



County Weld State Colorado

Elevation	
K.B. 4947'	
D.F. ---	
G.L. 4930'	

ate	11-FEB-2018
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Well Number	111166
Depth Driller	18257 FT

Depth Logger	6466 F-I
Bottom Logged Interval	6461 FT

Top Log Interval	Surface
non Hole Size	7.875"

Type Fluid	Water
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Max. Recorded Temp.	219°F
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Estimated Cement Log	See Log
Time Well Ready	ROA

Time Logger on Bottom	8:40 AM
Equipment Plumber	HD 32E

Location	Fort Lupton, CO
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Recorded By	J. Mesquez
Witnessed By	J. Cleveland

Borehole Record		
Run Number	Bit	From To

Increasing Record	Size (in)	Wgt (lbs/Ft)
1000	10.00	30

intermediate #1	5 1/2	17
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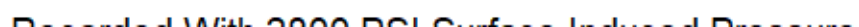
leiliciale ptz			
ner			

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 reported at 17 FT
Adjusted +3 FT to correlate with Kelly Bushing
Gauge Ring/Junk Basket ran to 7522 FT with no debris
5.50" RBP Set @ 6515 FT
Log ran from 6461 FT to Surface
Recorded with 2800 PSI Surface Induced Pressure
Logging tools were clean and free of debris upon completion of operations

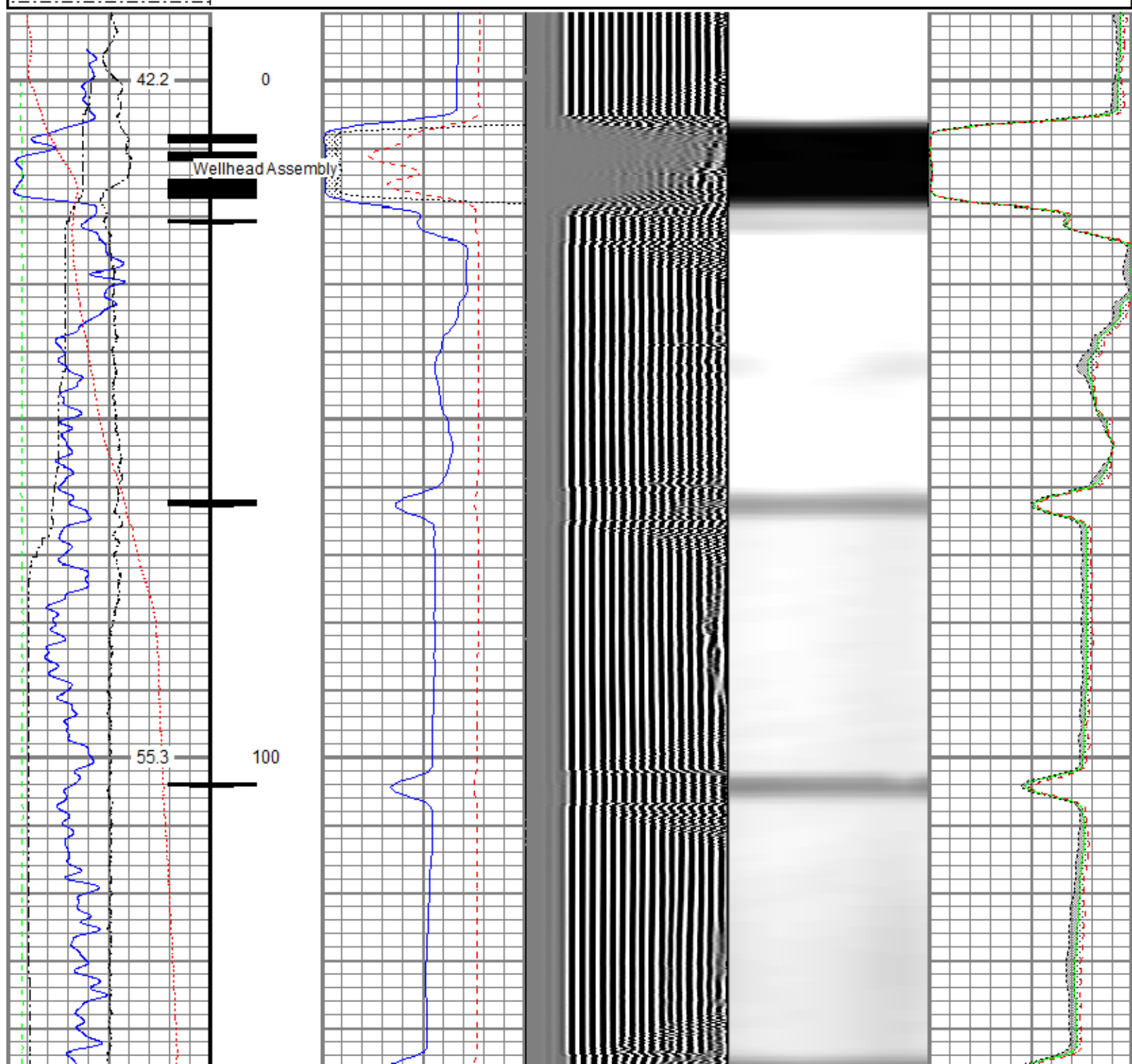
Thank you for choosing Reliance Oilfield Services, LLC!!

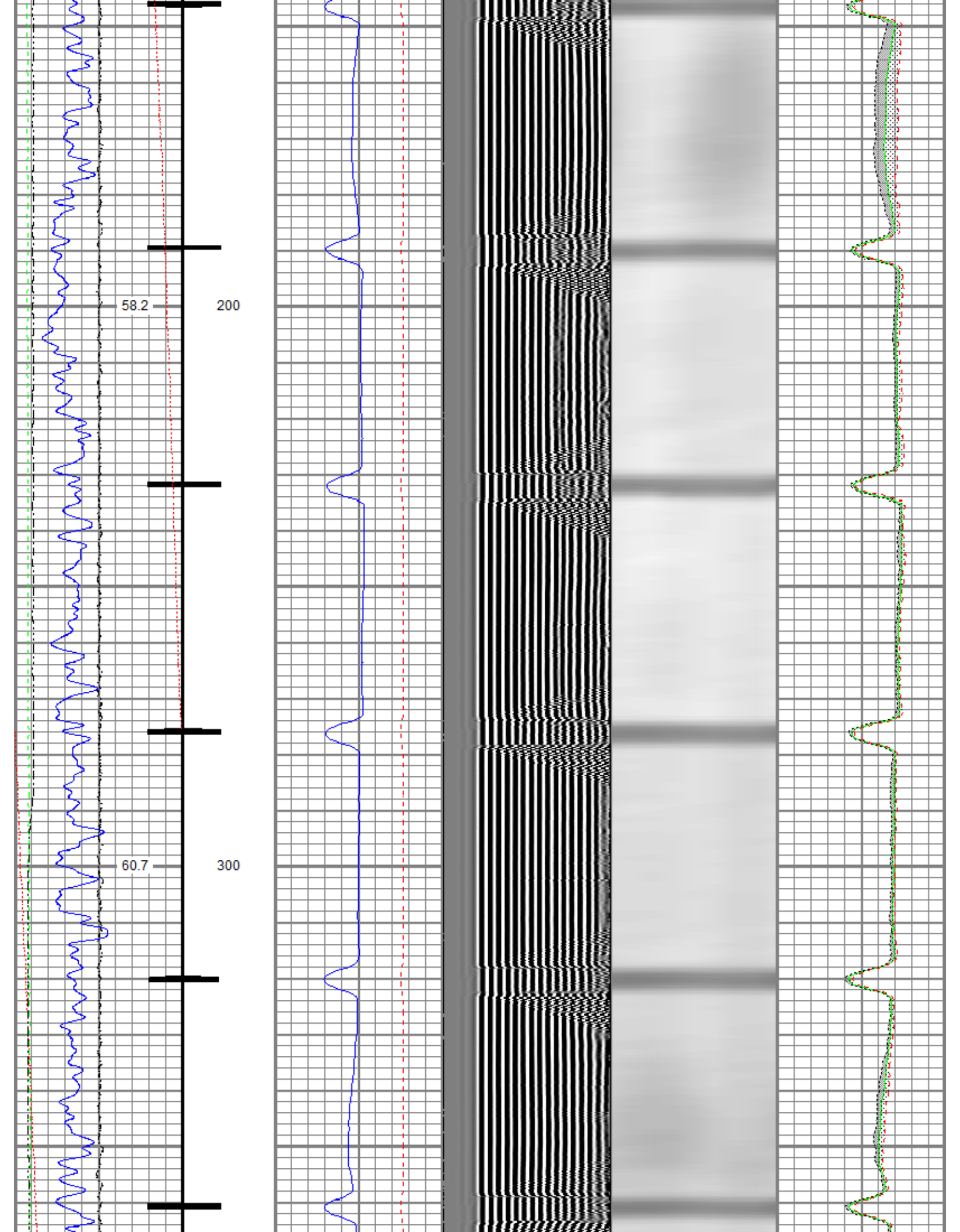
Main Pass

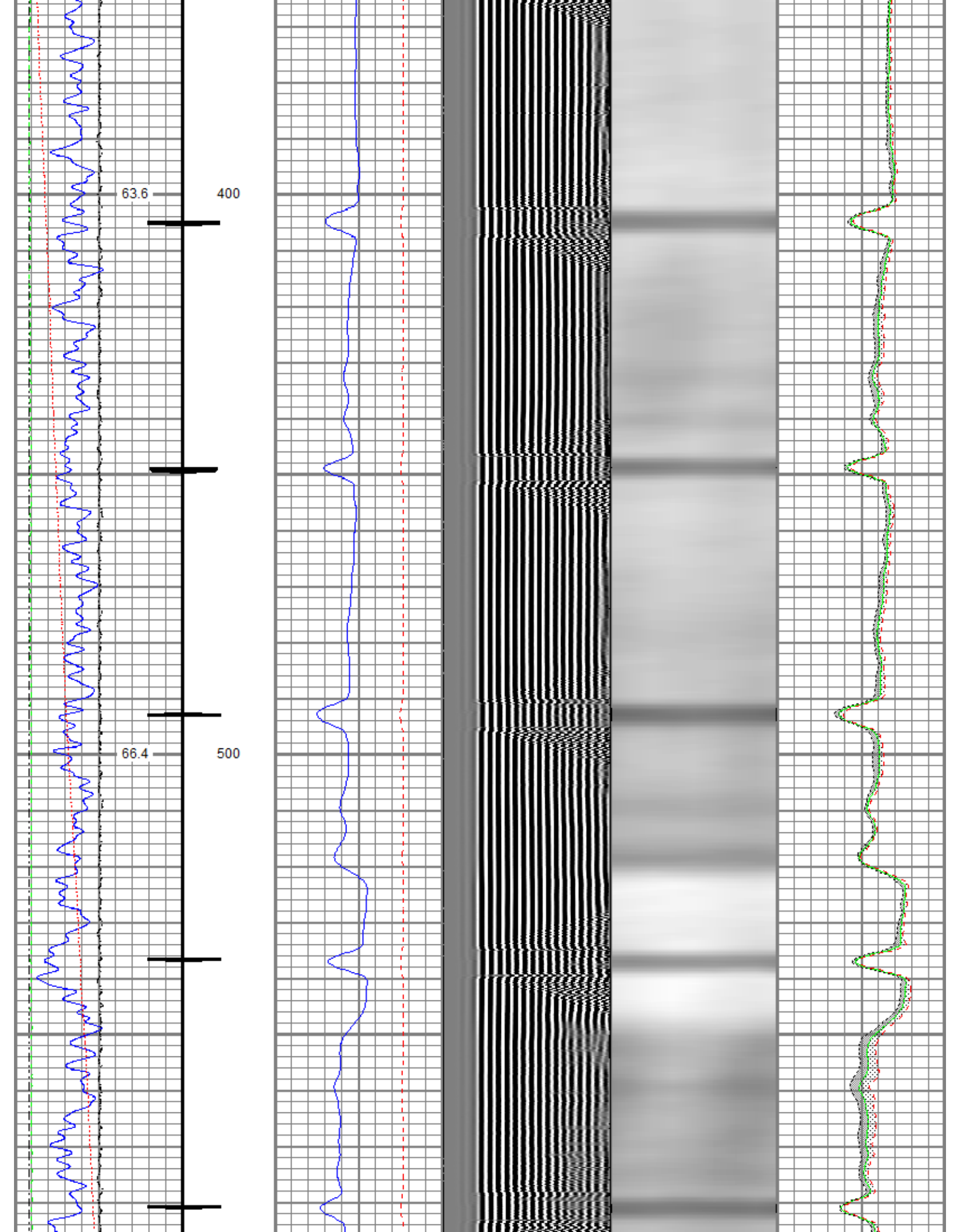


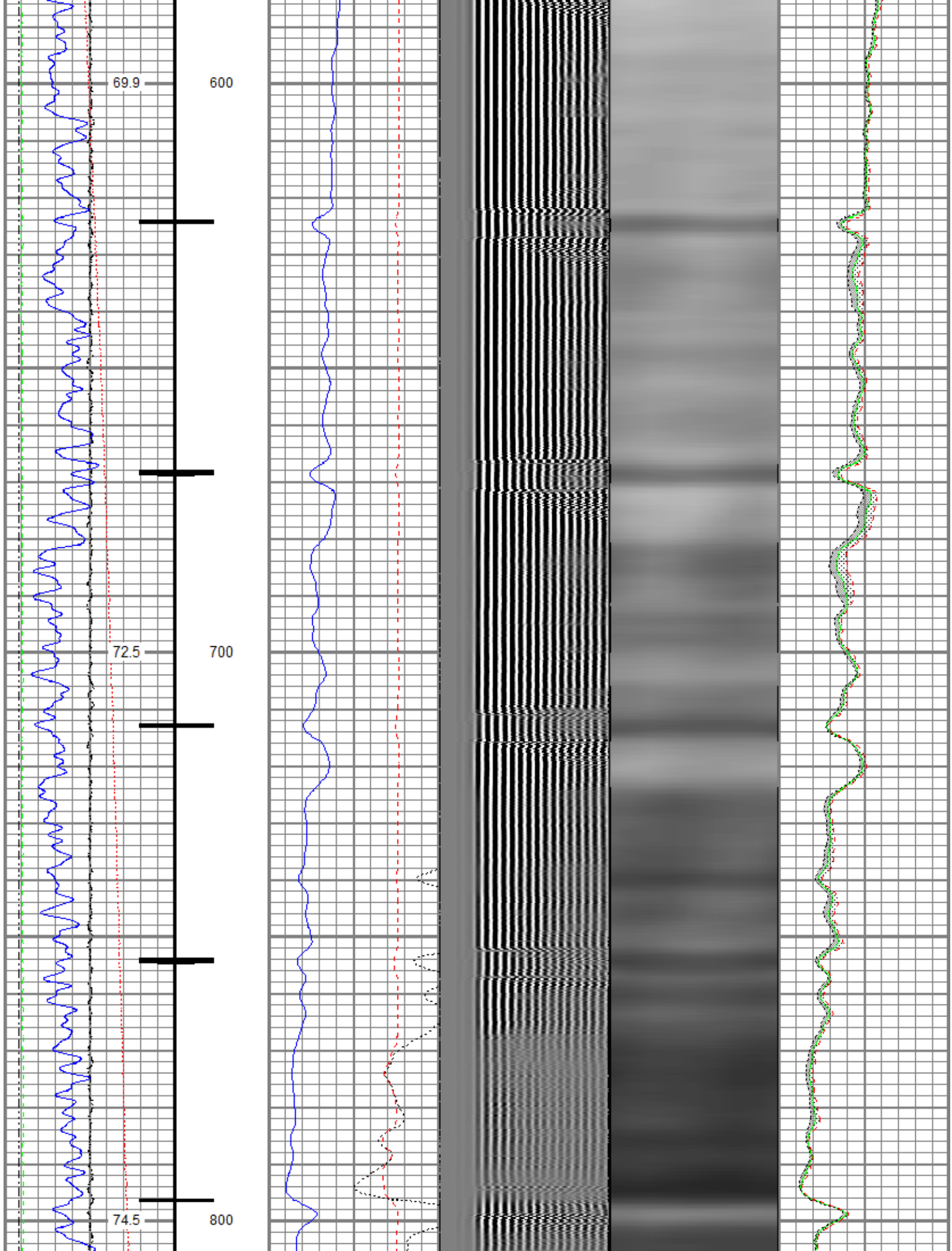
Database File anadarko\robin 9-8hz\0512345156_anadarko_robin 9-8hz_rbl_02-11-18.db
 Dataset Pathname pass4
 Presentation Format ros_radrii
 Dataset Creation Sun Feb 11 08:40:18 2018
 Charted by Depth in Feet scaled 1:240

