



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.		
Well	Bane 28N1-9HZ		
Field	Wattenberg		
County	Weld		
State	Colorado		
Location:	Company	Kerr-McGee Oil & Gas Onshore, L.P.	
	Well	Bane 28N1-9HZ	
	Field	Wattenberg	
	County	Weld	
Other Services	State	Colorado	
	API # :	05-123-41305	
	SEC 9	TWP 1N	RGE 65W
	Permanent Datum	Ground Level	Elevation
JB/GR	Log Measured From	Kelly Bushing	25 FT
	Drilling Measured From	Kelly Bushing	4964'
Elevation		K.B. 4989'	D.F. 4988'
		G.L. 4964'	

Date	02-SEPT-2015
Run Number	Two
Depth Driller	11998 FT
Depth Logger	7520 FT
Bottom Logged Interval	7515 FT
Top Log Interval	Surface
Open Hole Size	7.875"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	232.5 °F
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	10:40 AM
Equipment Number	HD-0119
Location	Ft. Lupton, CO
Recorded By	M. Steinman
Witnessed By	Steve Vigil

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	1607 FT		
Intermediate #1	5 1/2	17	HCP-110	Surface	11988 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
Casing Tally Reported Marker Joint at 6567' FT
Recorded Marker Joint at 6583'-6606' FT
Gauge Ring/Junk Basket Ran to 7608 FT With No Debris Retrieved
Logged Ran 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

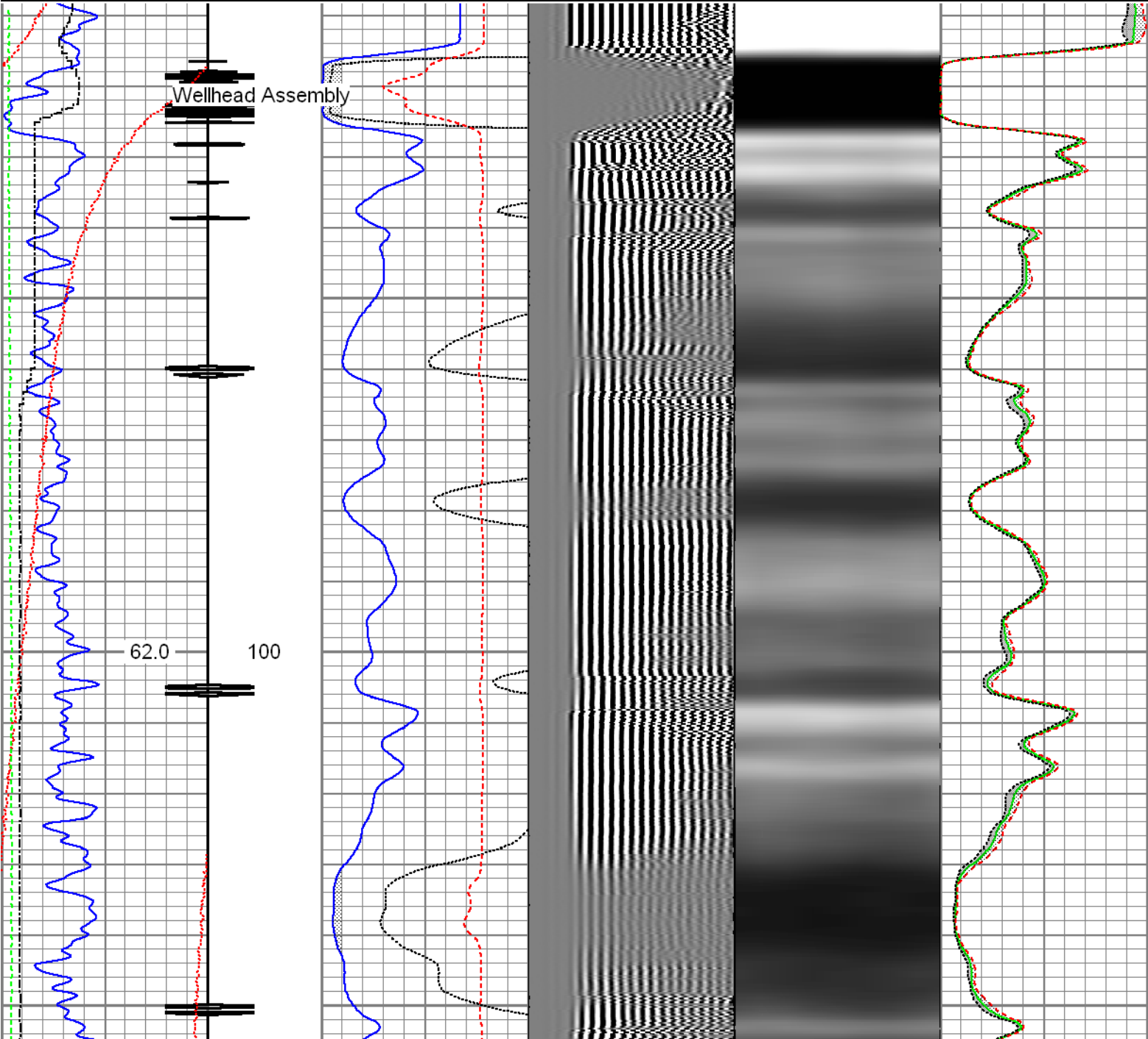
Thank you for choosing FMC Technologies Completion Services, Inc.!!

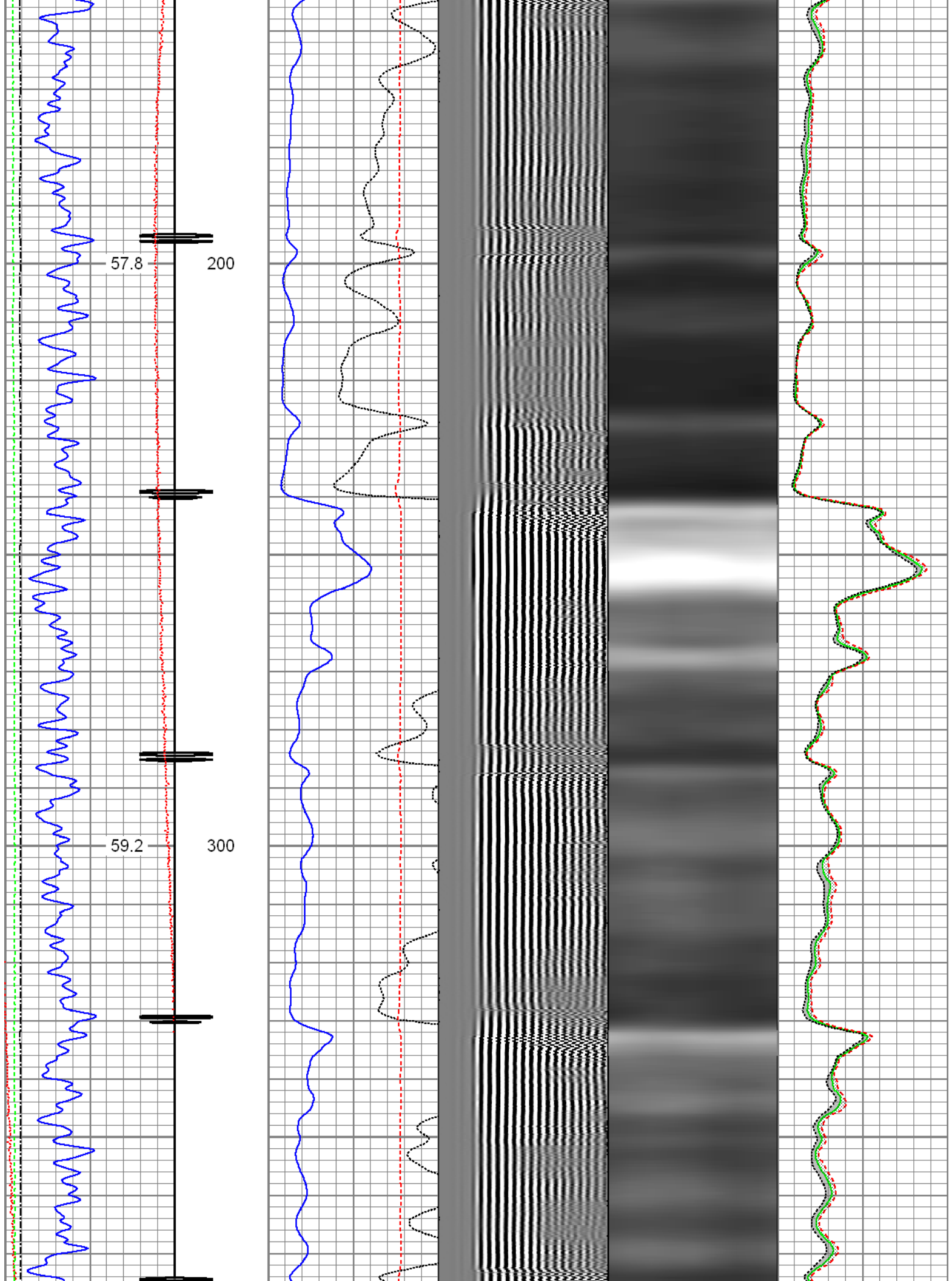


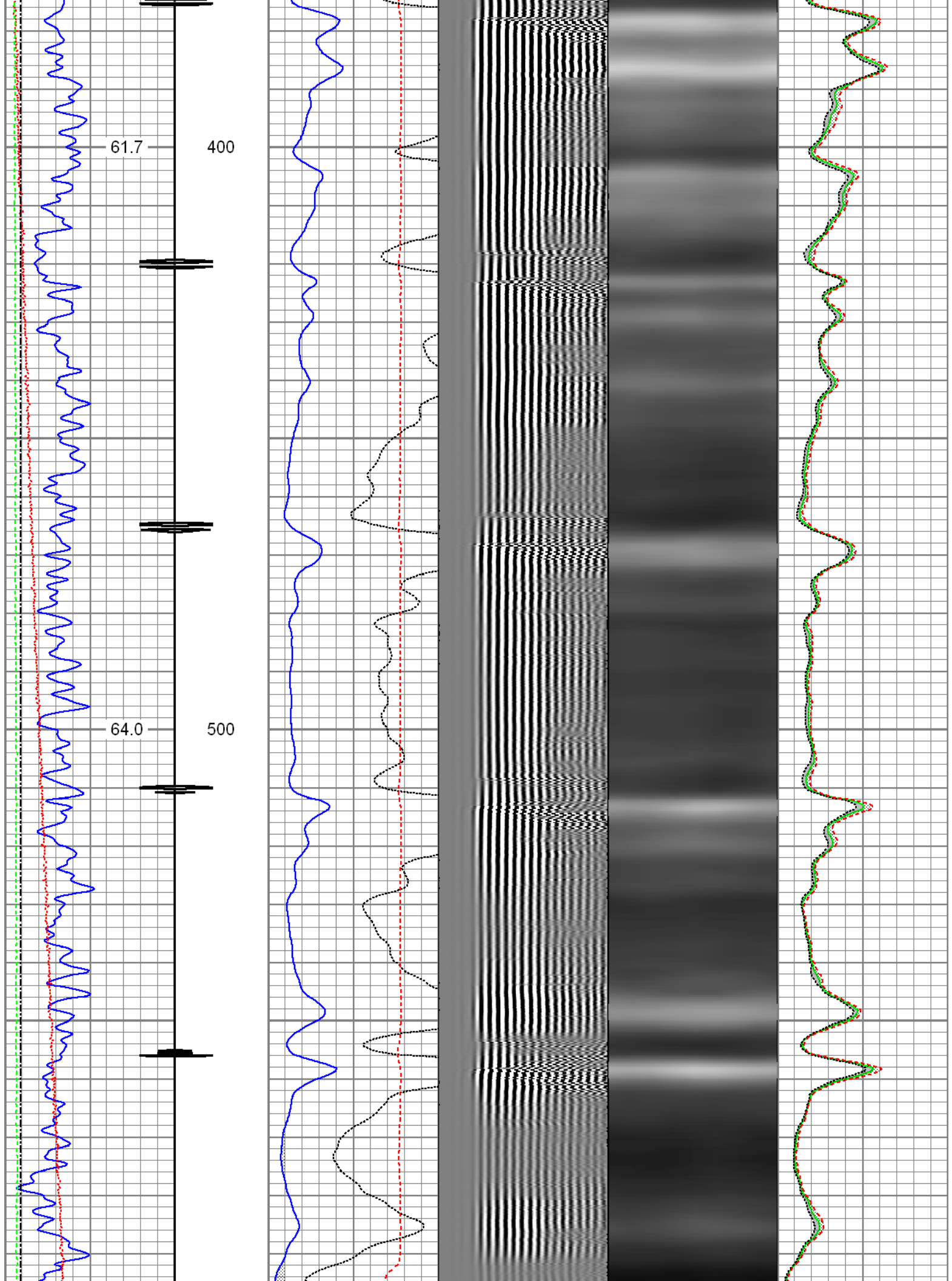
Main Pass

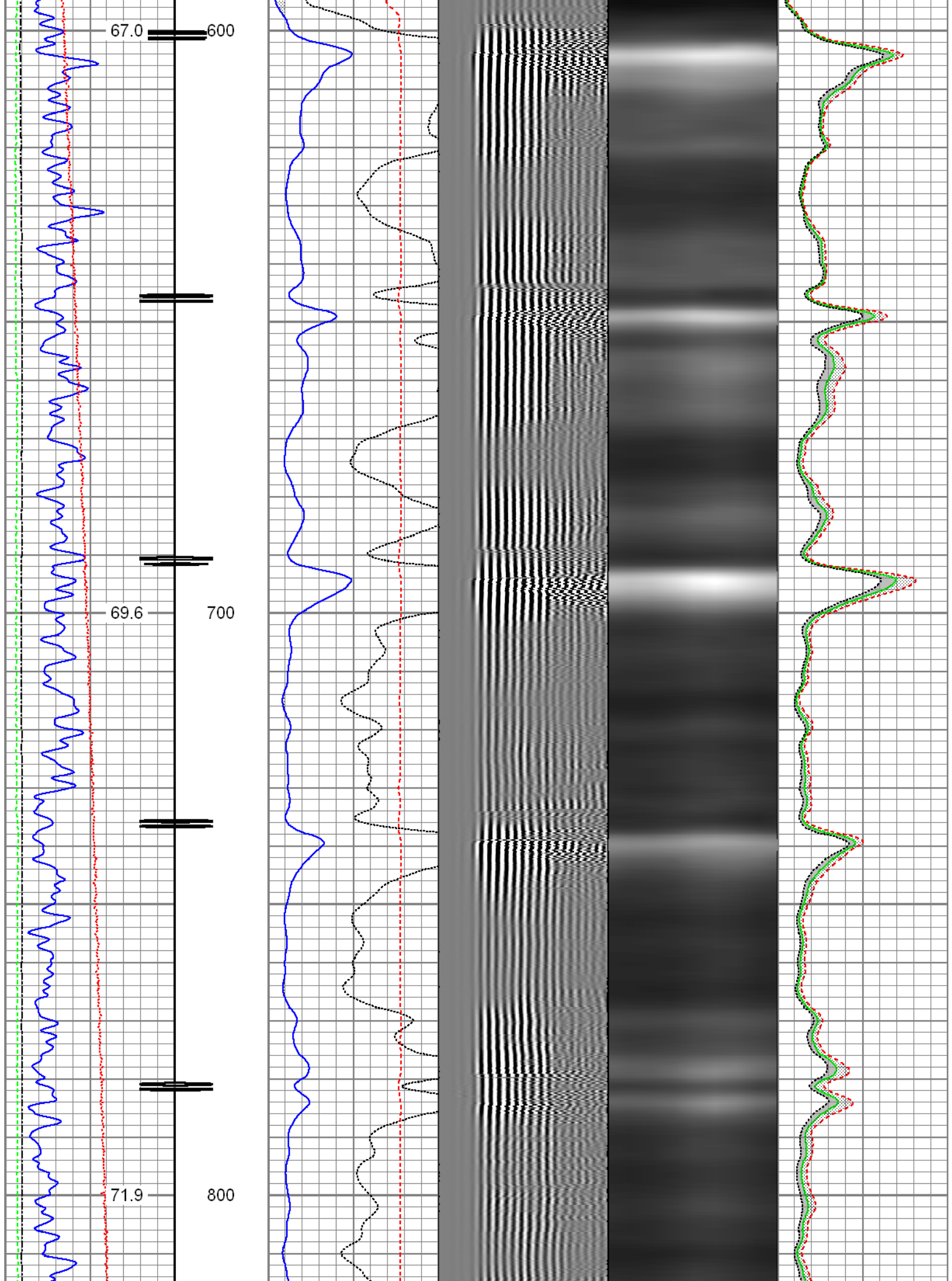
Recorded with 2800 PSI Surface Induced Pressure

