



Radial Cement Bond
Gamma Ray
Casing Collar Log

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

Well Windsock 21-10HZ

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-50639

SEC 21 TWP 1N RGE 68W

Permanent Datum Ground Level Elevation 5222'

Log Measured From Kelly Bushing 20 FT

Drilling Measured From Kelly Bushing

Other Services
GR/JB
RBP

Elevation
K.B. 5242'
D.F. ---
G.L. 5222'

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Well Windsock 21-10HZ
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State Colorado

Date	17-MAR-2020
Run Number	Three
Depth Driller	13744 FT
Depth Logger	7401 FT
Bottom Logged Interval	7386 FT
Top Log Interval	Surface
Open Hole Size	7.875"
Type Fluid	Water
Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	222°F
Estimated Cement Top	See Log
Time Well Ready	ROA
Time Logger on Bottom	15:55
Equipment Number	HD-363
Location	Platteville, CO
Recorded By	M. Hayes
Witnessed By	John McCarthy
Borehole Record	
Run Number	Bit From To
Size (in)	Size Weight From To
Wgt (lbs/ft)	
Surface Casing	9 5/8 36 J-55 Surface 1889 FT
Intermediate #1	5 1/2 17 HC P110 Surface 13731 FT
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 7349 FT
Adjusted -5 FT to correlate with Marker Joint
Gauge Ring/Junk Basket ran to 8368 FT
Retrievable Bridge Plug set at 7440 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!!

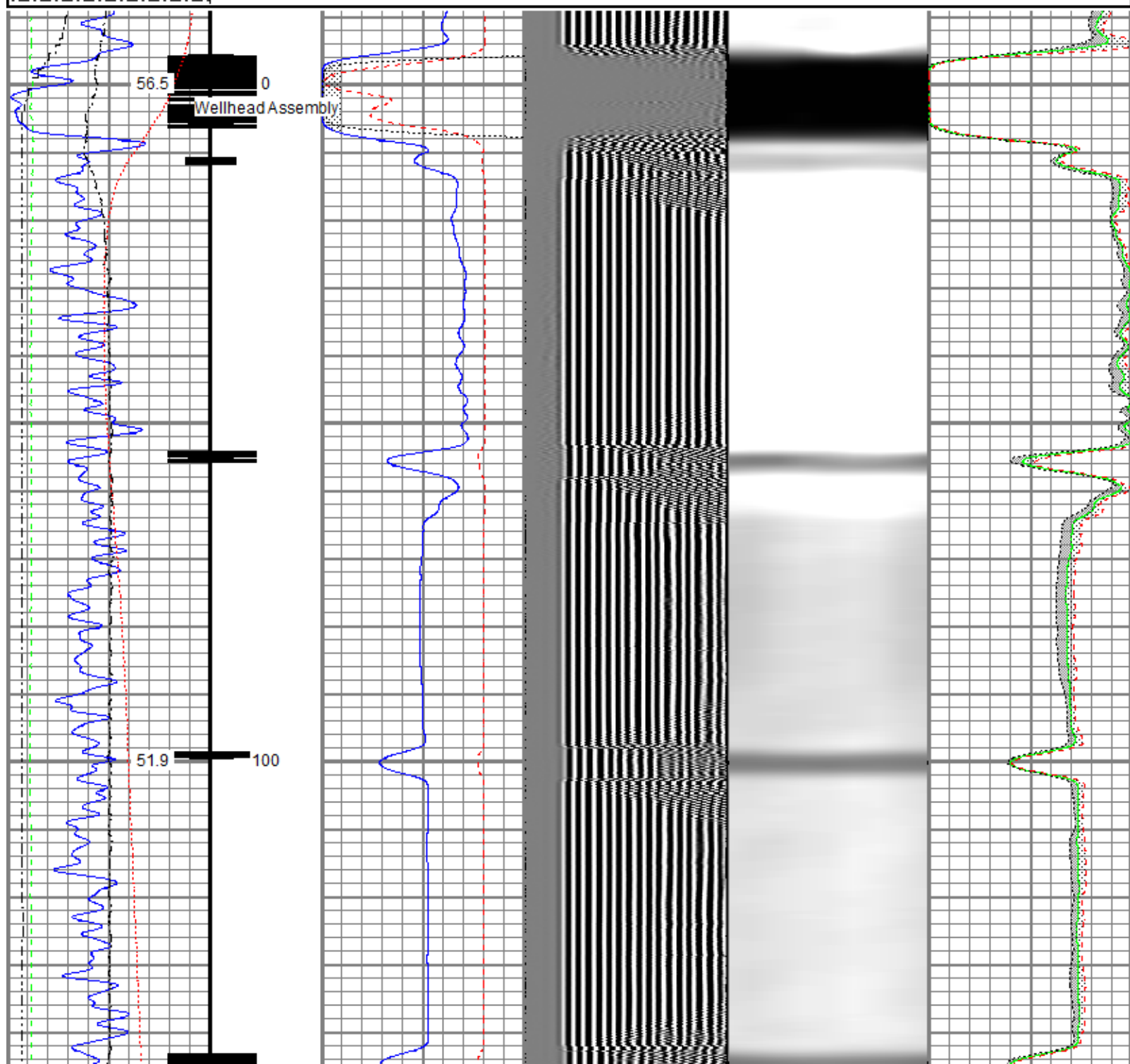
Main Pass

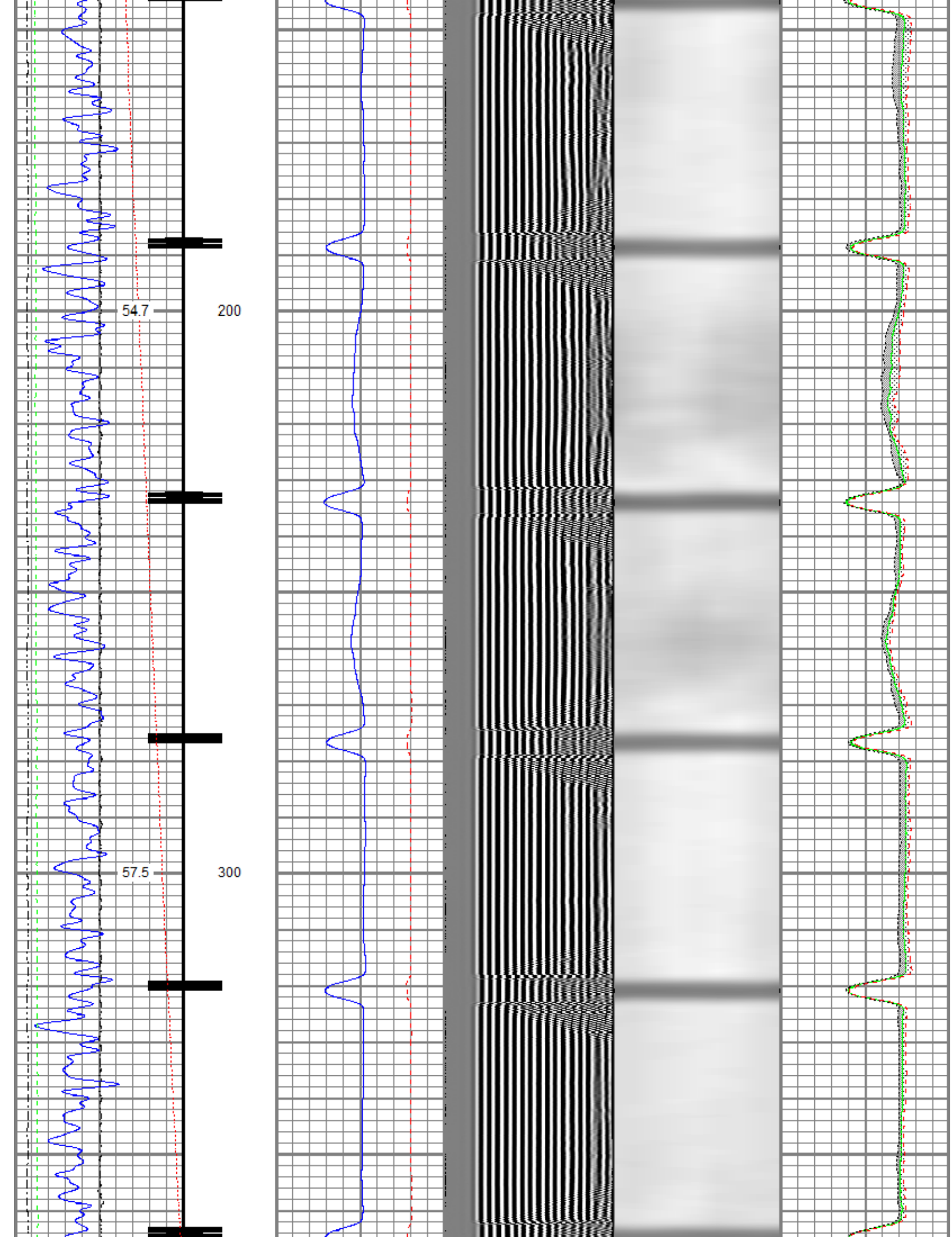


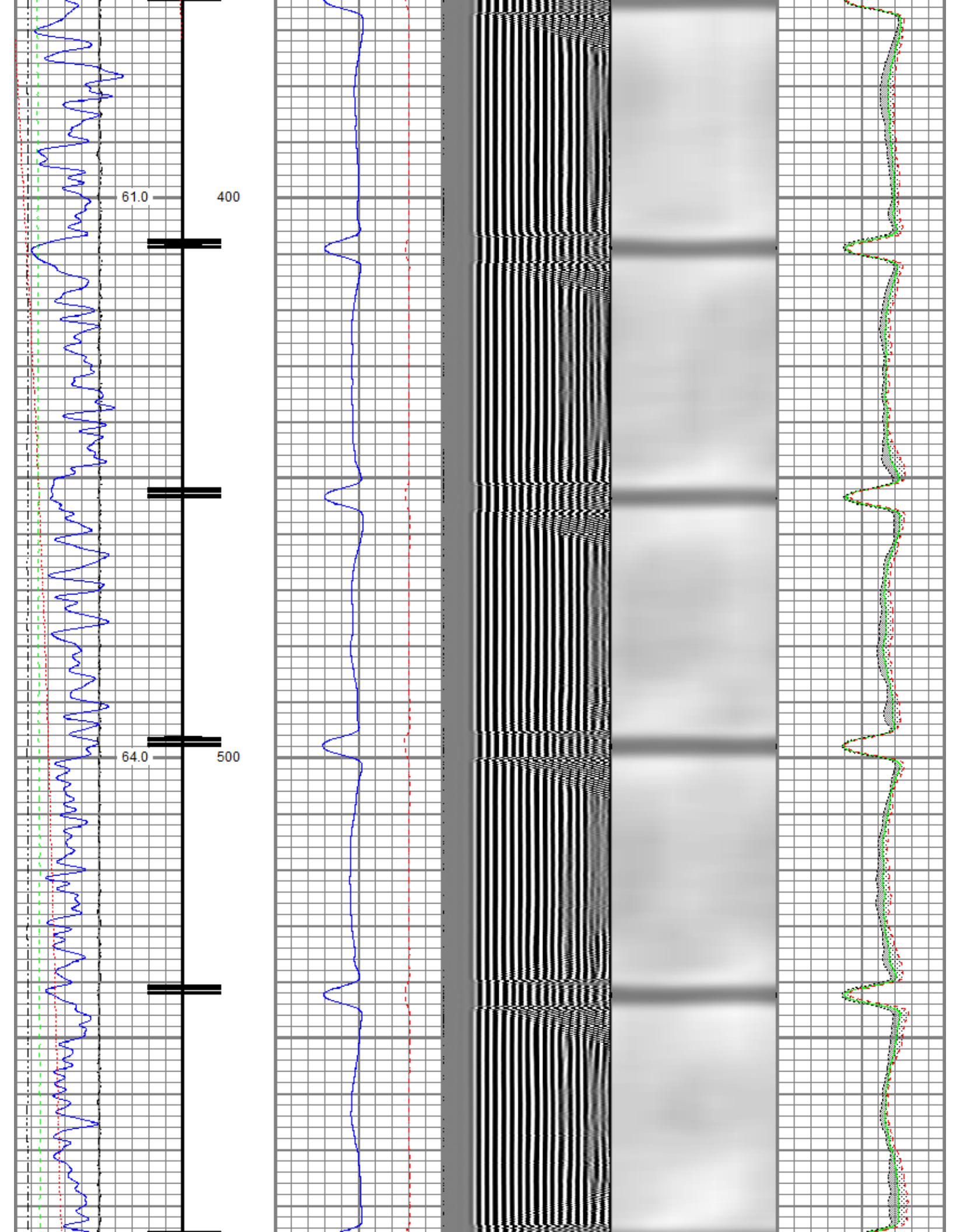
Recorded With 0 PSI Surface Induced Pressure

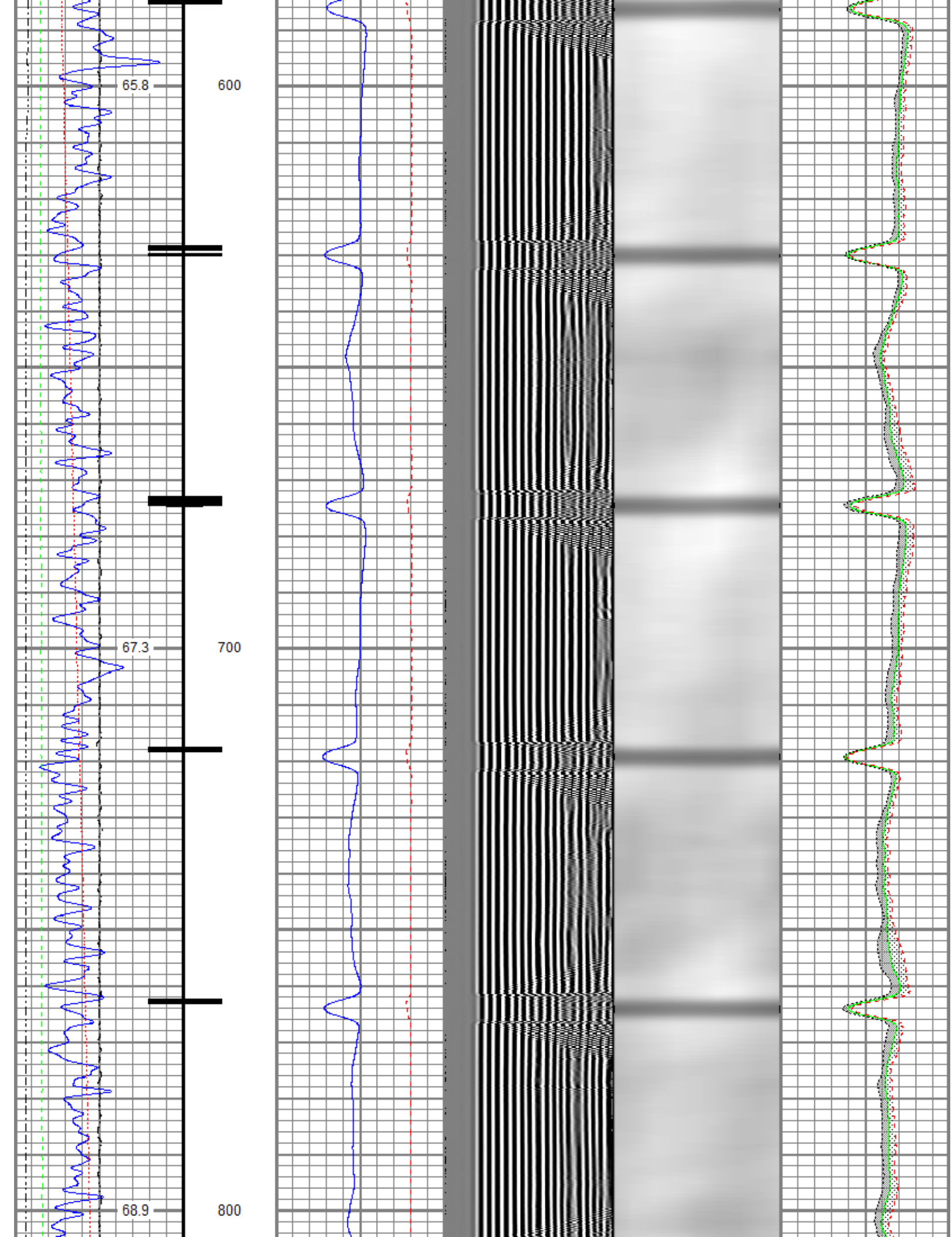
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Dataset Pathname	pass4.3
Presentation Format	ros_radri
Dataset Creation	Wed Mar 18 12:54:12 2020
Charted by	Depth in Feet scaled 1:240

