



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Nelson 35-16HZ
Field Wattenberg
County Weld State Colorado

Location: API #: 05-123-51246

Other Services
JBGR

SEC 35 TWP 2N RGE 68W

Permanent Datum Ground Level Elevation 4955'
Log Measured From Ground Level 0 FT
Drilling Measured From Kelly Bushing
K.B. 4975'
D.F. ---
G.L. 4955'

Date 13-MAY-2021

Run Number	One		
Depth Driller	16154 FT		
Depth Logger	7198 FT		
Bottom Logged Interval	7184 FT		
Top Log Interval	Surface		
Open Hole Size	7 875"		
Type Fluid	Water		
Density / Viscosity	8.34 lb/gal		
Max. Recorded Temp.	219°F		
Estimated Cement Top	See Log		
Time Well Ready	ROA		
Time Logger on Bottom	15:51		
Equipment Number	HD-361		
Location	Platteville, CO		
Recorded By	S. Lopez		
Witnessed By	J. McMillan		

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record	Size (in)	Wgt (lbs/ft)	Grade	Top	Bottom		
Surface Casing	9 5/8	36	J-55	Surface	1887 FT		
Intermediate #1	5 1/2	17	HC P-110	Surface	16142 FT		
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 Marker Joint at 6697 FT
Adjusted +20 FT to correlate with Marker Joint
Gauge Ring/Junk Basket ran to 7275 FT
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!!

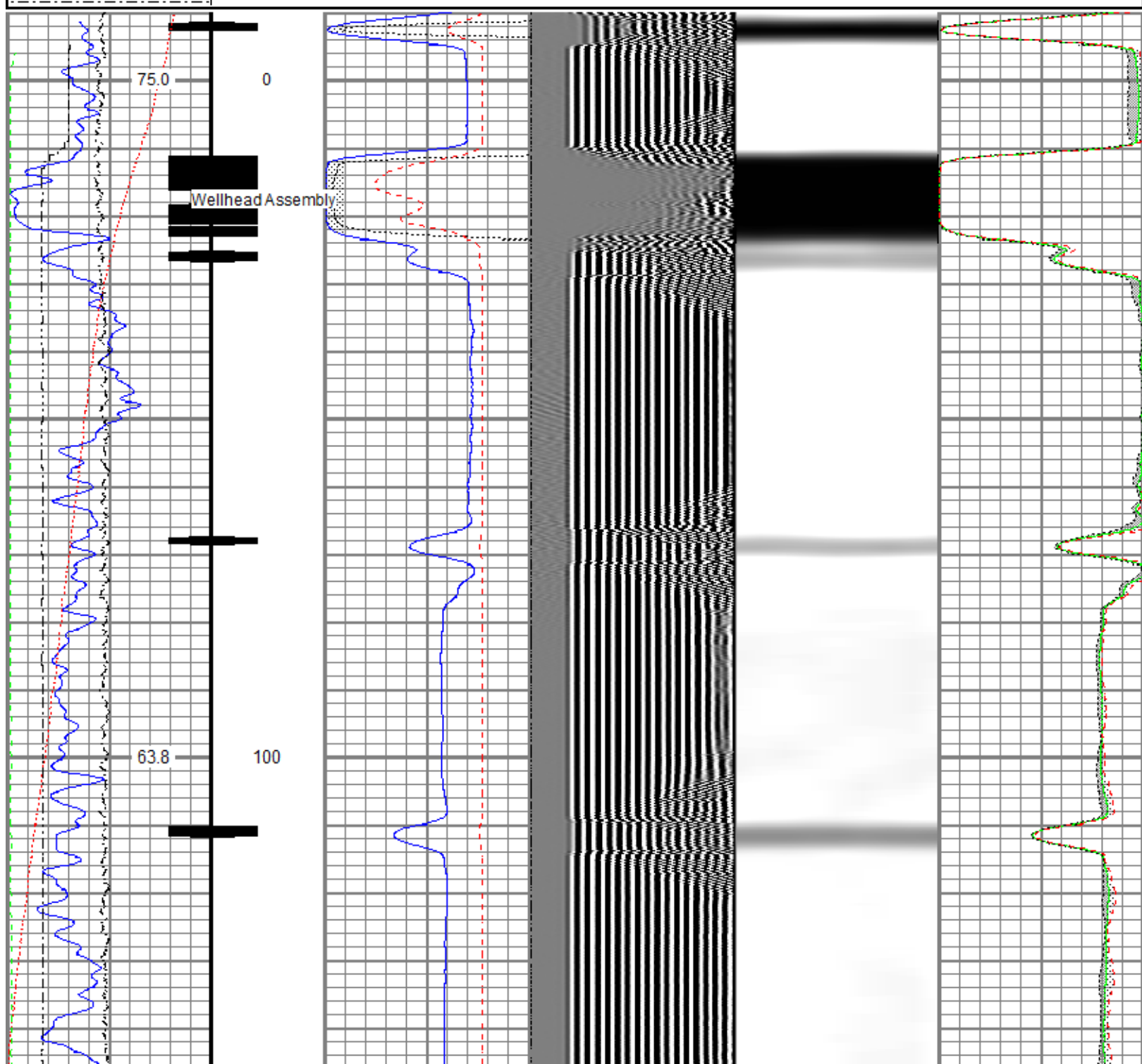


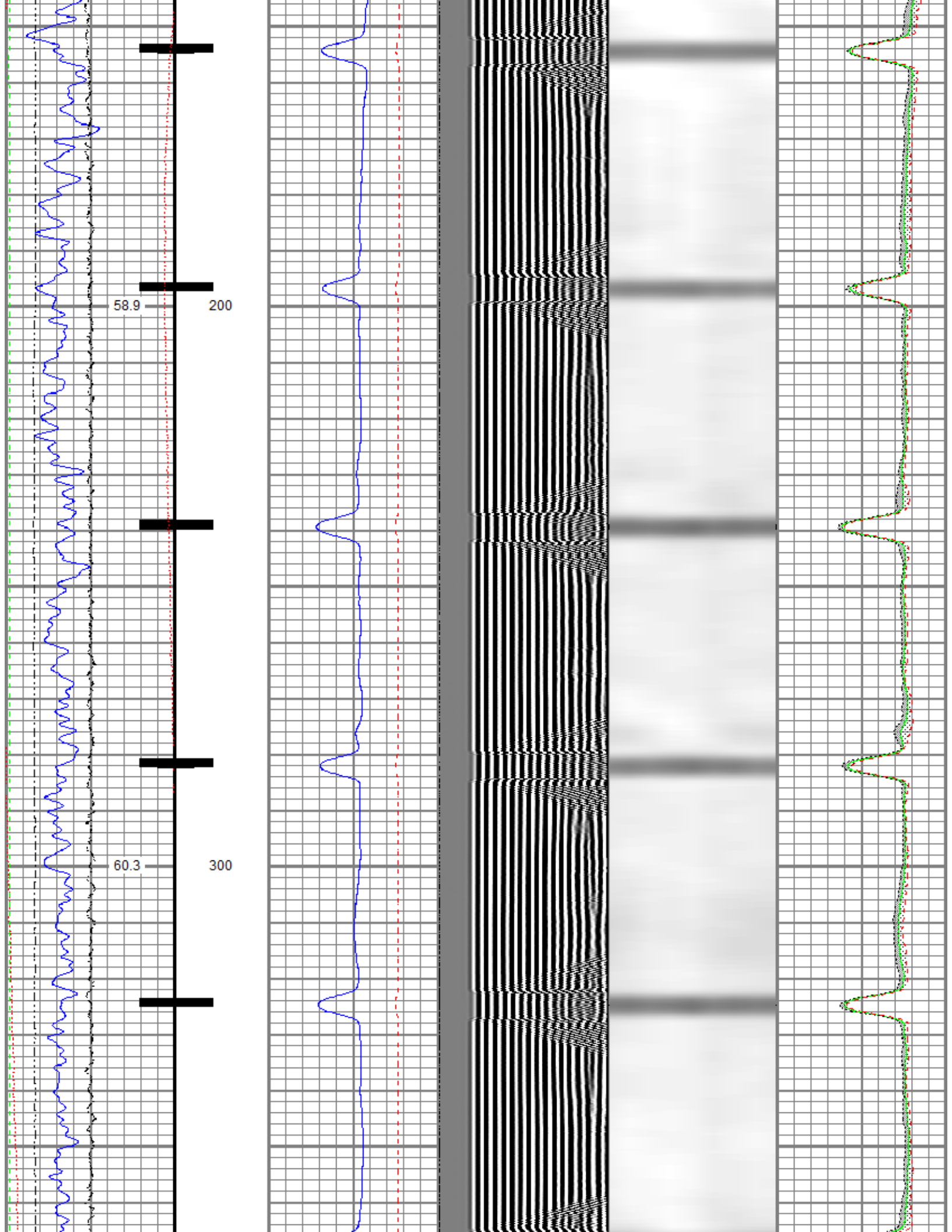
Main Pass

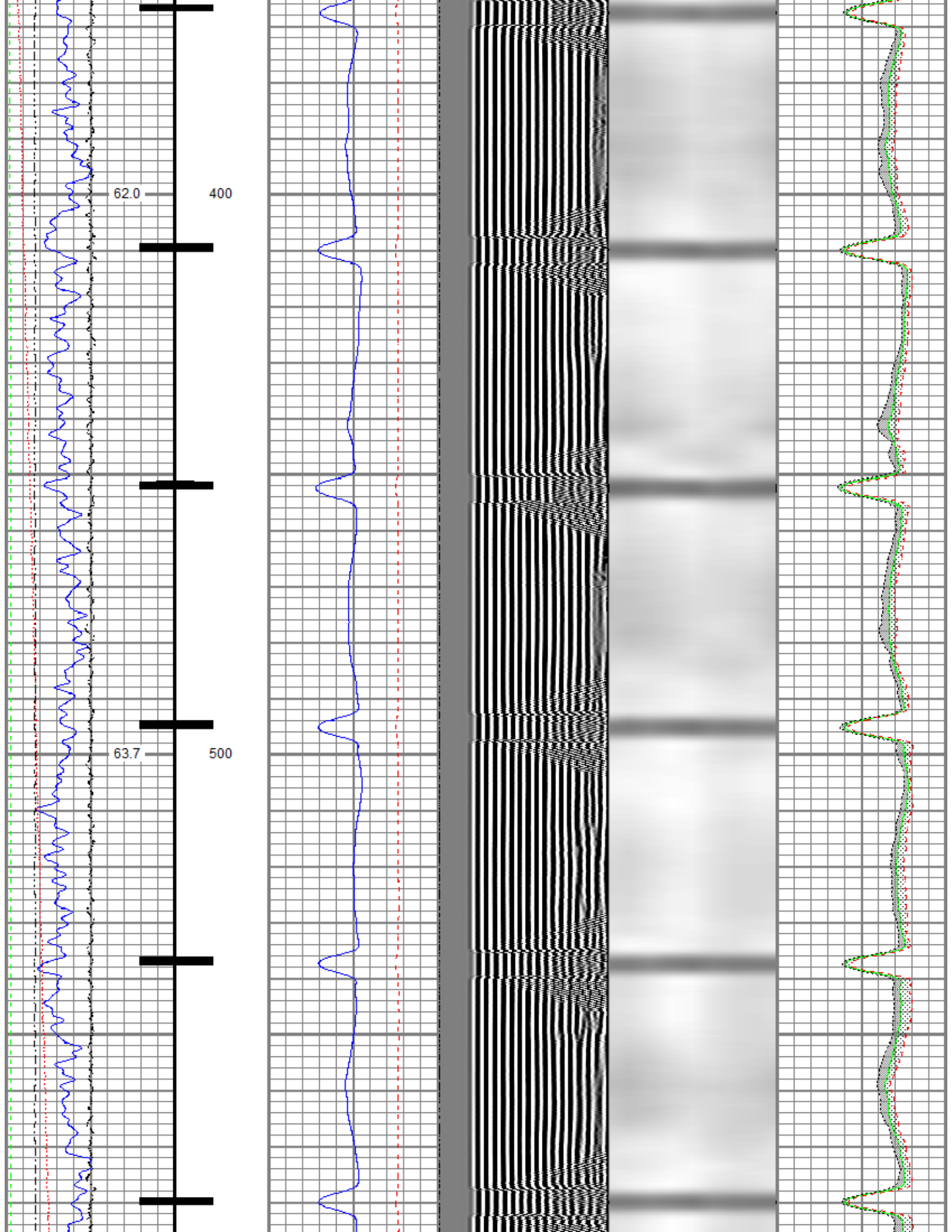
Recorded With 2800 PSI Surface Induced Pressure

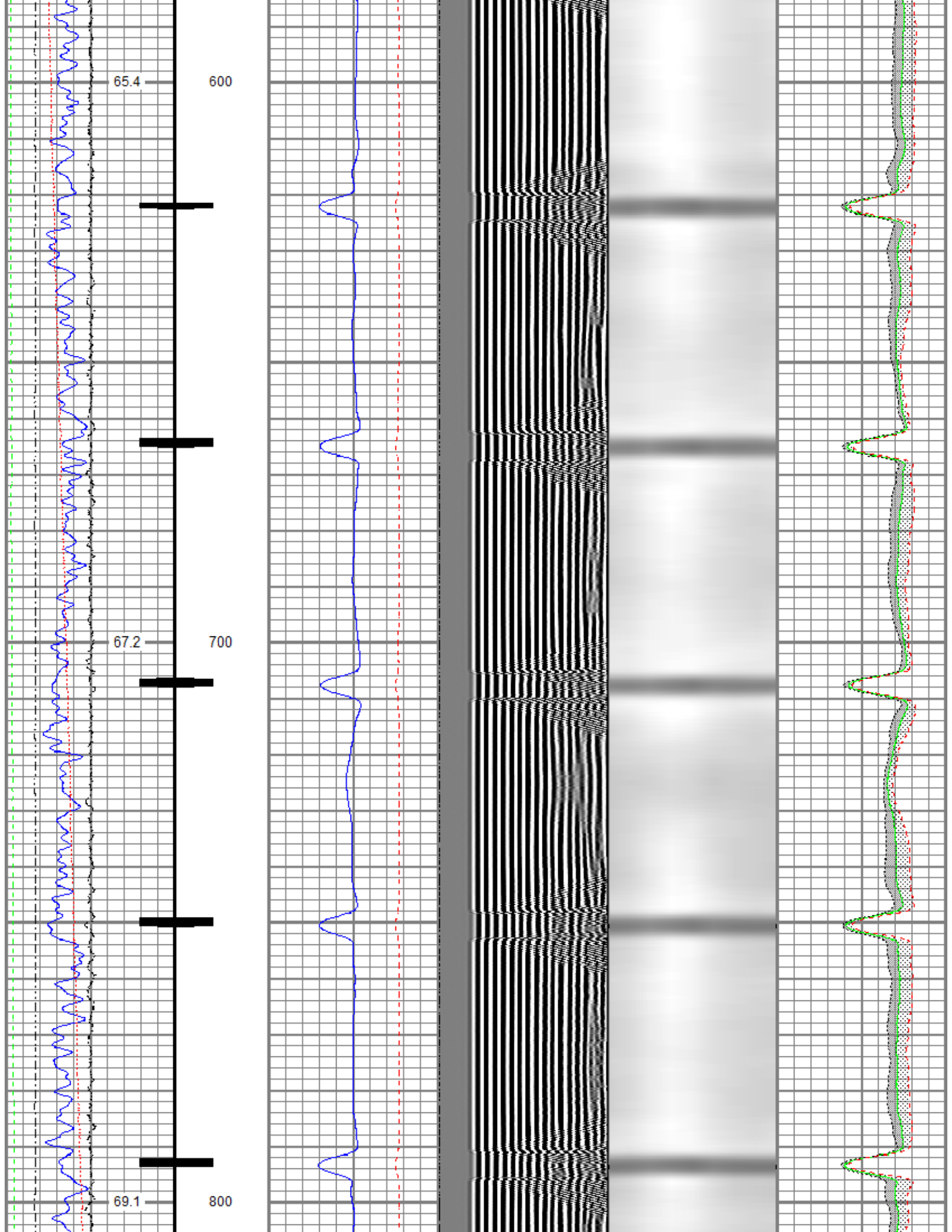
Database File 0512351246_oxy_nelson 35-16hz_rbl_05-13-21.db
 Dataset Pathname pass4.2
 Presentation Format ros_radri
 Dataset Creation Sat May 15 08:38:18 2021
 Charted by Depth in Feet scaled 1:240

