



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Laramie Energy LLC

Well CC Federal 0697-03-01W

Field Grand Valley

County Garfield State Colorado

Location: API #: 05-045-23992

Other Services
Gauge Ring

SEC 4 TWP 6S RGE 9TW

Permanent Datum Ground Level Elevation 8609'

Log Measured From Kelly Bushing 30 FT

Drilling Measured From Kelly Bushing

Elevation
K.B. 8639'
D.F. 8638'
G.L. 8609'

Company Laramie Energy LLC
Well CC Federal 0697-03-01W
Field Grand Valley
County Garfield
State Colorado

Date	17-AUG-2019			
Run Number	Two			
Depth Driller	10422 FT			
Depth Logger	10292 FT			
Bottom Logged Interval	10277 FT			
Top Log Interval	Surface			
Open Hole Size	8.750"			
Type Fluid	Water			
Density / Viscosity	8.34 lb/gal			
Max. Recorded Temp.	266°F			
Estimated Cement Top	See Log			
Time Well Ready	ROA			
Time Logger on Bottom	17.15			
Equipment Number	HD-0359			
Location	Grand Junction, CO			
Recorded By	Z. Fisher			
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	4 1/2	11.6	P-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 Kelly Bushing at 30 FT
Marker Joints logged from 8199 - 8220 FT and 9842 - 9864 FT
Recorded with 0 PSI Surface Induced Pressure

Thank you for choosing Reliance Oilfield Services, LLC!

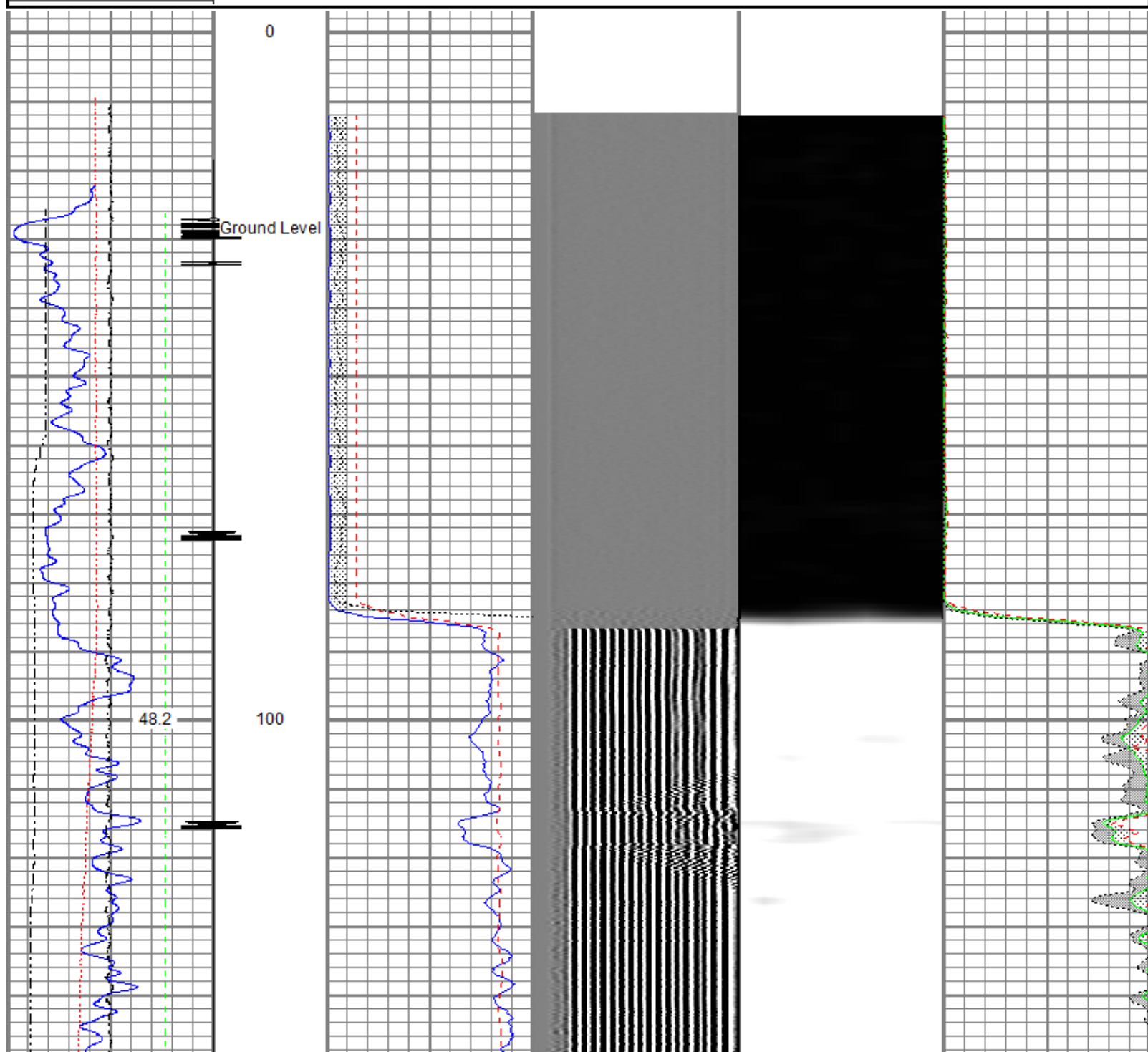
Main Pass

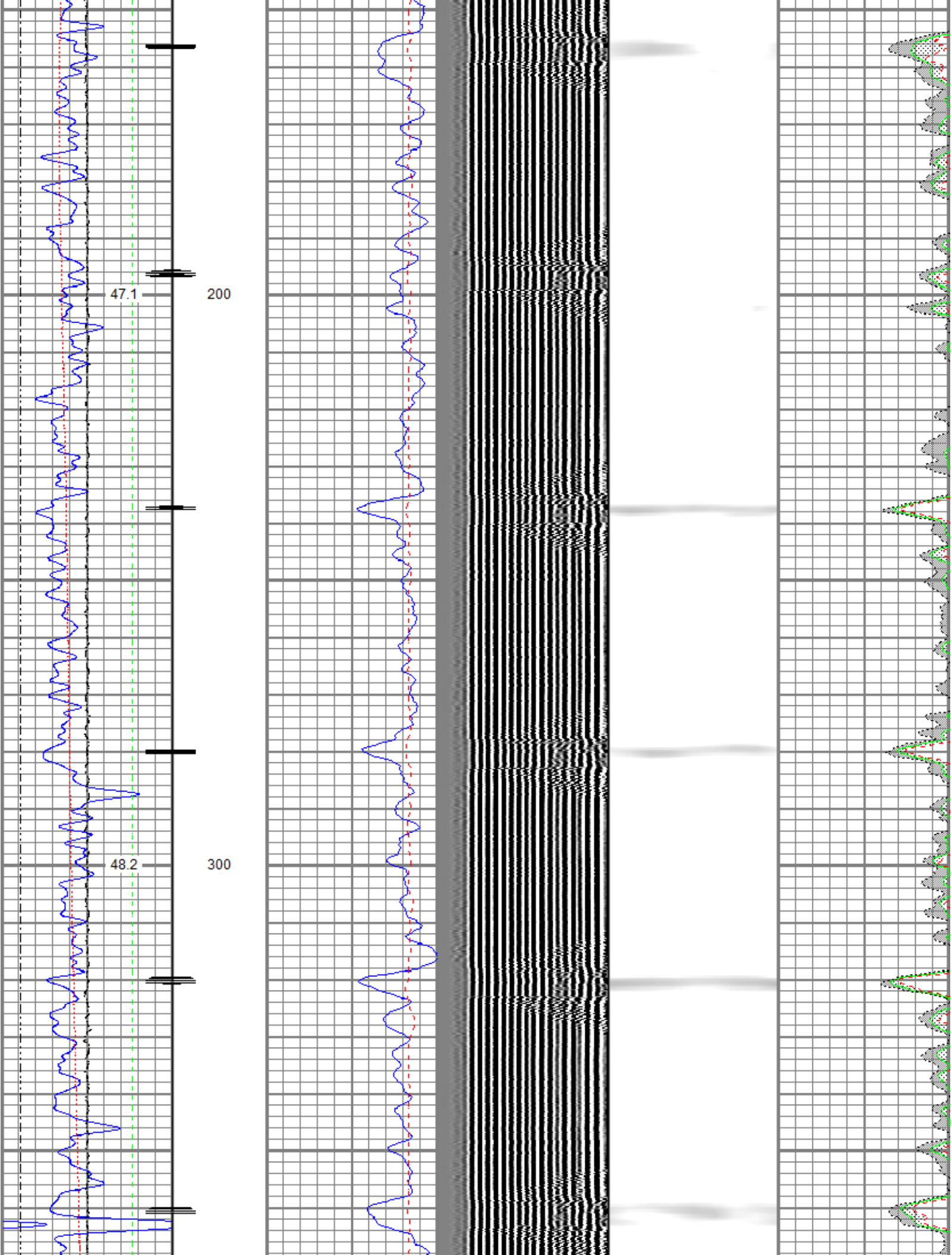


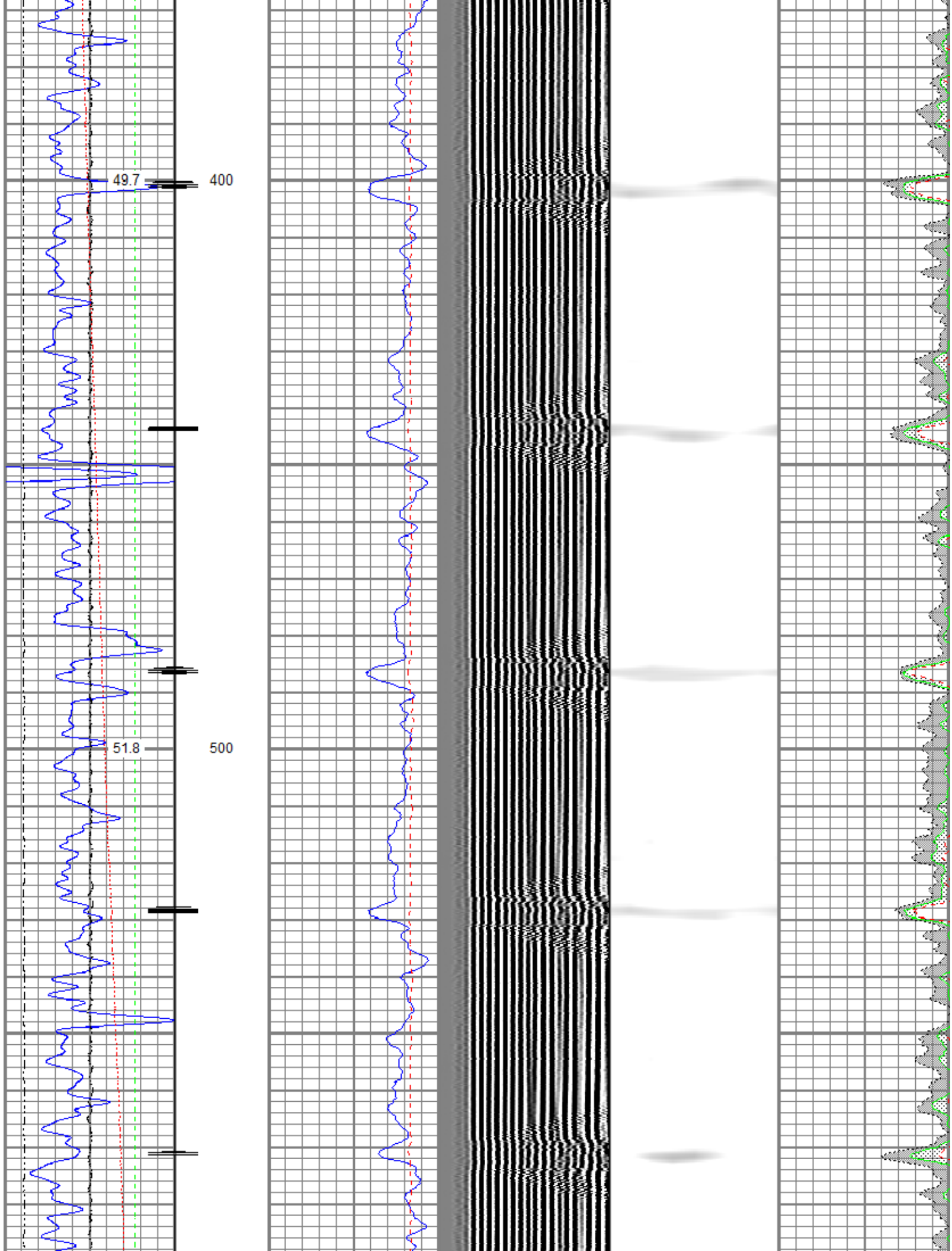
Recorded With 0 PSI Surface Induced Pressure

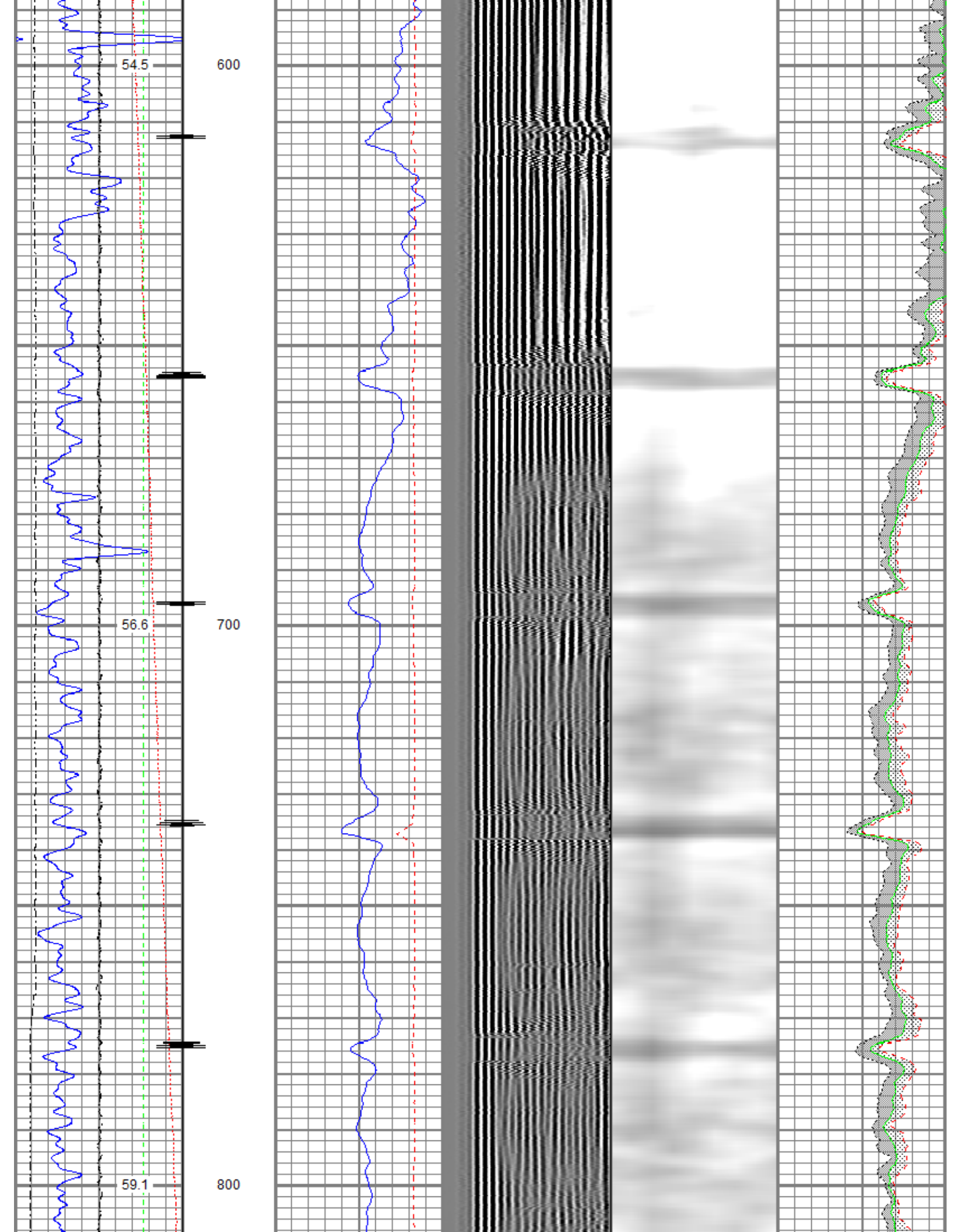
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Dataset Pathname	main
Presentation Format	ros_rbt004_sx
Dataset Creation	Sat Aug 17 17:06:22 2019
Charted by	Depth in Feet scaled 1:240

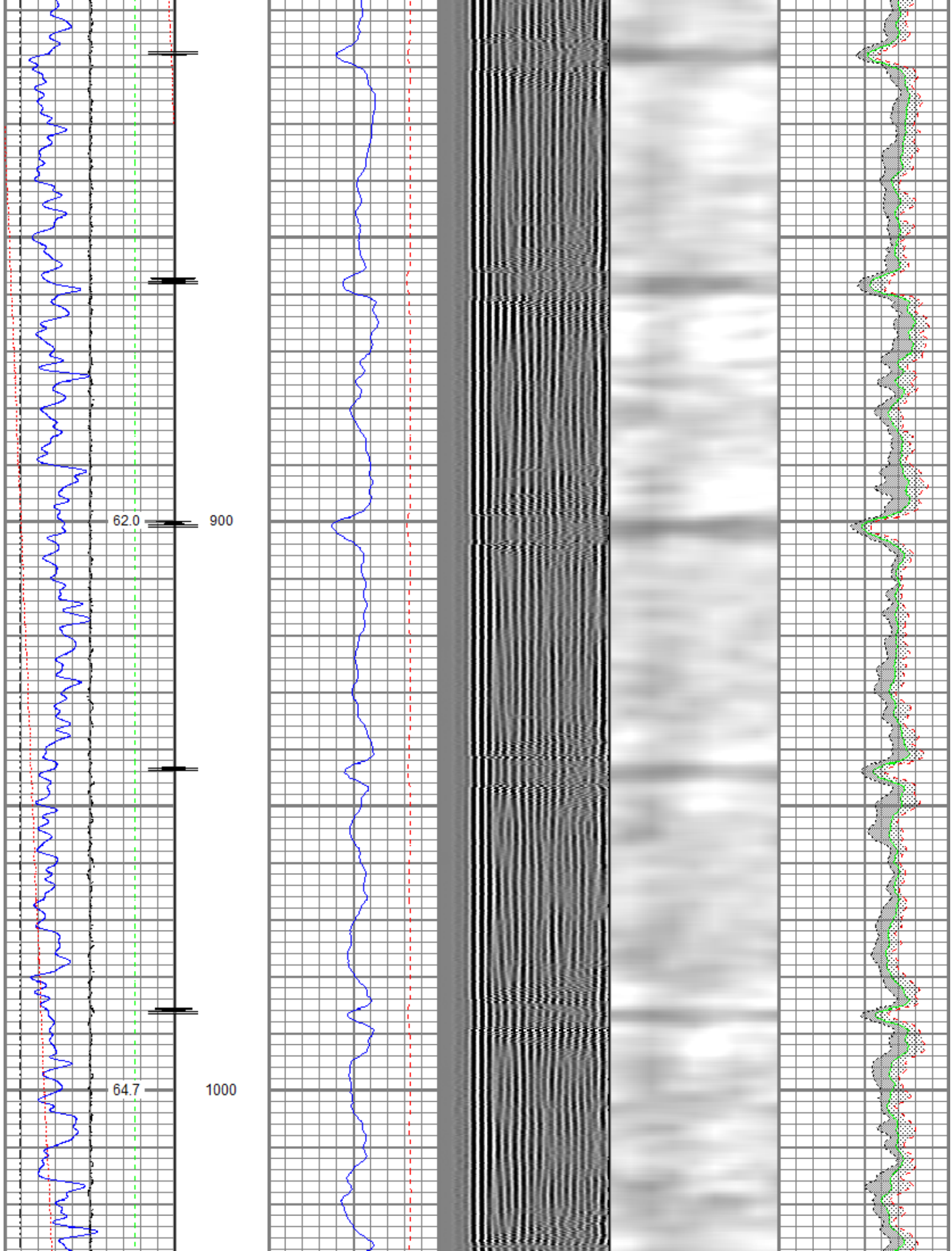
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200 (usec) 1200			Minimum Amplitude
Line Speed	0	(mV) 20			0	100
-150 (ft/min) 150		3' Travel Time				Maximum Amplitude
Line Tension (lb) 2000	0	650 (usec) 150			0	100
Differential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

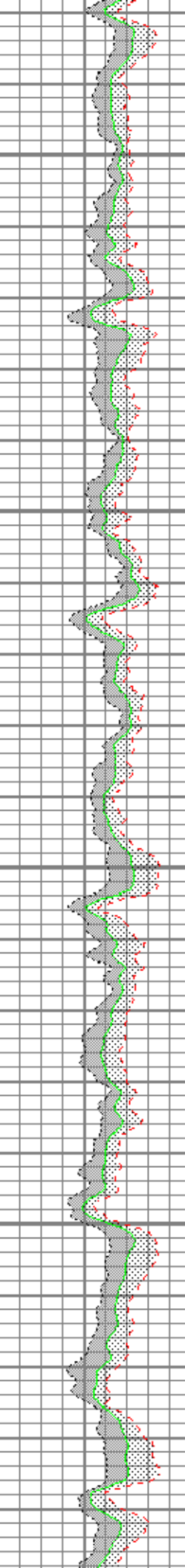
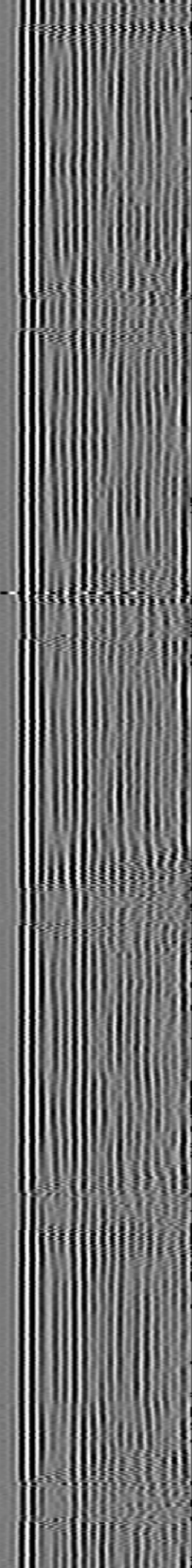
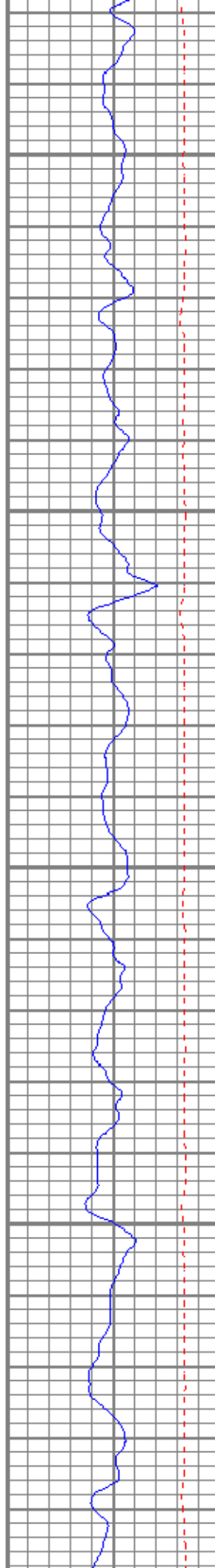
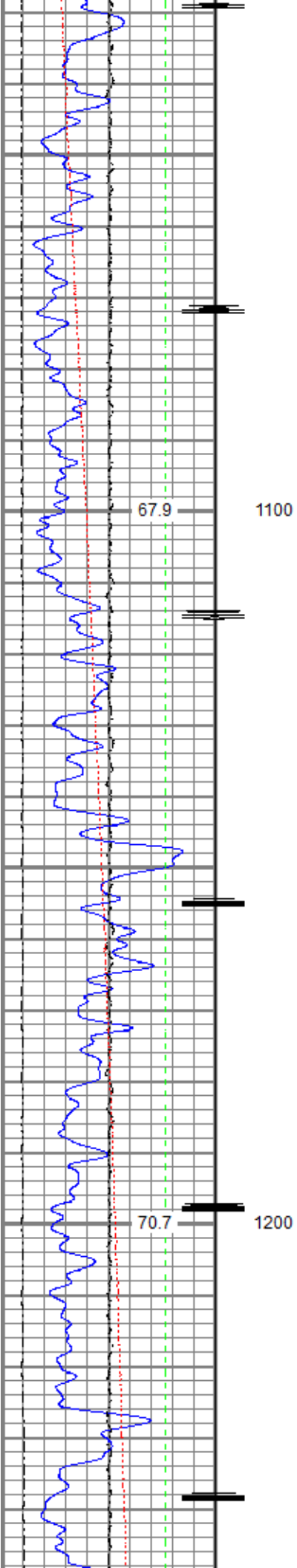


