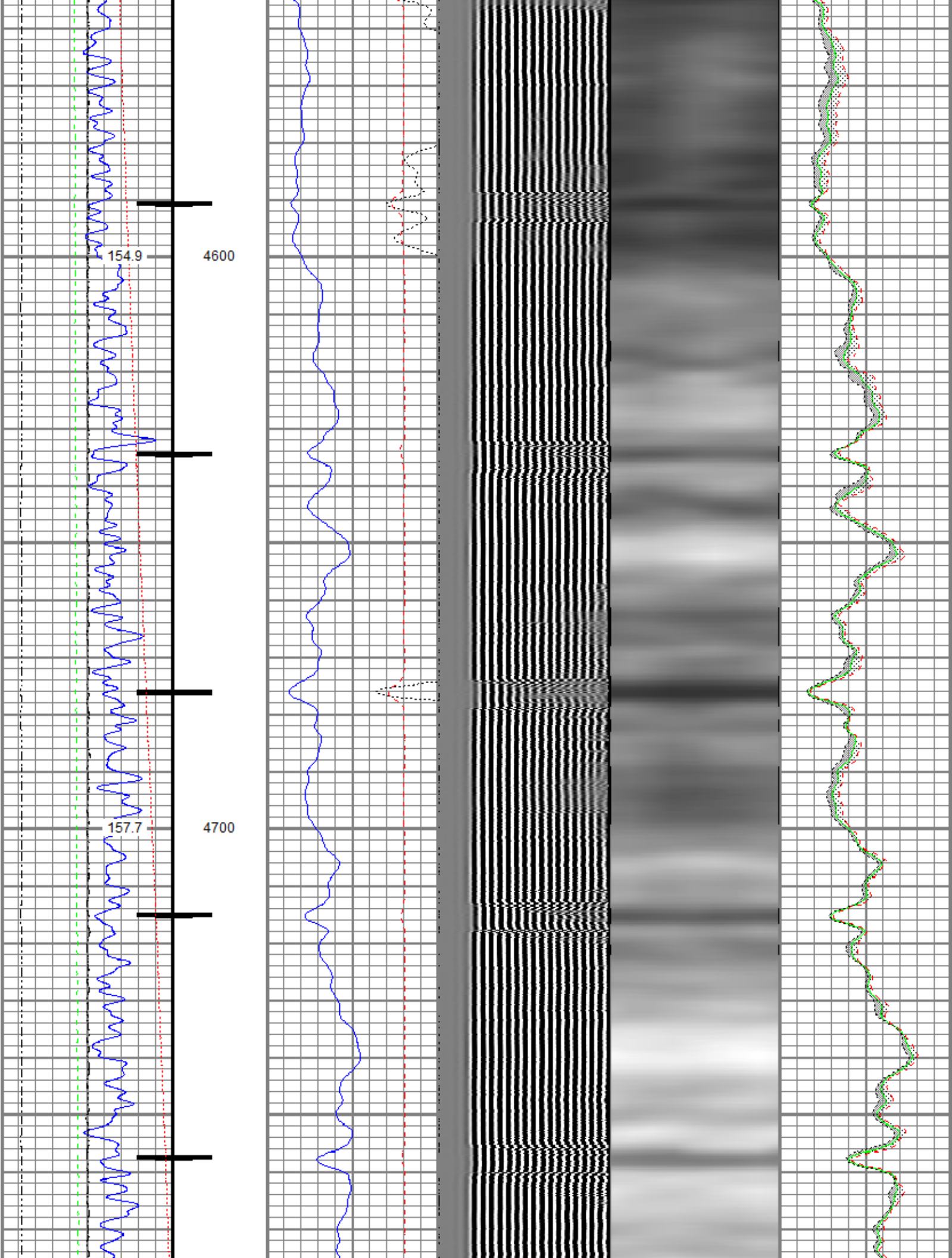


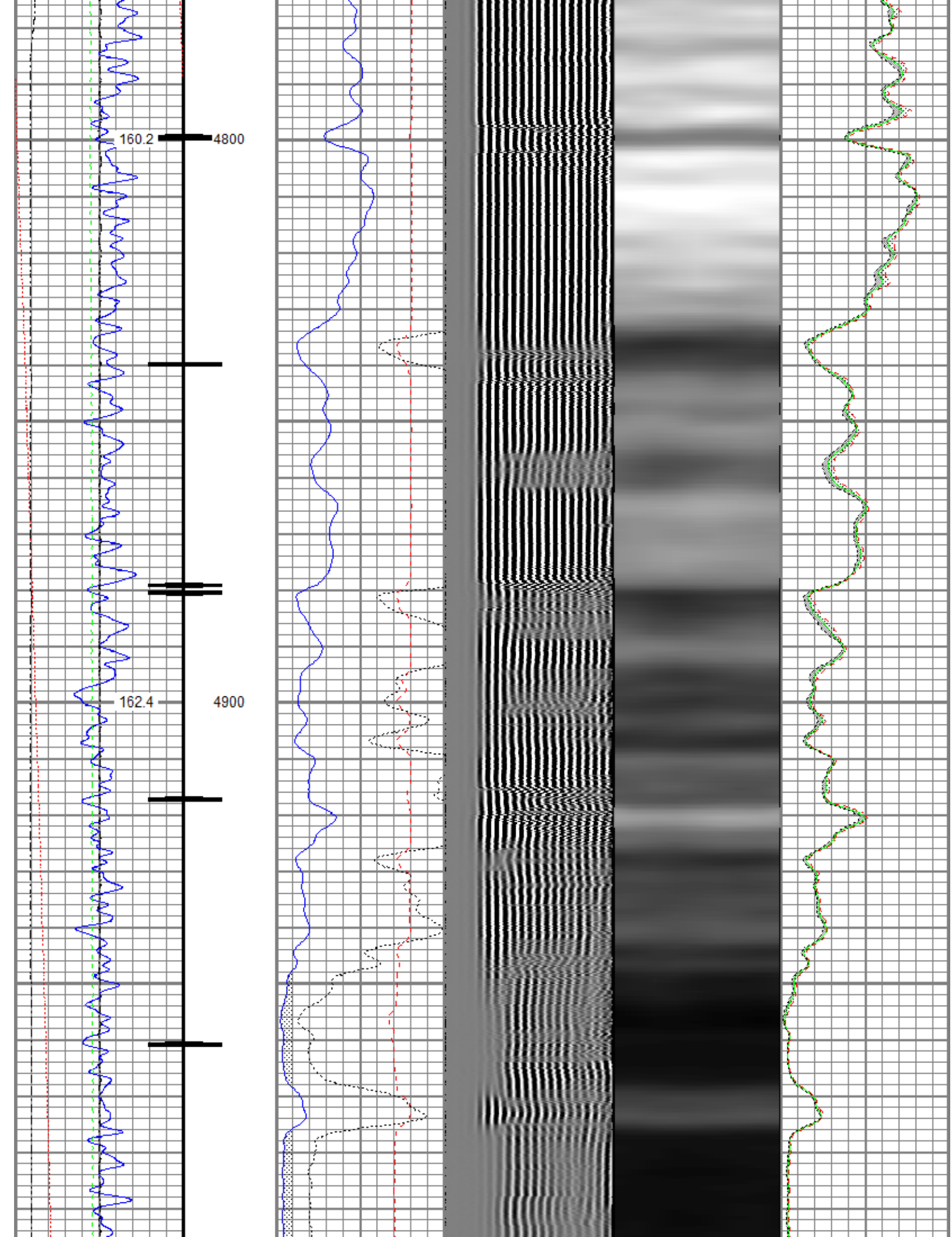


