



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.		
Well	Iceman State 5N-C16HZ		
Field	Wattenberg		
County	Weld		
State	Colorado		
Location:	Company	Kerr-McGee Oil & Gas Onshore, L.P.	
	Well	Iceman State 5N-C16HZ	
	Field	Wattenberg	
	County	Weld	
Other Services	State	Colorado	
	API # :	05-123-41344	
	SEC	15	TWP 3N RGE 67W
	Permanent Datum	Ground Level	Elevation 4796'
Gauge Ring	Log Measured From	Kelly Bushing	20 FT
	Drilling Measured From	Kelly Bushing	Elevation K.B. 4816' D.F. 4815' G.L. 4796'

Date	27-OCT-2015
Run Number	Two
Depth Driller	13134 FT
Depth Logger	7052 FT
Bottom Logged Interval	7021 FT
Top Log Interval	Surface
Open Hole Size	7.875"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	227°F
Estimated Cement Top	37 FT
Time Well Ready	ROA
Time Logger on Bottom	10:33
Equipment Number	HD-0119
Location	Ft. Lupton, CO
Recorded By	R. Fogarty
Witnessed By	V. Frankie

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	Surface	1655 FT		
Intermediate #1	5 1/2	17	HCP 110 LTC	Surface	13106 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 Marker Joint top at 6364 FT
Adjusted -26 FT to correlate to Marker Joint top
Gauge ring ran to 7052 FT
Log ran as deep as possible to surface
Log ran with 2800 PSI surface induced pressure
No debris on logging tools upon completion of run

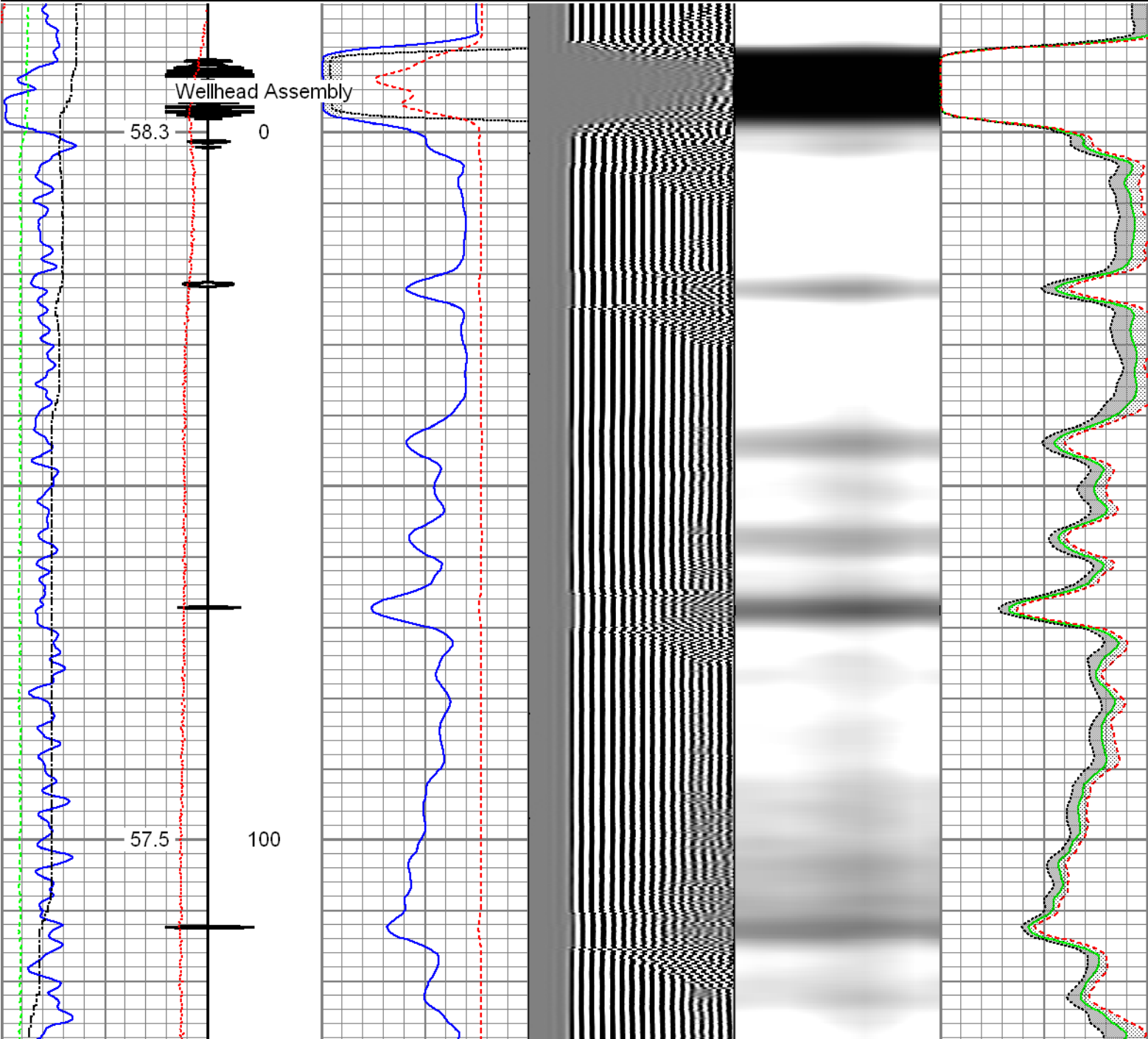
Thank you for choosing FMC Technologies Completion Services, Inc.!!

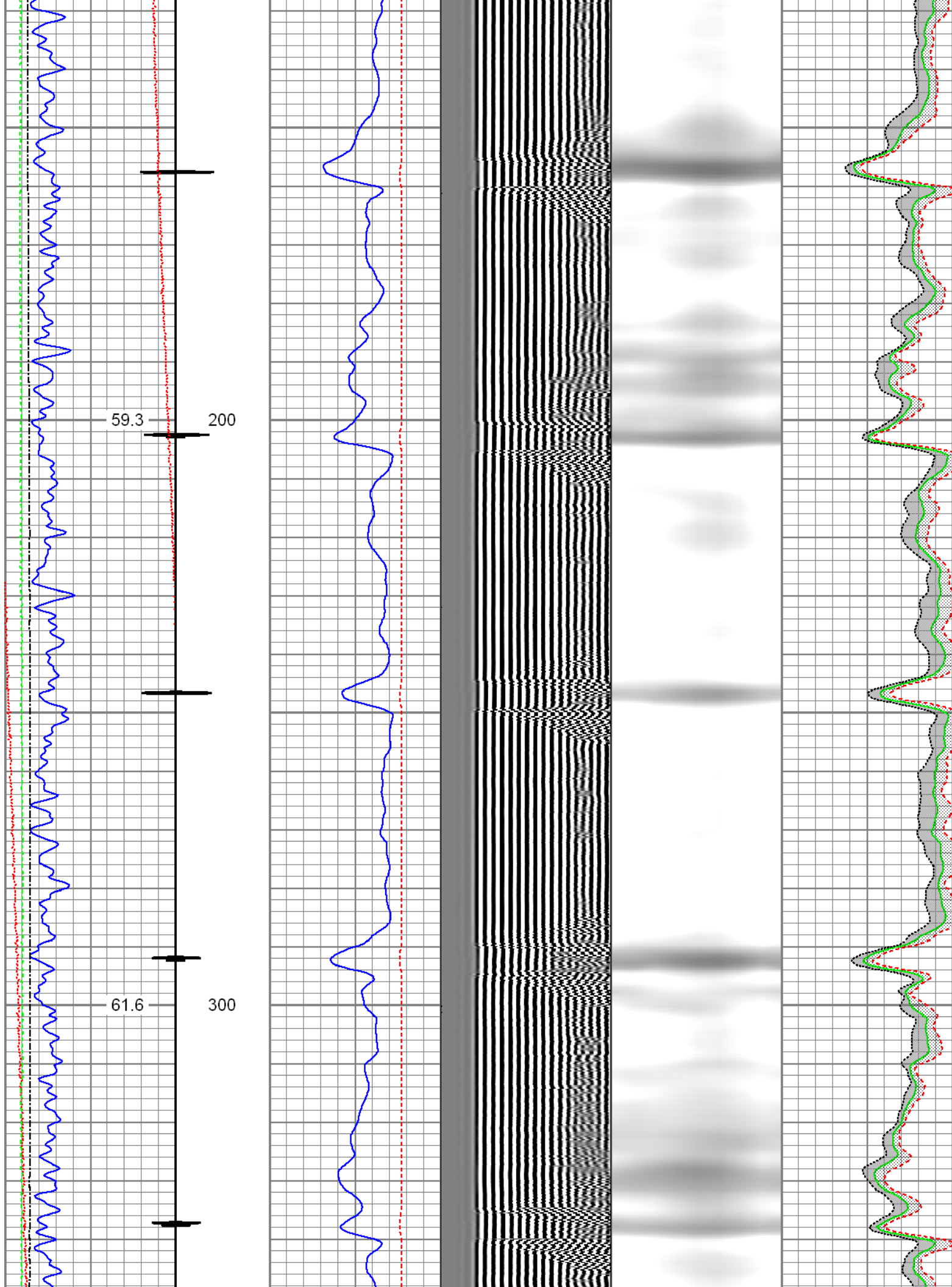


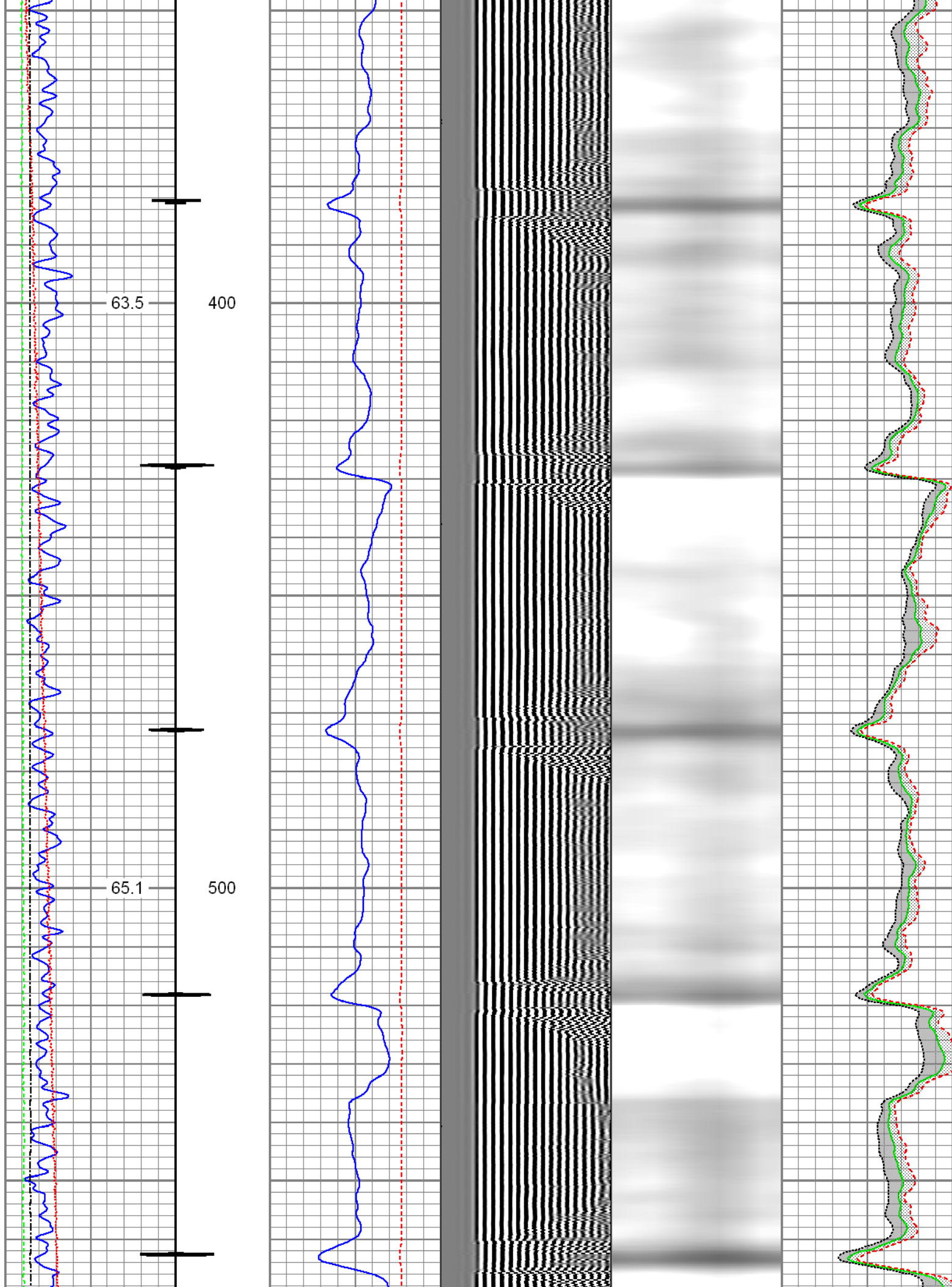
Main Pass

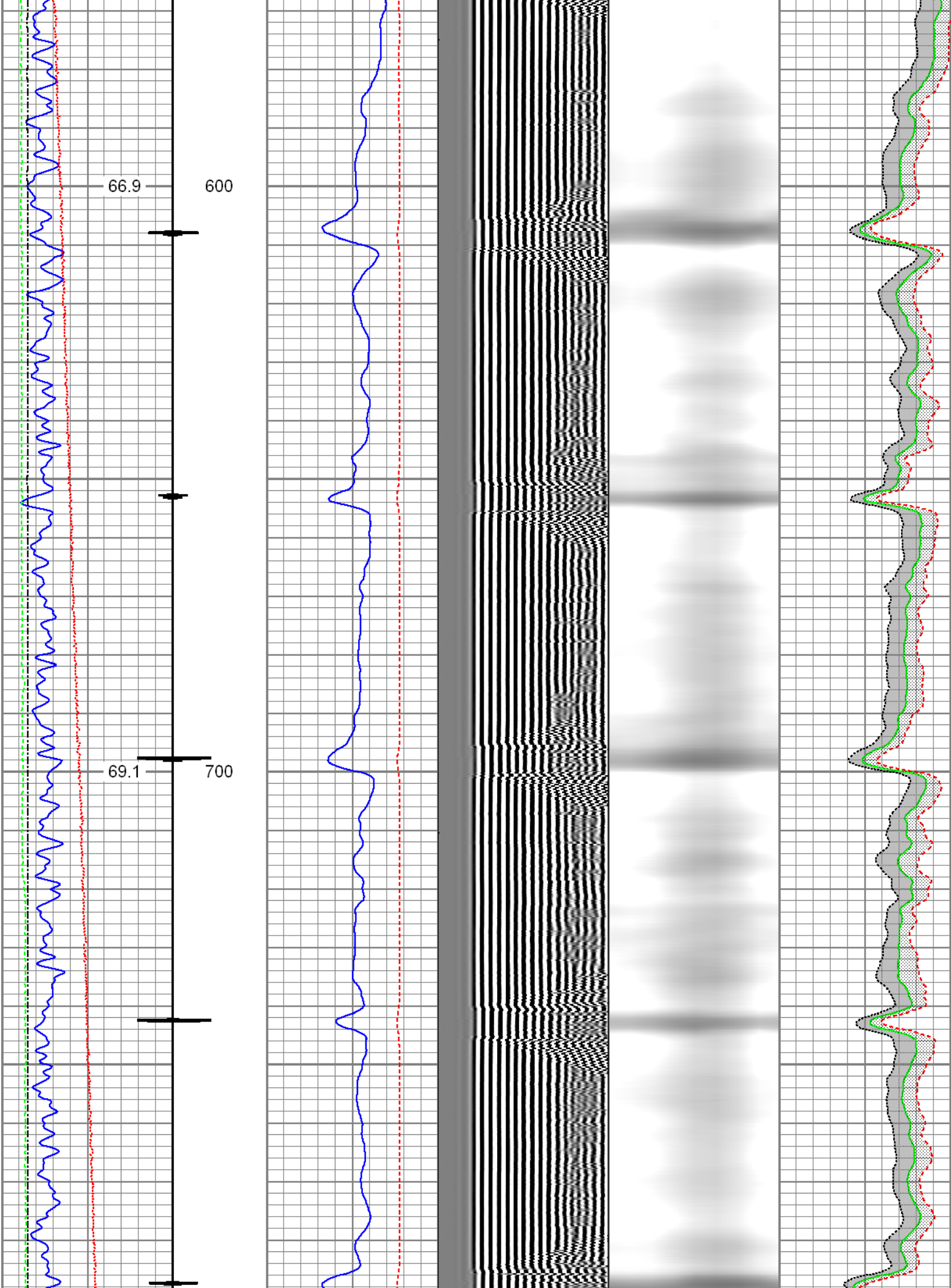
Recorded with 2800 PSI Surface Induced Pressure

