



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 Land 15C-32HZ				Well Land 15C-32HZ			
Field Wattenberg				Field Wattenberg			
County Weld				County Weld			
State Colorado				State Colorado			
Location:				API # : 05-123-42304			
SEC 32 TWP 2N RGE 66W				Other Services Gauge Ring CNL			
Permanent Datum		Ground Level		Elevation		Elevation	
Log Measured From		Kelly Bushing		20 FT		K.B. 4933'	
Drilling Measured From		Kelly Bushing				D.F. 4932'	
						G.L. 4913'	
Date				03-SEP-2016			
Run Number				Two			
Depth Driller				13084 FT			
Depth Logger				7853 FT			
Bottom Logged Interval				7852 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				62 FT			
Time Well Ready				ROA			
Time Logger on Bottom				09:00			
Equipment Number				HD-0325			
Location				Fort Lupton, CO			
Recorded By				Sam Hopper			
Witnessed By				Noe Pulido			
Borehole Record				Tubing Record			
Run Number		Bit		From		To	
Casing Record		Size (in)		Wgt (lbs/ft)		Grade	
Surface Casing		9 5/8		36		JD BTC	
Intermediate #1		5 1/2		17		LTC	
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

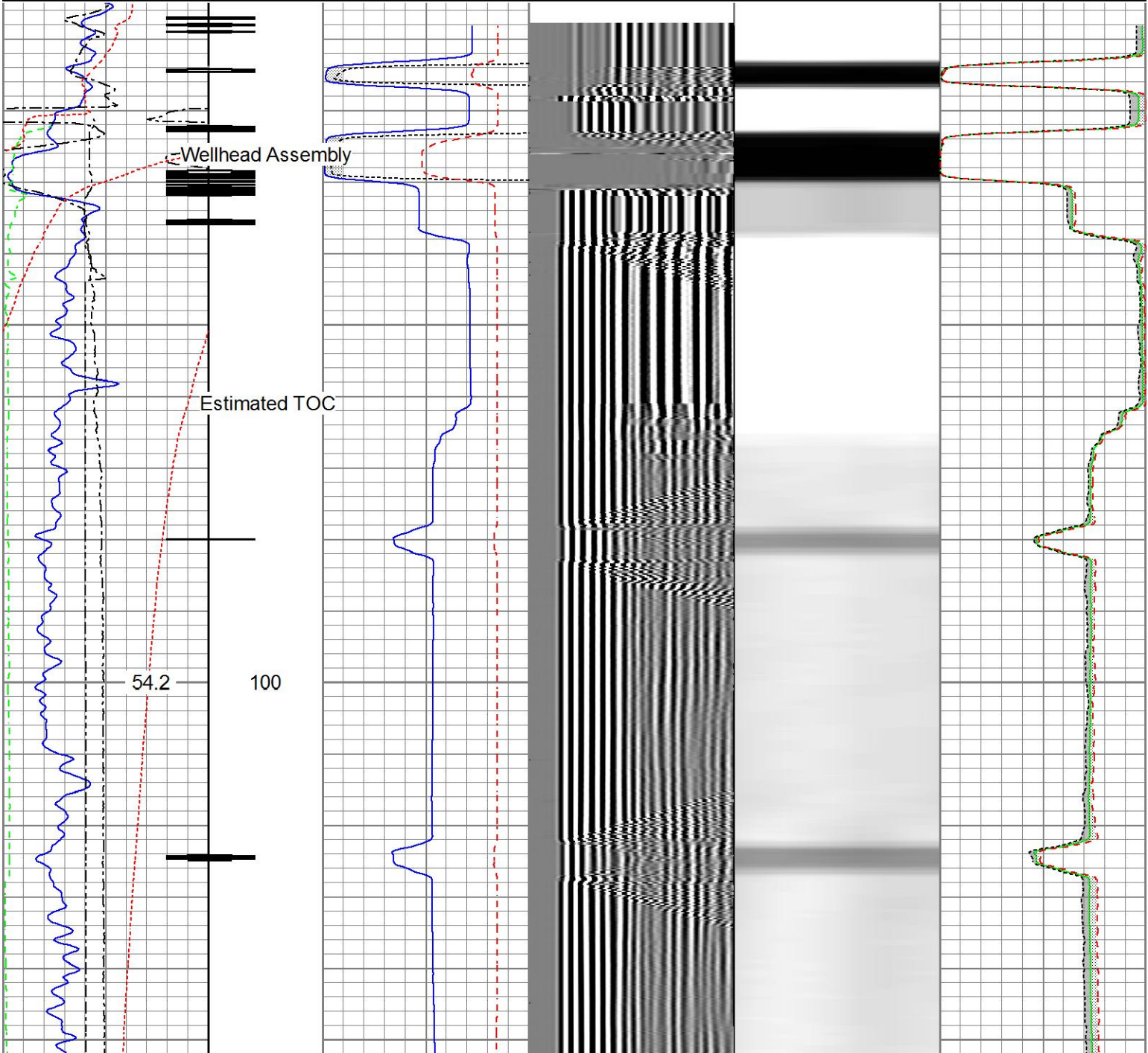
Log ran as per customer request  
Depth referenced to Casing Tally reported Marker Joint Top at 7015 FT  
Adjusted +11 FT to correlate with Marker Joint  
Gauge Ring/Junk Basket ran to 7843 FT with no debris  
Log ran from as deep as possible in heel to surface  
Log ran with 2800 PSI surface induced pressure  
Logging tools were clean and free of any debris upon completion of operations  
  
Thank you for choosing Reliance Oilfield Services, LLC!!



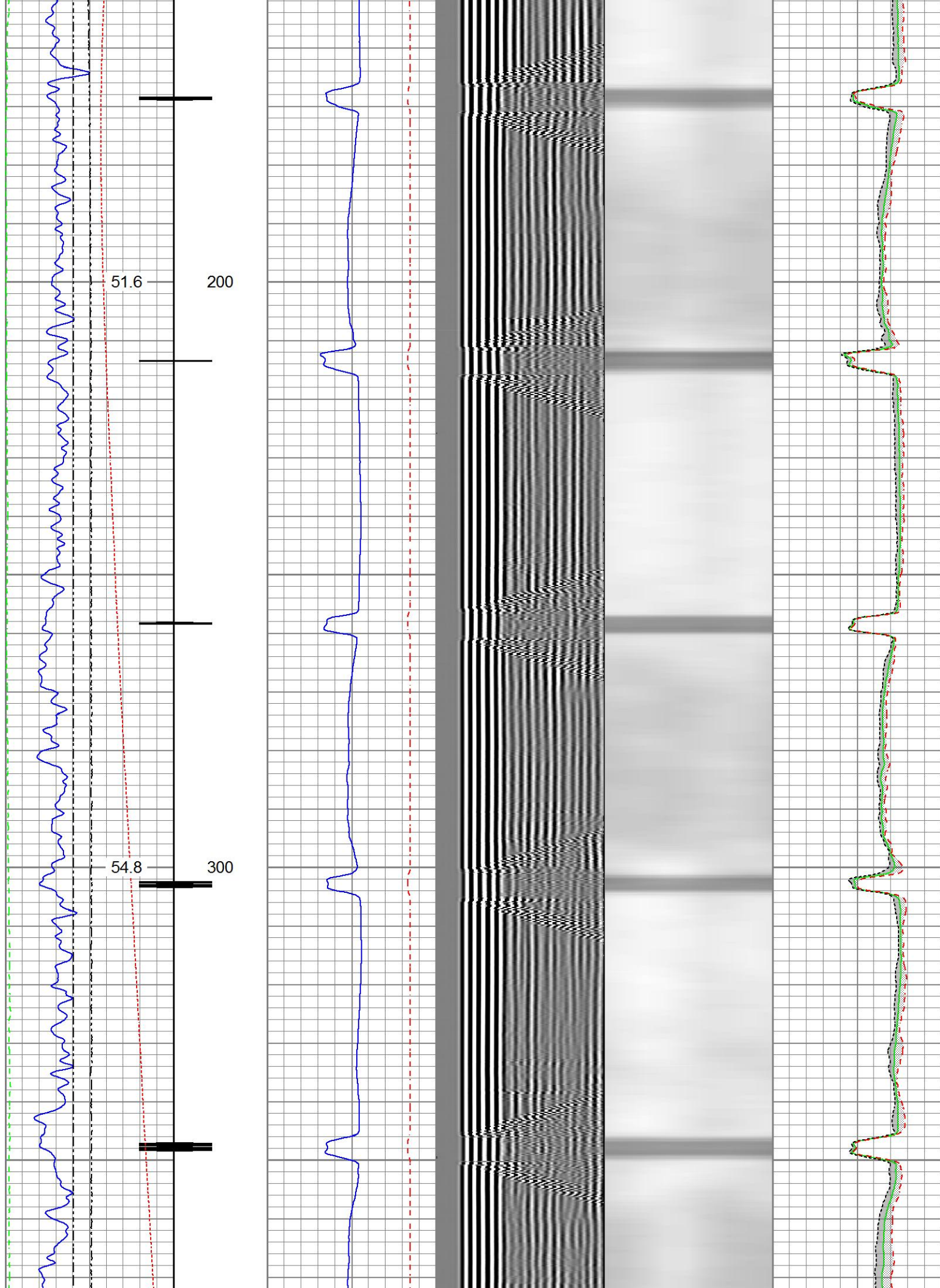
Main Pass

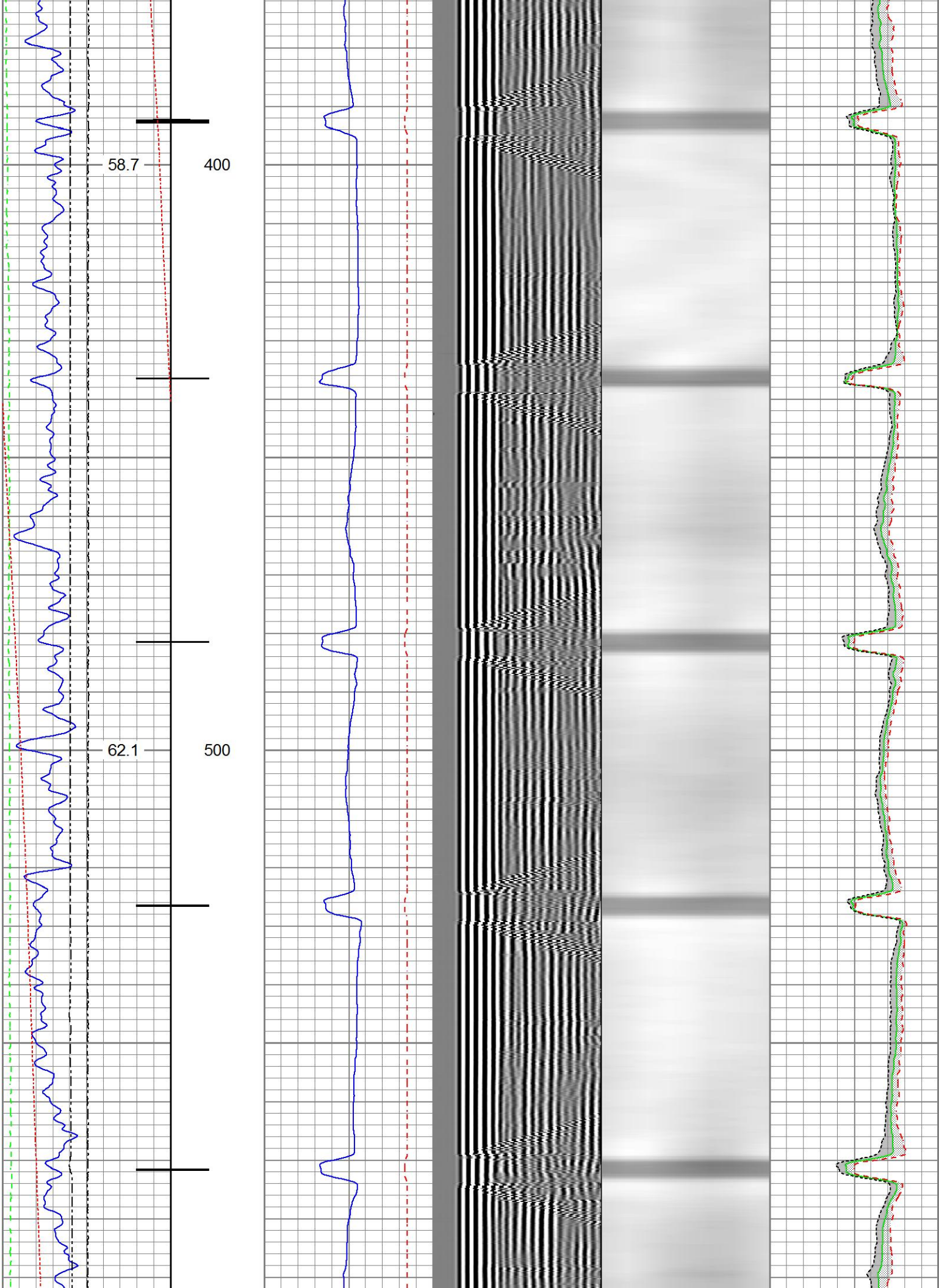
Recorded With 2800 PSI Surface Induced Pressure

