

County Weld State Colorado

Drilling Measured From	Kelly Bushing	G.L. 4944
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jaaner			

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.

Log ran as per customer request
Depth referenced to Kelly Bushing at 17 FT
Casing Tally reported Marker Joint 6247 FT
Unable to Correlate to Marker Joint Due to RBP Set Depth of 6230 FT
Gauge Ring/Junk Basket ran to 7022 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 debris upon completion of operations

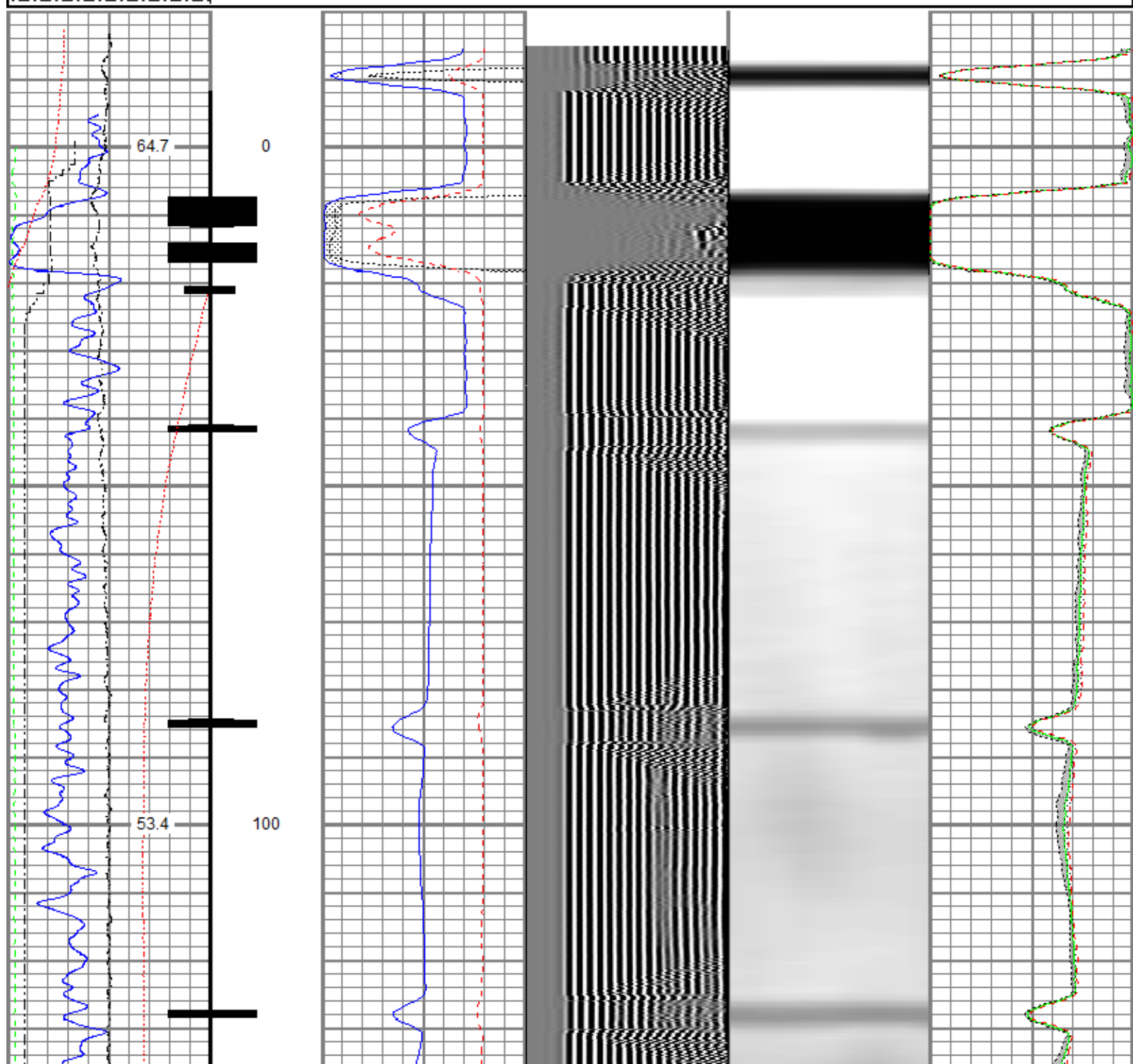
Thank you for choosing Reliance Oilfield Services, LLC!!

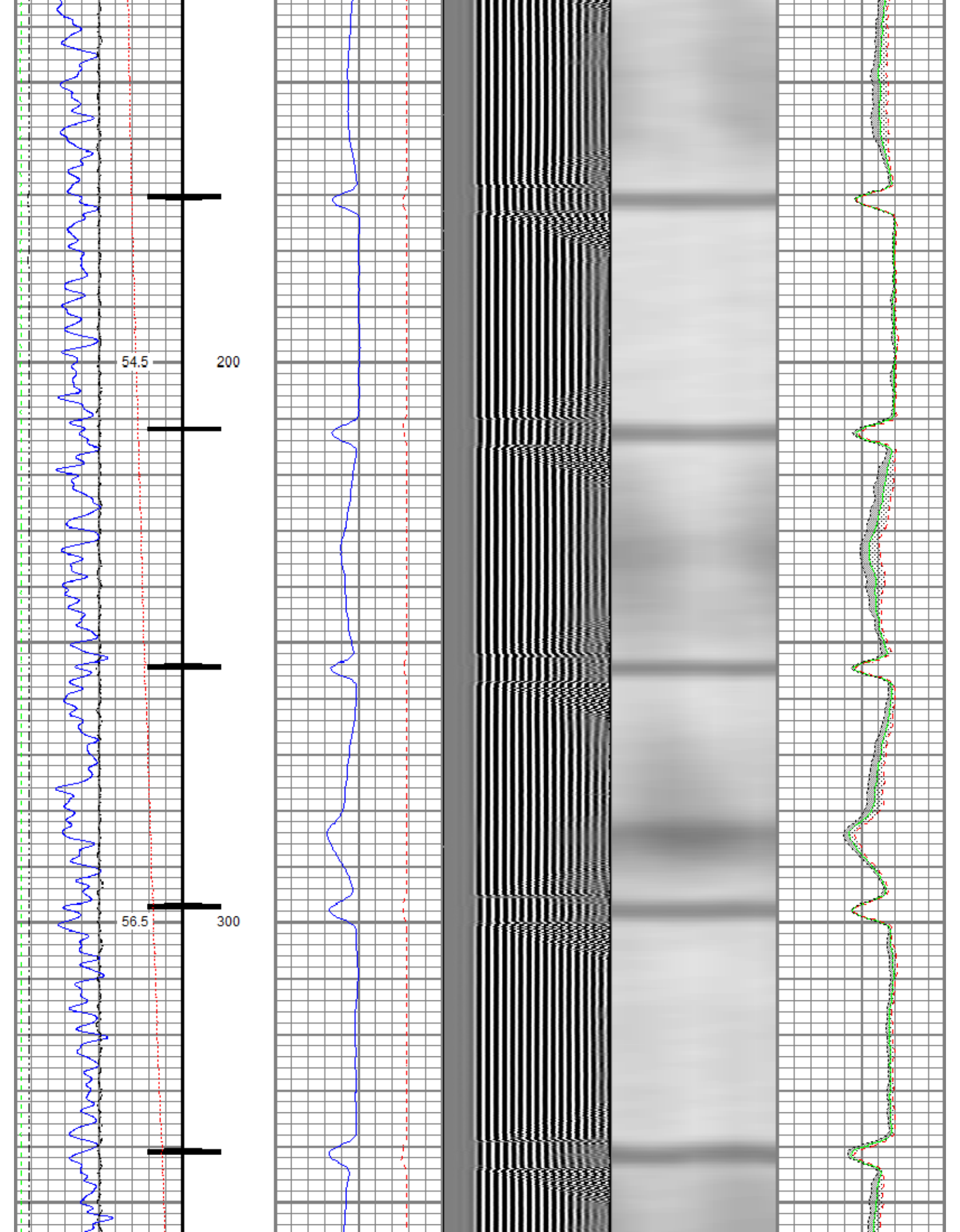
Main Pass

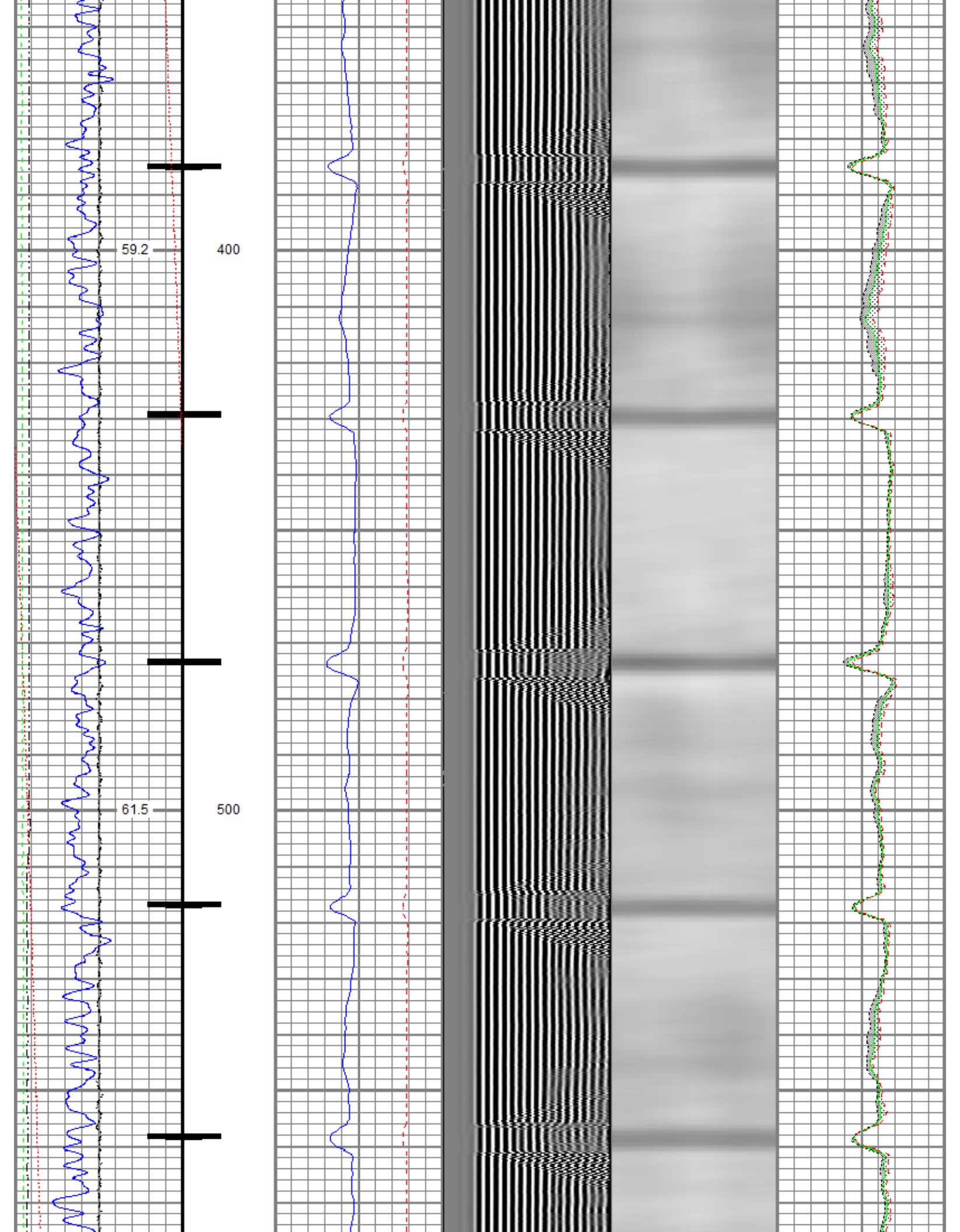


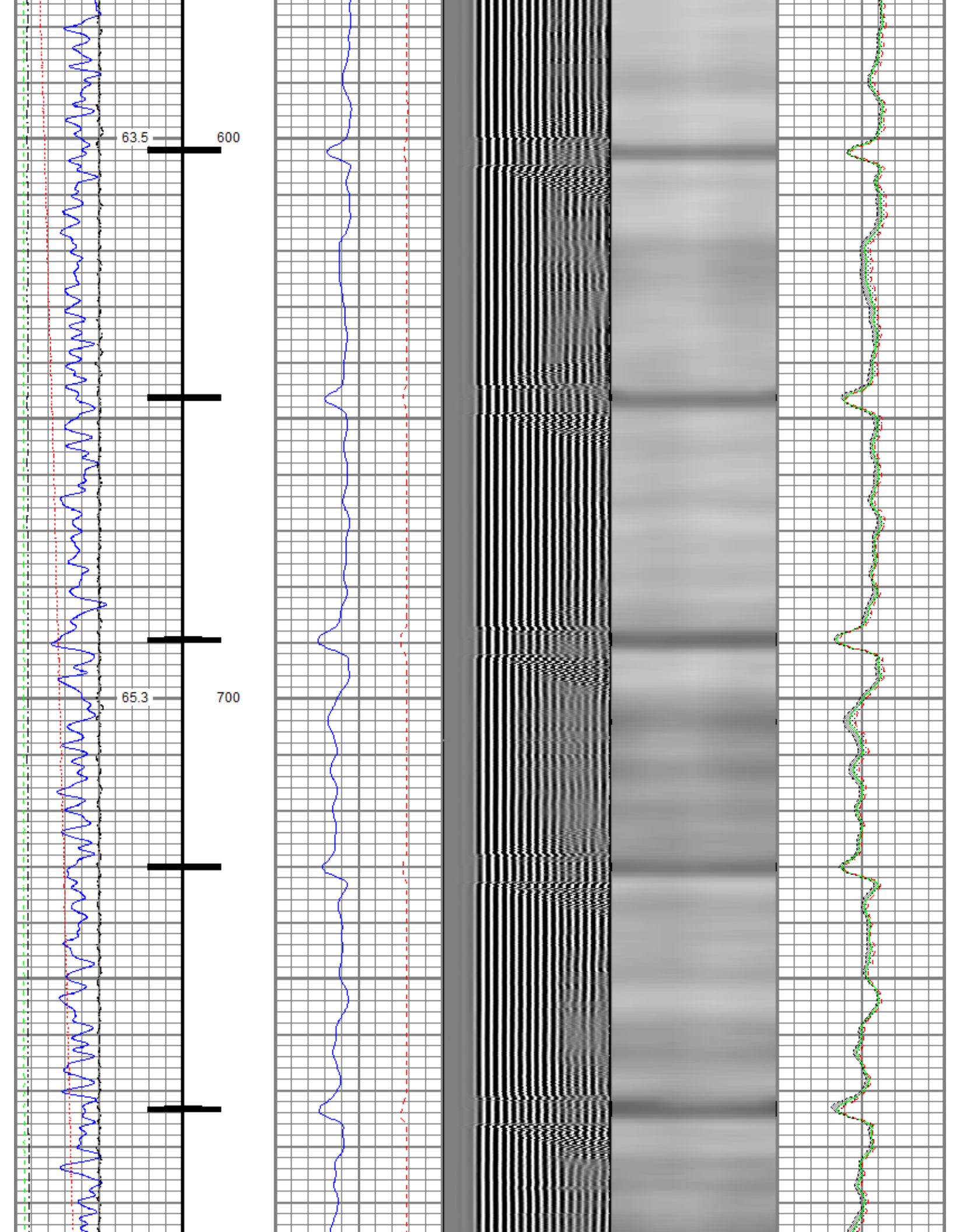
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 Dataset Pathname pass9
 Presentation Format ros_radri
 Dataset Creation Sun Apr 08 12:16:18 2018
 Charted by Depth in Feet scaled 1:240