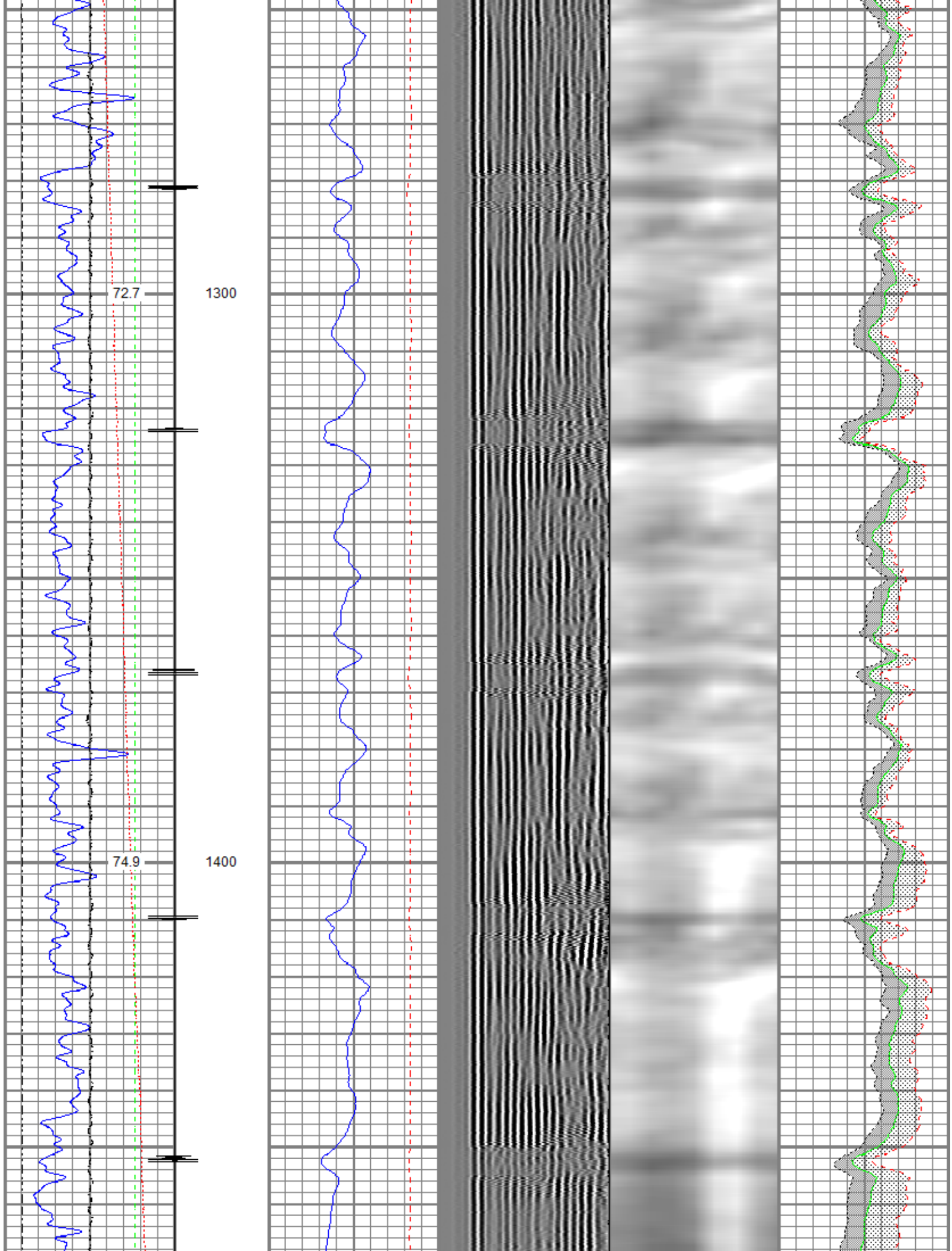


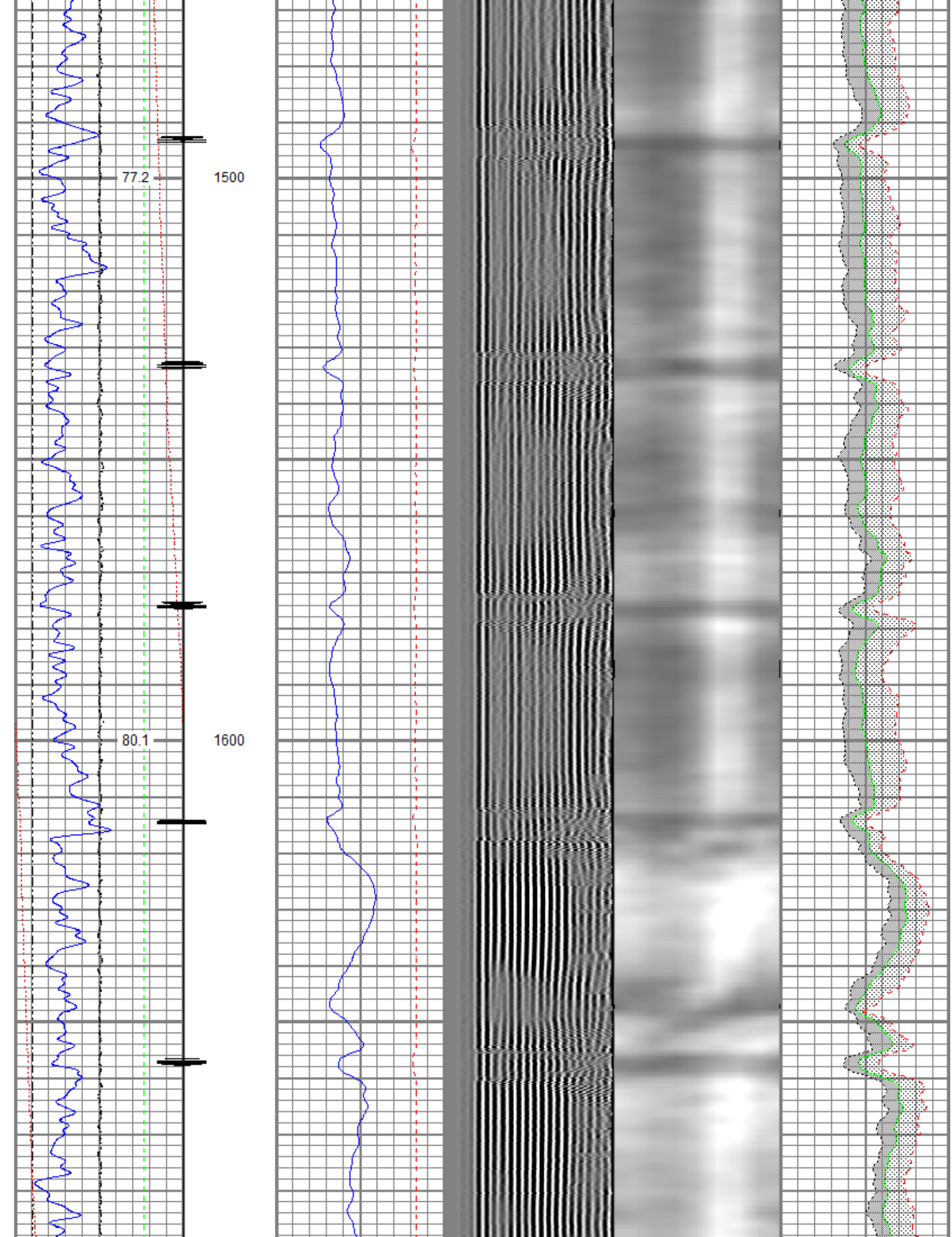


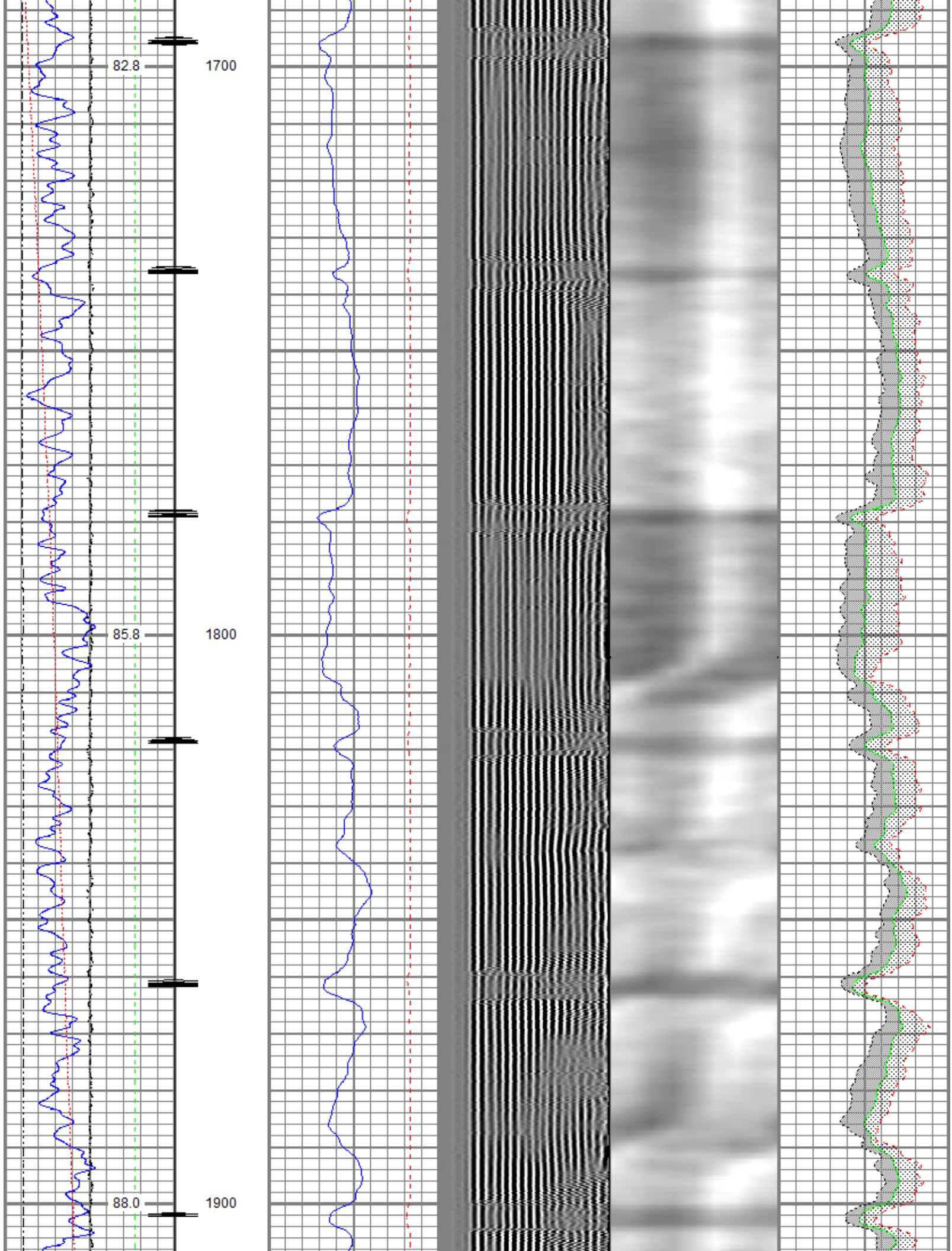


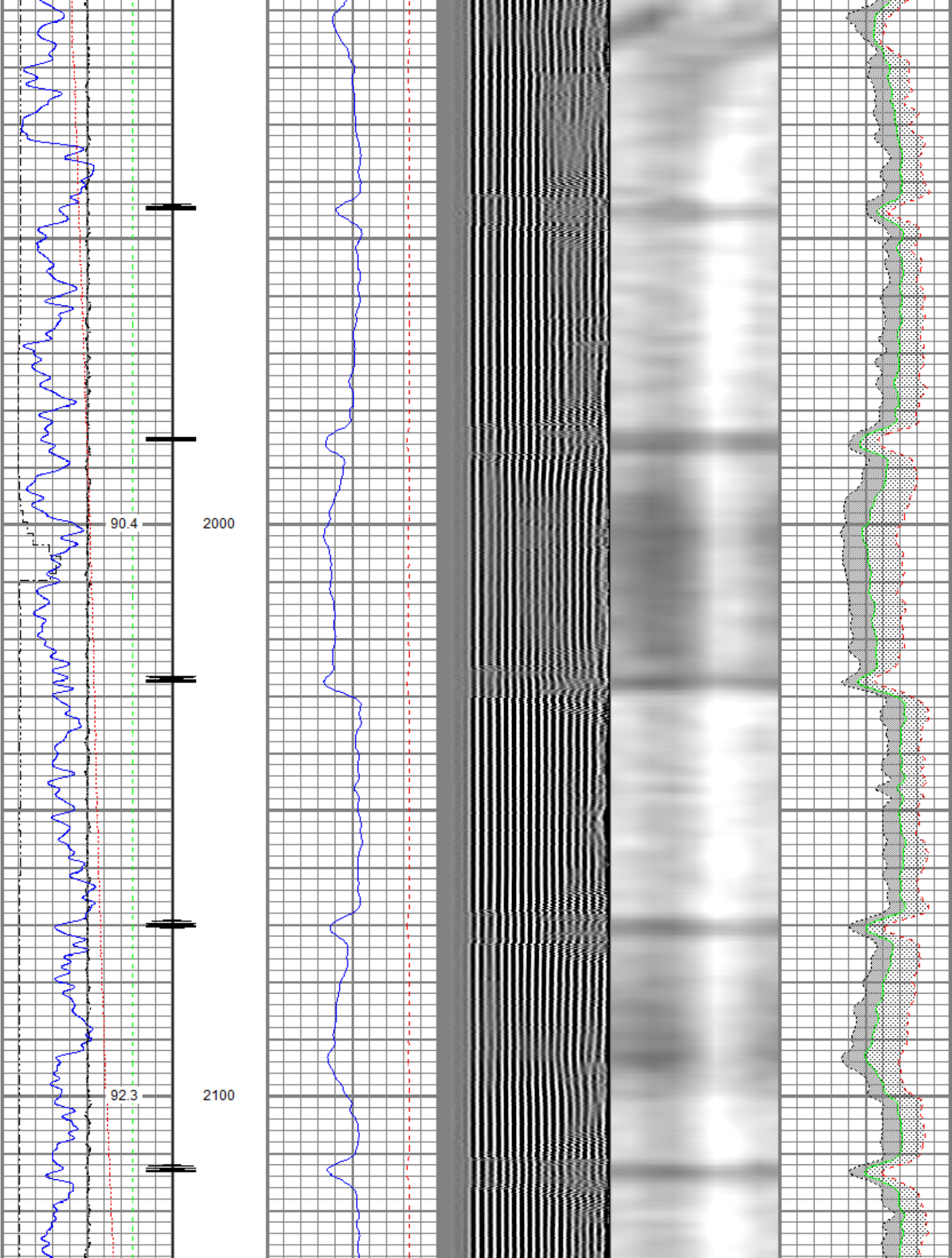


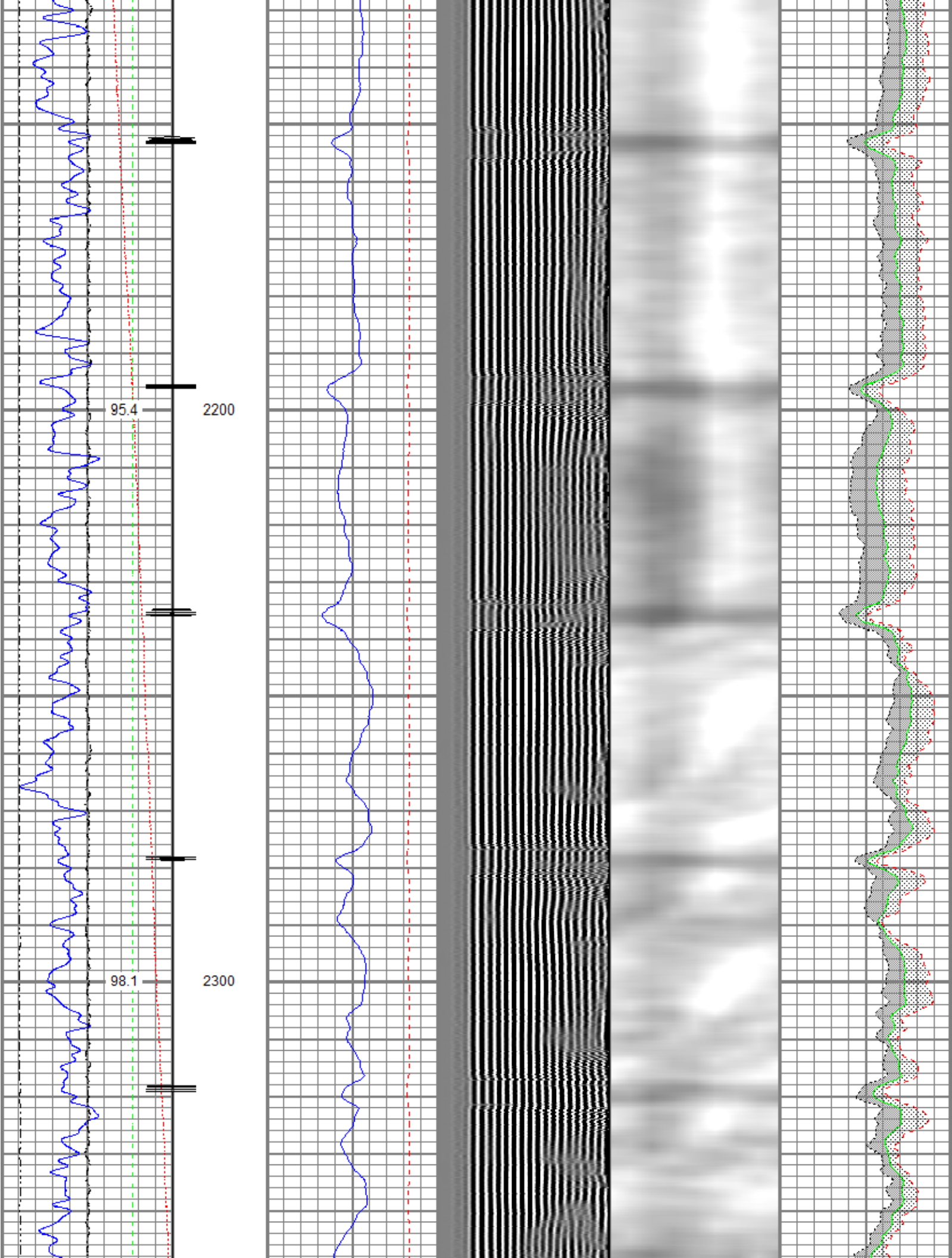


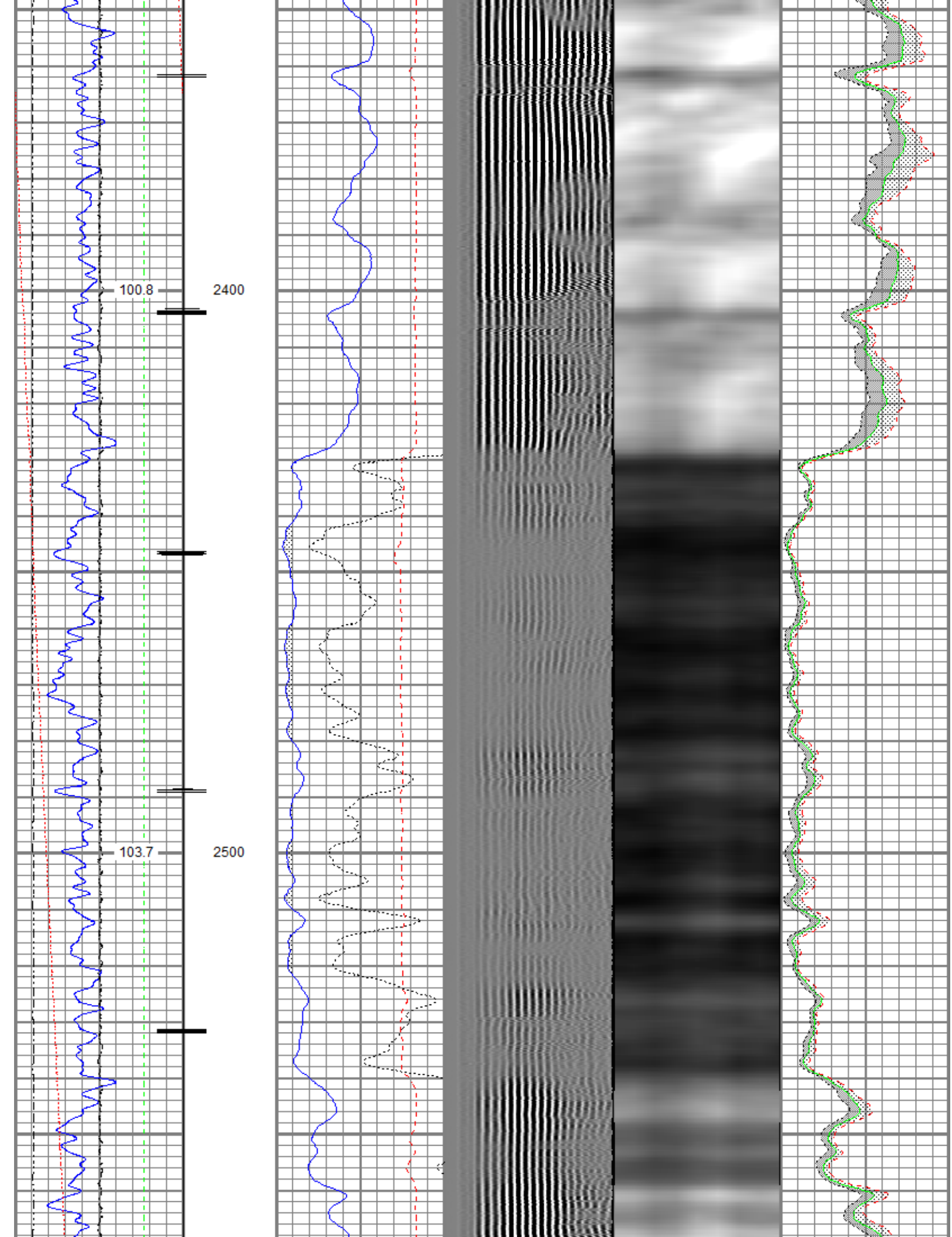


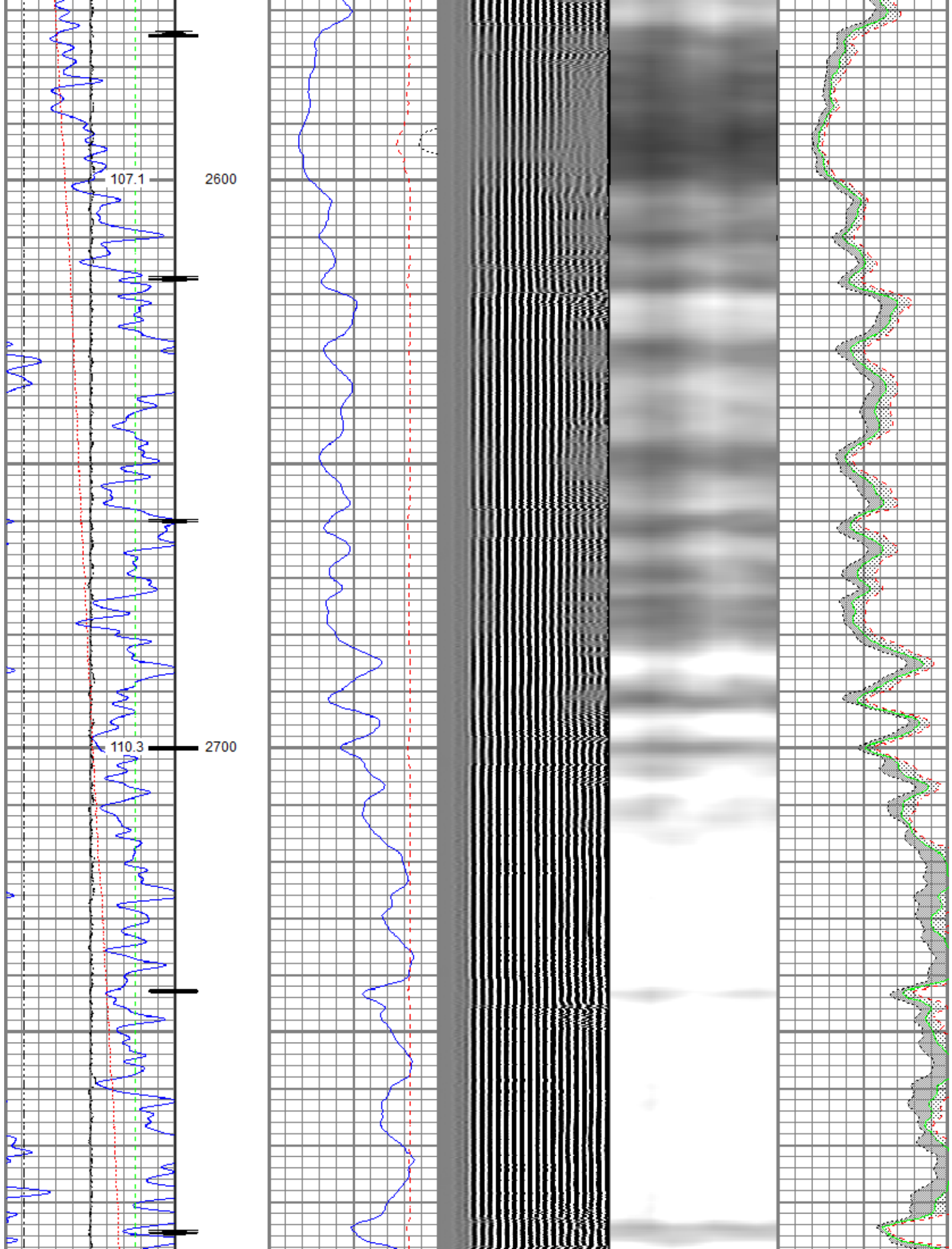


