



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company Noble Energy Inc.

Well Reveille A34-778

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-50791

Other Services

SEC 34 TWP 6N RGE 64W

Elevation

Permanent Datum Ground Level Elevation 4631'

Log Measured From Kelly Bushing 30 FT

Drilling Measured From Kelly Bushing

K.B. 4661'  
D.F. ---  
G.L. 4631'

Company Noble Energy Inc.  
Well Reveille A34-778  
Field Wattenberg  
County Weld  
State Colorado

Date	21-MAR-2021	One		
Run Number		17038 FT		
Depth Driller		7154 FT		
Depth Logger		7139 FT		
Bottom Logged Interval		Surface		
Top Log Interval		---		
Open Hole Size		Water		
Type Fluid		8.34 lb/gal		
Density / Viscosity		237°F		
Max. Recorded Temp.		See Log		
Estimated Cement Top		ROA		
Time Well Ready		08:10		
Time Logger on Bottom		HD-0361		
Equipment Number		Platteville, CO		
Location		M. Steinman		
Recorded By		Charlie Schendzielos		
Witnessed By				
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	17	P-110CY	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 6026.1 FT  
Adjusted -6 FT to correlate with Marker Joint  
Log ran with 2000 PSI Surface Induced Pressure  
Logging tools were clean and free of debris upon completion of operations

Thank you for choosing Reliance Oilfield Services, LLC!!

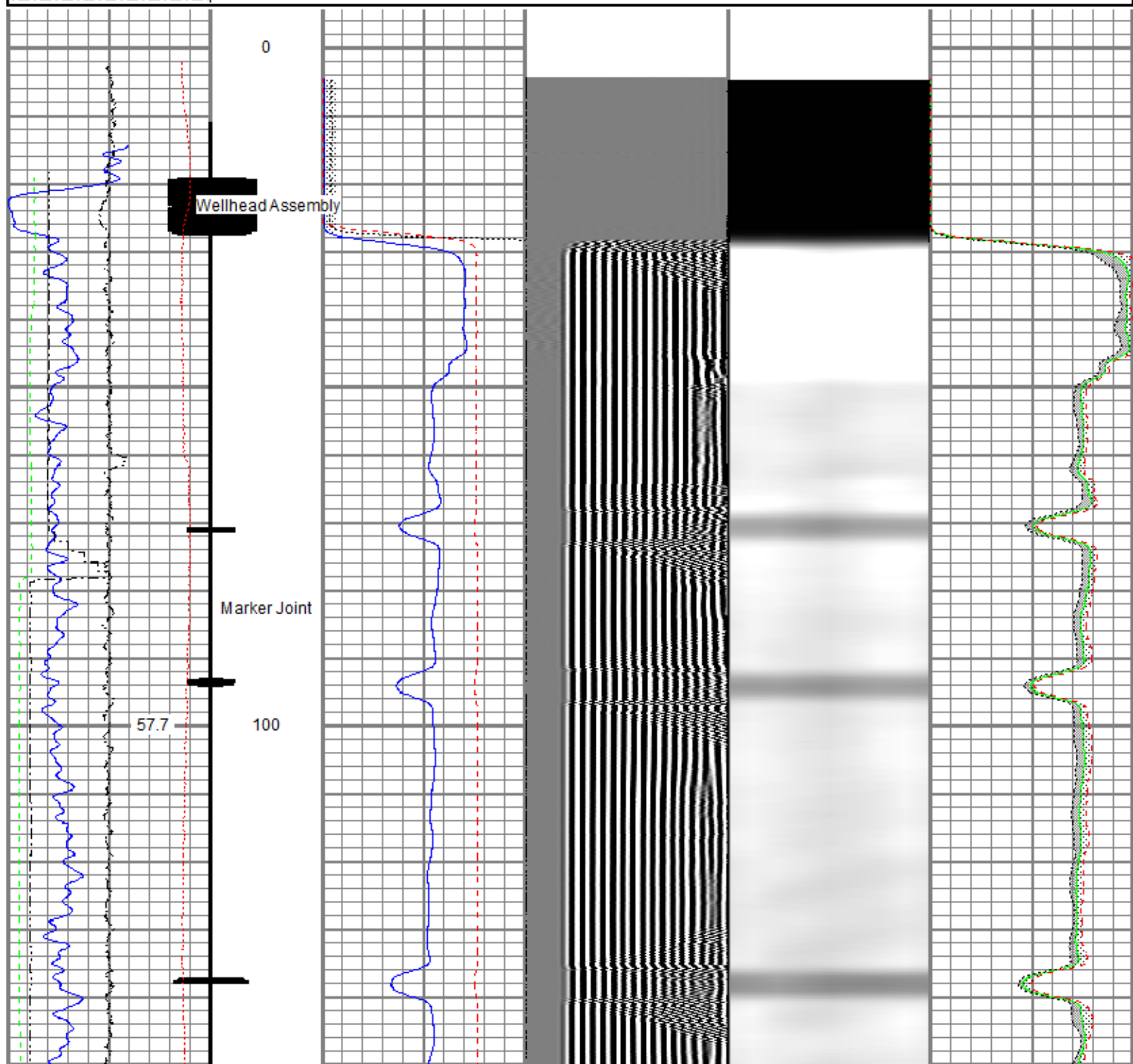
Main Pass

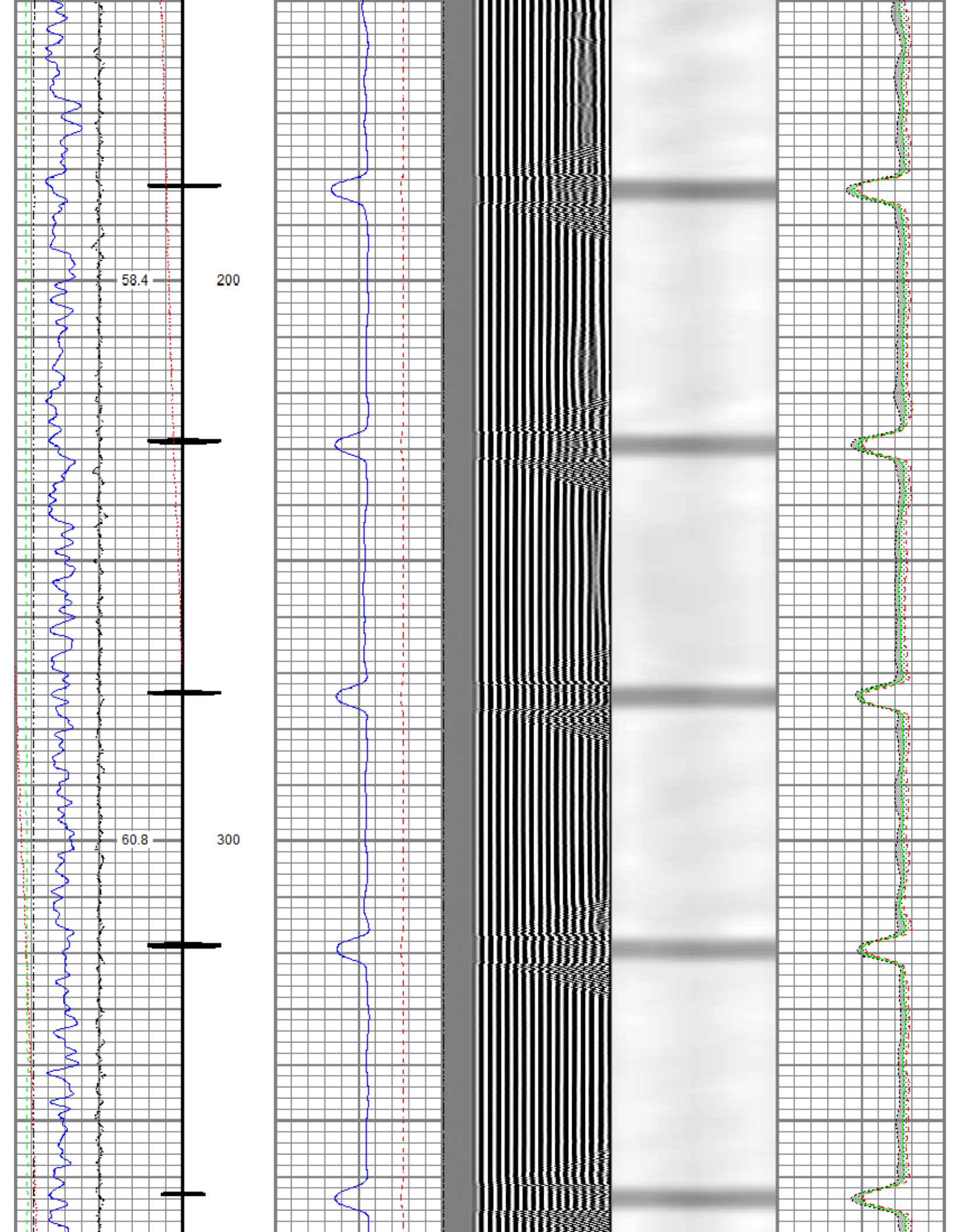


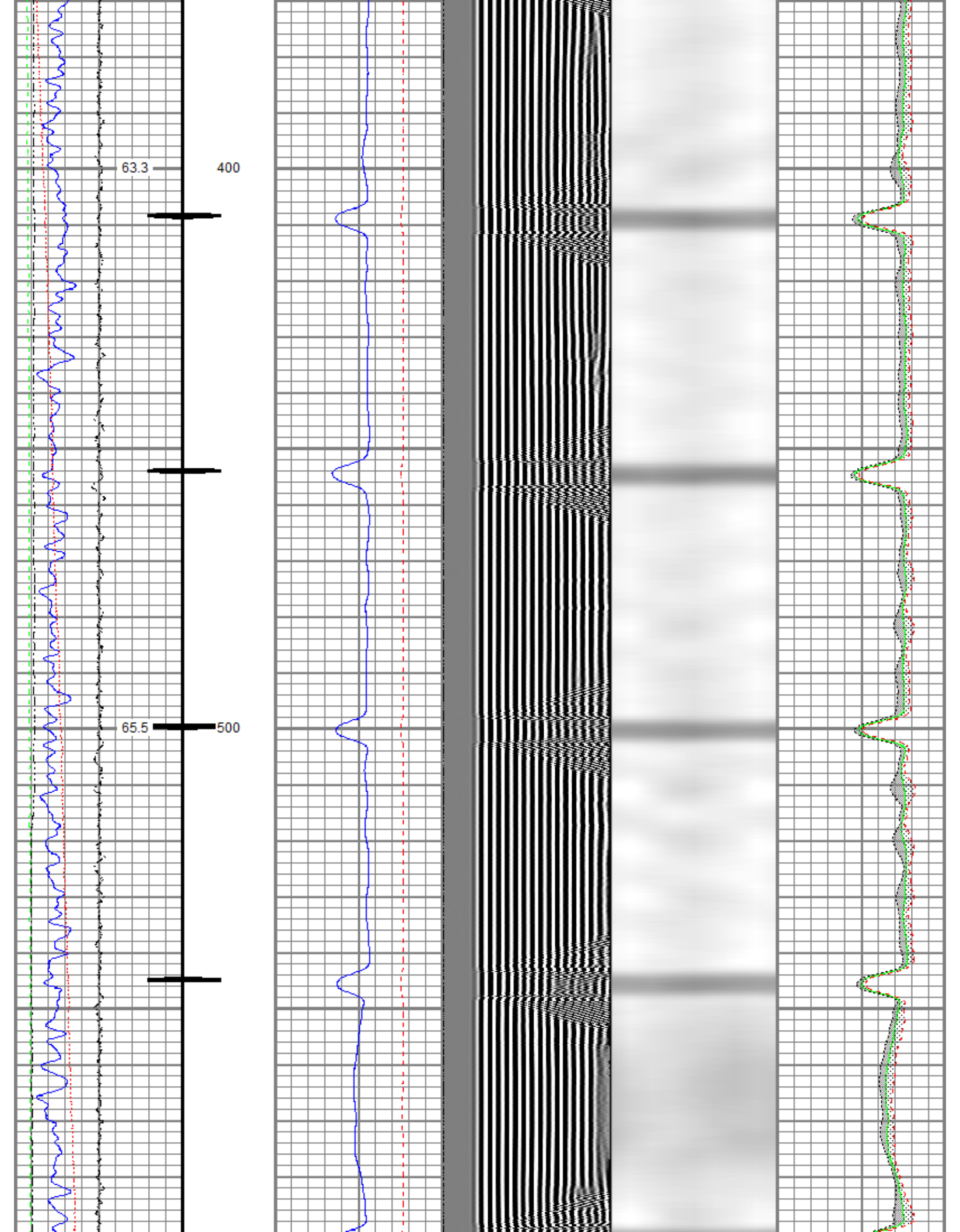
Recorded With 2000 PSI Surface Induced Pressure

Database File noble\noble\_reveille a34-778\_rbl\_03-21-21\noble\_reveille a34-778\_rbl\_03-21-21.db  
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 Presentation Format ros\_radri\_noble  
 Dataset Creation Sun Mar 21 08:11:05 2021  
 Charted by Depth in Feet scaled 1:240

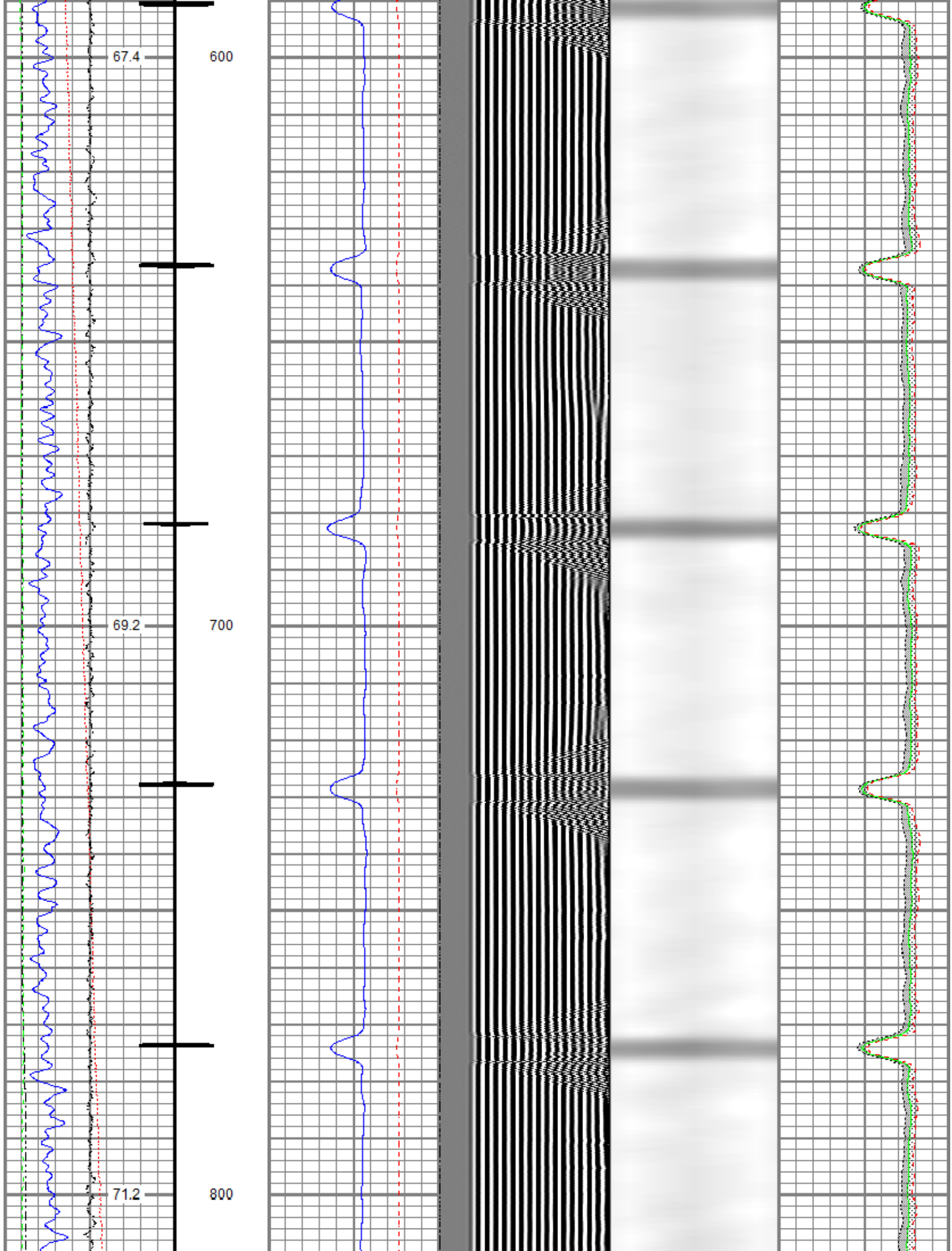
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200 (usec) 1200			Minimum Amplitude
Casing Collar Locator	0	(mV) 20			0	100
Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed	650	(usec) 150			0	100
-150 (ft/min) 150						
Line Tension (lb) 2000						
Differential Temperature						
-2 (degF) 2						

