



County Weld State Colorado

Elevation	
K.B. 5006'	
D.F. ---	
G.L. 4974'	

[illegible]

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 Kelly Bushing of 32 FT  
Adjusted -6 FT to correlate with Kelly Bushing  
Gauge Ring/Junk Basket ran to 7475 FT with no debris  
Log ran from just above WRP  
Recorded 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!!

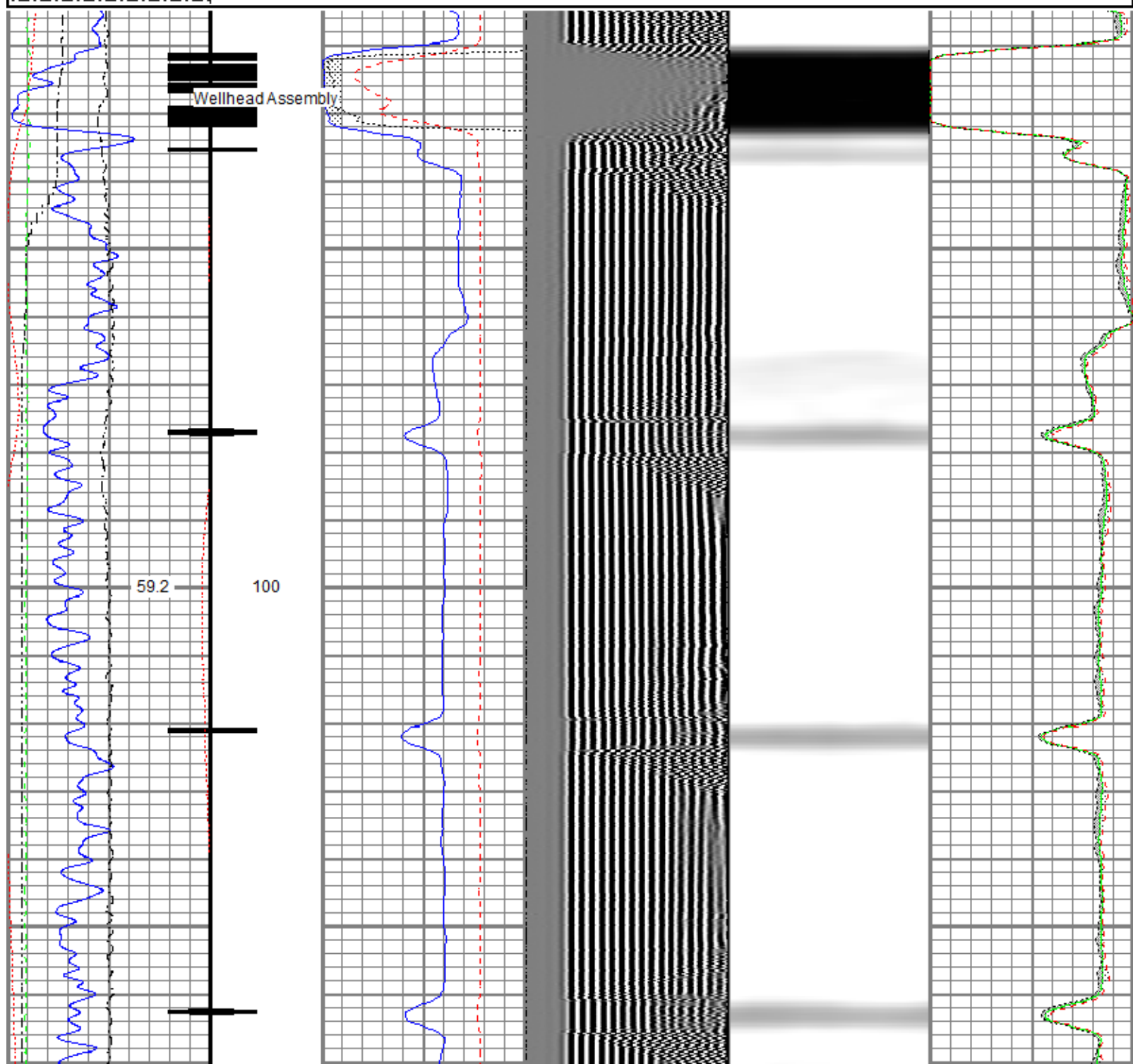
## Main Pass

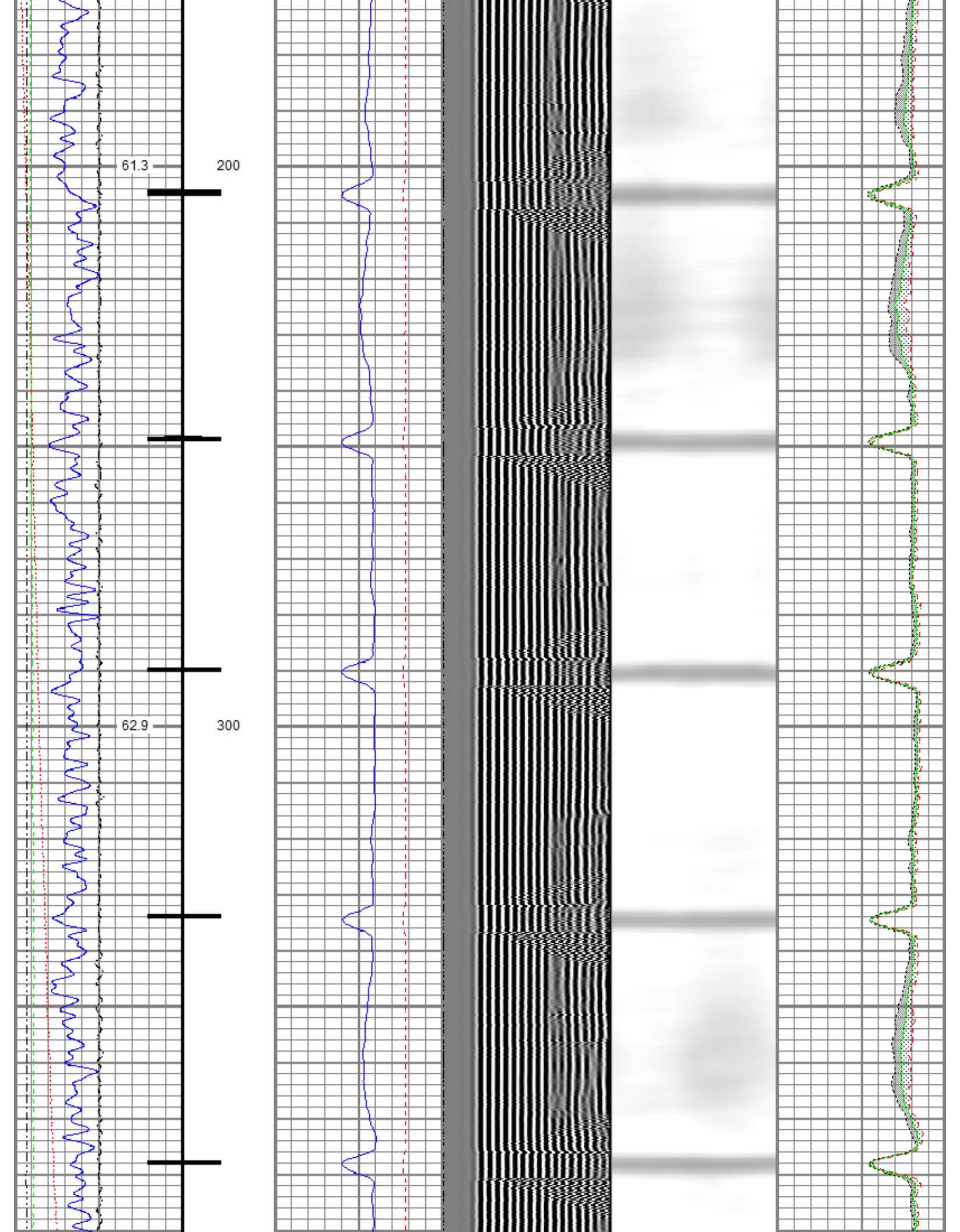


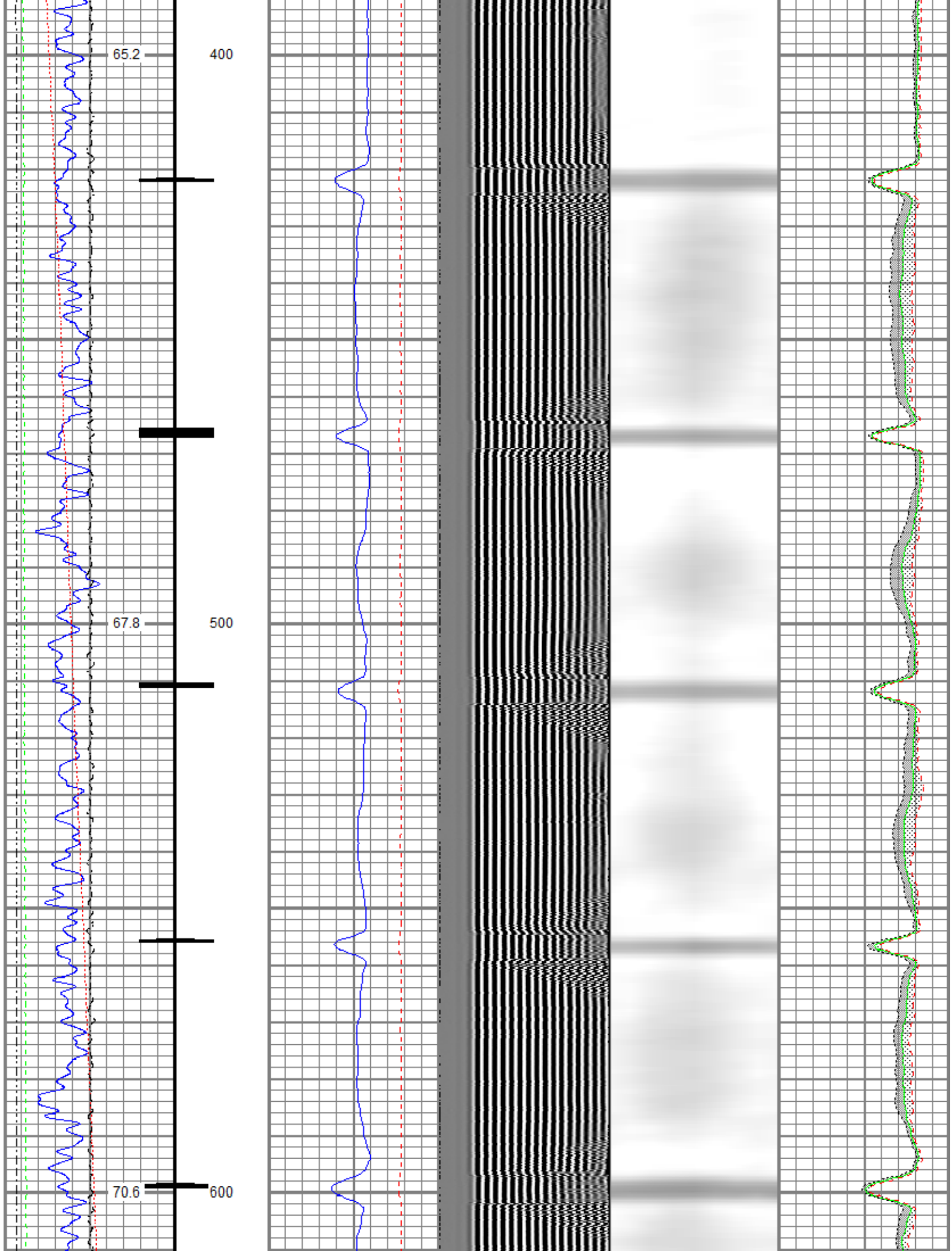
Recorded With 2800 PSI Surface-Induced Pressure

Database File 0512345247\_anadarko\_robin 9-15hz\_rbl\_01-04-18\0512345247\_anadarko\_robin 9-15hz\_rbl\_01-04-18.db  
 Dataset Pathname pass4.1  
 Presentation Format ros\_radrii  
 Dataset Creation Sat Jan 06 16:49:20 2018  
 Charted by Depth in Feet scaled 1:240

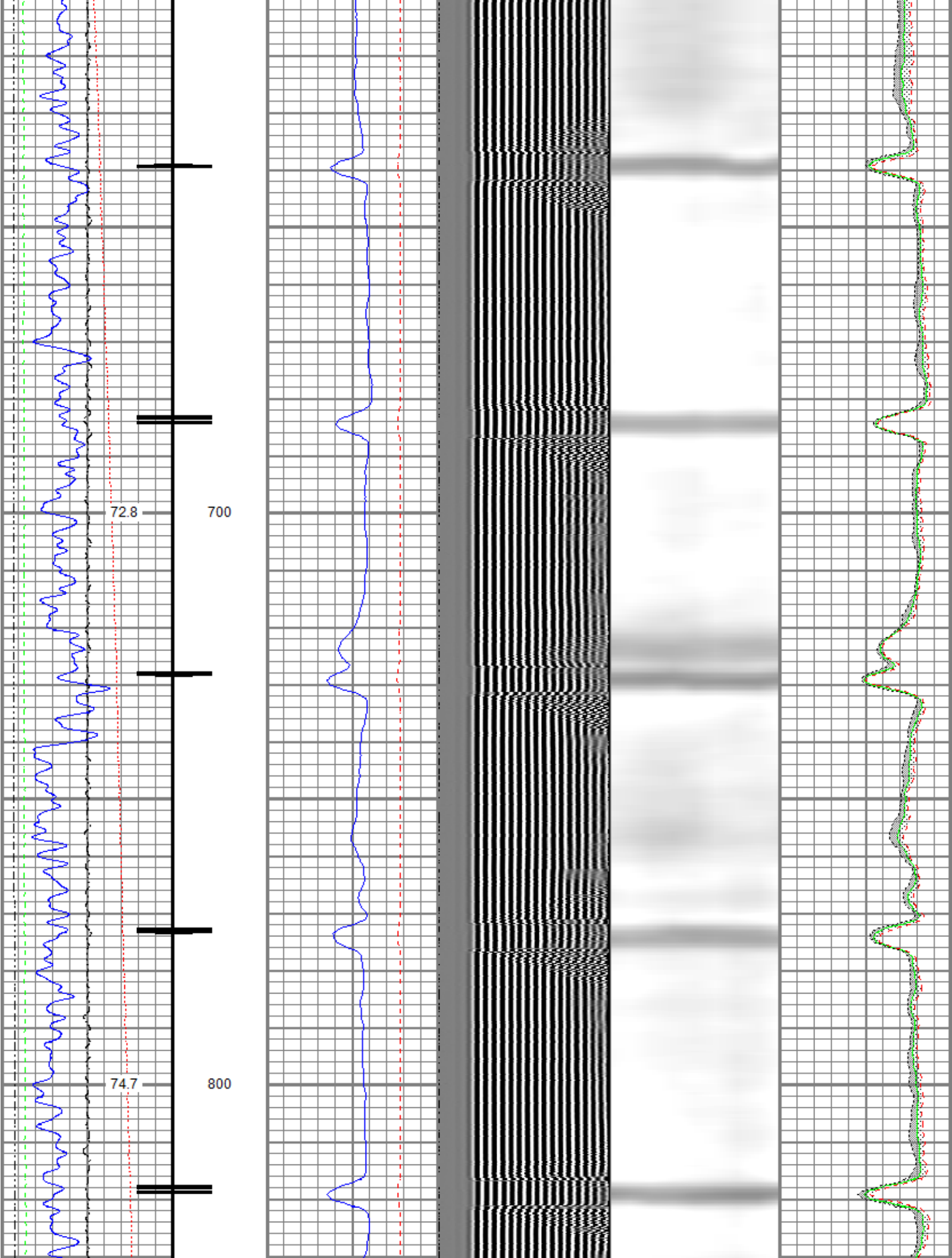
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200			Minimum Amplitude
Casing Collar Locator	0	(mV) 20			0	100
Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed	650	(usec) 150			0	100
-150 (ft/min) 150				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

