



Radial Cement Bond  
Gamma Ray  
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.
Well	Joker 1N3-9HZ
Field	Wattenberg
County	Weld
State	Colorado
Company	Kerr-McGee Oil & Gas Onshore, L.P.
Well	Joker 1N3-9HZ
Field	Wattenberg
County	Weld
State	Colorado
Location:	API #: 05-123-41331
Permanent Datum	SEC 9 TWP 1N RGE 65W
Log Measured From	Ground Level
Drilling Measured From	Kelly Bushing
	25 FT
	Elevation 4972'
	K.B. 4997'
	D.F. 4996'
	G.L. 4972'
	Other Services
	JB/GR

Date	10-SEP-2015
Run Number	Two
Depth Driller	11,936 FT
Depth Logger	7000 FT
Bottom Logged Interval	6996 FT
Top Log Interval	Surface
Open Hole Size	7.875
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	224°F
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	9:30 AM
Equipment Number	HD-0311
Location	Ft. Lupton, CO
Recorded By	B. Kalkwarf
Witnessed By	Darrel Bothwell

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	J55 LT&C	Surface	1785 FT		
Intermediate #1							
Intermediate #2	5 1/2	17	HCP-110 LTC	Surface	11962 FT		
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  
Log was measured from KB 25 FT  
Recorded Marker Joint at 6324 - 6347 FT  
Log ran from as deep as possible in heel 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 FMC Technologies Completion Services, Inc.!!

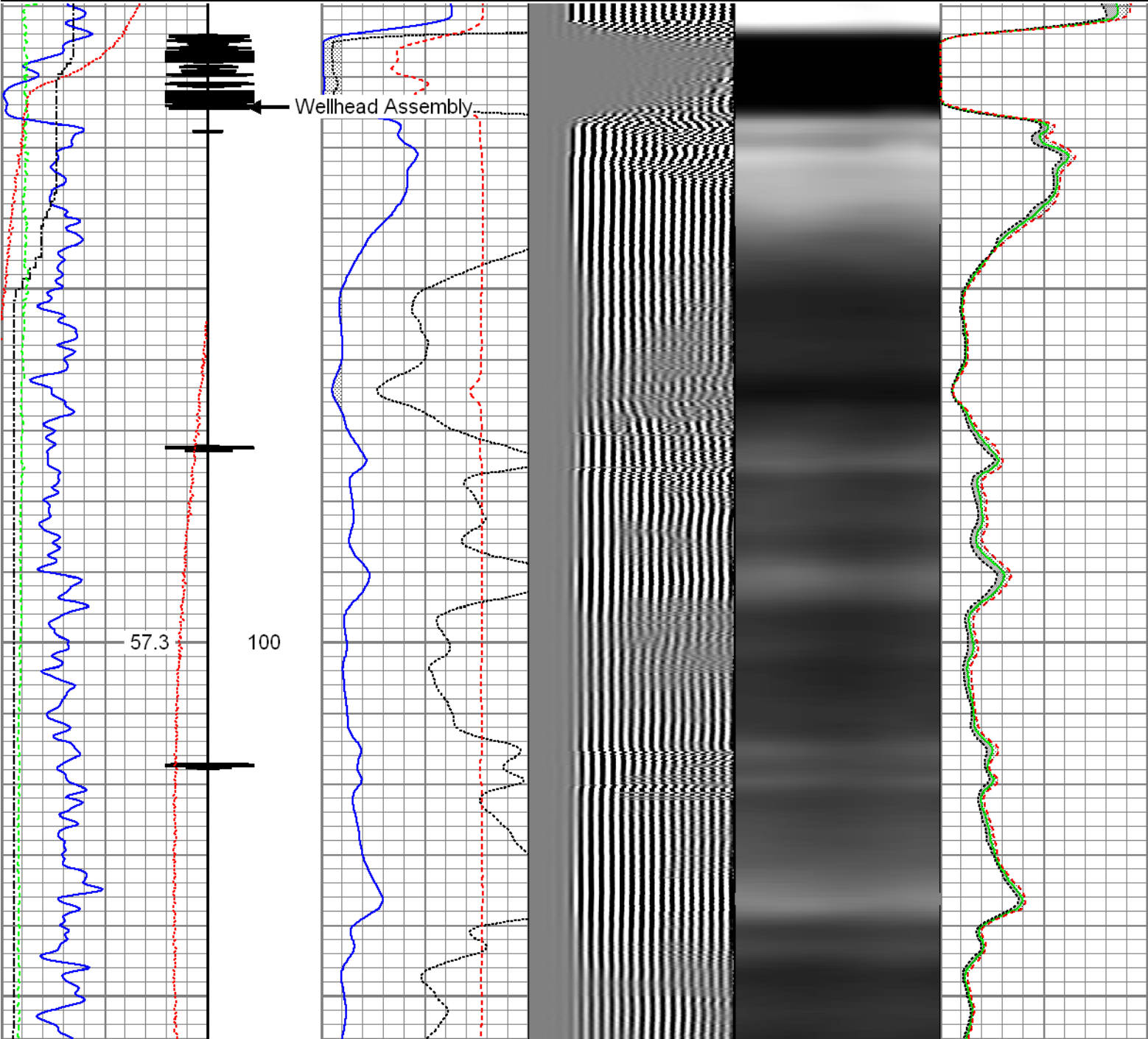


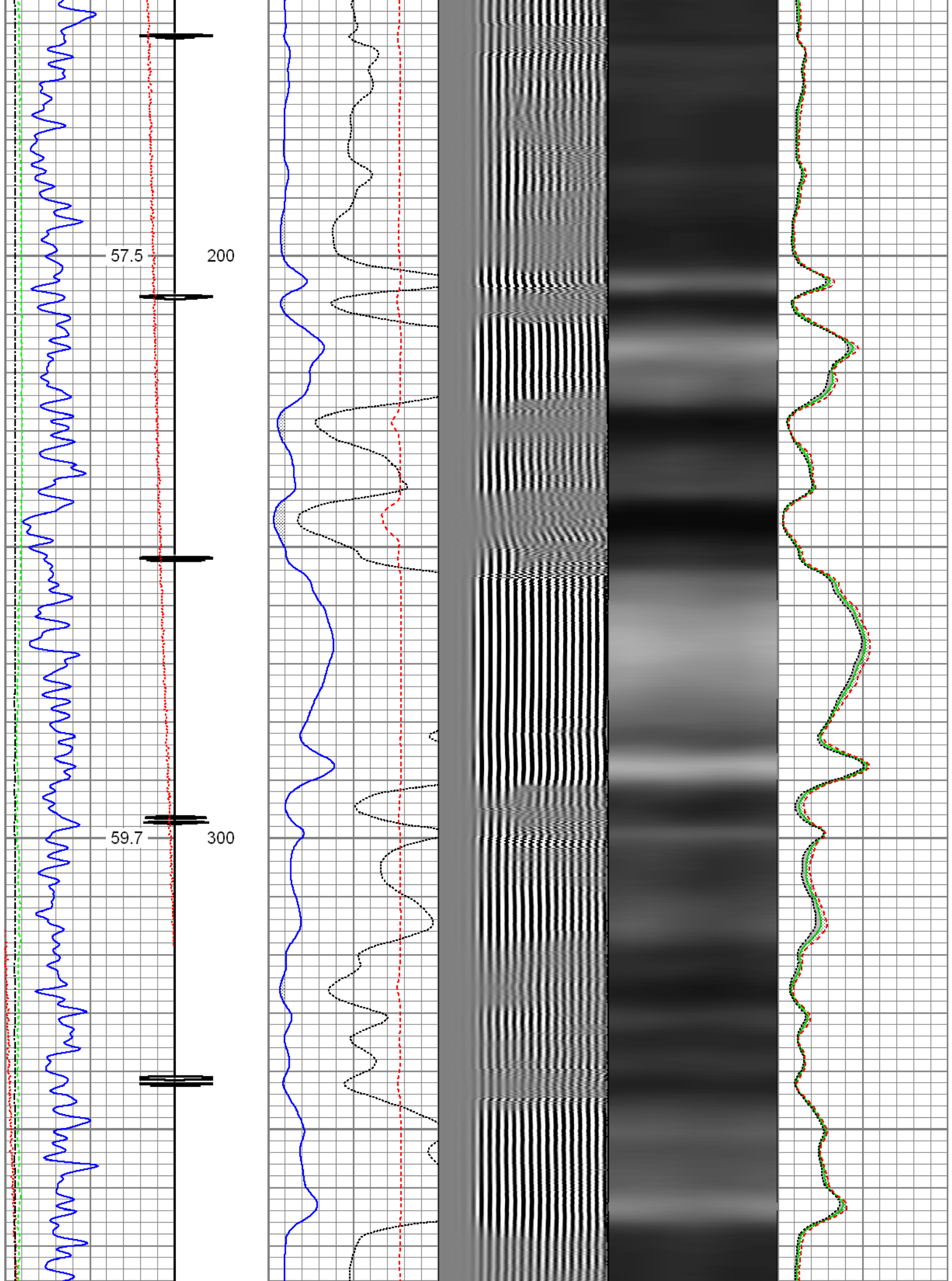
Main Pass

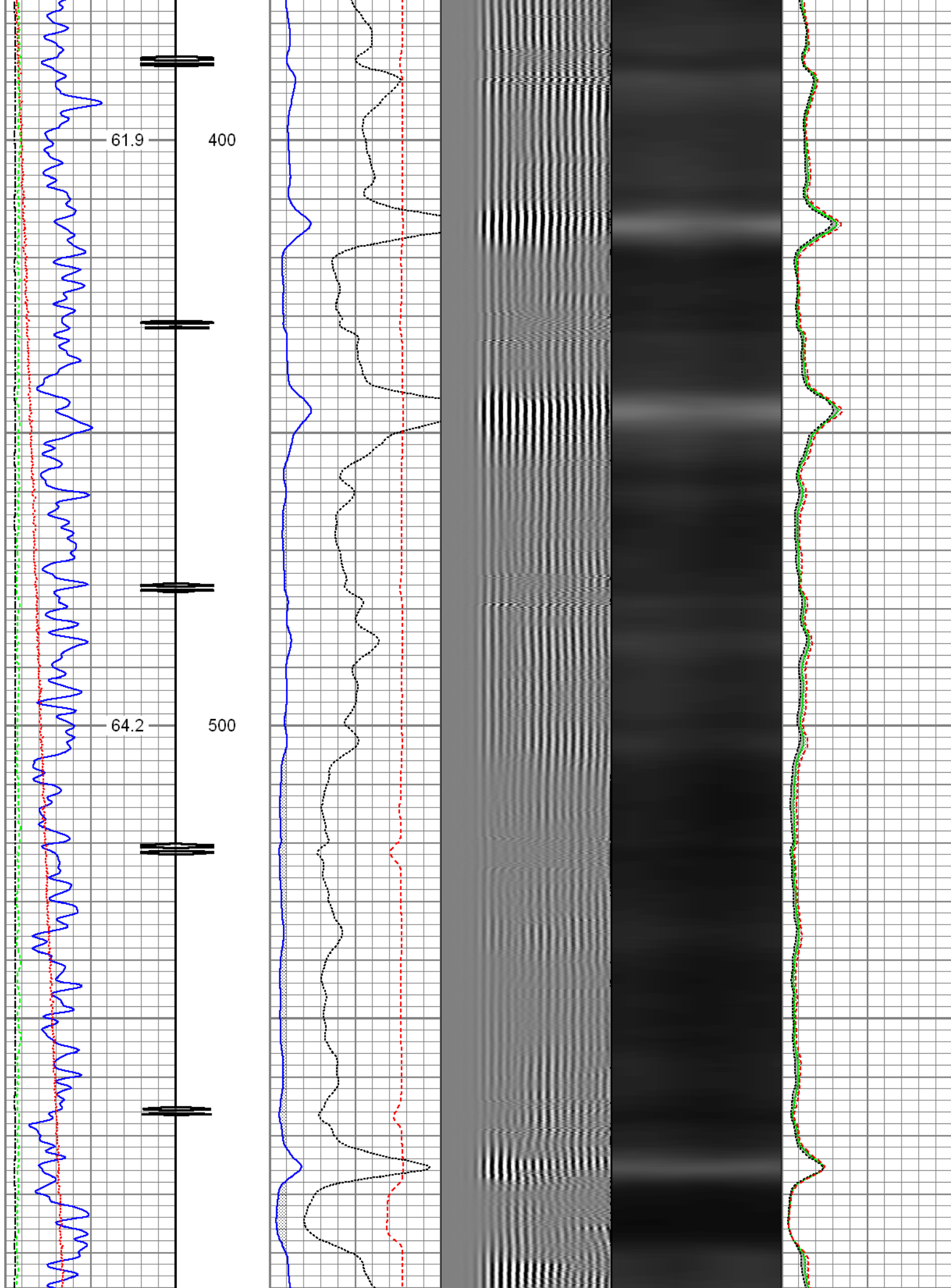
Recorded with 2800 PSI Surface Induced Pressure

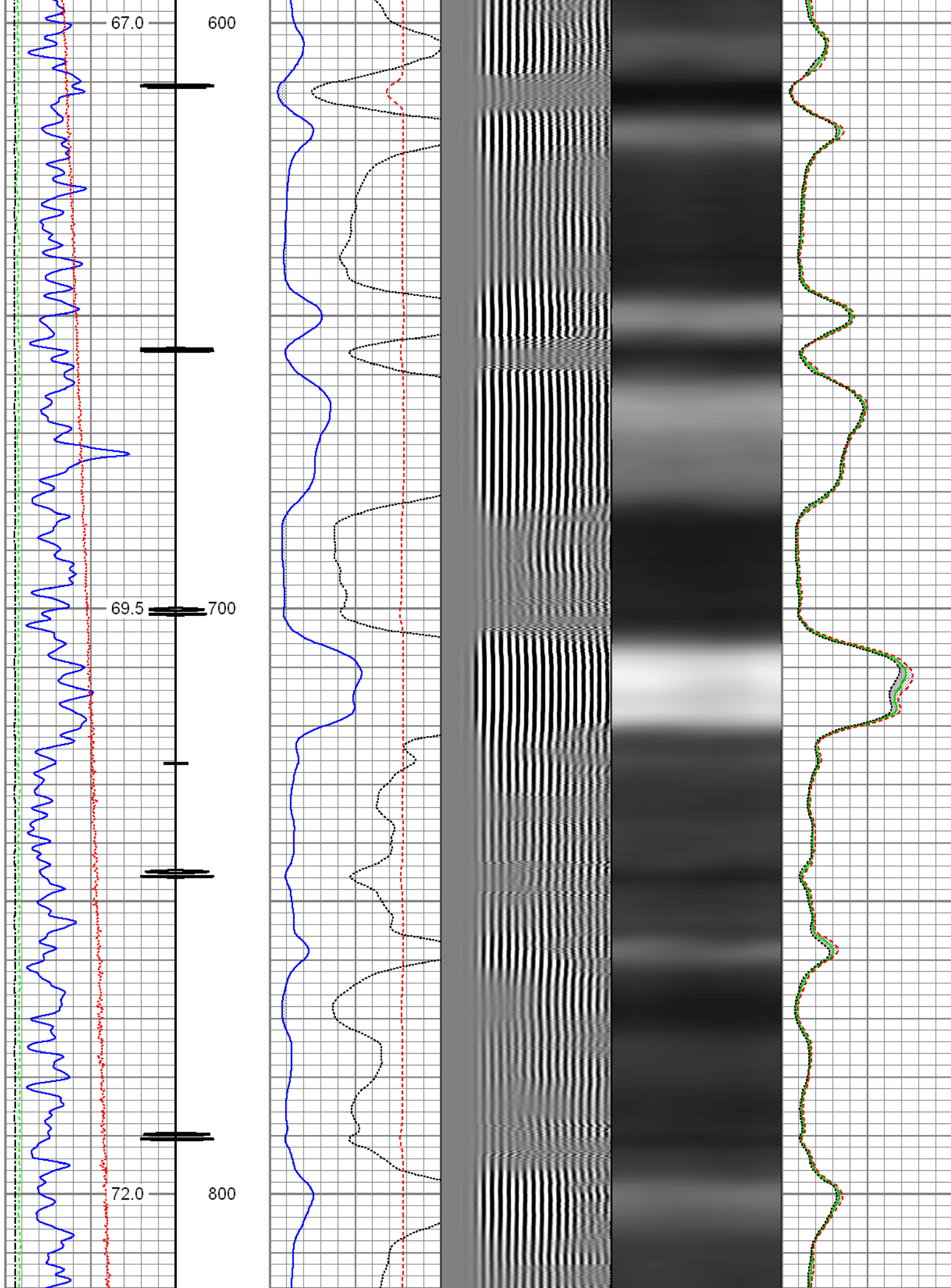
Database File: 0512341331\_anadarko\_joker 1n3-9hz\_09-10-15\_rbl.db  
Dataset Pathname: pass4  
Presentation Format: radii  
Dataset Creation: Thu Sep 10 09:27:32 2015 by Log 7.0 B1  
Charted by: Depth in Feet scaled 1:240

