



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company Noble Energy Inc.

Well Reveille A33-720

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-50790

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 A33-720  
Field Wattenberg  
County Weld  
State Colorado

Date	20-MAR-2021	One		
Run Number		17500 FT		
Depth Driller		7537 FT		
Depth Logger		7522 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		13:00		
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 6468.1 FT  
Adjusted -7 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!!

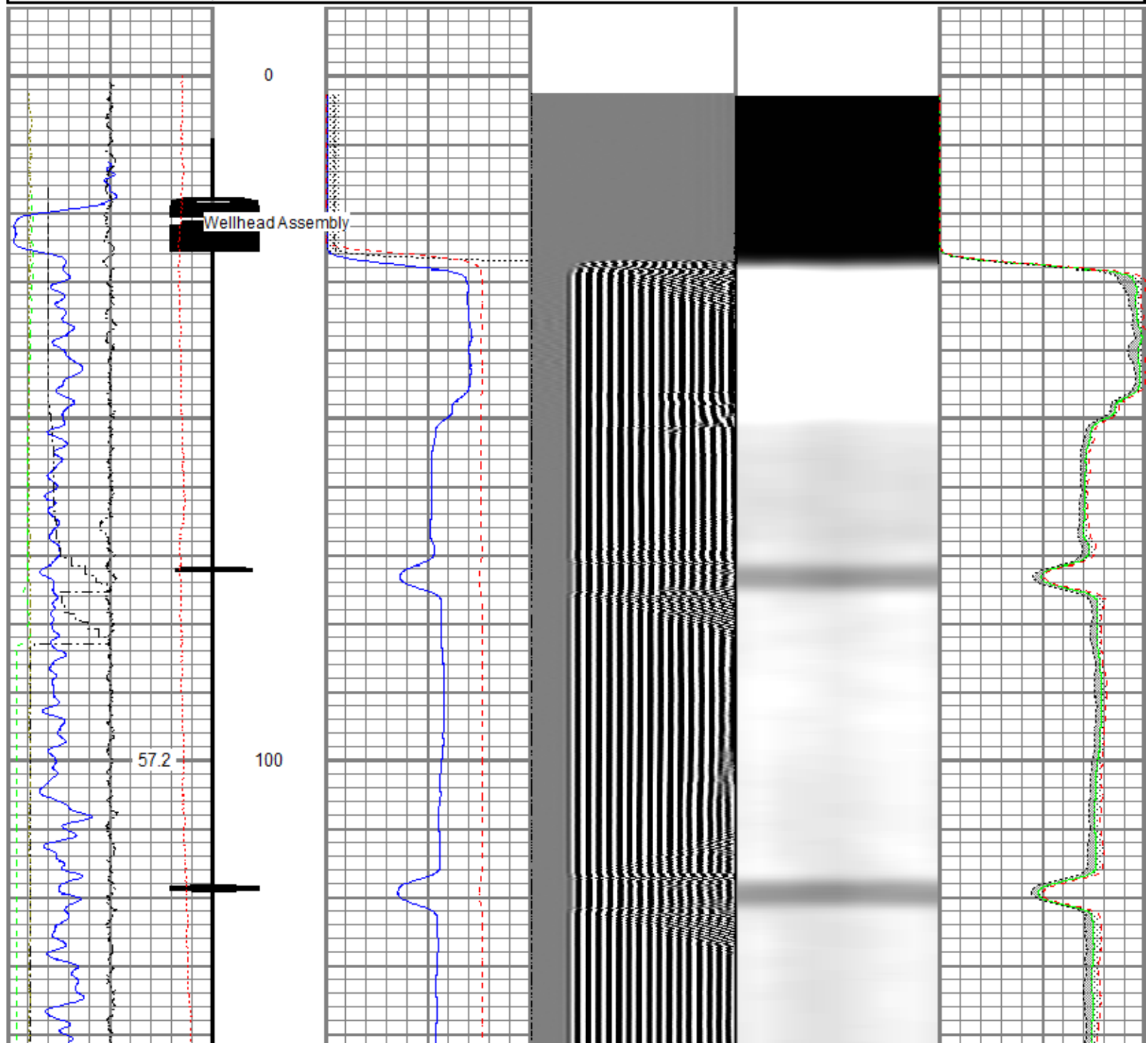
Main Pass

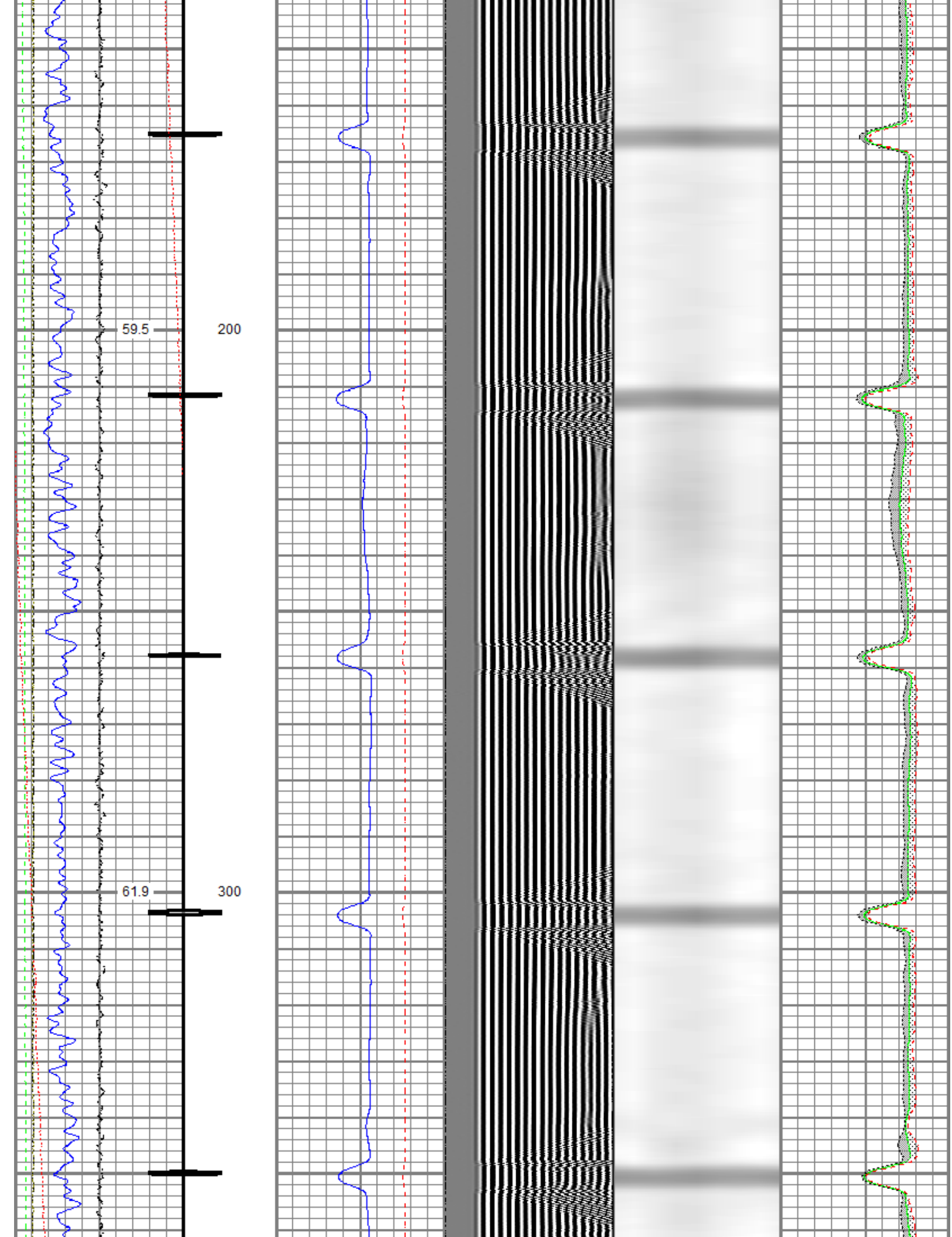


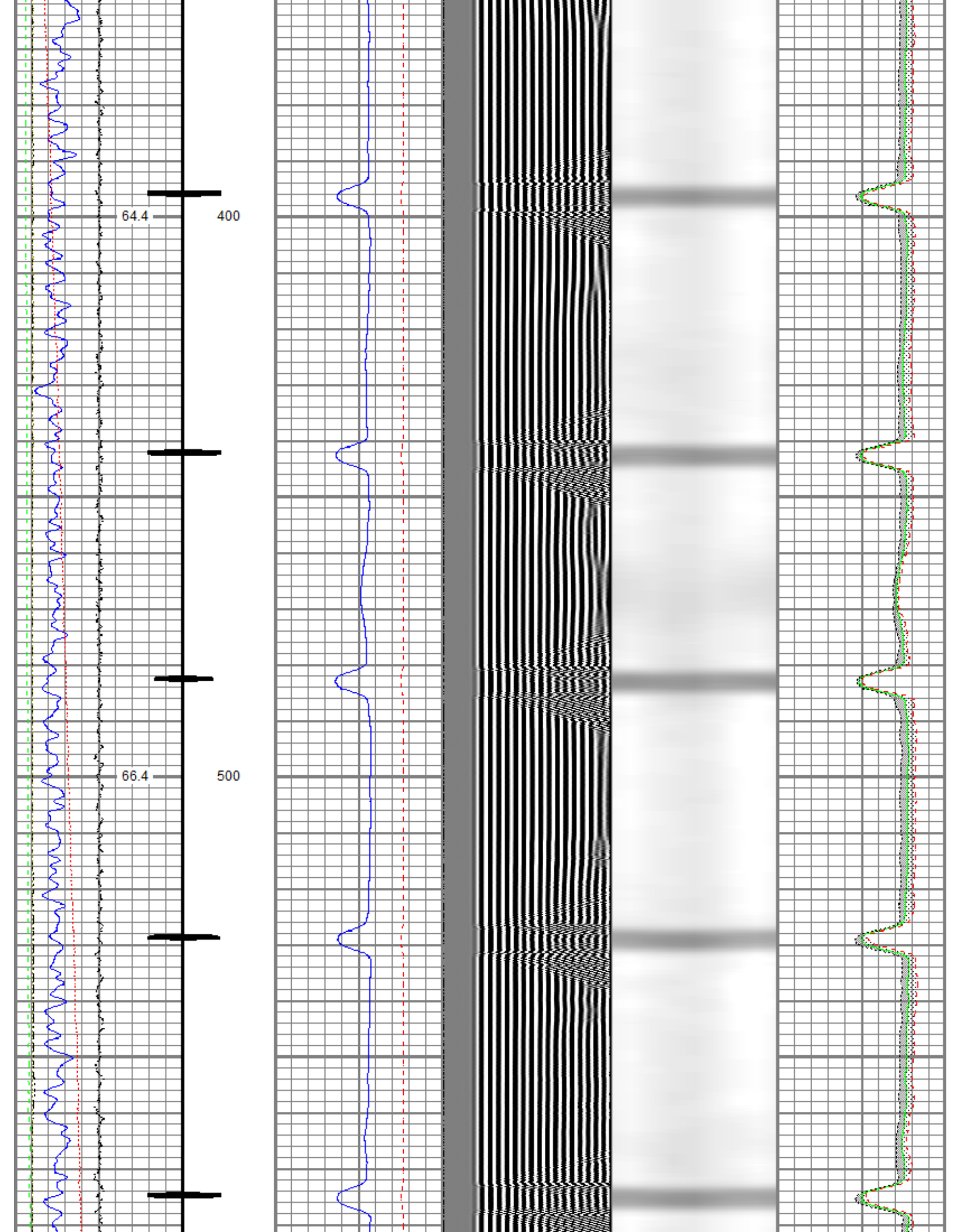
Recorded With 2000 PSI Surface Induced Pressure

Database File noble\noble\_reveille a33-720\_rbl\_03-20-21\noble\_reveille a33-720\_rbl\_03-20-21.db  
 Dataset Pathname main/pass1  
 Presentation Format ros\_radri\_noble  
 Dataset Creation Sat Mar 20 13:03:48 2021  
 Charted by Depth in Feet scaled 1:240

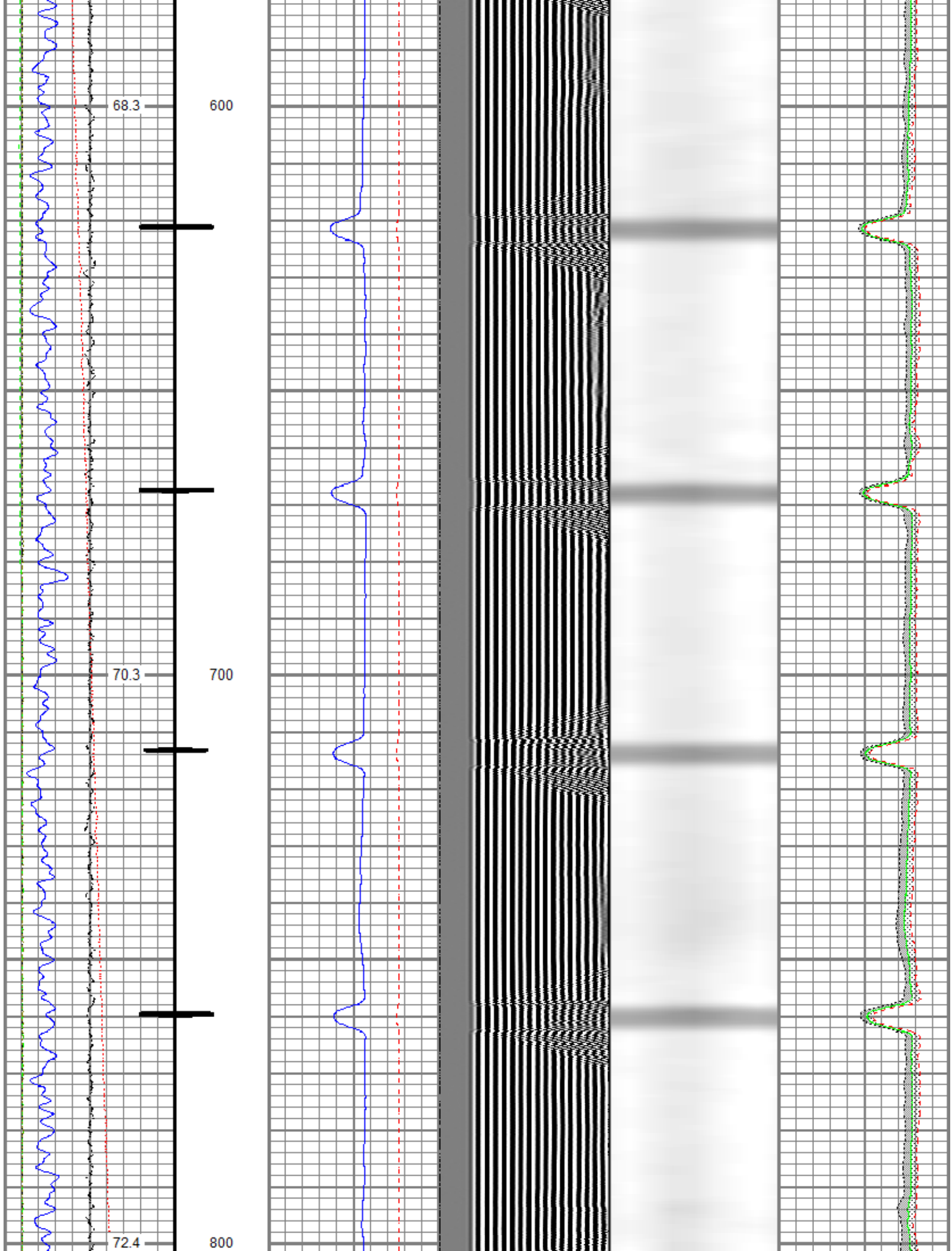
Gamma Ray	0	3' Amplitude (mV)	100	5' Variable Density Log	Sector Map	0	Average Amplitude	100
(GAPI)	120	3' Amplitude x 5	200	(usec)	1200		Minimum Amplitude	
Casing Collar Locator		0	(mV)	20		0		100
0 Temperature (degF)	20	3' Travel Time					Maximum Amplitude	
Line Speed		650	(usec)	150		0		100
-150 (ft/min)	150							
0 Line Tension (lb)	2000							
Differential Temperature								
-2 (degF)	2							
-10 Deviation (deg)	90							

