



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.				
Well	English Farms 15N-8HZ				
Field	Wattenberg				
County	Weld				
State	Colorado				
Location:	API # : 05-123-41501				
SEC 8	TWP 1N	RGE 65W	Other Services		
			GR		
			Elevation		
			K.B. 4965'		
Log Measured From	Ground Level		Elevation		4949'
Drilling Measured From	Kelly Bushing		16 FT		
		Kelly Bushing			
		K.B. 4965'		D.F. 4964'	
		G.L. 4949'			

Date	21-AUG-2015
Run Number	Two
Depth Driller	13346 FT
Depth Logger	7704 FT
Bottom Logged Interval	7699 FT
Top Log Interval	Surface
Open Hole Size	8.750"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	235°F
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	10:20
Equipment Number	HD-0343
Location	Fort Lupton, CO
Recorded By	W.Wacker
Witnessed By	Steve Vigil

Borehole Record				Tubing 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 LT&C	Surface	1866 FT		
Intermediate #1	5 1/2	17	HCP-110 LTC	Surface	13346 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  
Casing Tally reported Marker Joint at 6615 FT  
Recorded Marker Joint at 6620 FT  
Gauge Ring / Junk Basket ran to 7728 FT with no debris retrieved  
Log recorded with 2800 PSI surface induced pressure  
No debris found on logging tools upon completion of run  
  
Thank you for choosing FMC Technologies Completion Services, Inc.!!



Main Pass

Recorded with 2800 PSI Surface Induced Pressure

Database File:0512341501\_anadarko\_english farms 15n-8hz\_08-21-15\_rbl.db

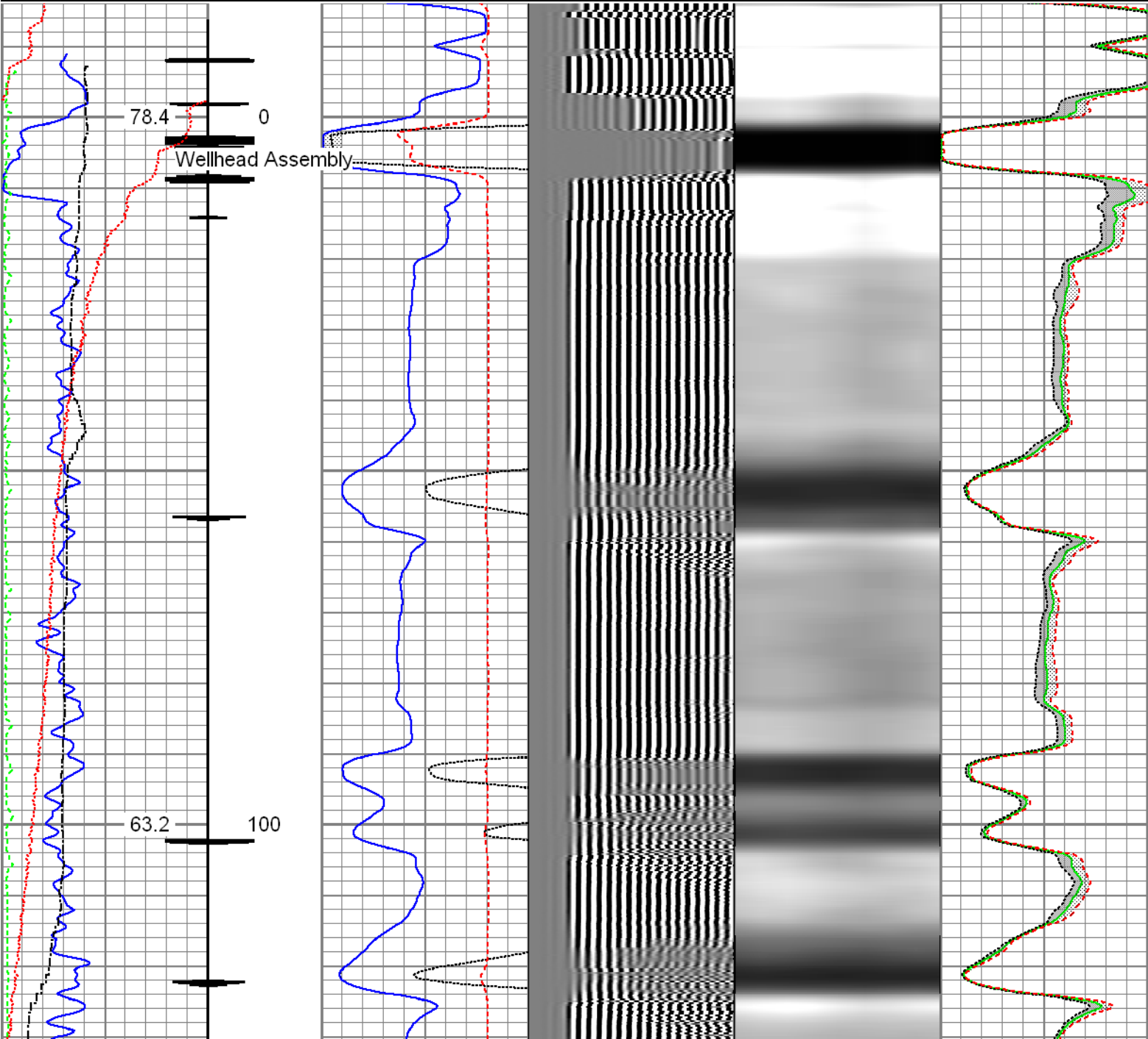
Dataset Pathname:main

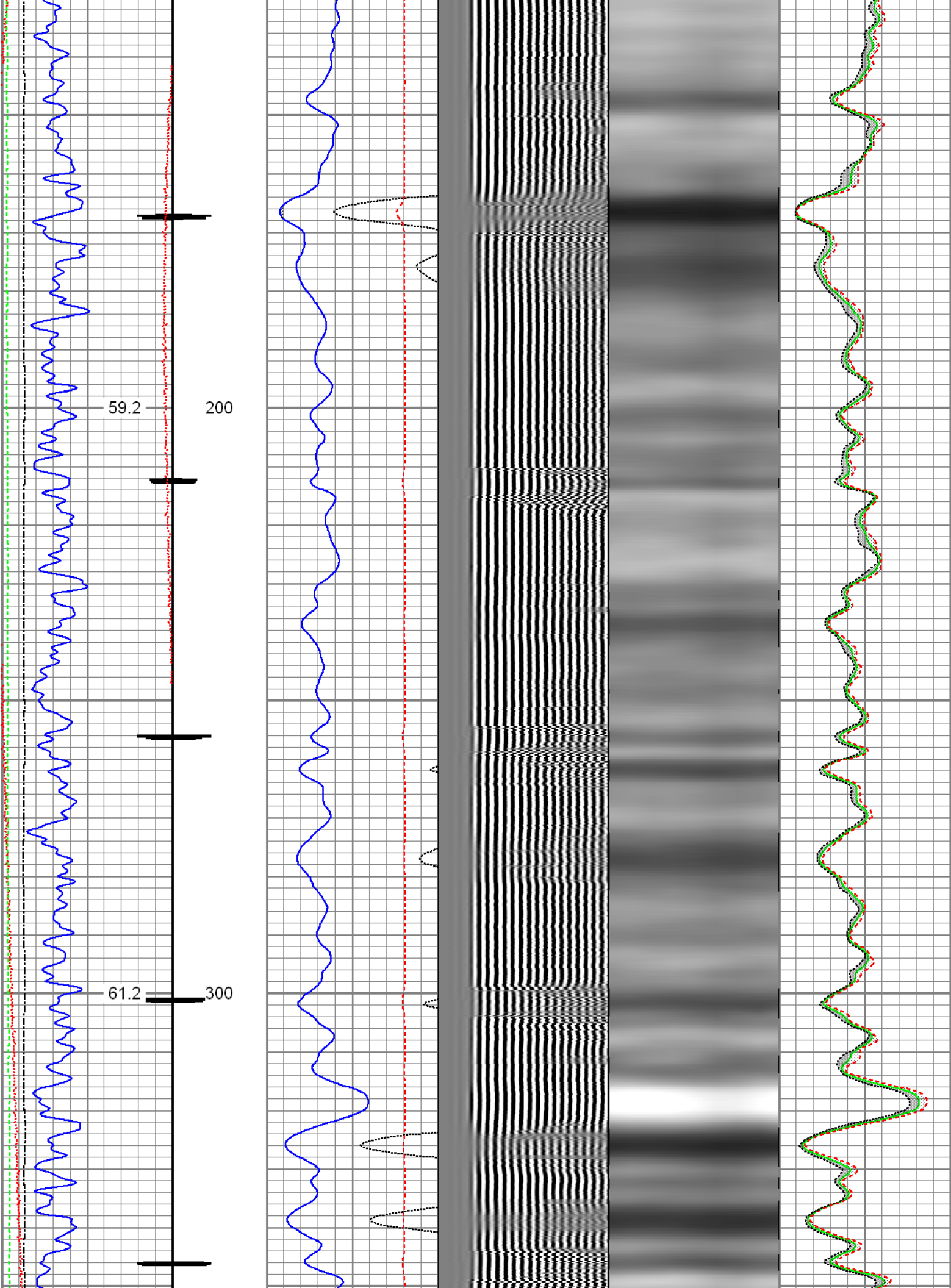
Presentation Format:radii

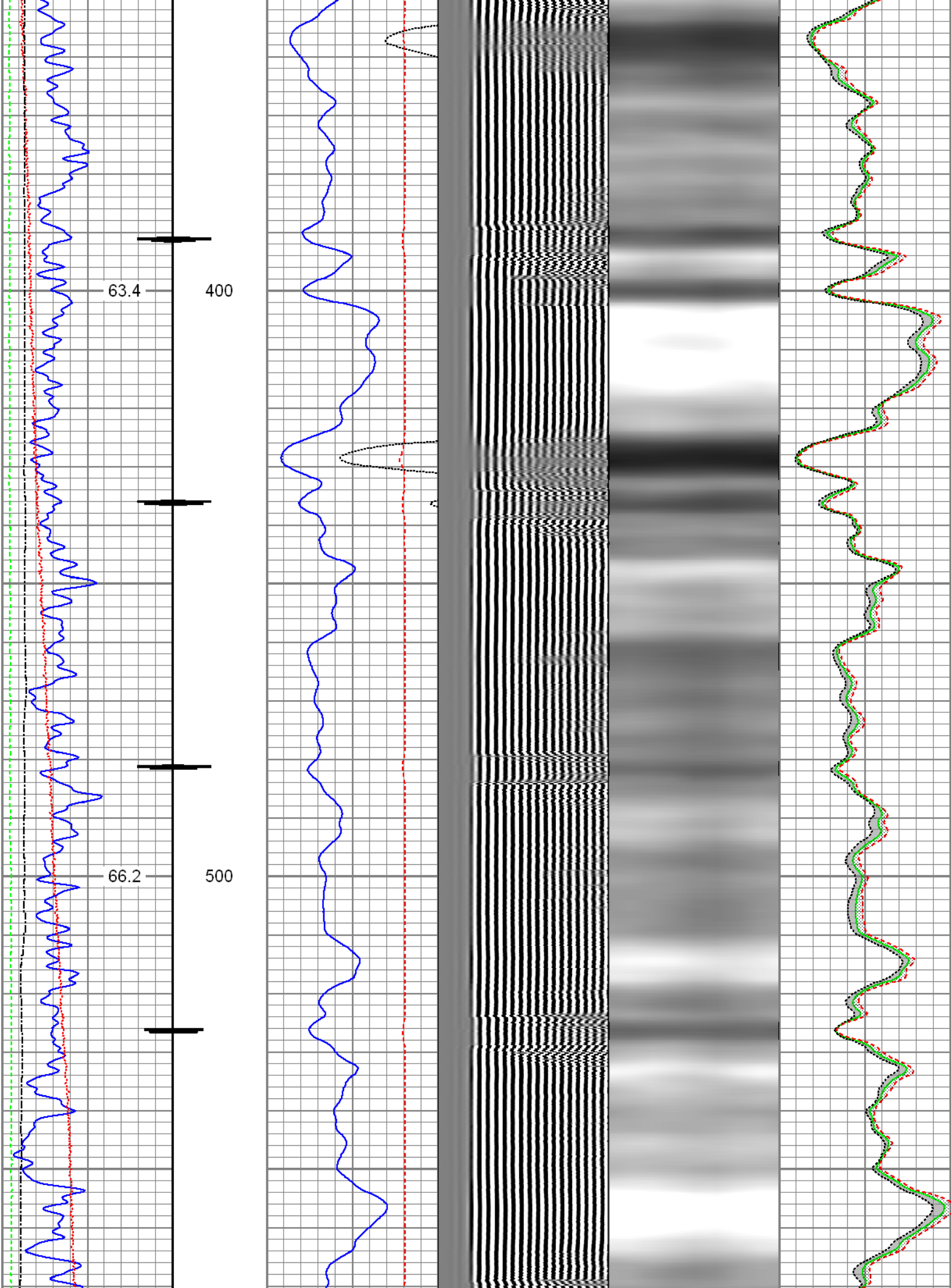
Dataset Creation:Fri Aug 21 10:14:45 2015 by Log 7.0 B1

Charted by:Depth in Feet scaled 1:240

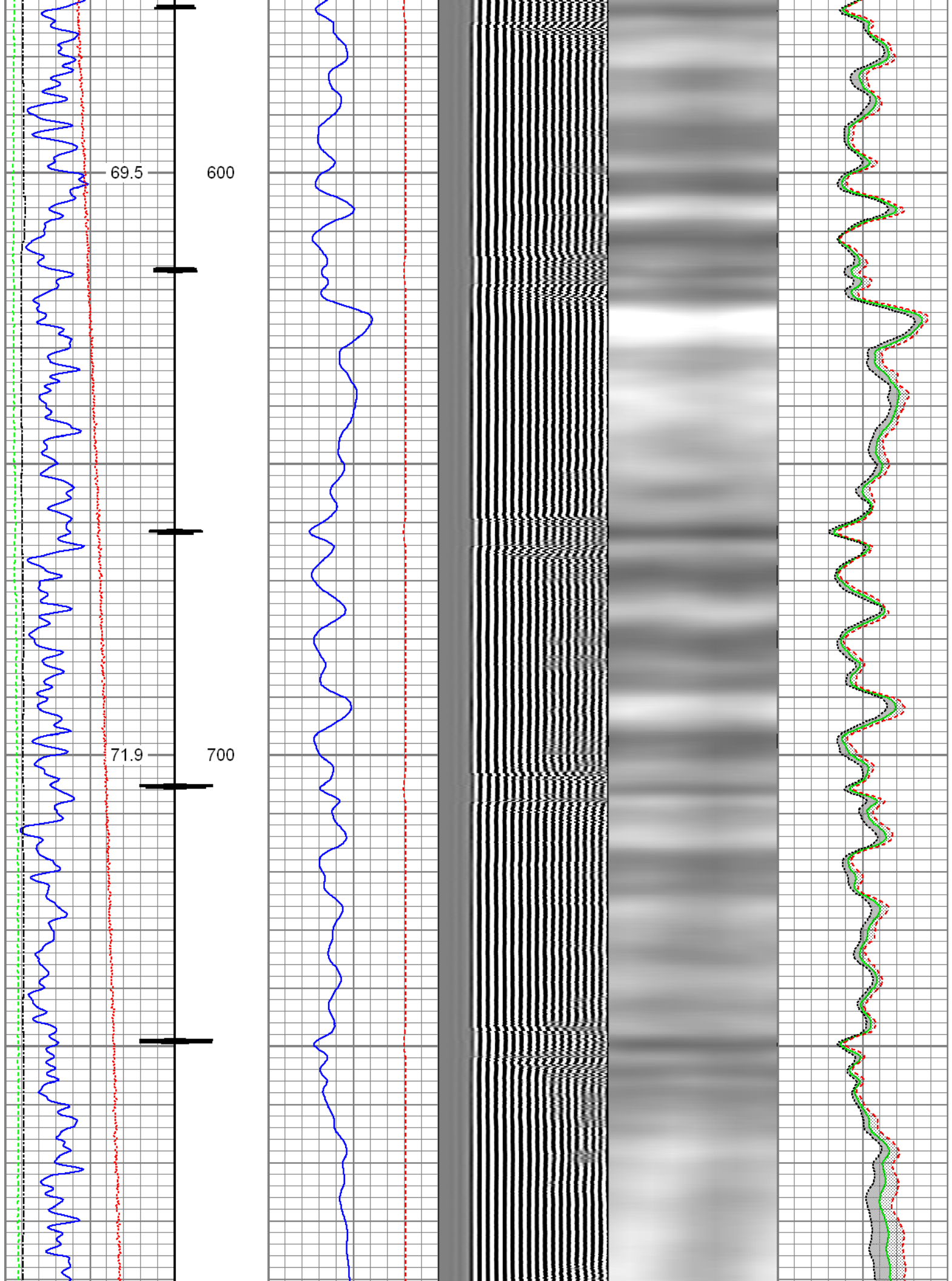
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150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