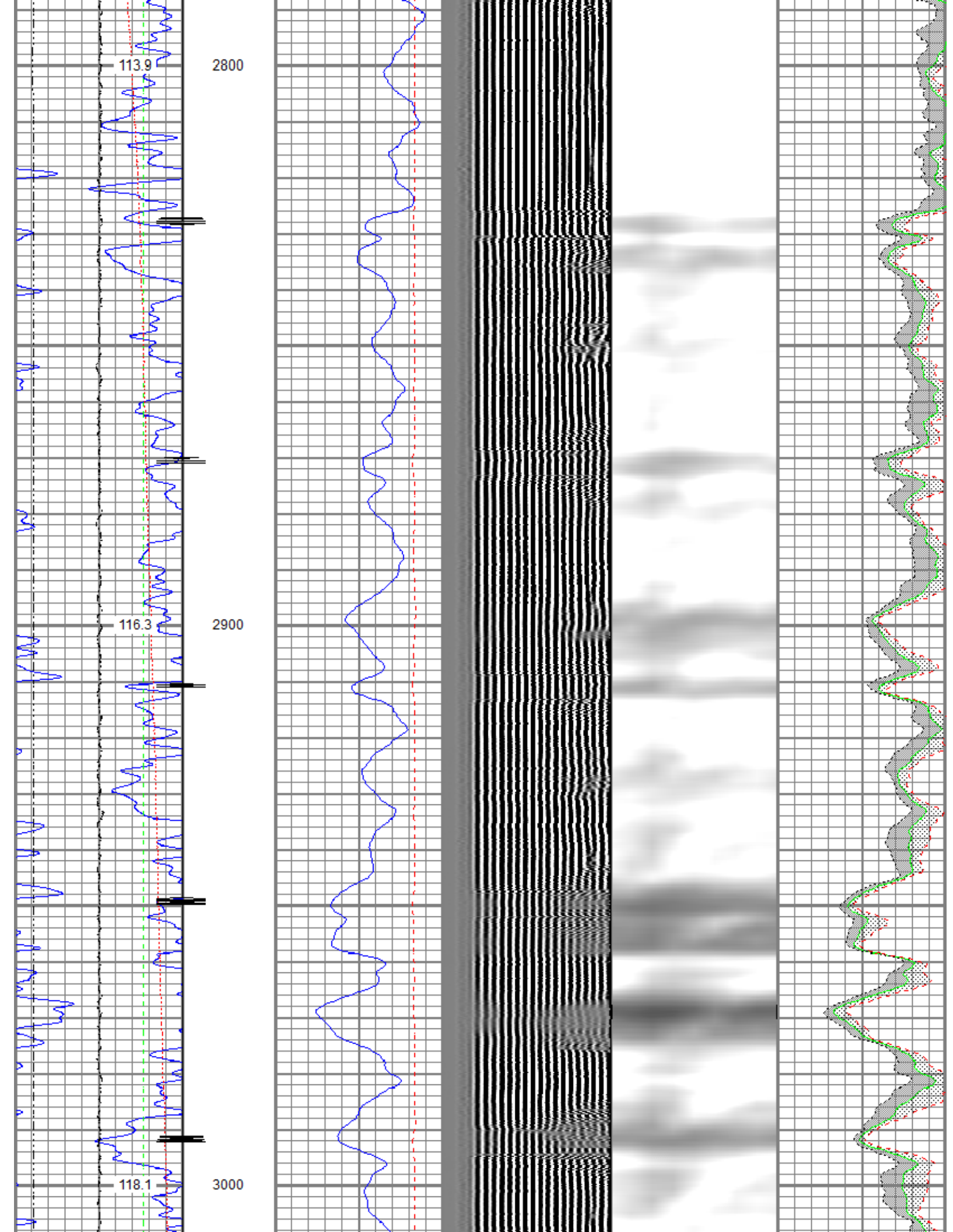


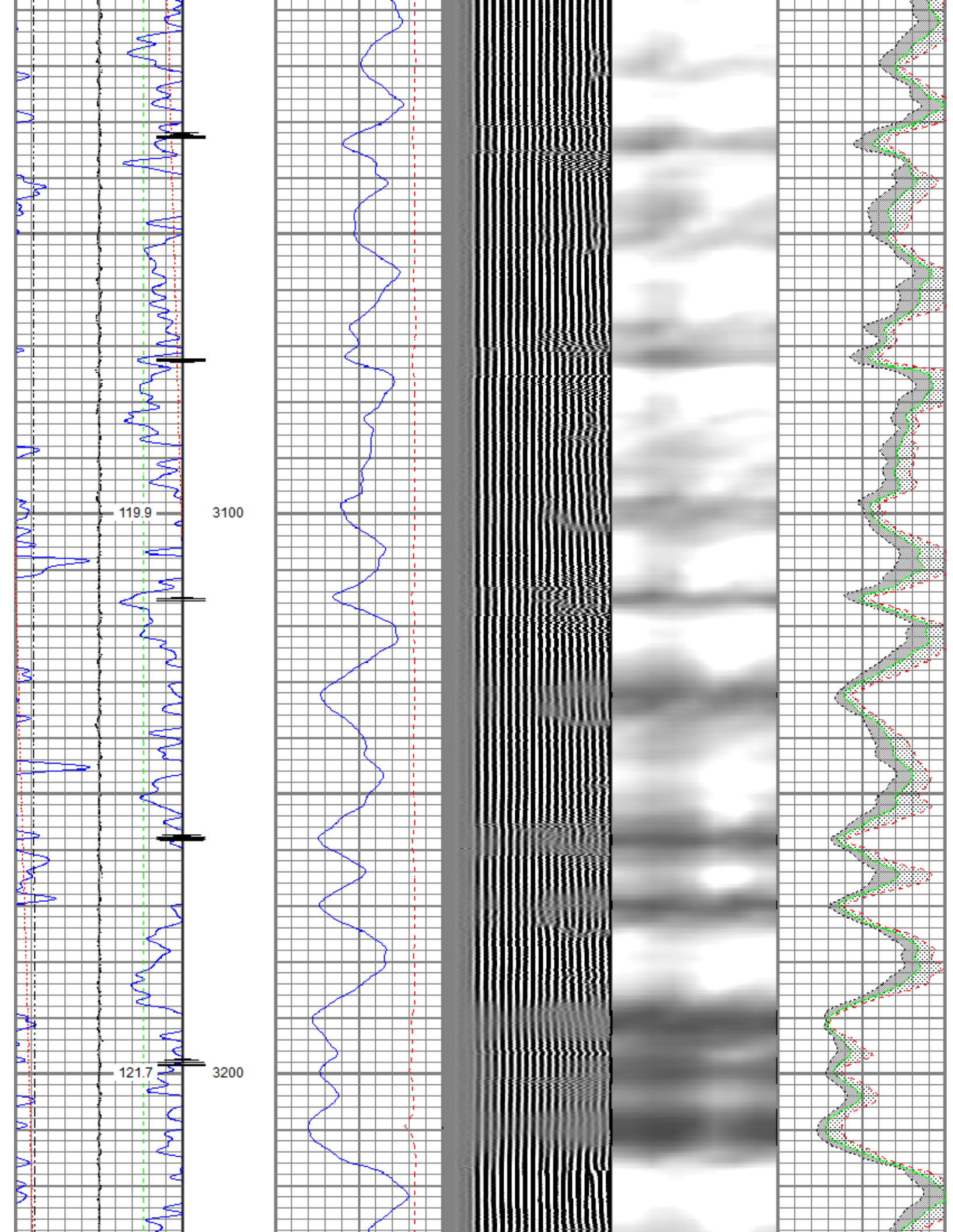


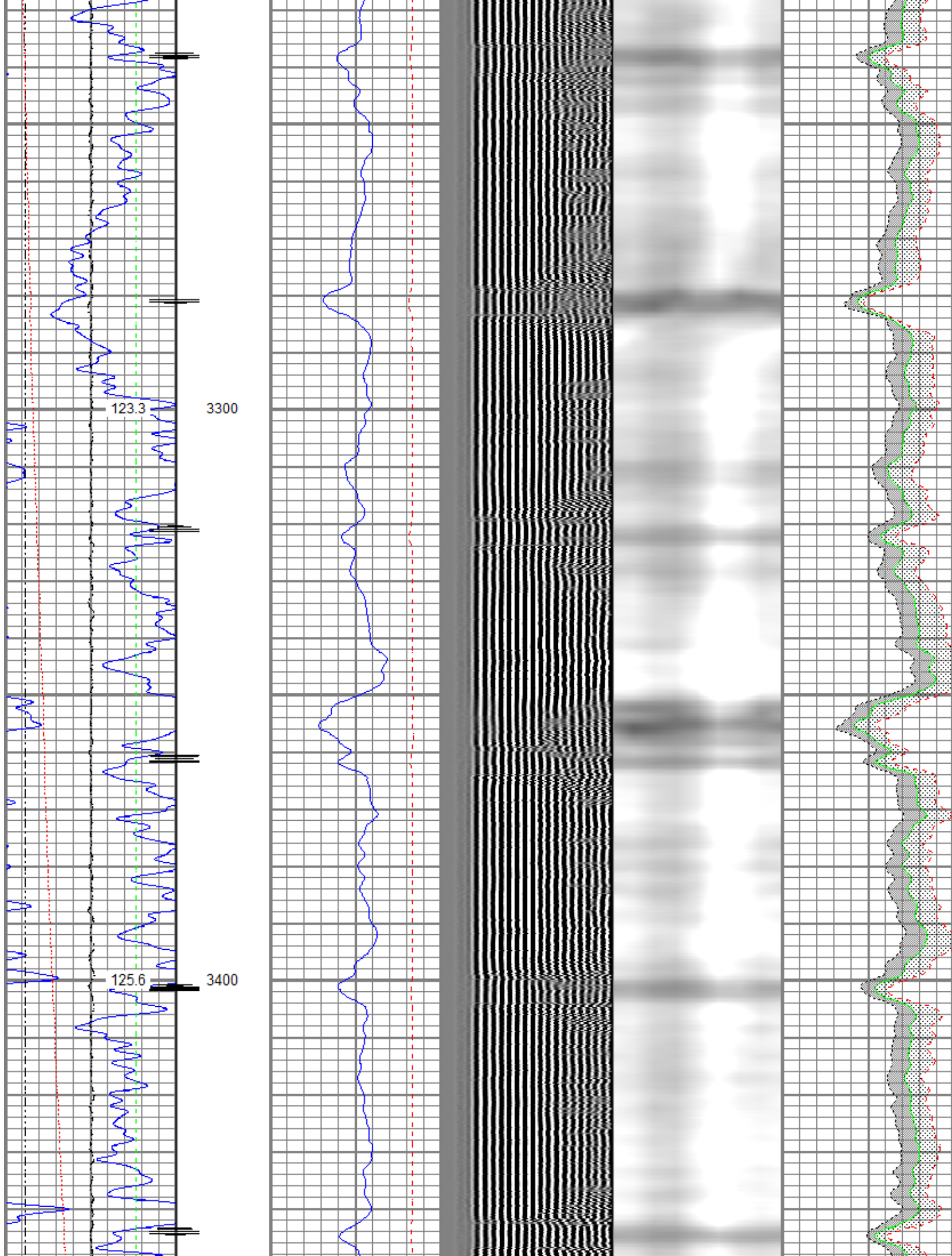


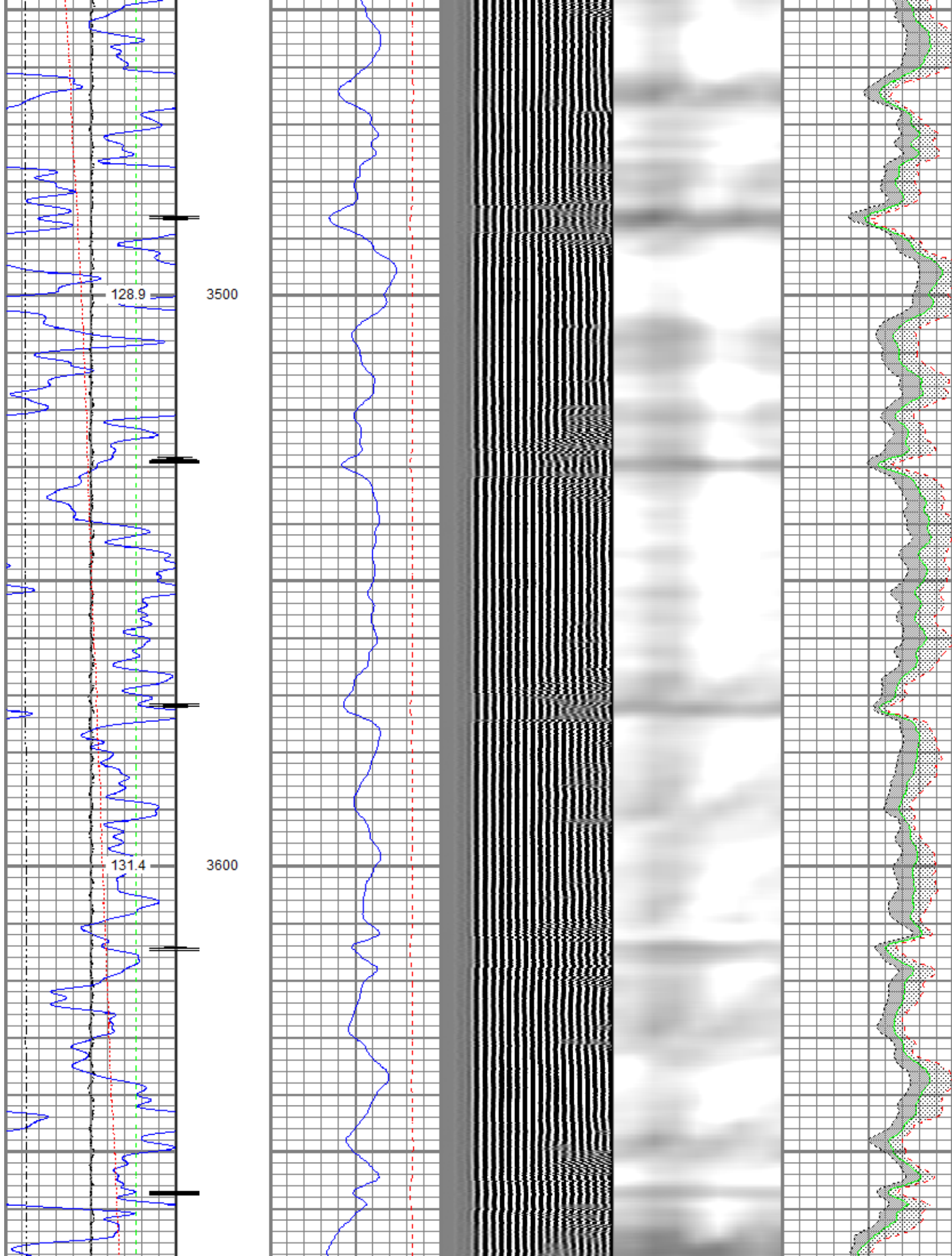


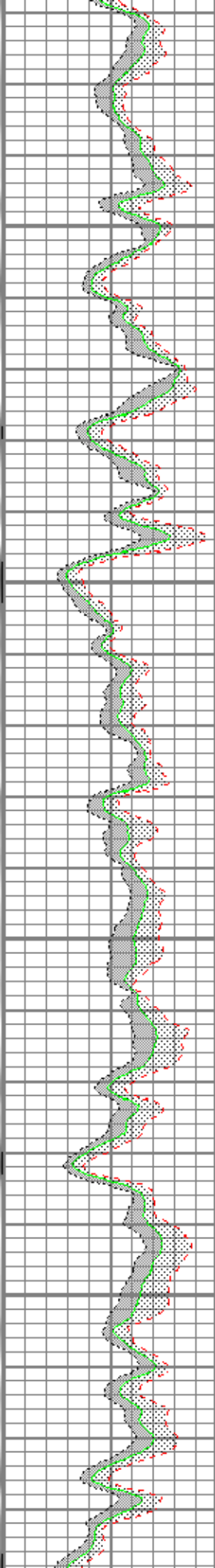
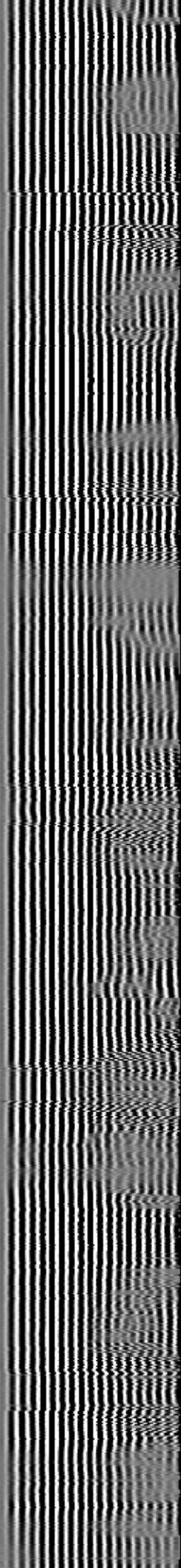
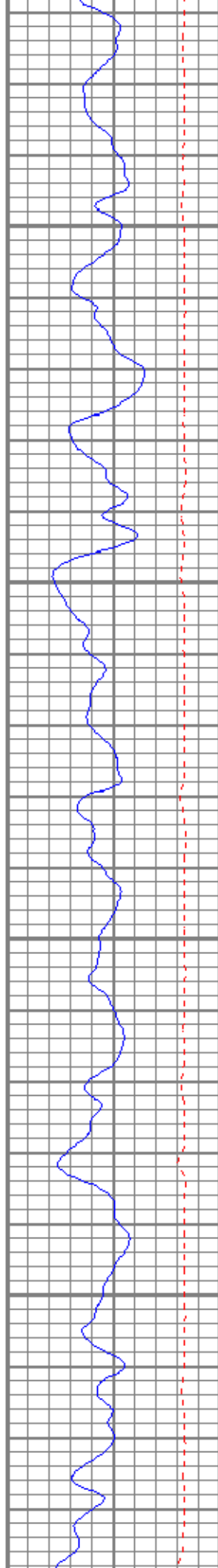
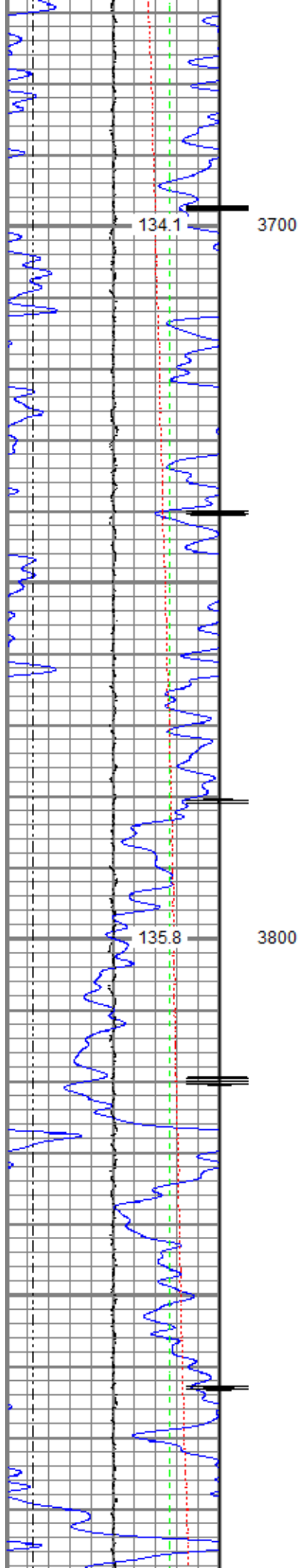