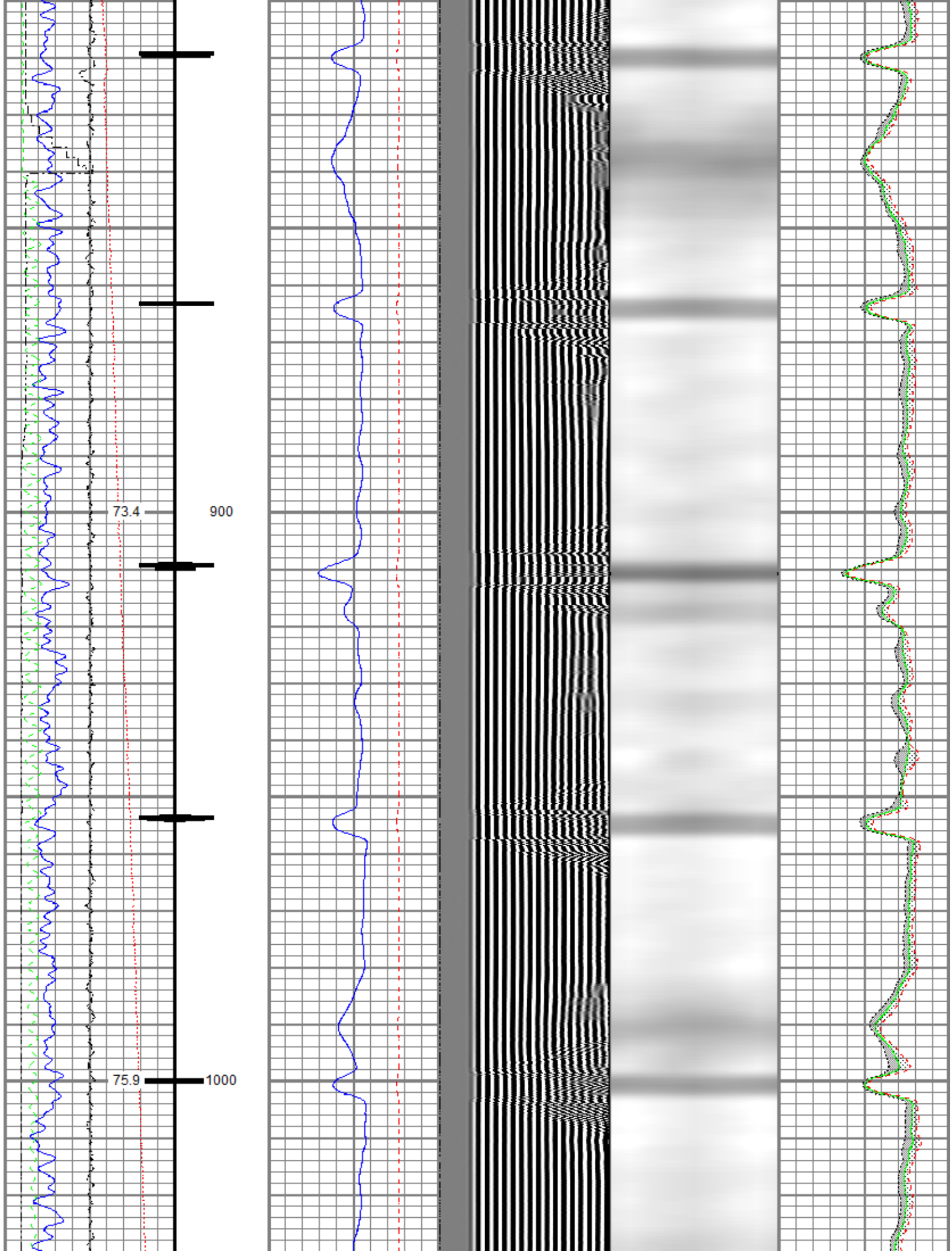


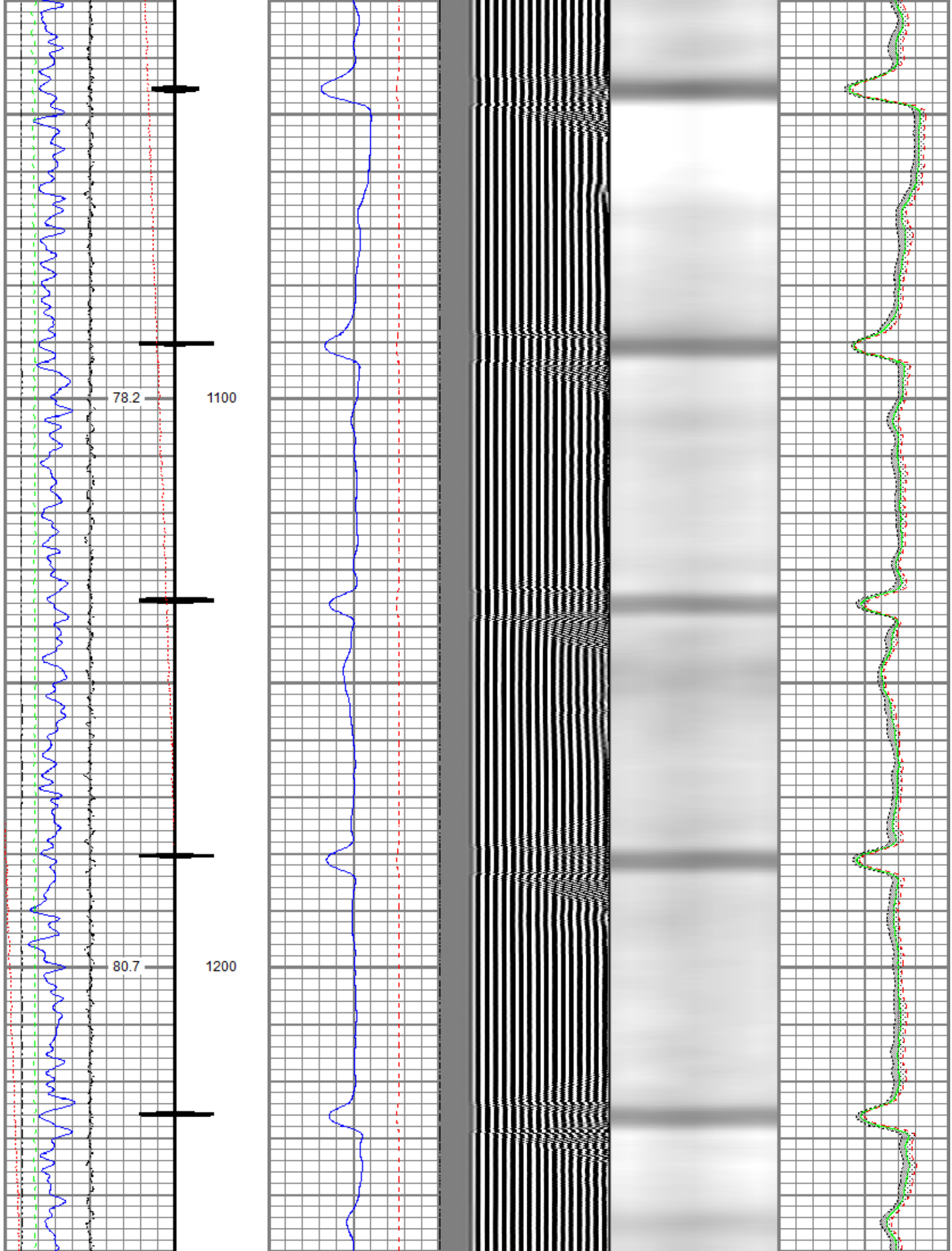


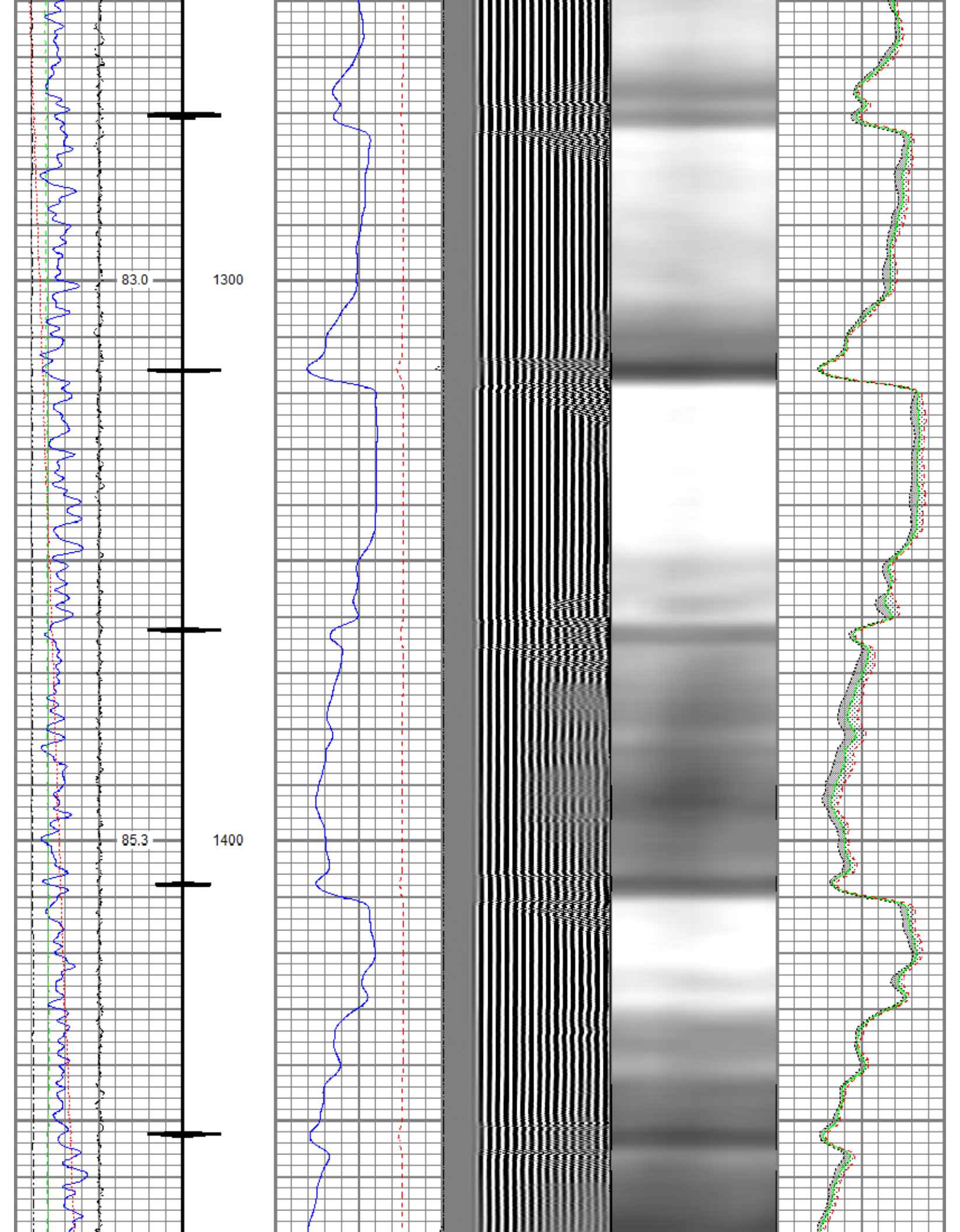




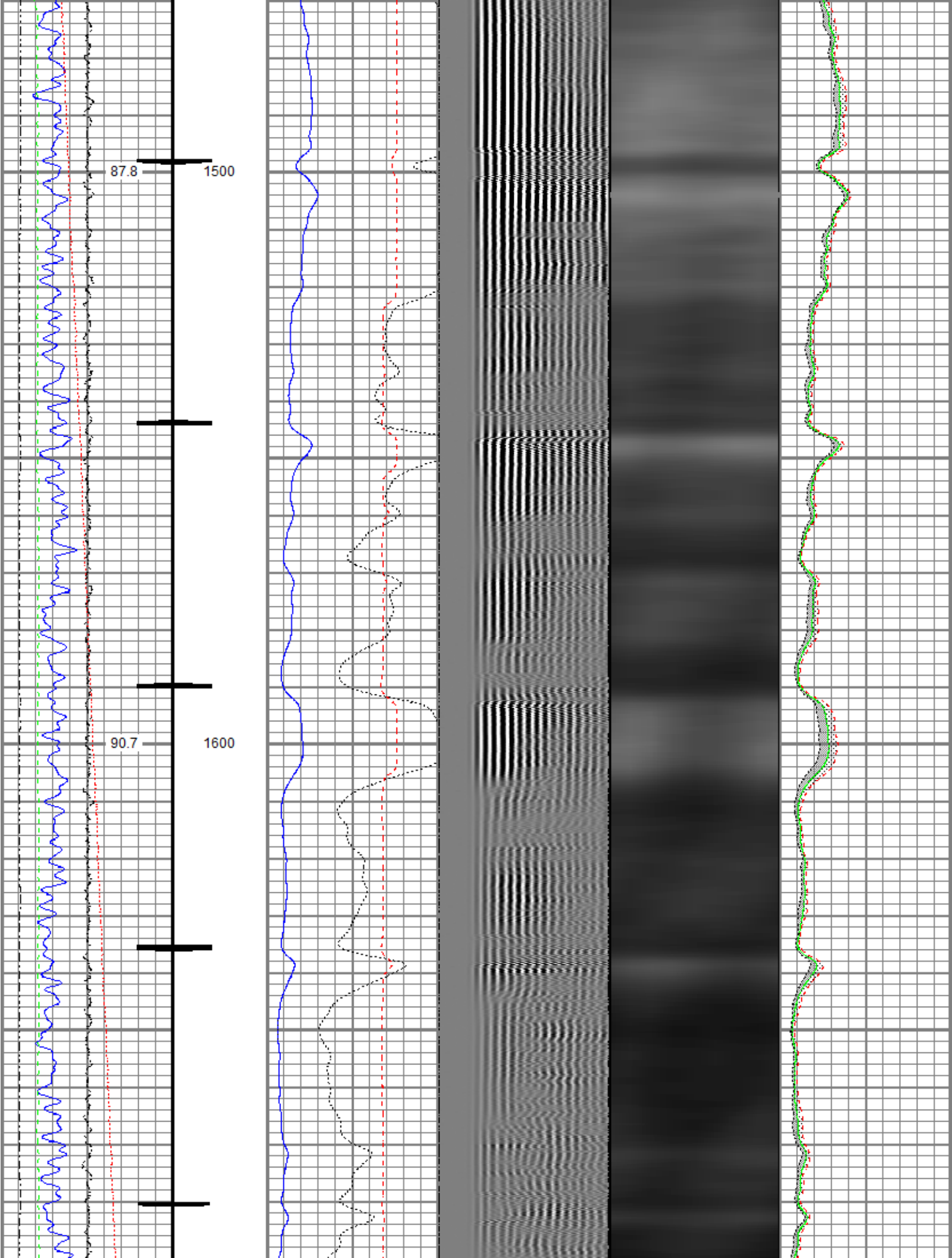


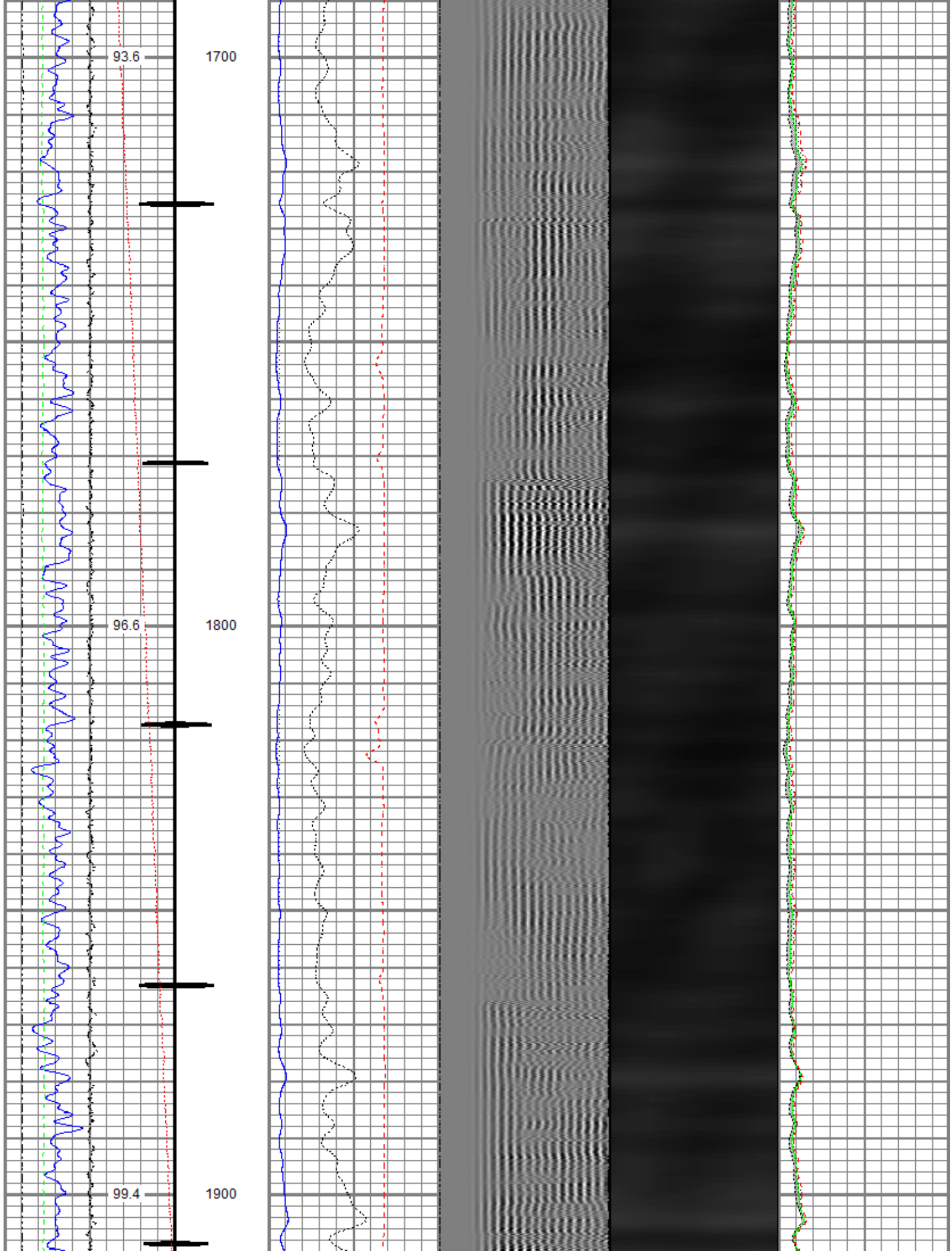


