



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company SRC Energy Inc.  
Well Hood 23C-22-M  
Field Wattenberg  
County Weld State Colorado

Location: API #: 05-123-44373  
SEC 20 TWP 6N RGE 66W  
Permanent Datum Ground Level Elevation 4736'  
Log Measured From Ground Level 0 FT  
Drilling Measured From Kelly Bushing  
Other Services  
JB/GR  
CNL  
RBP  
Elevation  
K.B. 4761'  
D.F. 4760'  
G.L. 4736'

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County Weld  
State Colorado

Date 02-JUL-2017

Run Number Three  
Depth Driller 15400 FT  
Depth Logger 6750 FT  
Bottom Logged Interval 6745 FT  
Top Log Interval Surface  
Open Hole Size ---  
Type Fluid Water  
Density / Viscosity 8.34 lb/gal  
Max. Recorded Temp. 224°F  
Estimated Cement Top See Log  
Time Well Ready ROA  
Time Logger on Bottom 1300  
Equipment Number HD-0324  
Location Fort Lupton, CO  
Recorded By Jack Amidei  
Witnessed By Shane Hart Sam Hopper

Run Number Bit From To Size (in) Weight (lb/ft) From To

Casing Record	Size (in)	Wgt (lb/ft)	Grade	Top	Bottom
Surface Casing	9 5/8	36	---	Surface	1750 FT
Intermediate #1	5 1/2	20	HCP-110	Surface	15384 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  
Depth referenced to Marker Joint reported at 6472 FT  
Adjusted Log -12 FT to correlate with Marker Joint  
Log ran with 2500 PSI Surface Induced Pressure  
Log ran from 6750 FT to Surface  
Logging tools came out clean and free of debris upon completion of operations

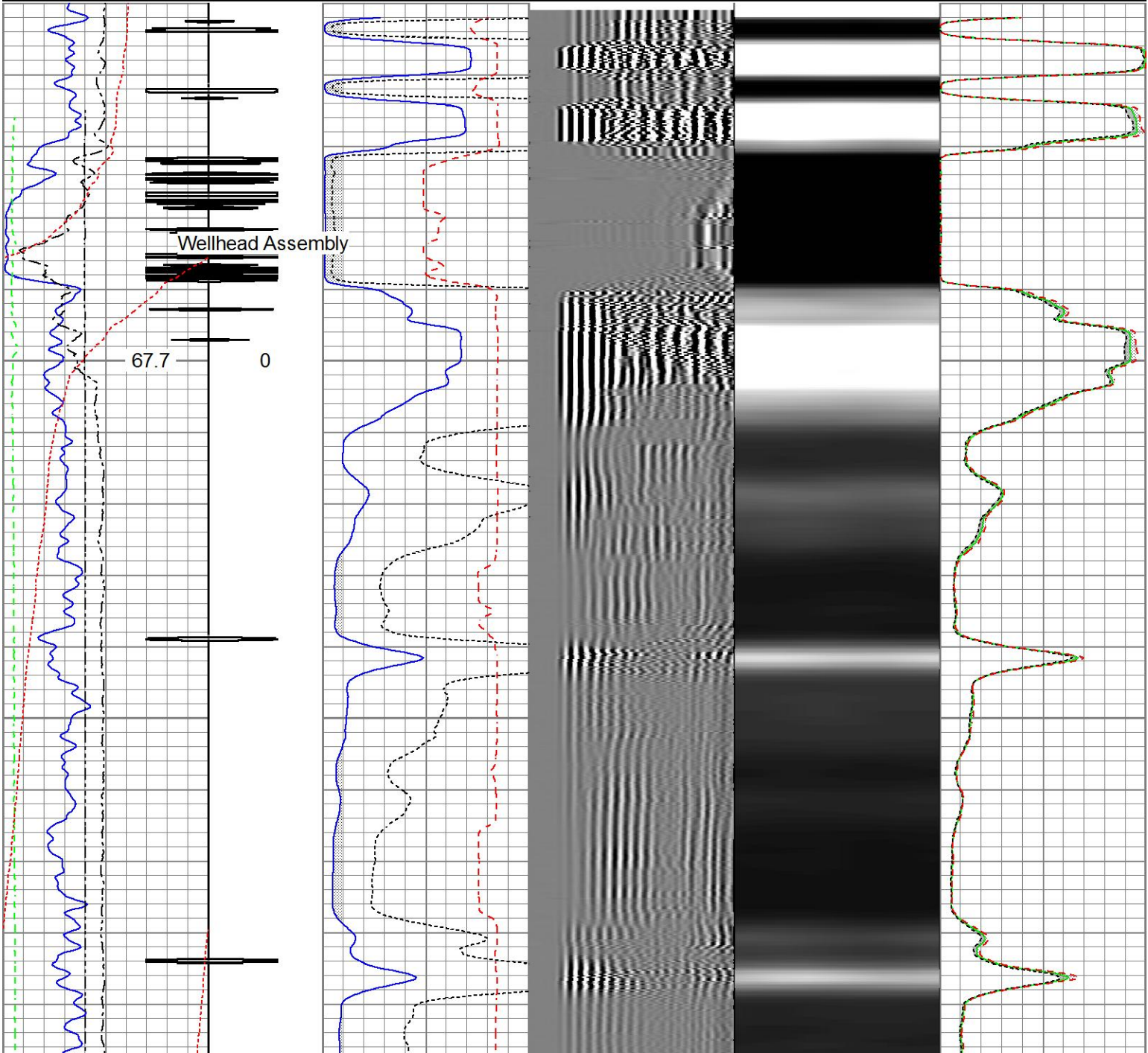
Thank you for choosing Reliance Oilfield Services, LLC!!



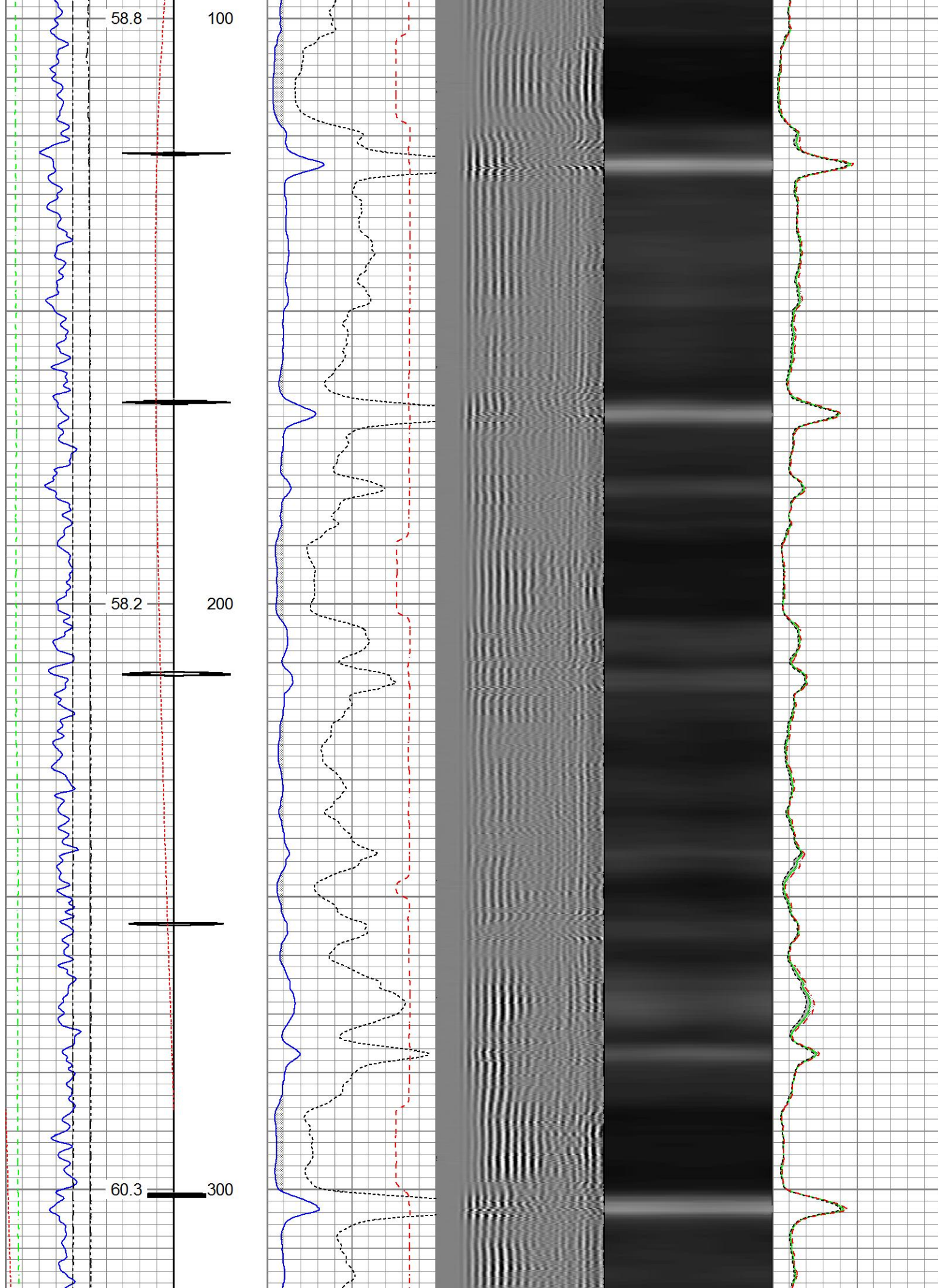
Main Pass

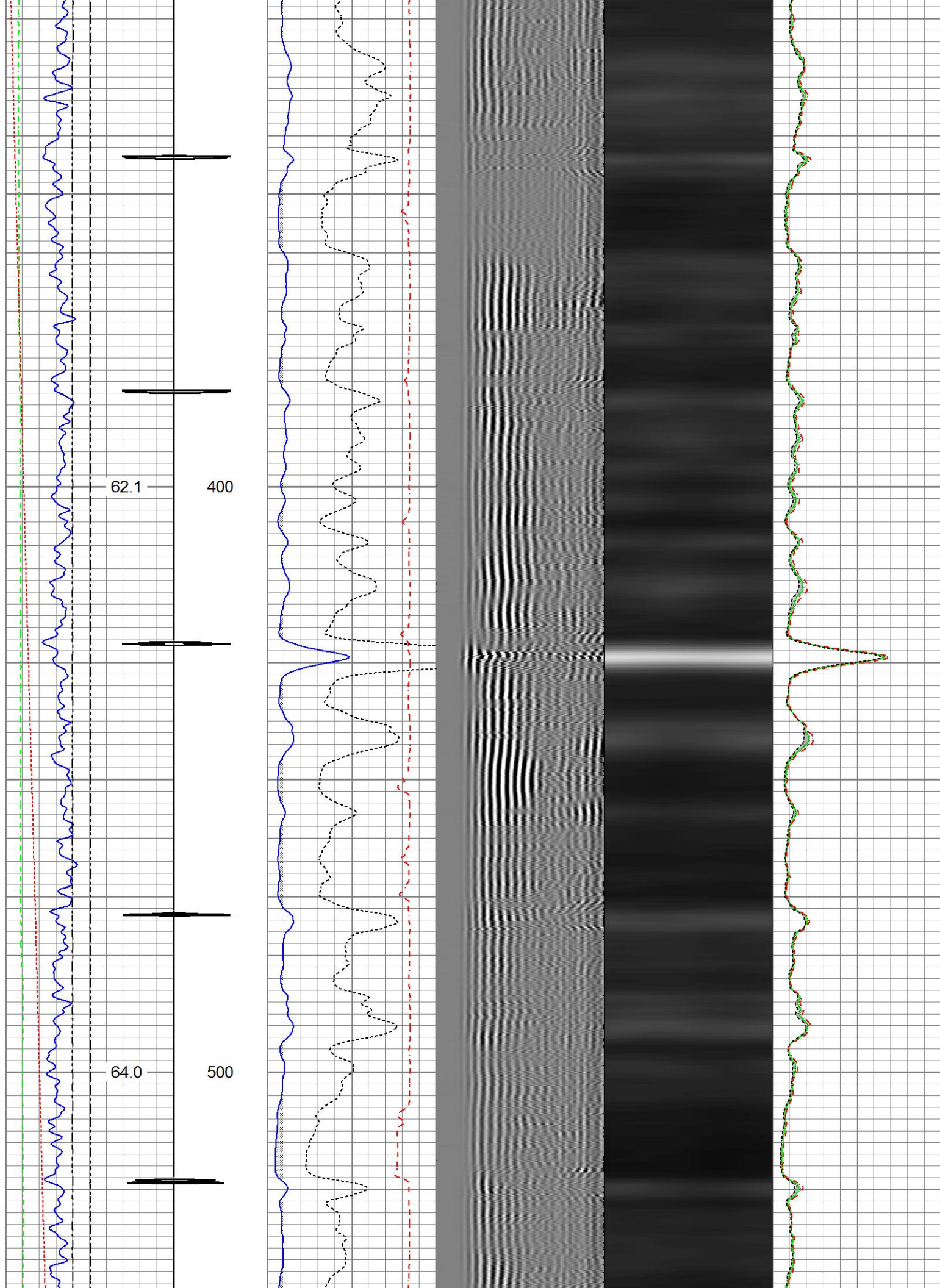
Recorded With 2500 PSI Surface Induced Pressure

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			Minimum 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				