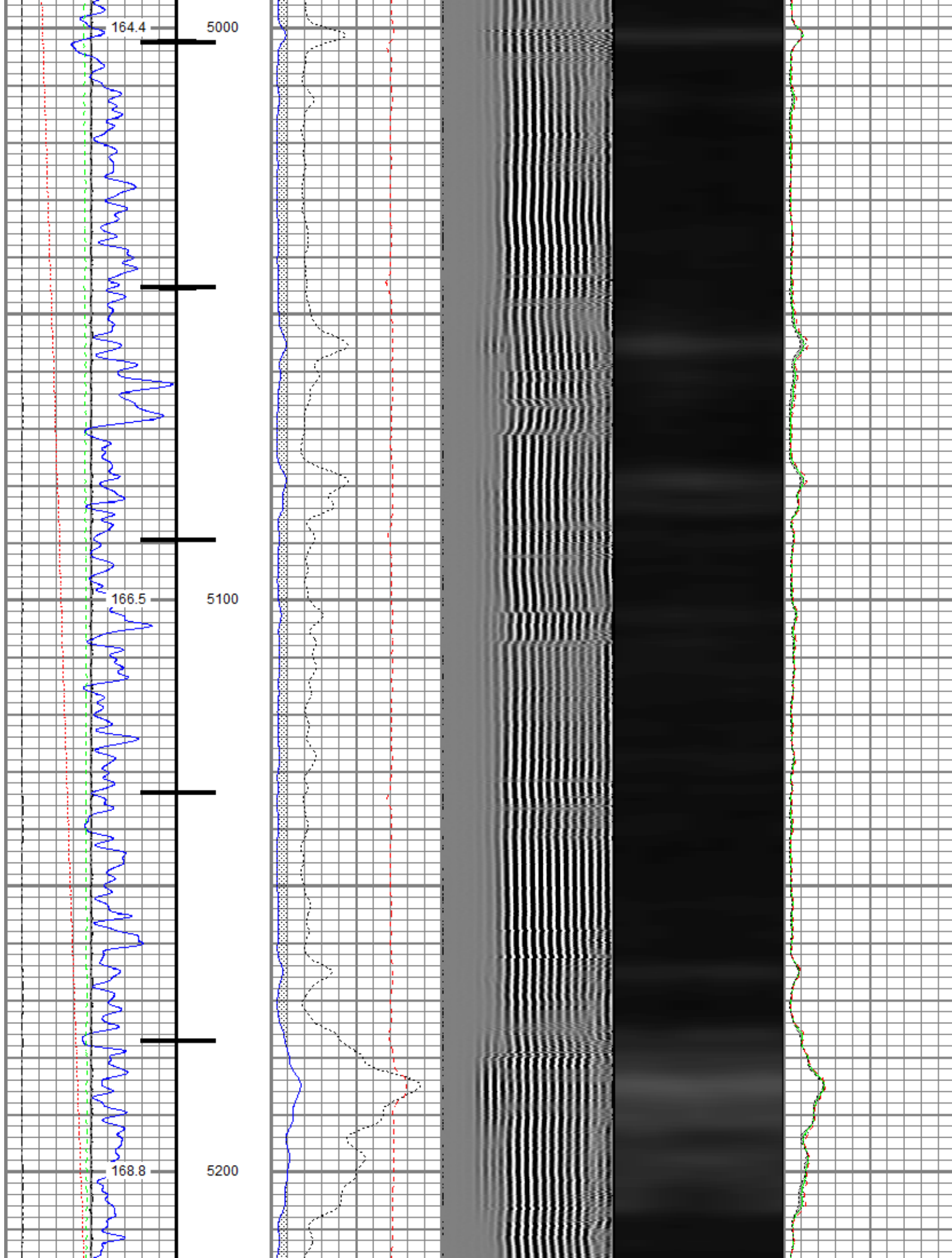


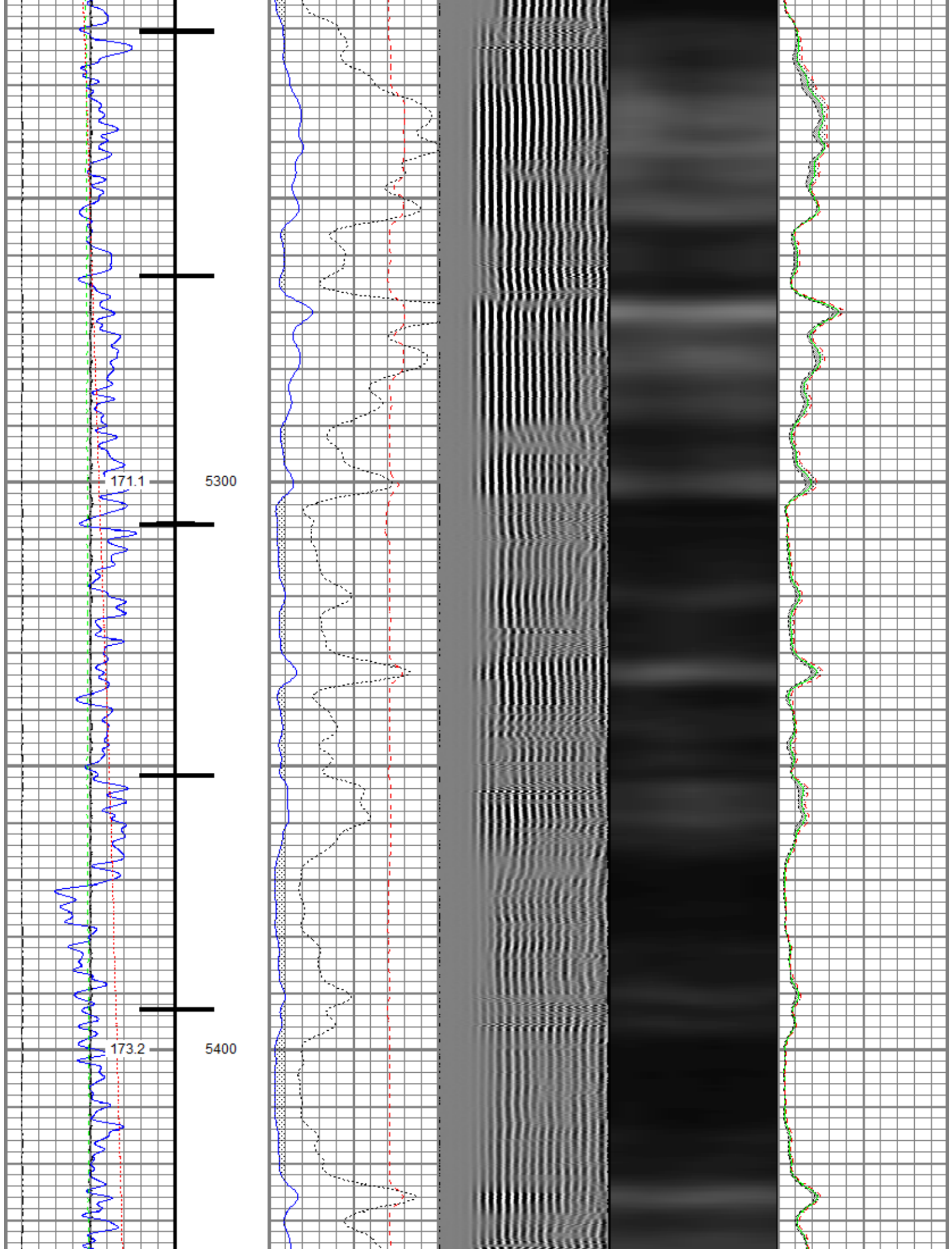