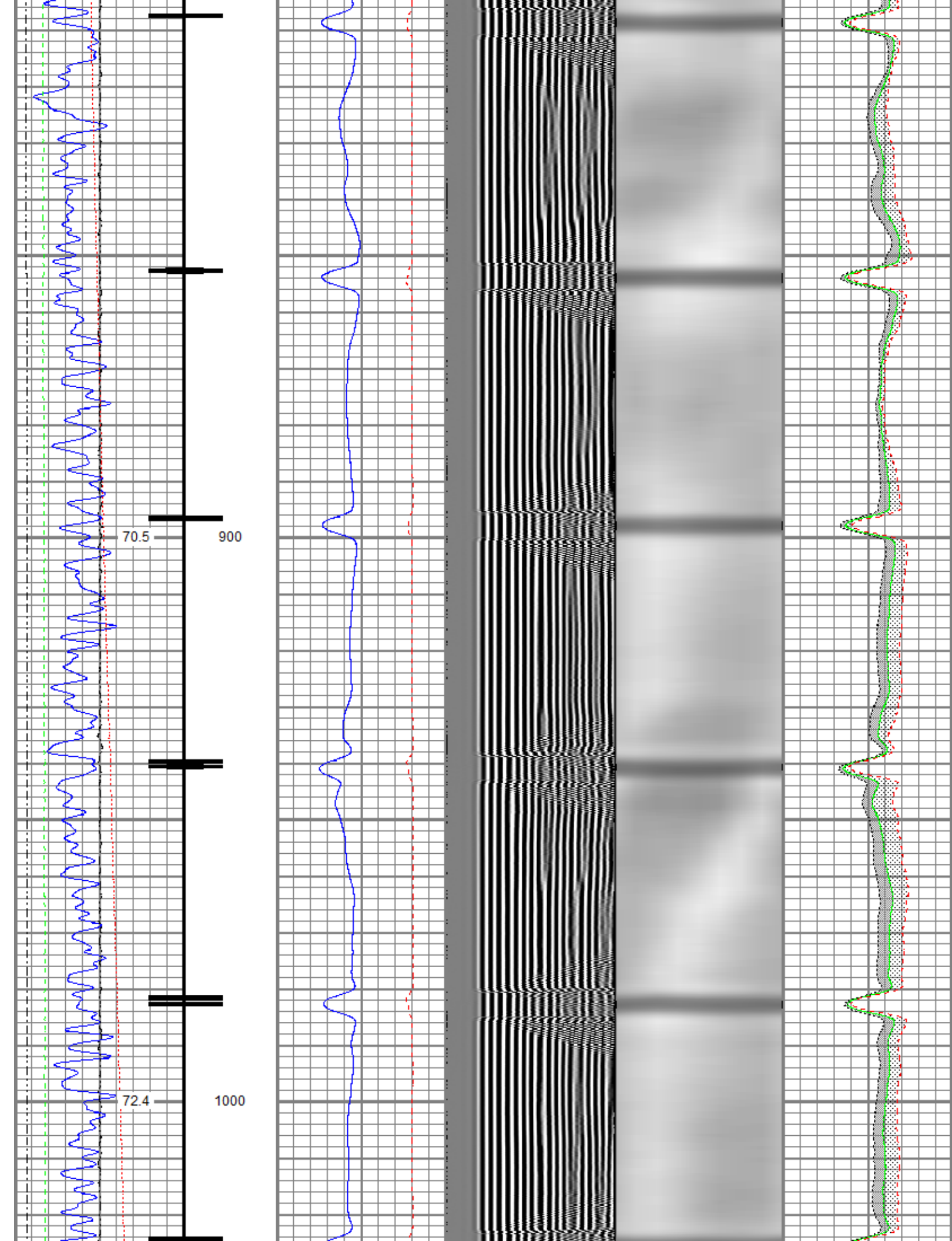
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200 (usec) 1200			Minimum Amplitude
Casing Collar Locator	0	(mV) 20			0	100
Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed	650	(usec) 150			0	100
-150 (ft/min)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

