



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.				
Well	Rocky 38N-33HZ				
Field	Wattenberg				
County	Weld				
State	Colorado				
Company	Kerr-McGee Oil & Gas Onshore, L.P.	Well	Rocky 38N-33HZ	Field	Wattenberg
County	Weld	State	Colorado		
Location:	API # : 05-123-44226		Other Services Gauge Ring RBP		
SEC 33 TWP 2N RGE 65W			Elevation		
Permanent Datum	Ground Level	Elevation	4929'		
Log Measured From	Kelly Bushing	17 FT	K.B. 4946'		
Drilling Measured From	Kelly Bushing		D.F. ---		
			G.L. 4929'		

Date 21-OCT-2017

Run Number	Three		
Depth Driller	13397 FT		
Depth Logger	7590 FT		
Bottom Logged Interval	7588 FT		
Top Log Interval	Surface		
Open Hole Size	8.50"		
Type Fluid	Water		
Density / Viscosity	8.34 lb/gal		
Max. Recorded Temp.	232°F		
Estimated Cement Top	See Log		
Time Well Ready	ROA		
Time Logger on Bottom	14:47		
Equipment Number	HD-0311		
Location	Fort Lupton, CO		
Recorded By	R. Cameron		
Witnessed By	Brad Clearain		

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	1911 FT
Intermediate #1	5 1/2	20	HCP-110	Surface	13387 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 at 6592 FT
Adjusted -2 FT to correlate to Kelly Bushing
Gauge Ring/Junk Basket ran to 7620 FT with no debris
Log ran from just above RBP to Surface
Log ran with 2800 PSI Surface Induced Pressure
Logging tools were clean and free of any debris upon completion of operations

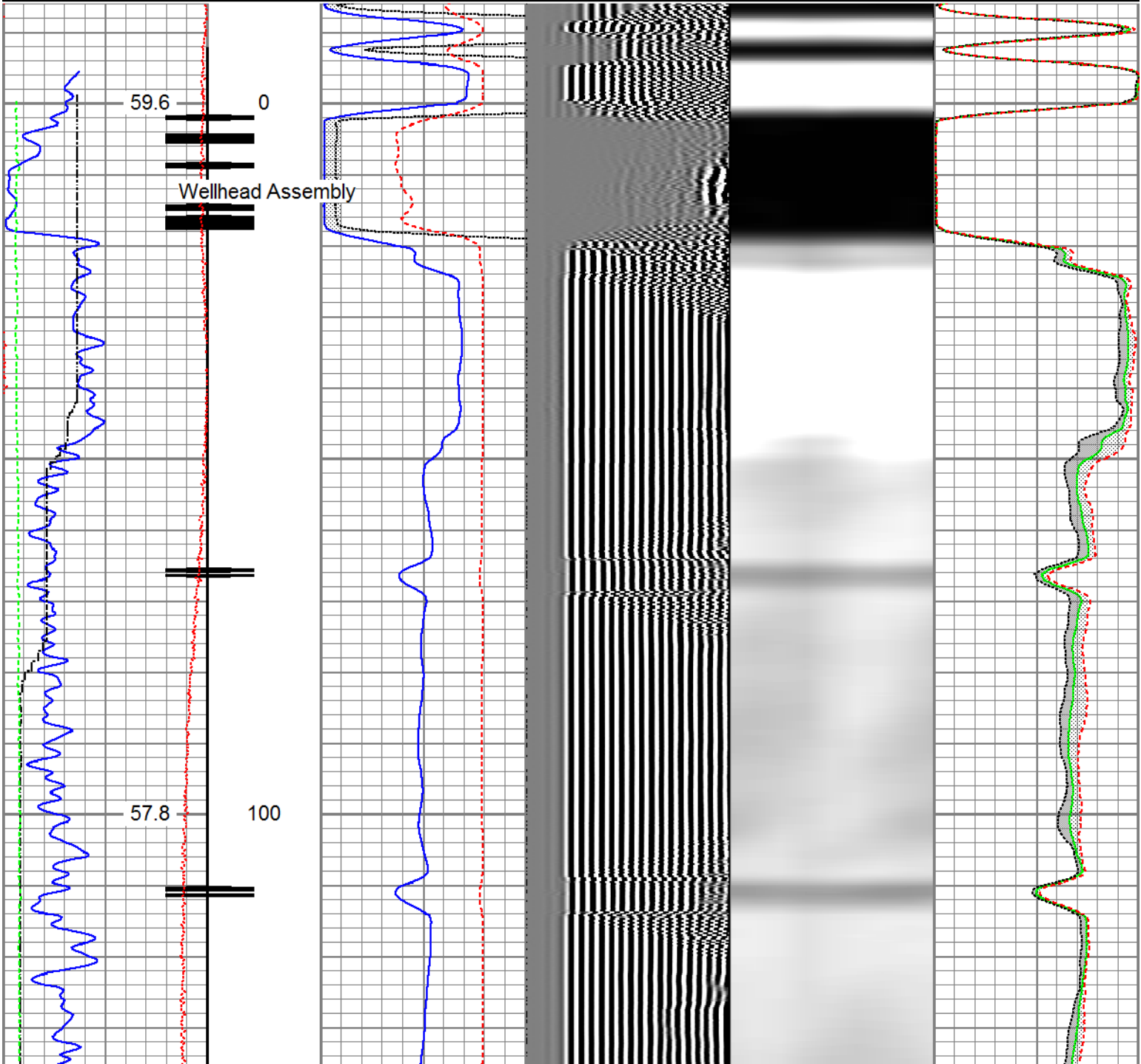
Thank you for choosing Reliance Oilfield Services, LLC!!

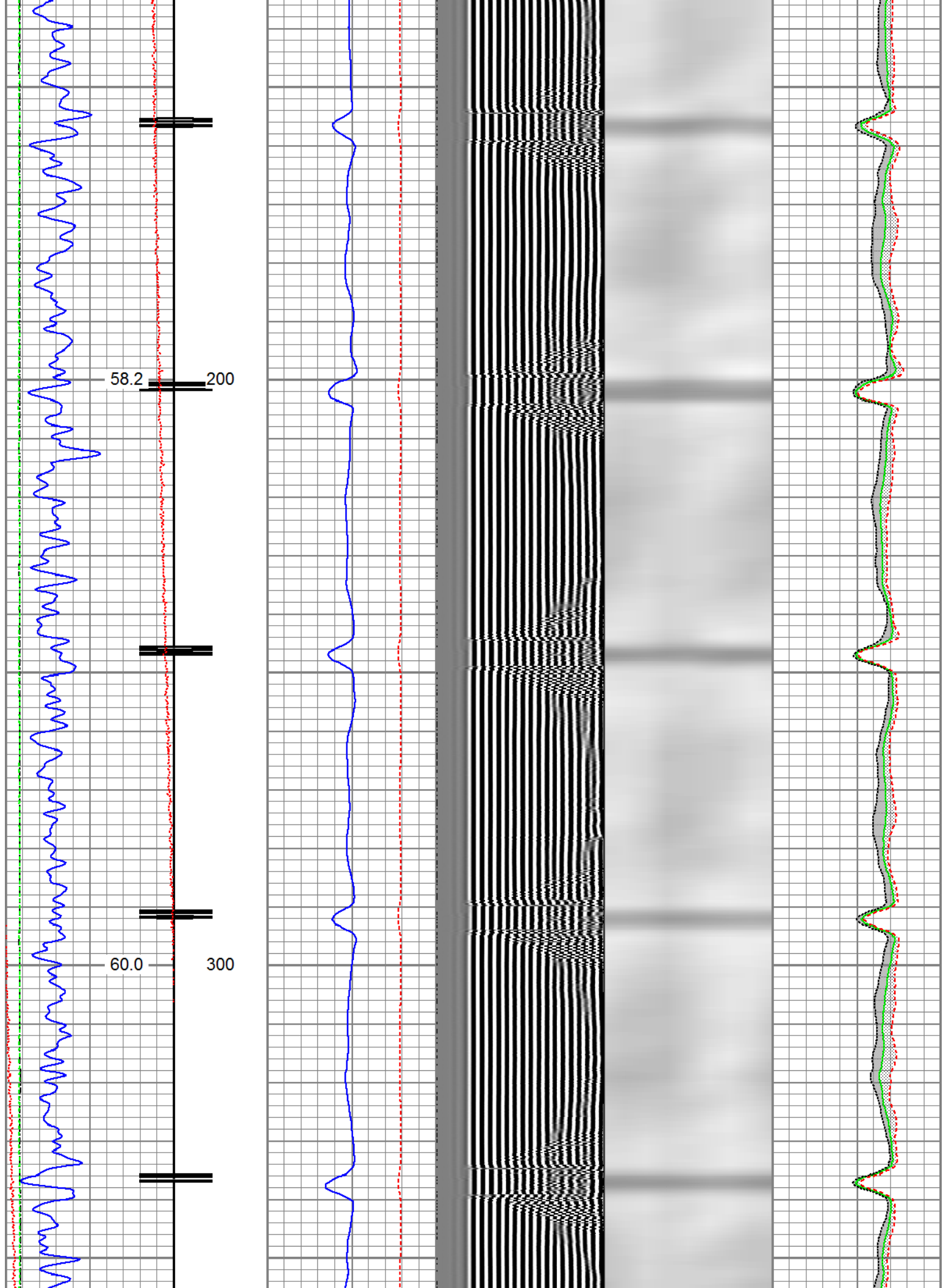


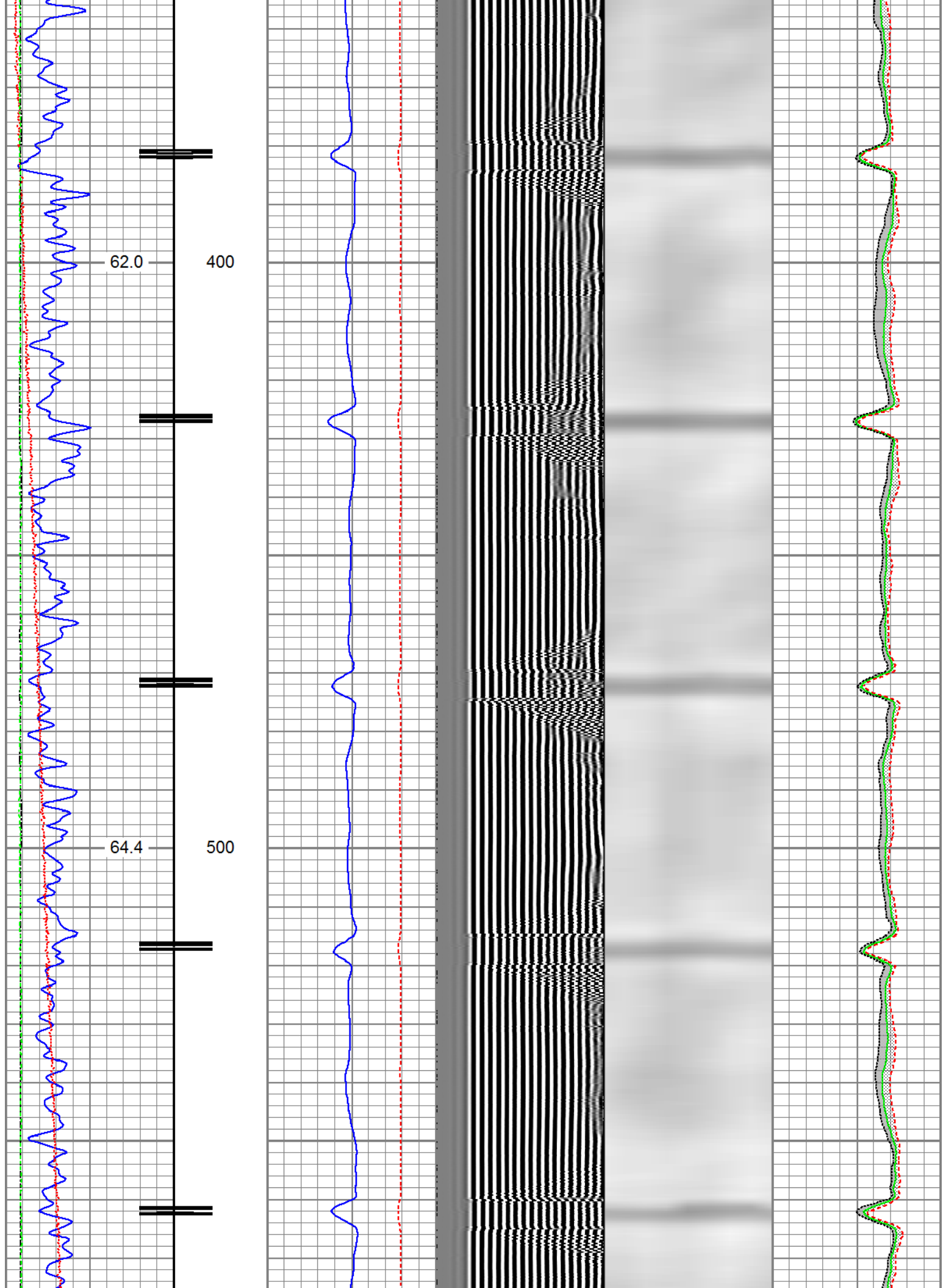
Main Pass

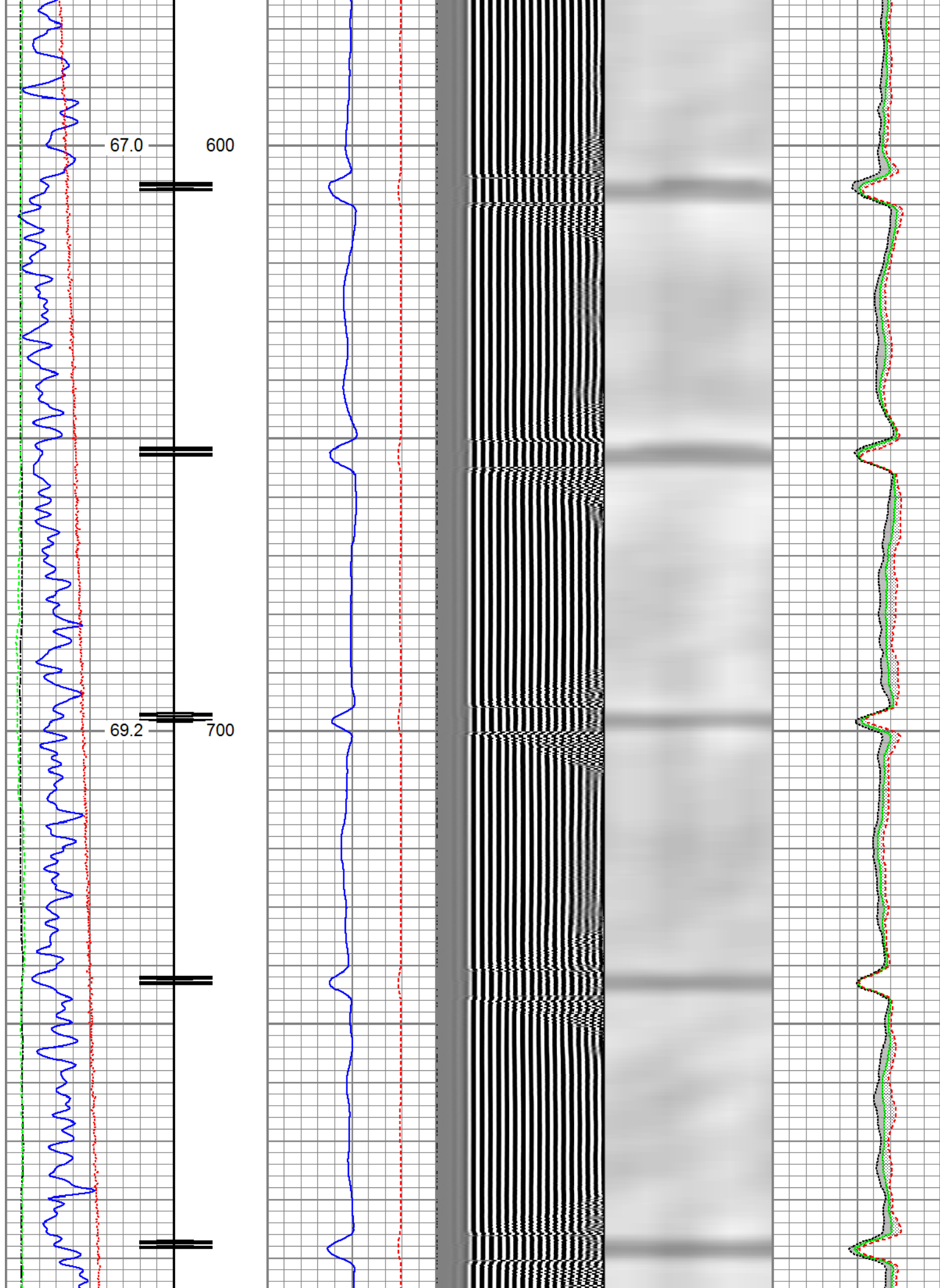
Recorded With 2800 PSI Surface Induced Pressure