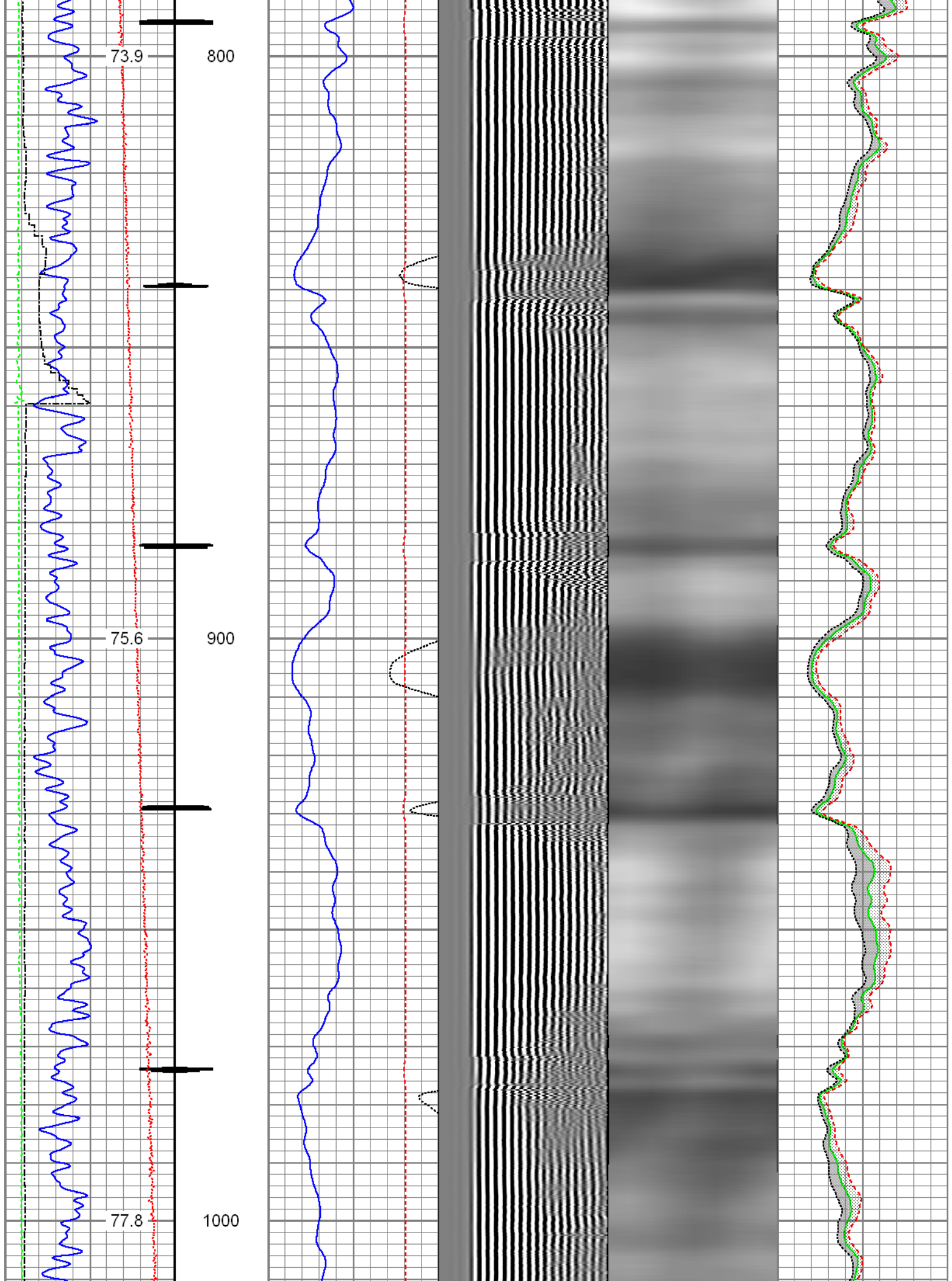


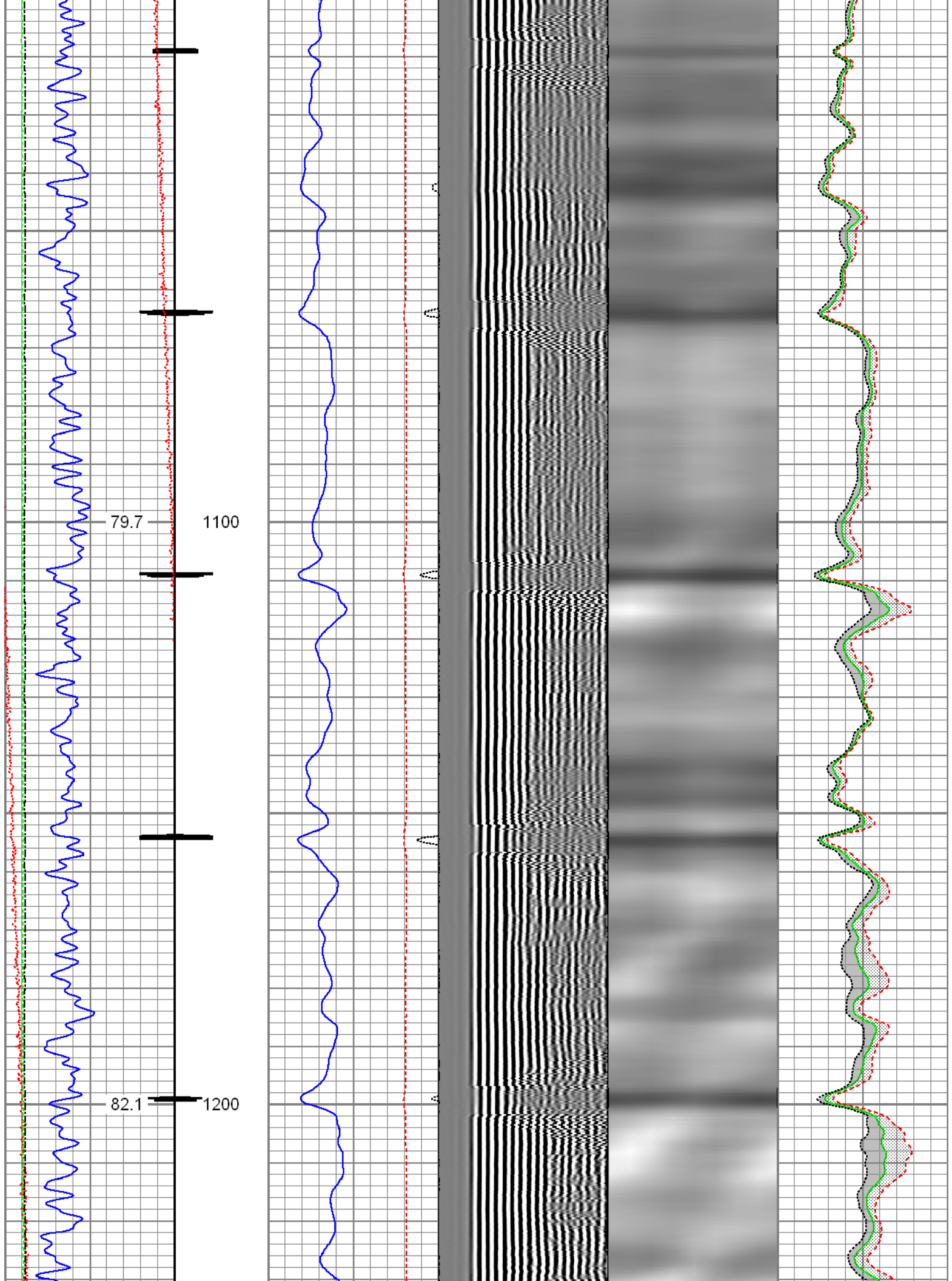




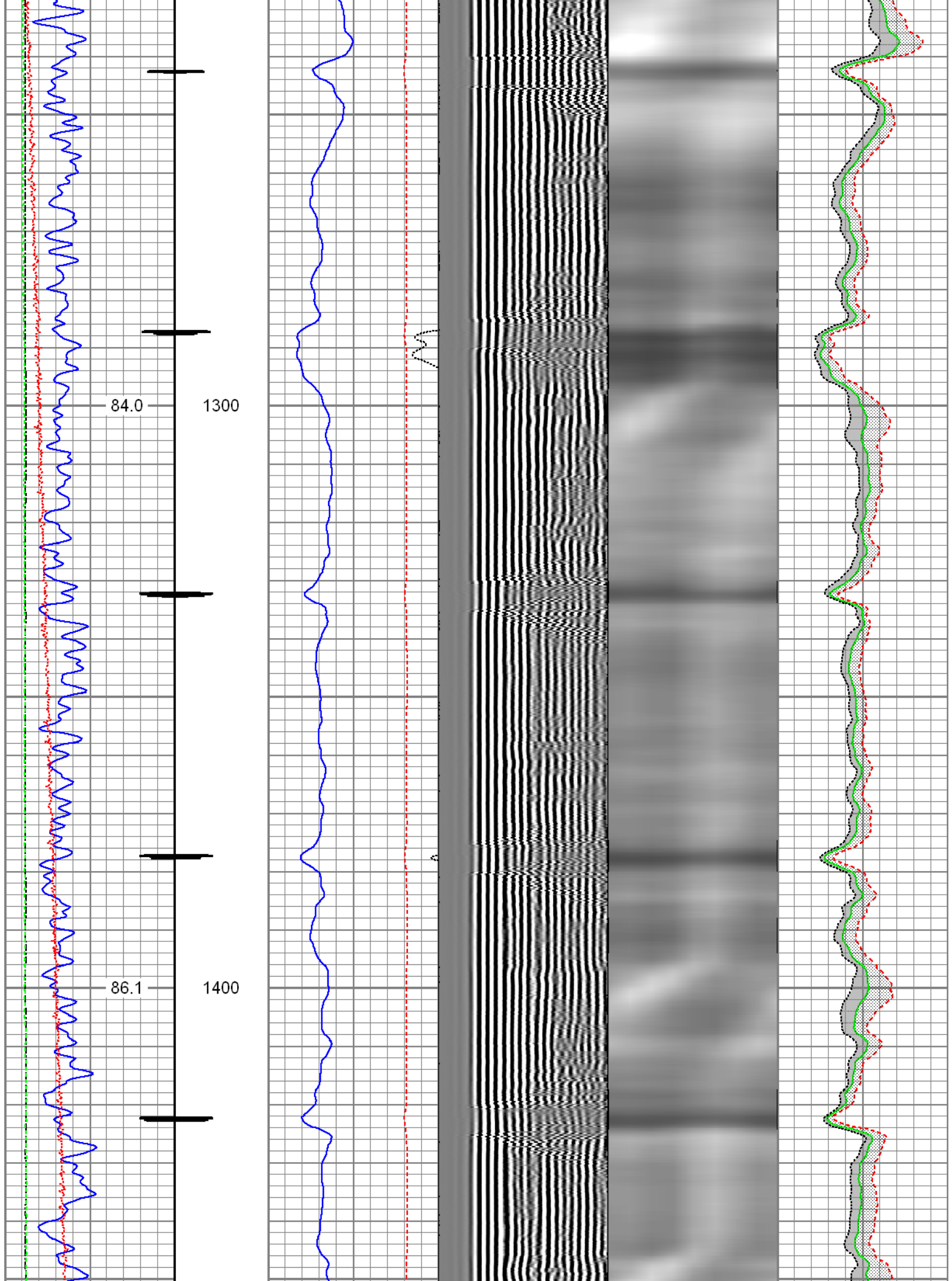




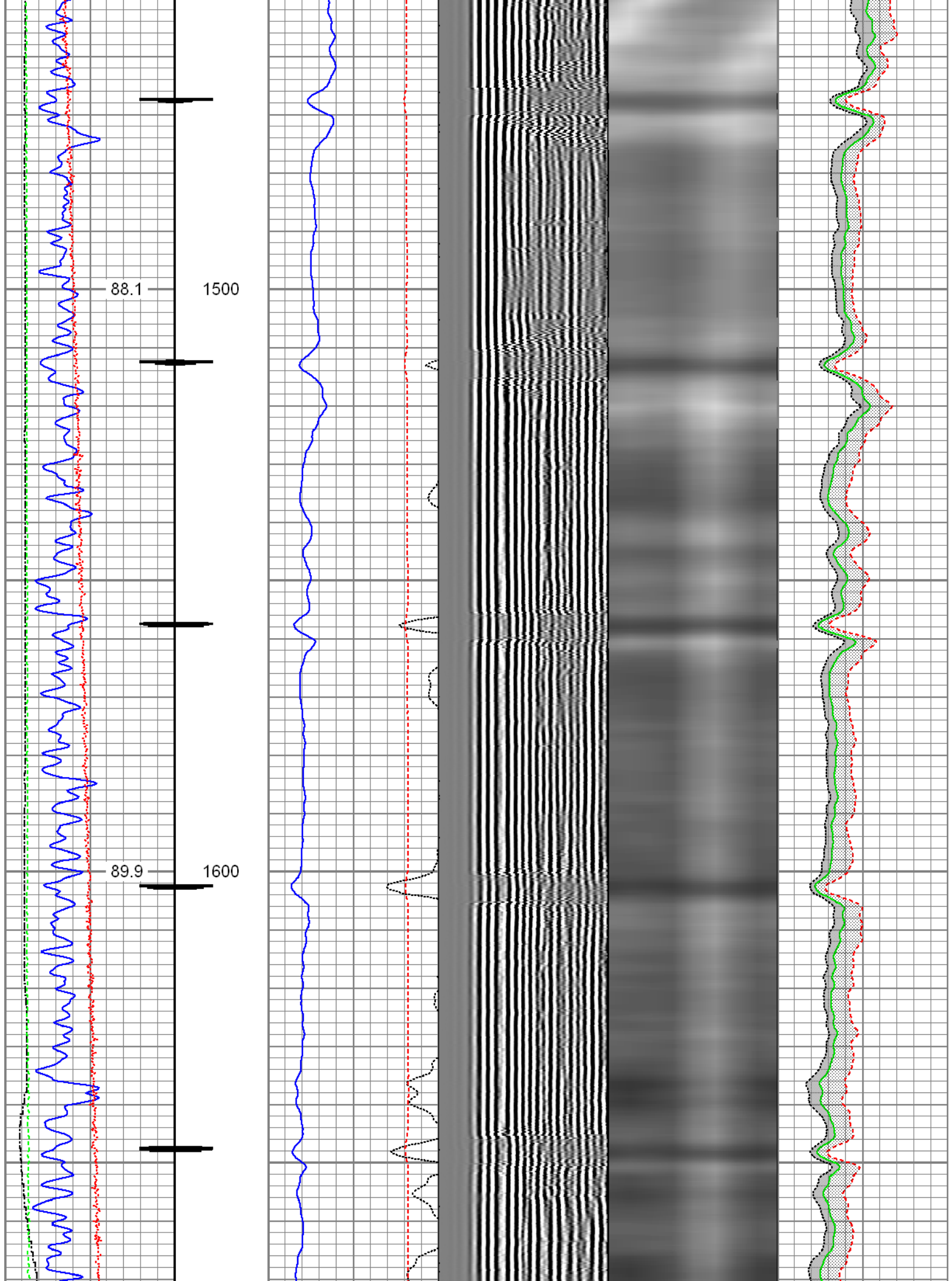


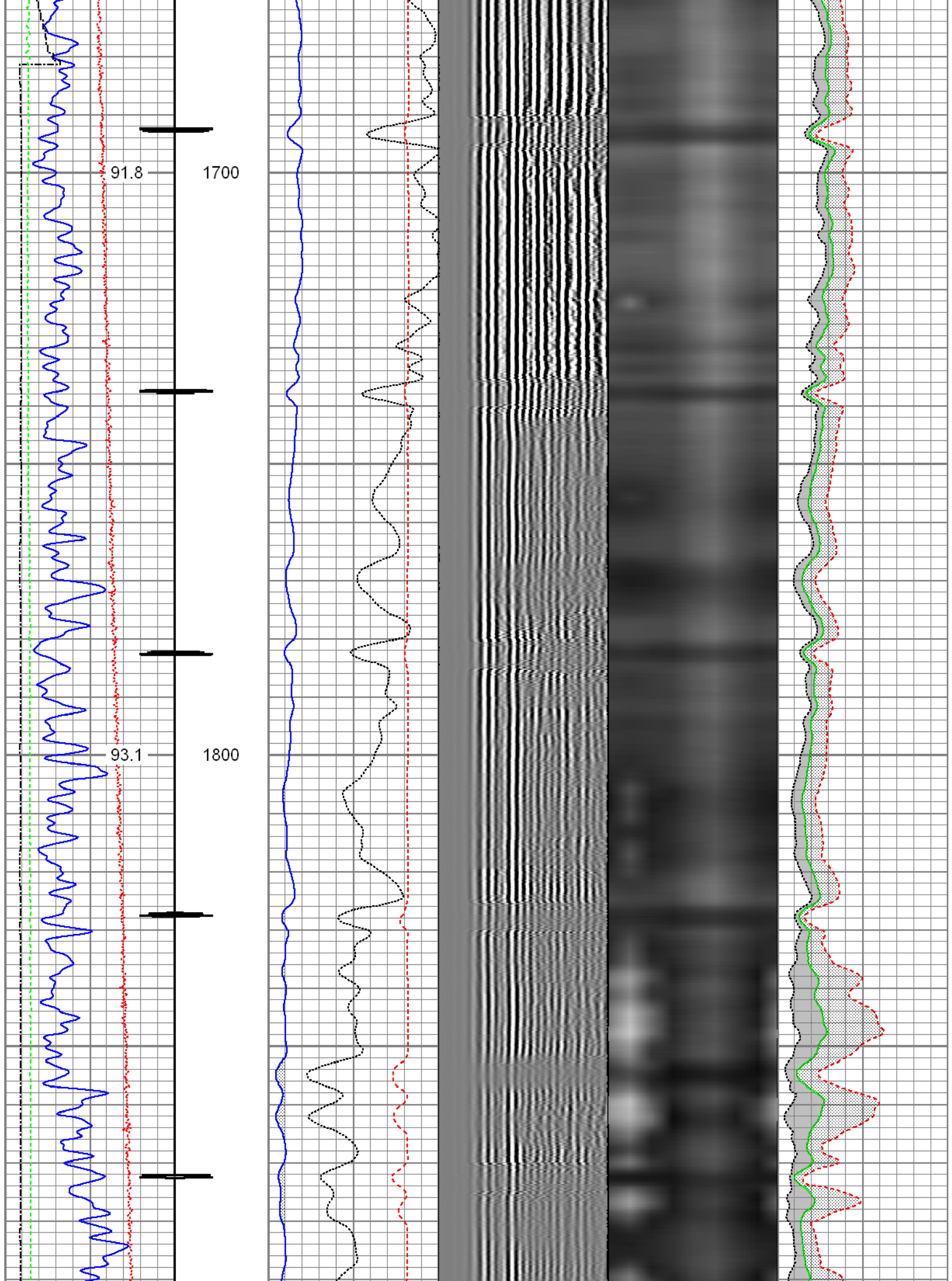


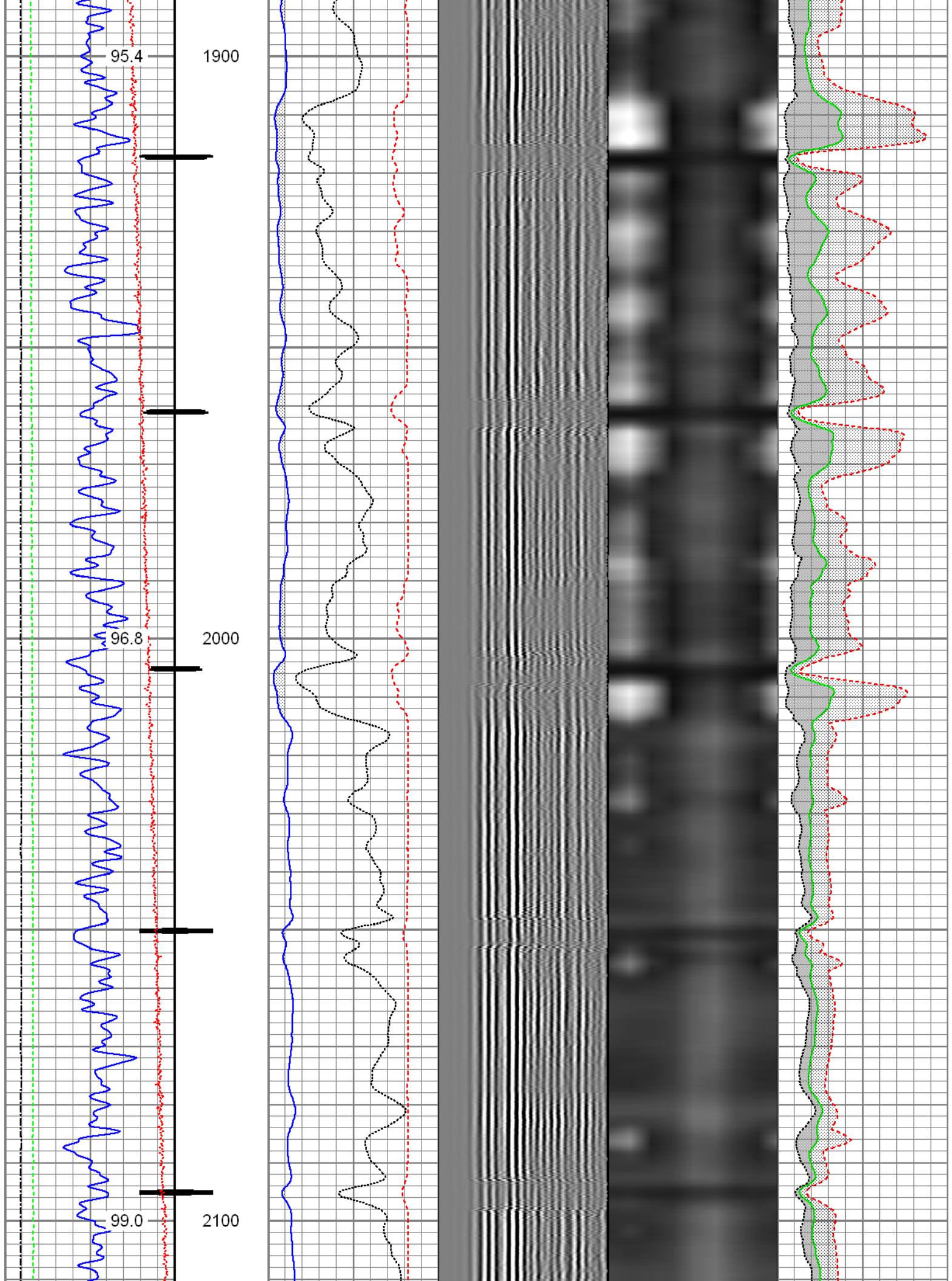




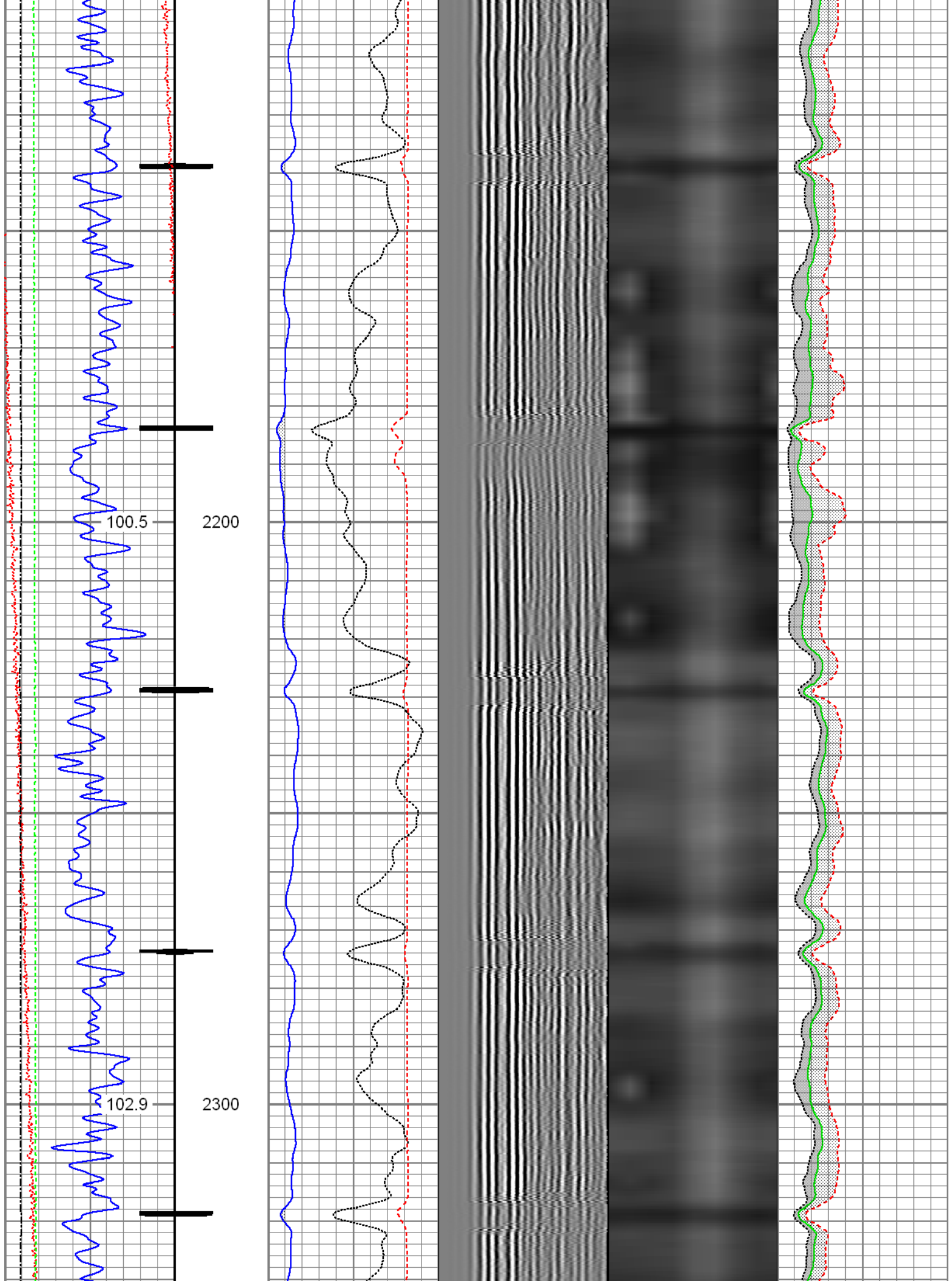




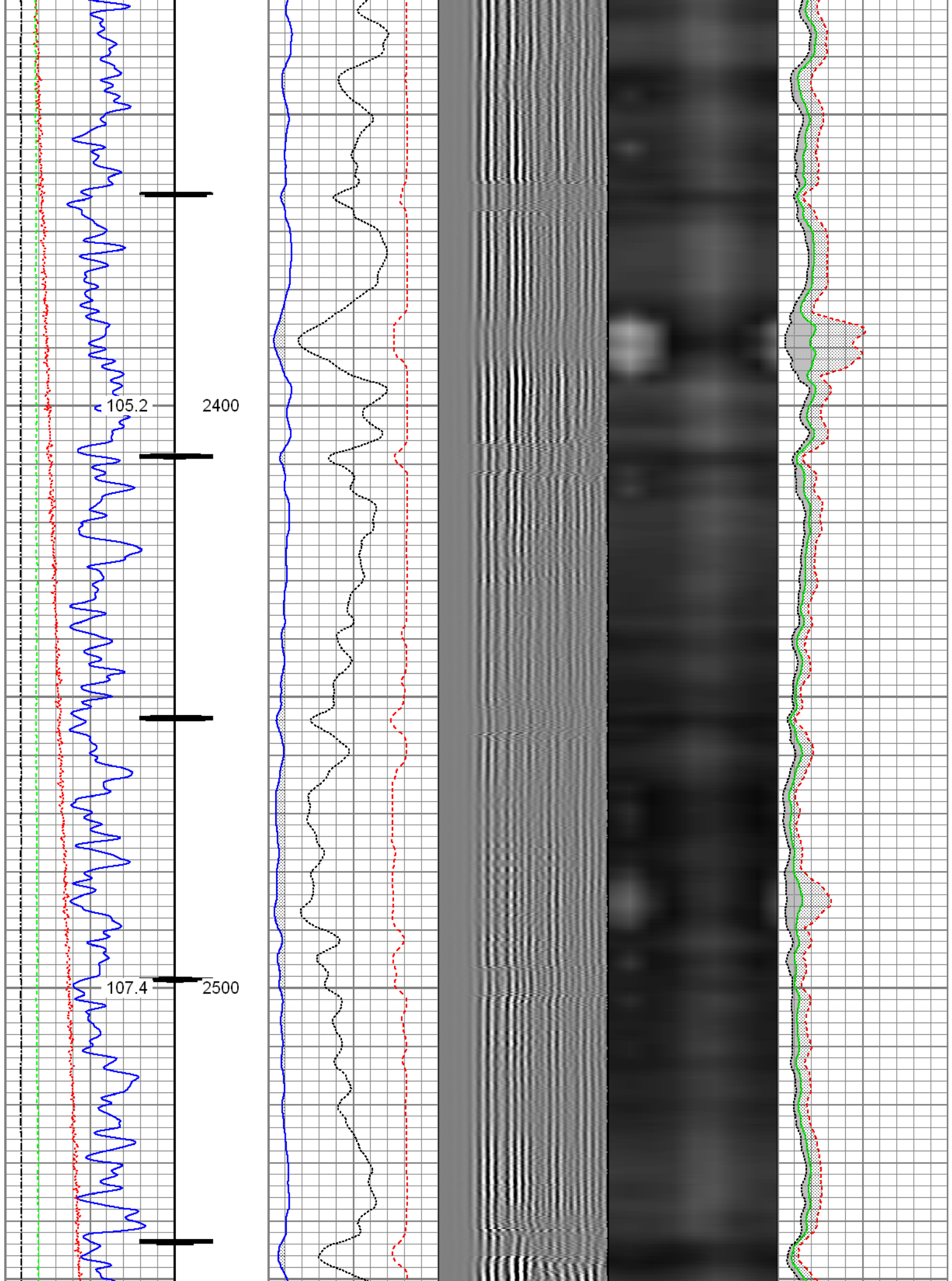


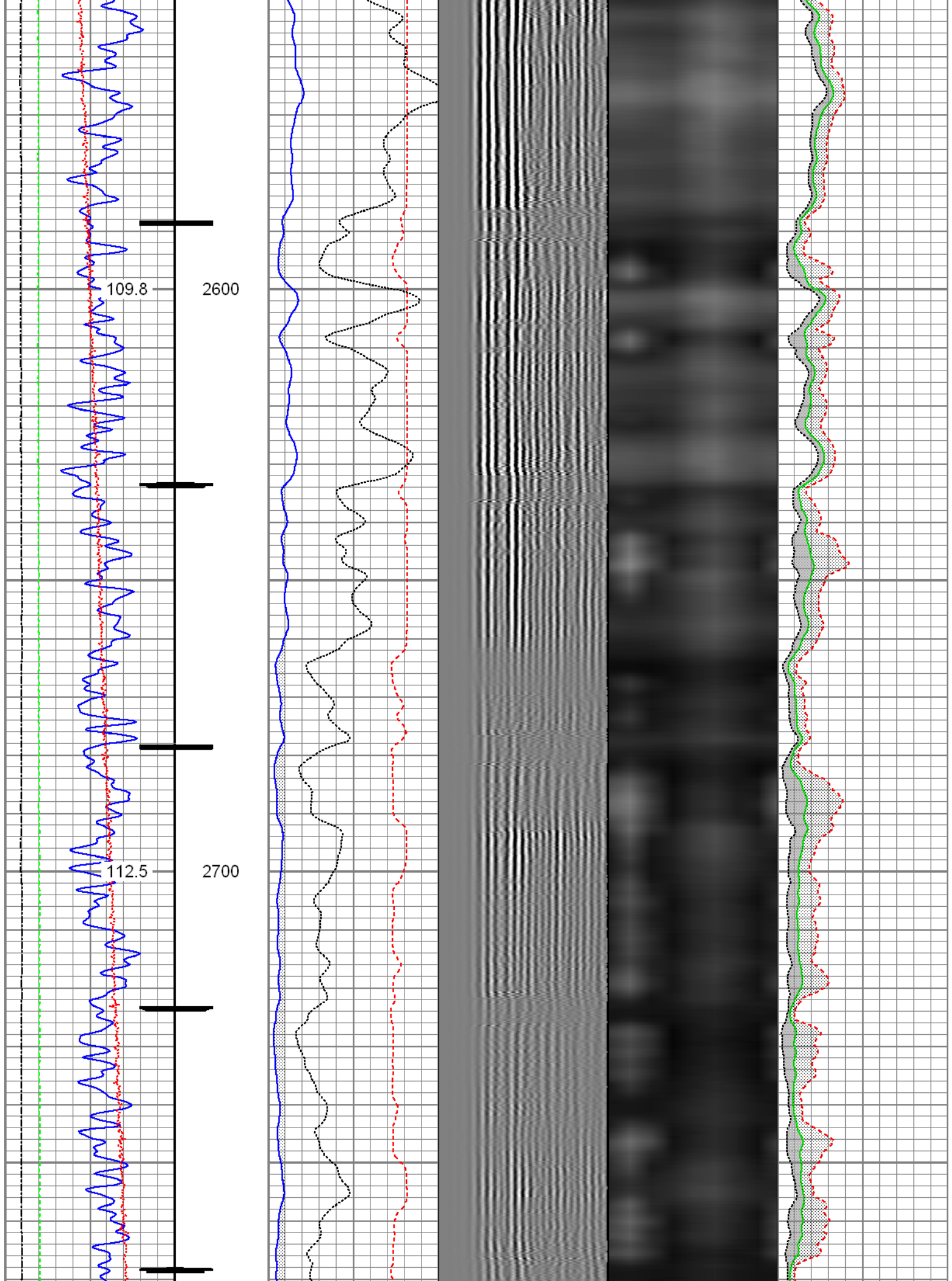


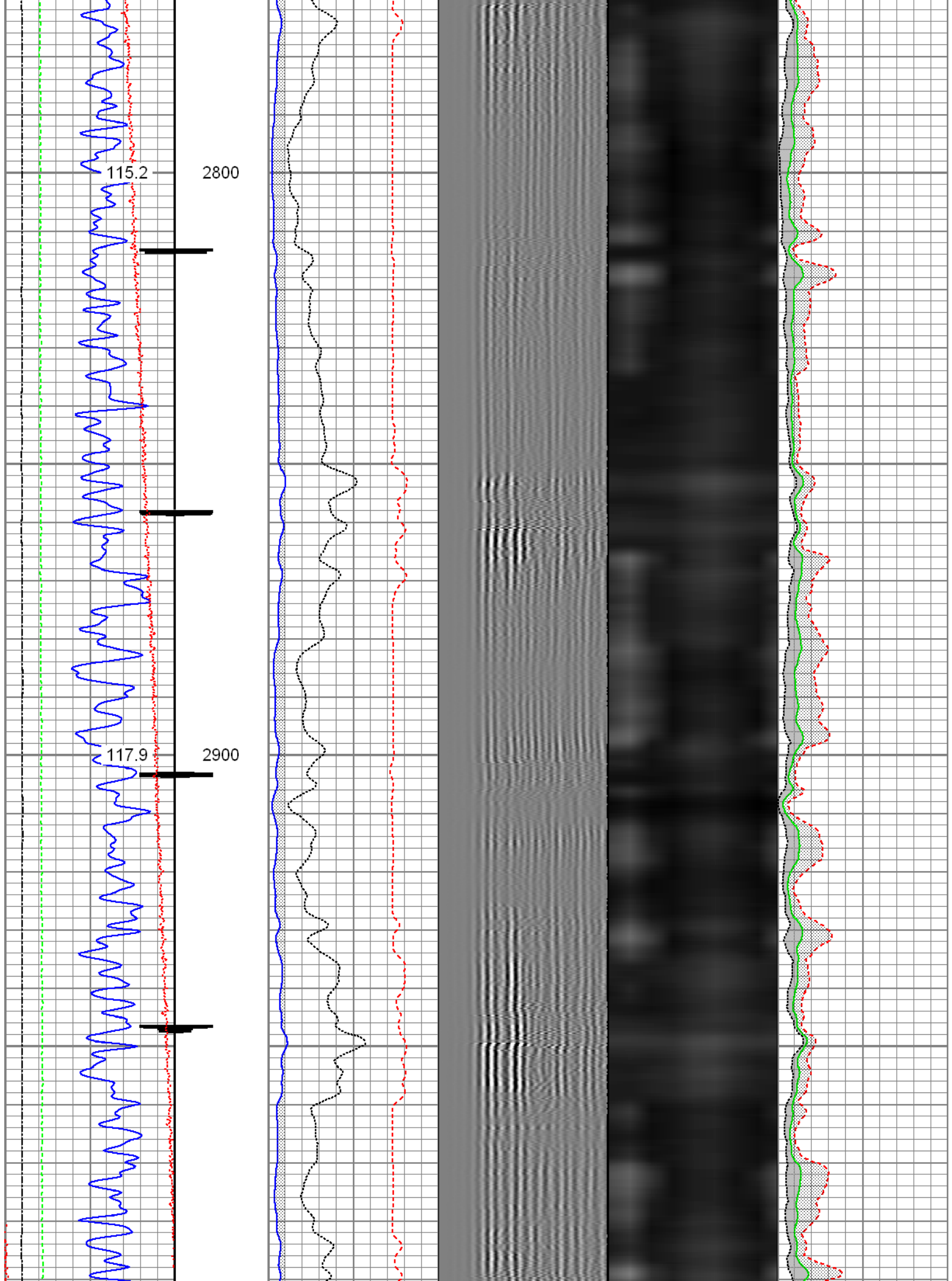




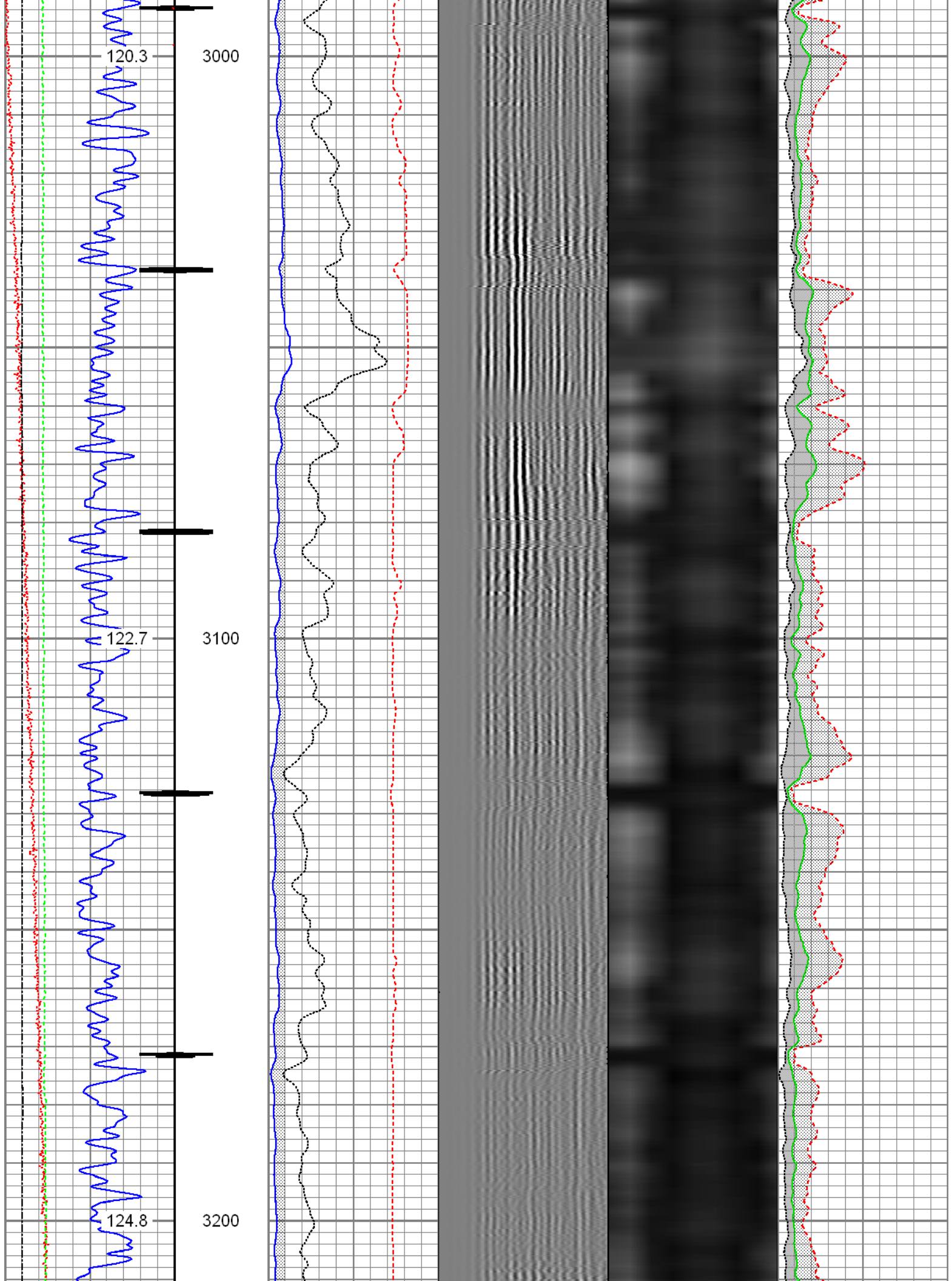




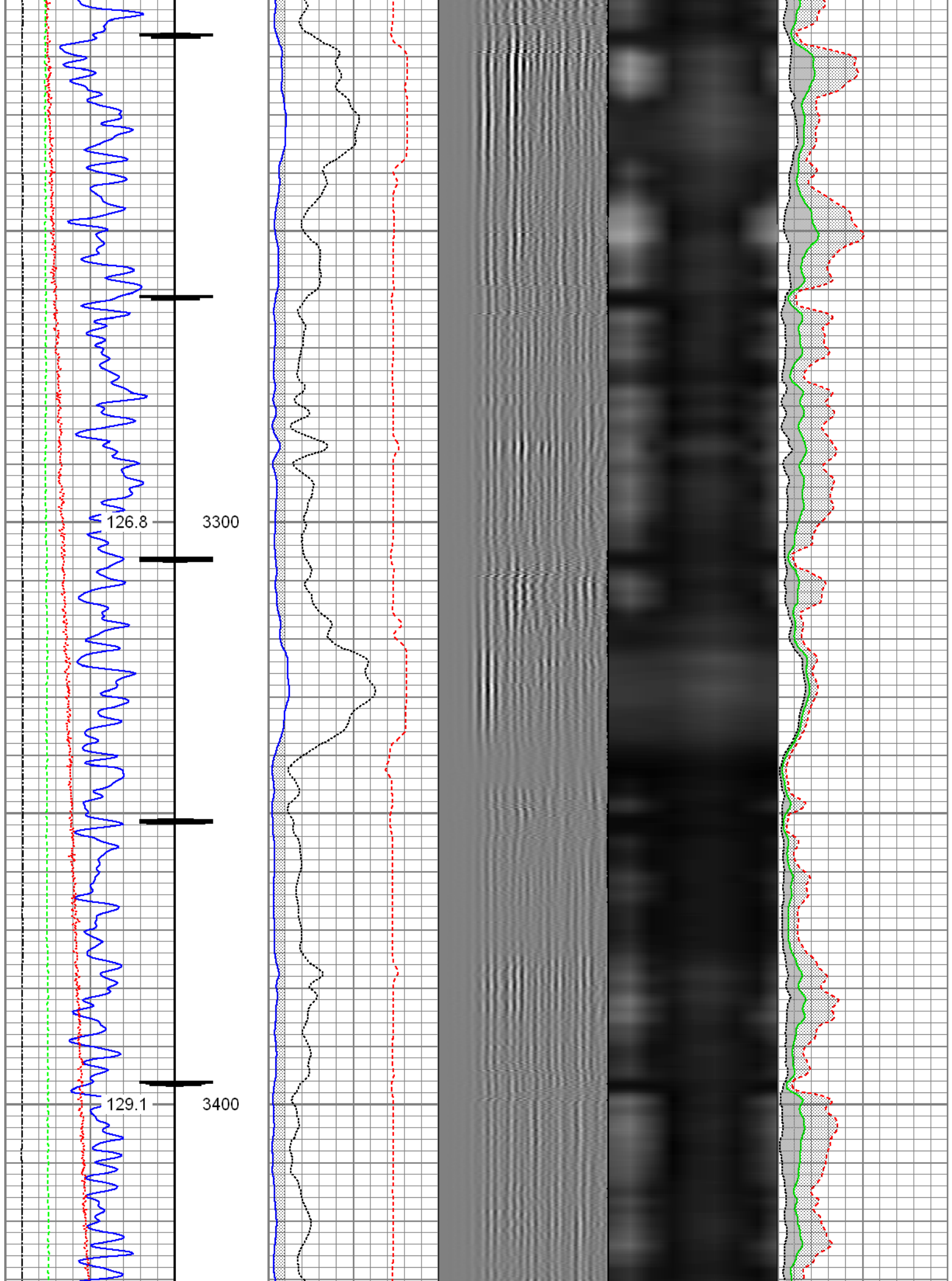


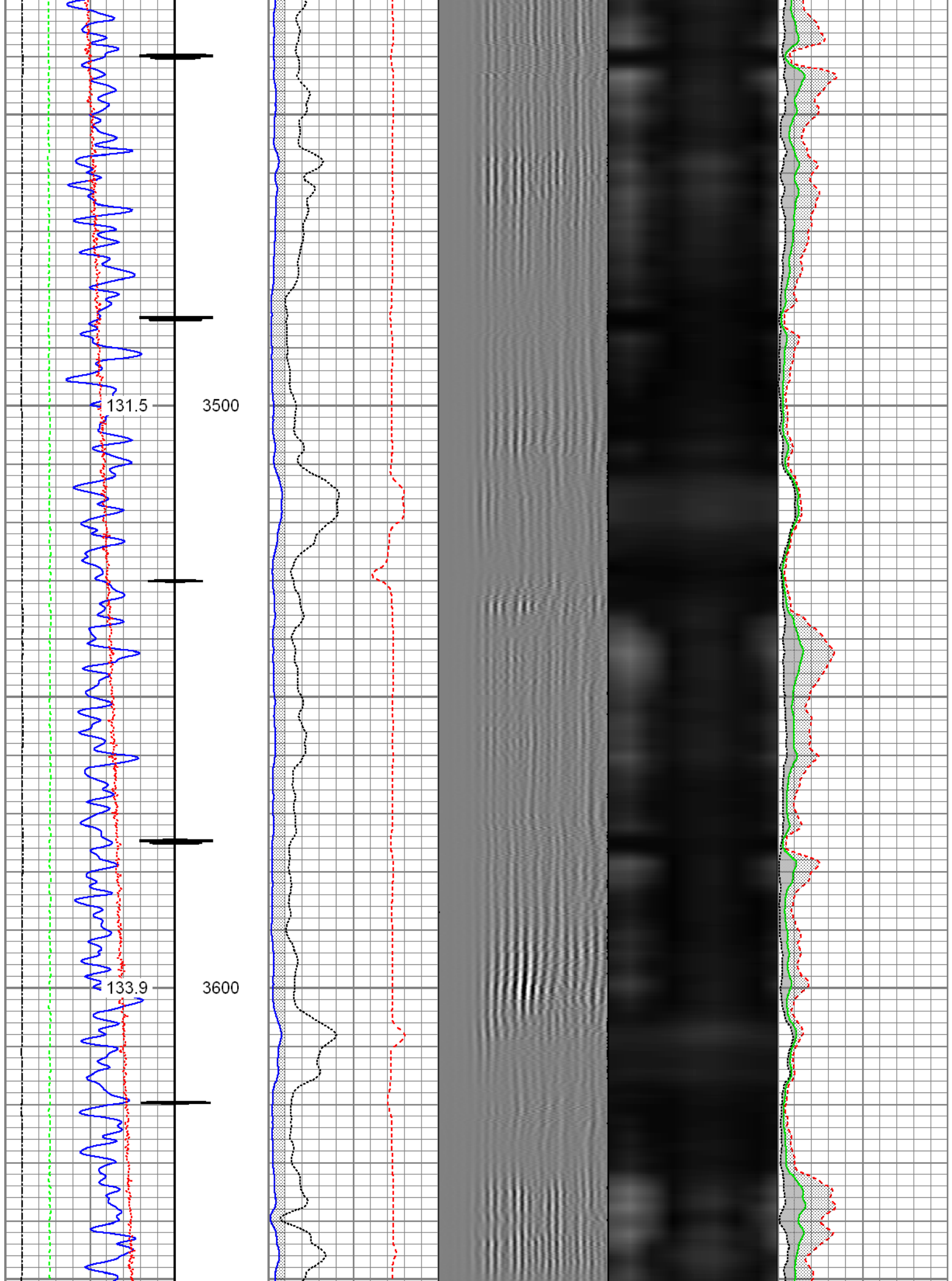


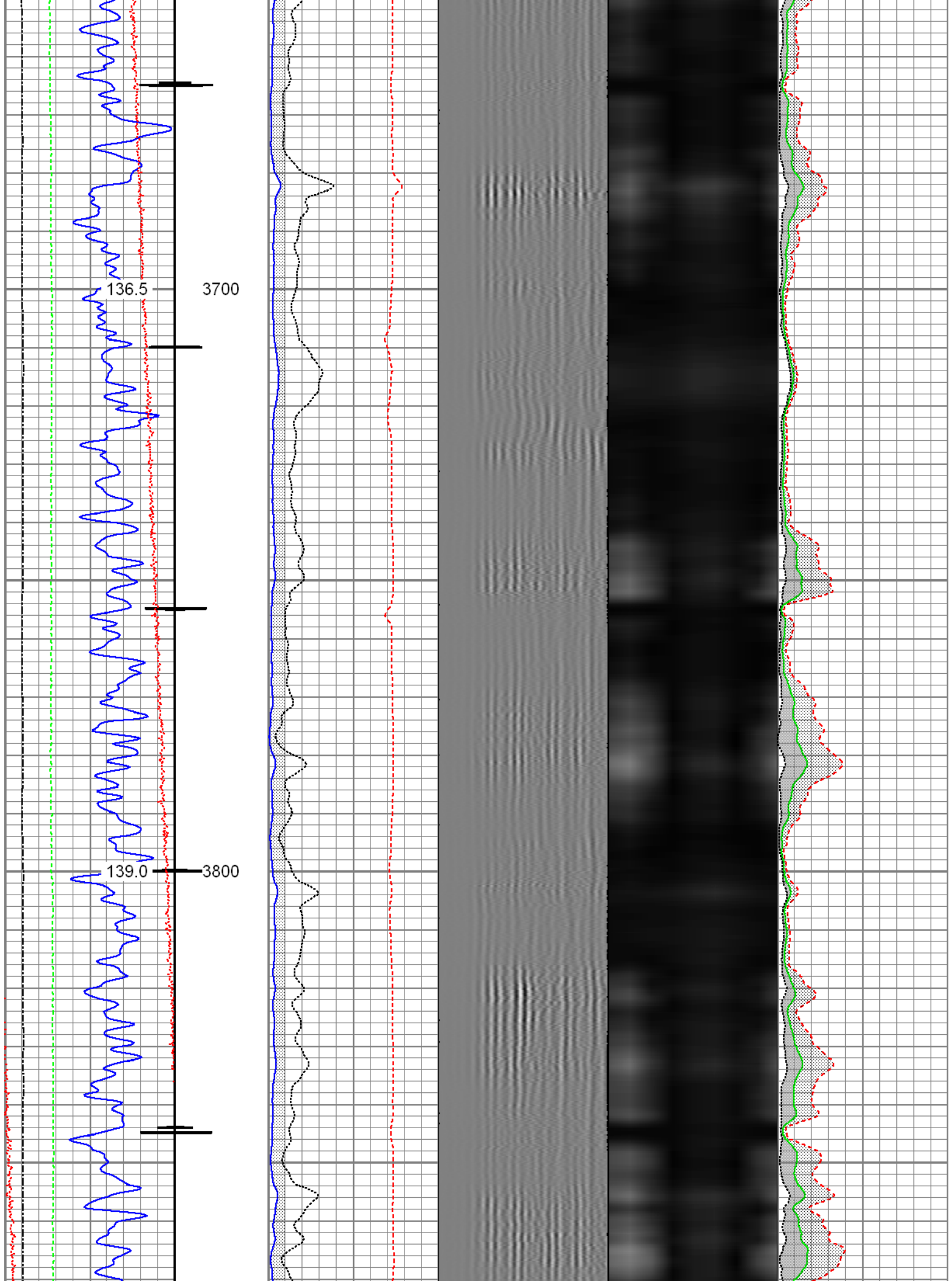




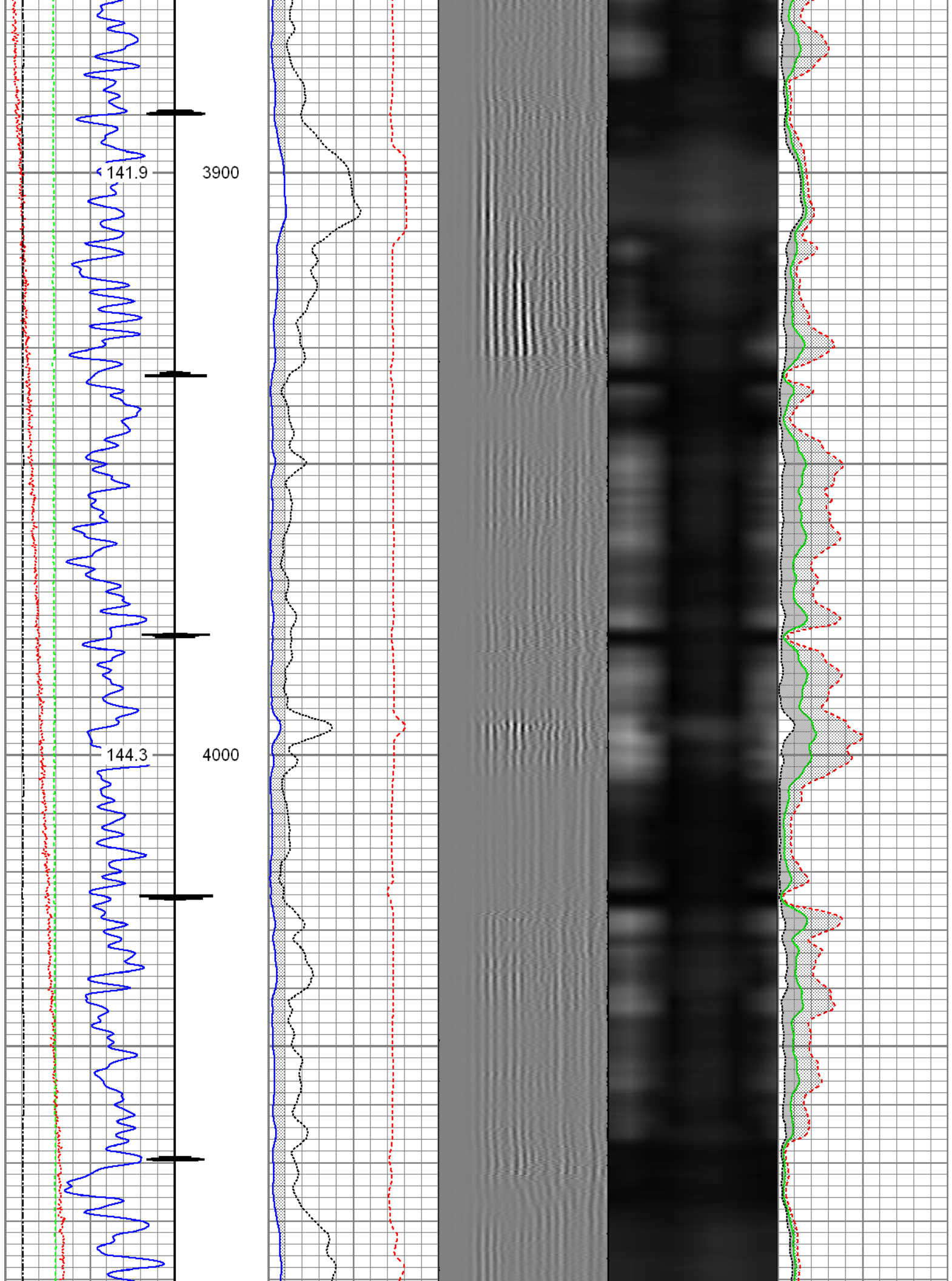