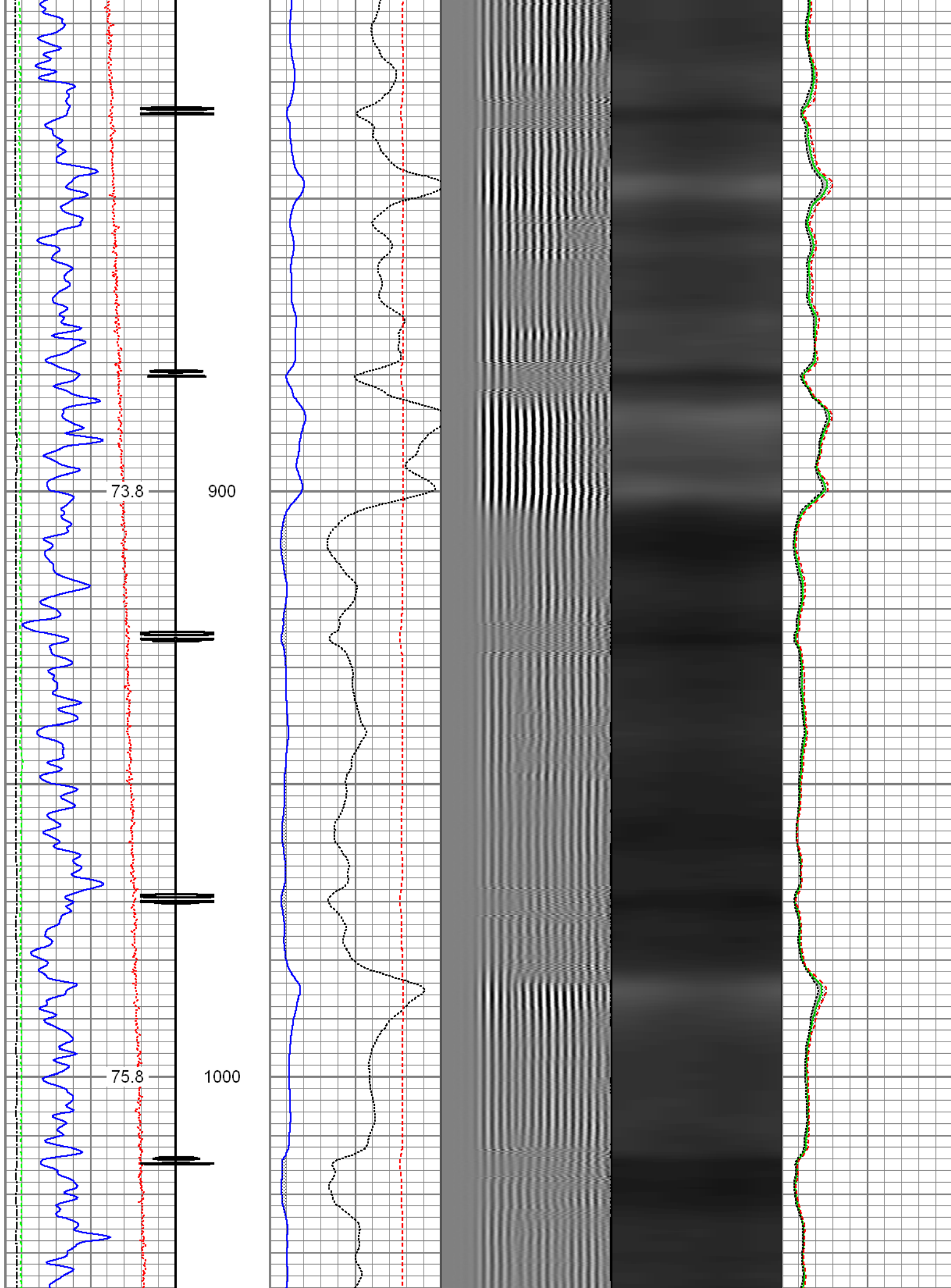
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150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

