



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Kerr-McGee Oil & Gas Onshore, L.P.		Company Kerr-McGee Oil & Gas Onshore, L.P.					
Well Tedford 4N-28HZ		Well Tedford 4N-28HZ					
Field Wattenberg		Field Wattenberg					
County Weld		County Weld					
State Colorado		State Colorado					
Location:		API # : 05-123-41792					
SEC 28 TWP 2N RGE 66W		Other Services					
Permanent Datum Ground Level		Gauge Ring					
Log Measured From Kelly Bushing		Elevation					
Drilling Measured From Kelly Bushing		K.B. 4989'					
		D.F. 4988'					
		G.L. 4964'					
Date 22-OCT-2015							
Run Number Two							
Depth Driller 13145 FT							
Depth Logger 7683 FT							
Bottom Logged Interval 7294 FT							
Top Log Interval Surface							
Open Hole Size 7.875"							
Type Fluid Water							
Density / Viscosity 8.34 lbm/gal							
Max. Recorded Temp. 230°F							
Estimated Cement Top Surface							
Time Well Ready ROA							
Time Logger on Bottom 9:24							
Equipment Number HD-0343							
Location Fort Lupton, CO							
Recorded By Robert Fogarty							
Witnessed By Levi McArthur							
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	1893 FT		
Intermediate #1	5 1/2	17	HCP-110 LTC	Surface	13134 FT		
Intermediate #2							
Liner							

<<< Fold Here >>>

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
Log correlated to 25 FT Kelly Bushing
Casing Tally Reported Marker Joint Top at 6801 FT
Log Recorded Marker Joint Top at 6790 FT
Gauge Ring Ran to 7683 FT
Log Ran as deep as possible to surface
Log was ran 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.!!

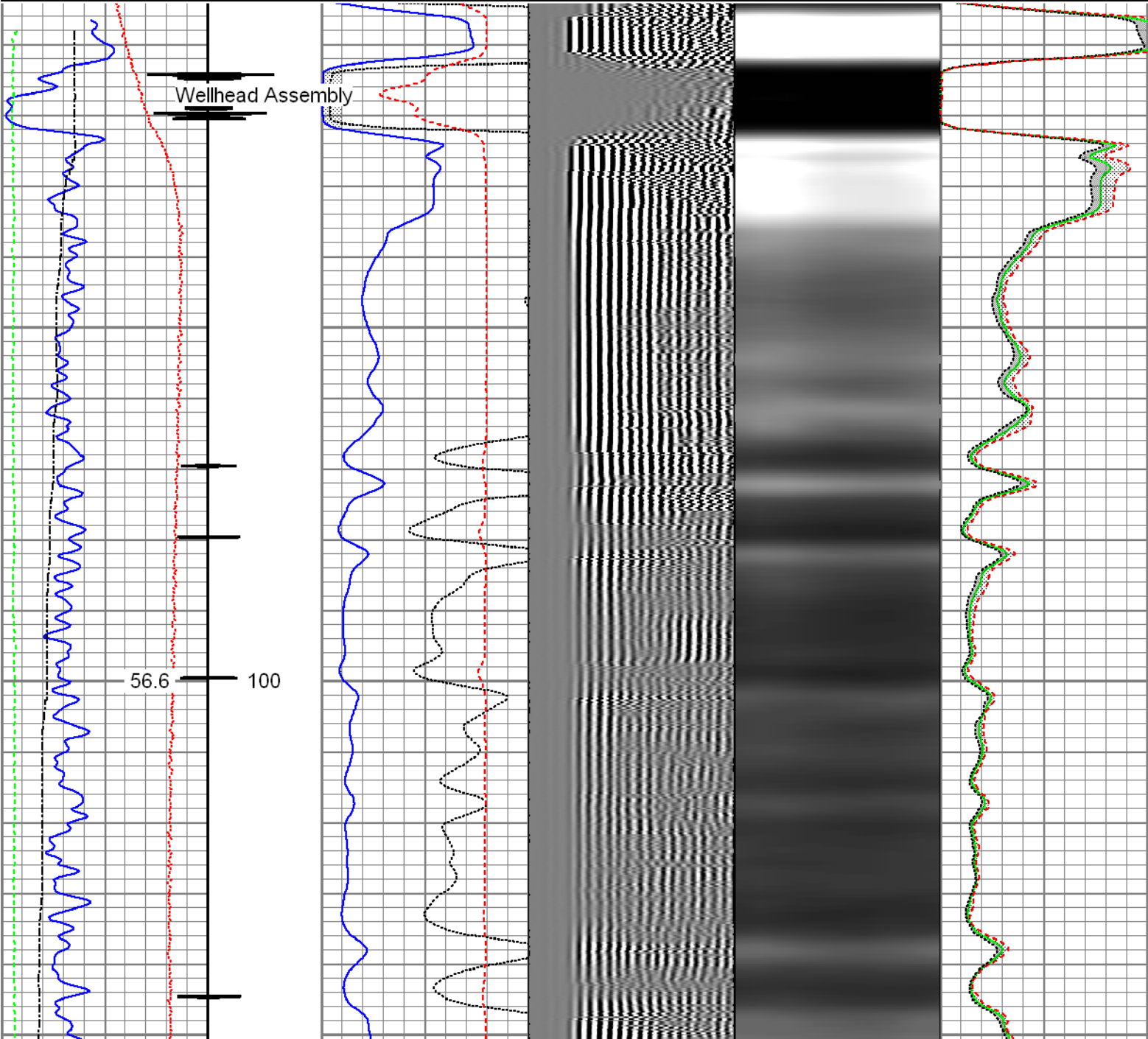


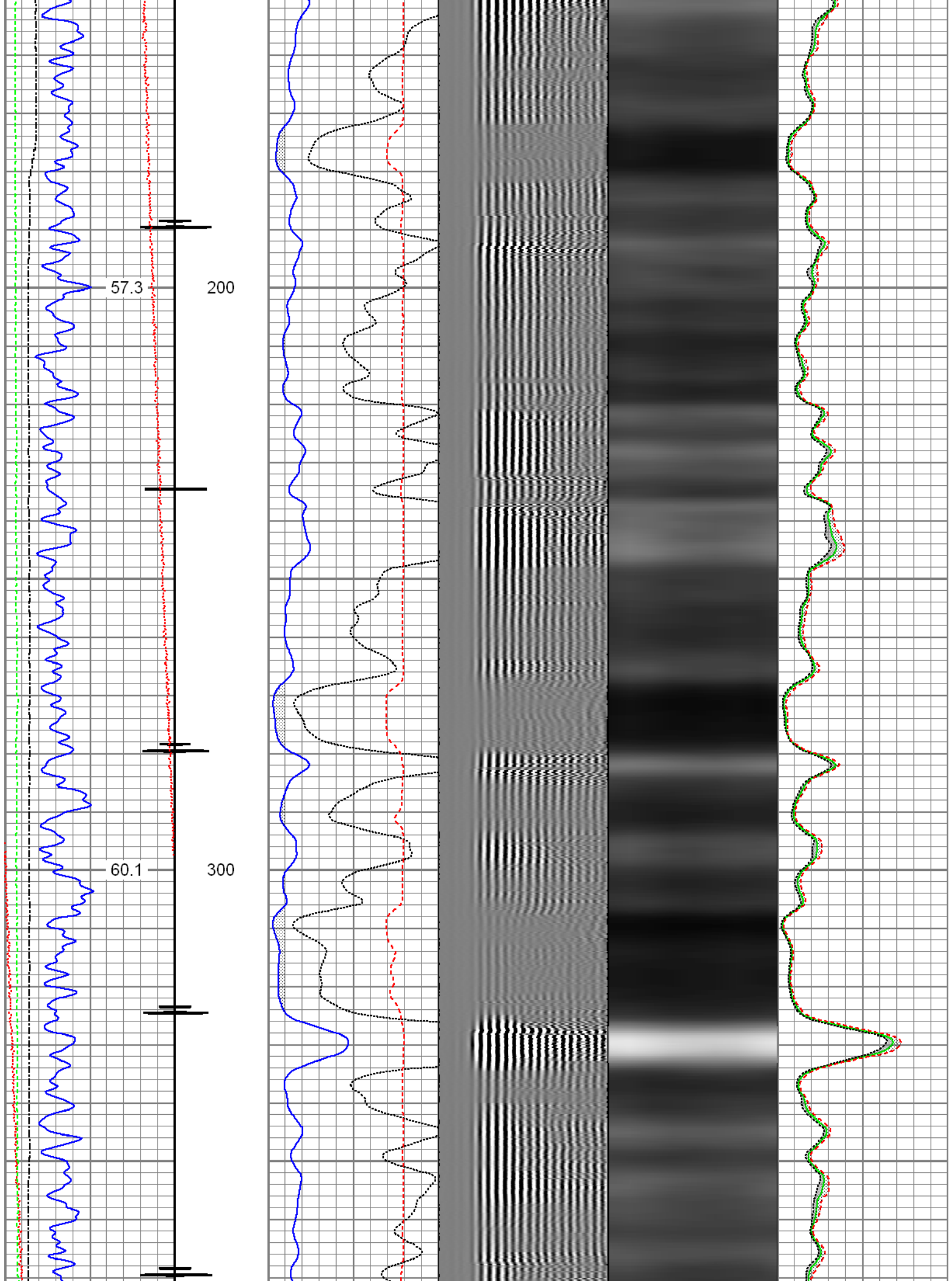
Main Pass

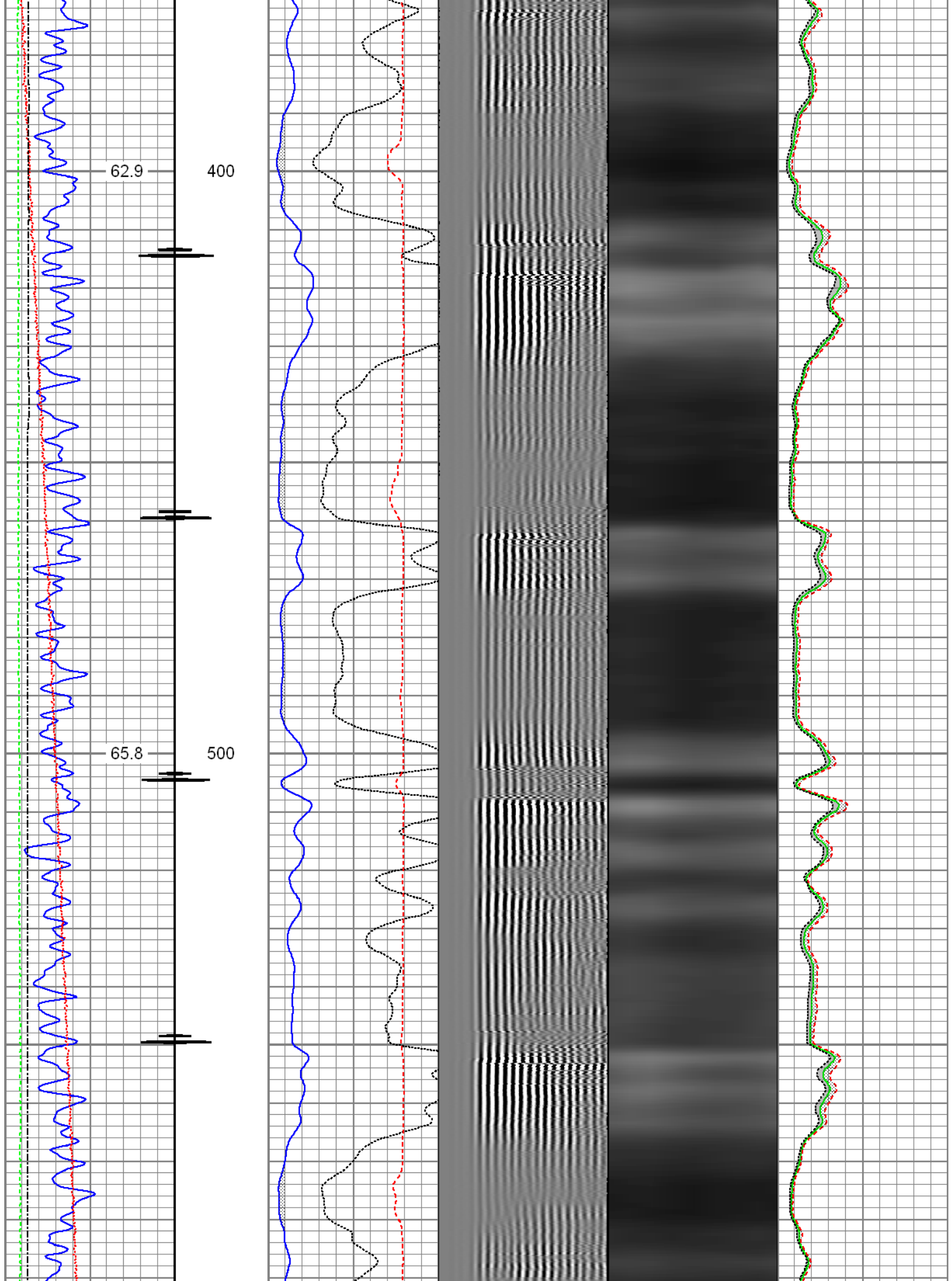
Recorded with 2800 PSI Surface Induced Pressure

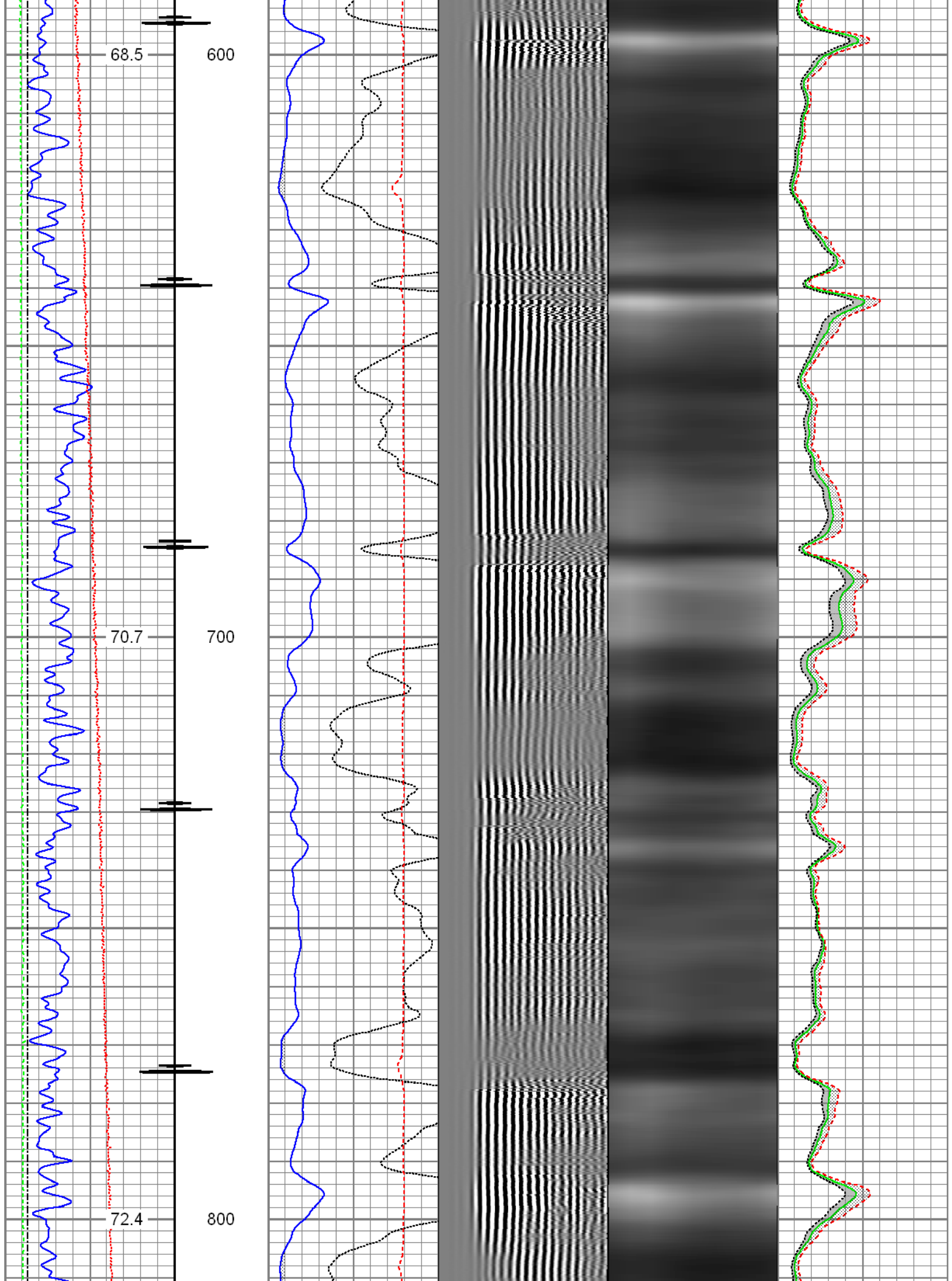
Database File: 0512341792_anadarko_tedford 4n-28hz_10-22-15_rbl.db
Dataset Pathname: pass6
Presentation Format: radii
Dataset Creation: Thu Oct 22 09:23:12 2015 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