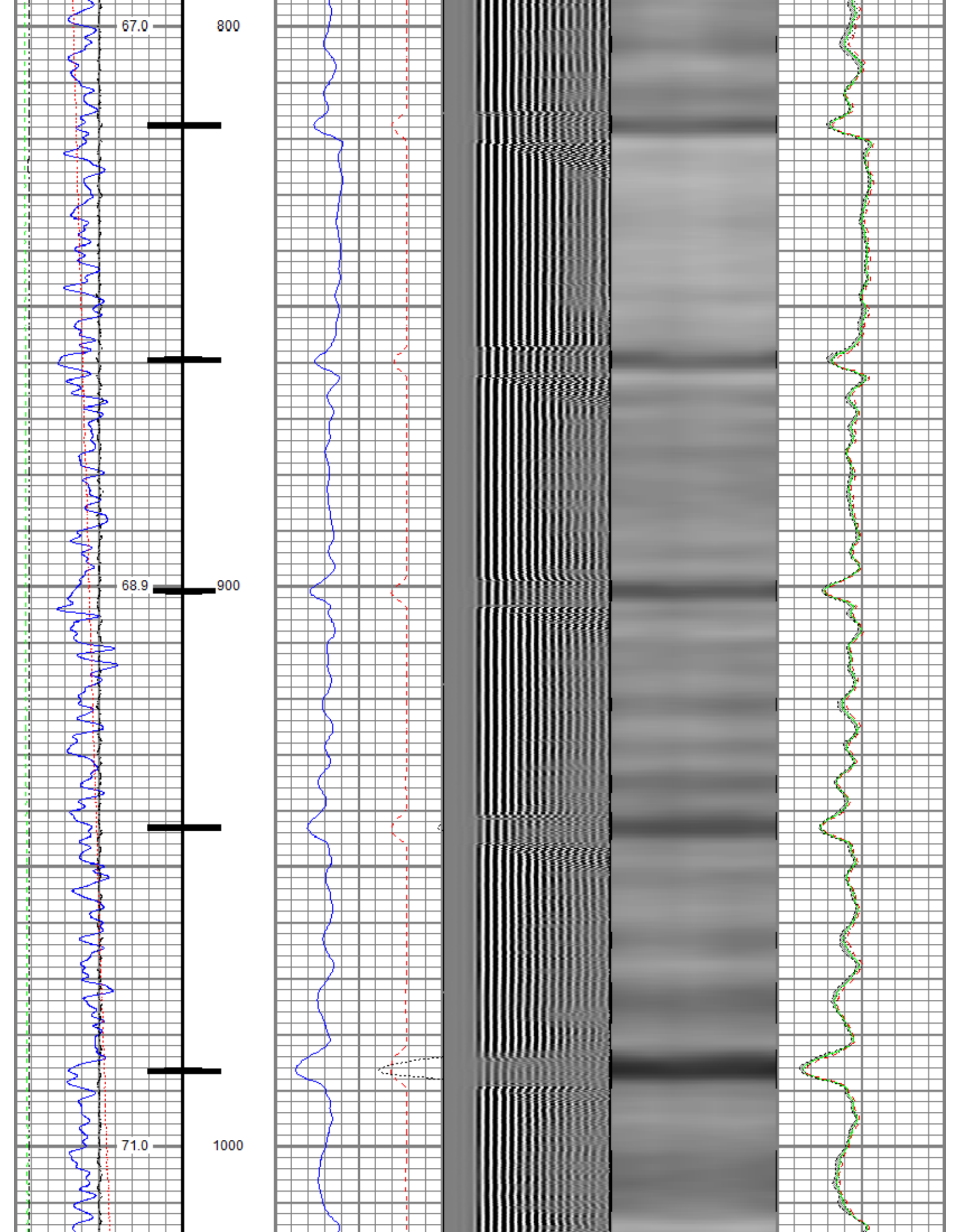
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200			Minimum Amplitude
Casing Collar Locator	0	(mV) 20			0	100
Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed	650	(usec) 150			0	100
-150 (ft/min) 150						
Line Tension (lb) 2000						
Differential Temperature						
-2 (degF) 2						