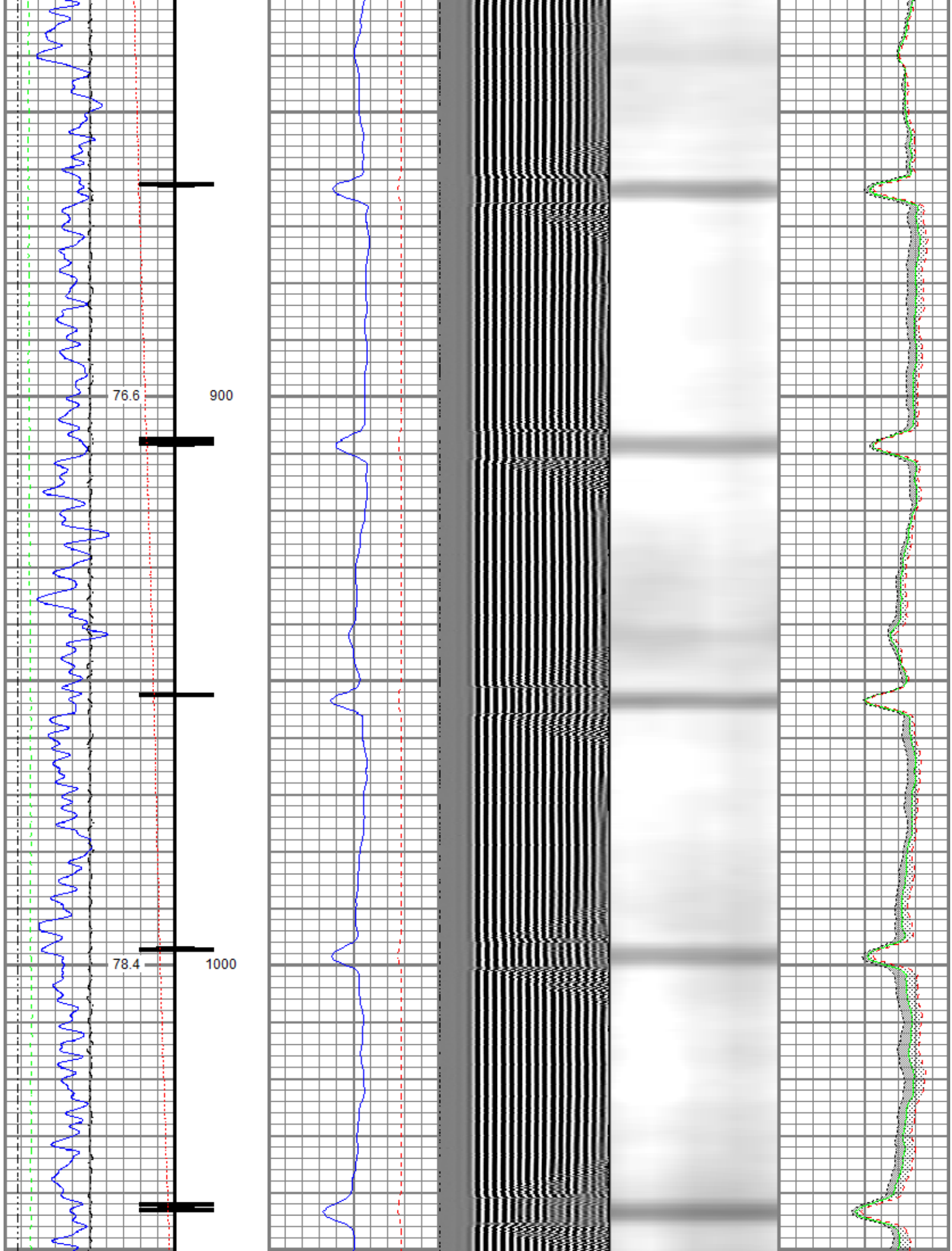


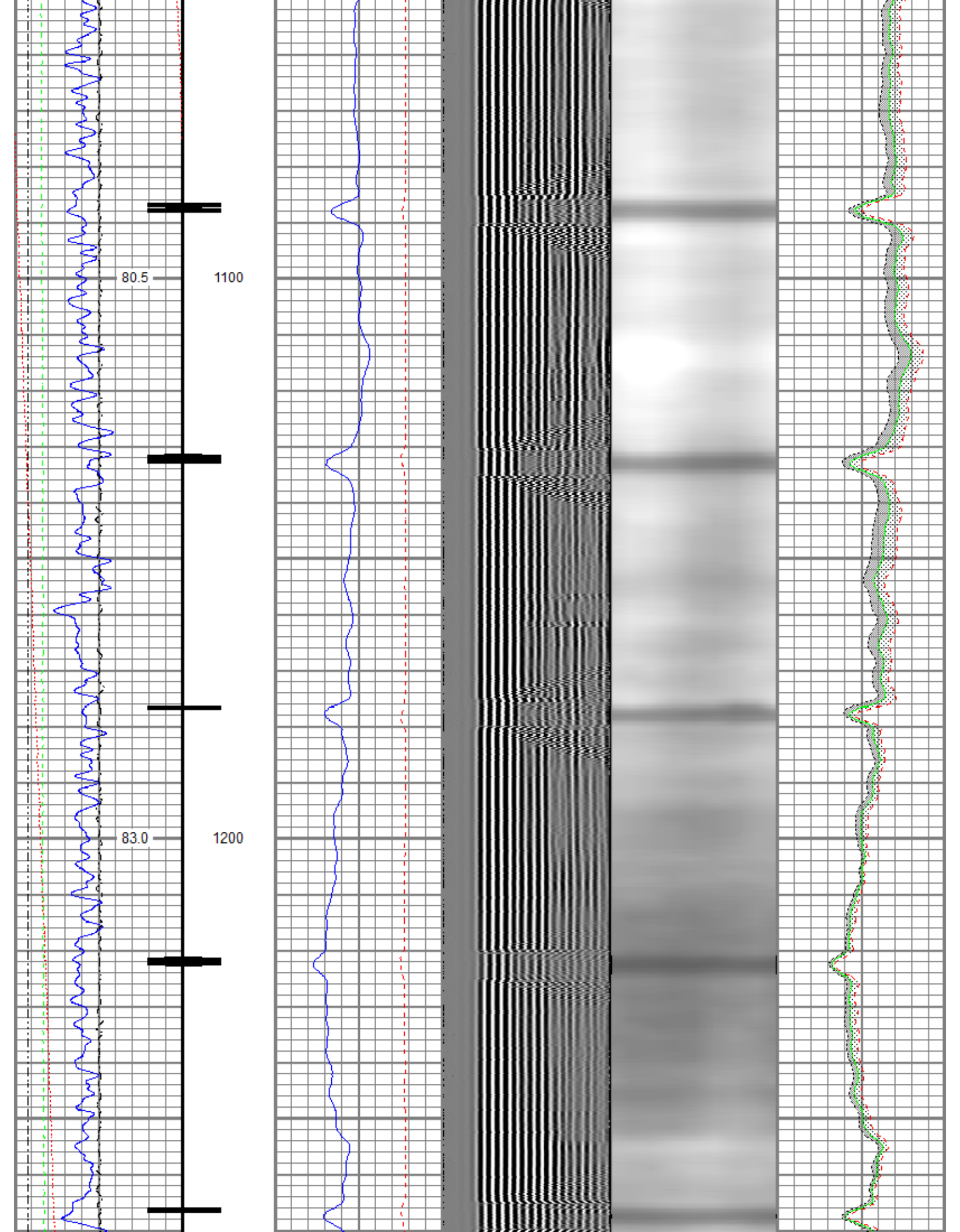




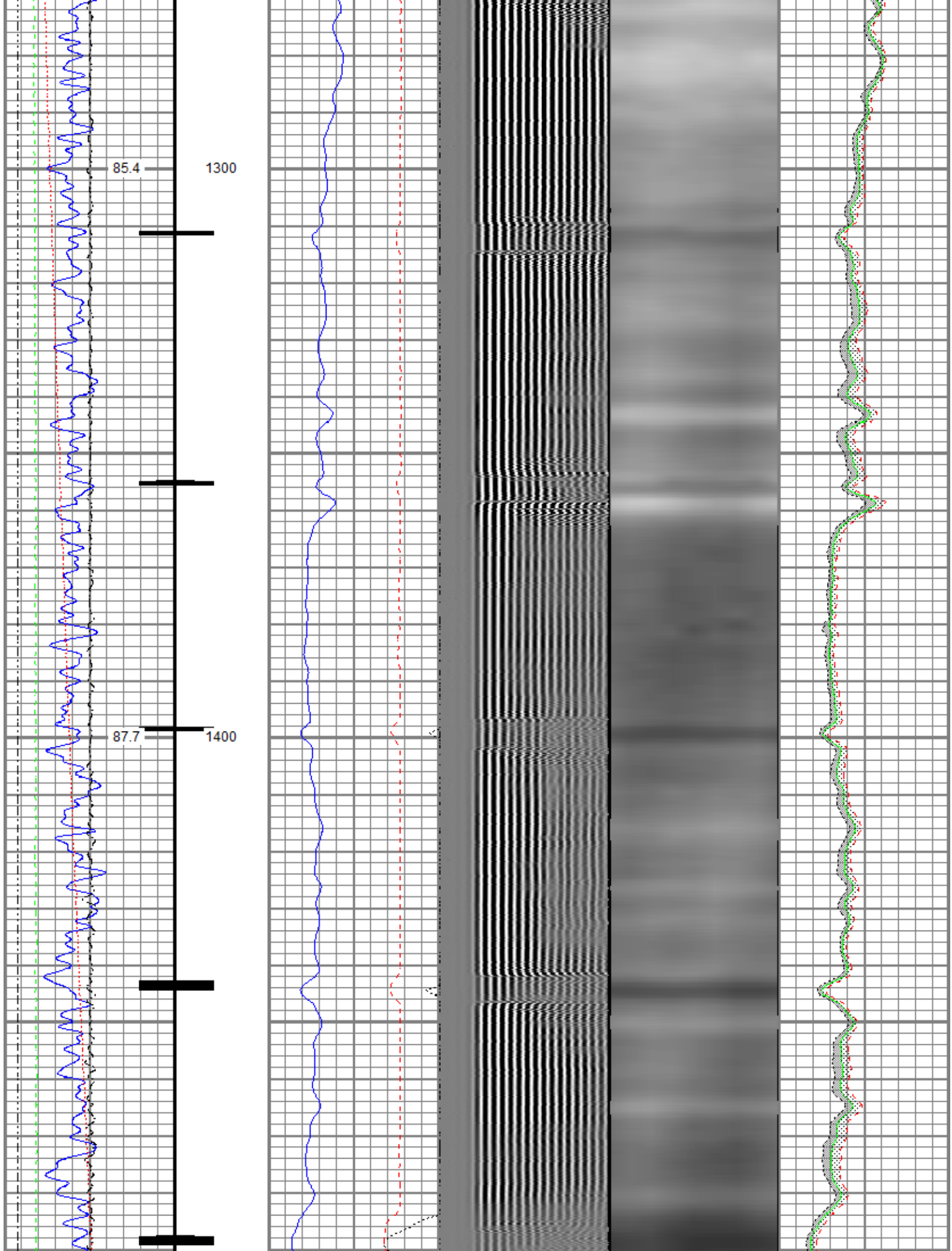




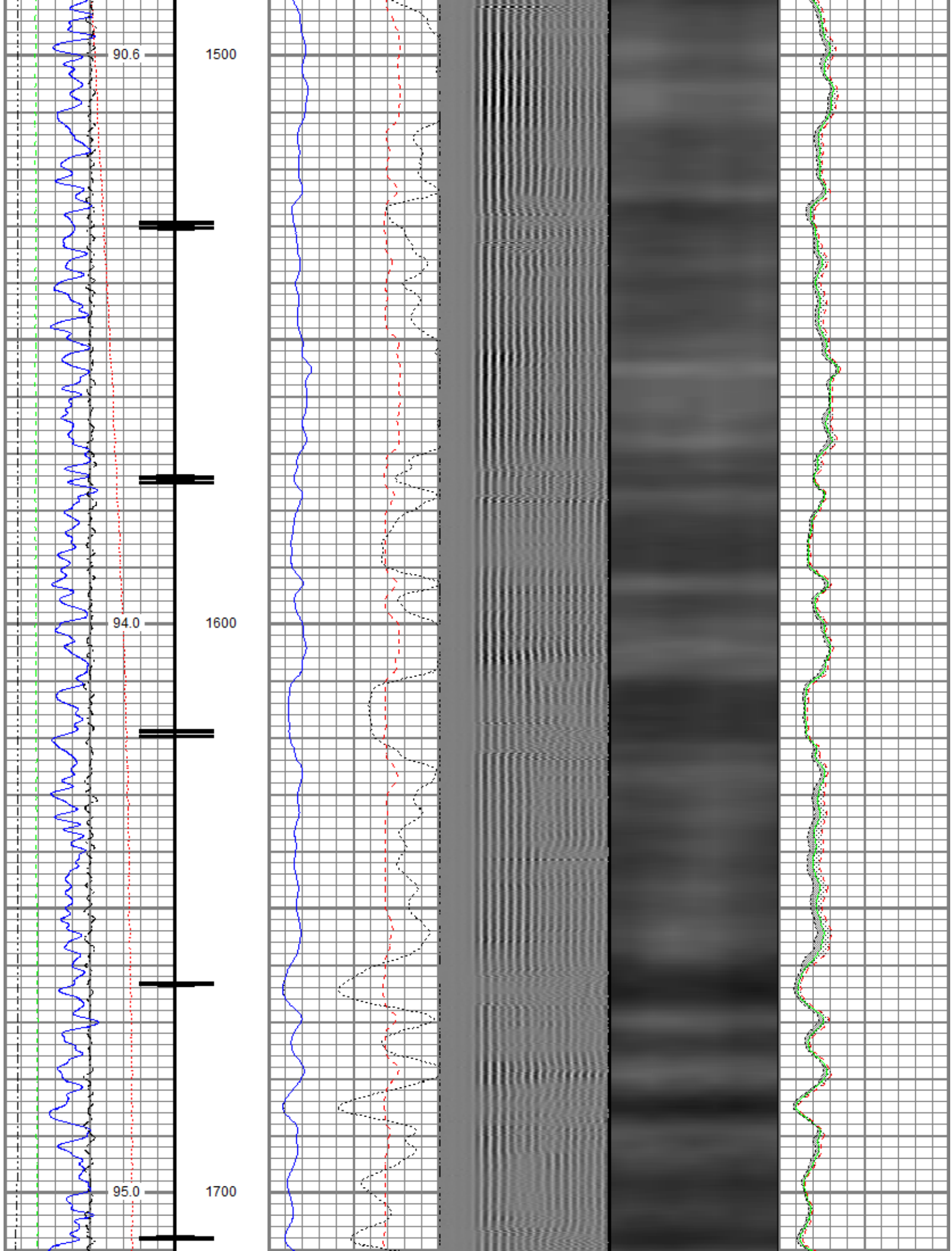


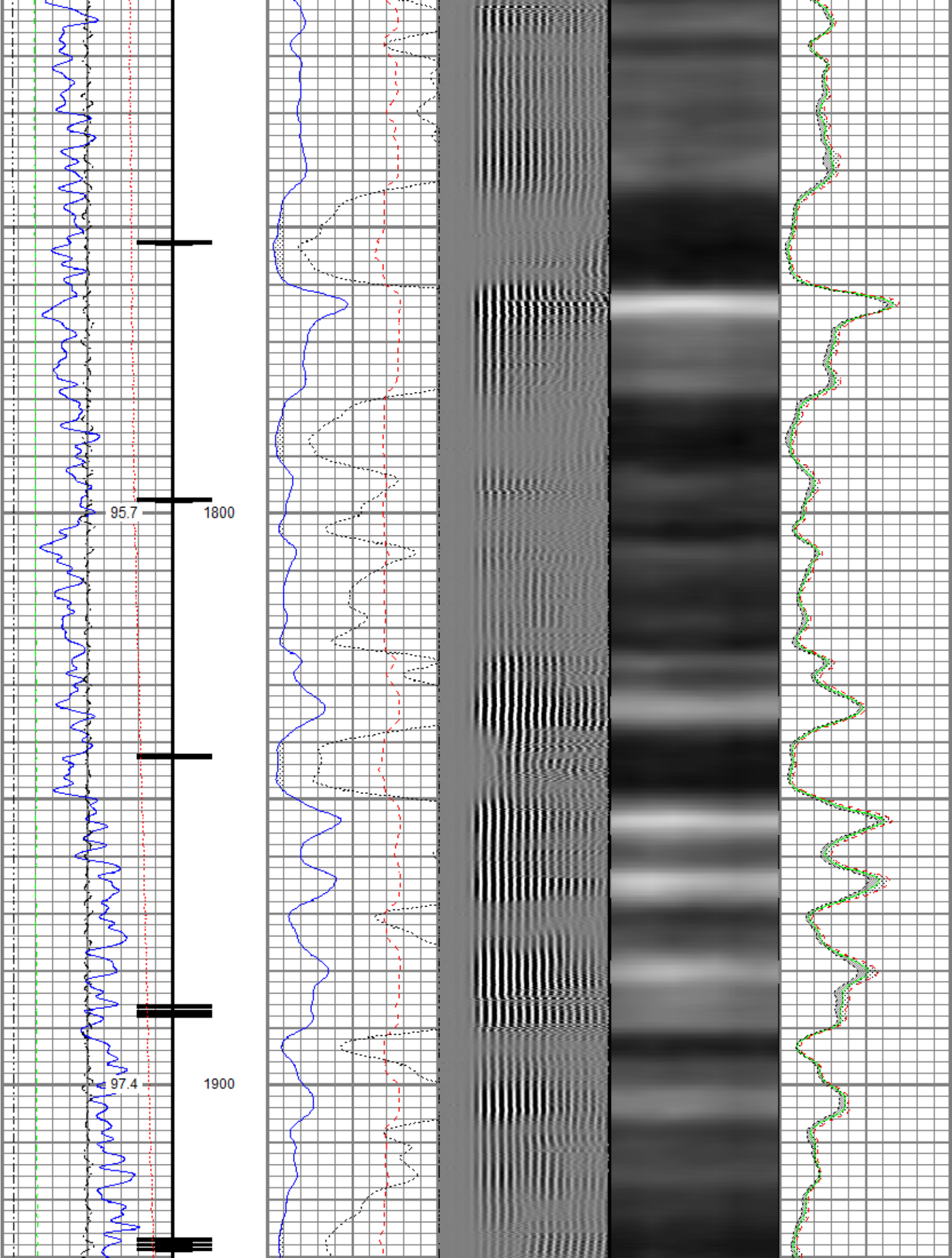


