



Radial Cement Bond
Gamma Ray
Casing Collar Log

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

Well OJB 15-17HZ

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-48981

SEC 15 TWP 1N RGE 66W

Permanent Datum Ground Level Elevation 5070'
Log Measured From Kelly Bushing 26 FT
Drilling Measured From Kelly Bushing

Other Services
Gauge Ring
RBP
RBL 0 PSI
Elevation
K.B. 5096'
D.F. ---
G.L. 5070'

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State Colorado

Date	12-JUN-2019	Four		
Run Number		17583 FT		
Depth Driller		6974 FT		
Depth Logger		6961 FT		
Bottom Logged Interval		Surface		
Top Log Interval		---		
Open Hole Size		Water		
Type Fluid		8.34 lb/gal		
Density / Viscosity		222°F		
Max. Recorded Temp.		See Log		
Estimated Cement Top		ROA		
Time Well Ready		07.13		
Time Logger on Bottom		HD-0324		
Equipment Number		Platteville, CO		
Location		Matt Steinman		
Recorded By		John 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	HC-P110	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 6916 FT
Adjusted +1 FT to correlate with Marker Joint
Gauge Ring/Junk Basket ran to 7678 FT
Retrievable Bridge Plug set at 6985 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!!

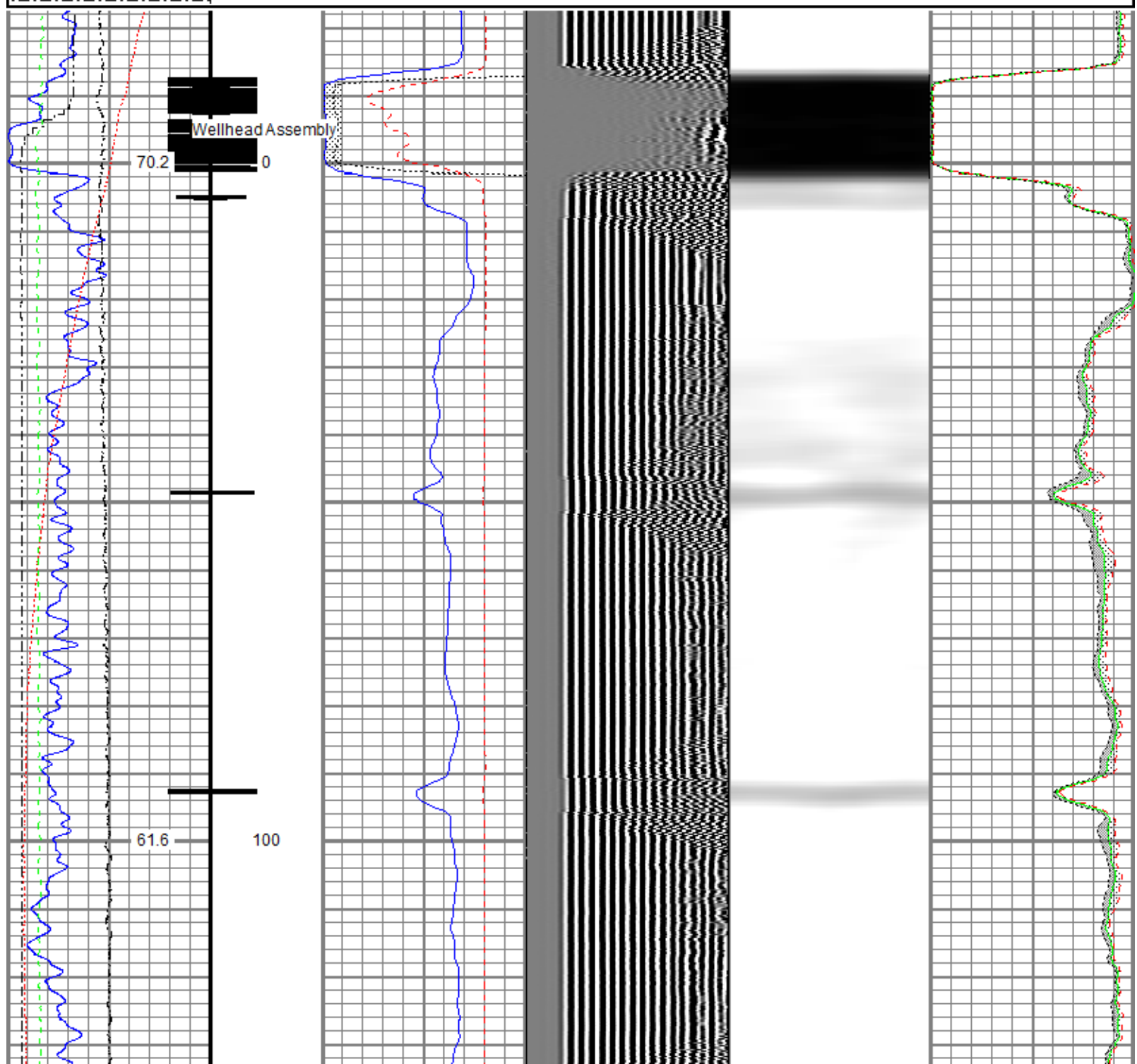
Main Pass

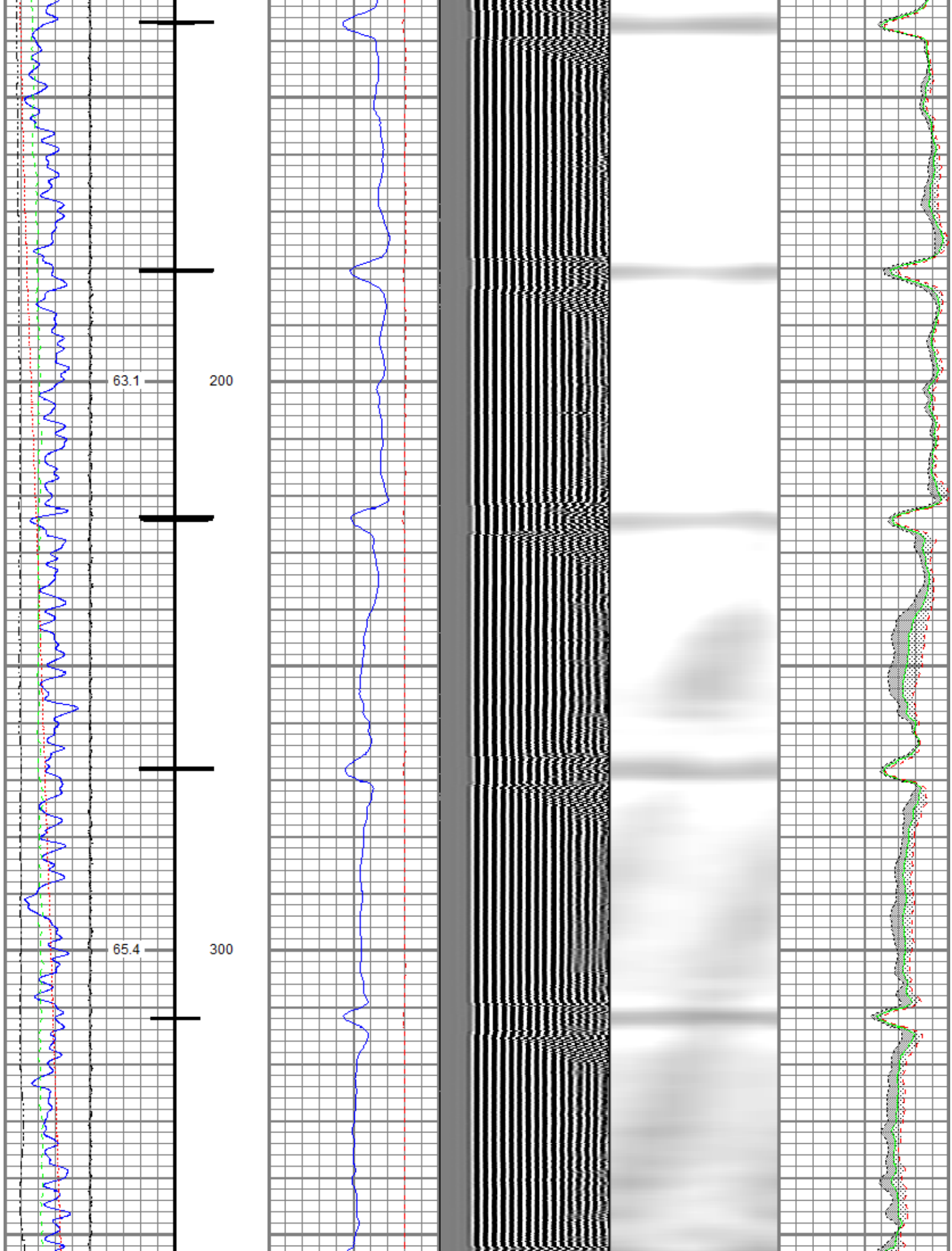


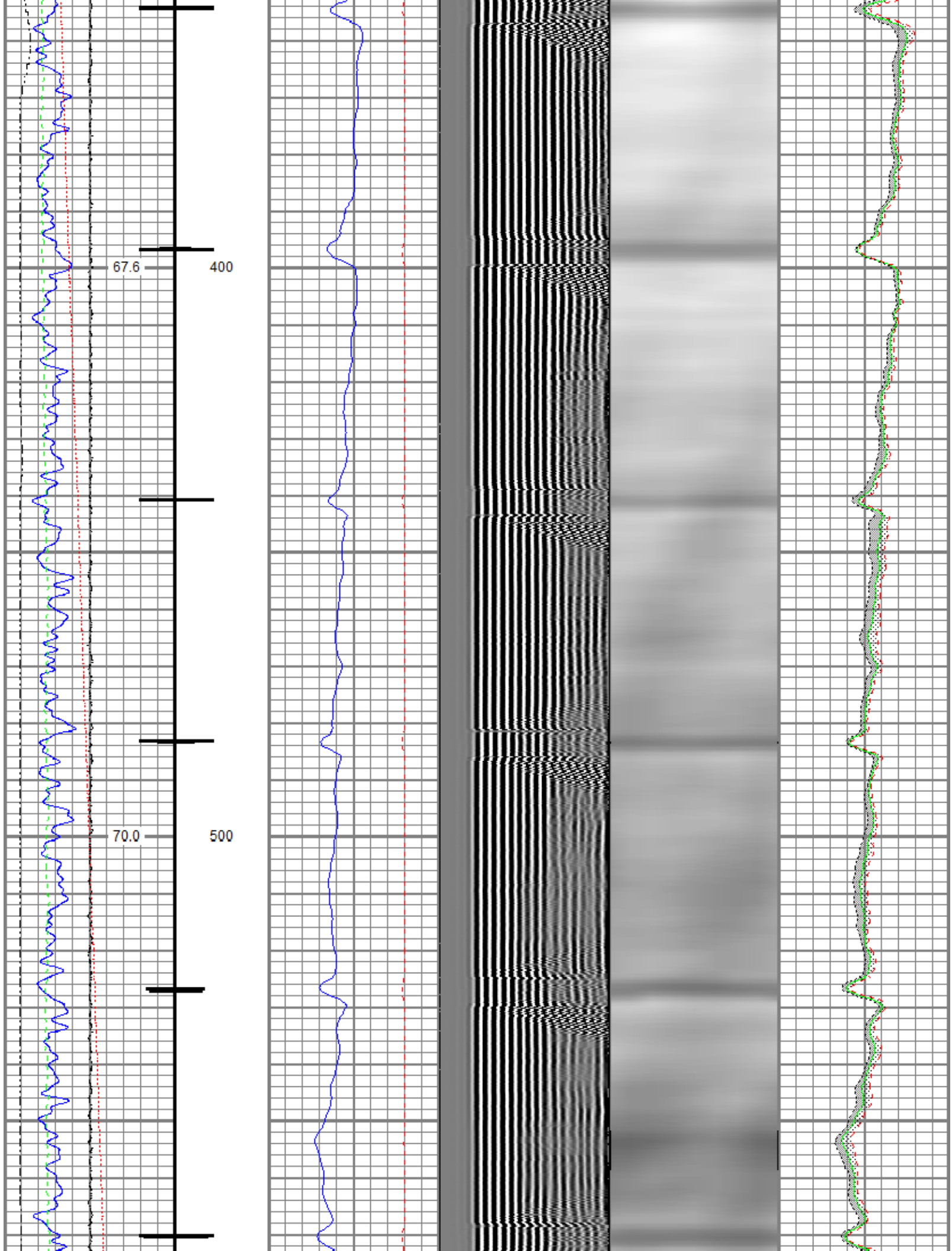
Recorded With 2800 PSI Surface Induced Pressure

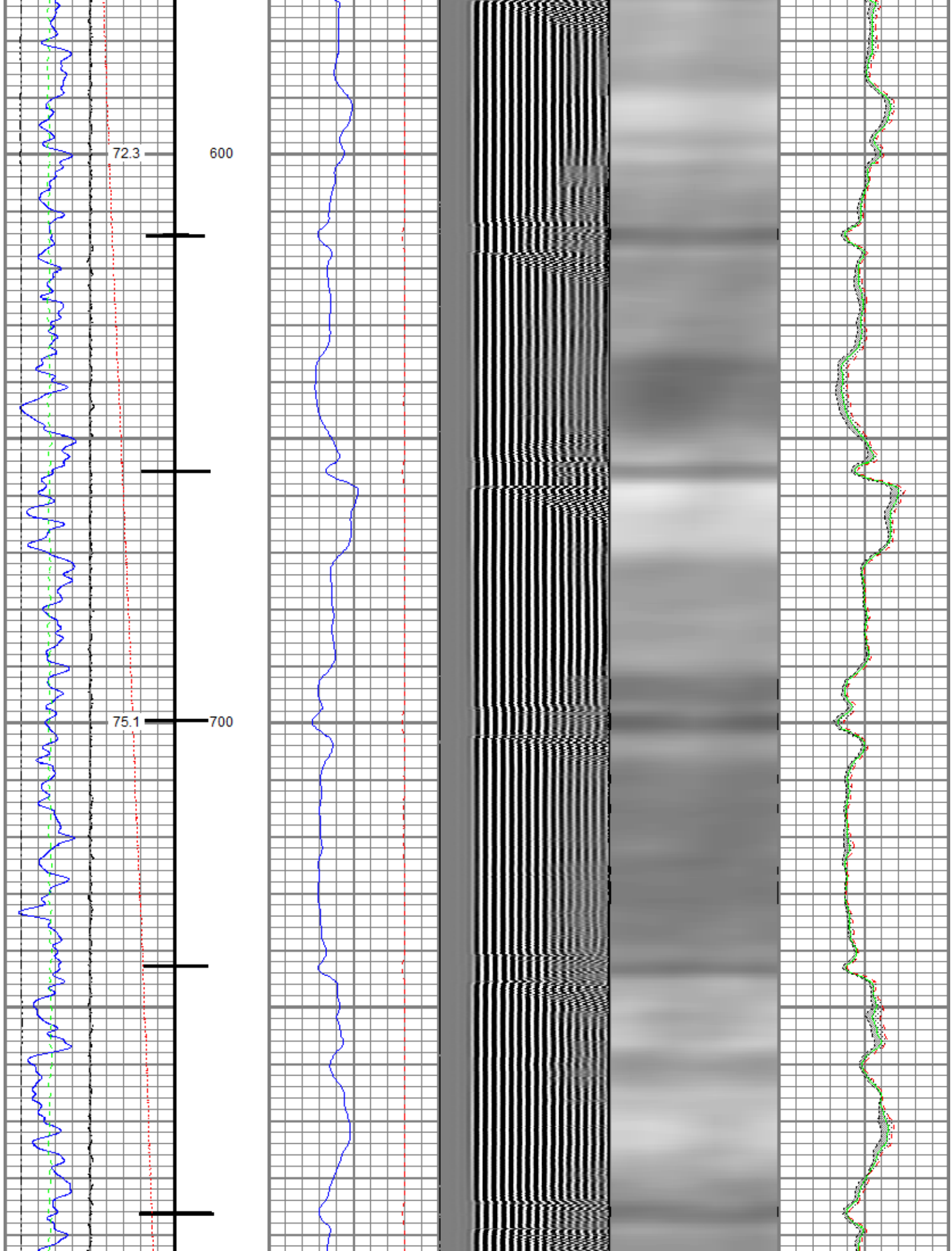
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Presentation Format	ros_radri
Dataset Creation	Thu Jun 13 10:07:41 2019
Charted by	Depth in Feet scaled 1:240