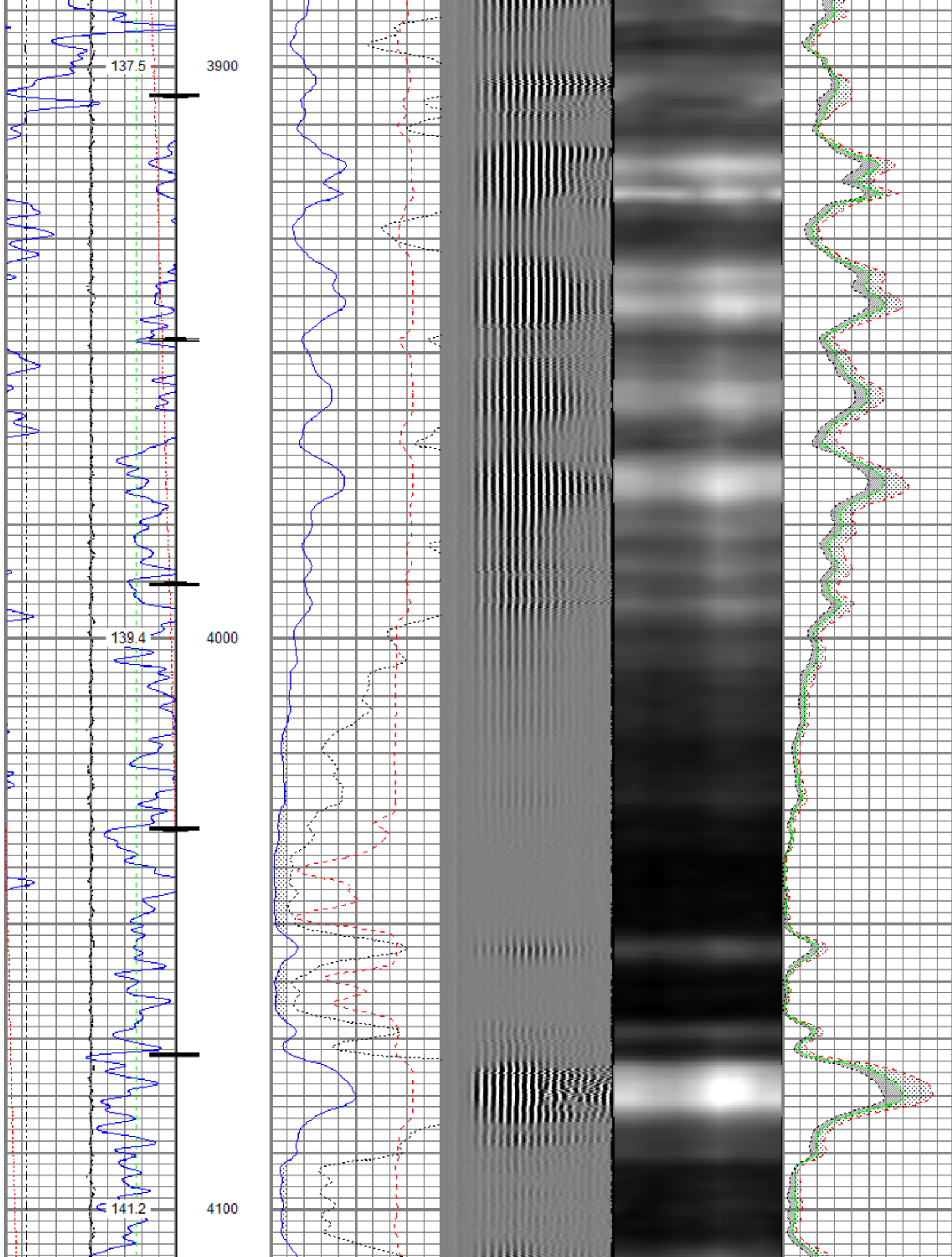


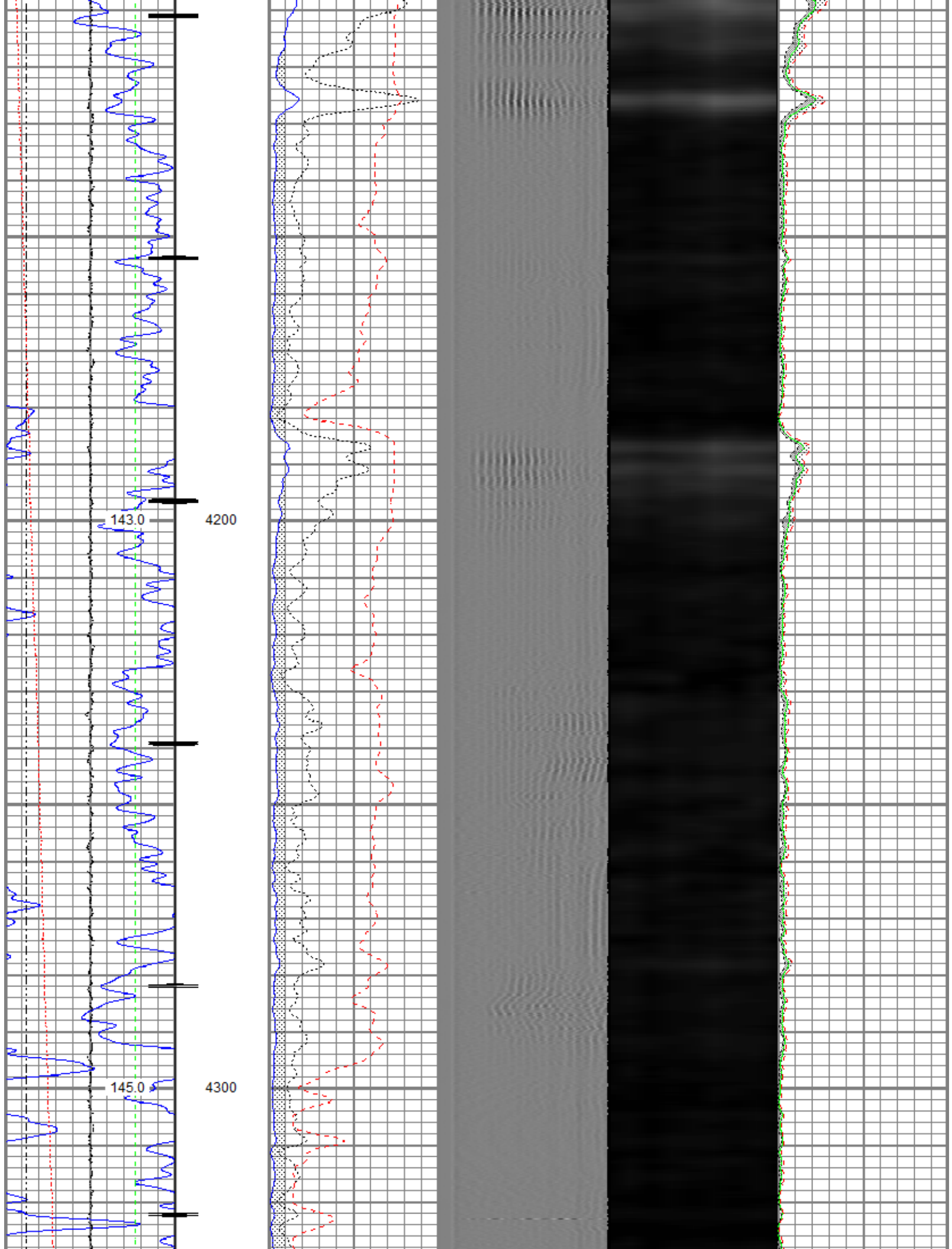


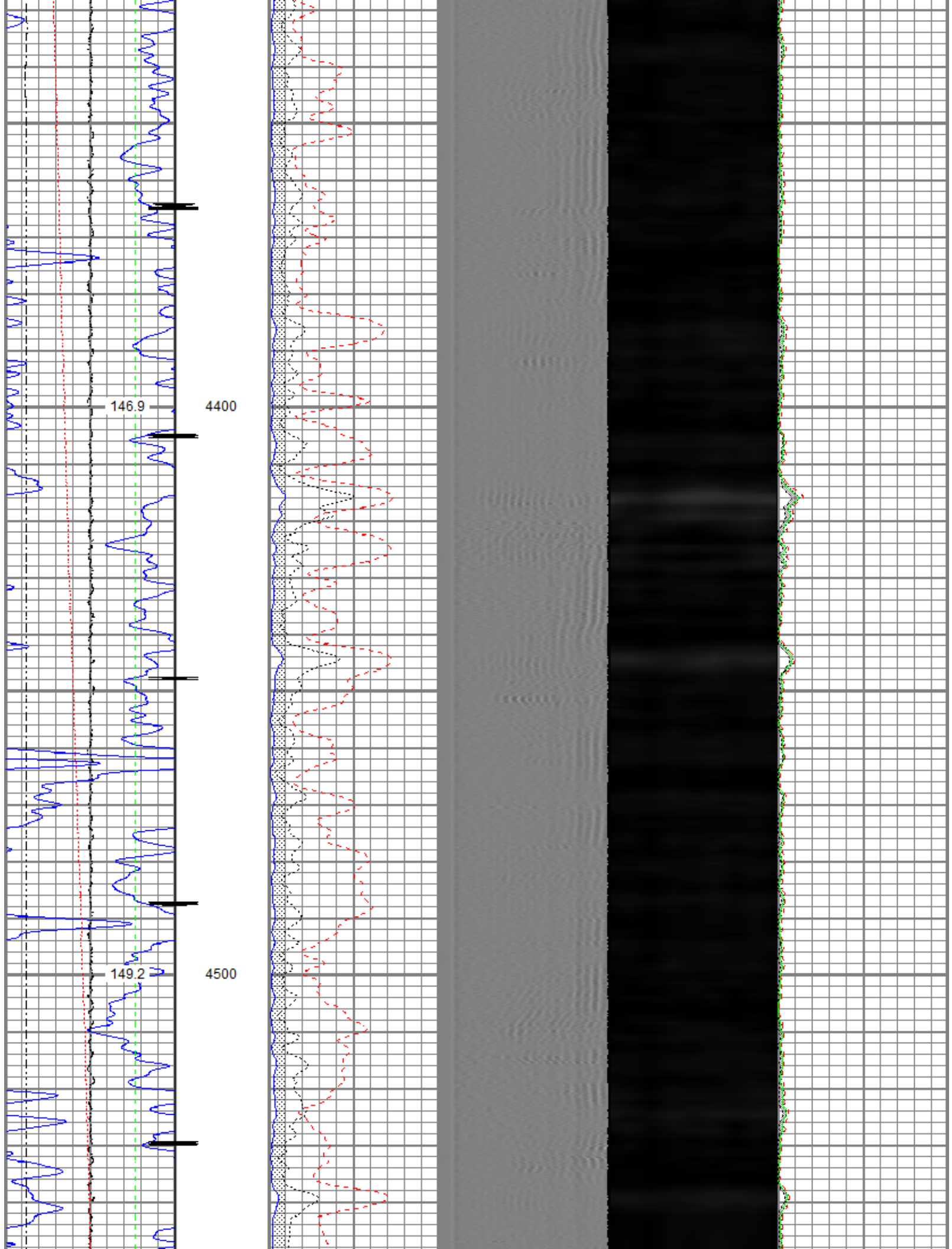


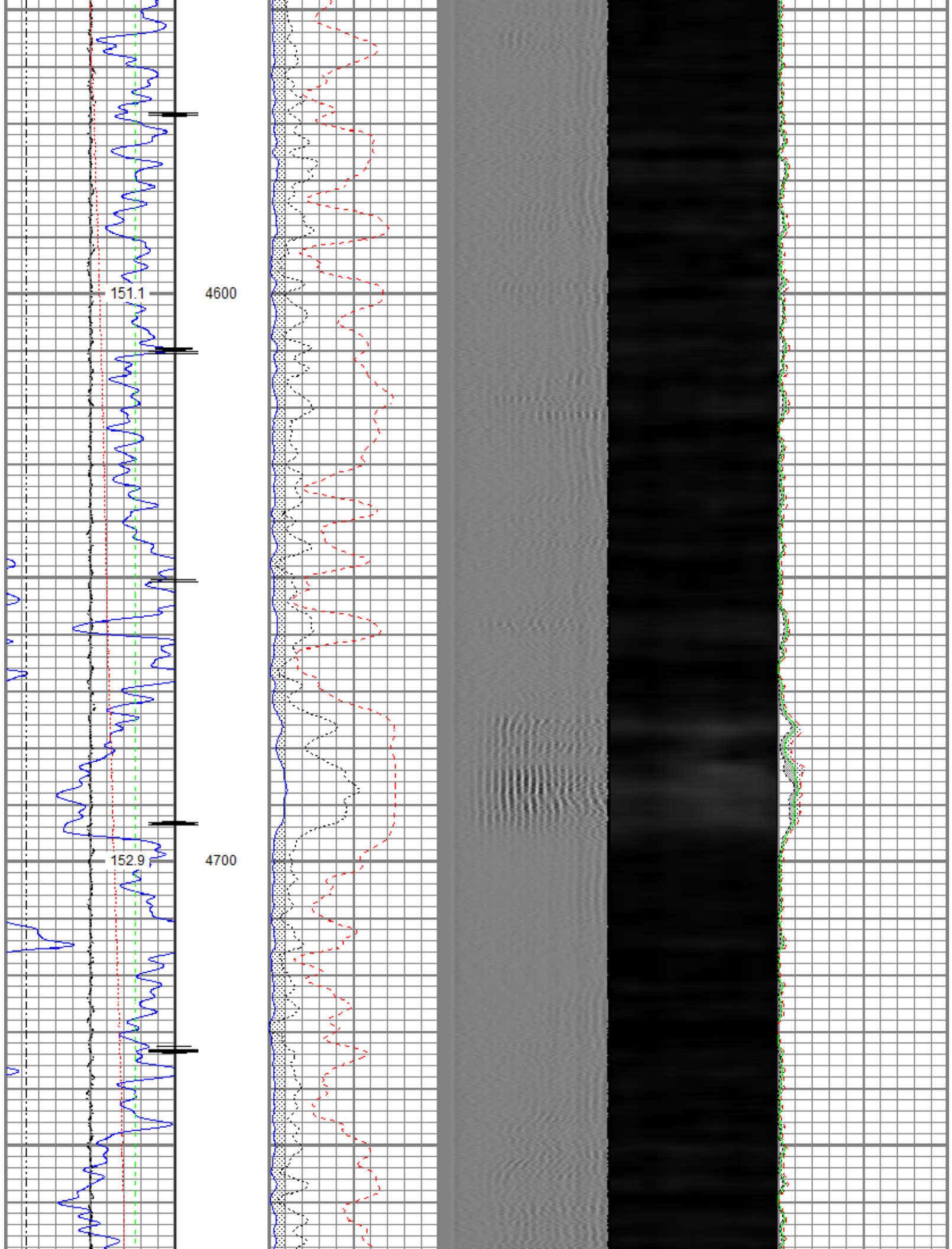


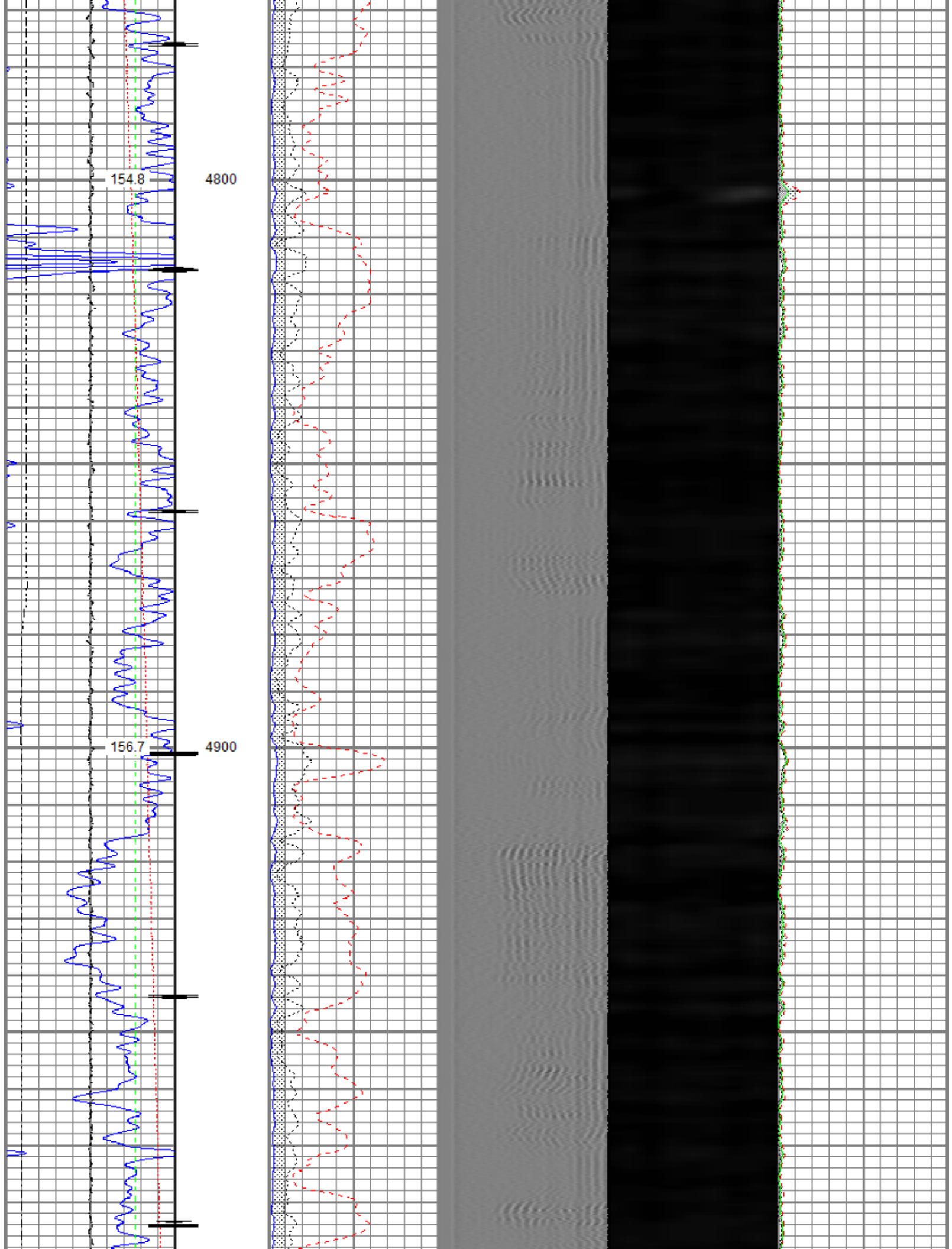


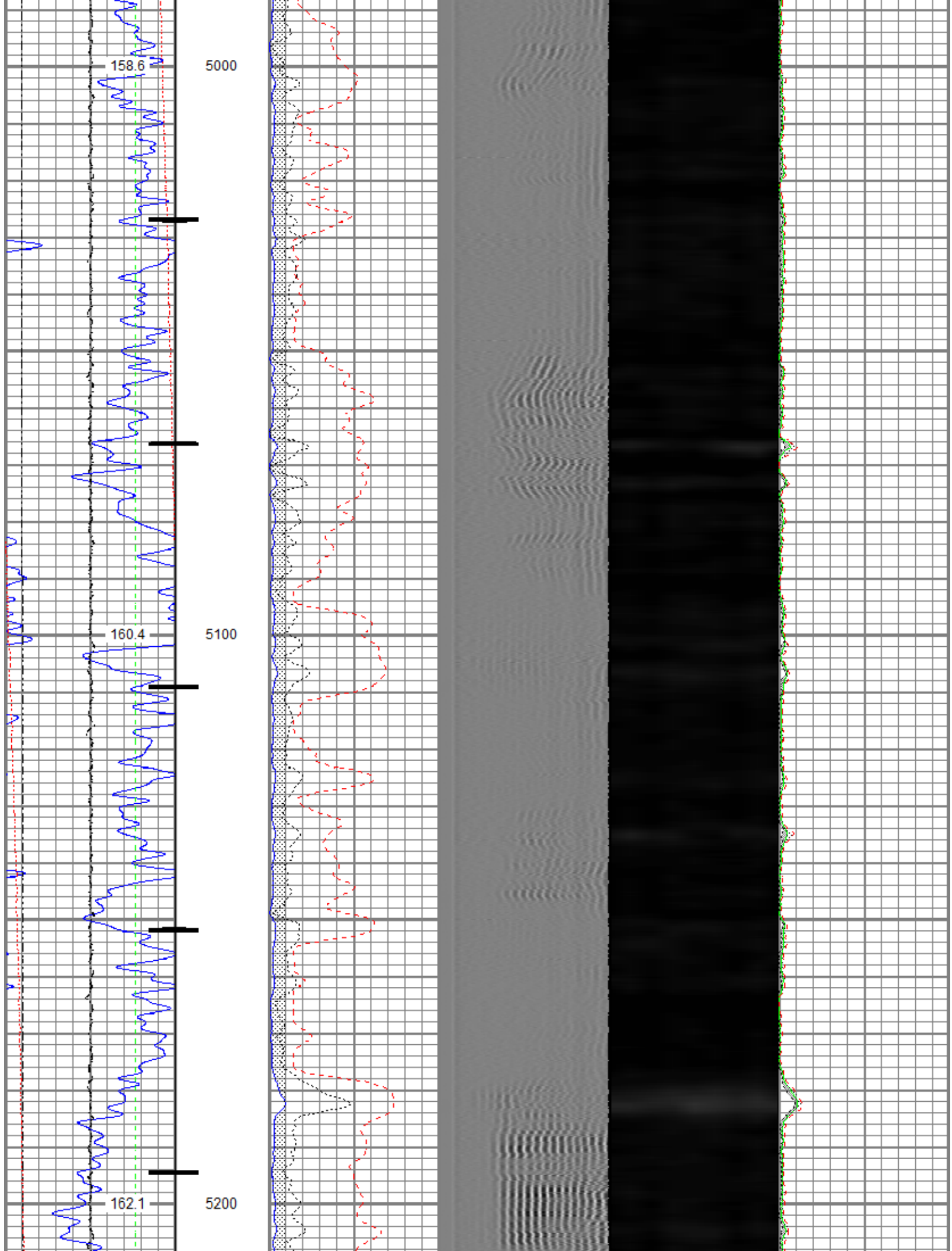


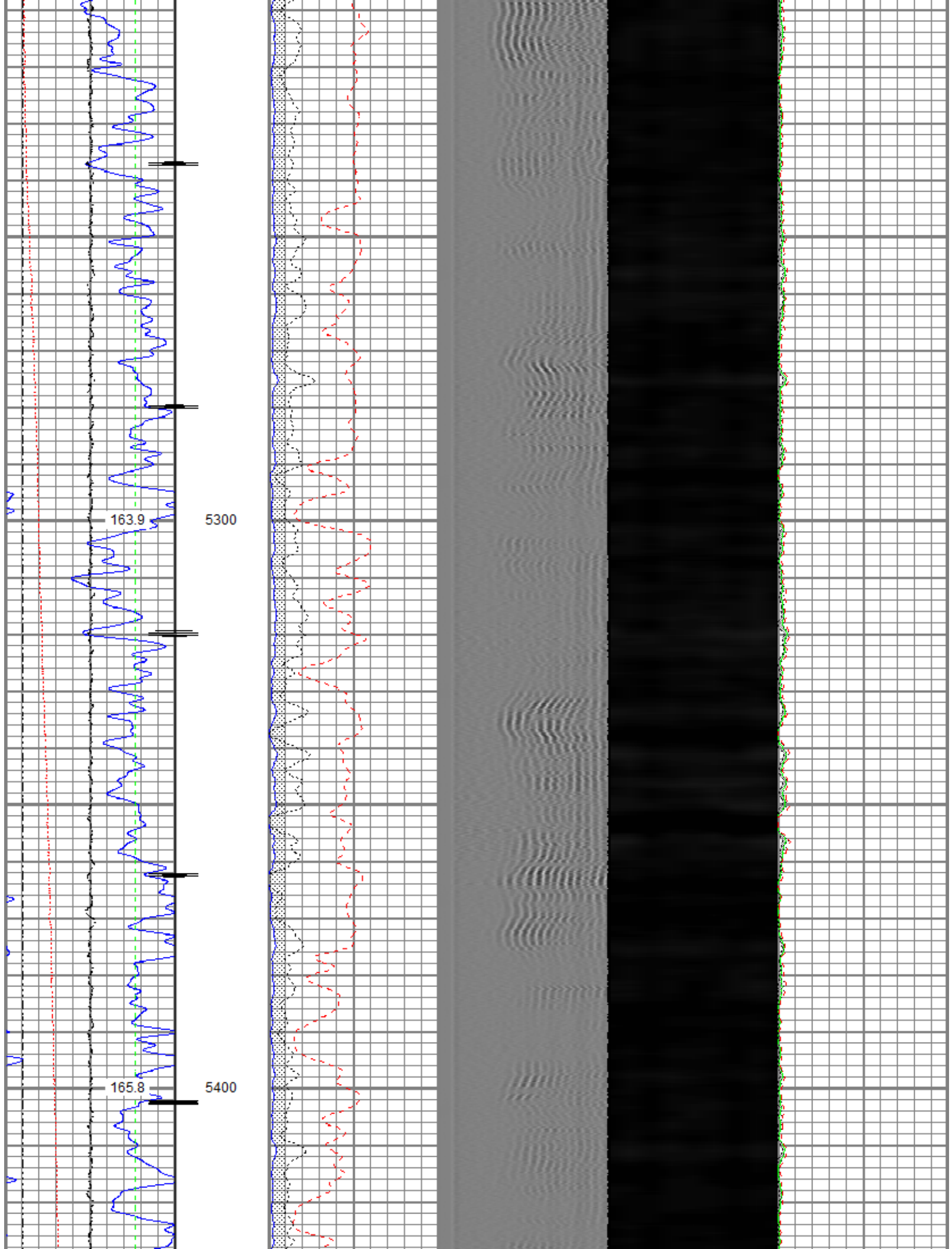