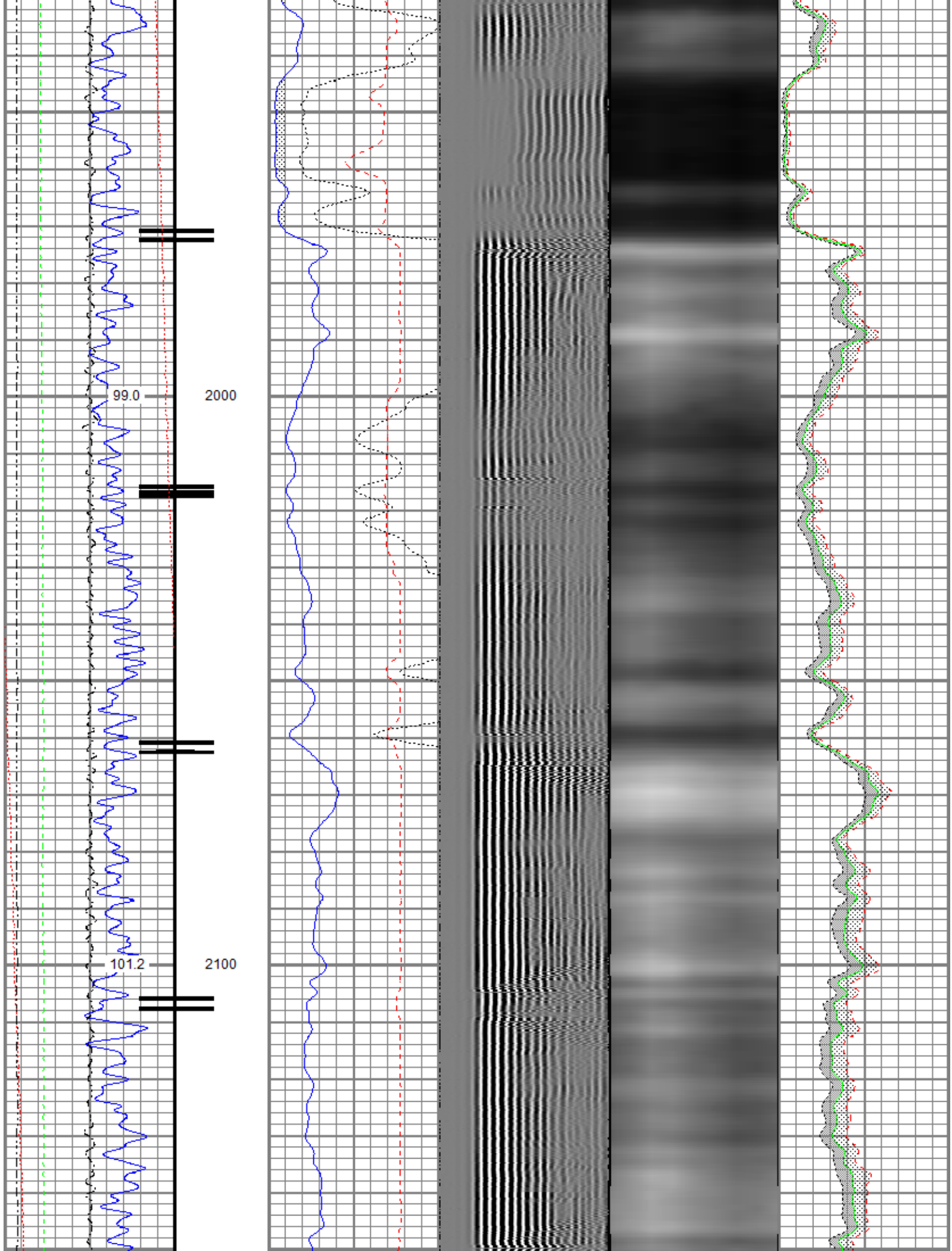




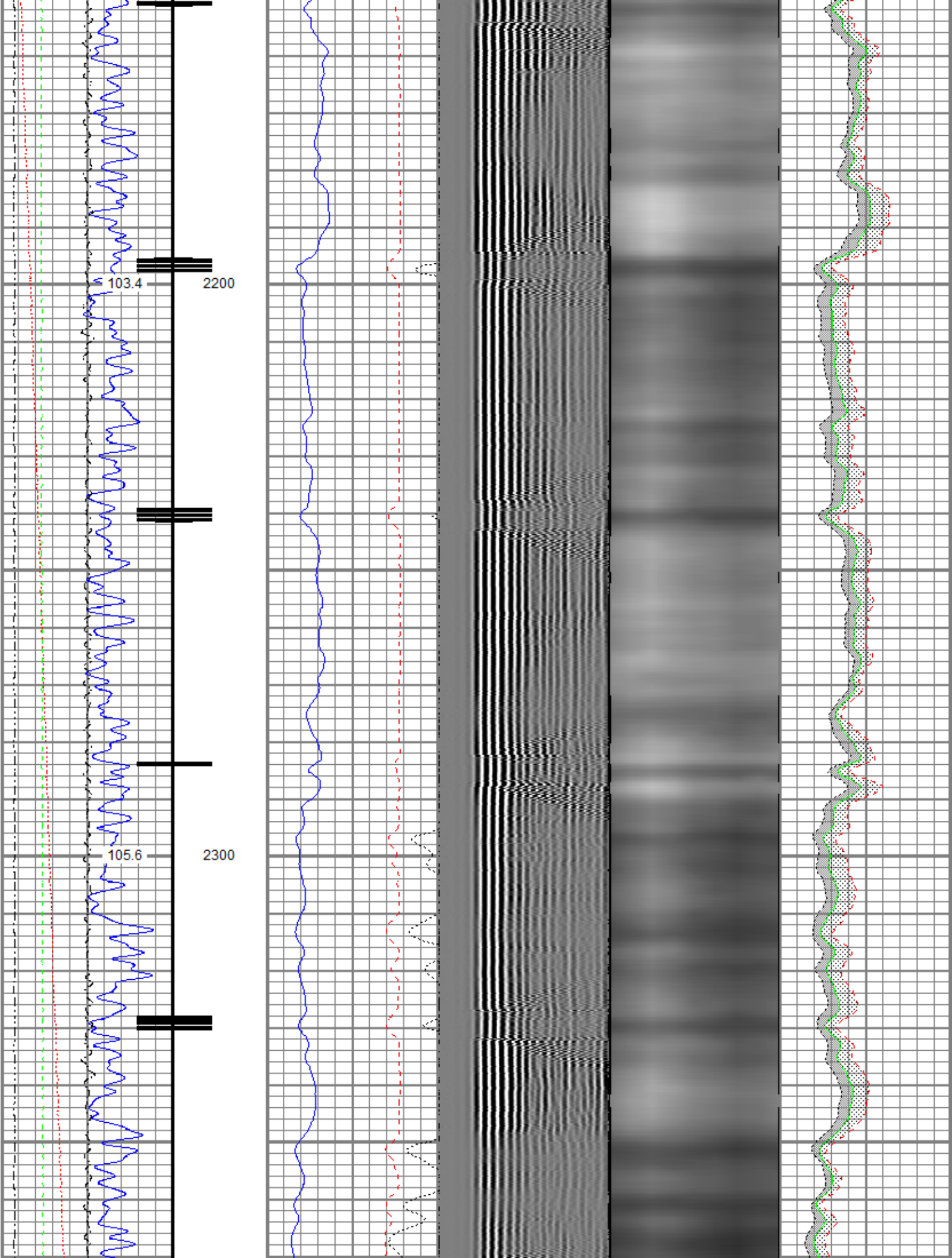




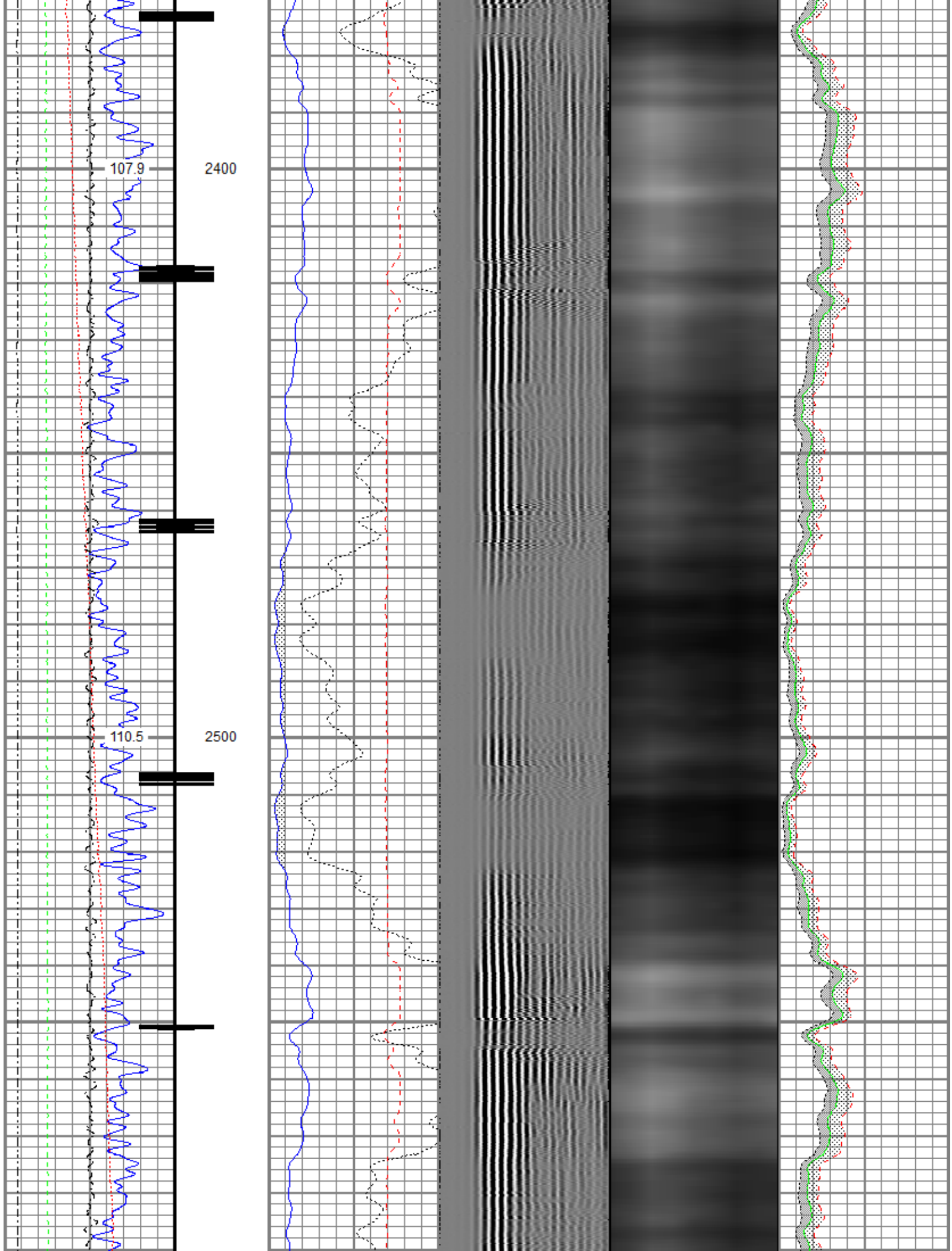


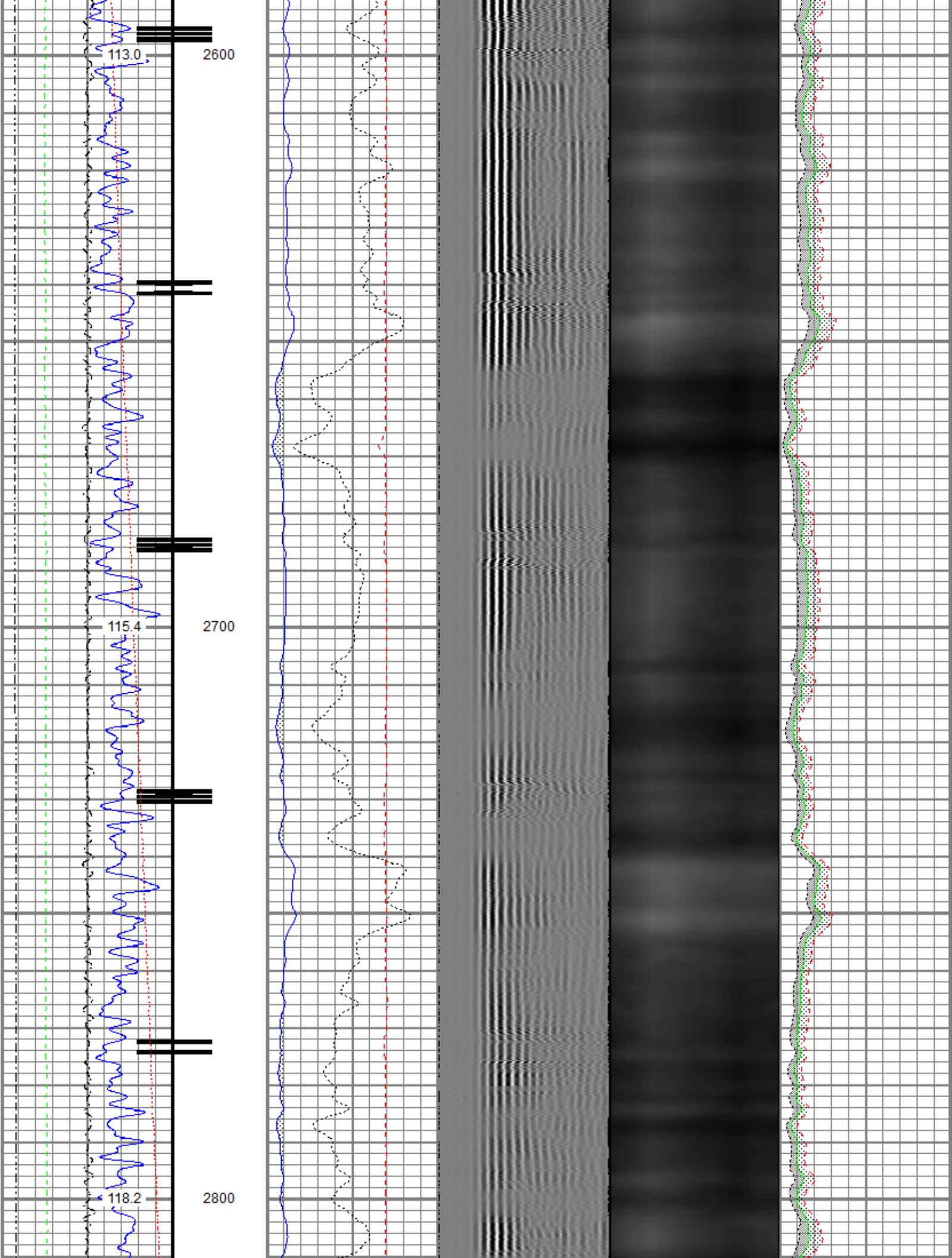


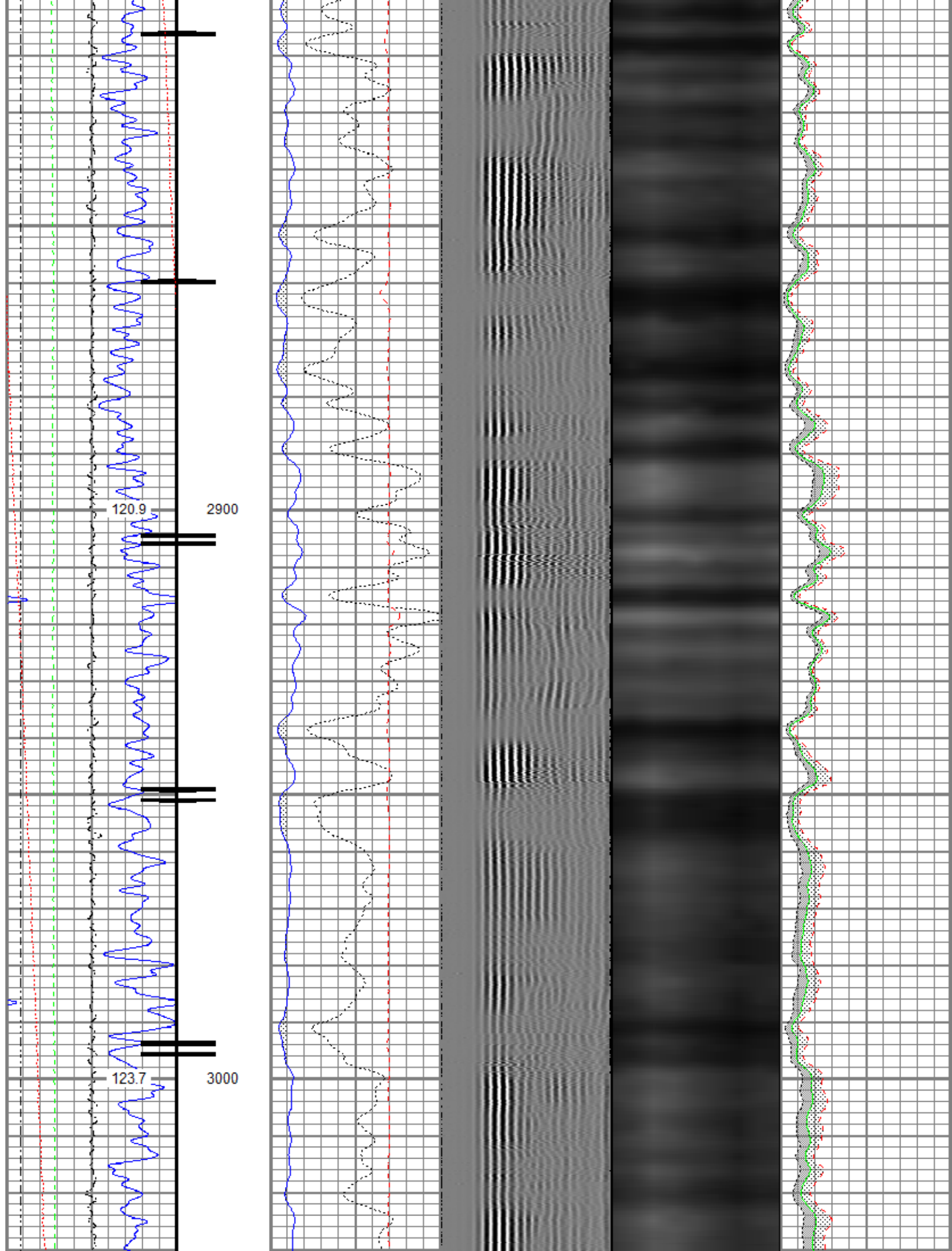