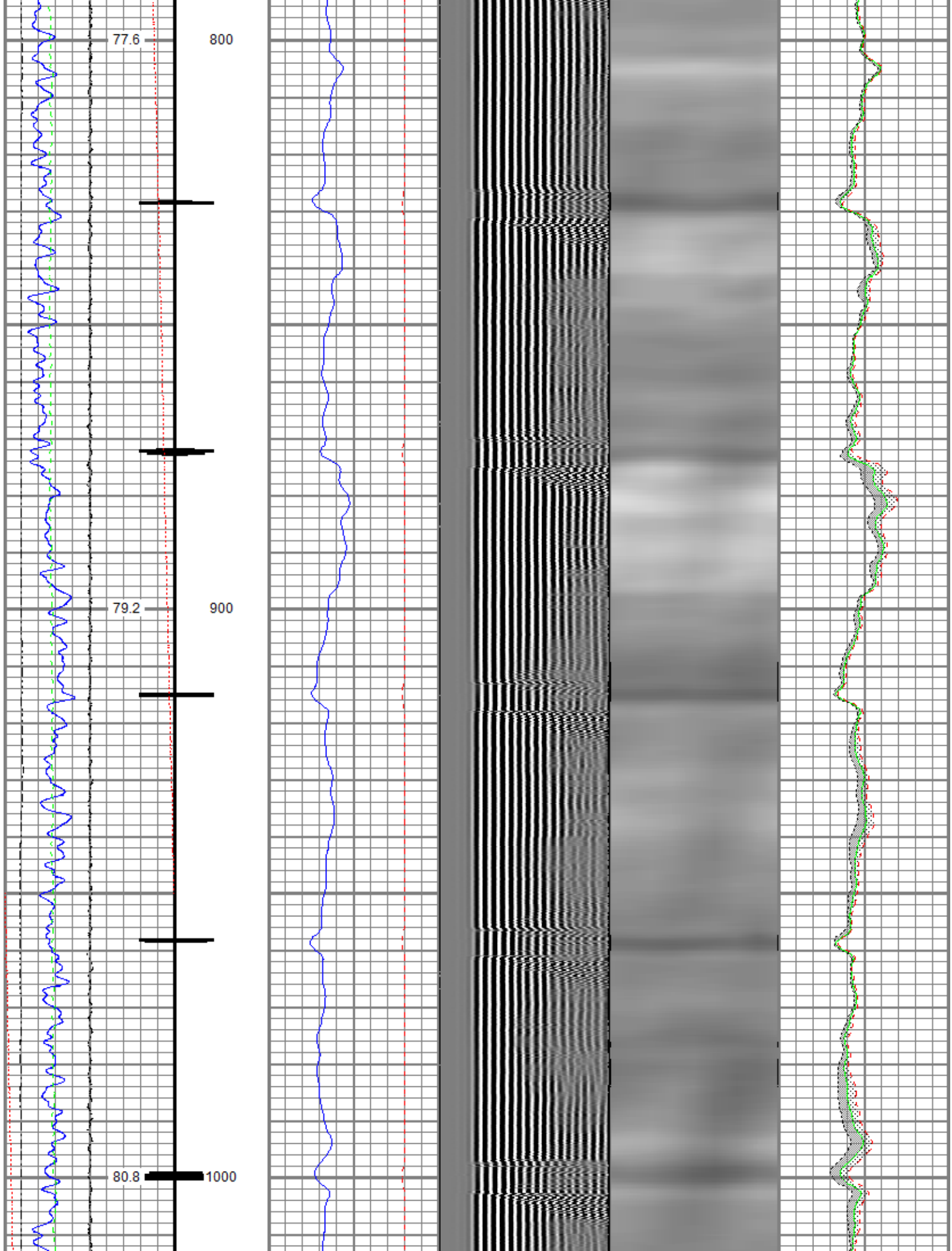
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200			Minimum Amplitude
Casing Collar Locator		(mV) 20				
0 Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed		650 (usec) 150				
-150 (ft/min) 150						
0 Line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

