



Radial Cement Bond Gamma Ray Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.				
Well	Dry Creek 11-35				
Field	Wattenberg				
County	Weld				
State	Colorado				
Location:		API # : 05-123-31019			Other Services None
SEC 35		TWP 1N	RGE 67W	Elevation	
Permanent Datum		Ground Level	Elevation	5029'	
Log Measured From		Kelly Bushing	15 FT	K.B. 5044'	
Drilling Measured From		Kelly Bushing		D.F. 5043'	
				G.L. 5029'	

Date	26-AUG-2016				
Run Number	One				
Depth Driller	8509 FT				
Depth Logger	4021 FT				
Bottom Logged Interval	4017 FT				
Top Log Interval	Surface				
Open Hole Size	7.875"				
Type Fluid	Water				
Density / Viscosity	8.34 lbm/gal				
Max. Recorded Temp.	138°F				
Estimated Cement Top	1350 FT				
Time Well Ready	ROA				
Time Logger on Bottom	08:10				
Equipment Number	HD-0343				
Location	Fort Lupton, CO				
Recorded By	Sam Hopper				
Witnessed By	Luis Morales				

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	8 5/8	24	J-55	Surface	1184 FT		
Intermediate #1	4 1/2	11.6	I-80	Surface	8498 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 existing cement at 3820 FT
Adjusted log -14.5 FT to correlate with existing cement
Log ran from 4000 FT to surface
Recorded with 0 PSI surface induced pressure
Logging tools were clean and free of any debris upon completion of operations

Thank you for choosing Reliance Oilfield Services, LLC!!