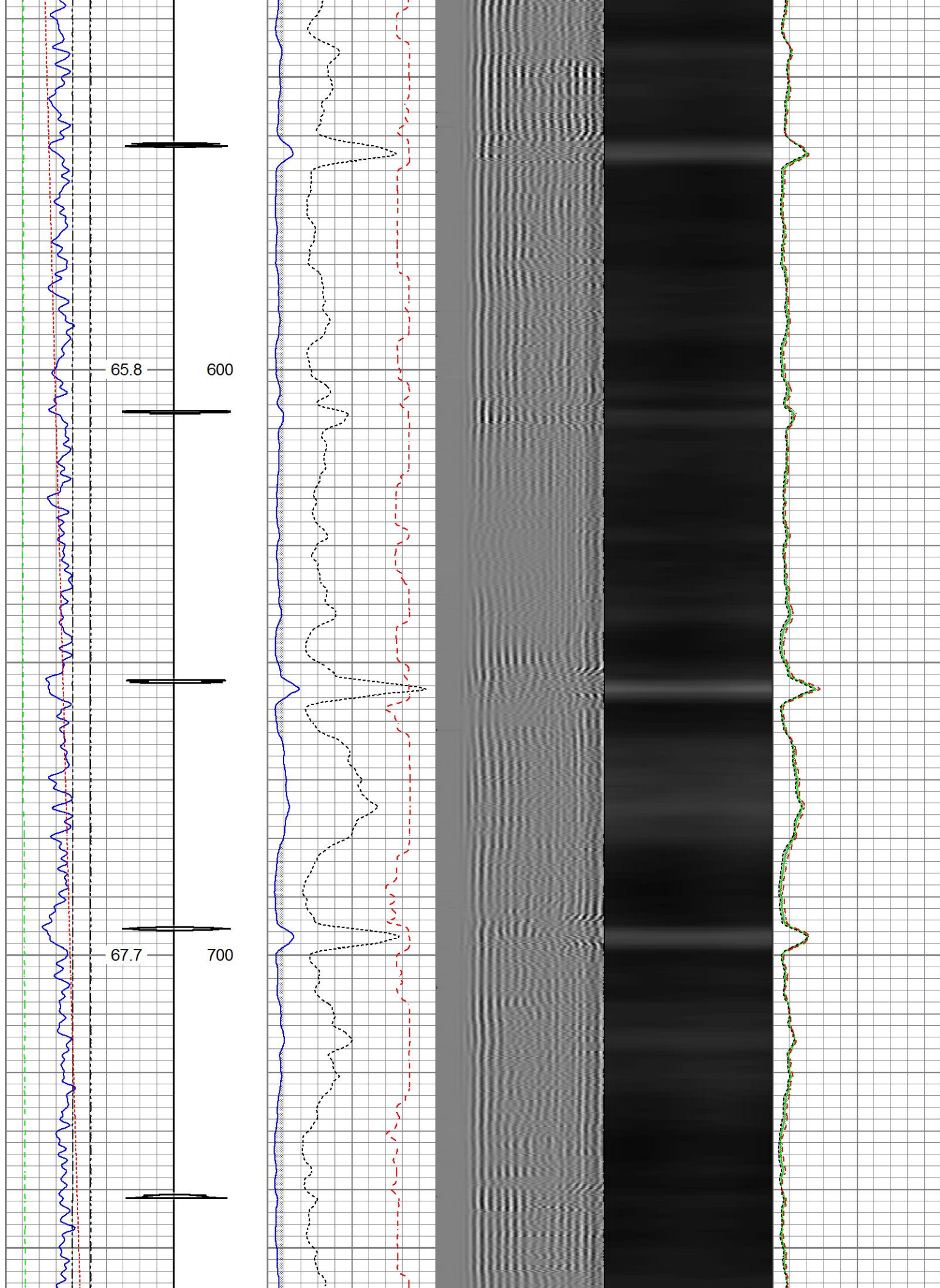


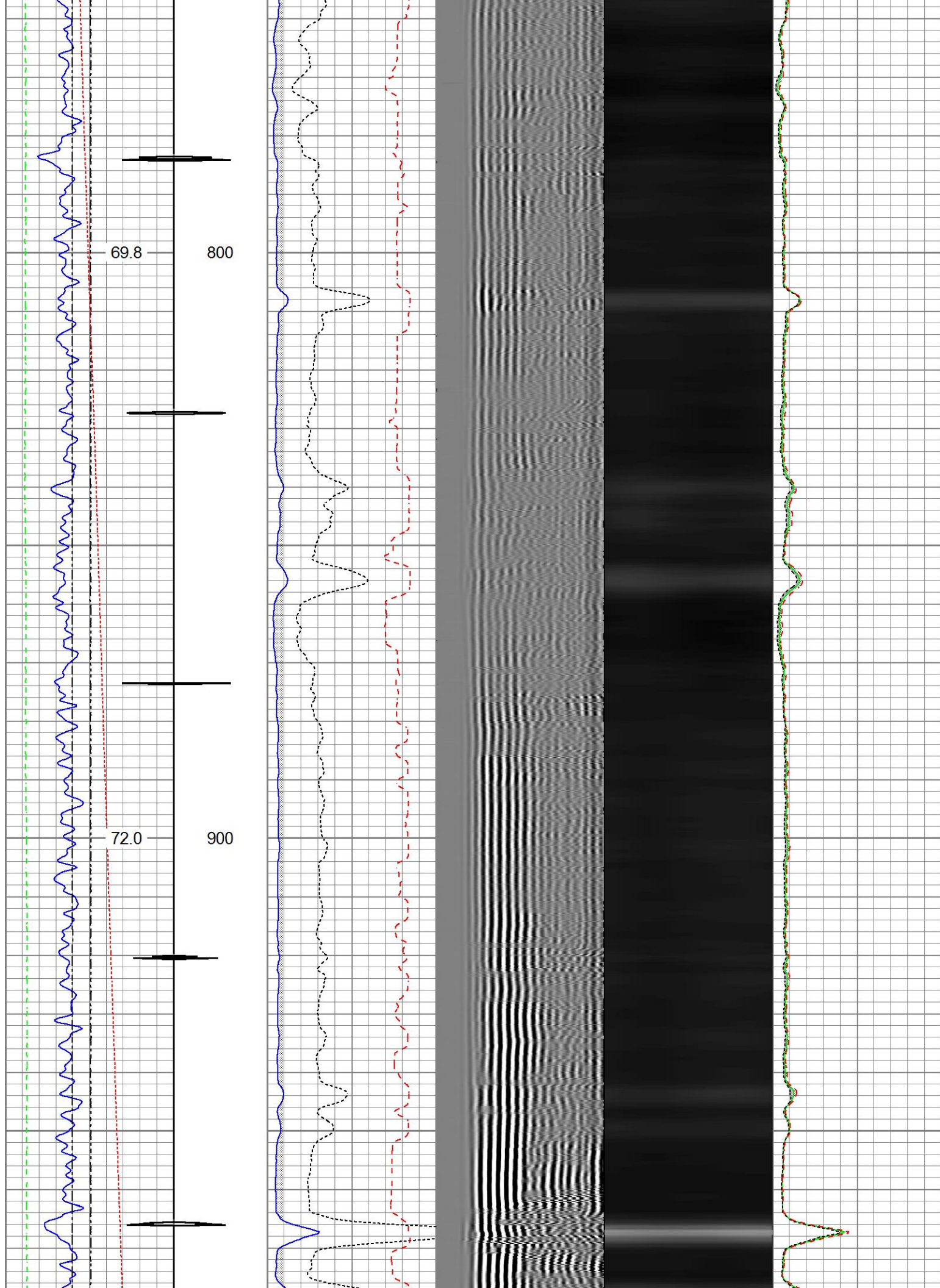




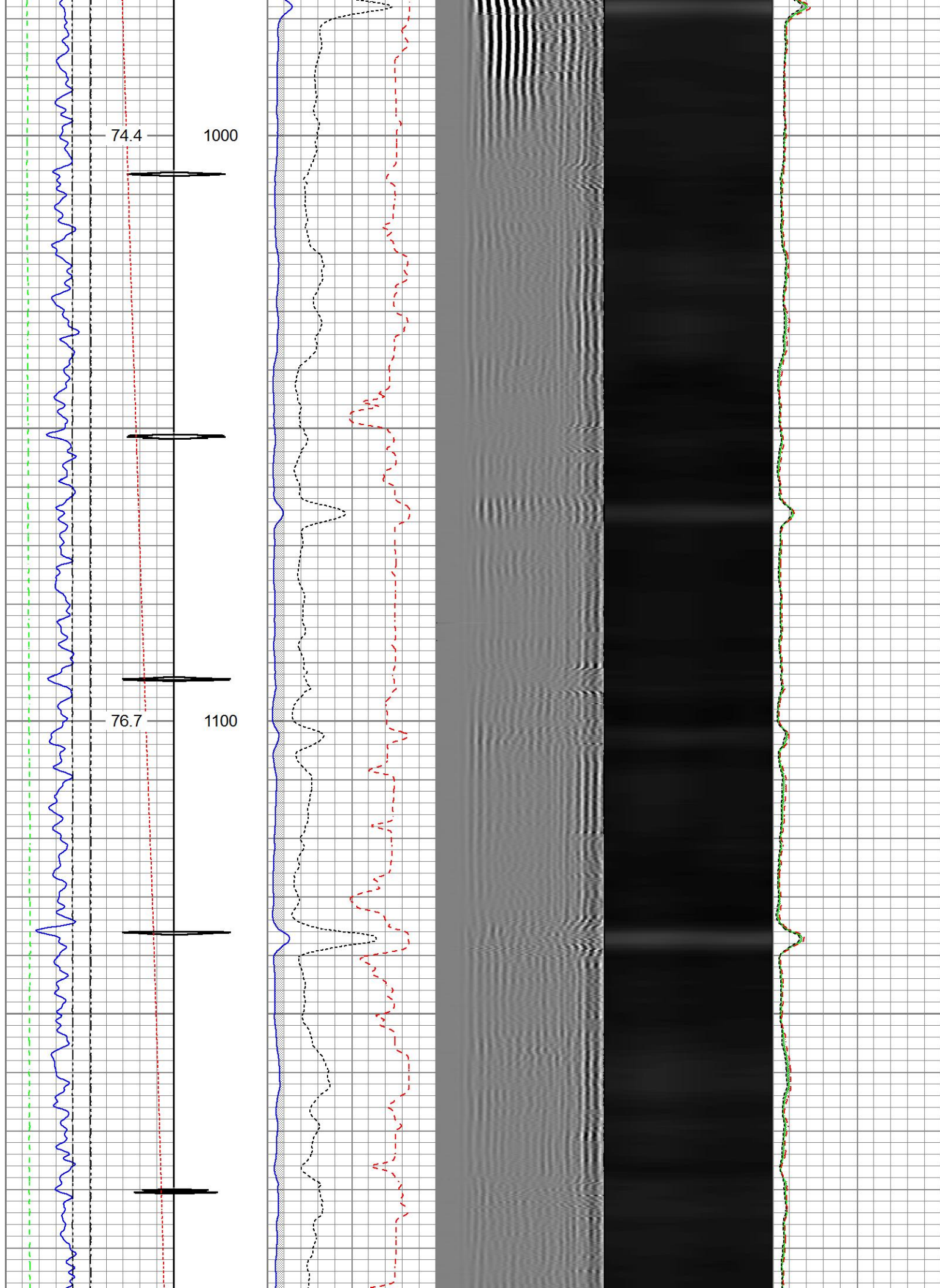


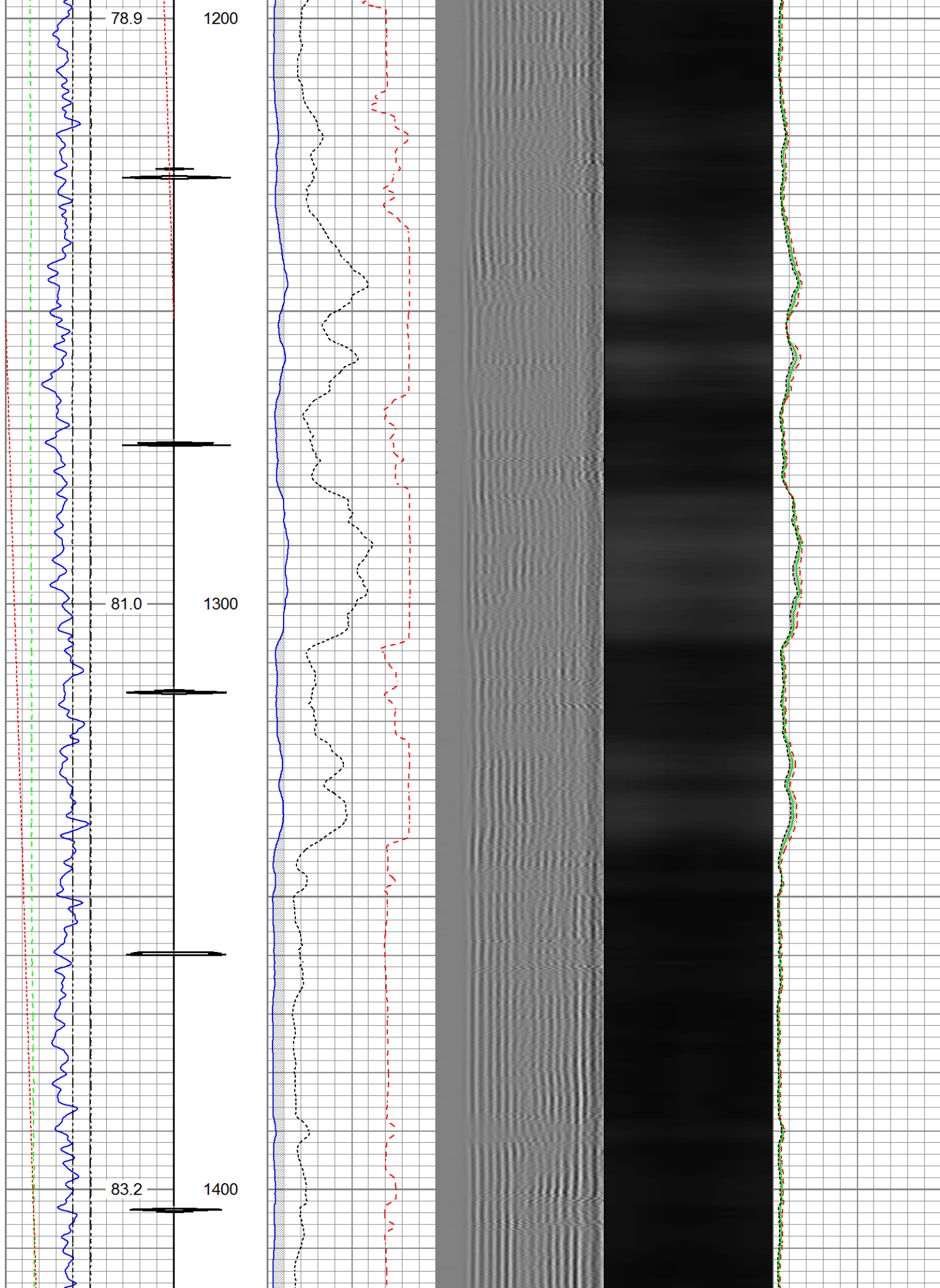




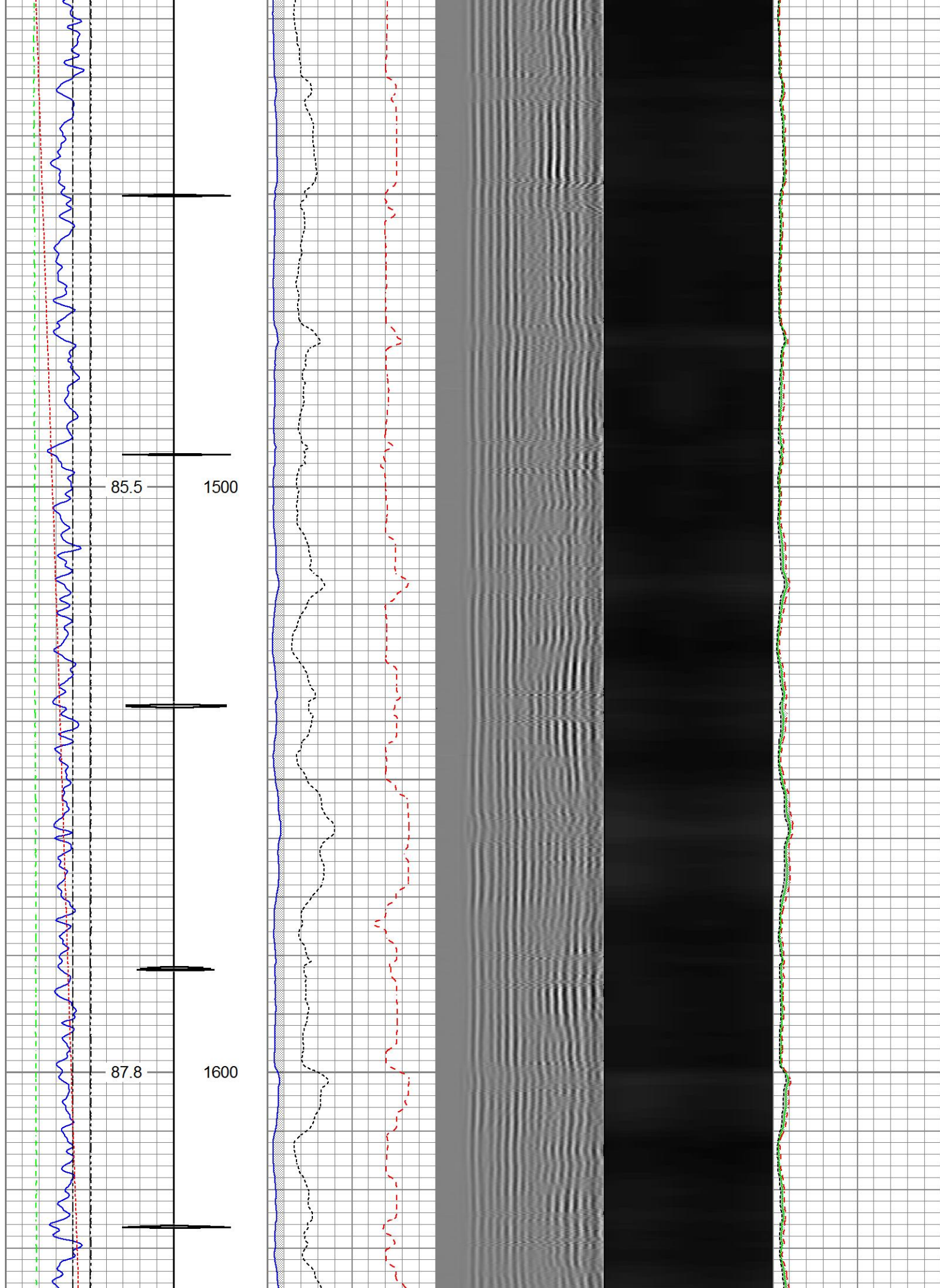


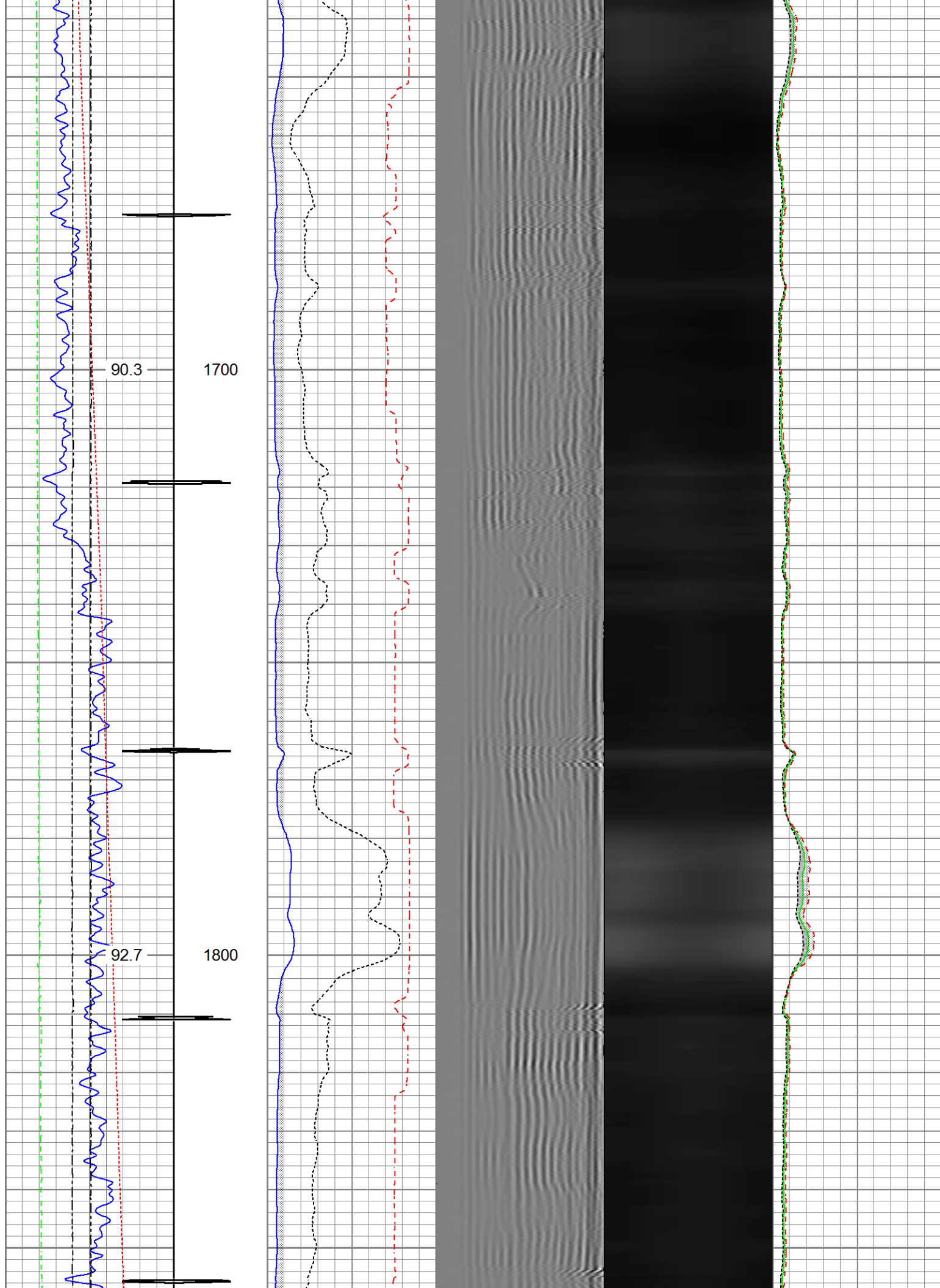




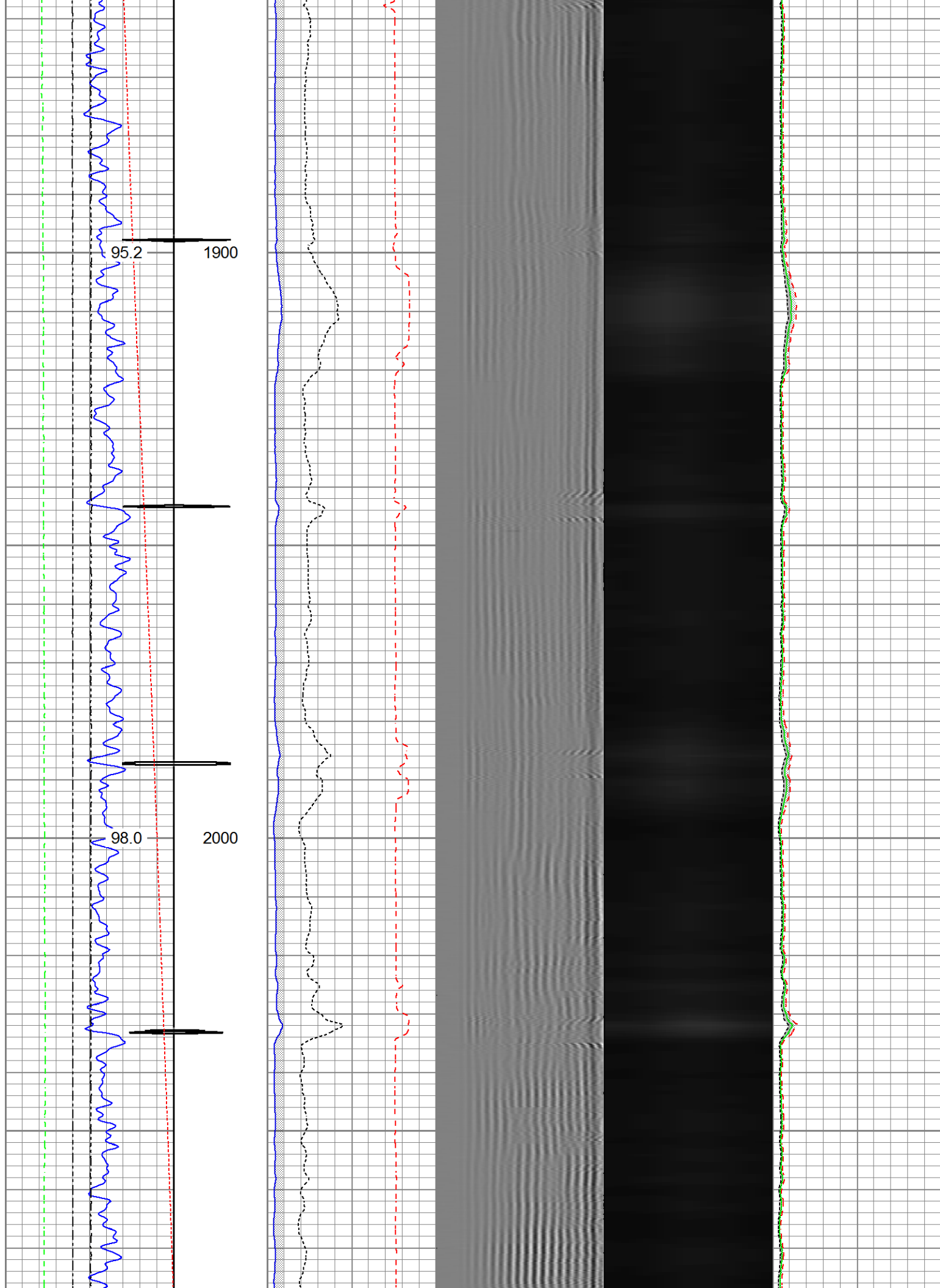


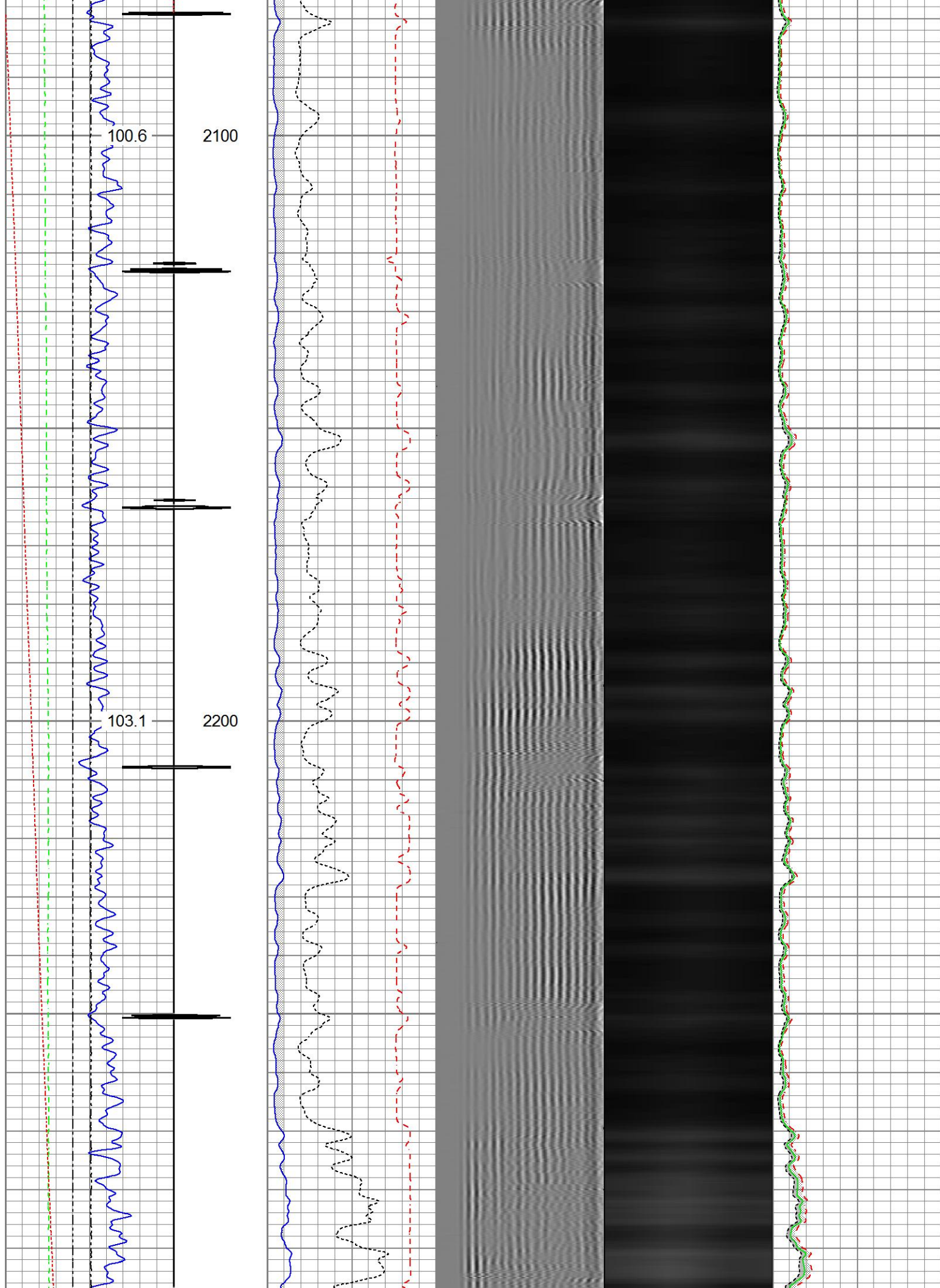




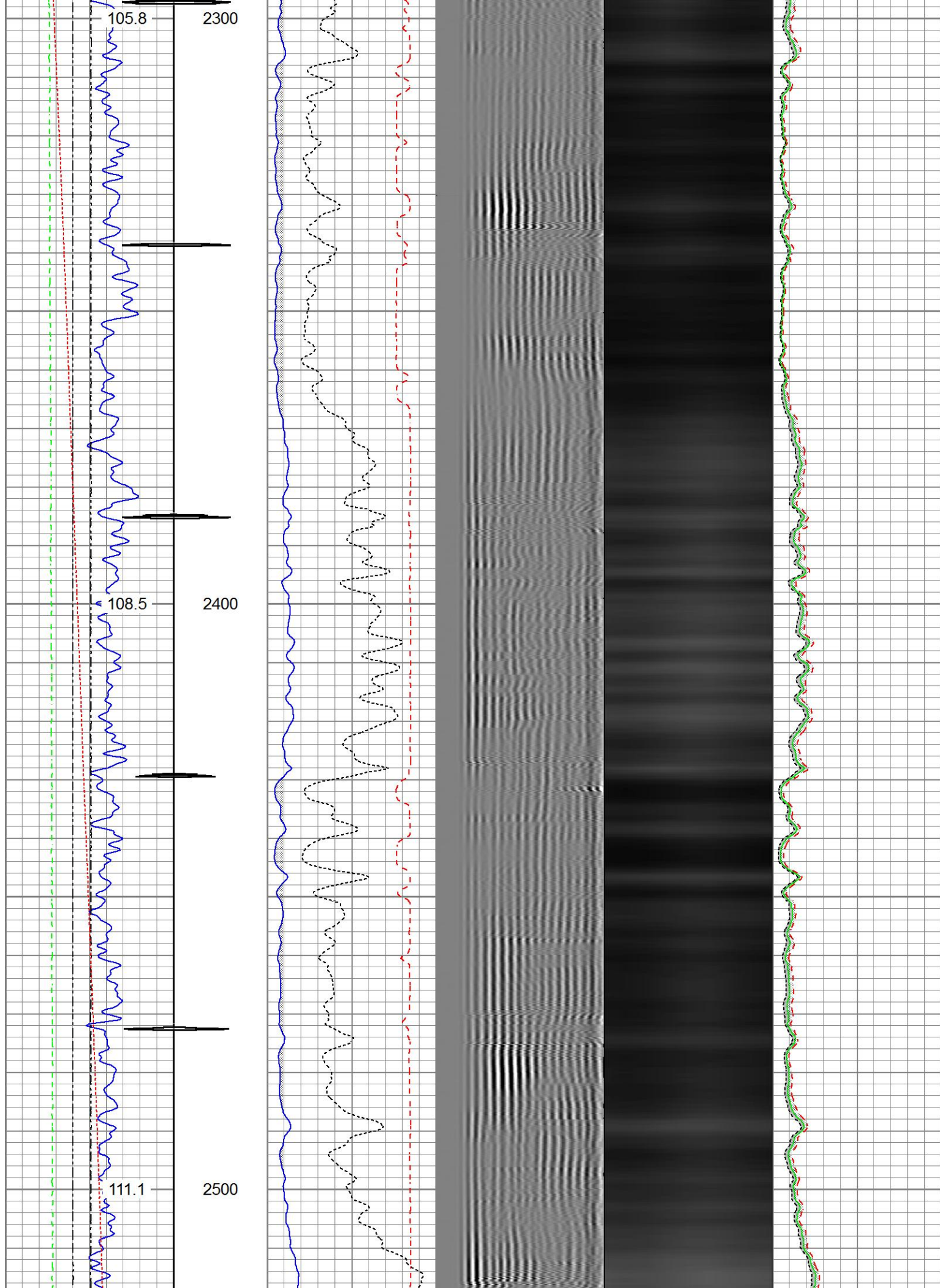


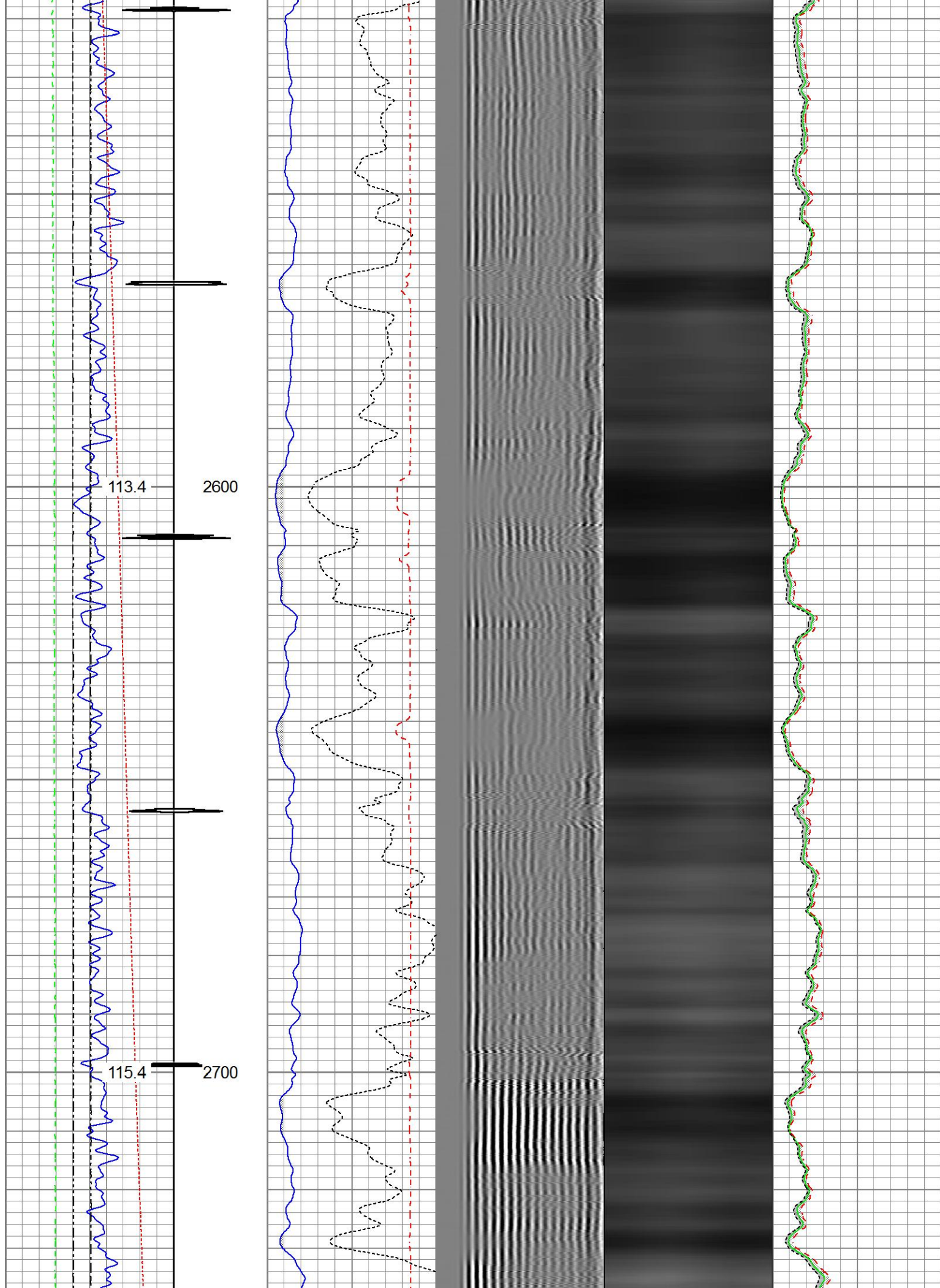




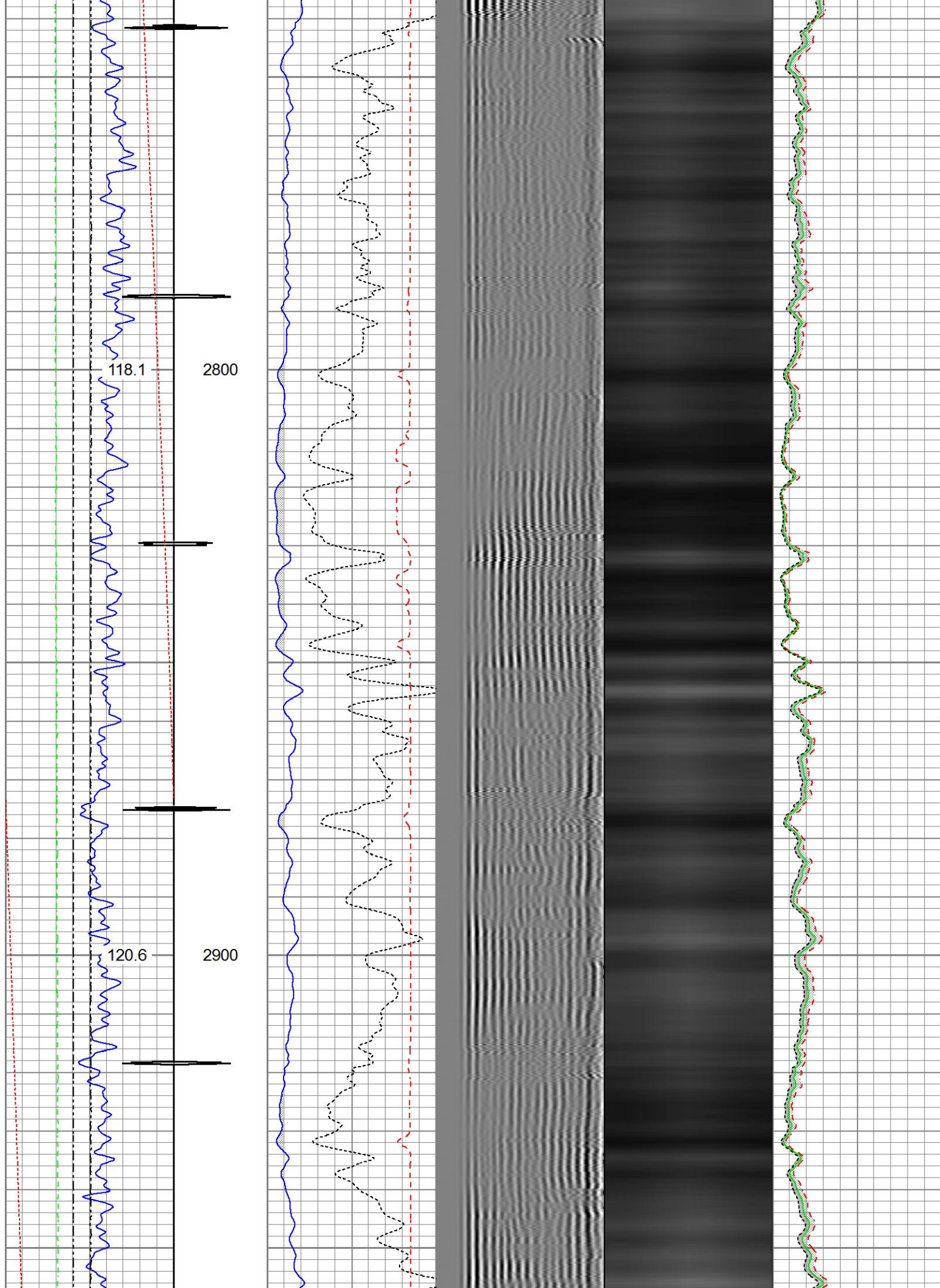


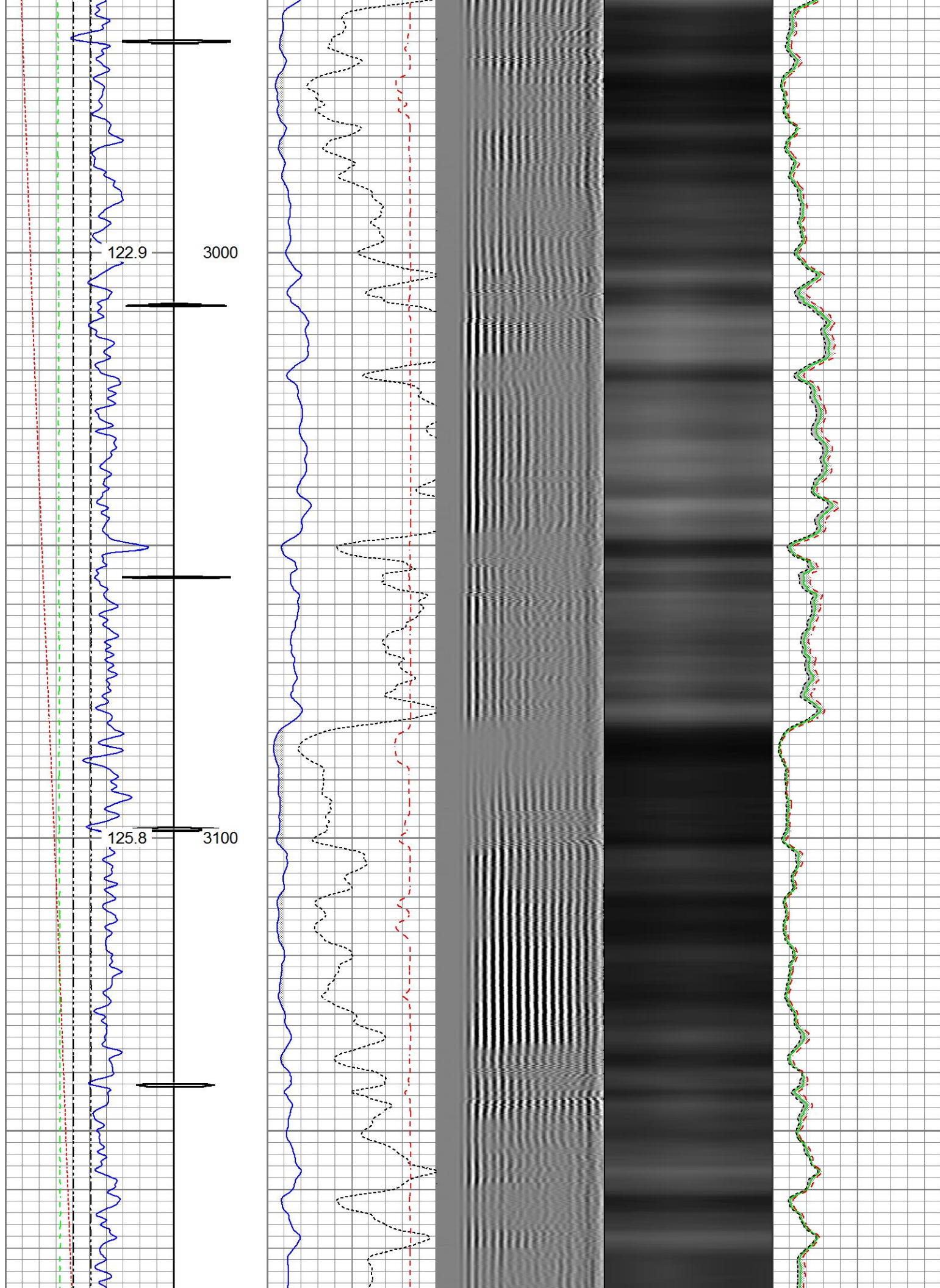




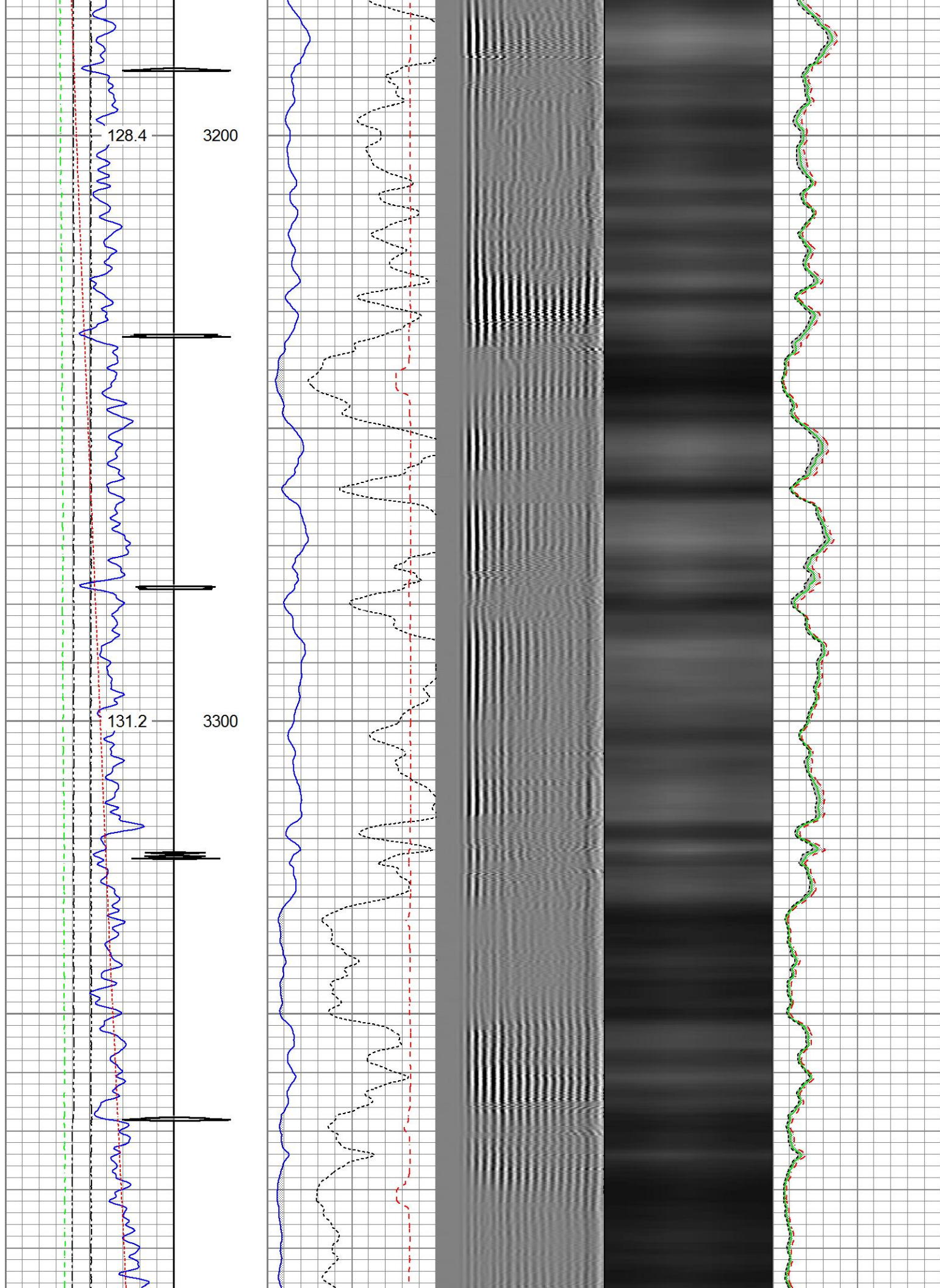


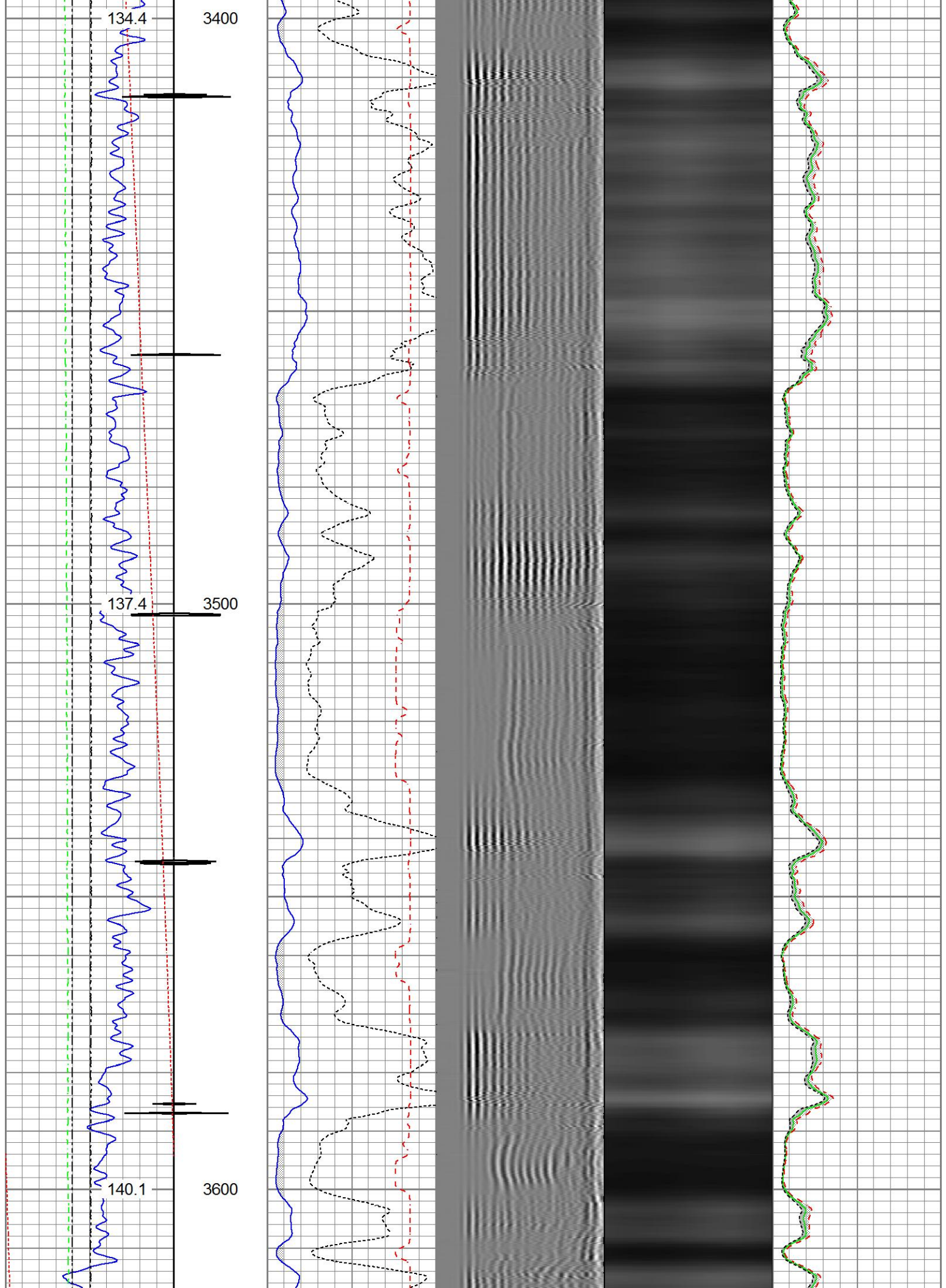




