



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.		
Well	Carter 14C-33HZ		
Field	Wattenberg		
County	Weld		
State	Colorado		
Location:		API # : 05-123-41551	Other Services
SEC 33 TWP 2N RGE 66W		JB/GR	
Permanent Datum	Ground Level	Elevation	K.B. 4975' D.F. 4974' G.L. 4959'
Log Measured From	Kelly Bushing	16 FT	
Drilling Measured From	Kelly Bushing		

Date	03-NOV-2015		
Run Number	Two		
Depth Driller	12515 FT		
Depth Logger	7790 FT		
Bottom Logged Interval	7785 FT		
Top Log Interval	Surface		
Open Hole Size	7.875"		
Type Fluid	Water		
Density / Viscosity	8.34 lbm/gal		
Max. Recorded Temp.	243°F		
Estimated Cement Top	Surface		
Time Well Ready	ROA		
Time Logger on Bottom	9:30		
Equipment Number	HD-0311		
Location	Ft. Lupton, CO		
Recorded By	Z. Fisher		
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	J55 LT&C	Surface	1890 FT		
Intermediate #1							
Intermediate #2	5 1/2	17	HCP-110 LTC	Surface	12508 FT		
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 6930 FT
Adjusted log +28.7 FT to correlate with Marker Joint
Log ran from as deep as possible in heel to Surface
Log ran with 2800 PSI Surface Induced Pressure
Logging tools were clean and free of debris upon completion of operations

Thank you for choosing FMC Technologies Completion Services, Inc.!!



Main Pass

Recorded with 2800 PSI Surface Induced Pressure

Database File: c:\warrior\data\0512341551_anadarko_carter 14c-33hz_11-03-15_rbl_cnl\processed_0512341551_ar

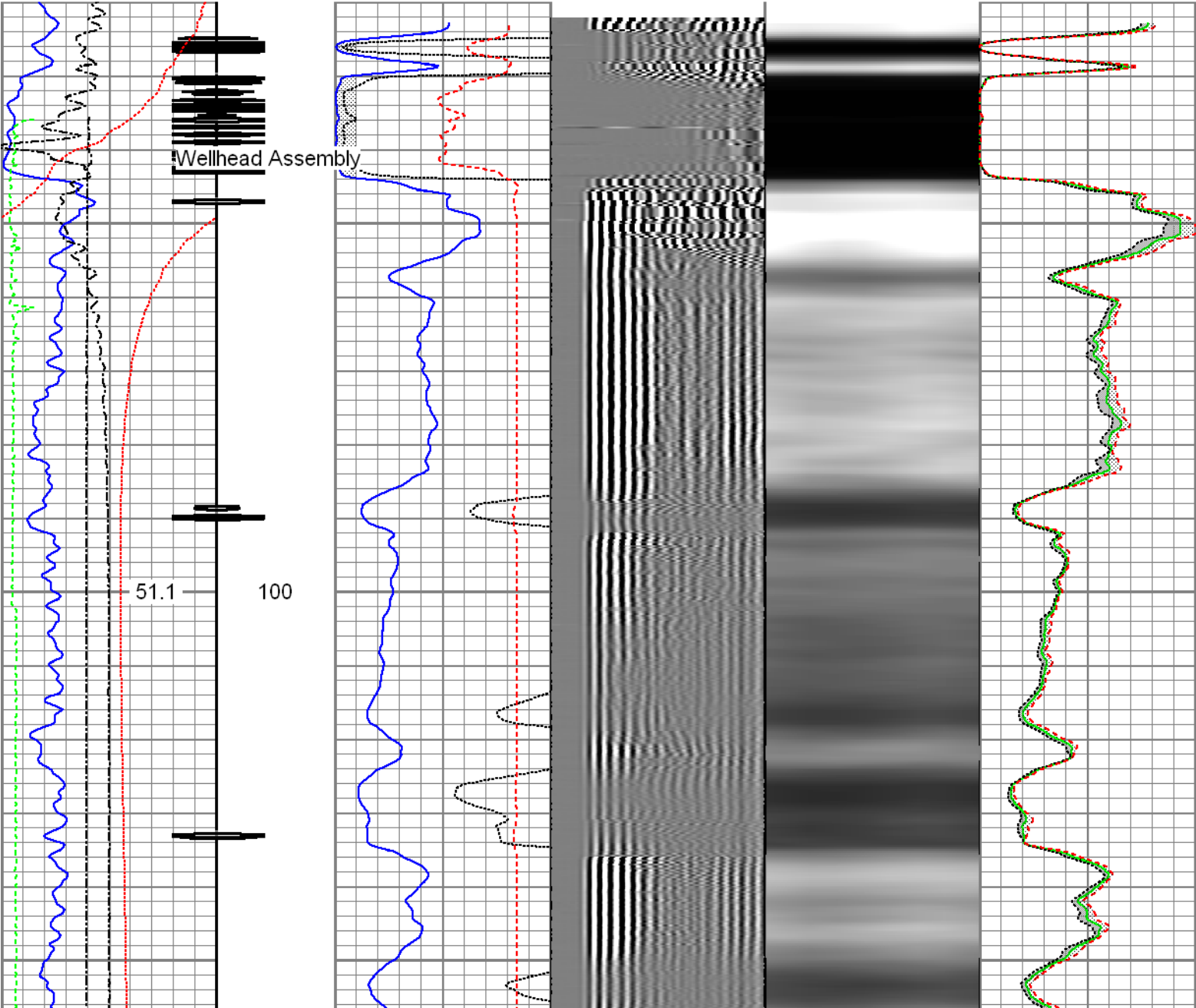
Dataset Pathname: Main

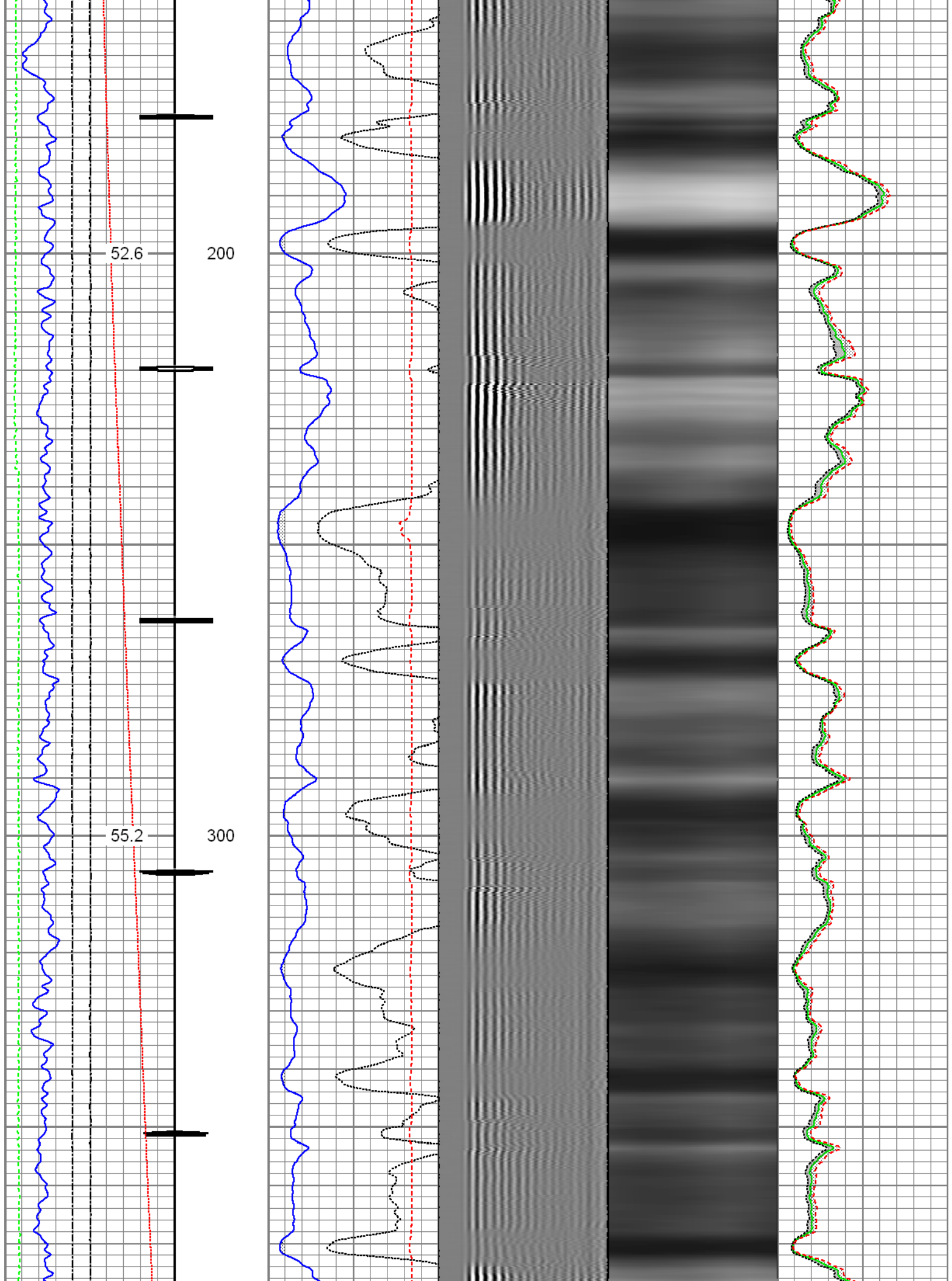
Presentation Format: rbt004

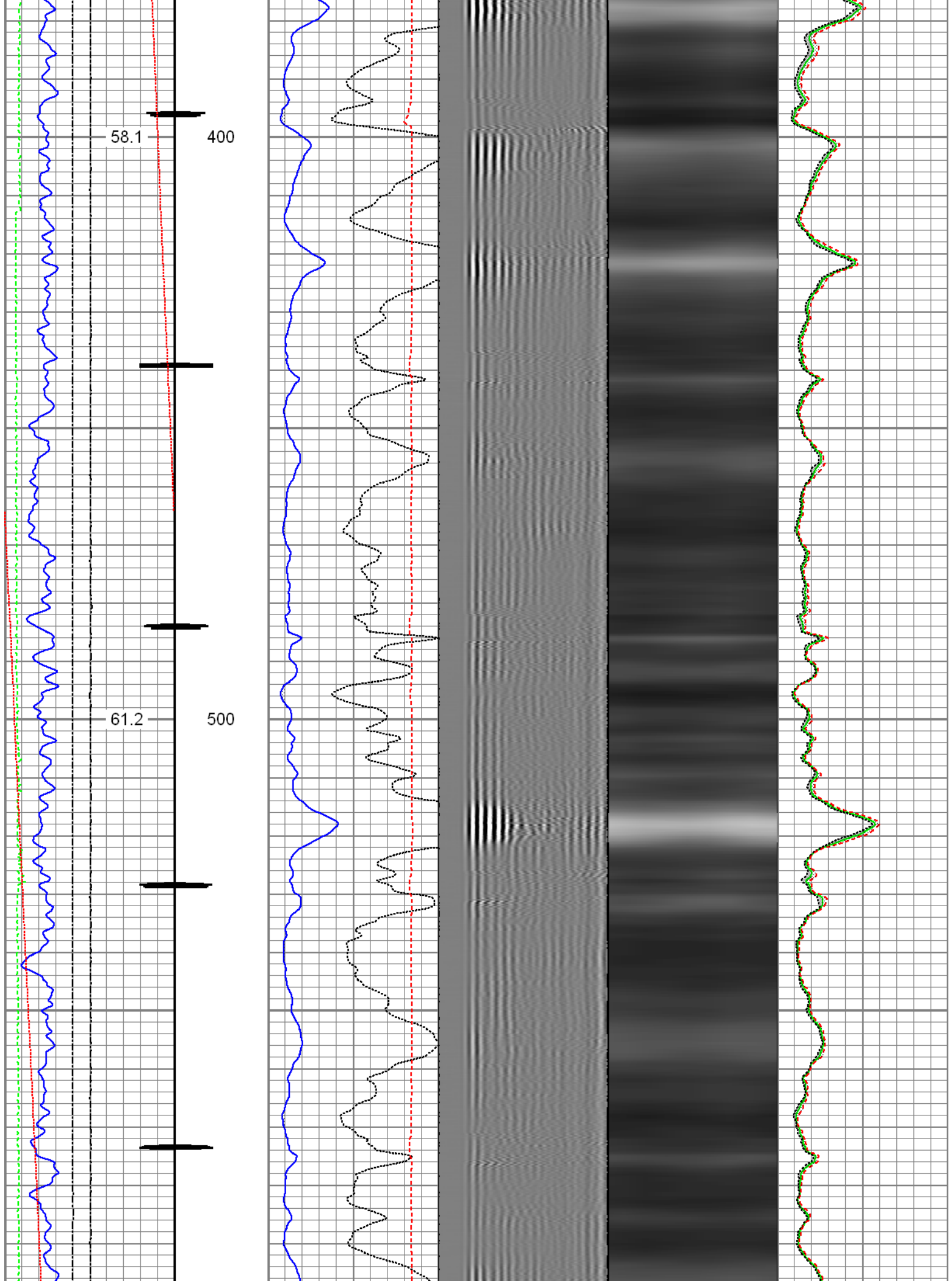
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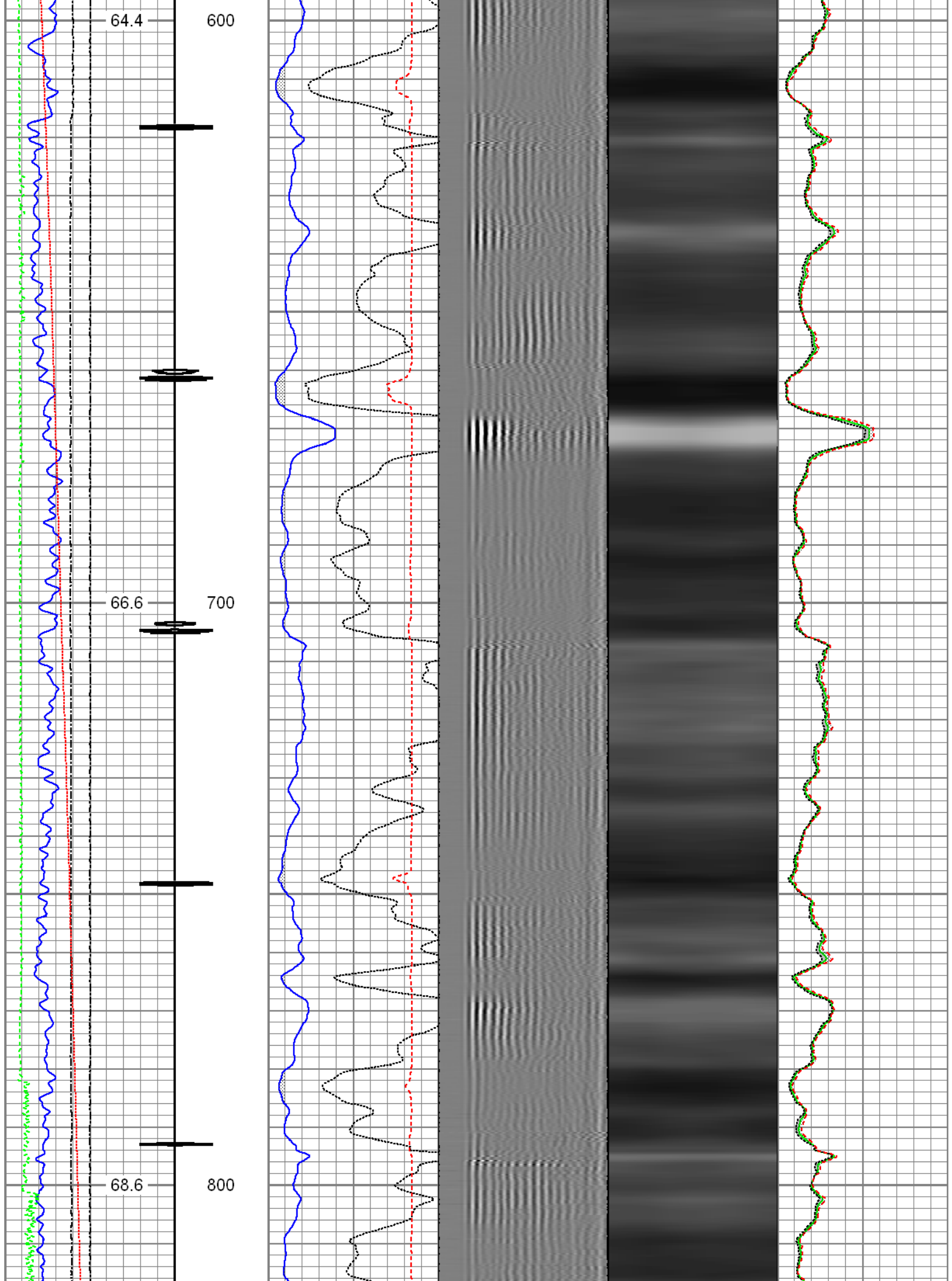
Charted by: Depth in Feet scaled 1:240

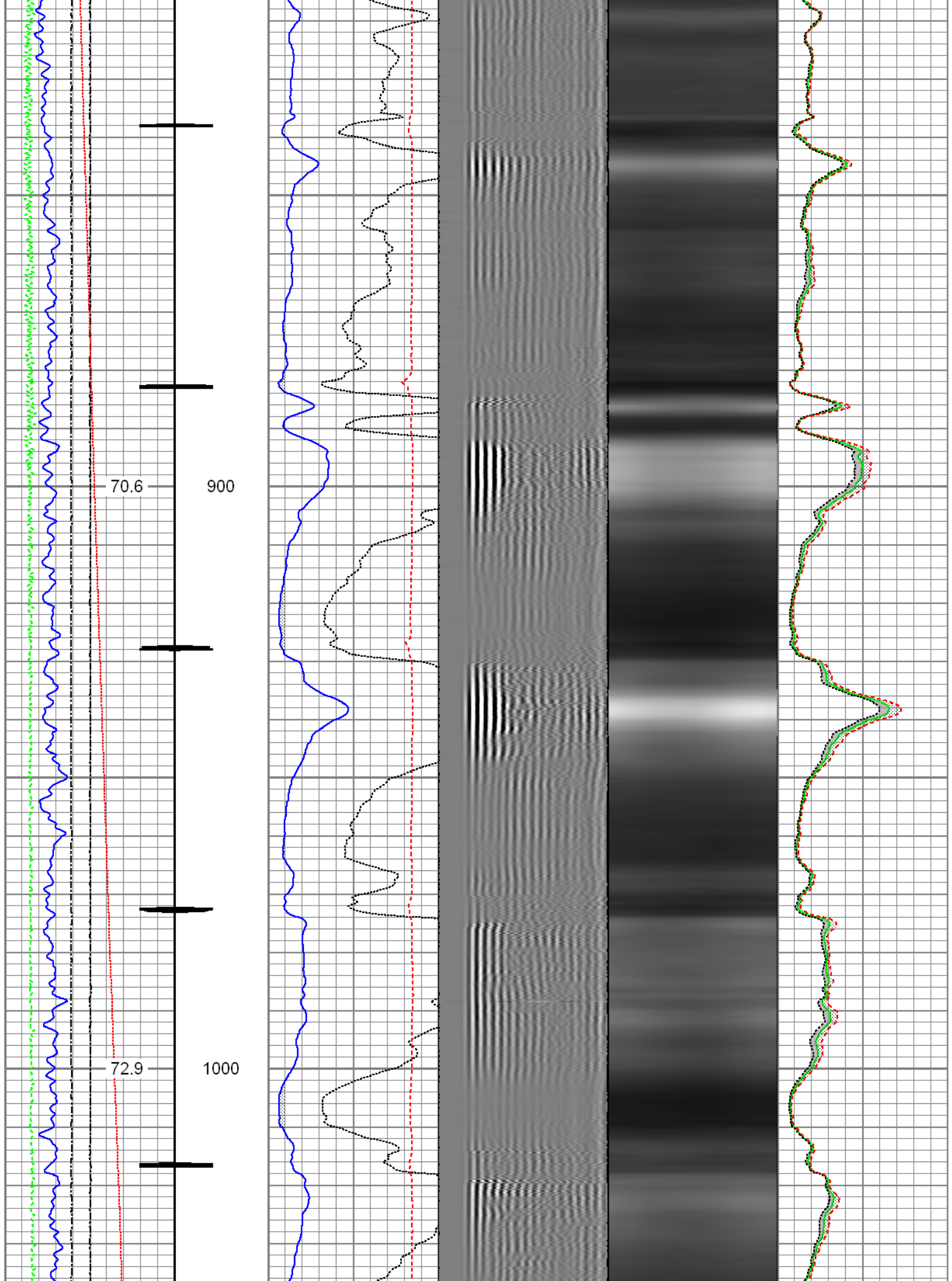
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Line Speed	0 (mV) 20			0 100
-150 (ft/min) 150	3' Travel Time			Maximum Amplitude
Line Tension	650 (usec) 150			0 100
0 (lb) 2000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