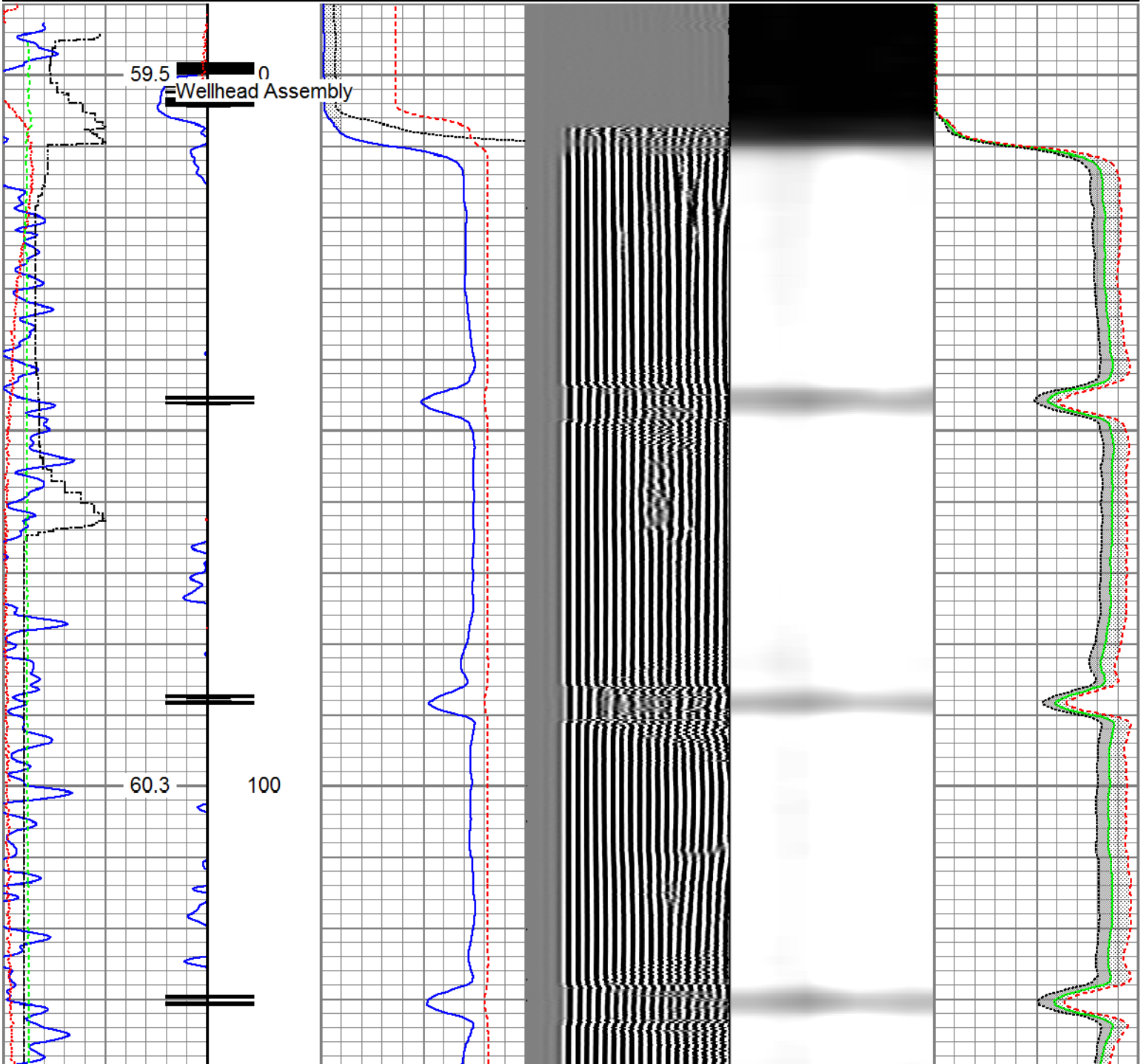


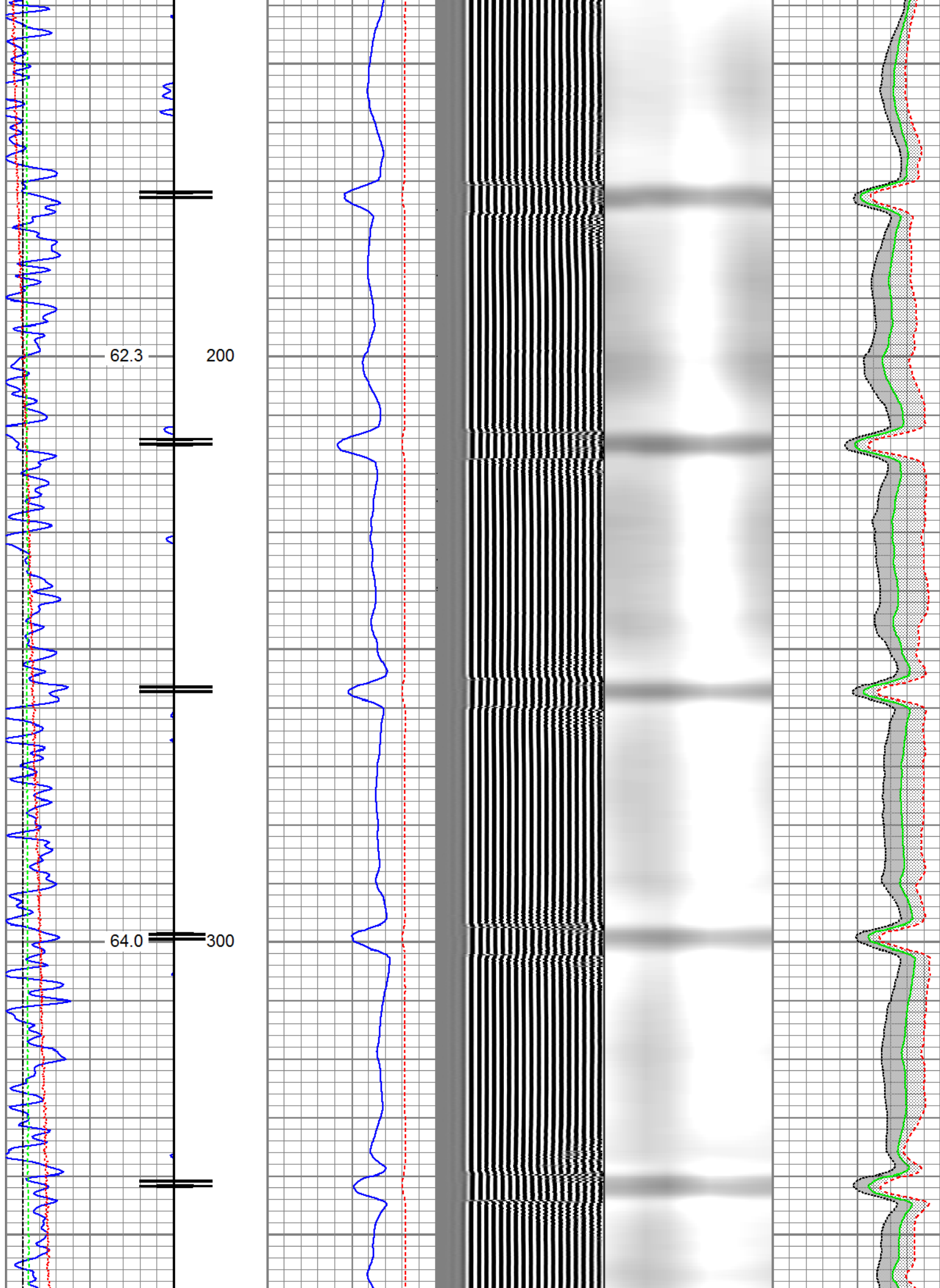
Main Pass

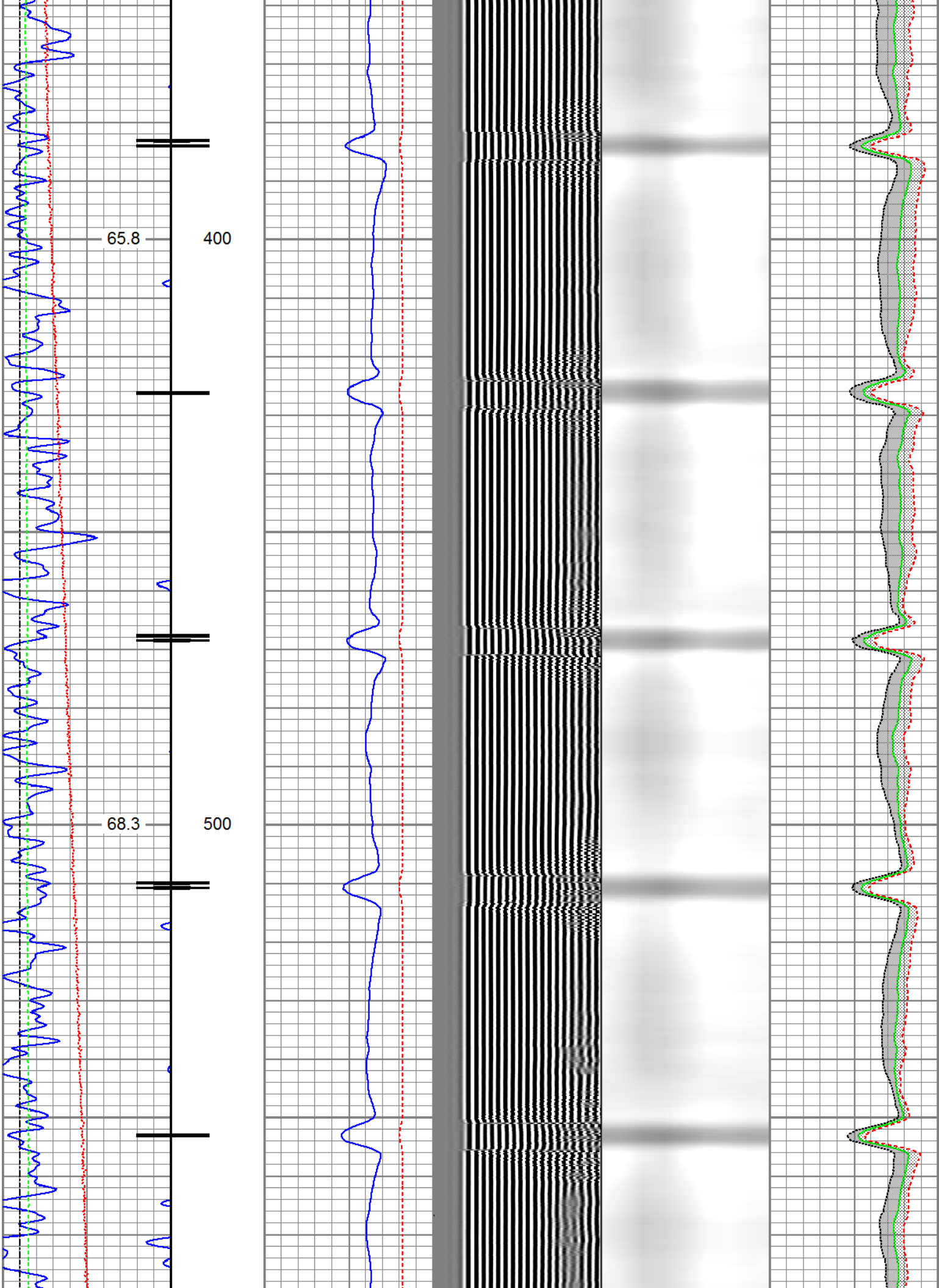
Recorded With 0 PSI Surface Induced Pressure