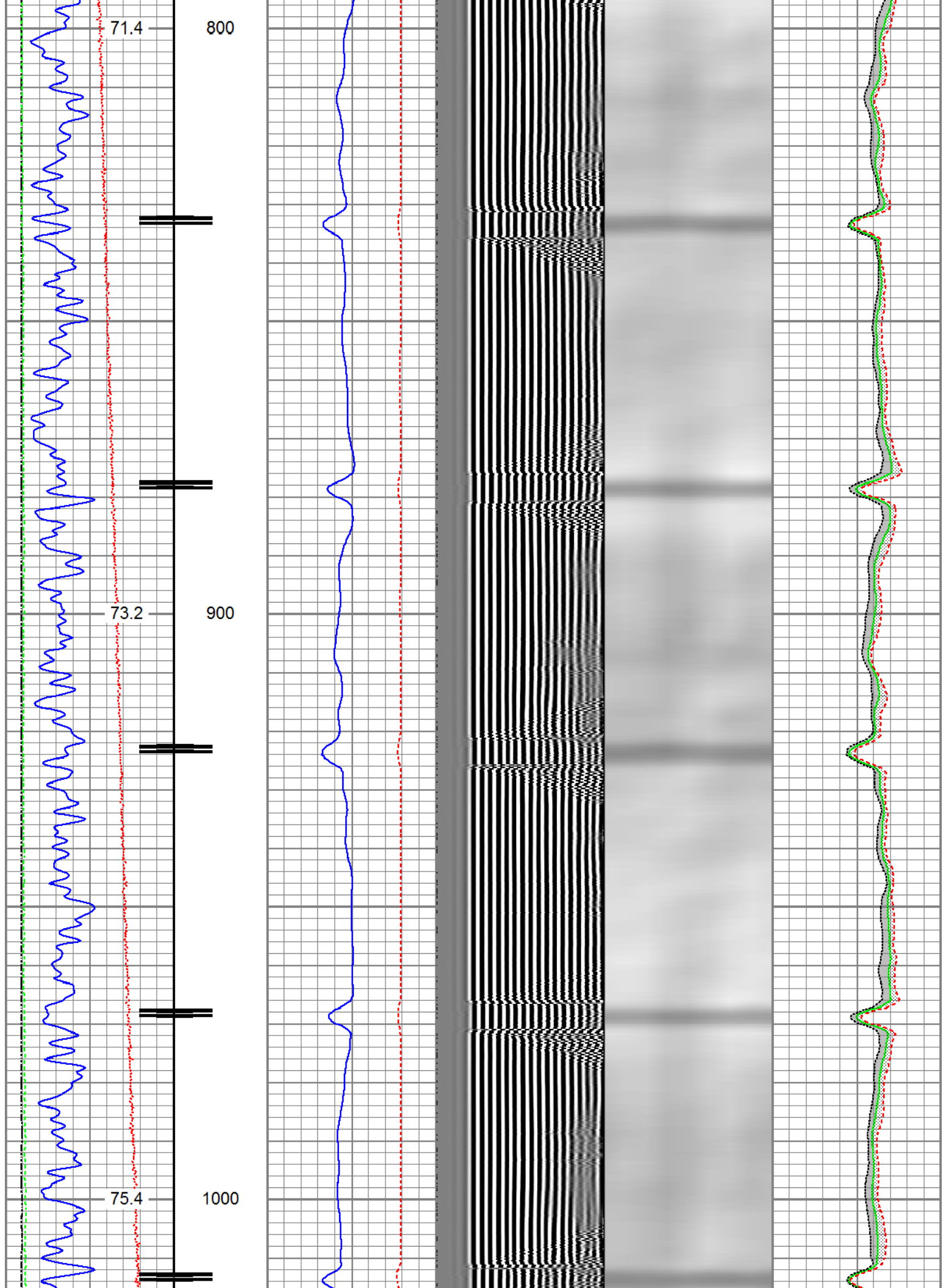
Gamma Ray			3' Amplitude		5' Variable Density Log	Sector Map	Average Amplitude		
0	(GAPI)	120	0	(mV)			100	0	100
Casing Collar Locator			3' Amplitude x 5				Minimum Amplitude		
			0	(mV)			20	0	100
Temperature			3' Travel Time				Maximum Amplitude		
0	(degF)	20	650	(usec)			150	0	100
Line Speed					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