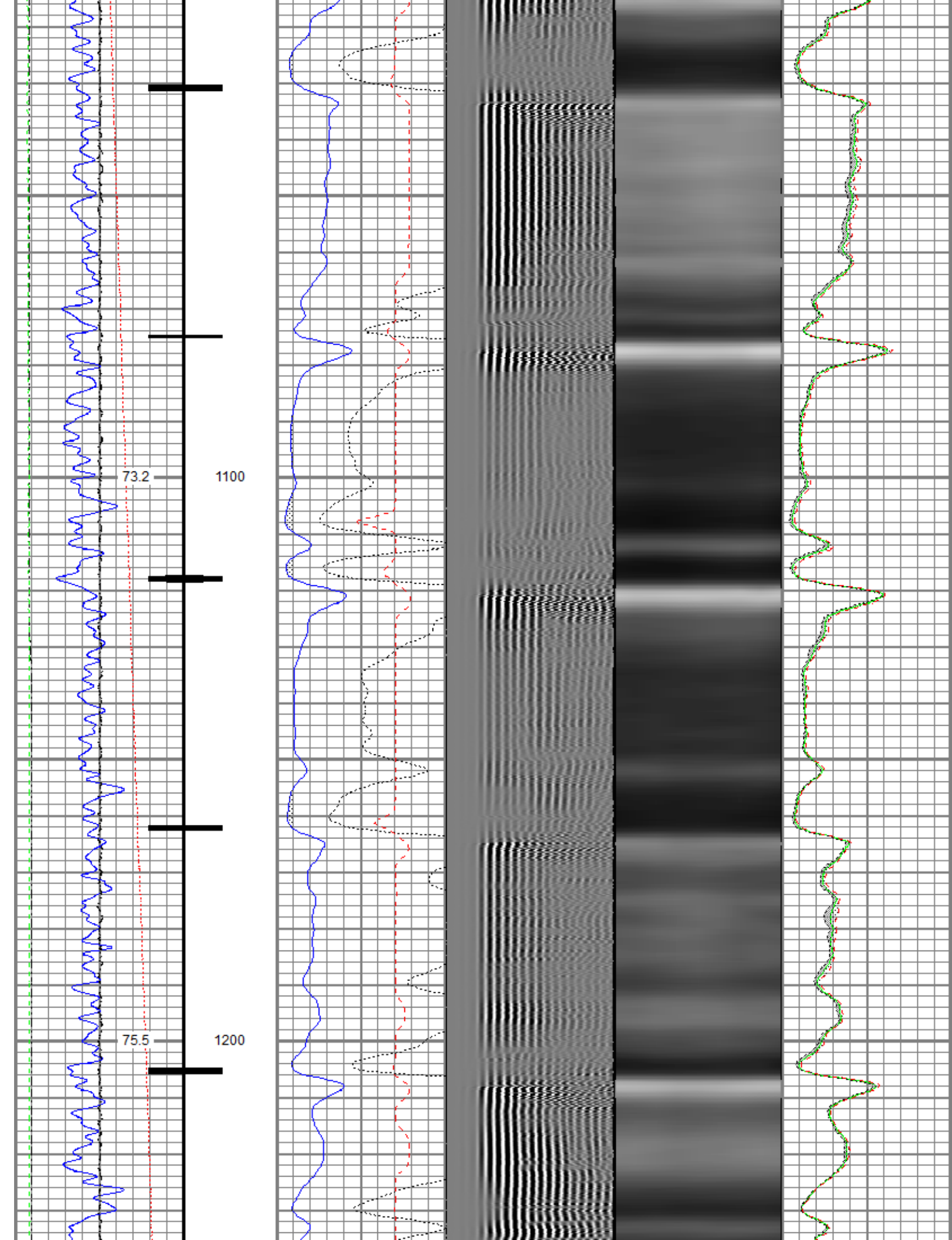


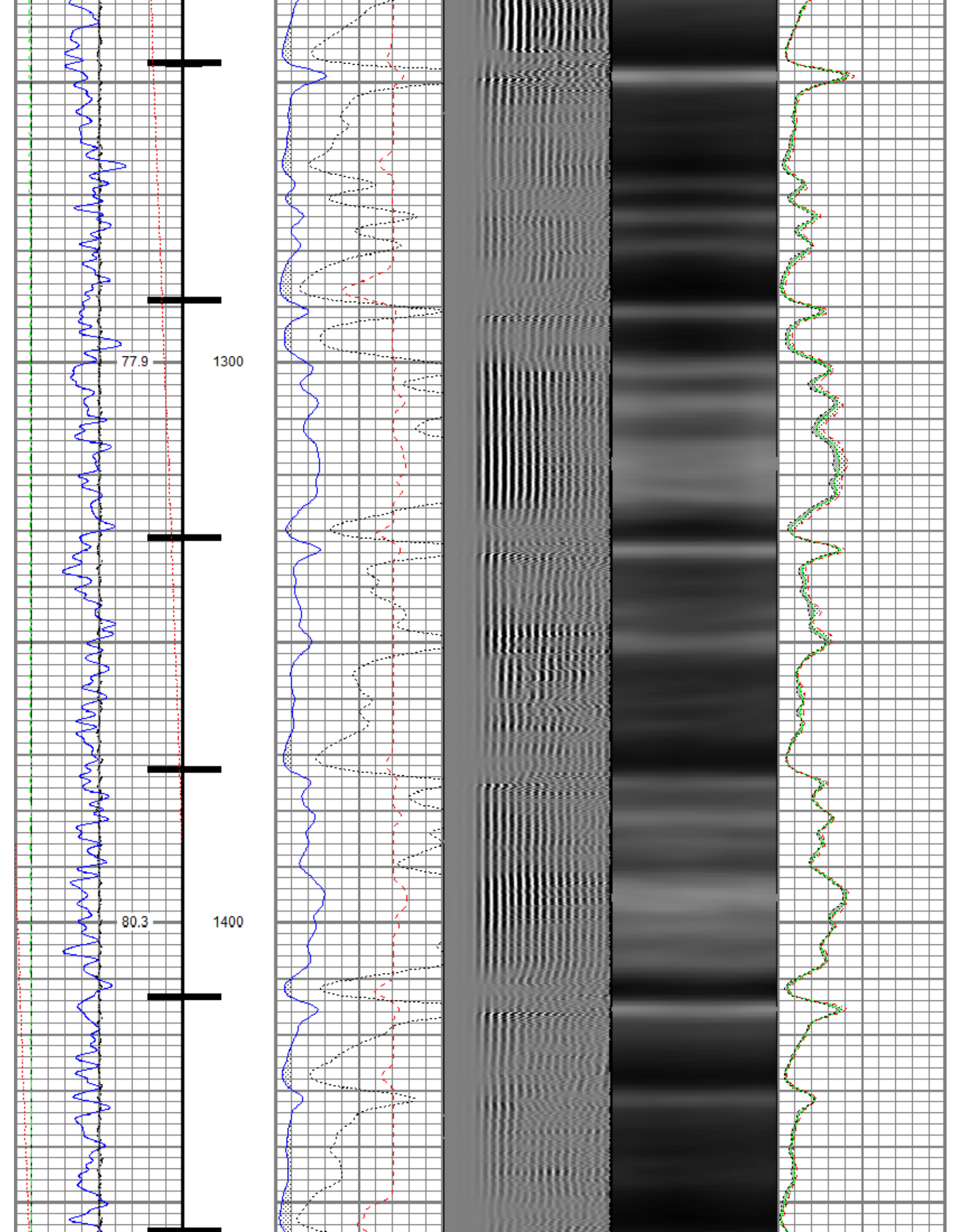


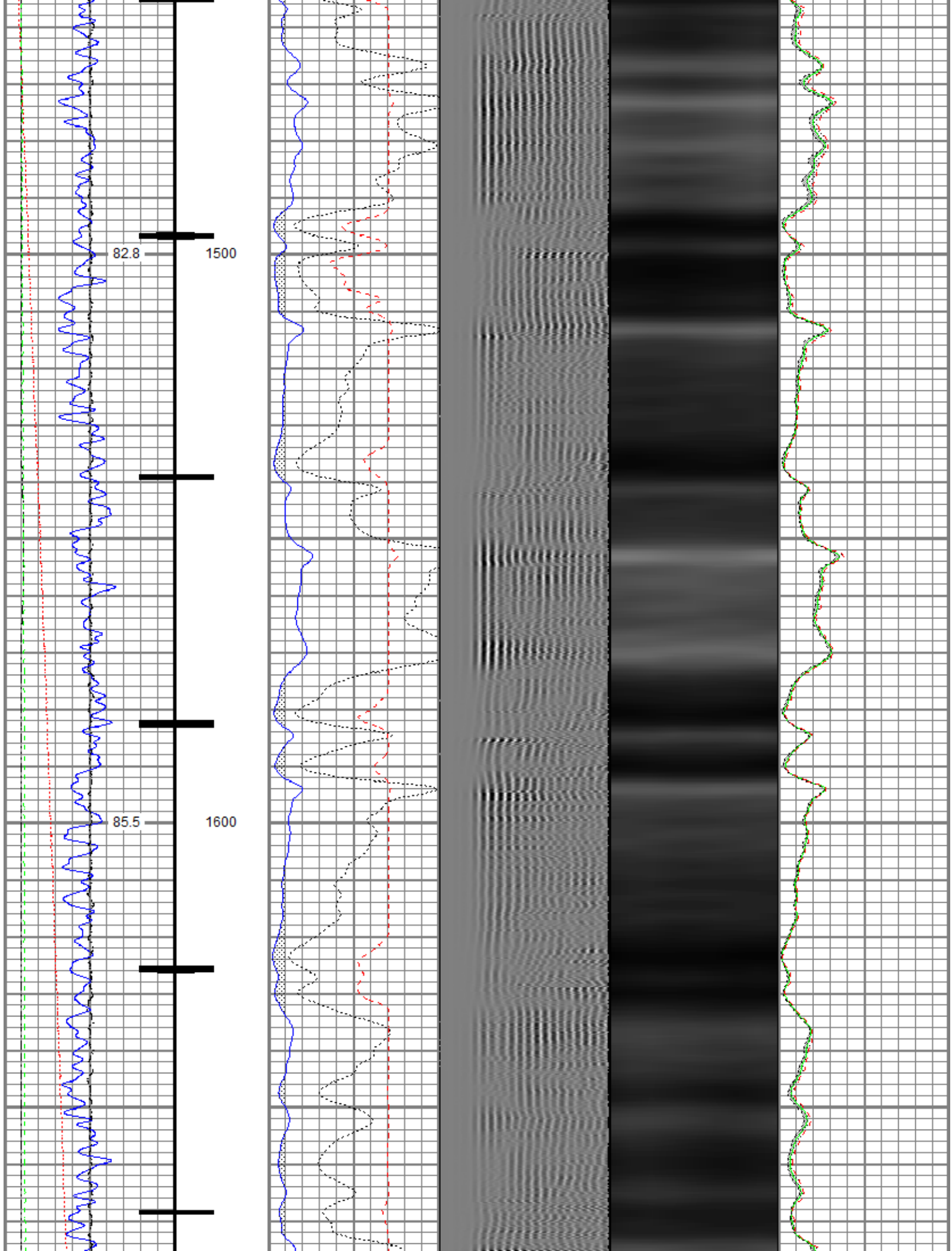


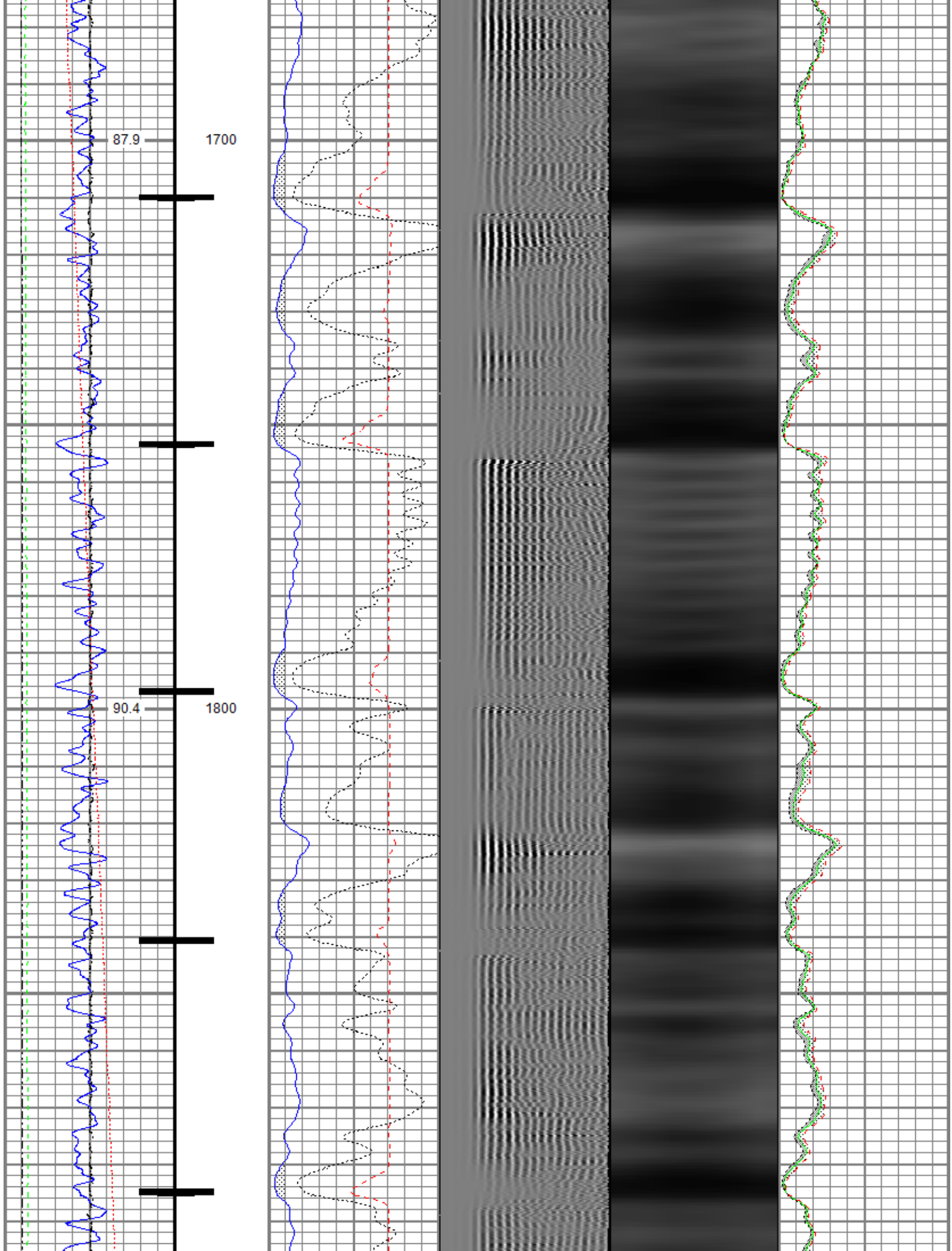


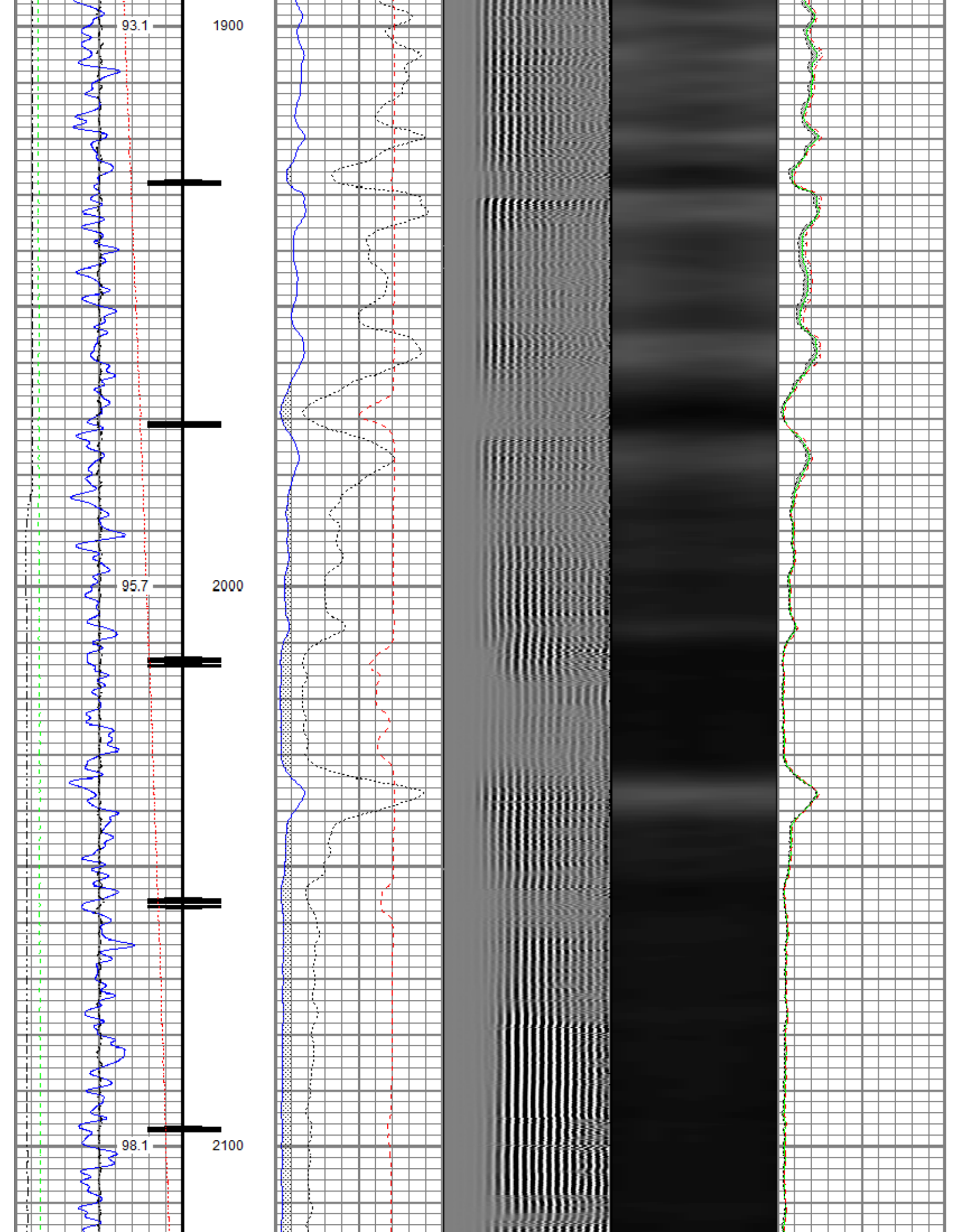


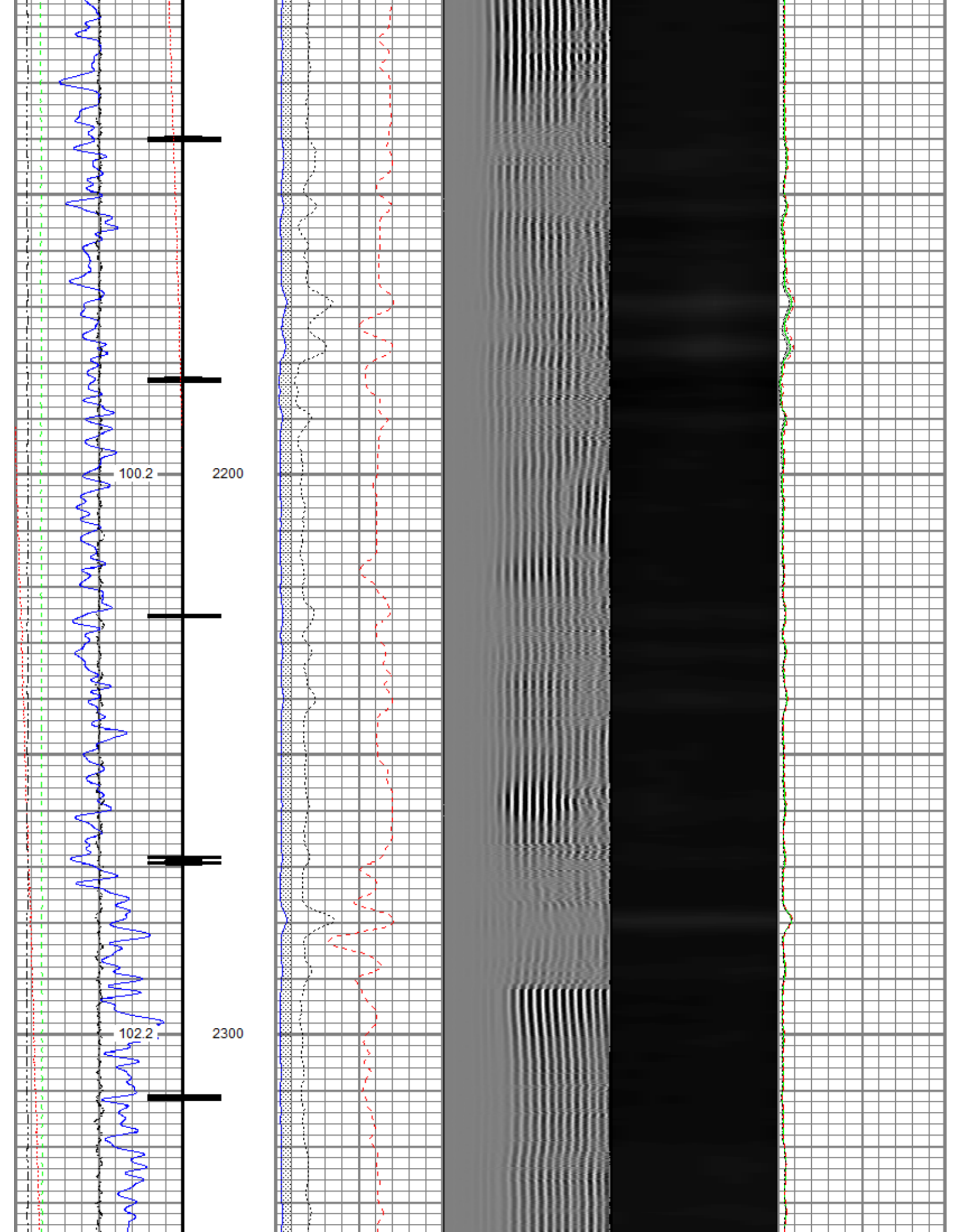


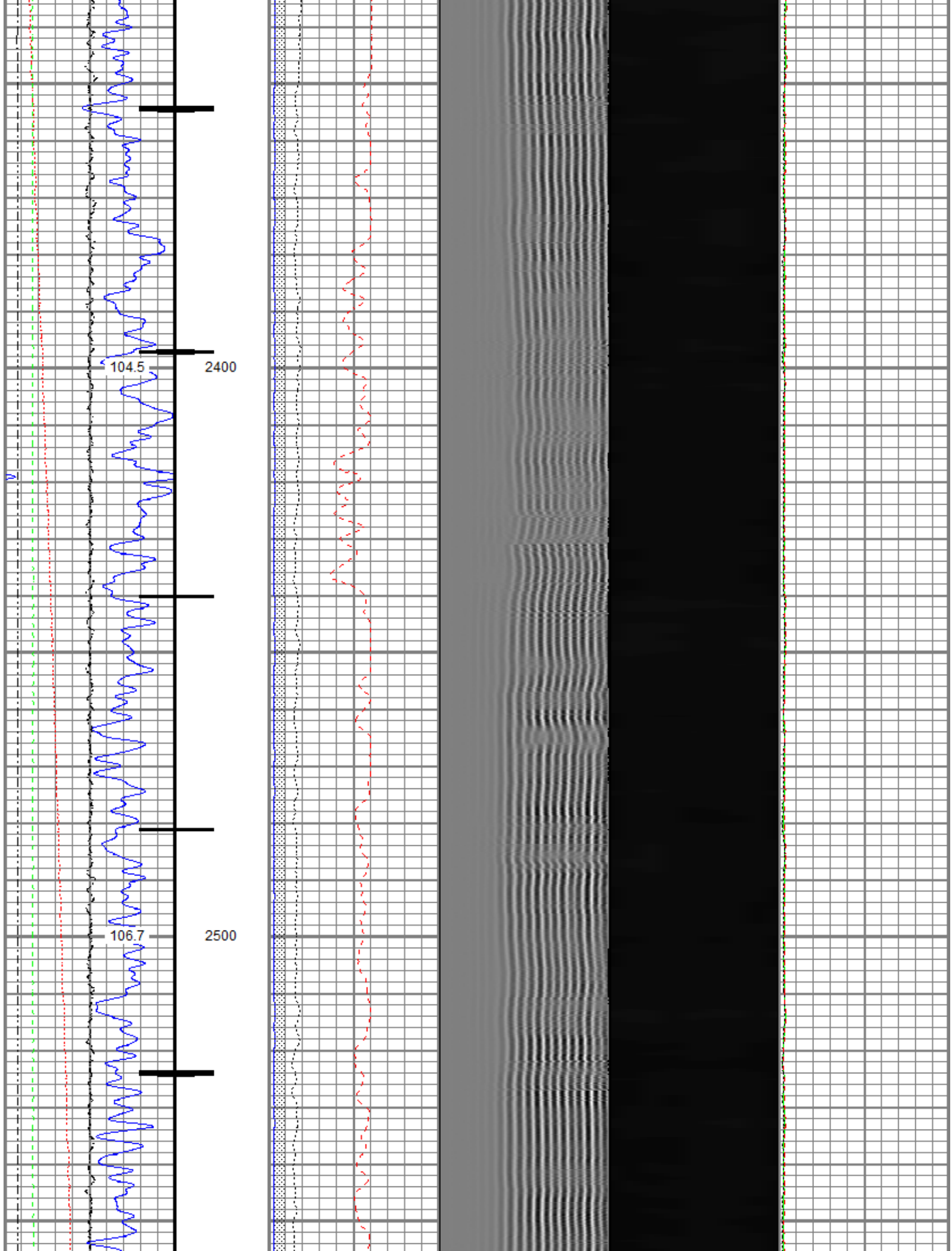


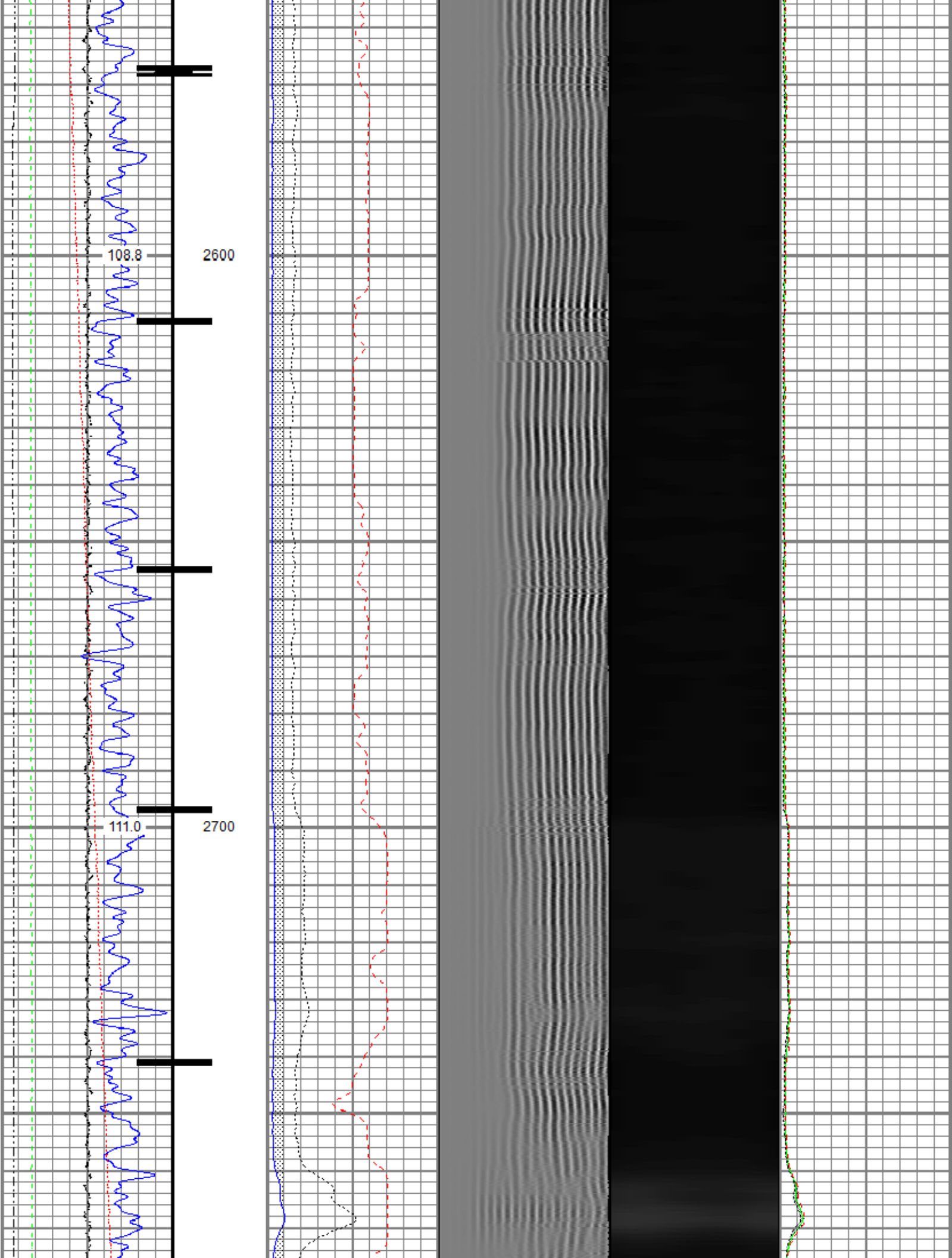


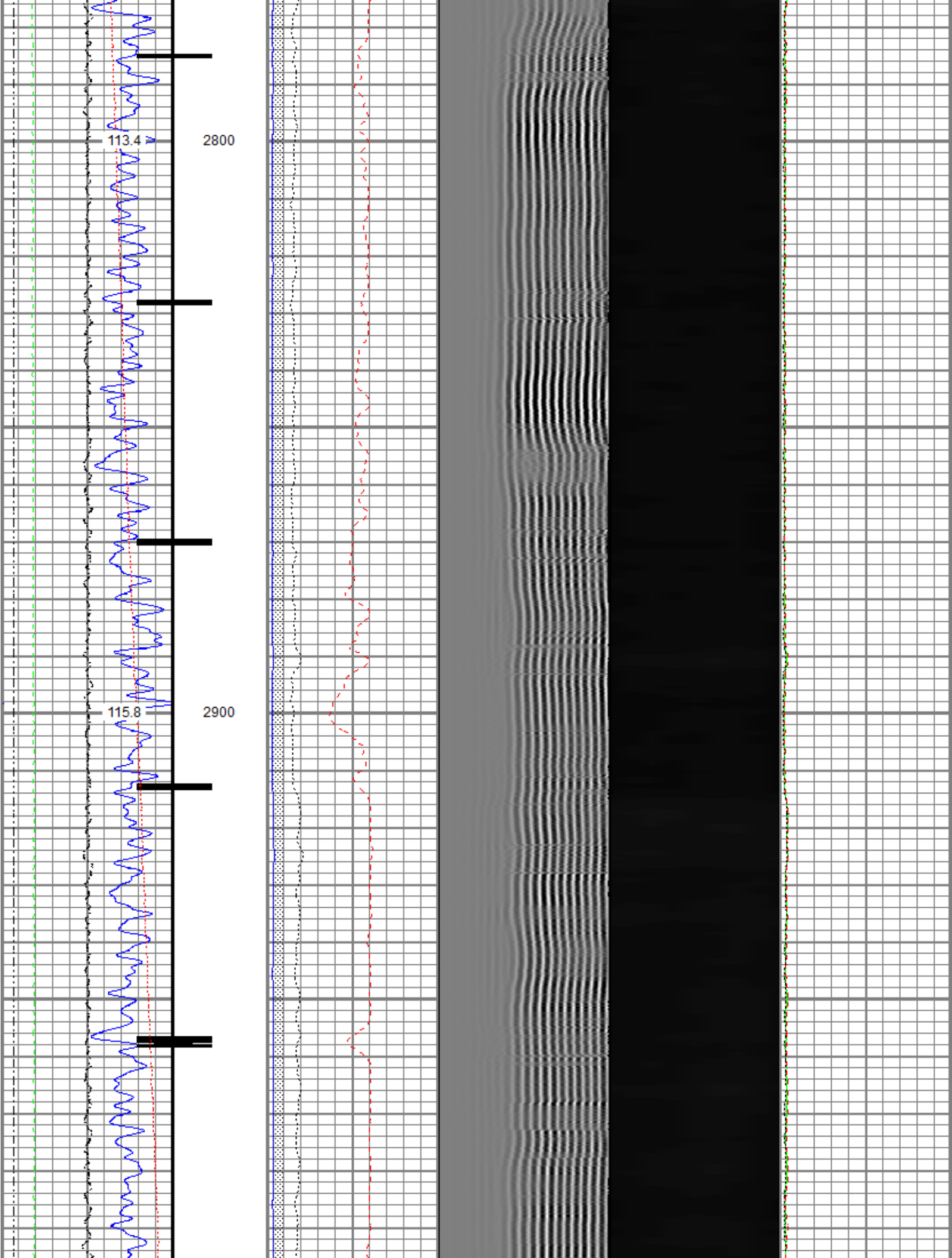


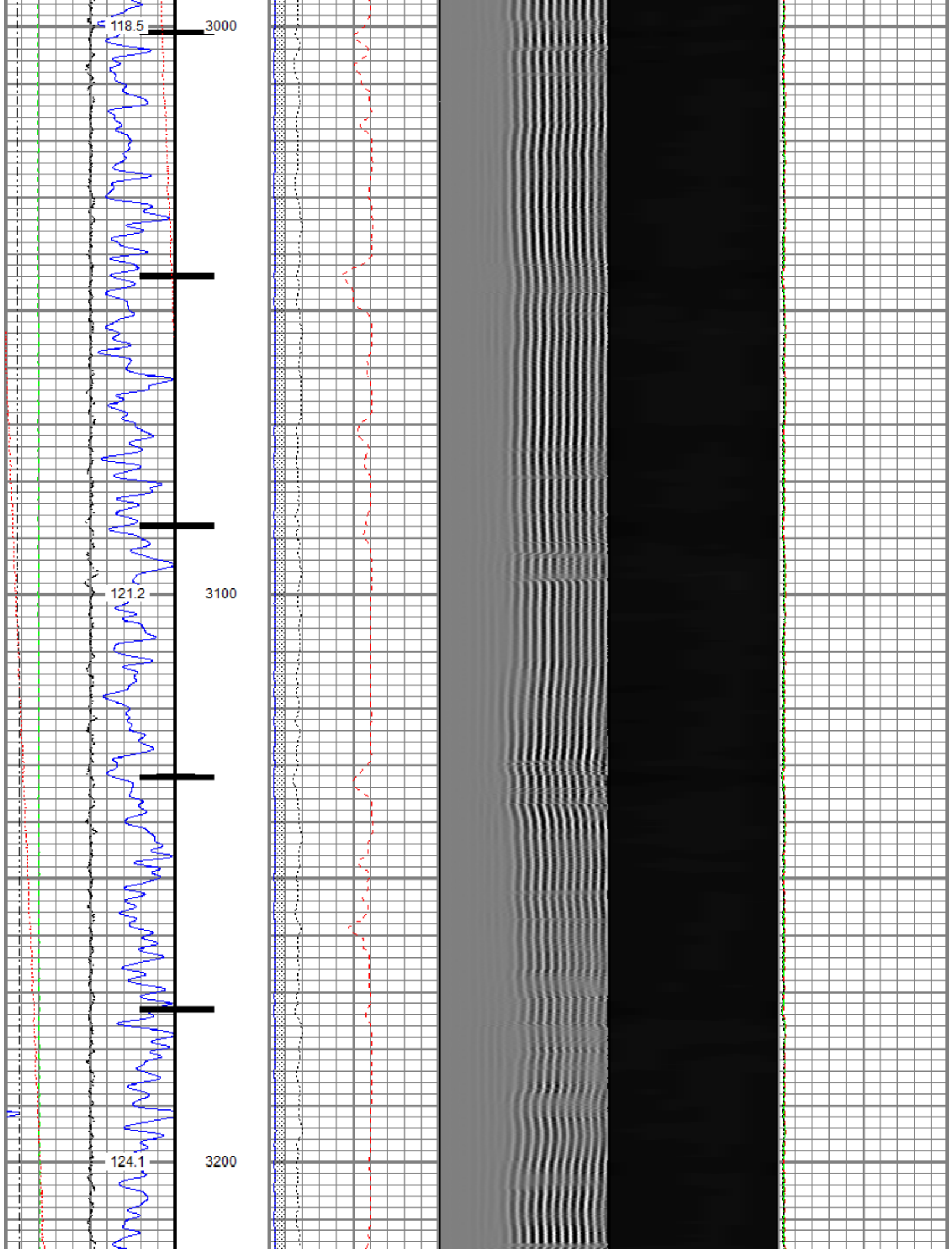


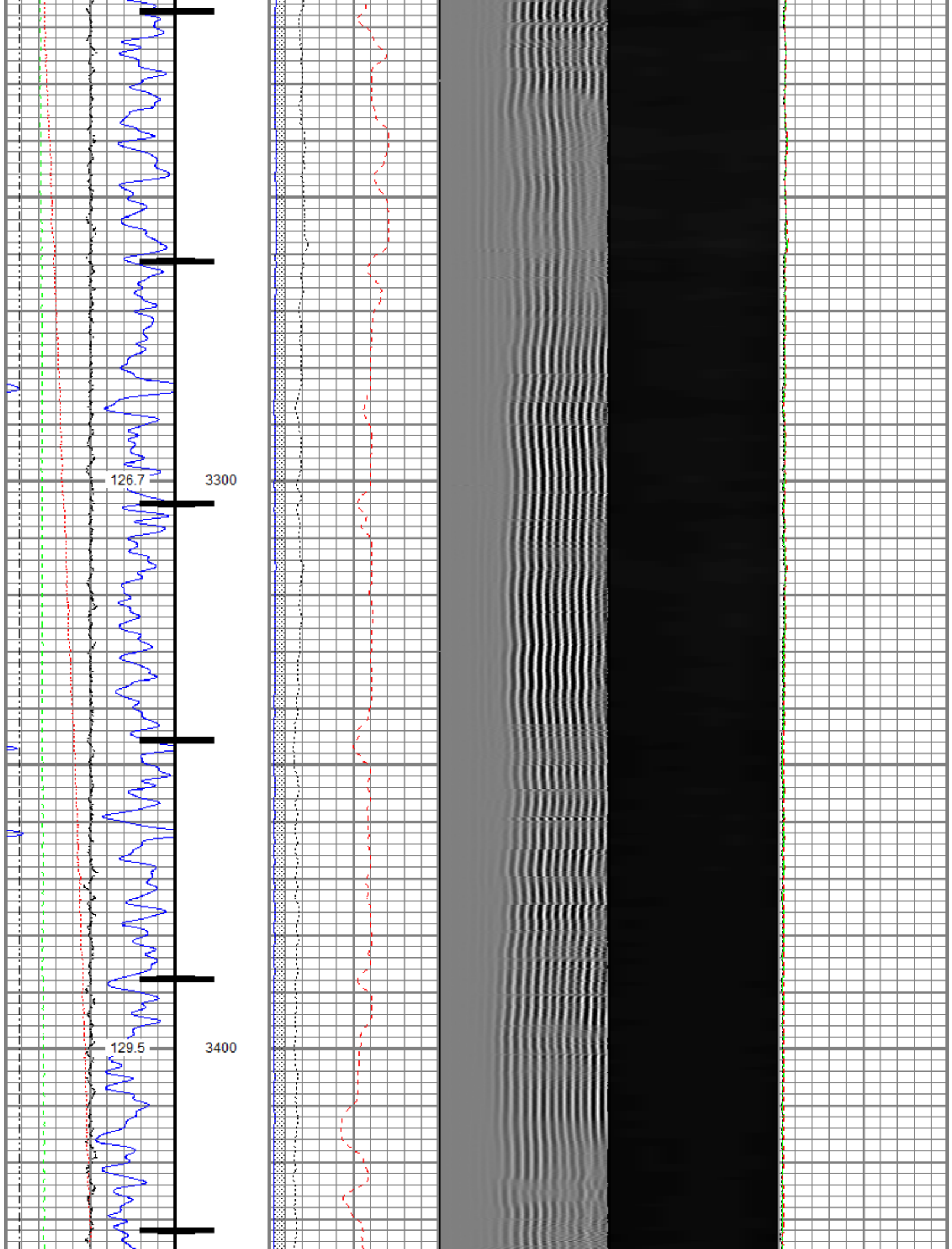


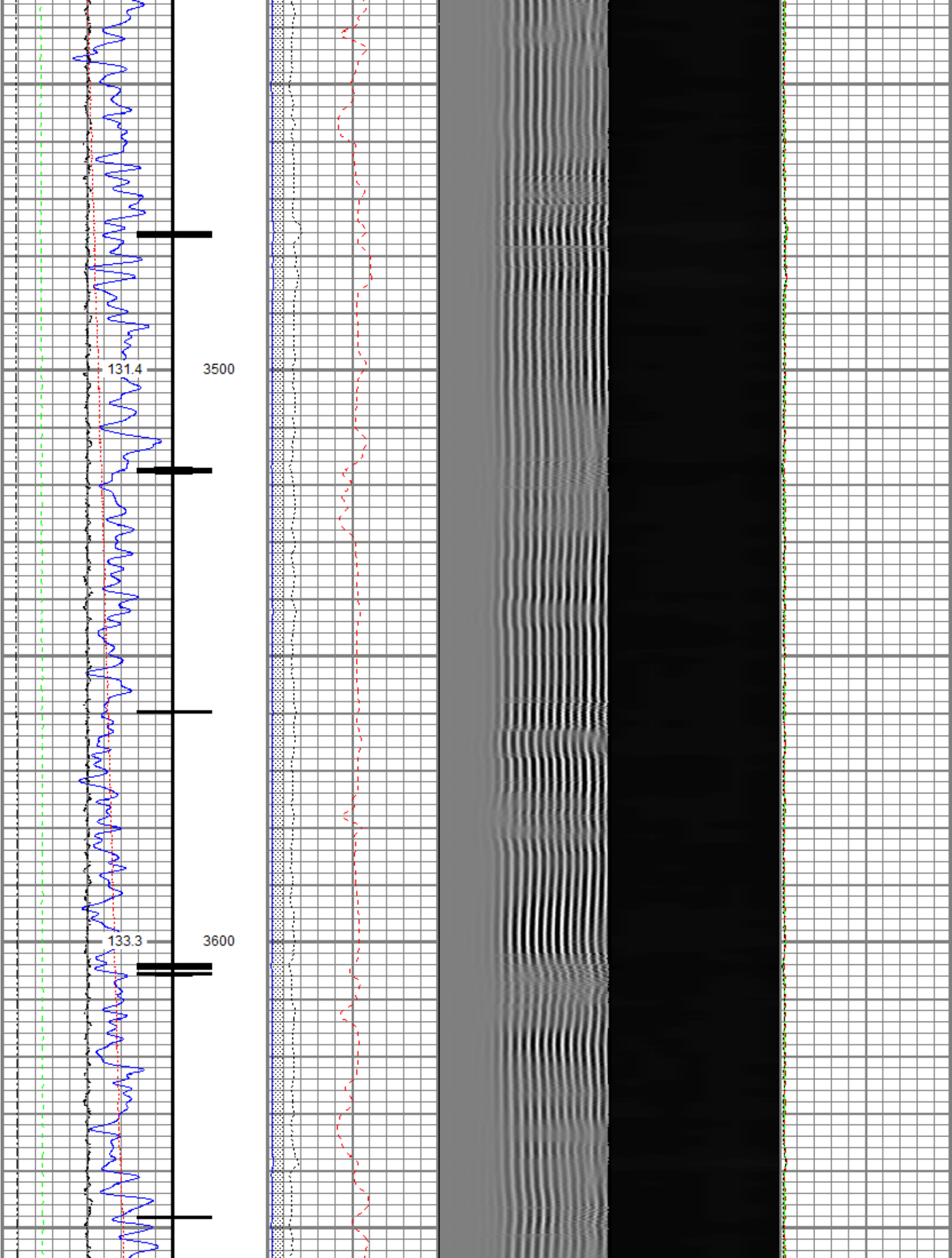


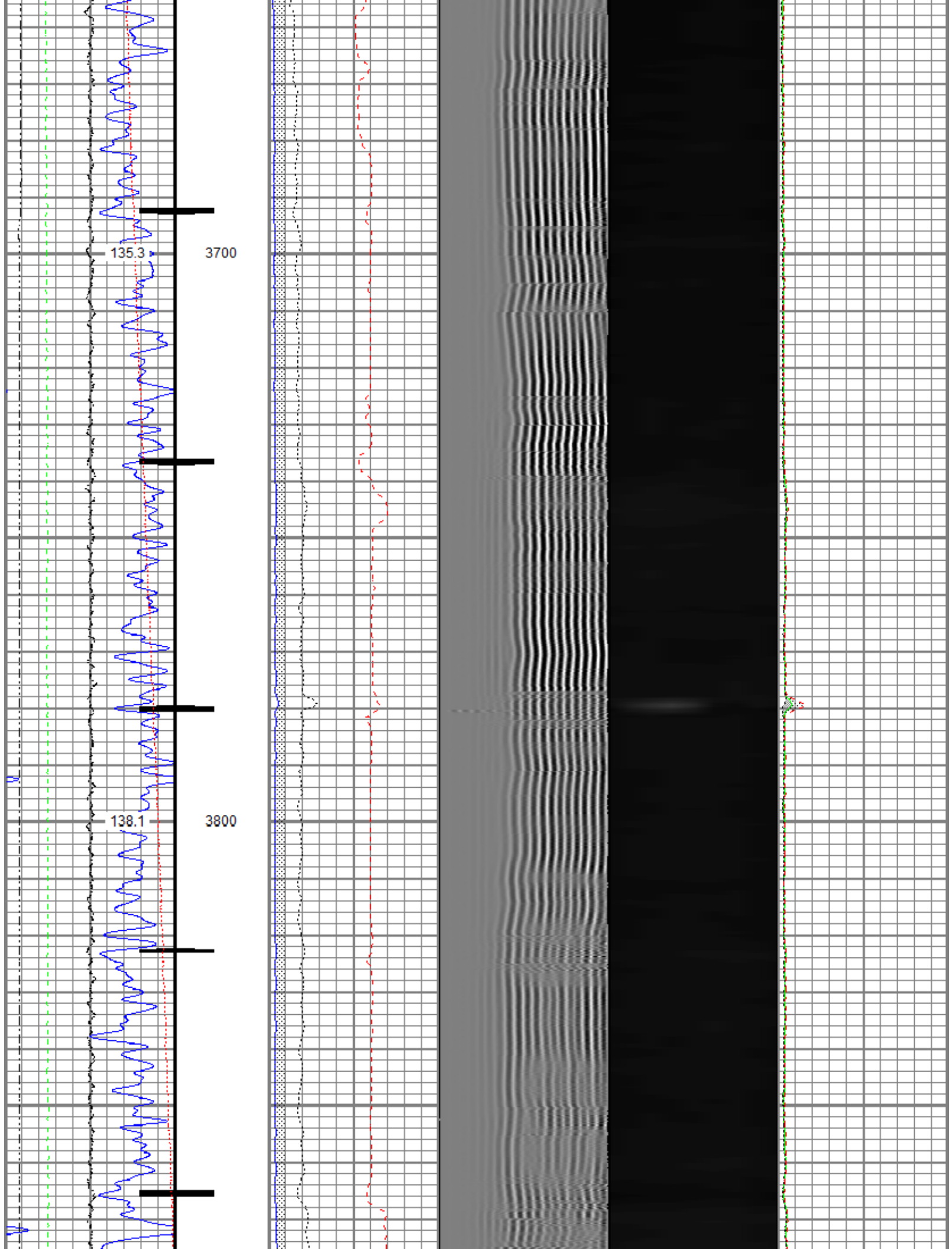


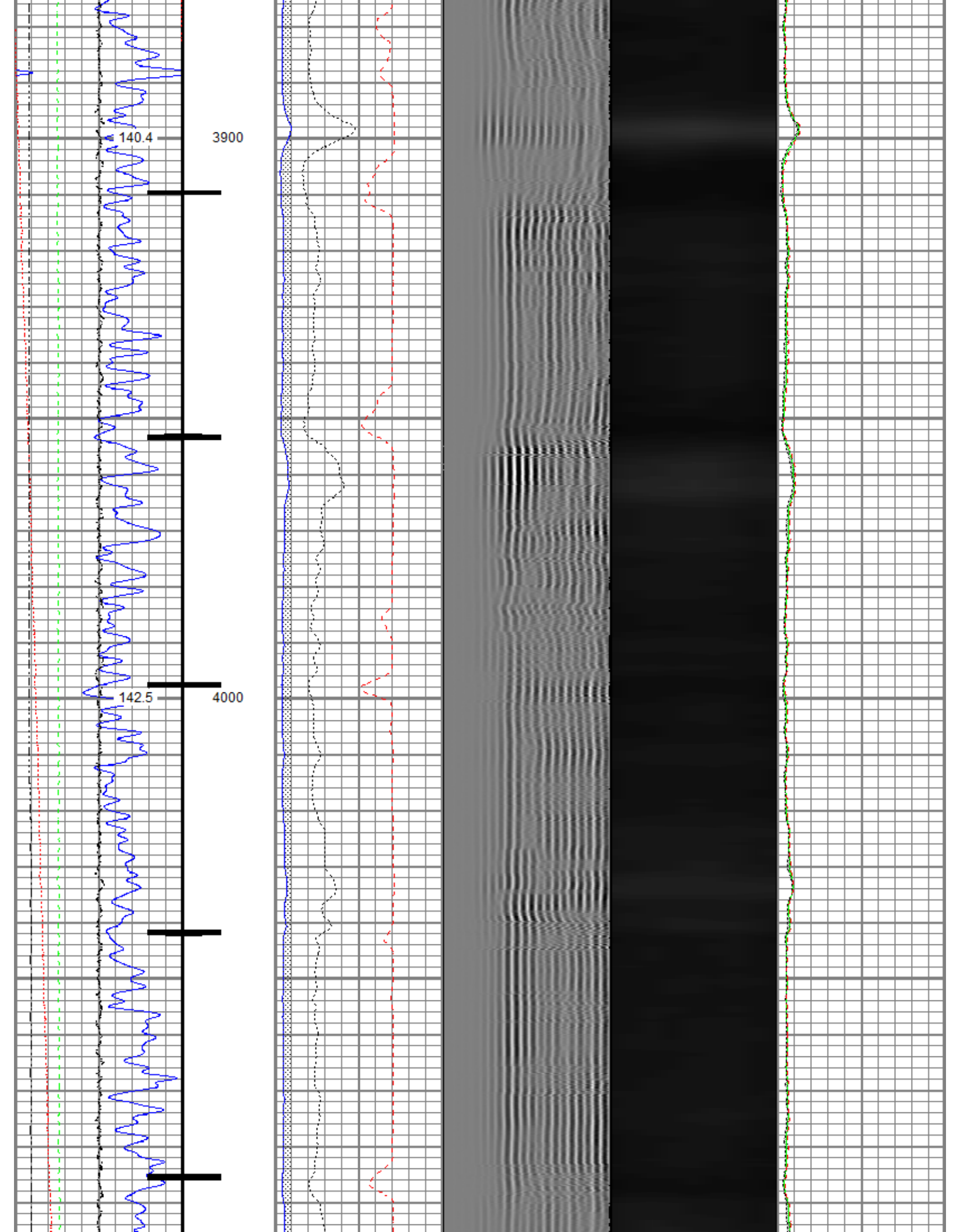


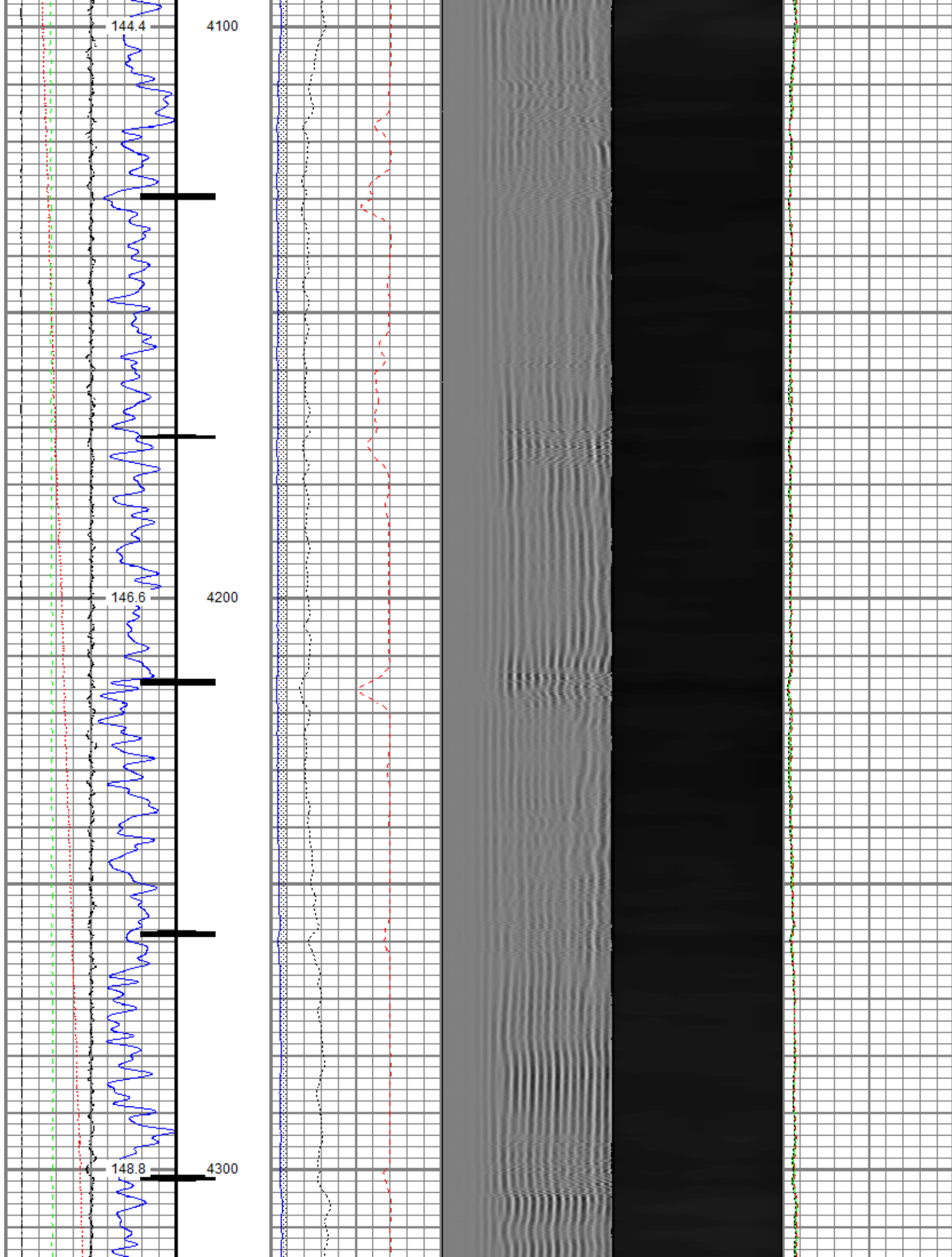


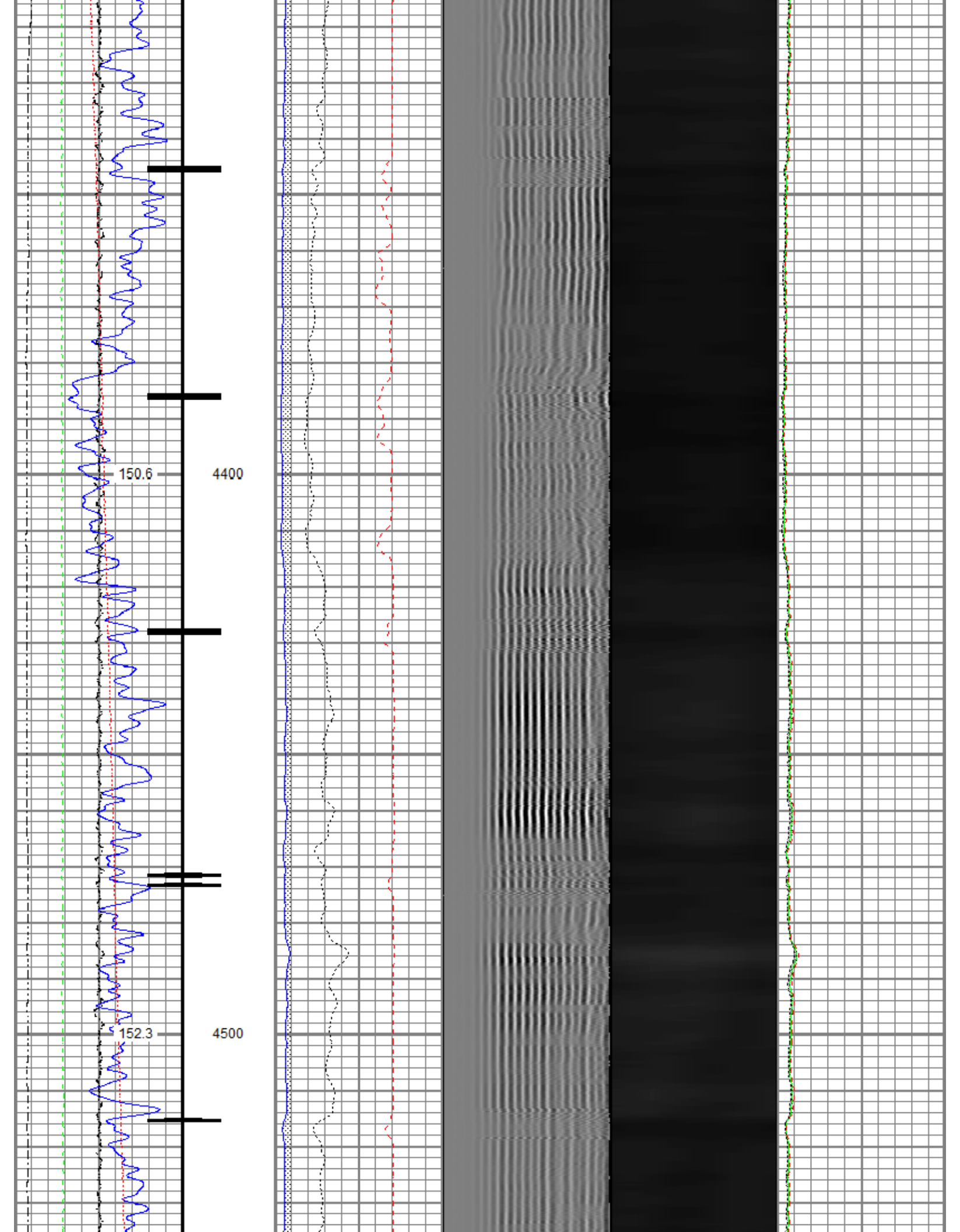


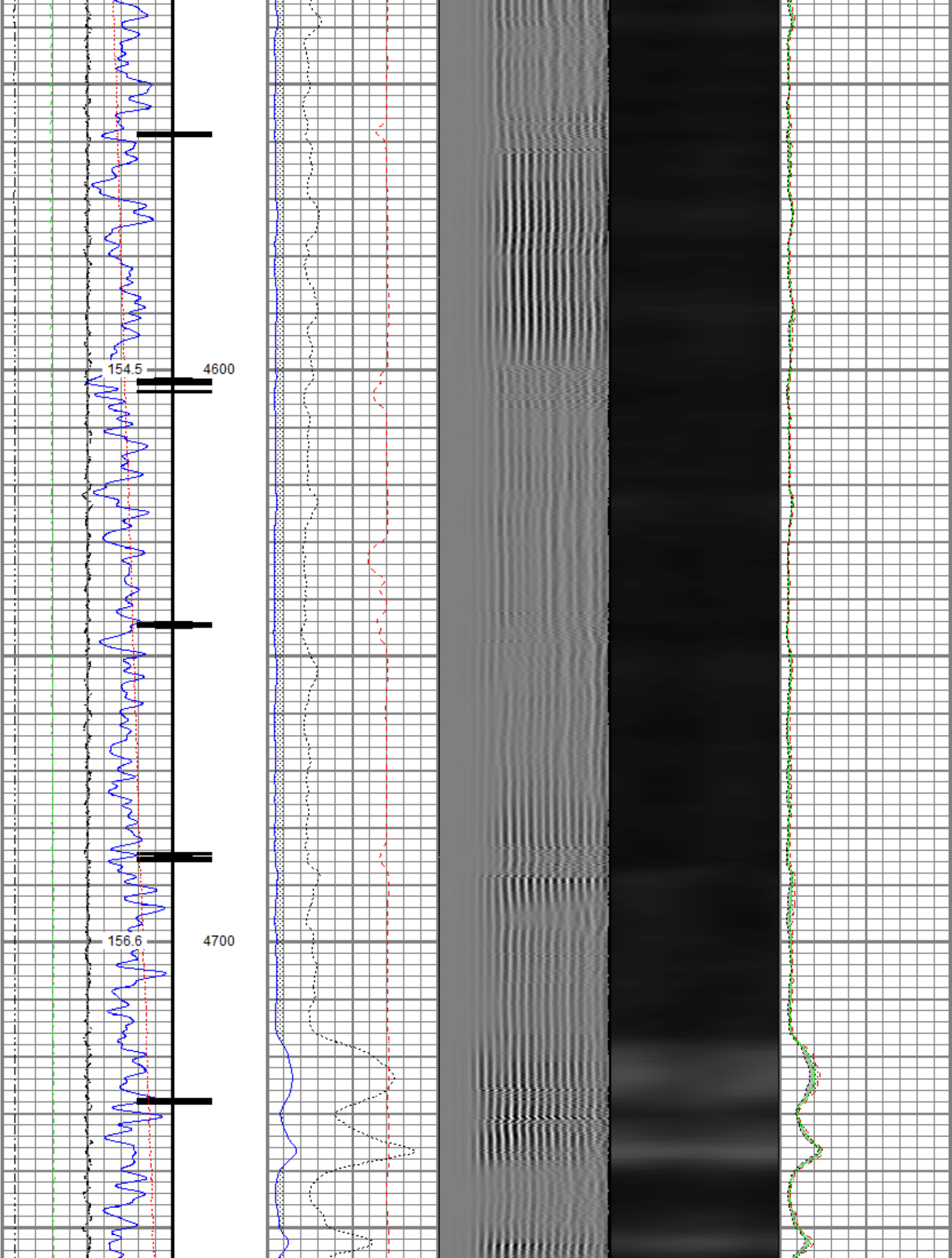


