



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Kerr-McGee Oil & Gas Onshore, L.P.

Well RW 27N-5HZ

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-44766

Other Services
Gauge Ring

SEC 29 TWP 3N RGE 65W

Elevation

Permanent Datum Ground Level Elevation 4869'
Log Measured From Kelly Bushing 21 FT
Drilling Measured From Kelly Bushing

K.B. 4890'
D.F. ---
G.L. 4869'

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Date	20-NOV-2017			
Run Number	Two			
Depth Driller	13384 FT			
Depth Logger	7170 FT			
Bottom Logged Interval	7166 FT			
Top Log Interval	Surface			
Open Hole Size	7 875"			
Type Fluid	Water			
Density / Viscosity	8.34 lb/gal			
Max. Recorded Temp.	249°F			
Estimated Cement Top	See Log			
Time Well Ready	ROA			
Time Logger on Bottom	8:10 AM			
Equipment Number	HD-340			
Location	Fort Lupton, CO			
Recorded By	J. Fresquez			
Witnessed By	J. McMillen			
Borehole Record				
Run Number	Bit	From	To	Size
				Weight
				From
				To
Tubing Record				
Casing Record	Size (in)	Wgt (lbs/ft)	Grade	Top
Surface Casing	9 5/8	36	J-55	Surface
Intermediate #1	5 1/2	20	P-110	Surface
Intermediate #2				
Inner				

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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 at 6352 FT
Adjusted -2 FT to correlate with Marker Joint
Gauge Ring/Junk Basket ran to 7250 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!!

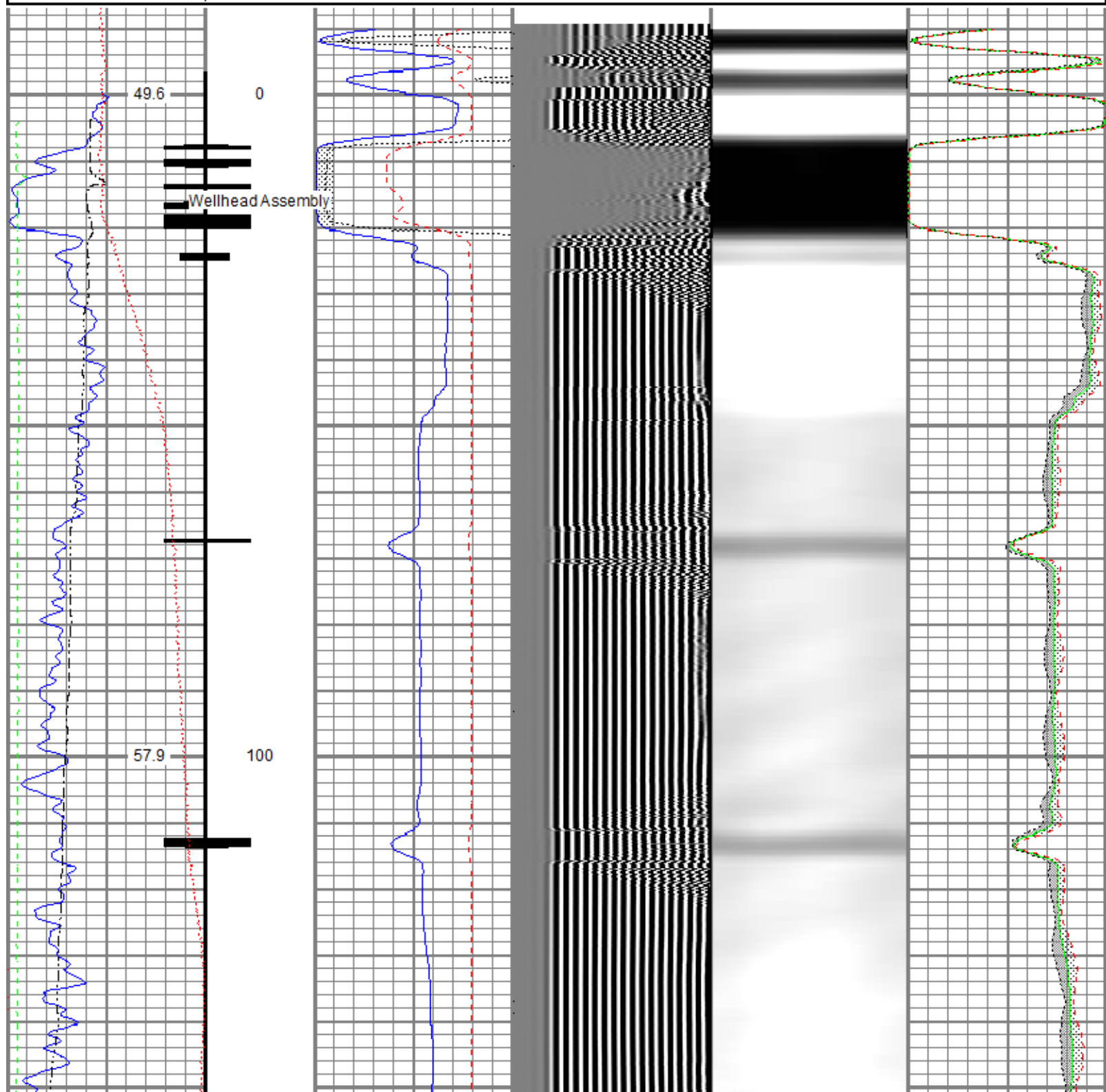
Main Pass

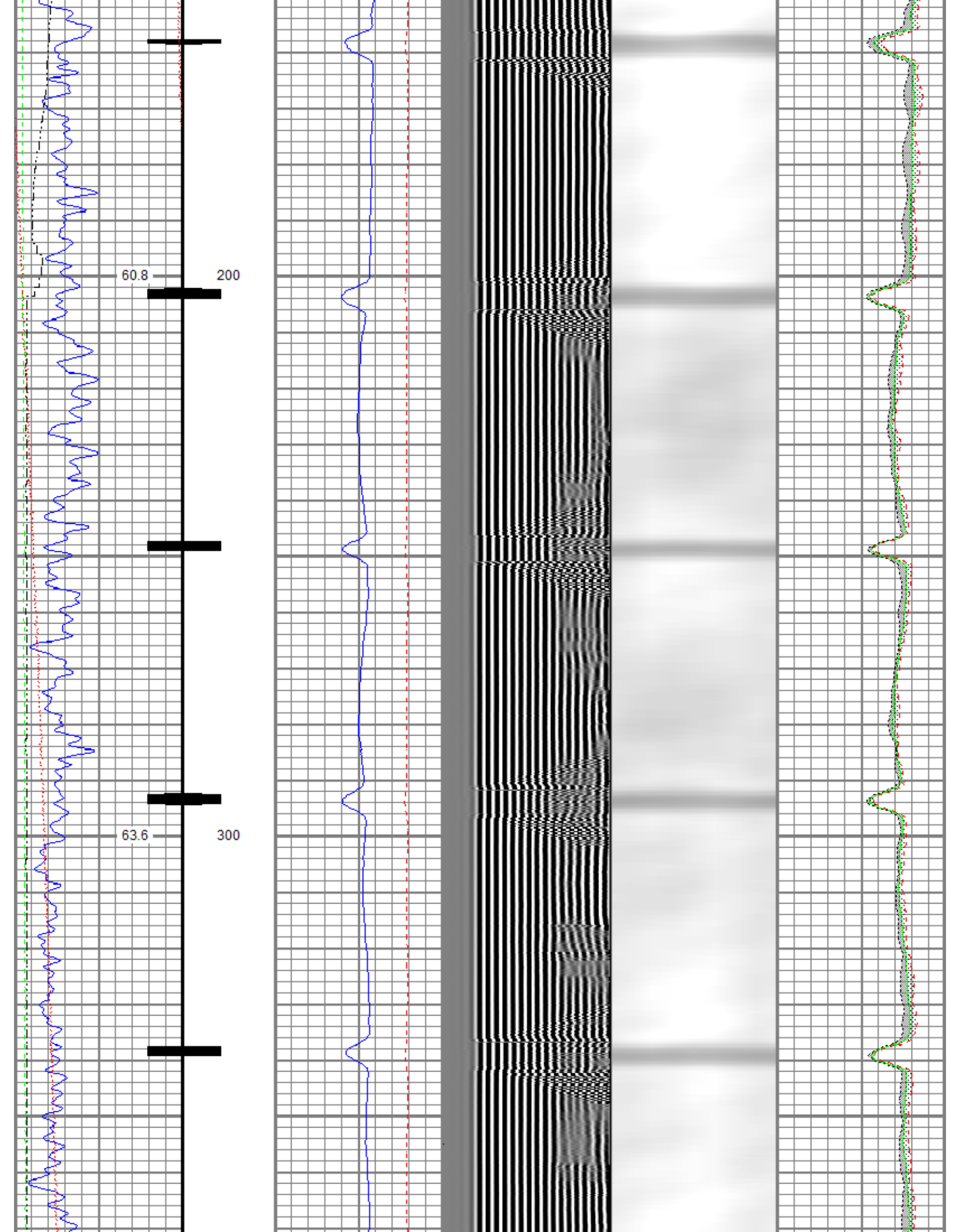


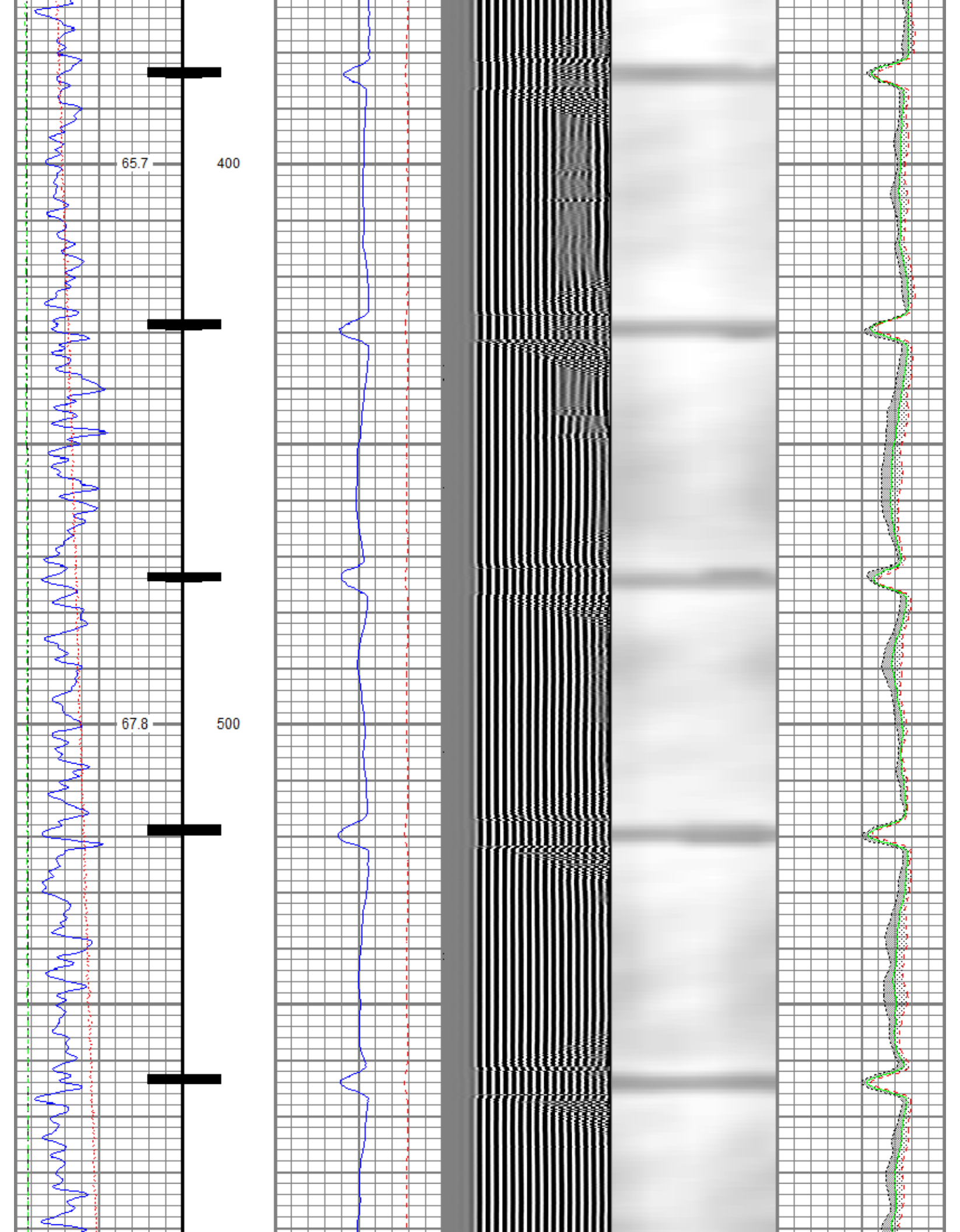
Recorded With 2800 PSI Surface Induced Pressure

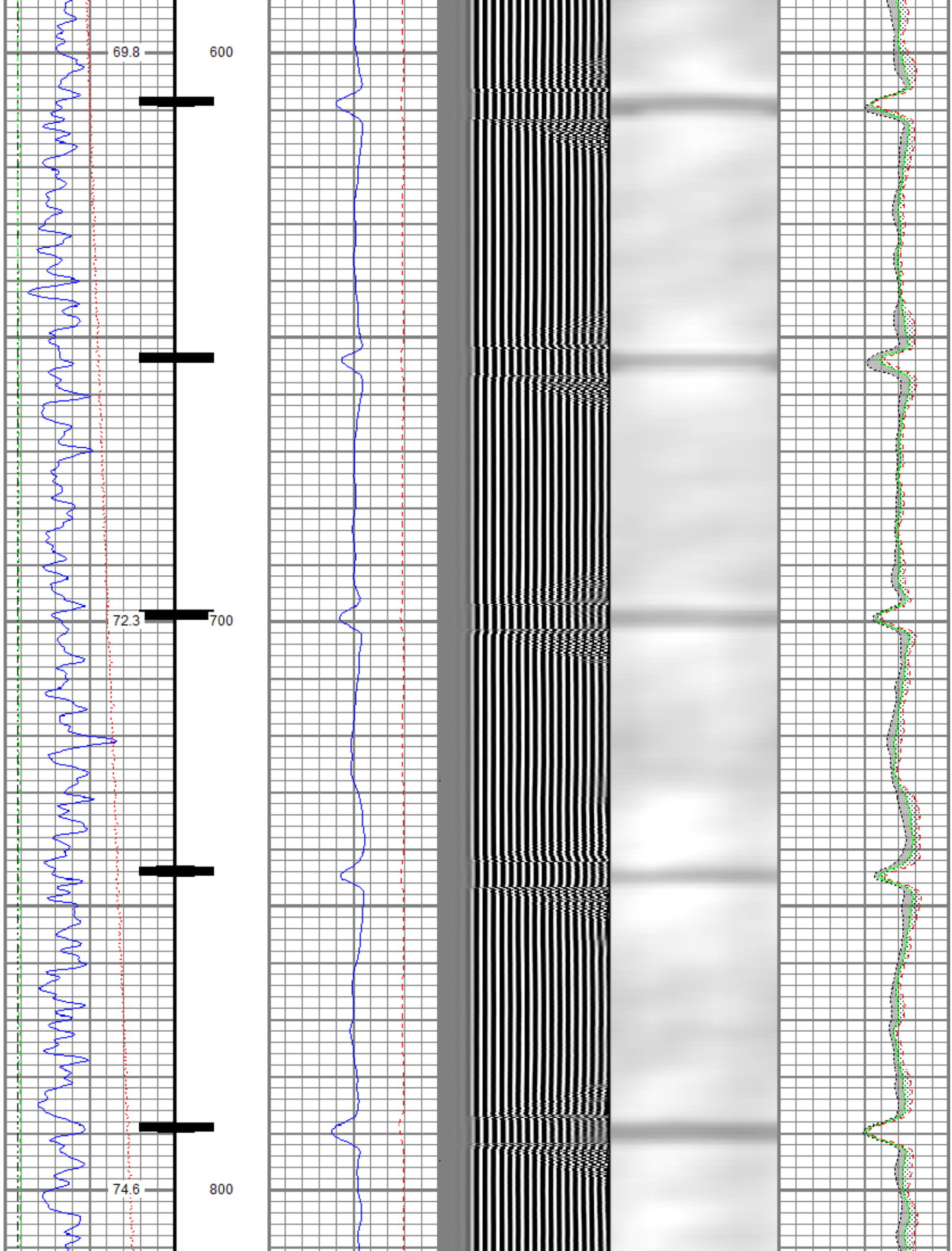
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Dataset Pathname	pass7.1
Presentation Format	ros_radrii
Dataset Creation	Mon Nov 20 09:10:25 2017
Charted by	Depth in Feet scaled 1:240