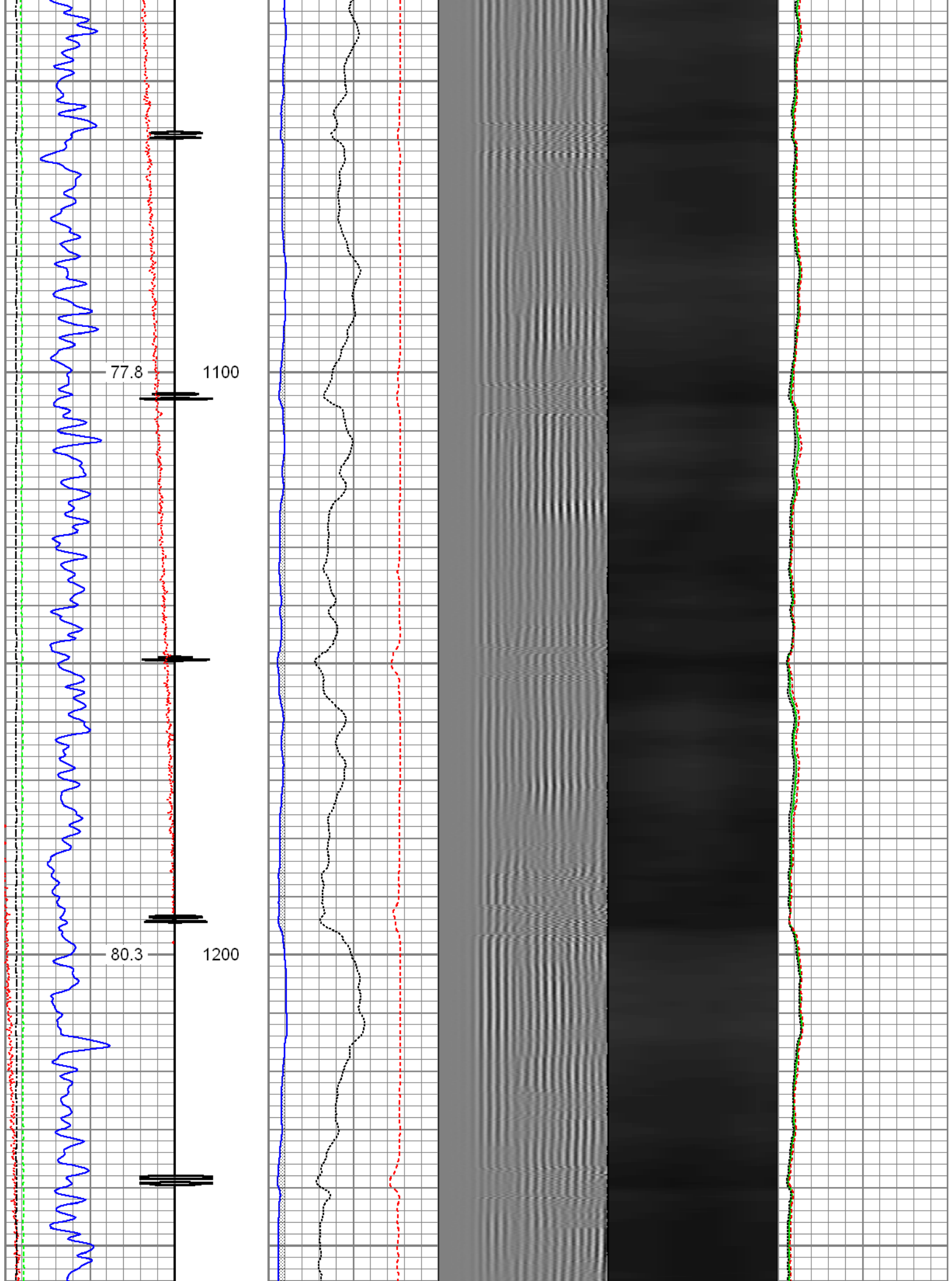


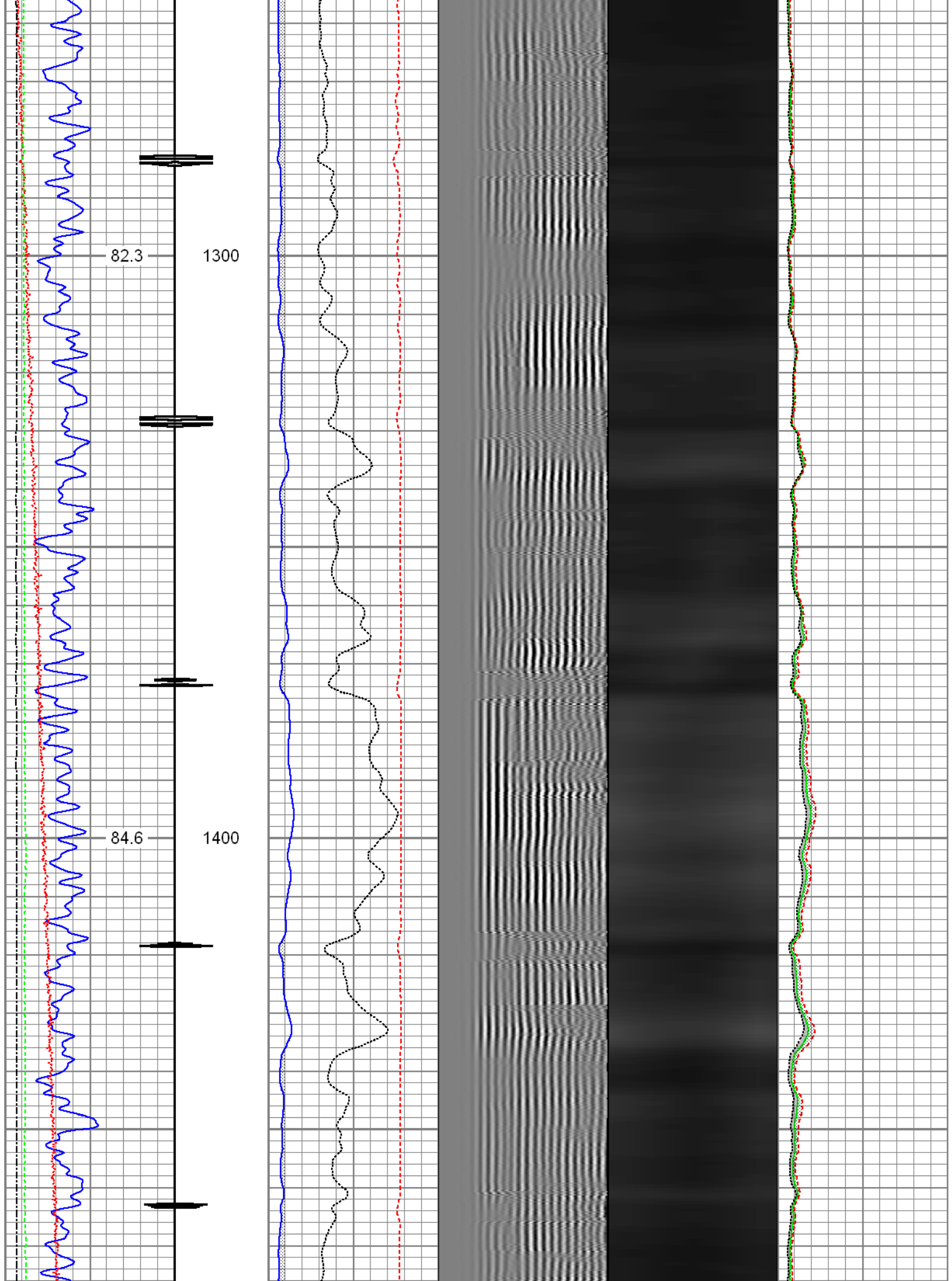


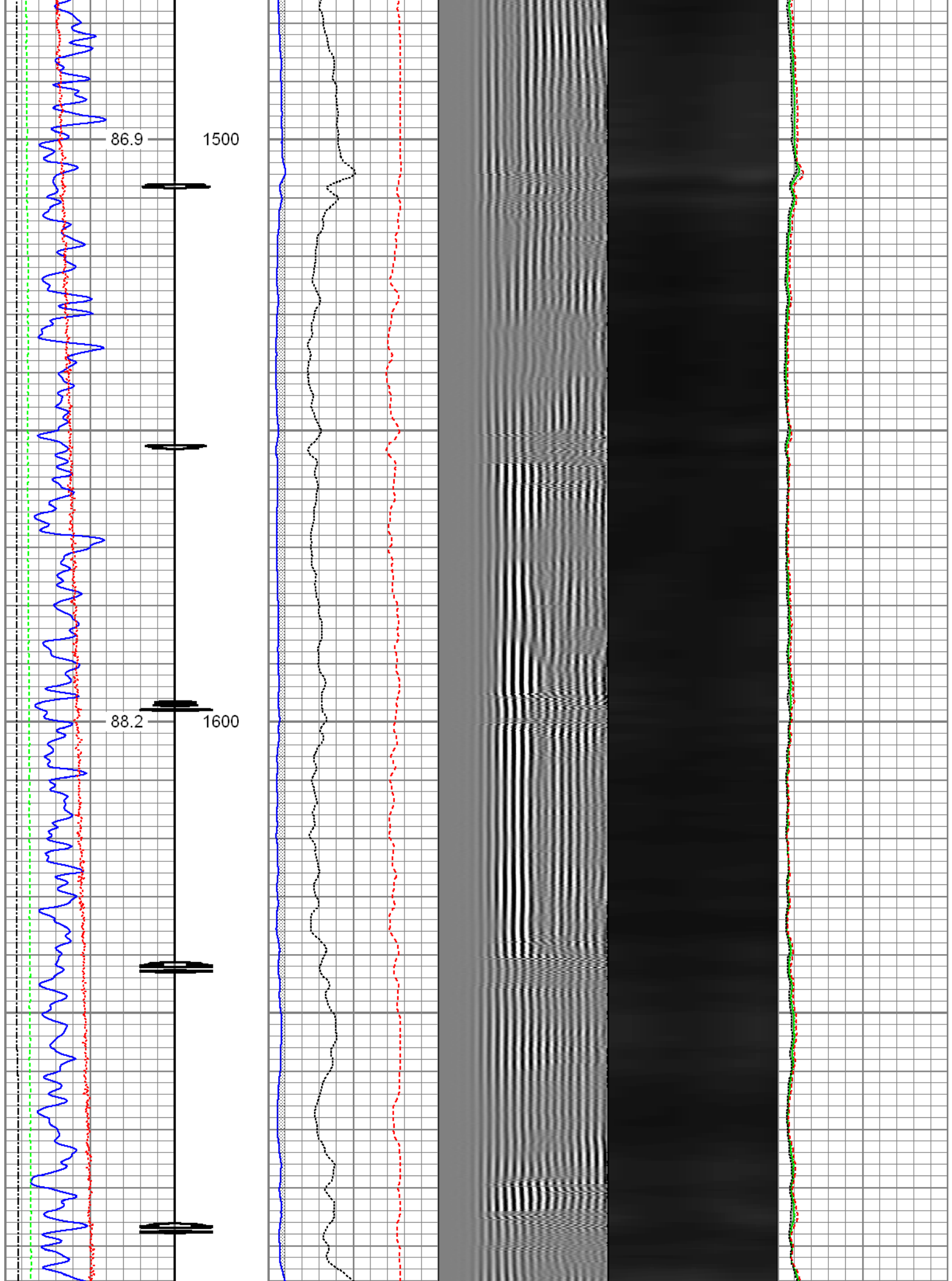


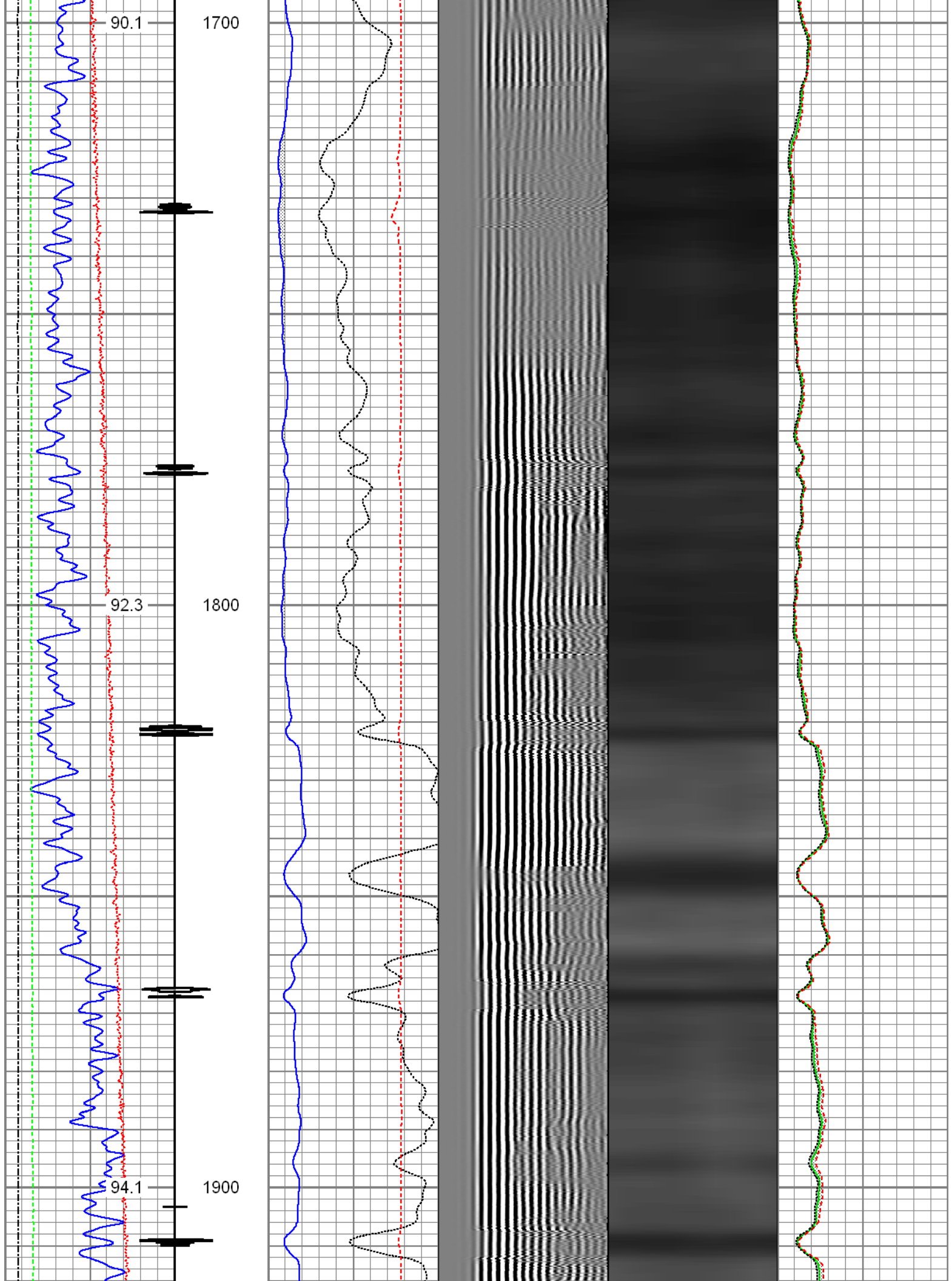


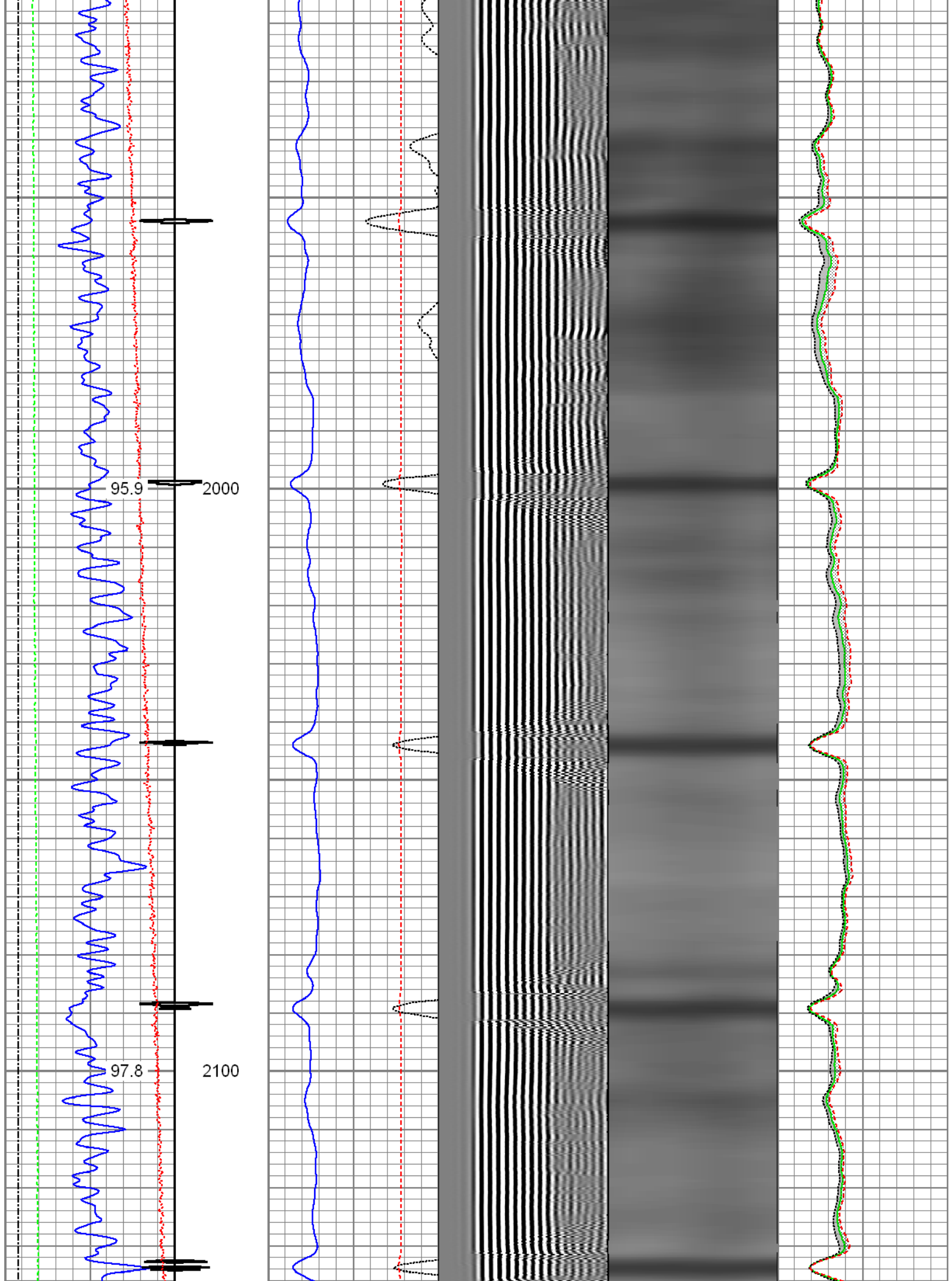


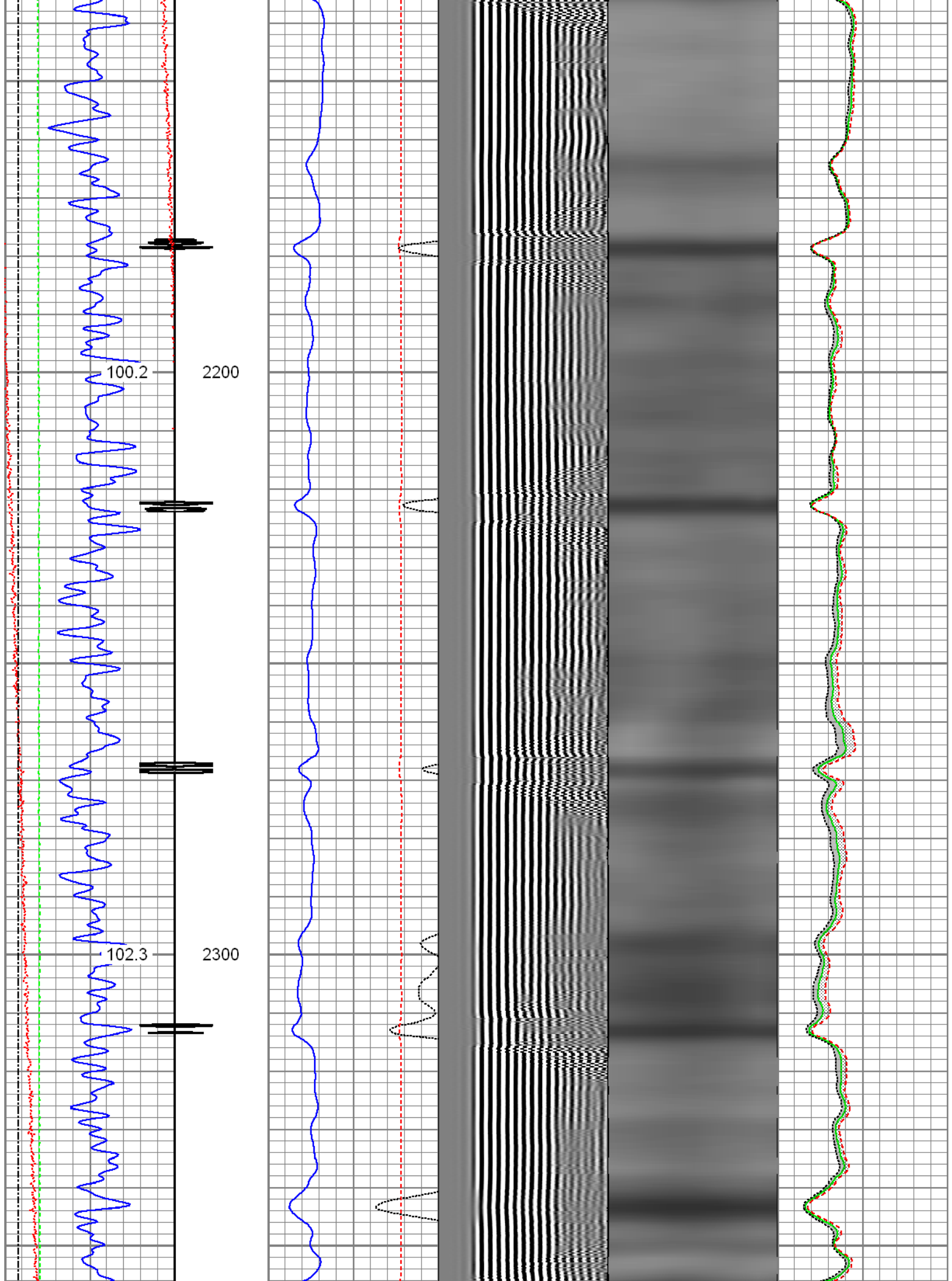


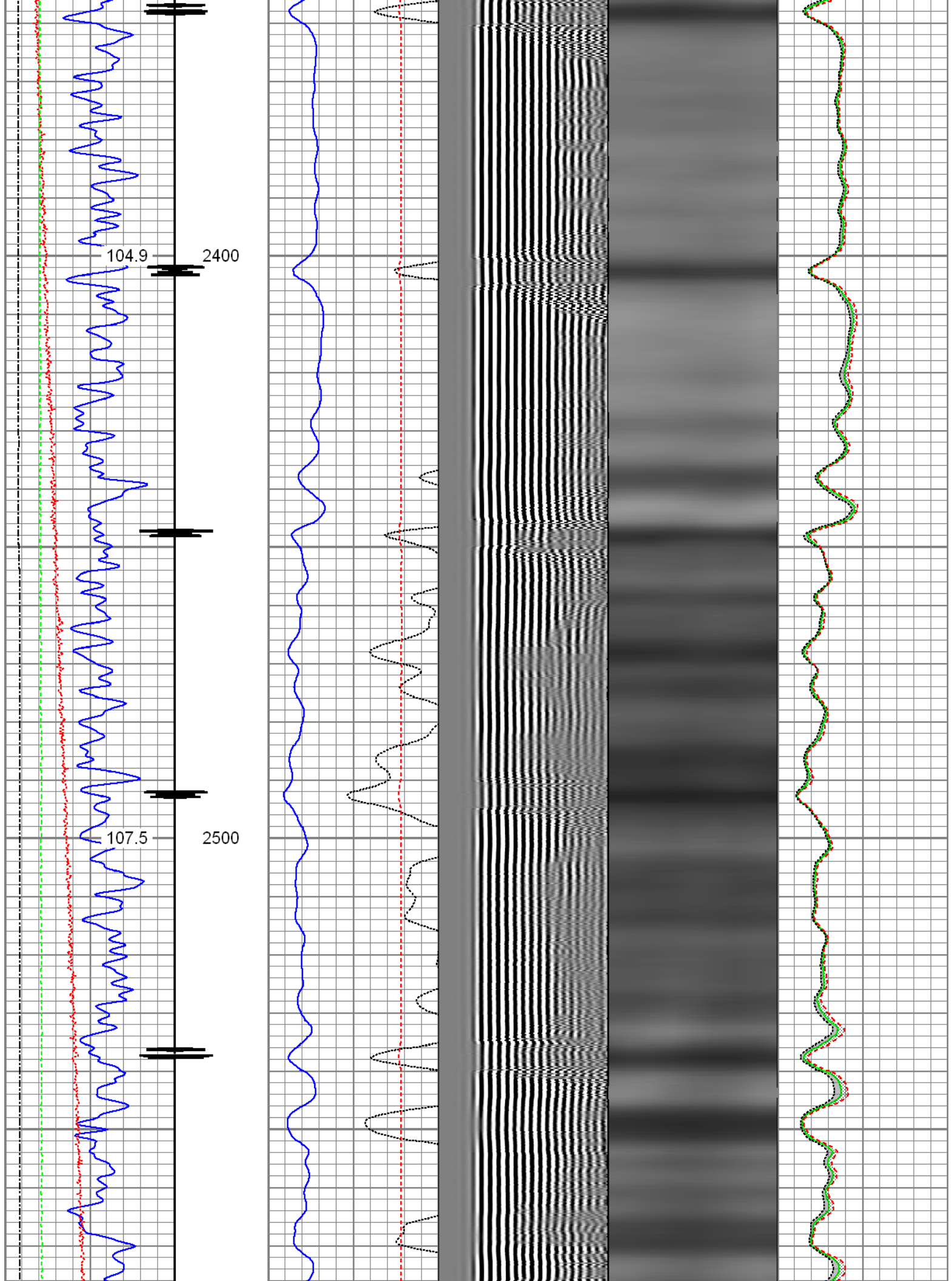


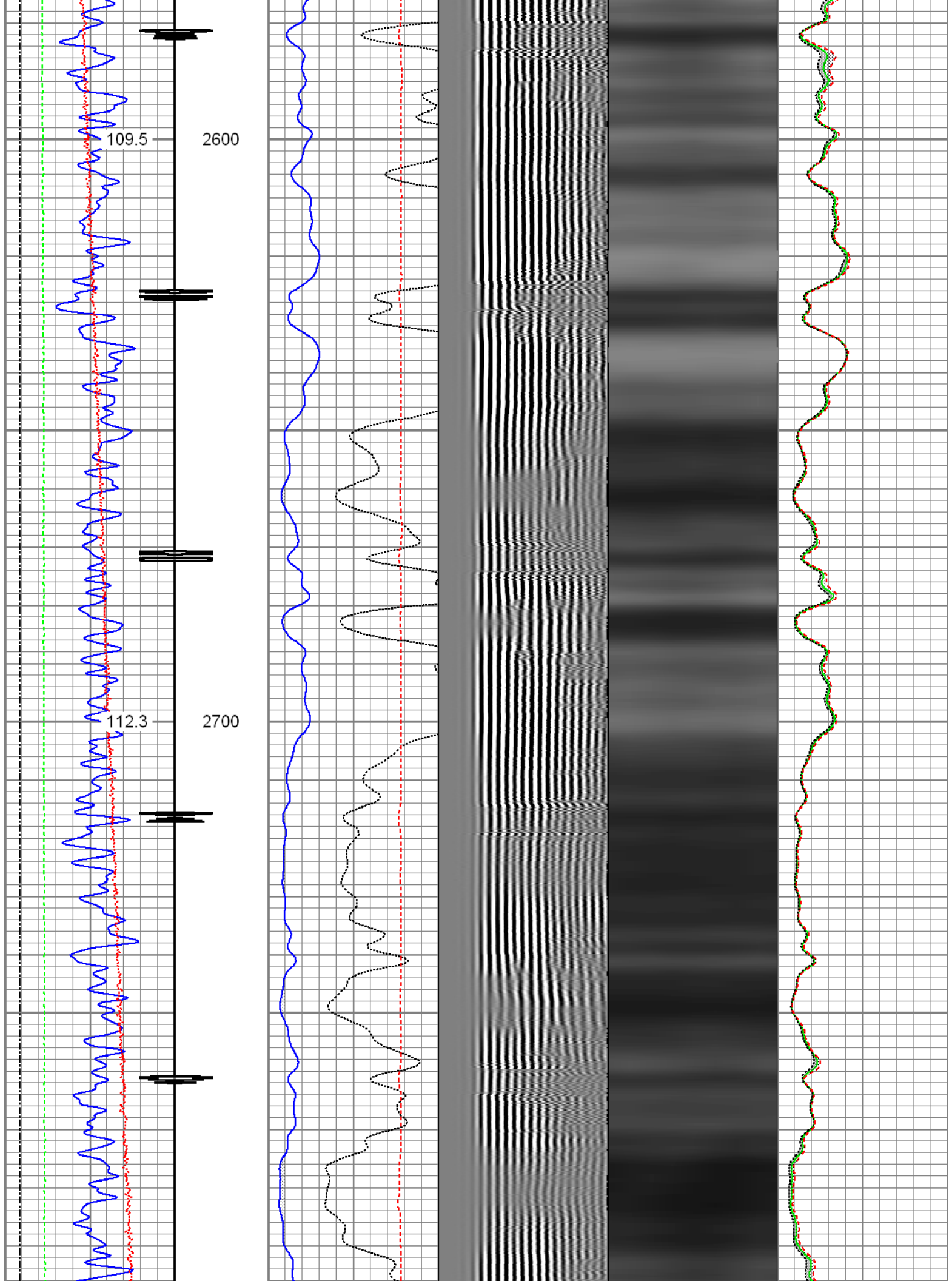


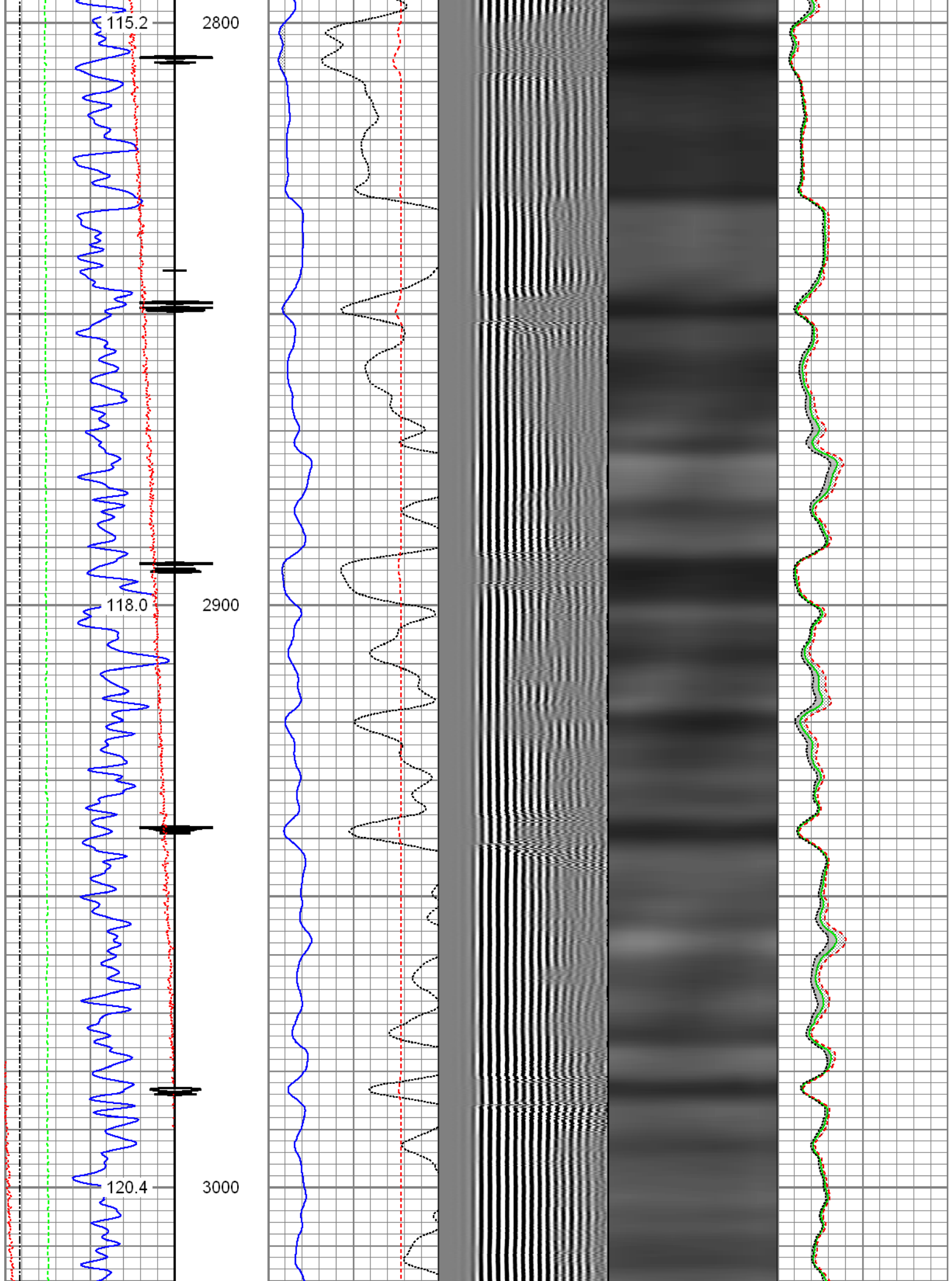


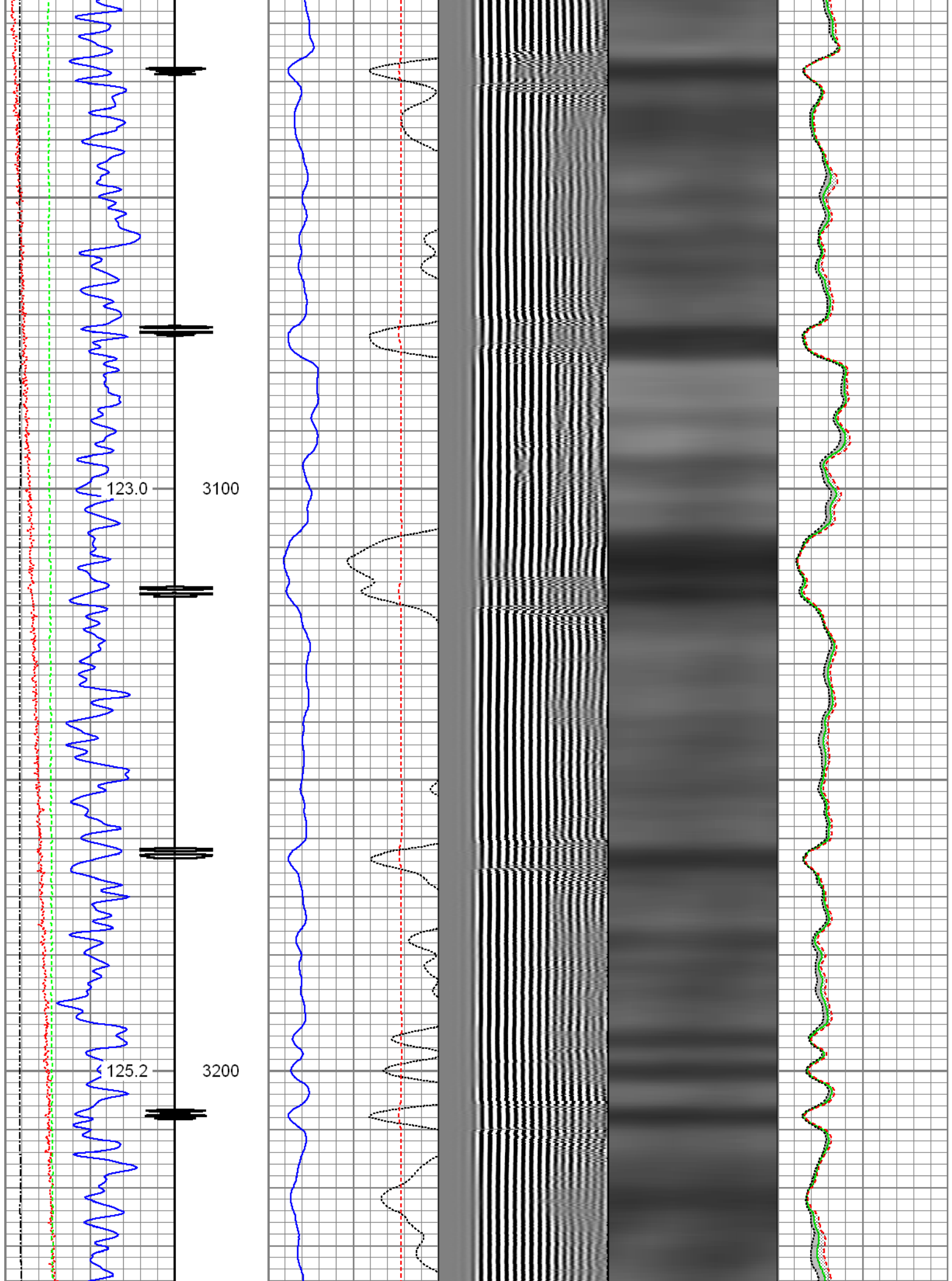


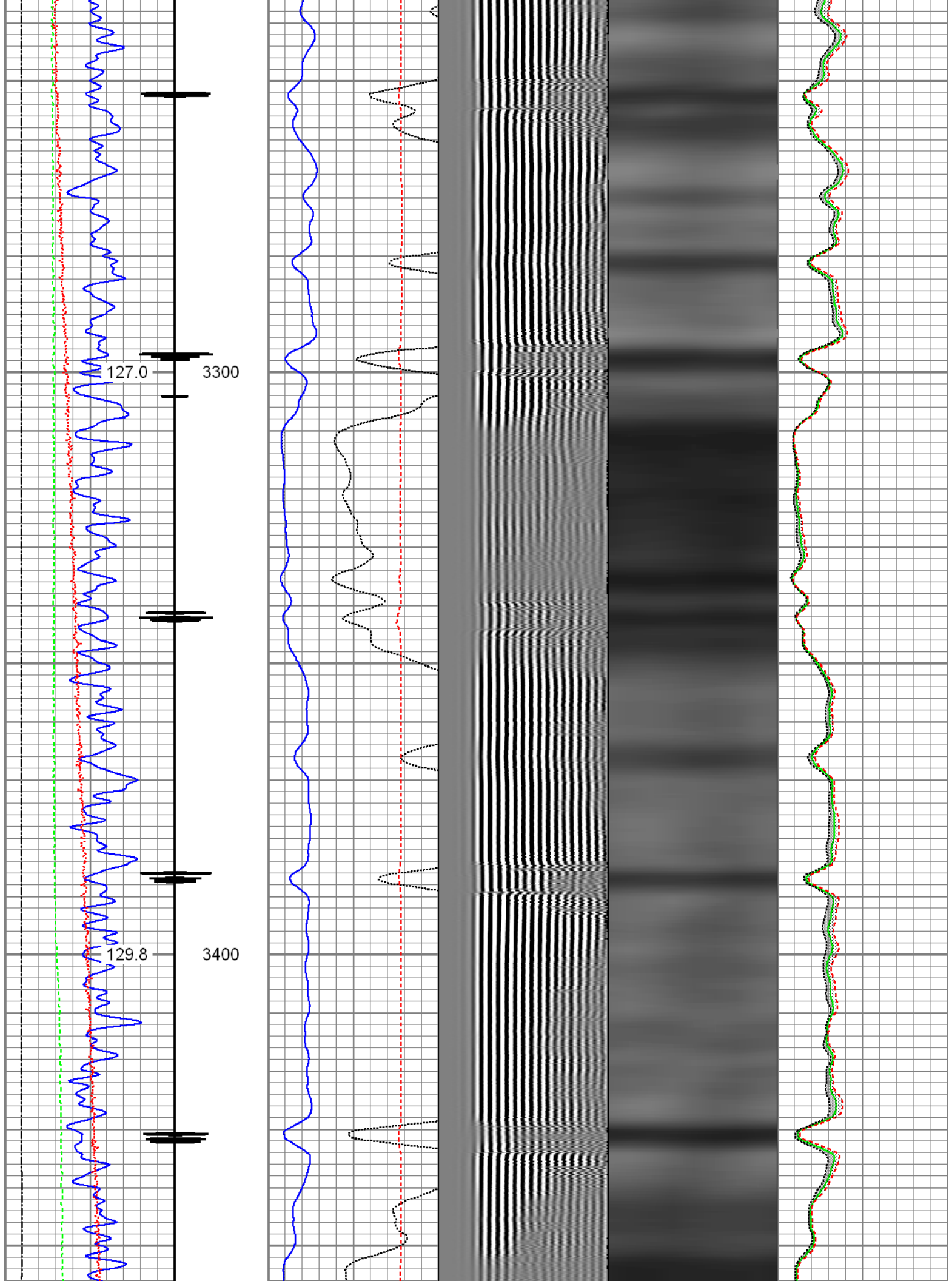


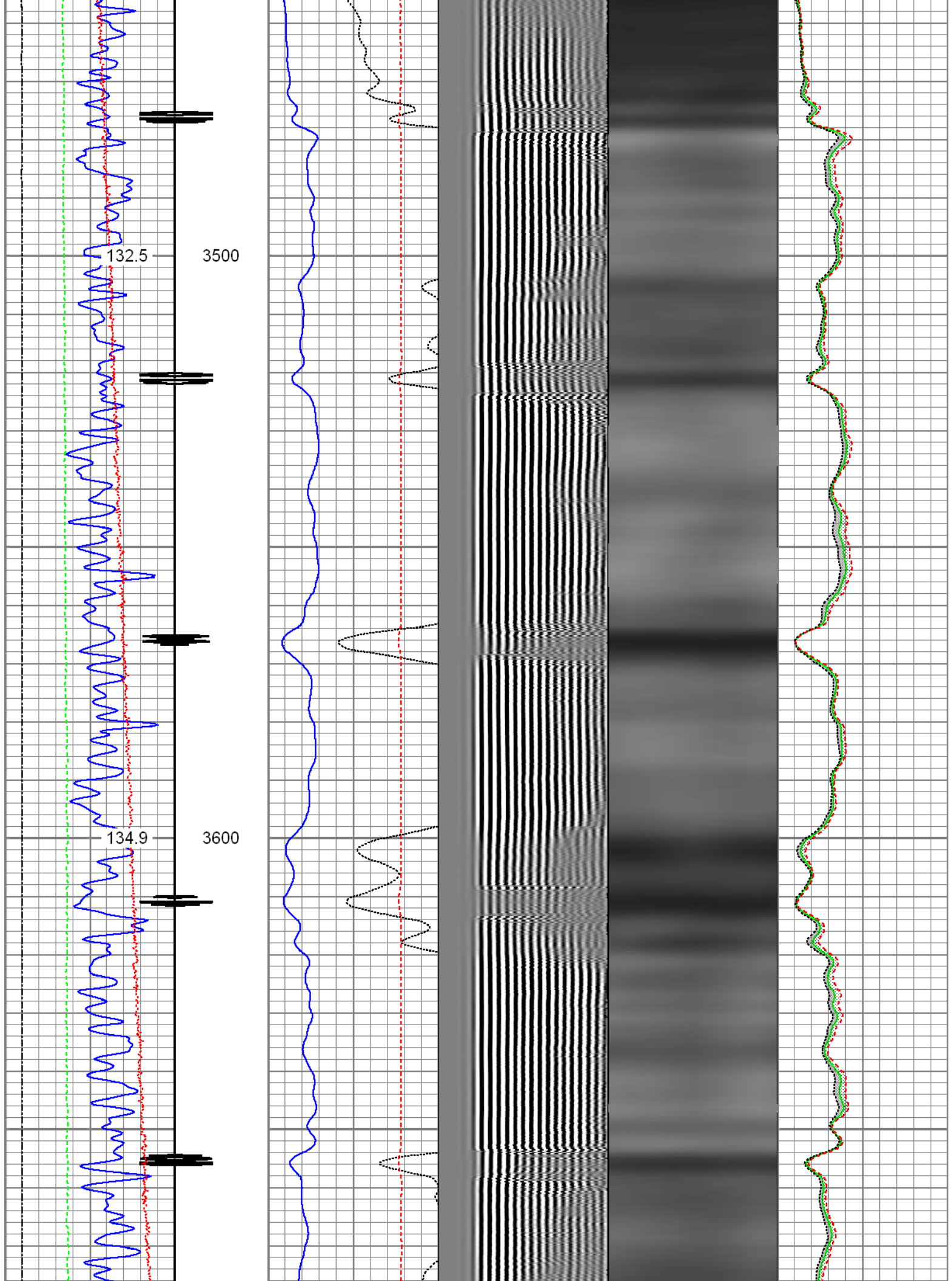


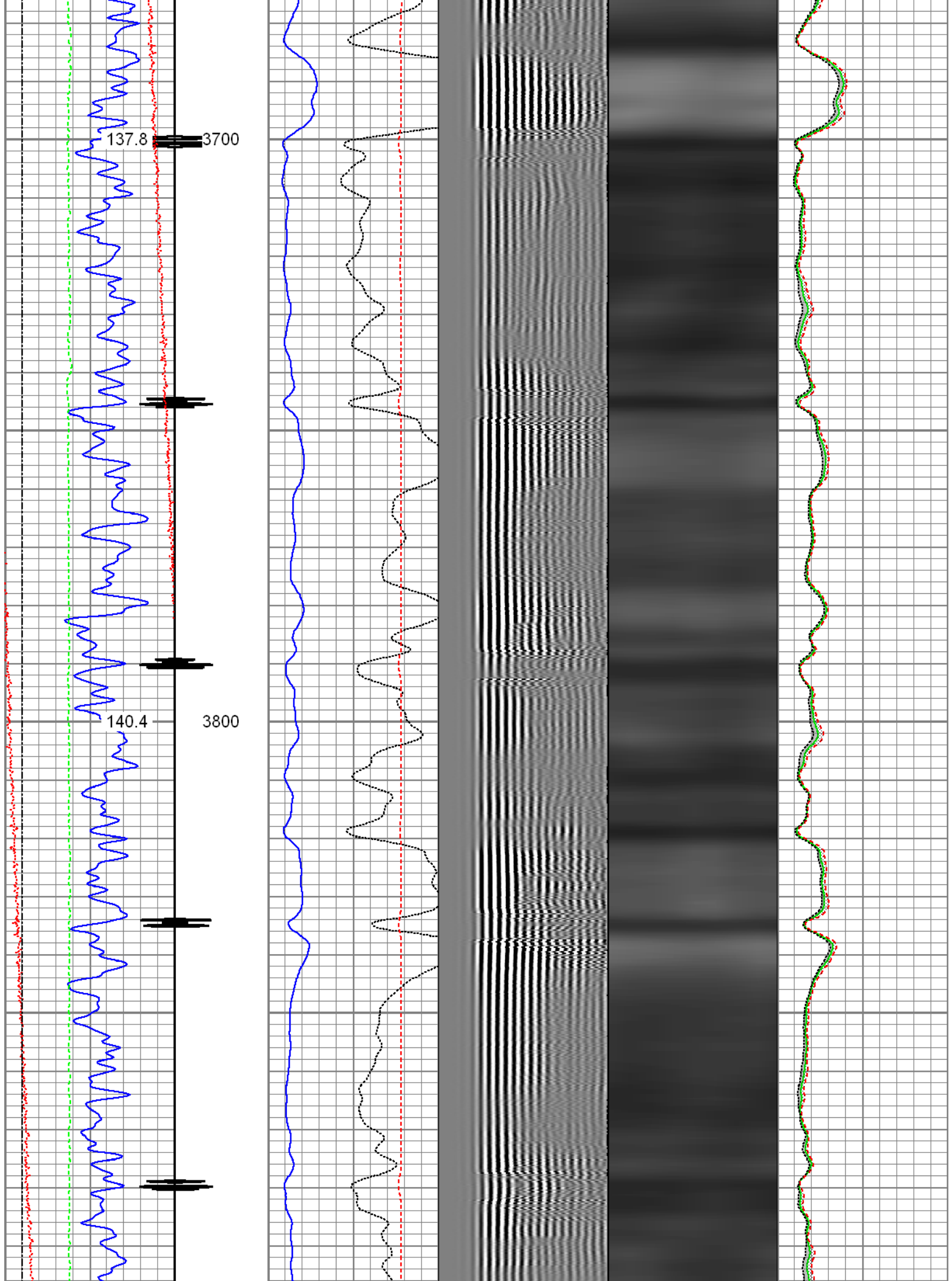


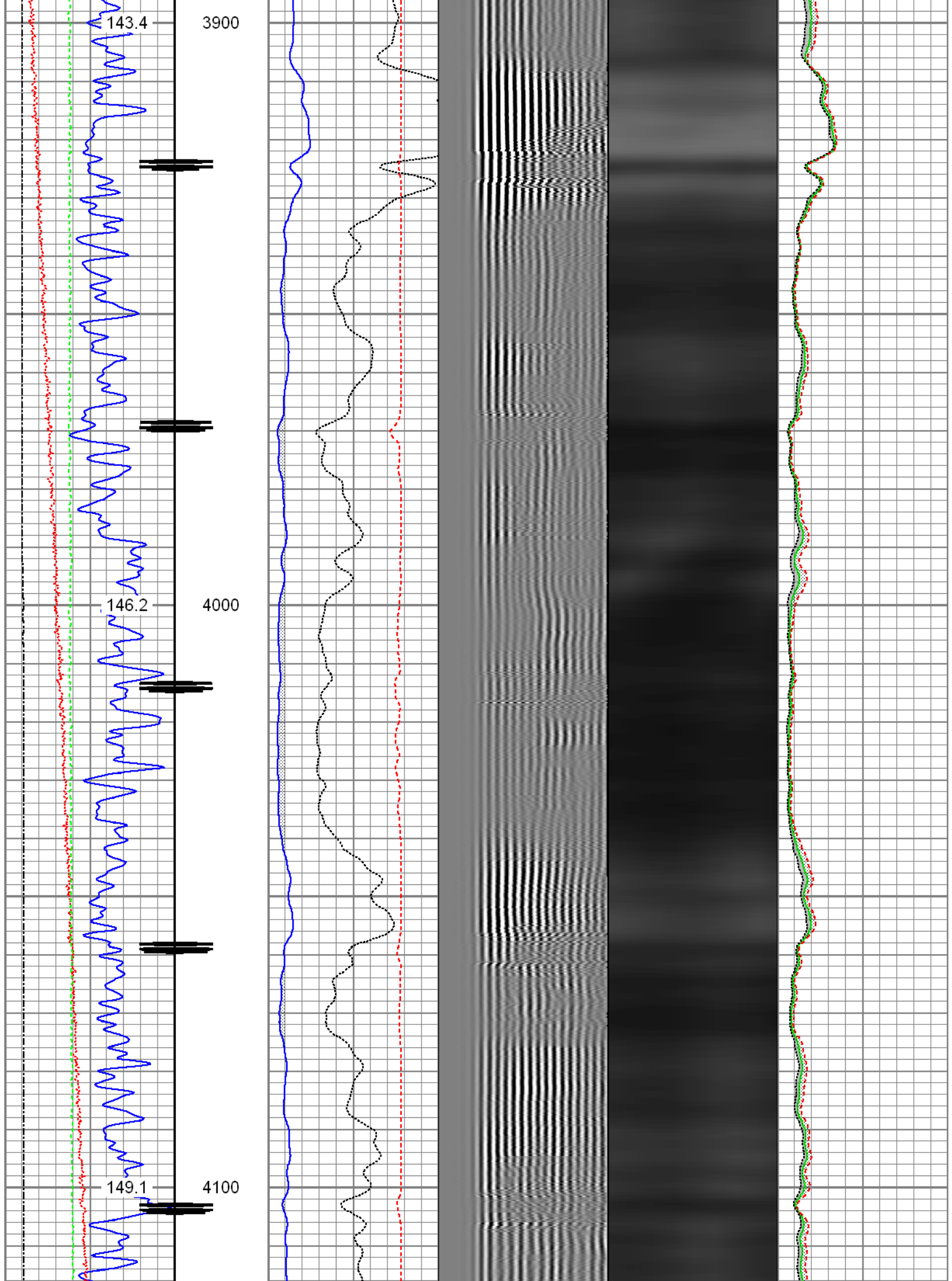


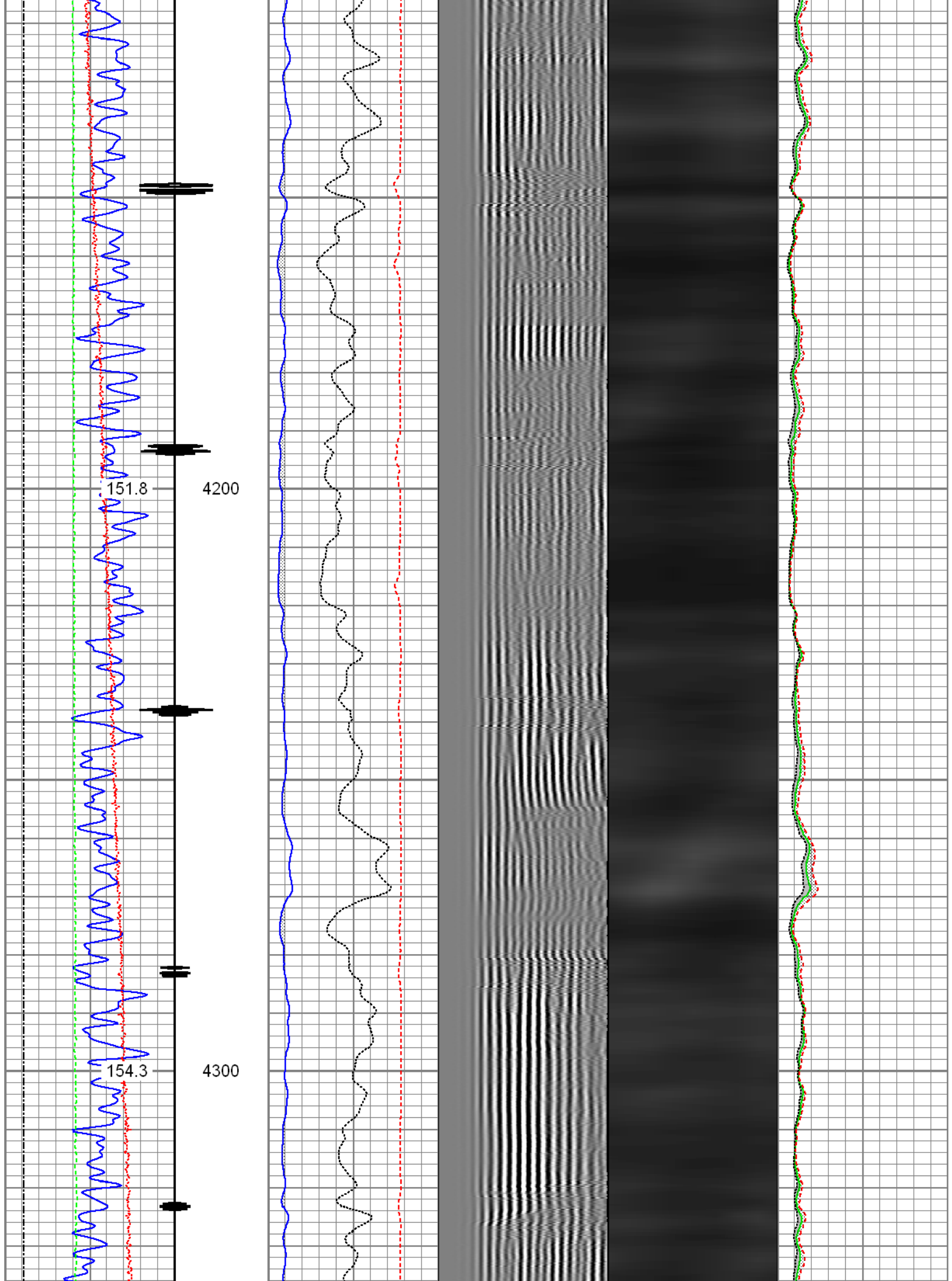


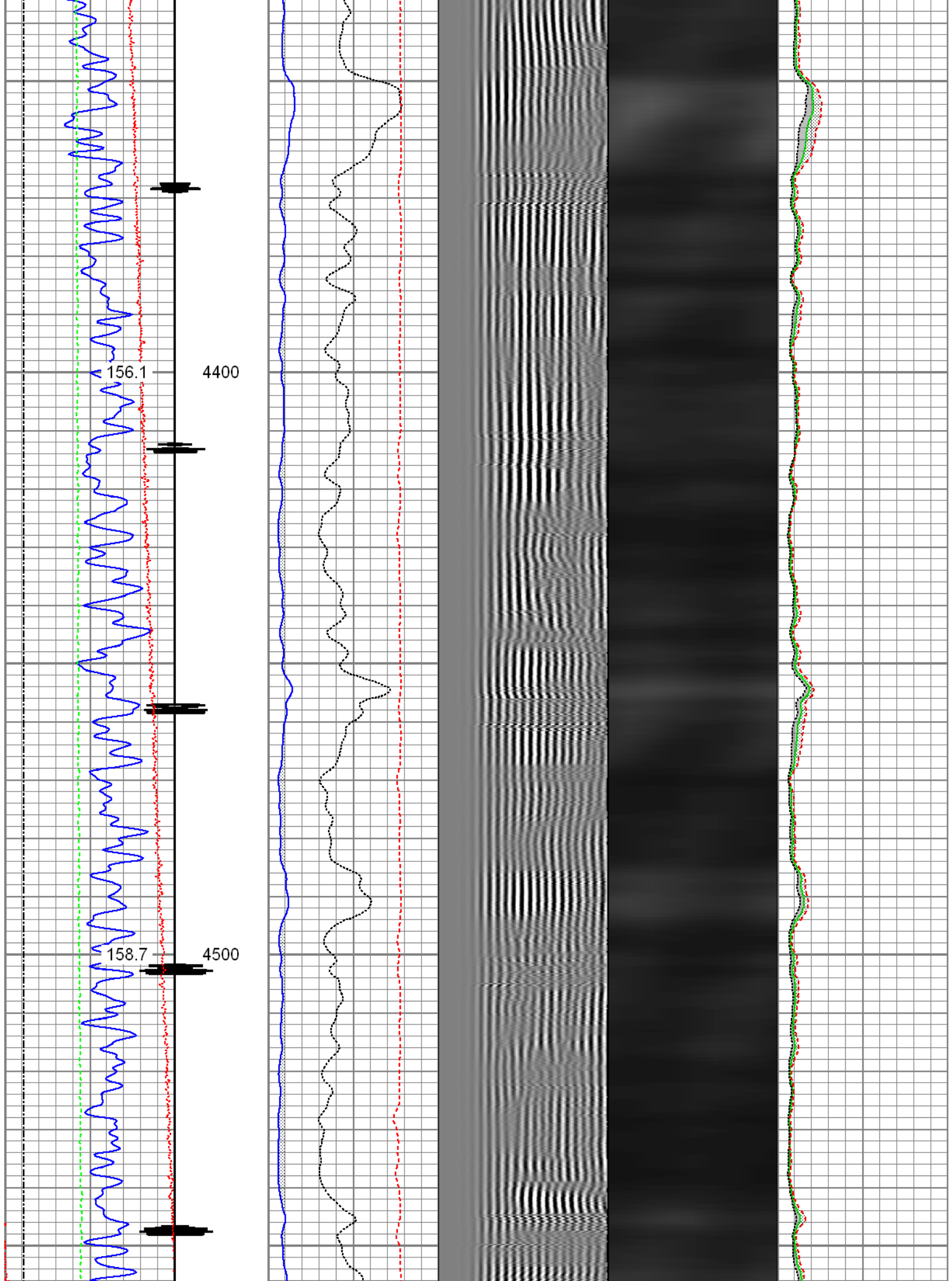


