



**Radial Cement Bond
Gamma Ray
Casing Collar Log**

Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Prowant 18-10HZ
Field Wattenberg
County Weld **State** Colorado

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County Weld
State Colorado

Location: SEC 18 TWP 5N RGE 67W
 API #: 05-123-50765
 JBGGR
 Other Services
 Permanent Datum Ground Level Elevation 4939'
 Log Measured From Ground Level
 Drilling Measured From Kelly Bushing
 Elevation
 K.B. 4965'
 D.F. ---
 G.L. 4939'

Date	22-JAN-2021						
Run Number	Two						
Depth Driller	20645 FT						
Depth Logger	6605 FT						
Bottom Logged Interval	6593 FT						
Top Log Interval	Surface						
Open Hole Size	8.75"						
Type Fluid	Water						
Density / Viscosity	8.34 lb/gal						
Max. Recorded Temp.	116°F						
E. estimated Cement Top	See Log						
Time Well Ready	ROA						
Time Logger on Bottom	10:35						
E. equipment Number	HD-361						
Location	Platteville, CO						
Recorded By	S. Lopez						
Witnessed By	Chris Hayes						
Borehole 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	1897 FT		
Intermediate #1	5.1/2	17	HC P-110	Surface	20635 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.

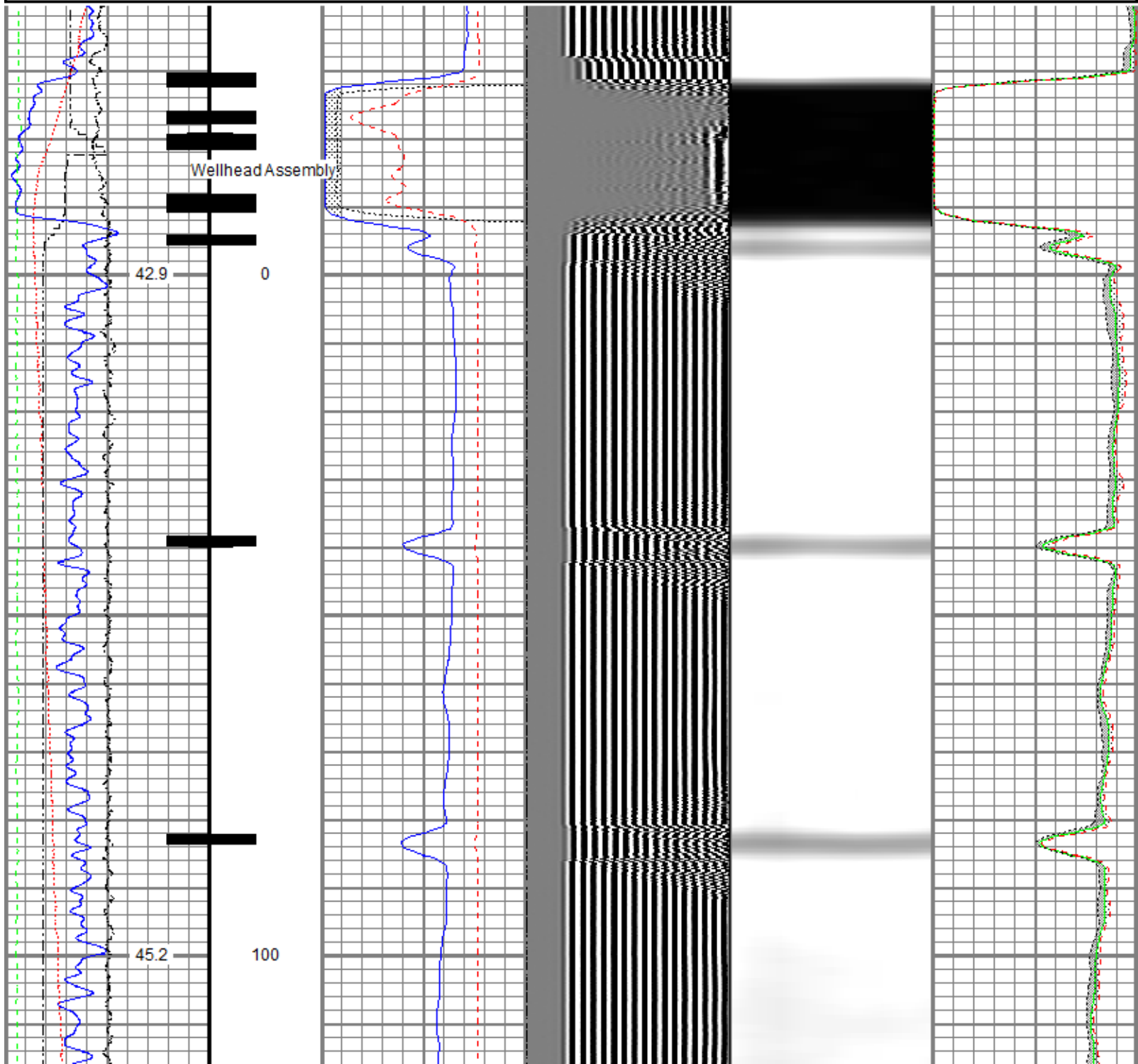
Comments

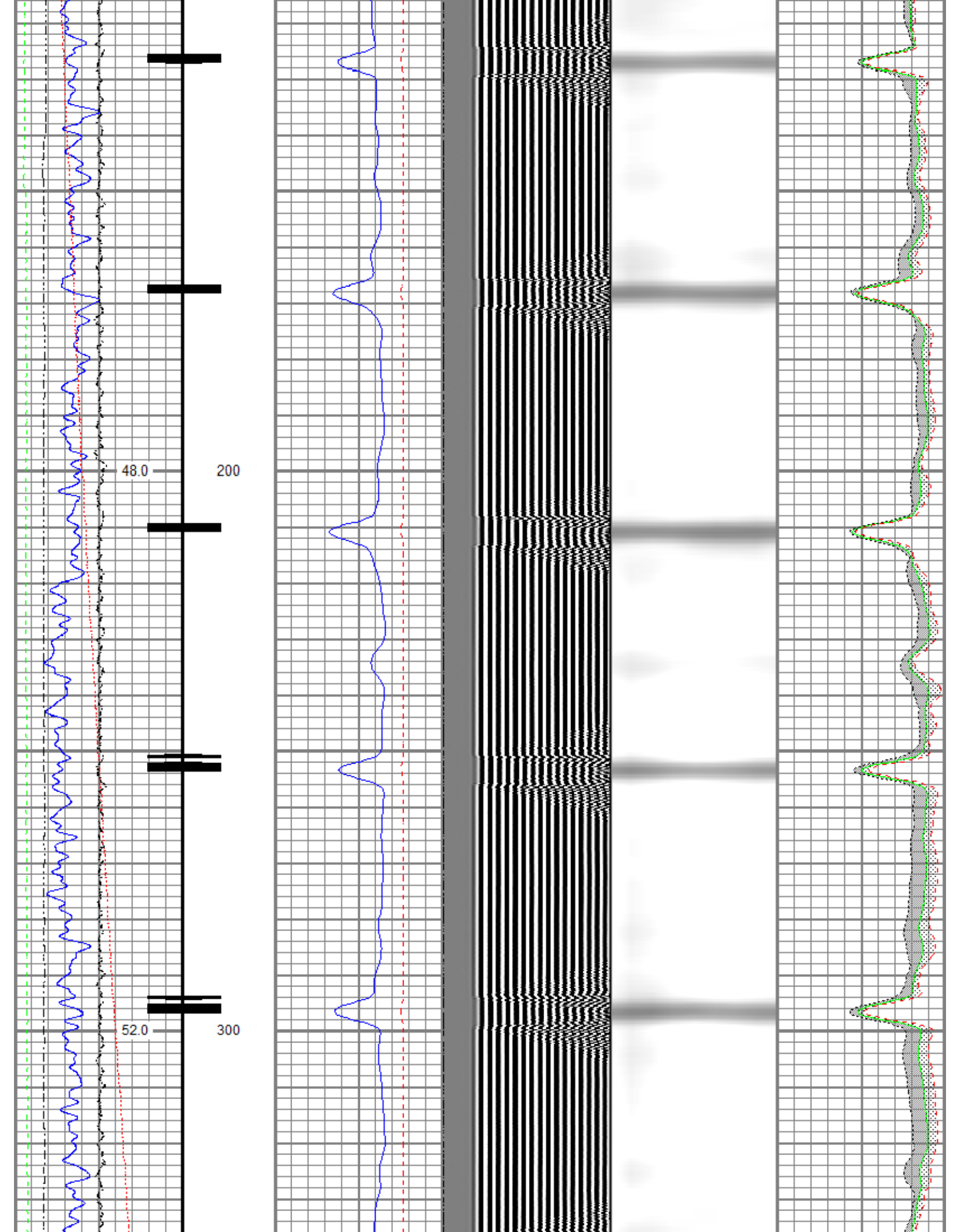
Log ran as per customer request
 Depth referenced to Casing Tally reported Marker Joint at 6203 FT
 Adjusted -5 FT to correlate with Marker Joint
 Gauge Ring/Junk Basket ran to 7525 FT
 Log ran with 2400 PSI Surface Induced Pressure
 Logging tools were clean and free of debris upon completion of operations
 Thank you for choosing Reliance Oilfield Services, LLC!!

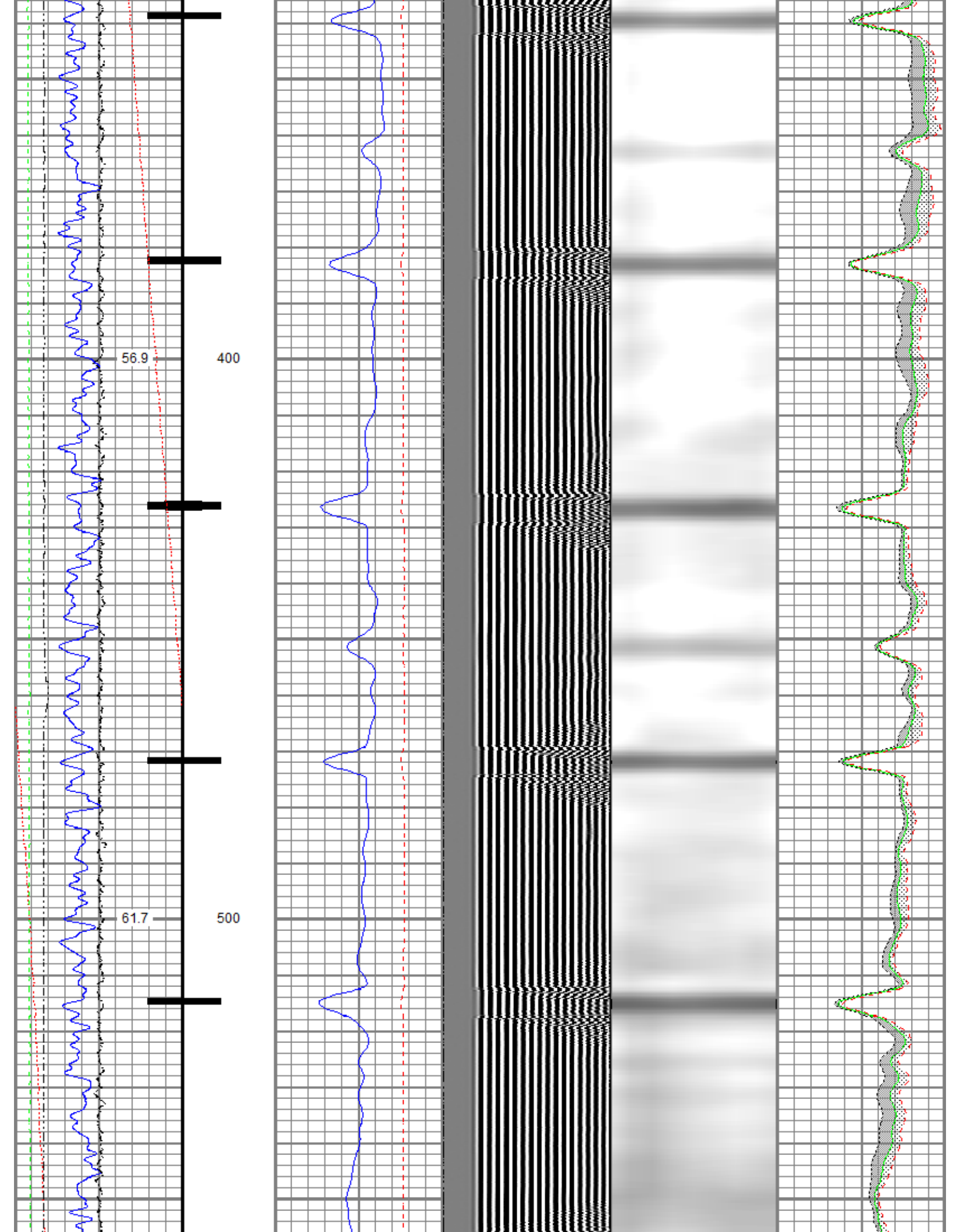
Recorded With 2400 PSI Surface Induced Pressure

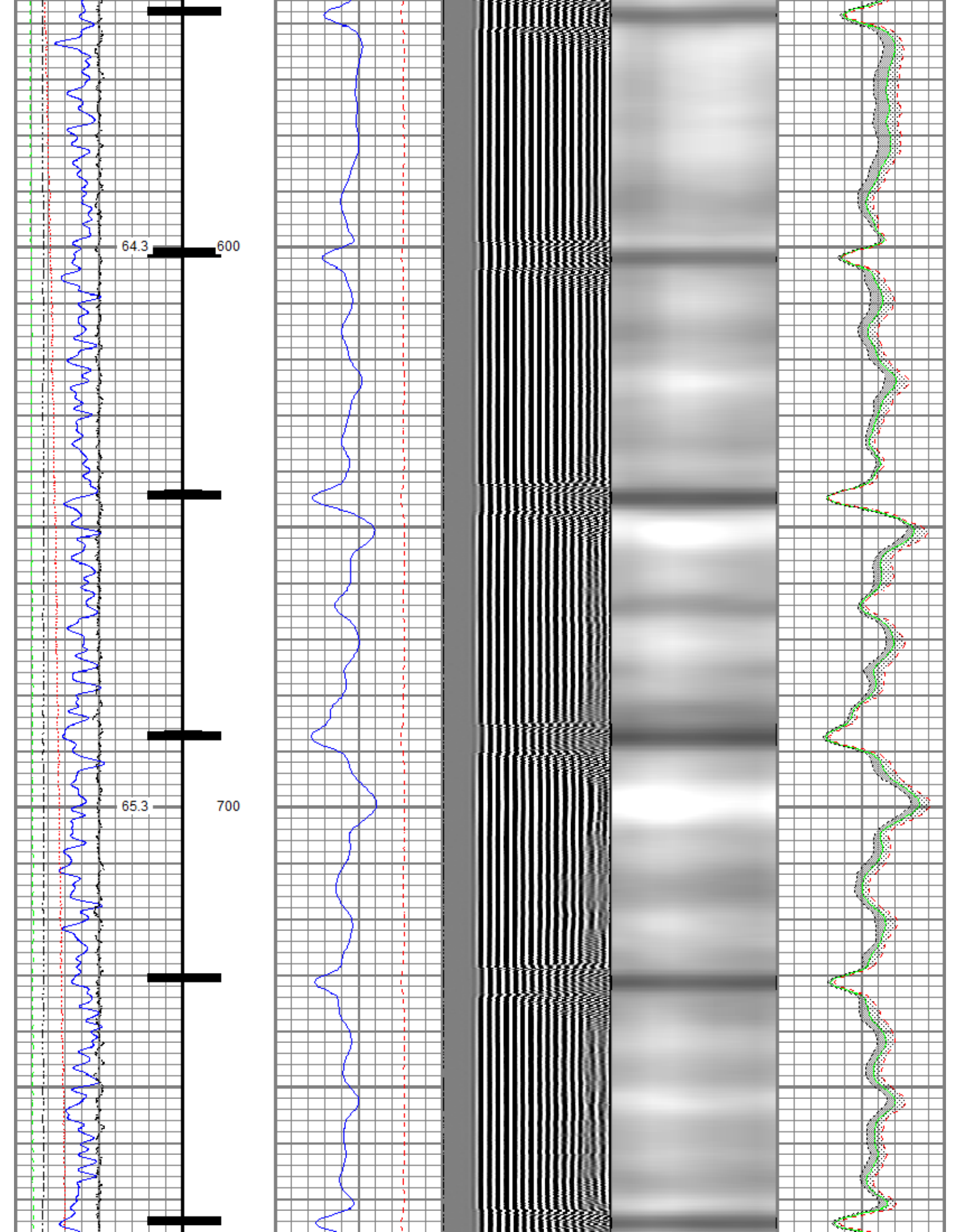
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 Dataset Pathname pass4.1
 Presentation Format ros_radrii
 Dataset Creation Fri Jan 22 11:51:21 2021
 Charted by Depth in Feet scaled 1:240