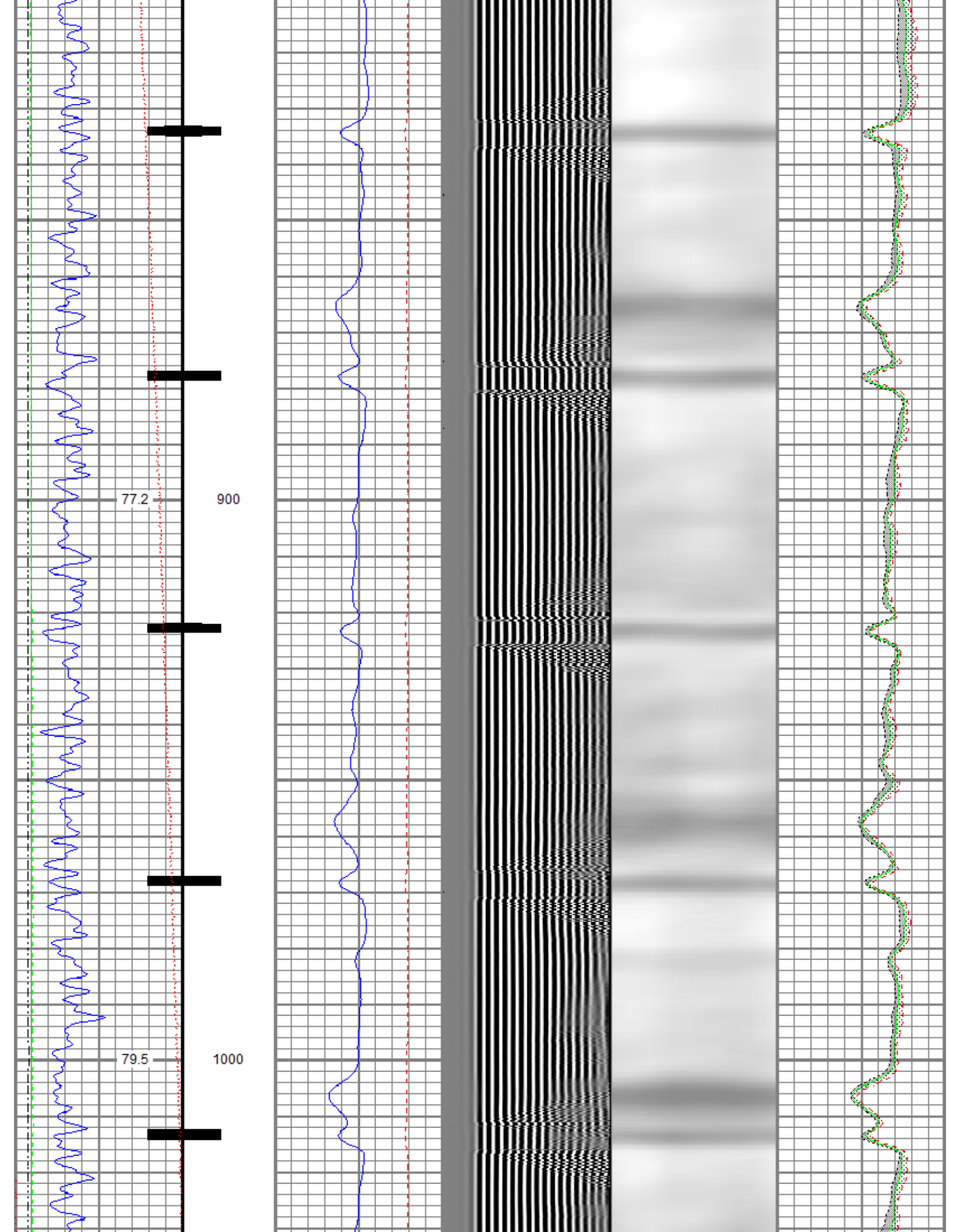
Gamma Ray	0	3' Amplitude (mV)	100	5' Variable Density Log	Sector Map	0	Average Amplitude	100
(GAPI)	120	3' Amplitude x 5	200	1200			Minimum Amplitude	
Casing Collar Locator		(mV)	20			0		100
Temperature (degF)	20	3' Travel Time					Maximum Amplitude	
Line Speed		(usec)	150			0		100
(ft/min)	150					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