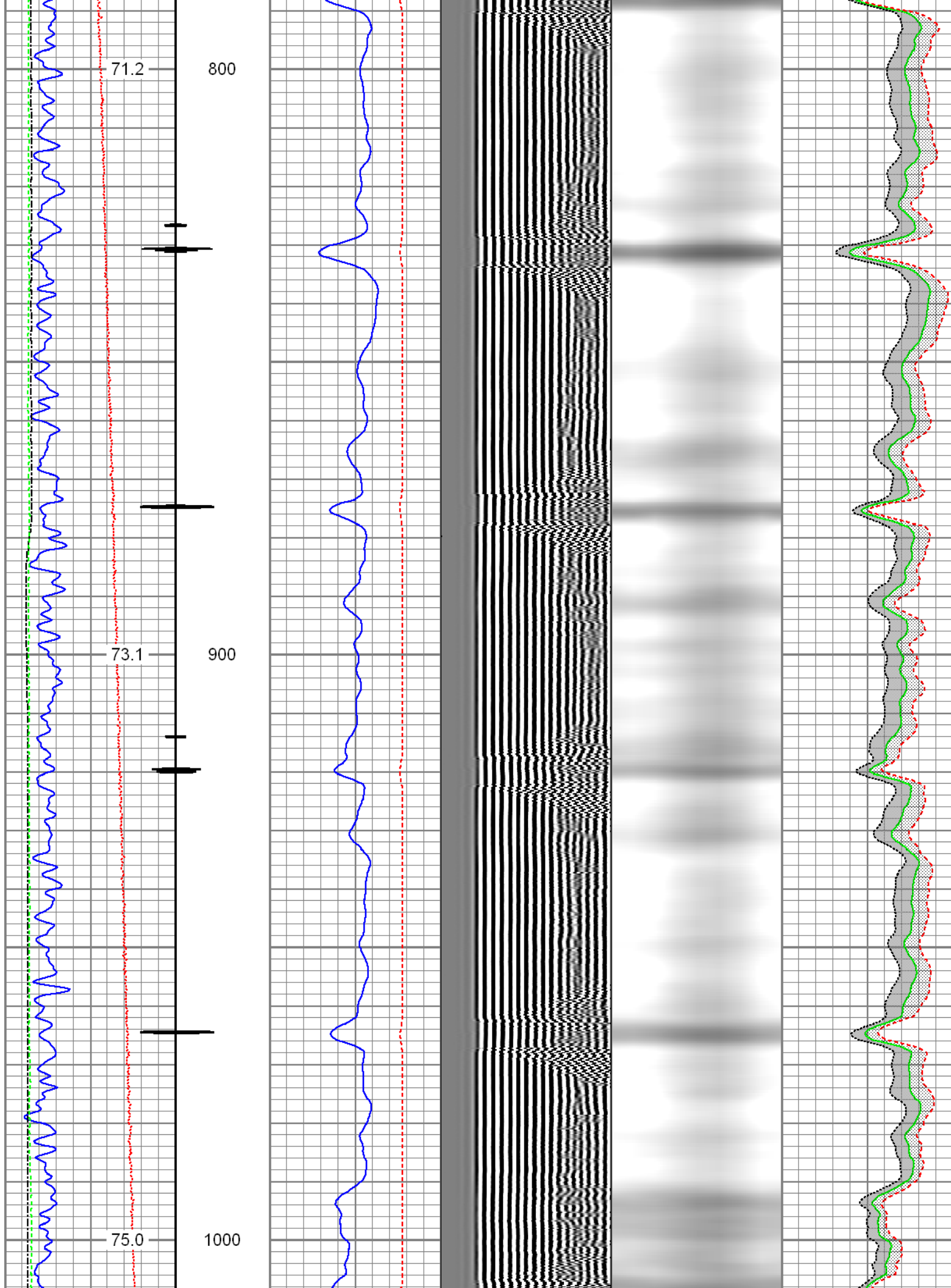
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 170	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150				
Line Tension				
0 (lb) 2000				