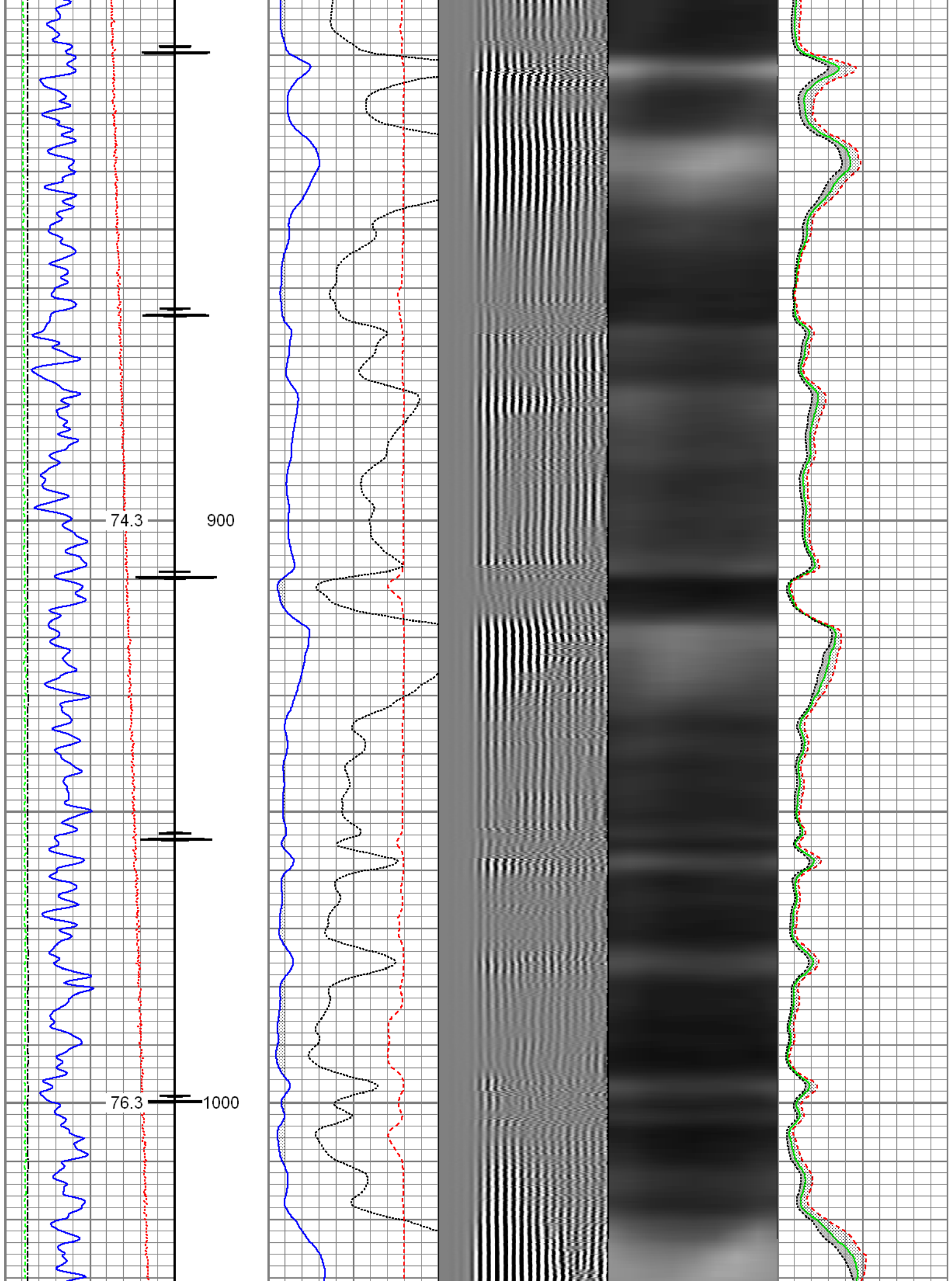
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150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