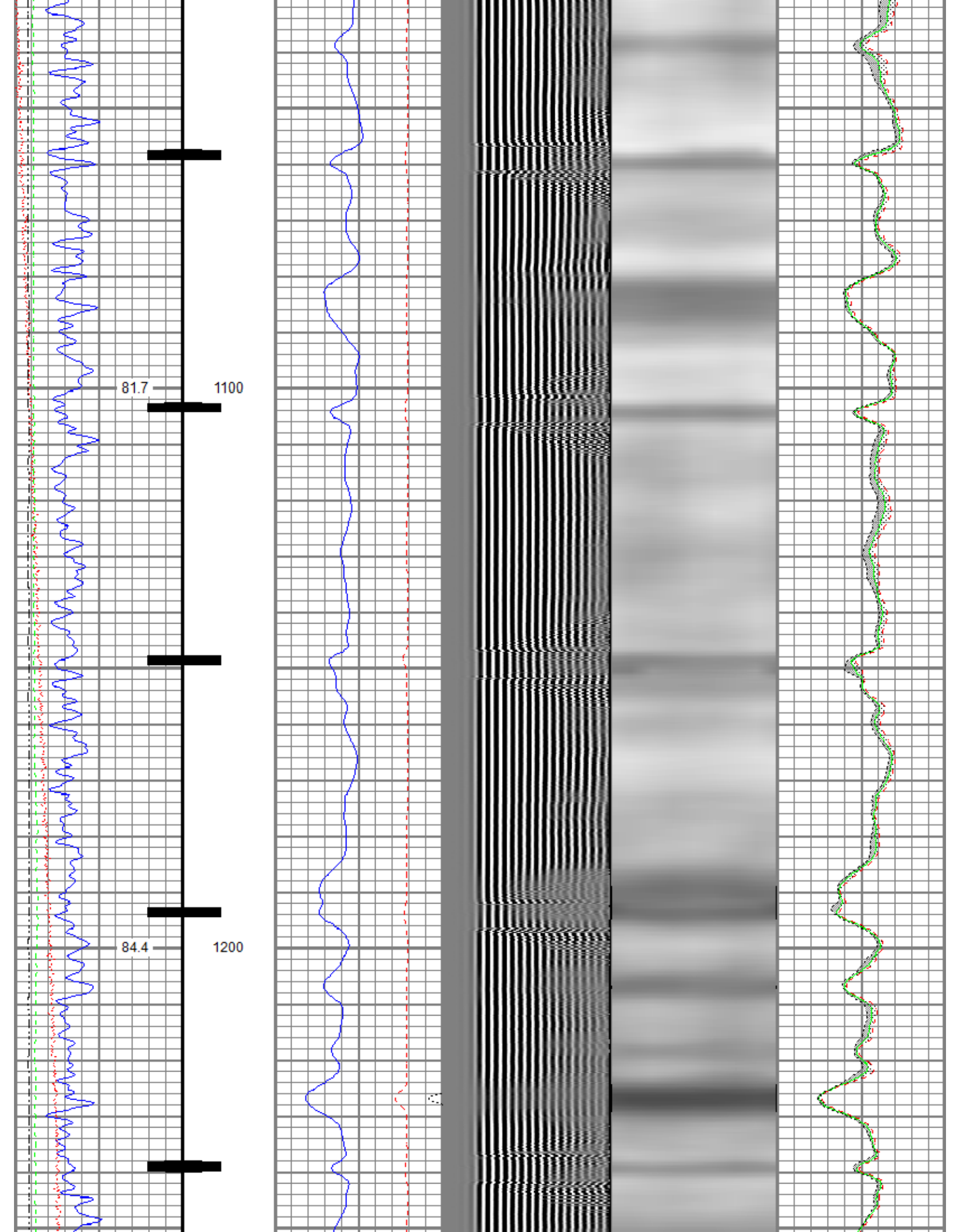


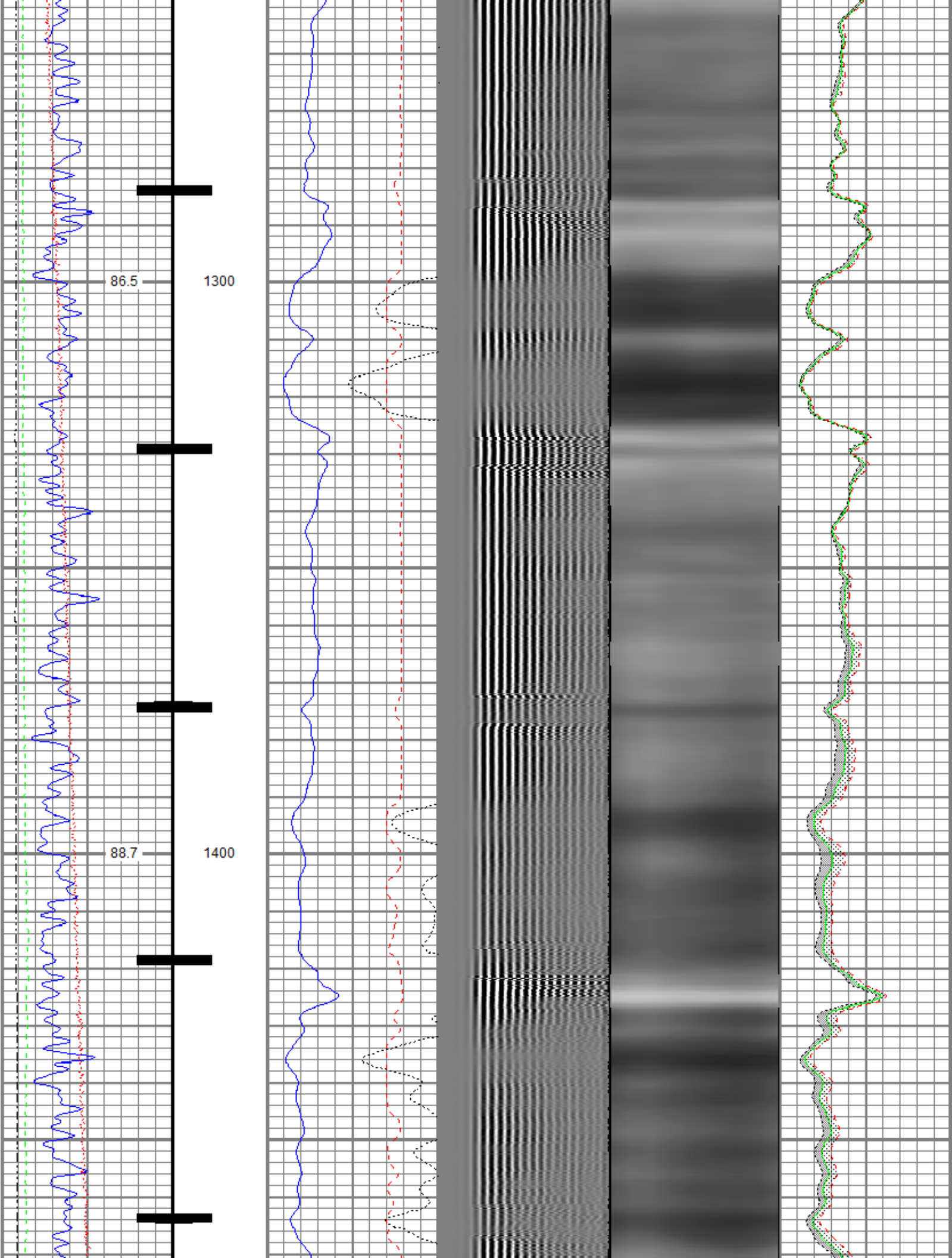


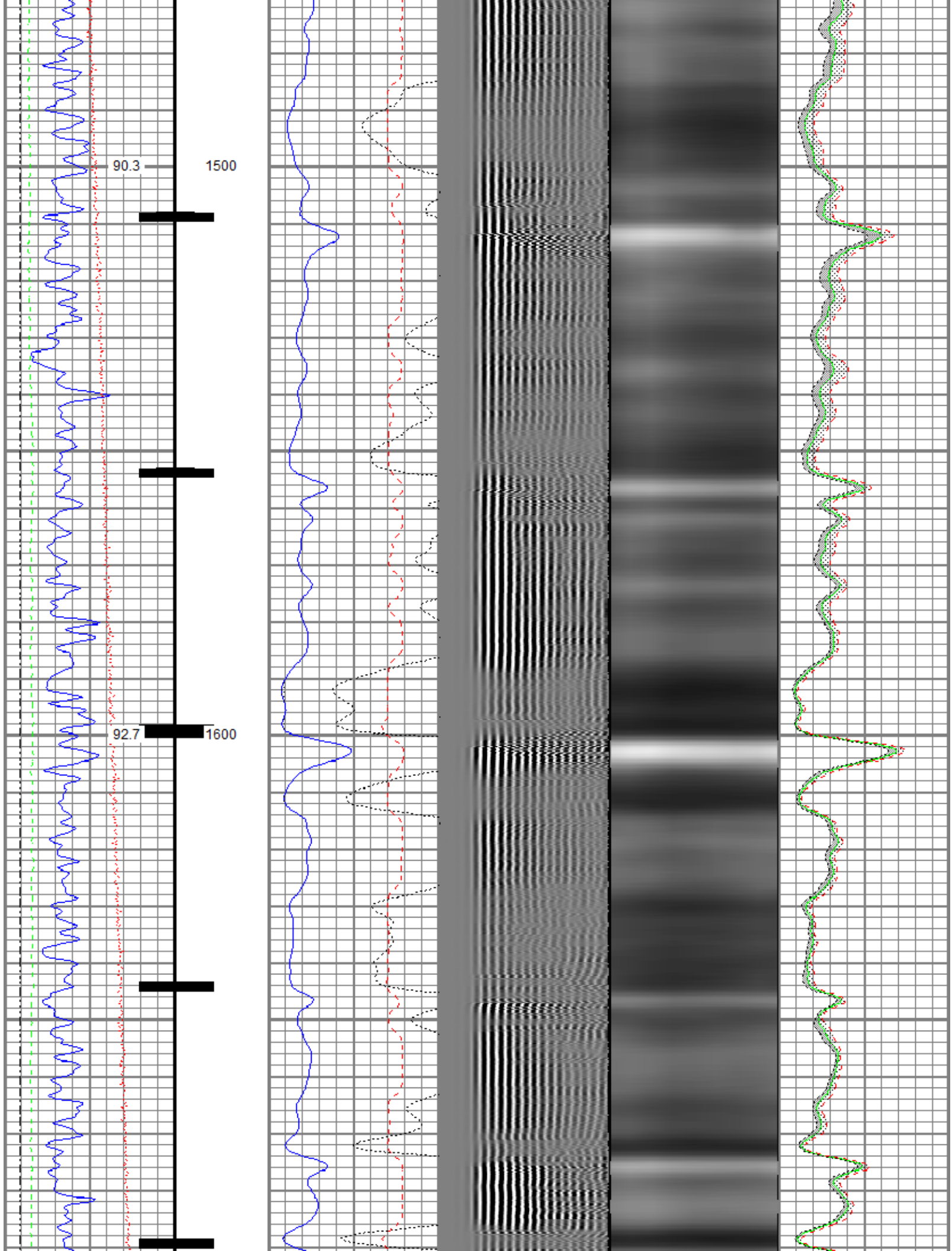


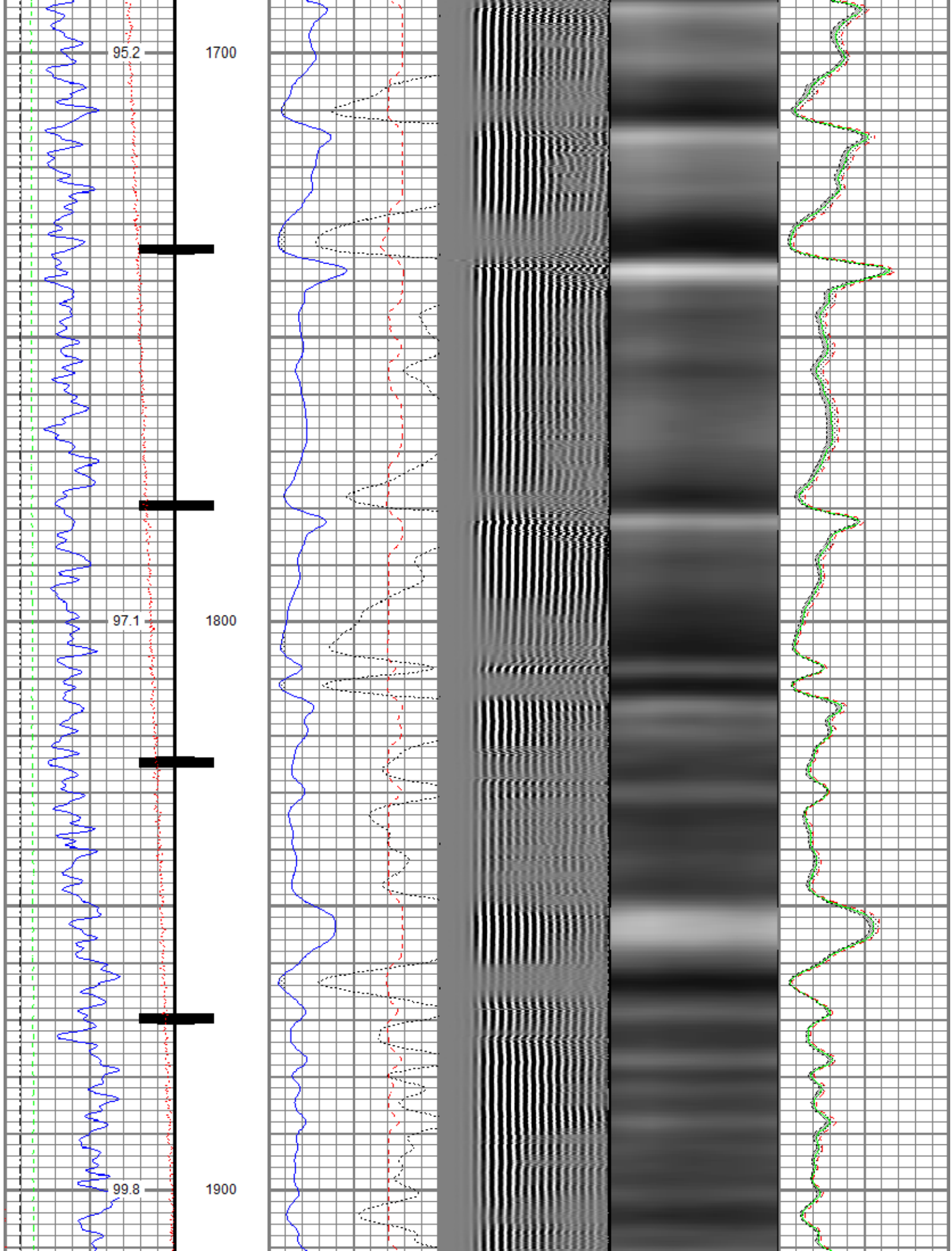


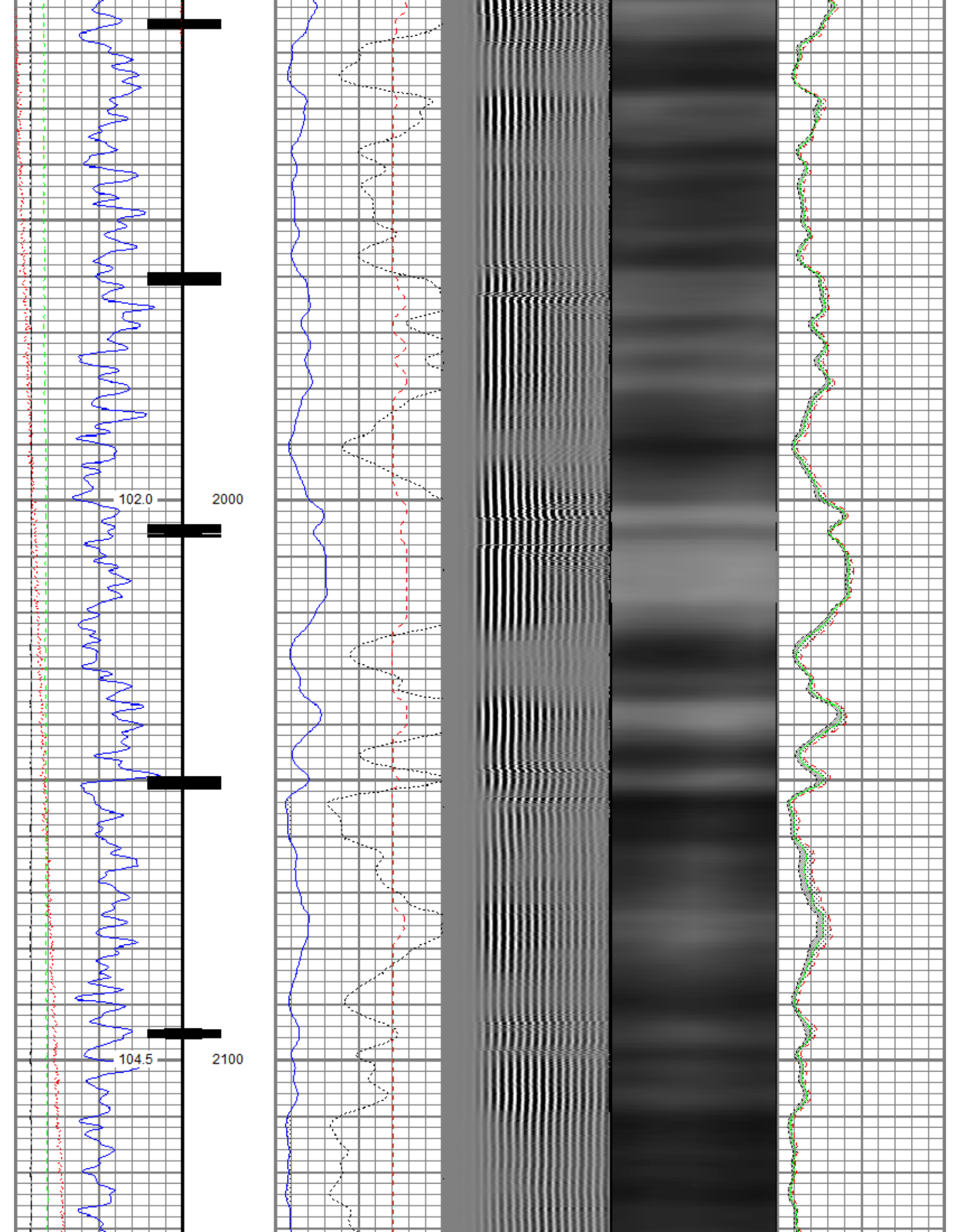


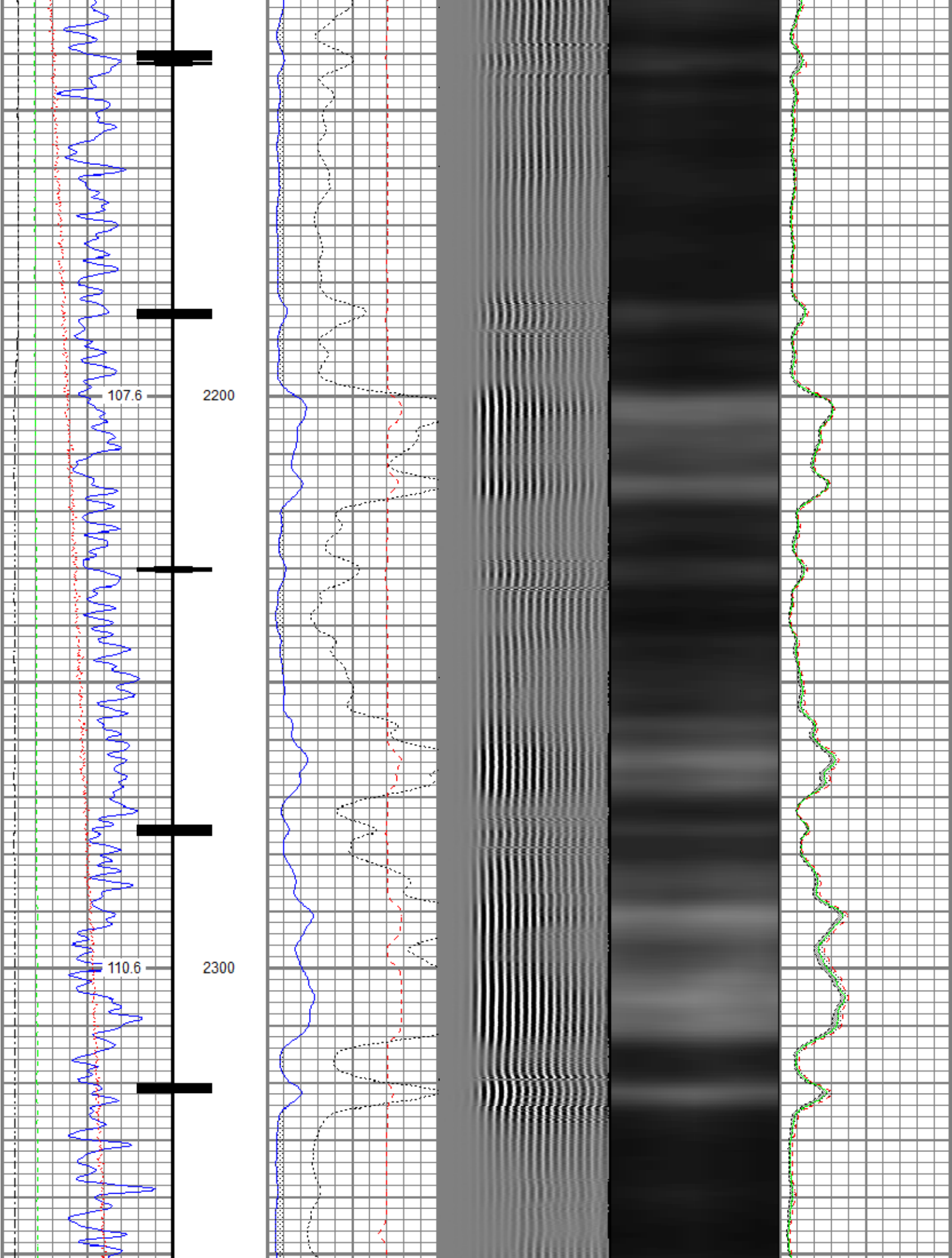


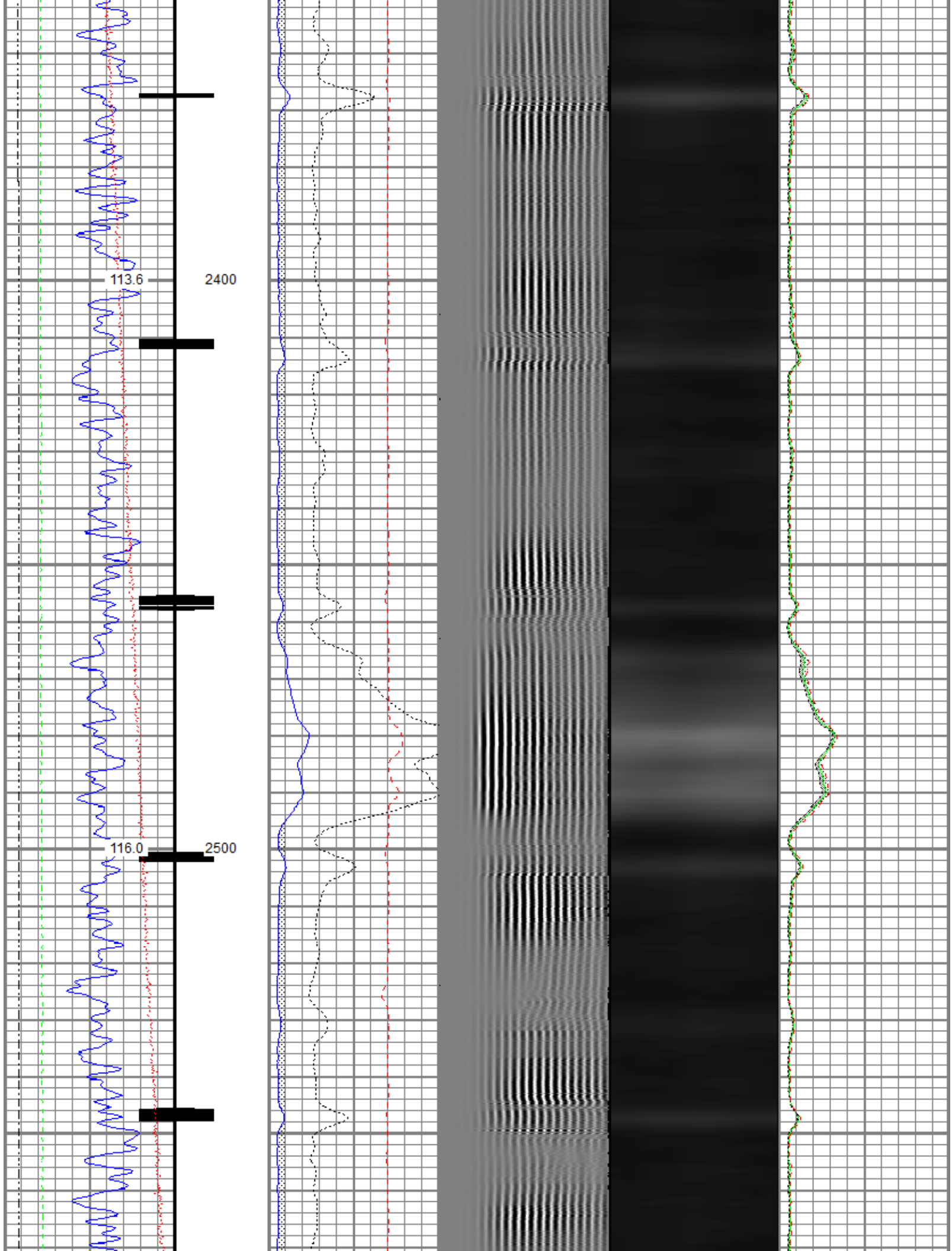


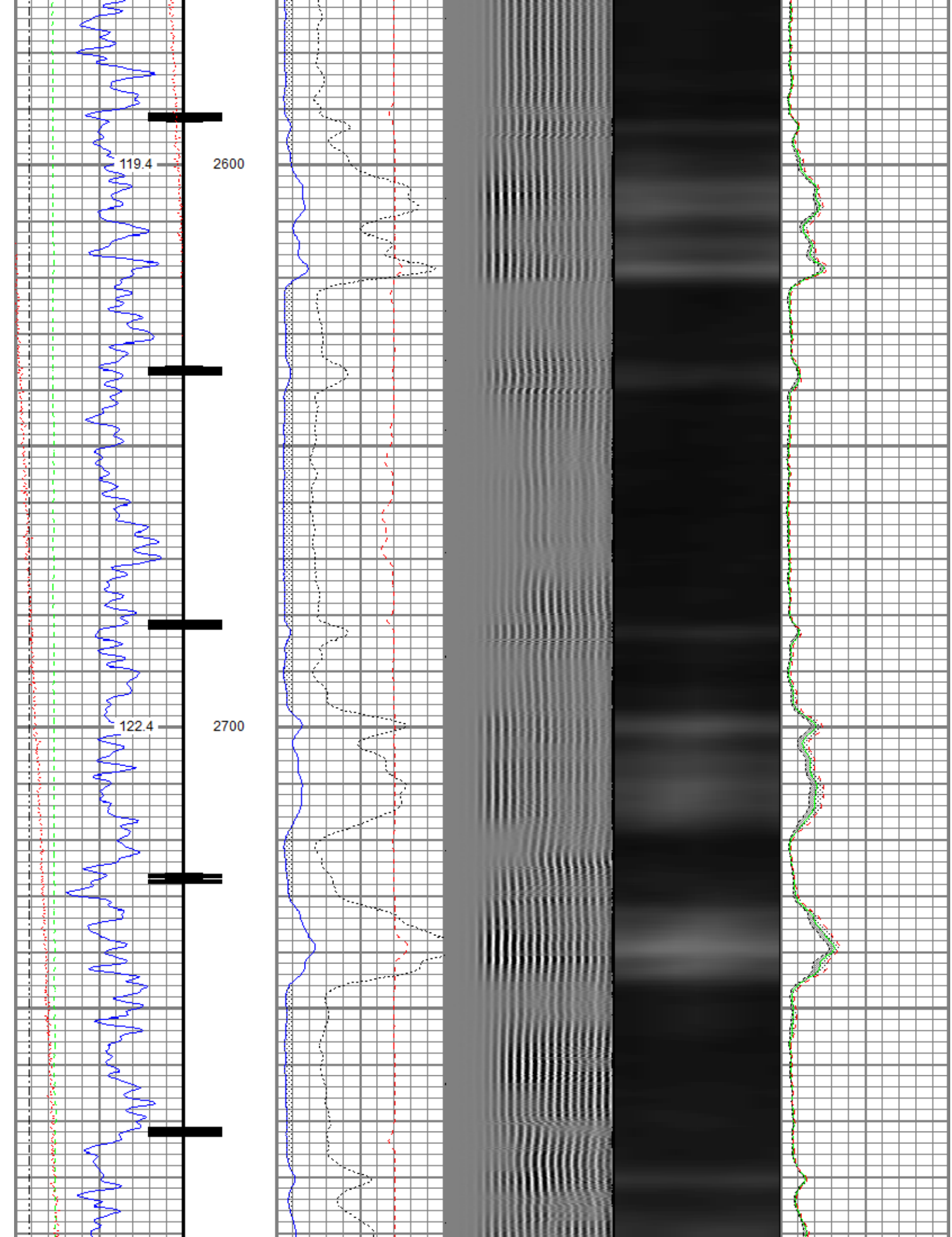


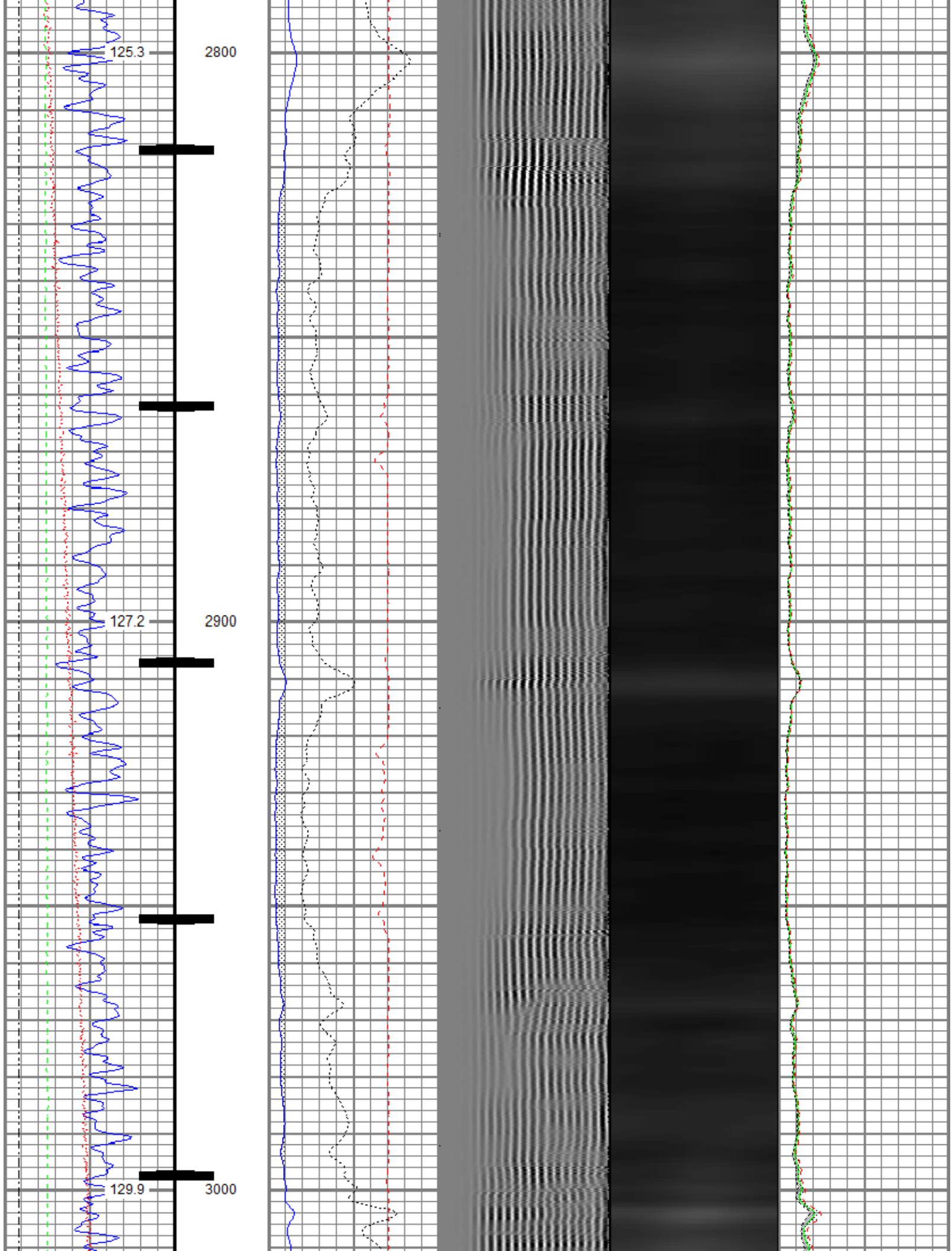


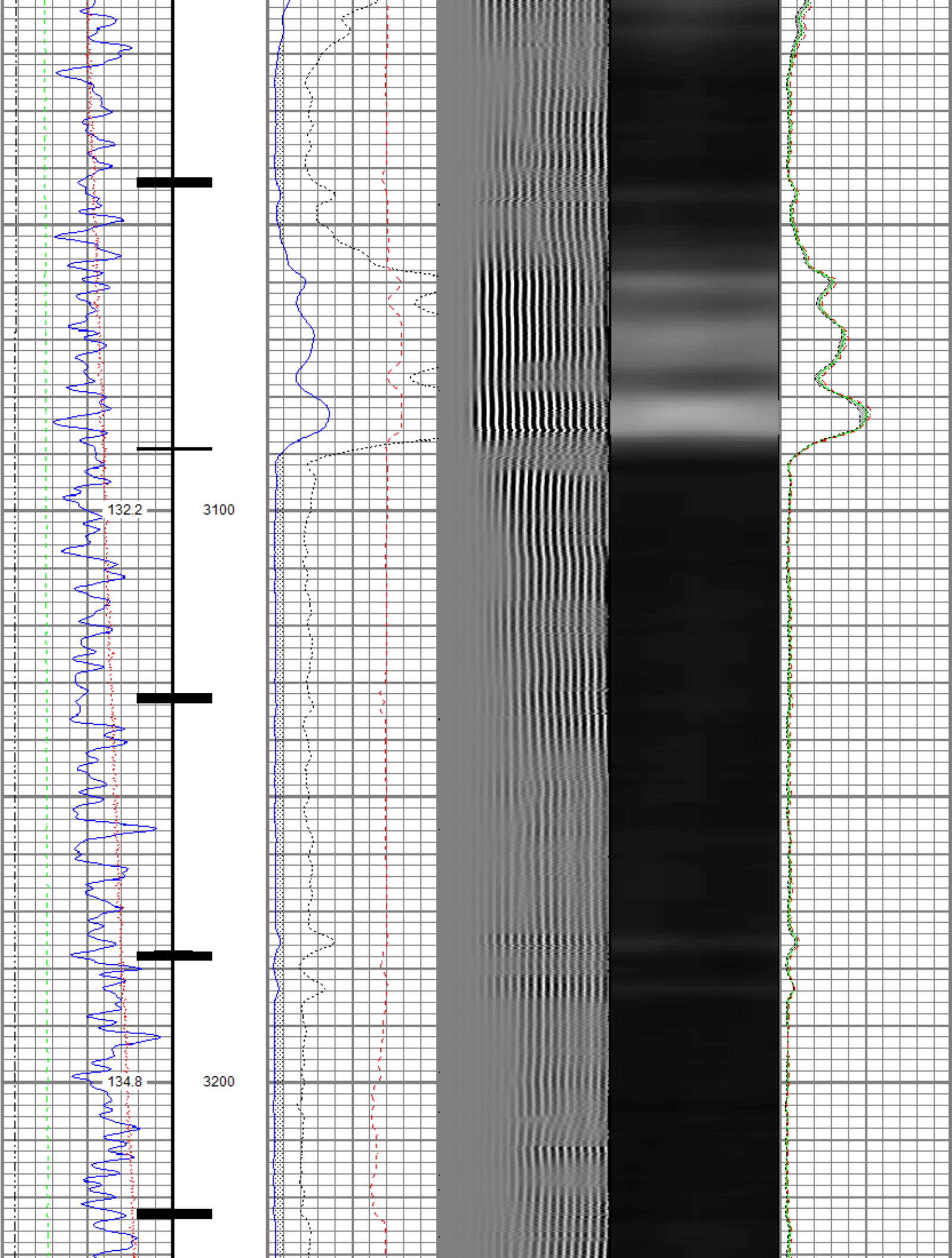


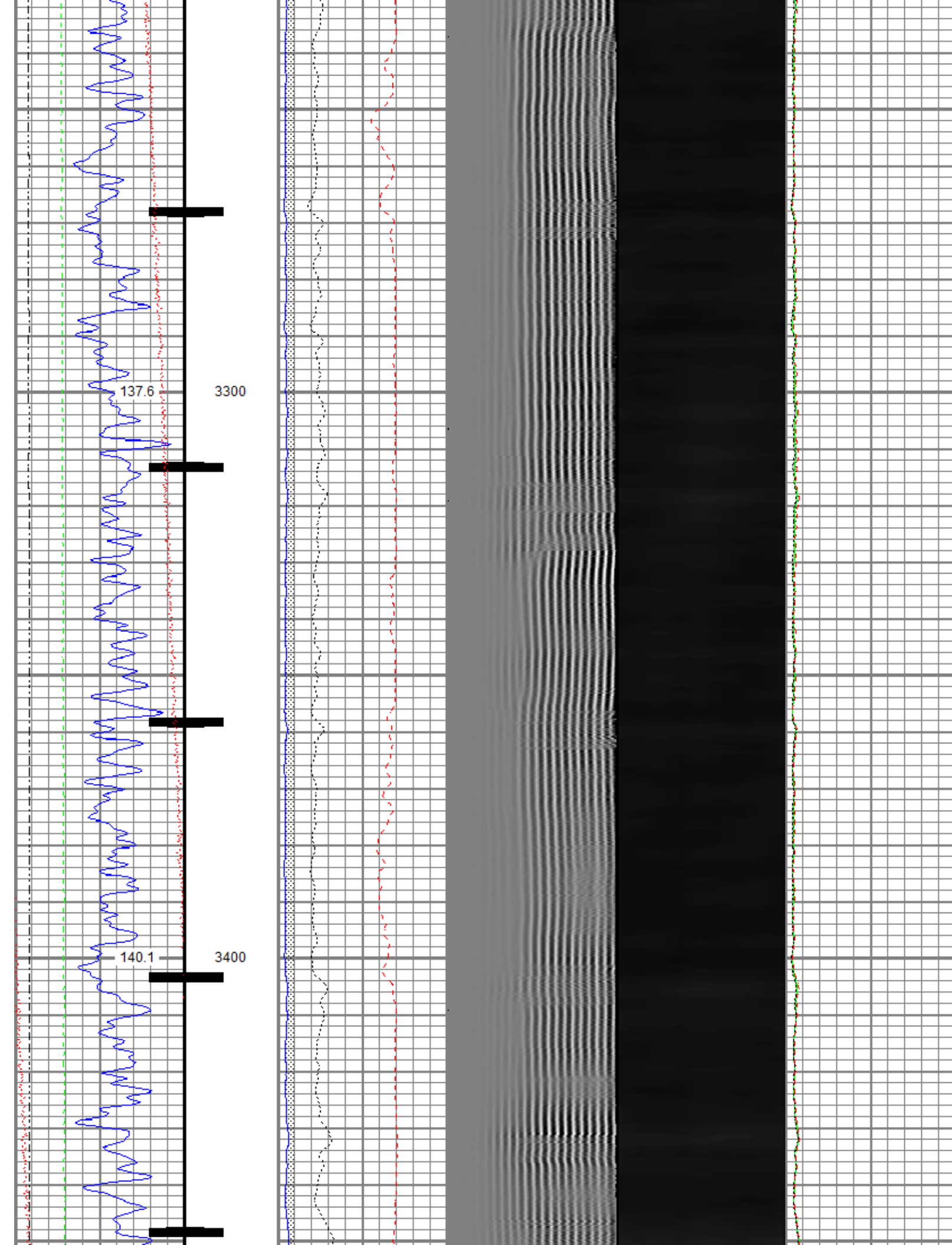


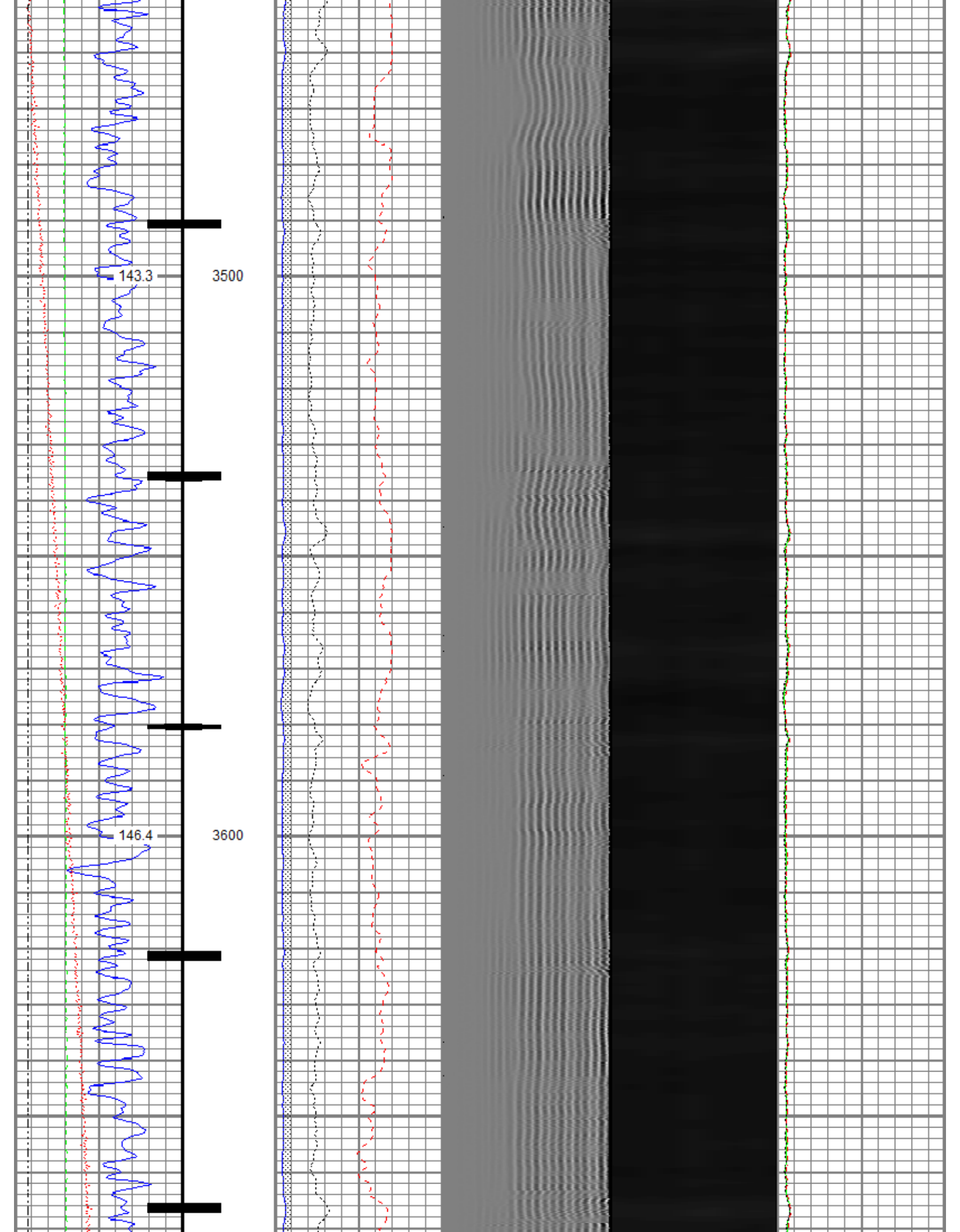


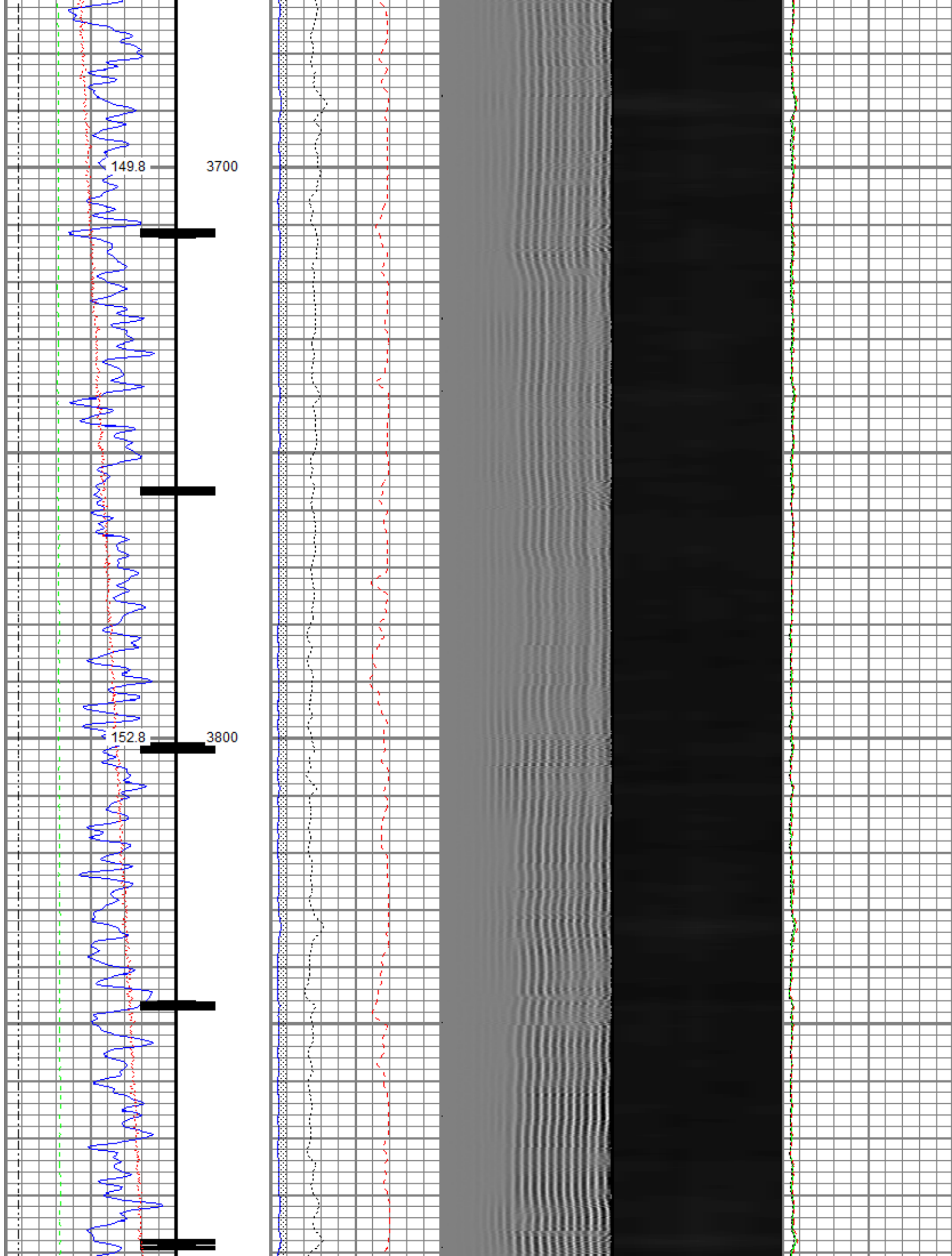