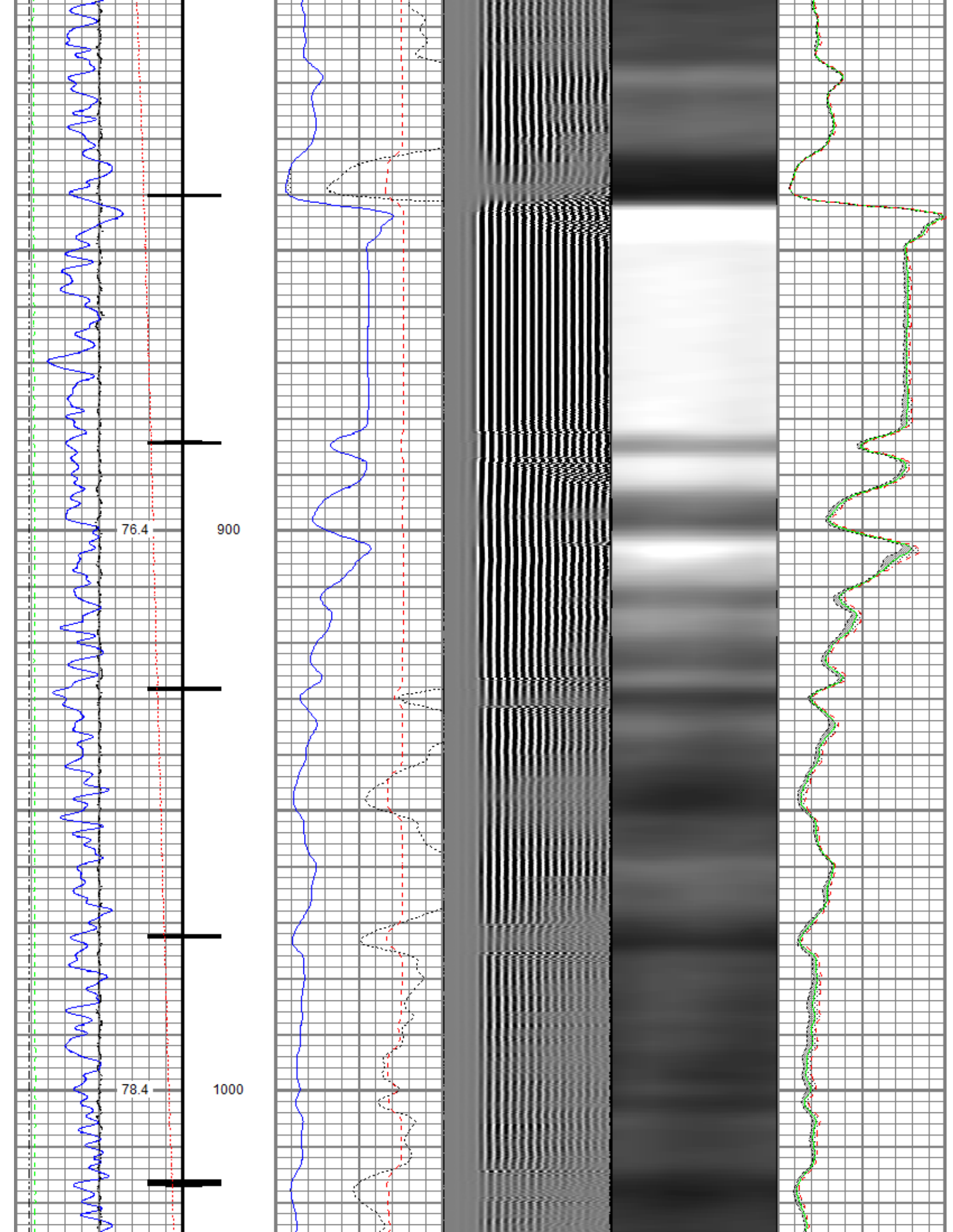
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200 (usec) 1200			Minimum Amplitude
Casing Collar Locator	0	(mV) 20			0	100
Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed	650	(usec) 150			0	100
-150 (ft/min)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