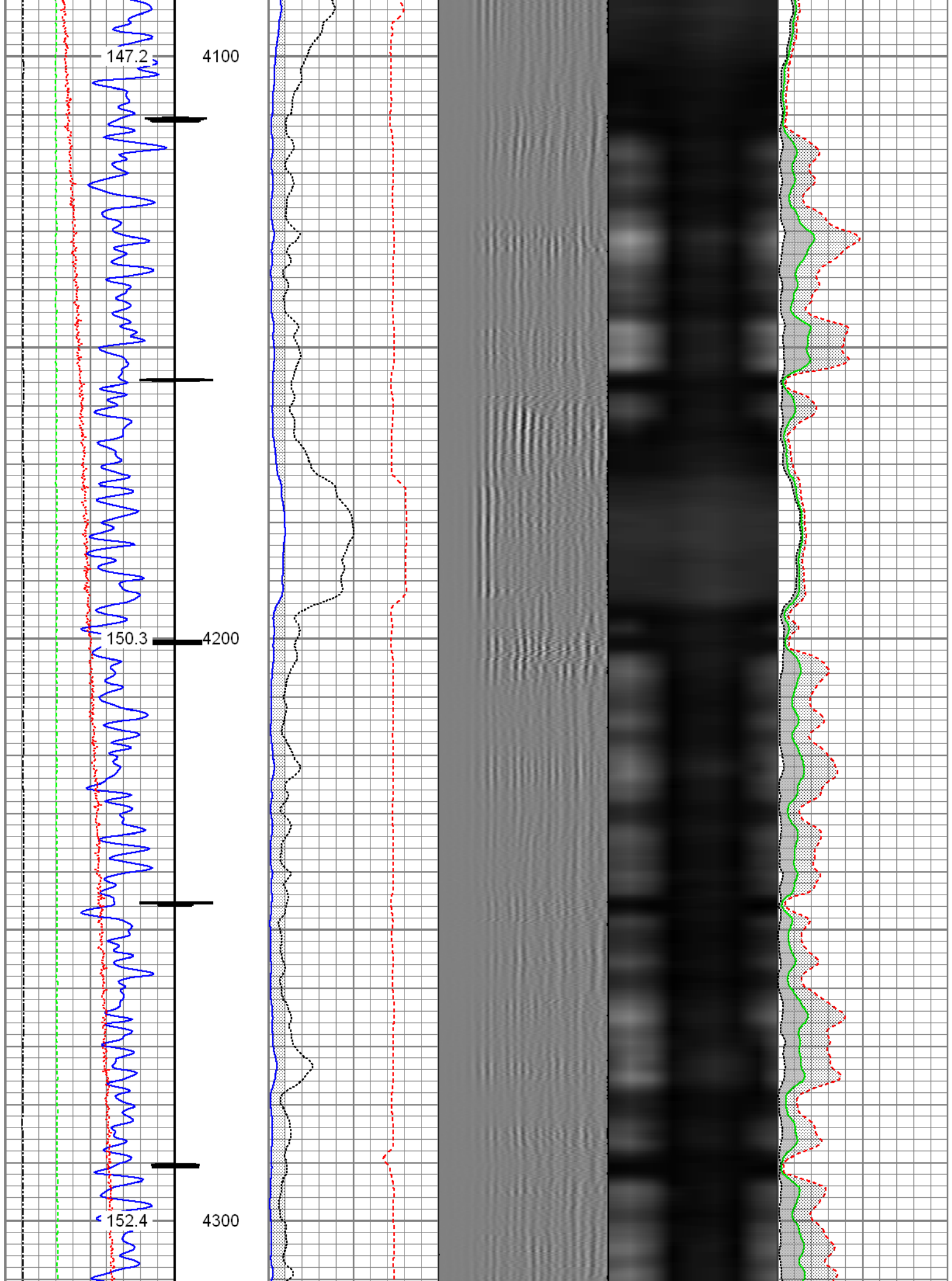


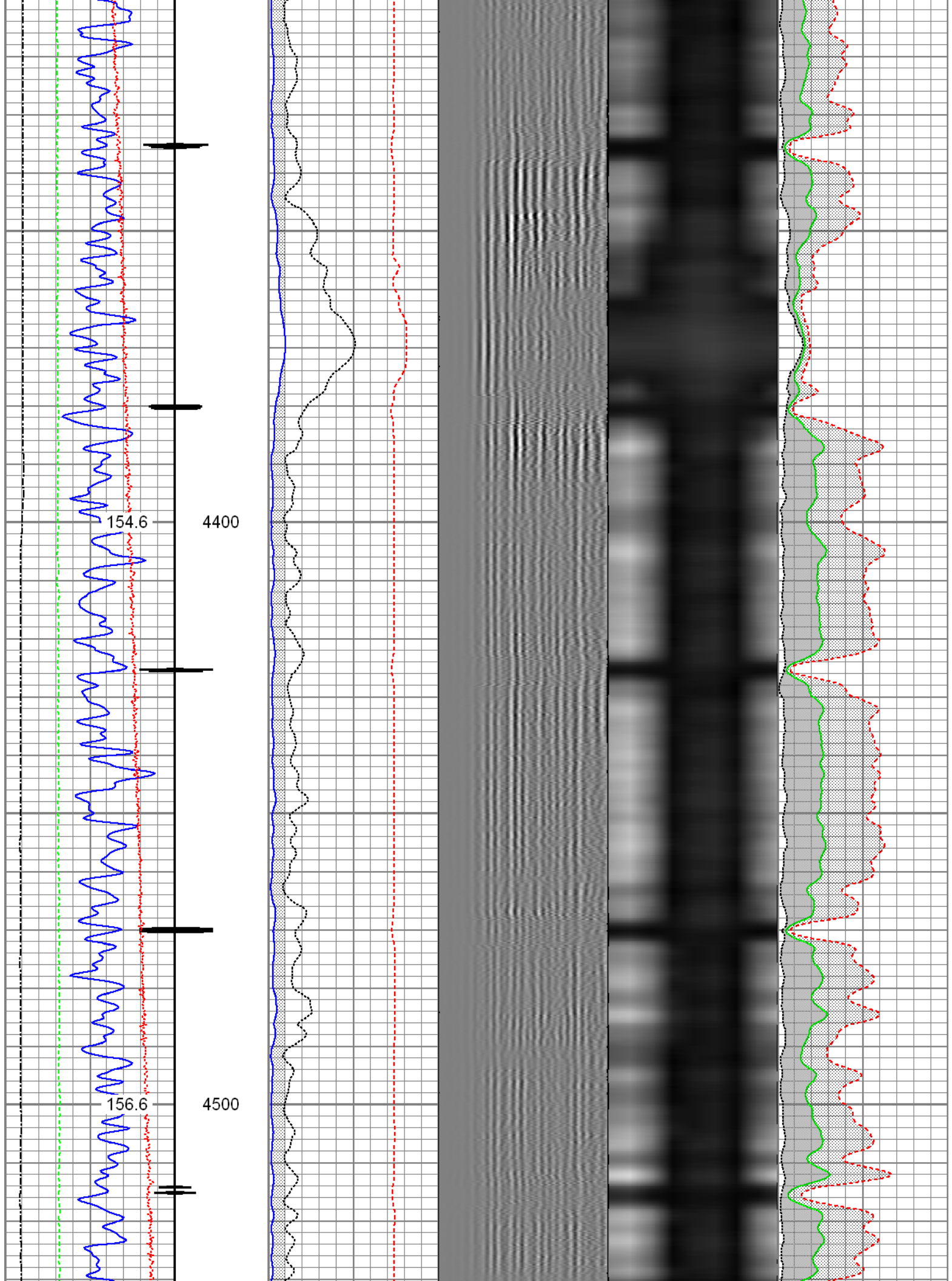


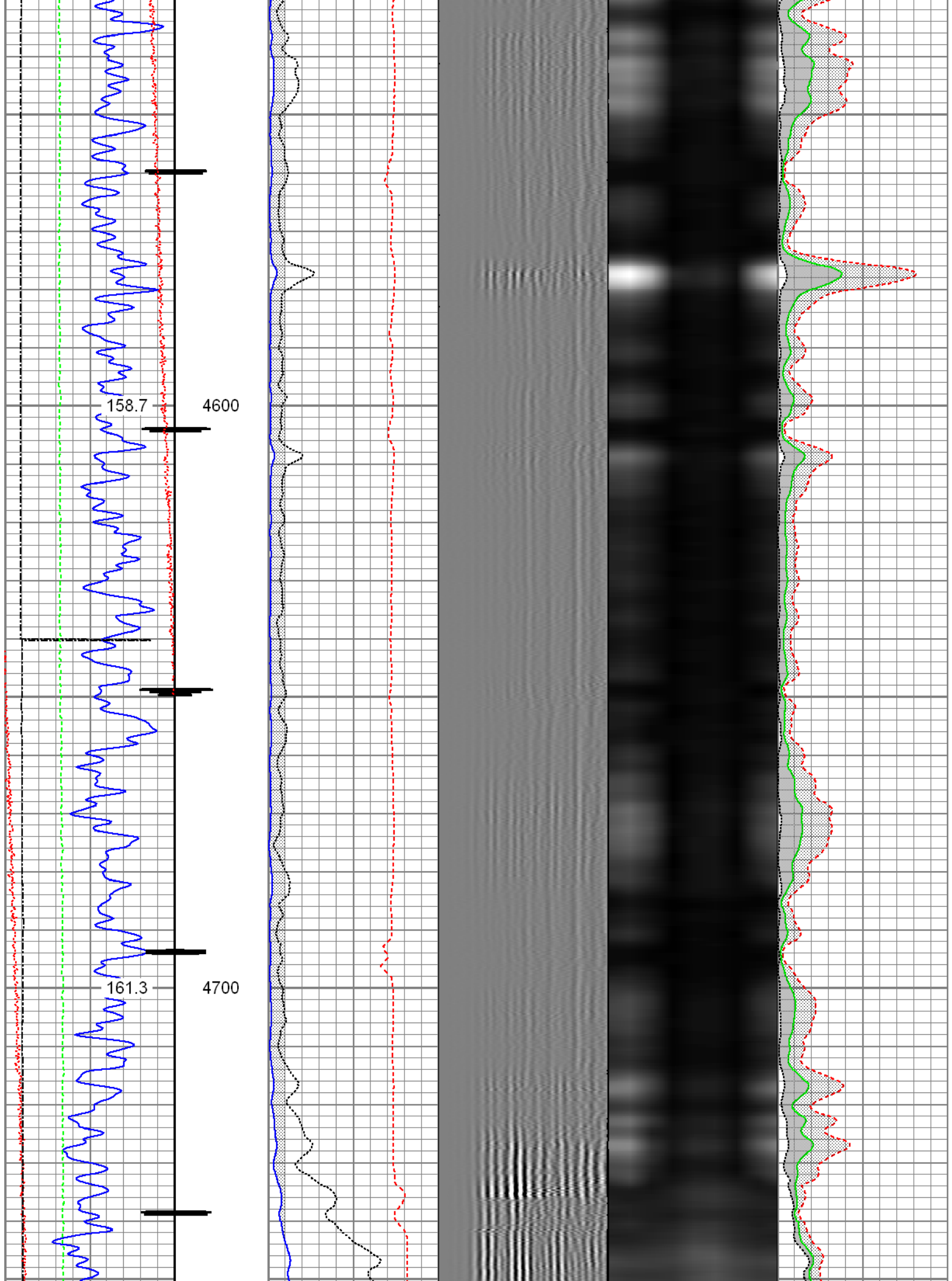




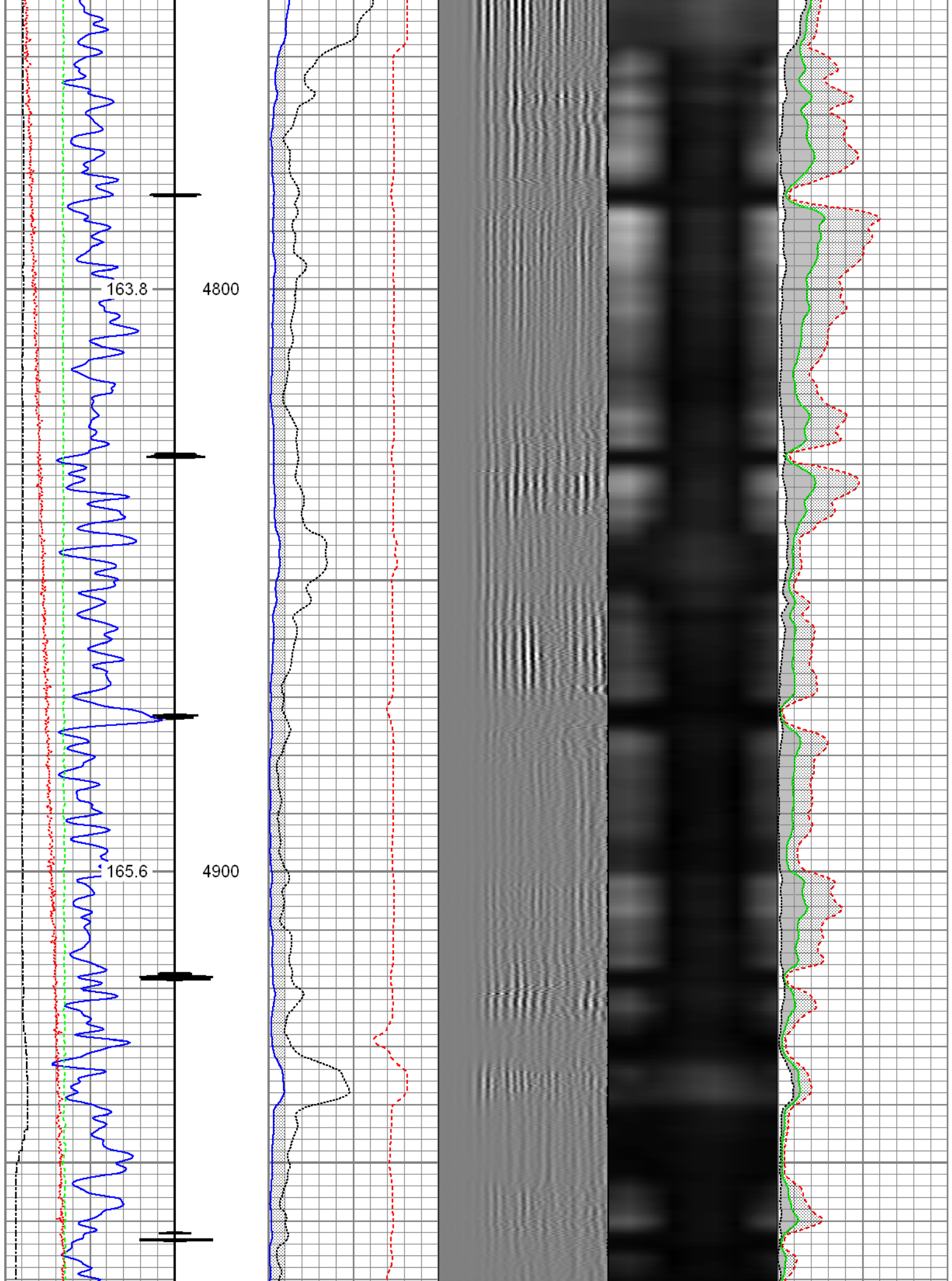


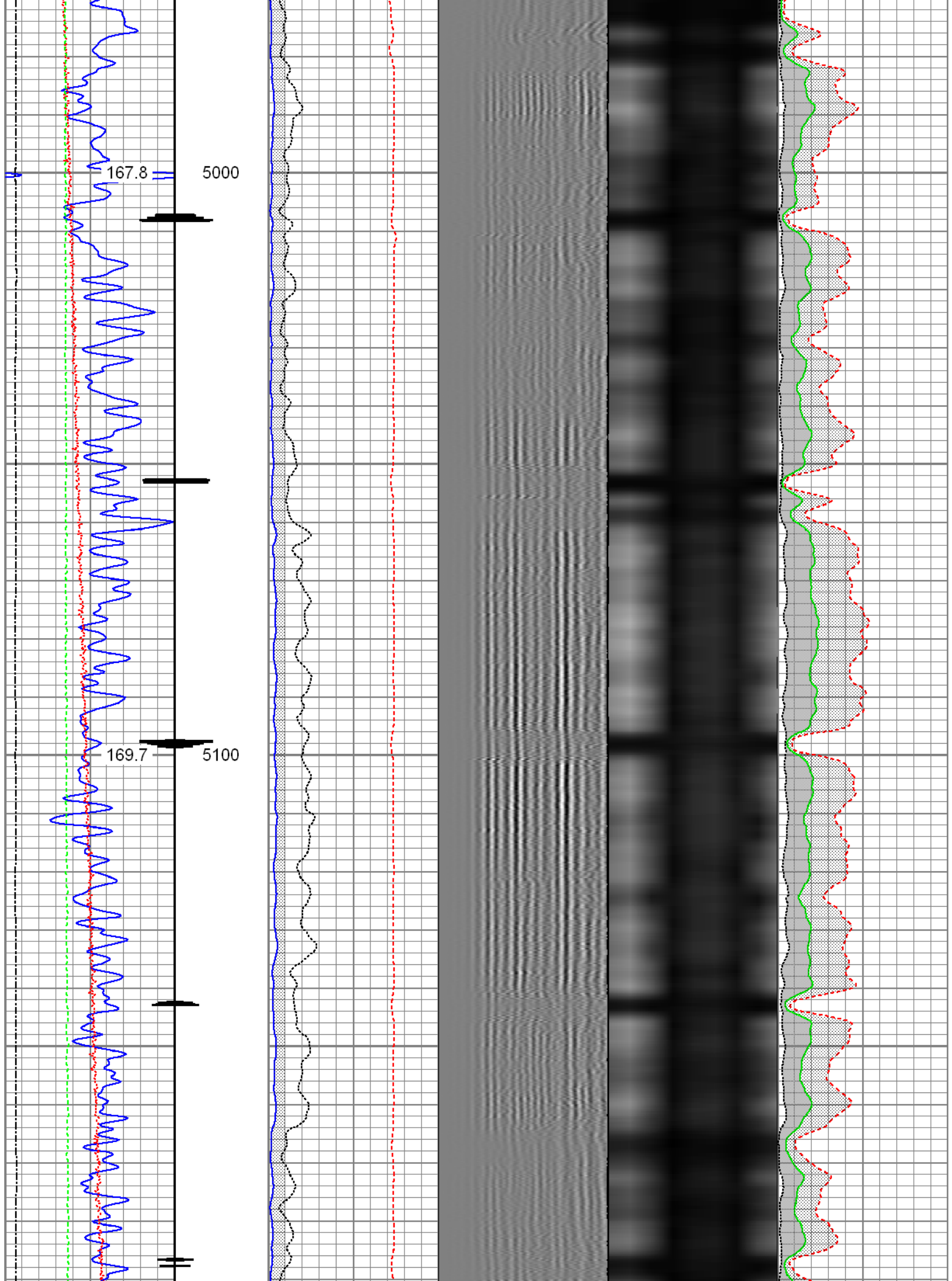


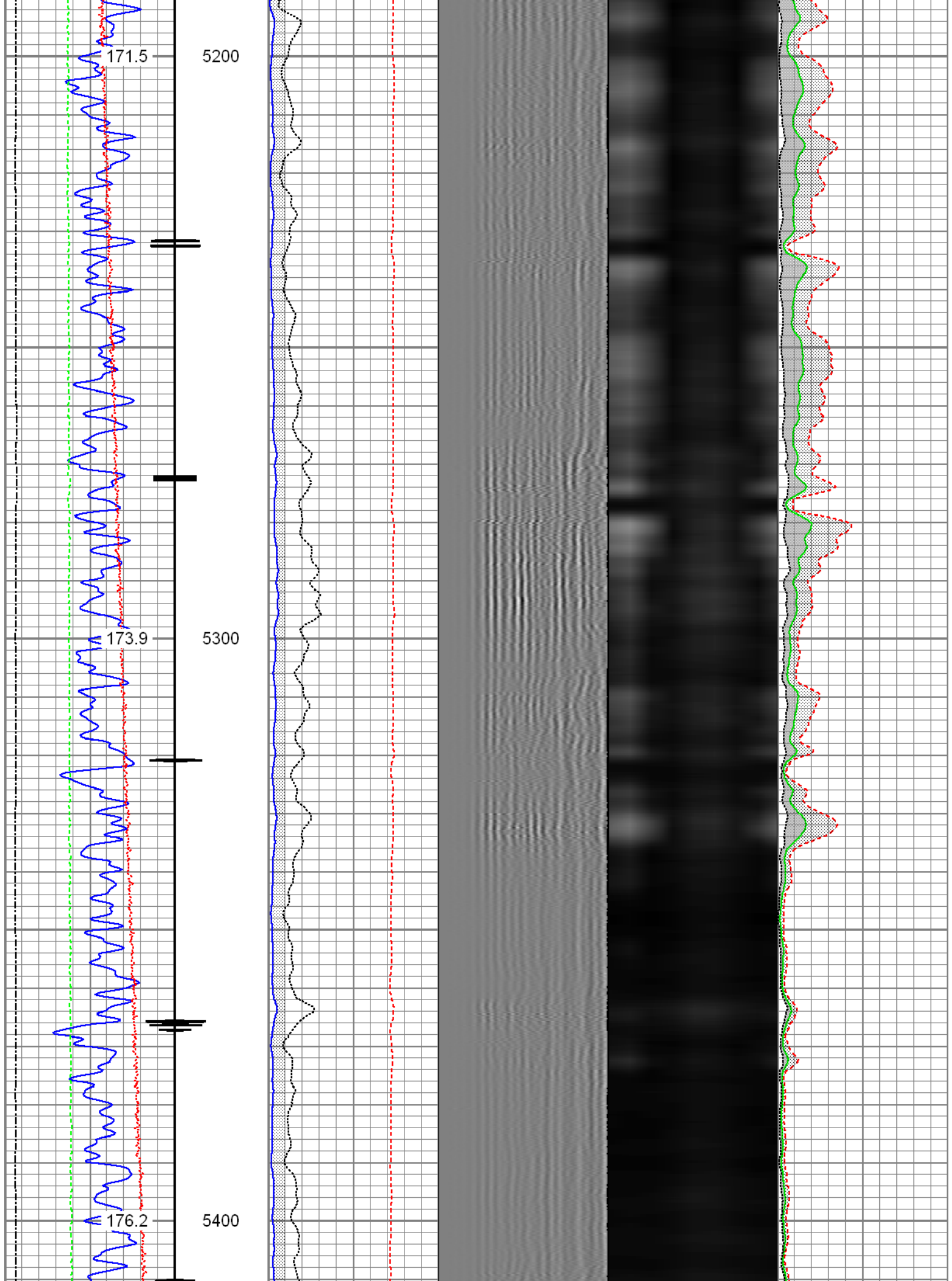




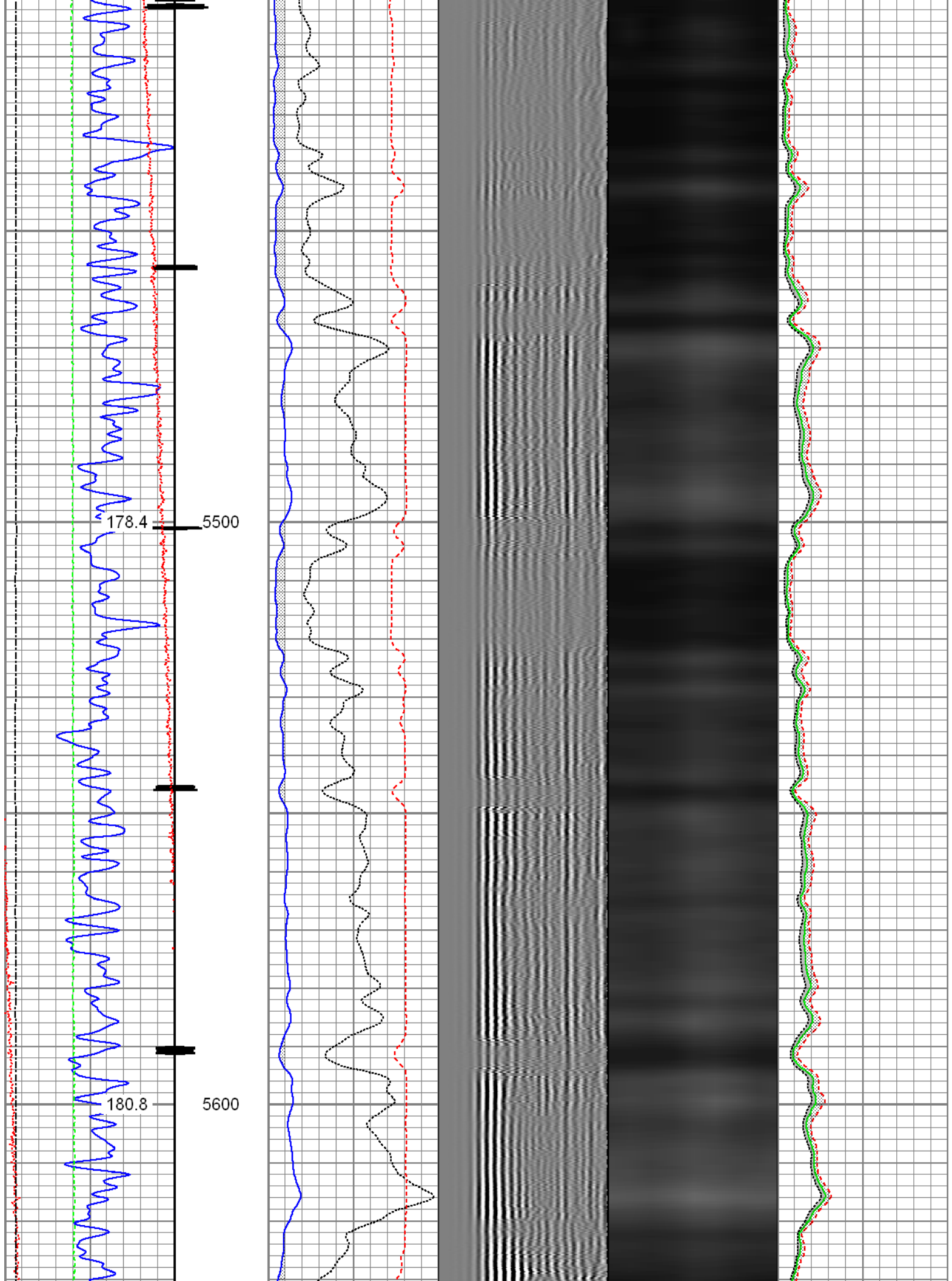


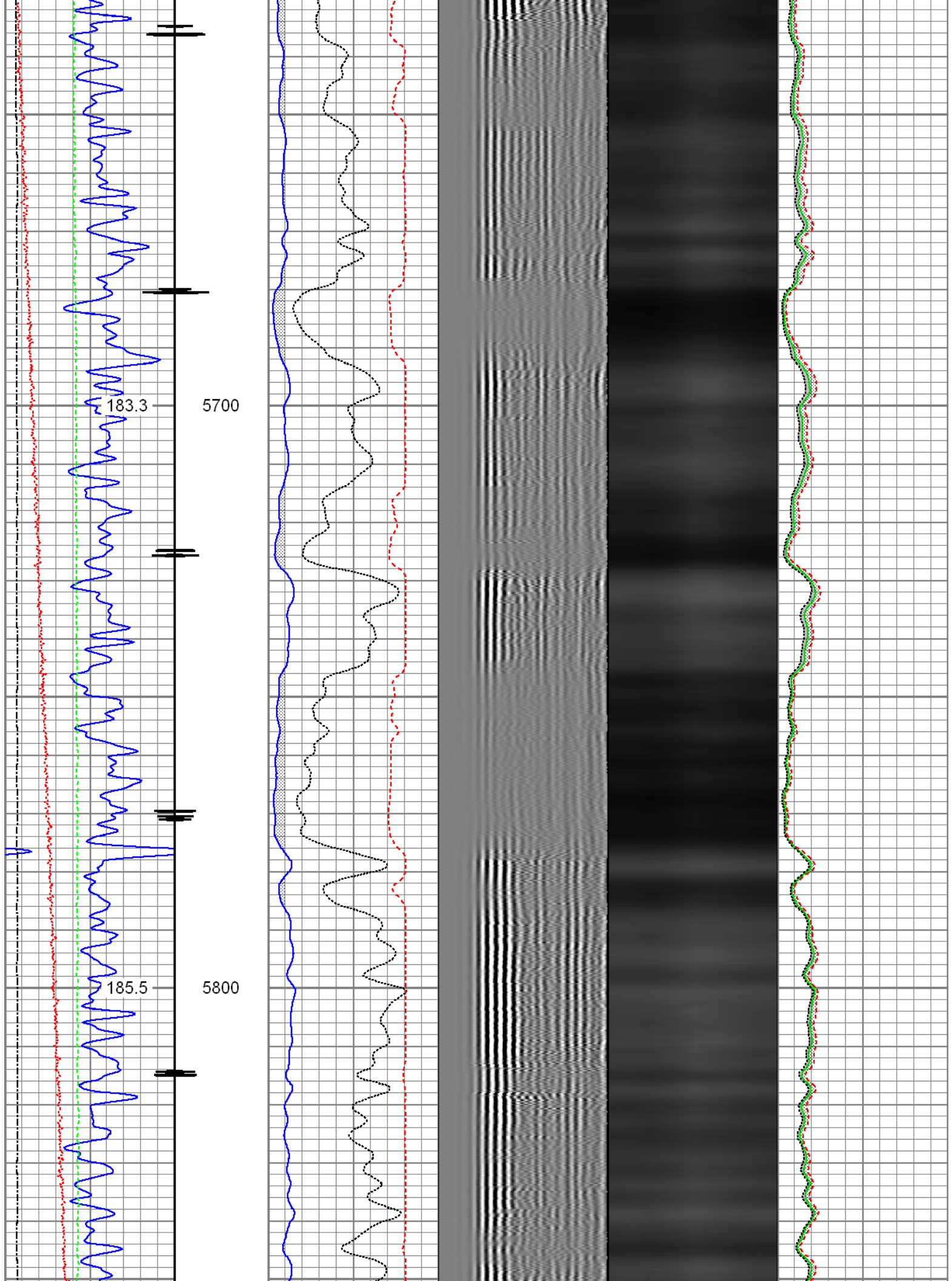


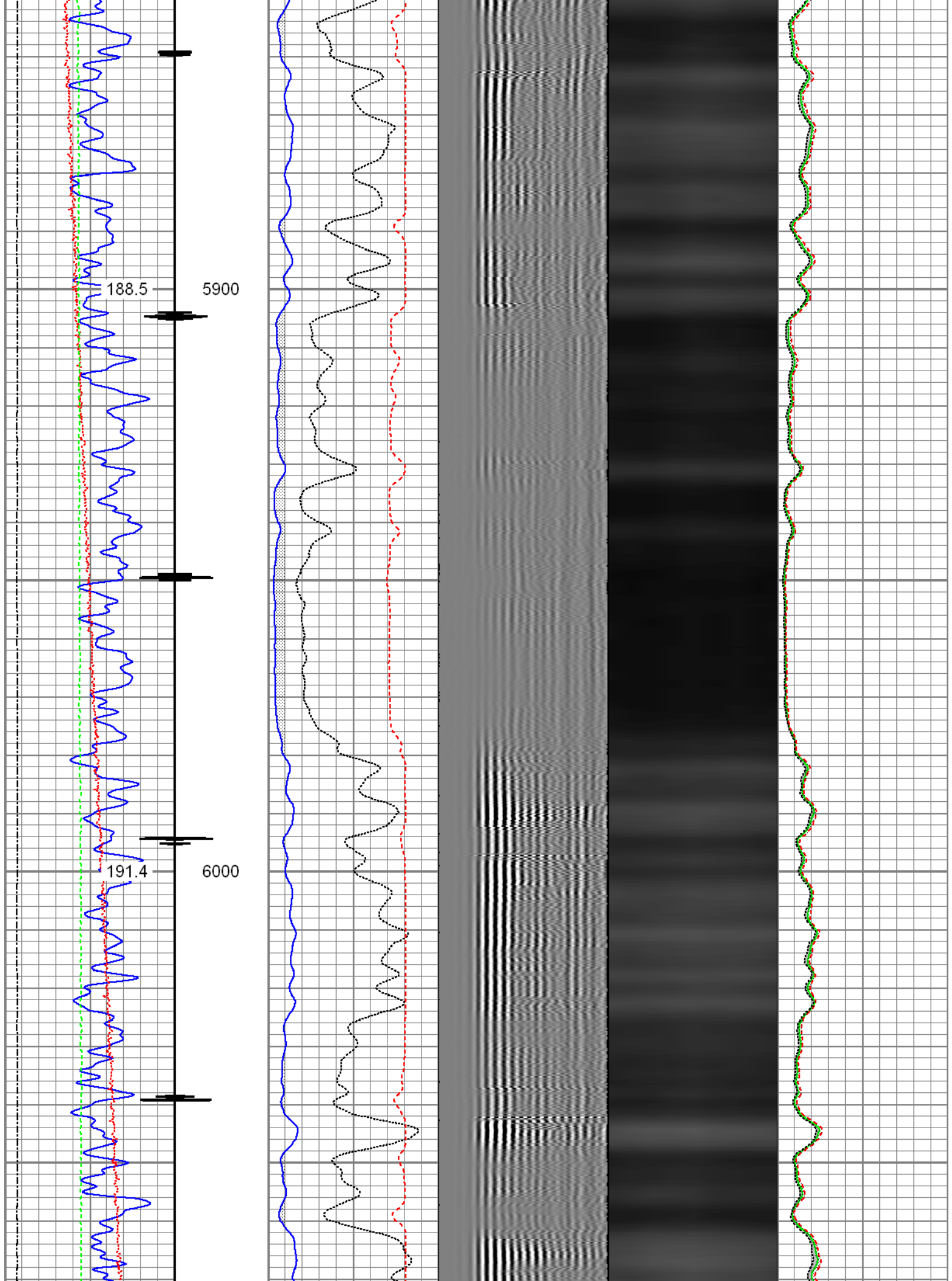




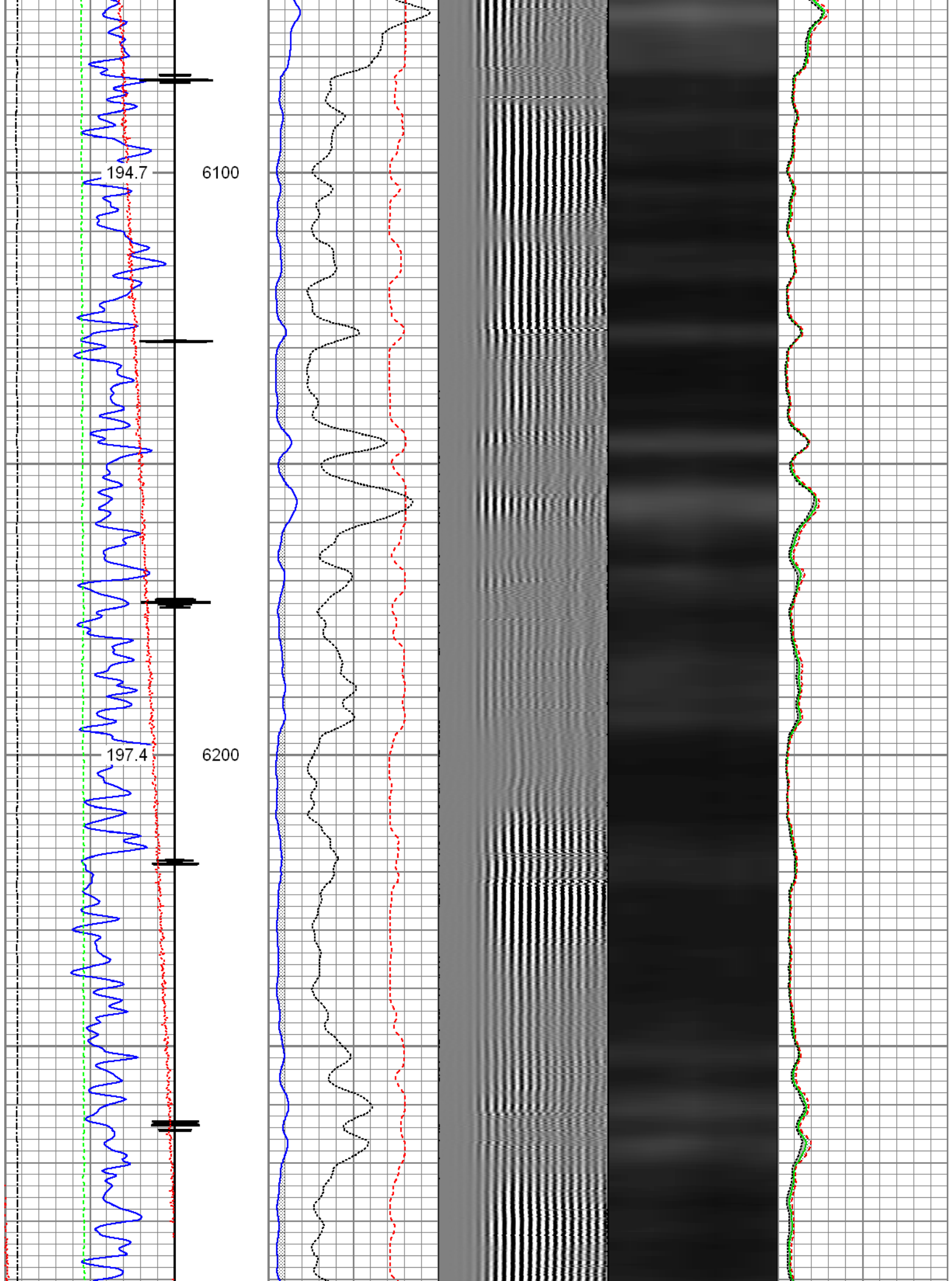


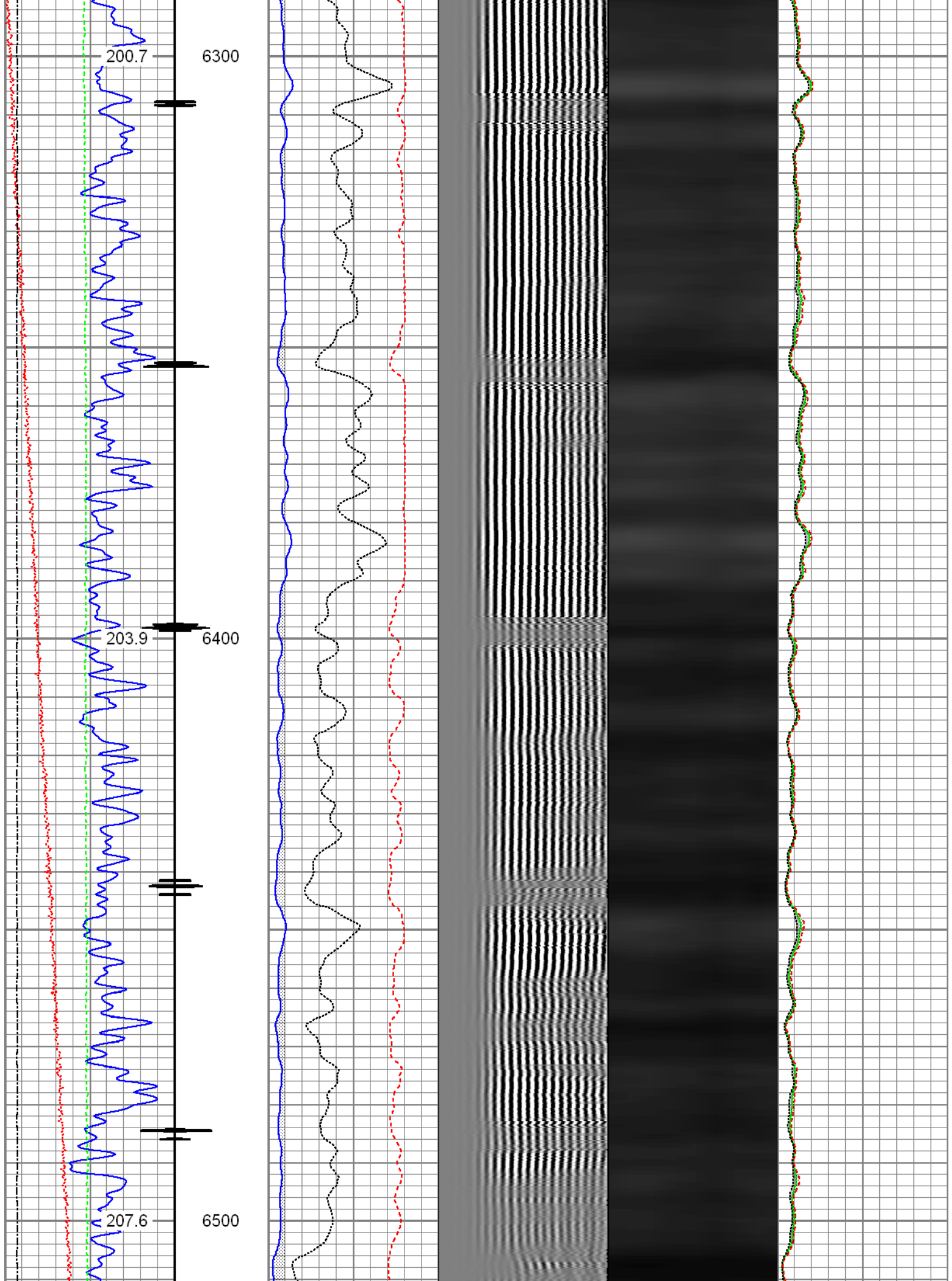


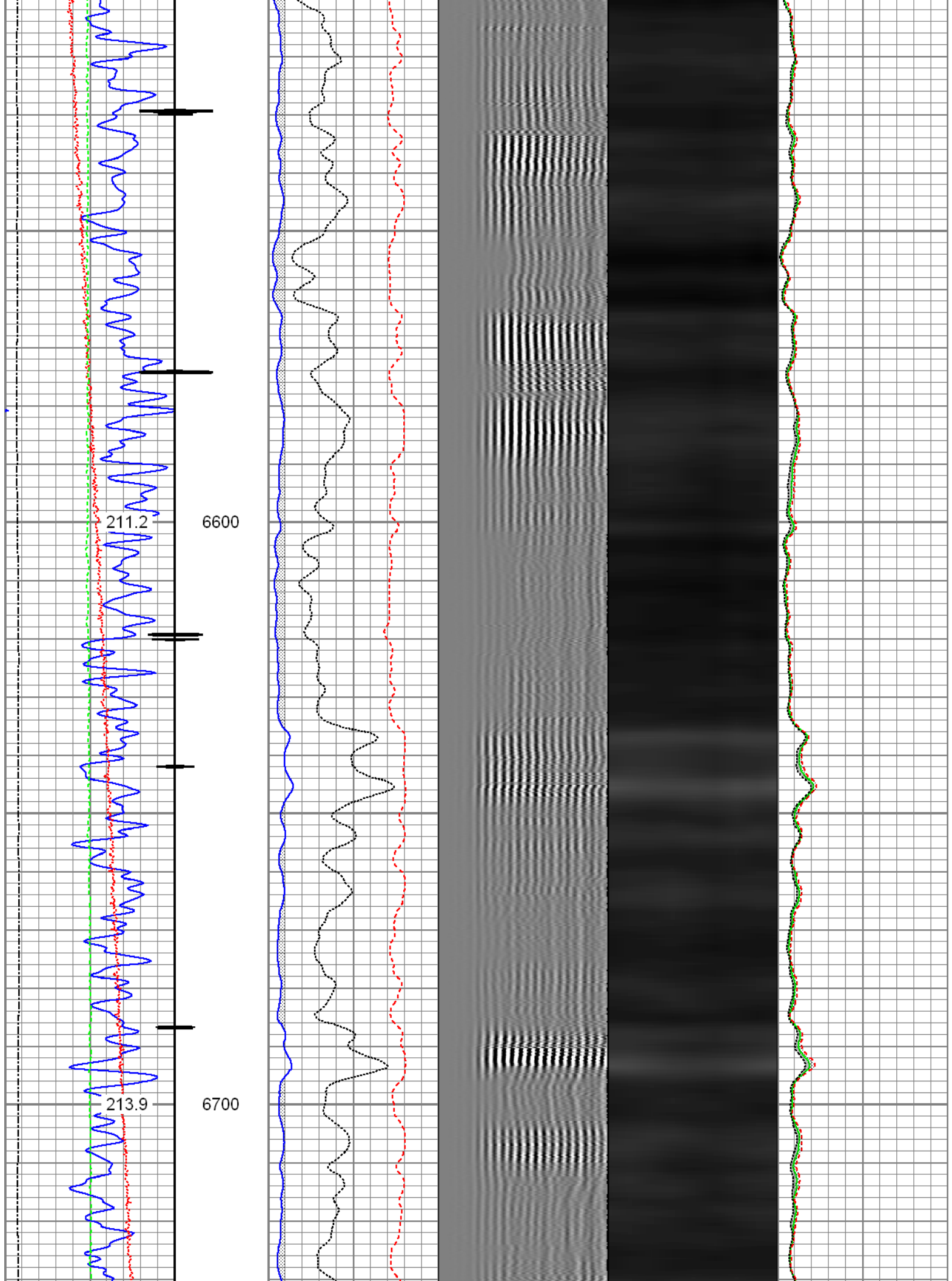




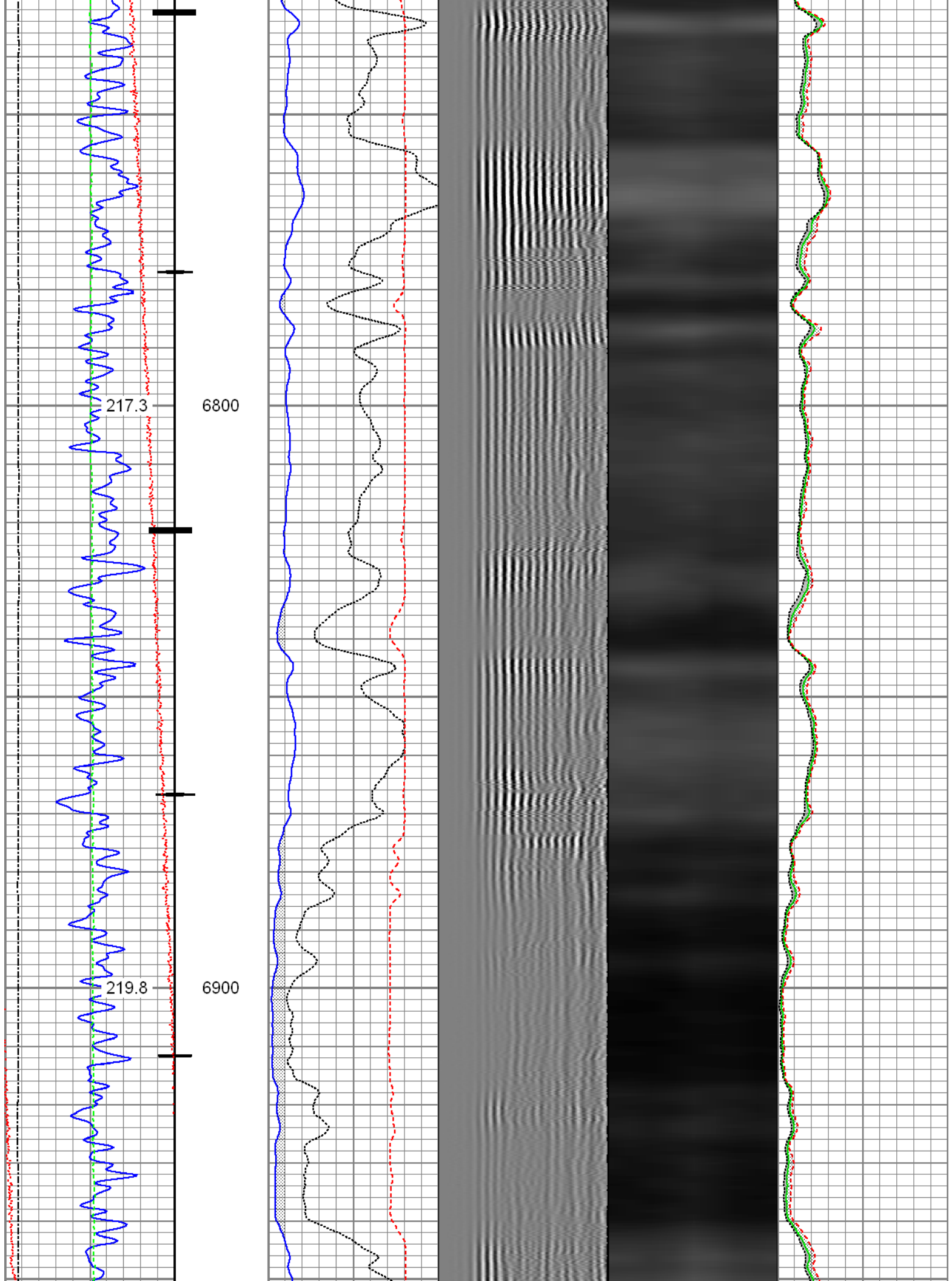


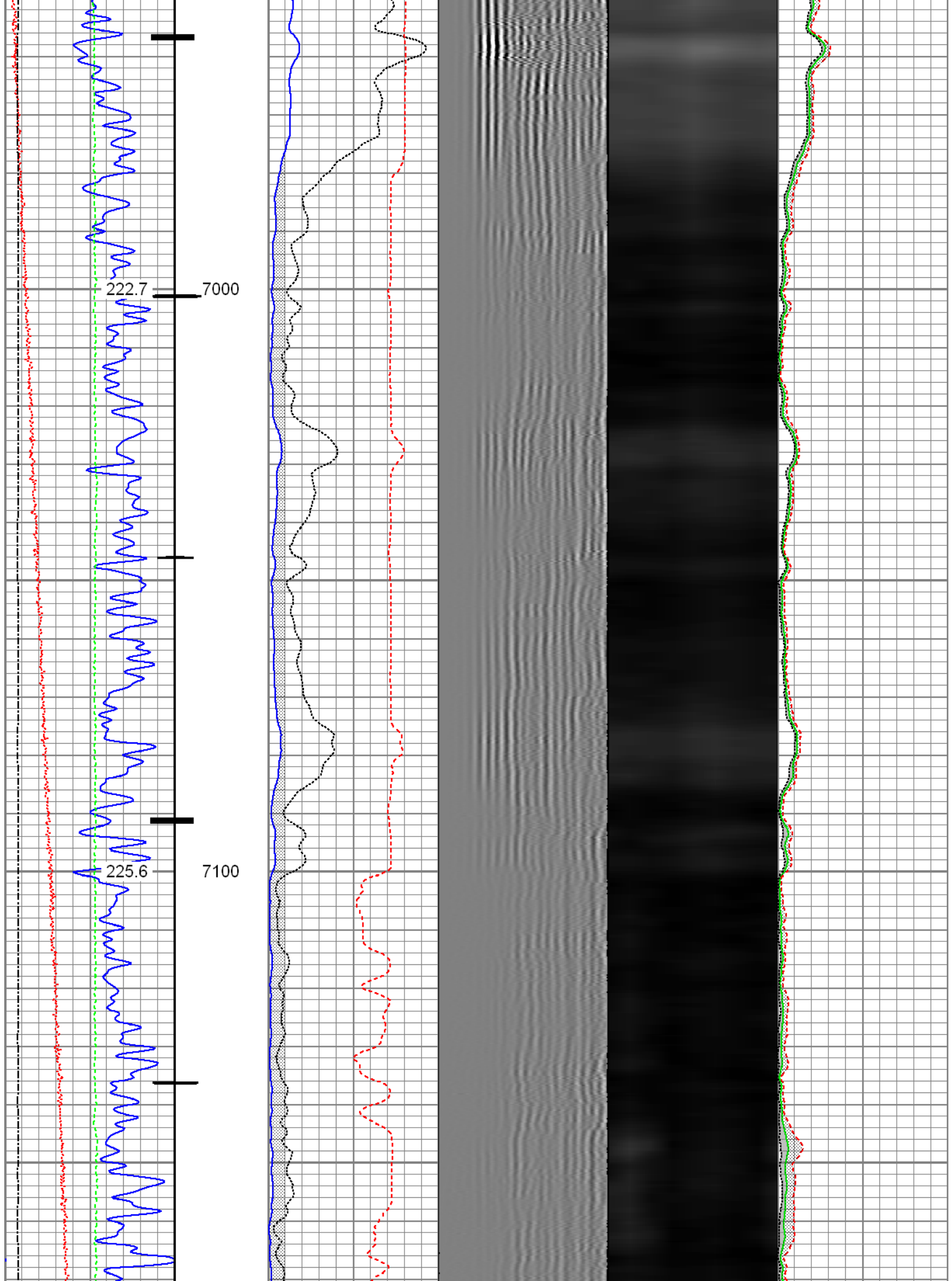


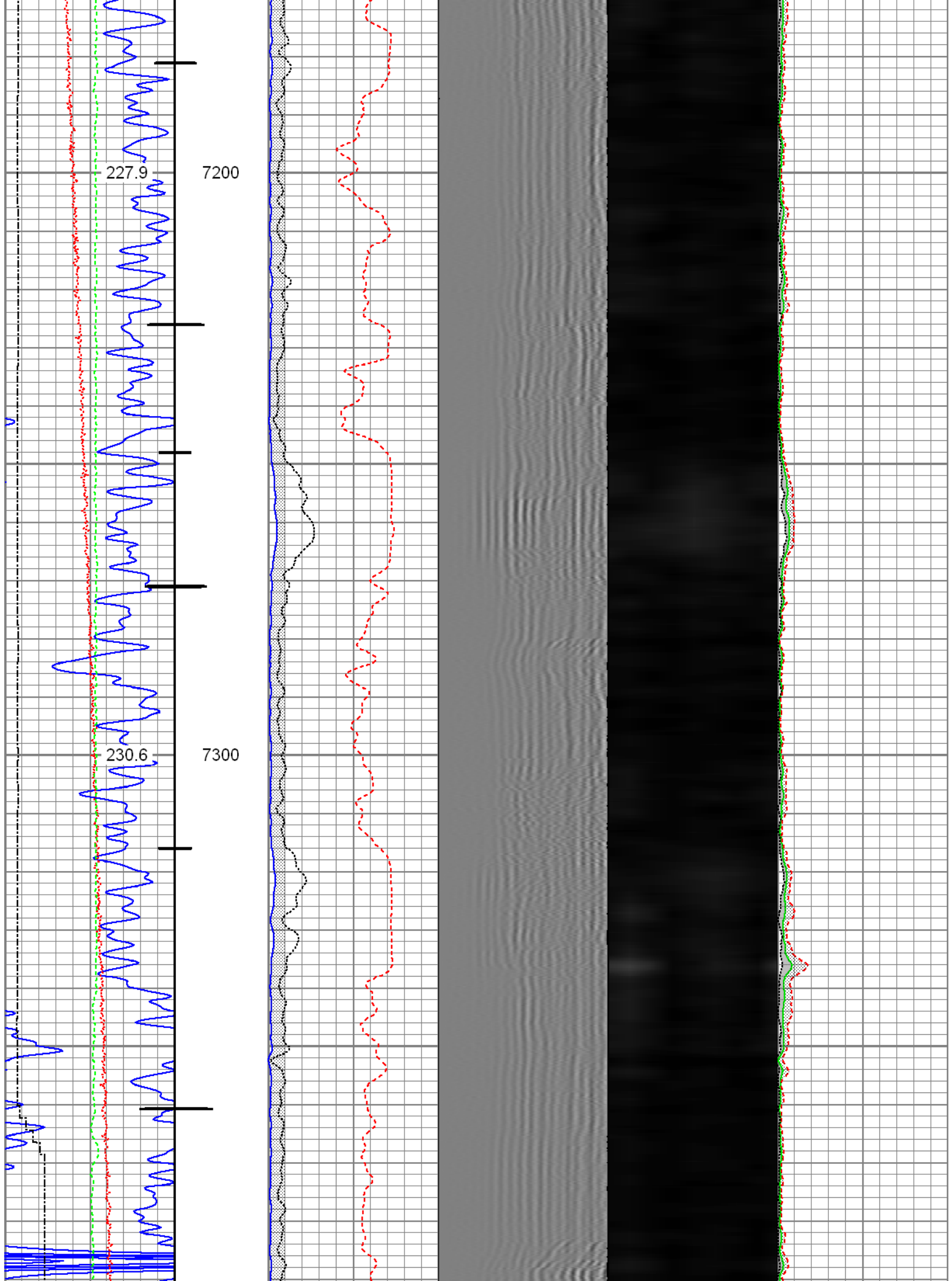




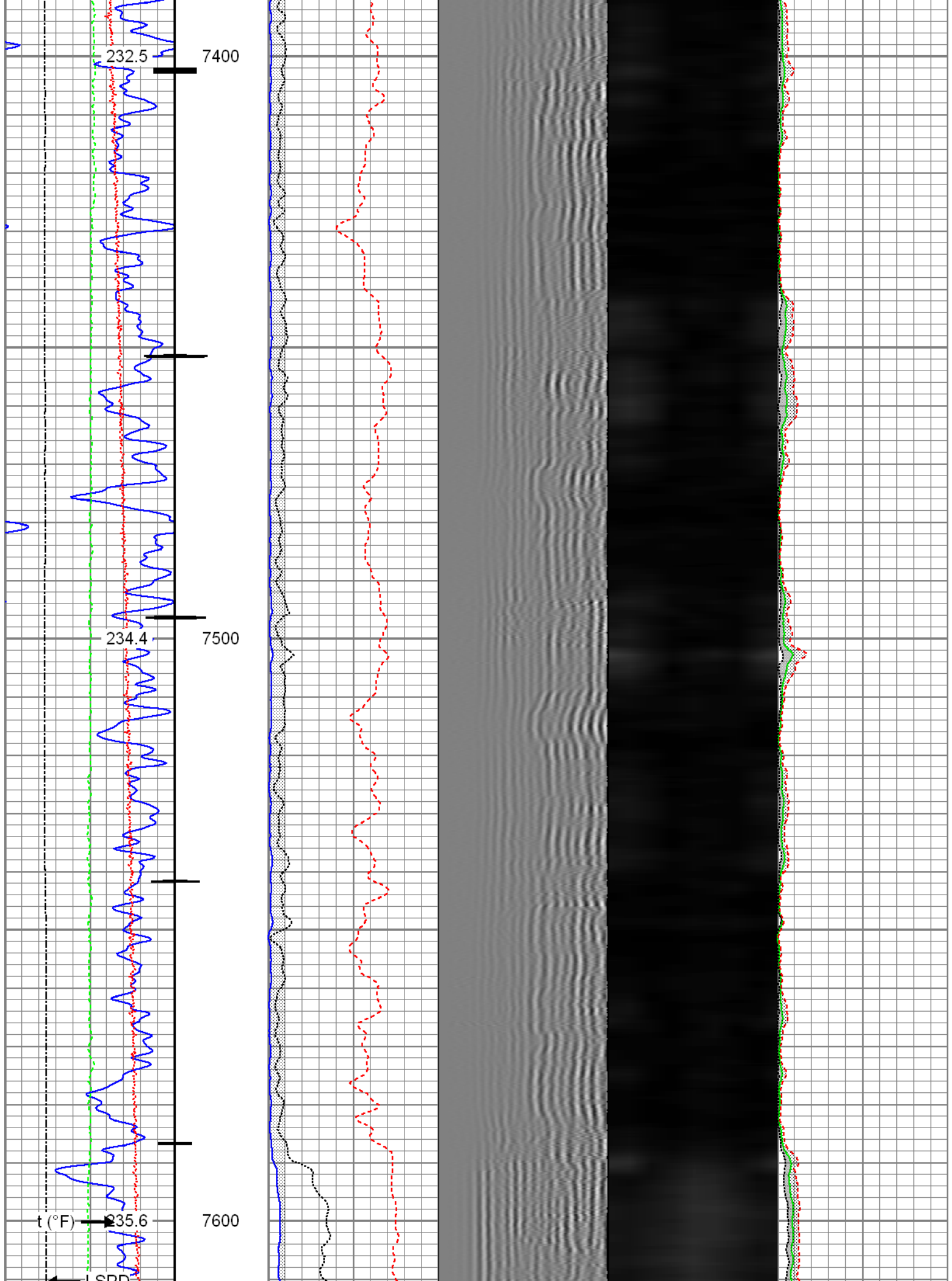