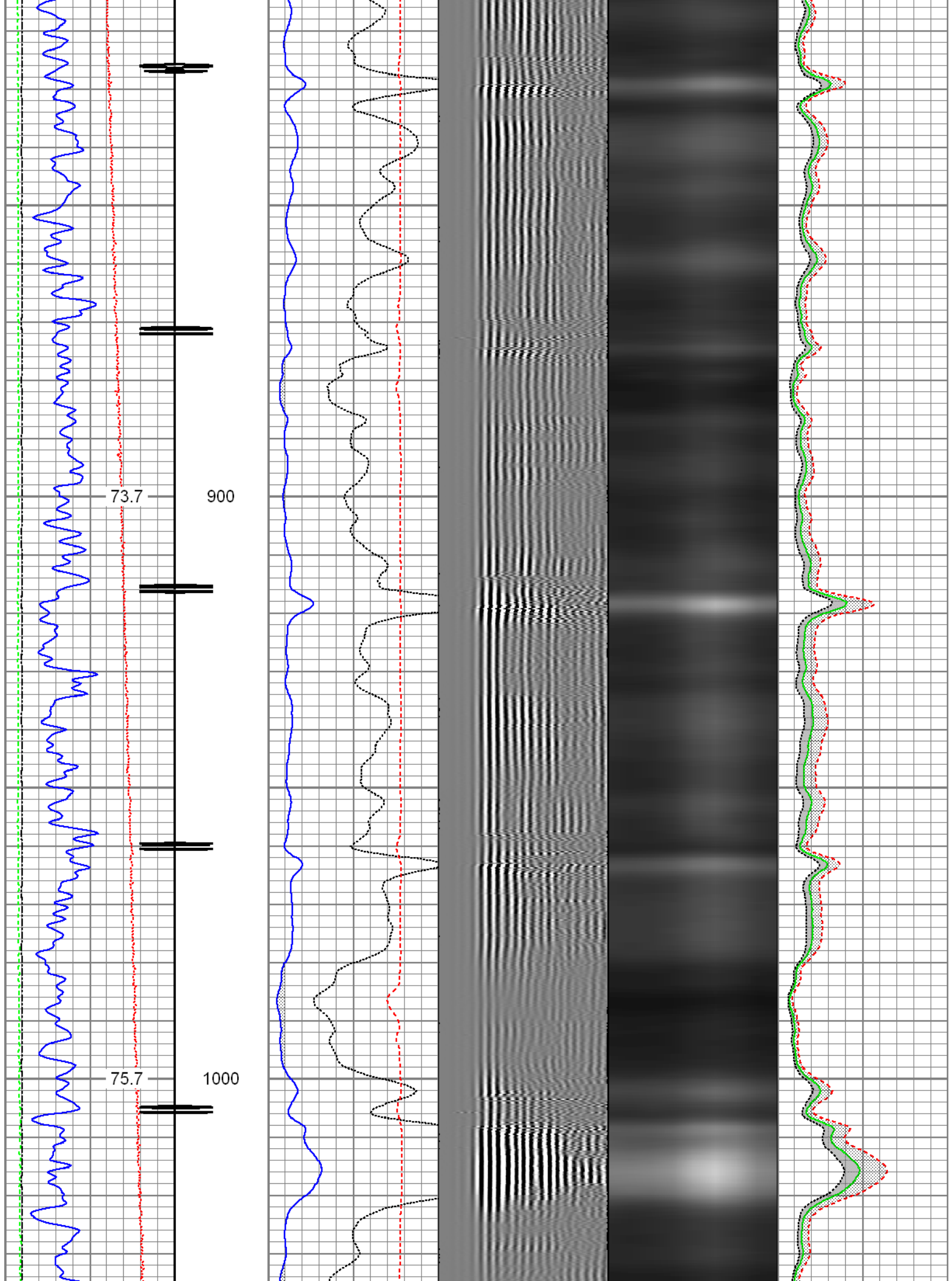
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min) 150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

