



Radial Cement Bond
Gamma Ray
Casing Collar Log

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

Well Jodster South 25-9HZ

Field Wattenberg

County Larimer State Colorado

Location: API #: 05-069-06503

Other Services

SEC 25 TWP 5N RGE 68W

Elevation

Permanent Datum Ground Level Elevation 4861'

Log Measured From Kelly Bushing 26 FT

Drilling Measured From Kelly Bushing K.B. 4887'
D.F. ---
G.L. 4861'

Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Jodster South 25-9HZ
Field Wattenberg
County Larimer
State Colorado

Date	24-JAN-2020	One		
Run Number		12642 FT		
Depth Driller		6646 FT		
Depth Logger		6631 FT		
Bottom Logged Interval		Surface		
Top Log Interval		7.875'		
Open Hole Size		Water		
Type Fluid		8.34 lb/gal		
Density / Viscosity		201°F		
Max. Recorded Temp.		See Log		
Estimated Cement Top		ROA		
Time Well Ready		11:25		
Time Logger on Bottom		HD-325		
Equipment Number		Platteville, CO		
Location		Dennis Roberts		
Recorded By		J. McCarthy		
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	HCP-110	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

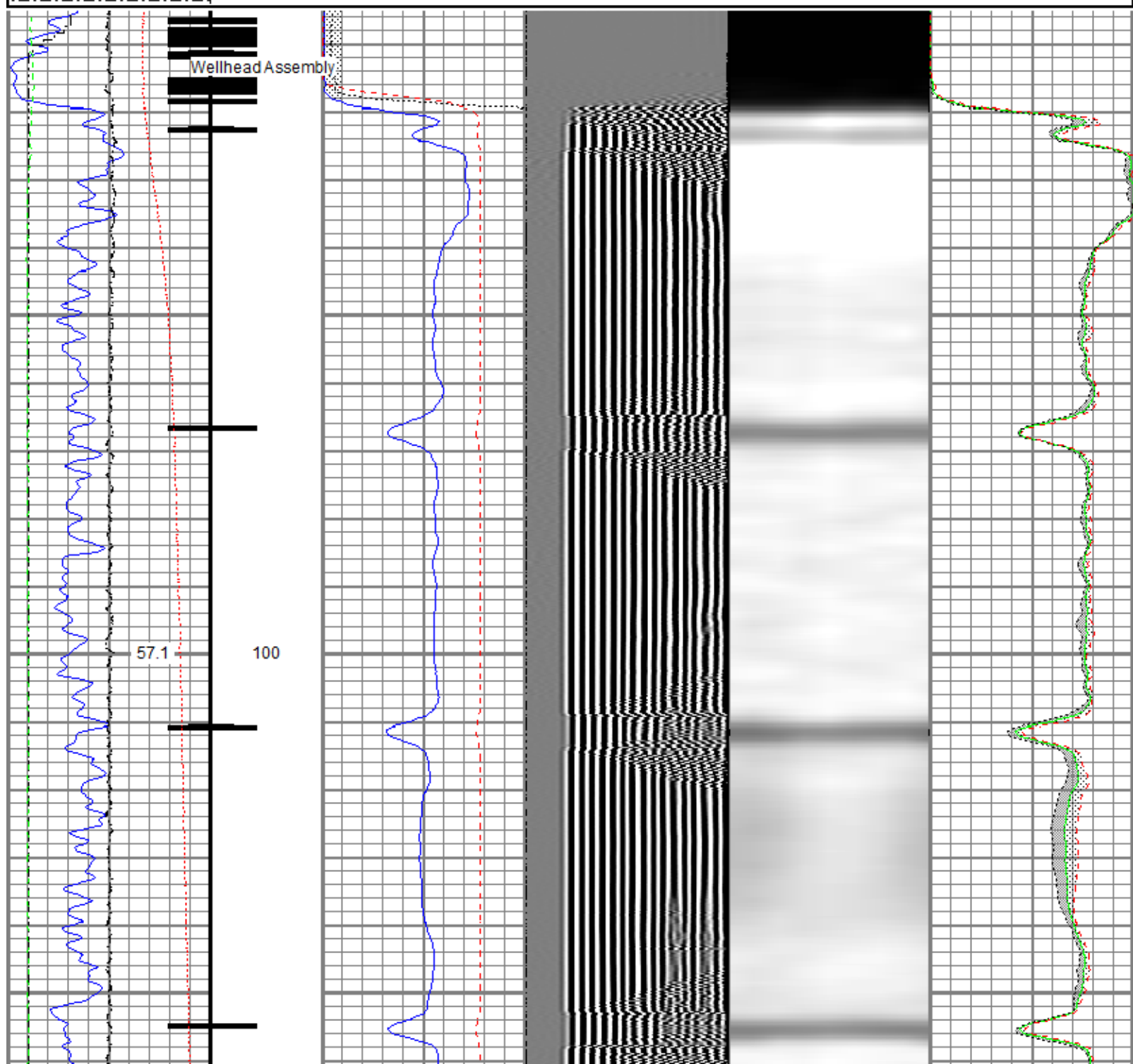
Log ran as per customer request
Depth referenced to Casing Tally reported Marker Joint at 6420 FT
Adjusted -4 FT to correlate with Marker Joint
Log ran with 0 PSI Surface Induced Pressure
Logging tools were clean and free of debris upon completion of operations
Thank you for choosing Reliance Oilfield Services, LLC!!

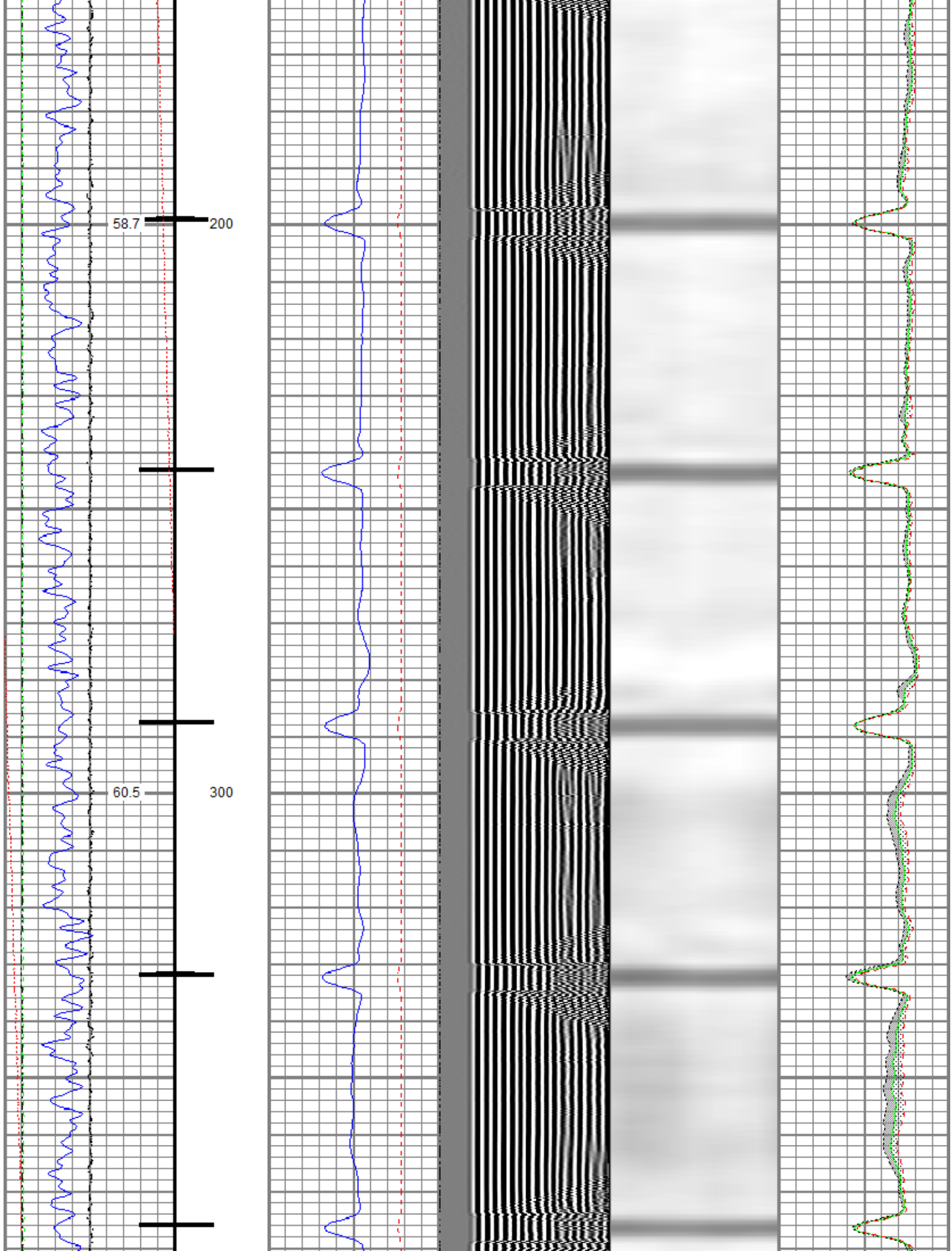
Main Pass

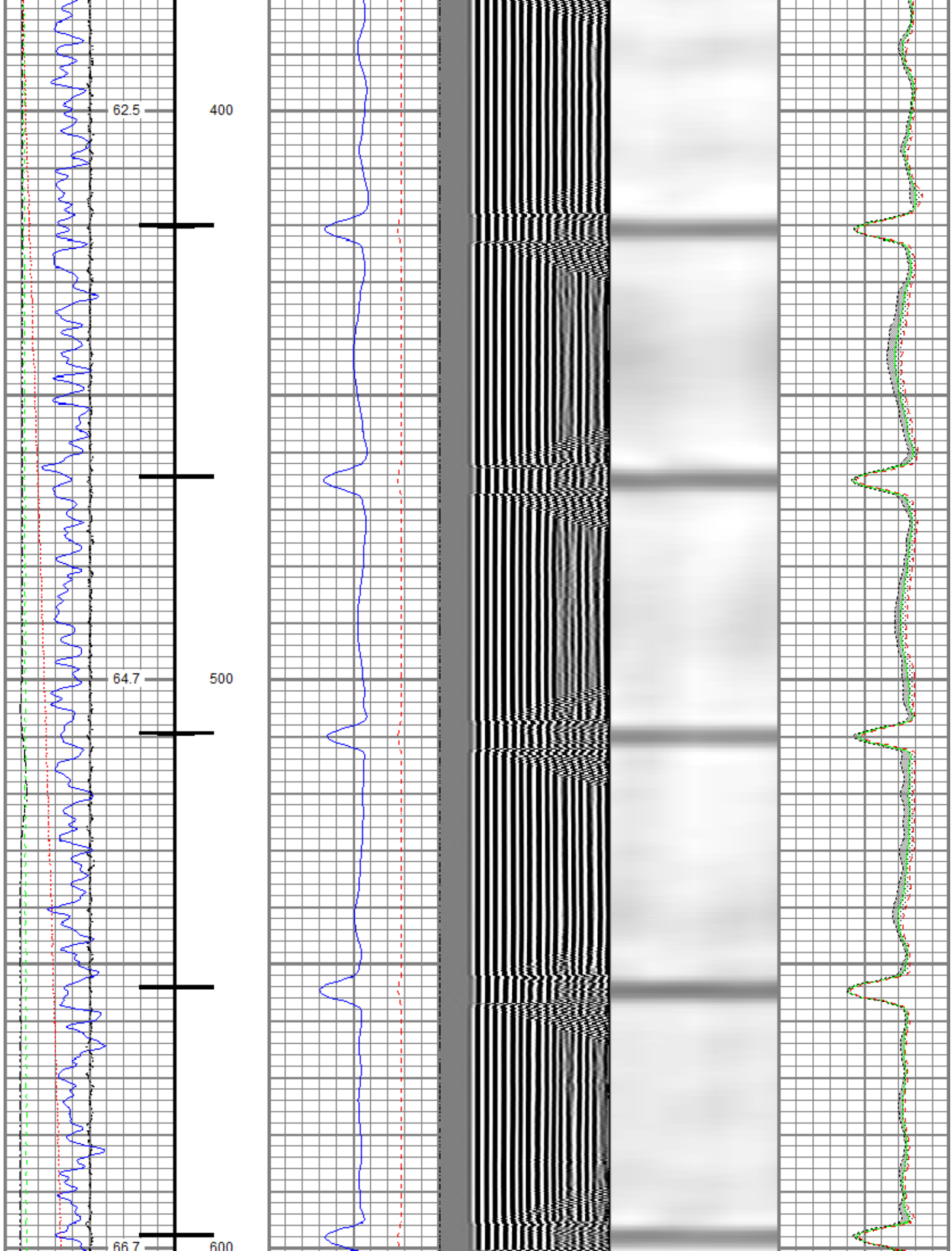


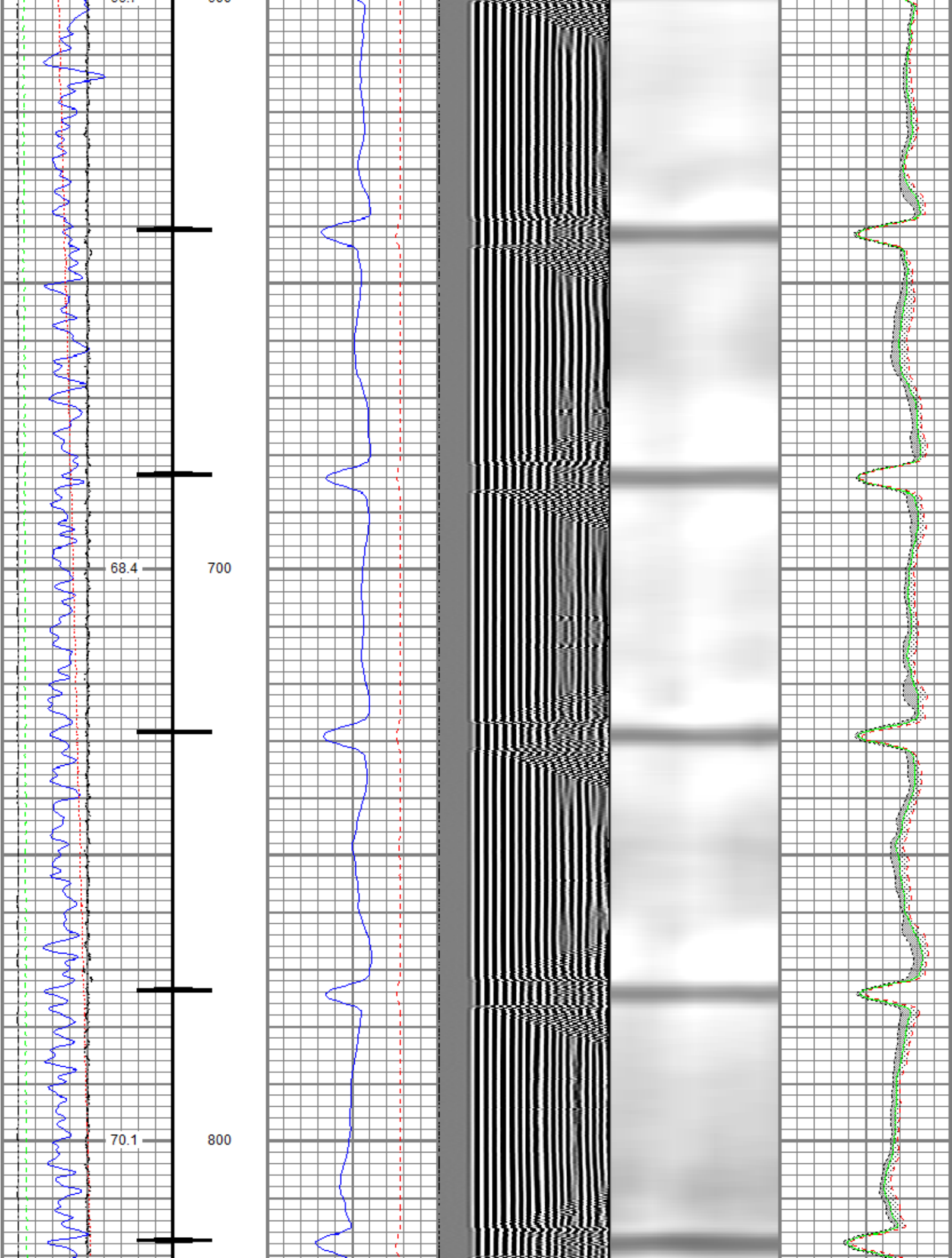
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 Dataset Pathname RBL/pass6.2
 Presentation Format ros_radri
 Dataset Creation Fri Jan 24 14:07:02 2020
 Charted by Depth in Feet scaled 1:240