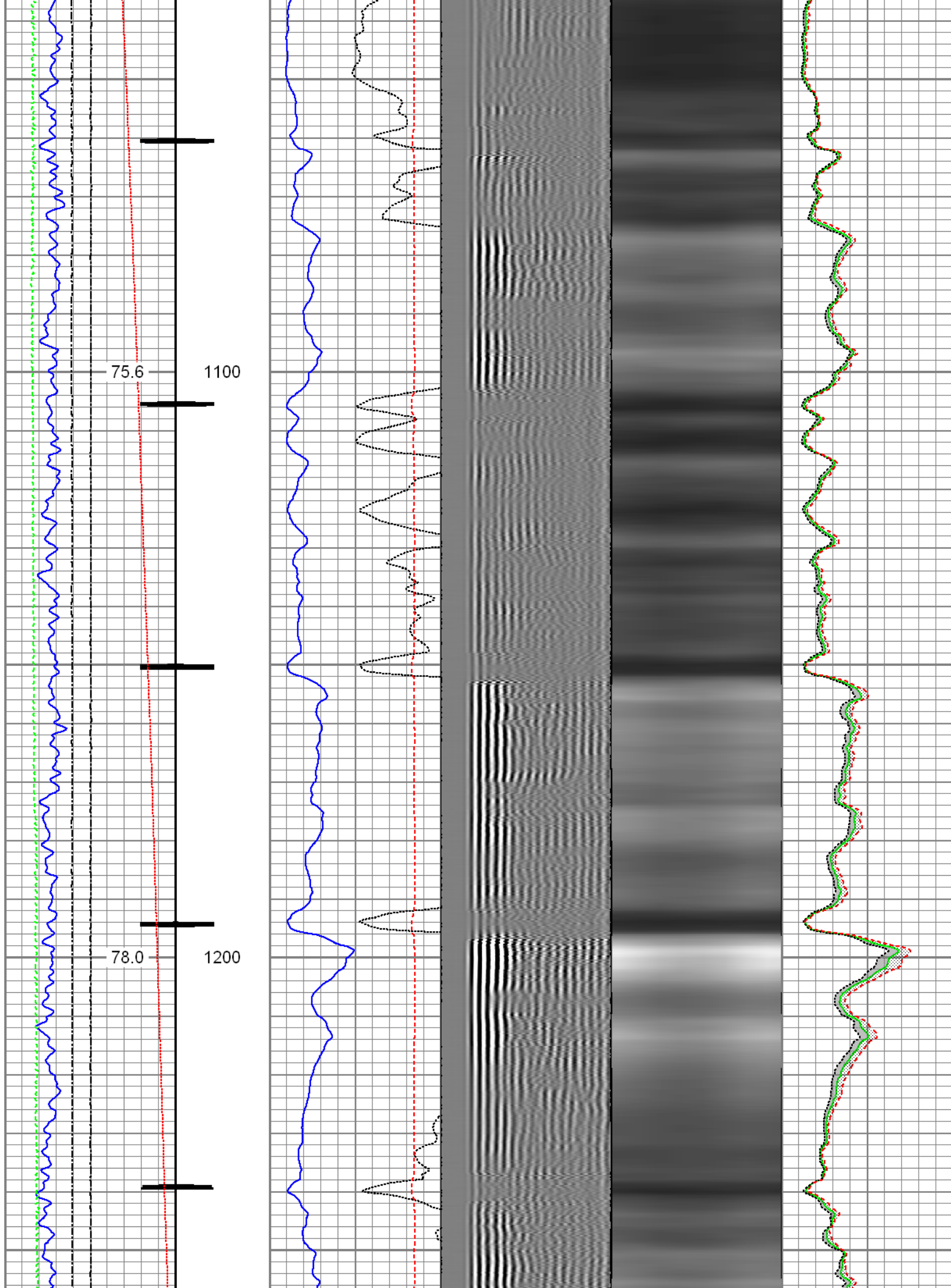


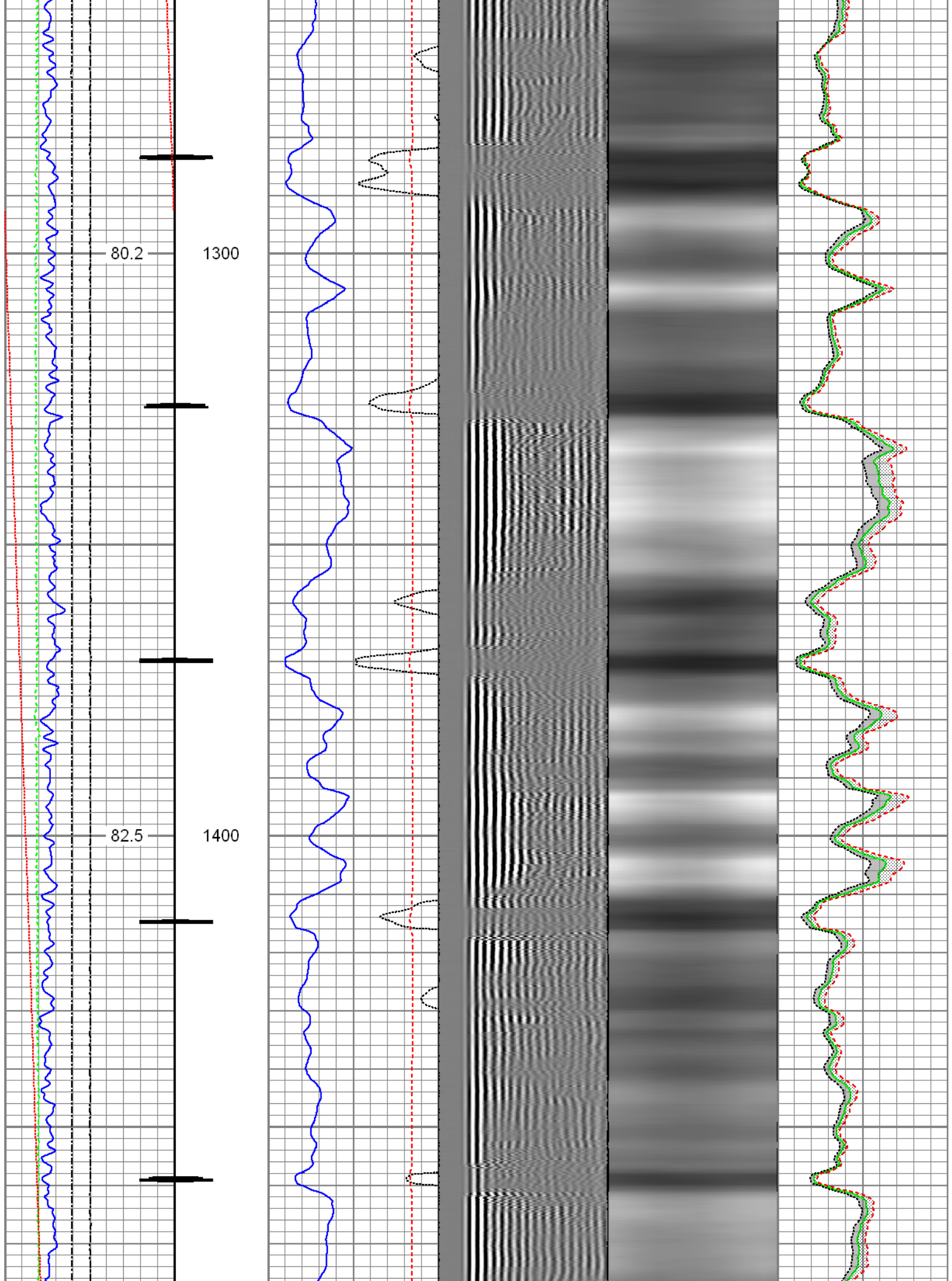


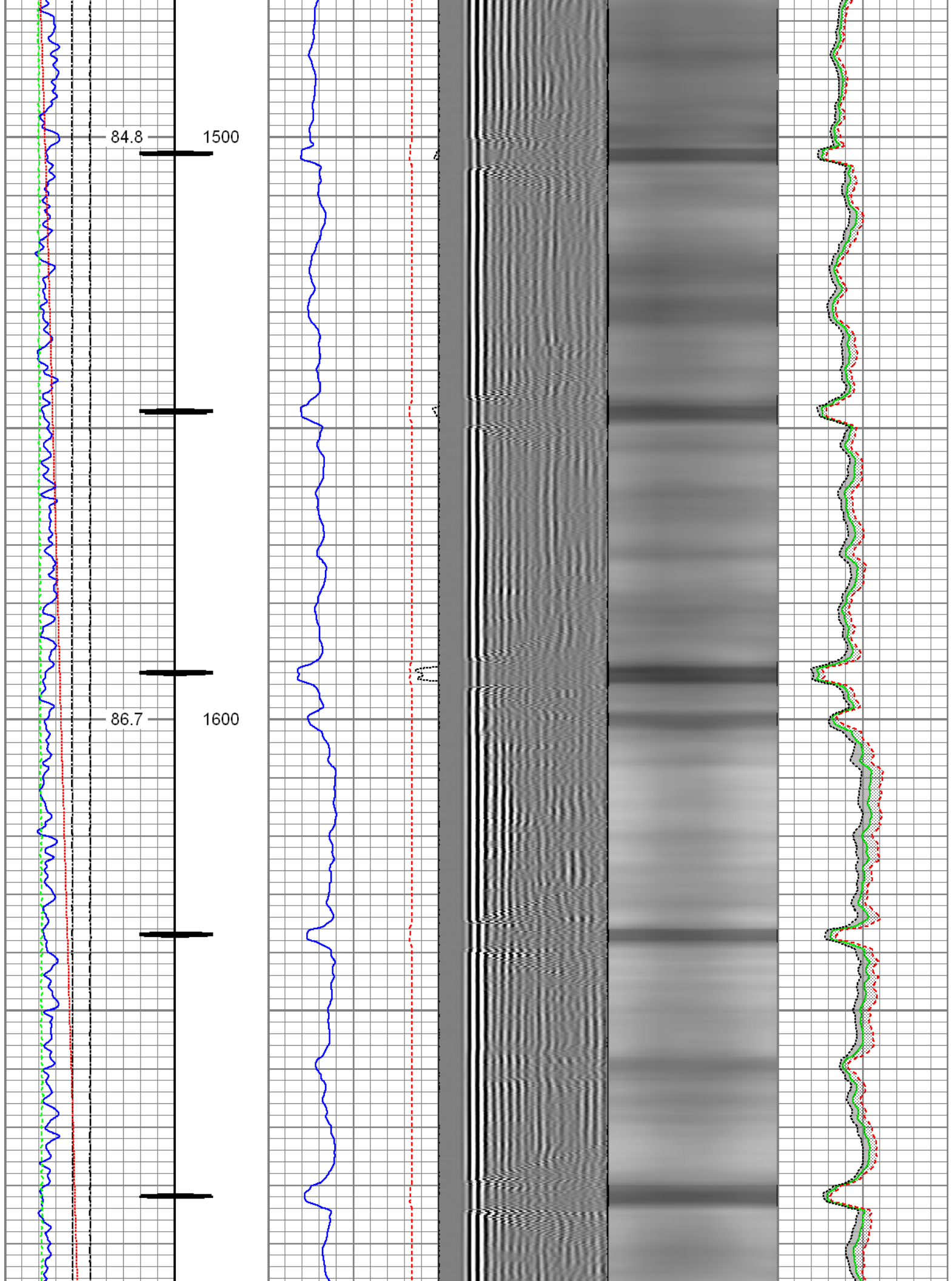


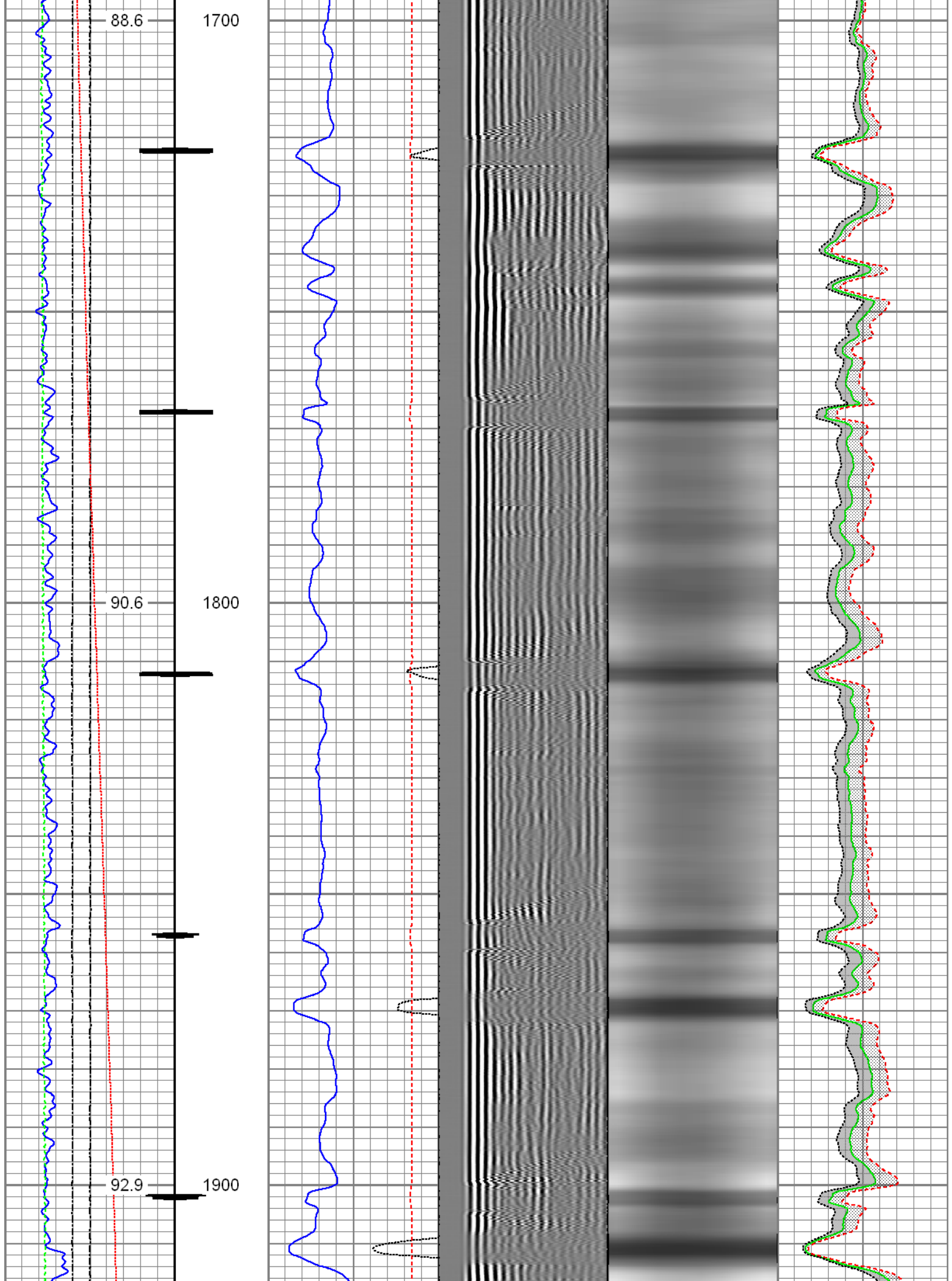


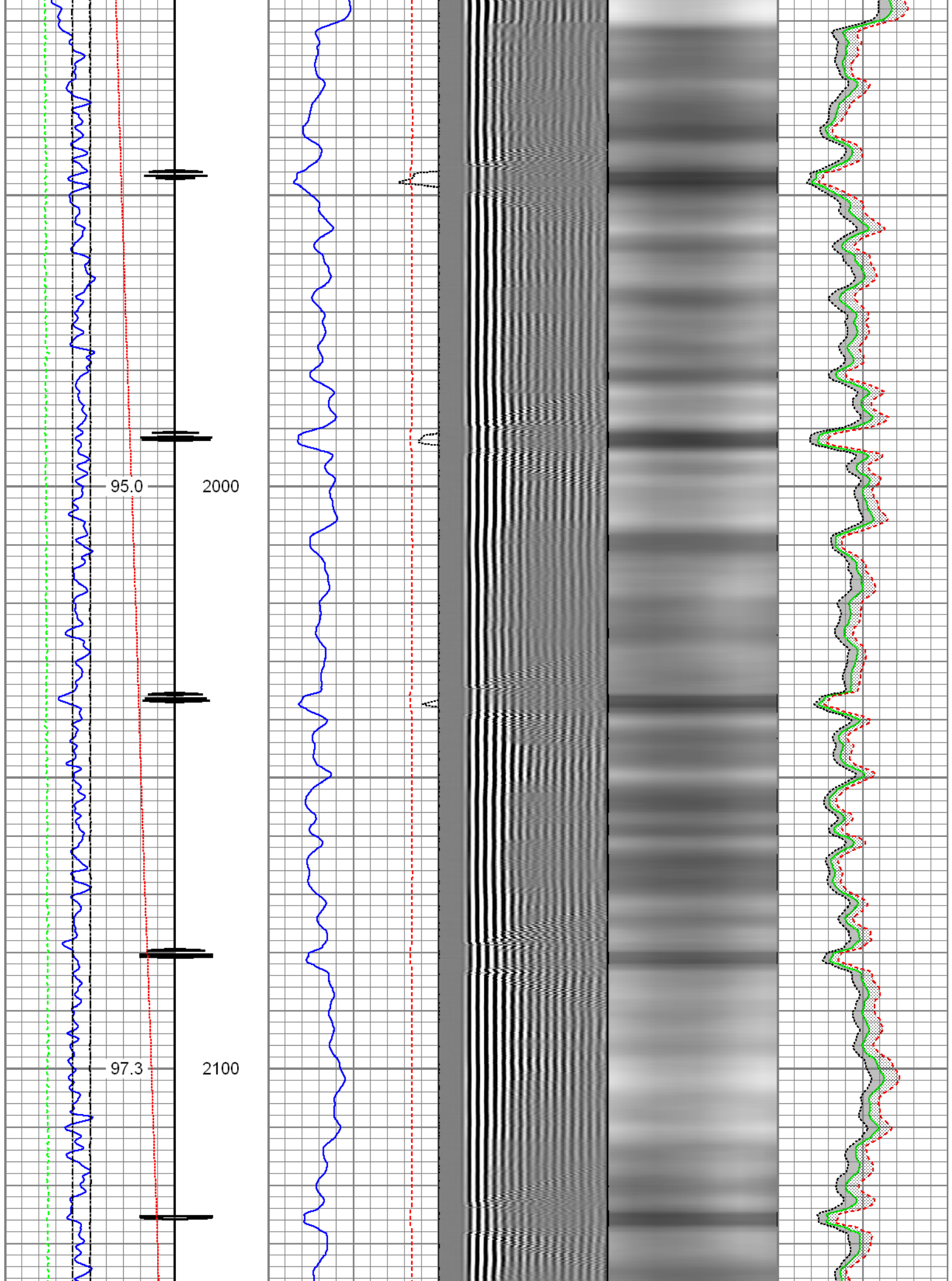


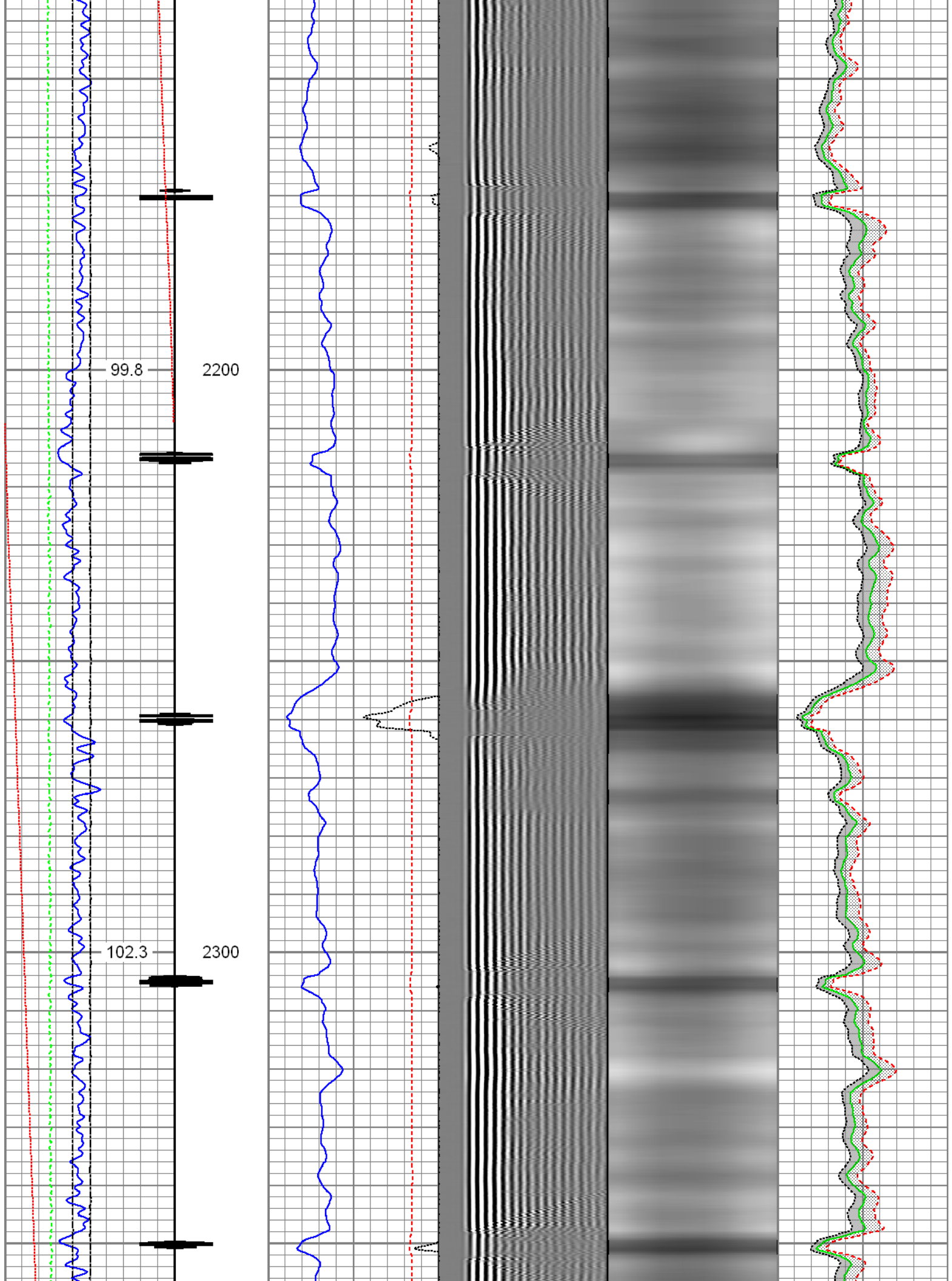


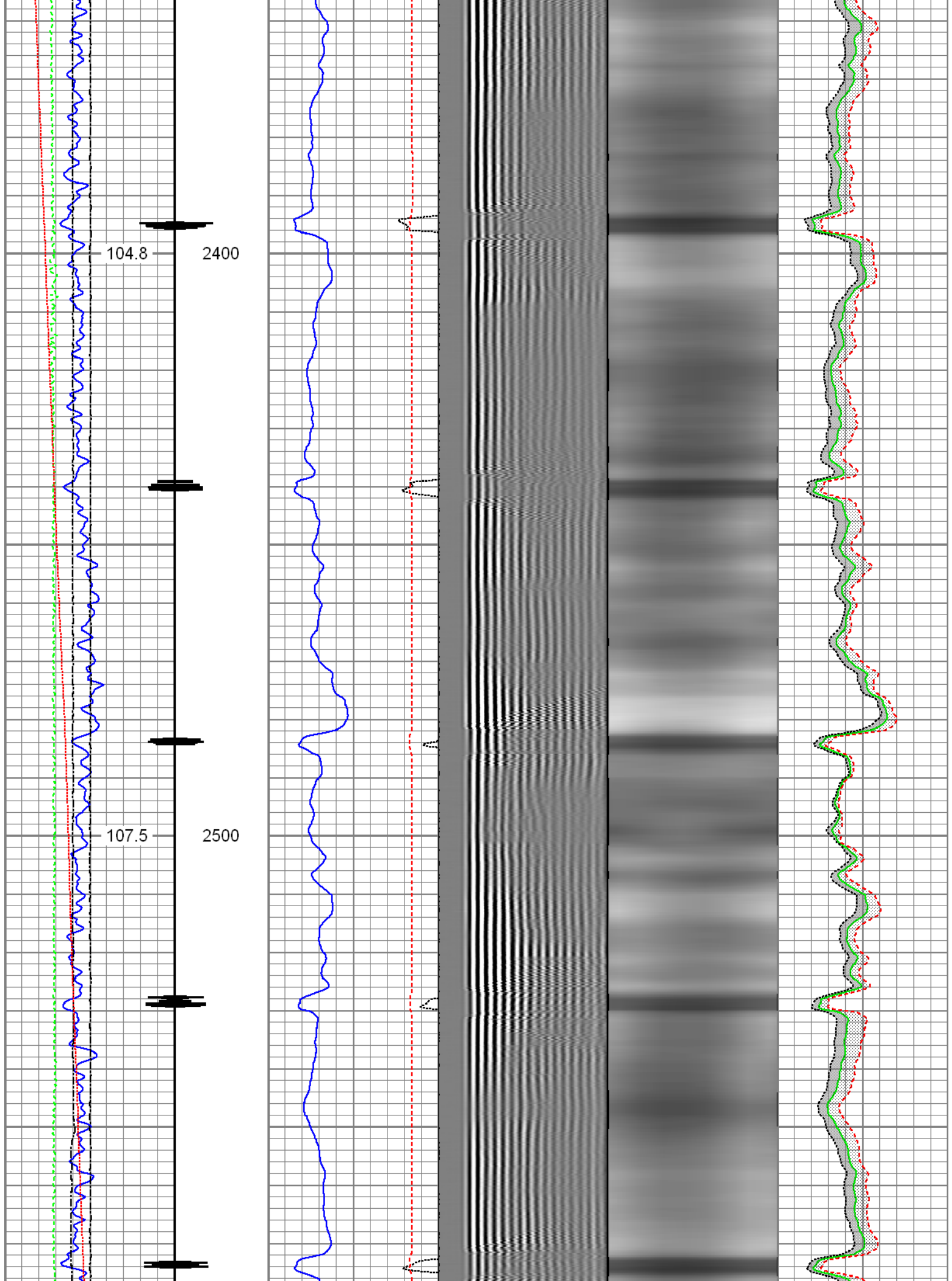


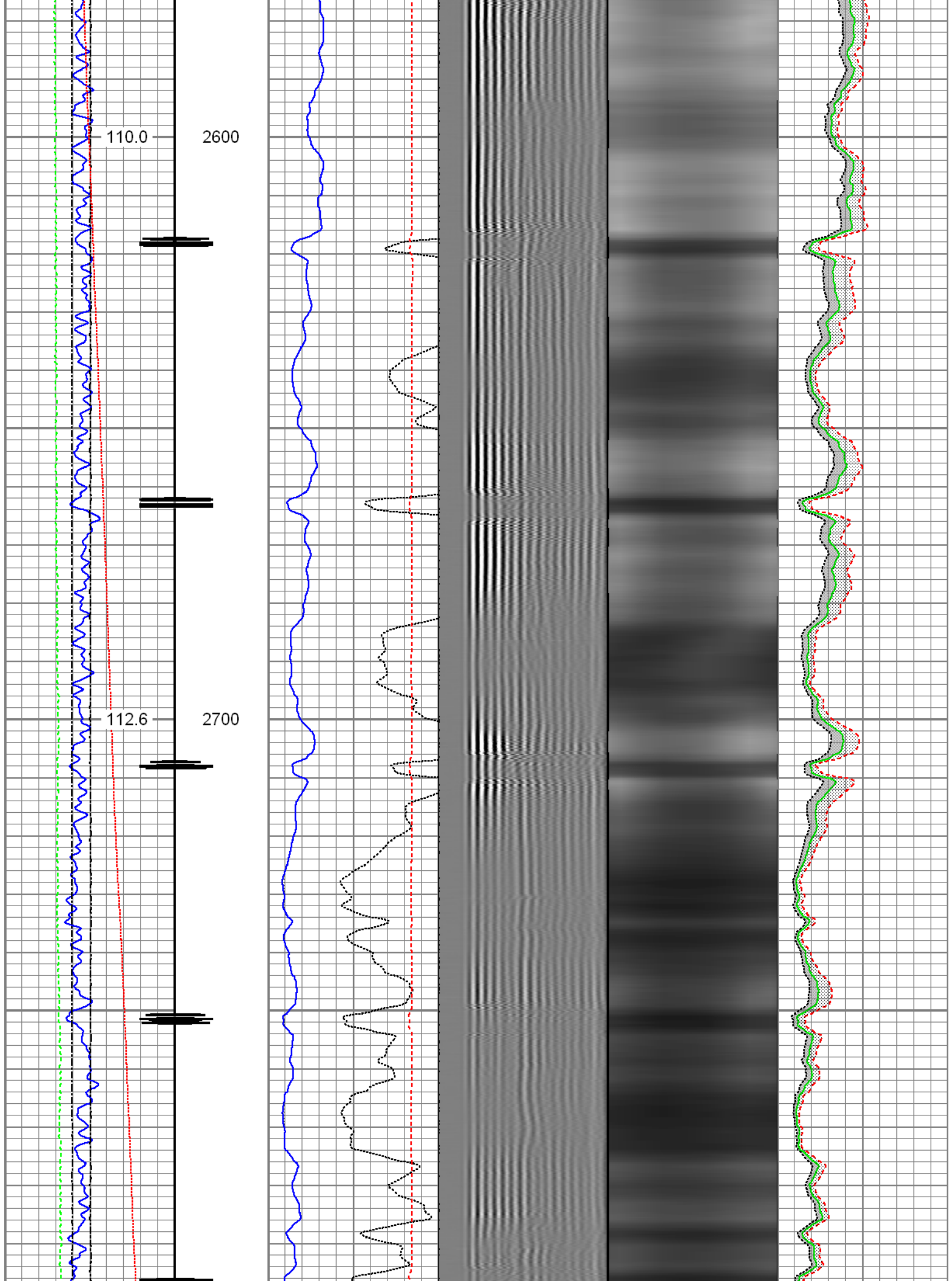


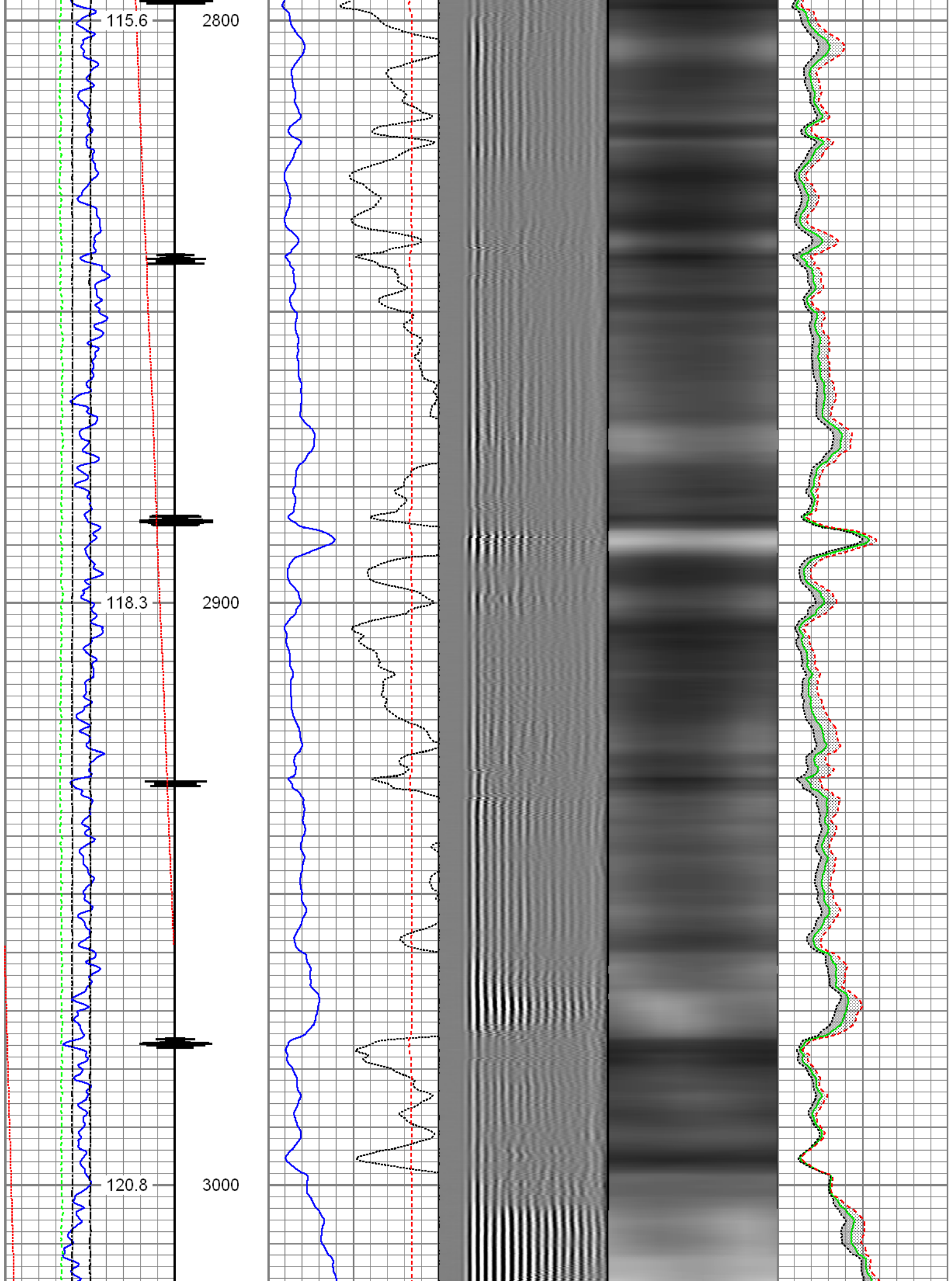


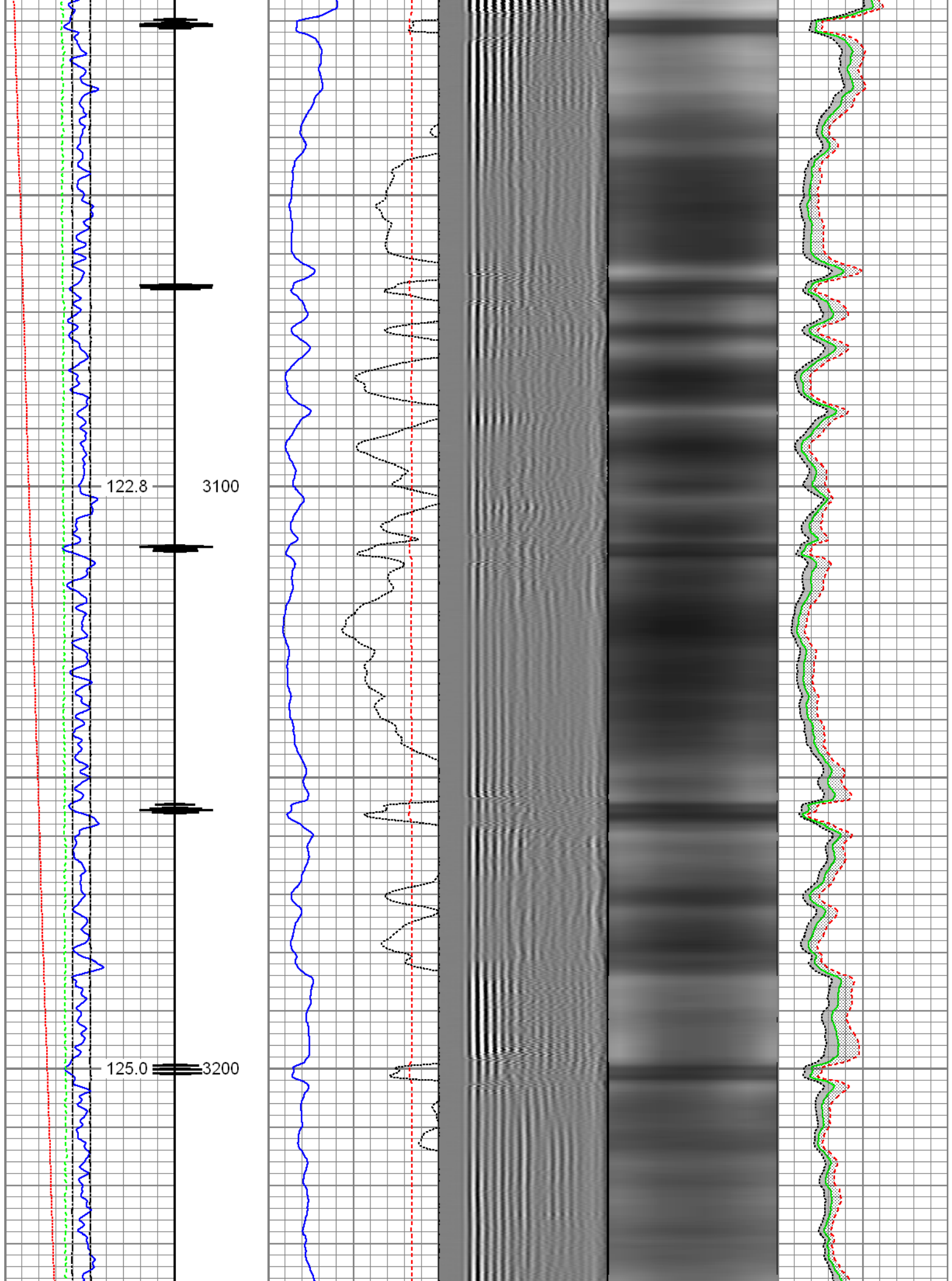


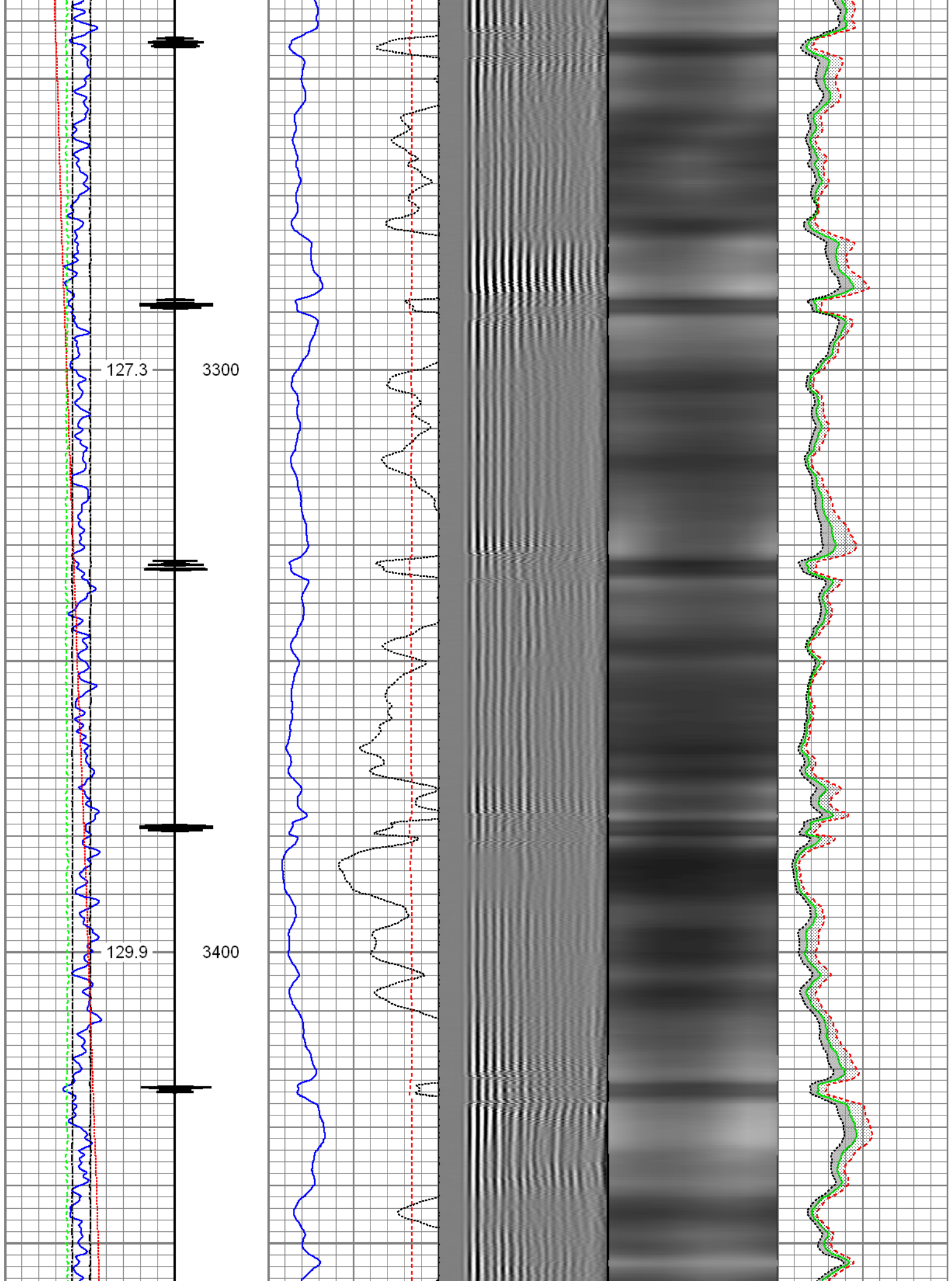


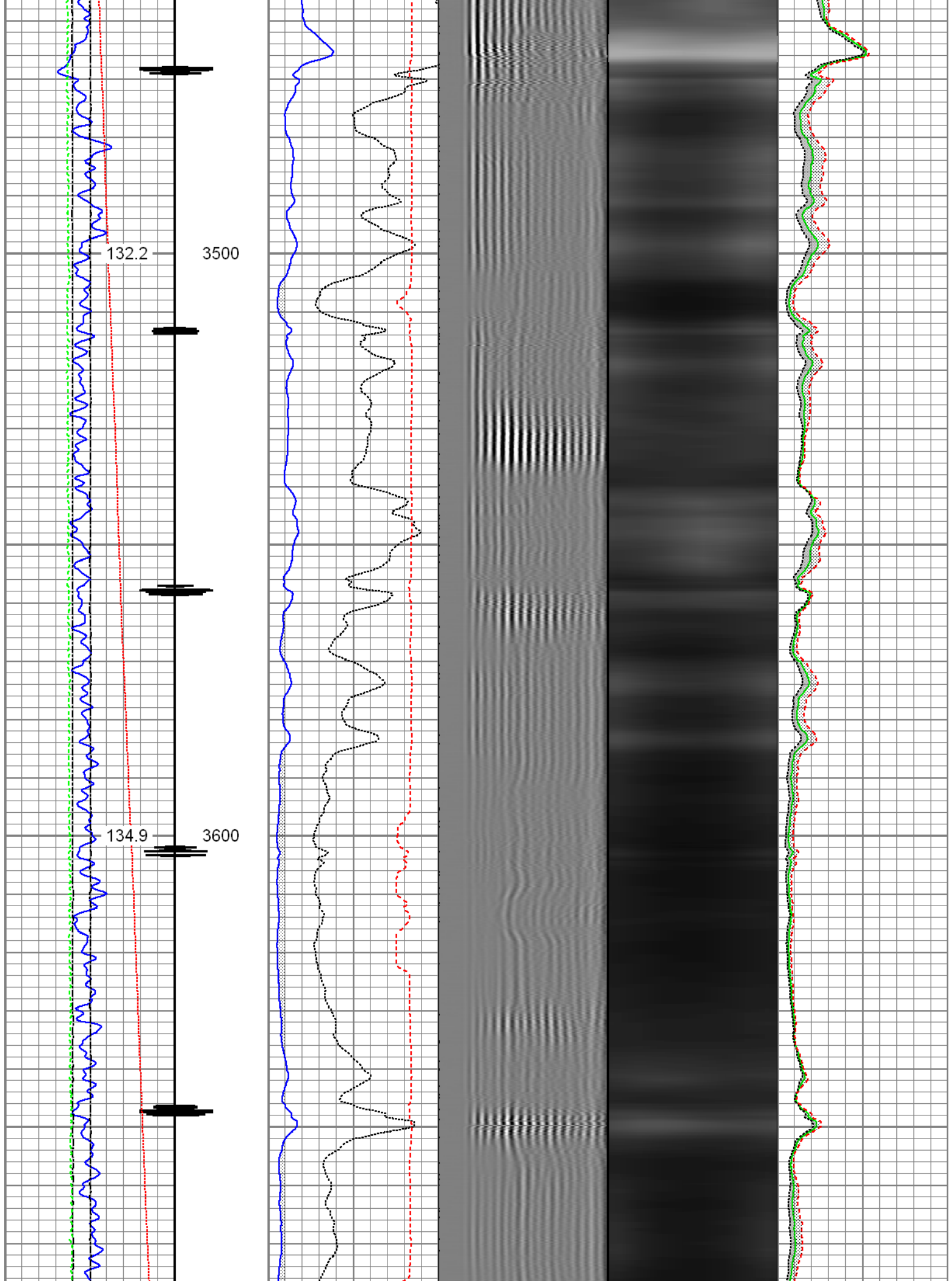


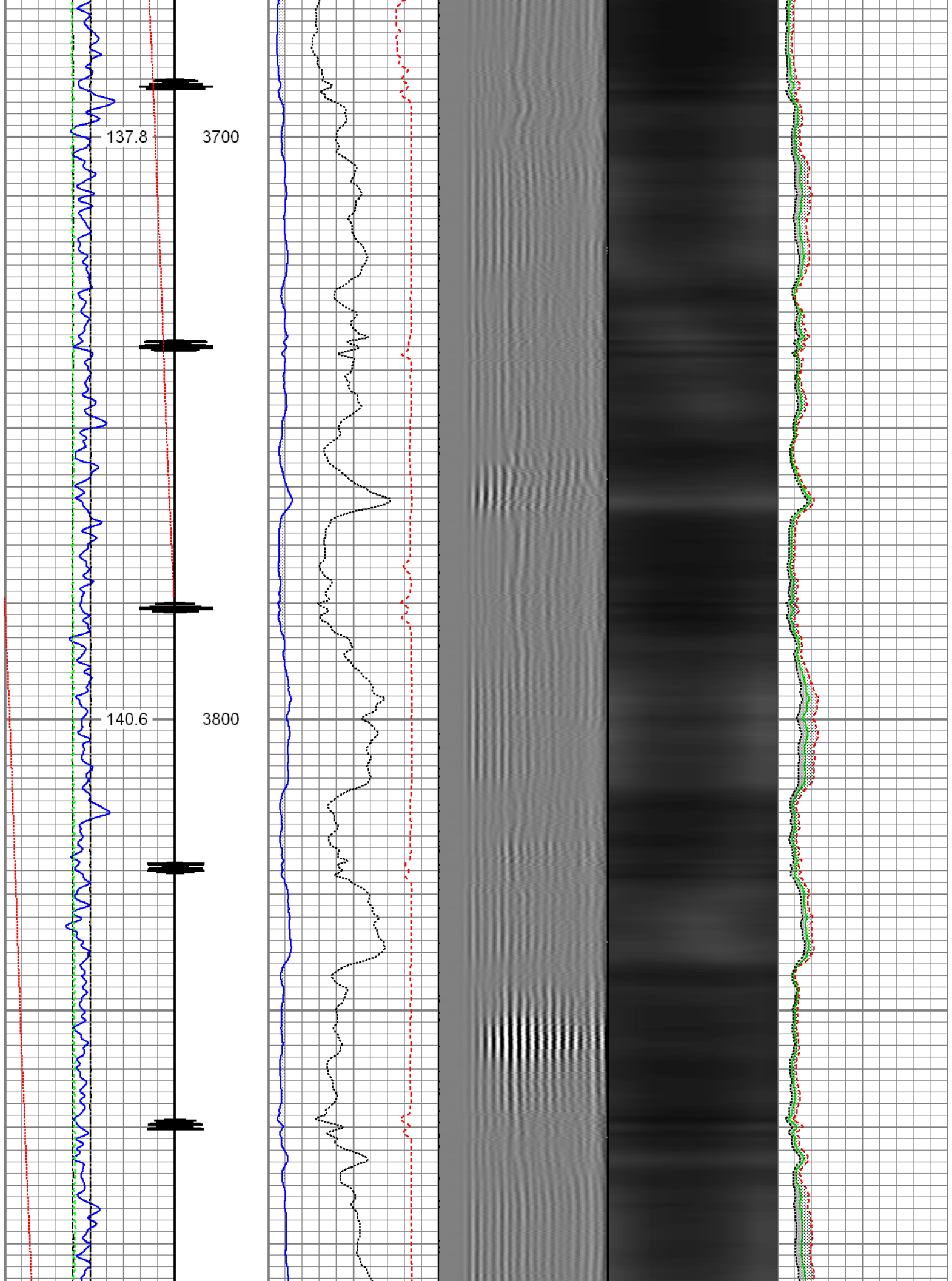


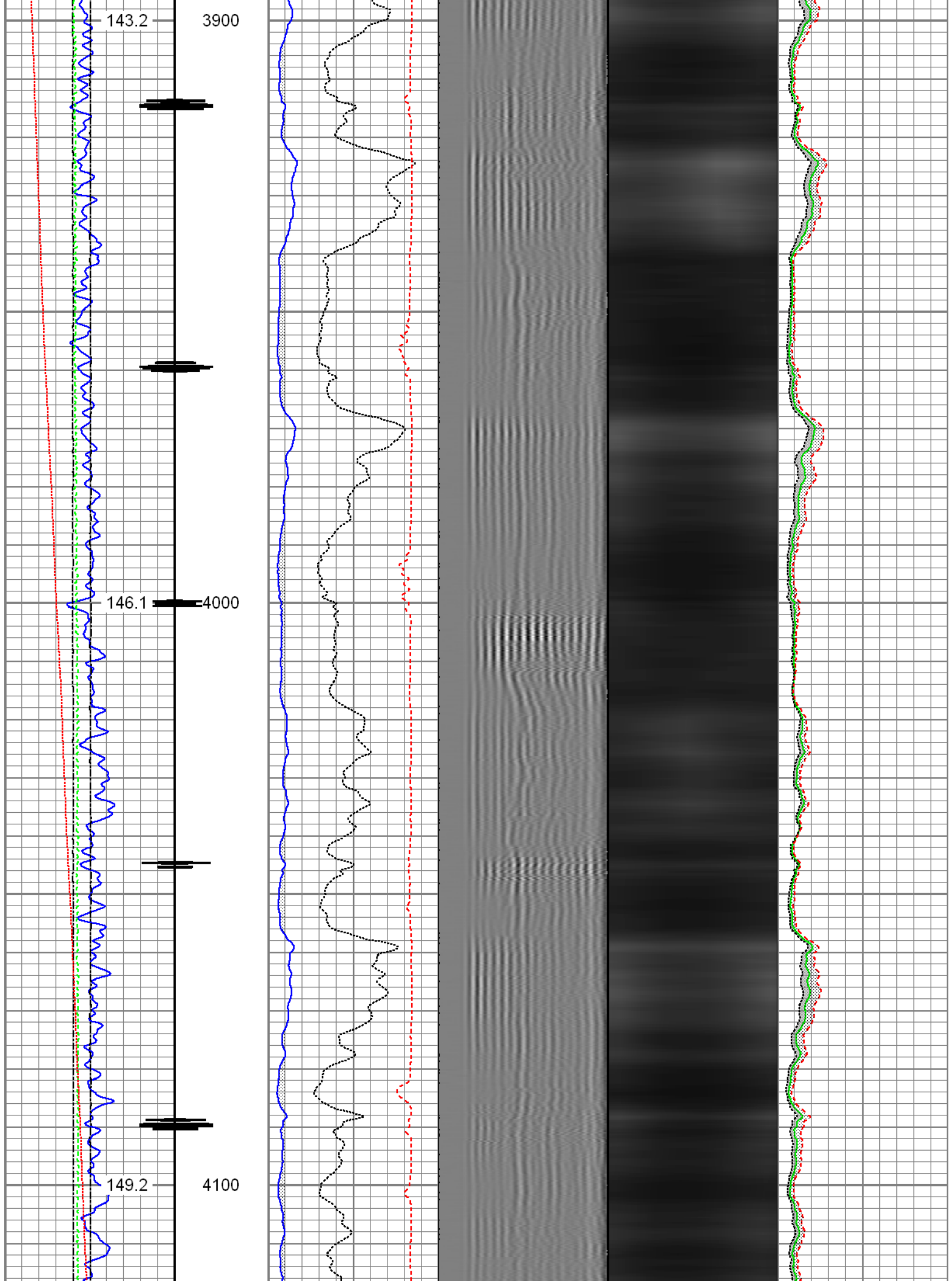


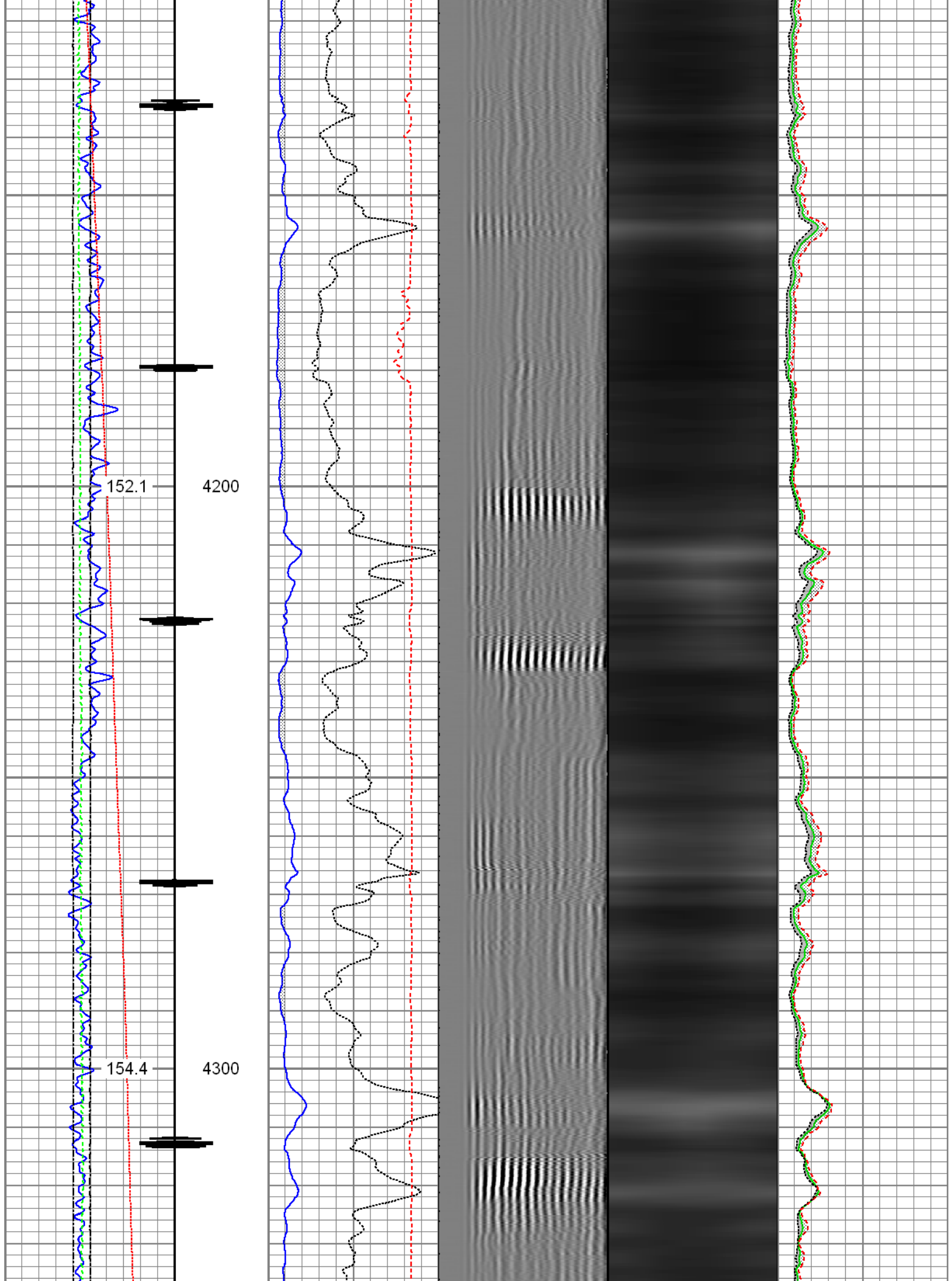


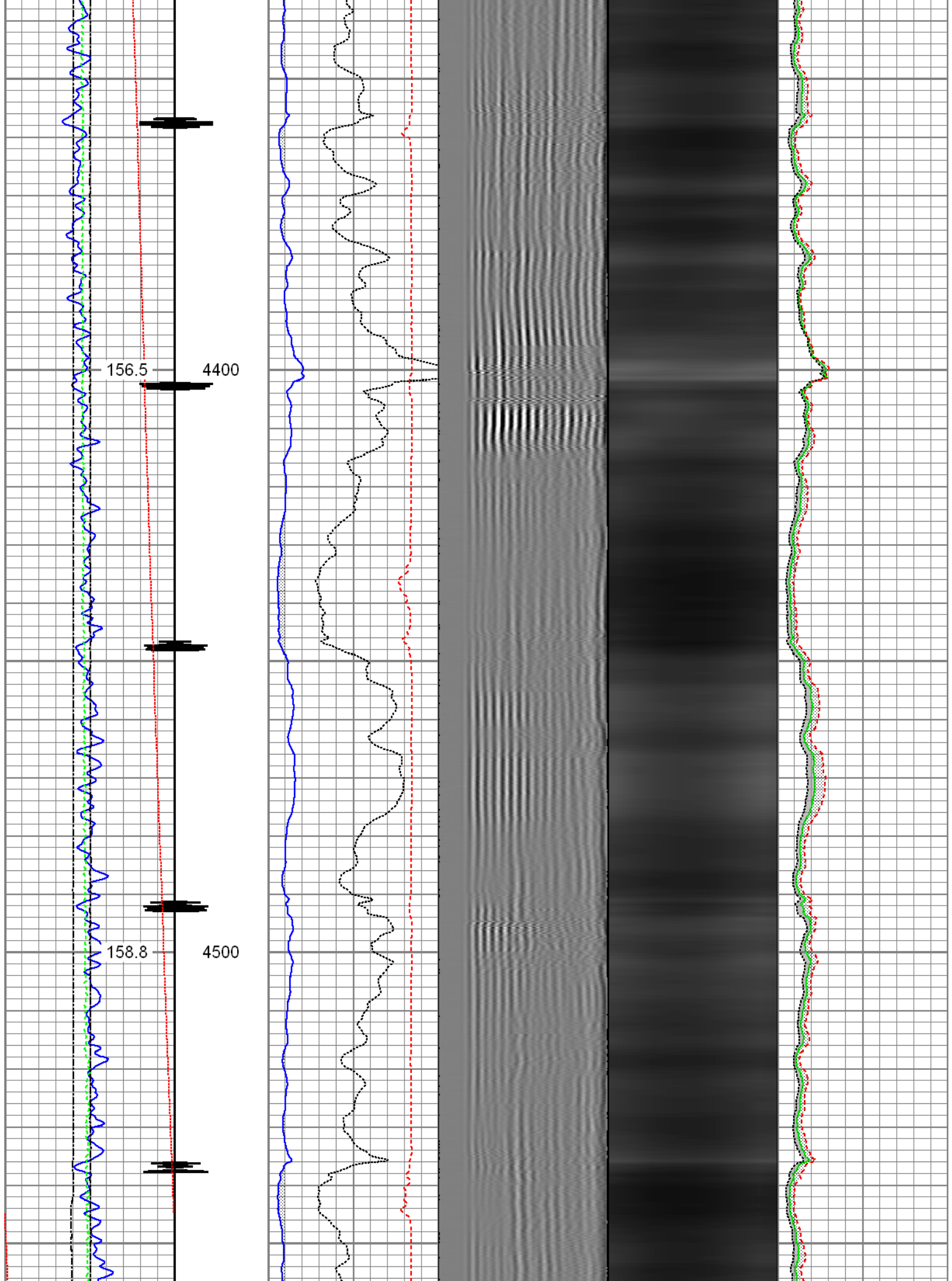


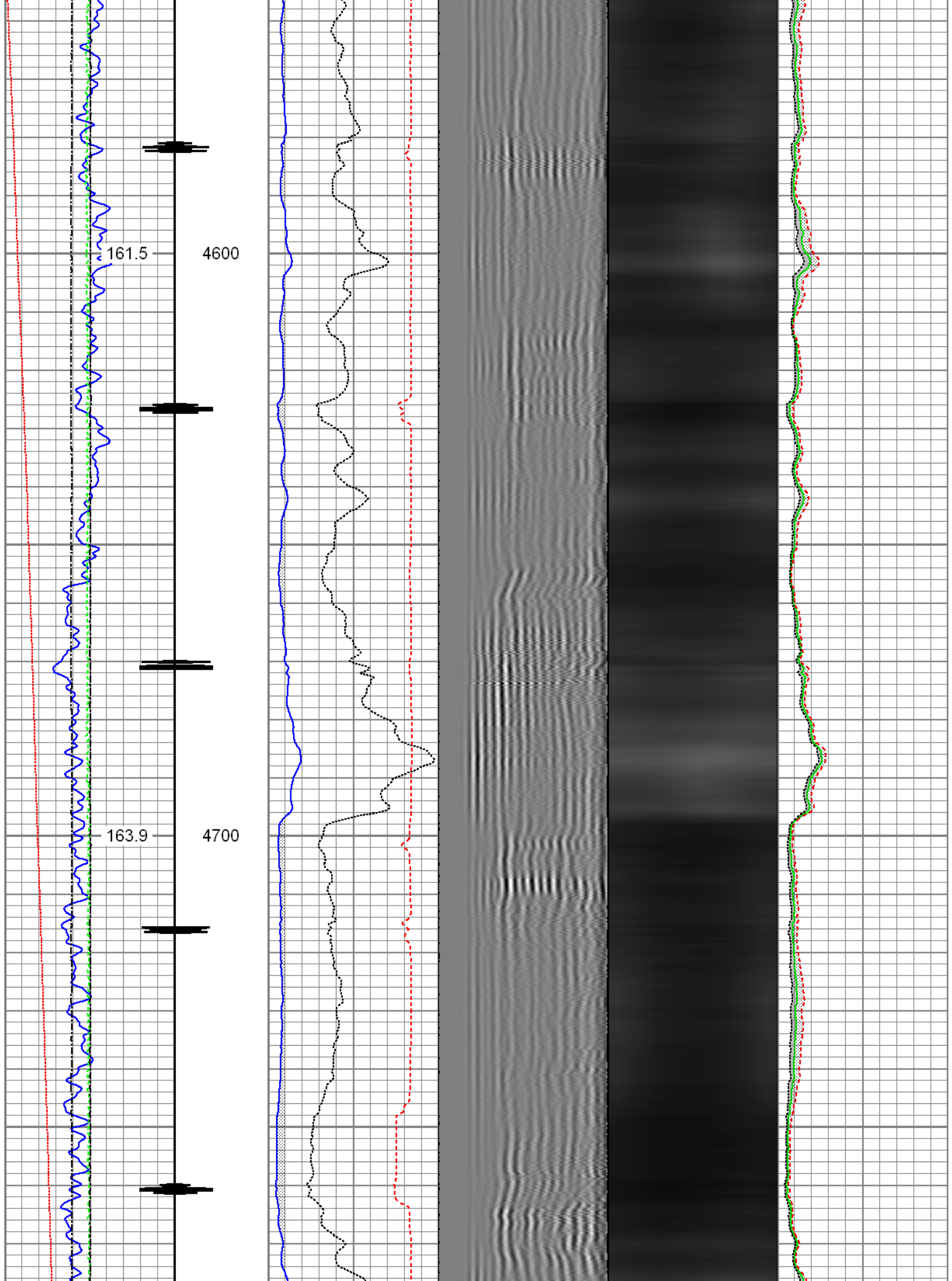