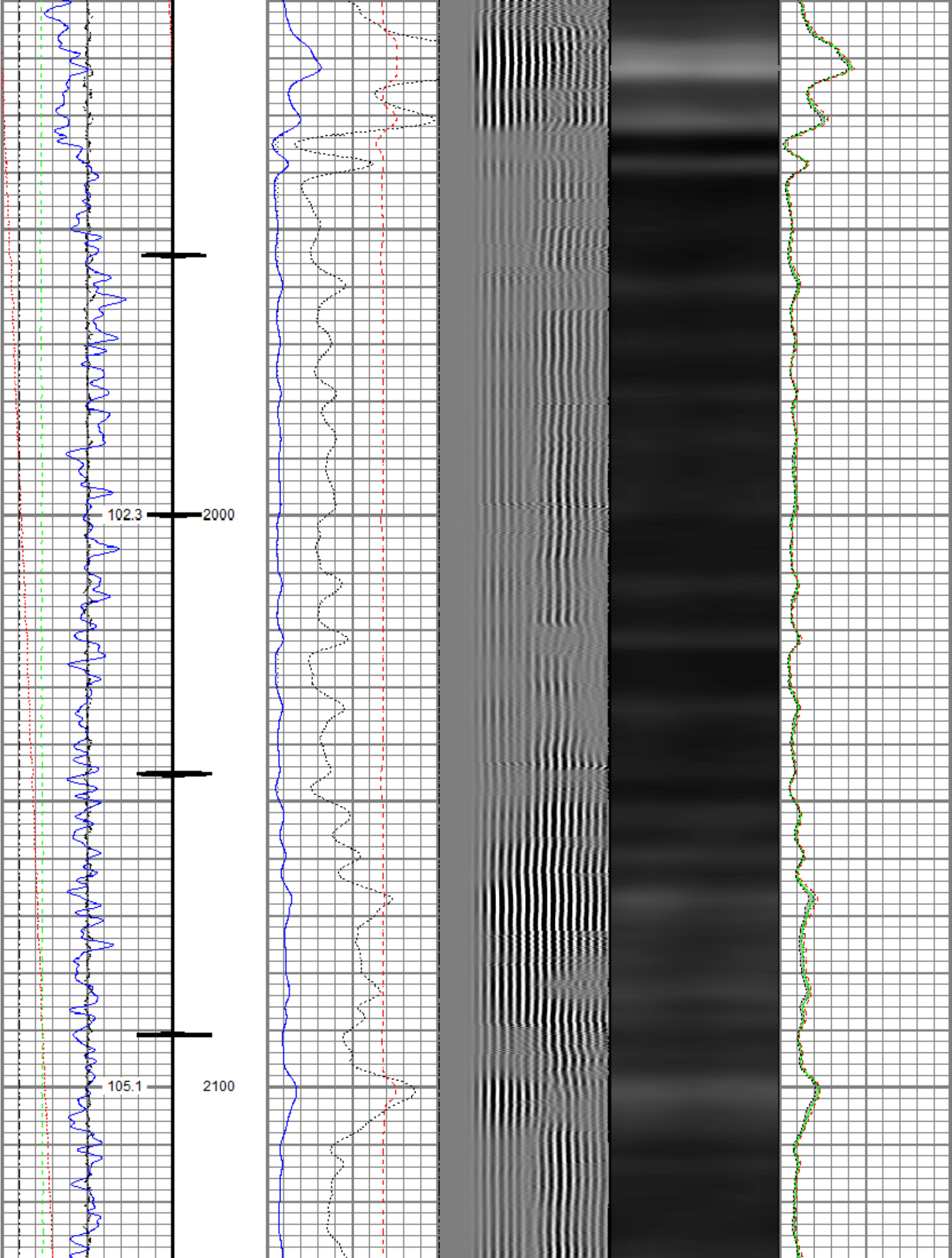


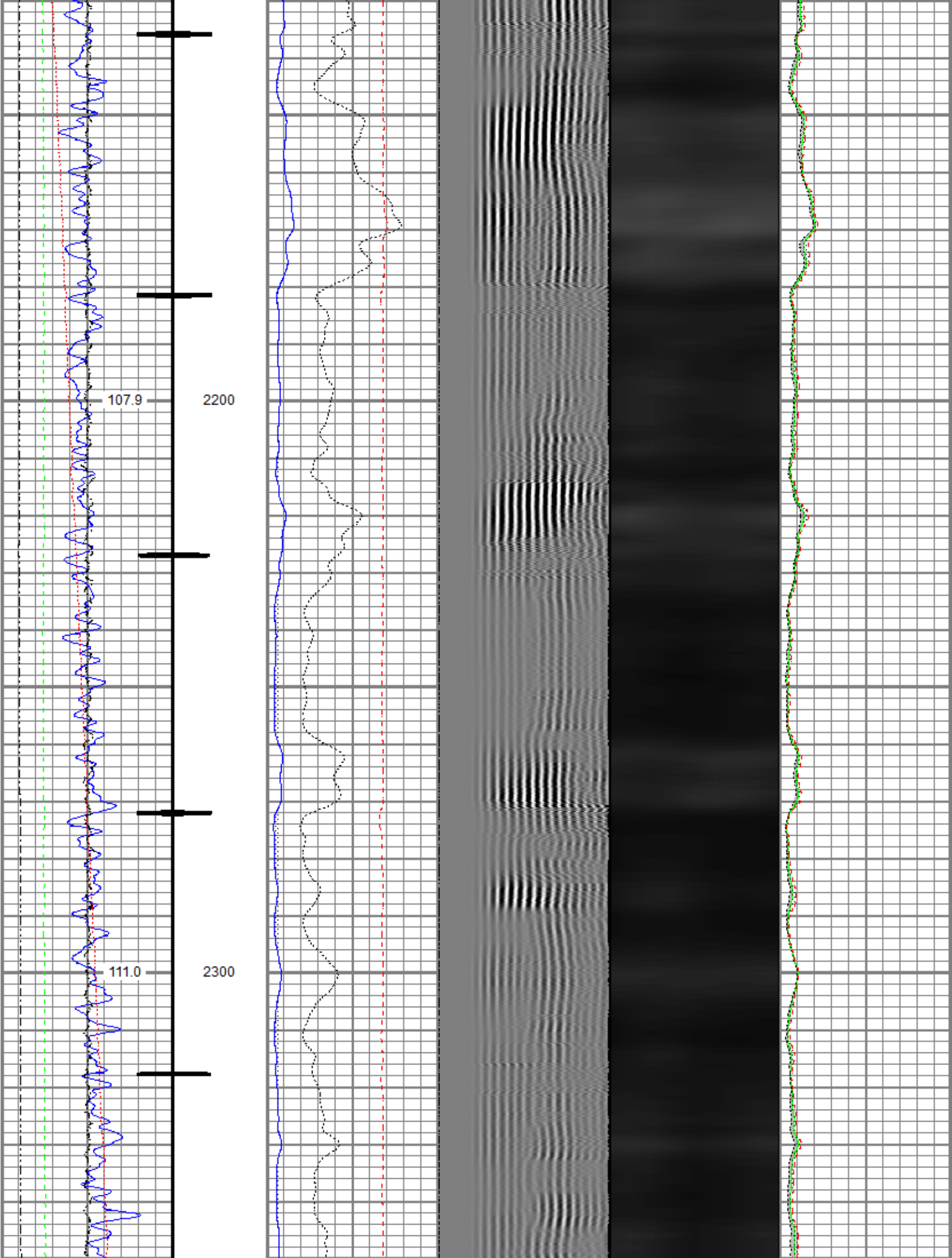




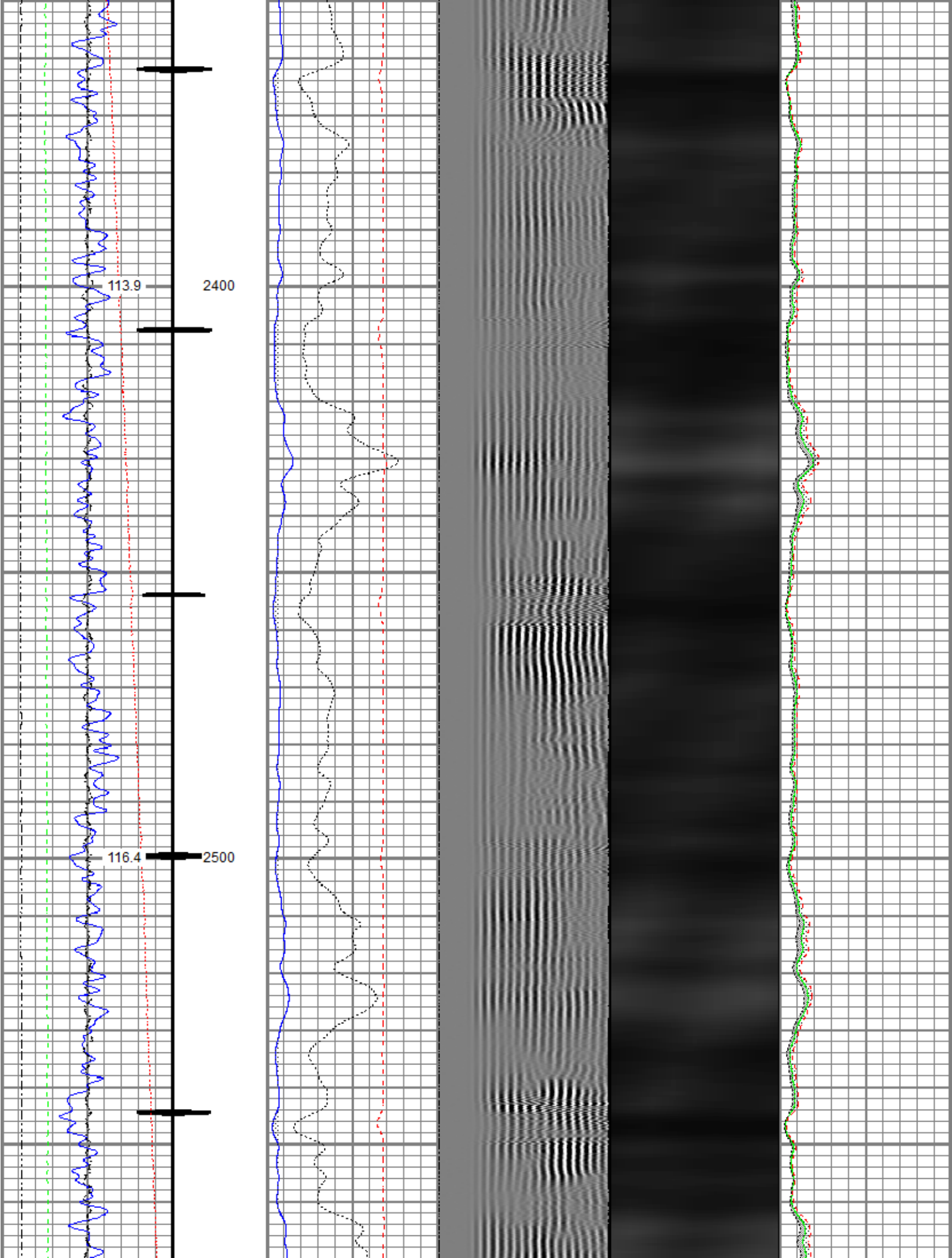


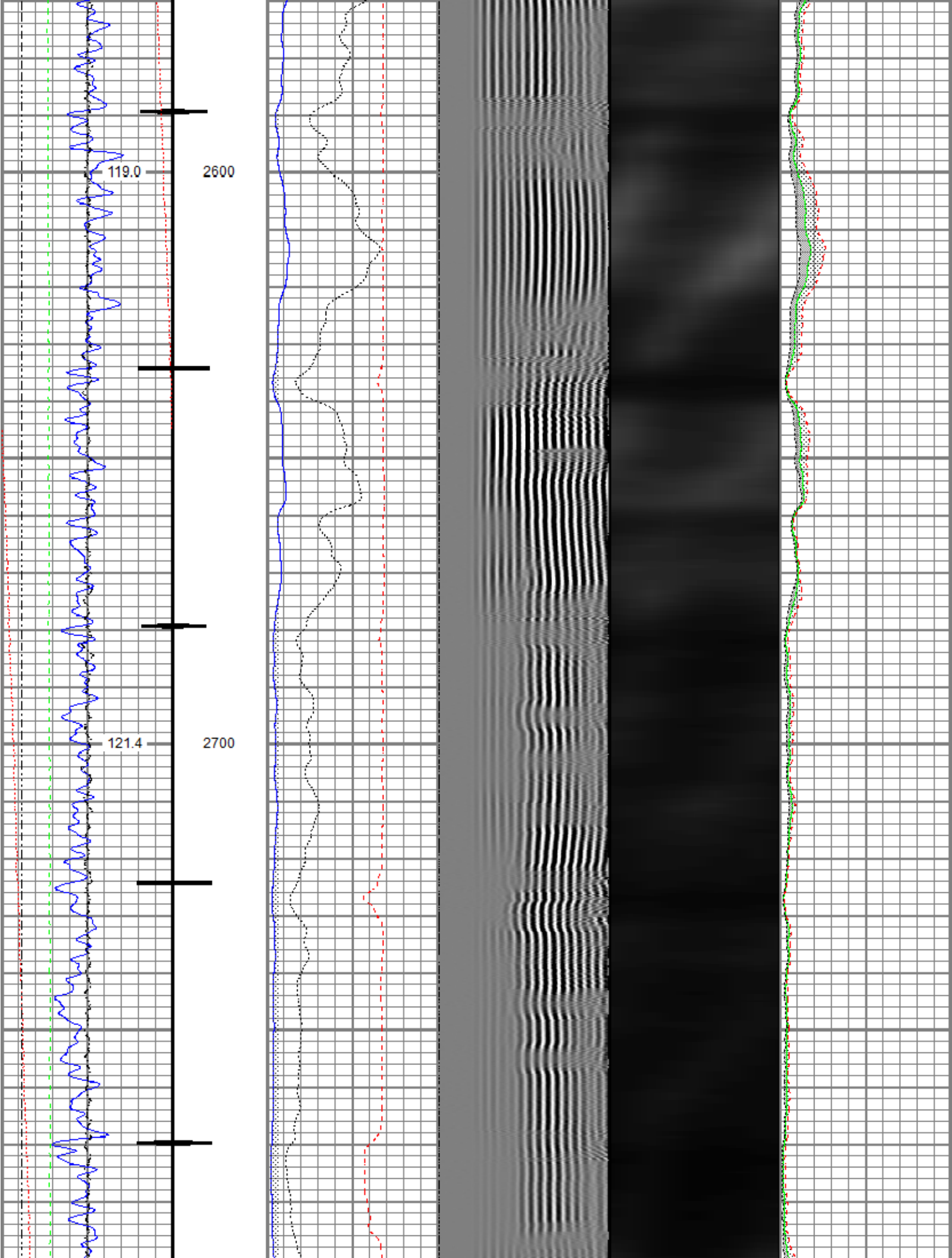


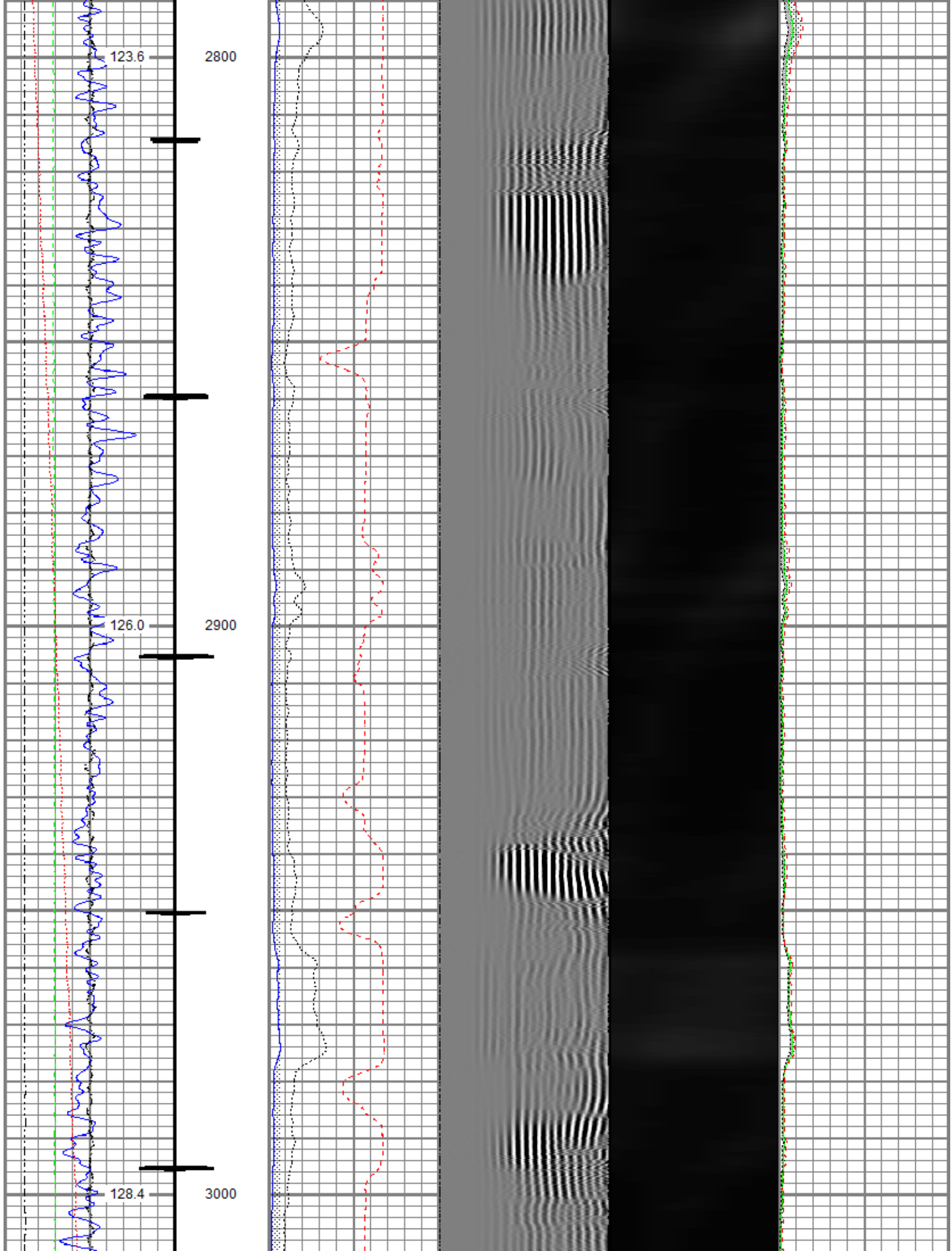


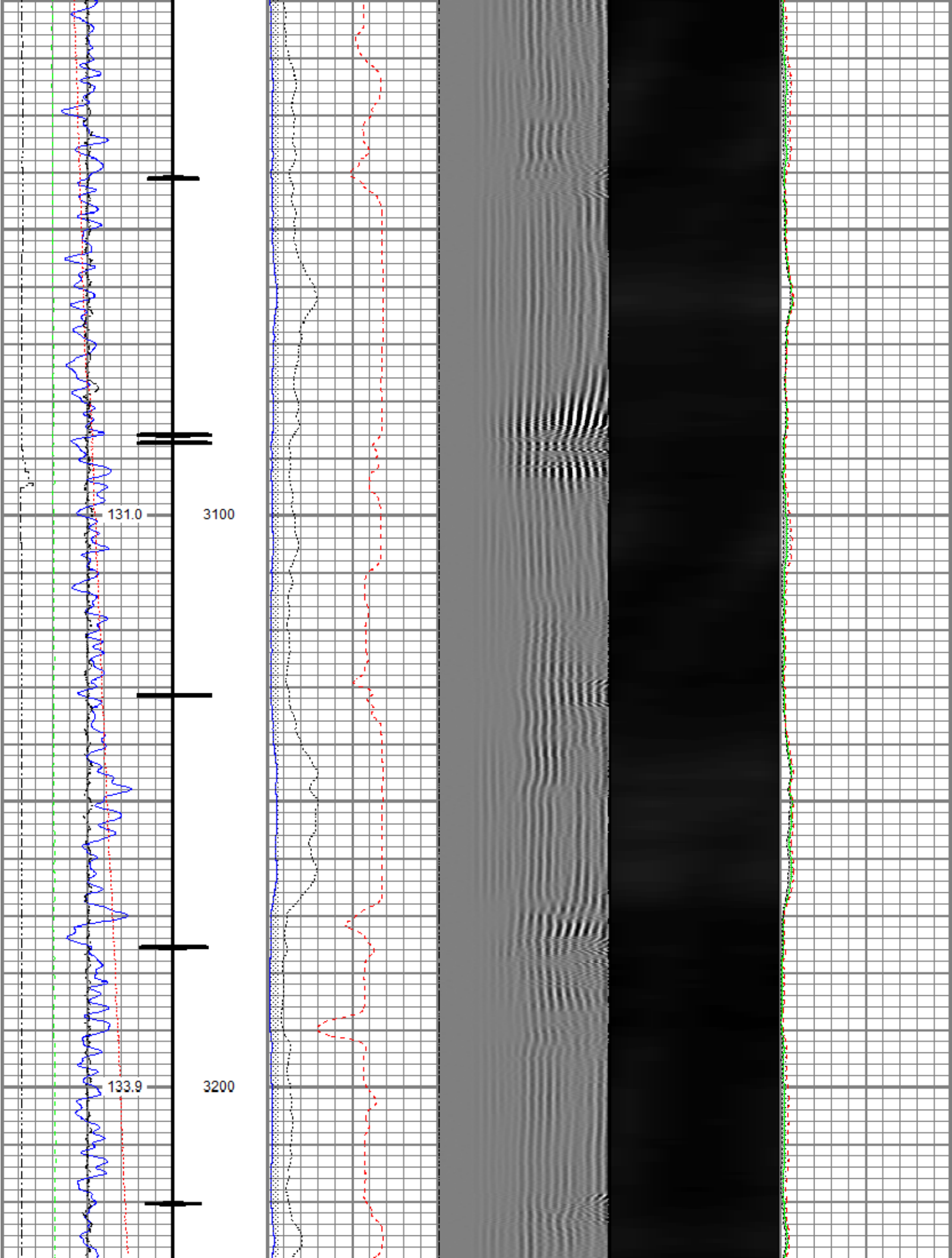