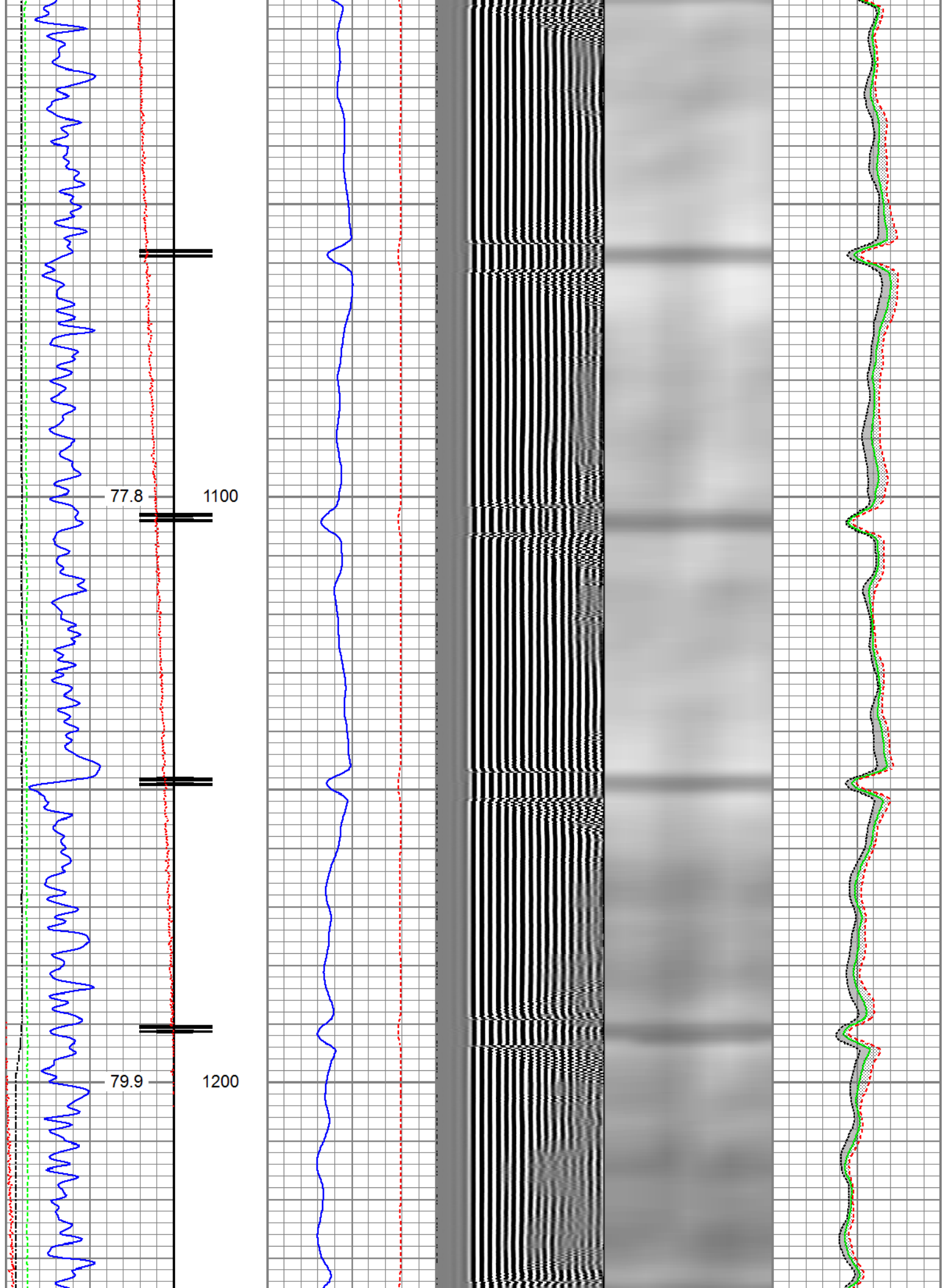


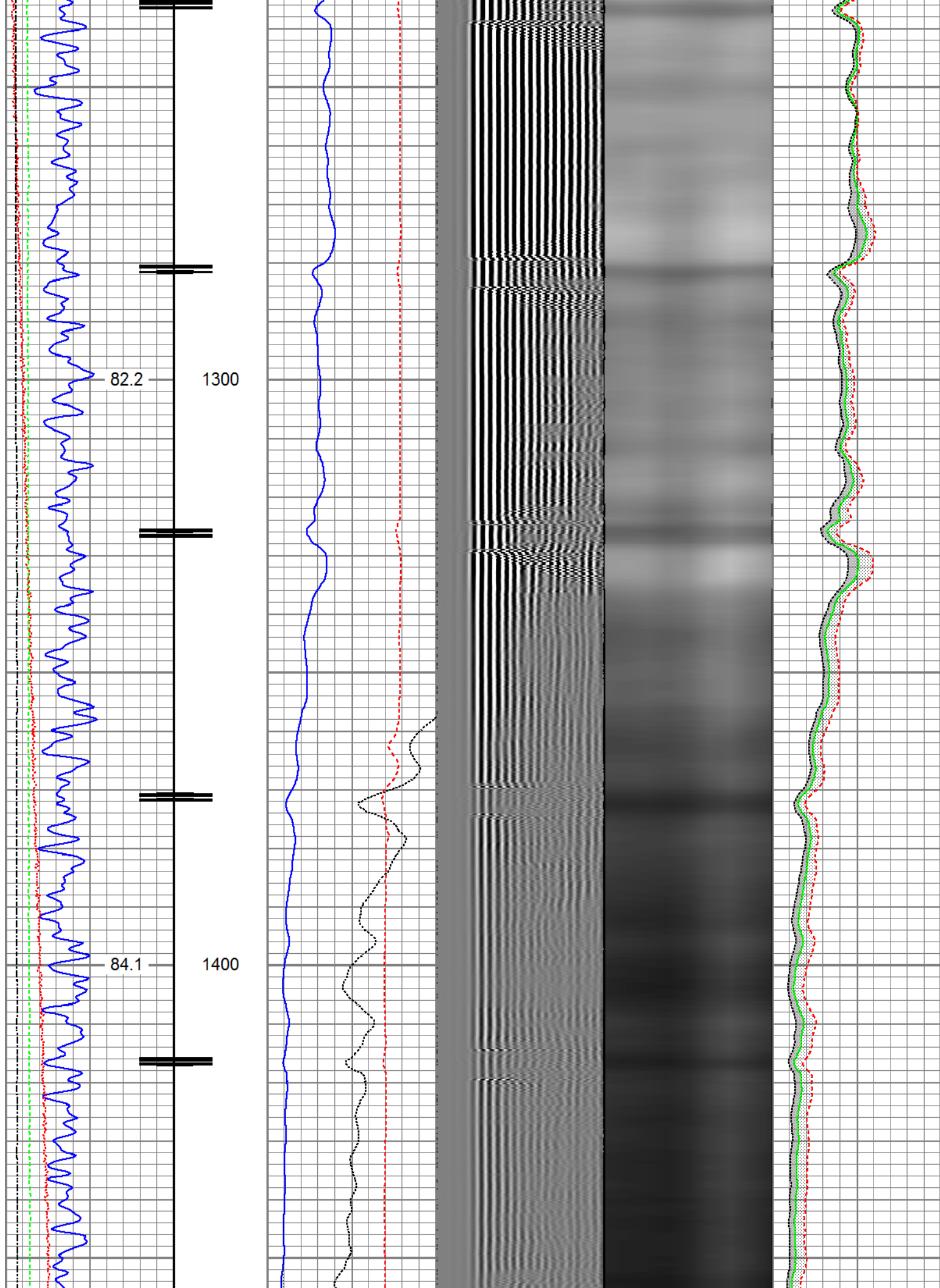


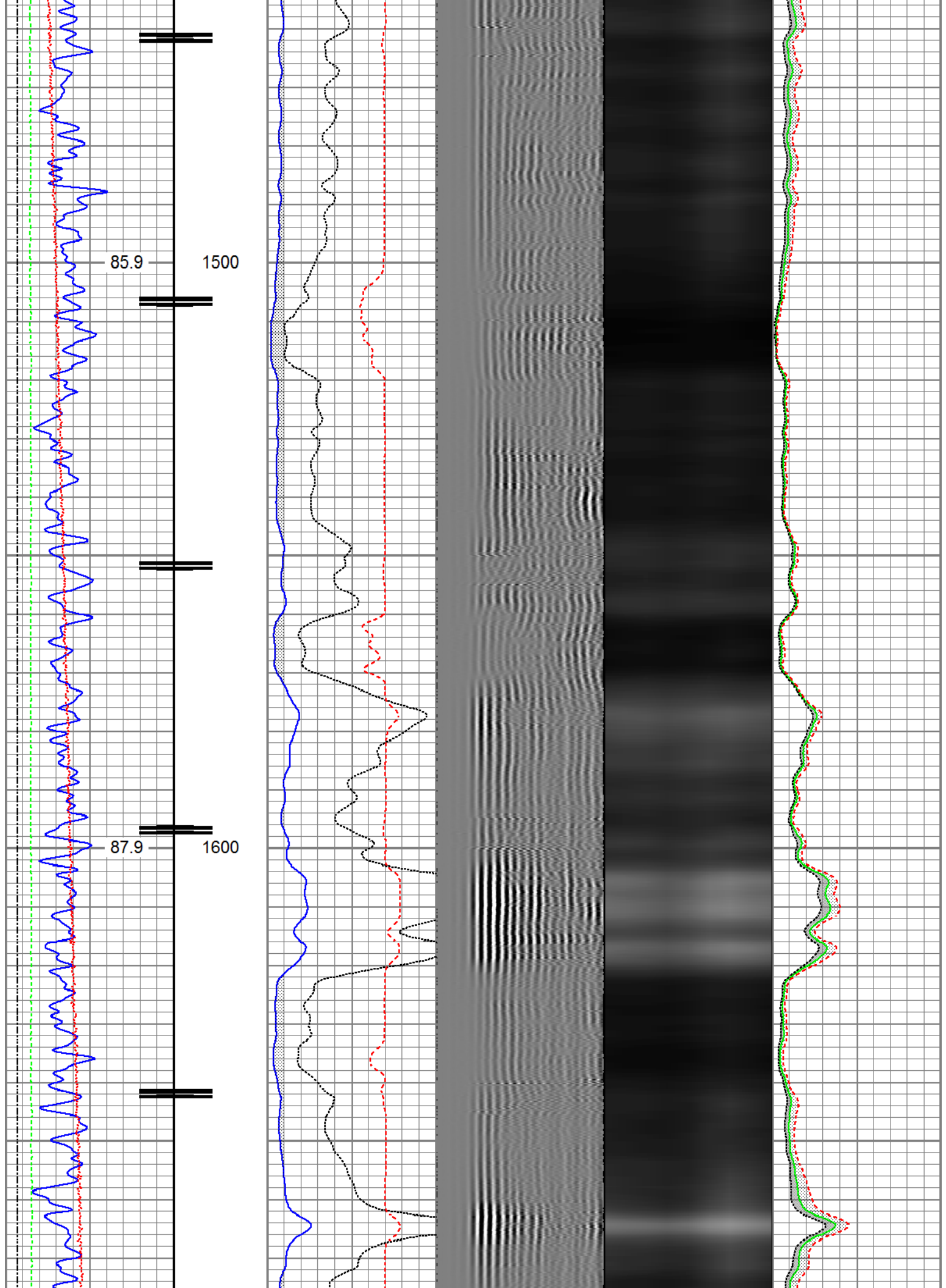


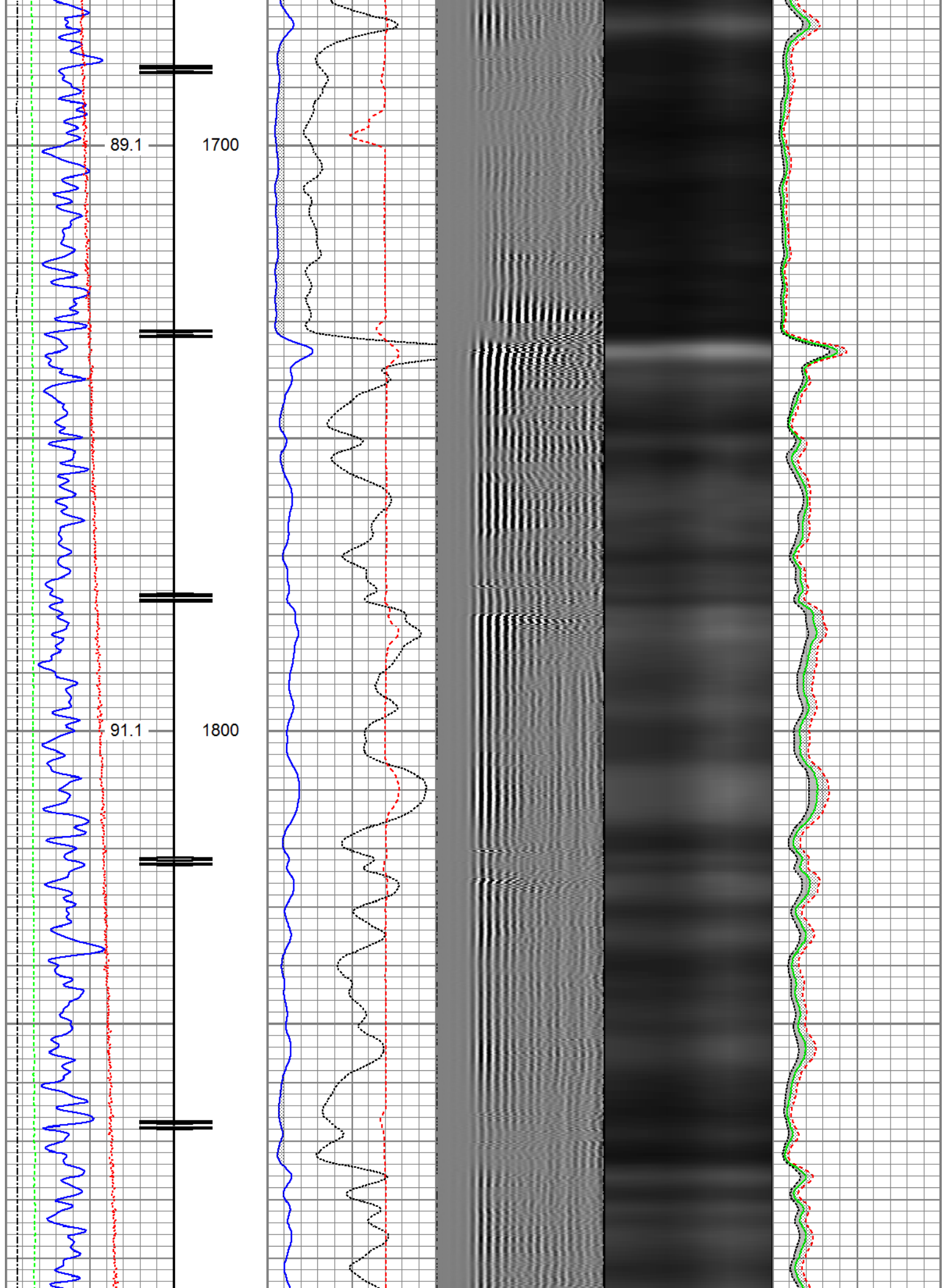


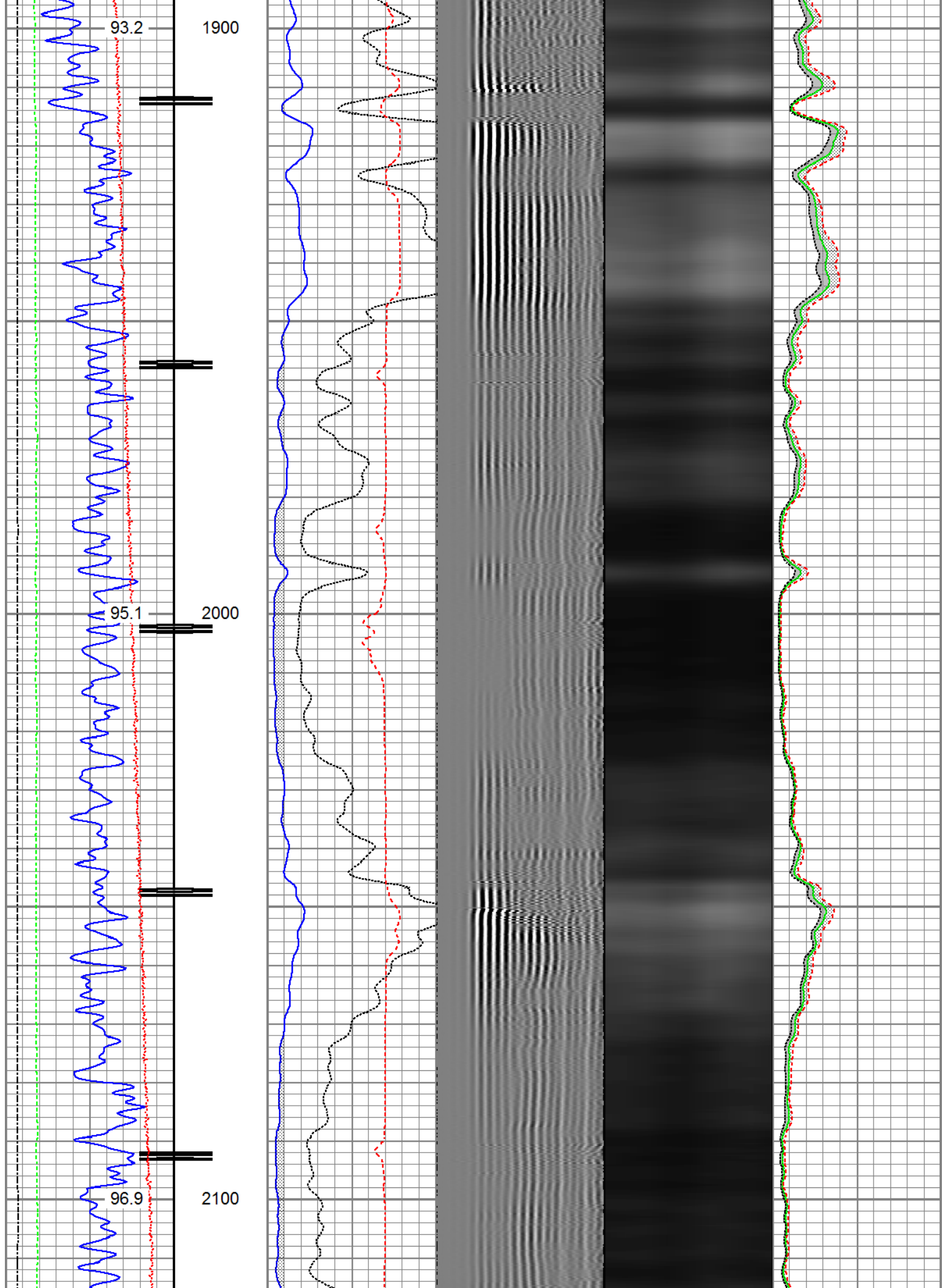


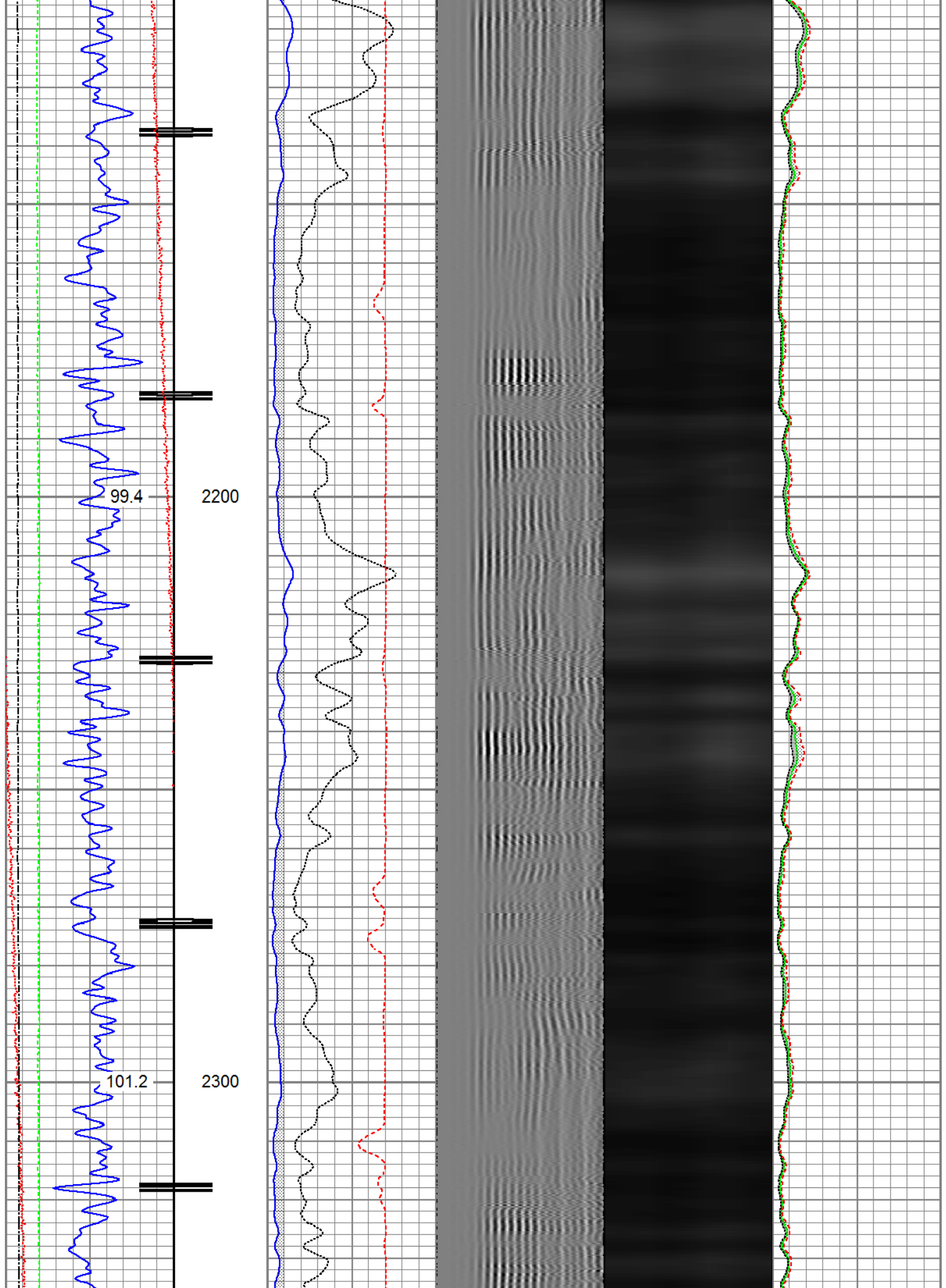


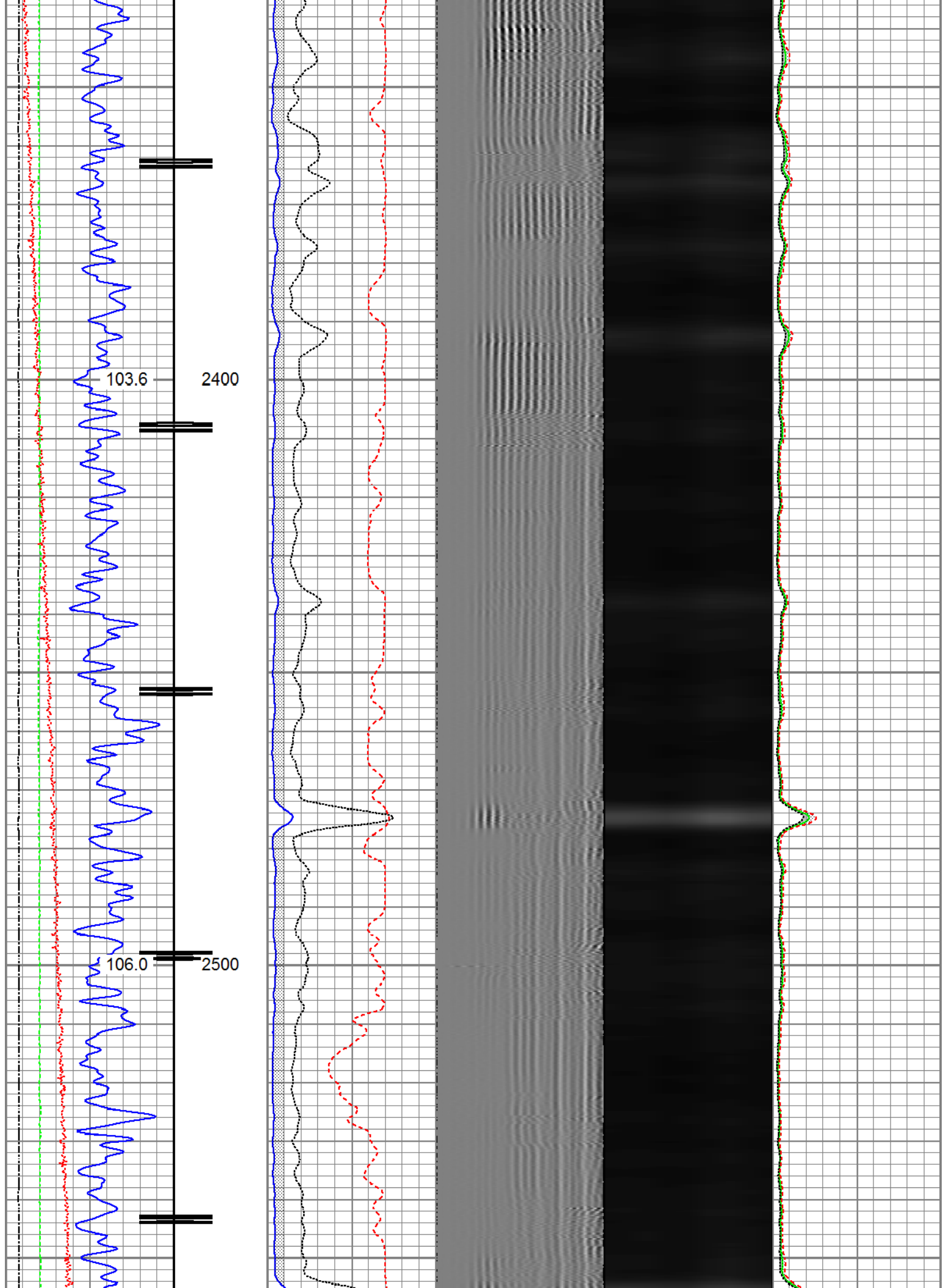


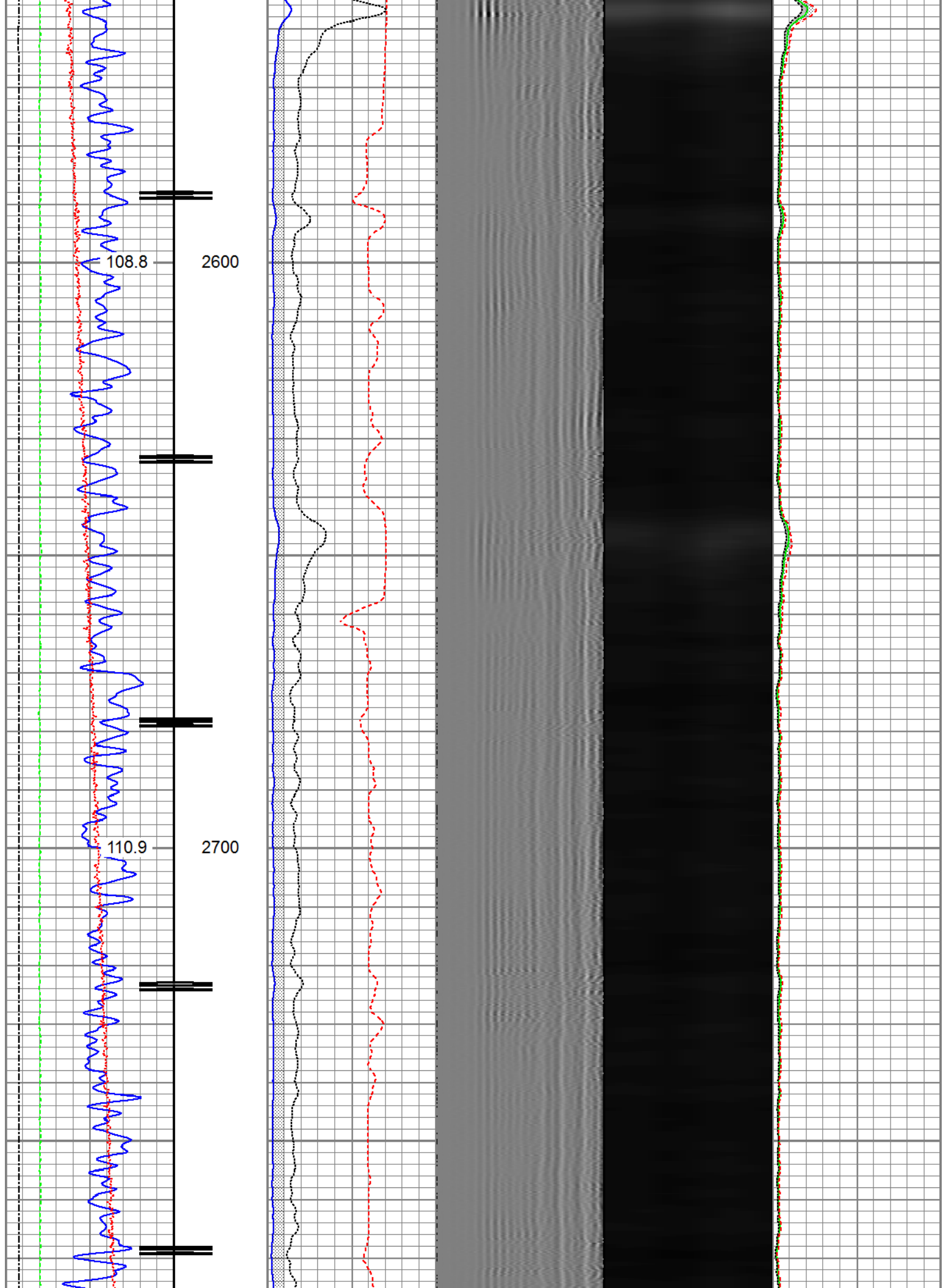


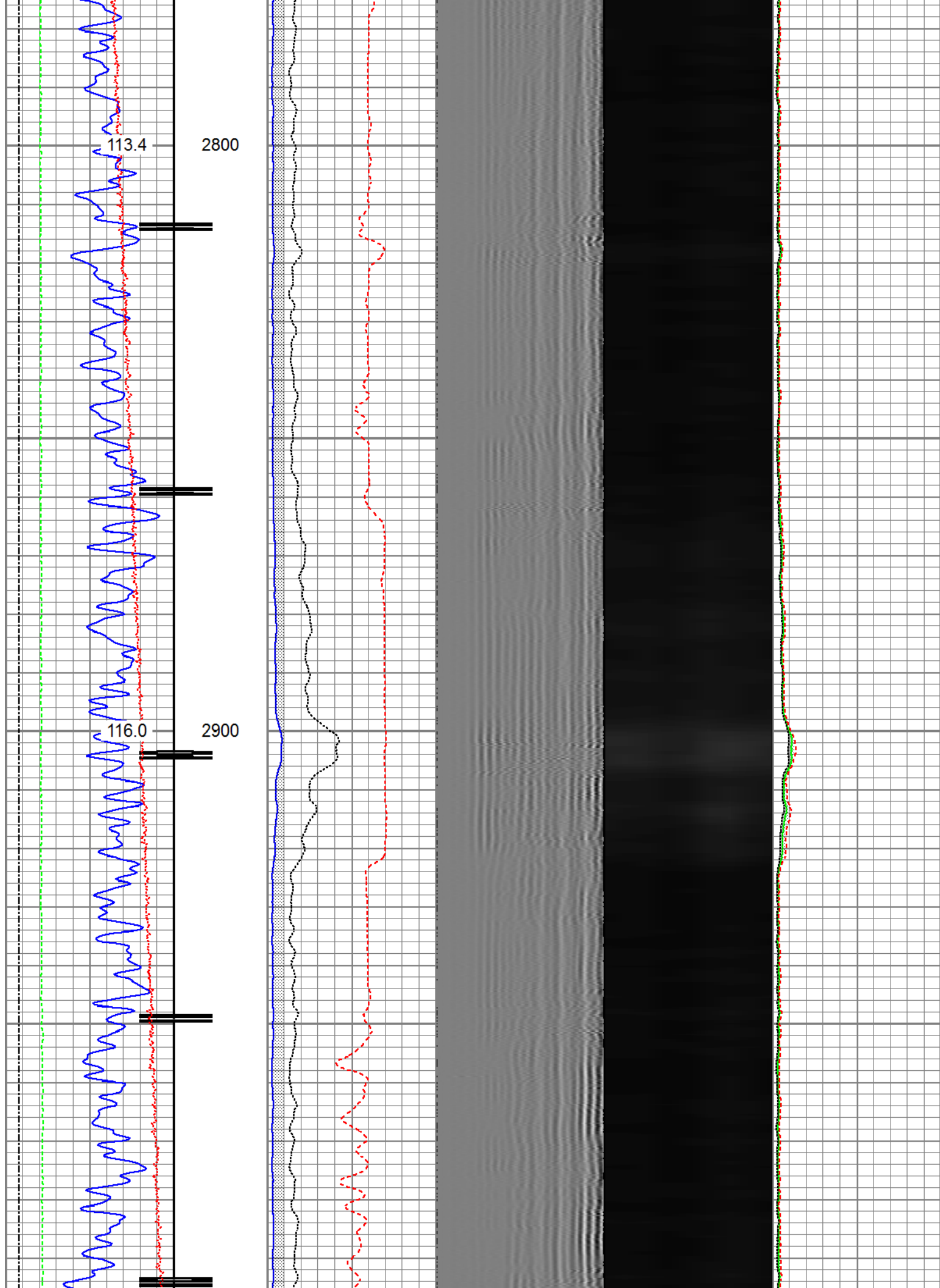


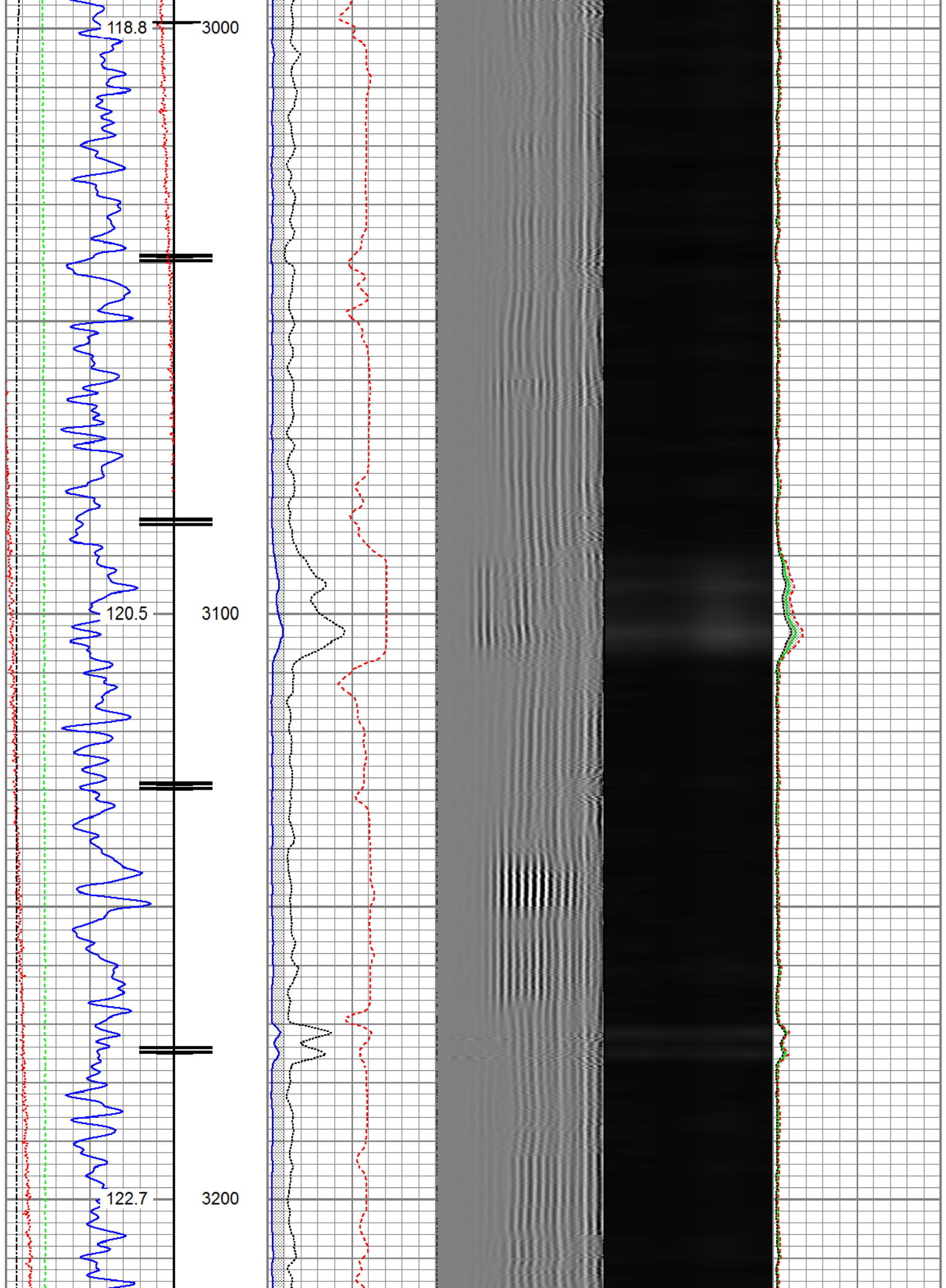


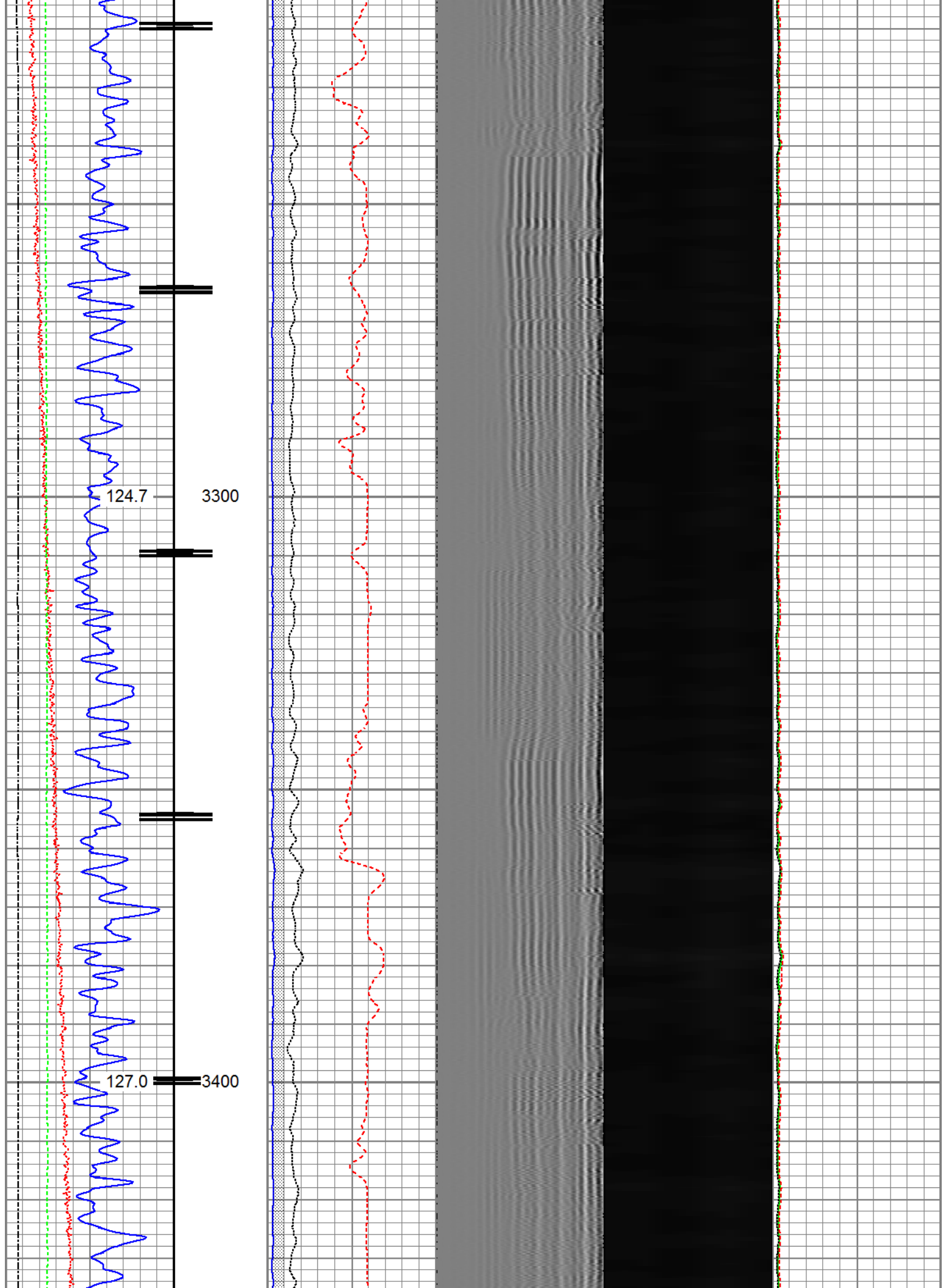


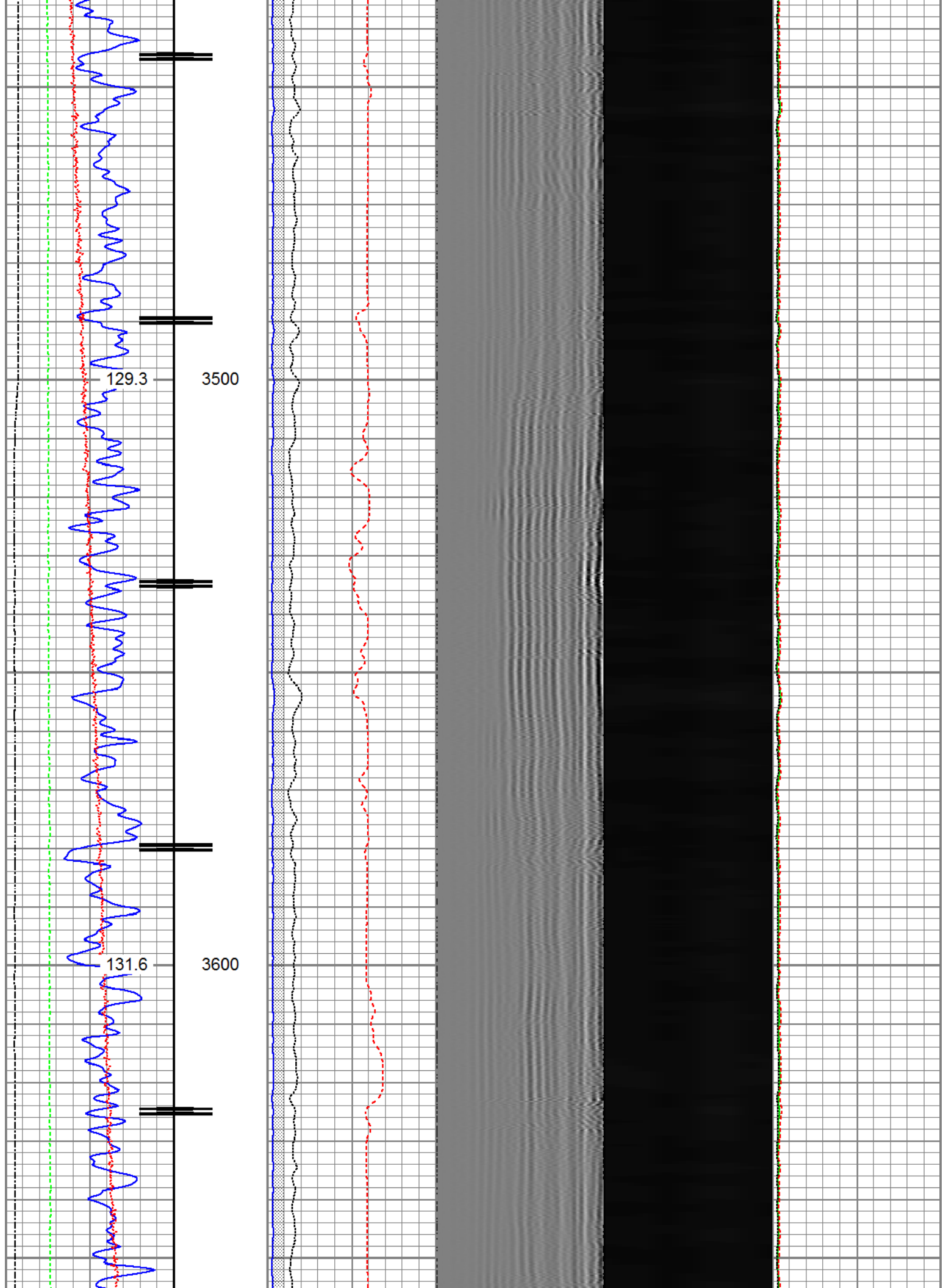


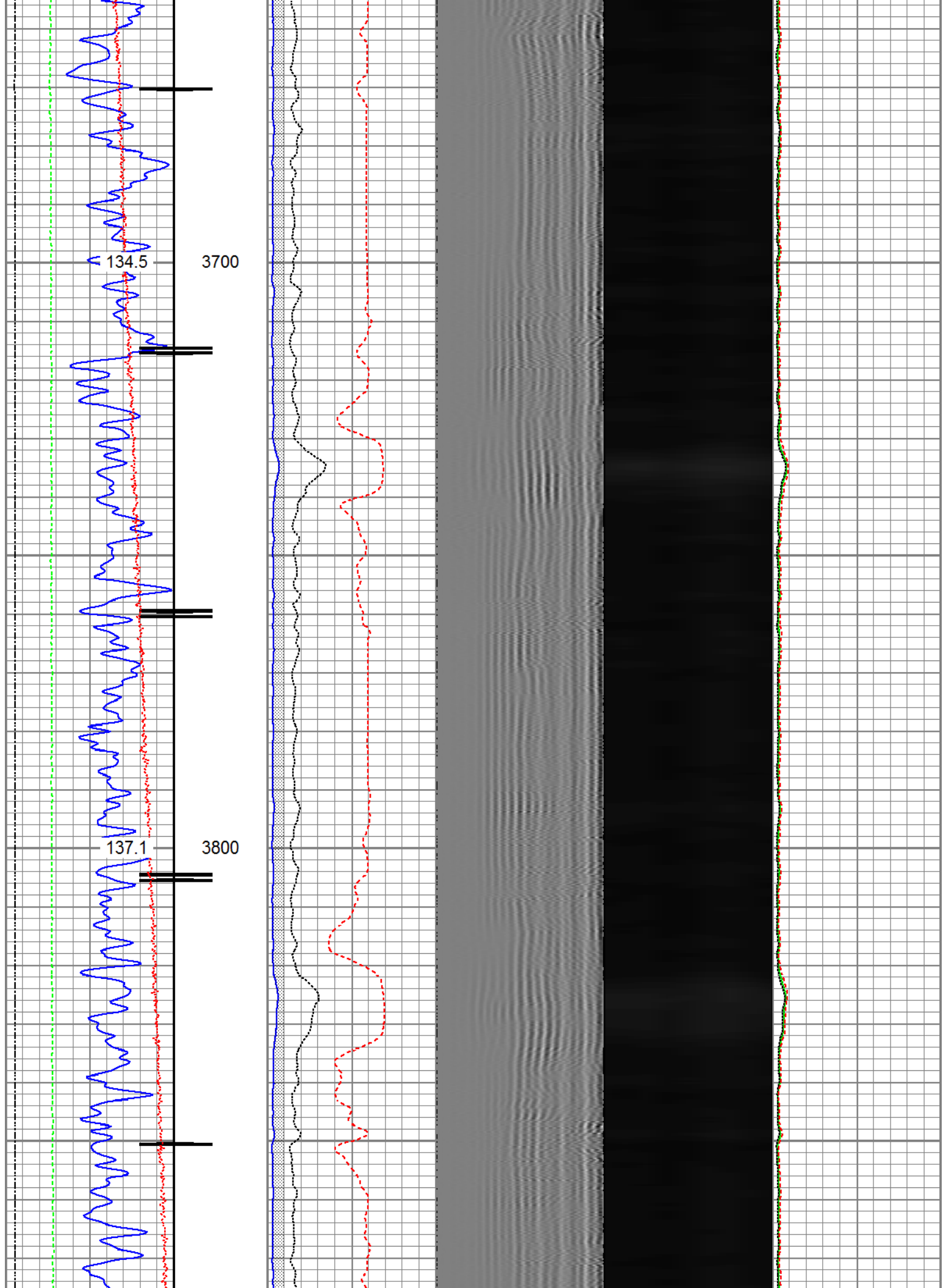


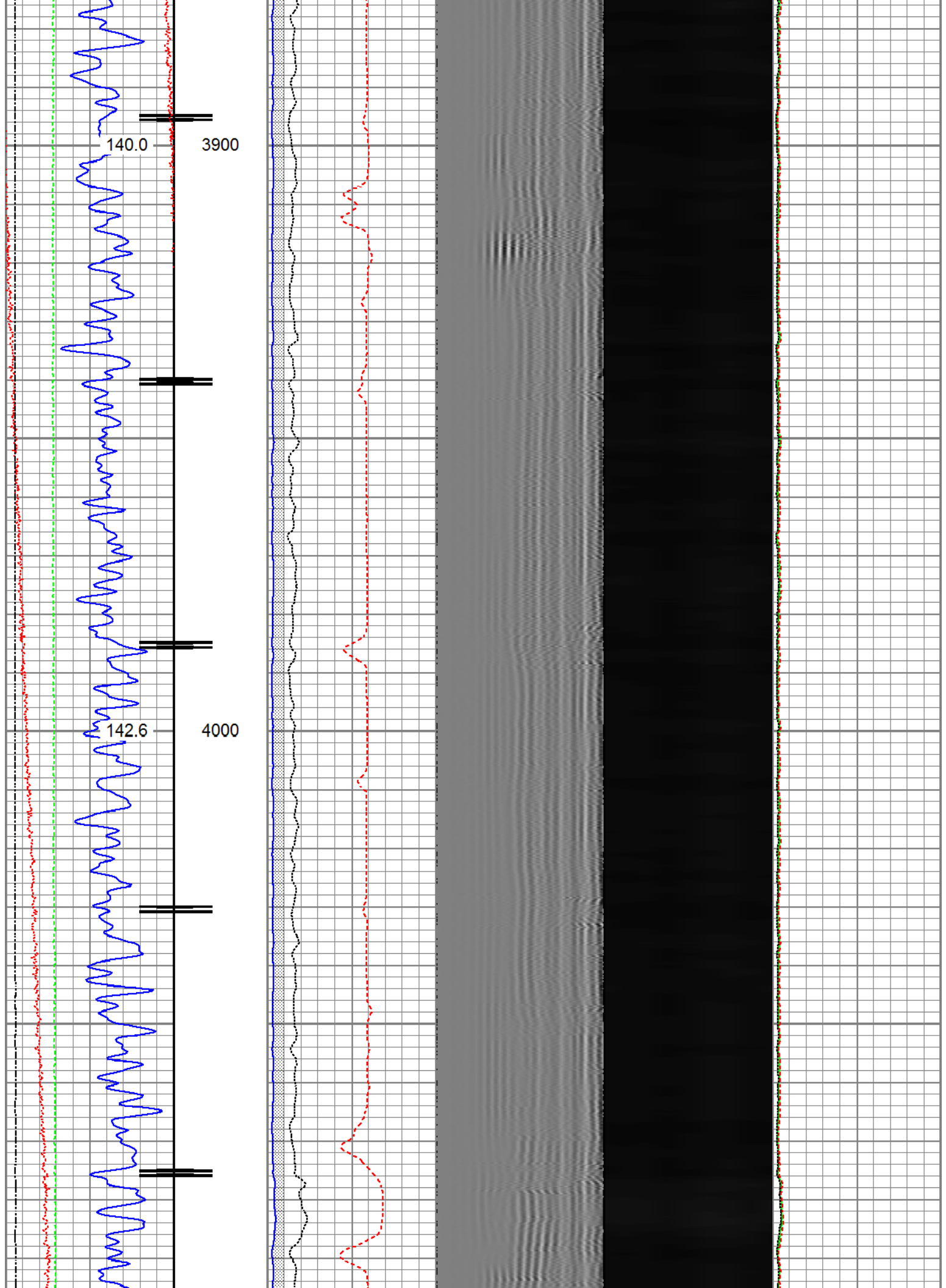


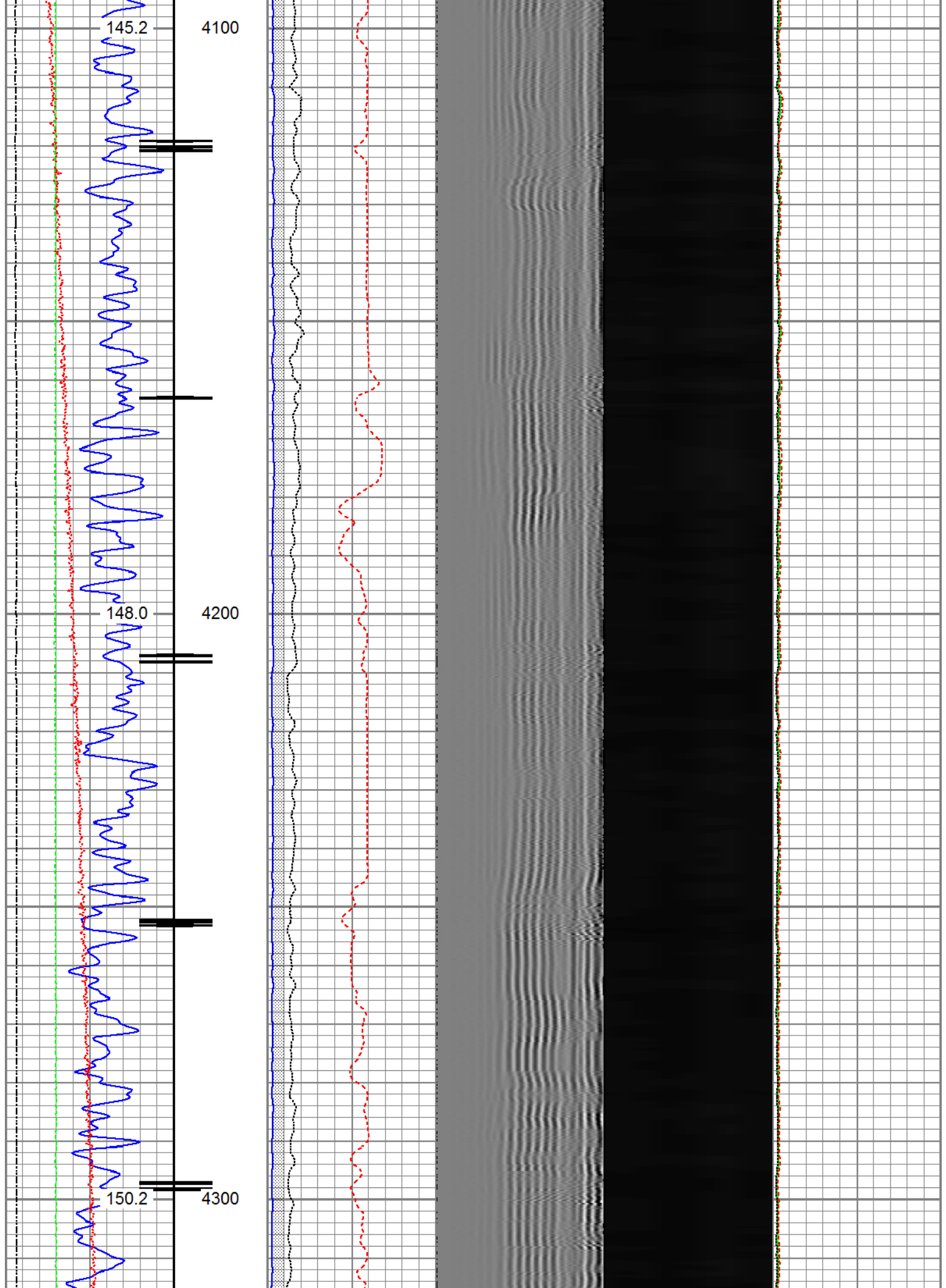


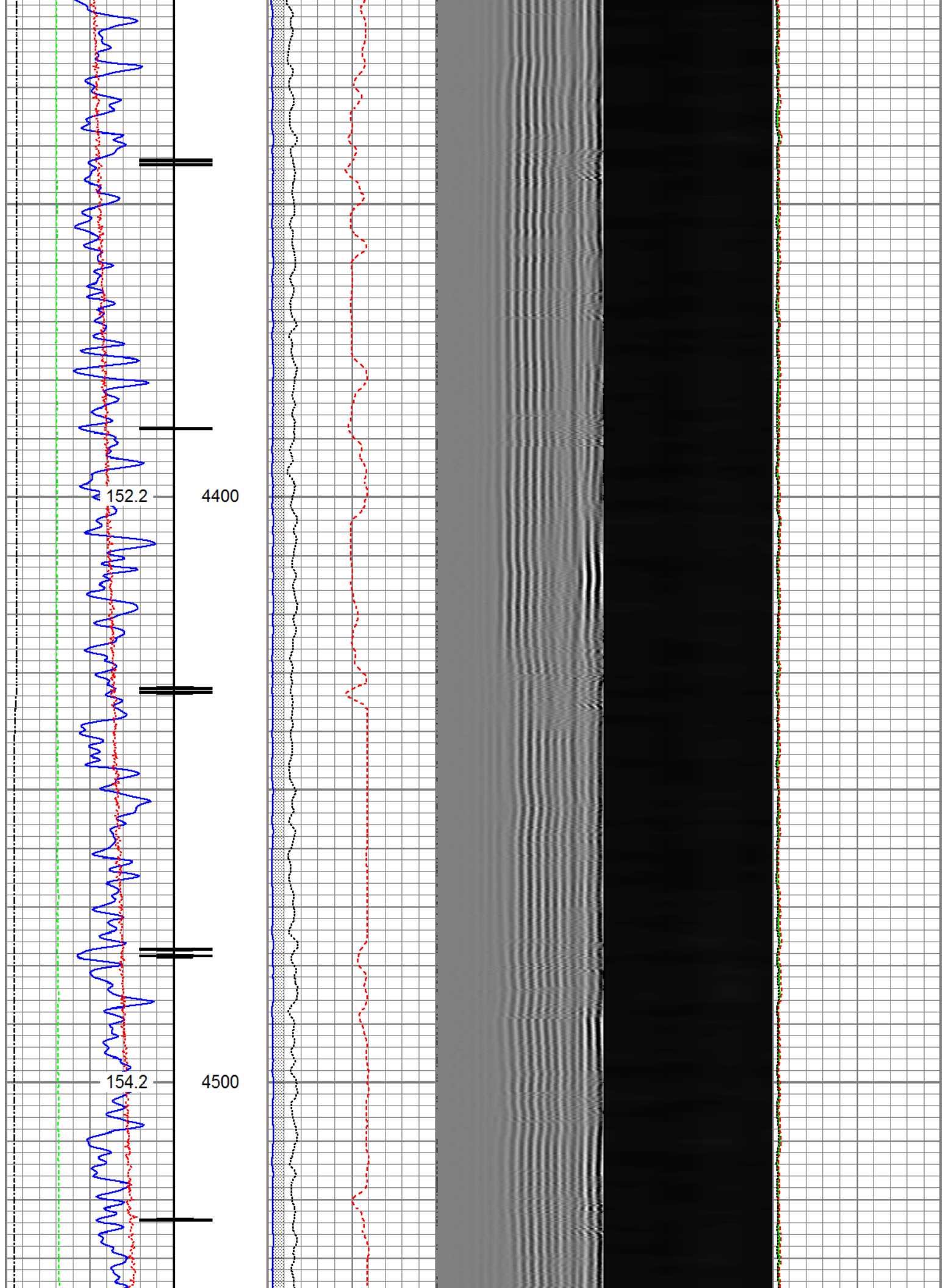


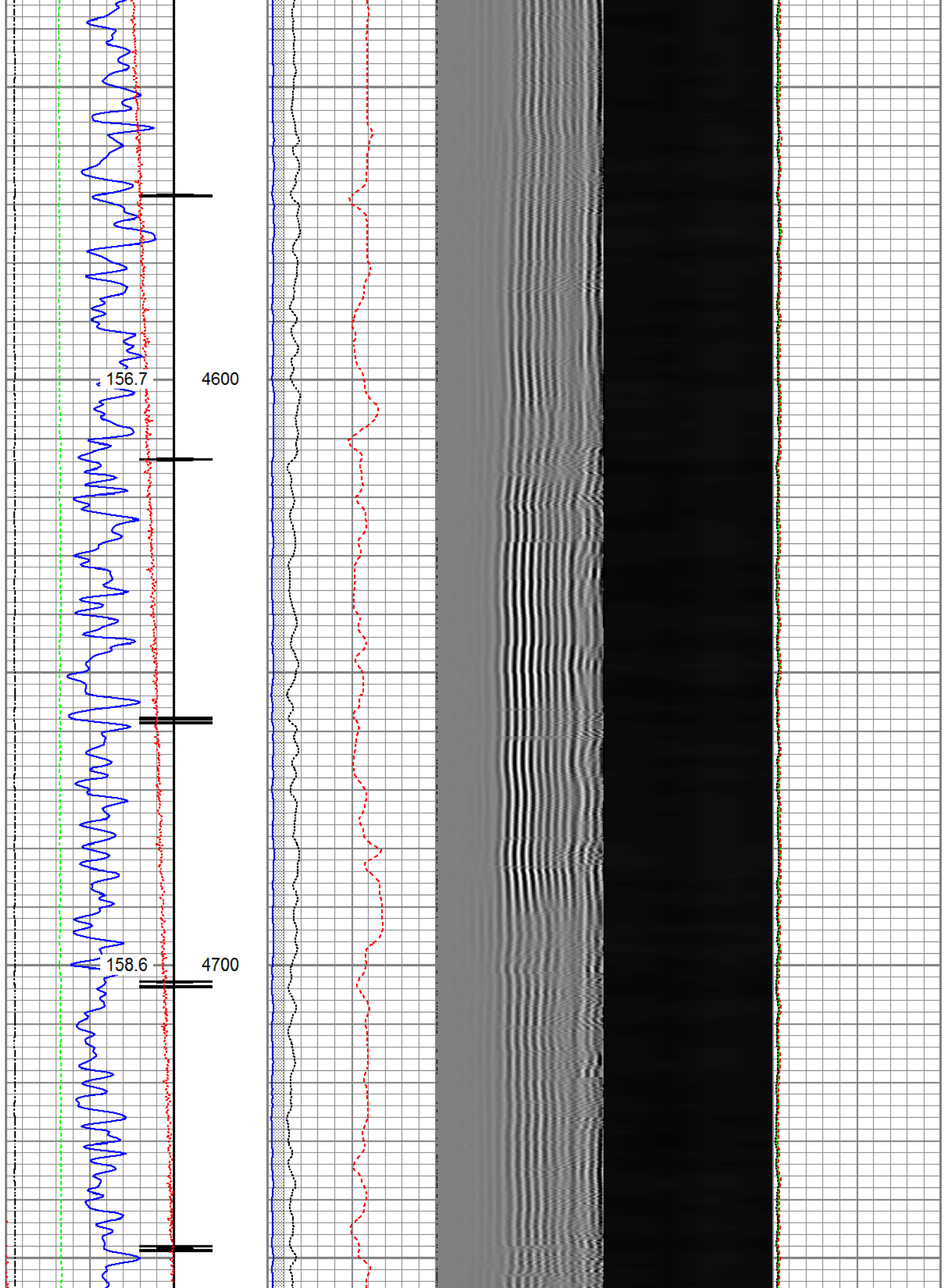


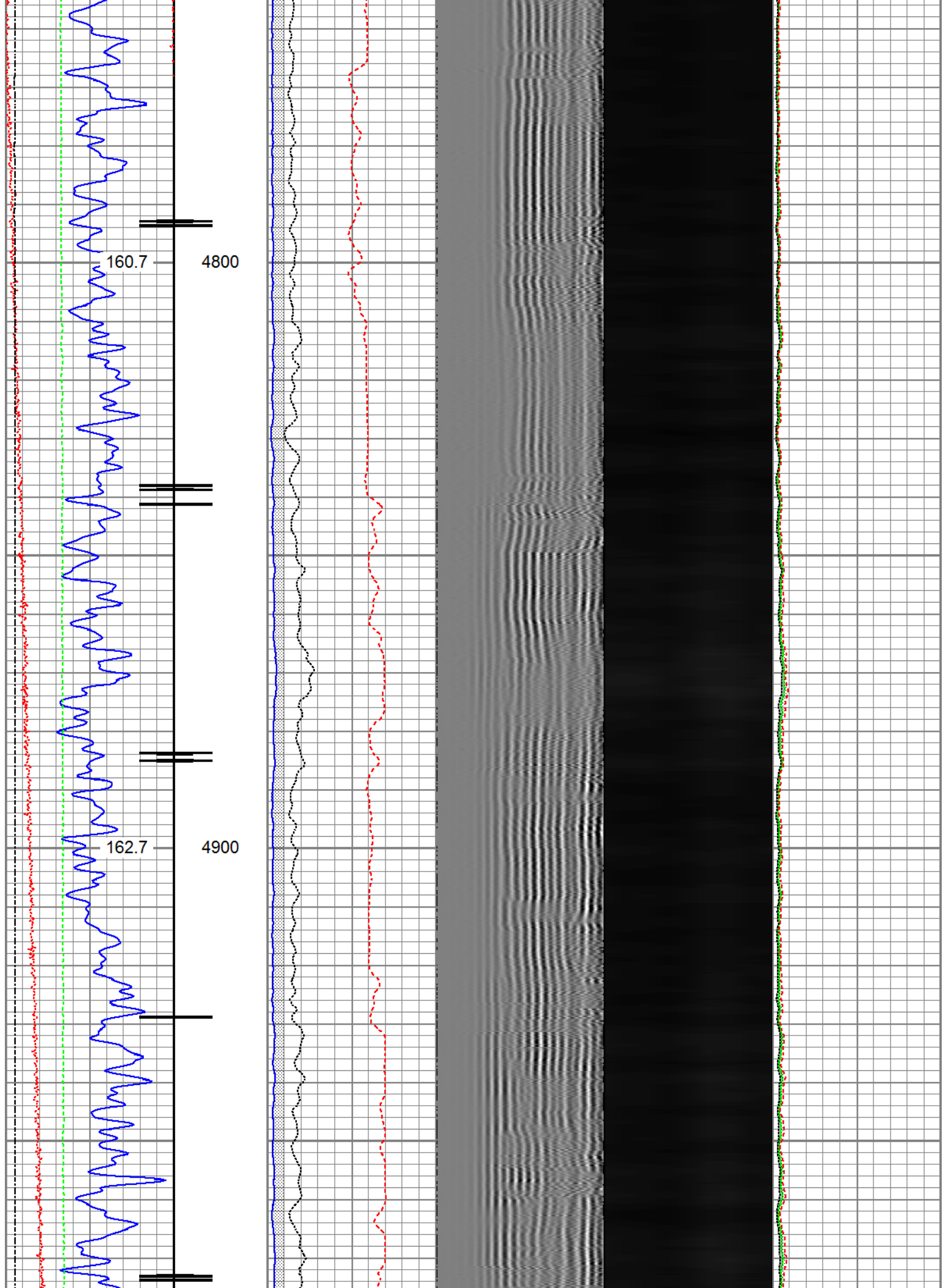