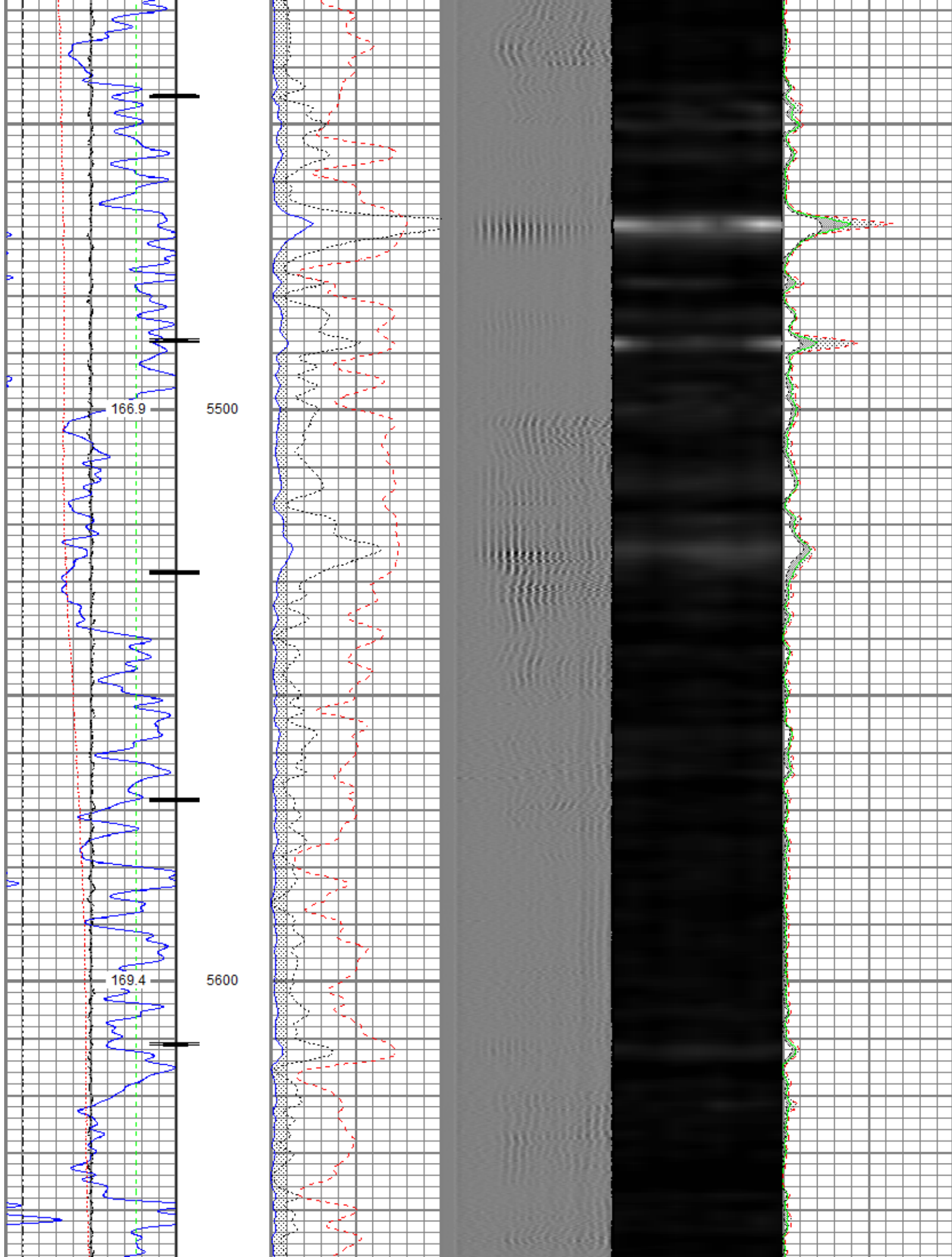


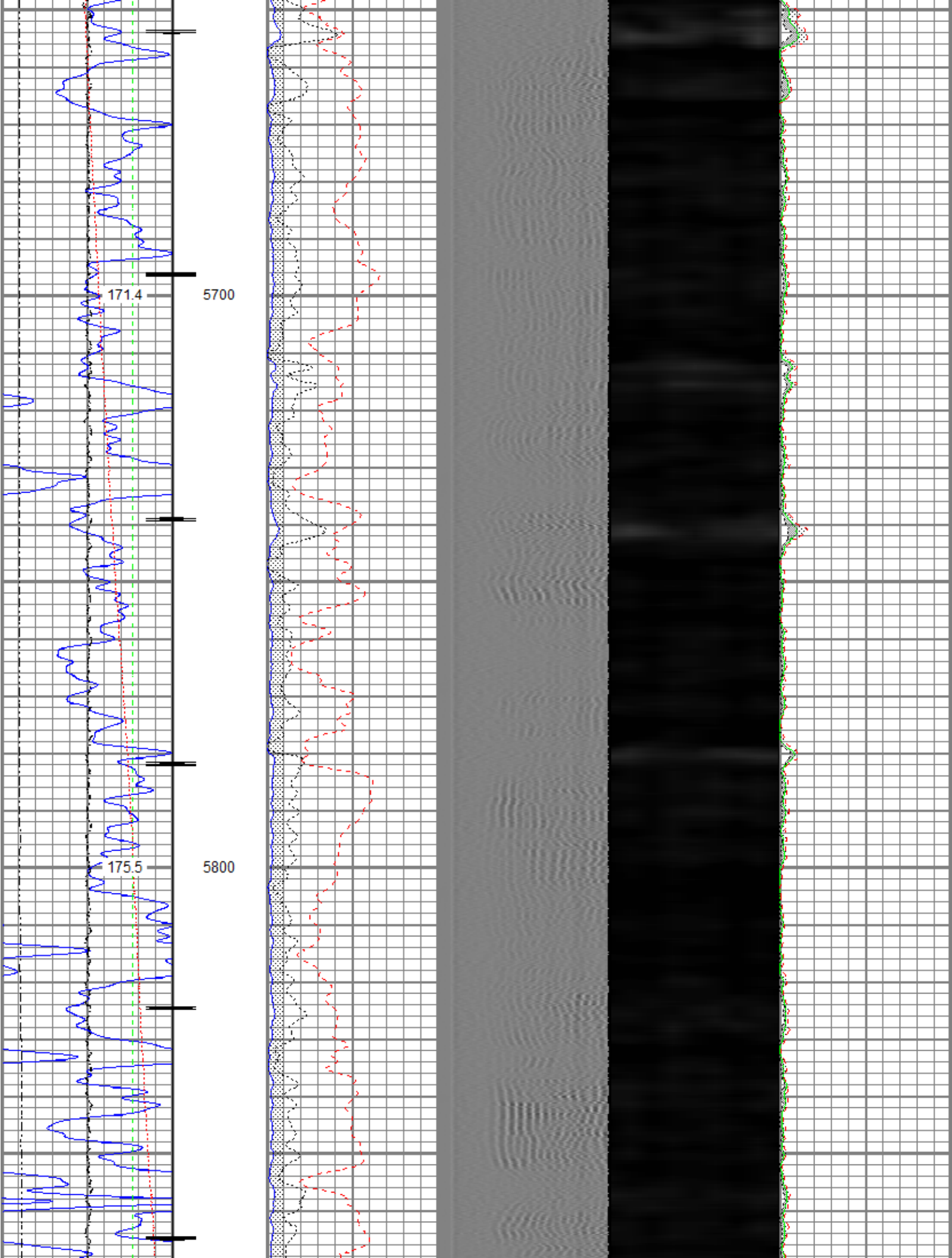


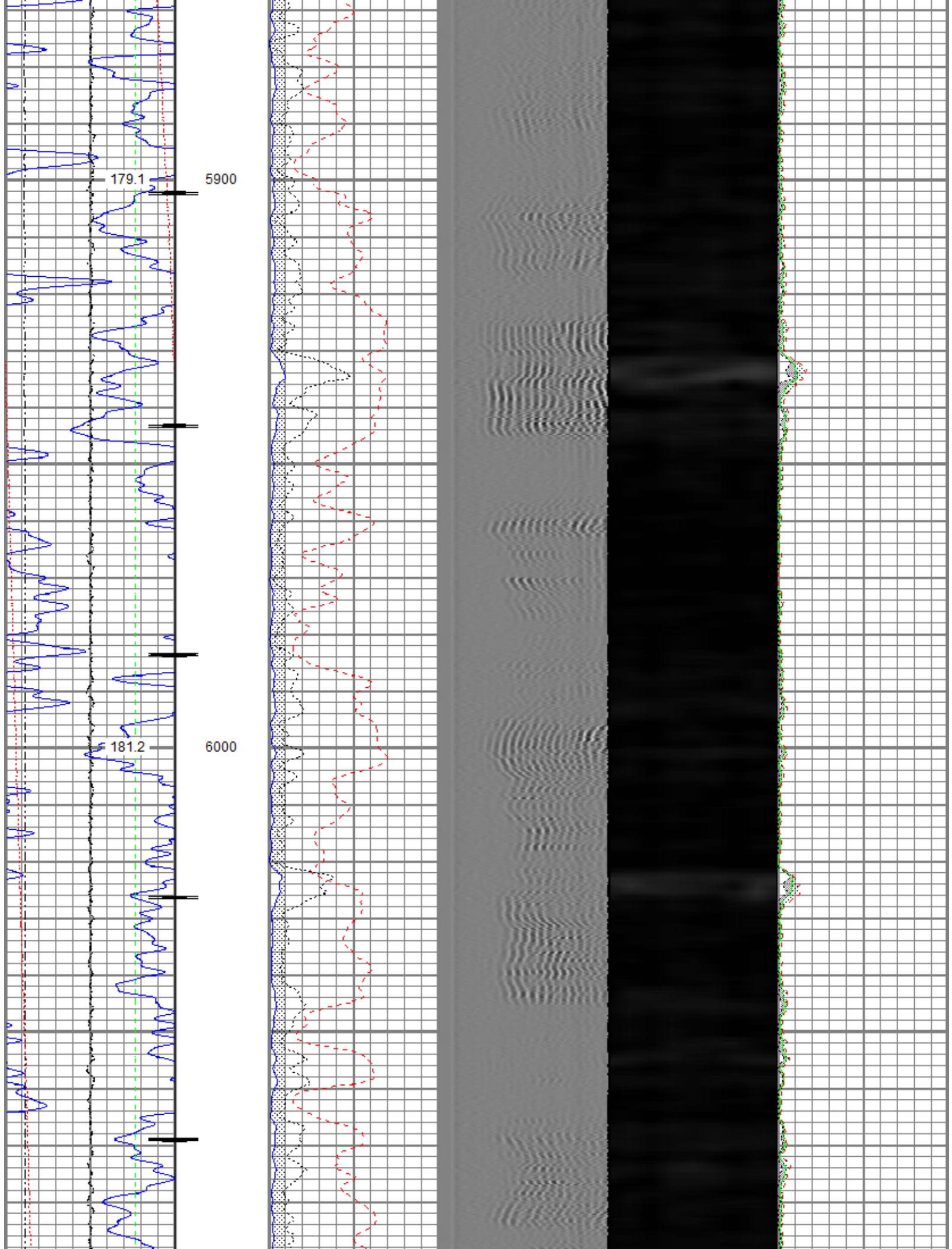


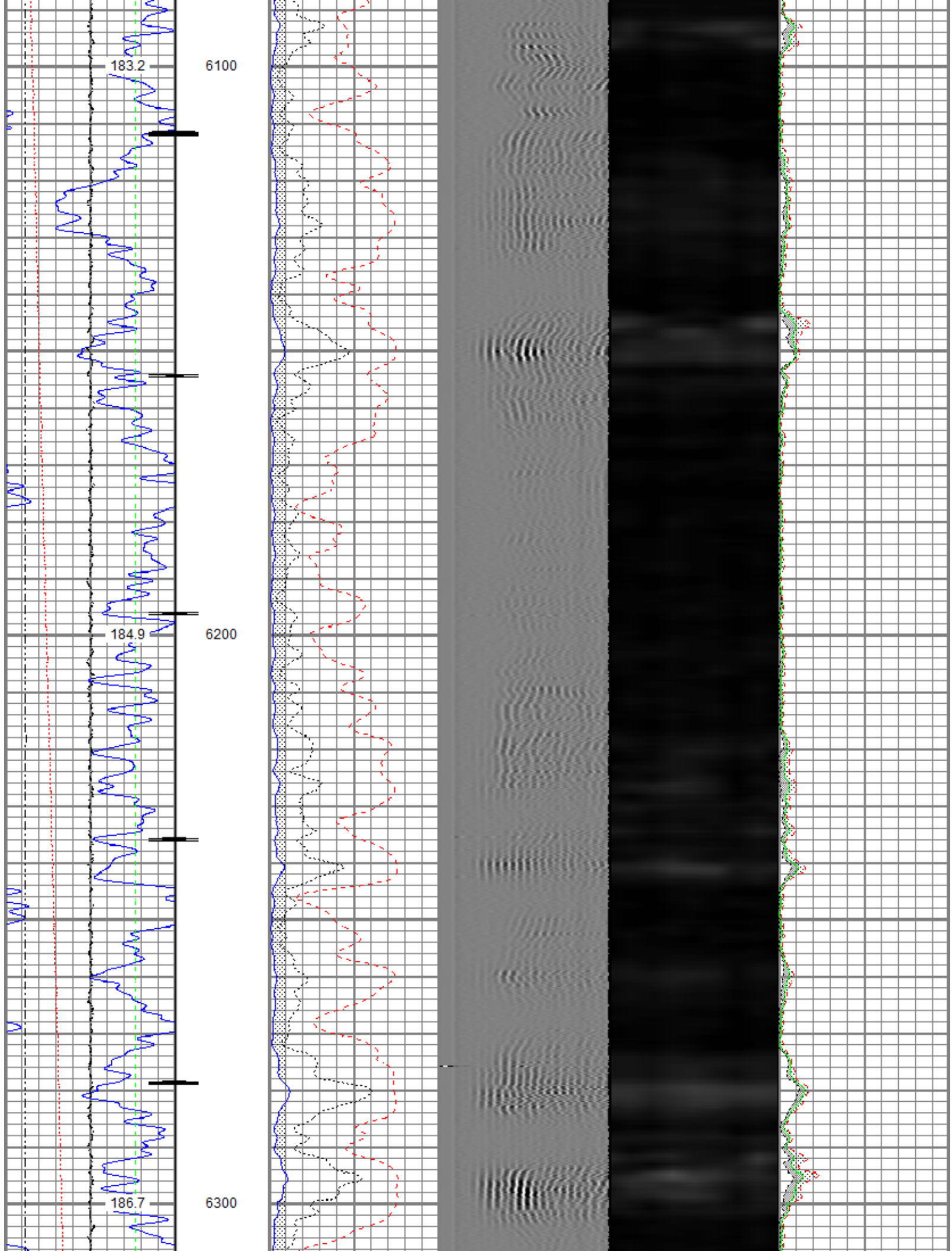


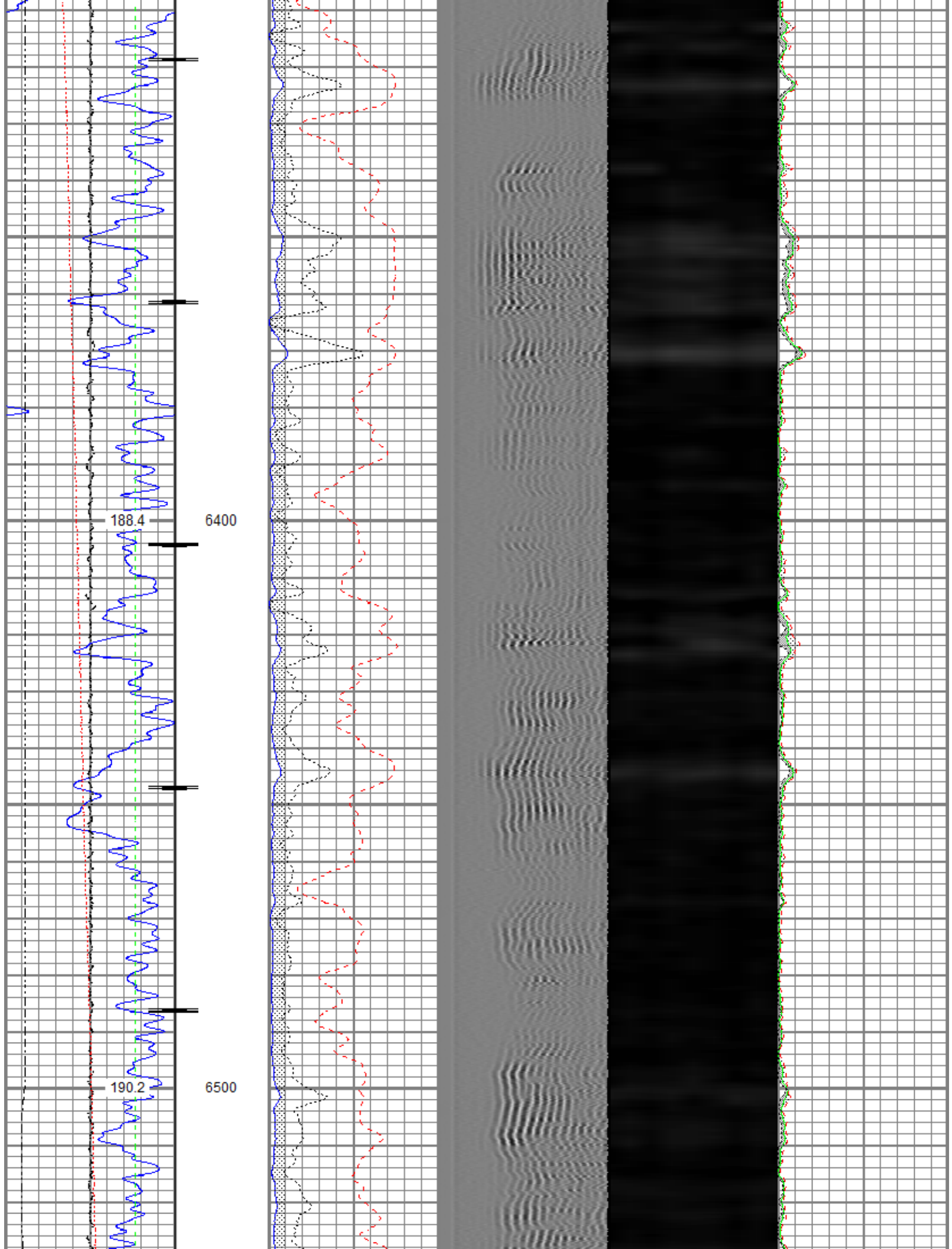


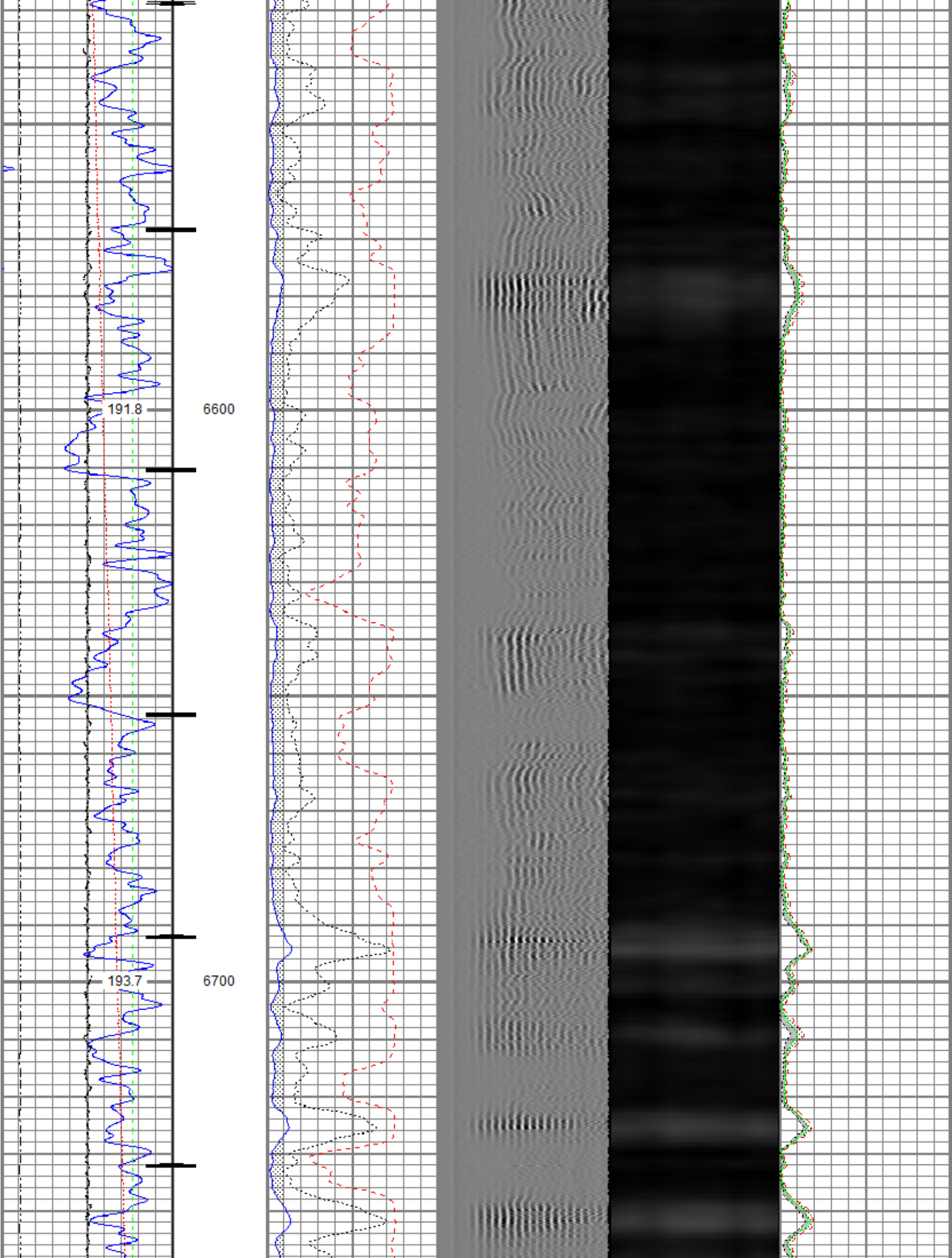


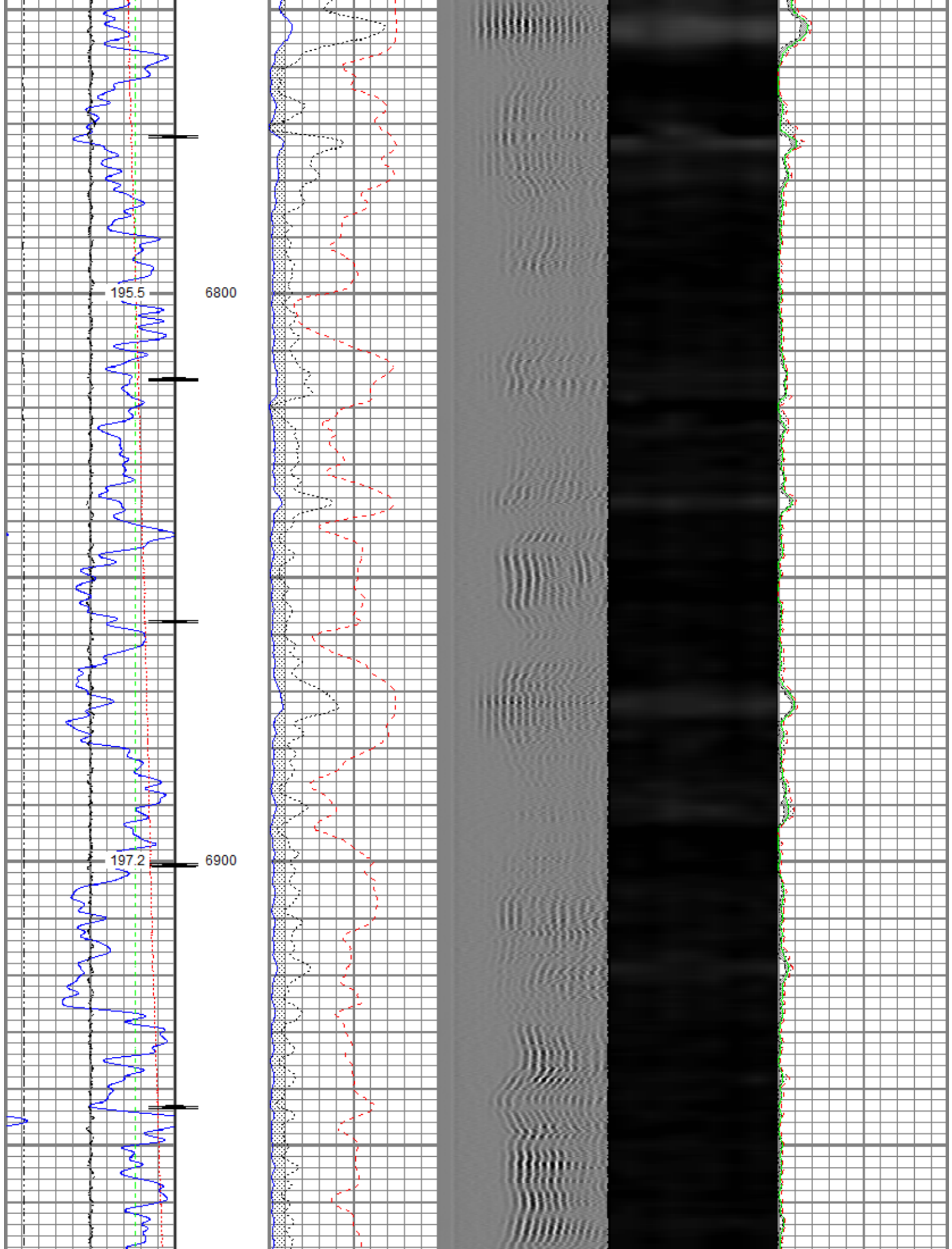


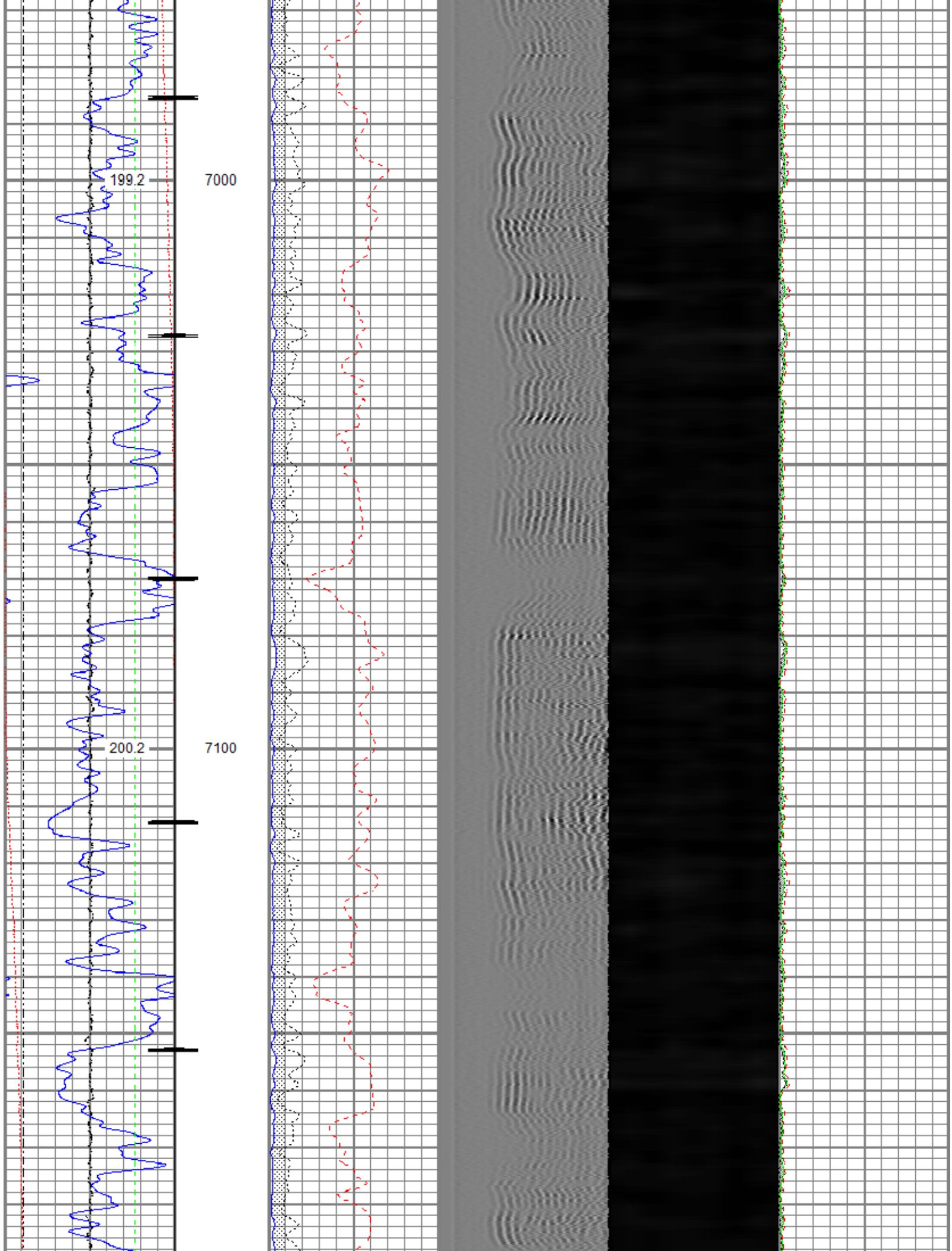