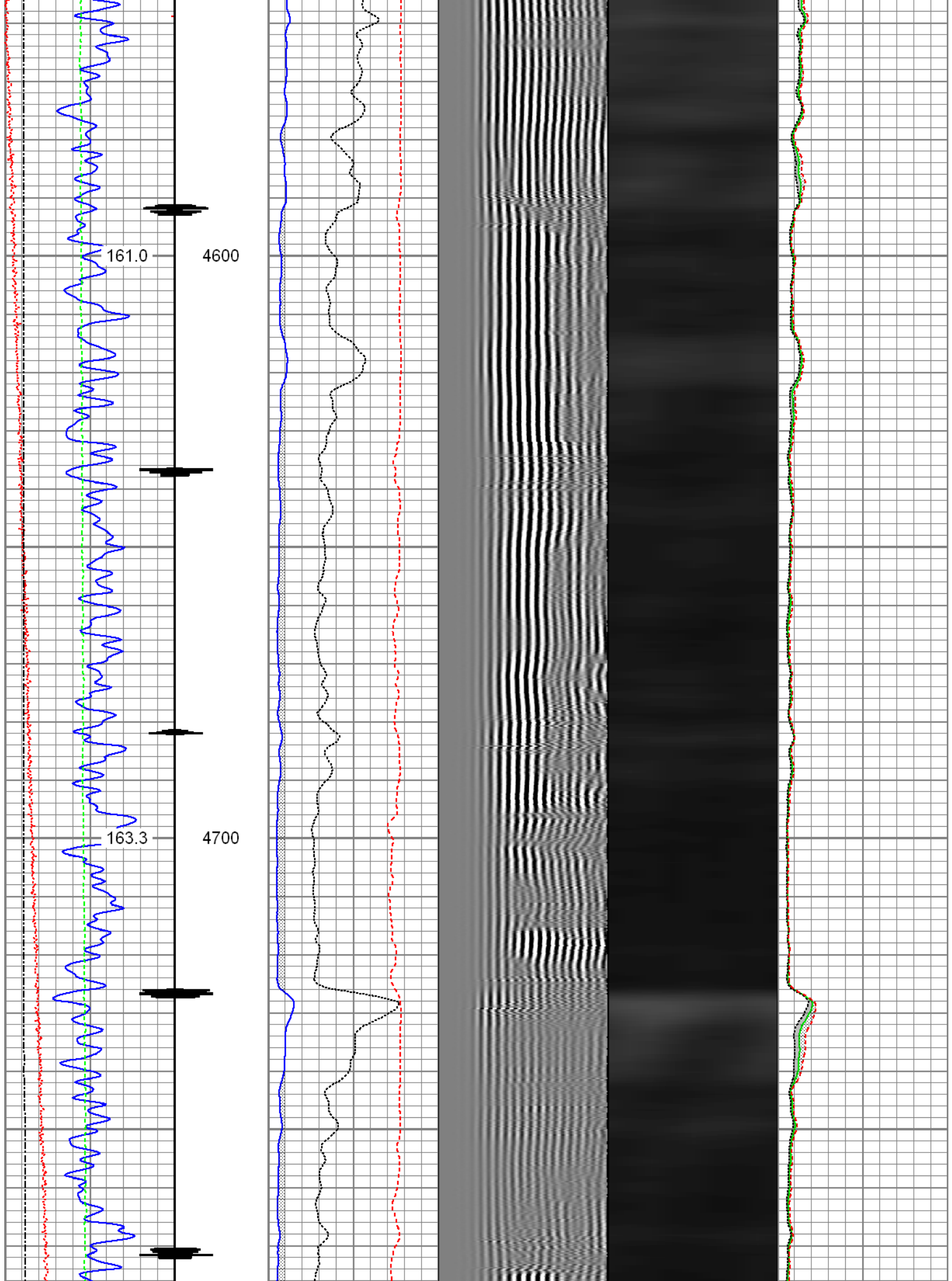


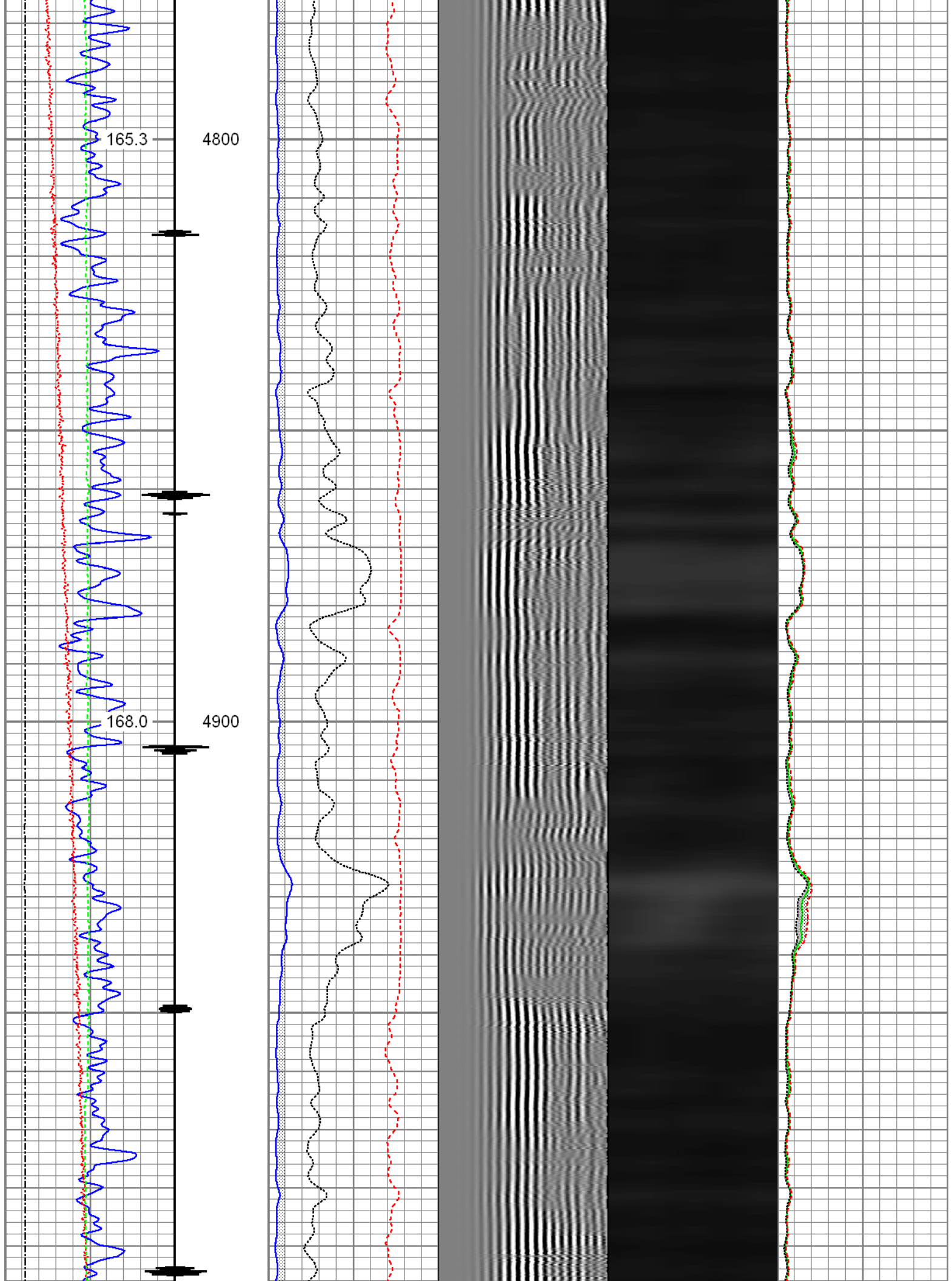


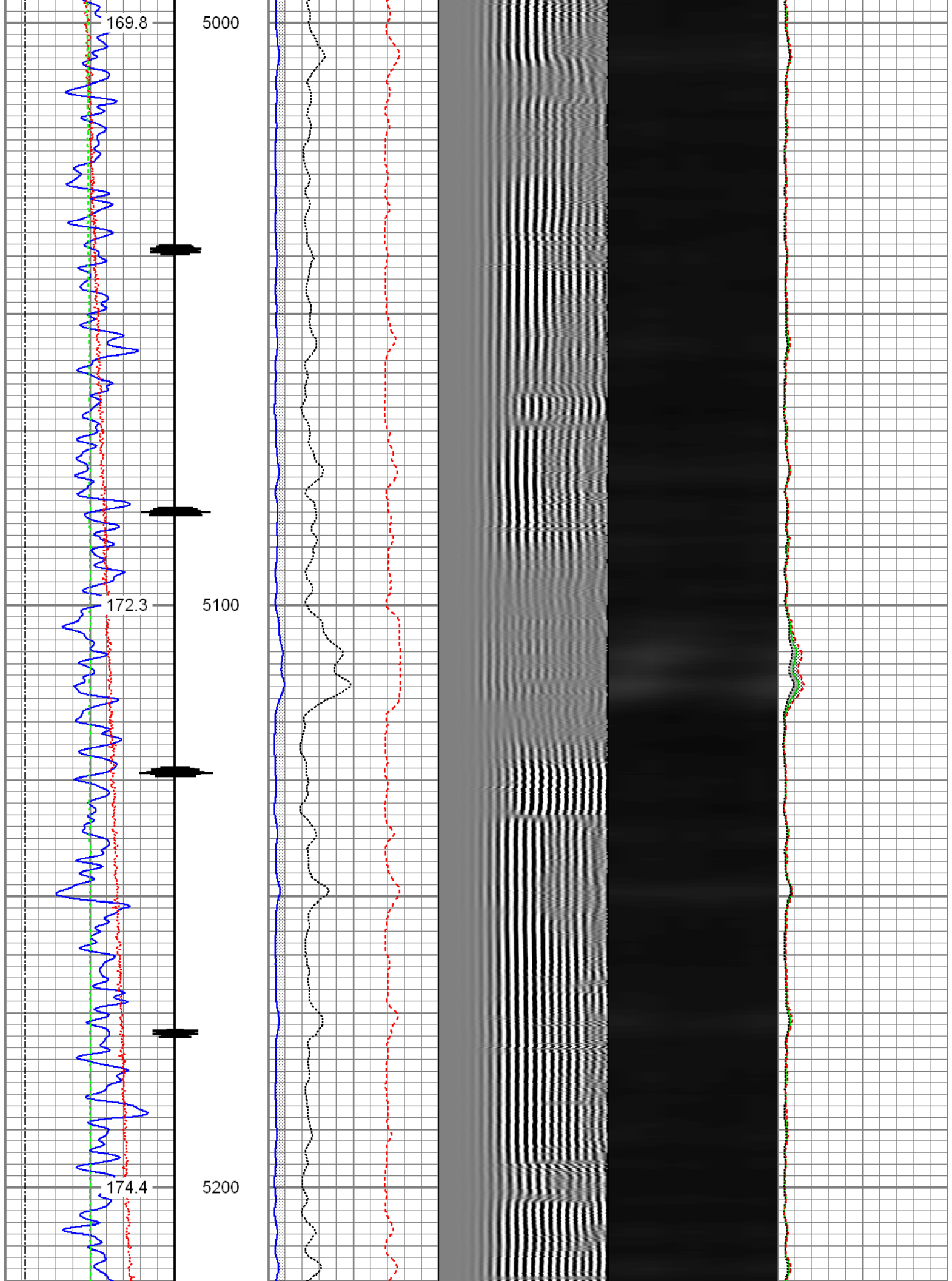


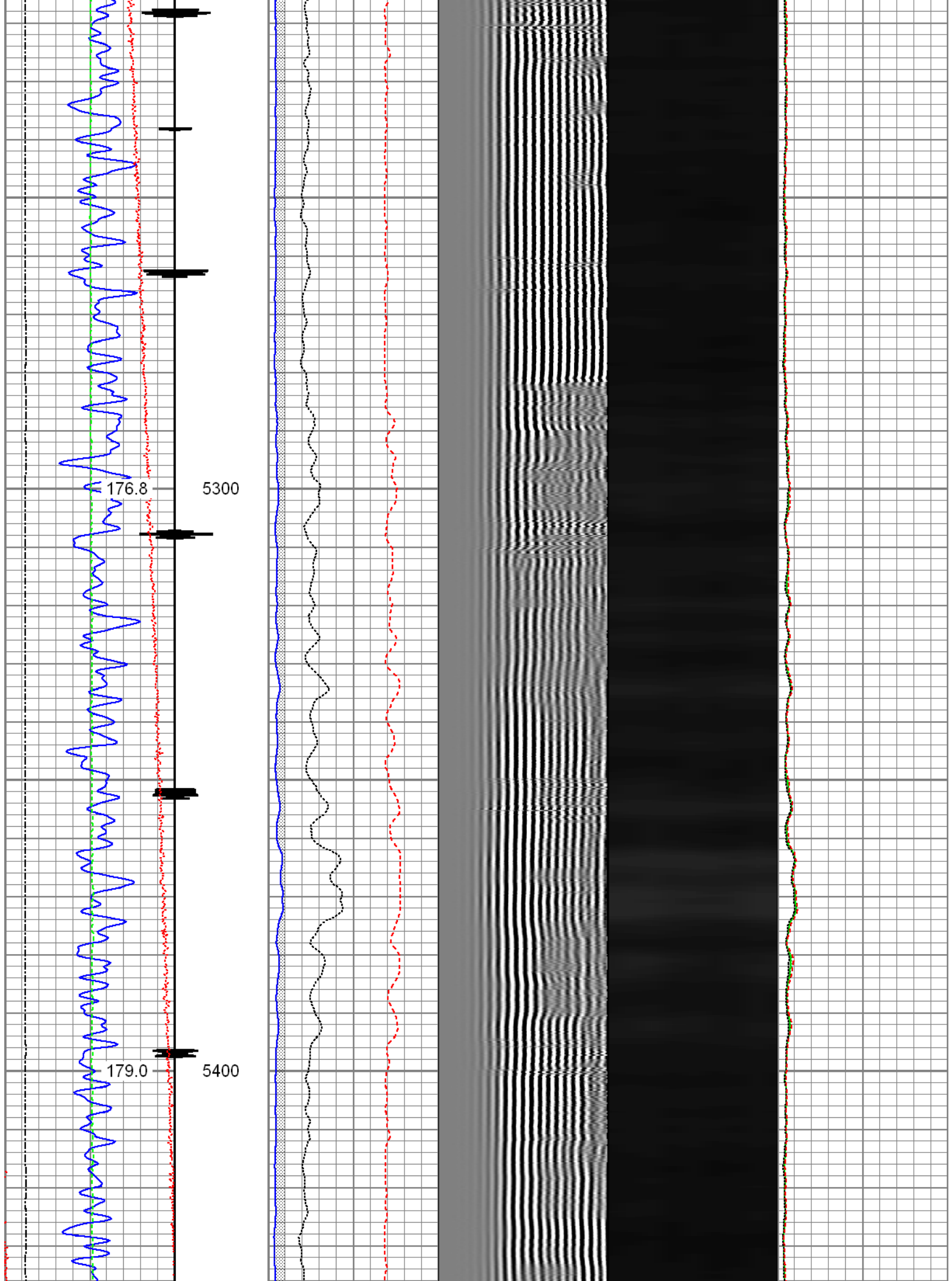


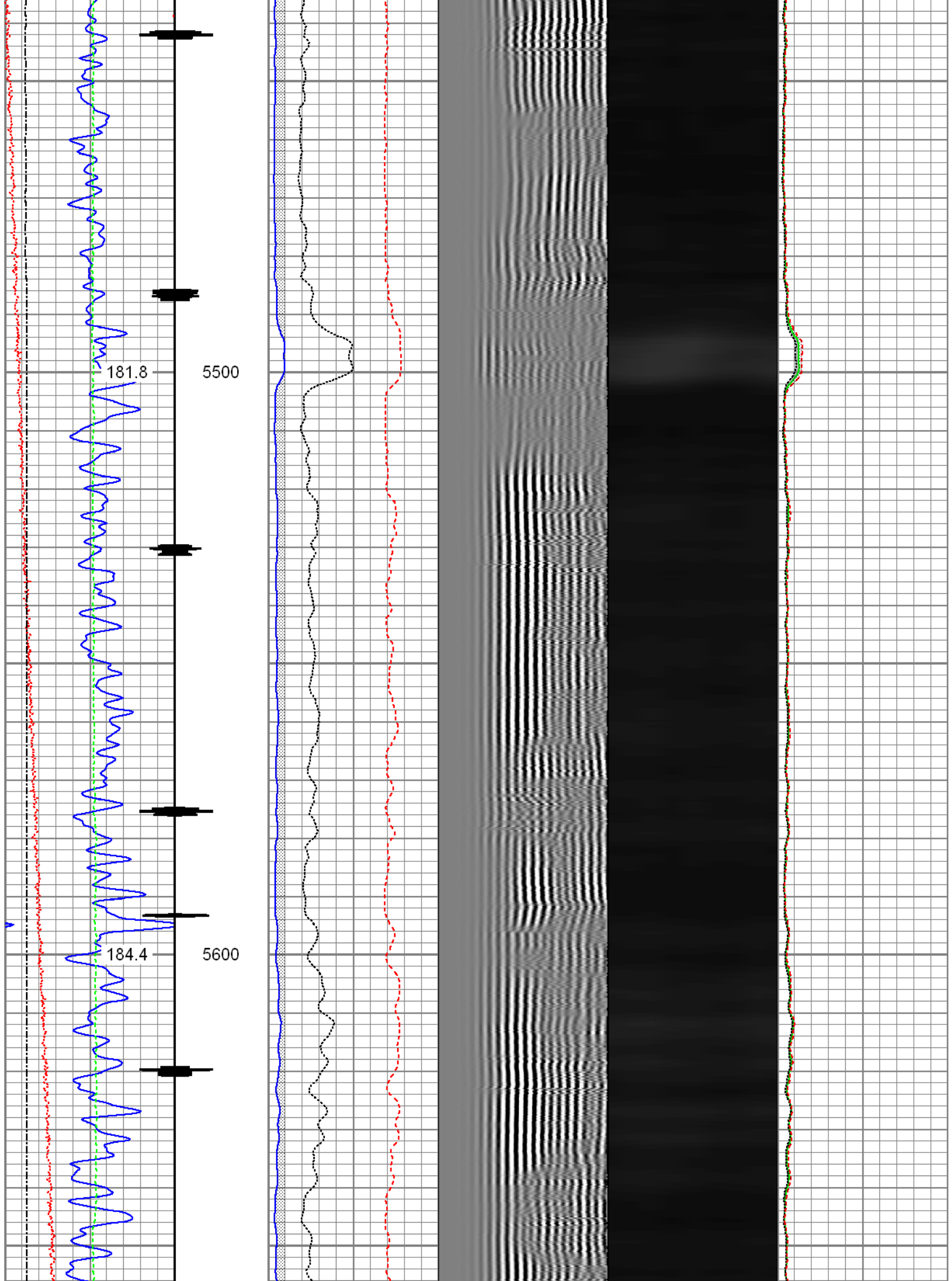


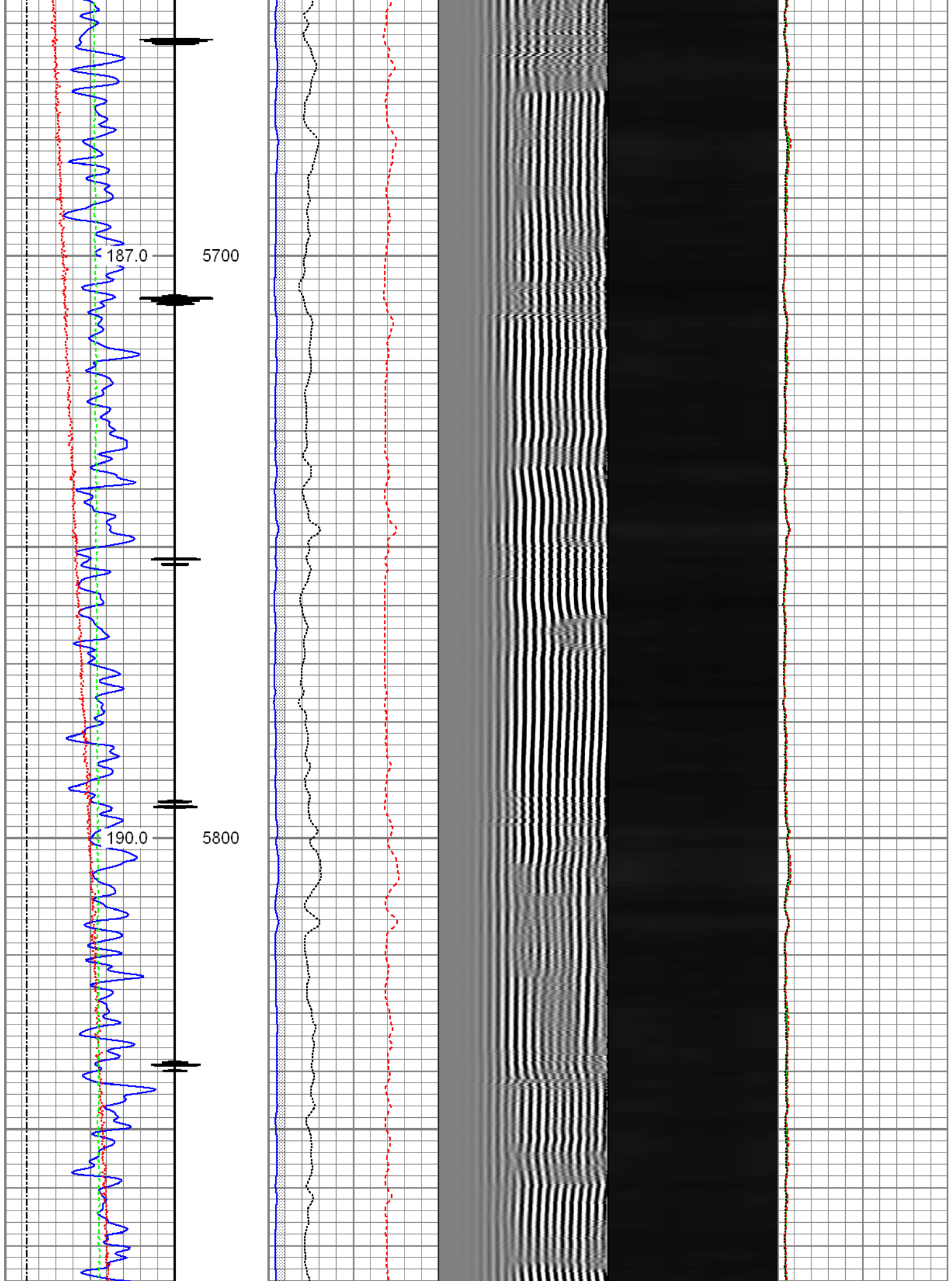


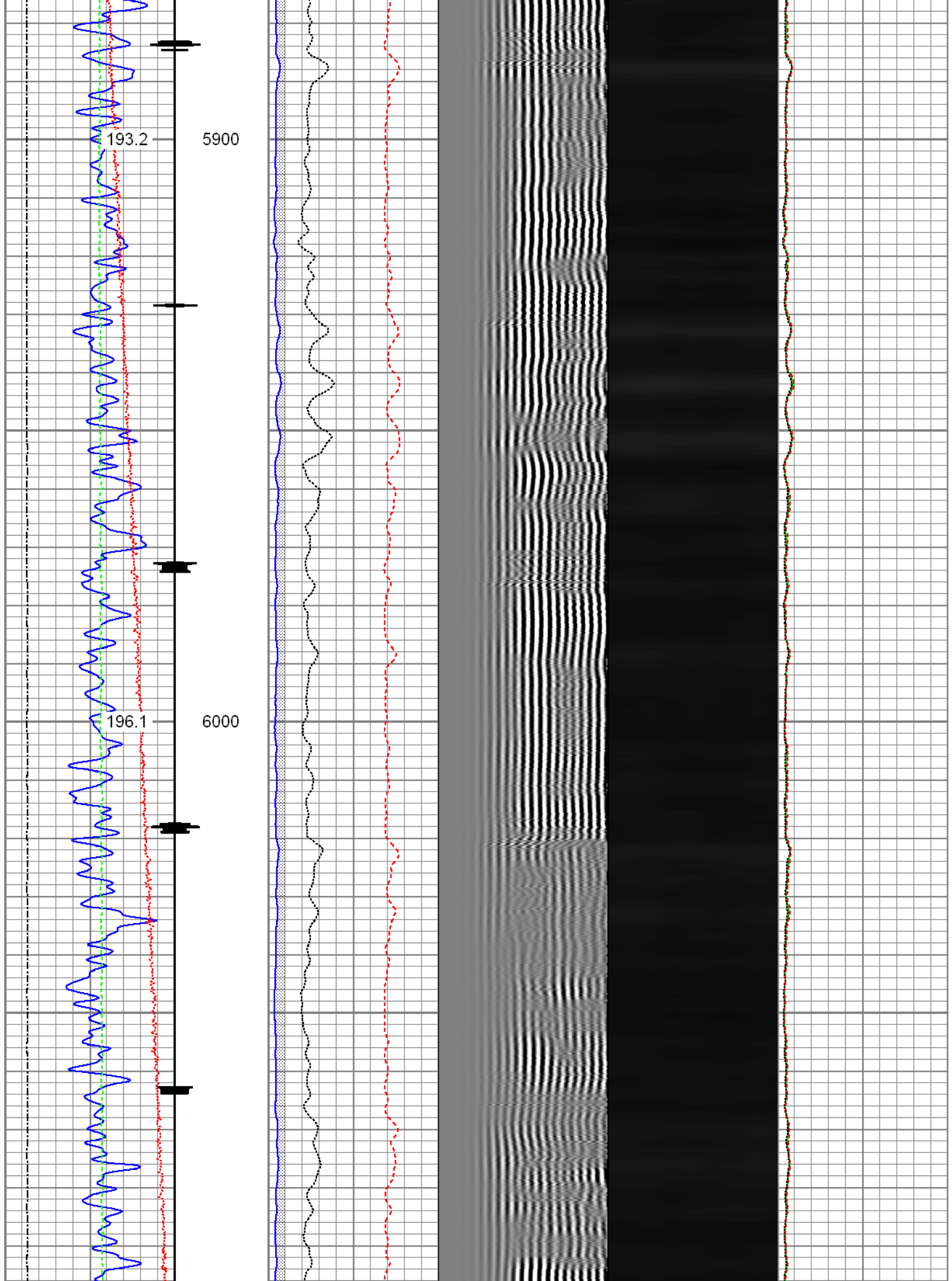


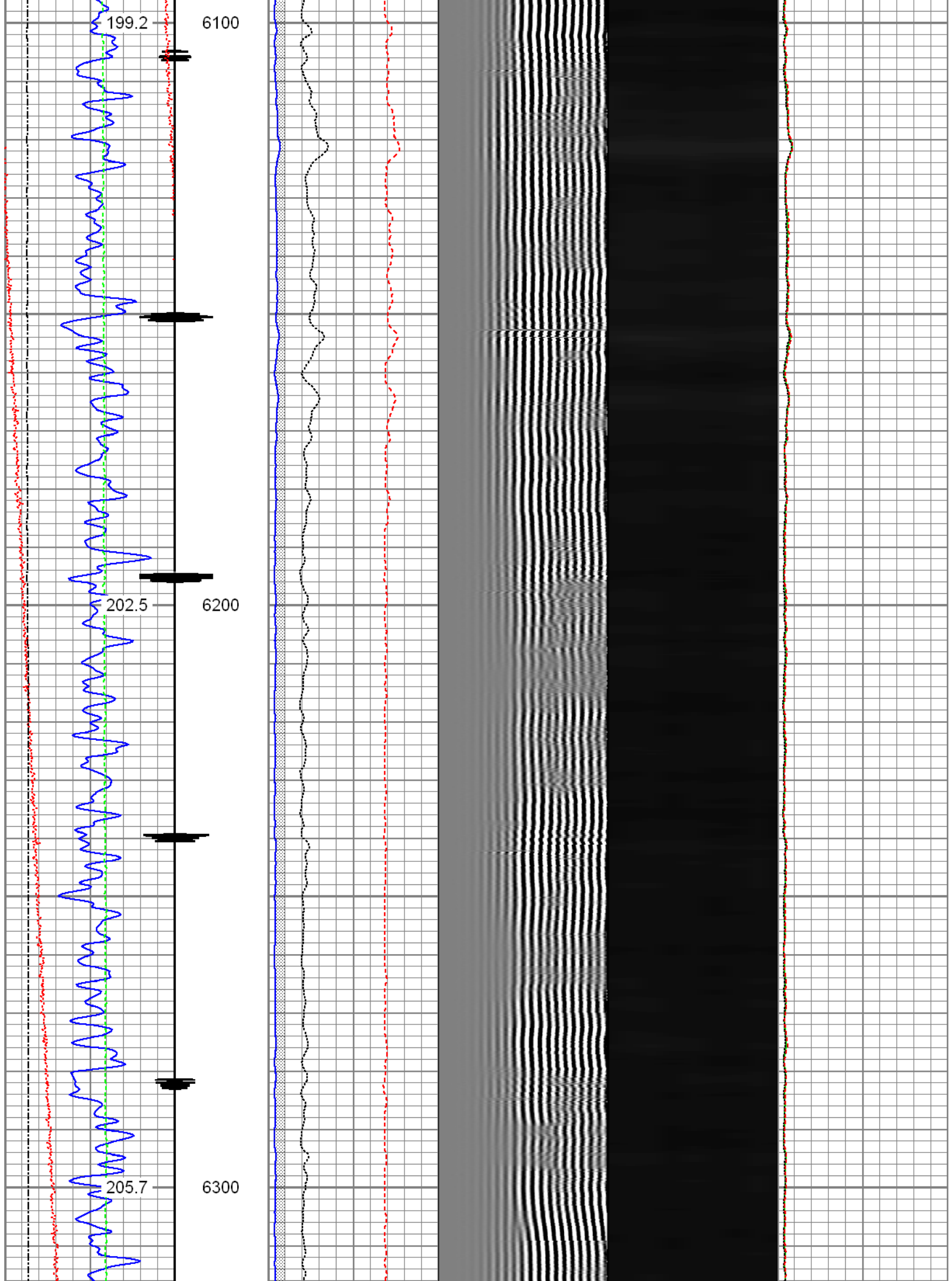


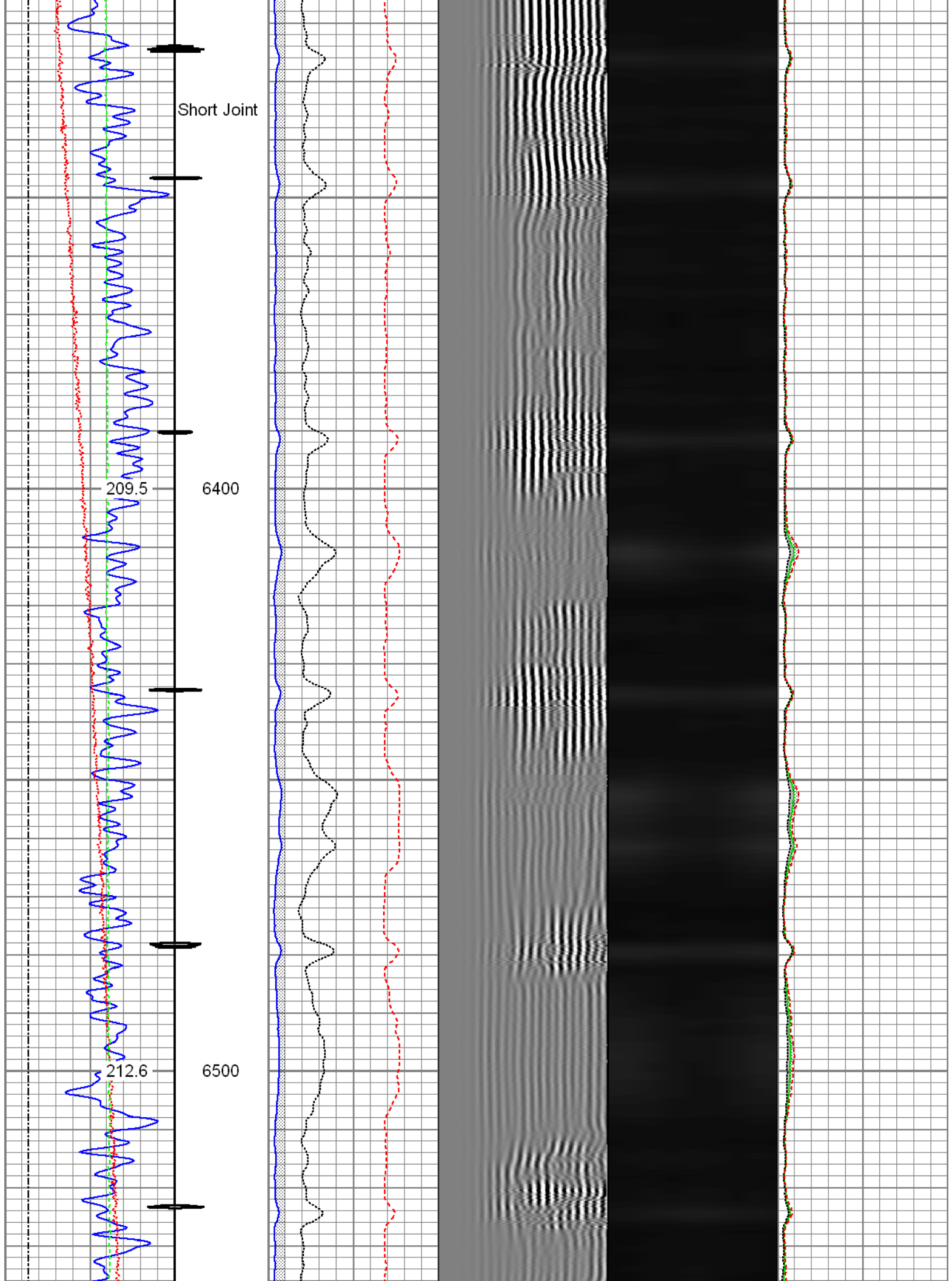


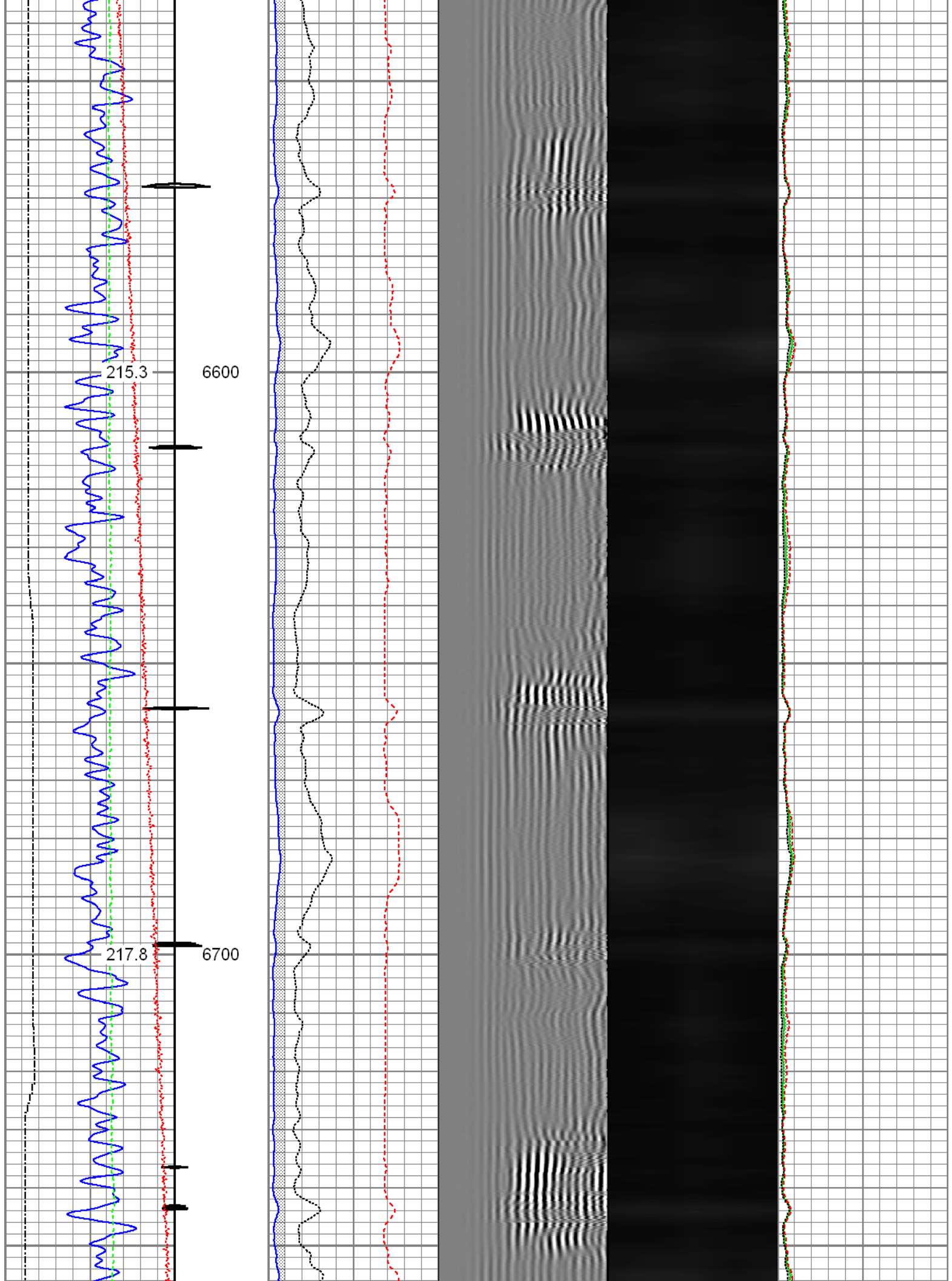


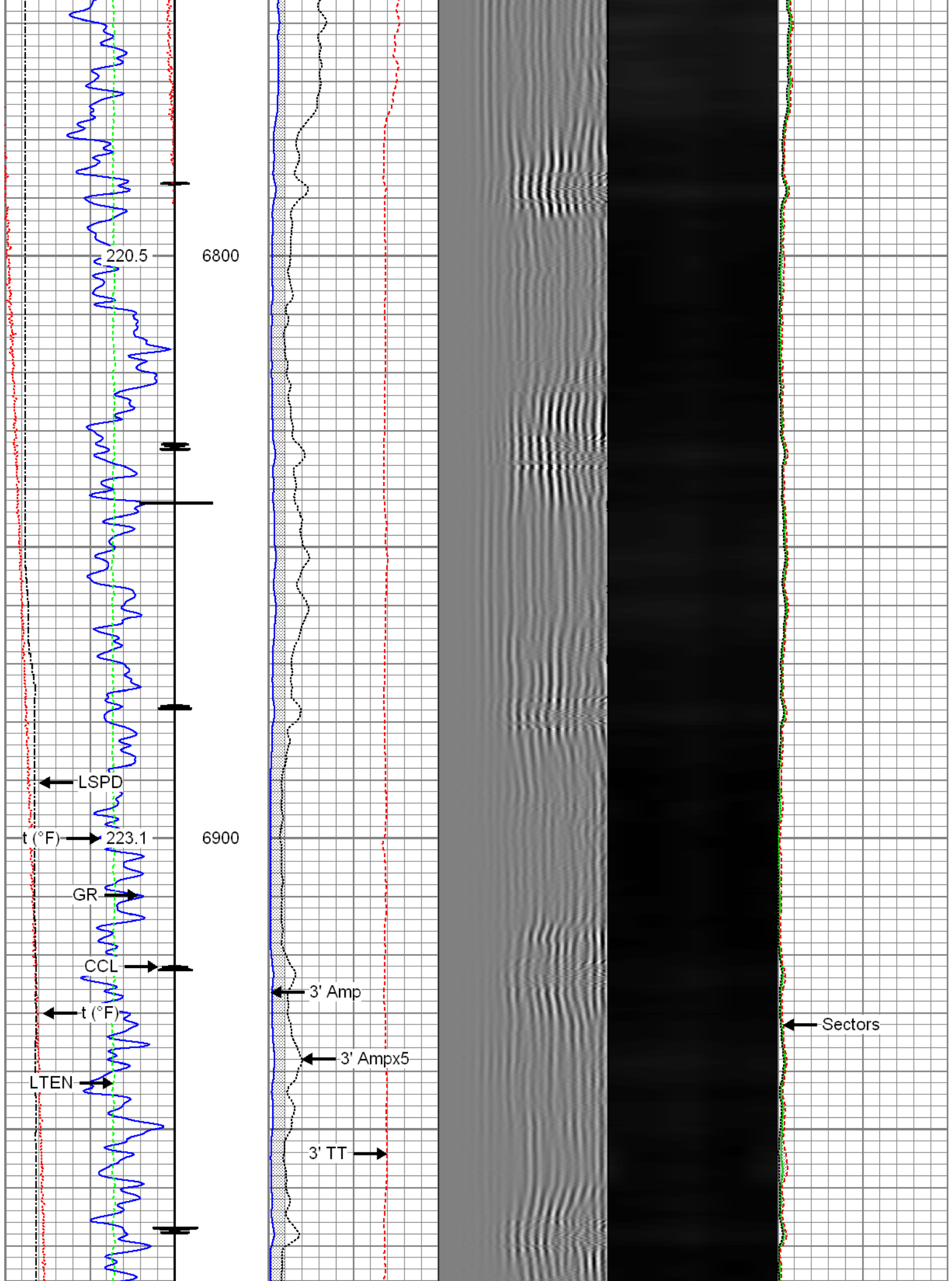


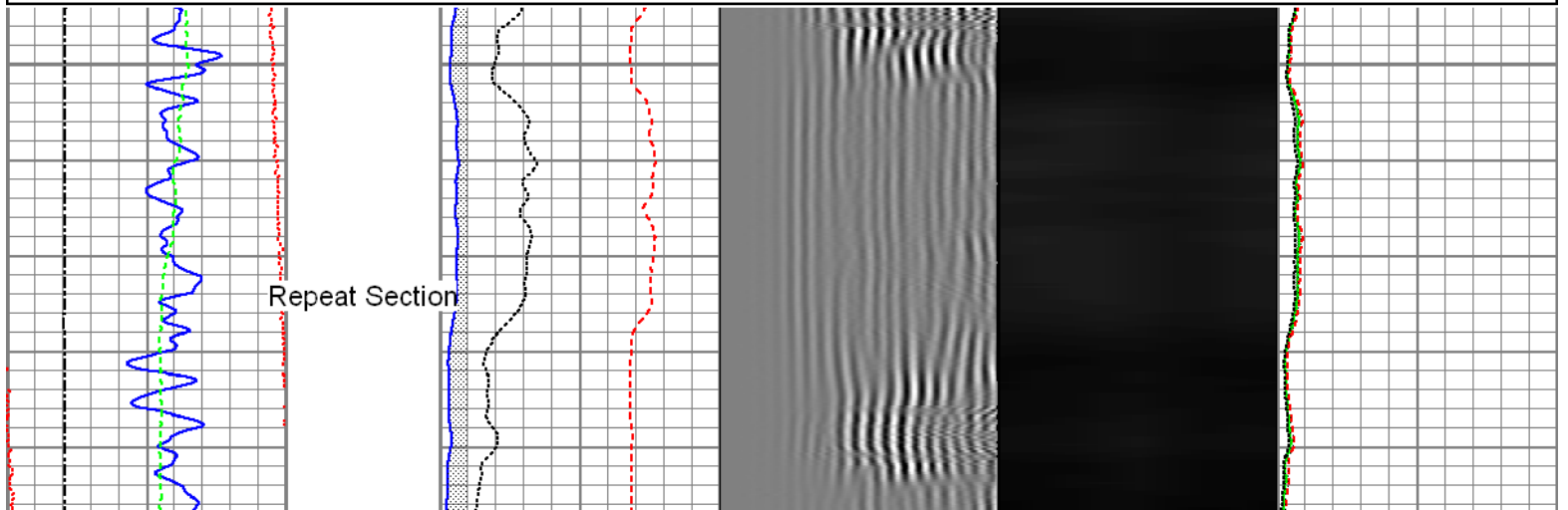
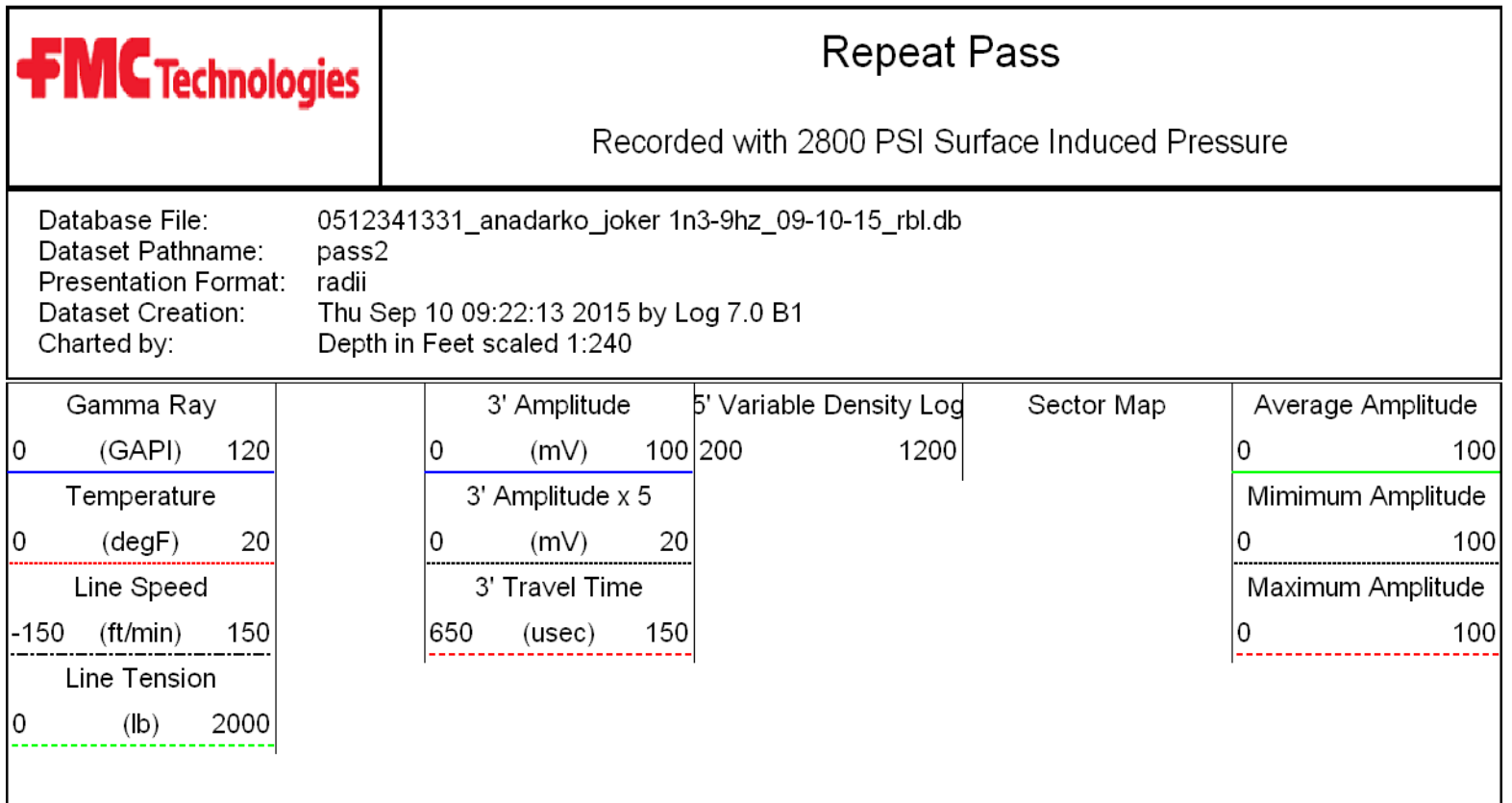
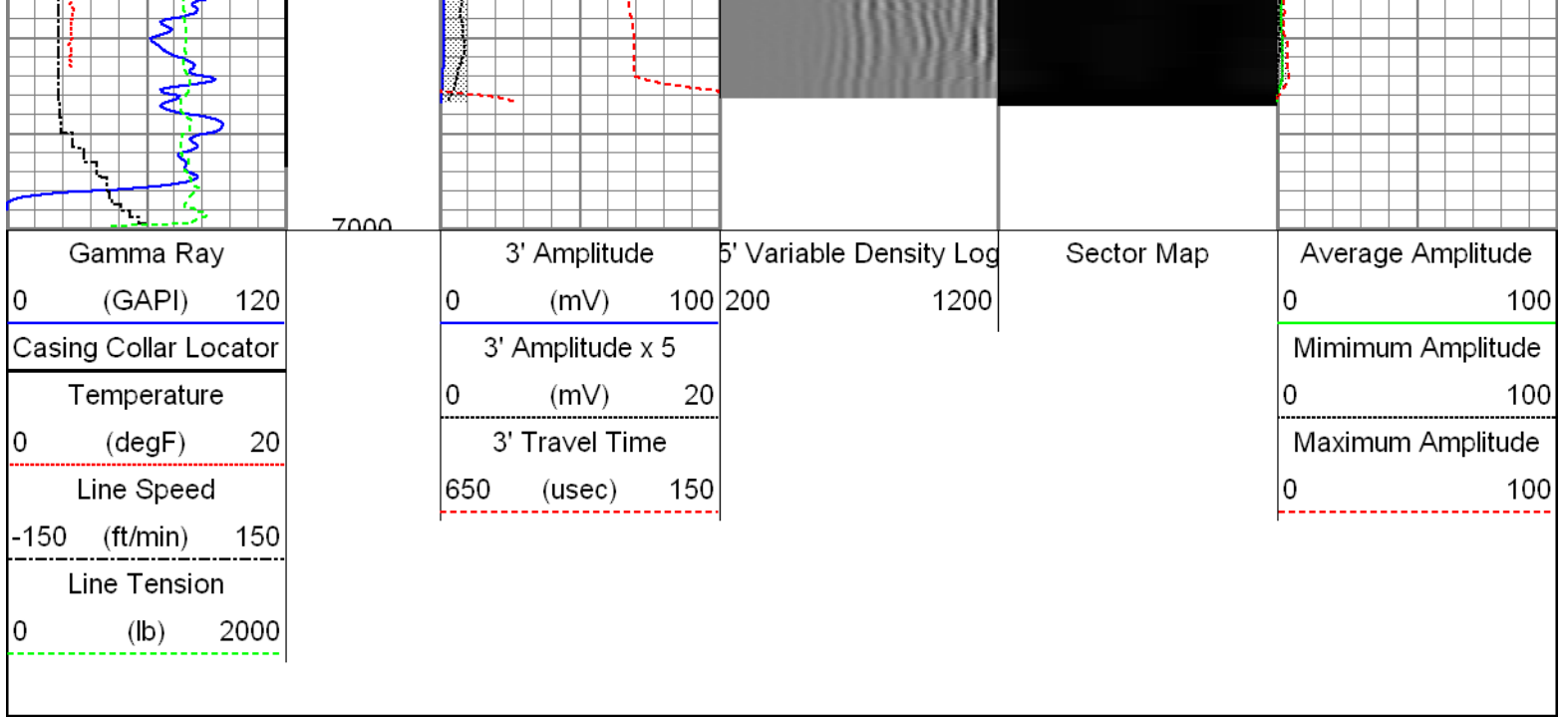


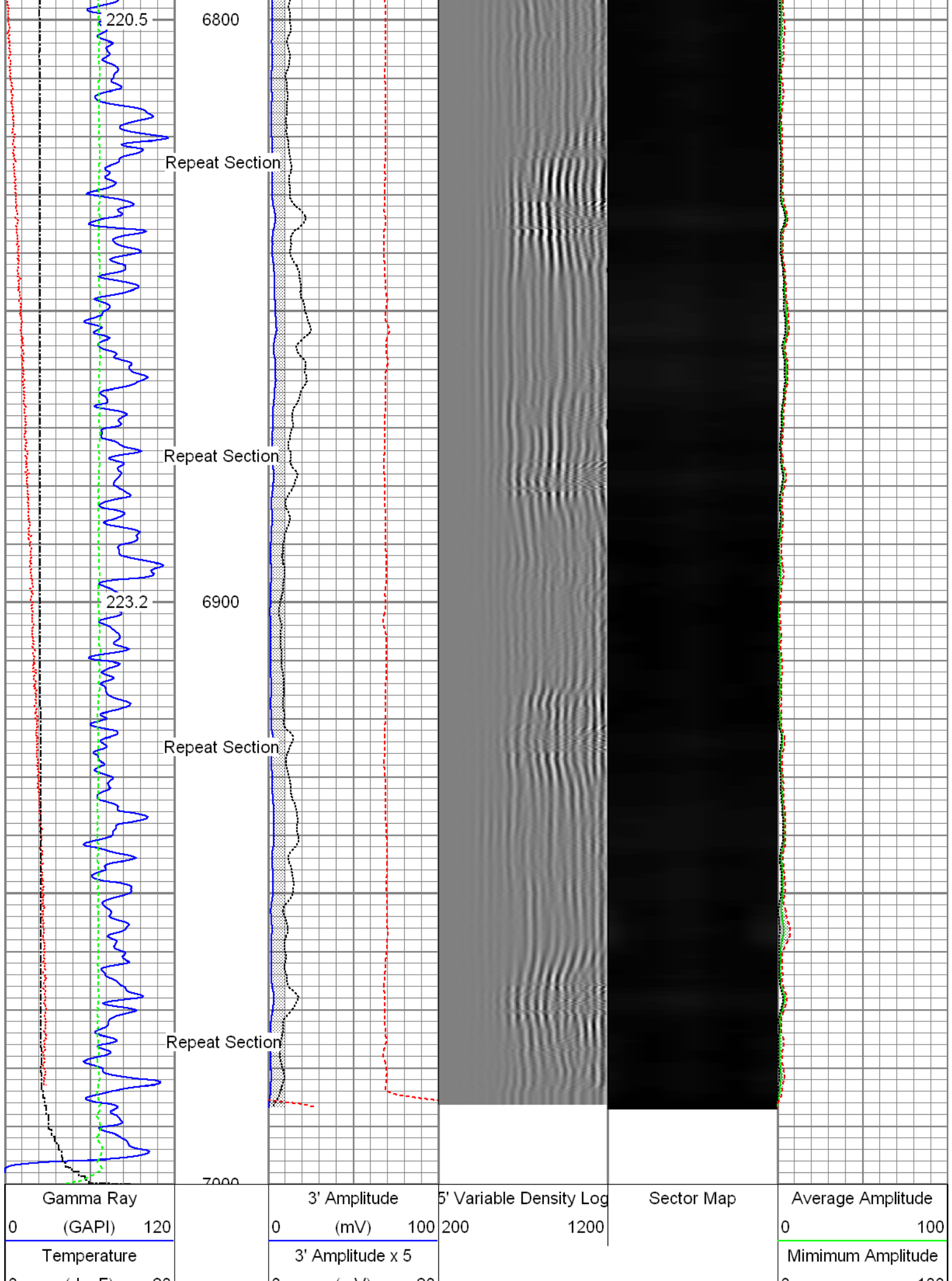






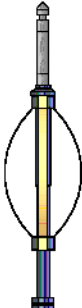