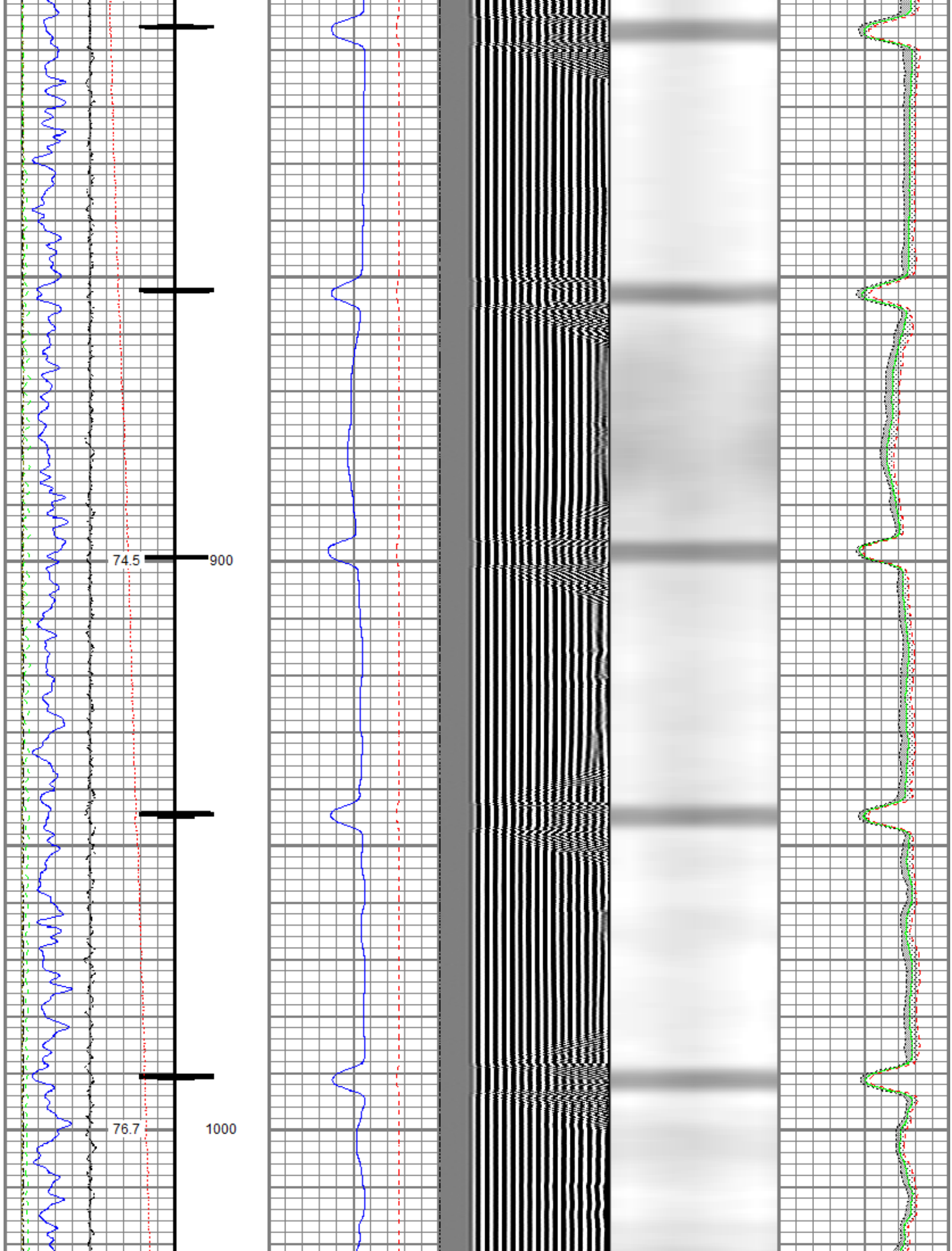


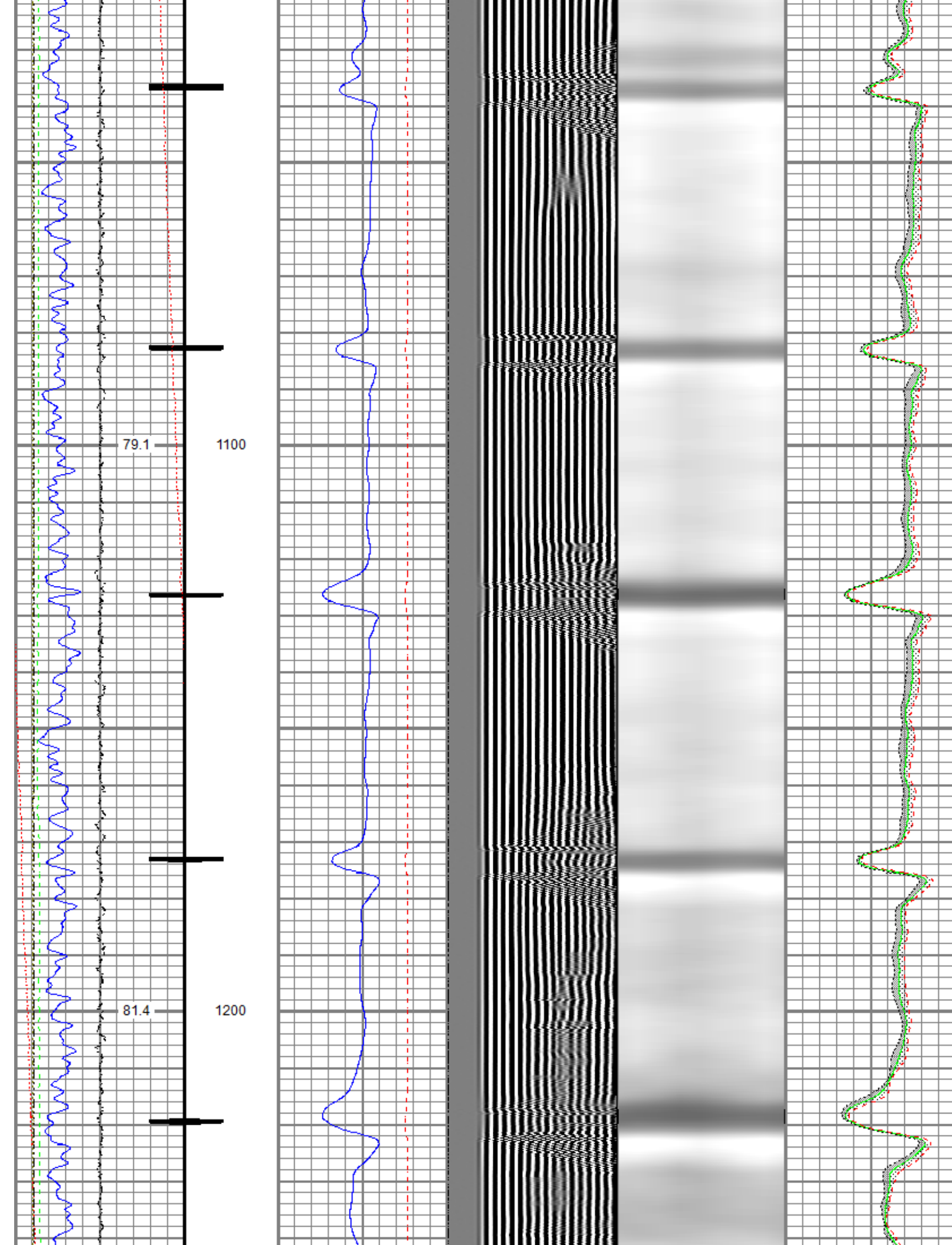




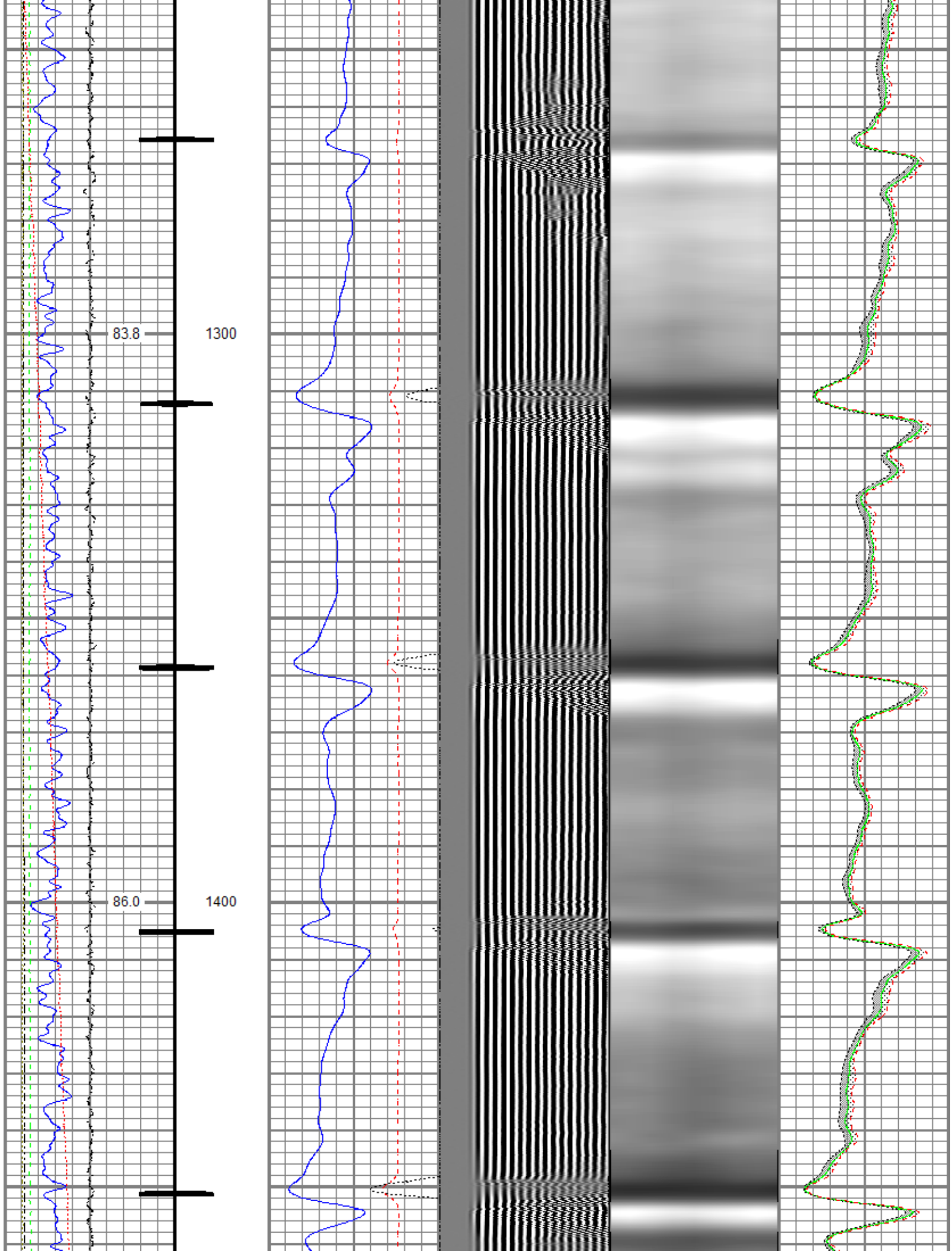




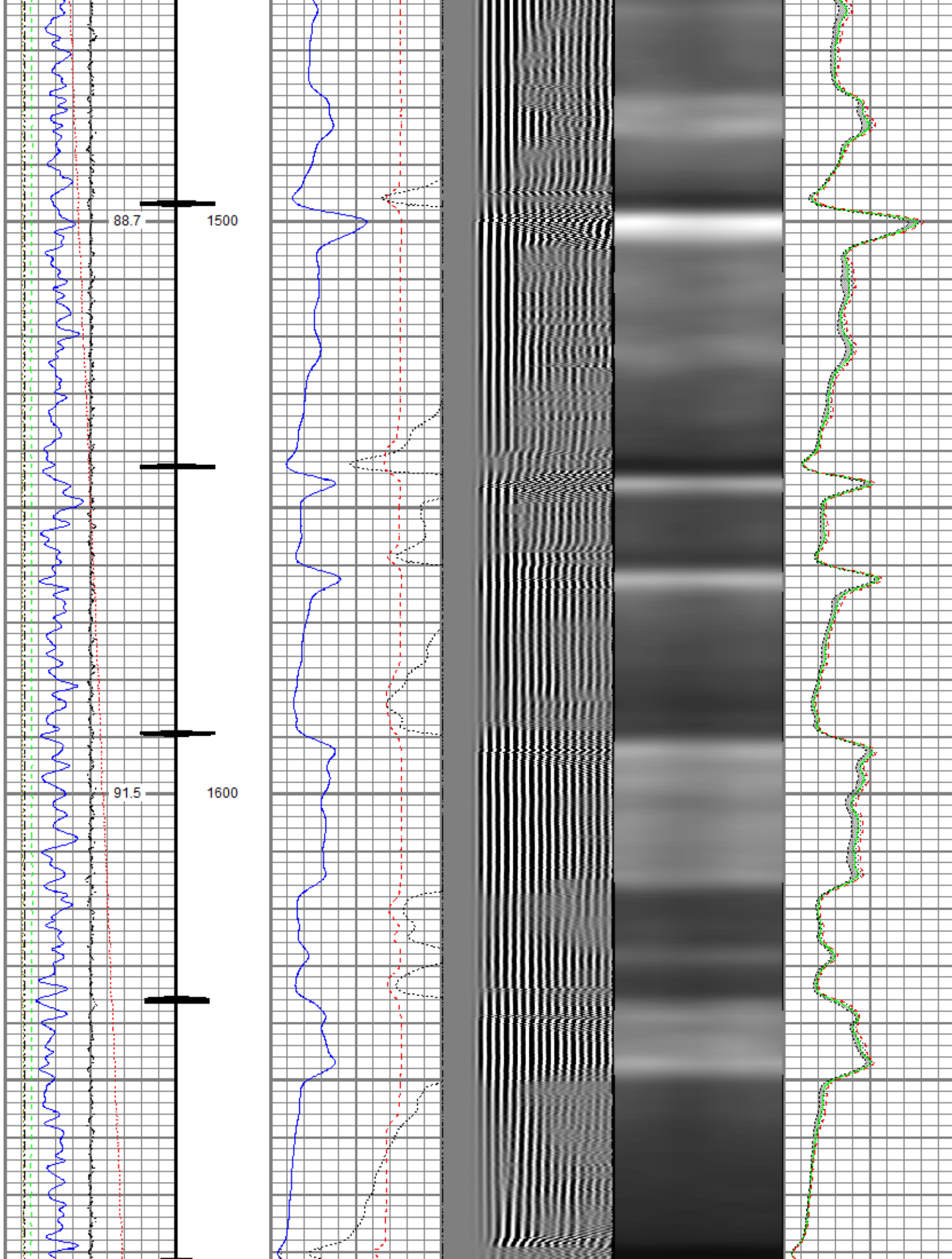


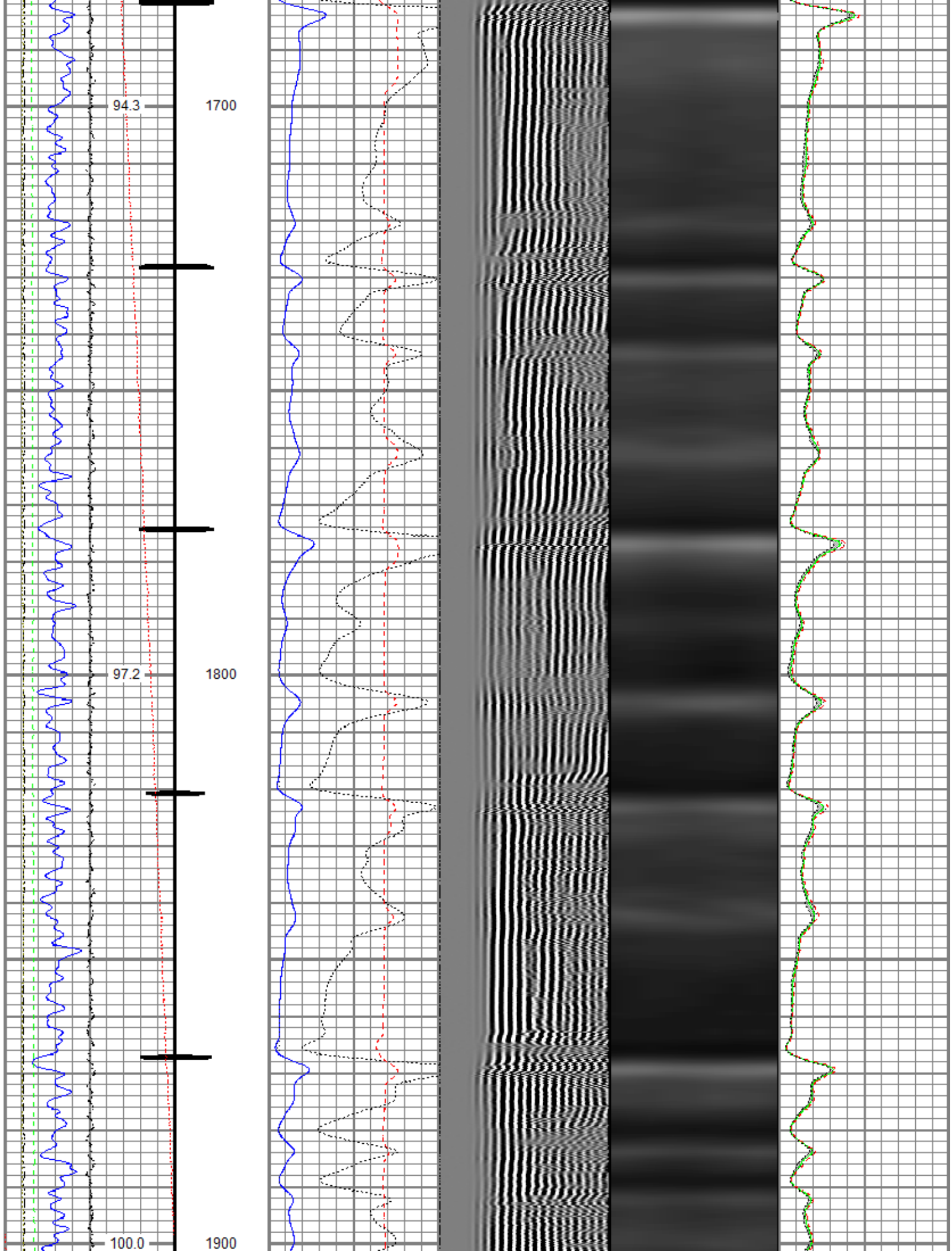


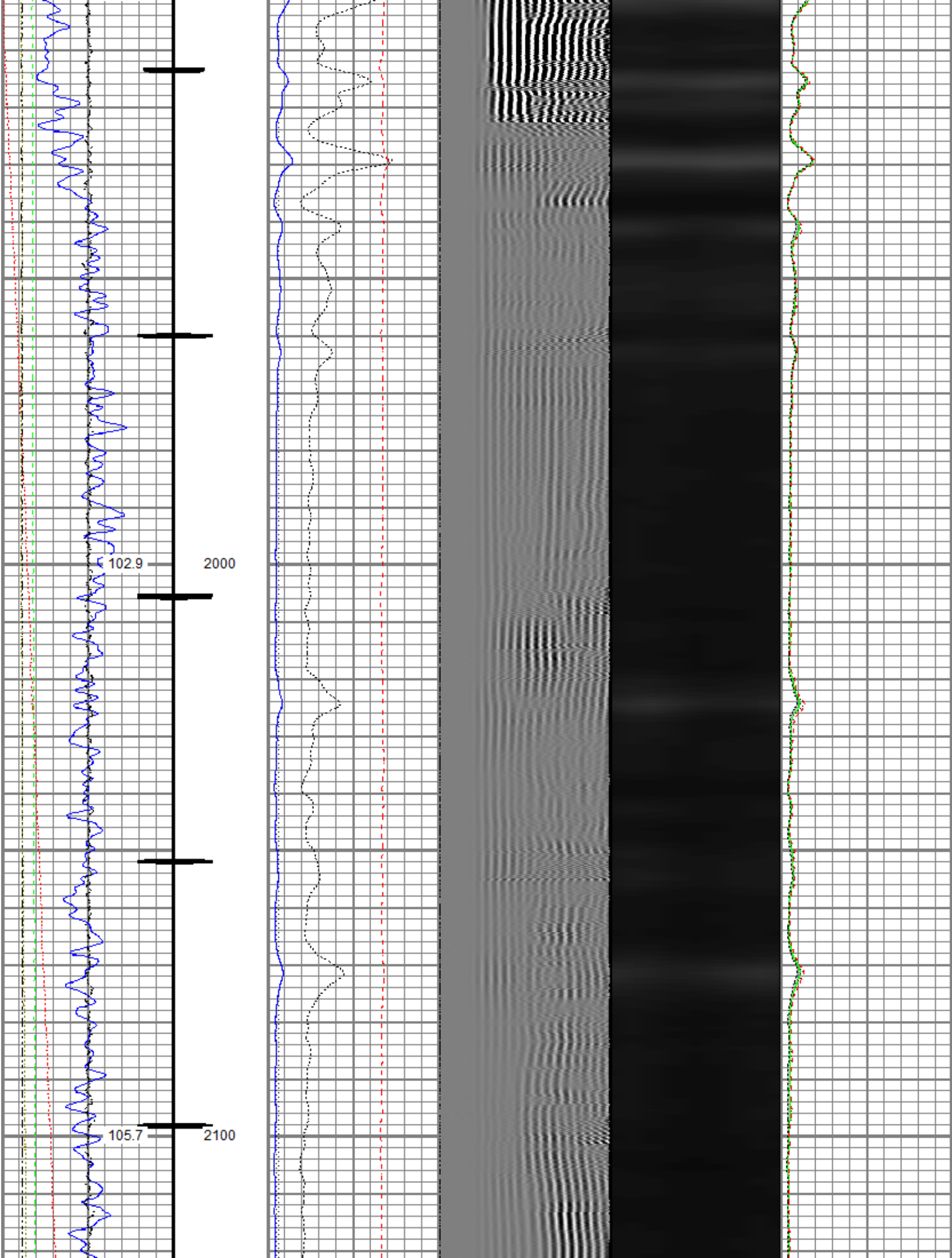




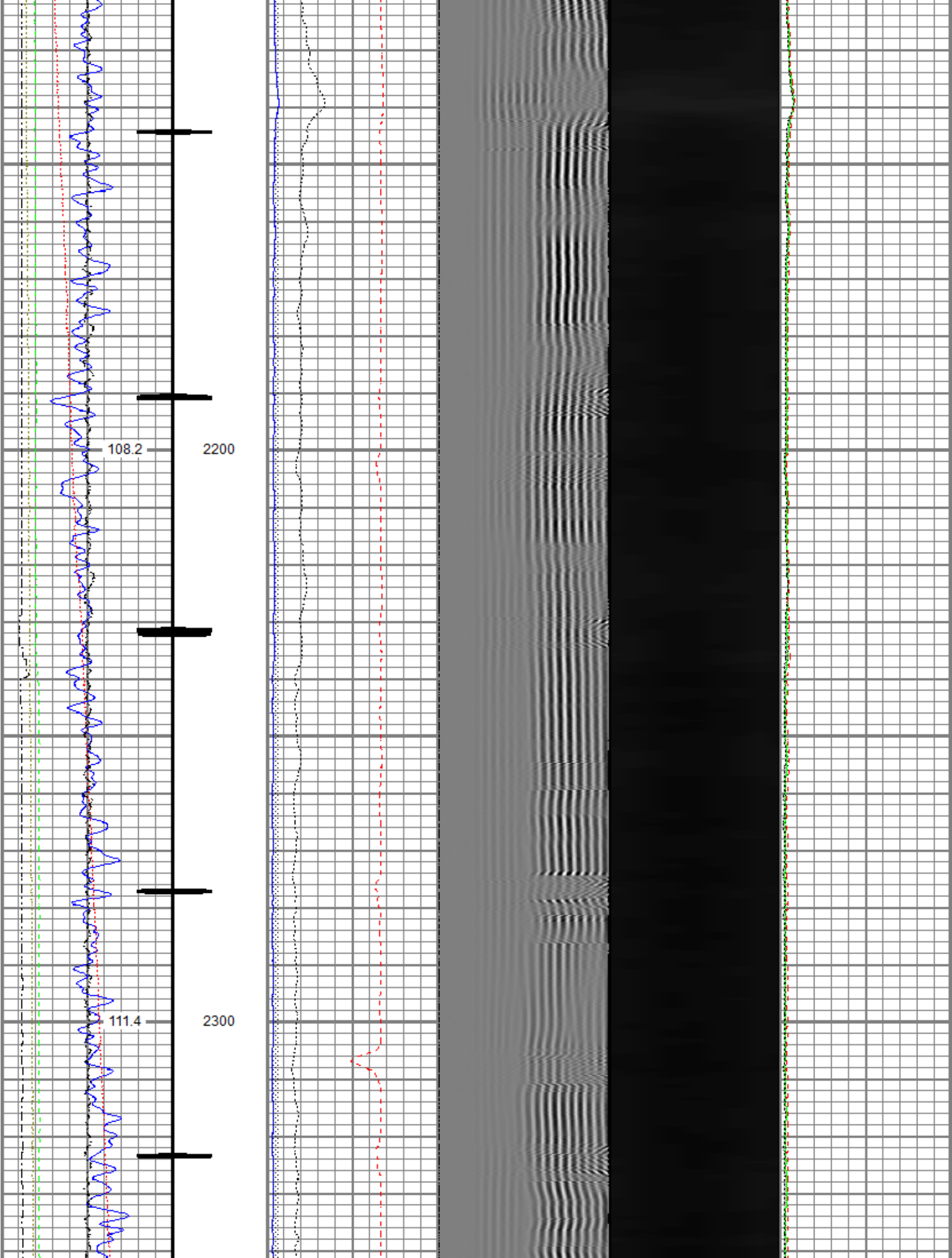




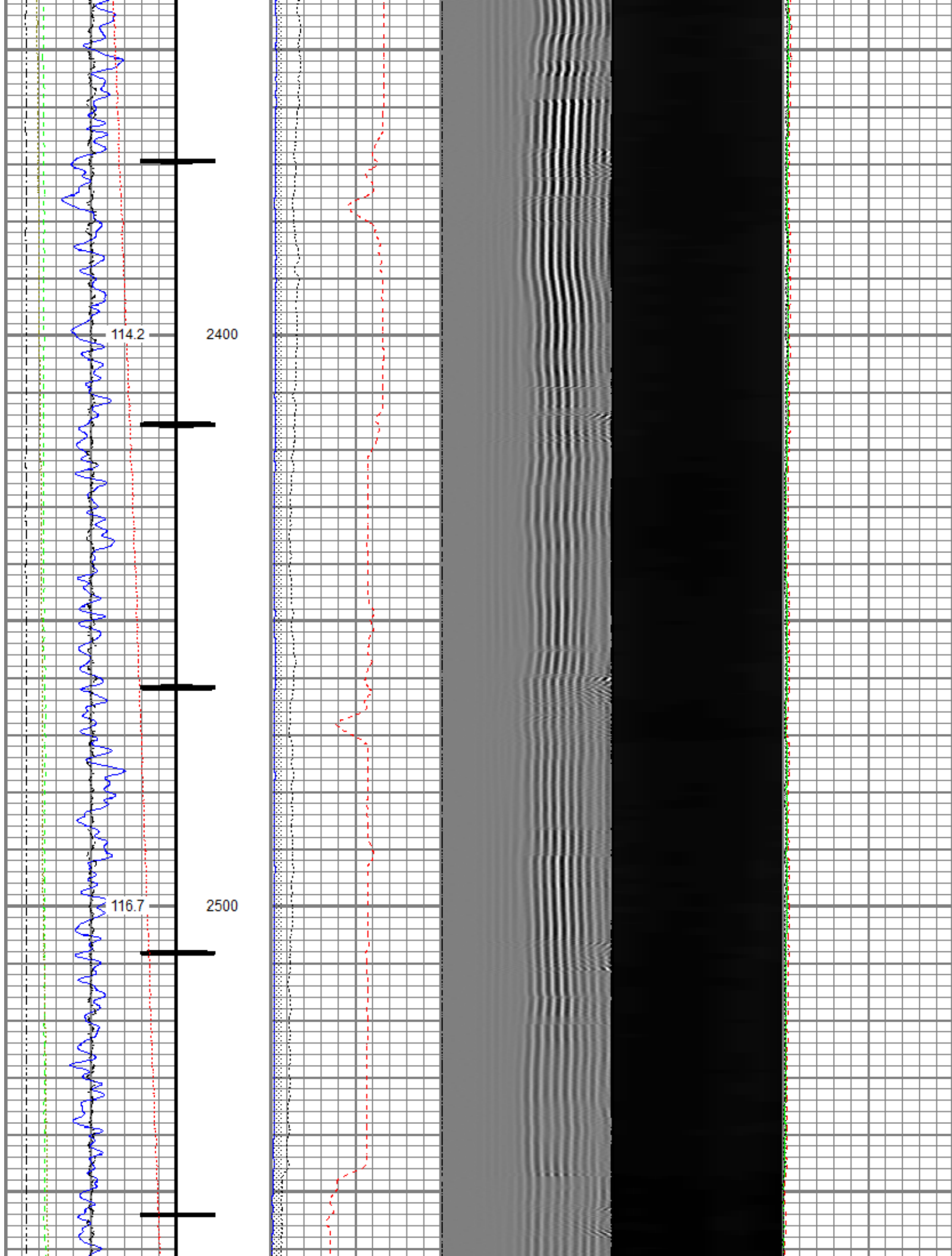


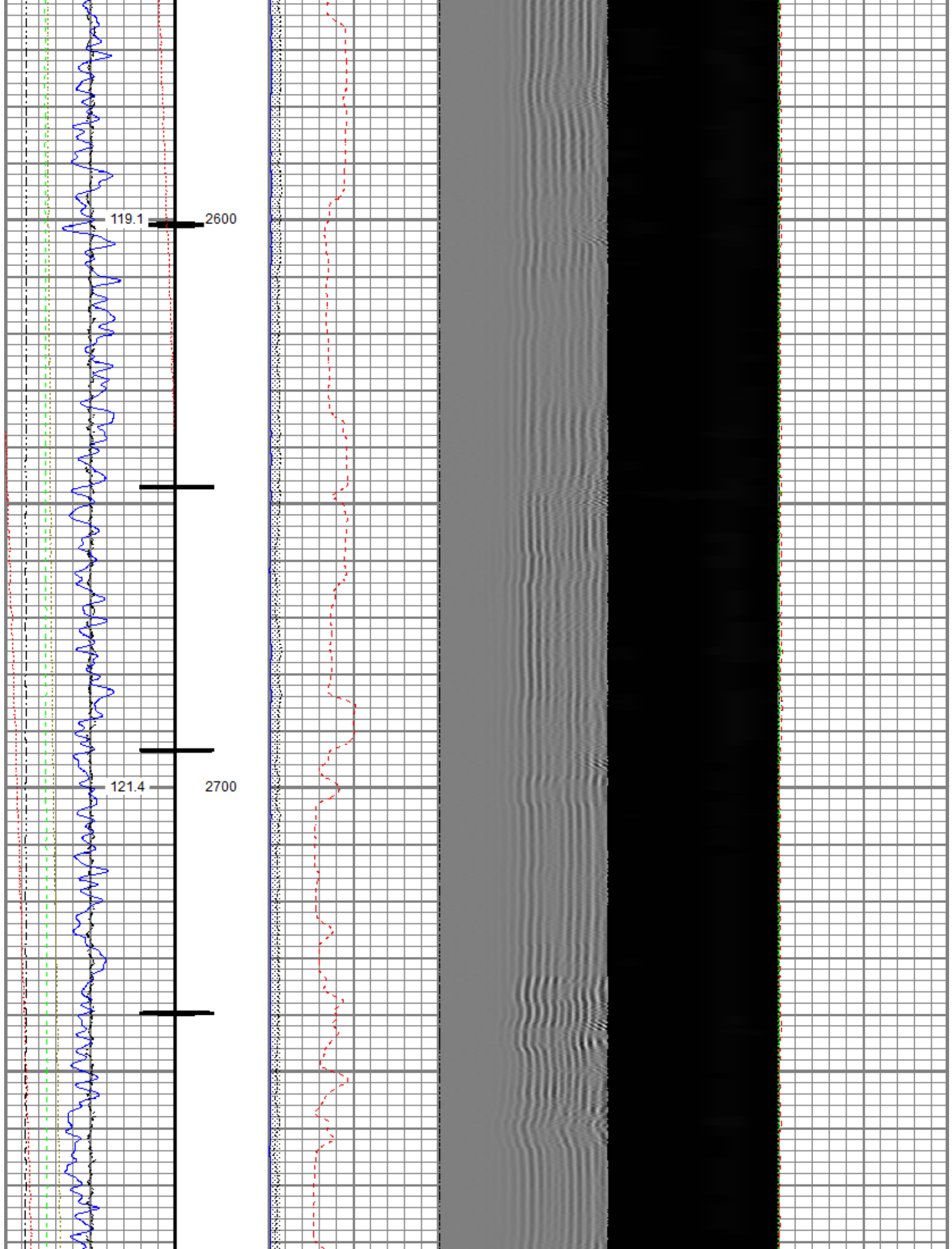


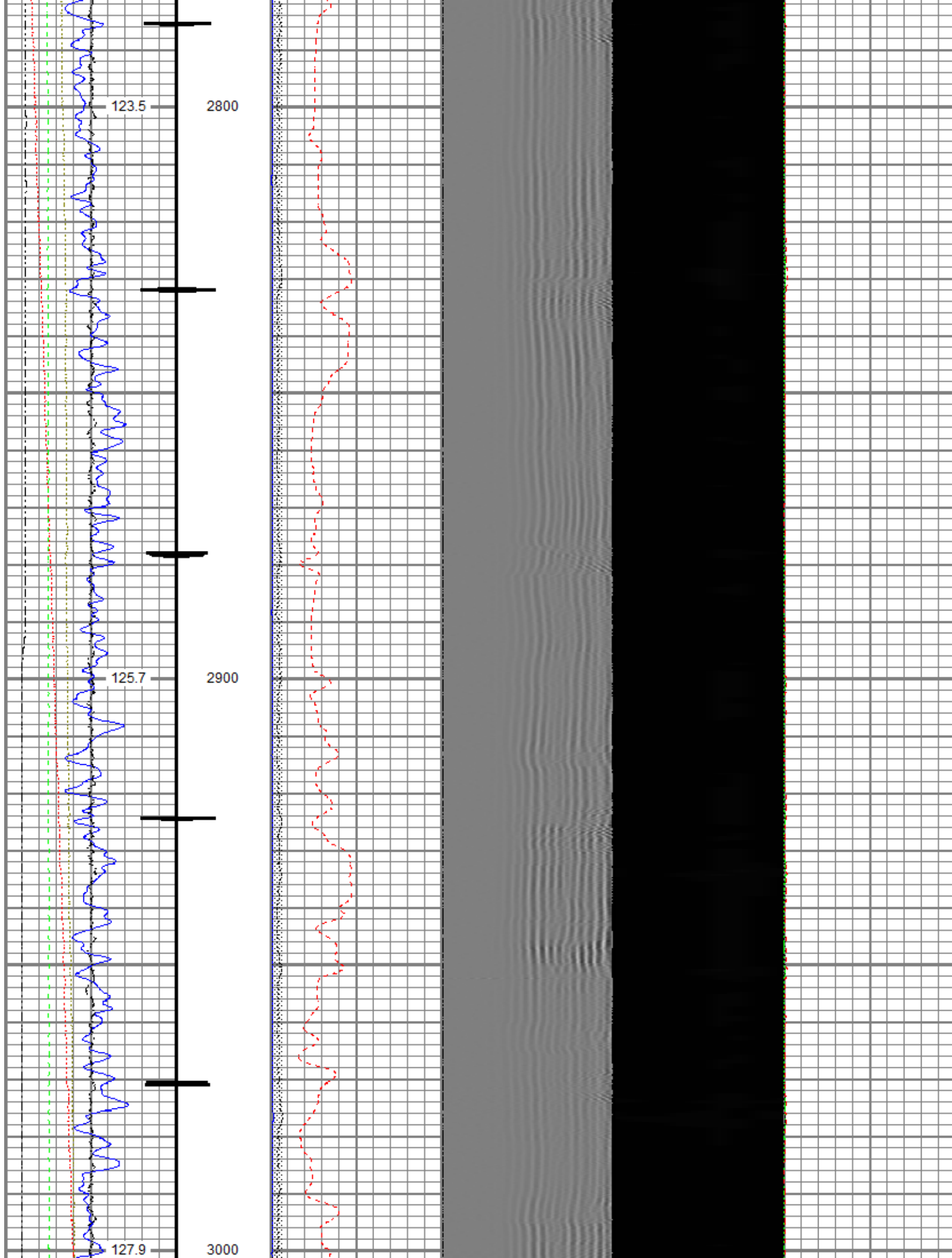


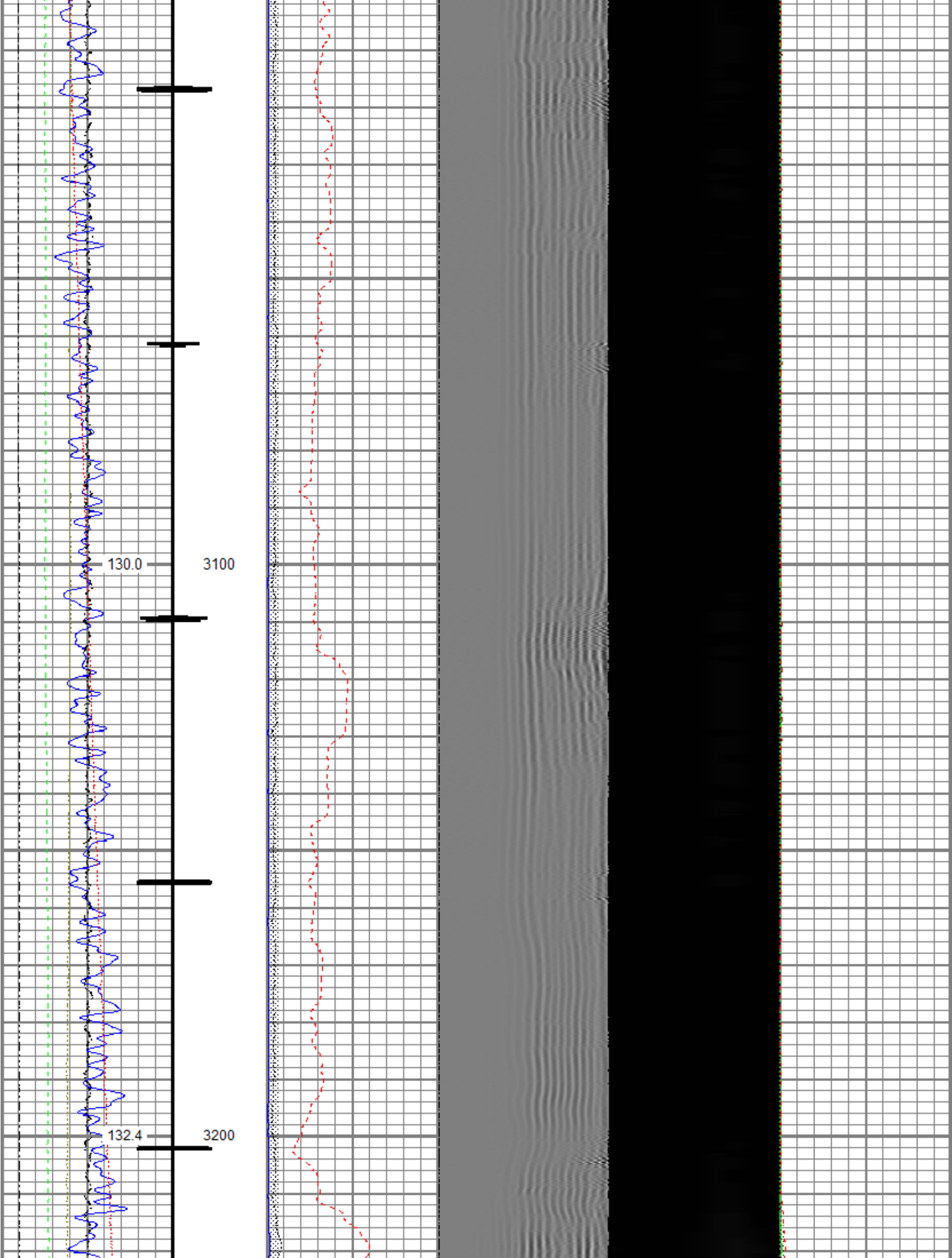




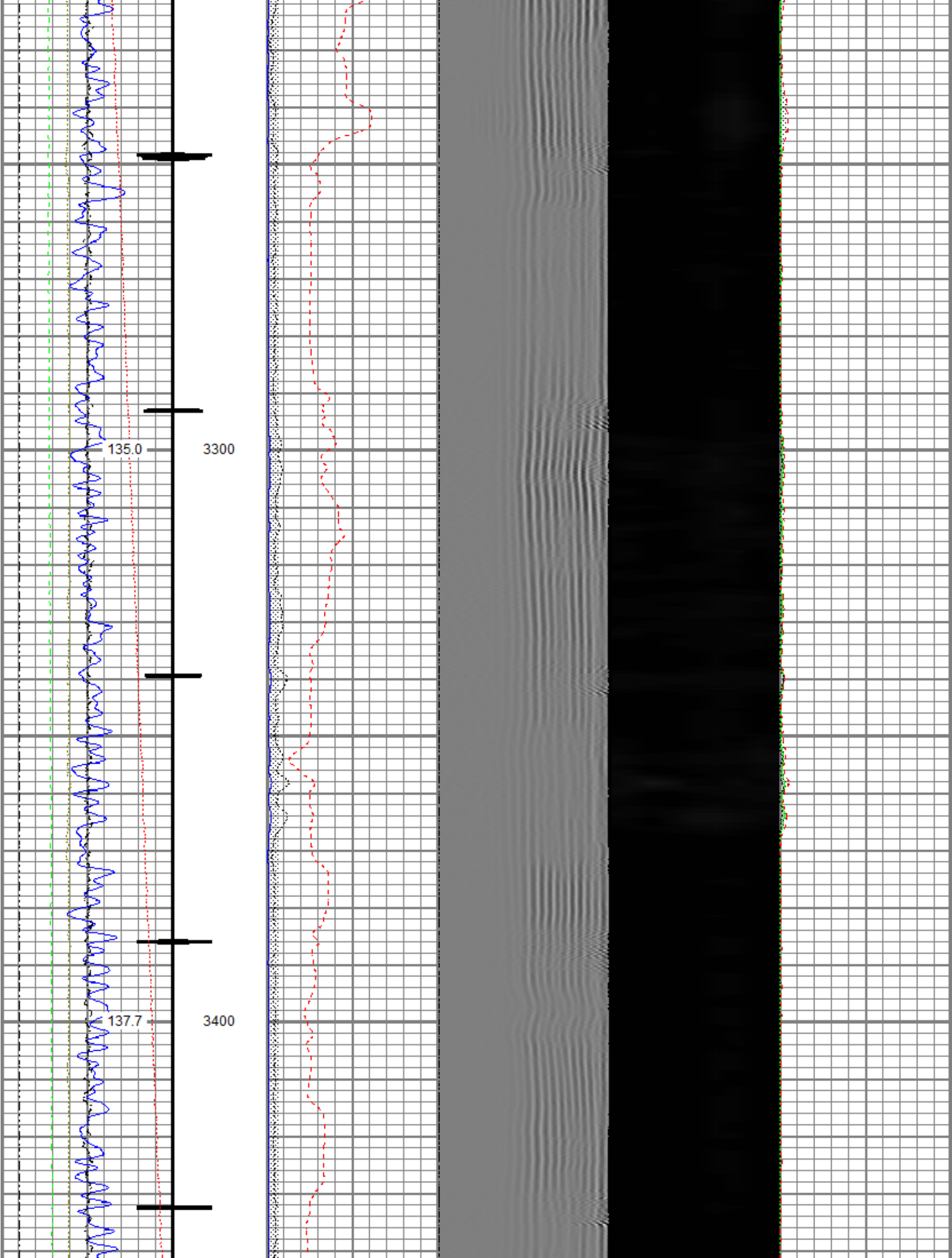