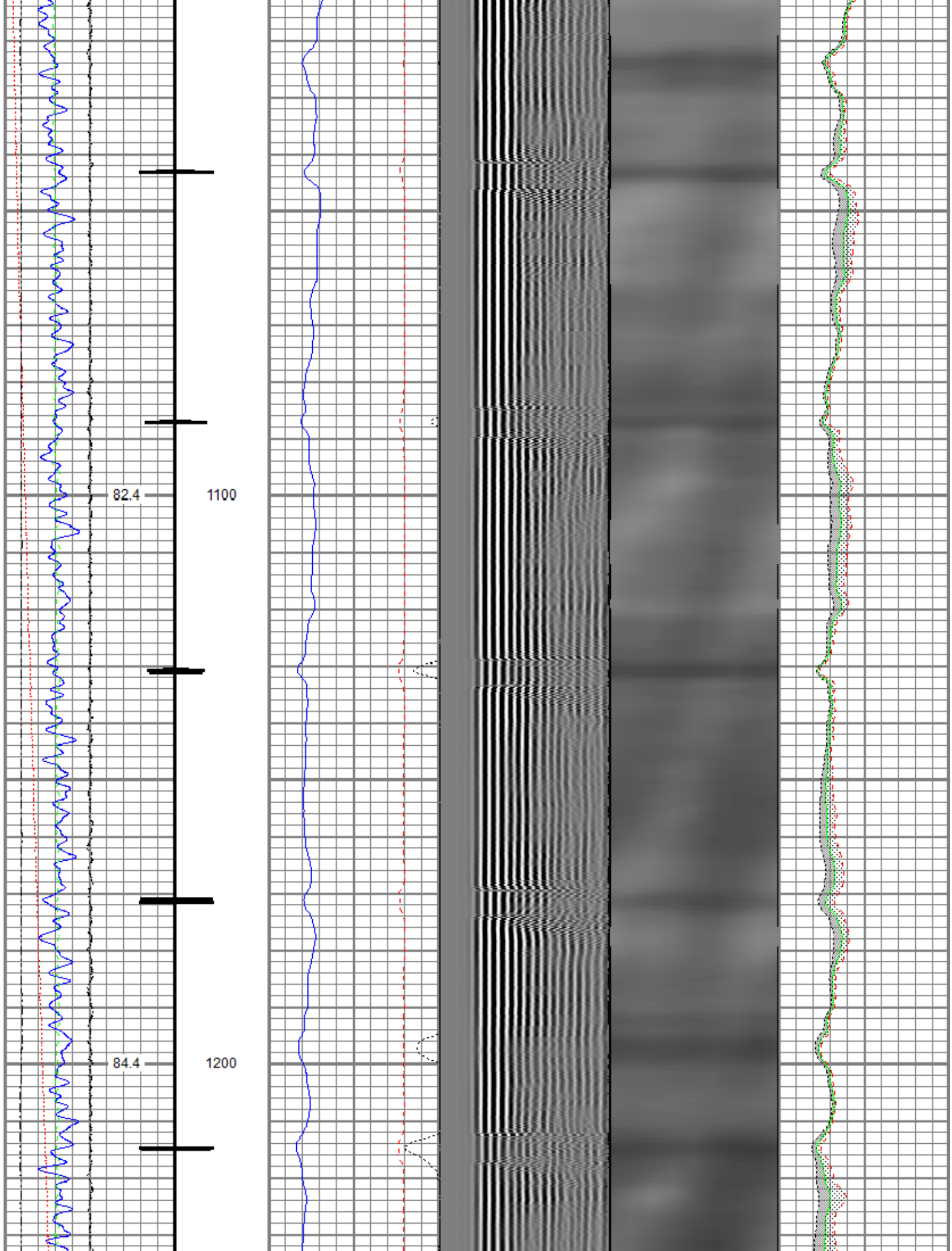


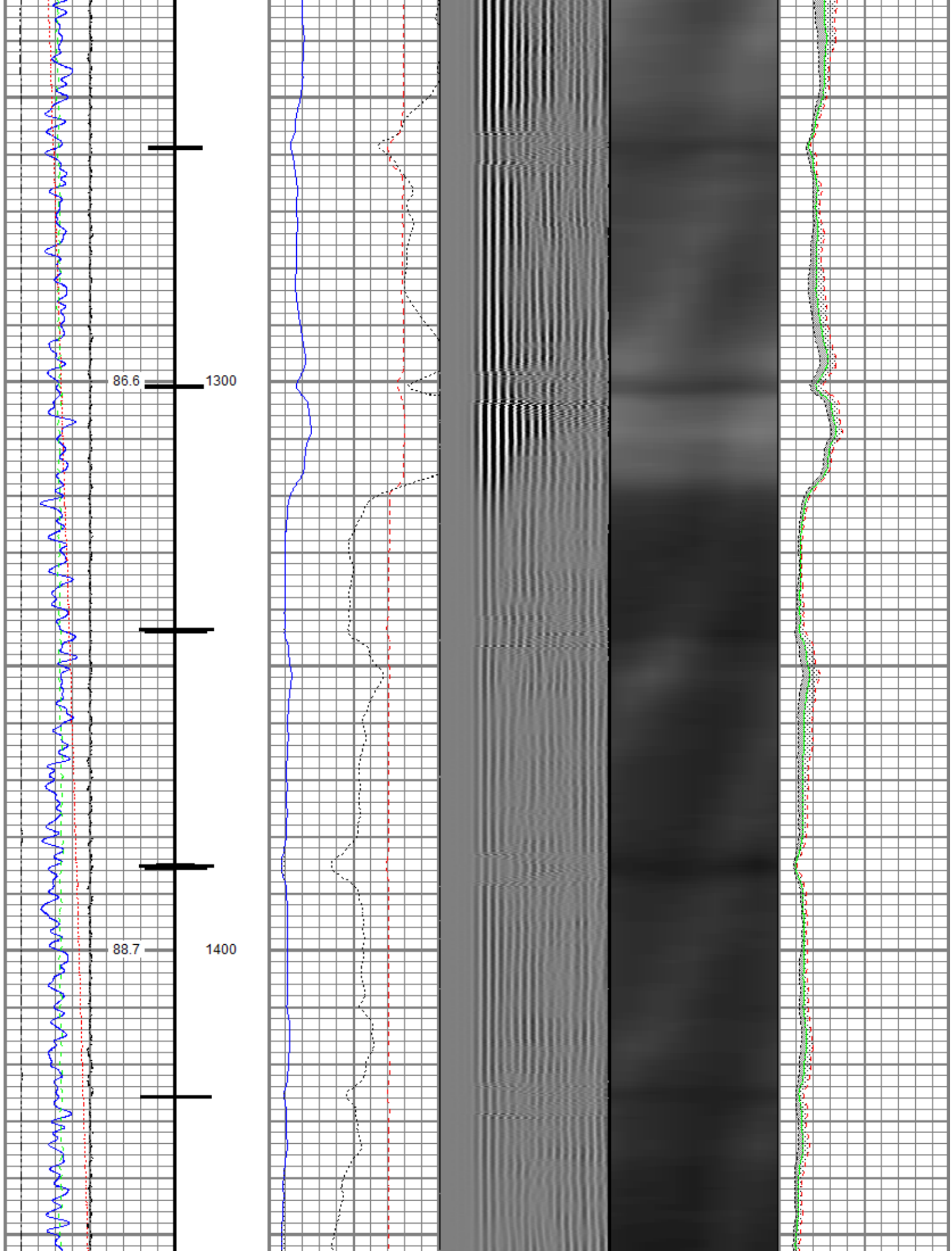


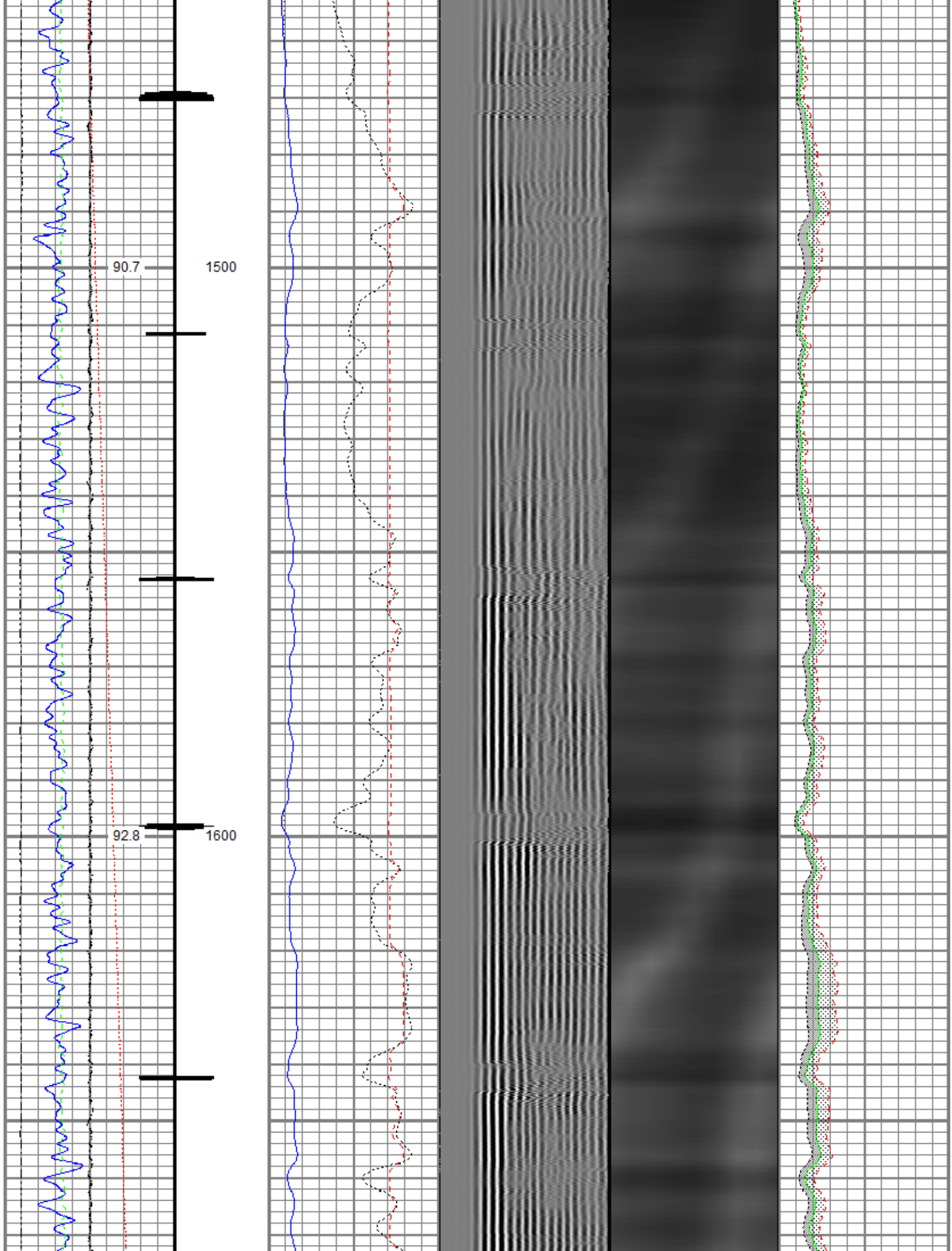


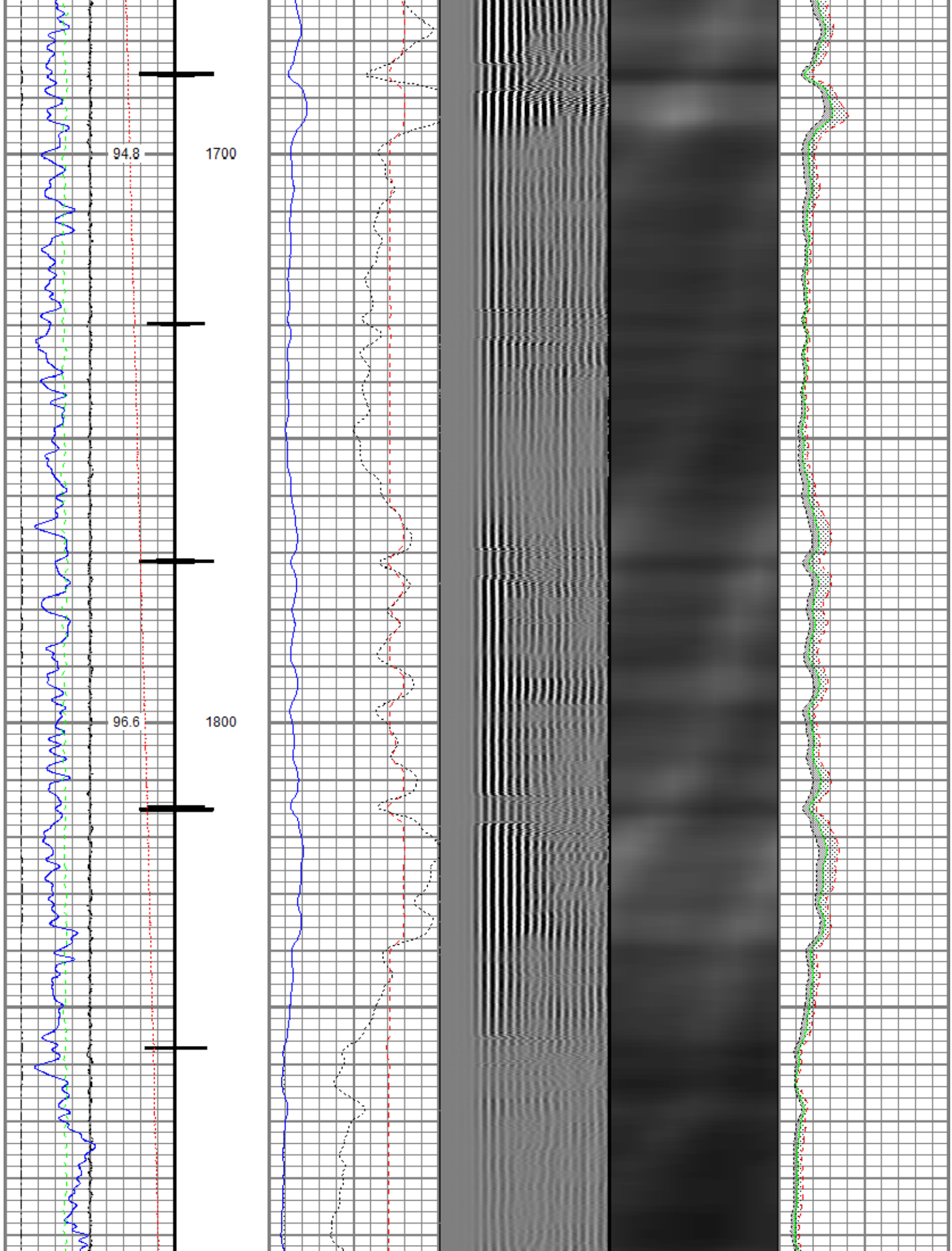


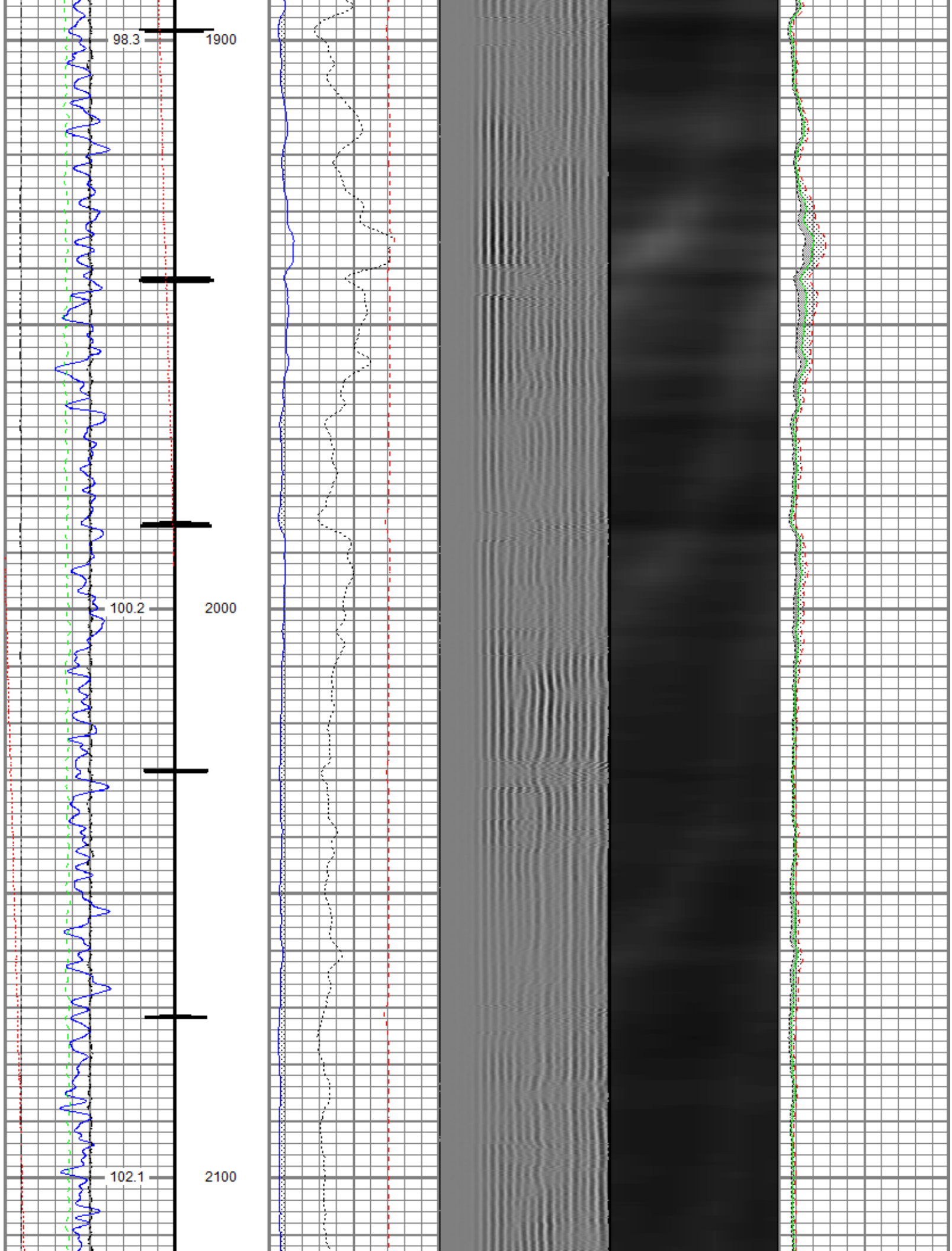


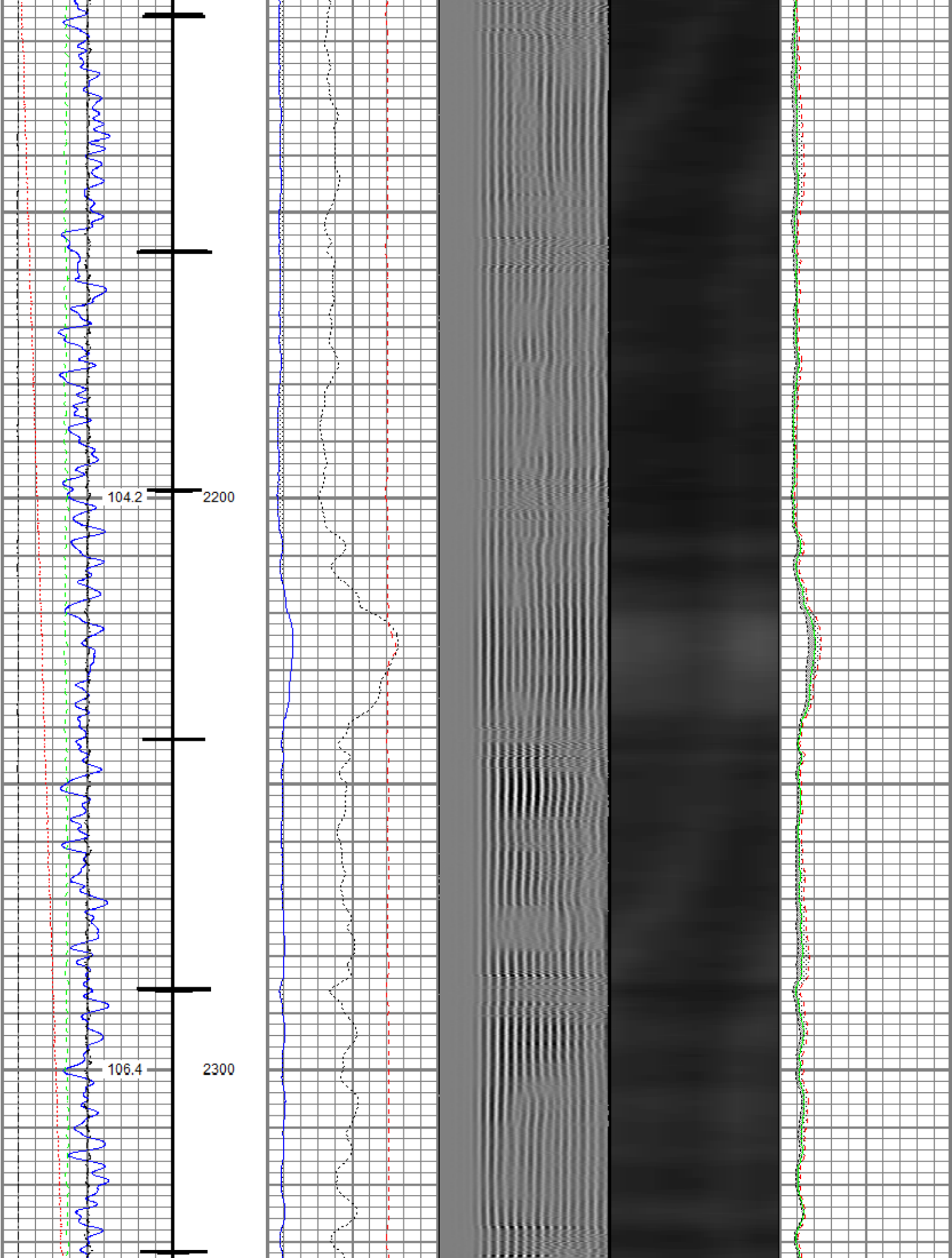


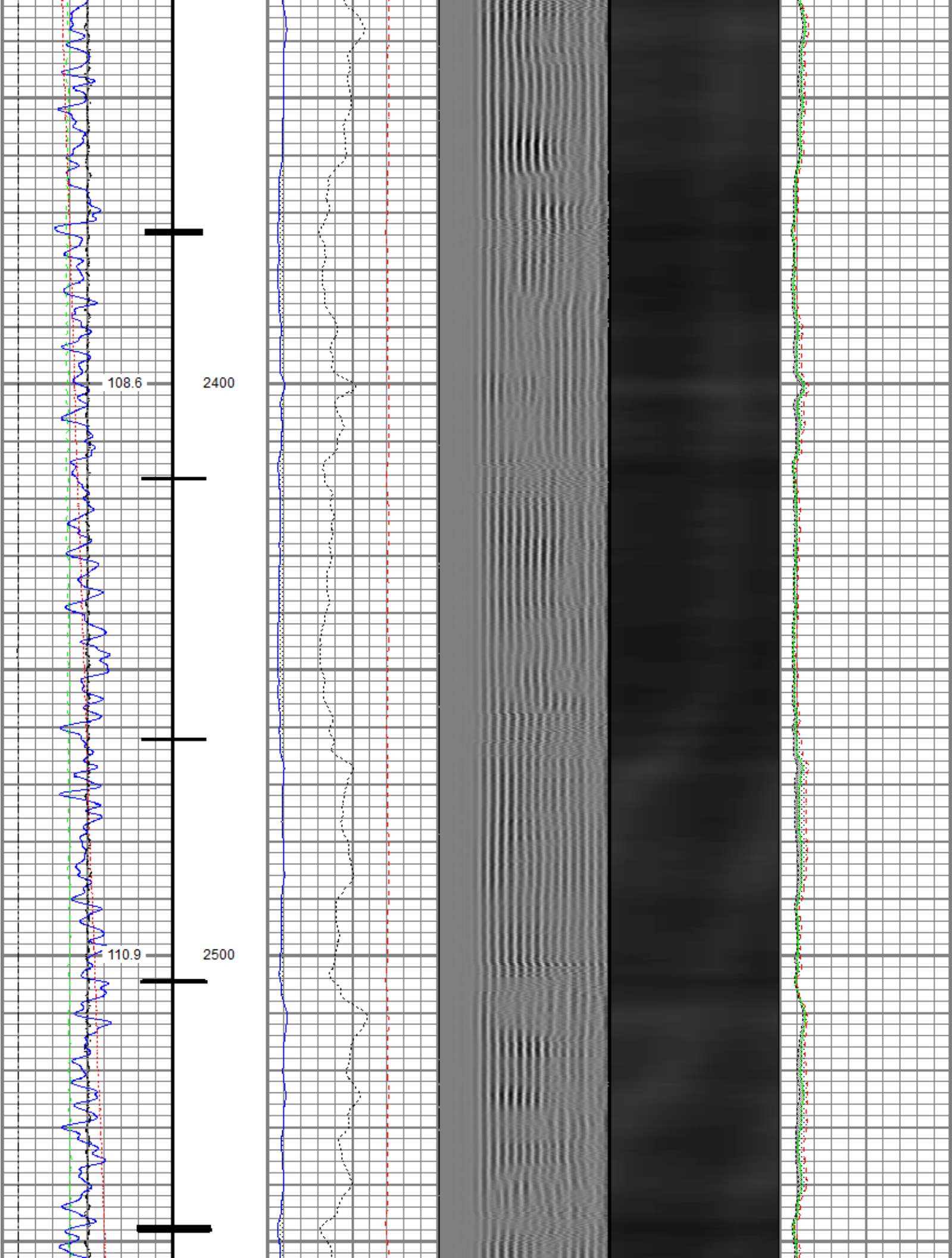


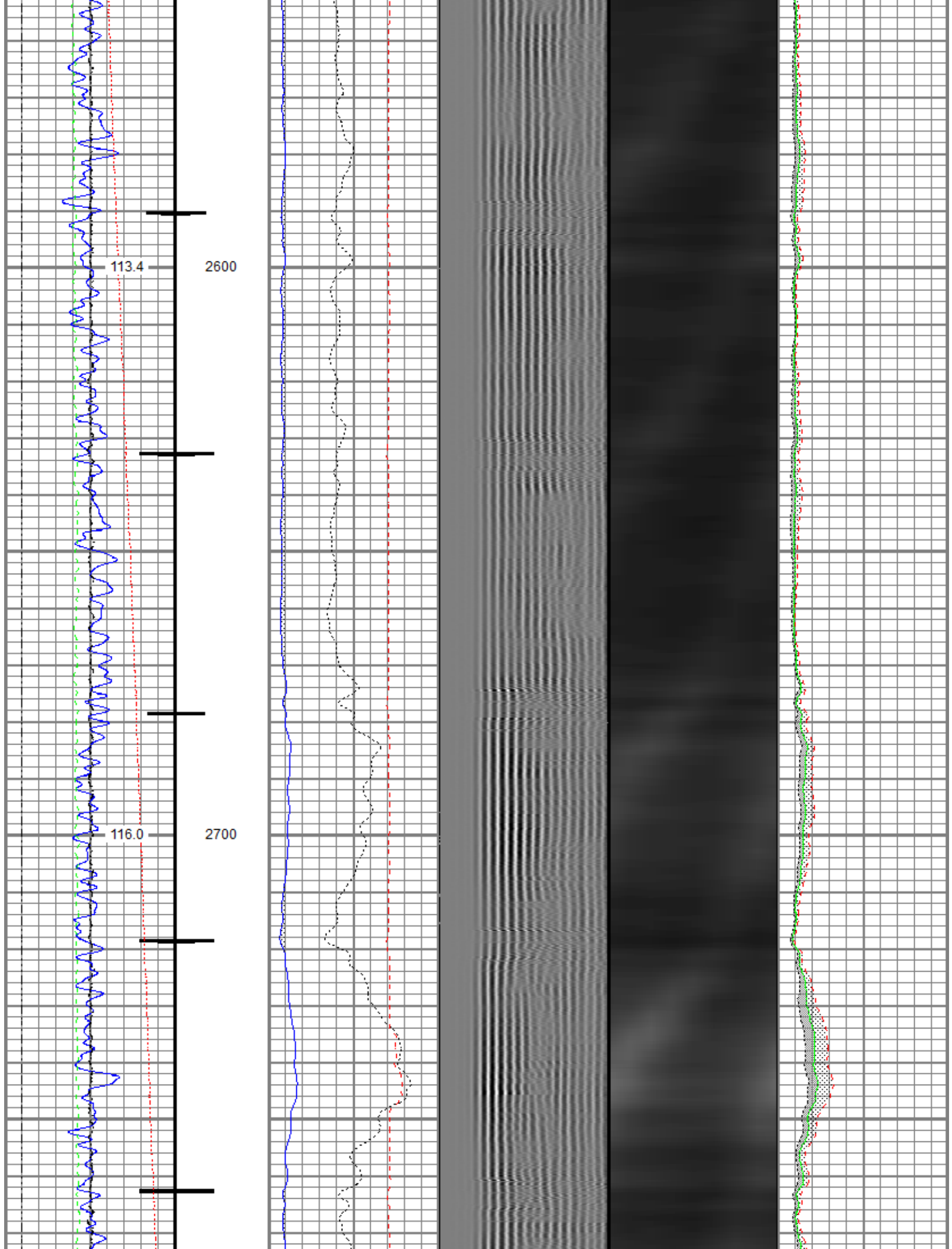


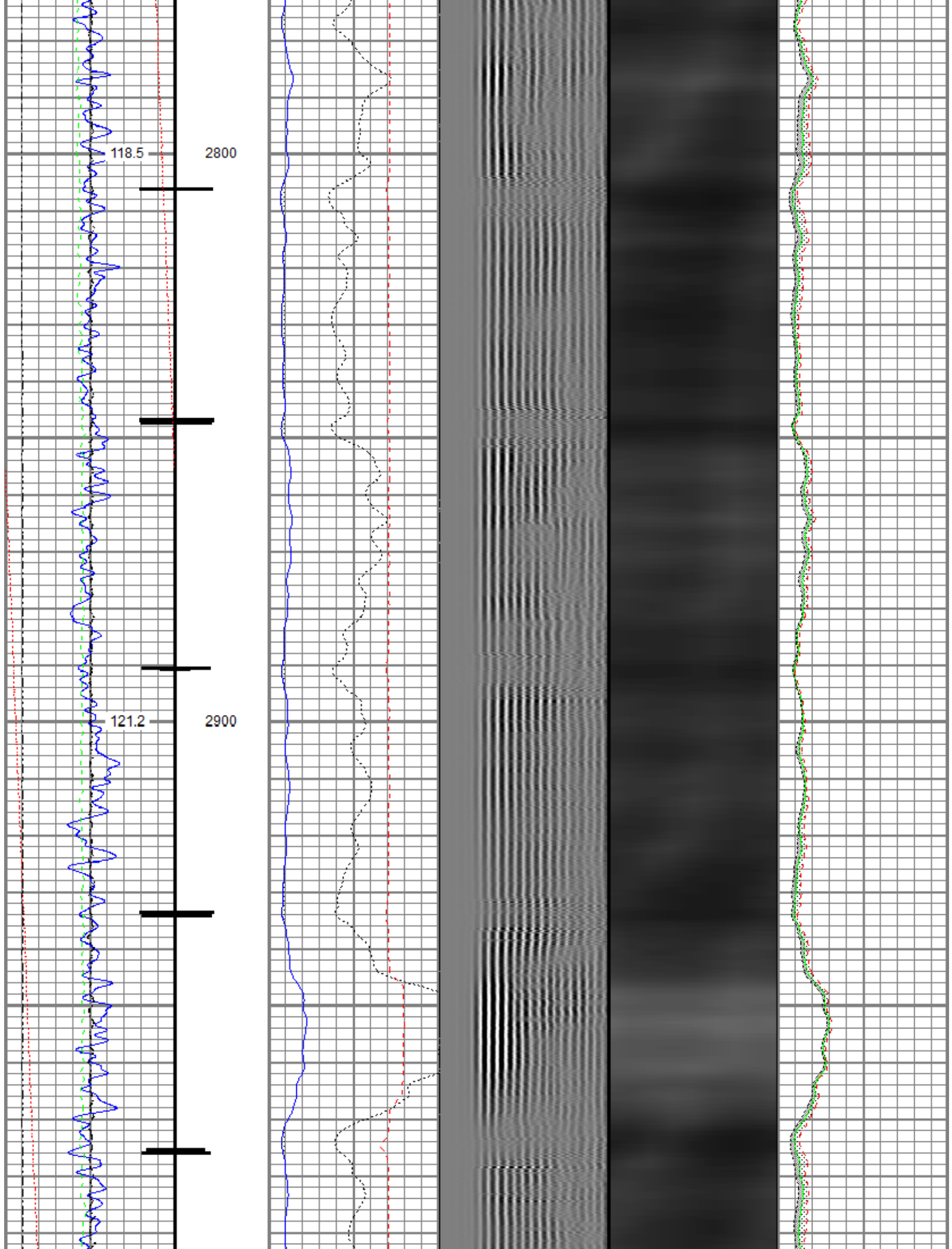


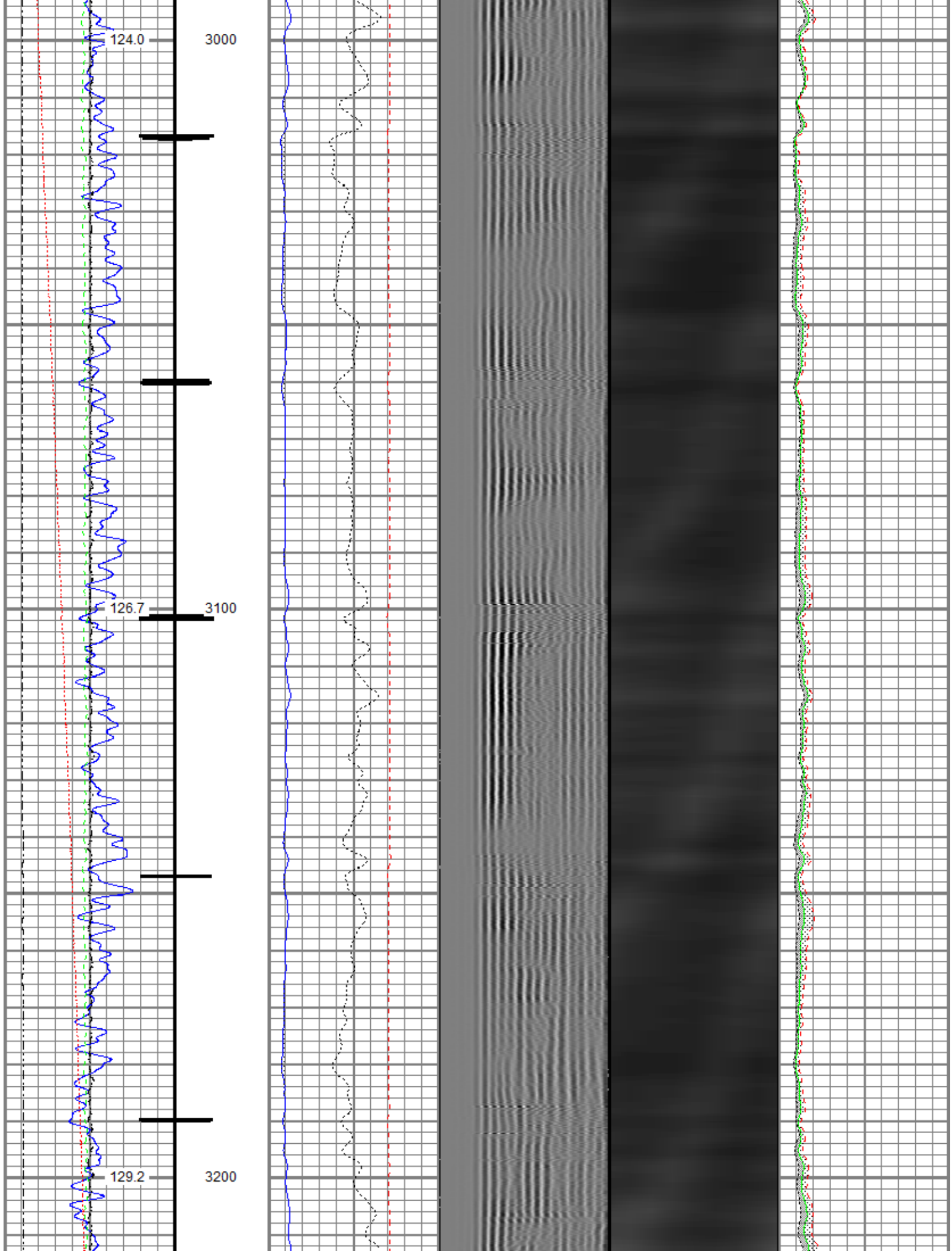


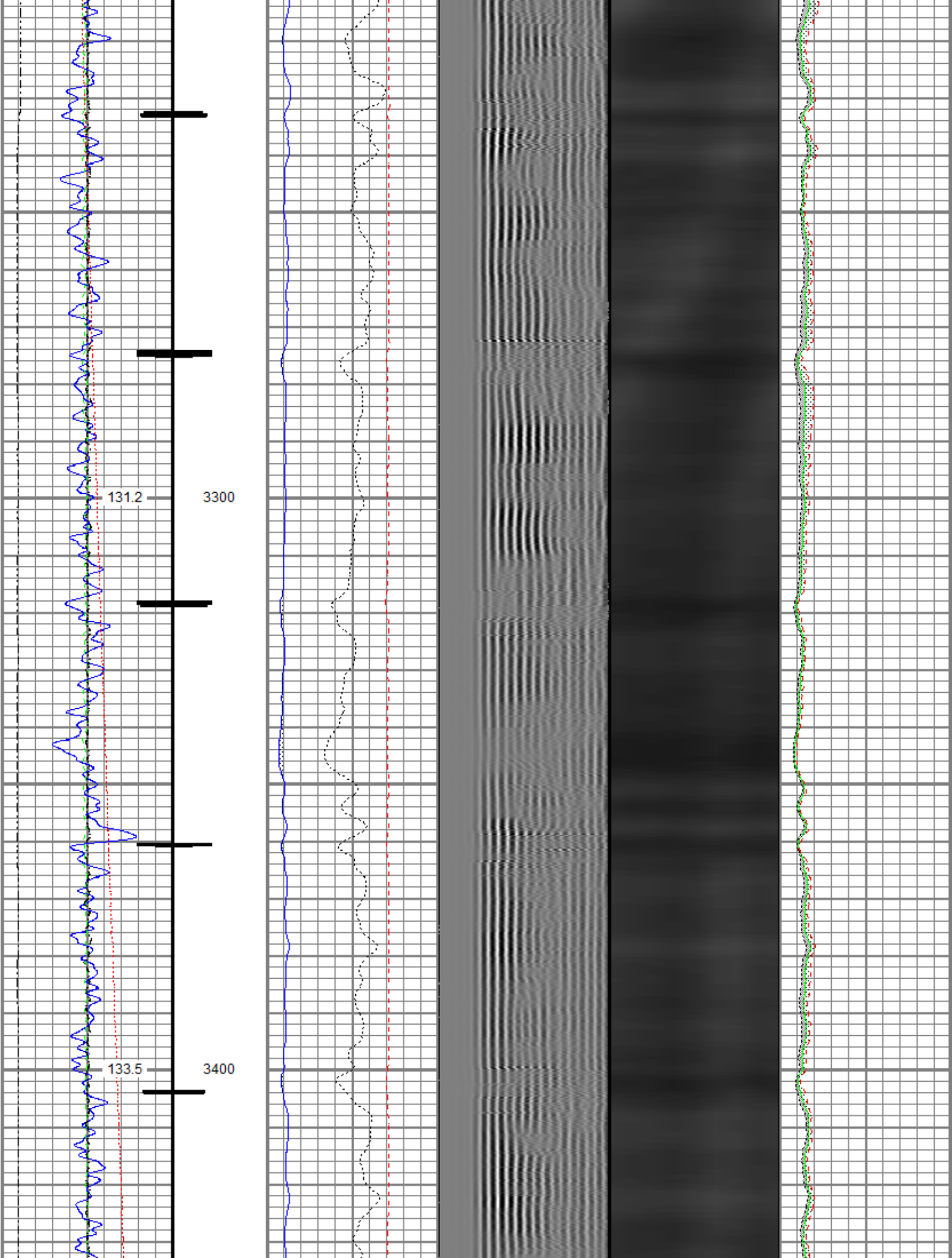


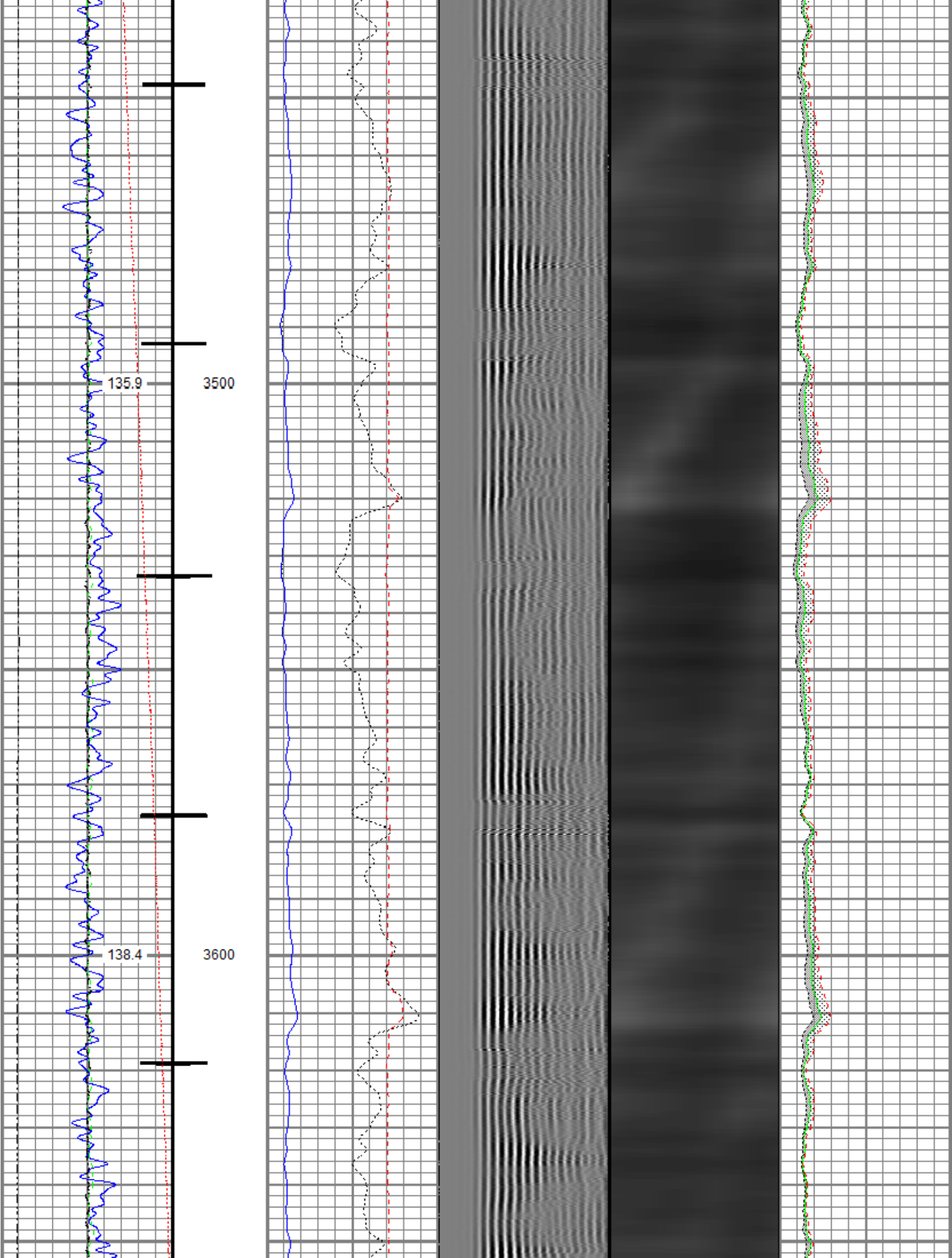


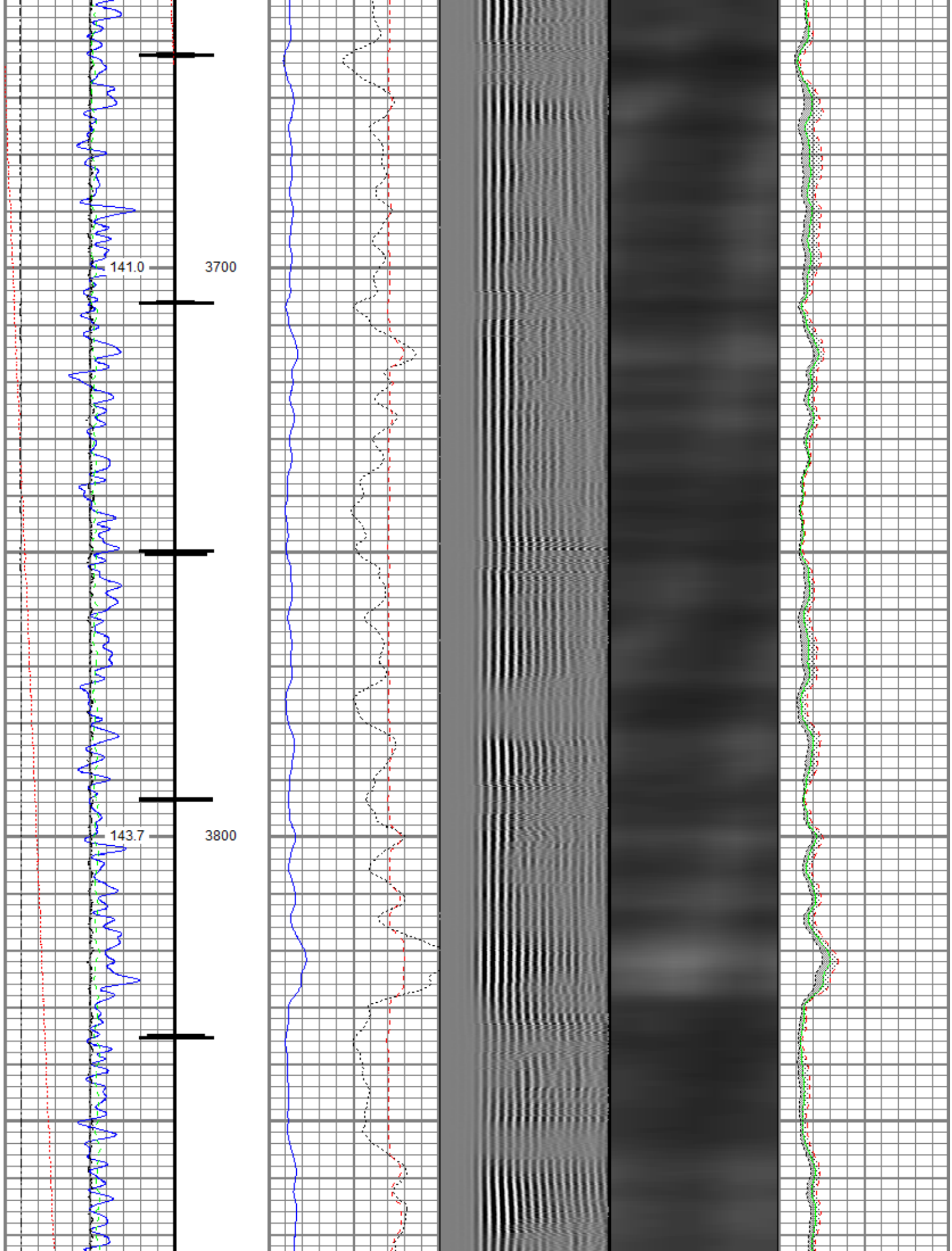