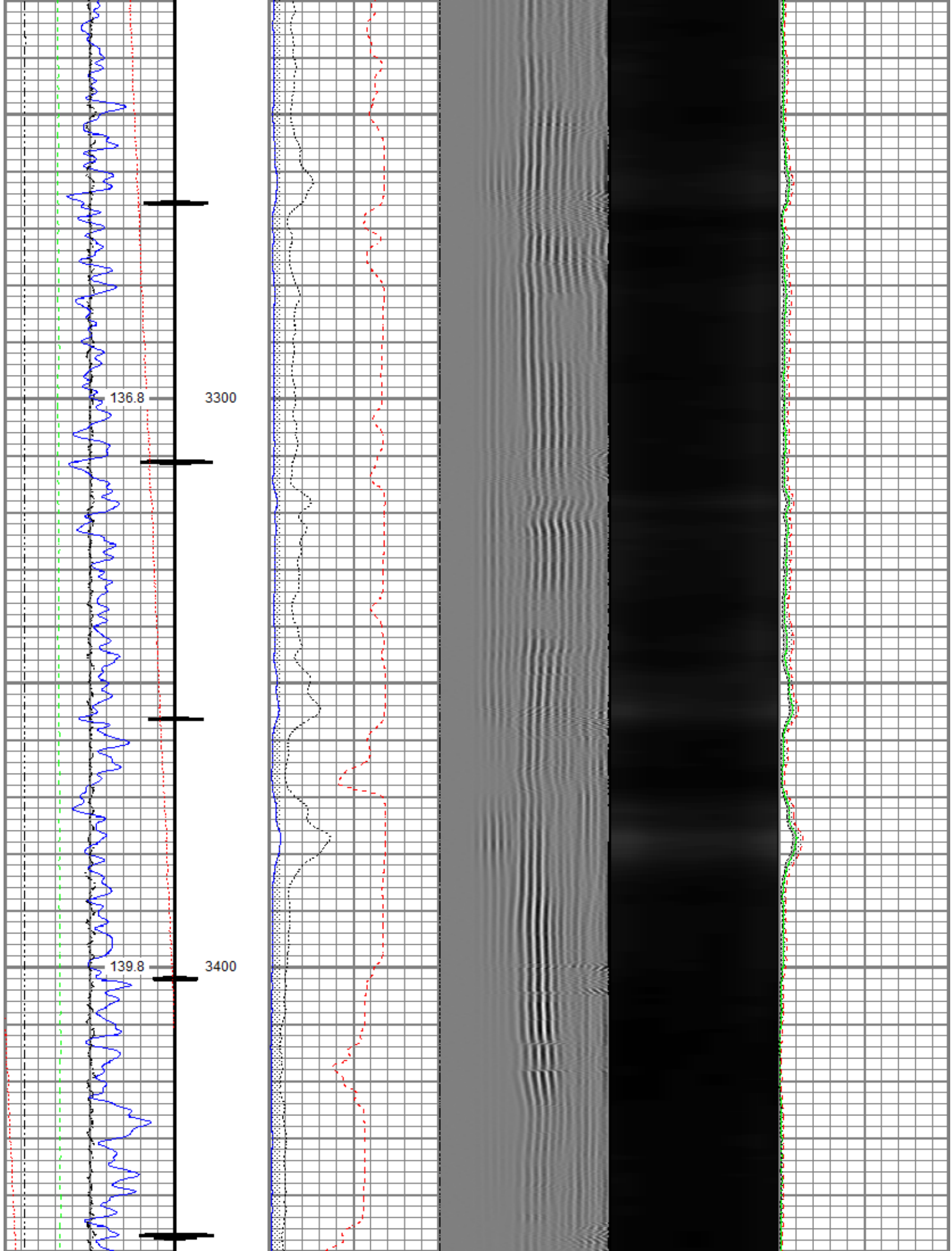


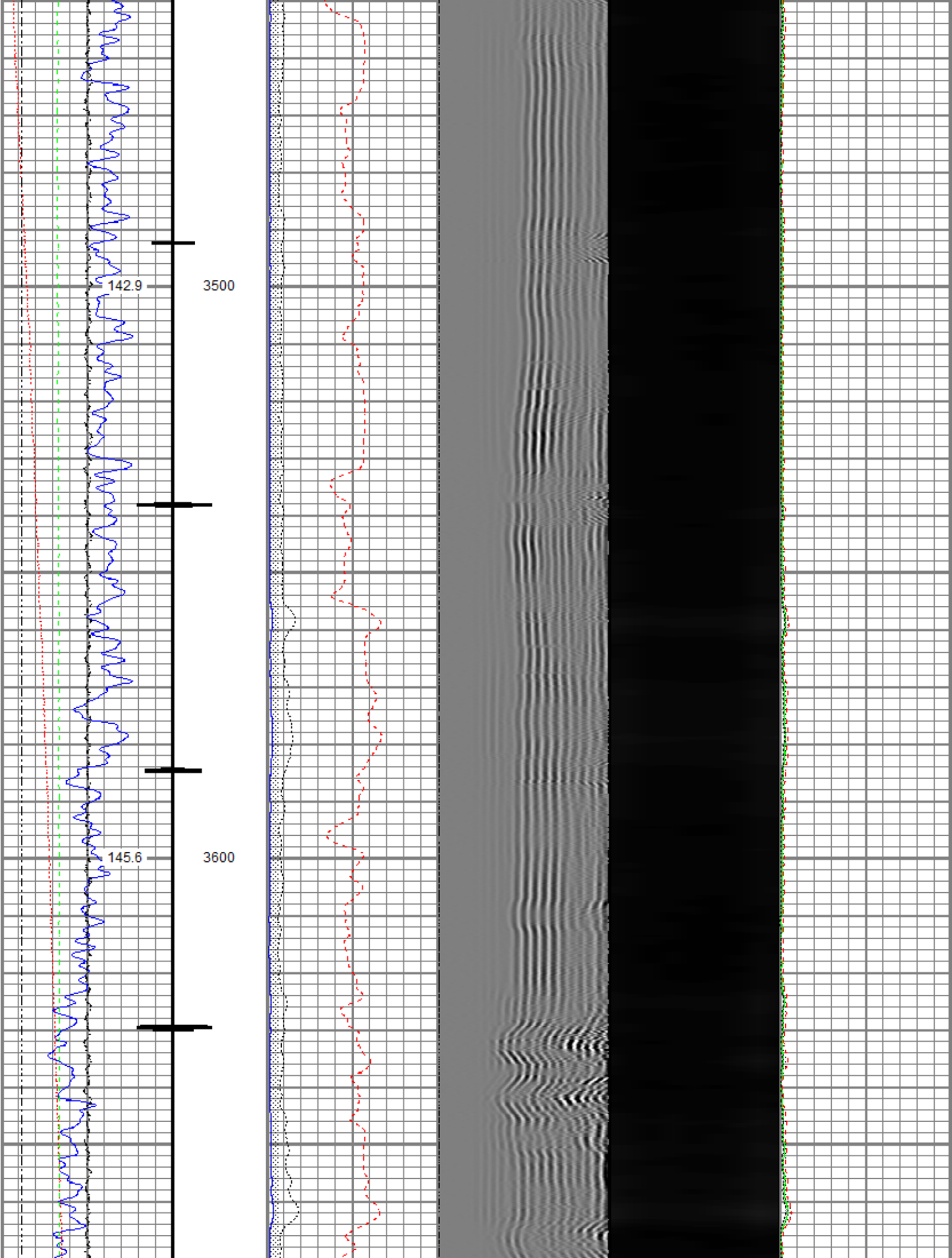










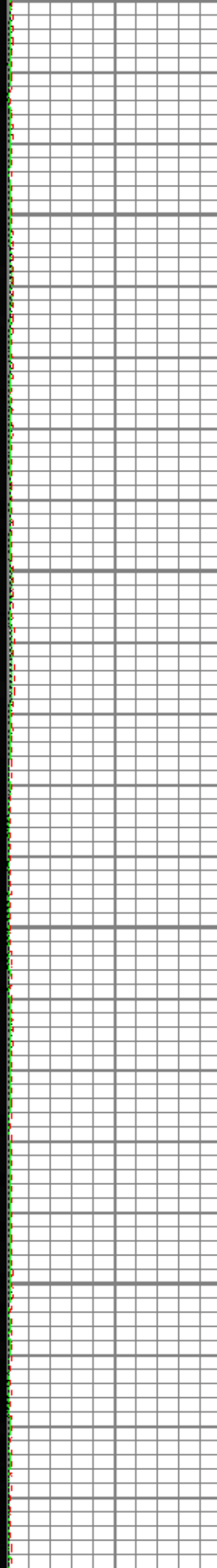
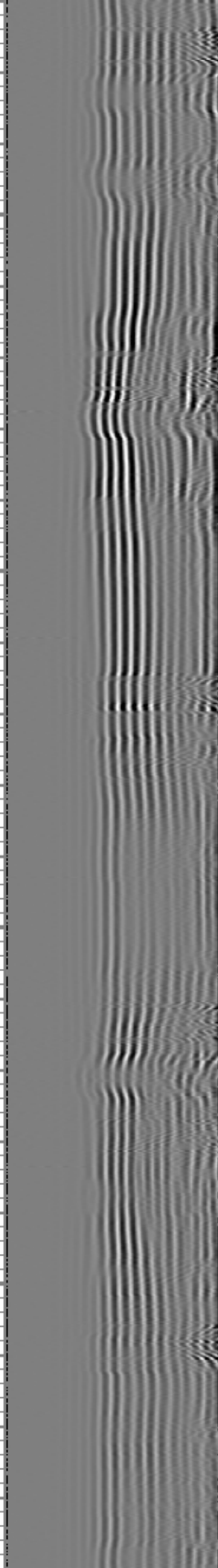
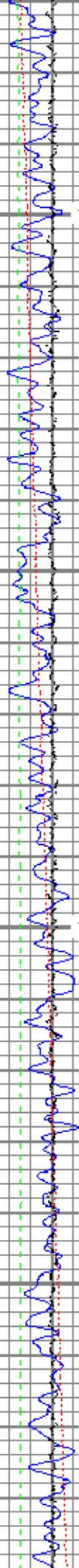