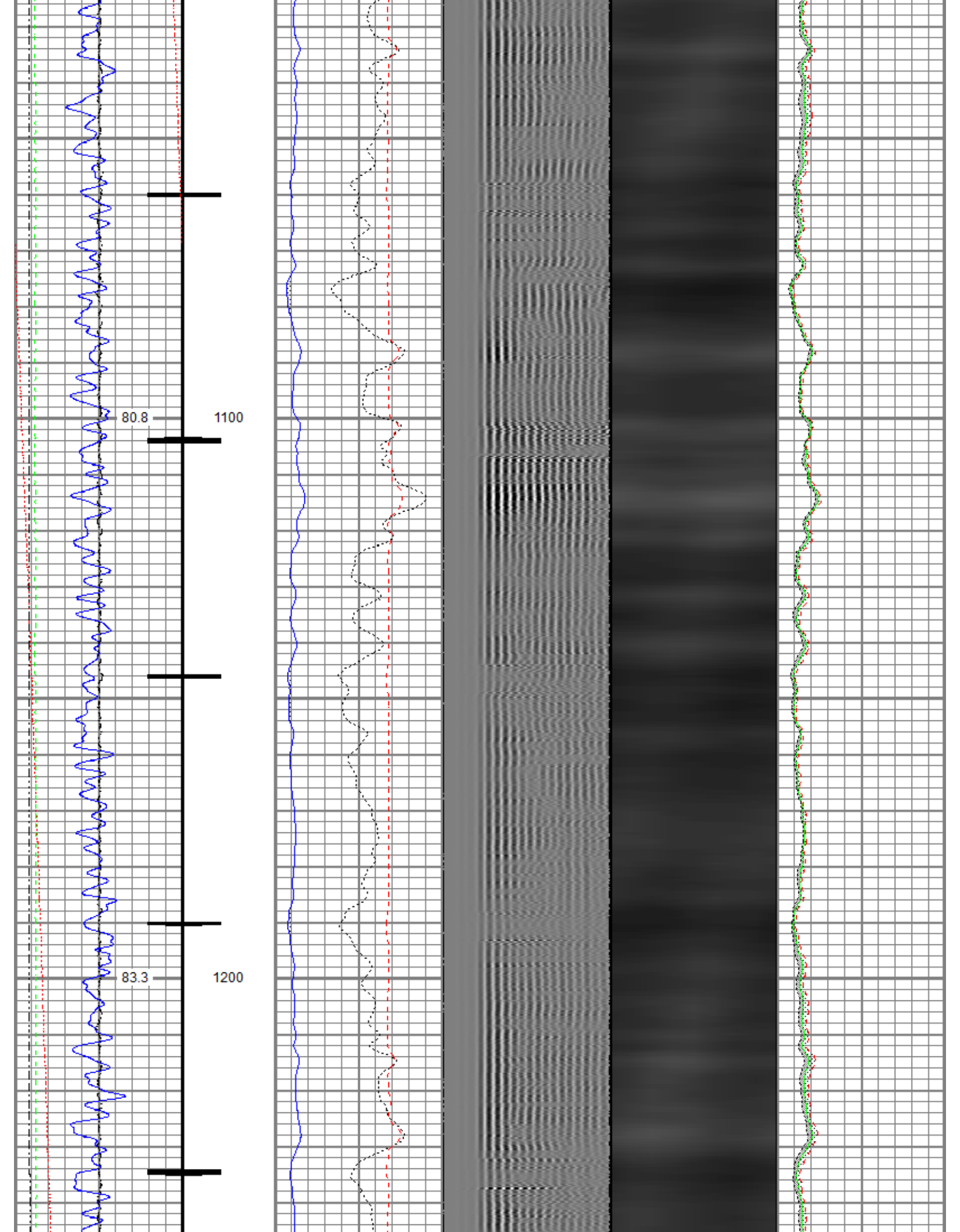


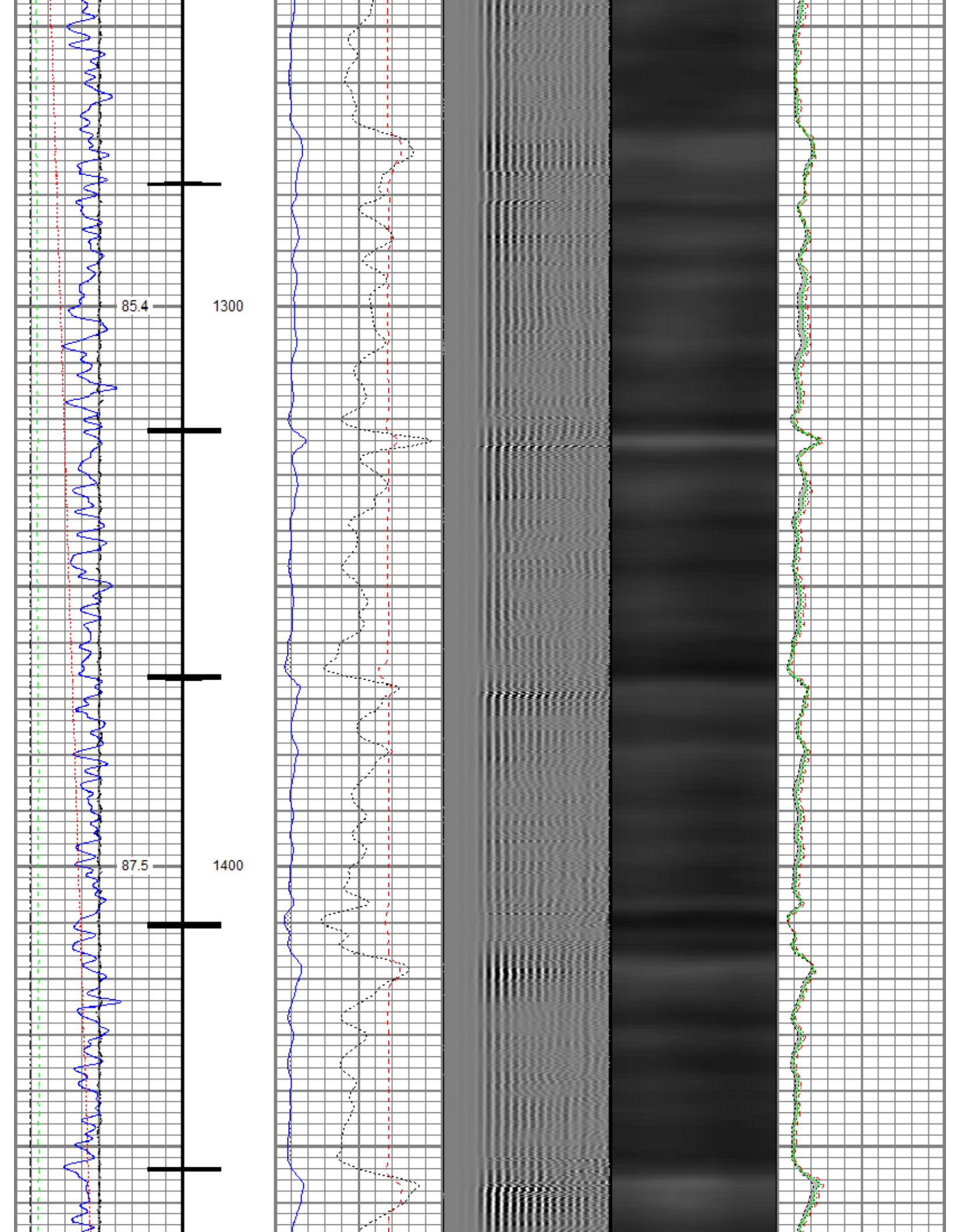


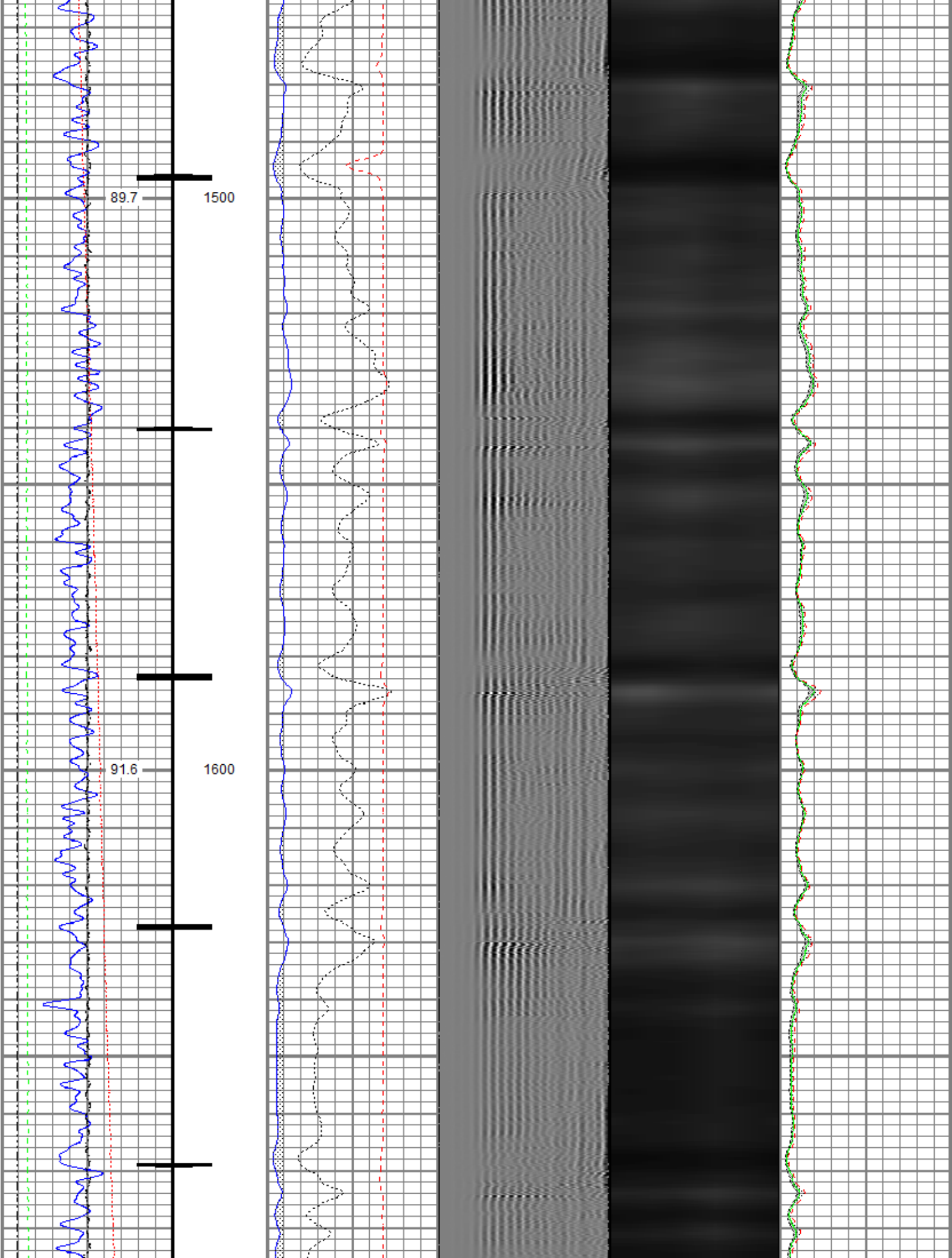


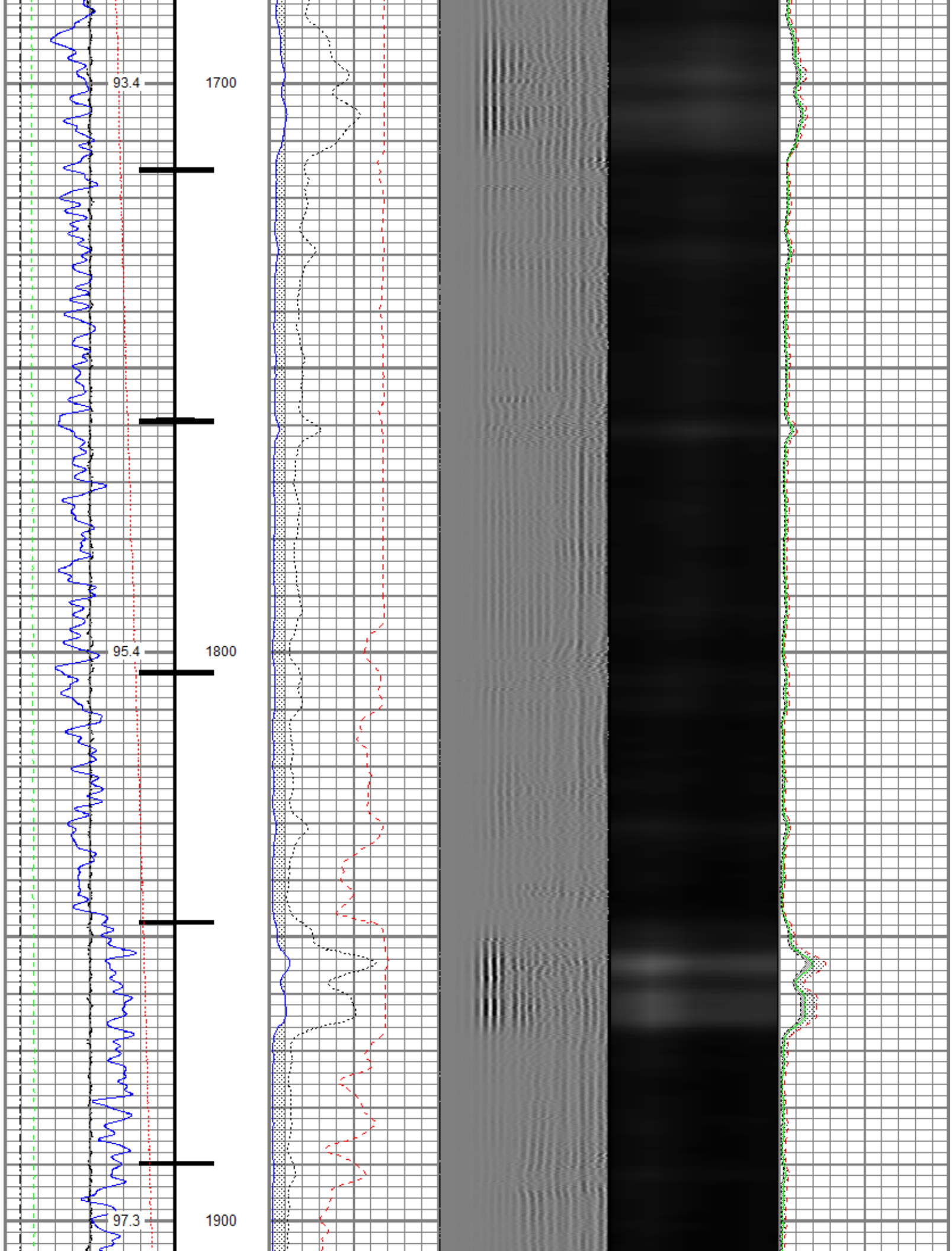


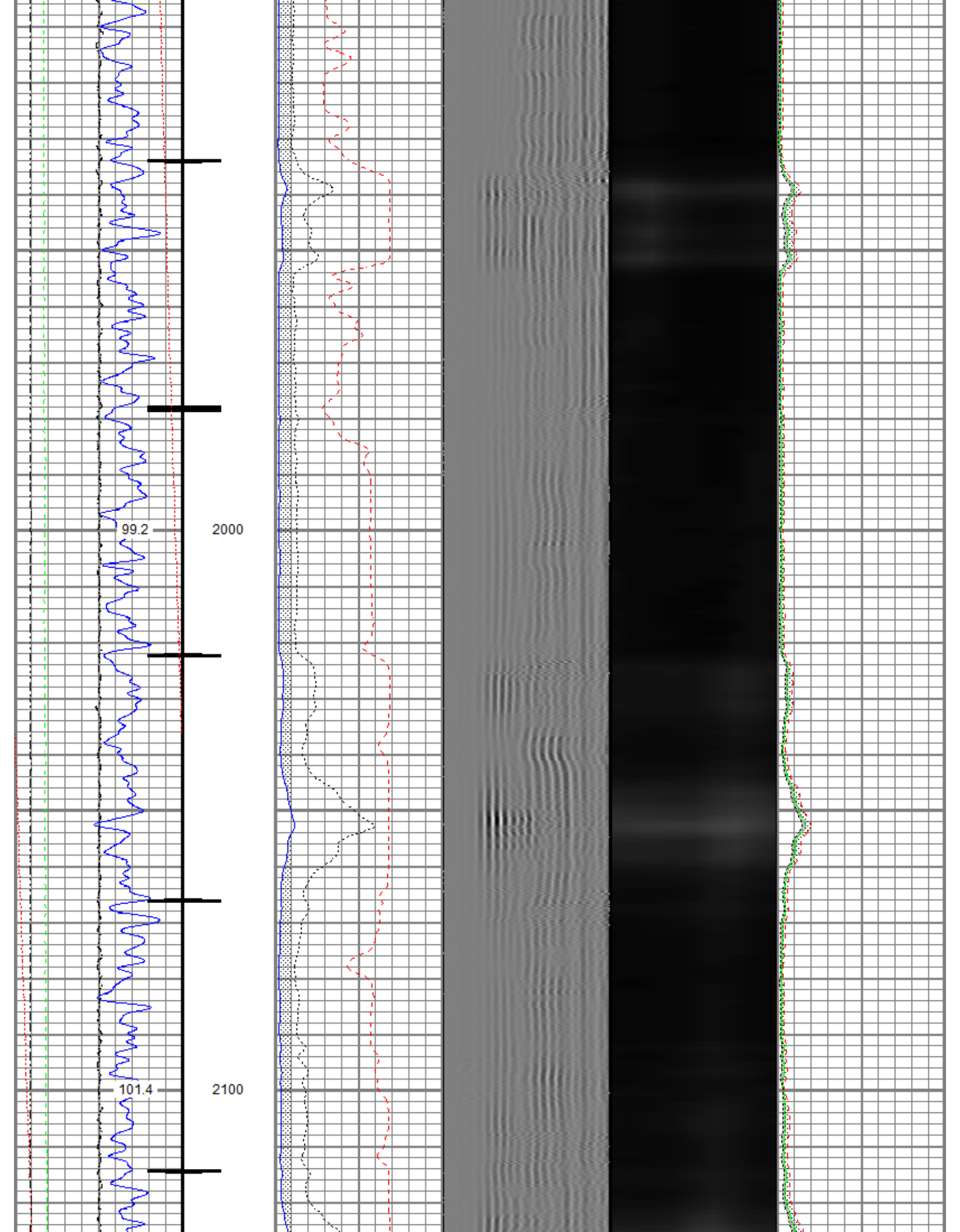


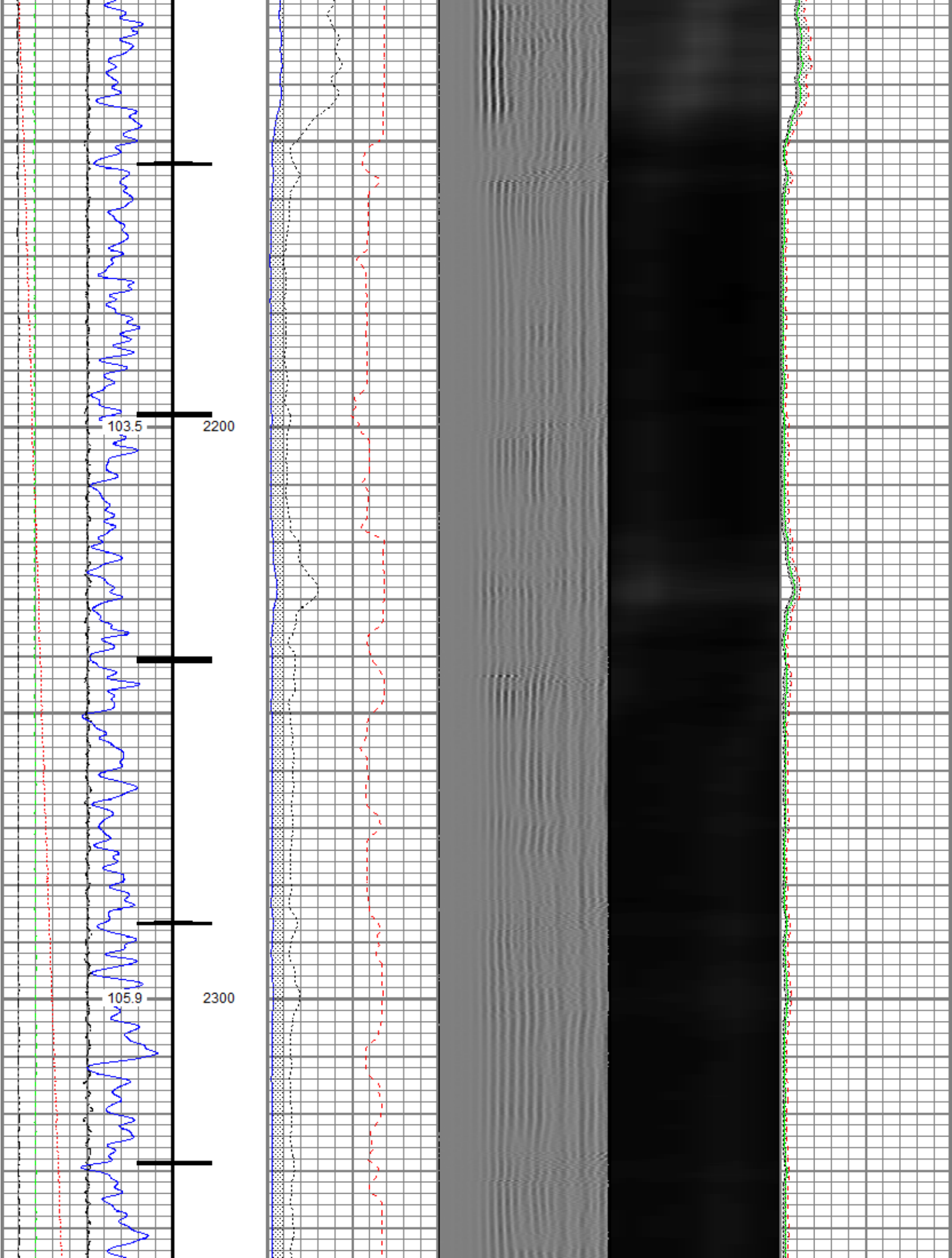


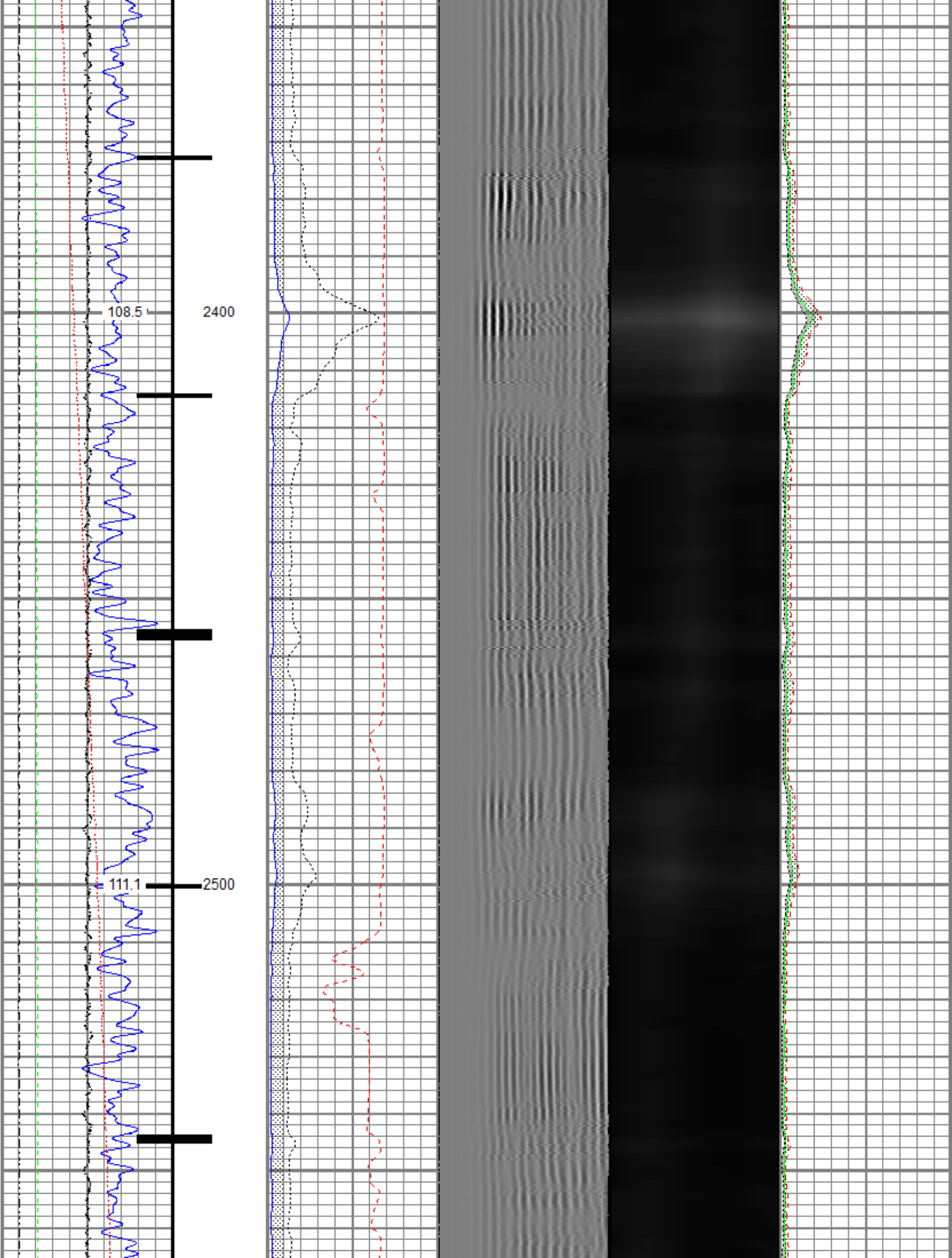


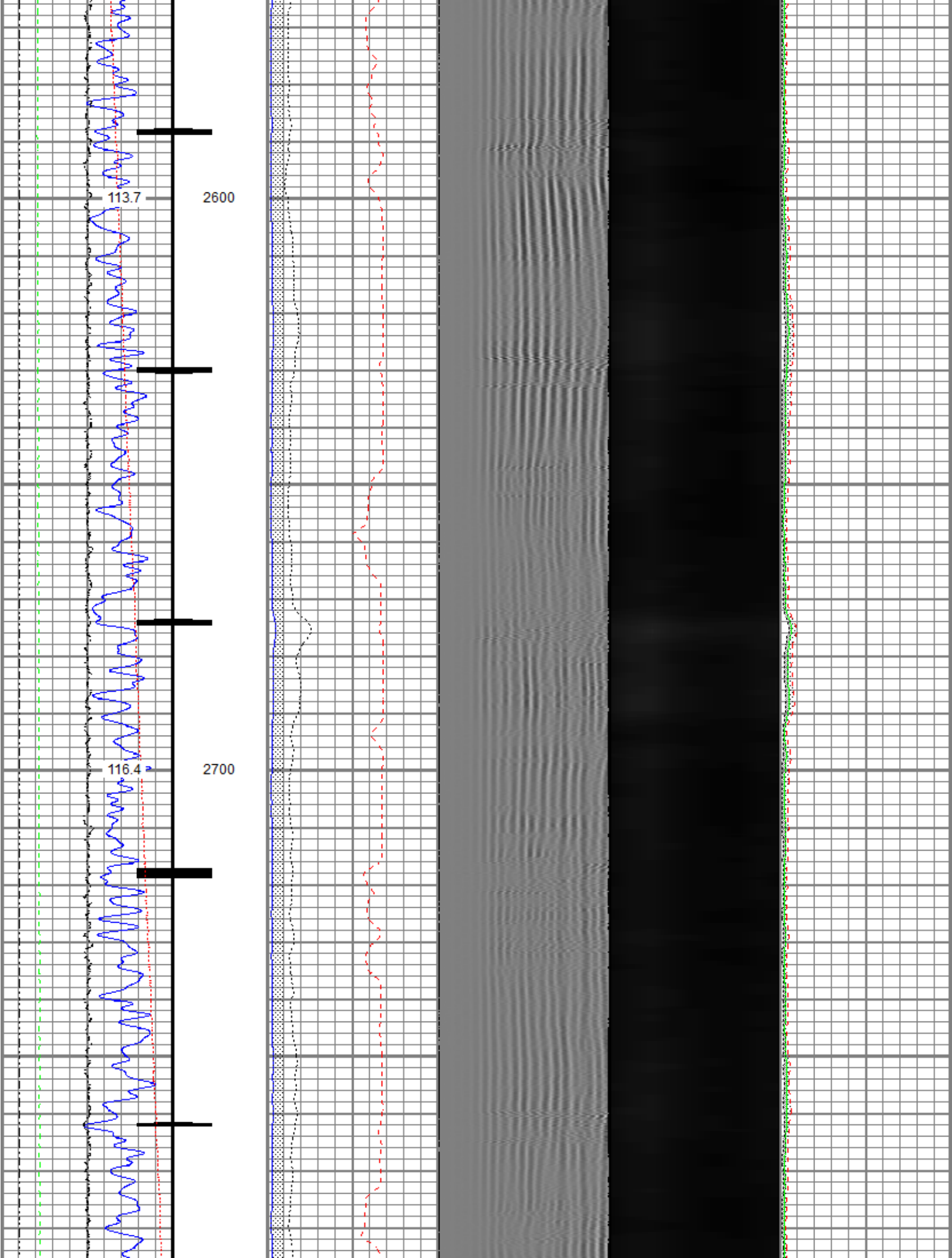


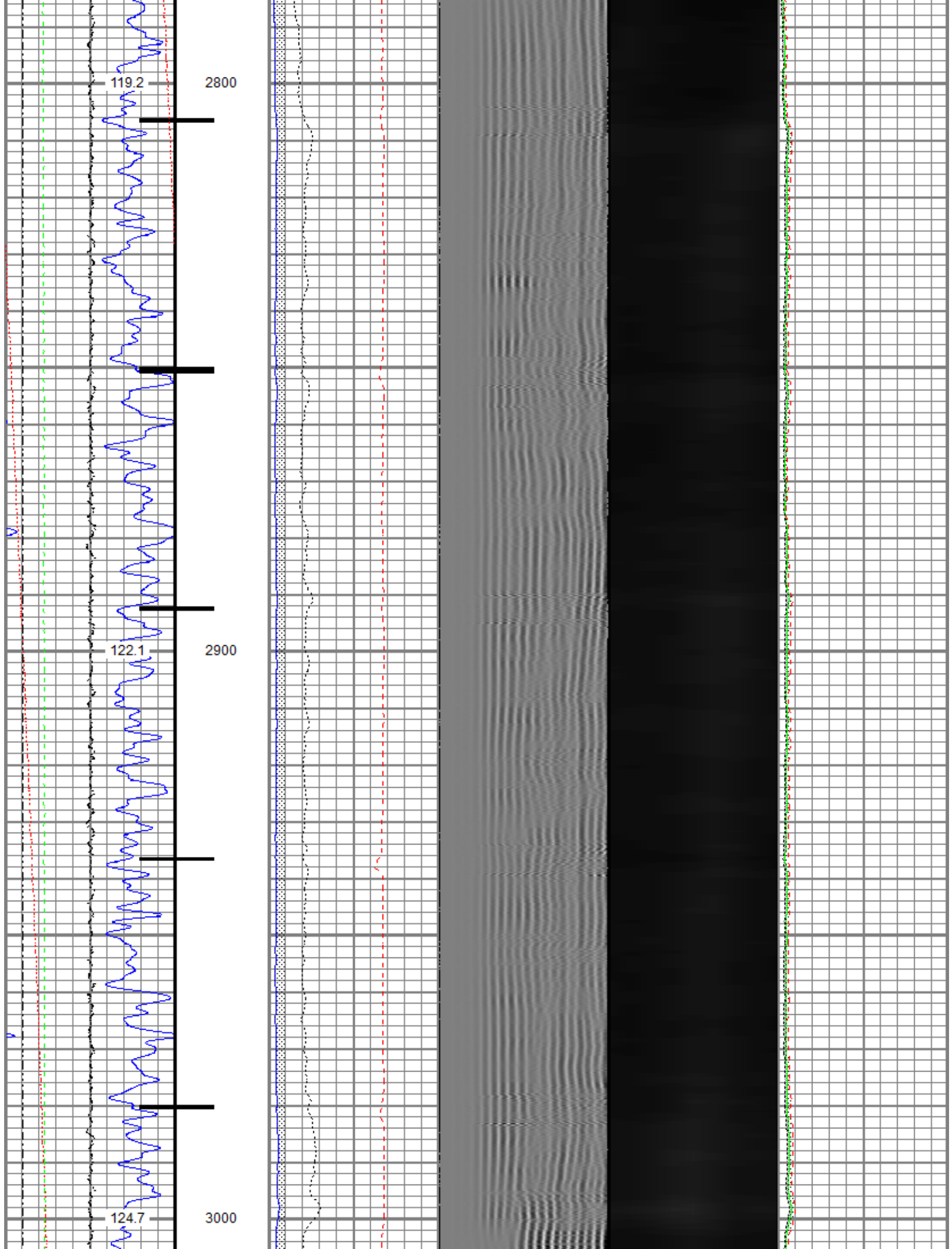


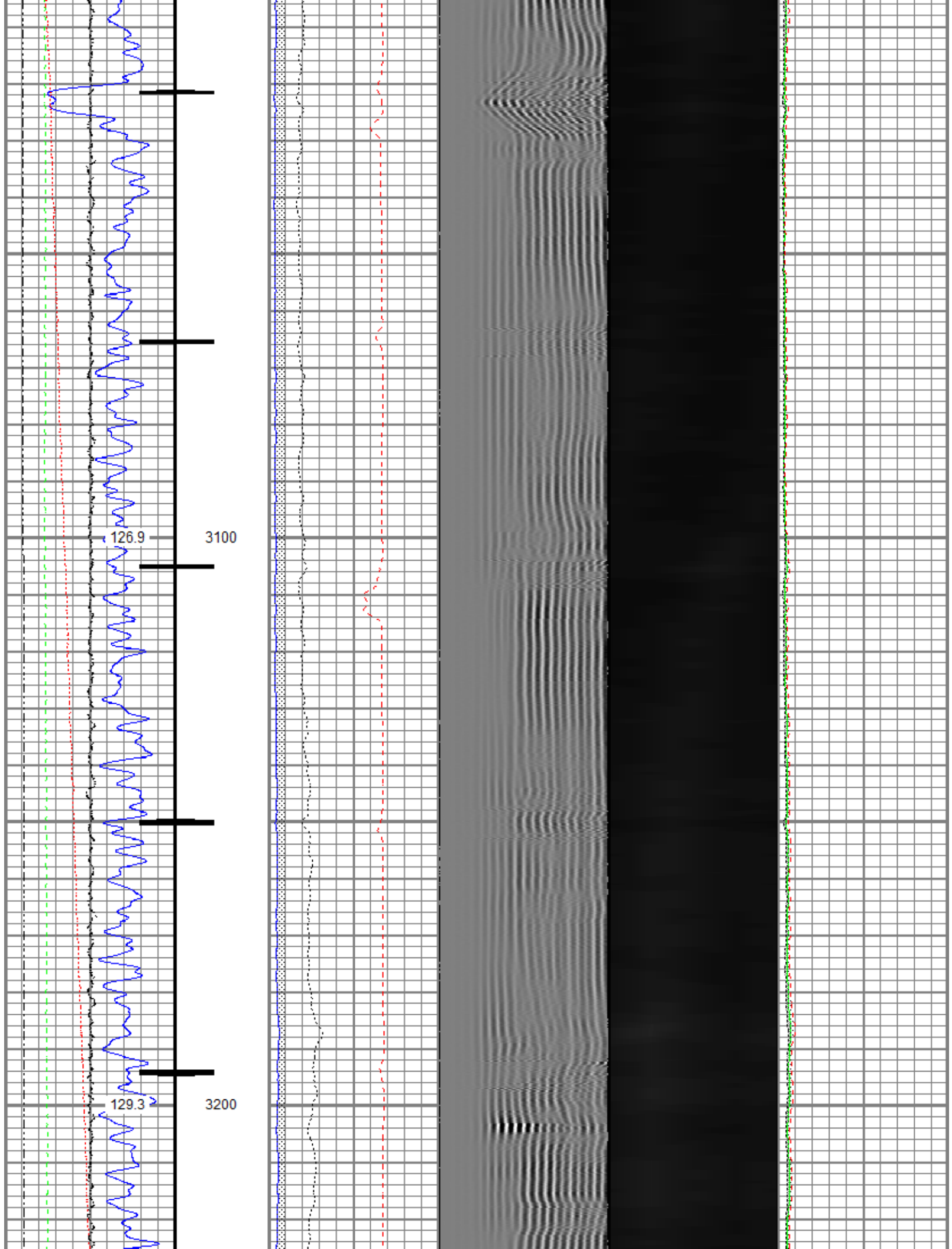


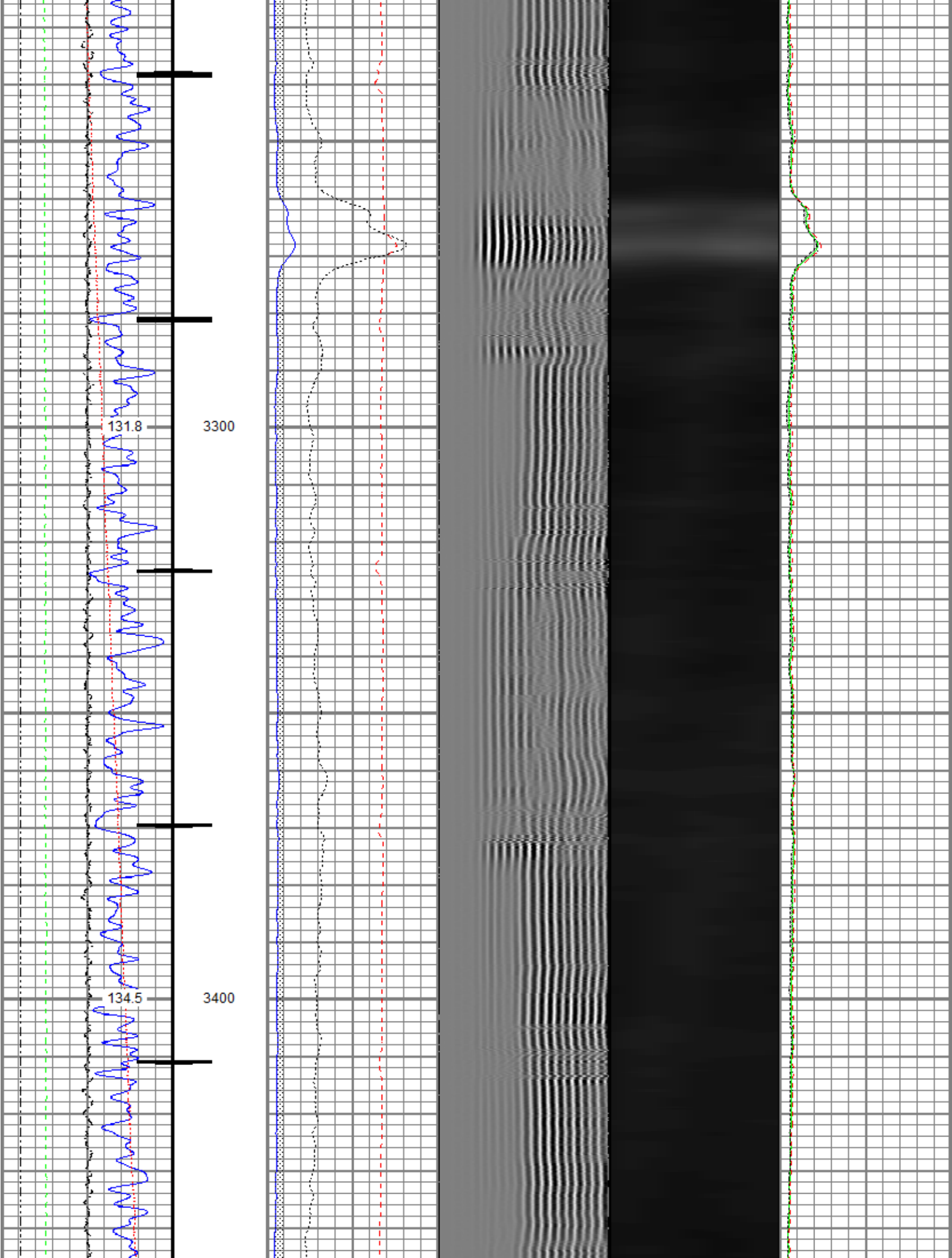


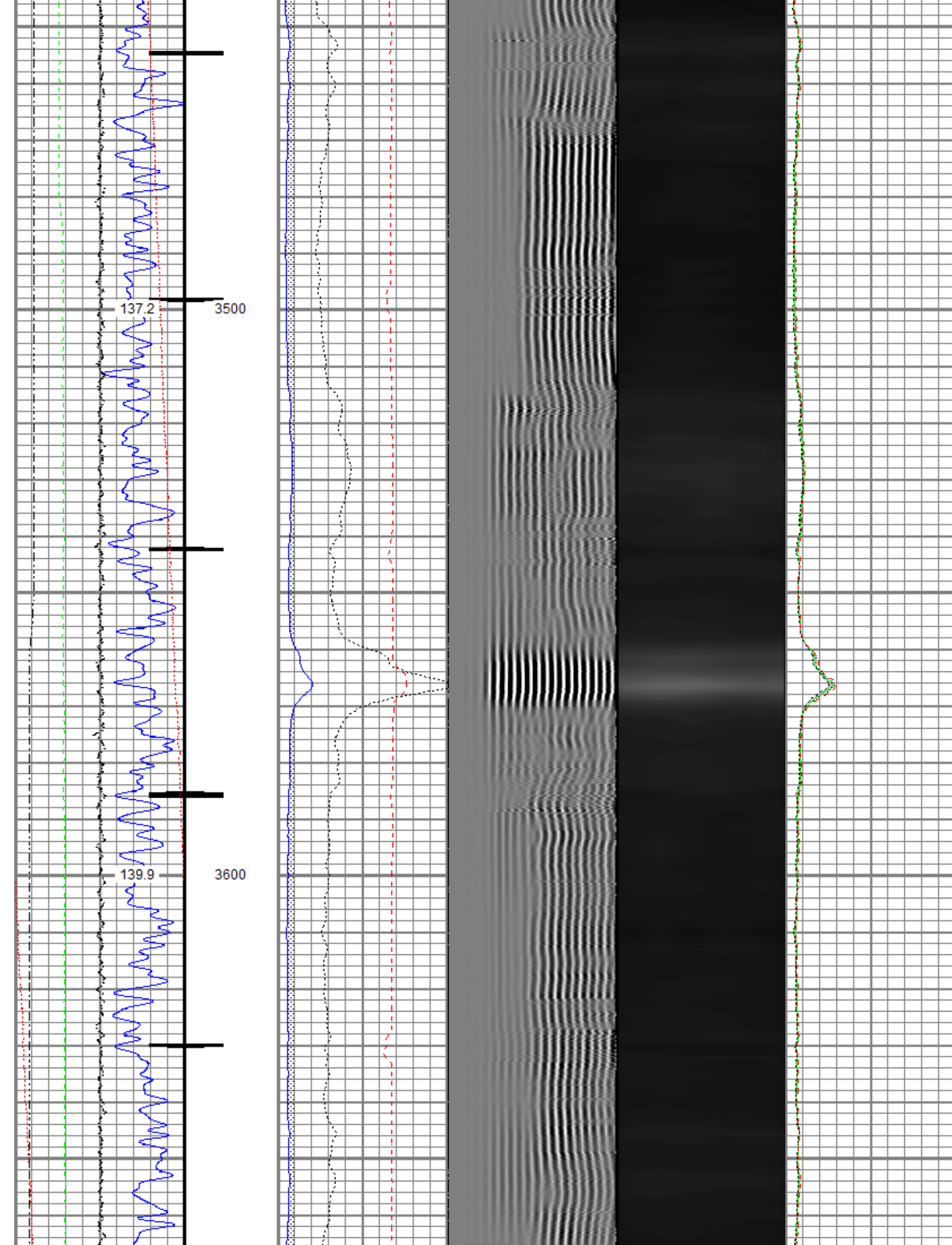


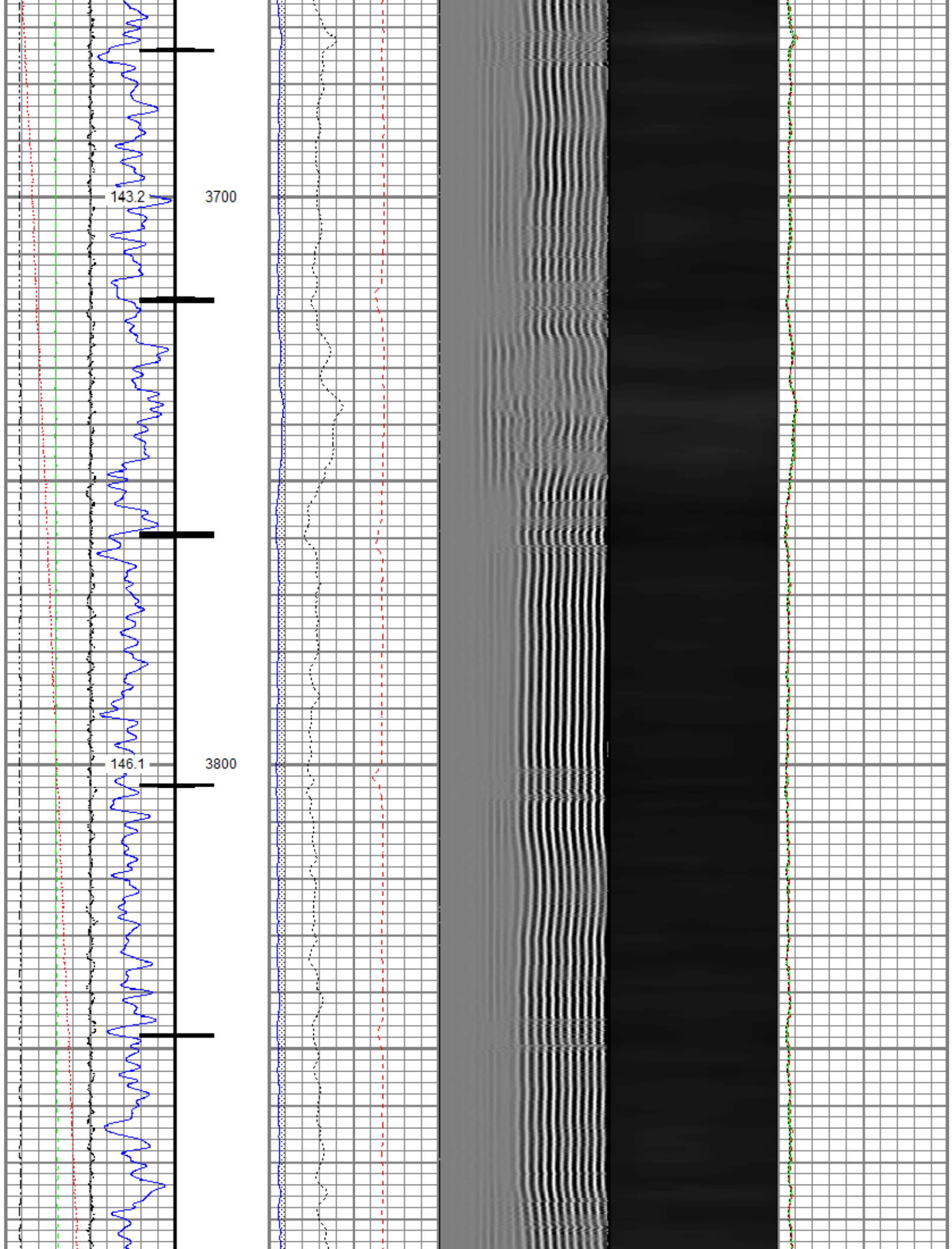


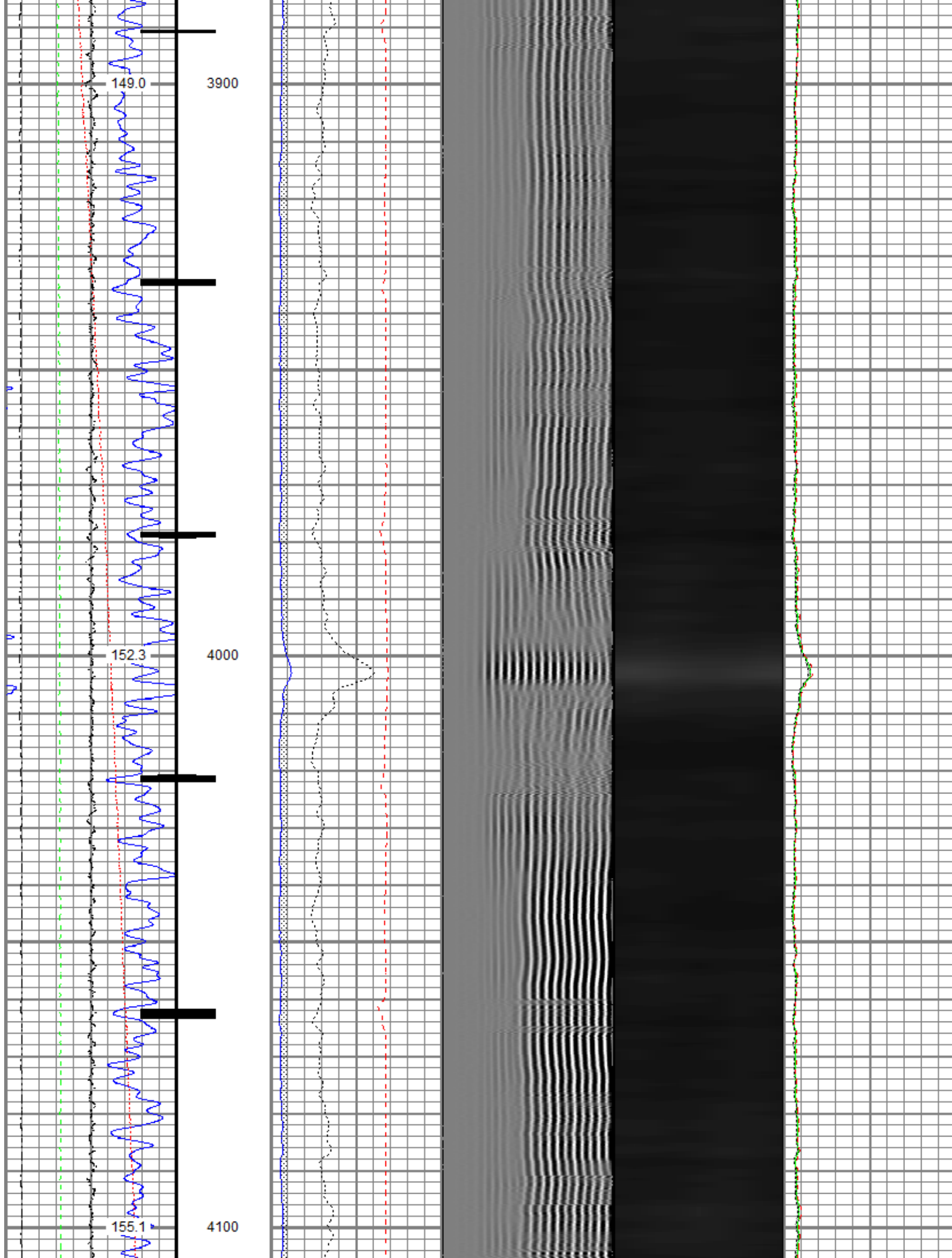


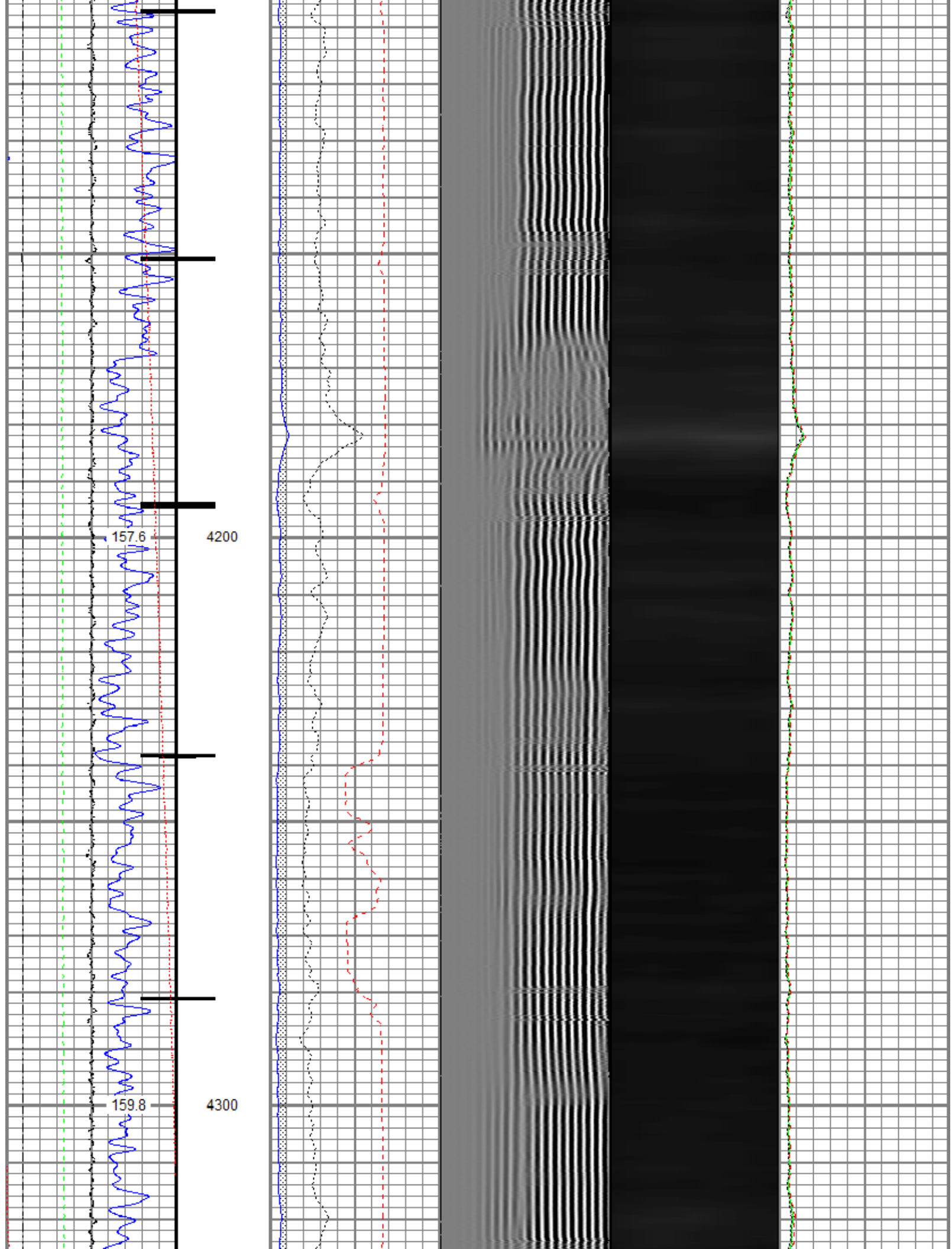


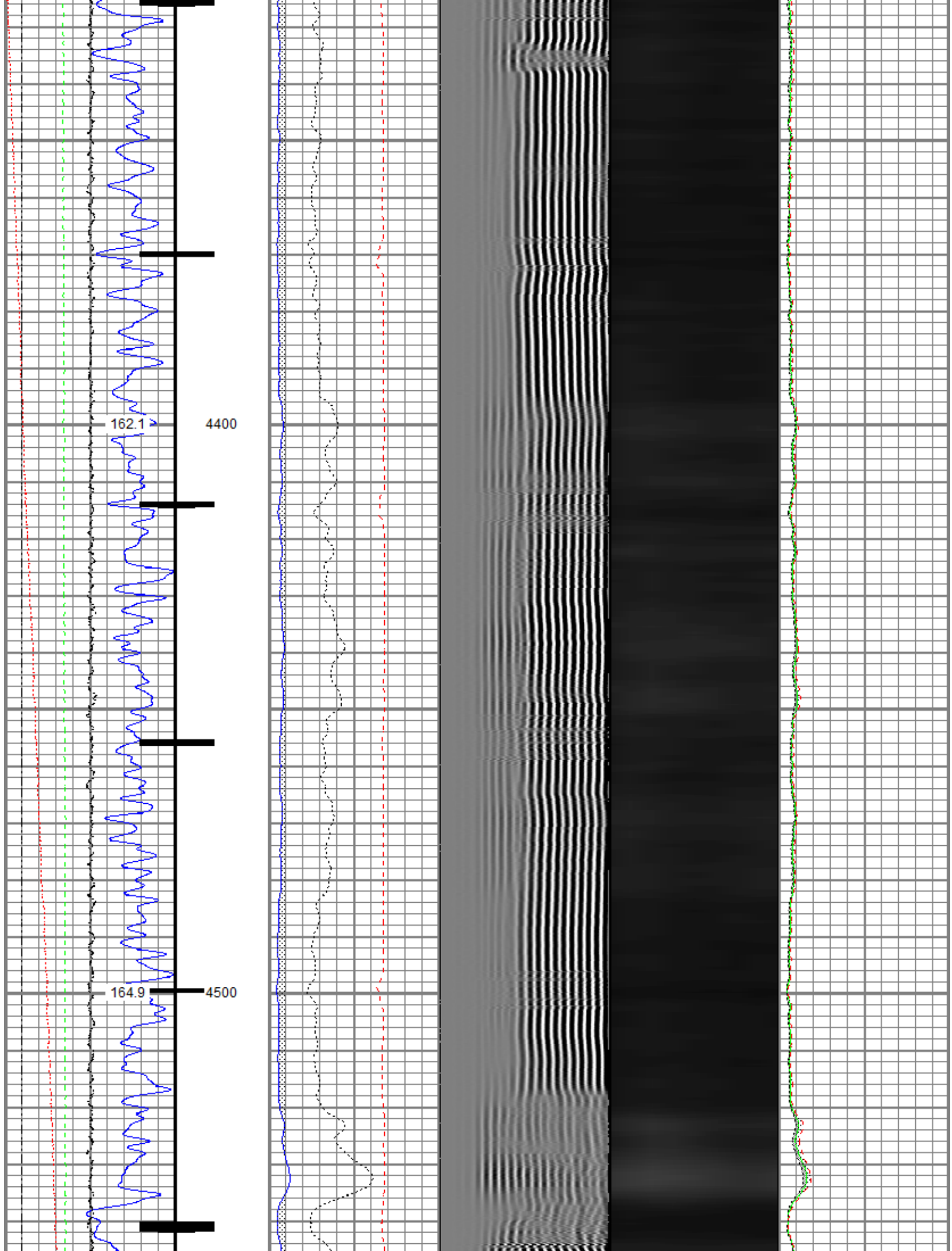


