



County Weld State Colorado

K.B.	5172"
D.F.	---
G.L.	5152"

01-FEB-2020
T1

Run Number	13ree
Depth Driller	18955 FT

Depth Logger	7287 FT
Bottom Loaded Interval	7273 FT

Top Log Interval	Surface
Non Hold Size	7.875"

Open in Die Cast	1.013
Type Fluid	Water

Density / Viscosity	8.34 lb/gal
Max. Recorded Temp.	228°F

Estimated Cement Top	See Log
Time Well Ready	ROA

Time Logger on Bottom	07:50
Equipment Number	HD 364

Equipment number	IND-201
Location	Platteville, CO

Recorded By	G. Lueck
Witnessed By	J. McCarth

Borehole Record		
Run Number	Bit	From To

[illegible]

Size (in)	Wgt (lbs/Ft)
0.10	36

unlace casing	9 5/10	30
intermediate #1	5 1/2	17

intermediate #2		
ner		

[illegible][illegible]

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<p>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.</p>	

Comments
<p>Log ran as per customer request</p> <p>Depth referenced to Casing Tally reported Marker Joint at 7234 FT</p> <p>Adjusted -31 FT to correlate with Marker Joint</p> <p>Gauge Ring/Junk Basket ran to 8083 FT</p> <p>Retrievable Bridge Plug set at 7310 FT</p> <p>Log ran with 0 PSI Surface Induced Pressure</p> <p>Logging tools were clean and free of debris upon completion of operations</p> <p>Thank you for choosing Reliance Oilfield Services, LLC!!</p>

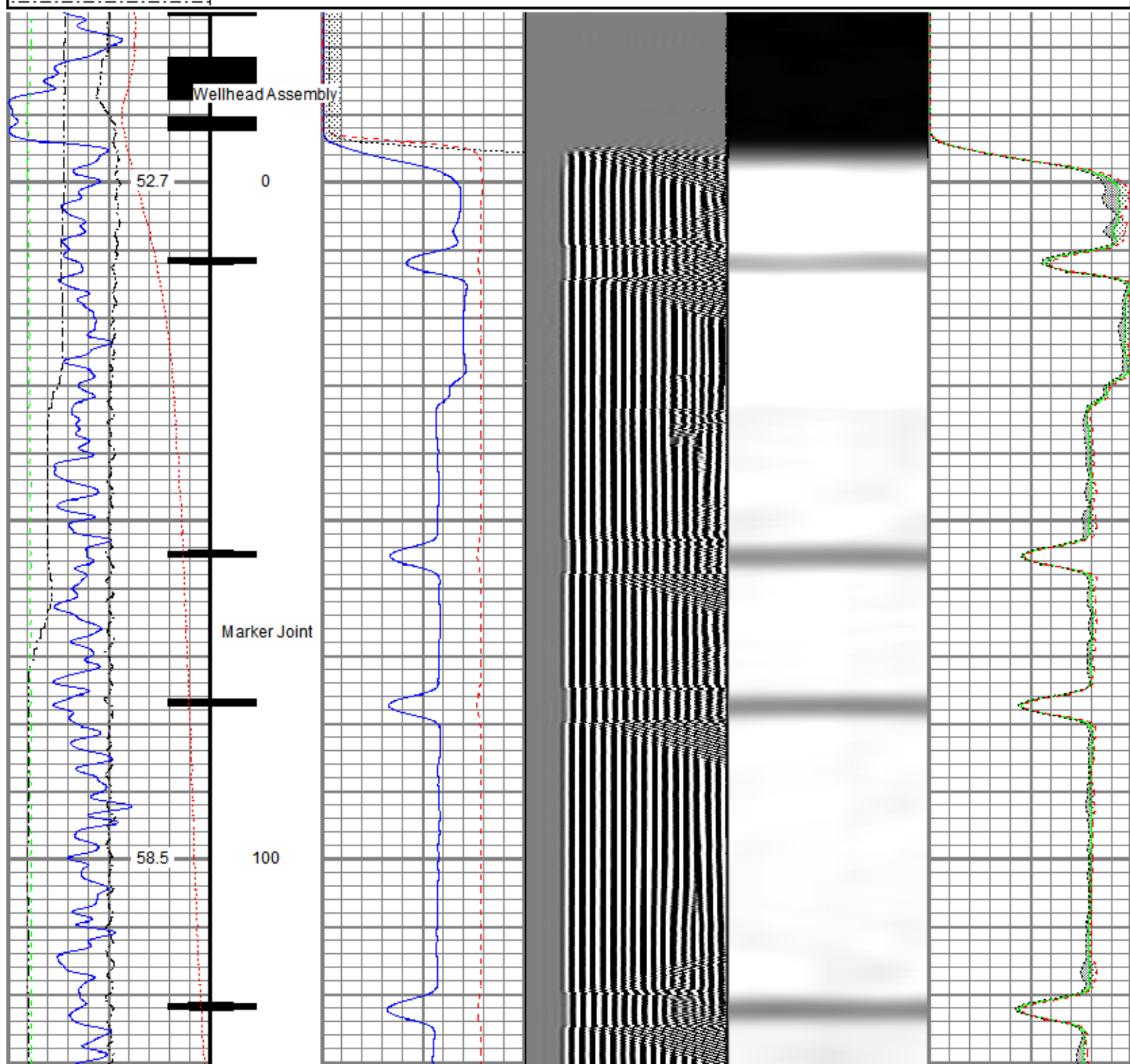
Main Pass

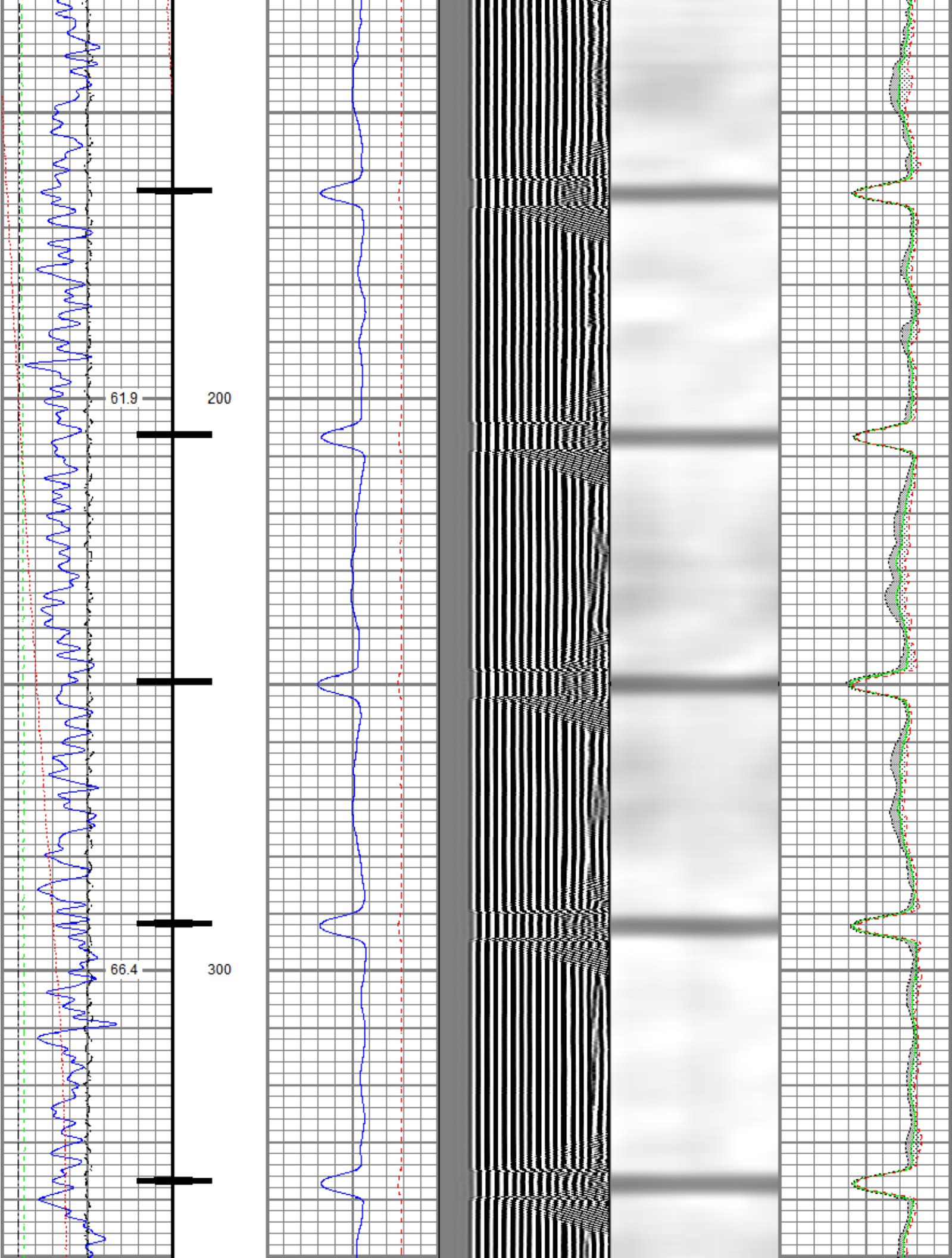


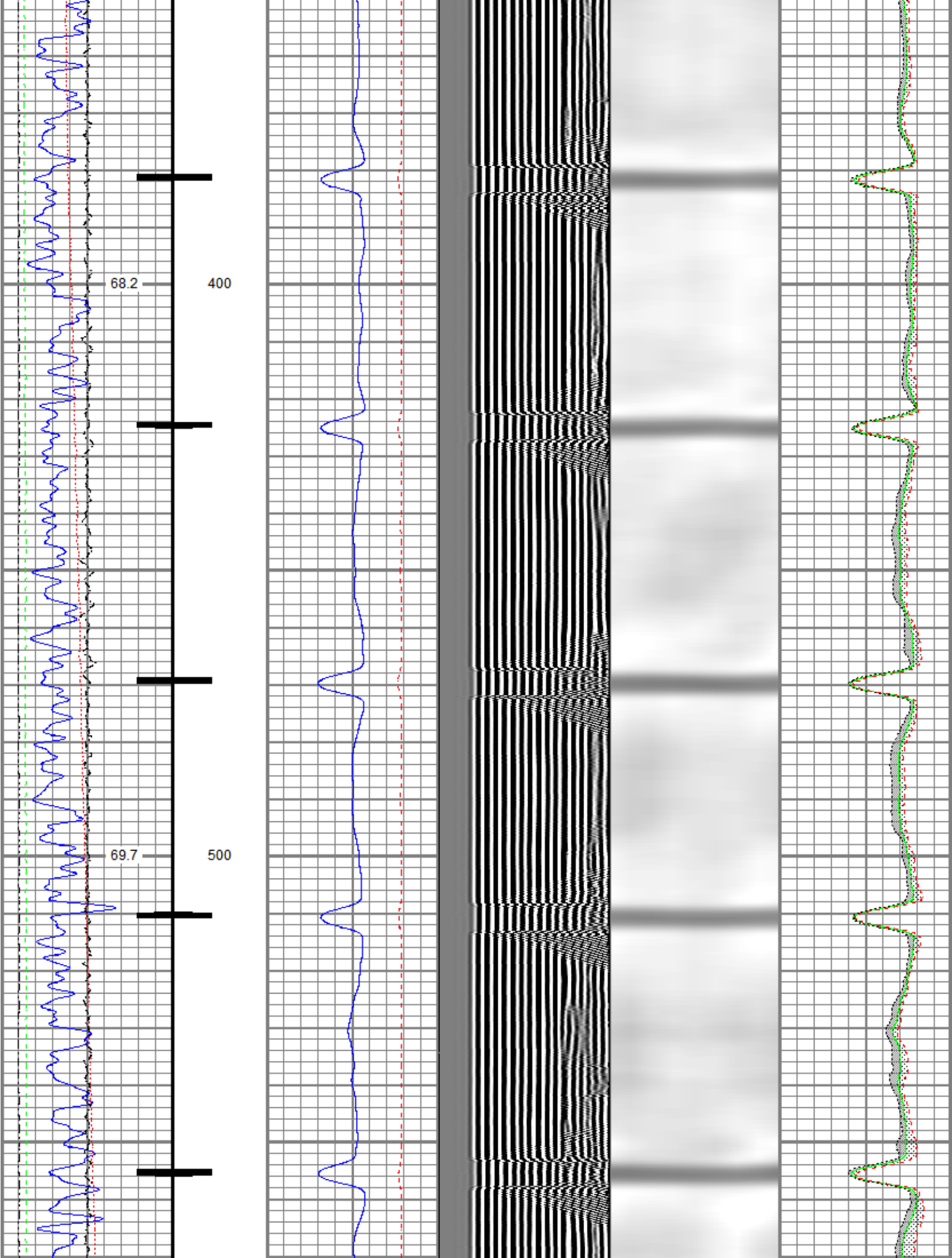
Recorded With A DCL Surface Induced Pressure

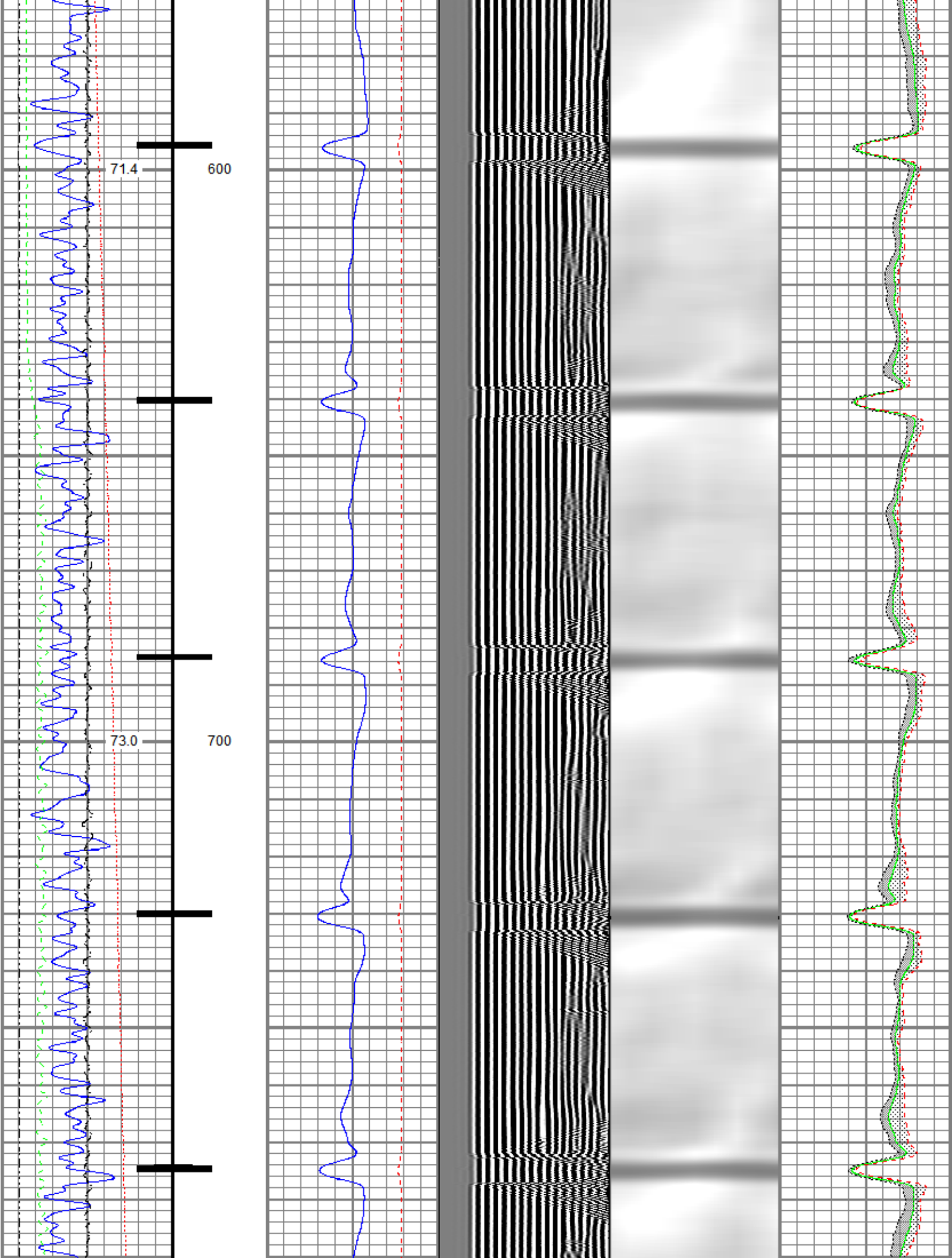
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 Dataset Pathname rcb10/pass4.1
 Presentation Format ros_radri
 Dataset Creation Sat Feb 01 08:53:23 2020
 Charted by Depth in Feet scaled 1:240