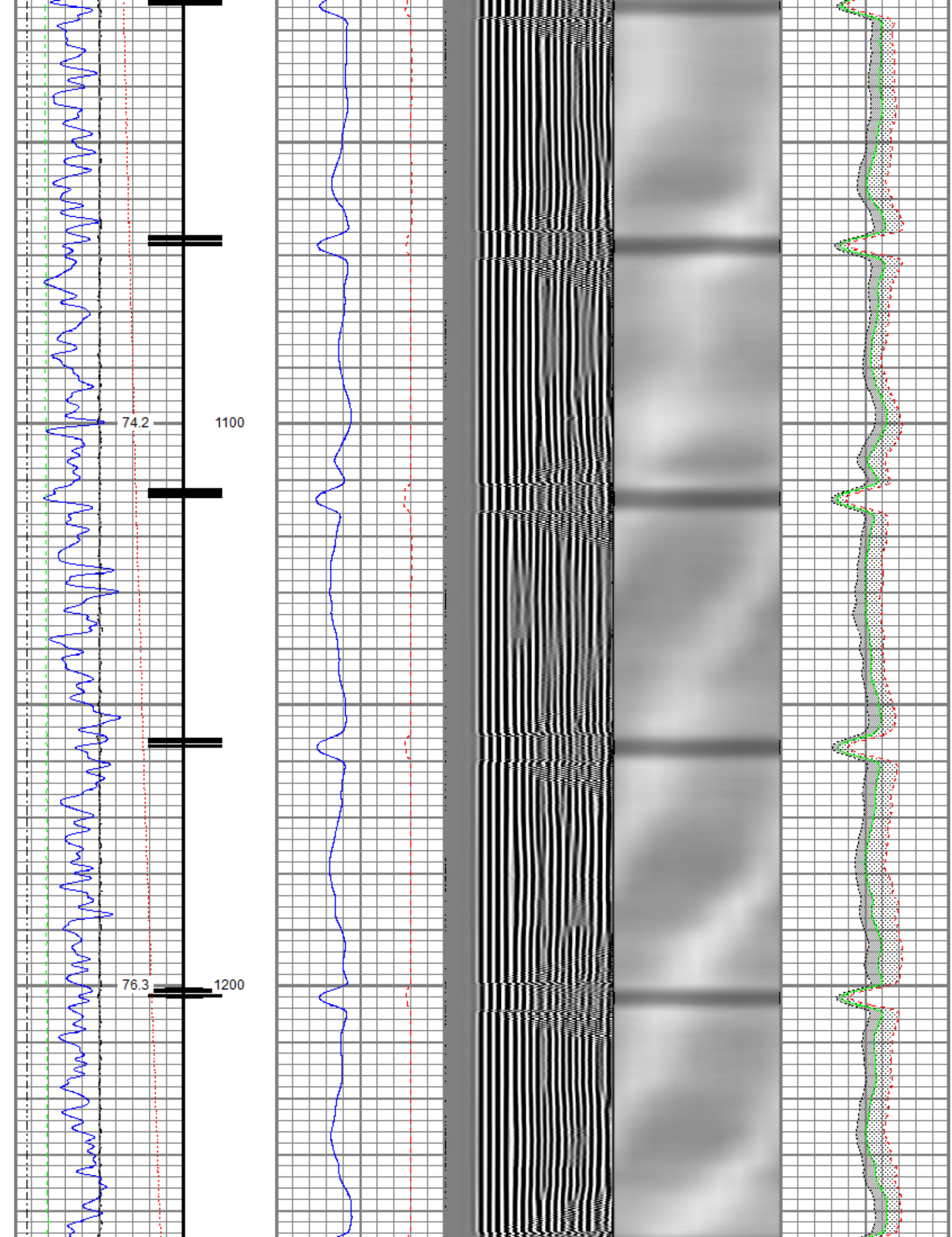


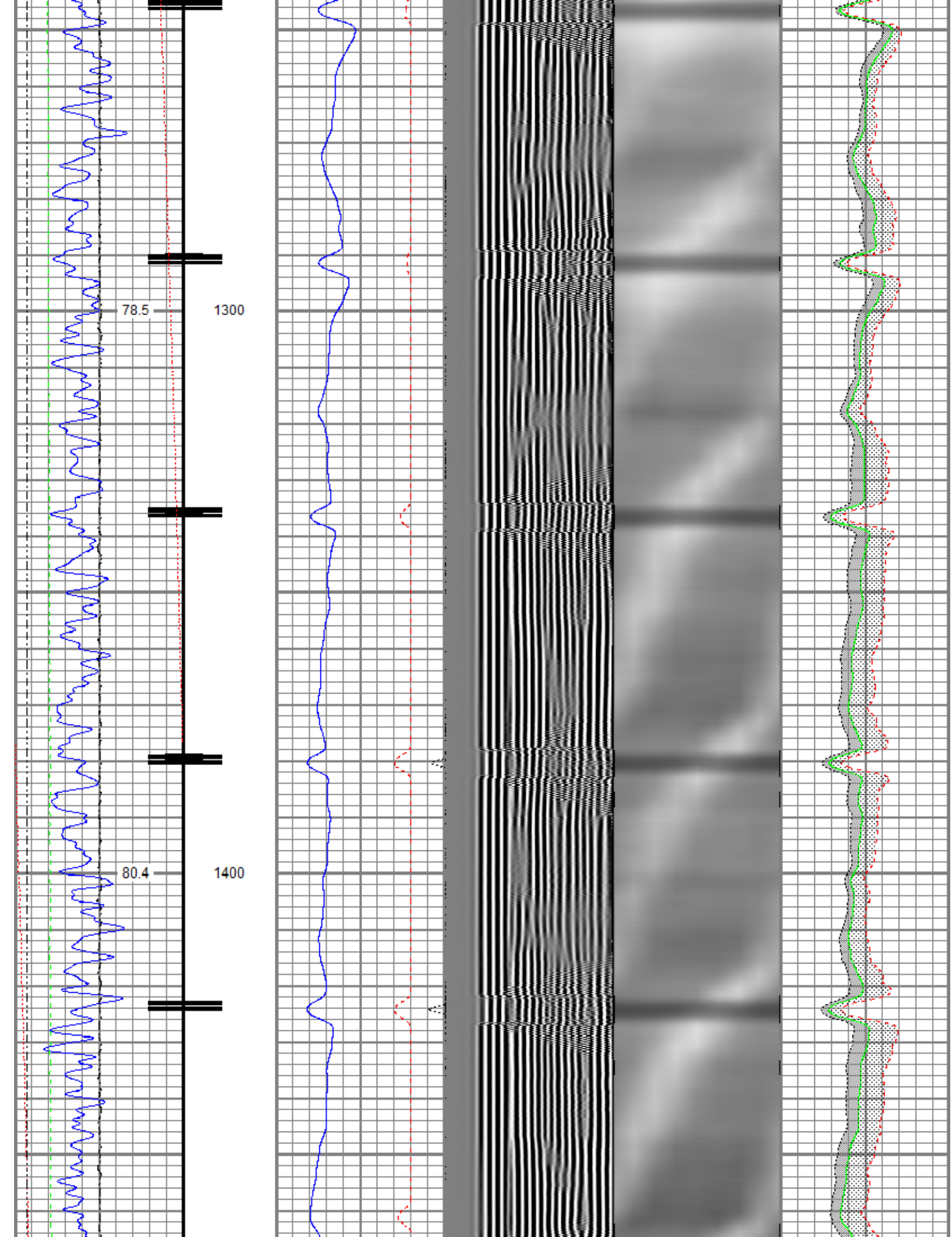


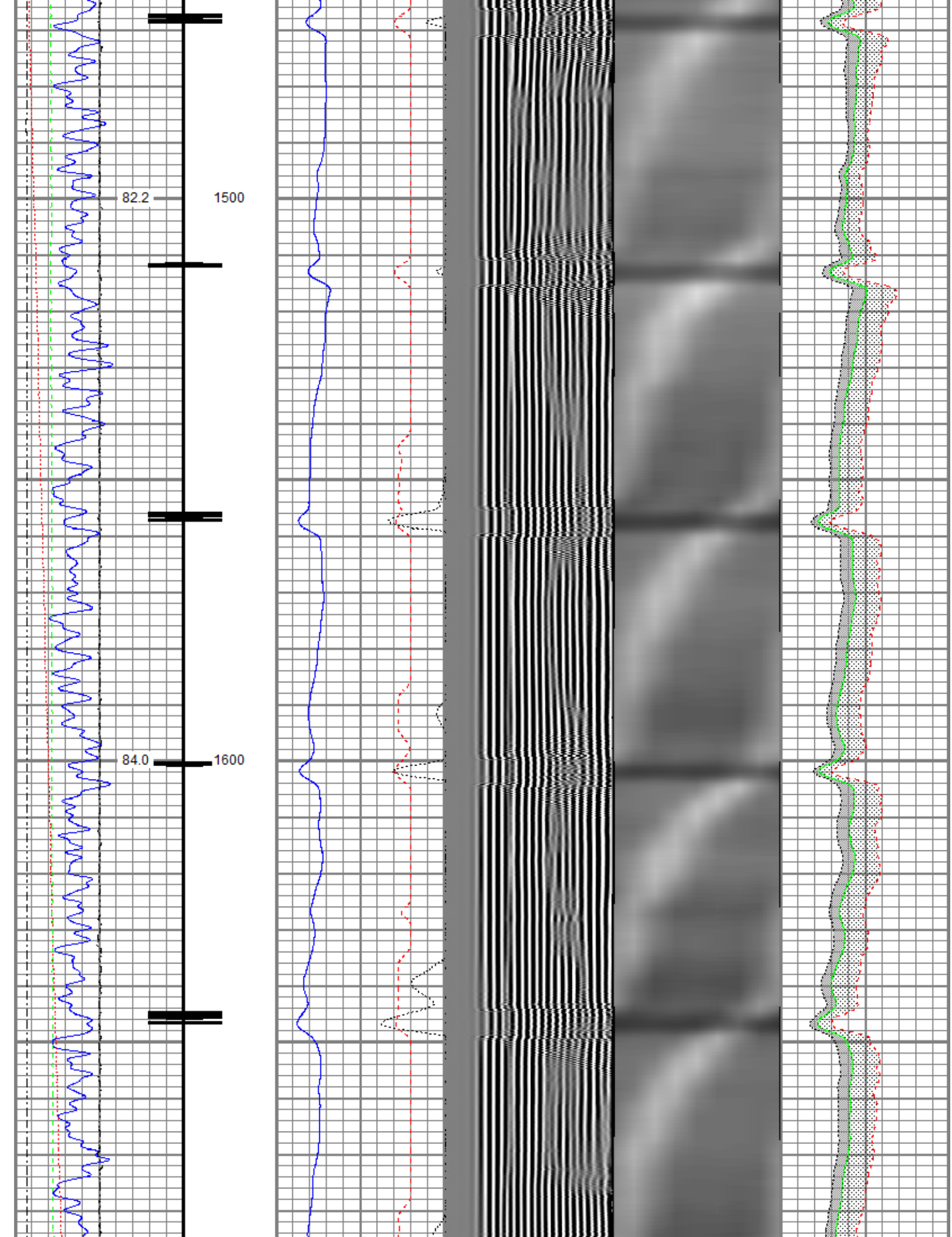


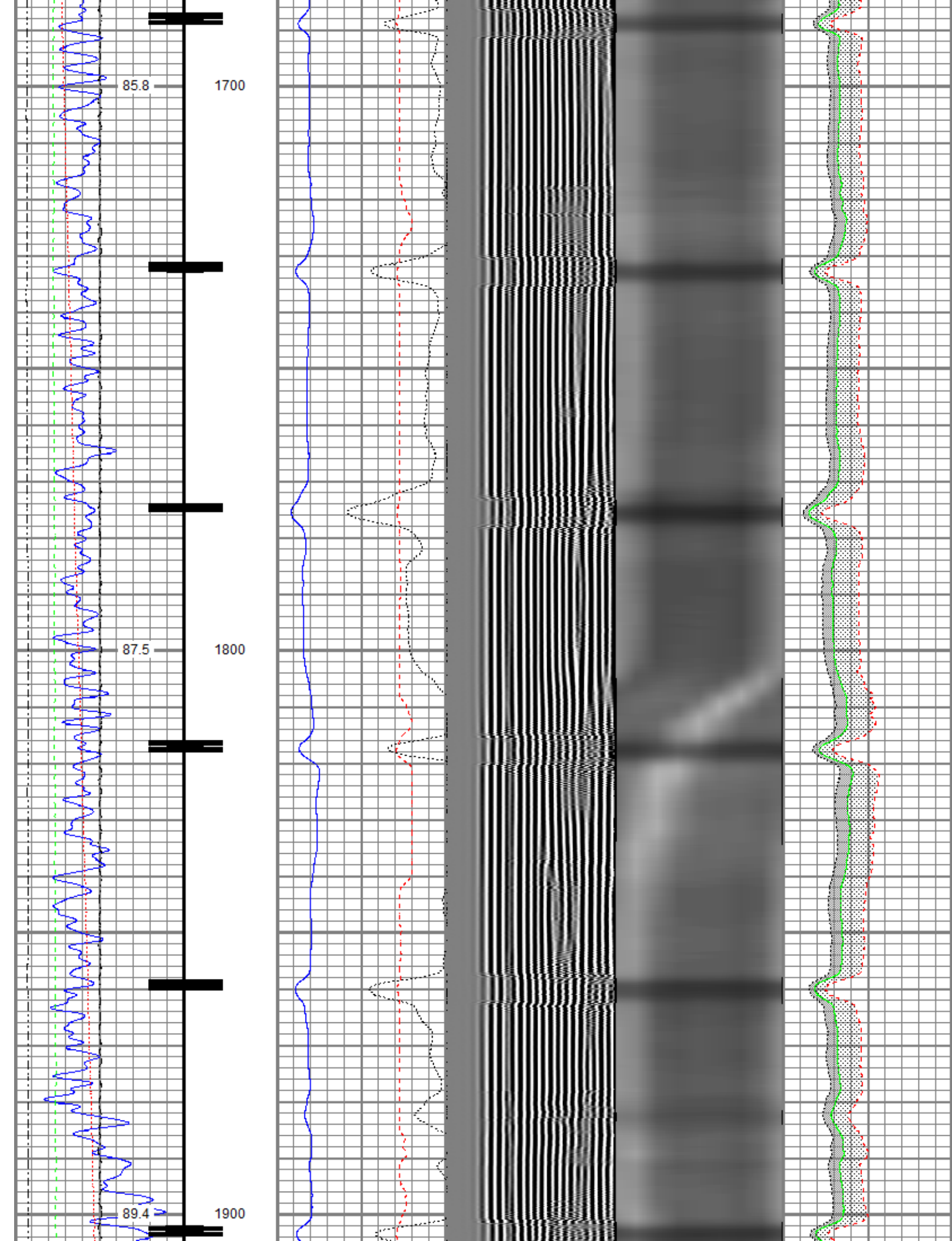


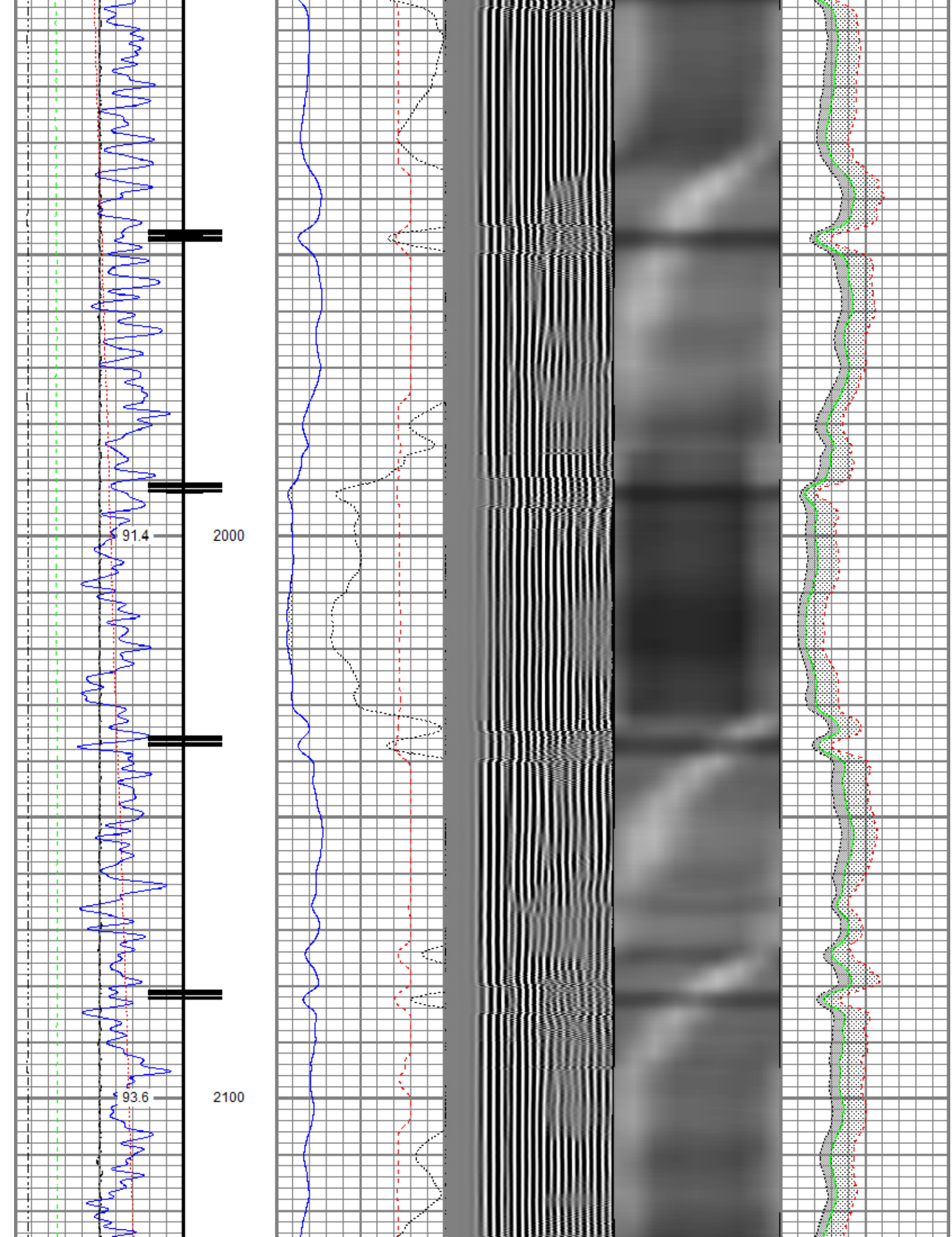


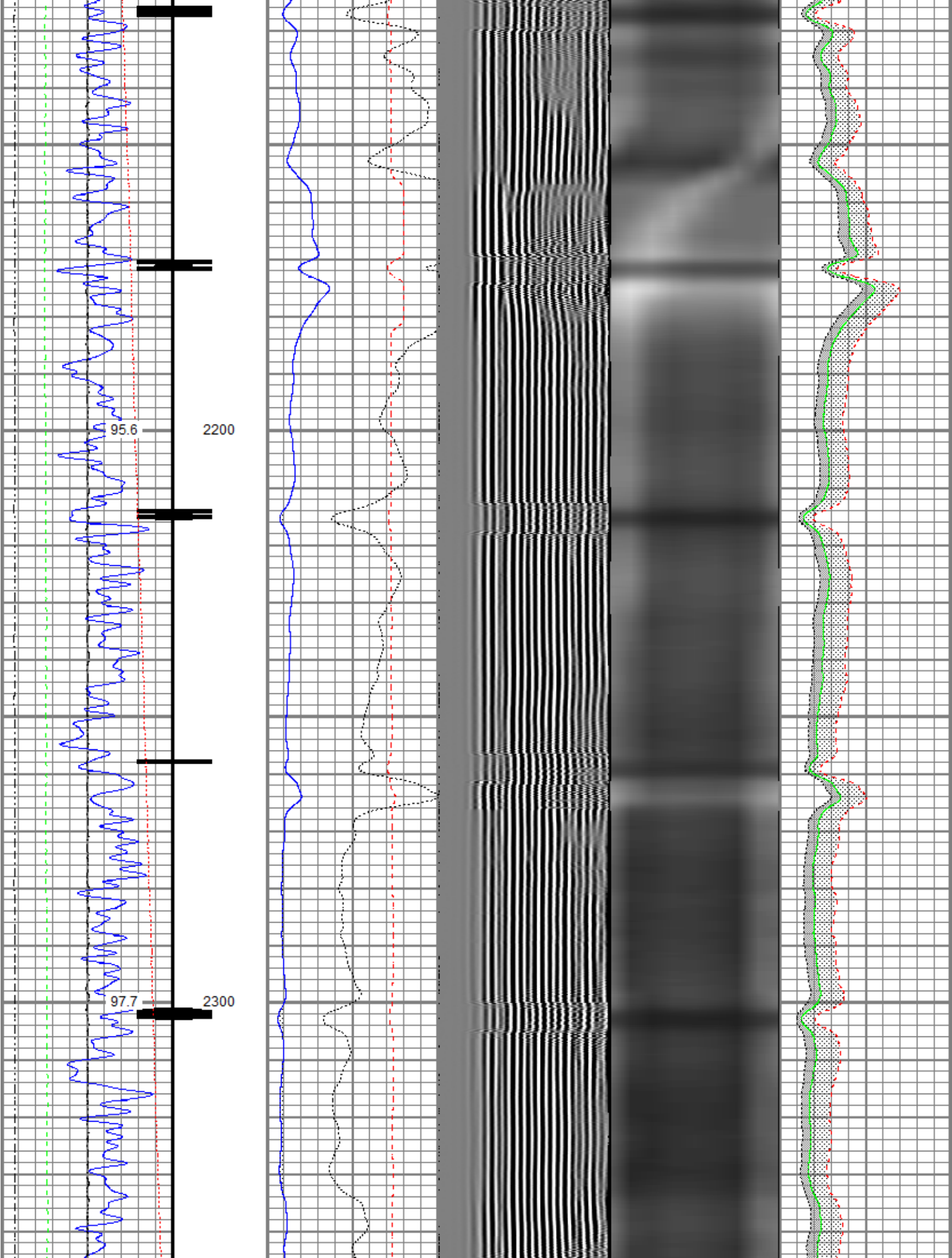


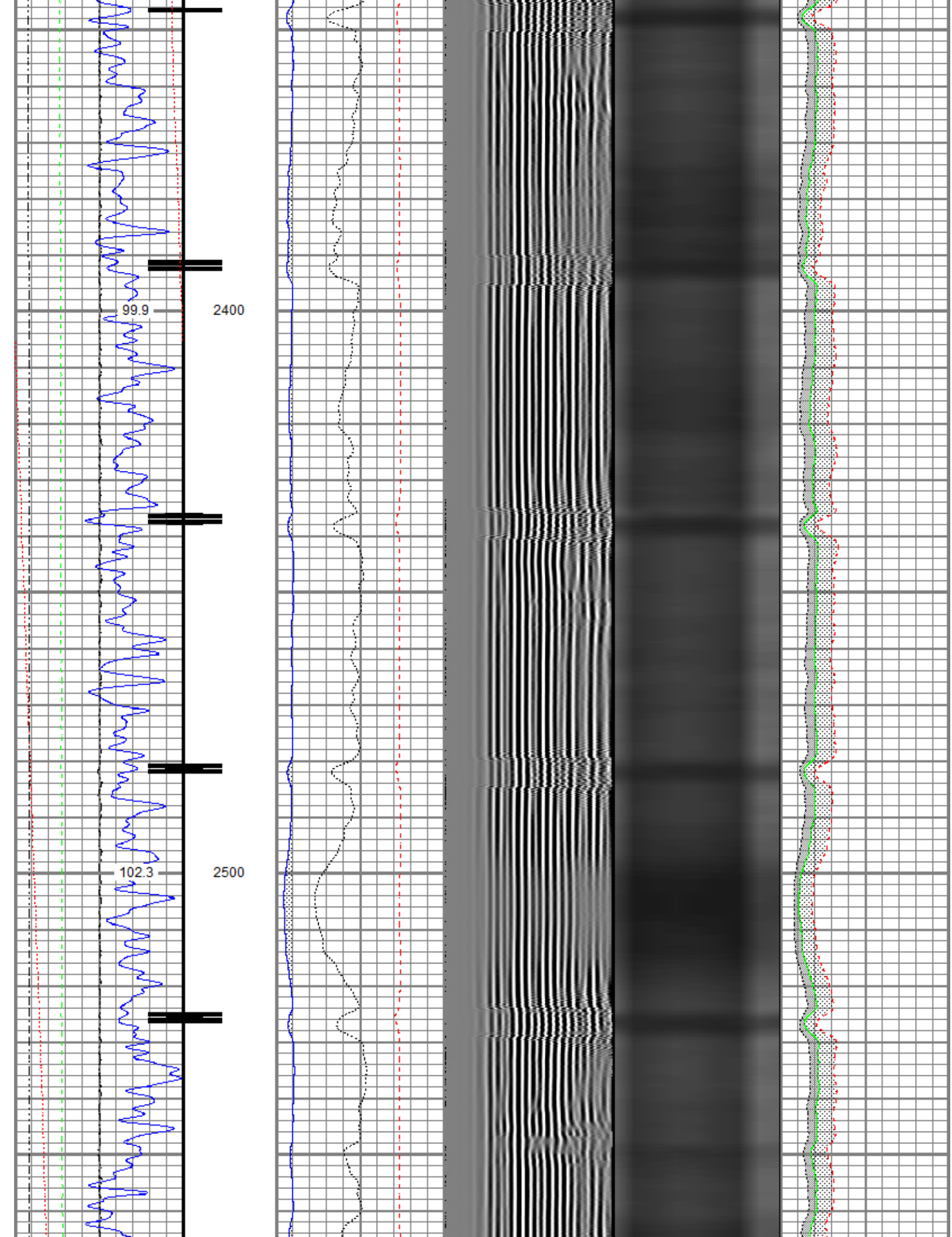


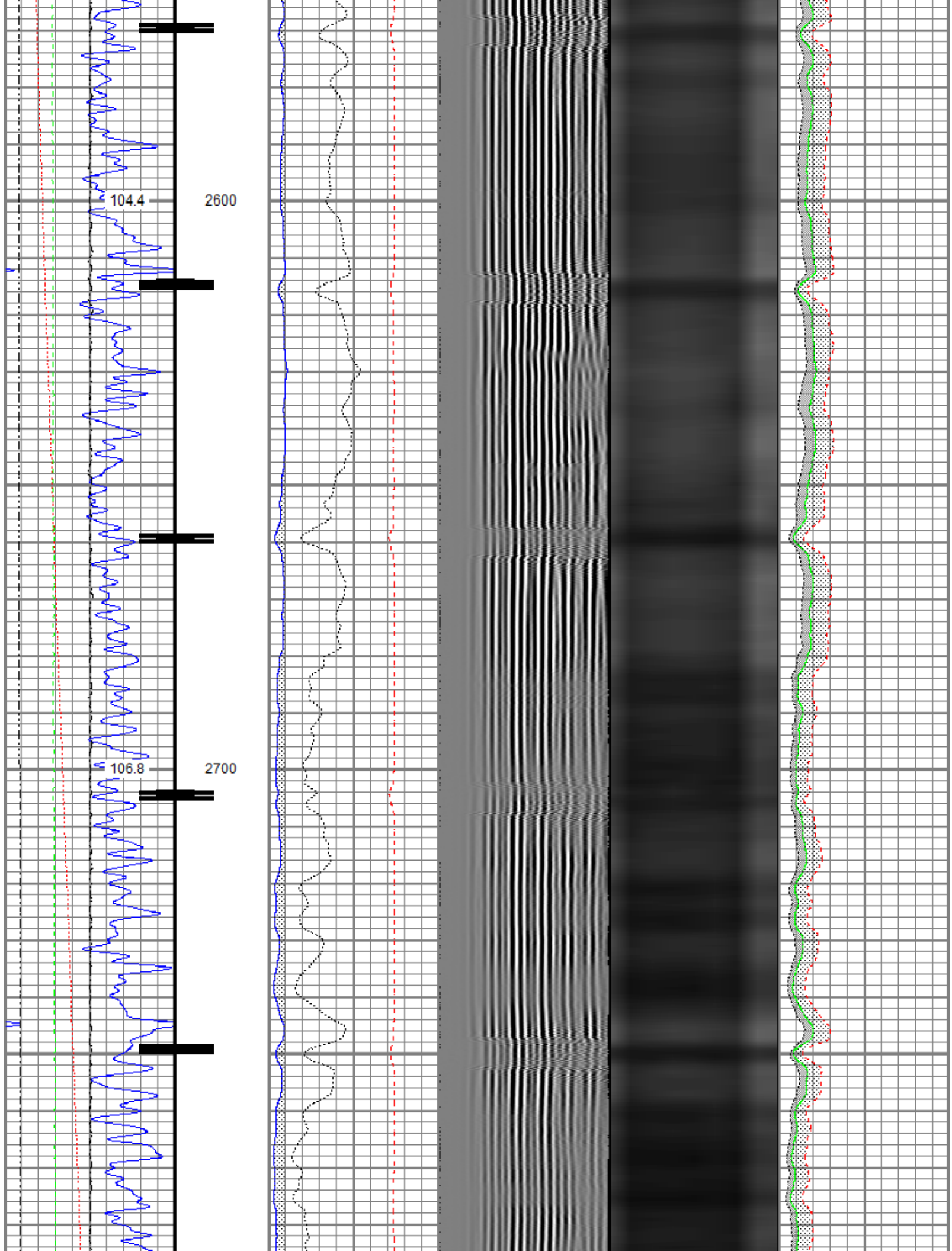


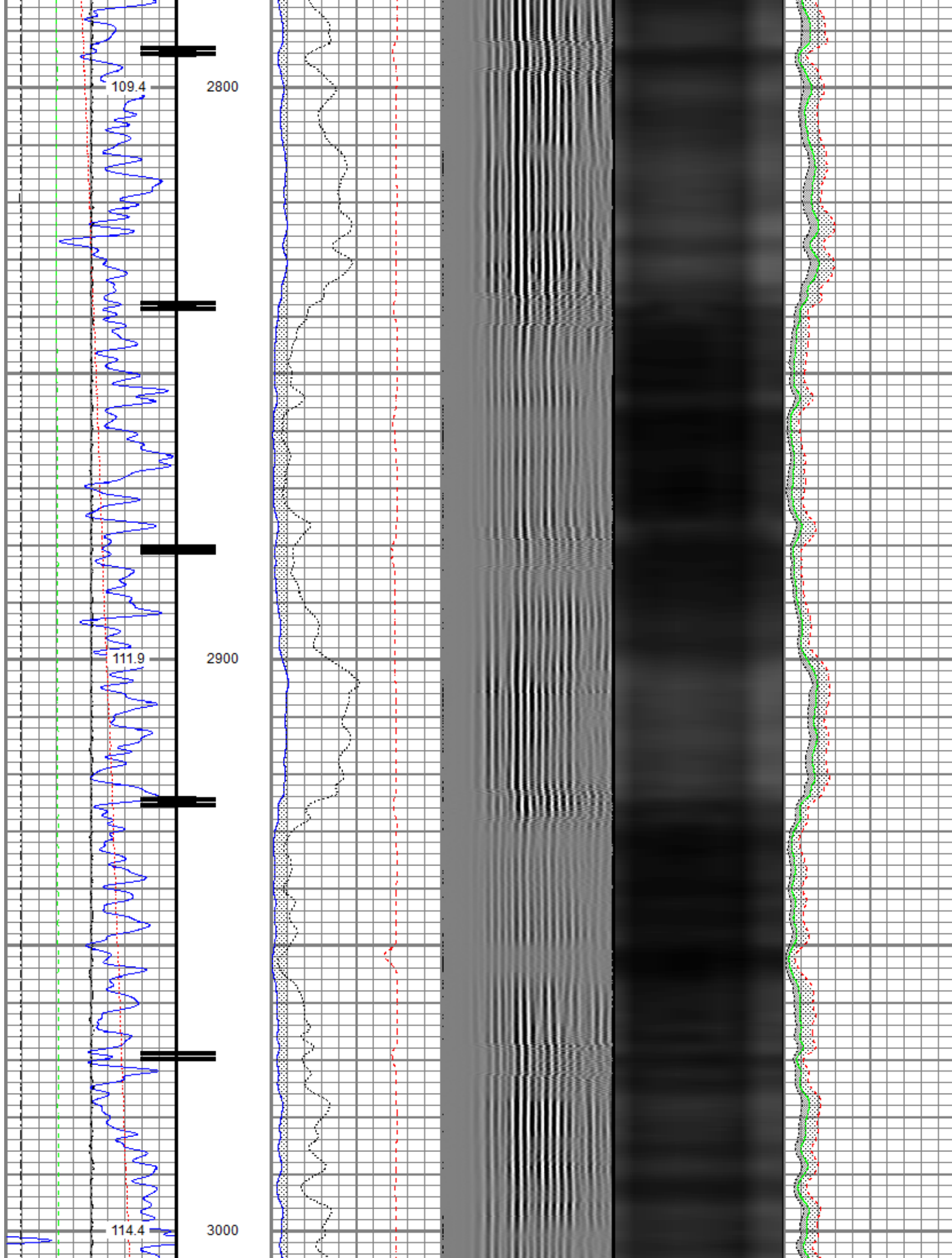


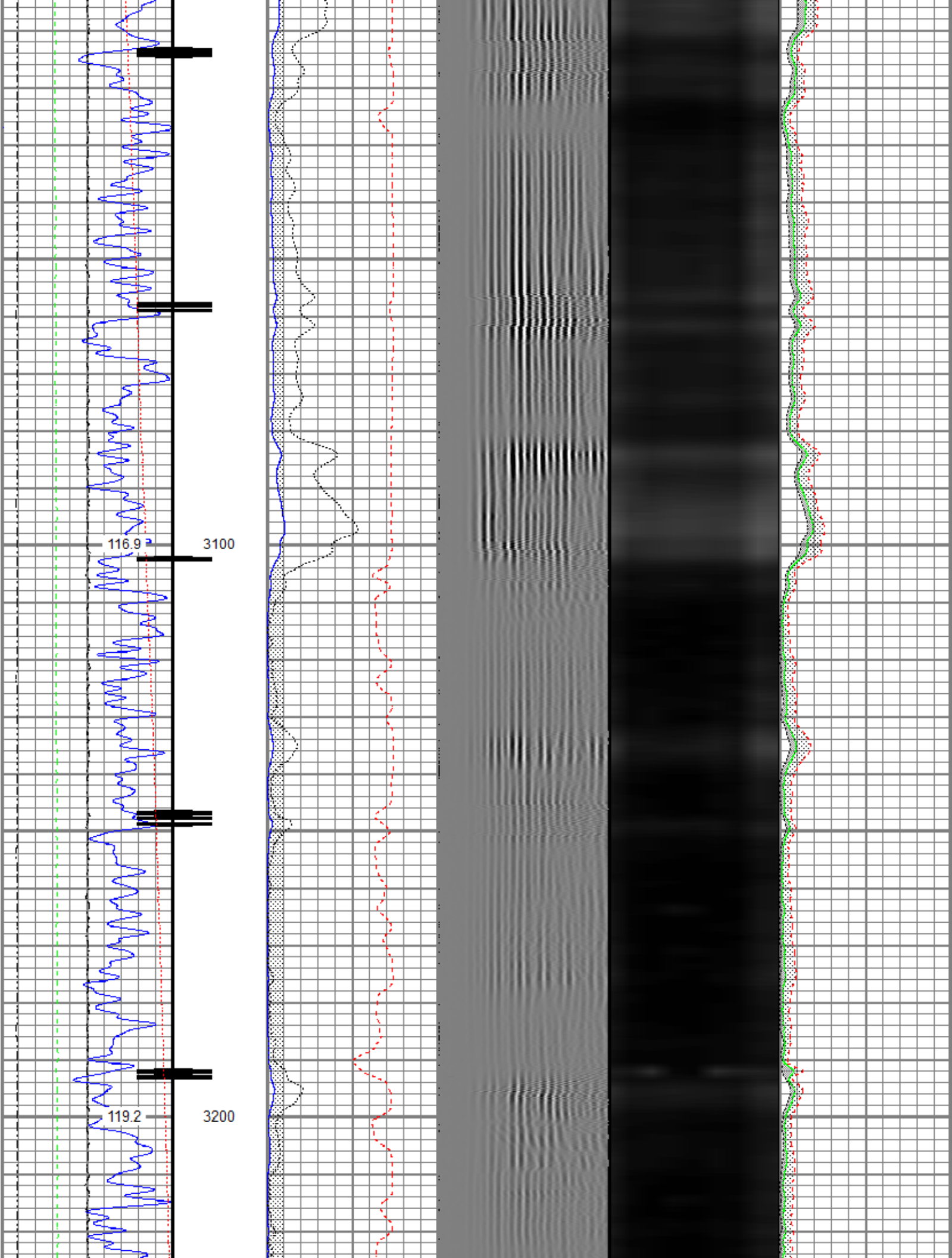


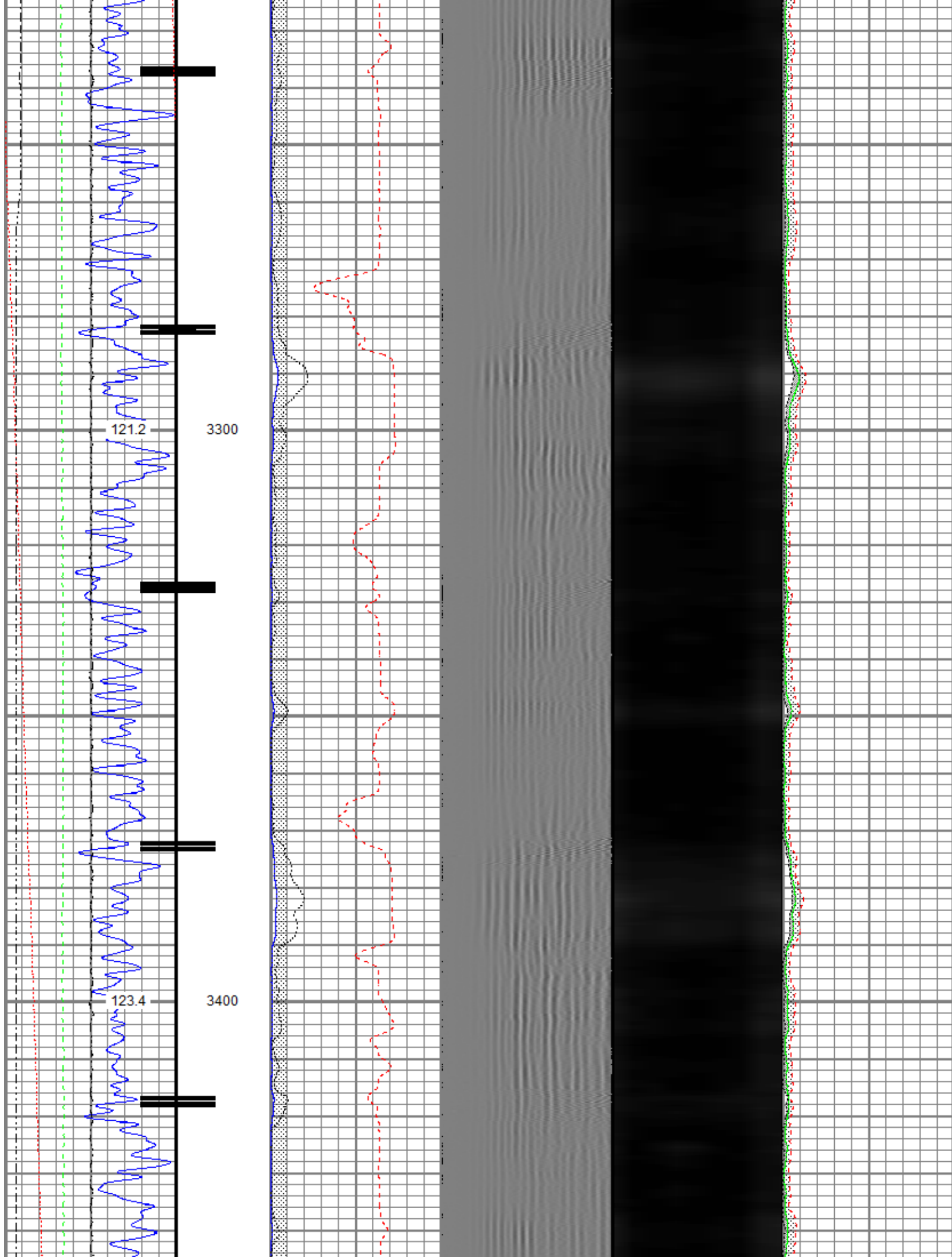


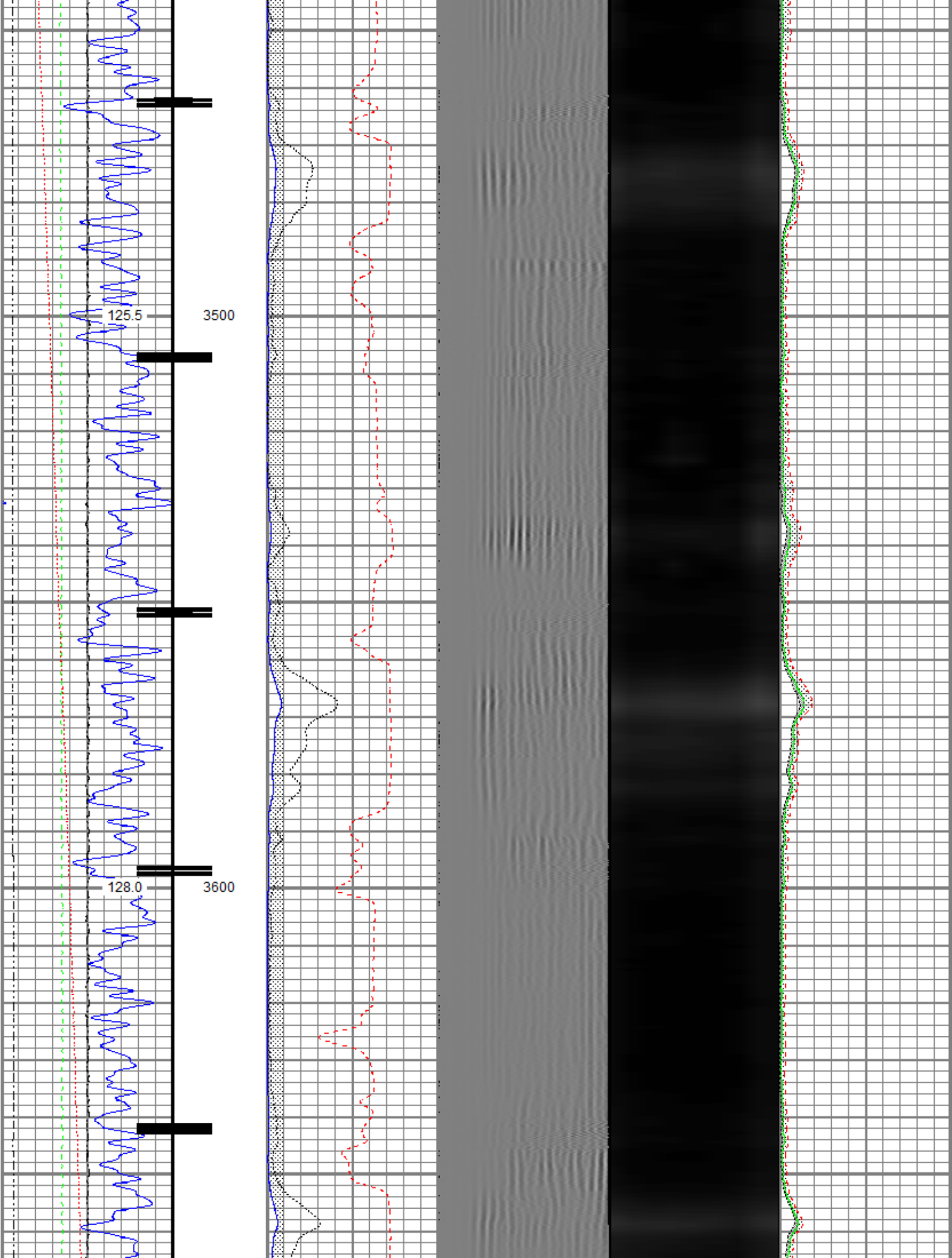


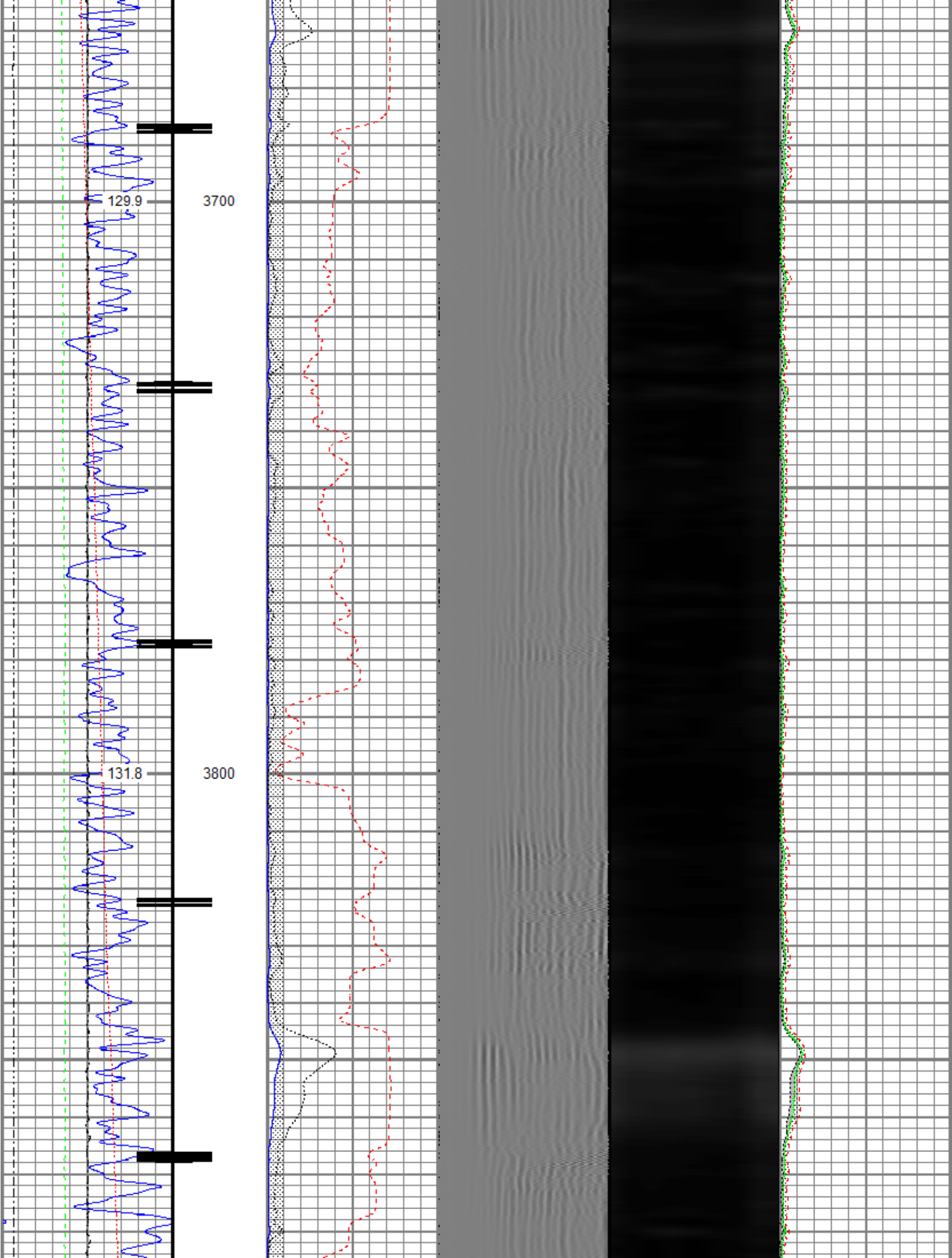


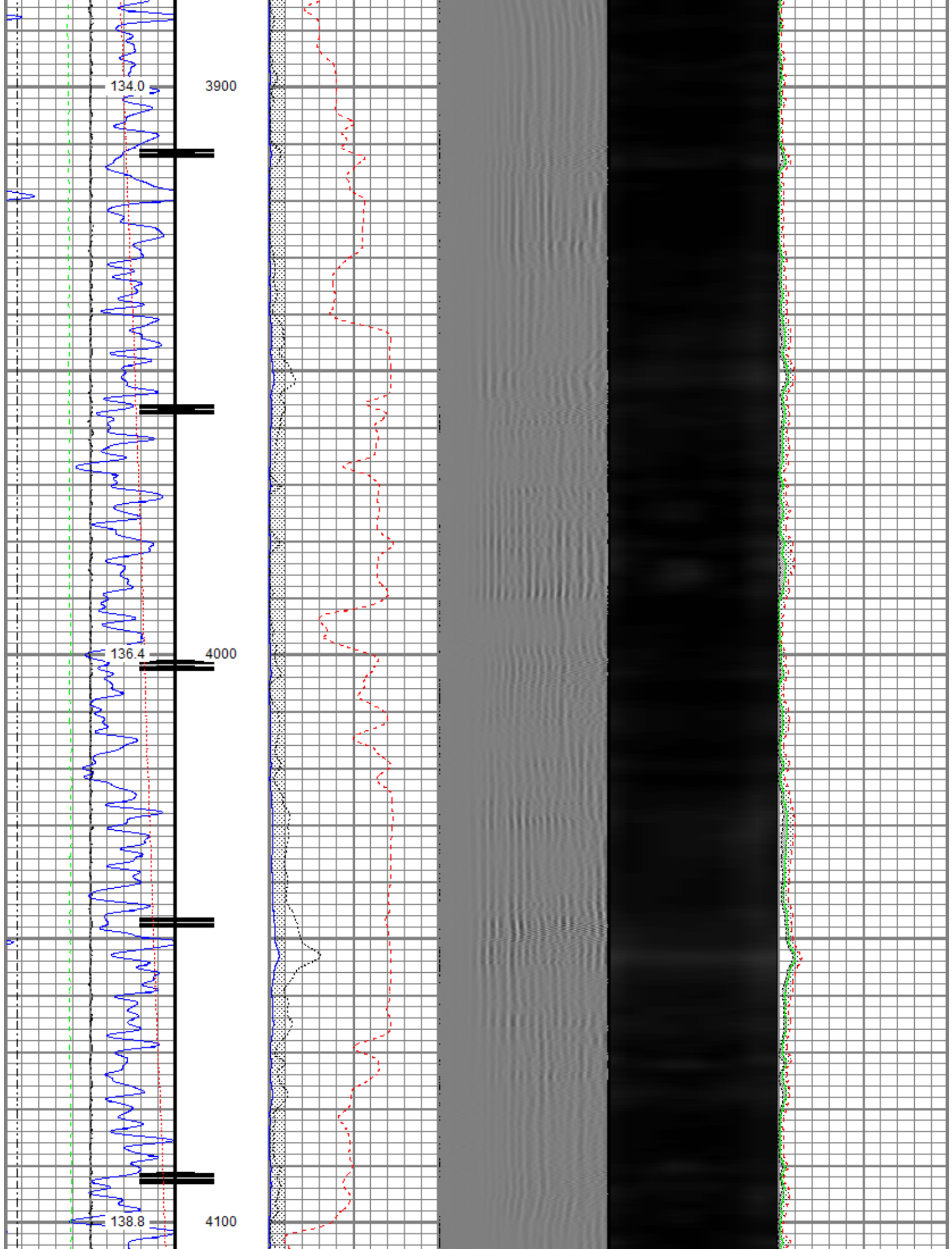


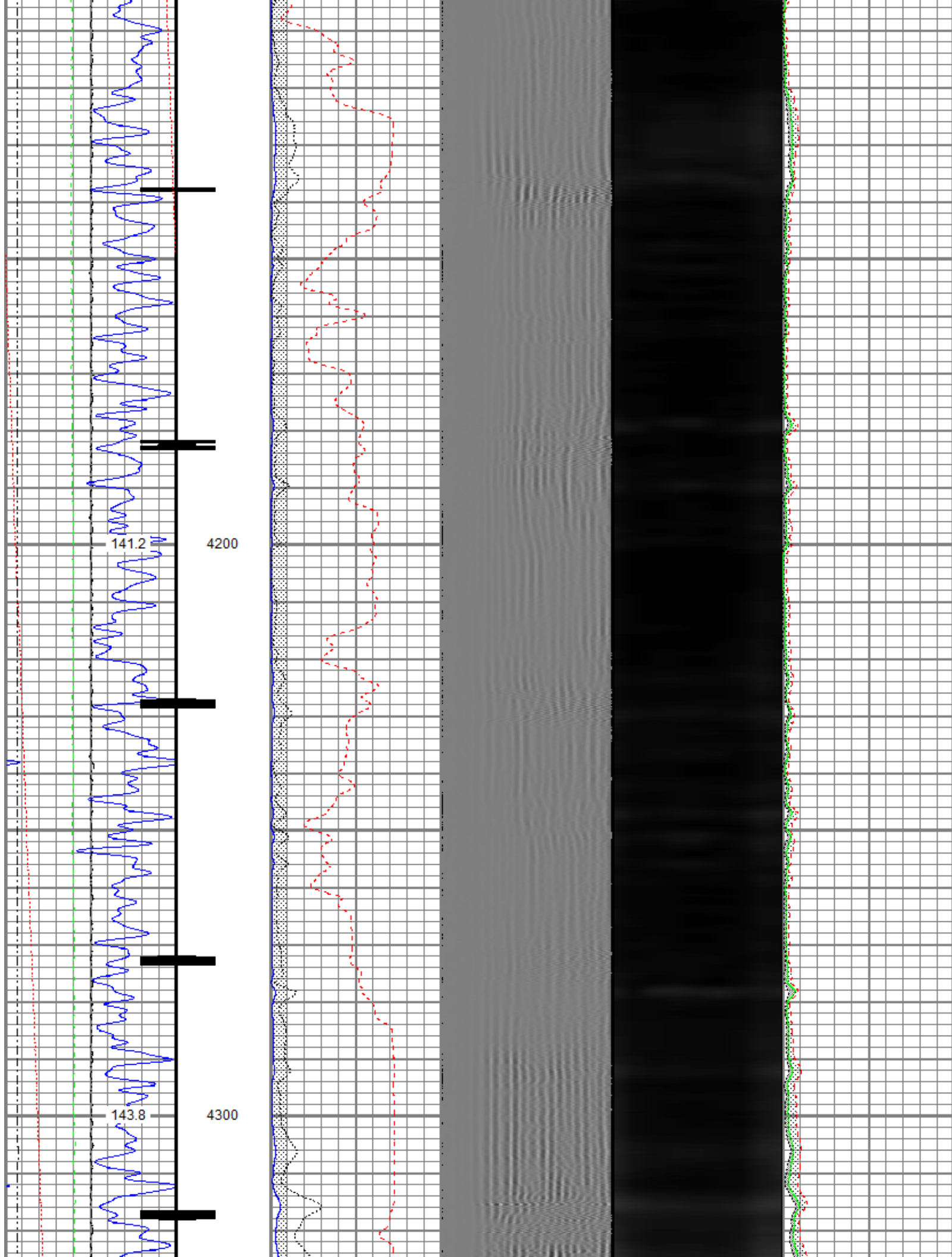


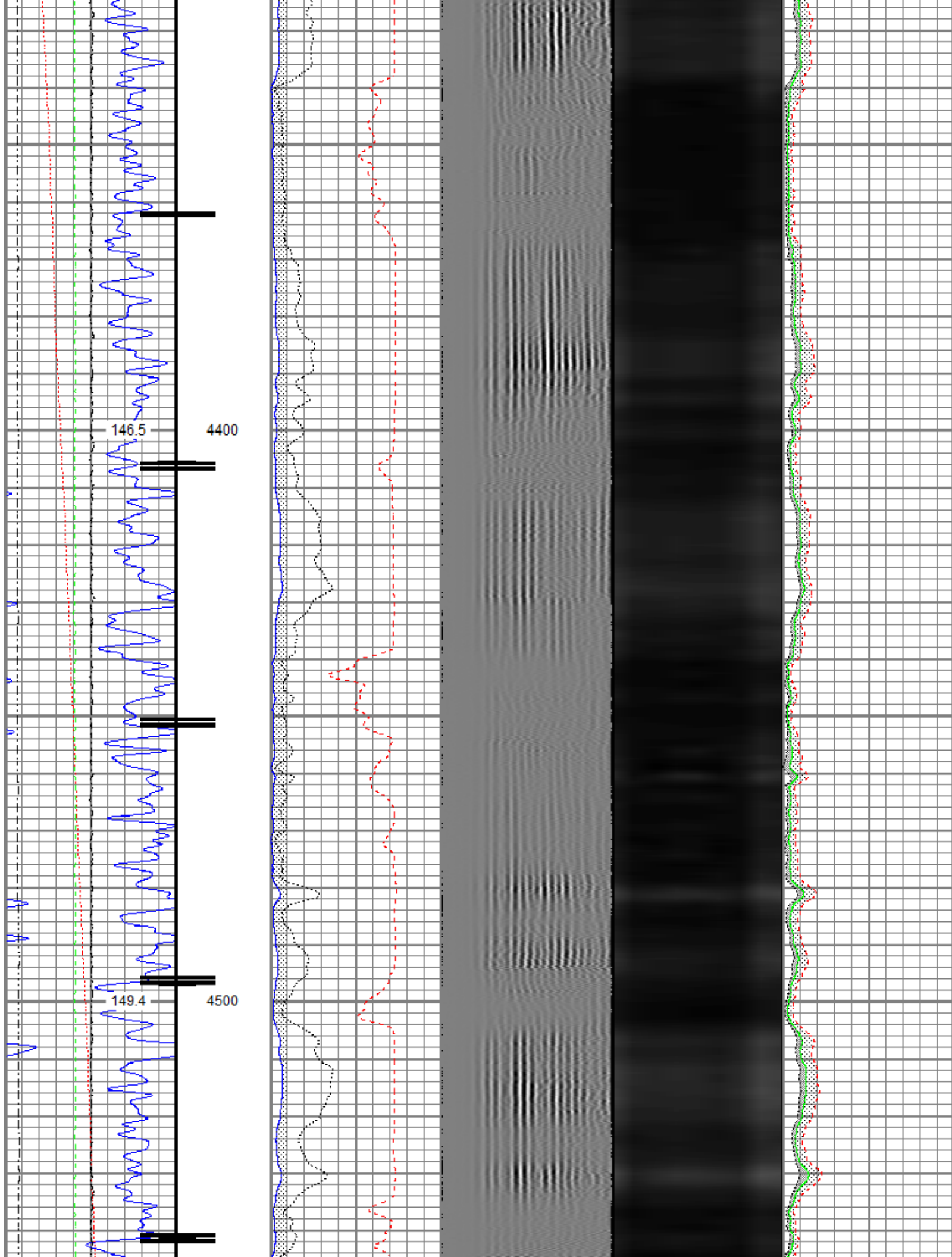