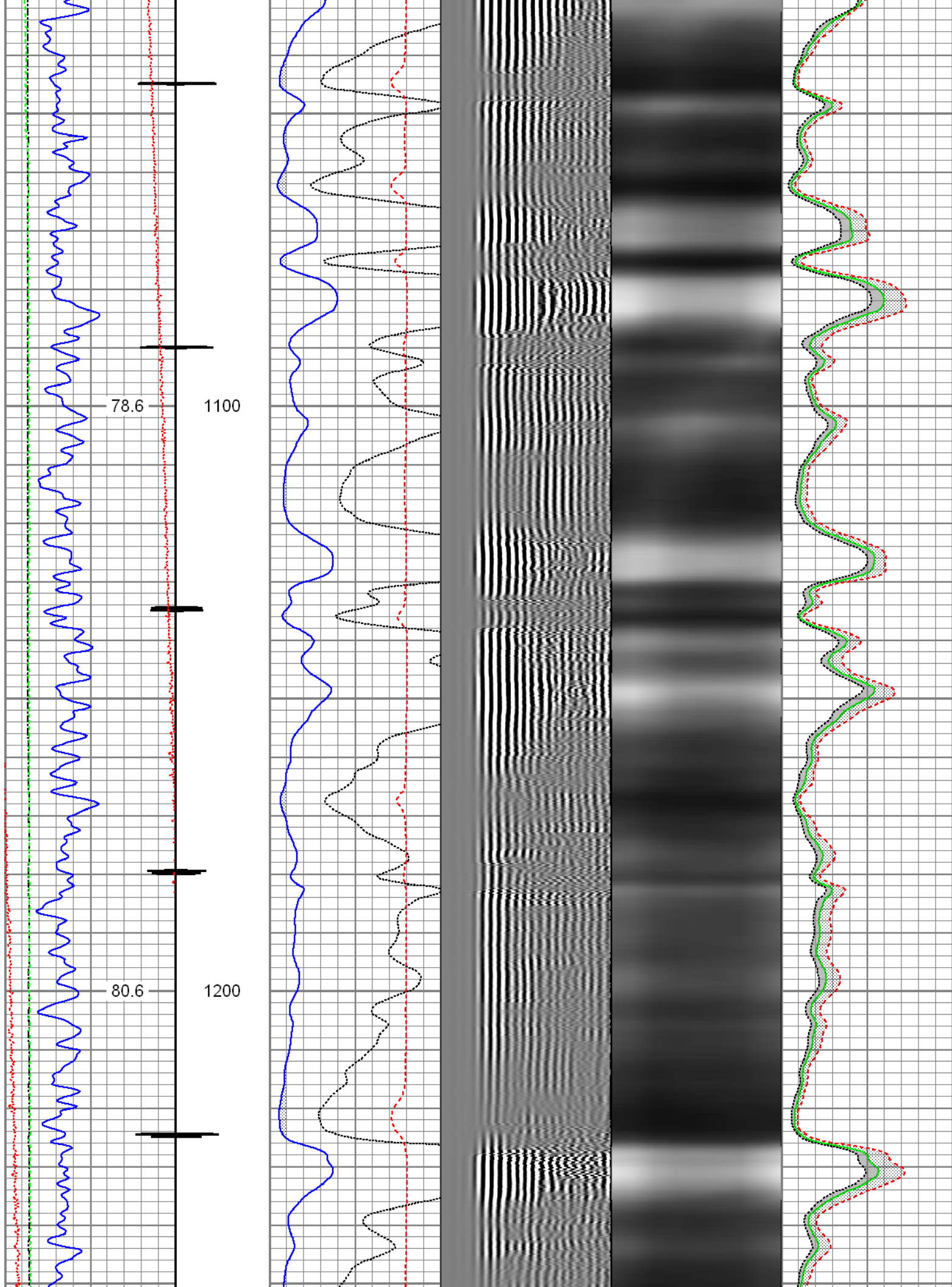


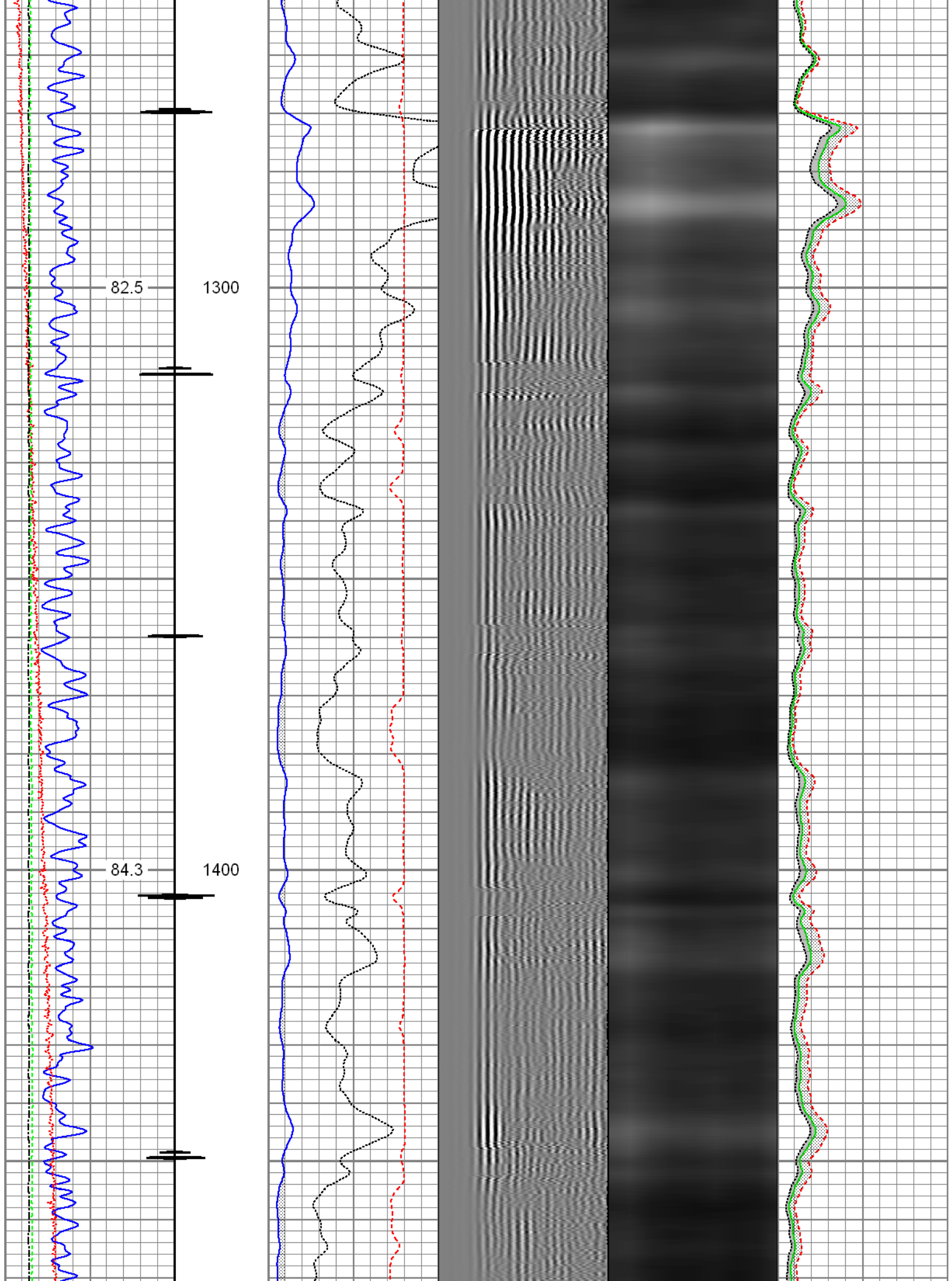


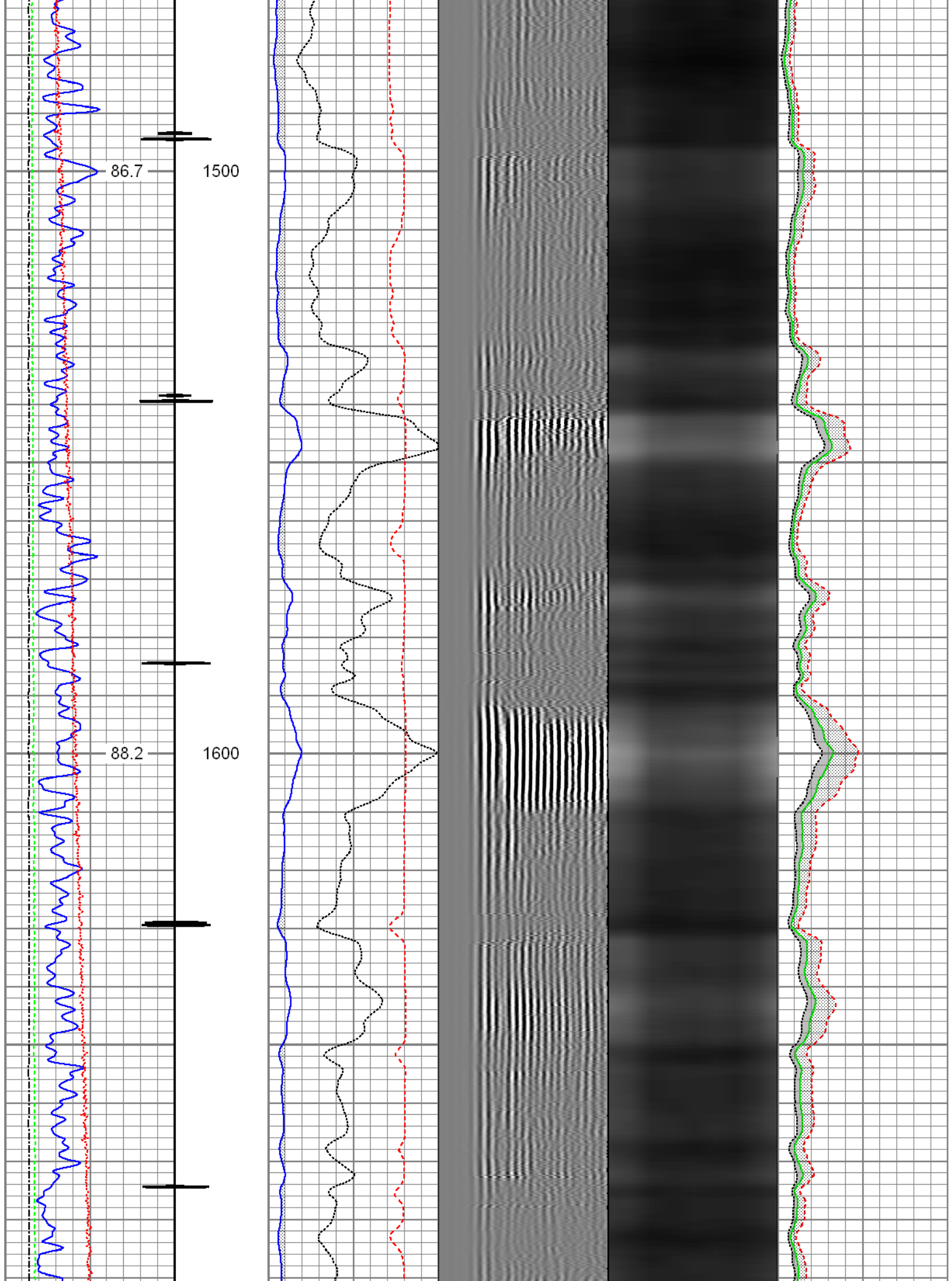


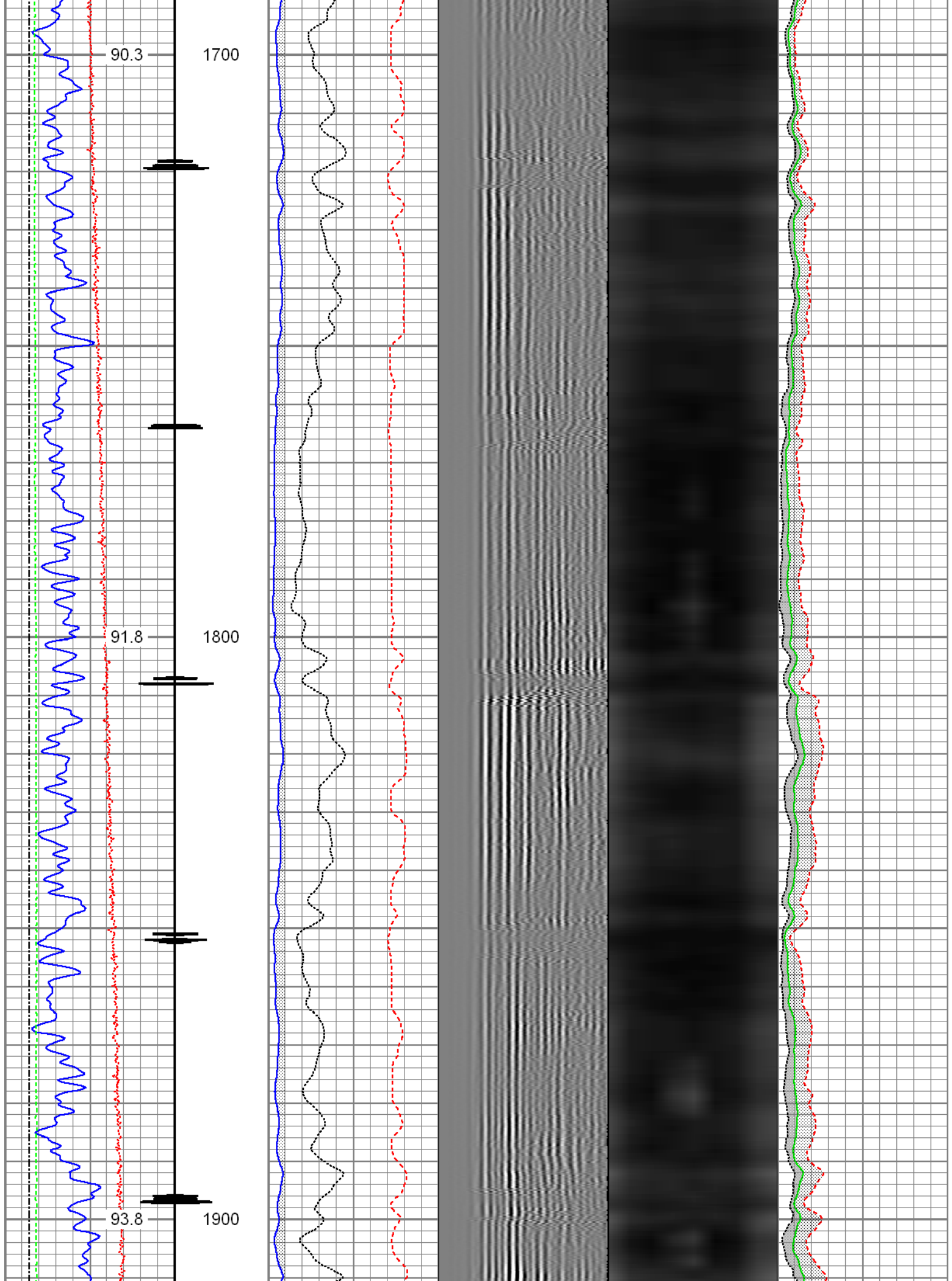


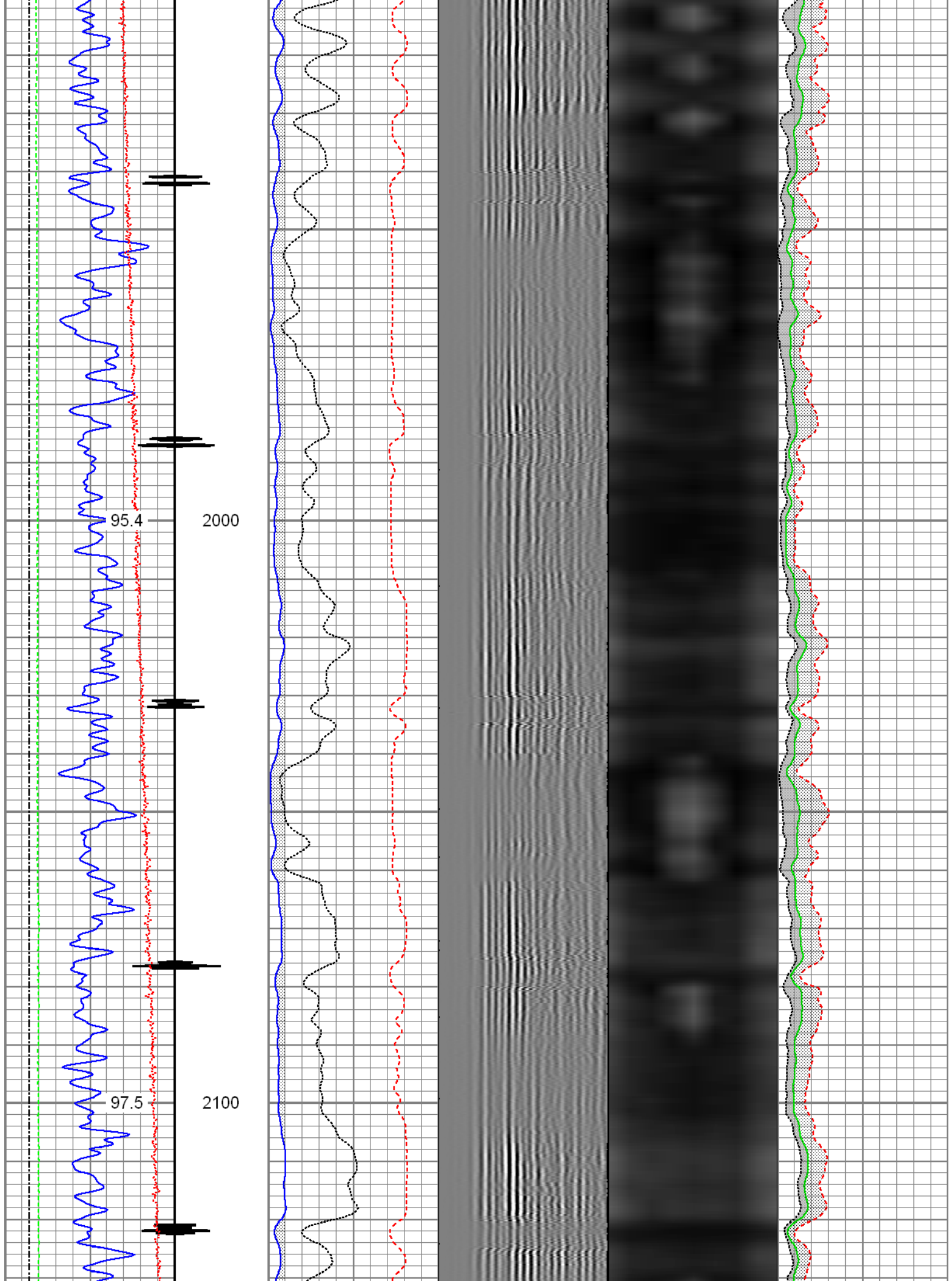


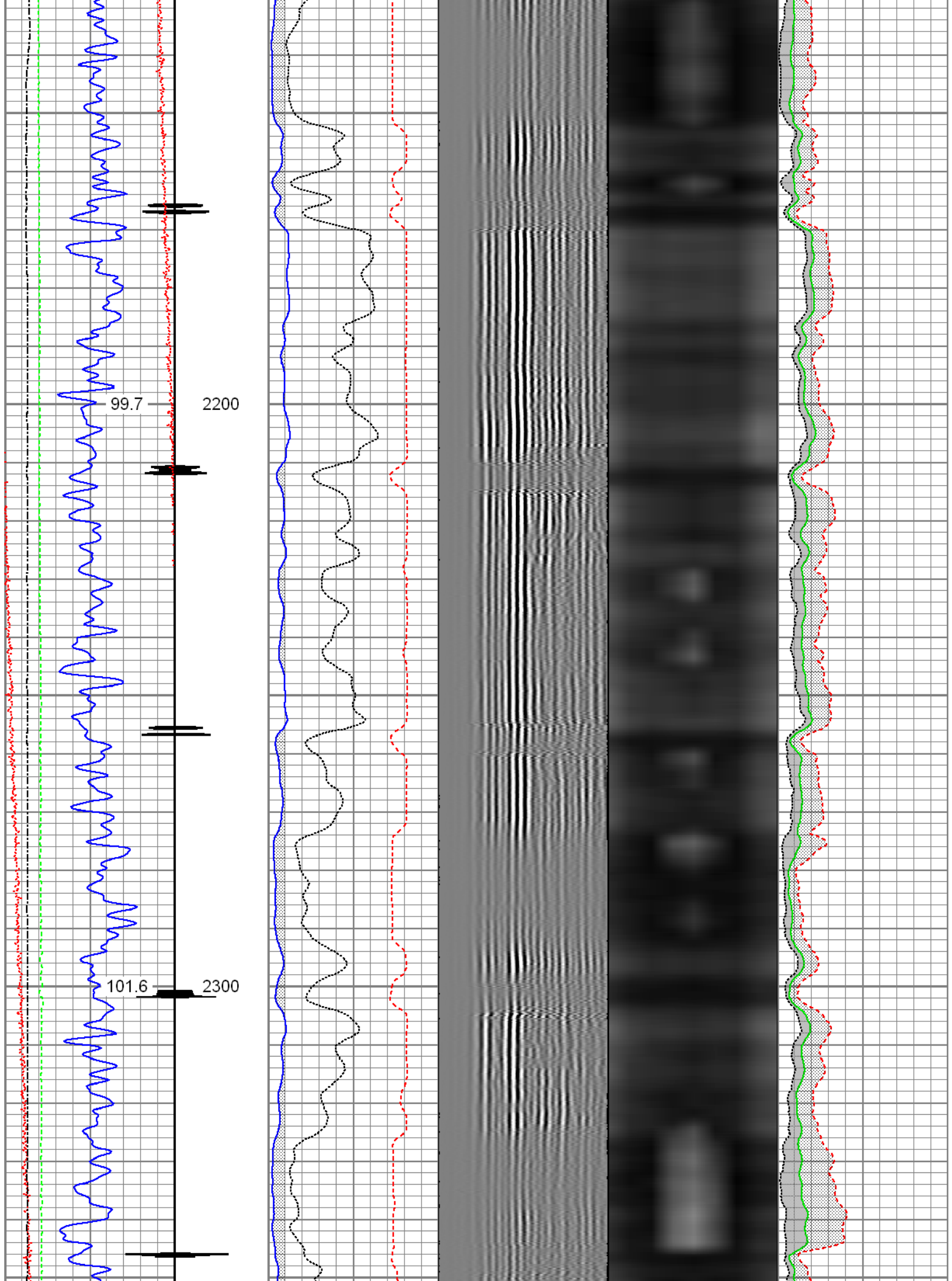


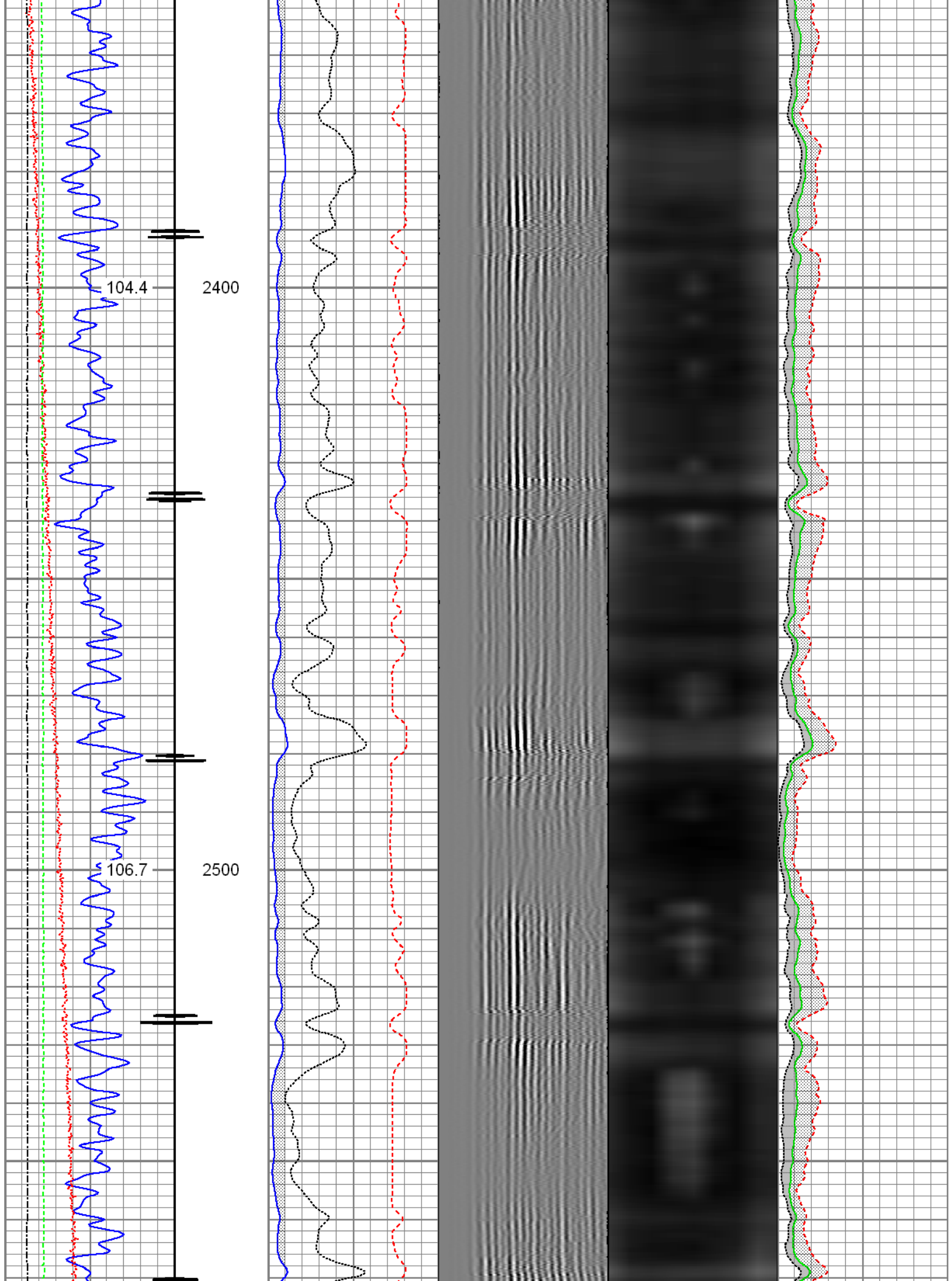


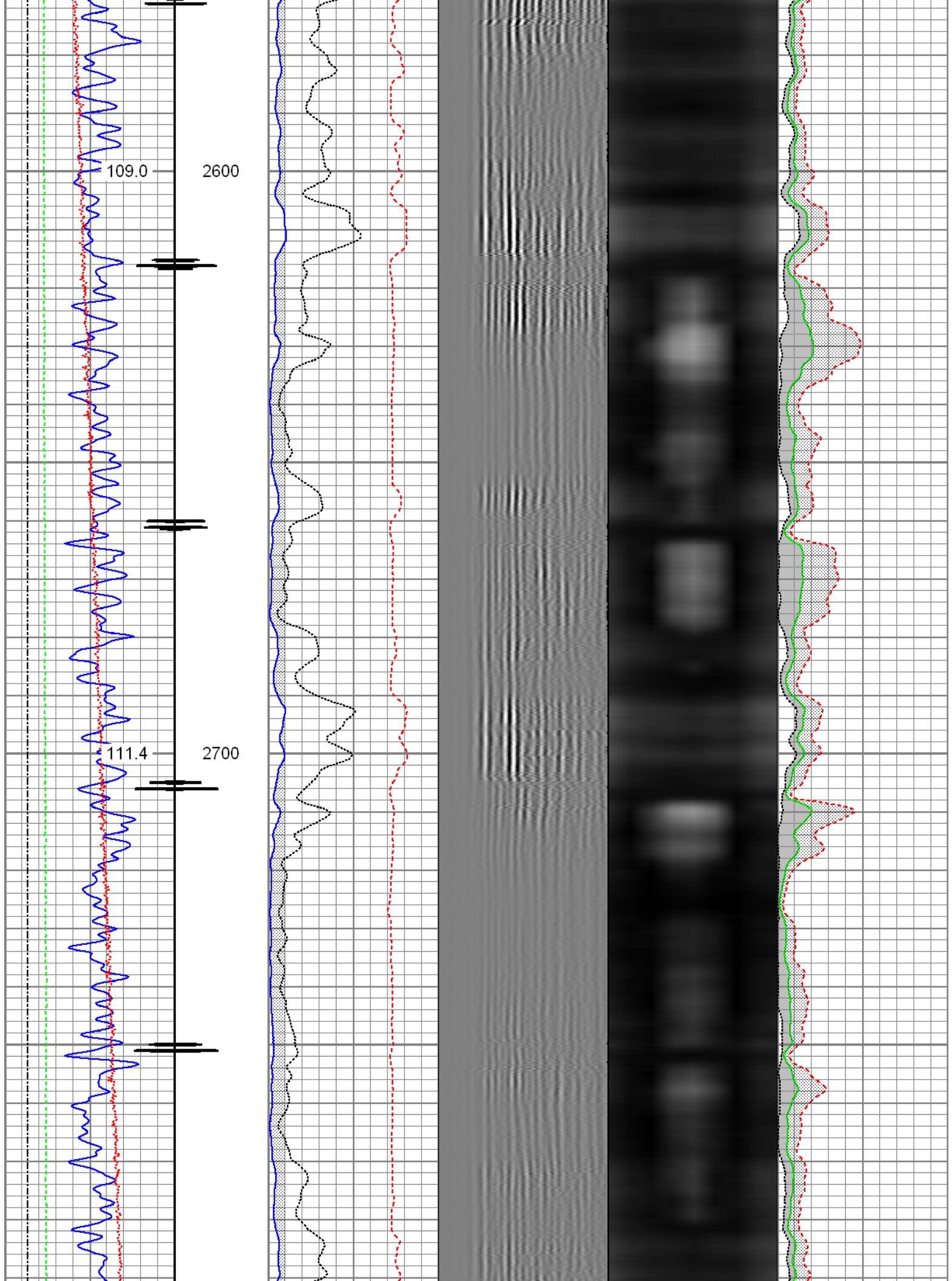


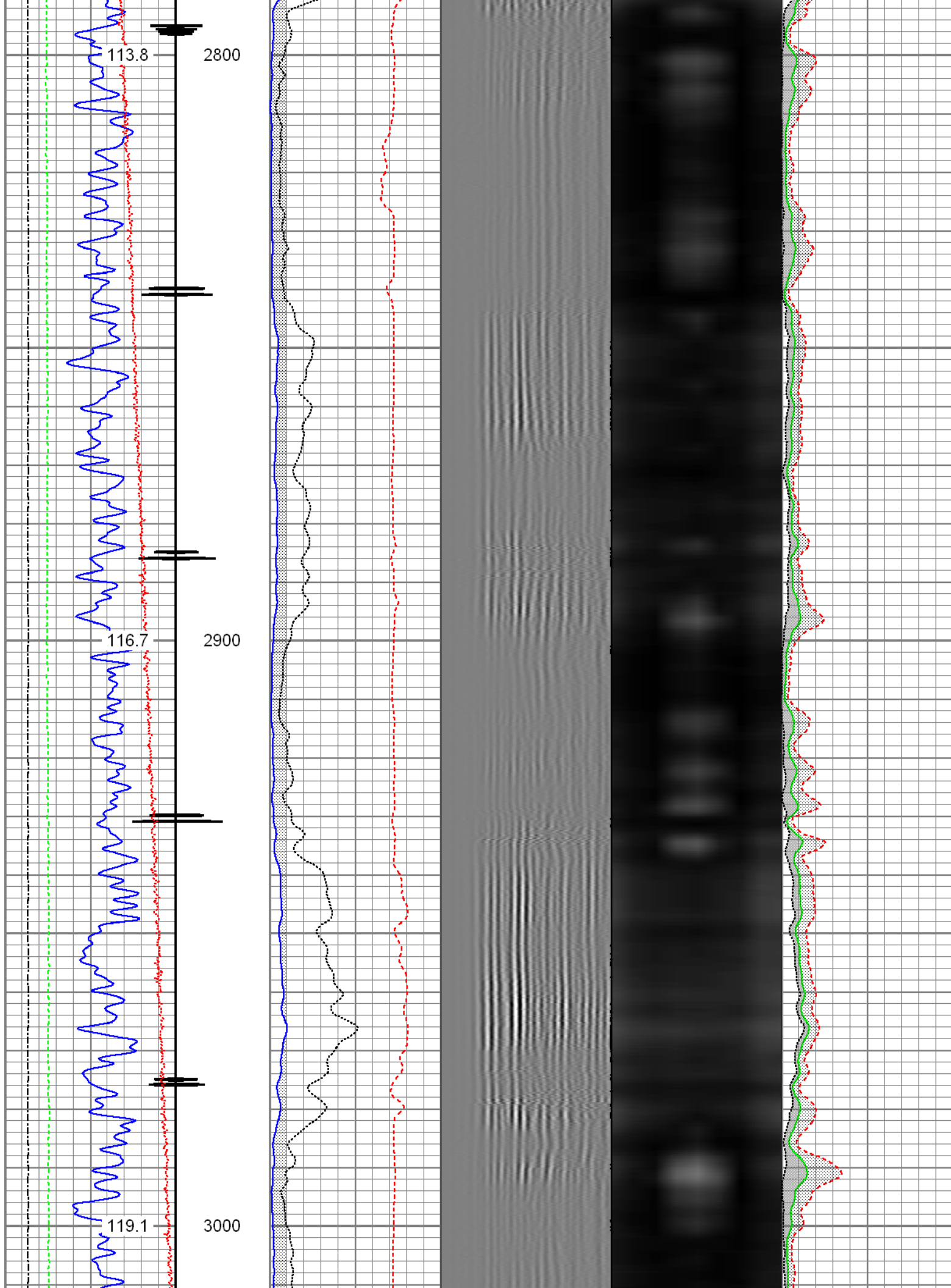


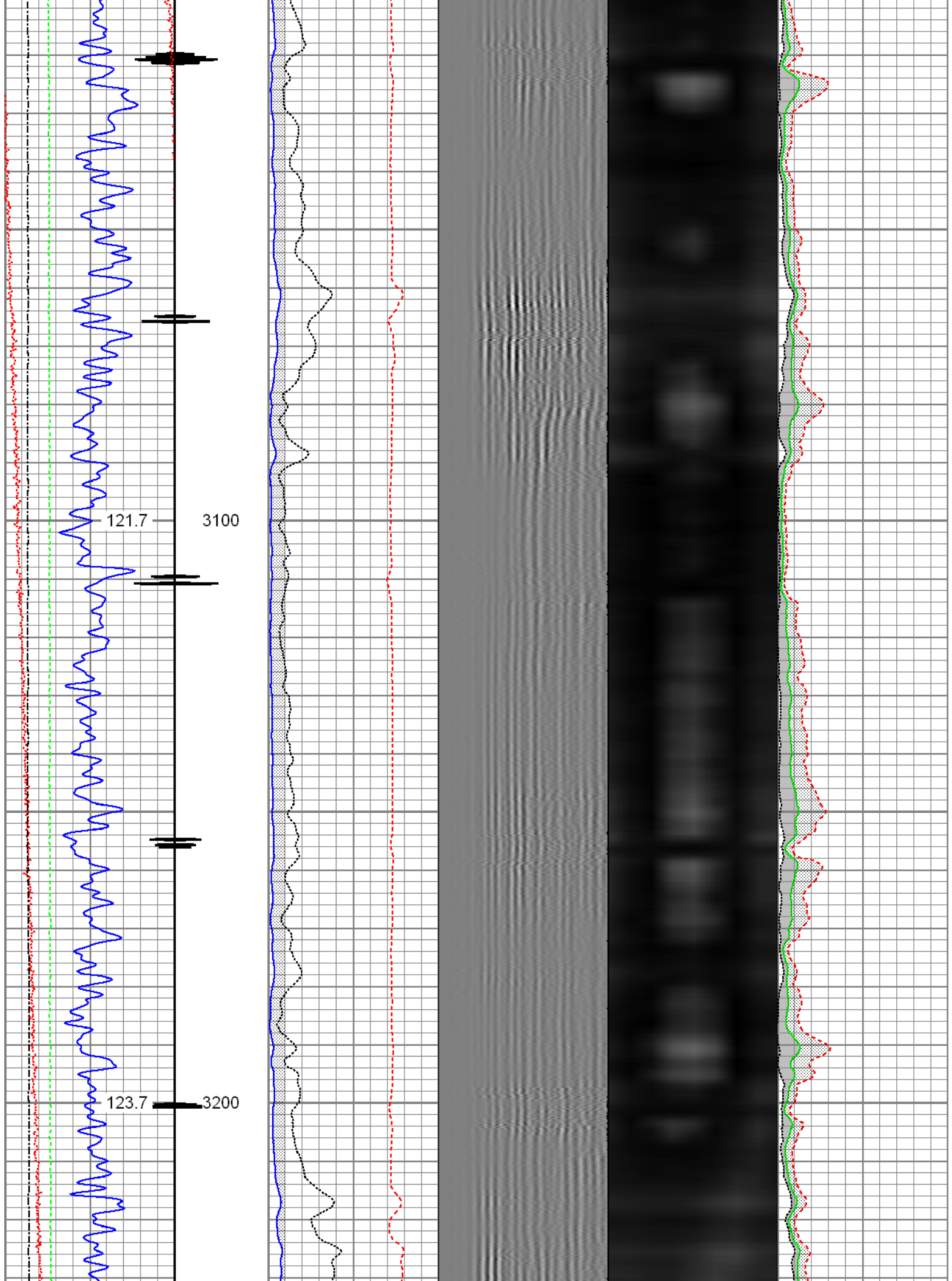


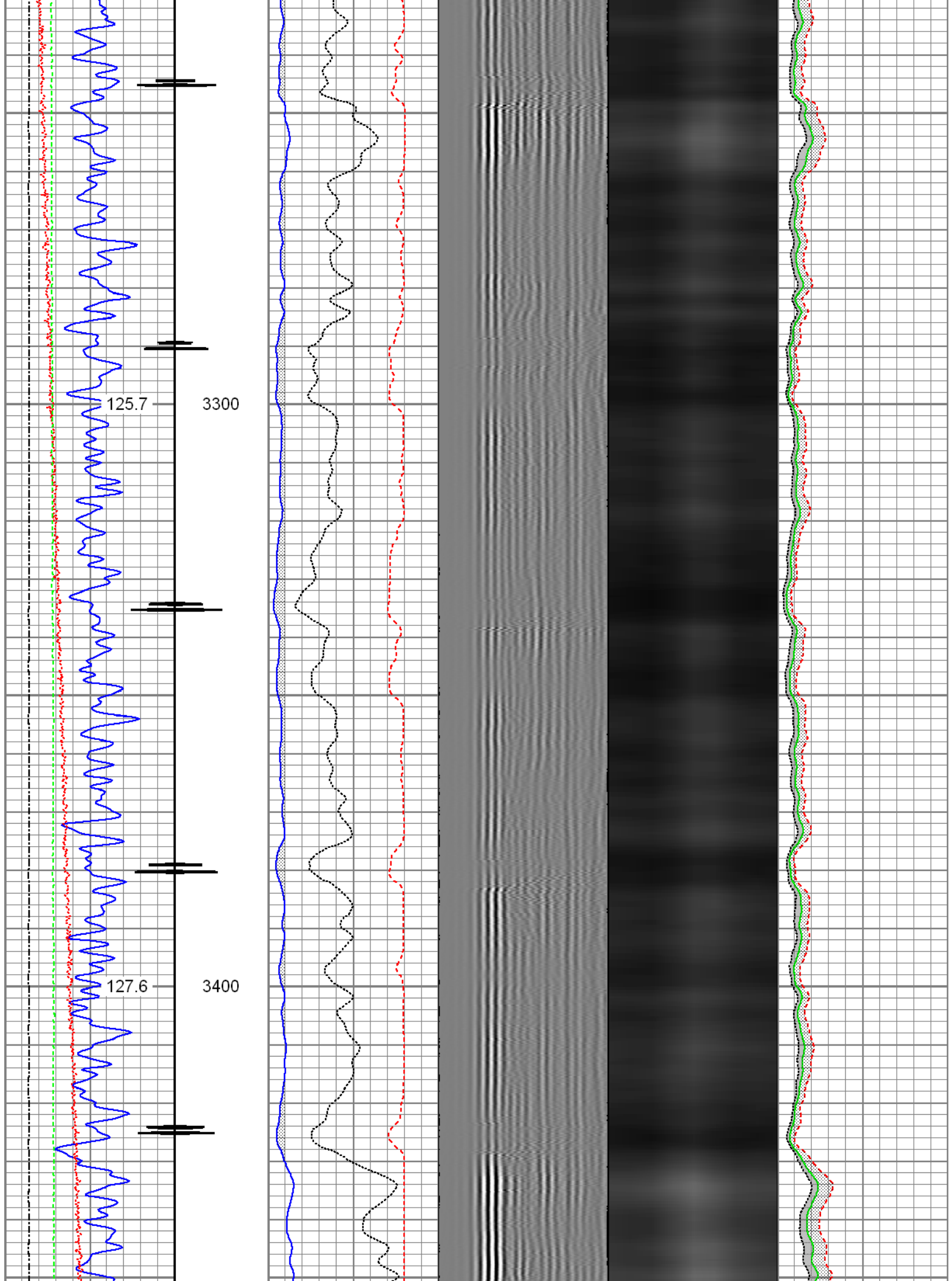


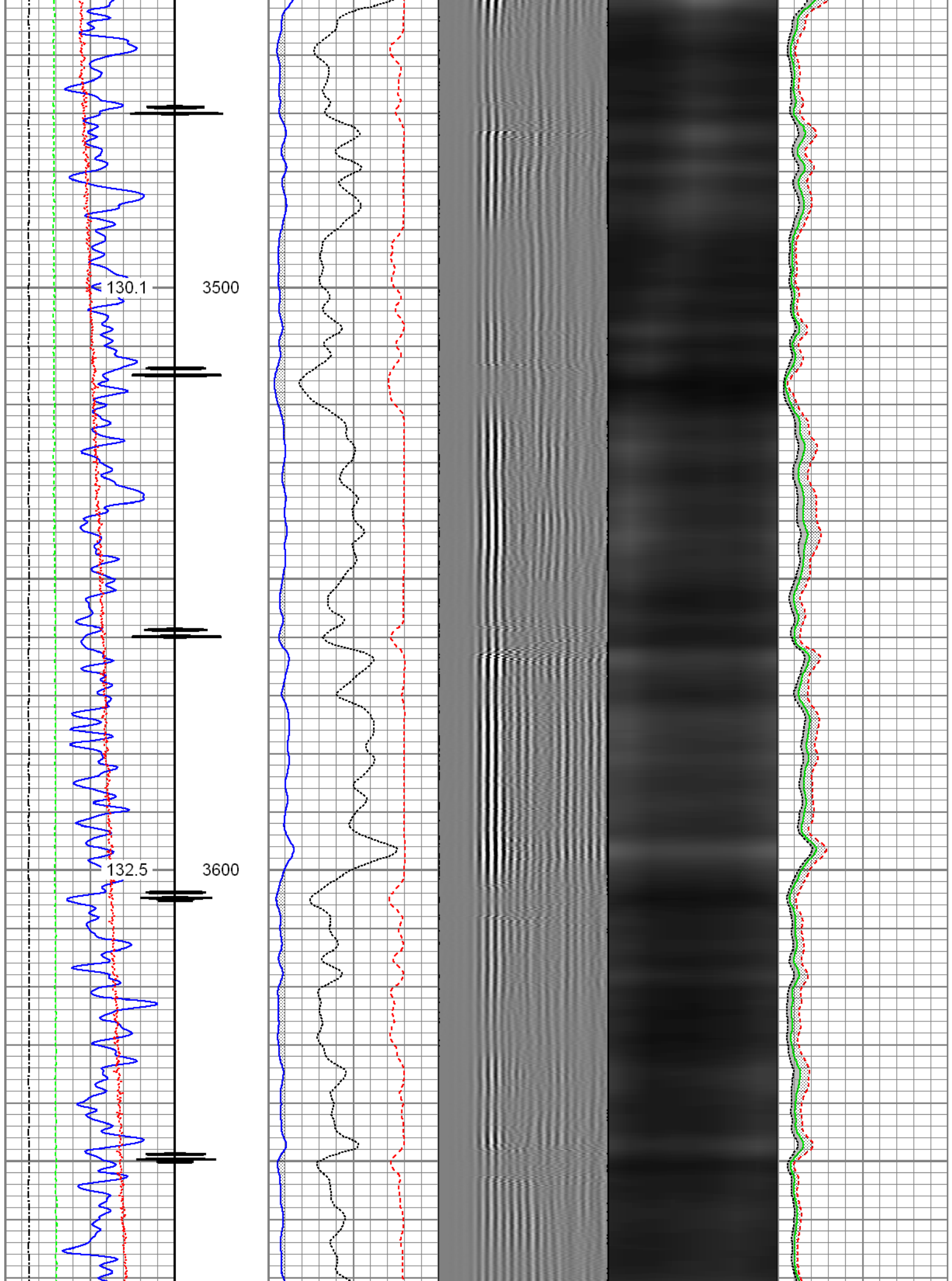


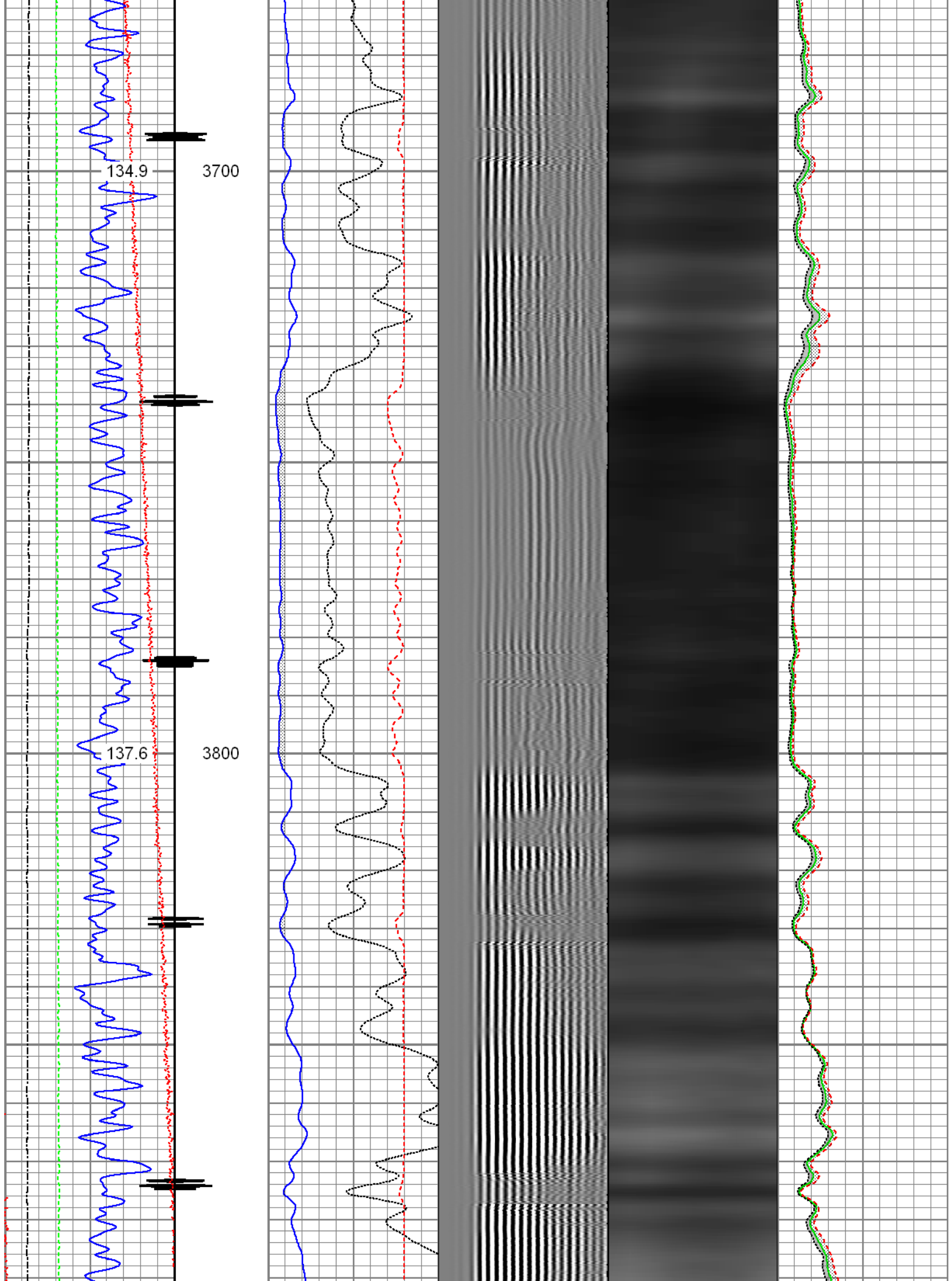