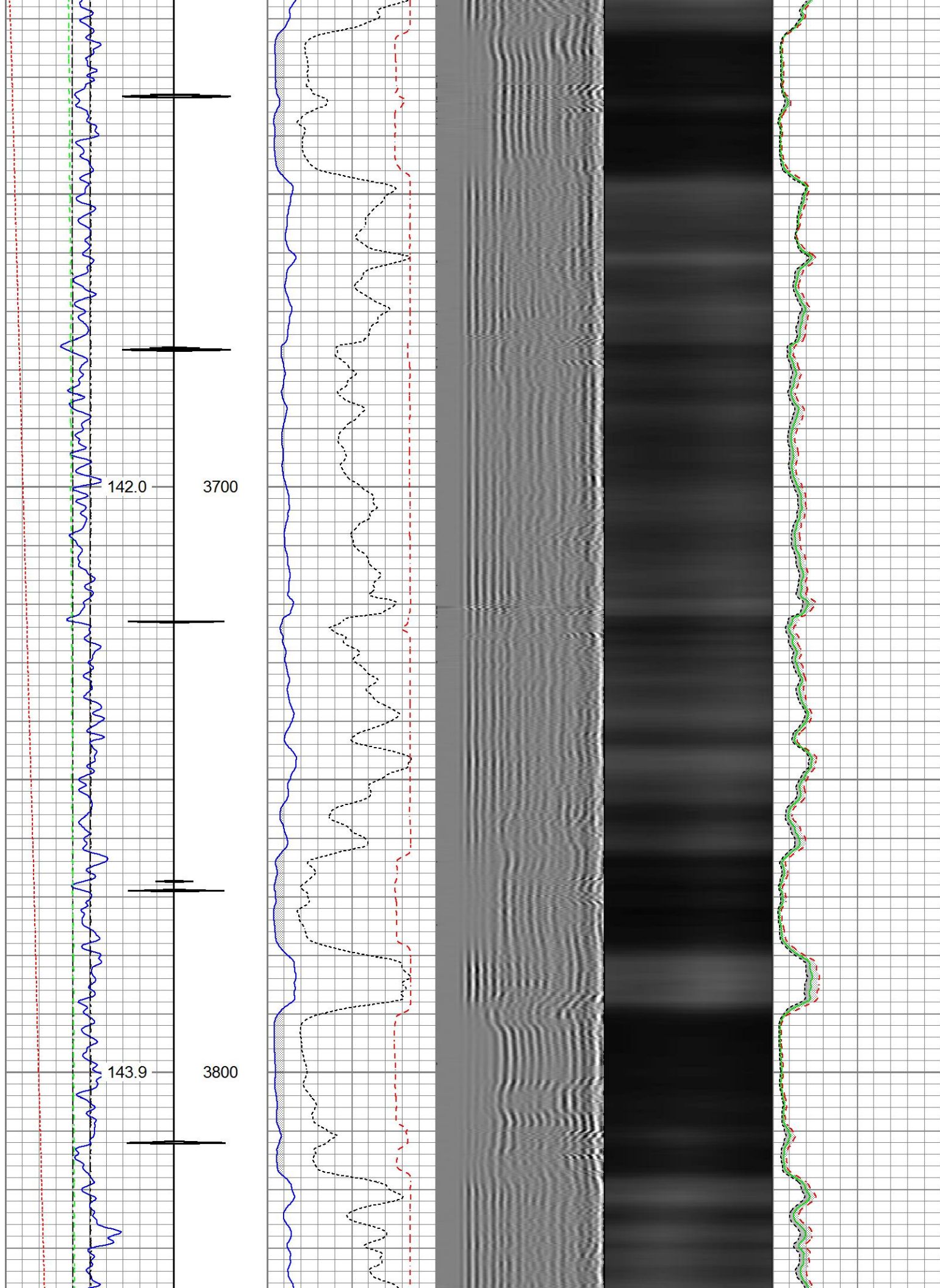


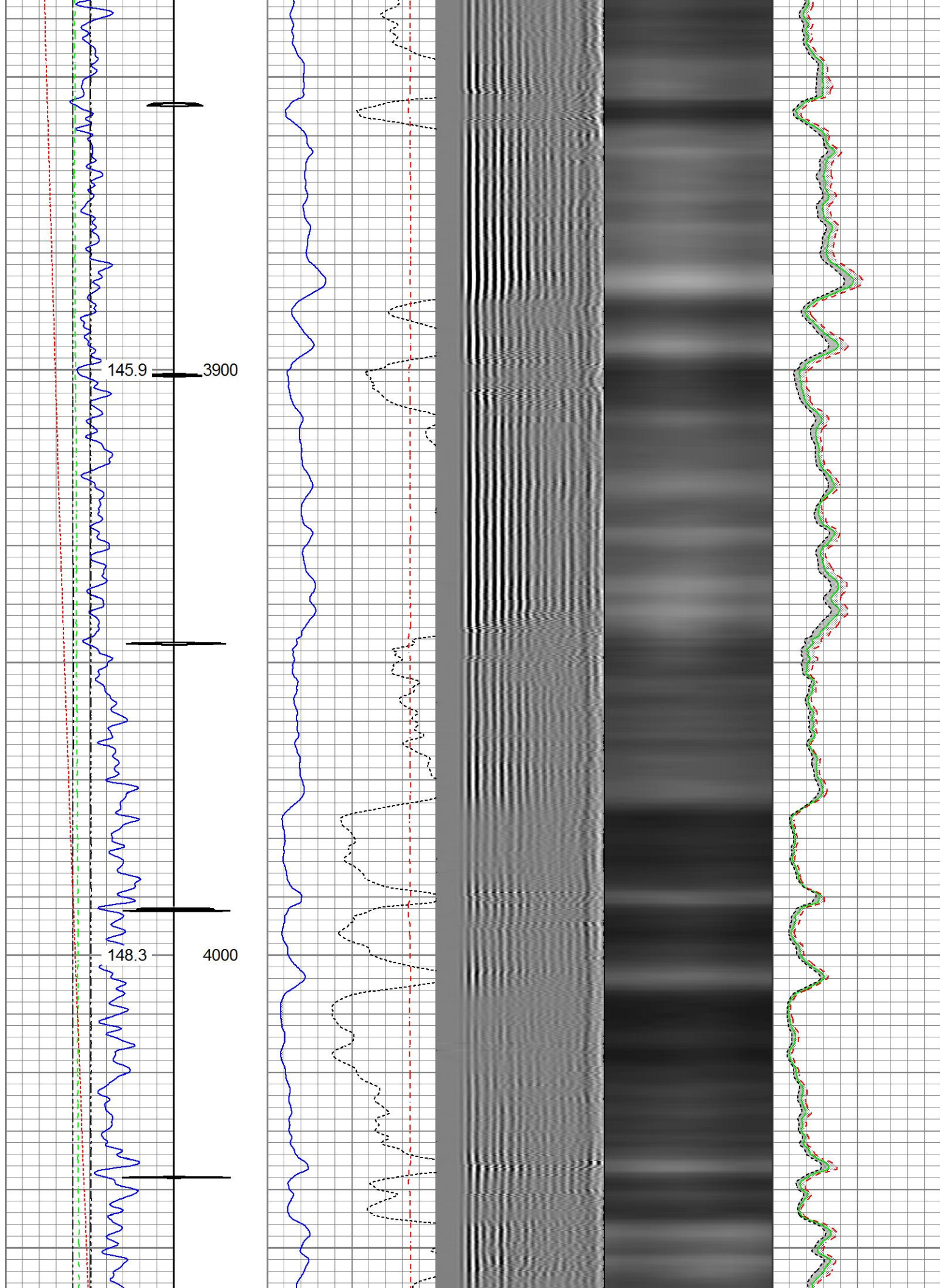




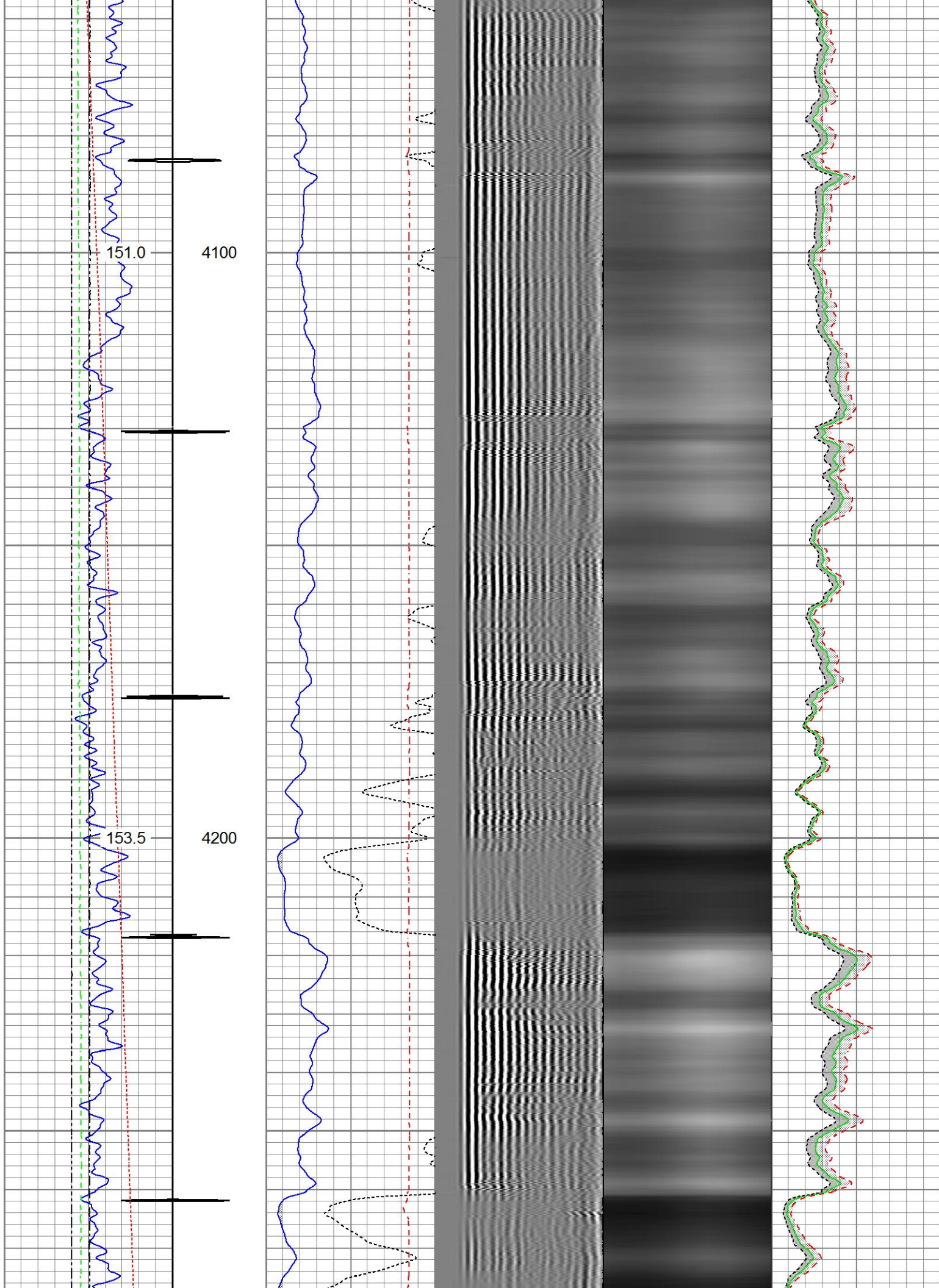


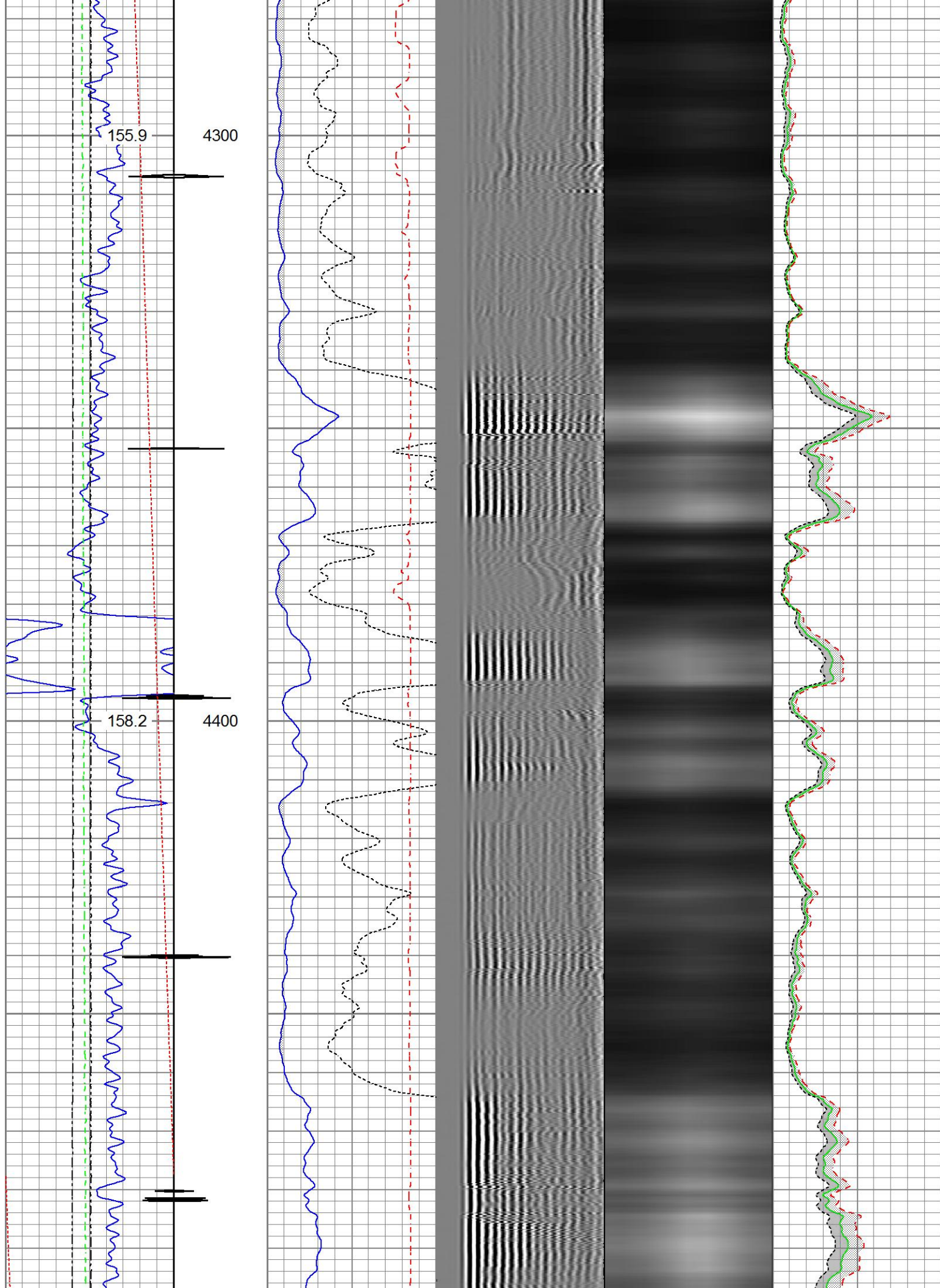




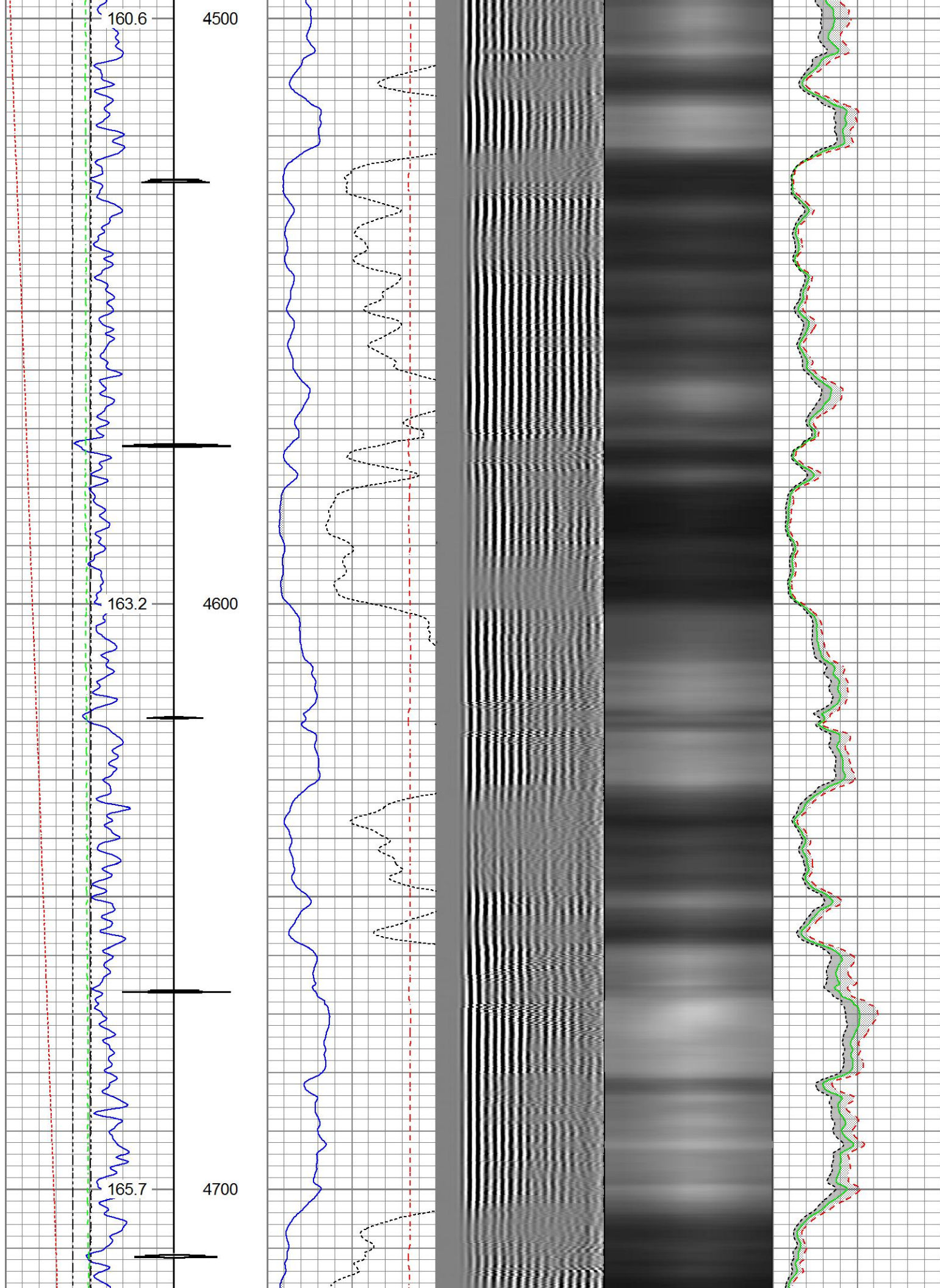


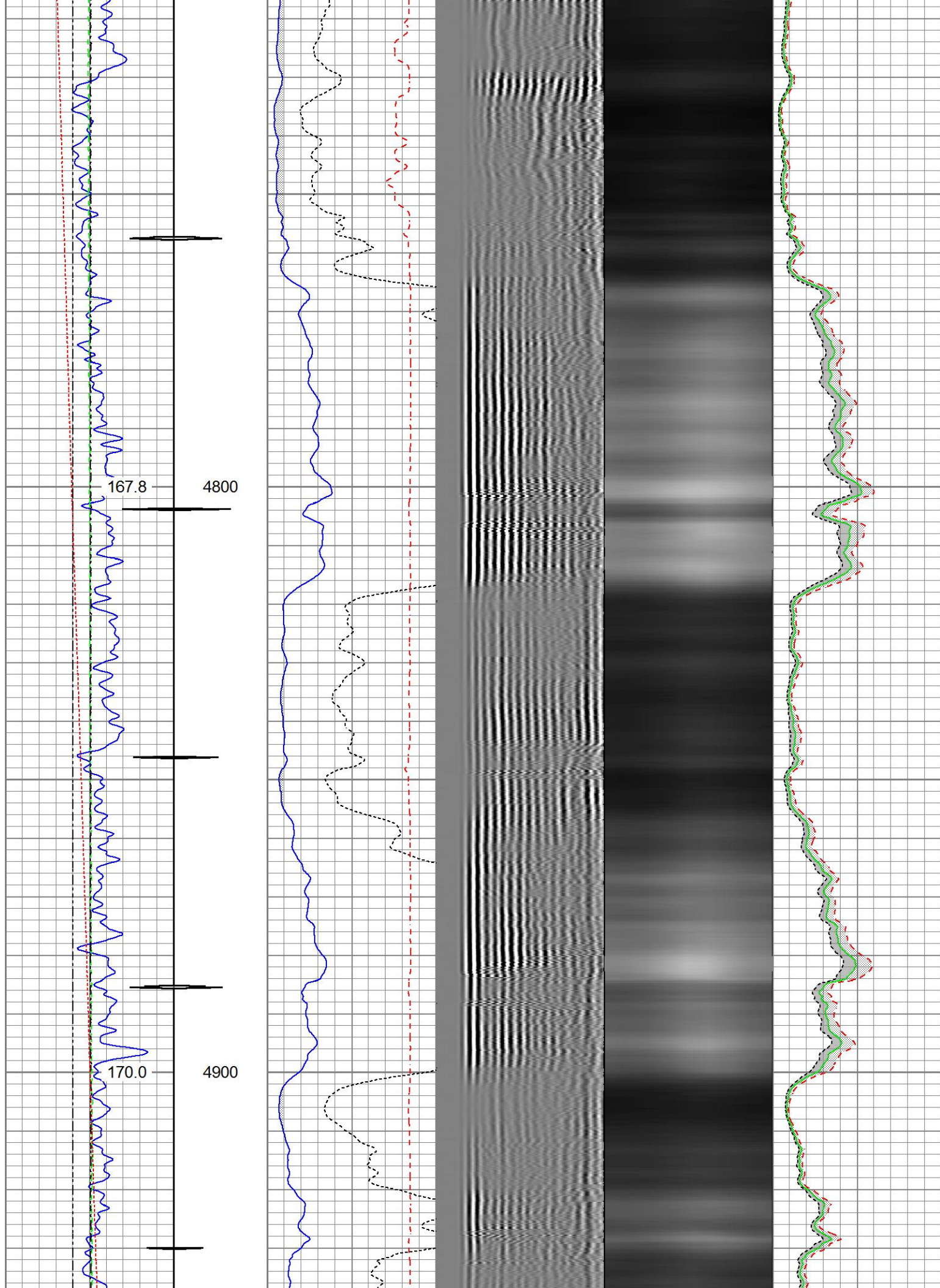




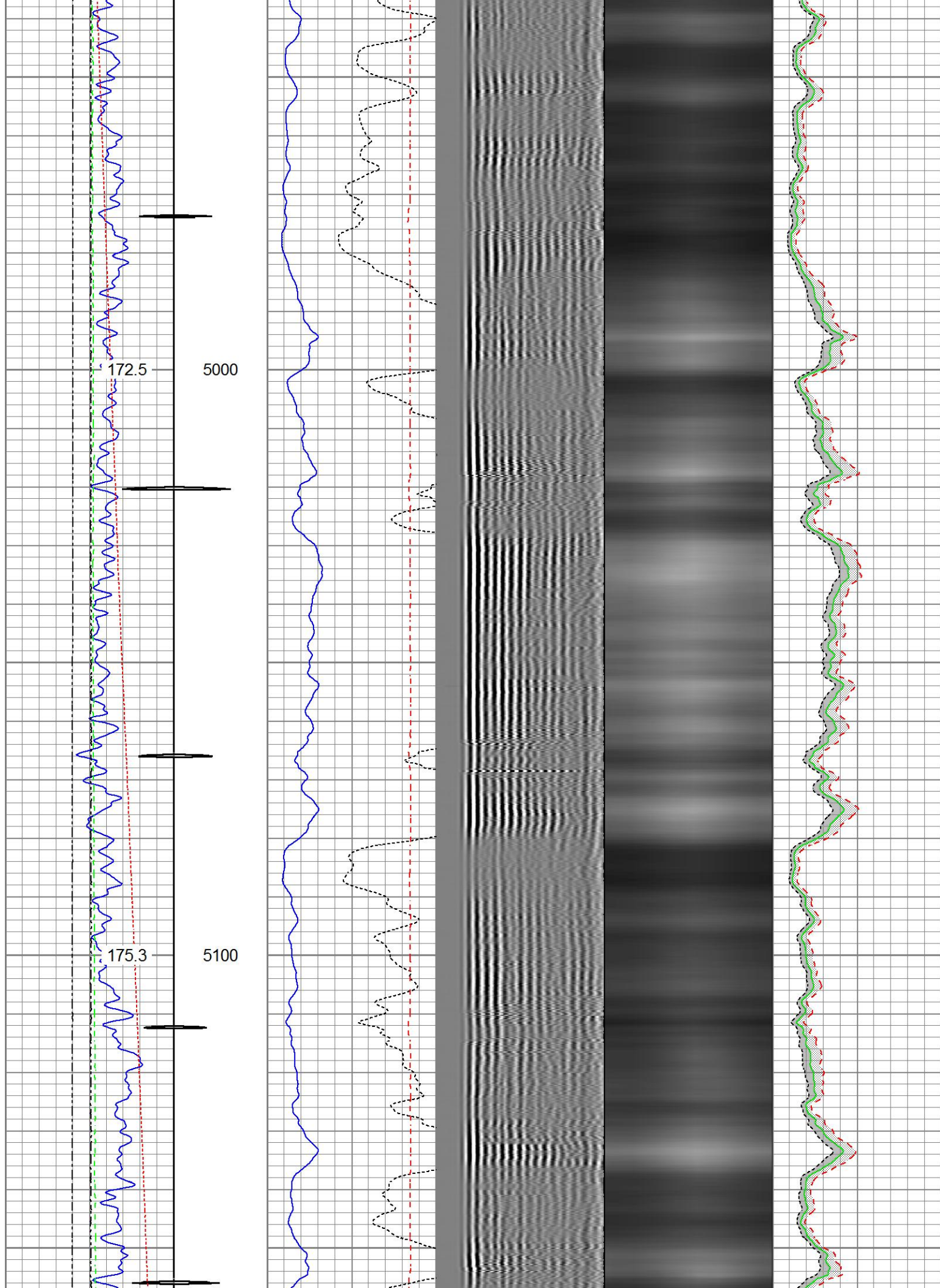


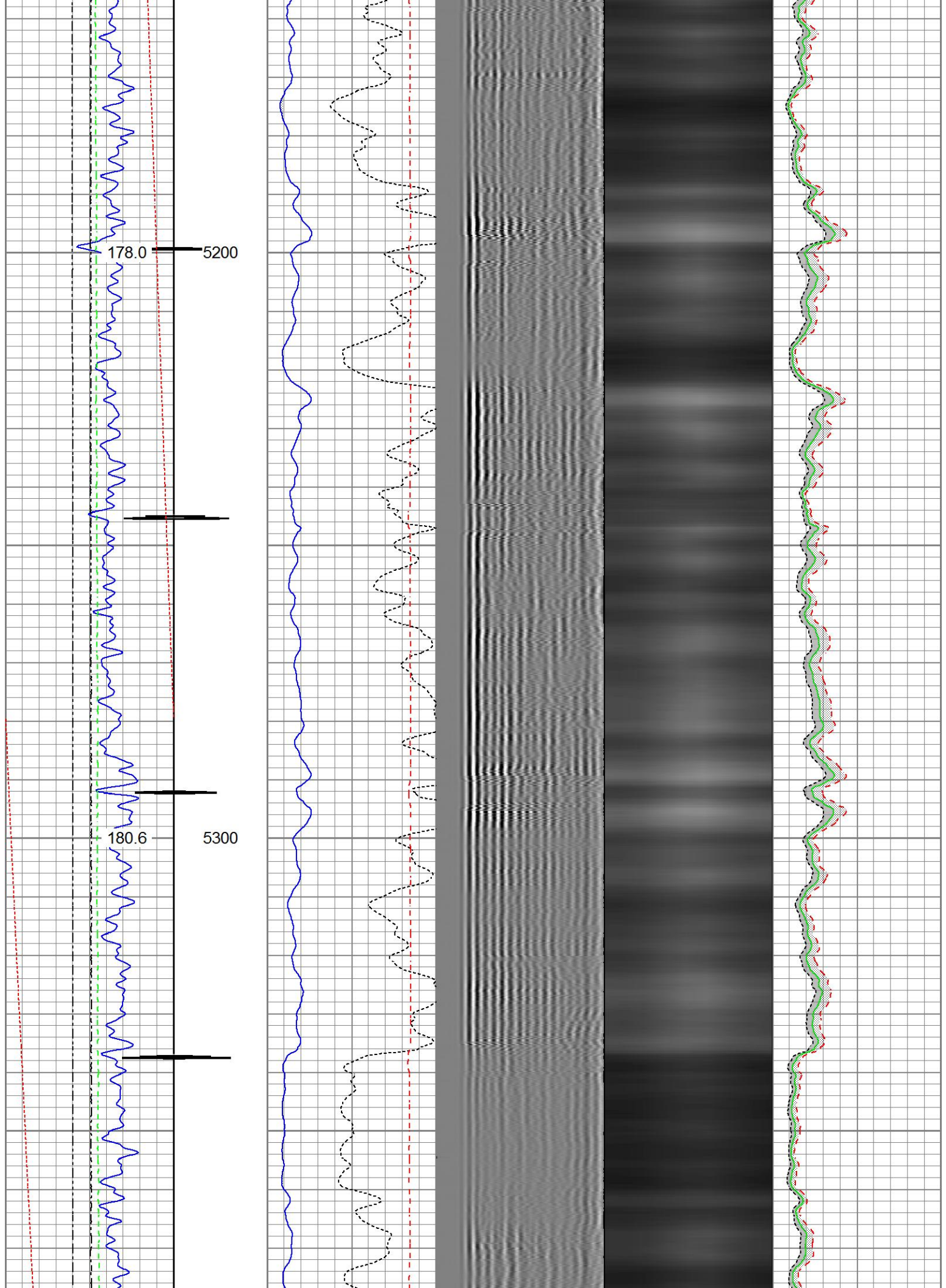




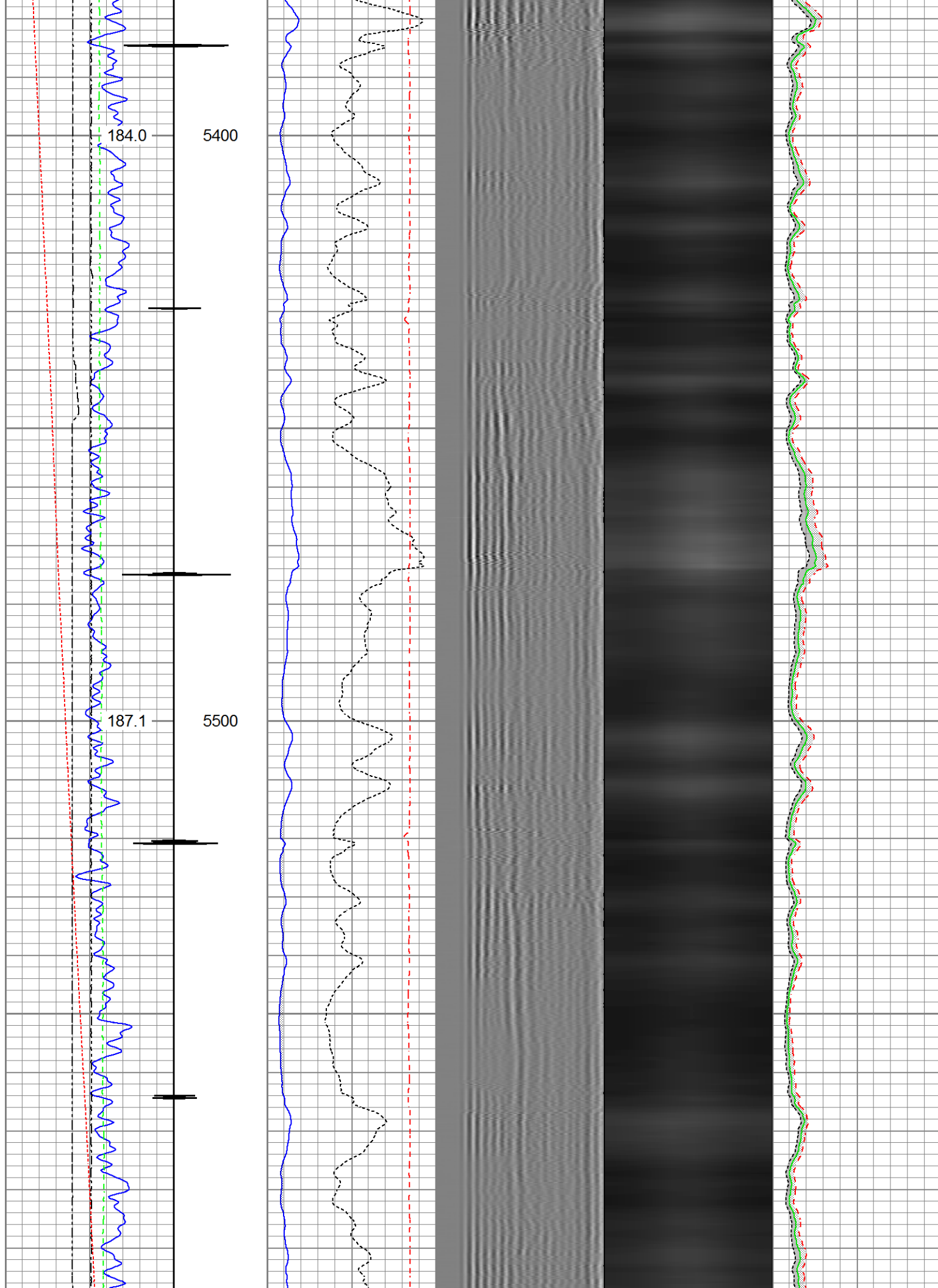


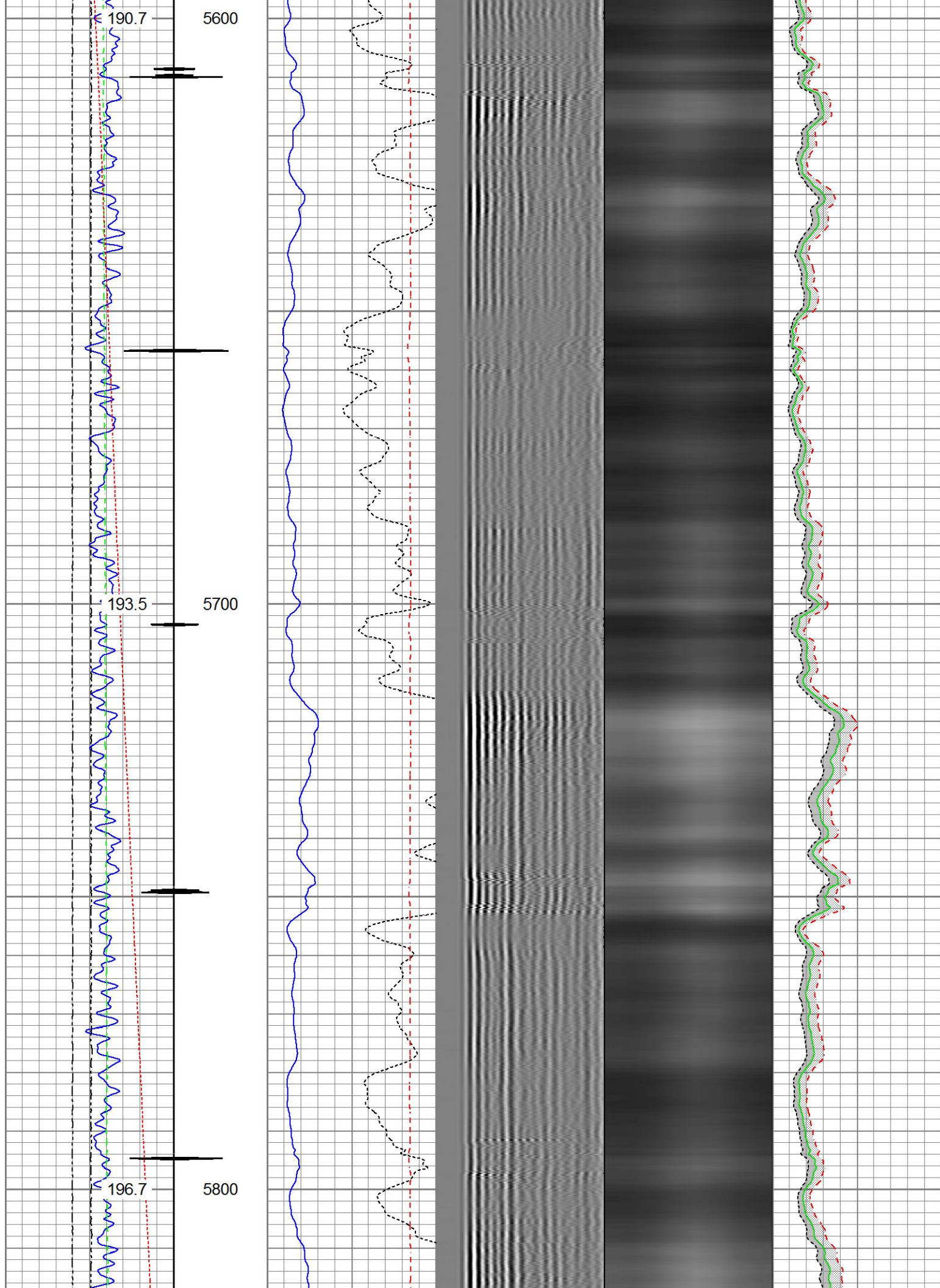




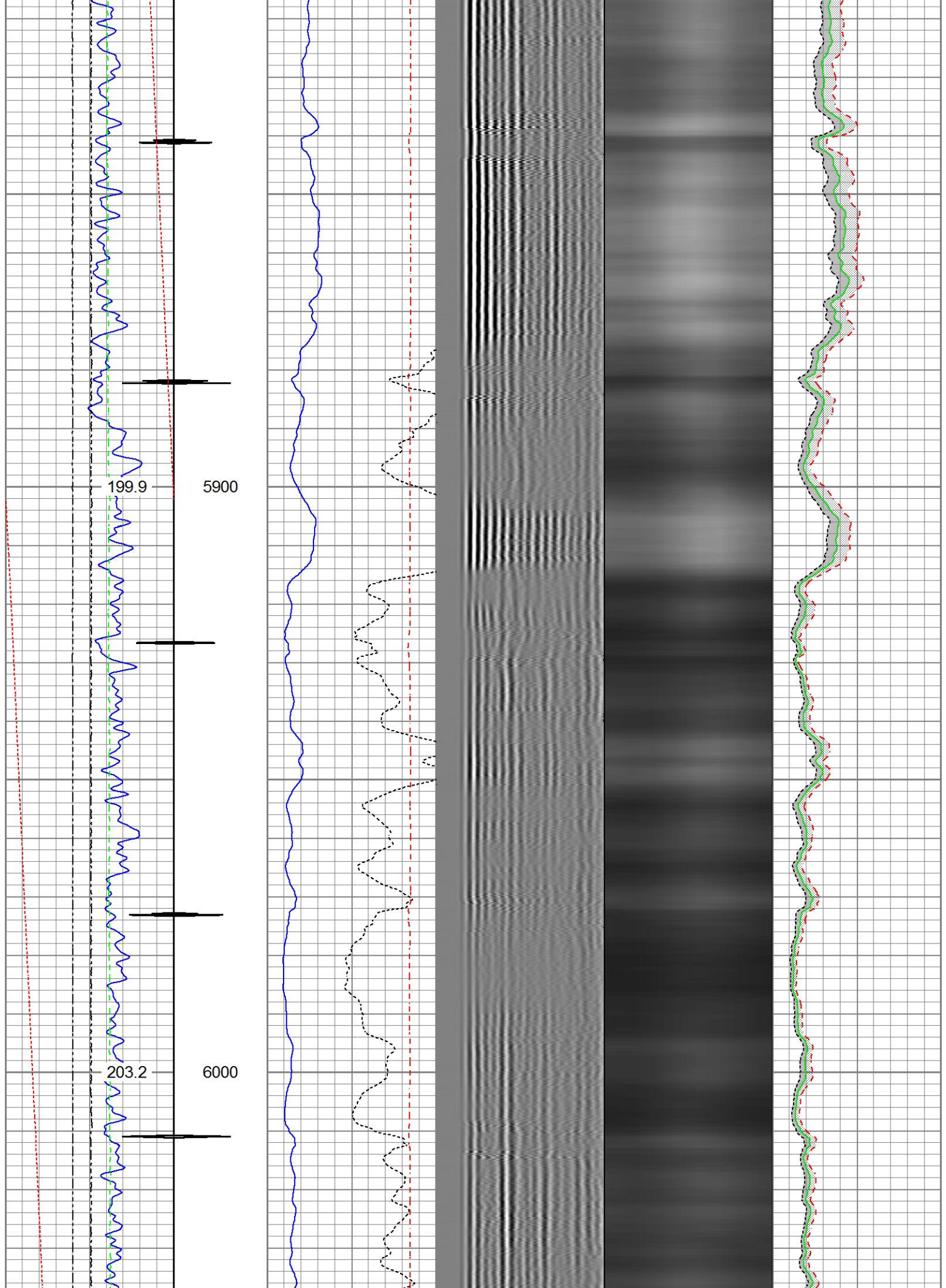


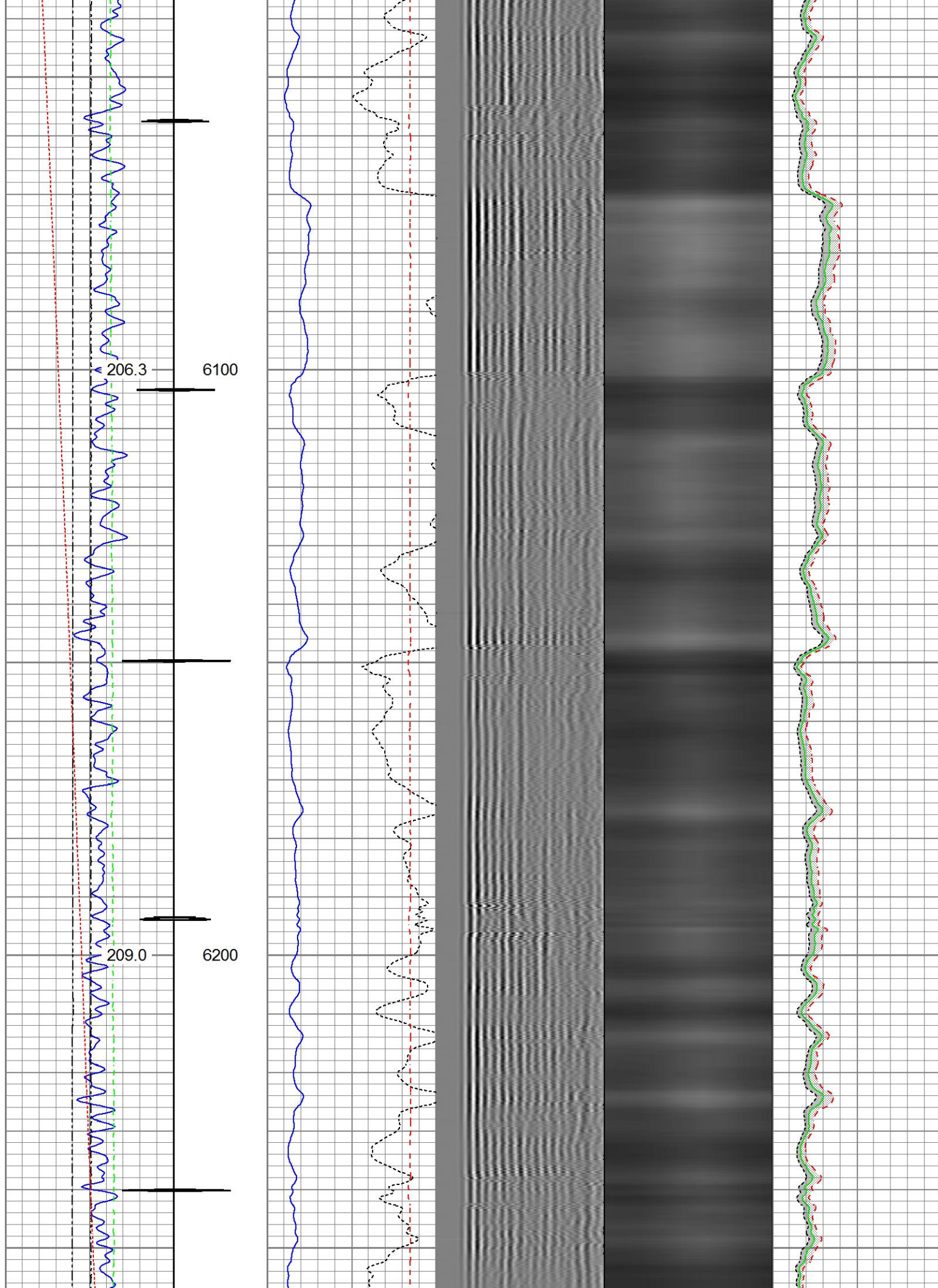




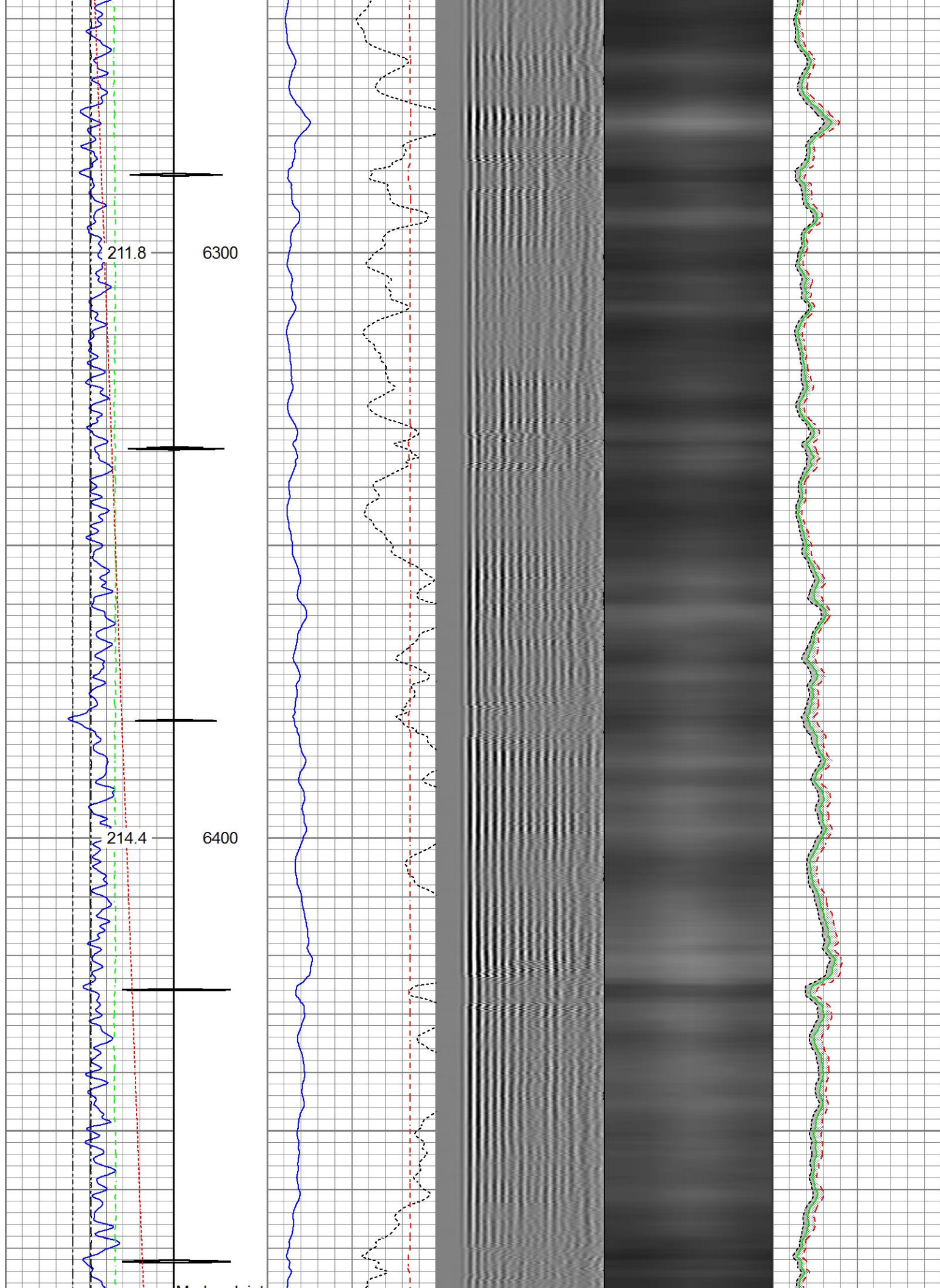