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				

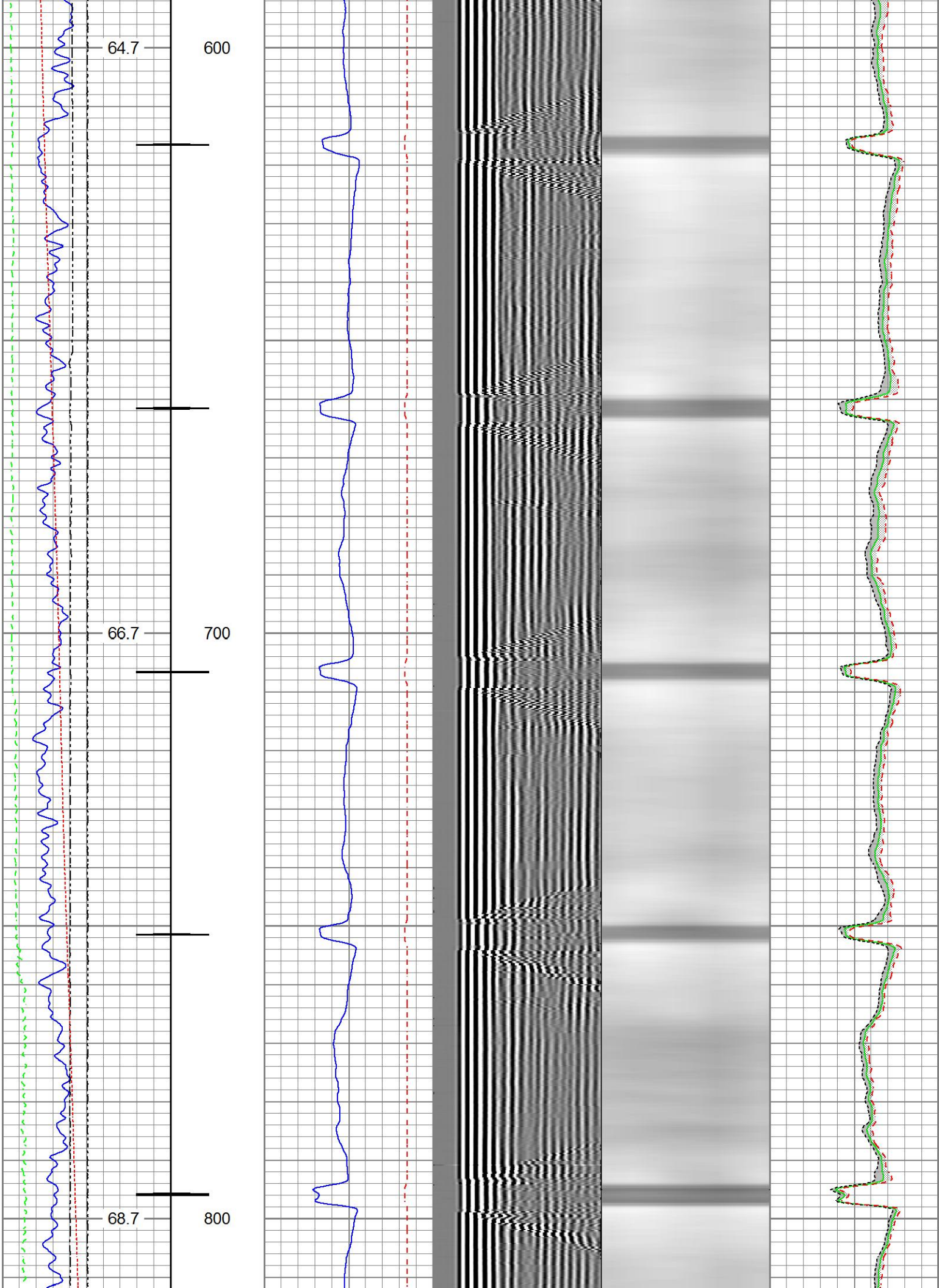


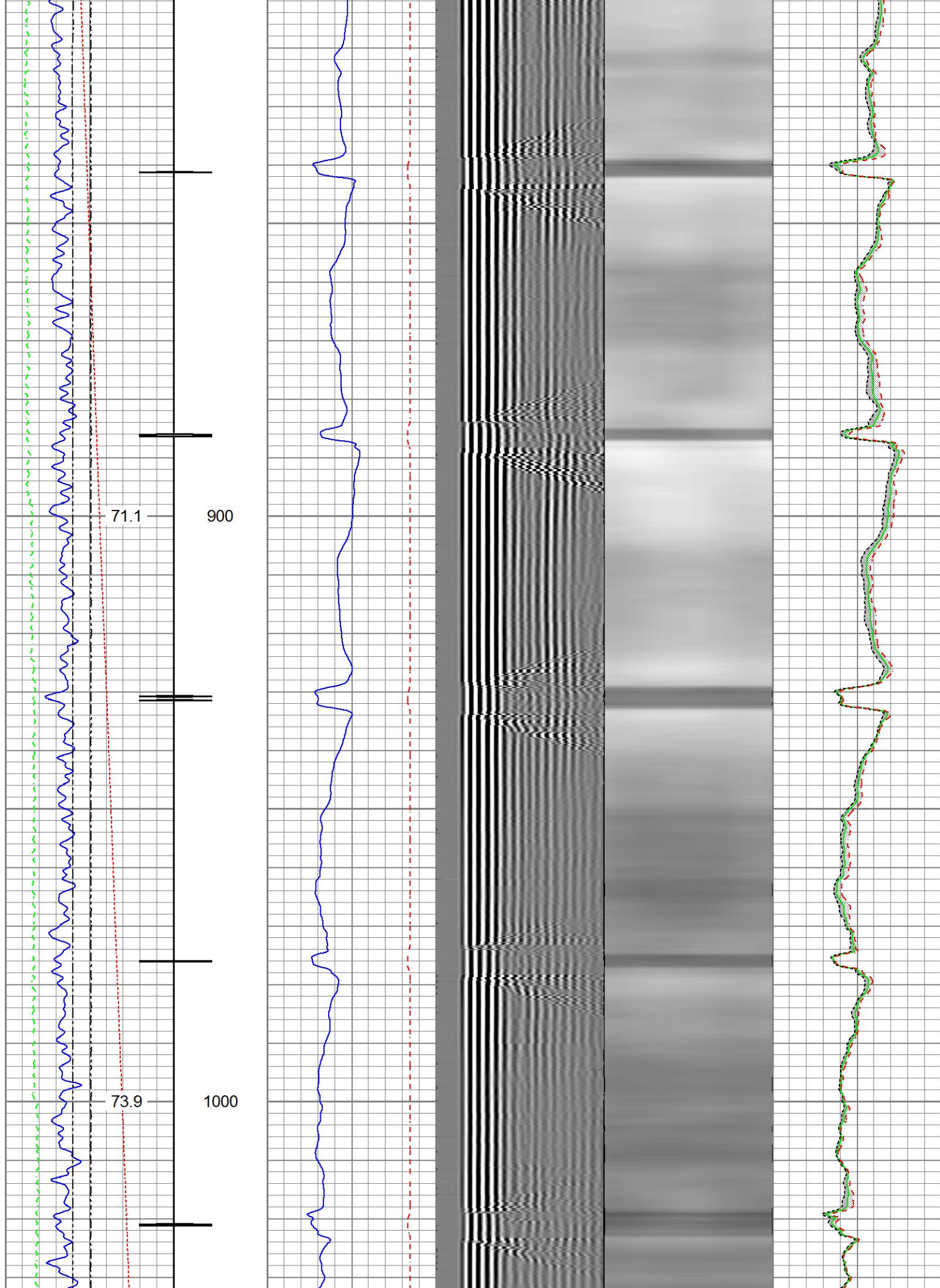




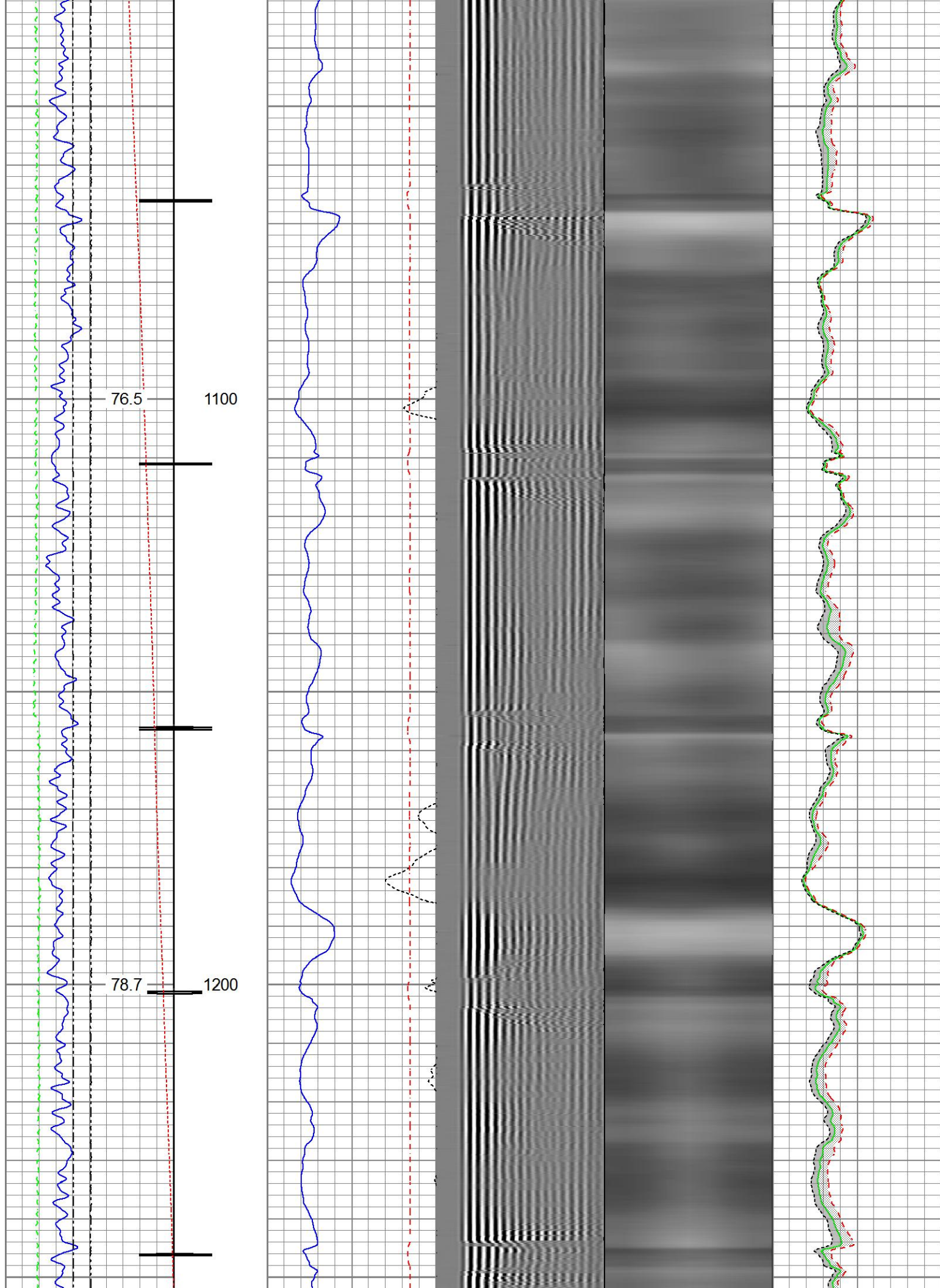


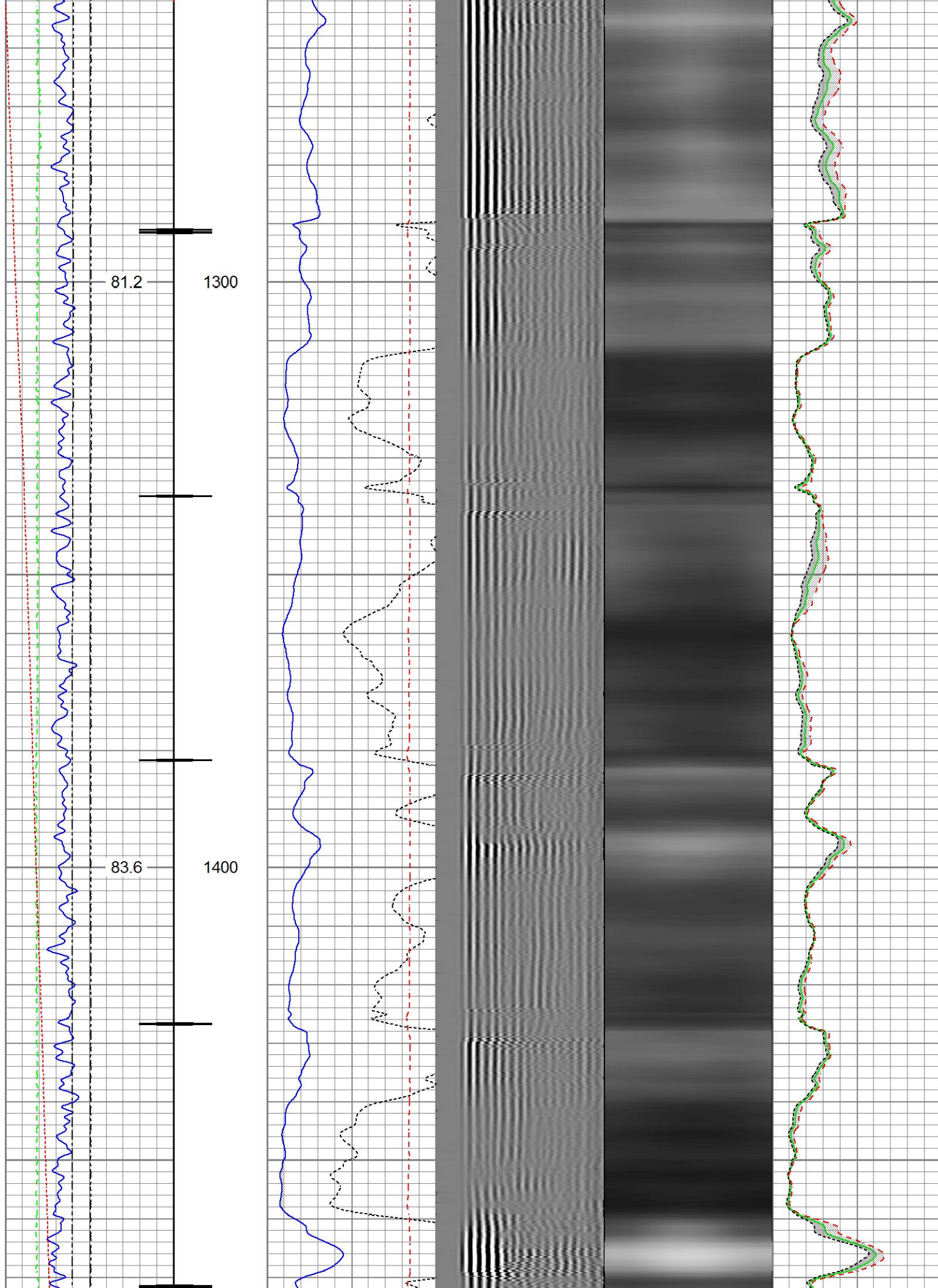




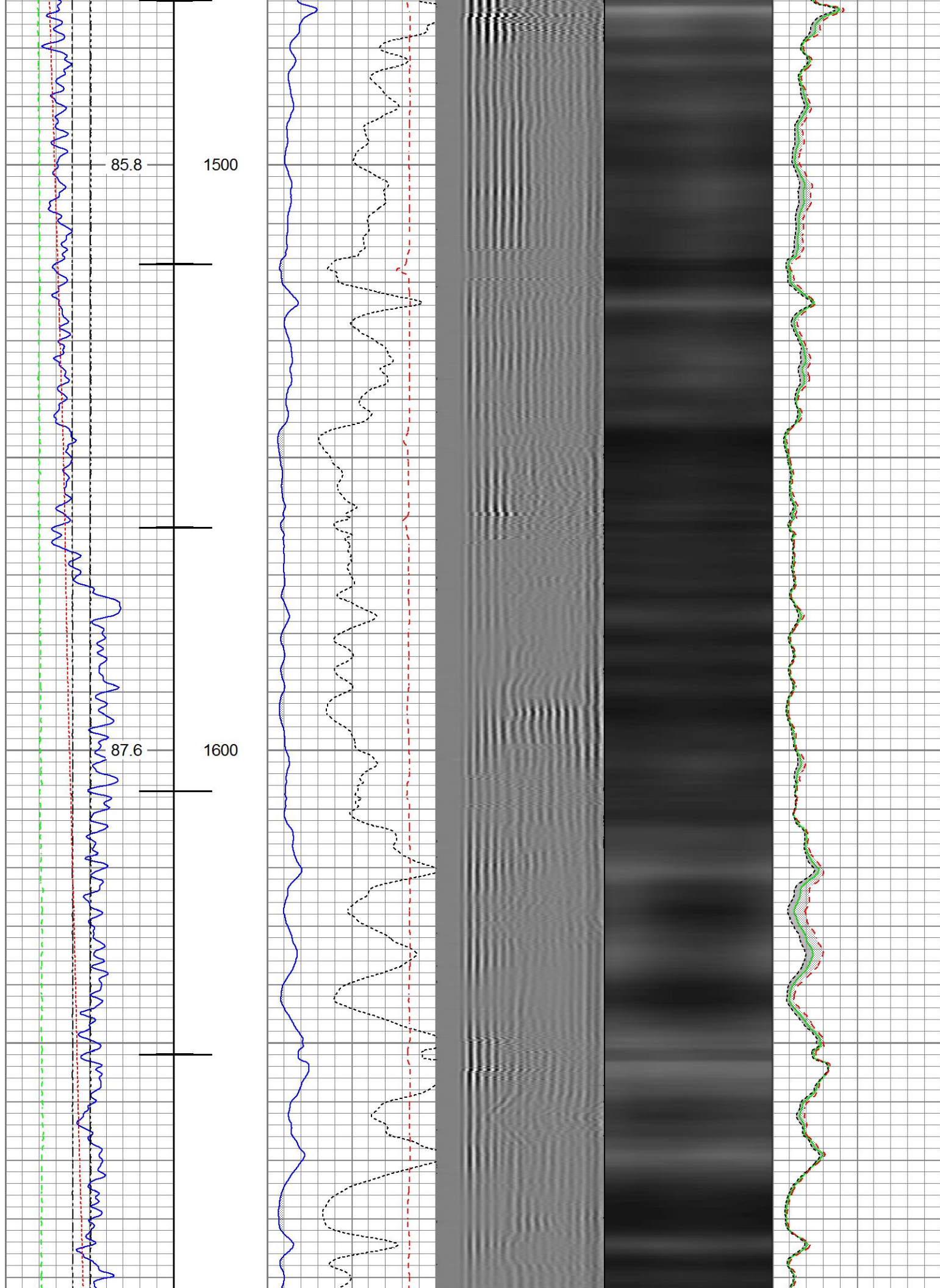


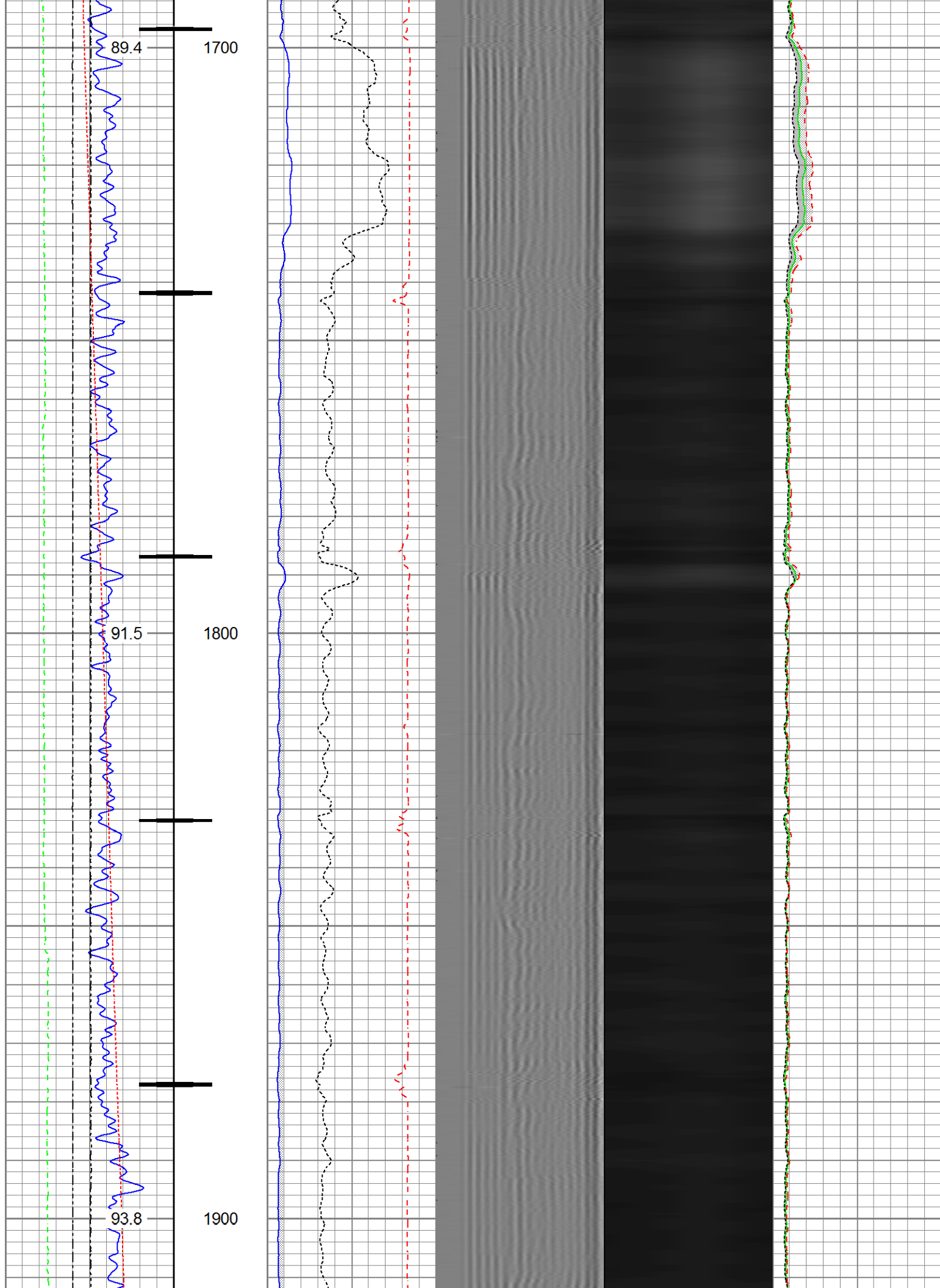




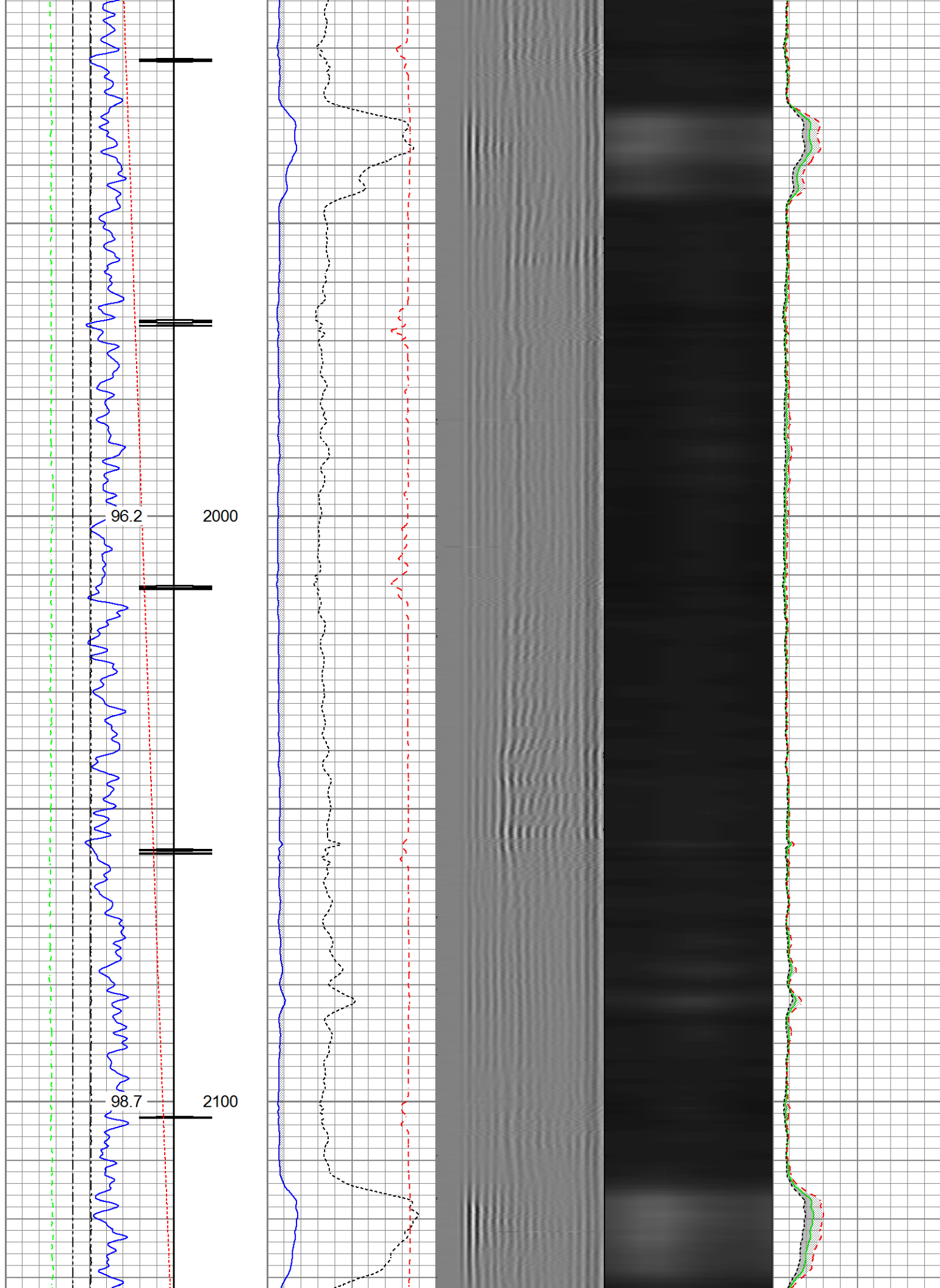


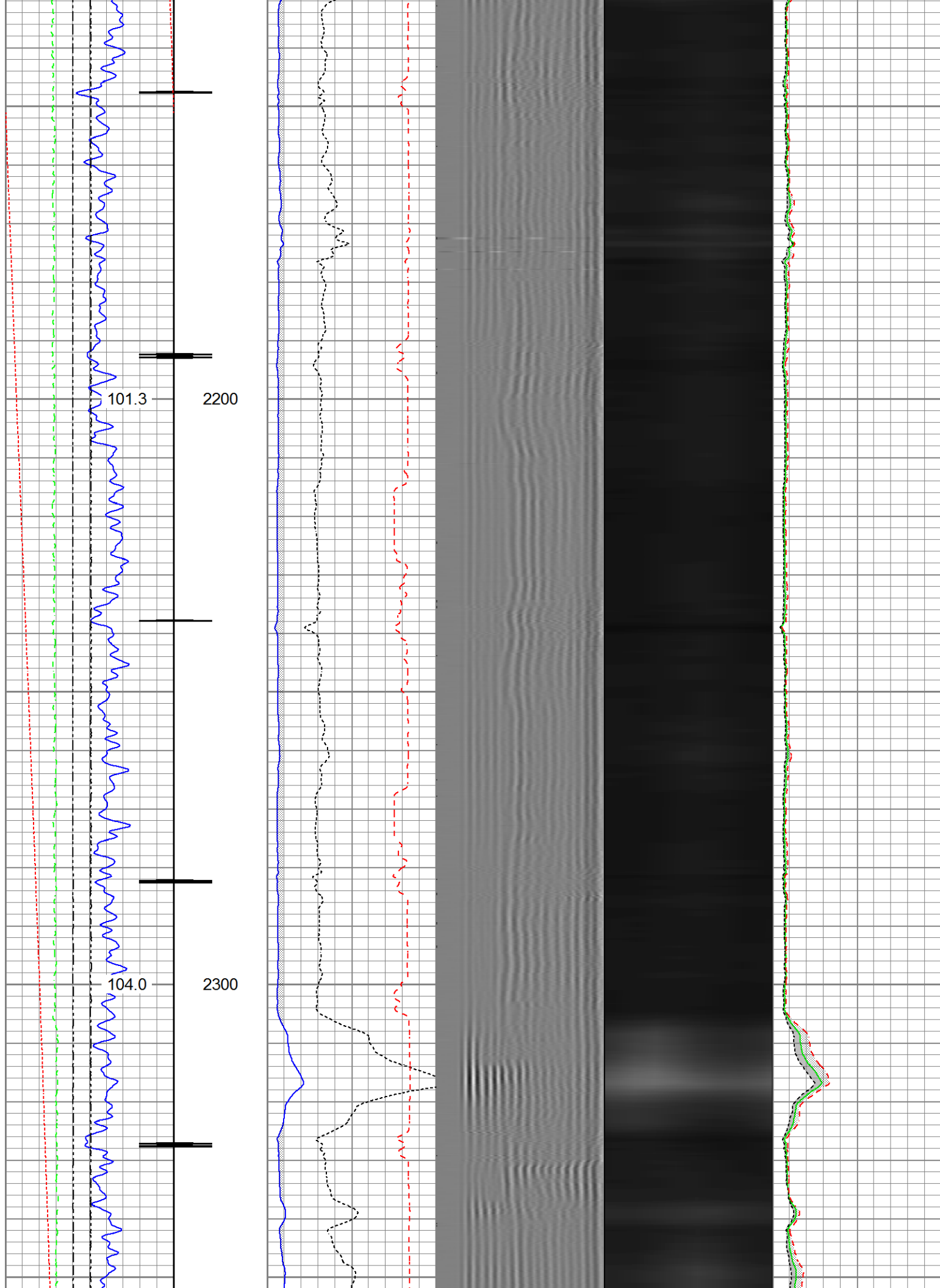




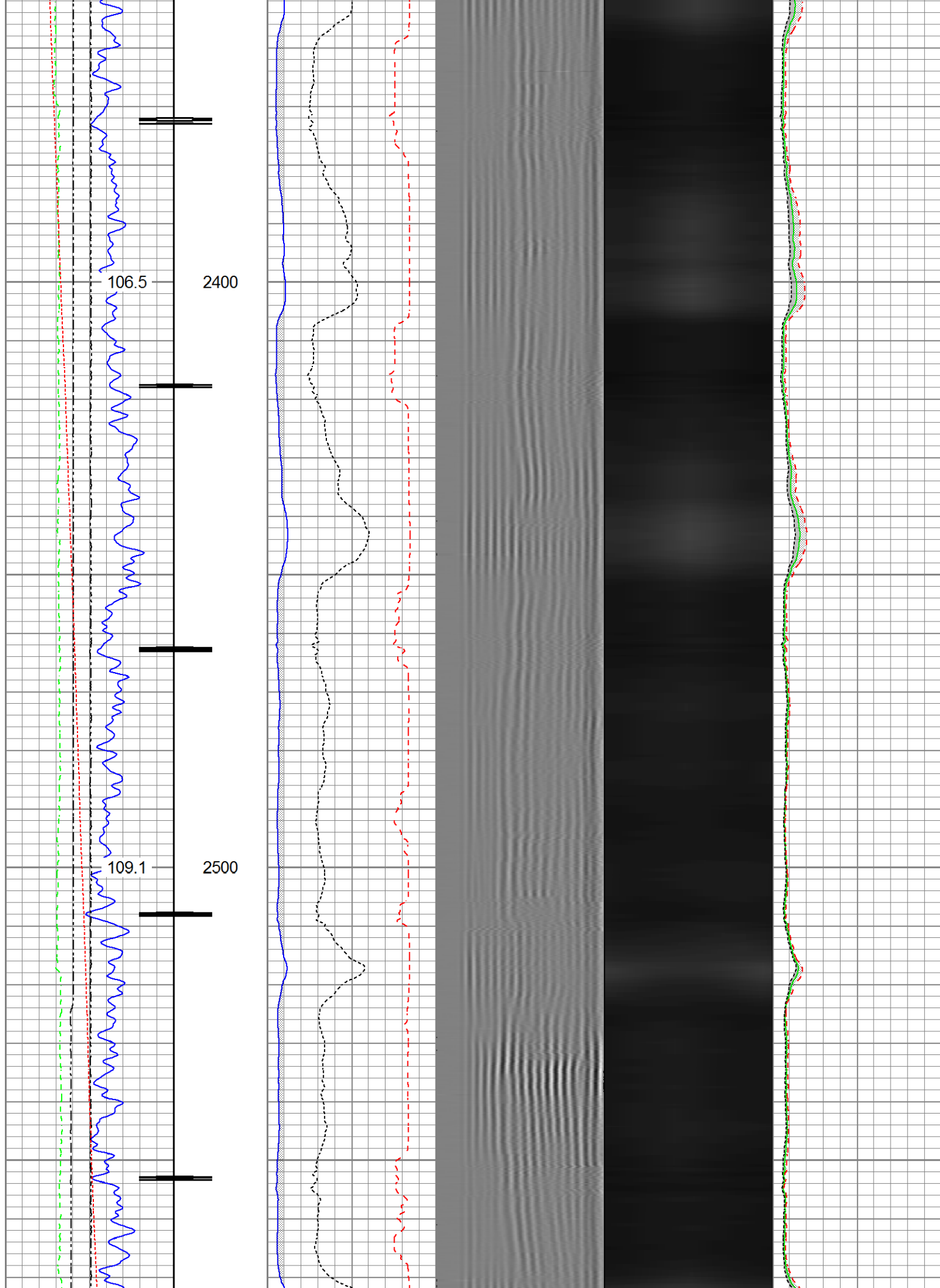


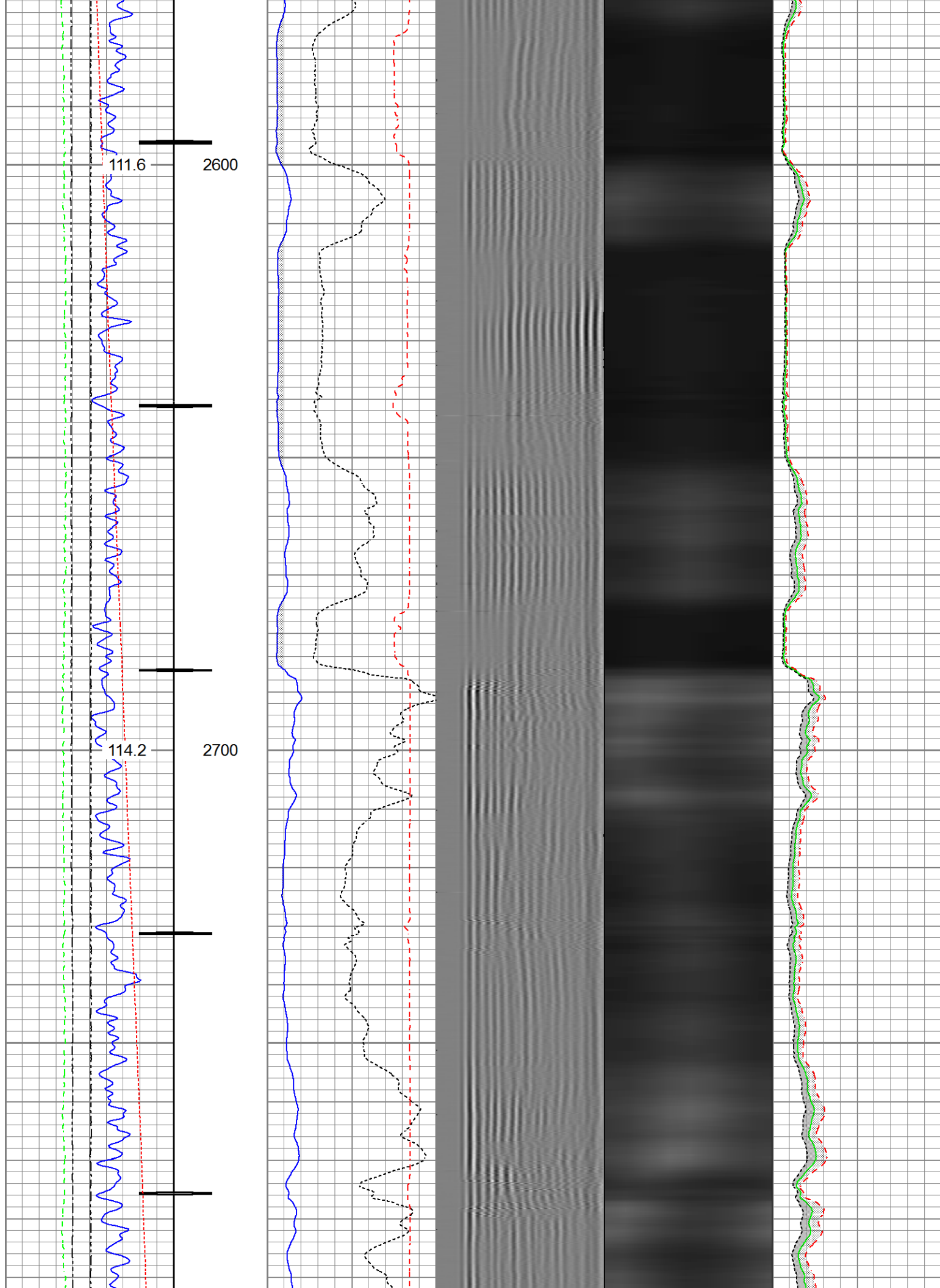




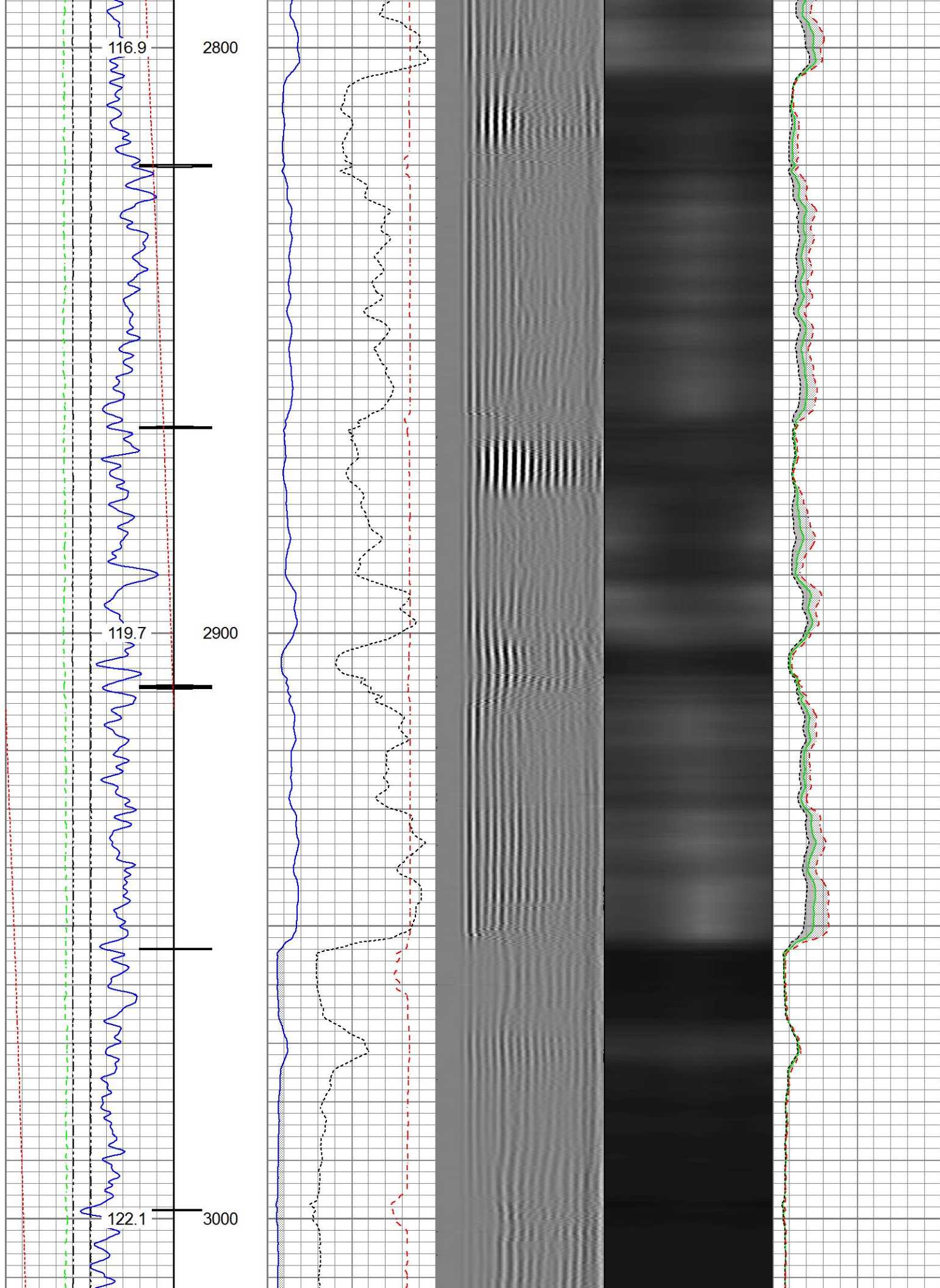


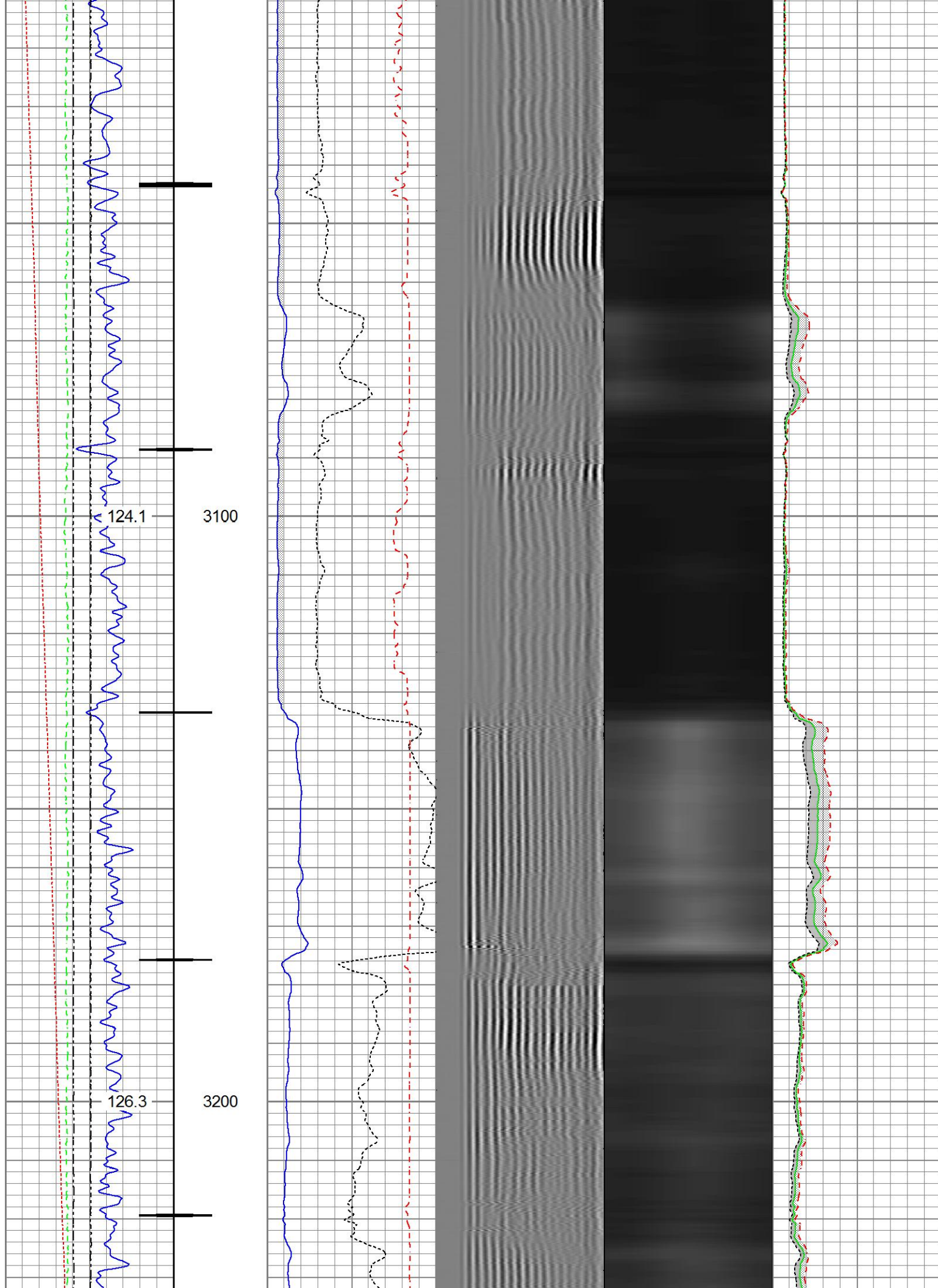




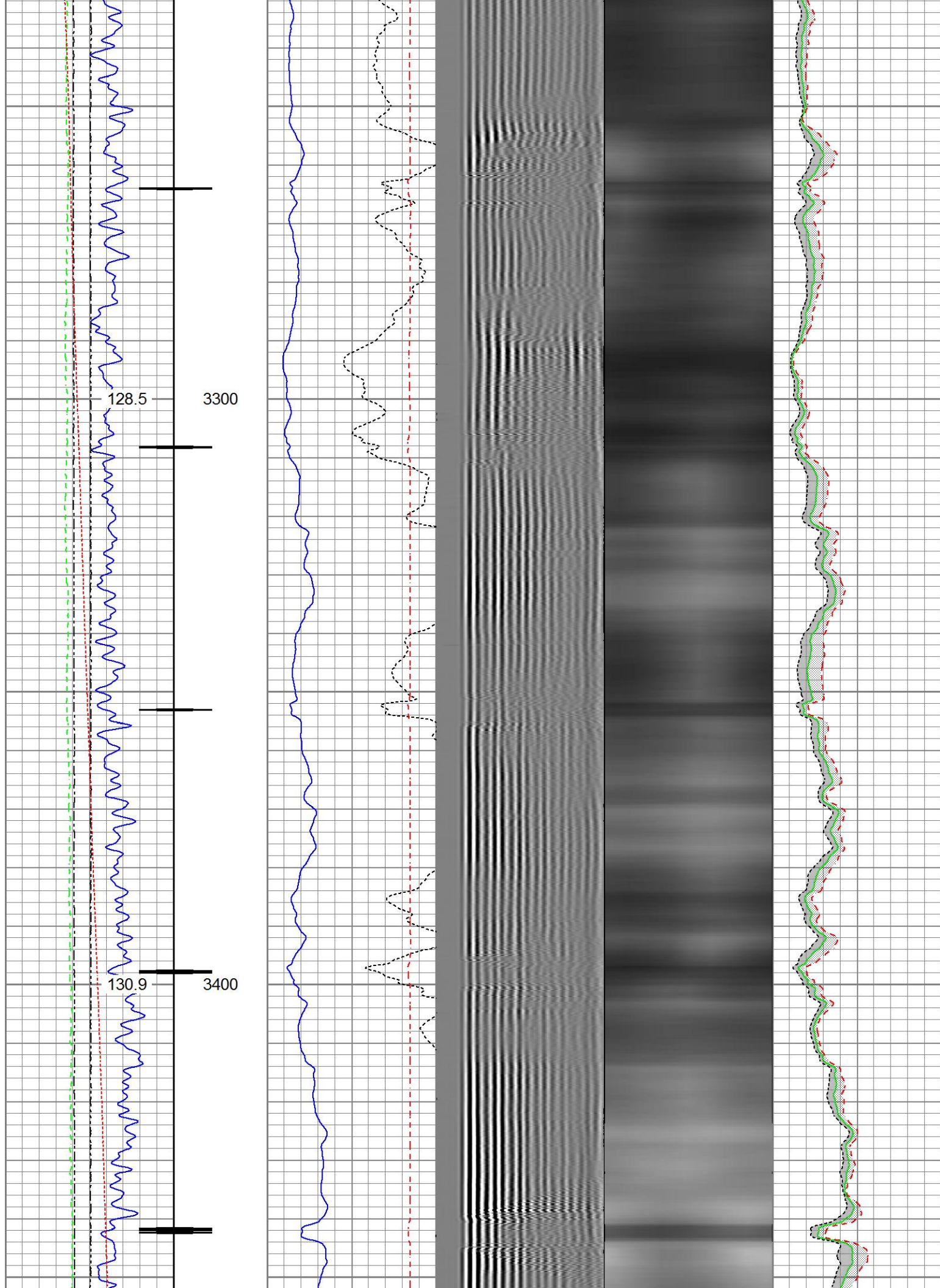


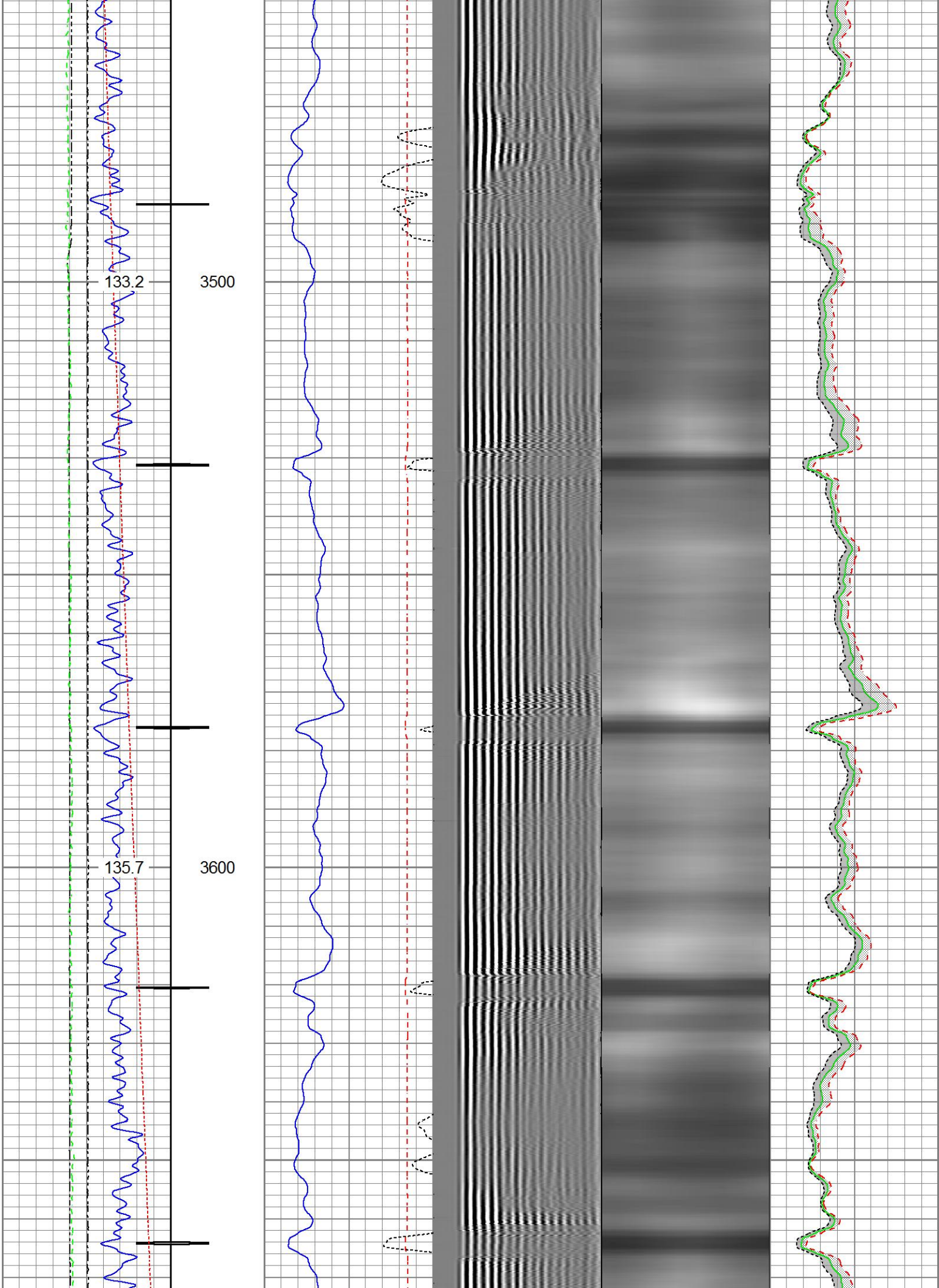




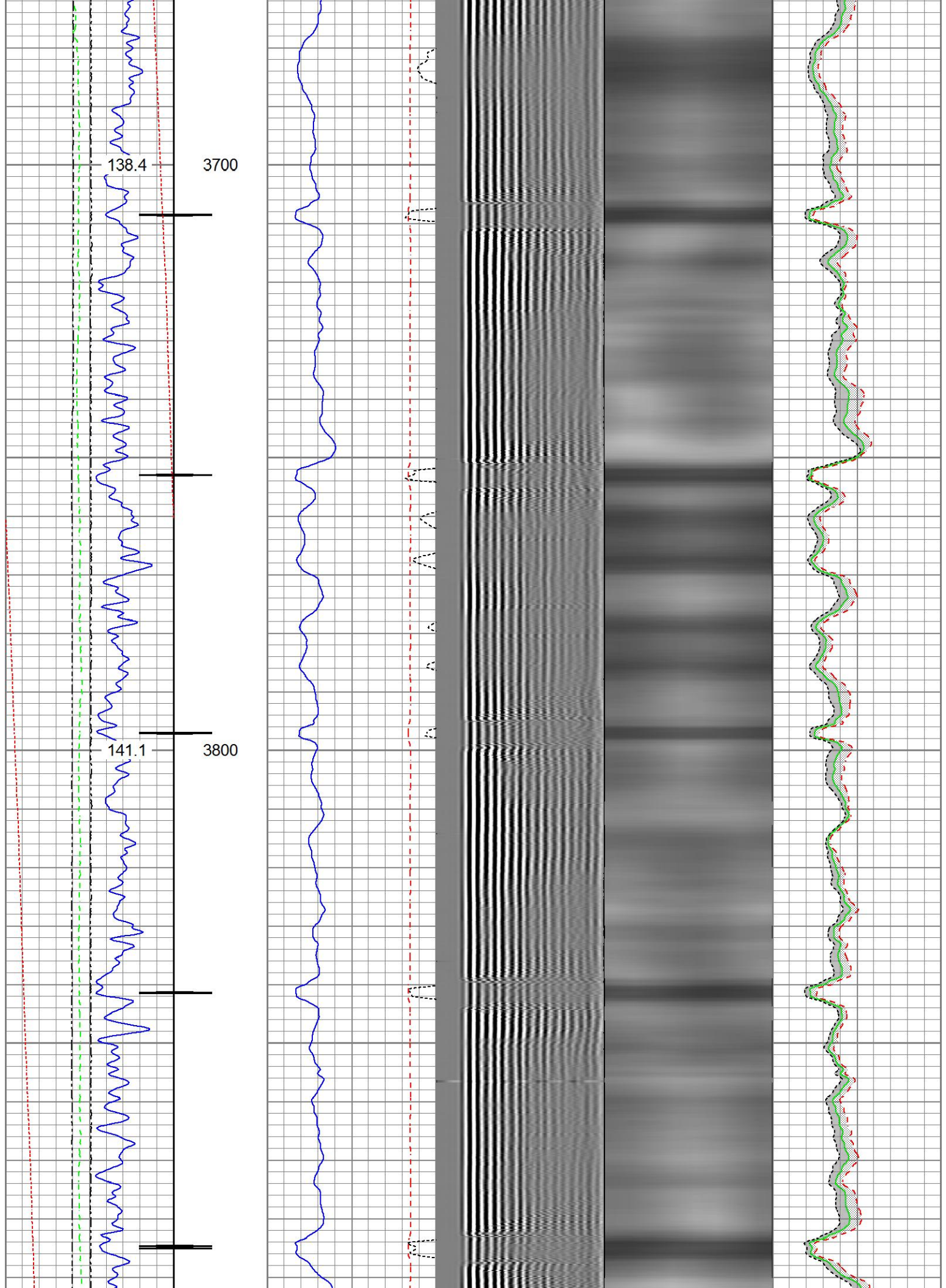