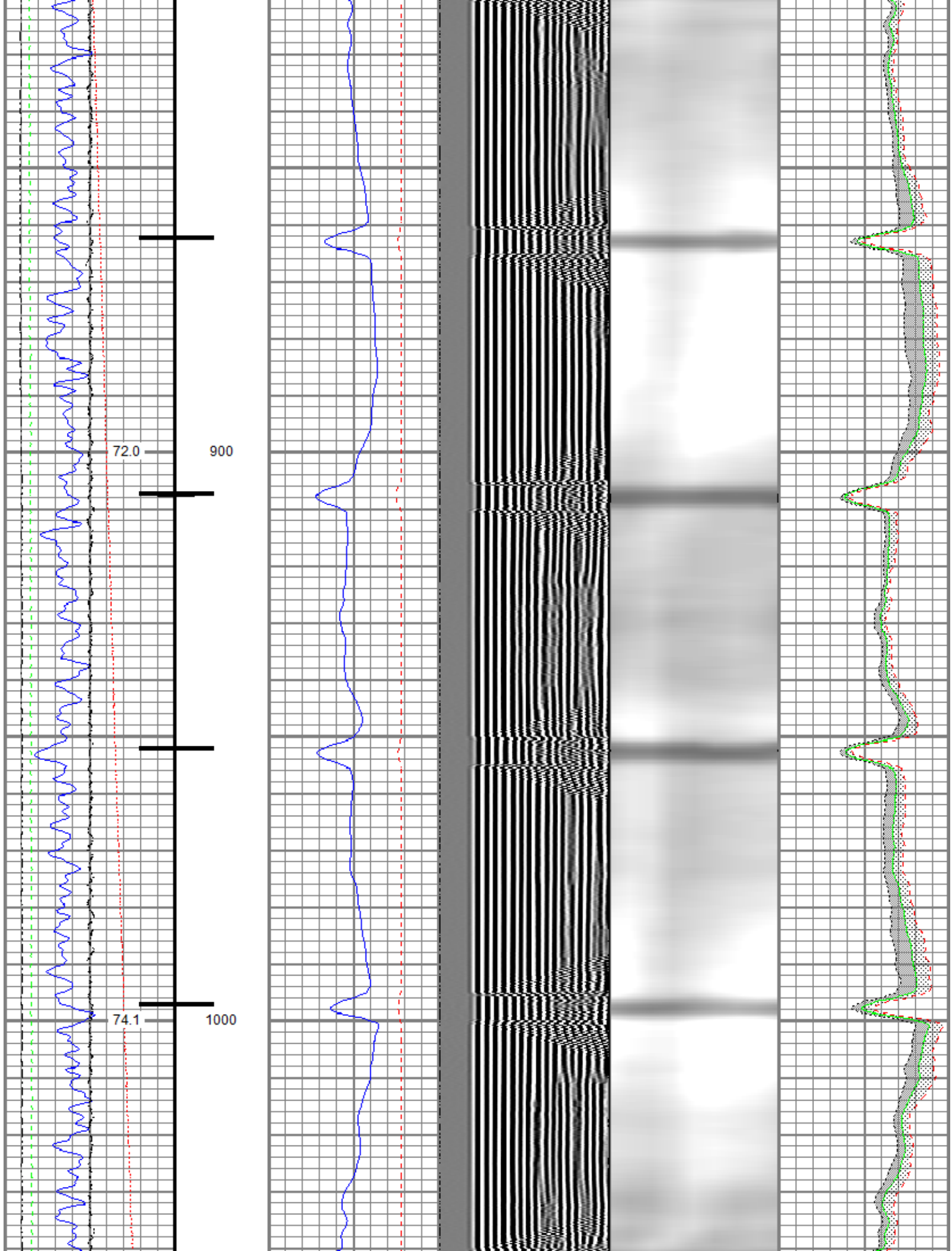
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200 (usec) 1200			Minimum Amplitude
Casing Collar Locator	0	(mV) 20			0	100
Temperature (degF) 20		3' Travel Time				Maximum Amplitude
Line Speed	650	(usec) 150			0	100
-150 (ft/min)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

