



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

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

Well George 25-1HZ

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-46332

SEC 25 TWP 2N RGE 65W

Permanent Datum Ground Level Elevation 4900'  
Log Measured From Kelly Bushing 17 FT  
Drilling Measured From Kelly Bushing  
Other Services  
JB/GR  
RBP  
RBL 0 PSI  
Elevation  
K.B. 4917'  
D.F. ---  
G.L. 4900'

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Well George 25-1HZ  
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County Weld  
State Colorado

Date	12-AUG-2018														
Run Number	Four														
Depth Driller	17865 FT														
Depth Logger	6647 FT														
Bottom Logged Interval	6632 FT														
Top Log Interval	Surface														
Open Hole Size	7.88"														
Type Fluid	Water														
Density / Viscosity	8.34 lb/gal														
Max. Recorded Temp.	214°F														
E estimated Cement Top	See Log														
Time Well Ready	ROA														
Time Logger on Bottom	11:10														
Equipment Number	HD-363														
Location	Platteville, CO														
Recorded By	J. Morrison														
Witnessed By	Kyle Carver														
Borehole Record					Tubing Record										
Run Number	Bit	From	To	Size	Weight	From	To								
Casing Record	Size (in)	Wgt (lbs/ft)	Grade	Top	Bottom										
Surface Casing	9 5/8	36	J-55	Surface	1914 FT										
Intermediate #1	5 1/2	17	HCP 110	Surface	17857 FT										
Intermediate #2															
Liner															

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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

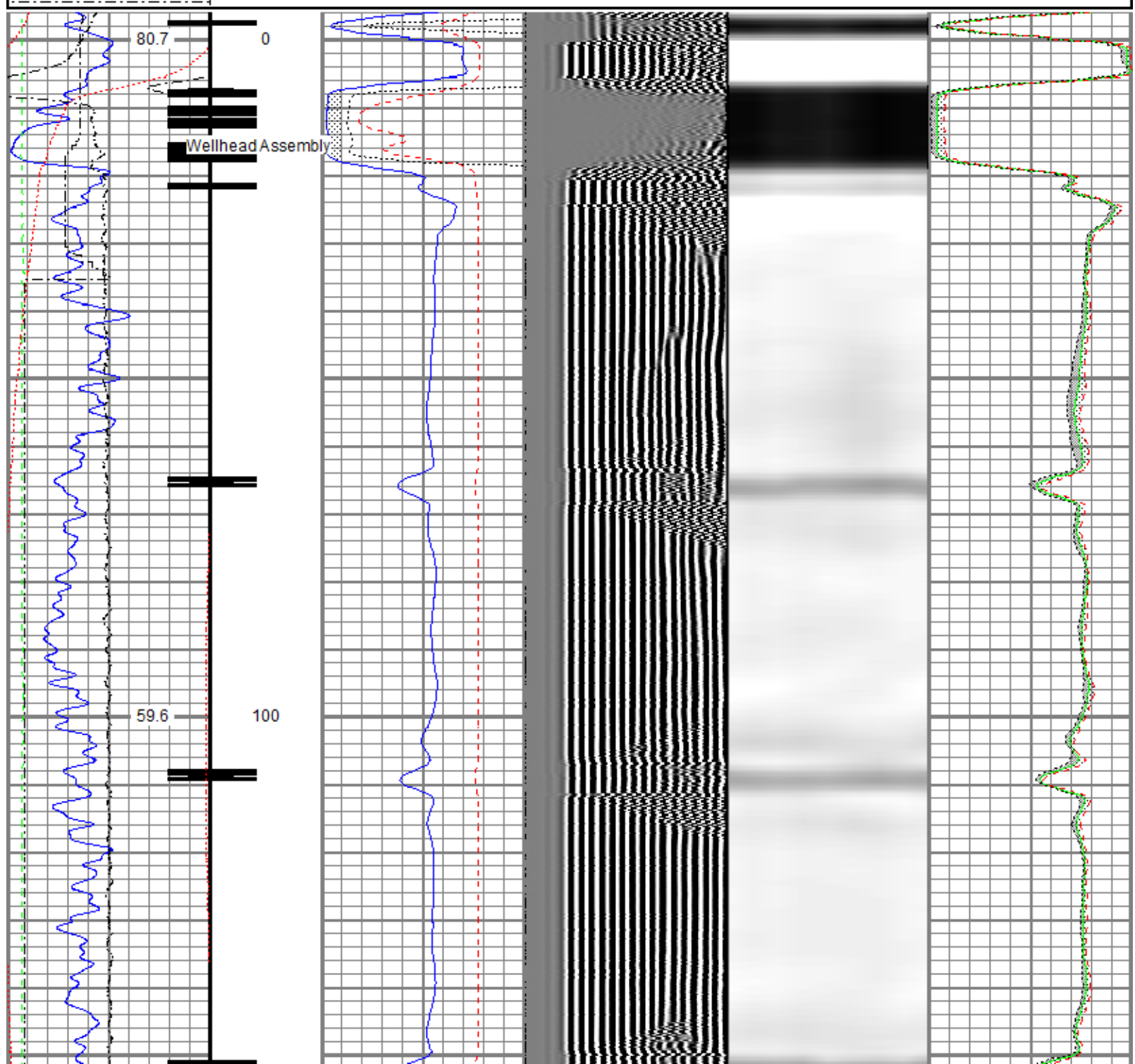
Log ran as per customer request  
Depth referenced to Casing Tally reported Marker Joint at 6600 FT  
Adjusted +1 FT to correlate with Marker Joint  
Ran JB/GR down to 7718 FT  
Log ran with 2800 PSI Surface Induced Pressure  
Logging tools were clean and free of any debris upon completion of operations  
Thank you for choosing Reliance Oilfield Services, LLC!!

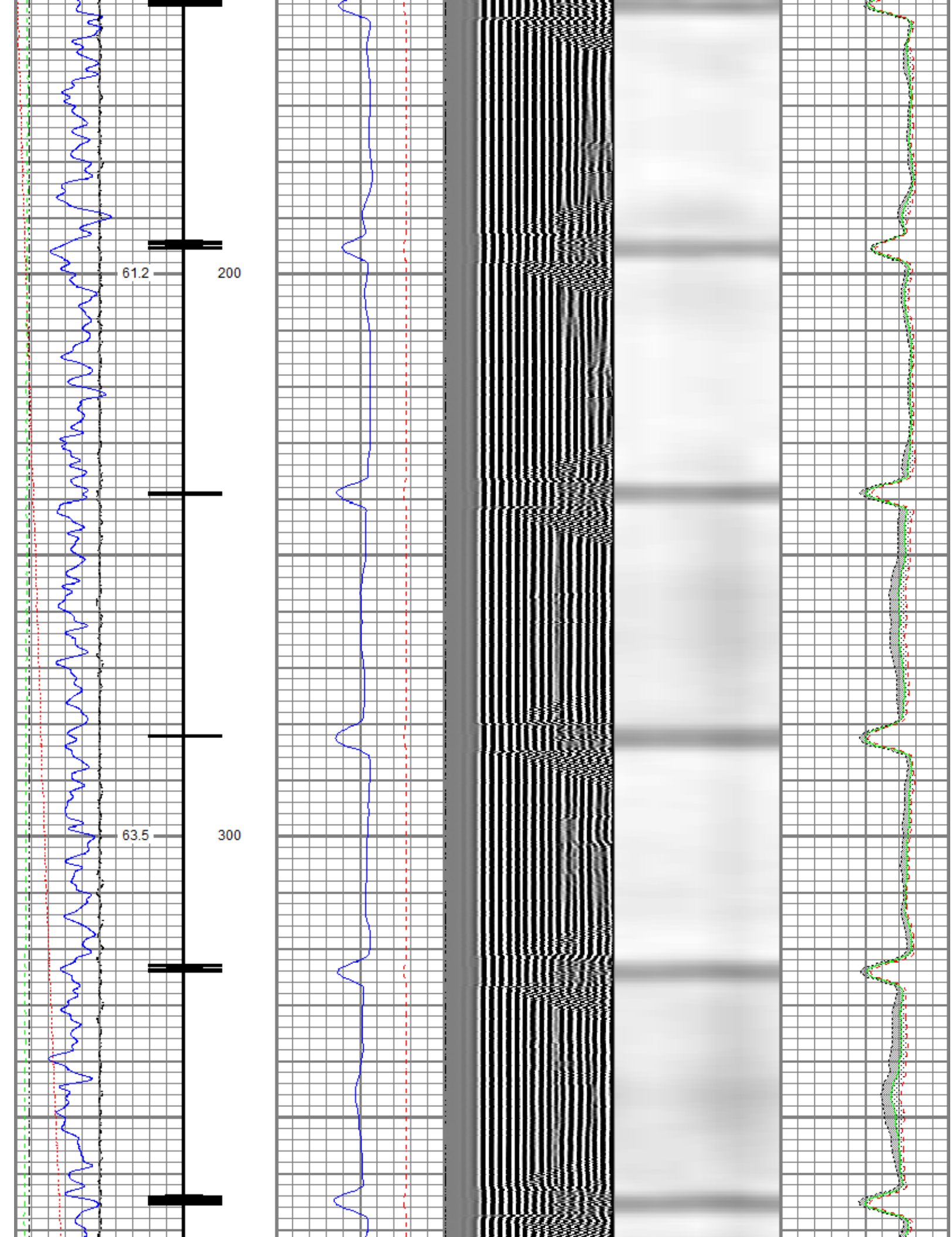
Main Pass

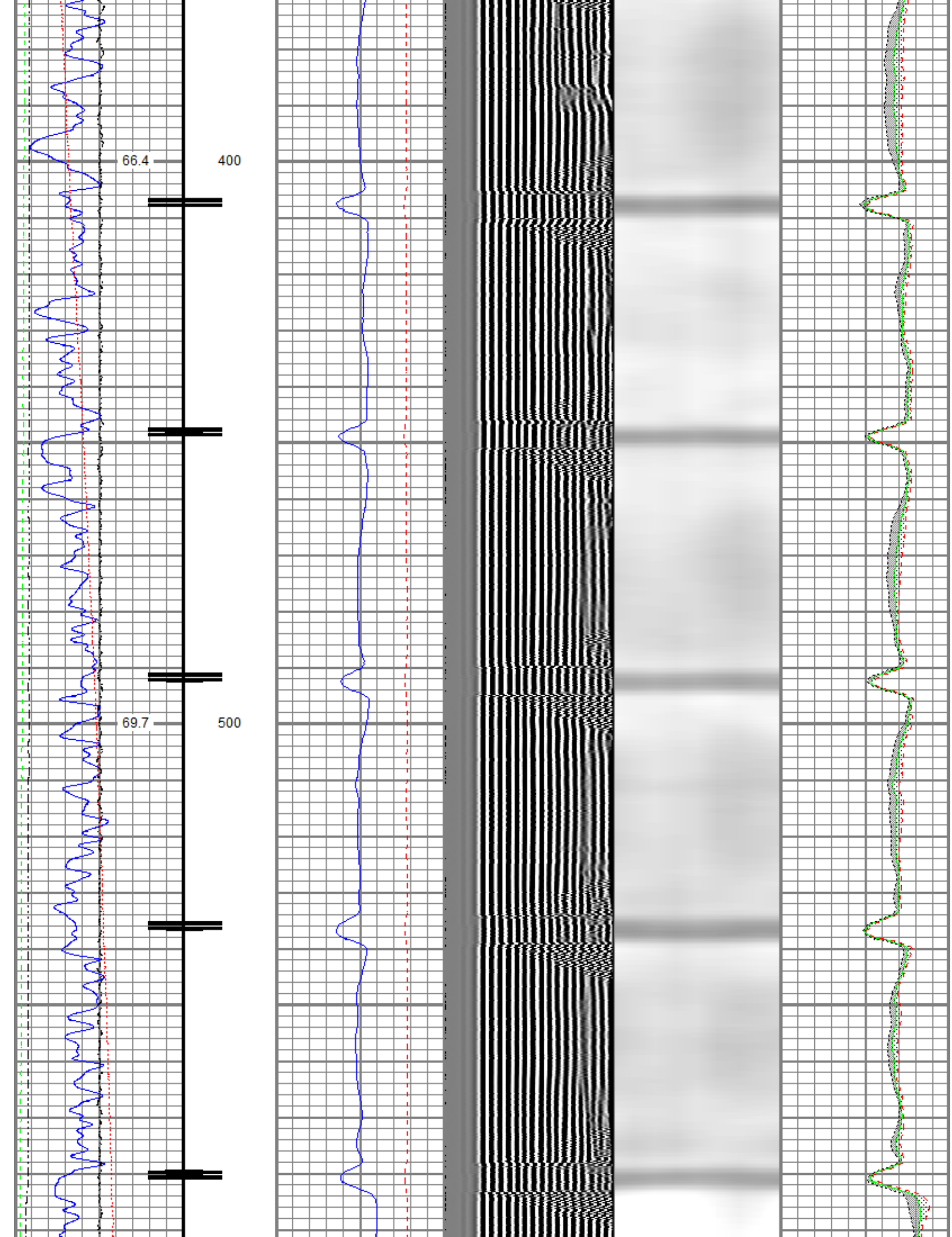


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Presentation Format	ros_radri
Dataset Creation	Mon Aug 13 15:34:03 2018
Charted by	Depth in Feet scaled 1:240

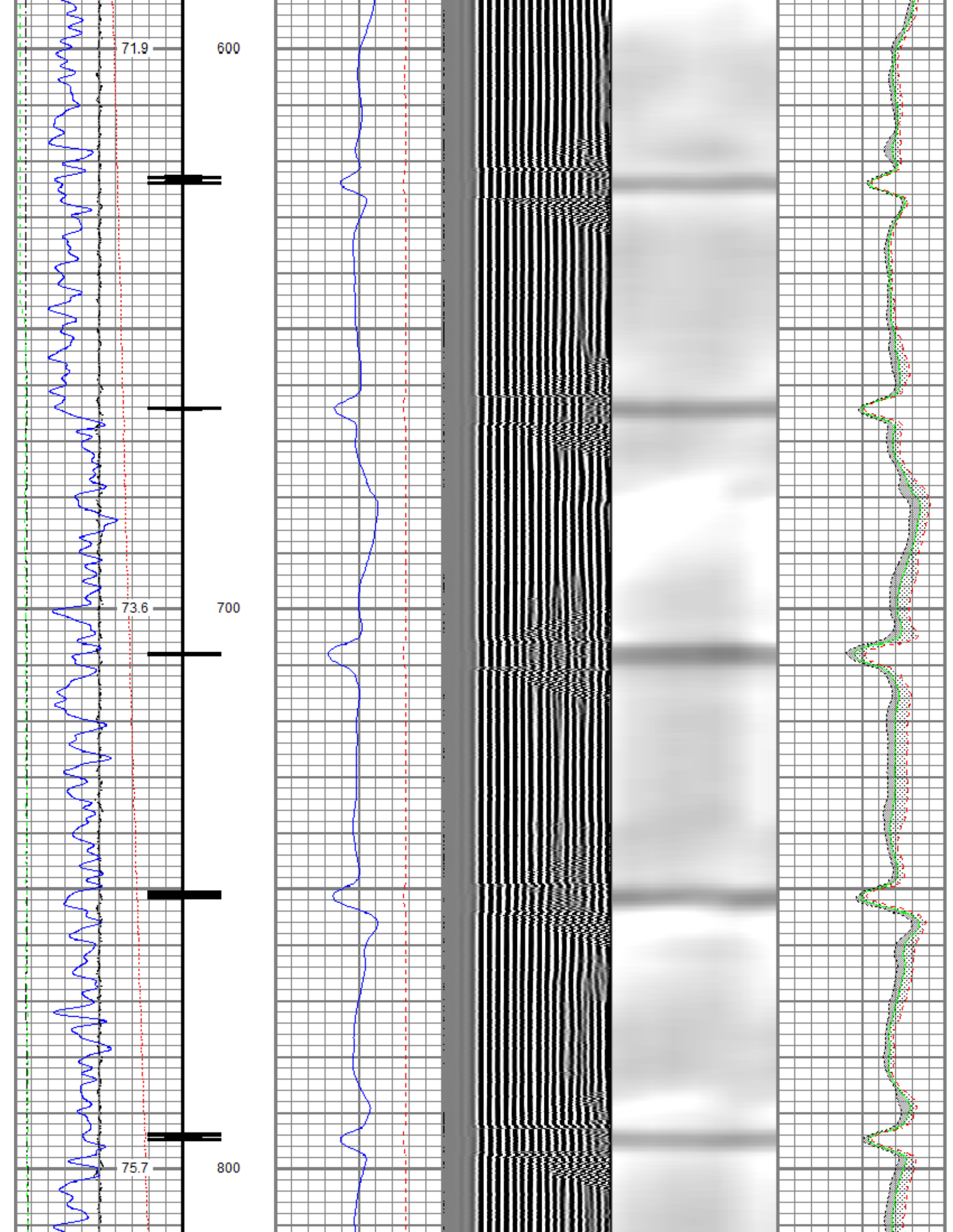
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
0 (GAPI) 120		3' Amplitude x 5	200			Minimum Amplitude
Casing Collar Locator	0	(mV) 20			0	100
0 Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed	650	(usec) 150			0	100
-150 (ft/min) 150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