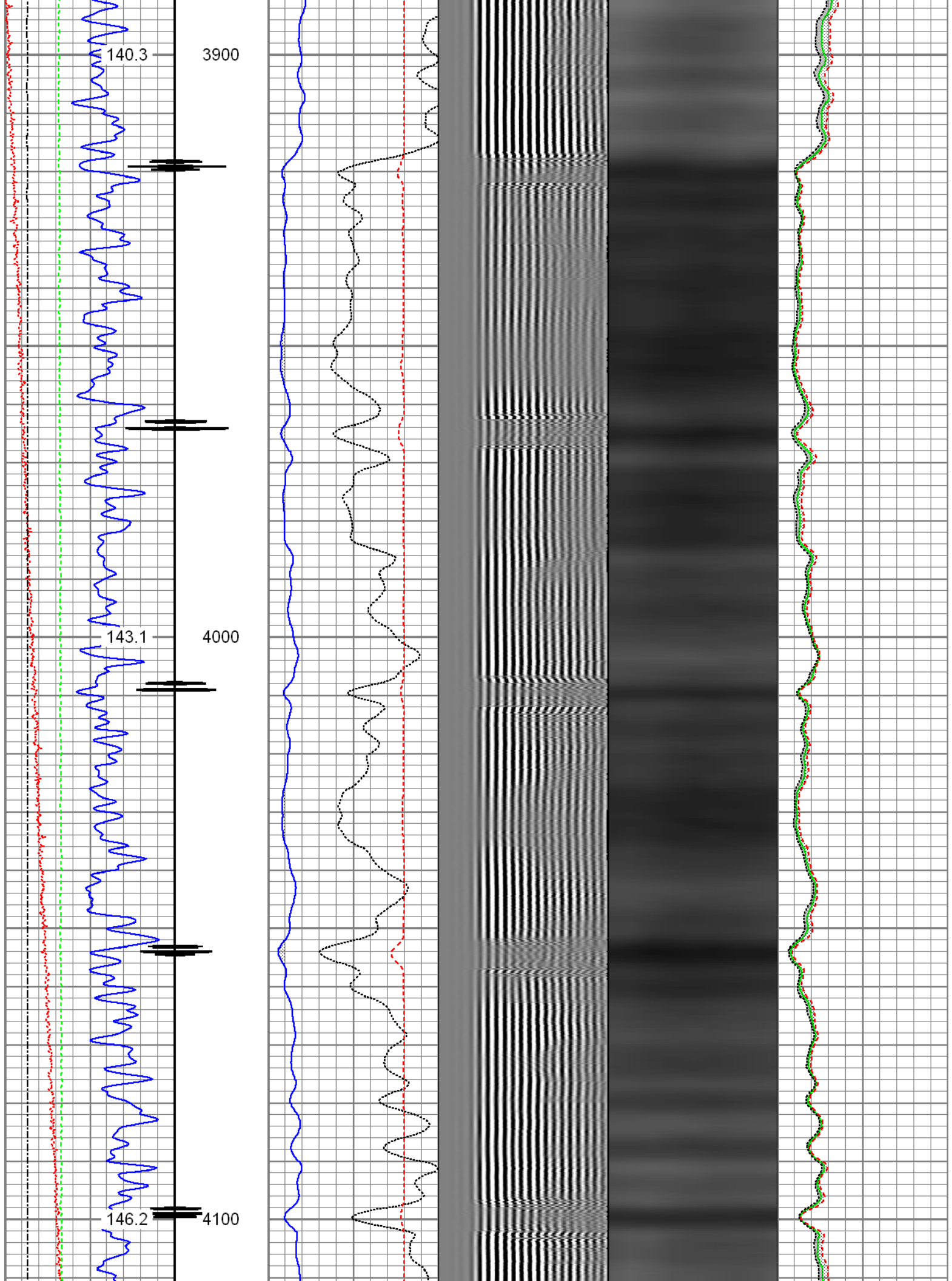


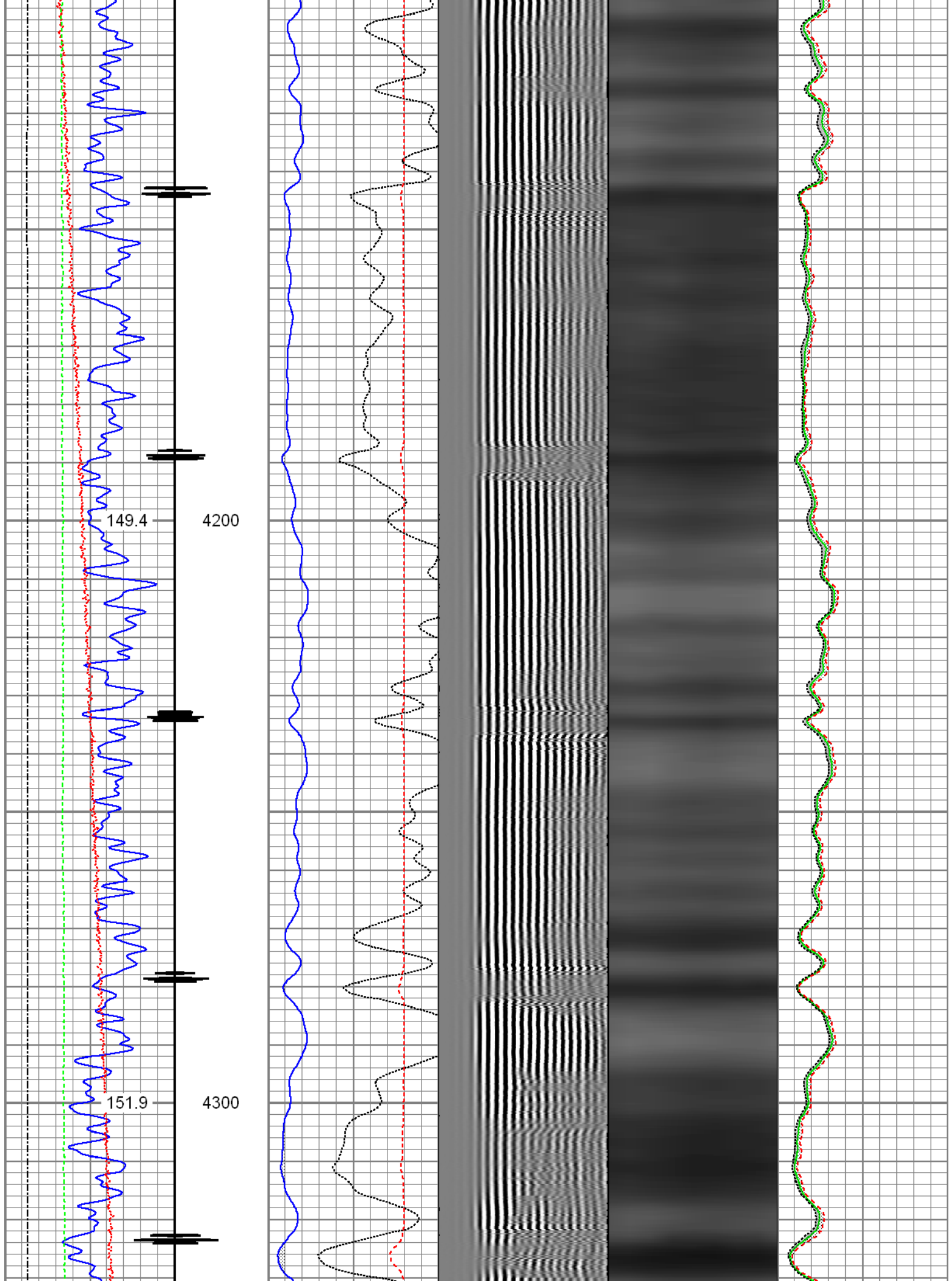


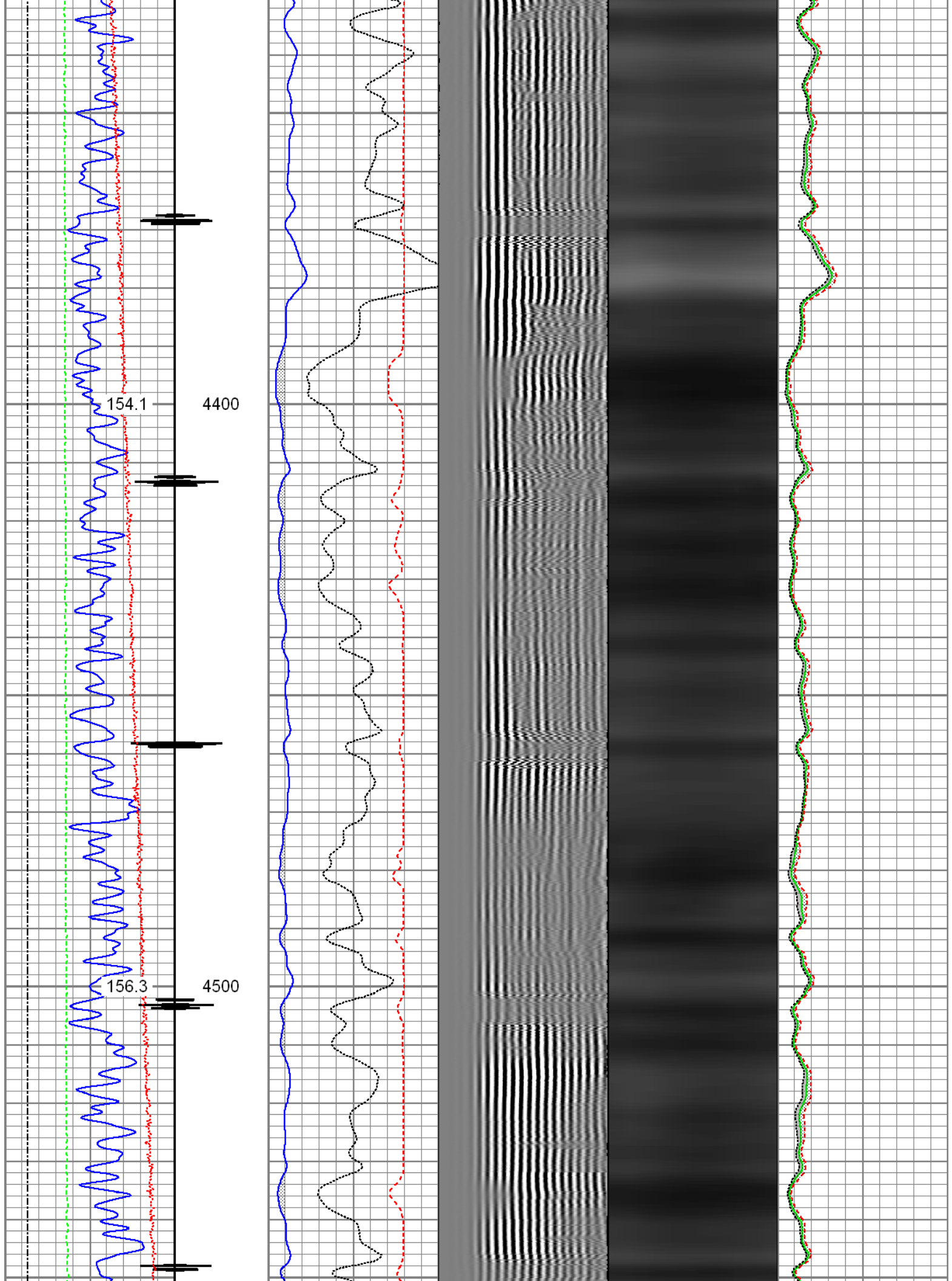


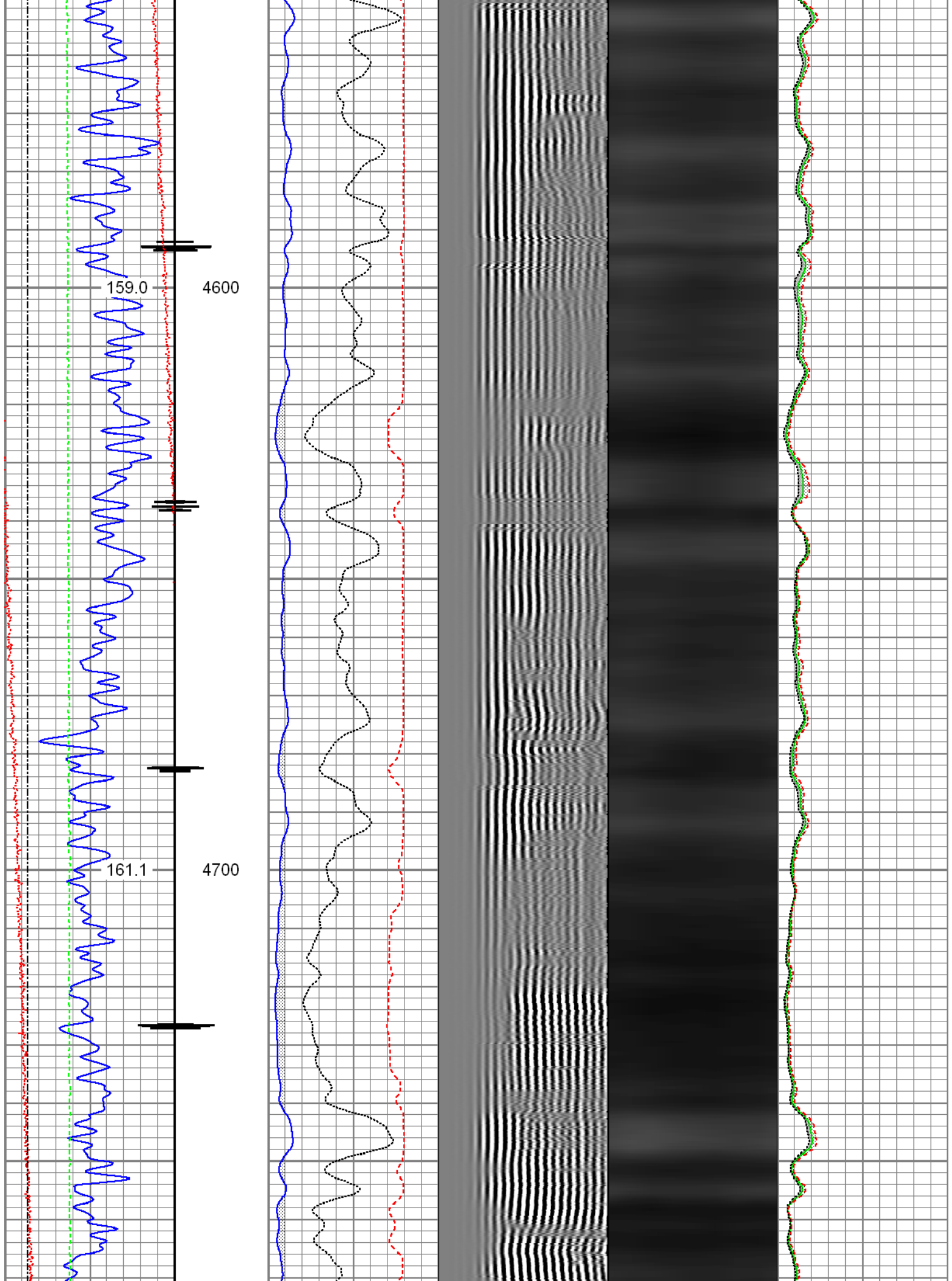


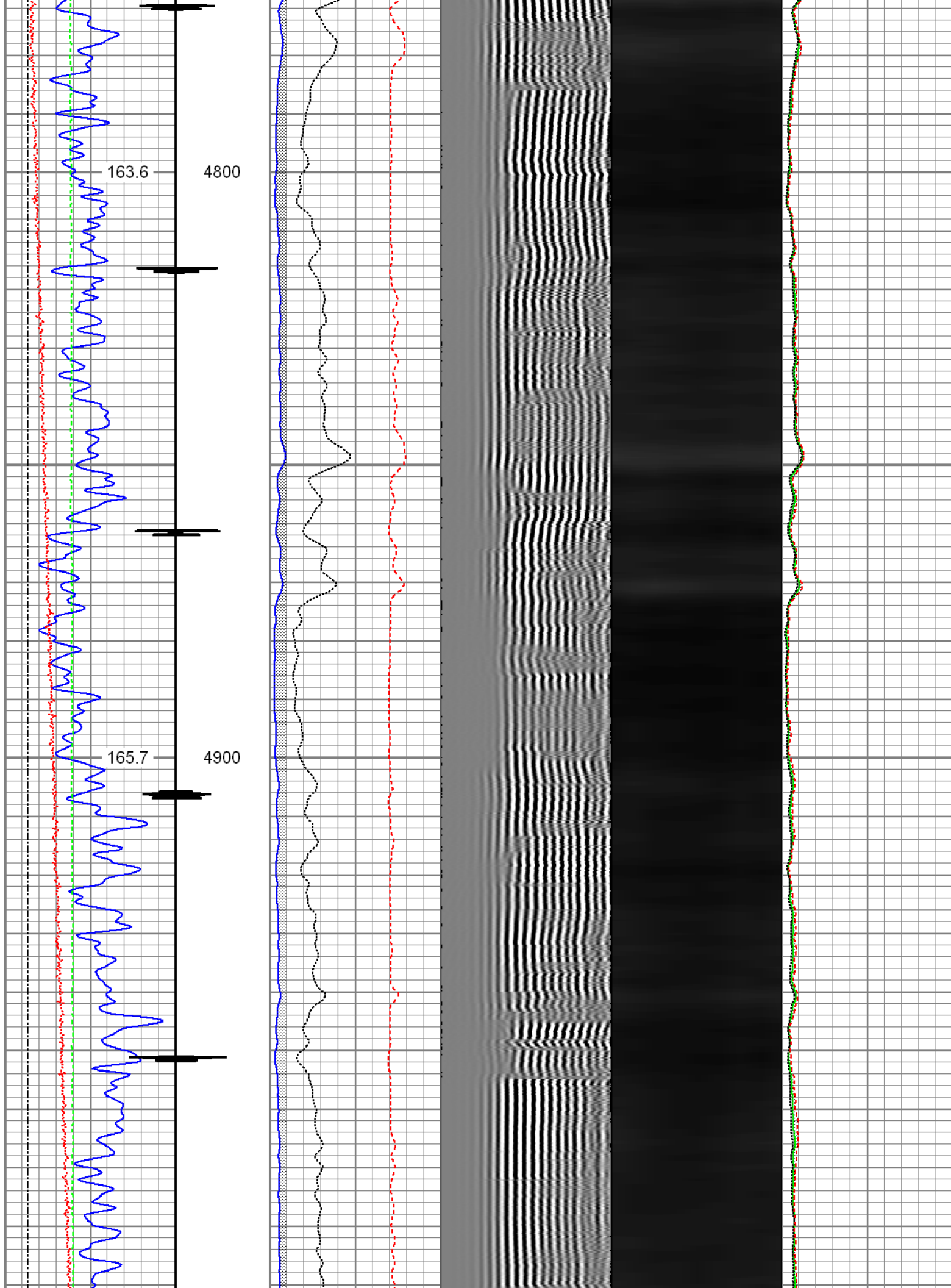


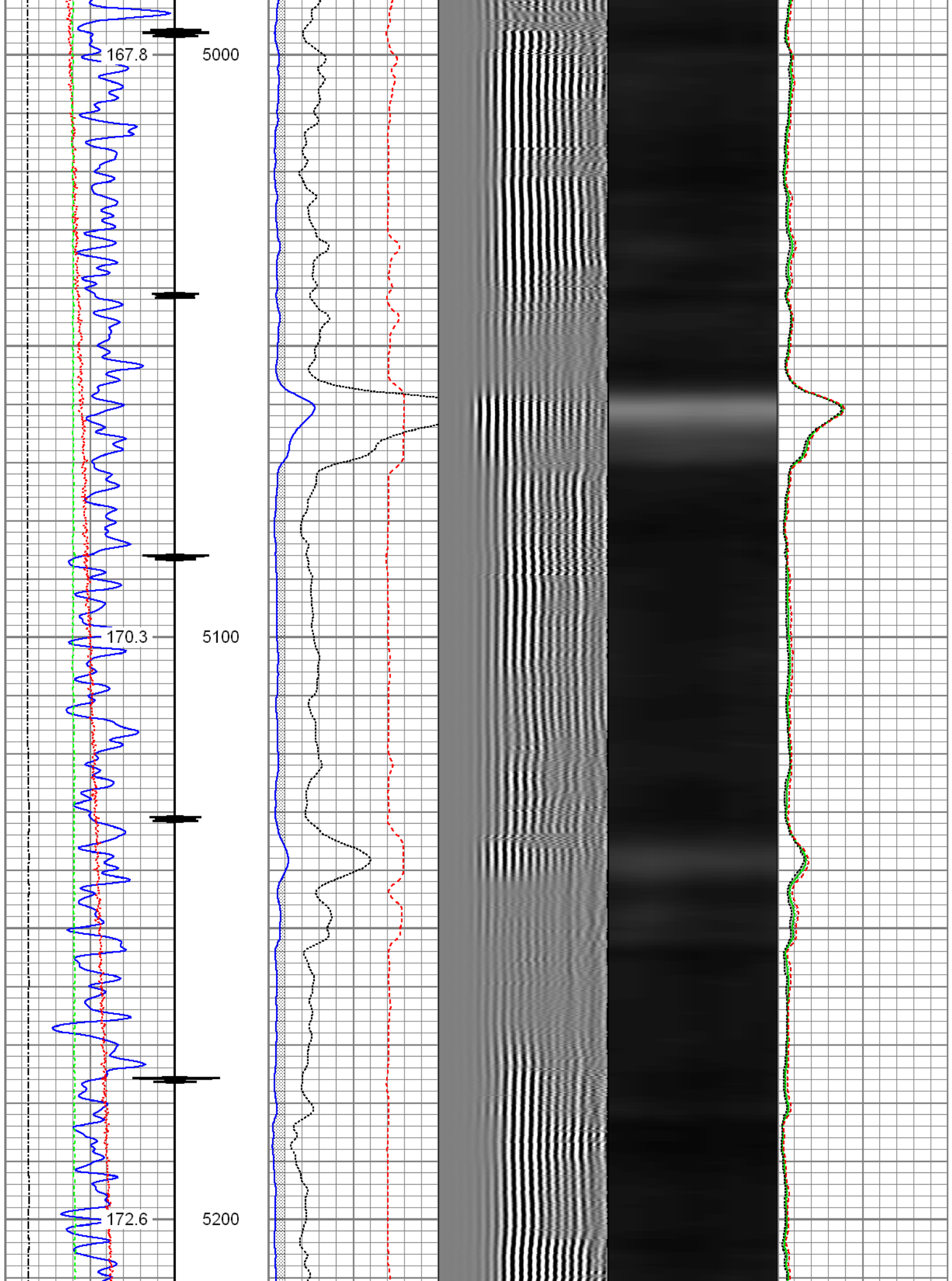


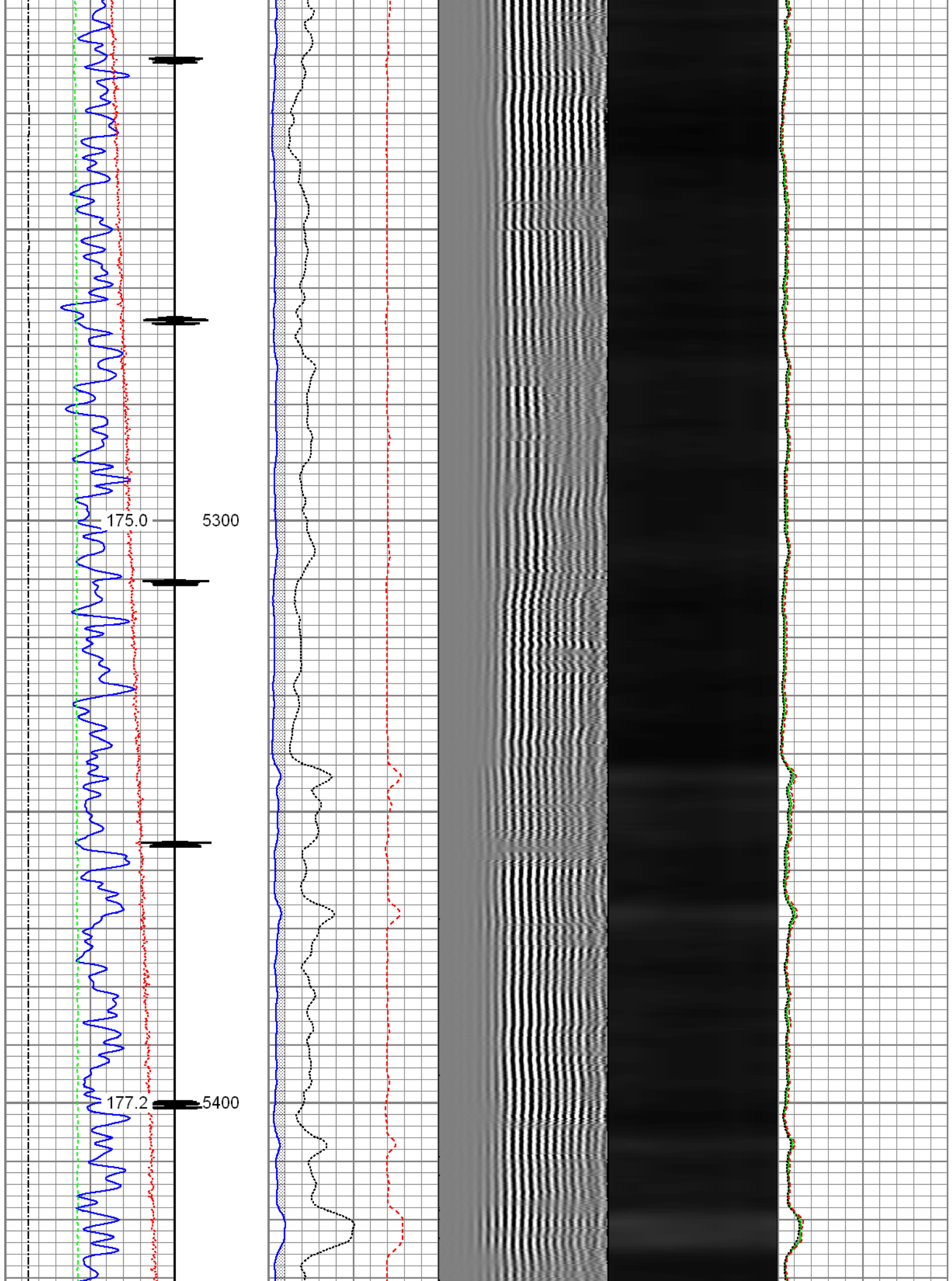


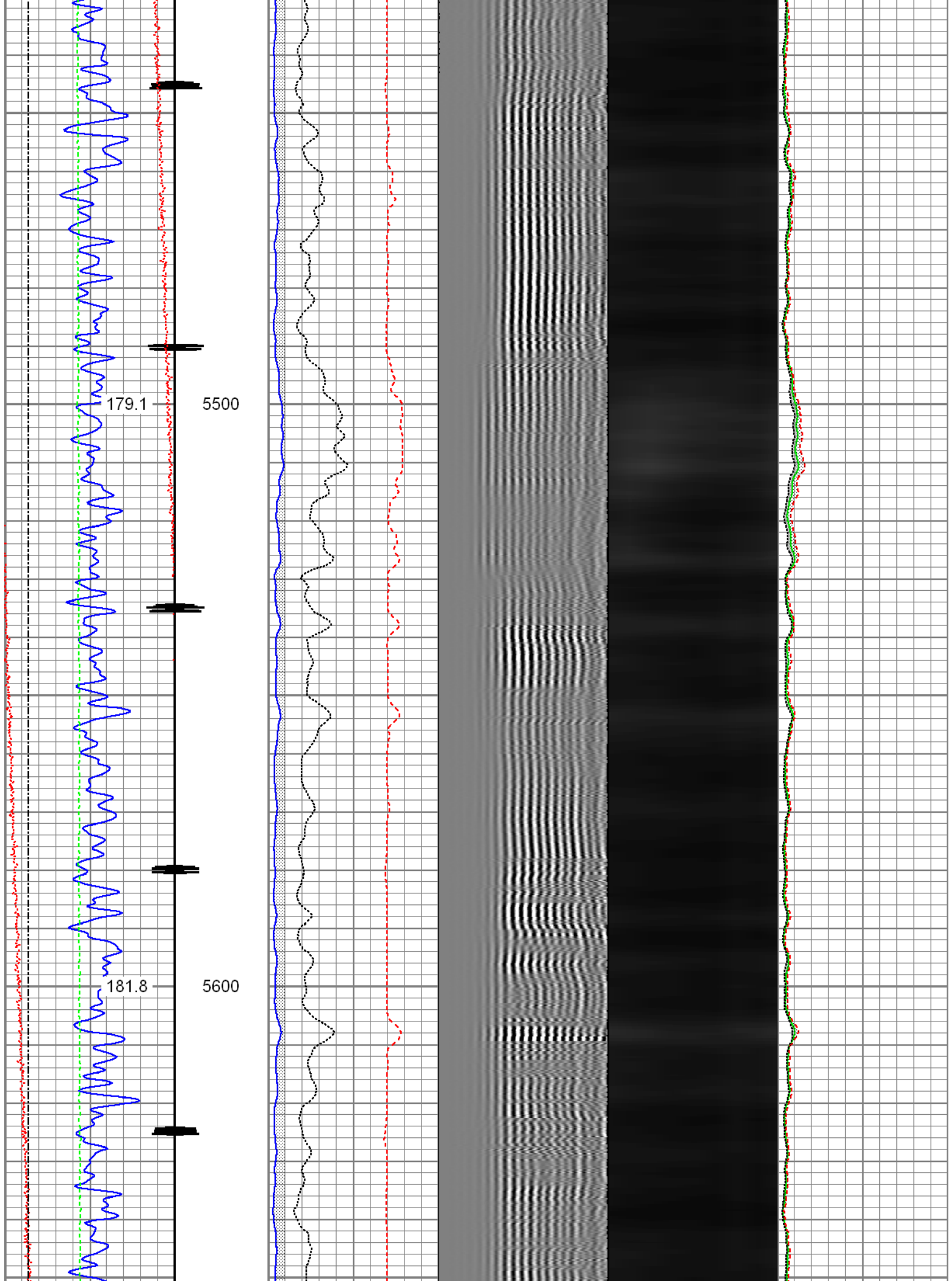


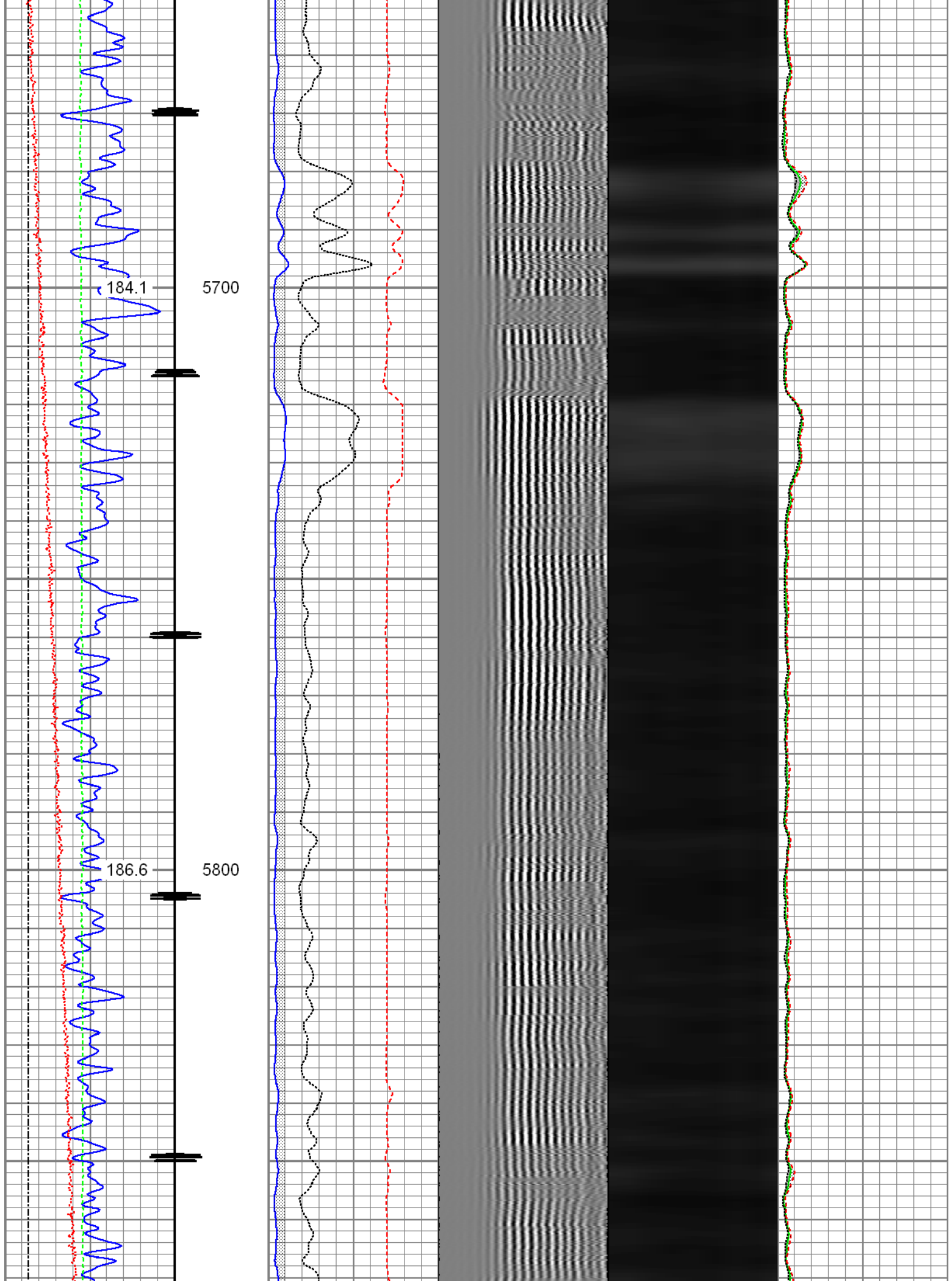


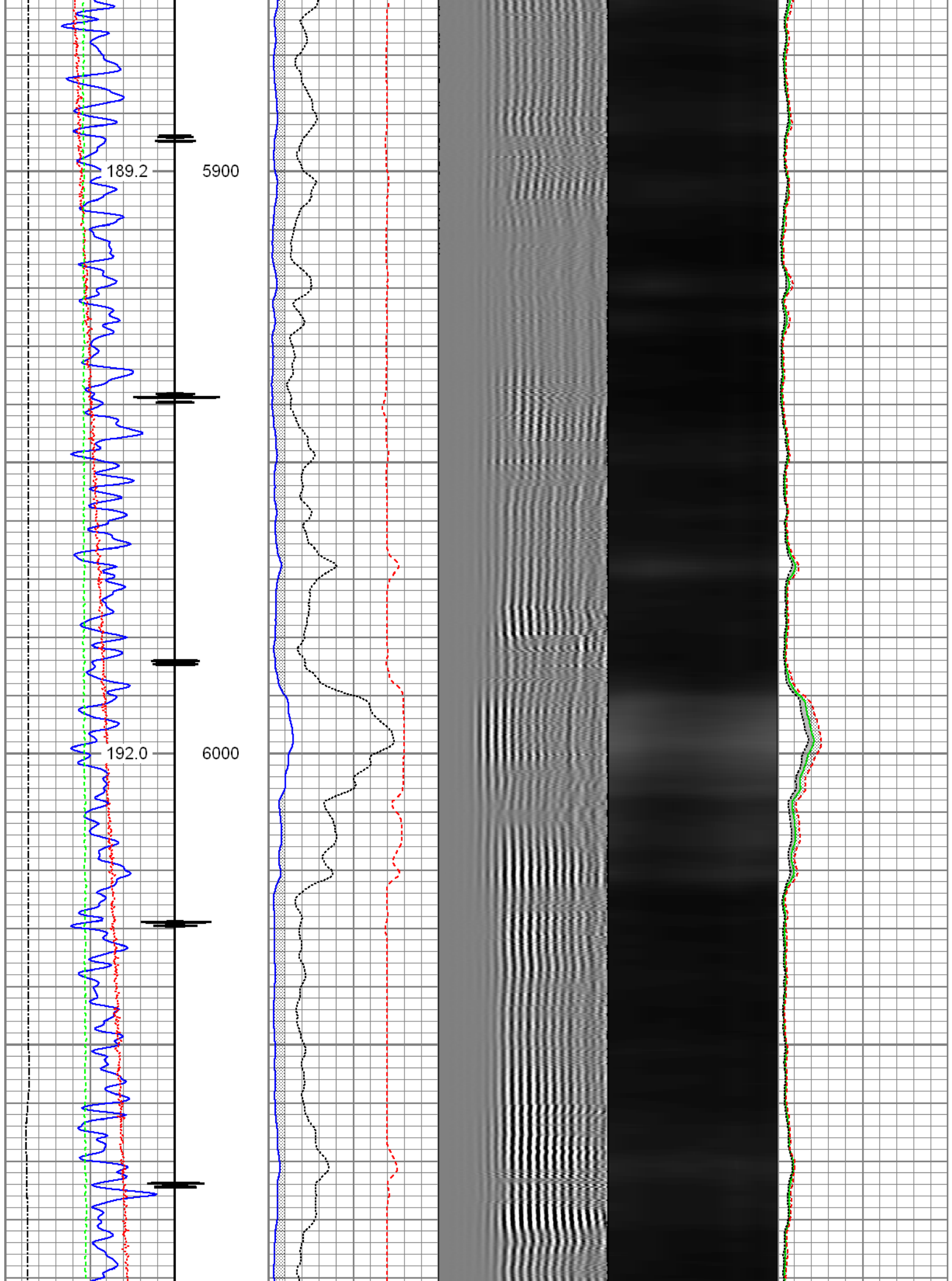


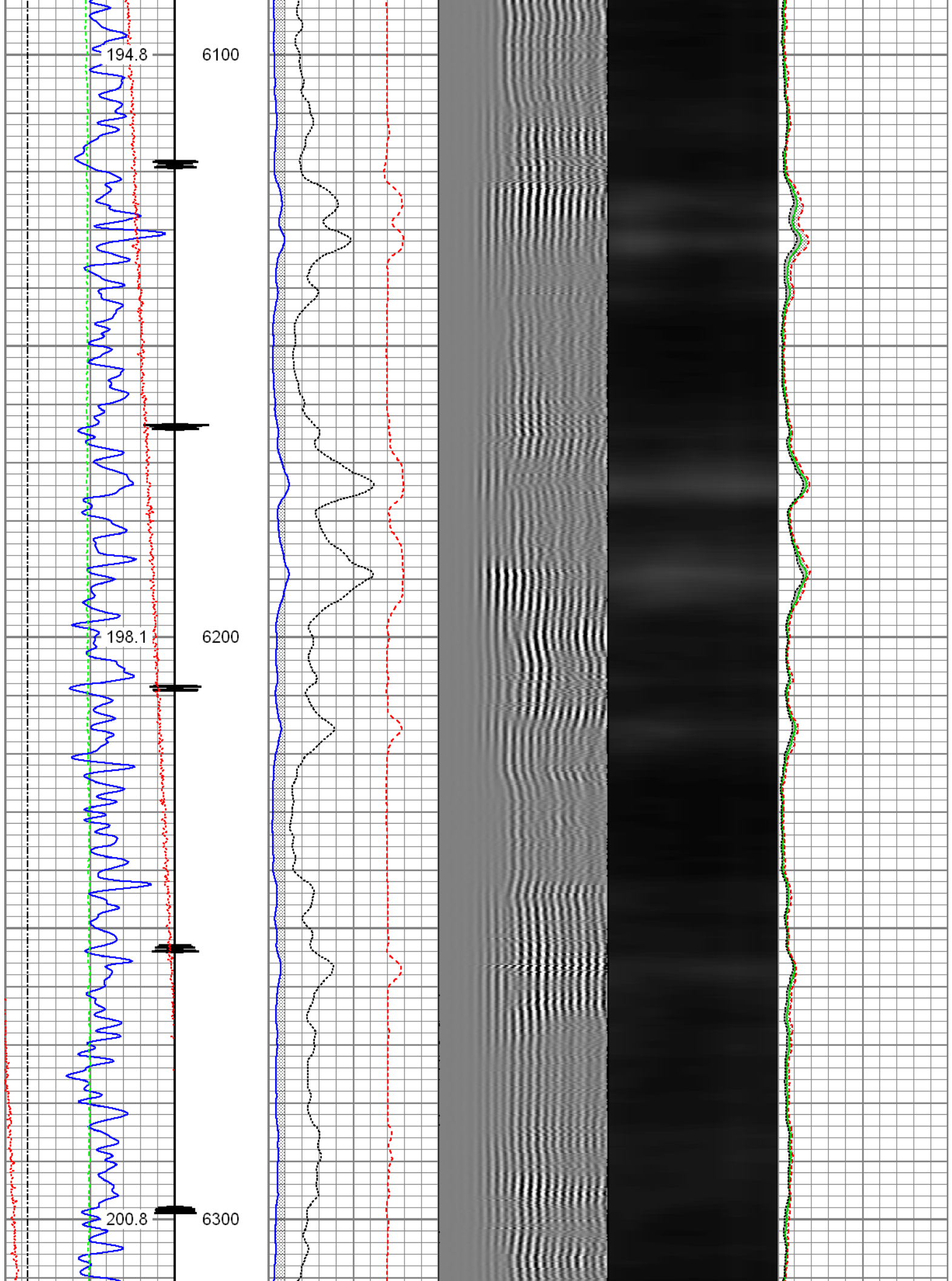


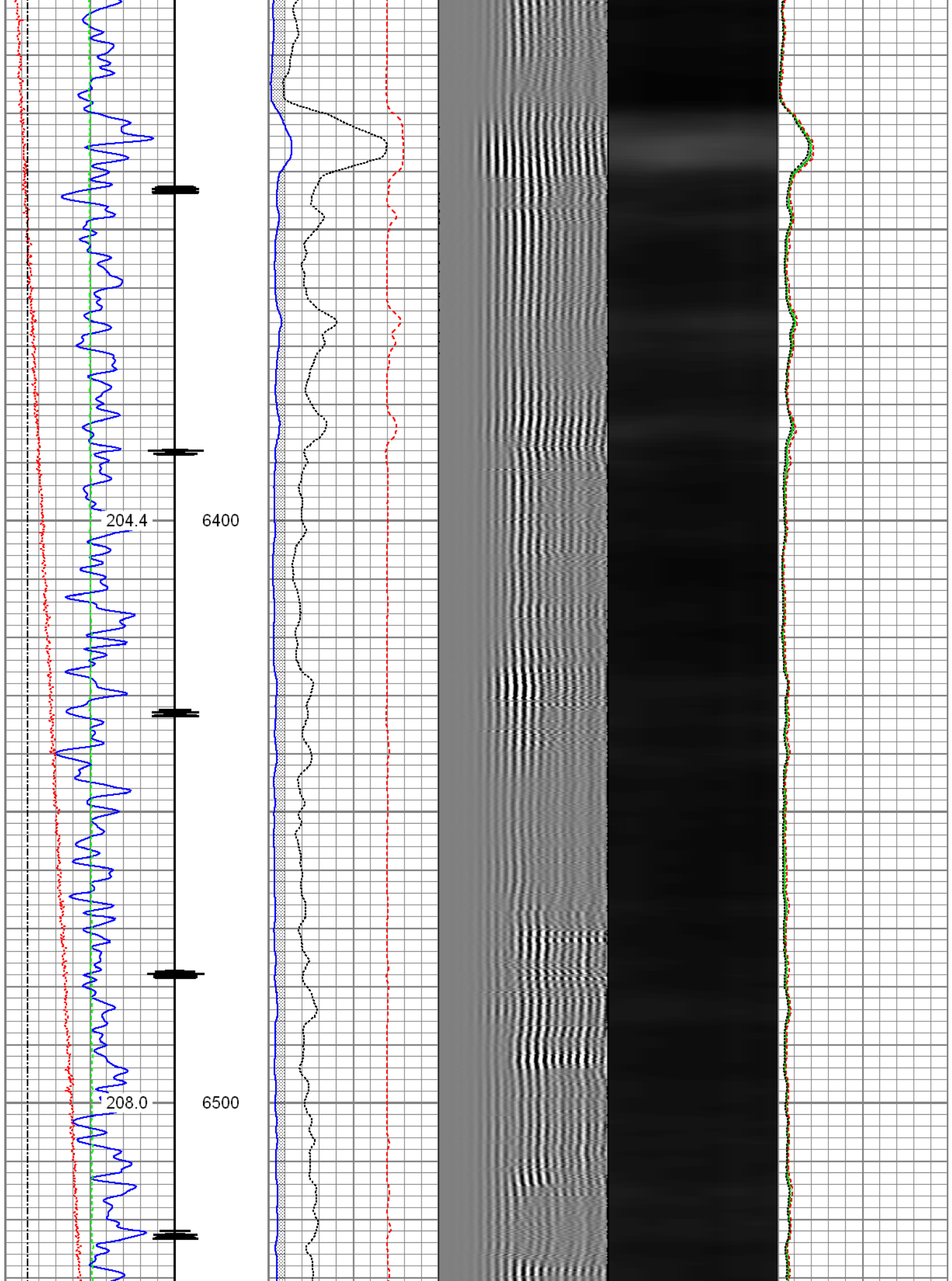


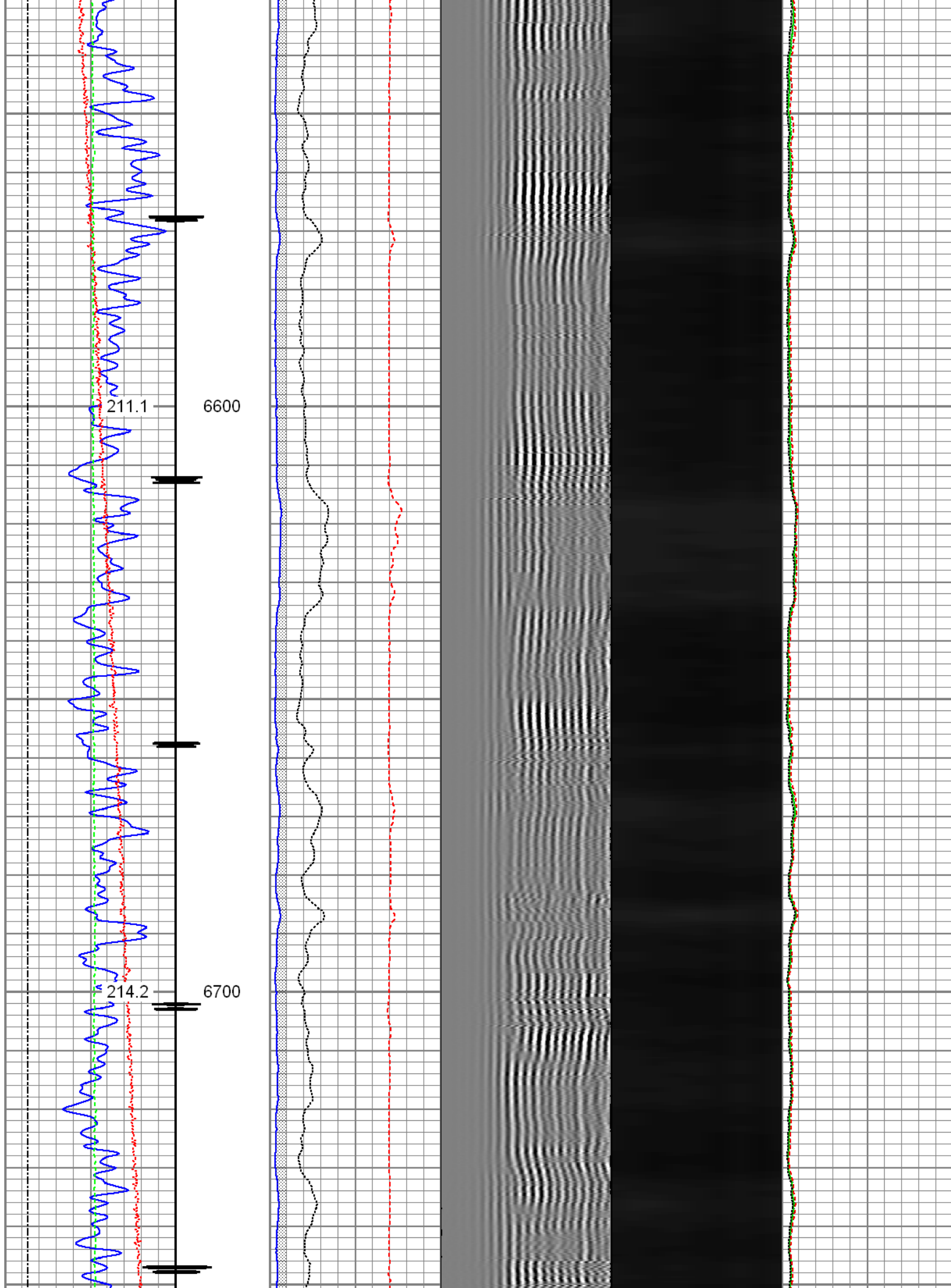