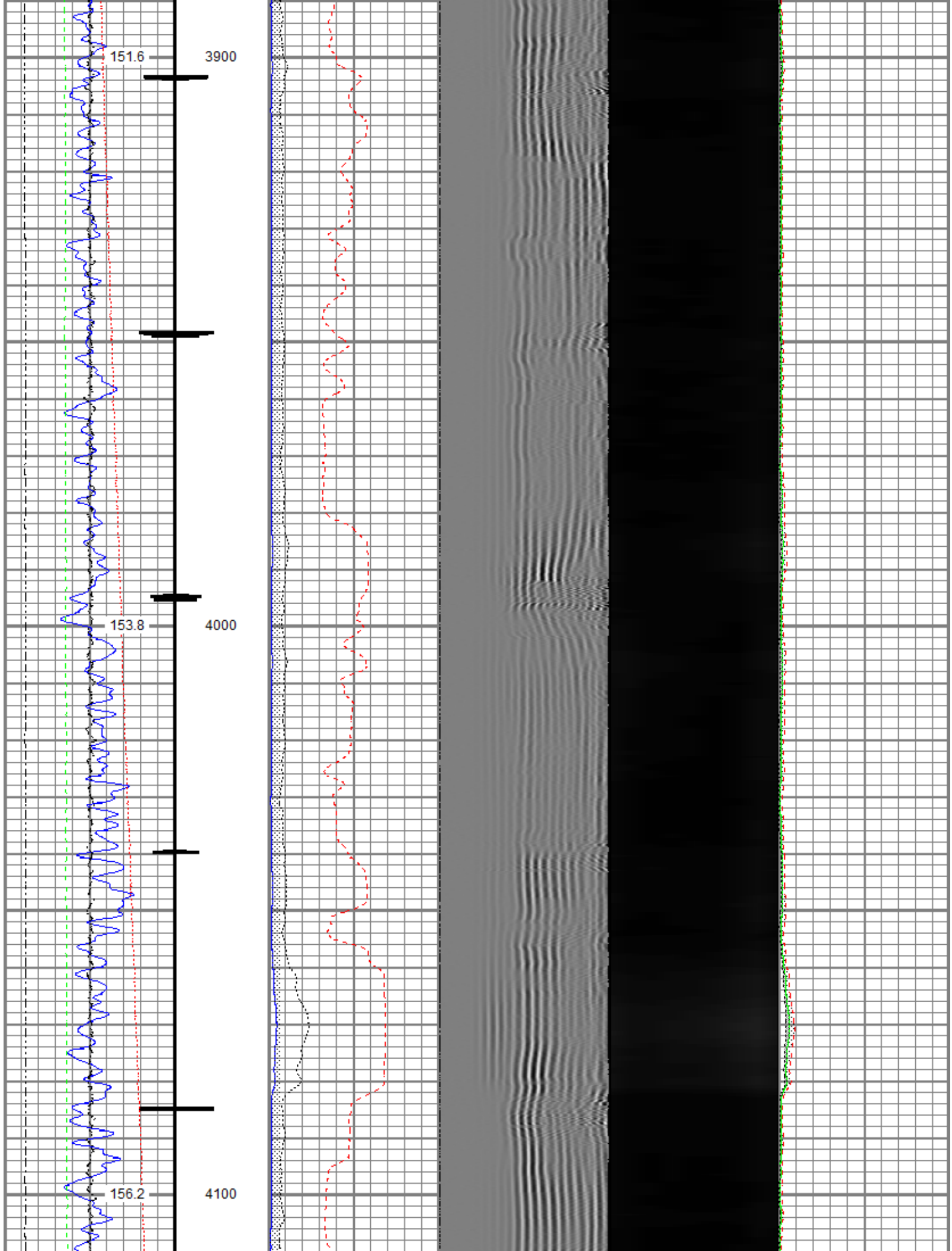
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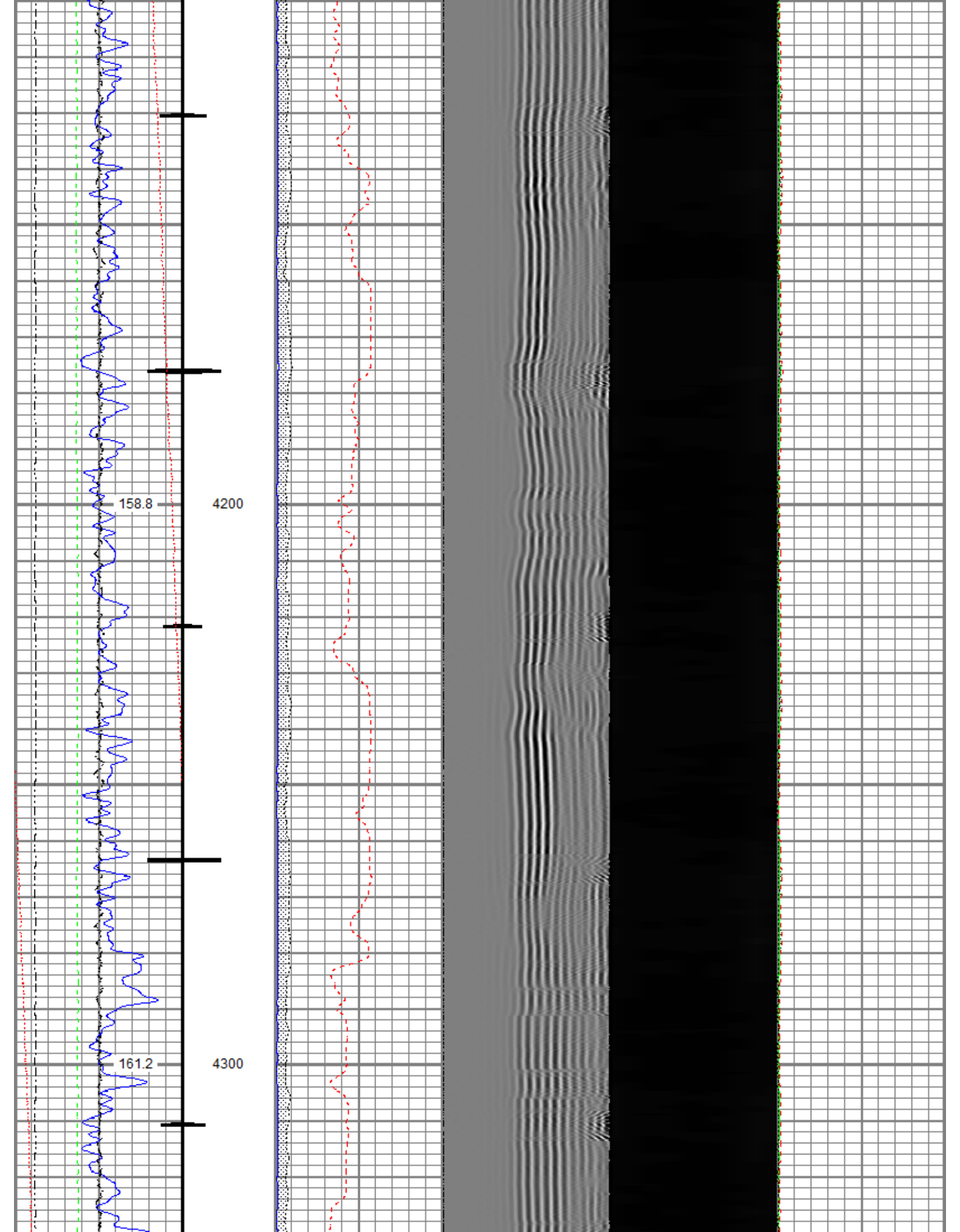
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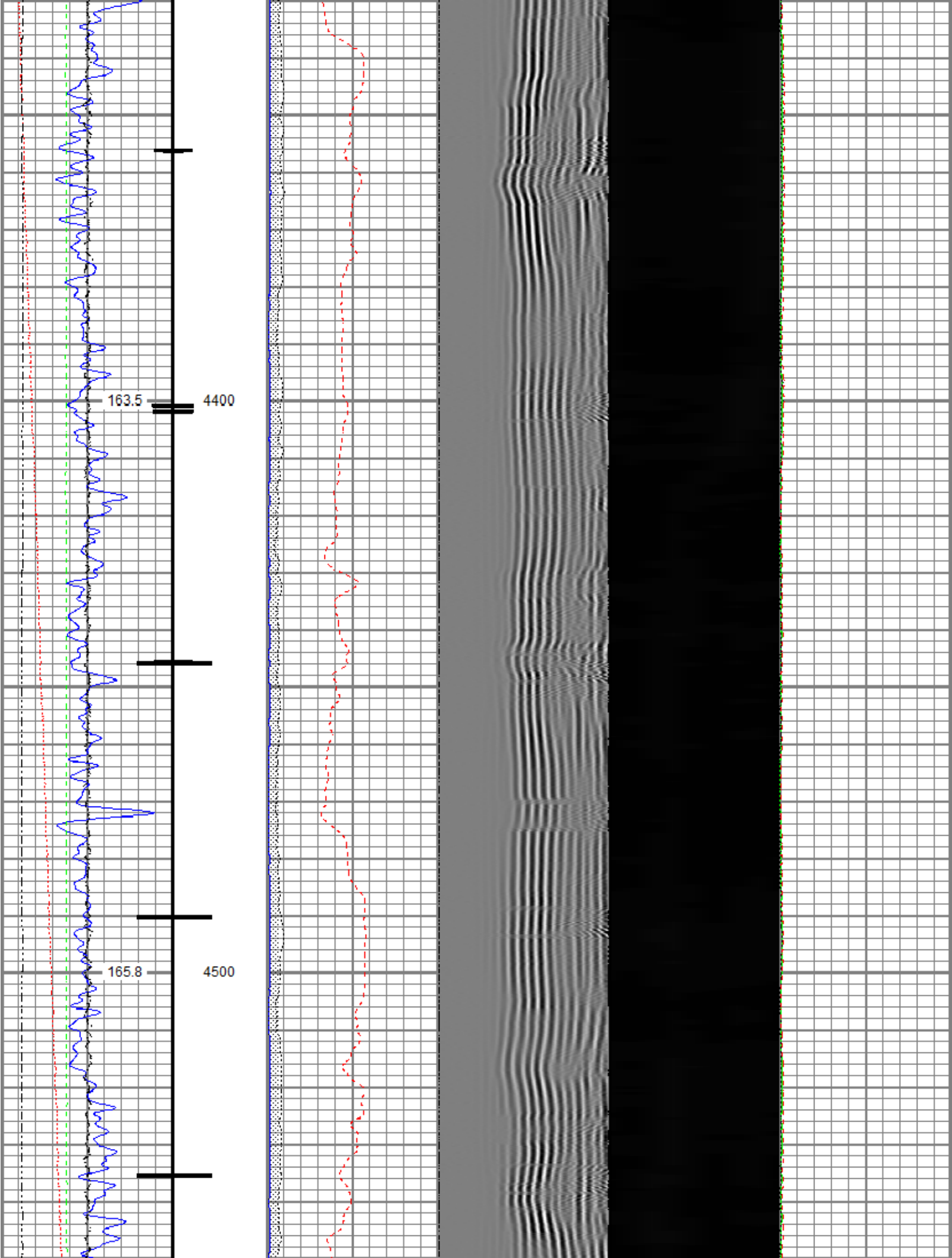
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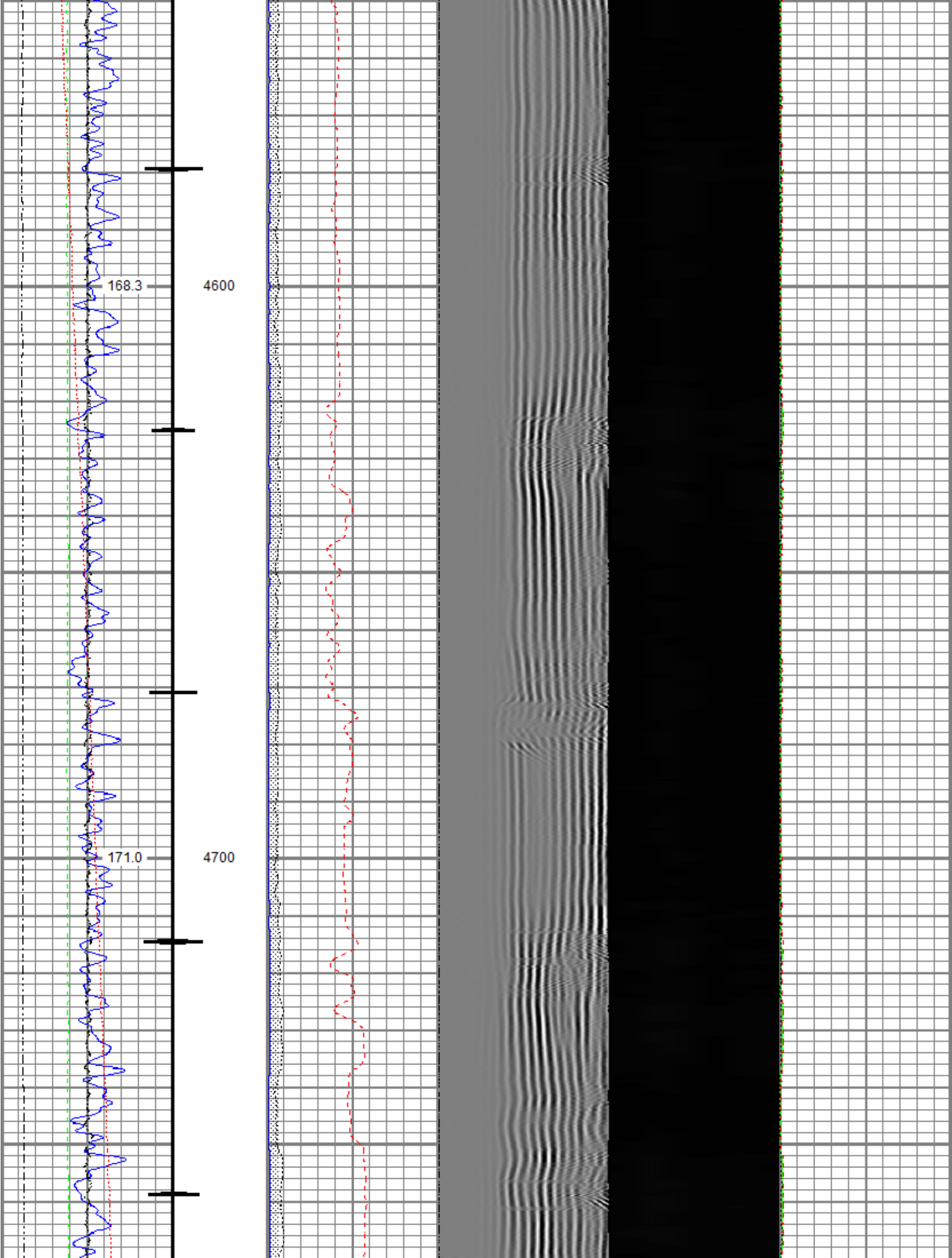