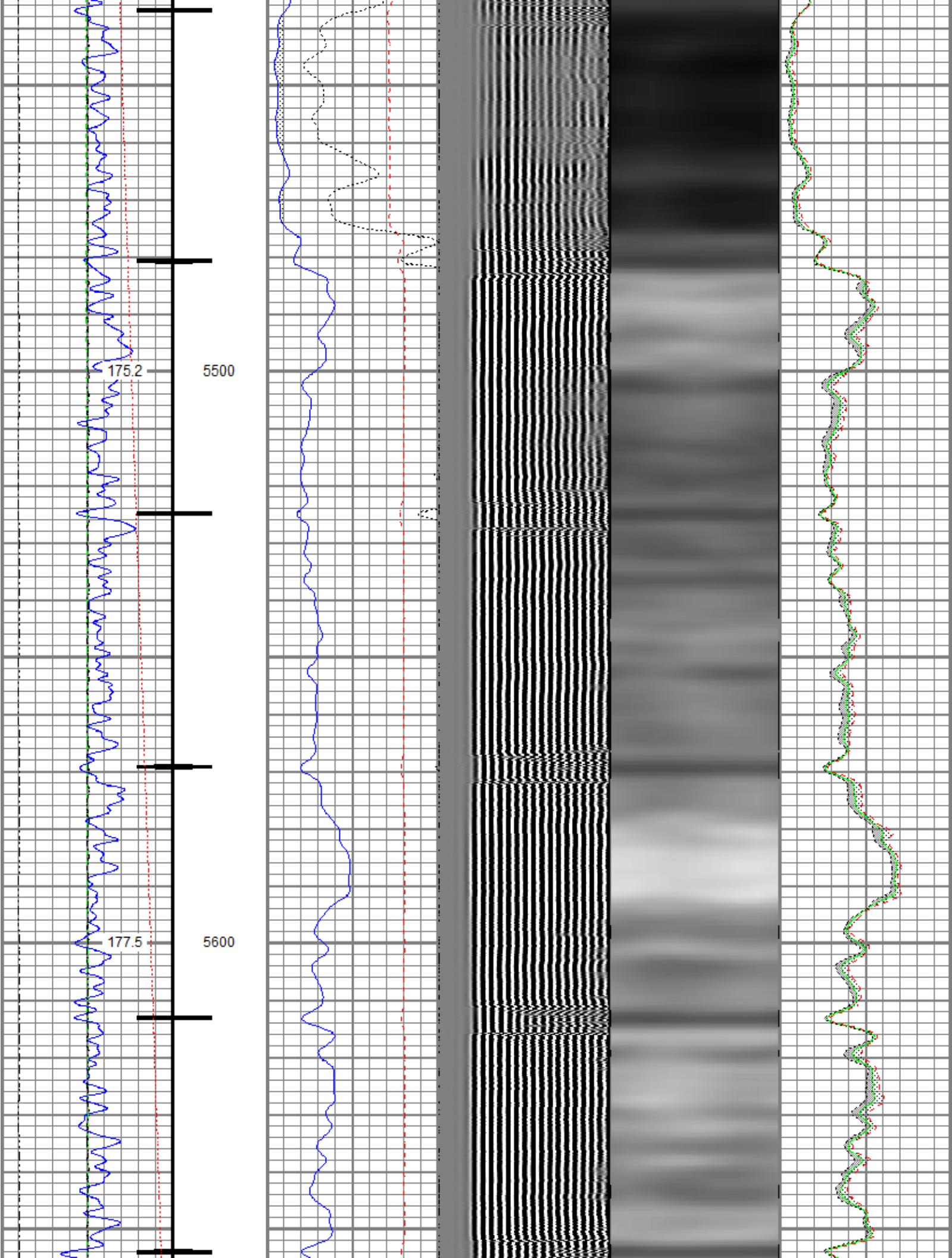


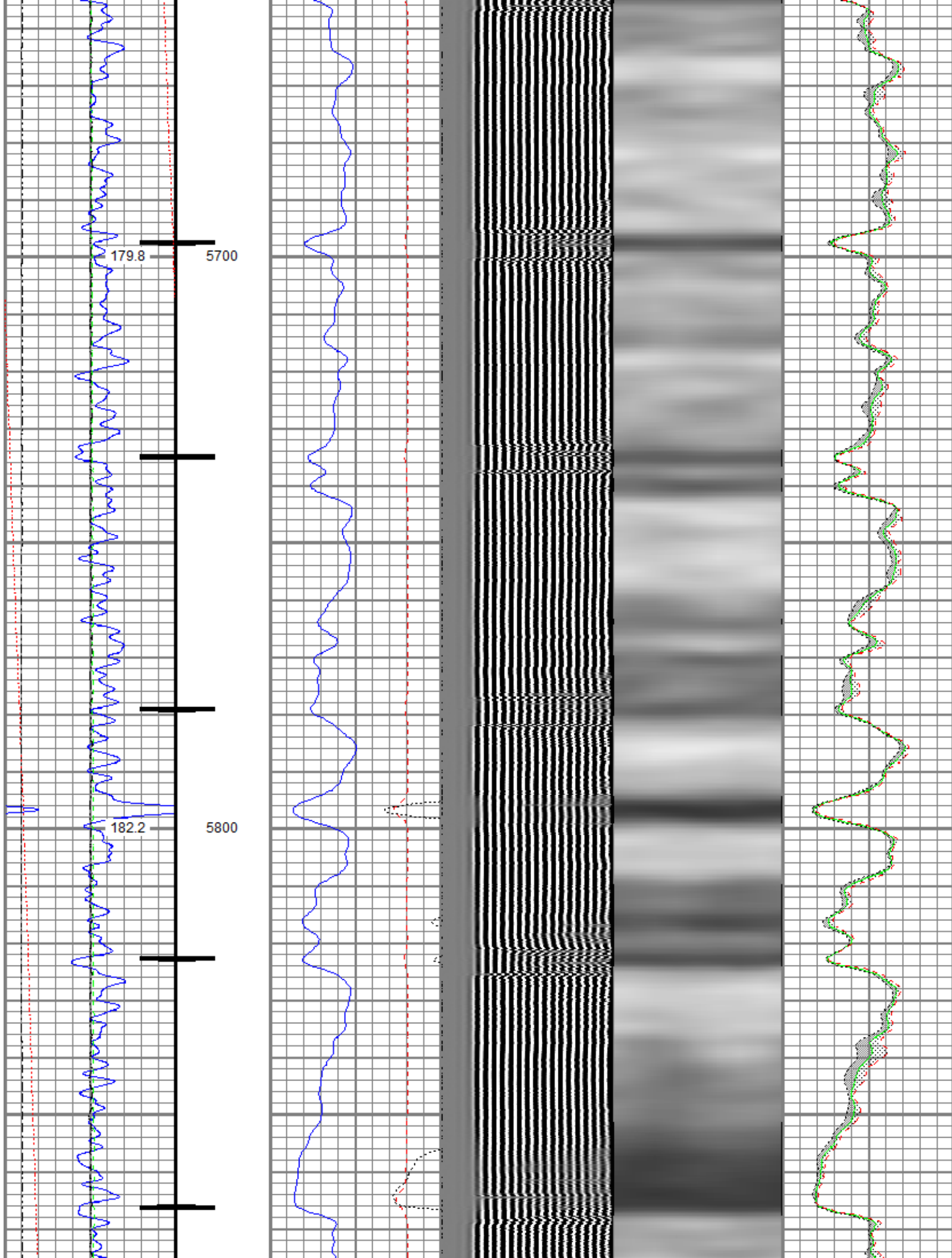