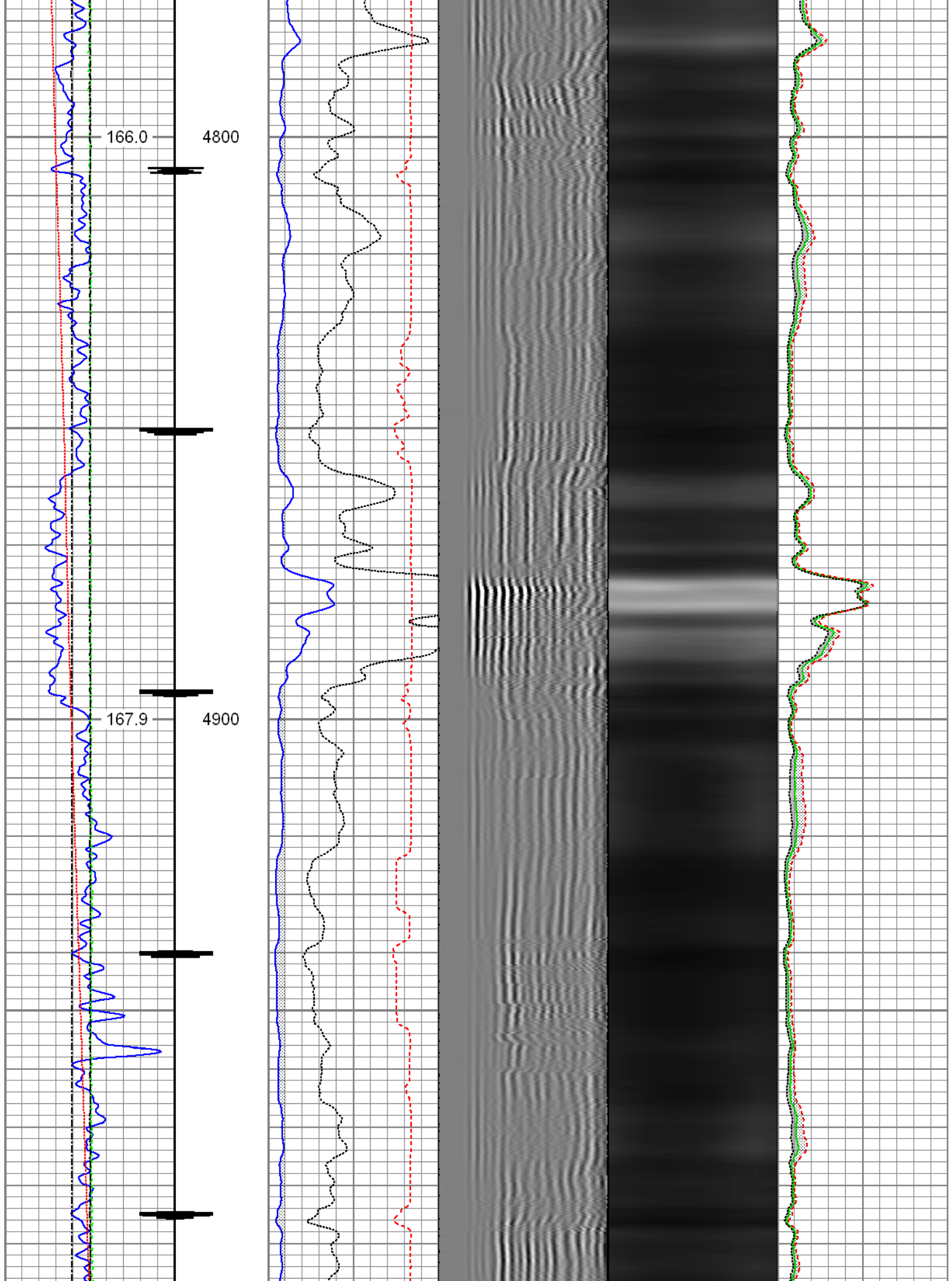


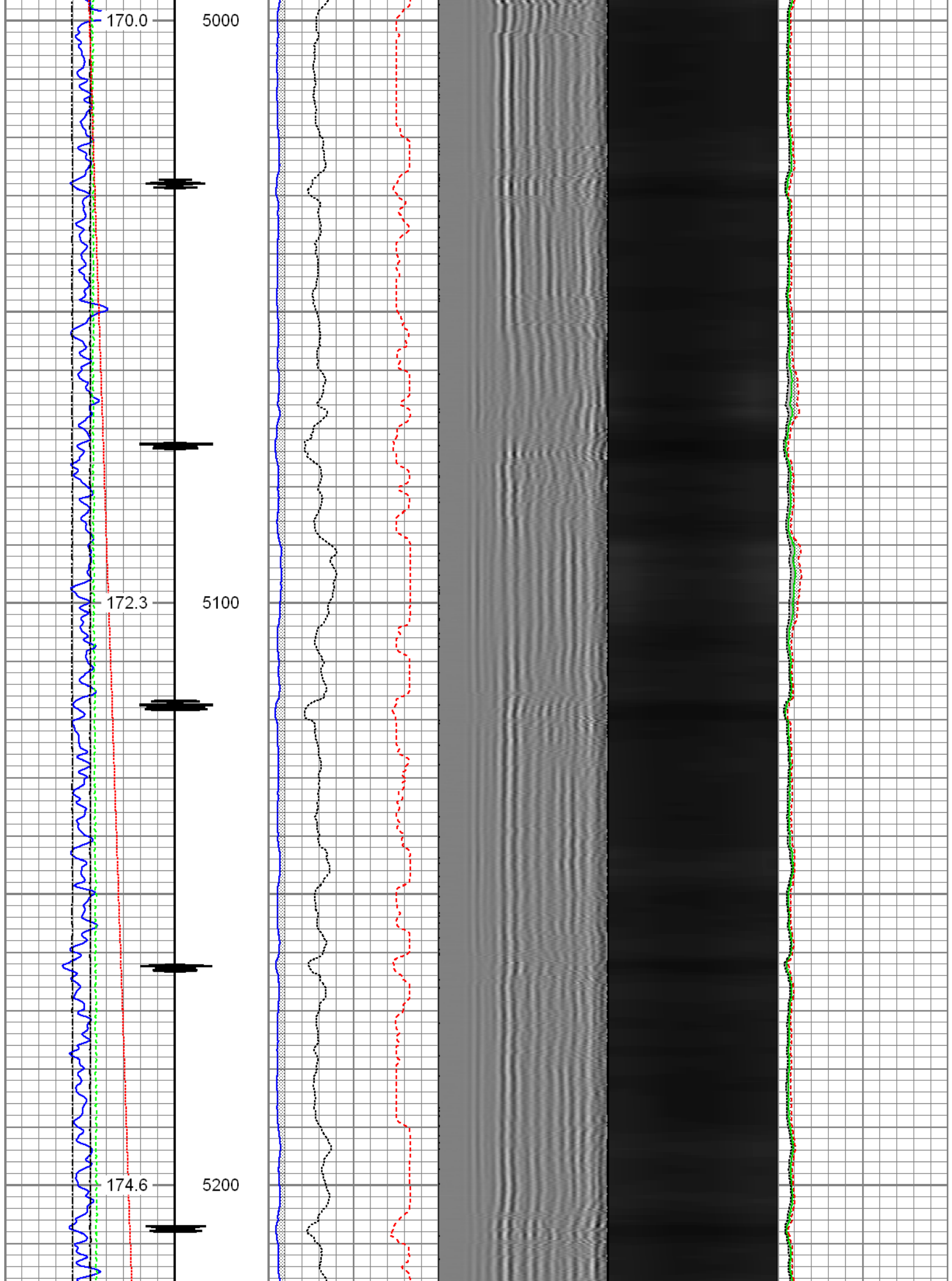


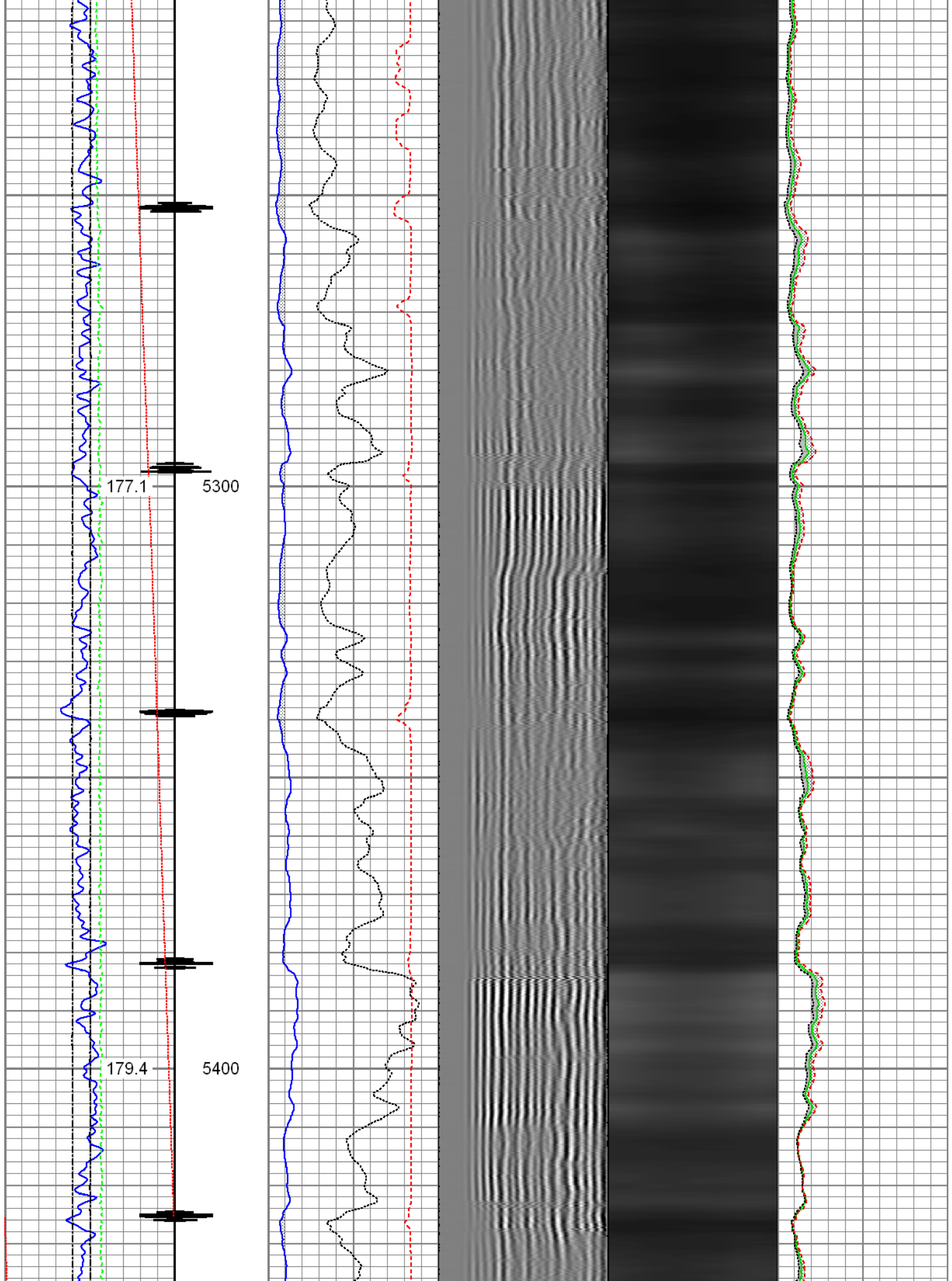


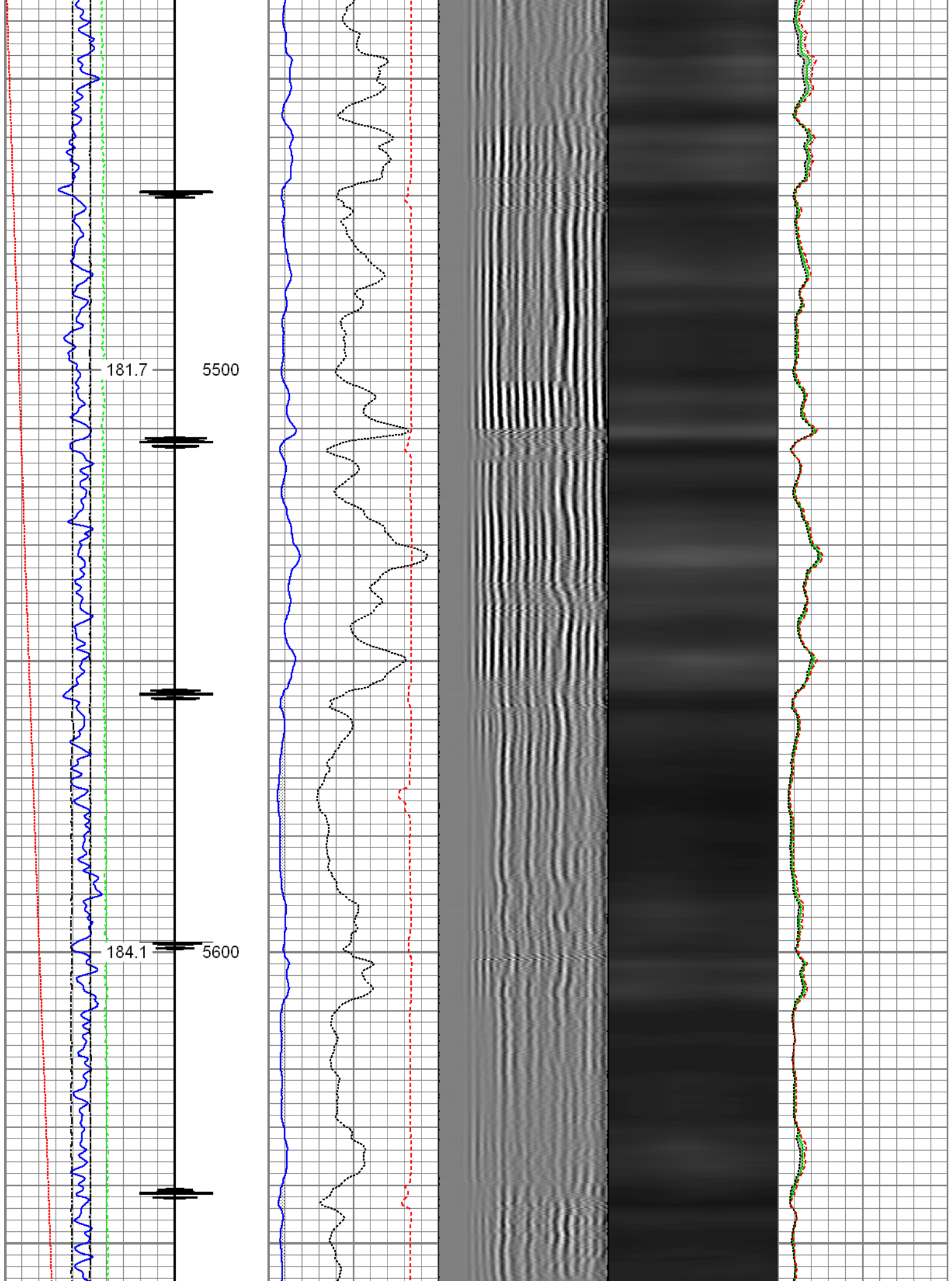


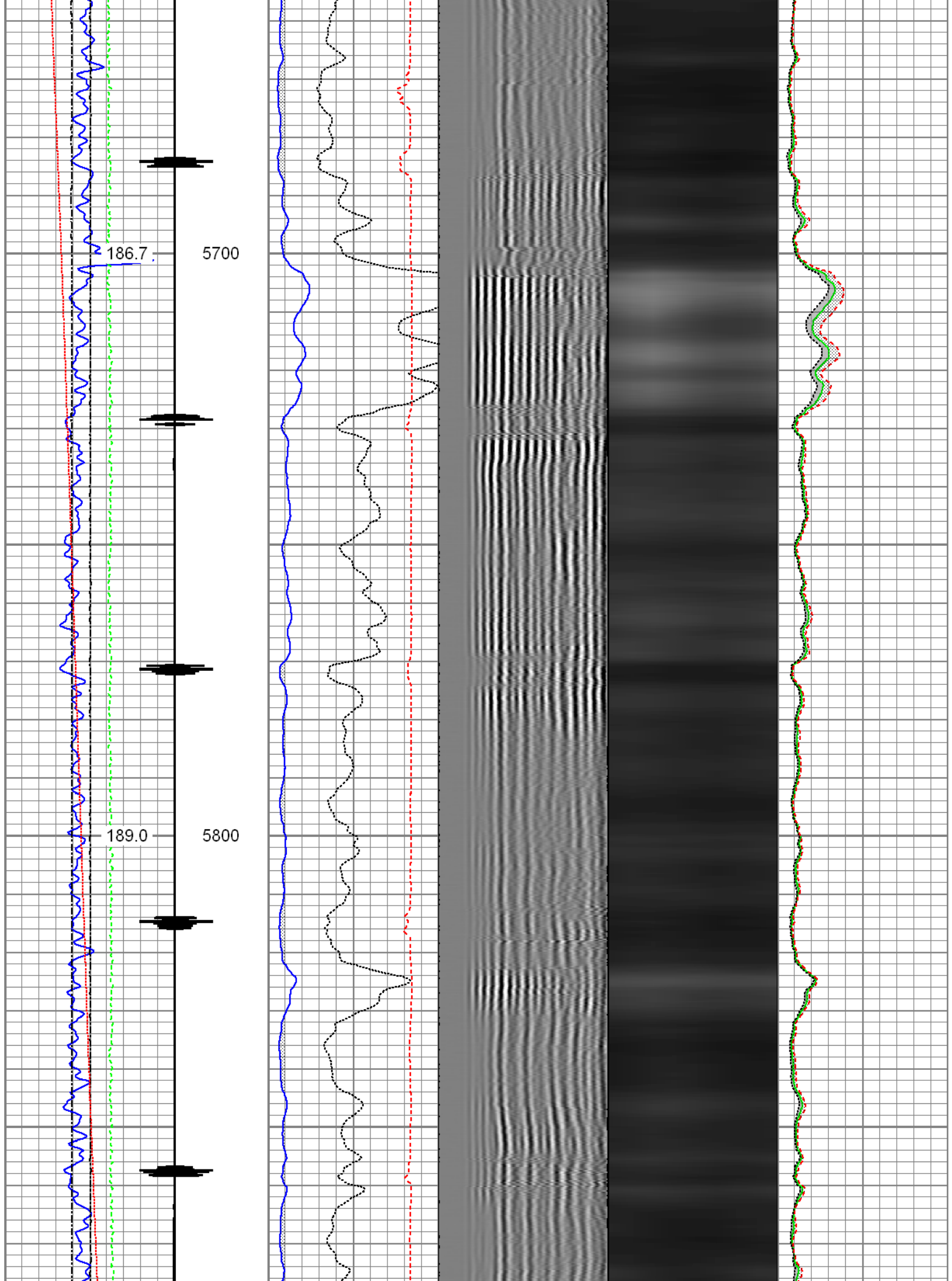


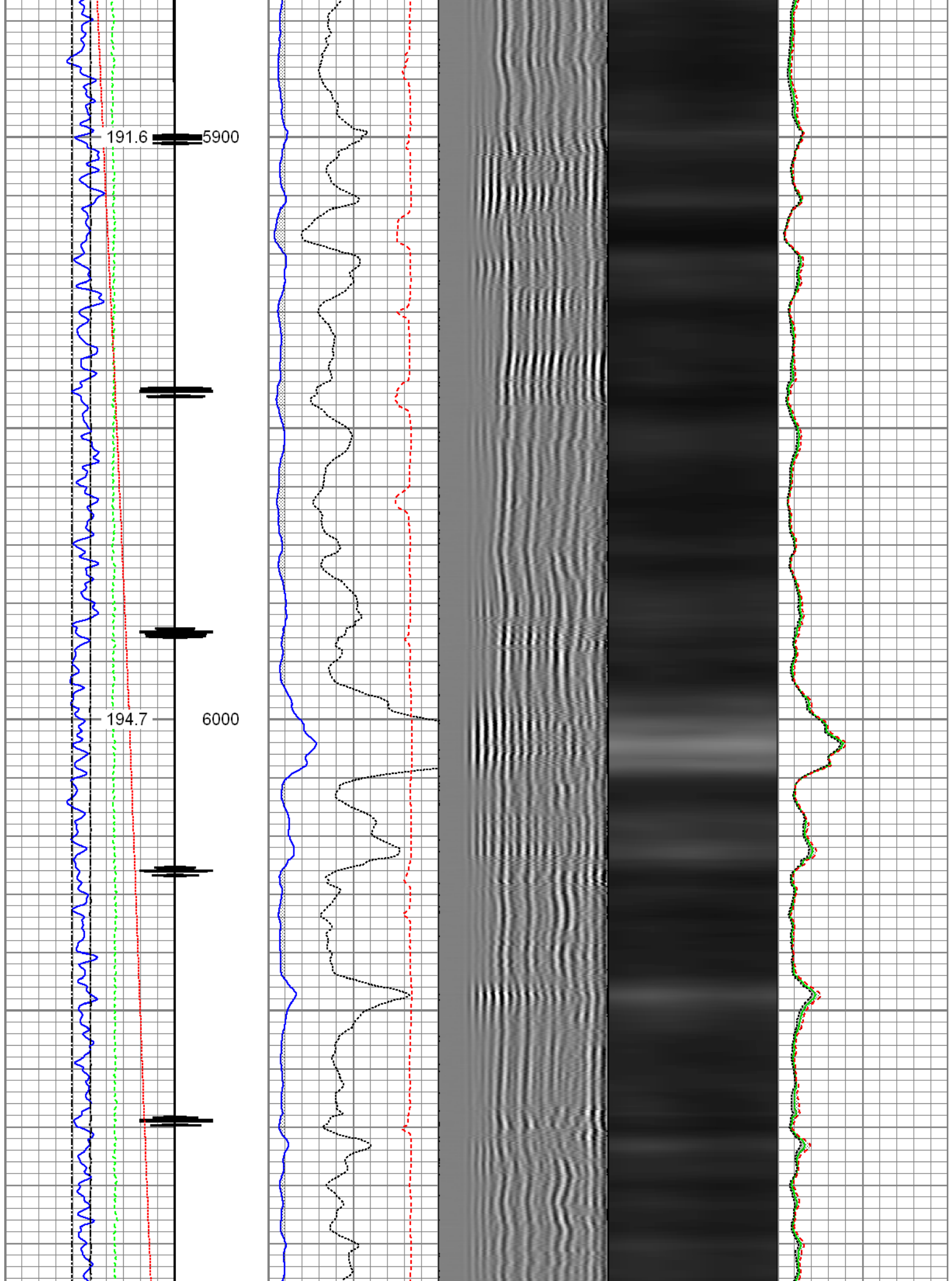


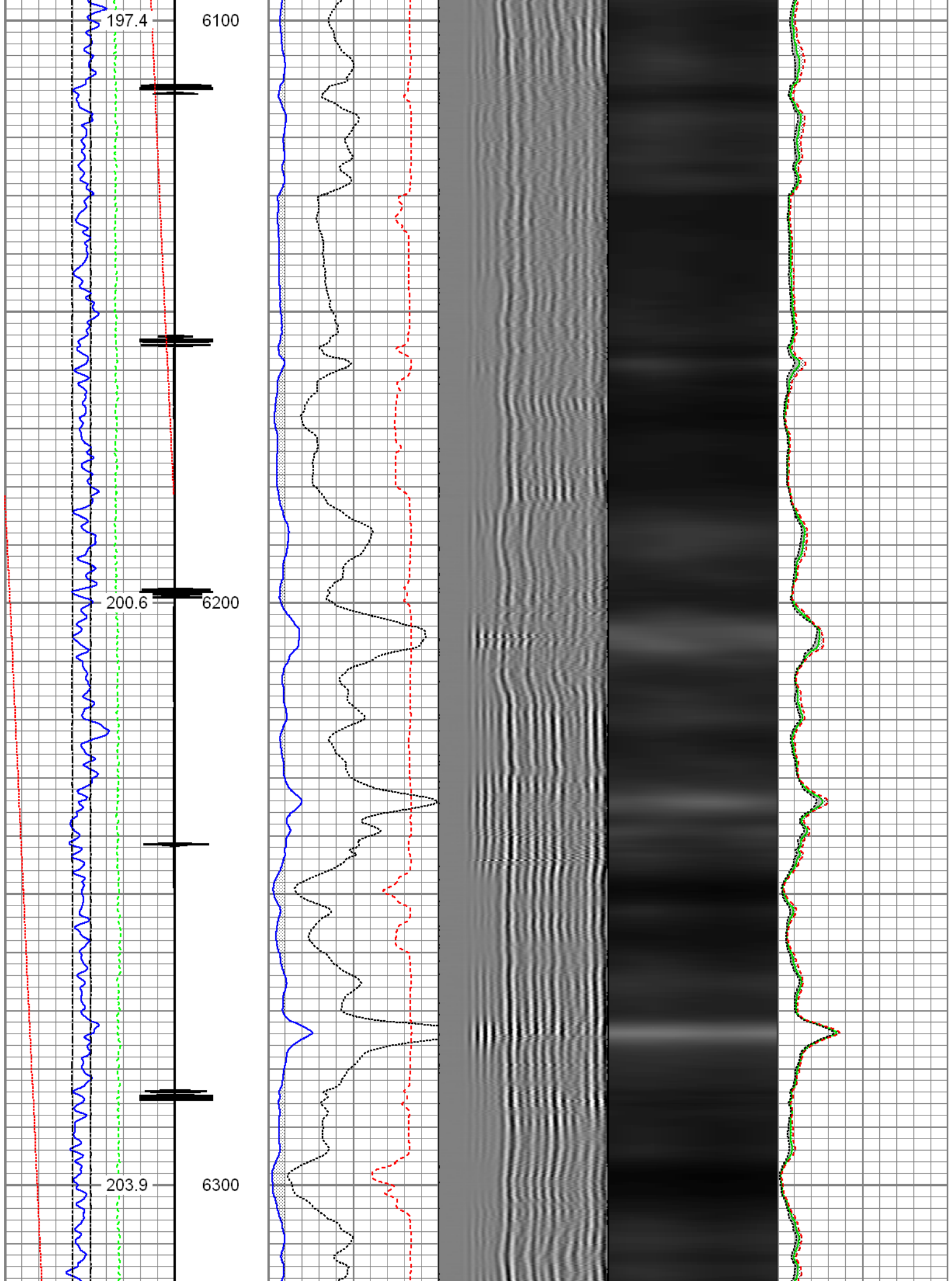


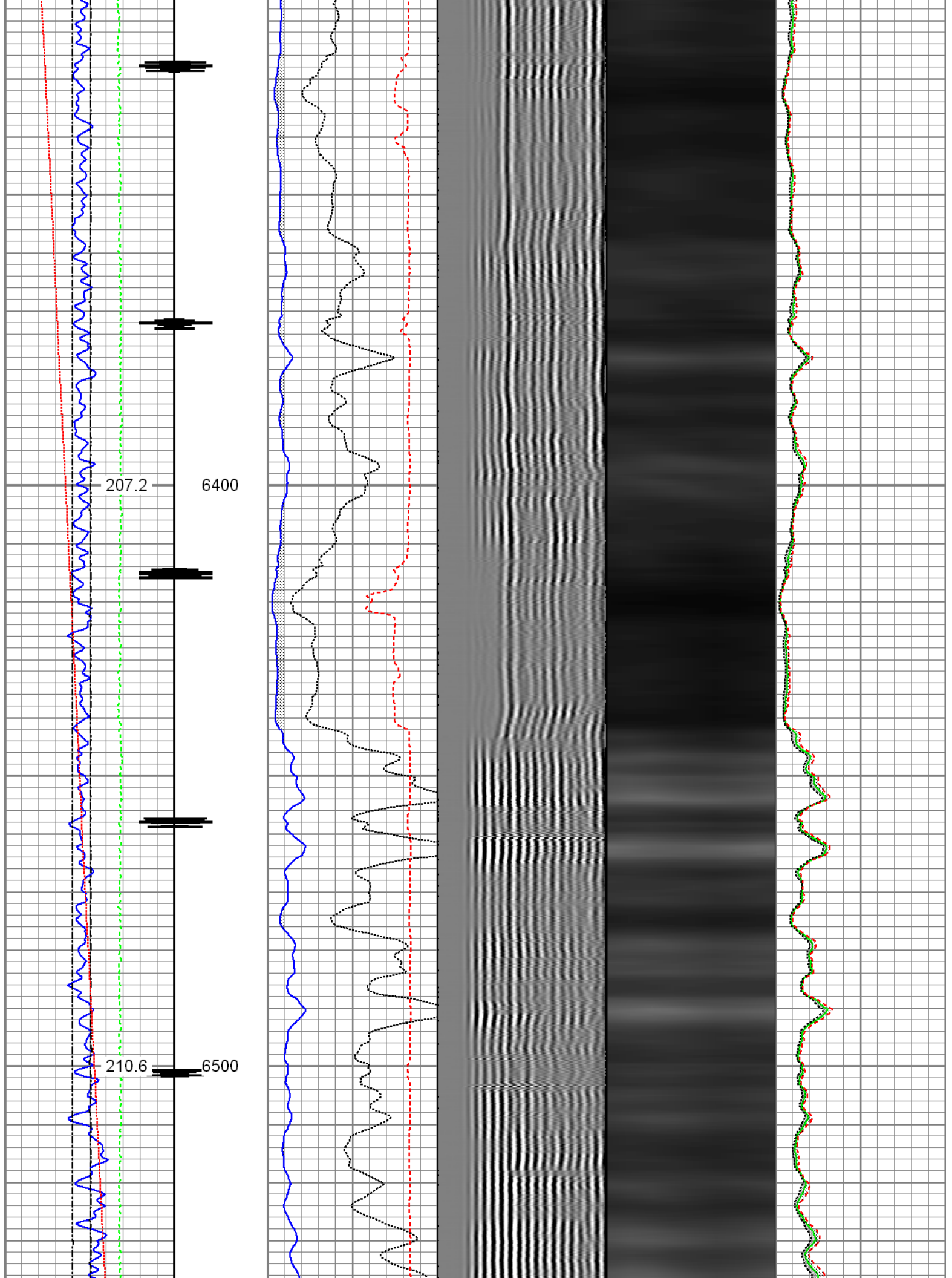


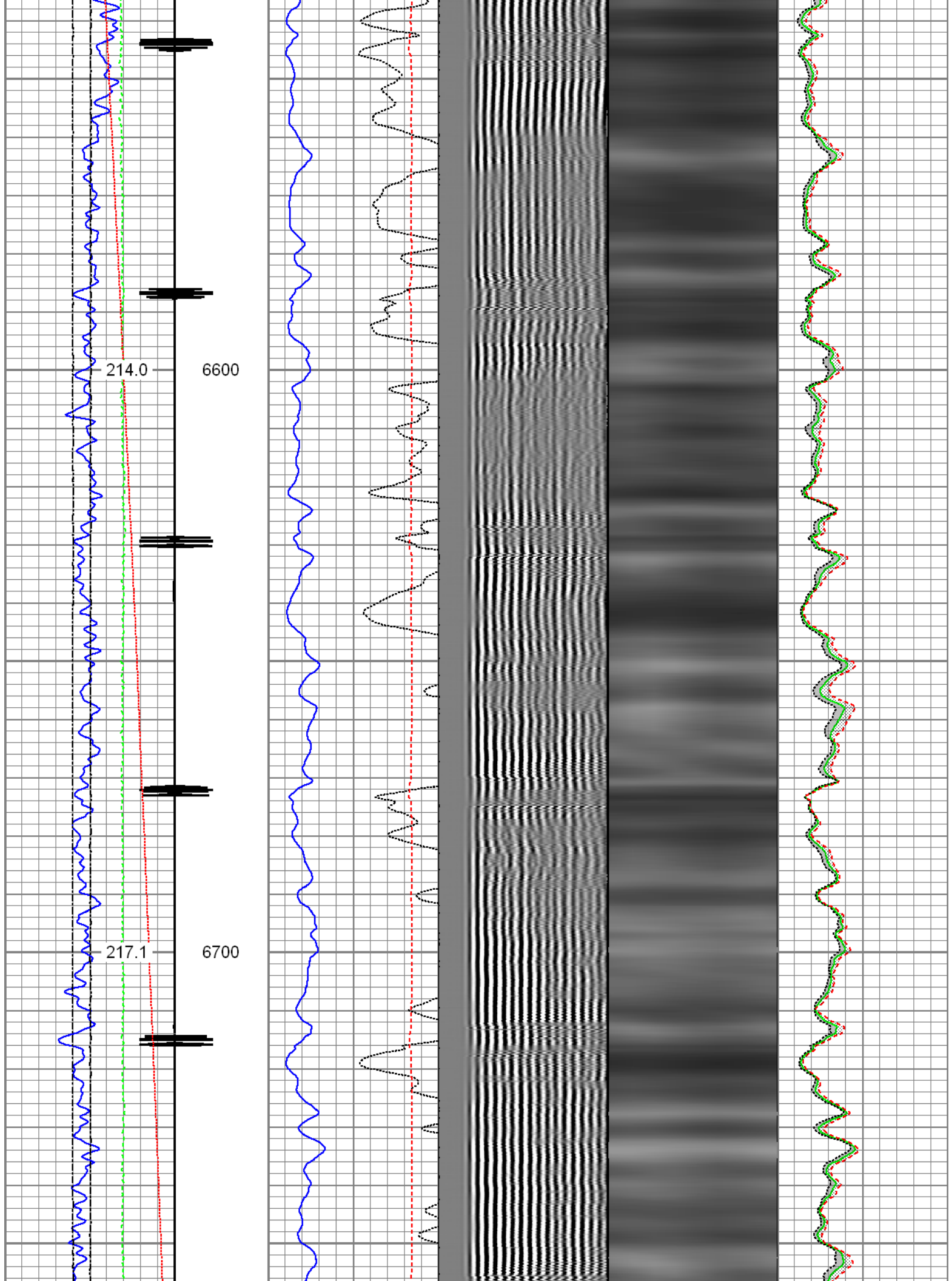


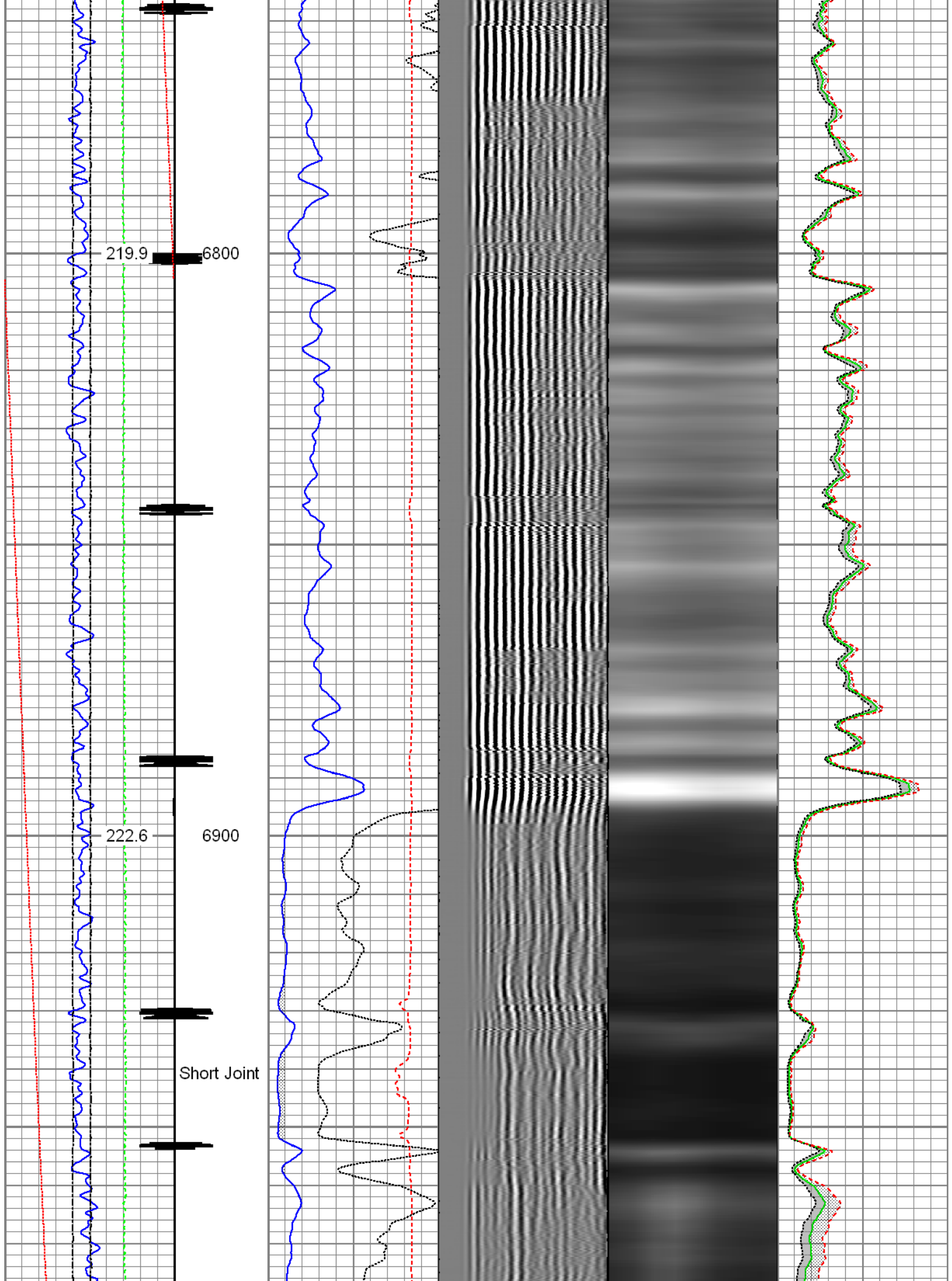


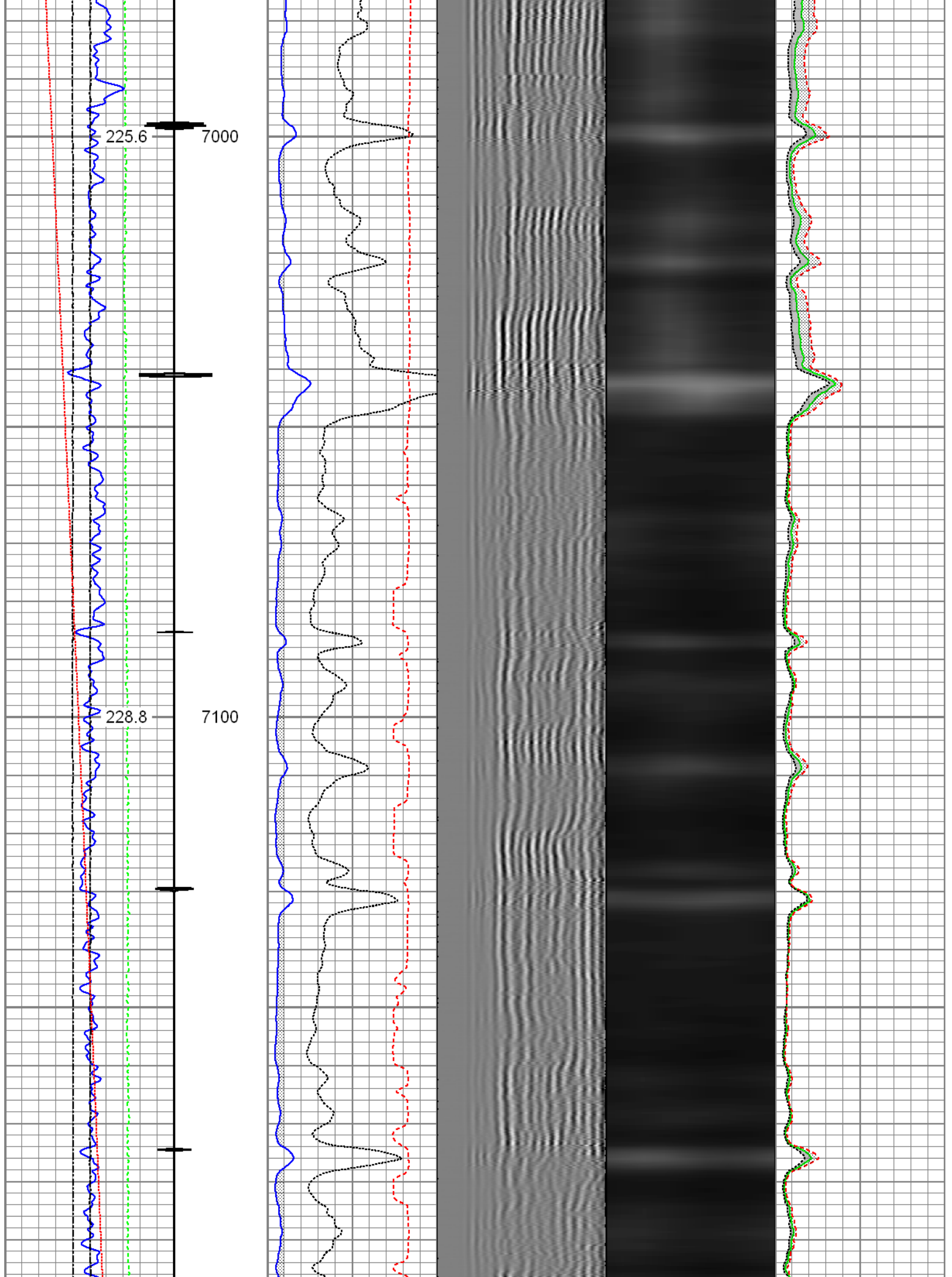


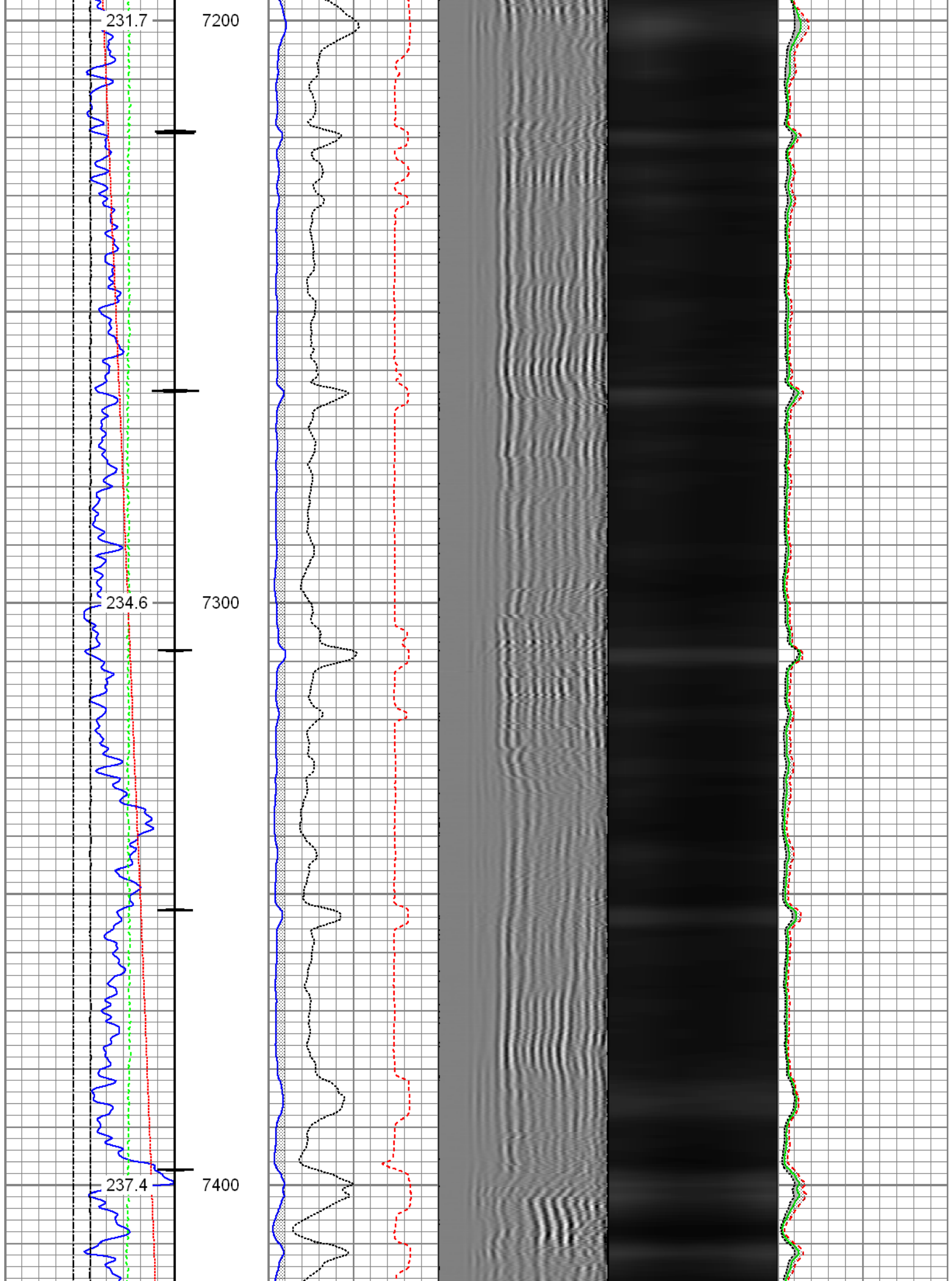


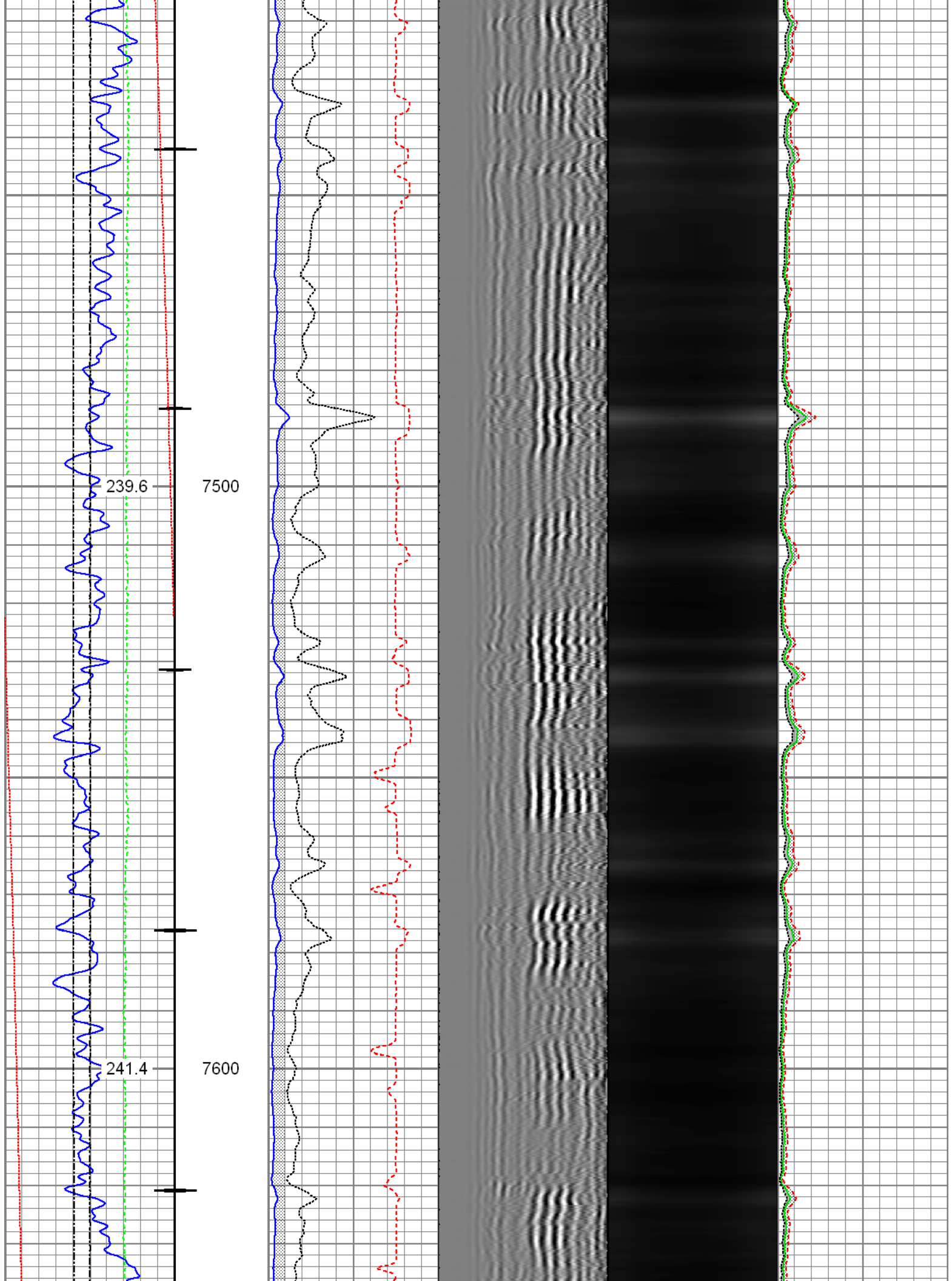


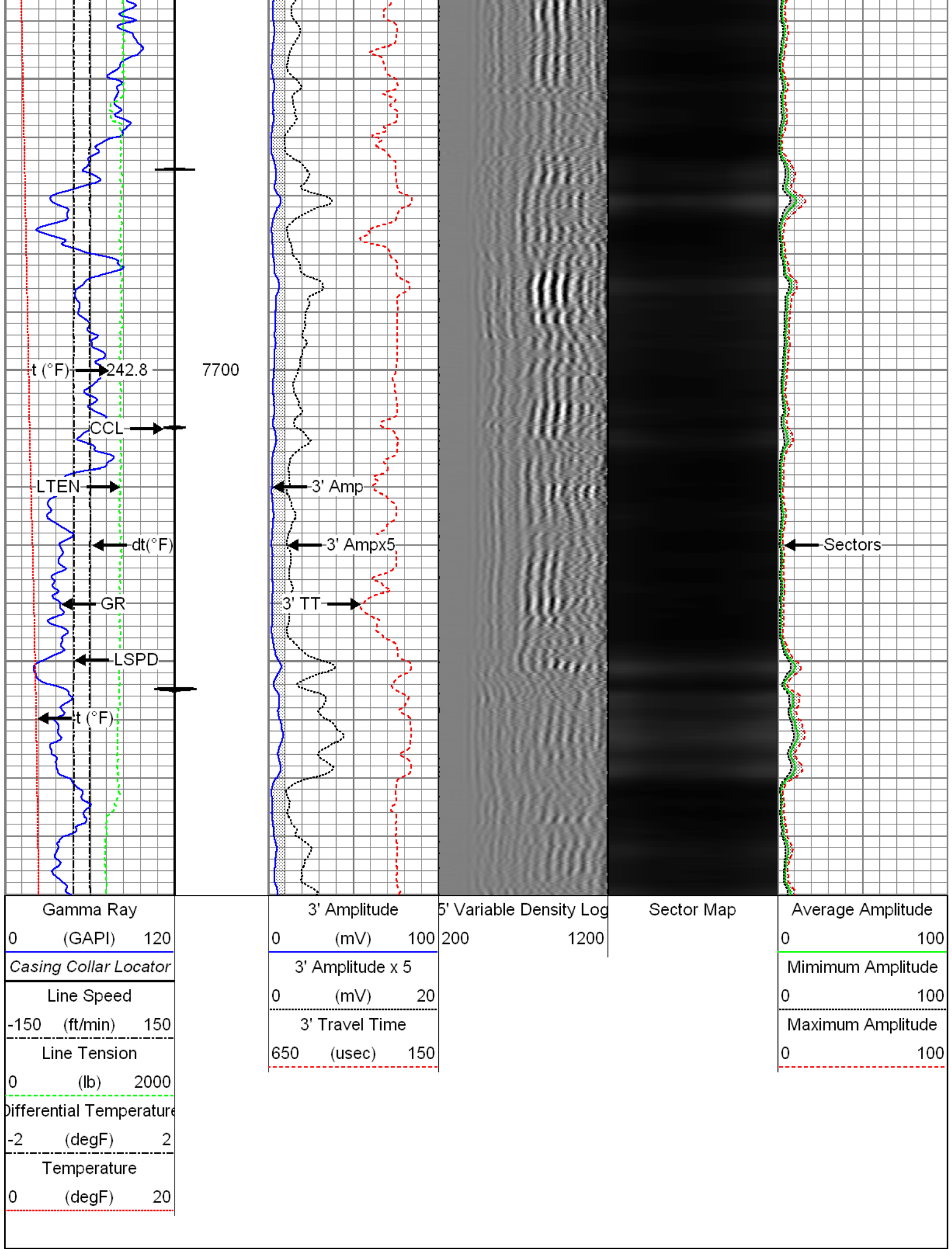










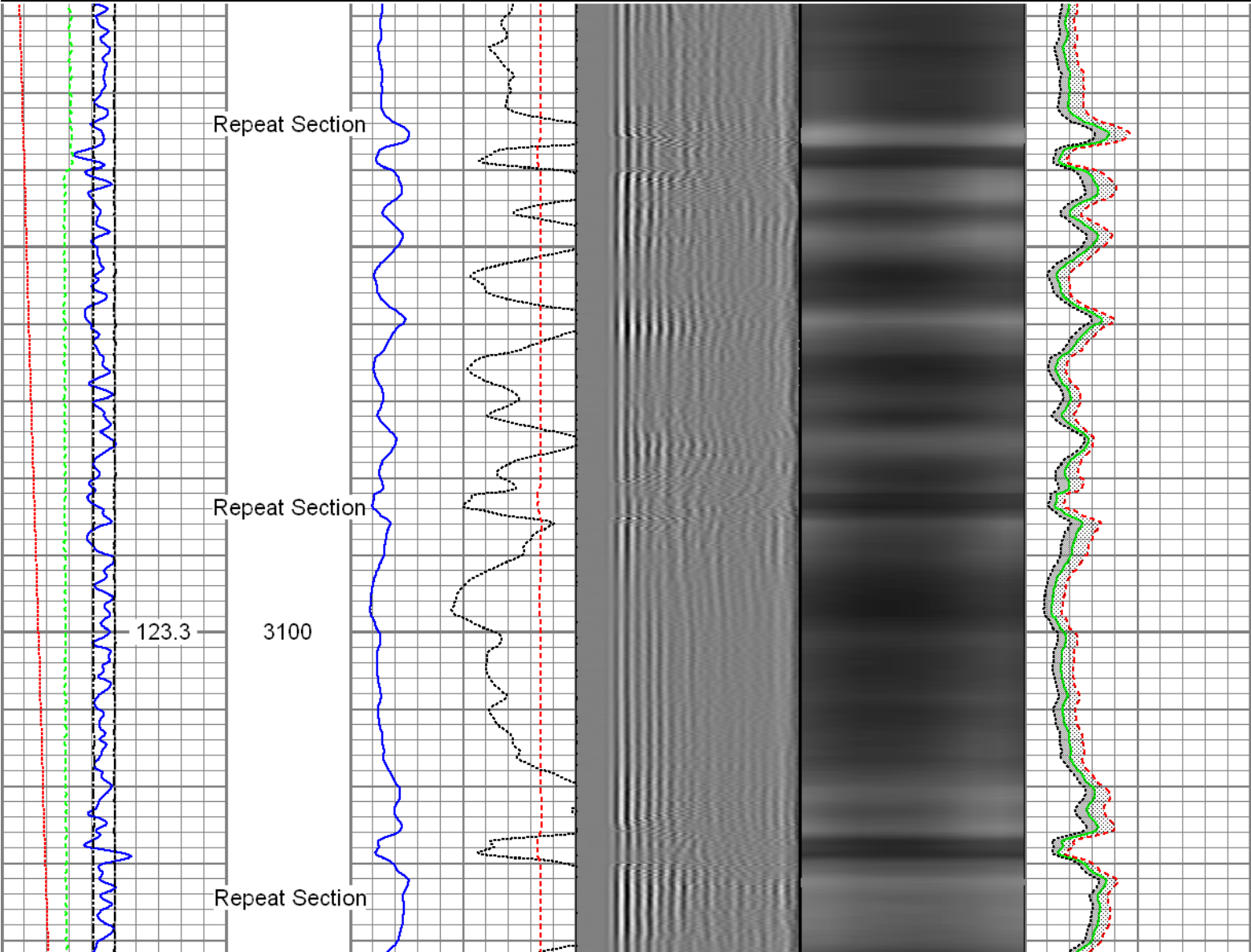


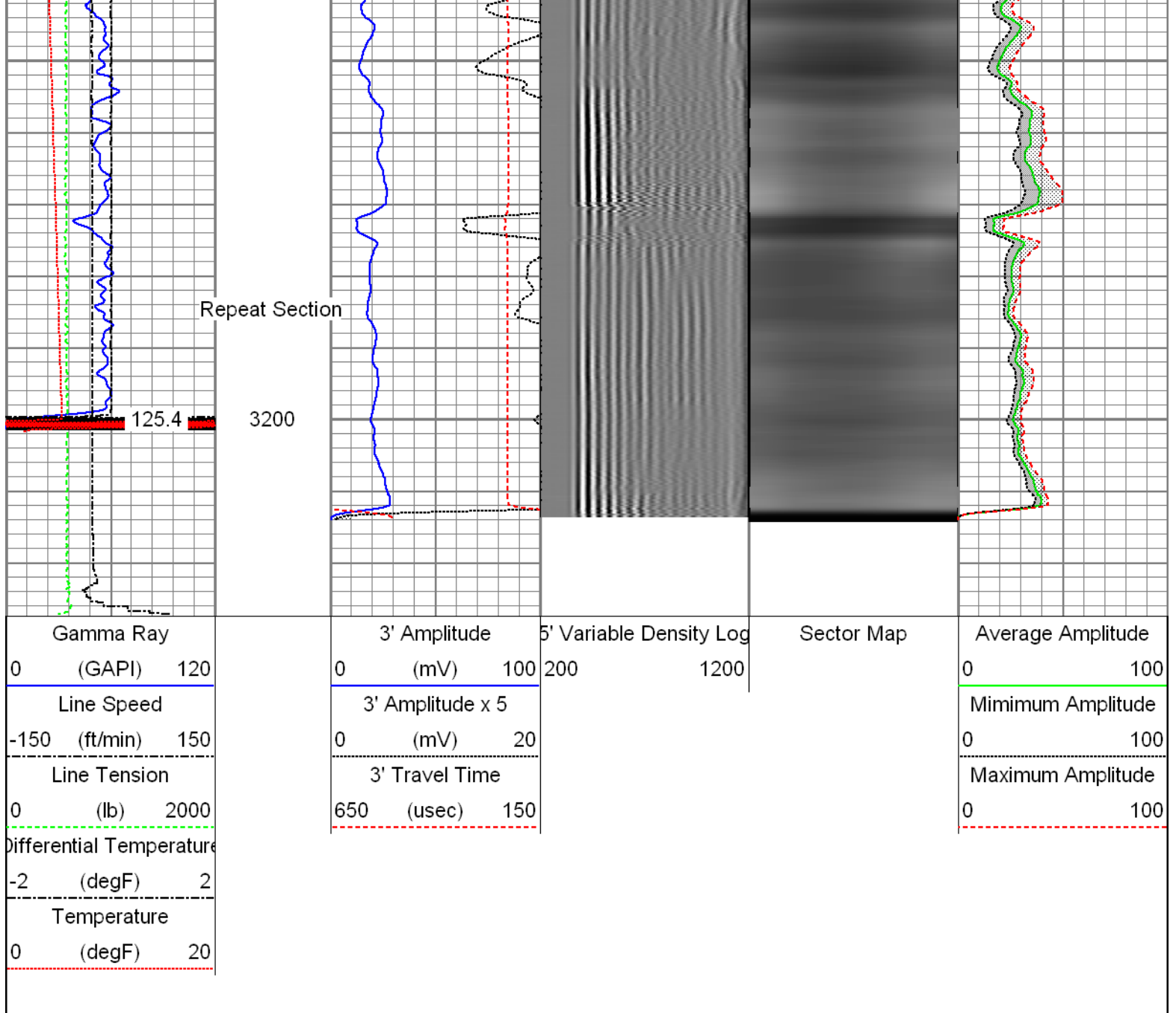
Recorded with 2800 PSI Surface Induced Pressure

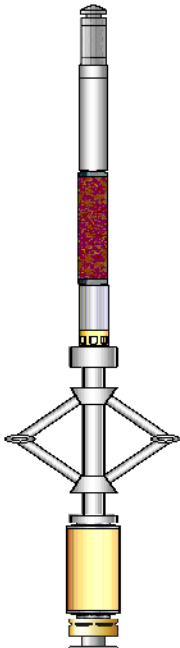