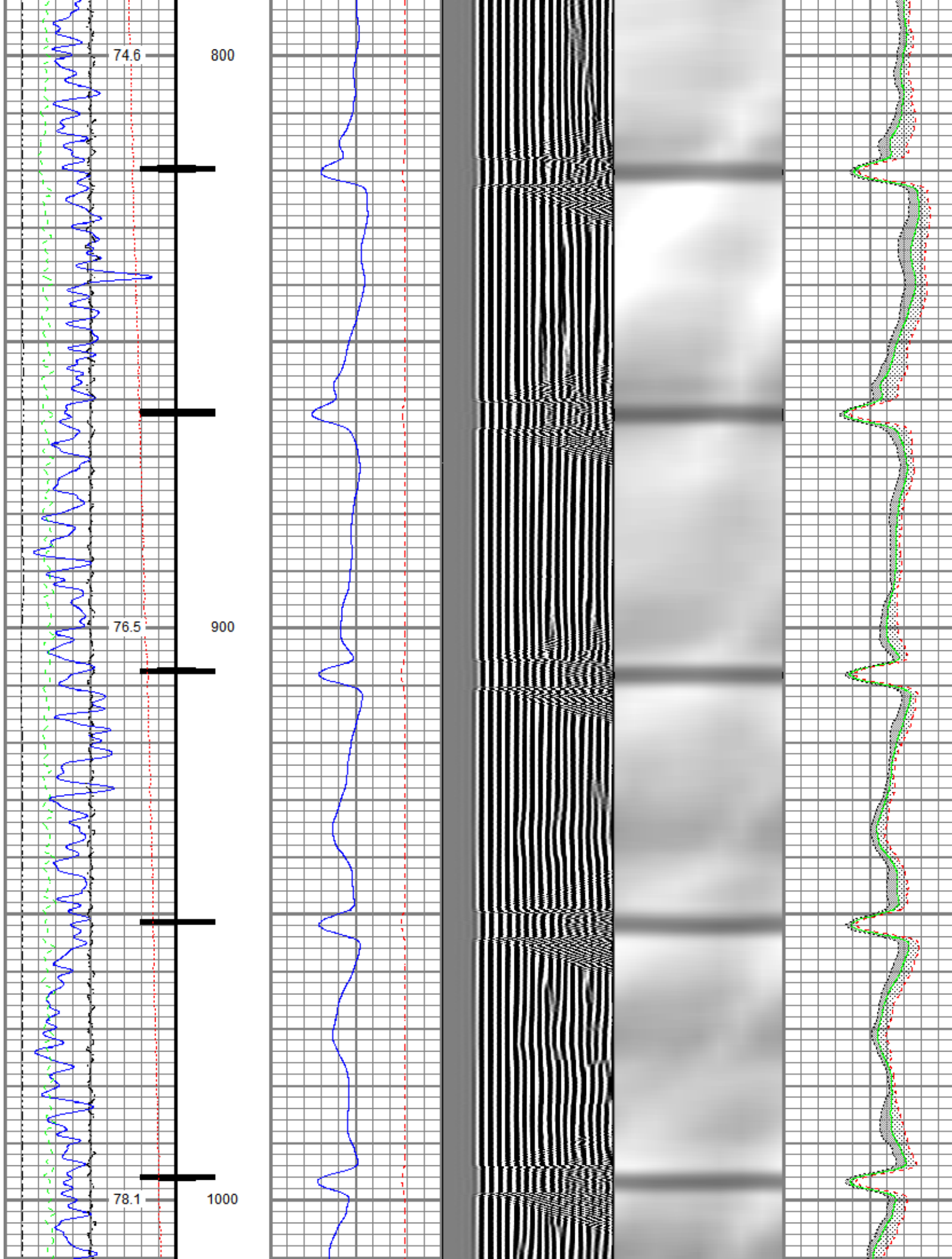
Gamma Ray	0	3' Amplitude (mV)	100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI)	120	3' Amplitude x 5	200	(u sec)			Minimum Amplitude
Casing Collar Locator		0	(mV)	20		0	100
0 Temperature (degF)	20	3' Travel Time					Maximum Amplitude
Line Speed		650	(u sec)	150		0	100
-150 (ft/min)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