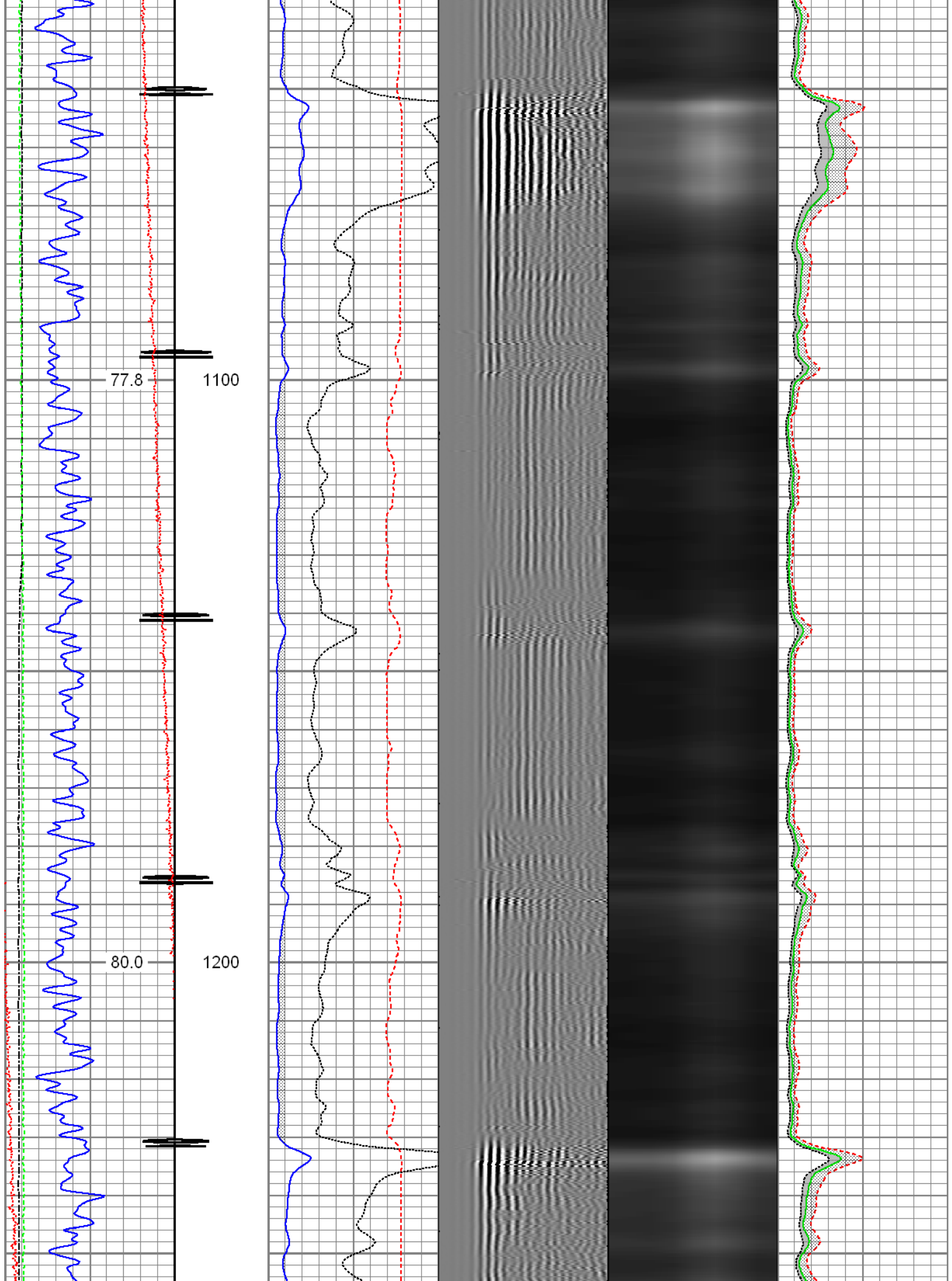


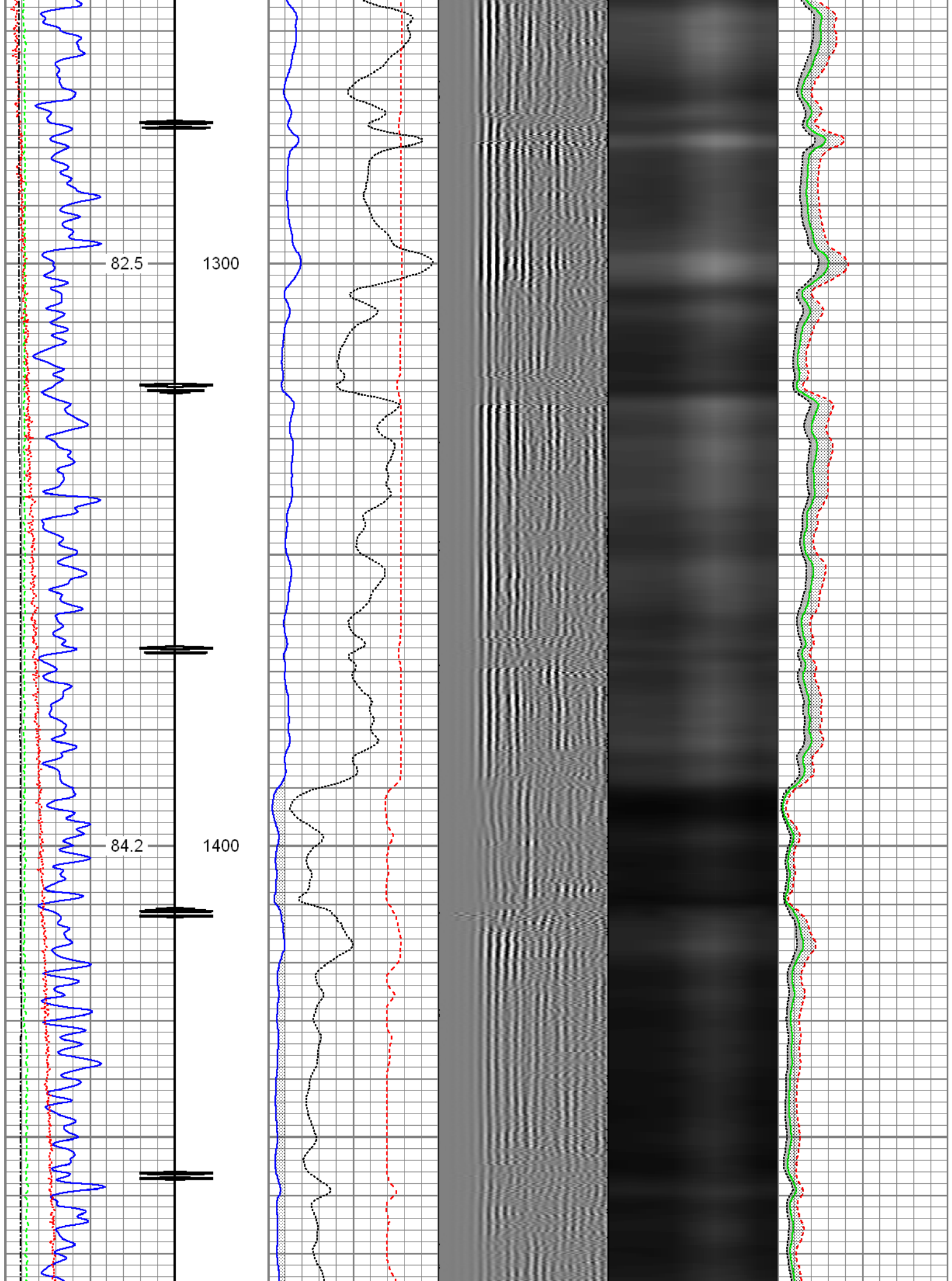


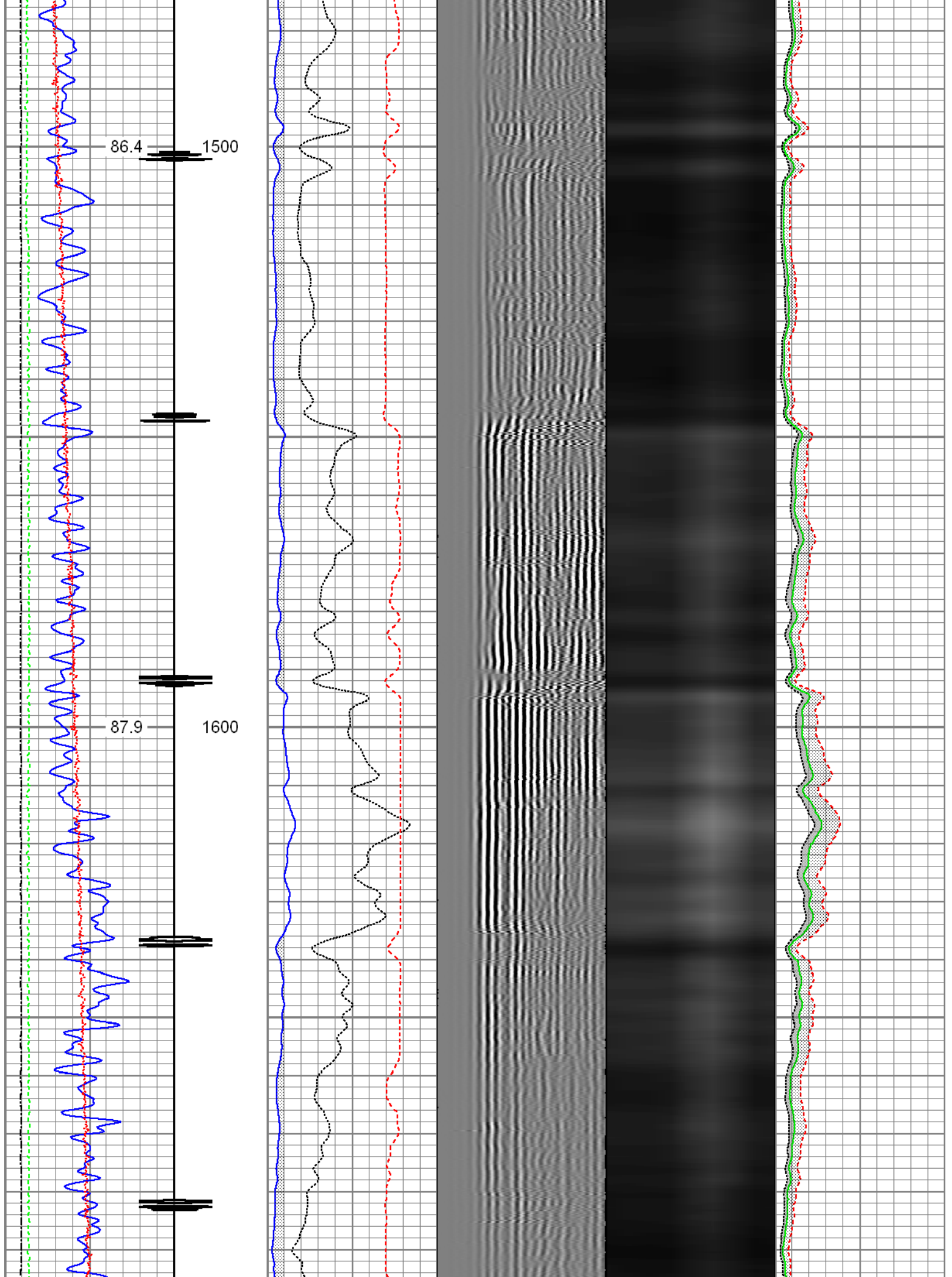


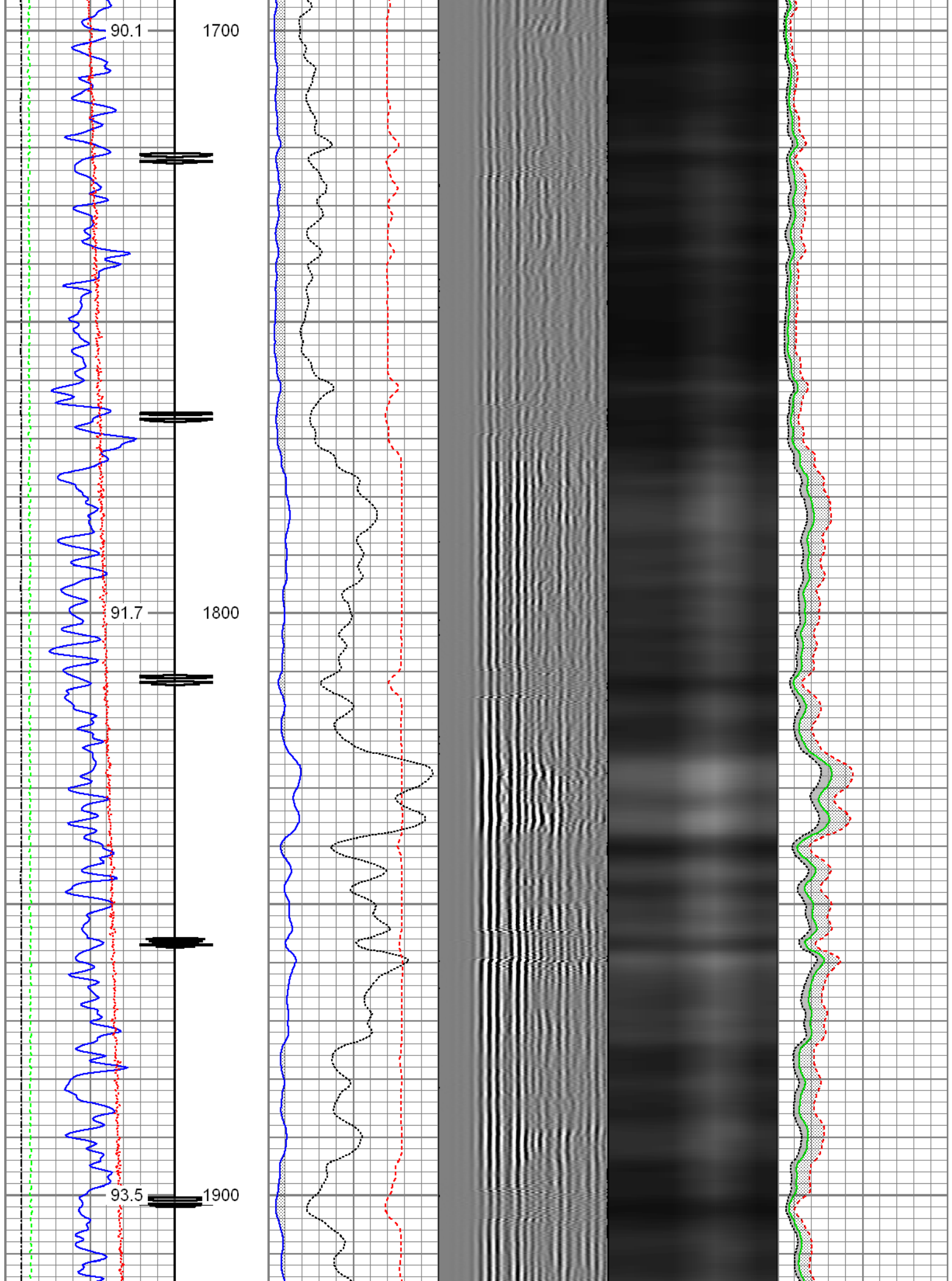


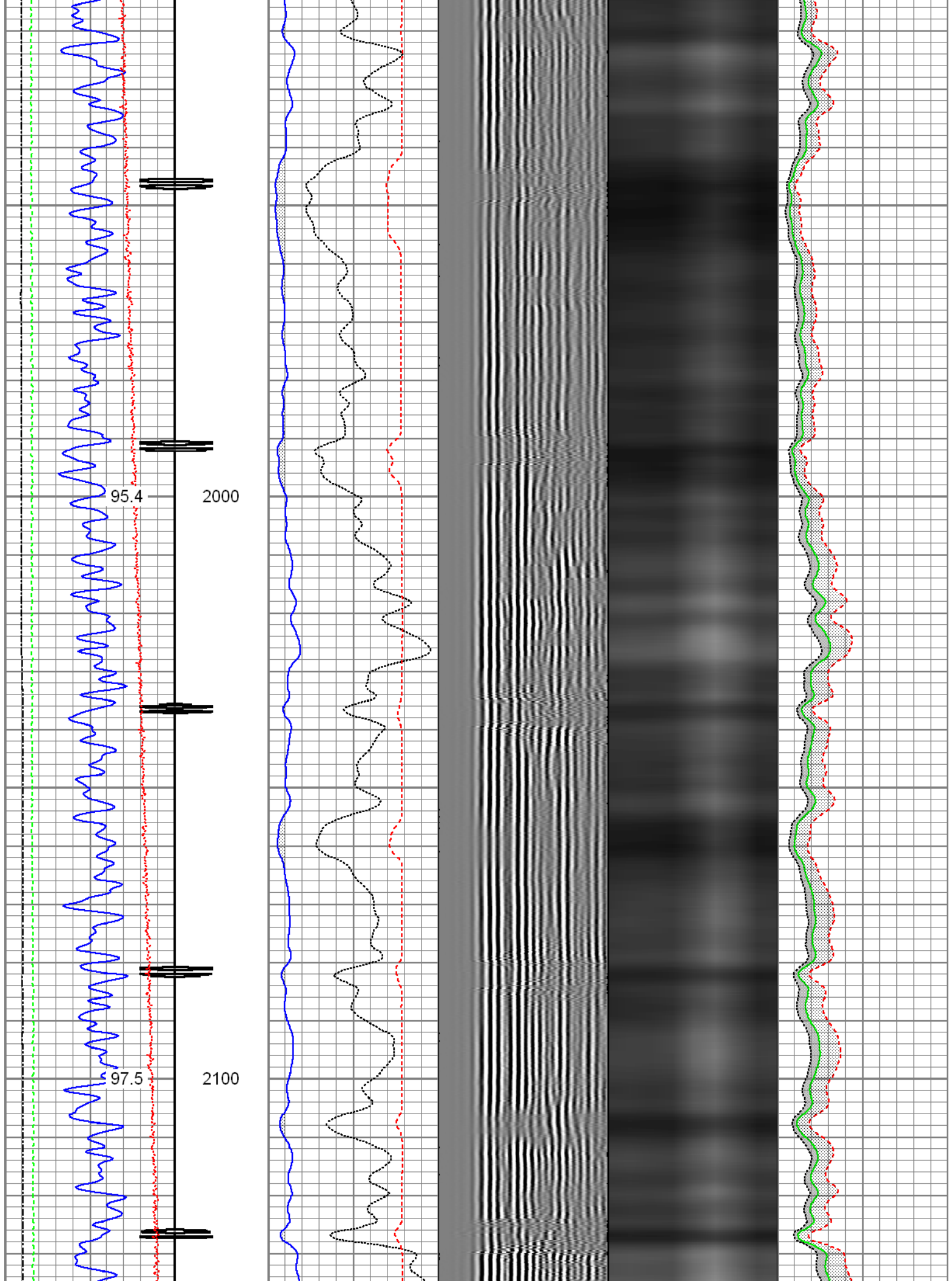


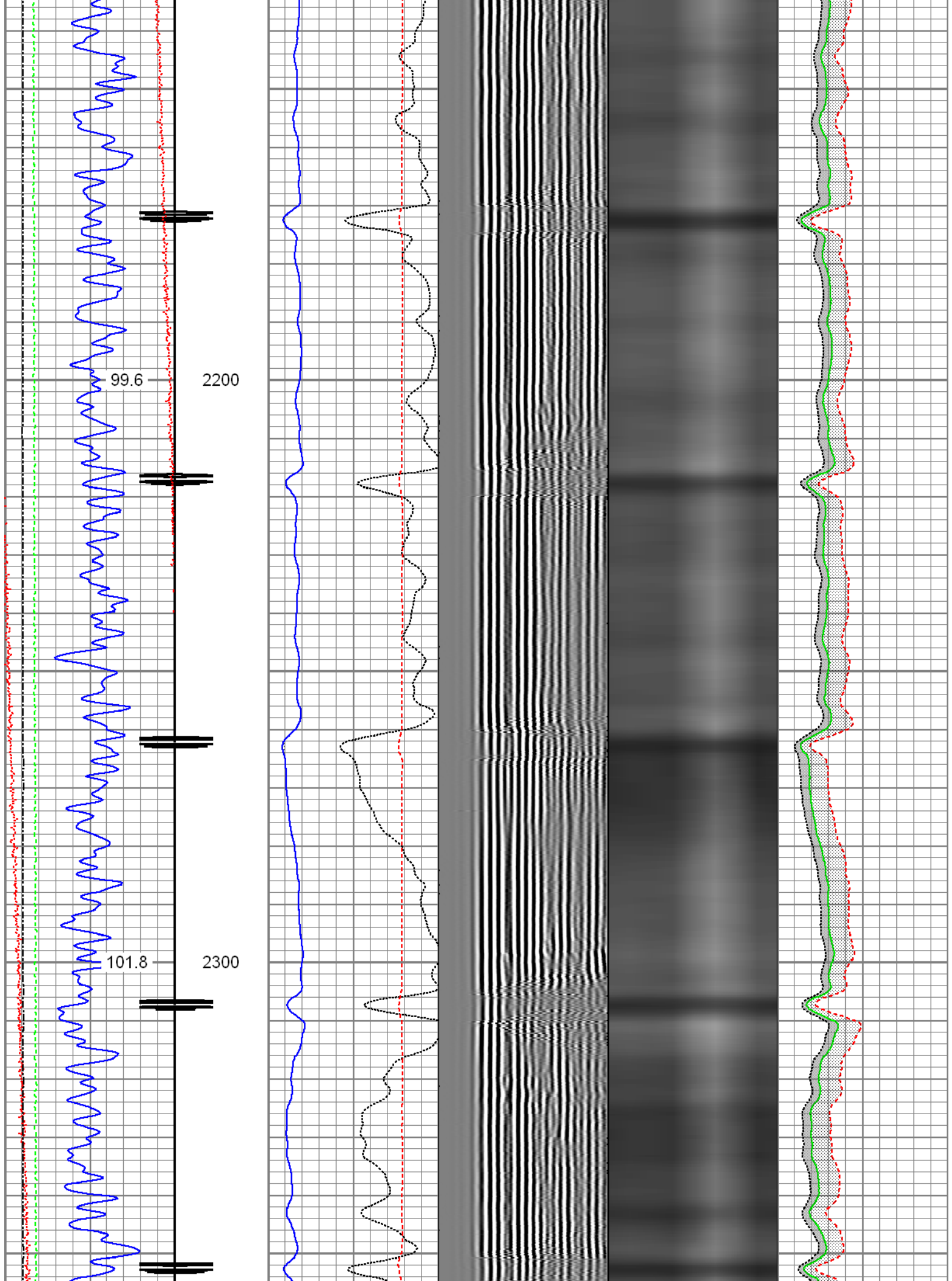


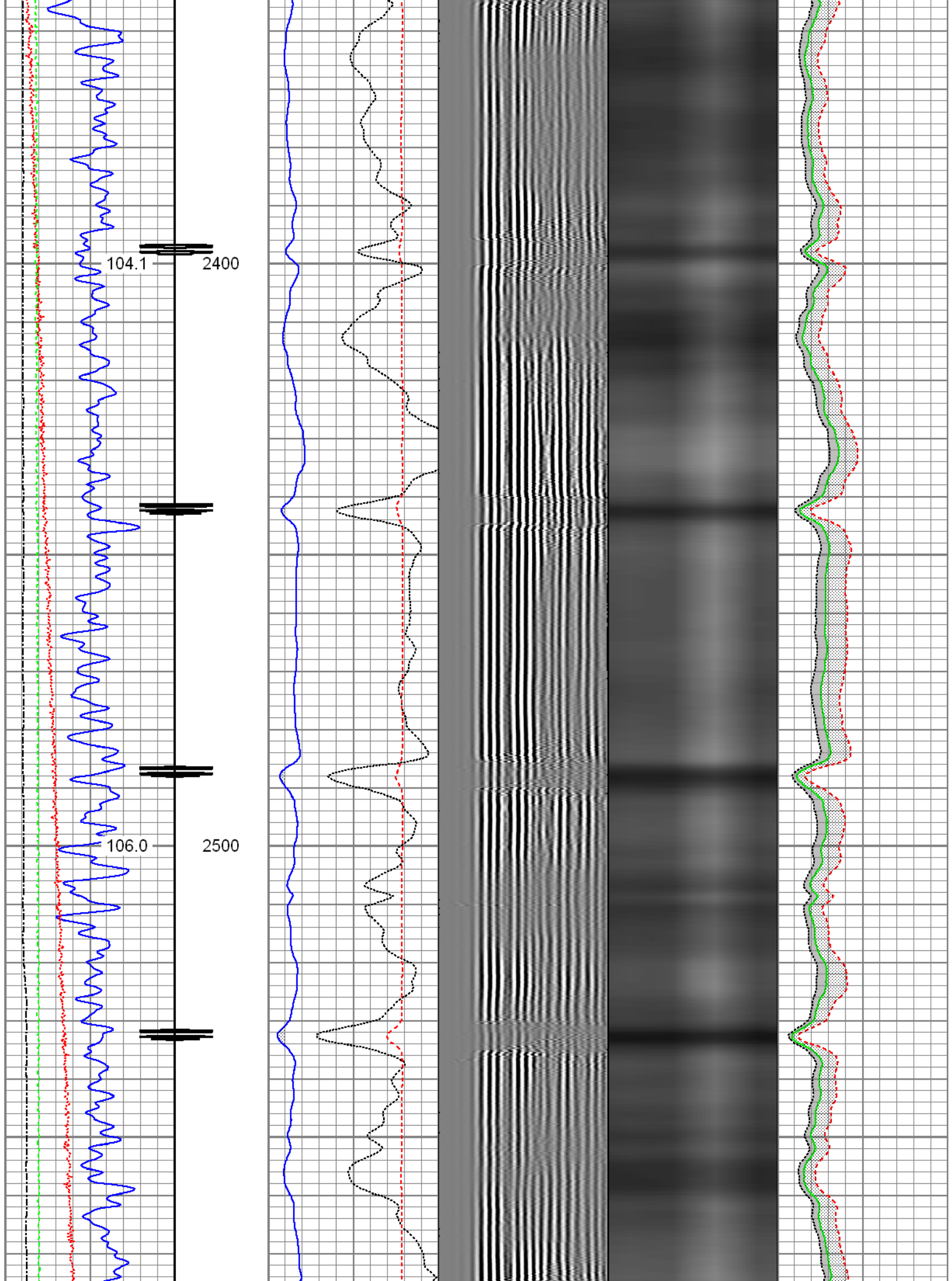


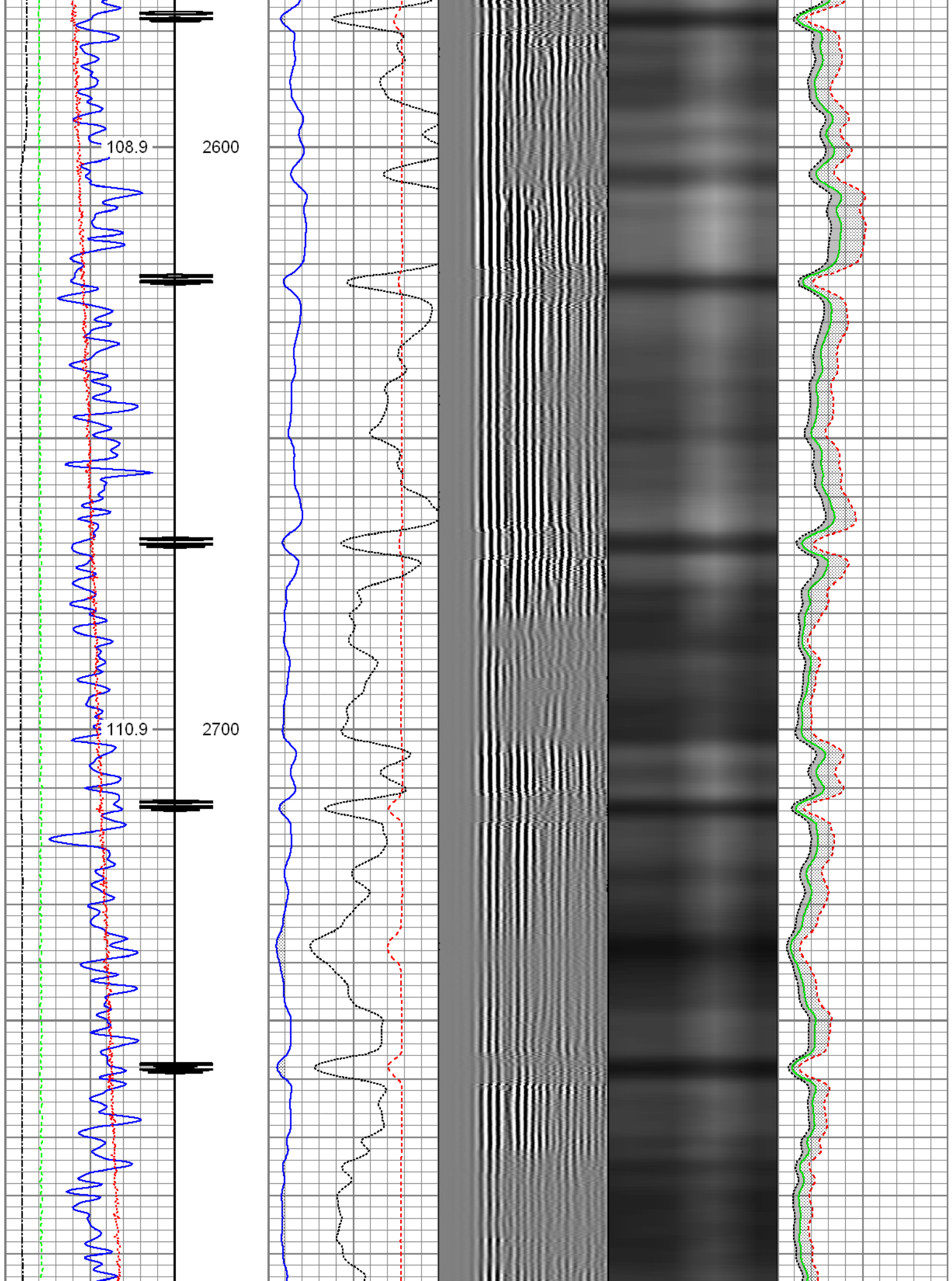


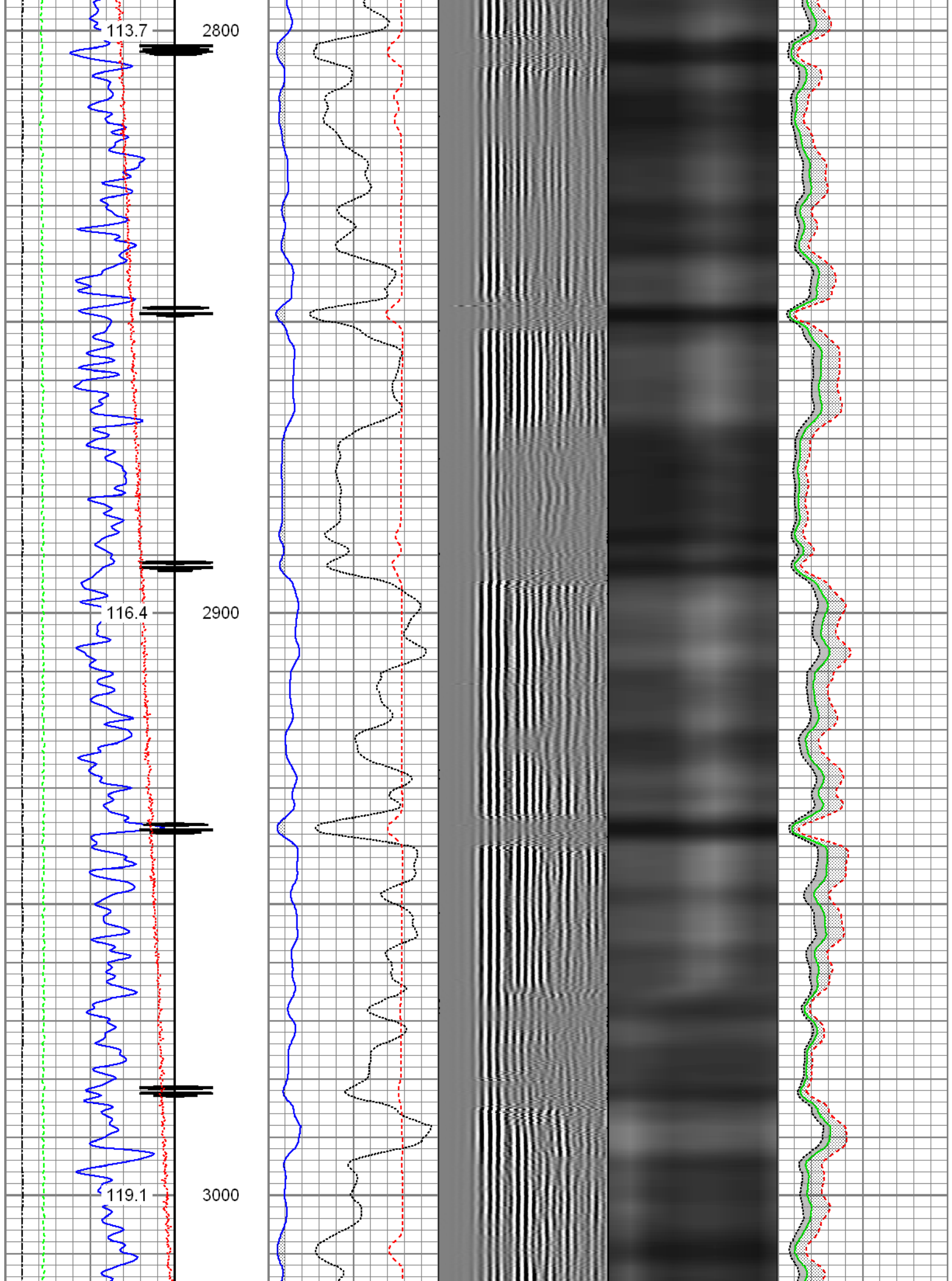


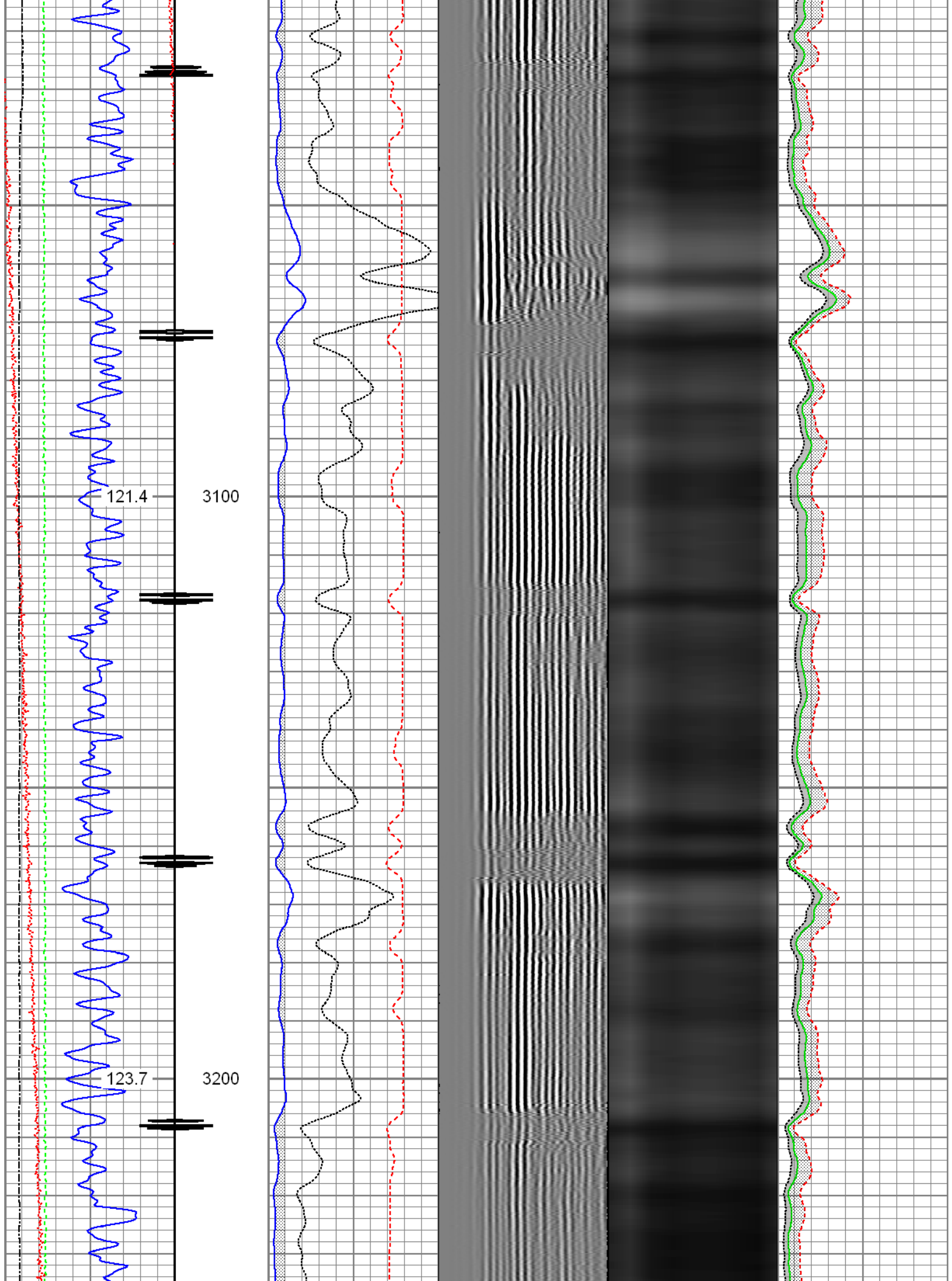


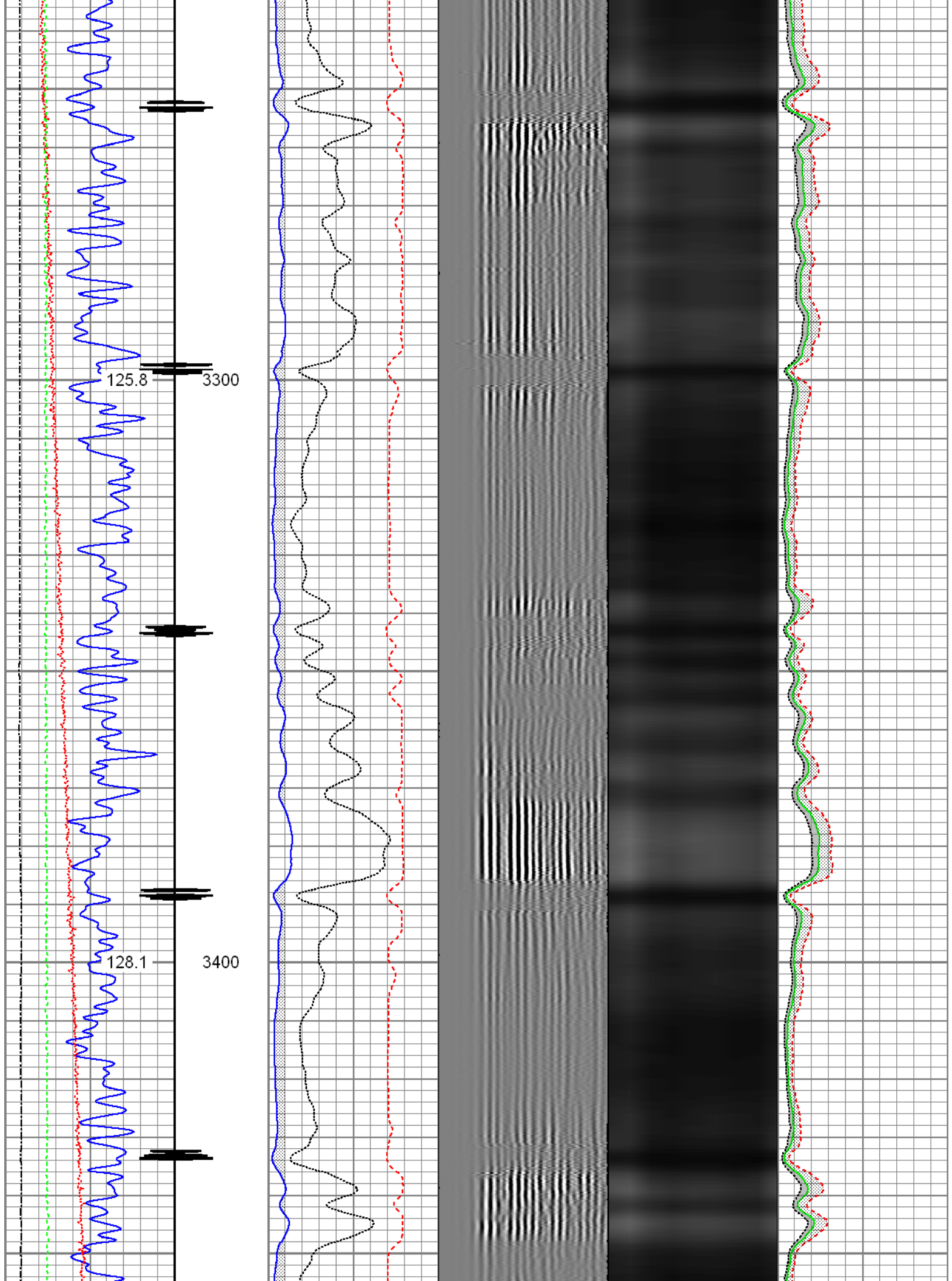


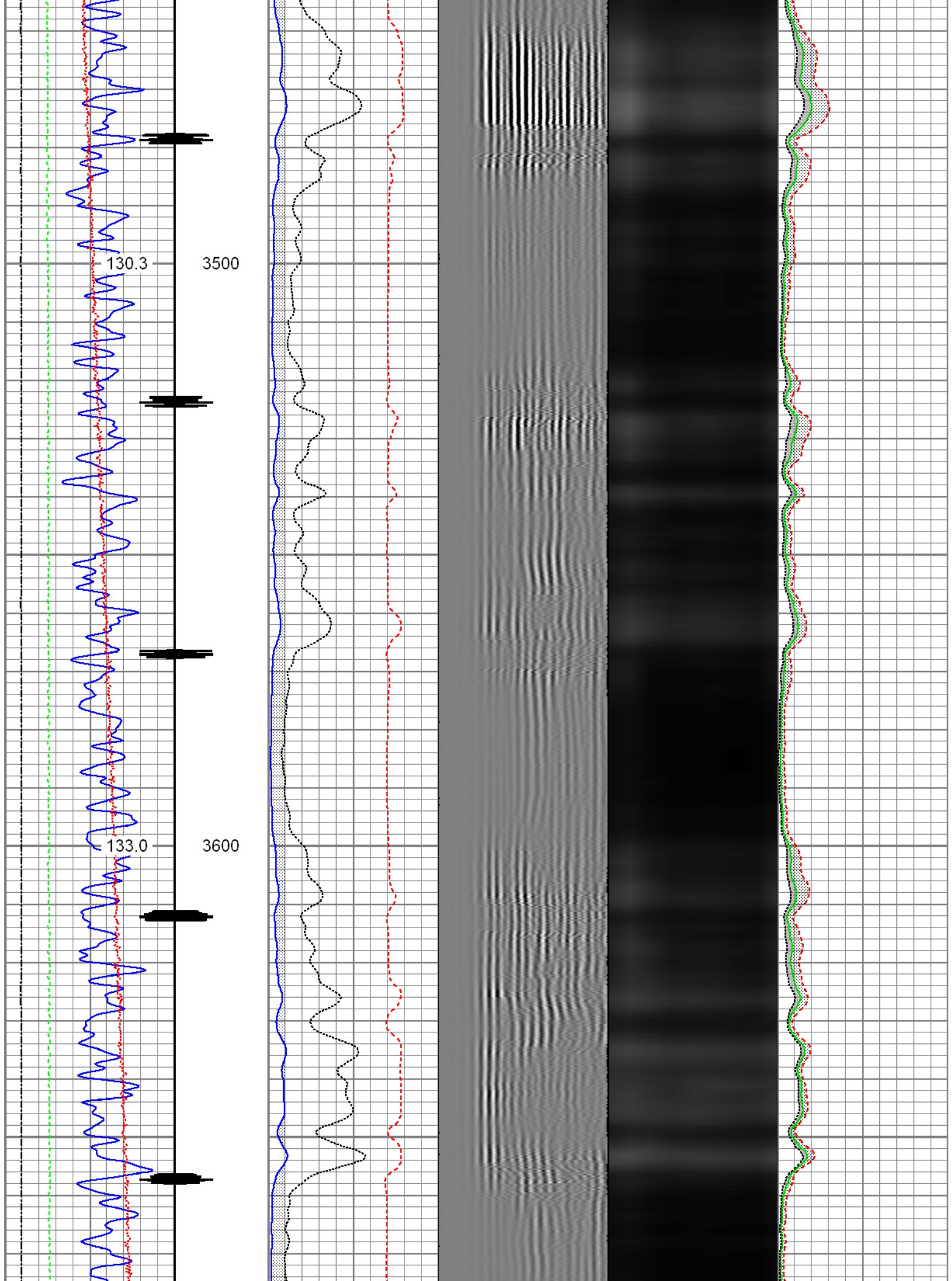


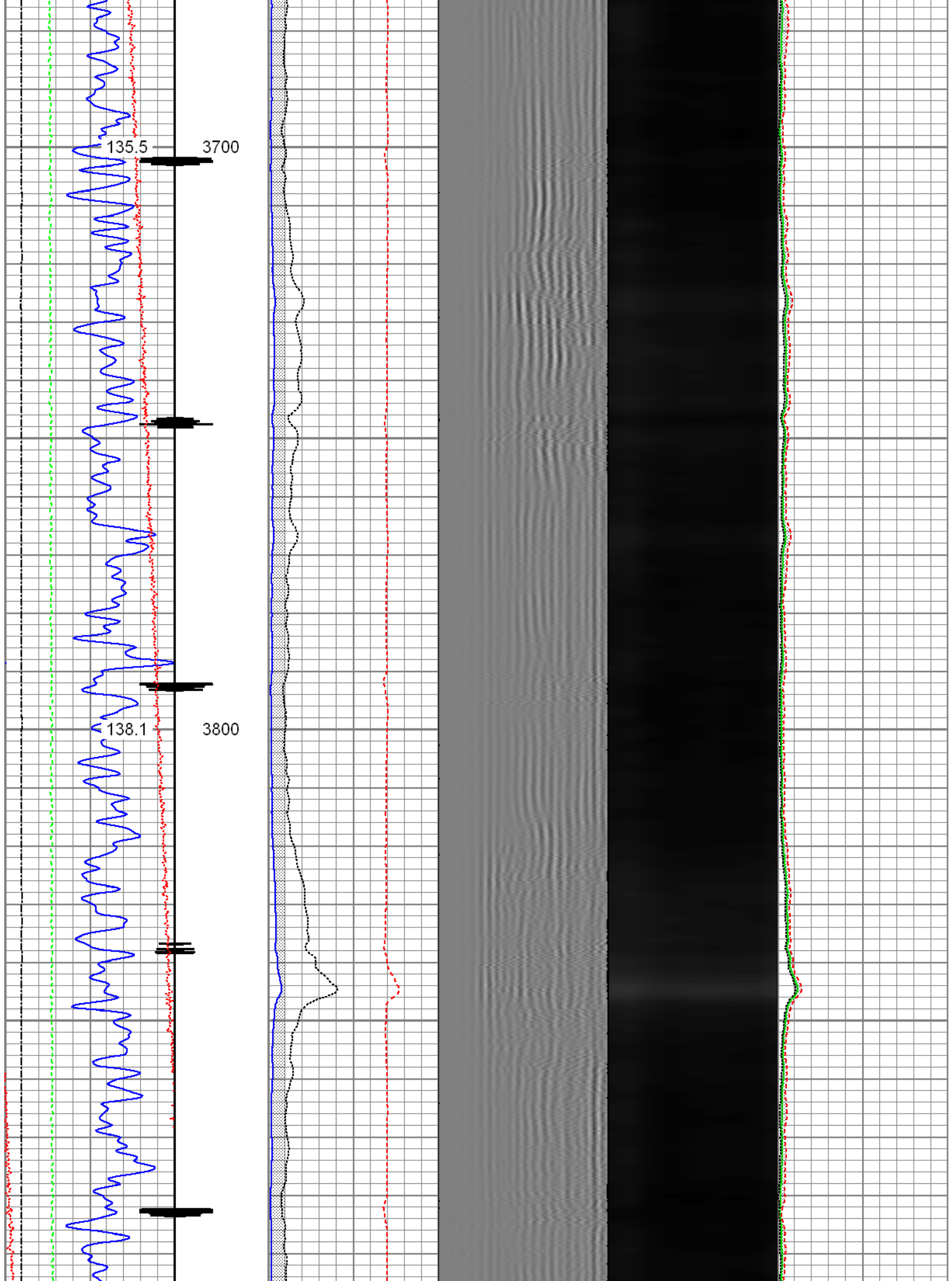


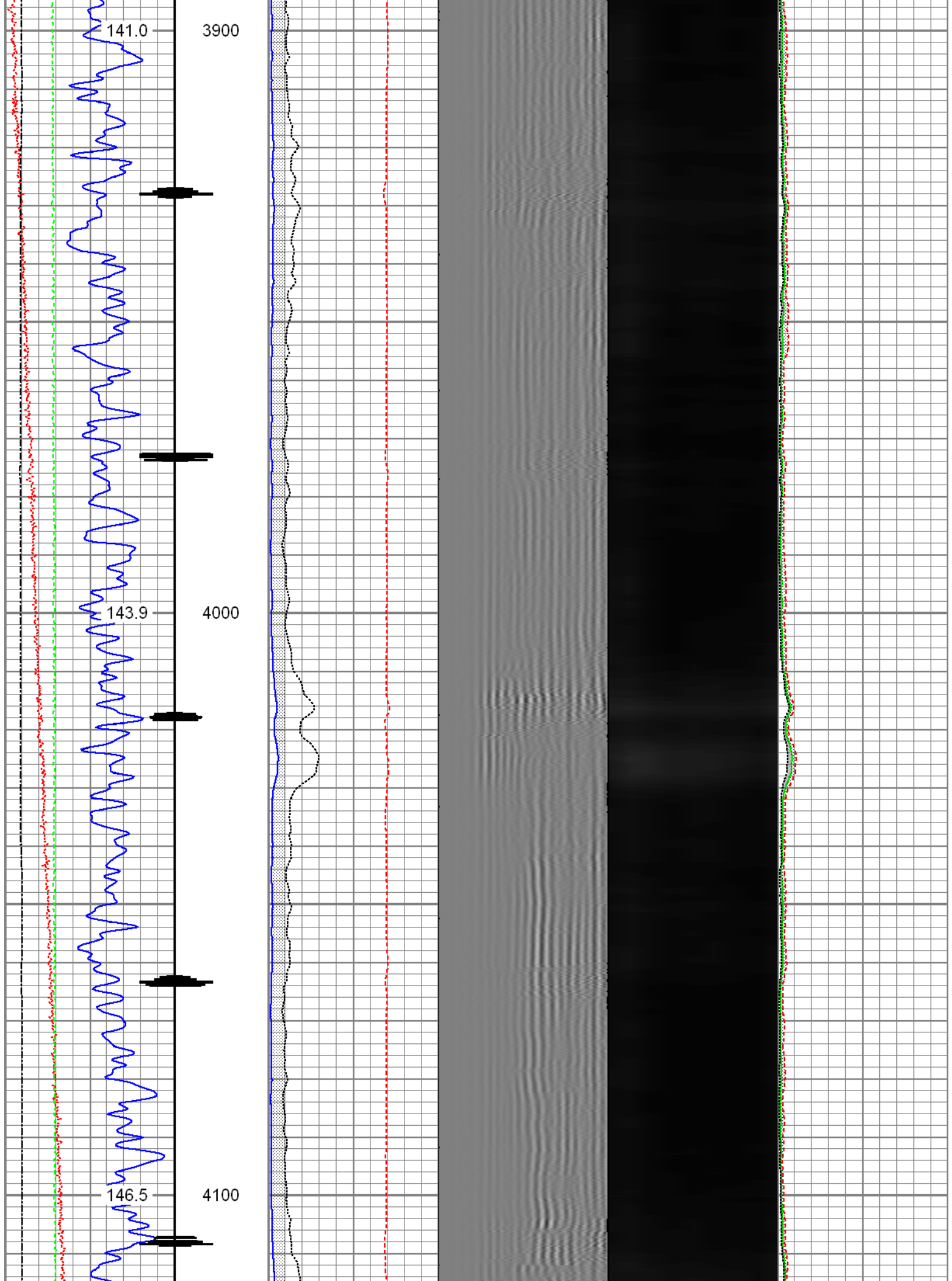


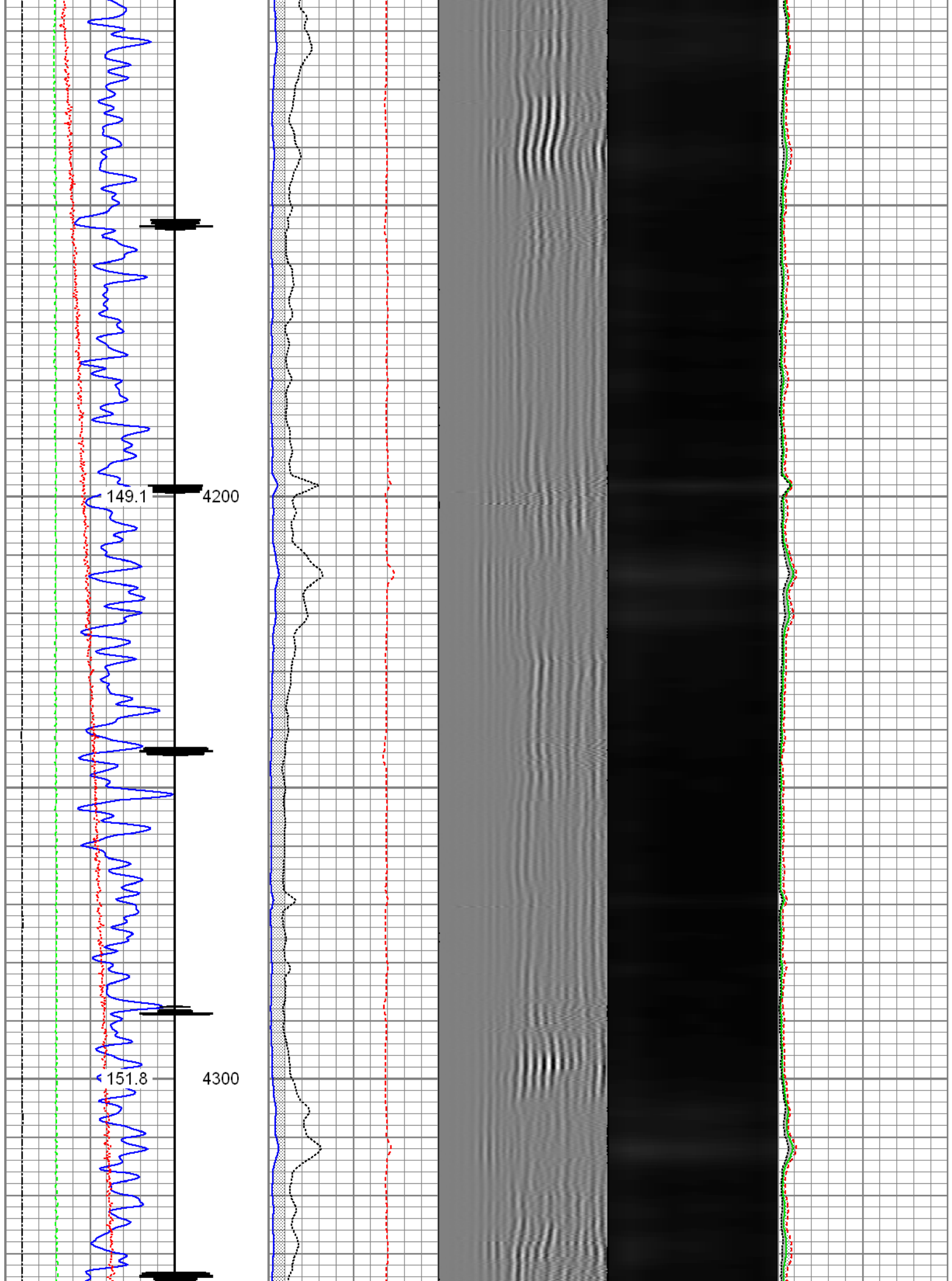


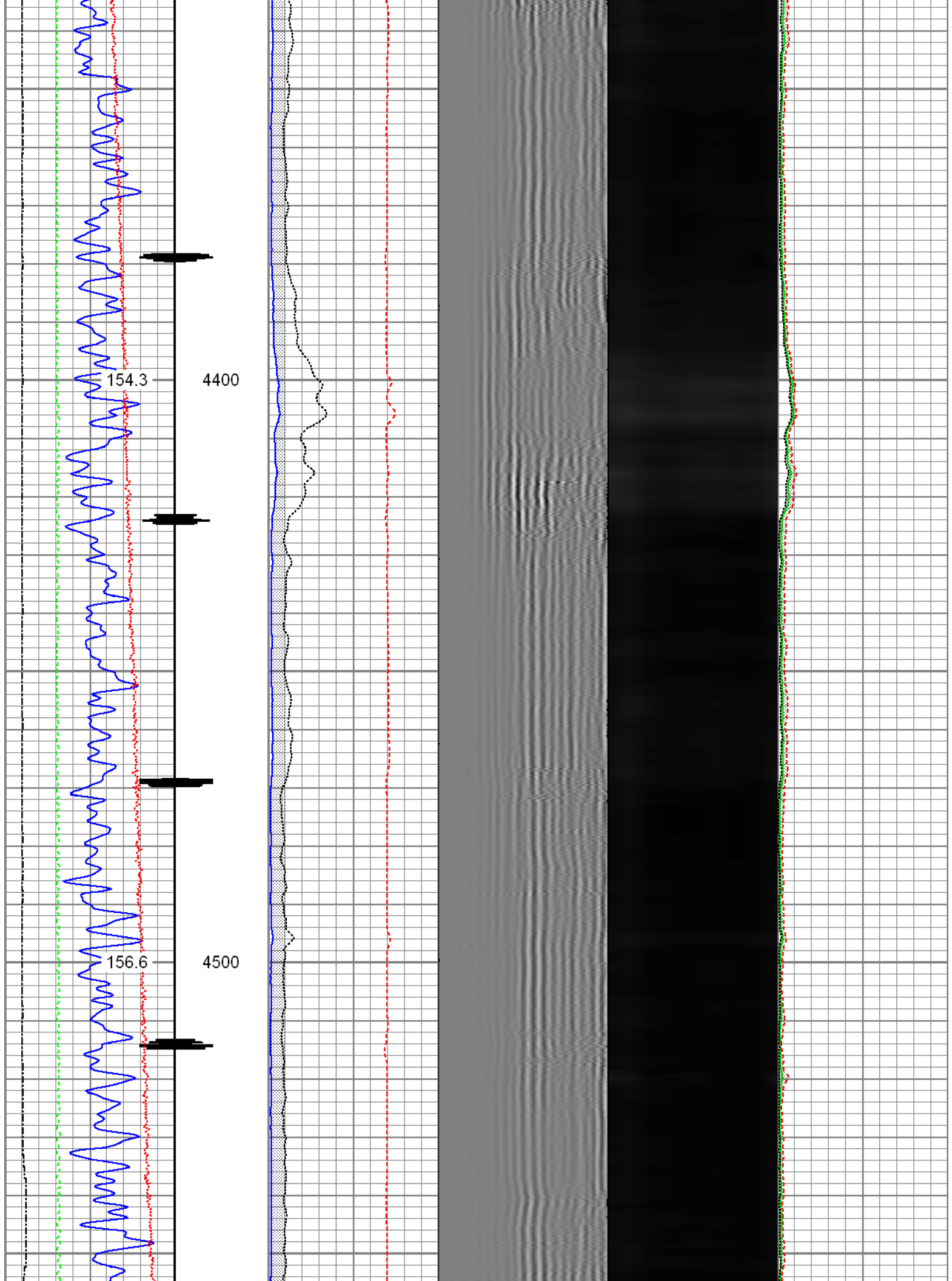