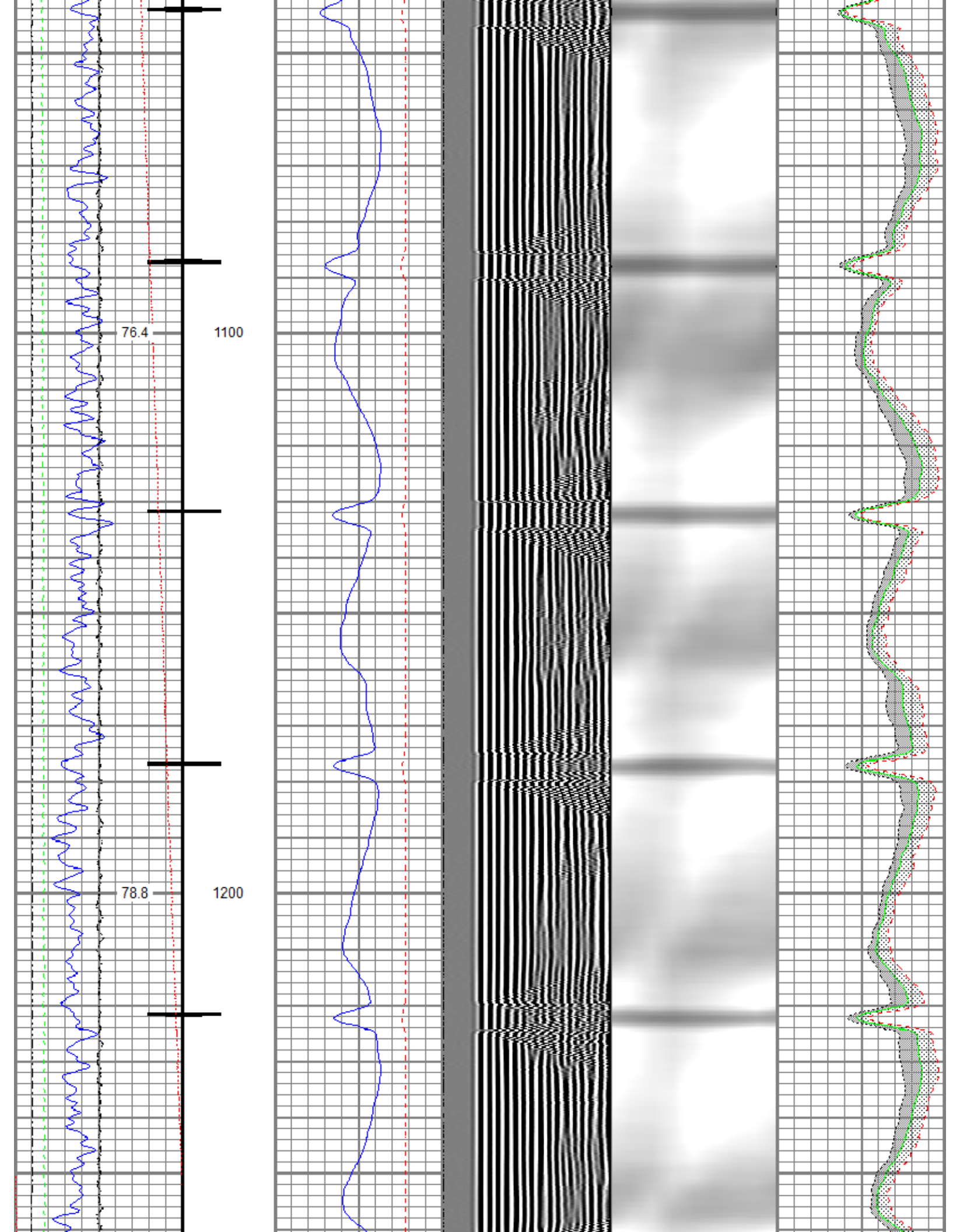


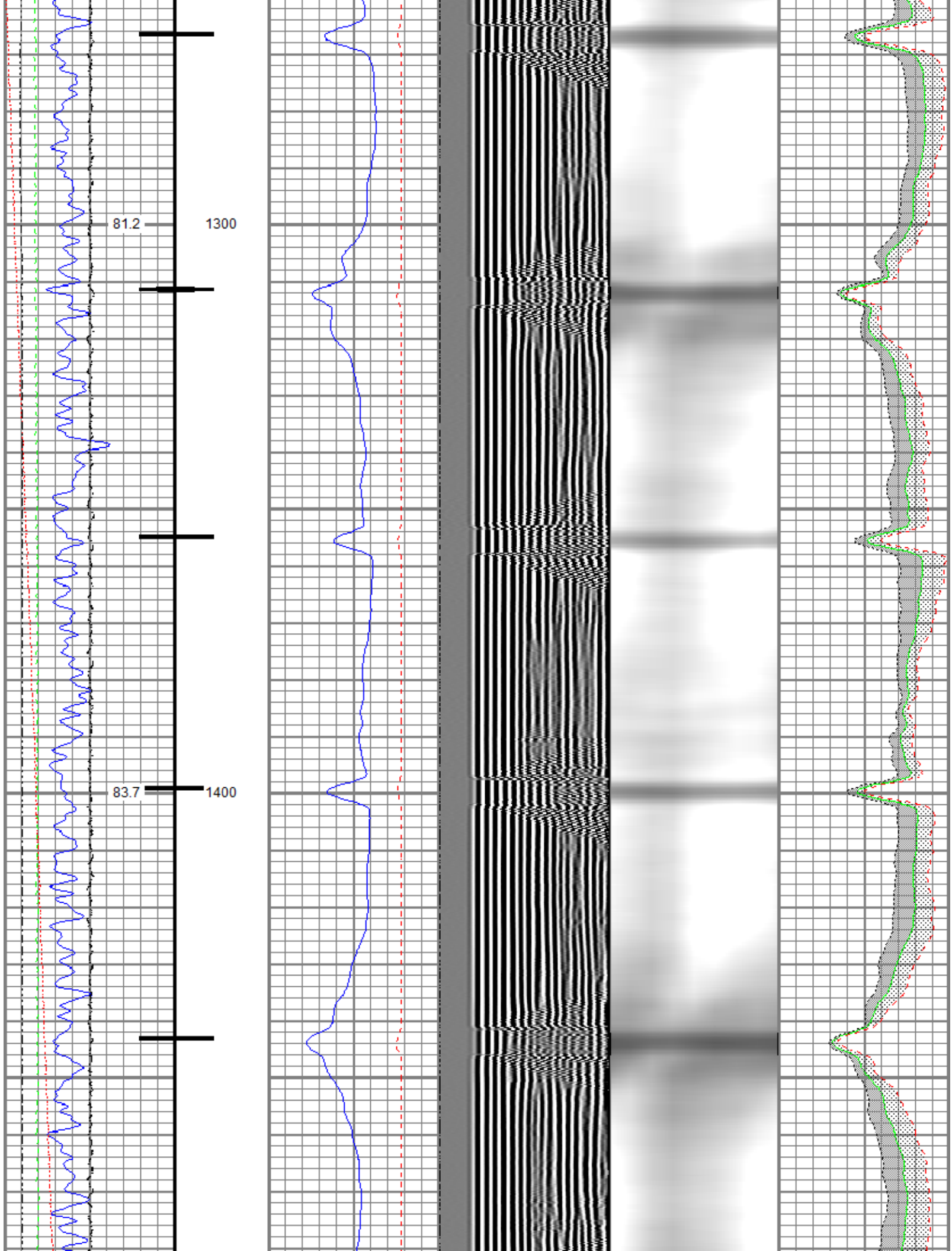


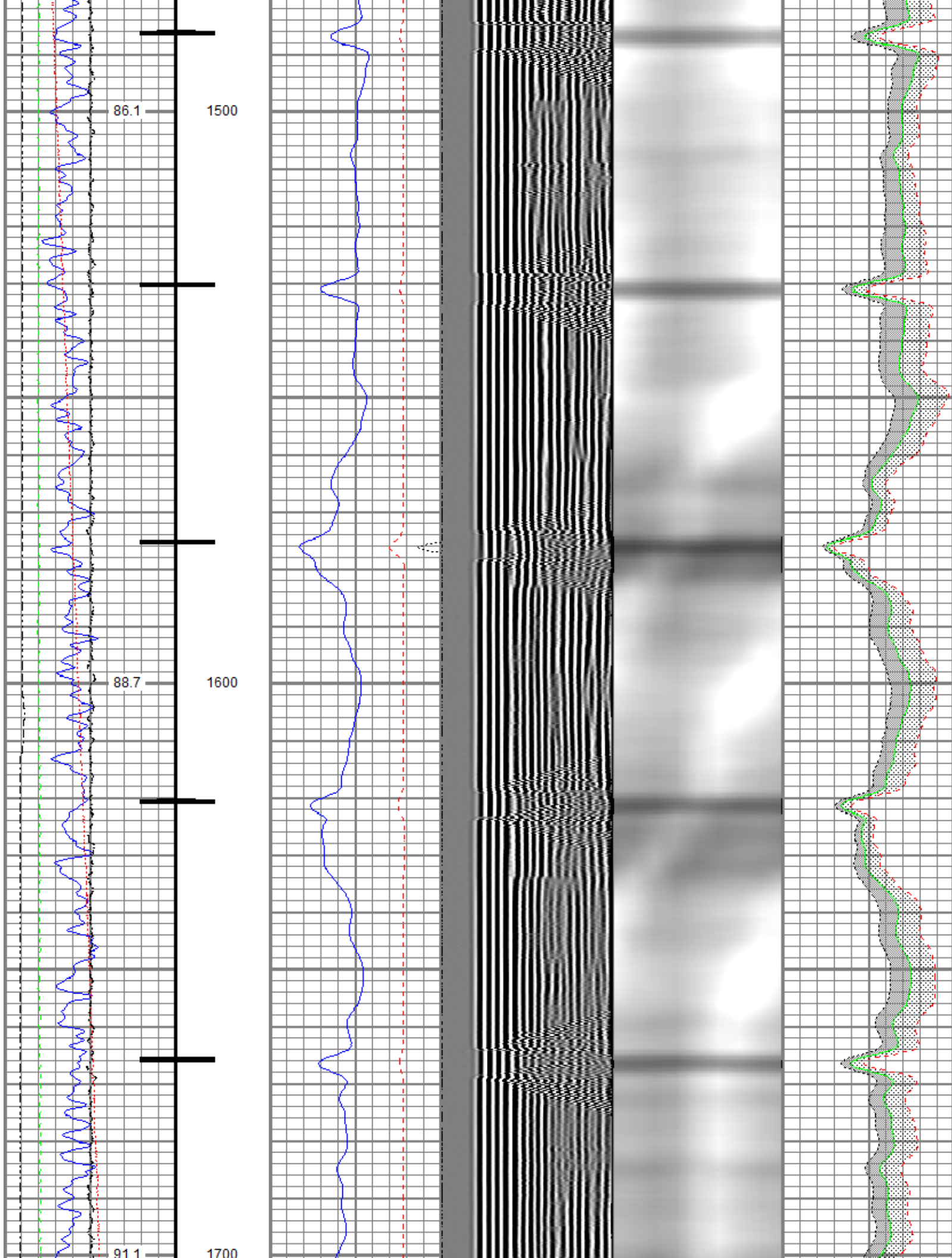


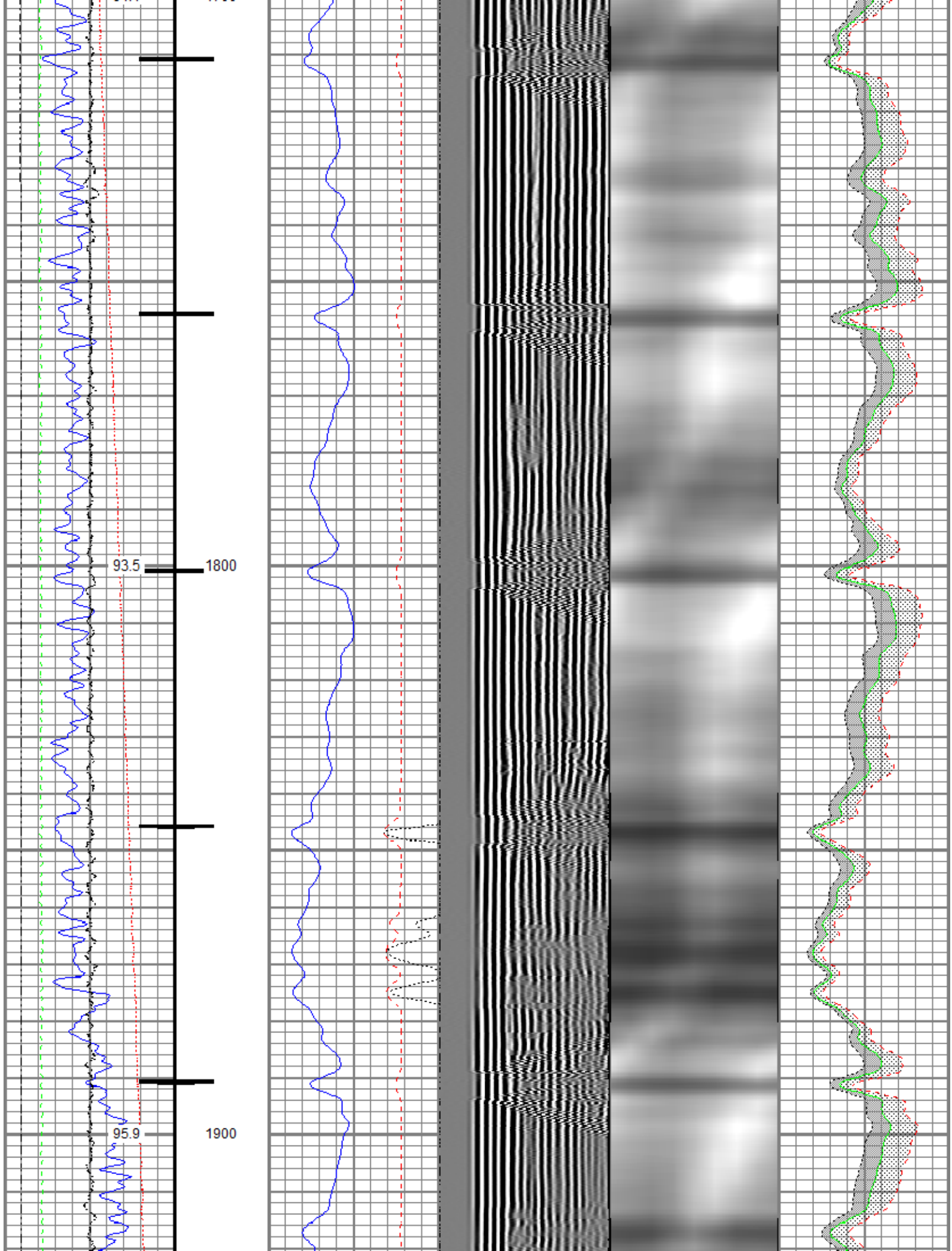


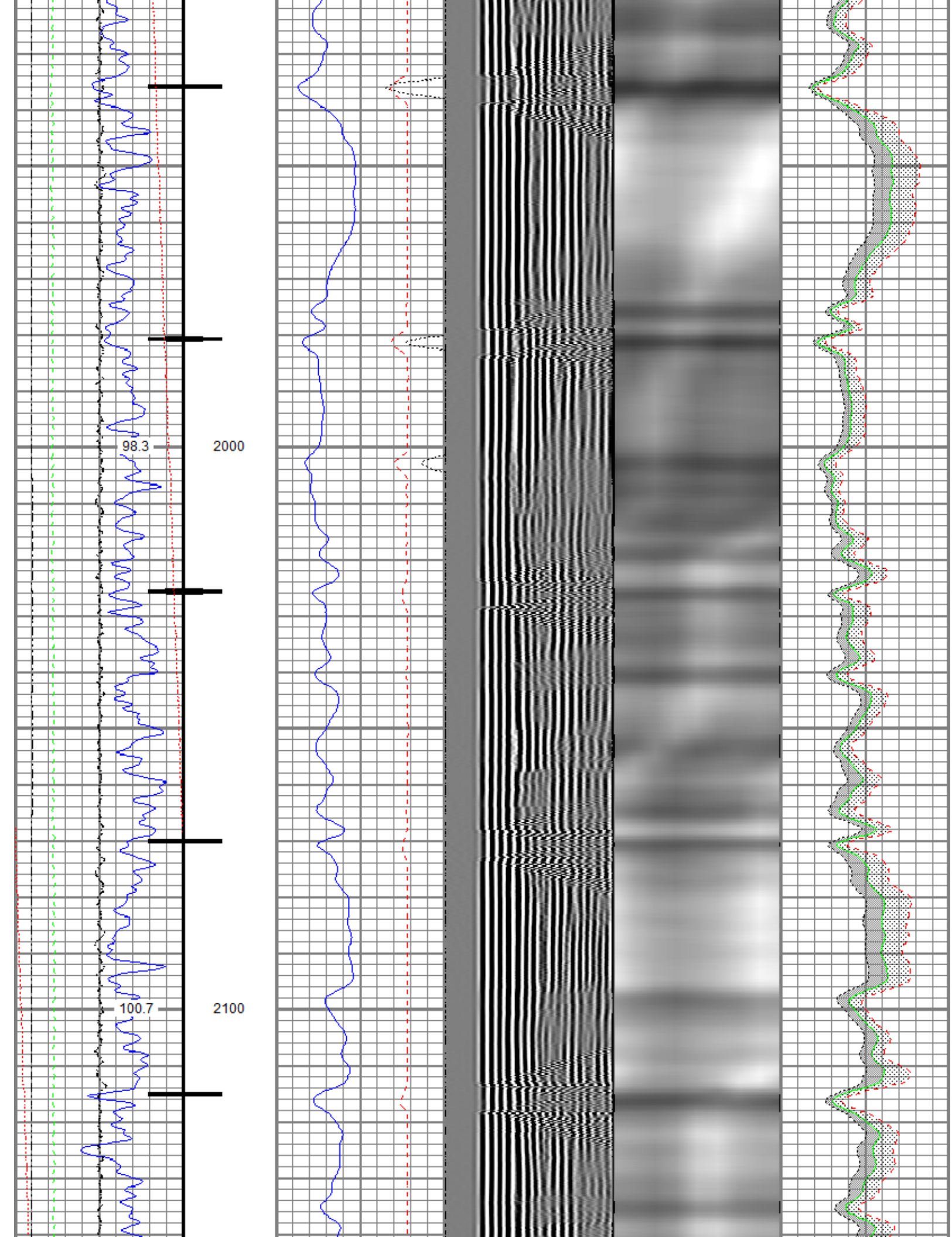


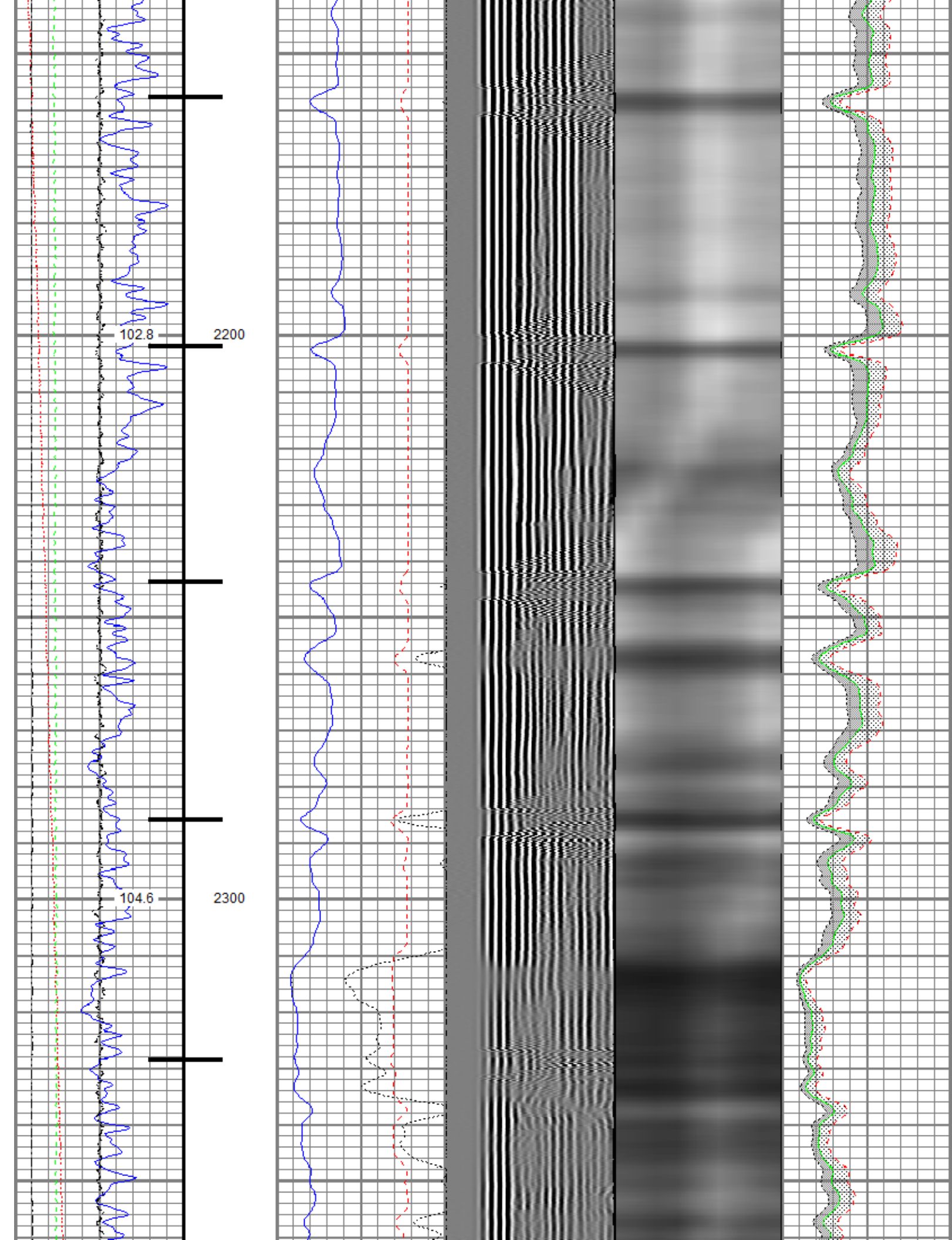


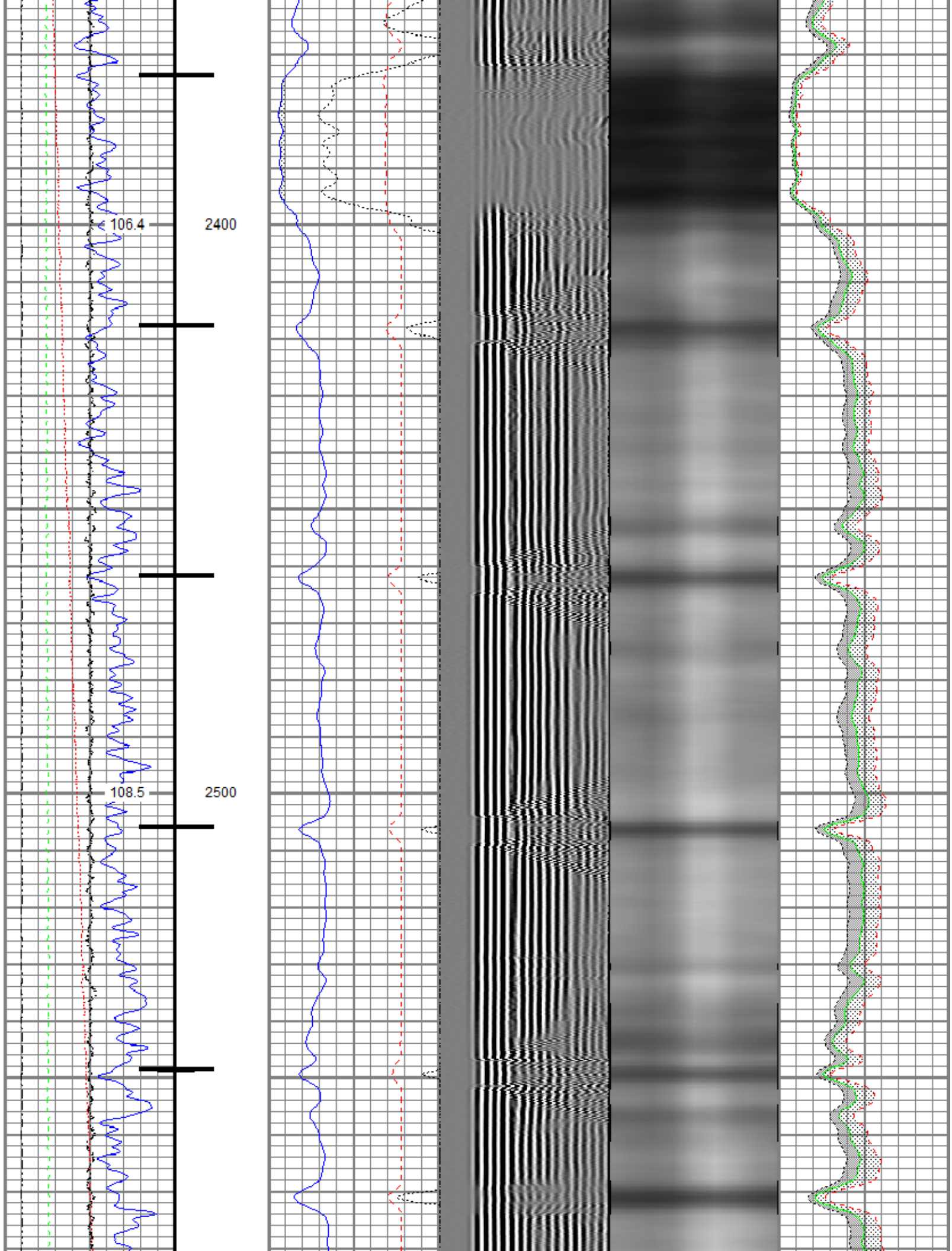


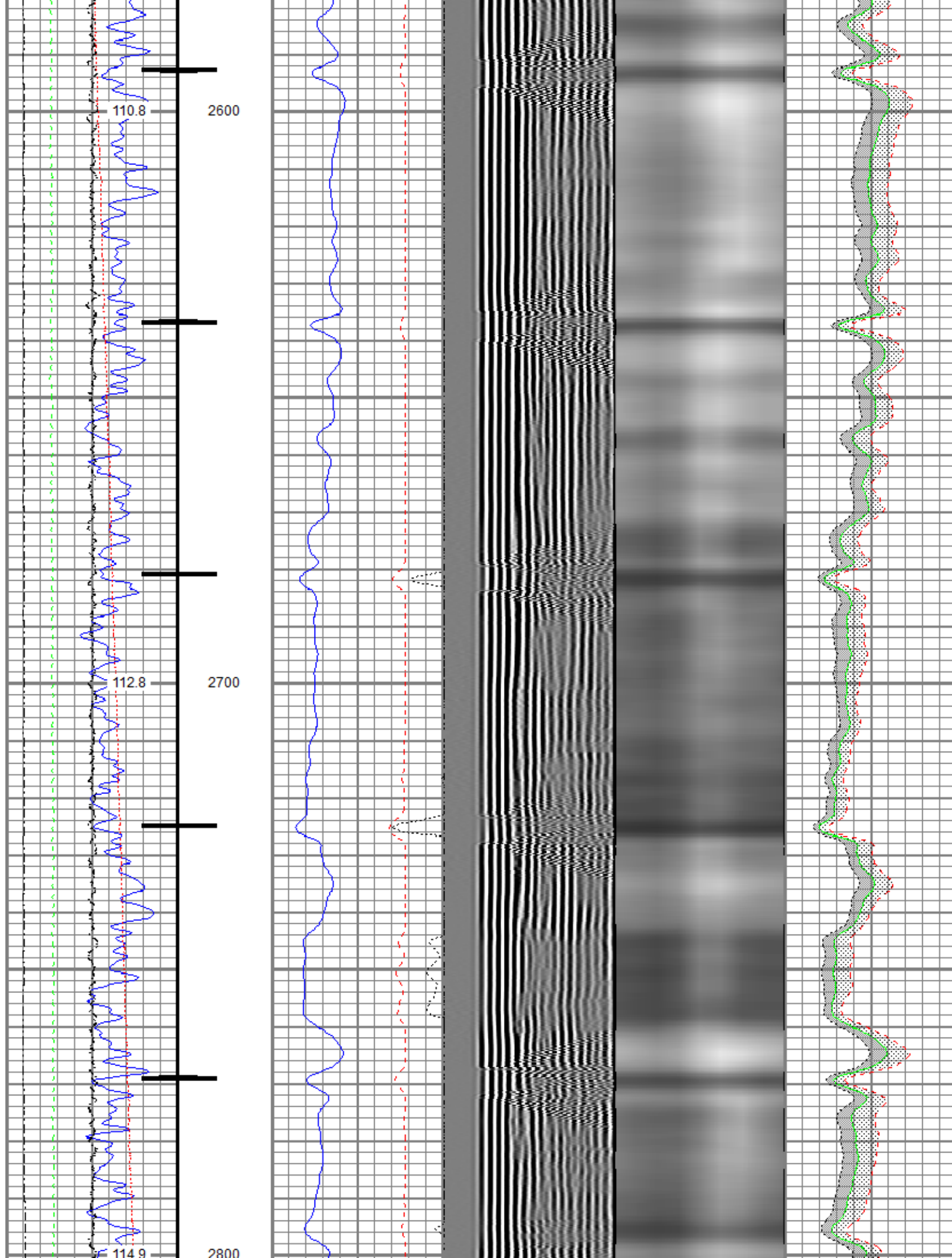


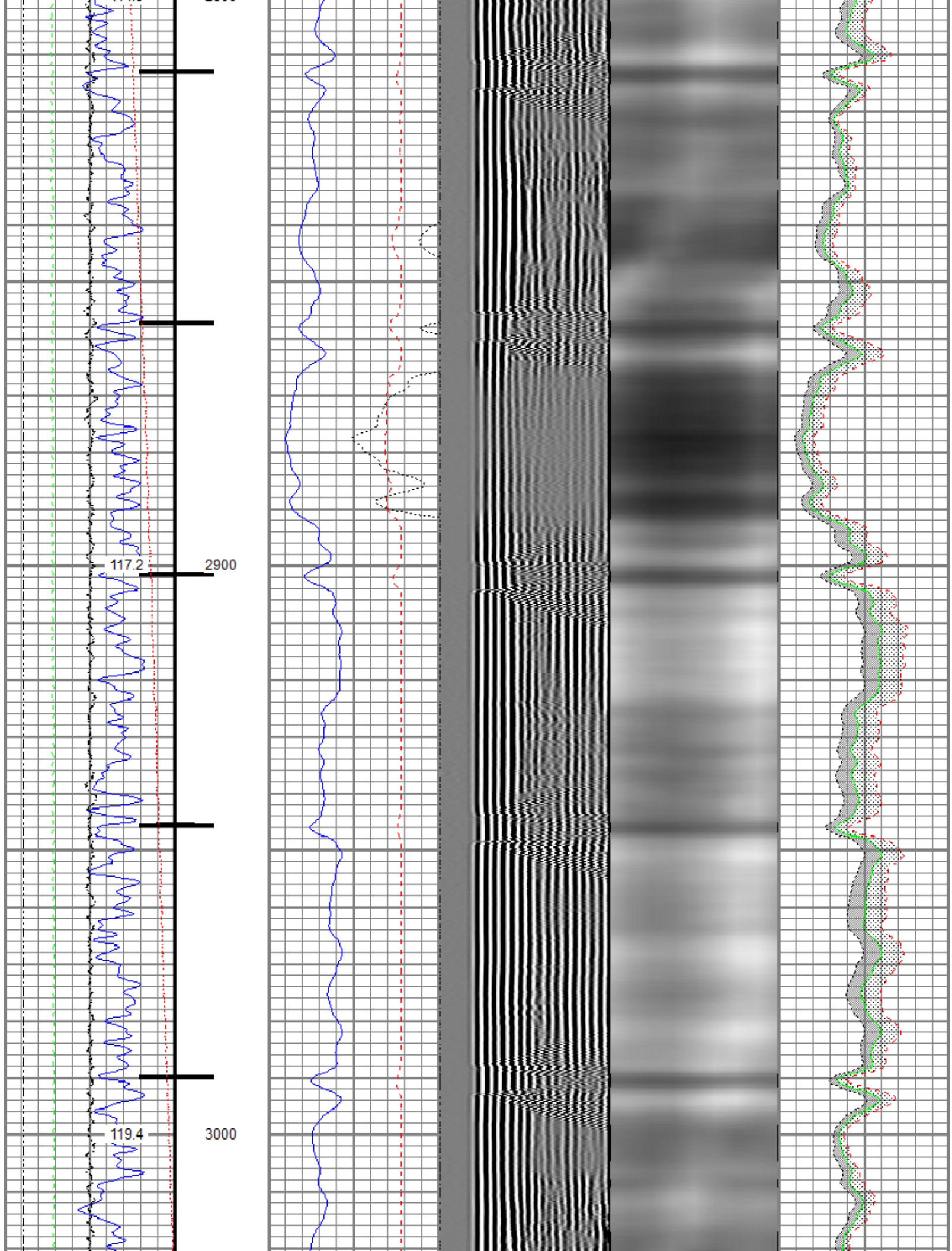


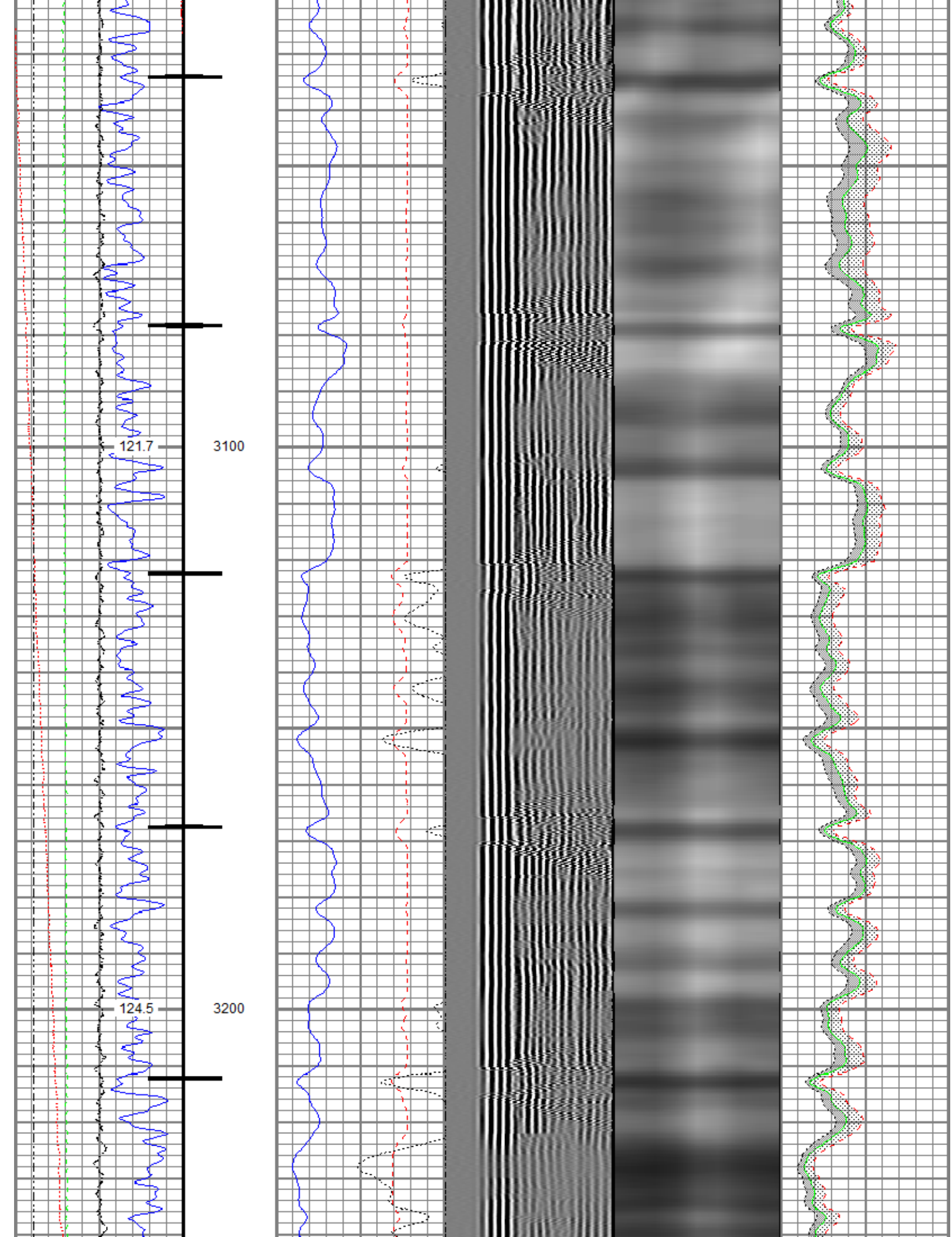


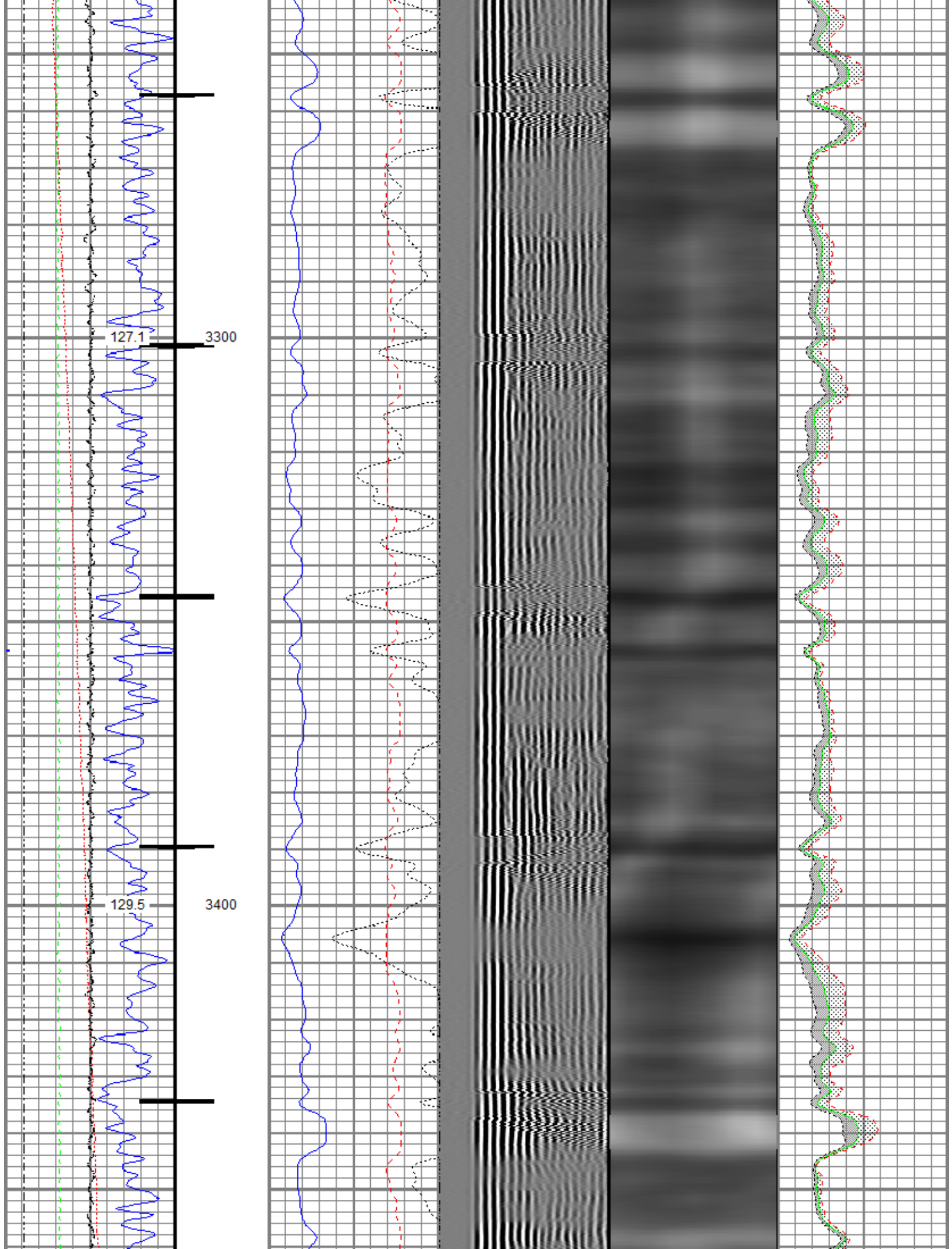


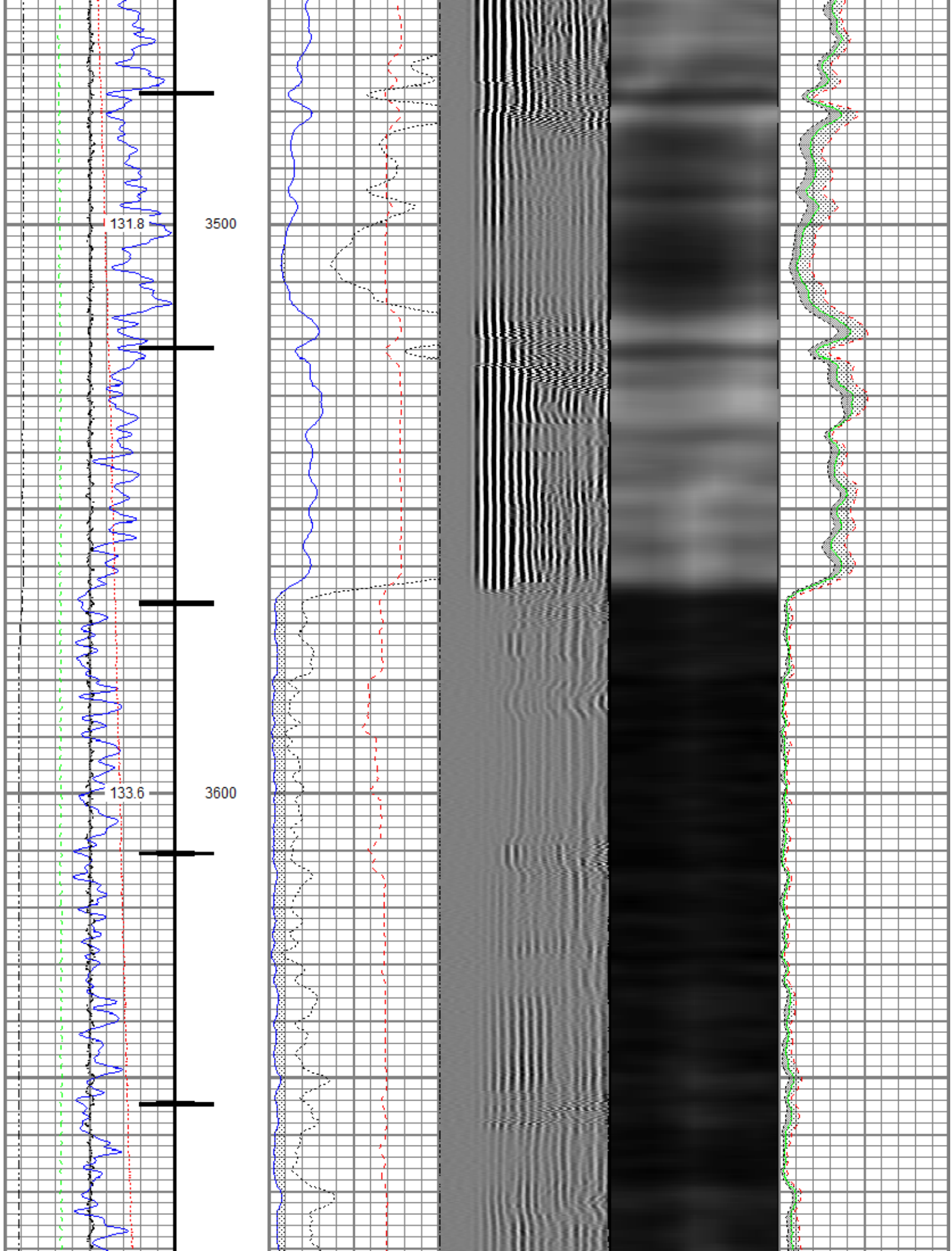


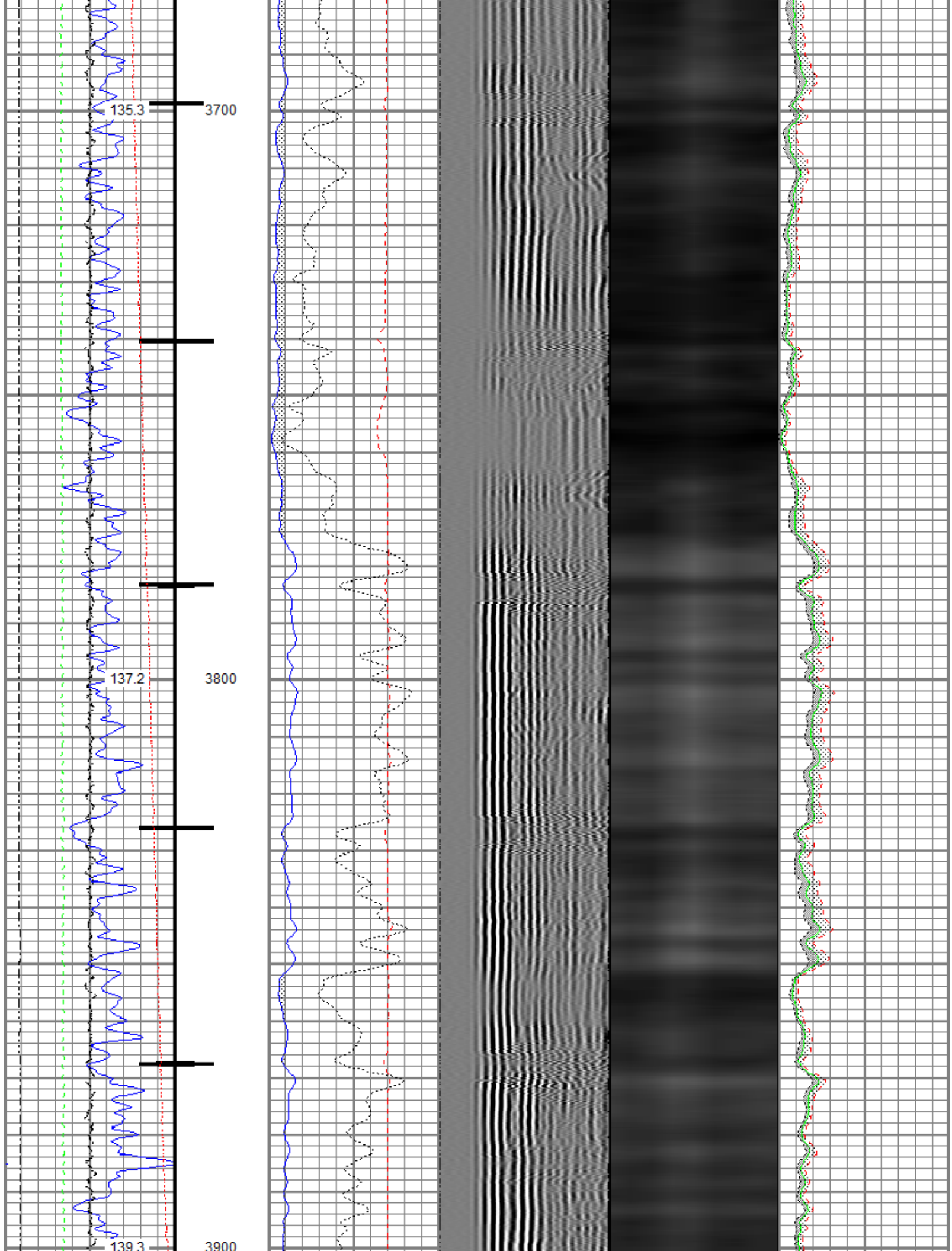


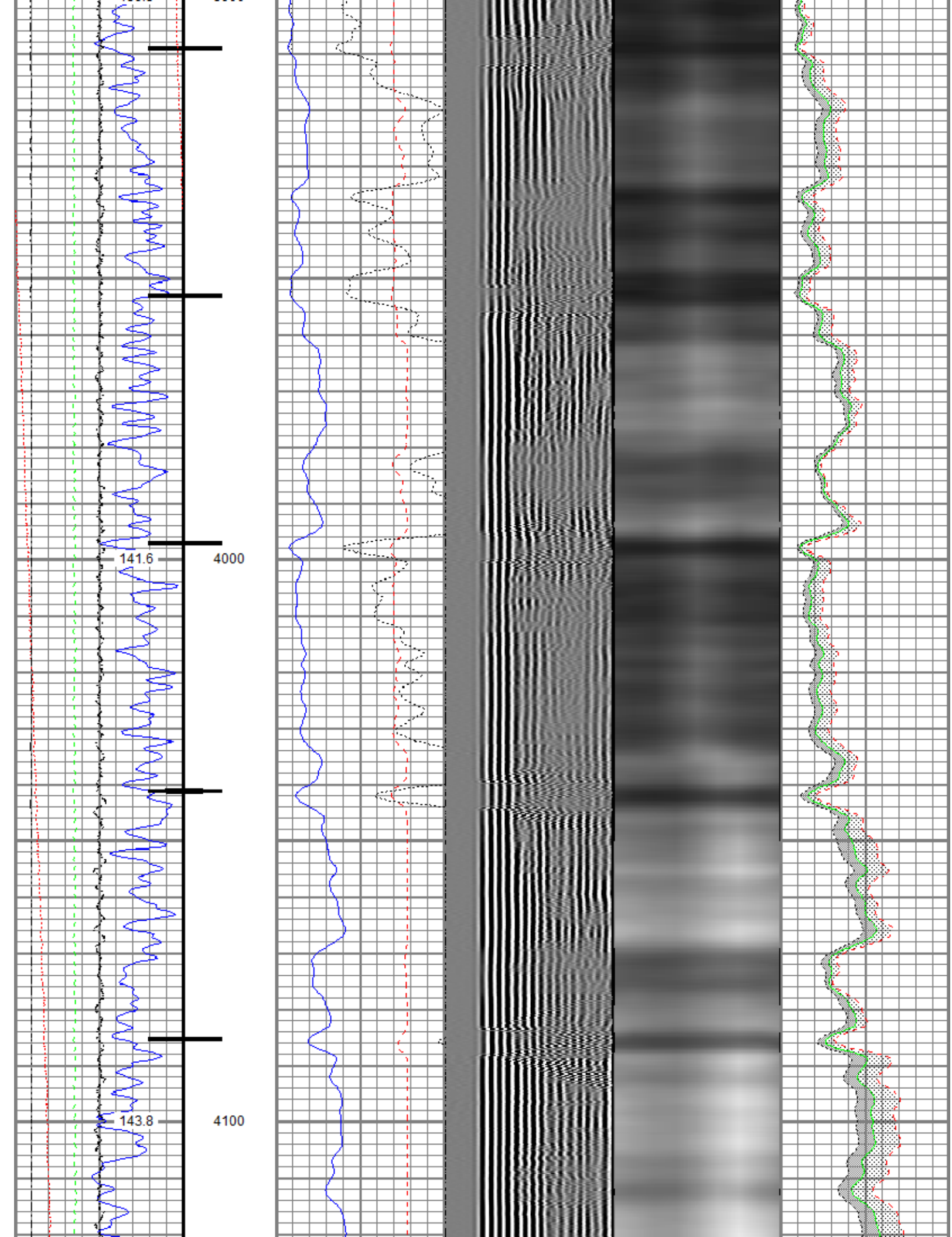


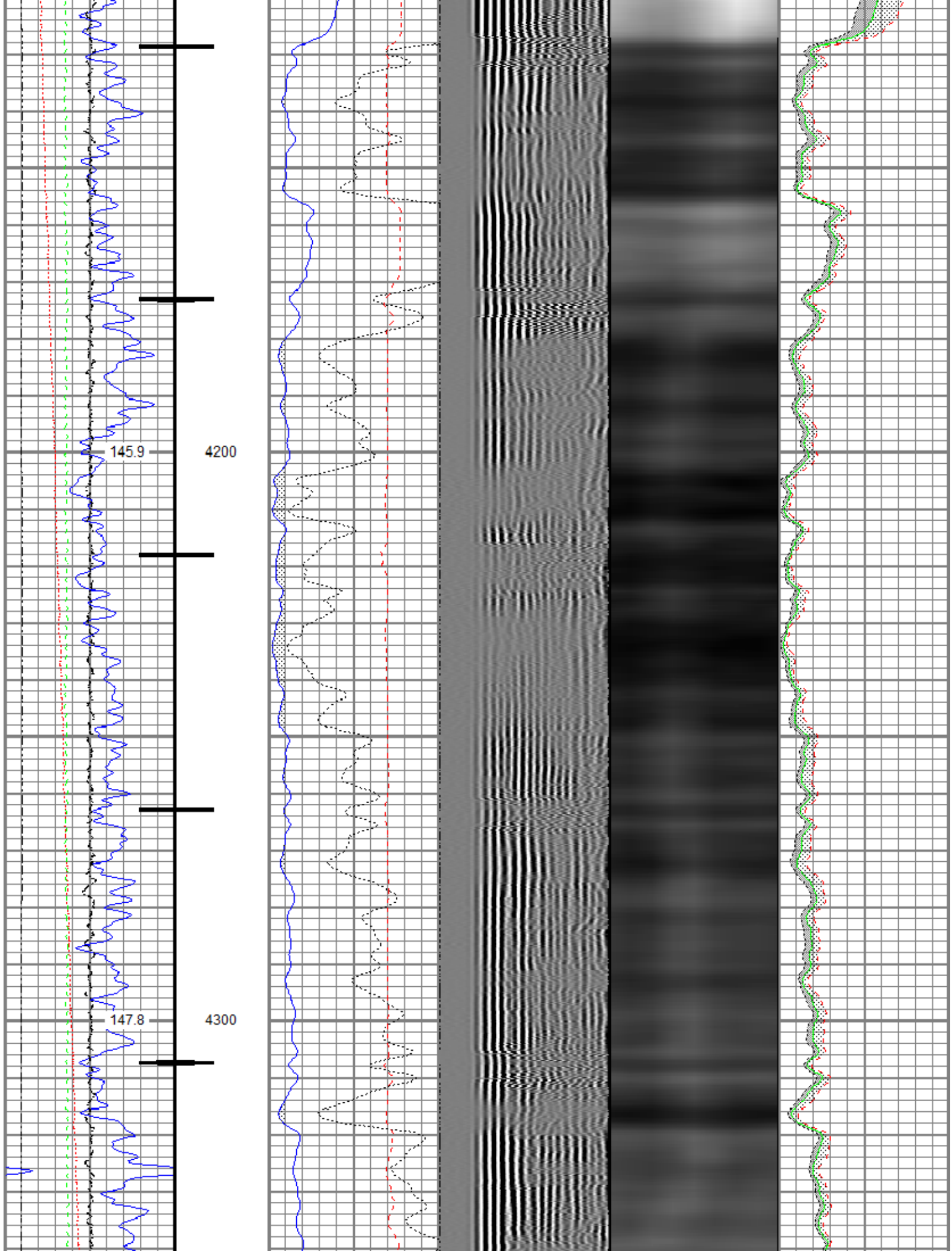


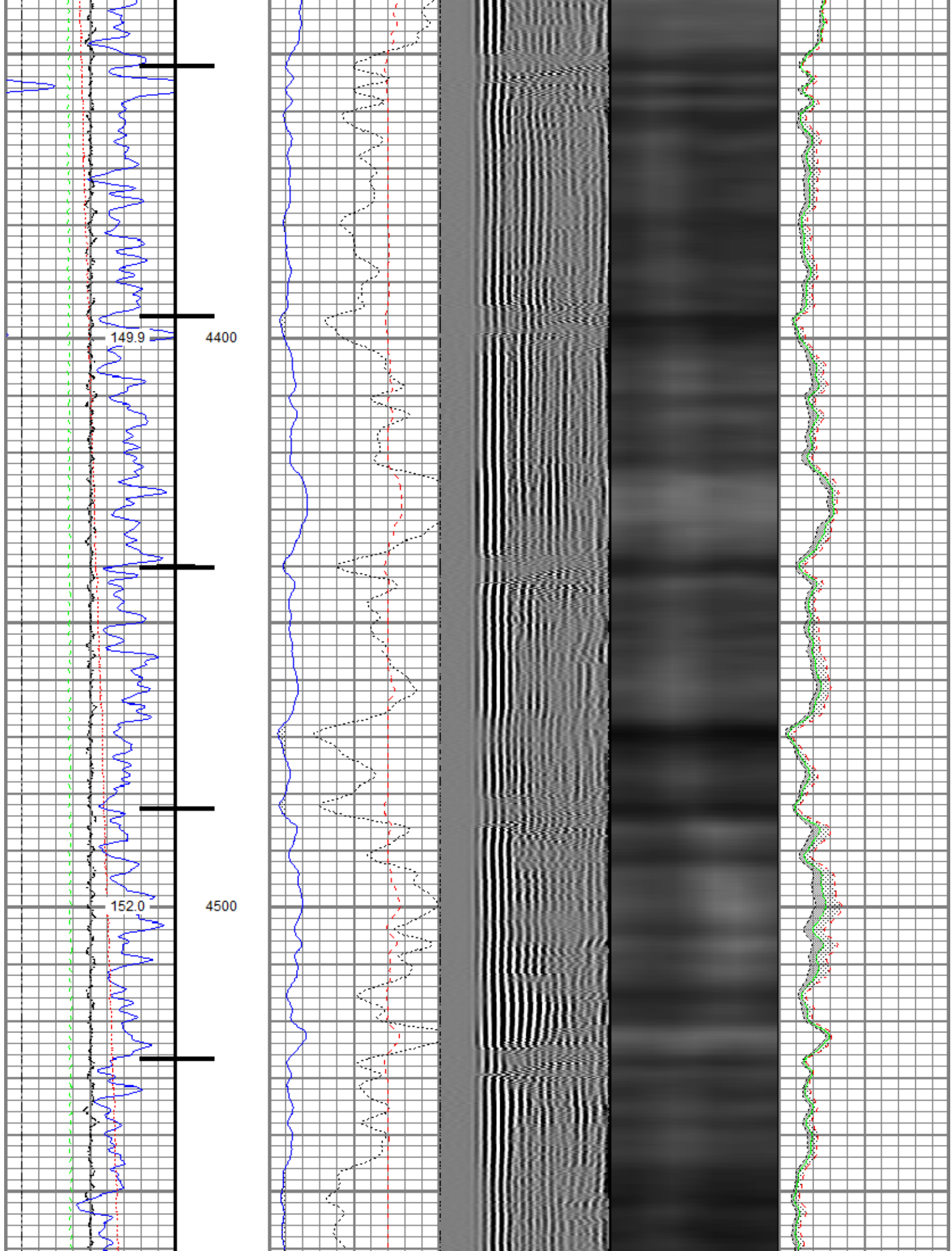


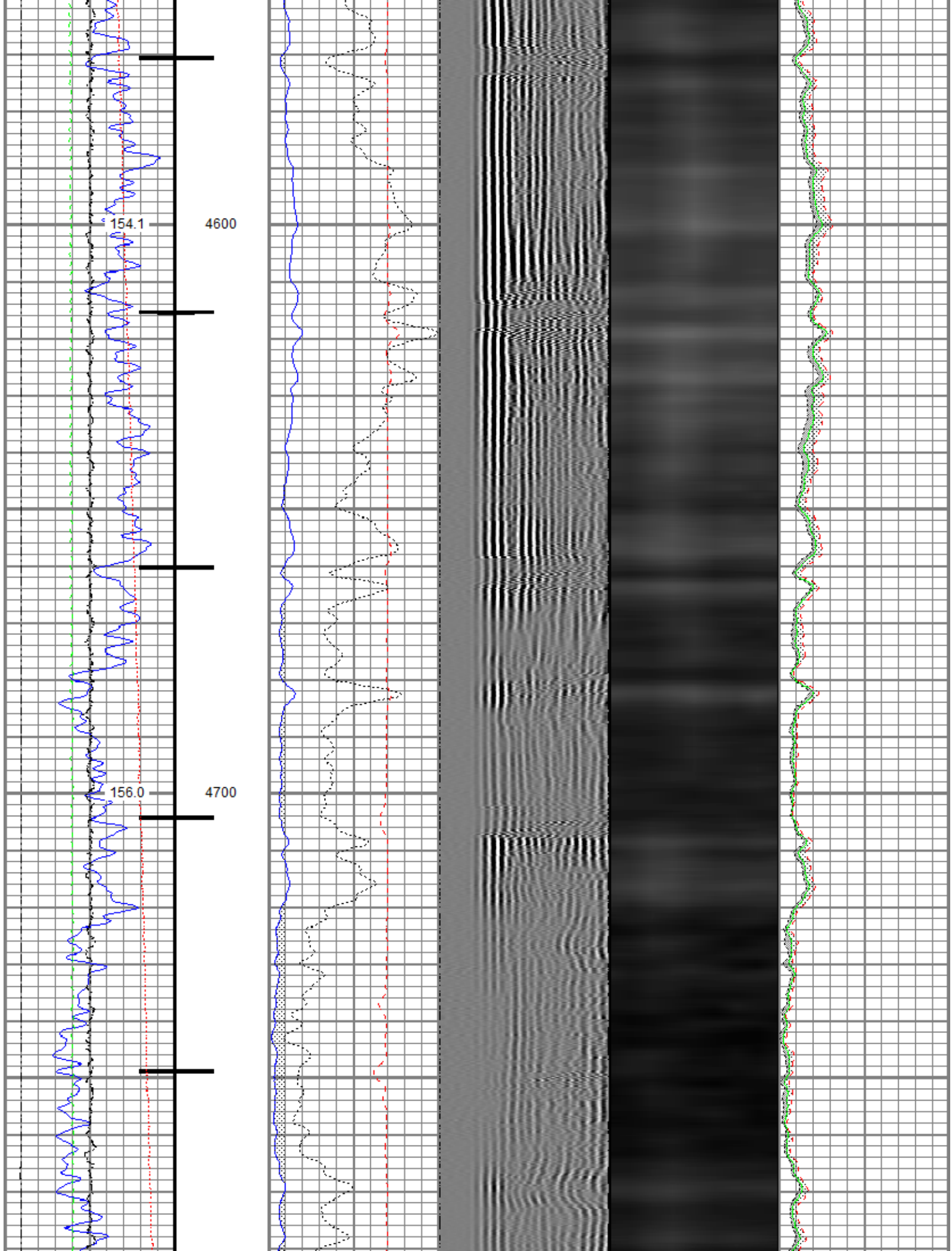


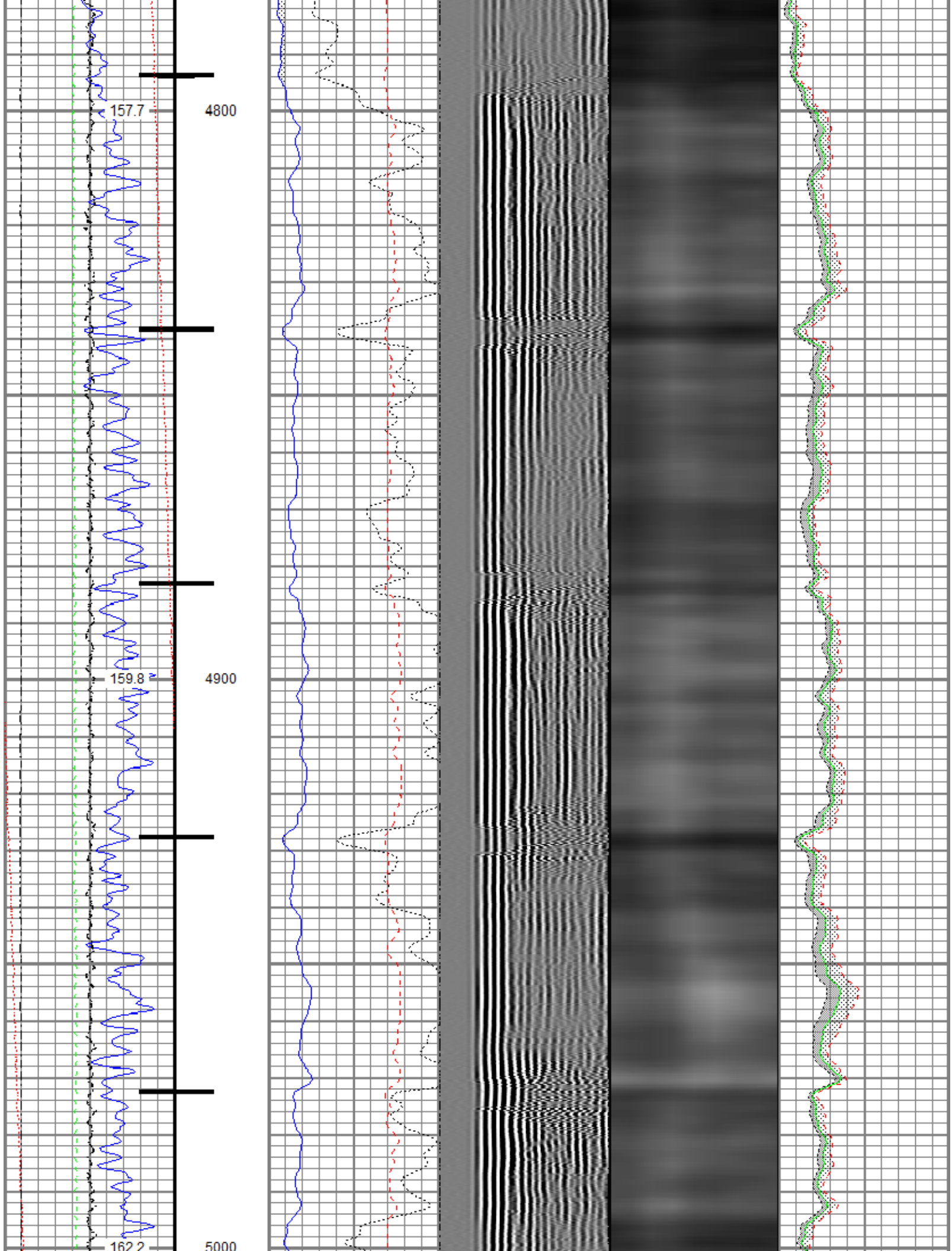


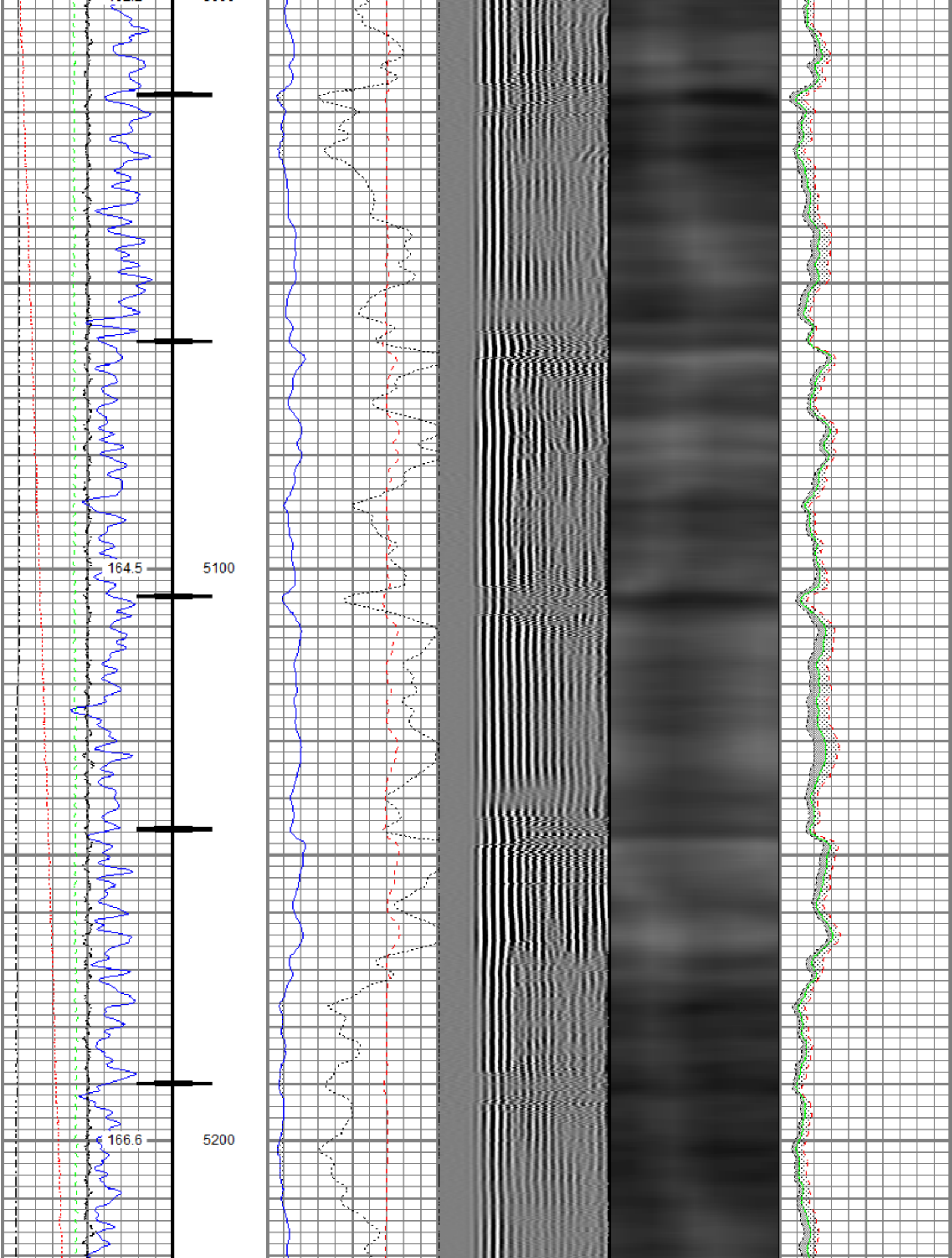


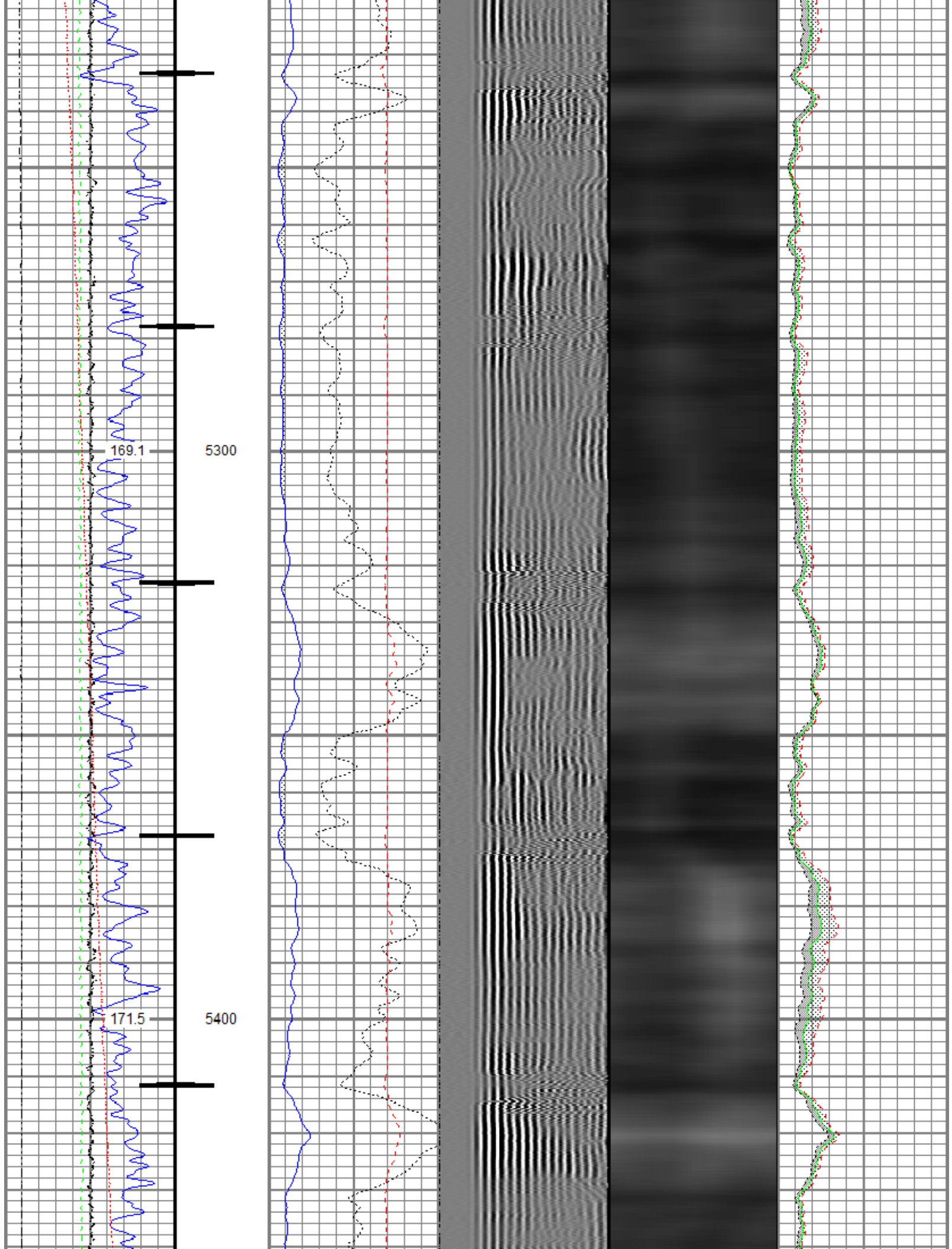