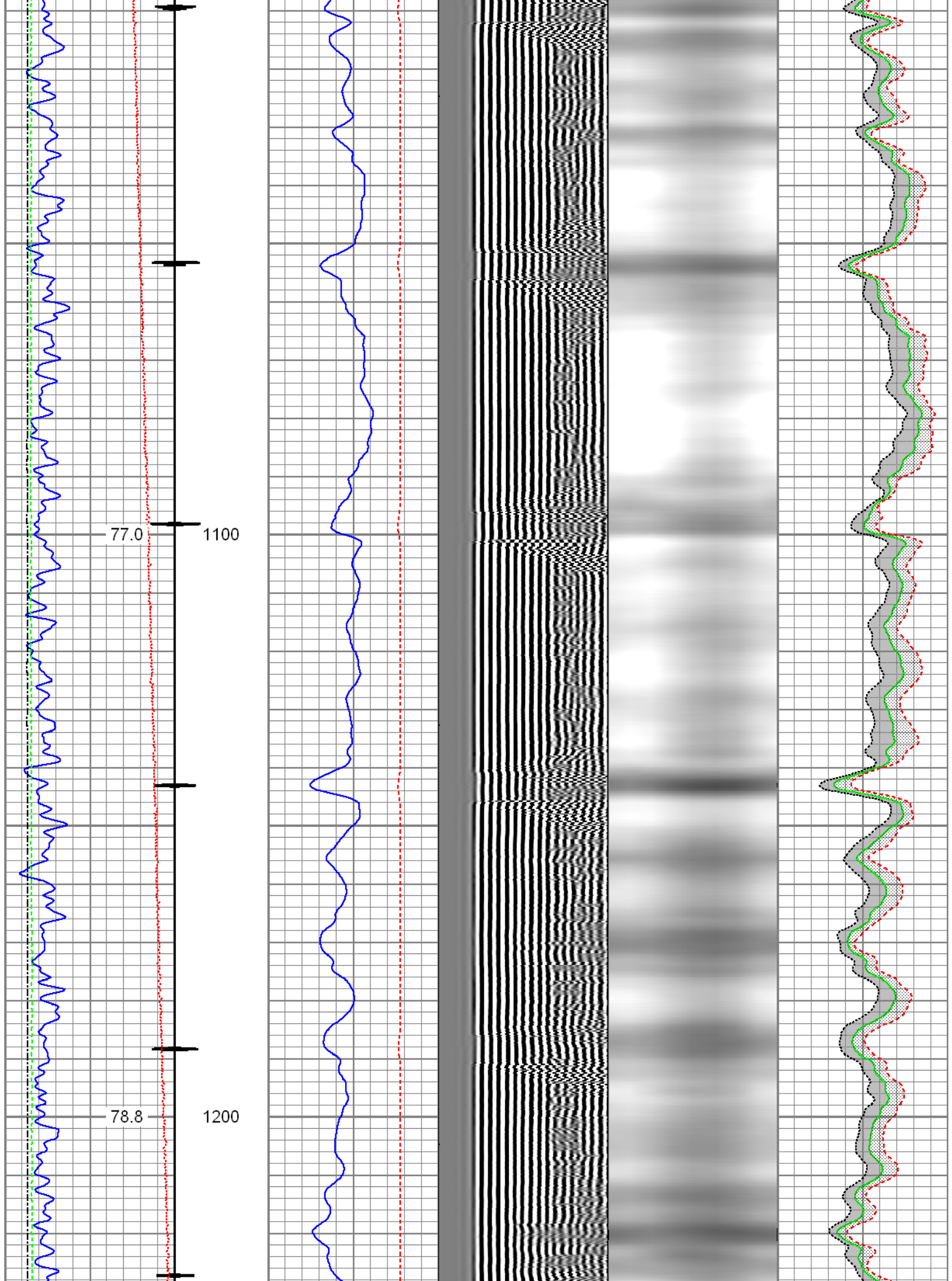


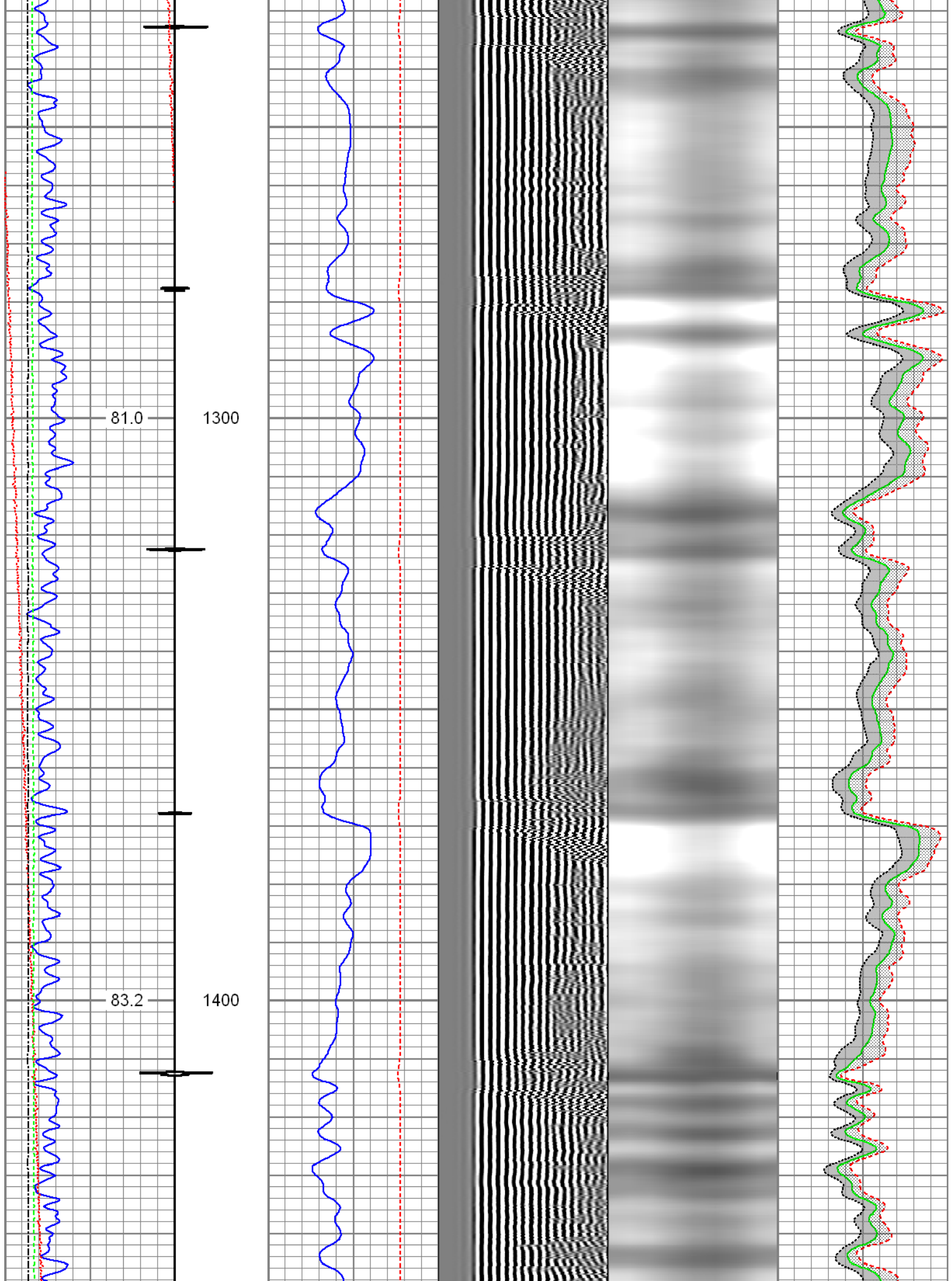


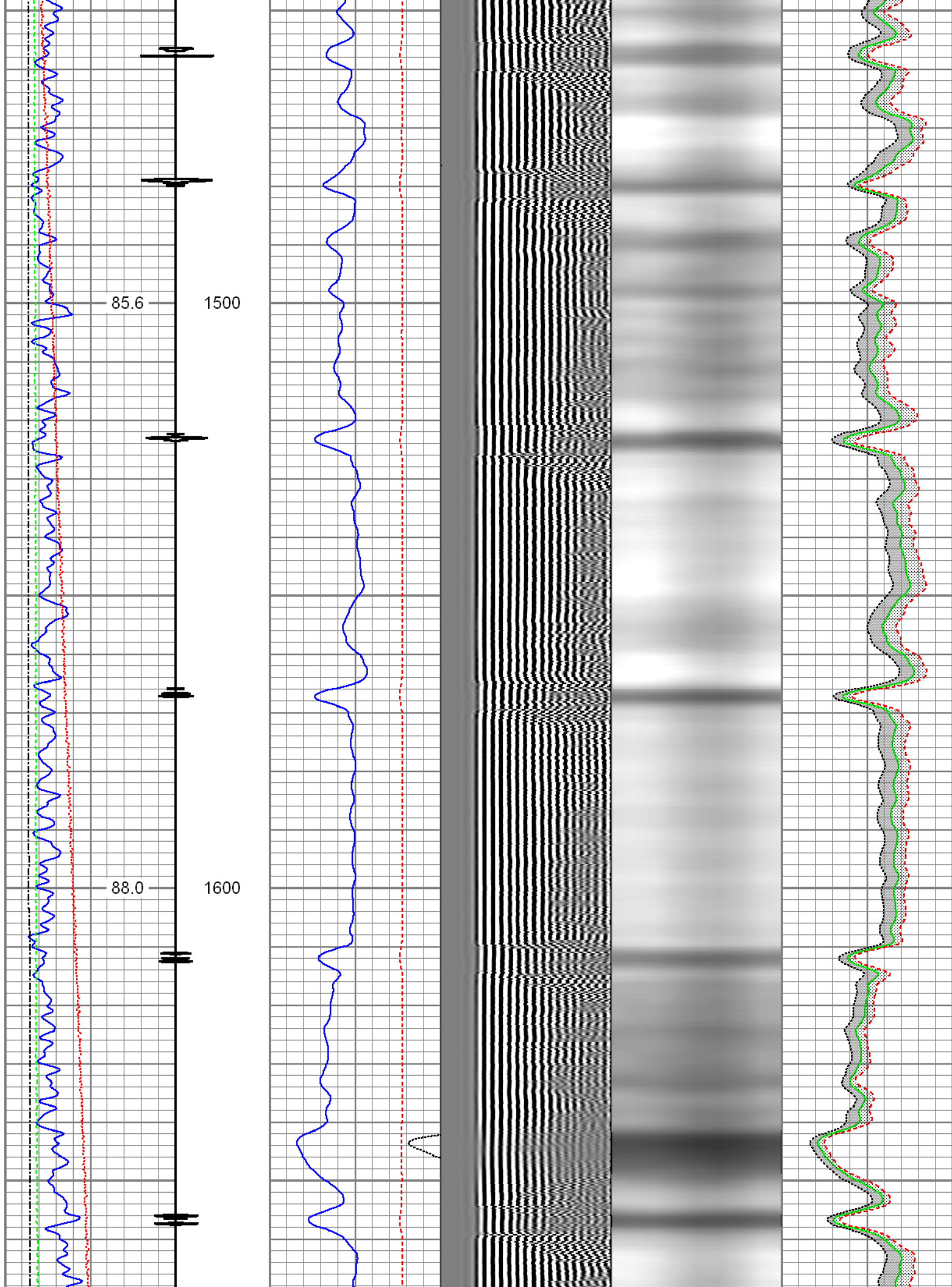


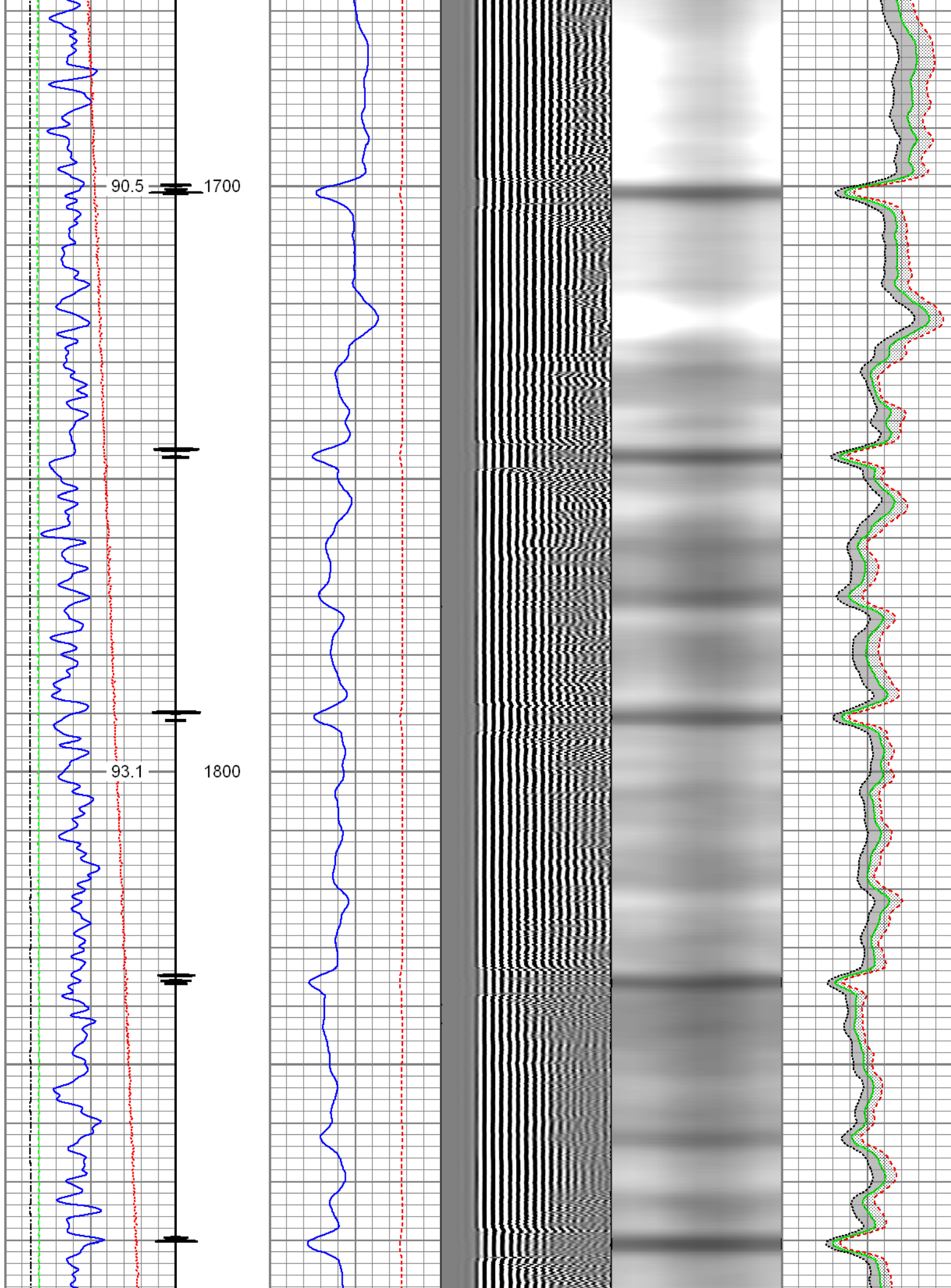


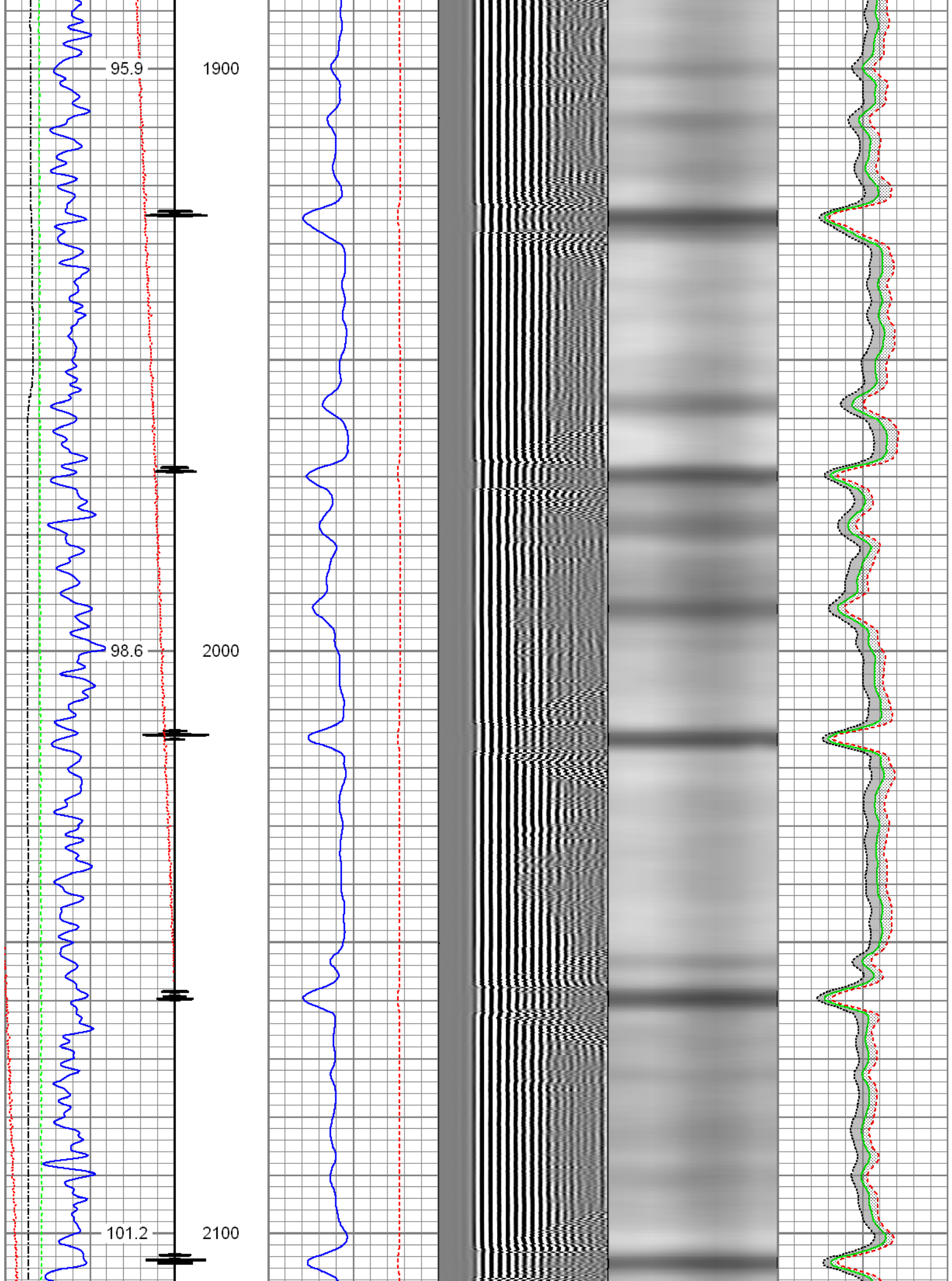


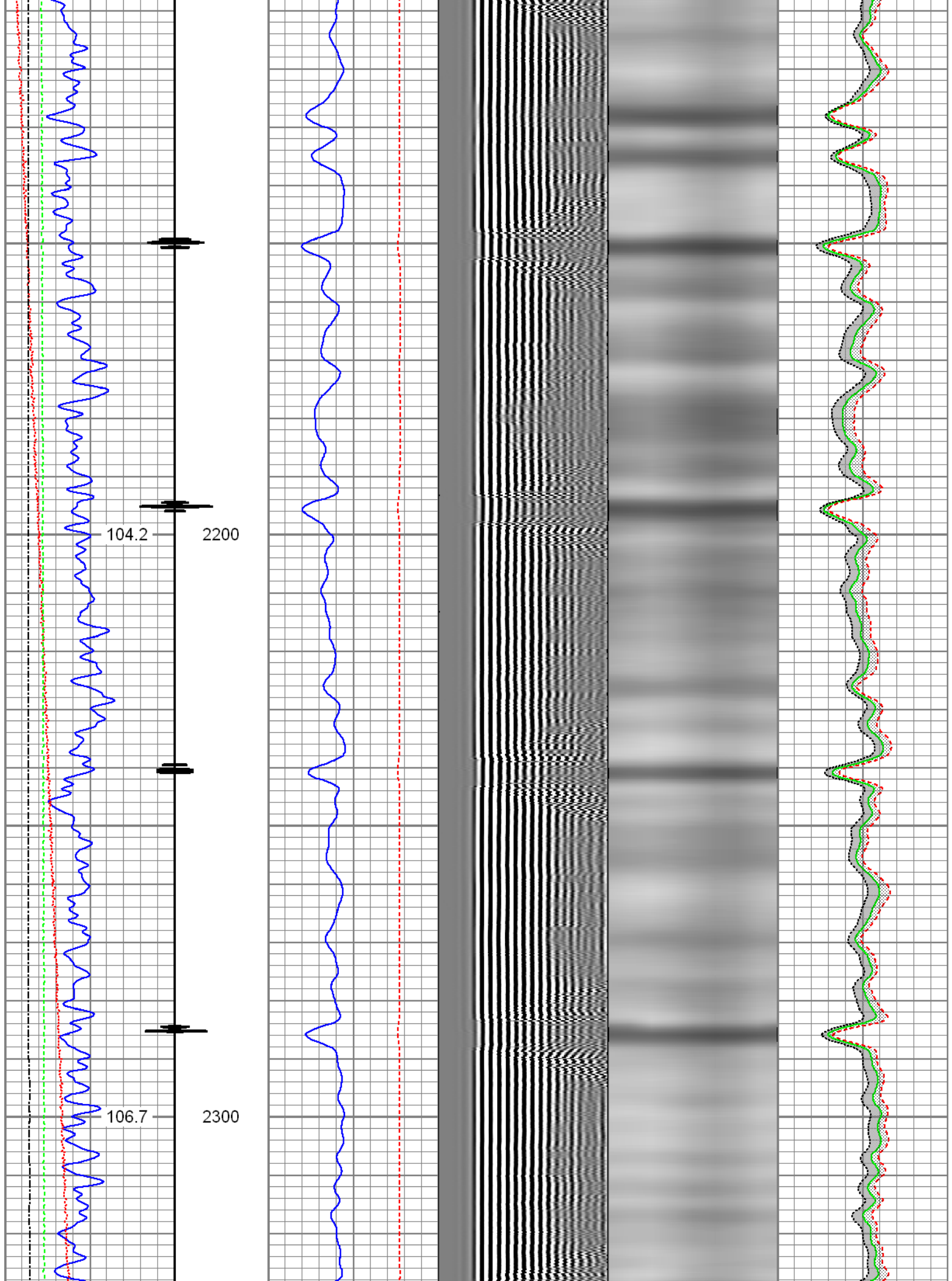


