



Radial Cement Bond
Gamma Ray
Casing Collar Log

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

Well MAB 15-6HZ

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-49247

SEC 15 TWP 1N RGE 66W

Elevation

Permanent Datum Ground Level Elevation 5113'
Log Measured From Ground Level 0 FT
Drilling Measured From Kelly Bushing

Other Services
JBGR
WRP
K.B. 5130'
D.F. ---
G.L. 5113'

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County Weld
State Colorado

Date	23-JUN-2019	Three		
Run Number		18218 FT		
Depth Driller		6859 FT		
Depth Logger		6844 FT		
Bottom Logged Interval		Surface		
Top Log Interval		7.875'		
Open Hole Size		Water		
Type Fluid		8.34 lb/gal		
Density / Viscosity		214°F		
Max. Recorded Temp.		See Log		
Estimated Cement Top		ROA		
Time Well Ready		13.11		
Time Logger on Bottom		HD-361		
Equipment Number		Platteville, CO		
Location		G. Lueck		
Recorded By		J. McCarthy		
Witnessed By				
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 6813 FT
Adjusted +5 FT to correlate with Marker Joint
Gauge Ring/Junk Basket ran to 7790 FT
Retrievable Bridge Plug set at 6873 FT
Log ran with 0 PSI Surface Induced Pressure
Logging tools were clean and free of debris upon completion of operations

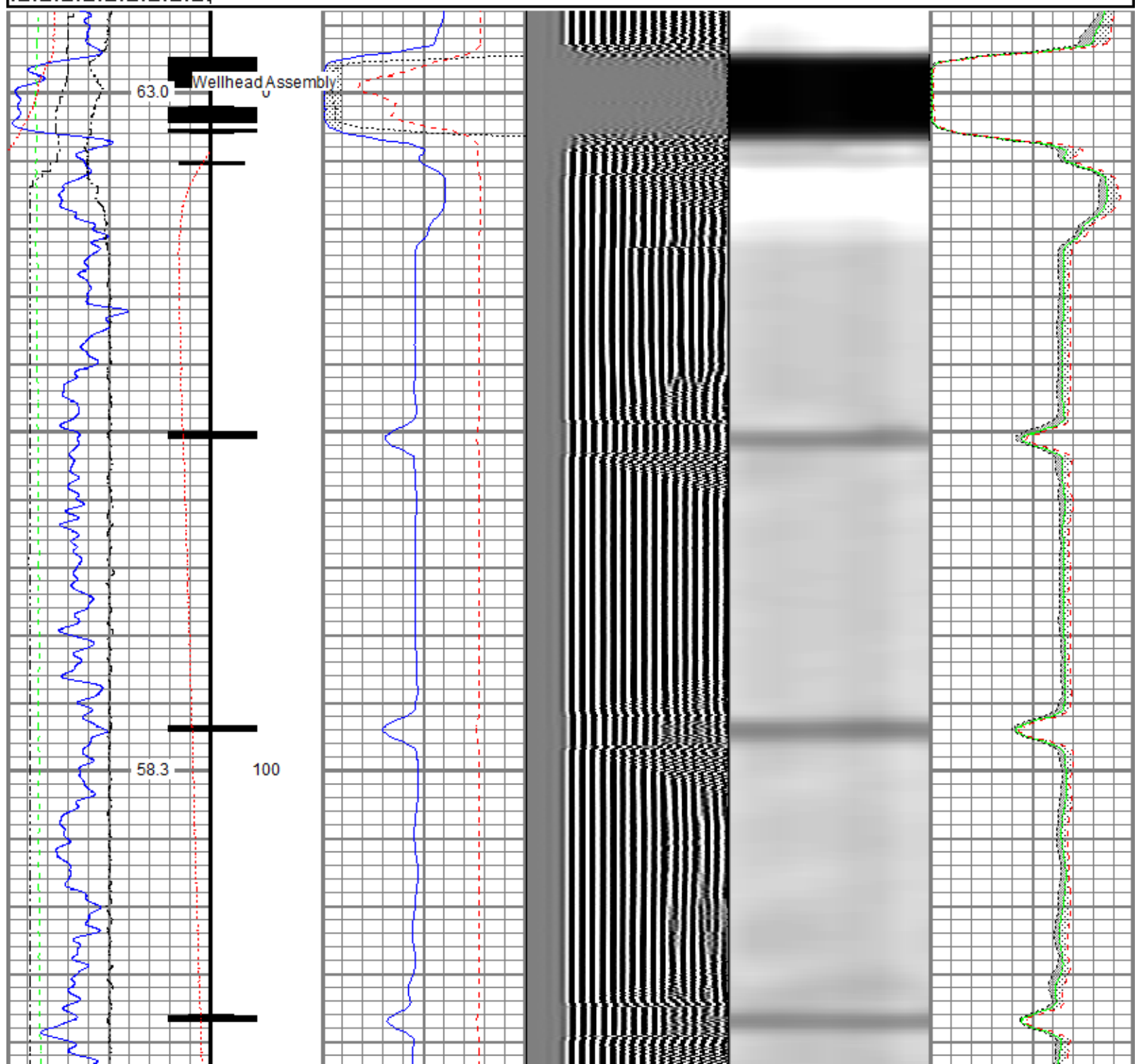
Thank you for choosing Reliance Oilfield Services, LLC!!

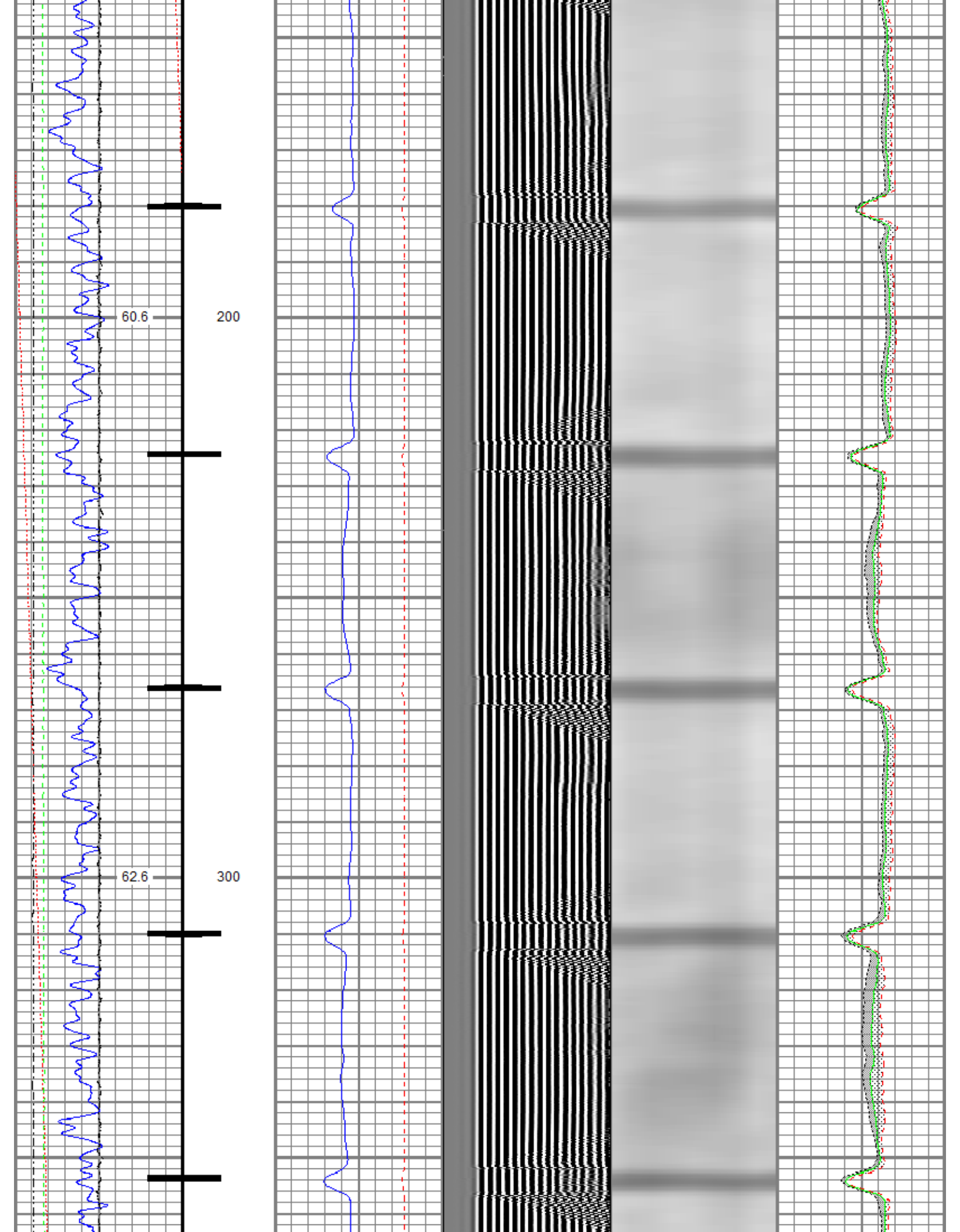
Main Pass

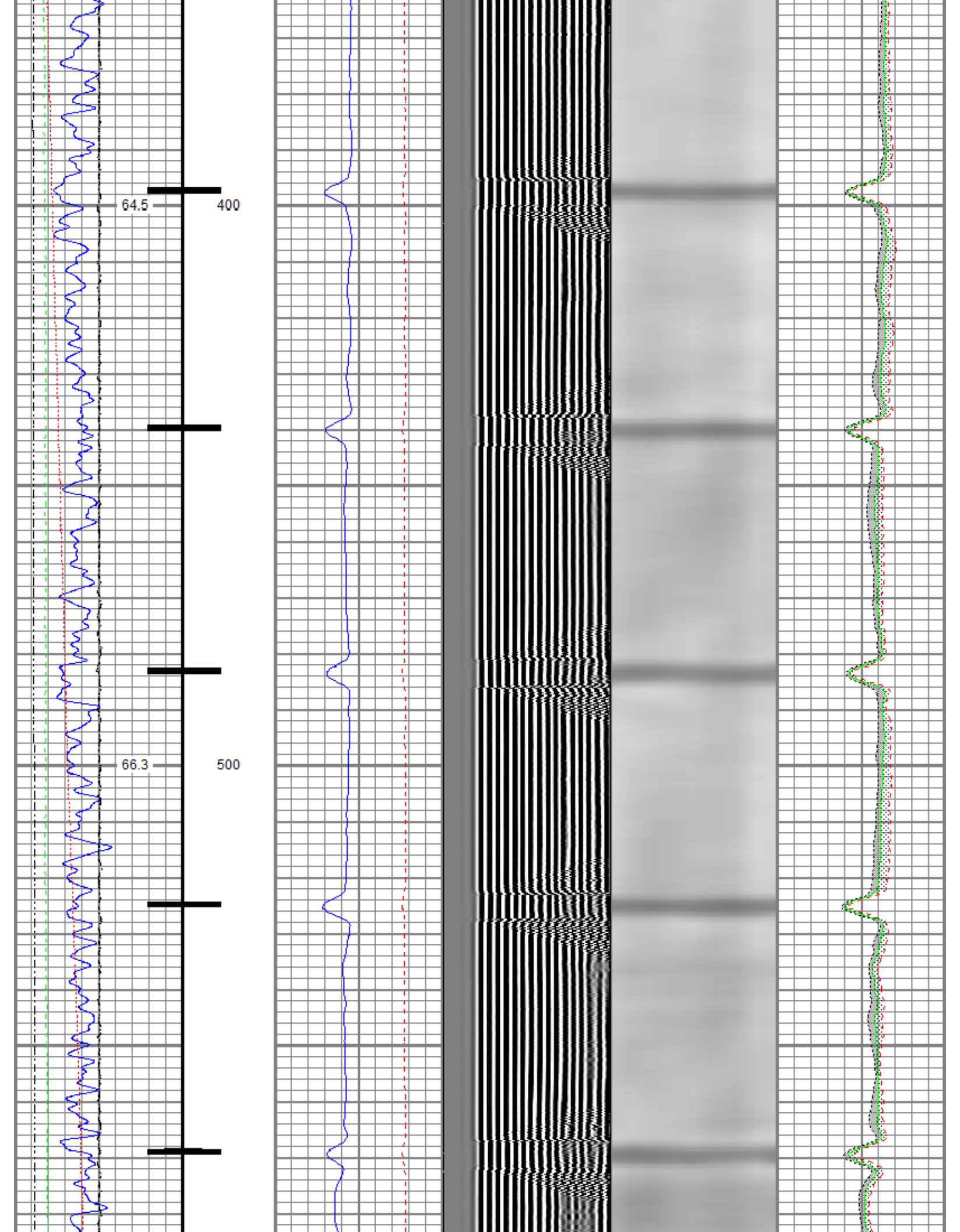


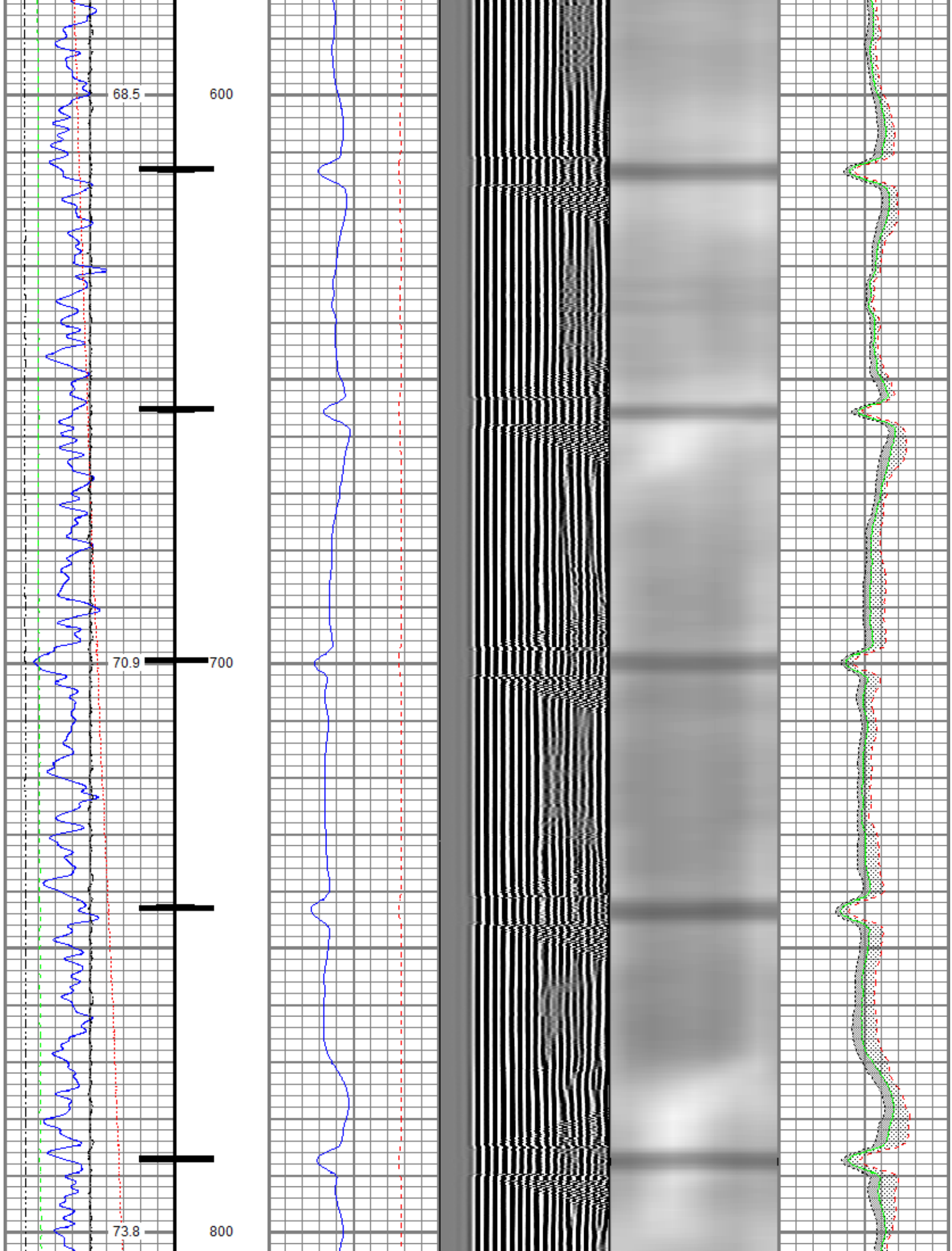
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Presentation Format	ros_radri
Dataset Creation	Mon Jun 24 14:14:30 2019
Charted by	Depth in Feet scaled 1:240