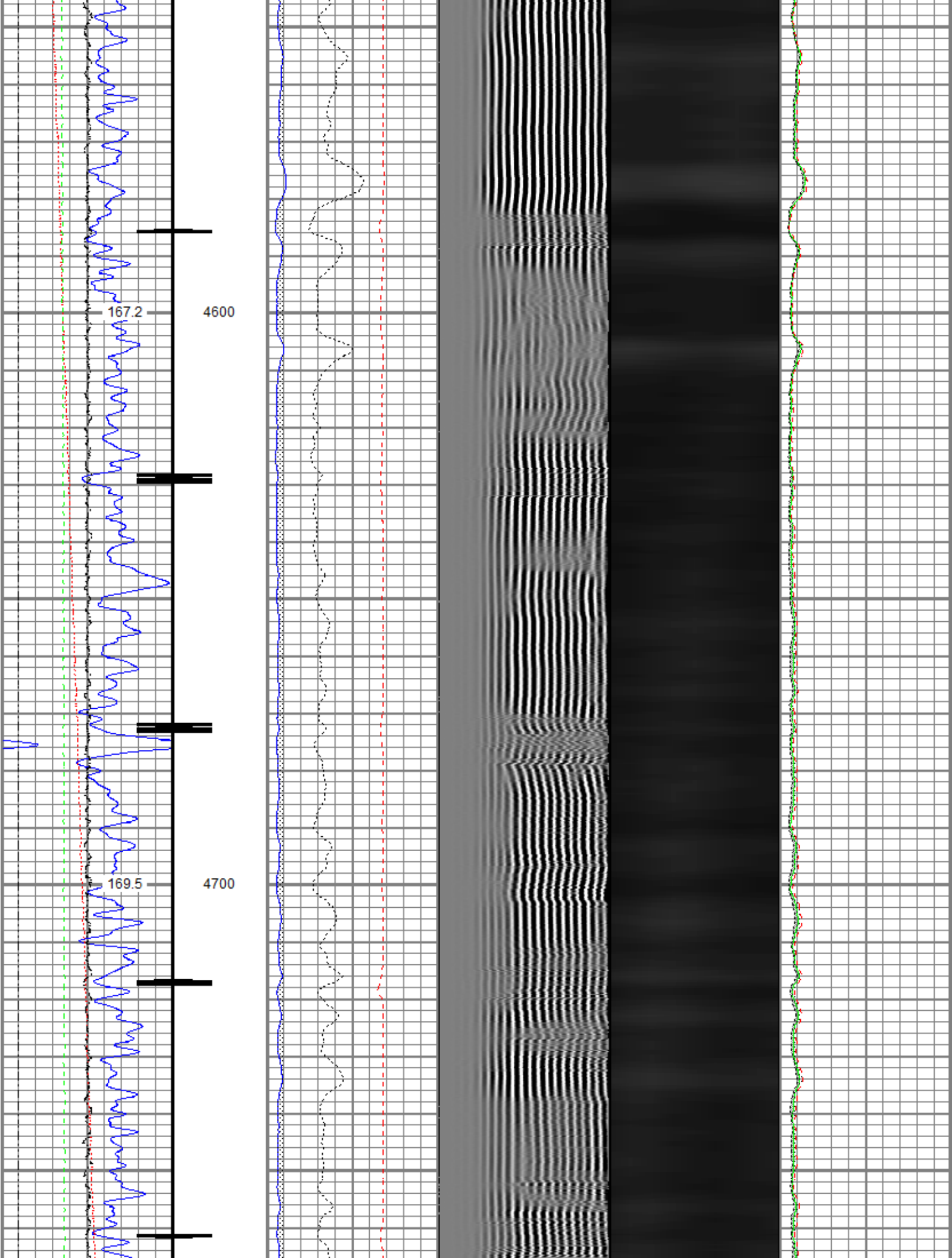


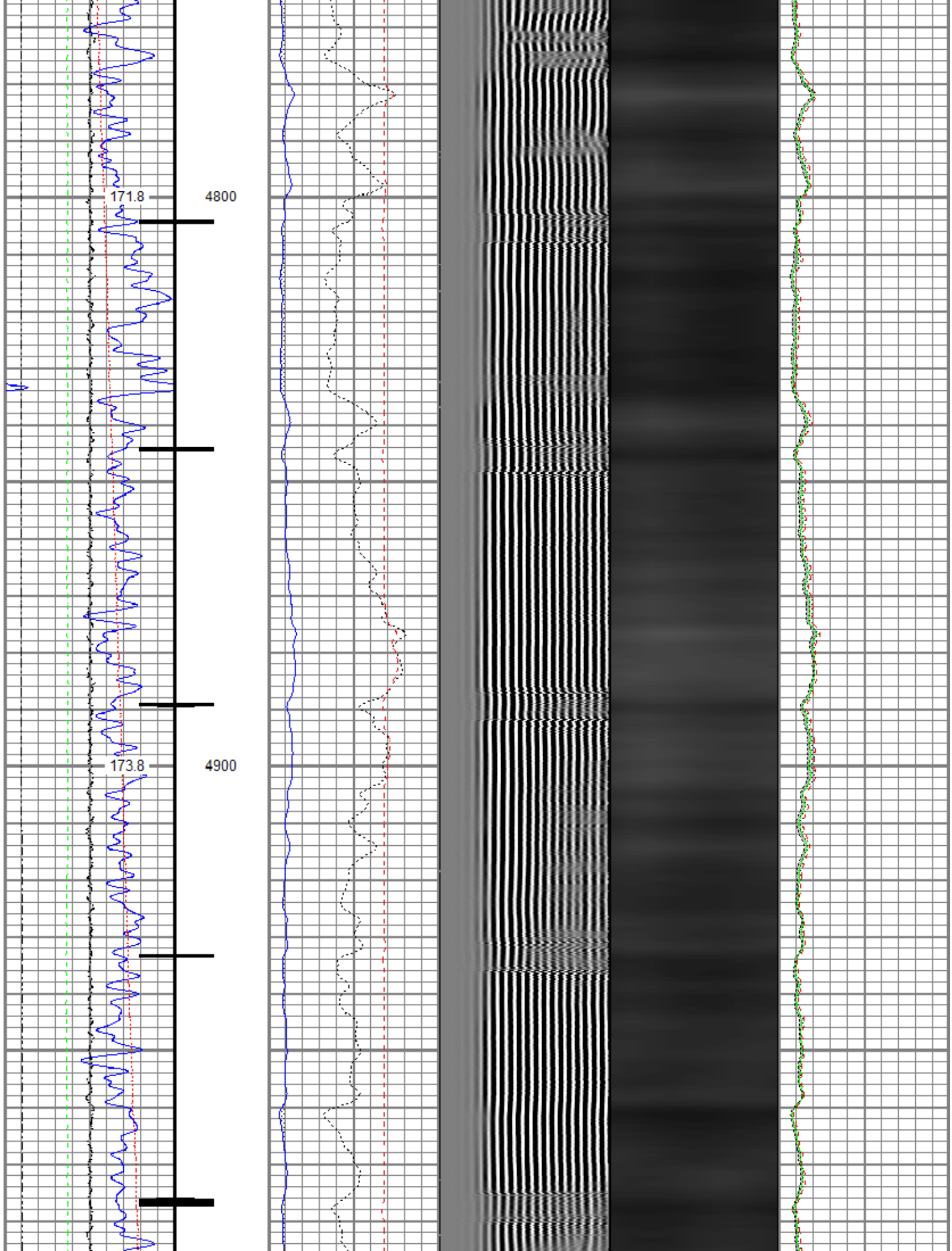


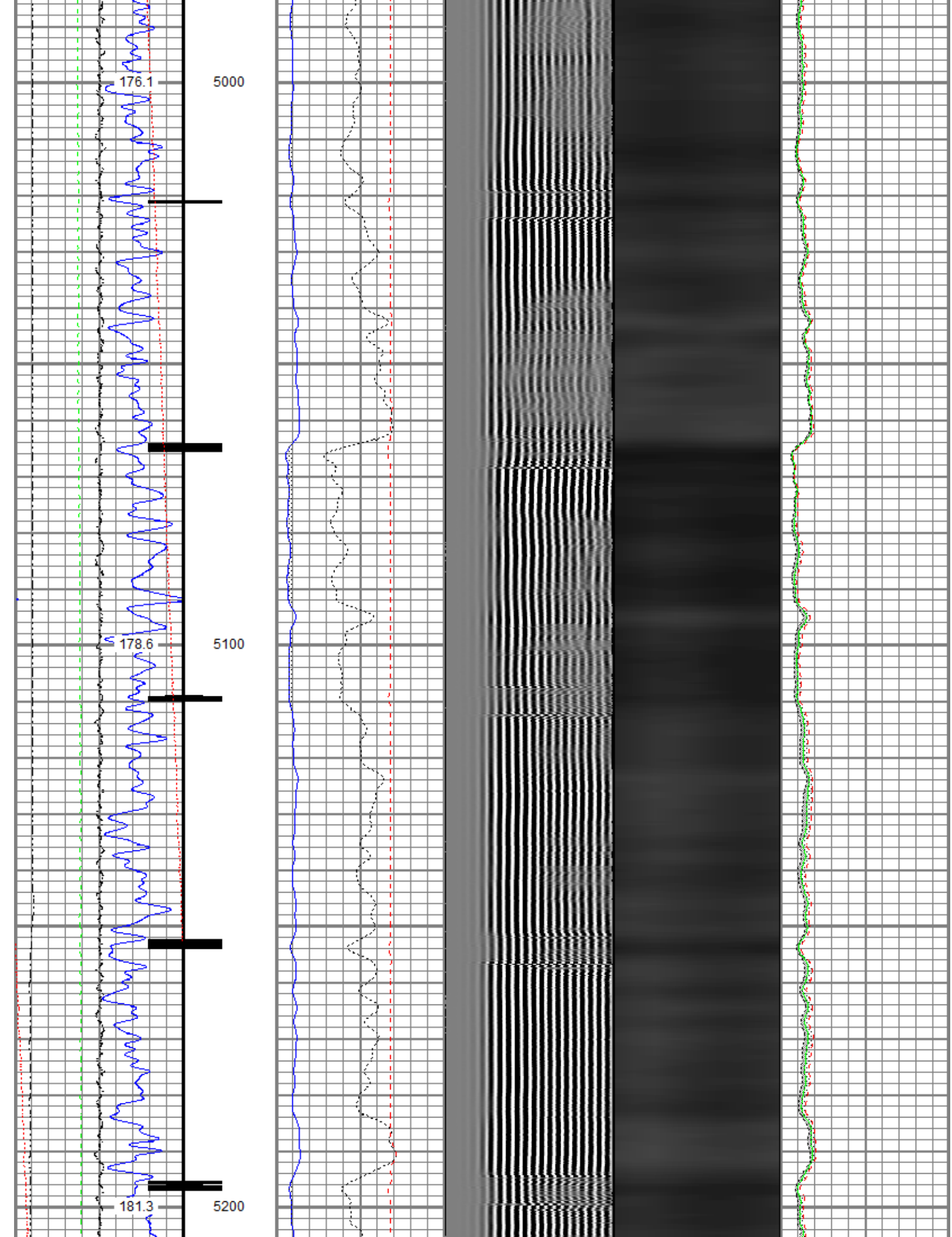


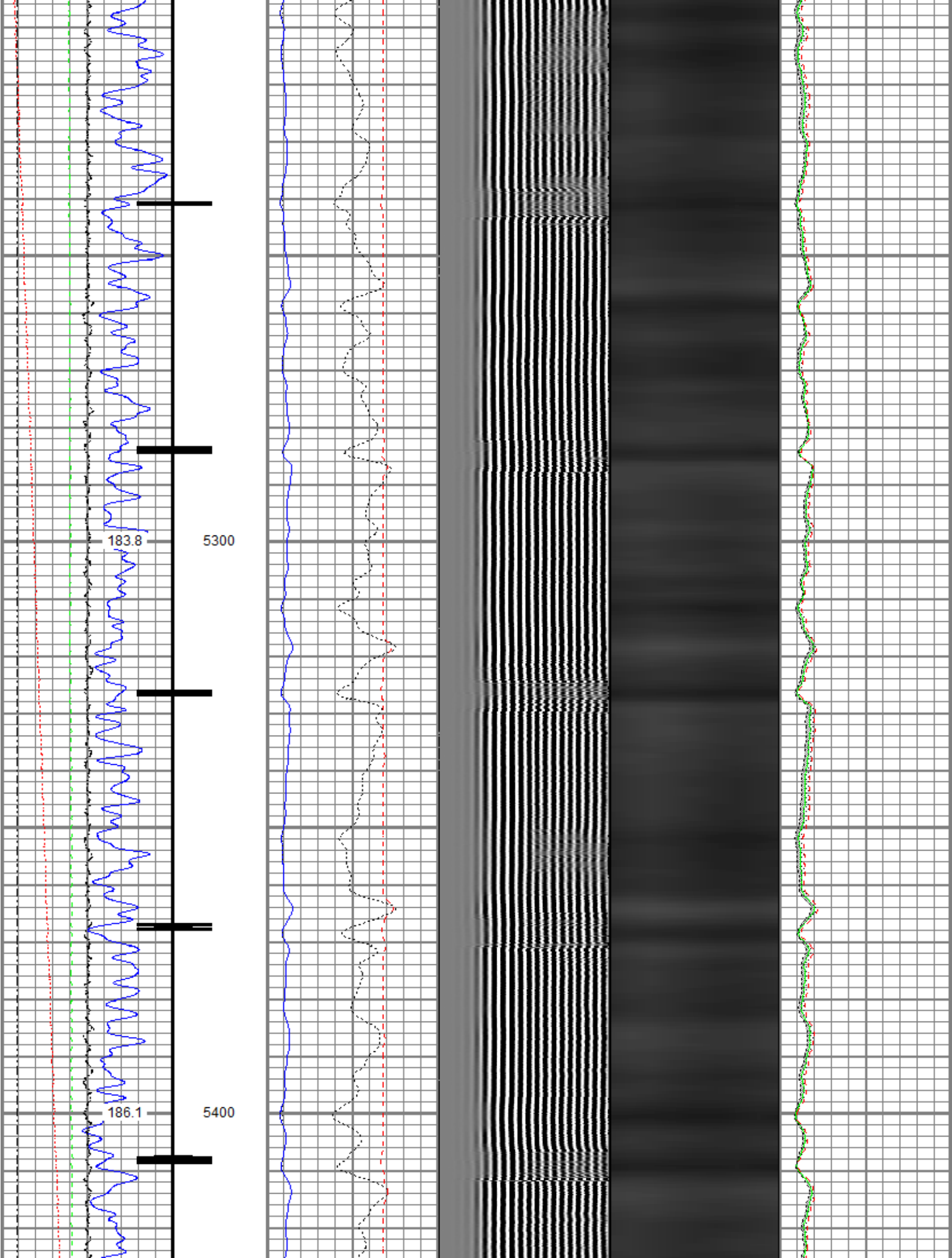


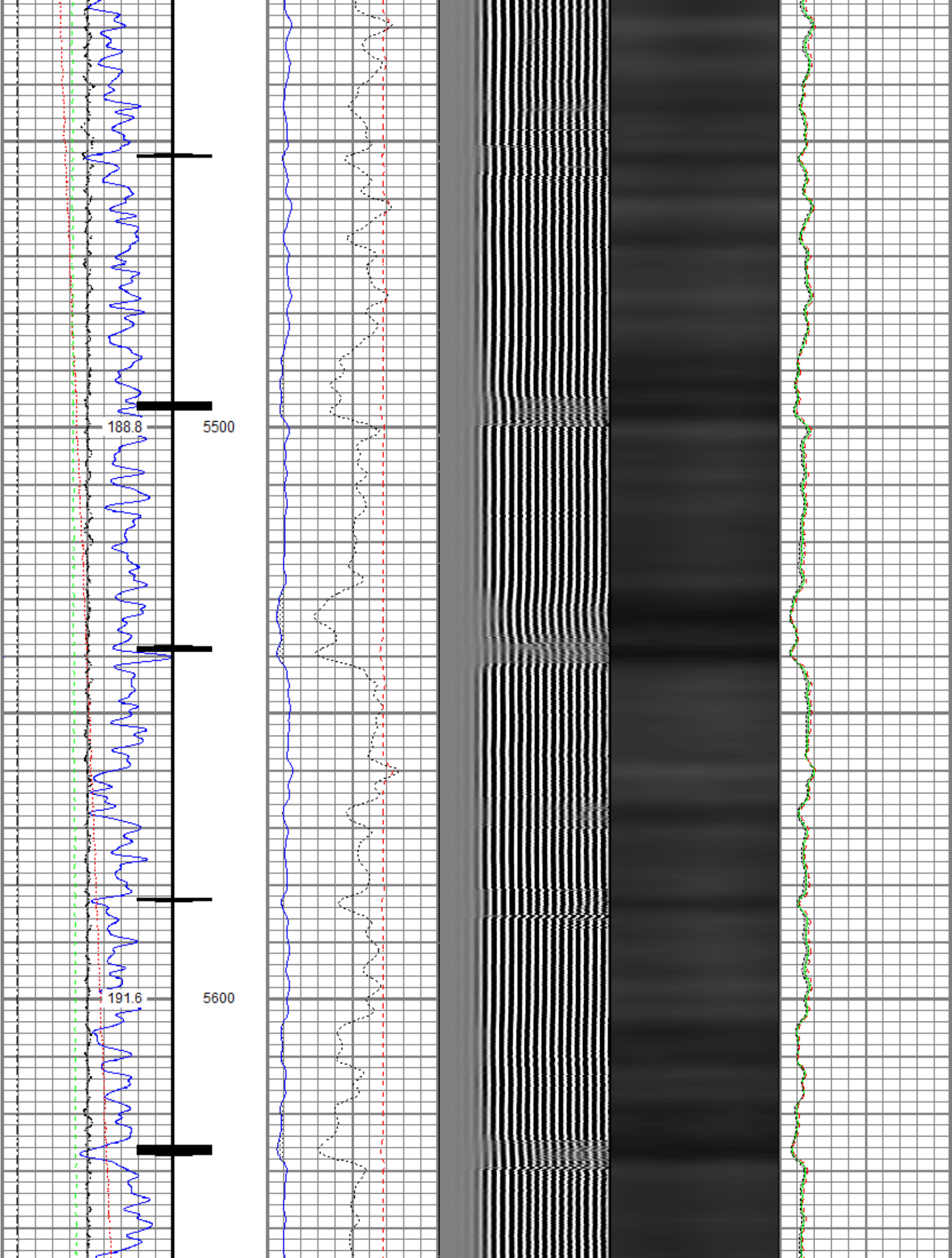


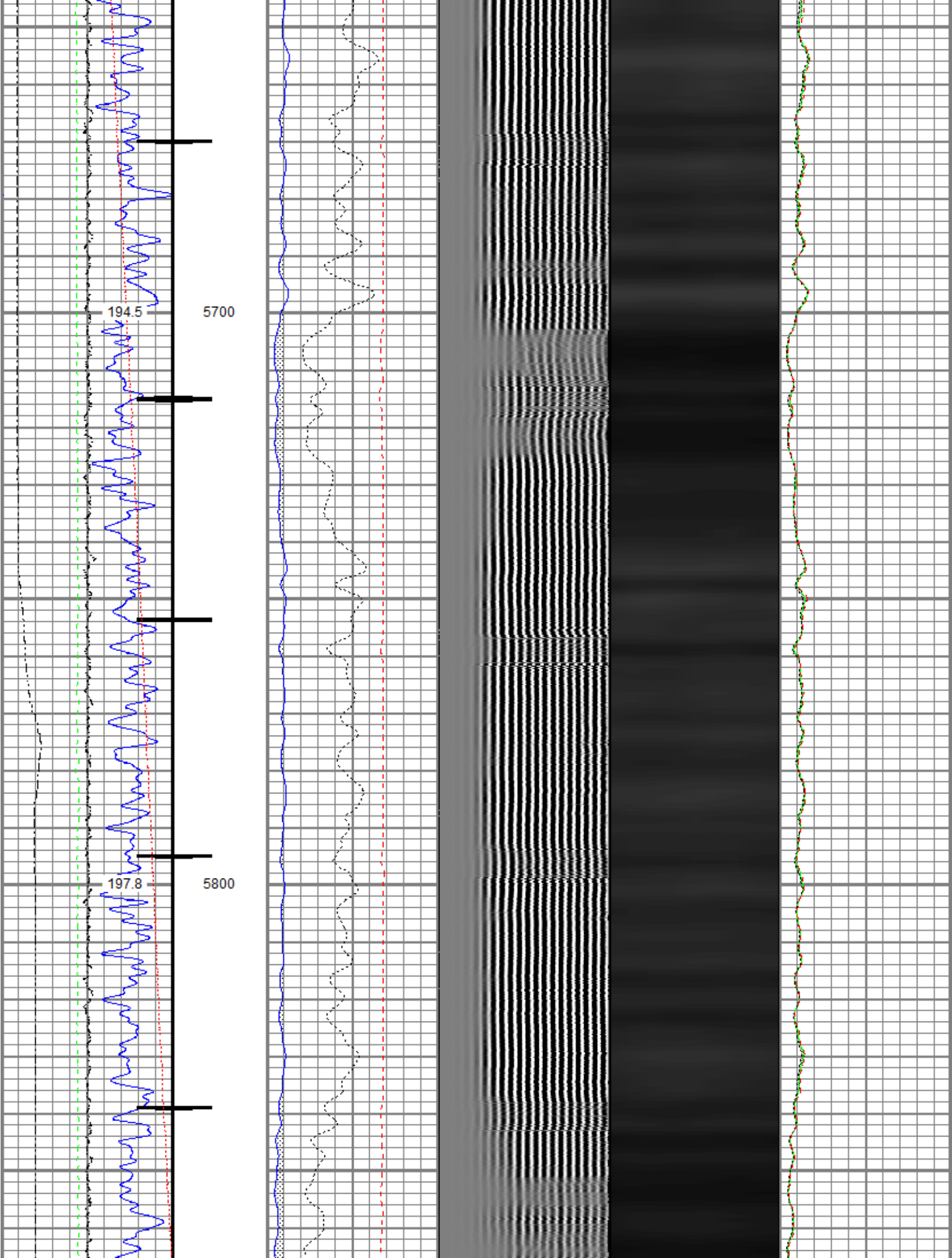


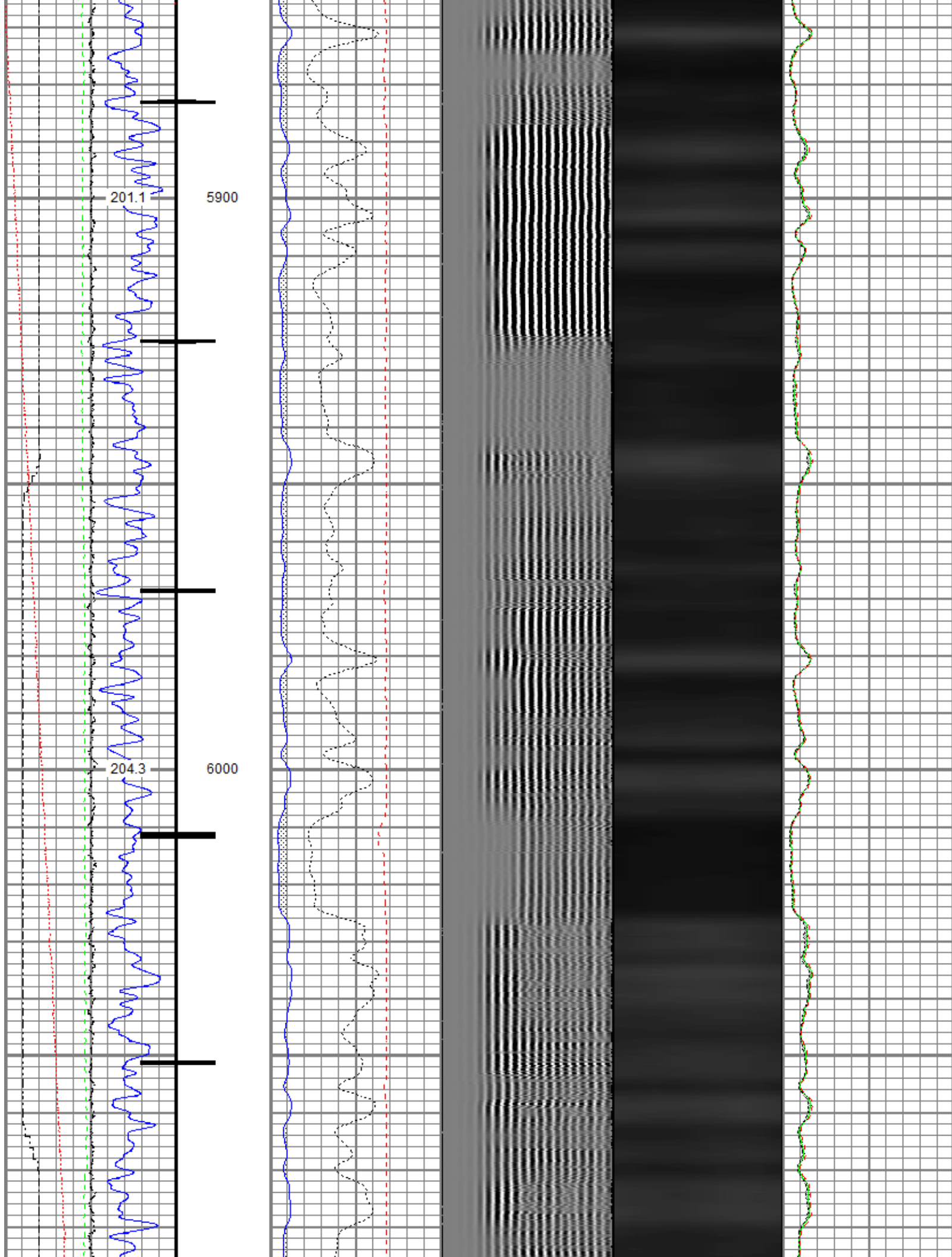


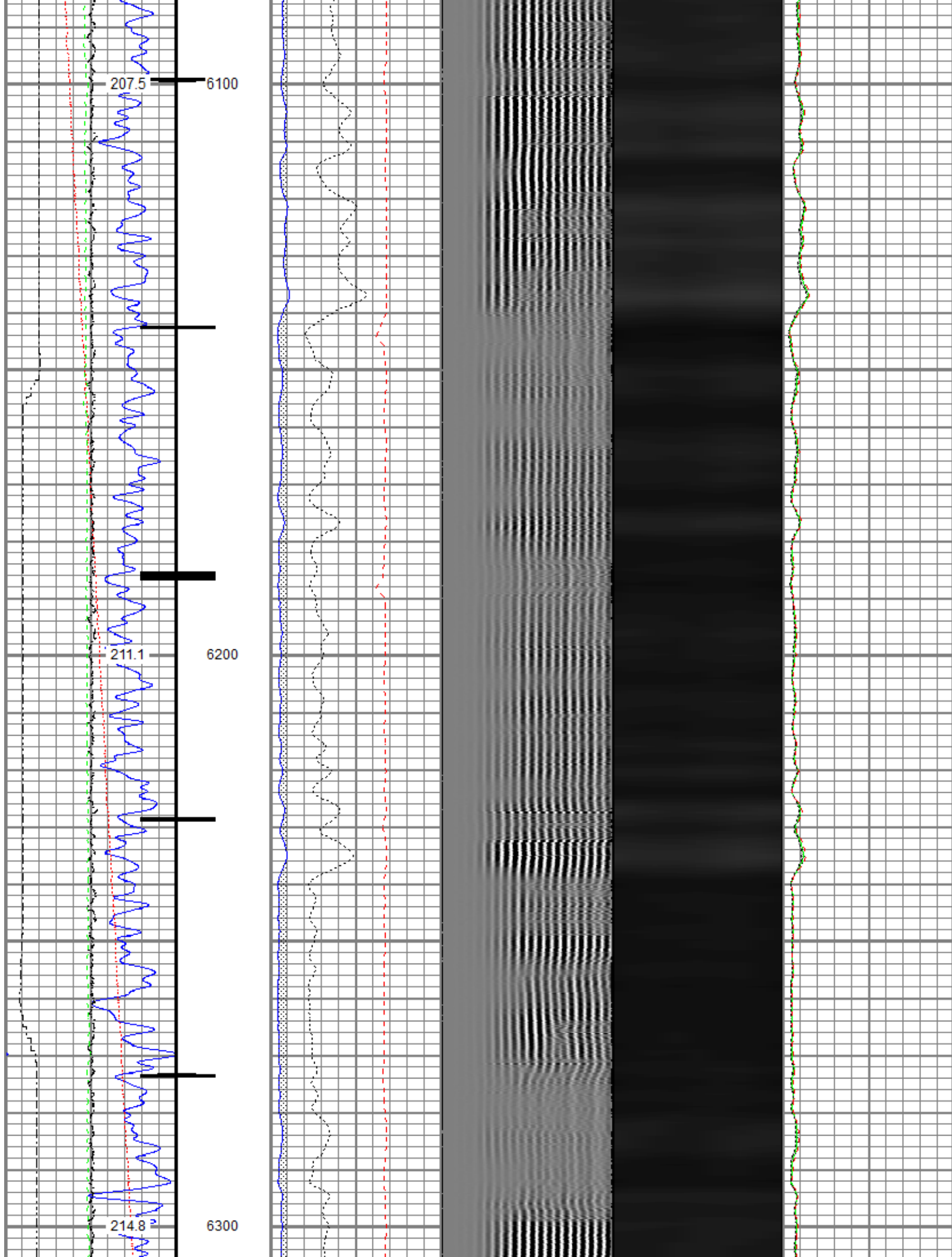






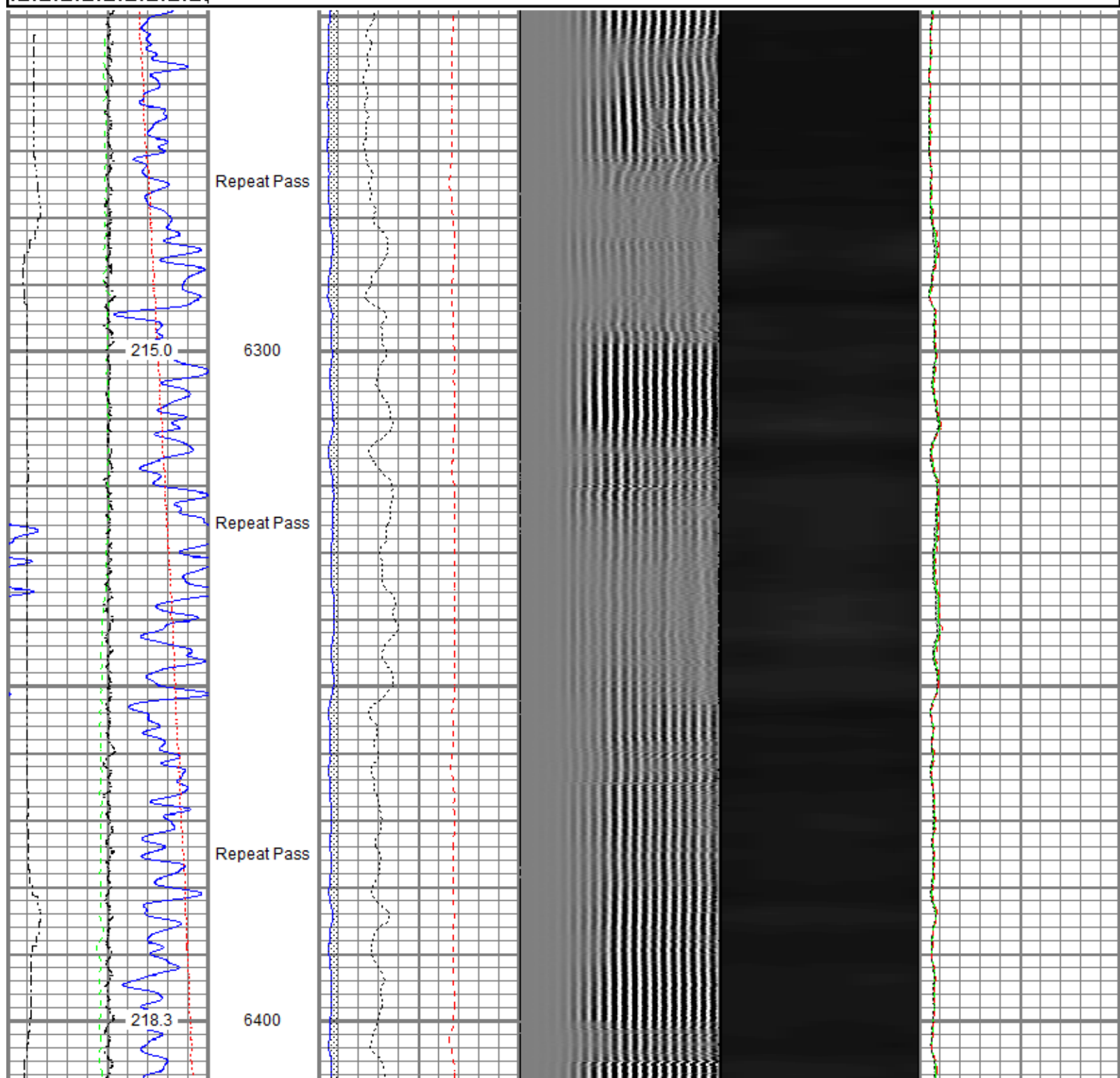


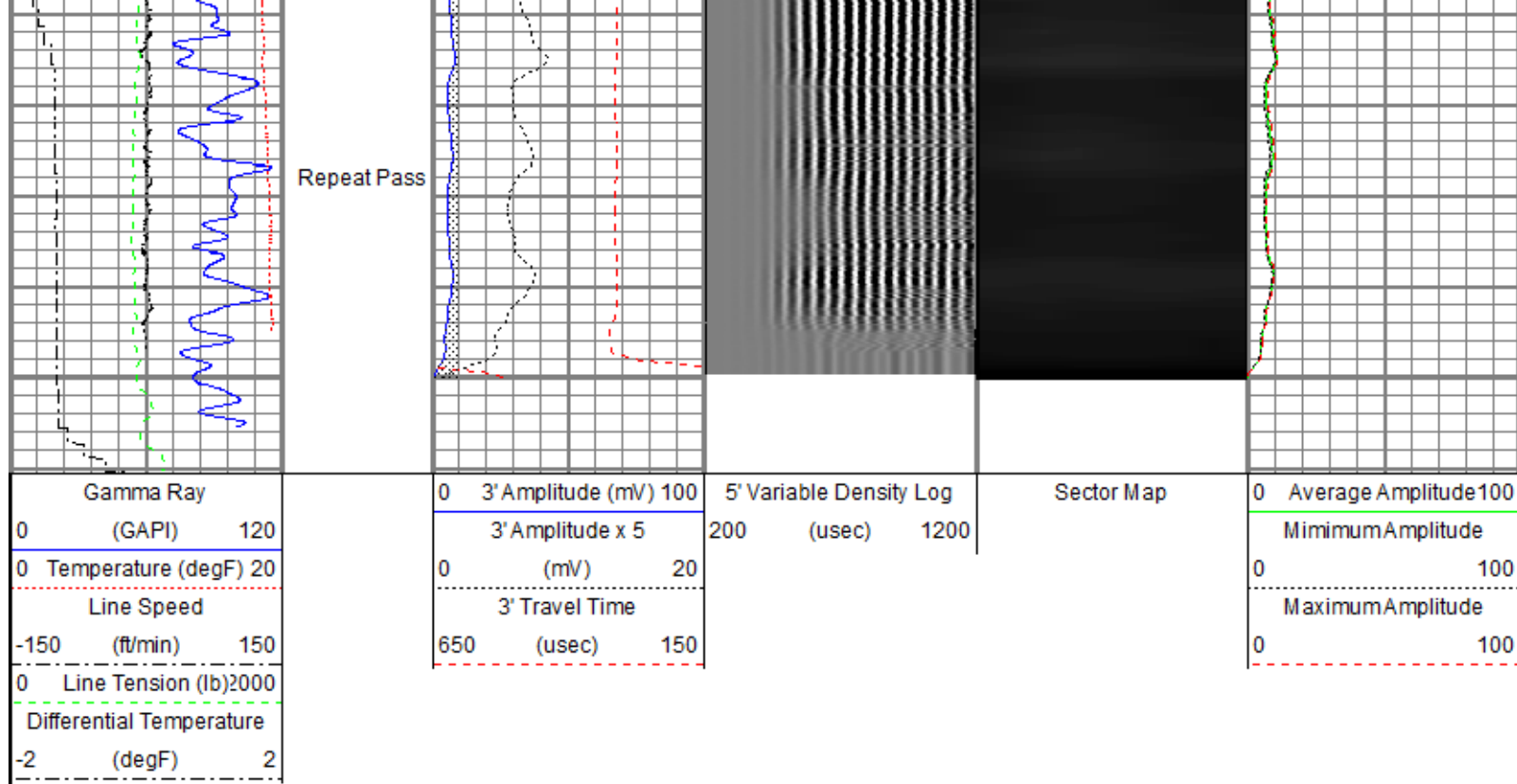




Database File anadarko\robin 9-8hz\0512345156_anadarko_robin 9-8hz_rbl_02-11-18.db
 Dataset Pathname pass2
 Presentation Format ros_radri
 Dataset Creation Sun Feb 11 08:37:01 2018
 Charted by Depth in Feet scaled 1:240

Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200 (usec) 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						
Differential Temperature						
-2 (degF) 2						





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
TEMP	17.03		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
			Probe Radii-2750 RBT (FW1308-091) Probe 2-3/4" Radial Cement Bond Tool with Integral Temperature Sub	9.39	2.75	105.00
WVFS8	14.80					
WVFS7	14.80					
WVFS6	14.80					
WVFS5	14.80					
WVFS4	14.80					
WVFS3	14.80					
WVFS2	14.80					
WVFS1	14.80					
WVFCAL	14.80					
WVF3FT	14.80					
WVF5FT	13.80					
HEADVOLT	10.55					
			Probe CENT-2750	2.88	2.75	20.00

			Probe 2-3/4" Electric Inline Bowspring Centralizer			
CCL\$2	6.79					
CCL\$1	6.79					
GR	5.55		Probe GR-CCL-2750 GOB (FW1212-026) Probe 2-3/4" rev.2 Digital Scintillation Gamma Ray/CCL Combined	4.51	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: 0512345156_Anadarko_Robin 9-8HZ_RBL_02-11-18.db: field/well/run1/pass4 Total length: 23.86 ft Total weight: 225.60 lb O.D.: 2.75 in						

Calibration Report						
Database File	C:\ProgramData\Warrior\Data\Anadarko\Robin 9-8HZ\0512345156_Anadarko_Robin 9-8HZ_RBL_02-11-18.db					
Dataset Pathname	pass4					
Dataset Creation	Sun Feb 11 08:40:18 2018					
Gamma Ray Calibration Report						
Serial Number:	FW1212-026					
Tool Model:	2750 GOB					
Performed:	Sun Nov 12 12:27:51 2017					
Calibrator Value:	637.0	GAPI				