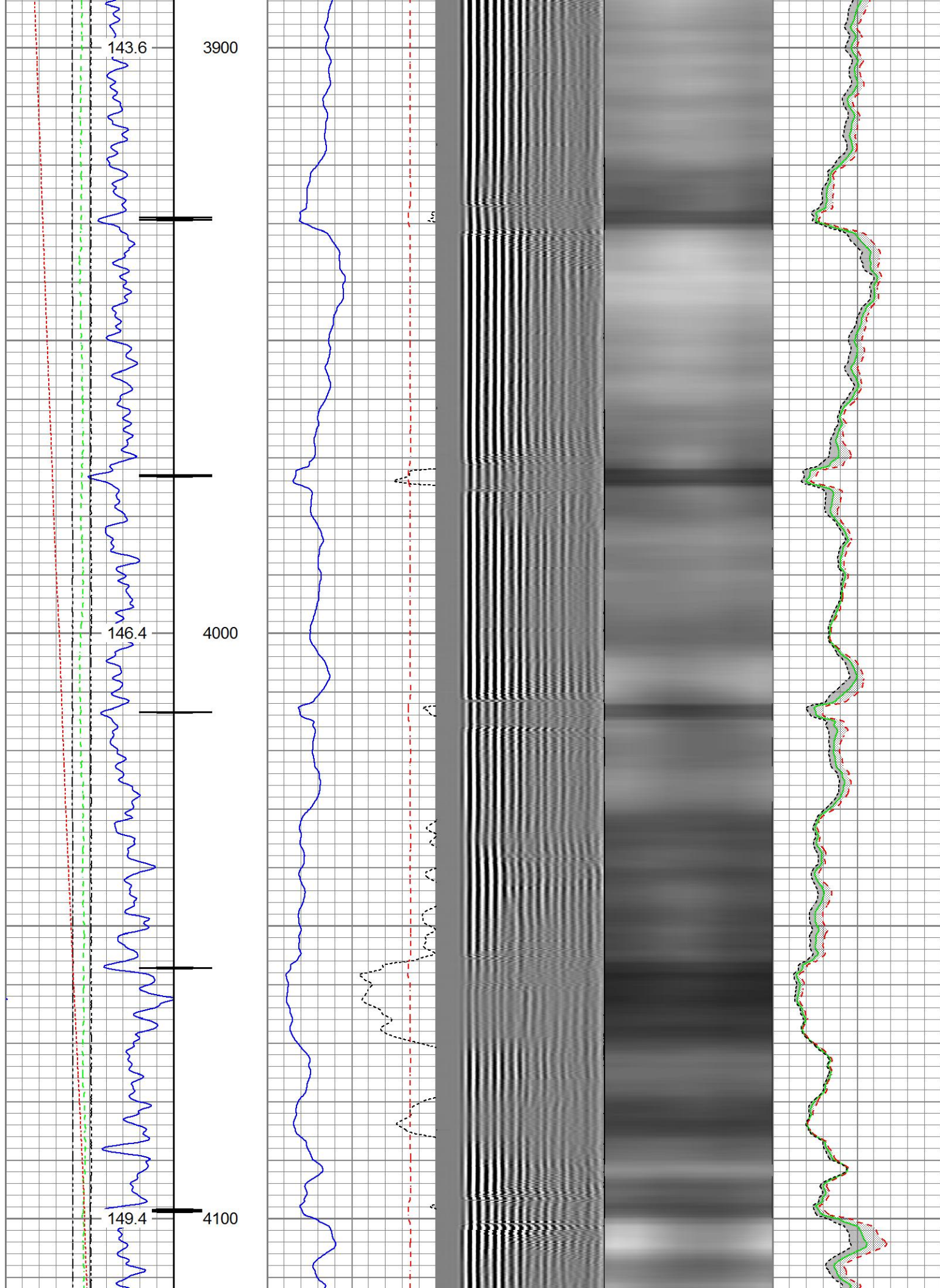




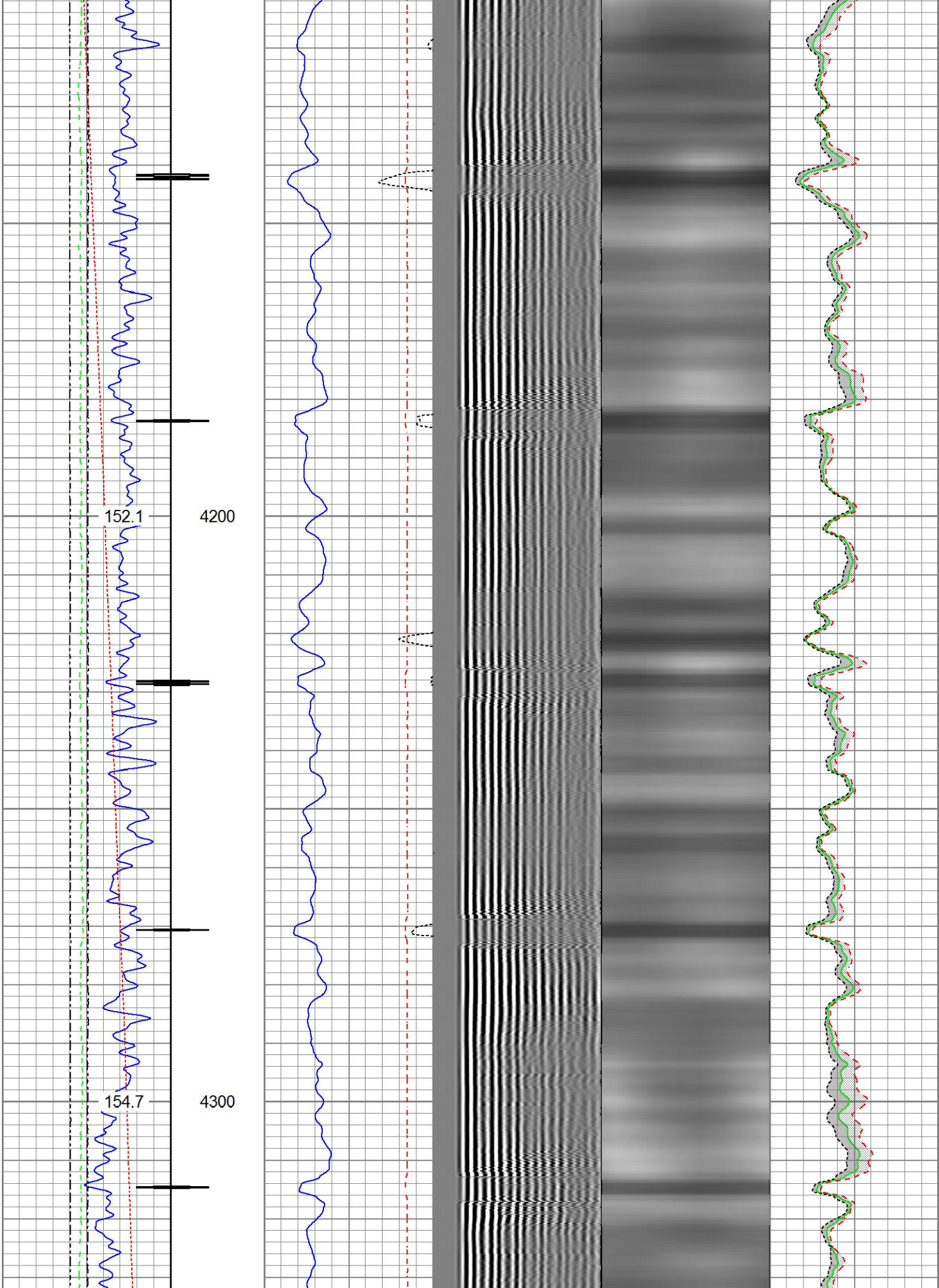


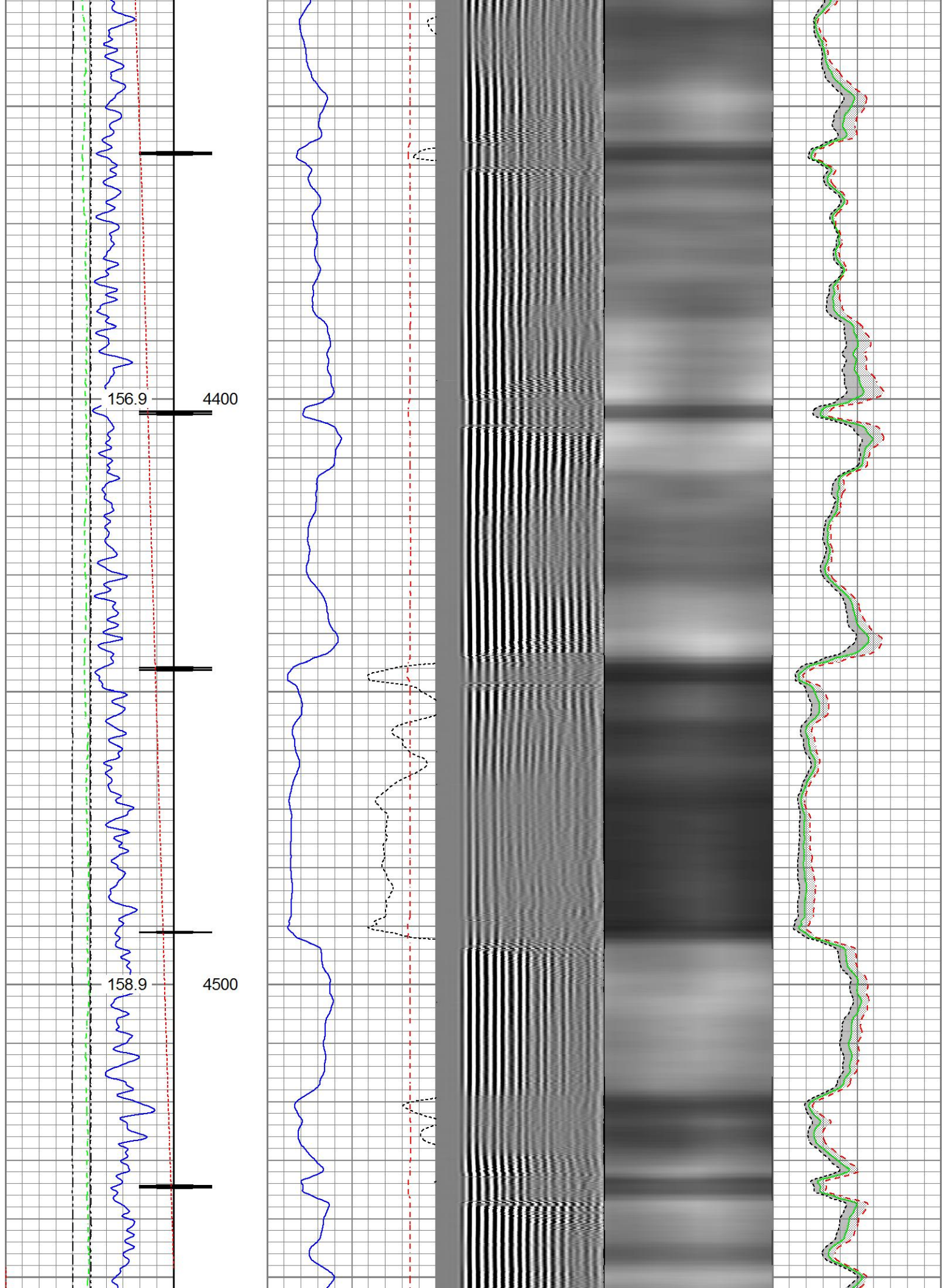




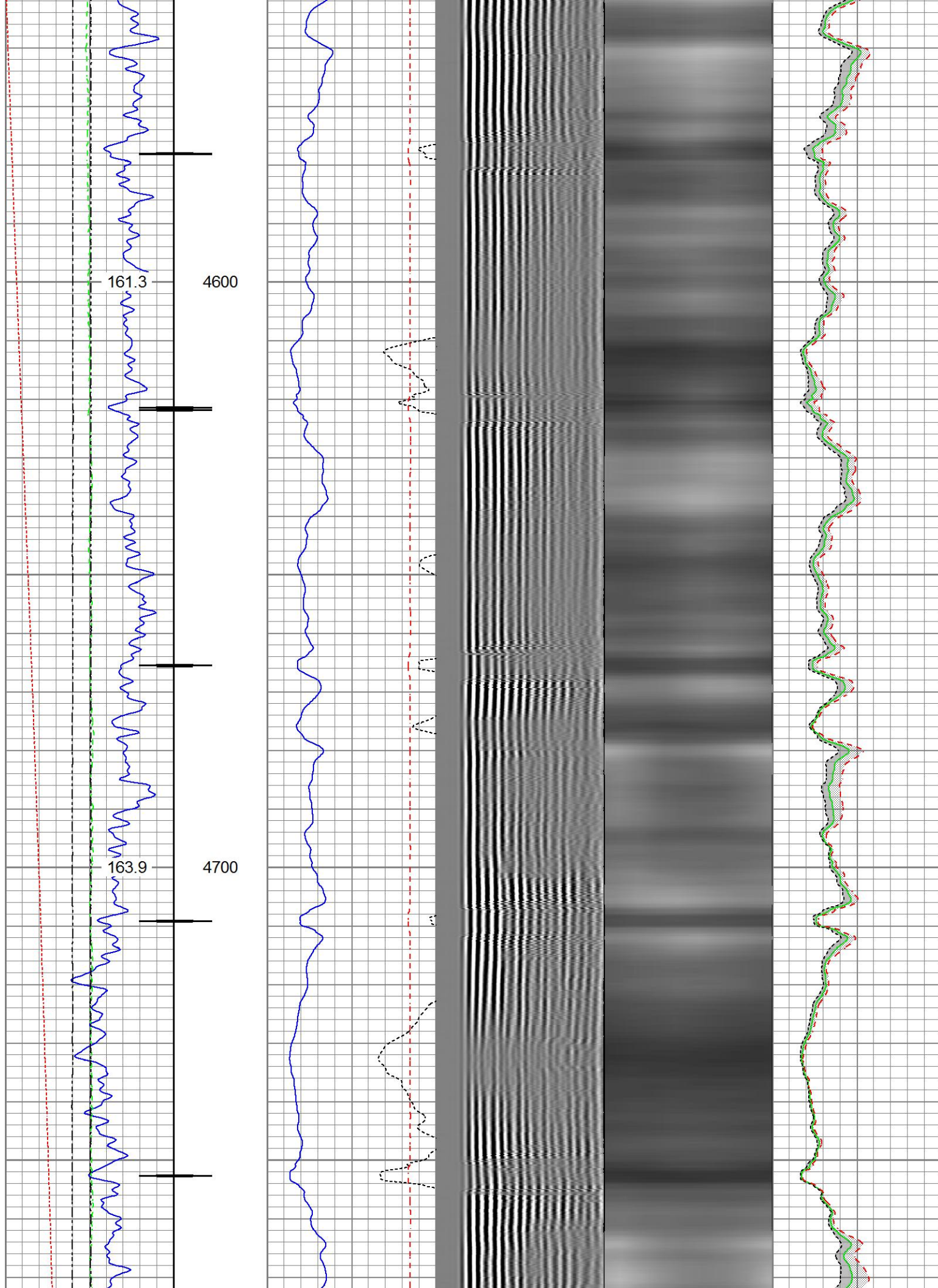




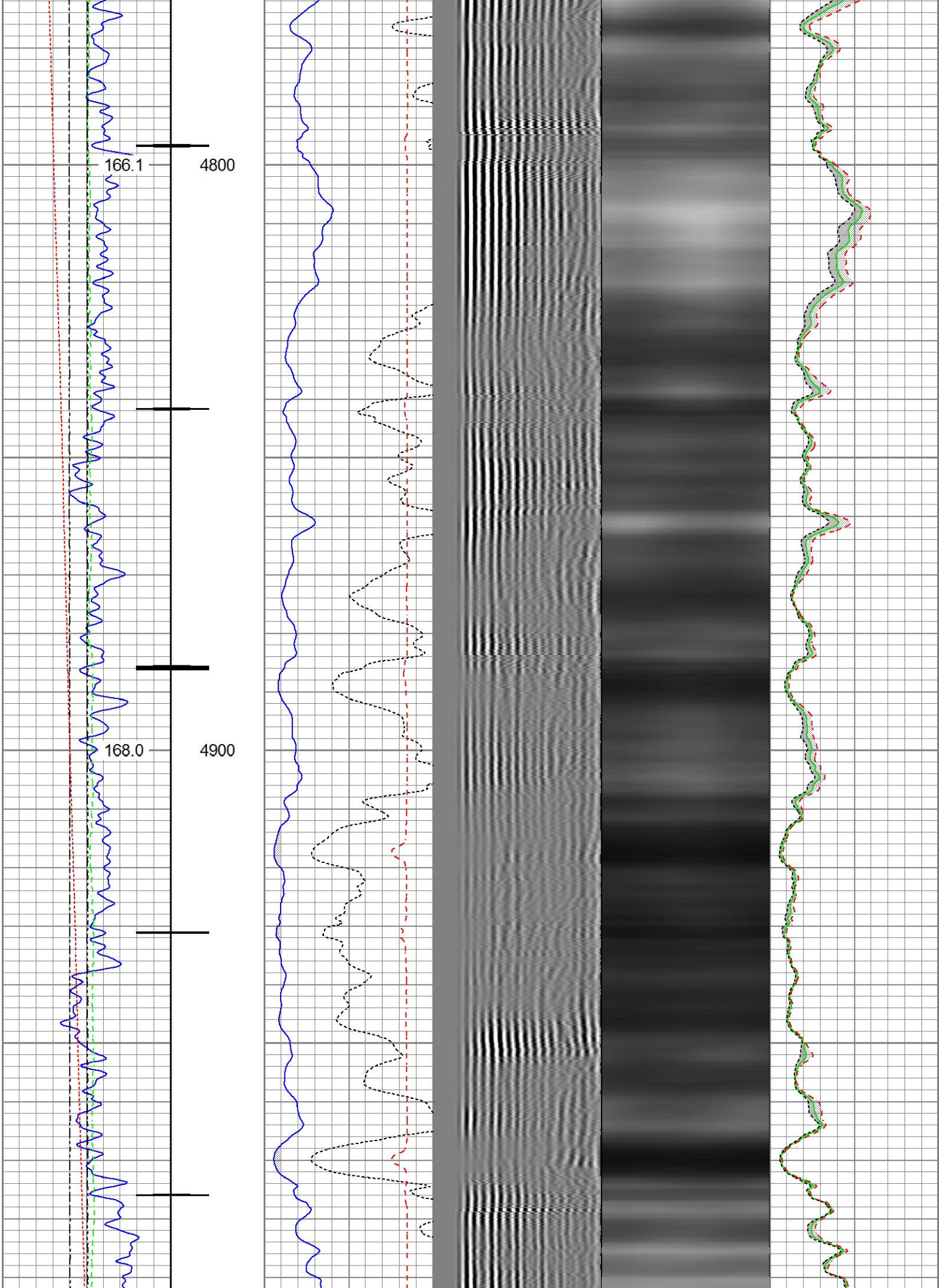


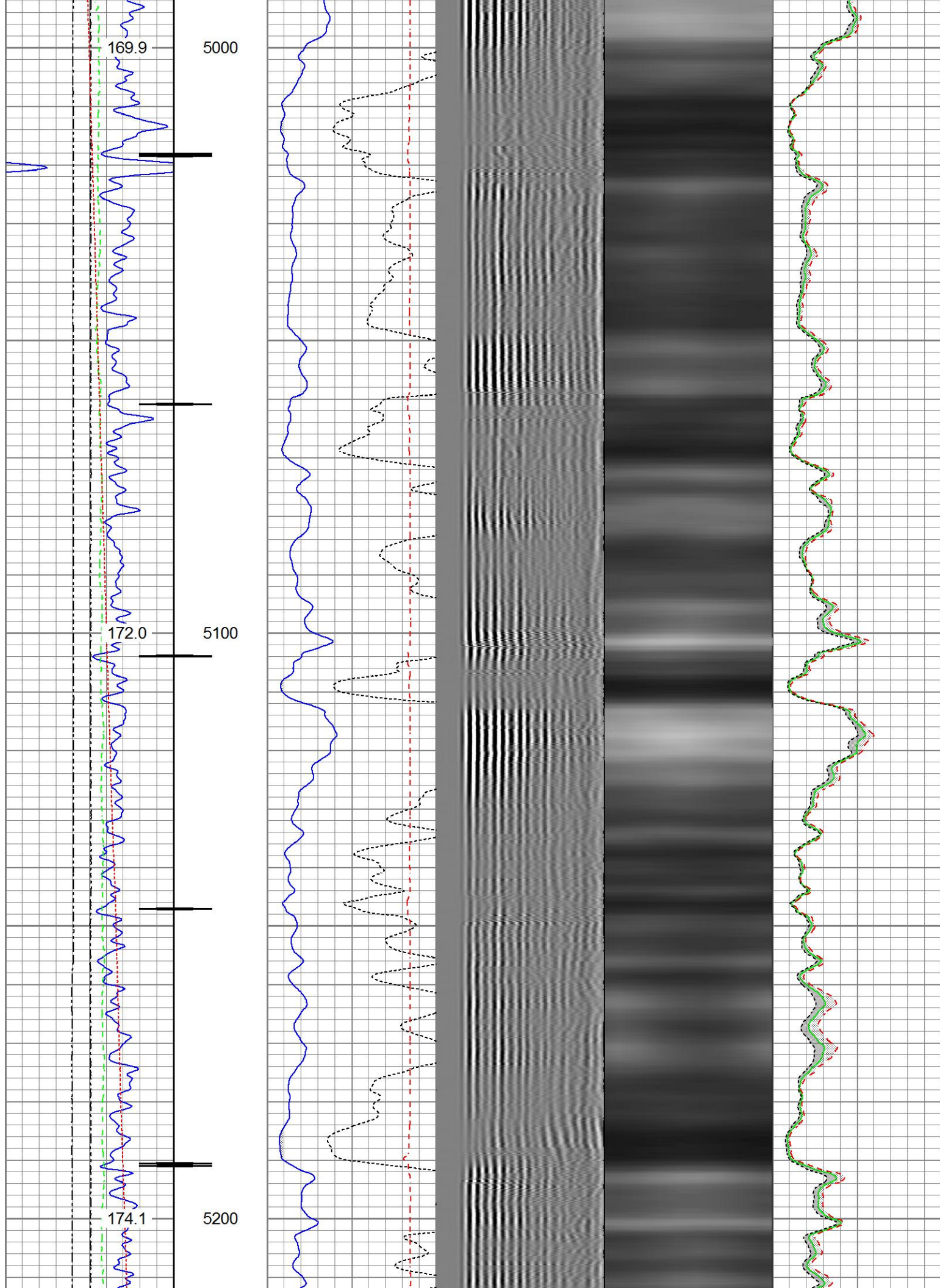




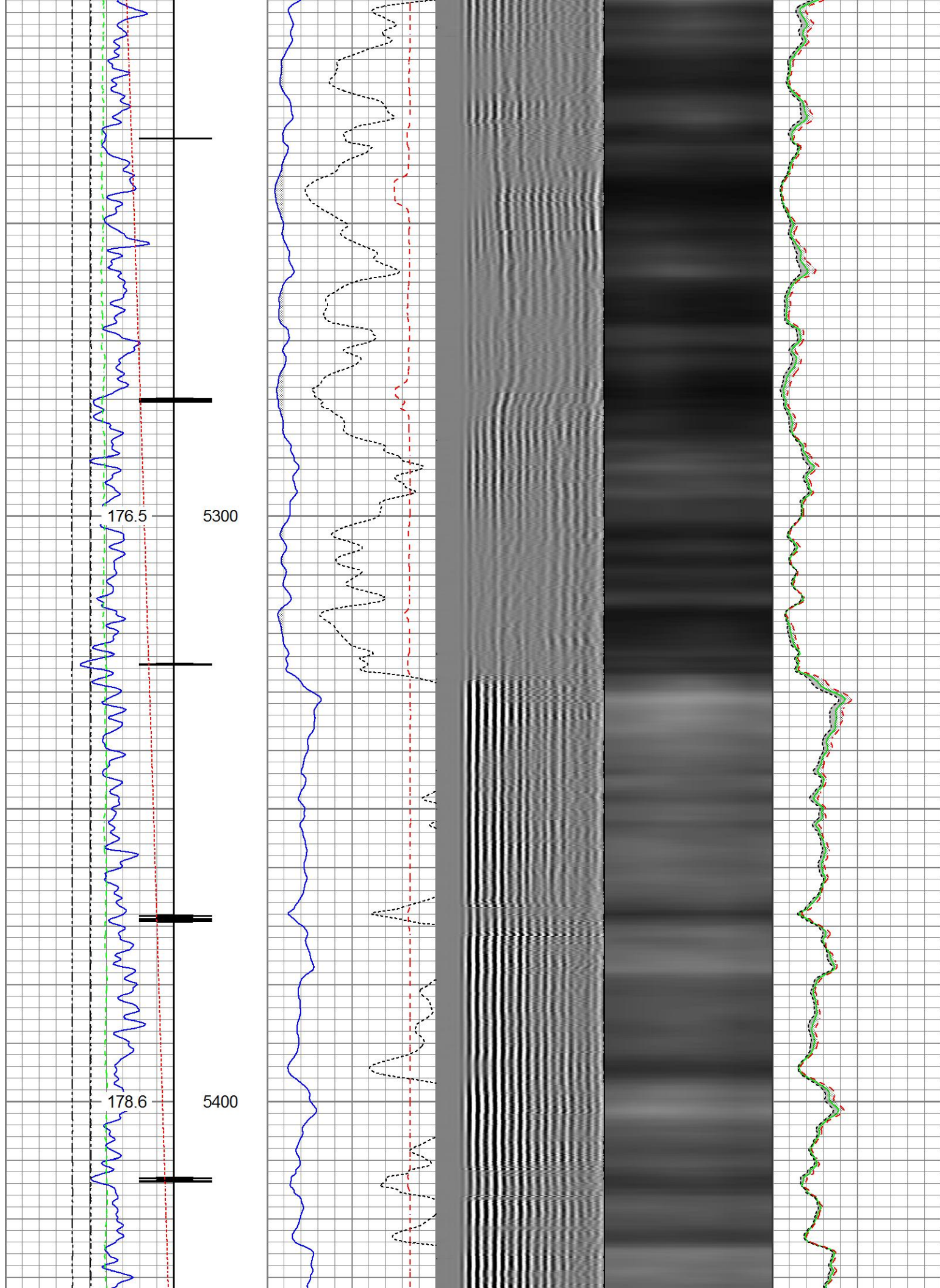


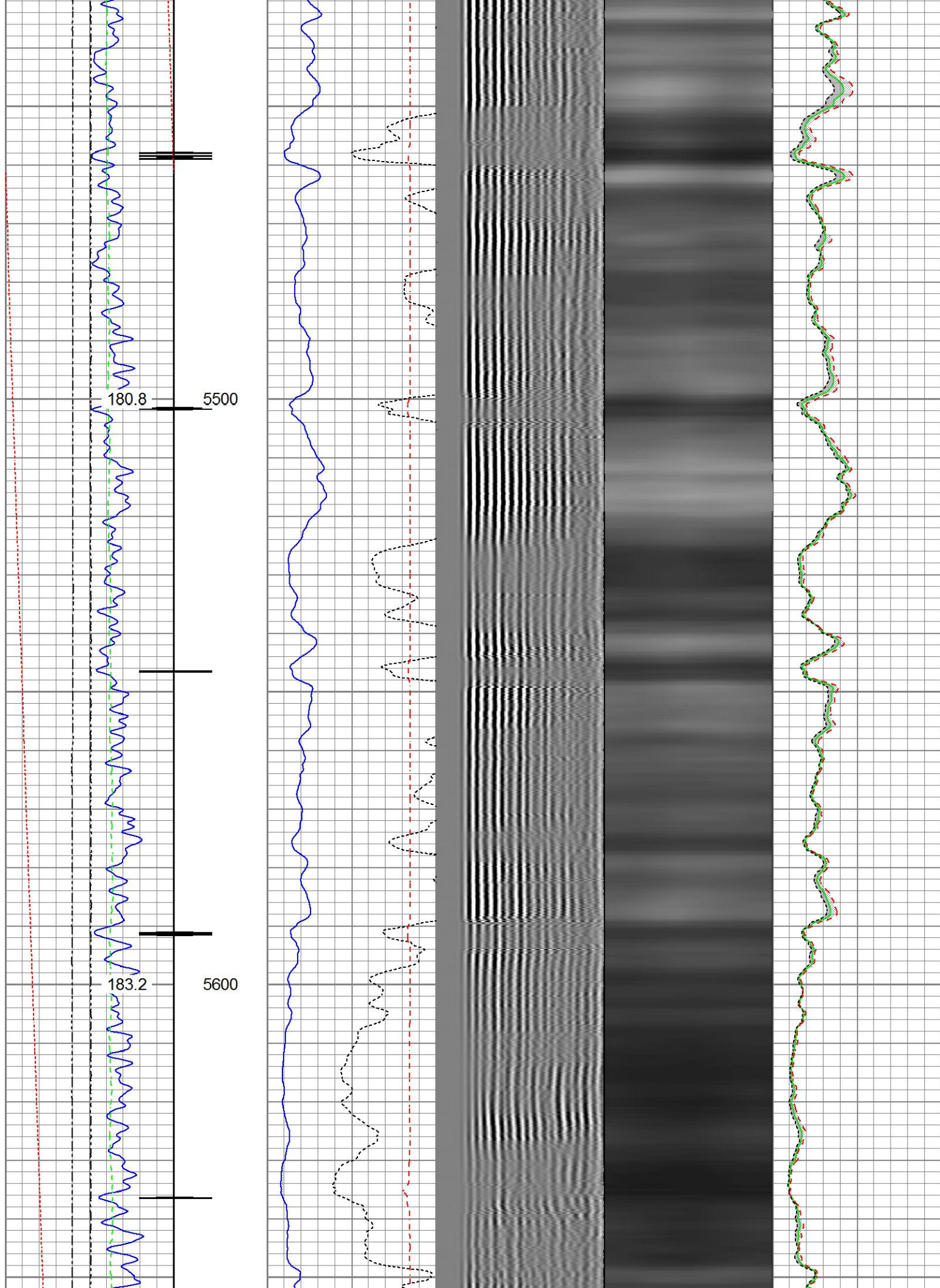






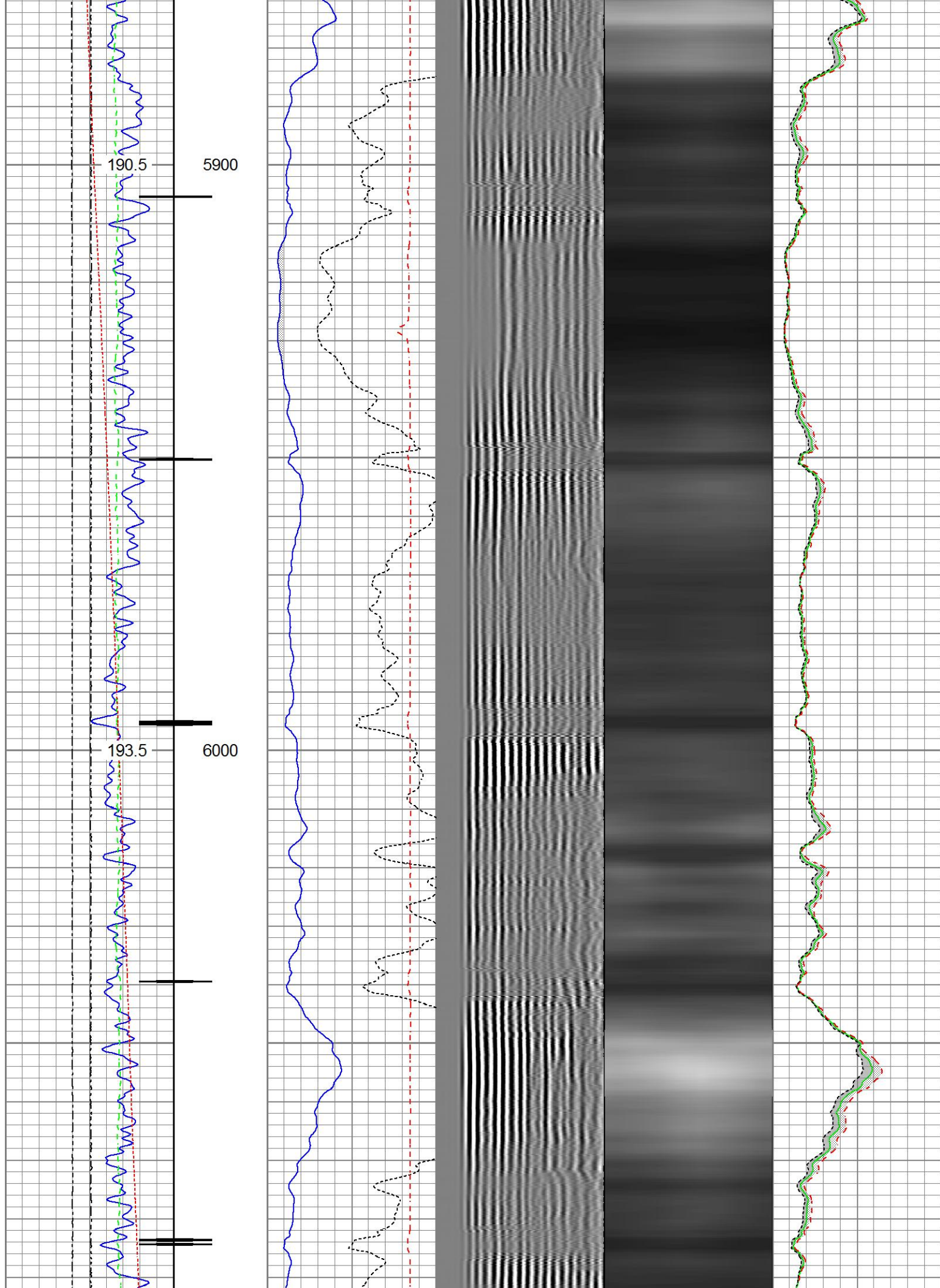




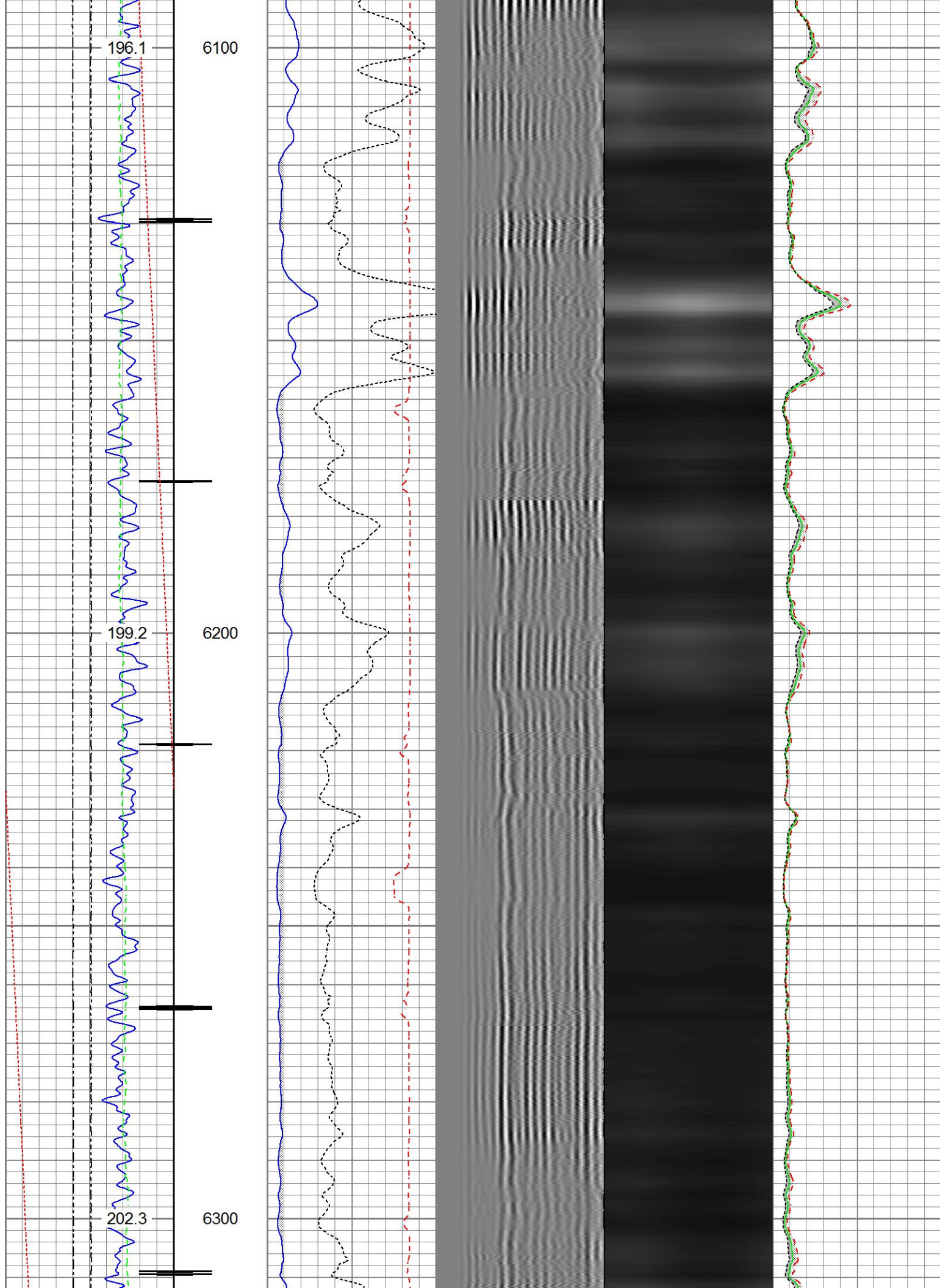


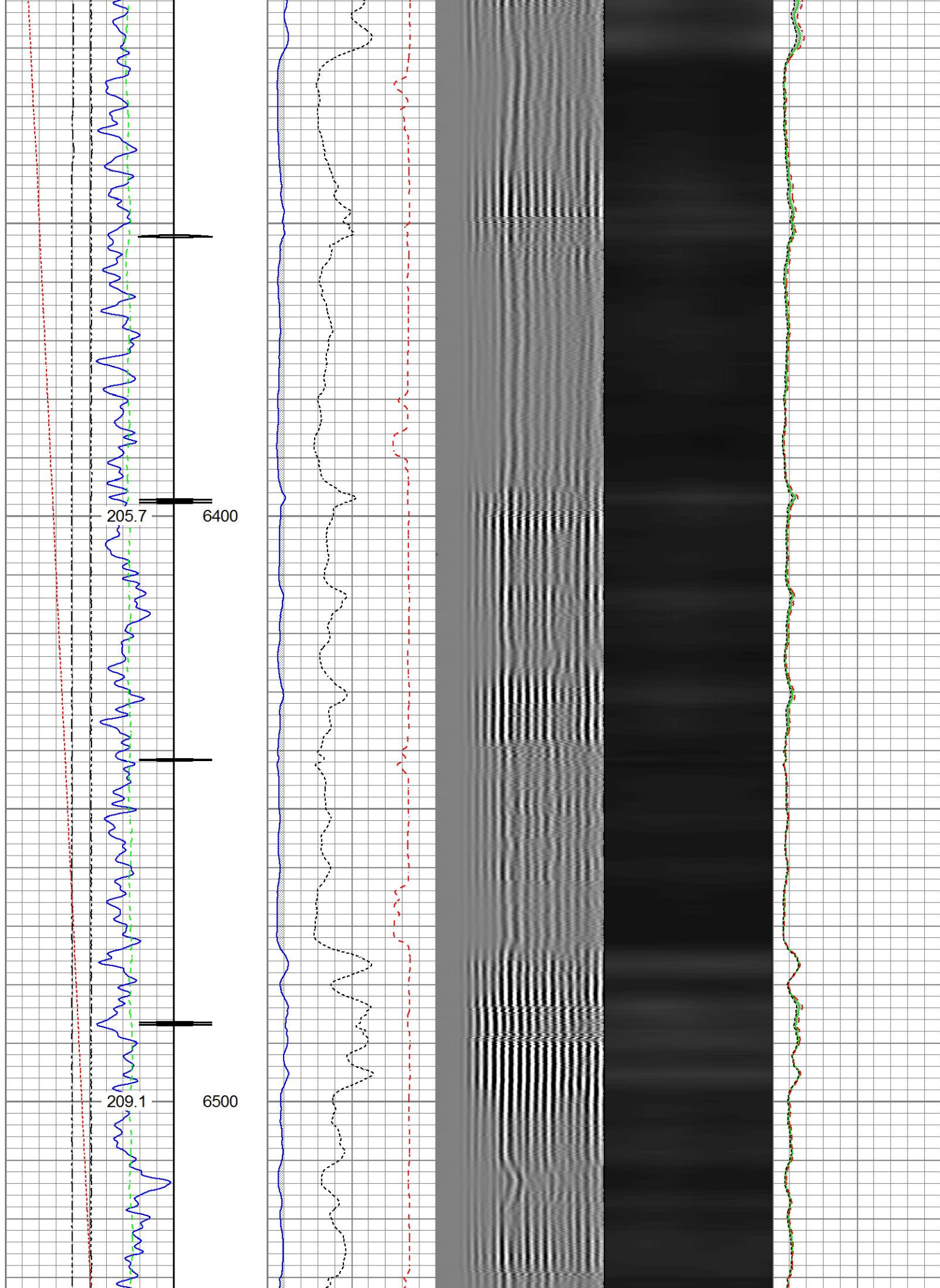




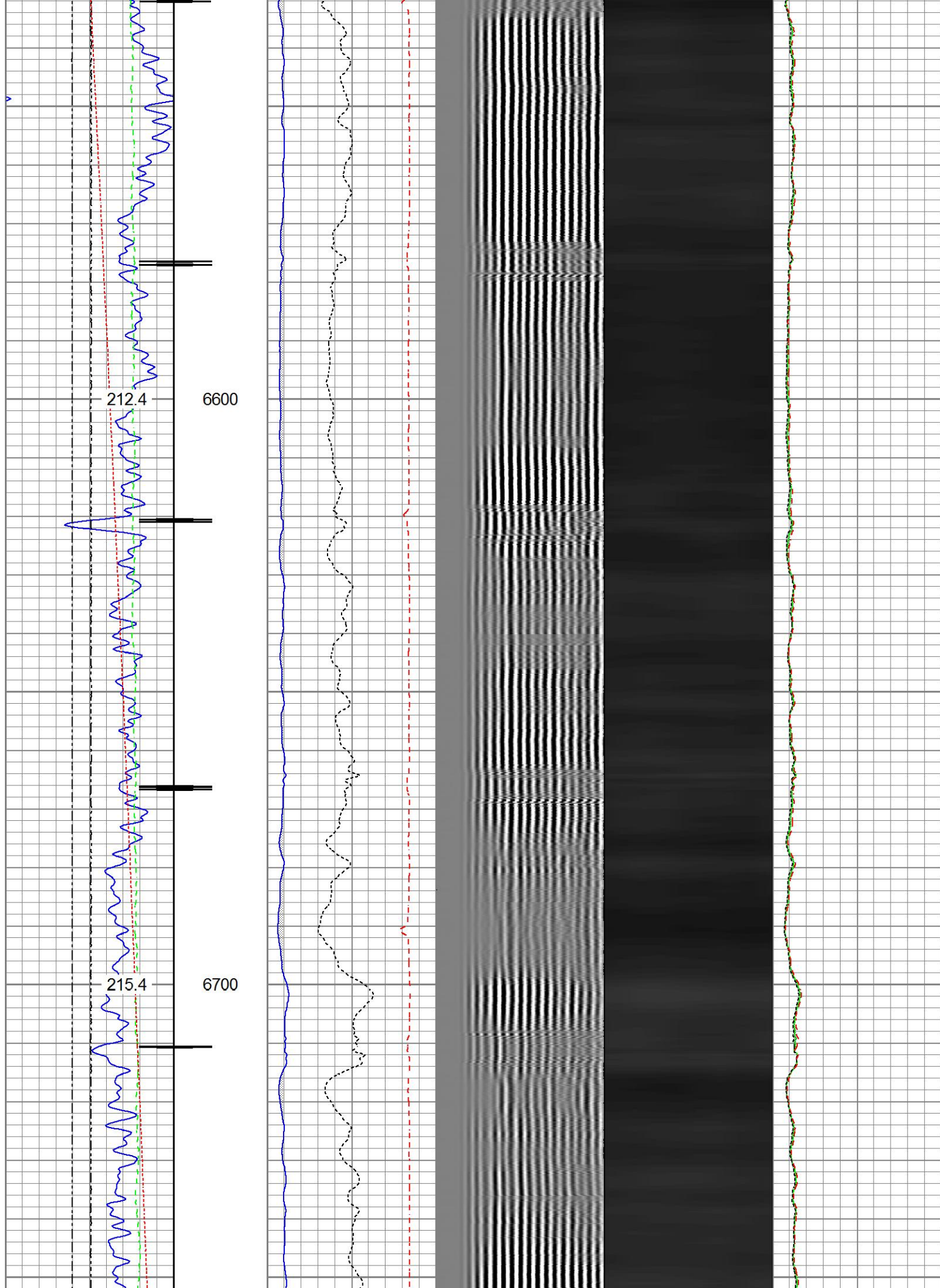


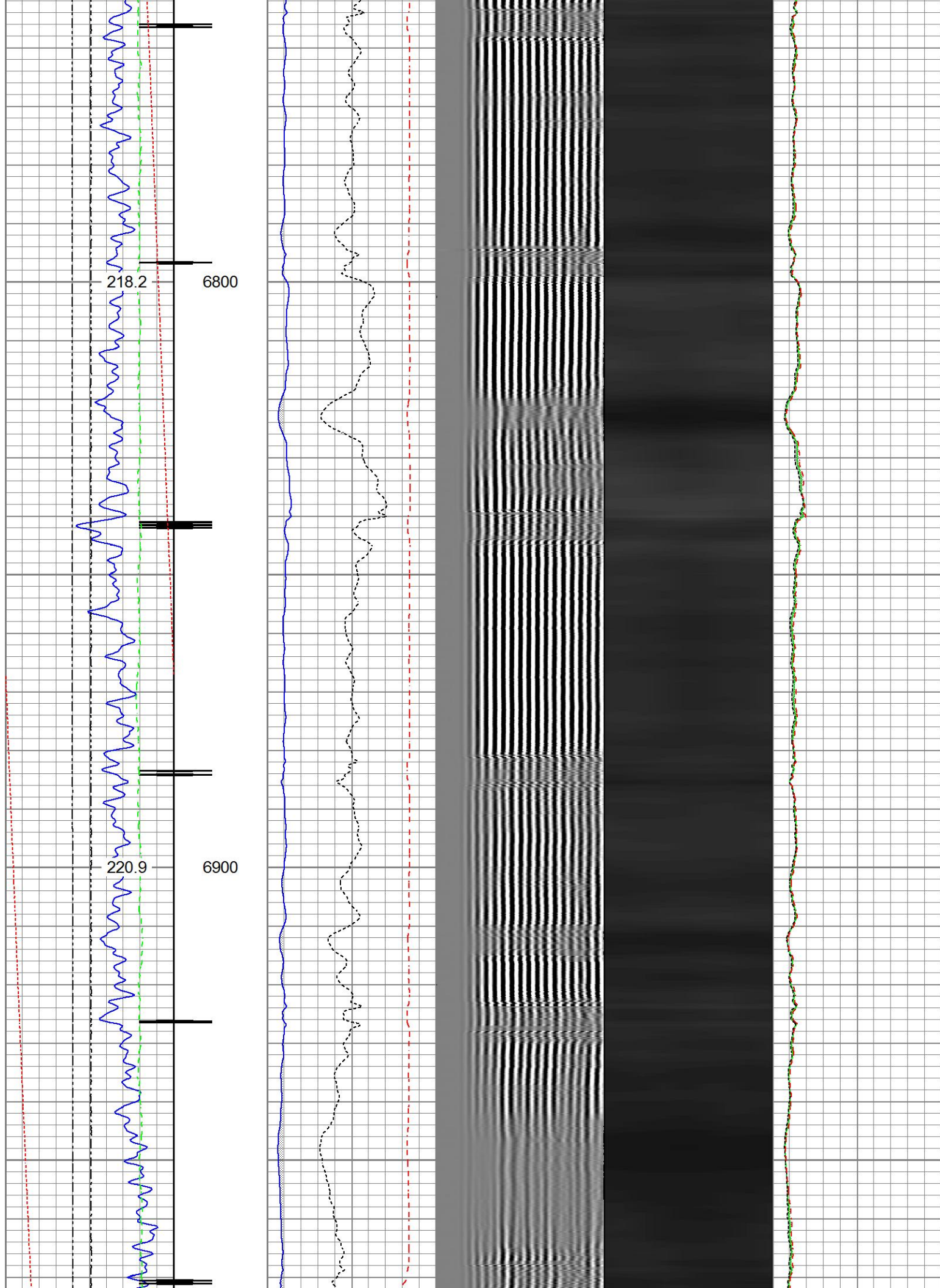




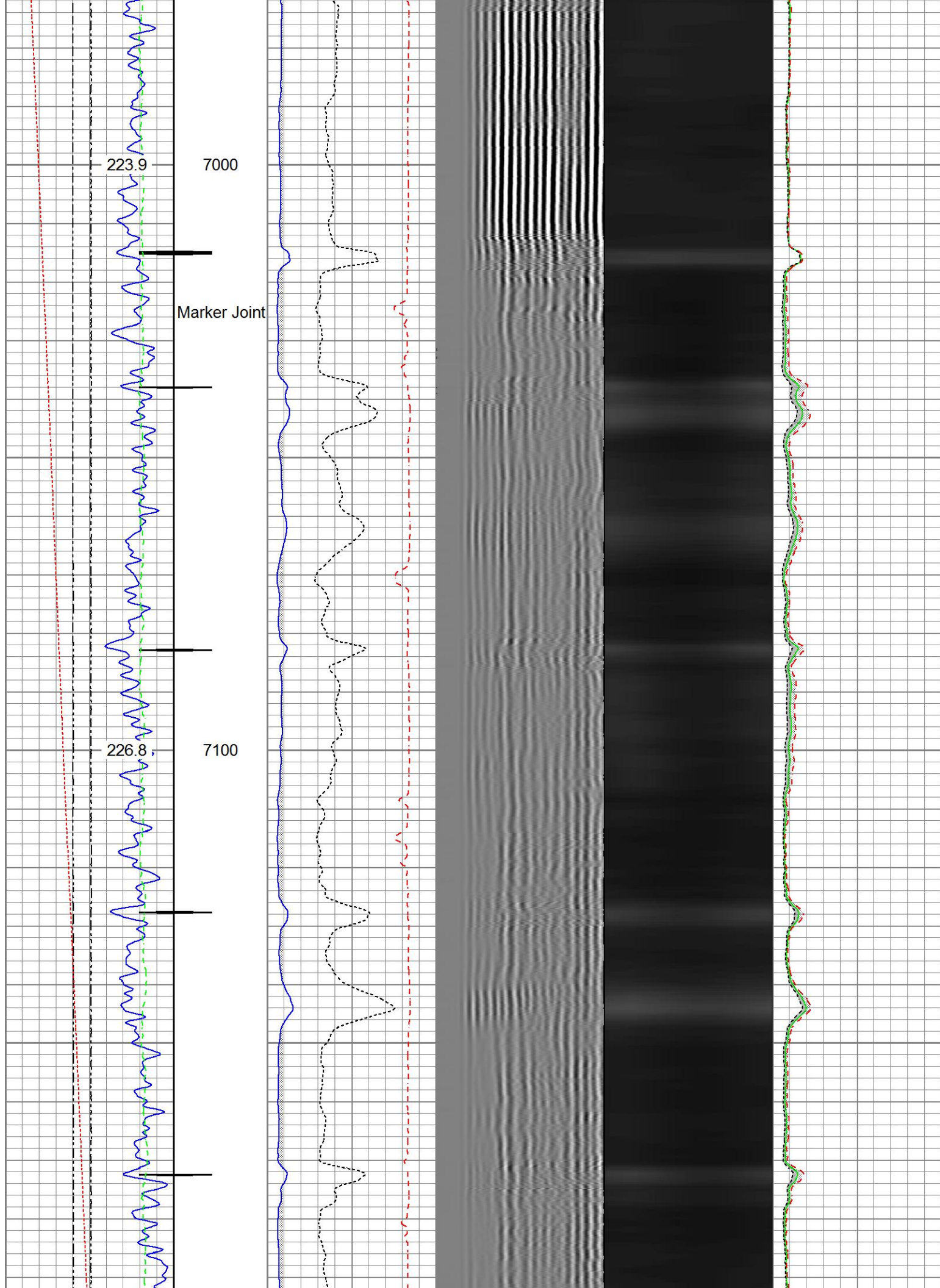


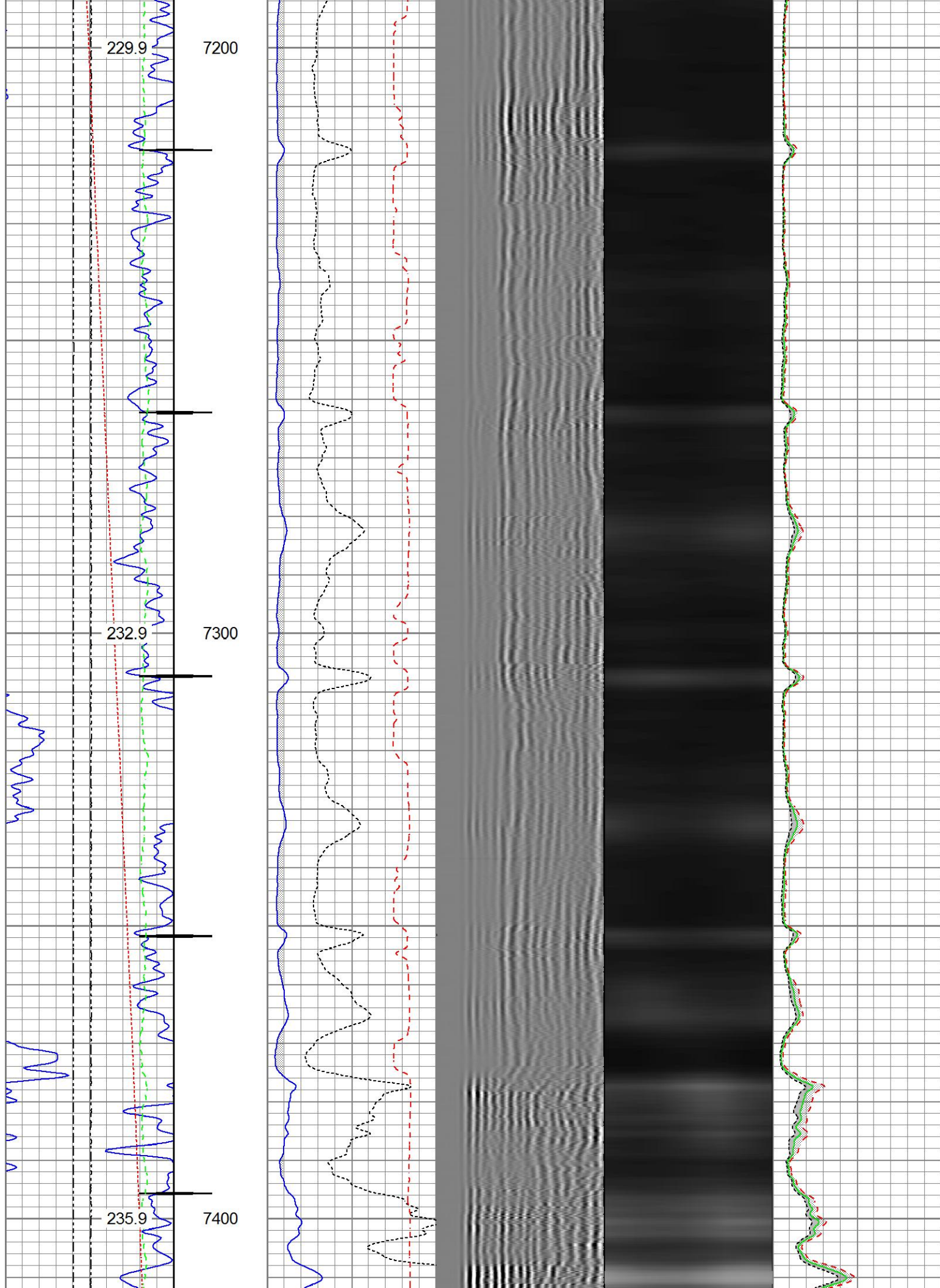