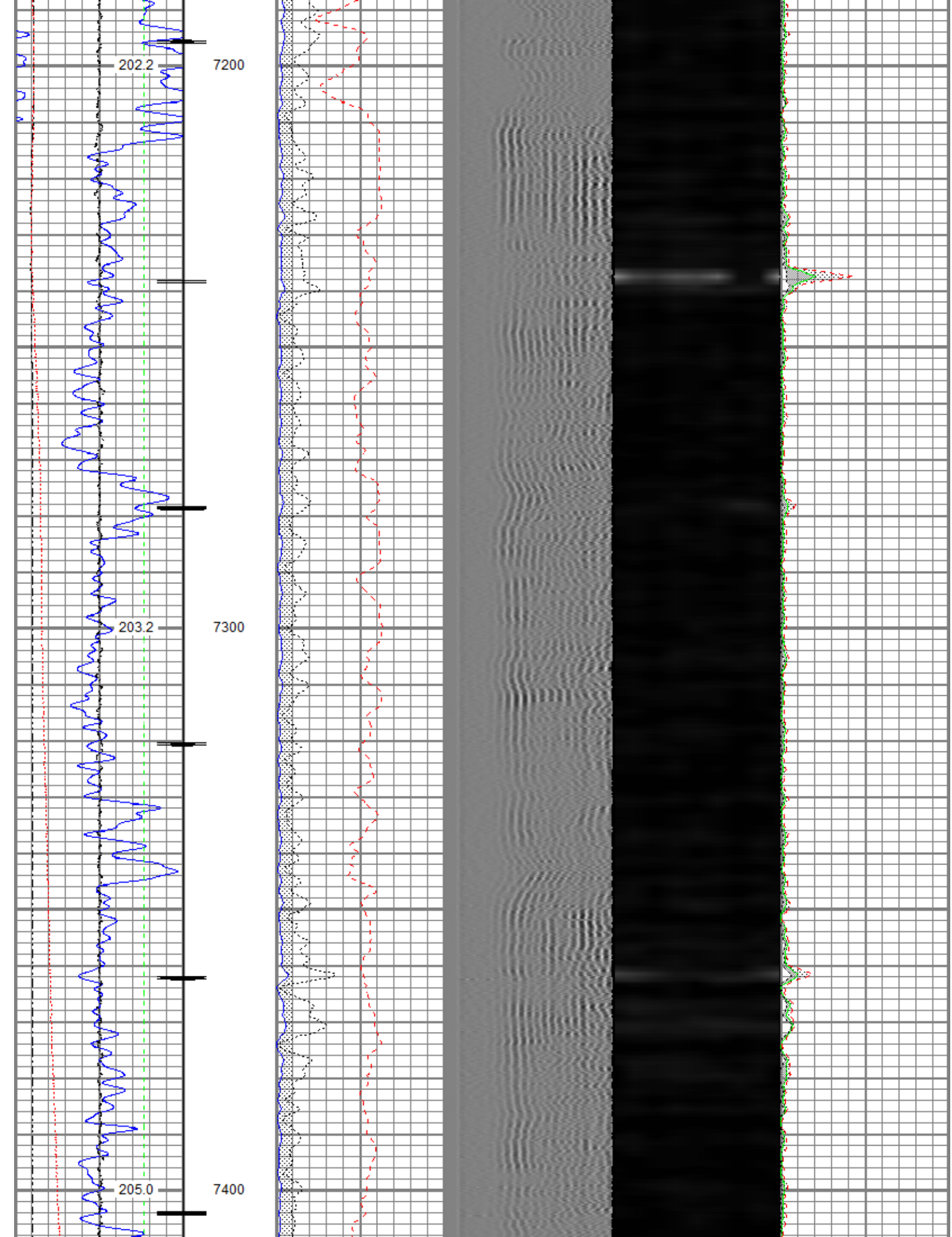


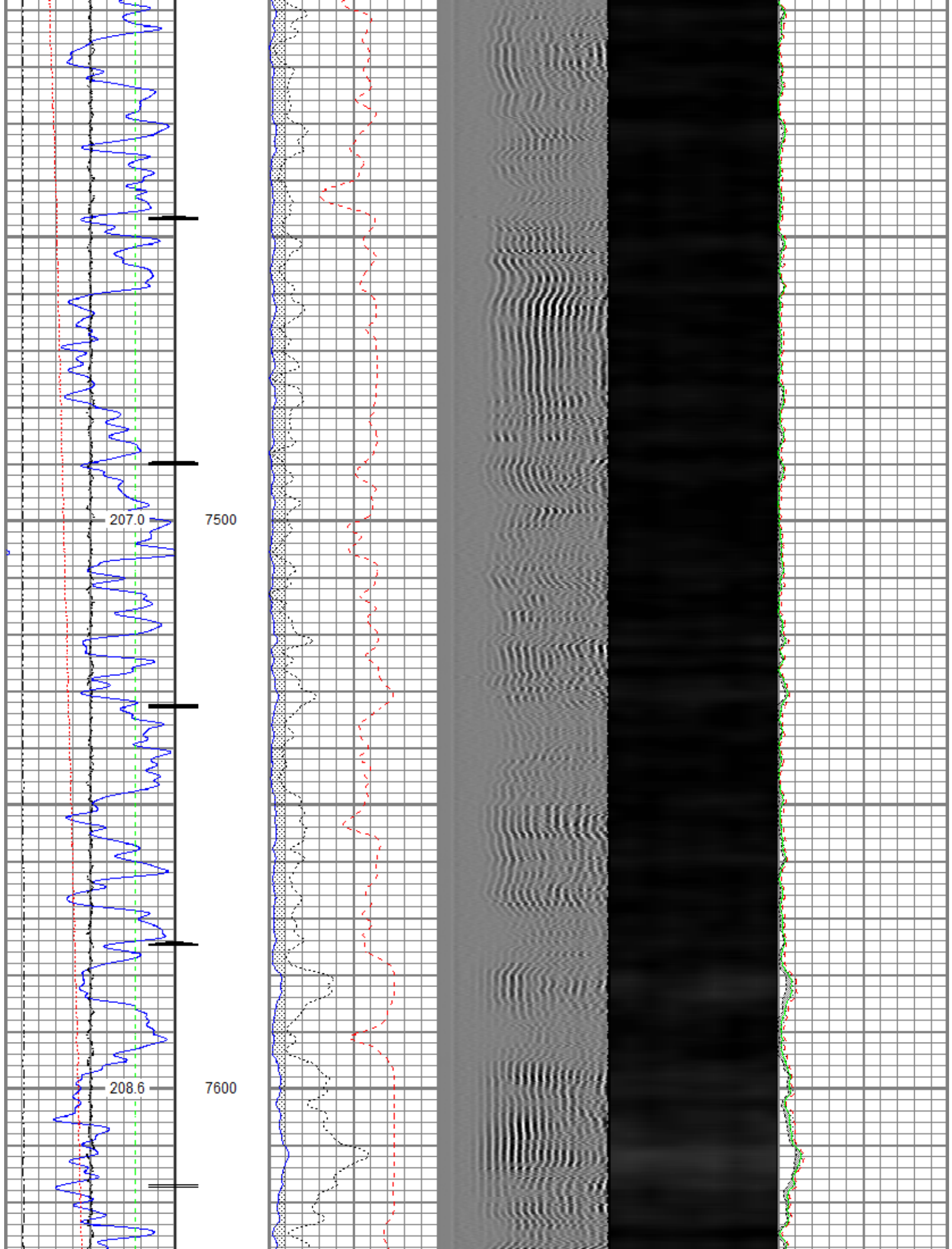


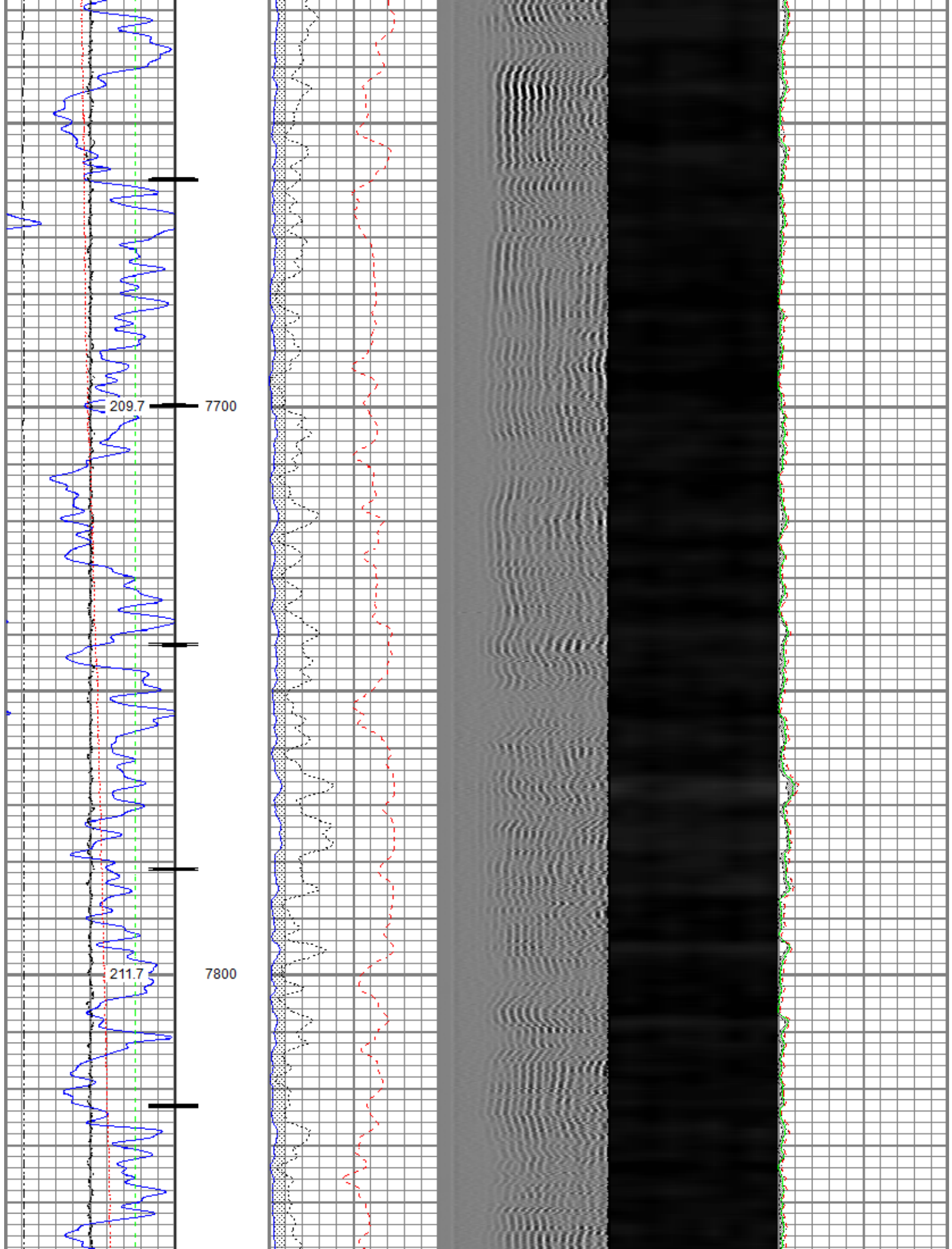


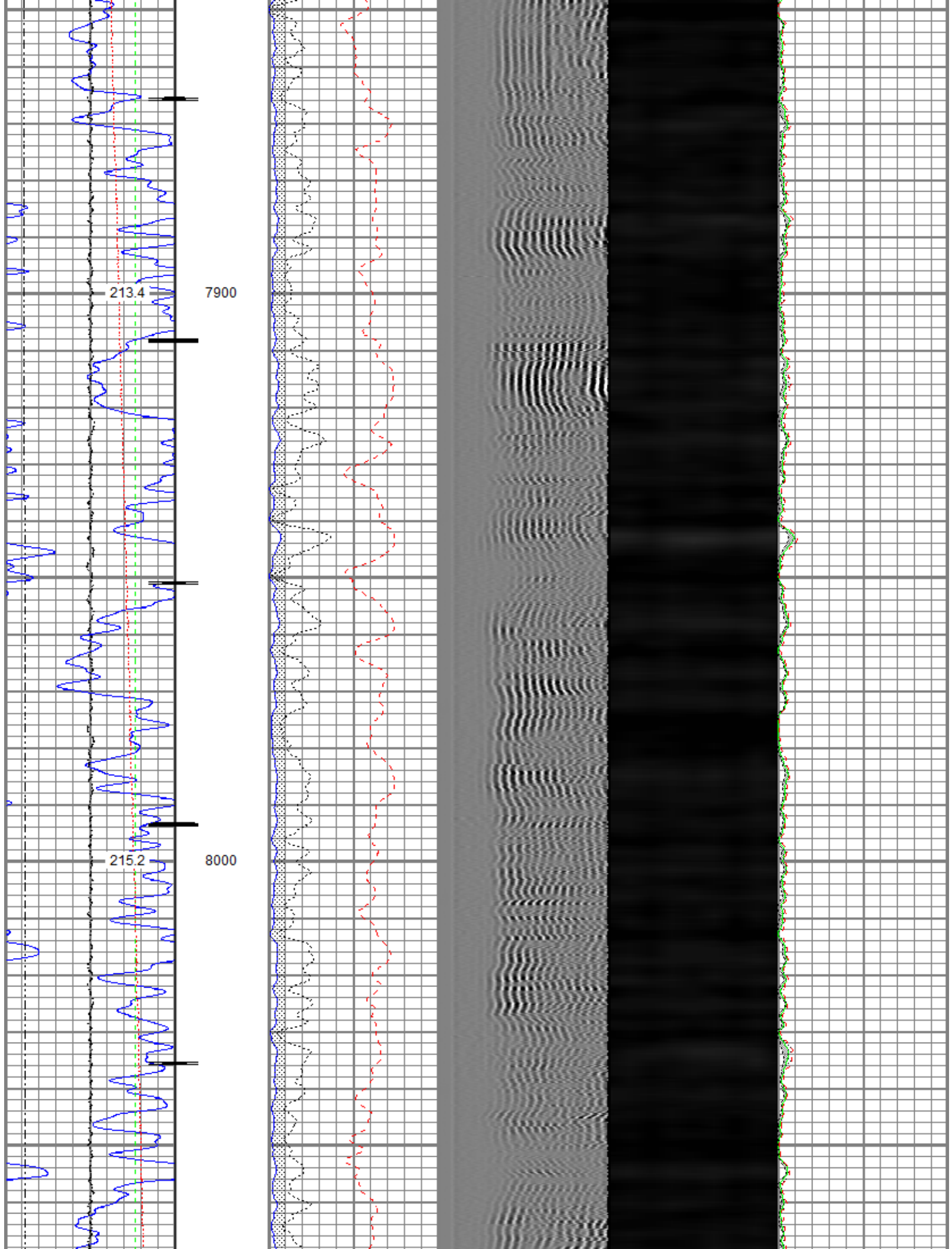


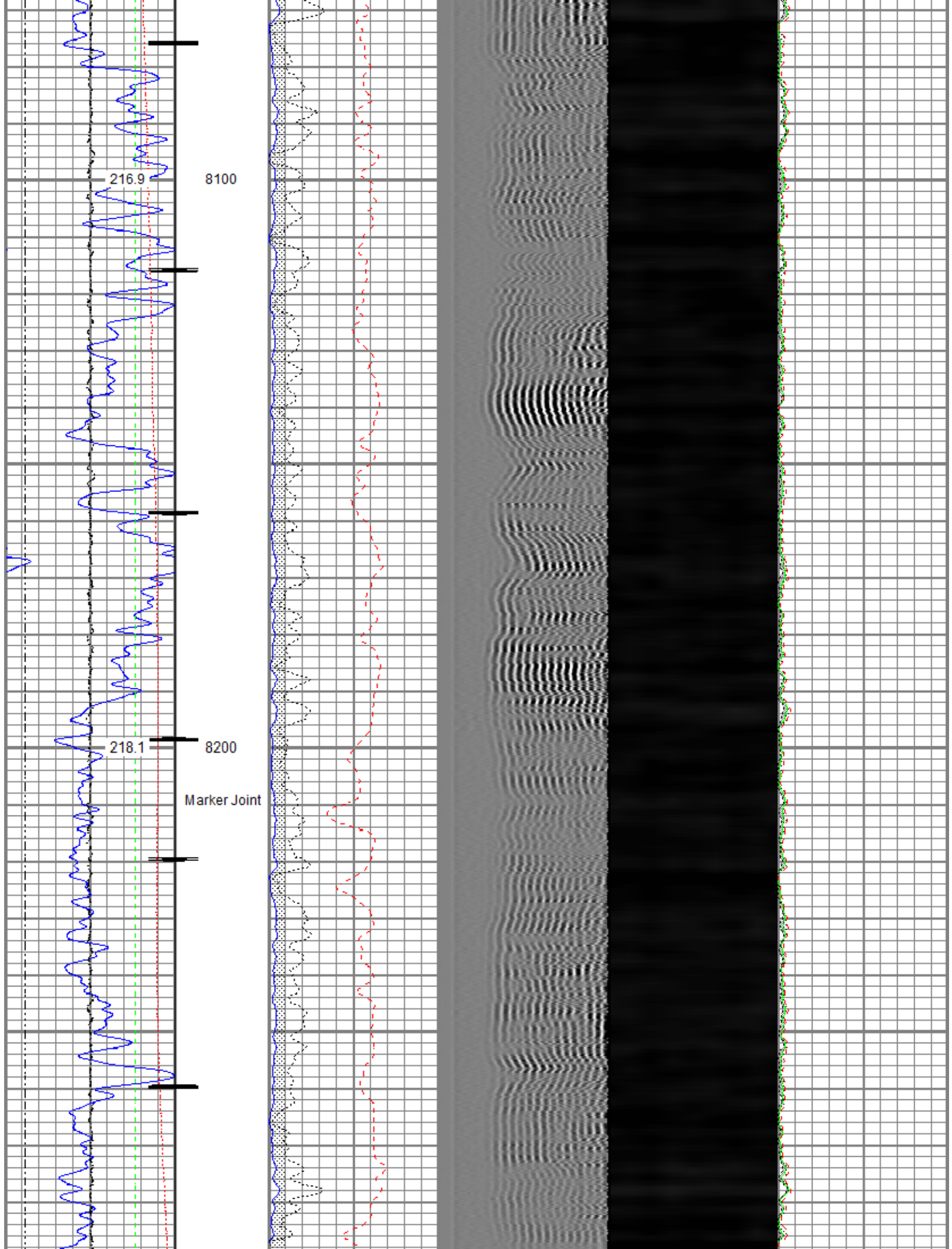


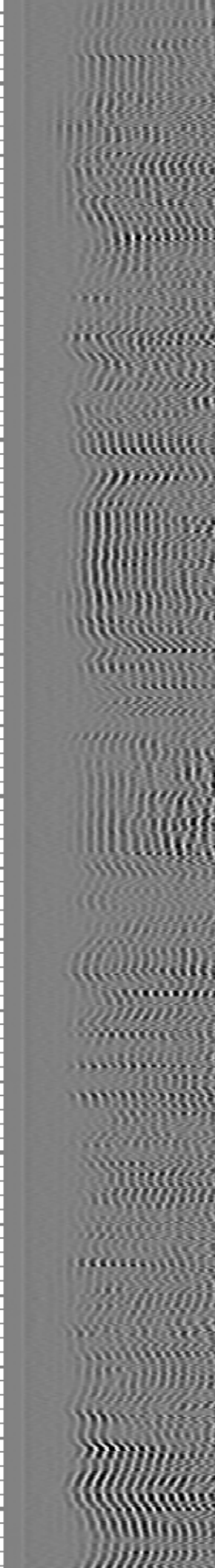
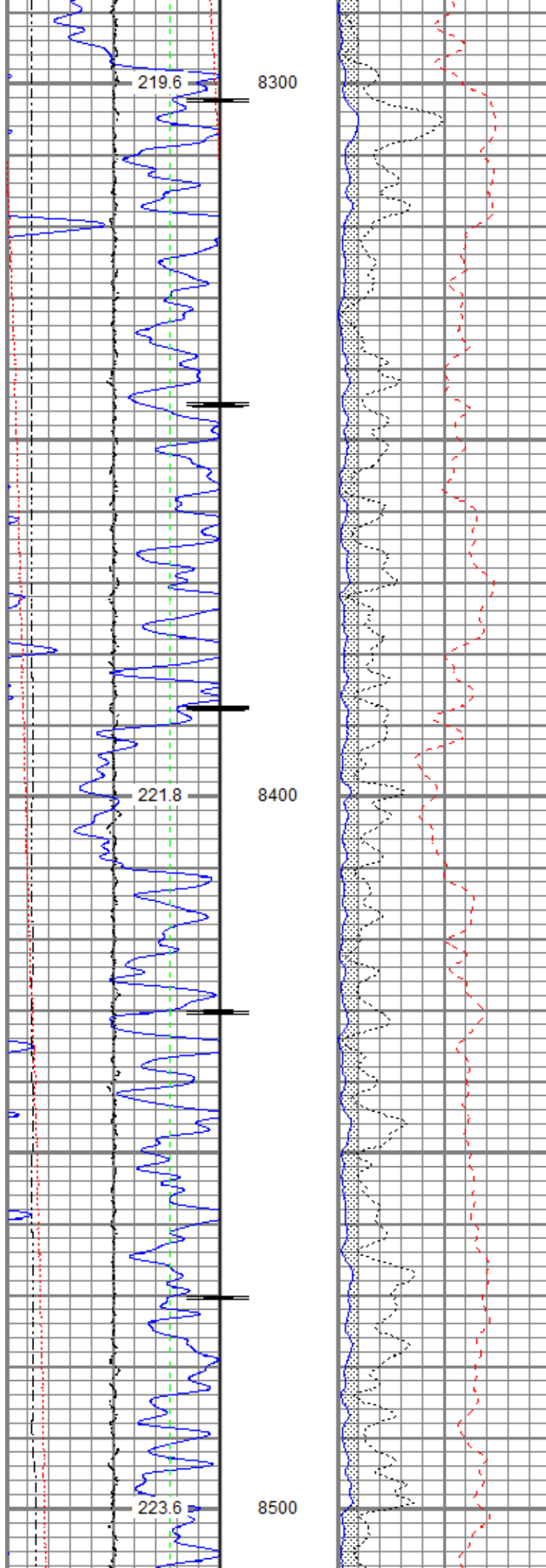