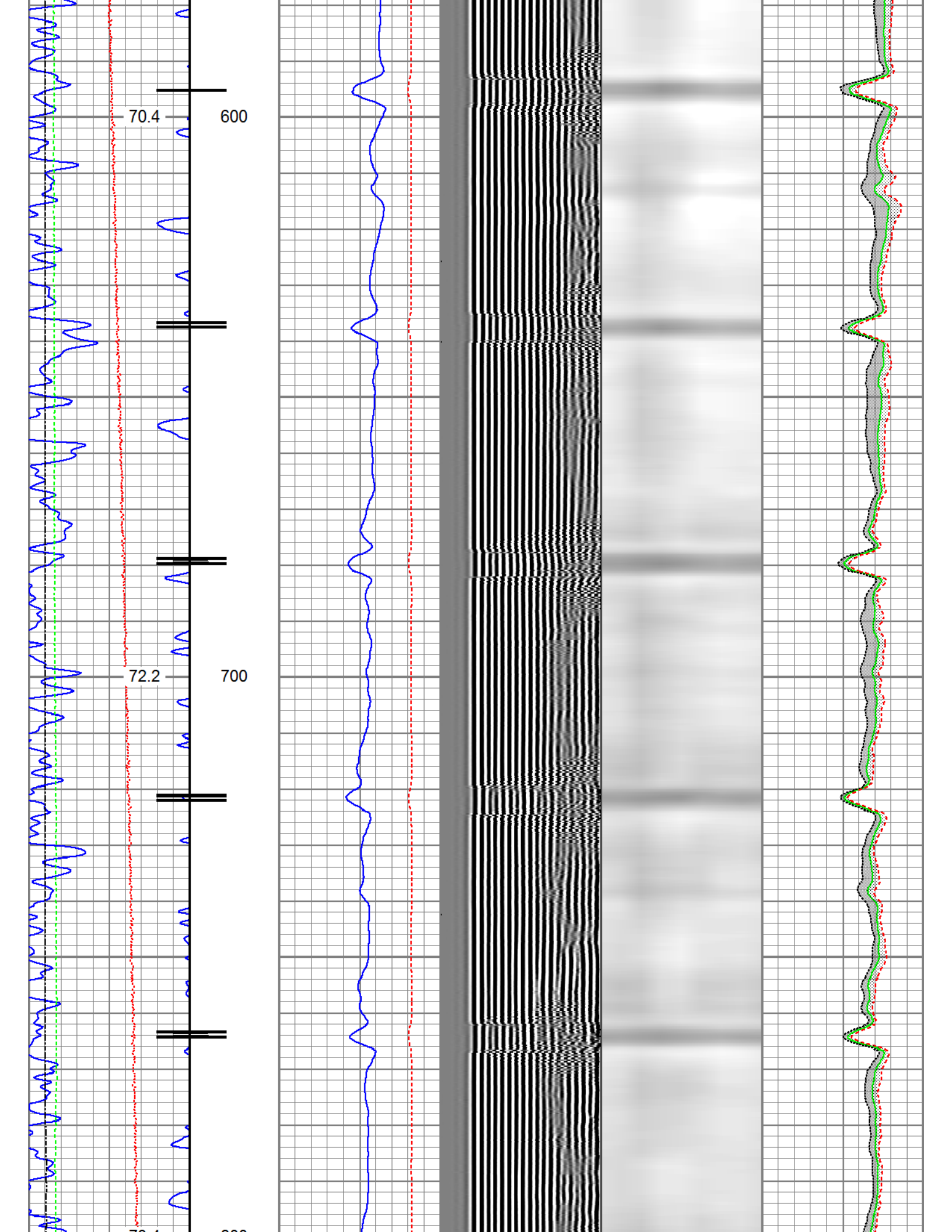
Database File	anadarko_dry creek 11-35_26-aug-2016_rbl_w8\processed_0512331019_anadarko_dry creek 11-35
Dataset Pathname	pass3.1
Presentation Format	ros_radrii_vert
Dataset Creation	Fri Aug 26 08:47:26 2016
Charted by	Depth in Feet scaled 1:240