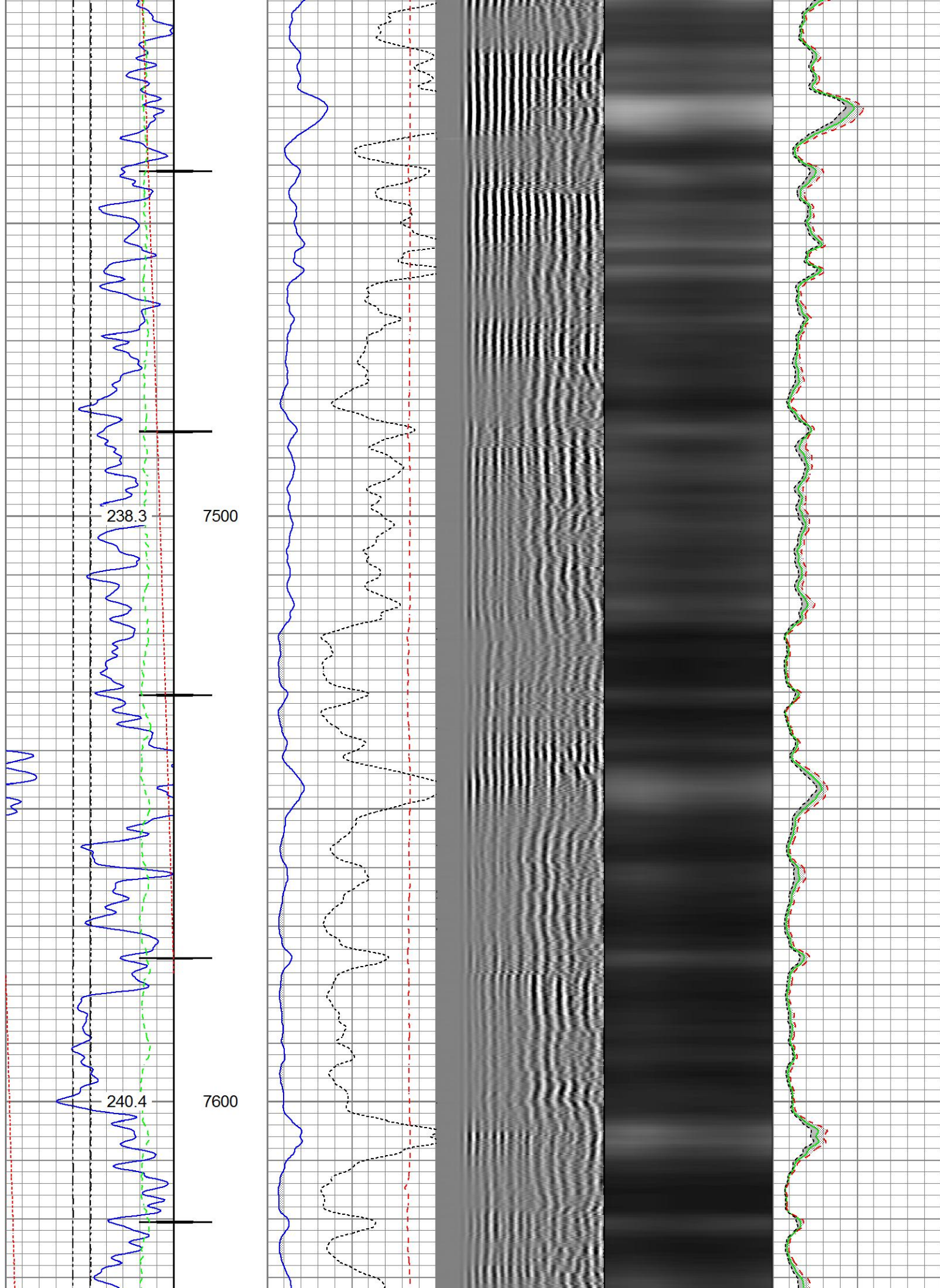


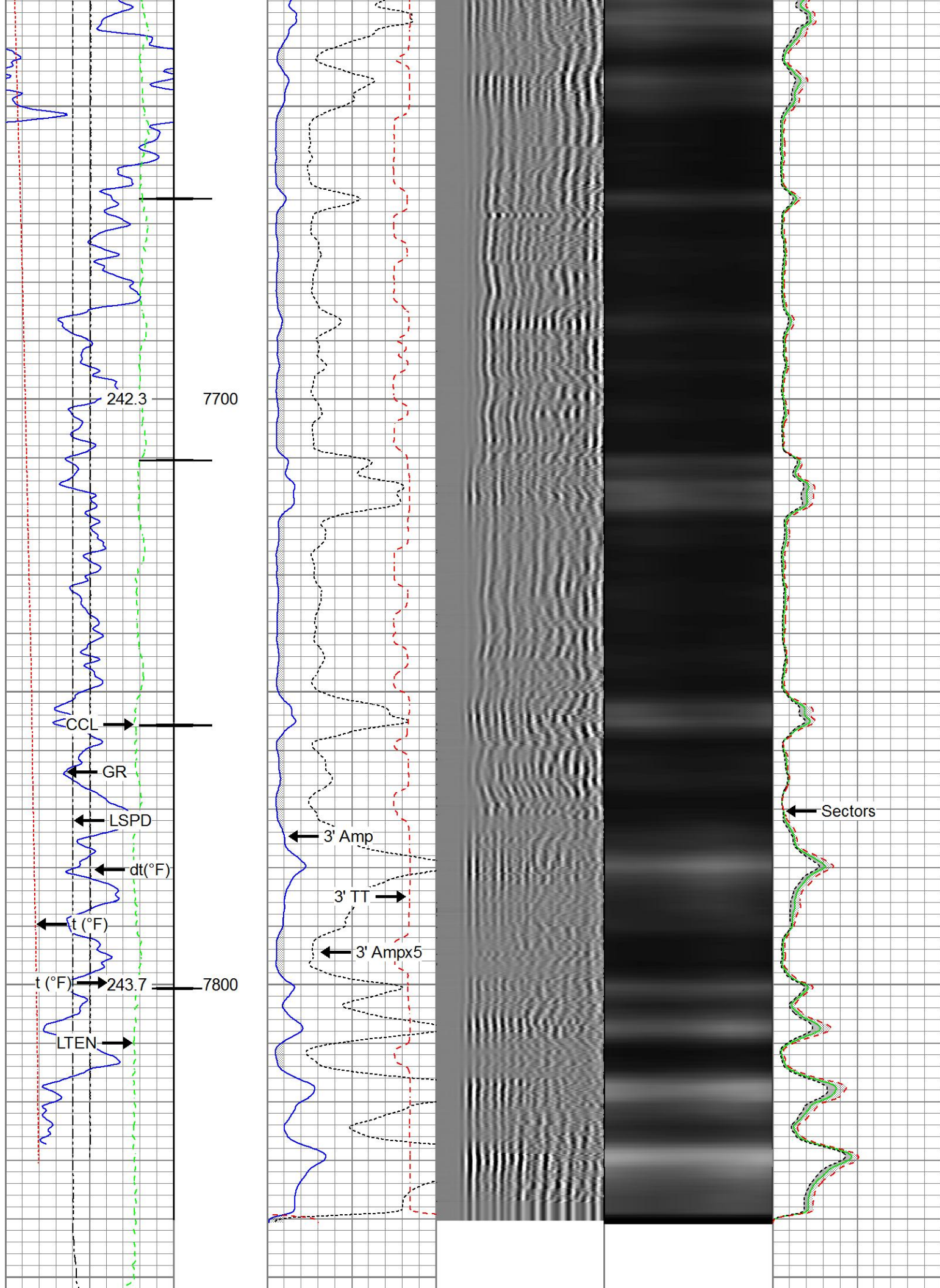














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Temperature					
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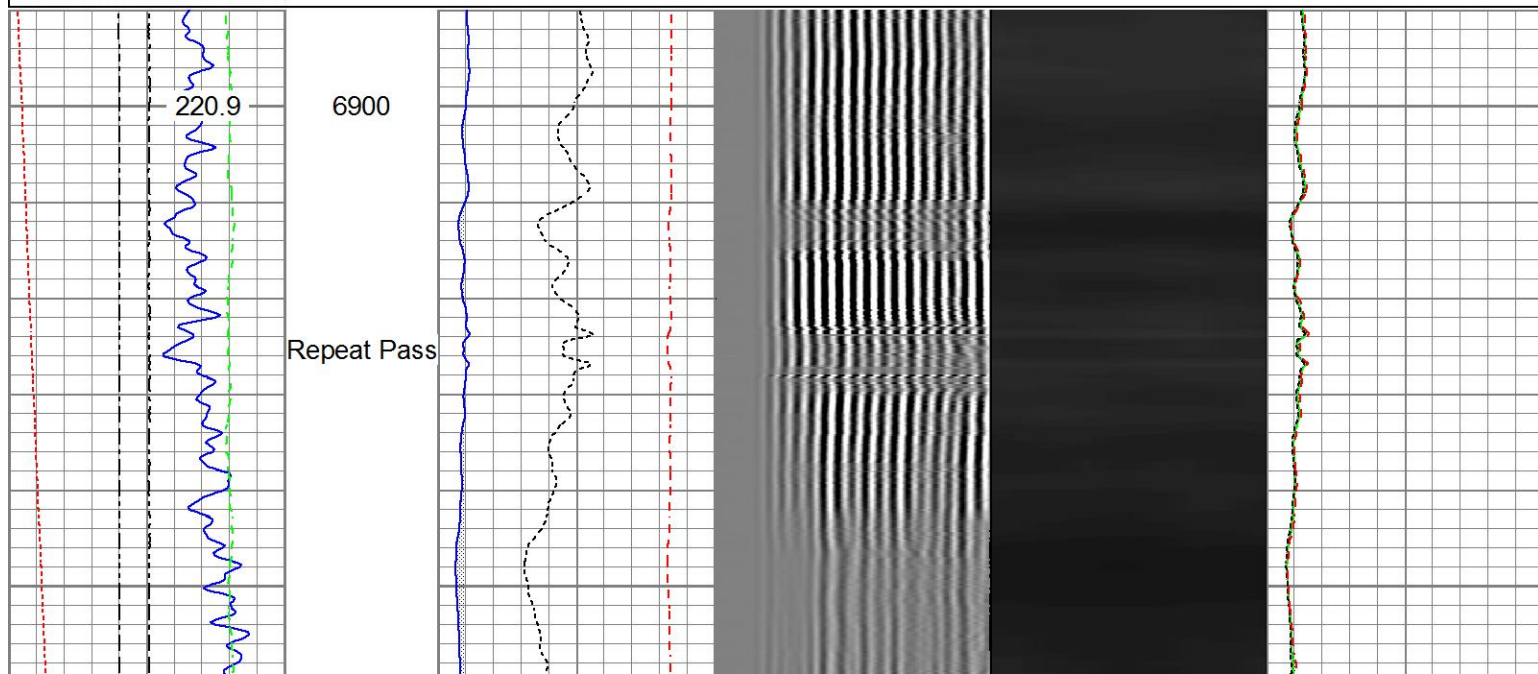


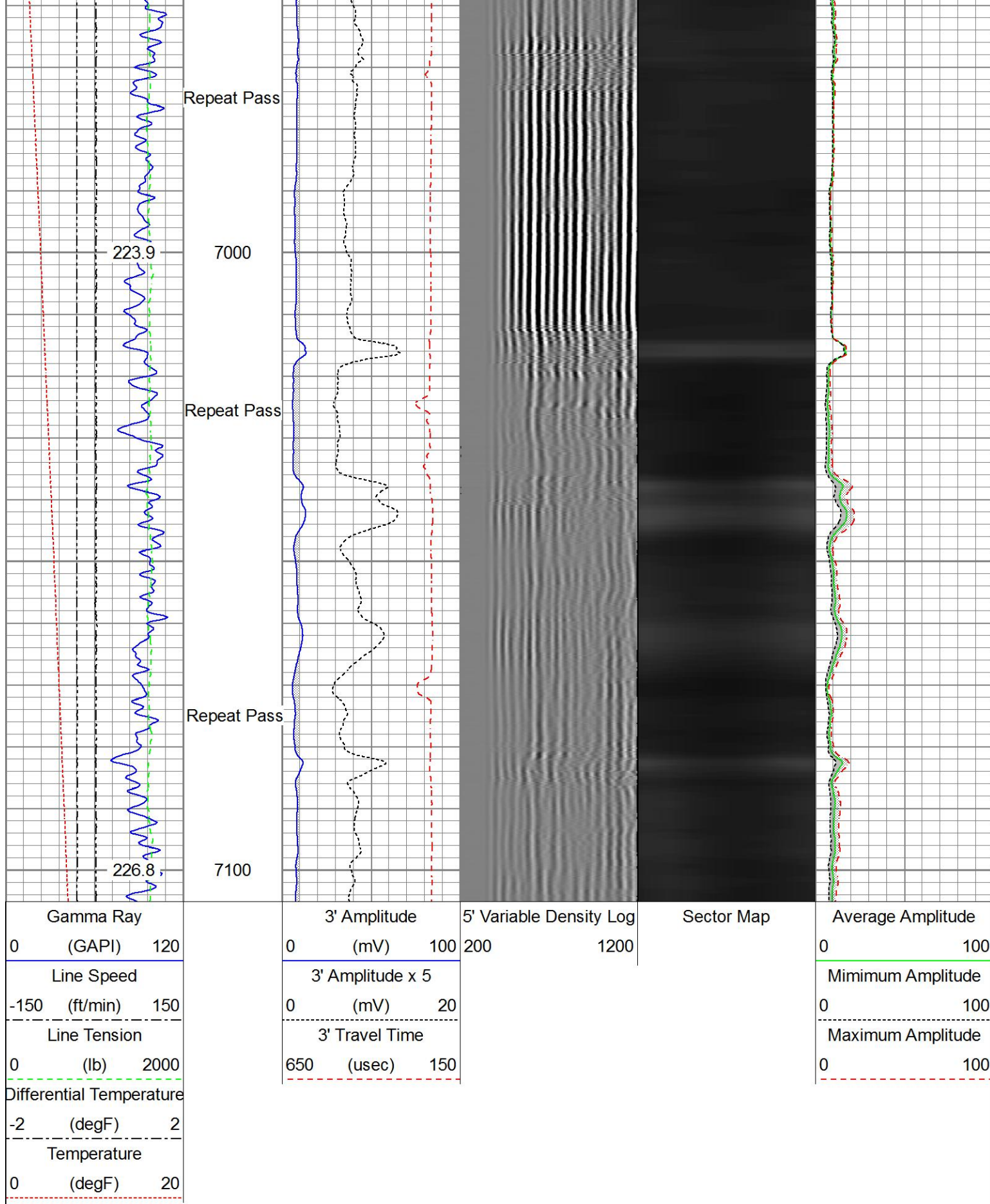
## Repeat Pass



Recorded With 2800 PSI Surface Induced Pressure

Database File 0512342304\_anadarko\_land 15c-32hz\_09-03-16\_cnl\_rbl\_w8.db  
Dataset Pathname pass4.1  
Presentation Format ros\_rbt004\_sx  
Dataset Creation Sat Sep 03 13:29:06 2016  
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)
			Titan_Electric_Cable_Heads-Titan_1-11/161.03 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 (219135) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