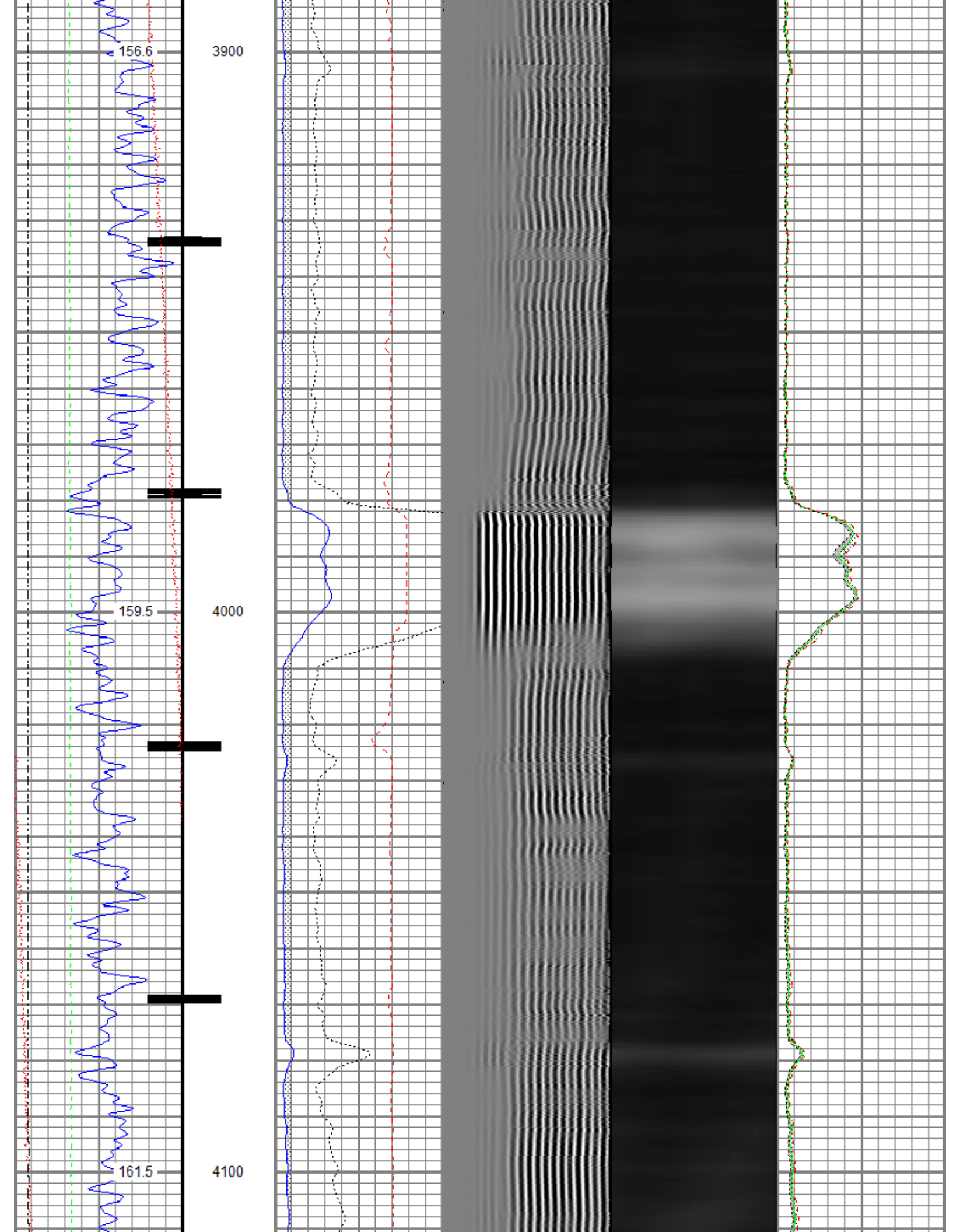


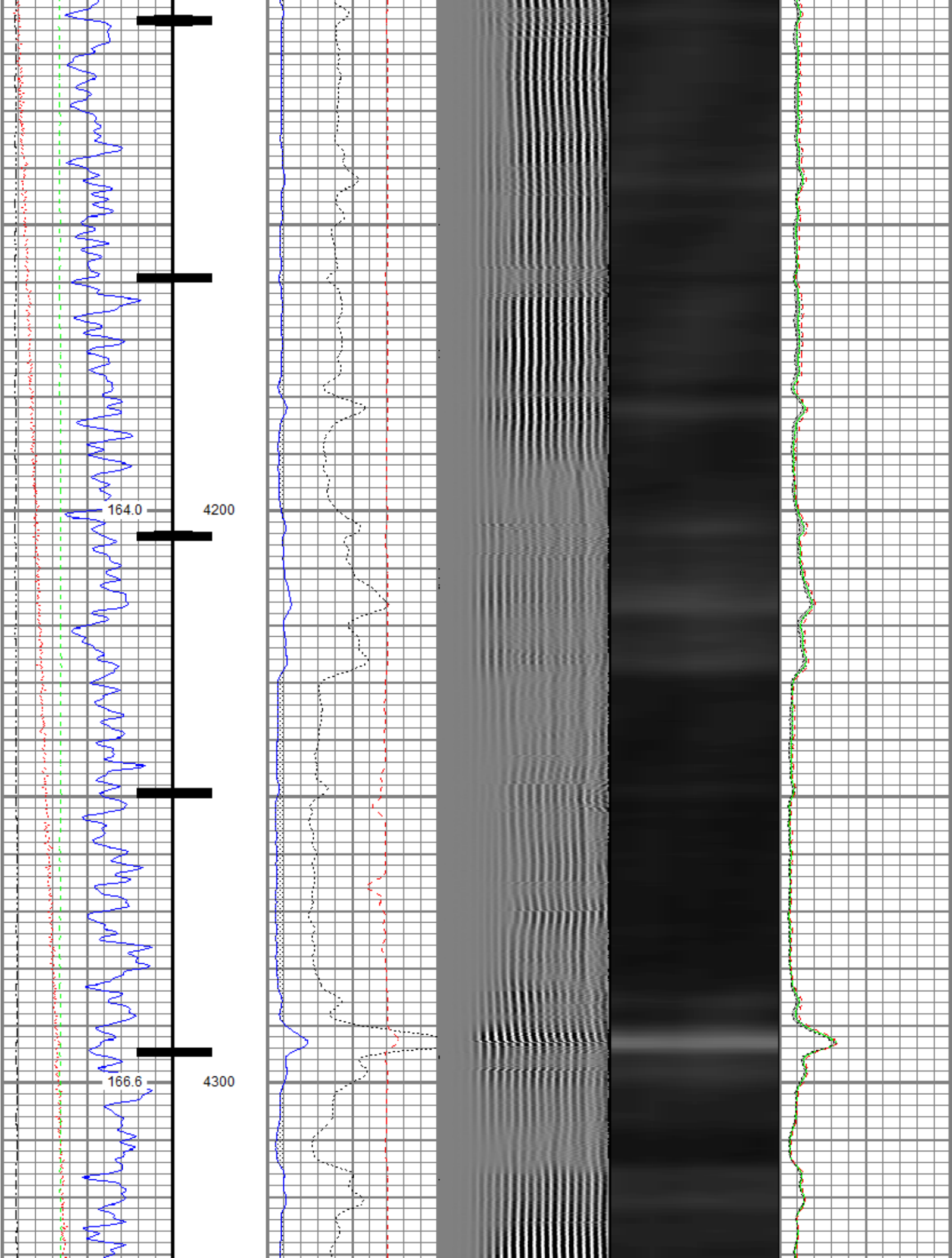


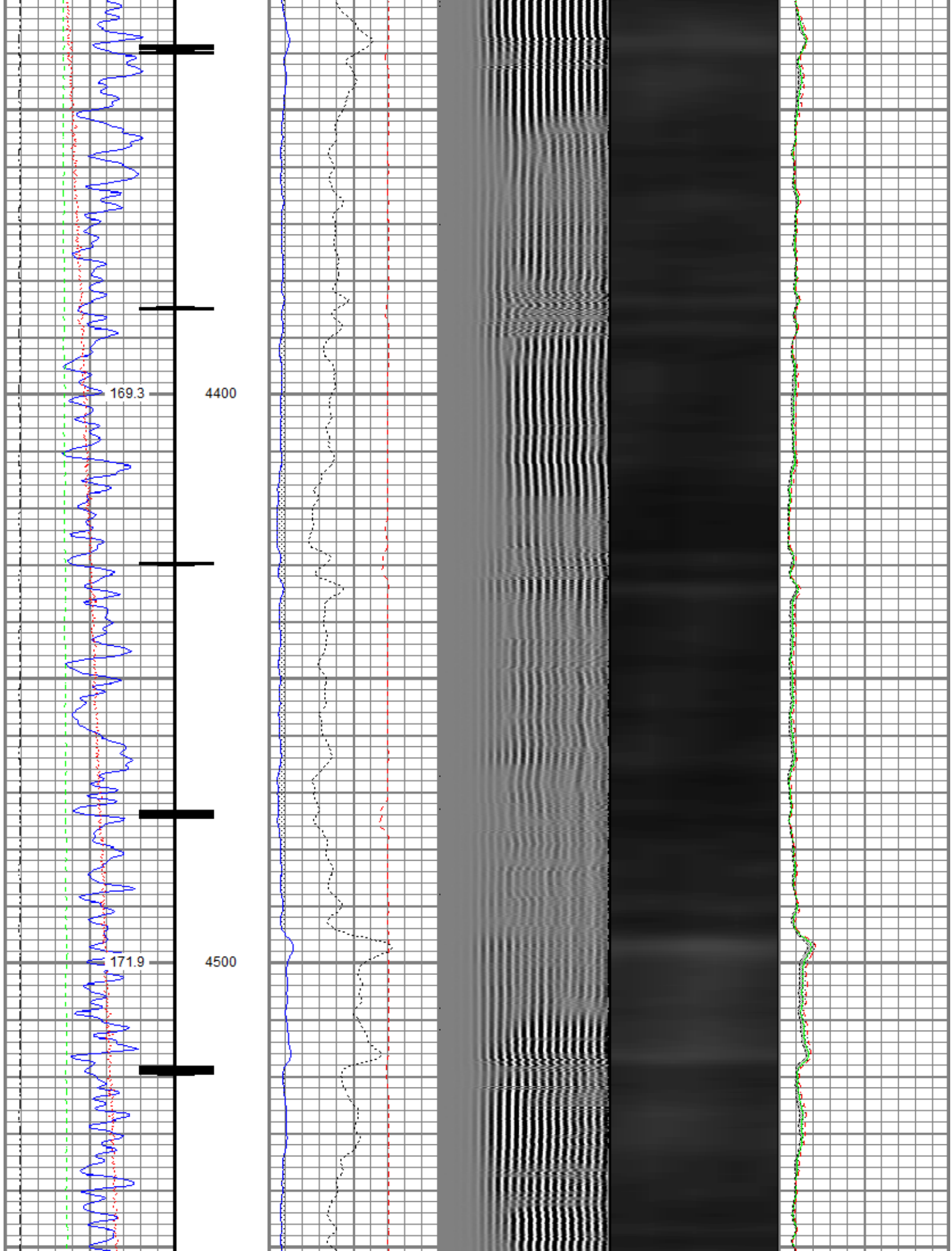


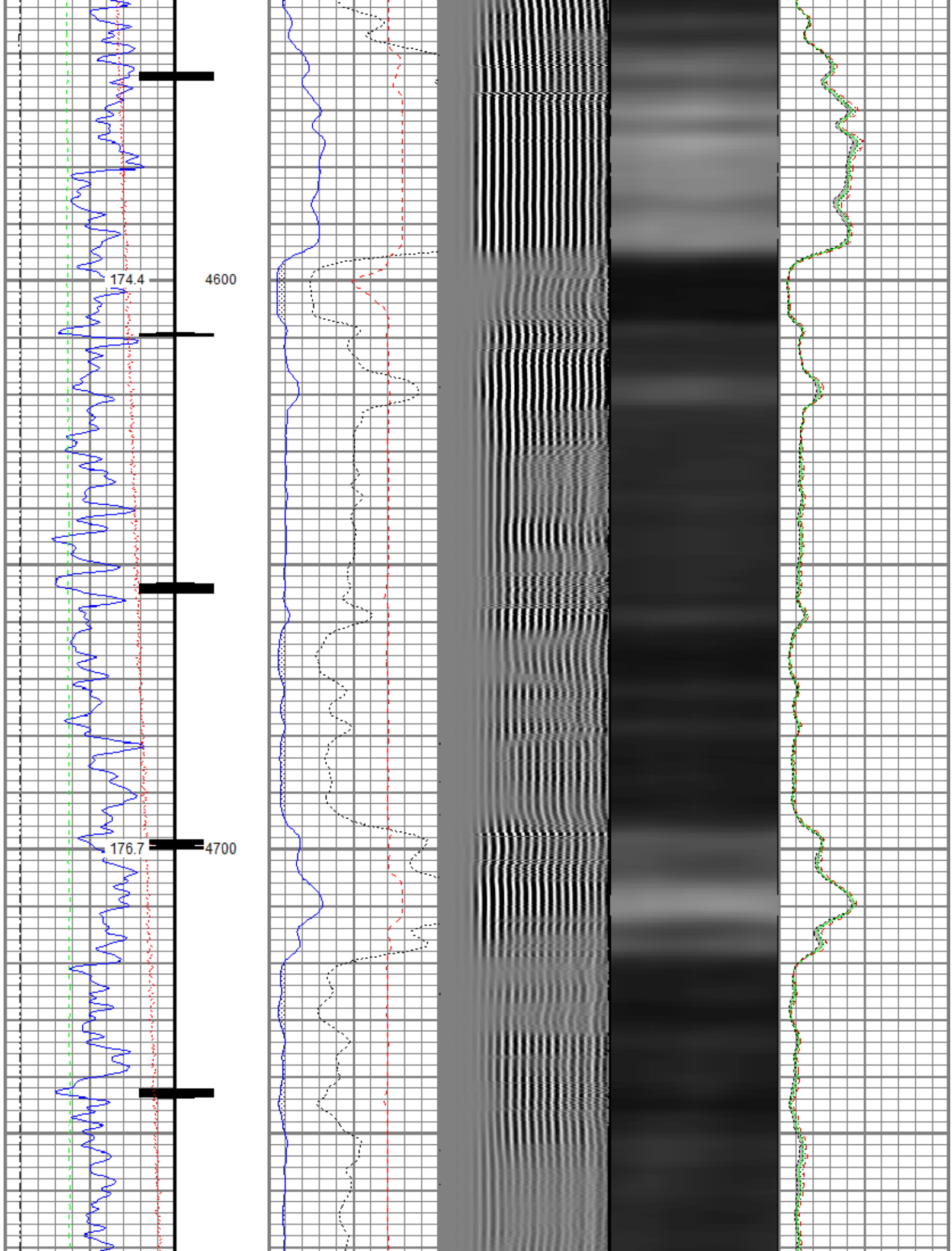


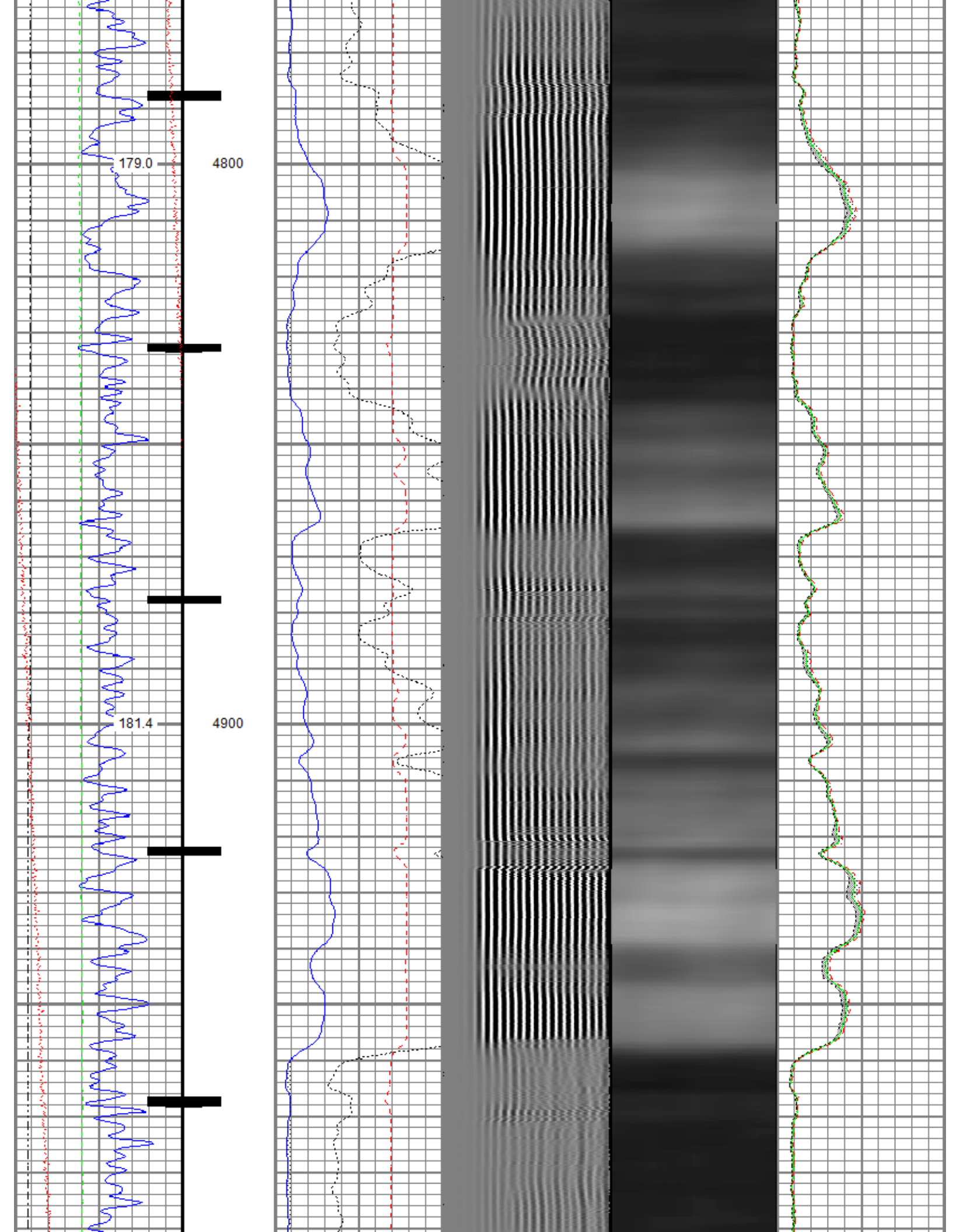


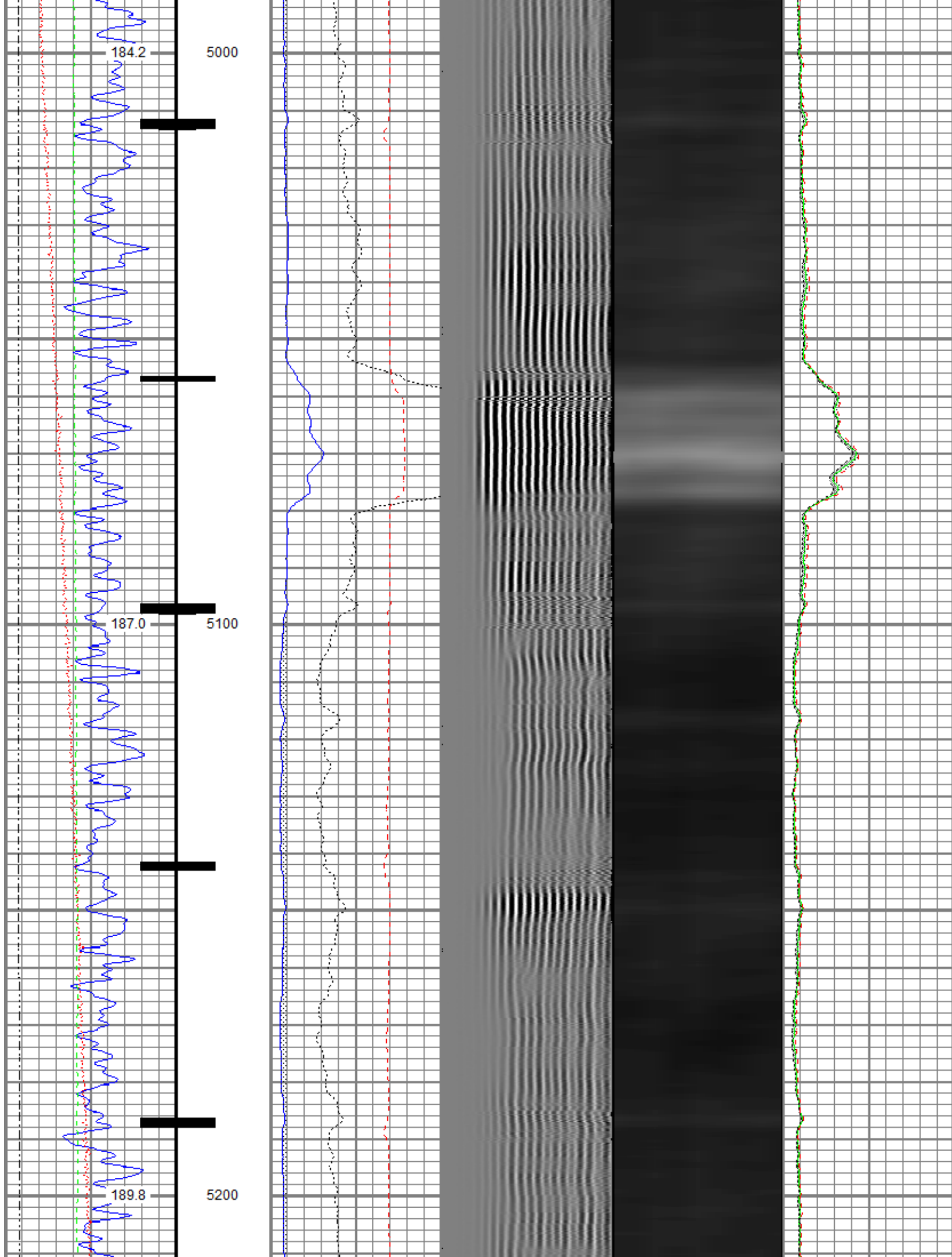


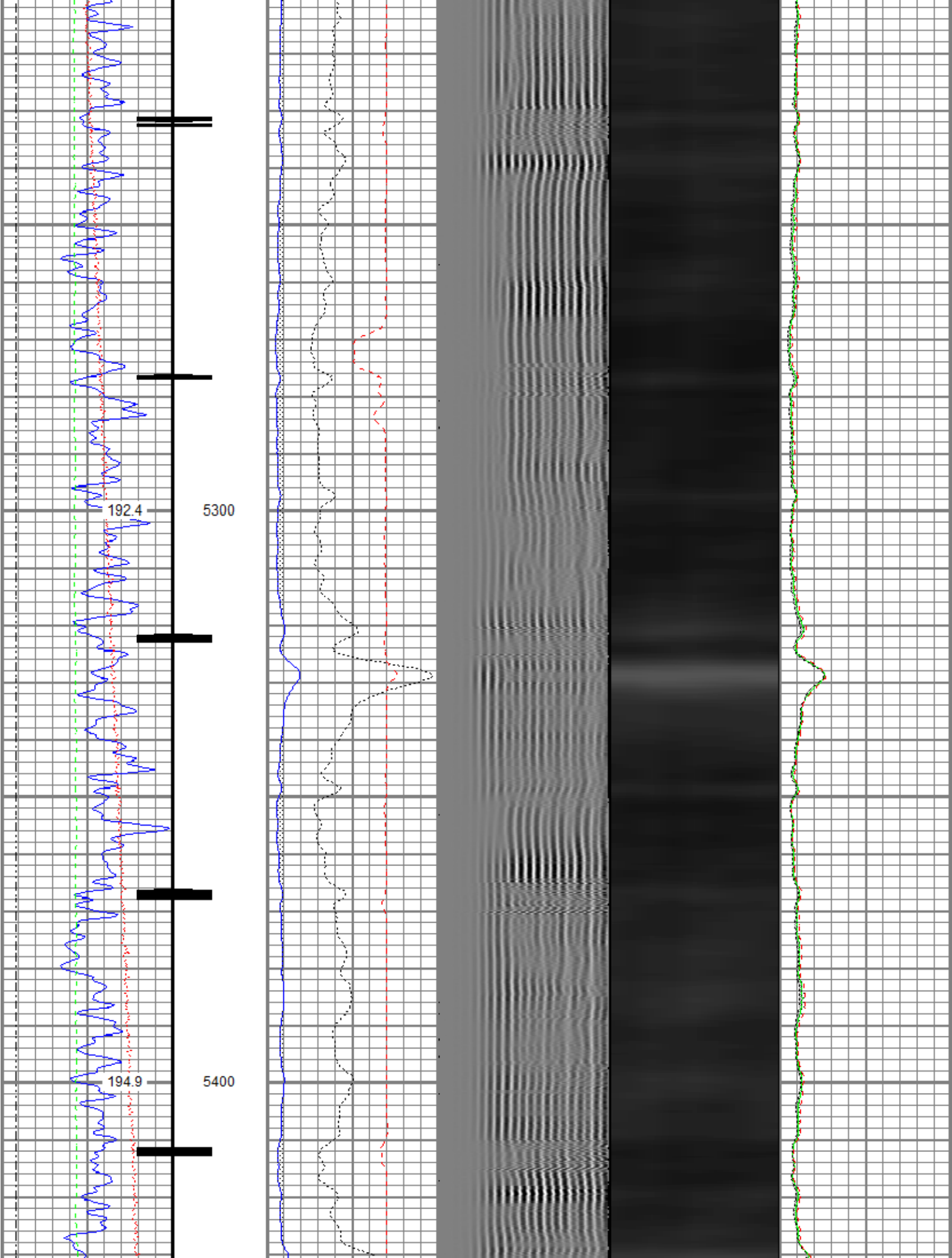


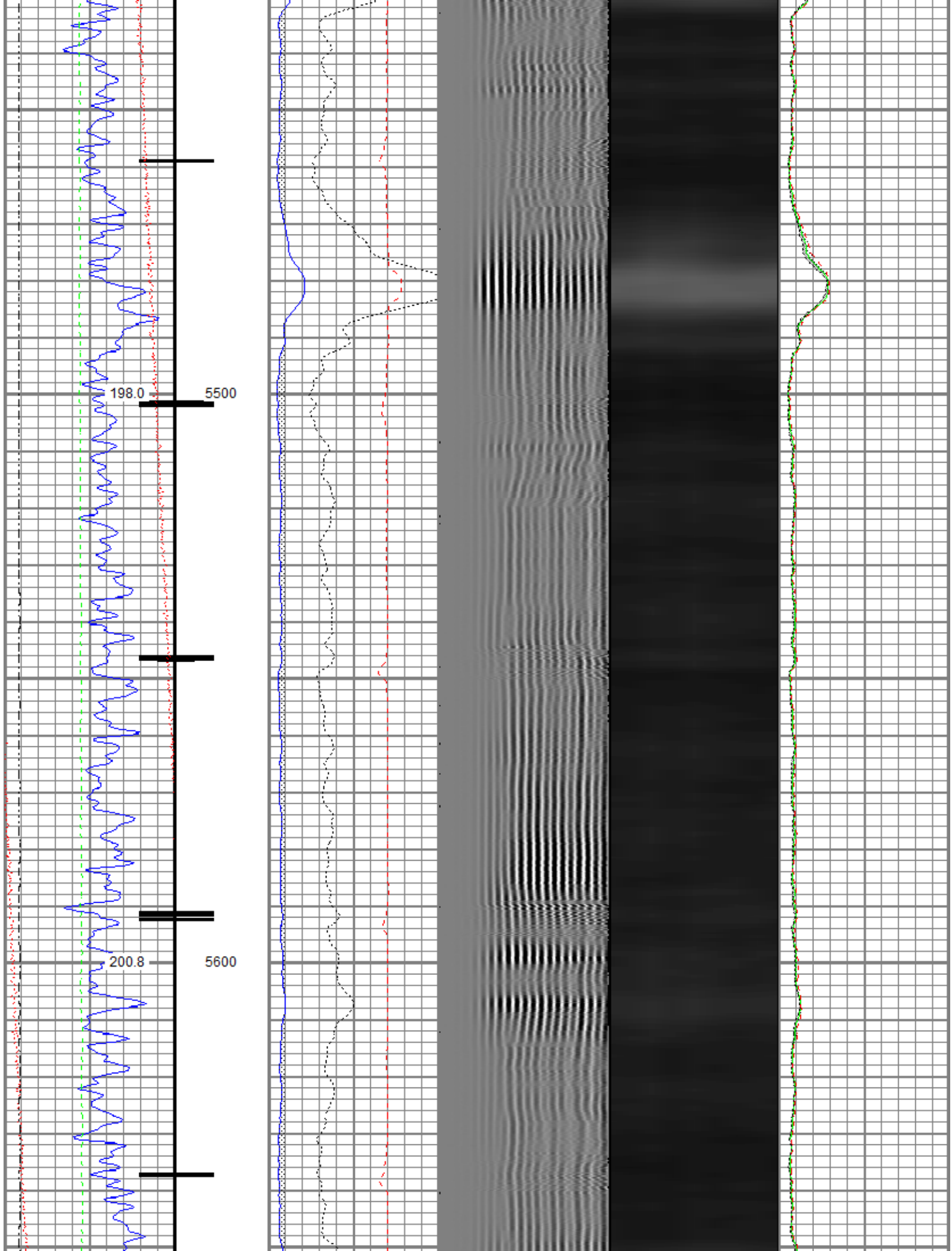


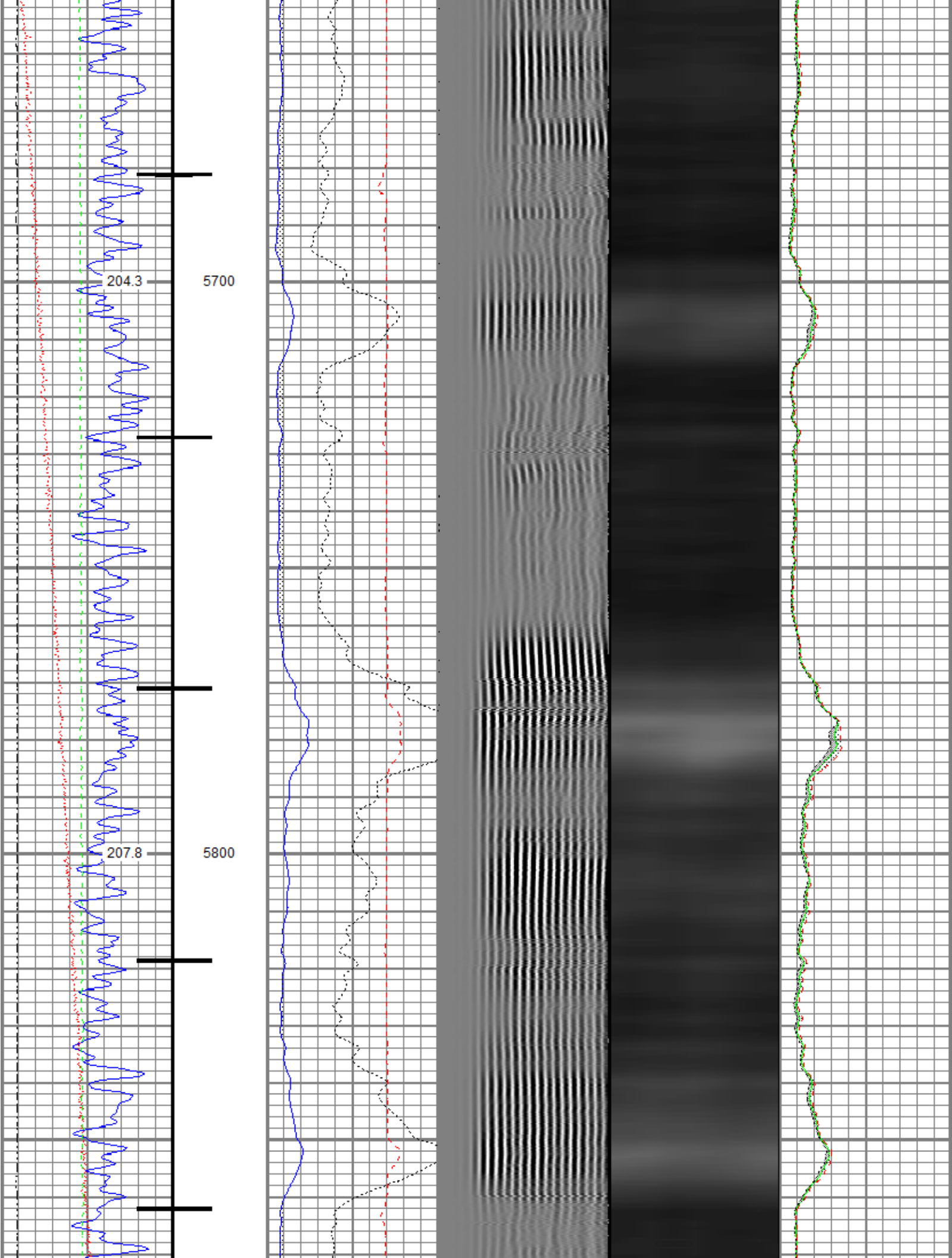


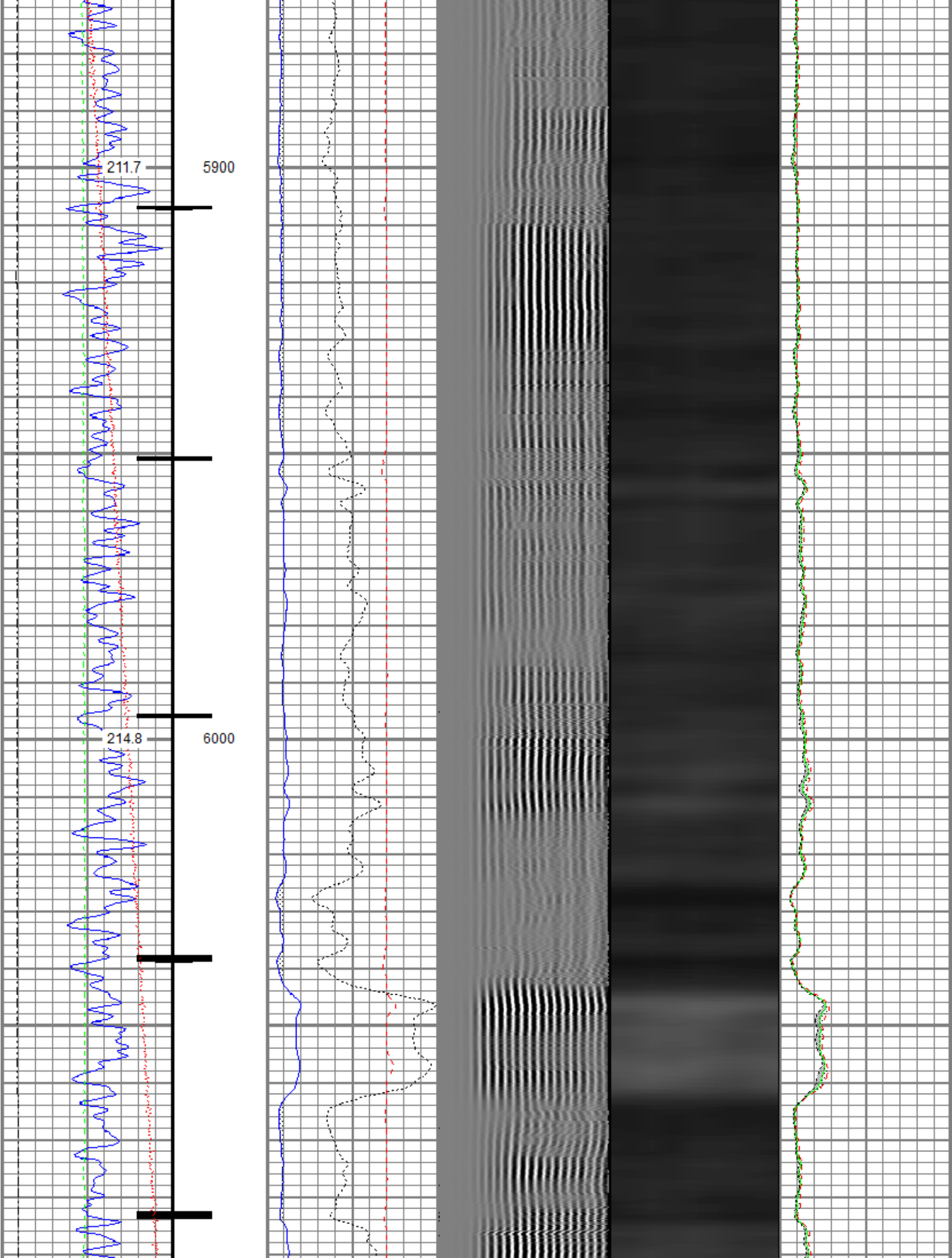


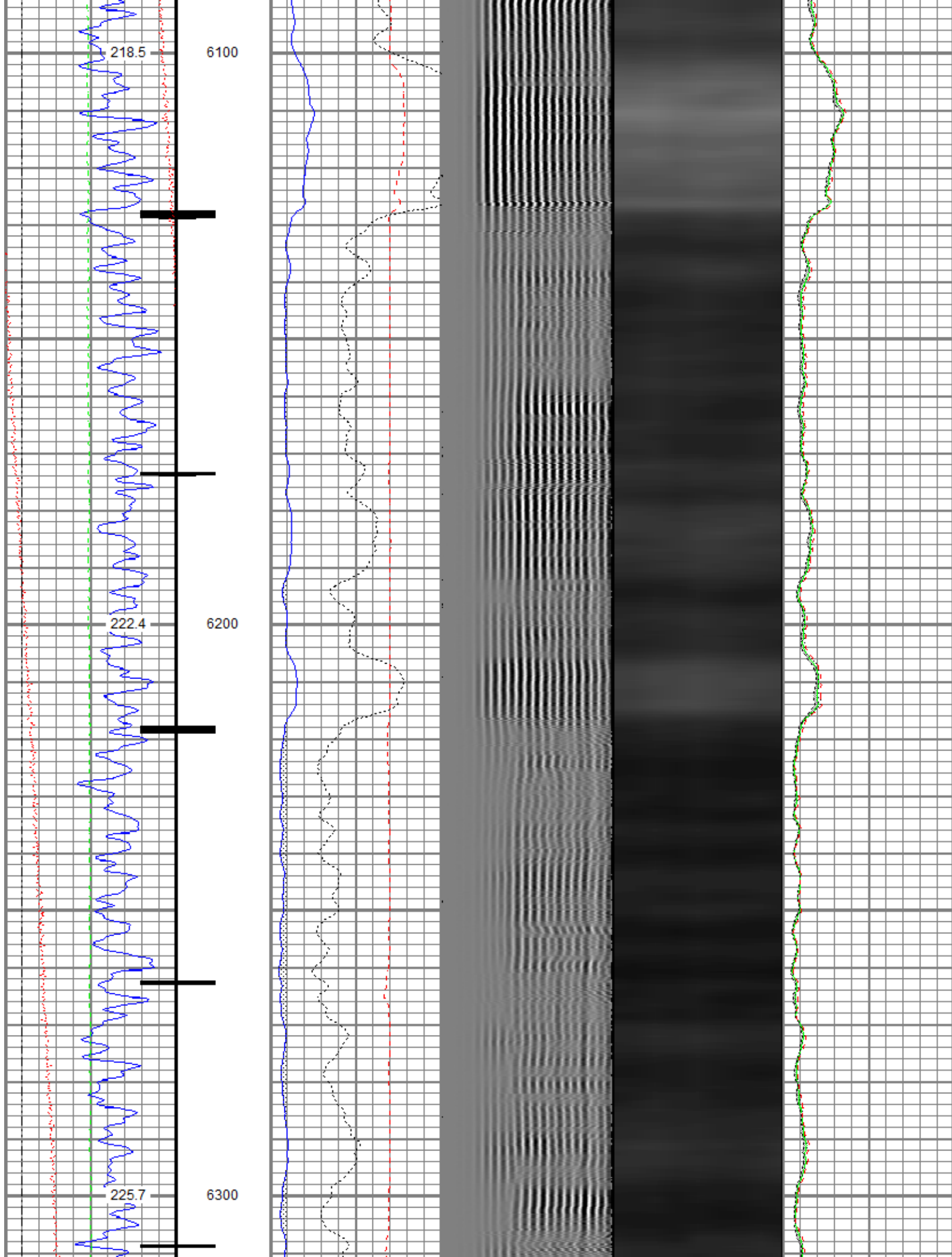












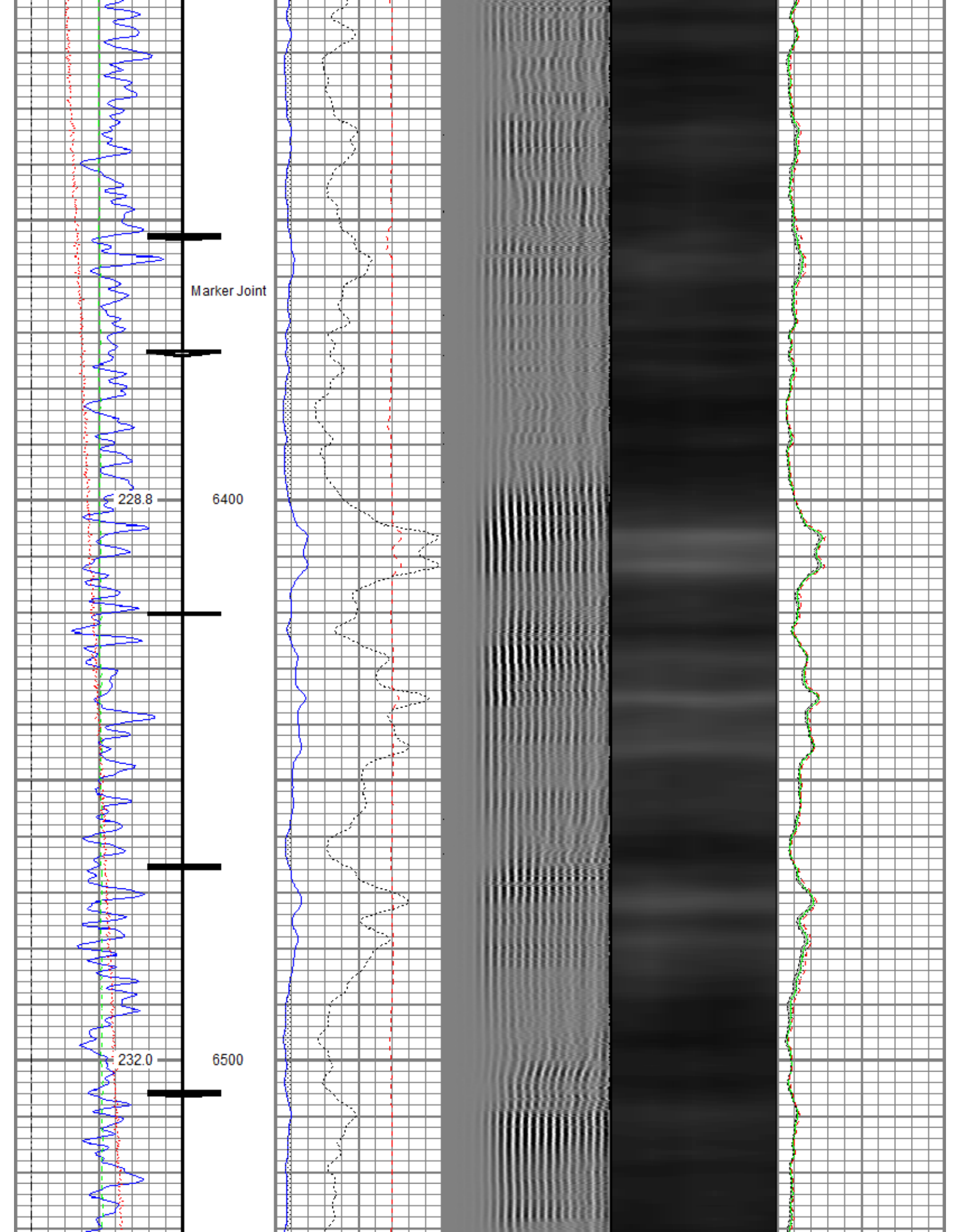
Marker Joint

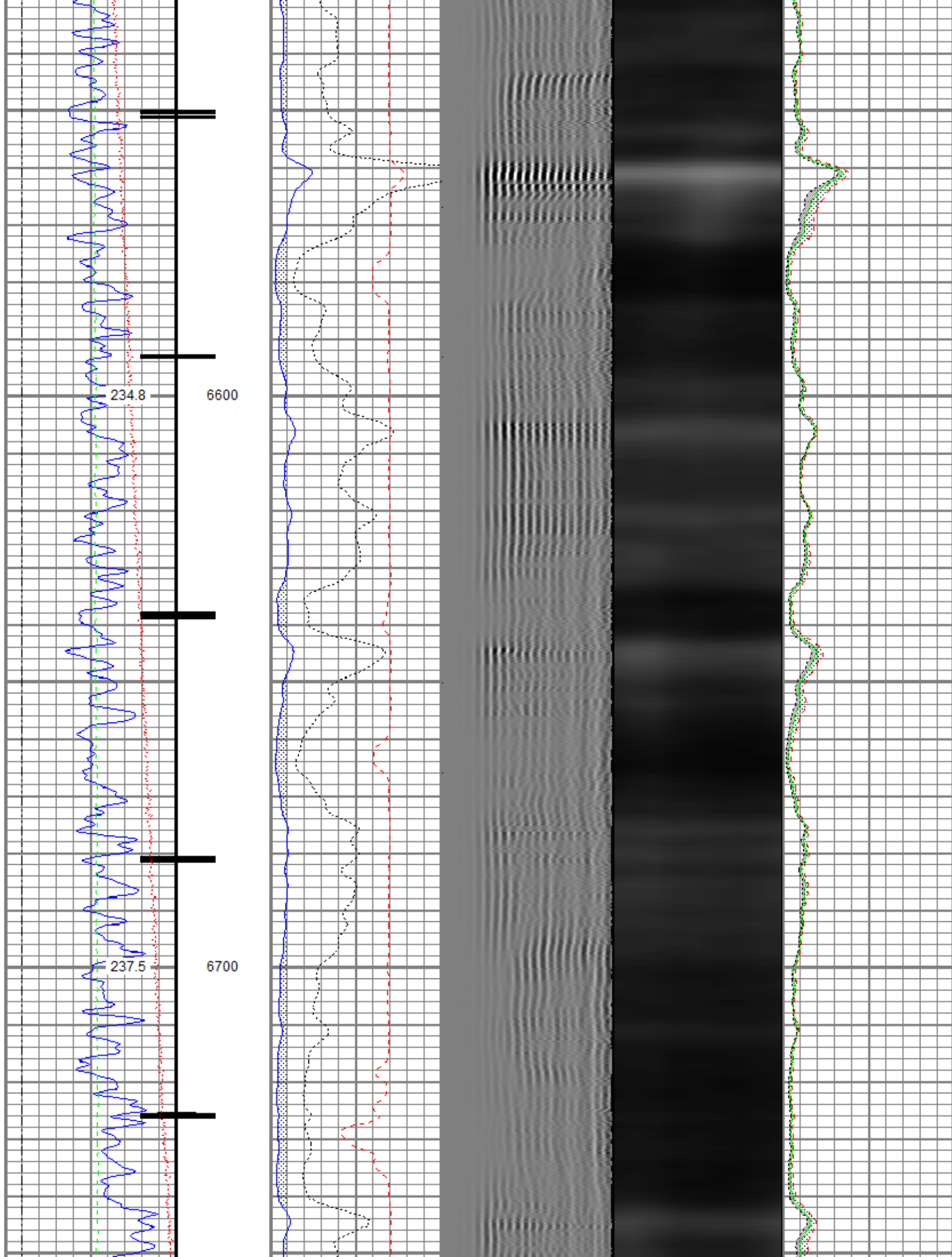