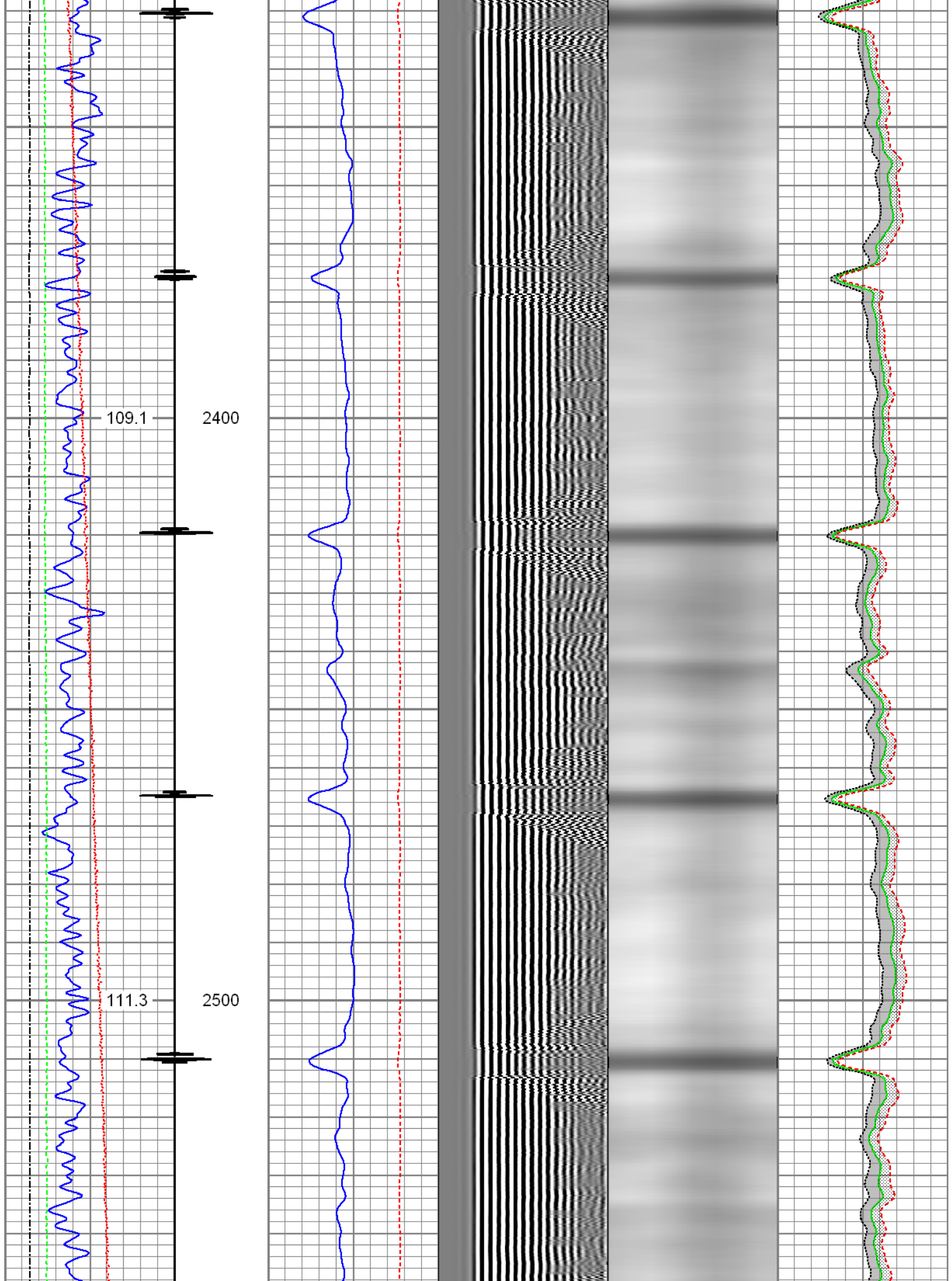


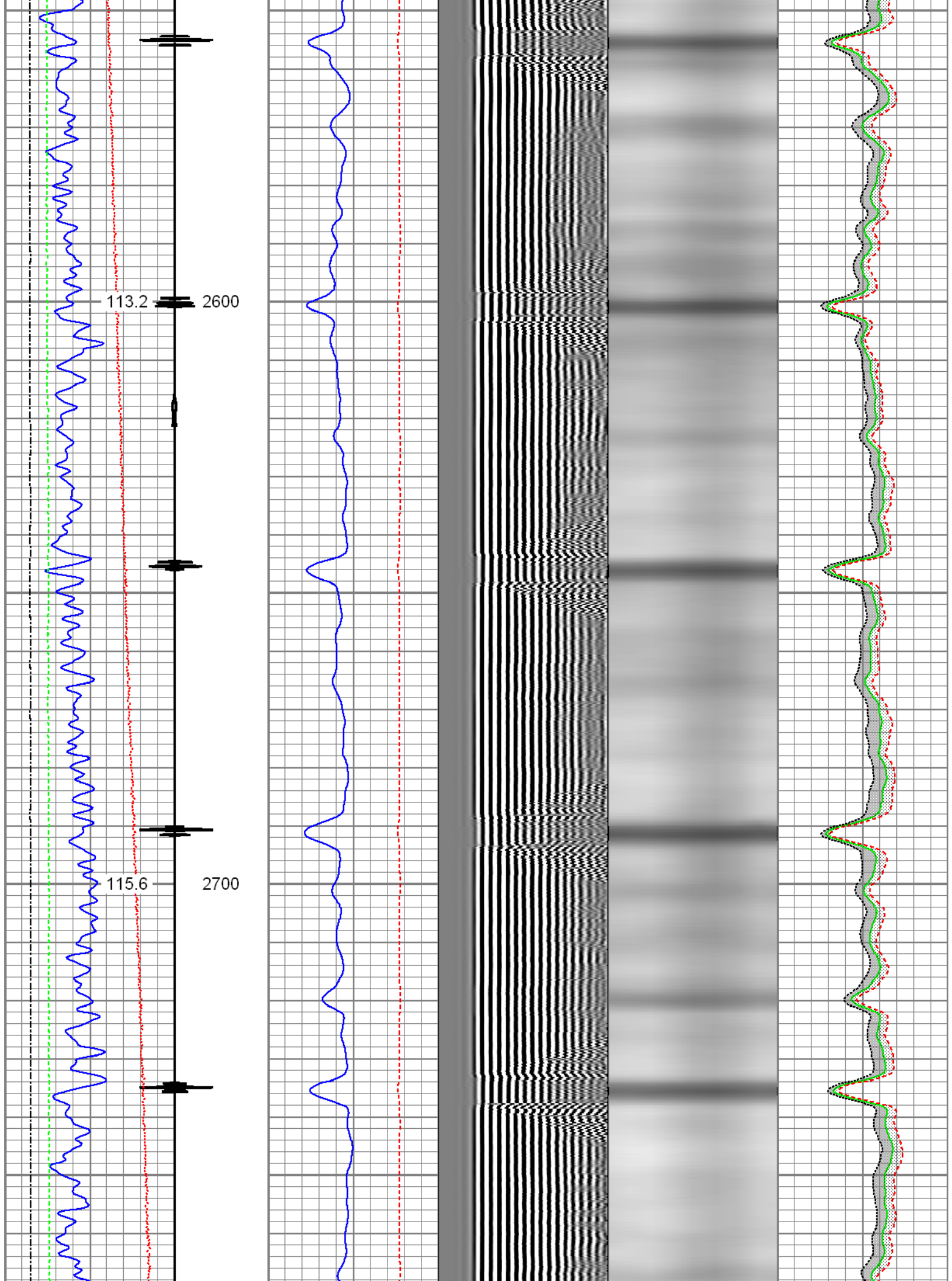


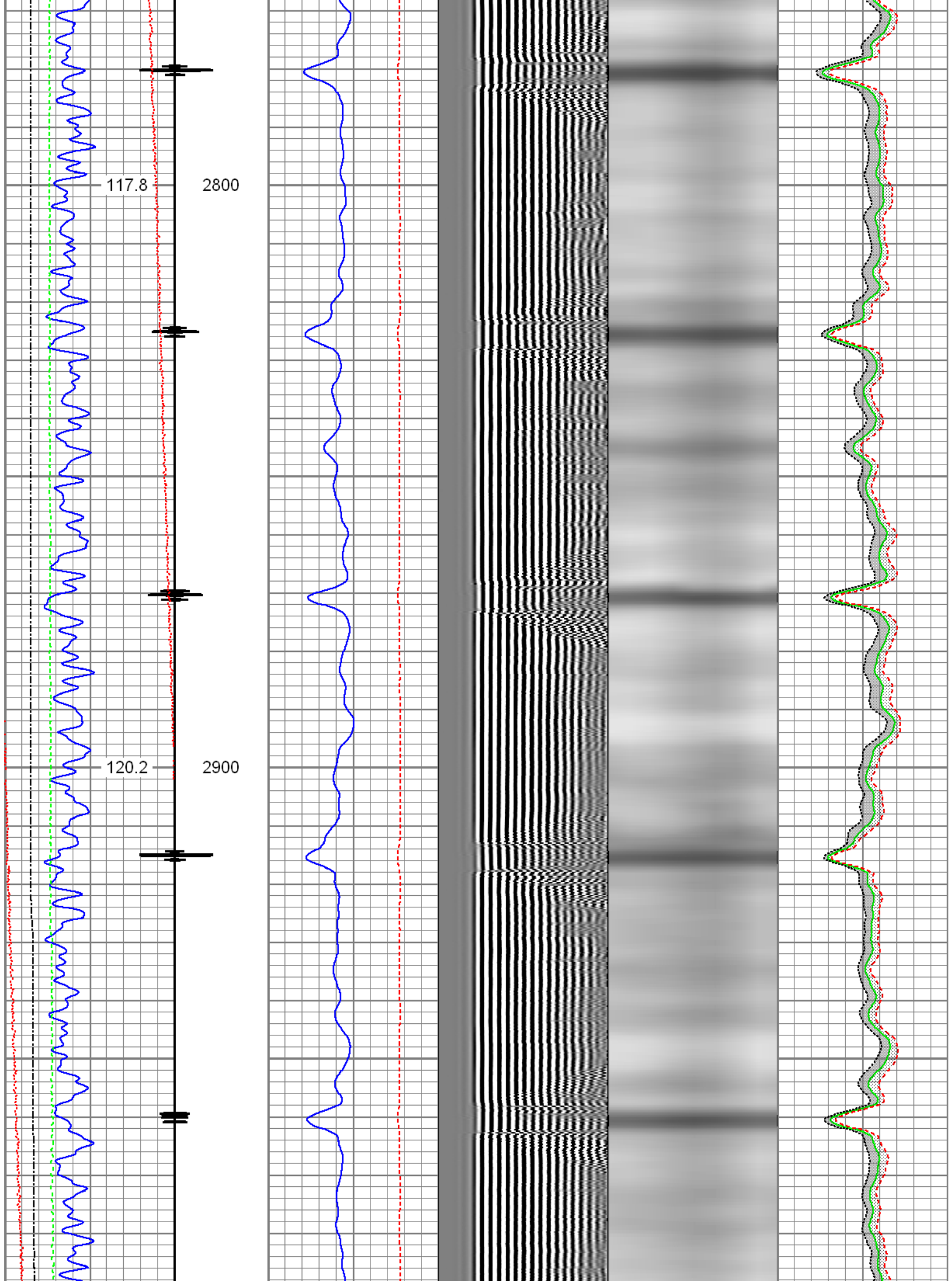


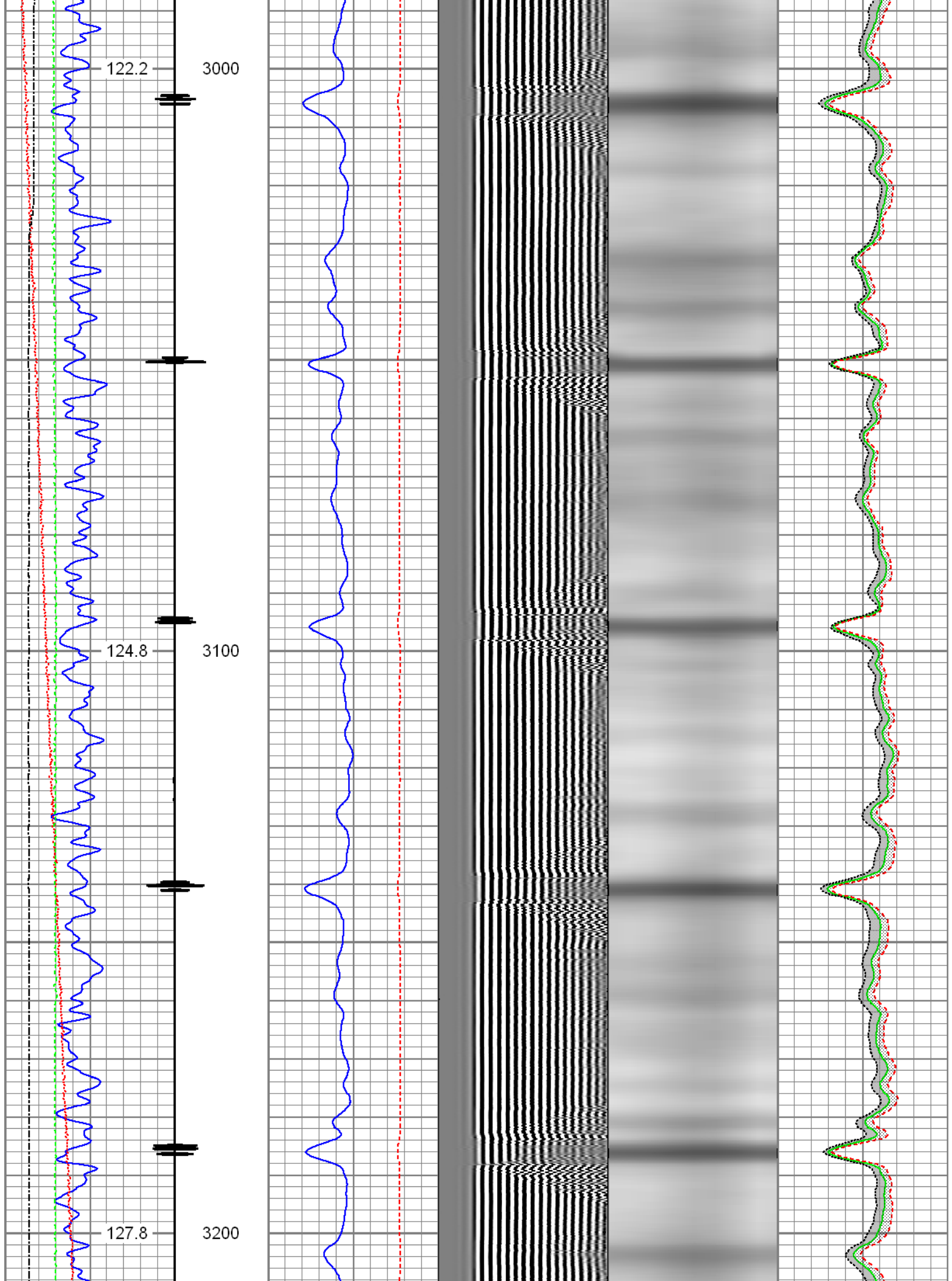


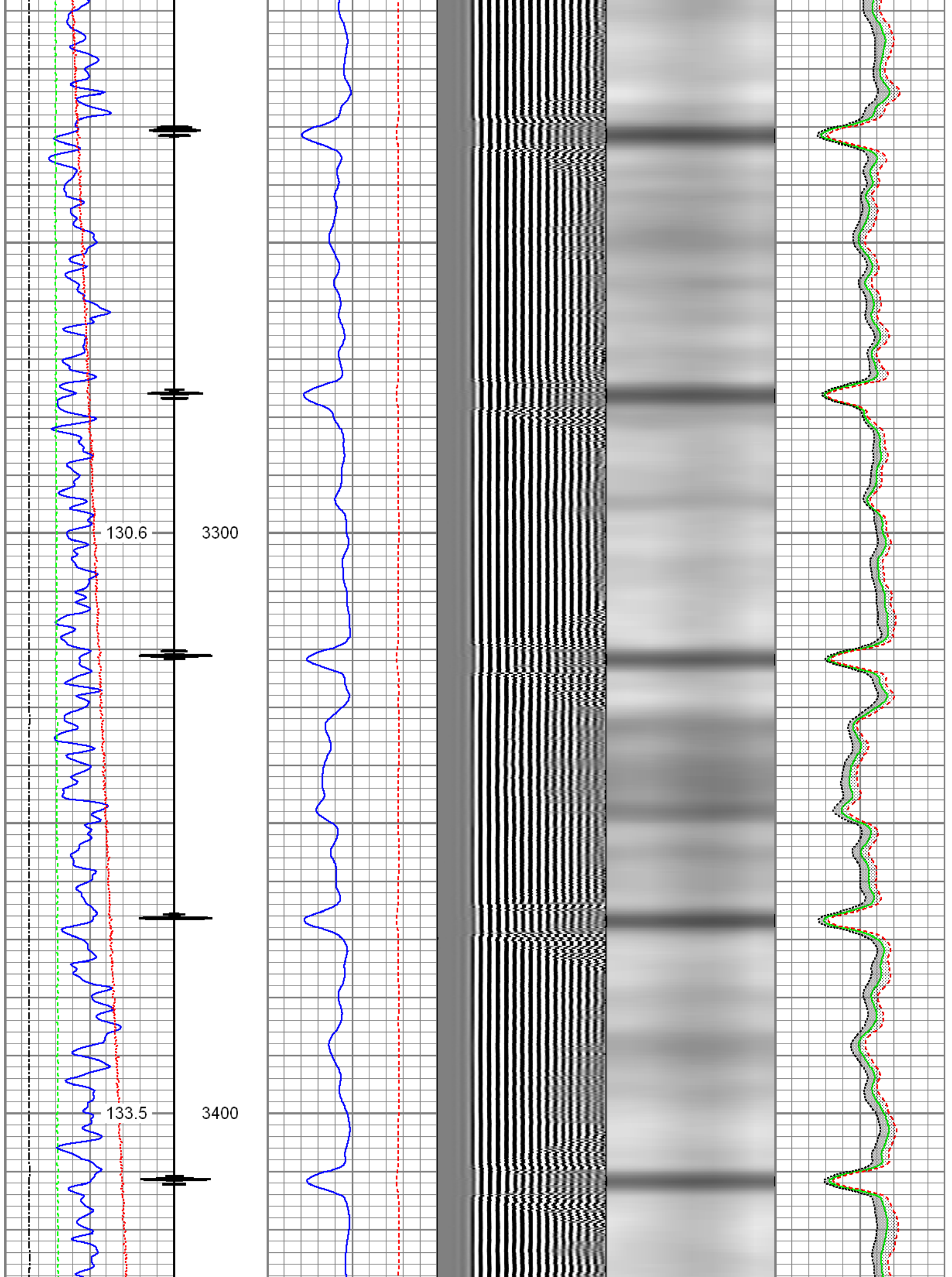


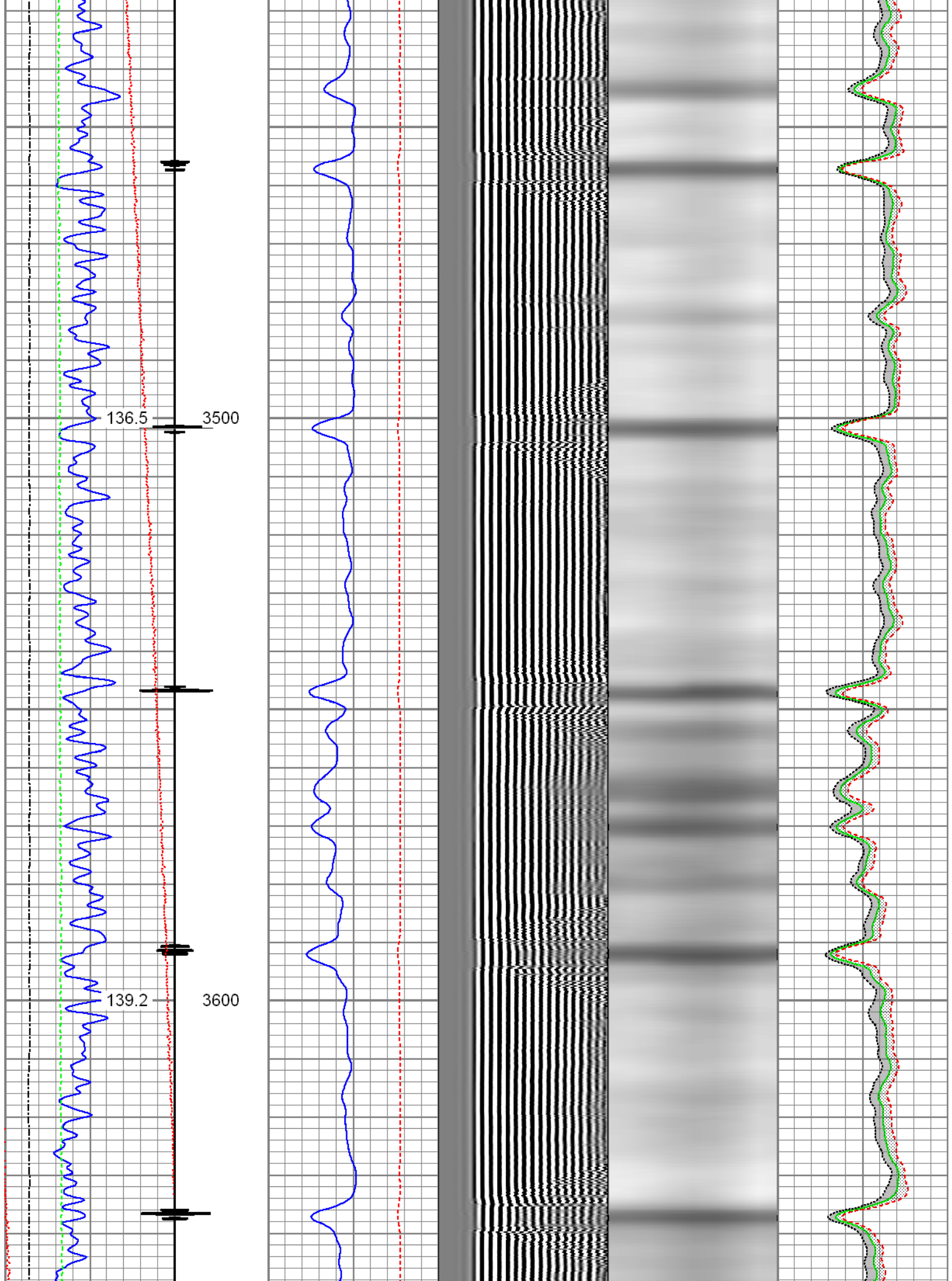


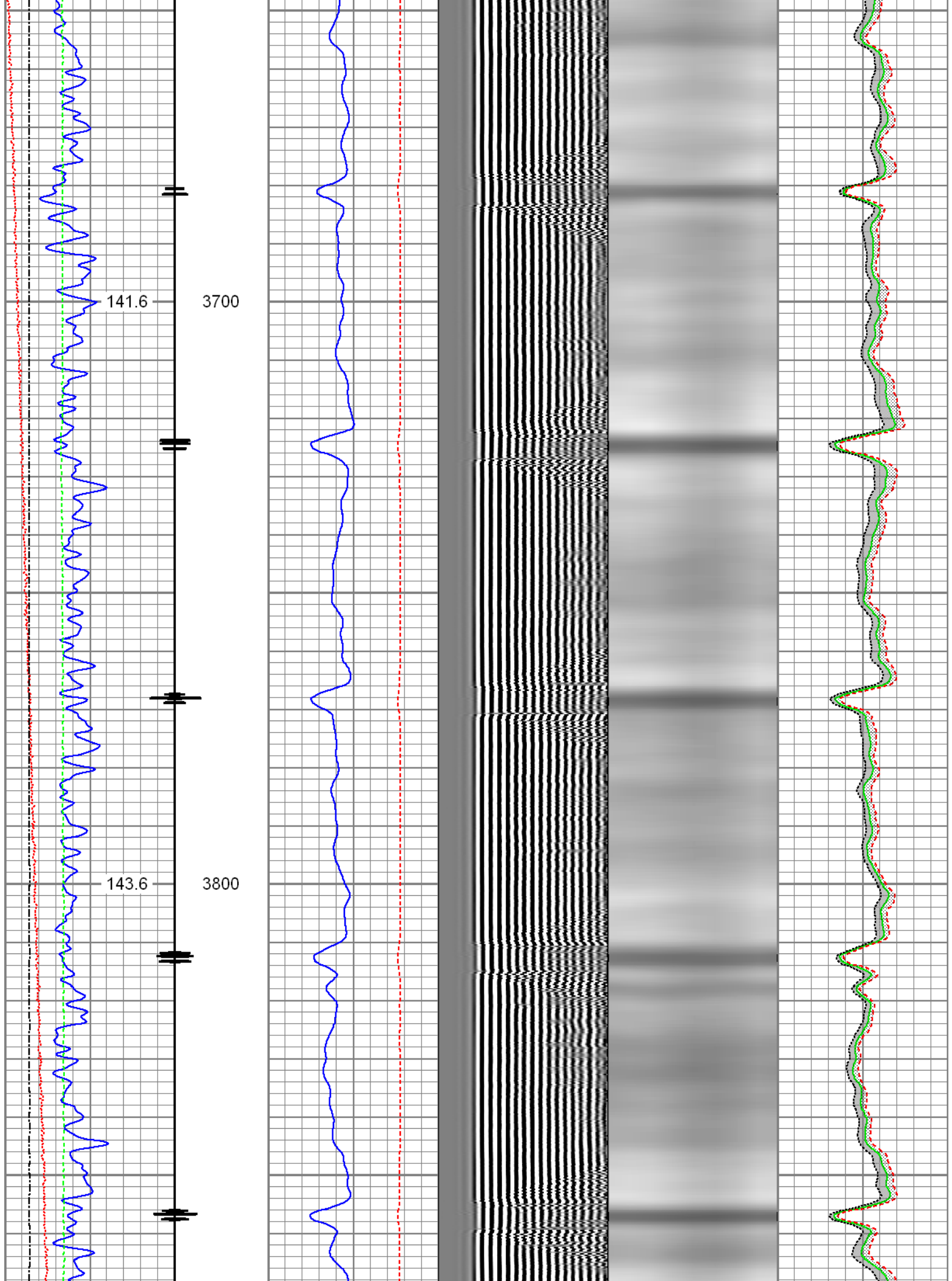