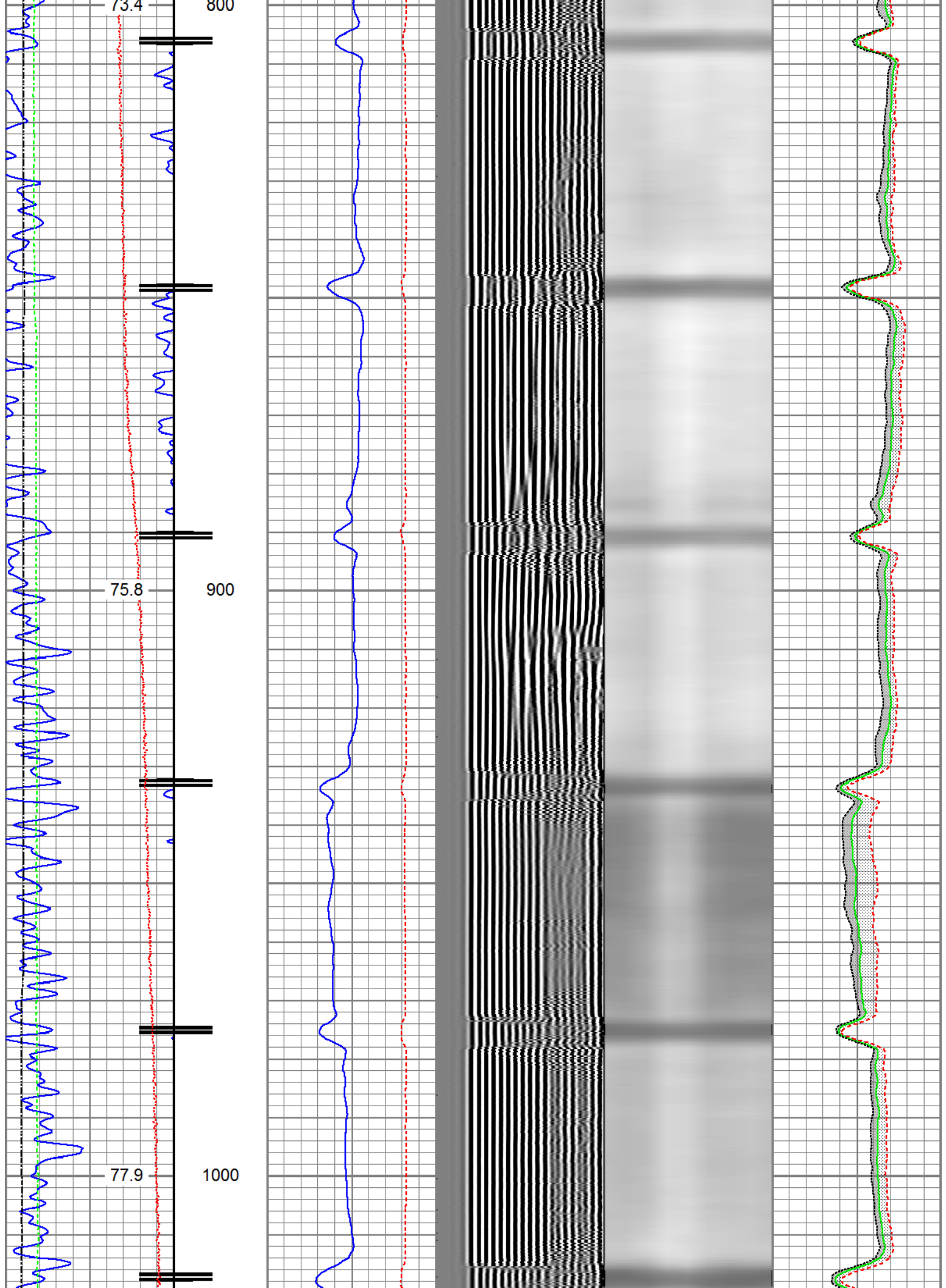
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
30 (GAPI) 130	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude
	0 (mV) 20			0 100
Temperature	3' Travel Time			Maximum Amplitude
0 (degF) 20	650 (usec) 150			0 100
Line Speed				
-150 (ft/min) 150				
Line Tension				
0 (lb) 2000				