Database File:
Dataset Pathname:
Presentation Format:
Dataset Creation:
Charted by:

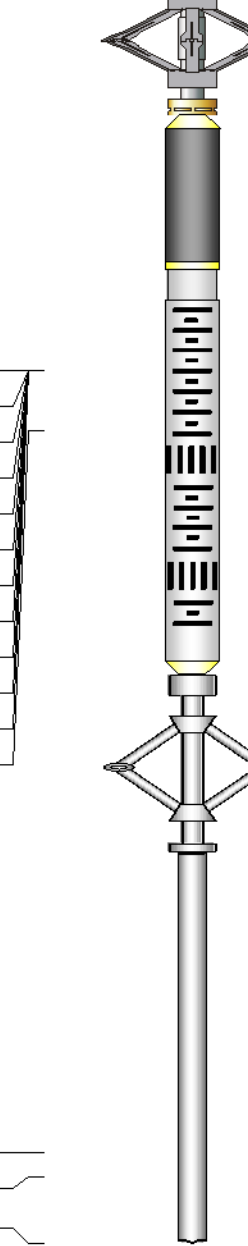
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pass7
rbt004
Tue Nov 03 09:58:54 2015 by Log 7.0 B1
Depth in Feet scaled 1:240

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





Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	27.74		T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			UW_AGS-UW_AGS_001 (215017) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW_XTU-UW_XTU_002 (211461) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (10024770) Production Gamma Ray	1.93	1.69	9.50
TEMP	26.35		UW_PRT-UW_PRT_016 (10025095) Platinum Resistance Thermometer	1.04	1.69	5.20