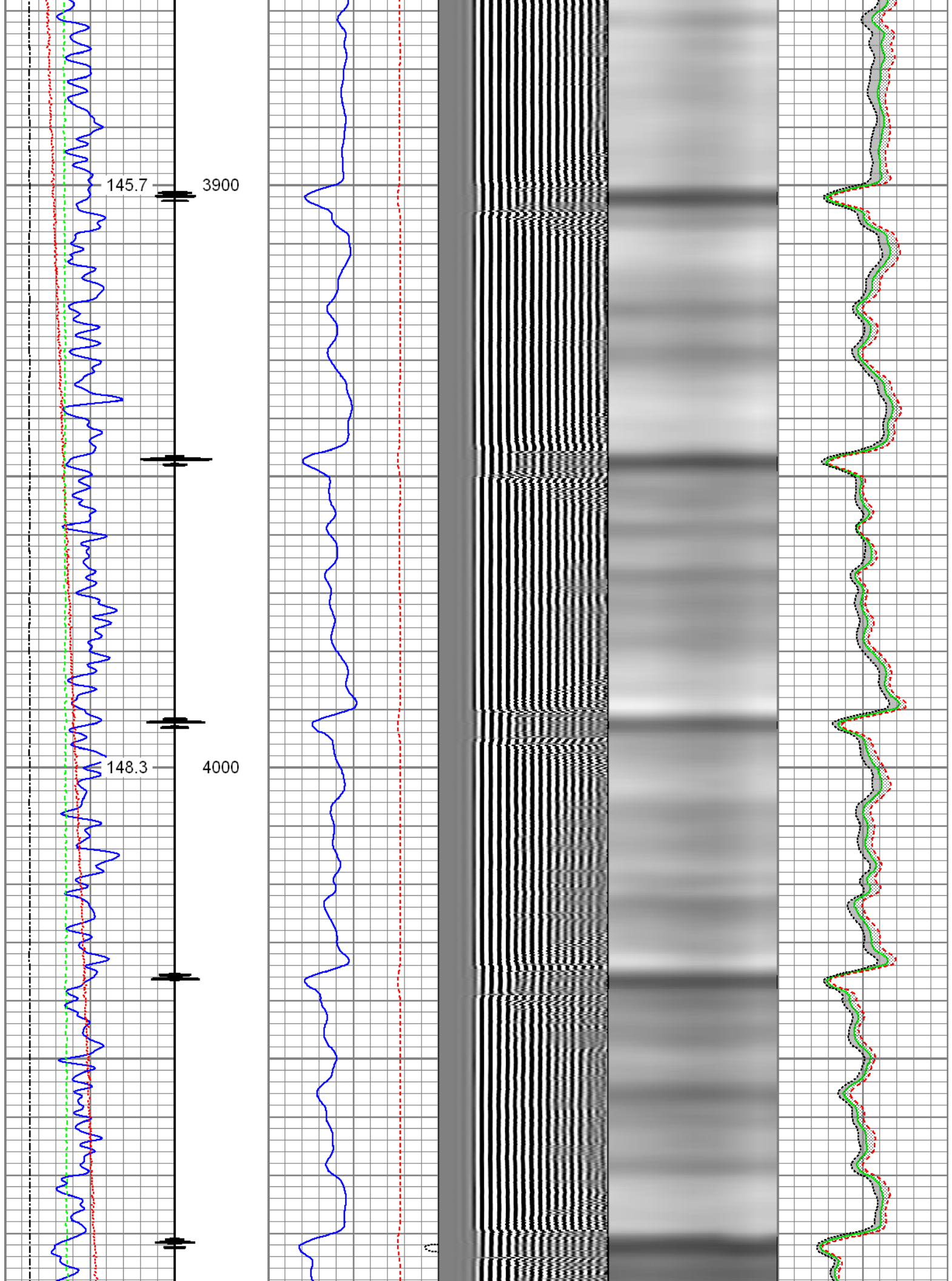


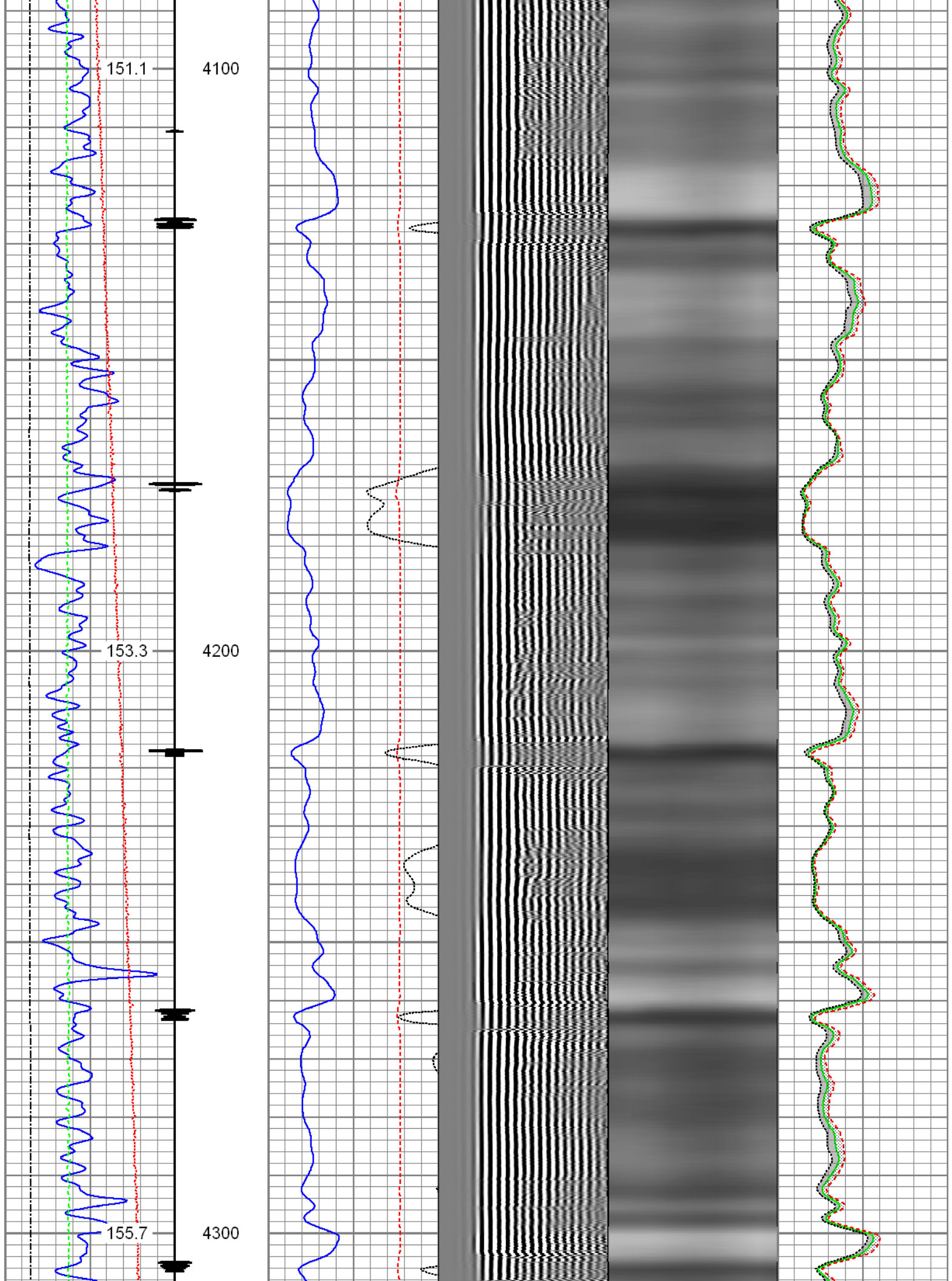


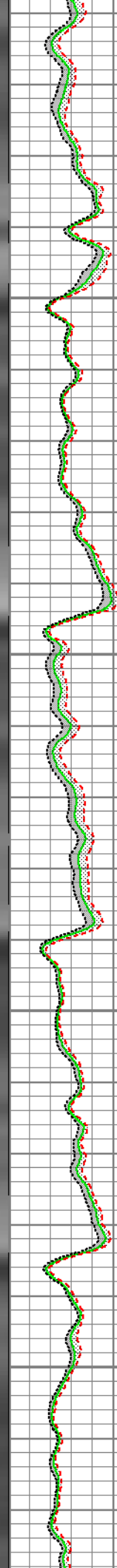
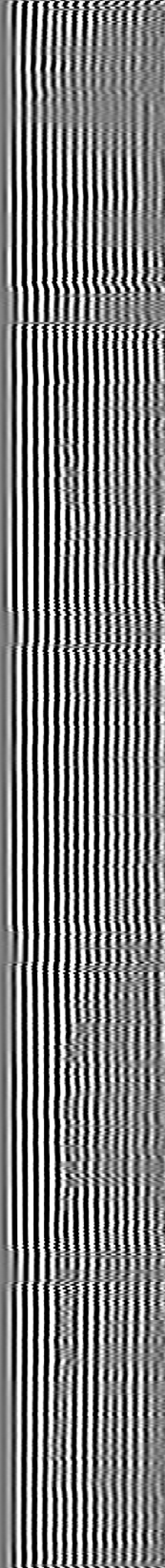
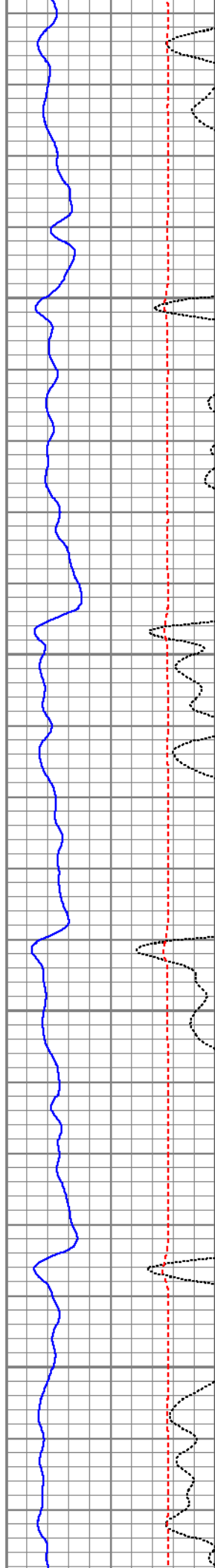
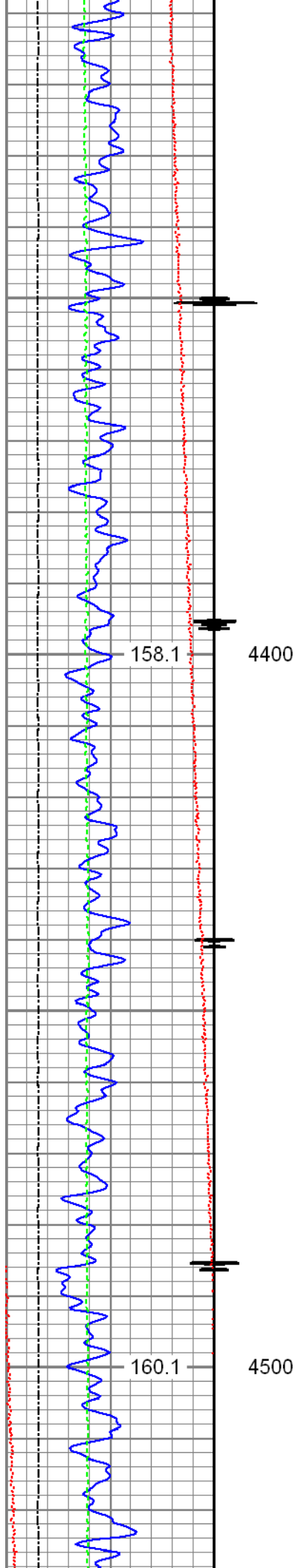