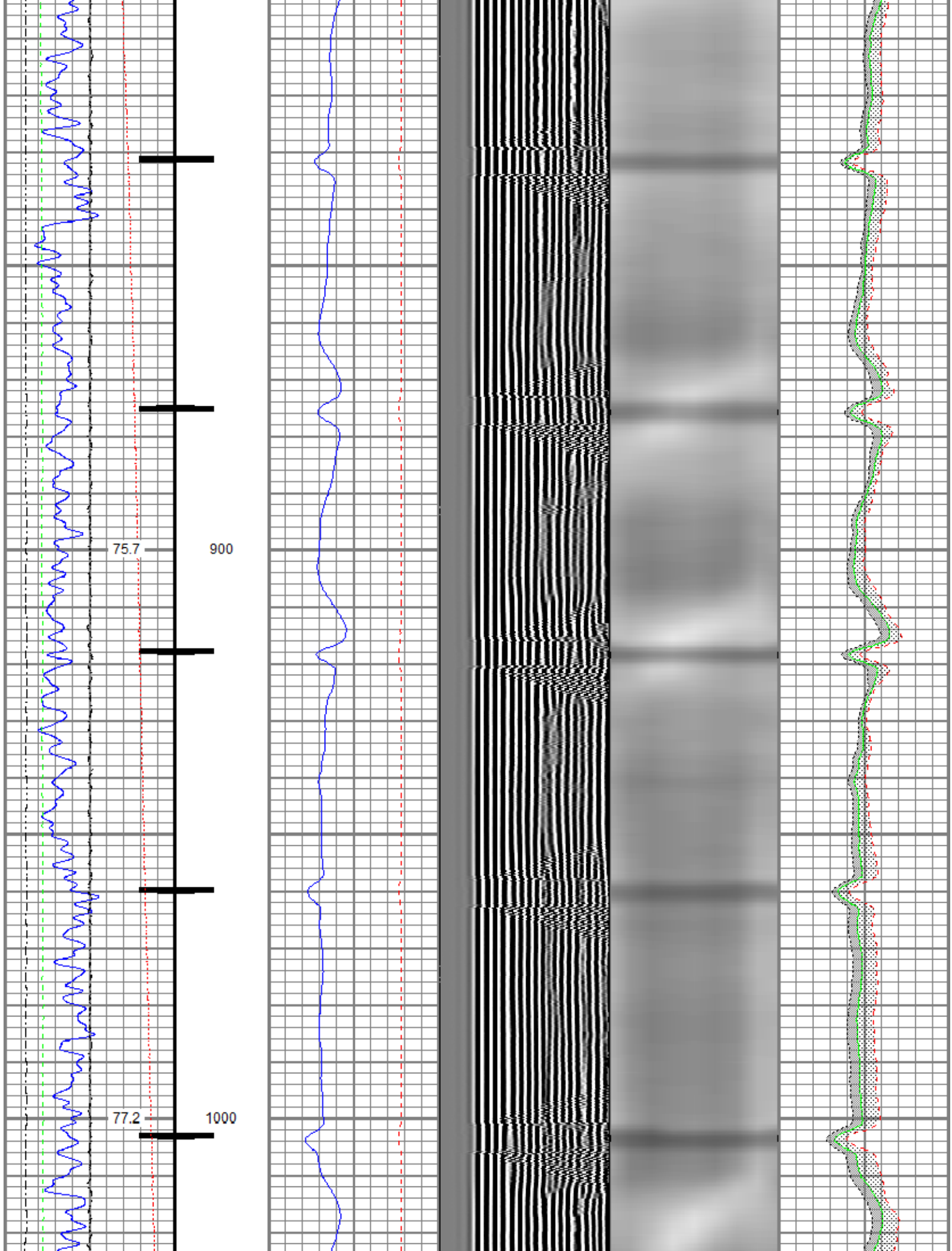
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200			Minimum Amplitude
Casing Collar Locator		0 (mV) 20			0	100
0 Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed		650 (usec) 150			0	100
-150 (ft/min) 150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