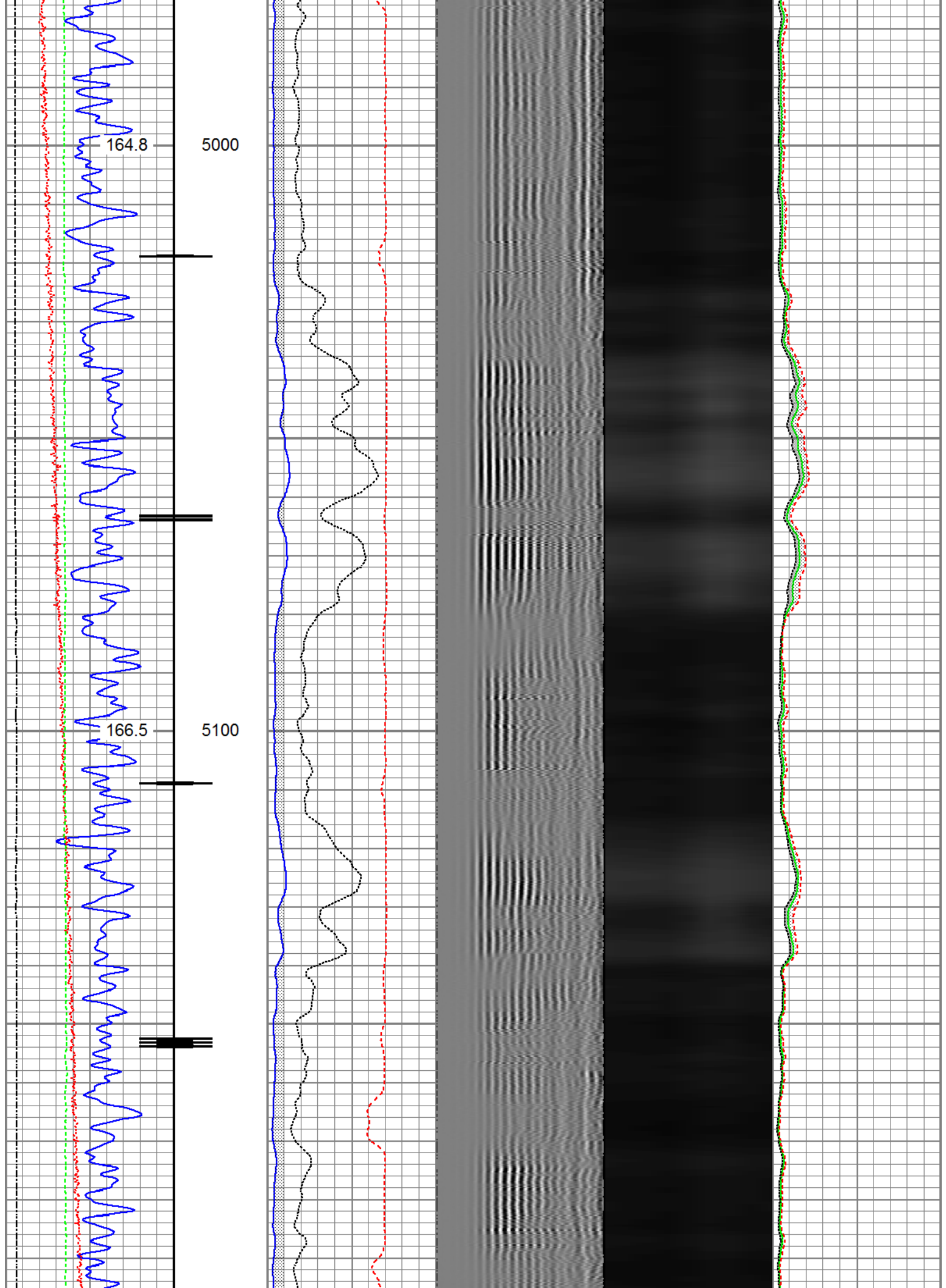


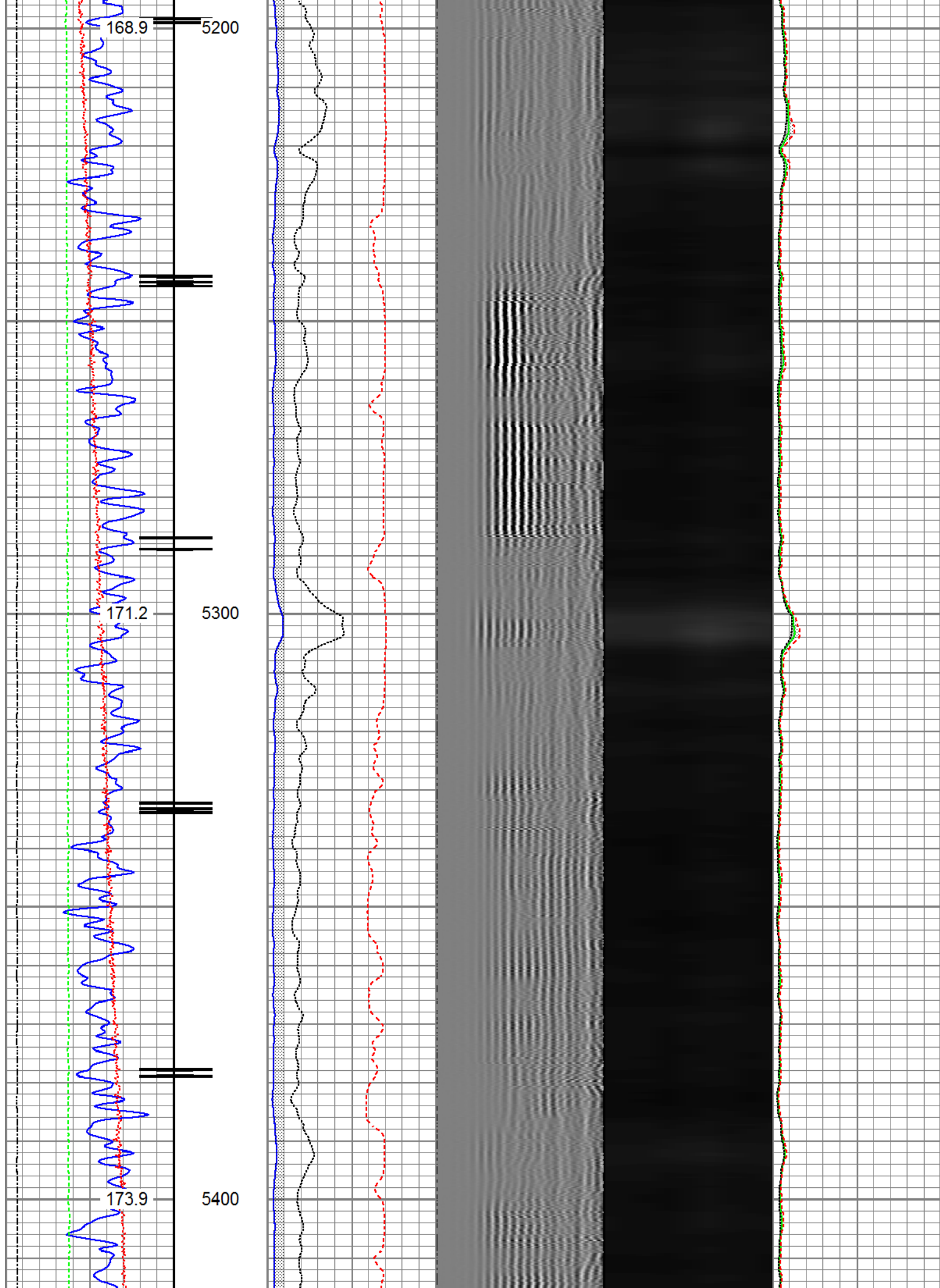


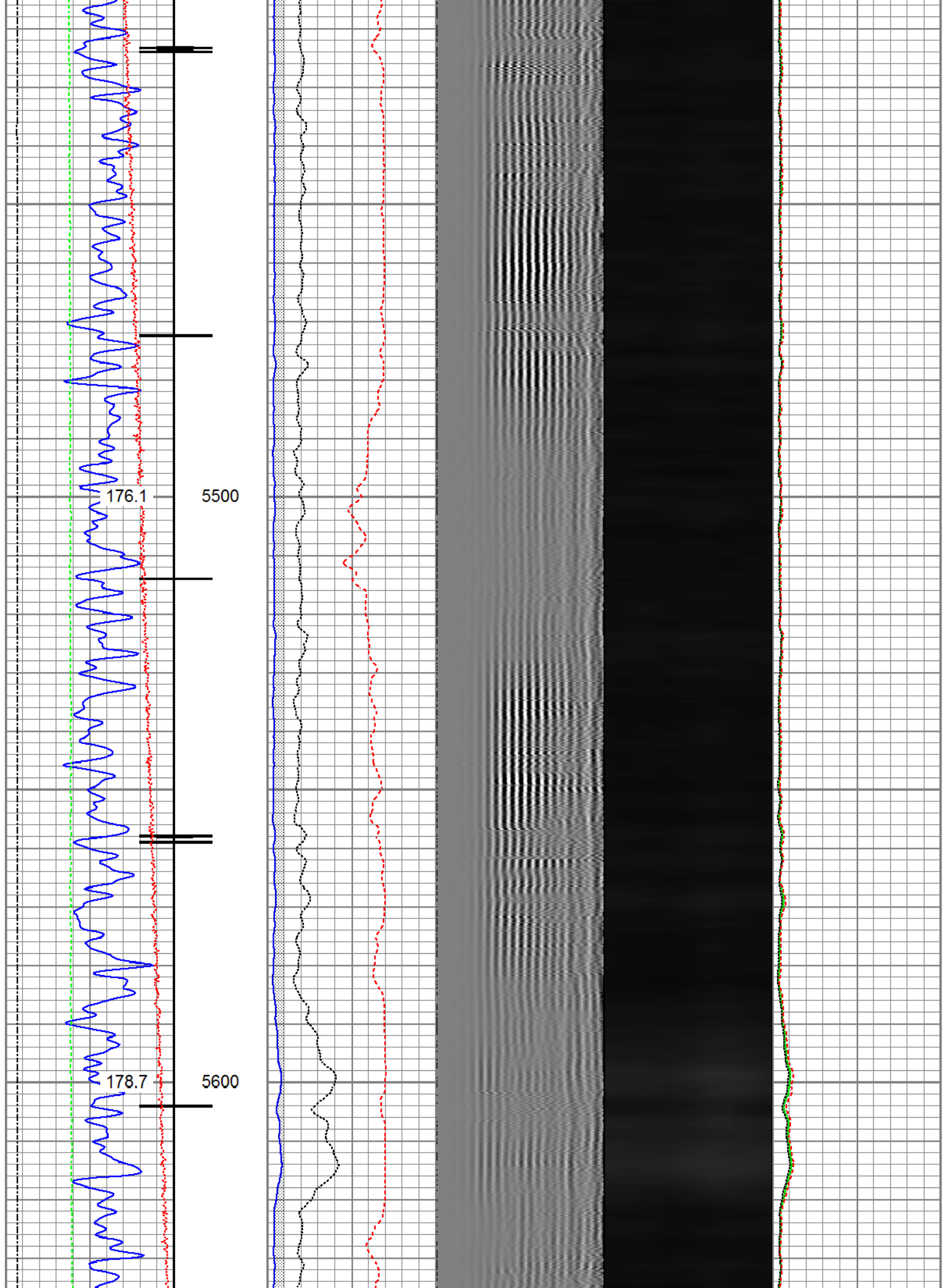


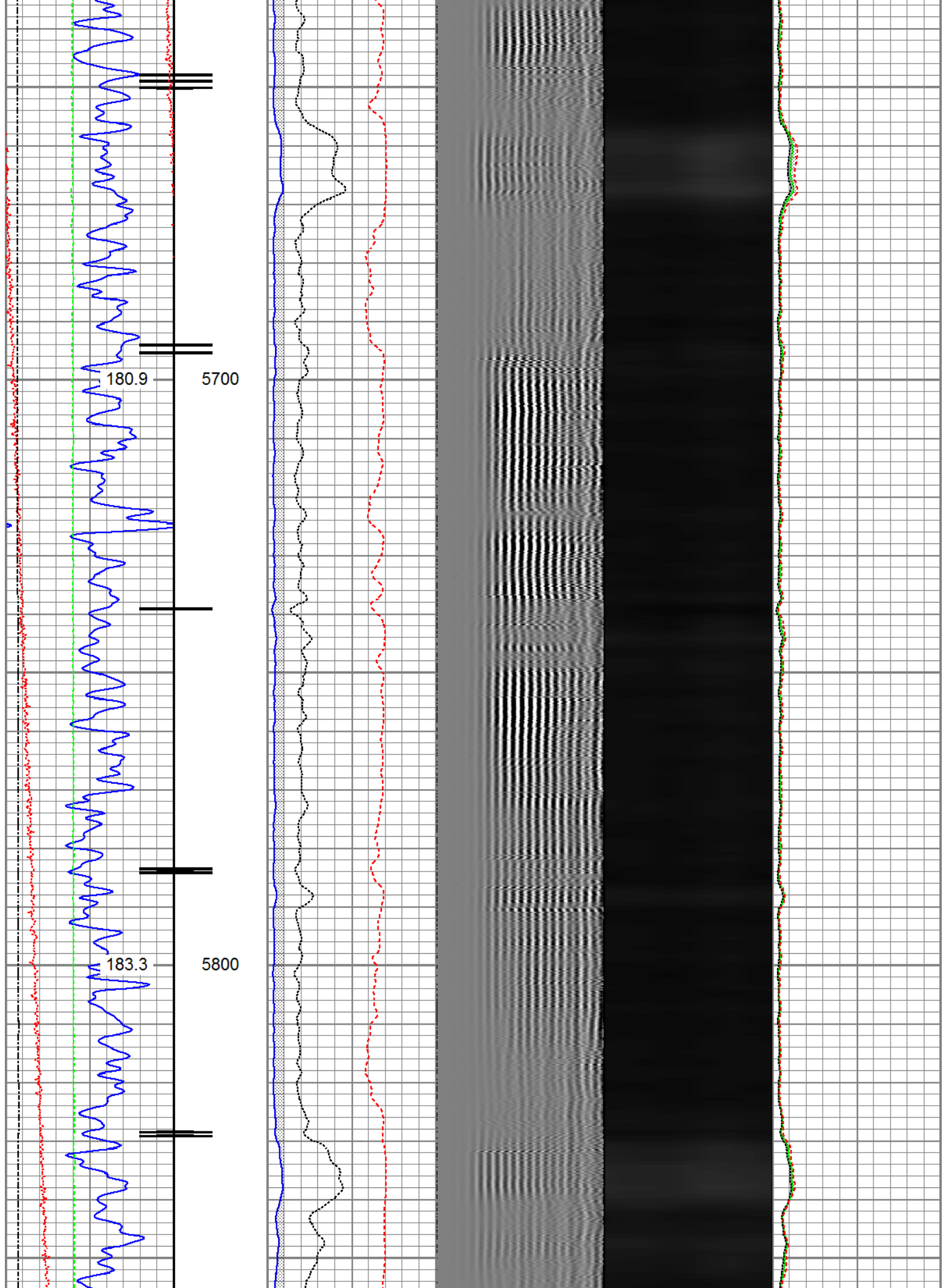


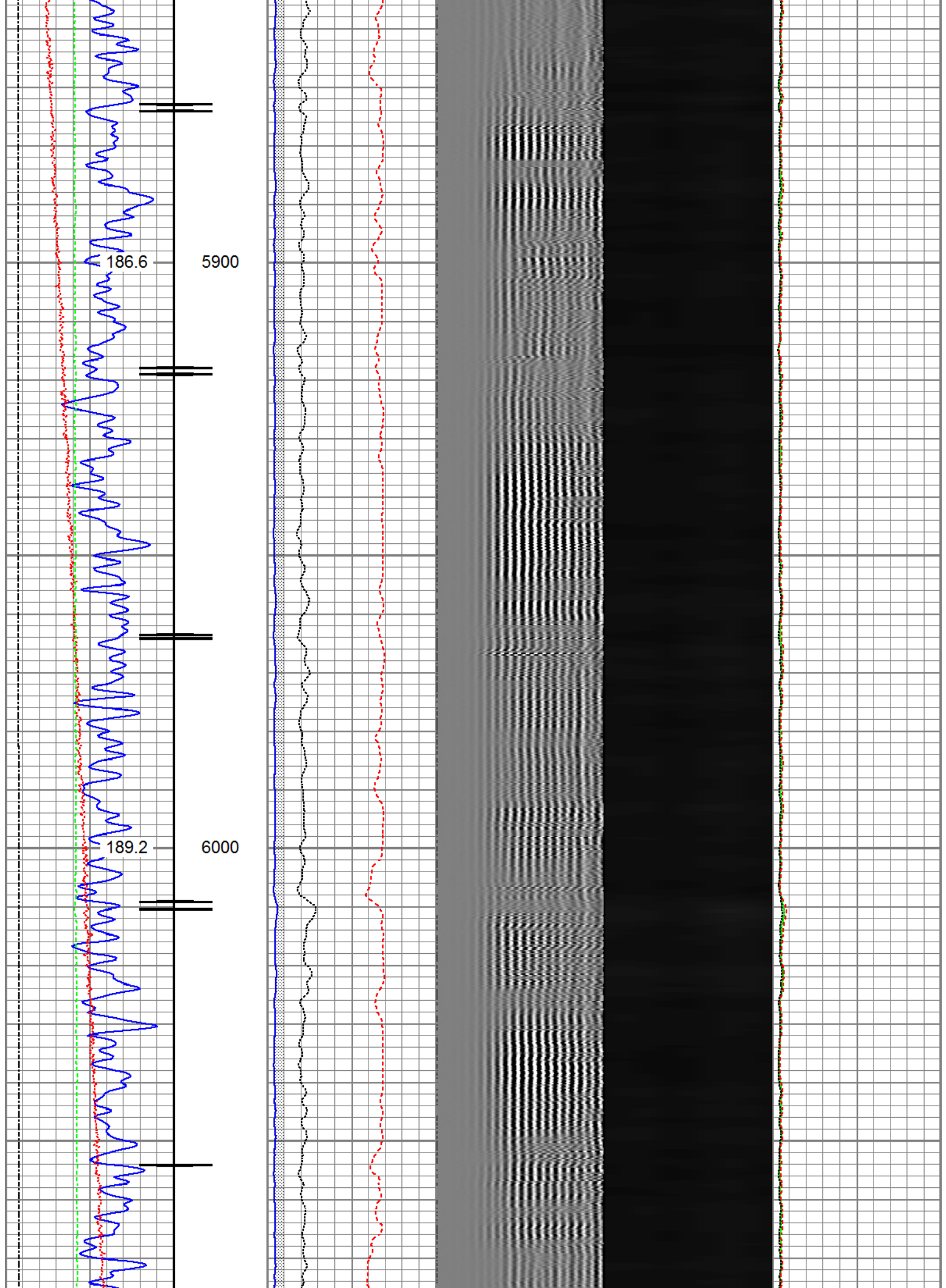


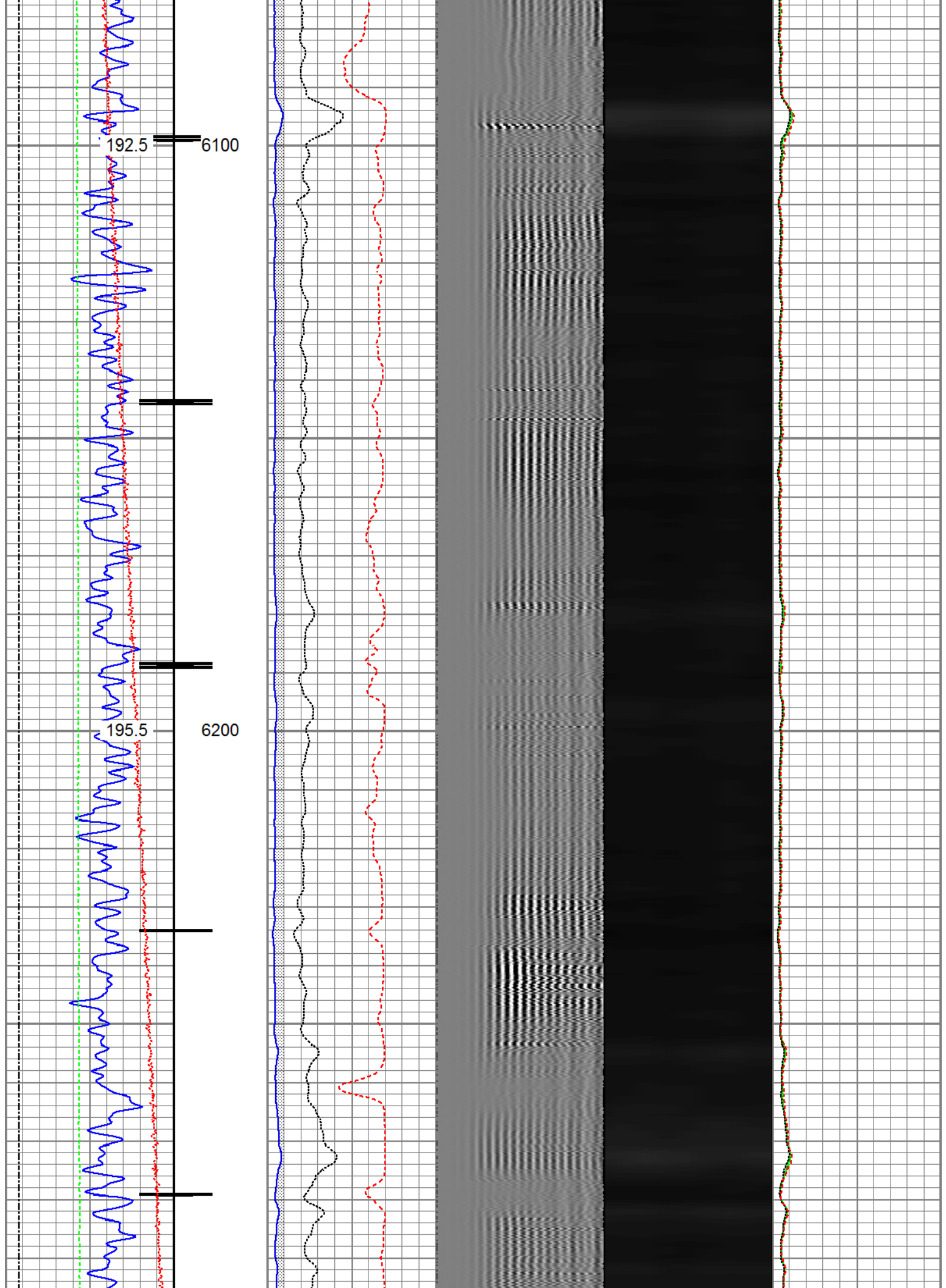


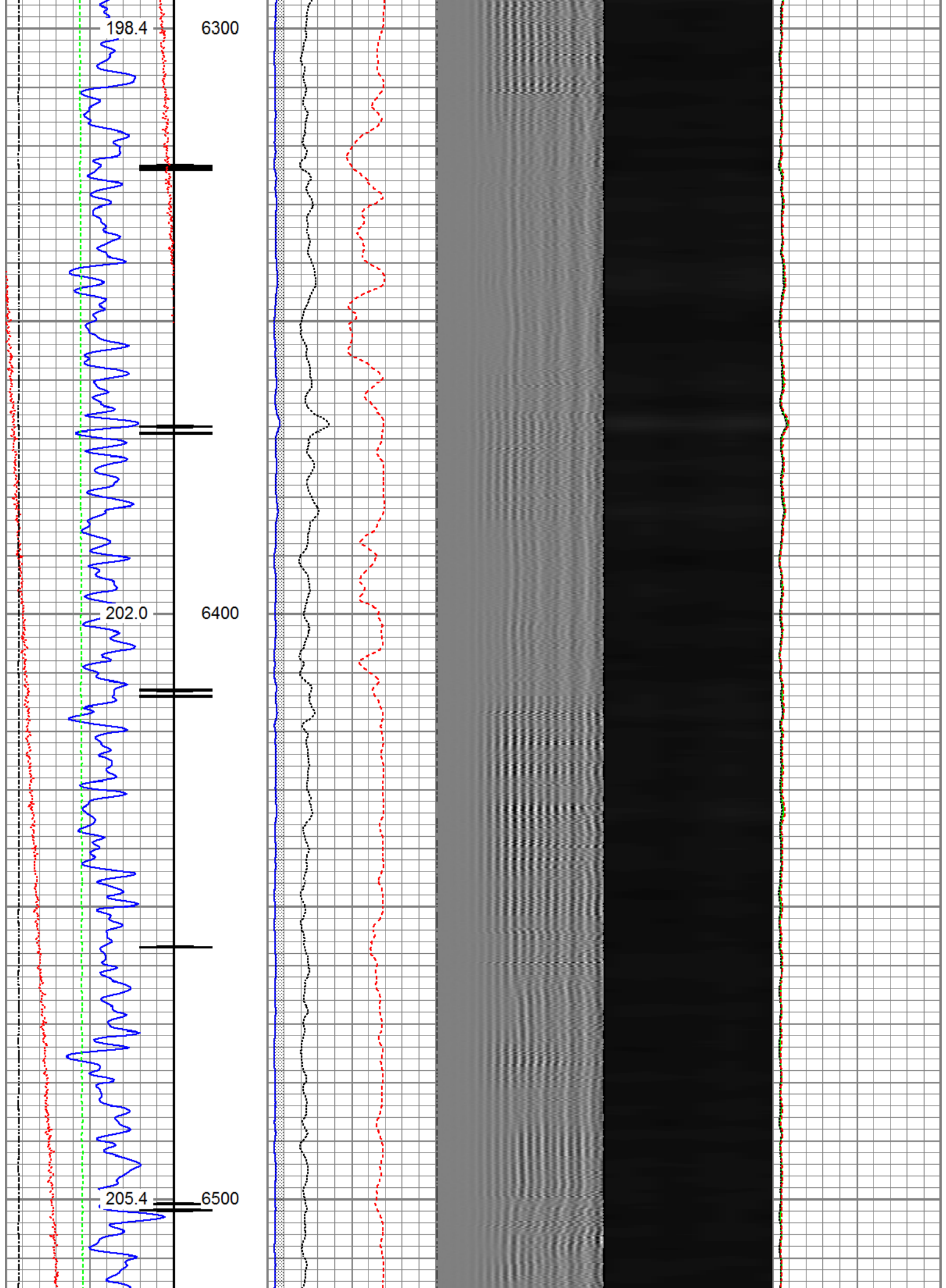


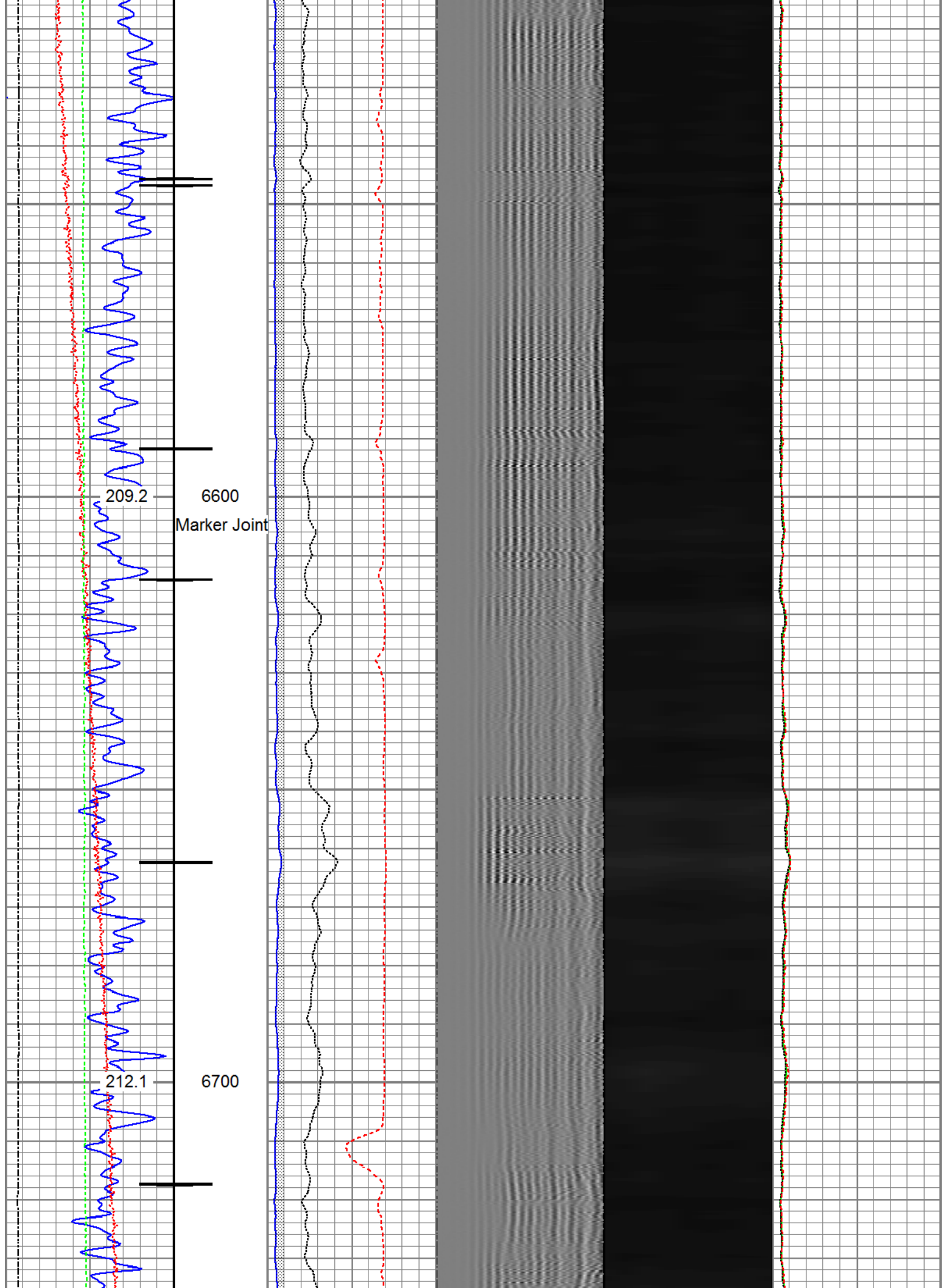


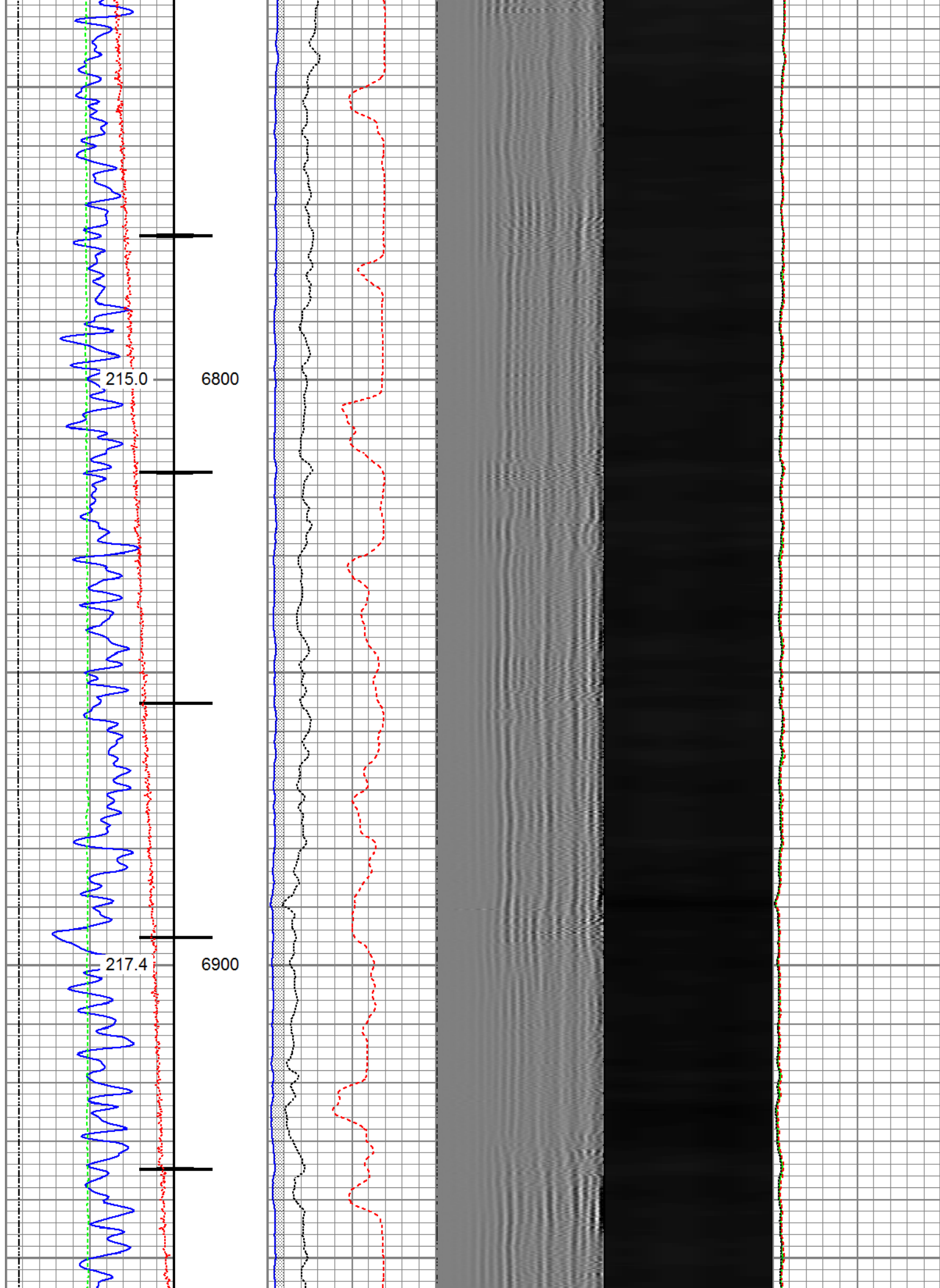


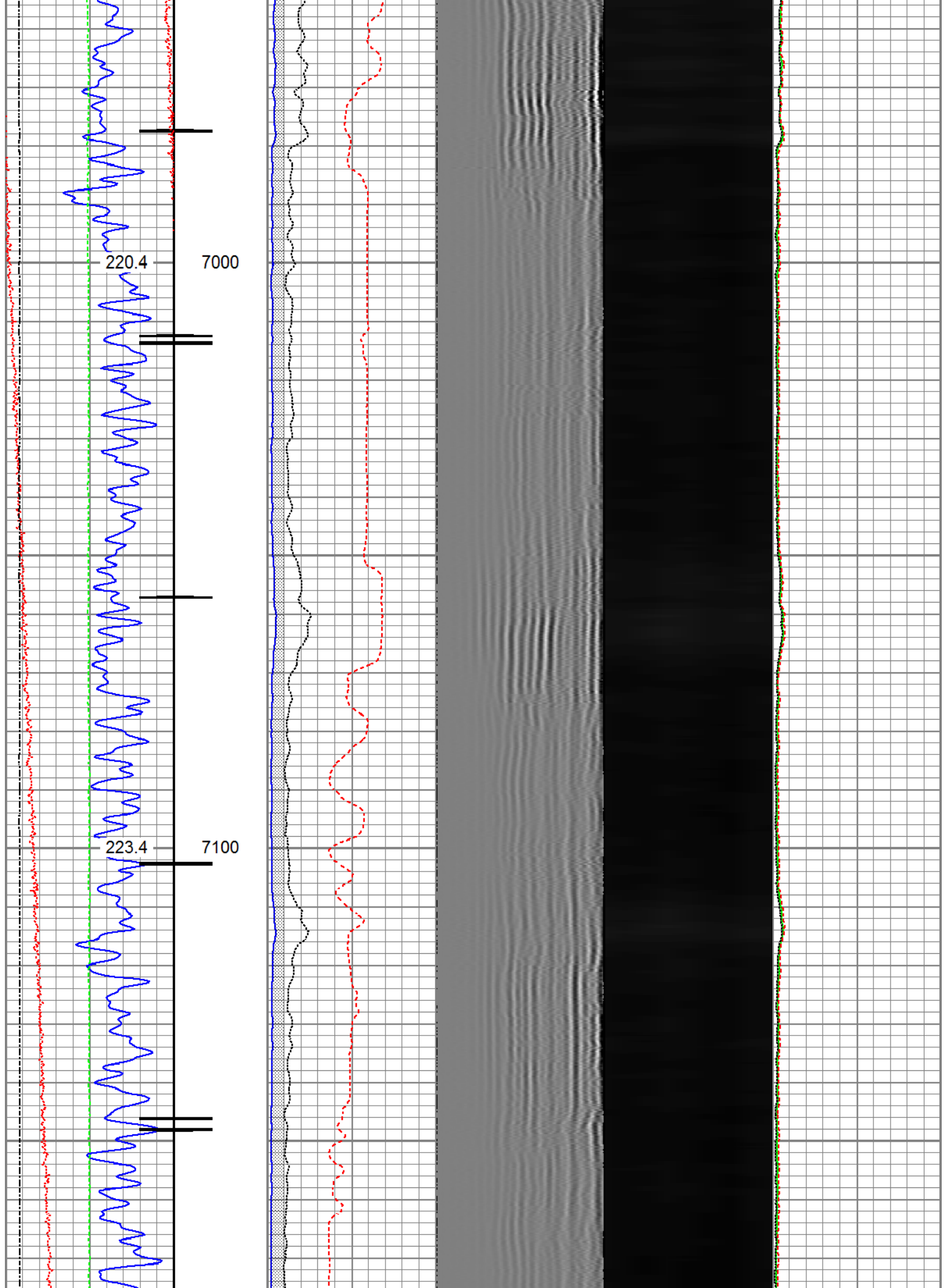


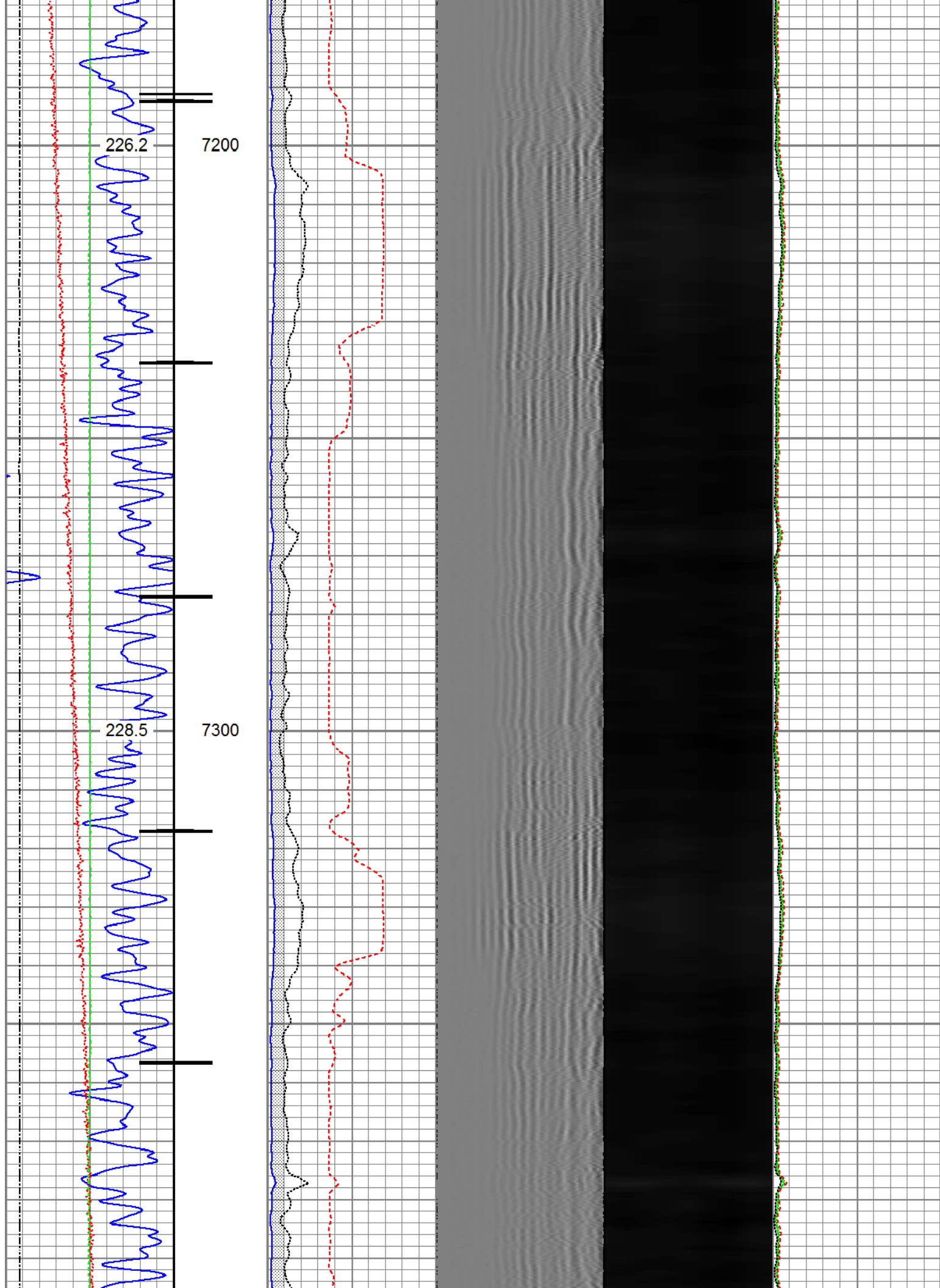


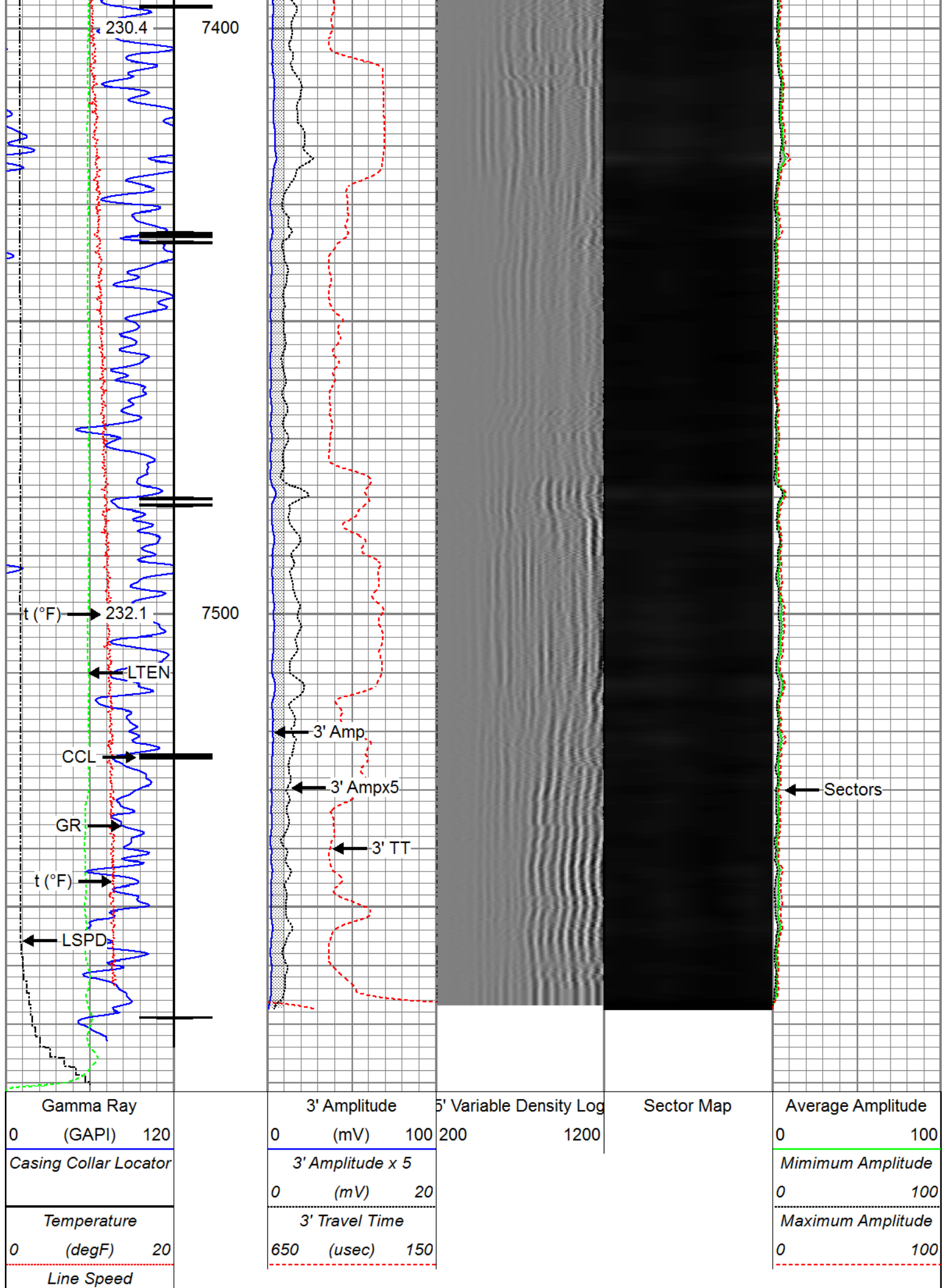












-150	(ft/min)	150
Line Tension		
0	(lb)	2000

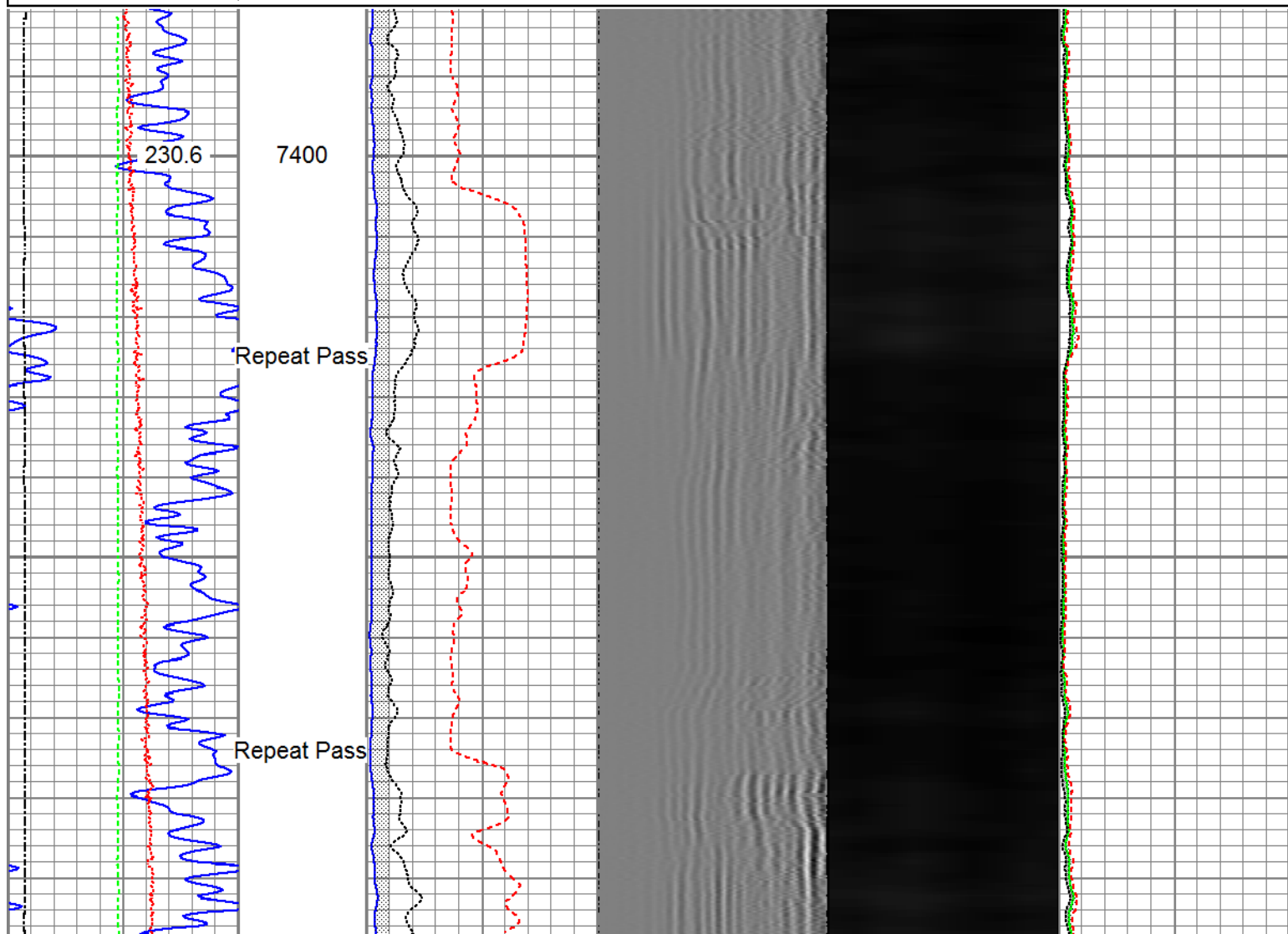


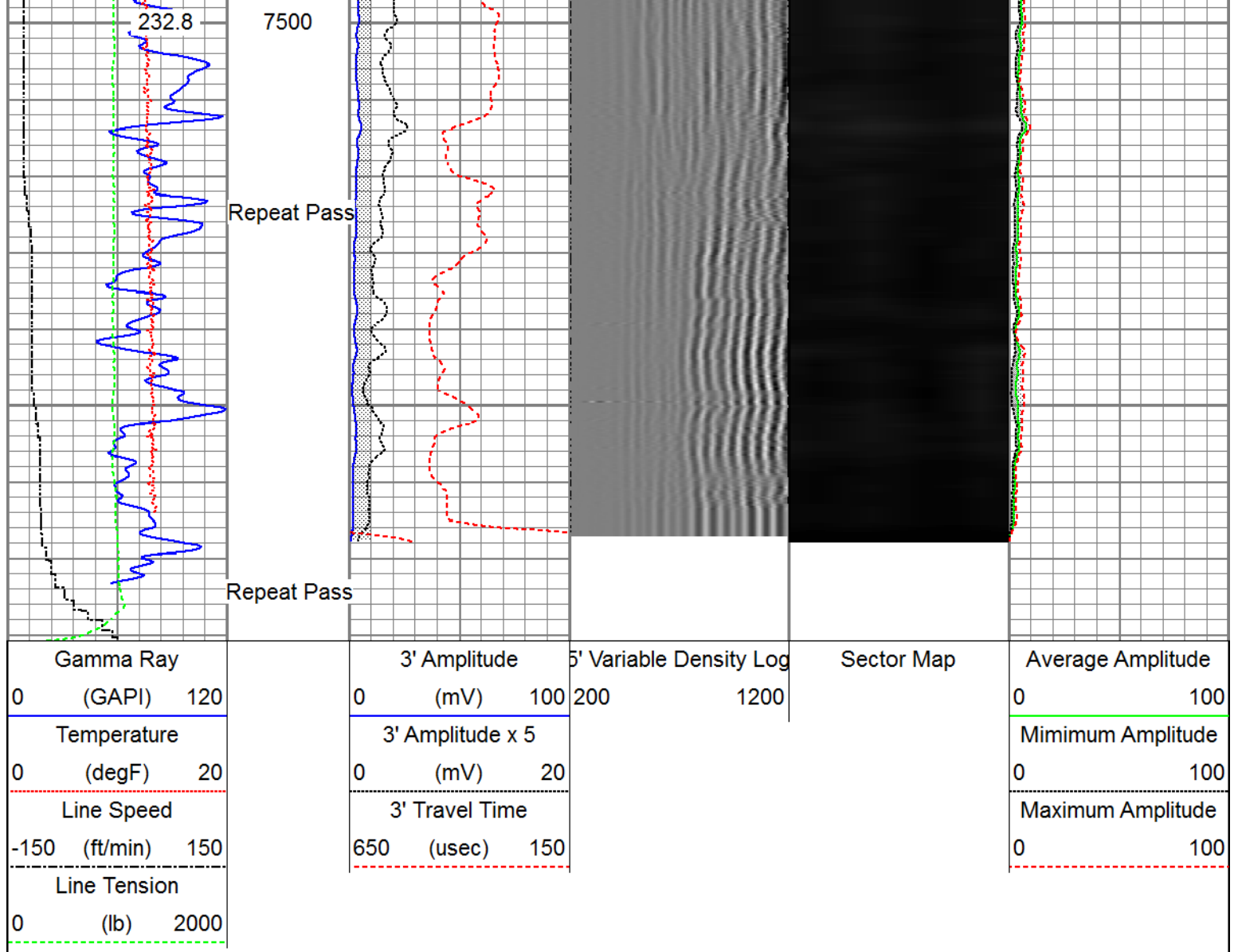
Repeat Pass

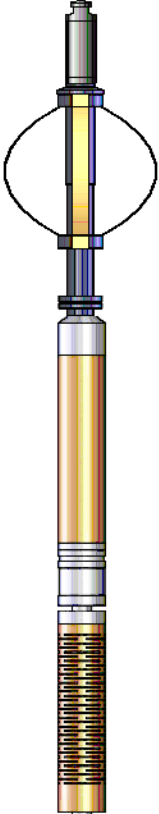

Recorded With 2800 PSI Surface Induced Pressure