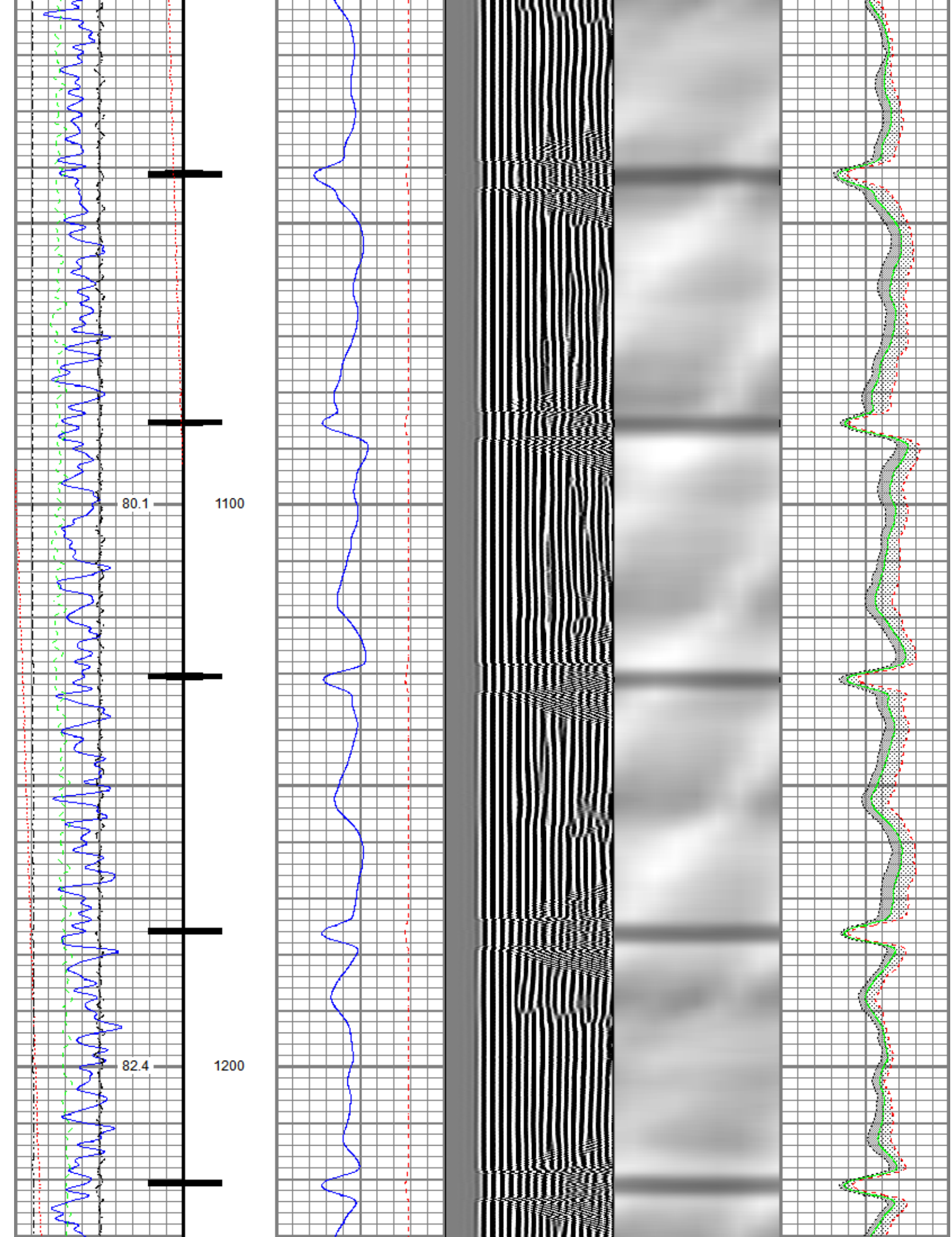


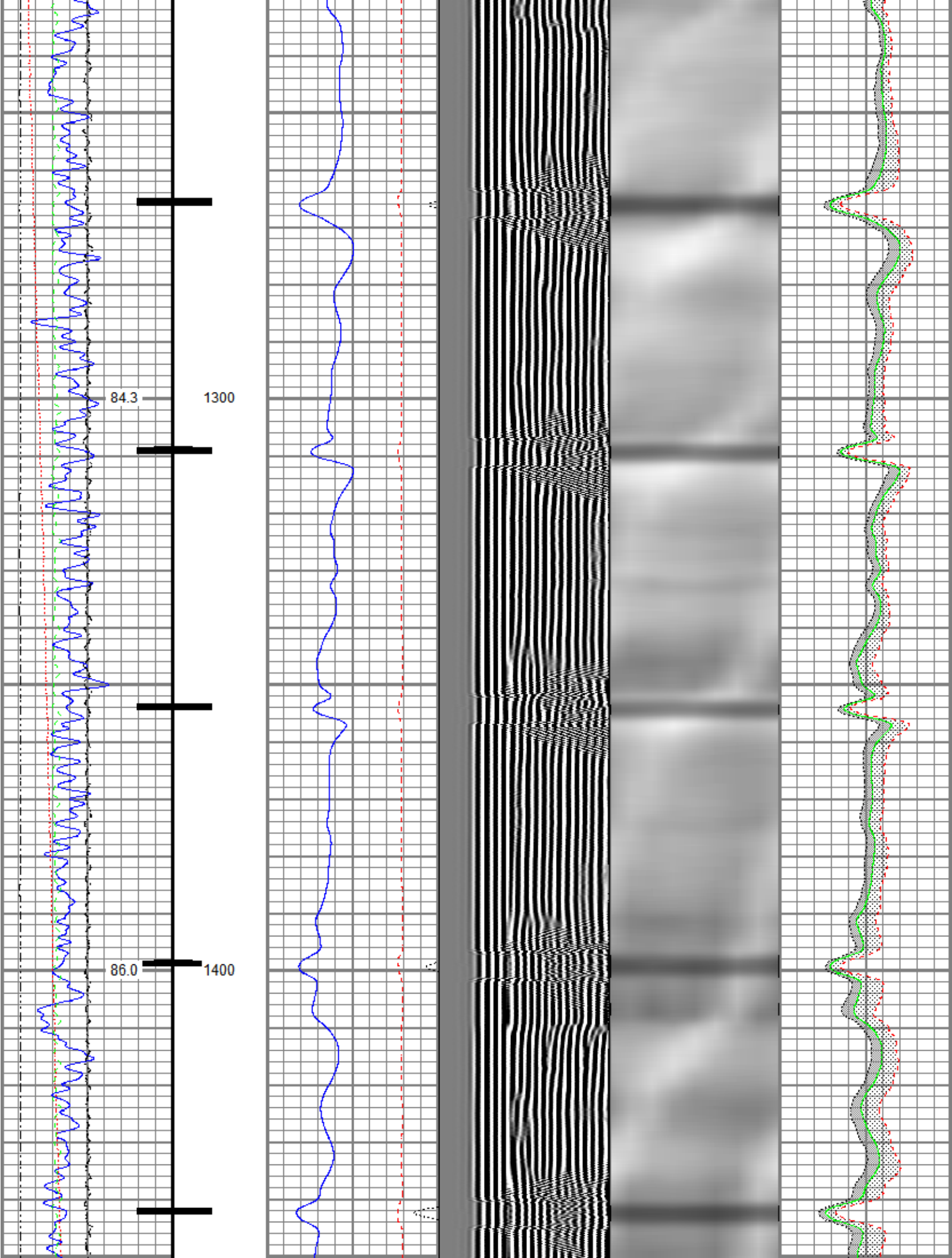


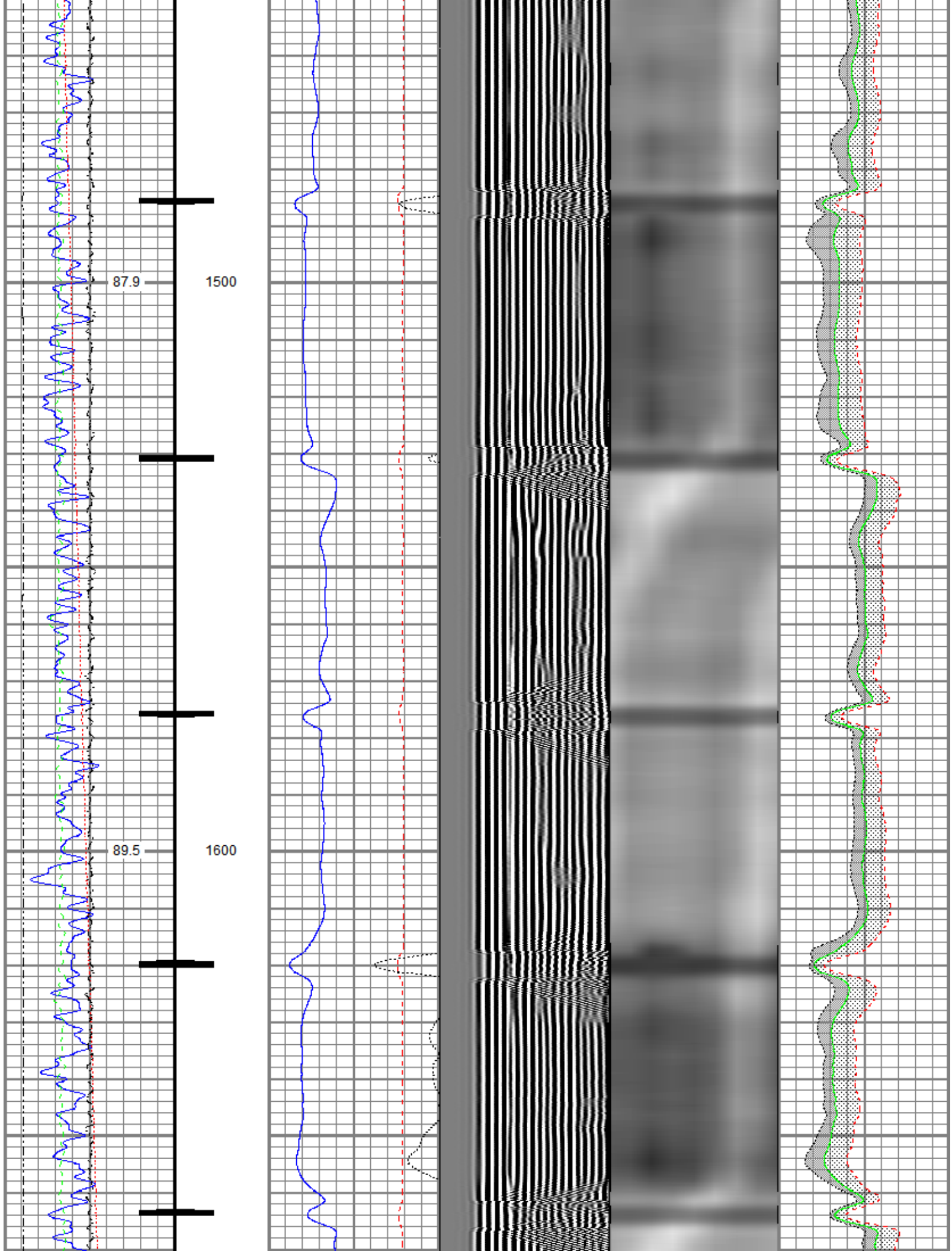


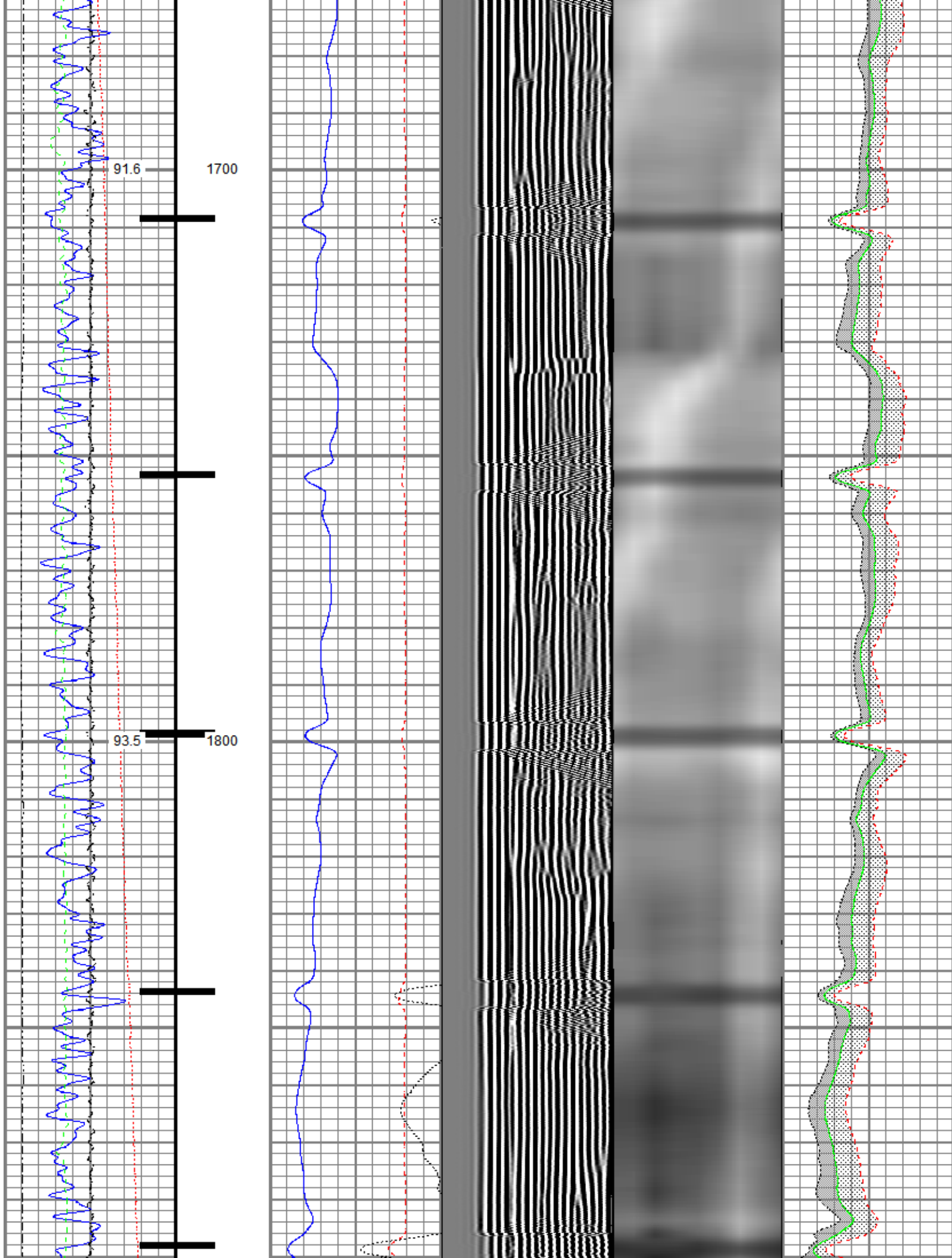


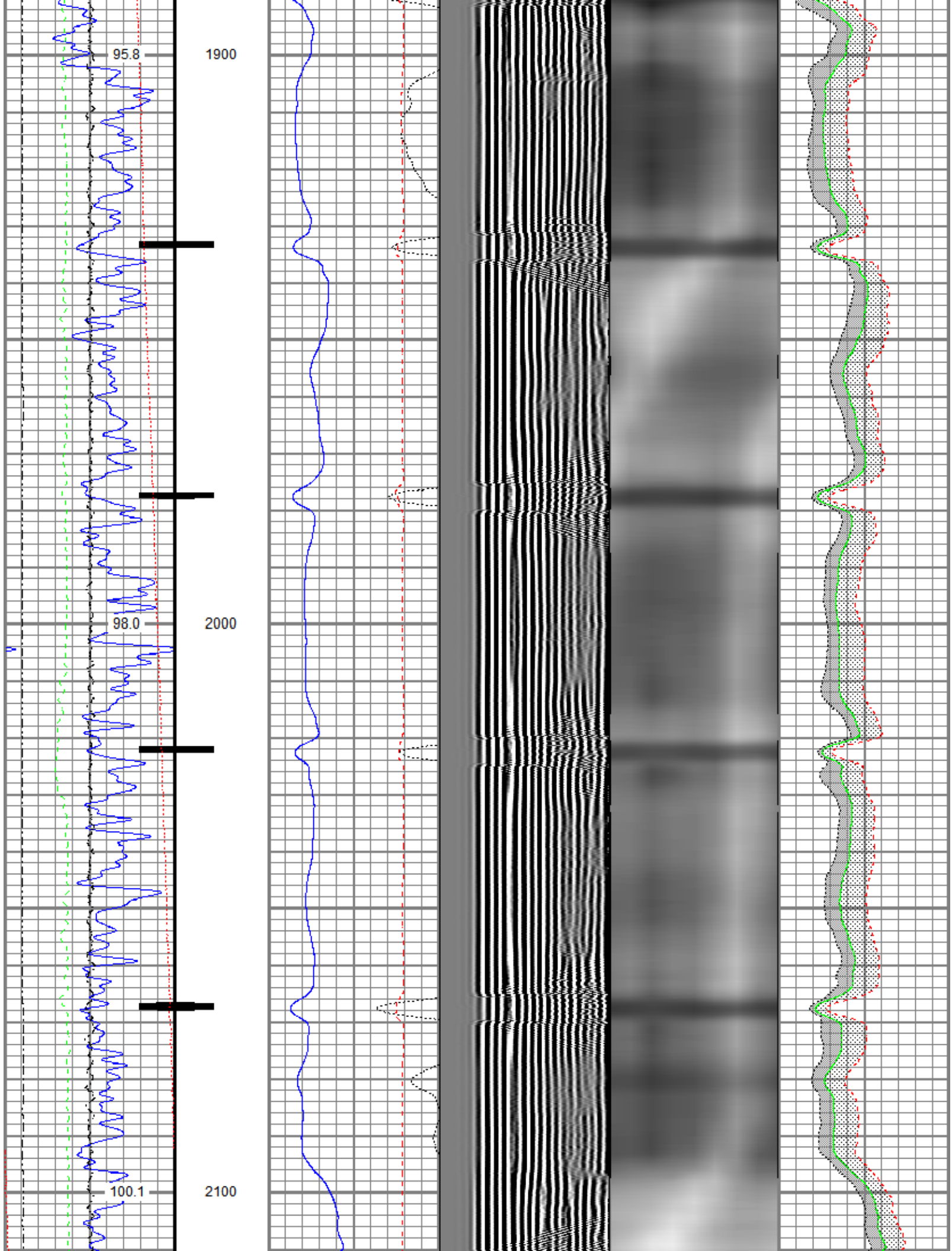


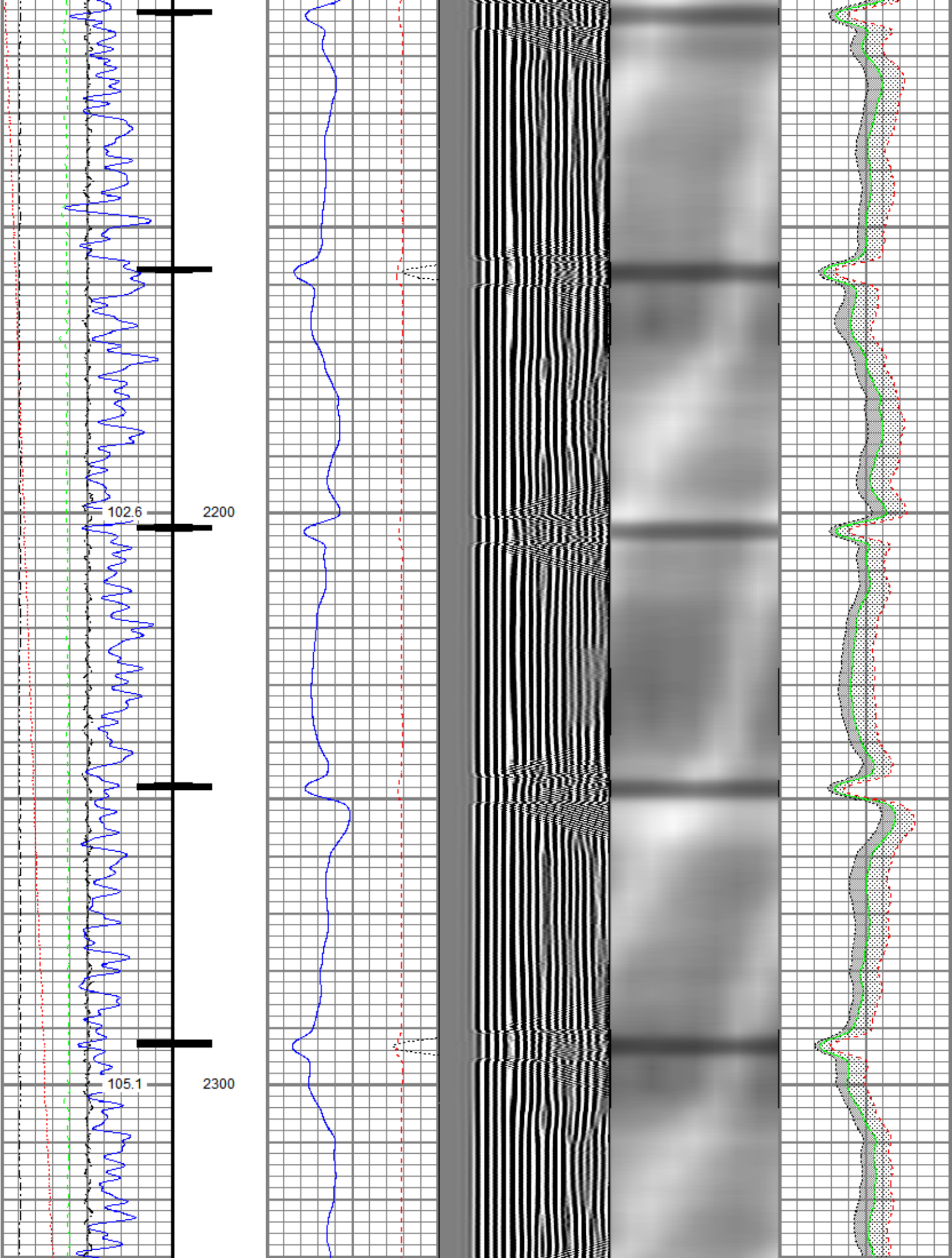