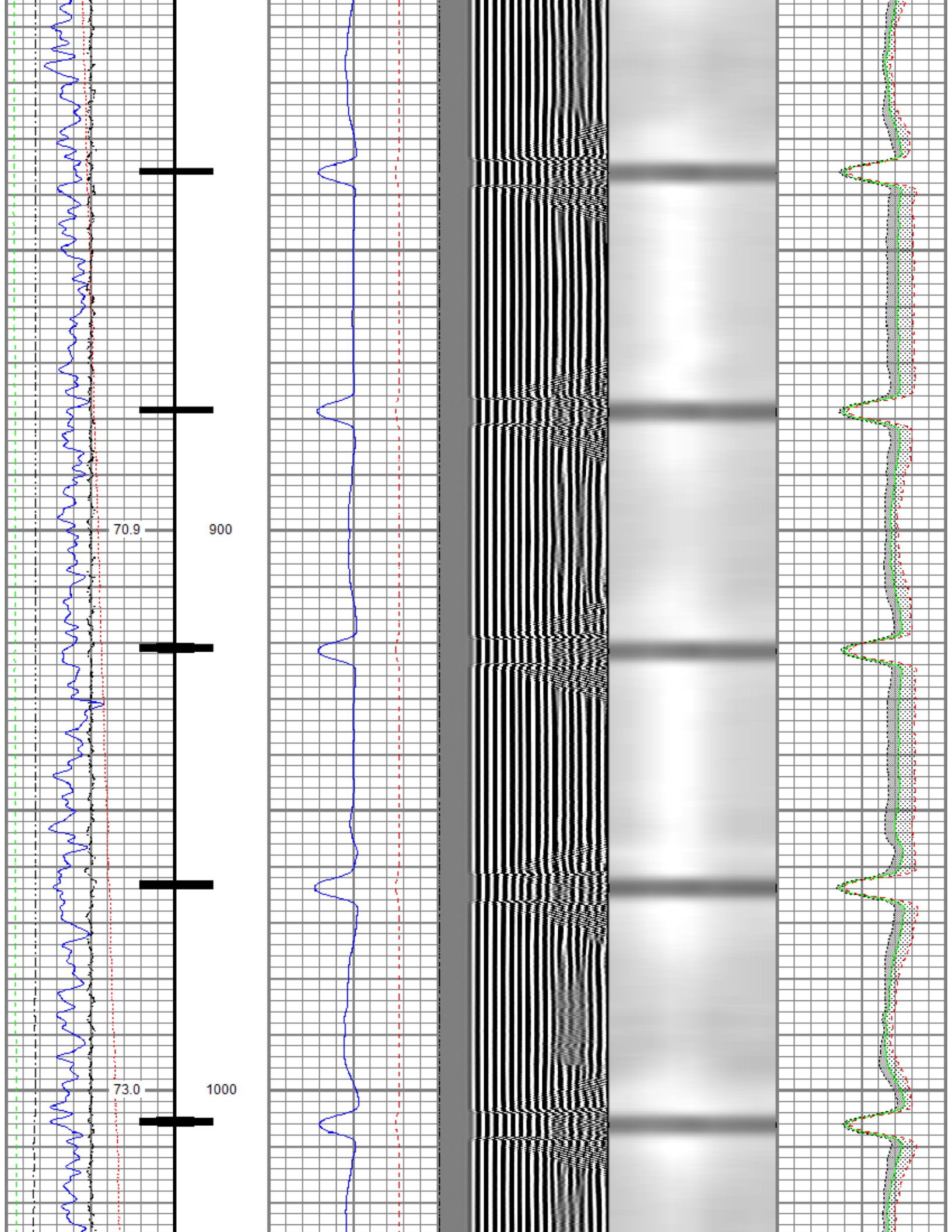
Gamma Ray	0	3' Amplitude (mV)	100	5' Variable Density Log	Sector Map	0	Average Amplitude	100
(GAPI)	120	3' Amplitude x 5	200	(u sec)	1200		Minimum Amplitude	
Casing Collar Locator		(mV)	20			0	100	
Temperature (degF)	20	3' Travel Time					Maximum Amplitude	
Line Speed		650 (u sec)	150			0	100	
(ft/min)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