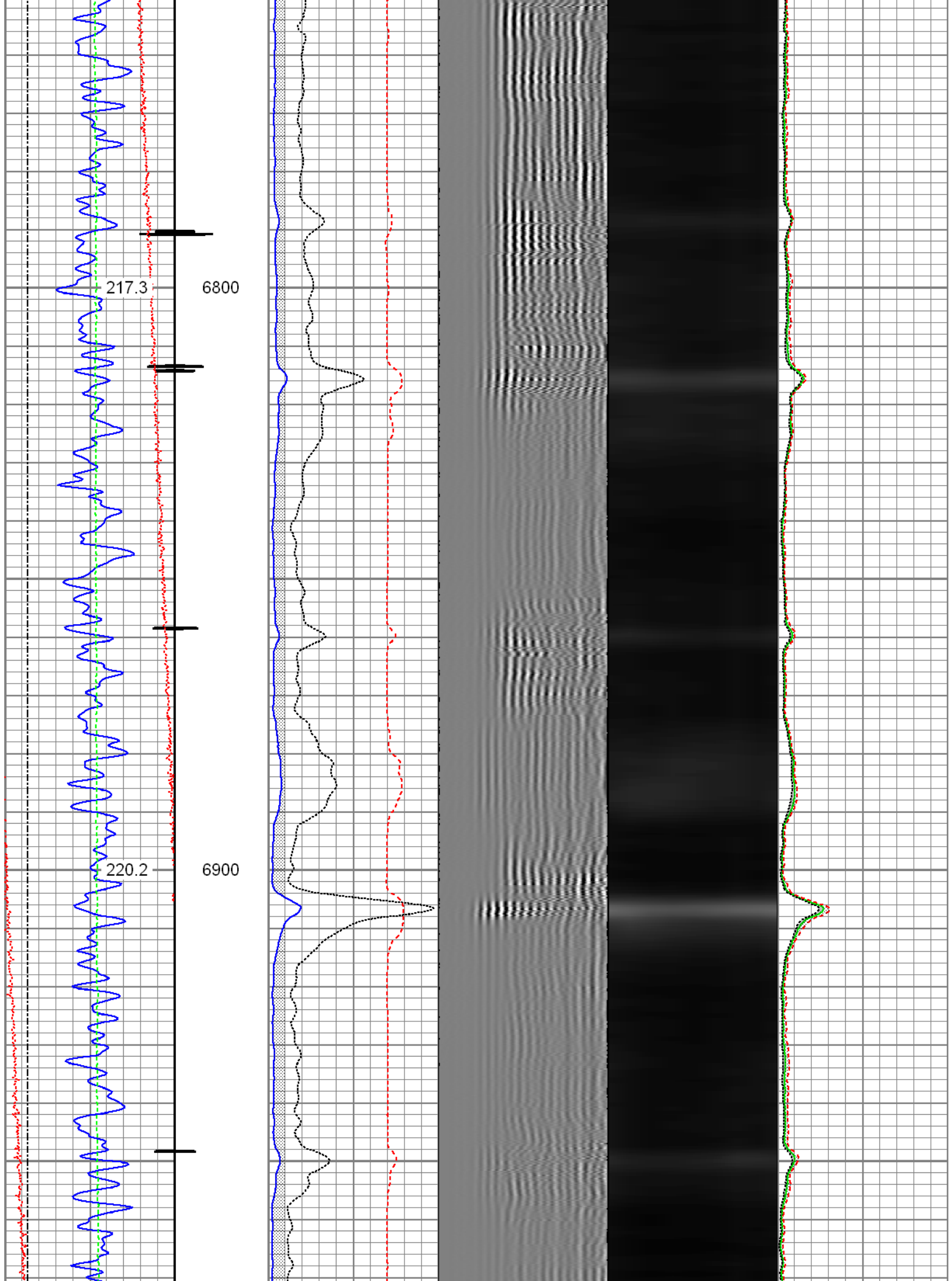


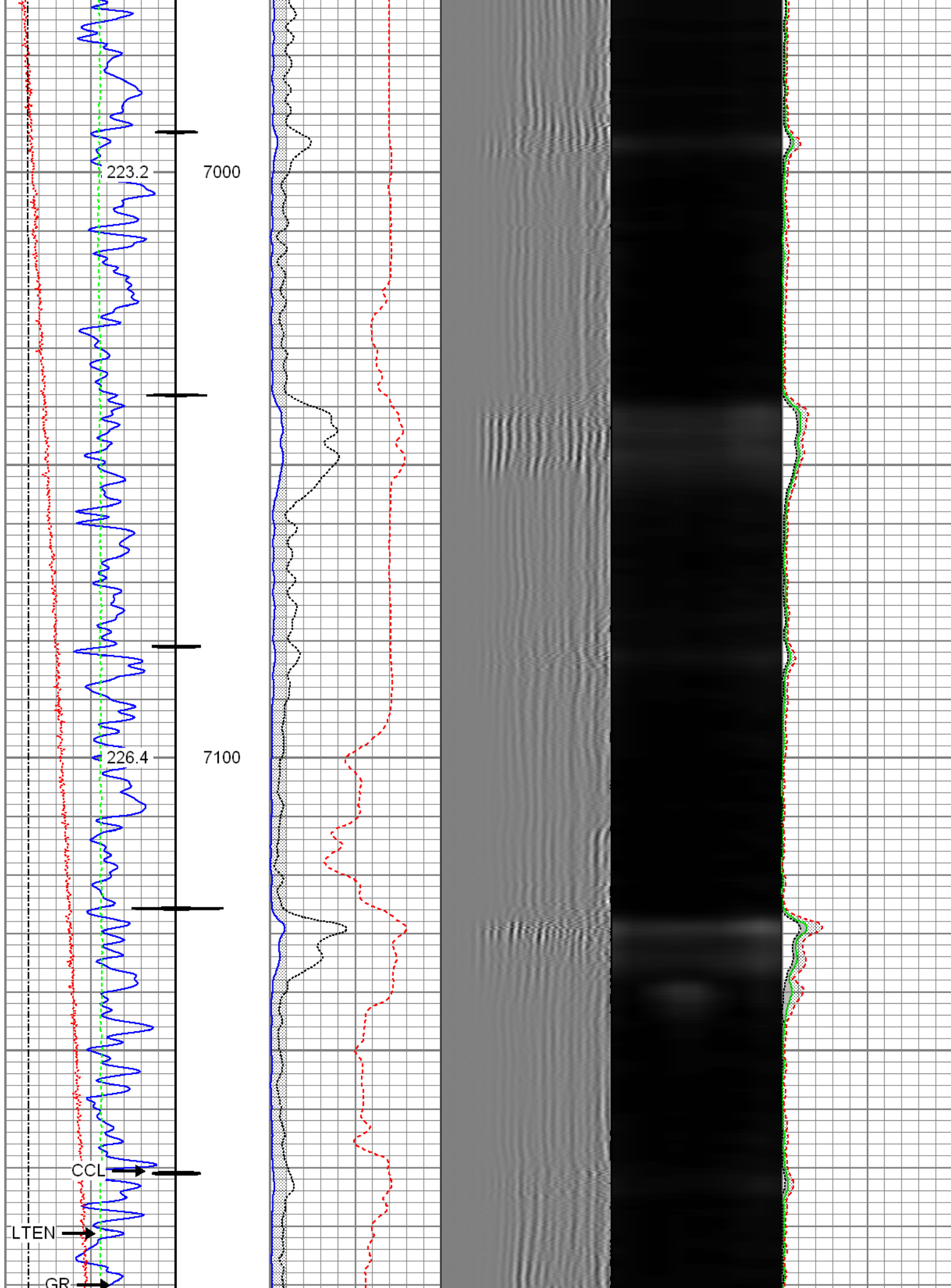


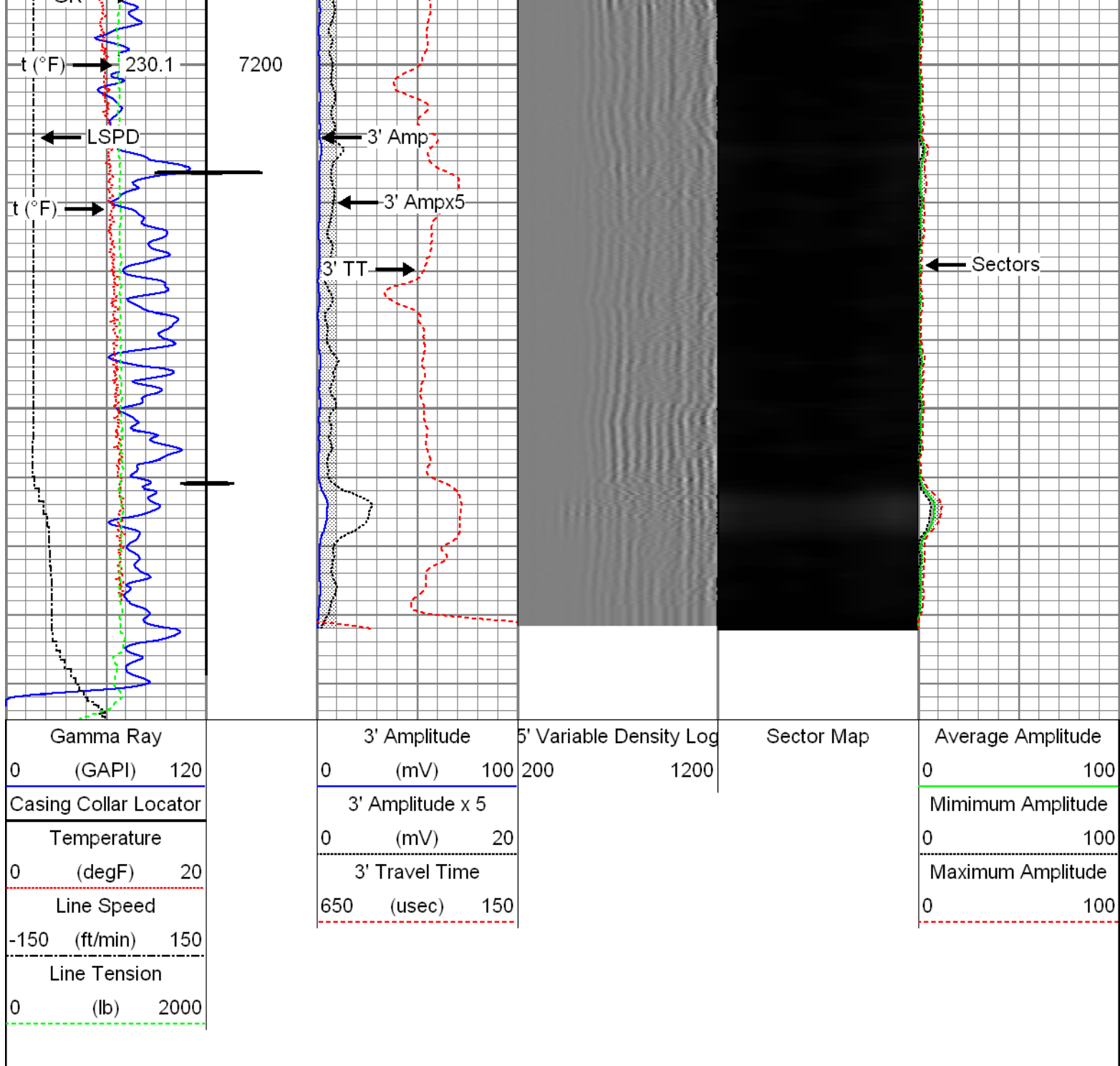








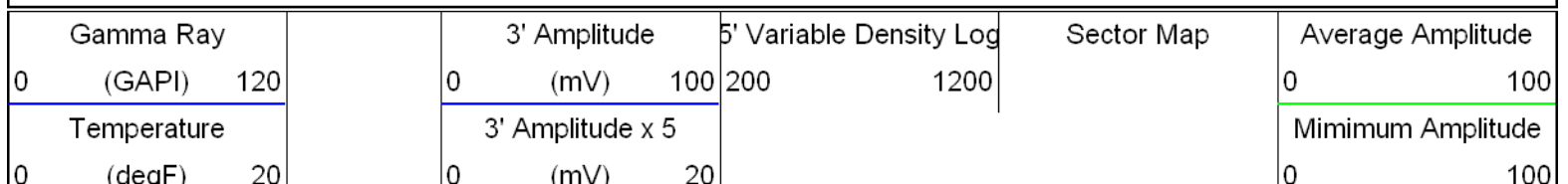




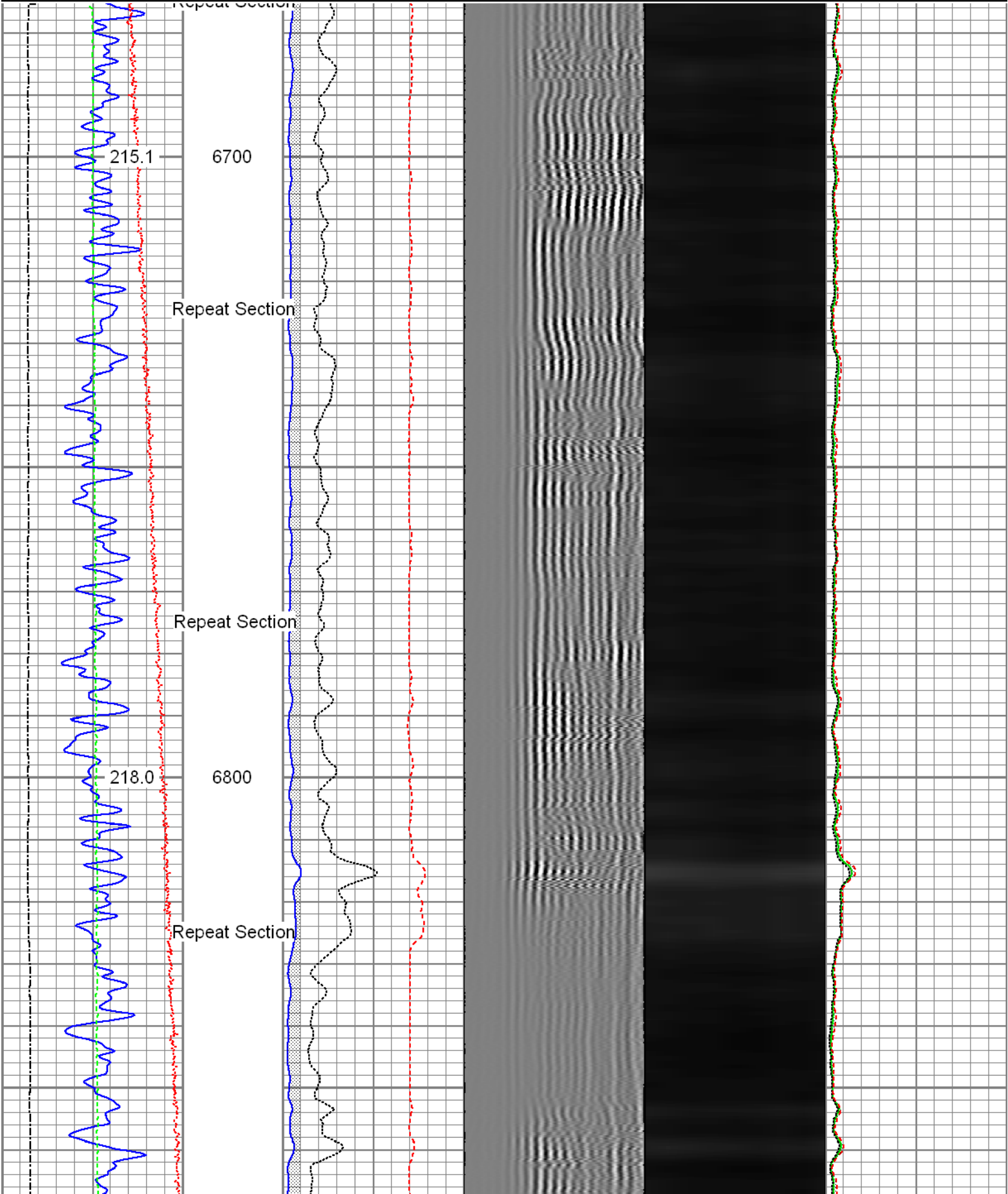
Repeat Pass

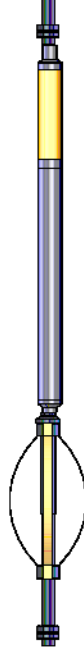
Recorded with 2800 PSI Surface Induced Pressure

Database File: 0512341792_anadarko_tedford 4n-28hz_10-22-15_rbl.db
 Dataset Pathname: pass2
 Presentation Format: radii
 Dataset Creation: Thu Oct 22 08:13:55 2015 by Log 7.0 B1
 Charted by: Depth in Feet scaled 1:240



Line Speed			3' Travel Time			Maximum Amplitude		