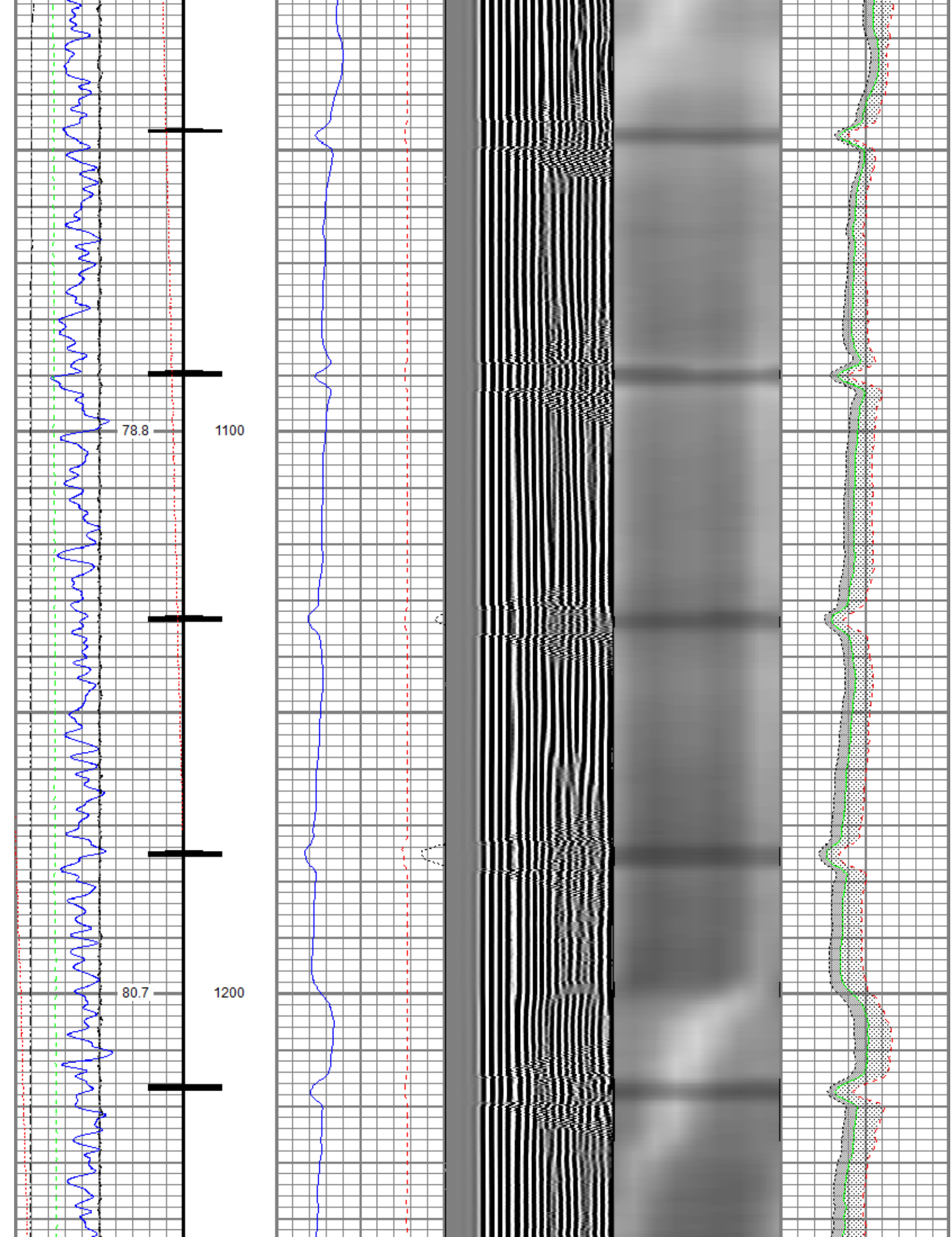


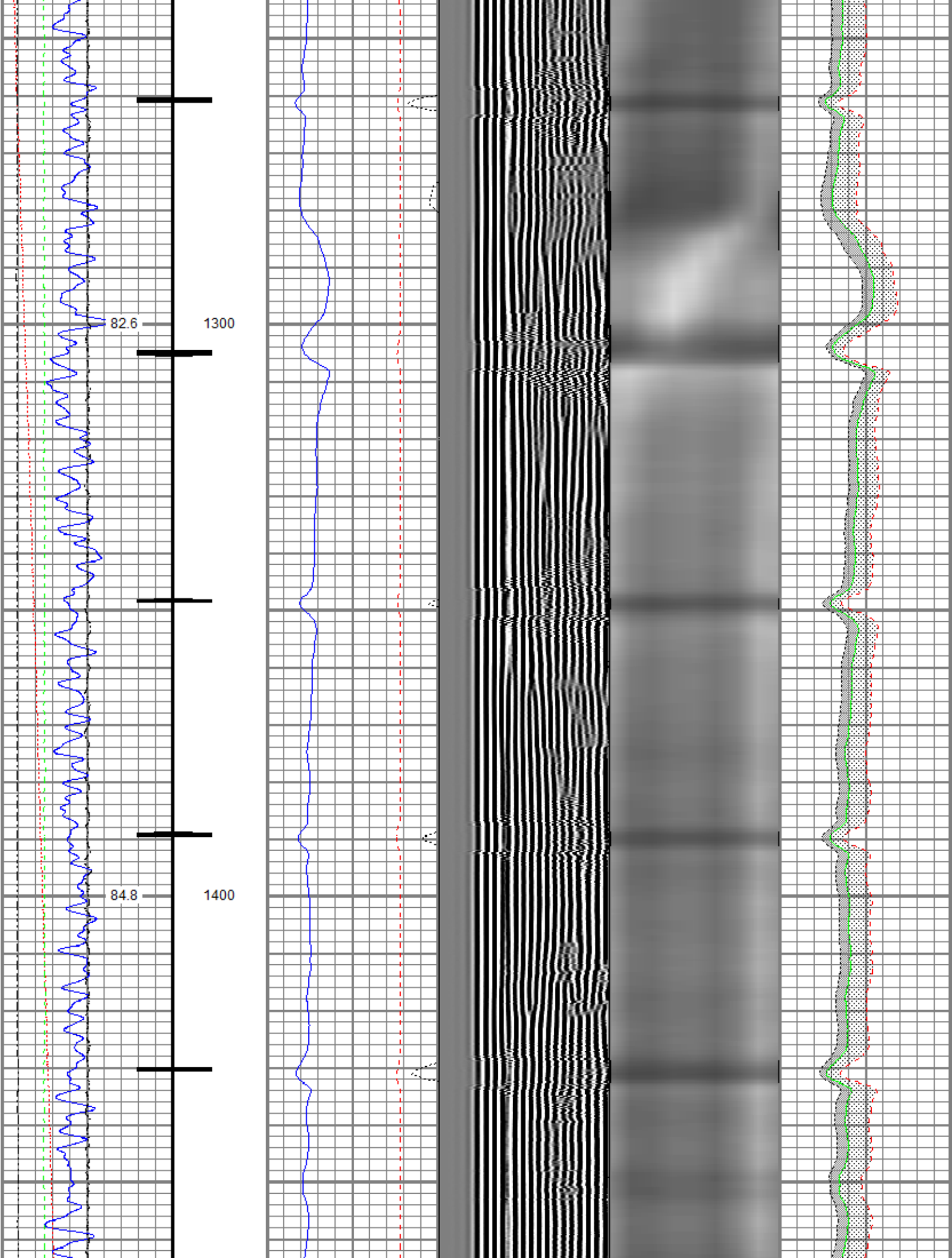


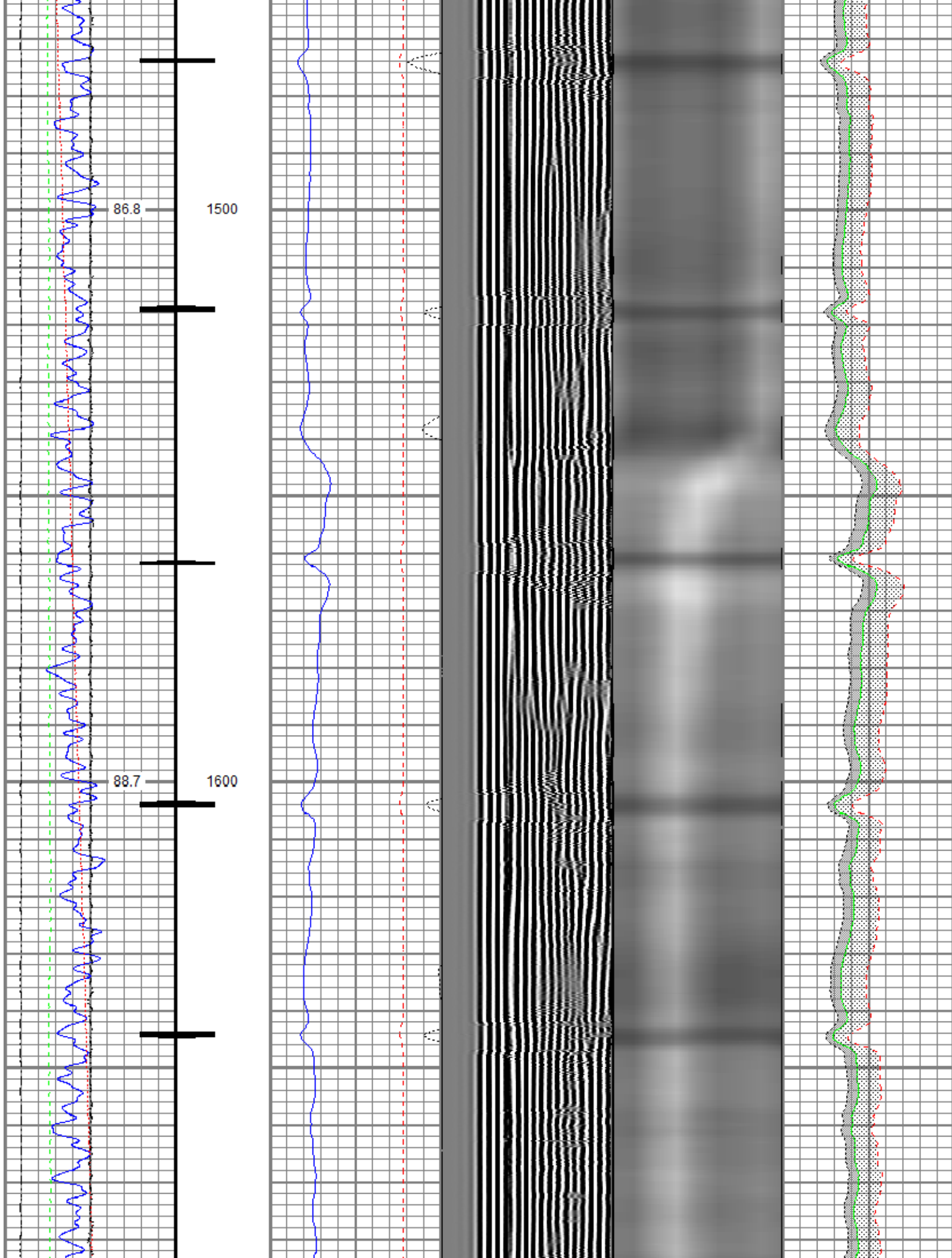


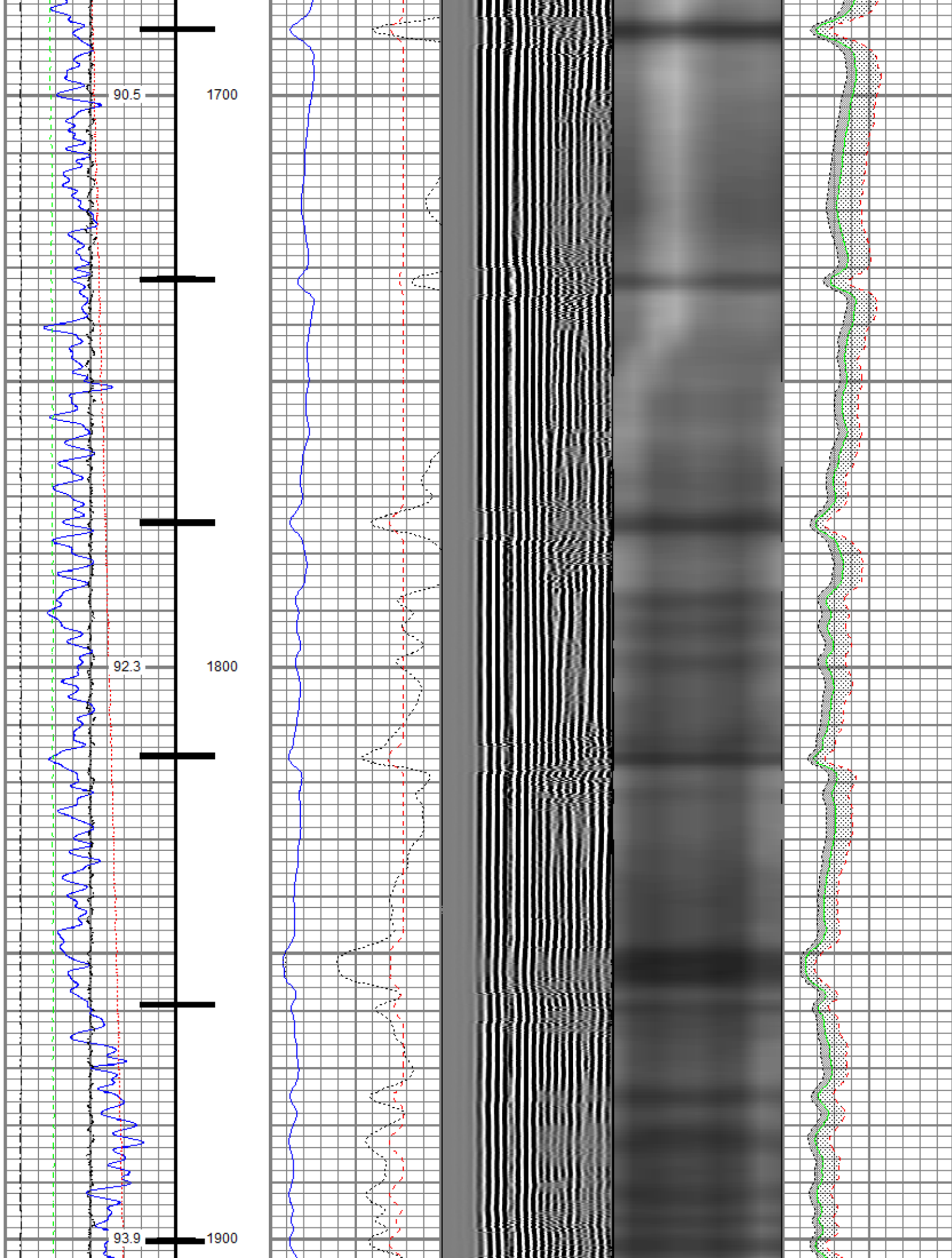


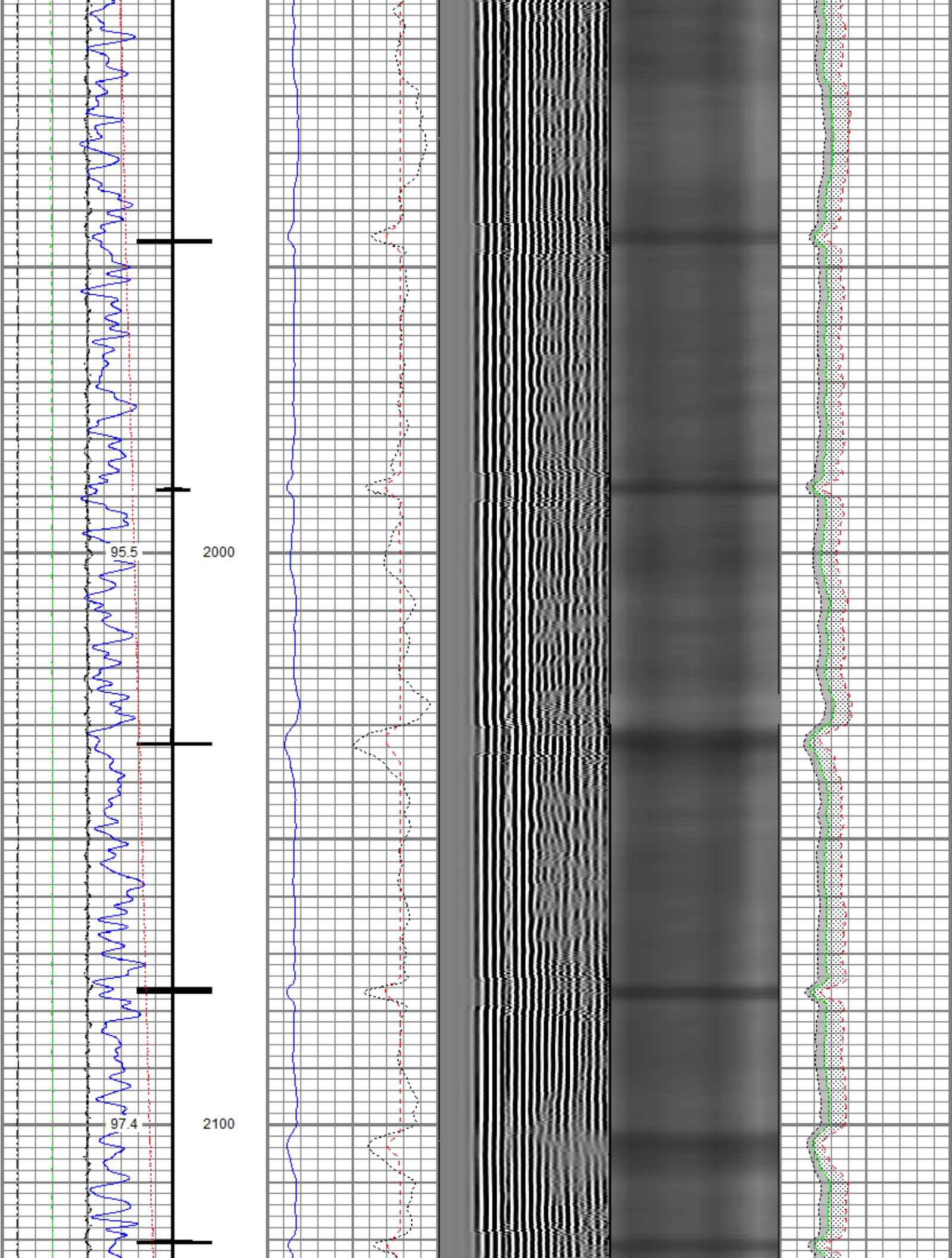


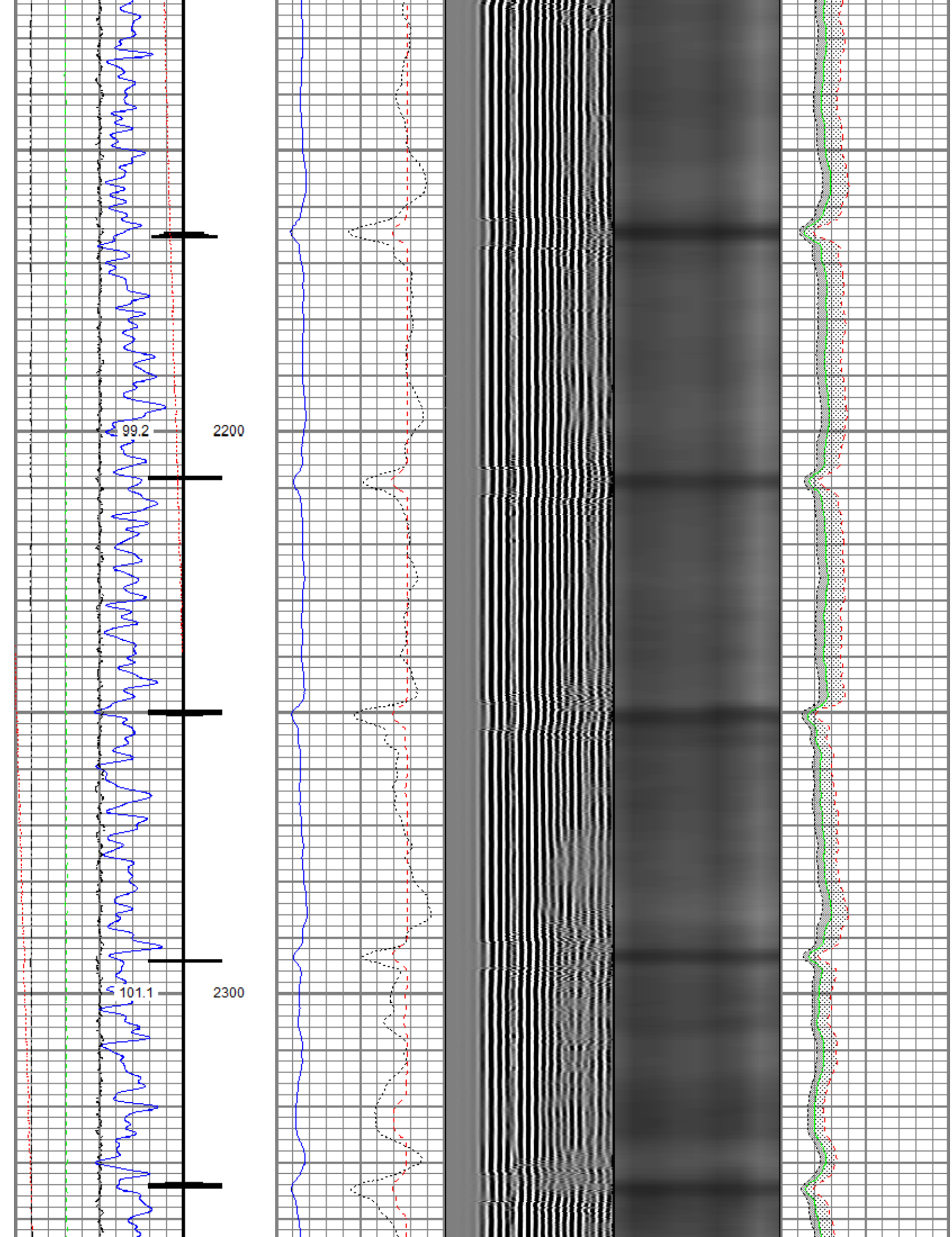


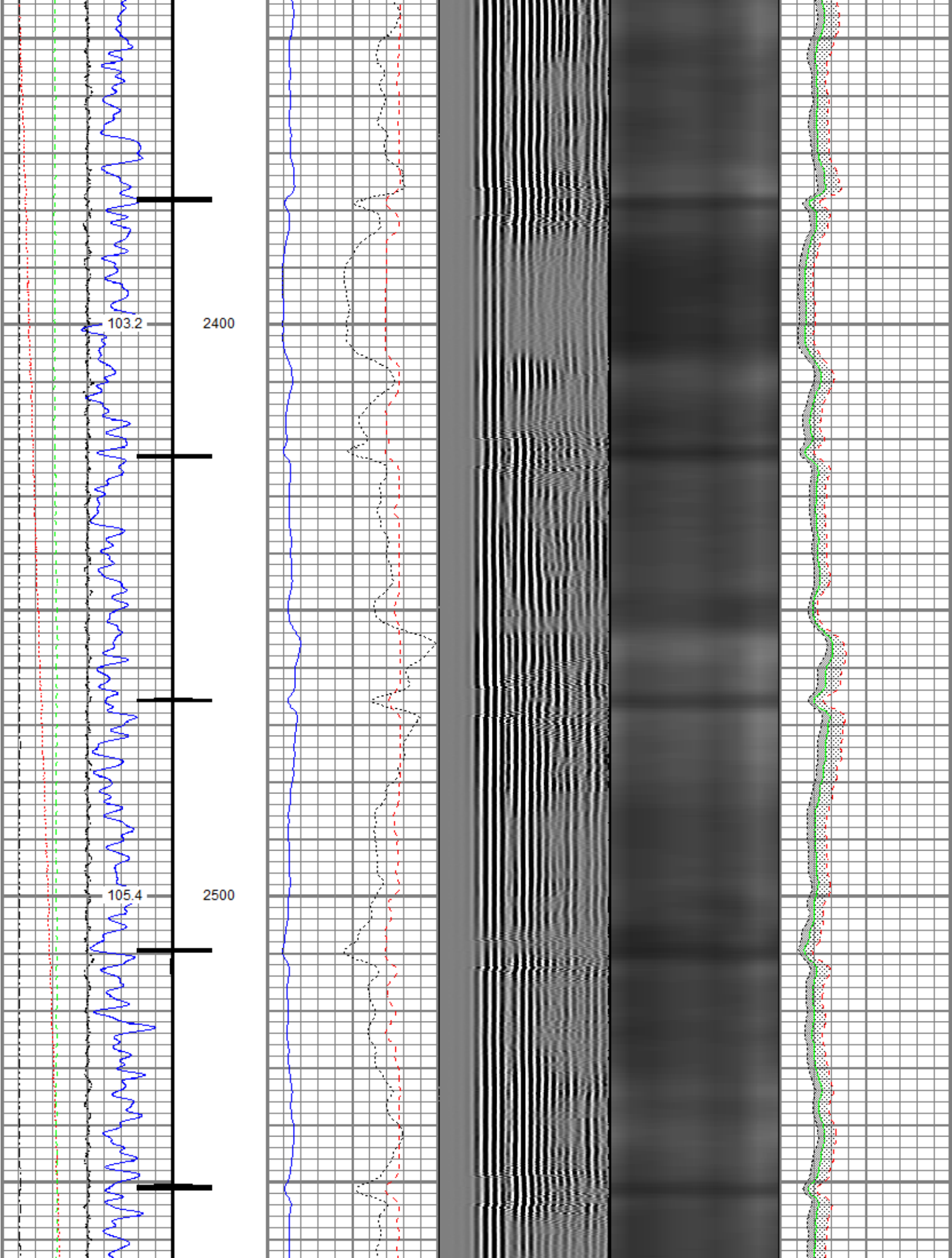


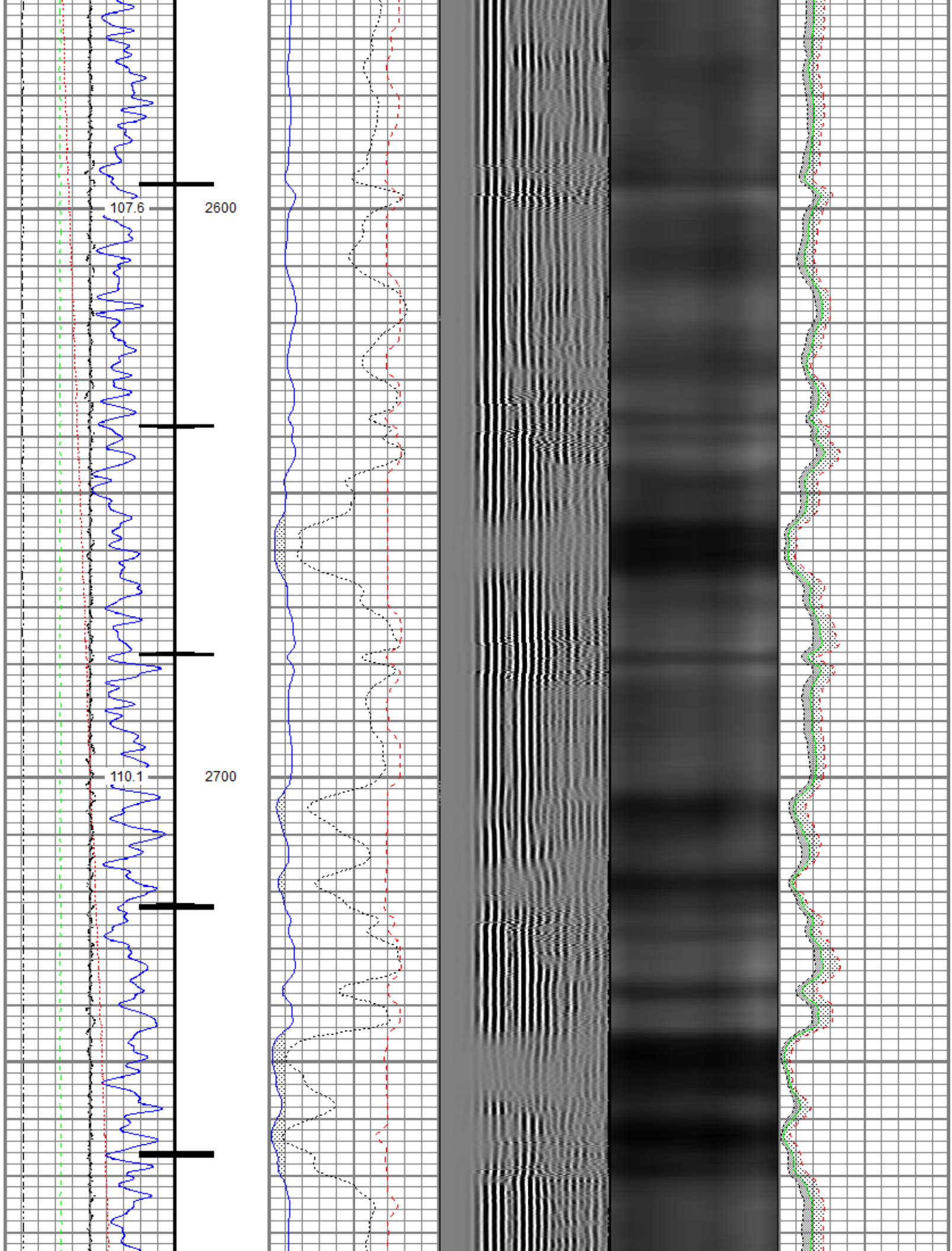


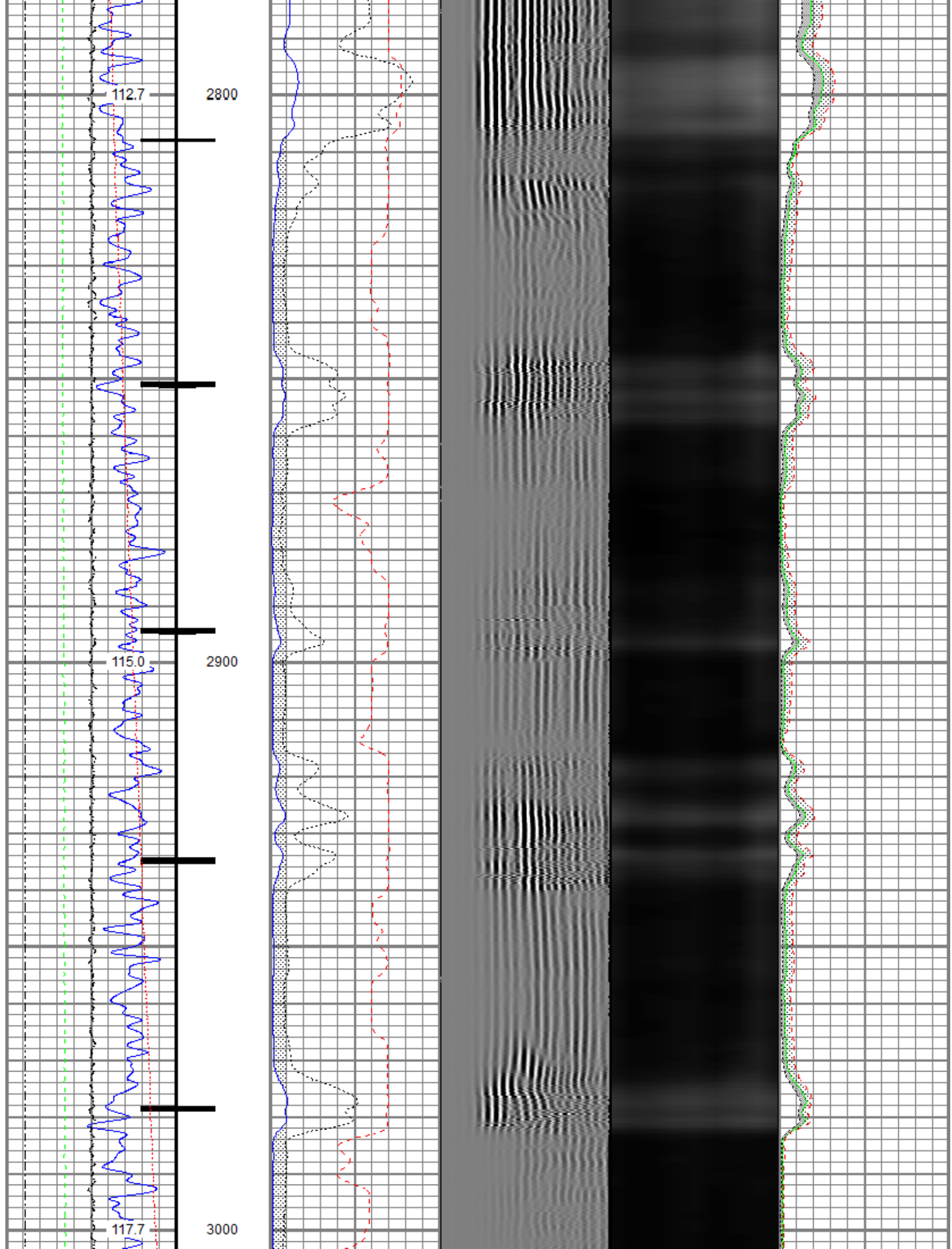


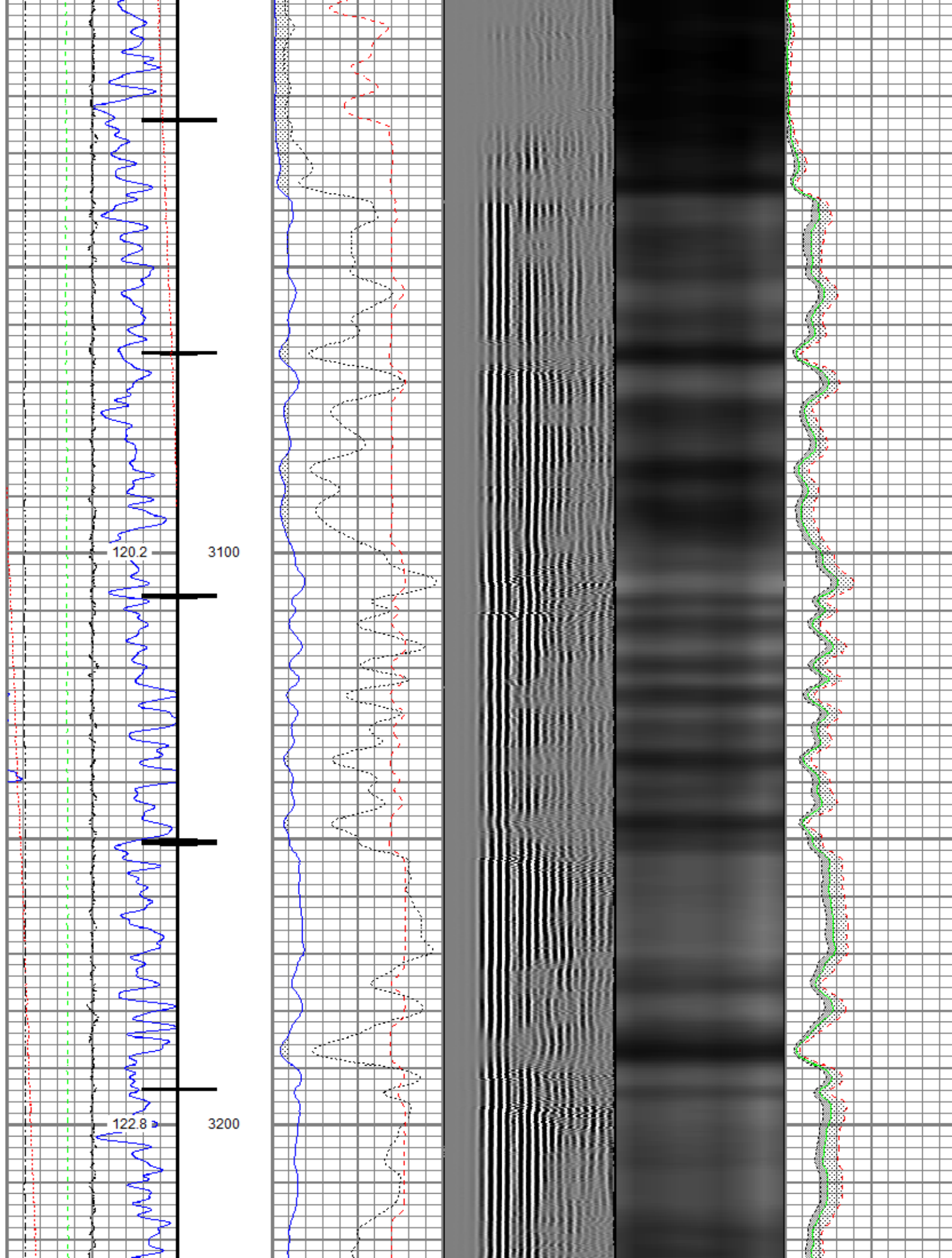


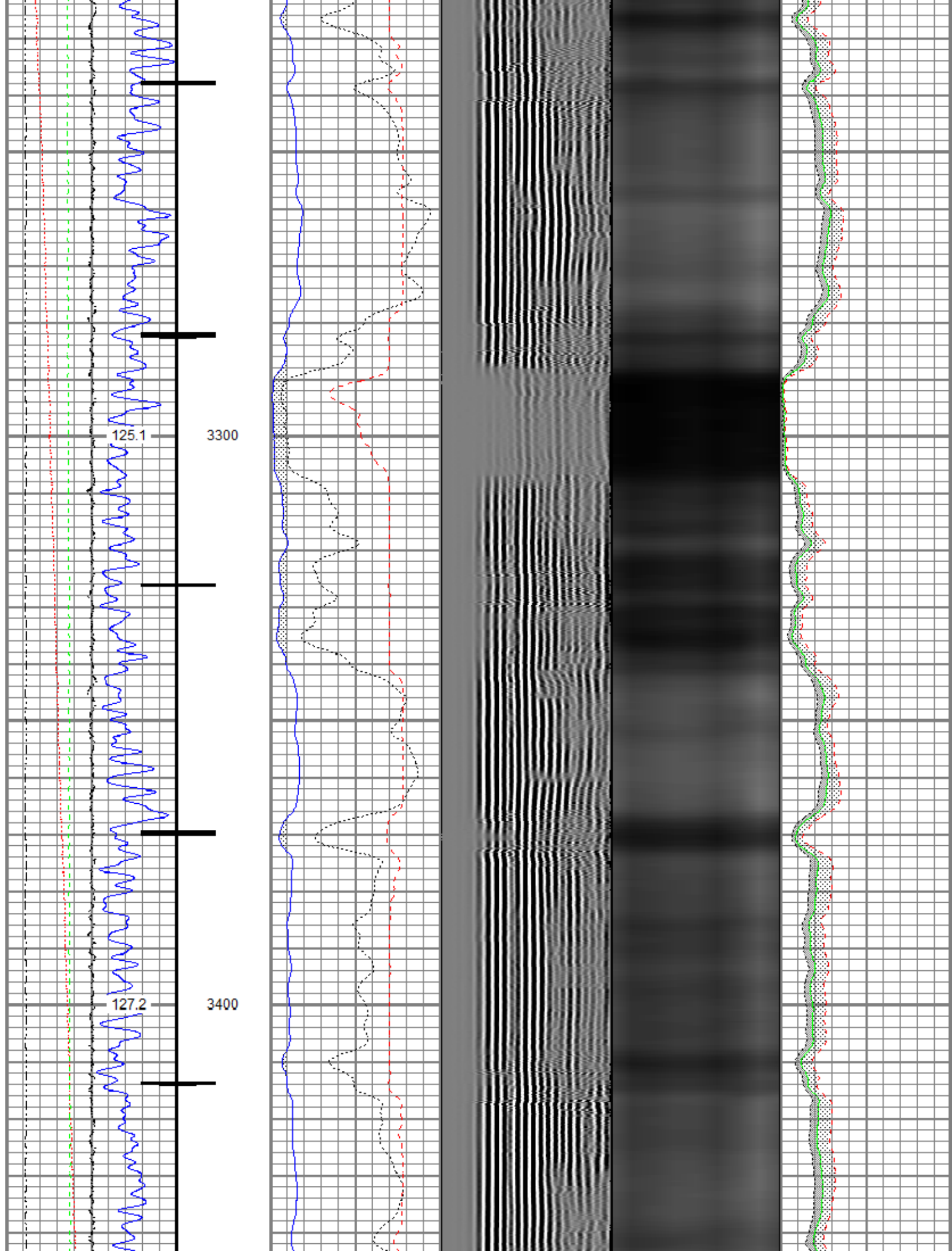


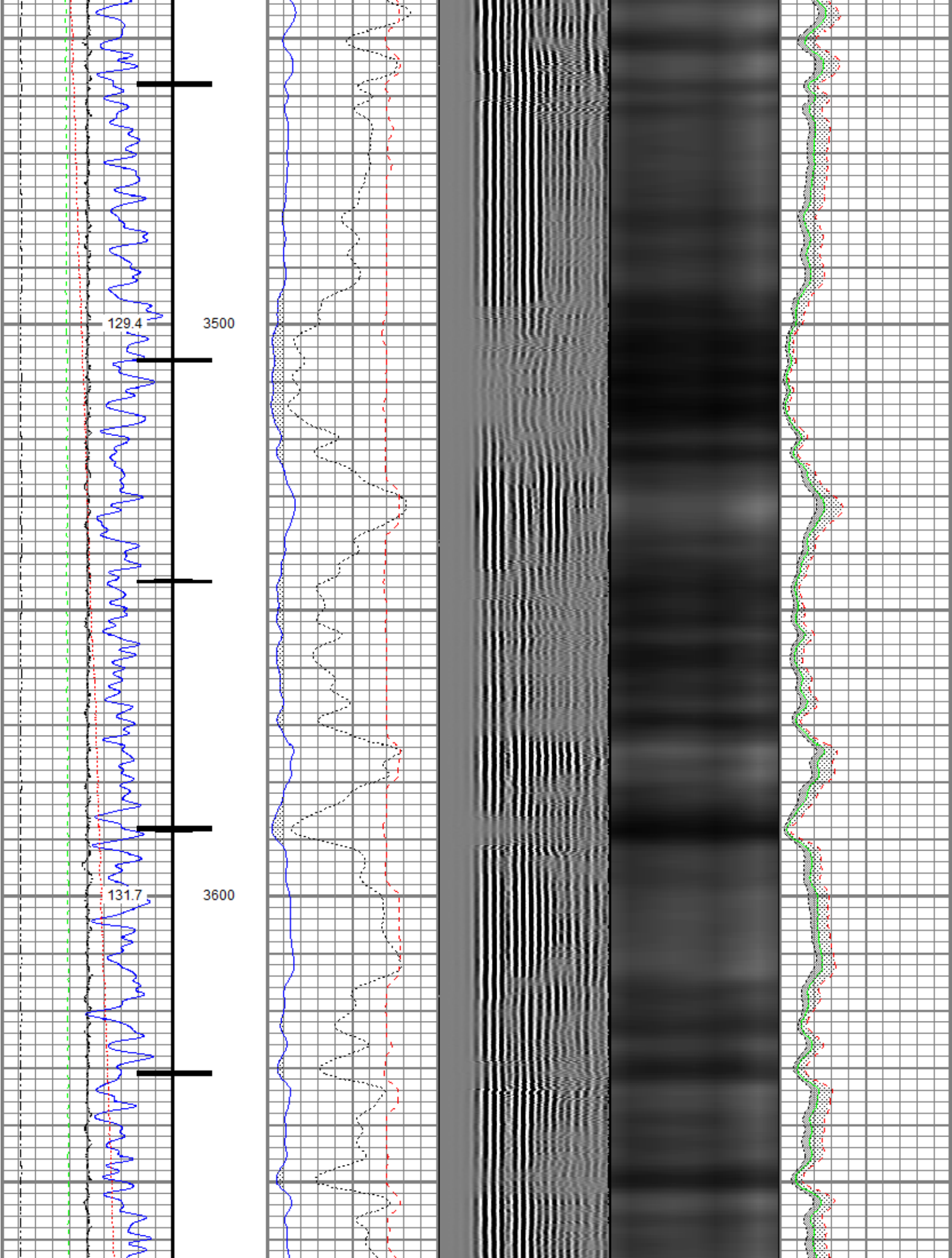


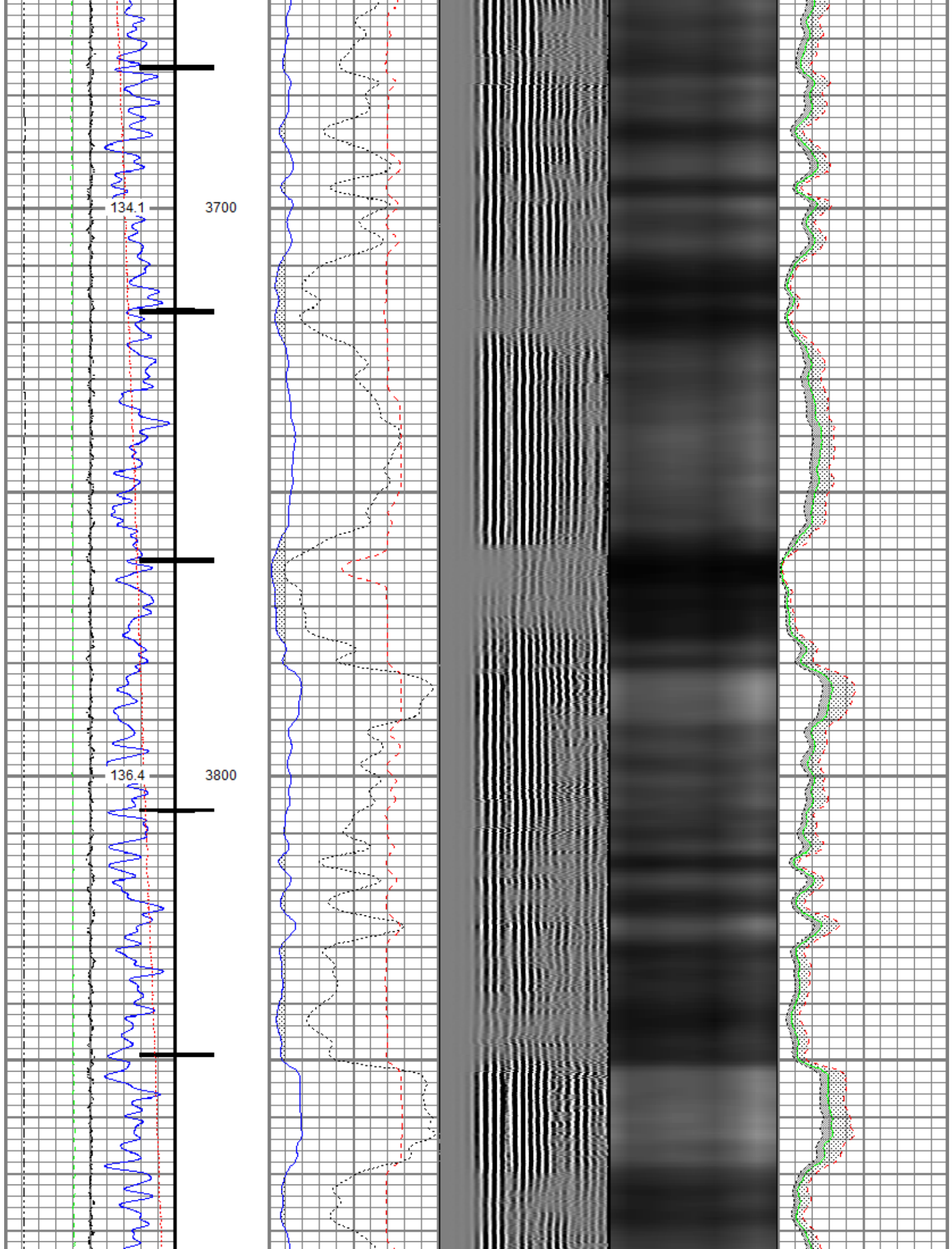


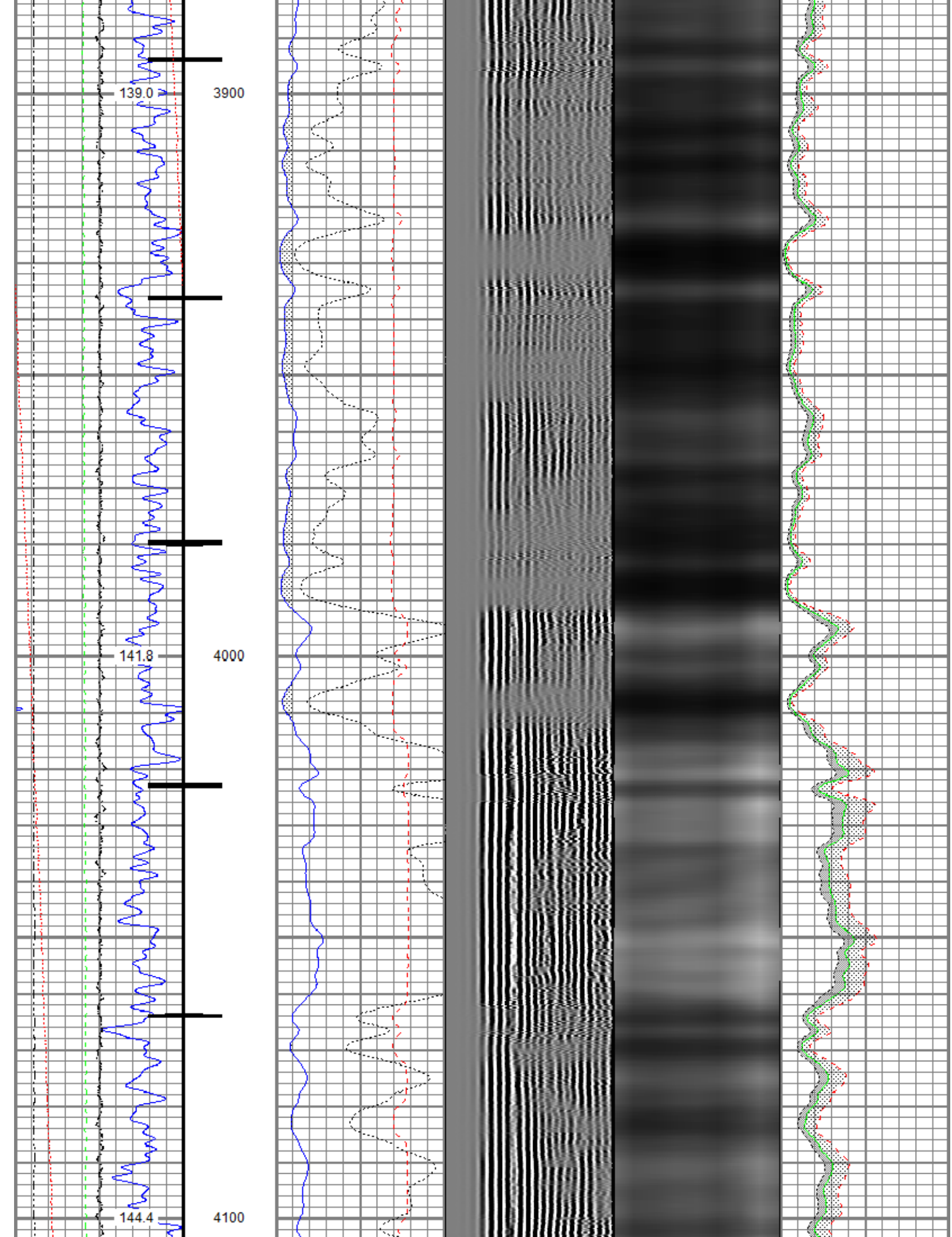