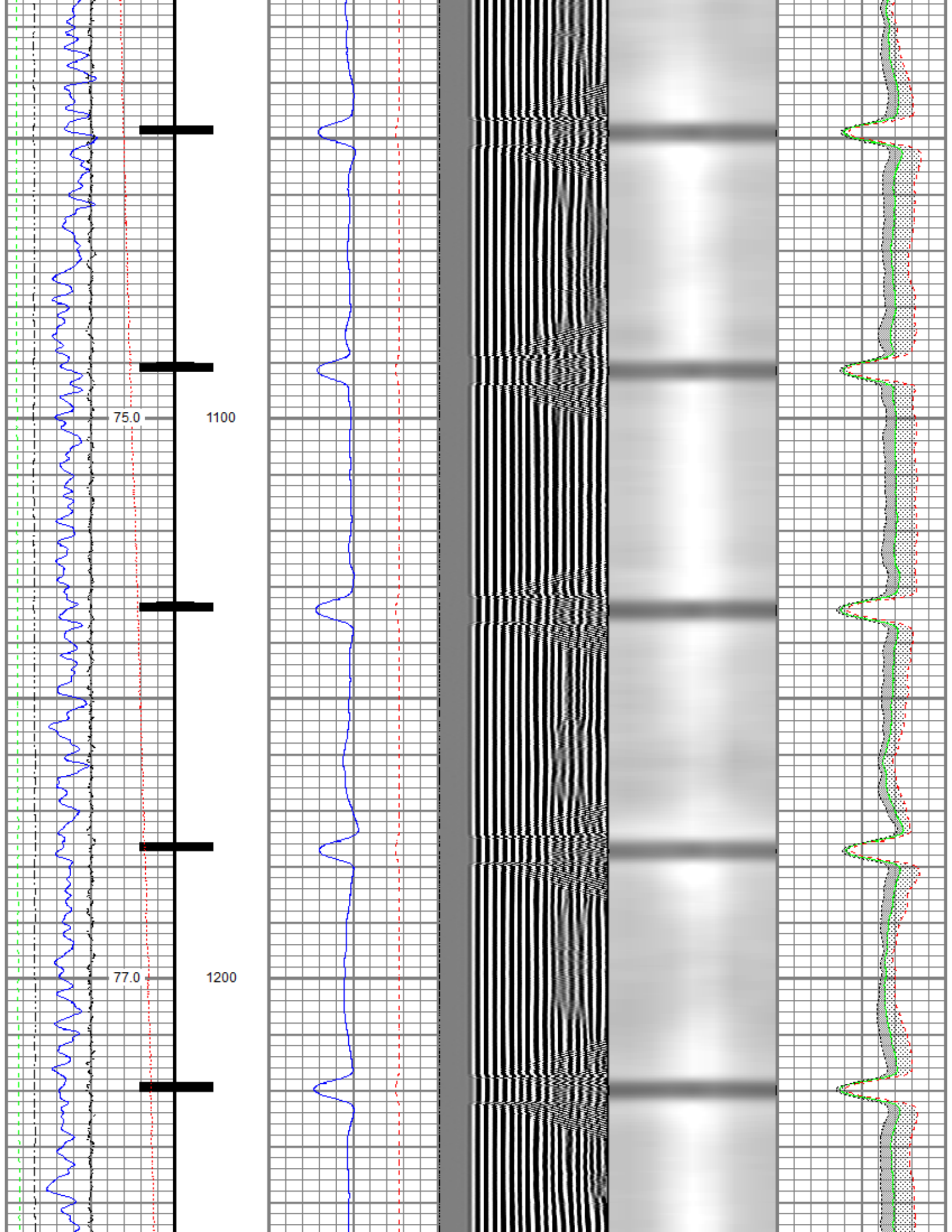


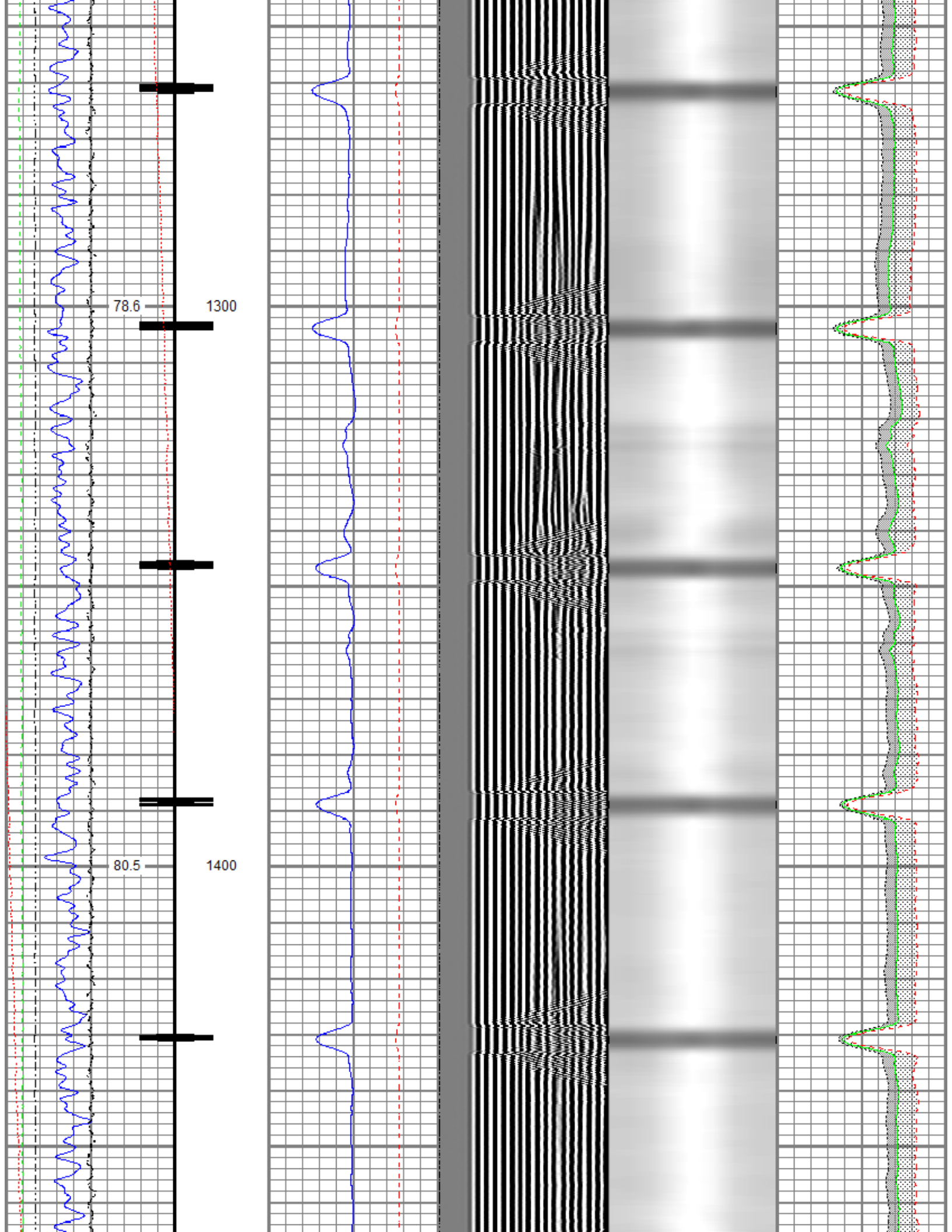


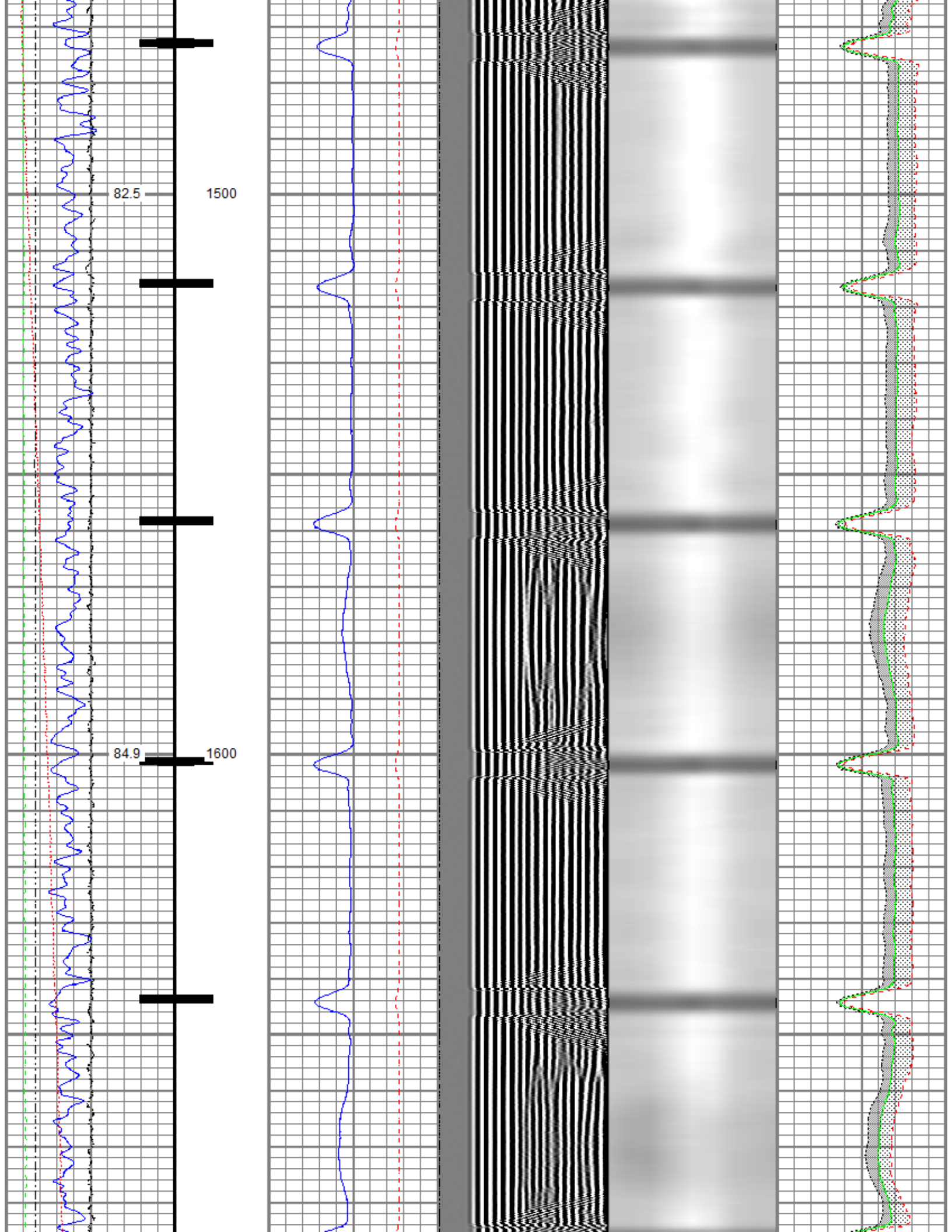


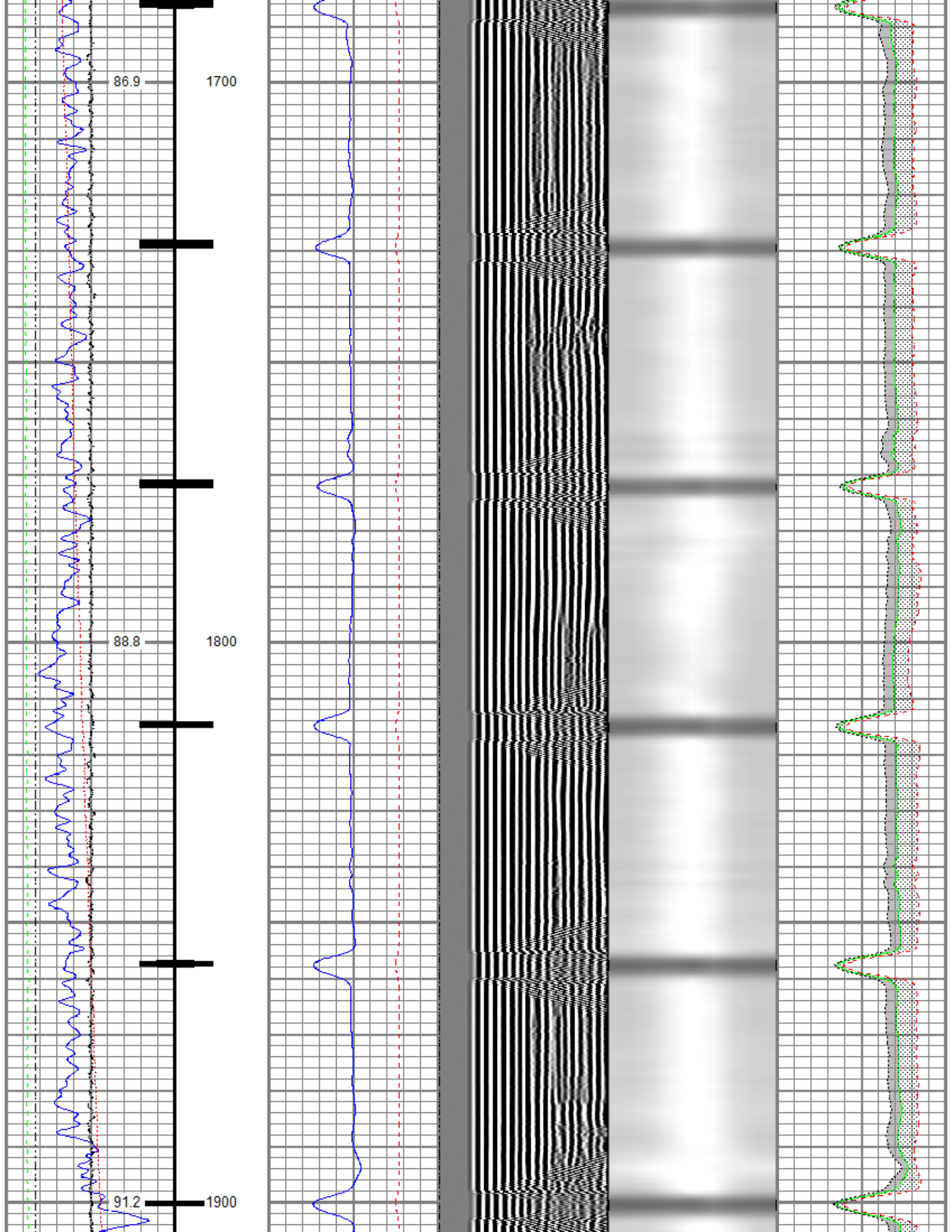


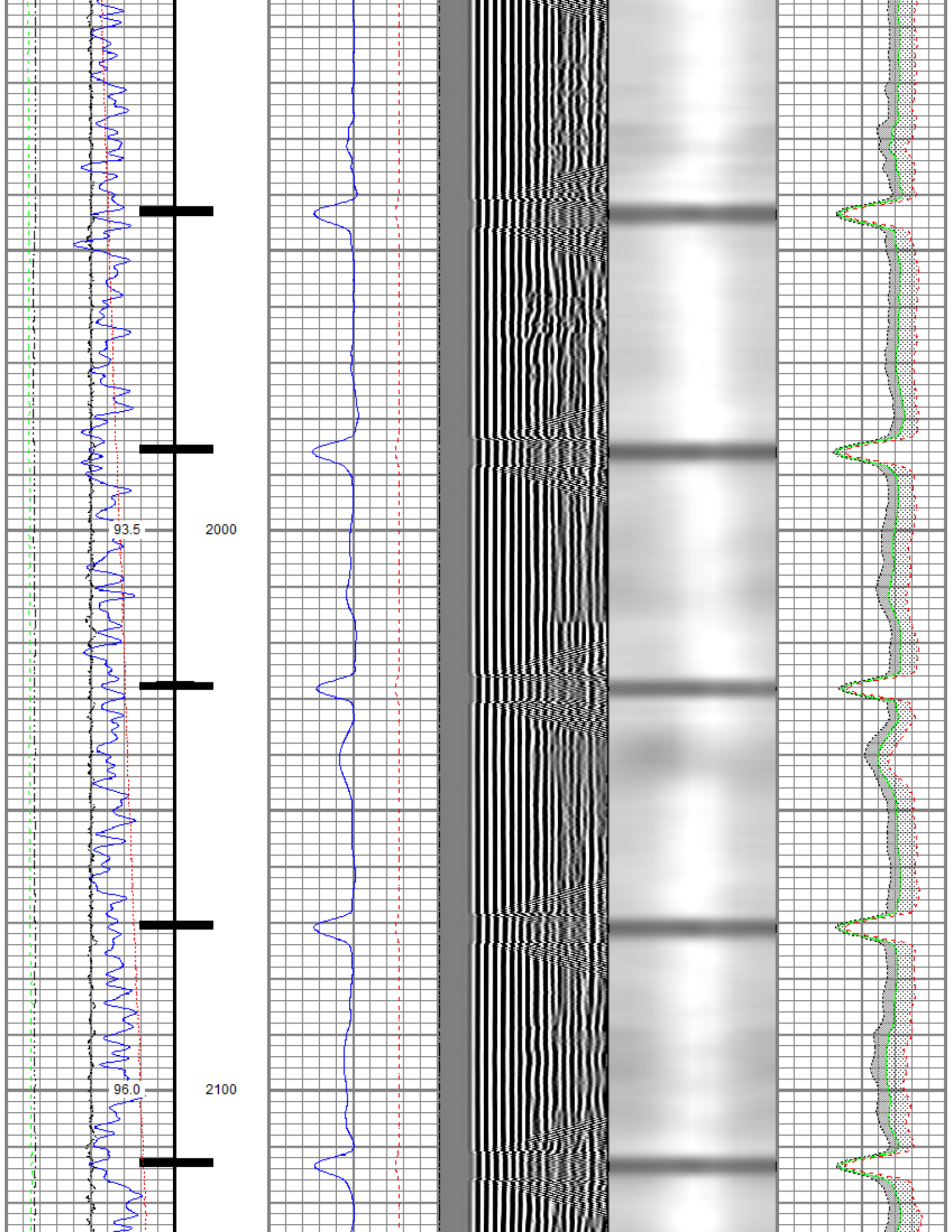


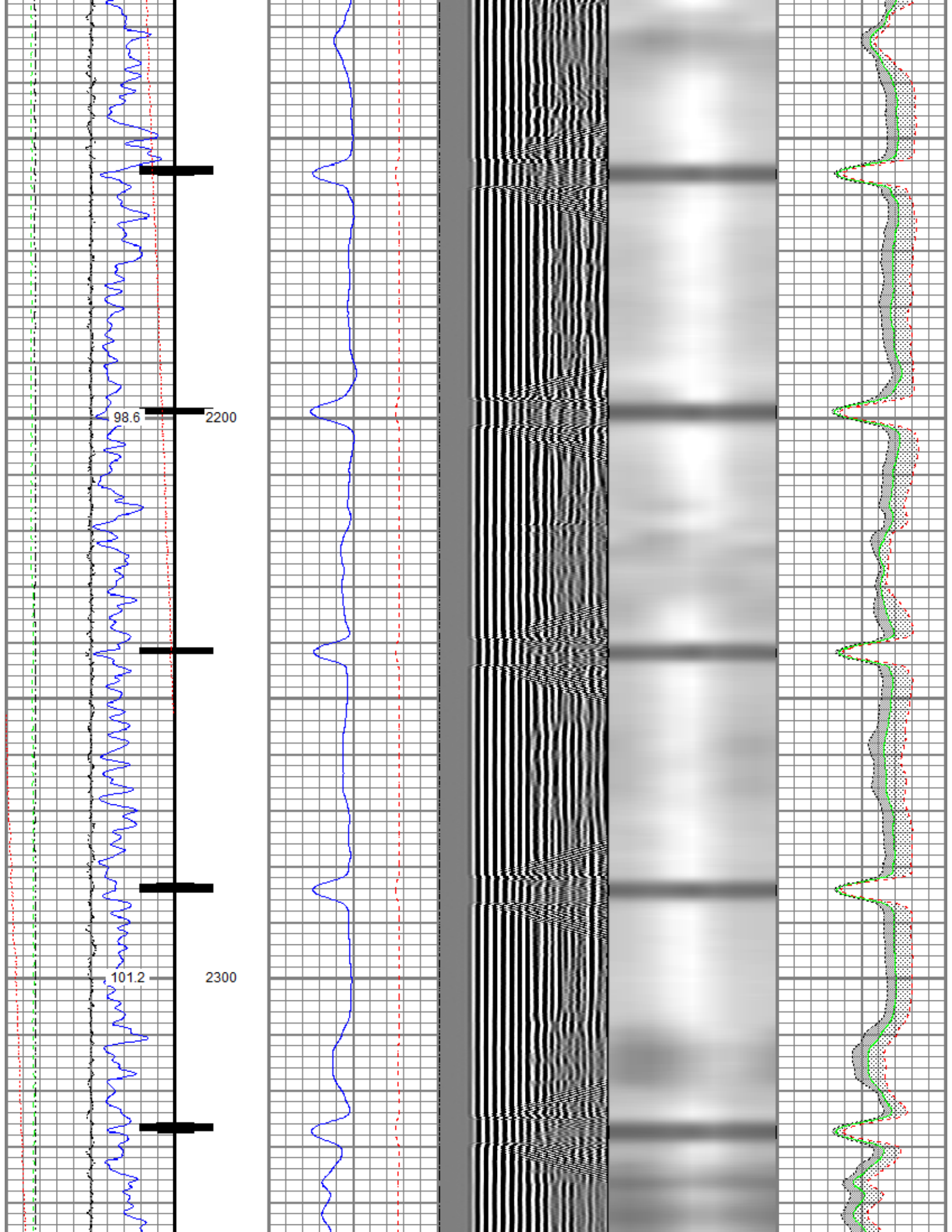


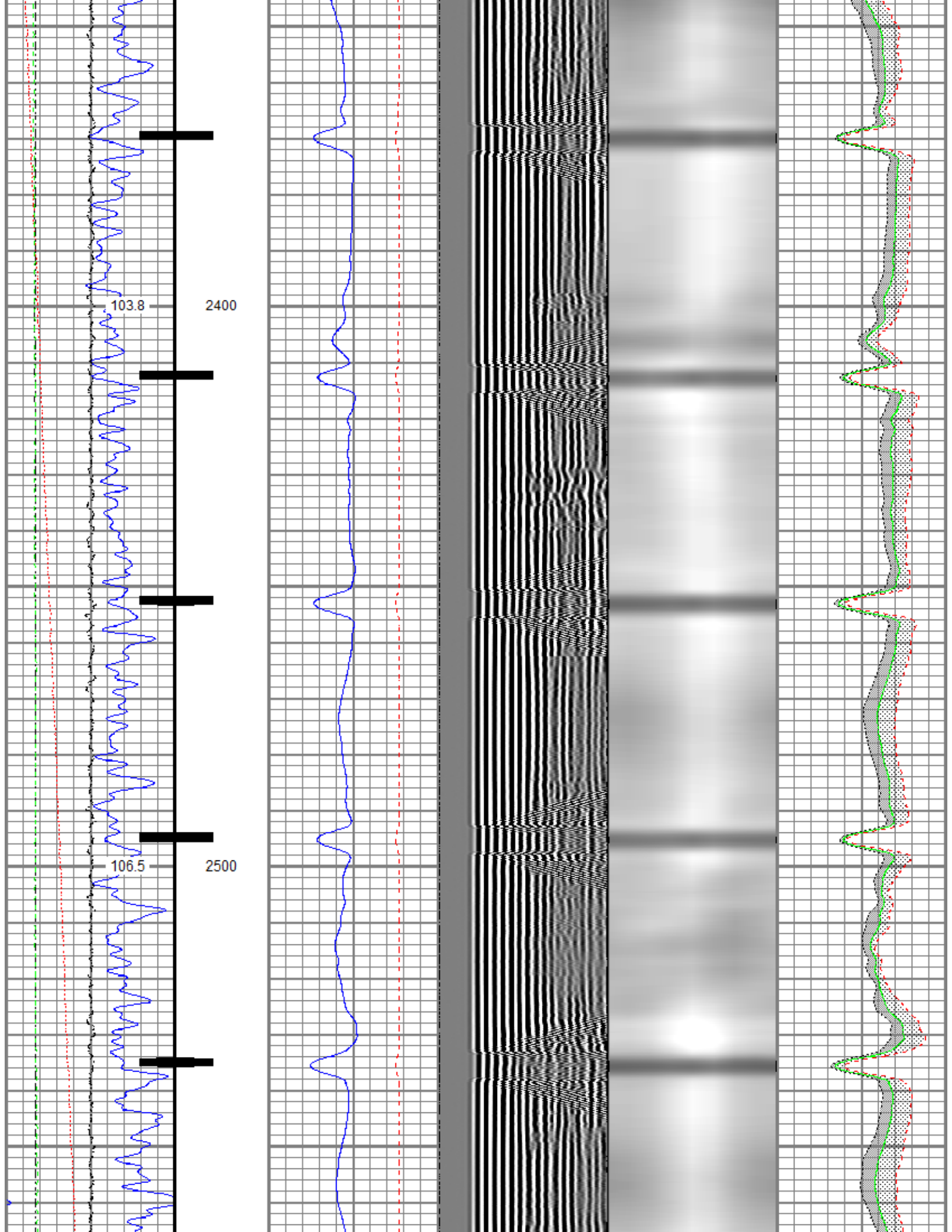


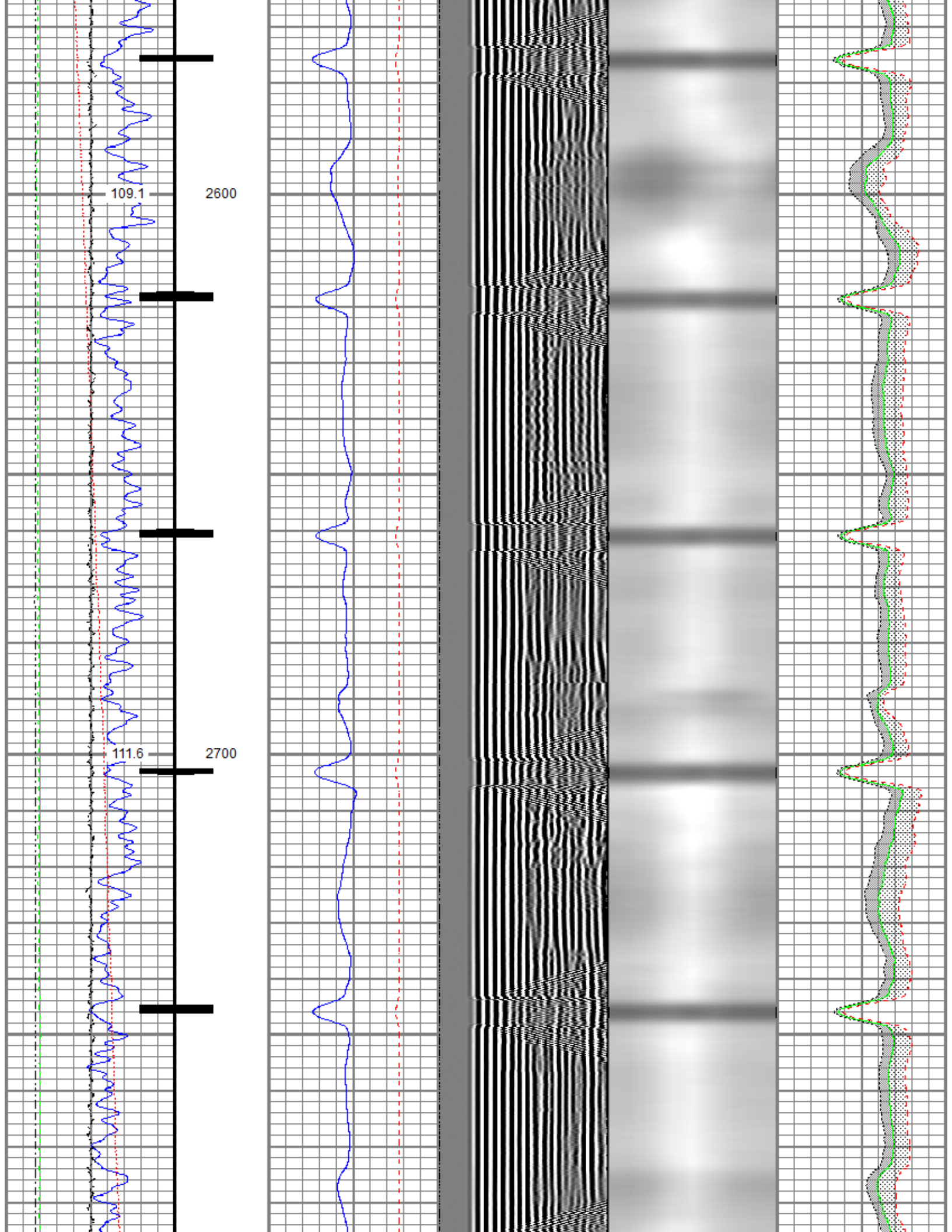


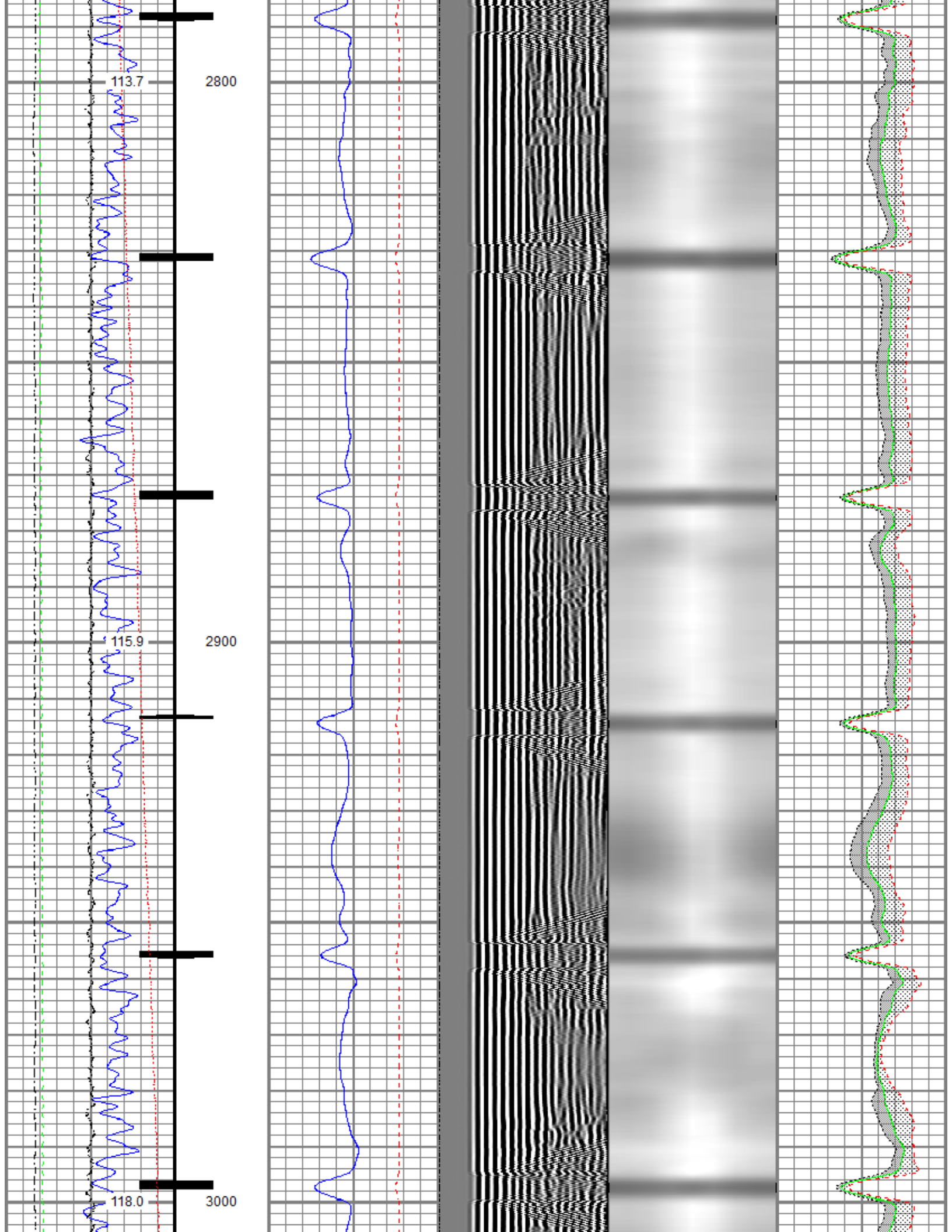


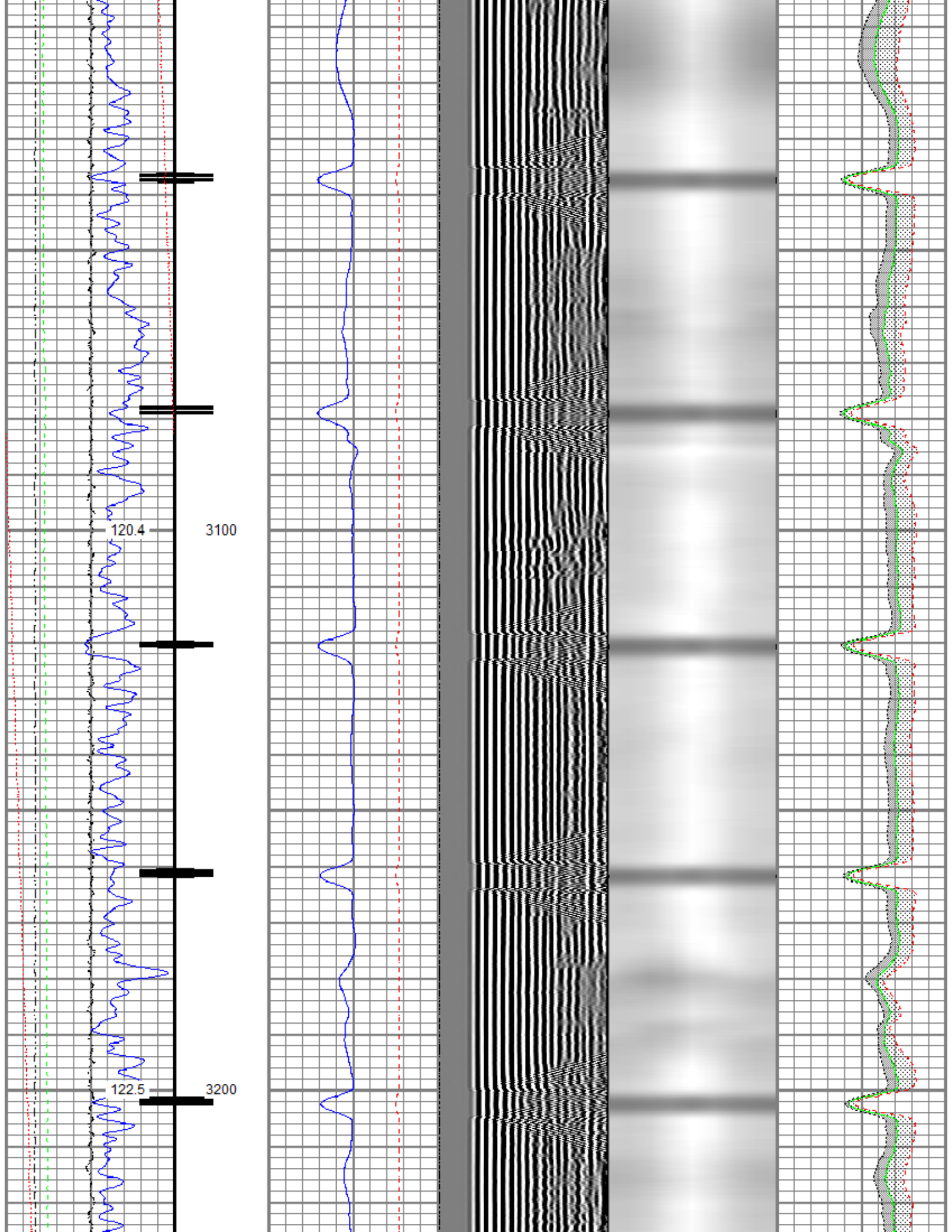


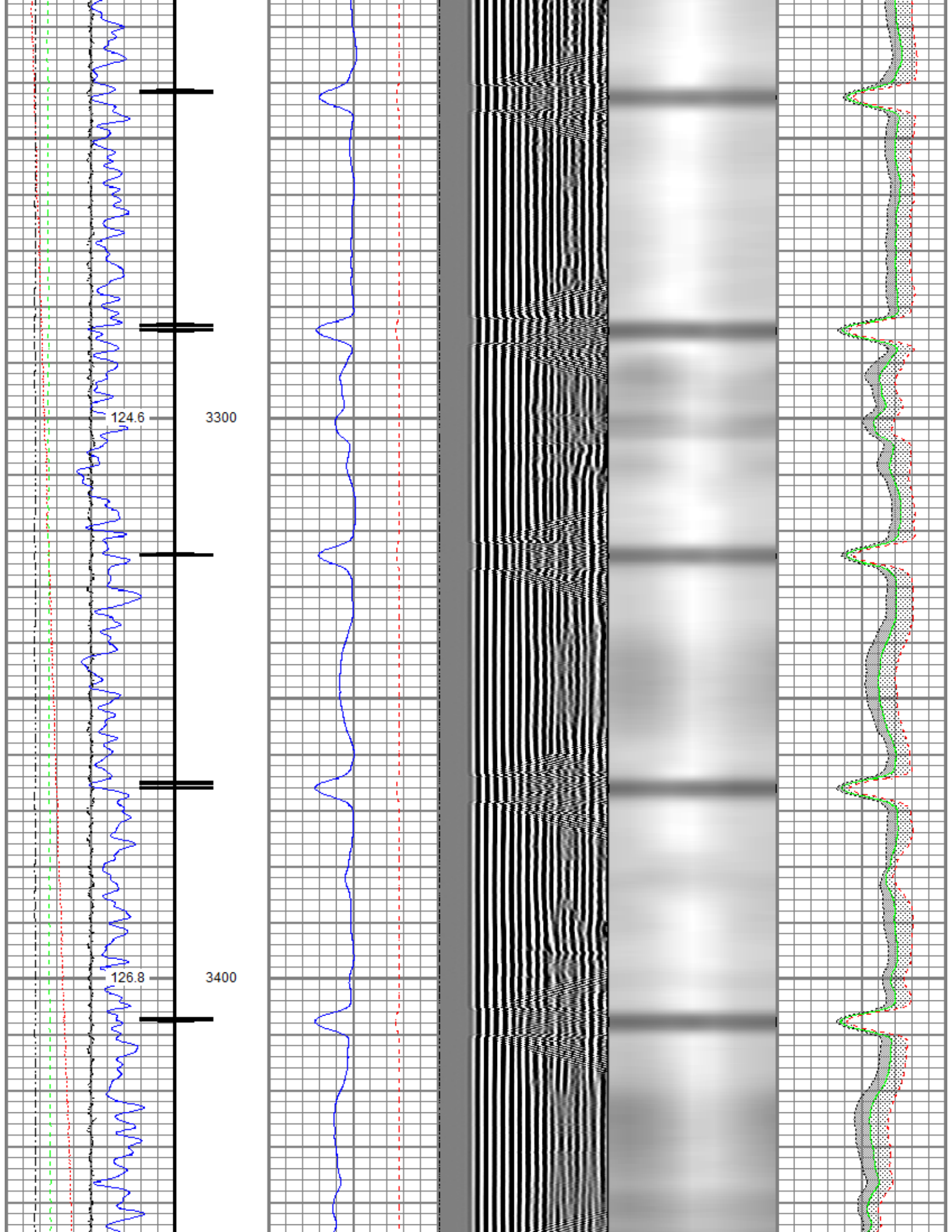


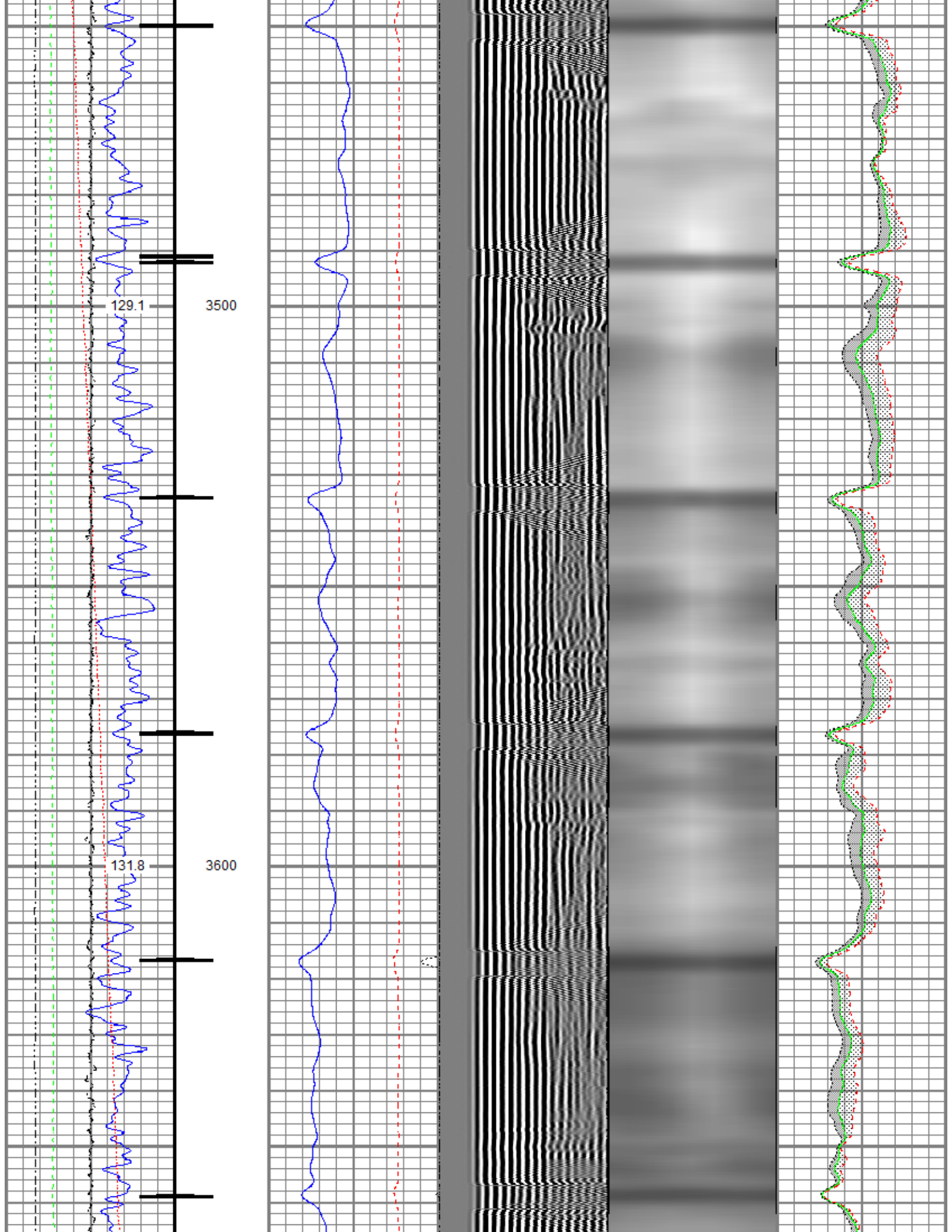


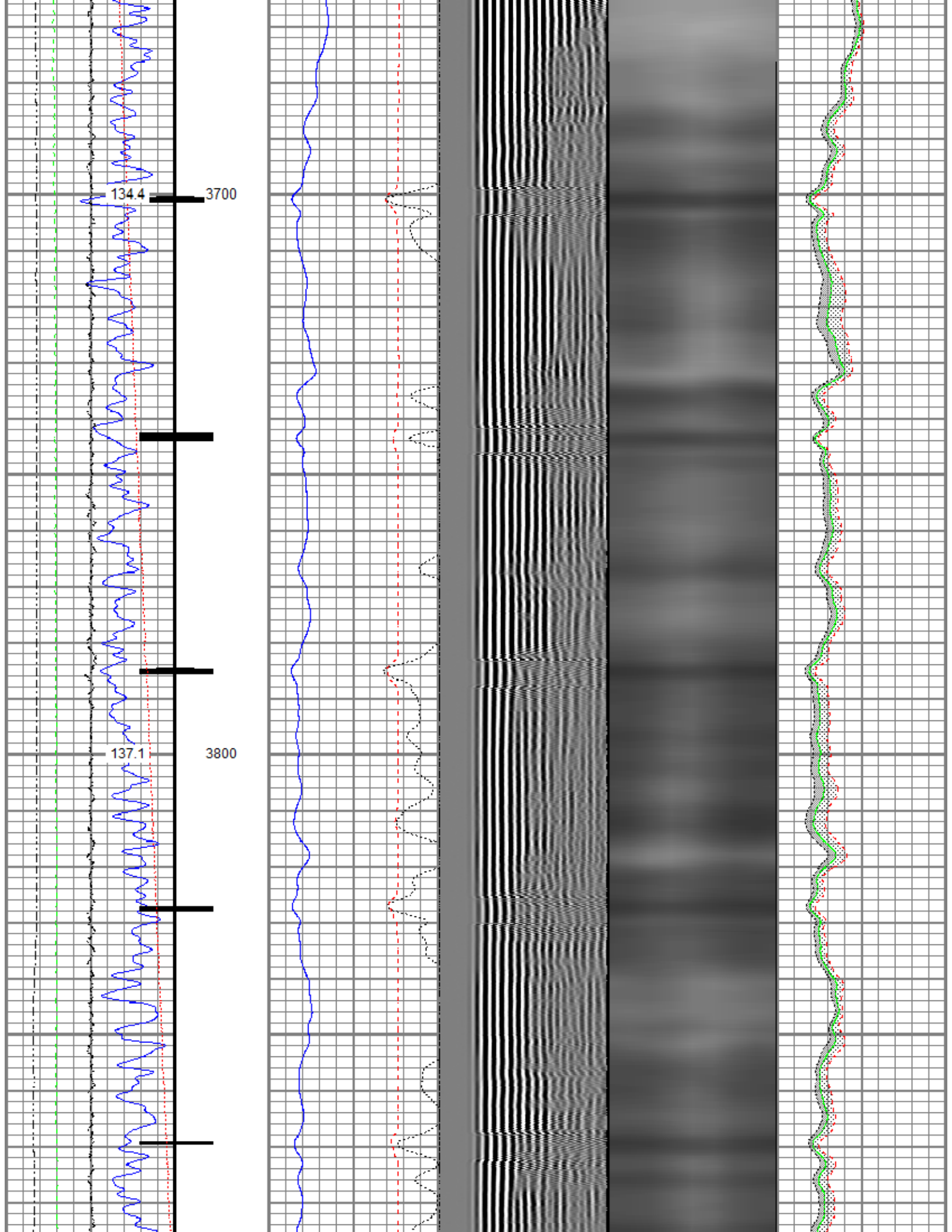


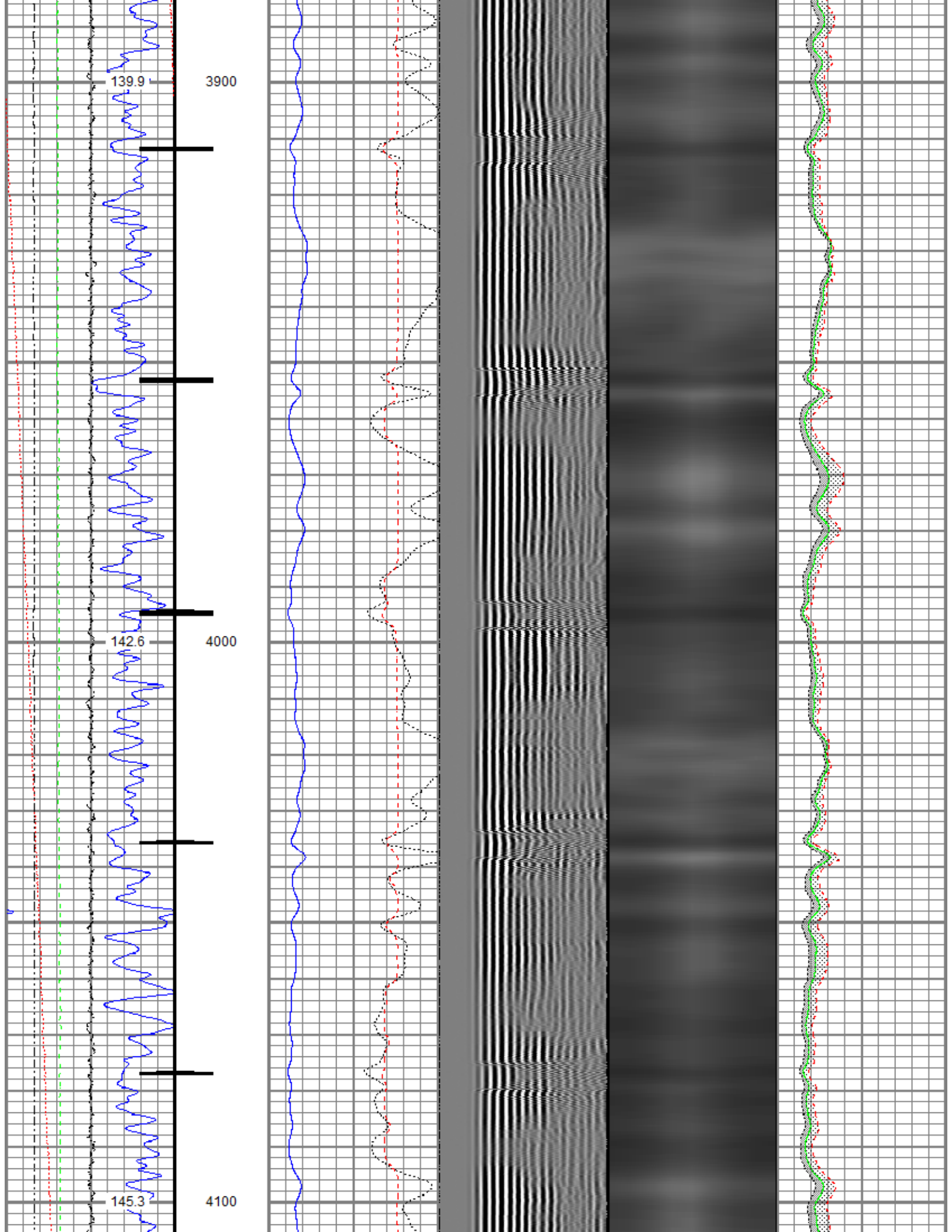


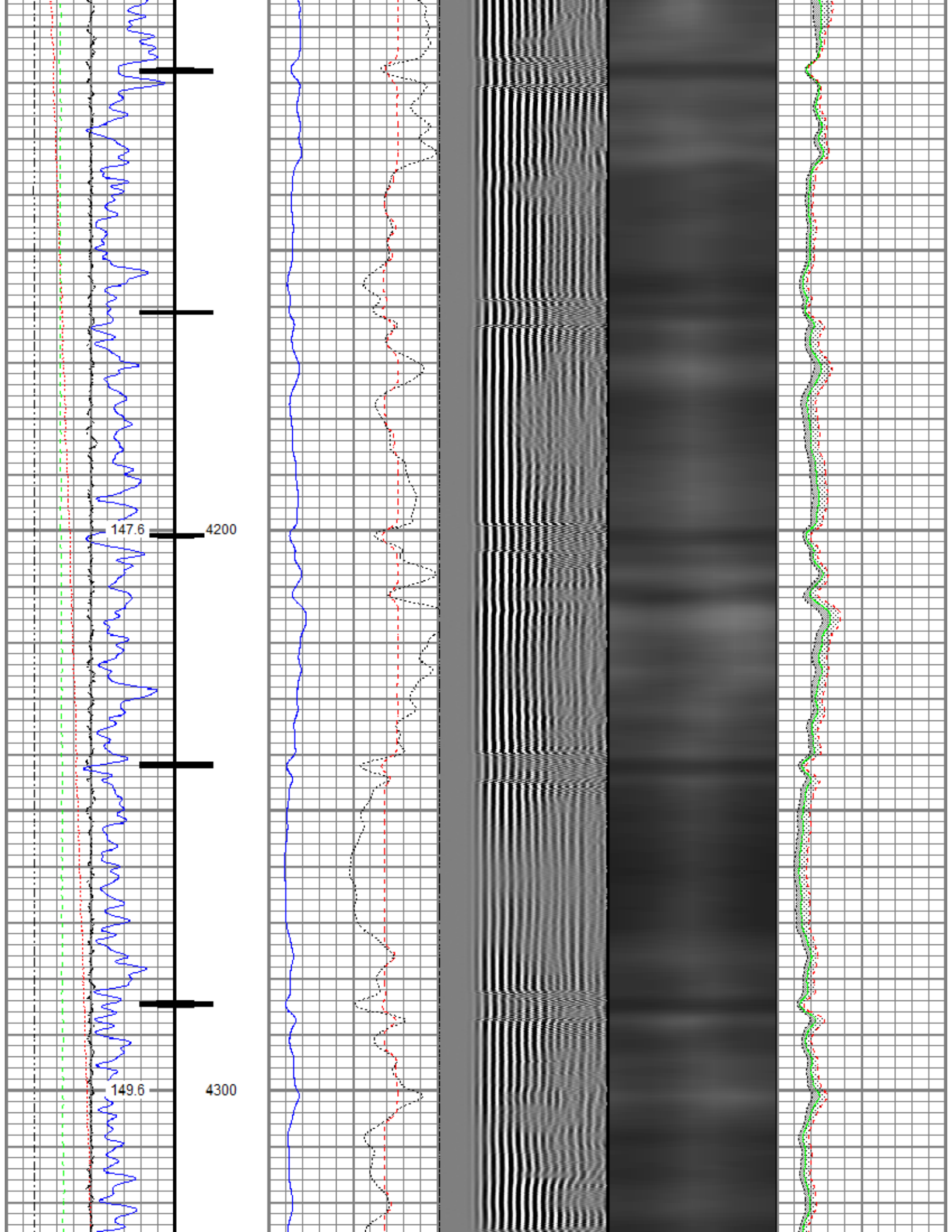