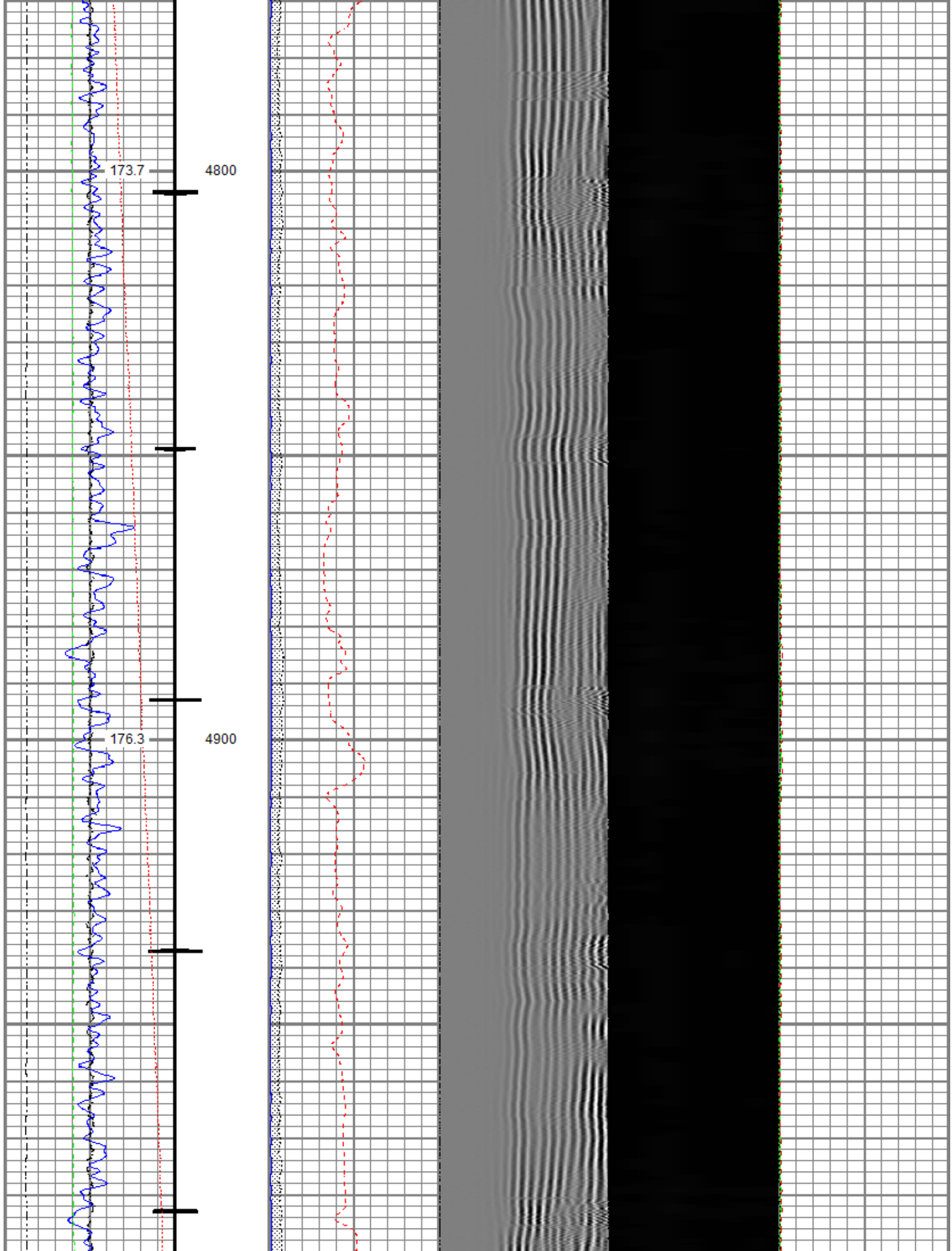




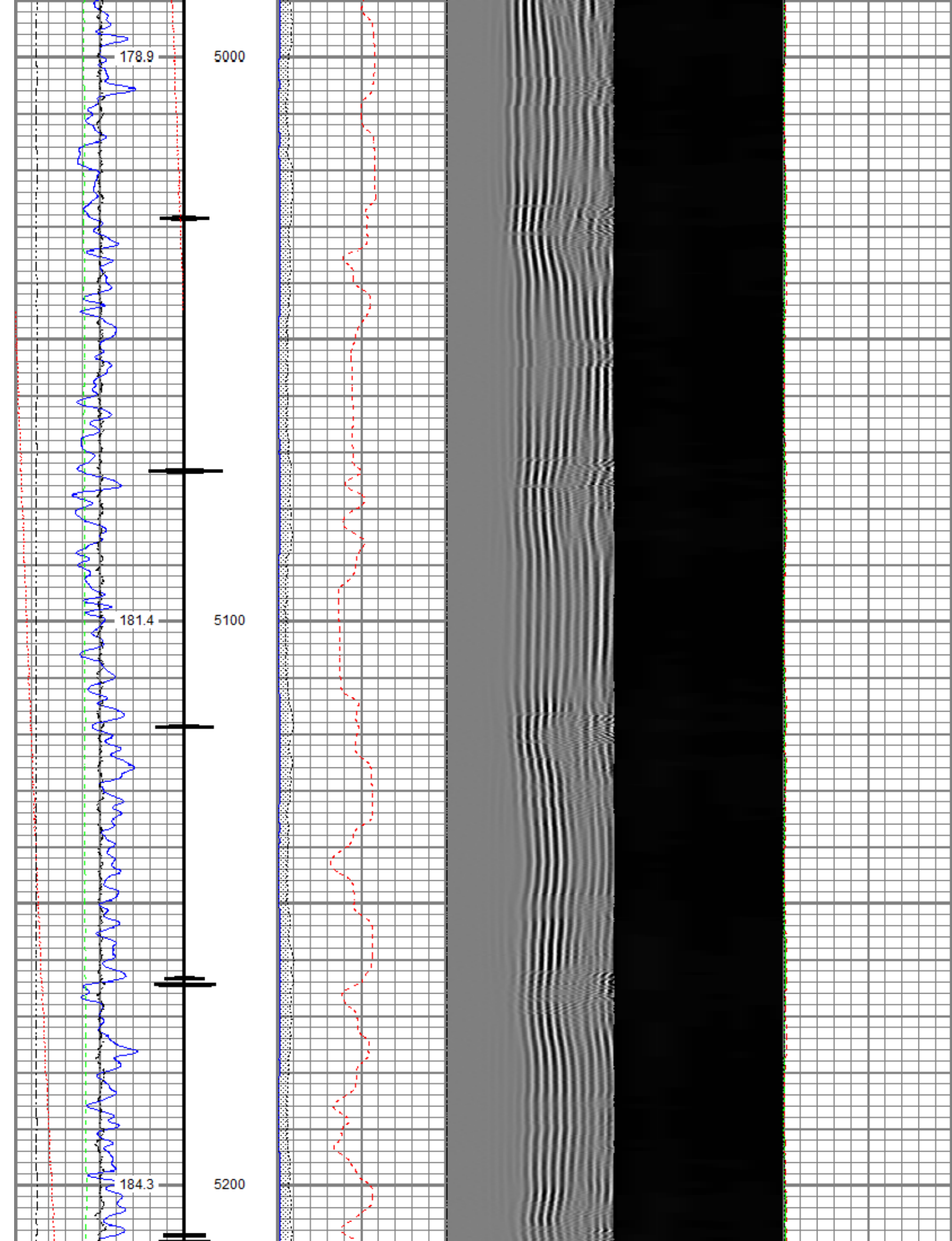


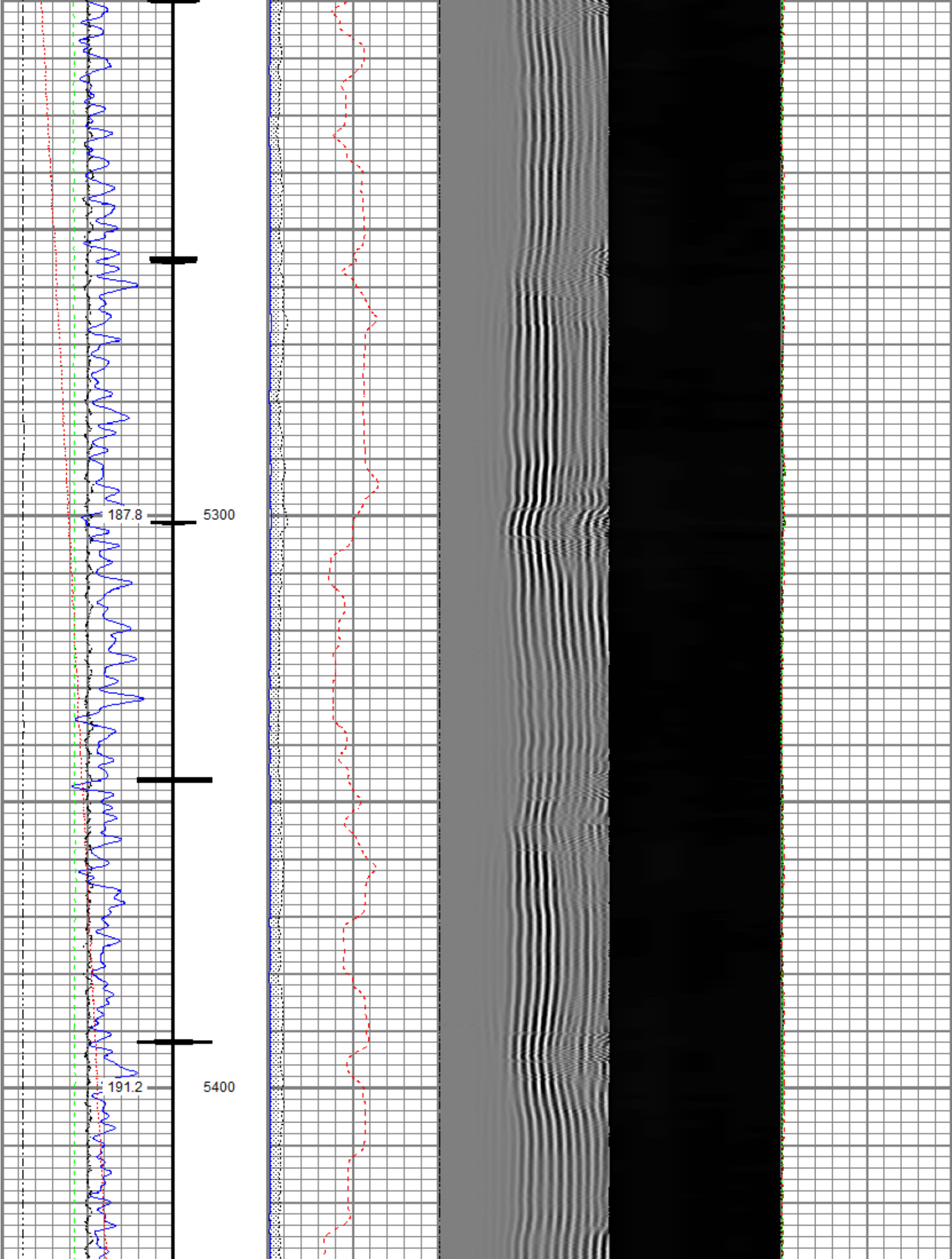


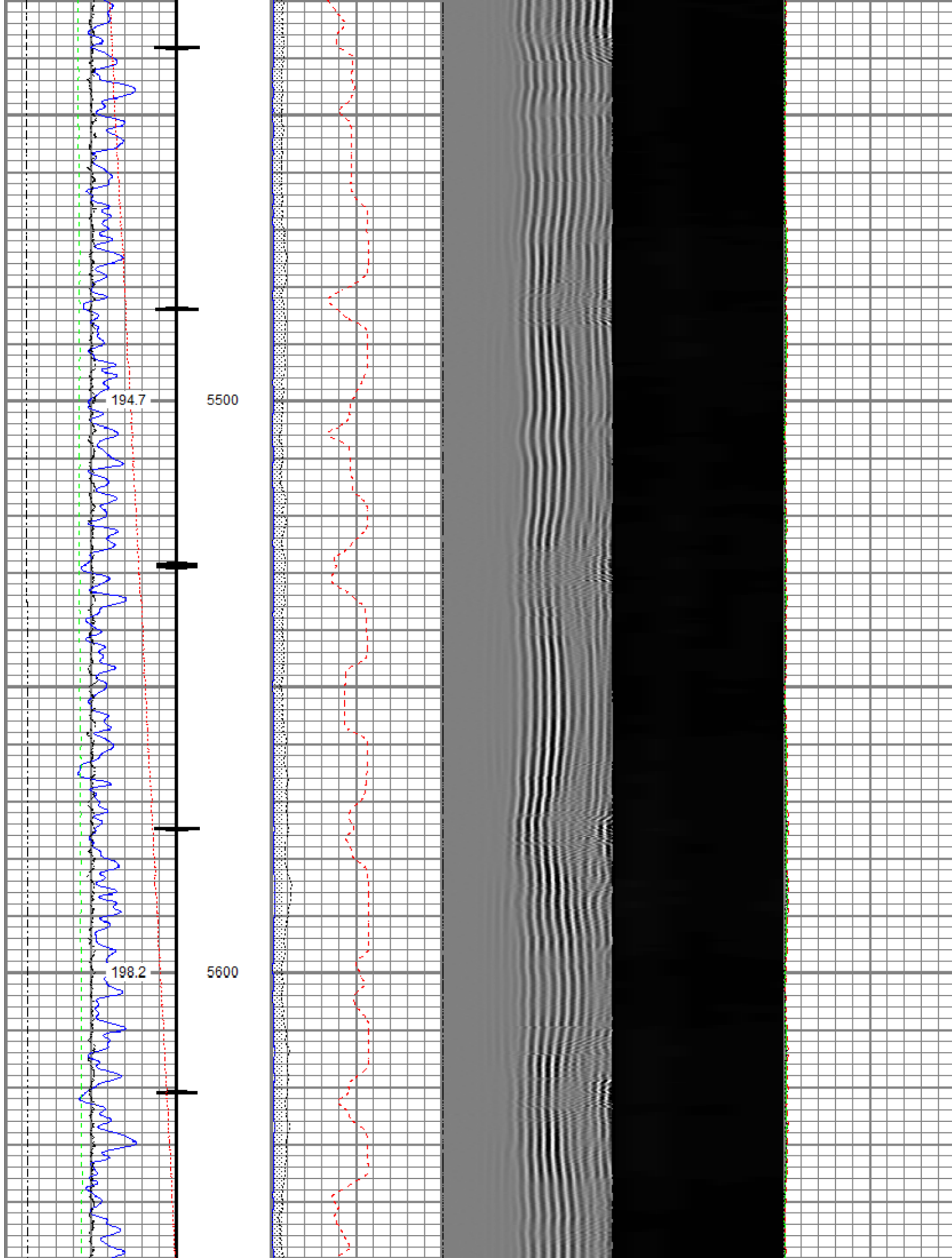


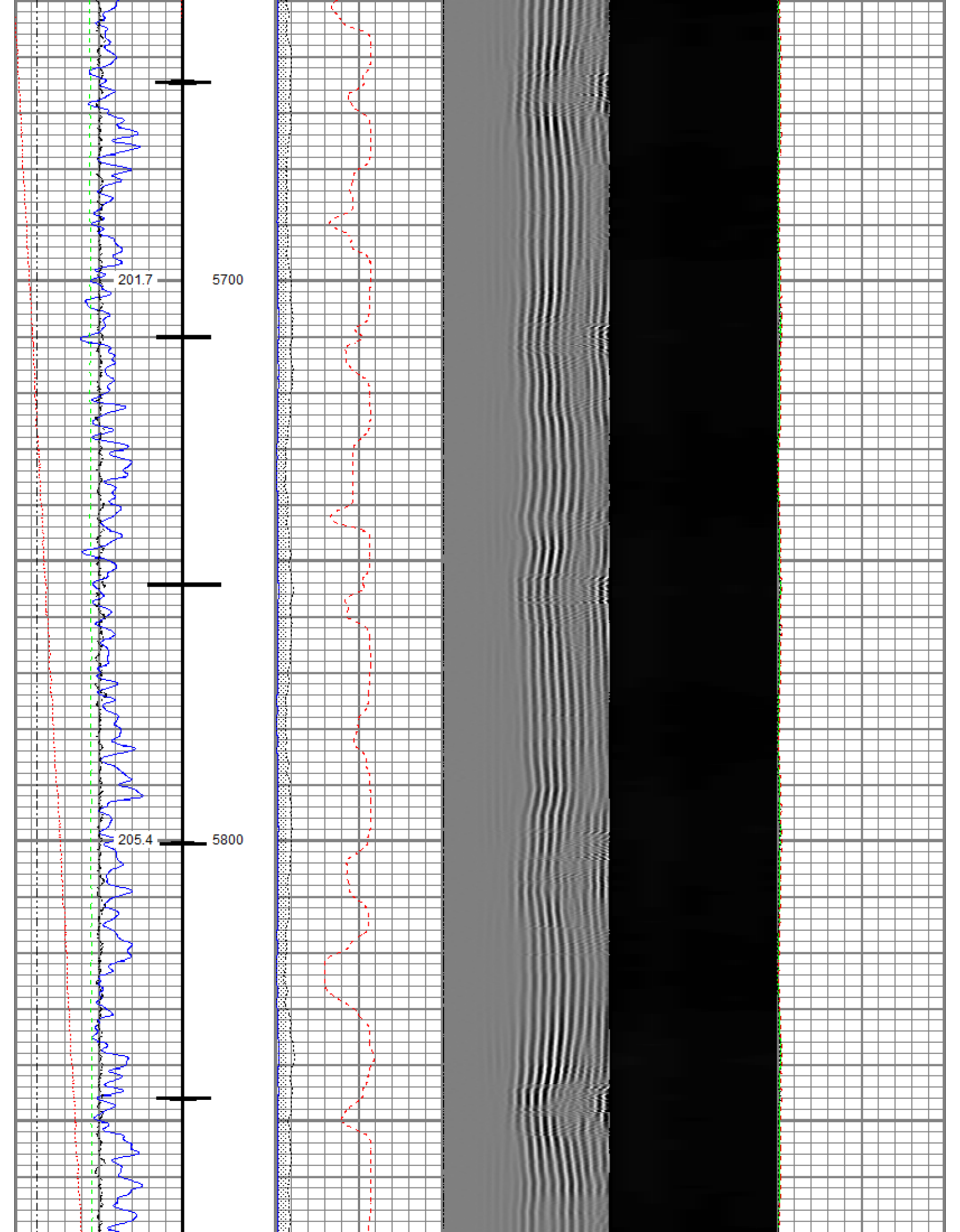




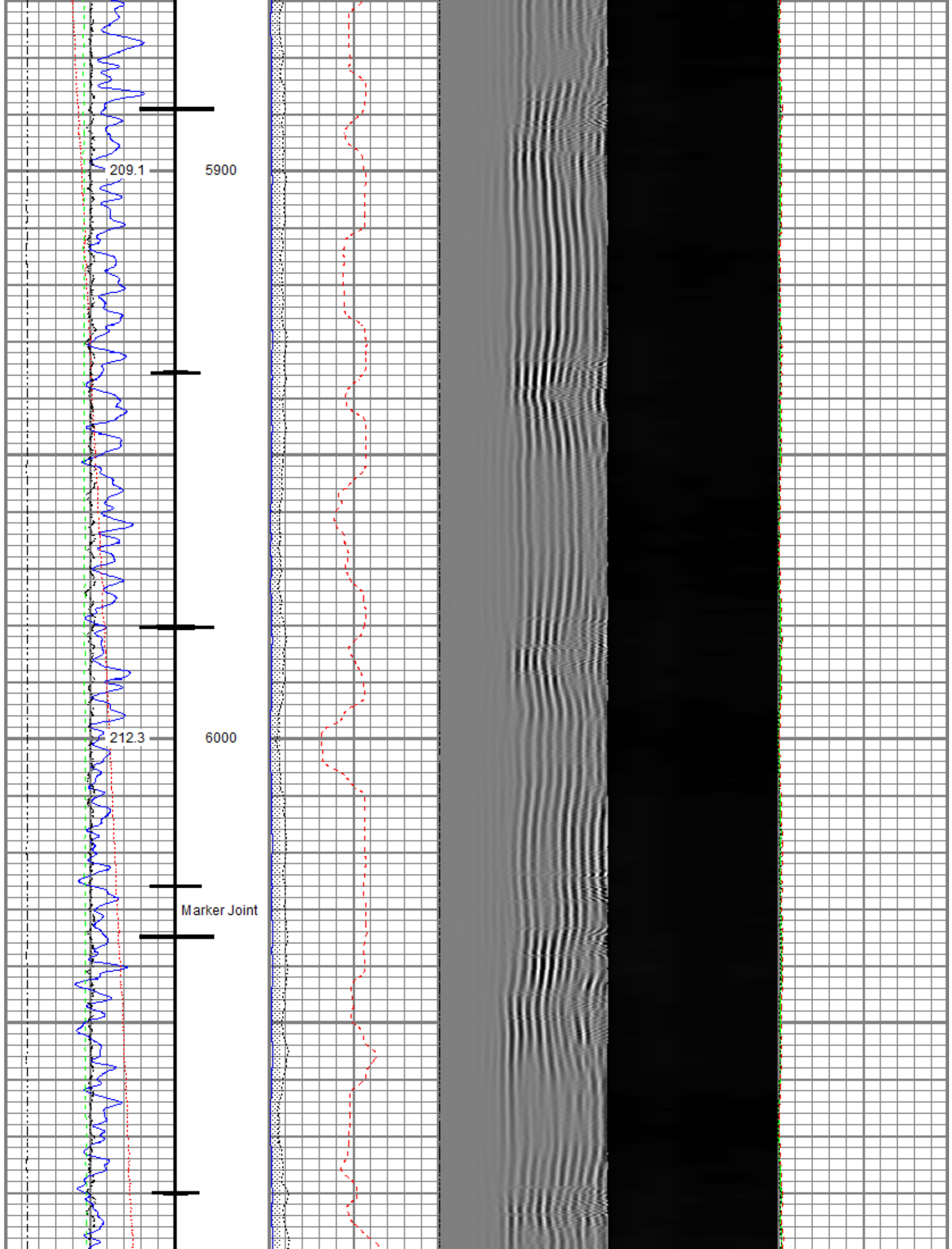


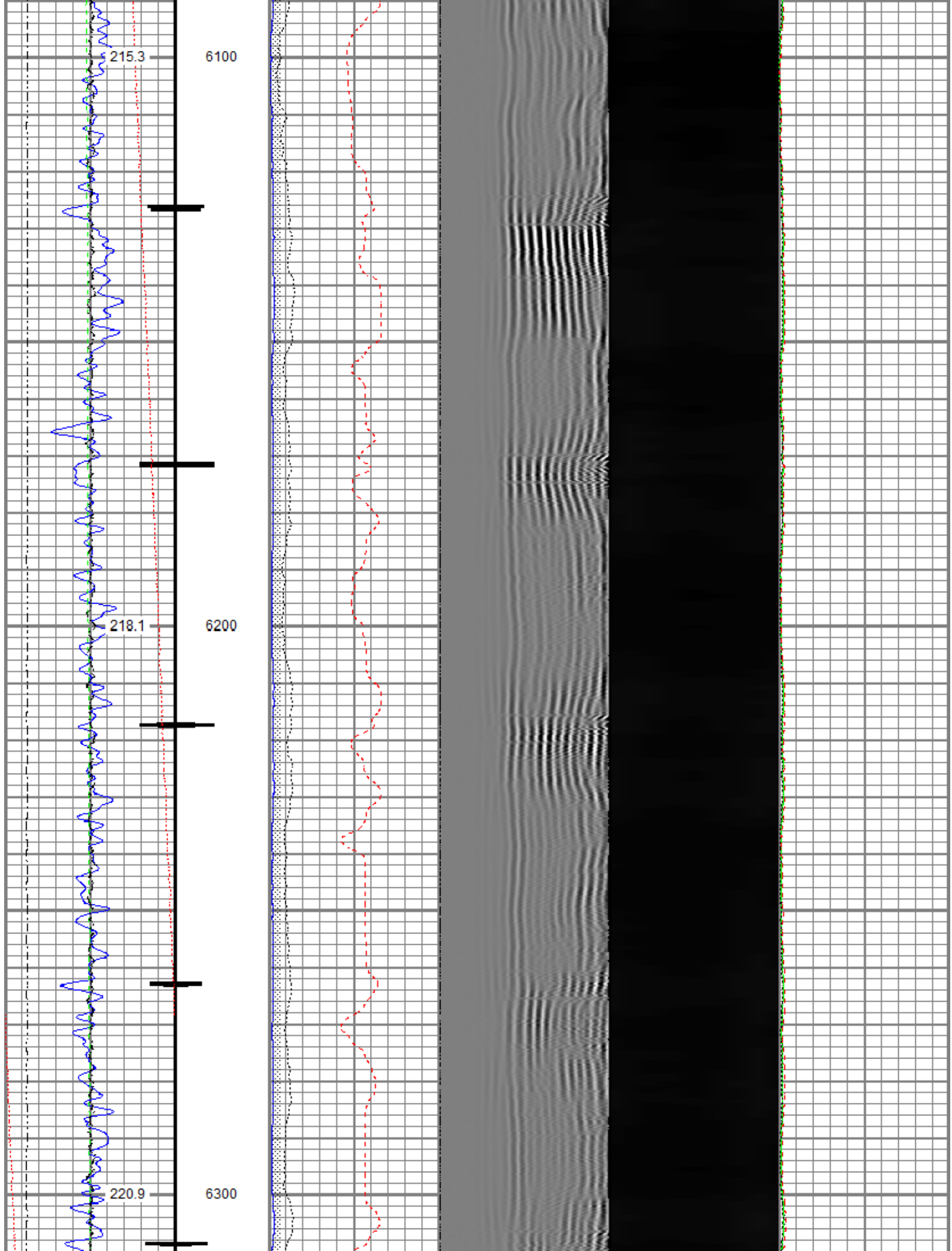


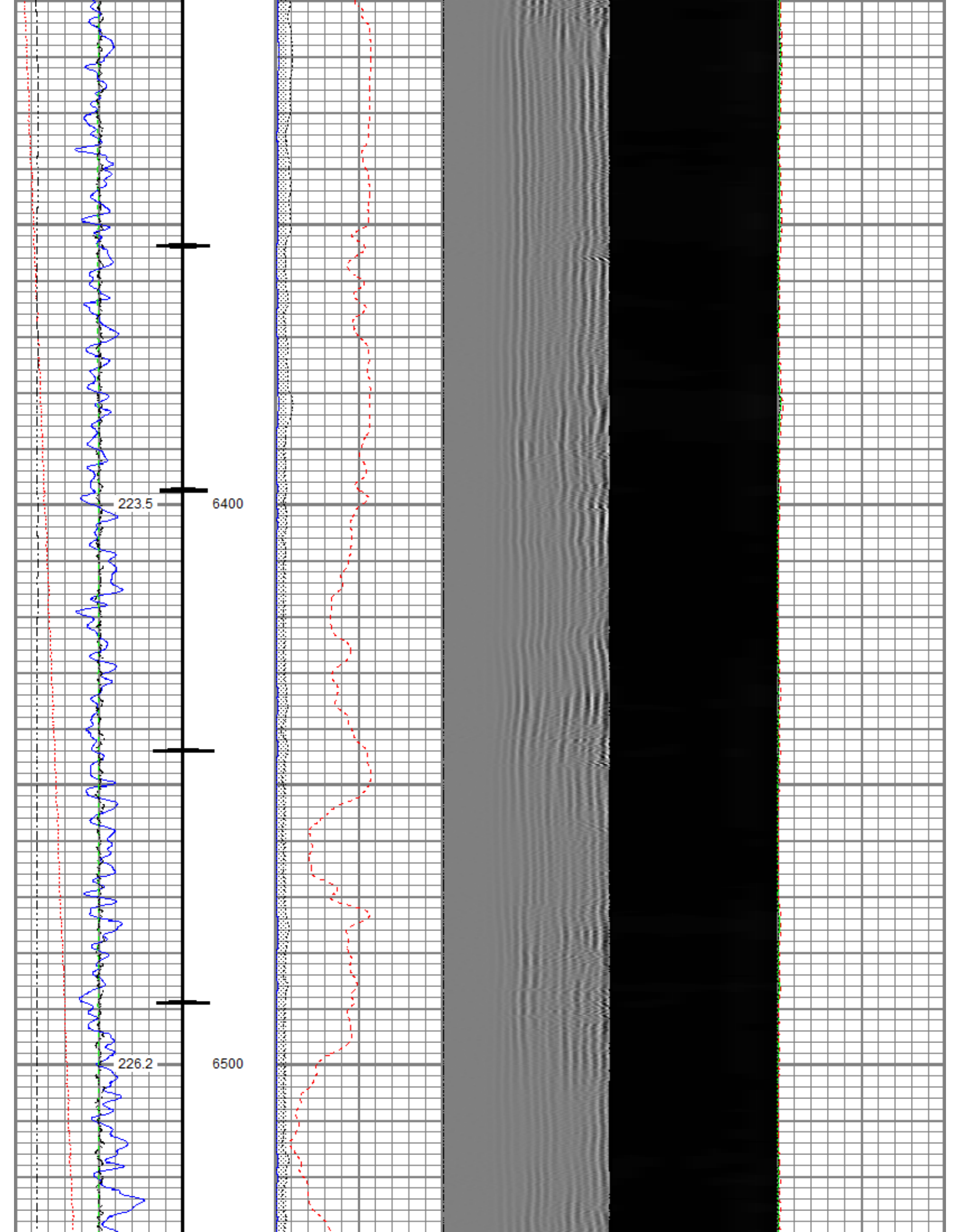


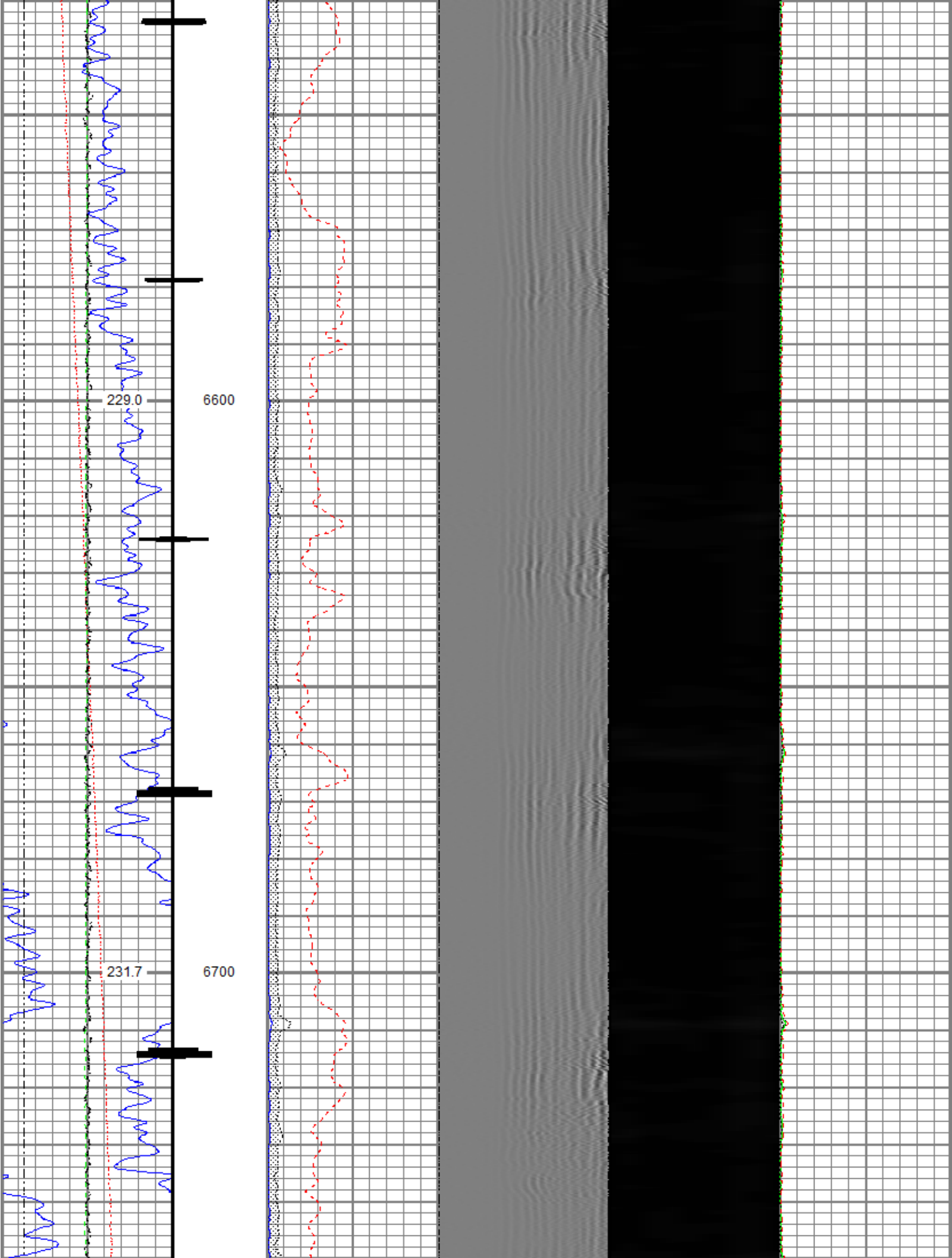




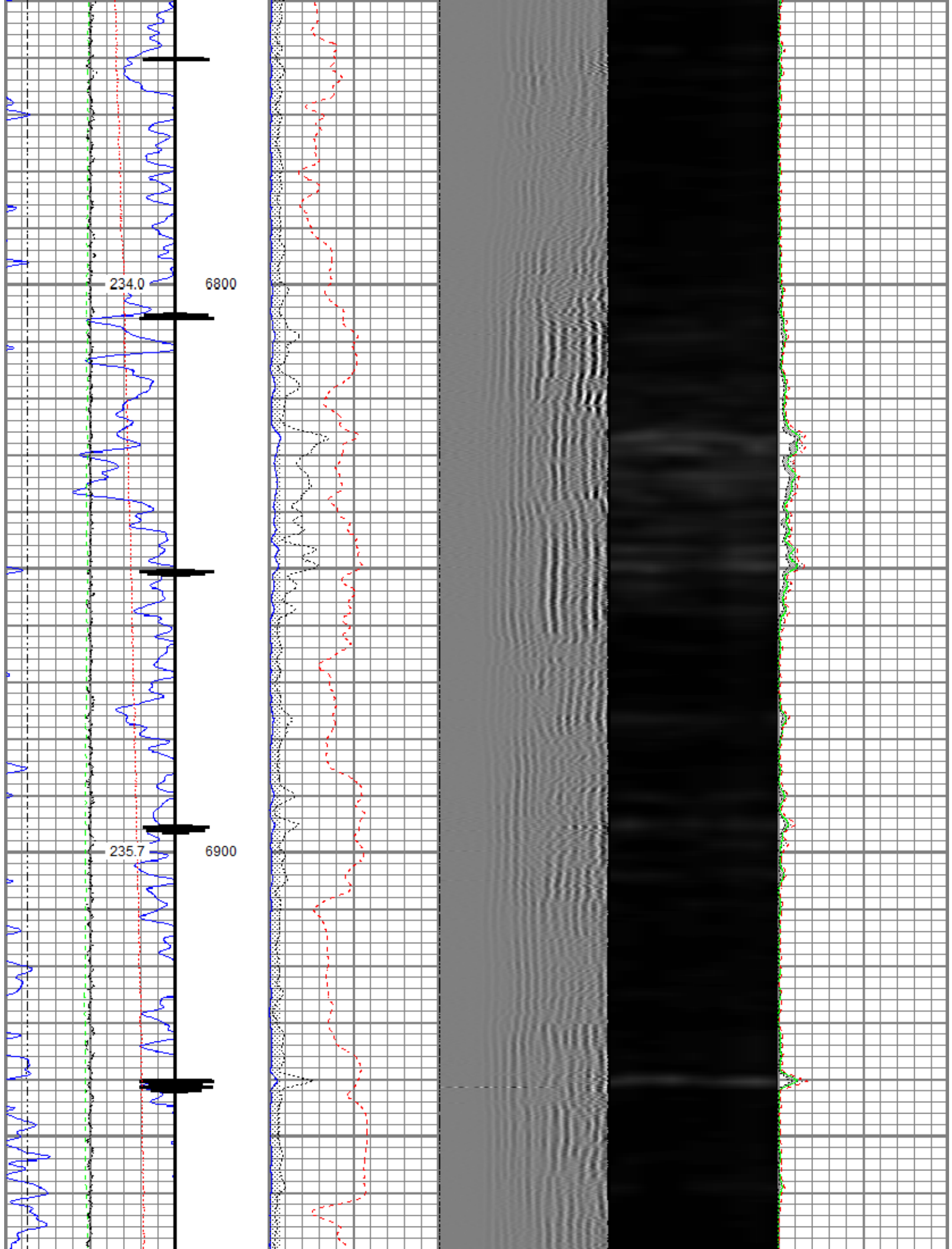


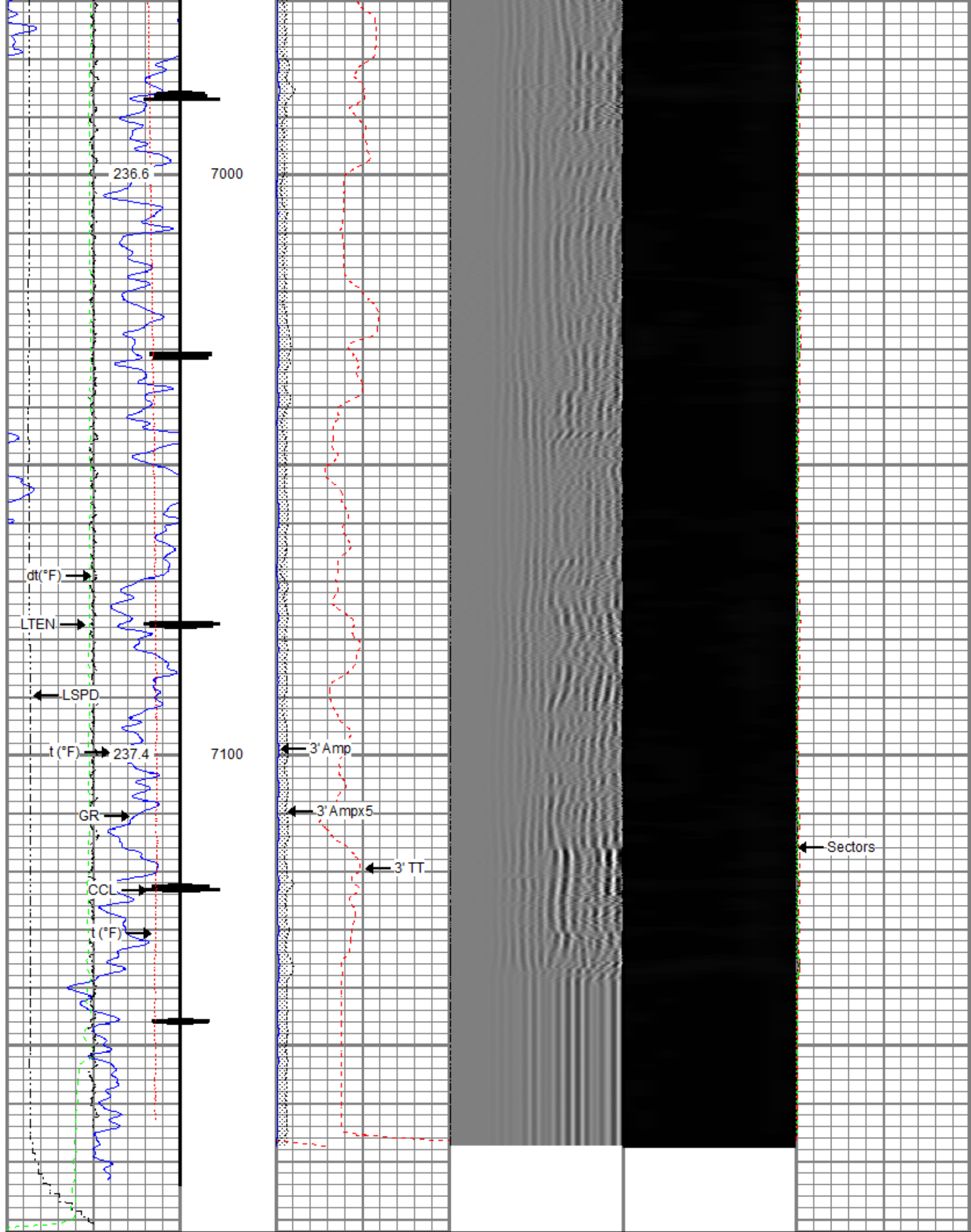












Gamma Ray	0 3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0 Average Amplitude 100
(GAPI) 120	3' Amplitude x 5	200 (usec) 1200		Minimum Amplitude

Casing Collar Locator	0	(mV)	20	0	100
0 Temperature (degF) 20	3' Travel Time			Maximum Amplitude	
Line Speed	650	(usec)	150	0	100
-150 (ft/min) 150					
0 Line Tension (lb) 2000					
Differential Temperature					
-2 (degF) 2					

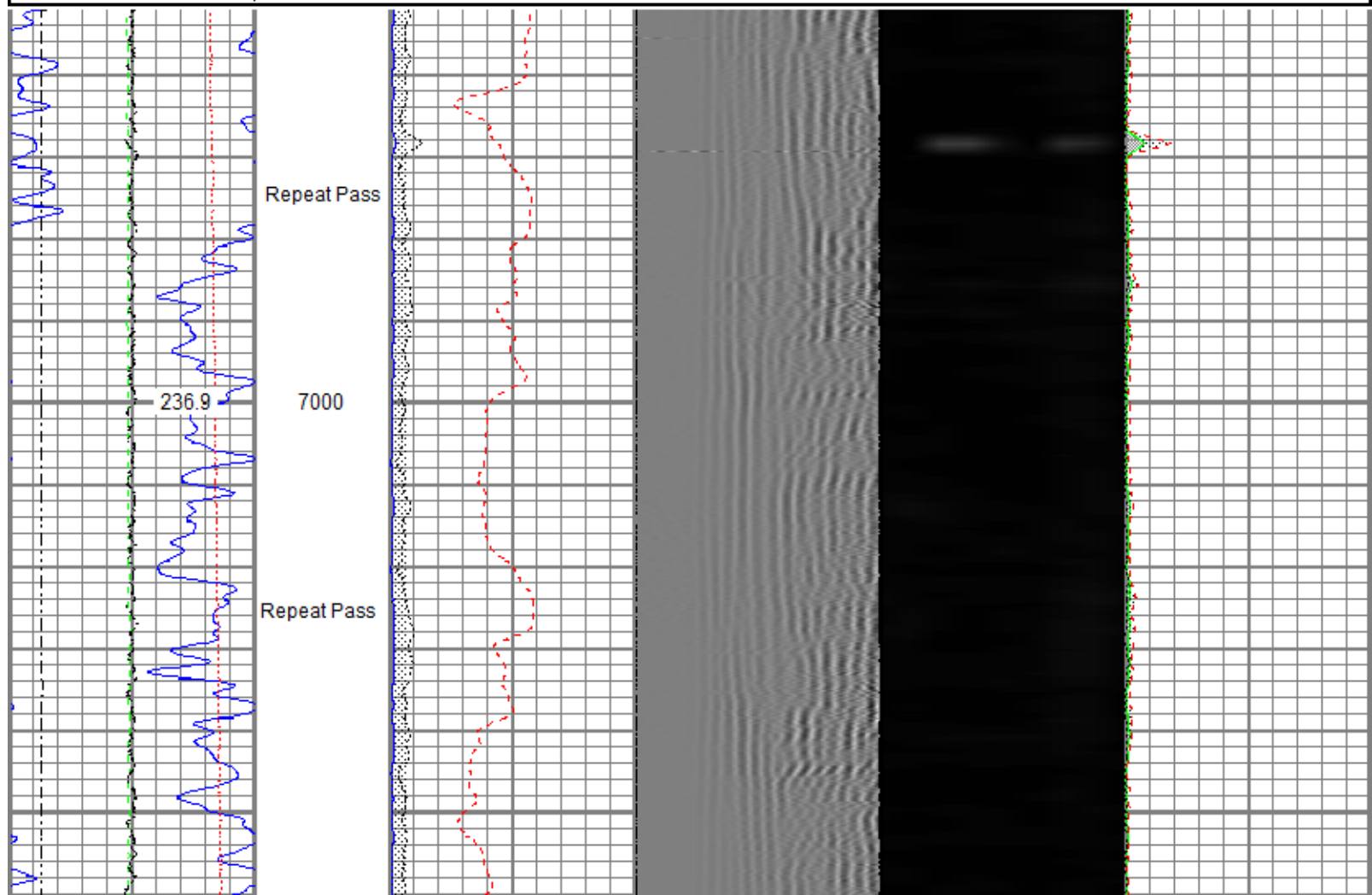


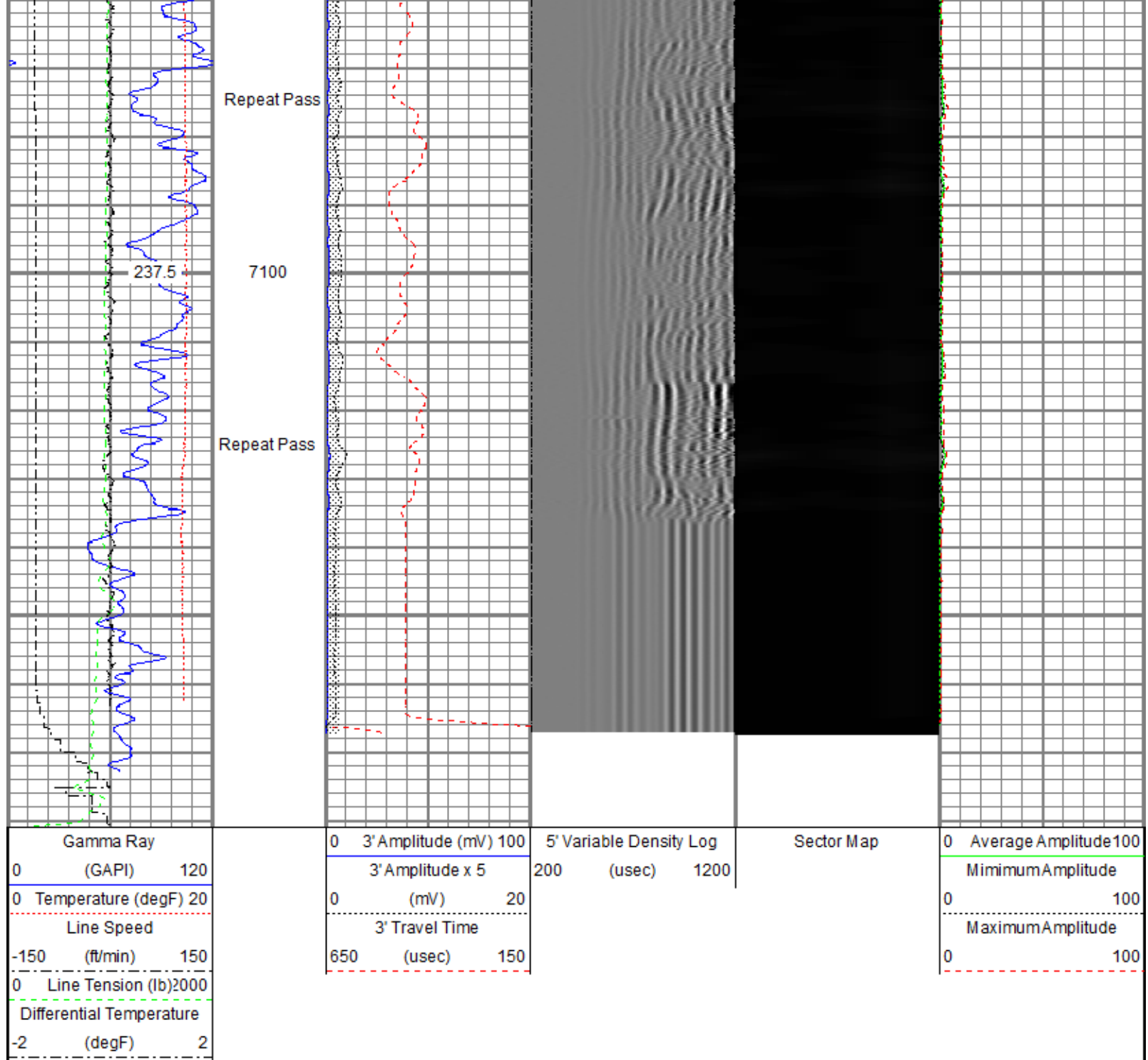
## Repeat Pass

Recorded With 2000 PSI Surface Induced Pressure

Database File noble\noble\_reveille a34-778\_rbl\_03-21-21\noble\_reveille a34-778\_rbl\_03-21-21.db  
Dataset Pathname repeat/pass2  
Presentation Format ros\_radri\_noble  
Dataset Creation Sun Mar 21 08:07:16 2021  
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
0 (GAPI) 120	3' Amplitude x 5		200 (usec) 1200		MinimumAmplitude	
0 Temperature (degF) 20	0	(mV) 20			0	100
Line Speed	3' Travel Time				MaximumAmplitude	
-150 (ft/min) 150	650	(usec) 150			0	100
0 Line Tension (lb) 2000						
Differential Temperature						
