



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

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

Well Papa Jo 2-25 29C-8HZ

Field Wattenberg

County Weld State Colorado

Location: API #: 05-123-45504

Other Services  
RCBL  
0 Pressure

SEC 8 TWP 1N RGE 68W

Elevation

Permanent Datum Ground Level Elevation 5063'  
Log Measured From Kelly Bushing 26 FT  
Drilling Measured From Kelly Bushing

K.B. 5089'  
D.F. ---  
G.L. 5063'

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Well Papa Jo 2-25 29C-8HZ  
Field Wattenberg  
County Weld  
State Colorado

Date	28-MAR-2018			
Run Number	Two			
Depth Driller	13737 FT			
Depth Logger	7340 FT			
Bottom Logged Interval	7338 FT			
Top Log Interval	Surface			
Open Hole Size	7 875"			
Type Fluid	Water			
Density / Viscosity	8.34 lb/gal			
Max. Recorded Temp.	225°F			
Estimated Cement Top	See Log			
Time Well Ready	ROA			
Time Logger on Bottom	1200			
Equipment Number	HD-324			
Location	Fort Lupton, CO			
Recorded By	M. Hayes			
Witnessed By	John McCarthy			
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	HCP-110	Surface
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 Casing Tally reported top of Marker Joint 7258 FT  
Adjusted 8 FT to correlate with Liner Top  
Log ran from 7340 FT 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!!

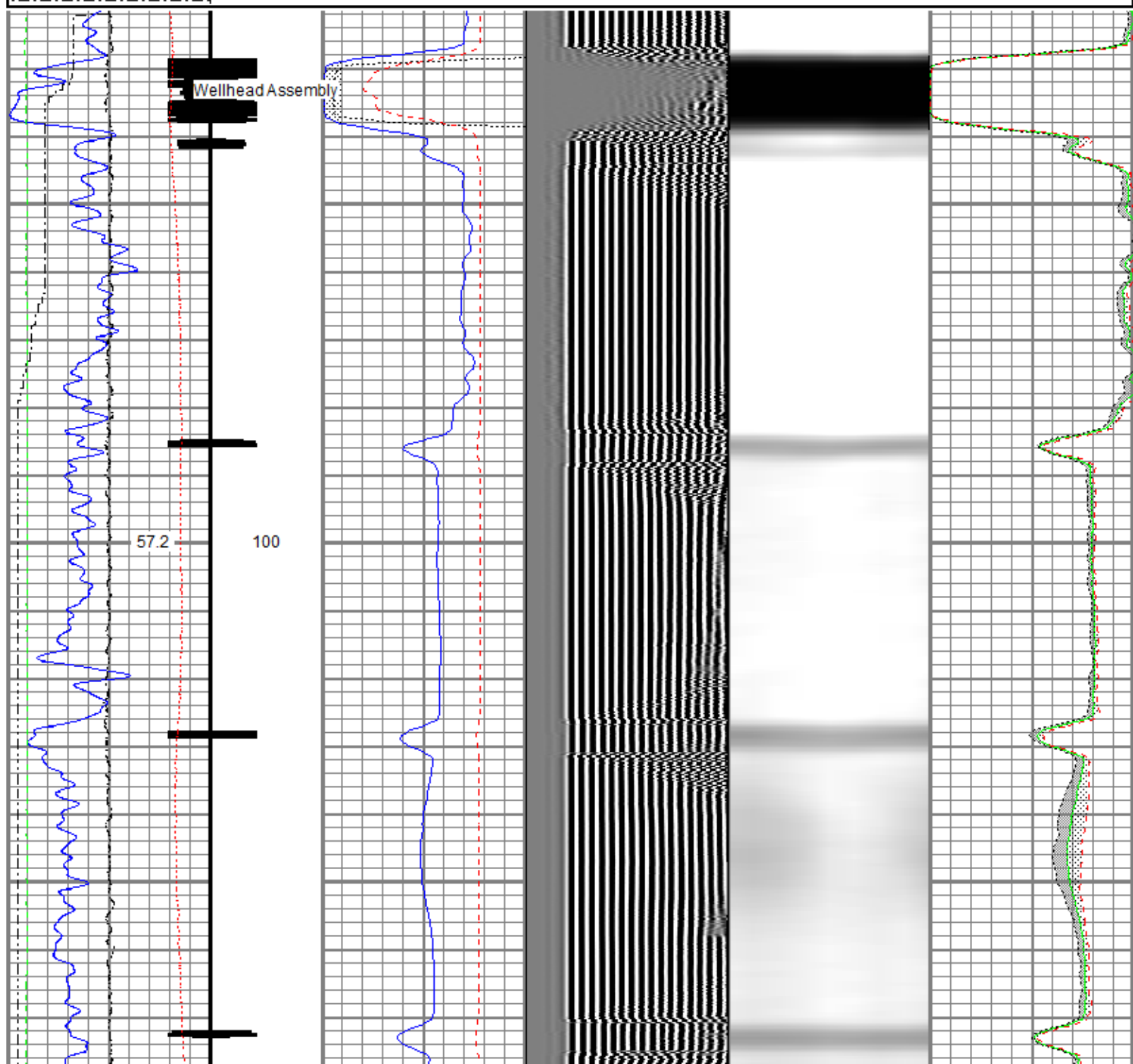
Main Pass

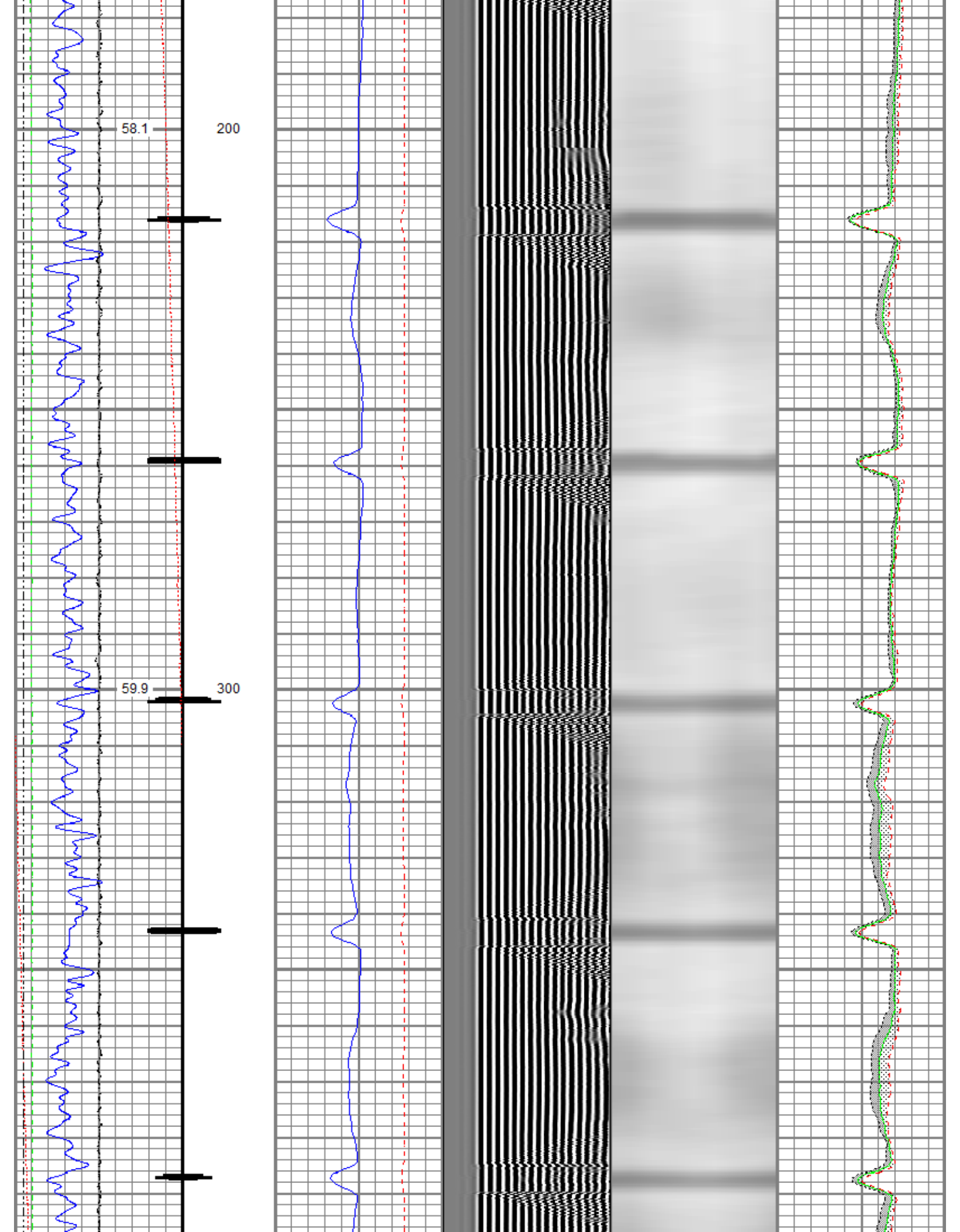


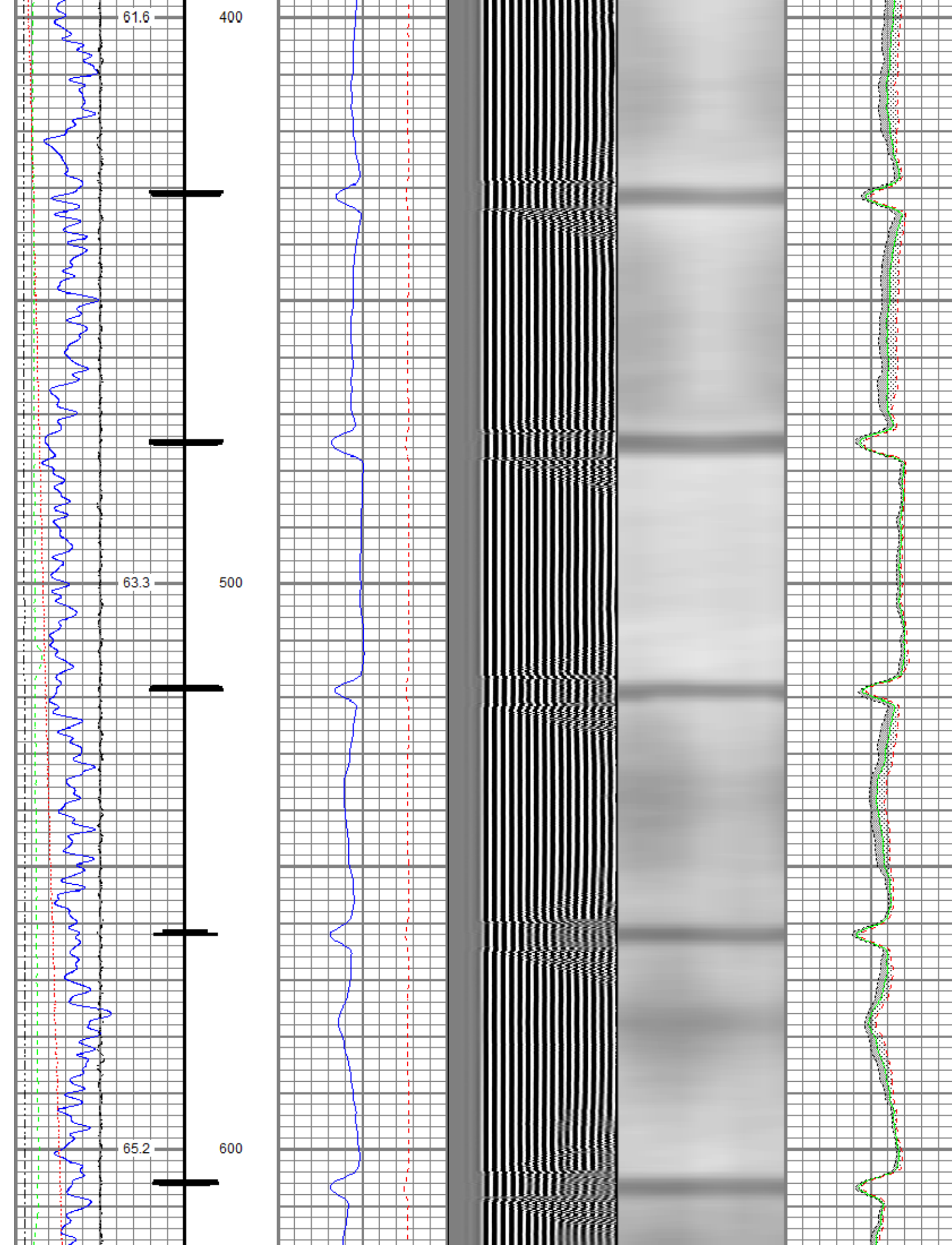
Recorded With 2800 PSI Surface Induced Pressure

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 Presentation Format ros\_radri  
 Dataset Creation Thu Mar 29 13:10:38 2018  
 Charted by Depth in Feet scaled 1:240

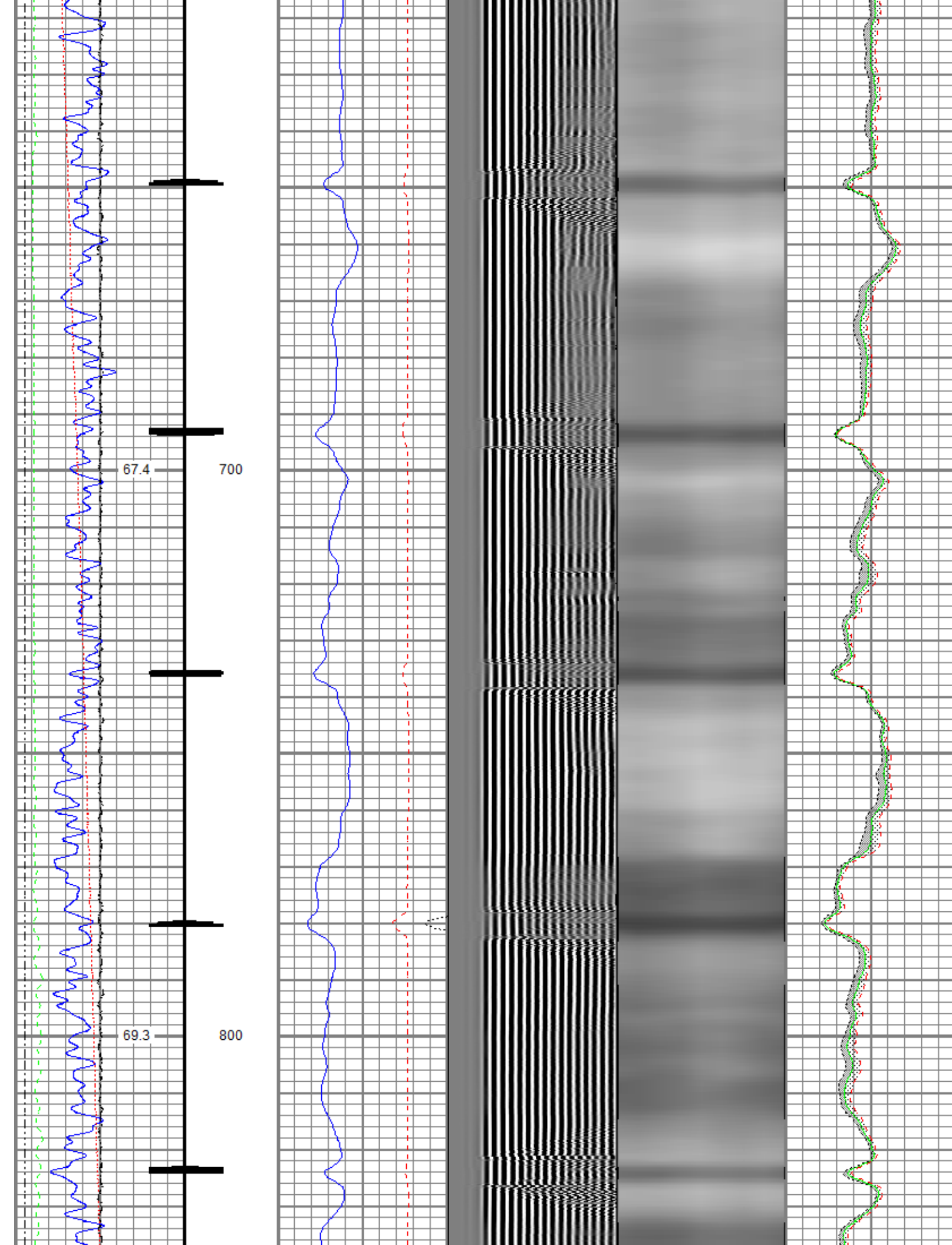
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200			Minimum Amplitude
Casing Collar Locator	0	(mV) 20			0	100
Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed	650	(usec) 150			0	100
-150 (ft/min) 150				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