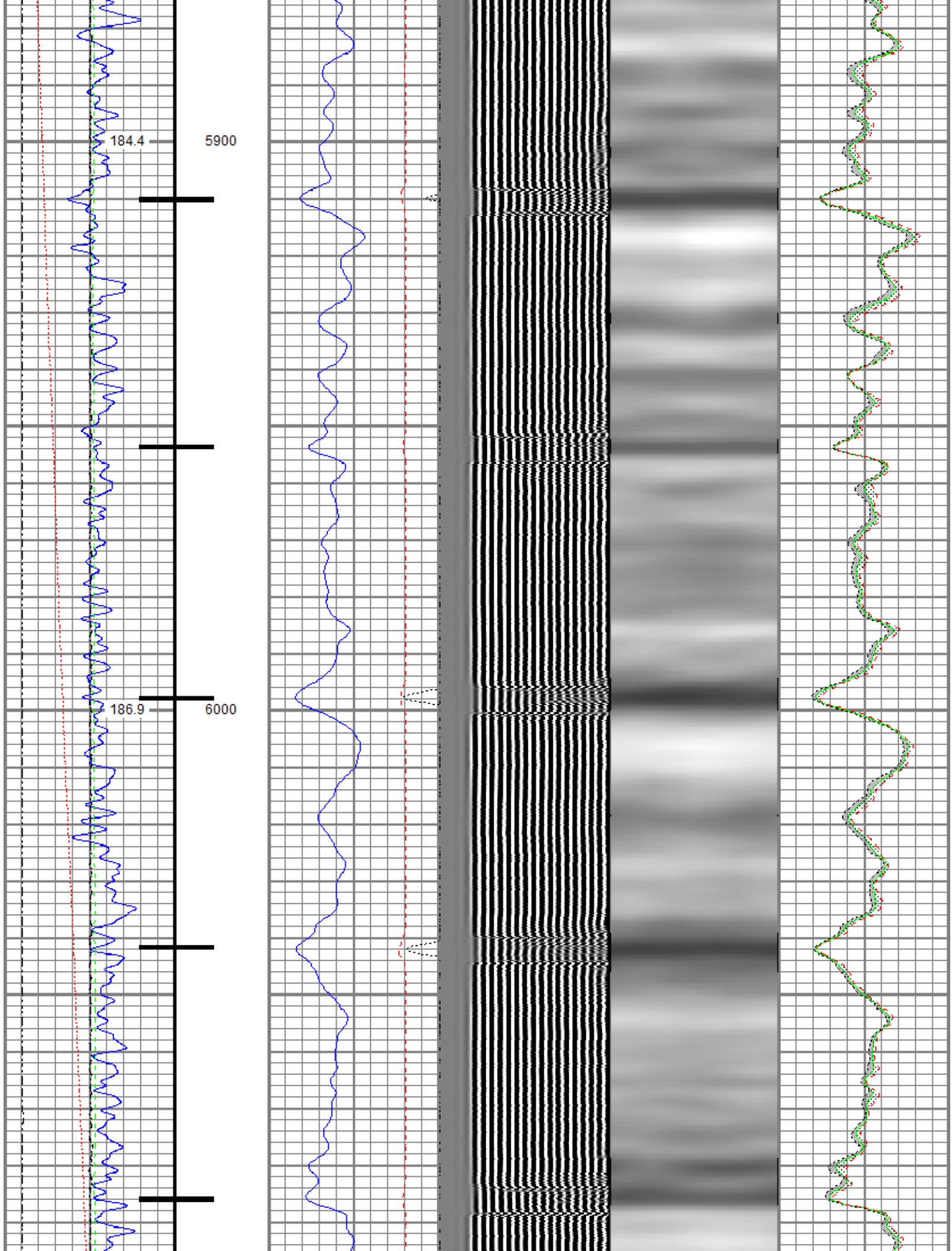


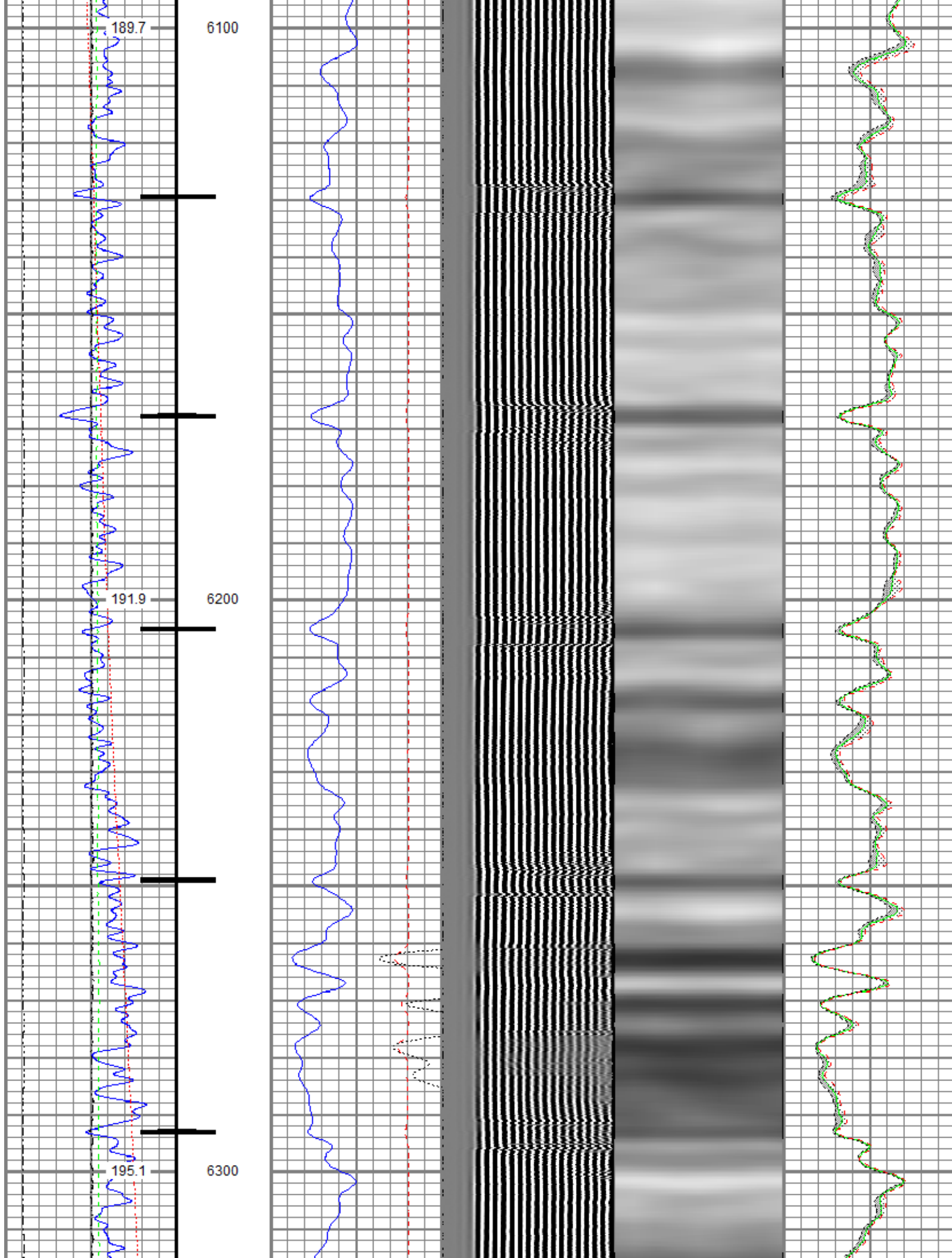