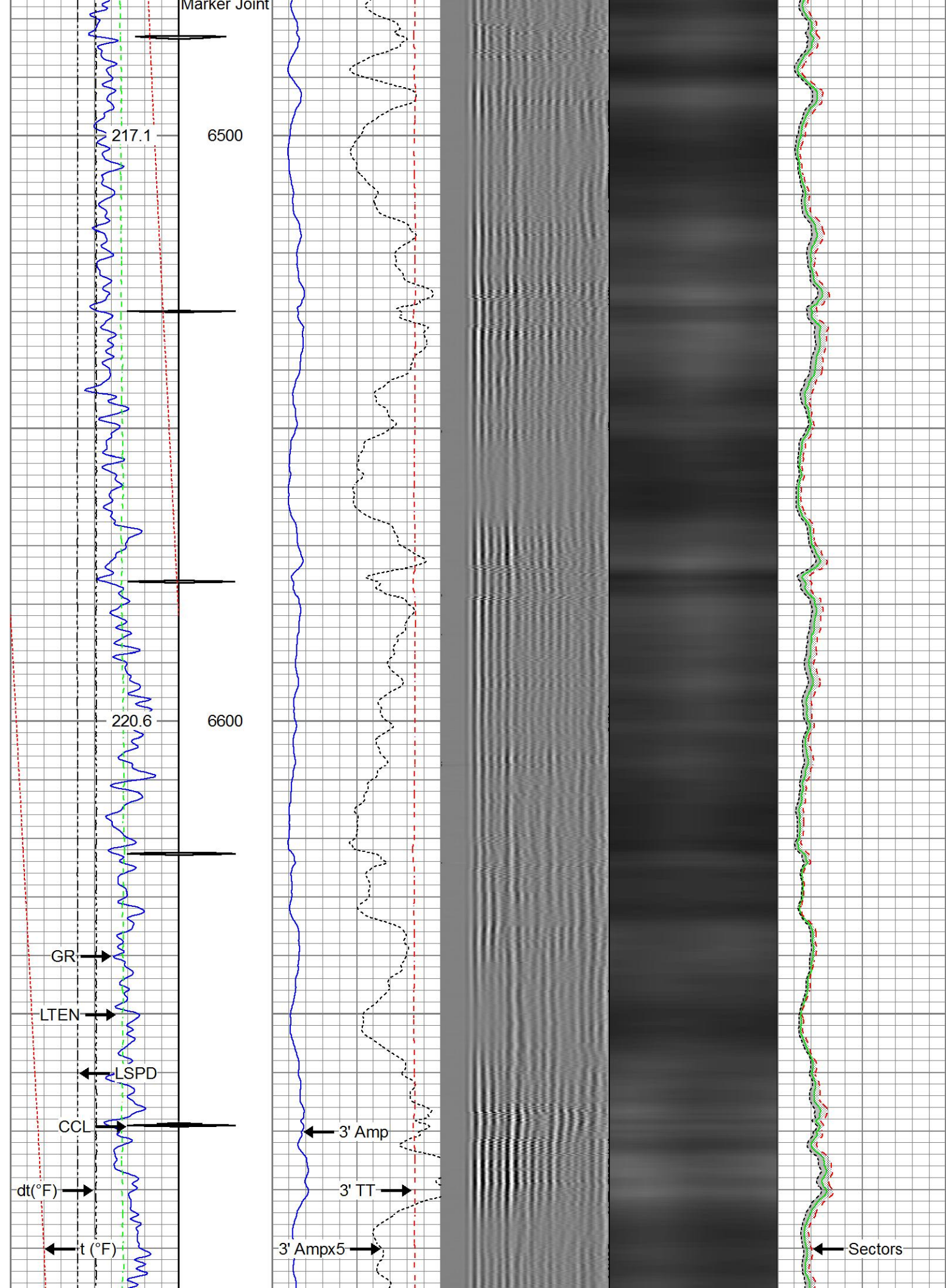




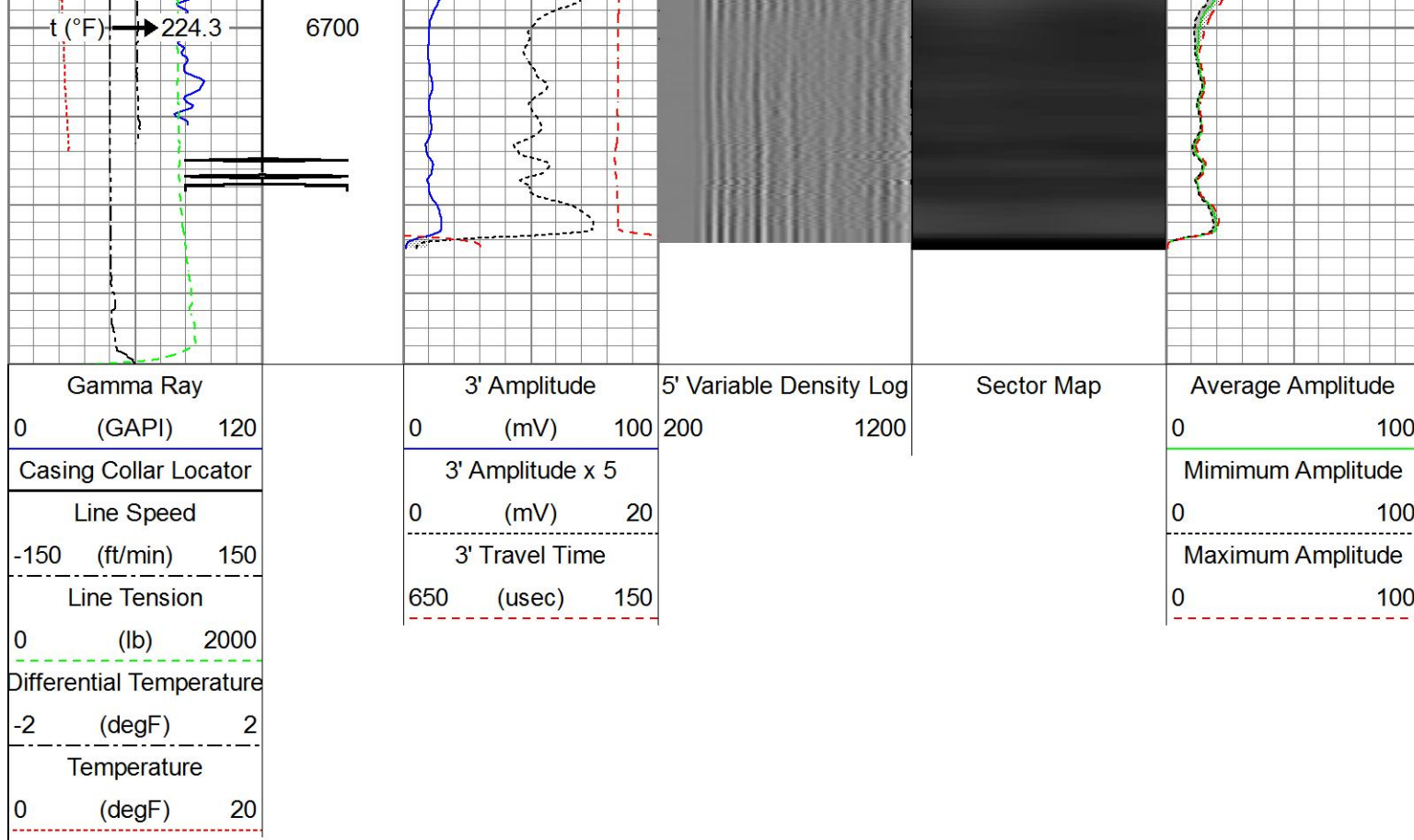








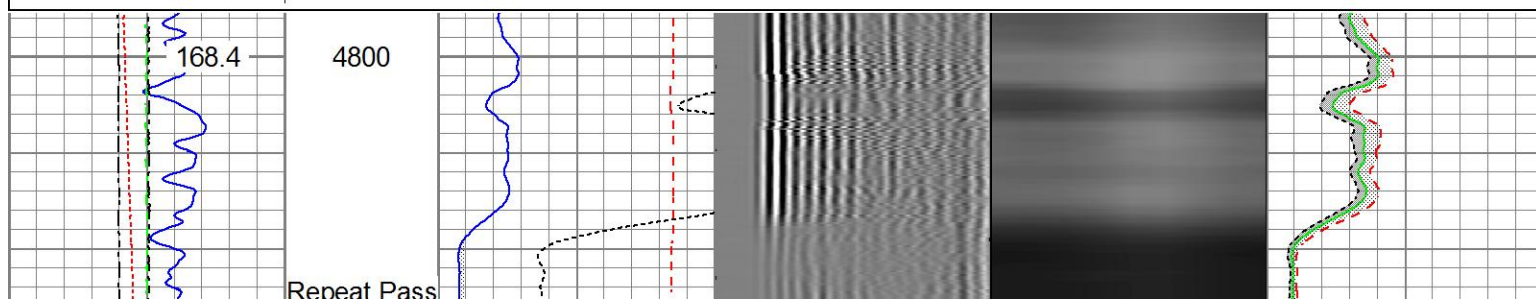
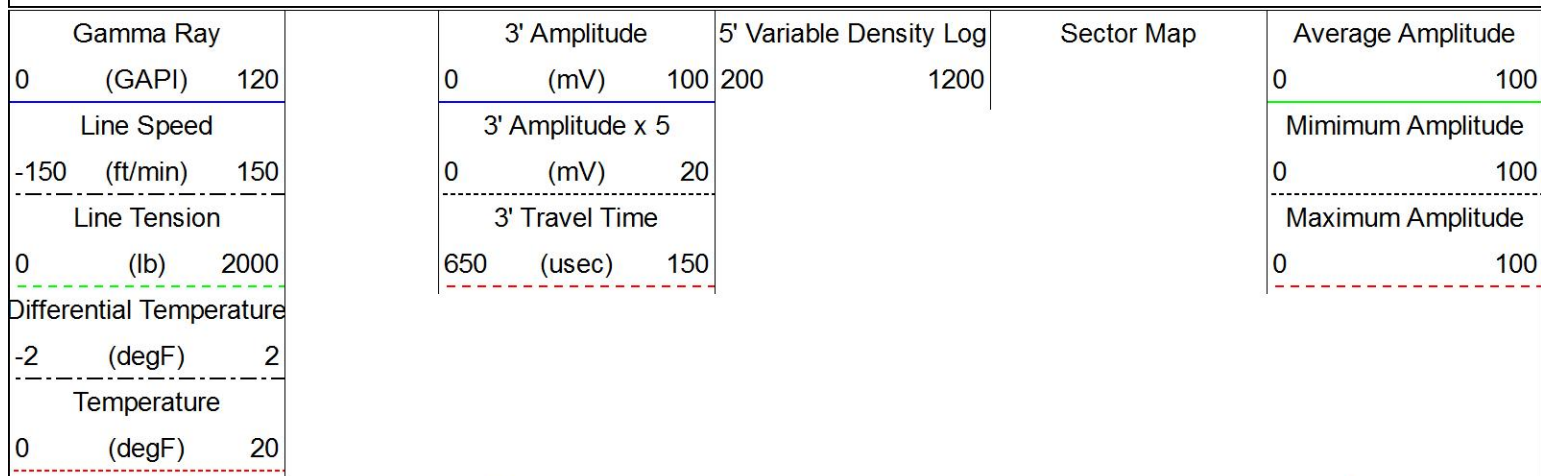


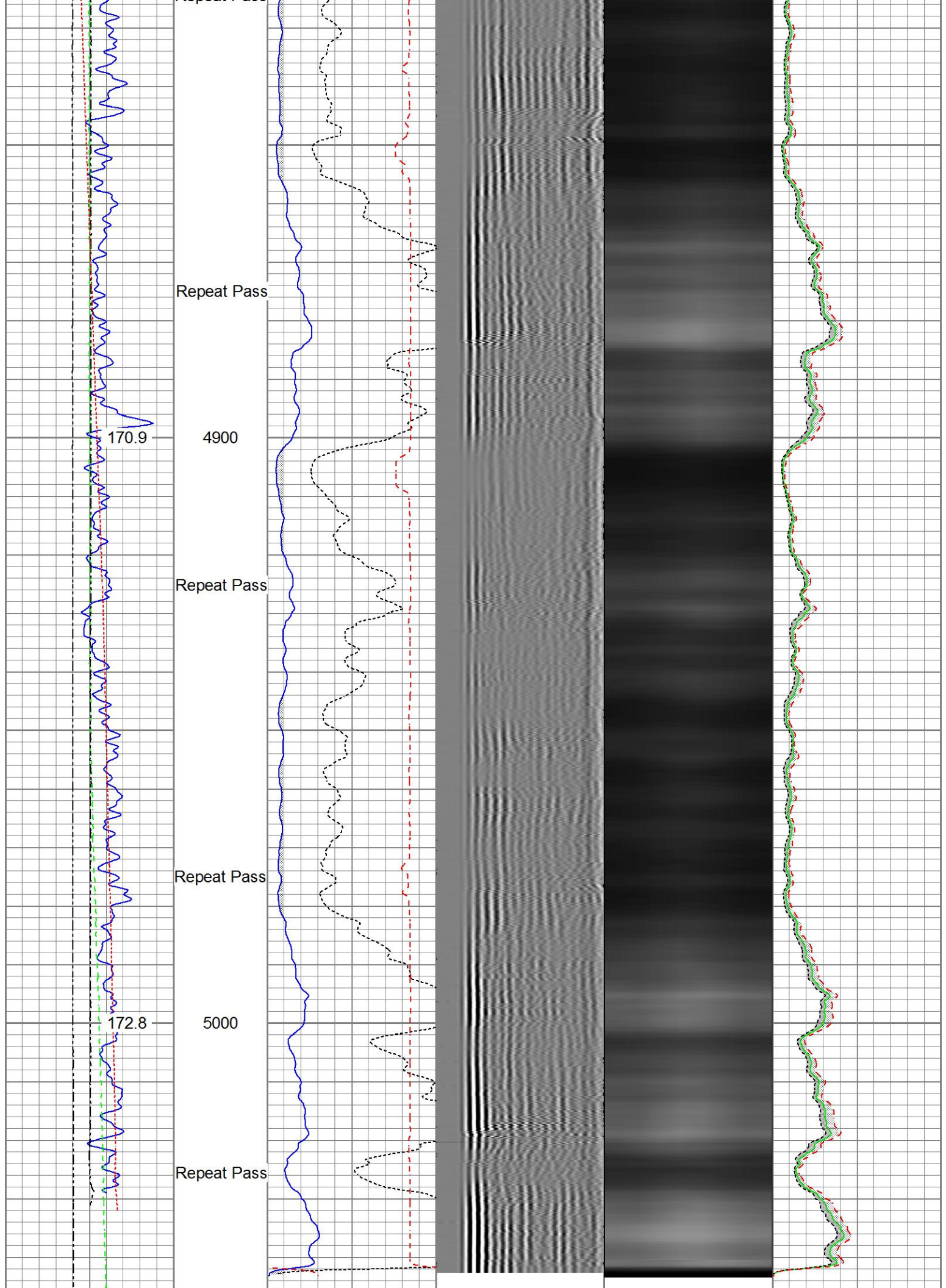


## Repeat Pass

Recorded With 2500 PSI Surface Induced Pressure

Database File src energy\_hood 23c-22-m\src energy\_hood 23c-22-m\_rbl\_07-02-17.db  
 Dataset Pathname pass2.4  
 Presentation Format ros\_rbt004\_sx  
 Dataset Creation Thu Jul 06 08:30:13 2017  
 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
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	Length (ft)	O.D. (in)	Weight (lb)	