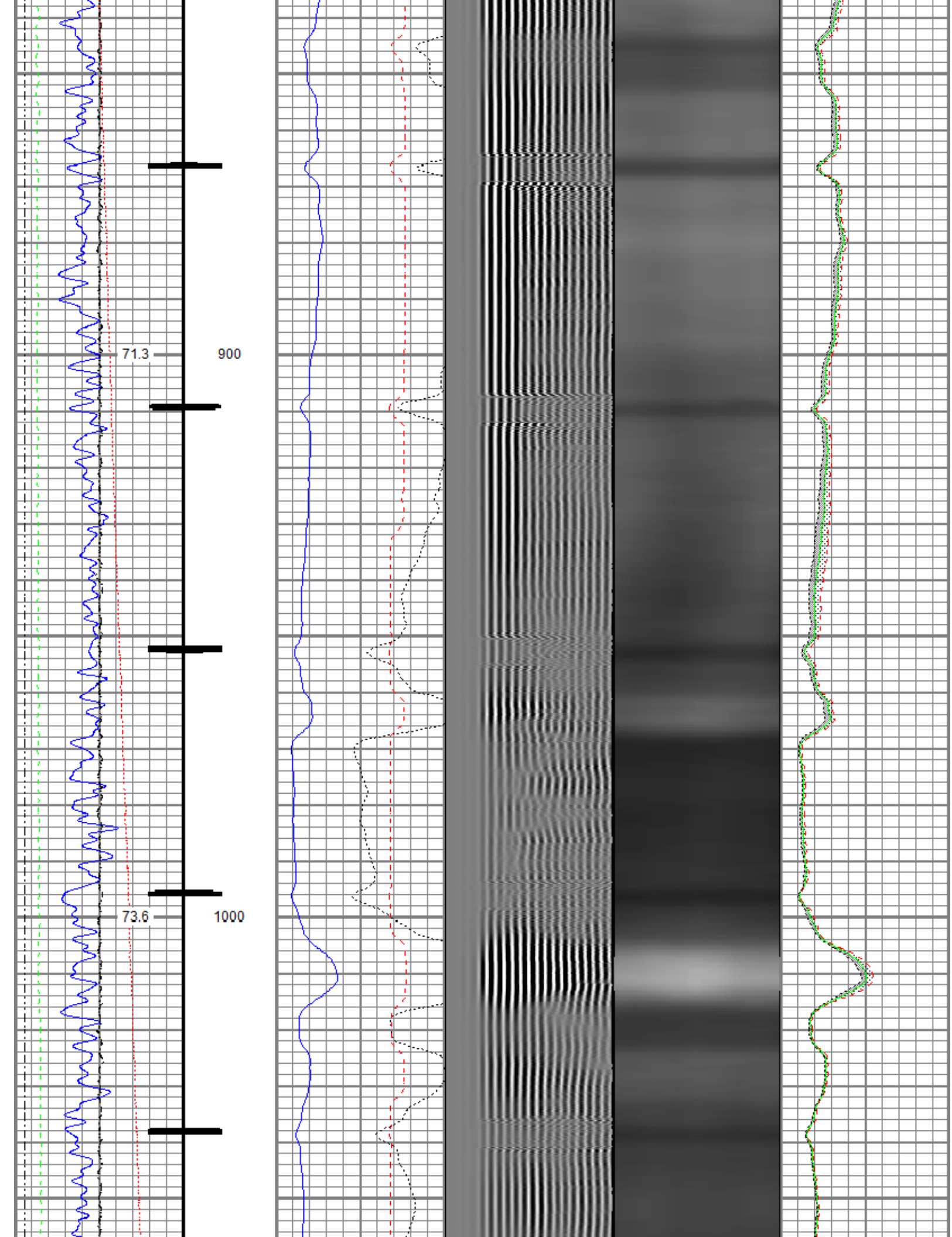


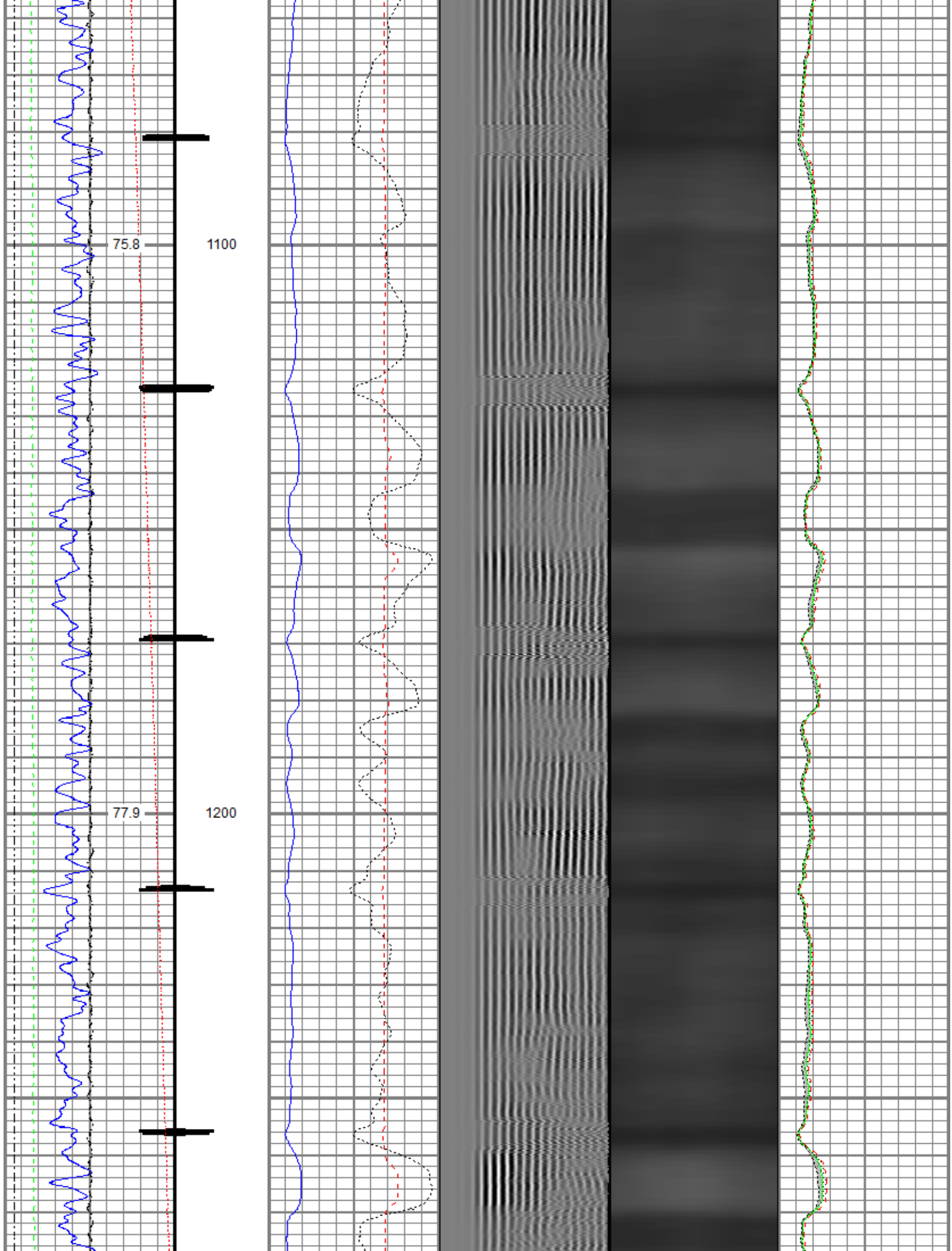


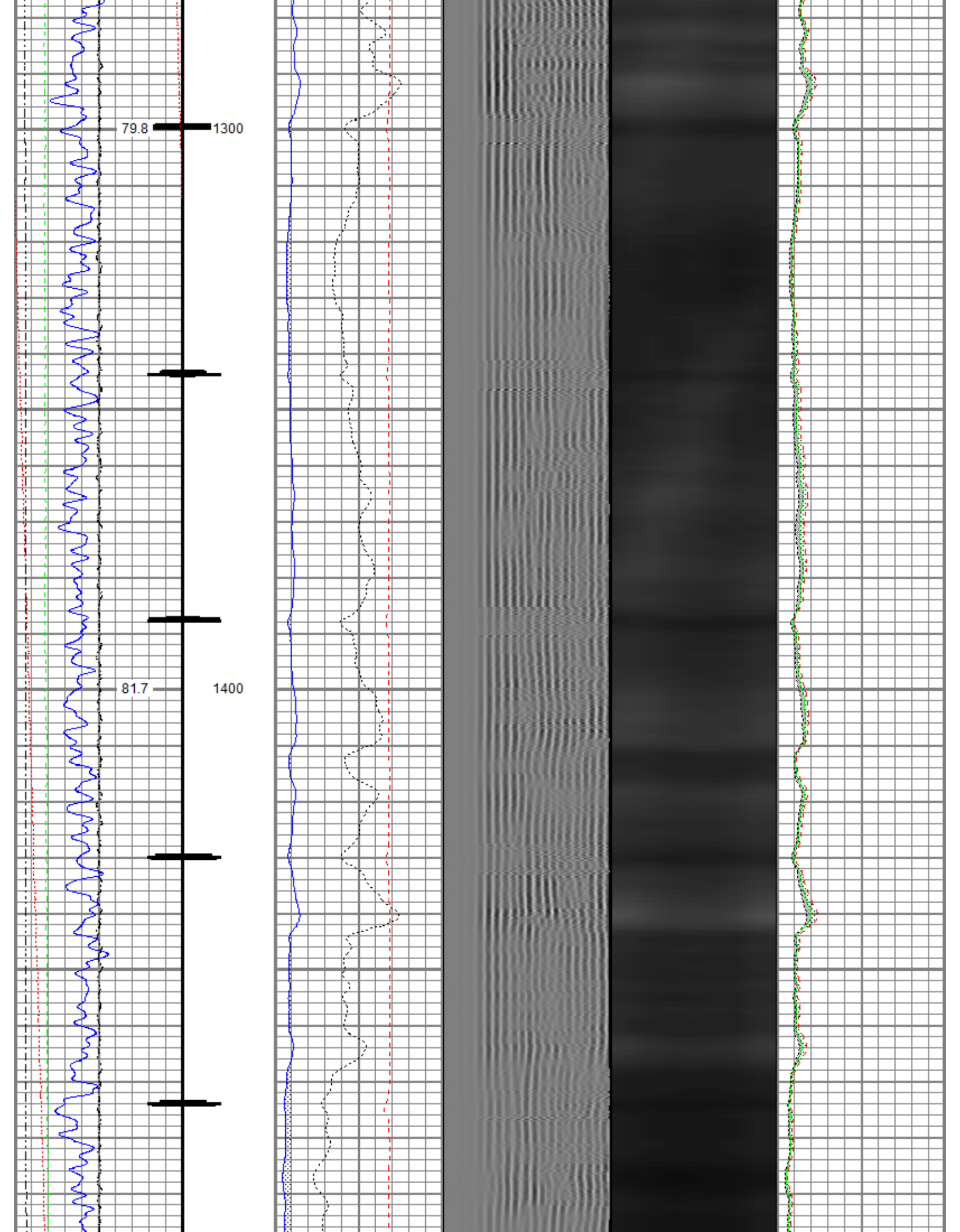




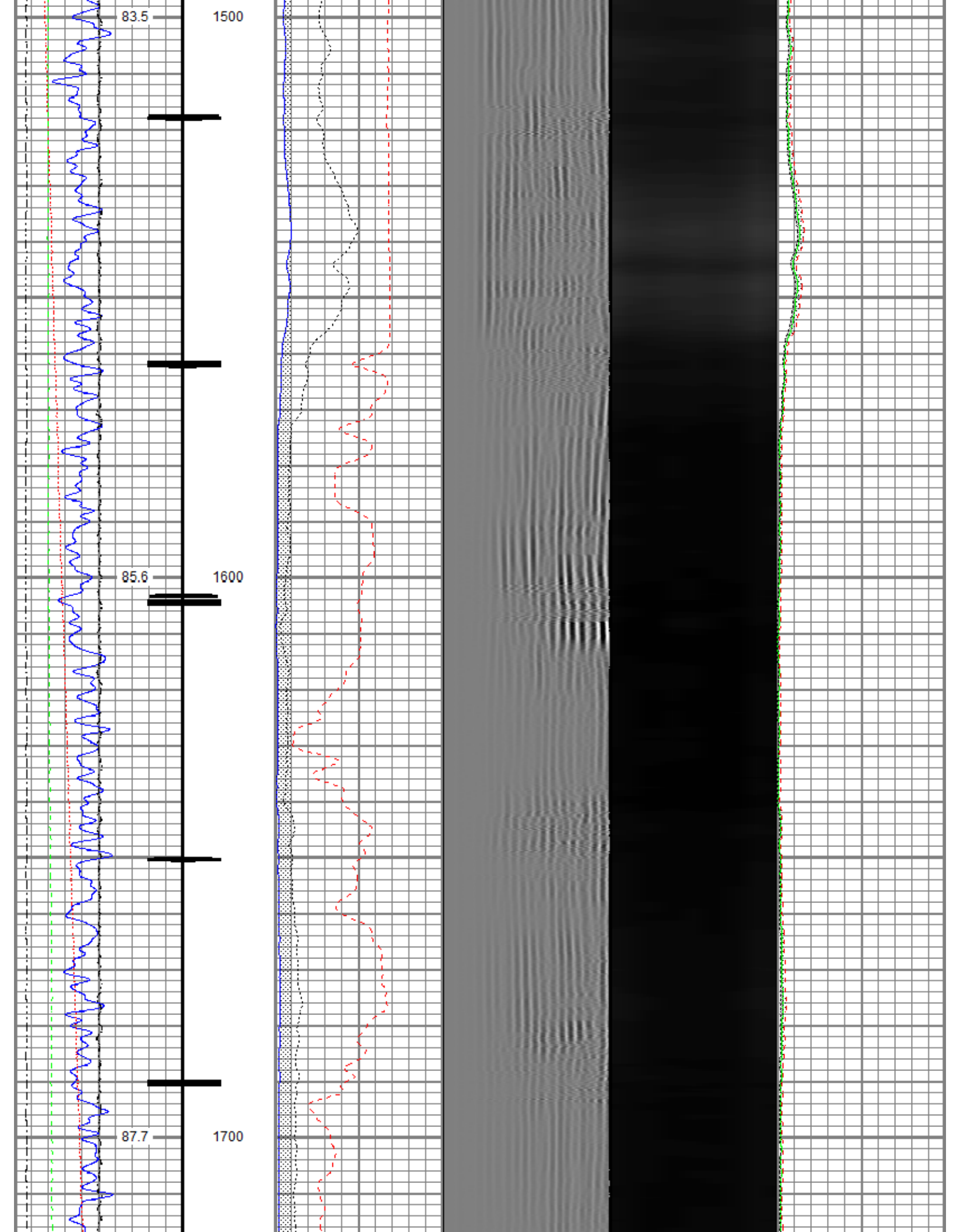


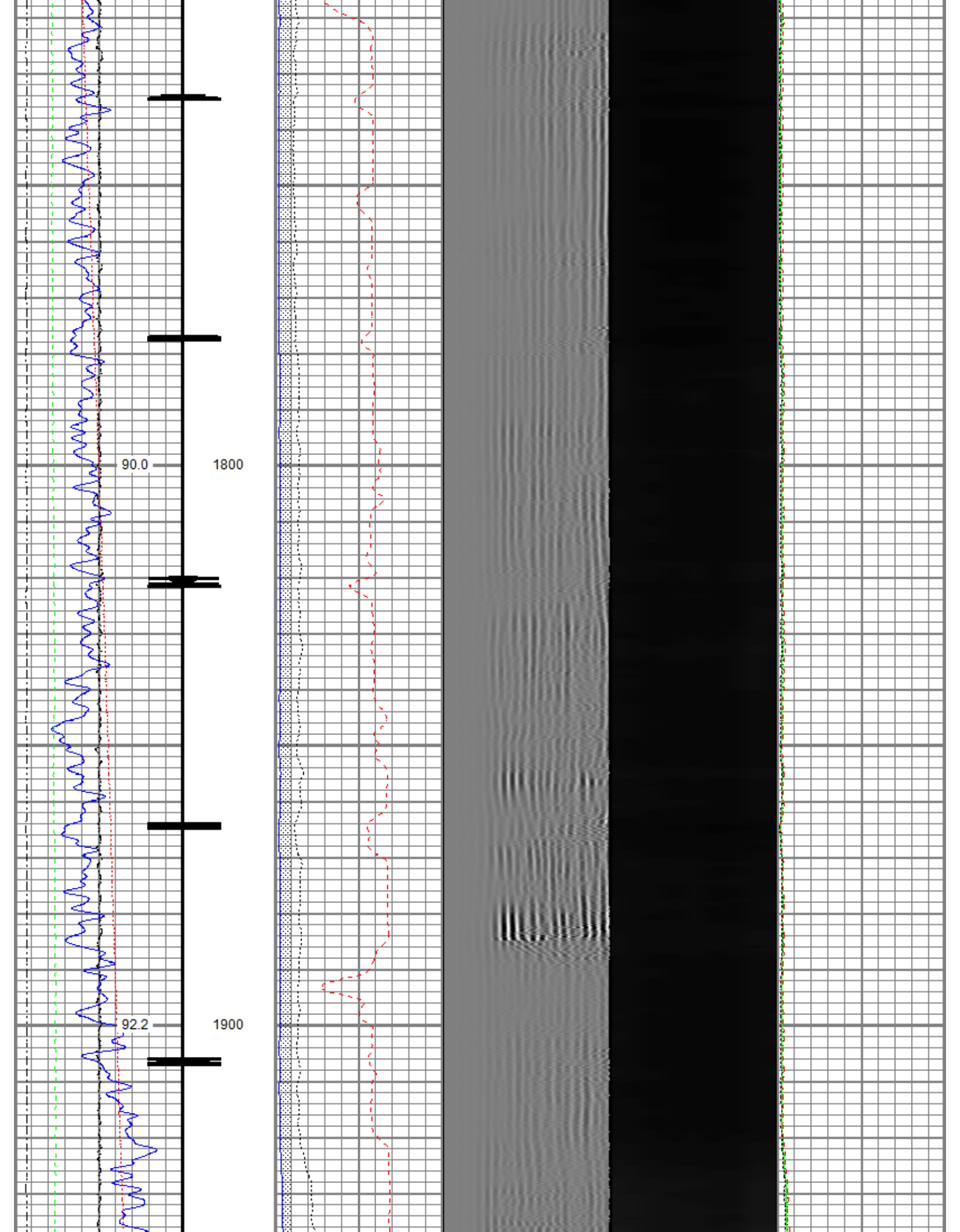


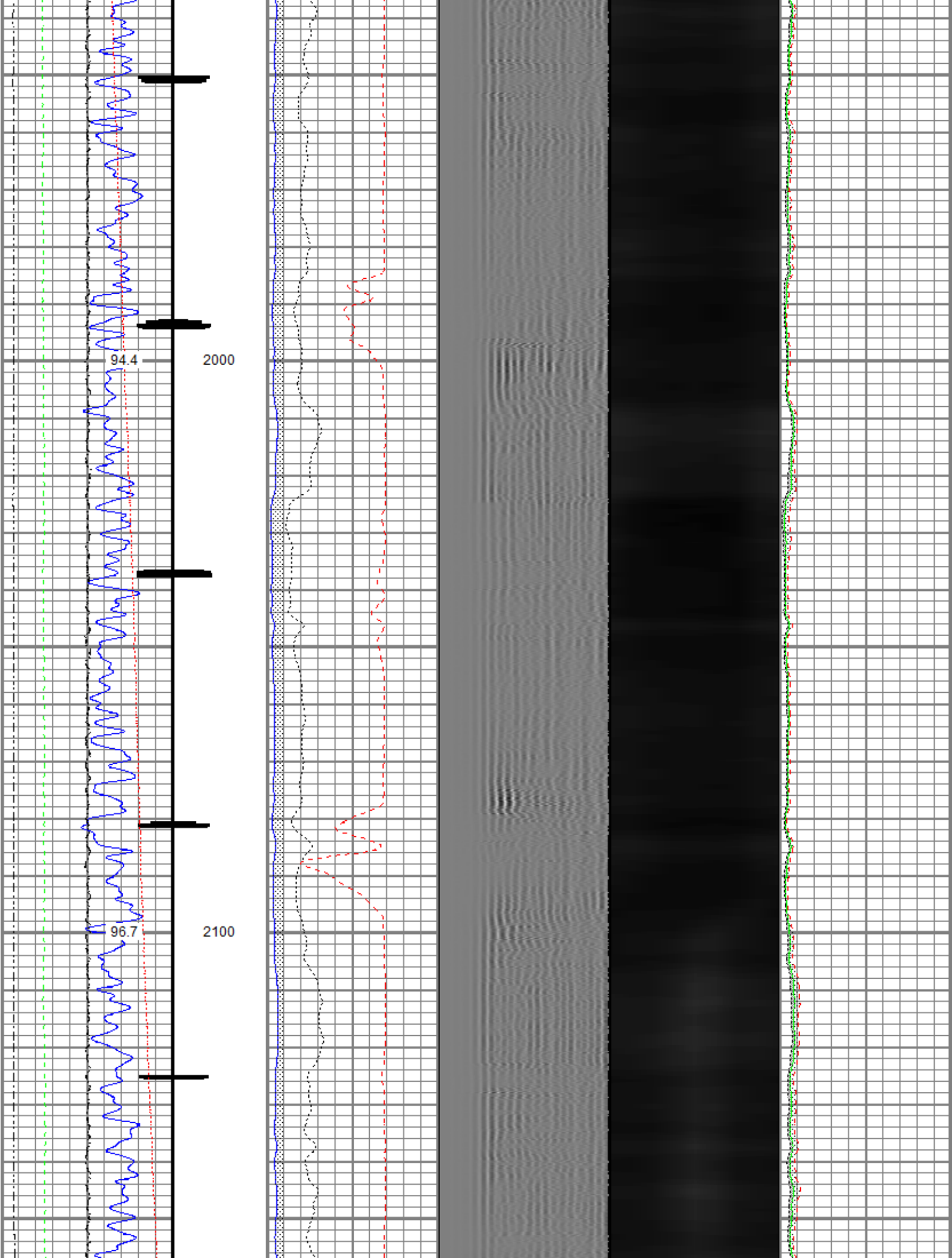


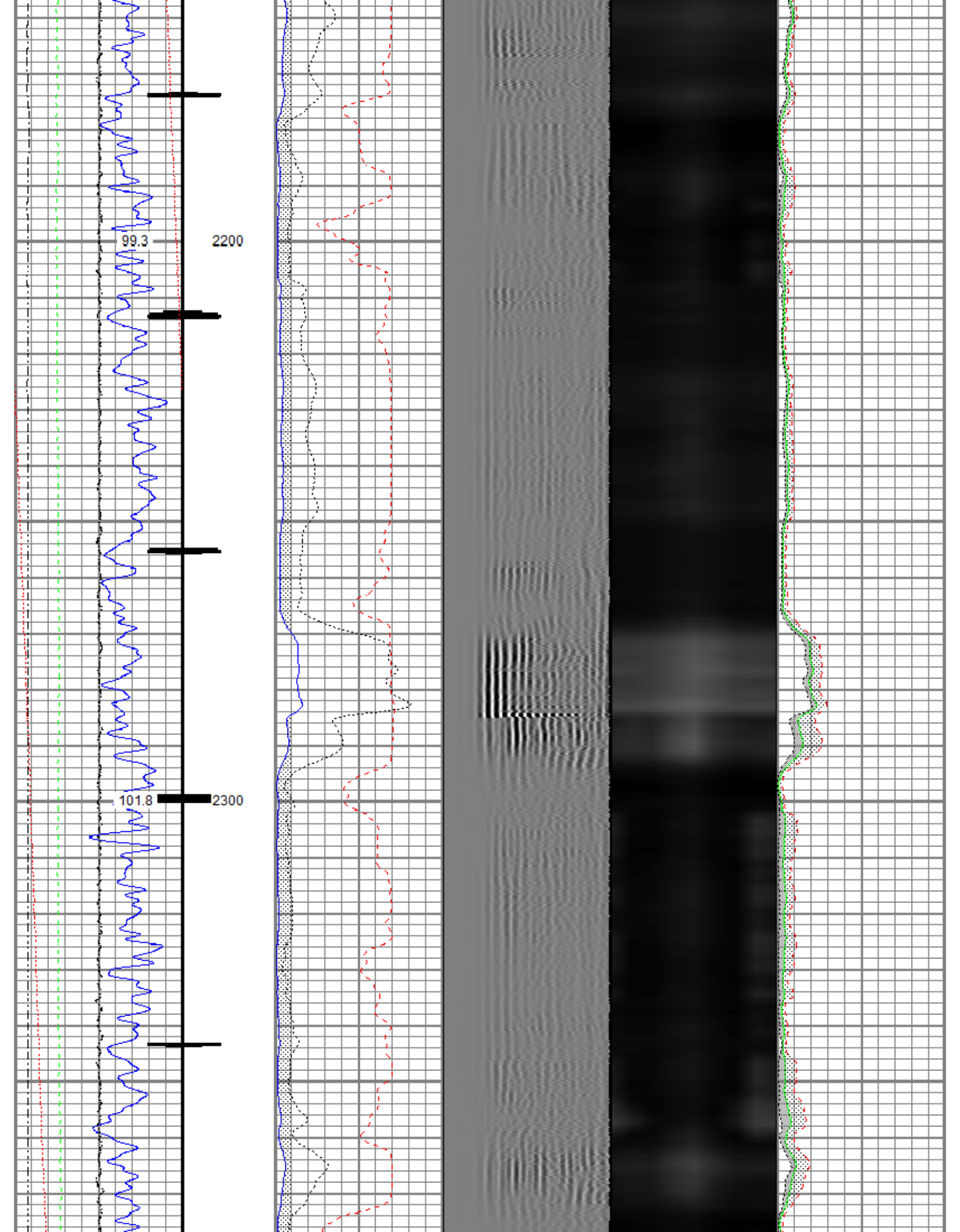




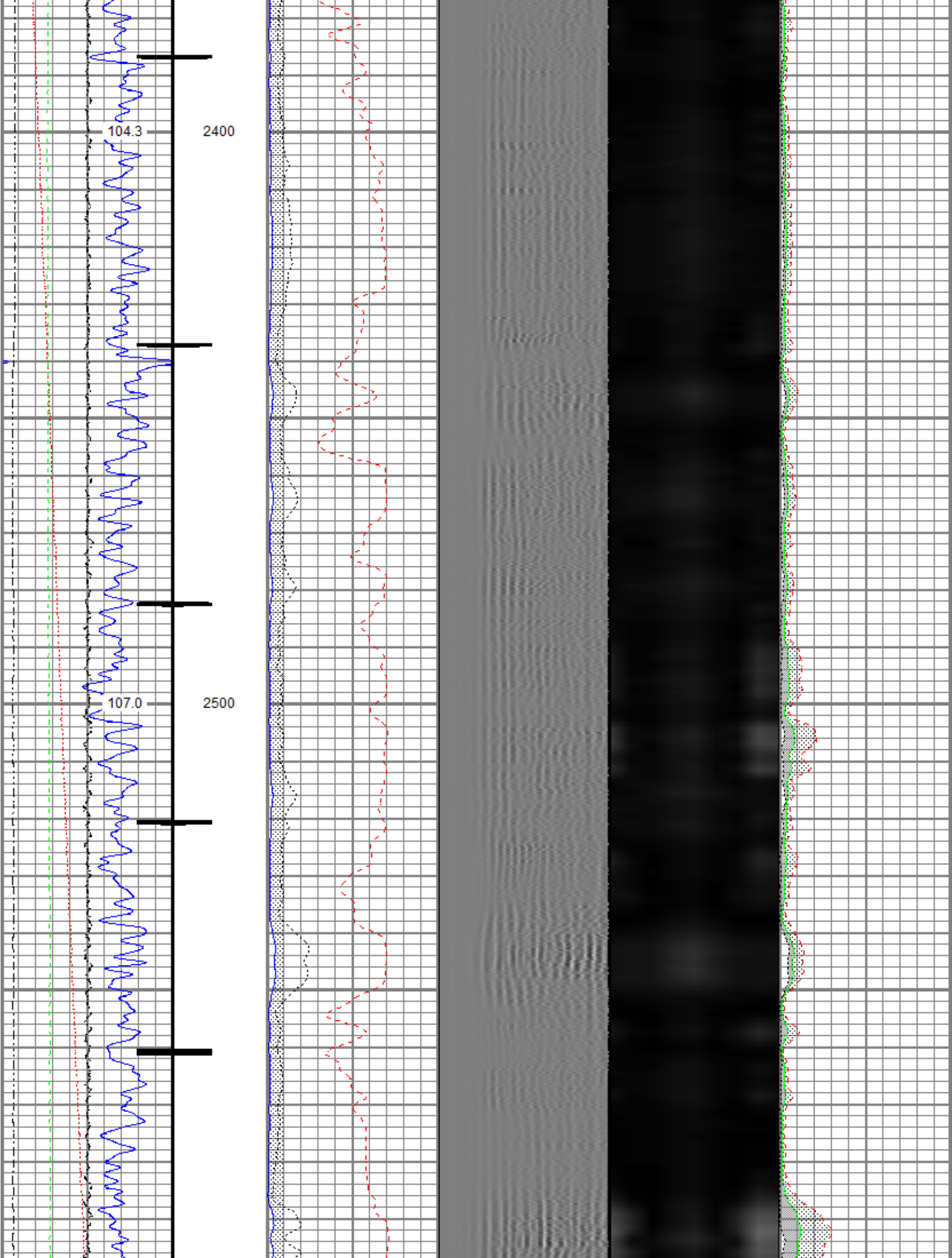


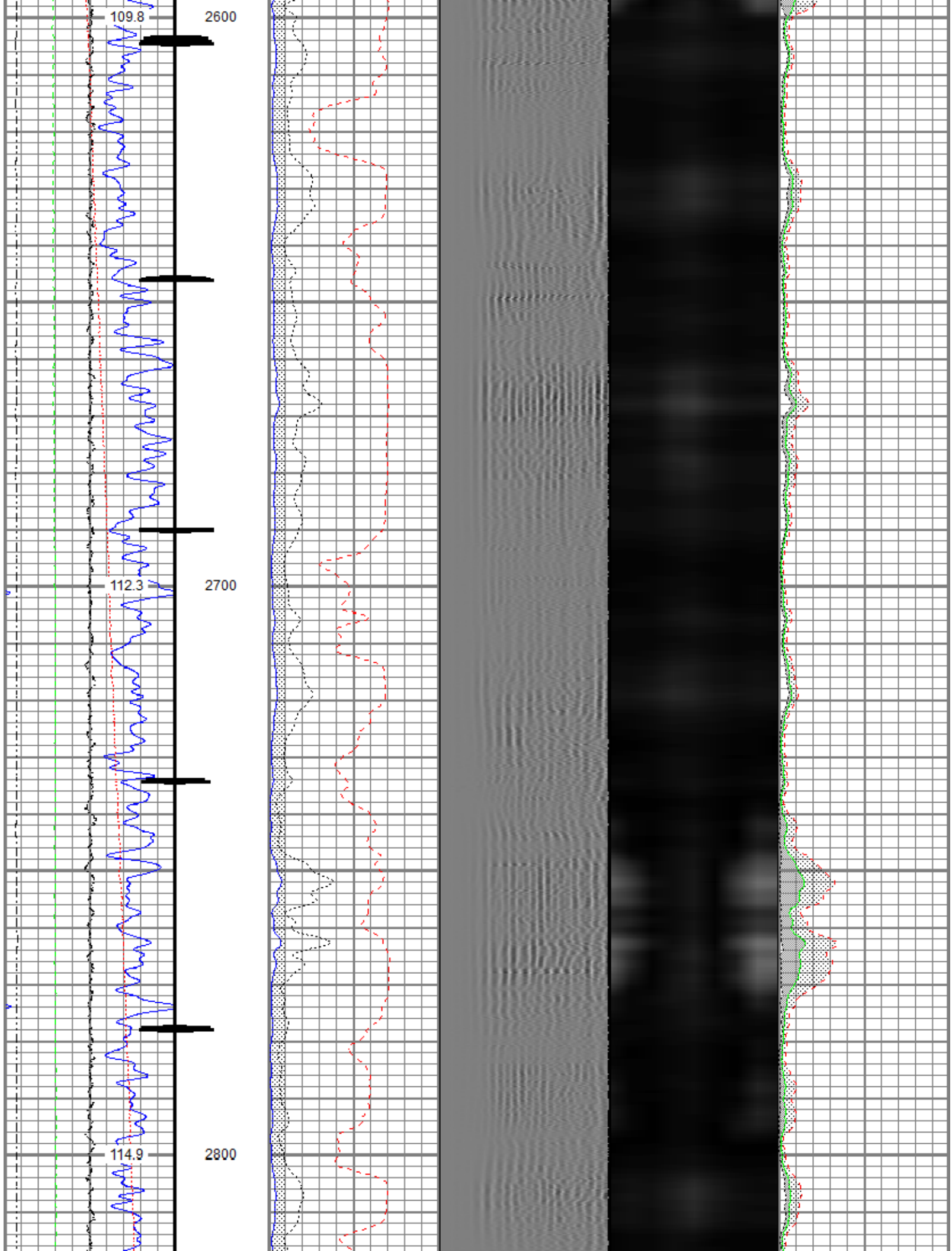


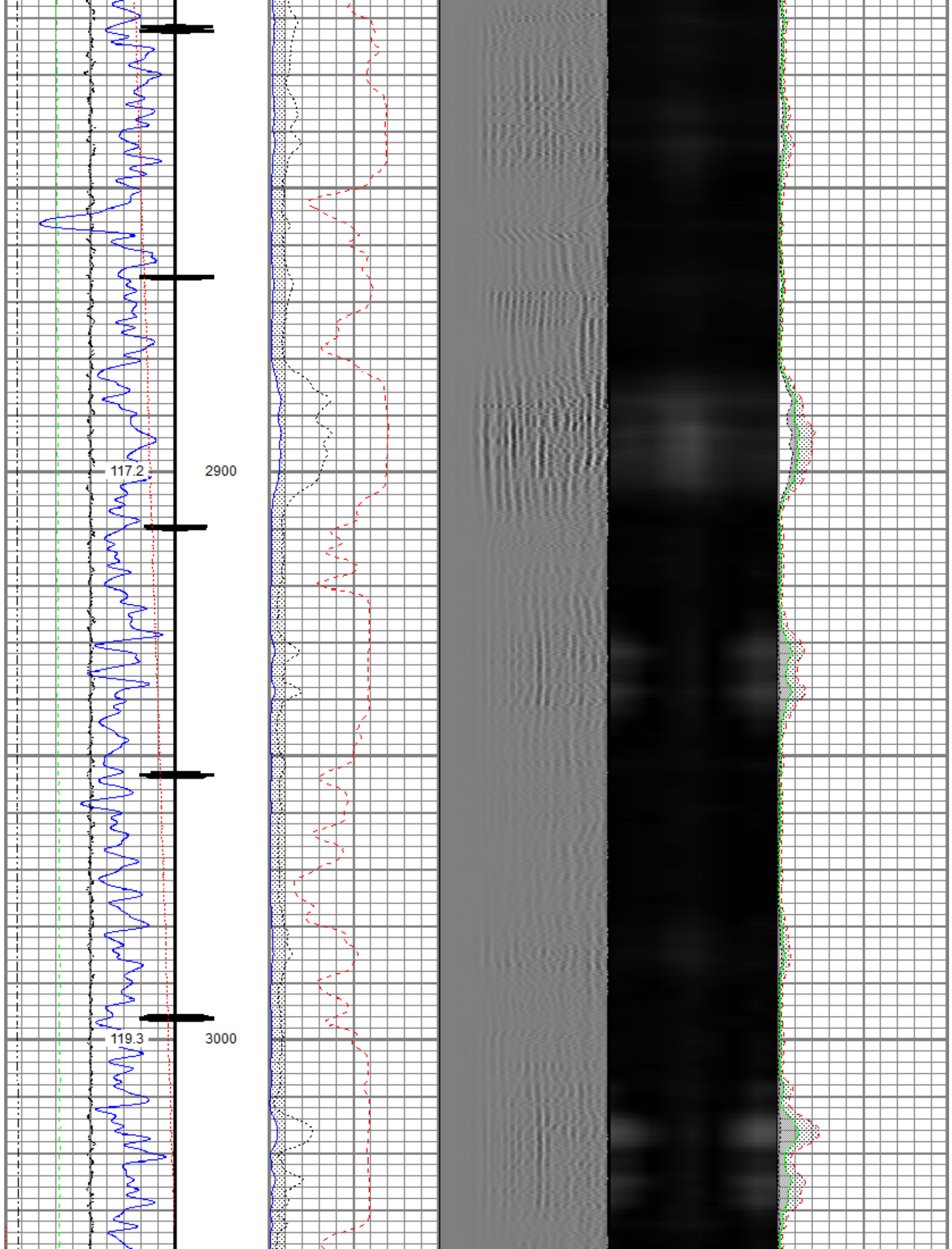


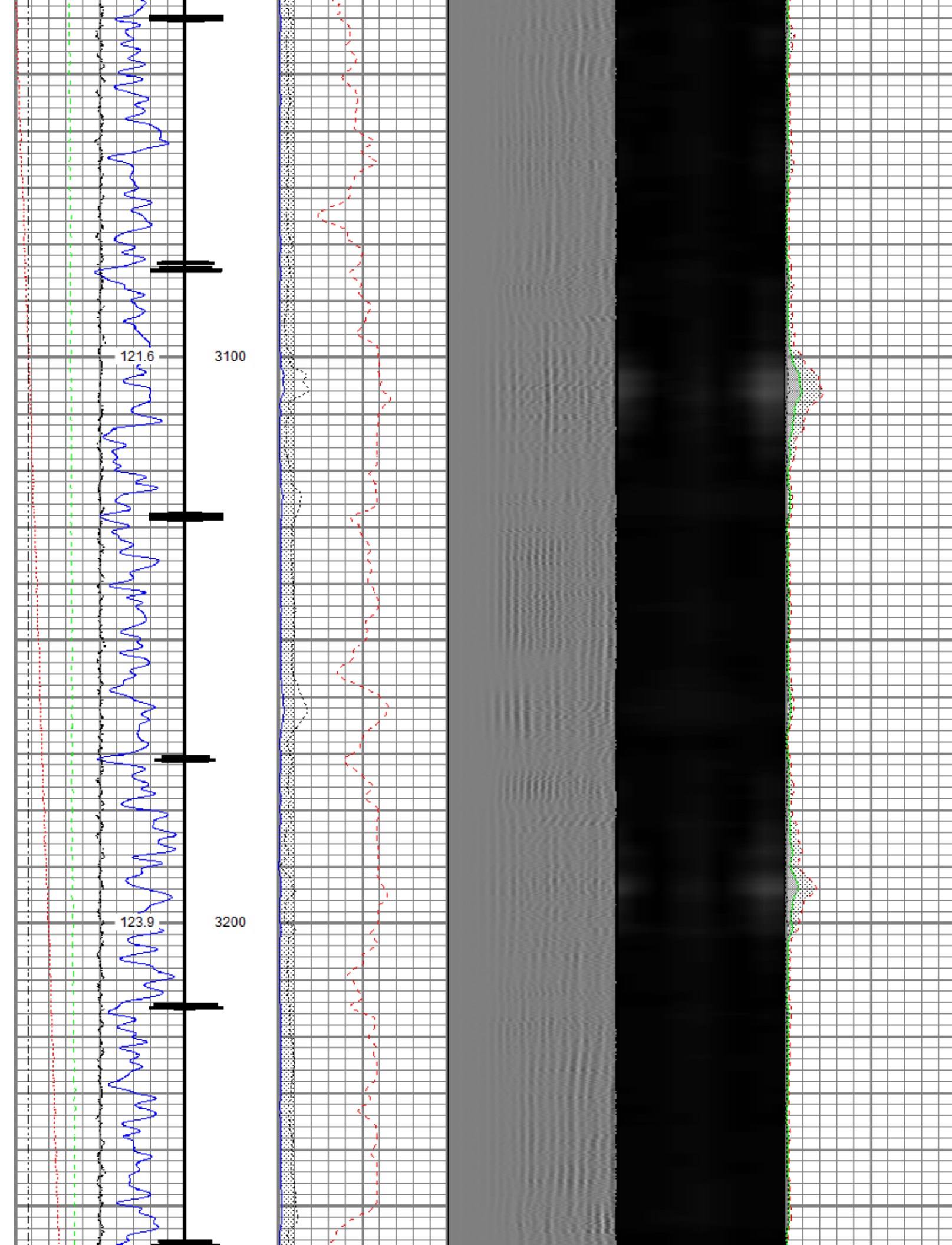




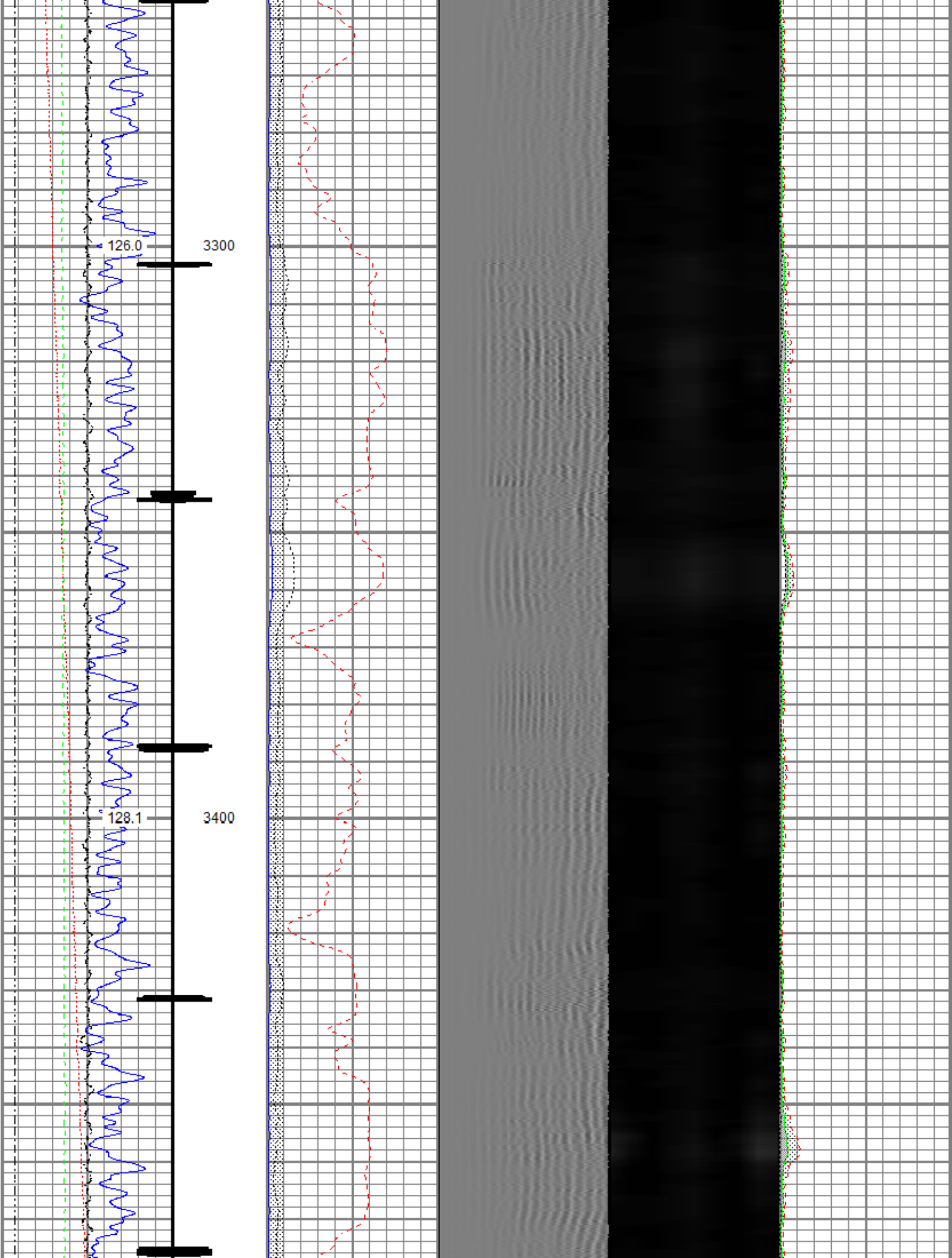


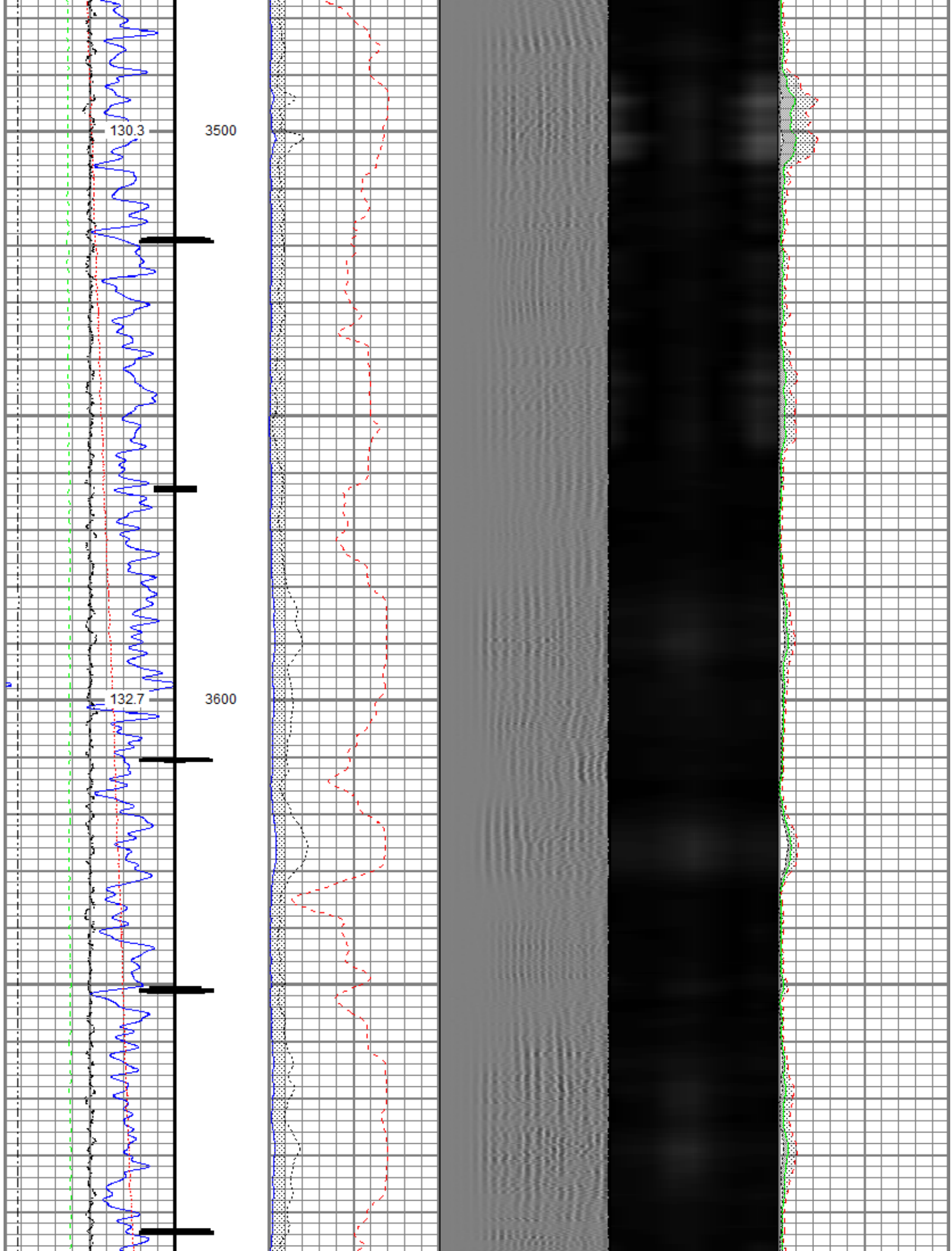


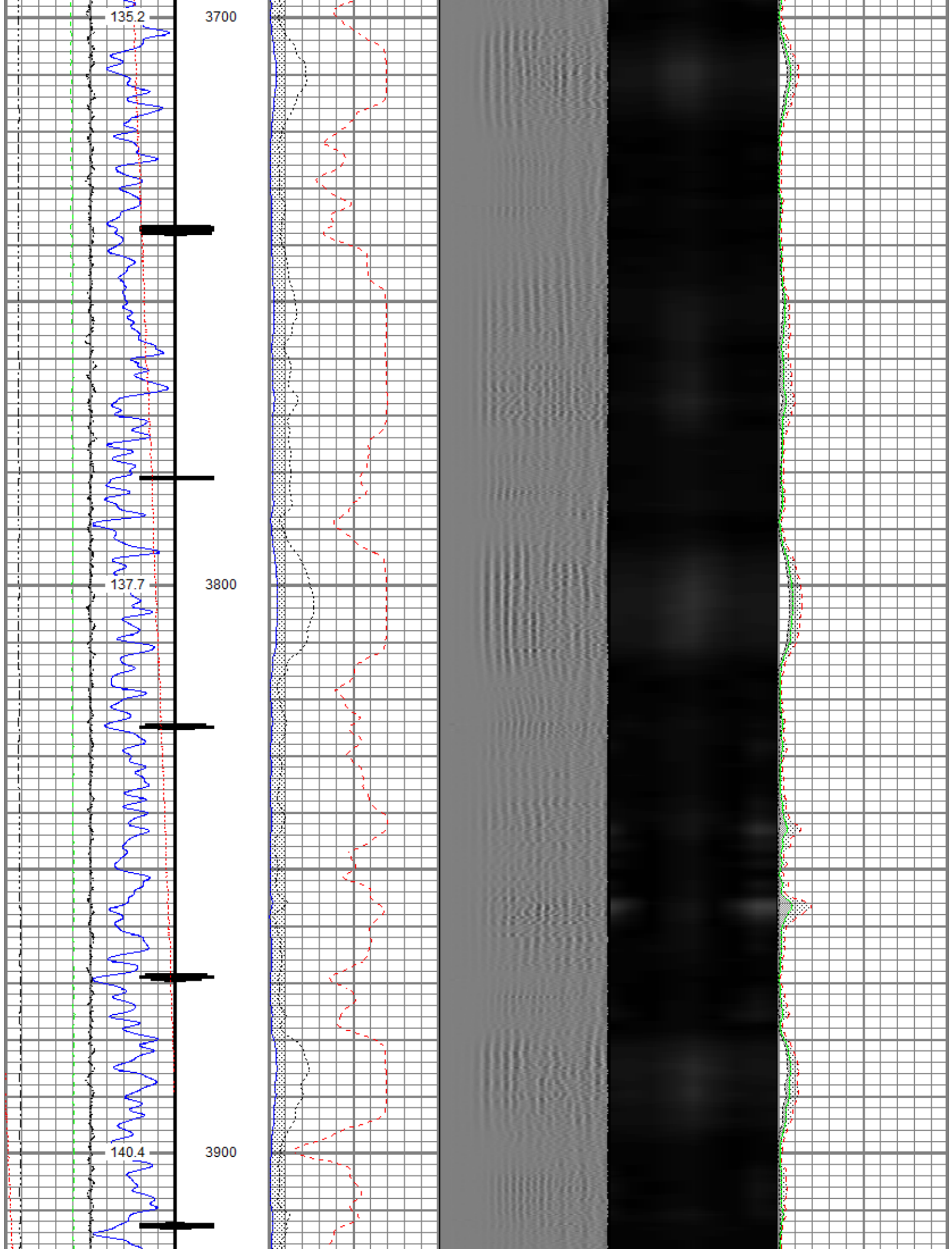


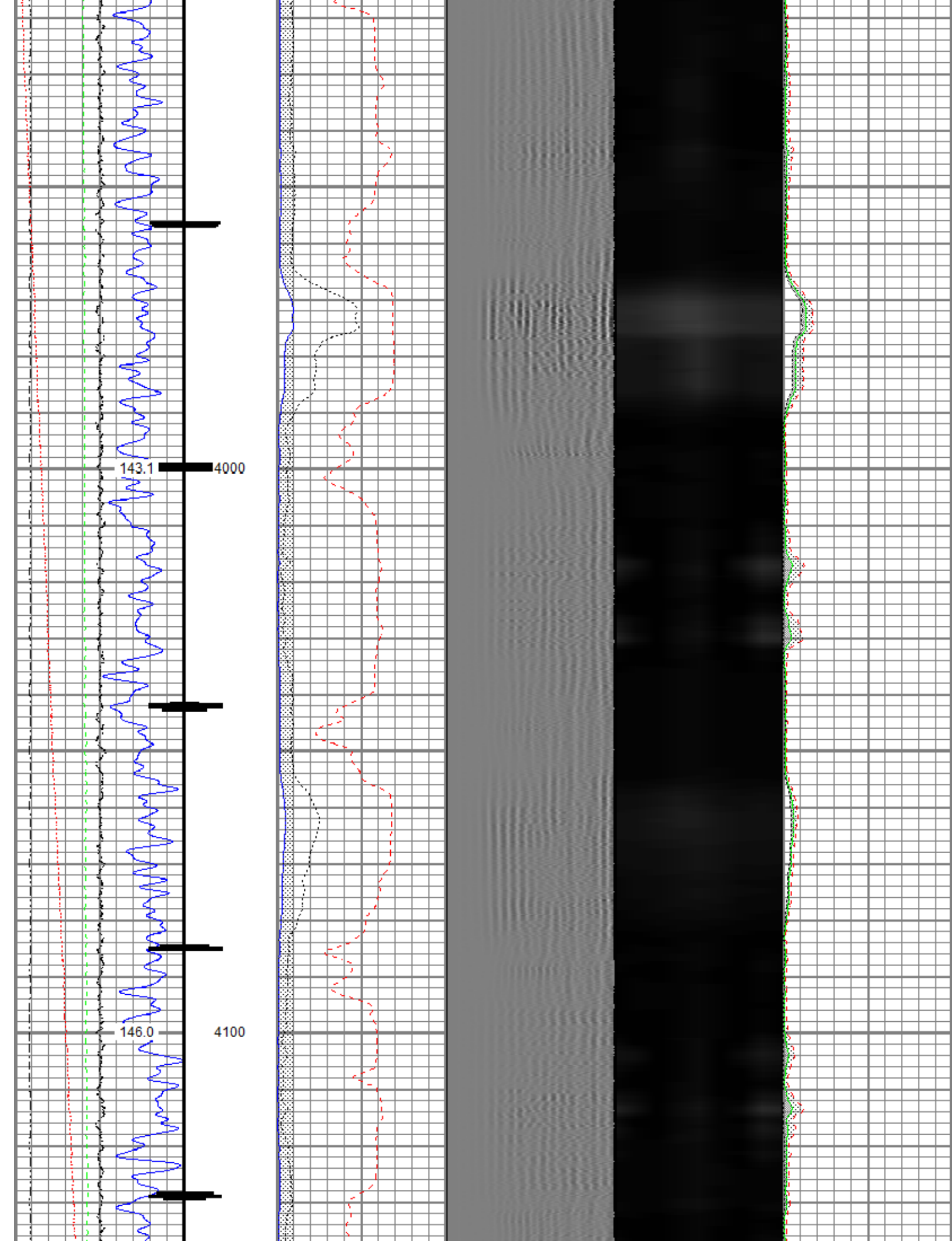




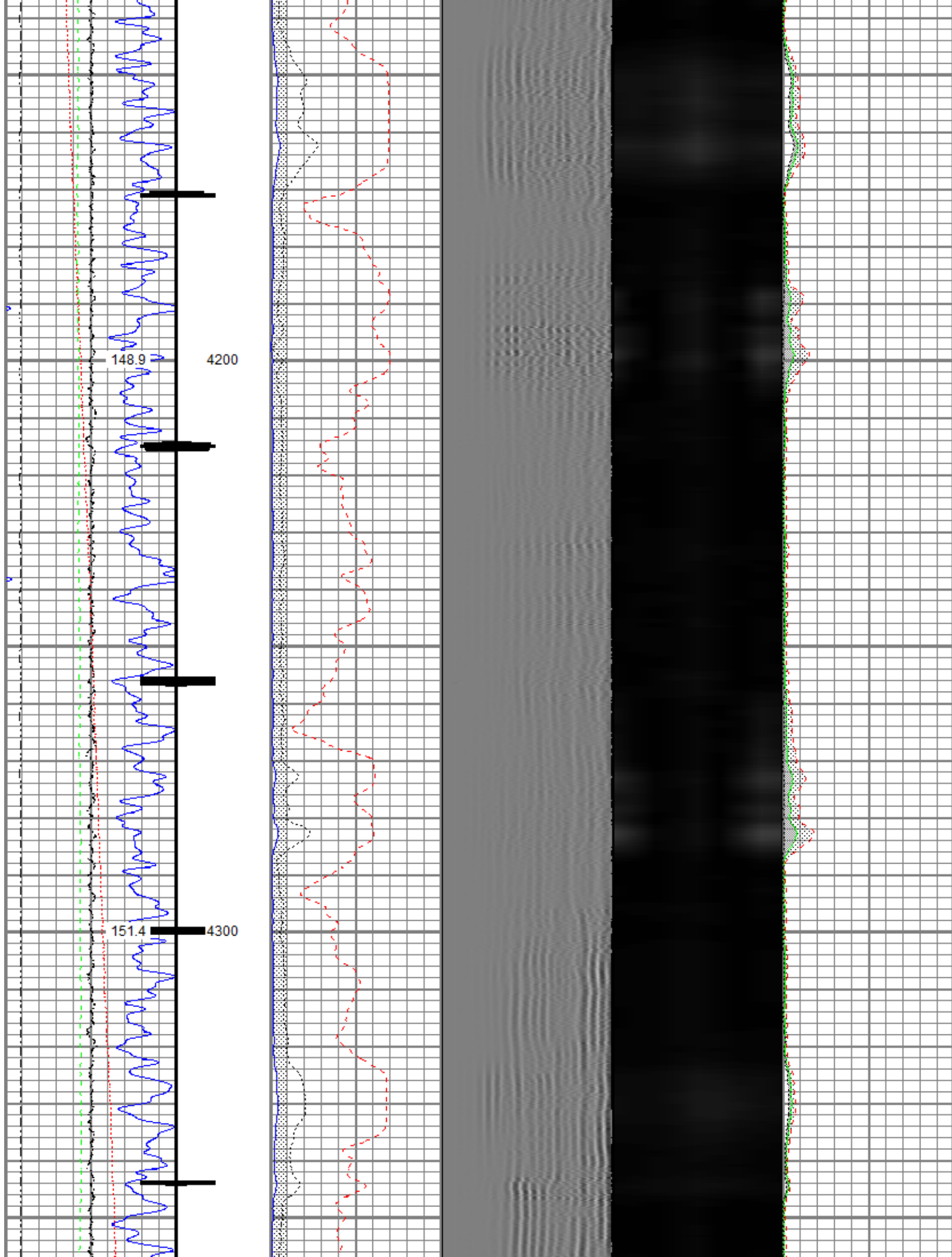