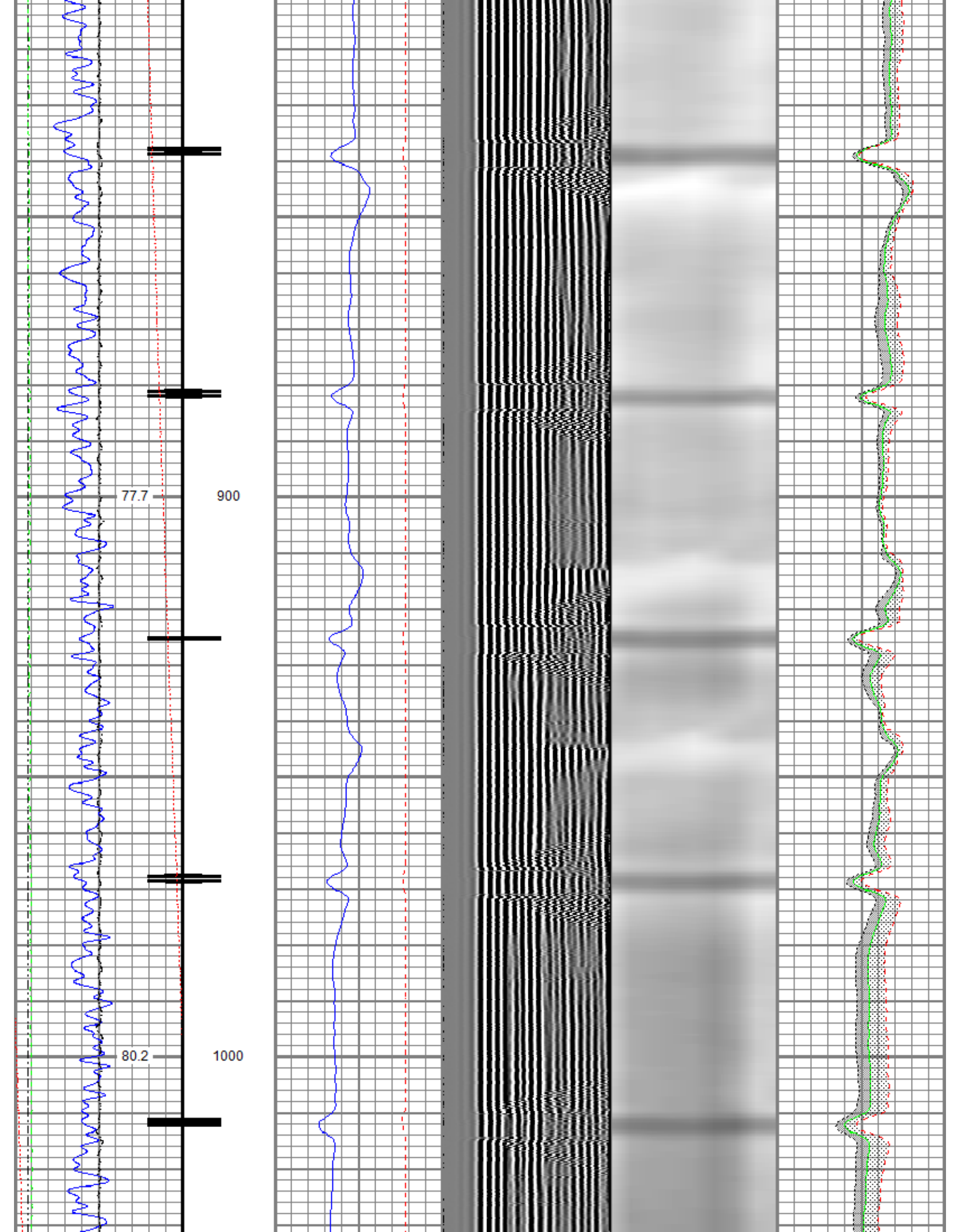


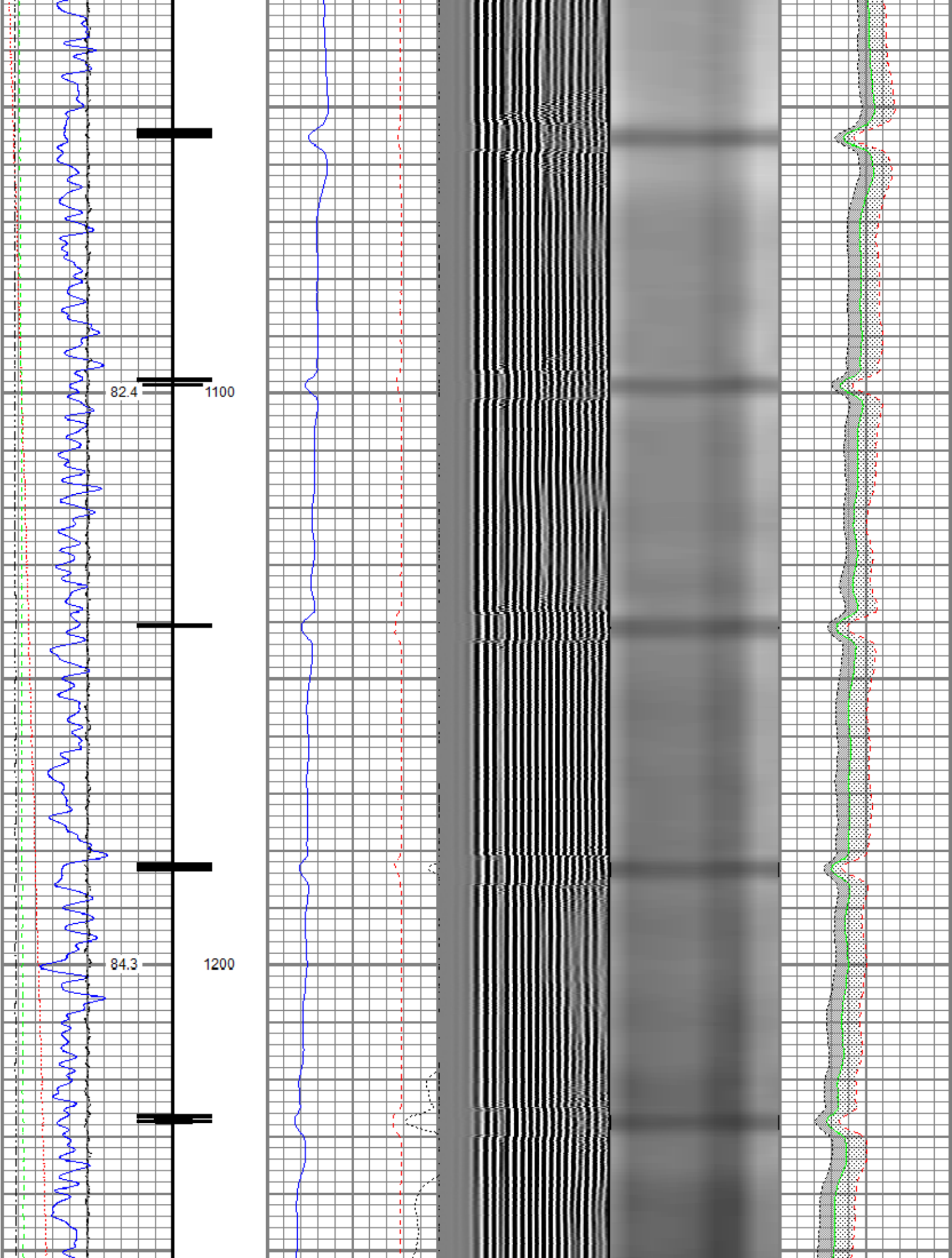




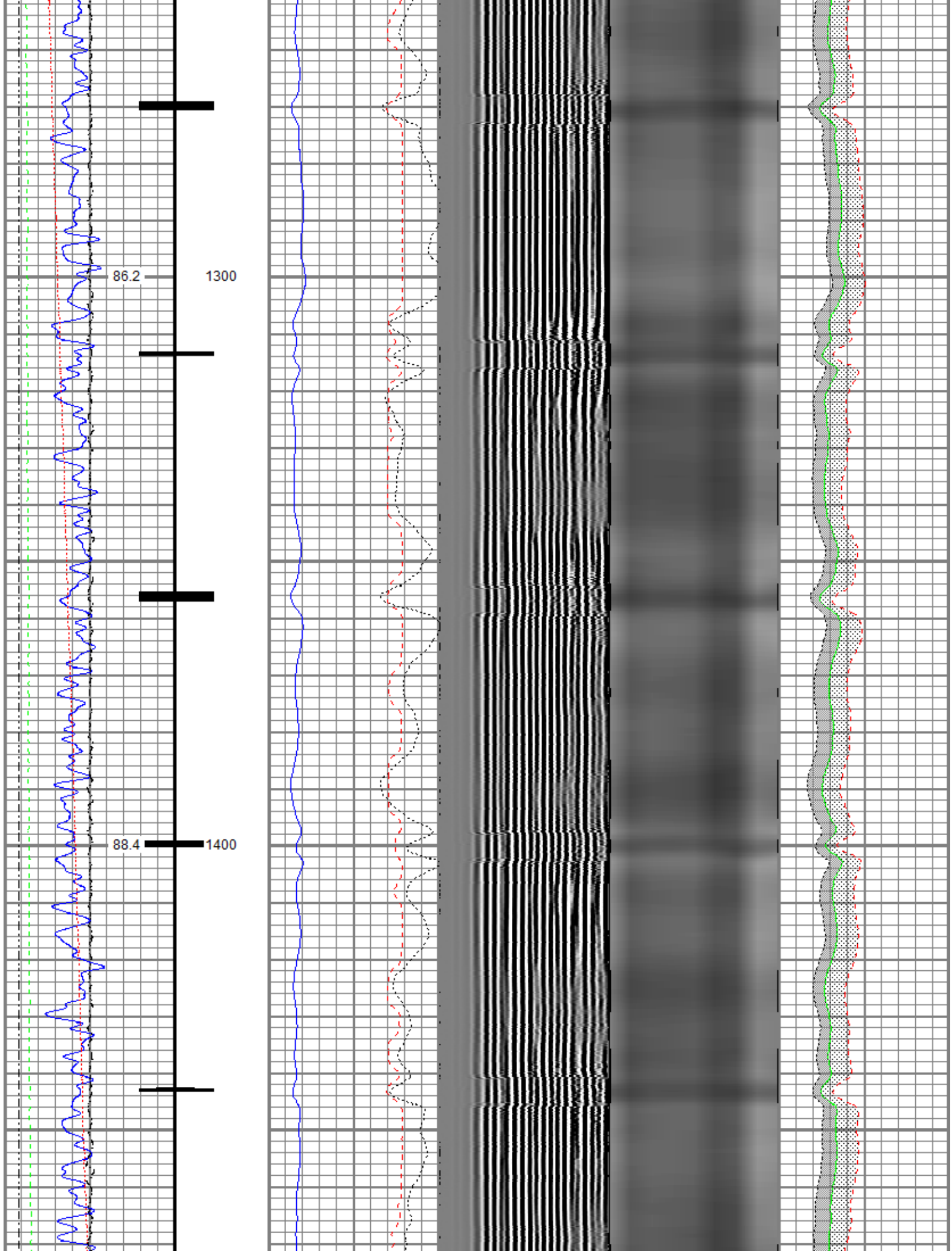




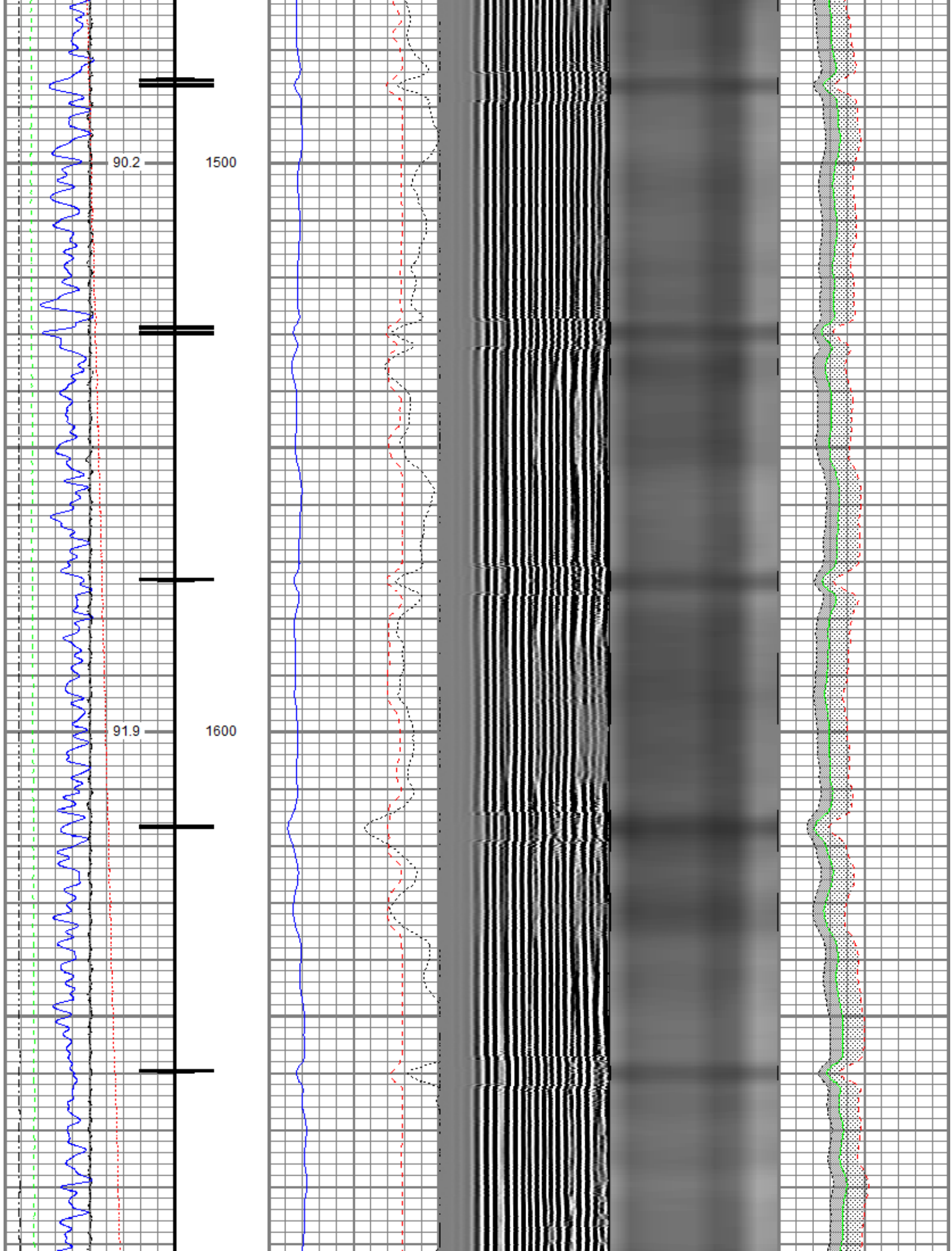


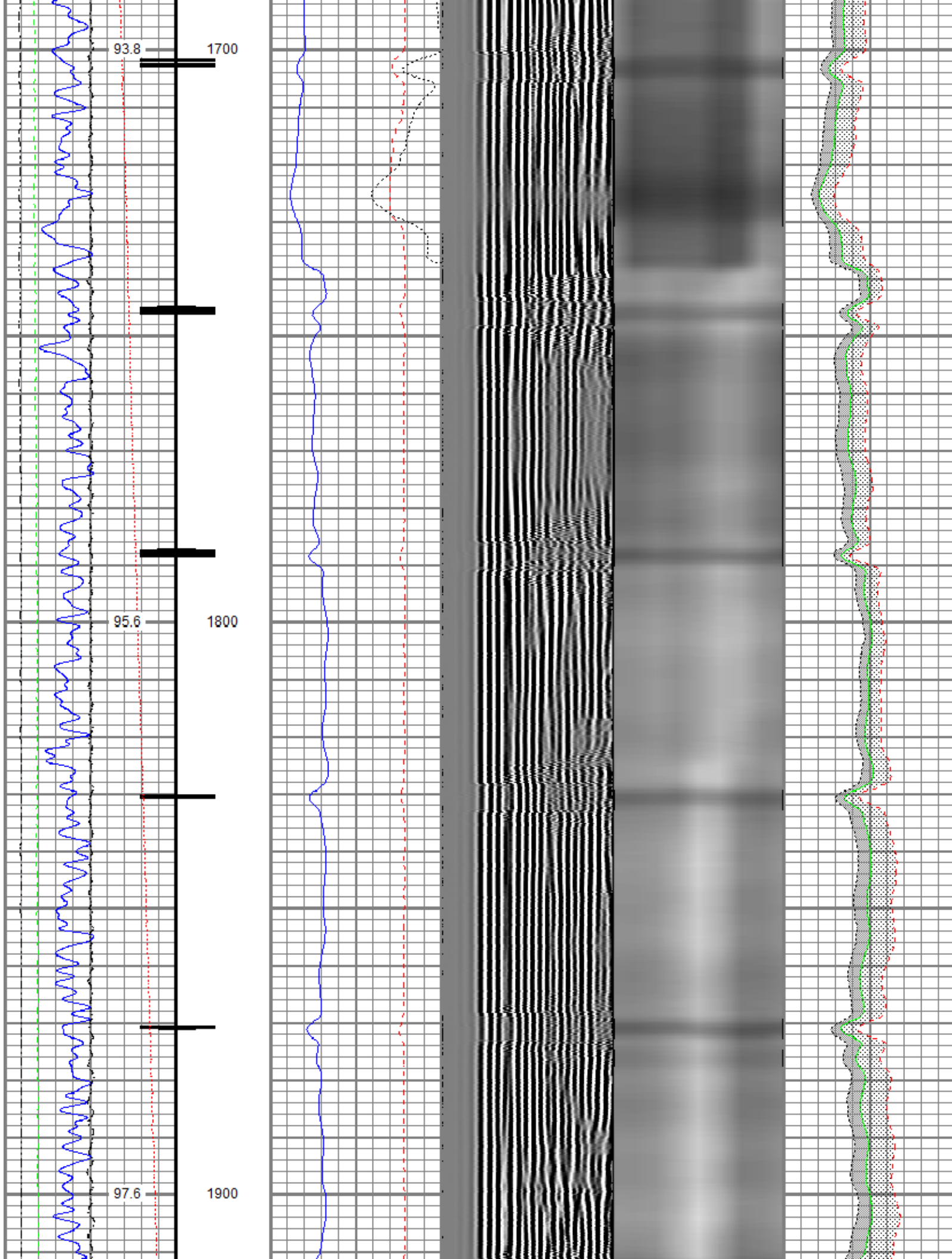


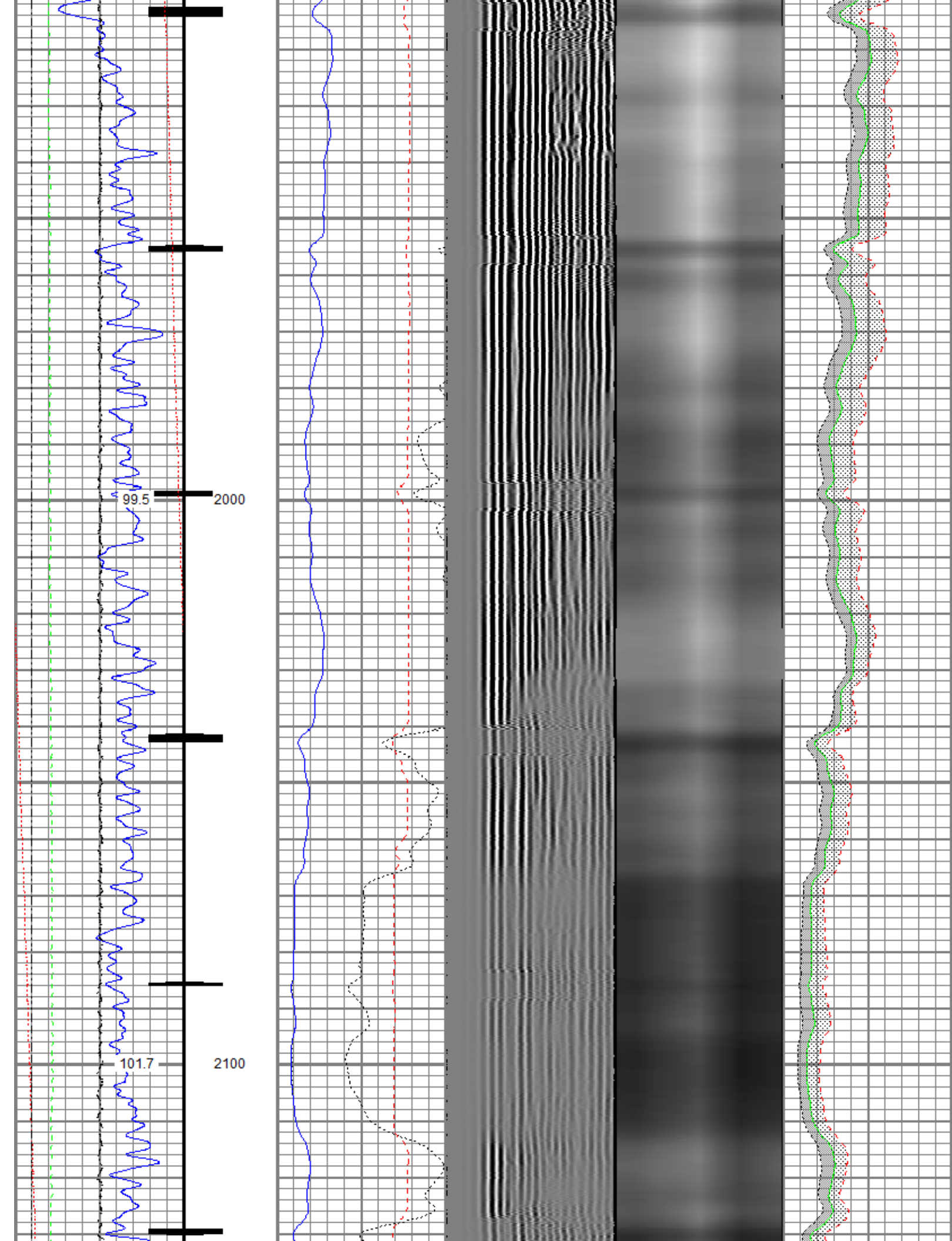




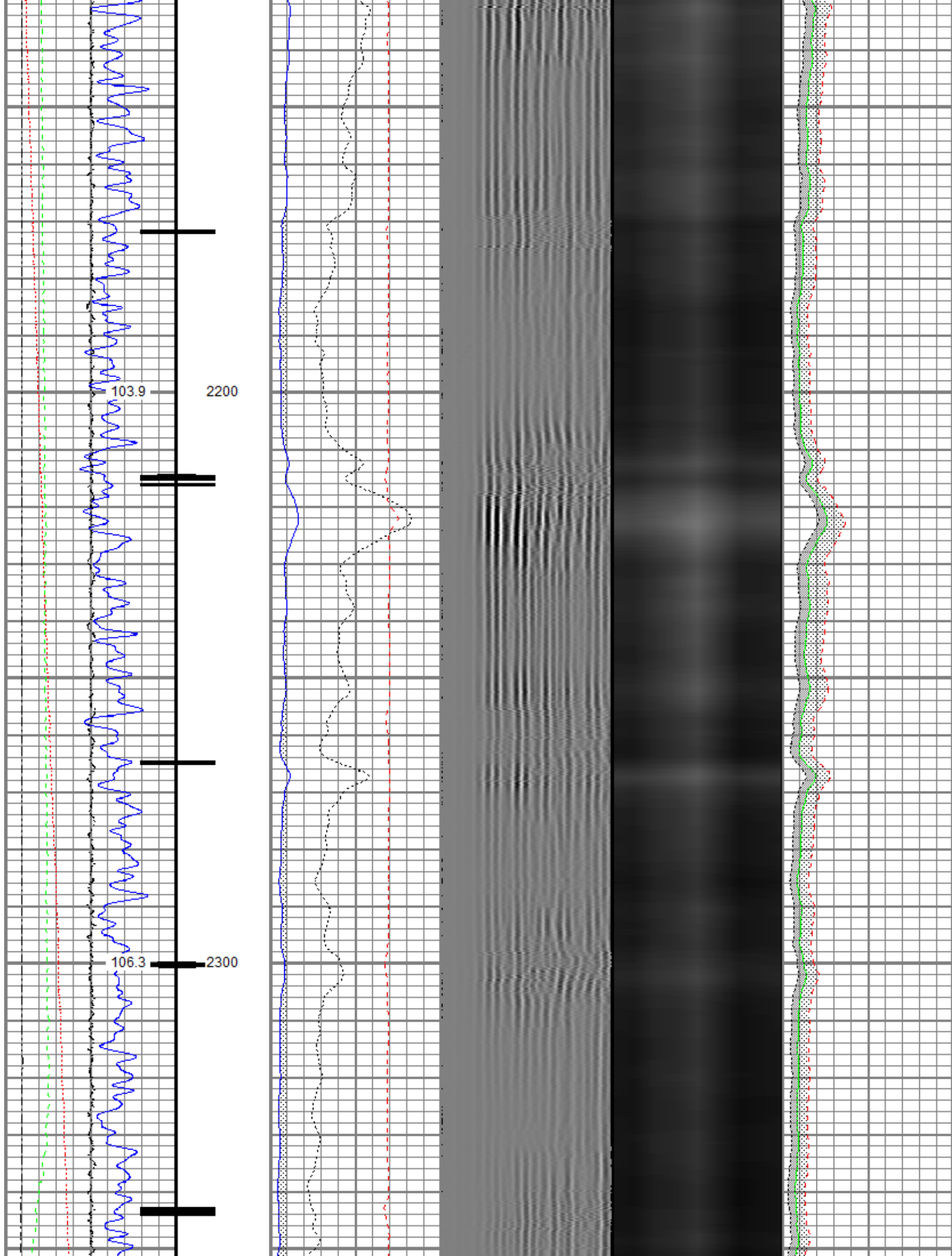


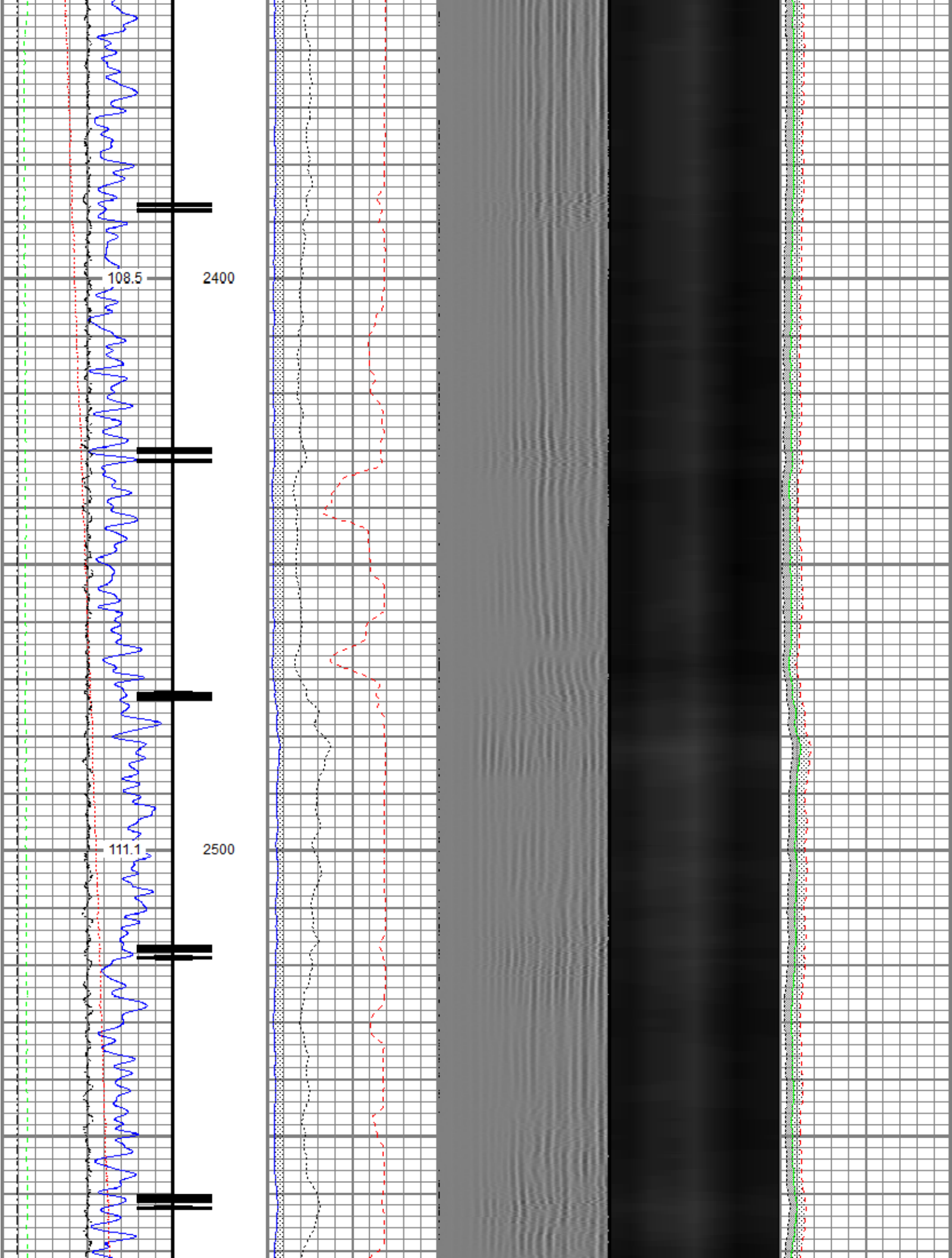


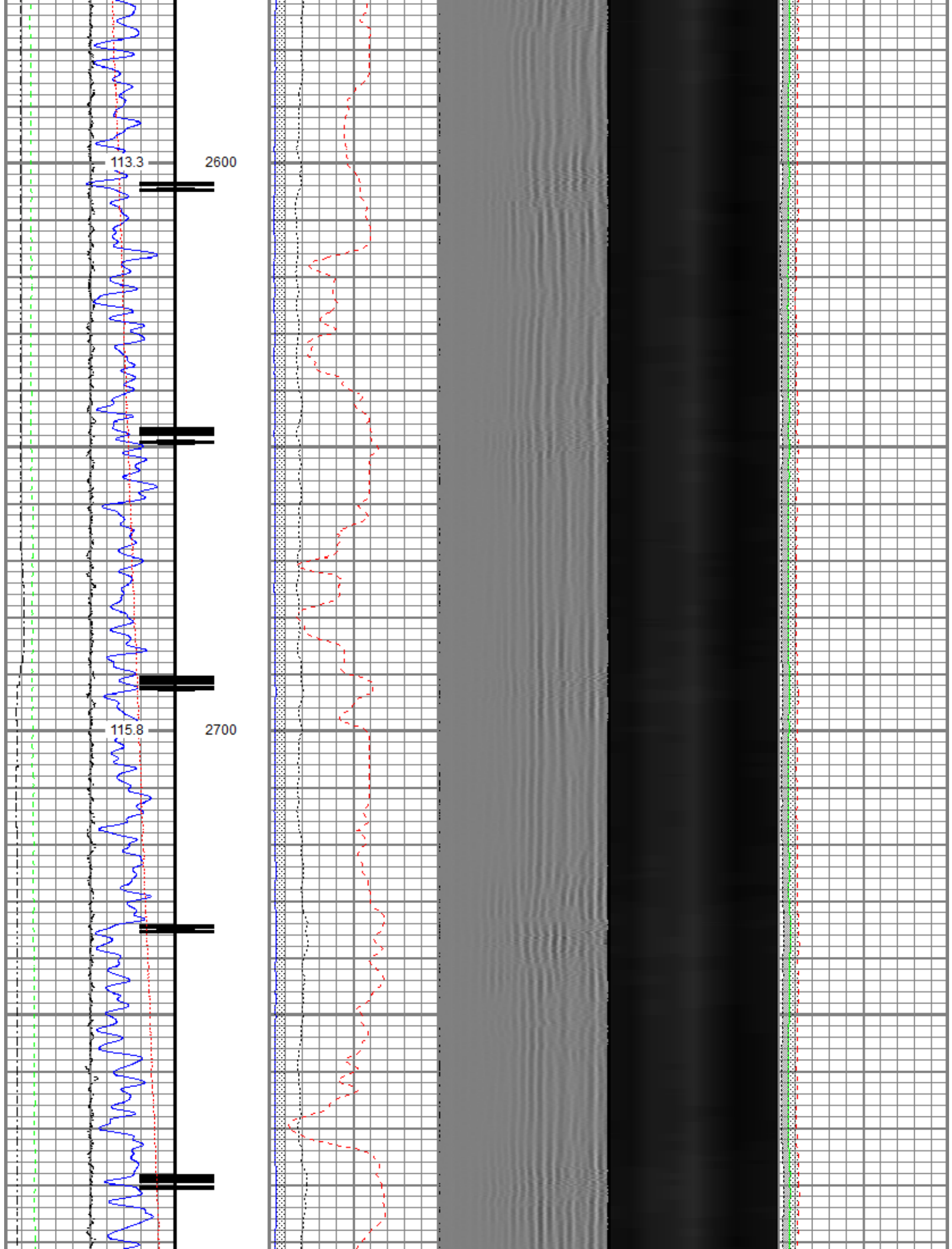




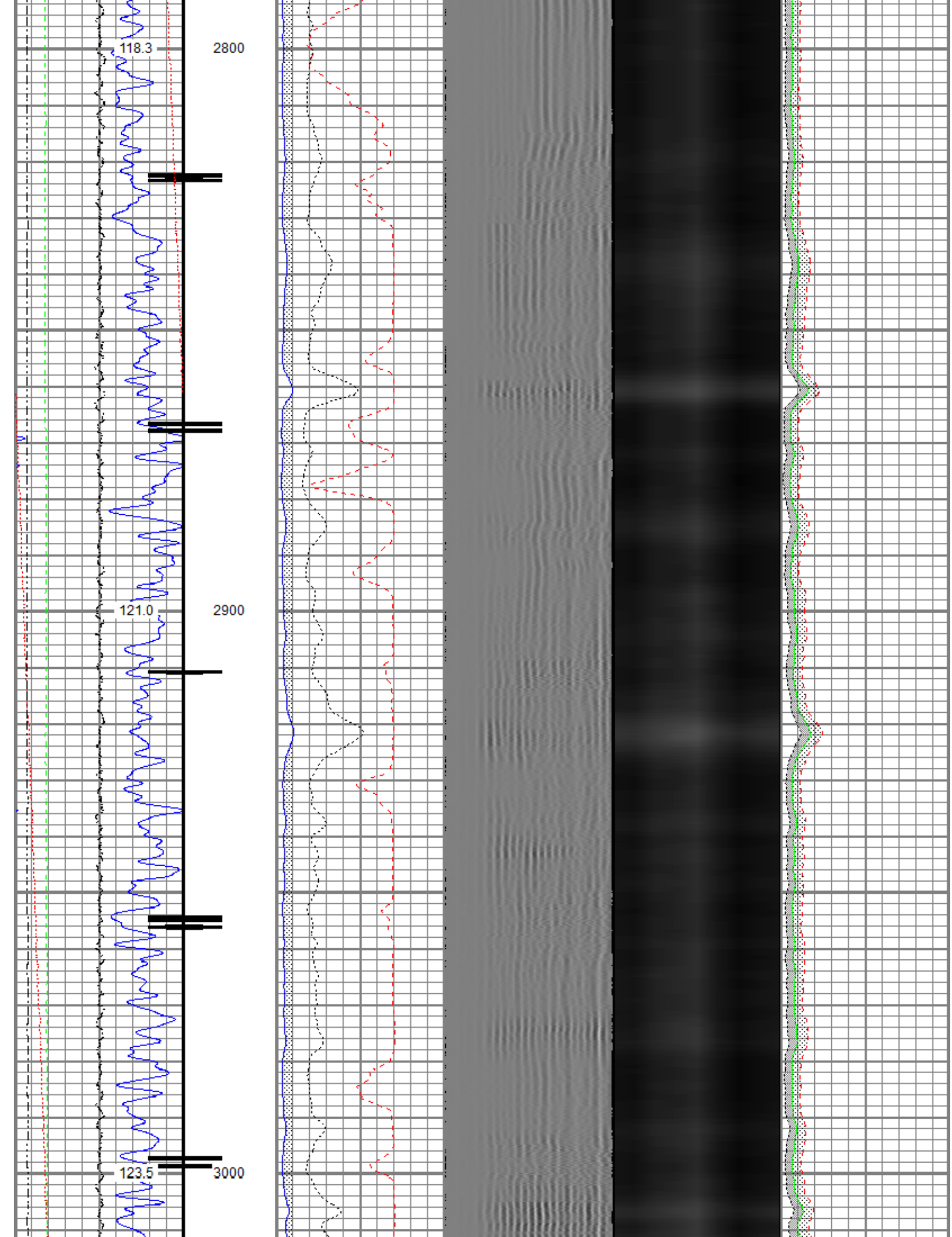


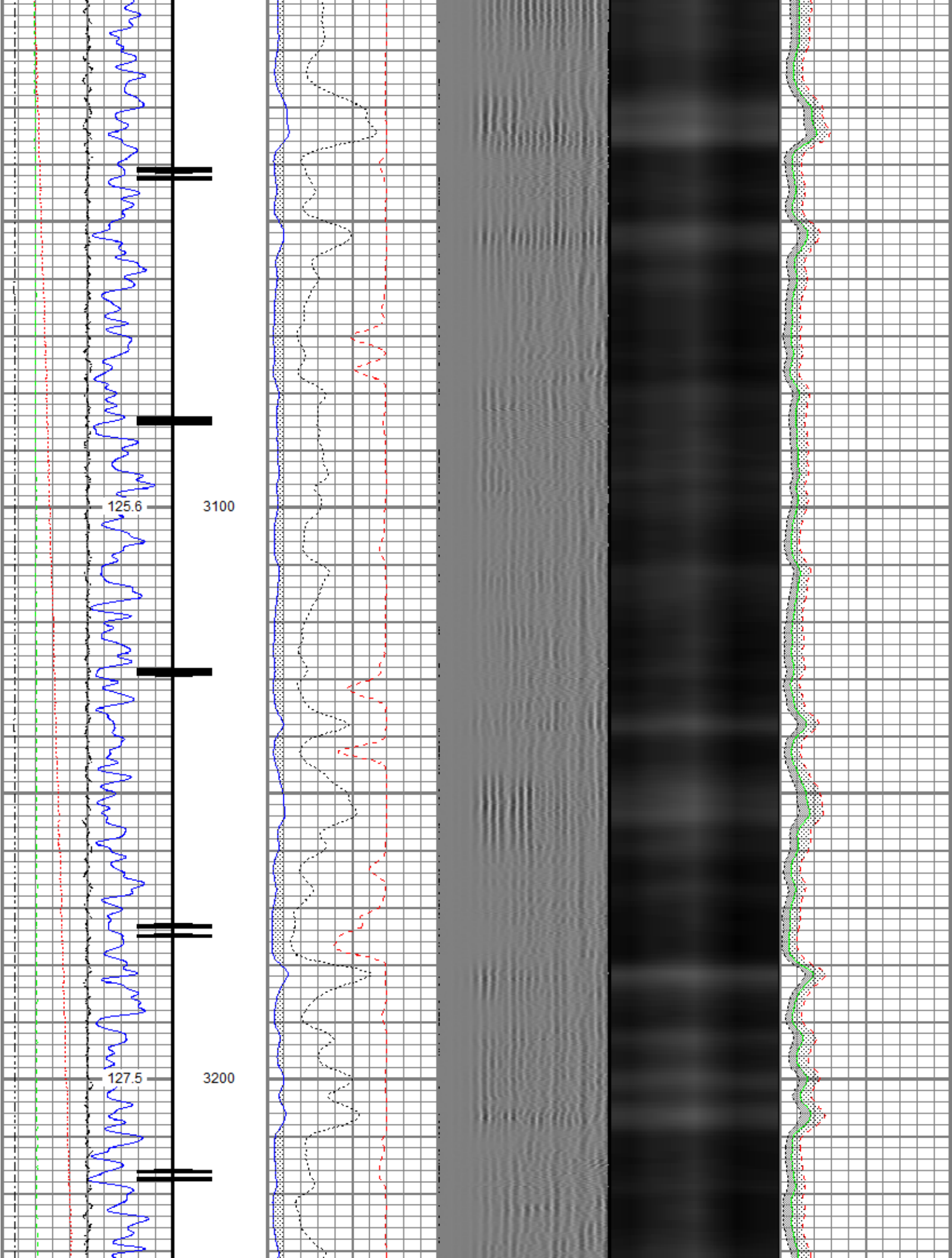


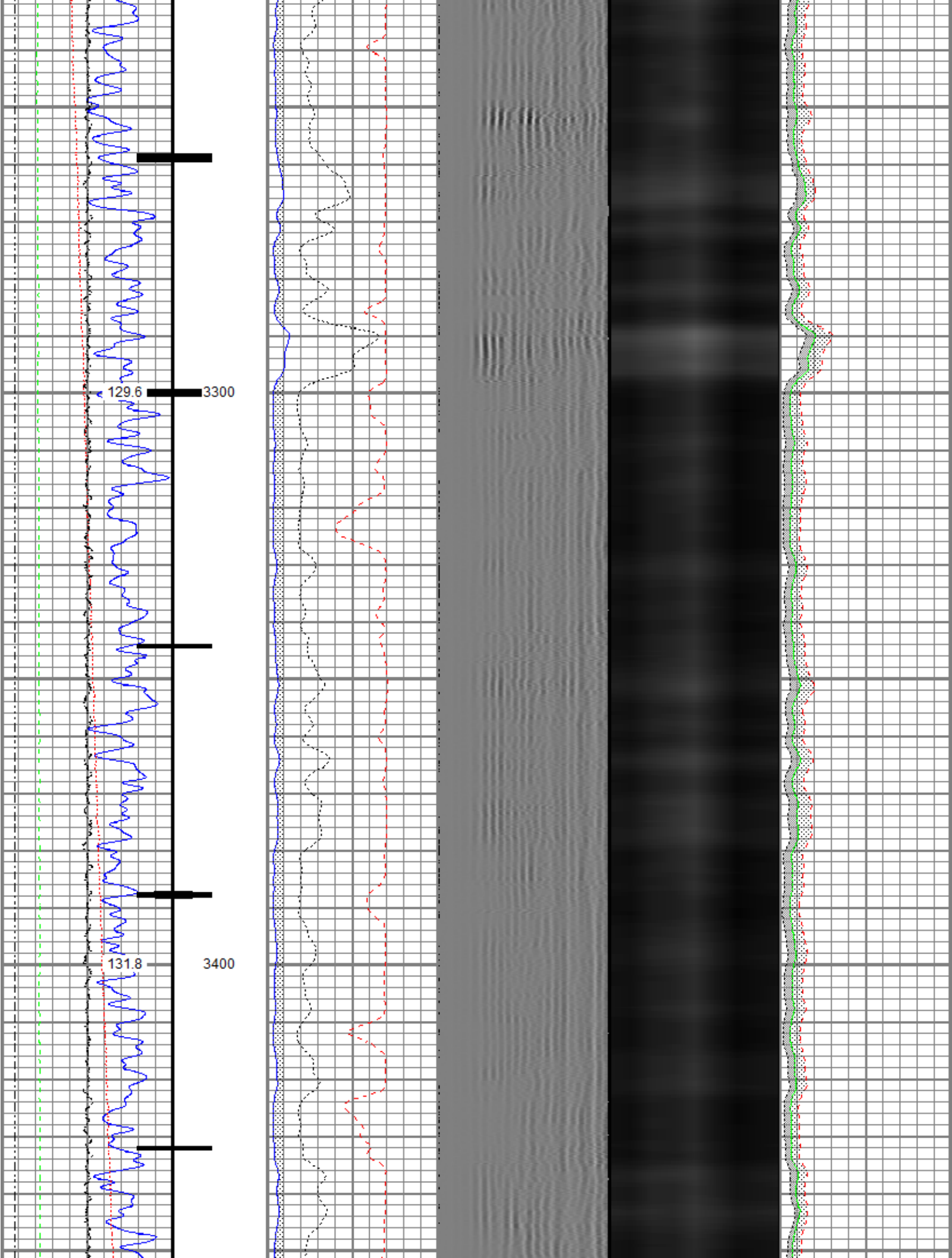




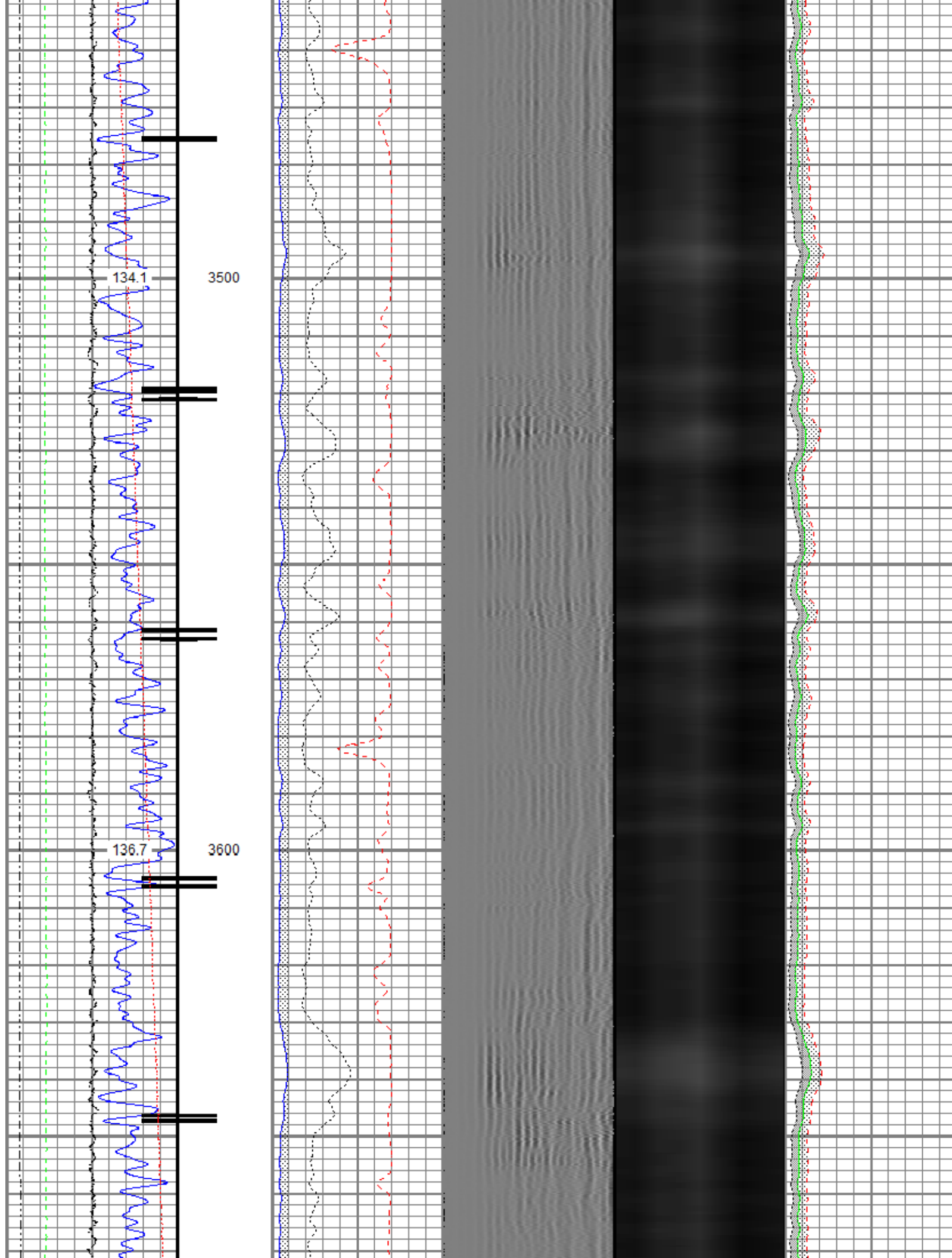