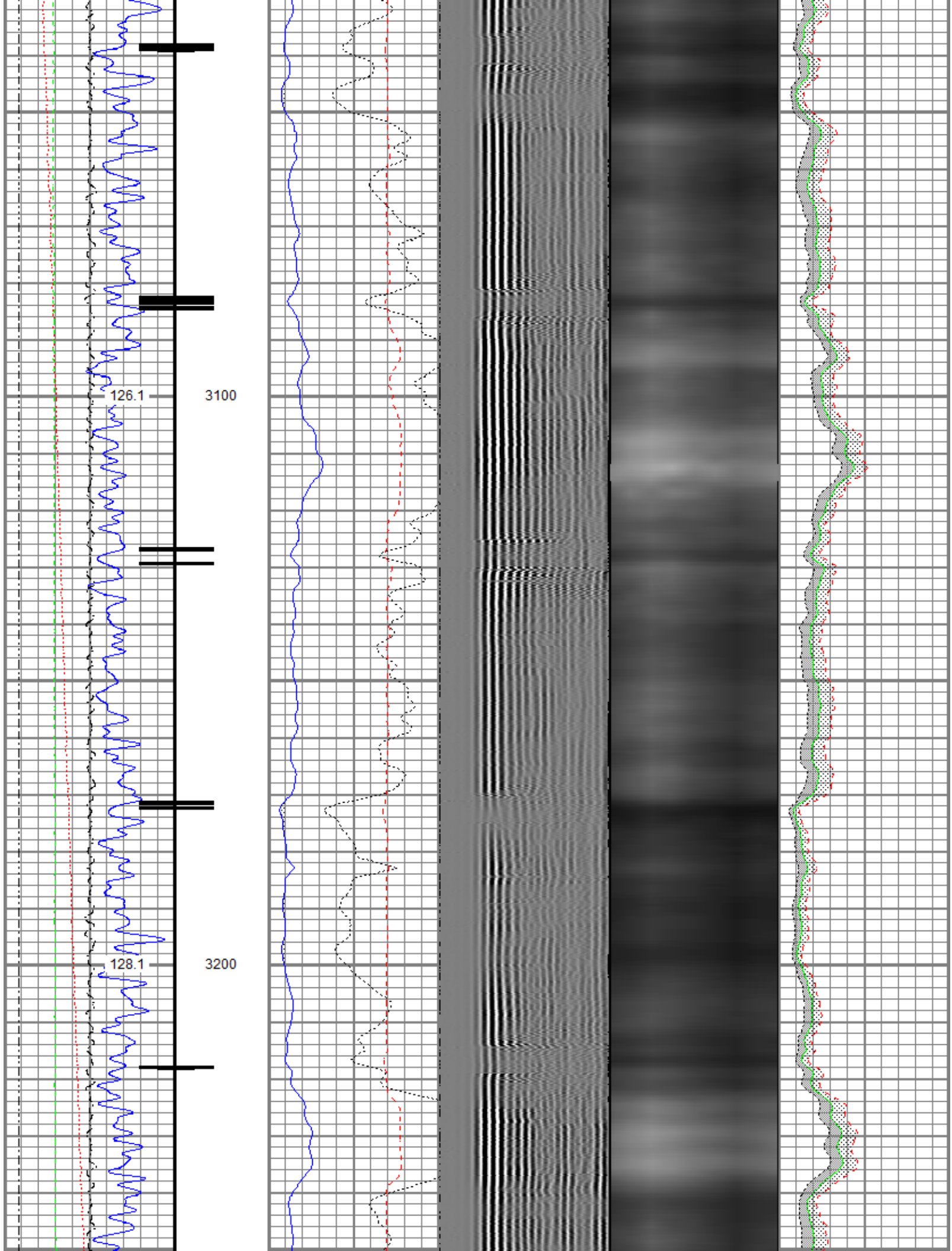




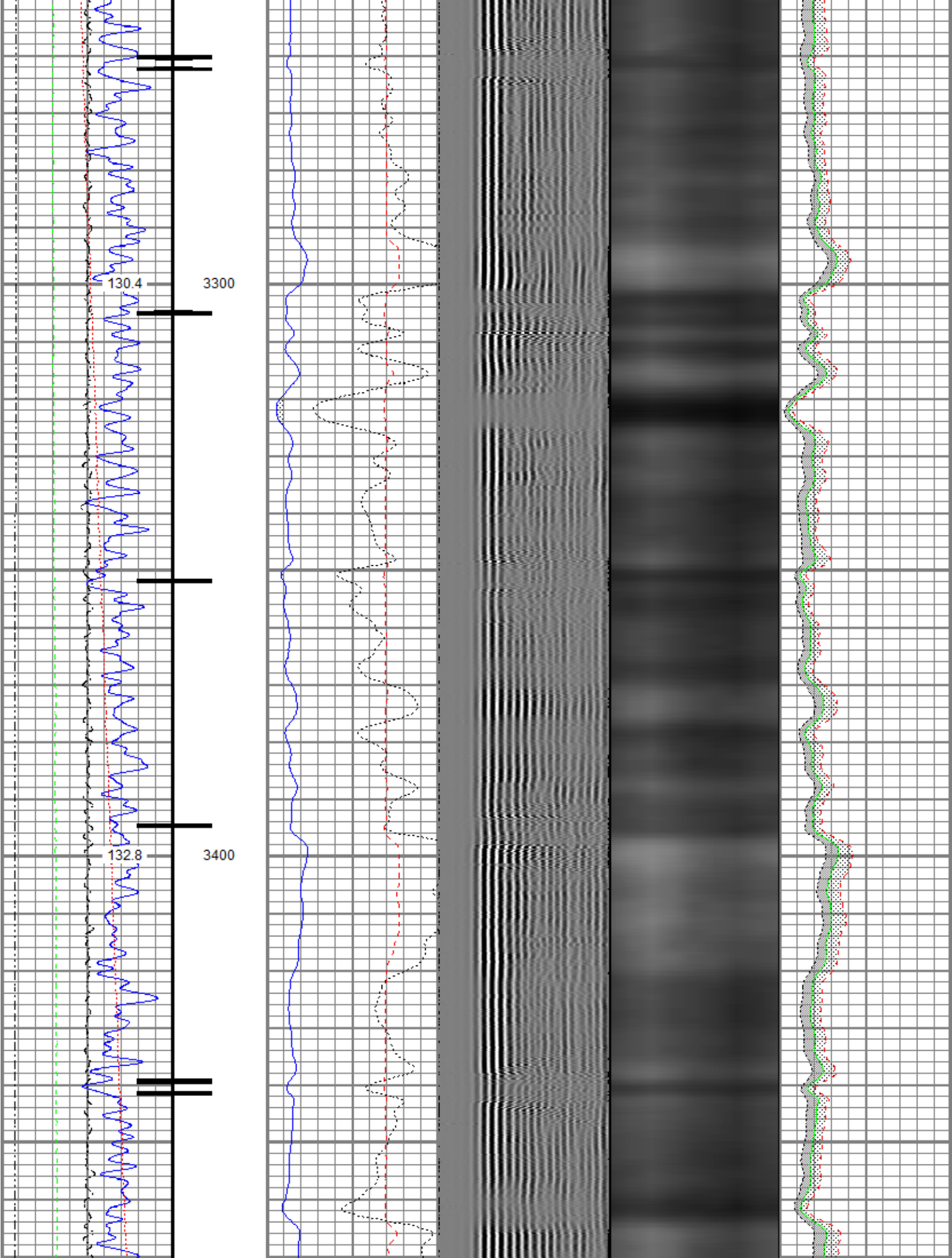


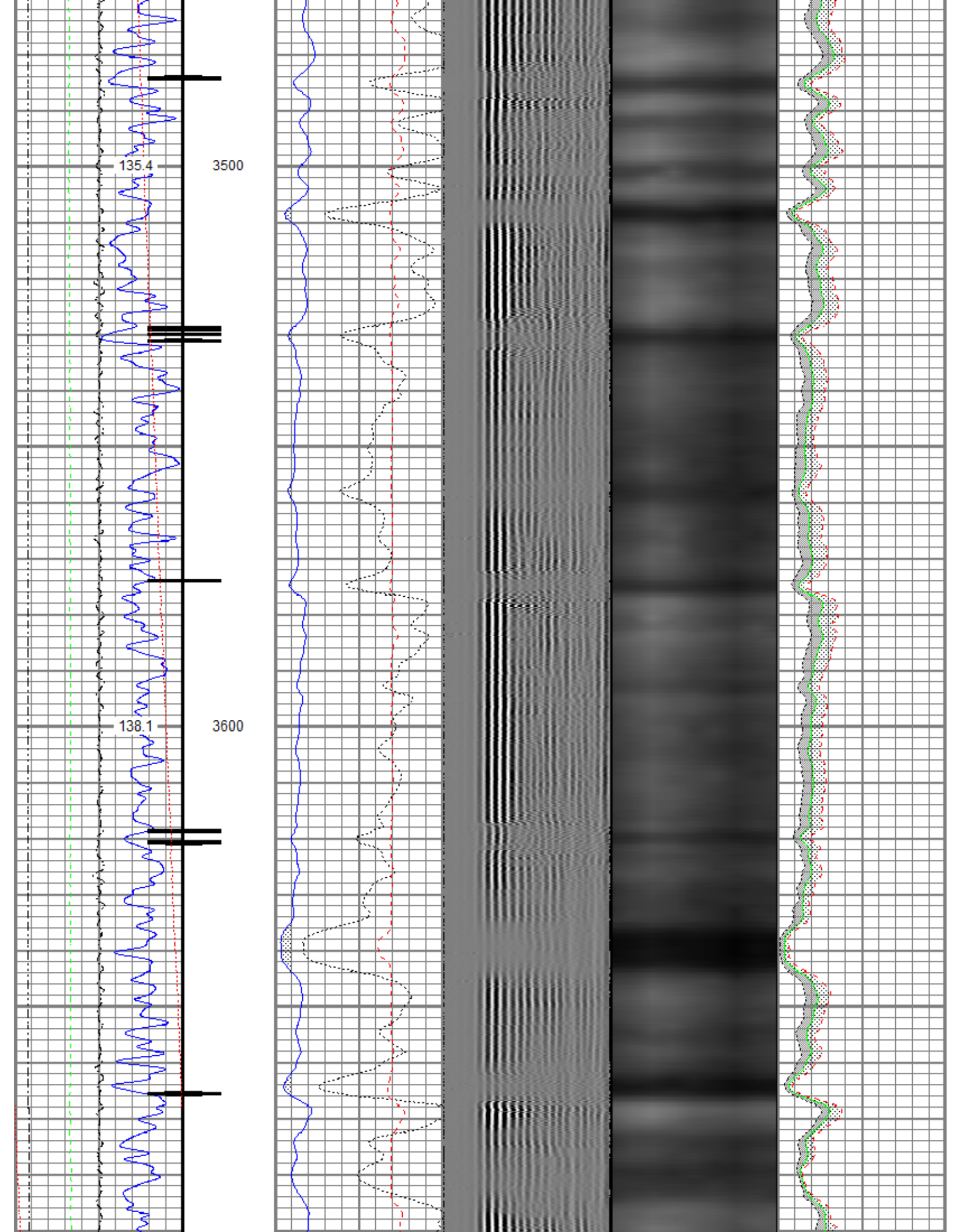


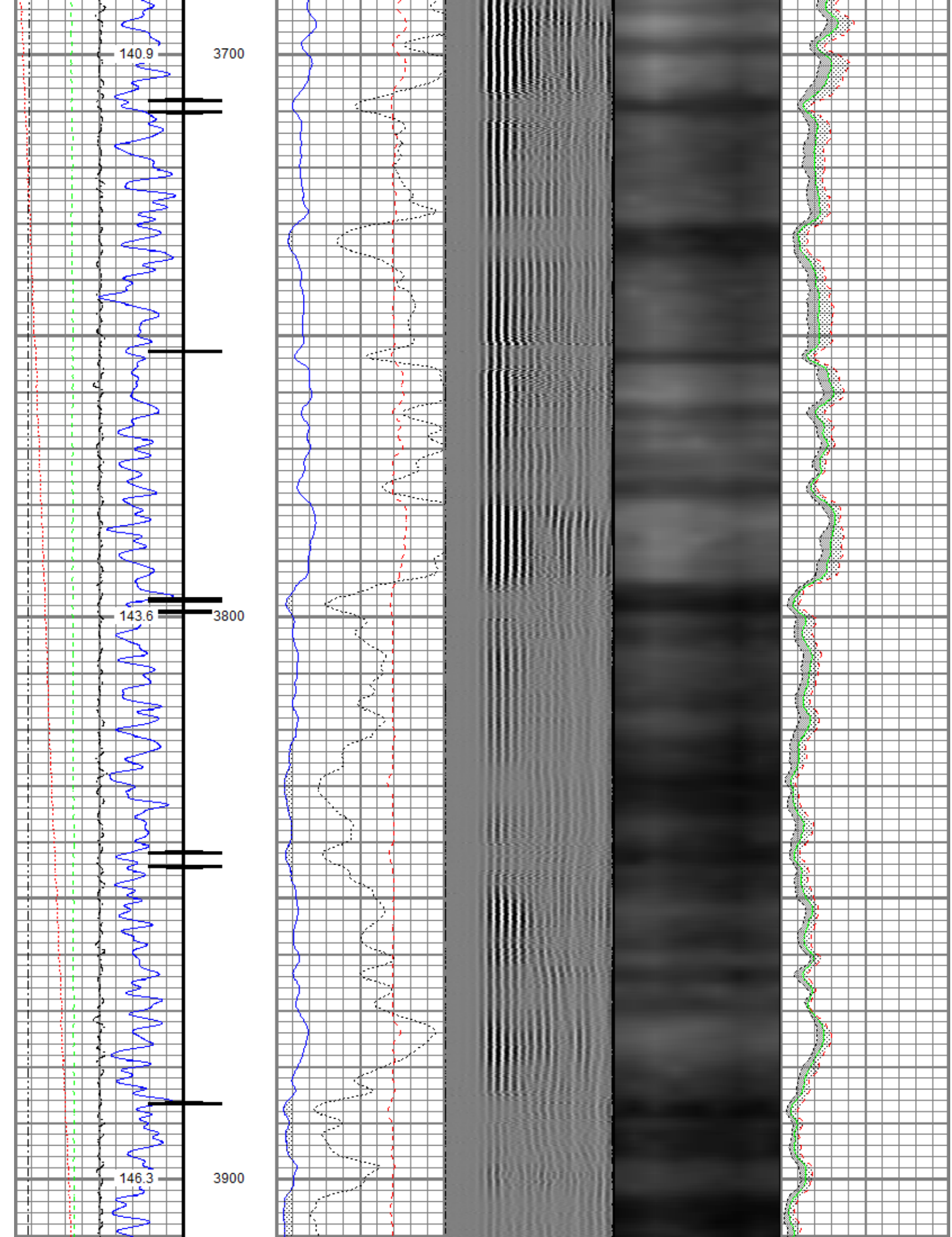




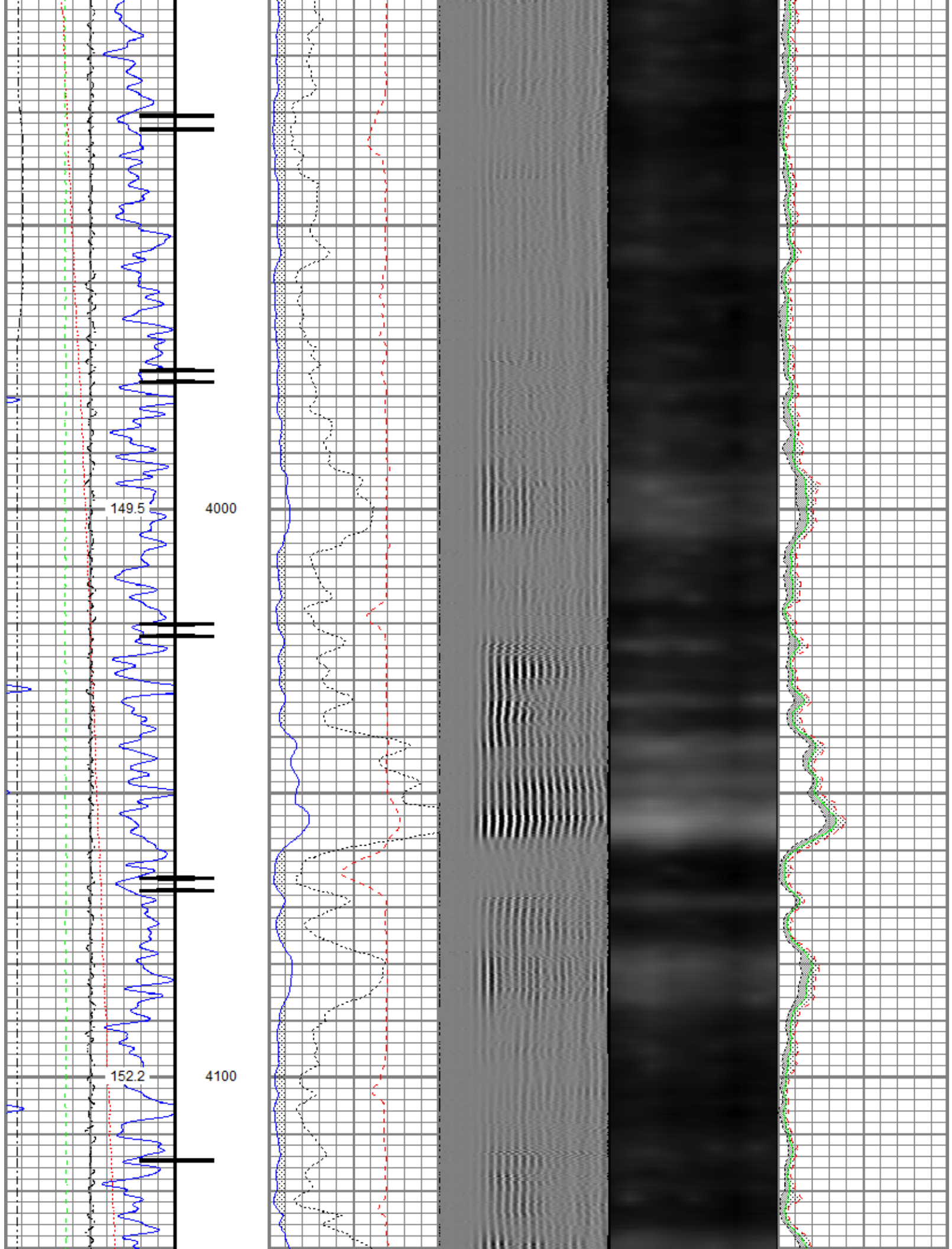