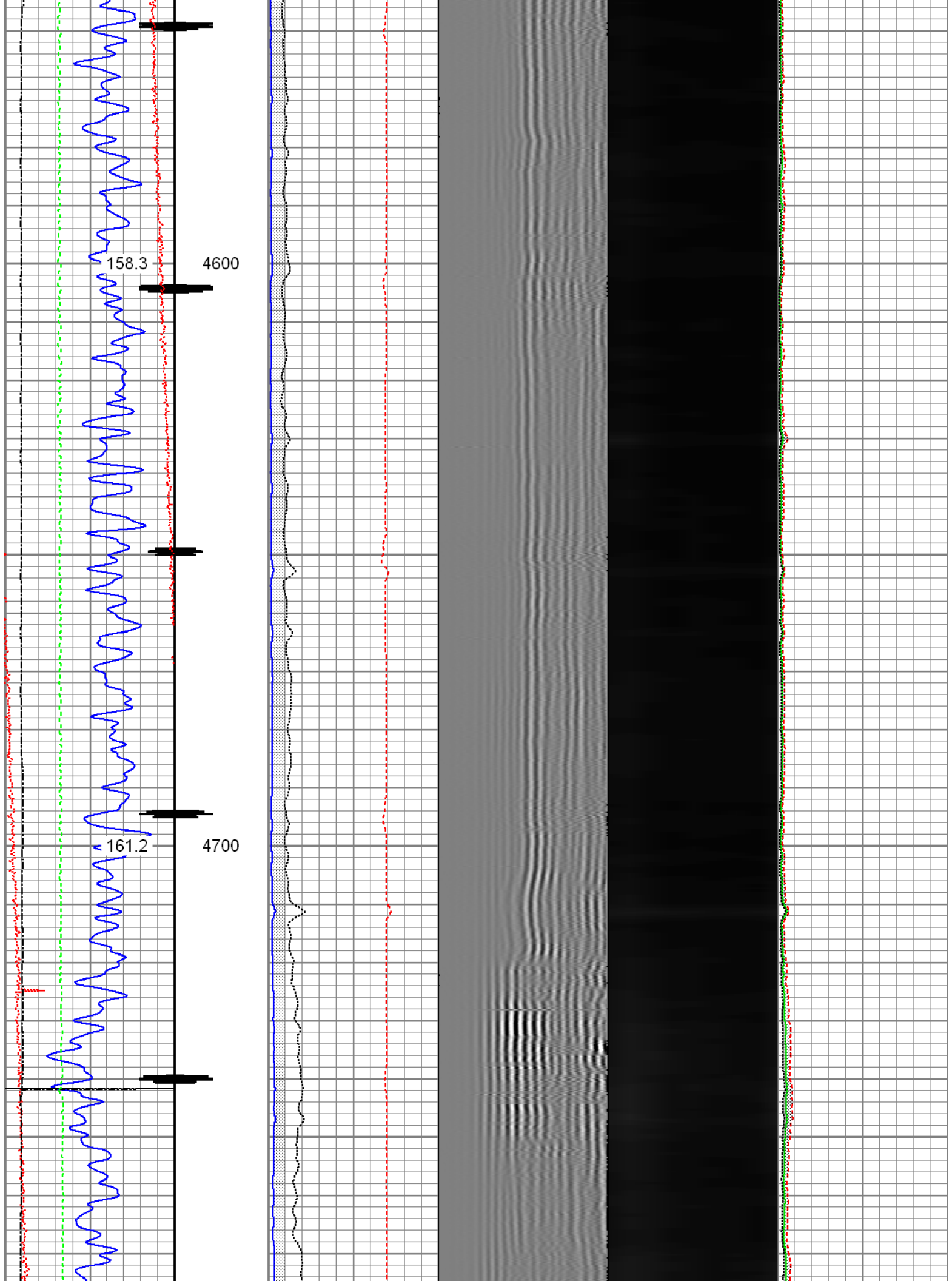


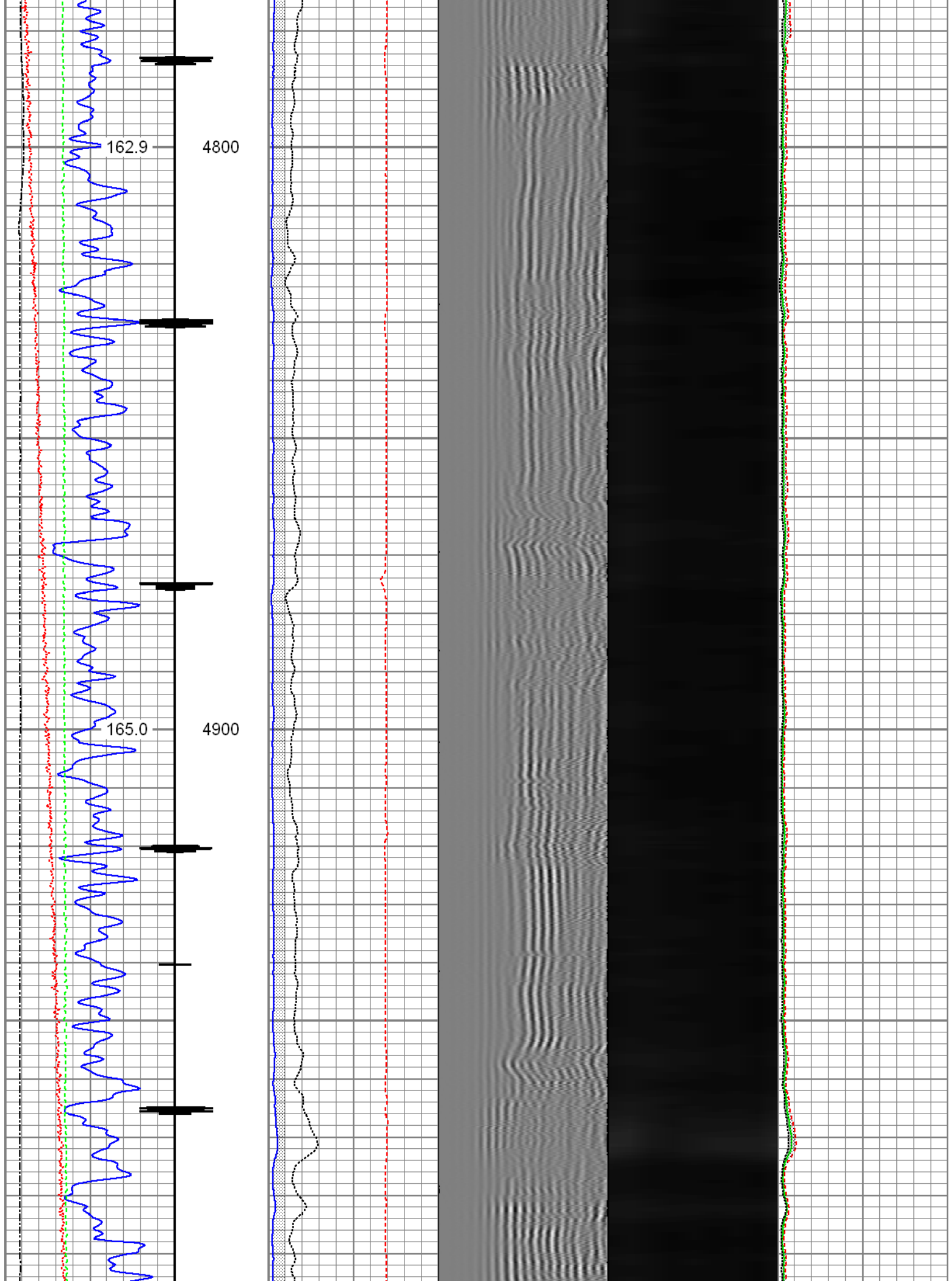


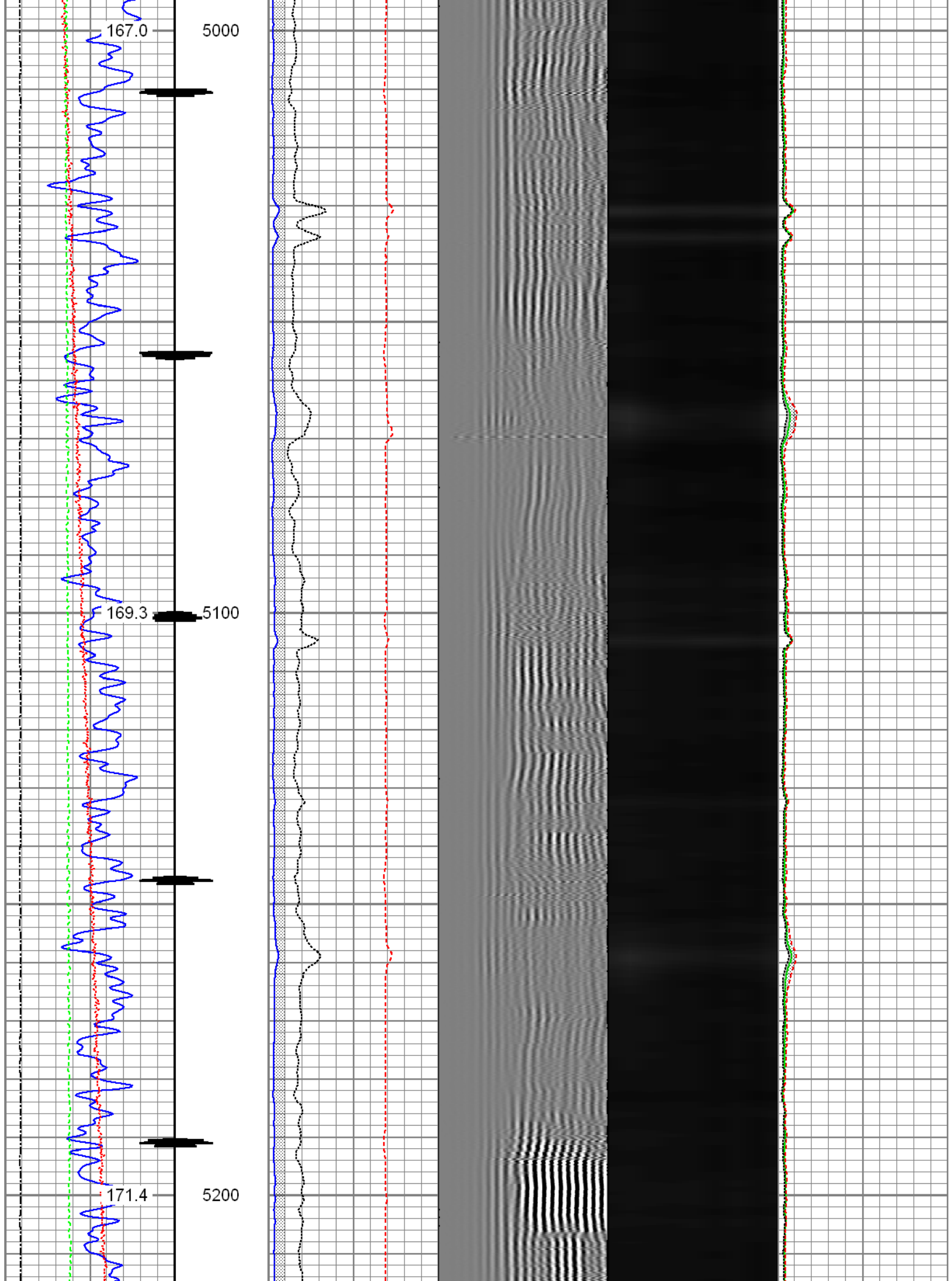


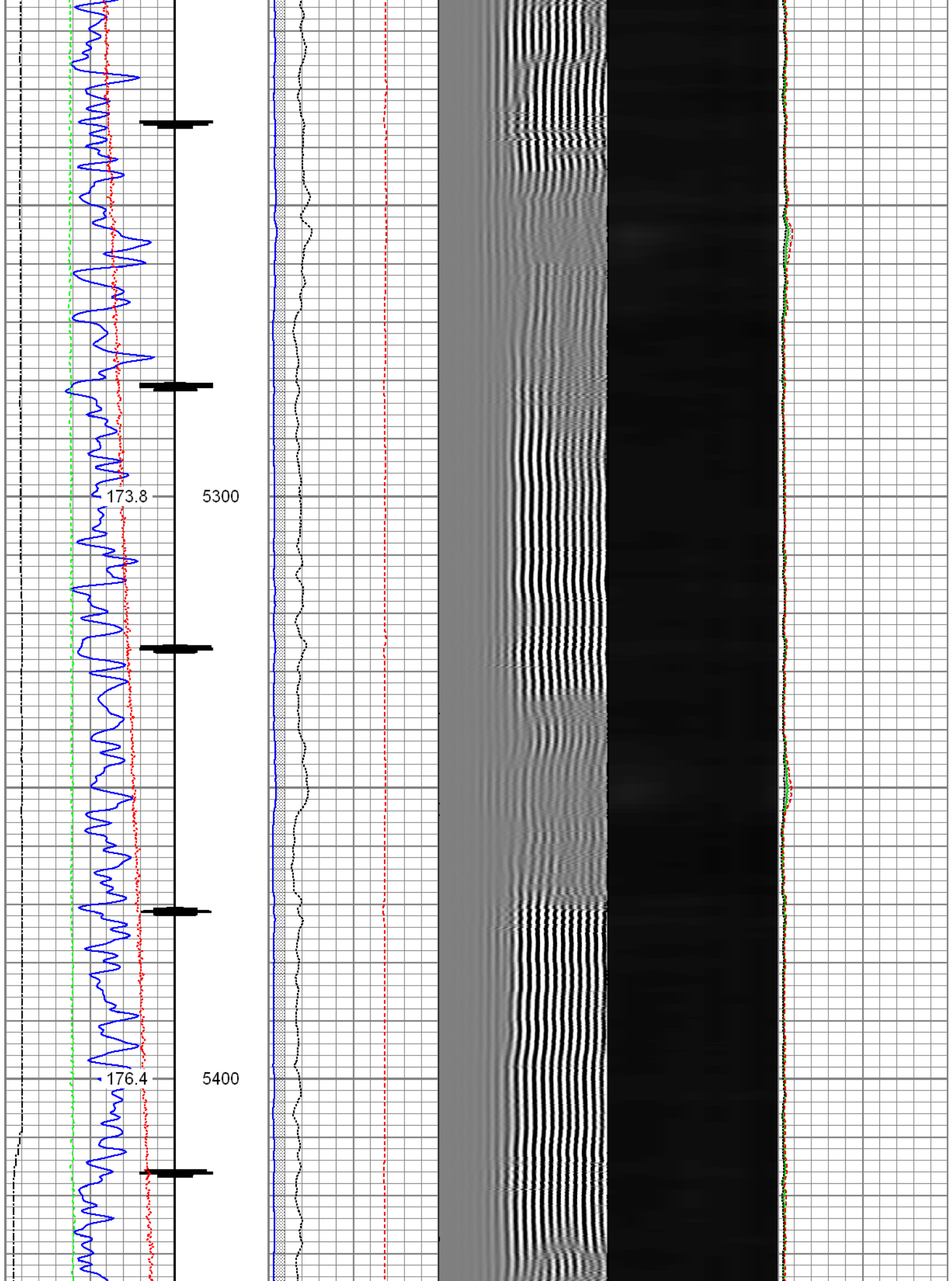


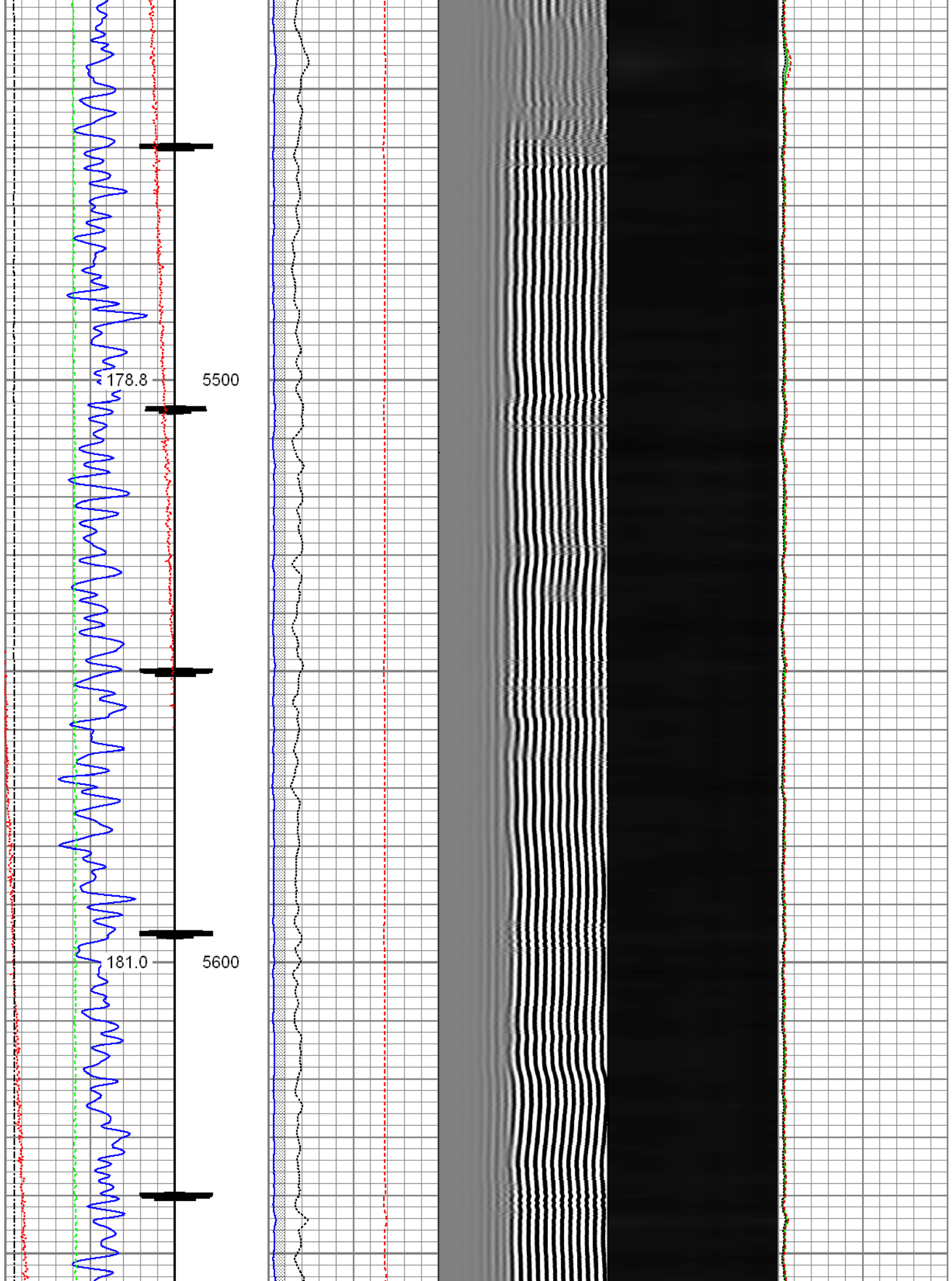


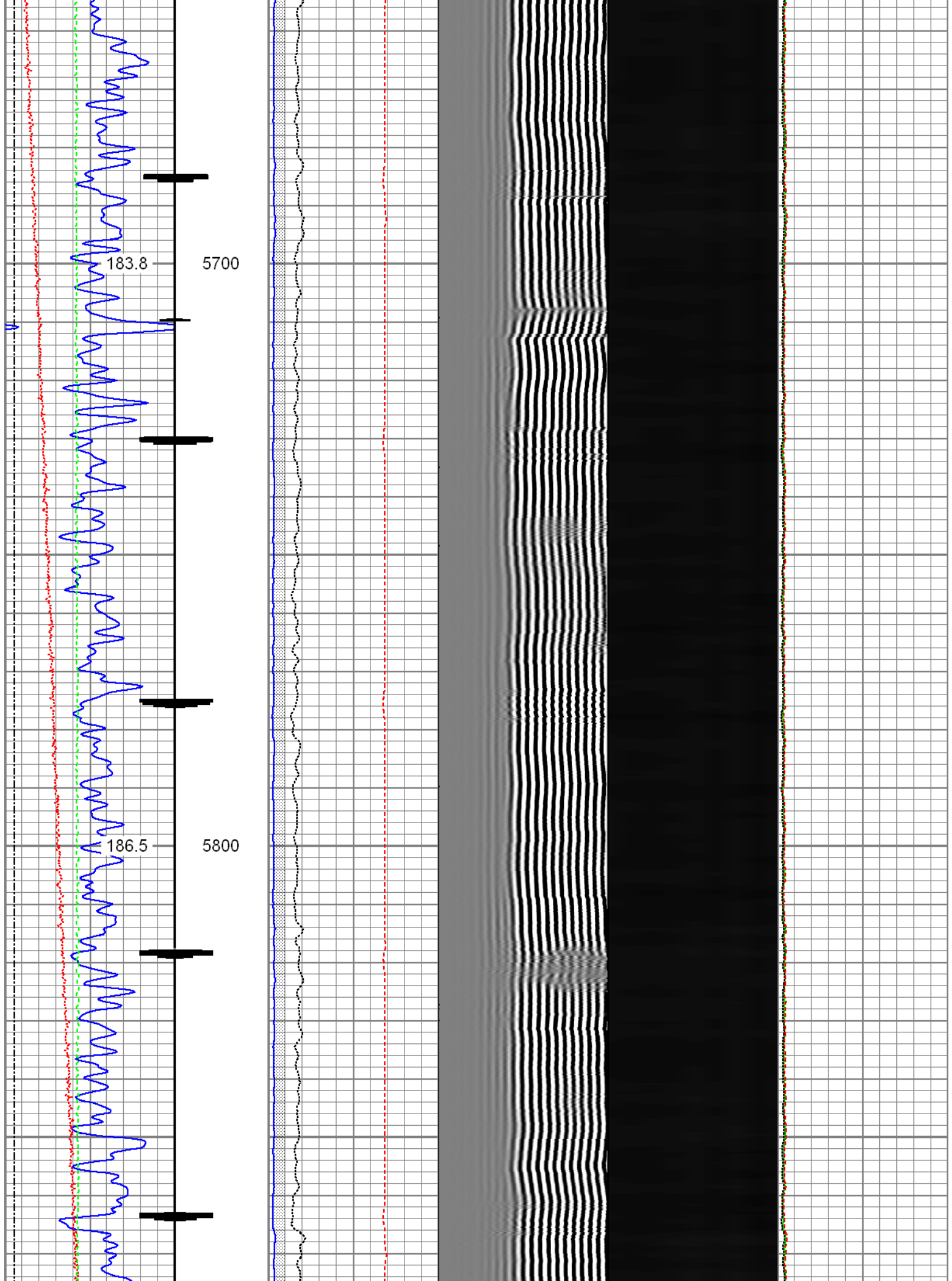


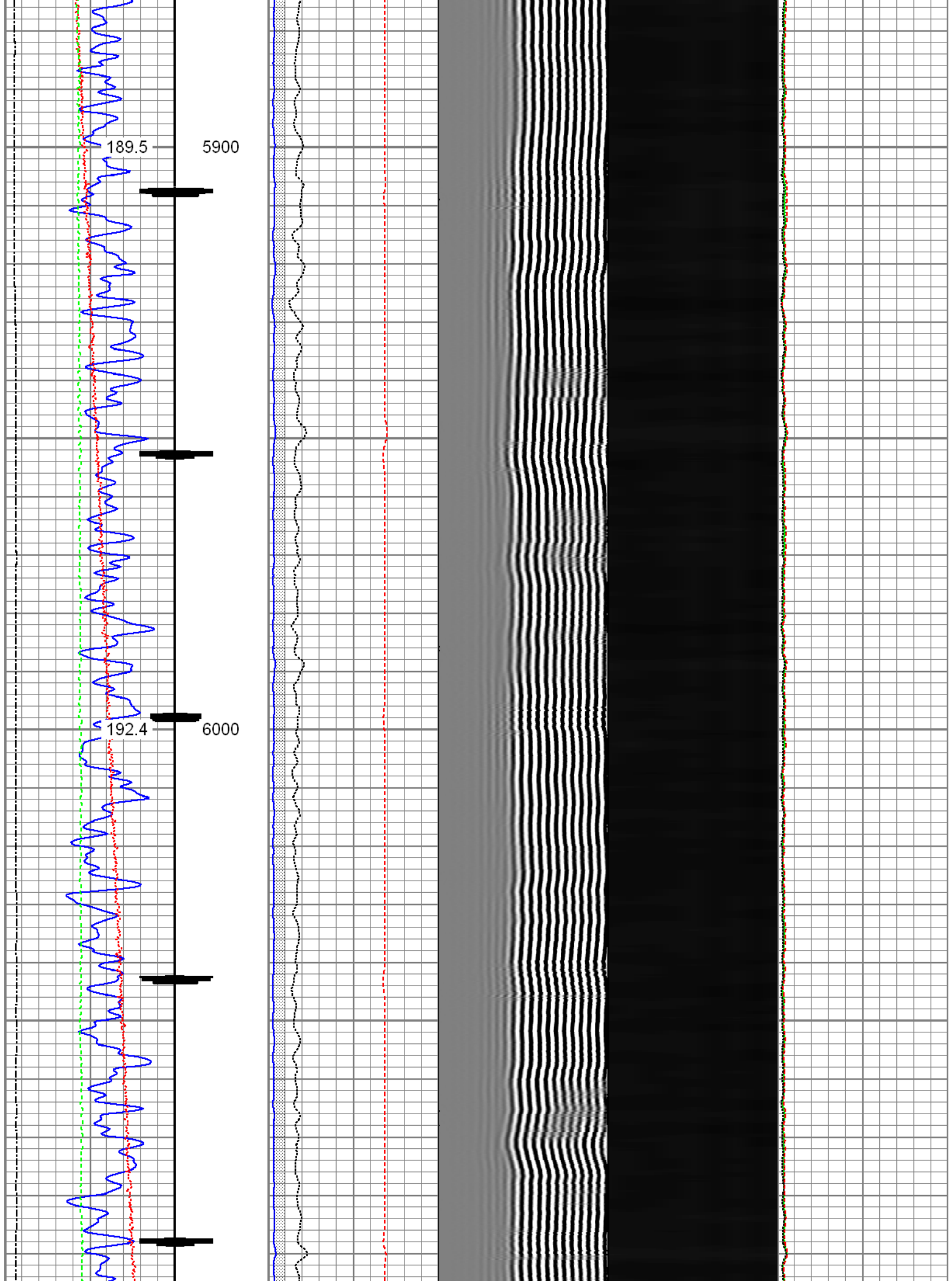


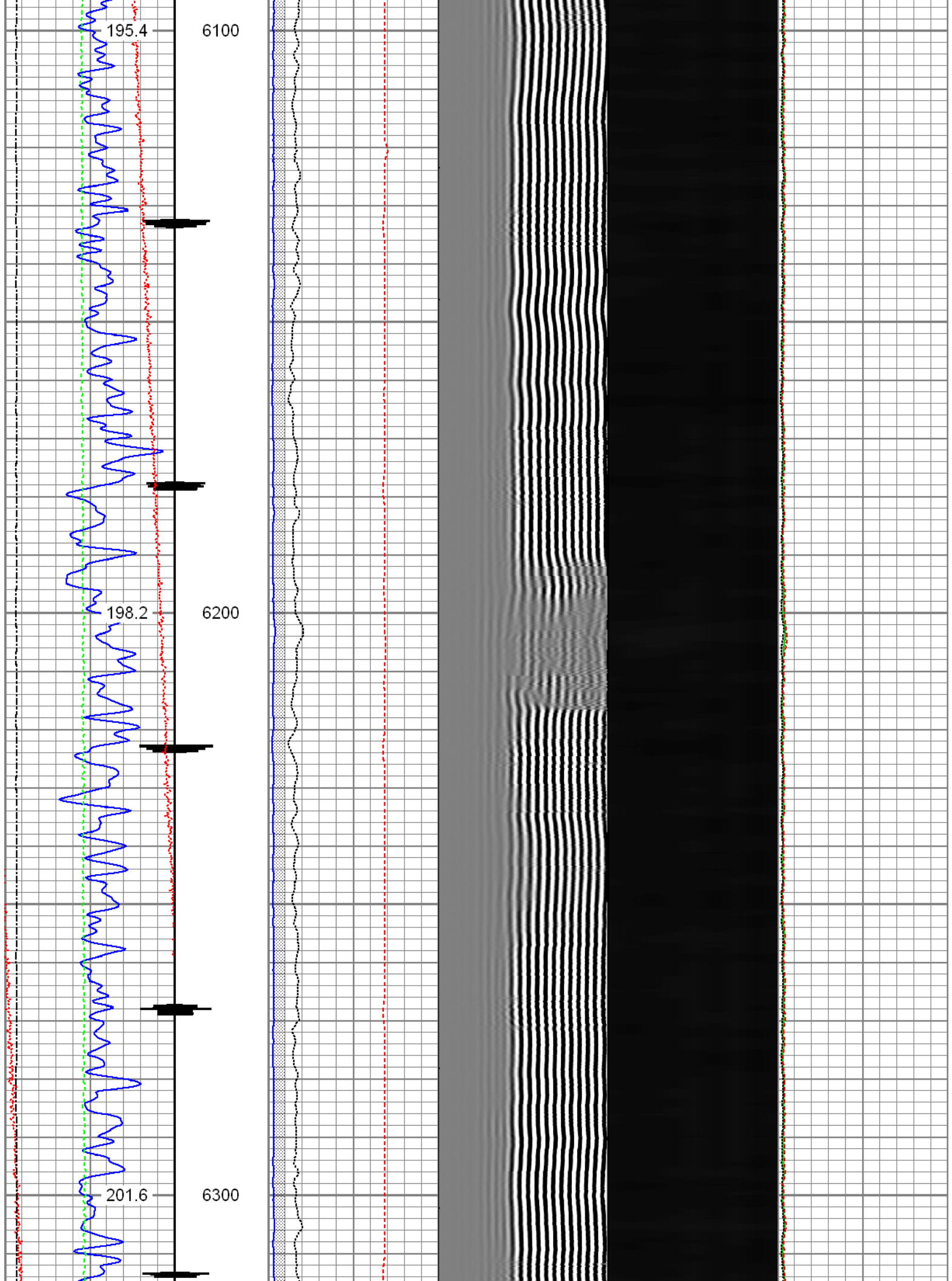


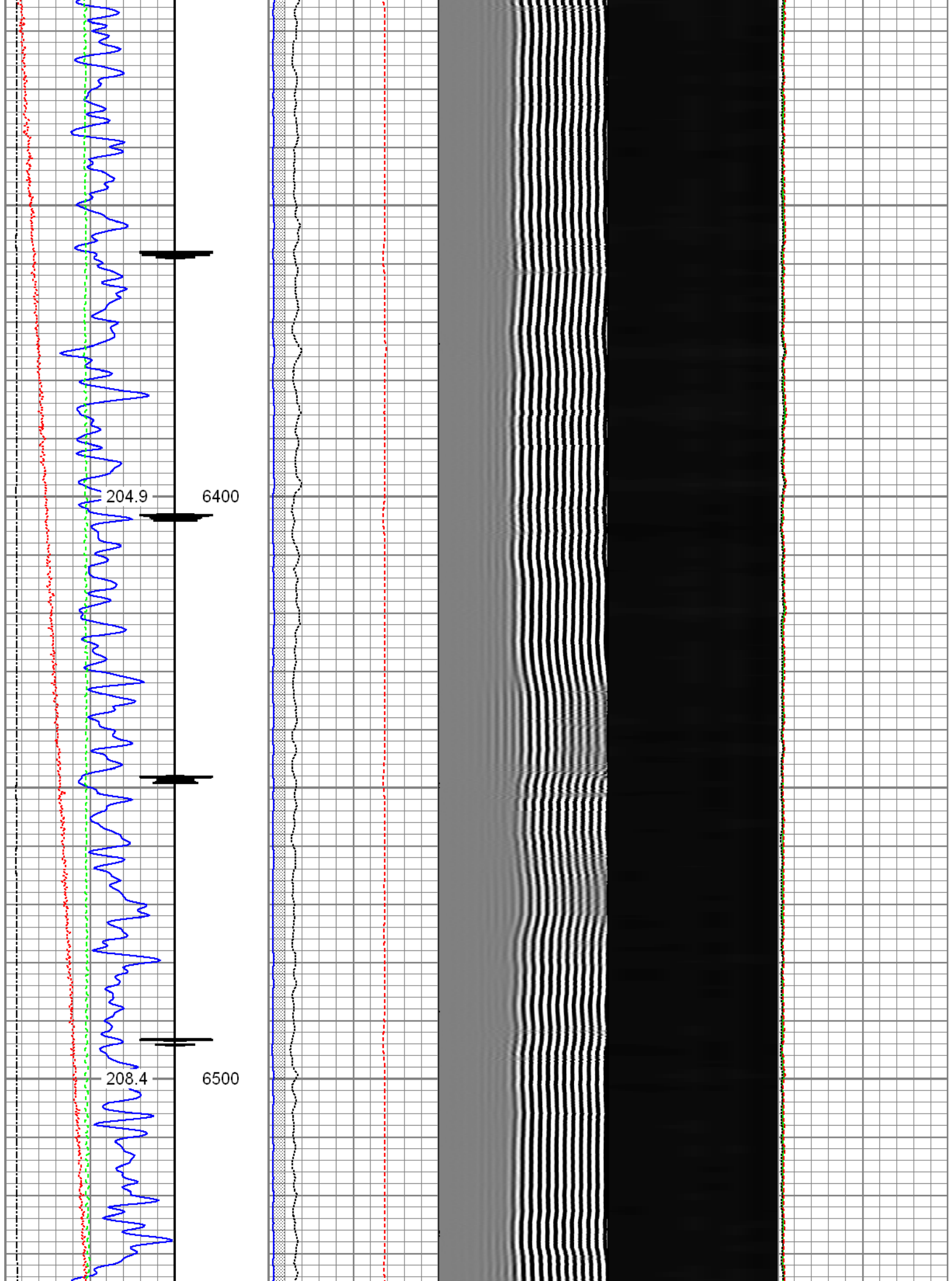


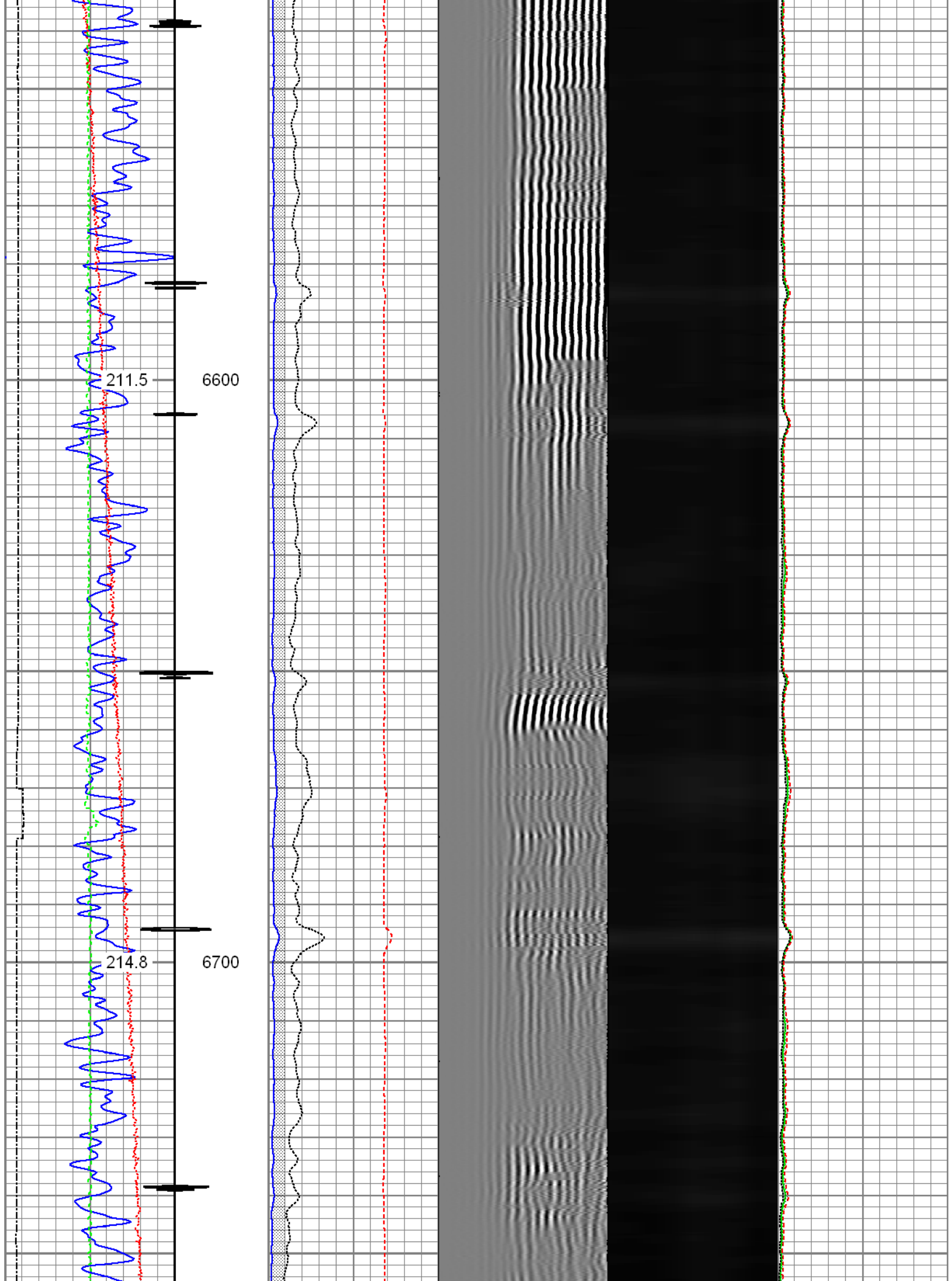


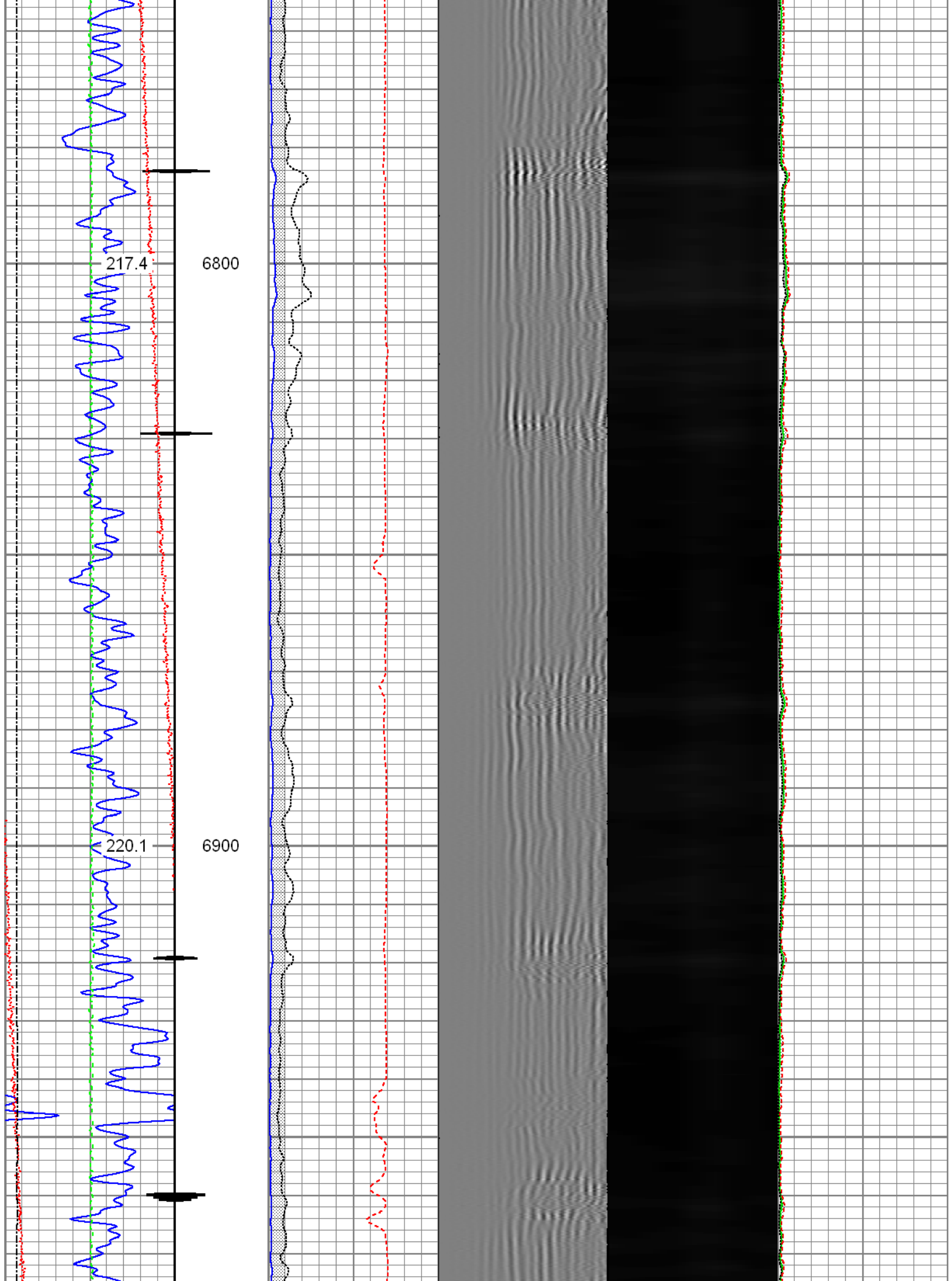


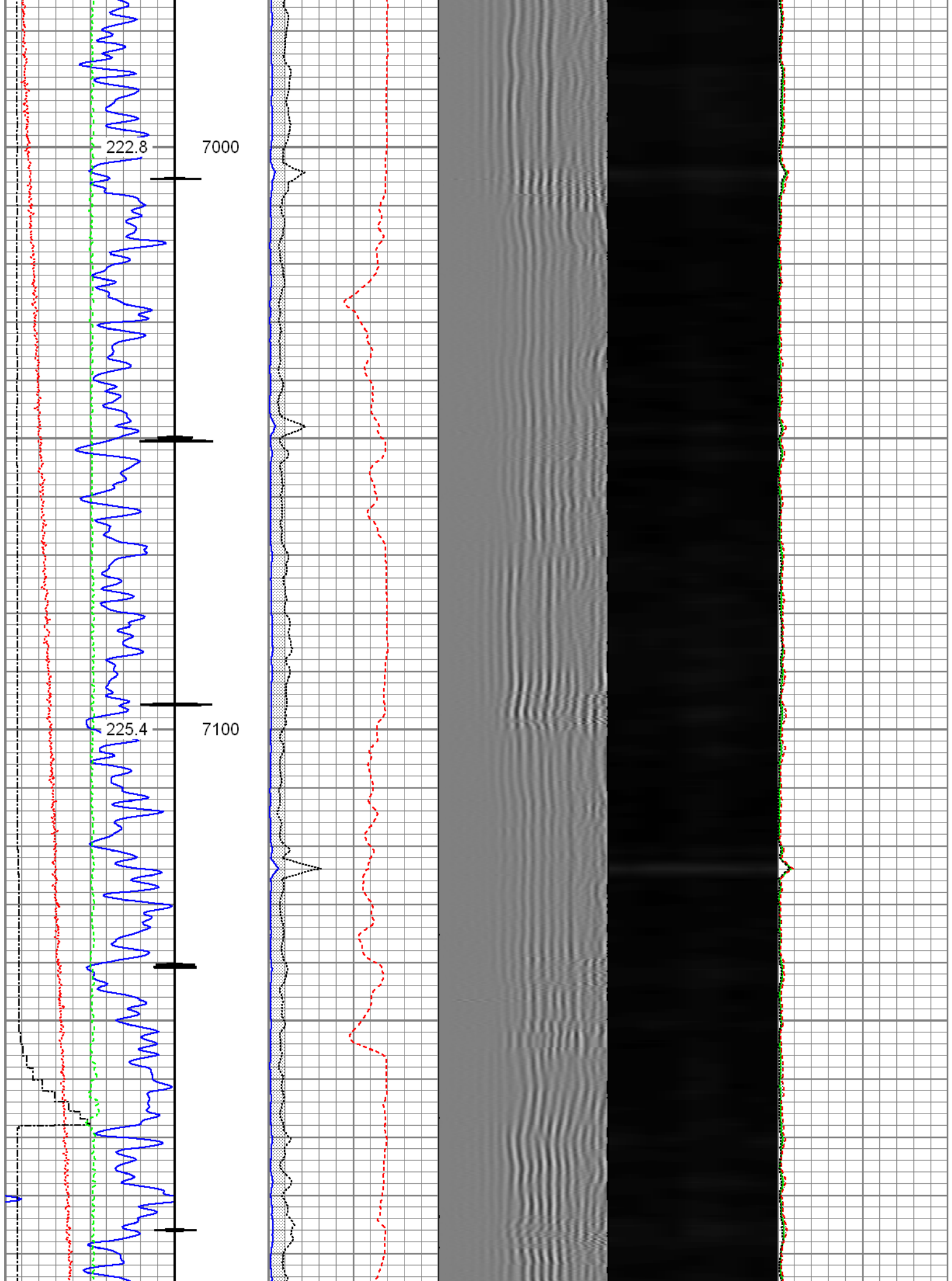


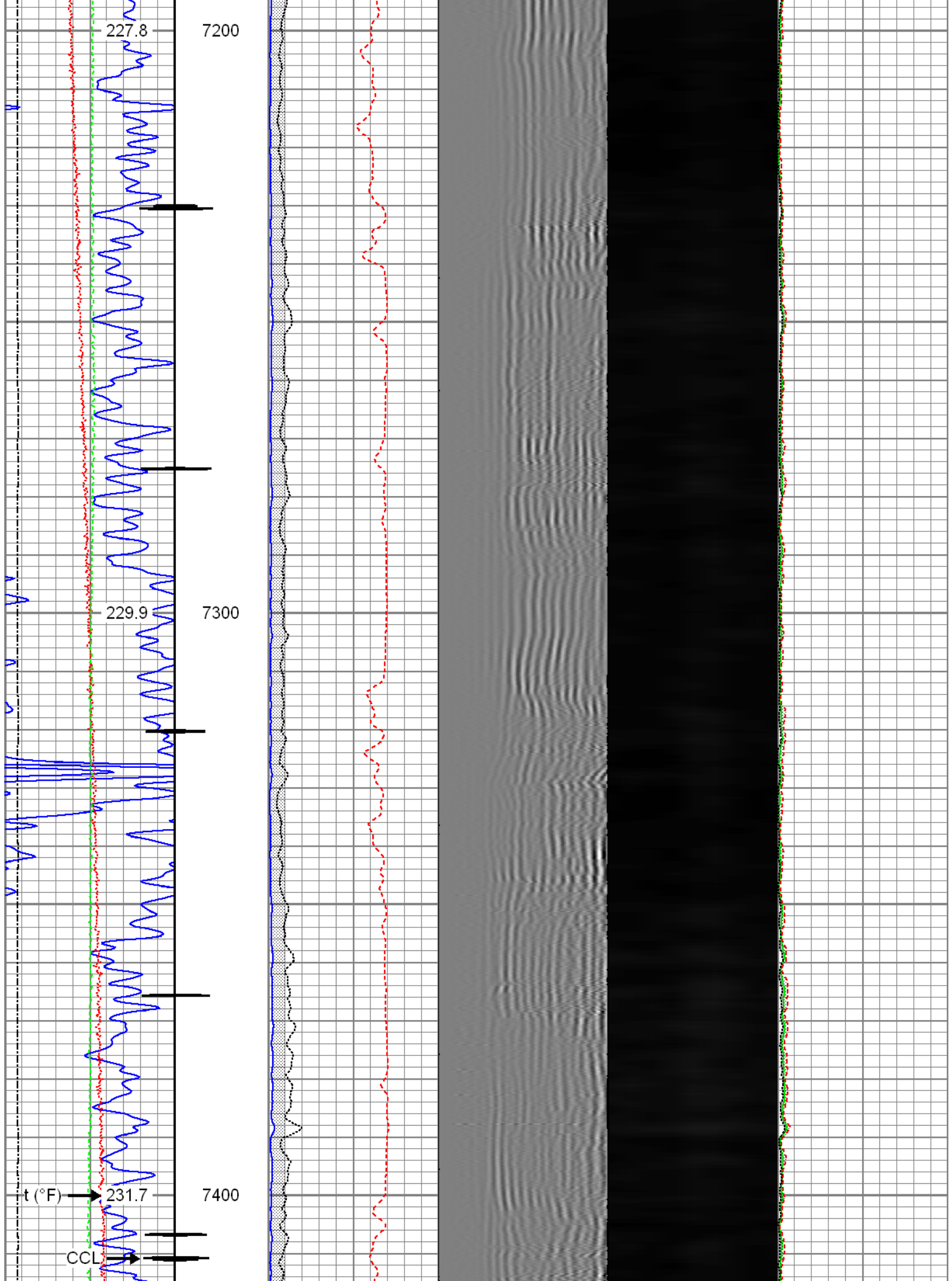


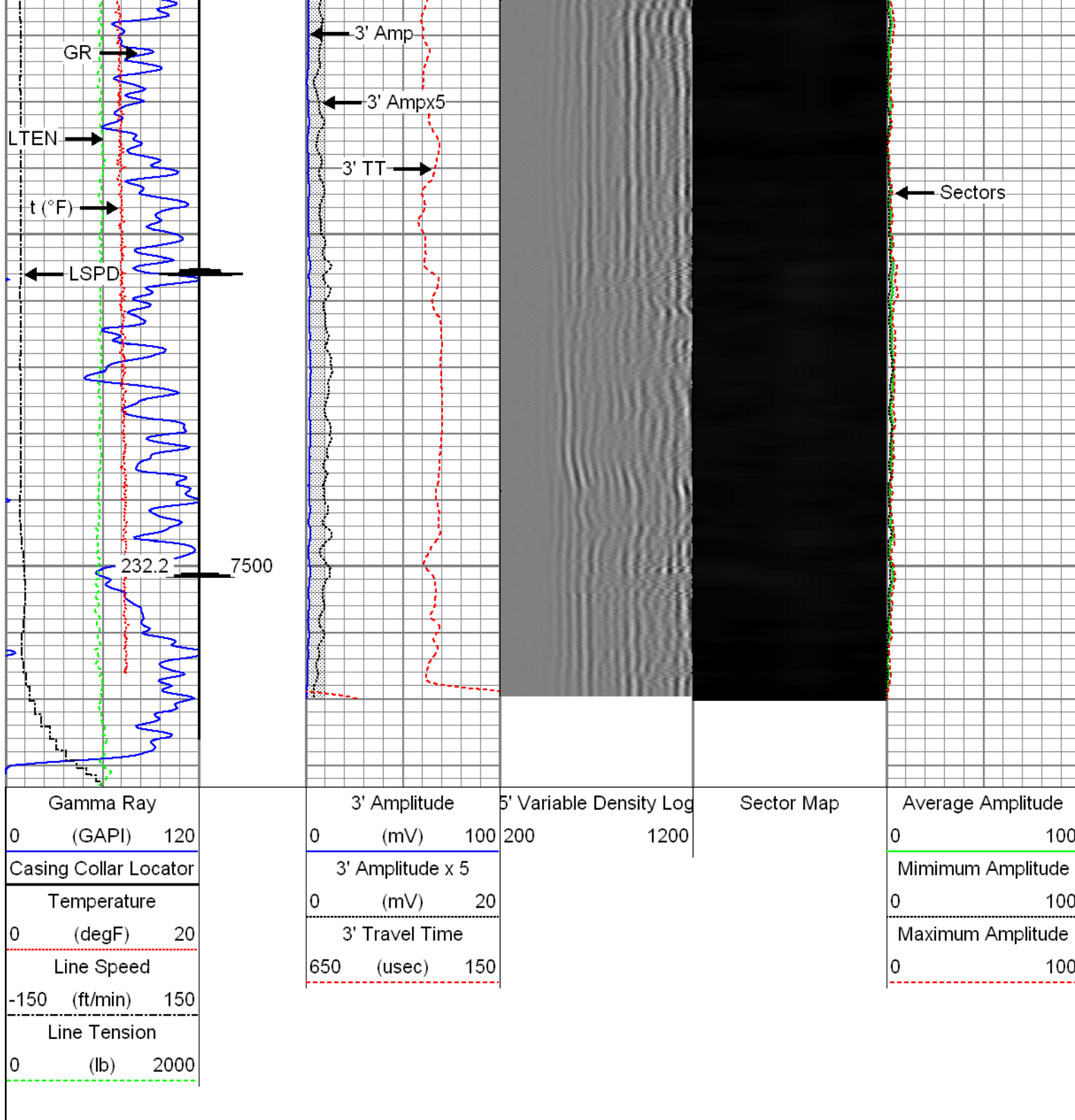












Repeat Section

Recorded with 2800 PSI Surface Induced Pressure