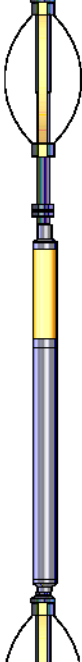






Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Temperature	3' Amplitude x 5			Minimum Amplitude
0 (F) 200	0 (mV) 200			0 100

0 (degF) 20	0 (mV) 20	0 100
Line Speed	3' Travel Time	Maximum Amplitude
-150 (ft/min) 150	650 (usec) 150	0 100
Line Tension		
0 (lb) 2000		

Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
HeadVolt	19.49		T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Temp	16.72					
WVF3FT	14.55		Probe_RADII-C-2-3/4" (FW1302-002) Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.19	2.75	105.00
WVFCAL	14.55					
WVFS1	14.55					
WVFS2	14.55					
WVFS3	14.55					
WVFS4	14.55					
WVFS5	14.55					
WVFS6	14.55					
WVFS7	14.55					
WVFS8	14.55					
WVF5FT	13.55					
CCL DCCL	6.51 6.51		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
GR	3.77		Probe_CCL_GR-2.75"Digital (FW1211-081) Probe 2-3/4" Digital CCL / Gamma Ray Combined	4.54	2.75	55.00



Probe\_IL\_BS\_Cent

Probe 2-3/4" Inline Electrical Inline Bowspring  
Centralizer

2.88

2.75

10.00

Dataset: 0512341331\_Anadarko\_Joker 1N3-9HZ\_09-10-15\_RBL.db: field/well/run1/pass4  
Total Length: 23.40 ft  
Total Weight: 194.00 lb  
O.D. 2.75 in

## Calibration Report

Database File: 0512341331\_Anadarko\_Joker 1N3-9HZ\_09-10-15\_RBL.db  
Dataset Pathname: pass4  
Dataset Creation: Thu Sep 10 09:27:32 2015 by Log 7.0 B1