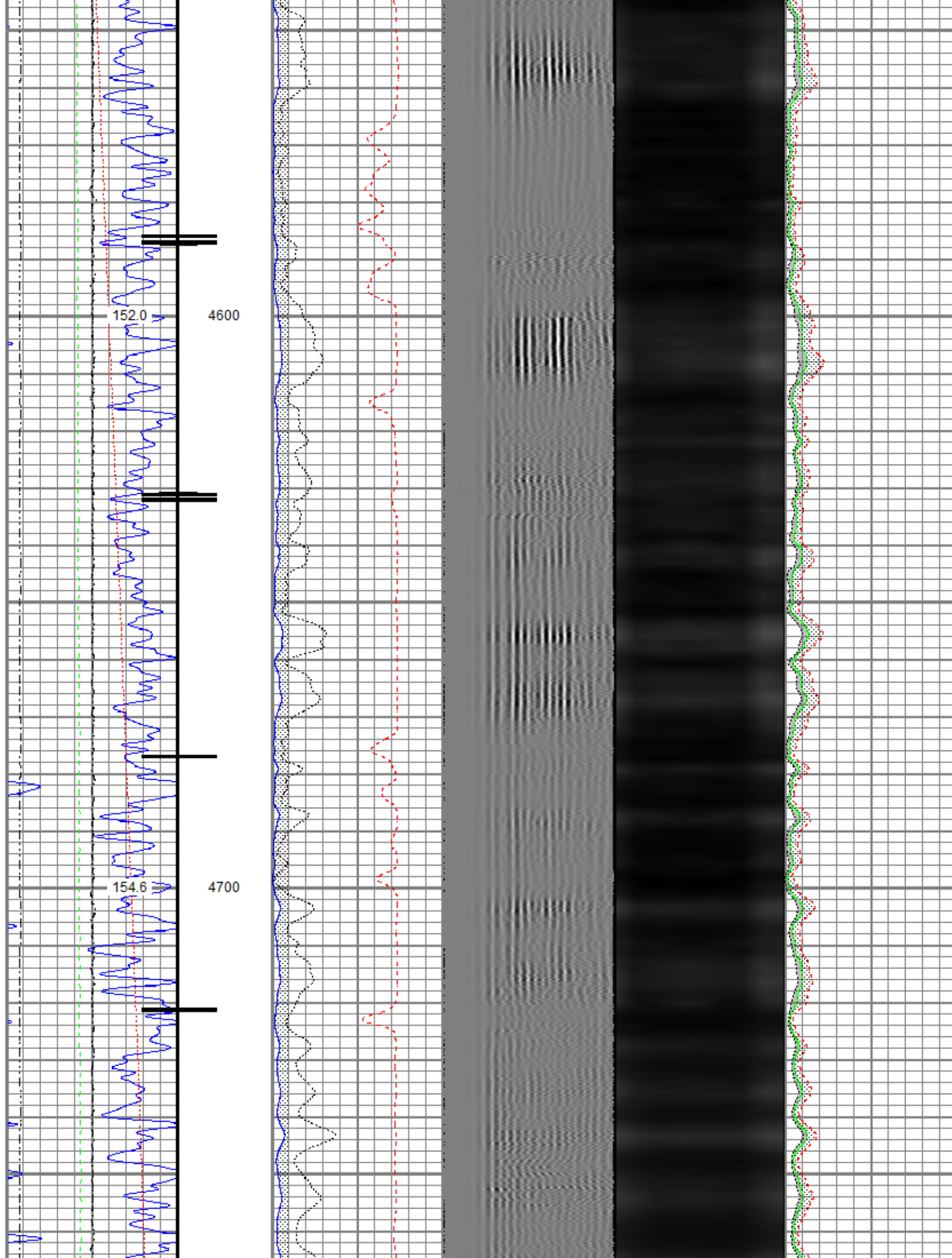


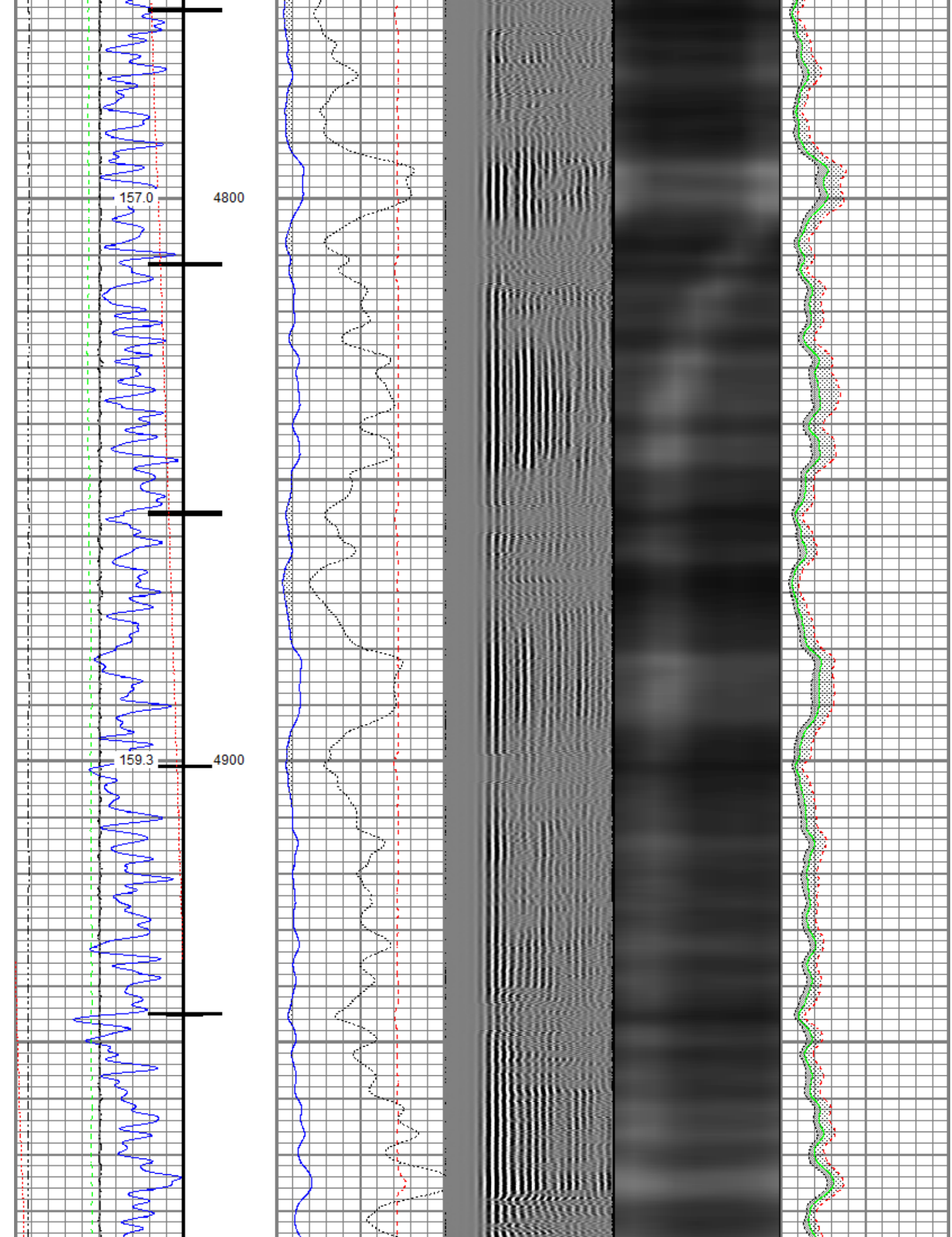


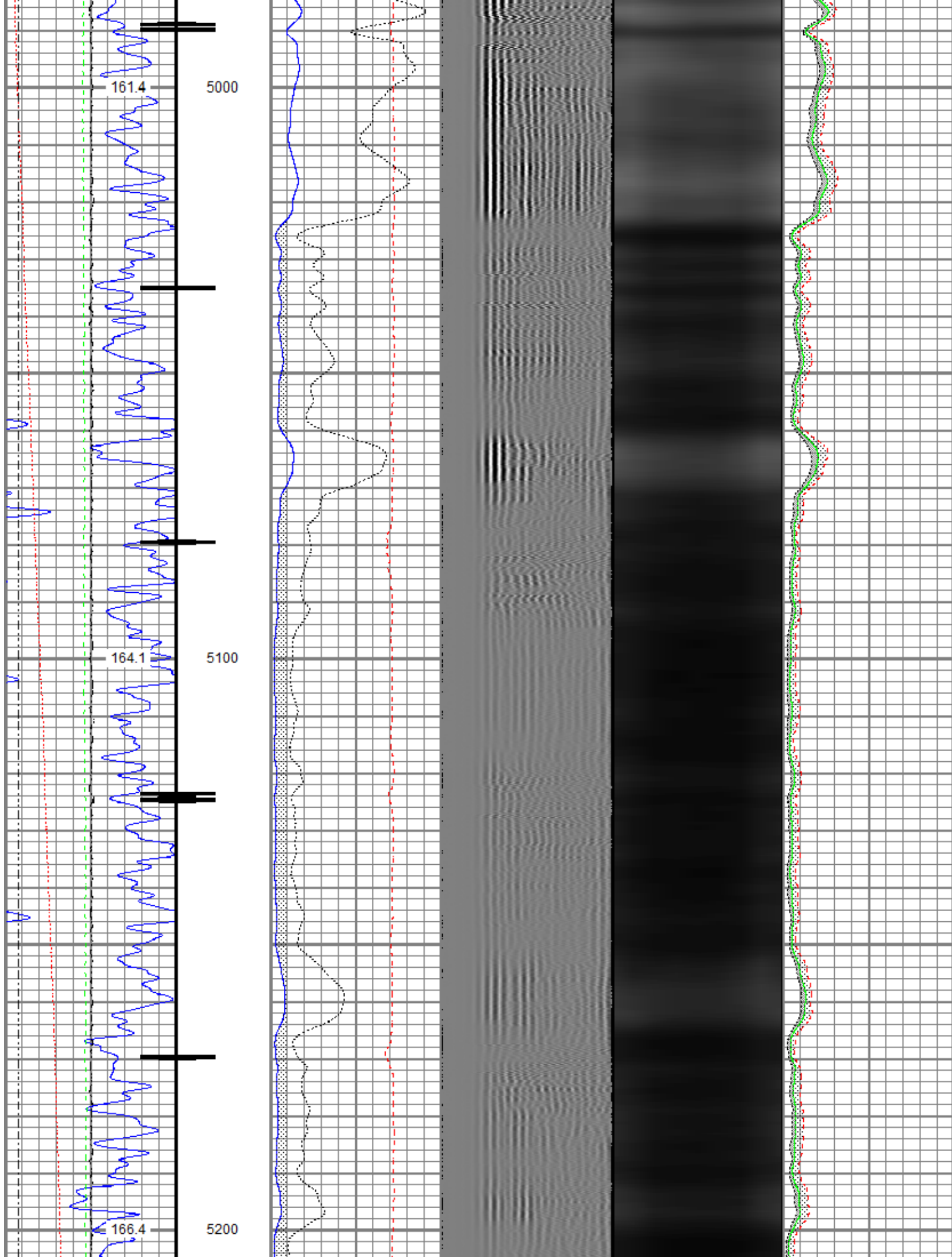


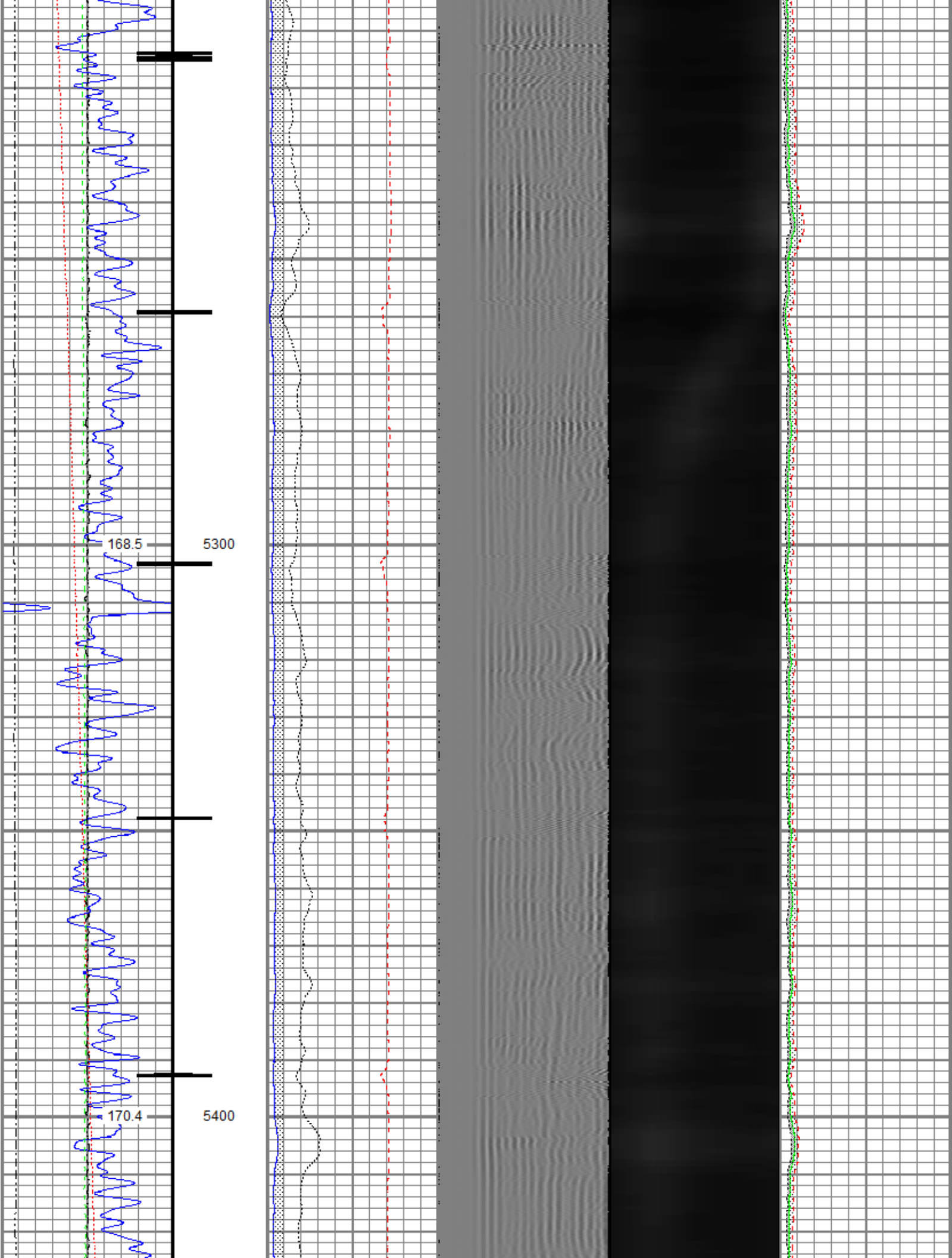


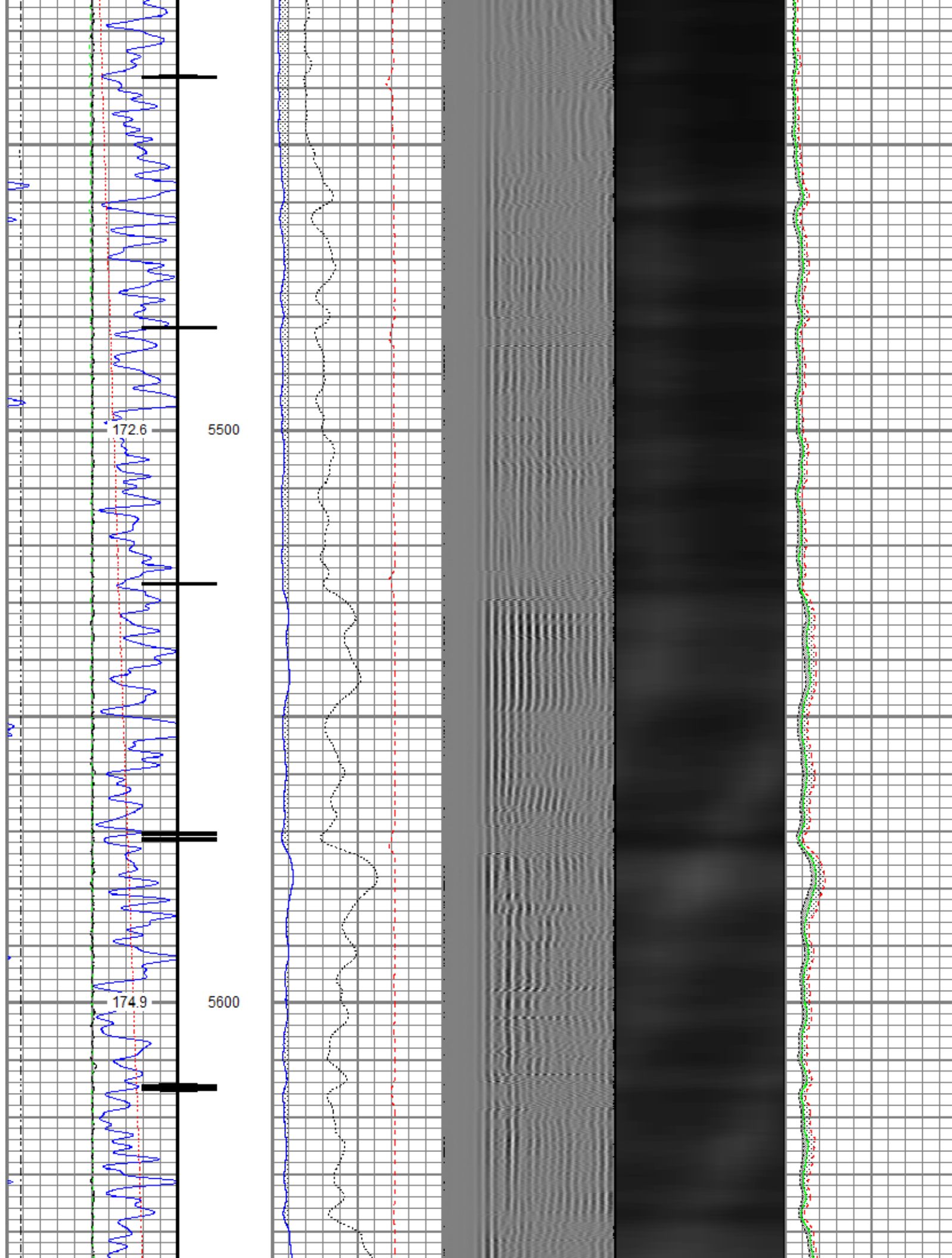


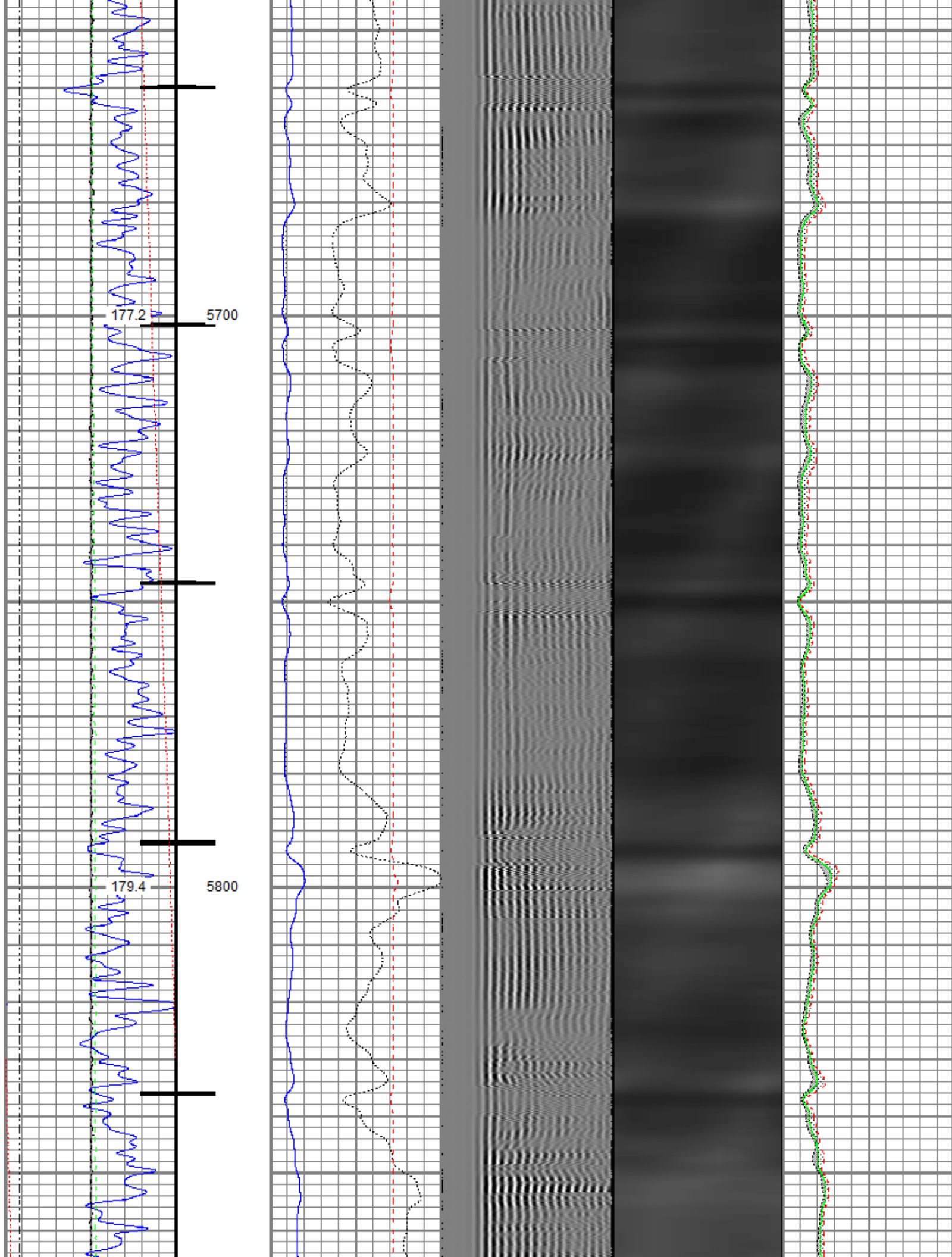


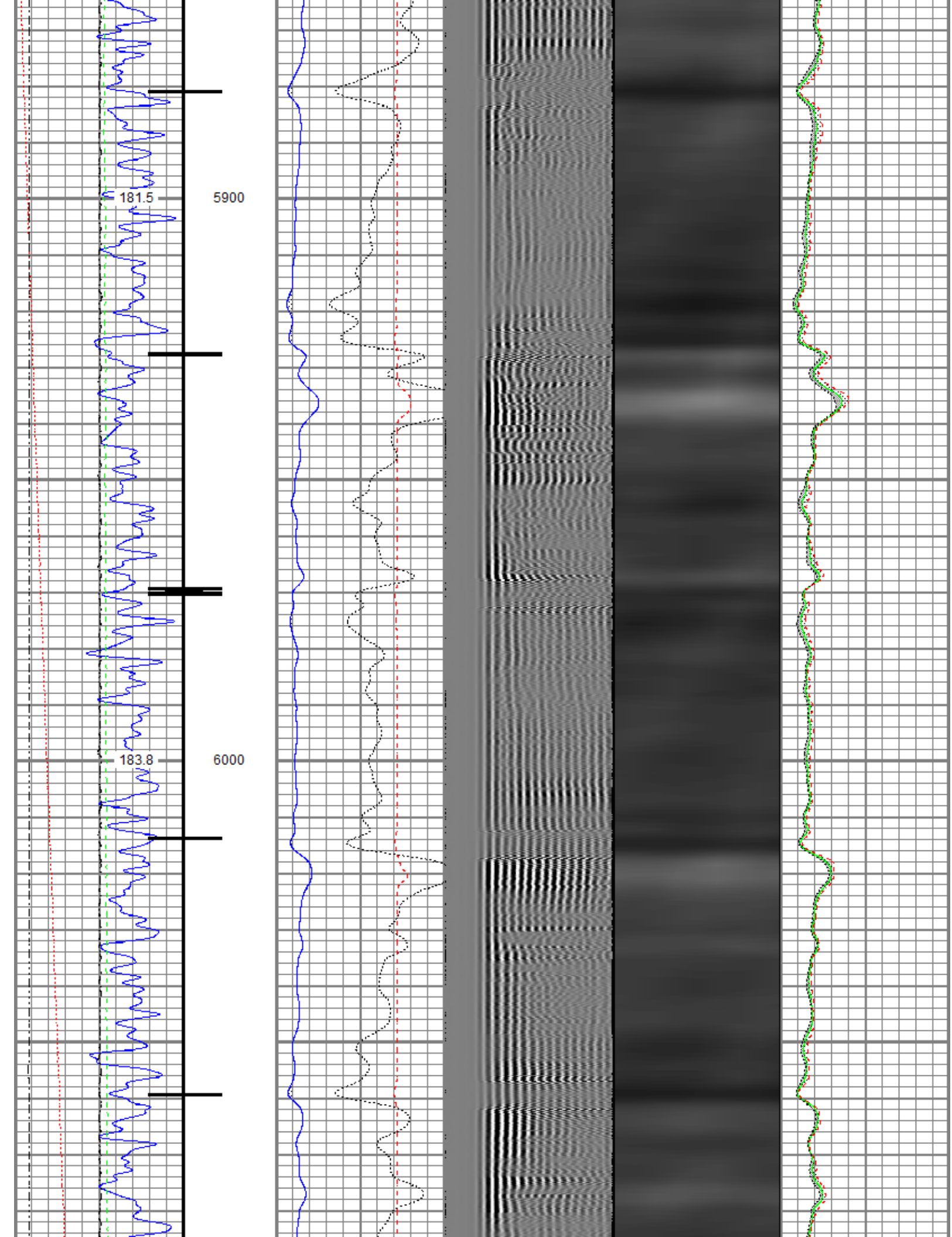


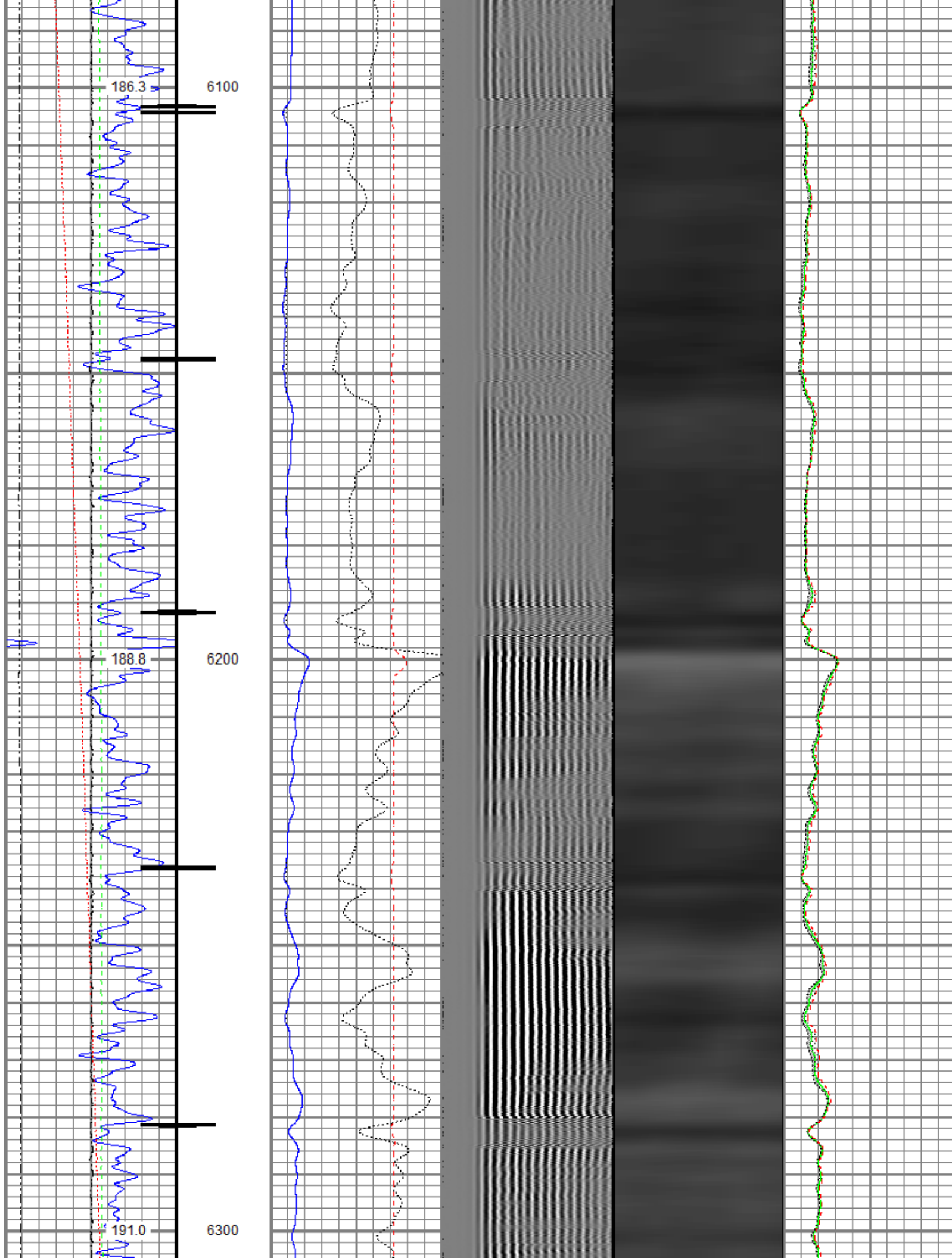


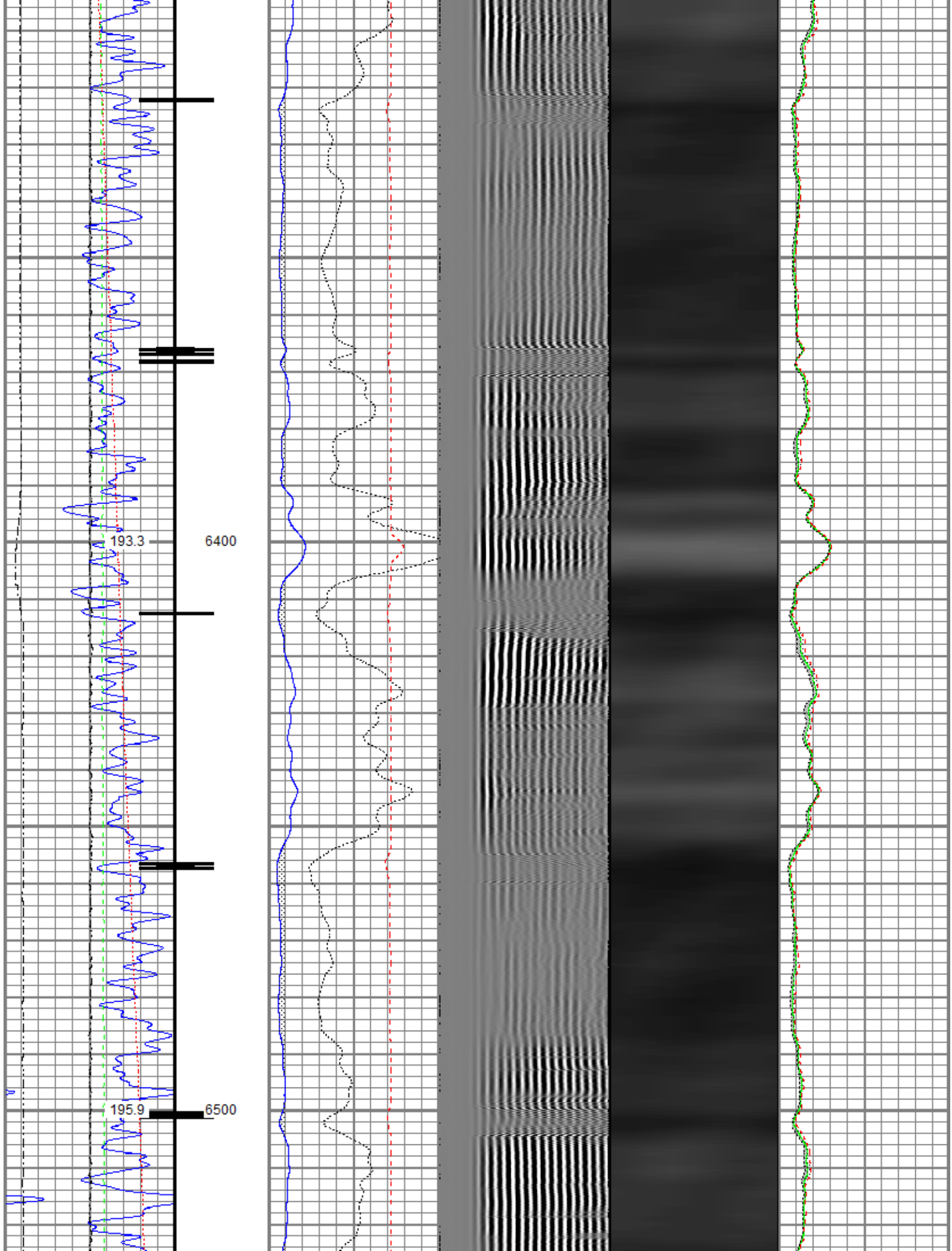


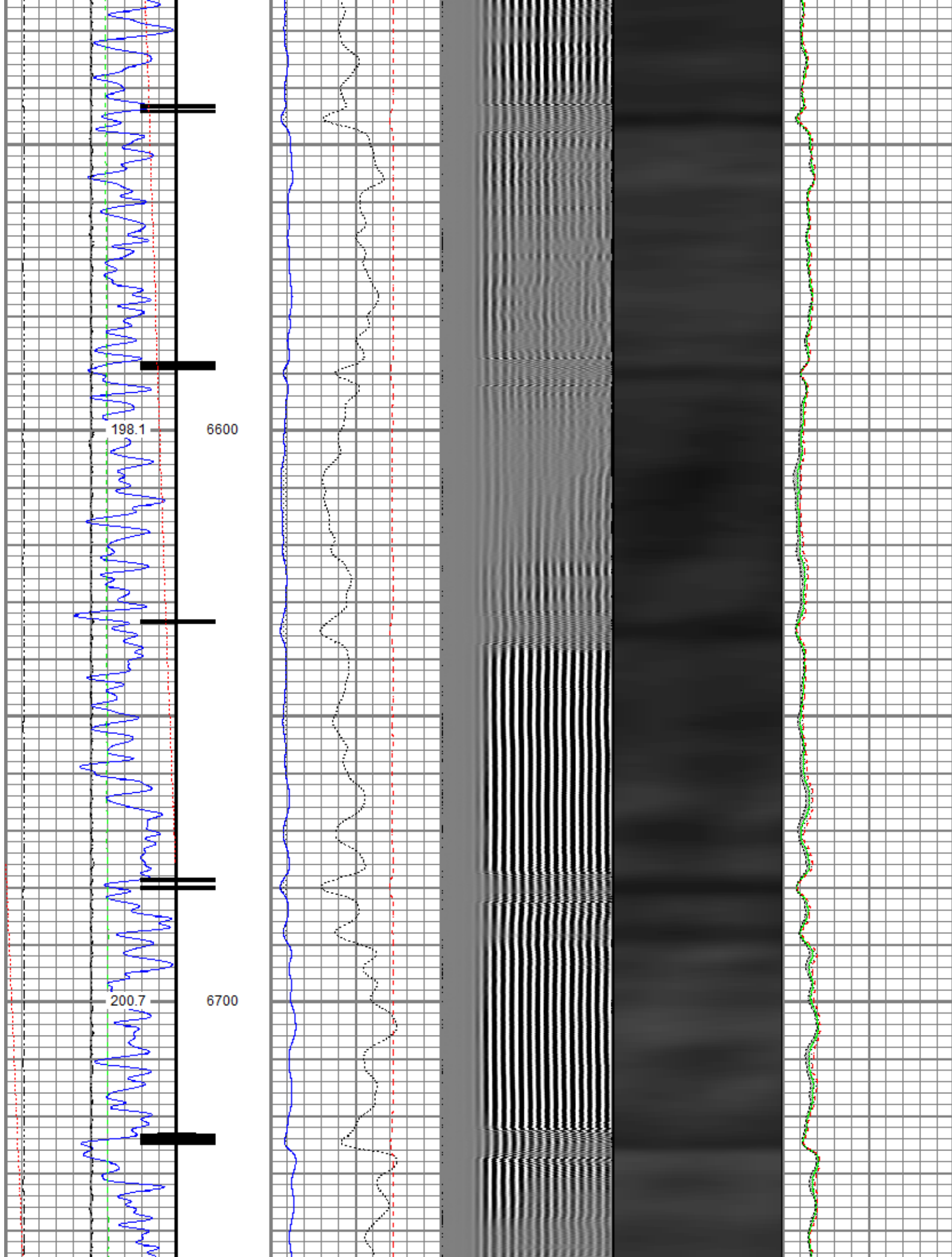


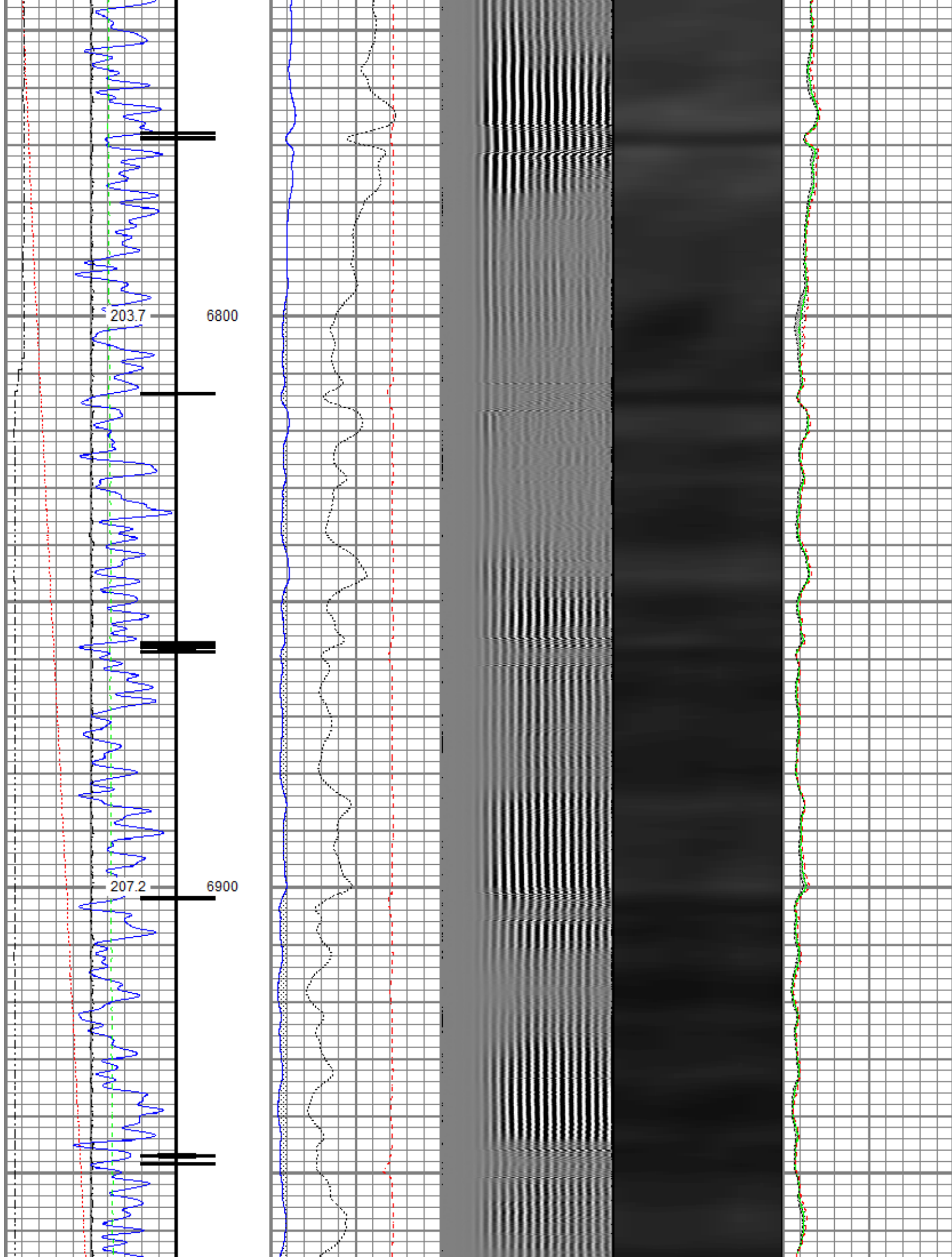


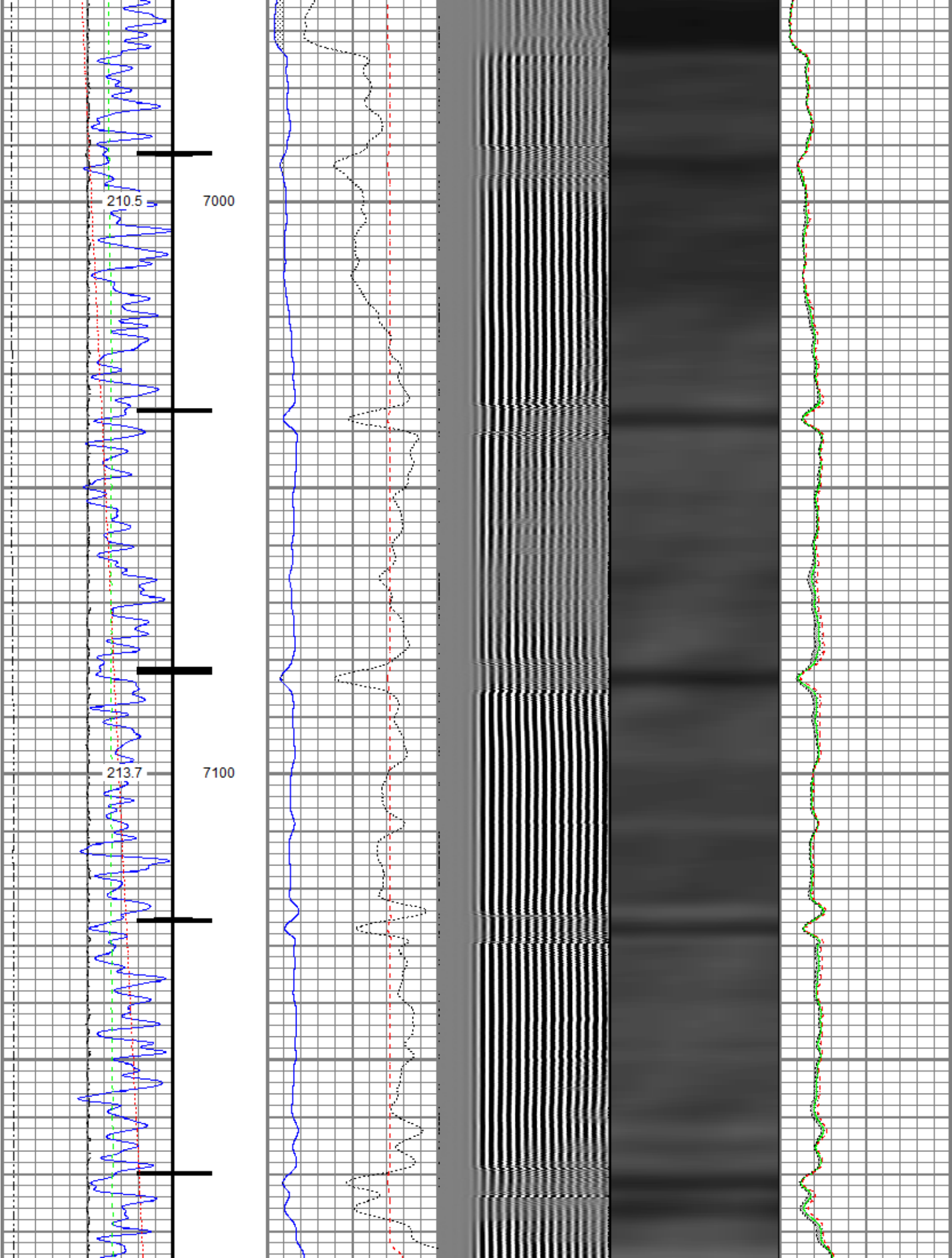


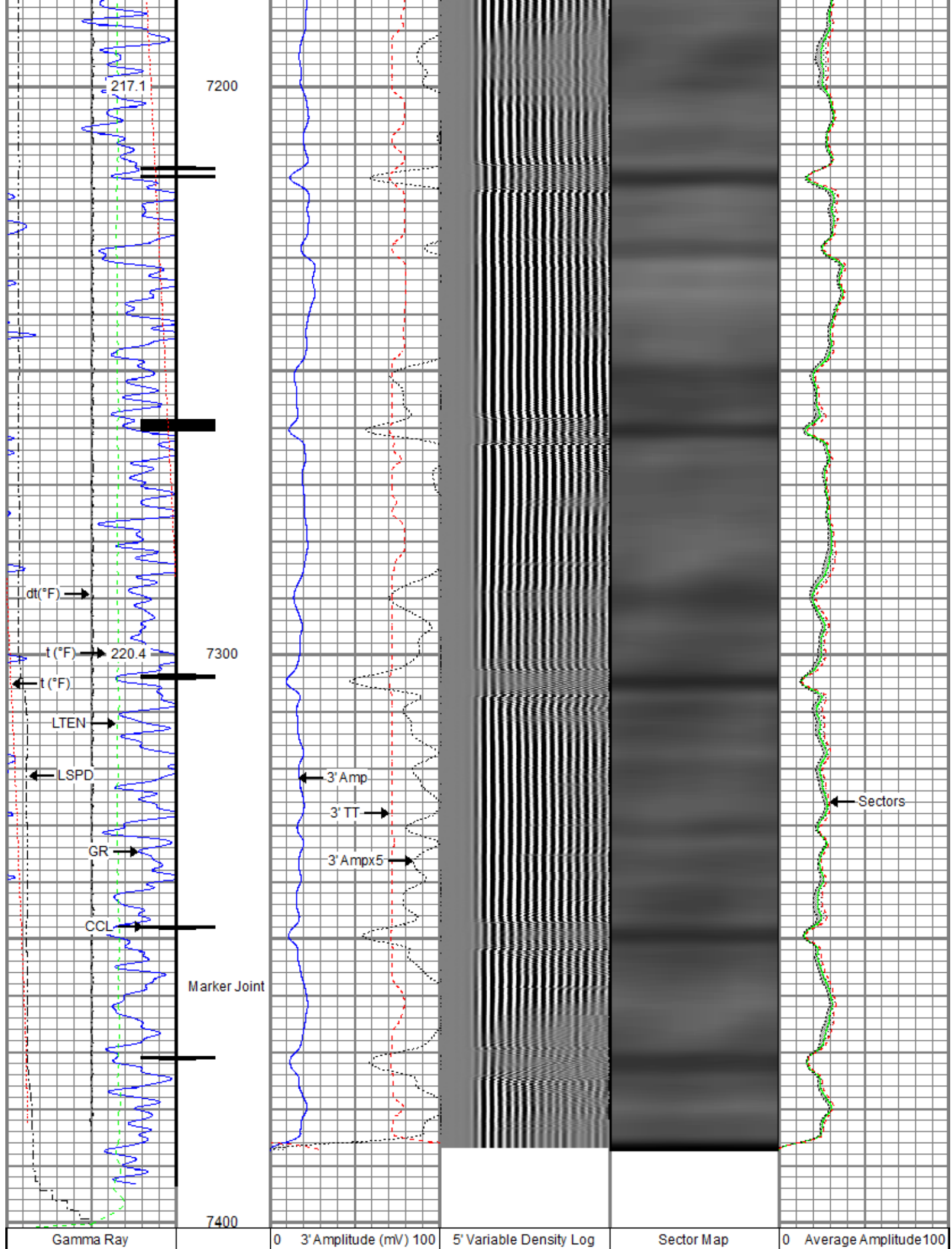












0 (GAPI) 120	3' Amplitude x 5	200 (usec) 1200	Minimum Amplitude
Casing Collar Locator	0 (mV) 20		0 100