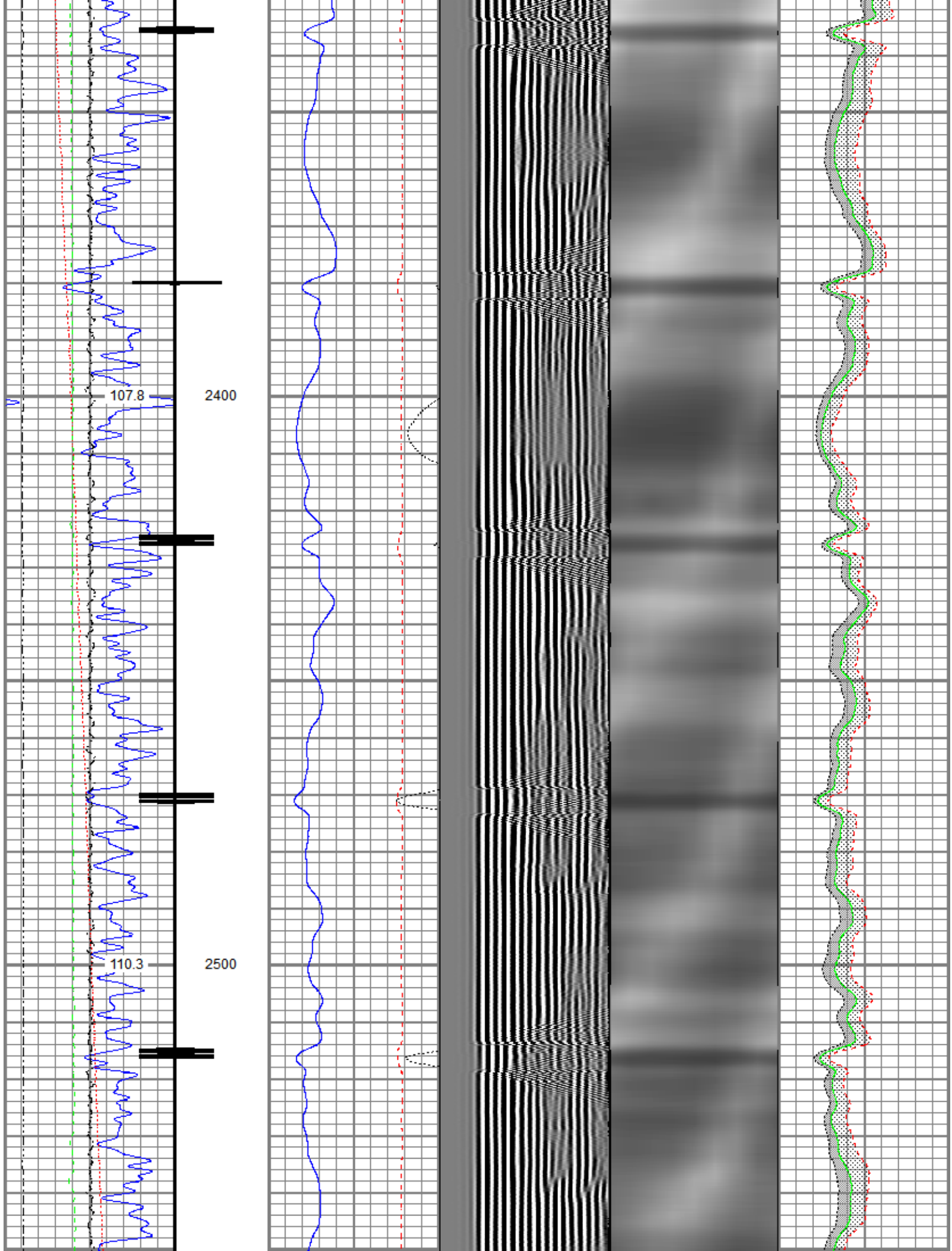


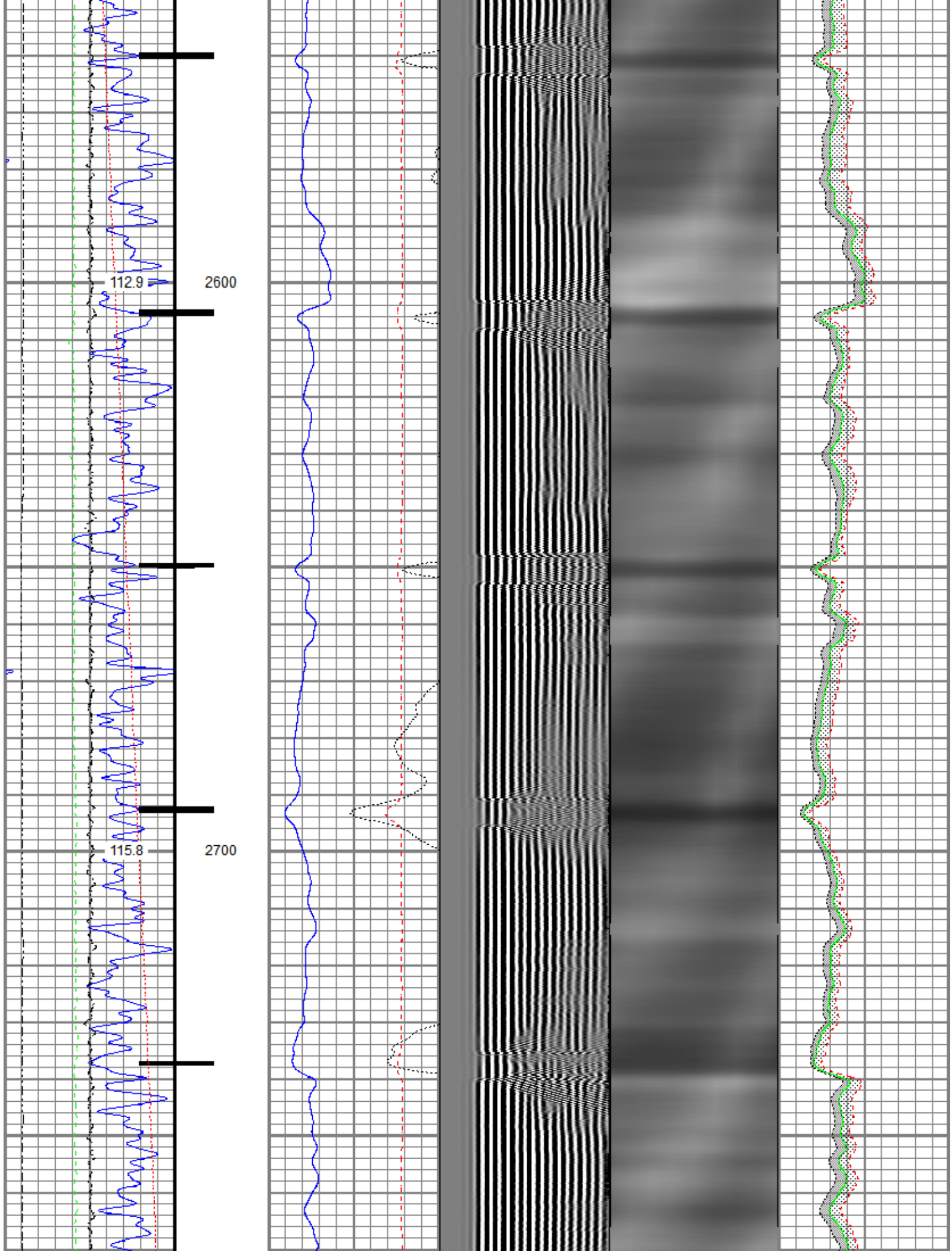


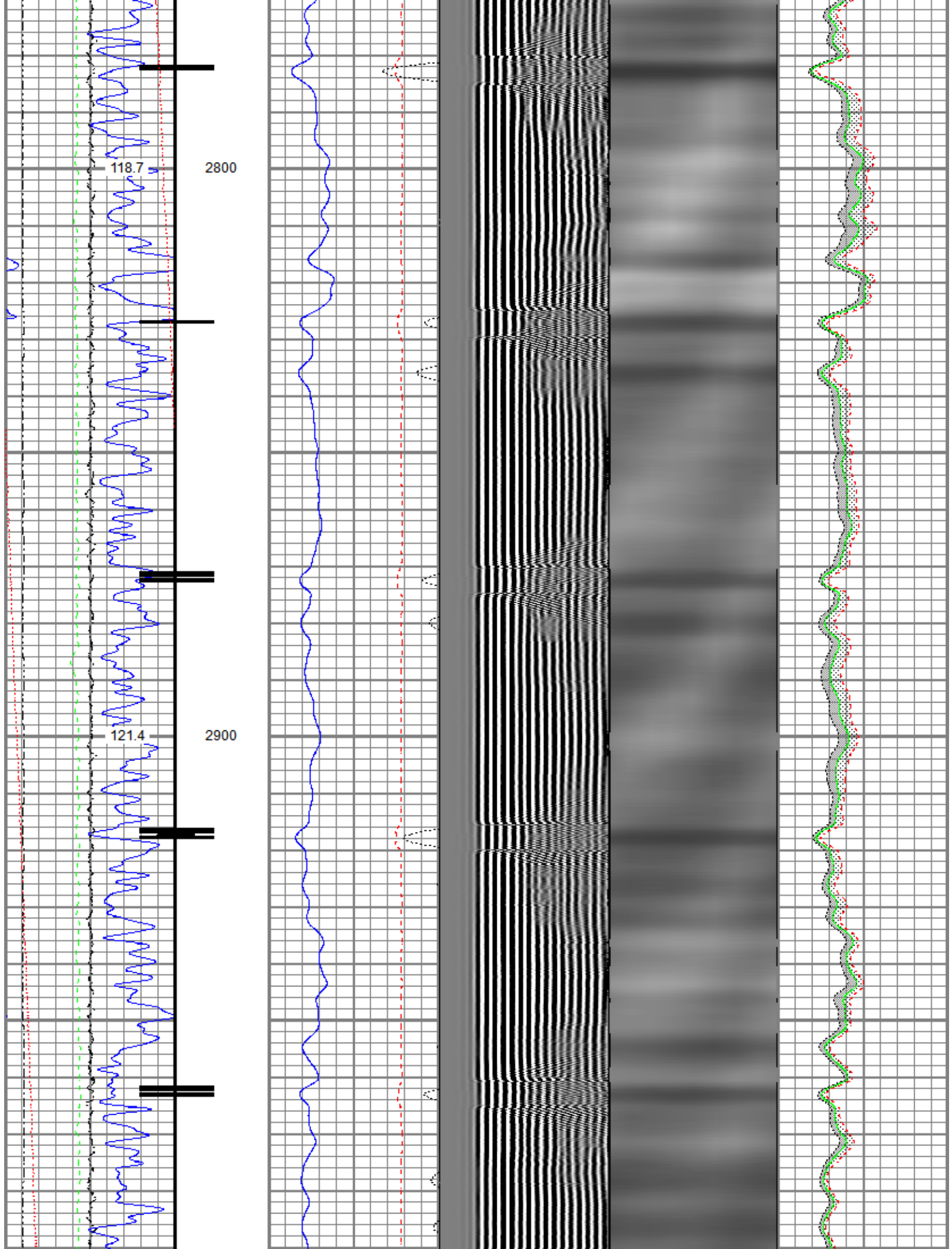


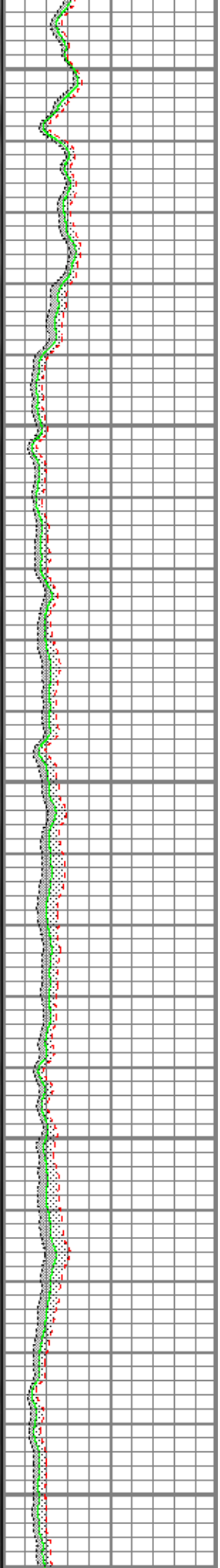
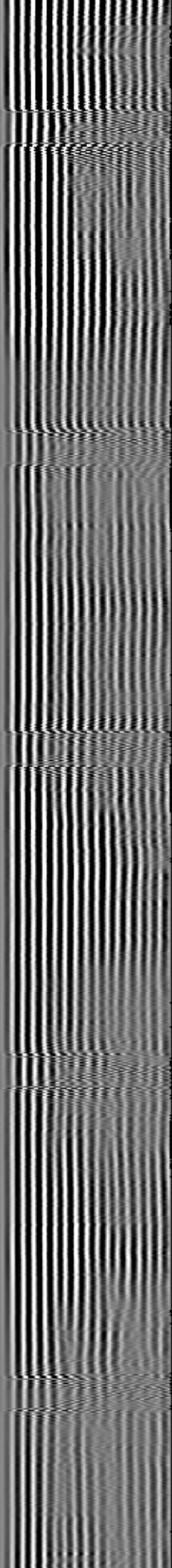
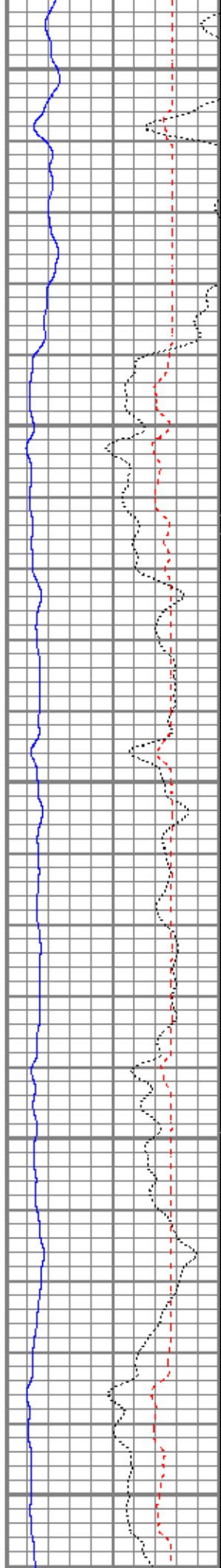
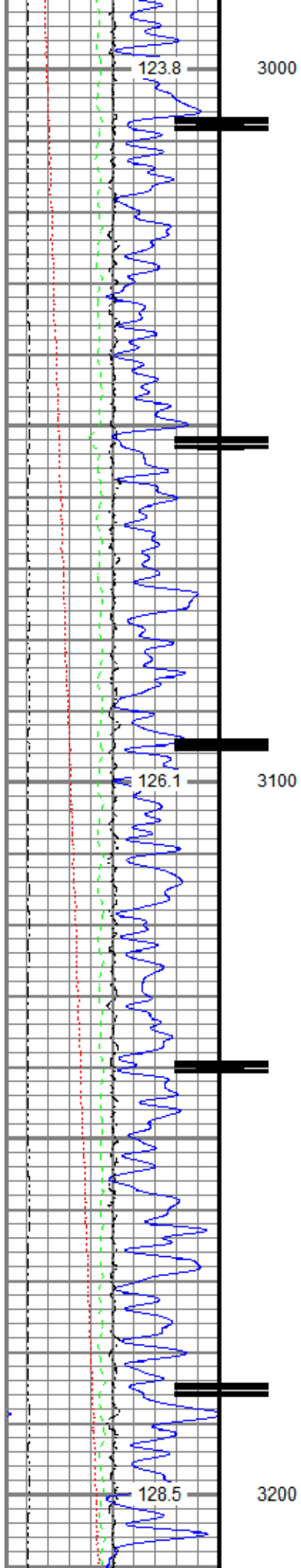