## Gamma Ray Calibration Report

Serial Number: FW1211-081  
Tool Model: 2.75" Digital  
Performed: Fri Aug 28 07:53:28 2015  
  
Calibrator Value: 1.0 GAPI  
  
Background Reading: 0.0 cps  
Calibrator Reading: 1.0 cps  
  
Sensitivity: 0.6000 GAPI/cps

## Segmented Cement Bond Log Calibration Report

Serial Number: FW1302-002  
Tool Model: 2-3/4"  
  
Calibration Casing Diameter: 5.500 in  
Calibration Depth: 25.891 ft

Master Calibration, performed Thu Sep 10 08:55:48 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.004	0.795	1.000	71.921	89.662	0.606
CAL	0.729	1.486				
5'	0.005	0.447	1.000	71.921	160.374	0.168
SUM						
S1	0.002	0.746	0.000	100.000	134.405	-0.269
S2	0.005	0.738	0.000	100.000	136.438	-0.640
S3	0.005	0.761	0.000	100.000	132.133	-0.611
S4	0.005	0.816	0.000	100.000	123.232	-0.608
S5	0.005	0.886	0.000	100.000	113.521	-0.606
S6	0.005	0.896	0.000	100.000	112.288	-0.592
S7	0.005	0.853	0.000	100.000	117.847	-0.534
S8	0.005	0.799	0.000	100.000	125.895	-0.602

Internal Reference Calibration, performed Wed Dec 31 17:00:00 1969:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.729	1.486	1.000	0.000

CAL 0.000 0.000 0.729 1.400 1.000 0.000

Air Zero Calibration, performed Thu Sep 10 08:54:03 2015:

	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



Company Kerr-McGee Oil & Gas Onshore, L.P.  
Well Joker 1N3-9HZ  
Field Wattenberg  
County Weld  
State Colorado