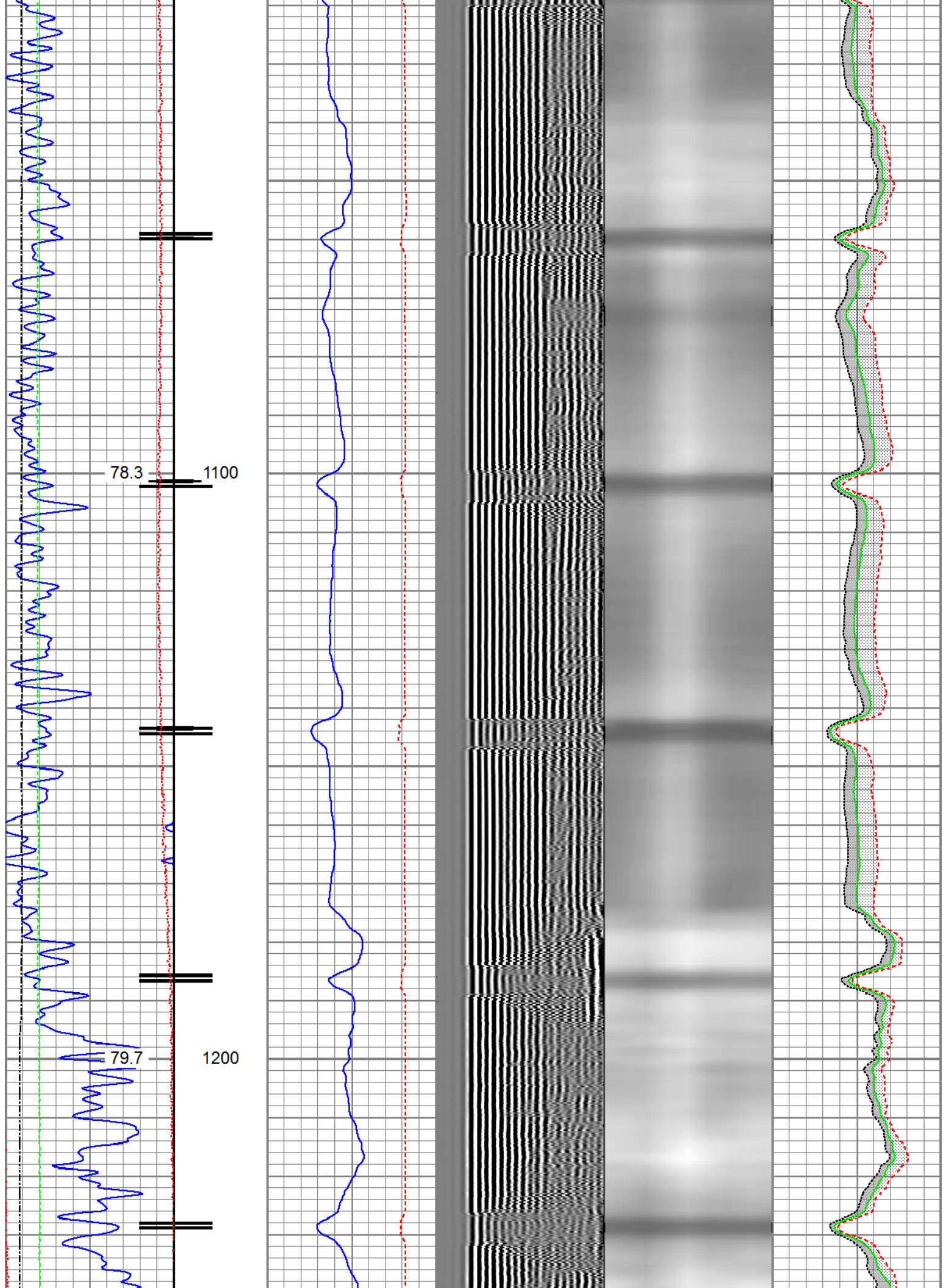


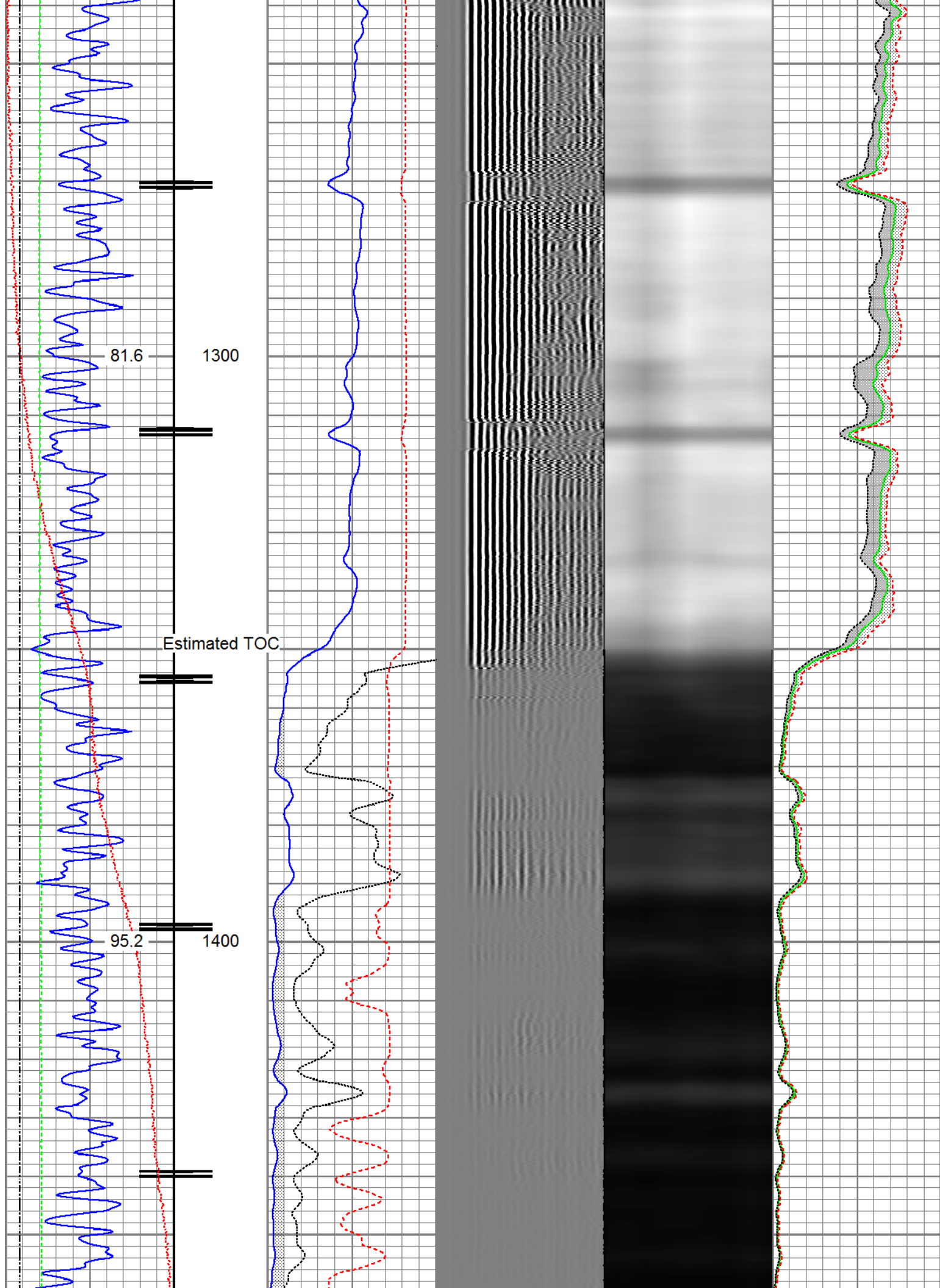