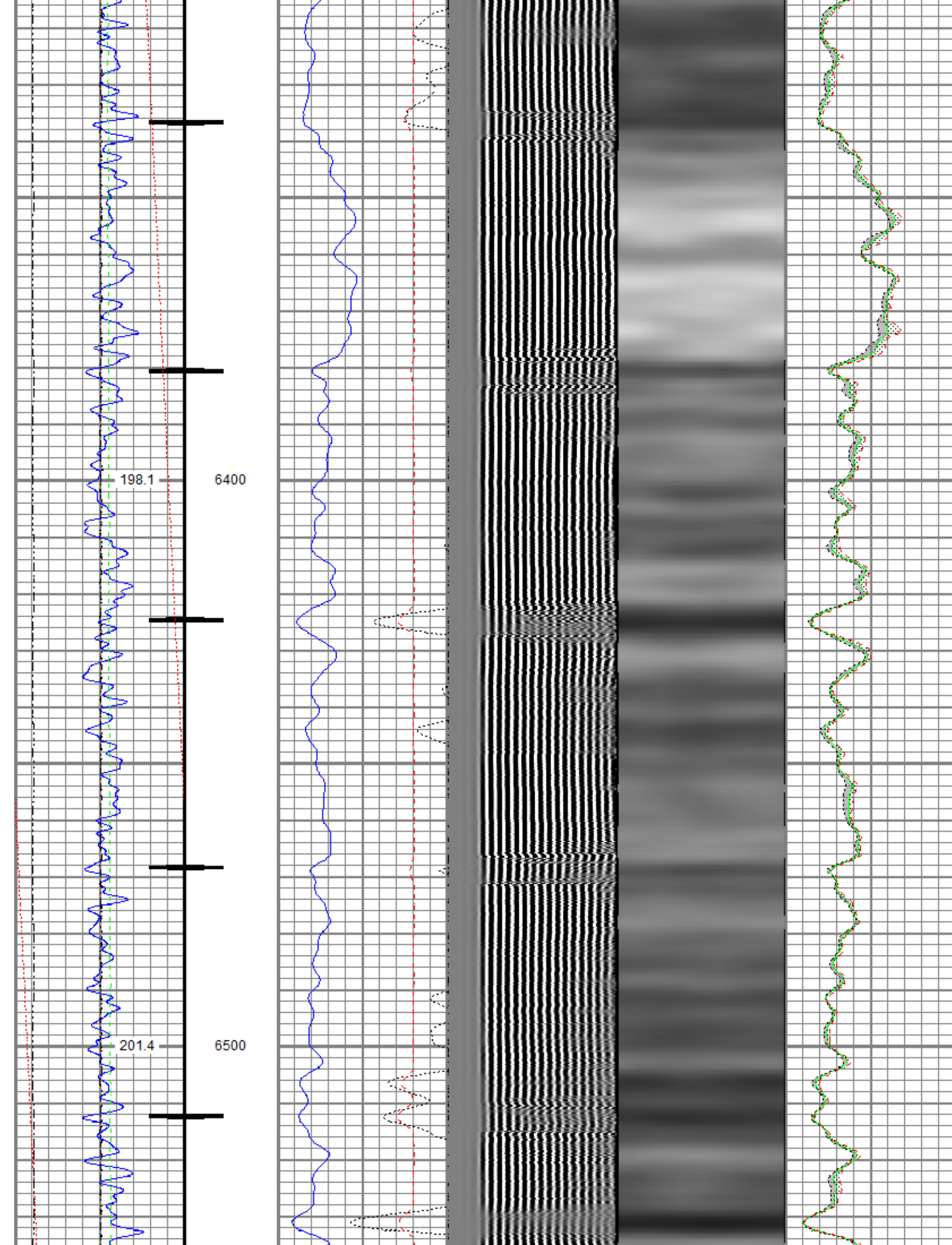


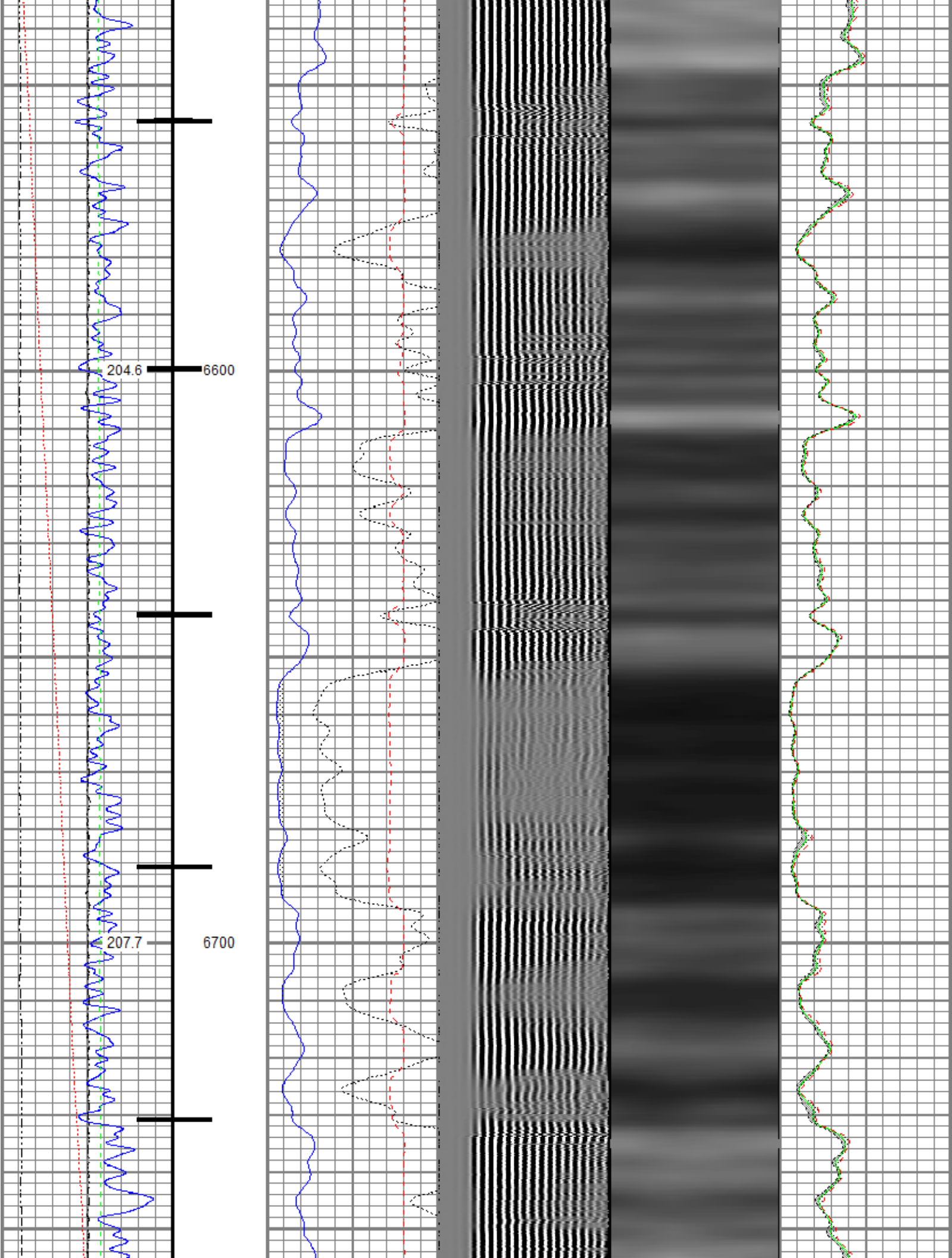