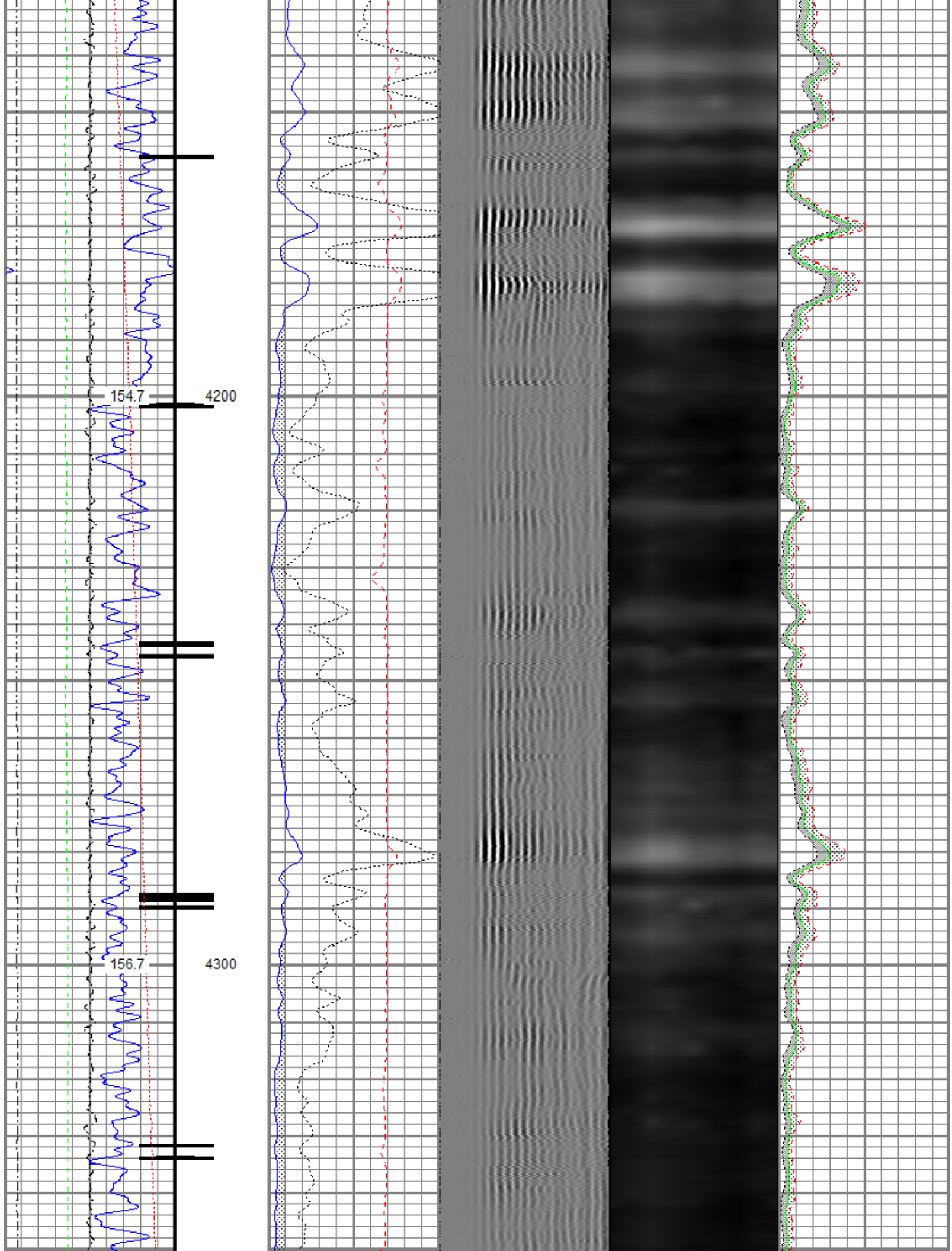


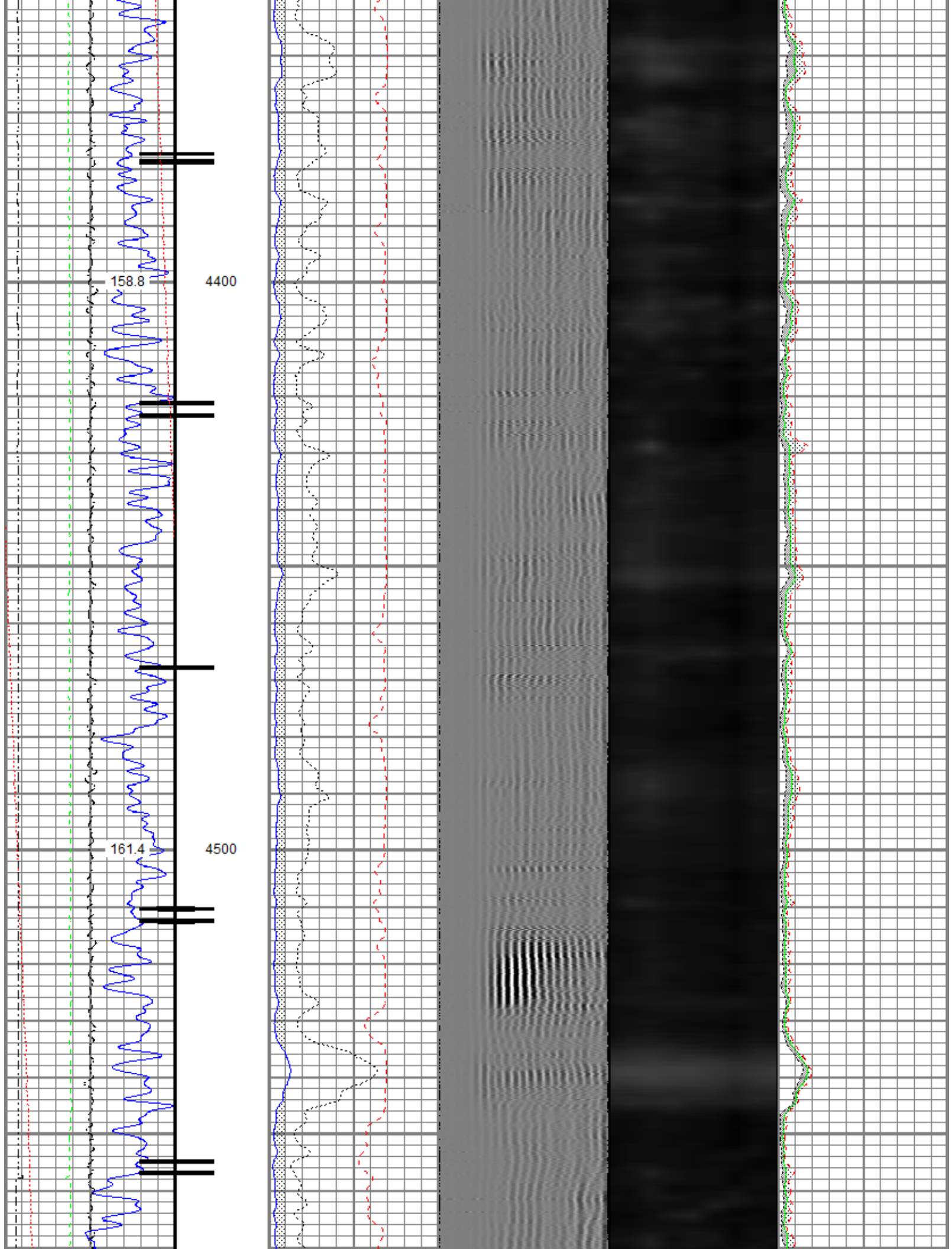


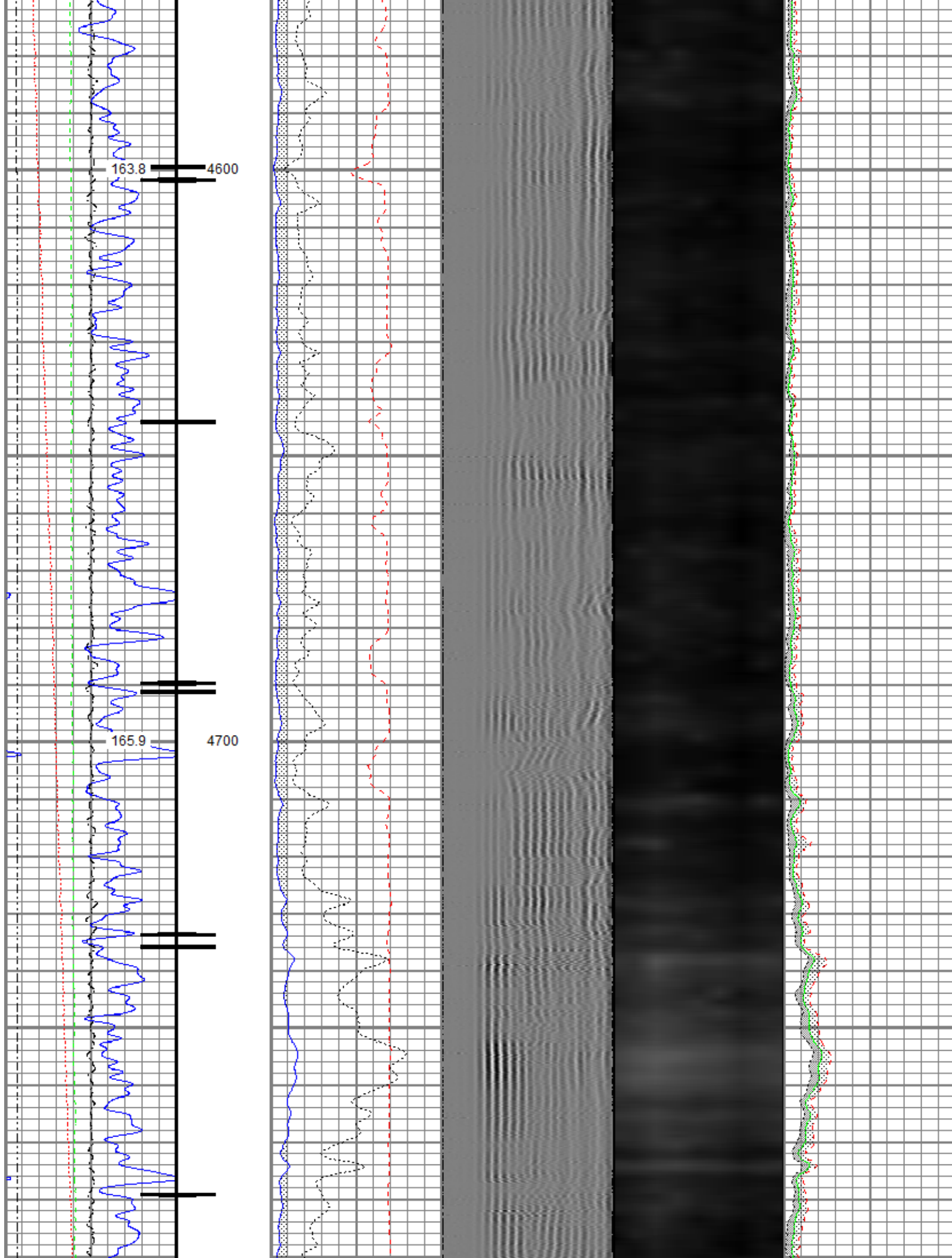




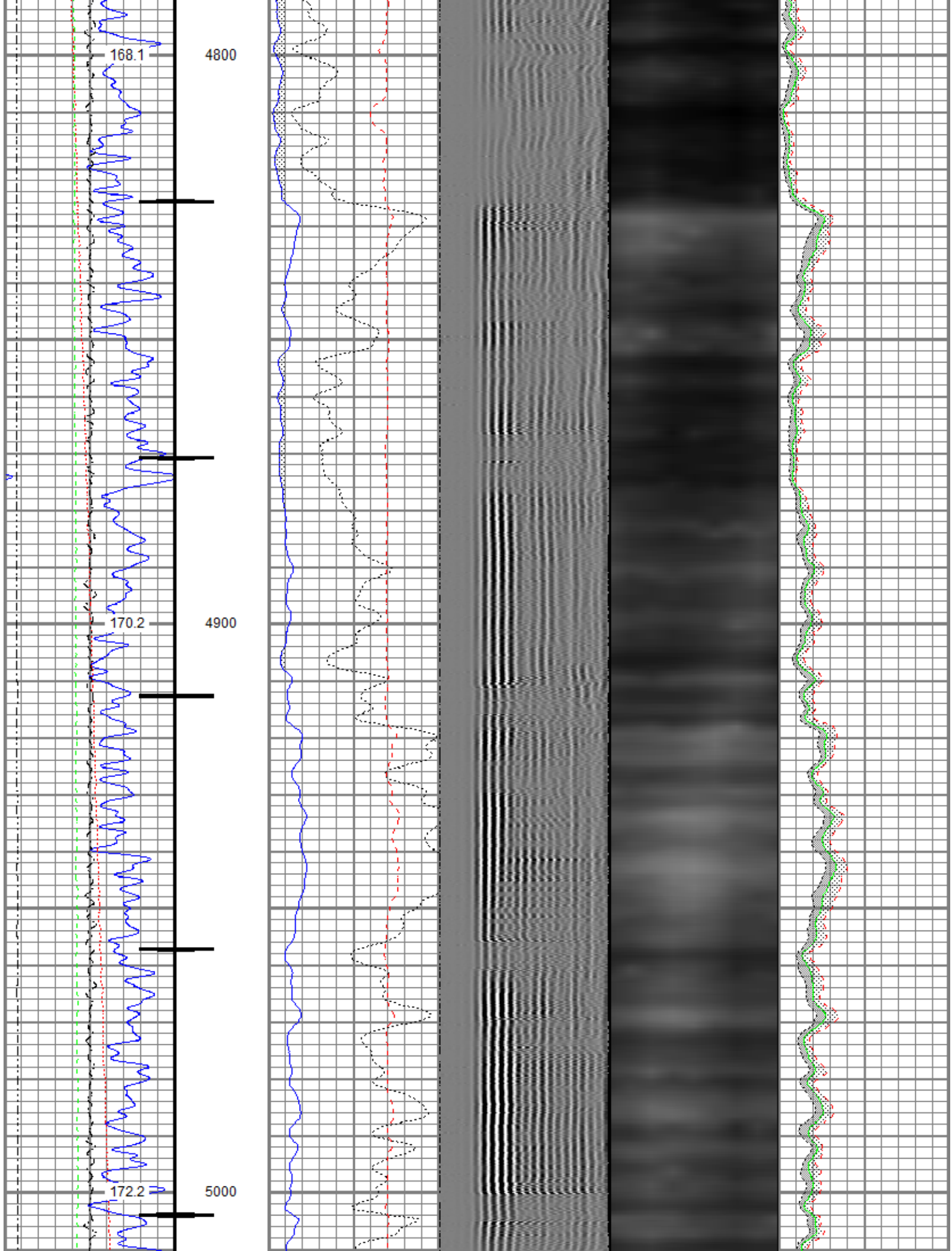


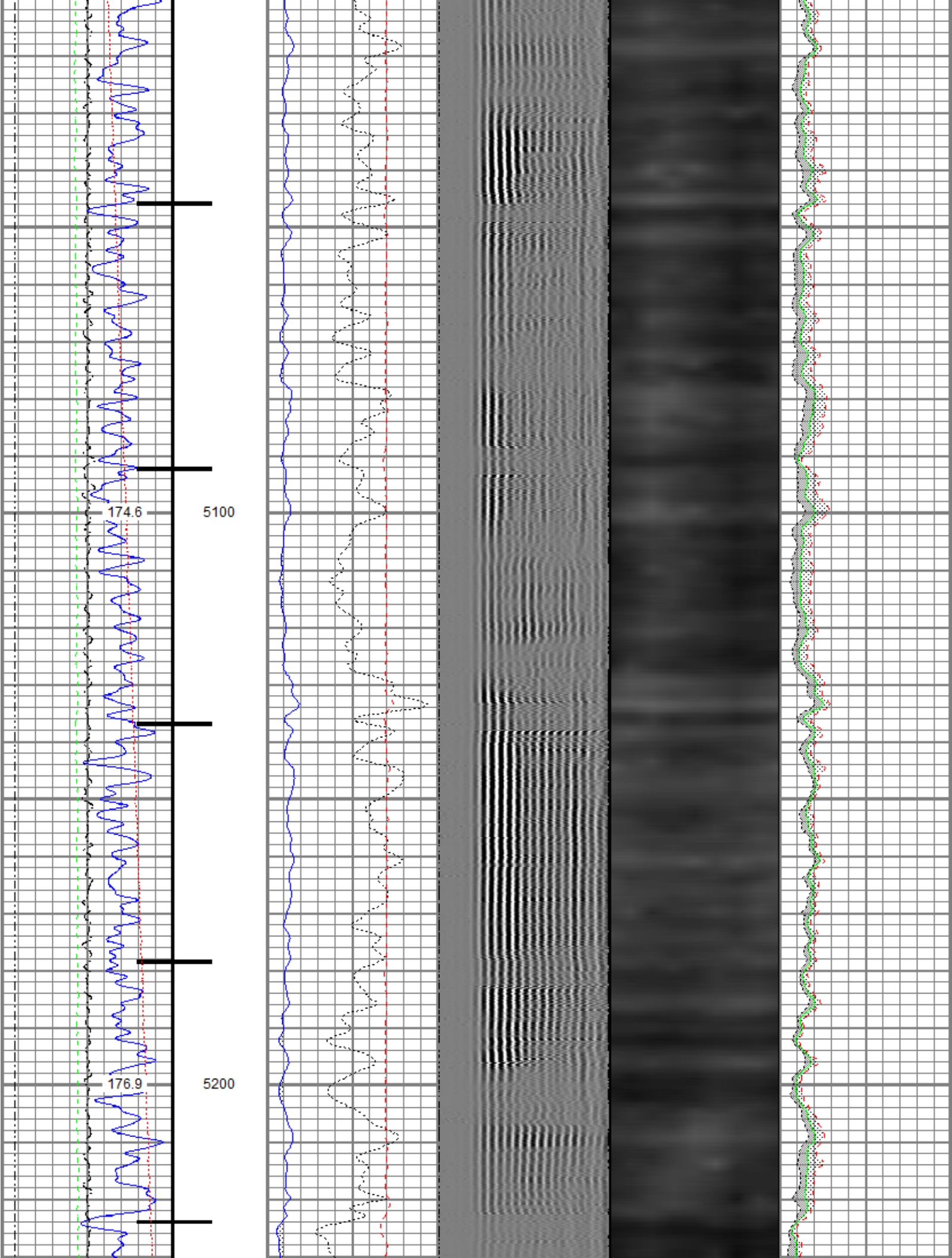