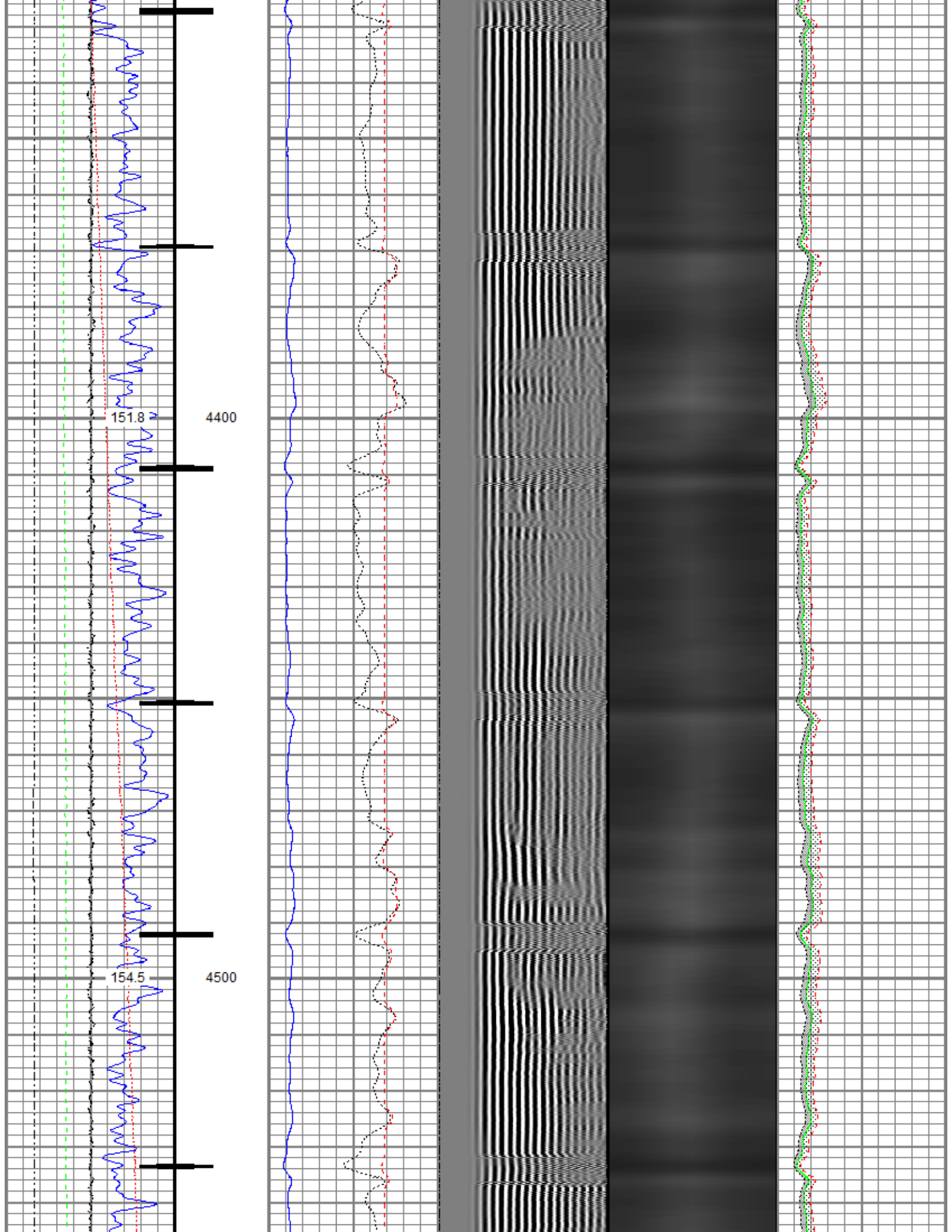


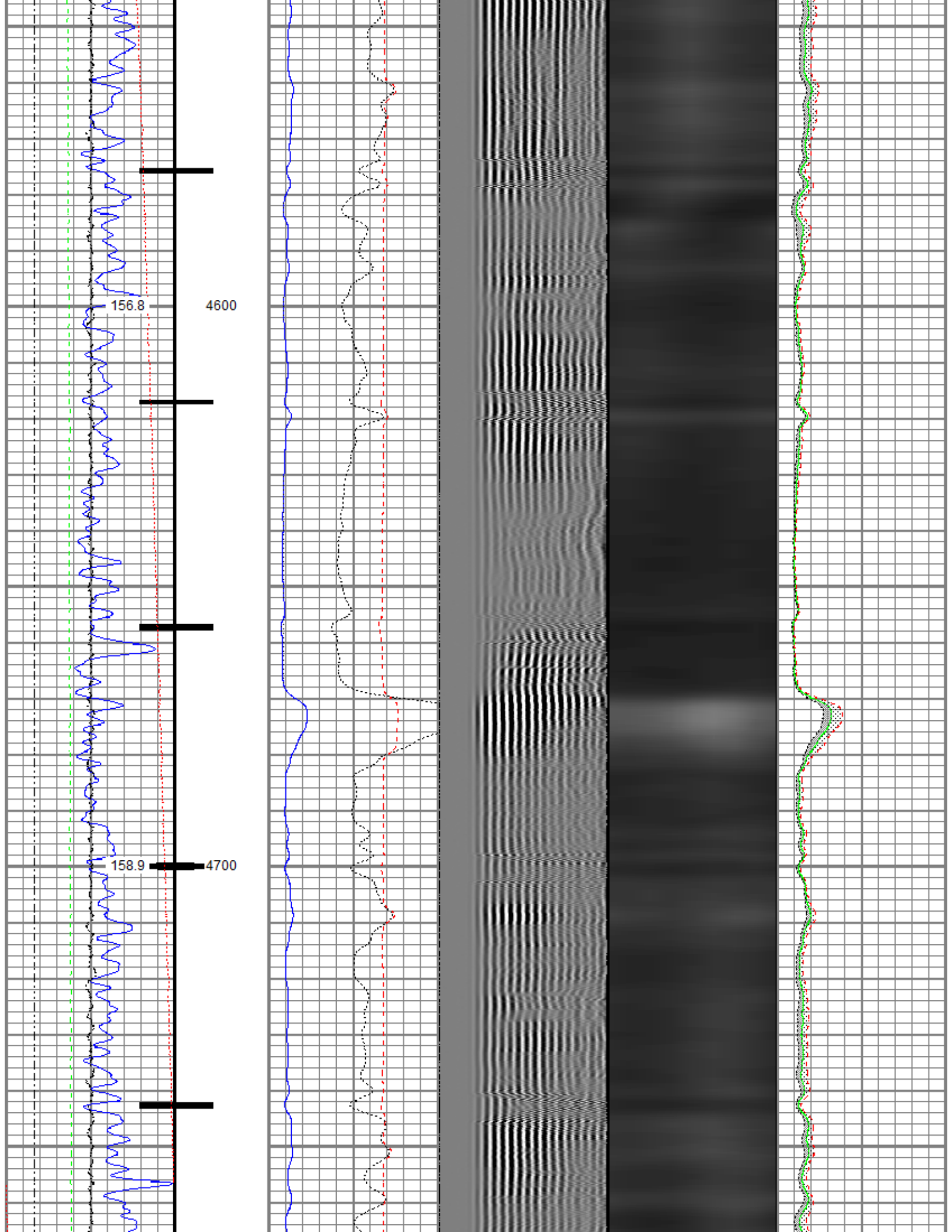


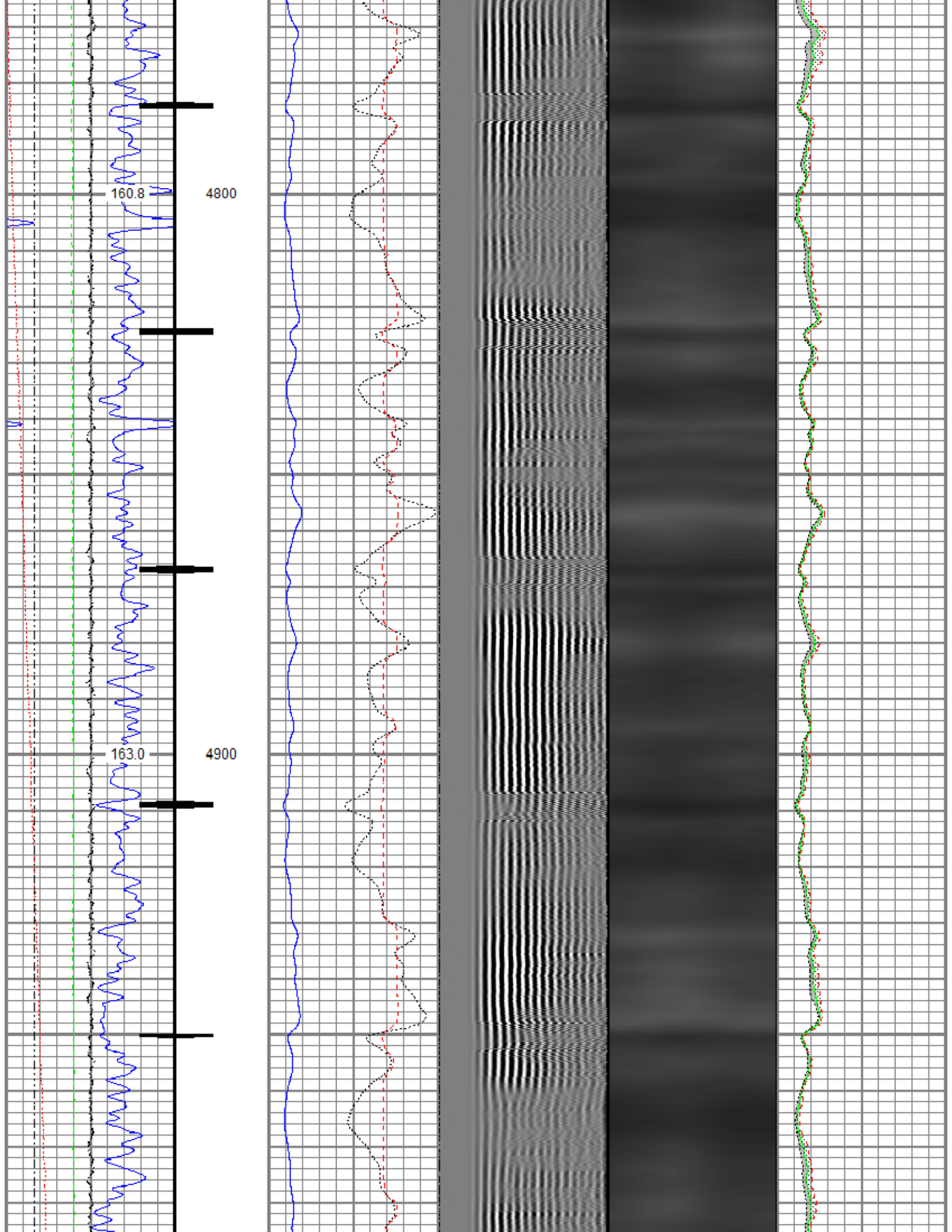


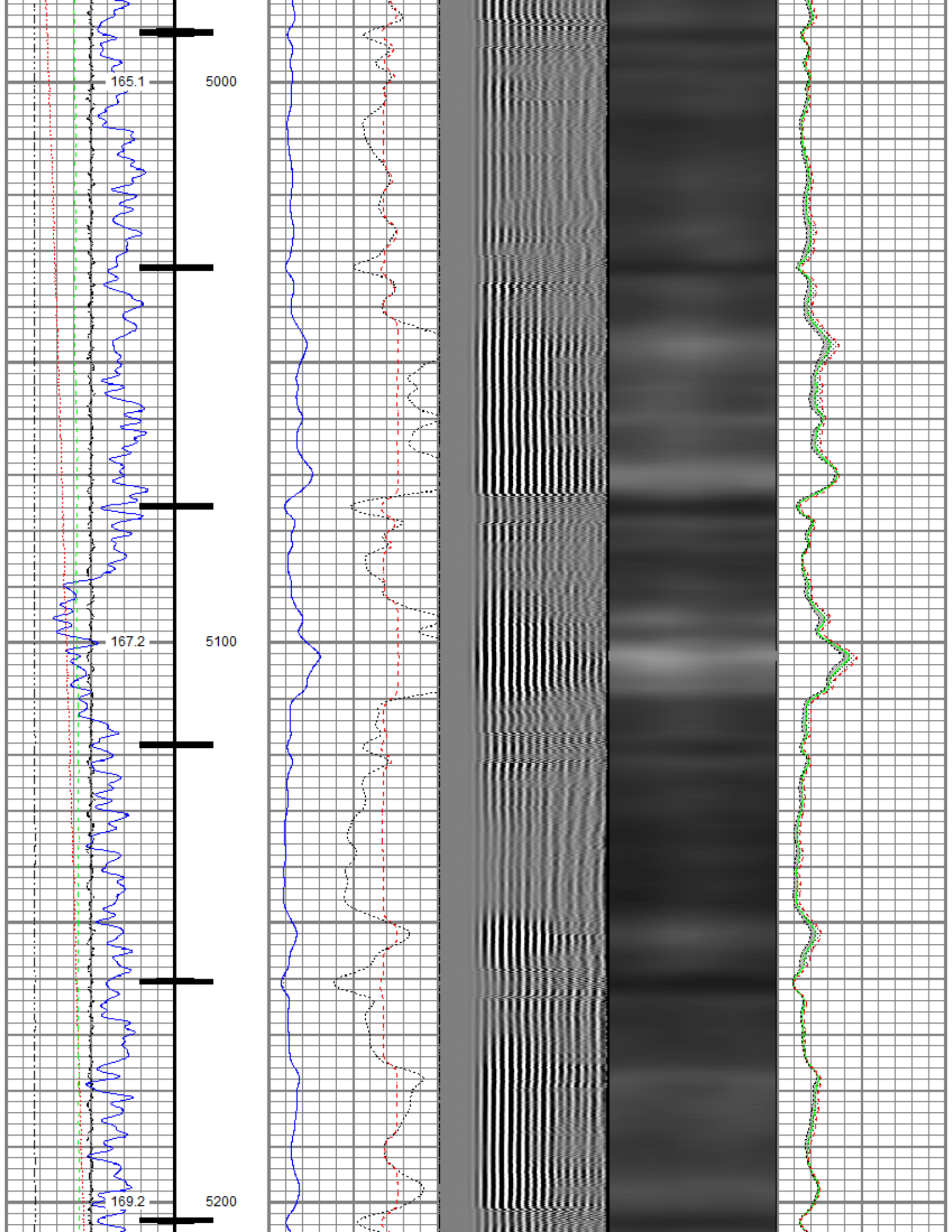


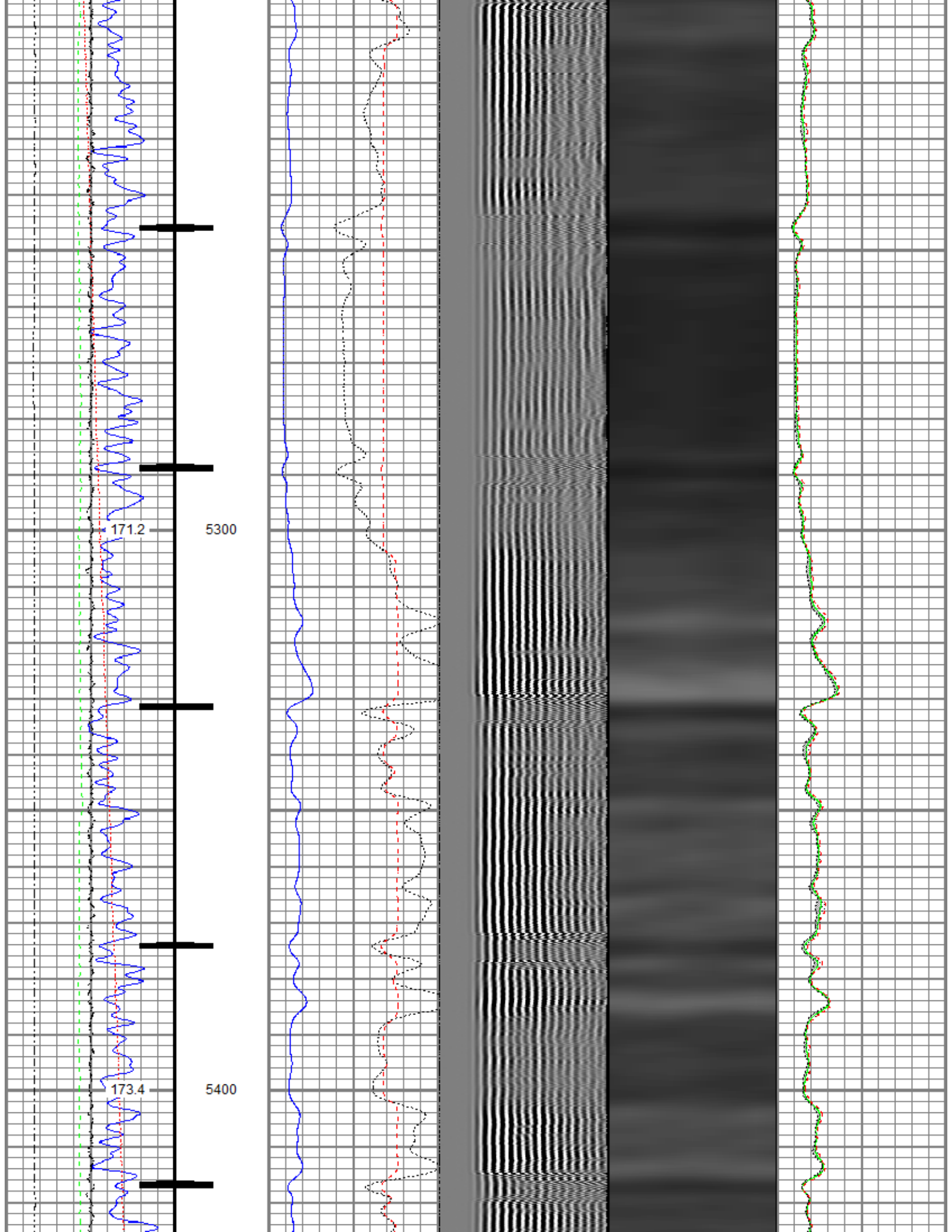


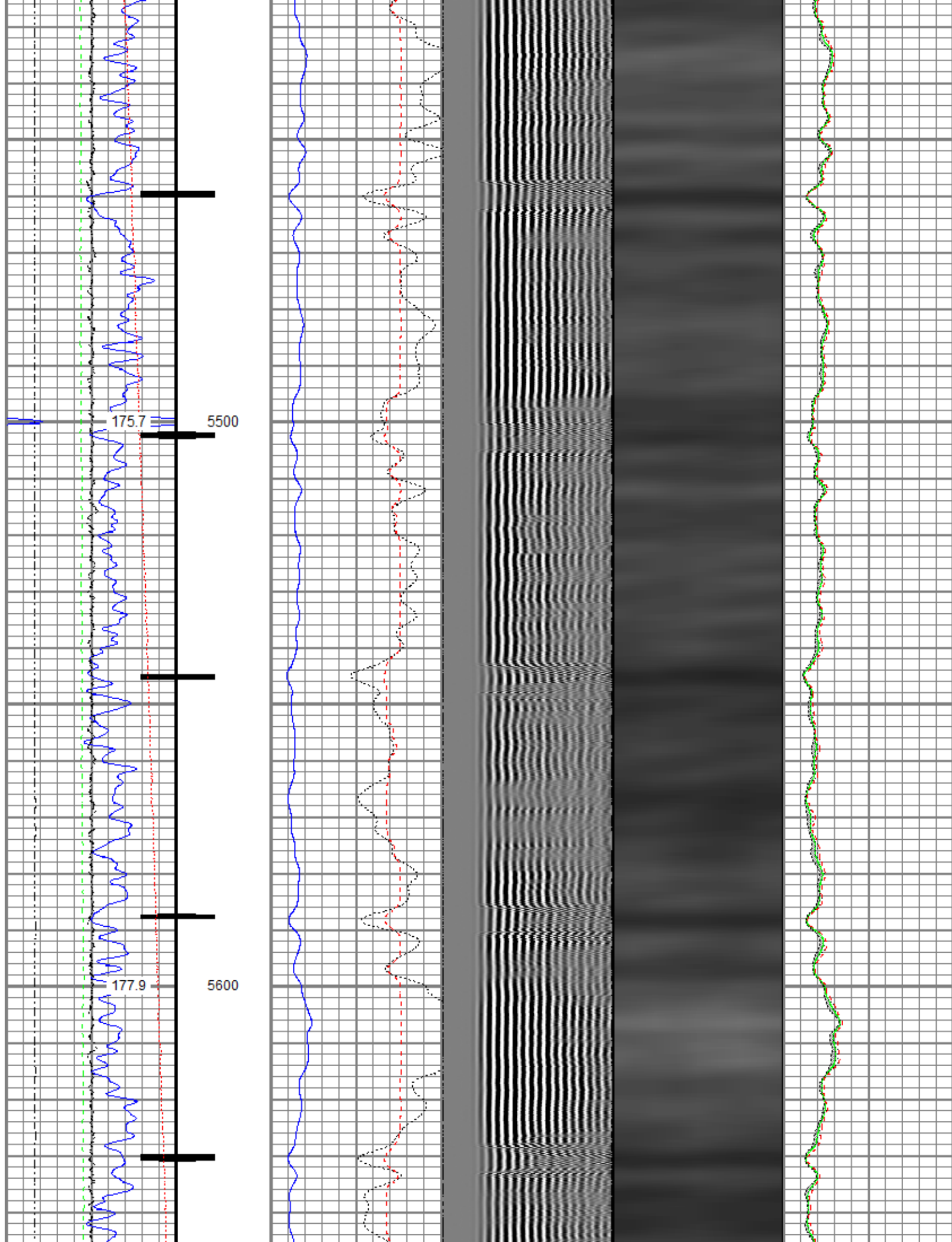


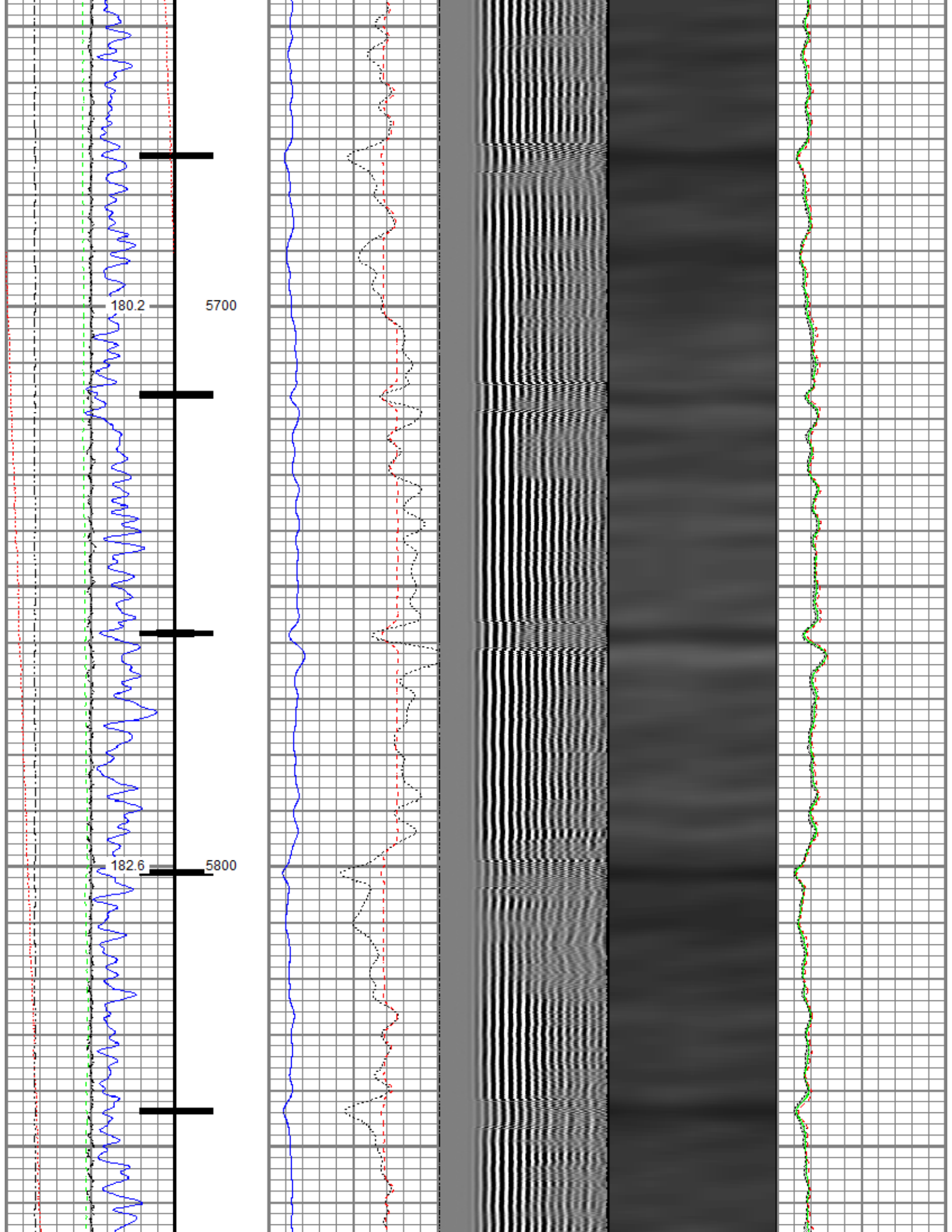


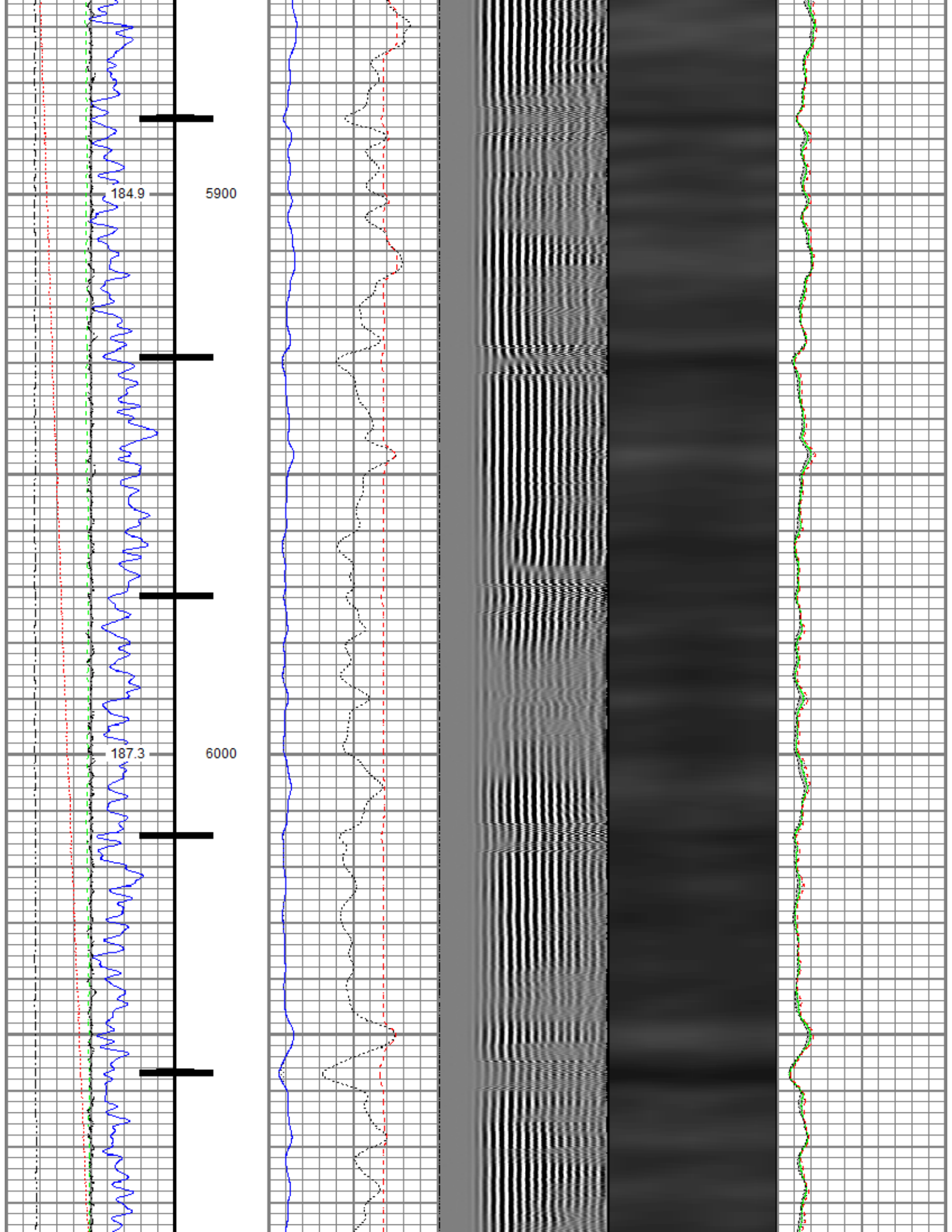


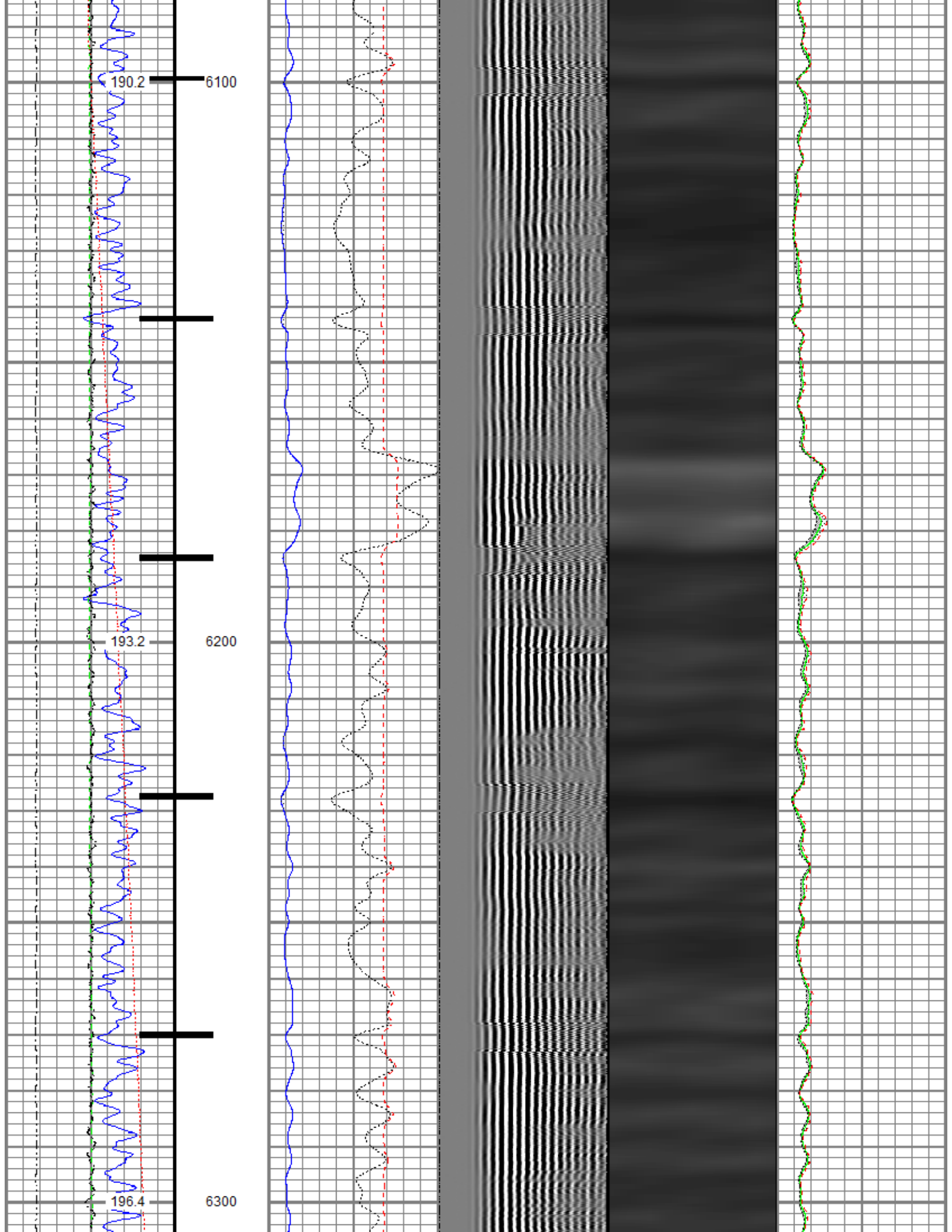


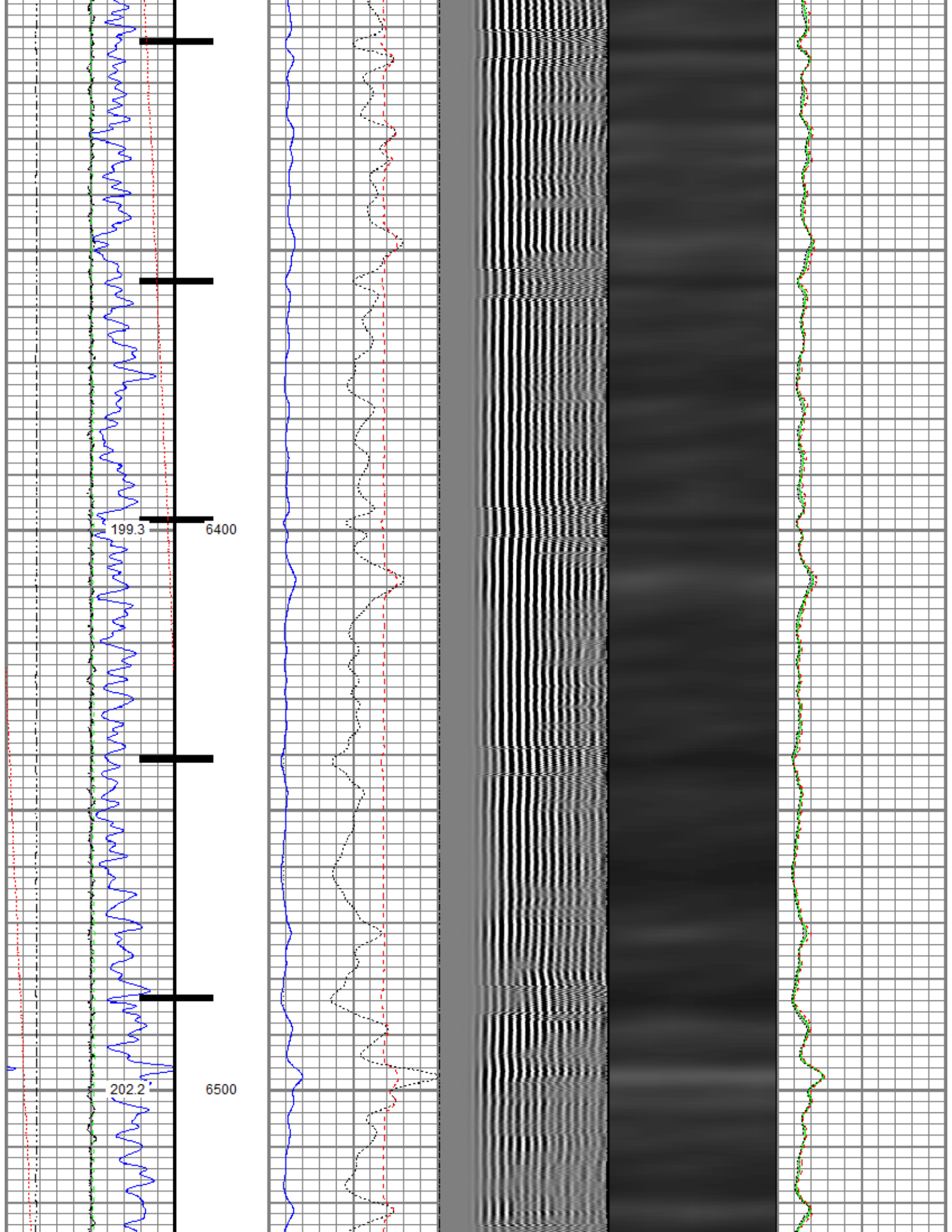


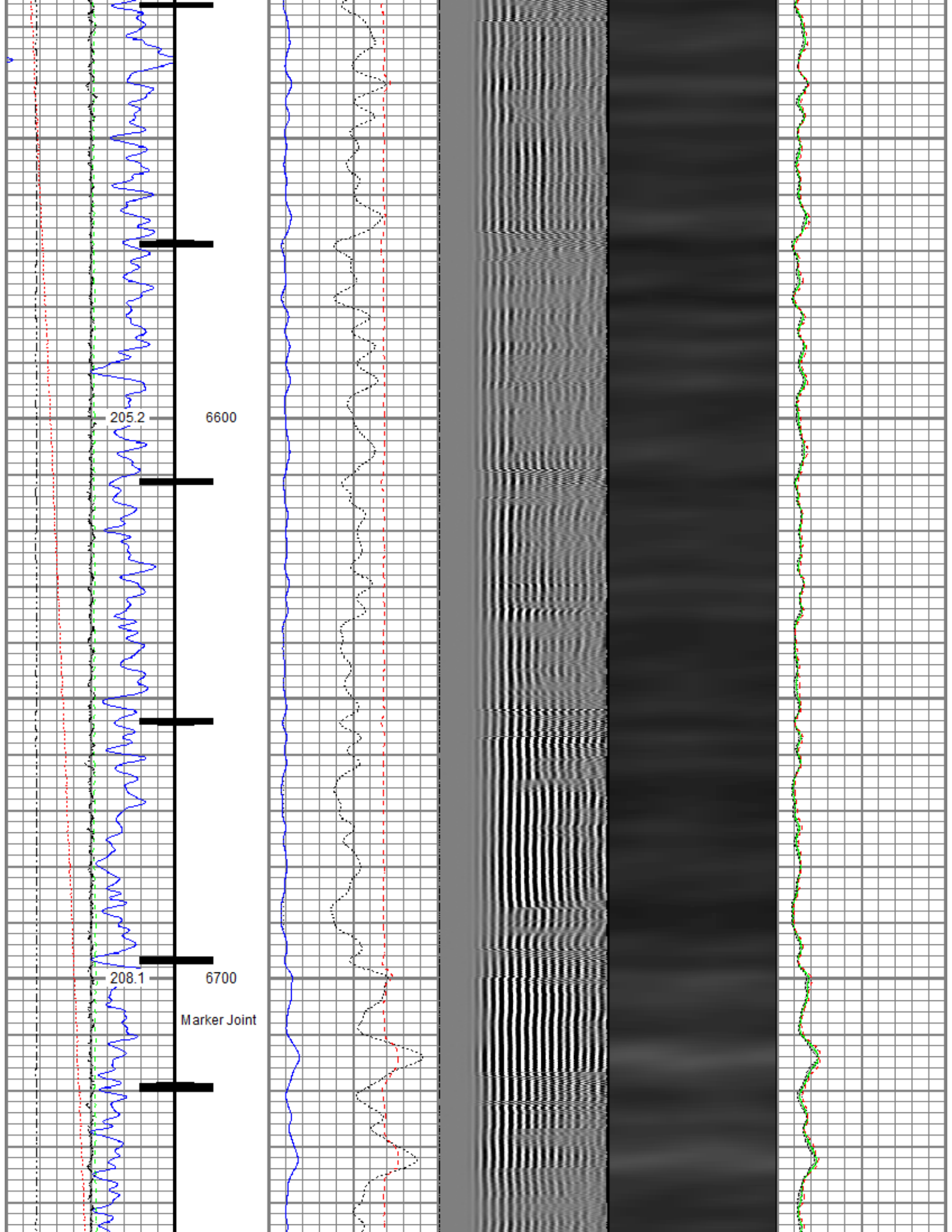


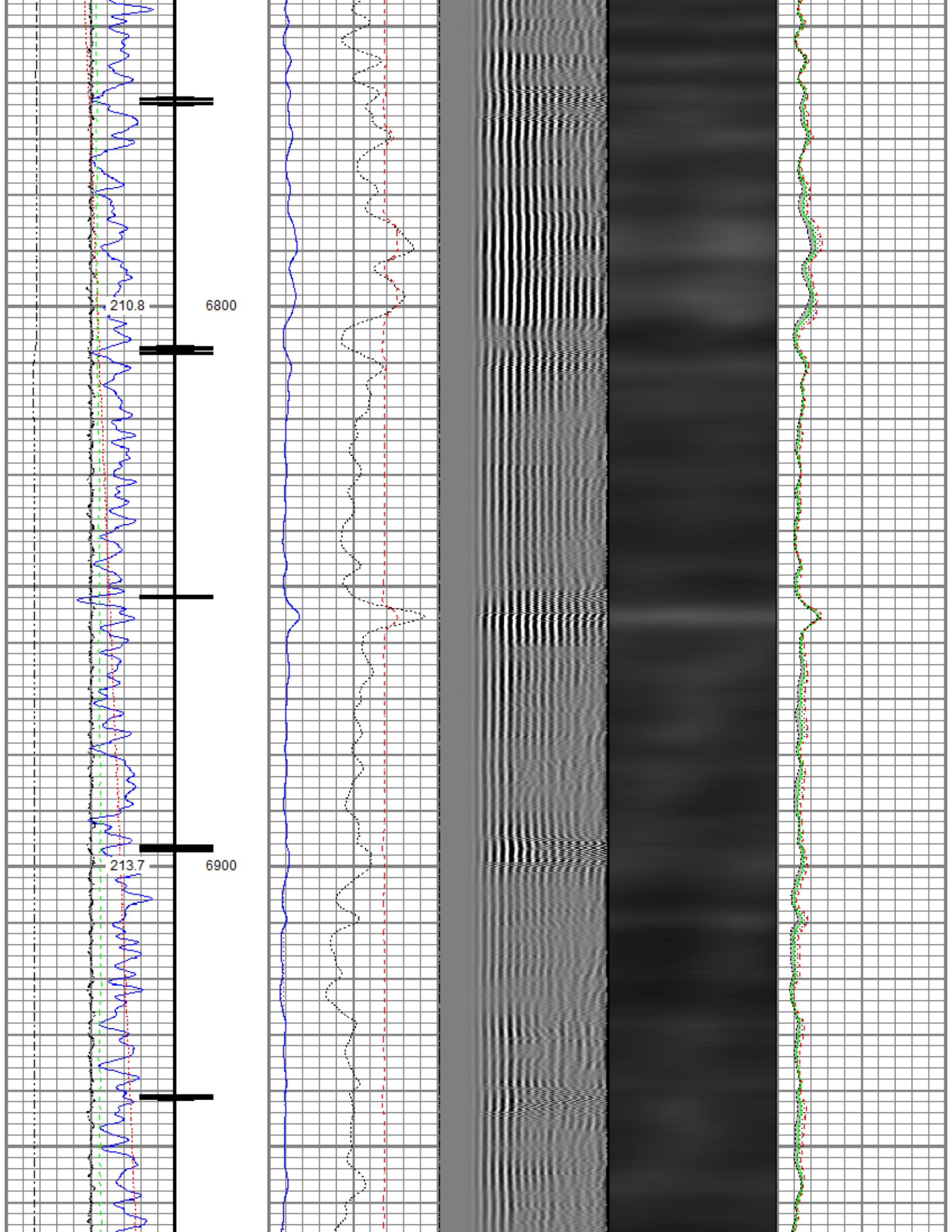


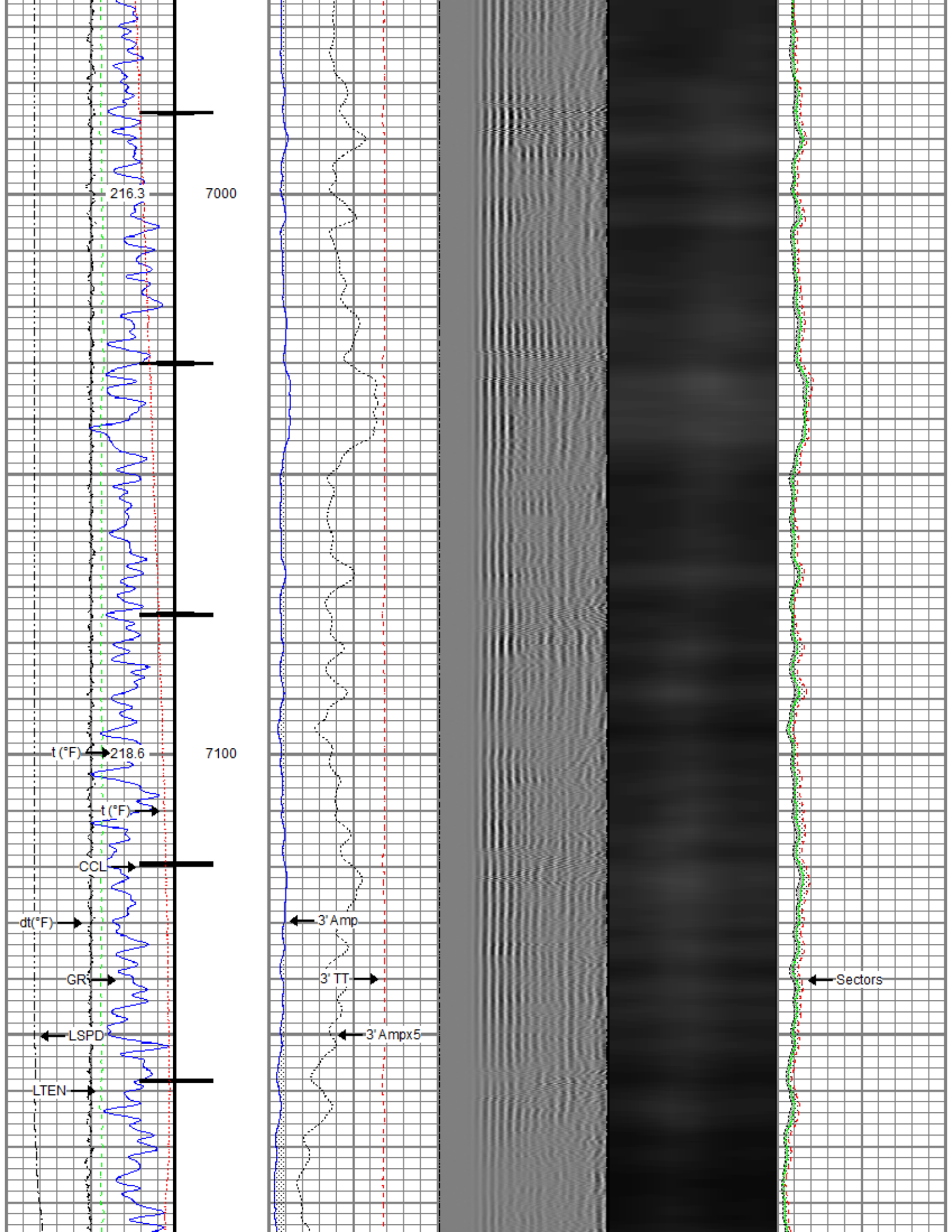


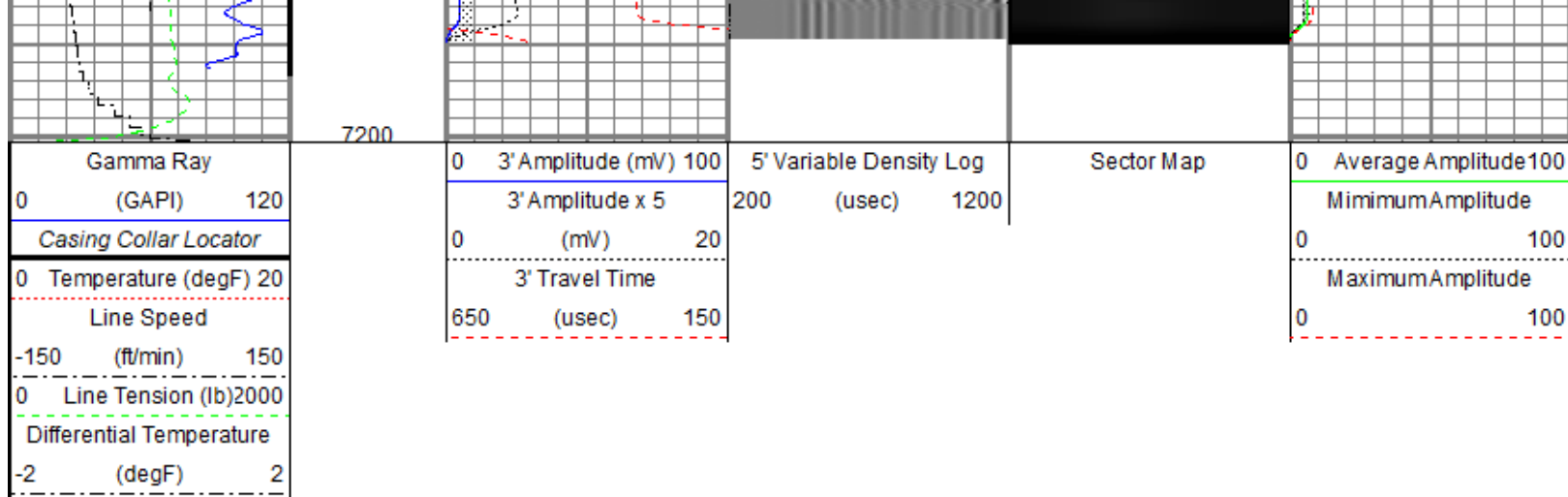








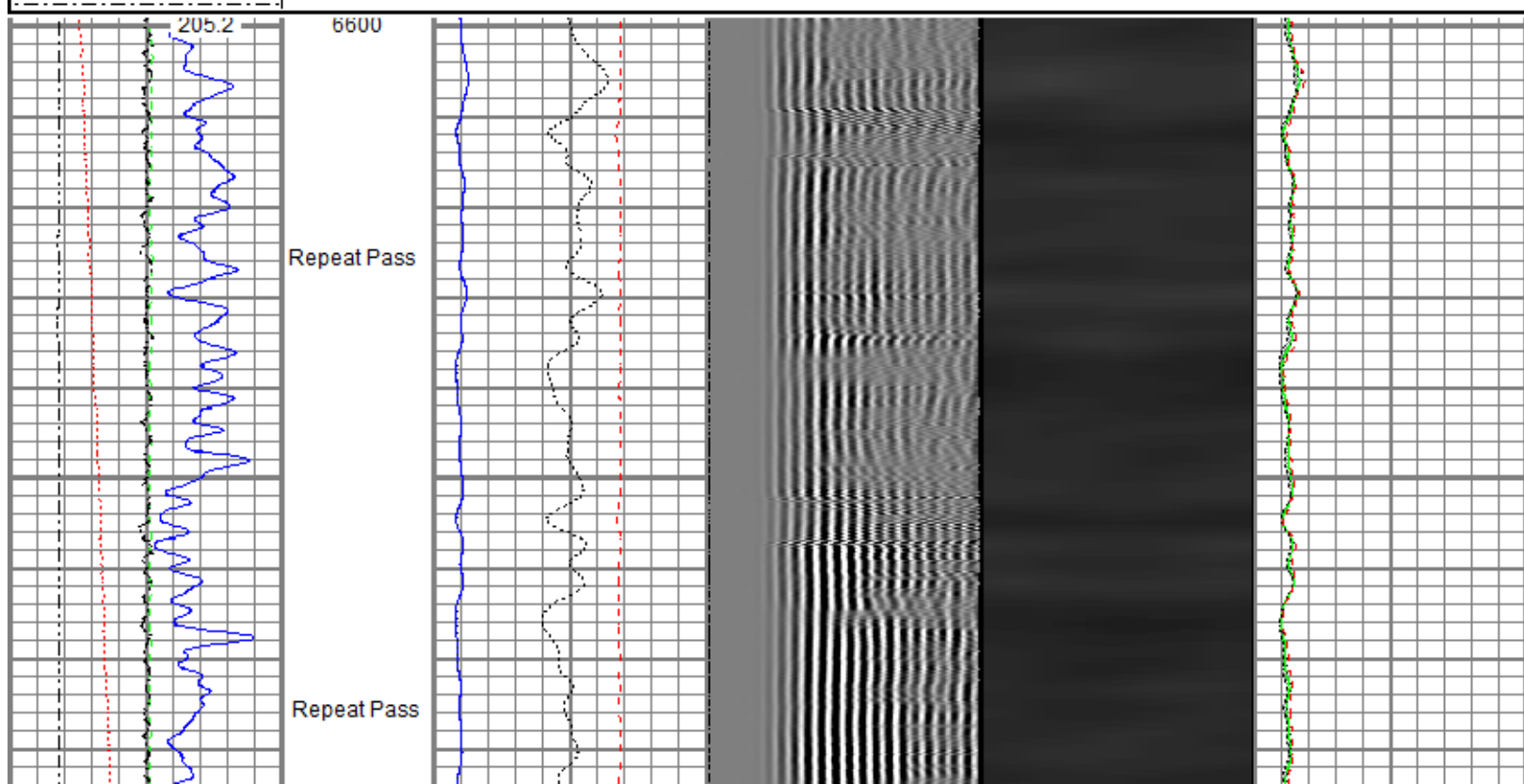