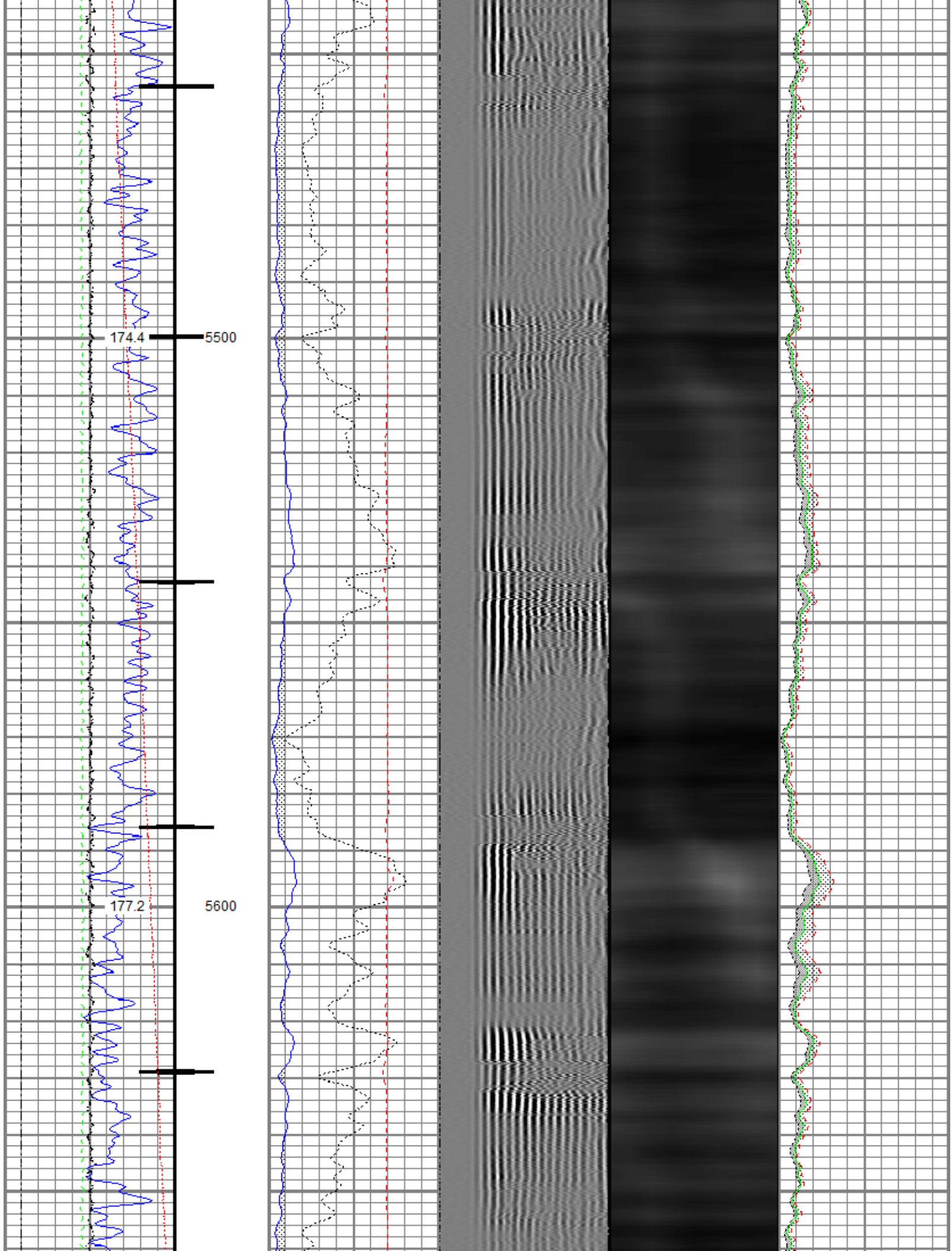


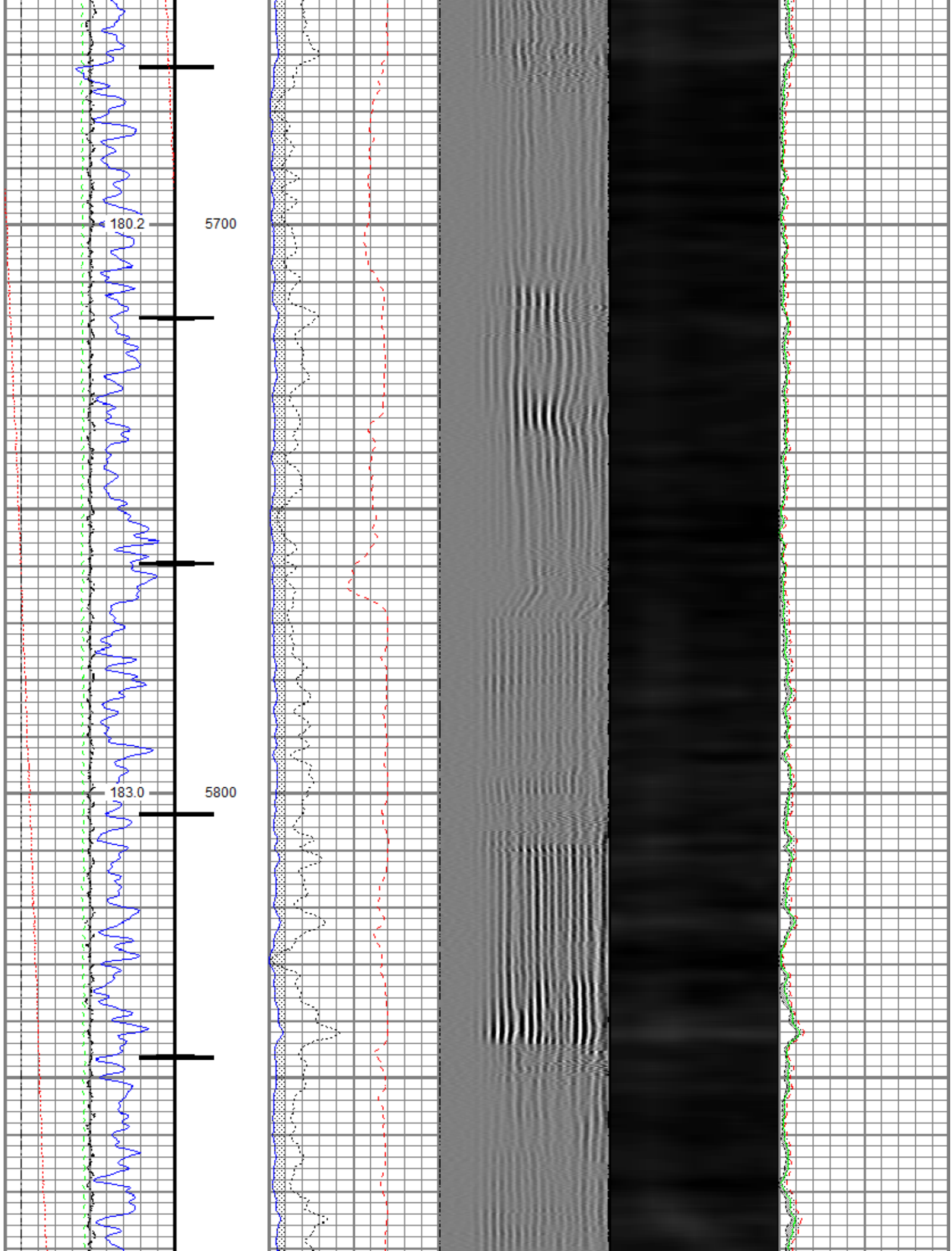


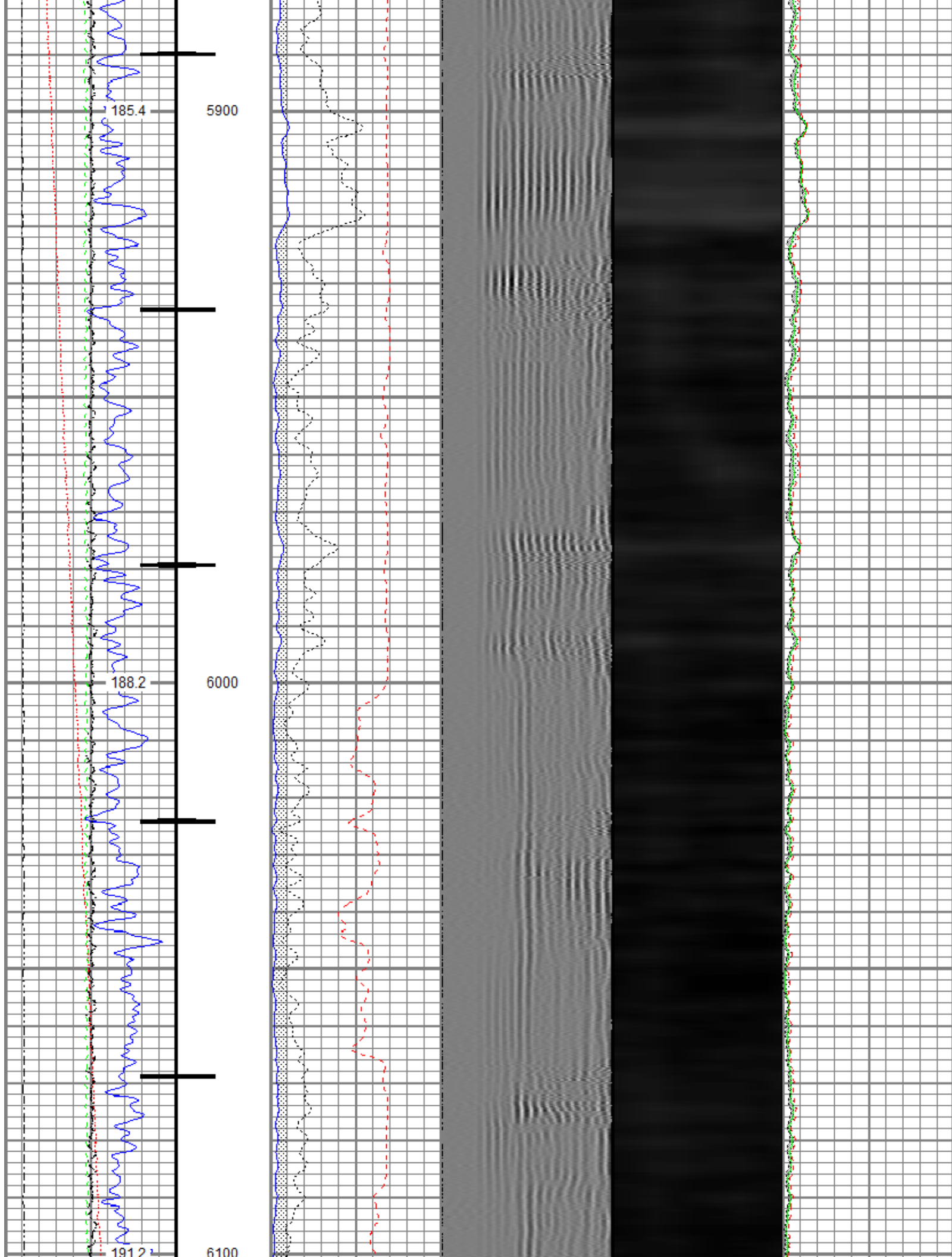


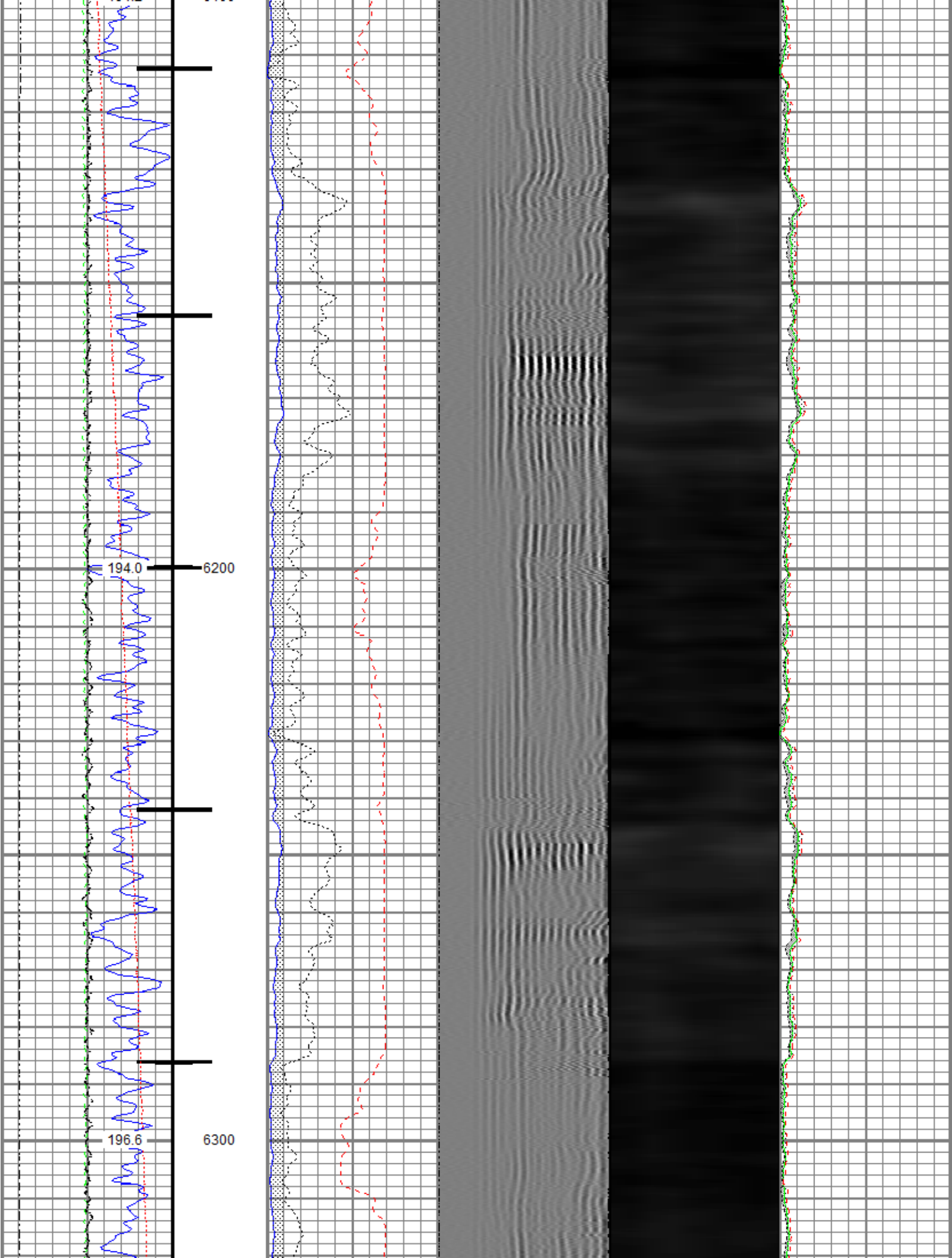


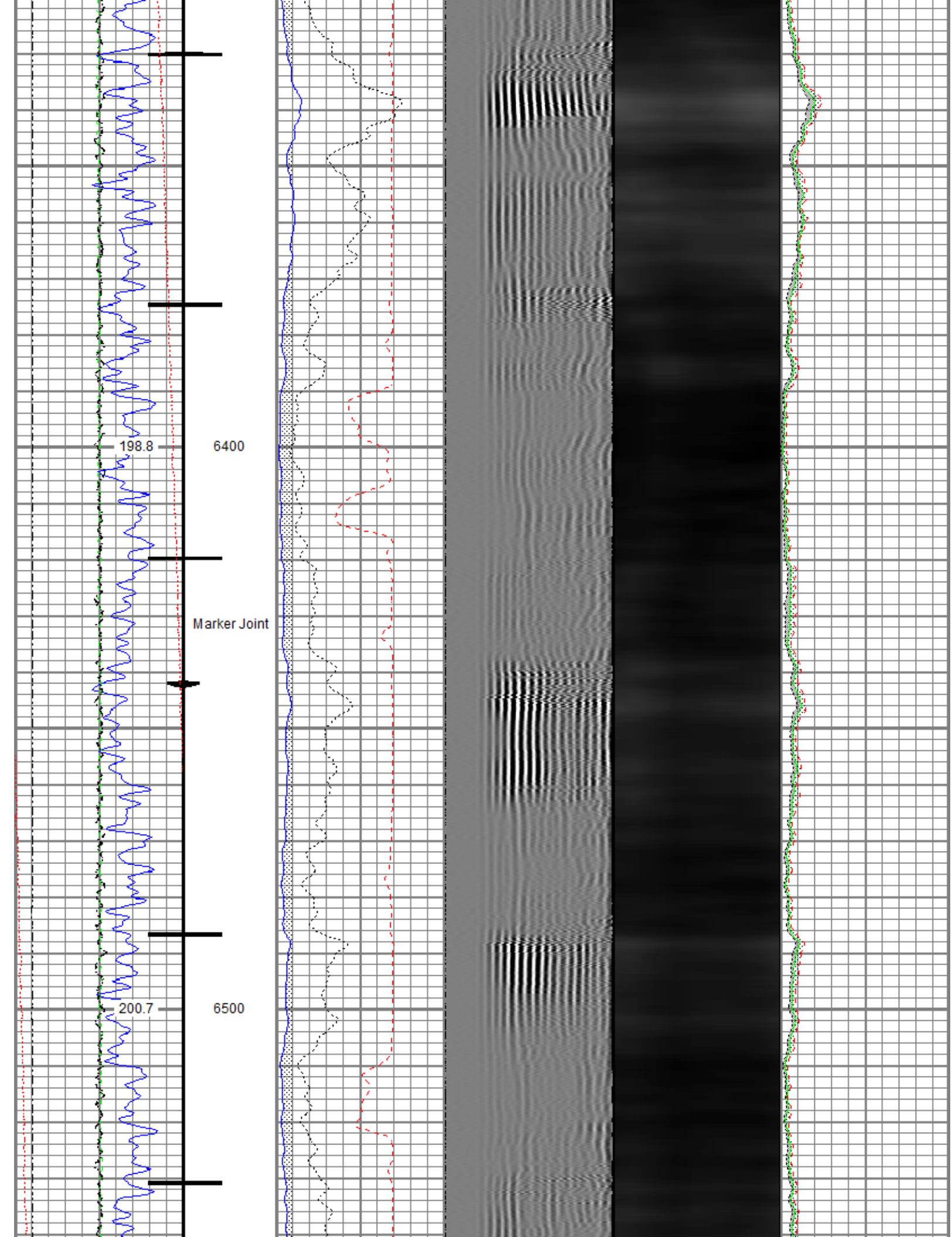












Database File	oxy_jodster south 25-9hz\0506906503_oxy_jodster south 25-9hz_rbl_01-24-20.db
Dataset Pathname	RBL/pass4.1
Presentation Format	ros_radrii
Dataset Creation	Fri Jan 24 14:13:42 2020
Charted by	Depth in Feet scaled 1:240

Repeat Pass

Repeat Pass

198.6

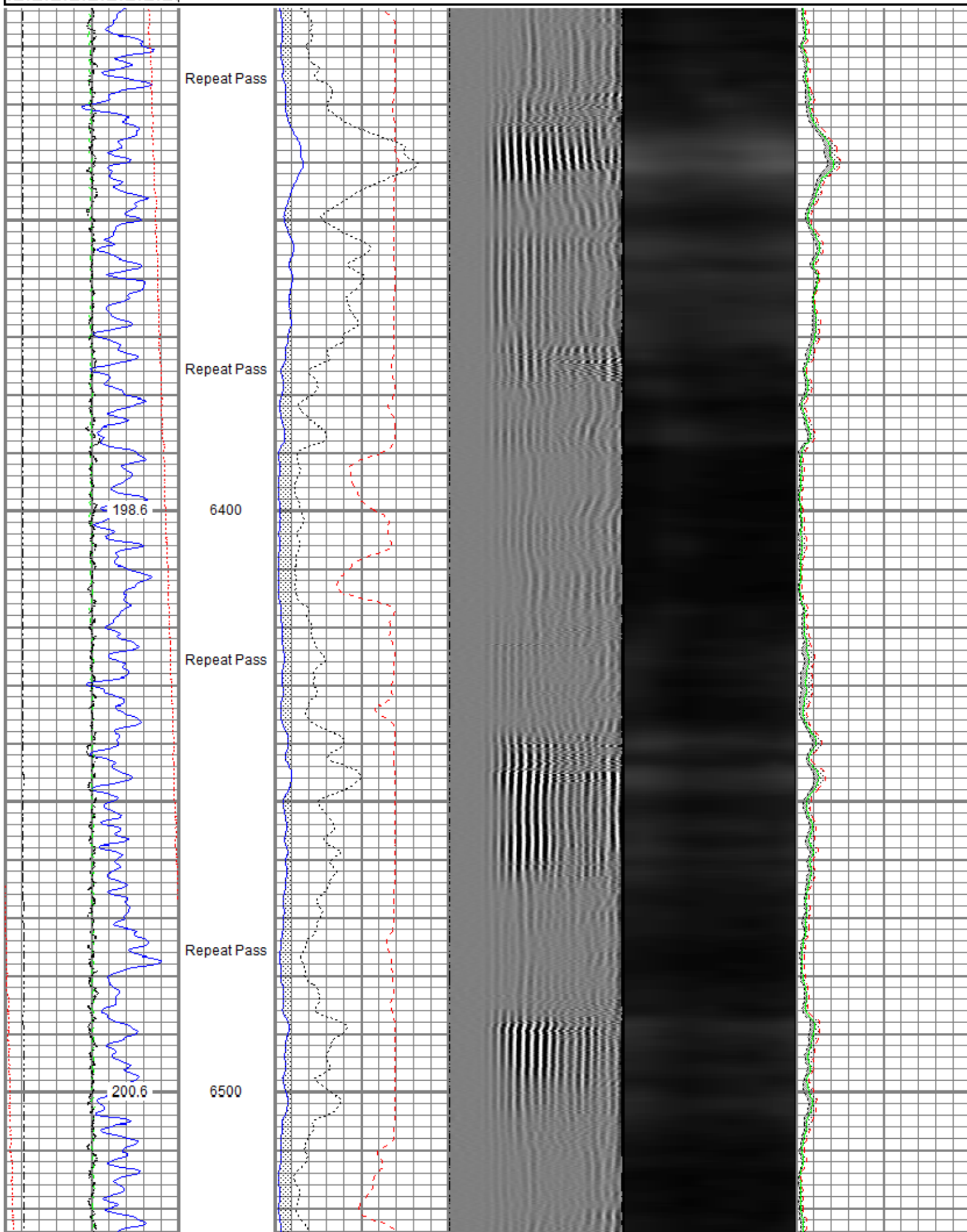
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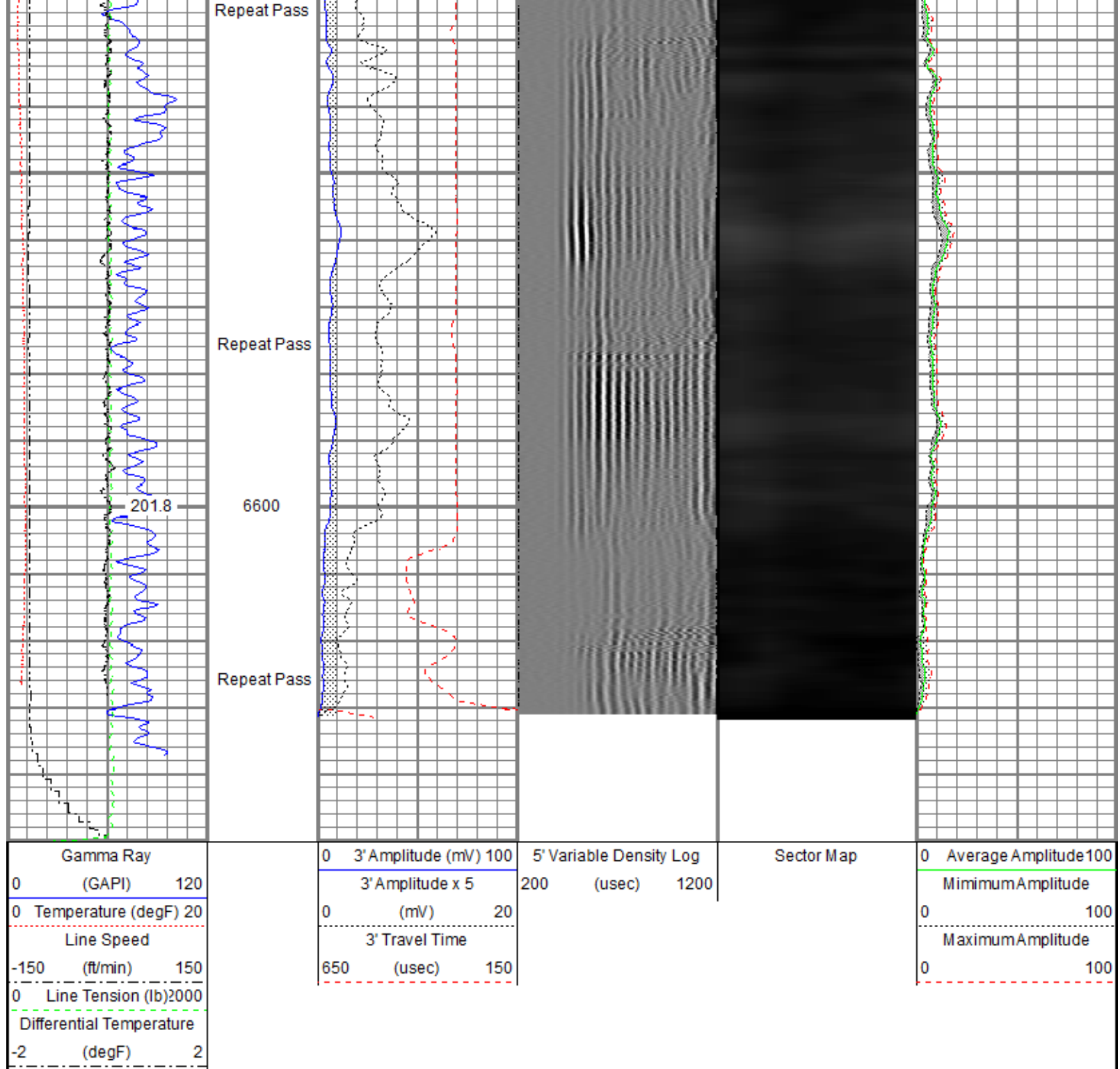
Repeat Pass

Repeat Pass

200.6

6500





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 (FW1302-001)	9.39	2.75
RBT_ACCY	14.81		Probe 2-3/4" Radial Cement Bond Tool with Integral		
RBT_ACCX	14.81		Temperature Sub and Accelerometer	105.00	