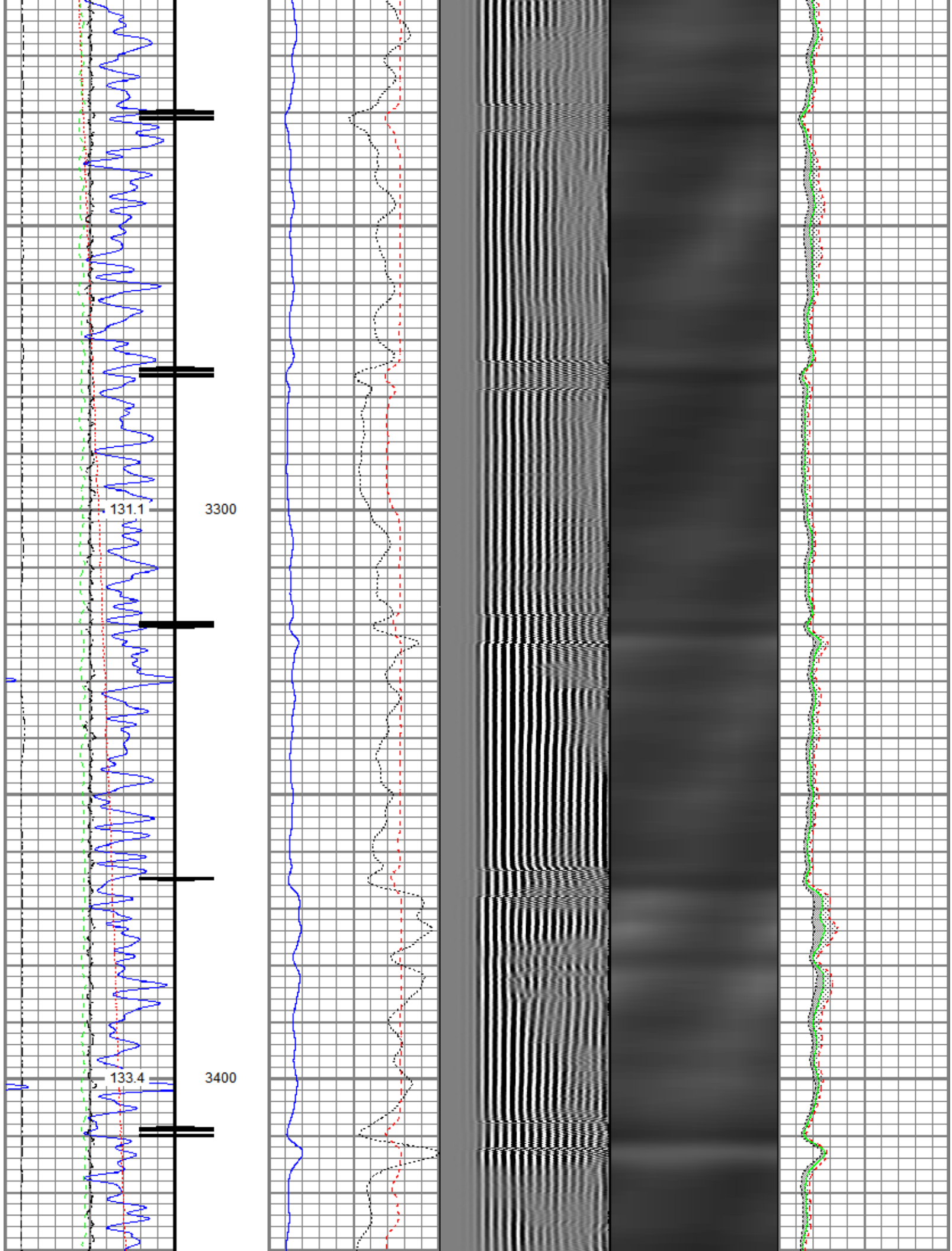


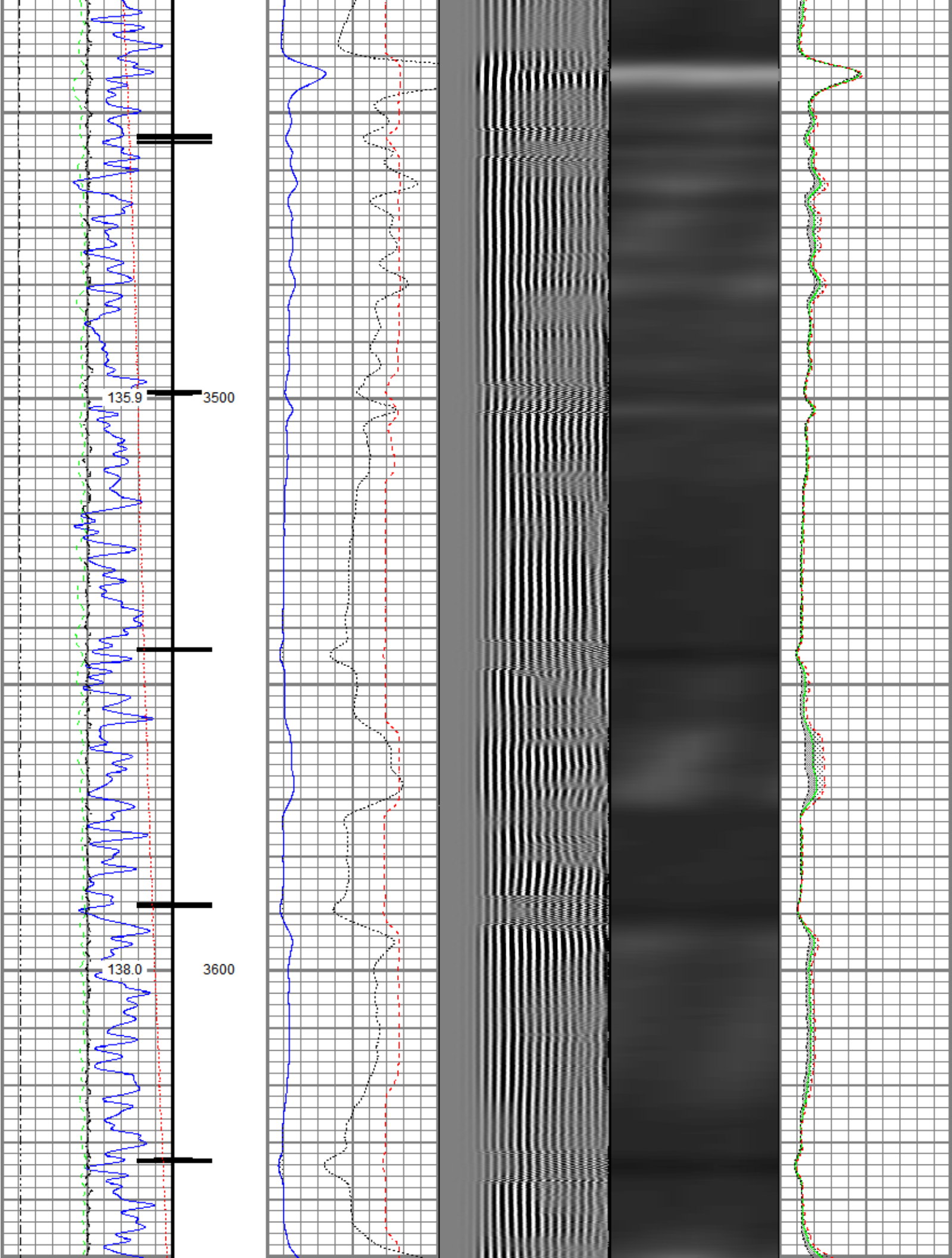


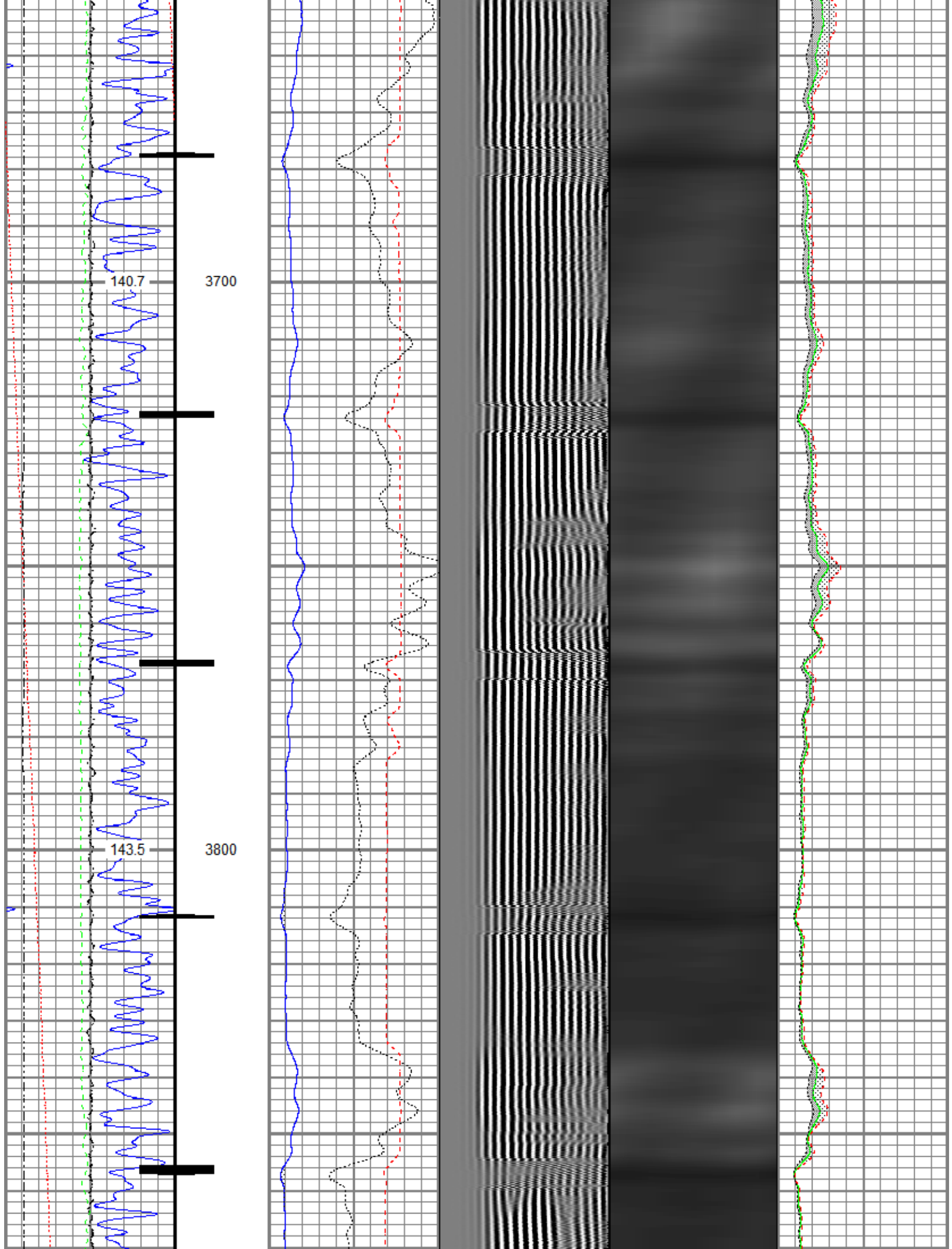


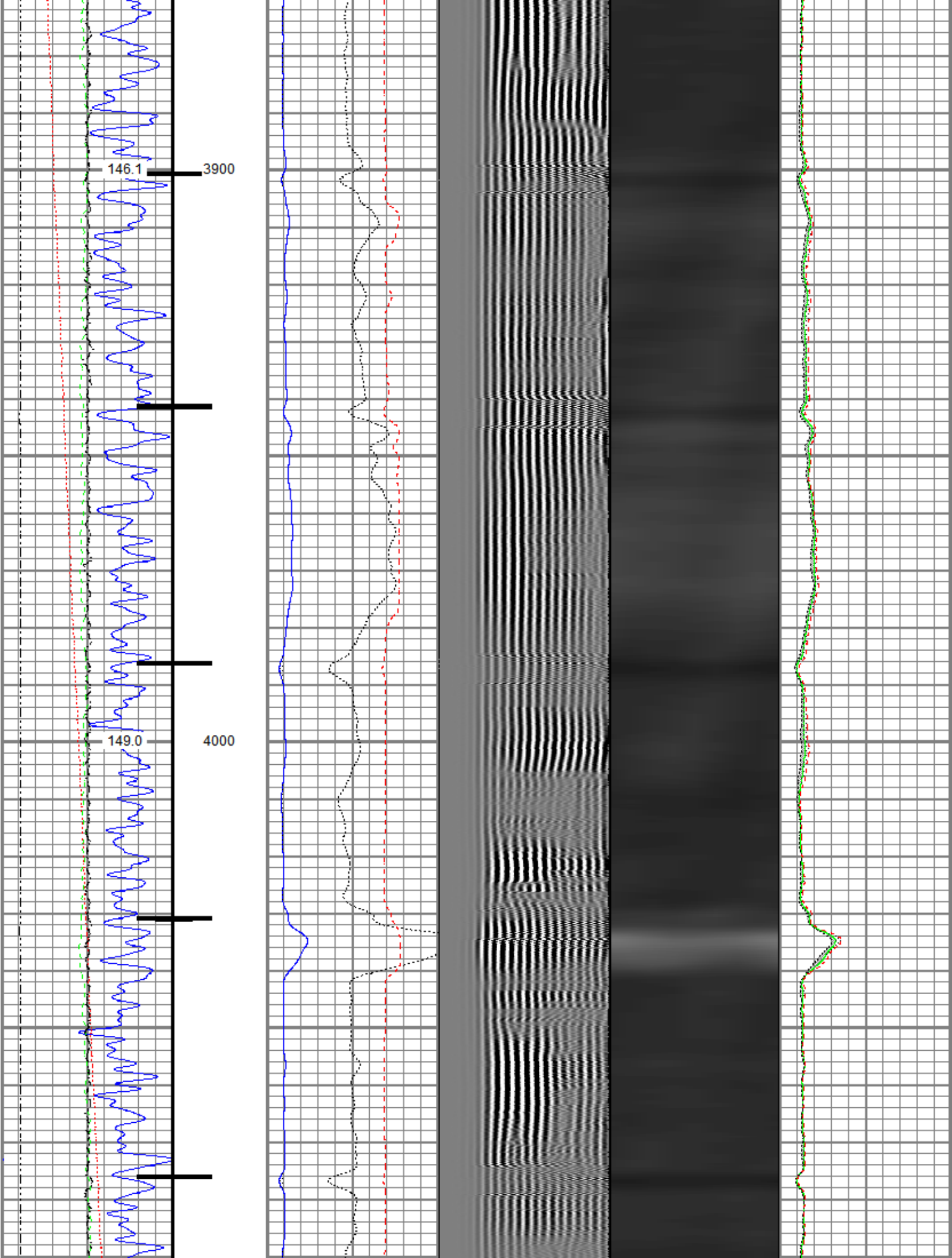


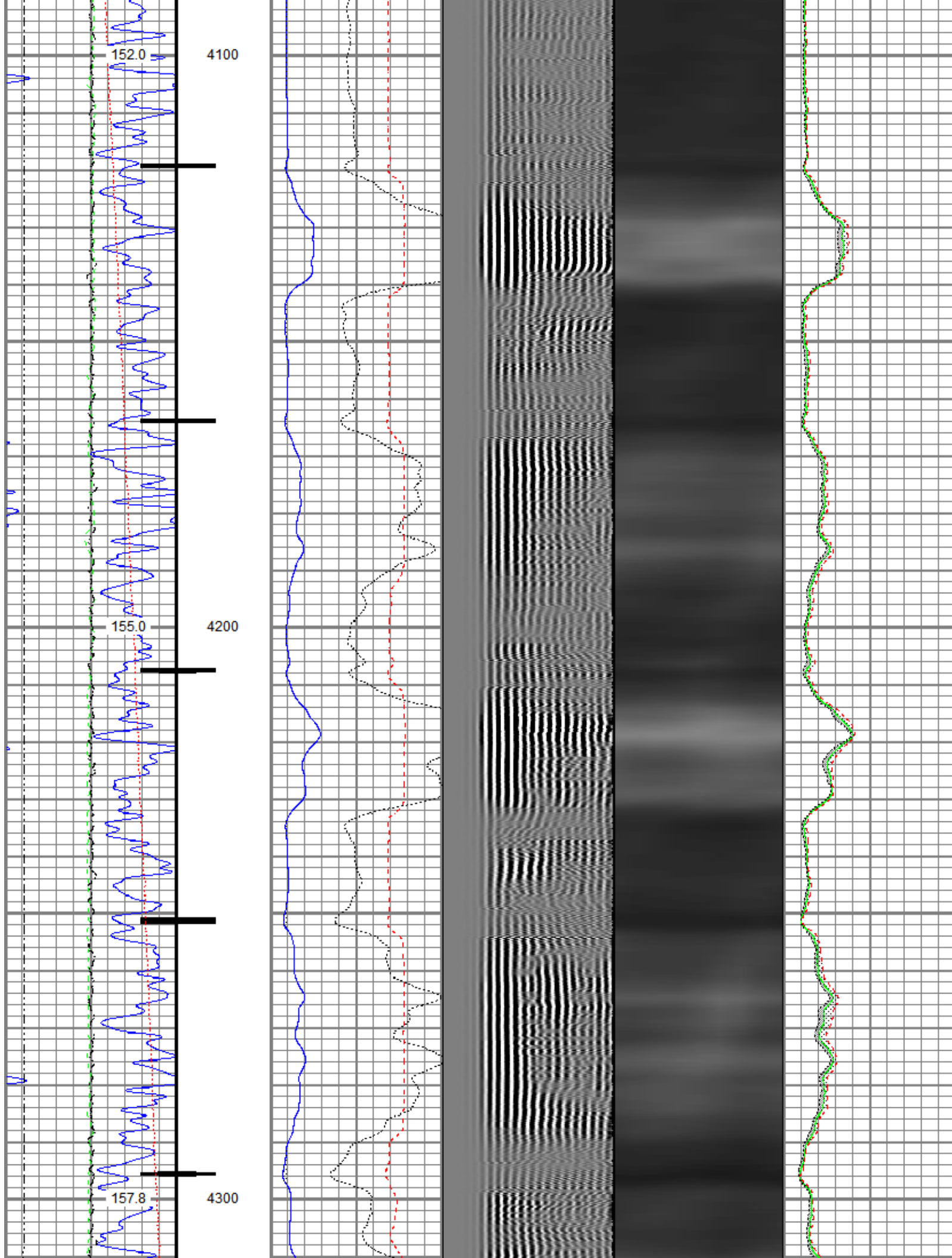


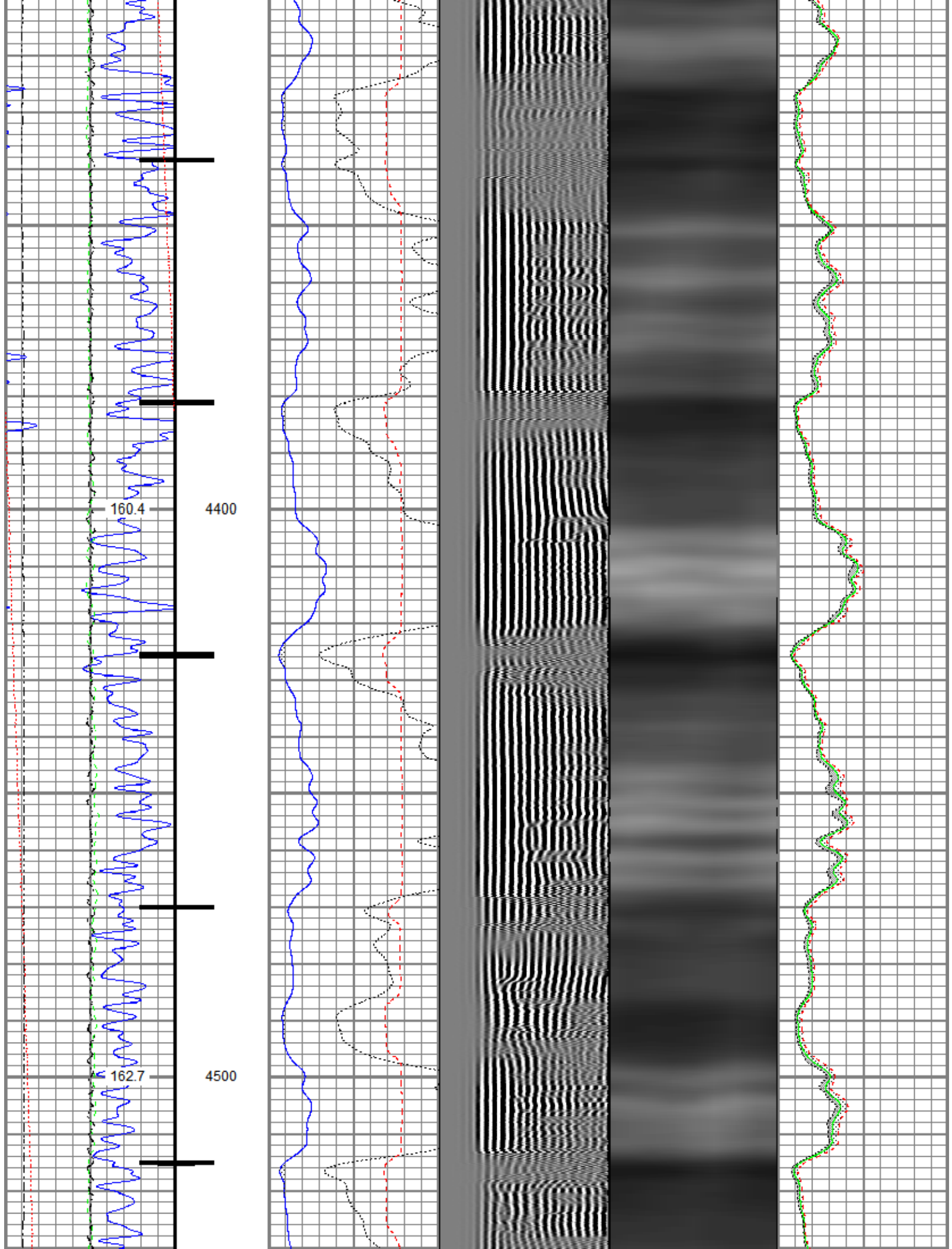


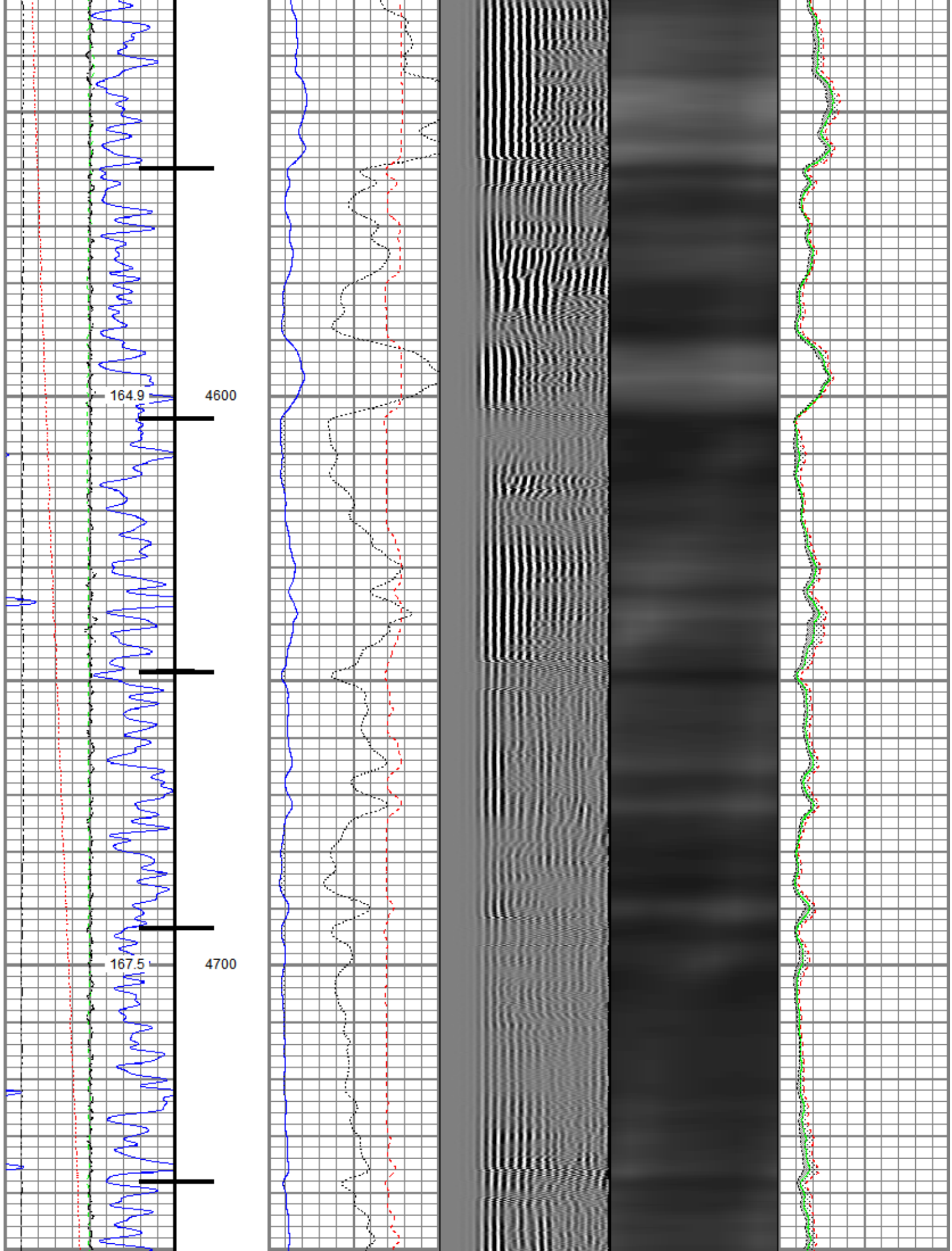


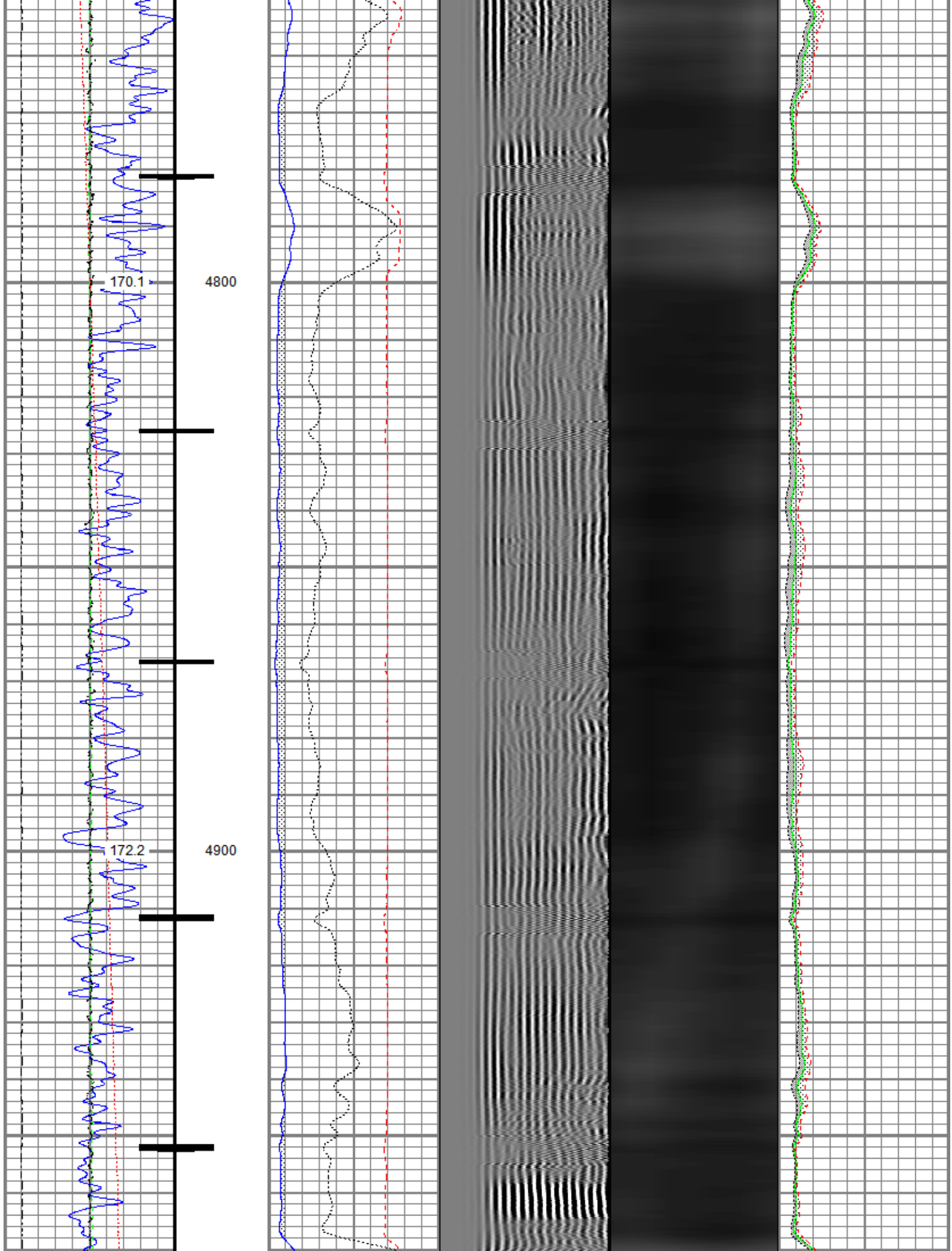


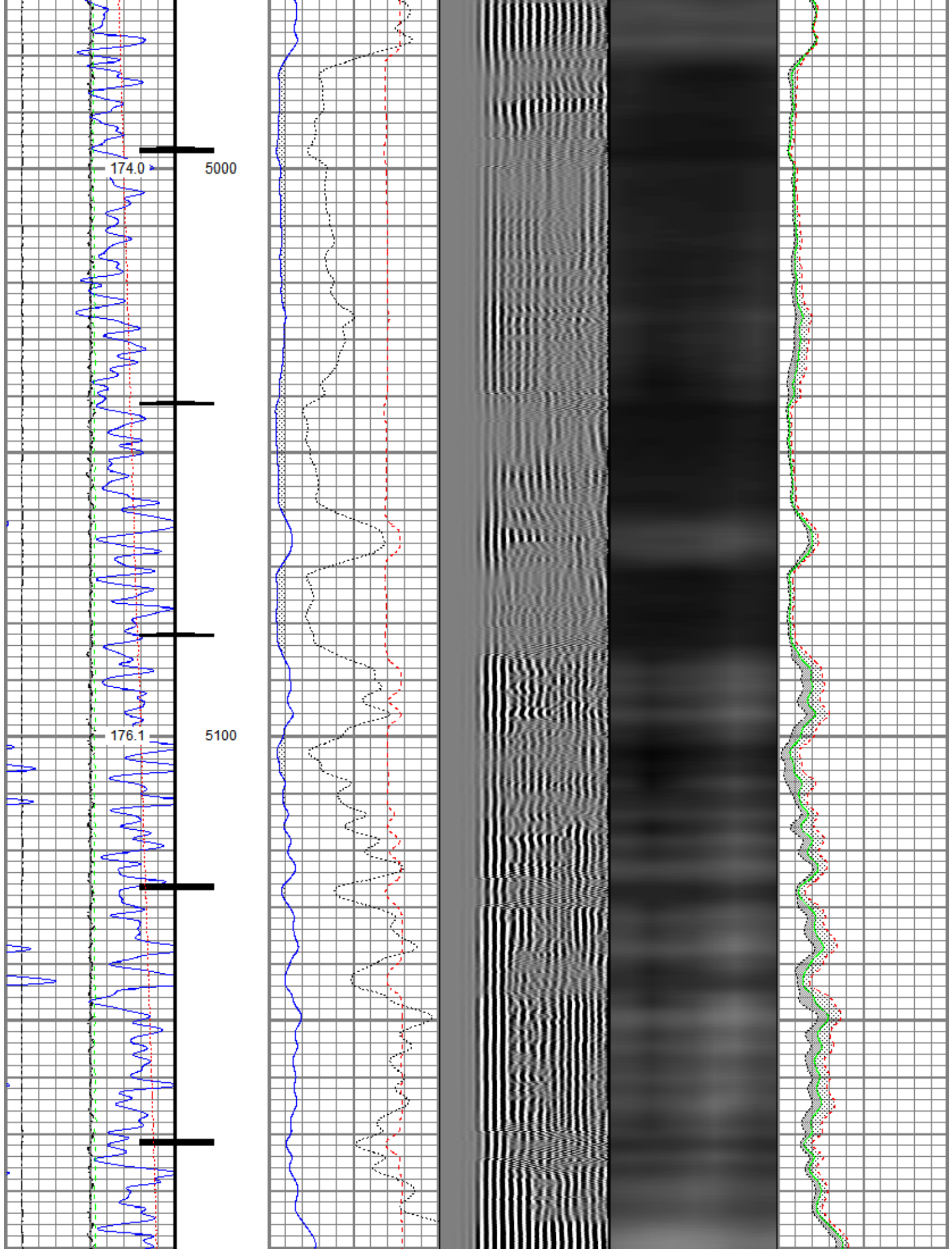


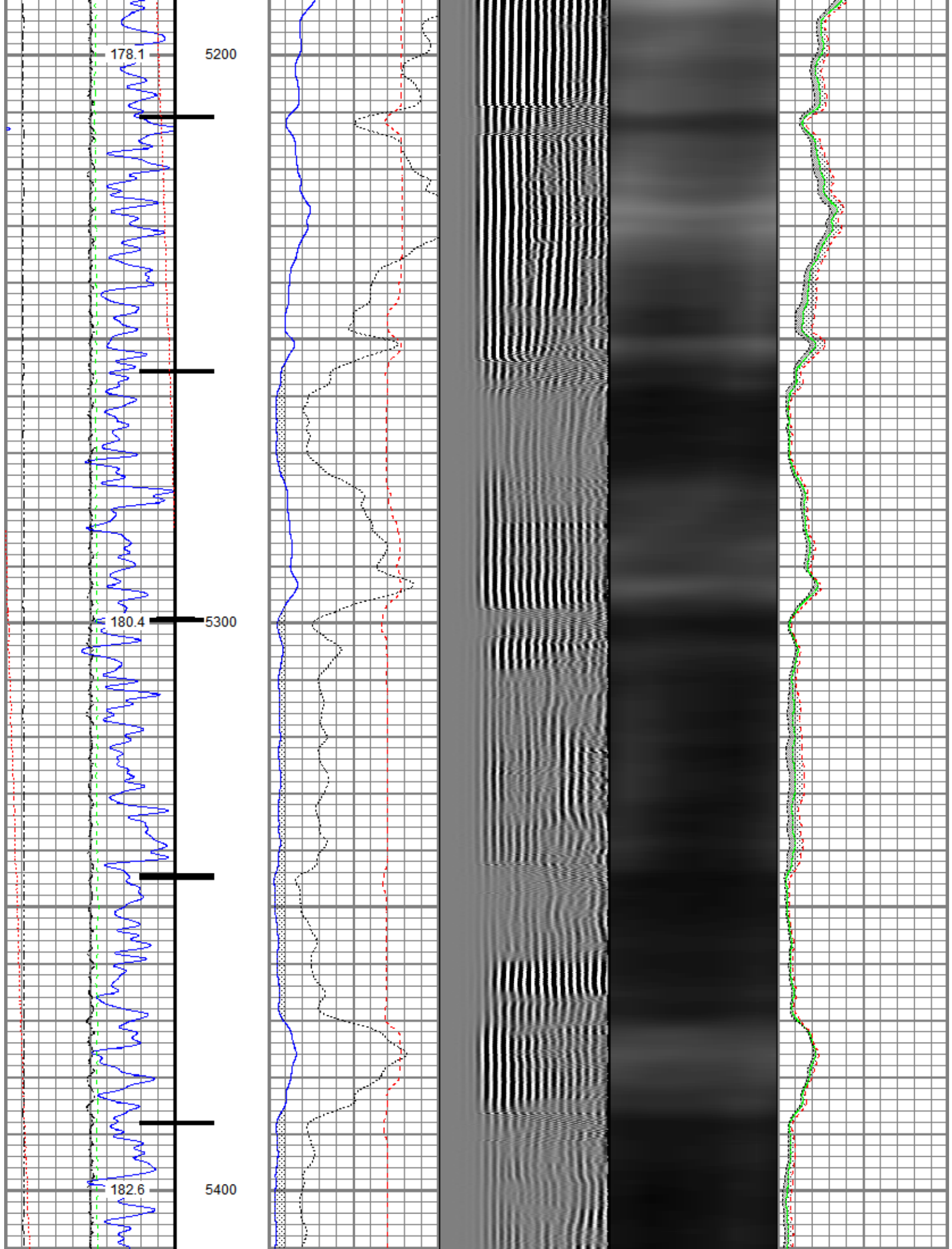


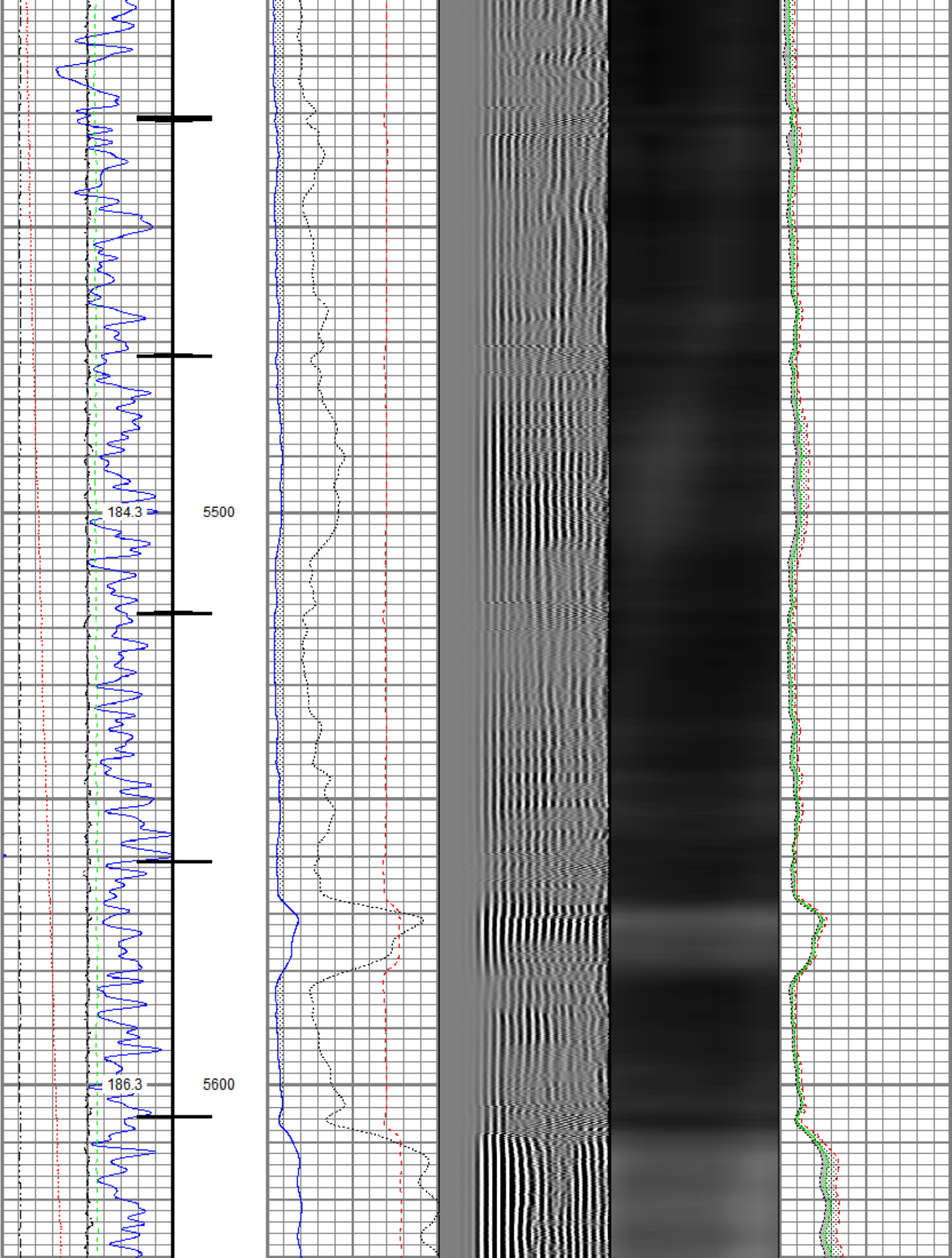


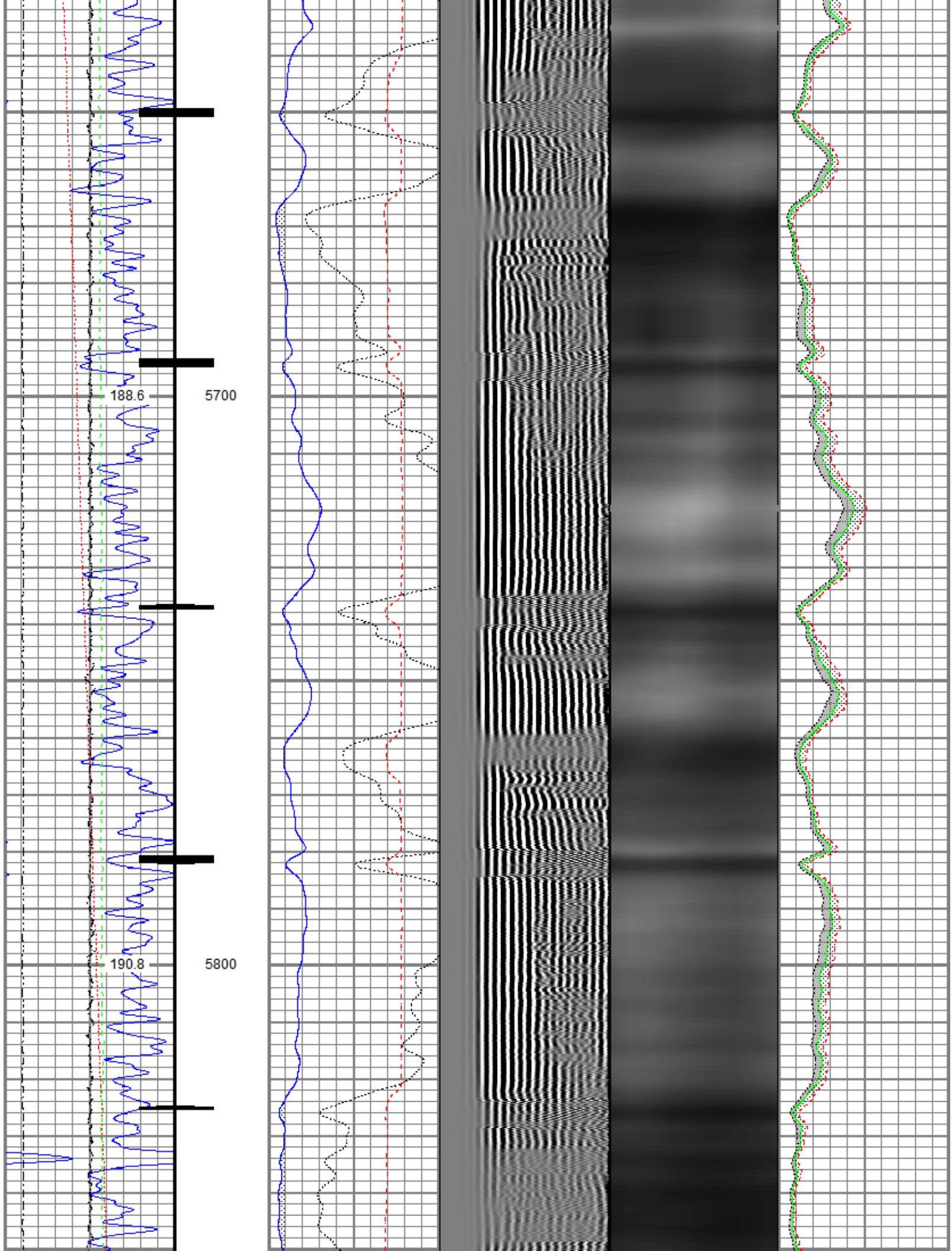


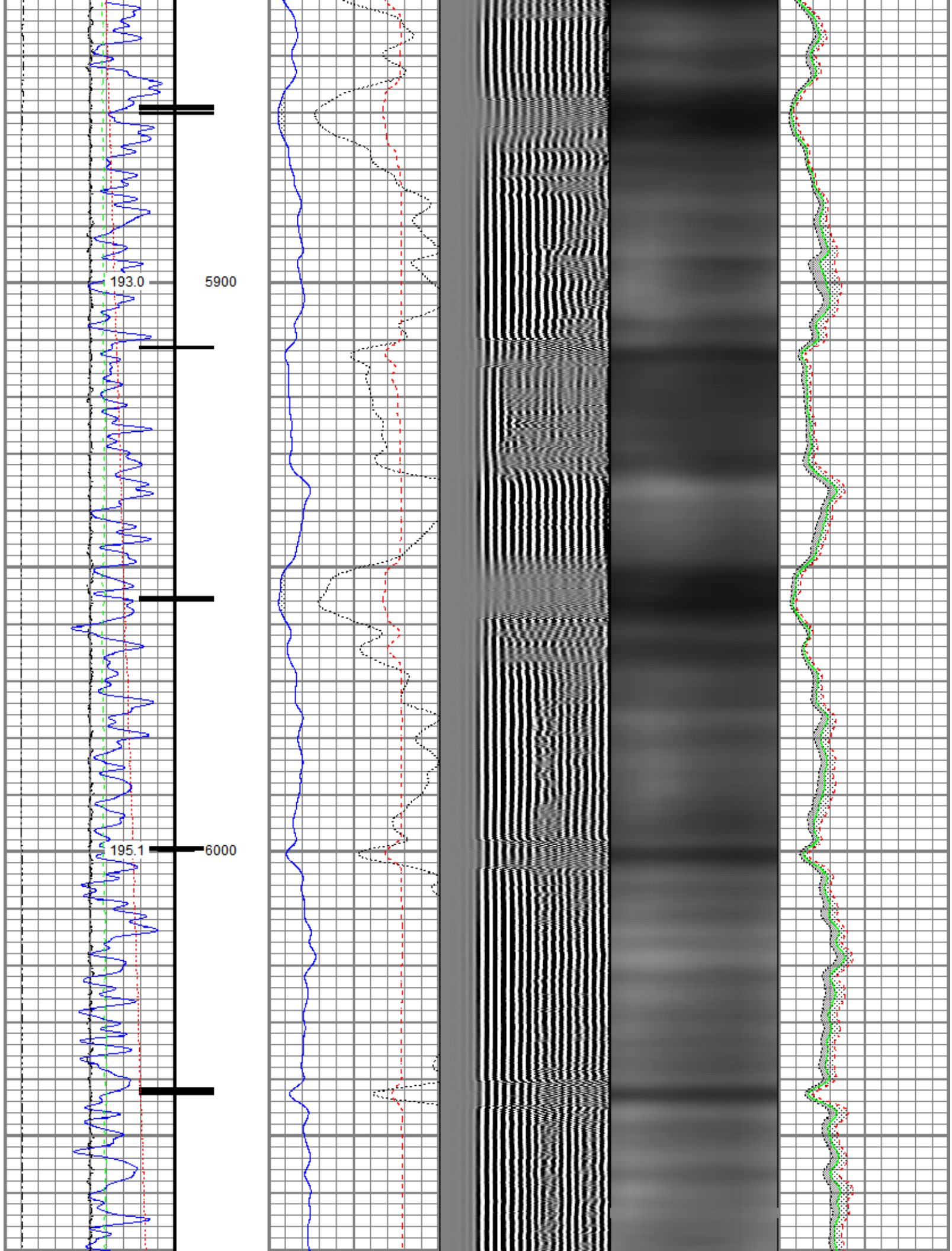


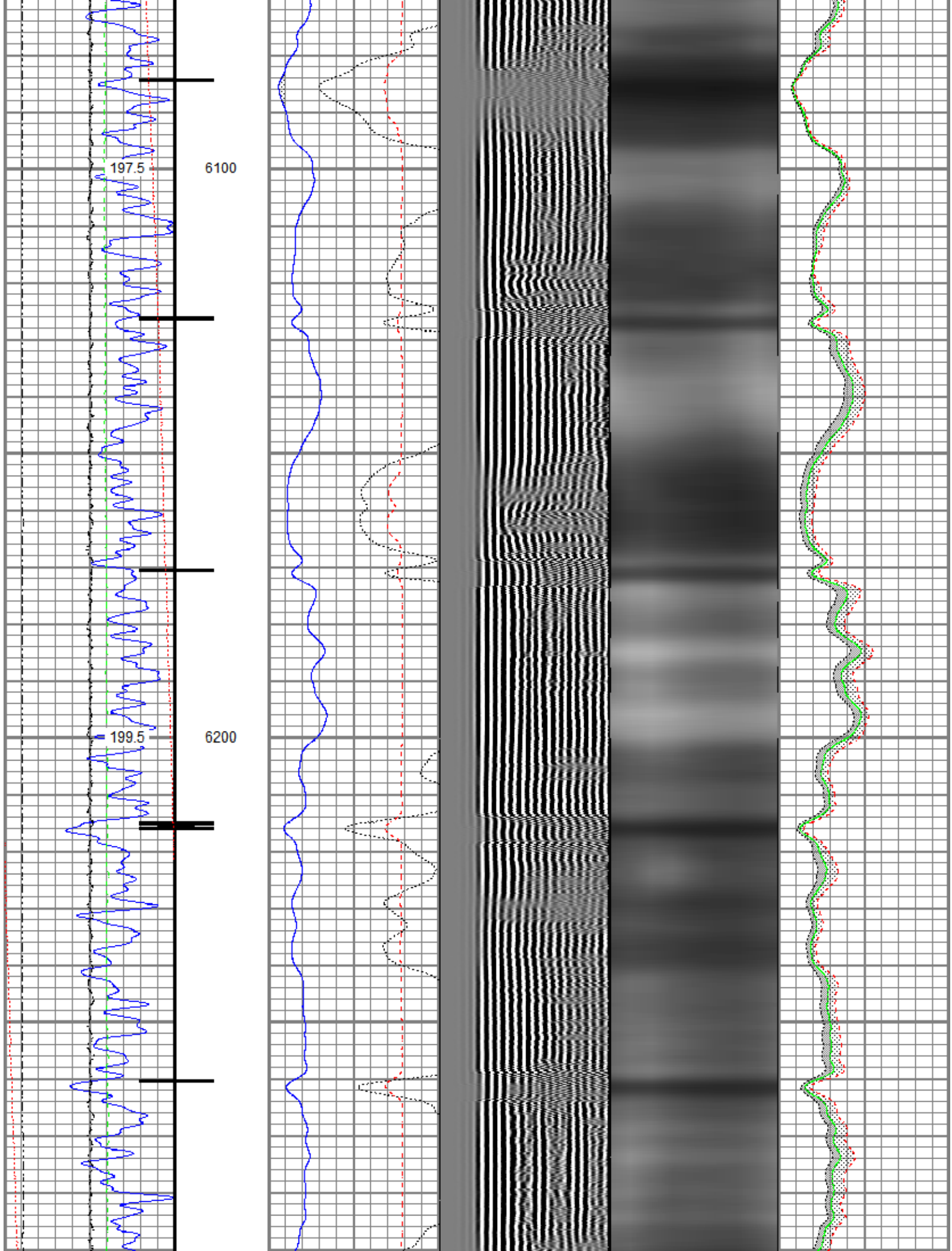


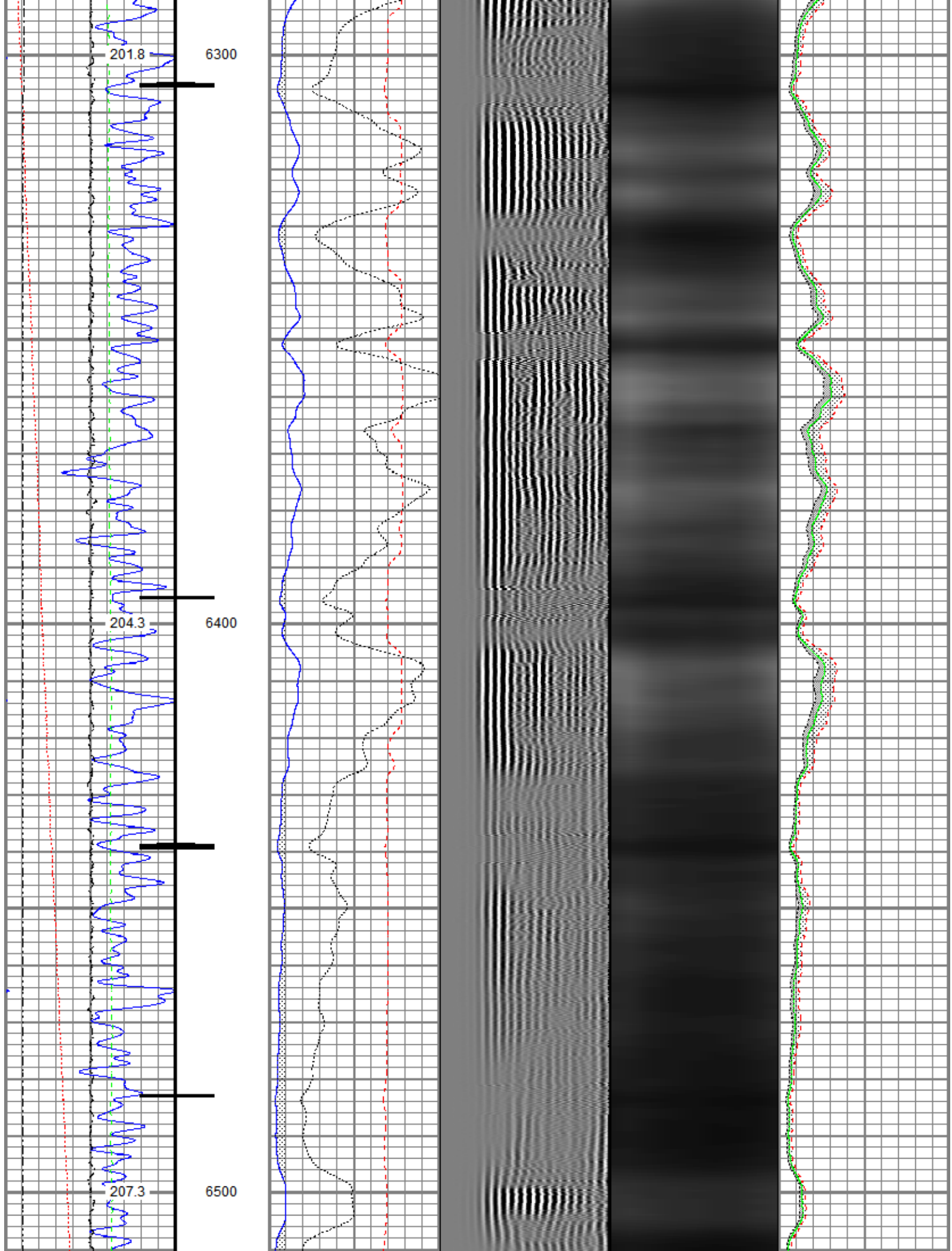


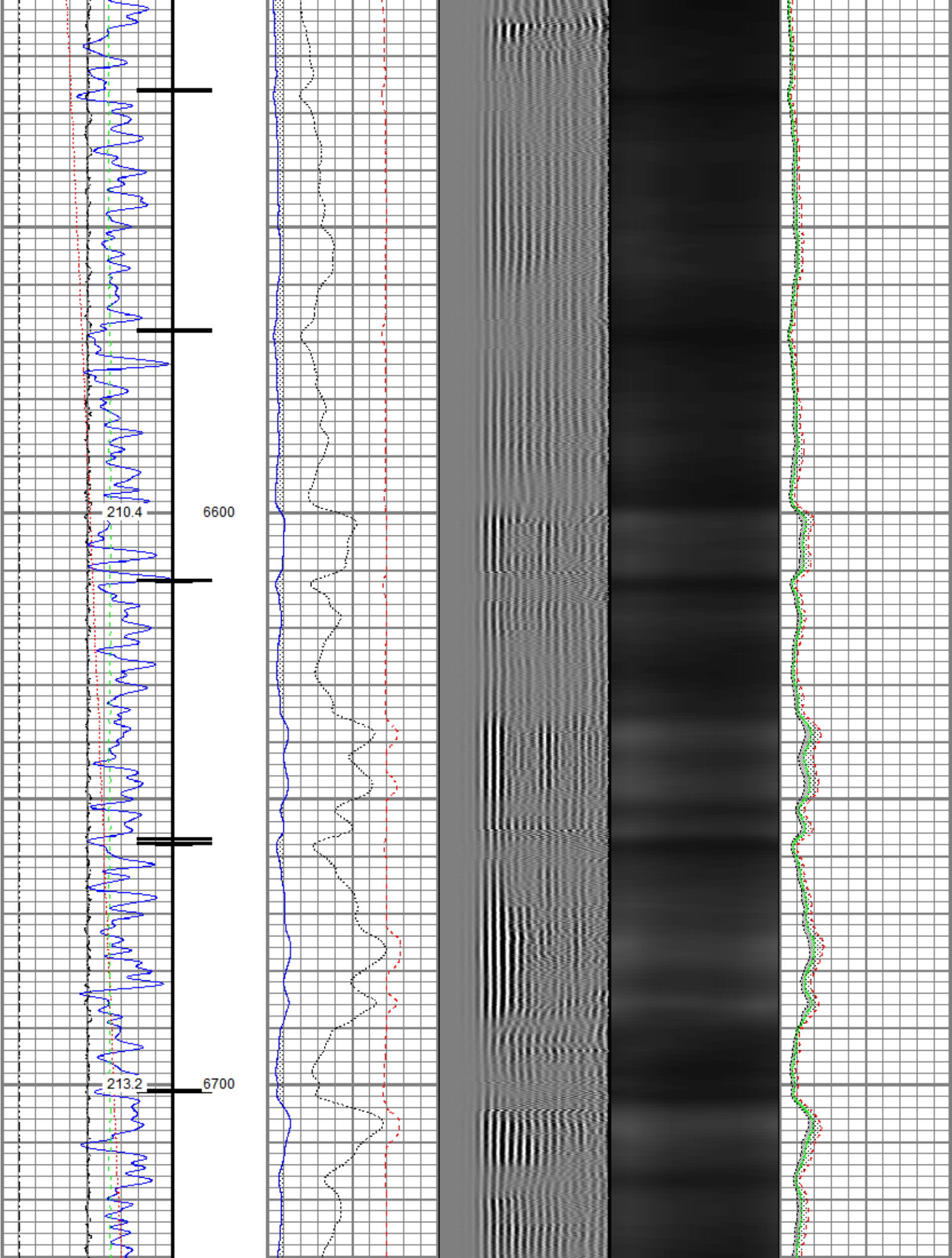


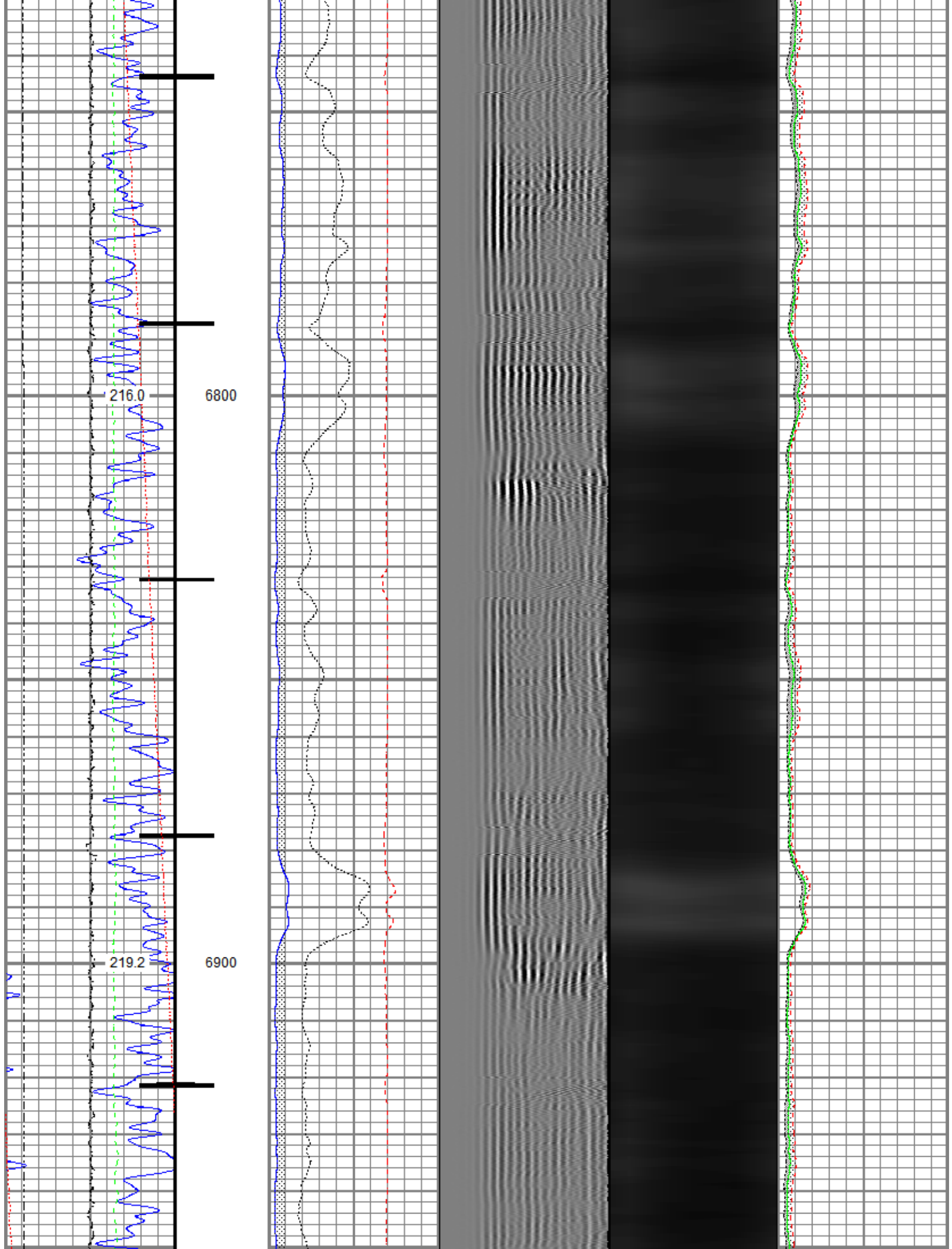


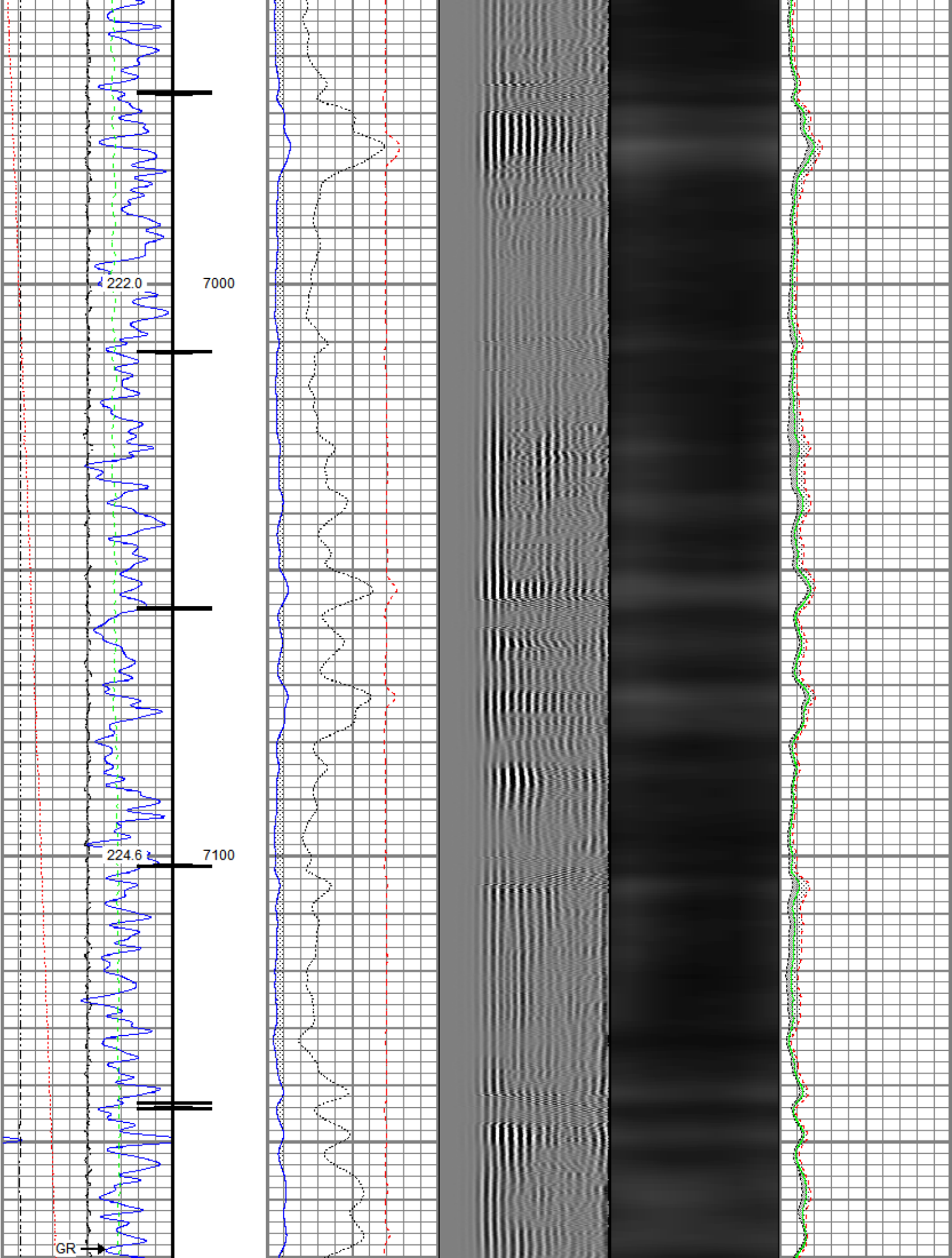


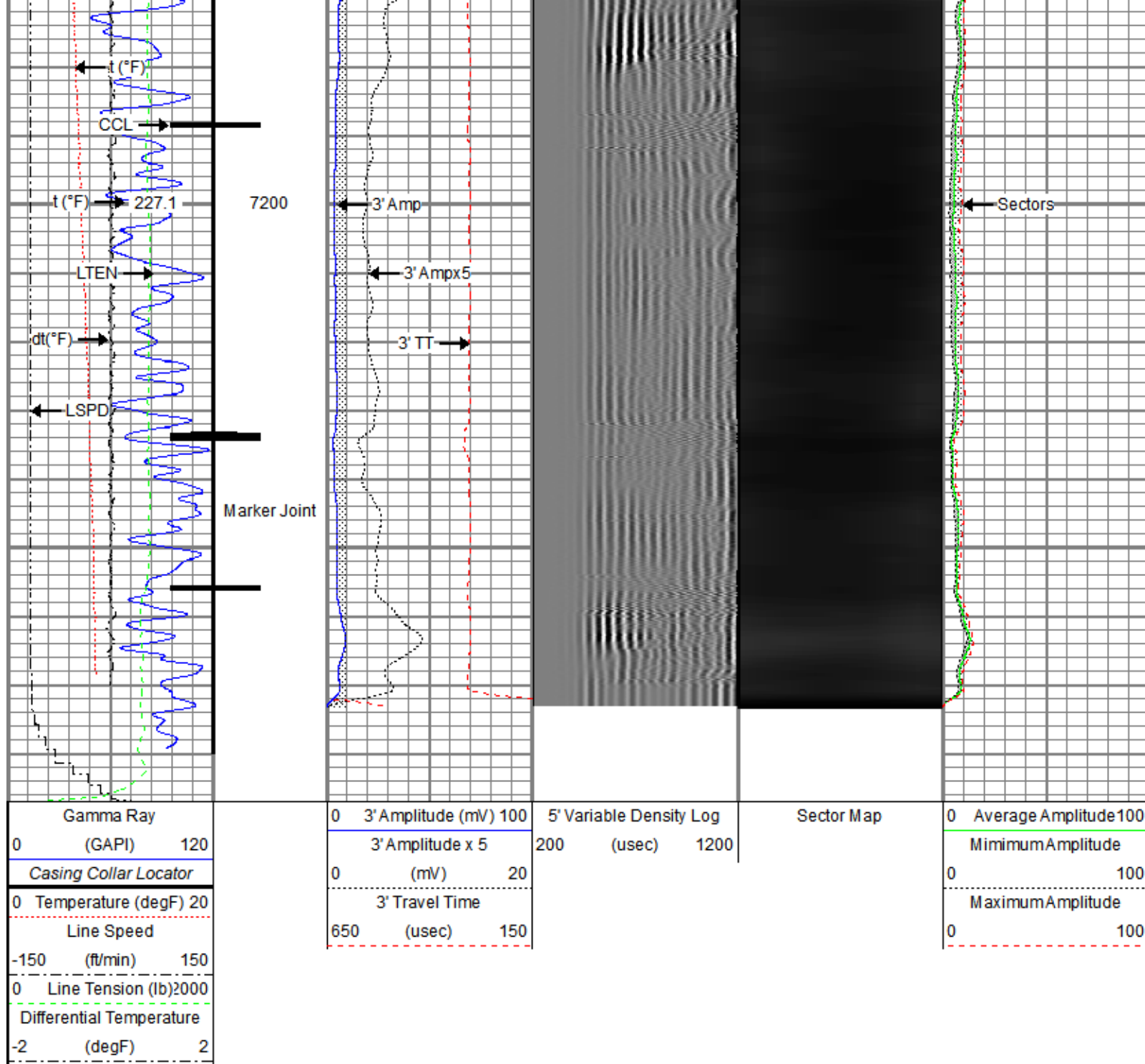