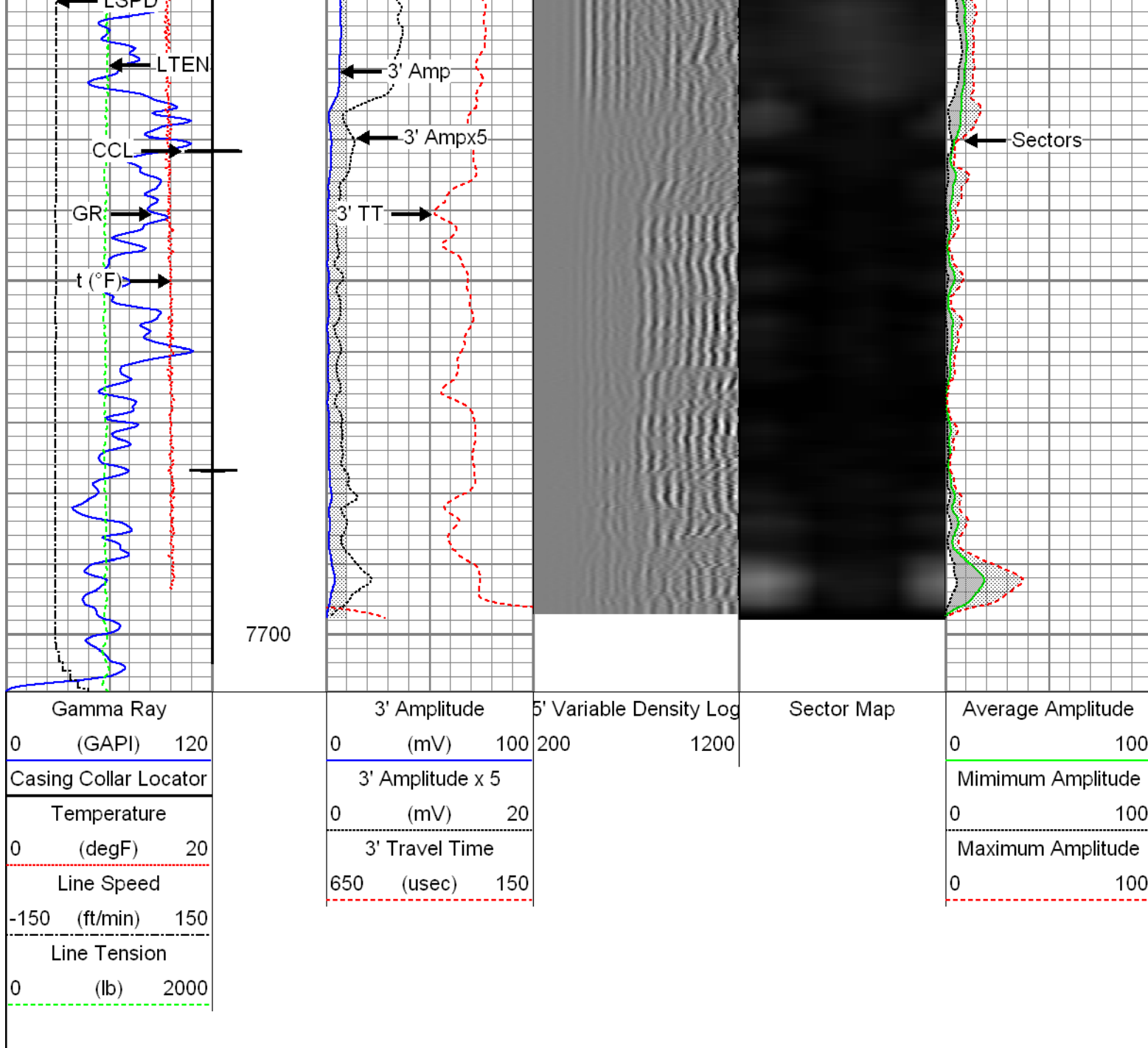












## Repeat Section

Recorded with 2800 PSI Surface Induced Pressure

Database File: 0512341501\_anadarko\_english farms 15n-8hz\_08-21-15\_rbl.db

Dataset Pathname: repeat

Presentation Format: radii

Dataset Creation: Fri Aug 21 10:02:13 2015 by Log 7.0 B1

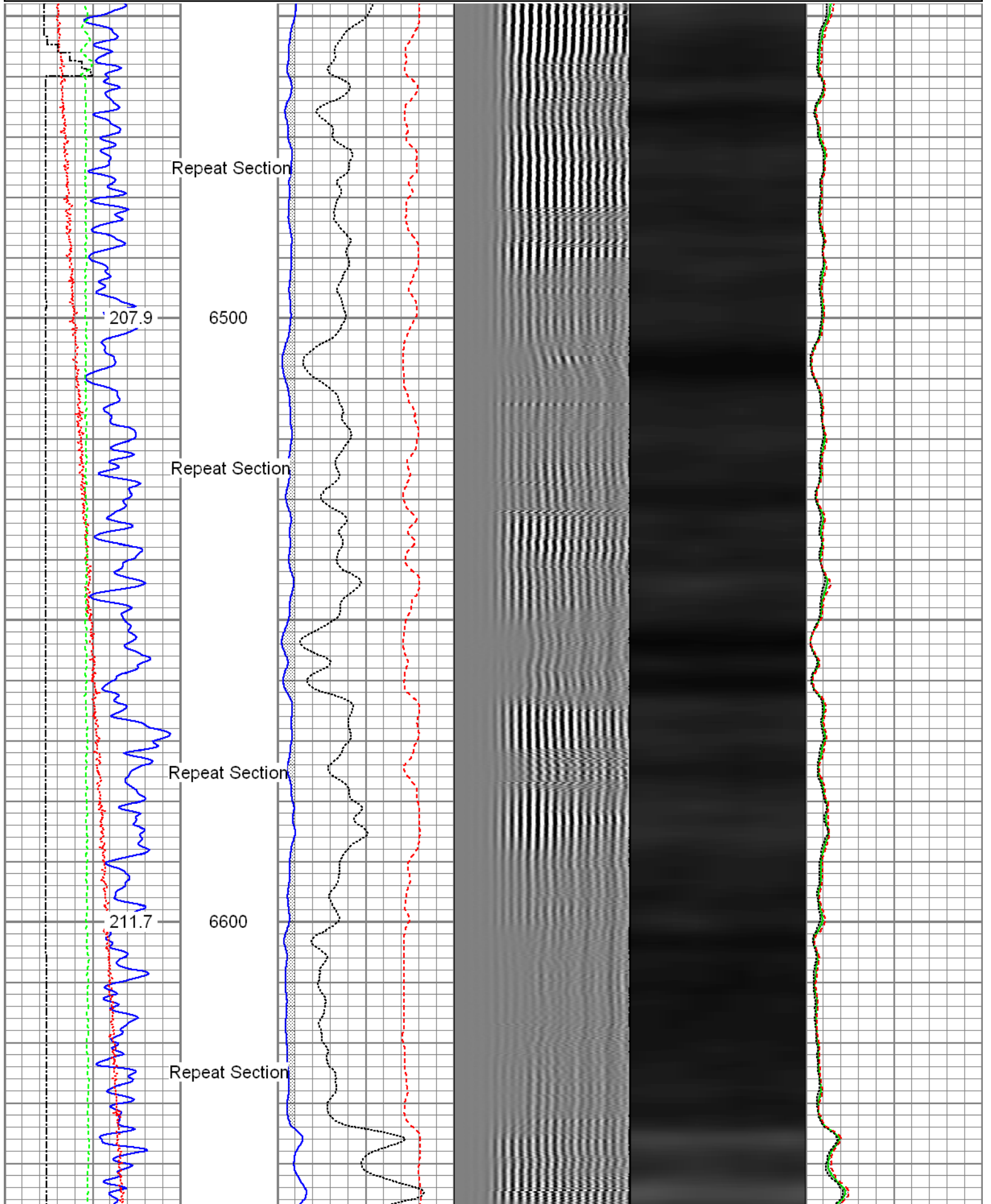
Charted by: Depth in Feet scaled 1:240

Gamma Ray 0 (GAPI) 120	3' Amplitude 0 (mV) 100	5' Variable Density Log 200 1200	Sector Map	Average Amplitude 0 100
Temperature 0 (degF) 20	3' Amplitude x 5 0 (mV) 20			Minimum Amplitude 0 100
Line Speed	3' Travel Time			Maximum Amplitude

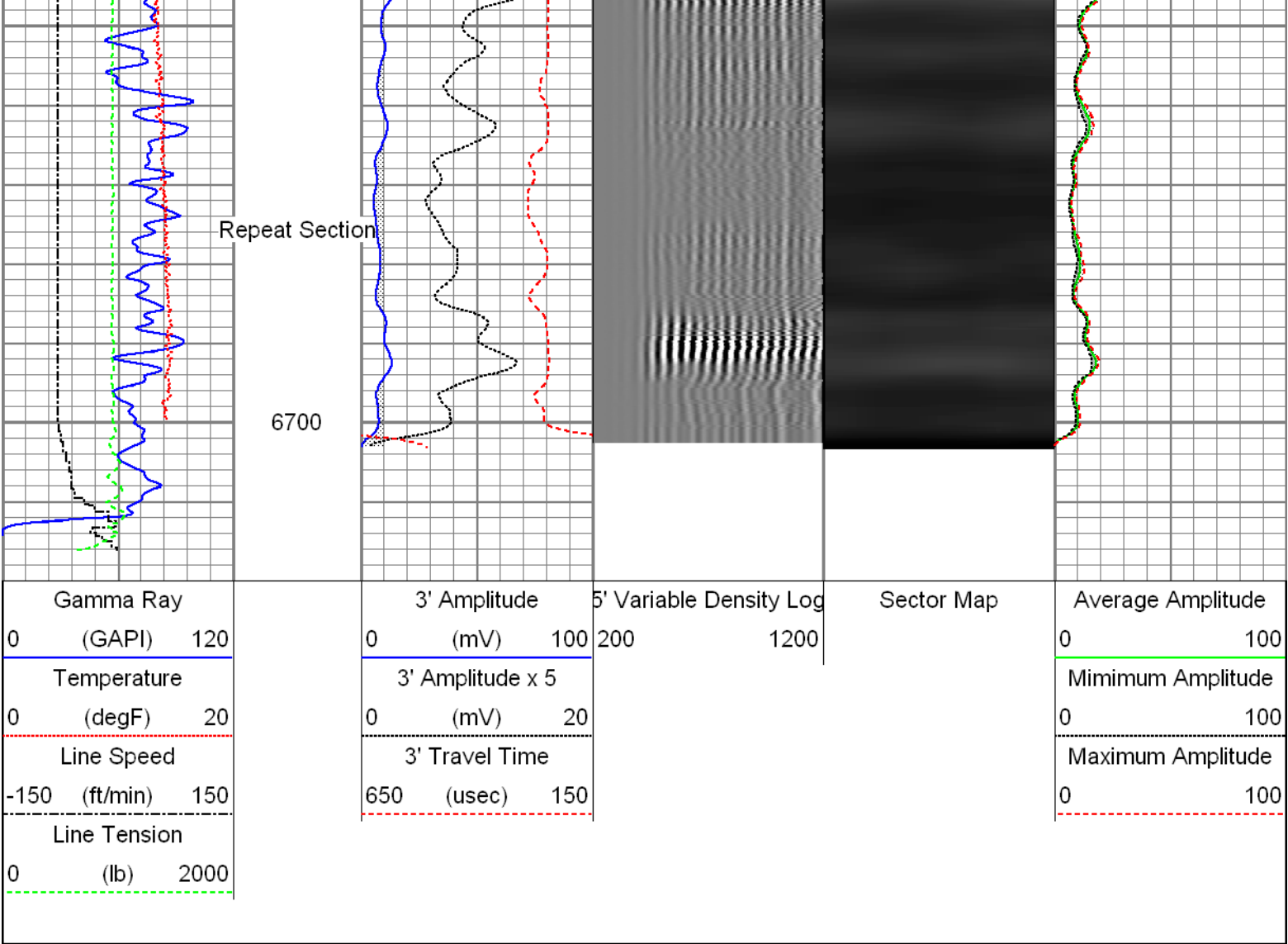