GR	24.33		UW_PGR-UW_PGR_020 (10013899) Production Gamma Ray	1.92	1.69	9.50
TEMP	22.93		UW_PRT-PRT_016 (10025097) Platinum Resistance Thermometer	1.04	1.69	5.20
CCL	21.69		UW_CCL-UW_CCL_028 (10024819) 3-1/8" Ultrawire Casing Collar Locator	1.61	3.13	36.00
			UW_PRC-DSS_RAC 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
CBLROT	14.29		UW_RBT-UW_RBT_004 (10013454) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.48	3.13	140.00
WVFS8	14.29					
WVFS7	14.29					
WVFS6	14.29					
WVFS5	14.29					
WVFS4	14.29					
WVFS3	14.29					
WVFS2	14.29					
WVFS1	14.29					
WVF3FT	14.29					
WVF5FT	13.29					
CBLTEMP	9.16		UW_PRC-DSS_RAC 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
			UW_CNL-UW_CNL_007 (1007) Sondex Compensated Neutron Logging Tool	6.61	1.69	30.00
CNLSC	1.53					
CNSSC	1.12					
TSTAMP	0.00					
Dataset: 0512342304_Anadarko_Land 15C-32HZ_09-03-16_CNL_RBL_w8.db: field/well/run1/pass6.1 Total length: 28.58 ft Total weight: 297.60 lb O.D.: 3.13 in						

Compensated Neutron Calibration Report			
Serial Number:	1007		
Tool Model:	UW_CNL_007		
Master Calibration	Sun Feb 07 11:32:29 2016		
Detector	Readings		
Short Space	240.97	cps	
Long Space	302.45	cps	
Ratio	Measured	Reference	
CNRAT Gain K	0.8150	Sleeve: 1.0000	
	1.0211		
Before Survey			
Detector	Readings		
Short Space		cps	