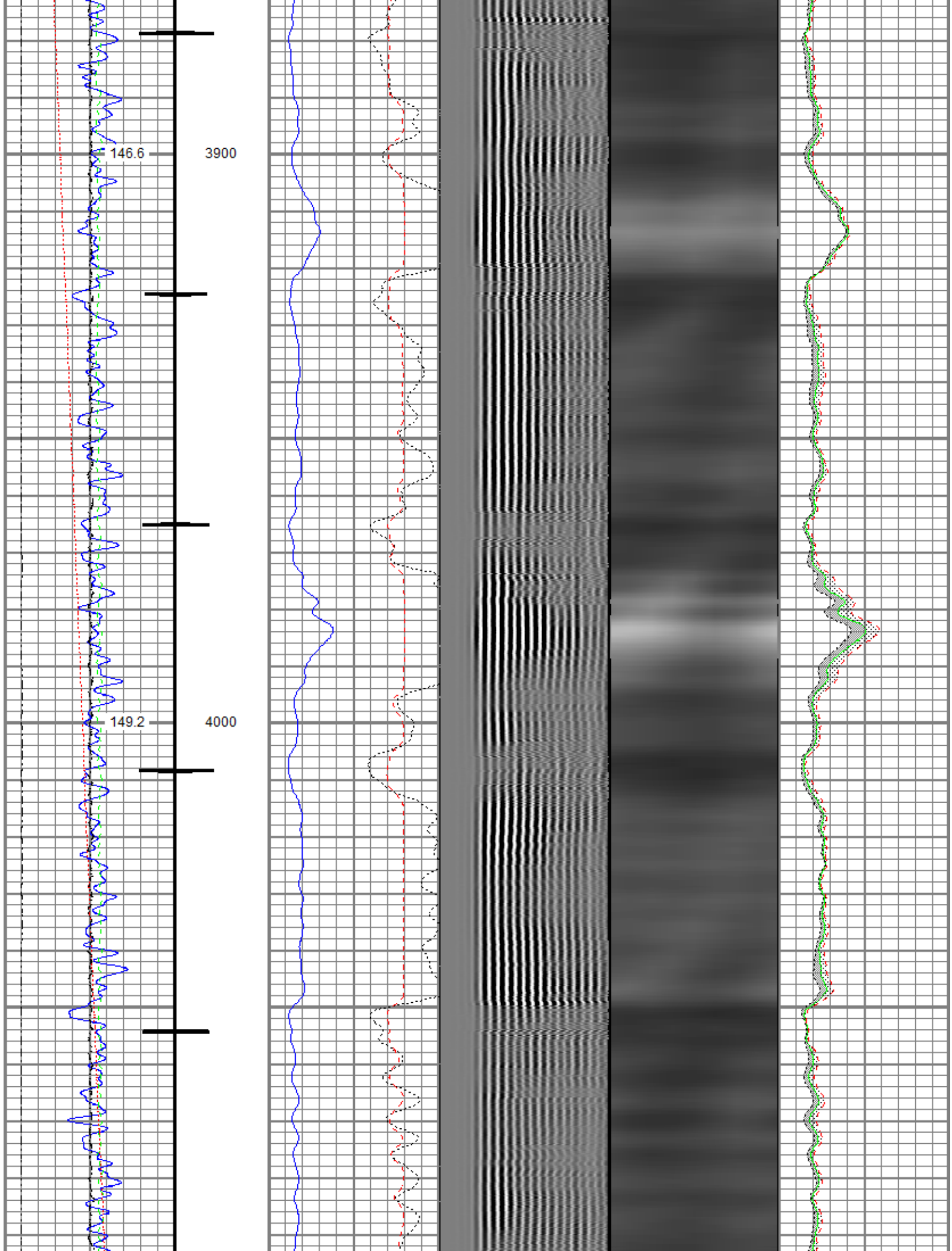


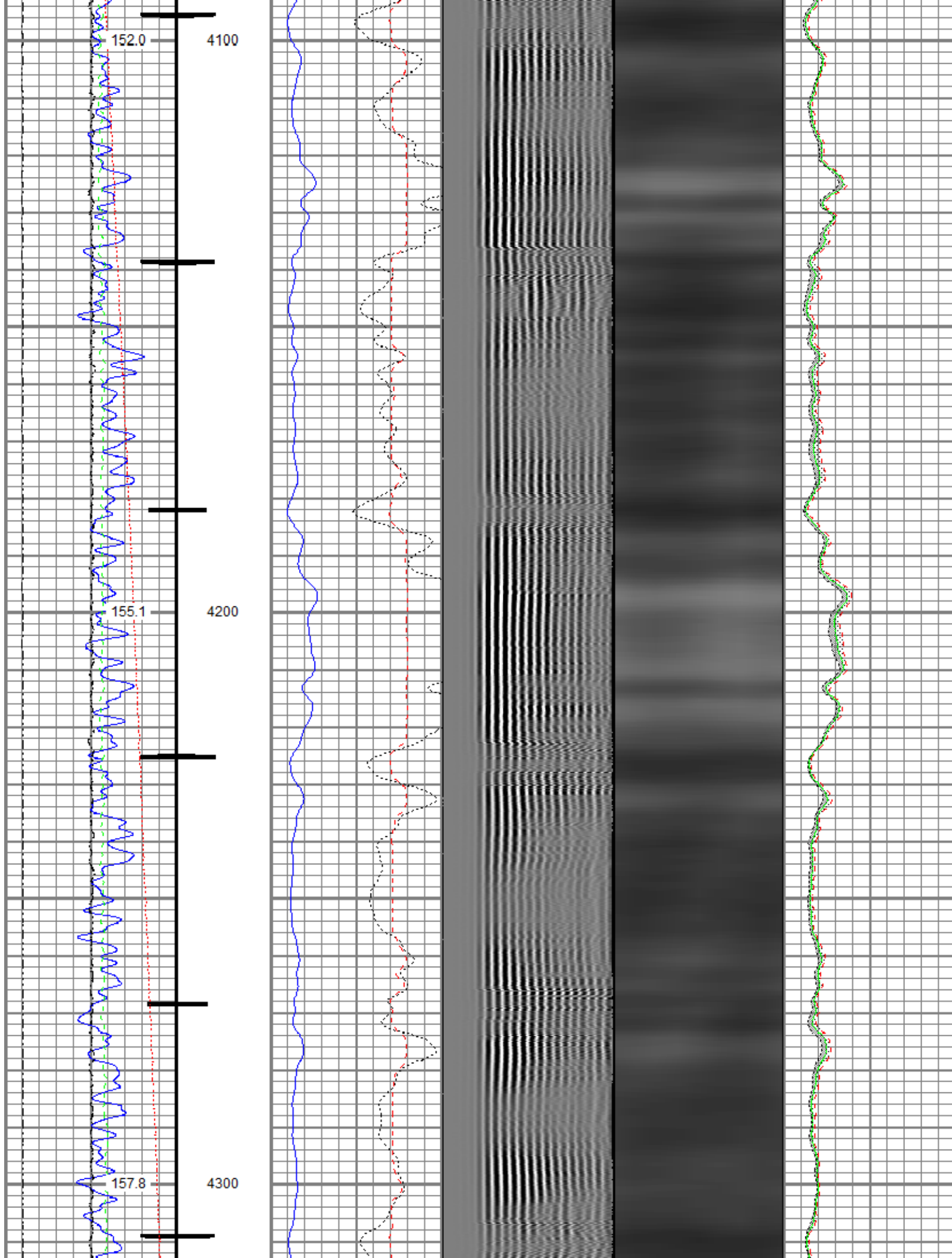


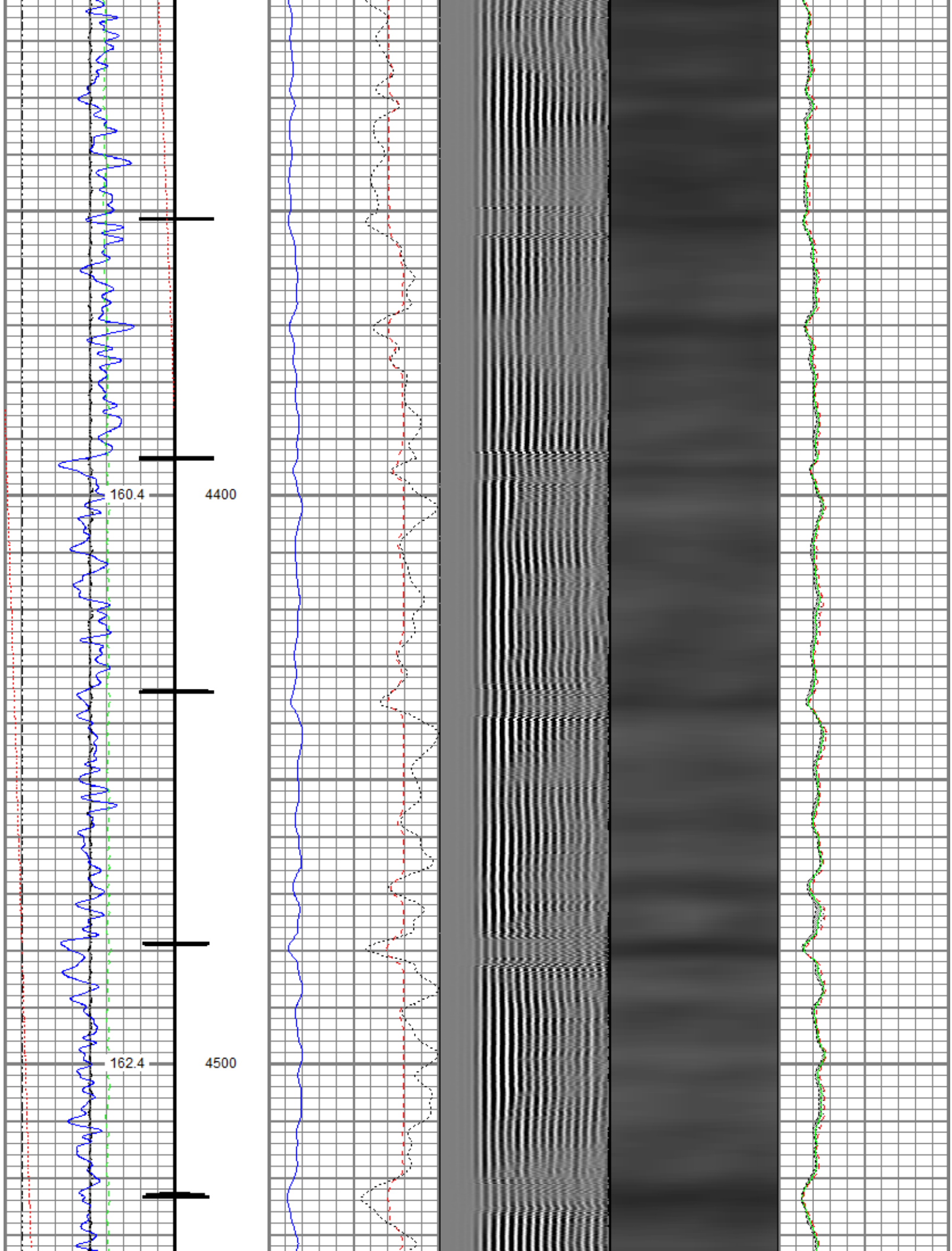


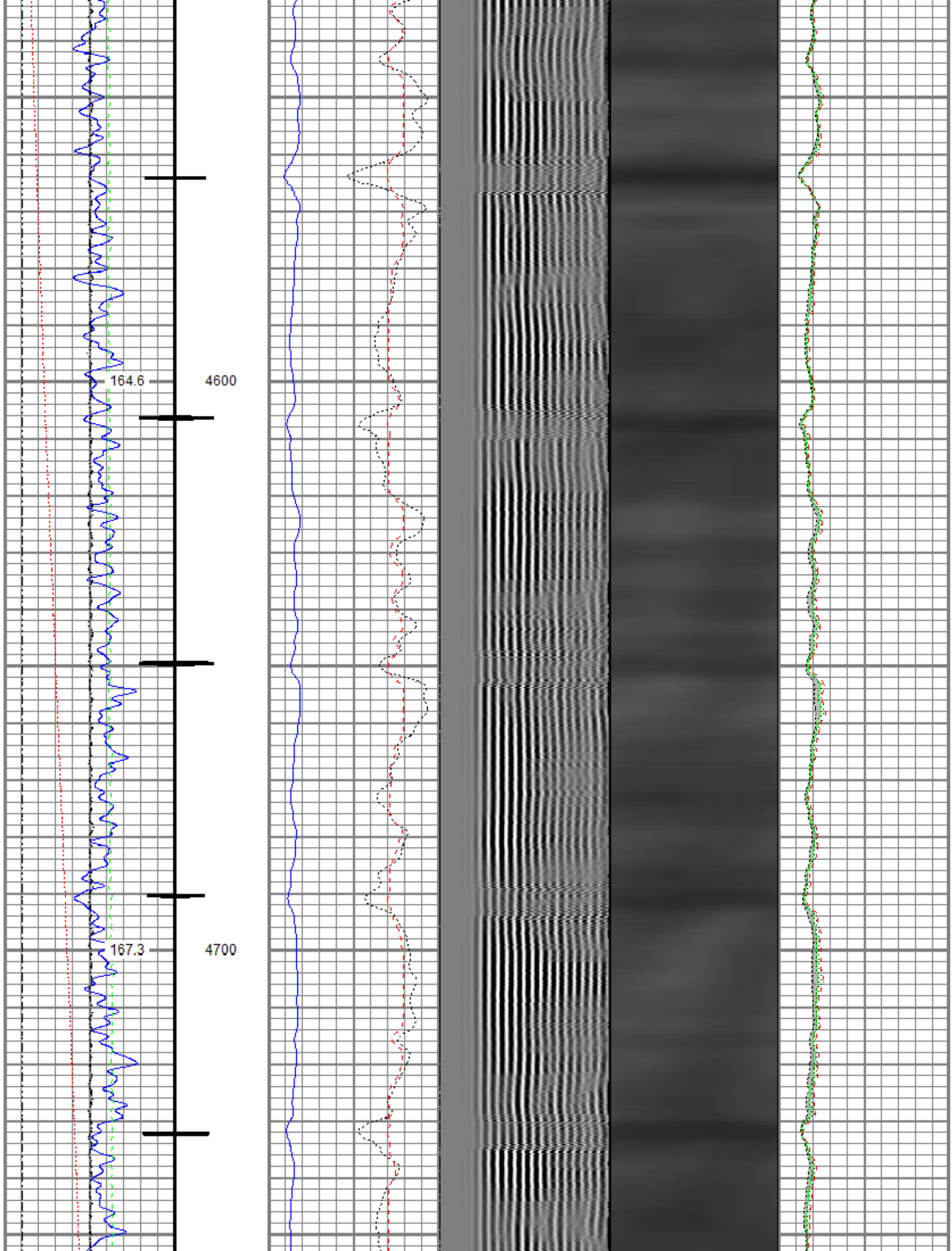


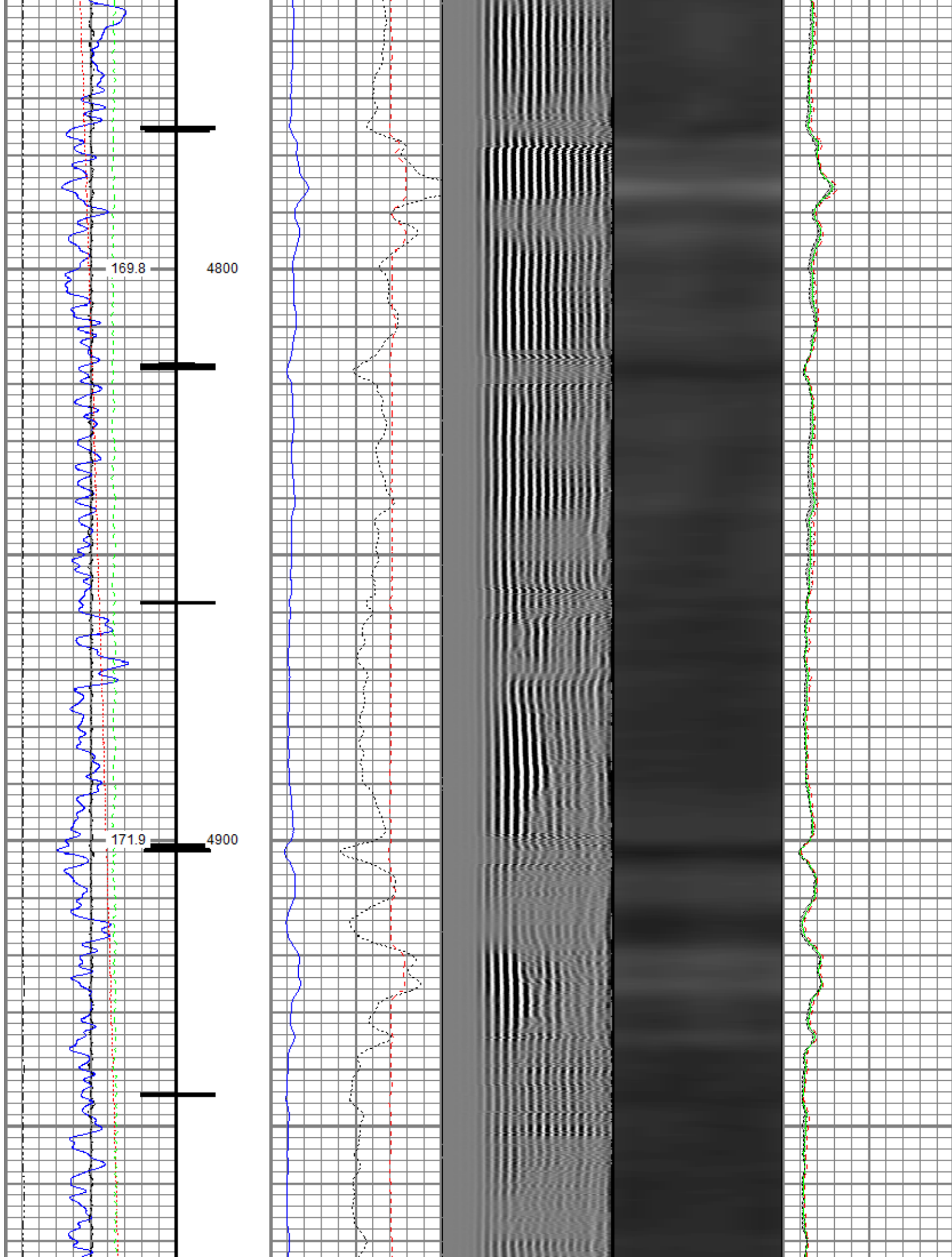


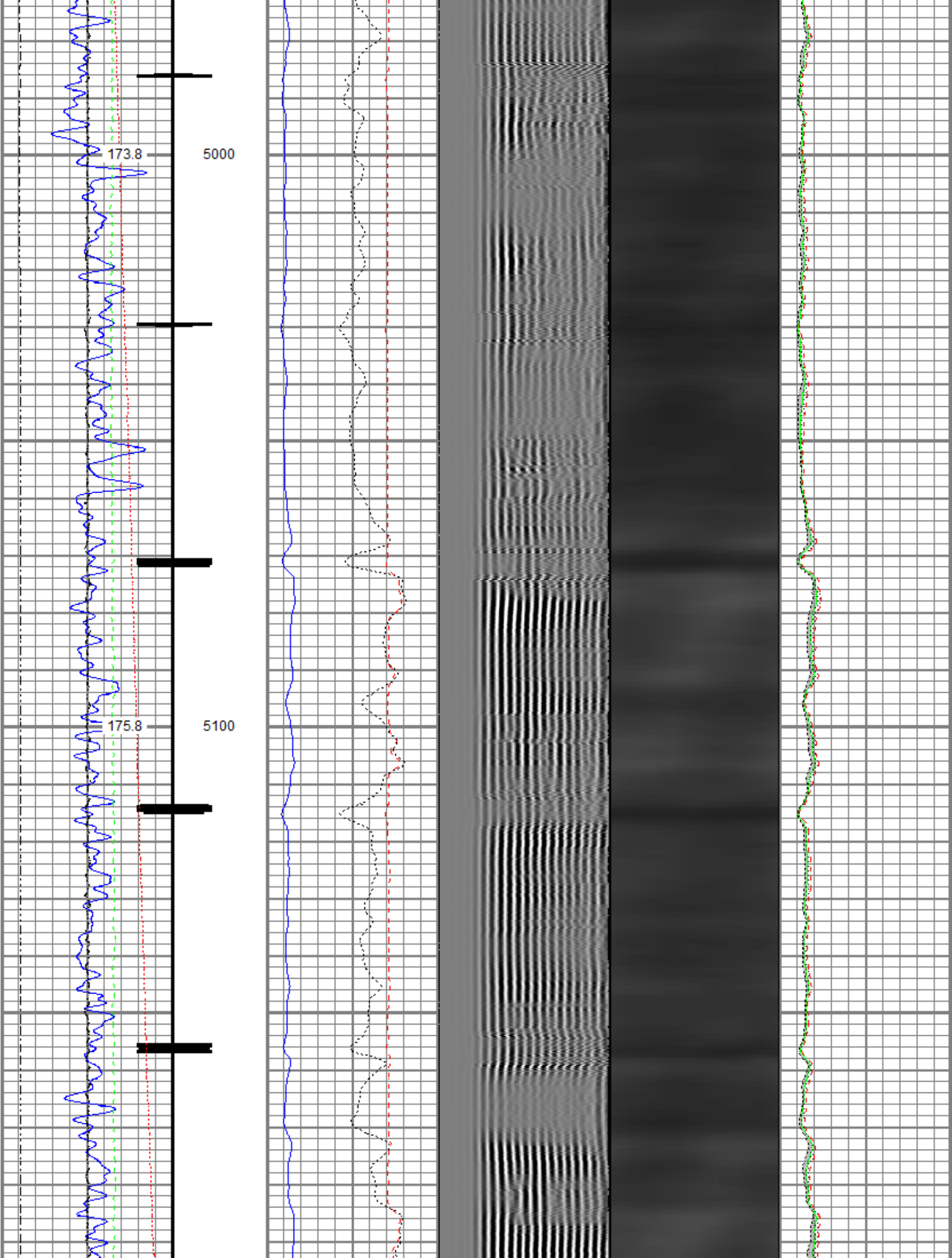


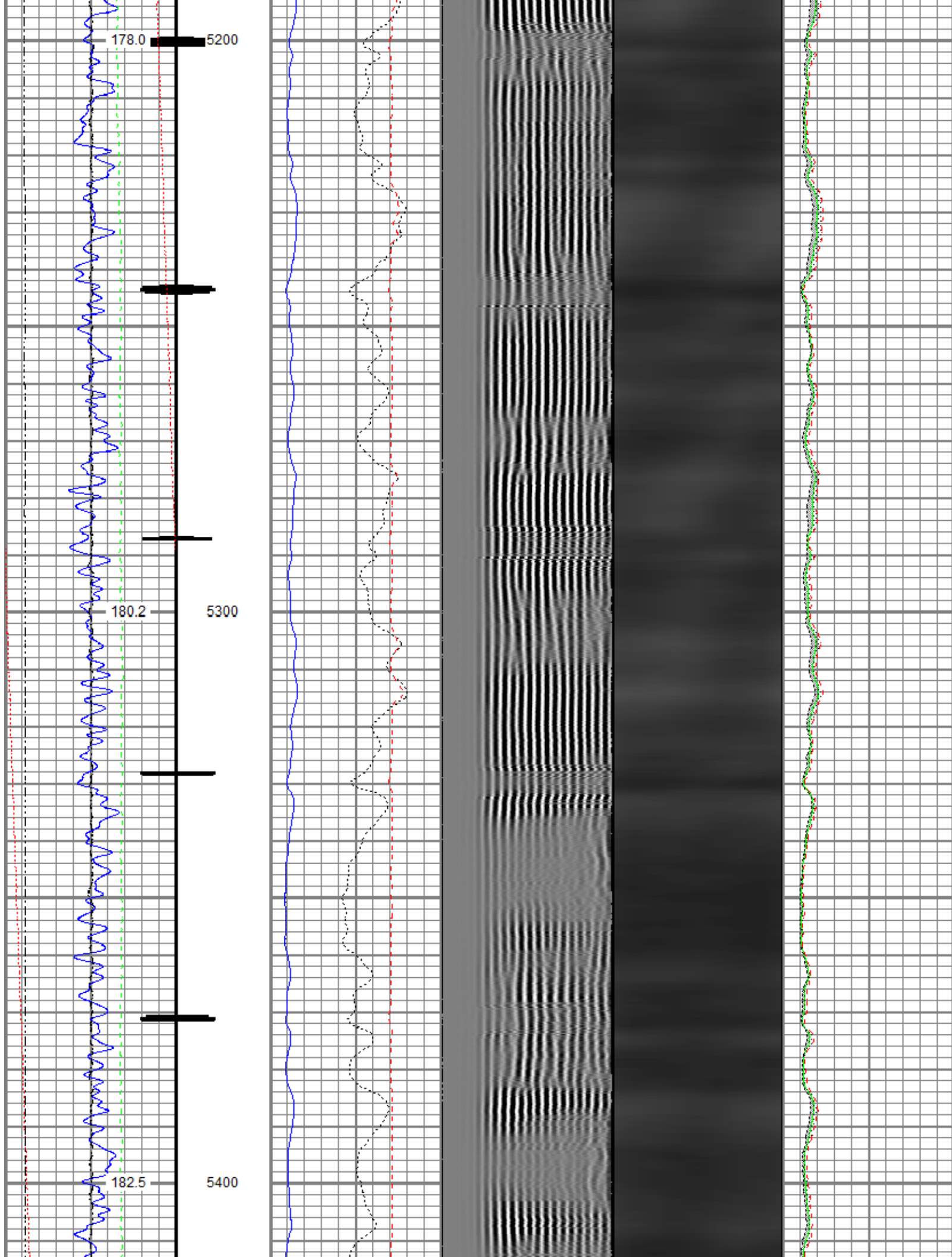


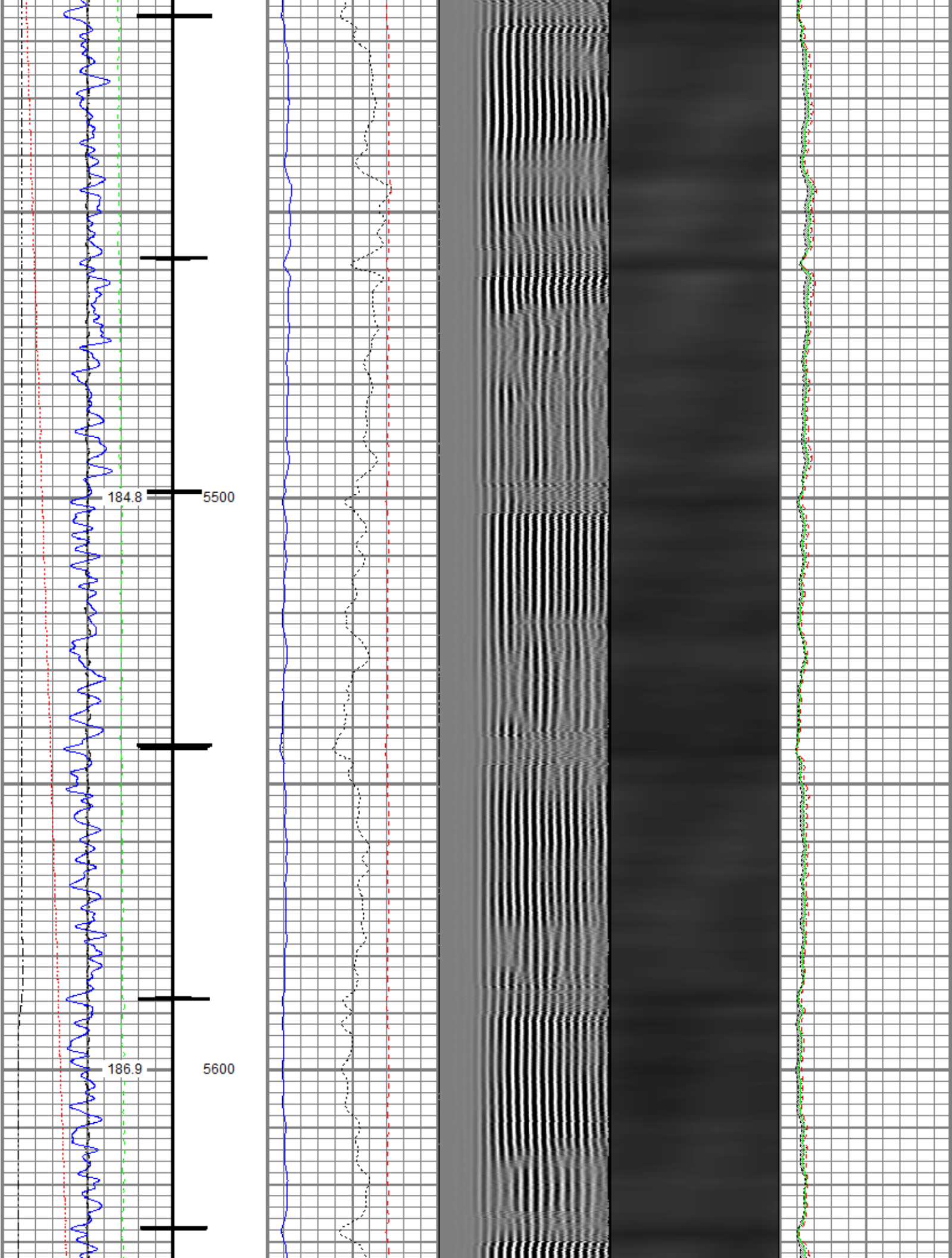


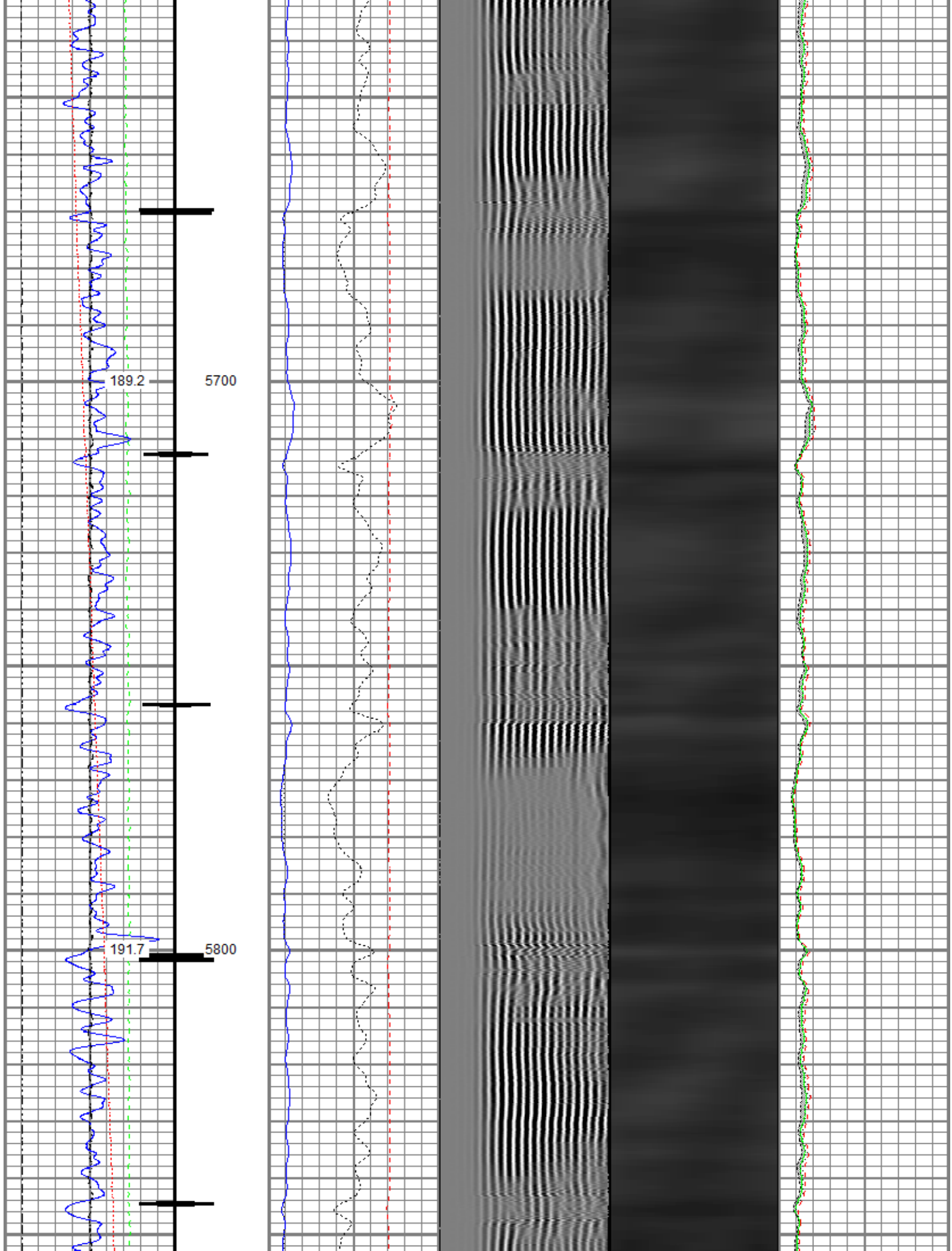


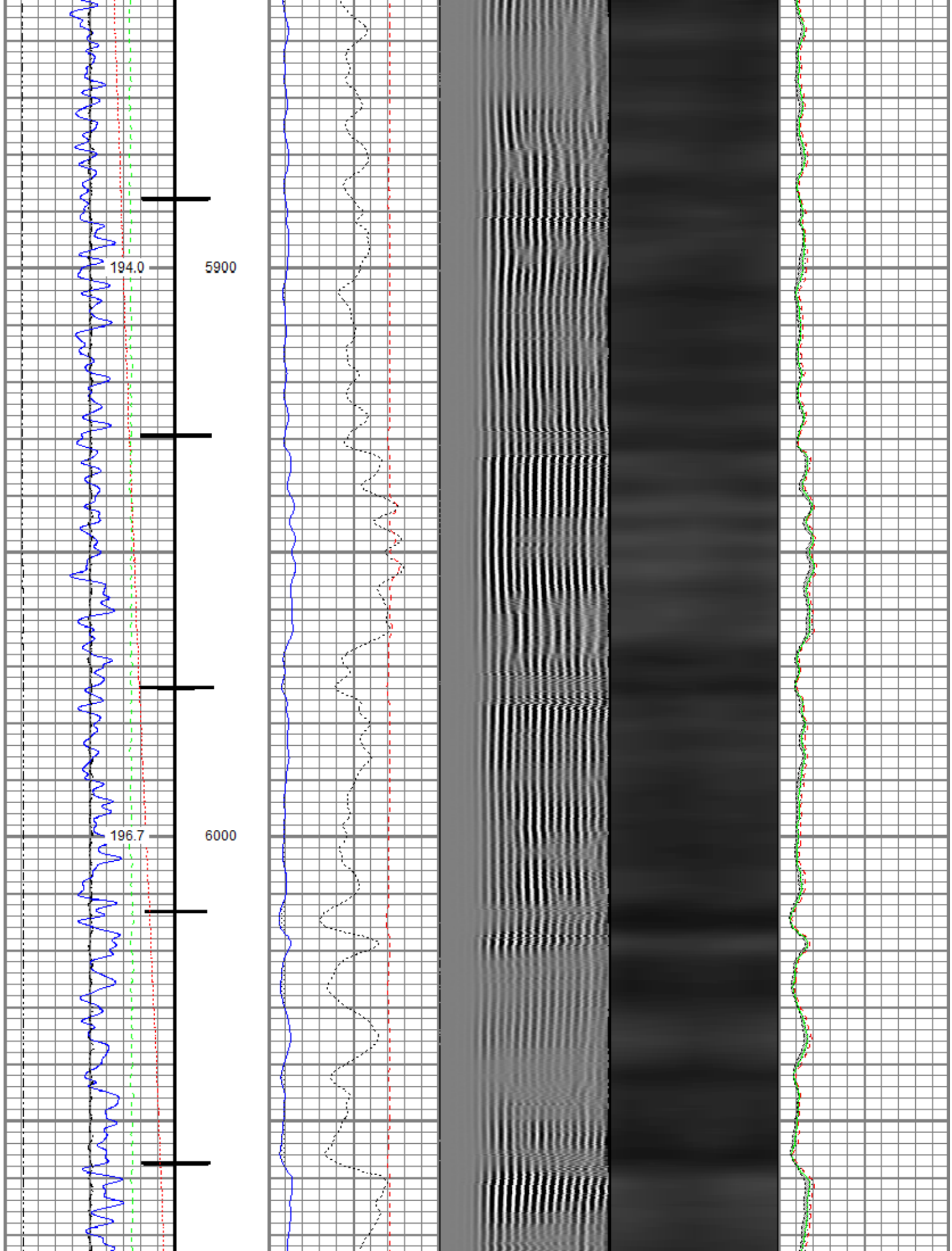


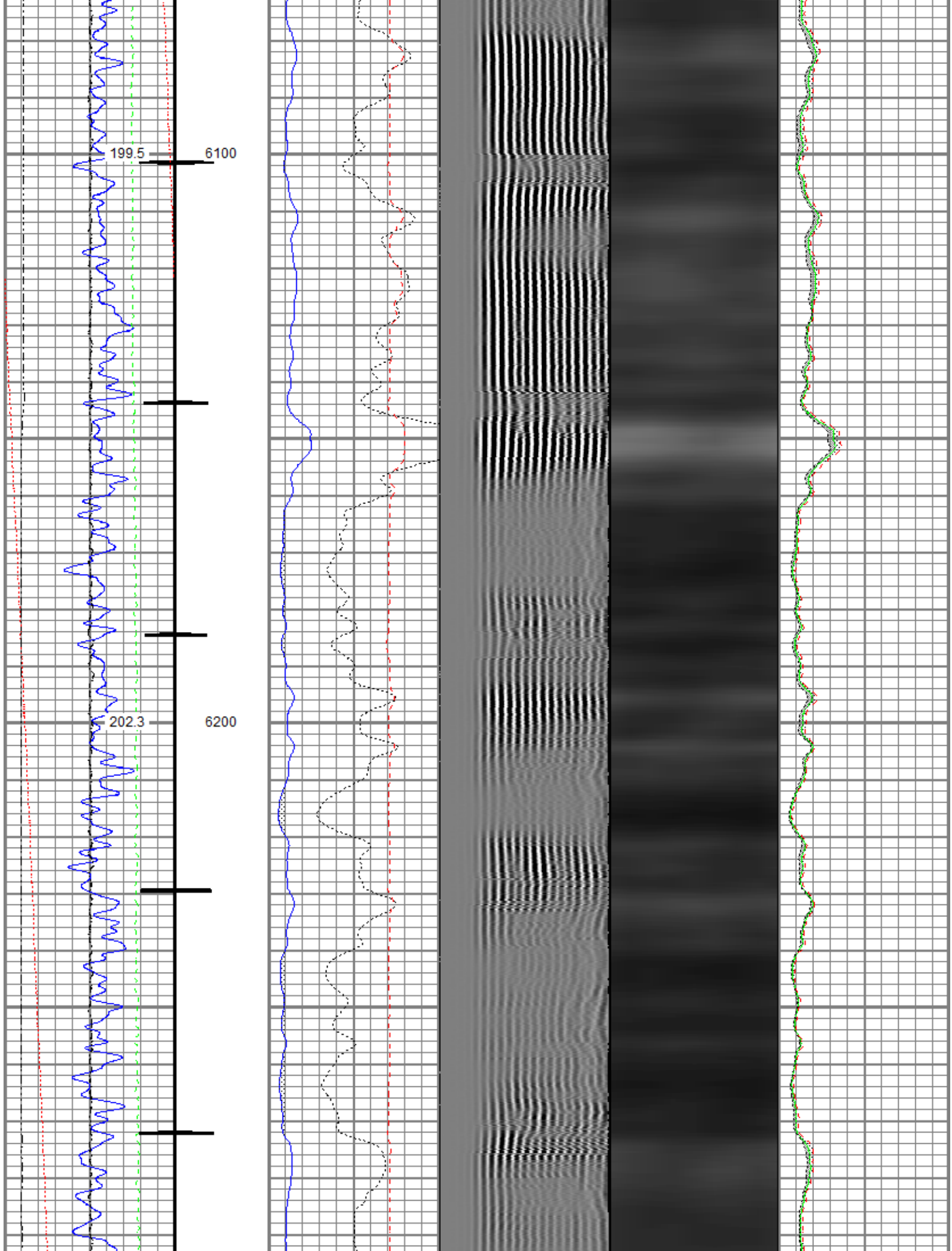


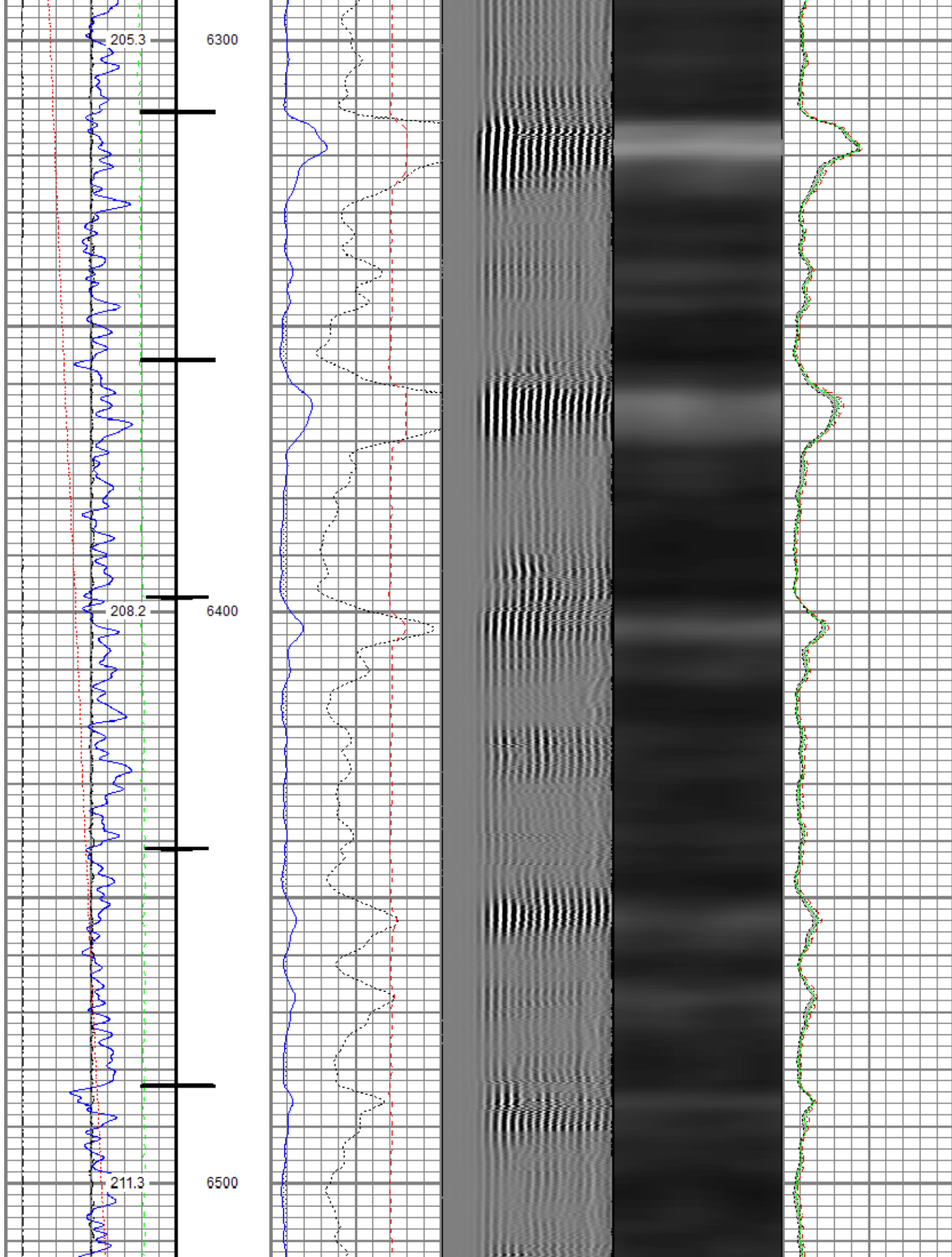


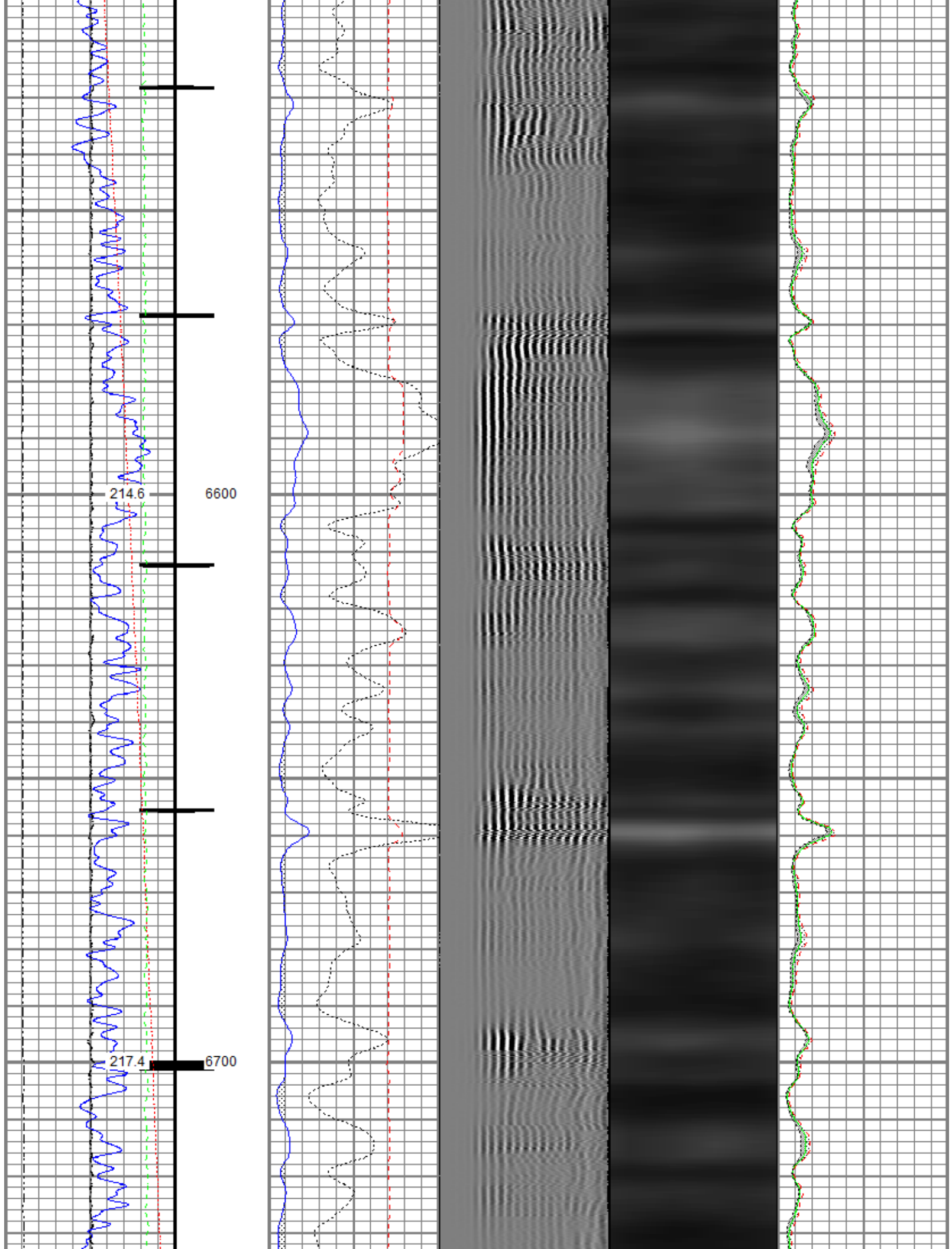