-150 (ft/min) 150  
Line Tension  
0 (lb) 2000

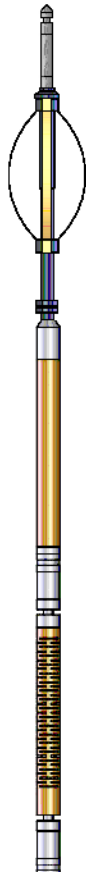

650 (usec) 150

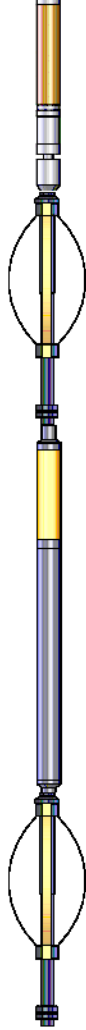
0 100







Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
HeadVolt	19.49		T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
			Probe_RADII-C-2-3/4" (FW1305-098) Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.19	2.75	105.00
WV3FT	14.55					
WVFCAL	14.55					
WVFS1	14.55					
WVFS2	14.55					
WVFS3	14.55					

WVFS4	14.55		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
WVFS5	14.55					
WVFS6	14.55					
WVFS7	14.55					
WVFS8	14.55					
WVF5FT	13.55					
CCL	6.51					
DCCL	6.51					