0 Temperature (degF) 20	3' Travel Time		Maximum Amplitude
Line Speed	650 (usec) 150		0 100
-150 (ft/min) 150			
0 Line Tension (lb) 2000			
Differential Temperature			
-2 (degF) 2			

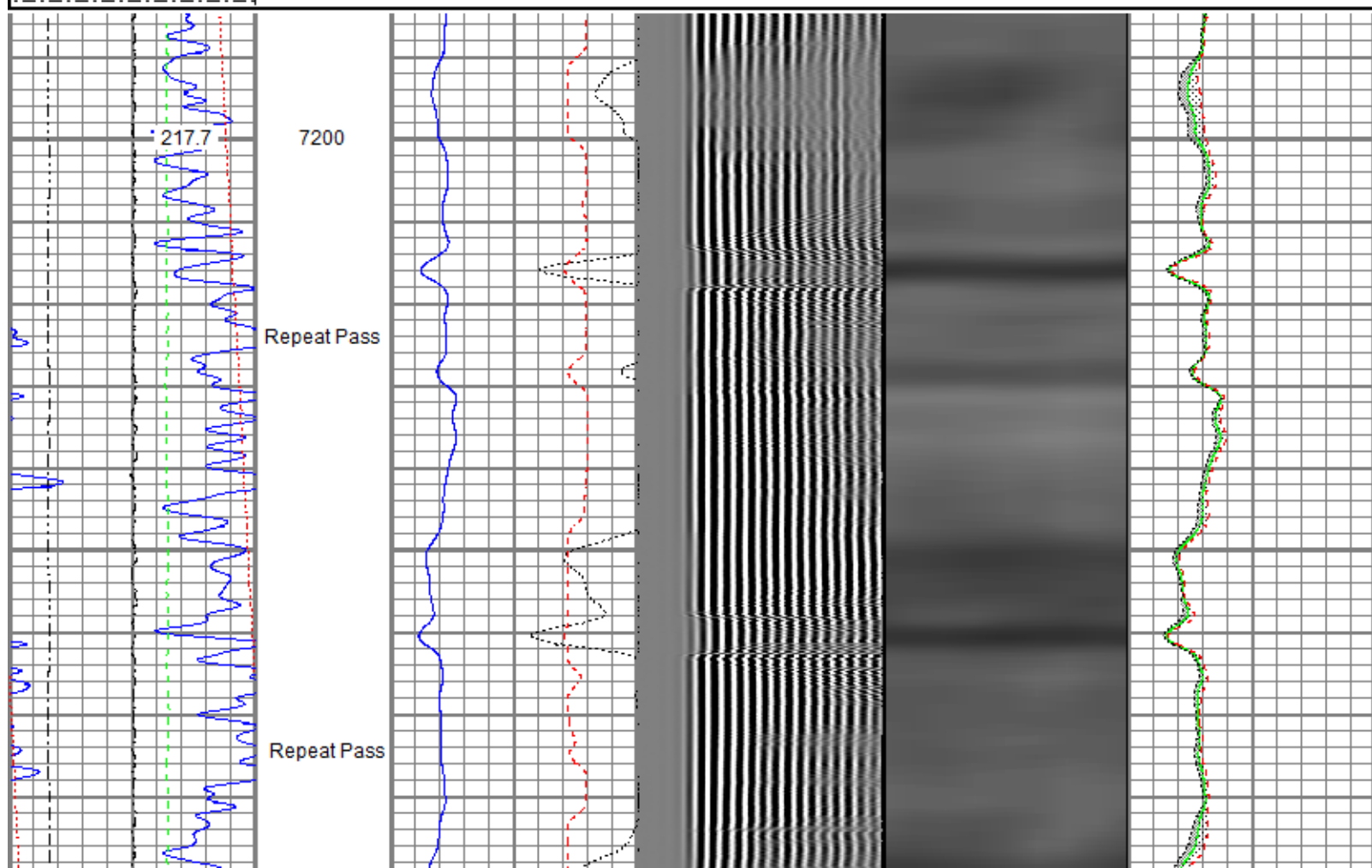


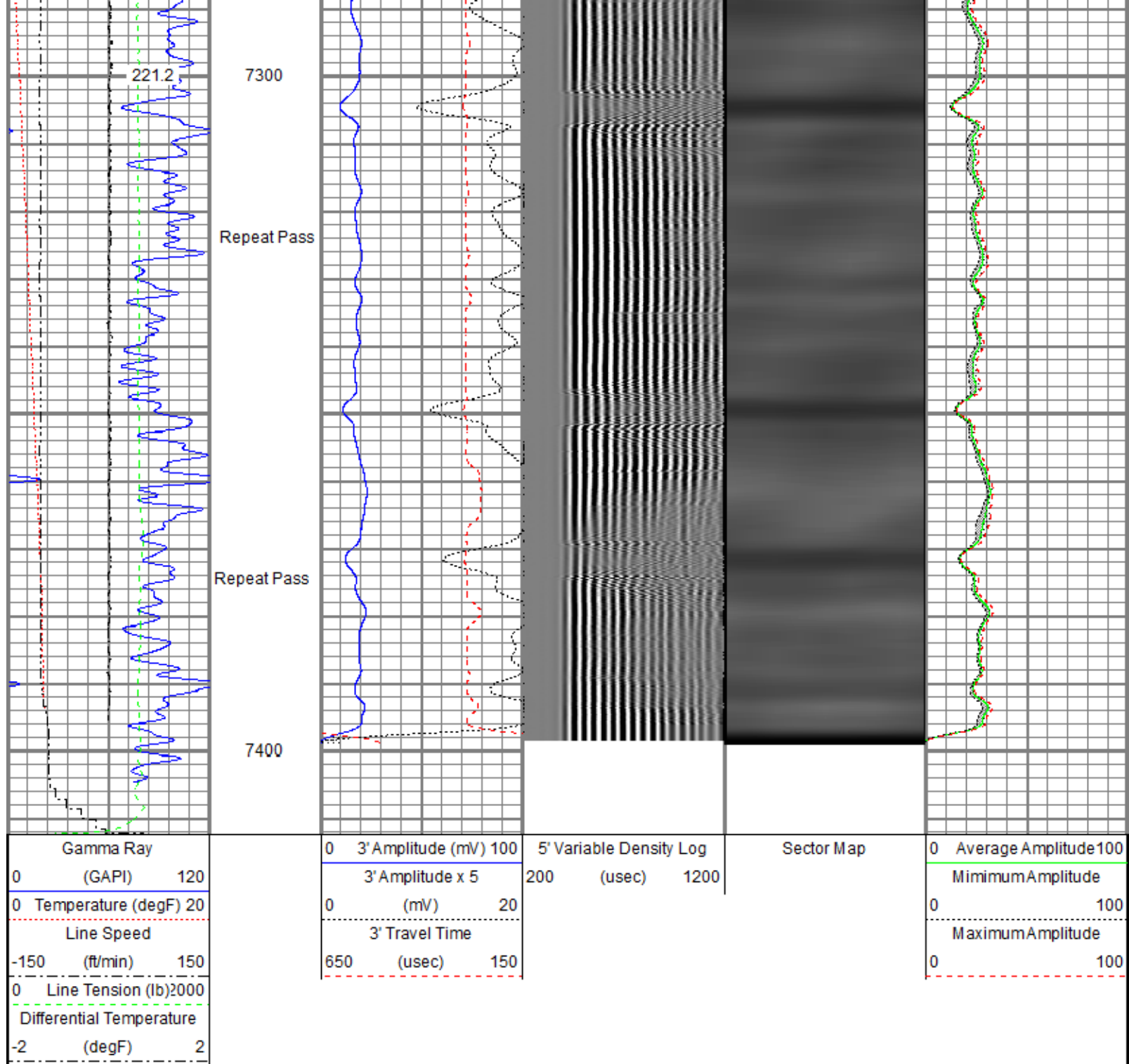
Repeat Pass

Recorded With 0 PSI Surface Induced Pressure

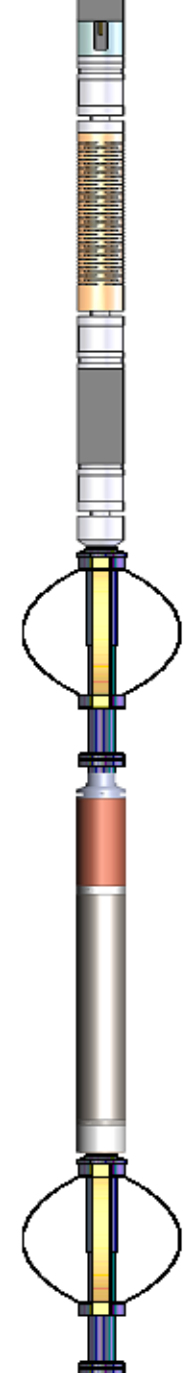
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Dataset Pathname pass2.2
Presentation Format ros_radri
Dataset Creation Wed Mar 18 13:06:00 2020
Charted by Depth in Feet scaled 1:240

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 (usec) 1200		Minimum Amplitude
0 Temperature (degF) 20	0 (mV) 20			0 100