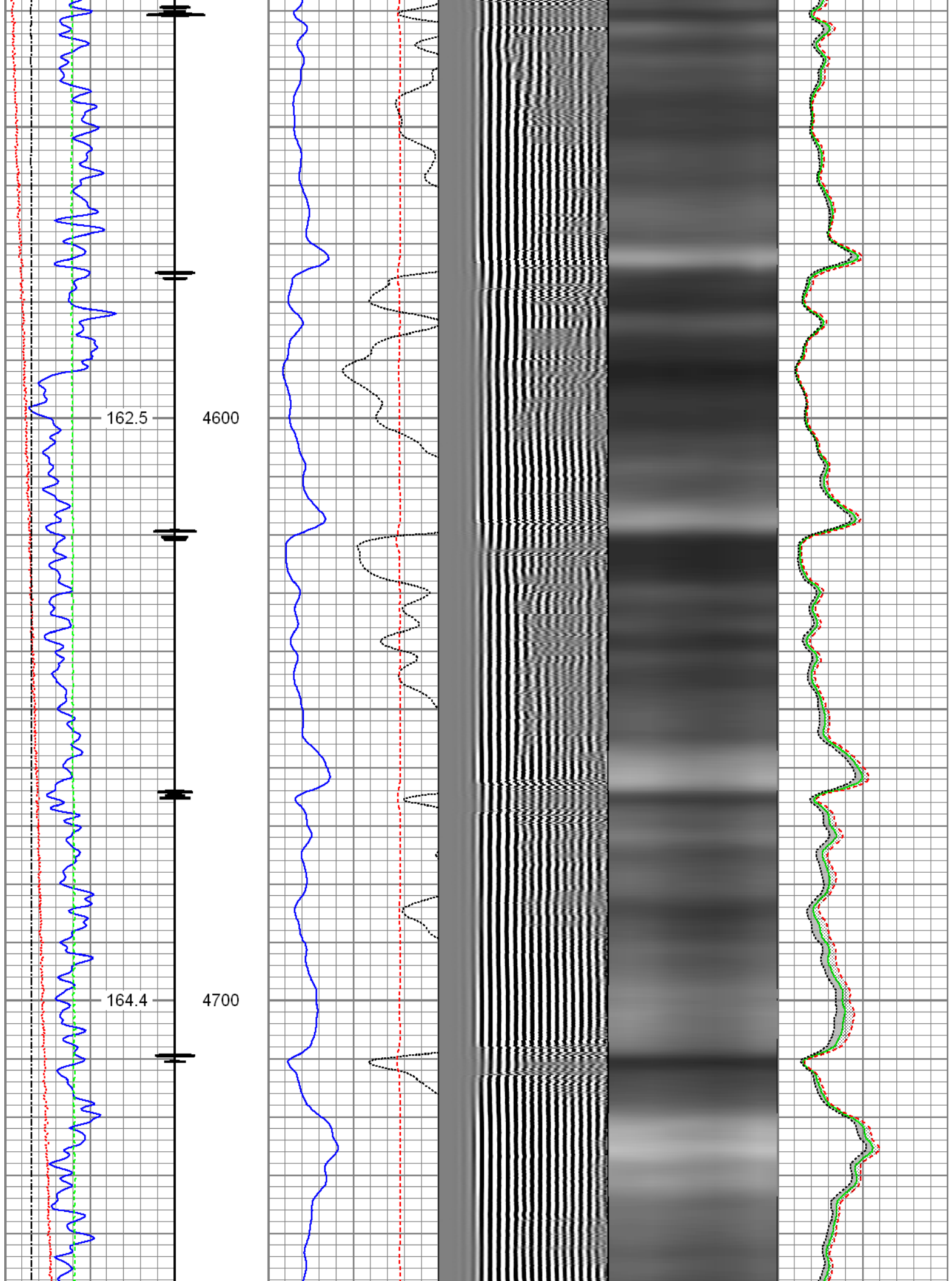


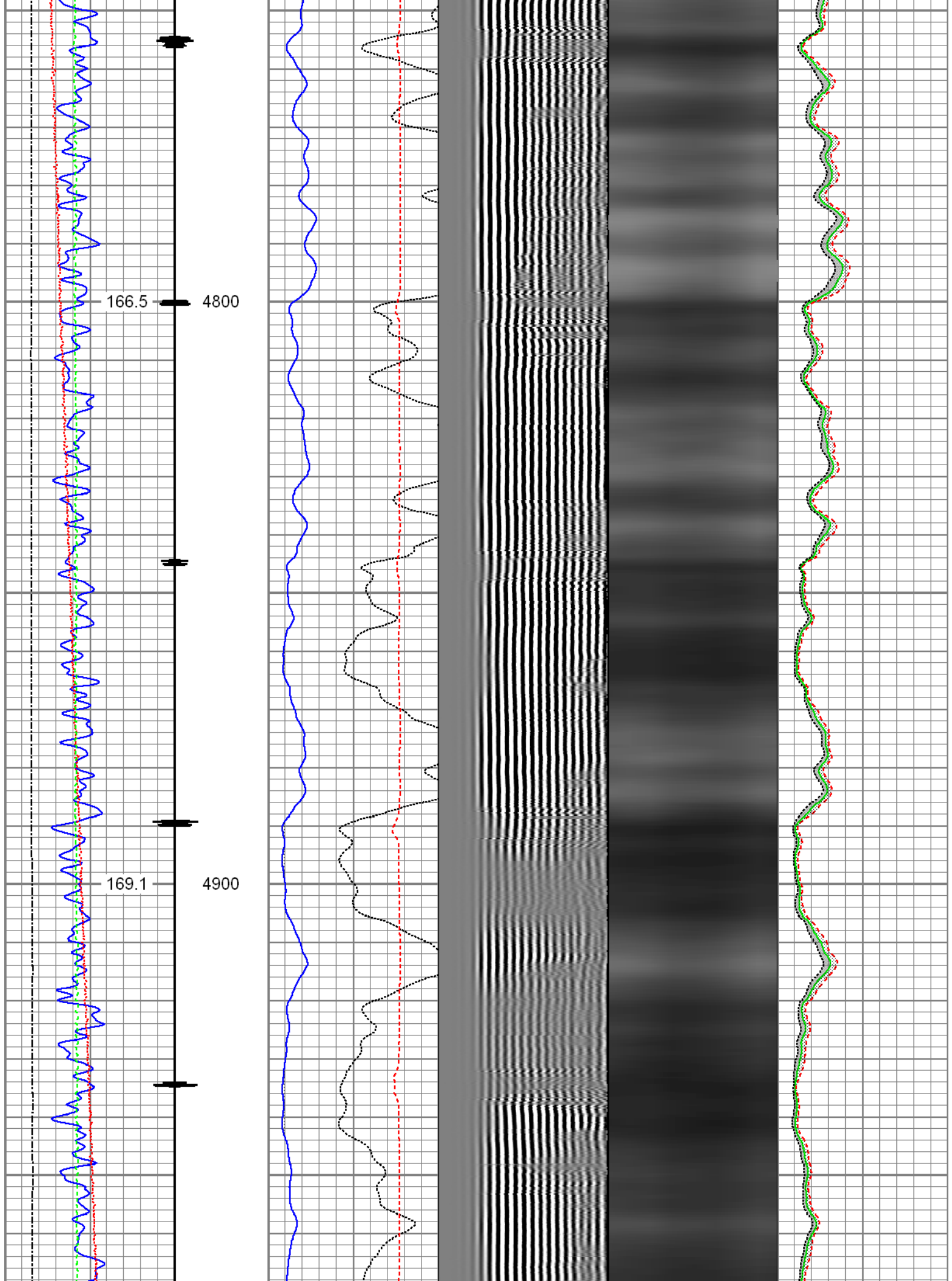


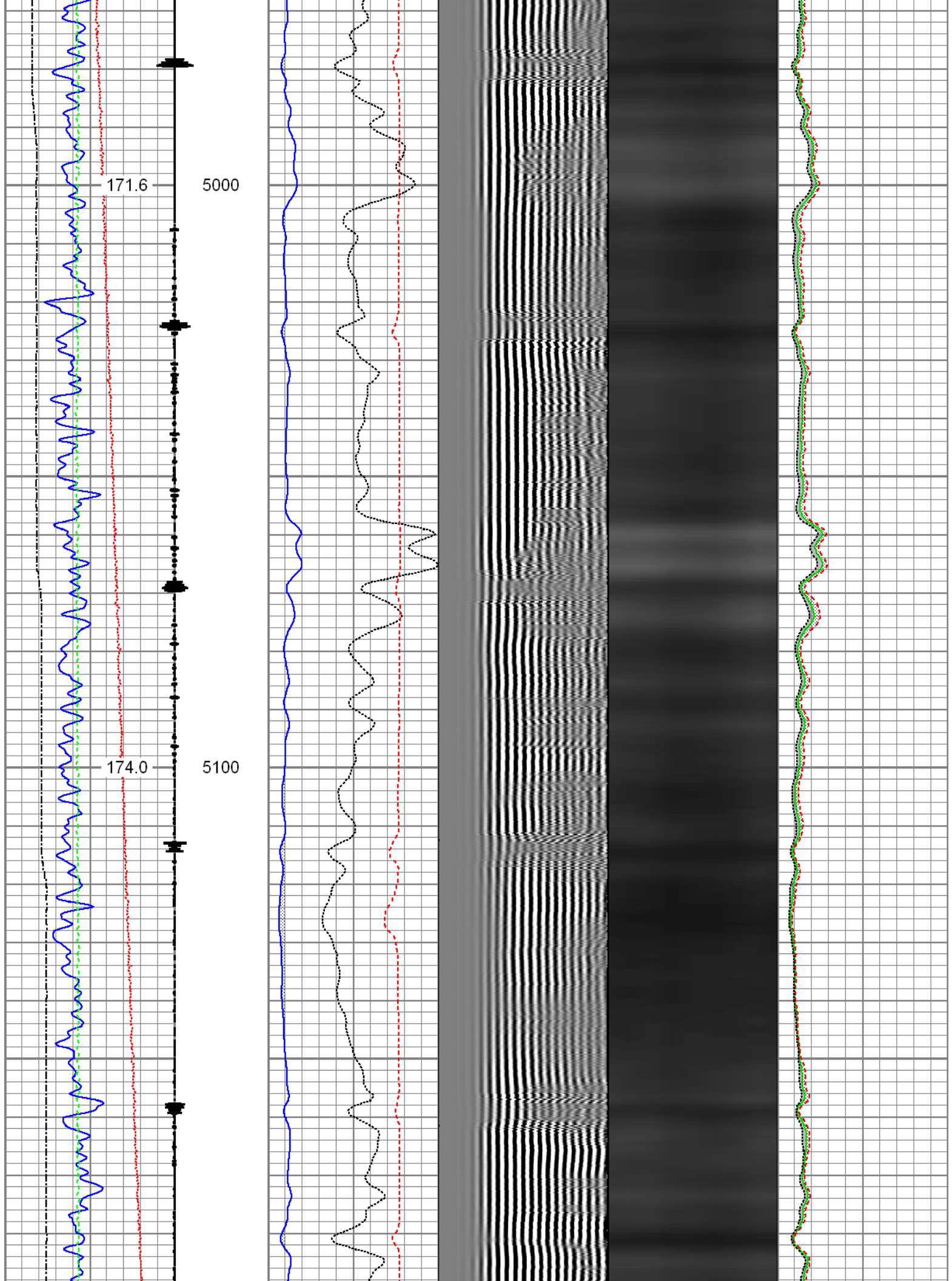


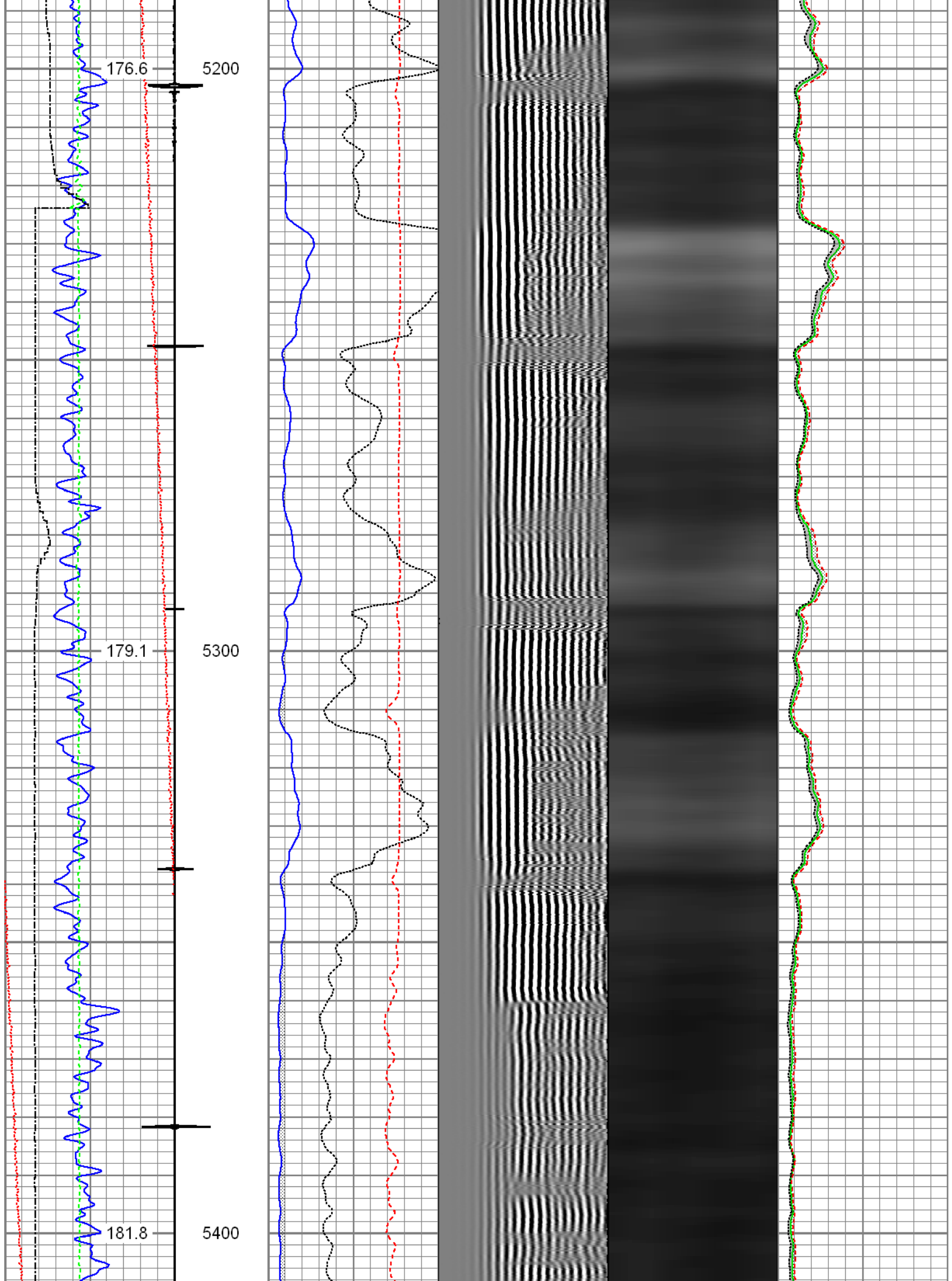


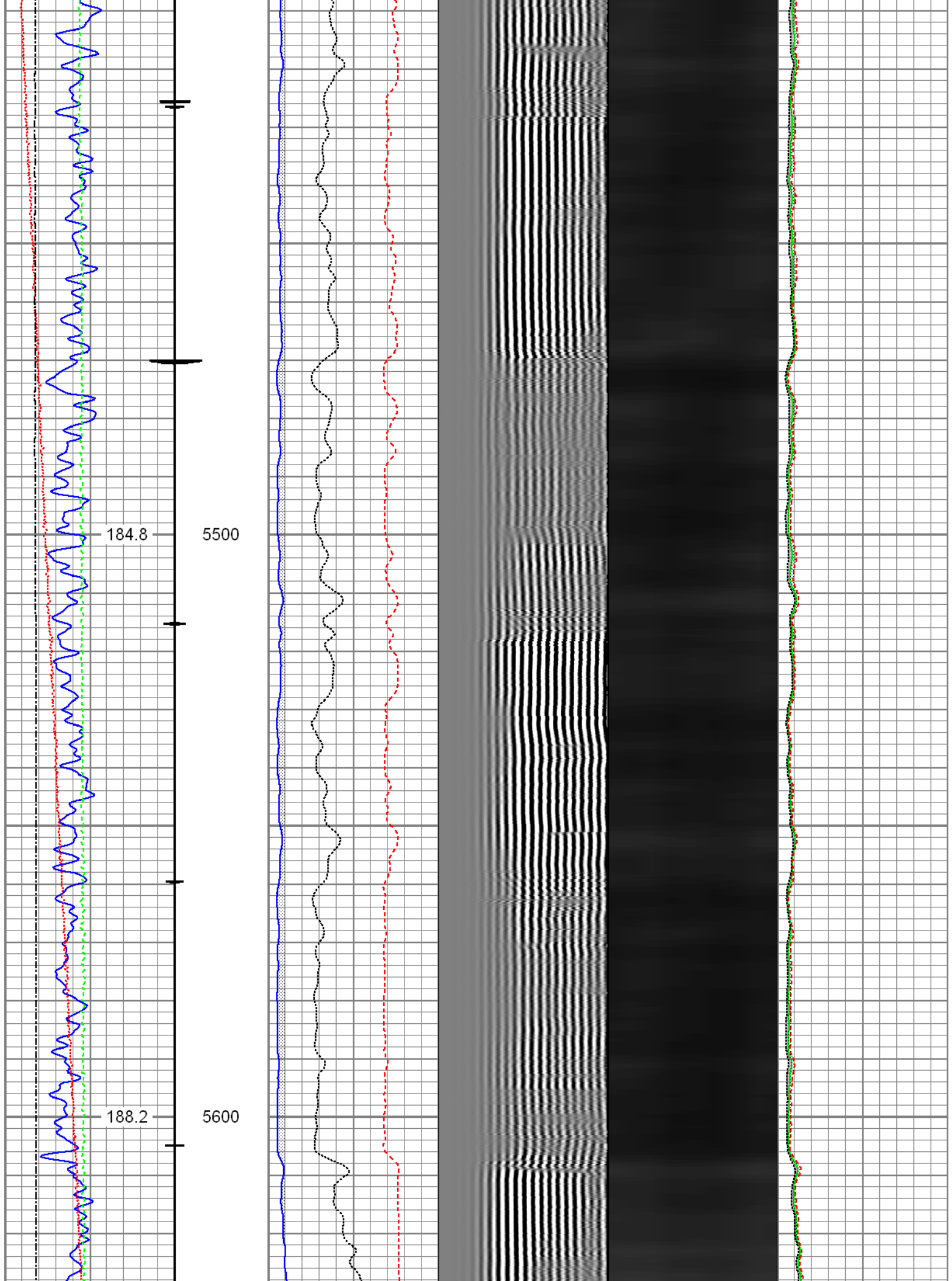


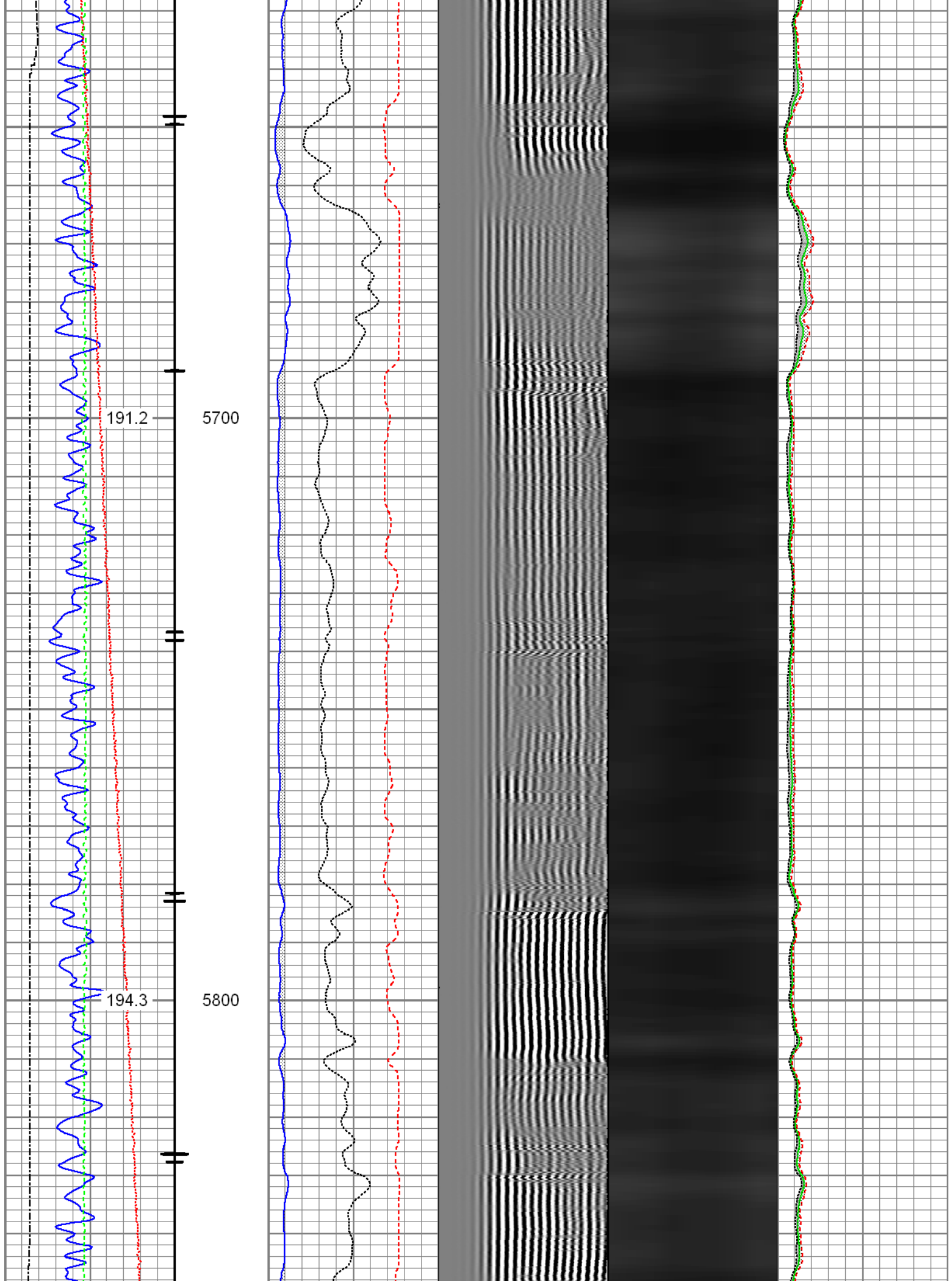


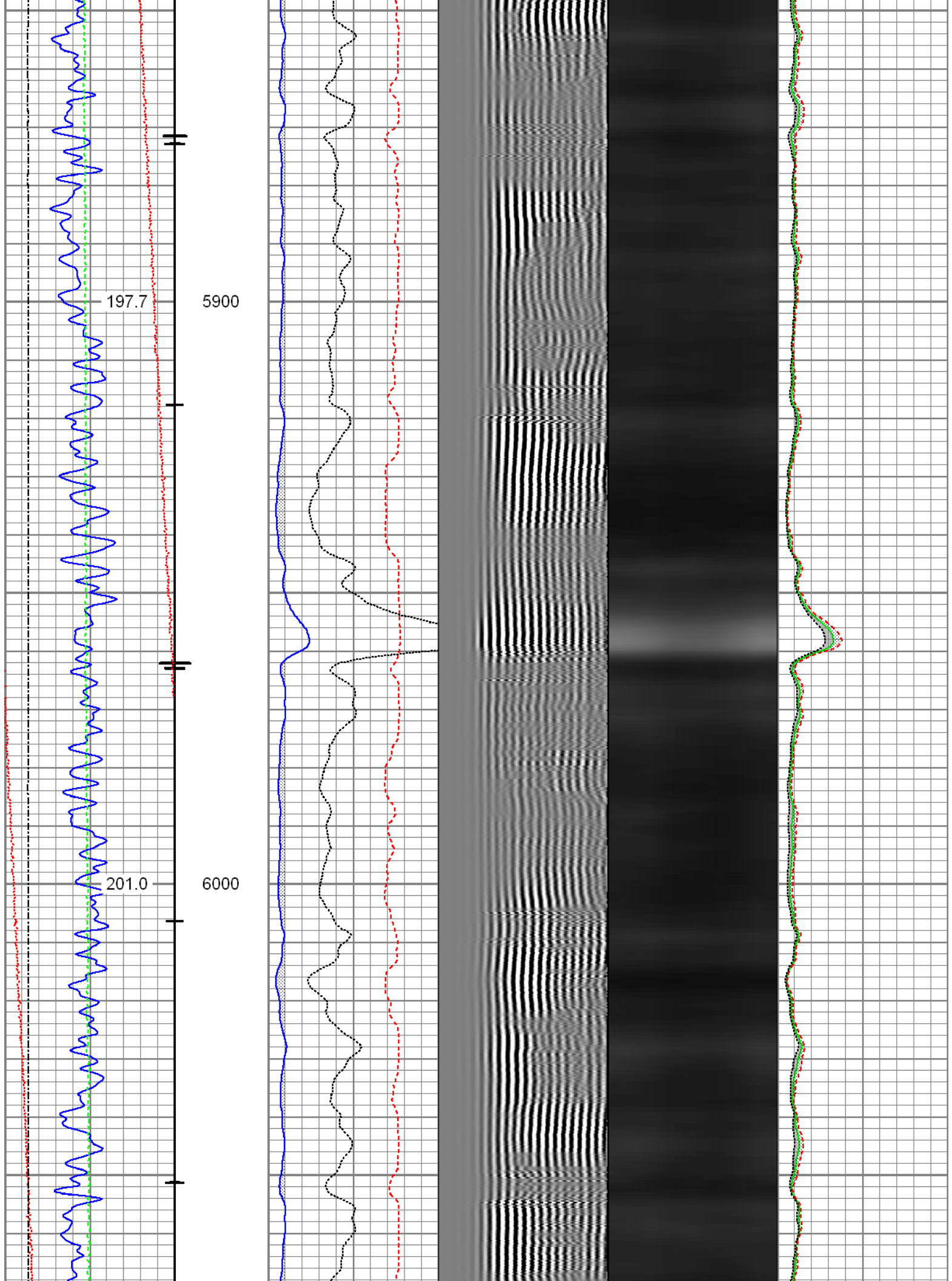


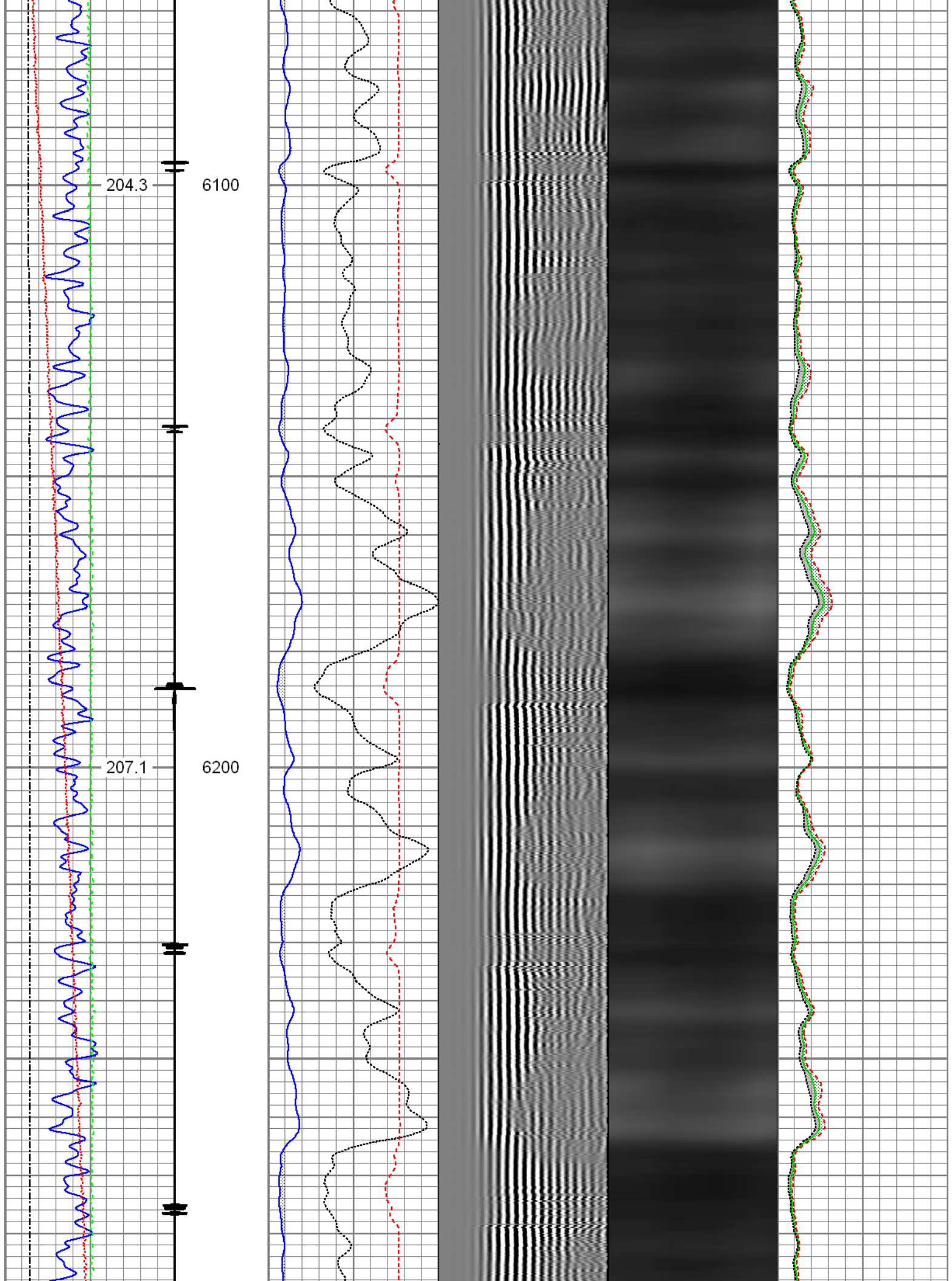


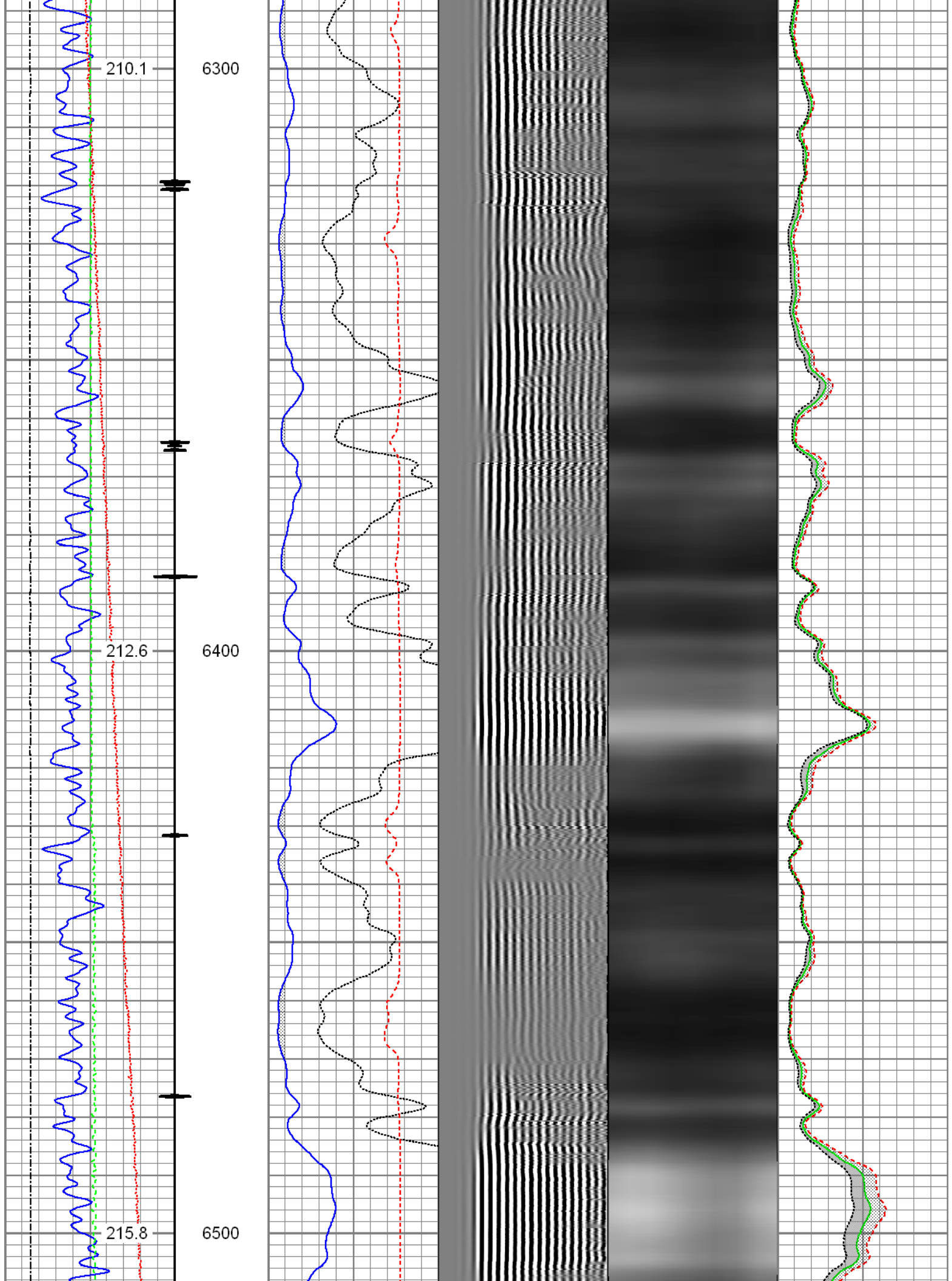


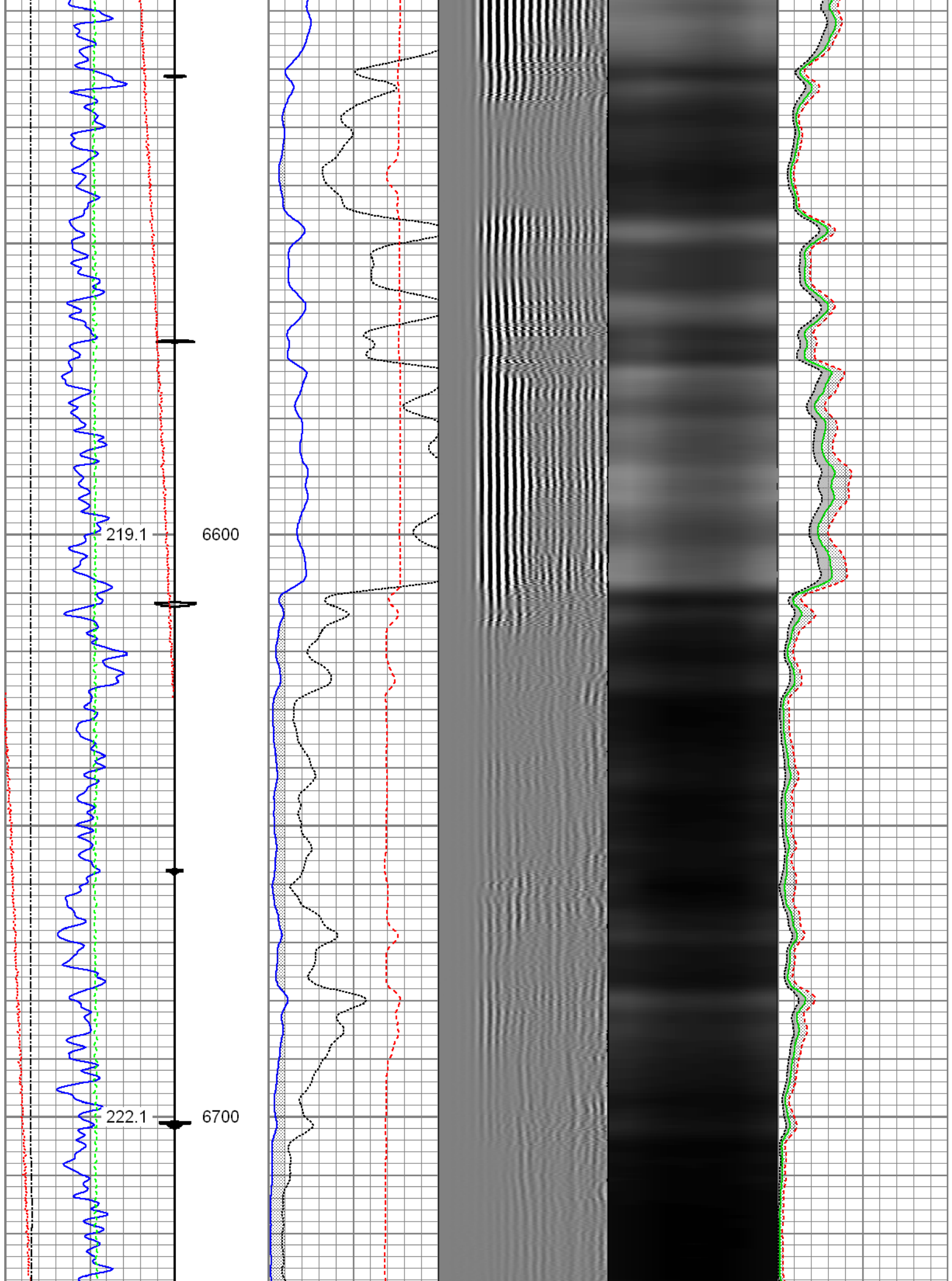


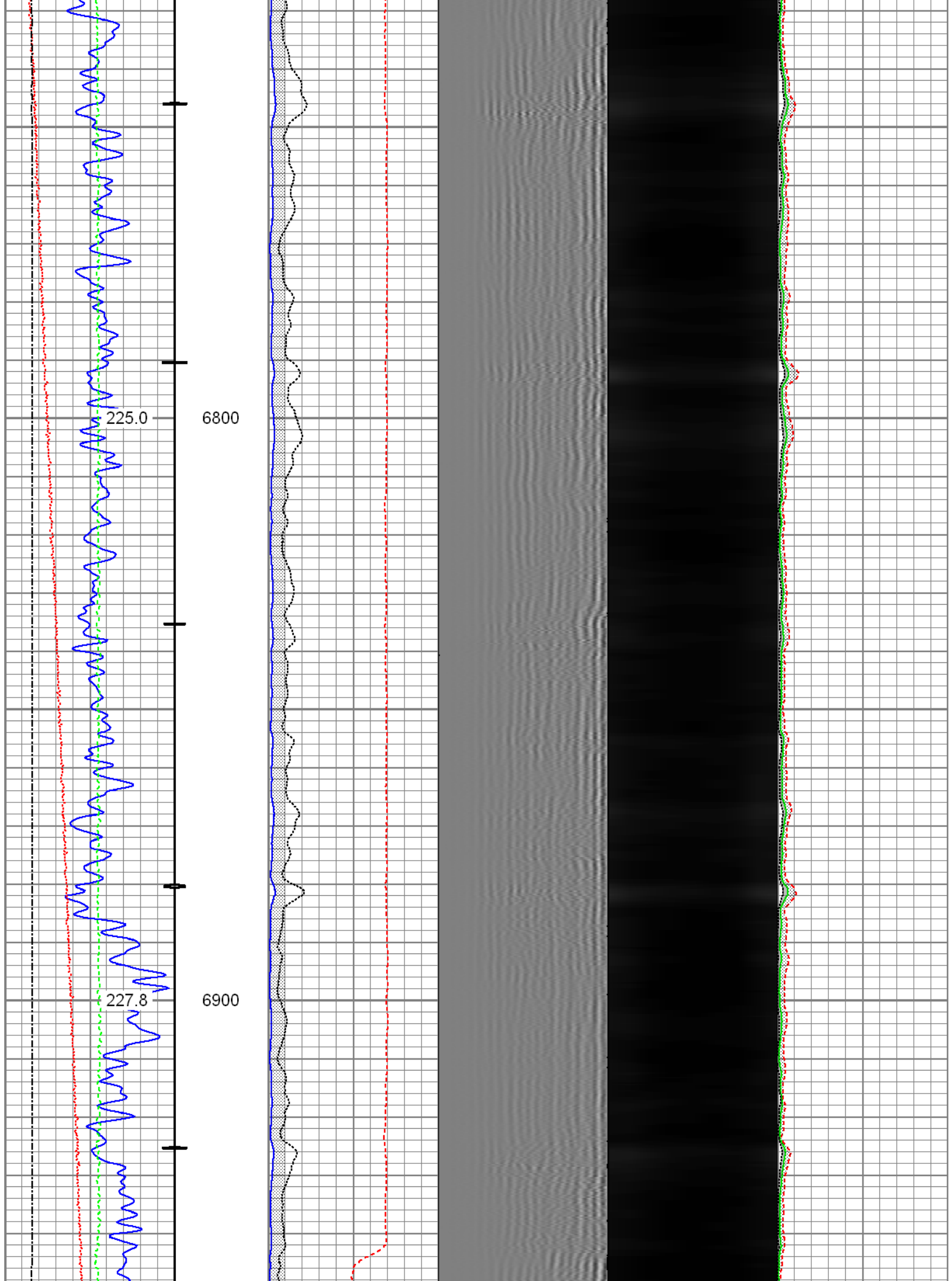


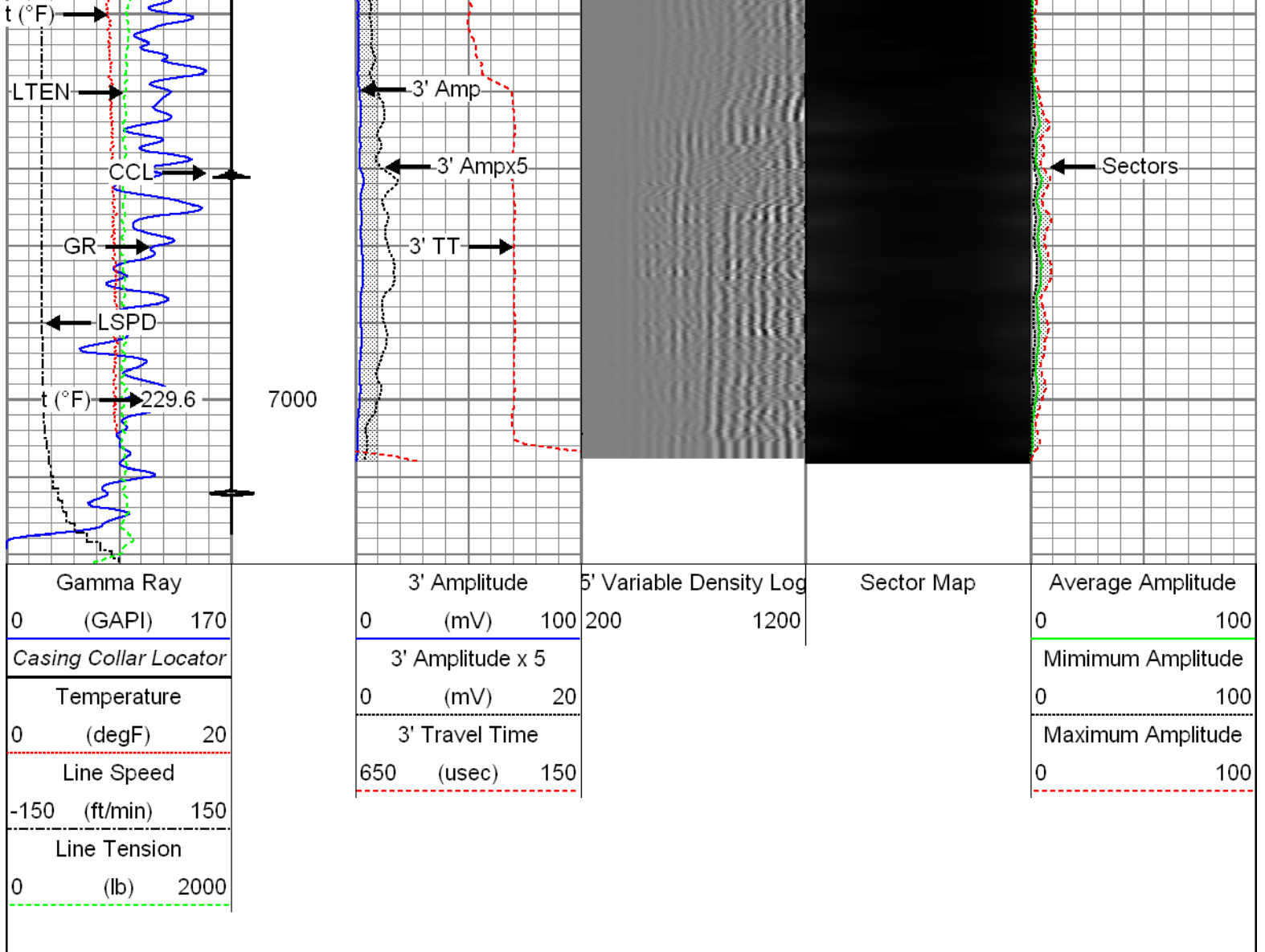








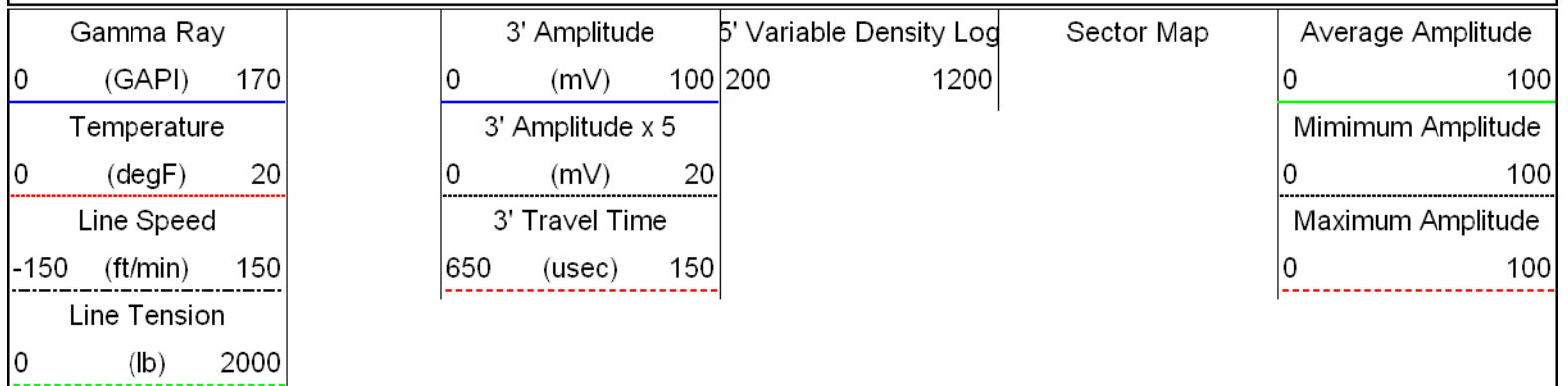


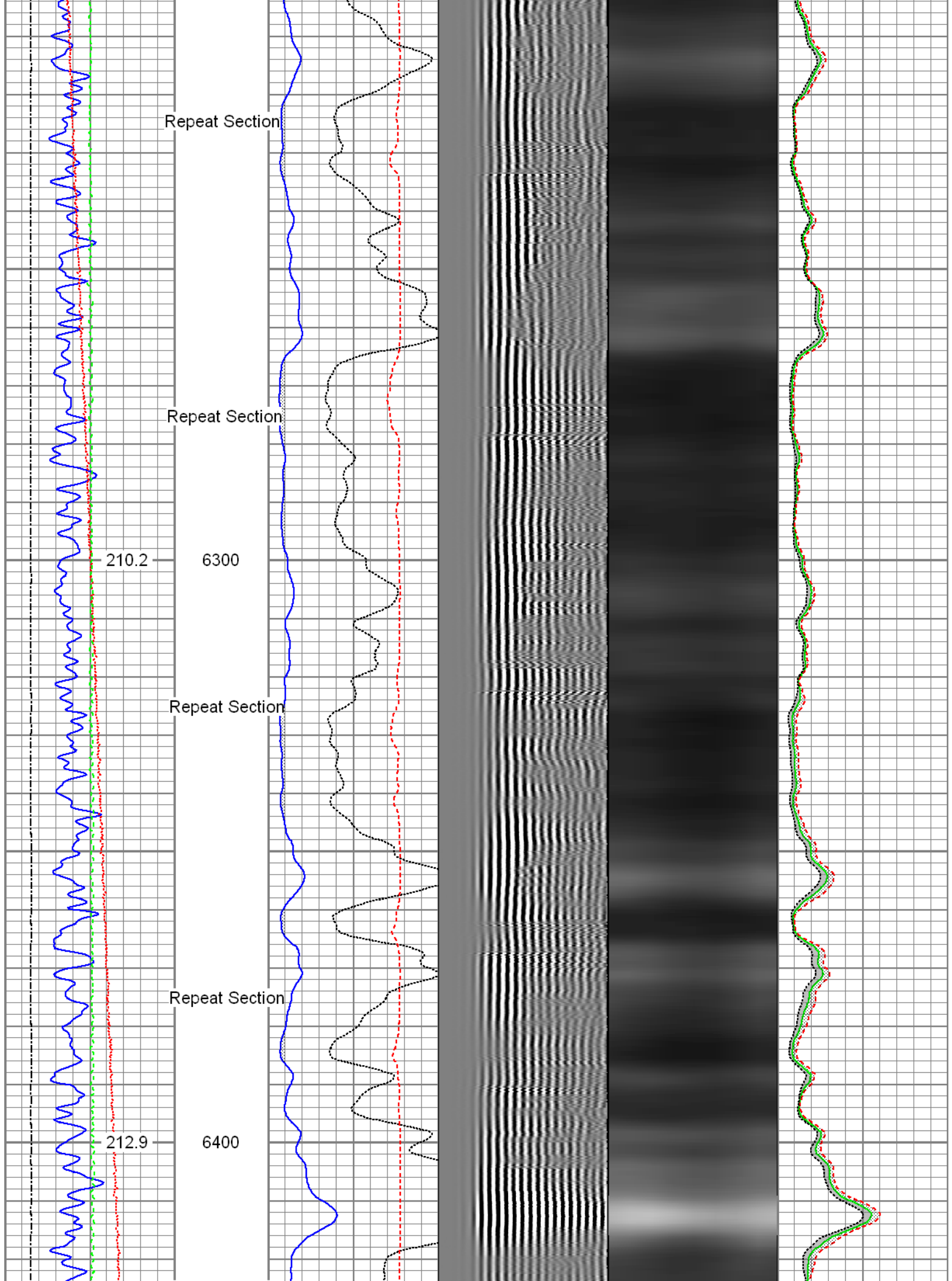


Repeat Pass

Recorded with 2800 PSI Surface Induced Pressure