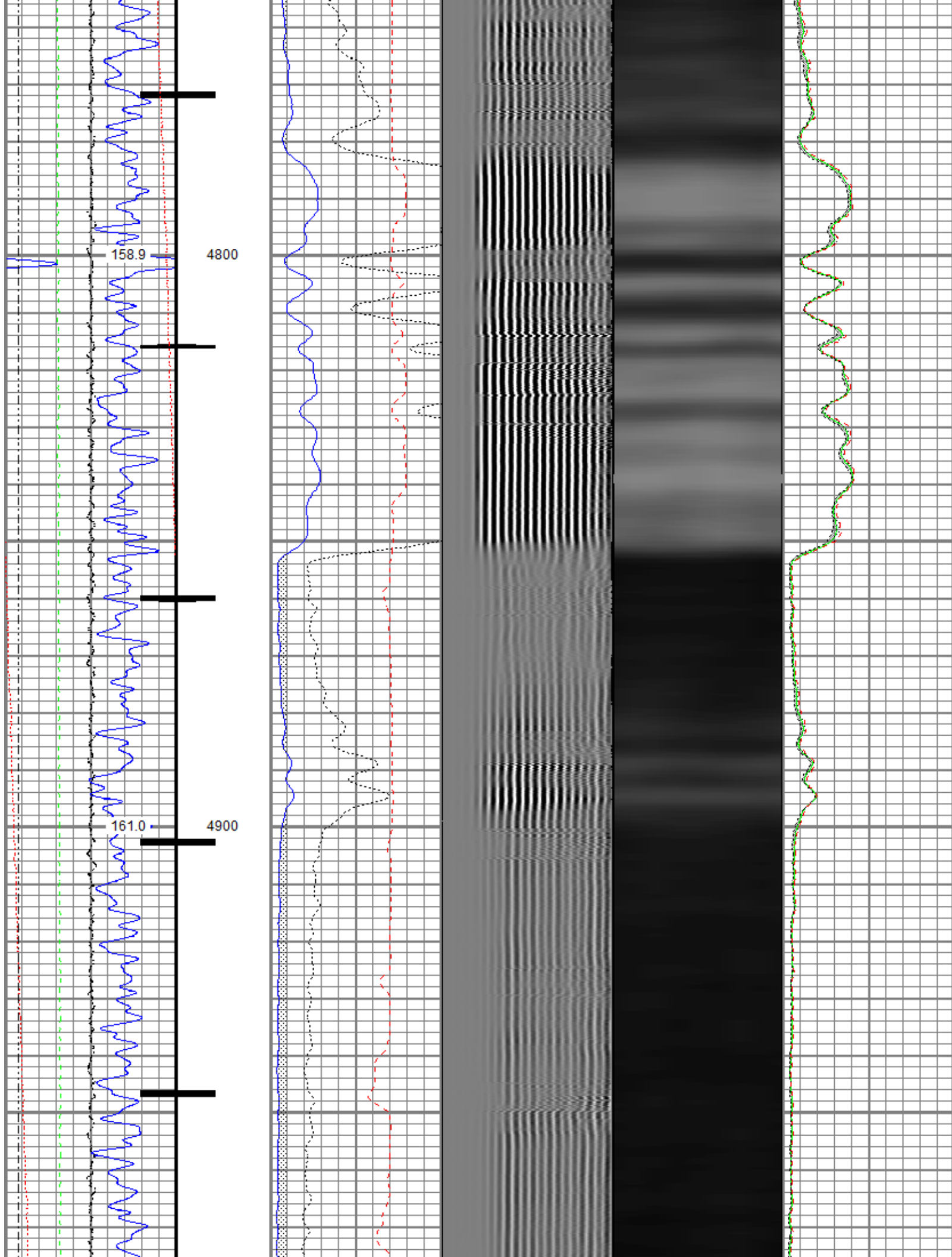


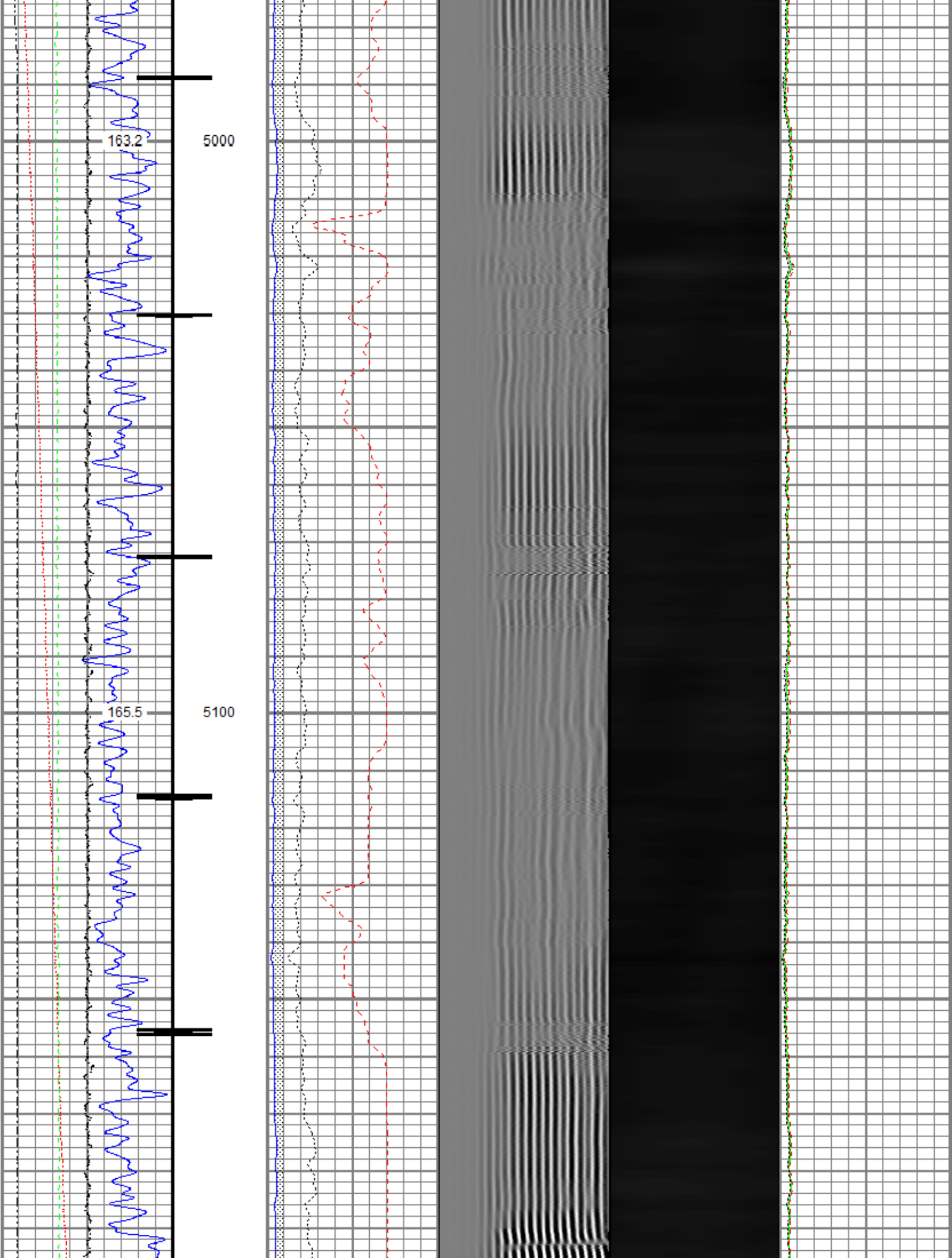


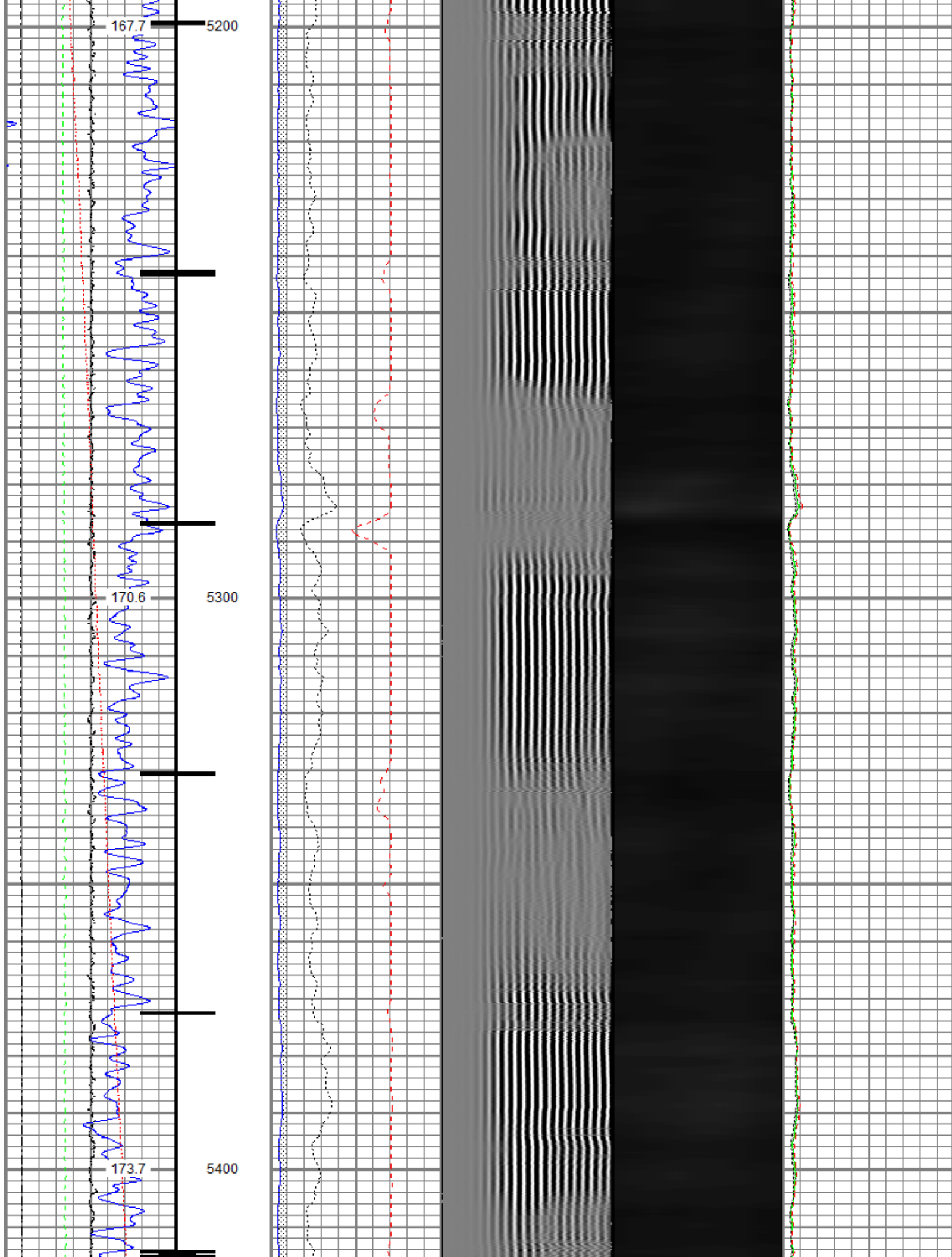


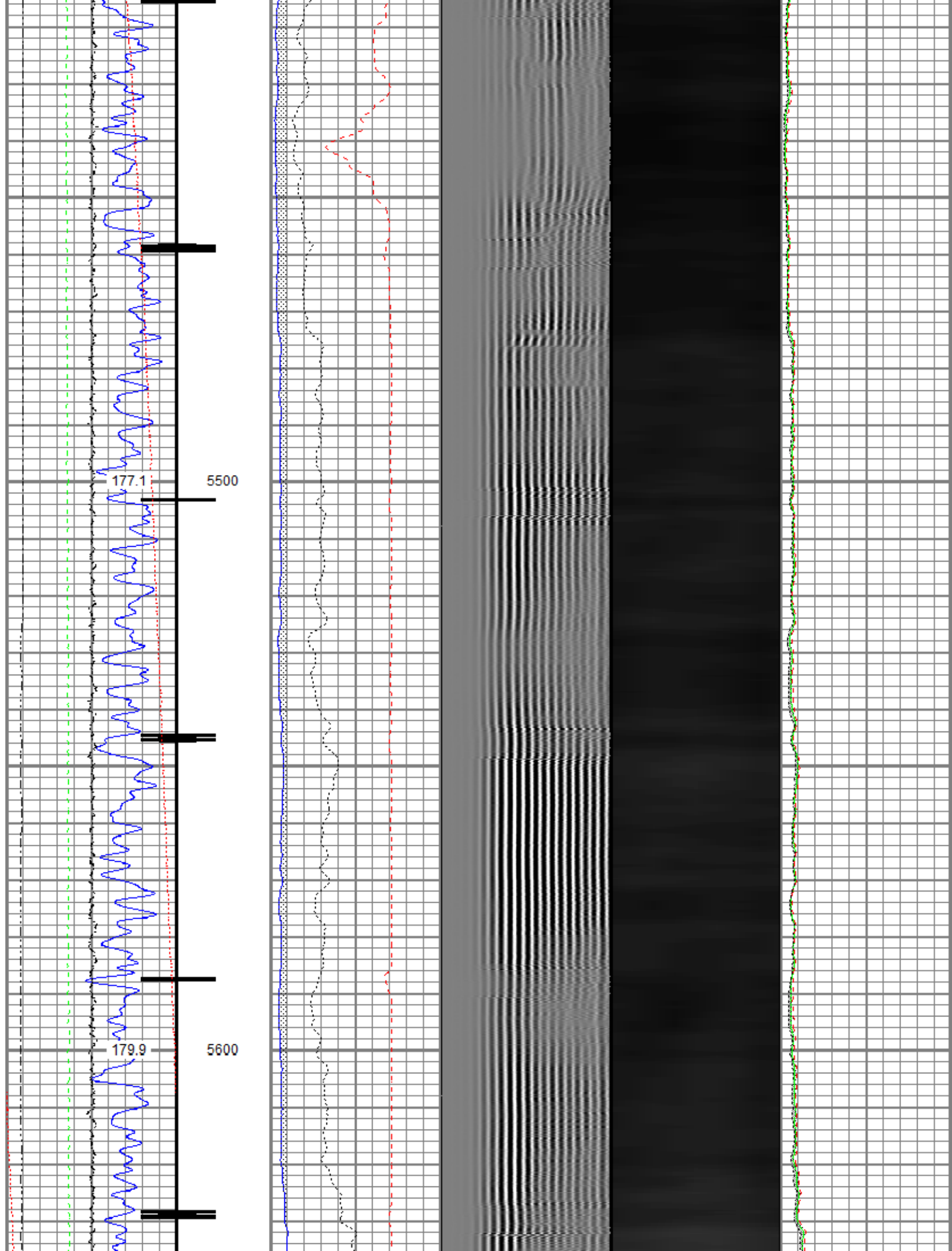


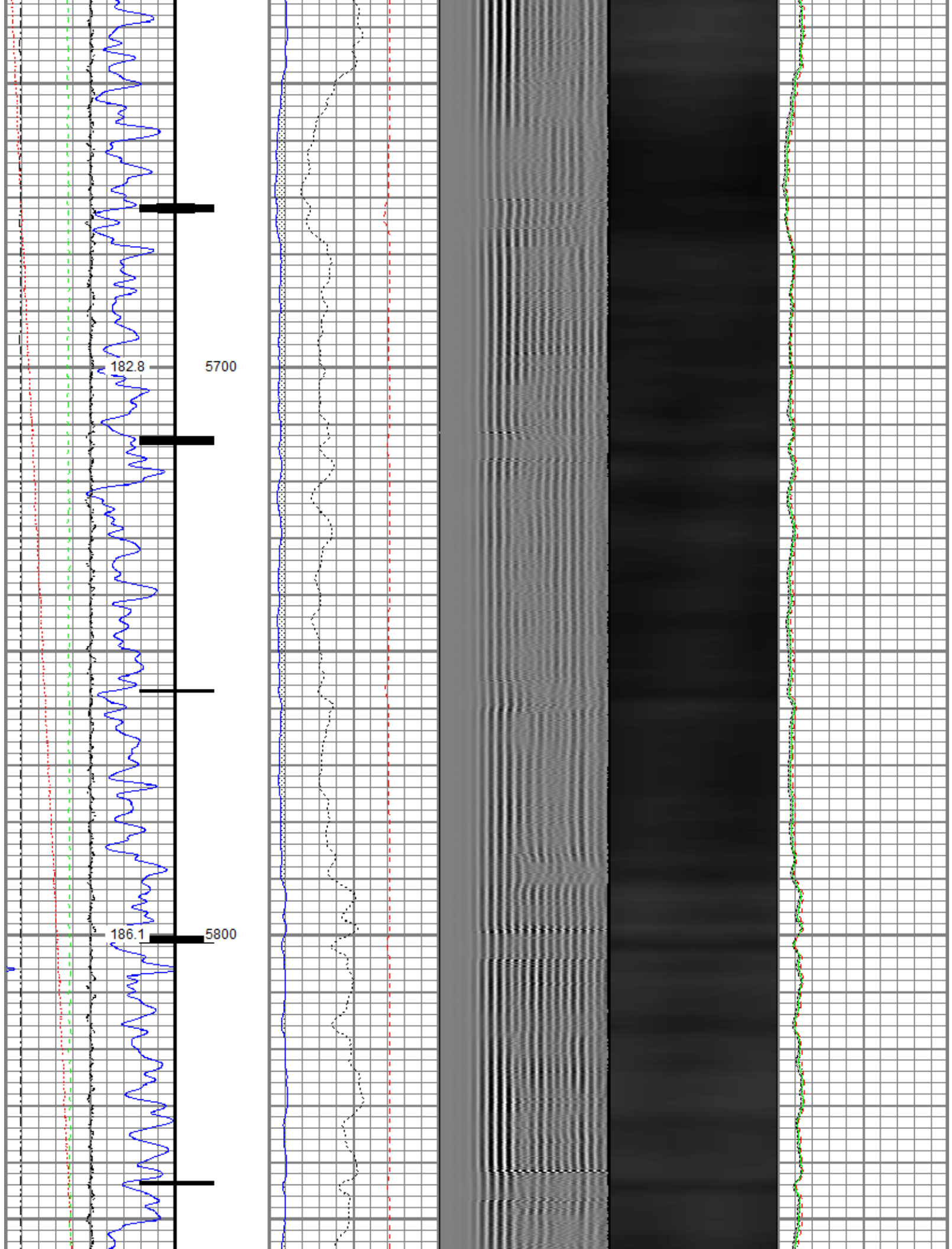


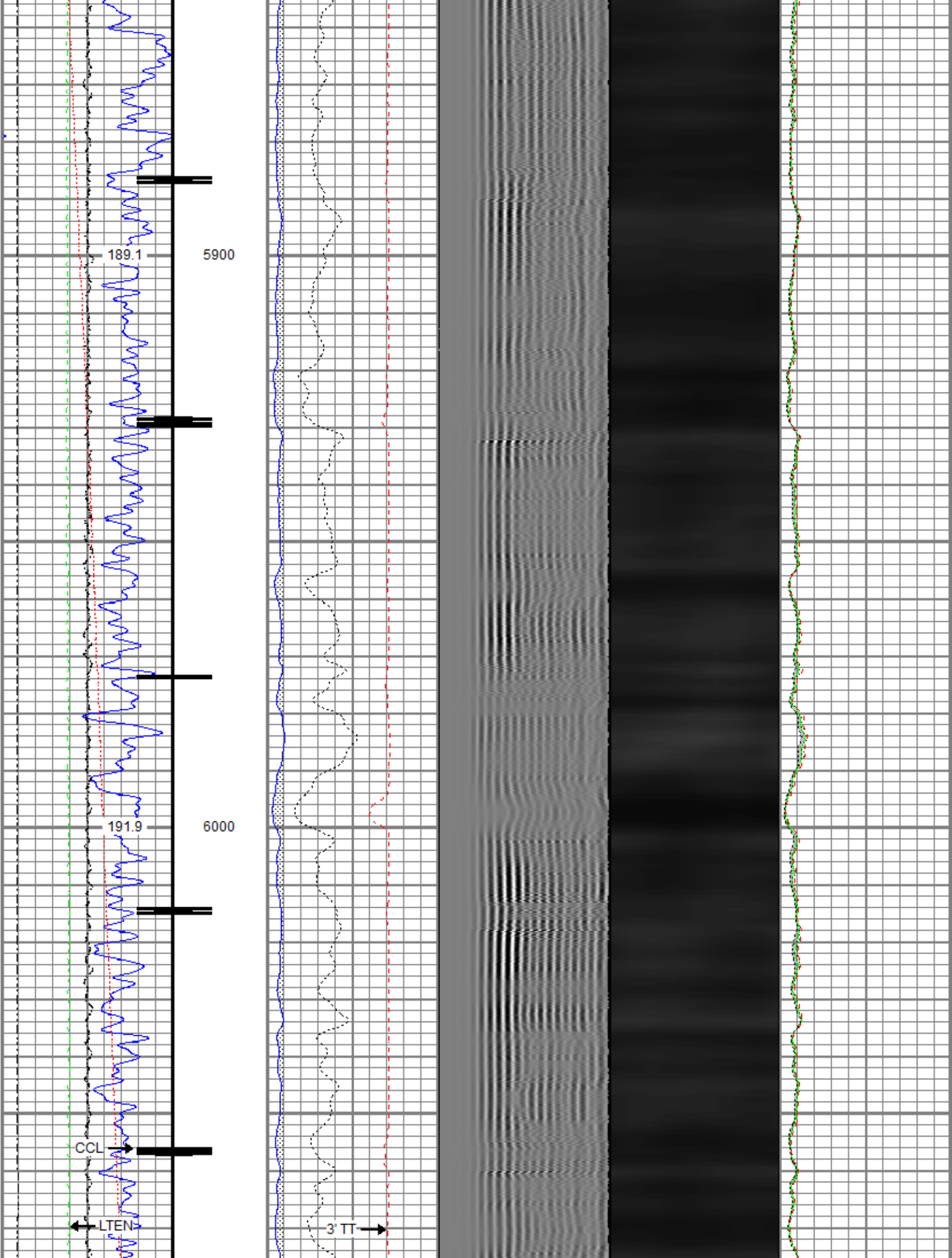


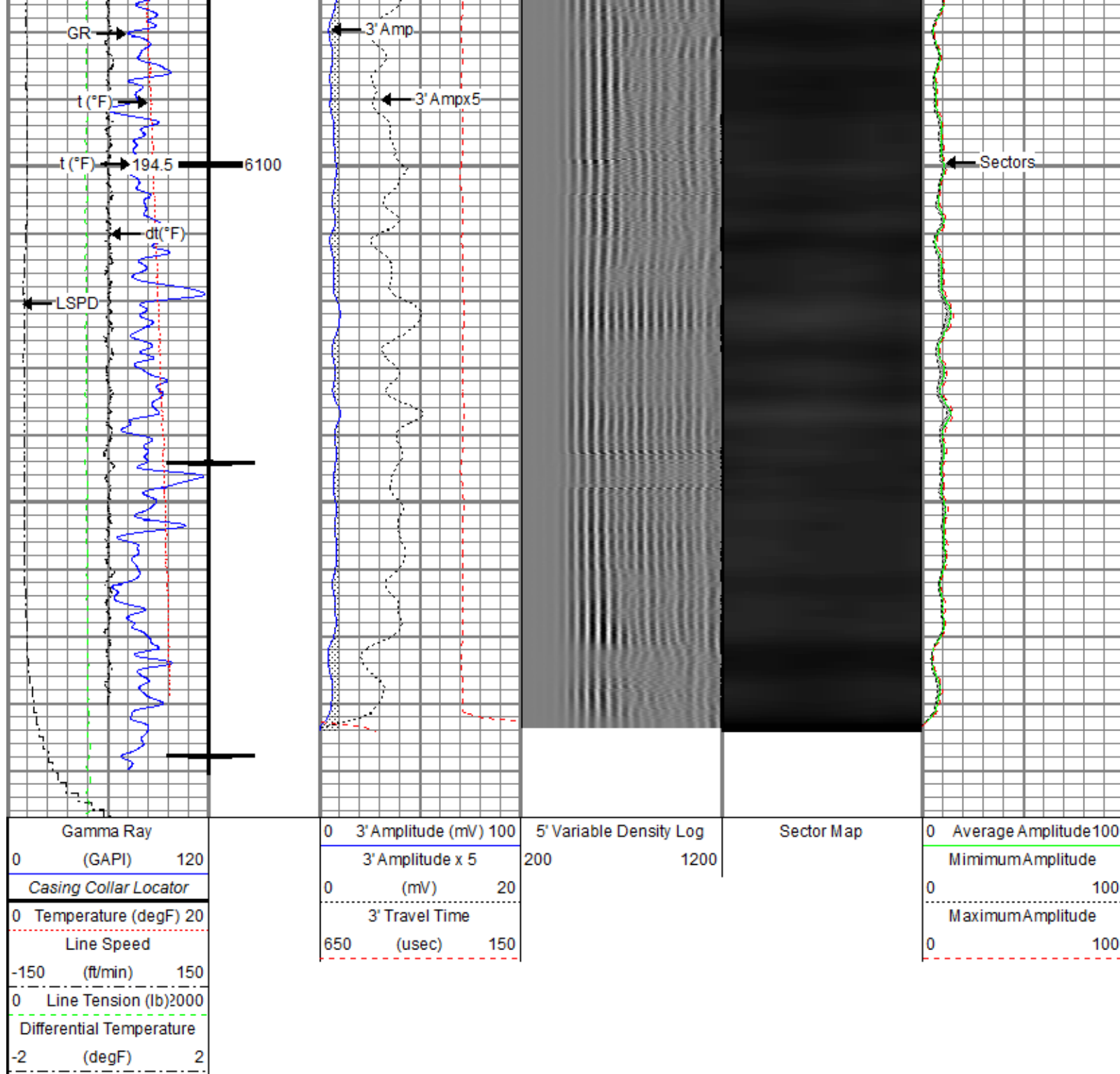








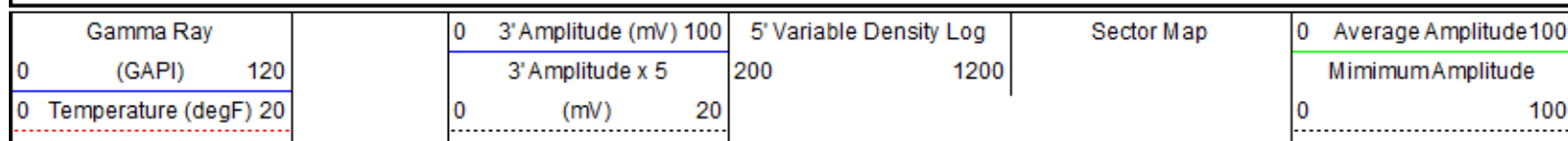




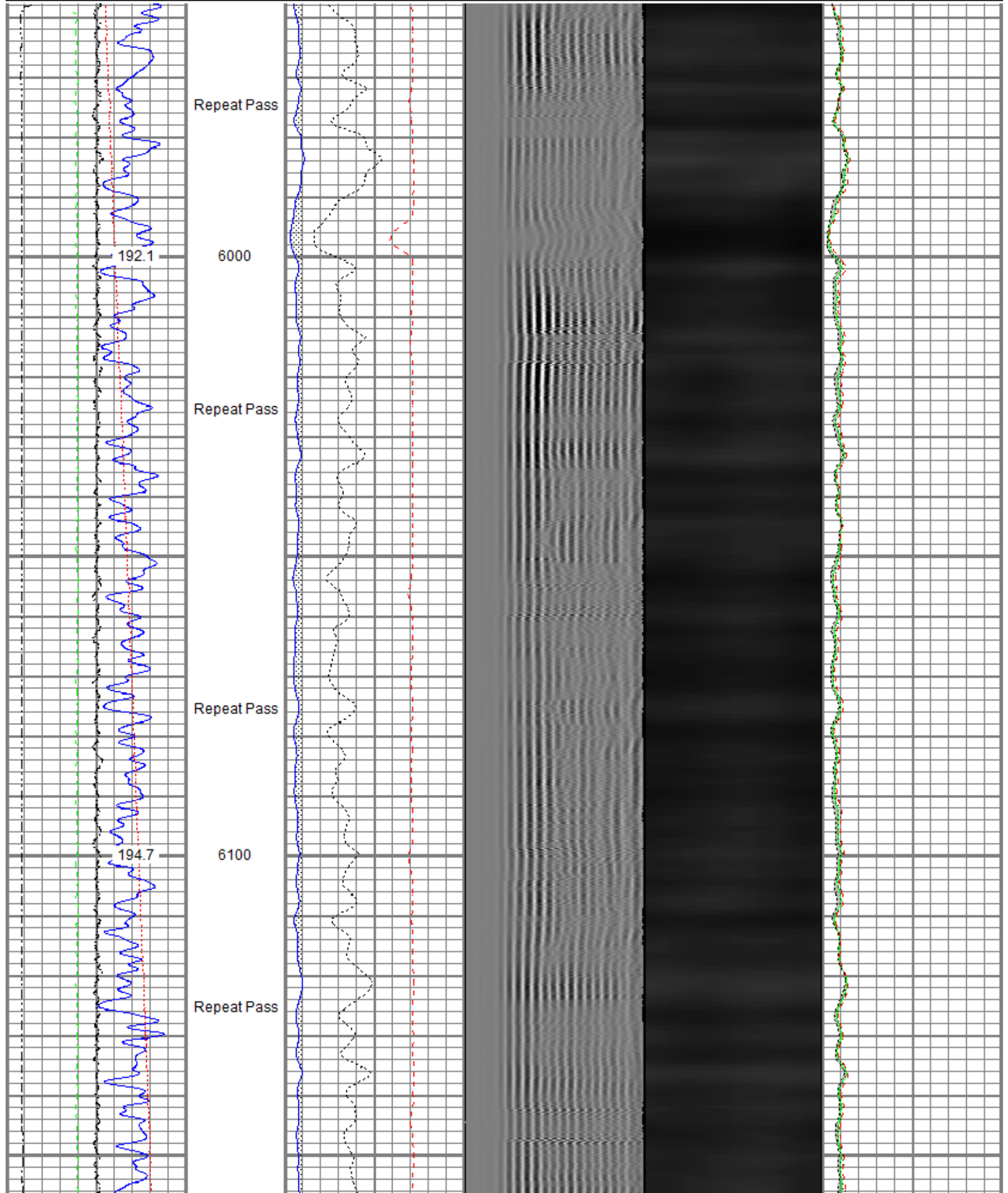
Repeat Pass

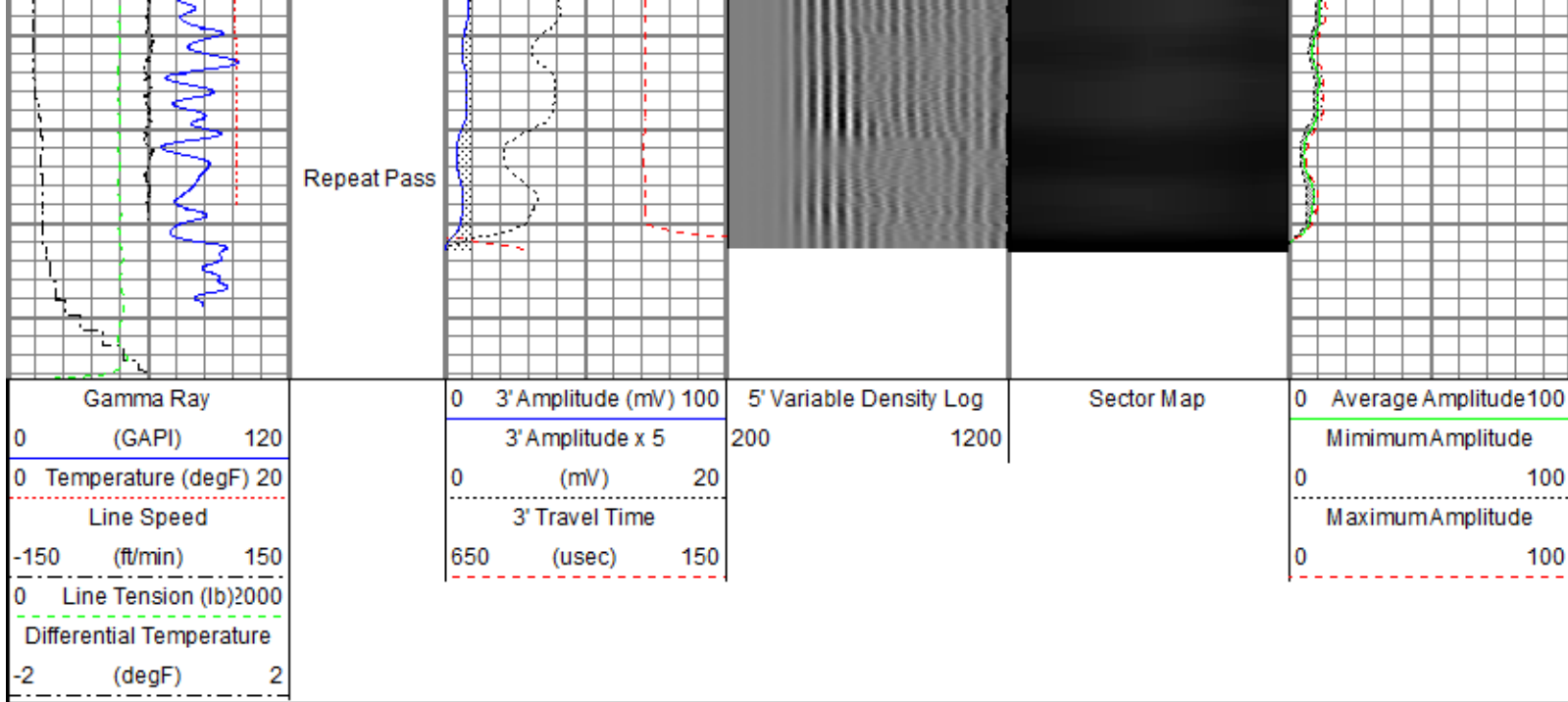
Recorded With 2800 PSI Surface Induced Pressure

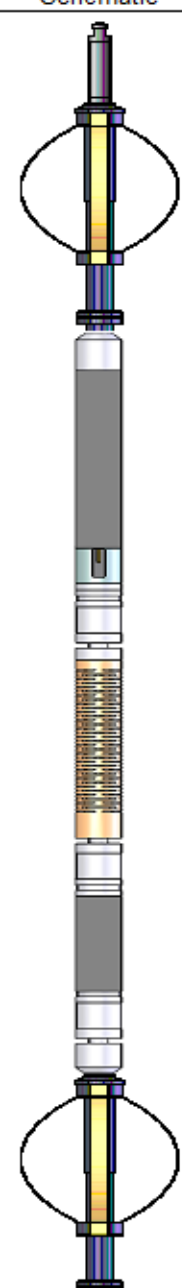
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 Dataset Pathname pass7
 Presentation Format ros_radii
 Dataset Creation Sun Apr 08 12:12:16 2018
 Charted by Depth in Feet scaled 1:240