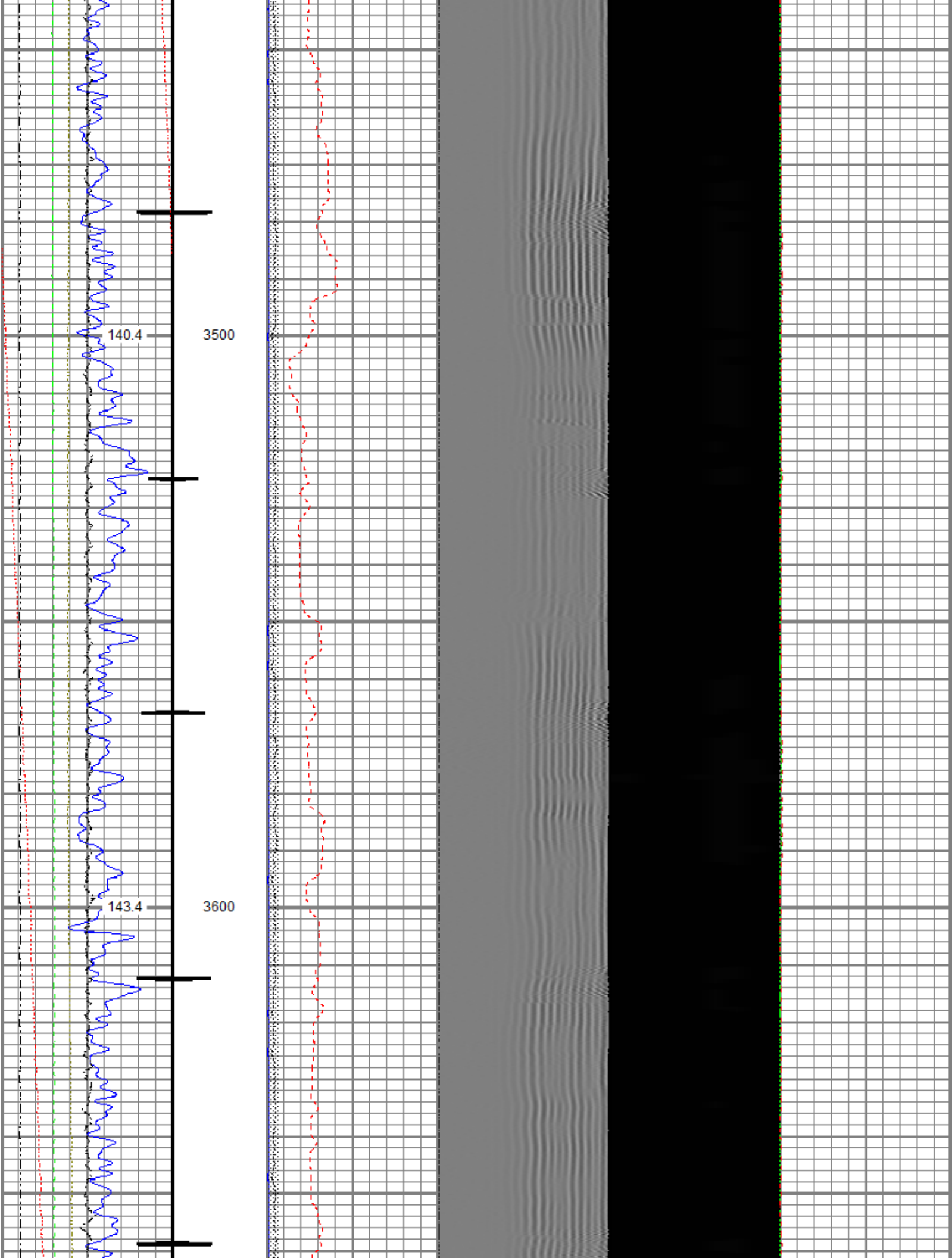


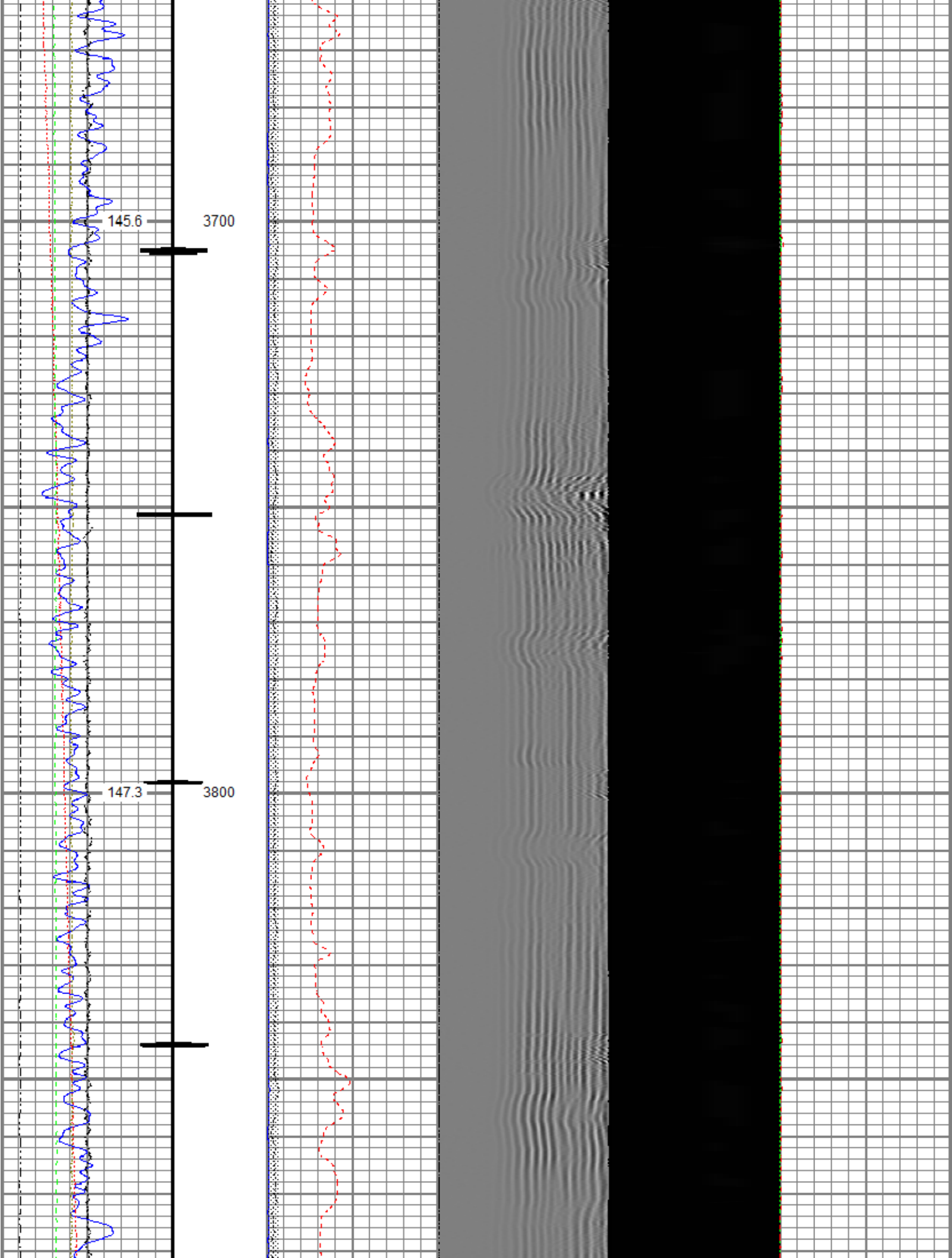


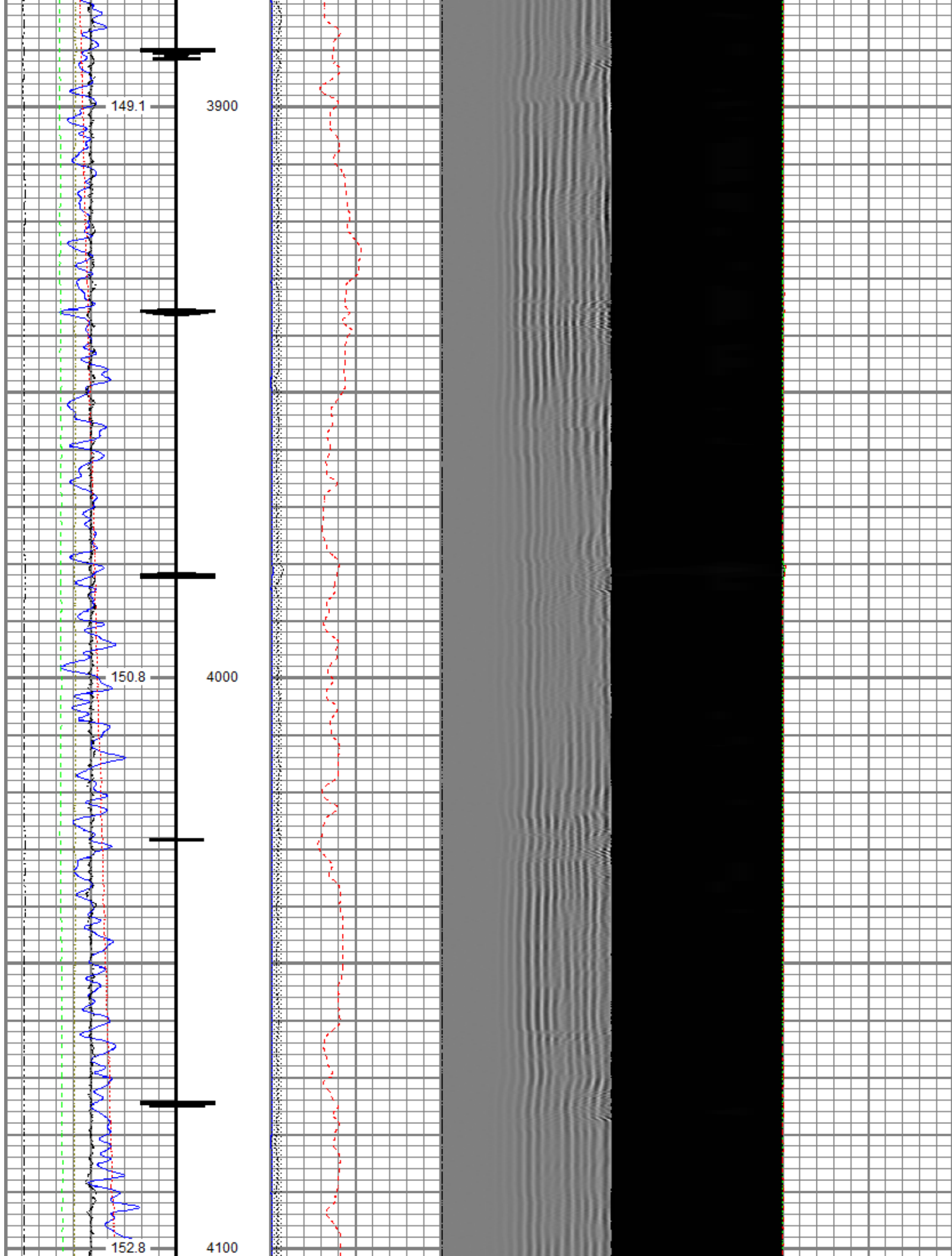




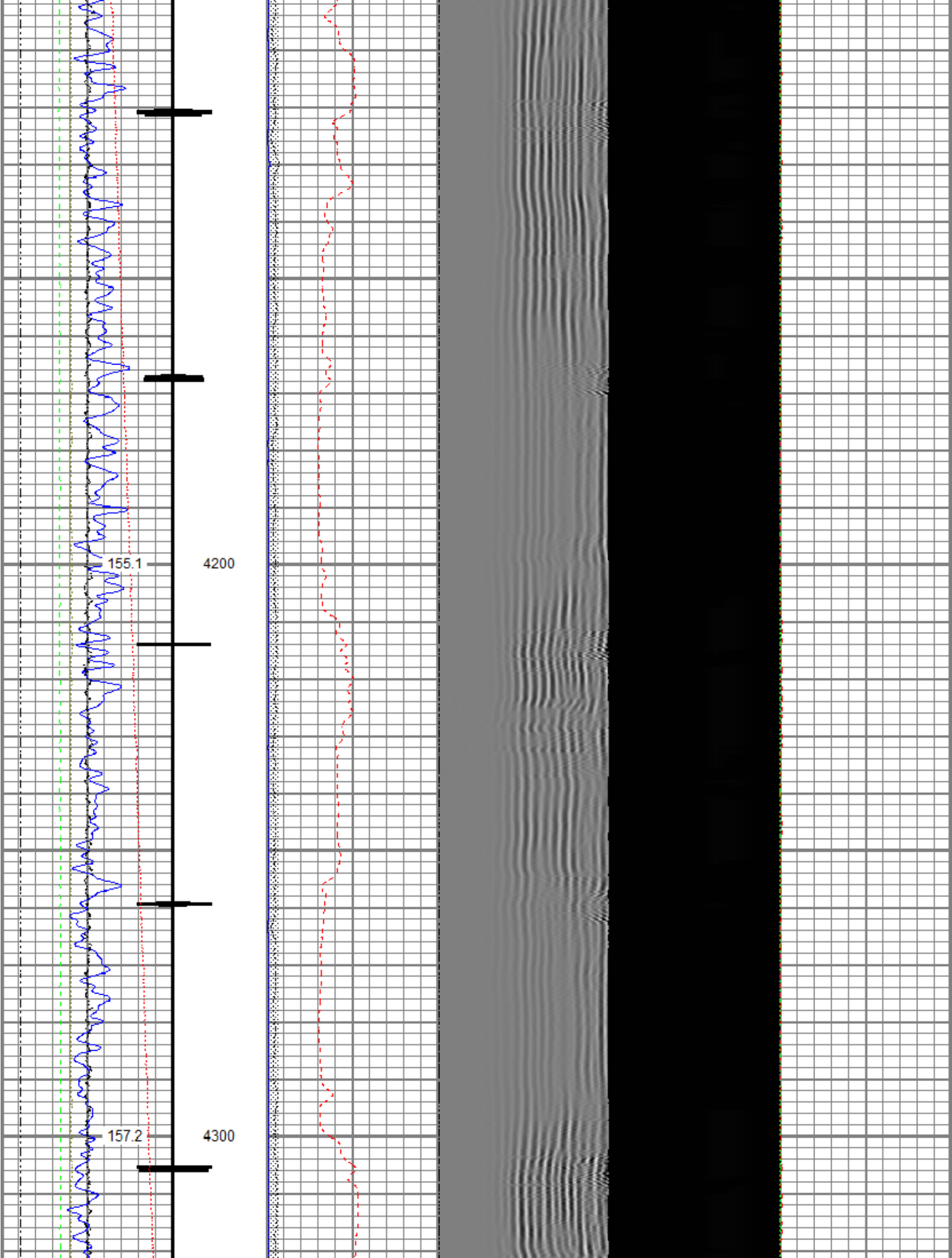


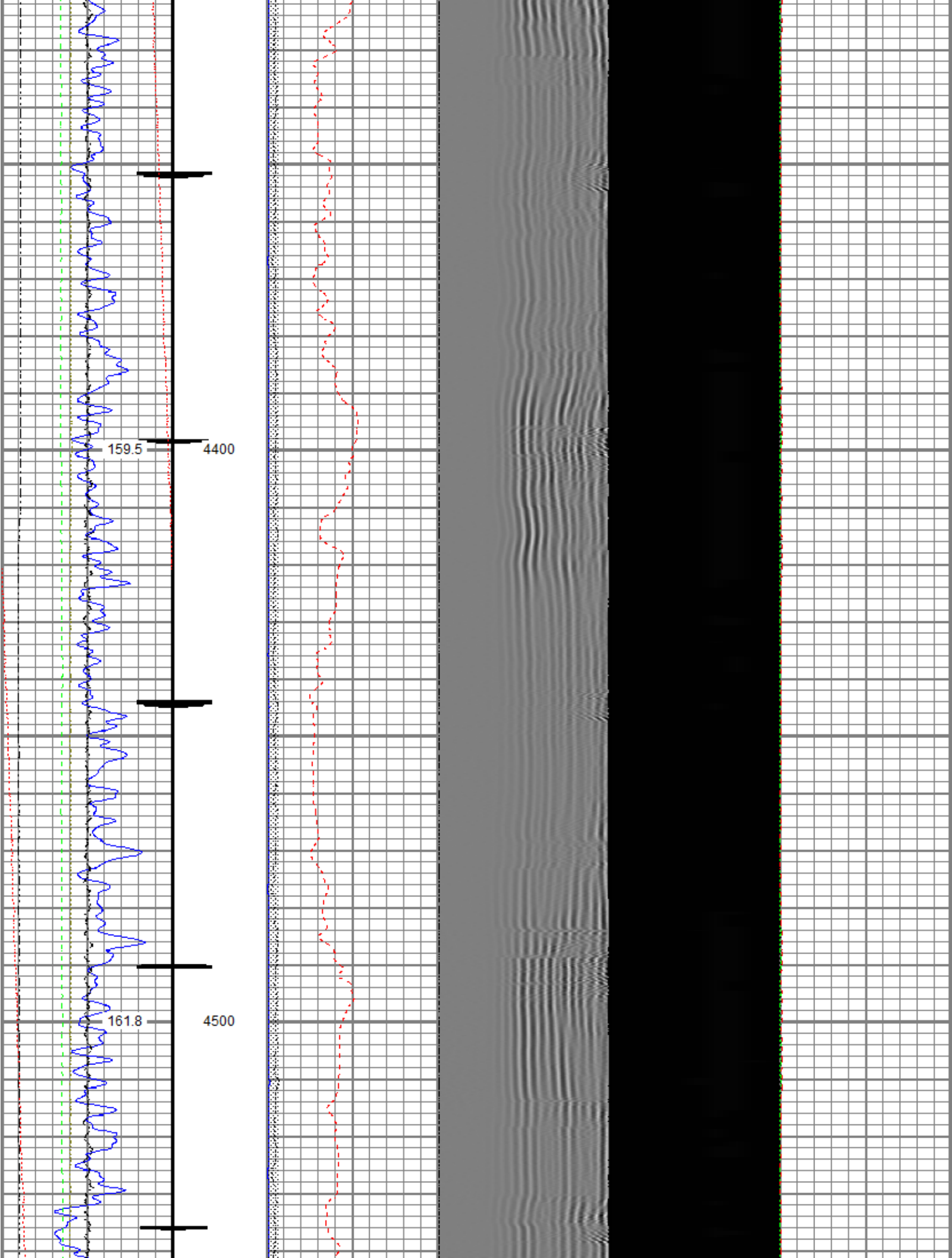


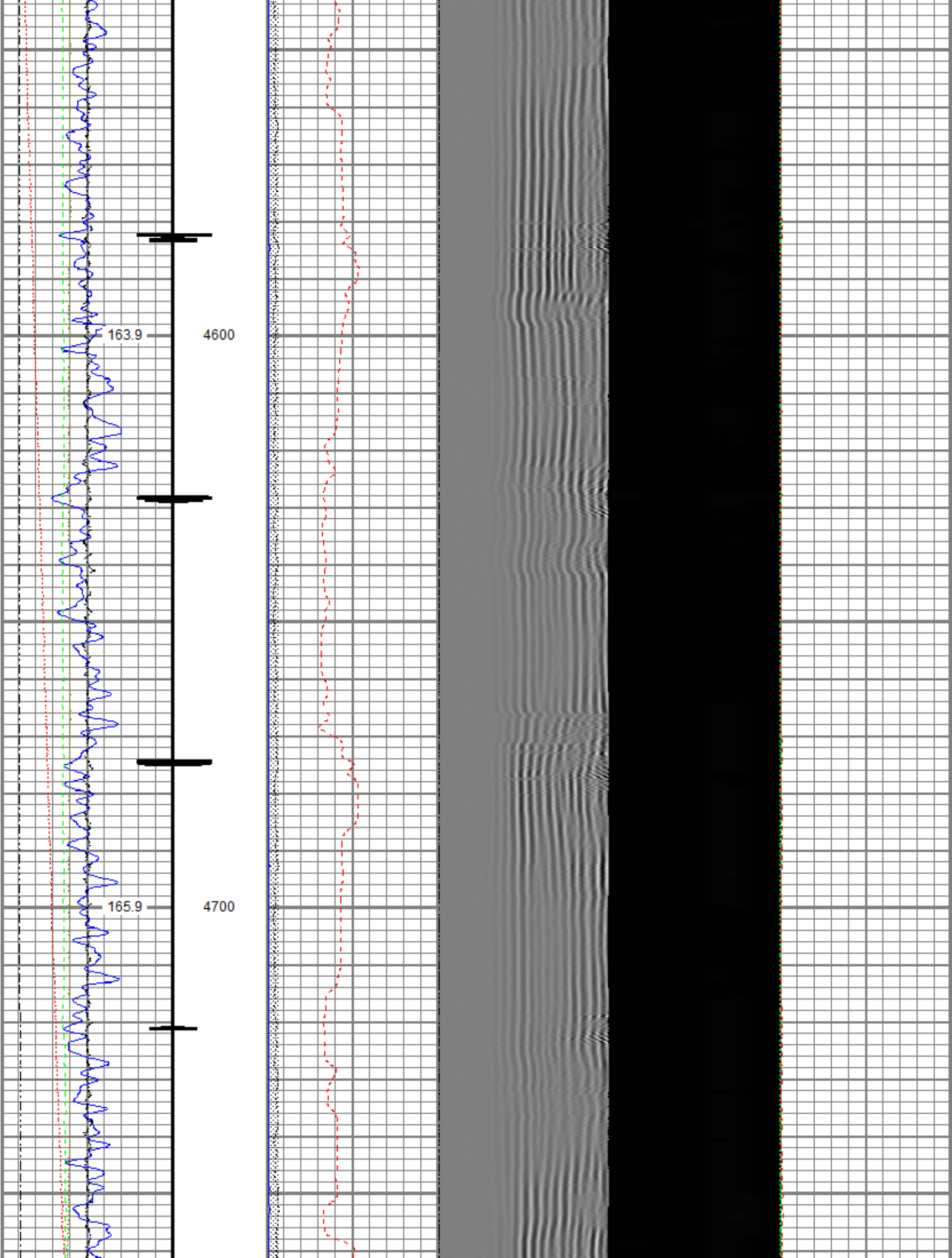


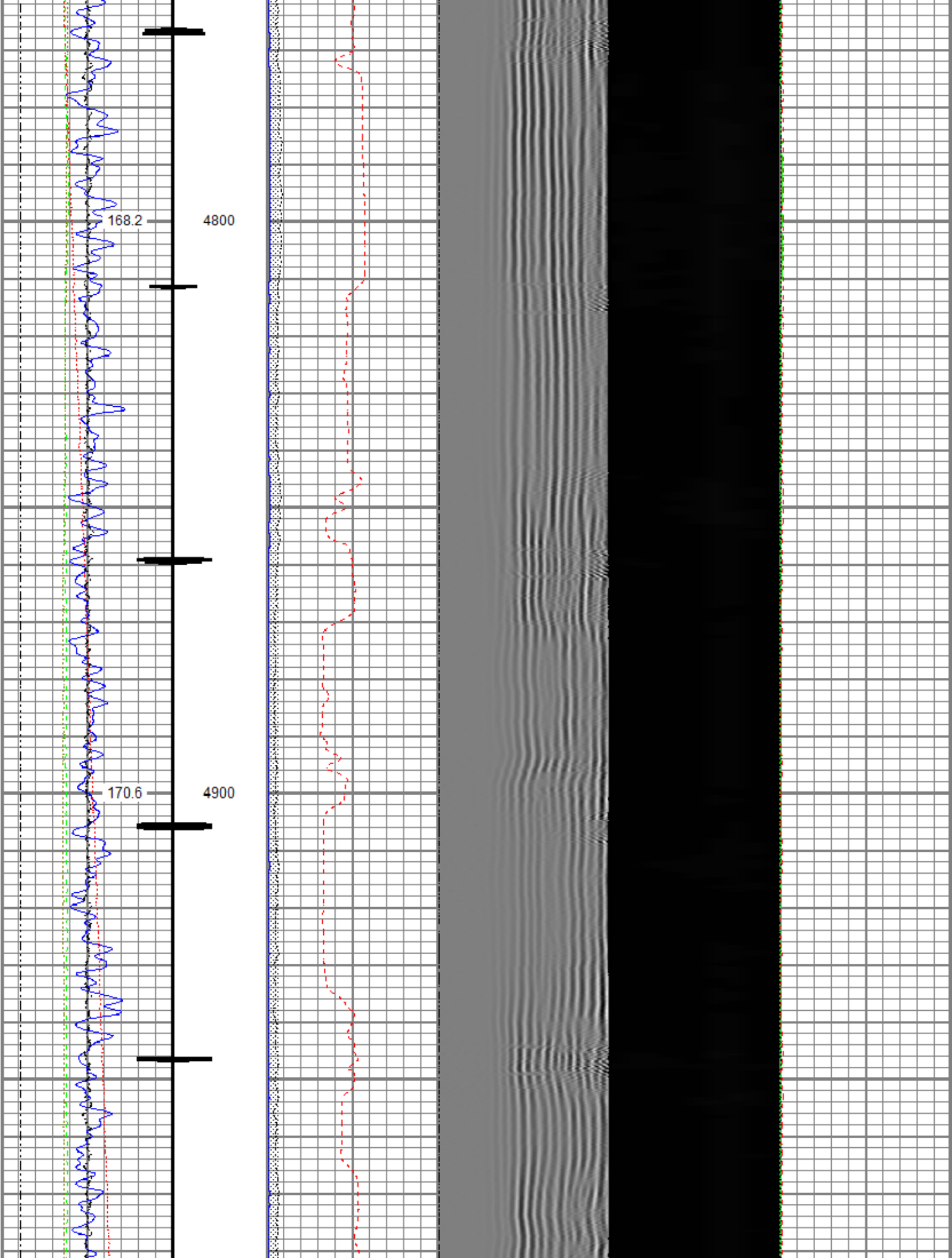




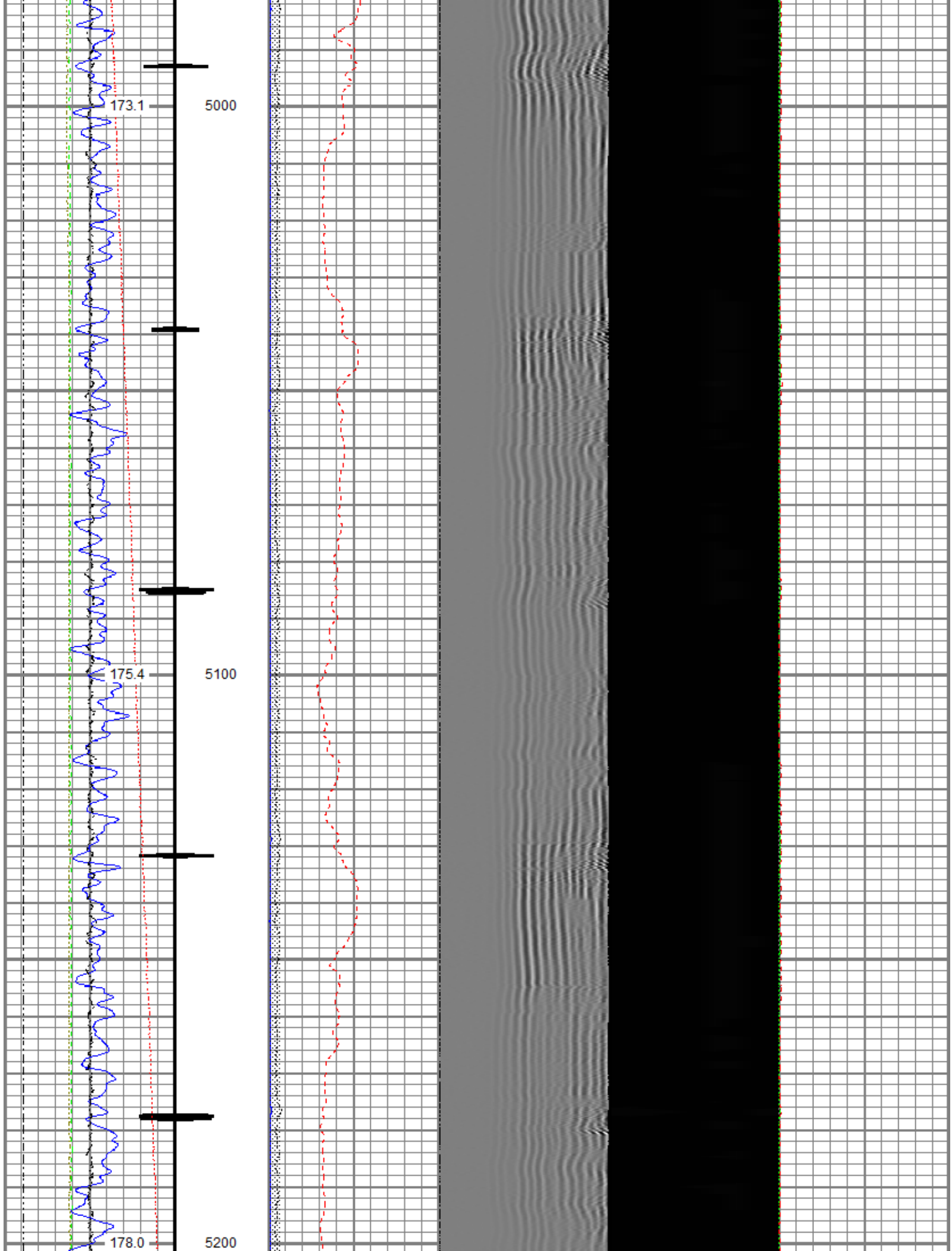


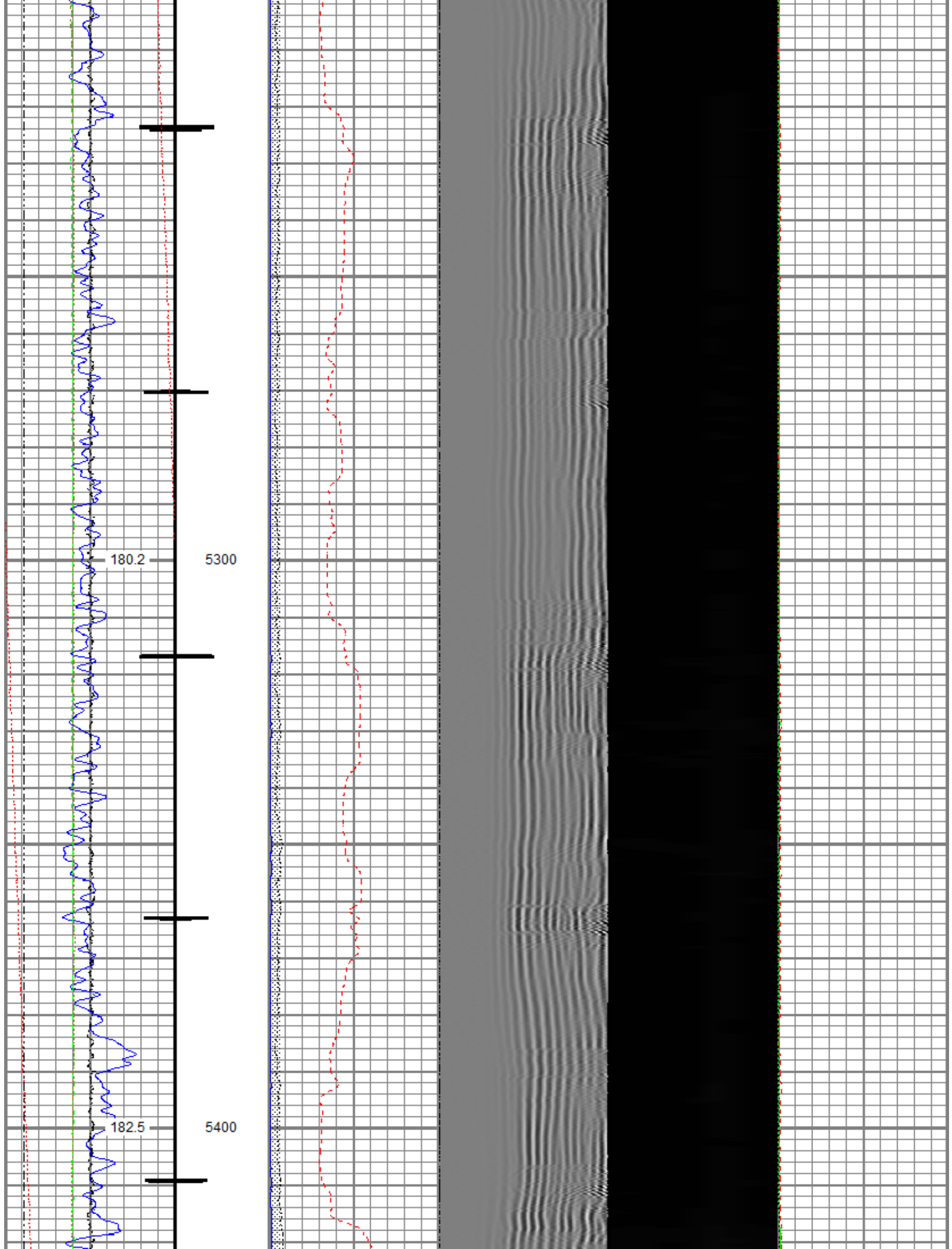


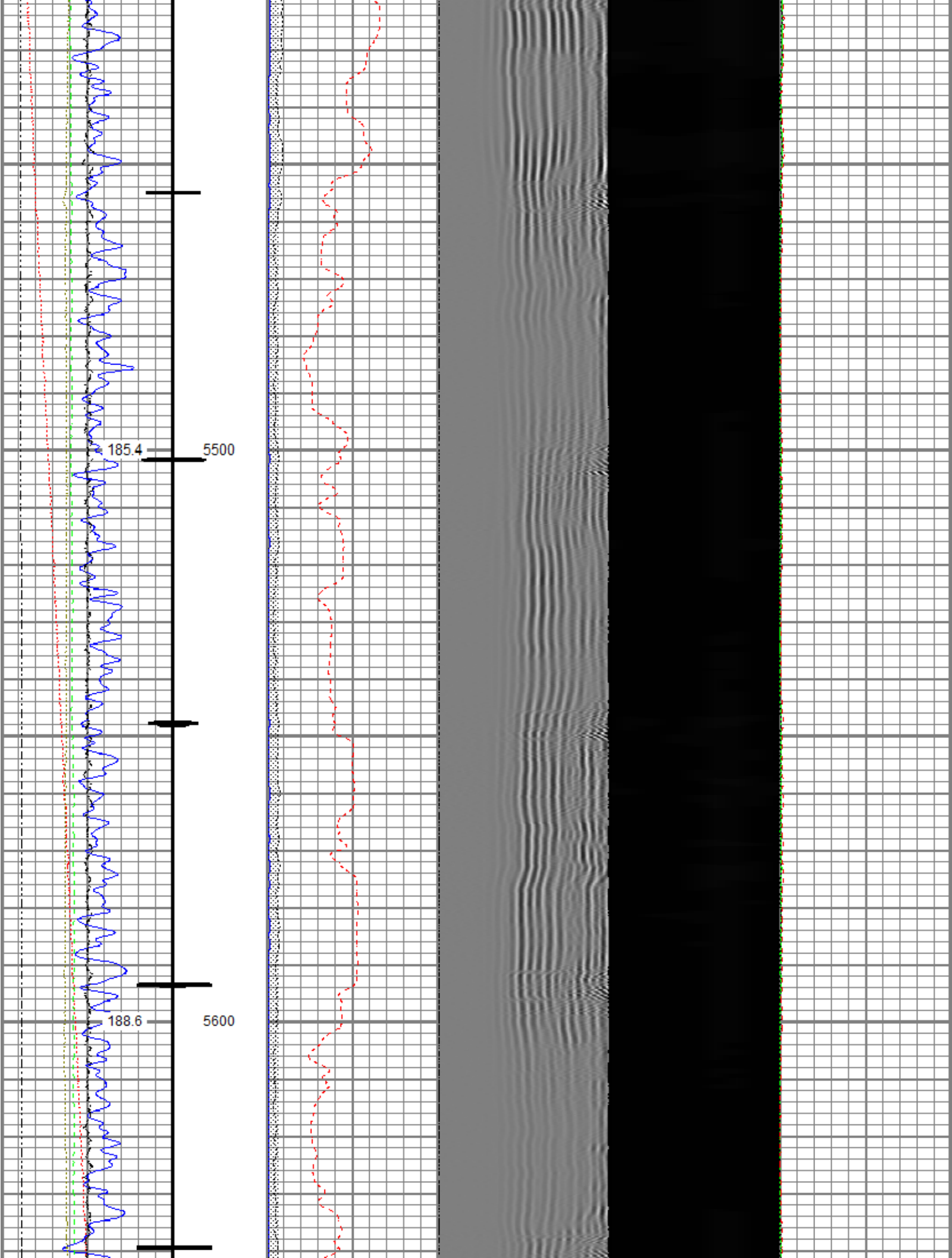


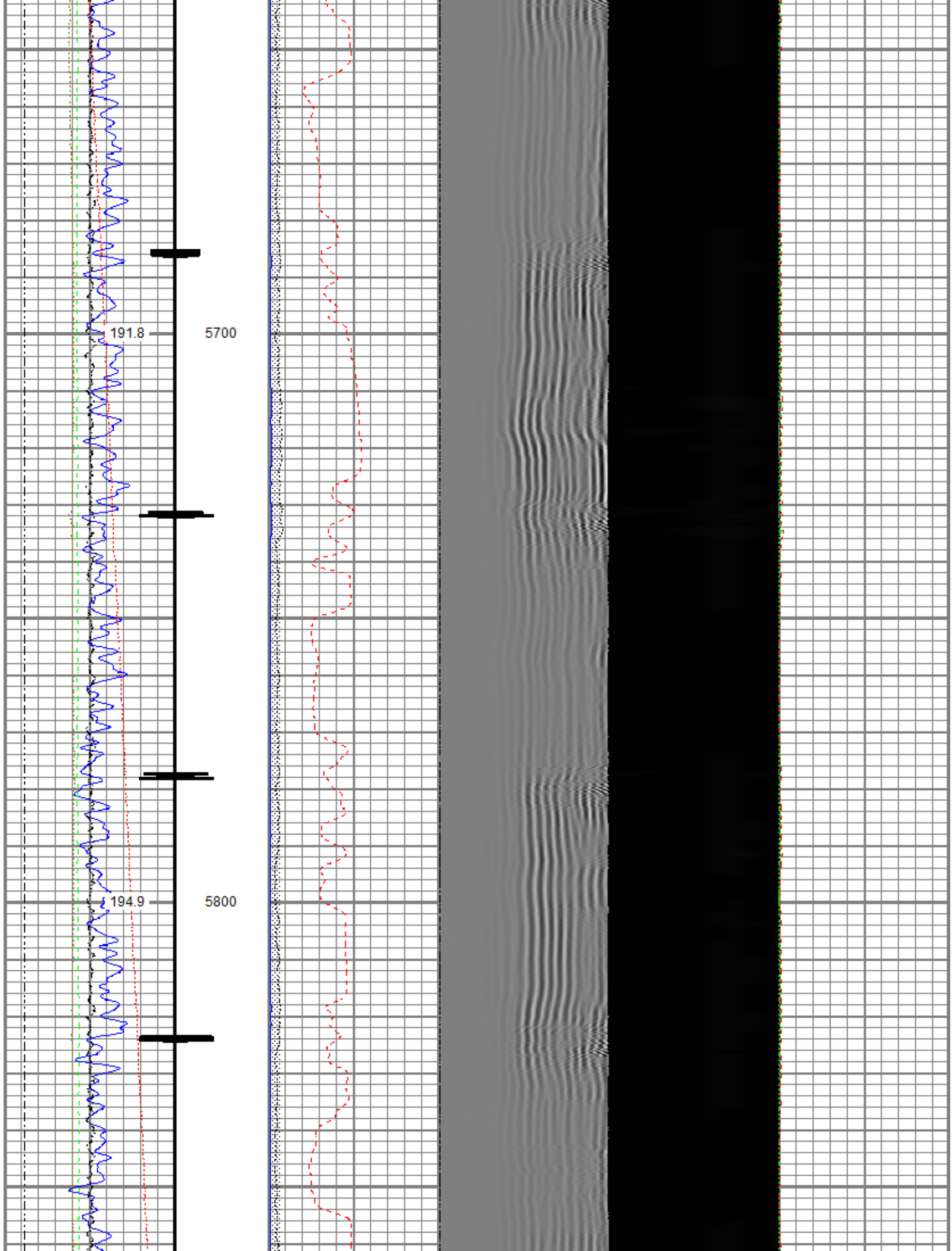




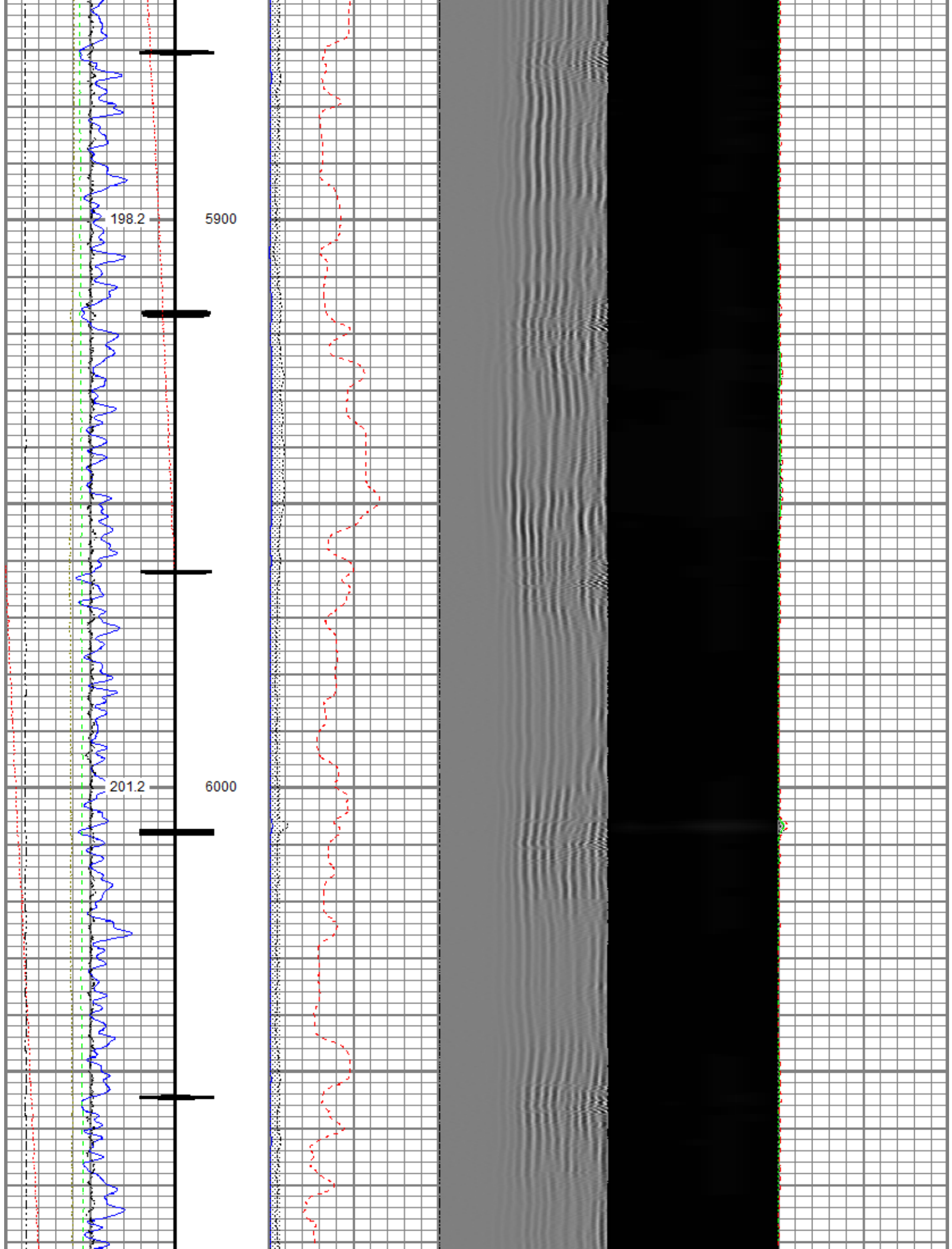