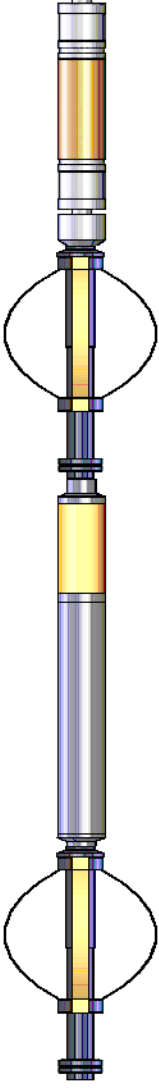
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 Dataset Pathname pass2.4
 Presentation Format ros_radrii
 Dataset Creation Sun Oct 22 11:34:28 2017
 Charted by Depth in Feet scaled 1:240

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





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
Temp	16.72		Titan_Electric_Cable_Heads-Titan_1-11/16" 1.03 Electric Cable Head with 1" Fishing Neck	1.03	1.69	5.40
			Probe_ELine_BowSpring_Centralizer-P_EB2.8875 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.8875	2.75	20.00
			Probe_RADII-C-P_RBT_2750 (FW1302-0029.19 Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	29.19	2.75	105.00
WVFS8	14.55					
WVFS7	14.55					
WVFS6	14.55					

WVFS5	14.55					