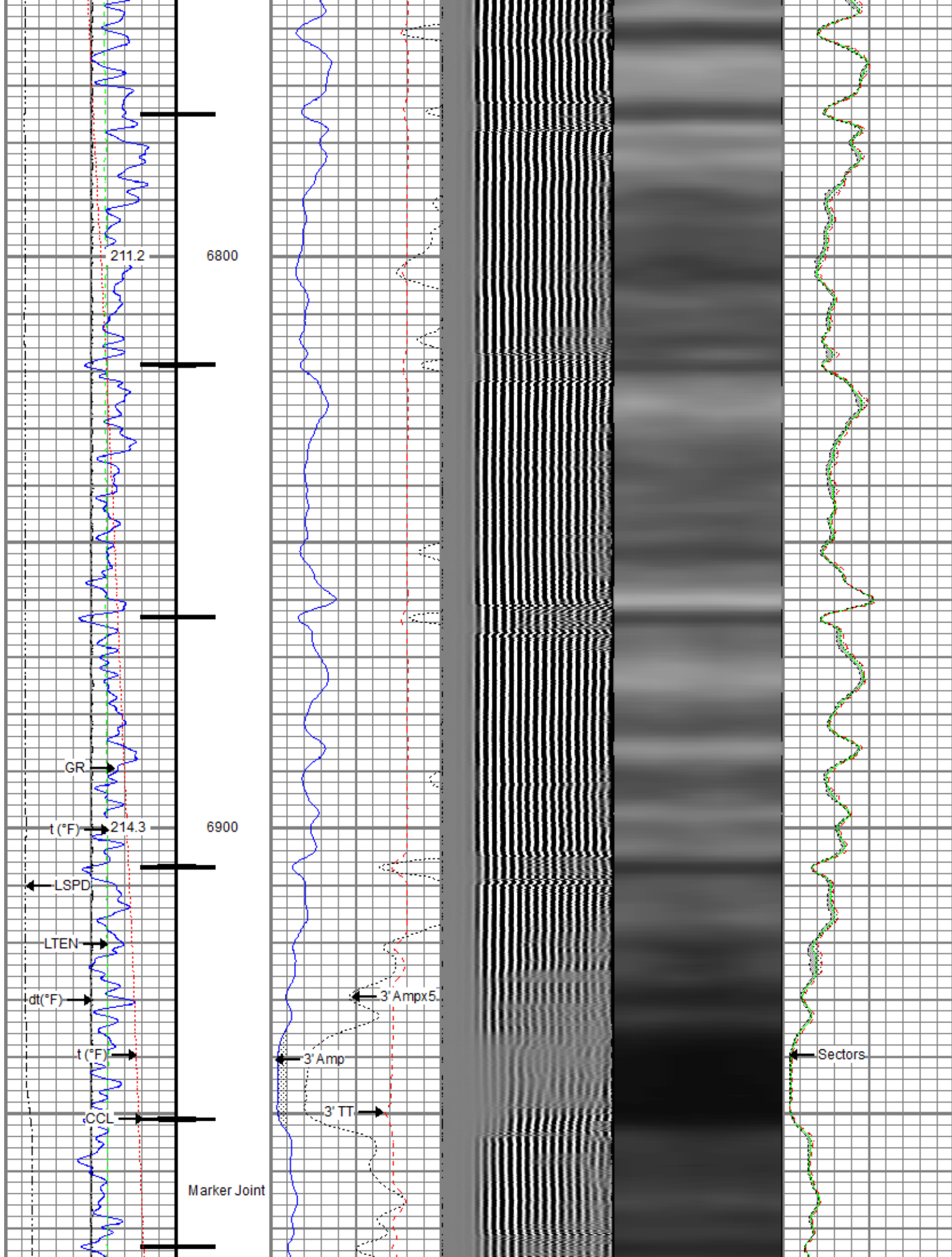


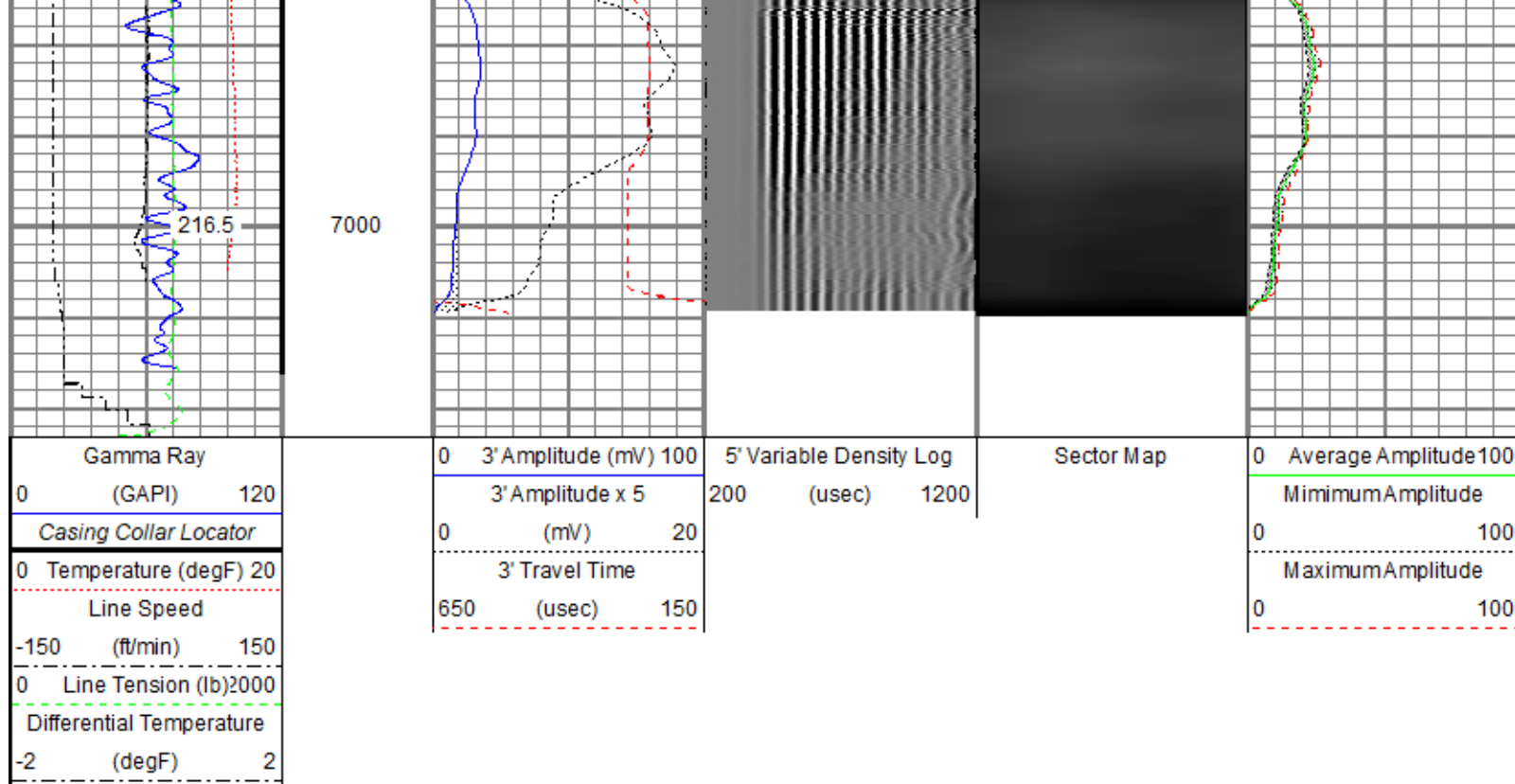