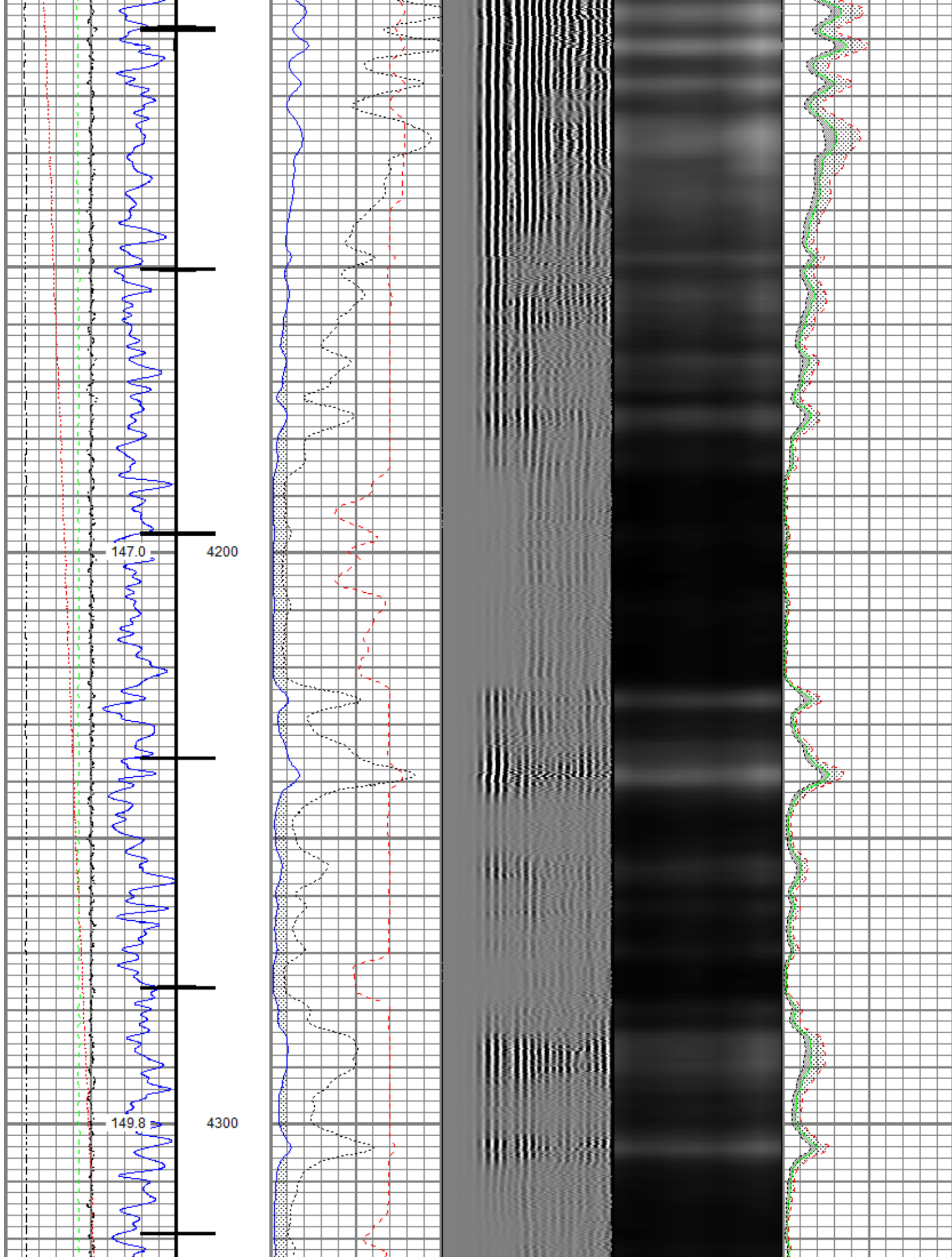


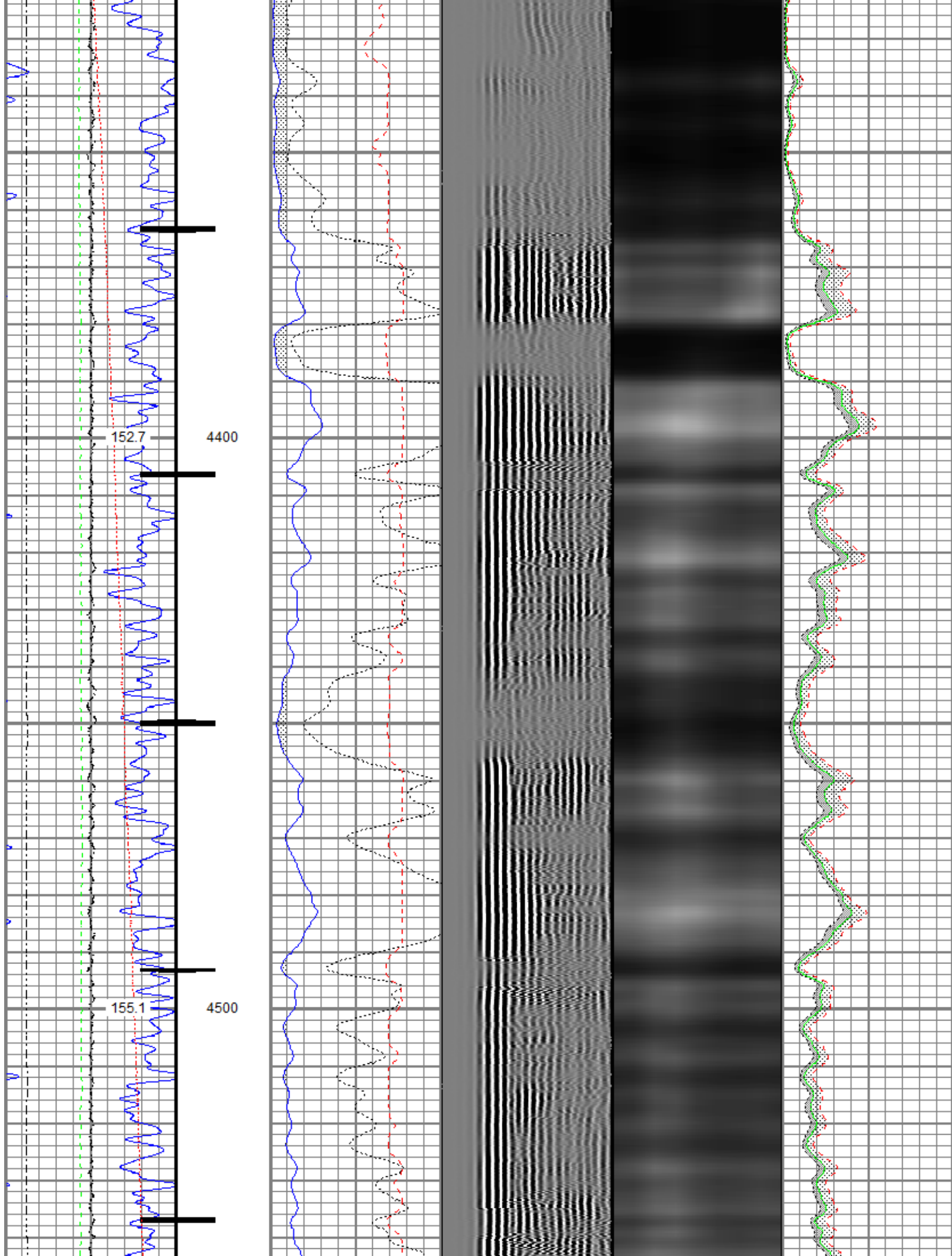


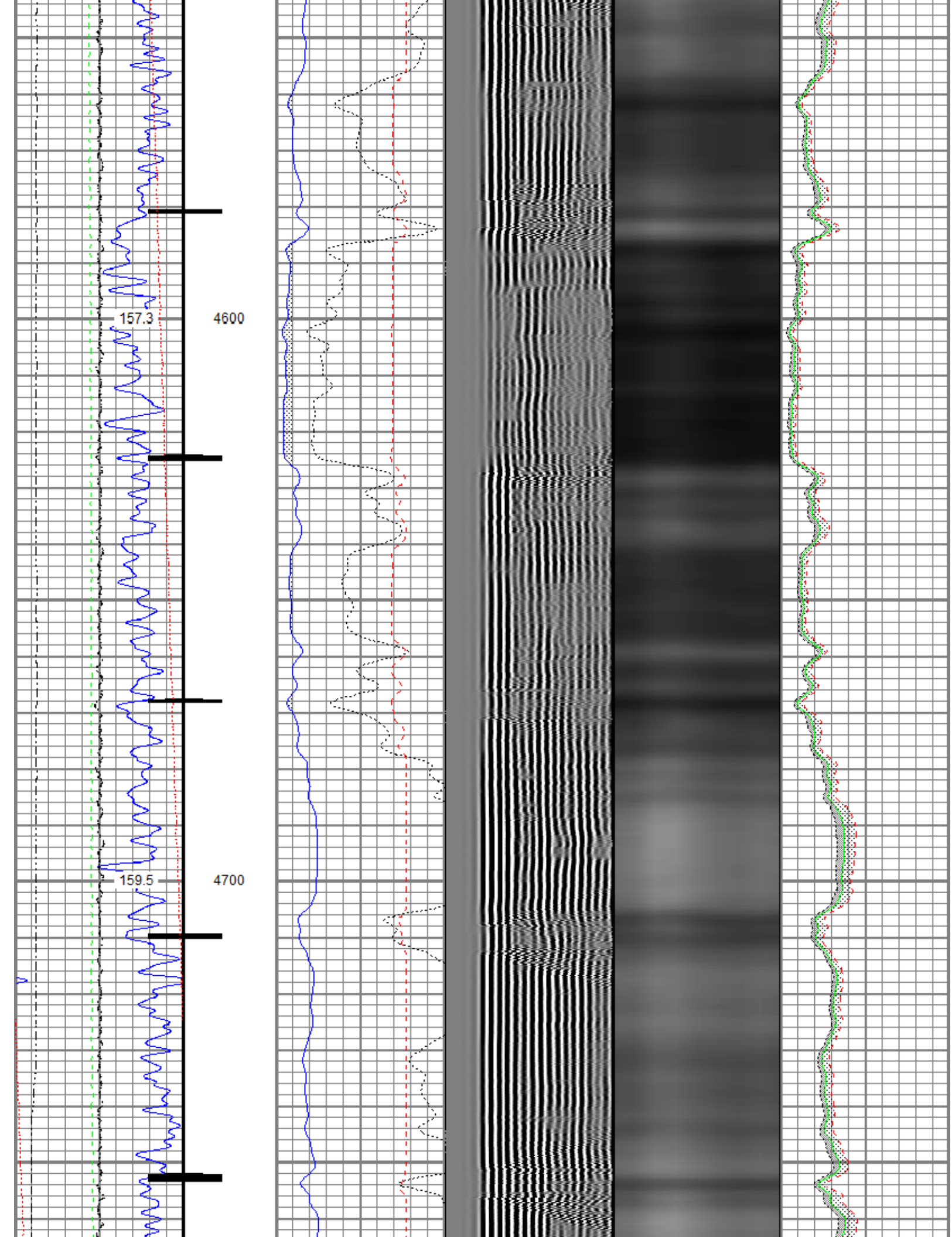


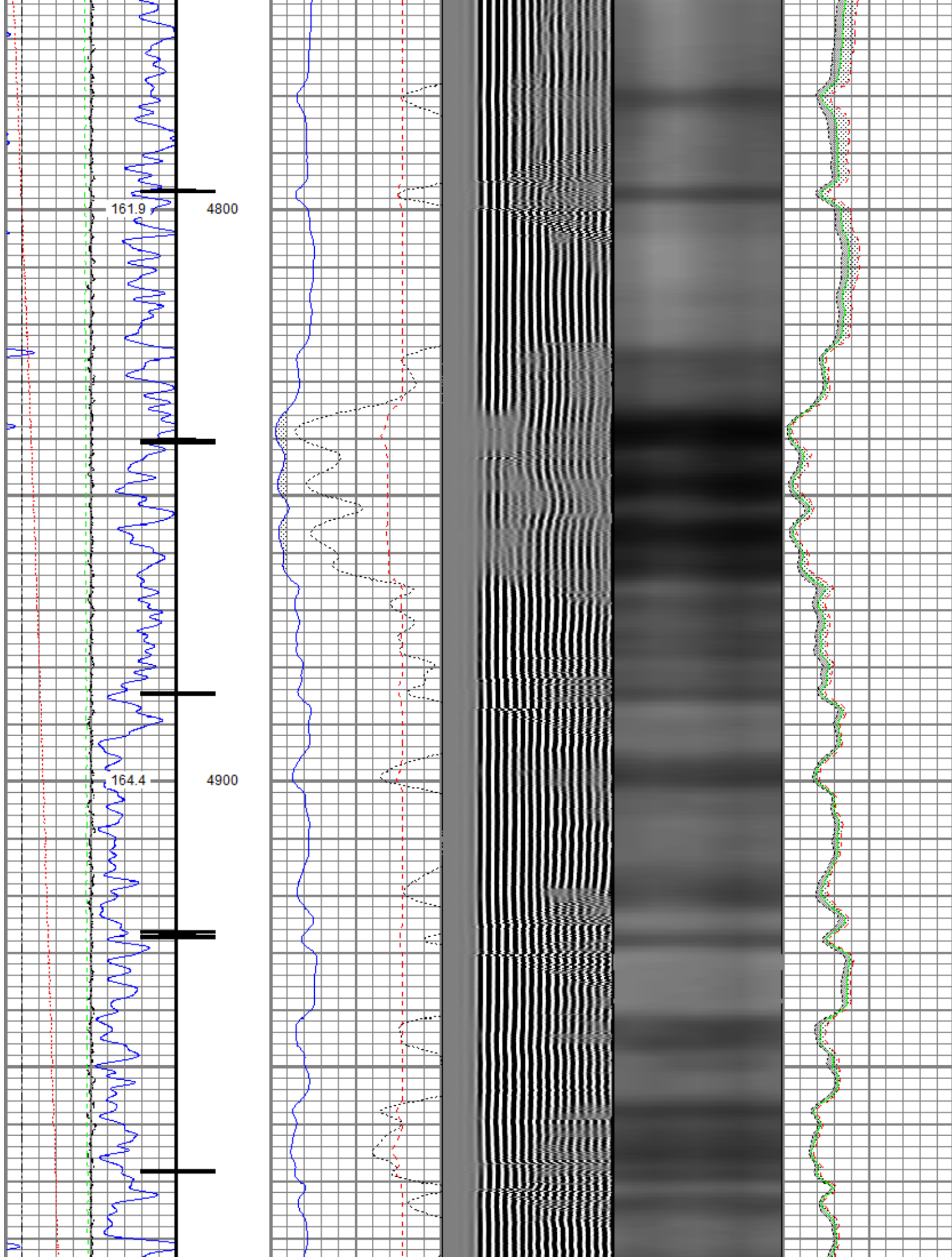


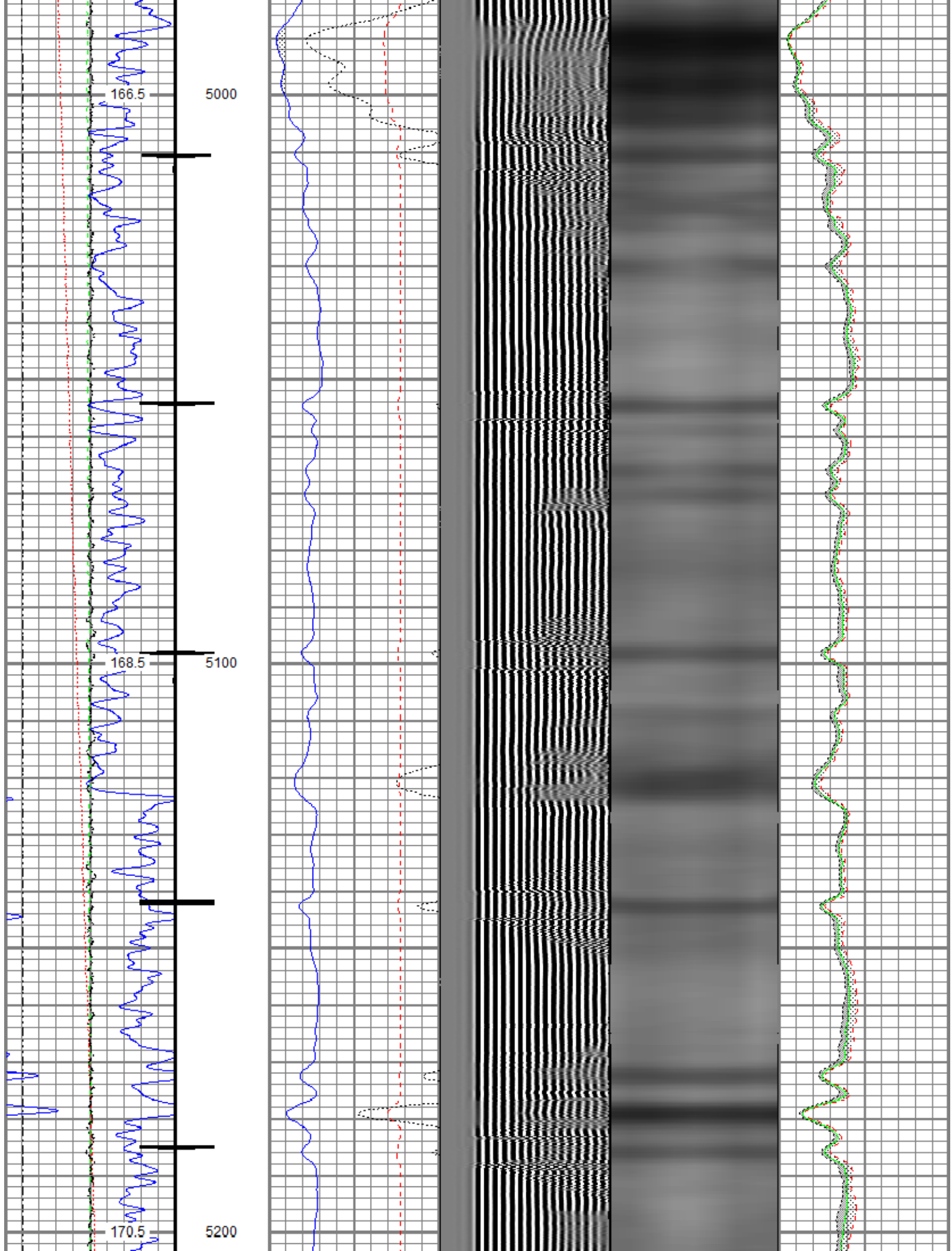


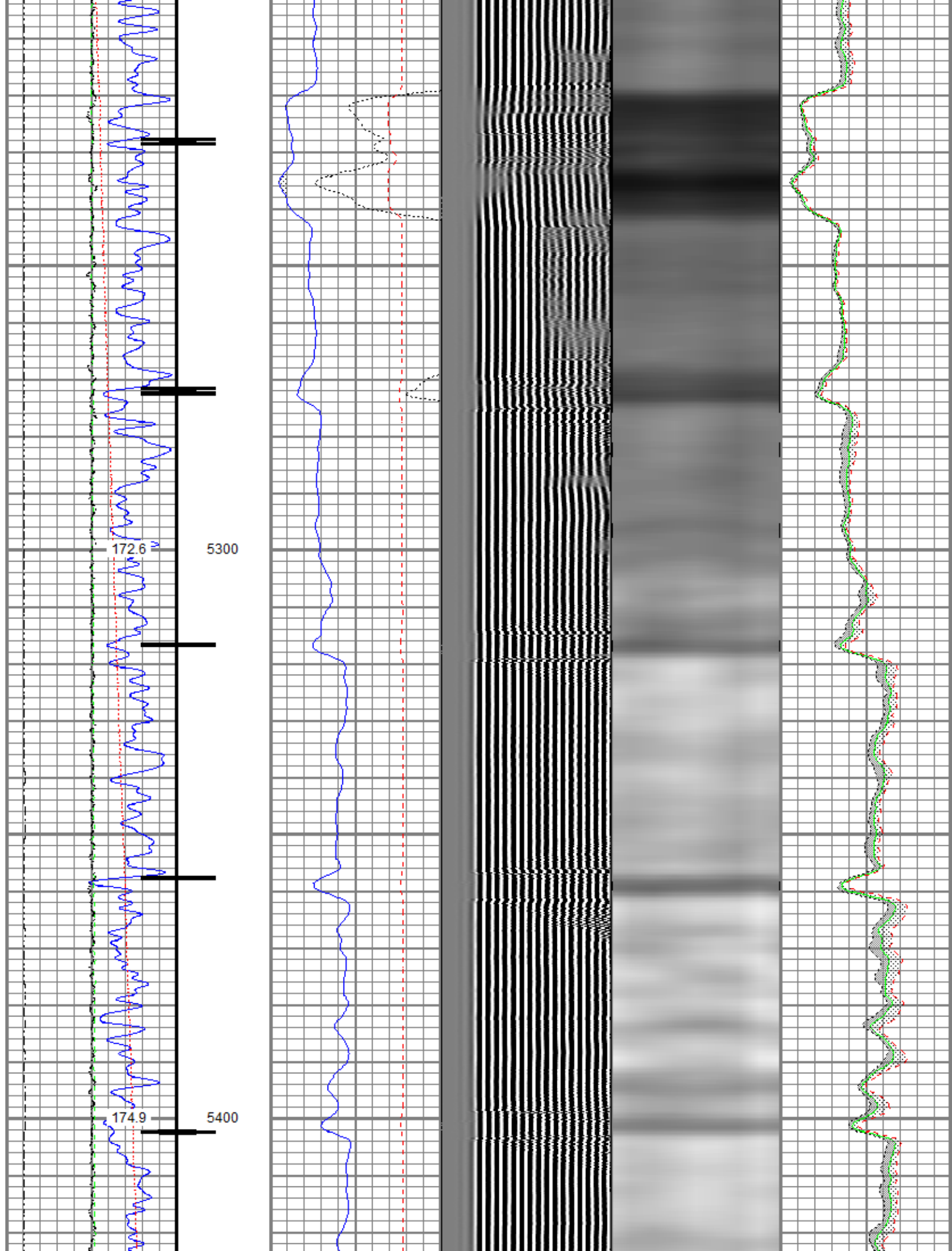


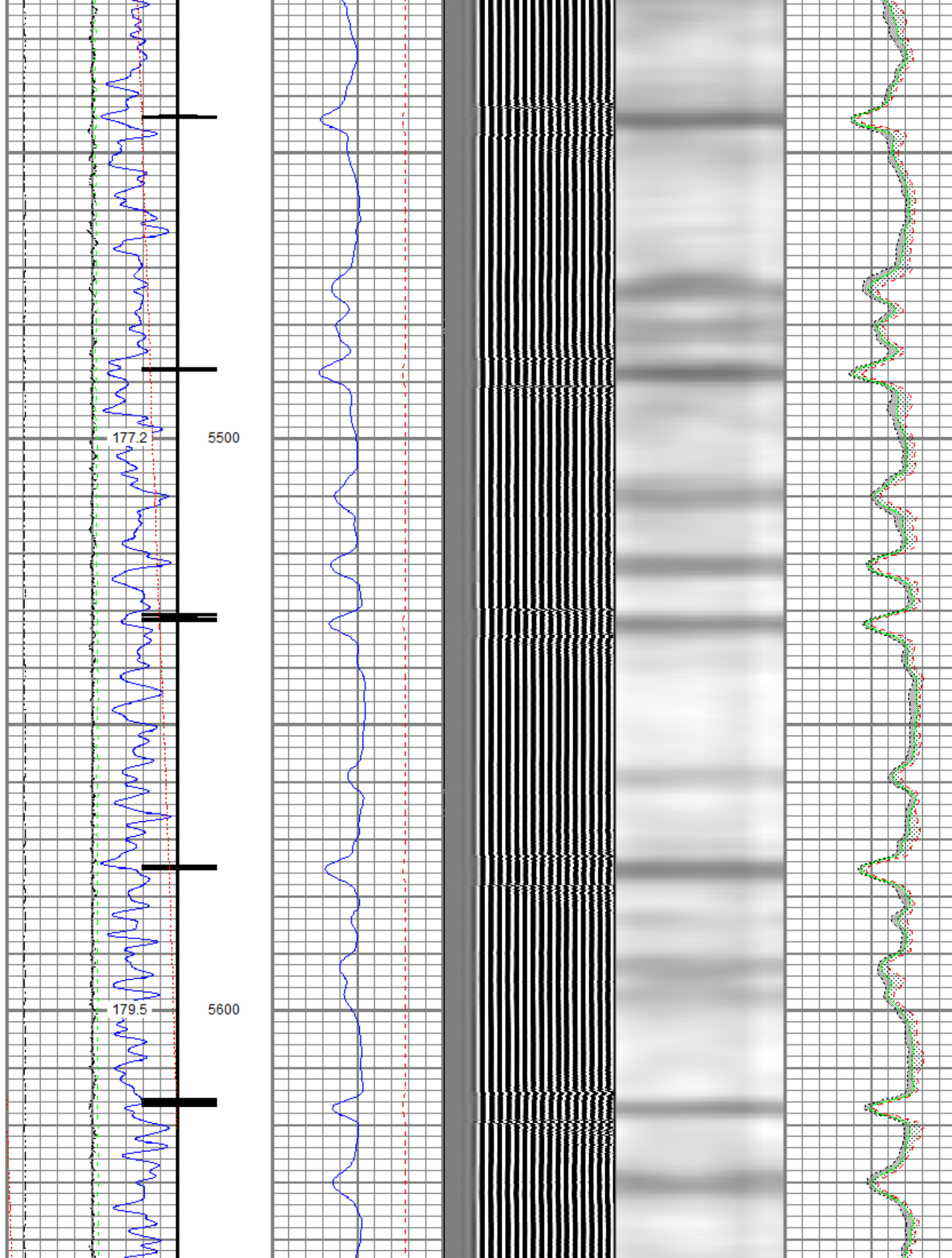


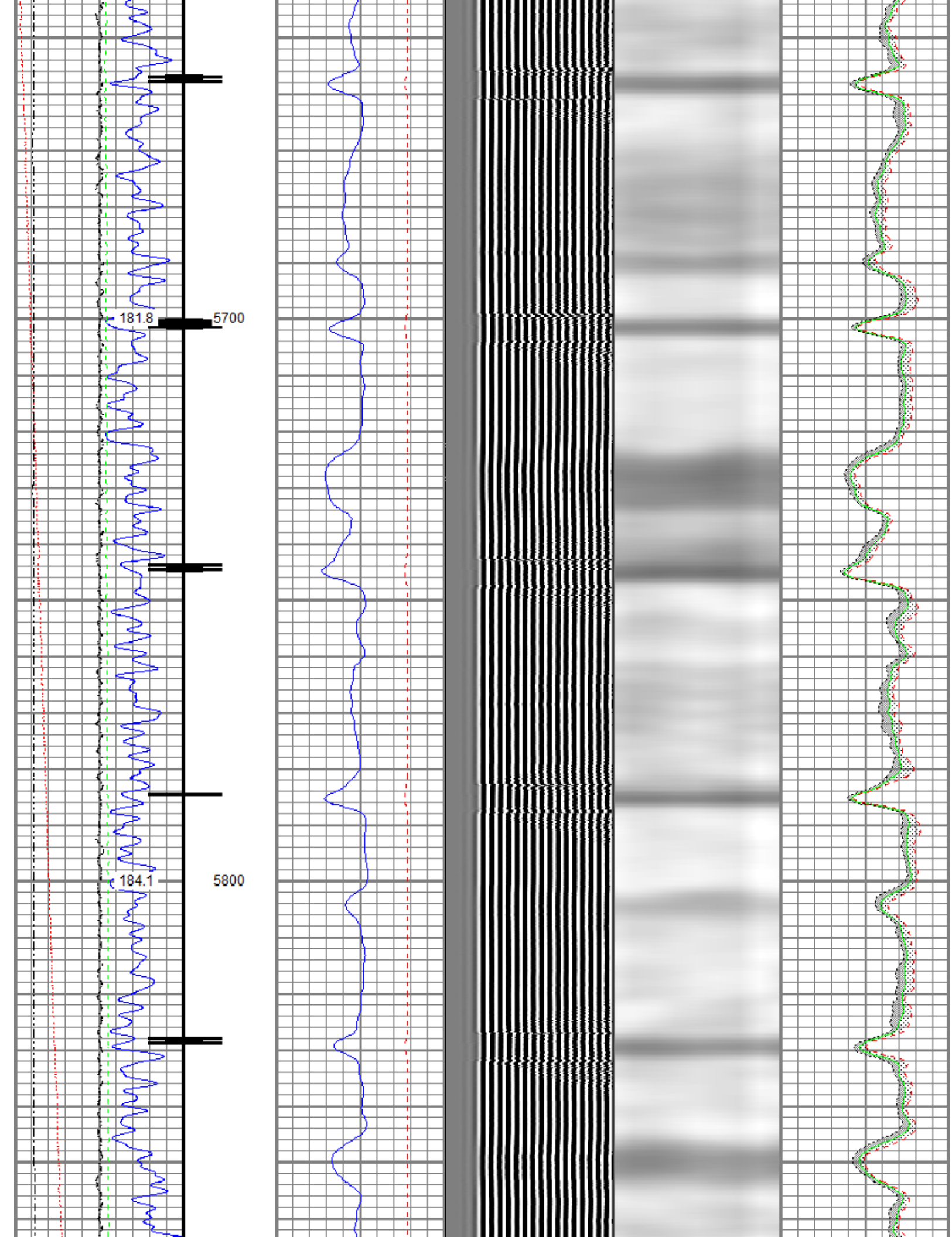


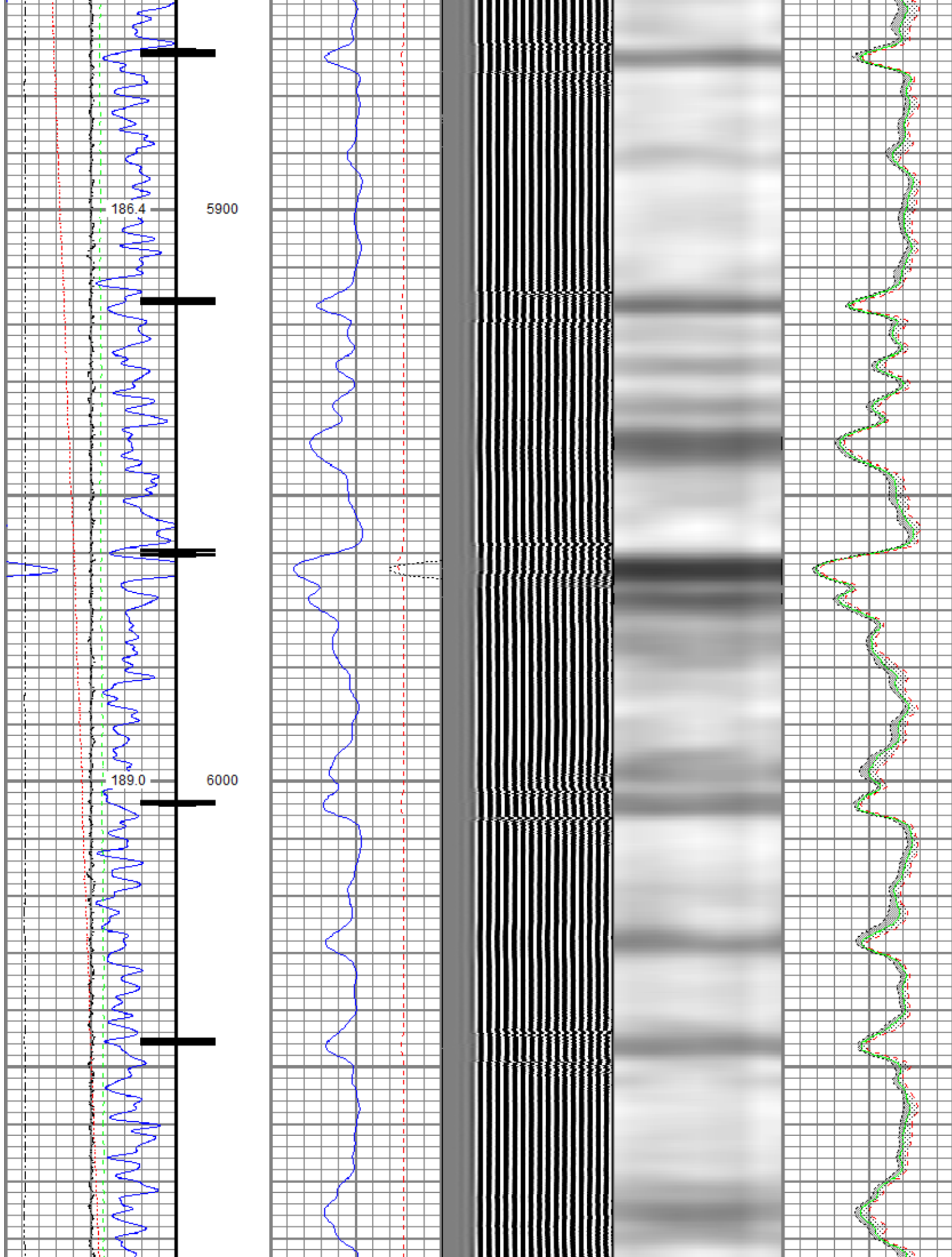


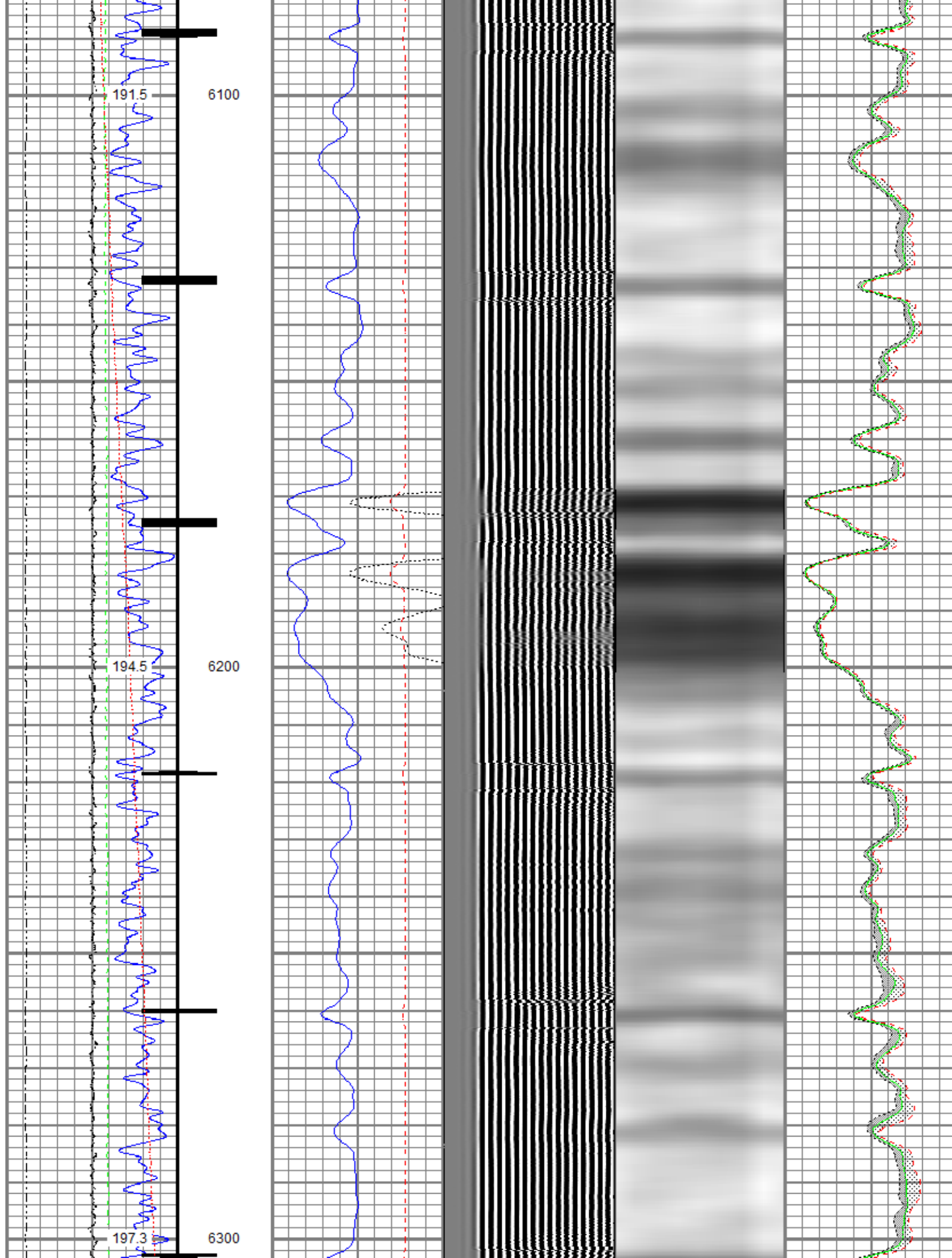


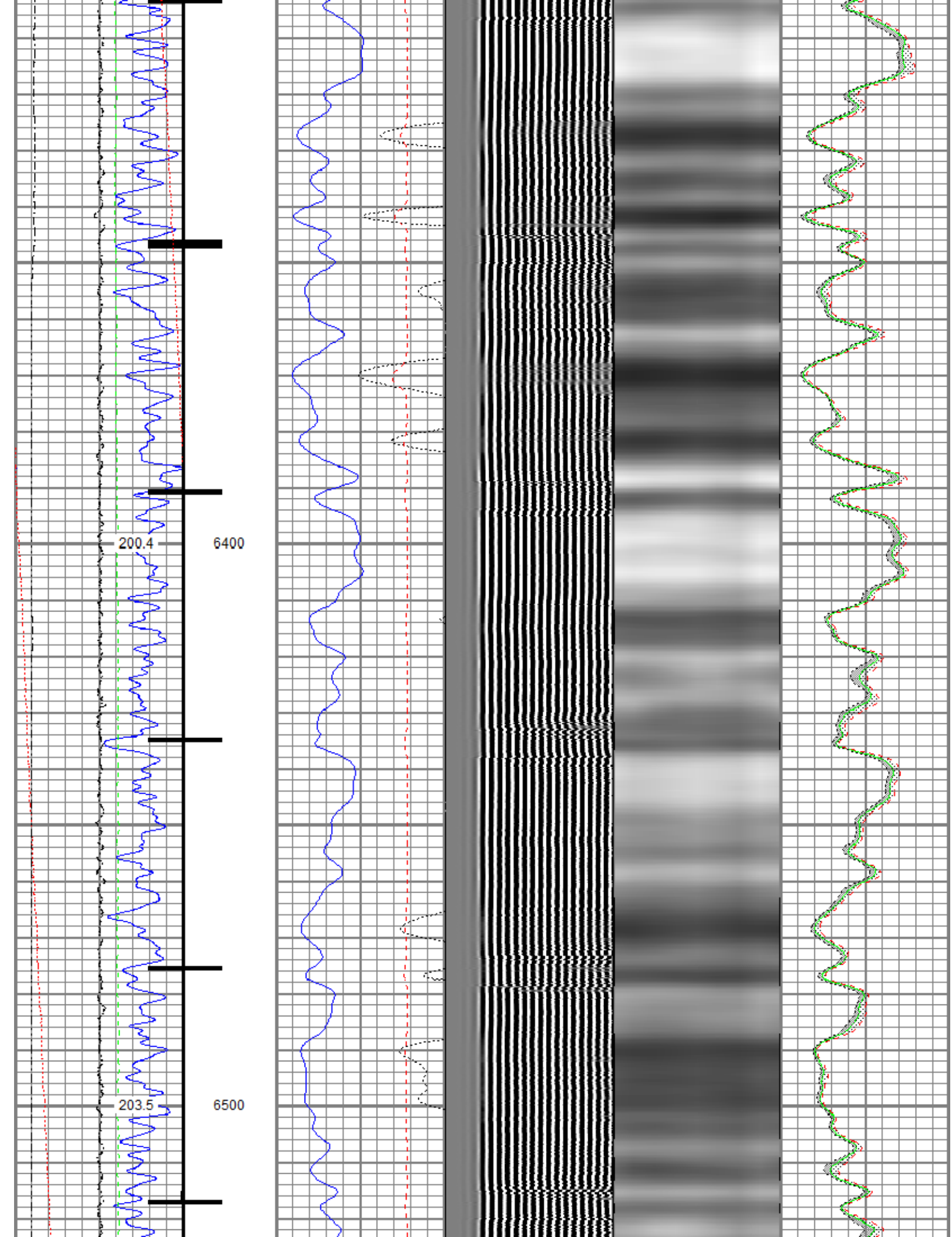


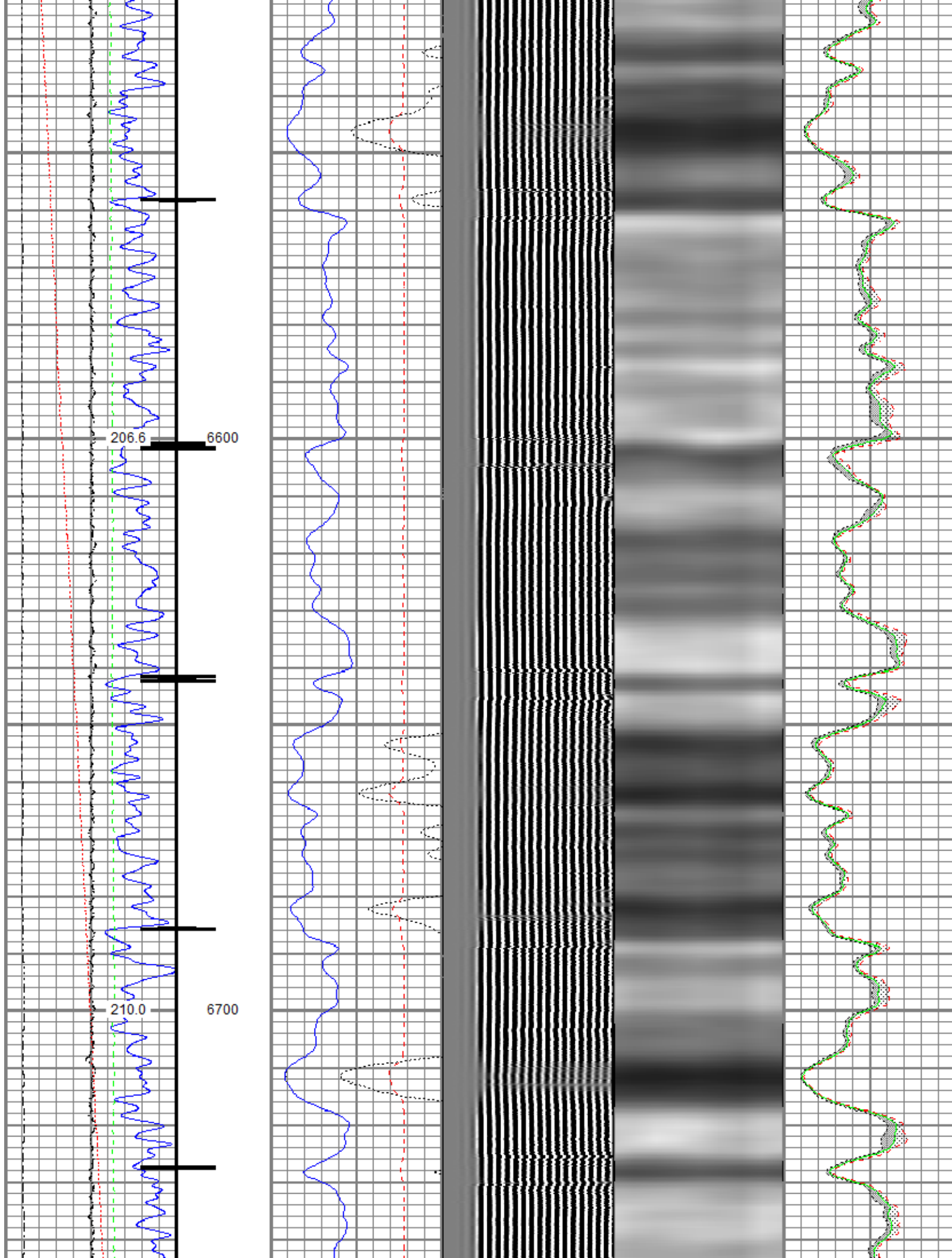


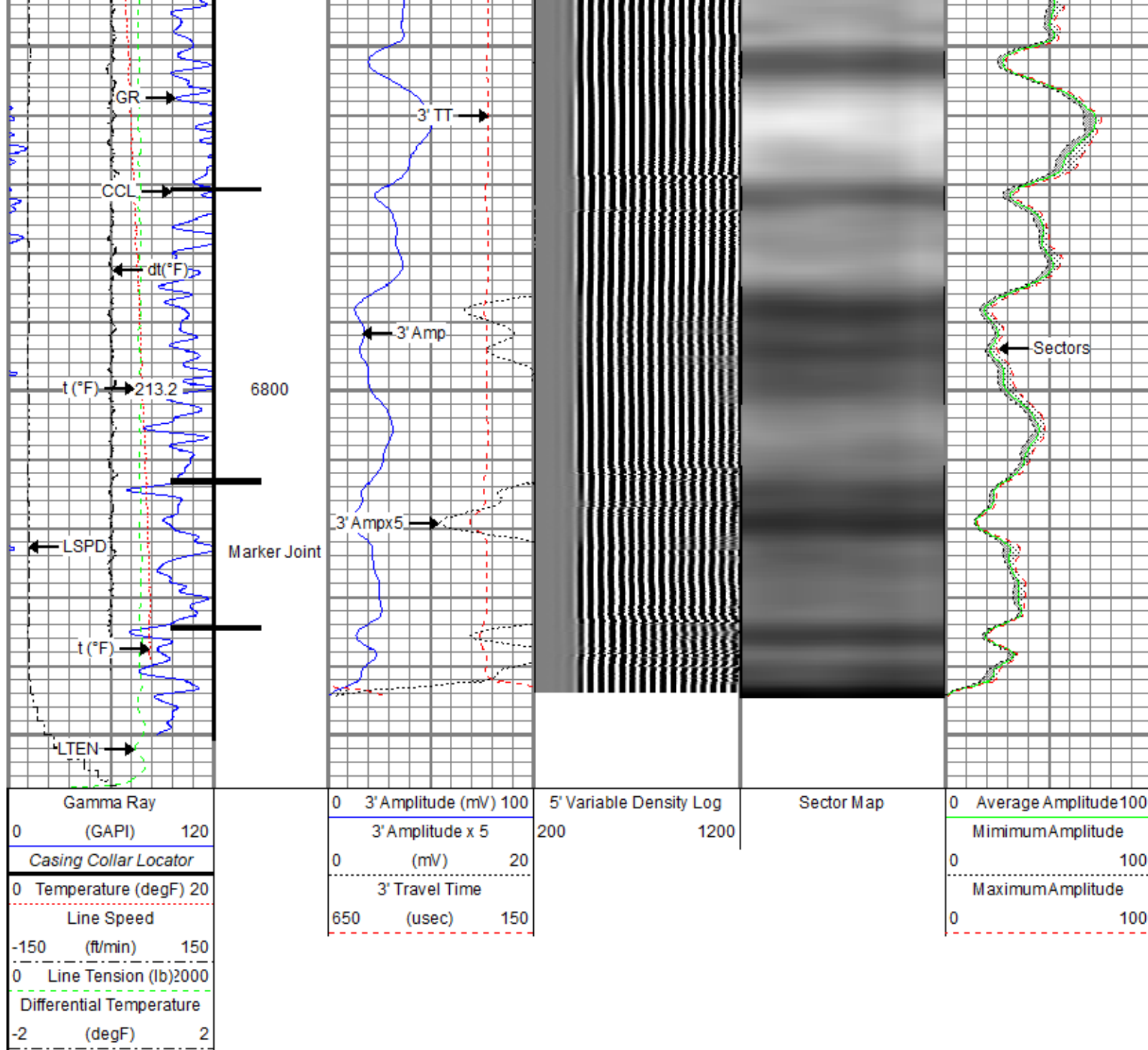