Database File:	c:\warrior\data\new folder\0512341305_anadarko_bane 28n1-9hz_09-02-15_rbl.db
Dataset Pathname:	repeat
Presentation Format:	radii
Dataset Creation:	Wed Sep 02 10:26:53 2015 by Log 7.0 B1
Charted by:	Depth in Feet scaled 1:240

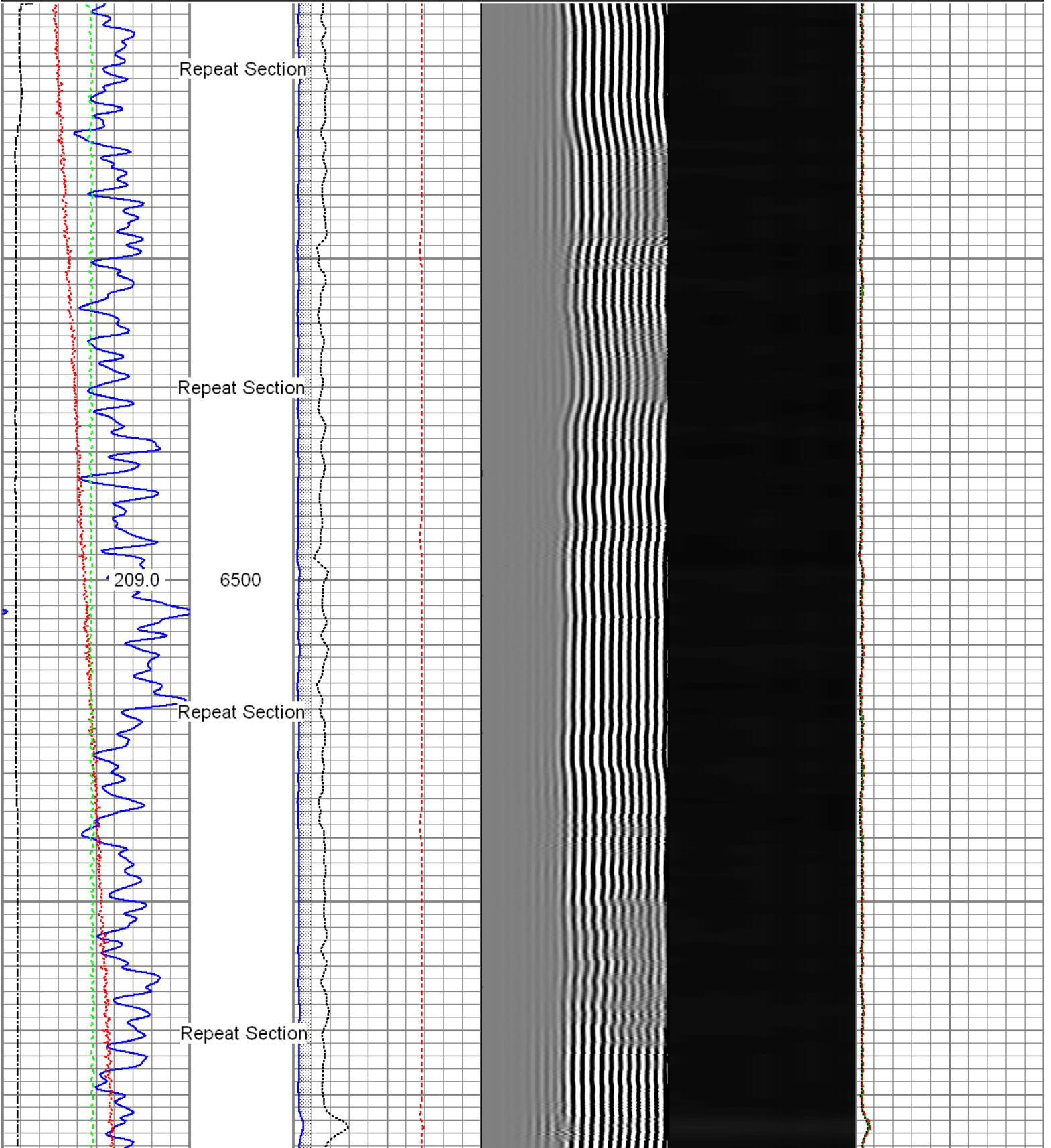
Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
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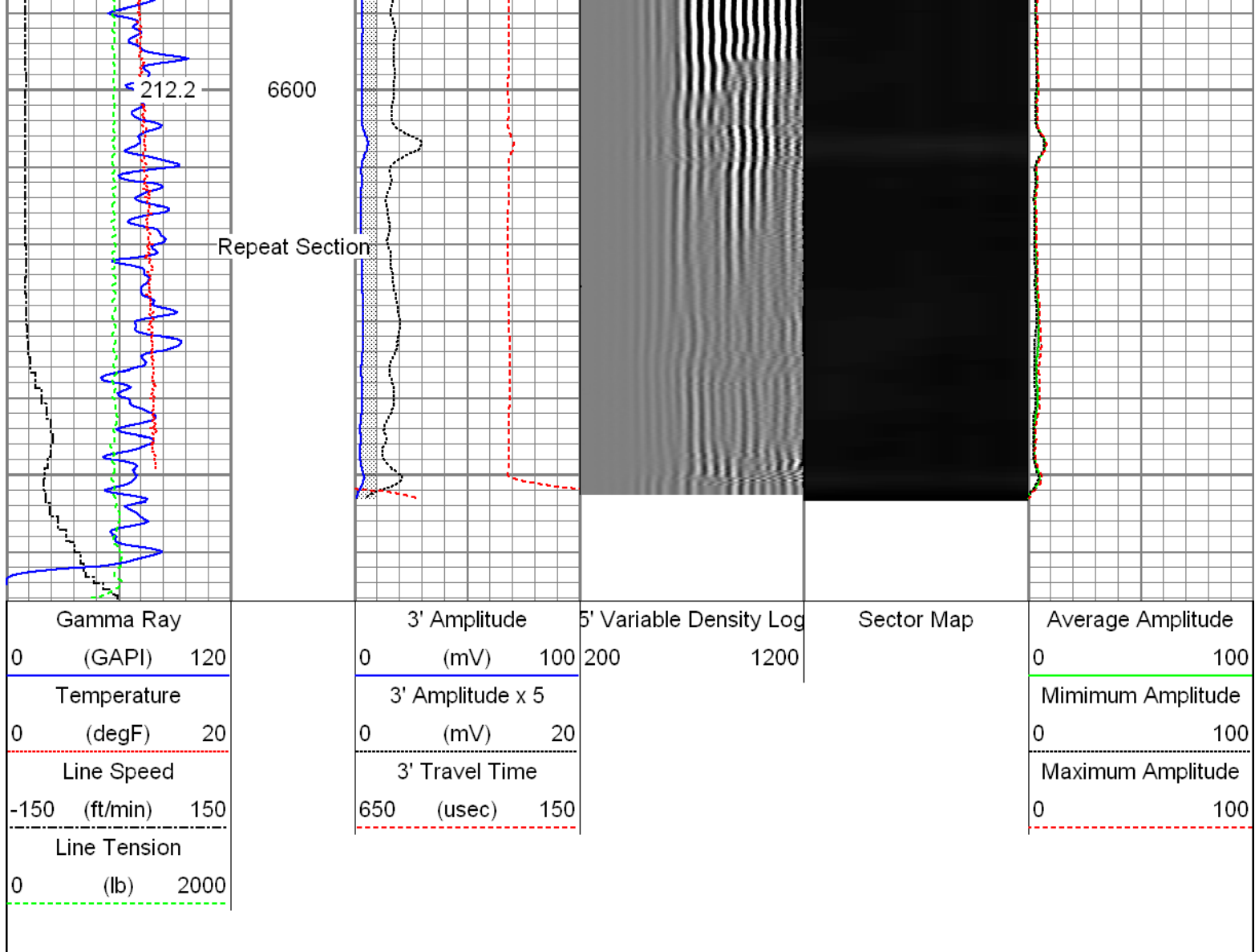
0	(GAPI)	120
Temperature		
0	(degF)	20
Line Speed		
-150	(ft/min)	150
Line Tension		
0	(lb)	2000



0	(mV)	100
3' Amplitude x 5		
0	(mV)	20
3' Travel Time		
650	(usec)	150

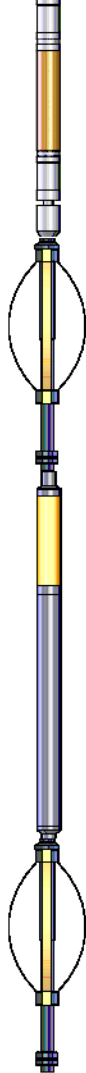
200	1200
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0	100
Minimum Amplitude	