Line Speed		3' Travel Time		Maximum Amplitude	
-150	(ft/min)	150	650	(usec)	150
0 Line Tension (lb)		2000		0	
Differential Temperature				100	
-2	(degF)	2			





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
TEMP	17.04		Titan CHD-14375 GO	1.03	1.44	3.60
			Titan 1-7/16" Assembled Electric Cable Head w/ 1" Fishing Neck			
			Probe CENT-2750	2.88	2.75	20.00
			Probe 2-3/4" Electric Inline Bowspring Centralizer			
WVFS8	14.81		Probe Radii-2750 RBT (FW0712-020)	9.39	2.75	105.00
WVFS7	14.81		Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub			
WVFS6	14.81					
WVFS5	14.81					
WVFS4	14.81					
WVFS3	14.81					
WVFS2	14.81					
WVFS1	14.81					
WVFCAL	14.81					
WVF3FT	14.81					
WVF5FT	13.81					
HEADVOLT	10.56		Probe CENT-2750	2.88	2.75	20.00
			Probe 2-3/4" Electric Inline Bowspring Centralizer			

CCL\$2	6.80		Probe GR-CCL-2750 6PB (101001) Probe 2-3/4" rev.1 Digital Scintillation Gamma Ray/CCL Combined with 6 Pin Bottom for CNT	4.80	2.75	55.00
CCL\$1	6.80					
GR	5.46					
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
Dataset: 0512345864_Anadarko_Hergenreder 22N1-4HZ_RBL_04-08-18.db: field/well/run1/pass9 Total length: 23.86 ft Total weight: 223.60 lb O.D.: 2.75 in						

Calibration Report	
Database File	C:\ProgramData\Warrior\Data\Anadarko_Hergenreder 22N1-4HZ\0512345864_Anadarko_Hergenreder 22N1-4HZ_RBL_04-08-18
Dataset Pathname	pass9
Dataset Creation	Sun Apr 08 12:16:18 2018

Gamma Ray Calibration Report		
Serial Number:	101001	