WVFS4	14.55					
WVFS3	14.55					
WVFS2	14.55					
WVFS1	14.55					
WVFCAL	14.55					
WVF3FT	14.55					
WVF5FT	13.55					
HeadVolt	10.30					
						
			Probe_ELine_BowSpring_Centralizer-P_EB	2.8875	2.75	20.00
			Probe 2-3/4" Electric Inline Bowspring Centralizer			
DCCL	6.51					
CCL	6.51					
GR	5.30		Probe_GR_CCL-P_CGR_2750_S (FW1212)	2.8875	2.75	55.00
			Probe 2-3/4" Digital CCL / Gamma Ray Combined			
			Probe_ELine_BowSpring_Centralizer-P_EB	2.8875	2.75	20.00
			Probe 2-3/4" Electric Inline Bowspring Centralizer			
Dataset: PROCESSED_0512344226_Anadarko_Rocky 38N-33HZ_RBL_10-21-17.db: field/well/run1/pass4.4 Total length: 23.40 ft Total weight: 225.40 lb O.D.: 2.75 in						

Calibration Report	
Database File	C:\ProgramData\Warrior\Data\0512344226_Anadarko_Rocky 38N-33HZ_RBL_10-21-17\PROCESSED
Dataset Pathname	pass4.4
Dataset Creation	Sat Oct 21 16:12:20 2017

Gamma Ray Calibration Report		
Serial Number:	FW1212-026	
Tool Model:	P_CGR_2750_S	
Performed:	Sat Feb 06 11:32:54 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.6	cps
Sensitivity:	0.6061	GAPI/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	FW1302-002	
Tool Model:	P_RBT_2750	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	28.886	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.570	0.800	71.921	124.792	0.761
CAL	0.004	0.648				
5'	0.000	0.527	0.800	71.921	134.886	0.782
SUM						
S1	0.001	0.523	0.000	100.000	191.375	-0.097
S2	0.000	0.539	0.000	100.000	185.828	-0.074
S3	0.000	0.565	0.000	100.000	177.230	-0.057
S4	0.001	0.617	0.000	100.000	162.205	-0.087
S5	0.000	0.655	0.000	100.000	152.731	-0.053
S6	0.000	0.635	0.000	100.000	157.427	-0.002
S7	0.000	0.573	0.000	100.000	174.601	-0.052
S8	0.000	0.540	0.000	100.000	185.160	-0.069

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.004	0.648	1.000	0.000

Air Zero Calibration, performed Sat Oct 21 13:58:02 2017:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.004		0.000		0.000	
5'	0.004		0.000		0.000	
SUM						
S1	0.004		0.000		0.000	
S2	0.004		0.000		0.000	
S3	0.004		0.000		0.000	
S4	0.004		0.000		0.000	
S5	0.004		0.000		0.000	
S6	0.004		0.000		-0.000	
S7	0.004		0.000		0.000	
S8	0.004		0.000		0.000	



RELIANCE
DILLFIELD SERVICES

Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Rocky 38N-33HZ
Field Wattenberg
County Weld
State Colorado