0	100
Maximum Amplitude	
0	100





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
			Probe_RADII-C-2-3/4" (FW1305-098) Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.19	2.75	105.00
WVF3FT	14.55					
WVFCAL	14.55					
WVFS1	14.55					
WVFS2	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					
						
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
CCL	6.51					
DCCL	6.51					
			Probe_CCL_GR-2.75"Digital (FW1307-038) Probe 2-3/4" Digital CCL / Gamma Ray Combined	4.54	2.75	55.00
GR	3.77					
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Dataset: 0512341305_anadarko_bane 28n1-9hz_09-02-15_rbl.db: field/well/run1/main Total Length: 23.40 ft Total Weight: 194.00 lb O.D. 2.75 in						

Calibration Report		
Database File:	c:\warrior\data\new folder\0512341305_anadarko_bane 28n1-9hz_09-02-15_rbl.db	
Dataset Pathname:	main	
Dataset Creation:	Wed Sep 02 10:39:11 2015 by Log 7.0 B1	

Gamma Ray Calibration Report		
Serial Number:	FW1307-038	
Tool Model:	2.75"Digital	
Performed:	Wed Sep 02 09:49:00 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:	FW1305-098	
Tool Model:	2-3/4"	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	29.956	ft

Master Calibration, performed Wed Sep 02 09:46:12 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.001	0.691	0.800	71.921	102.795	0.918
CAL	0.723	0.783				
5'	0.001	0.702	0.800	71.921	101.441	0.689
SUM						
S1	-0.004	0.693	0.000	100.000	143.535	0.517
S2	-0.001	0.694	0.000	100.000	143.944	0.151
S3	-0.001	0.692	0.000	100.000	144.419	0.127
S4	-0.001	0.691	0.000	100.000	144.556	0.143
S5	-0.001	0.689	0.000	100.000	145.007	0.117
S6	-0.001	0.691	0.000	100.000	144.630	0.079
S7	-0.001	0.696	0.000	100.000	143.593	0.096
S8	-0.001	0.692	0.000	100.000	144.251	0.153

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	0.723	0.783	1.000	0.000

Air Zero Calibration, performed Wed Sep 02 09:45:48 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	



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Well	Bane 28N1-9HZ
Field	Wattenberg
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State	Colorado