Background Reading:	113.7	cps				
Calibrator Reading:	1029.1	cps				
Sensitivity:	0.6959	GAPI/cps				
Segmented Cement Bond Log Calibration Report						
Serial Number:	FW1308-091					
Tool Model:	2750 RBT					
Calibration Casing Diameter:	5.500	in				
Calibration Depth:	27.291	ft				
Master Calibration, performed (Derived):						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.001	0.637	0.800	71.921	111.823	0.651
CAL	0.006	0.667				
5'	0.001	0.560	0.800	71.921	127.125	0.689
SUM						
S1	0.001	0.636	0.000	100.000	157.582	-0.177
S2	0.001	0.647	0.000	100.000	154.721	-0.149
S3	0.001	0.641	0.000	100.000	156.263	-0.202

S4	0.001	0.630	0.000	100.000	159.068	-0.219
S5	0.002	0.634	0.000	100.000	158.234	-0.251
S6	0.002	0.637	0.000	100.000	157.403	-0.245
S7	0.002	0.634	0.000	100.000	158.178	-0.238
S8	0.001	0.645	0.000	100.000	155.302	-0.176

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.006	0.667	1.000	0.000

Air Zero Calibration, performed Mon Feb 05 12:35:58 2018:

	Raw (v)		Calibrated (v)	Results
	Zero		Zero	Offset
3'	0.006		0.000	0.000
5'	0.006		0.000	-0.000
SUM				
S1	0.007		0.000	0.000
S2	0.007		0.000	-0.000
S3	0.006		0.000	0.000
S4	0.006		0.000	0.000
S5	0.006		0.000	0.000
S6	0.006		0.000	0.000
S7	0.006		0.000	0.000
S8	0.006		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	



Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Robin 9-8HZ
Field Wattenberg
County Weld
State Colorado