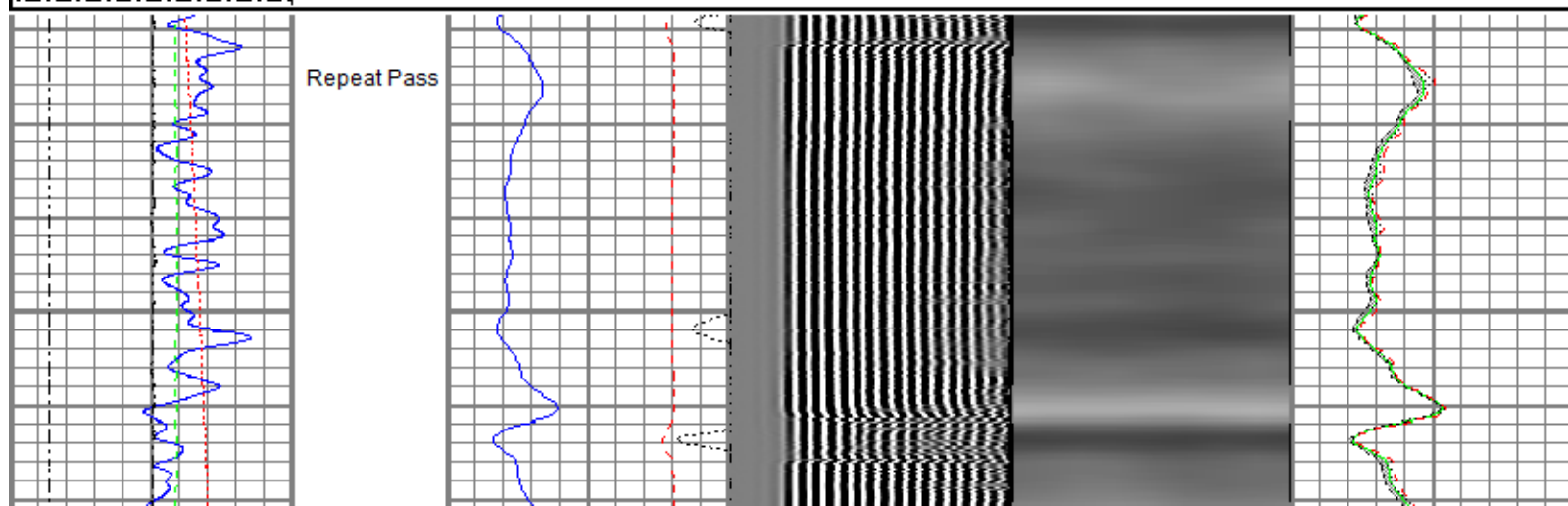
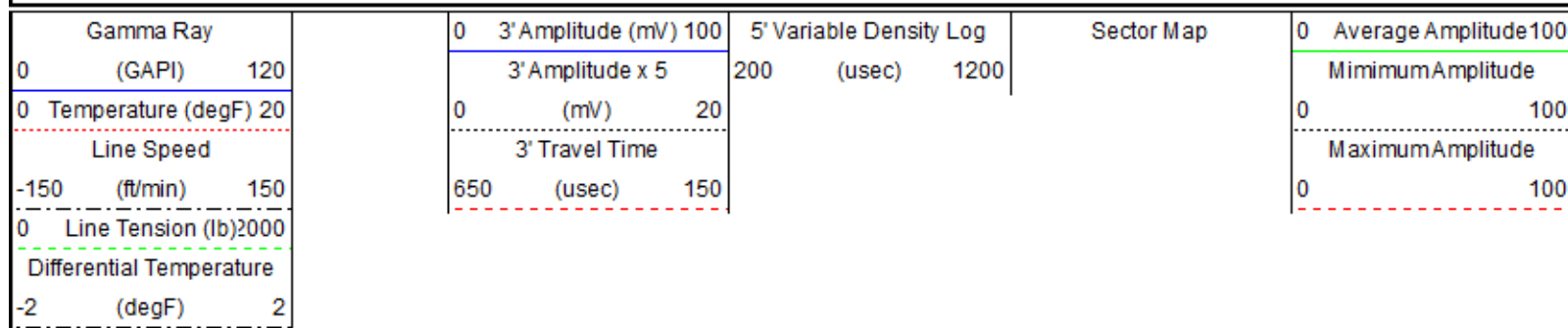