Tool Model:	2750 6PB	
Performed:	Sun Nov 12 11:25:32 2017	
Calibrator Value:	637.0	GAPI
Background Reading:	100.6	cps
Calibrator Reading:	981.1	cps
Sensitivity:	0.7235	GAPI/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	FW0712-020	
Tool Model:	2750 RBT	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	-0.199	ft

Master Calibration, performed Sun Apr 08 06:39:48 2018:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.006	0.359	0.800	71.921	201.635	-0.509
CAL	0.006	0.383				
5'	0.006	0.323	0.800	71.921	224.544	-0.614
SUM						
S1	0.006	0.355	0.000	100.000	286.915	-1.839
S2	0.007	0.360	0.000	100.000	282.824	-1.844
S3	0.006	0.359	0.000	100.000	283.588	-1.790
S4	0.006	0.356	0.000	100.000	285.615	-1.792
S5	0.006	0.359	0.000	100.000	283.303	-1.740
S6	0.006	0.361	0.000	100.000	281.415	-1.731
S7	0.006	0.361	0.000	100.000	281.415	-1.728

S8 0.006 0.360 0.000 100.000 282.600 -1.818

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.006	0.383	1.000	0.000

Air Zero Calibration, performed Sun Apr 08 06:38:45 2018:

	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	

Temperature Calibration Report

Serial Number: FW0712-020
Tool Model: 2750 RBT
Performed: Thu Dec 21 07:48:40 2017

	Reference	Reading
Low Reference:	100.00 degF	109.43 degF
High Reference:	350.00 degF	405.87 degF

Gain: 0.84
Offset: 7.72
Delta Spacing: 1



Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Hergenreder 22N1-4HZ
Field Wattenberg
County Weld
State Colorado