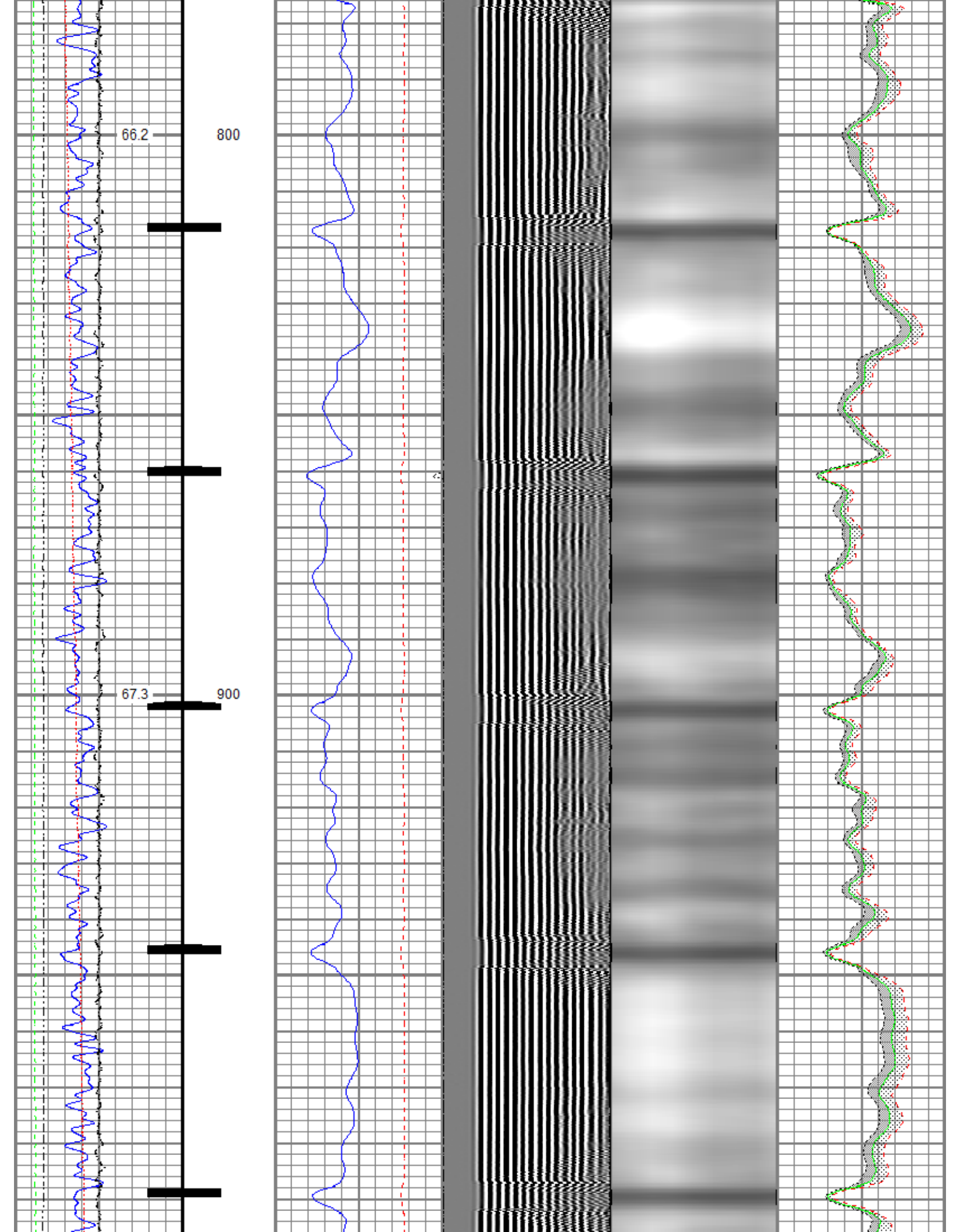
Gamma Ray (GAPI) 120	0 3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0 Average Amplitude 100
Casing Collar Locator	0 3' Amplitude x 5 20	200 (usec) 1200		Minimum Amplitude
0 Temperature (degF) 20	0 (mV) 20			0 100
Line Speed	0 3' Travel Time			Maximum Amplitude
-150 (ft/min) 150	650 (usec)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