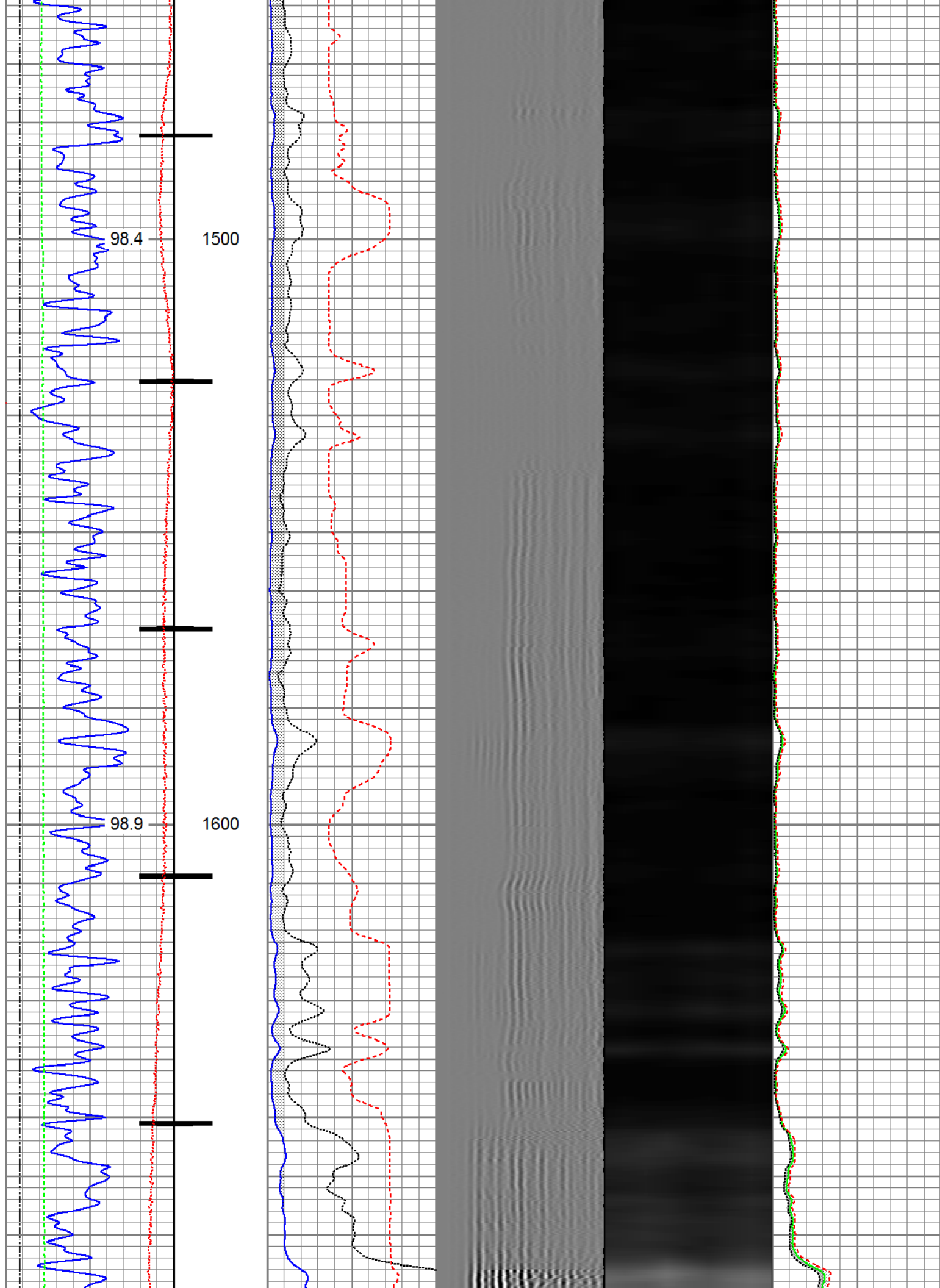


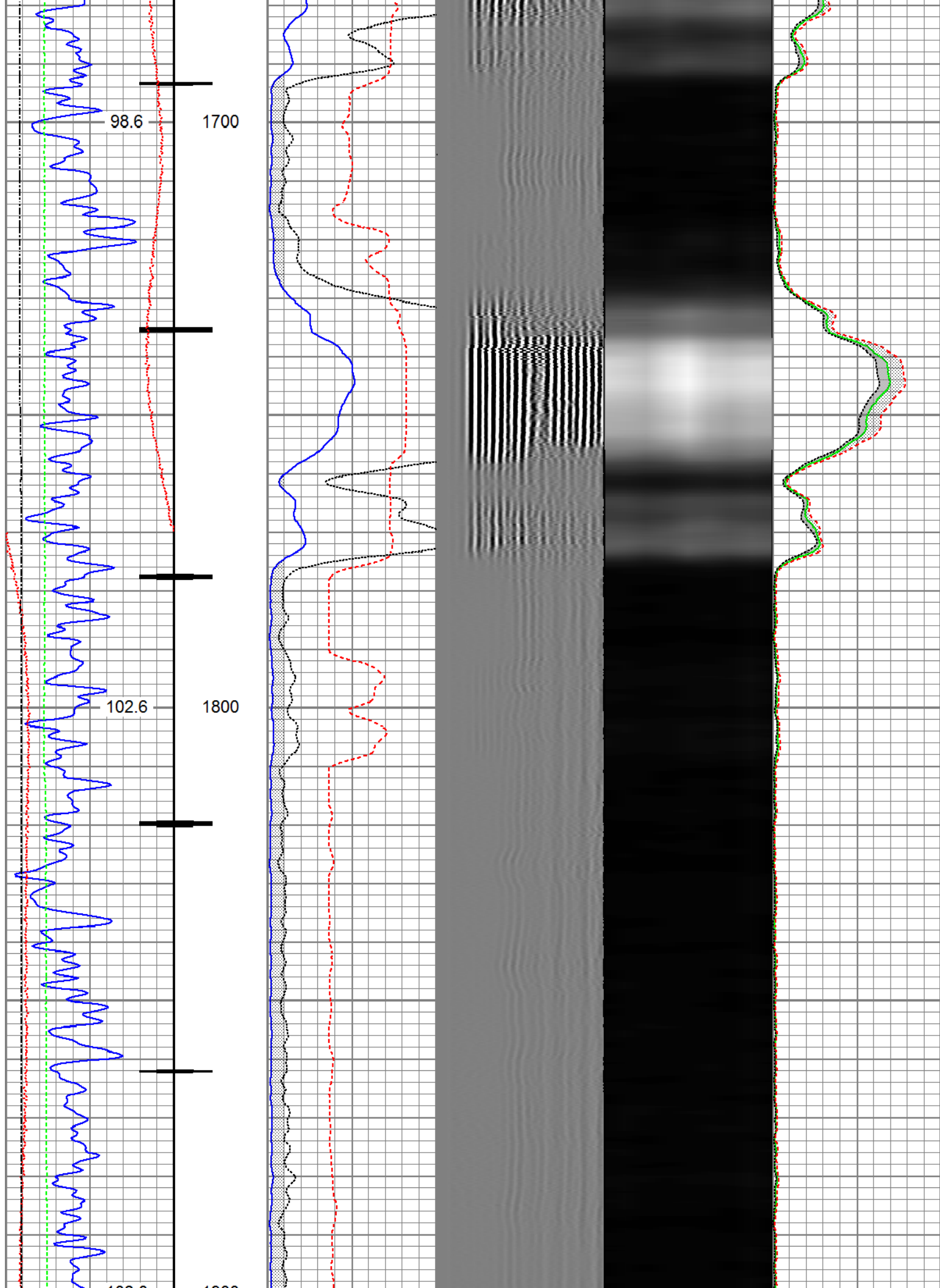