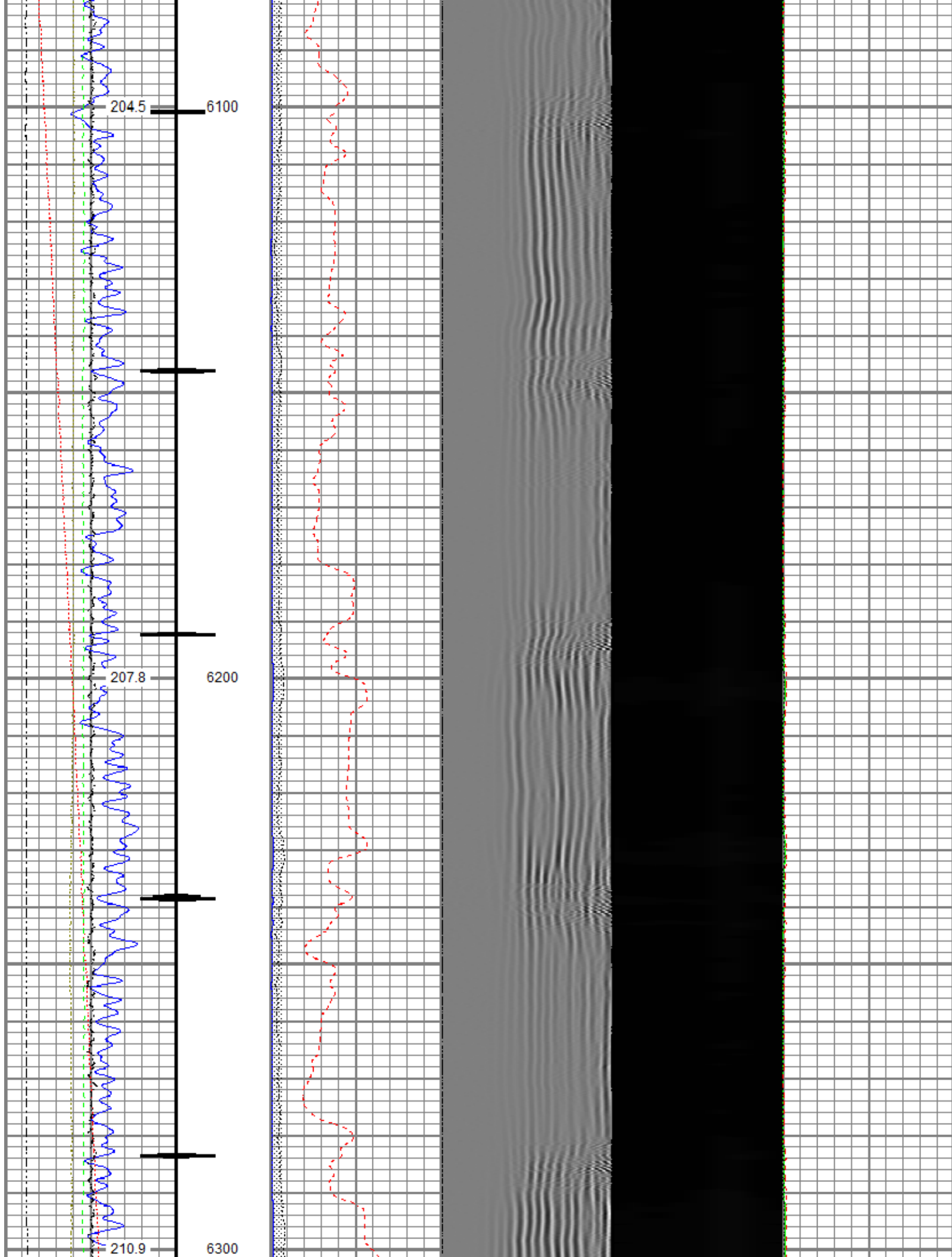


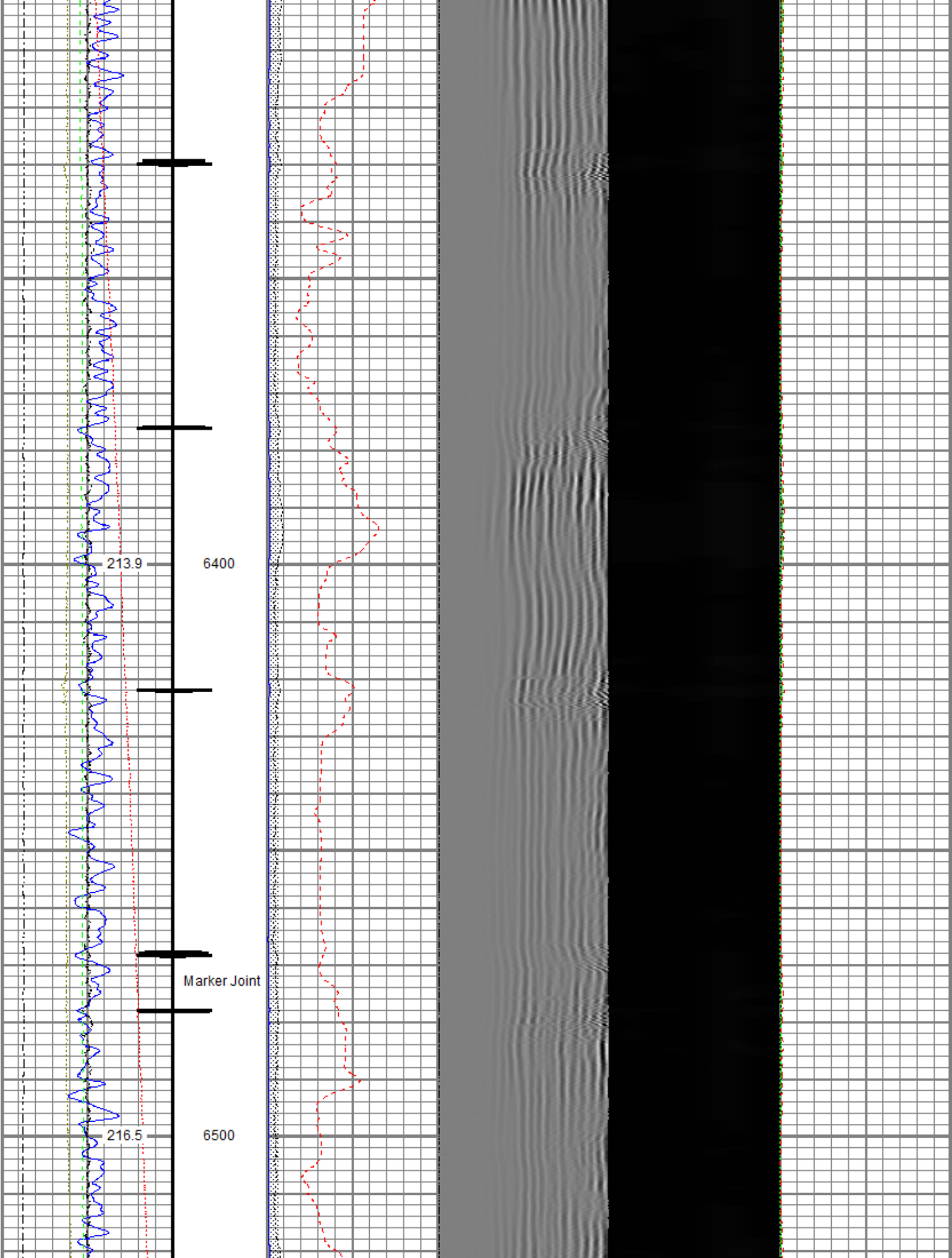


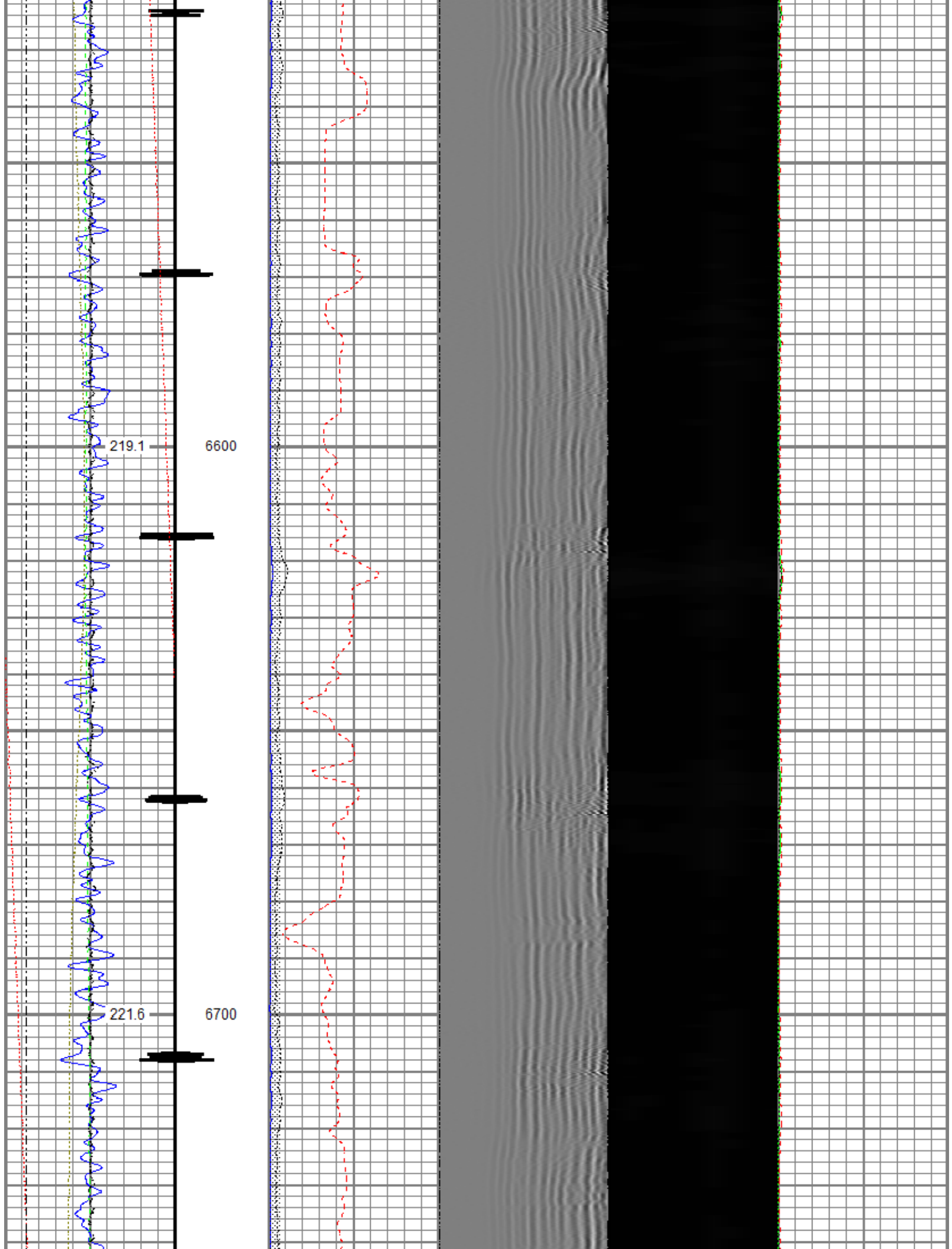




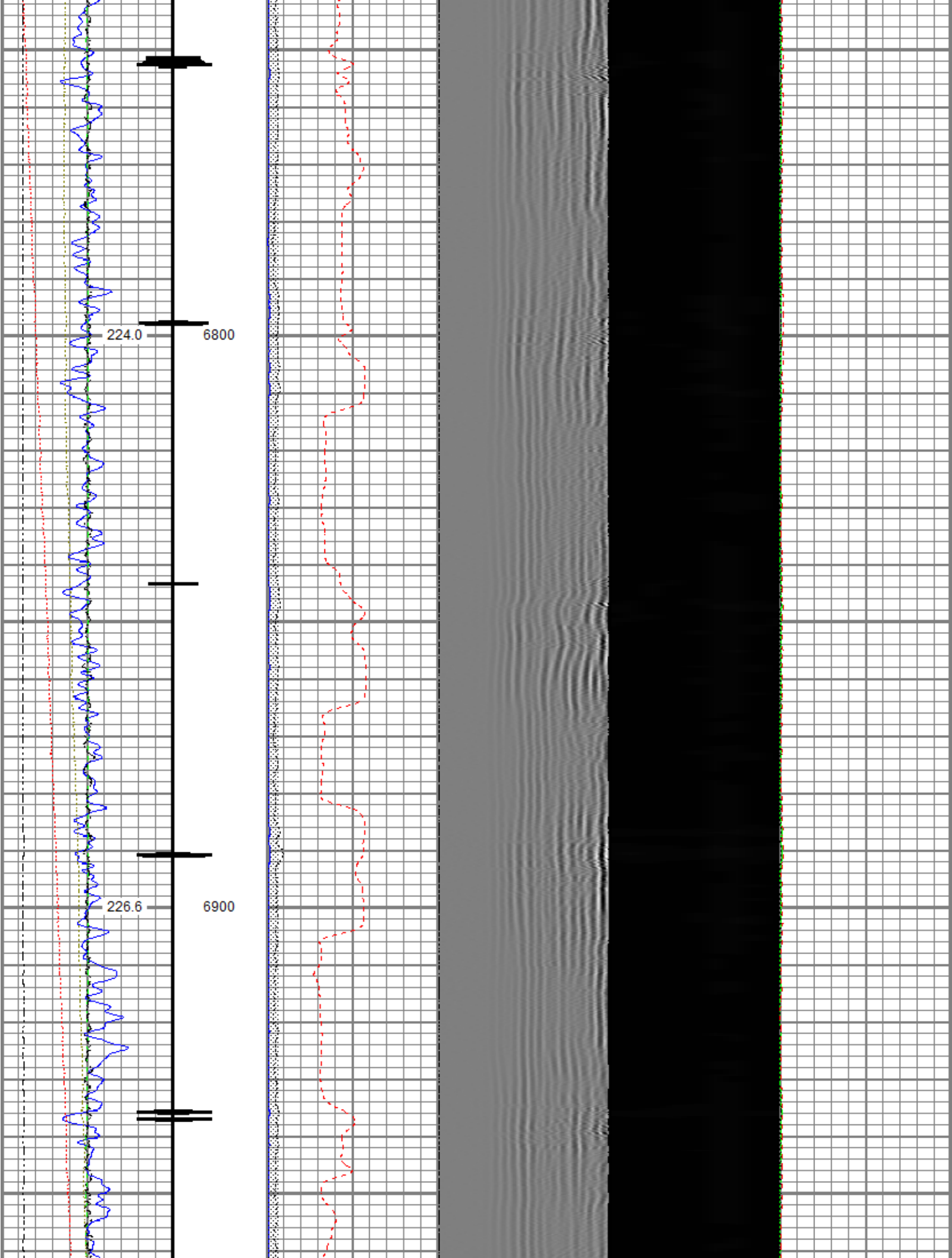


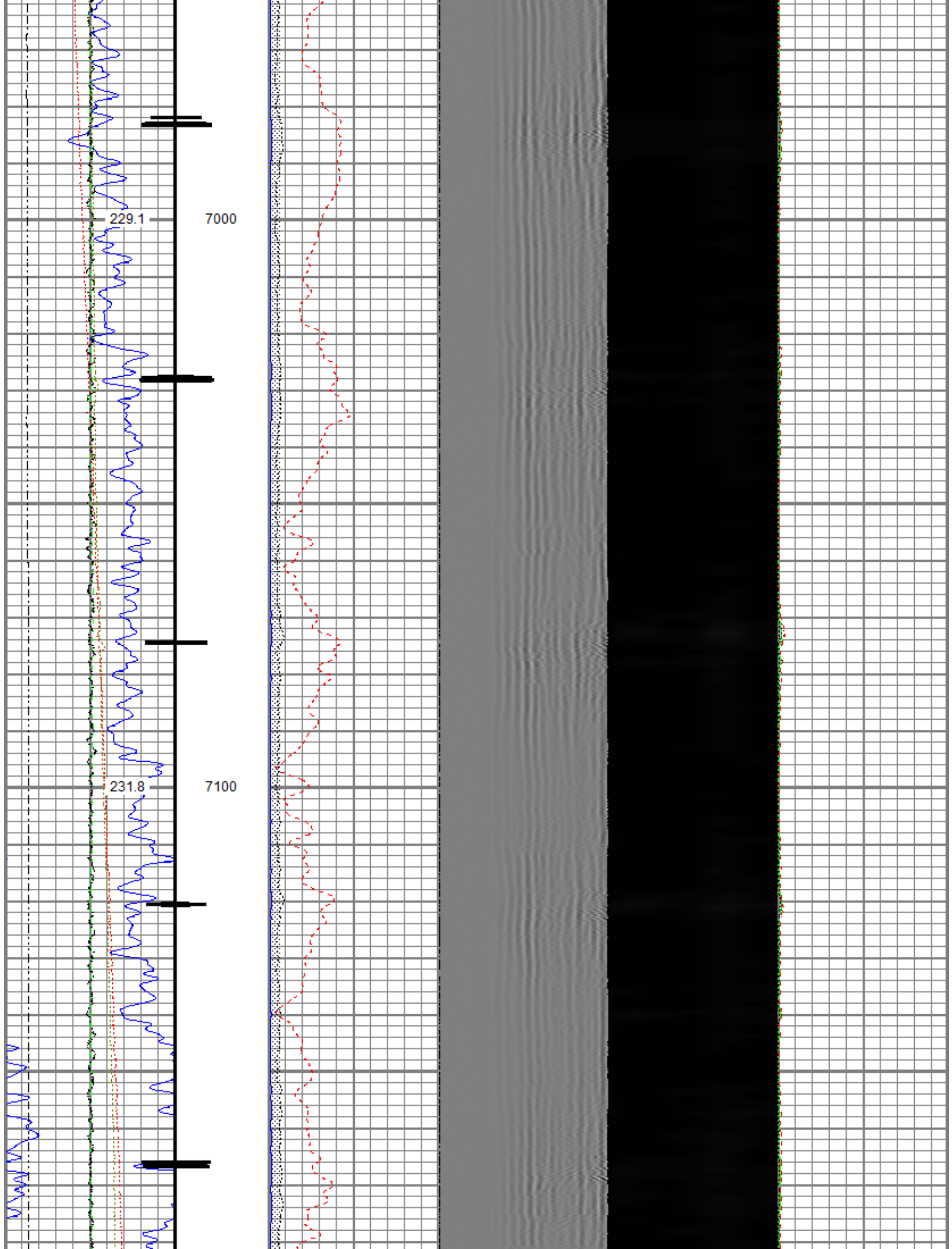


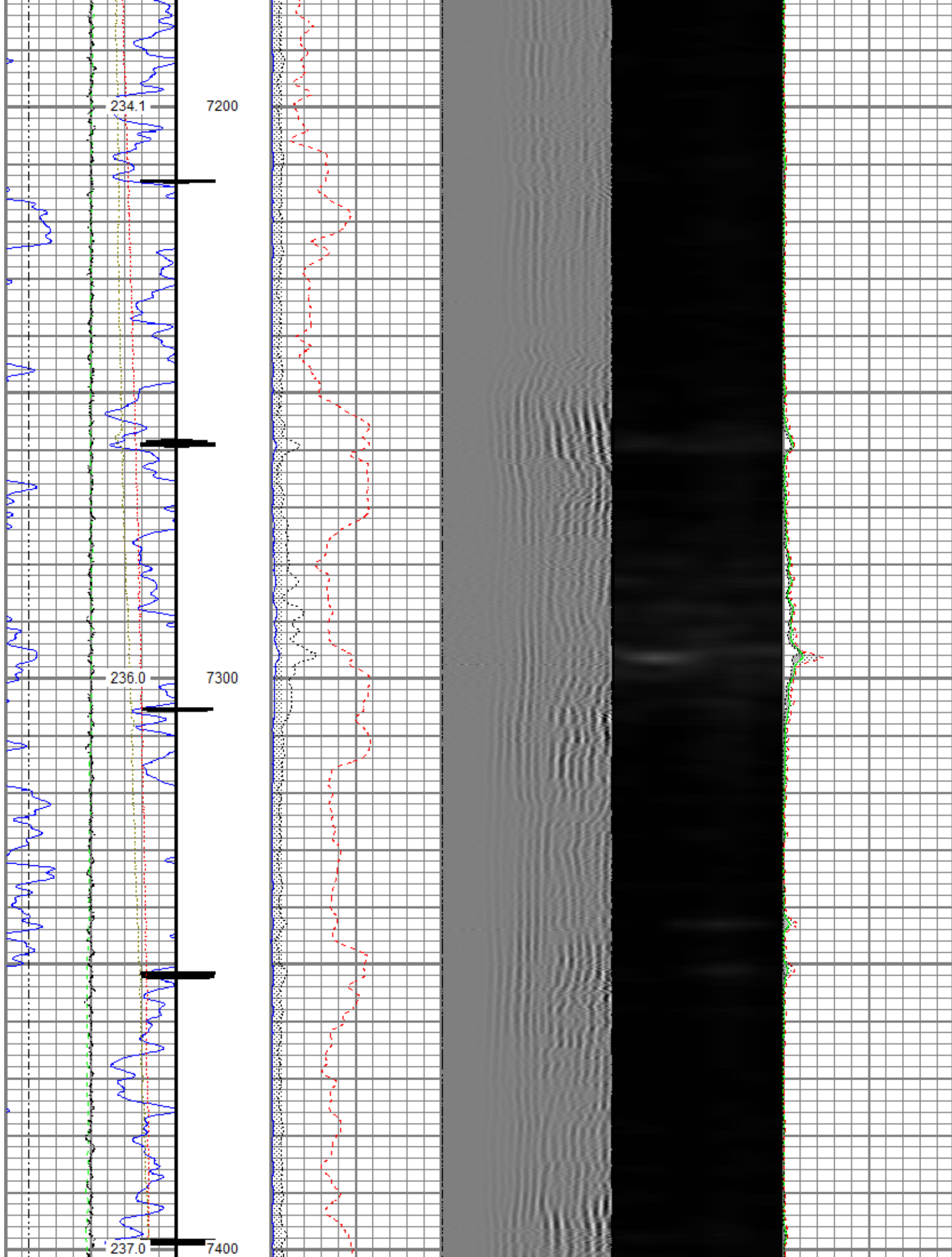


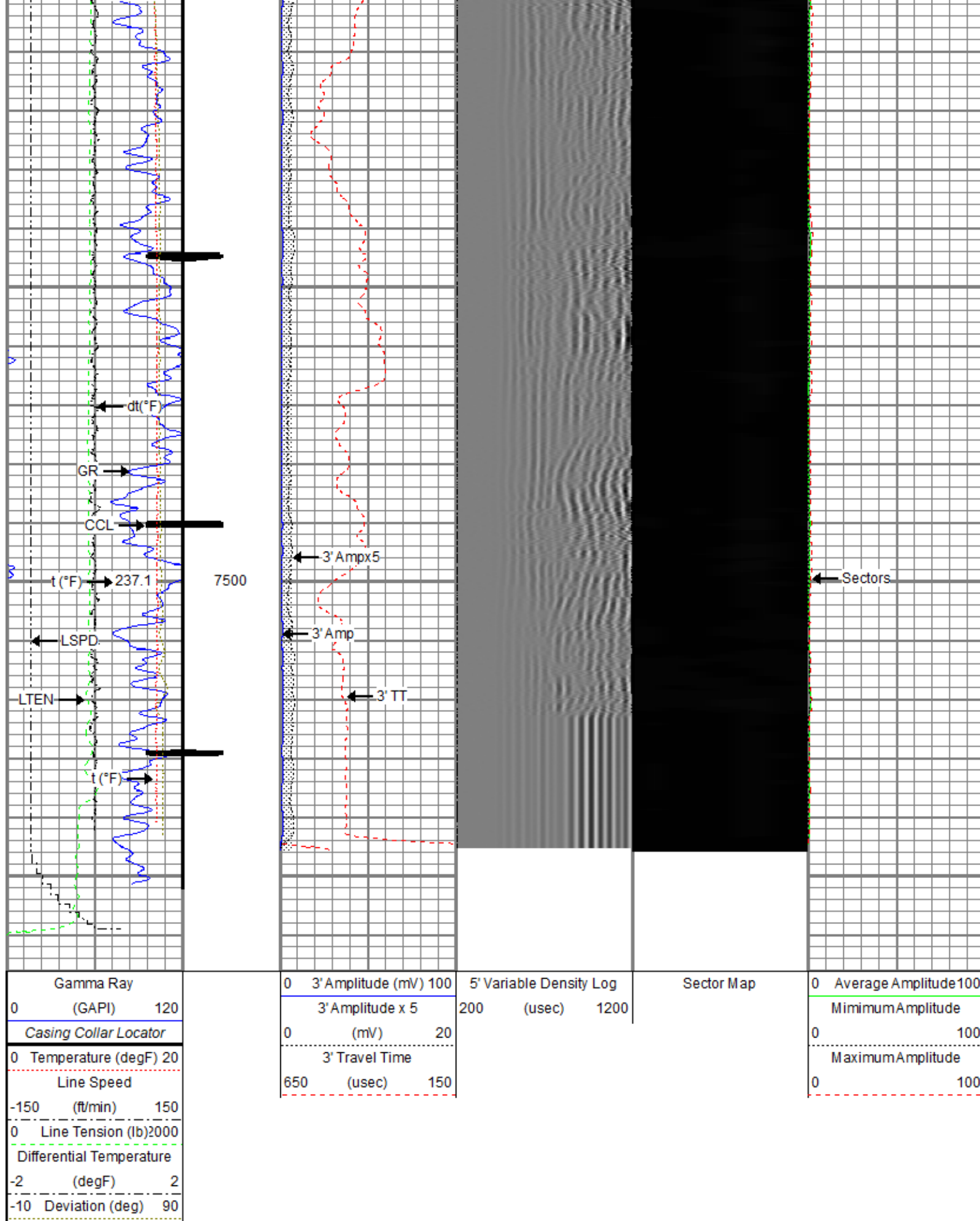










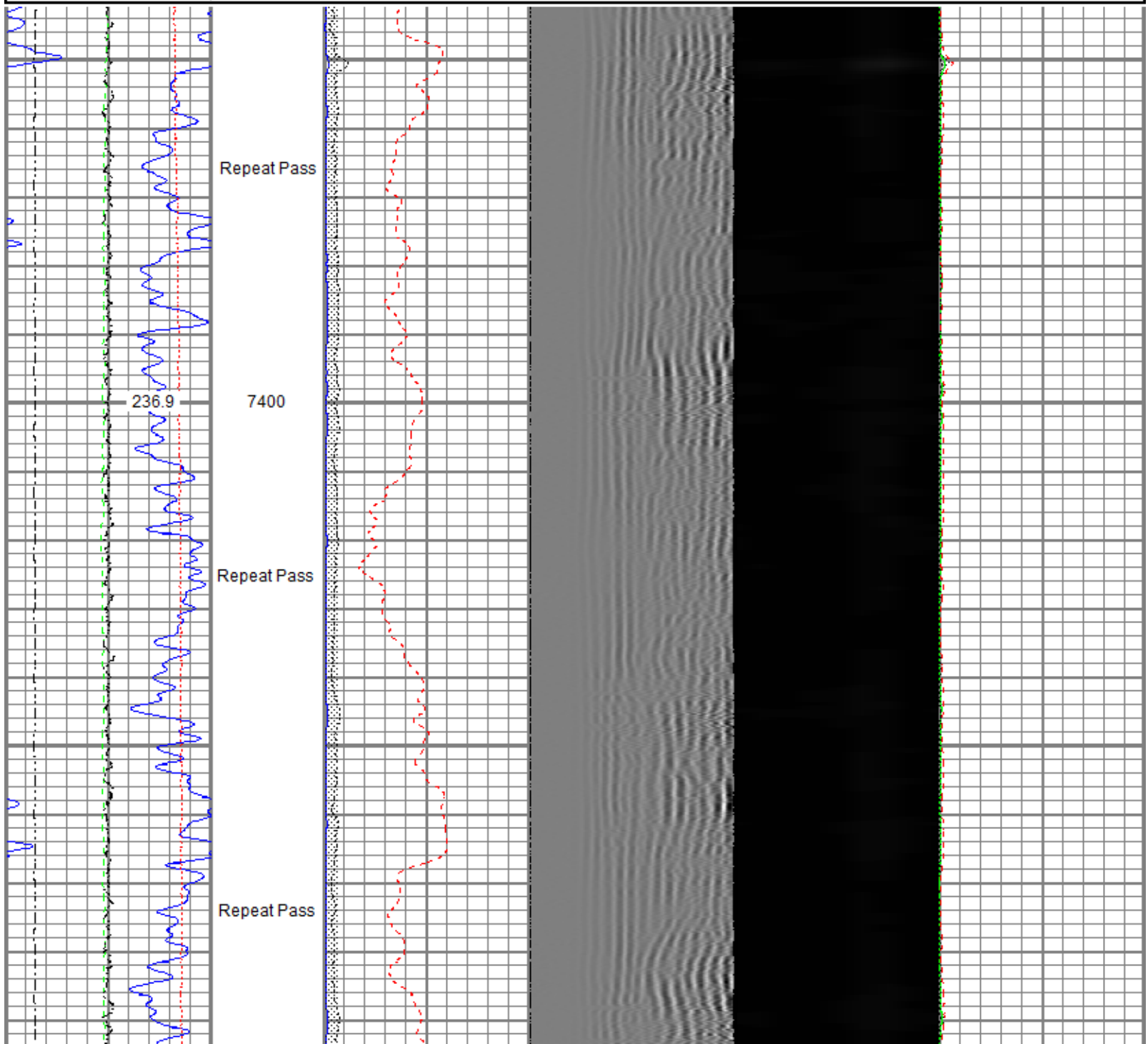


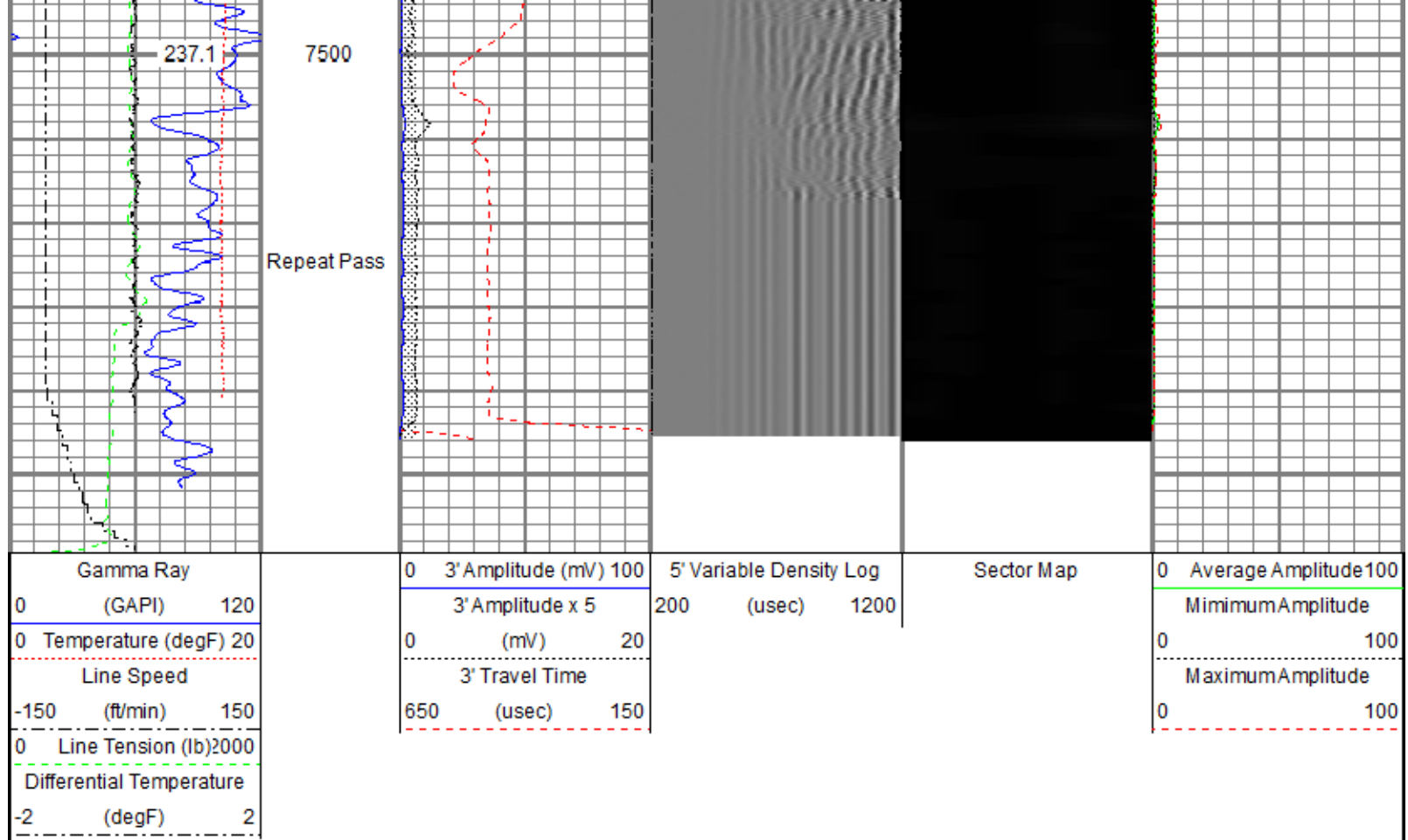
Repeat Pass






Database File noble\noble\_reveille a33-720\_rbl\_03-20-21\noble\_reveille a33-720\_rbl\_03-20-21.db  