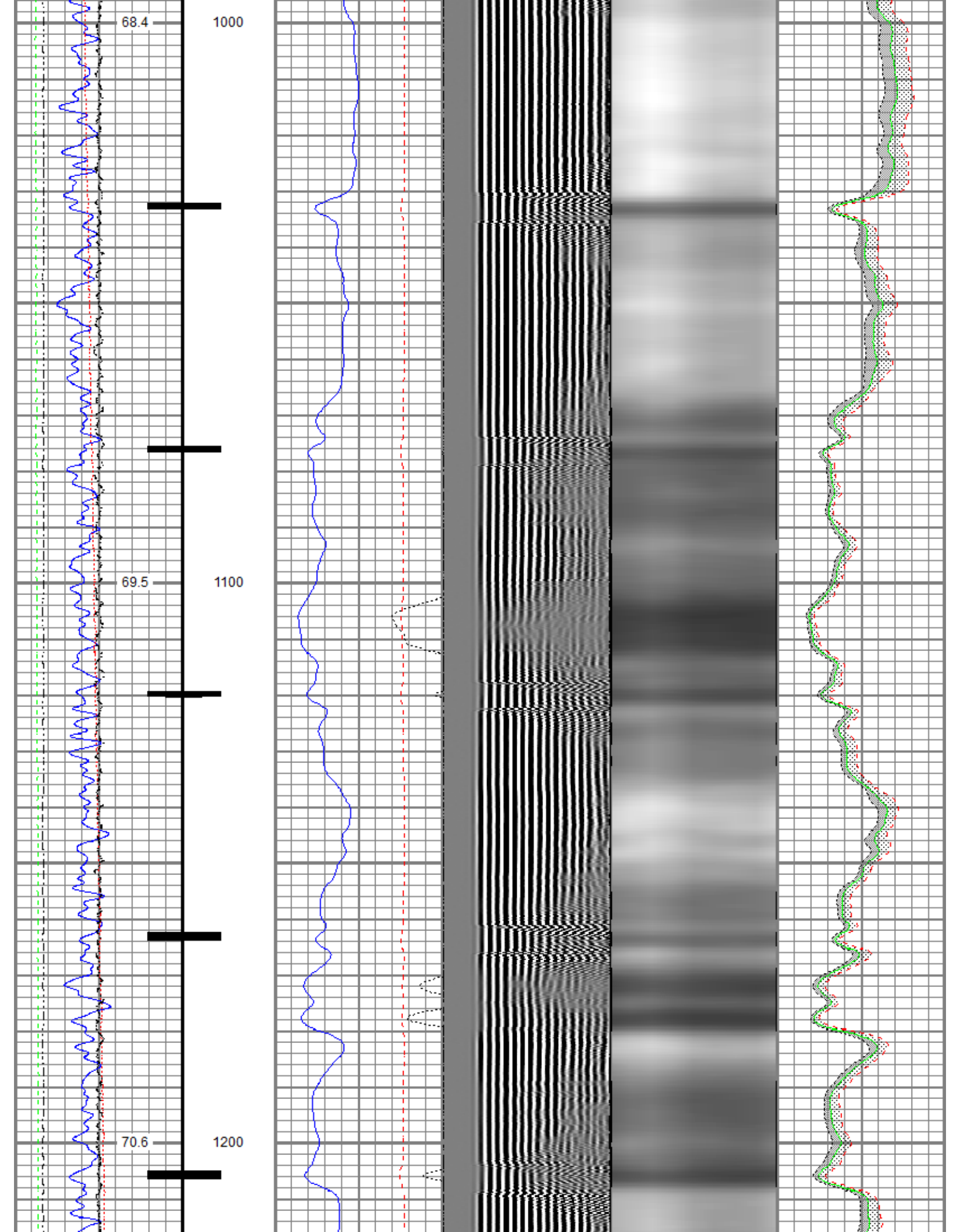


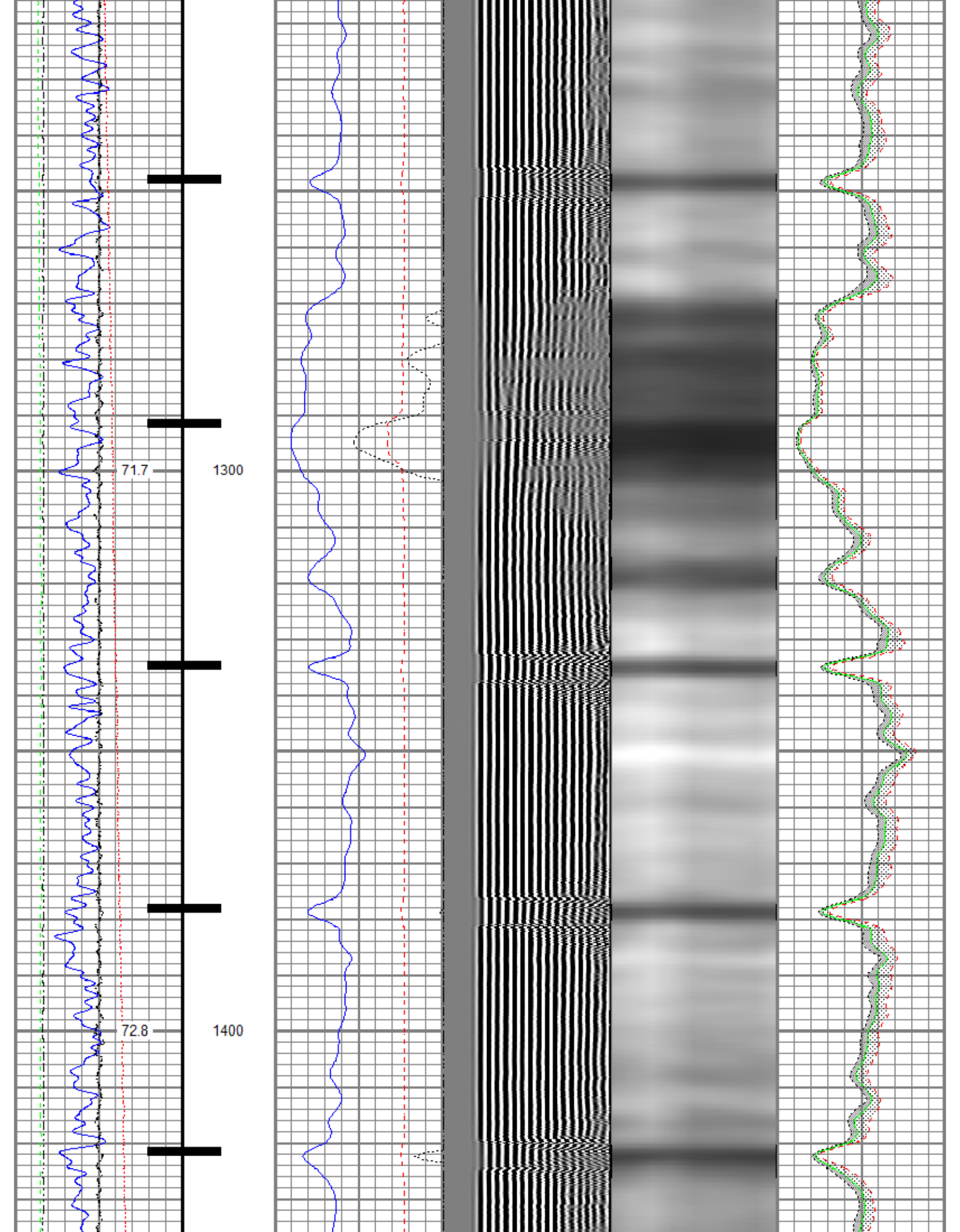


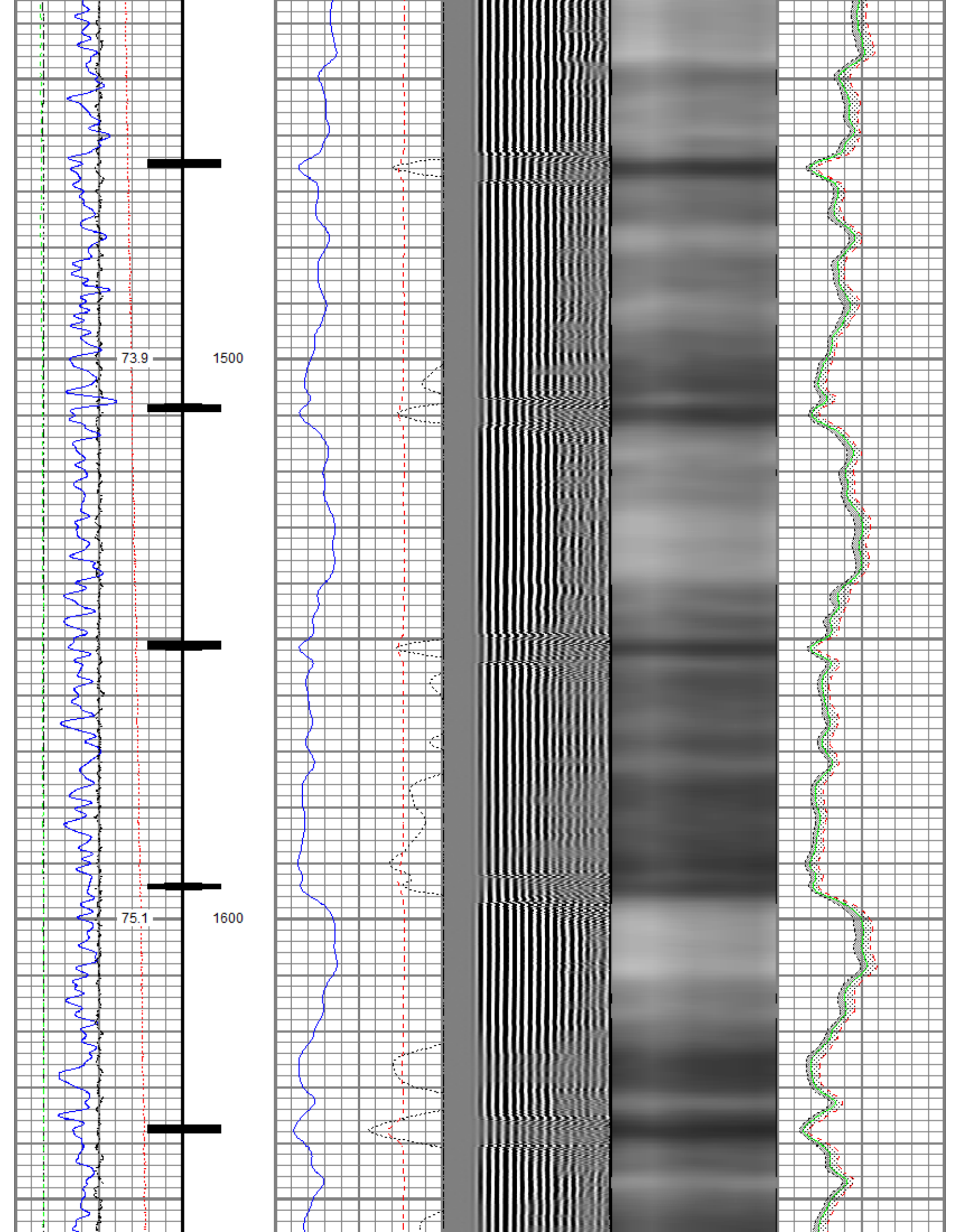


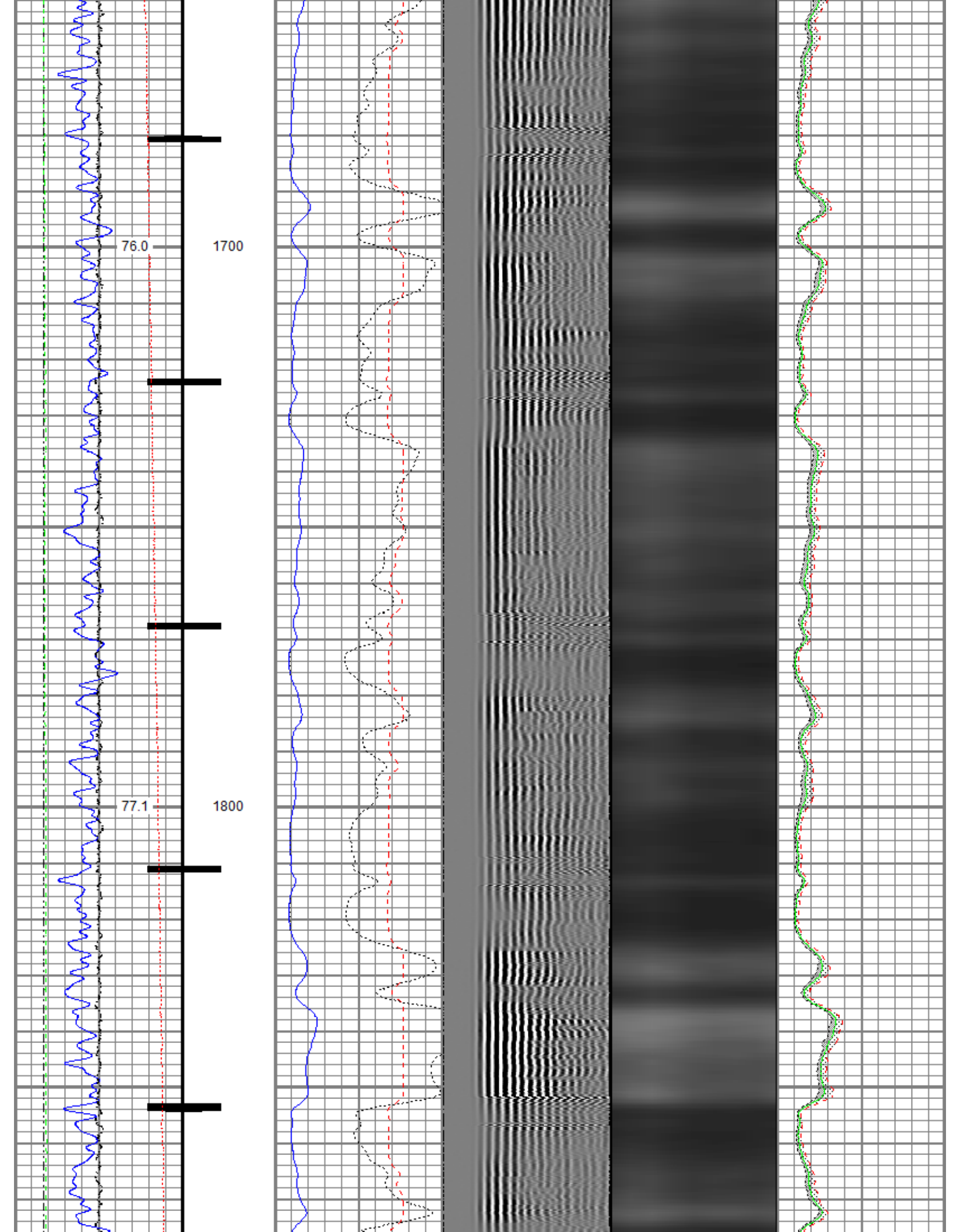


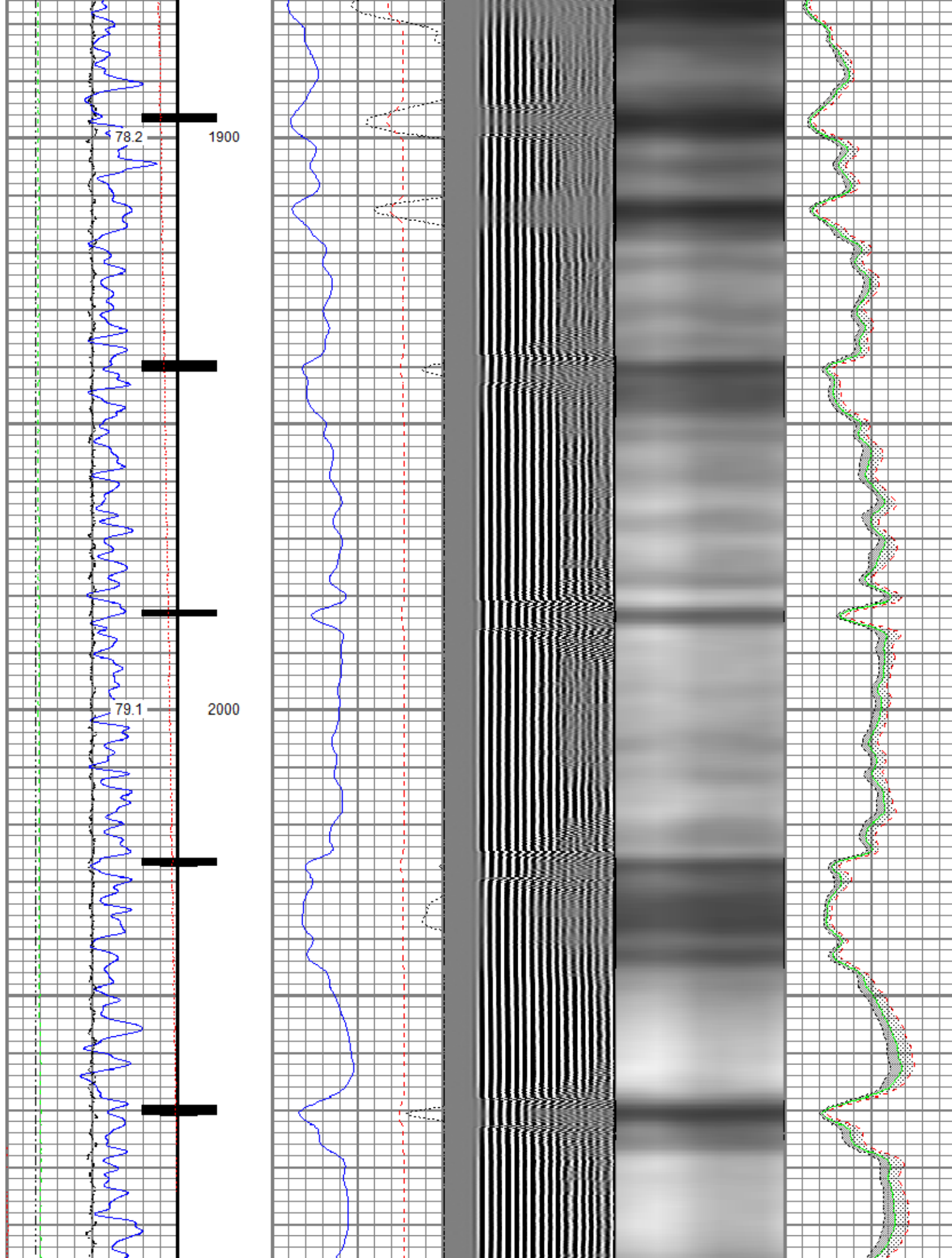


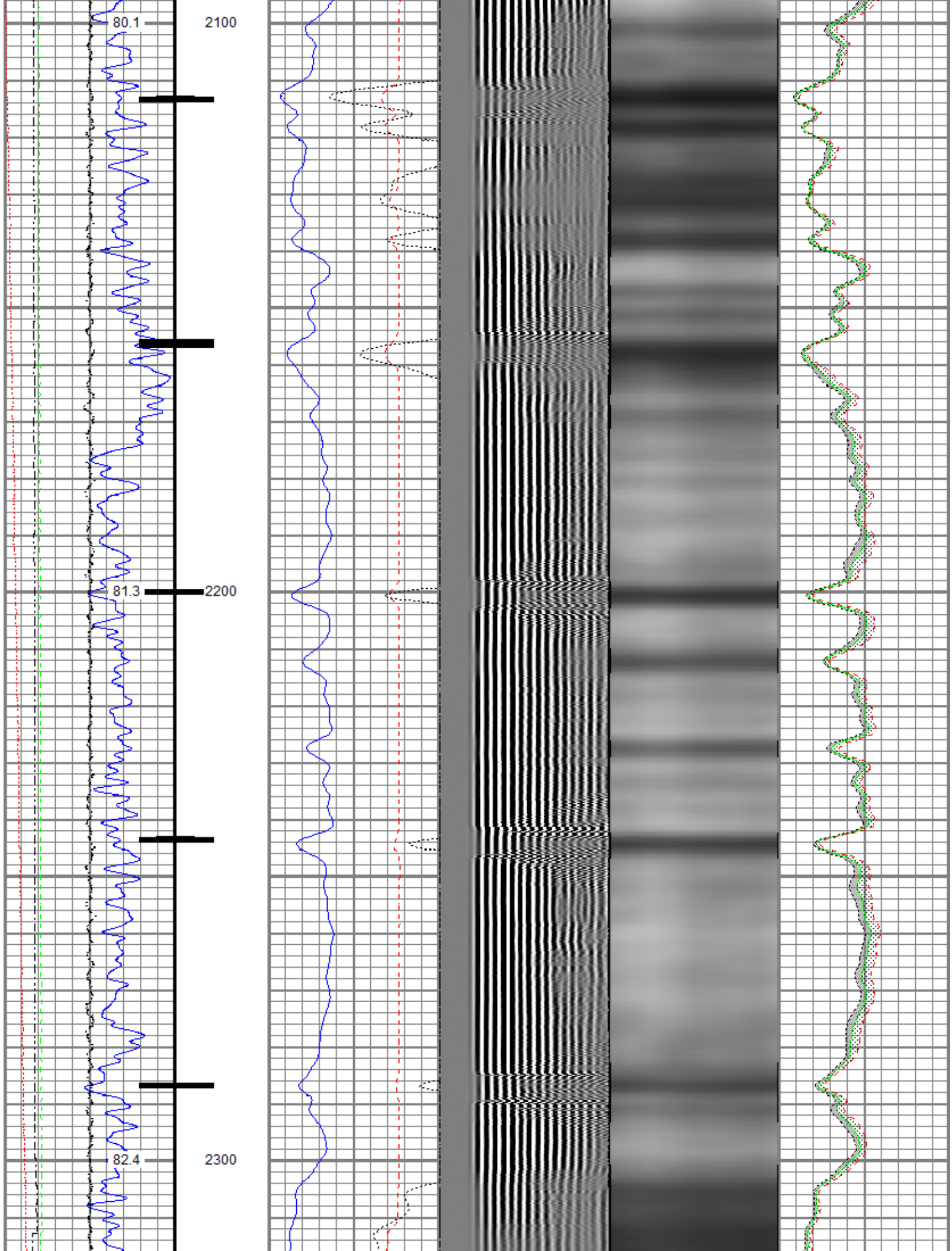


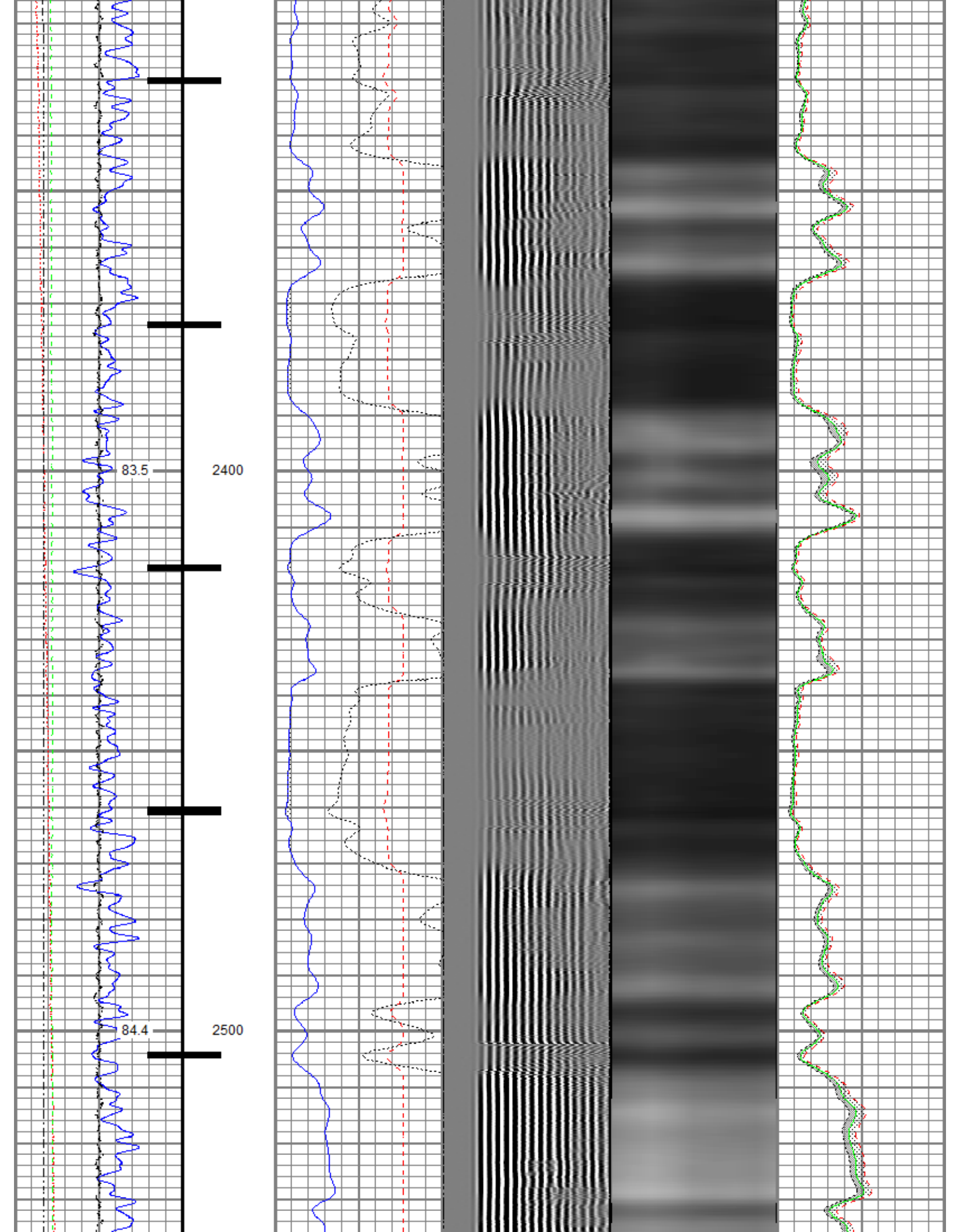


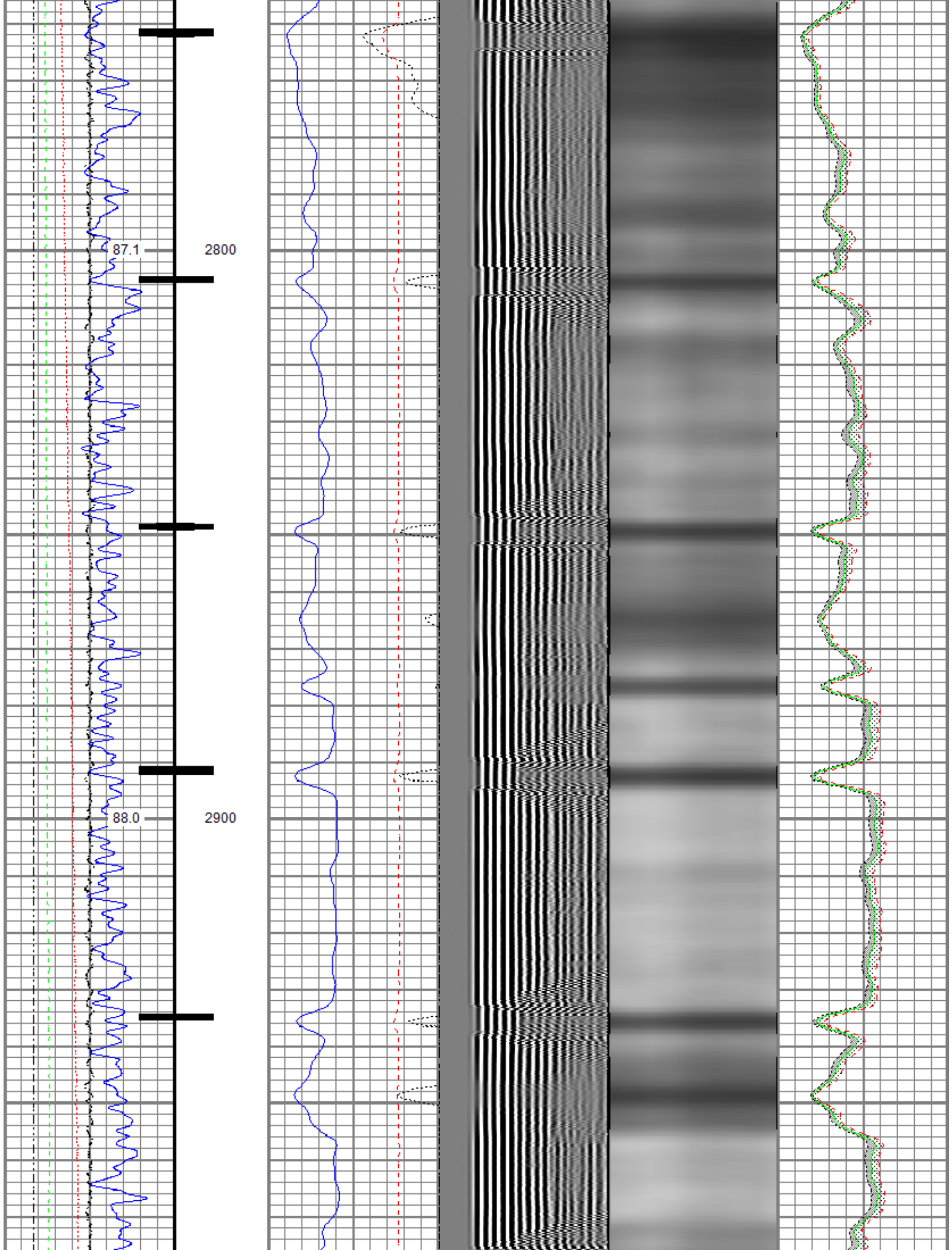


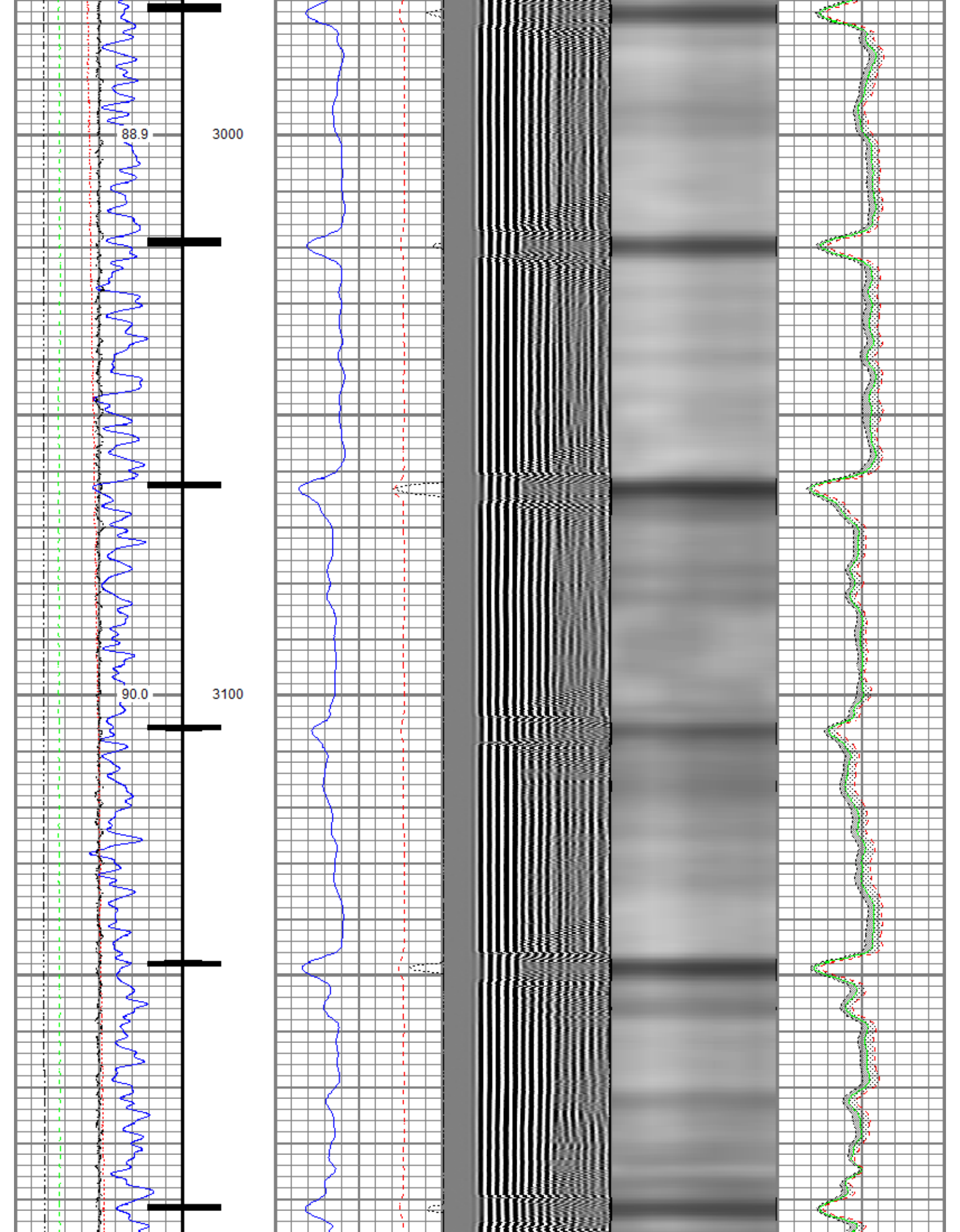


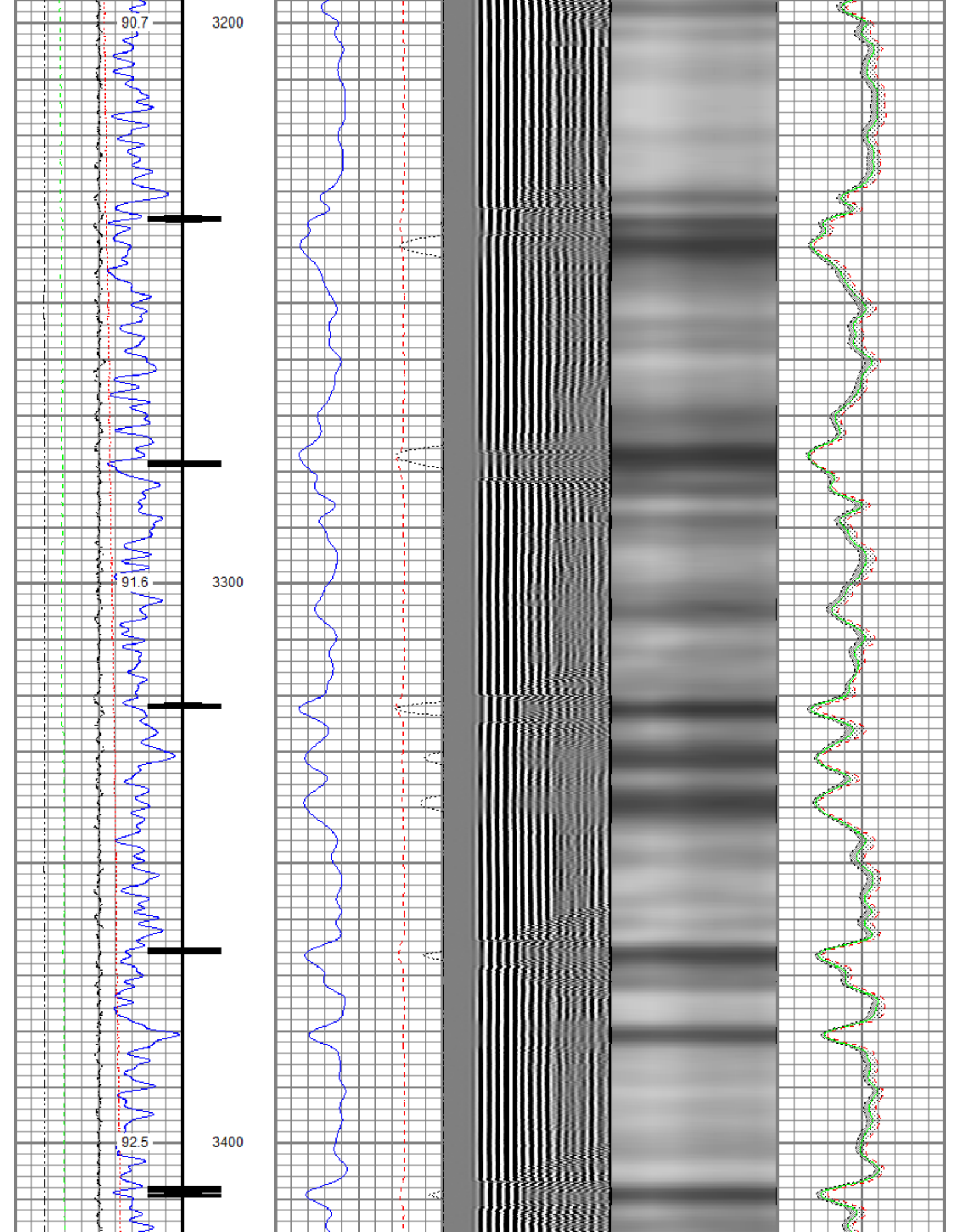


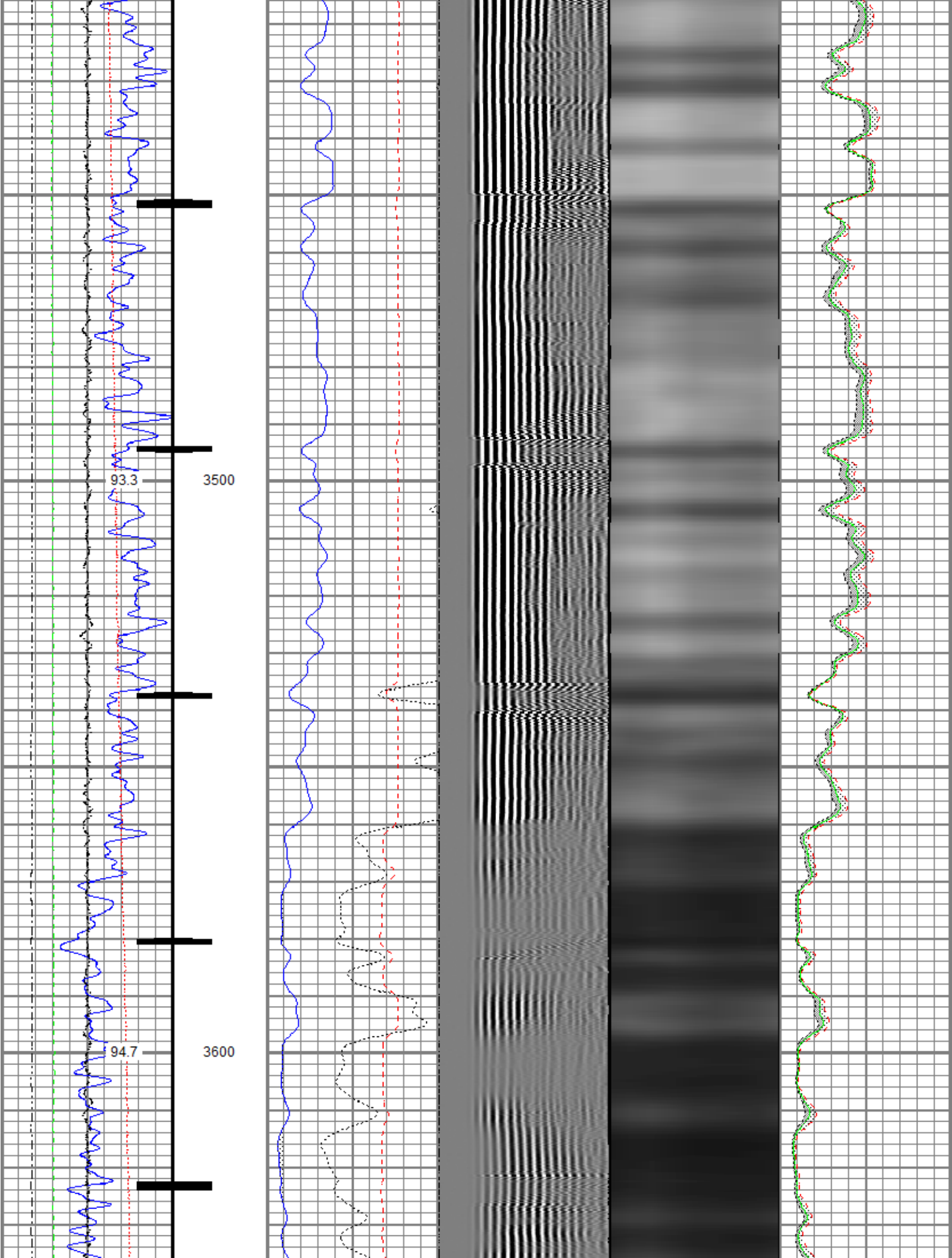


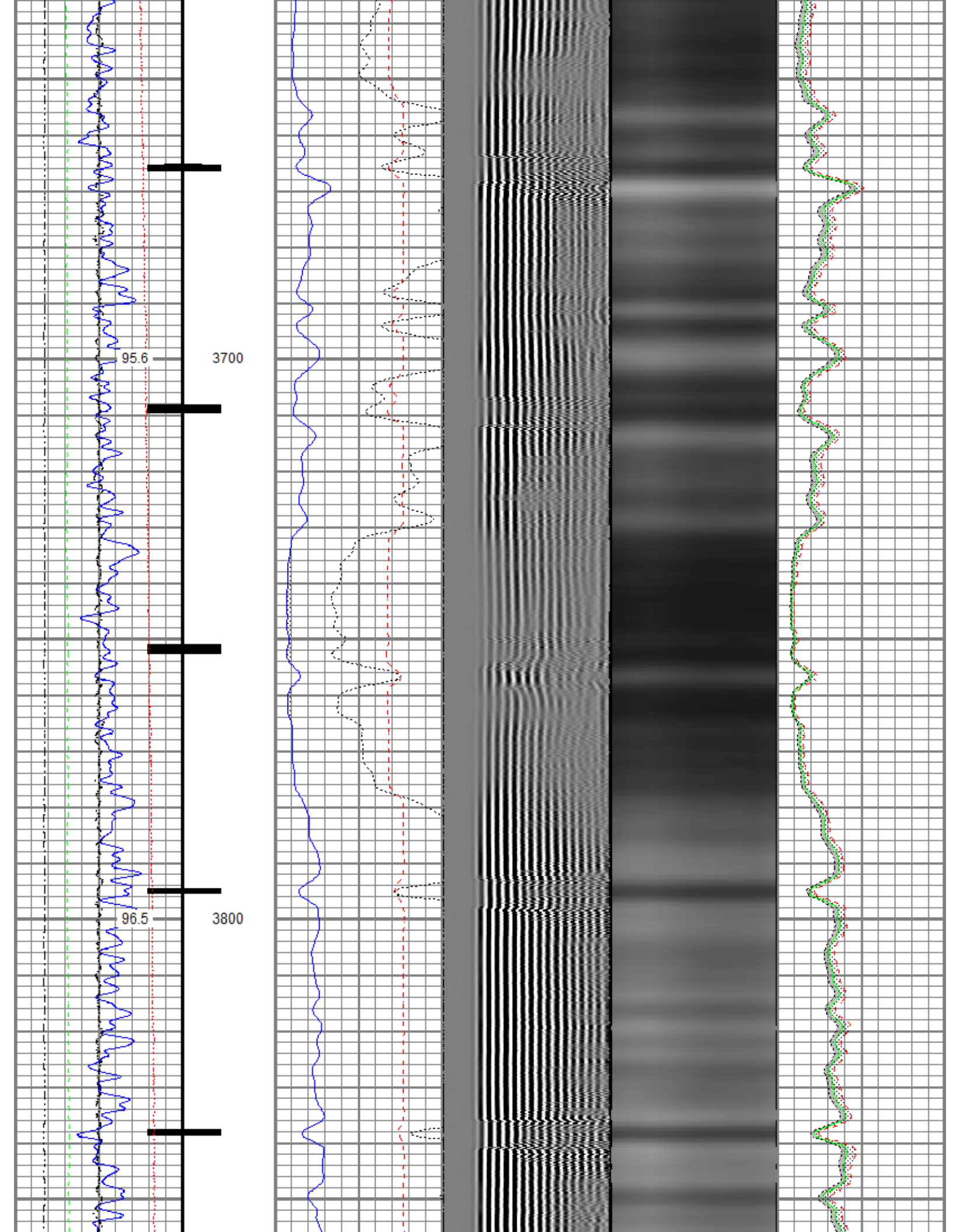


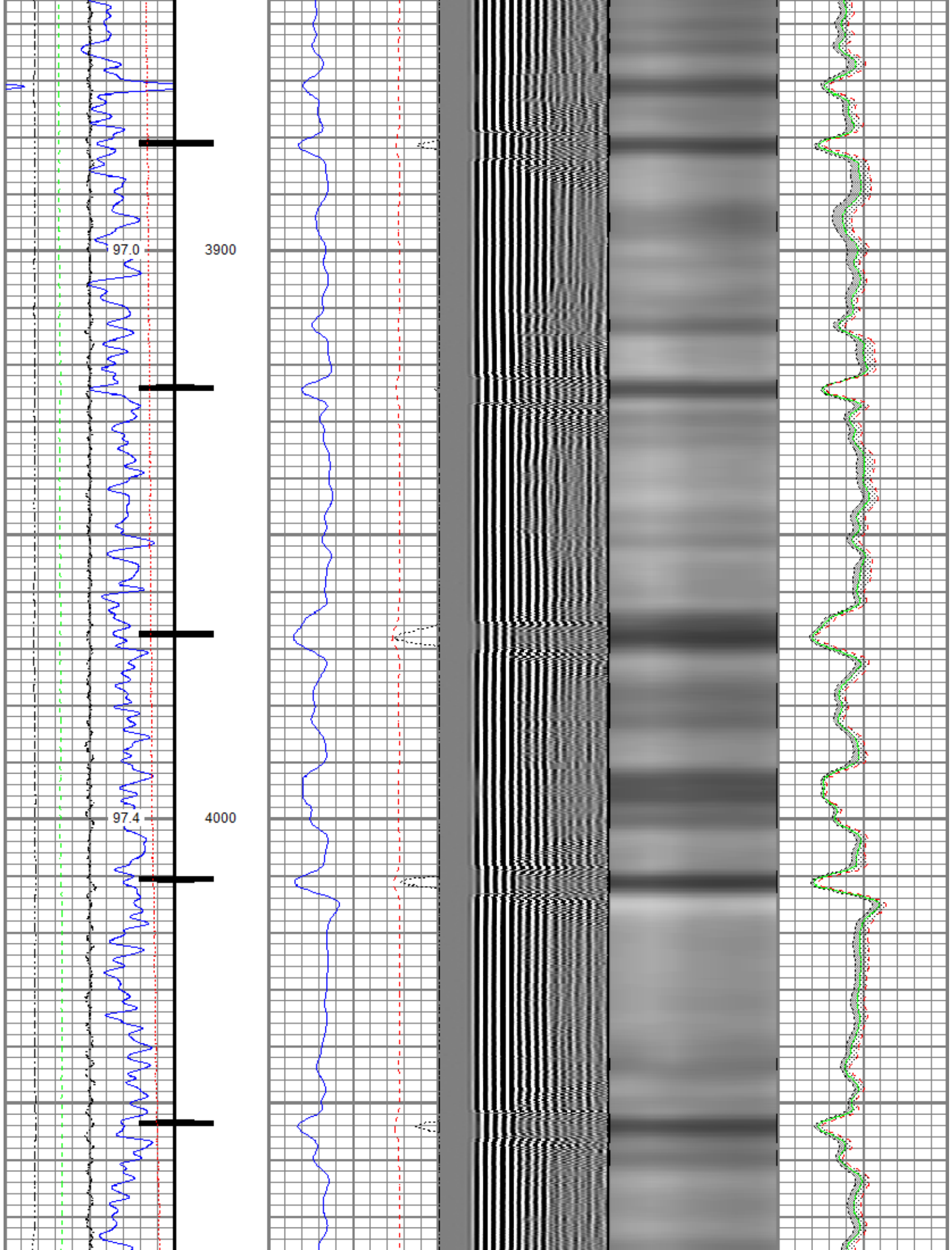


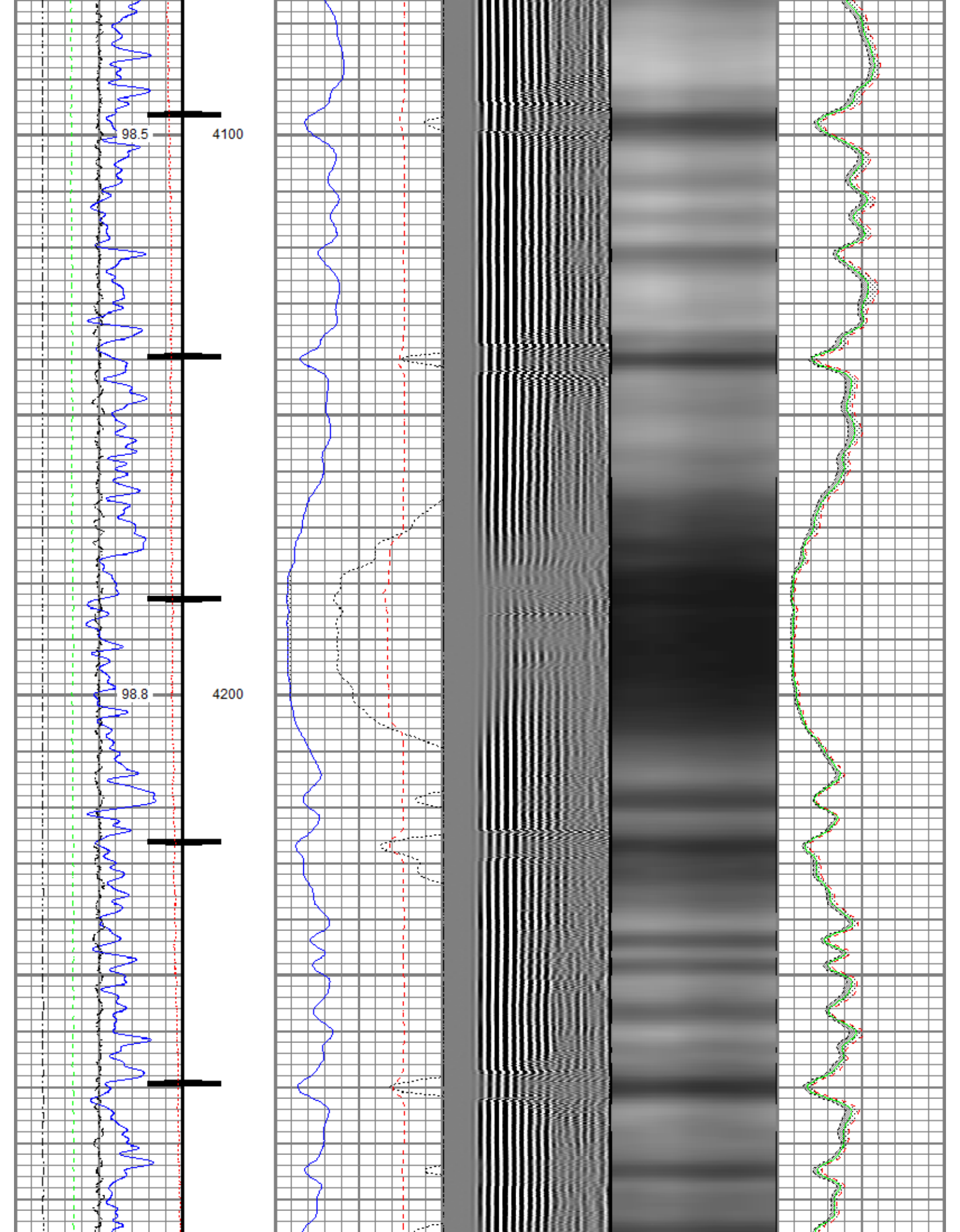


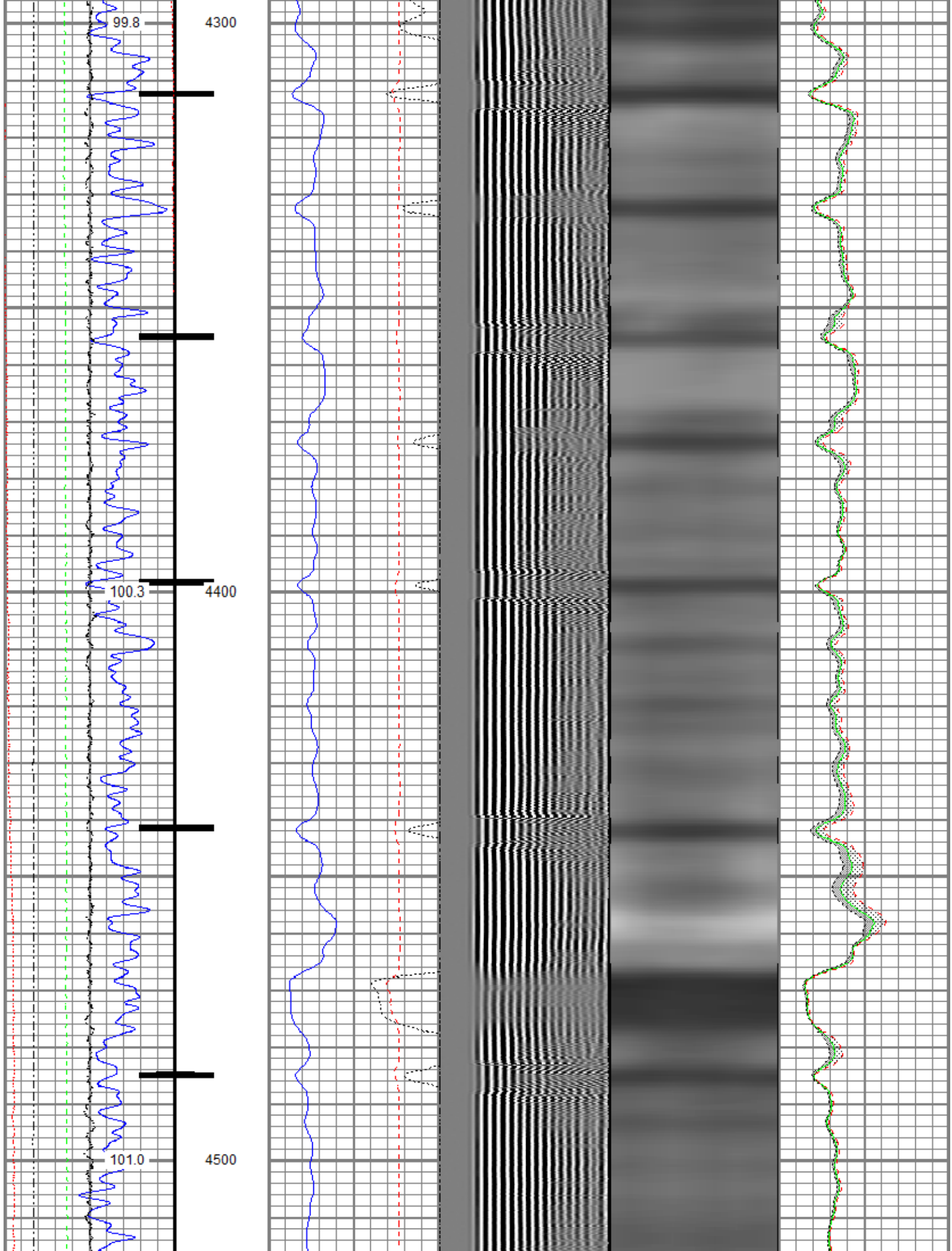


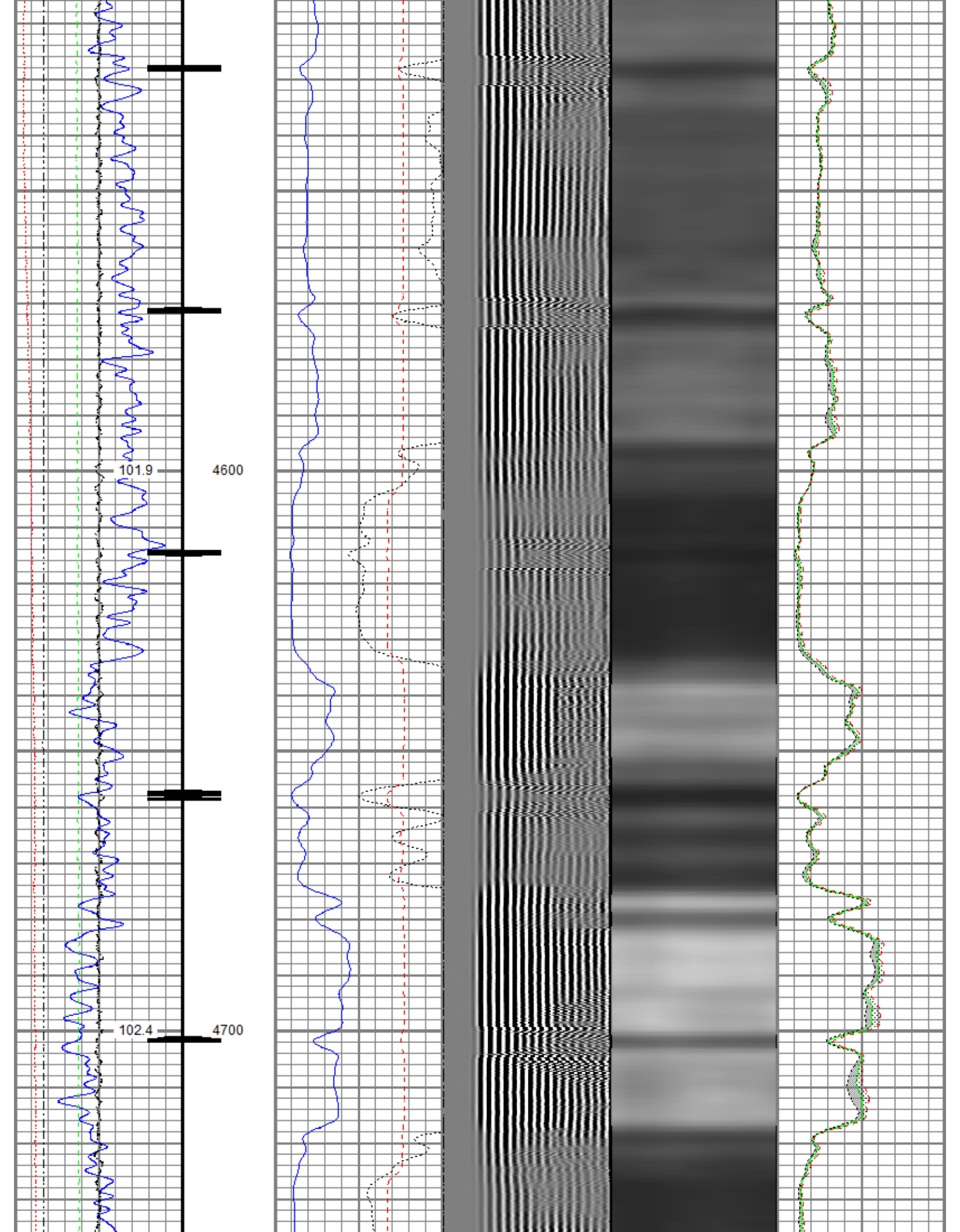


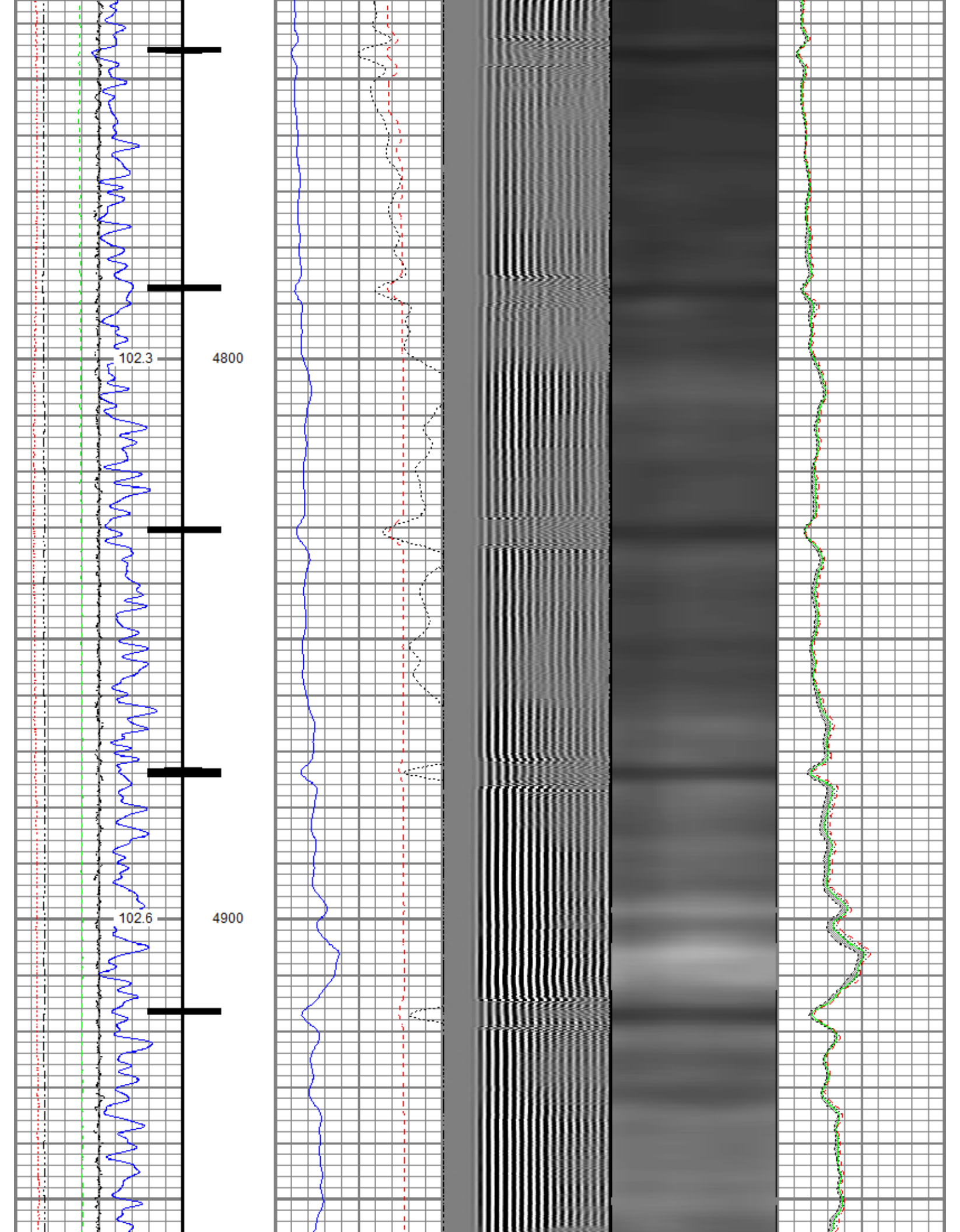


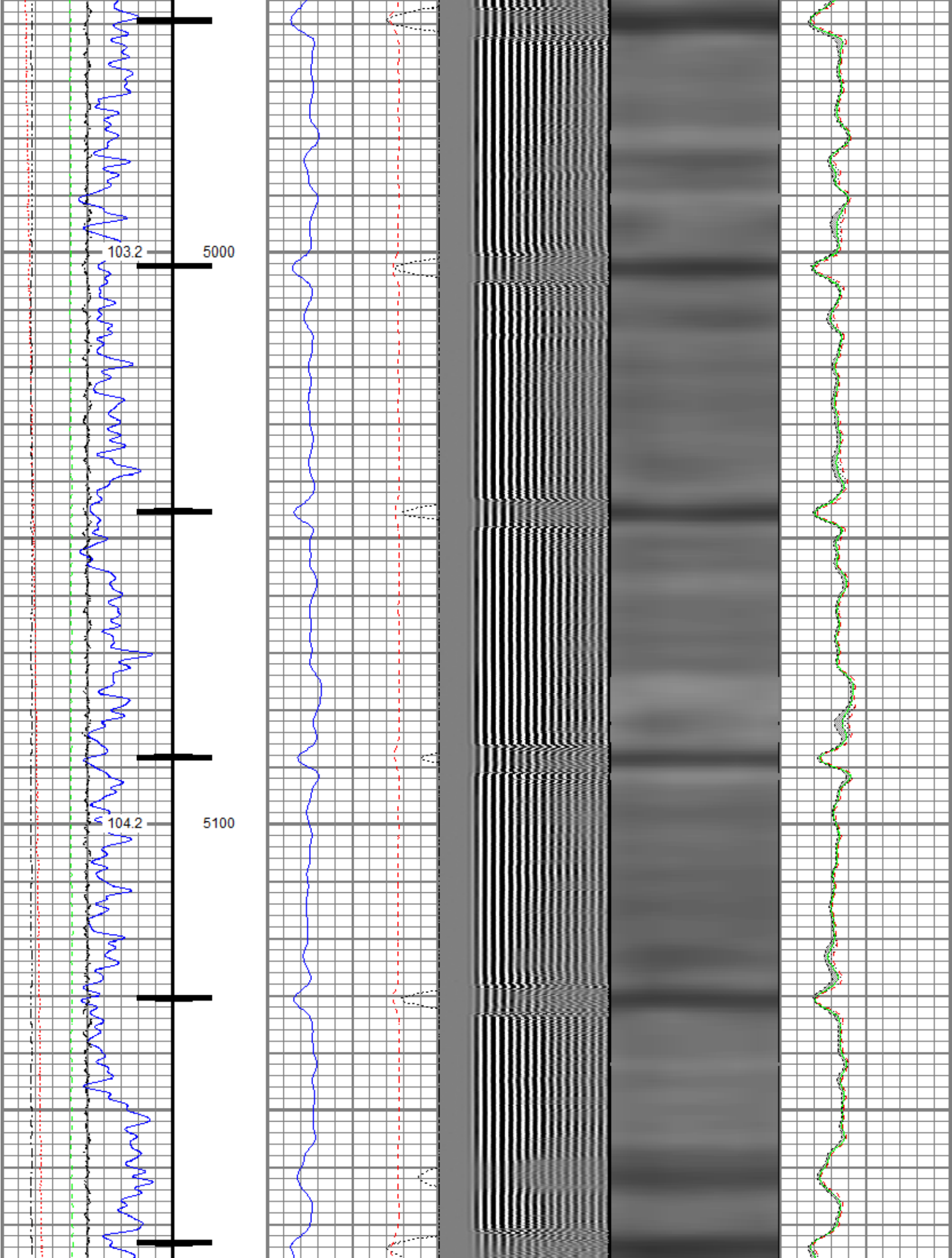


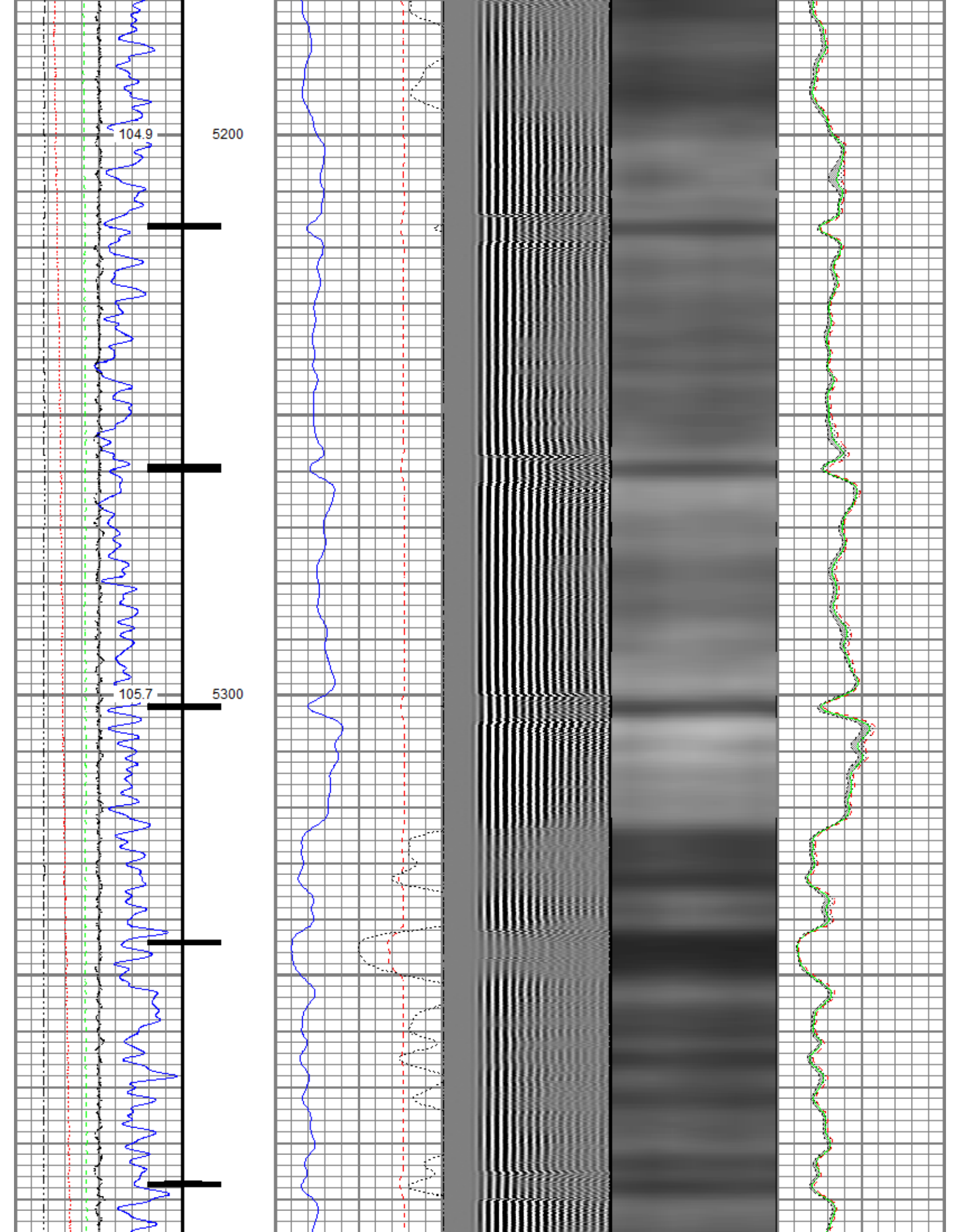