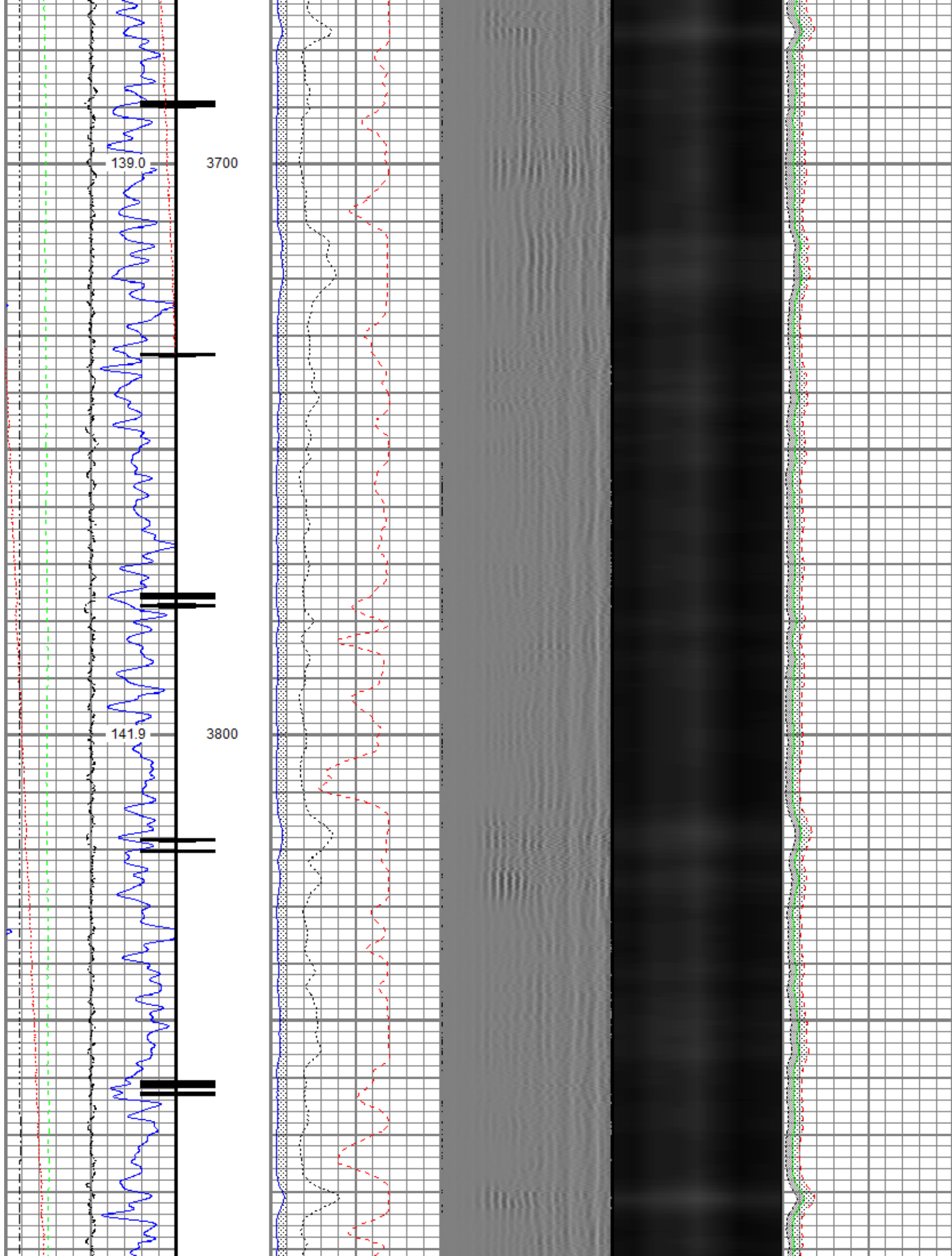


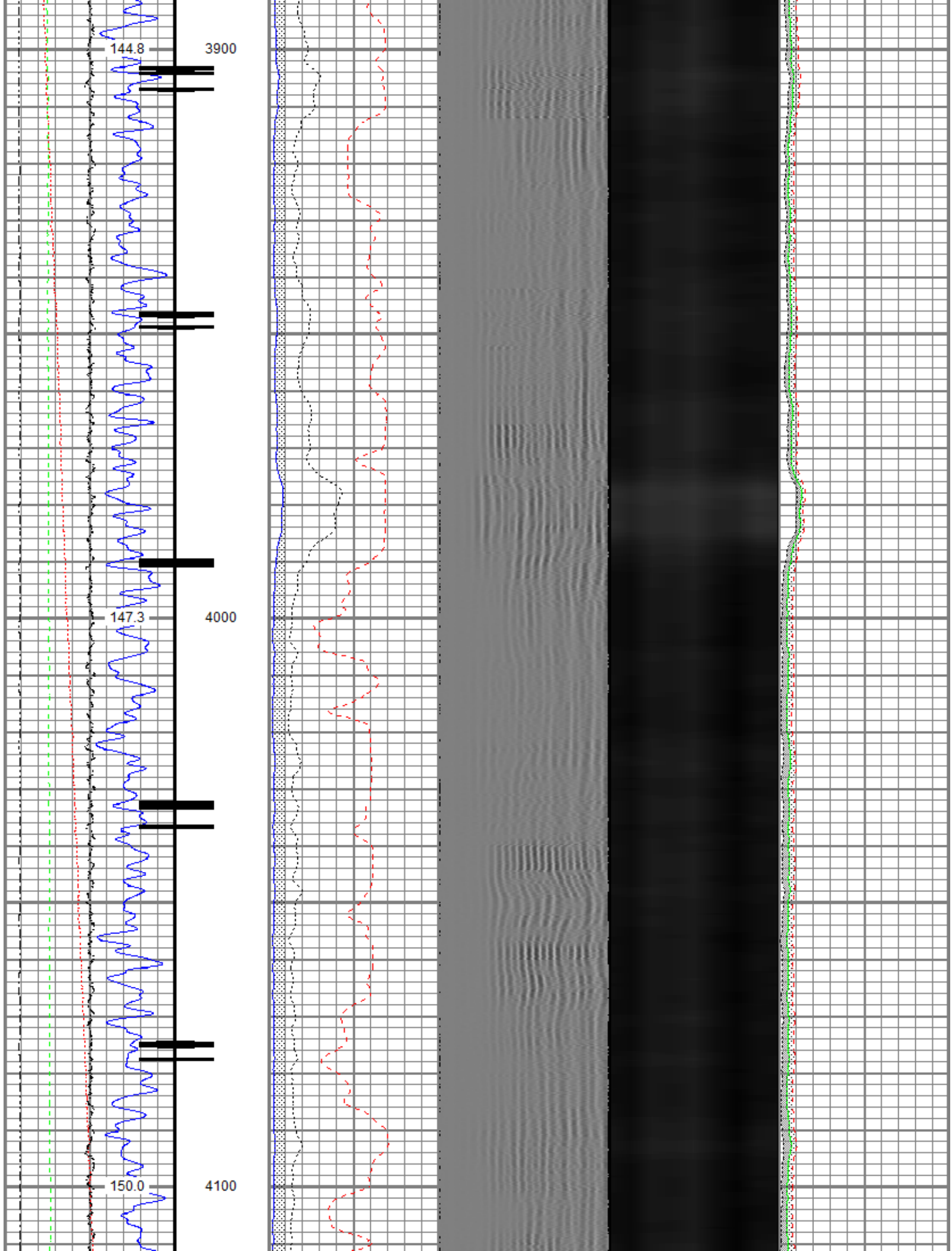




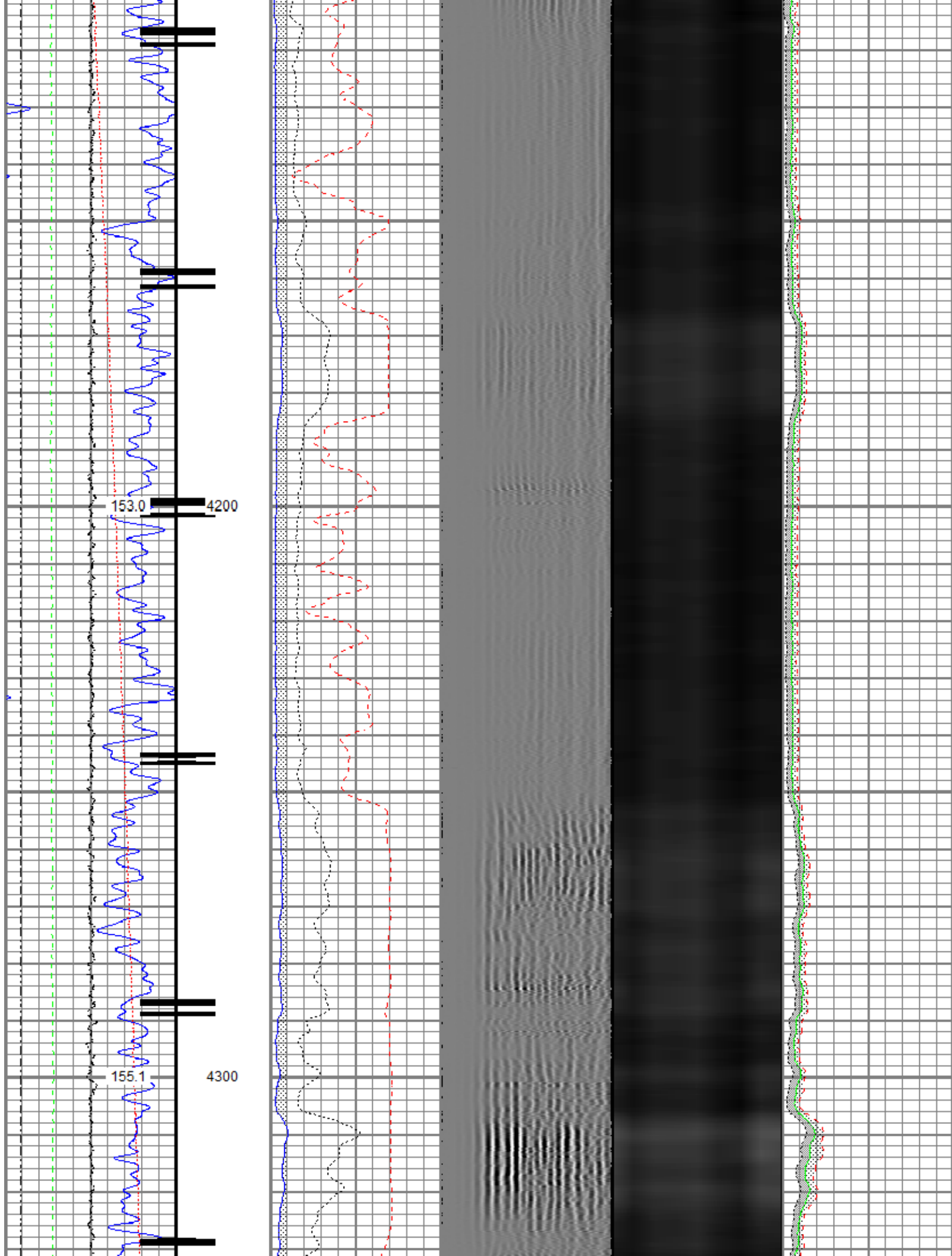


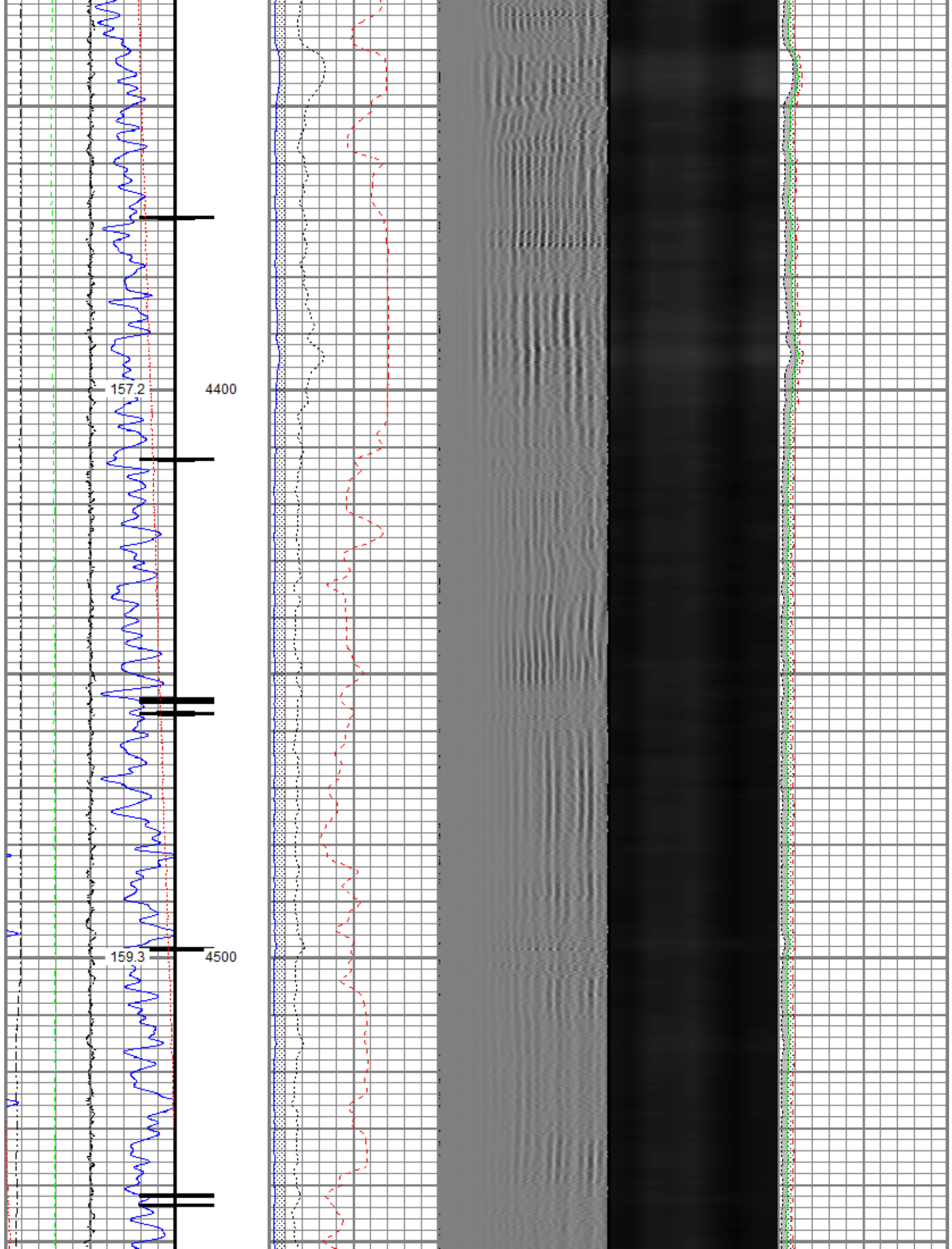


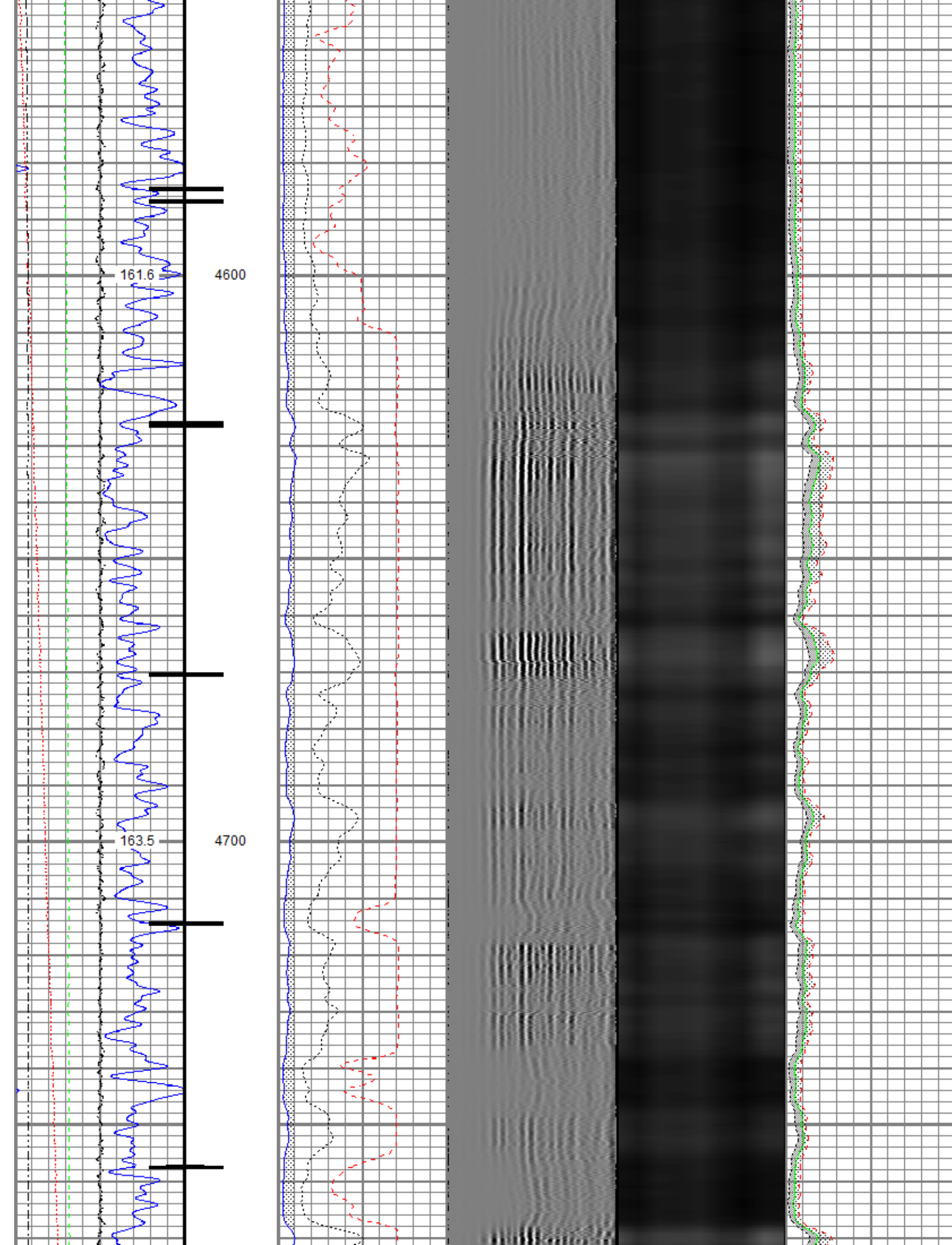




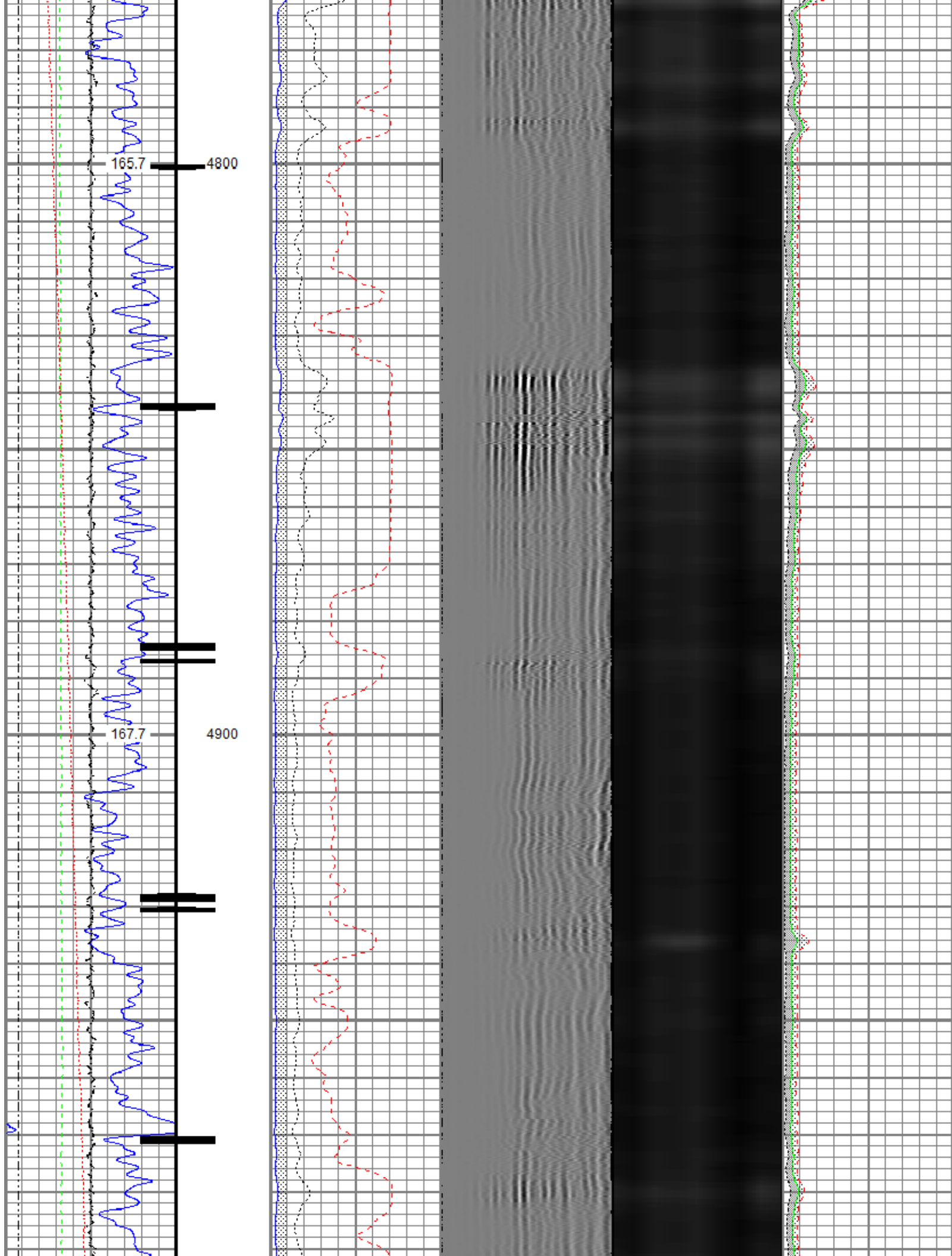


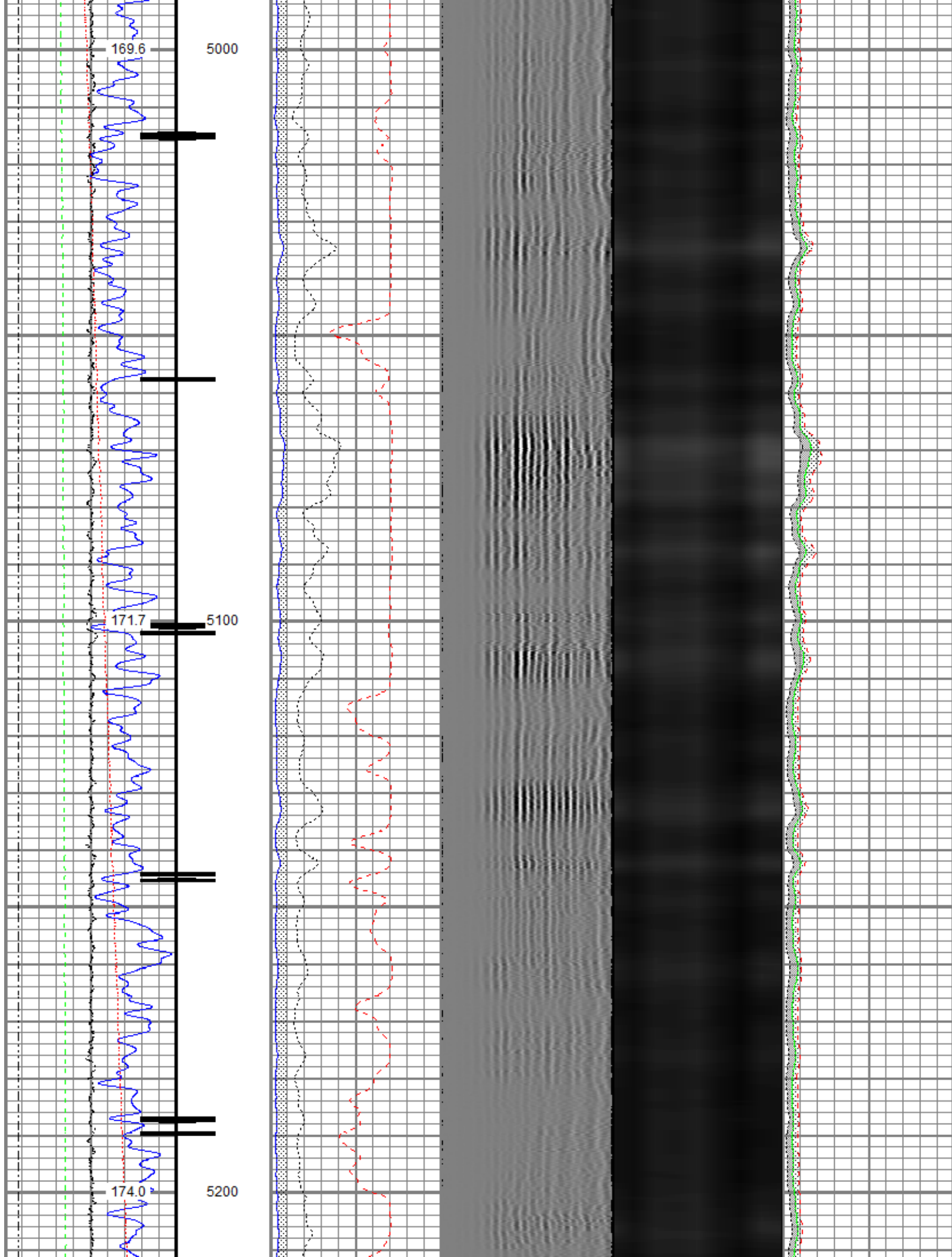


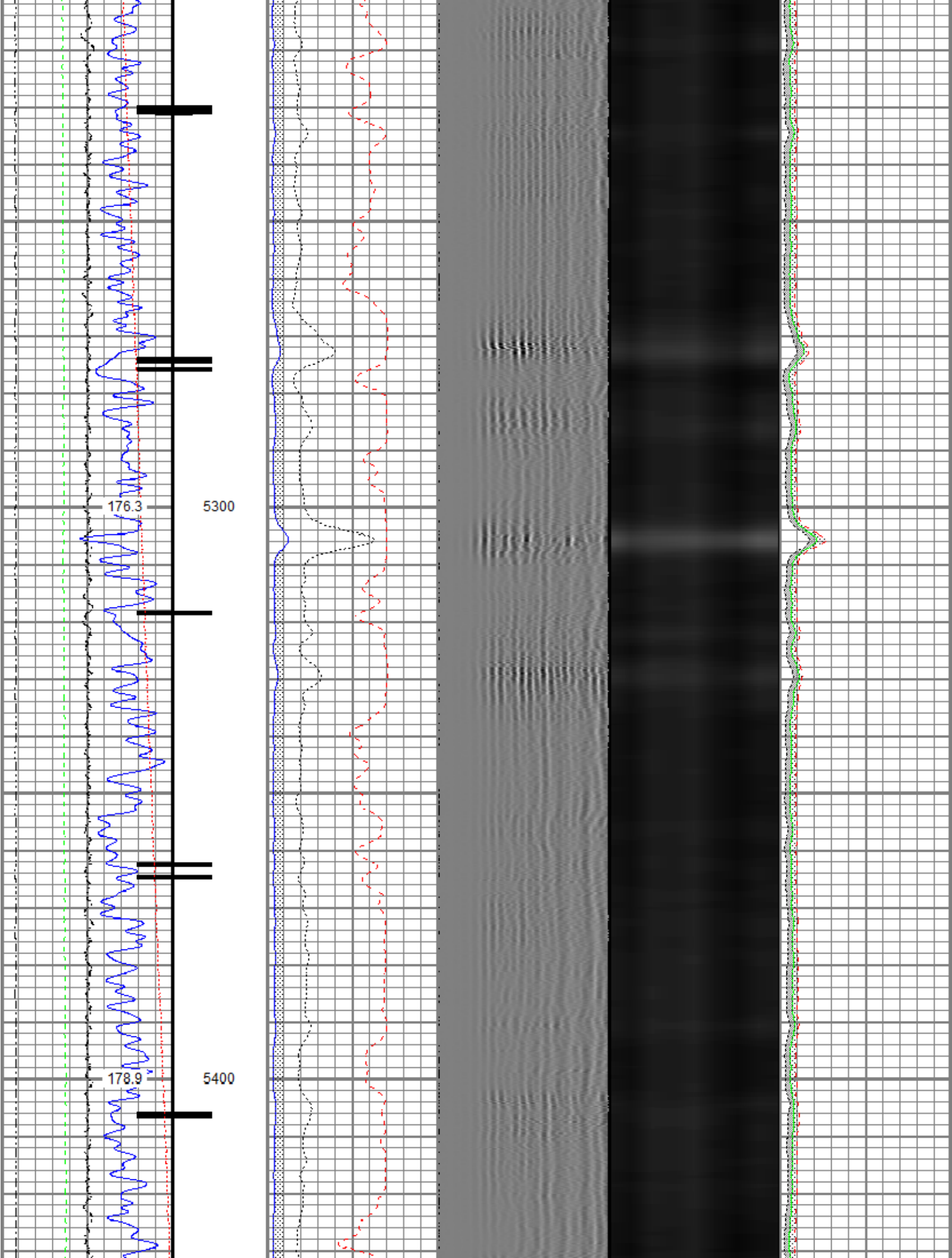




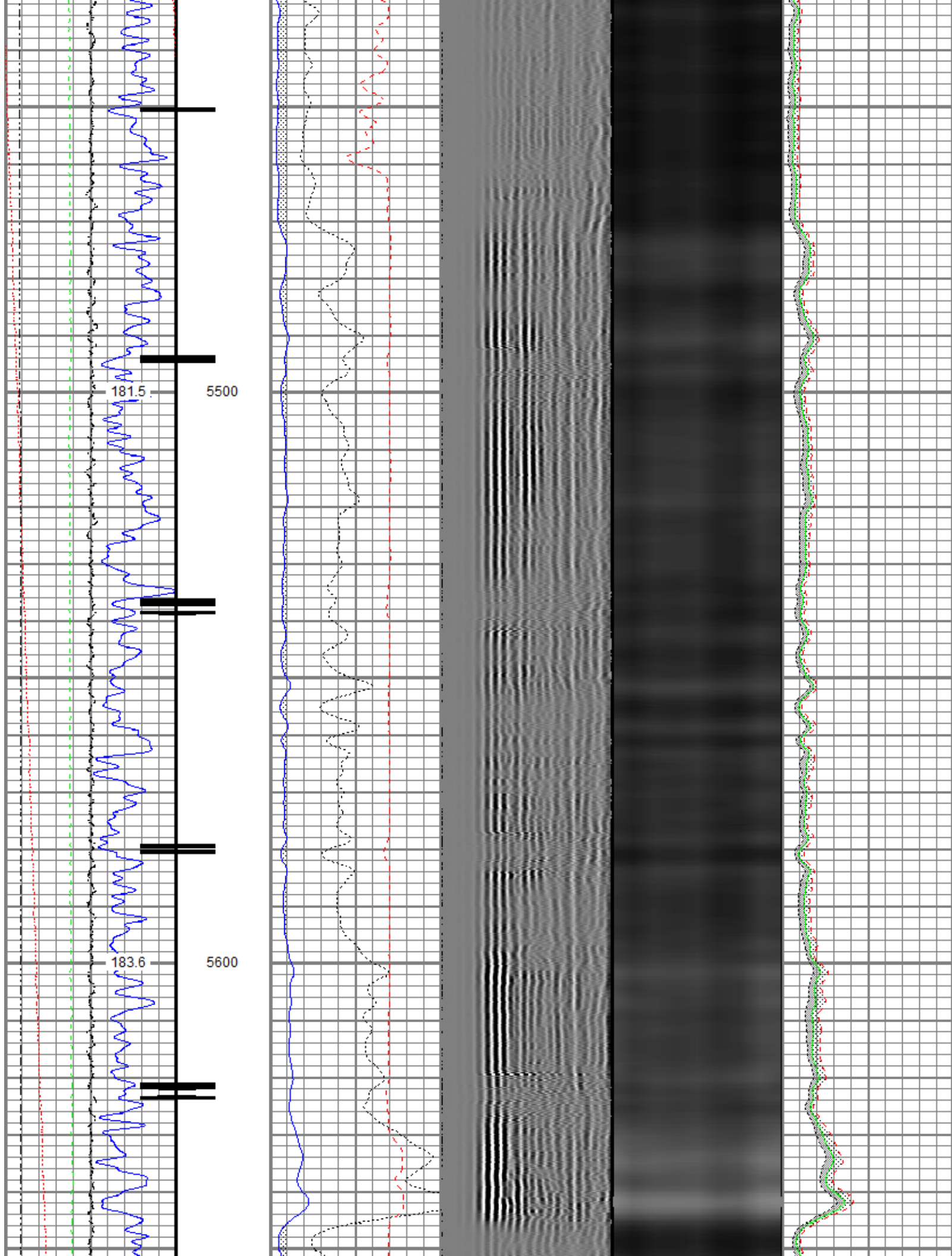


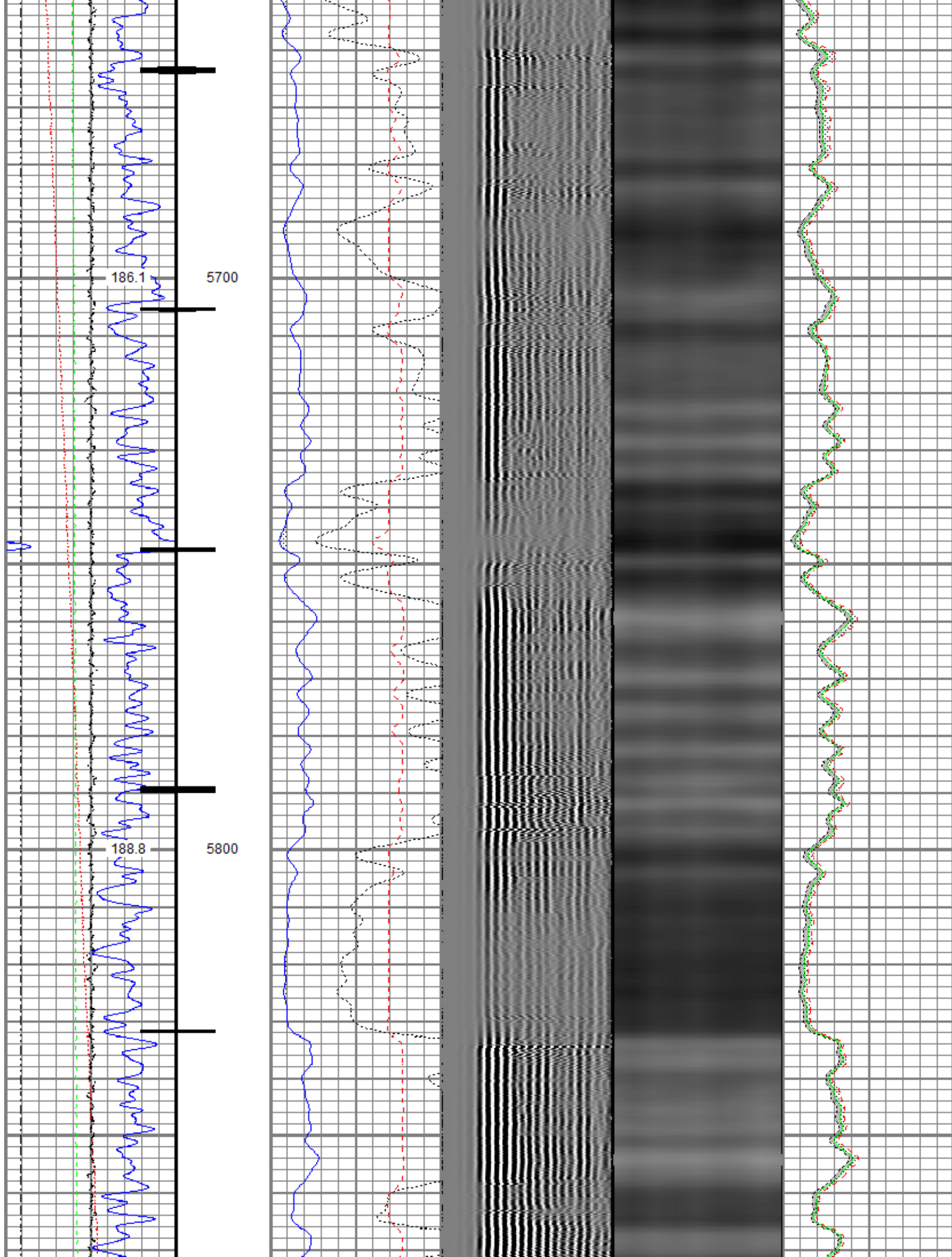


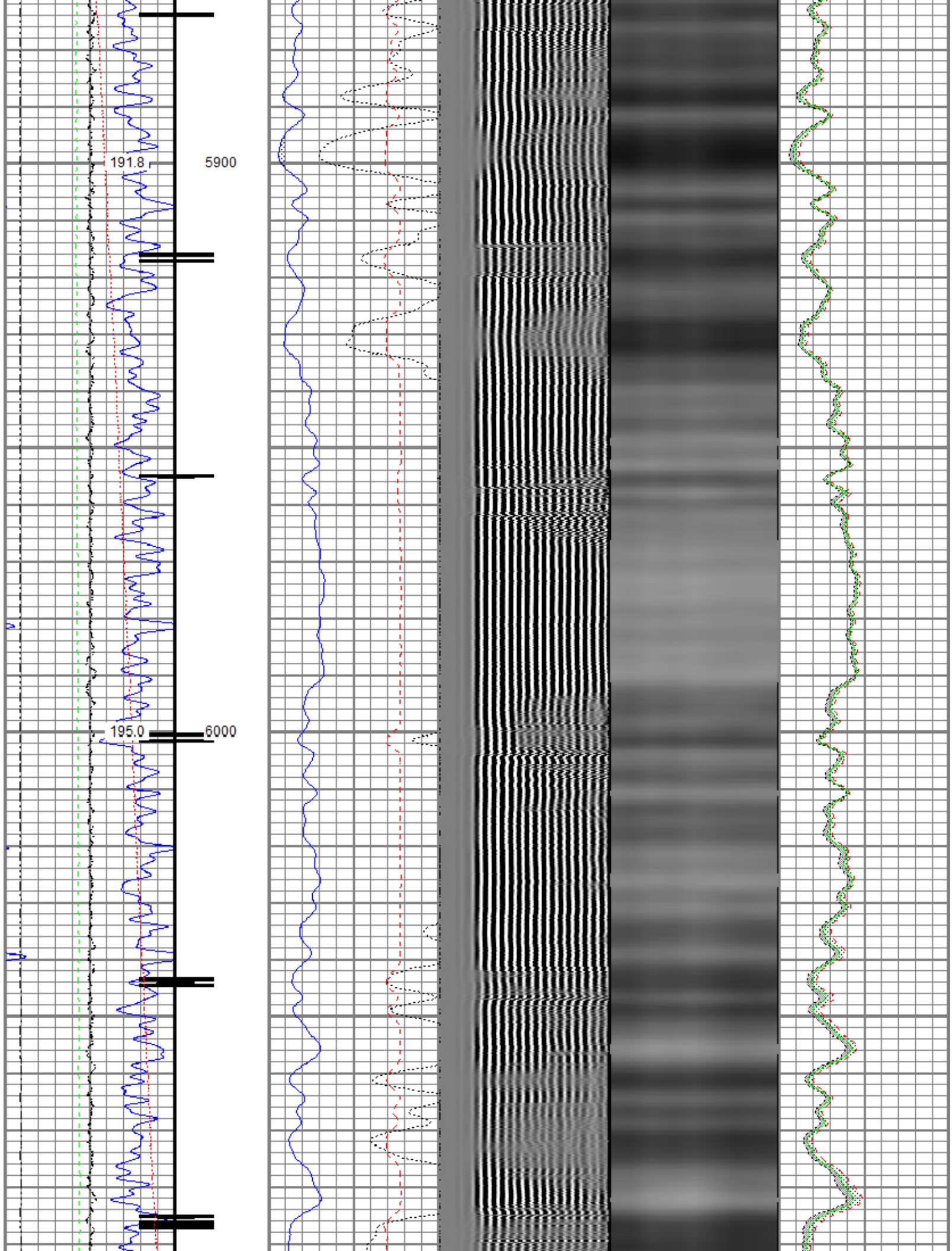




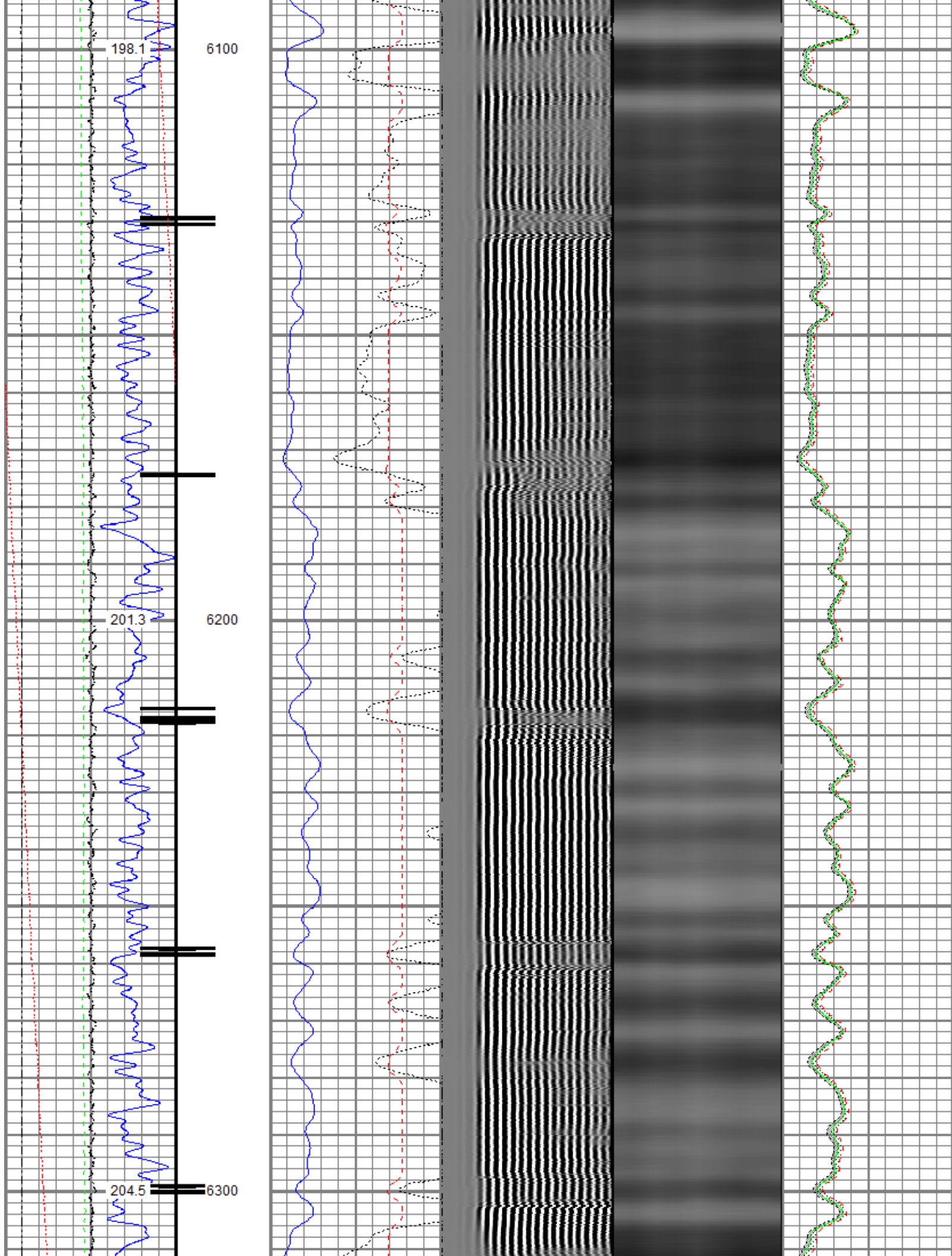


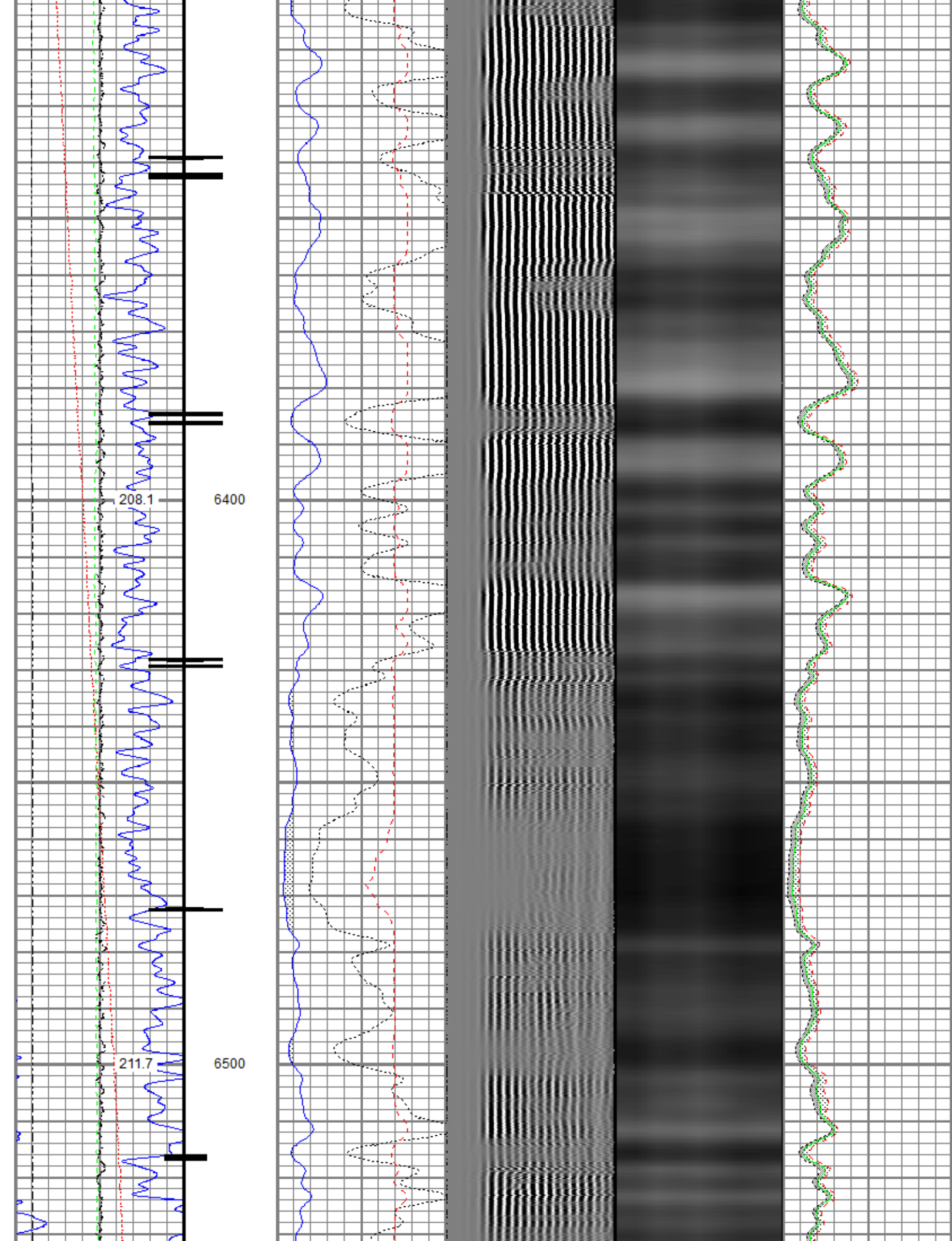