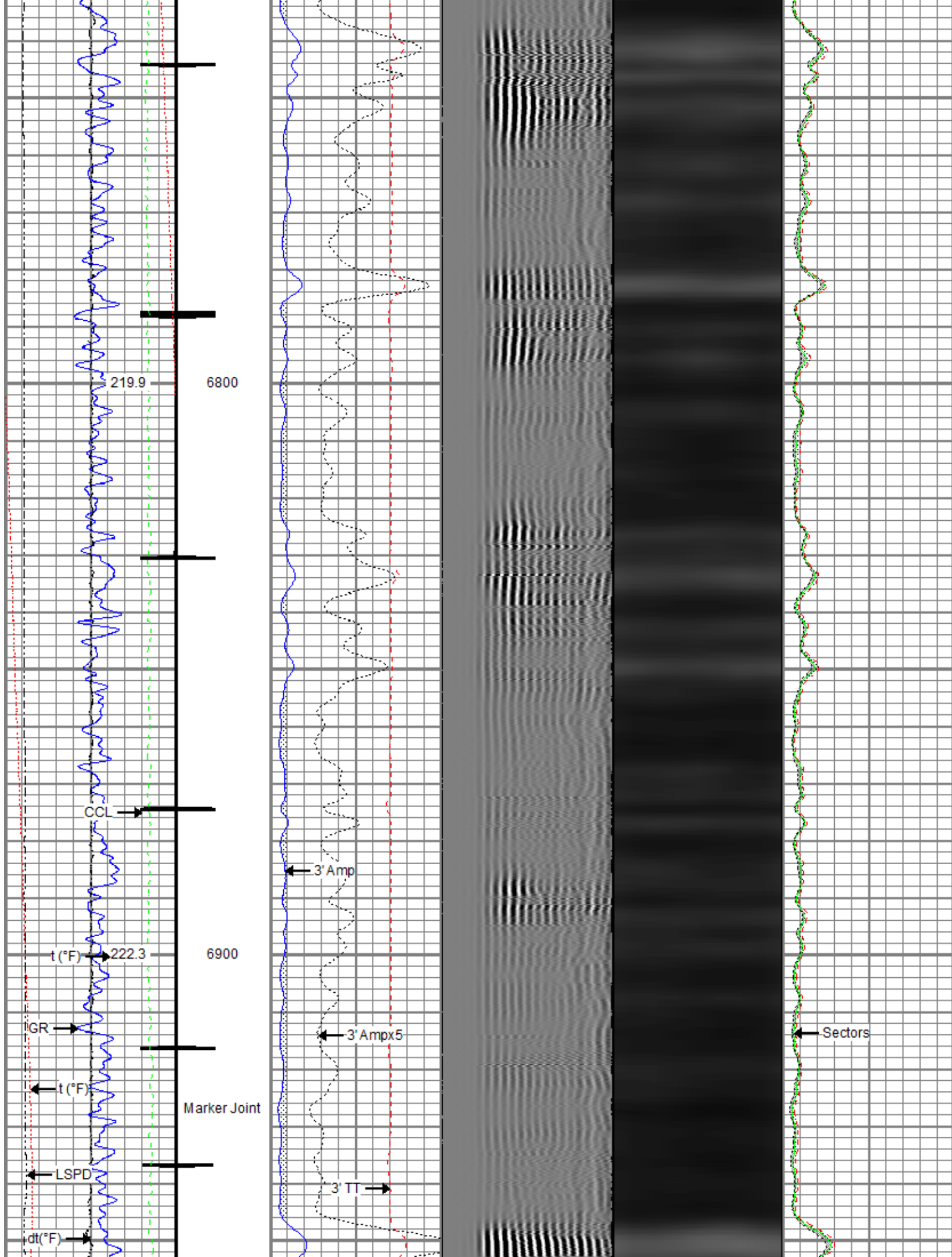


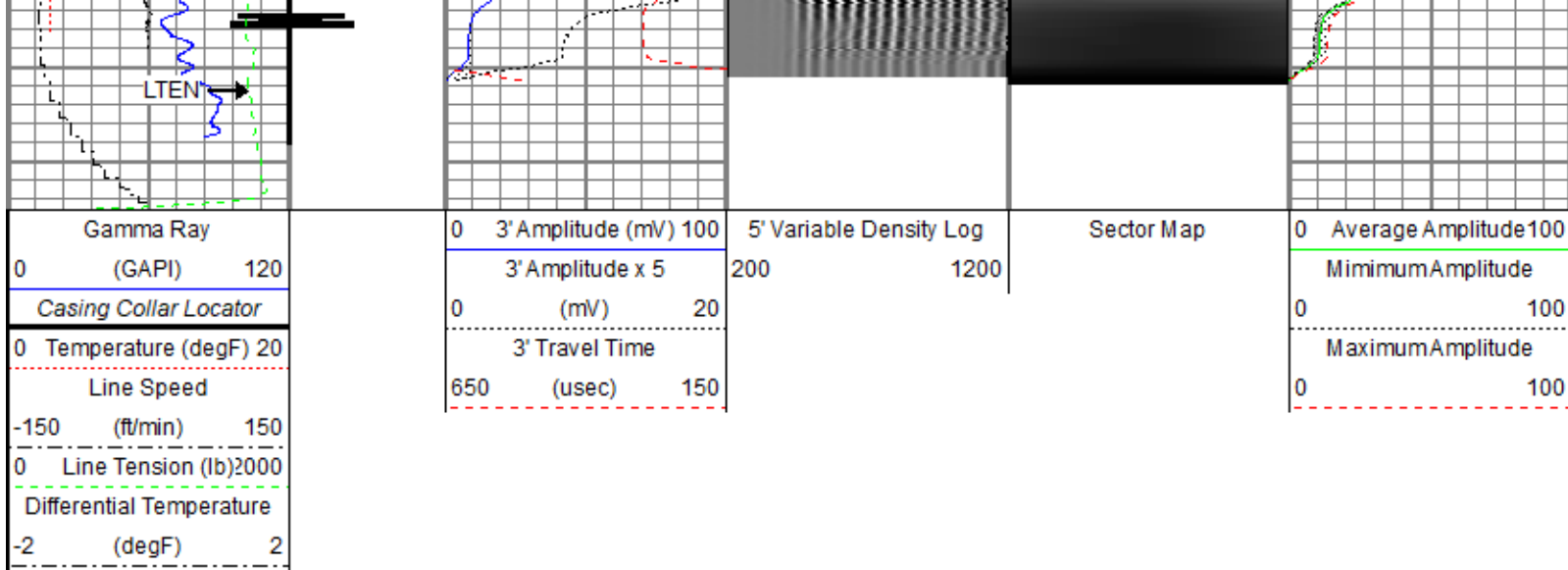








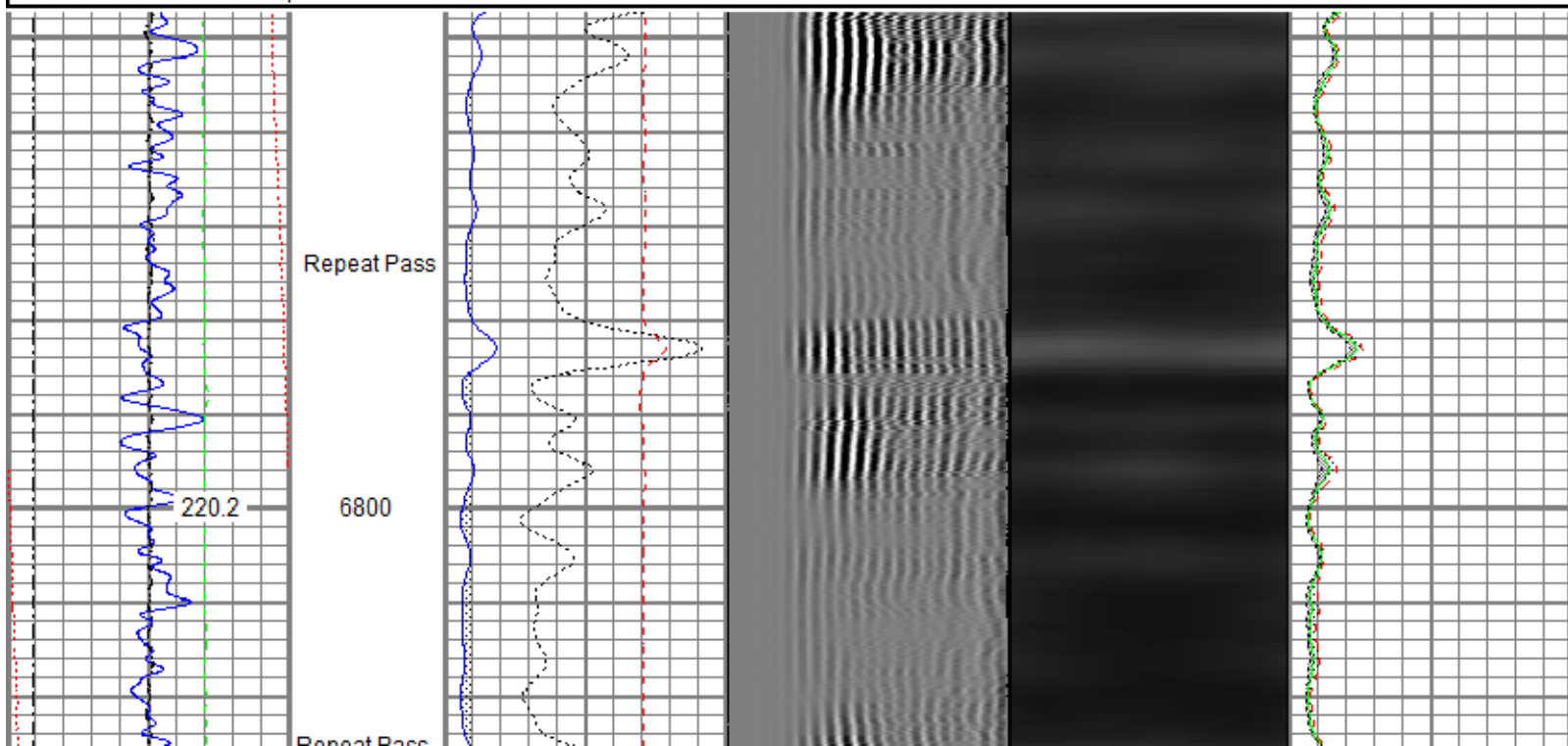
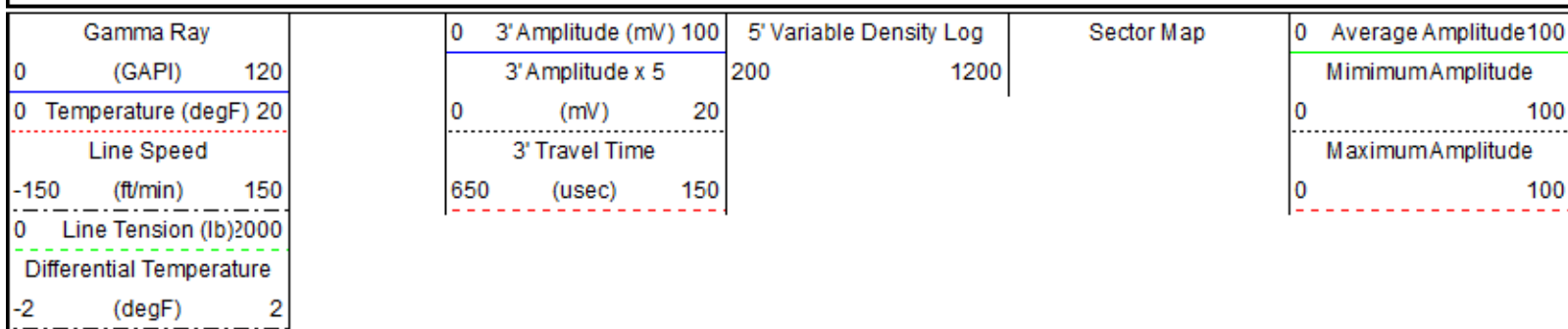


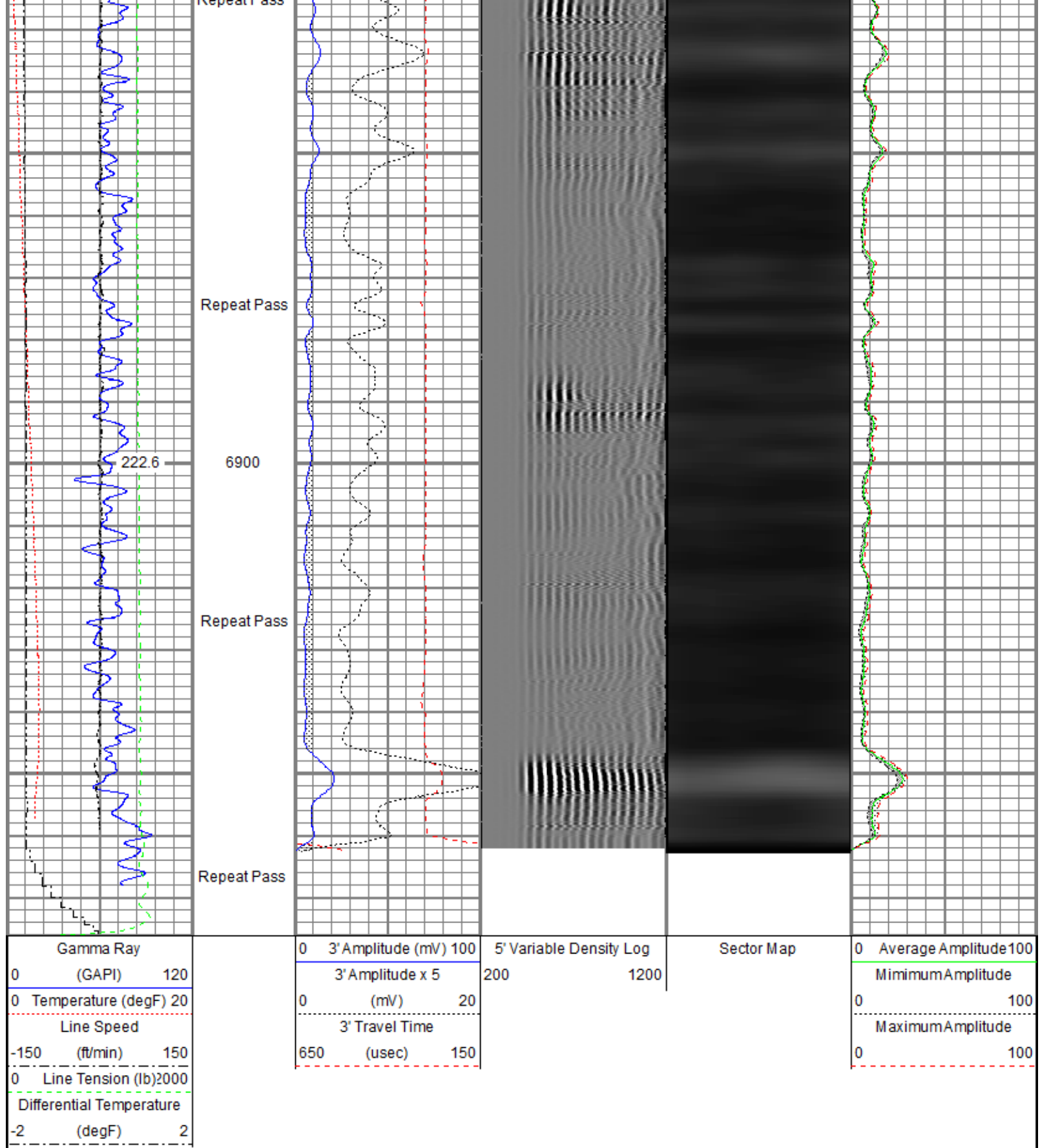


Repeat Pass

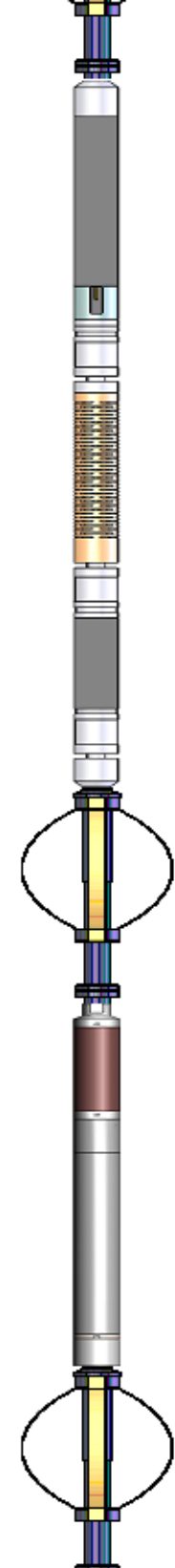
Recorded With 2800 PSI Surface Induced Pressure

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 Presentation Format: ros_radrii
 Dataset Creation: Thu Jun 13 10:23:59 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 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