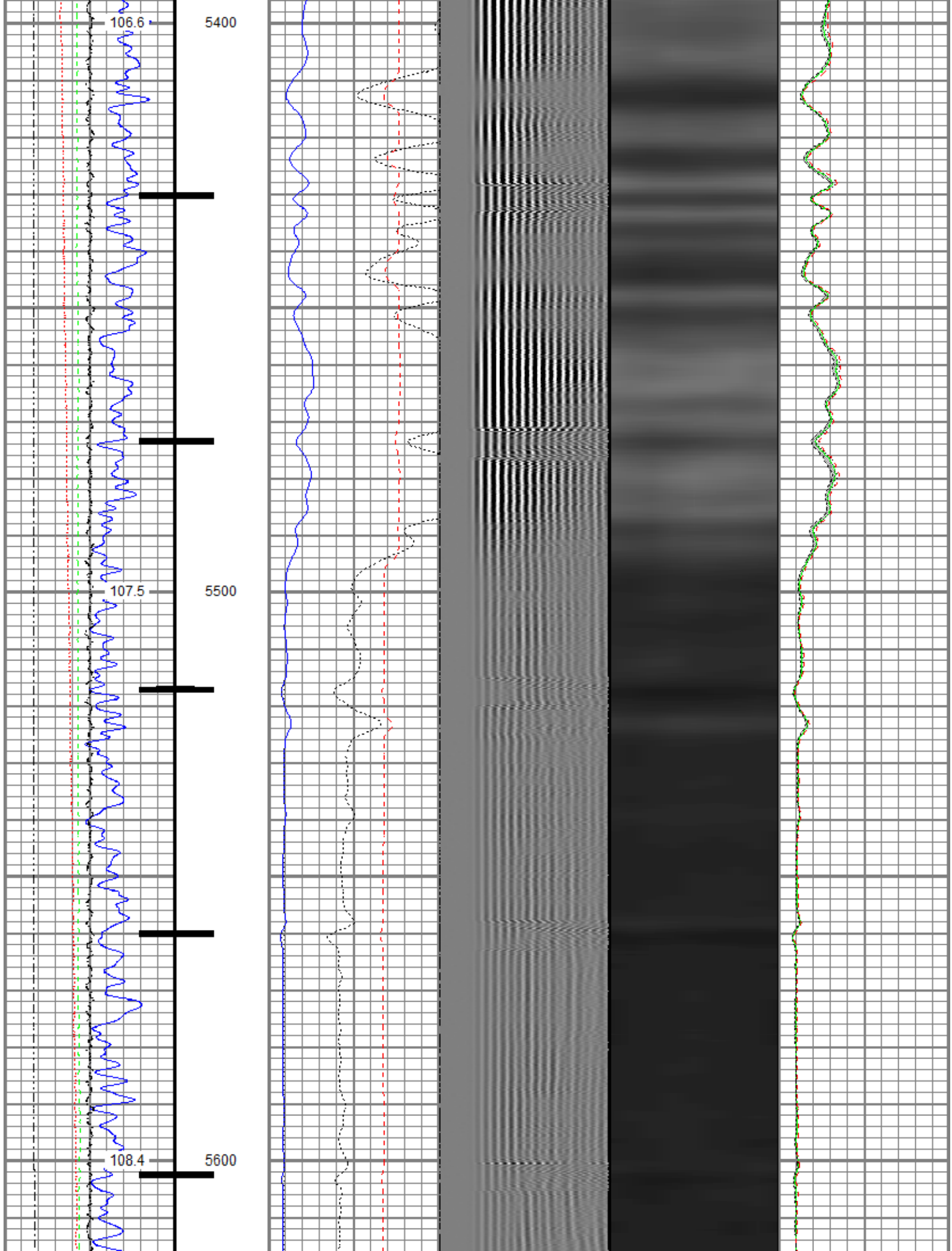


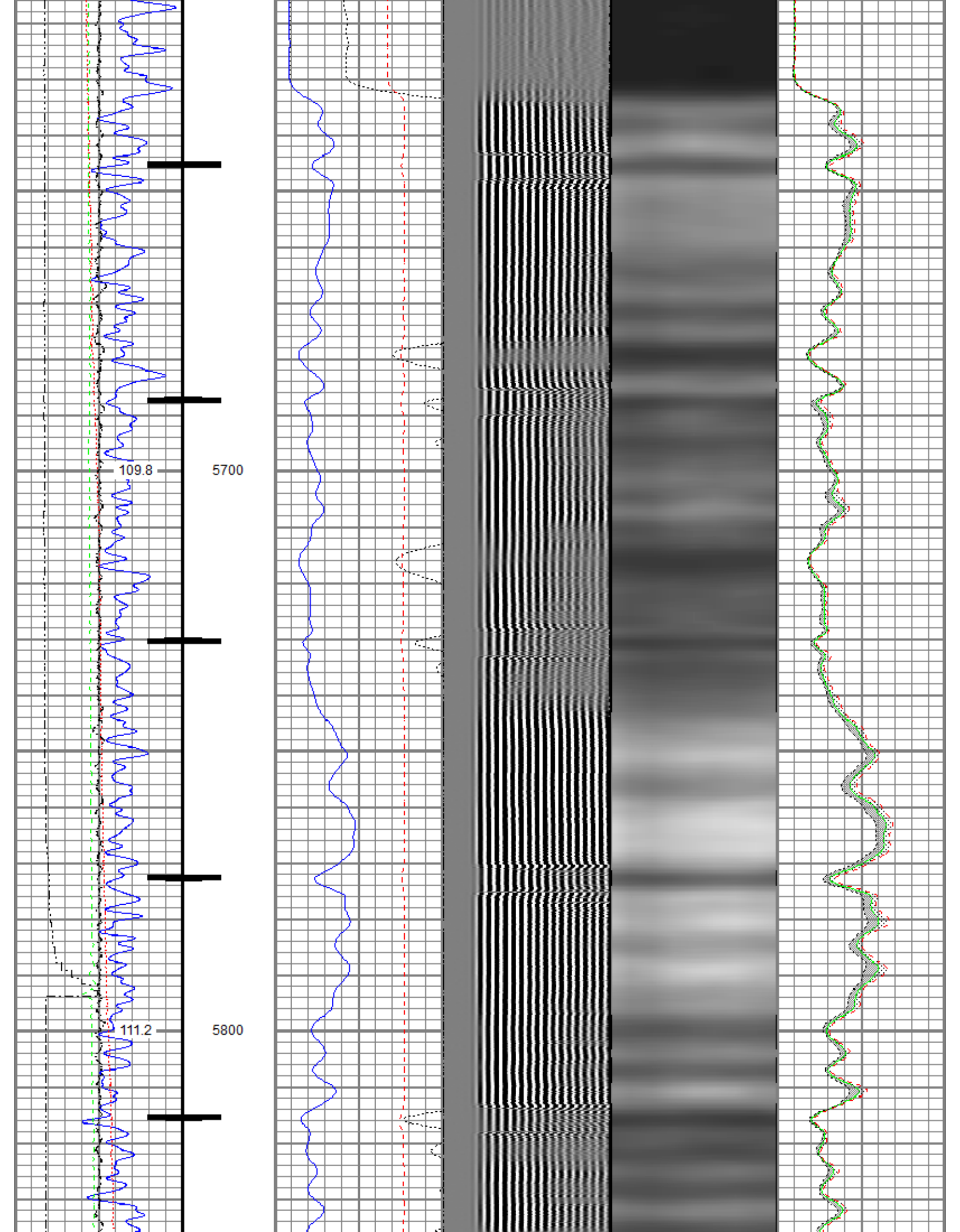


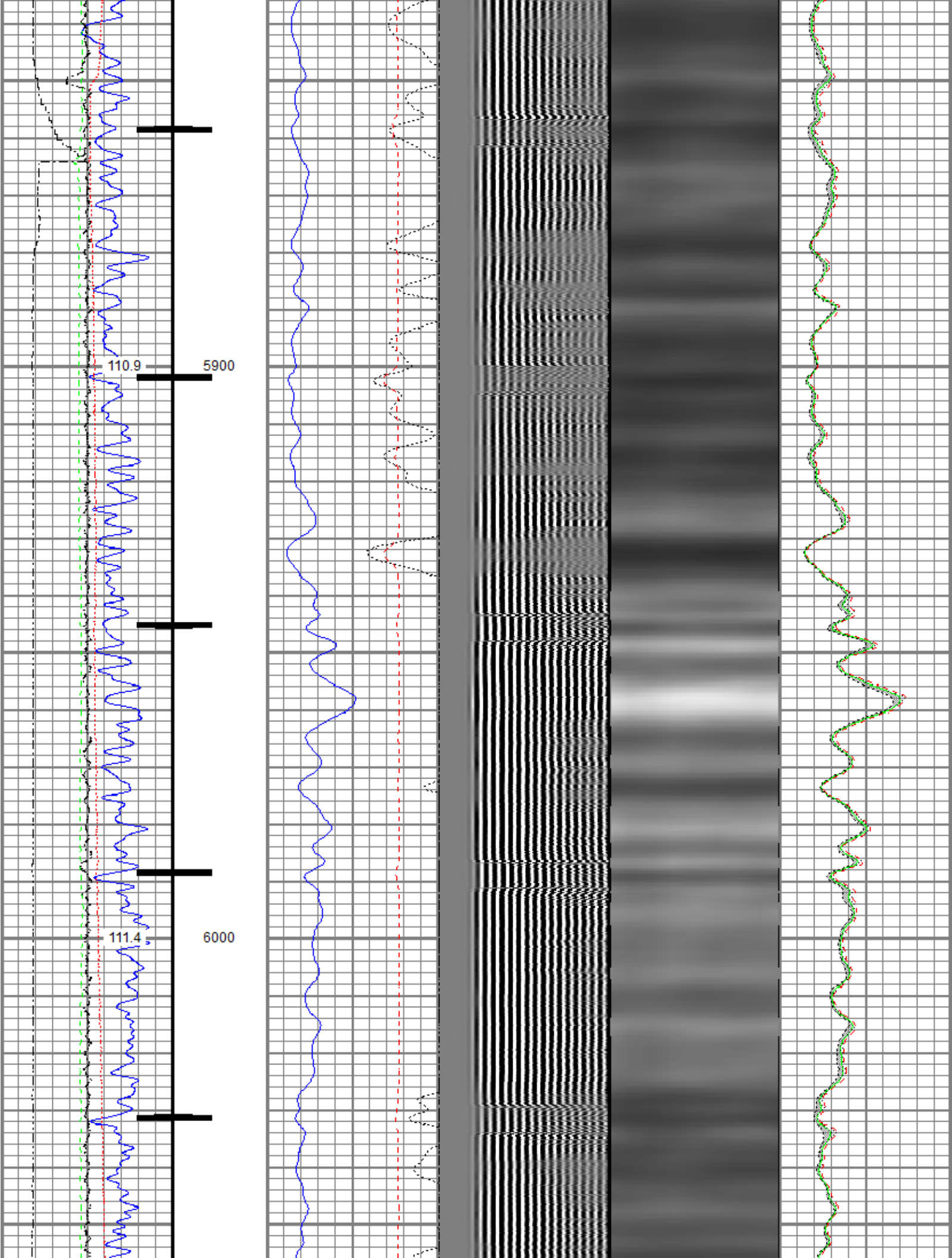


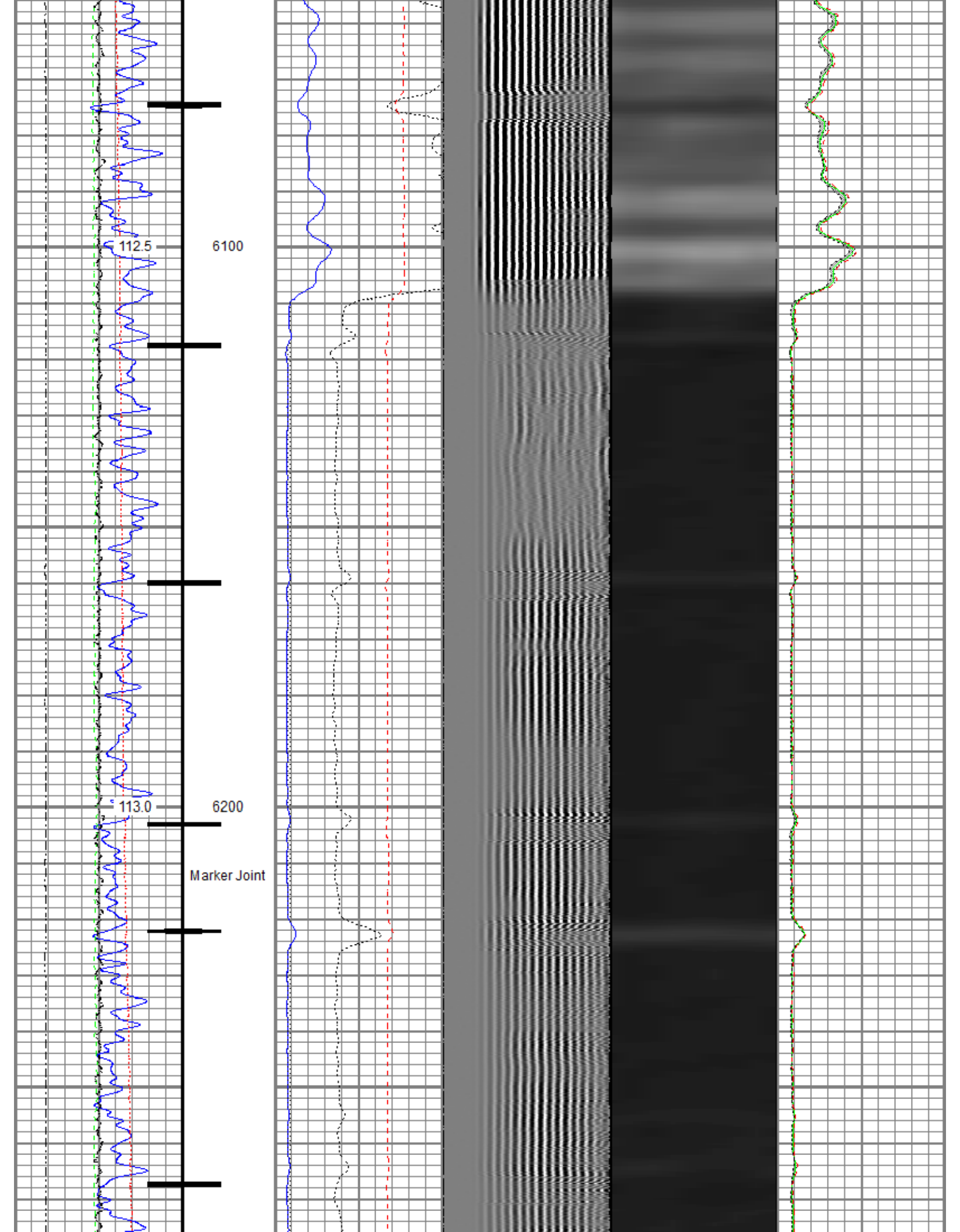


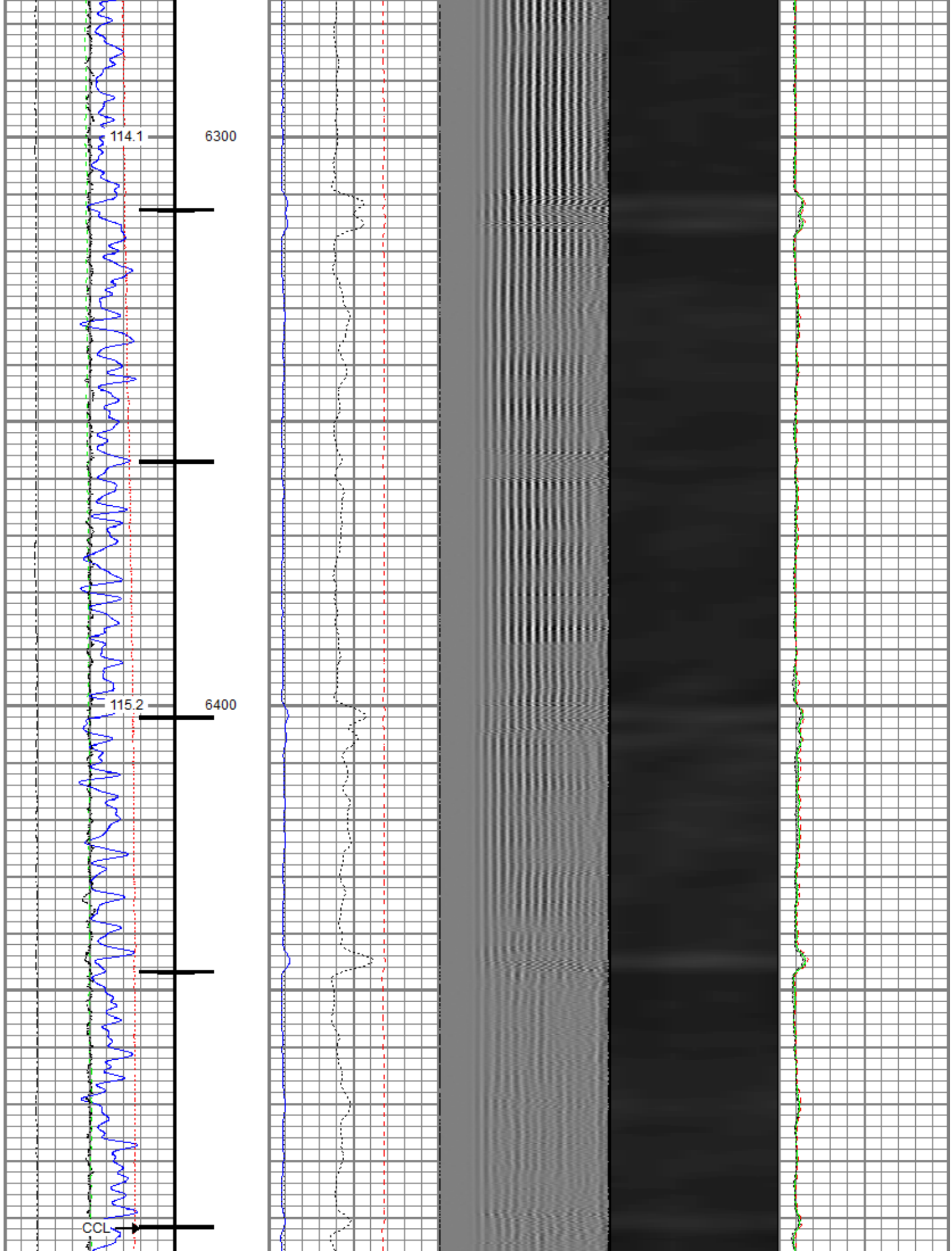


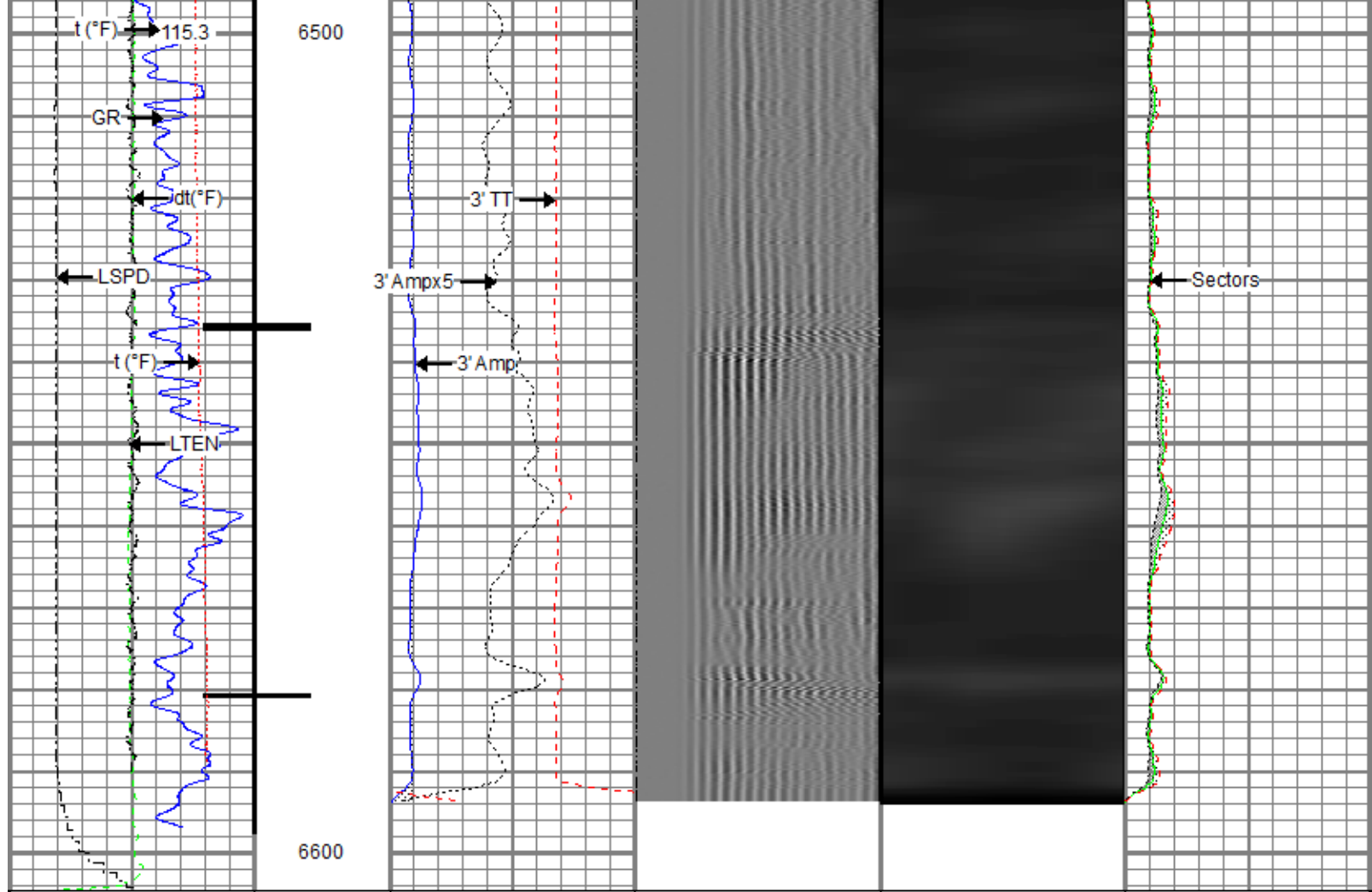












Gamma Ray (GAPI) 120	0 3' Amplitude (mV) 100	5' Variable Density Log (usec) 1200	Sector Map	0 Average Amplitude 100
Casing Collar Locator	0 3' Amplitude x 5 (mV) 20			Minimum Amplitude 100
0 Temperature (degF) 20	0 3' Travel Time (usec) 150			Maximum Amplitude 100
Line Speed (ft/min) 150				
0 Line Tension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

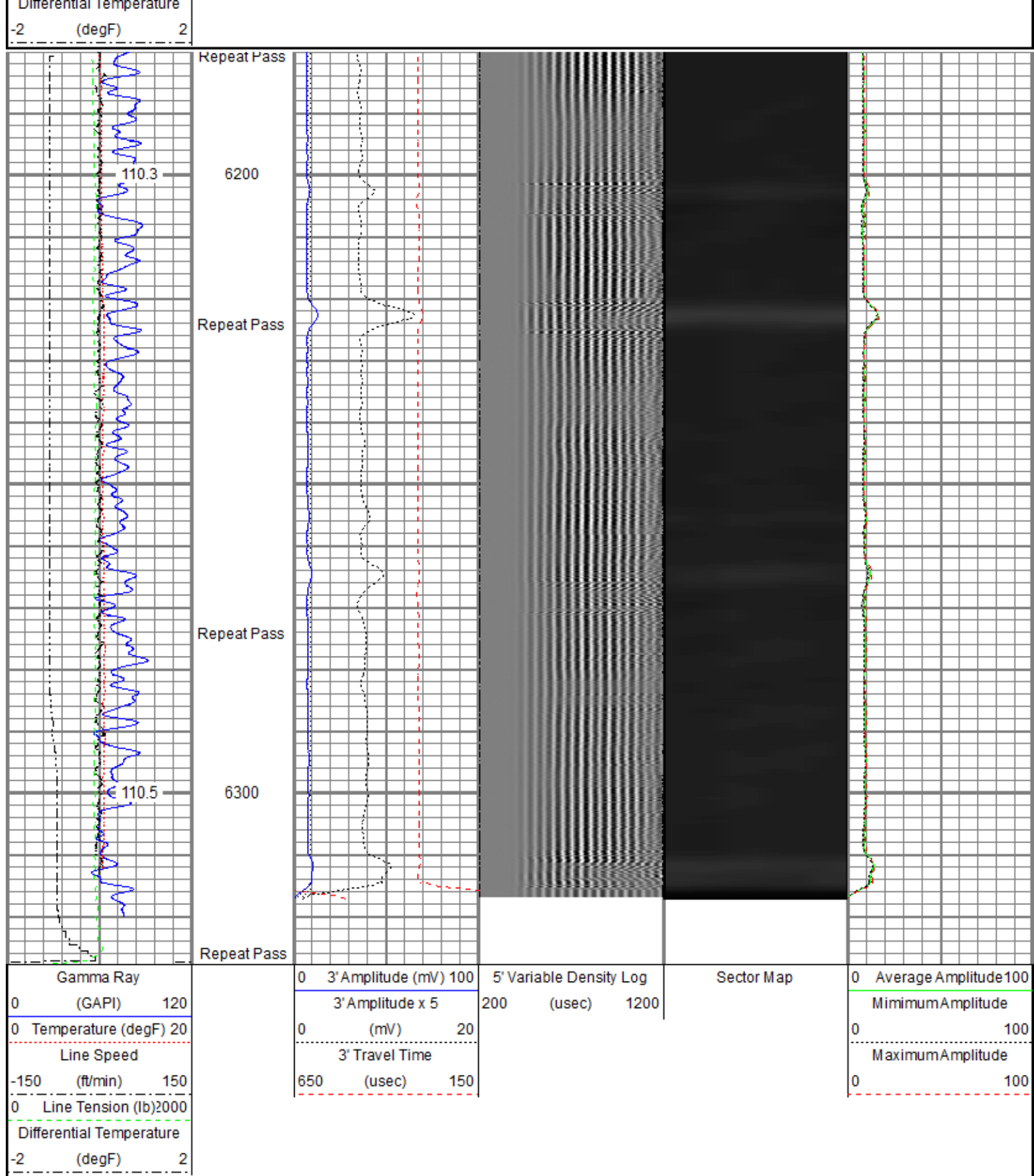


Repeat Pass

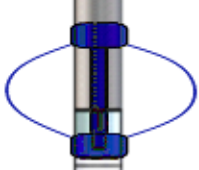
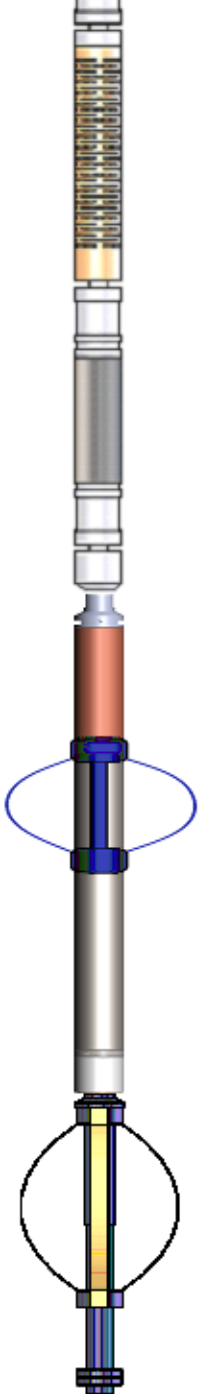
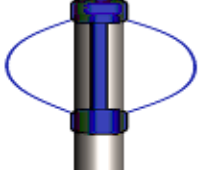