CCL	22.12		UW_PRC-UW_PRC_057 (1038) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
			UW_CCL-UW_CCL_028 (10009470) Ultrawire 3-1/8" CCL	1.61	3.13	36.00

			UW_PRC #4 -DSSRAC (080) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00
WVF3FT	14.72		UW_RBT-UW_RBT_004 (10022773) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.47	3.13	140.00
WVFS1	14.72					
WVFS2	14.72					
WVFS3	14.72					
WVFS4	14.72					
WVFS5	14.72					
WVFS6	14.72					
WVFS7	14.72					
WVFS8	14.72					
CBLTEMP	14.72		UW_PRC-UW_PRC_057 (1037) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
CBLROT	14.72					
WVF5FT	13.72					
			CNL-007 (1005) Compensated Neutron Logging Tool	6.61	1.69	30.00
CNLSC	1.53					
CNSSC	1.12					
TSTAMP	0.00					
Dataset: PROCESSED_0512341551_Anadarko_Carter 14C-33HZ_11-03-15_RBL_CNL.db: field/well/run1/Main Total Length: 31.99 ft Total Weight: 328.20 lb O.D. 3.13 in						

Calibration Report			
Database File:	C:\Warrior\Data\0512341551_Anadarko_Carter 14C-33HZ_11-03-15_RBL_CNL\PROCESSED_0512341551_Anadarko_Carter 14C-33HZ_11-03-15_RBL_CNL		
Dataset Pathname:	Main		
Dataset Creation:	Tue Nov 03 10:24:28 2015 by Log 7.0 B1		
Compensated Neutron Calibration Report			
Serial Number:	1005		
Tool Model:	007		
Master Calibration	Tue Jun 03 09:29:29 2014		
Detector	Readings		
Short Space	240.87	cps	
Long Space	303.55	cps	
	Measured	Reference	
Ratio	0.8150	Sleeve: 1.0000	
CNRAT Gain K	1.0271		

Before Survey			
Detector	Readings		
Short Space		cps	
Long Space		cps	
	Measured	Reference	