Line Speed	3' Travel Time			Maximum Amplitude
-150 (ft/min) 150	650 (usec) 150			0 100
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 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	17.04							
WVFS8	14.81			Probe Radii-2750 RBT (120855) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00	
WVFS7	14.81							
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 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	
LOCTIM	0.00							
UTCTIM	0.00							
Dataset:		processed_0512350639_oxy_windsock 21-10hz_rbl_03-17-20.db: field/well/run1/pass4.3						
Total length:		23.86 ft						
Total weight:		223.60 lb						
O.D.:		2.75 in						

Calibration Report		
Database File	c:\programdata\warrior\data\oxy\0512350639_oxy_windsock 21-10hz_rbl_03-17-20\processed_0512350639_oxy_windsock 21-	
Dataset Pathname	pass4.3	
Dataset Creation	Wed Mar 18 12:54:12 2020	
Gamma Ray Calibration Report		
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:	0.7025	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: 120855
 Tool Model: 2750 RBT
 Calibration Casing Diameter: 5.500 in
 Calibration Depth: 28.429 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.004	0.418	0.000	71.921	173.866	-0.724
CAL	0.004	0.404				
5'	0.006	0.365	0.000	71.921	199.920	-1.140
SUM						
S1	0.004	0.423	0.000	100.000	238.578	-0.886
S2	0.005	0.424	0.000	100.000	238.558	-1.154
S3	0.004	0.420	0.000	100.000	240.319	-0.976
S4	0.004	0.418	0.000	100.000	241.909	-1.069
S5	0.006	0.415	0.000	100.000	244.605	-1.588
S6	0.005	0.411	0.000	100.000	246.772	-1.337
S7	0.005	0.409	0.000	100.000	247.386	-1.234
S8	0.005	0.414	0.000	100.000	244.297	-1.165

Air Zero Calibration, performed Tue Mar 17 13:42:32 2020:

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

Temperature Calibration Report

Serial Number: 120855
 Tool Model: 2750 RBT
 Performed: Wed Dec 18 13:34:18 2019

	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: Kerr-McGee Oil & Gas Onshore, L.P.
 Well: Windsock 21-10HZ
 Field: Wattenberg
 County: Weld

State

Colorado