Database File: c:\warrior\data\0512341344_anadarko_iceman state 5n-c16hz_10-27-15_rbl\0512341344_anadarko_ pass6
 Dataset Pathname: radii
 Presentation Format: Tue Oct 27 09:25:00 2015 by Log 7.0 B1
 Dataset Creation: Depth in Feet scaled 1:240
 Charted by:





WVFS8 WVF5FT	14.55 13.55		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
CCL DCCL	6.51 6.51		Probe_CCL_GR-2.75"Digital (FW1211-081) 4.54 Probe 2-3/4" Digital CCL / Gamma Ray Combined			
GR	3.77		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Dataset: 0512341344_Anadarko_Iceman State 5N-C16HZ_10-27-15_RBL.db: field/well/run1/pass8 Total Length: 23.40 ft Total Weight: 194.00 lb O.D. 2.75 in						

3'	-0.000	0.620	0.800	71.921	114.557	0.839
CAL	0.777	0.737				
5'	0.000	0.555	0.800	71.921	128.156	0.773
SUM						
S1	-0.002	0.577	0.000	100.000	172.849	0.321
S2	-0.000	0.562	0.000	100.000	177.697	0.080
S3	-0.001	0.578	0.000	100.000	172.772	0.112
S4	0.001	0.633	0.000	100.000	158.263	-0.124
S5	0.001	0.711	0.000	100.000	140.821	-0.158
S6	0.000	0.737	0.000	100.000	135.676	-0.045
S7	-0.000	0.687	0.000	100.000	145.400	0.041
S8	0.000	0.619	0.000	100.000	161.559	-0.020

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	0.777	0.737	1.000	0.000

Air Zero Calibration, performed Tue Oct 27 09:58:43 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 Iceman State 5N-C16HZ
Field Wattenberg
County Weld
State Colorado