Ratio			

After Survey			
Detector	Readings		
Short Space		cps	
Long Space		cps	
	Measured	Reference	
Ratio			

Segmented Cement Bond Log Calibration Report			
Serial Number:		10022773	
Tool Model:		UW_RBT_004	
Calibration Casing Diameter:		5.500	in
Calibration Depth:		67.920	ft

Master Calibration, performed Tue Nov 03 09:28:21 2015:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.002	0.809	0.800	71.921	88.182	0.585
5FT	-0.001	0.697	0.800	71.921	101.856	0.924
S1	0.002	0.794	0.000	100.000	126.410	-0.309
S2	0.001	0.820	0.000	100.000	122.110	-0.143
S3	0.002	0.800	0.000	100.000	125.423	-0.300
S4	0.002	0.778	0.000	100.000	128.789	-0.206
S5	0.002	0.784	0.000	100.000	127.914	-0.309
S6	0.001	0.769	0.000	100.000	130.289	-0.165
S7	0.002	0.774	0.000	100.000	129.528	-0.316
S8	0.002	0.786	0.000	100.000	127.530	-0.241

Temperature Calibration Report					
Serial Number:		10025095			
Tool Model:		UW_PRT_016			
Performed:		Wed Feb 11 13:43:20 2015			
Point #	Reading		Reference		
1	12798.00	cps	68.00	degF	
2	18136.00	cps	104.00	degF	
3	29513.00	cps	176.00	degF	
4	40905.00	cps	248.00	degF	
5	52487.00	cps	320.00	degF	
6	58362.00	cps	356.00	degF	
7		cps		degF	
8		cps		degF	
9		cps		degF	
10		cps		degF	

Gamma Ray Calibration Report

Serial Number:	10024770	
Tool Model:	UW_PGR_020	
Performed:	Mon Nov 02 15:08:04 2015	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.7000	GAPI/cps



Company	Kerr-McGee Oil & Gas Onshore, L.P.
Well	Carter 14C-33HZ
Field	Wattenberg
County	Weld
State	Colorado