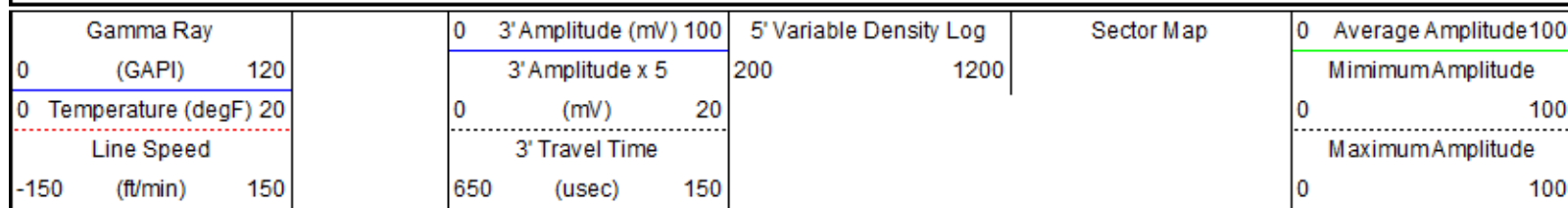




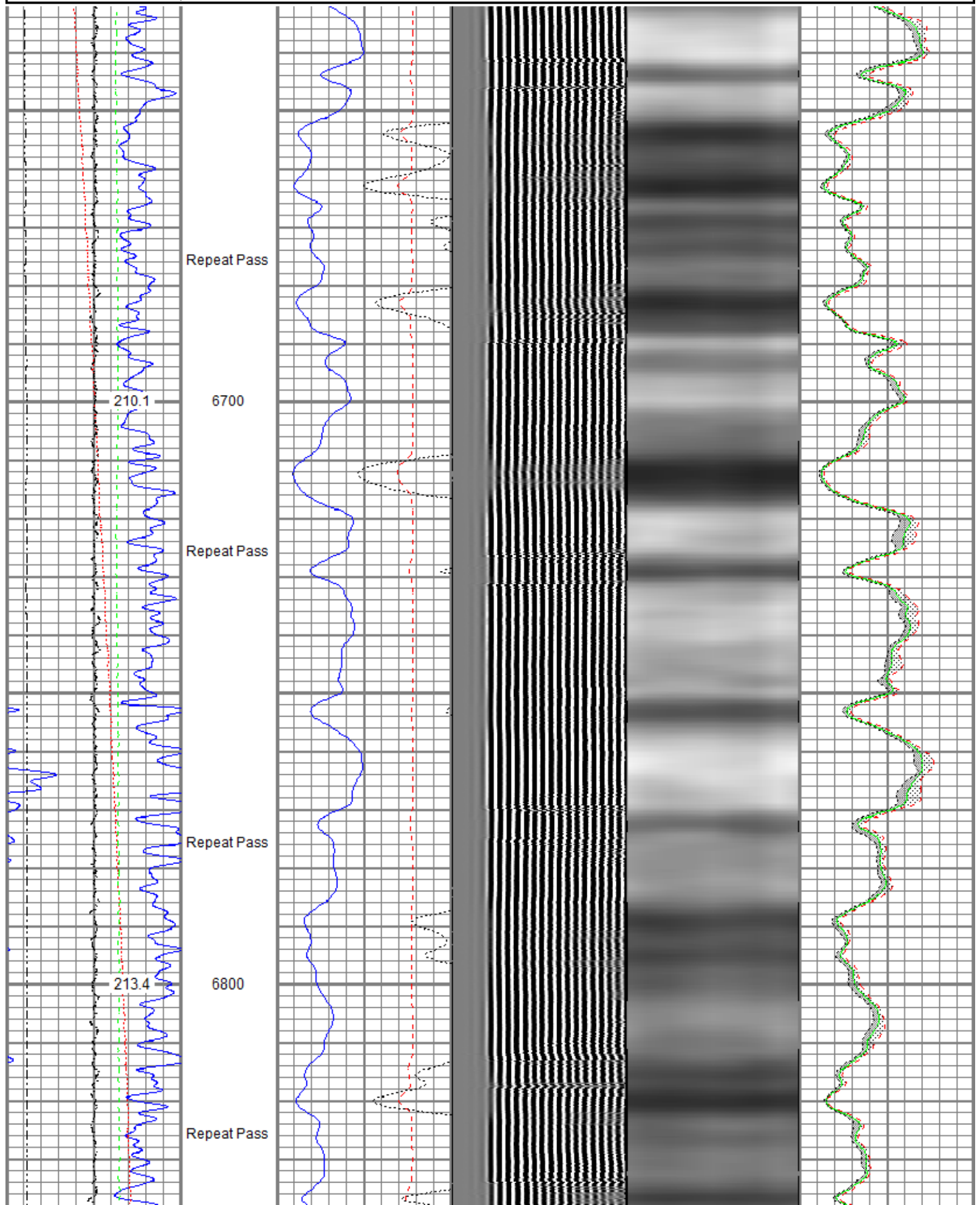
Repeat Pass

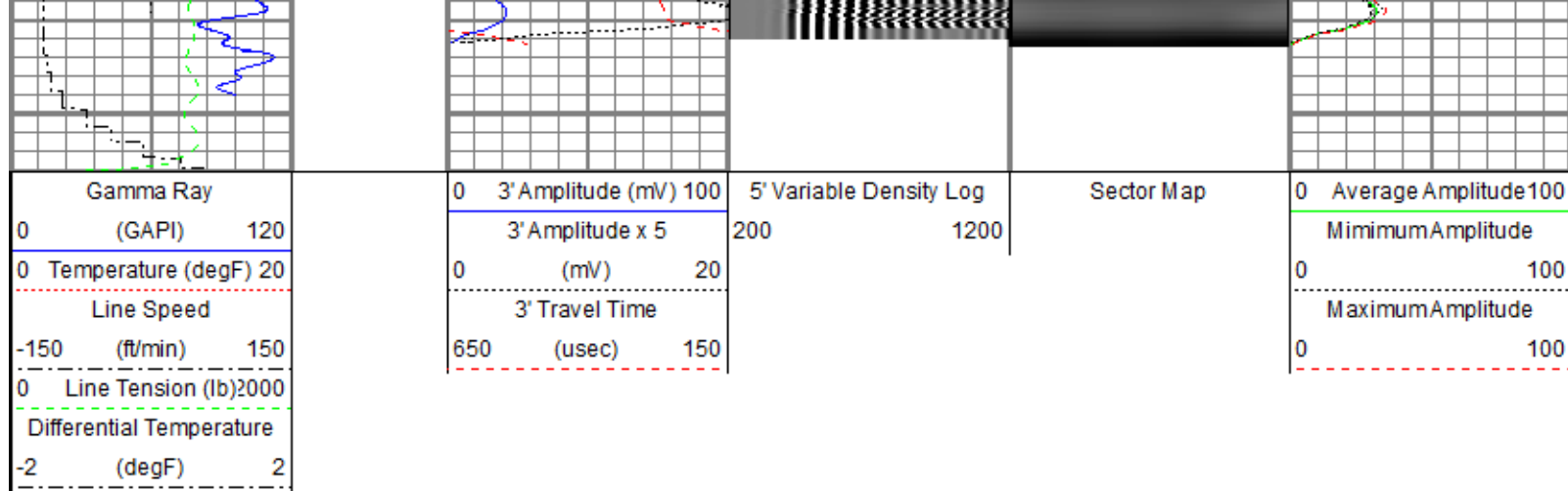
Recorded With 0 PSI Surface Induced Pressure

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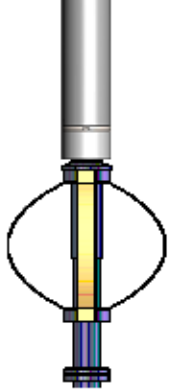


0 Line Tension (lb)2000
Differential Temperature
-2 (degF) 2





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 (FW1305-098) 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 (101001) Probe 2-3/4" rev. 1 Digital Scintillation Gamma	4.80	2.75	55.00

			2-3/4" Electric Inline Bowspring Centralizer Ray/CCL Combined with 6 Pin Bottom for CNT			