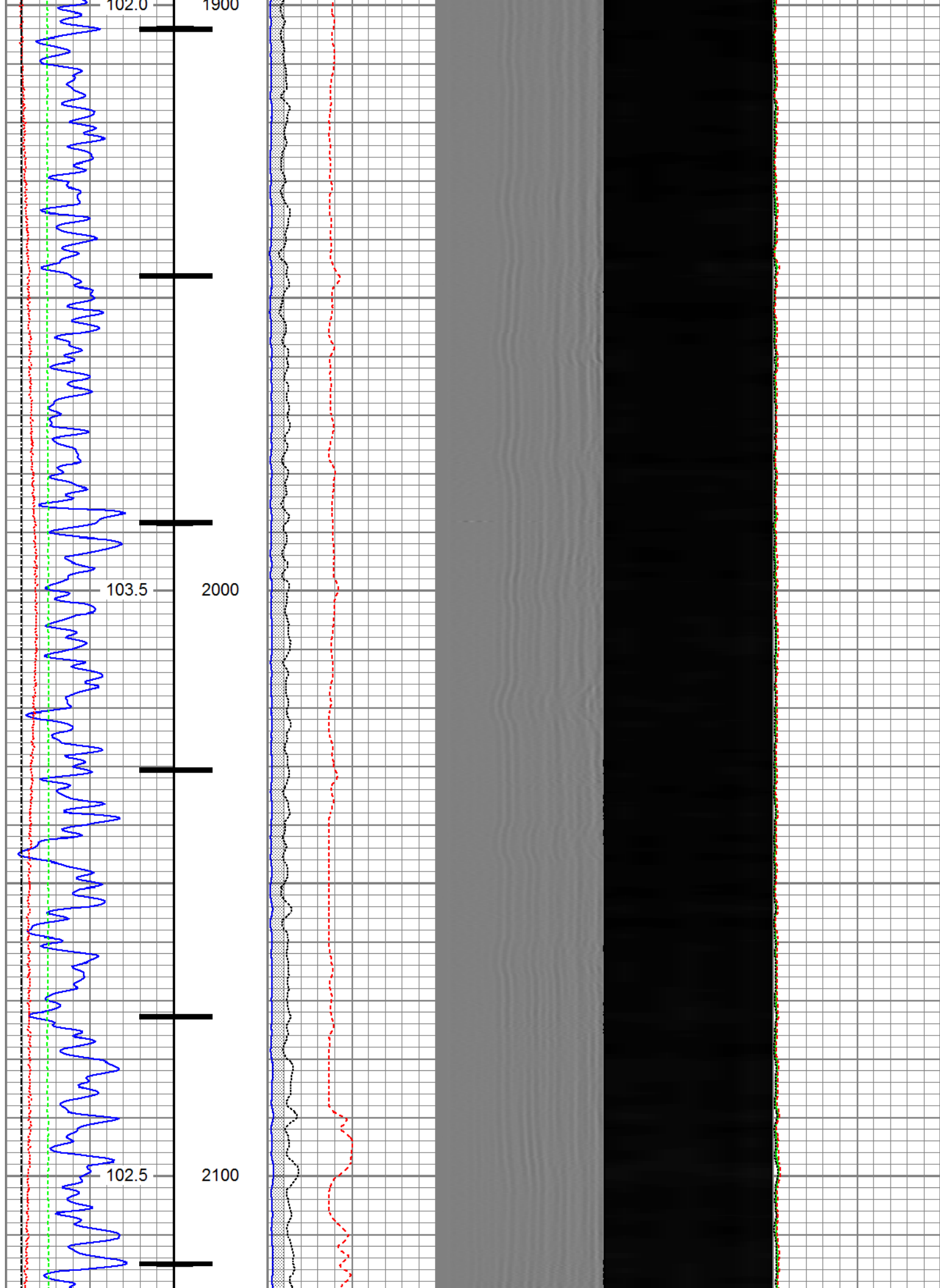