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		Probe CENT-2750	2.88	2.75
WVFCAL	14.81		Probe 2-3/4" Electric Inline Bowspring Centralizer	20.00	
WVF3FT	14.81				
WVF5FT	13.81				
CCL\$2	6.80				
CCL\$1	6.80				
GR	5.46		Probe GR-CCL-2750 6PB (101001)	4.80	2.75
			Probe 2-3/4" rev.1 Digital Scintillation Gamma	55.00	
			Ray/CCL Combined with 6 Pin Bottom for CNT		
			Probe CENT-2750	2.88	2.75
			Probe 2-3/4" Electric Inline Bowspring Centralizer	20.00	
LOCTIM	0.00				
UTCTIM	0.00				
Dataset: 0506906503_oxy_jodster south 25-9hz_rbl_01-24-20.db: field/well/RBL/tollstring Total length: 23.86 ft Total weight: 225.40 lb O.D.: 2.75 in					

Calibration Report		
Database File	c:\programdata\warrior\data\oxy_jodster south 25-9hz\0506906503_oxy_jodster south 25-9hz_rbl_01-24-20.db	
Dataset Pathname	RBL/pass6.2	
Dataset Creation	Fri Jan 24 14:07:02 2020	
Compensated Neutron Calibration Report		
Model:	Probe CN - 2750 BL	
Serial Number:	FW1308-020_A1483	
SHOP CALIBRATION		
Tue Dec 03 09:24:53 2019		
	Cal Tube	Units
Tank Ratio	6.7797	SS/L S

Tool Ratio	0.7737	SS/LS
LS Detector	452.04	cps
SS Detector	3241.60	cps
Tool Ratio	7.1710	SS/LS
Tool Gain	0.9454	---

PRE-SURVEY VERIFICATION

SS Detector	LS Detector	Measured (p.u.)	Target (p.u.)
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POST-SURVEY VERIFICATION

SS Detector	LS Detector	Measured (p.u.)	Target (p.u.)
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Gamma Ray Calibration Report

Serial Number:	101001	
Tool Model:	2750 6PB	
Performed:	Tue Dec 03 09:24:53 2019	
Calibrator Value:	637.0	GAPI
Background Reading:	100.6	cps
Calibrator Reading:	981.1	cps
Sensitivity:	0.7235	GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	FW1302-001	