 Dataset Pathname repeat/pass1  
 Presentation Format ros\_radri\_noble  
 Dataset Creation Sat Mar 20 13:00:20 2021  
 Charted by Depth in Feet scaled 1:240

Gamma Ray (GAPI) 120	0 3' Amplitude (mV) 100	5' Variable Density Log (usec) 1200	Sector Map	0 Average Amplitude 100
0 Temperature (degF) 20	3' Amplitude x 5 (mV) 20			Minimum Amplitude
Line Speed (ft/min) 150	0 3' Travel Time (usec) 150			Maximum Amplitude
0 Line Tension (lb) 2000				
Differential Temperature (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					
			Probe Radii ACC-2750 RBTa (FW1302-002)	9.39	2.75	105.00
			Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub and Accelerometer			
RBT_ACCZ	14.81					
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		Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
WVFS2	14.81					
WVFS1	14.81					
WVFCAL	14.81					
WVF3FT	14.81					
WVF5FT	13.81					
CCL\$2	6.80		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
CCL\$1	6.80					
GR	5.46					
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 A33-720_RBL_03-20-21.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 A33-720_RBL_03-20-21\Noble_Reveille A33-720_RBL_03-20-21.db	
Dataset Pathname	main/pass1	
Dataset Creation	Sat Mar 20 13:03:48 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 12:27:37 2021:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.008	0.579	0.800	71.921	124.661	-0.218
CAL	0.614	0.608				
5'	0.008	0.579	0.800	71.921	124.666	0.189

S	0.000	0.578	0.000	71.921	124.000	-0.189
SUM						
S1	0.006	0.549	0.000	100.000	183.953	-1.042
S2	0.008	0.583	0.000	100.000	173.965	-1.408
S3	0.008	0.638	0.000	100.000	158.876	-1.294
S4	0.008	0.662	0.000	100.000	153.007	-1.255
S5	0.008	0.654	0.000	100.000	154.863	-1.255
S6	0.008	0.606	0.000	100.000	167.249	-1.311
S7	0.008	0.561	0.000	100.000	180.939	-1.484
S8	0.008	0.541	0.000	100.000	187.321	-1.422

Air Zero Calibration, performed Sat Mar 20 12:27:18 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 A33-720  
**Field** Wattenberg  
**County** Weld  
**State** Colorado