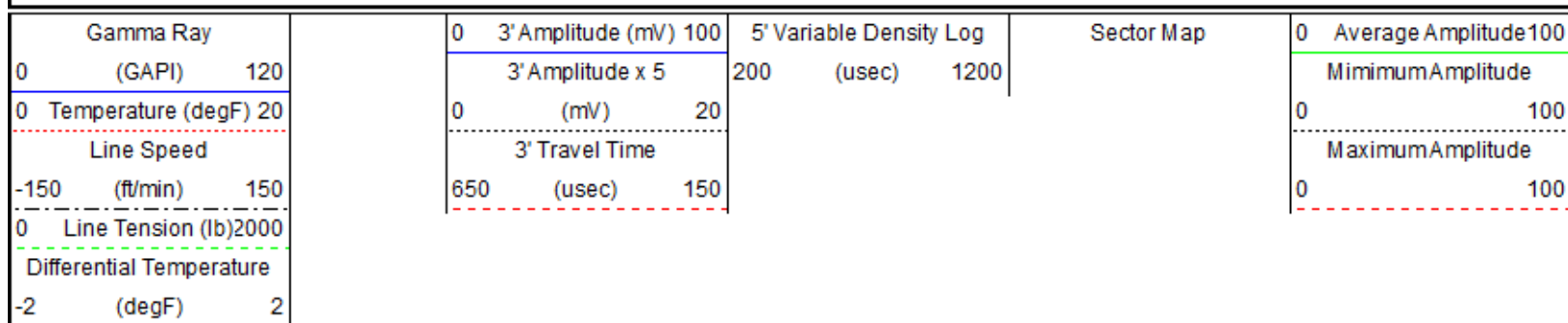


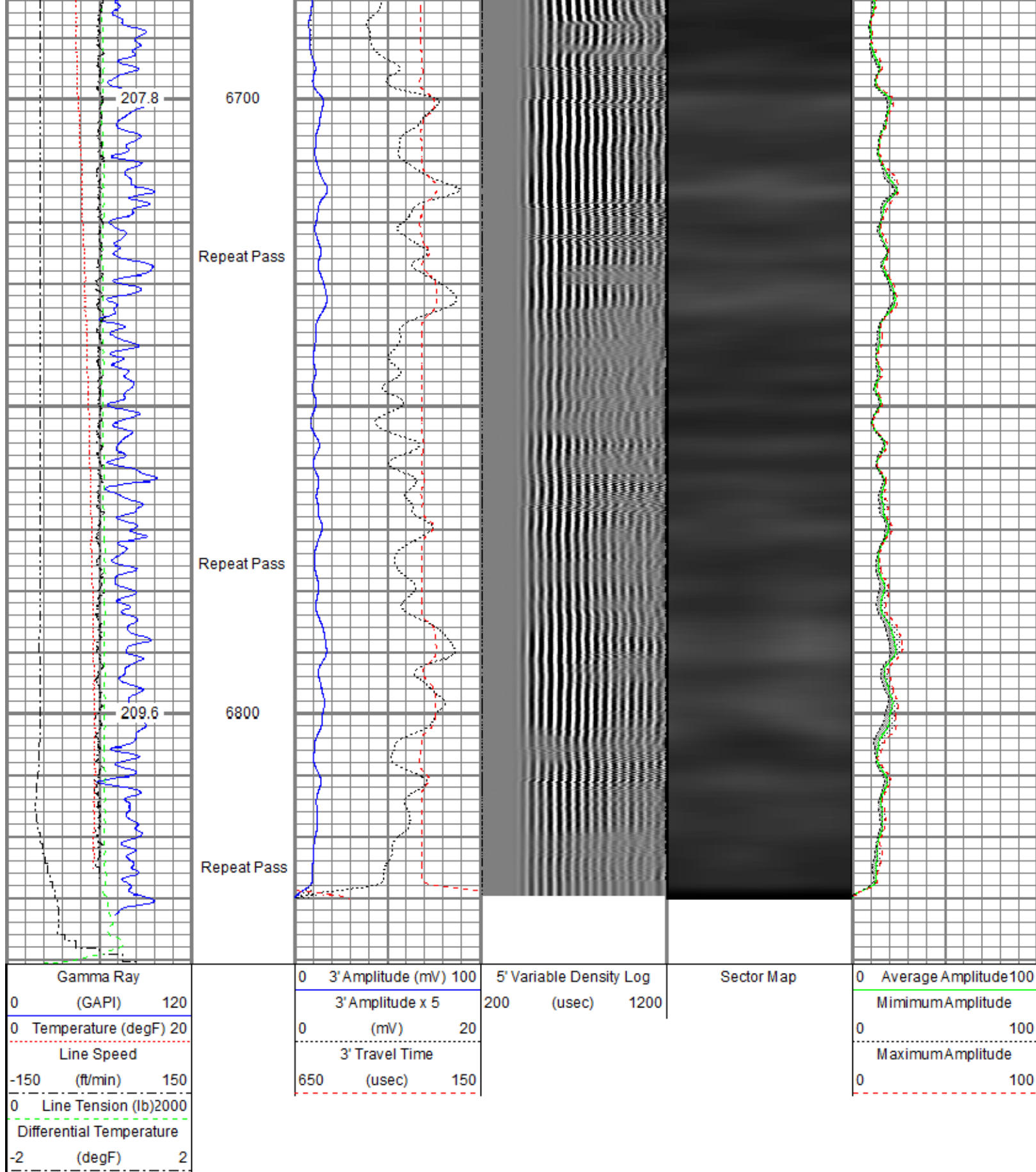



Repeat Pass

Recorded With 2800 PSI Surface Induced Pressure

Database File 0512351246_oxy_nelson 35-16hz_rbl_05-13-21.db
 Dataset Pathname pass2.2
 Presentation Format ros_radri
 Dataset Creation Sat May 15 08:44:05 2021
 Charted by Depth in Feet scaled 1:240





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
ErrCt	18.10		Titan CHD-16875 GO Titan 1-11/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.69	5.40
RBT_HV	17.07					

			SO BS CENT-2750-4500 Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer	1.33	3.25	10.00
TEMP	14.16					