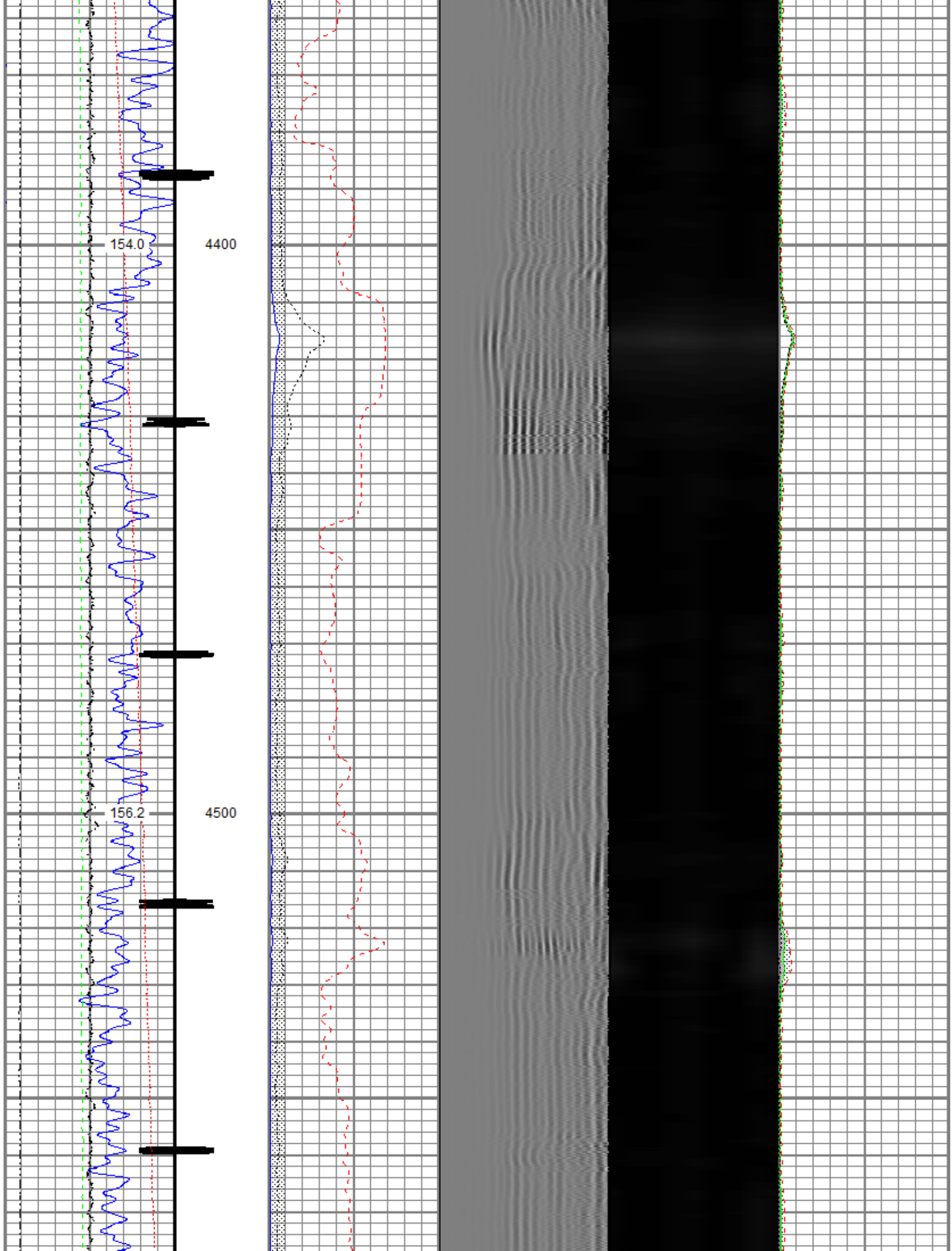


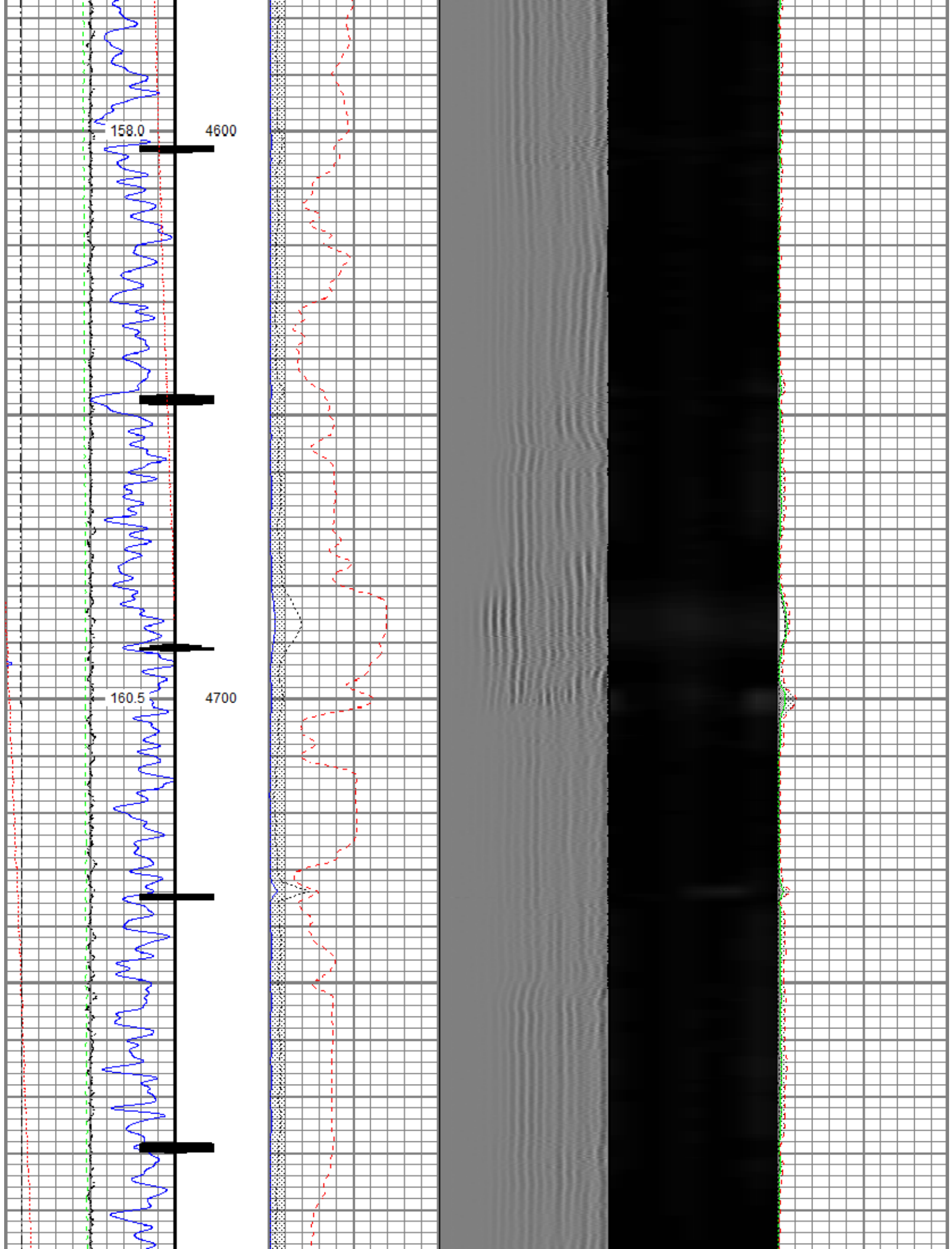


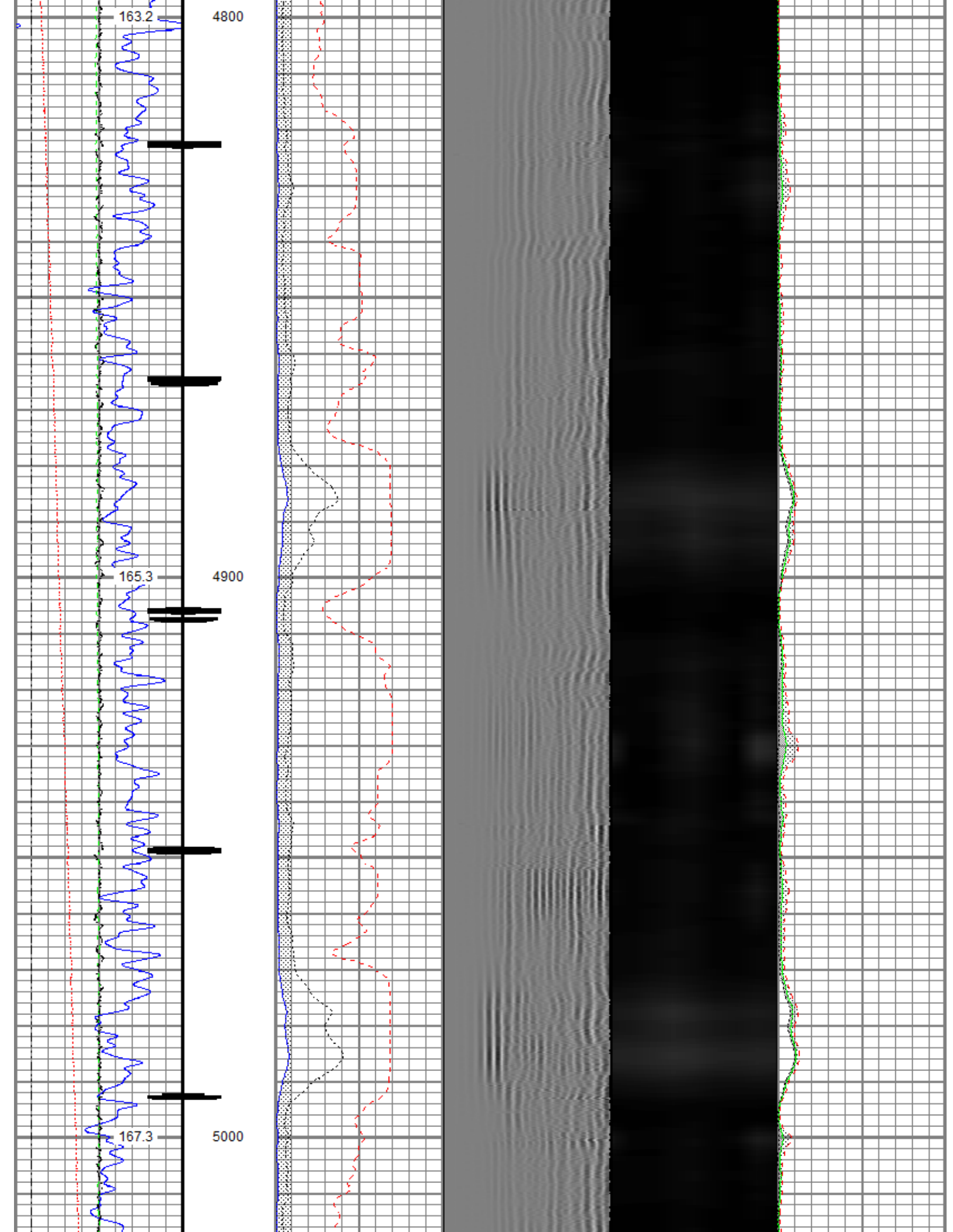




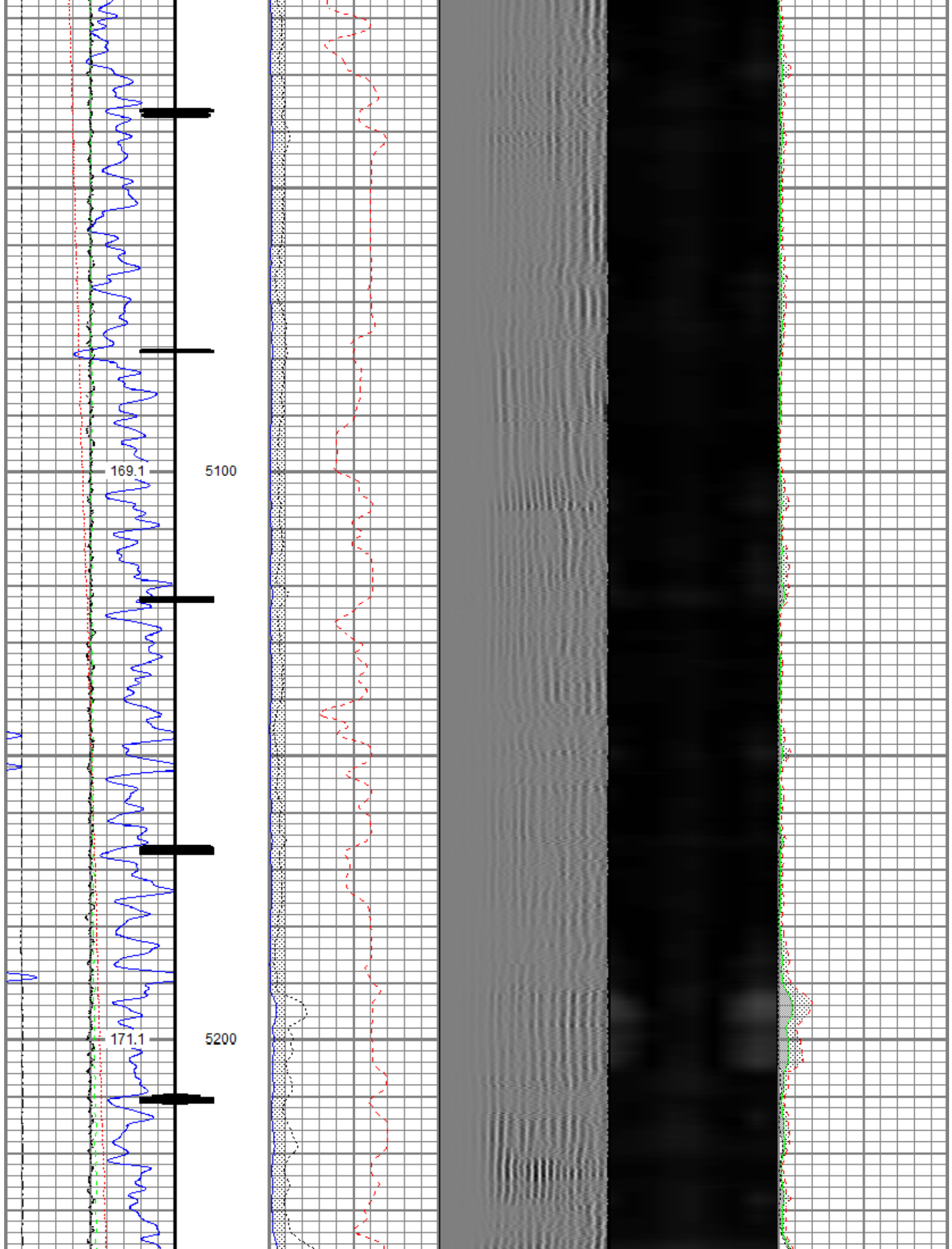


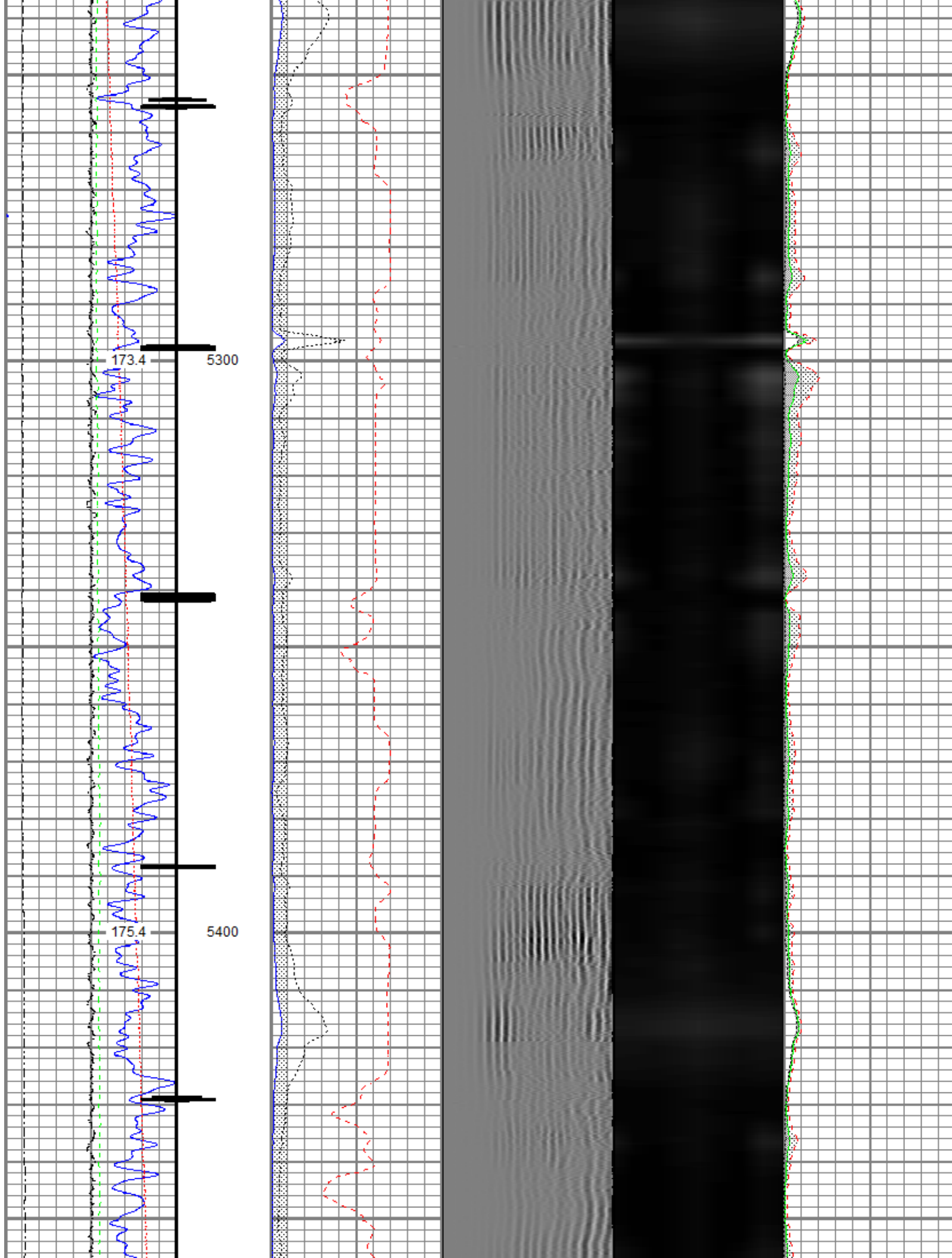


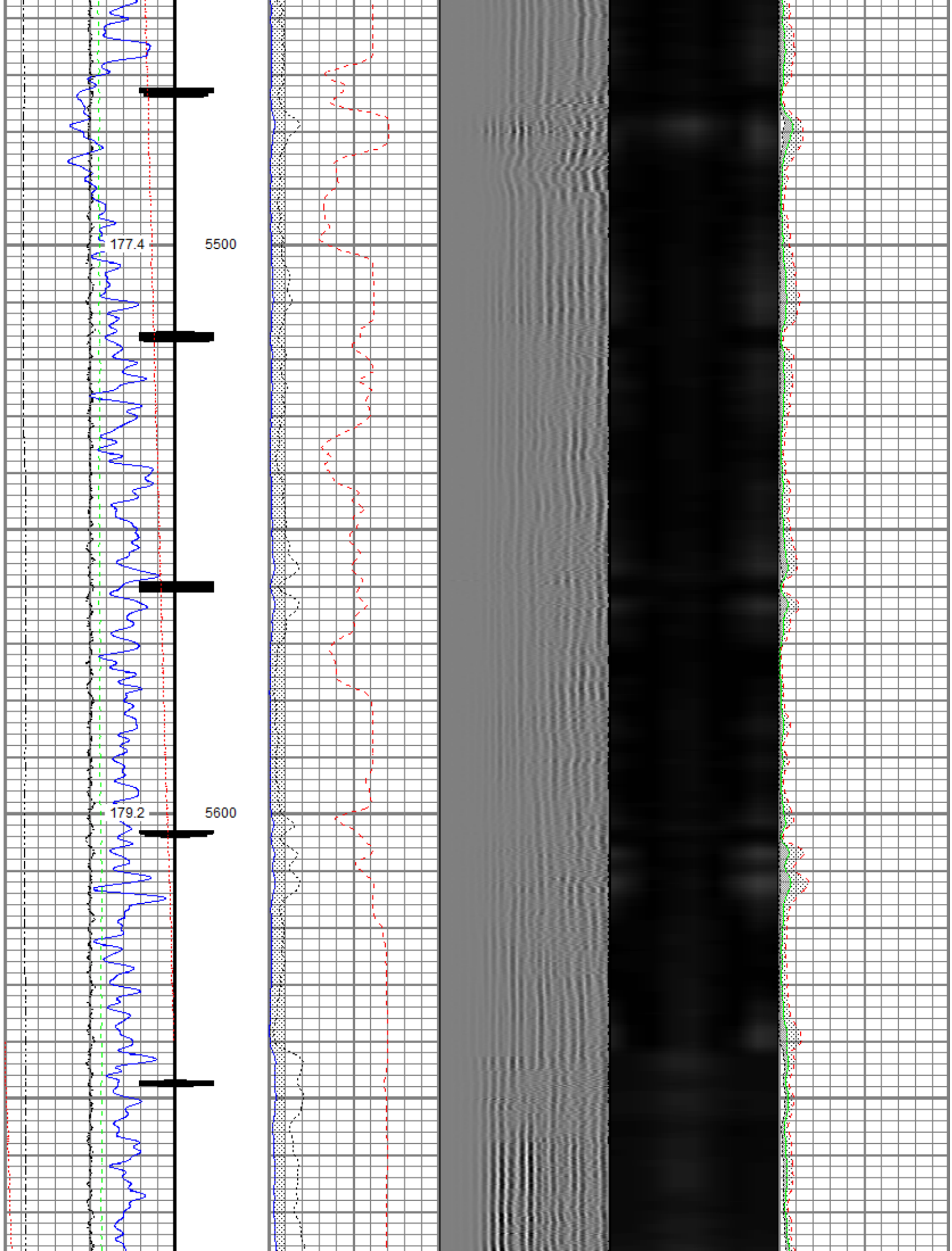


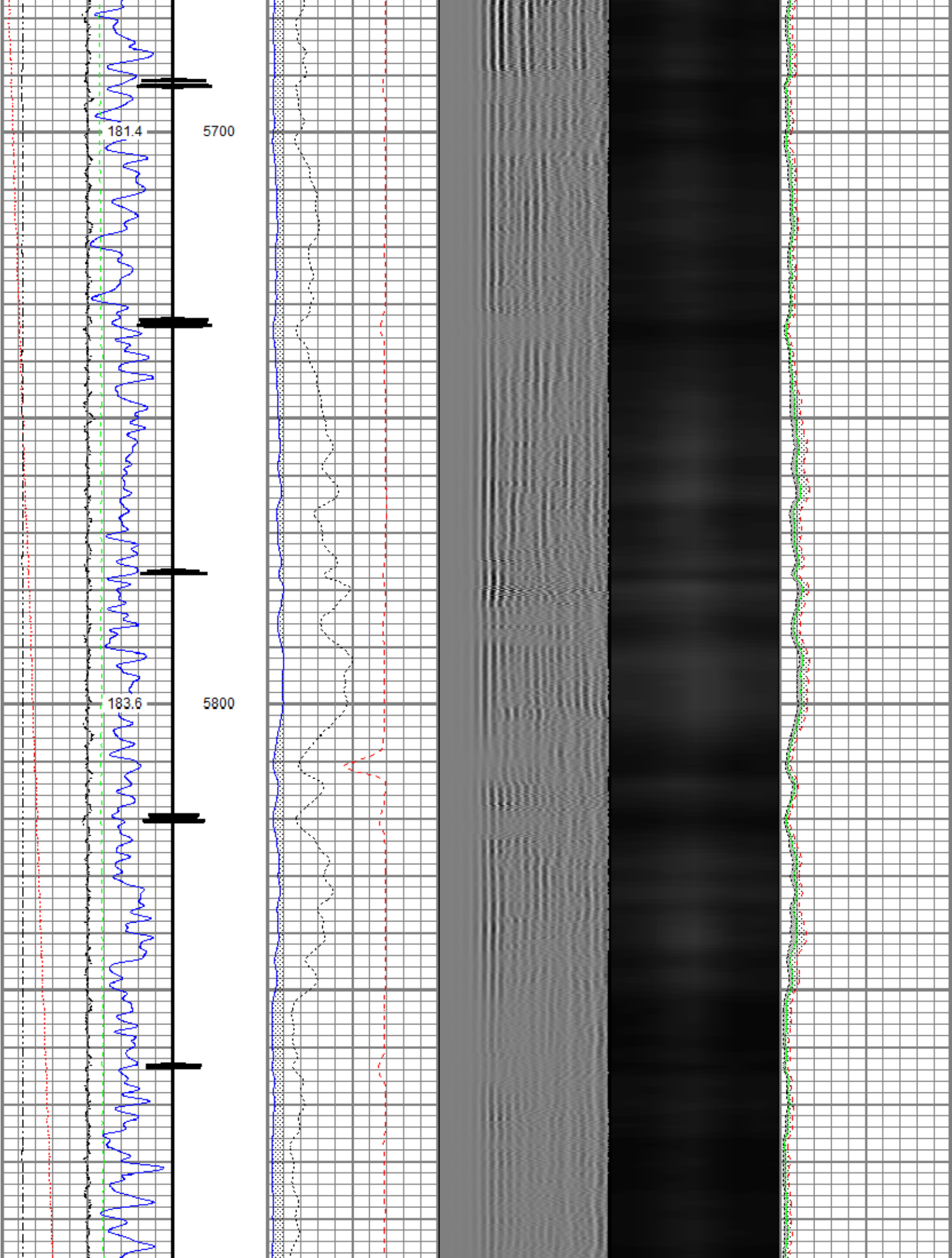




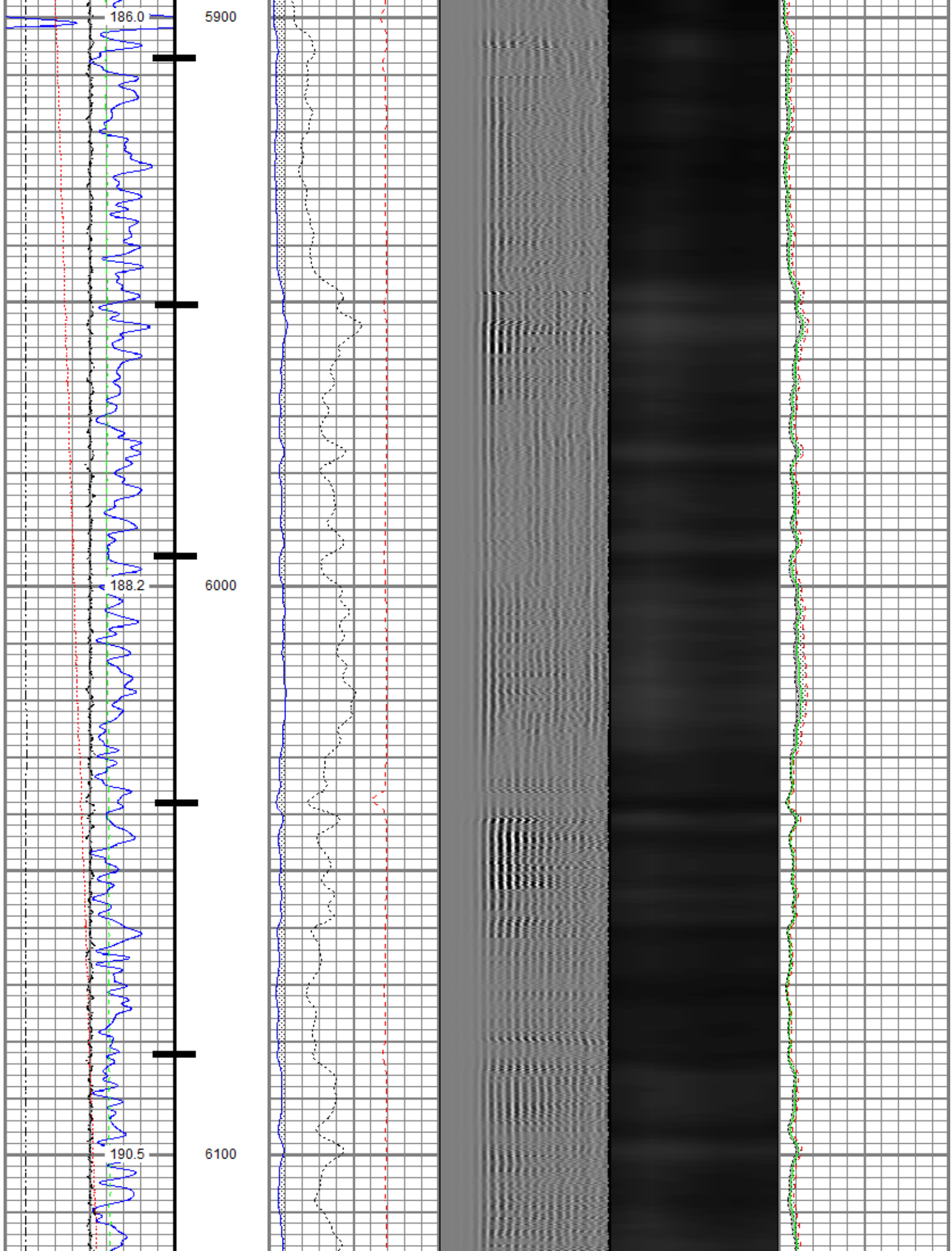


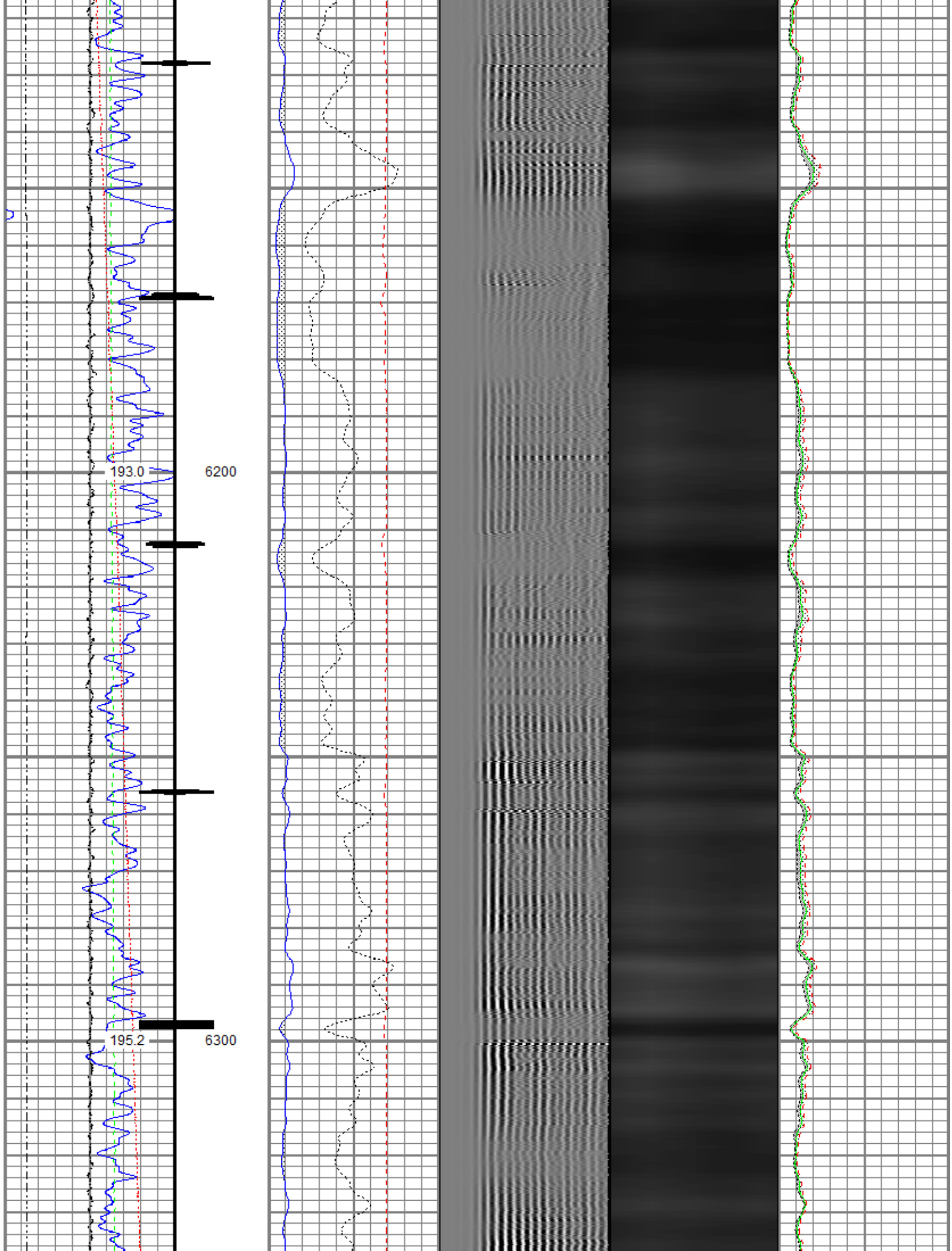


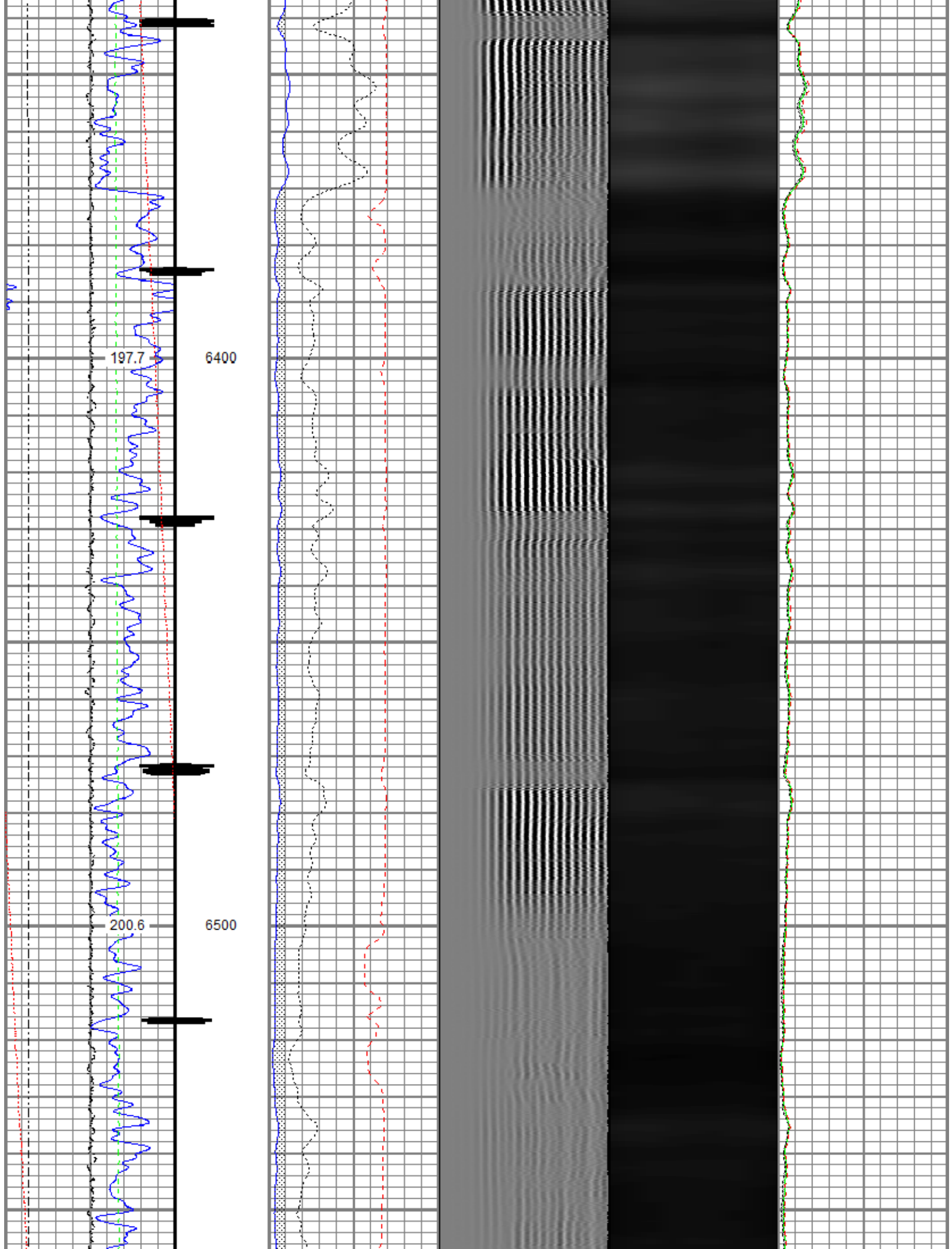


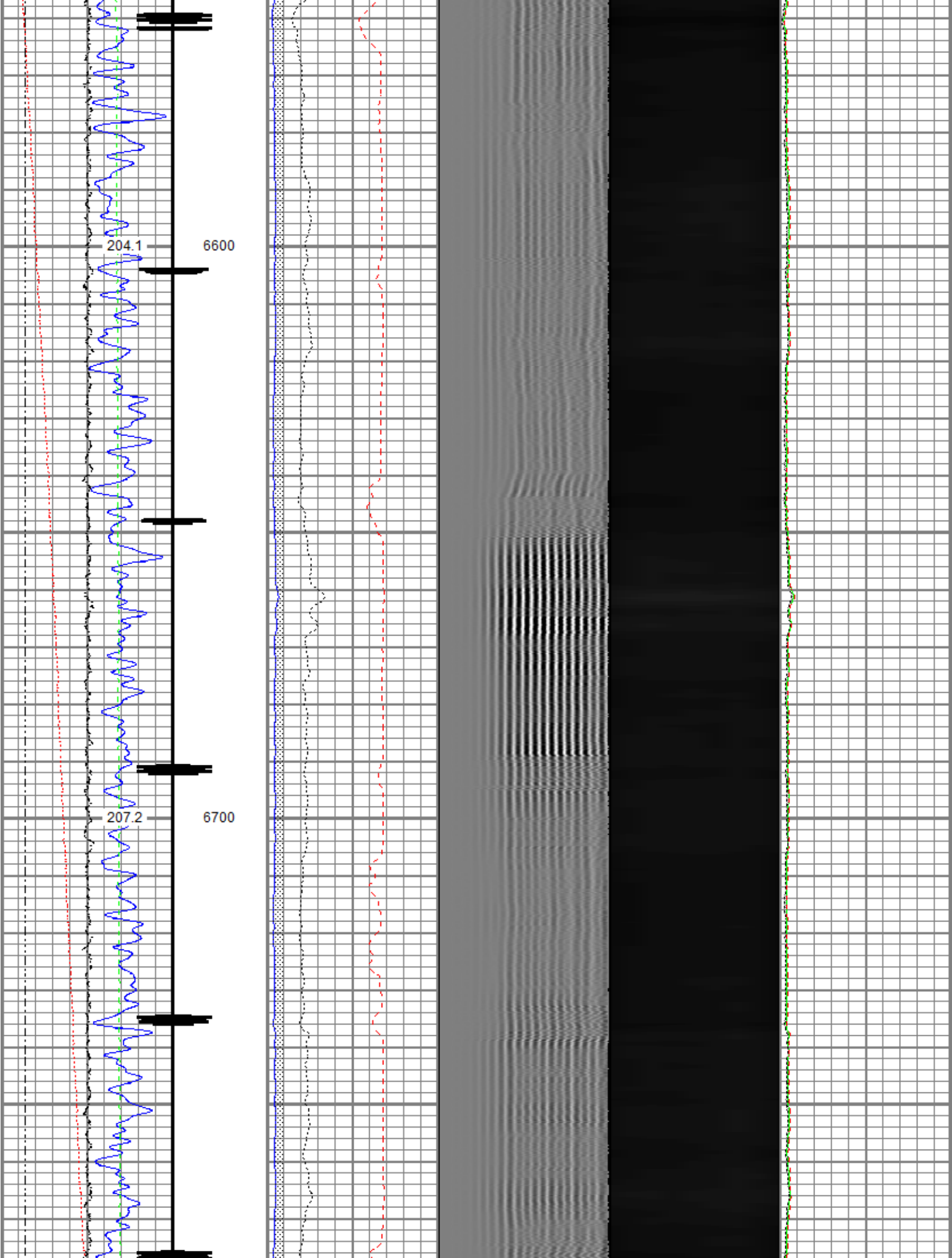




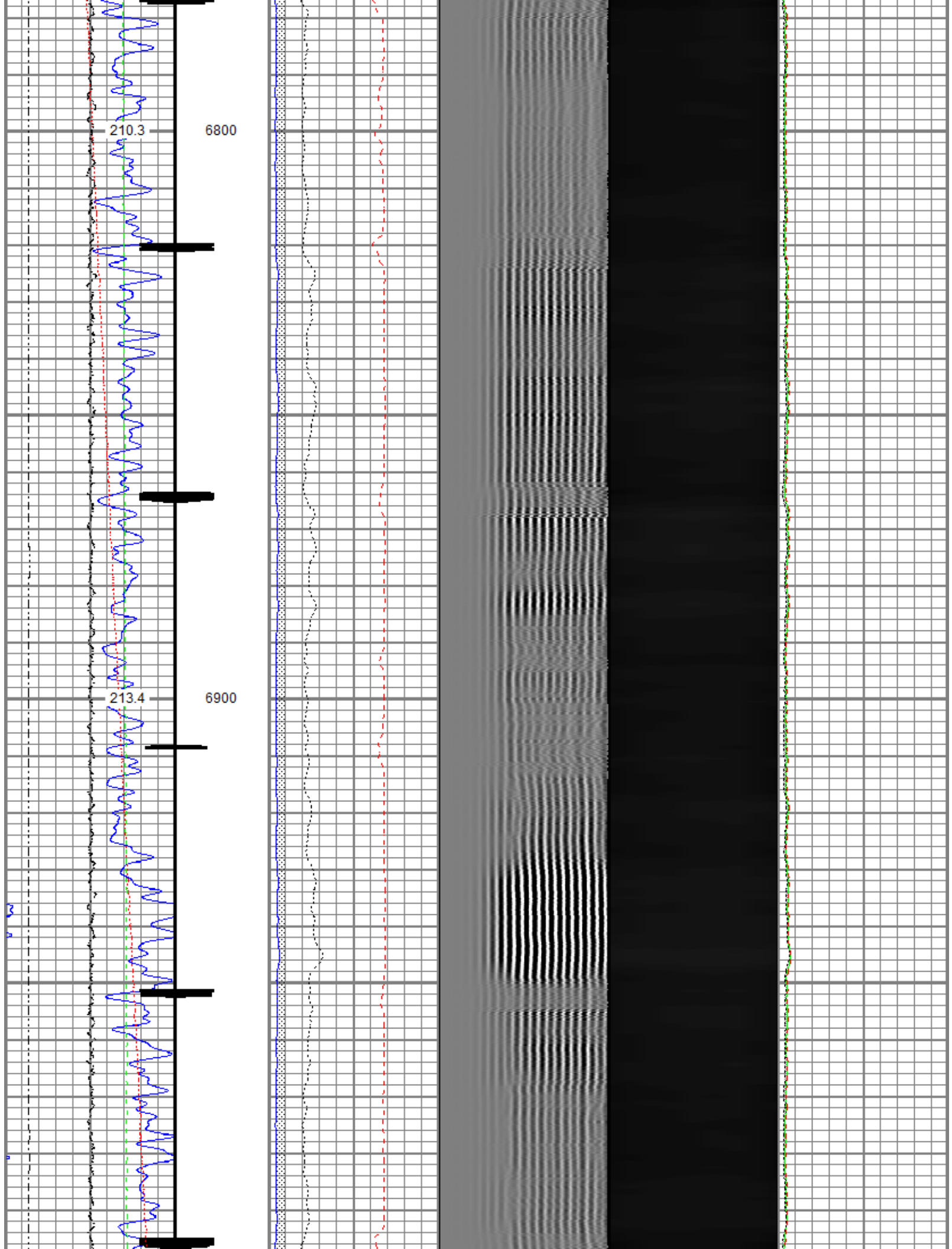


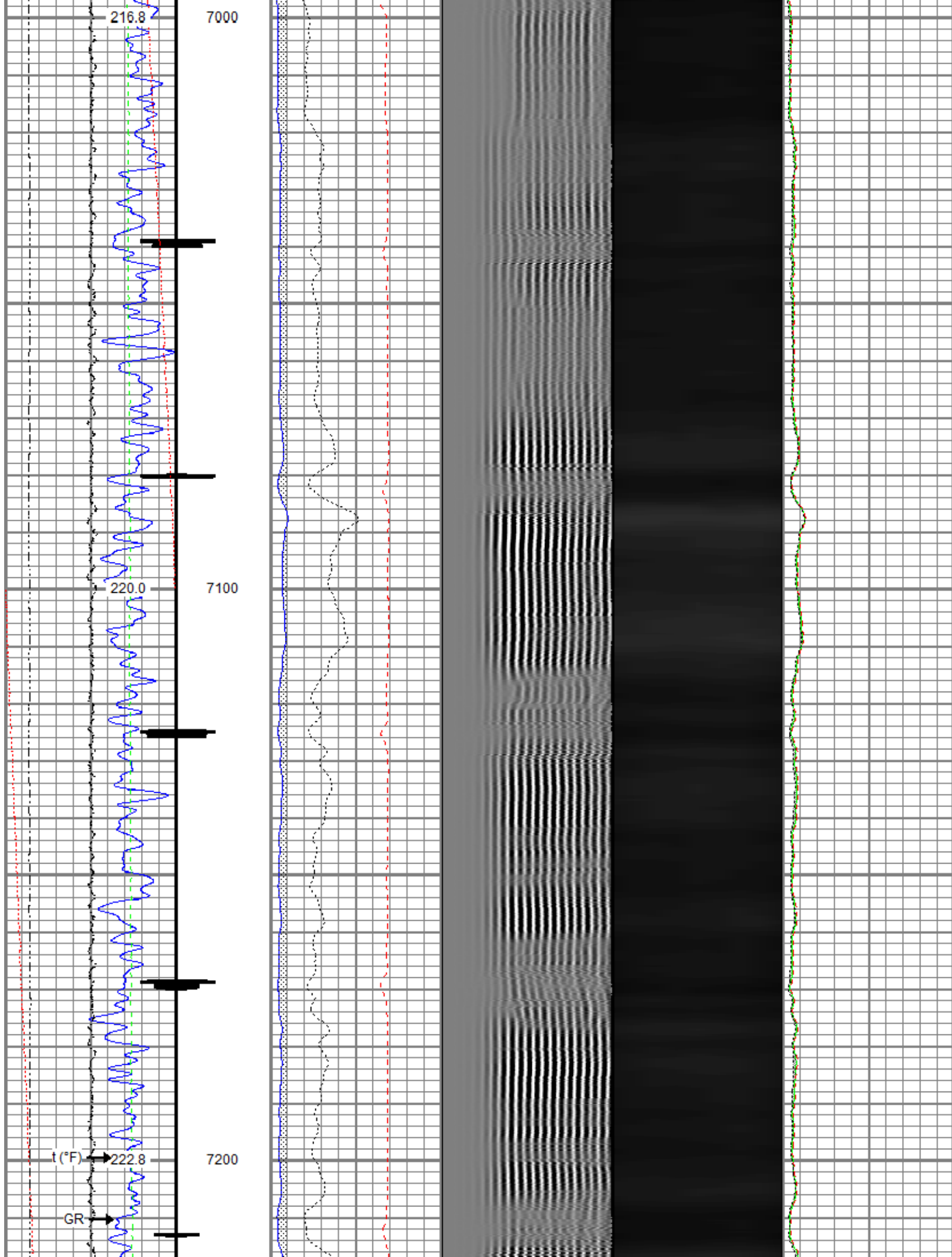


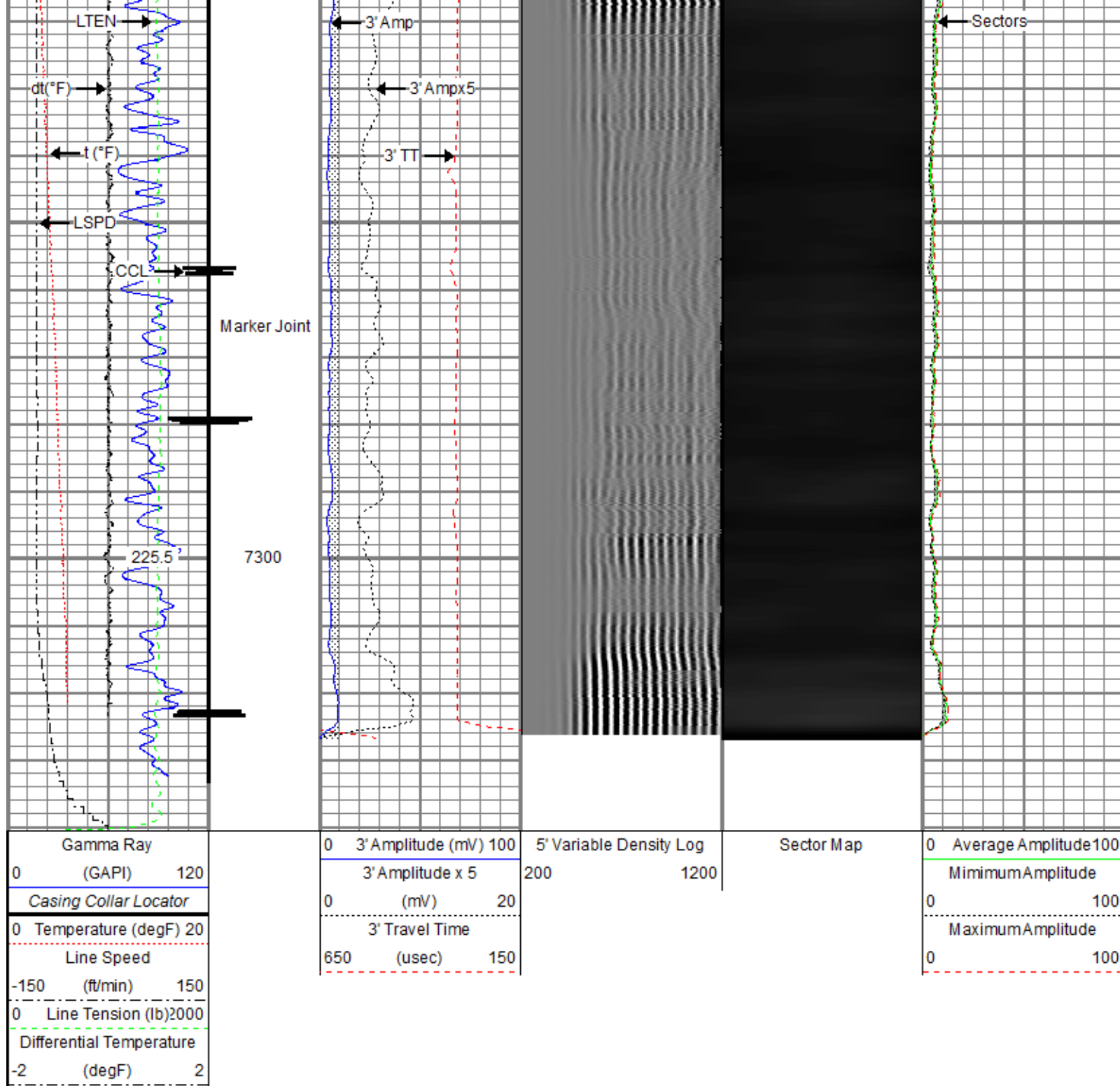








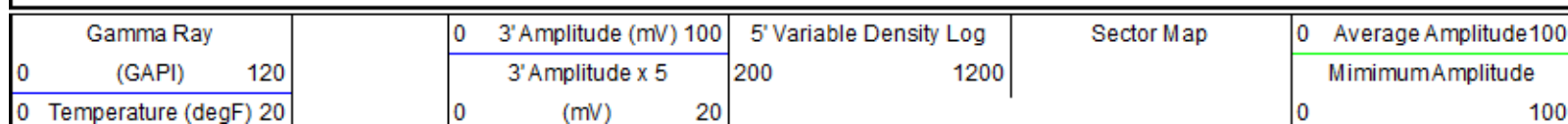




## Repeat Pass

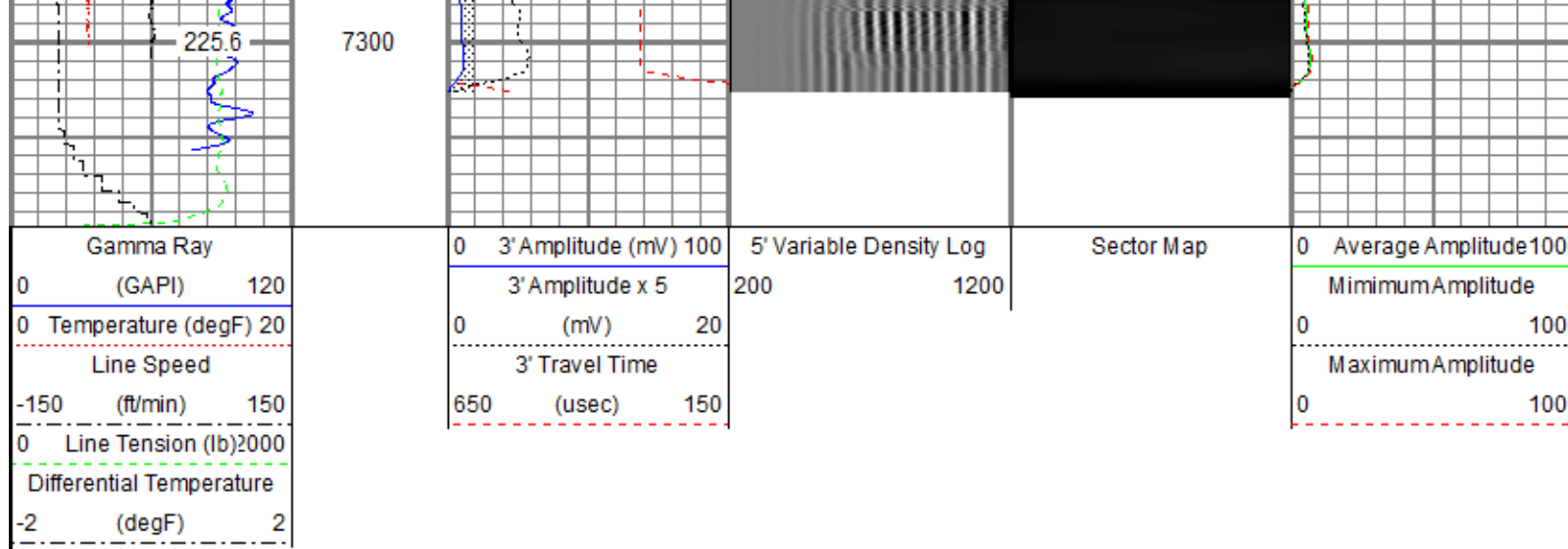