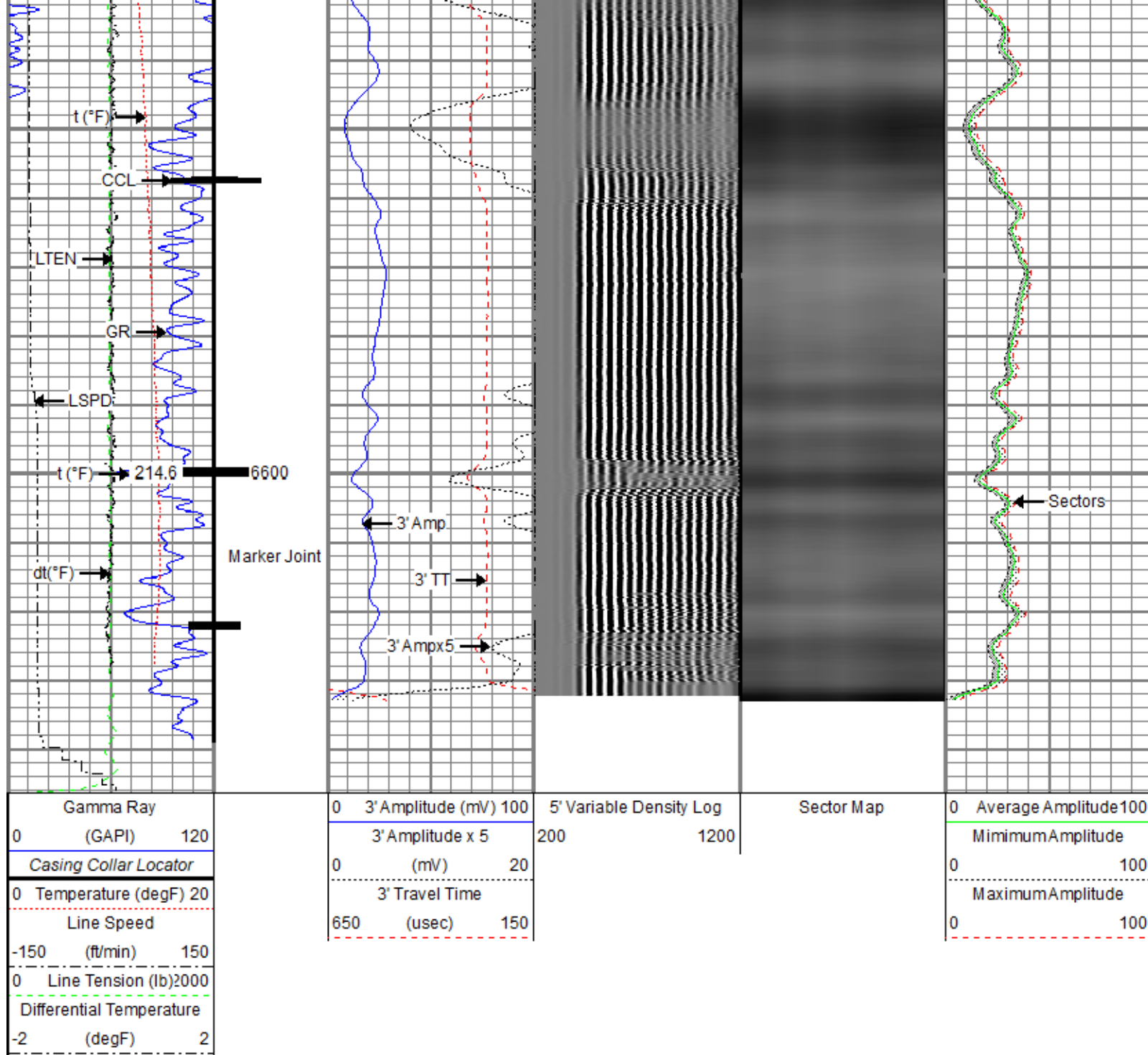








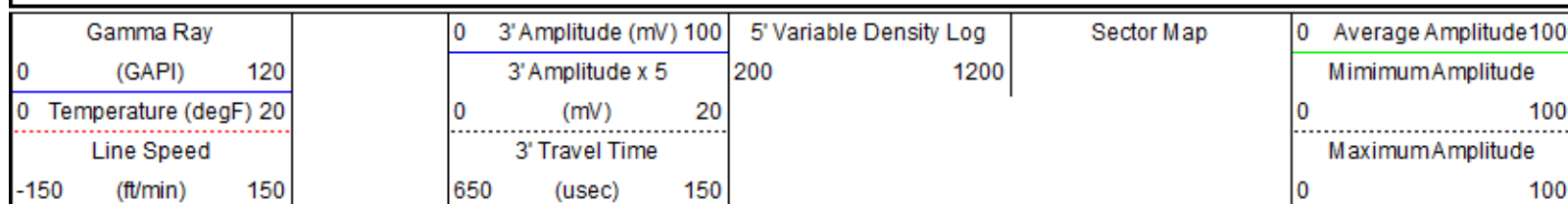




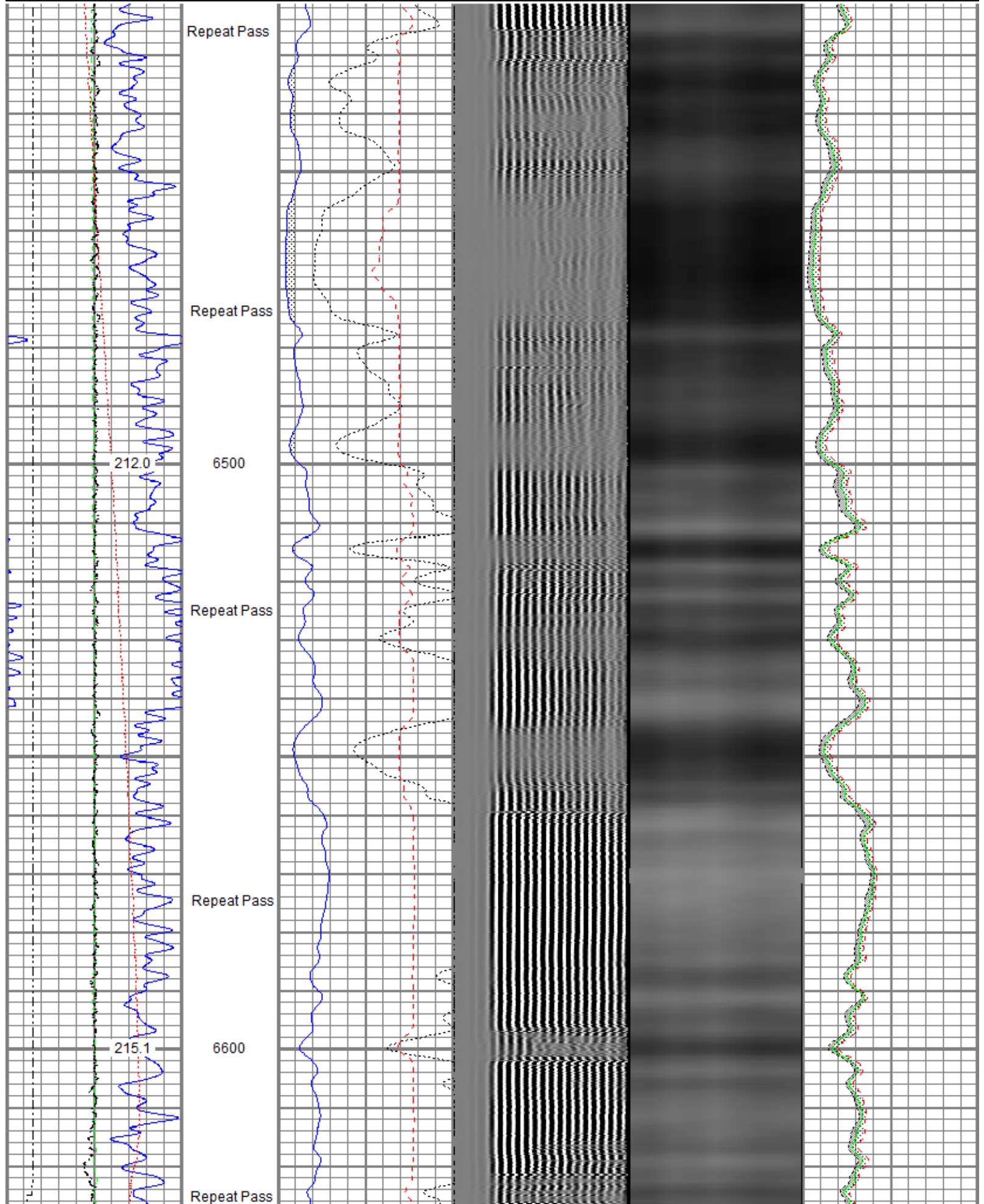
## Repeat Pass

Recorded with 2800 PSI Surface Induced Pressure

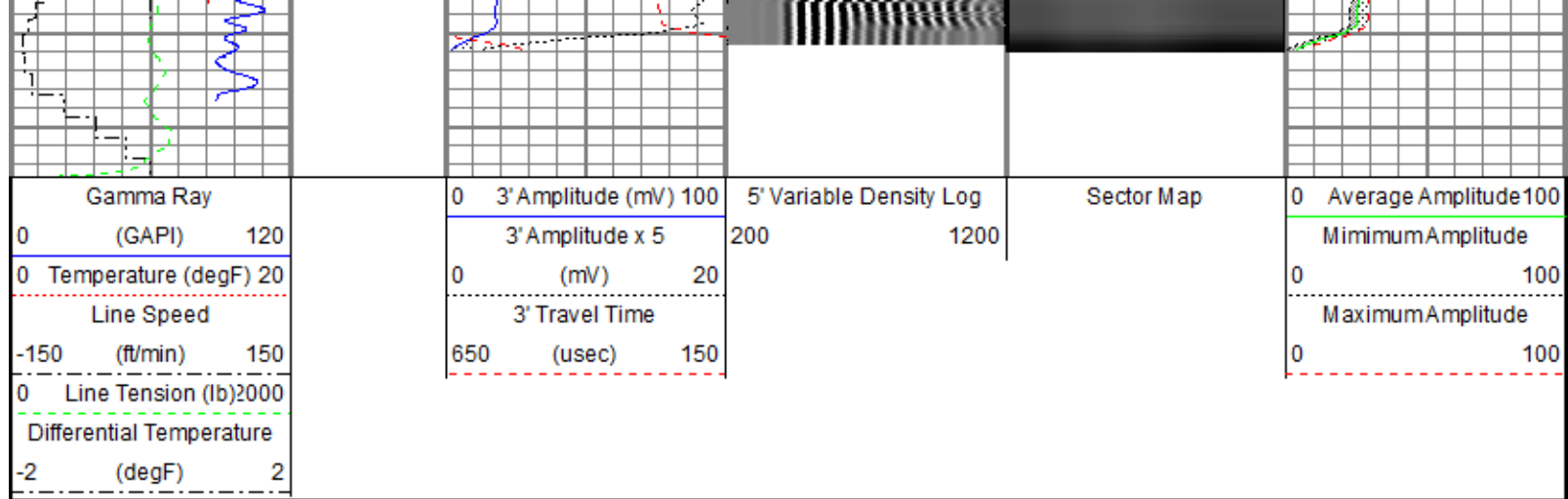
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 Charted by: Depth in Feet scaled 1:240



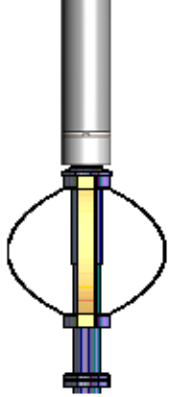








Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan CHD-14375 GO Titan 1-7/16" Assembled Electric Cable Head w/ 1" Fishing Neck	1.03	1.44	3.60
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