Long Space		cps	
Ratio	Measured	Reference	
After Survey			
Detector	Readings		
Short Space		cps	
Long Space		cps	
Ratio	Measured	Reference	
Segmented Cement Bond Log Calibration Report			
Serial Number:	10013454		
Tool Model:	UW_RBT_004		
Calibration Casing Diameter:	7.000	in	
Calibration Depth:	305.118	ft	
Master Calibration, performed (Derived):			
	Raw (v)		Calibrated (mv)
	Zero	Cal	Results
			Zero
			Cal
			Gain
			Offset
3FT	-0.001	0.861	0.800
5FT	-0.035	0.814	71.921
S1	-0.001	0.729	82.444
S2	-0.003	0.736	71.921
S3	-0.003	0.748	83.733
S4	-0.003	0.770	136.897
S5	-0.001	0.787	135.486
S6	-0.003	0.779	133.156
S7	-0.002	0.748	100.000
S8	-0.002	0.745	100.000
			129.383
			126.785
			127.980
			133.380
			133.960
			0.901
			3.756
			0.180
			0.344
			0.343
			0.333
			0.168
			0.326
			0.257
			0.258
Temperature Calibration Report			
Serial Number:	10025097		
Tool Model:	PRT_016		
Performed:	Sun Oct 11 12:34:58 2015		



Point #	Reading		Reference	
1	13053.00	cps	68.00	degF
2	18014.00	cps	104.00	degF
3	29668.00	cps	176.00	degF
4	41181.00	cps	248.00	degF
5	52983.00	cps	320.00	degF
6	58931.00	cps	356.00	degF
7		cps		degF
8		cps		degF
9		cps		degF
10		cps		degF

Gamma Ray Calibration Report			
Serial Number:	10013899		
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	

	Company	Kerr-McGee Oil & Gas Onshore, L.P.
	Well	Land 15C-32HZ
	Field	Wattenberg
	County	Weld
	State	Colorado