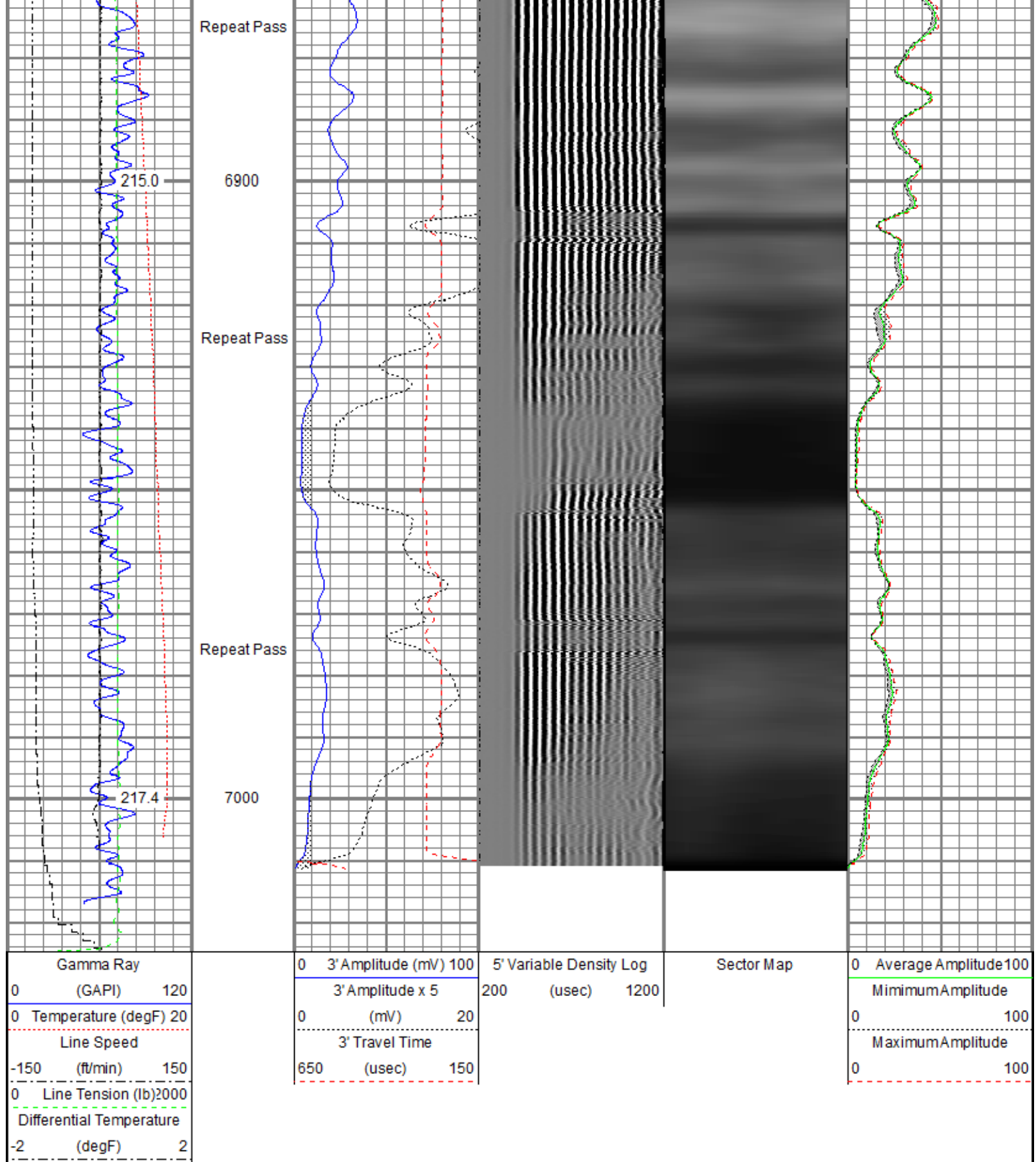


Repeat Pass

Recorded With 0 PSI Surface Induced Pressure

Database File new folder\0512349356_anadarko_ranger 7-19hz_rbl_07-29-19.db
 Dataset Pathname repeat.1
 Presentation Format ros_radri
 Dataset Creation Tue Jul 30 16:52:10 2019
 Charted by Depth in Feet scaled 1:240





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan CHD-14375 GO	1.03	1.44	3.60
			Titan 1-7/16" Assembled Electric Cable Head w/ 1" Fishing Neck			
			Probe CENT 2750	2.88	2.75	20.00

			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.00	2.75	20.00
TEMP	17.04					
WVFS8	14.81		Probe Radii-2750 RBT (120855) 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					
HEADVOLT	10.56		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: 0512349356_Anadarko_Ranger 7-19HZ_RBL_07-29-19.db: field/well/run1/main Total length: 23.86 ft Total weight: 223.60 lb O.D.: 2.75 in						

Calibration Report	
Database File	C:\ProgramData\Warrior\Data\New folder\0512349356_Anadarko_Ranger 7-19HZ_RBL_07-29-19.db
Dataset Pathname	main.1
Dataset Creation	Mon Jul 29 10:03:11 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:	21.507	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.001	0.649	0.800	71.921	109.713	0.672
CAL	0.741	0.743				
5'	0.000	0.602	0.800	71.921	118.218	0.762
SUM						
S1	0.001	0.649	0.000	100.000	154.417	-0.204
S2	0.002	0.697	0.000	100.000	143.848	-0.237
S3	0.002	0.720	0.000	100.000	139.257	-0.215
S4	0.001	0.698	0.000	100.000	143.432	-0.182
S5	0.001	0.659	0.000	100.000	151.985	-0.148
S6	0.001	0.626	0.000	100.000	160.051	-0.124
S7	0.001	0.617	0.000	100.000	162.349	-0.154
S8	0.001	0.618	0.000	100.000	162.192	-0.162

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.741	0.743	1.000	0.000


Air Zero Calibration, performed Sun Jul 28 10:34:06 2019:

	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

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			

	Company	Kerr-McGee Oil & Gas Onshore, L.P.
	Well	Ranger 7-19HZ
	Field	Wattenberg
	County	Weld
	State	Colorado