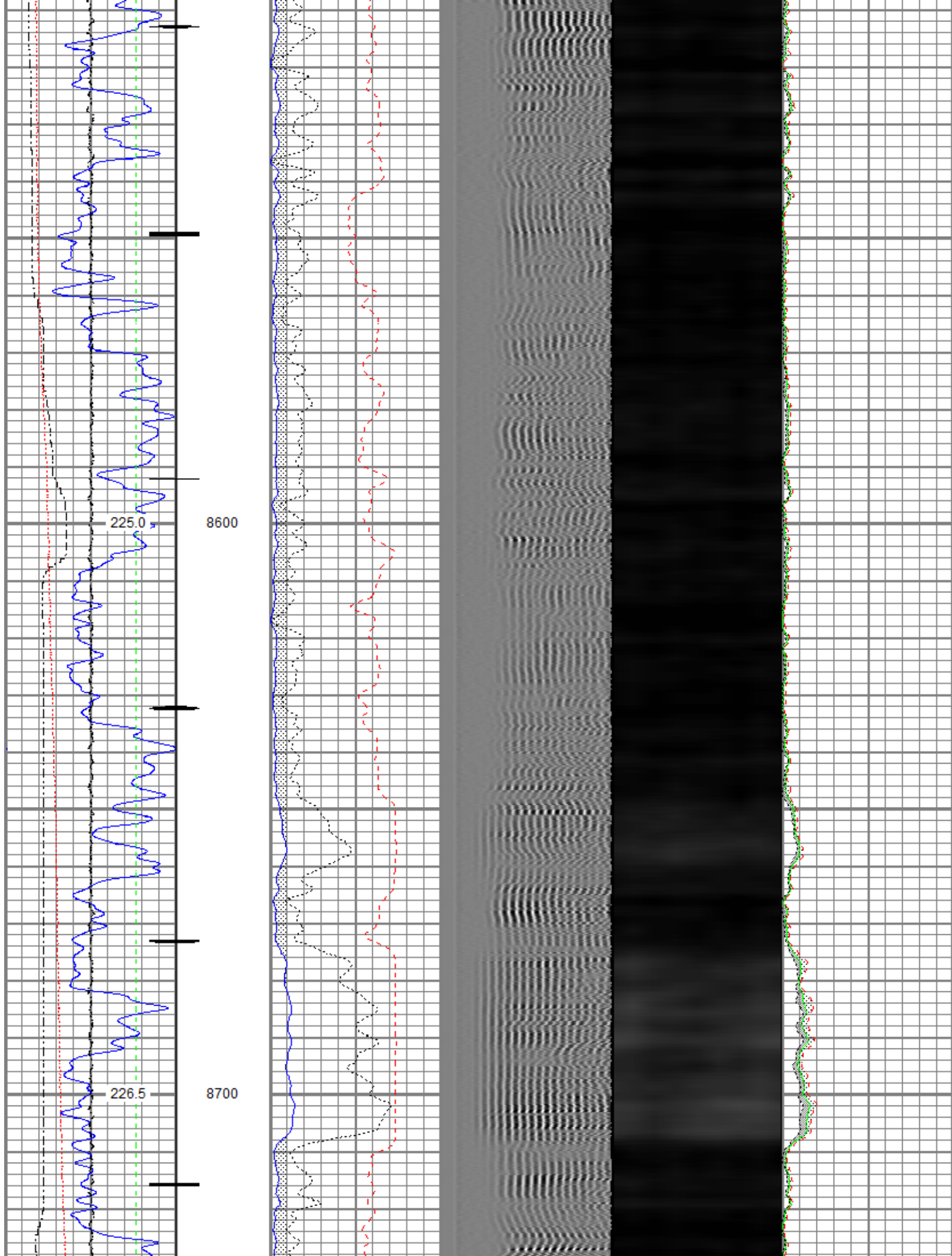


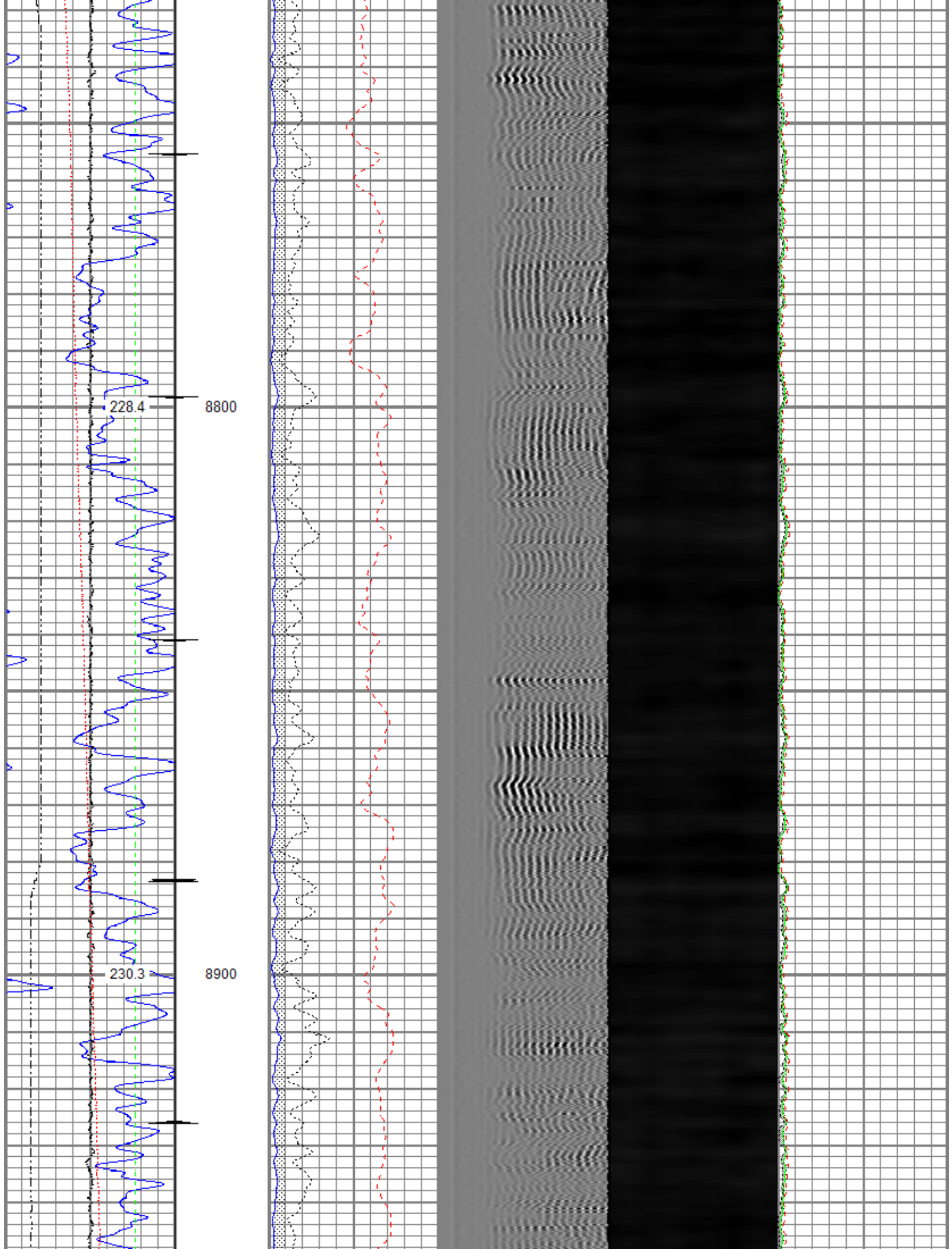


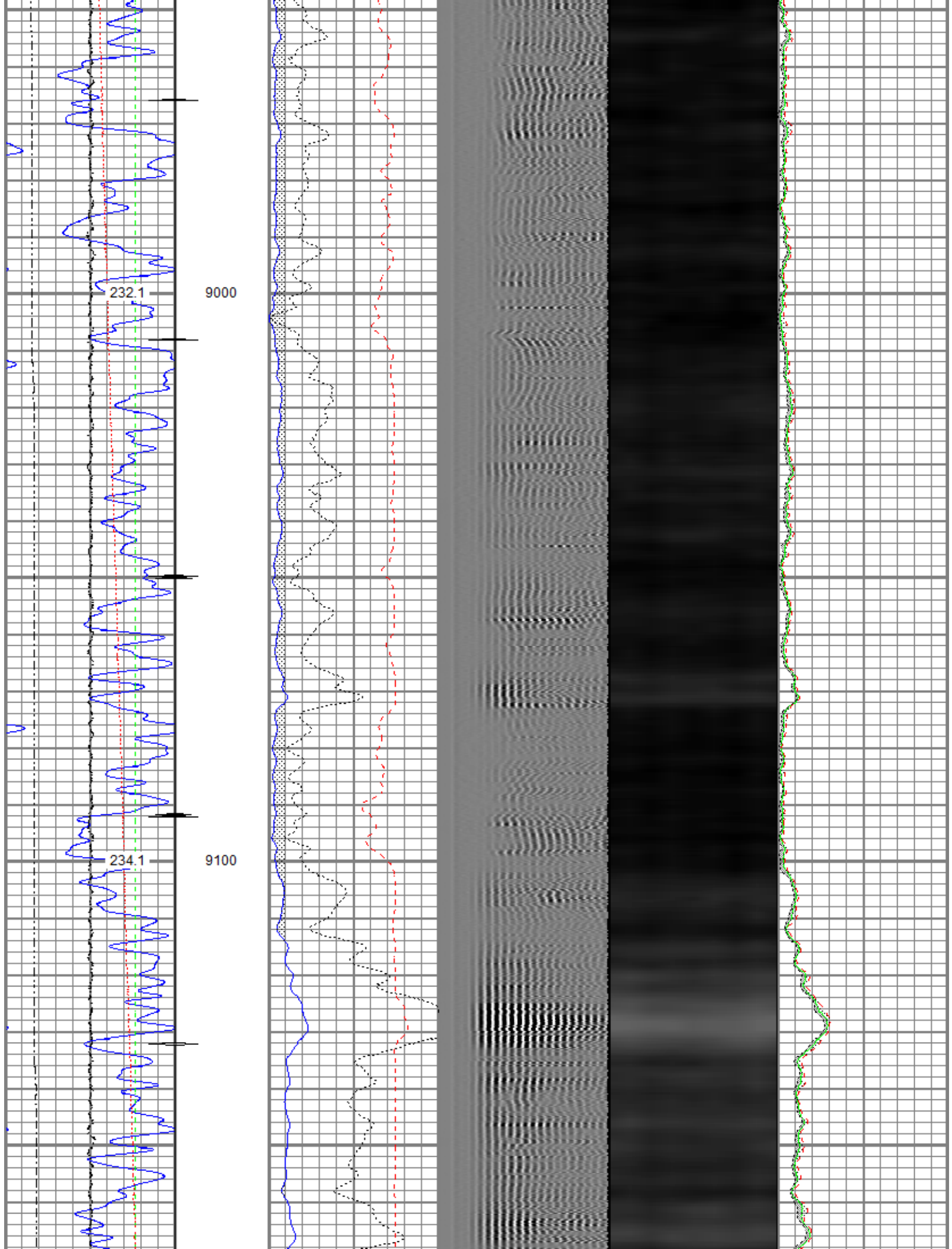


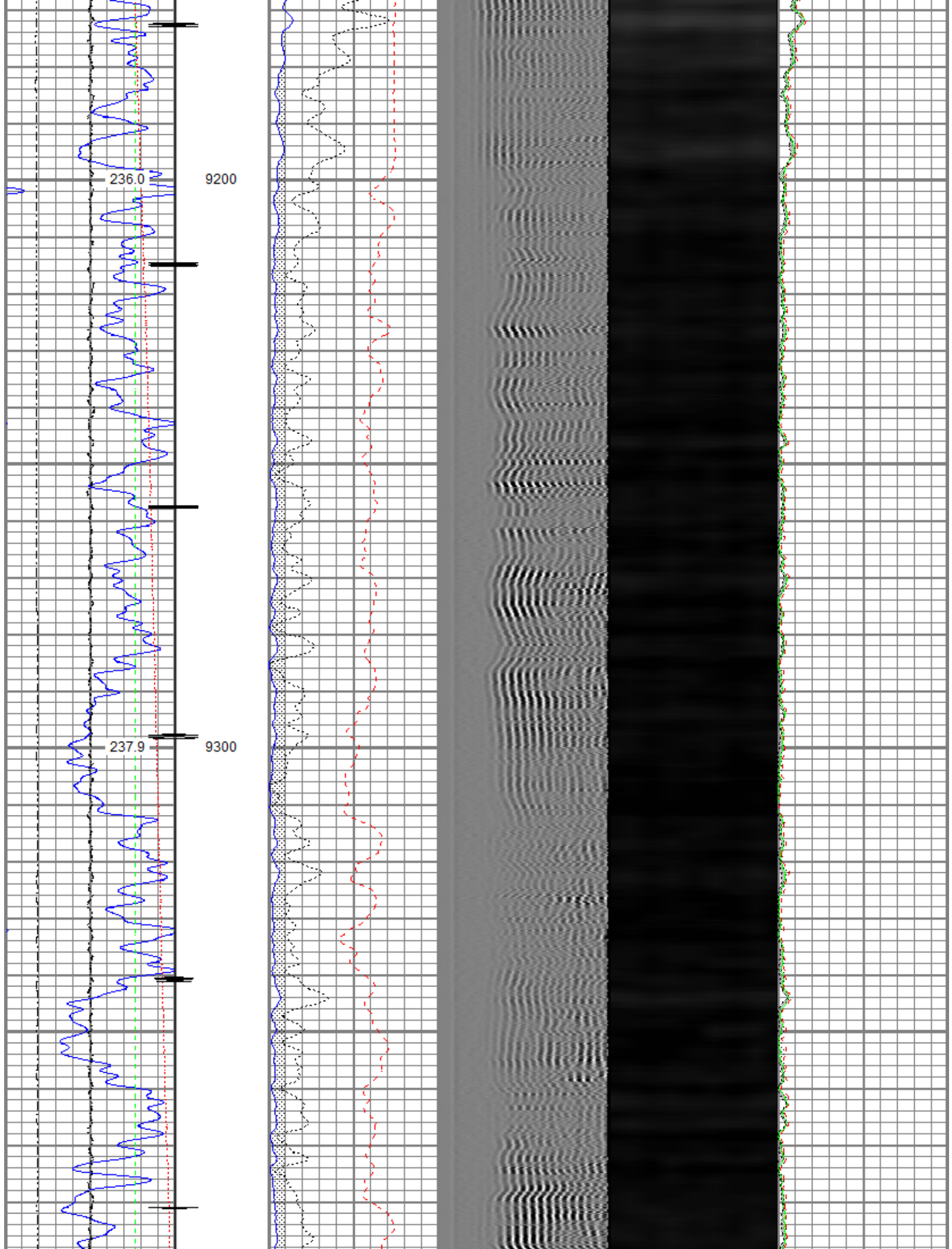


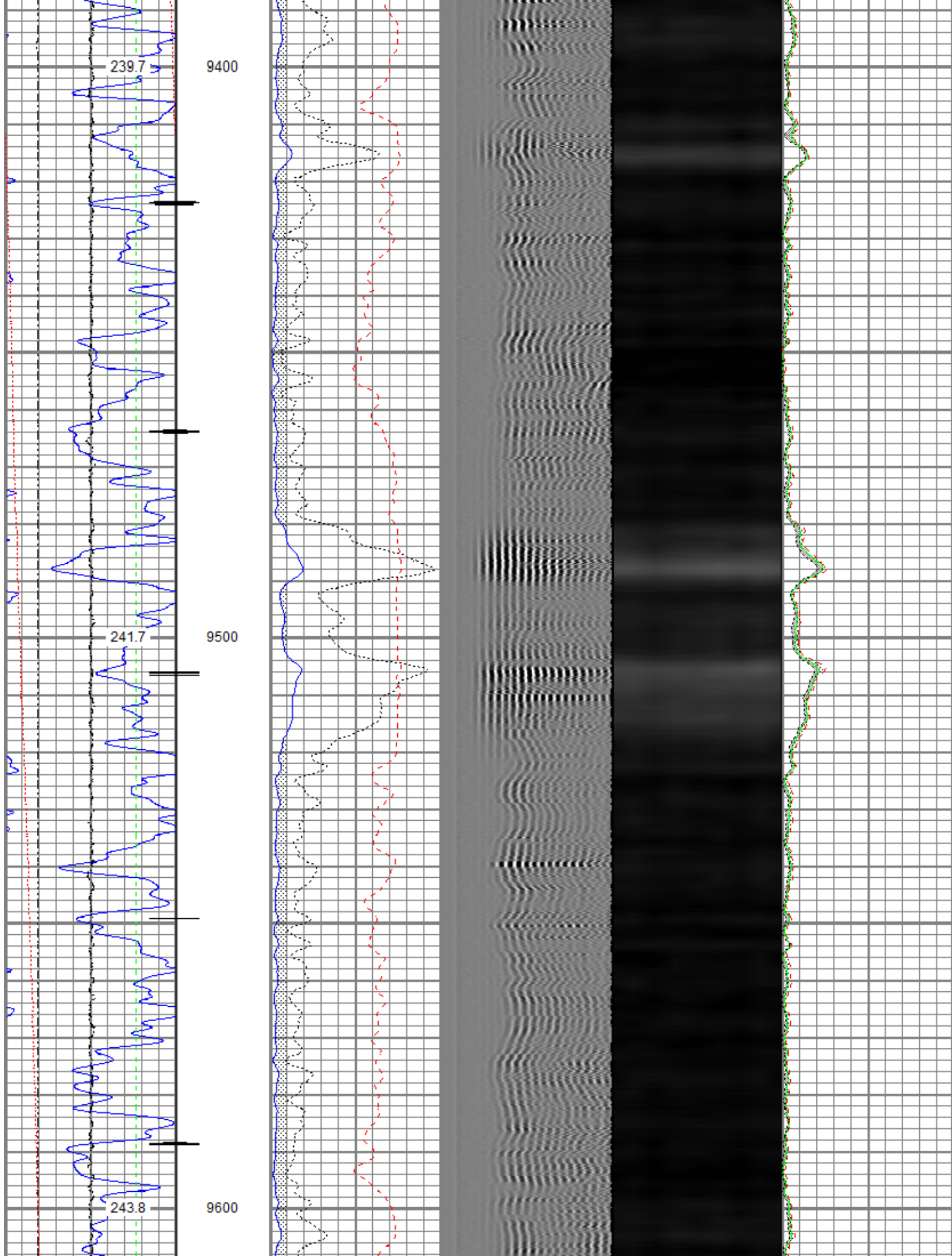


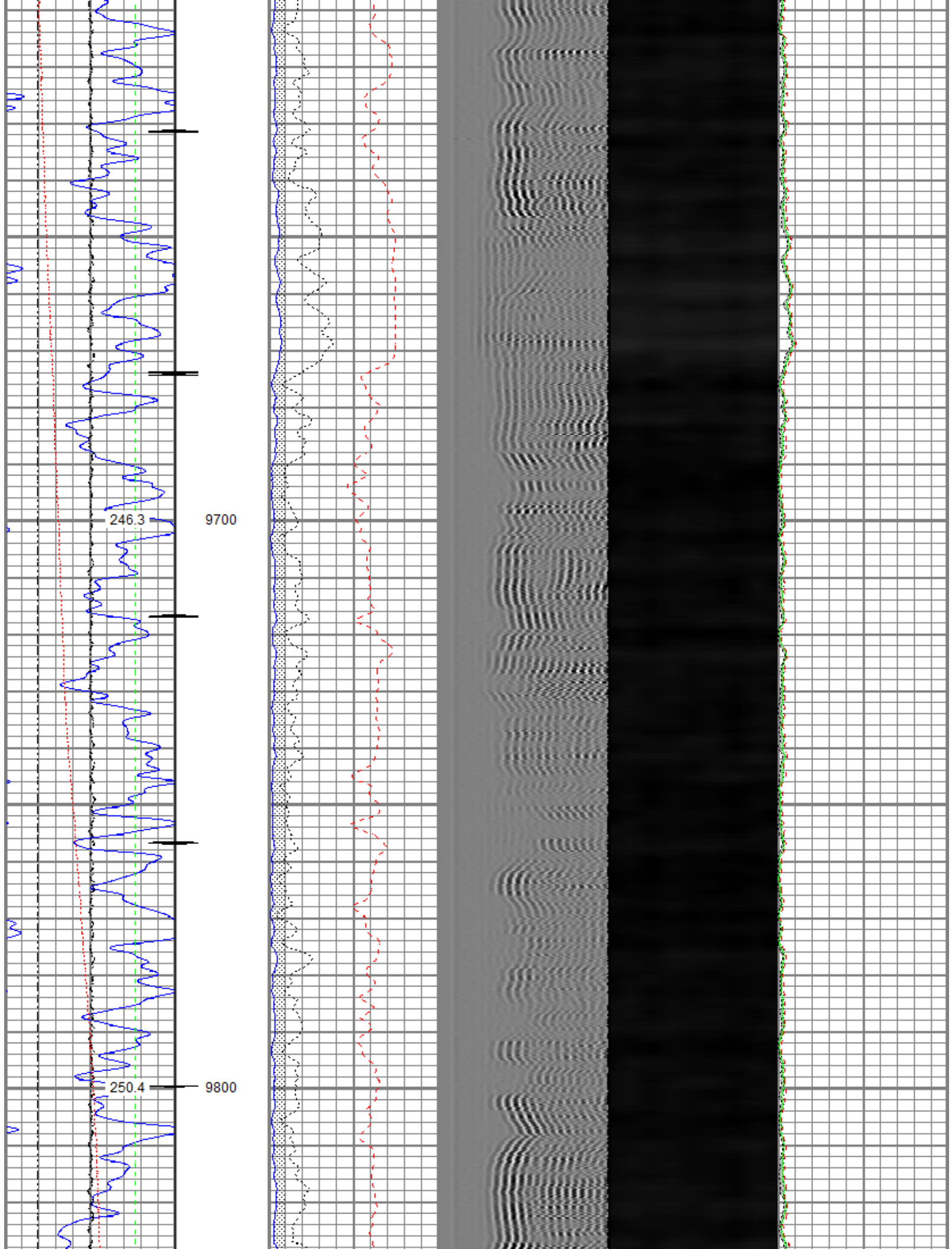












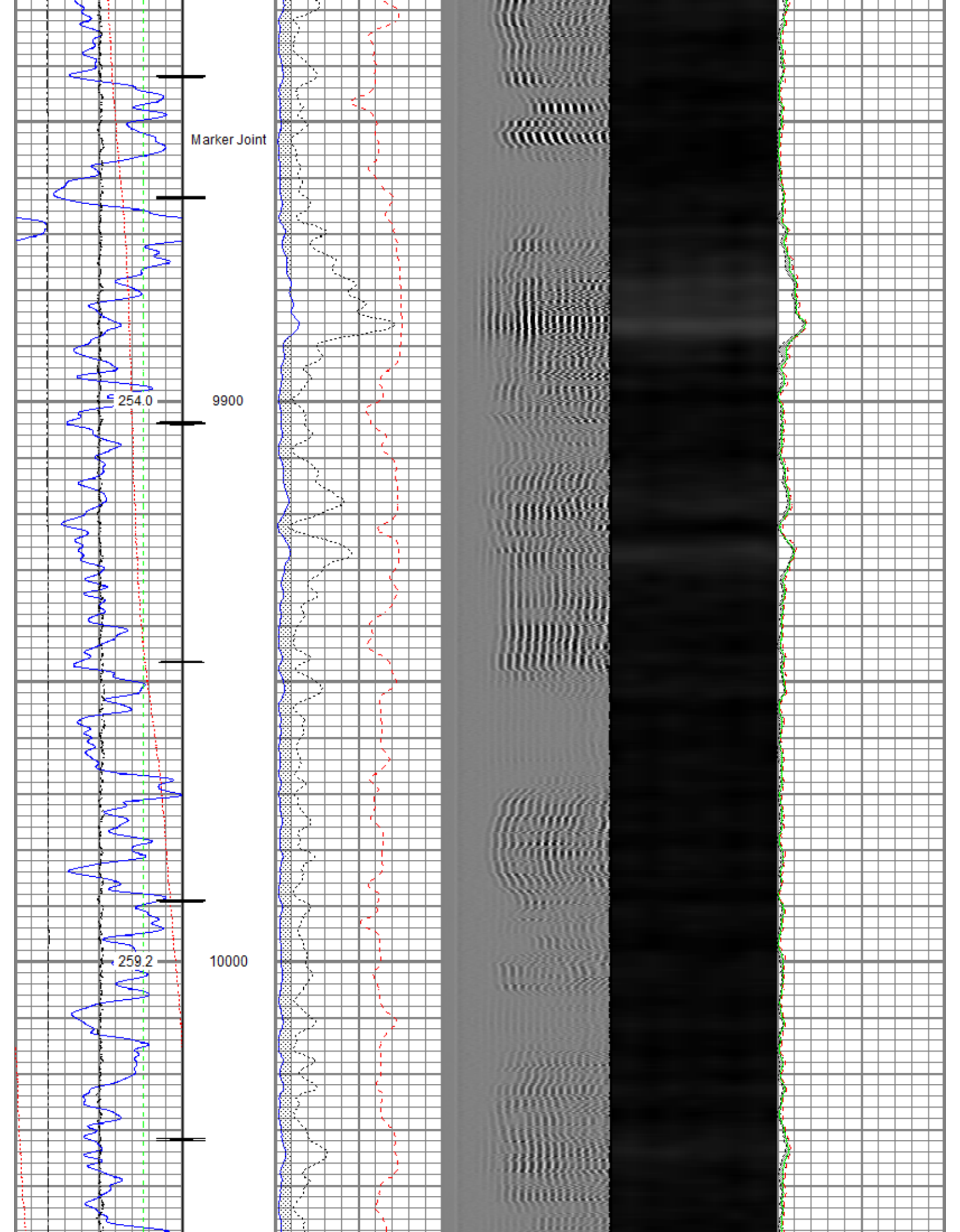
Marker Joint

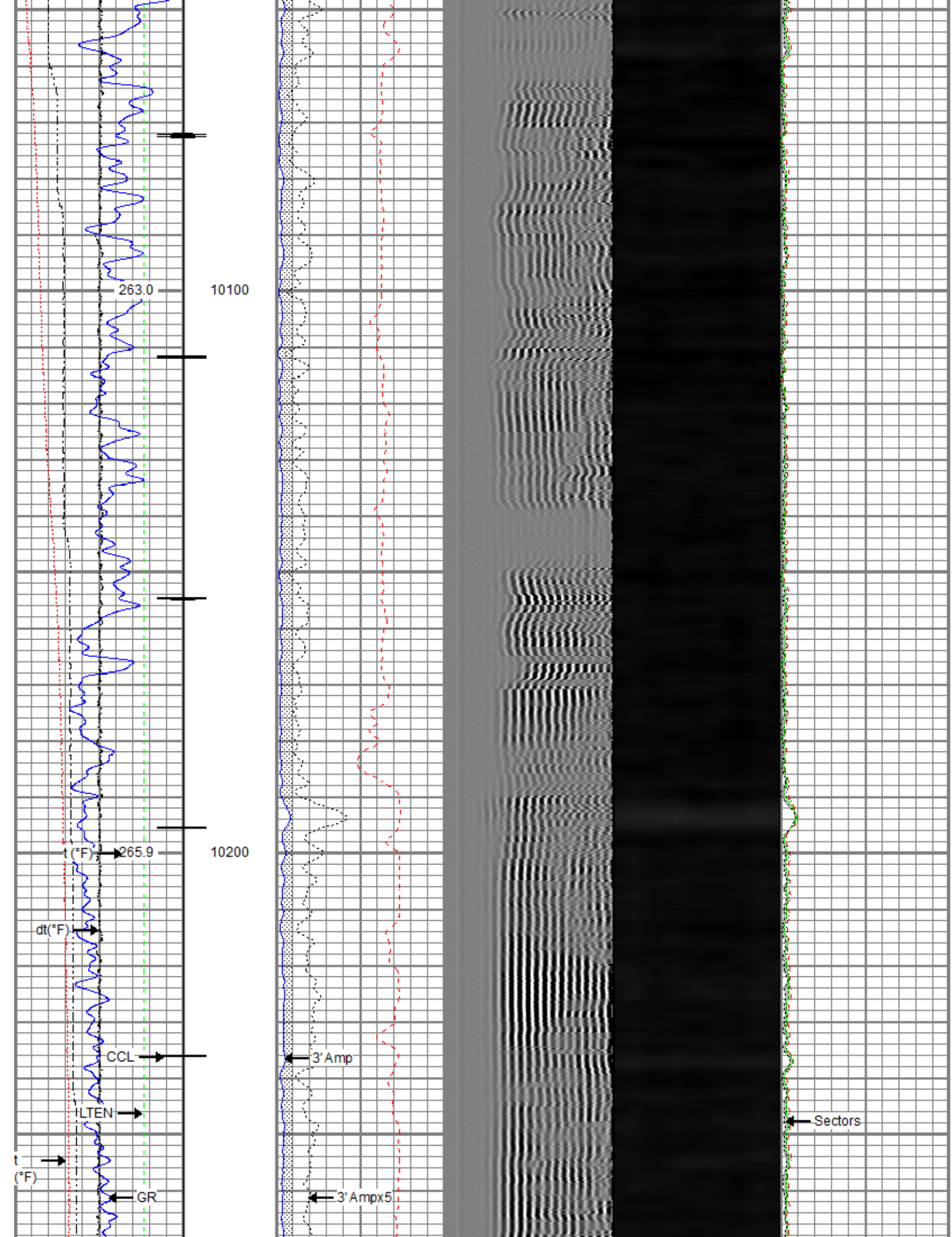
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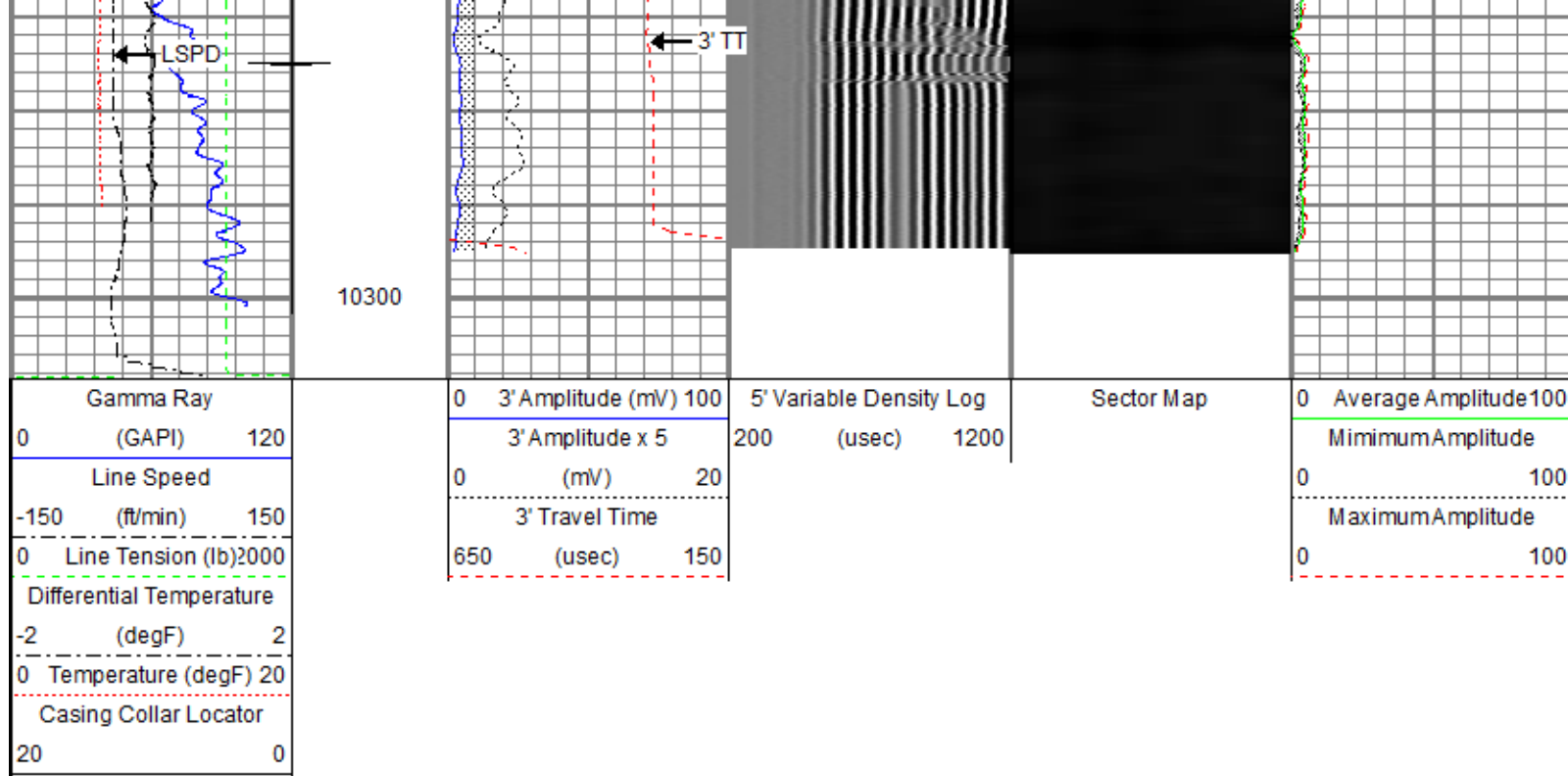
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259.2

10000



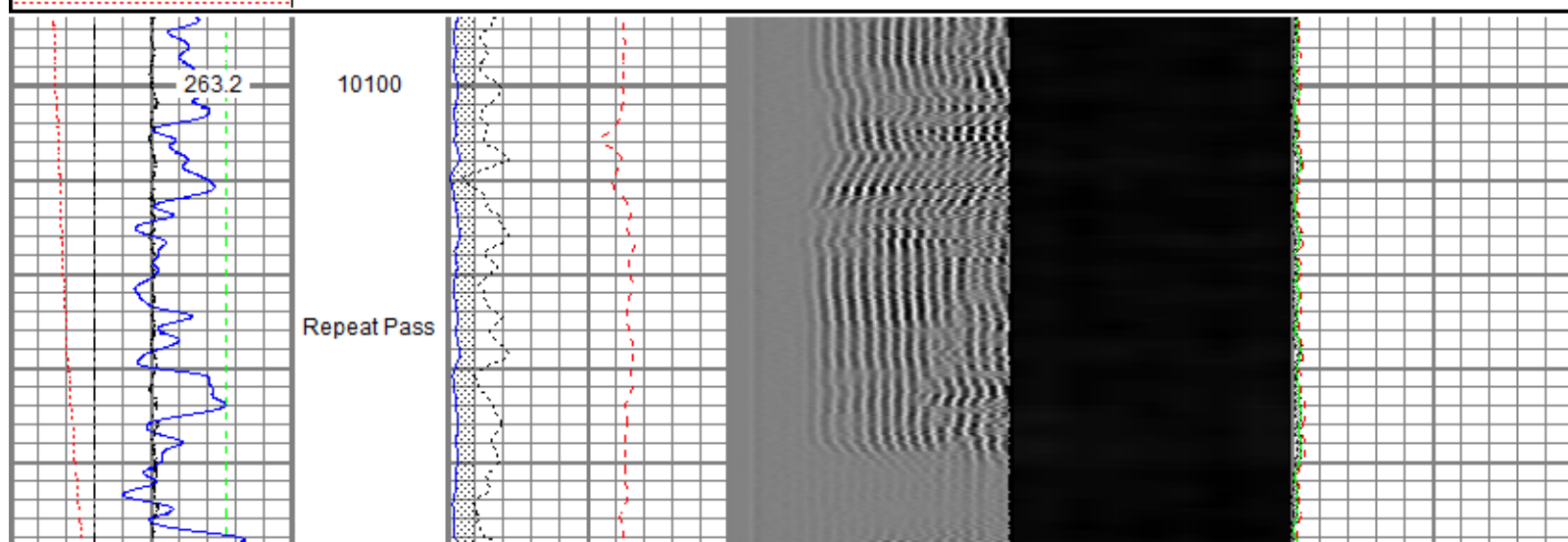
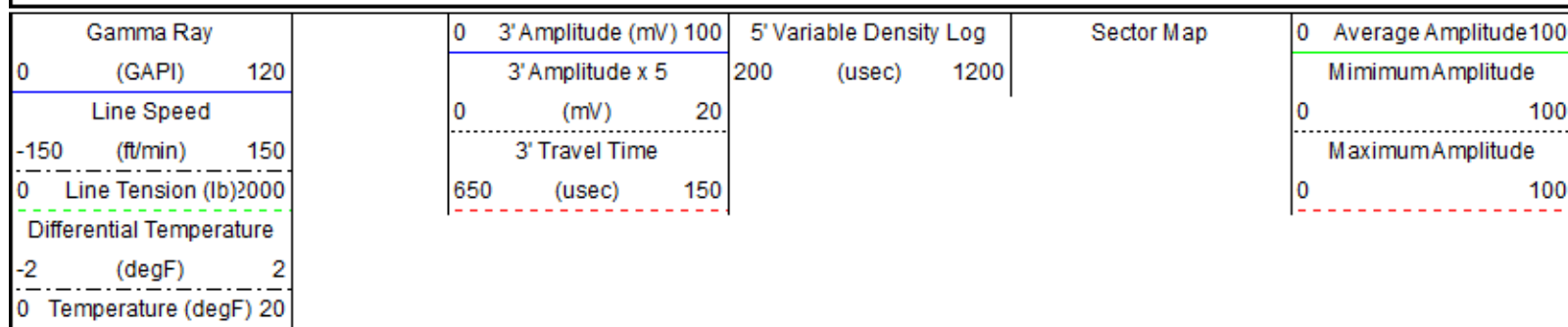


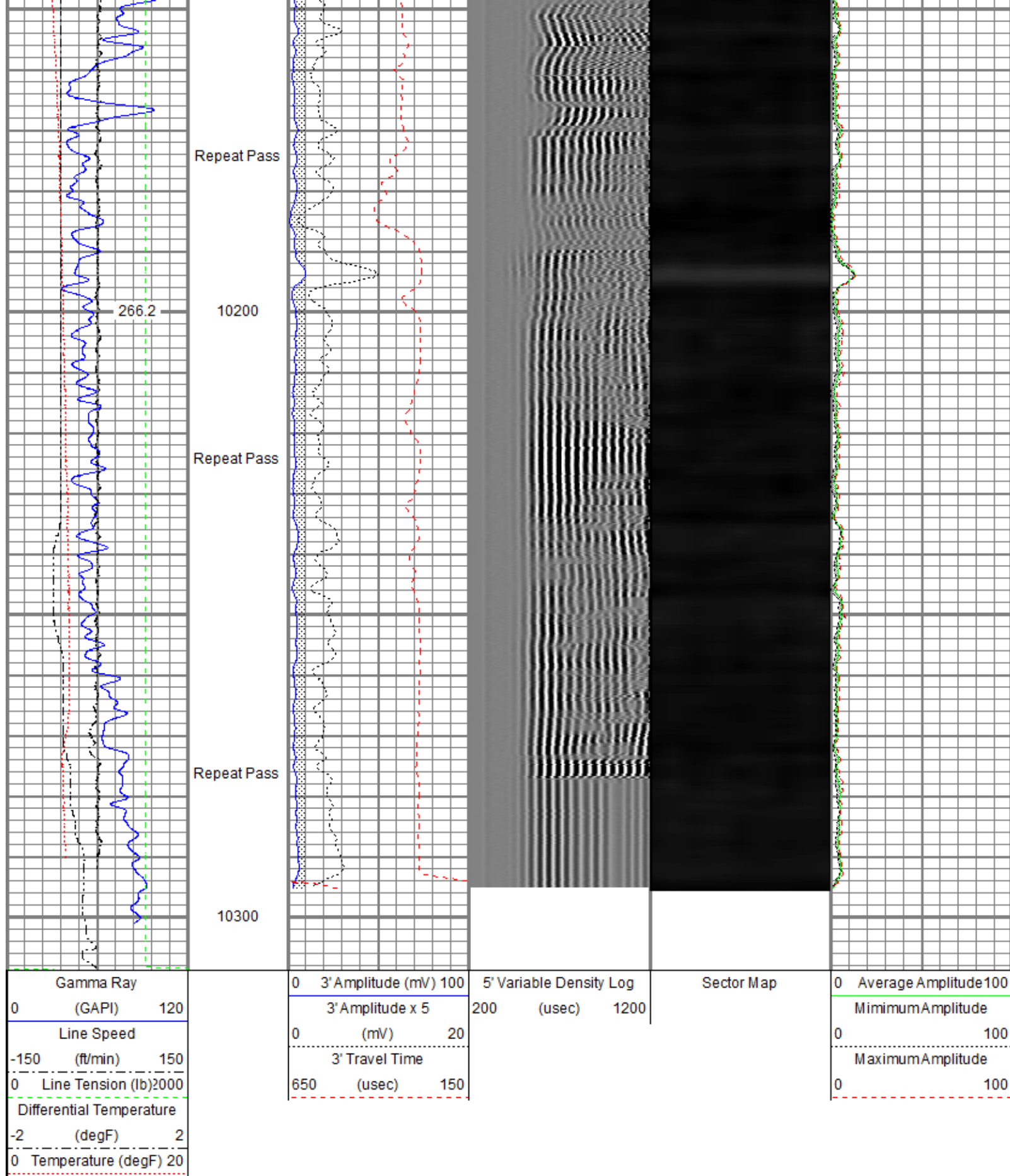



Repeat Pass

Recorded With 0 PSI Surface Induced Pressure

Database File laramie/cc federal 0697-03-01w/processed_laramie energy_cc federal 0697-03-01w_rbl_08-17-19.db
 Dataset Pathname repeat
 Presentation Format ros_rbt004_sx
 Dataset Creation Sat Aug 17 17:00:19 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 Titan 1-7/16" Assembled Electric Cable Head with 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	17.00					
WVFS8	14.77		Probe Radii-2750 RBT (120855) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
WVFS7	14.77					
WVFS6	14.77					
WVFS5	14.77					
WVFS4	14.77					
WVFS3	14.77					
WVFS2	14.77					
WVFS1	14.77					
WVFCAL	14.77					
WVF3FT	14.77					
WVF5FT	13.77					
HEADVOLT	10.52		Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
CCL\$2	6.76					
CCL\$1	6.76					
GR	5.51		Probe GR-CCL-2750 GOB (FW1211-081) Probe 2-3/4" rev.2 Digital Scintillation Gamma Ray/CCL Combined with GO Bottom	4.51	2.75	55.00
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
			GO BN-14375 GO 1-7/16" Bull Nose with Go Box Top	0.25	1.44	1.00