GR	25.09		Titan_Electric_Cable_Heads-Titan_1-11/16 Electric Cable Head with 1" Fishing Neck	161.03	1.69	5.40	
			UW_AGS-UW_AGS_001 (219135) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00	
			UW_XTU-UW_XTU_002 (218874) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50	
			UW_PGR-UW_PGR_020 (10013902) Production Gamma Ray	1.92	1.69	9.50	
TEMP	23.69		UW_PRT-PRT_016 (10024052) Platinum Resistance Thermometer	1.04	1.69	5.20	
			UW_PKJ-PKJ_013 Sondex 1-11/16" Ultrawire Knuckle Joint	0.54	1.69	3.50	
CCL	19.36		UW_PRC-DSS_RAC 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00	
			UW_CCL-UW_CCL_028 (10024819) 3-1/8" Ultrawire Casing Collar Locator	1.61	3.13	36.00	
CBLROT	14.51			UW_RBT-UW_RBT_004 (10013454) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.48	3.13	140.00
WVFS8	14.51						
WVFS7	14.51						
WVFS6	14.51						
WVFS5	14.51						
WVFS4	14.51						
WVFS3	14.51						
WVFS2	14.51						
WVFS1	14.51						
WVF3FT	14.51						
WVF5FT	13.51	UW_BUL-UW_BUL_006 (031422) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20		
CBLTEMP	9.38	UW_PRC-DSS_RAC 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00		