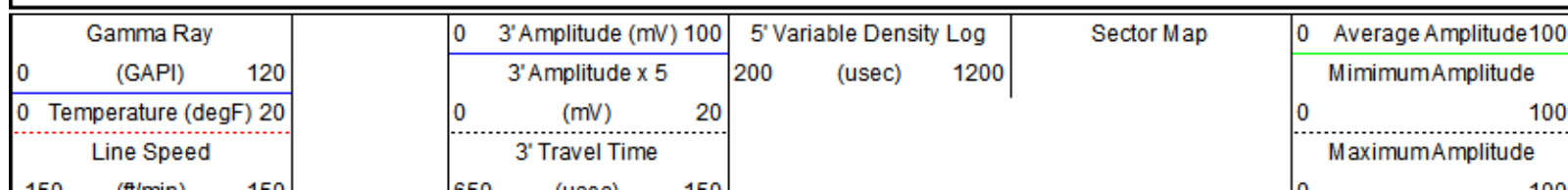


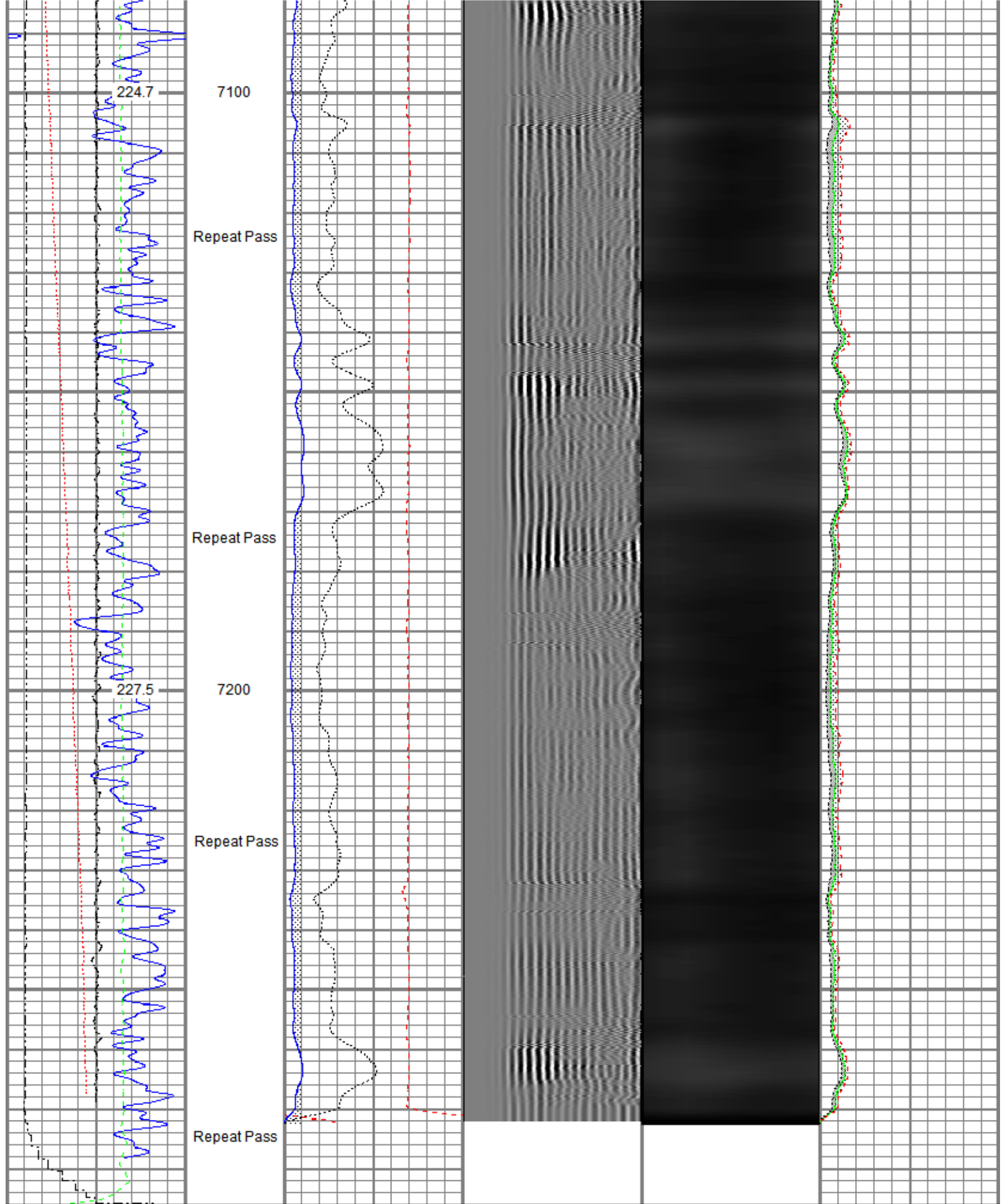


Repeat Pass

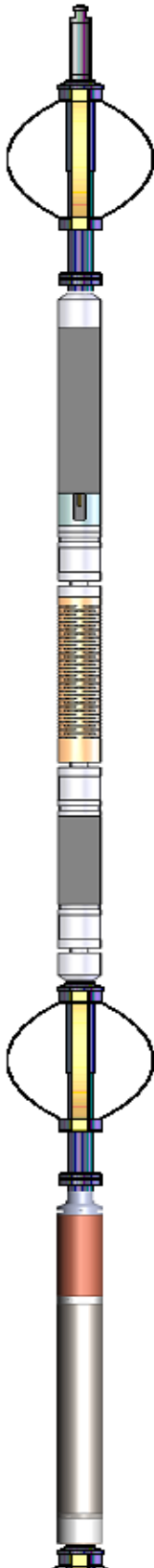
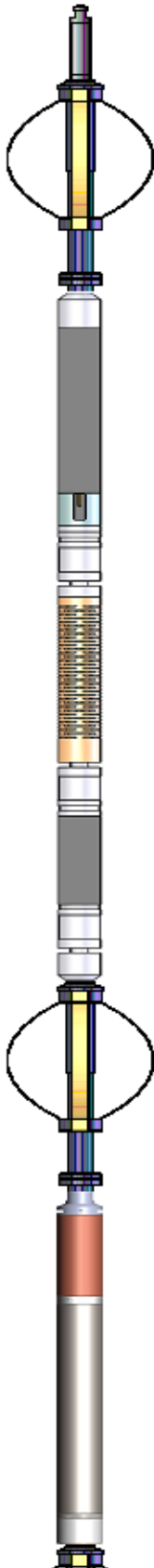
Recorded With 0 PSI Surface Induced Pressure

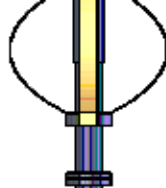
Database File oxy_cleland 15-5hz\0512350492_oxy_cleland 15-5hz_rbl_02-01-20.db
 Dataset Pathname rcb10/pass2.1
 Presentation Format ros_radial
 Dataset Creation Tue Feb 04 07:27:50 2020
 Charted by Depth in Feet scaled 1:240





Gamma Ray	3 Amplitude (mV)	3 Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 3' Amplitude x 5 200 (usec) 1200			0 100
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)
TEMP	17.04		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
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					