RBT_ACCZ	11.93		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	11.93					
RBT_ACCX	11.93					
WVFSYNC	11.93					
WVFS8	11.93					
WVFS7	11.93					
WVFS6	11.93					
WVFS5	11.93					
WVFS4	11.93					
WVFS3	11.93					
WVFS2	11.93					
WVFS1	11.93					
WVFCAL	11.93					
WVF3FT	11.93					
WVF5FT	10.93					
CCL\$2	6.80					
CCL\$1	6.80					
GR	5.46		SO BS CENT-2750-4500 Slip Over 2-3/4" I.D. for 4-1/2" O.D. Casing Bow Spring Centralizer 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	1.33 4.80	3.25 2.75	10.00 55.00
			Probe CENT-2750 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.88	2.75	20.00
LOCTIM	0.00					
UTCTIM	0.00					
Dataset: 0512351246_oxy_nelson 35-16hz_rbl_05-13-21.db: field/well/run1/pass4.2 Total length: 18.10 ft Total weight: 215.40 lb O.D.: 3.25 in						

Calibration Report	
Database File	0512351246_oxy_nelson 35-16hz_rbl_05-13-21.db
Dataset Pathname	pass4.2
Dataset Creation	Sat May 15 08:38:18 2021

Gamma Ray Calibration Report

Serial Number:	FW1304-132	
Tool Model:	2750 6PB	
Performed:	Mon Oct 19 14:19:51 2020	
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:	FW1302-002	
Tool Model:	2750 RBTa	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	0.329	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.006	0.664	0.800	71.921	108.144	0.104
CAL	0.006	0.675				
5'	0.008	0.603	0.800	71.921	119.509	-0.117
SUM						
S1	0.005	0.626	0.000	100.000	161.034	-0.802
S2	0.006	0.660	0.000	100.000	153.058	-0.990
S3	0.006	0.700	0.000	100.000	144.058	-0.883
S4	0.007	0.707	0.000	100.000	142.708	-0.946
S5	0.007	0.697	0.000	100.000	144.811	-0.989
S6	0.006	0.687	0.000	100.000	146.941	-0.944
S7	0.007	0.659	0.000	100.000	153.302	-1.039
S8	0.006	0.636	0.000	100.000	158.856	-1.004

Air Zero Calibration, performed Tue May 11 07:17:44 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	973.26	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	Kerr-McGee Oil & Gas Onshore, L.P.
Well	Nelson 35-16HZ
Field	Wattenberg
County	Weld
State	Colorado