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
Dataset: processed_0512349247_anadarko_mab 15-6hz_rbl_06-23-19.db: field/well/rbl/pass6.1 Total length: 23.86 ft Total weight: 223.60 lb O.D.: 2.75 in						

Calibration Report	
Database File	c:\programdata\warrior\data\anadarko\0512349247_anadarko_mab 15-6hz_rbl_06-23-19\processed_0512349247_anadarko_m
Dataset Pathname	rbl/pass6.3
Dataset Creation	Mon Jun 24 14:14:30 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:	FW1305-098	
Tool Model:	2750 RBT	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	-51.101	ft

Master Calibration, performed (Derived):						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.005	0.734	0.800	71.921	97.618	0.282
CAL	0.006	0.700				
5'	0.003	0.784	0.800	71.921	91.105	0.534
SUM						
S1	0.002	0.701	0.000	100.000	143.115	-0.349
S2	0.005	0.740	0.000	100.000	136.112	-0.702
S3	0.006	0.742	0.000	100.000	135.767	-0.754
S4	-0.005	0.720	0.000	100.000	137.941	0.691
S5	-0.005	0.723	0.000	100.000	137.370	0.726
S6	0.003	0.738	0.000	100.000	136.094	-0.454
S7	0.005	0.724	0.000	100.000	139.112	-0.724
S8	0.005	0.699	0.000	100.000	144.070	-0.700

Internal Reference Calibration, performed (Not Performed):						
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset

	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.006	0.700	1.000	0.000

Air Zero Calibration, performed Thu Jun 20 06:09:36 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: FW1305-098
Tool Model: 2750 RBT
Performed: Mon Oct 01 11:32:17 2018

	Reference	Reading
Low Reference:	100.00 degF	109.43 degF
High Reference:	350.00 degF	405.87 degF

Gain: 0.84
Offset: 7.72
Delta Spacing: 1



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State Colorado