Calibration Casing Diameter: 7.000 in  
Calibration Depth: 305.118 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.003	0.844	0.800	71.921	83.974	1.019
5FT	-0.007	0.796	0.800	71.921	88.582	1.389
S1	-0.003	0.698	0.000	100.000	142.764	0.382
S2	-0.004	0.732	0.000	100.000	135.987	0.509
S3	-0.004	0.760	0.000	100.000	130.936	0.474
S4	-0.004	0.778	0.000	100.000	127.832	0.484
S5	-0.003	0.762	0.000	100.000	130.754	0.374
S6	-0.004	0.729	0.000	100.000	136.437	0.531
S7	-0.004	0.689	0.000	100.000	144.340	0.512
S8	-0.003	0.683	0.000	100.000	145.680	0.454

Temperature Calibration Report

Serial Number: 10024052  
Tool Model: PRT\_016  
Performed: Sun Oct 11 12:16:39 2015

Point #	Reading		Reference	
1	12242.00	cps	68.00	degF
2	18329.00	cps	104.00	degF
3	29563.00	cps	176.00	degF
4	41222.00	cps	248.00	degF
5	52988.00	cps	320.00	degF
6	58824.00	cps	356.00	degF
7		cps		degF
8		cps		degF
9		cps		degF
10		cps		degF

Gamma Ray Calibration Report

Serial Number: 10013902  
Tool Model: UW\_PGR\_020  
Performed: (Not Performed)

Calibrator Value: 1.0 GAPI

Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps

Sensitivity: 1.0000 GAPI/cps



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