-2 (degF) 2						





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
ErrCt	23.86		Titan CHD-16875 GO	1.03	1.69	5.40
			Titan 1-11/16" Assembled Electric Cable Head with 1" Fishing Neck			
			Probe CENT-2750	2.88	2.75	20.00
			Probe 2-3/4" Electric Inline Bowspring Centralizer			
RBT_HV	19.95					



TEMP	17.04						
RBT_ACCZ	14.81			Probe Radii ACC-2750 RBTa (FW1302-002) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub and Accelerometer	9.39	2.75	105.00
RBT_ACCY	14.81						
RBT_ACCX	14.81						
WVFSYNC	14.81						
WVFS8	14.81						
WVFS7	14.81						
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						
CCL\$2	6.80		Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00	
CCL\$1	6.80						
GR	5.46		Probe GR-CCL-2750 6PB (FW1810-044) Probe 2-3/4" rev.1 Digital Scintillation Gamma Ray/CCL Combined with 6 Pin Bottom for CNT	4.80	2.75	55.00	
LOCTIM	0.00		Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00	
UTCTIM	0.00						
Dataset: Noble_Reveille A34-778_RBL_03-21-21.db: field/well/main/pass1 Total length: 23.86 ft Total weight: 225.40 lb O.D.: 2.75 in							

Calibration Report			
Database File	C:\ProgramData\Warrior\Data\Noble\Noble_Reveille A34-778_RBL_03-21-21\Noble_Reveille A34-778_RBL_03-21-21.db		
Dataset Pathname	main/pass1		
Dataset Creation	Sun Mar 21 08:11:05 2021		
Gamma Ray Calibration Report			
Serial Number:	FW1810-044		
Tool Model:	2750 6PB		
Performed:	Mon Oct 19 14:19:51 2020		
Calibrator Value:	637.0	GAPI	
Background Reading:	105.3	cps	
Calibrator Reading:	1221.0	cps	