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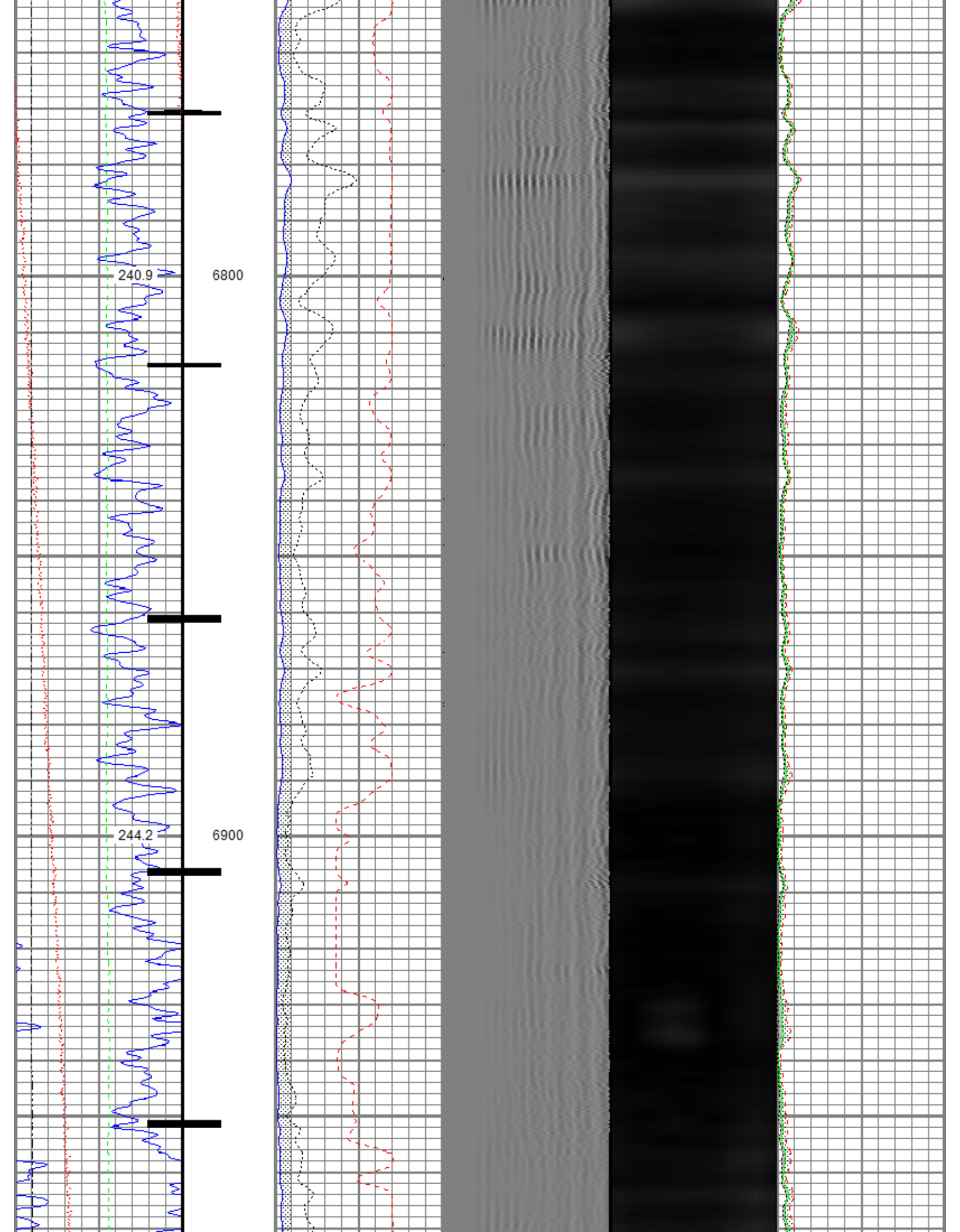
6400

232.0

6500







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

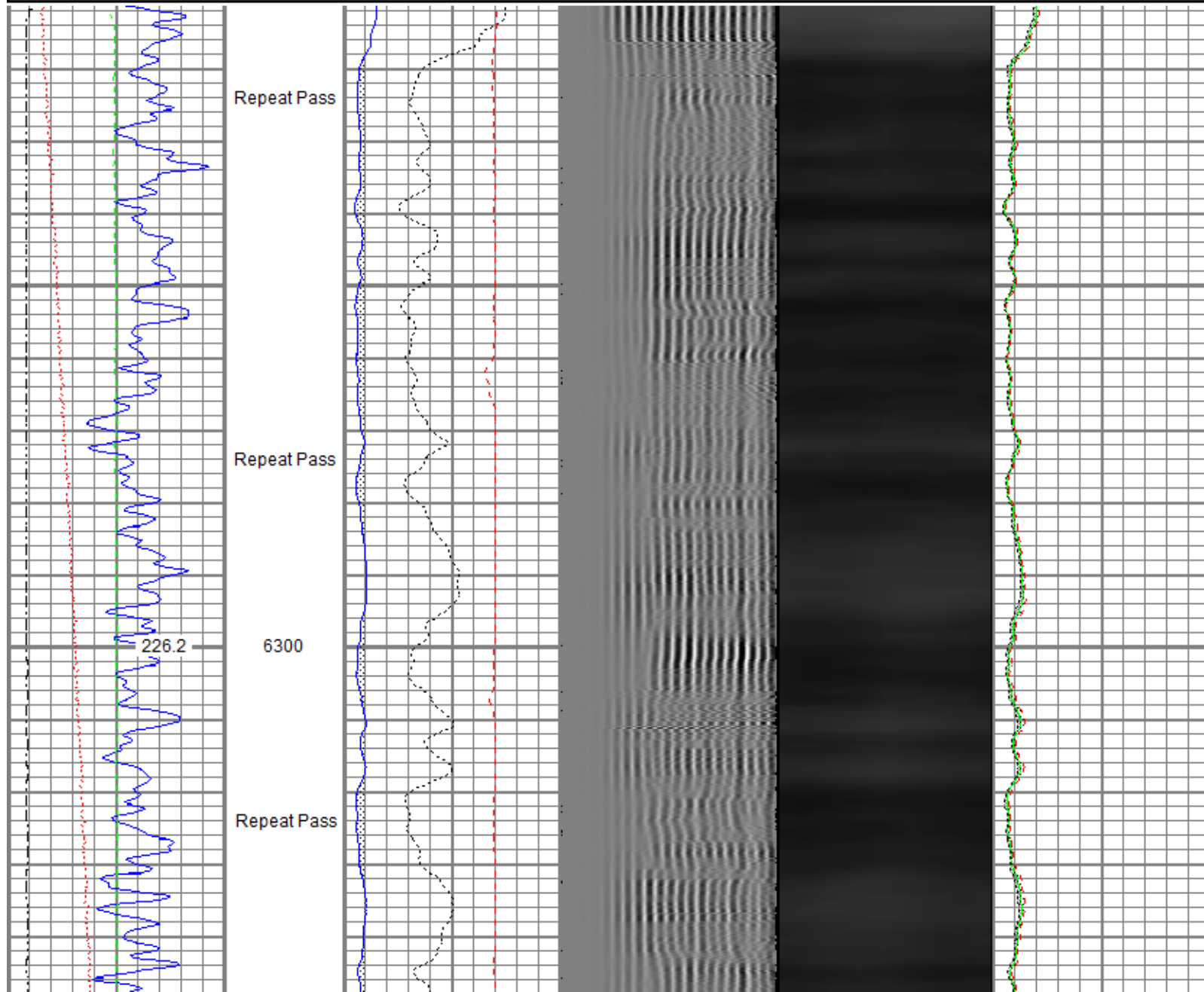


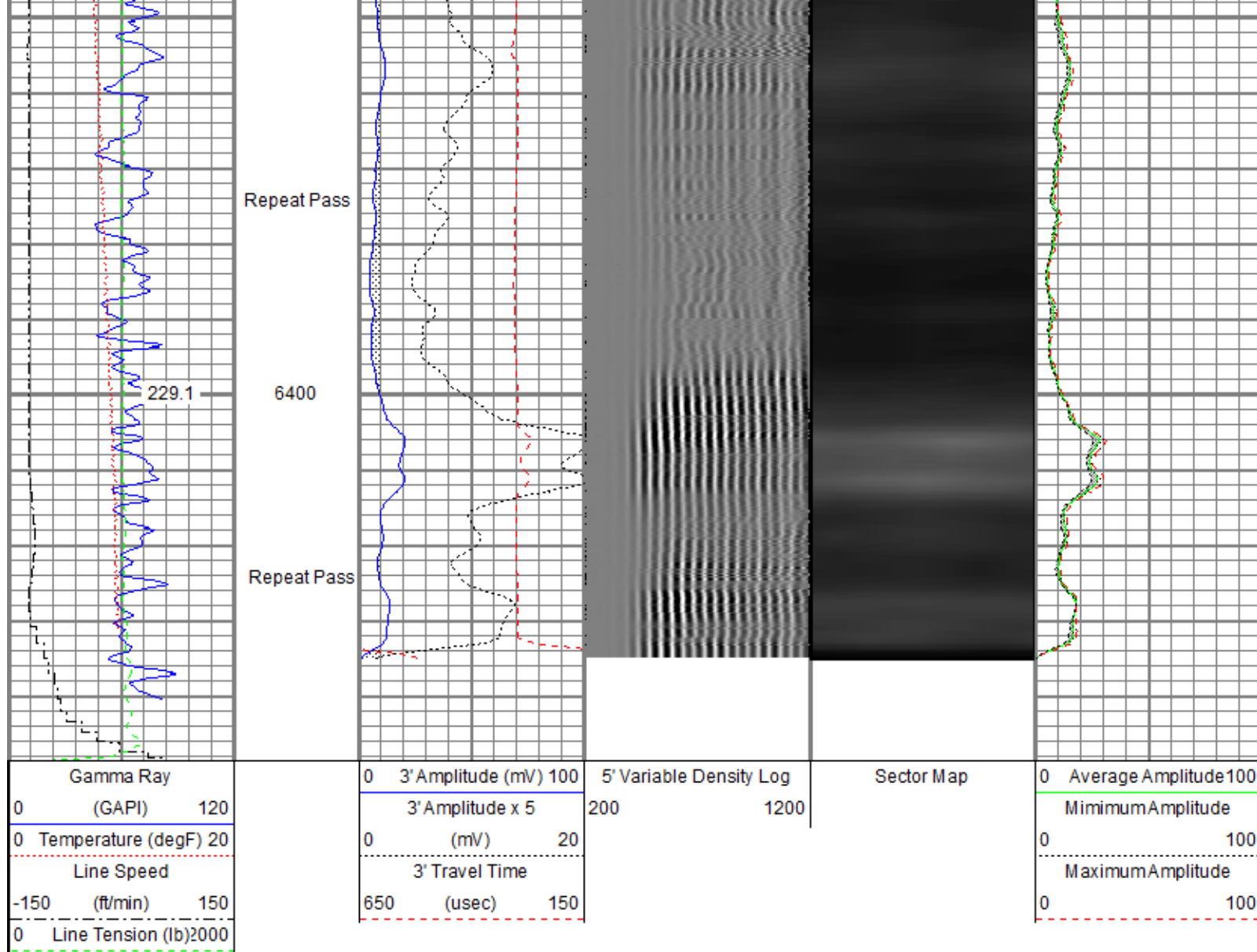
Repeat Pass

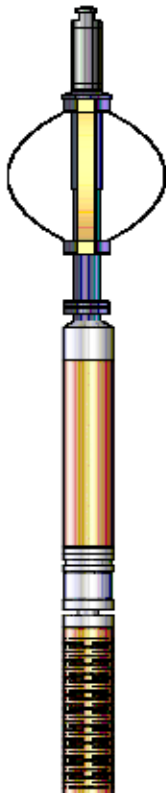
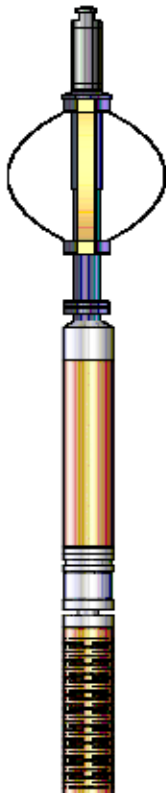
Recorded With 2800 PSI Surface Induced Pressure

Database File	0512344766_anadarko_rw 27n-5hz_rbl_11-20-17\processed_0512344766_anadarko_rw 27n-5hz_rbl_11-20-17.db
Dataset Pathname	pass5.1
Presentation Format	ros_radrii