CCL\$2	6.80		Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
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

LOCTIM	0.00		Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
UTCTIM	0.00					
Dataset: 0512350492_Oxy_Cleland 15-5HZ_RBL_02-01-20.db: field/well/rcbl0/pass4.1 Total length: 23.86 ft Total weight: 223.60 lb O.D.: 2.75 in						

Calibration Report	
Database File	C:\ProgramData\Warrior\Data\Oxy_Cleland 15-5HZ\0512350492_Oxy_Cleland 15-5HZ_RBL_02-01-20.db
Dataset Pathname	rcbl0/pass4.1
Dataset Creation	Sat Feb 01 08:53:23 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:	0.7235	GAPI/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	120855	
Tool Model:	2750 RBT	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	89.798	ft

Master Calibration, performed (Derived):						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.761	0.000	71.921	94.546	-0.006
CAL	0.007	0.638				
5'	-0.001	0.730	0.000	71.921	98.311	0.143
SUM						
S1	0.000	0.739	0.000	100.000	135.316	-0.010
S2	0.000	0.740	0.000	100.000	135.162	-0.010
S3	0.000	0.753	0.000	100.000	132.786	-0.009
S4	0.000	0.779	0.000	100.000	128.435	-0.008
S5	0.000	0.797	0.000	100.000	125.515	-0.009
S6	0.000	0.799	0.000	100.000	125.241	-0.009
S7	0.000	0.790	0.000	100.000	126.666	-0.010
S8	0.000	0.759	0.000	100.000	131.782	-0.011

Internal Reference Calibration, performed (Not Performed):						
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.007	0.638	1.000	0.000

Air Zero Calibration, performed Fri Jan 31 10:39:43 2020:

	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 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	Cleland 15-5HZ
	Field	Wattenberg
	County	Weld
	State	Colorado