Tool Model:	2750 RBTa	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	-2.294	ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.007	0.514	0.800	71.921	140.013	-0.114
CAL	0.592	0.591				
5'	0.008	0.471	0.800	71.921	153.842	-0.480
SUM						
S1	0.005	0.504	0.000	100.000	200.573	-1.084
S2	0.007	0.512	0.000	100.000	197.865	-1.361
S3	0.007	0.528	0.000	100.000	191.703	-1.297
S4	0.008	0.546	0.000	100.000	185.777	-1.510
S5	0.007	0.538	0.000	100.000	188.207	-1.233
S6	0.008	0.542	0.000	100.000	187.224	-1.485
S7	0.008	0.525	0.000	100.000	193.552	-1.538
S8	0.008	0.512	0.000	100.000	198.265	-1.529

Internal Reference Calibration, performed (Not Performed):


	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.592	0.591	1.000	0.000

Air Zero Calibration, performed Tue Jan 21 08:21:47 2020:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.006	0.000	0.000
5'	0.008	0.000	0.000
SUM			
S1	0.005	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	0.006	0.000	0.000
S7	0.007	0.000	-0.000
S8	0.007	0.000	-0.000

Inclinometer Calibration Report					
Performed:	Tue Dec 03 09:24:53 2019				
	Low Read.	High Read.	Low Ref.	High Ref.	
X Accelerometer	-900.00	892.00	-1.00	1.00	gee
Y Accelerometer	-922.00	893.00	-1.00	1.00	gee
Z Accelerometer	7.38	894.40	0.00	1.00	gee

Temperature Calibration Report					
Serial Number:	FW1302-001				
Tool Model:	2750 RBTa				
Performed:	Tue Dec 03 09:24:53 2019				
	Reference		Reading		
Low Reference:	100.00	degF	107.47	degF	
High Reference:	350.00	degF	404.08	degF	
Gain:	0.84				
Offset:	9.42				
Delta Spacing	1				

	Company	Kerr-McGee Oil & Gas Onshore, L.P.
	Well	Jodster South 25-9HZ
	Field	Wattenberg
	County	Larimer
	State	Colorado