Recorded With 2400 PSI Surface Induced Pressure

Database File: prowant 18-10hz\0512350765_oxy_prowant 18-10hz_rbl_01-22-21.db
 Dataset Pathname: pass2.1
 Presentation Format: ros_radrii
 Dataset Creation: Sun Jan 24 07:46:41 2021
 Charted by: Depth in Feet scaled 1:240

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



Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
ErrCt	18.10		Titan CHD-16875 GO	1.03	1.69	5.40
RBT_HV	17.07		Titan 1-11/16" Assembled Electric Cable Head with 1" Fishing Neck			

TEMP	14.16		SO BS CENT-2750-4500 Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer	1.33	3.25	10.00
RBT_ACCZ	11.93		Probe Radii ACC-2750 RBTa (FW1302-002) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub and Accelerometer	9.39	2.75	105.00
RBT_ACCY	11.93					
RBT_ACCX	11.93					
WVFSYNC	11.93					
WVFS8	11.93					
WVFS7	11.93					
WVFS6	11.93					
WVFS5	11.93					
WVFS4	11.93					
WVFS3	11.93					
WVFS2	11.93					
WVFS1	11.93					
WVFCAL	11.93					
WV3FT	11.93					
WV5FT	10.93					
CCL\$2	6.80		SO BS CENT-2750-4500 Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer	1.33	3.25	10.00
CCL\$1	6.80		Probe GR-CCL-2750 6PB (101001) Probe 2-3/4" rev.1 Digital Scintillation Gamma Ray/CCL Combined with 6 Pin Bottom for CNT	4.80	2.75	55.00
GR	5.46		Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
LOCTIM	0.00					
UTCTIM	0.00					

Dataset: 0512350765_Oxy_Prowant 18-10HZ_RBL_01-22-21.db: field/well/run1/pass4.1
Total length: 18.10 ft
Total weight: 226.40 lb
O.D.: 3.25 in

Calibration Report	
Database File	C:\ProgramData\Warrior\Data\Prowant 18-10HZ\0512350765_Oxy_Prowant 18-10HZ_RBL_01-22-21.db