Dataset: processed_laramie energy_cc federal 0697-03-01w_rbl_08-17-19.db: field/well/run1/main Total length: 23.82 ft Total weight: 224.60 lb O.D.: 2.75 in						

Calibration Report

Database File c:\programdata\warrior\data\laramie\cc federal 0697-03-01w\processed_laramie energy_cc federal 0697-03-01w_rbl_08-17-19.d
 Dataset Pathname main
 Dataset Creation Sat Aug 17 17:06:22 2019

Gamma Ray Calibration Report						
Serial Number:	FW1211-081					
Tool Model:	2750 GOB					
Performed:	Mon Oct 01 11:32:39 2018					
Calibrator Value:	637.0	GAPI				
Background Reading:	112.4	cps				
Calibrator Reading:	1008.7	cps				
Sensitivity:	0.7107	GAPI/cps				
Segmented Cement Bond Log Calibration Report						
Serial Number:	120855					
Tool Model:	2750 RBT					
Calibration Casing Diameter:	4.500	in				
Calibration Depth:	280.386	ft				
Master Calibration, performed Sat Aug 17 12:09:19 2019:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.004	0.193	0.800	81.196	408.108	2.484
CAL	-0.006	1.001				
5'	-0.002	0.184	0.800	81.196	432.723	1.561
SUM						
S1	-0.003	0.191	0.000	100.000	514.411	1.777
S2	-0.004	0.207	0.000	100.000	474.074	1.800
S3	-0.003	0.216	0.000	100.000	455.567	1.513
S4	-0.003	0.212	0.000	100.000	464.110	1.581
S5	-0.003	0.191	0.000	100.000	516.520	1.501
S6	-0.004	0.180	0.000	100.000	545.697	1.918
S7	-0.003	0.175	0.000	100.000	559.448	1.858
S8	-0.003	0.190	0.000	100.000	517.956	1.581
Internal Reference Calibration, performed (Not Performed):						
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.006	1.001	1.000	0.000
Air Zero Calibration, performed Sat Aug 17 06:49:53 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 RB1
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	Laramie Energy LLC
Well	CC Federal 0697-03-01W
Field	Grand Valley
County	Garfield
State	Colorado