Recorded With 2800 PSI Surface Induced Pressure

Database File: anadarko\_papa jo 2-25 29c-8hz\0512345504\_anadarko\_papa jo 2-25 29c-8hz\_rbl\_03-28-18\_2800 psi.db  
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 Presentation Format: ros\_radri  
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 Charted by: Depth in Feet scaled 1:240

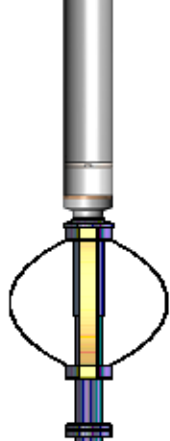








Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
			Titan CHD-14375 GO Titan 1-7/16" Assembled Electric Cable Head w/ 1" Fishing Neck	1.03	1.44	3.60
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
TEMP	17.33					
WVFS8	15.09		Probe Radii-2750 RBT (FW1308-091) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
WVFS7	15.09					
WVFS6	15.09					
WVFS5	15.09					
WVFS4	15.09					
WVFS3	15.09					
WVFS2	15.09					
WVFS1	15.09					
WVFCAL	15.09					
WVF3FT	15.09					
WVF5FT	14.09		Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
CCL\$2	7.08					
CCL\$1	7.08					
GR	5.75					

GR	0.75		Probe GR-CCL-2750 6PB (FW1304-132) Probe 2-3/4" rev.1 Digital Scintillation Gamma Ray/CCL Combined with 6 Pin Bottom for CNT	4.80	2.75	55.00
			Probe ADPT-6P-GO Probe 2-3/4" 6-Pin Top to GO Bottom Adaptor Sub	0.28	2.75	2.00
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
Dataset: 0512345504_anadarko_papa jo 2-25 29c-8hz_rbl_03-28-18_2800 psi.db: field/well/run1/pass4.3 Total length: 24.15 ft Total weight: 225.60 lb O.D.: 2.75 in						