			Probe_CCL_GR-2.75"Digital (FW1211-081)	4.54	2.75	55.00
			Probe 2-3/4" Digital CCL / Gamma Ray Combined			
GR	3.77					
			Probe_IL_BS_Cent	2.88	2.75	10.00
			Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer			
Dataset: 0512341501_Anadarko_English Farms 15N-8HZ_08-21-15_RBL.db: field/well/run1/main Total Length: 23.40 ft Total Weight: 194.00 lb O.D. 2.75 in						

Calibration Report	
Database File:	0512341501_Anadarko_English Farms 15N-8HZ_08-21-15_RBL.db
Dataset Pathname:	repeat
Dataset Creation:	Fri Aug 21 10:02:13 2015 by Log 7.0 B1

Gamma Ray Calibration Report		
Serial Number:	FW1211-081	
Tool Model:	2.75"Digital	
Performed:	Tue Aug 18 12:26:36 2015	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.6000	GAPI/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	FW1305-098	
Tool Model:	2-3/4"	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	204.539	ft

Master Calibration, performed Fri Aug 21 09:35:47 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.003	0.574	0.800	71.921	124.484	0.441
CAL	0.002	0.712				
5'	0.002	0.481	0.800	71.921	148.492	0.457
SUM						
S1	0.003	0.526	0.000	100.000	190.907	-0.489
S2	0.002	0.531	0.000	100.000	189.275	-0.414
S3	0.002	0.562	0.000	100.000	178.767	-0.441
S4	0.002	0.607	0.000	100.000	165.285	-0.359
S5	0.002	0.646	0.000	100.000	155.307	-0.337
S6	0.002	0.639	0.000	100.000	156.989	-0.351
S7	0.002	0.590	0.000	100.000	169.948	-0.315
S8	0.002	0.542	0.000	100.000	185.180	-0.368

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.002	0.712	1.000	0.000

Air Zero Calibration, performed Fri Aug 21 09:36:12 2015:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.003		0.000		0.000	
5'	0.002		0.000		0.000	
SUM						
S1	0.003		0.000		-0.000	
S2	0.002		0.000		0.000	
S3	0.002		0.000		0.000	
S4	0.002		0.000		-0.000	
S5	0.002		0.000		-0.000	
S6	0.002		0.000		0.000	
S7	0.002		0.000		-0.000	
S8	0.002		0.000		-0.000	



Company Kerr-McGee Oil & Gas Onshore, L.P.  
 Well English Farms 15N-8HZ  
 Field Wattenberg  
 County Weld  
 State Colorado