TEMP	17.04					
WVFS8	14.81		Probe Radii-2750 RBT (FW0712-020) 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					
			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_0512348981_anadarko_ojb 15-17hz_rbl_06-12-19_2800 psi.db: field/well/main/pass1.2				
Total length:		23.86 ft				
Total weight:		223.60 lb				
O.D.:		2.75 in				

Calibration Report	
Database File	c:\programdata\warrior\data\anadarko\0512348981_anadarko_ojb 15-17hz_rbl_06-11-12\2800psi\processed_0512348981_ana
Dataset Pathname	main/pass1.2
Dataset Creation	Thu Jun 13 10:07:41 2019

Gamma Ray Calibration Report	
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FW1810-044	
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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: FW0712-020
Tool Model: 2750 RBT

Calibration Casing Diameter: 5.500 in
Calibration Depth: 21.585 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.004	0.590	0.800	71.921	121.307	0.329
CAL	0.514	0.523				
5'	0.002	0.583	0.800	71.921	122.542	0.519
SUM						
S1	0.004	0.556	0.000	100.000	181.329	-0.745
S2	0.004	0.555	0.000	100.000	181.321	-0.705
S3	0.004	0.579	0.000	100.000	173.709	-0.653
S4	0.004	0.627	0.000	100.000	160.370	-0.595
S5	0.004	0.674	0.000	100.000	149.162	-0.569
S6	0.004	0.679	0.000	100.000	148.148	-0.572
S7	0.004	0.635	0.000	100.000	158.478	-0.616
S8	0.004	0.576	0.000	100.000	174.768	-0.675

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.514	0.523	1.000	0.000

Air Zero Calibration, performed Tue Jun 11 10:08:31 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: FW0712-020
Tool Model: 2750 RBT
Performed: Mon Oct 01 11:32:14 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