Dataset Pathname	pass4.1
Dataset Creation	Fri Jan 22 11:51:21 2021

Serial Number: 101001
 Tool Model: 2750 6PB
 Performed: Tue Dec 03 09:24:53 2019

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: FW1302-002
 Tool Model: 2750 RBTa

Calibration Casing Diameter: 5.500 in
 Calibration Depth: 7.998 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.001	0.630	0.800	71.921	113.220	0.634
CAL	0.006	0.681				
5'	0.001	0.583	0.800	71.921	122.013	0.736
SUM						
S1	0.002	0.619	0.000	100.000	161.897	-0.282
S2	0.002	0.703	0.000	100.000	142.591	-0.266
S3	0.002	0.731	0.000	100.000	137.041	-0.239
S4	0.001	0.677	0.000	100.000	148.127	-0.221
S5	0.001	0.644	0.000	100.000	155.506	-0.198
S6	0.001	0.621	0.000	100.000	161.286	-0.181
S7	0.001	0.608	0.000	100.000	164.734	-0.213
S8	0.002	0.614	0.000	100.000	163.333	-0.252

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.006	0.681	1.000	0.000

Air Zero Calibration, performed Thu Jan 21 11:52:20 2021:

	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	

Inclinometer Calibration Report

Performed: Tue Dec 03 09:24:53 2019

Low Read High Read Low Ref High Ref

	Low Ref.	High Ref.	Low Ref.	High Ref.	
X Accelerometer	-891.00	891.00	-1.00	1.00	gee
Y Accelerometer	-899.00	877.00	-1.00	1.00	gee
Z Accelerometer	-7.47	873.36	0.00	1.00	gee

Temperature Calibration Report

Serial Number: FW1302-002
 Tool Model: 2750 RBTa
 Performed: Tue Dec 03 09:24:53 2019

	Reference	Reading
Low Reference:	100.00 degF	110.72 degF
High Reference:	350.00 degF	409.18 degF
Gain:	0.84	
Offset:	7.26	
Delta Spacing	1	



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