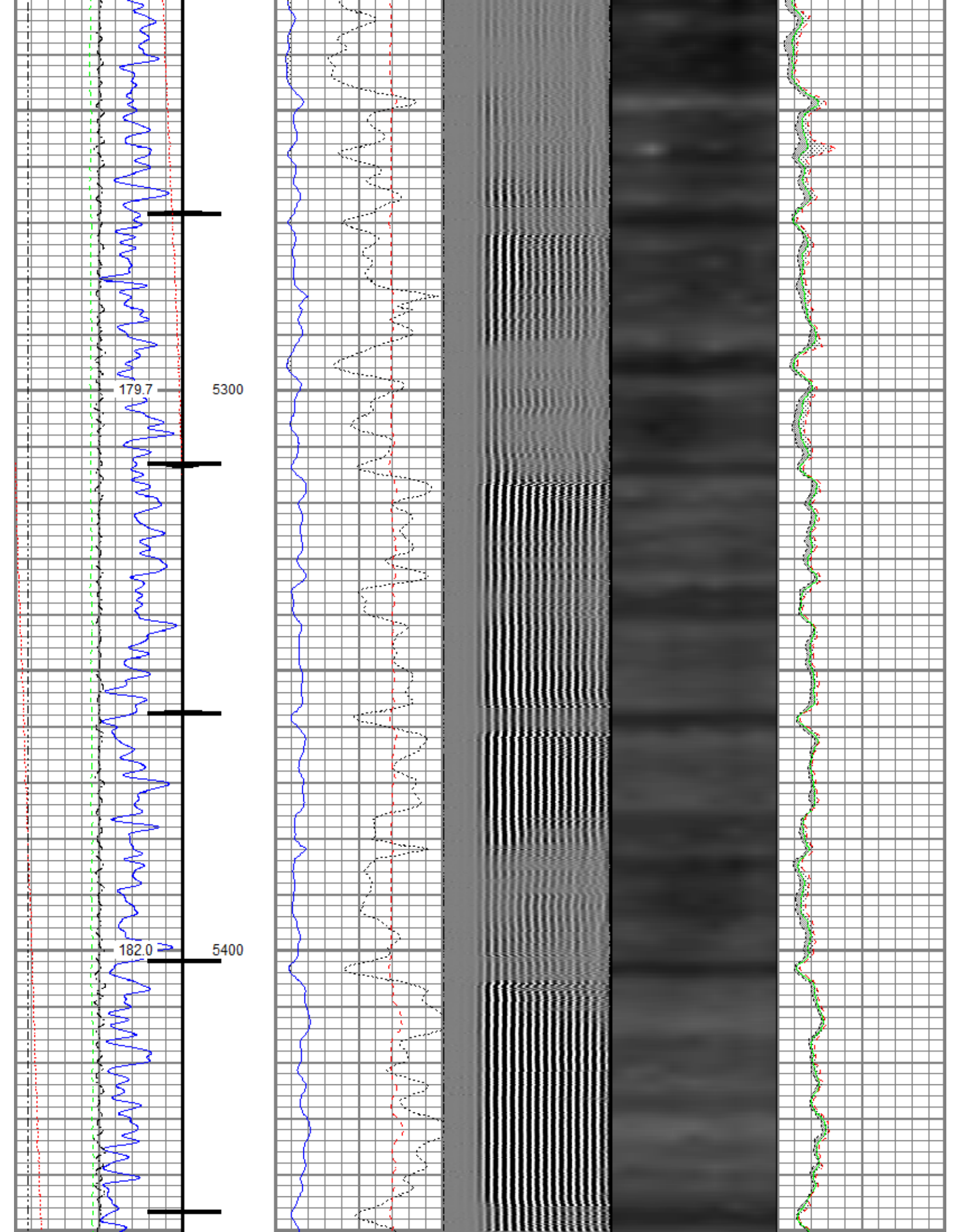




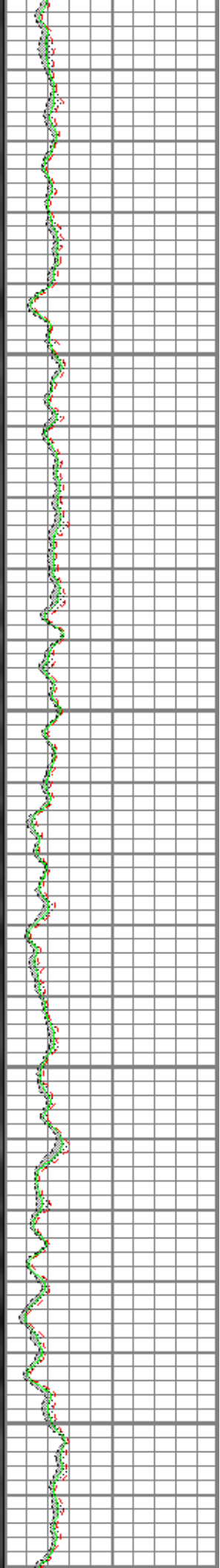
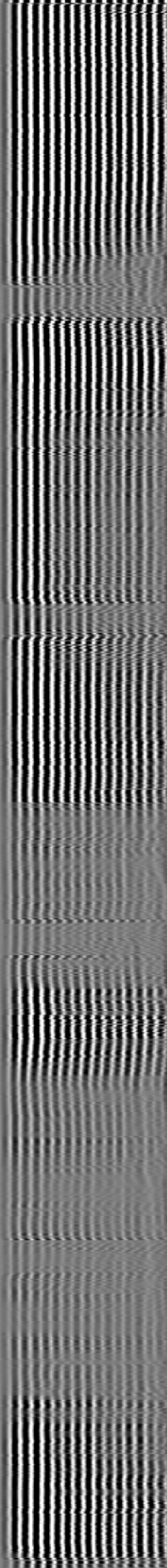
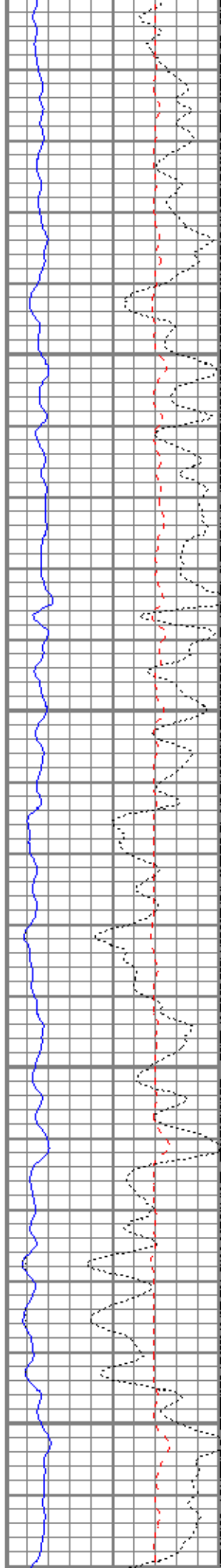
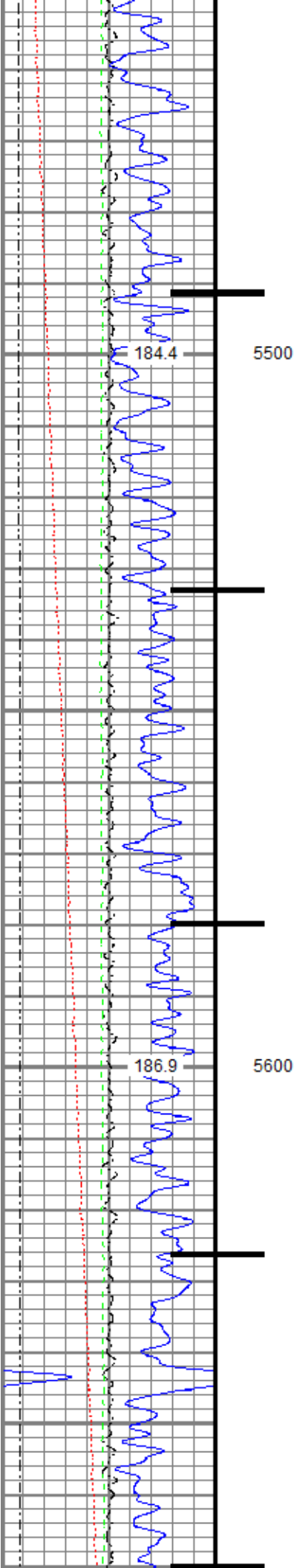