Sensitivity:	0.5709	GAPI/cps	

Segmented Cement Bond Log Calibration Report					
Serial Number:	FW1302-002				
Tool Model:	2750 RBTa				
Calibration Casing Diameter:	5.500	in			
Calibration Depth:	30.000	ft			

Master Calibration, performed Sat Mar 20 14:23:37 2021:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.009	0.579	0.800	71.921	124.760	-0.275
CAL	0.605	0.608				
5'	0.008	0.578	0.800	71.921	124.653	-0.181
SUM						
S1	0.006	0.549	0.000	100.000	184.181	-1.167
S2	0.008	0.583	0.000	100.000	174.035	-1.449
S3	0.008	0.638	0.000	100.000	158.963	-1.349
S4	0.008	0.662	0.000	100.000	153.033	-1.272
S5	0.009	0.654	0.000	100.000	154.989	-1.338
S6	0.008	0.606	0.000	100.000	167.406	-1.406
S7	0.008	0.561	0.000	100.000	180.919	-1.473
S8	0.008	0.541	0.000	100.000	187.519	-1.529

Air Zero Calibration, performed Sat Mar 20 14:23:18 2021:						
	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	

Inclinometer Calibration Report						
Performed:	Mon Oct 19 14:19:51 2020					
	Low Read.	High Read.	Low Ref.	High Ref.		
X Accelerometer	-891.00	891.00	-1.00	1.00	gee	
Y Accelerometer	-899.00	877.00	-1.00	1.00	gee	
Z Accelerometer	-7.47	873.36	0.00	1.00	gee	

Temperature Calibration Report					
Serial Number:	FW1302-002				
Tool Model:	2750 RBTa				
Performed:	Mon Oct 19 14:19:51 2020				
	Reference	Reading			
Low Reference:	100.00 degF	110.72	degF		

High Reference: 350.00 degF 409.18 degF

Gain: 0.84  
Offset: 7.26  
Delta Spacing 1



Company	Noble Energy Inc.
Well	Reveille A34-778
Field	Wattenberg
County	Weld
State	Colorado