-150	(ft/min)	150	650	(usec)	150	0		100
Line Tension								
0	(lb)	2000						



CCL DCCL	6.51 6.51		Probe_CCL_GR-2.75"Digital (FW1307-038) 4.54 Probe 2-3/4" Digital CCL / Gamma Ray Combined	2.75	55.00	
GR	3.77		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Dataset: 0512341792_Anadarko_Tedford 4N-28HZ_10-22-15_RBL.db: field/well/run1/pass6 Total Length: 23.40 ft Total Weight: 194.00 lb O.D. 2.75 in						

Calibration Report	
Database File:	0512341792_Anadarko_Tedford 4N-28HZ_10-22-15_RBL.db
Dataset Pathname:	pass6
Dataset Creation:	Thu Oct 22 09:23:12 2015 by Log 7.0 B1

Gamma Ray Calibration Report		
Serial Number:	FW1307-038	
Tool Model:	2.75"Digital	
Performed:	Fri Sep 11 07:43:30 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:	-109.851	ft

Master Calibration, performed Thu Oct 22 07:38:01 2015:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.003	0.626	0.800	71.921	114.119	0.429
CAL	0.803	0.919				
5'	0.006	0.394	0.800	71.921	183.573	-0.385
SUM						
S1	0.001	0.598	0.000	100.000	167.529	-0.239
S2	0.004	0.608	0.000	100.000	165.441	-0.502

S2	0.004	0.608	0.000	100.000	165.441	-0.592
S3	0.005	0.628	0.000	100.000	160.511	-0.856
S4	0.004	0.655	0.000	100.000	153.644	-0.608
S5	0.006	0.665	0.000	100.000	151.749	-0.897
S6	0.004	0.645	0.000	100.000	155.940	-0.550
S7	0.003	0.623	0.000	100.000	161.231	-0.496
S8	0.003	0.598	0.000	100.000	168.062	-0.558

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	0.803	0.919	1.000	0.000

Air Zero Calibration, performed Thu Oct 22 07:37:13 2015:

	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	



Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Tedford 4N-28HZ
Field Wattenberg
County Weld
State Colorado