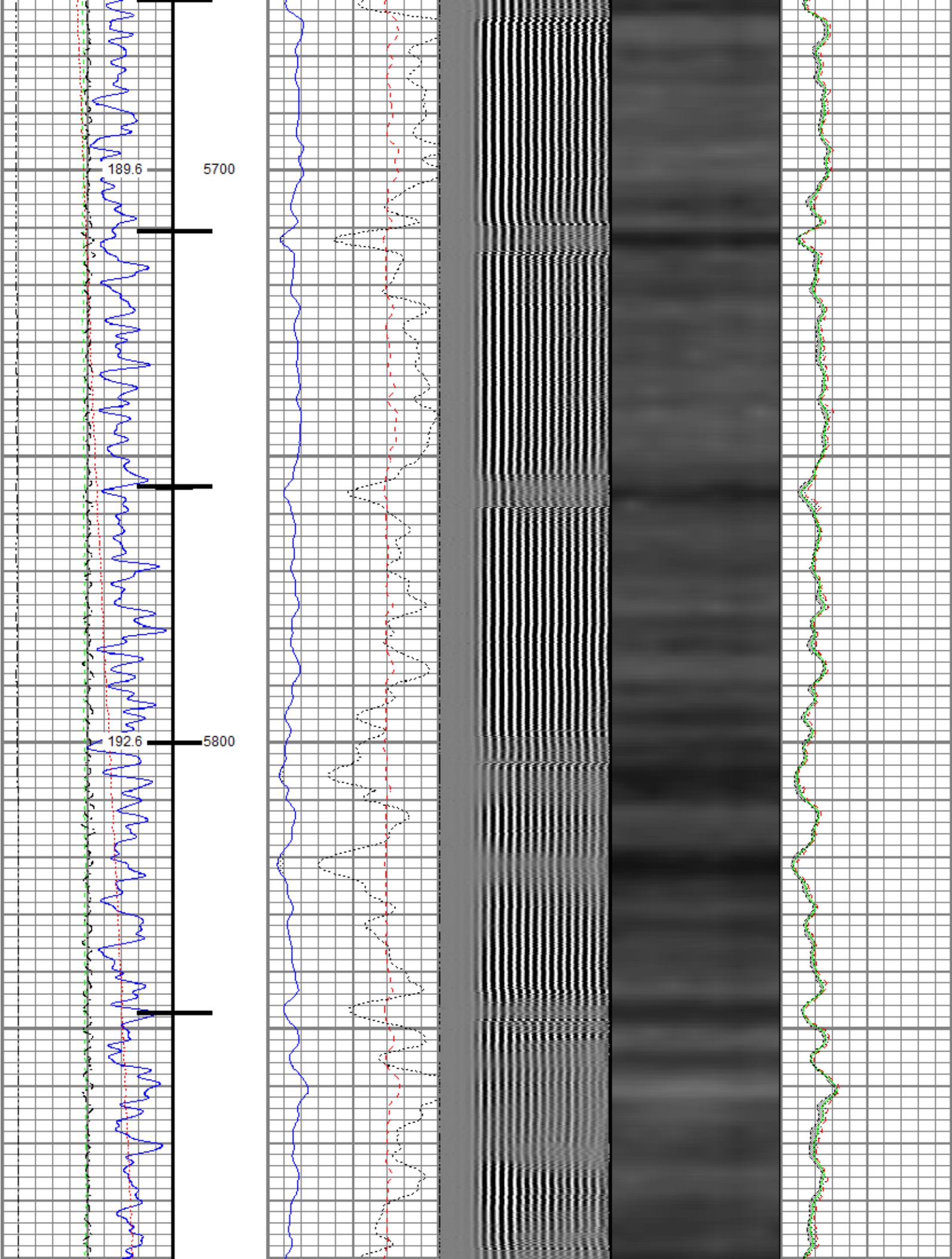


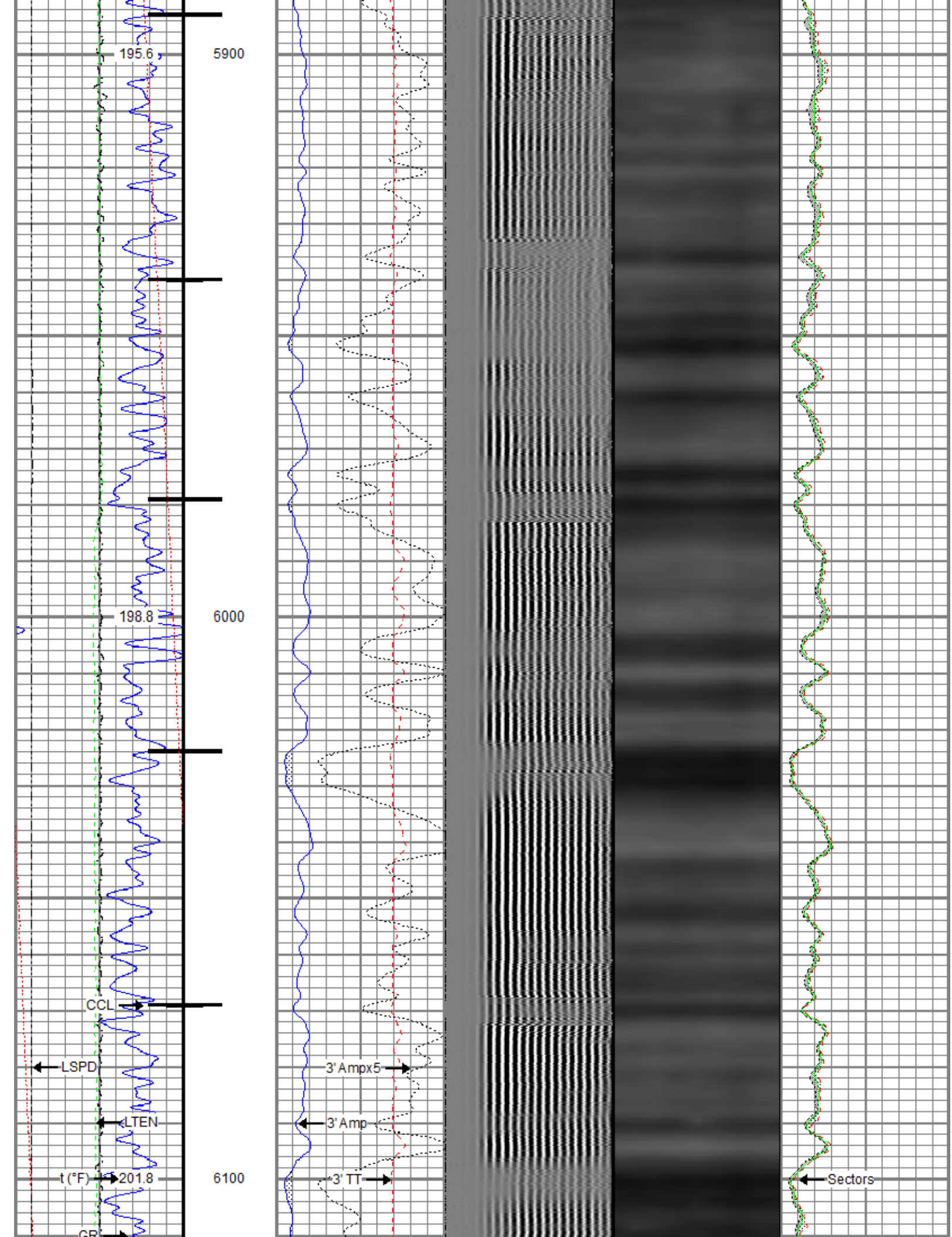




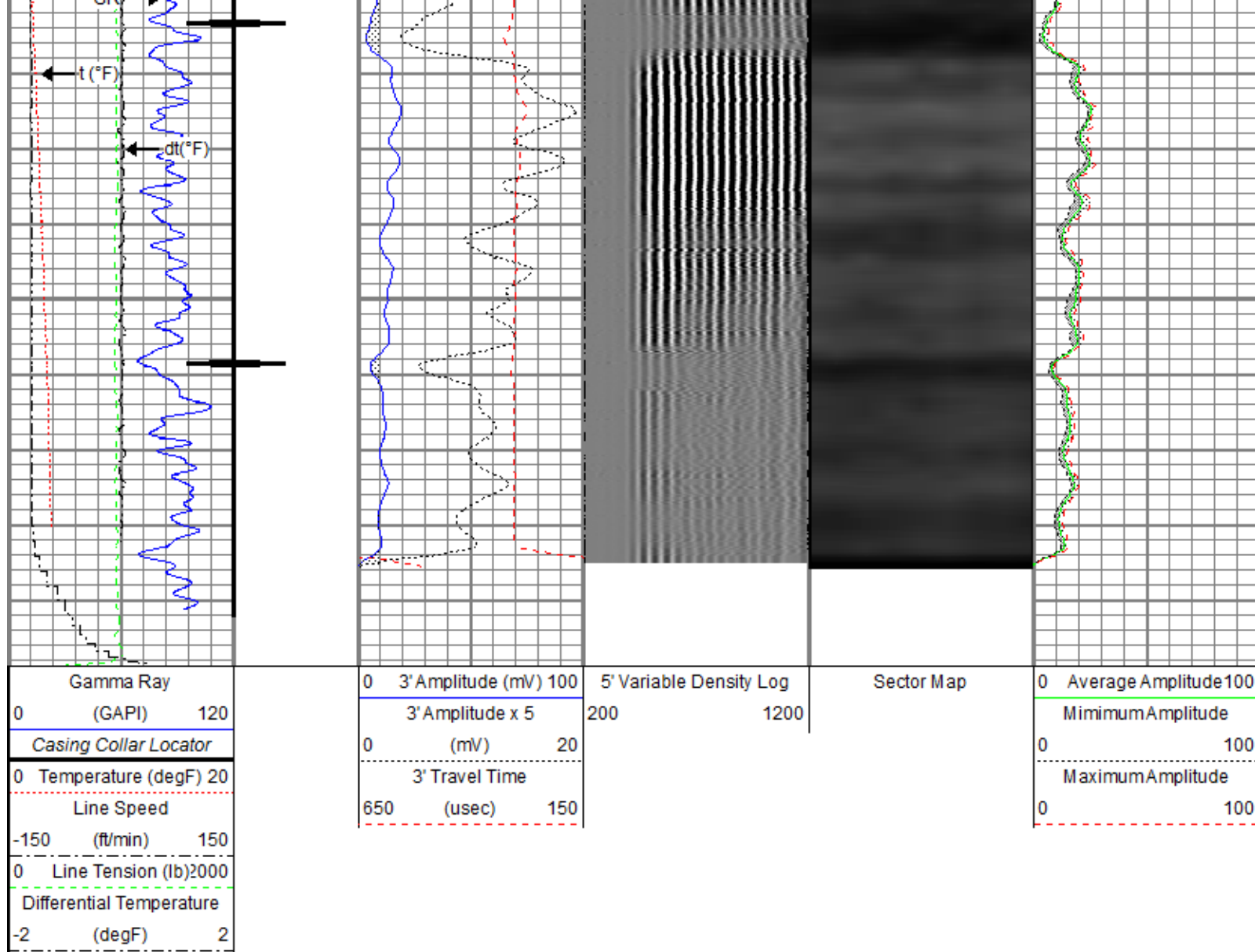








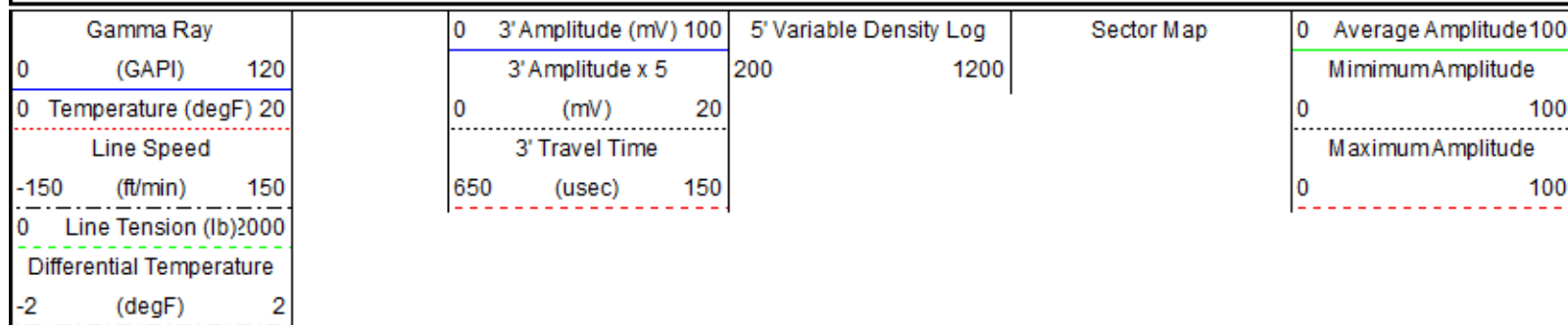




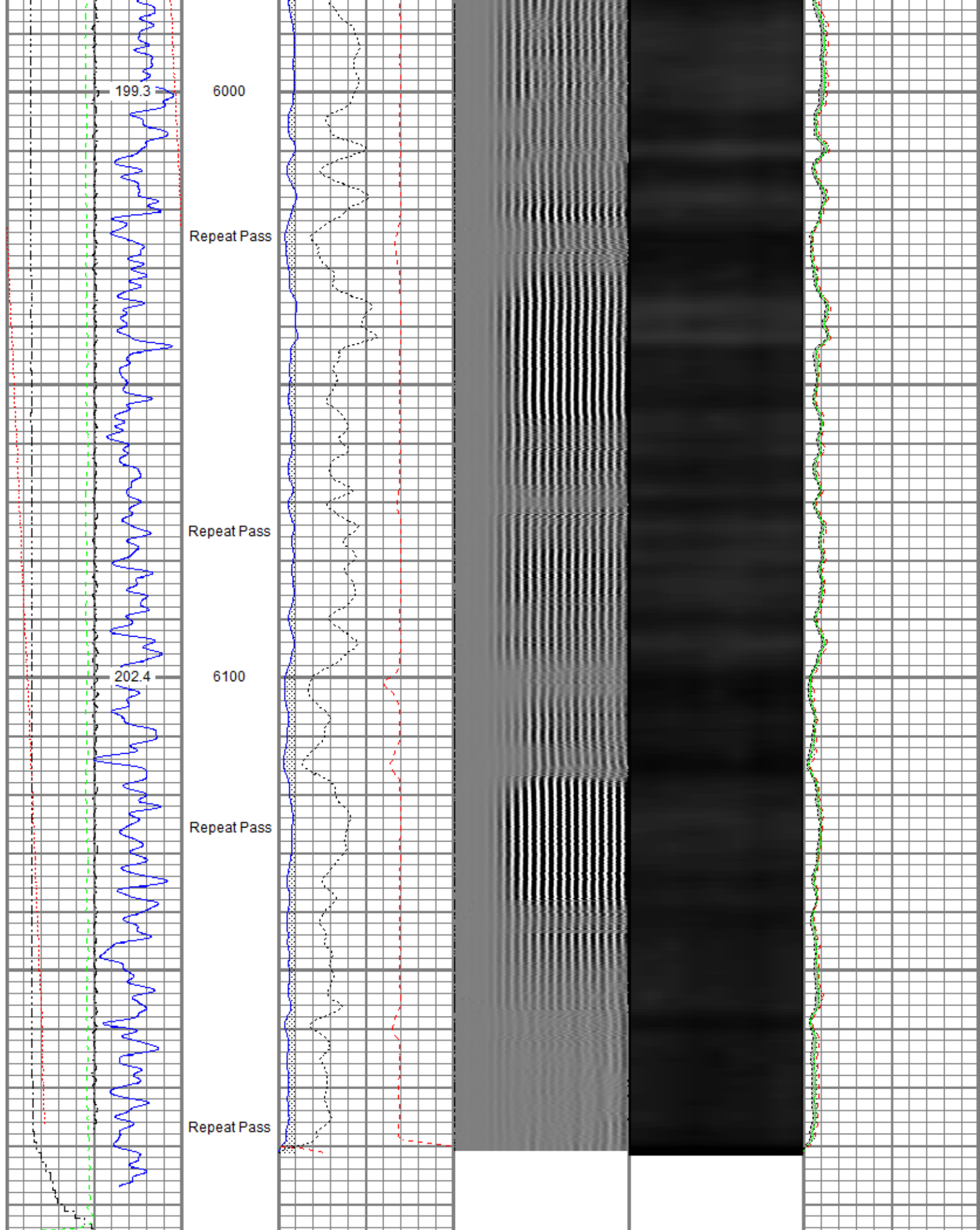
## Repeat Pass

Recorded With 2800 PSI Surface Induced Pressure

Database File 0512345247\_anadarko\_robin 9-15hz\_rbl\_01-04-18\0512345247\_anadarko\_robin 9-15hz\_rbl\_01-04-18.db  
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 Presentation Format ros\_radrii  
 Dataset Creation Sat Jan 06 17:03:10 2018  
 Charted by Depth in Feet scaled 1:240

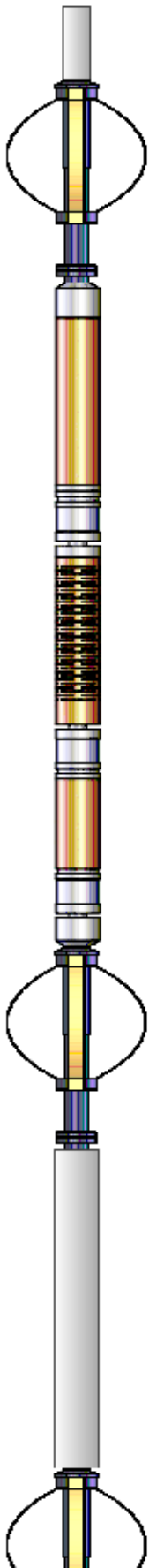
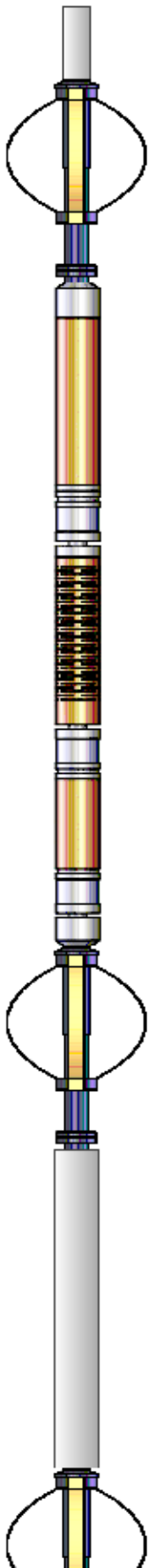
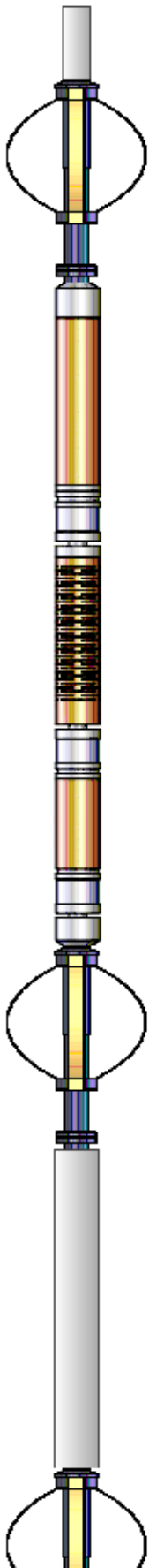
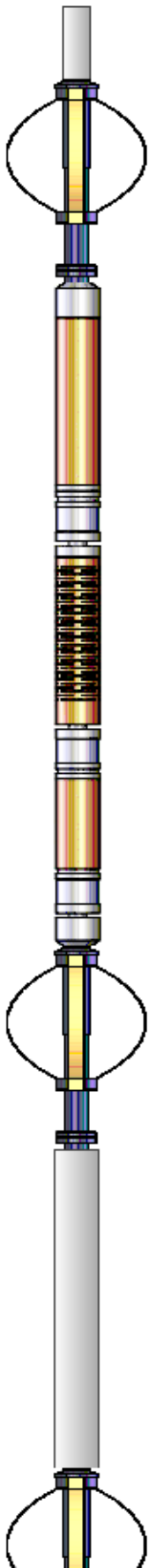


Repeat Pass




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 1200		Minimum Amplitude

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	16.75		Titan CHD-16875 GO	1.03	1.69	5.40
			Titan 1-11/16" Assembled Electric Cable Head w/ 1" Fishing Neck			
			Probe CENT-2750	2.88	2.75	20.00
			Probe 2-3/4" Electric Inline Bowspring Centralizer			
			Probe Radii-2750 RBT (FW1305-096)	9.39	2.75	105.00
			Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub			
WVFS8	14.52					
WVFS7	14.52					
WVFS6	14.52					
WVFS5	14.52					
WVFS4	14.52					
WVFS3	14.52					
WVFS2	14.52					
WVFS1	14.52					
WVFCAL	14.52					
WVF3FT	14.52					
WVF5FT	13.52					
CCL\$2 CCL\$1	6.51		Probe CENT-2750	2.88	2.75	20.00
	6.51		Probe 2-3/4" Electric Inline Bowspring Centralizer			
GR	5.26		Probe GR-CCL-2750 GOB (FW1212-026)	4.51	2.75	55.00
			Probe 2-3/4" rev.2 Digital Scintillation Gamma Ray/CCL Combined			
			Probe CENT-2750	2.88	2.75	20.00



			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.66	2.75	20.00