Calibration Report	
Database File	c:\programdata\warrior\data\anadarko_papa jo 2-25 29c-8hz\0512345504_anadarko_papa jo 2-25 29c-8hz_rbl_03-28-18_2800
Dataset Pathname	pass4.3
Dataset Creation	Thu Mar 29 13:10:38 2018

Gamma Ray Calibration Report		
Serial Number:	FW1304-132	
Tool Model:	2750 6PB	
Performed:	Tue Nov 28 11:17:11 2017	
Calibrator Value:	637.0	GAPI
Background Reading:	109.1	cps
Calibrator Reading:	1009.7	cps
Sensitivity:	0.7072	GAPI/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	FW1308-091	
Tool Model:	2750 RBT	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	-0.243	ft

Master Calibration, performed Wed Mar 28 06:46:04 2018:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.007	0.486	0.800	71.921	148.458	-0.293
CAL	0.007	0.509				
5'	0.007	0.432	0.800	71.921	167.353	-0.426
SUM						
S1	0.007	0.482	0.000	100.000	210.830	-1.544
S2	0.007	0.488	0.000	100.000	207.998	-1.529
S3	0.007	0.486	0.000	100.000	209.086	-1.529
S4	0.007	0.483	0.000	100.000	210.299	-1.538
S5	0.007	0.486	0.000	100.000	209.097	-1.531
S6	0.007	0.490	0.000	100.000	207.287	-1.493
S7	0.007	0.489	0.000	100.000	207.513	-1.517
S8	0.007	0.487	0.000	100.000	208.257	-1.515

Internal Reference Calibration, performed (Not Performed):						
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.007	0.509	1.000	0.000

Air Zero Calibration, performed Wed Mar 28 06:46:41 2018:

	Raw (v)		Calibrated (v)		Results
	Zero		Zero		Offset
3'	0.007		0.000		0.000
5'	0.007		0.000		0.000
SUM					
S1	0.007		0.000		0.000
S2	0.007		0.000		-0.000
S3	0.007		0.000		-0.000
S4	0.007		0.000		-0.000
S5	0.007		0.000		-0.000
S6	0.007		0.000		-0.000
S7	0.007		0.000		-0.000
S8	0.007		0.000		-0.000

#### Temperature Calibration Report

Serial Number: FW1308-091  
Tool Model: 2750 RBT  
Performed: Sun Nov 12 13:50:54 2017

	Reference	Reading
Low Reference:	100.00 degF	104.72 degF
High Reference:	350.00 degF	392.24 degF

Gain: 0.87  
Offset: 8.94  
Delta Spacing: 1



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