			Probe Radii-2750 RBT (FW1308-089) Probe 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" Electric Inline Bowspring Centralizer	4.80	2.75	55.00

			Probe 2-3/4" rev.1 Digital Scintillation Gamma 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_0512346332_anadarko_george 25-1hz_rbl_08-12-18_2800 psi.db: field/well/run1/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\0512346332_anadarko_george 25-1hz_rbl_08-12-18\processed_0512346332_anadarko
Dataset Pathname	Main.2
Dataset Creation	Mon Aug 13 15:34:03 2018

Gamma Ray Calibration Report		
Serial Number:	101001	
Tool Model:	2750 6PB	
Performed:	Sun Nov 12 11:25:32 2017	
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:	FW1308-089	
Tool Model:	2750 RBT	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	30.496	ft

Master Calibration, performed (Derived):						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.011	0.605	0.800	71.921	115.544	2.038
CAL	0.730	0.731				
5'	-0.011	0.554	0.800	71.921	125.909	2.137
SUM						
S1	-0.011	0.589	0.000	100.000	166.656	1.895
S2	-0.010	0.600	0.000	100.000	163.760	1.679
S3	-0.038	0.611	0.000	100.000	154.020	5.842
S4	-0.036	0.618	0.000	100.000	152.917	5.497
S5	-0.048	0.630	0.000	100.000	147.511	7.059
S6	-0.021	0.632	0.000	100.000	153.309	3.171
S7	-0.002	0.620	0.000	100.000	160.847	0.329
S8	-0.008	0.610	0.000	100.000	161.831	1.313

Internal Reference Calibration, performed (Not Performed):		
	Raw (v)	Calibrated (v)
		Results

	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.730	0.731	1.000	0.000

Air Zero Calibration, performed Sun Aug 12 09:08:28 2018:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.006	0.000	-0.000
5'	0.008	0.000	-0.000
SUM			
S1	0.004	0.000	-0.000
S2	0.006	0.000	0.000
S3	0.005	0.000	0.000
S4	0.005	0.000	-0.000
S5	0.005	0.000	-0.000
S6	0.005	0.000	-0.000
S7	0.005	0.000	0.000
S8	0.005	0.000	-0.000

#### Temperature Calibration Report

Serial Number: FW1308-089  
Tool Model: 2750 RBT  
Performed: Sun Nov 12 13:49:09 2017

	Reference	Reading
Low Reference:	100.00 degF	106.47 degF
High Reference:	350.00 degF	395.10 degF

Gain: 0.87  
Offset: 7.78  
Delta Spacing: 1



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**Field** Wattenberg  
**County** Weld  
**State** Colorado