Dataset Creation	Tue Nov 21 10:07:03 2017
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	1200			Minimum Amplitude	
0	Temperature (degF)	20	0	(mV)	20	0		100
Line Speed		3' Travel Time					Maximum Amplitude	
-150	(ft/min)	150	650	(usec)	150	0		100
0	Line Tension (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" Electric Cable Head with 1" Fishing Neck	1.03	1.69	5.40
			Probe_ELine_BowSpring_Centralizer-P_EBSC_2.88 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.75	2.75	20.00
			Probe_RADII-C-P_RBT_2750 (FW1302-002) Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.19	2.75	105.00
WVFS8	14.55					
WVFS7	14.55					
WVFS6	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					

Calibration Report		
Database File	C:\ProgramData\Warrior\Data\0512344766_Anadarko_RW 27N-5HZ_RBL_11-20-17\PROCESSED_0512344766_Anadarko_RW	
Dataset Pathname	pass7.1	
Dataset Creation	Mon Nov 20 09:10:25 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:	60.977	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.001	0.499	0.800	71.921	142.457	0.875
CAL	0.002	0.001				
5'	0.000	0.410	0.800	71.921	173.600	0.796
SUM						
S1	0.000	0.523	0.000	100.000	191.292	-0.010
S2	0.000	0.526	0.000	100.000	190.231	-0.009
S3	0.000	0.516	0.000	100.000	193.758	-0.005
S4	0.000	0.510	0.000	100.000	196.067	-0.015
S5	0.000	0.497	0.000	100.000	201.107	-0.030
S6	0.000	0.500	0.000	100.000	200.233	-0.040
S7	0.000	0.509	0.000	100.000	196.537	-0.034
S8	0.000	0.517	0.000	100.000	193.300	-0.005

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.002	0.001	1.000	0.000

Air Zero Calibration, performed Mon Nov 20 07:03:29 2017:

	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	



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