Dataset: 0512345247_anadarko_robin 9-15hz_rbl_01-04-18.db: field/well/run1/pass4.1 Total length: 23.57 ft Total weight: 225.40 lb O.D.: 2.75 in						

Calibration Report	
Database File	c:\programdata\warrior\data\0512345247_anadarko_robin 9-15hz_rbl_01-04-18\0512345247_anadarko_robin 9-15hz_rbl_01-04-18
Dataset Pathname	pass4.1
Dataset Creation	Sat Jan 06 16:49:20 2018

Gamma Ray Calibration Report		
Serial Number:	FW1212-026	
Tool Model:	2750 GOB	
Performed:	Sun Nov 12 12:27:51 2017	
Calibrator Value:	637.0	GAPI
Background Reading:	113.7	cps
Calibrator Reading:	1029.1	cps
Sensitivity:	0.6959	GAPI/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	FW1305-096	
Tool Model:	2750 RBT	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	28.352	ft


Master Calibration, performed (Derived):						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.007	0.471	0.800	71.921	153.248	-0.330
CAL	0.004	0.549				
5'	0.010	0.415	0.800	71.921	175.813	-0.969
SUM						
S1	0.006	0.469	0.000	100.000	215.753	-1.268
S2	0.007	0.456	0.000	100.000	222.733	-1.587
S3	0.007	0.452	0.000	100.000	224.816	-1.641
S4	0.007	0.447	0.000	100.000	227.092	-1.482
S5	0.007	0.467	0.000	100.000	217.177	-1.504
S6	0.006	0.478	0.000	100.000	211.937	-1.294
S7	0.009	0.485	0.000	100.000	209.777	-1.824
S8	0.006	0.491	0.000	100.000	205.914	-1.144

Internal Reference Calibration, performed (Not Performed):						
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.004	0.549	1.000	0.000

Air Zero Calibration, performed Thu Jan 04 06:50:35 2018:						
	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:	FW1305-096		
Tool Model:	2750 RBT		
Performed:	Sun Nov 12 13:42:10 2017		
	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		

	Company	Kerr-McGee Oil & Gas Onshore, L.P.
	Well	Robin 9-15HZ
	Field	Wattenberg
	County	Weld
	State	Colorado