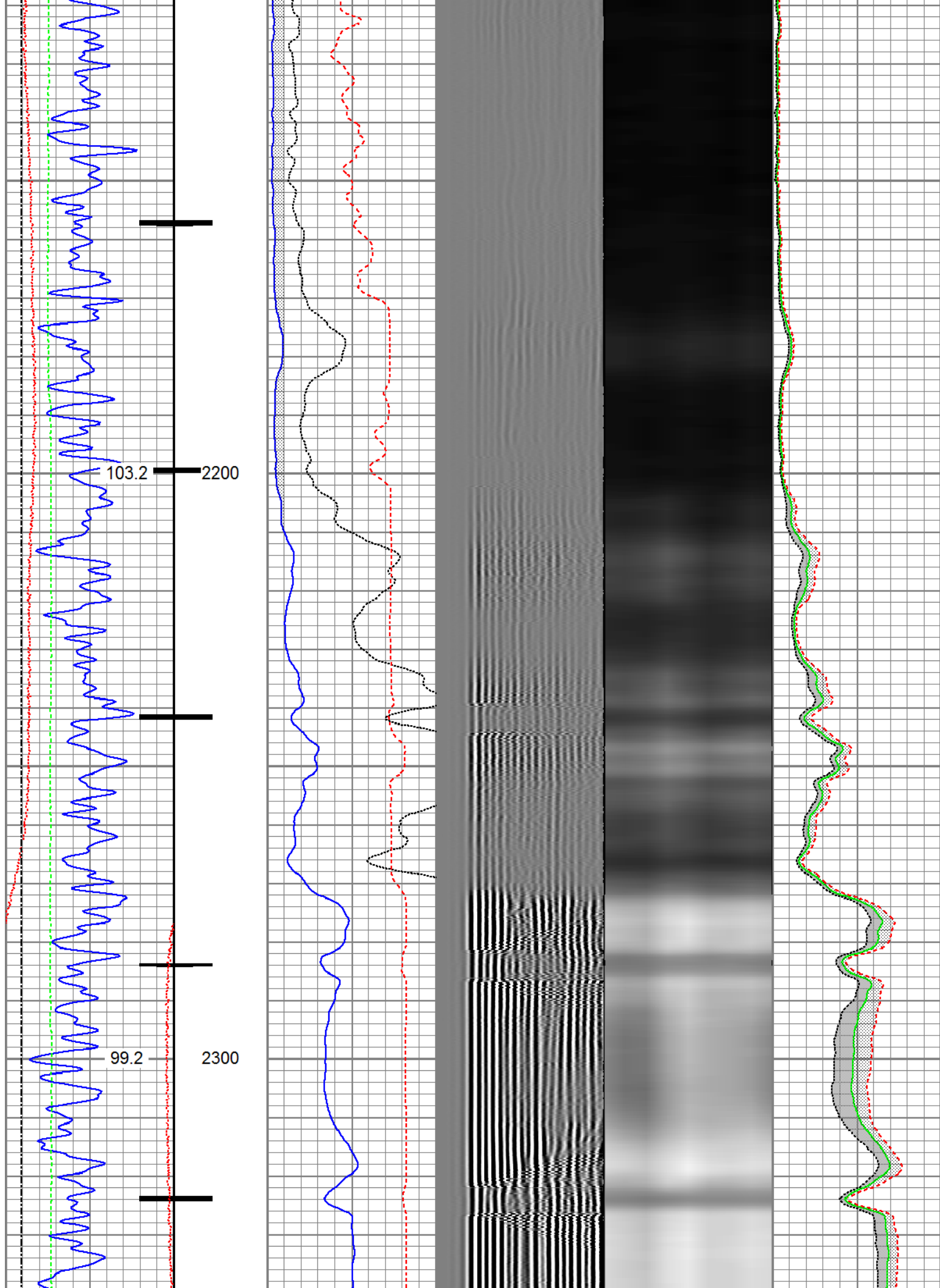


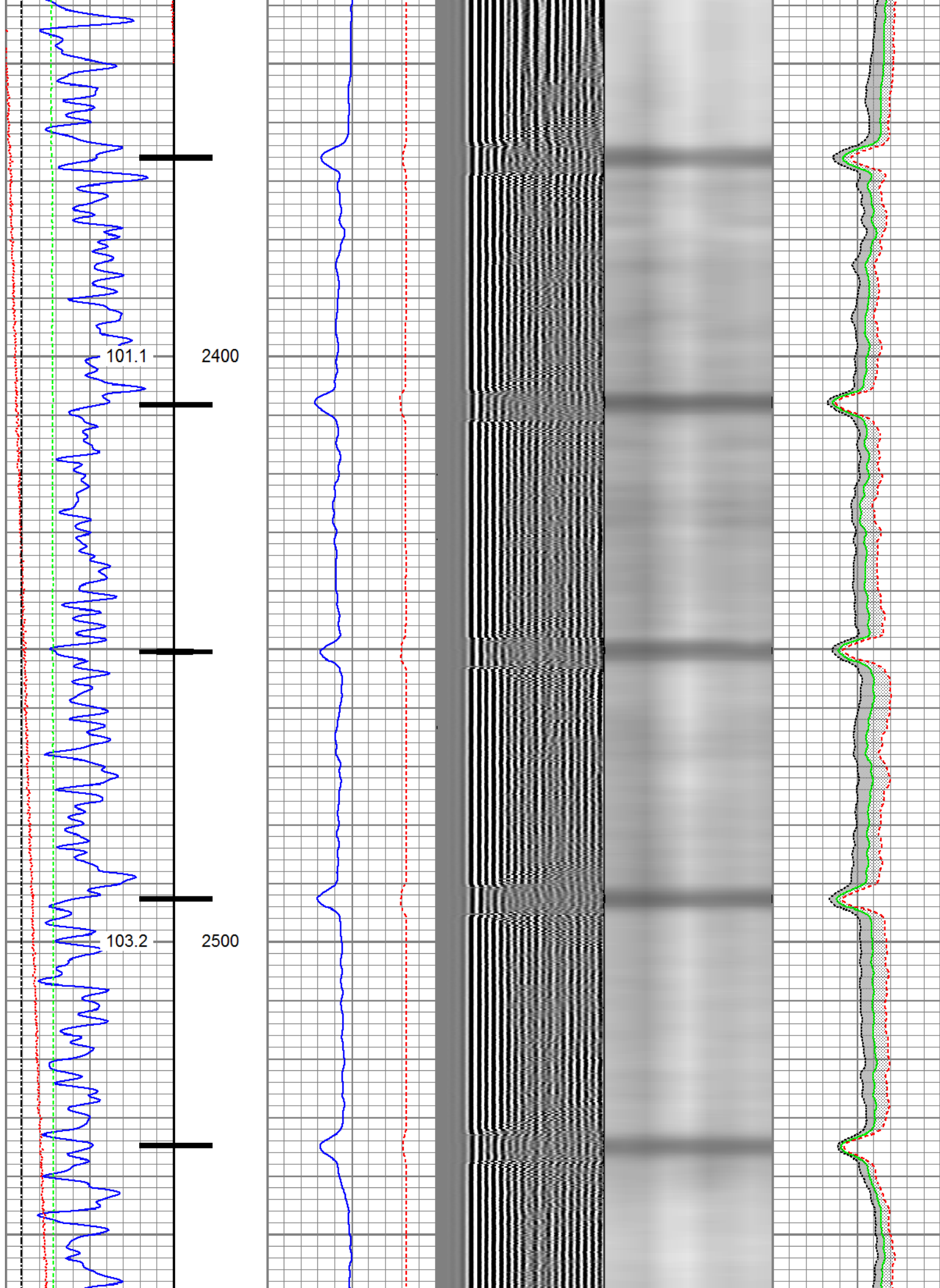


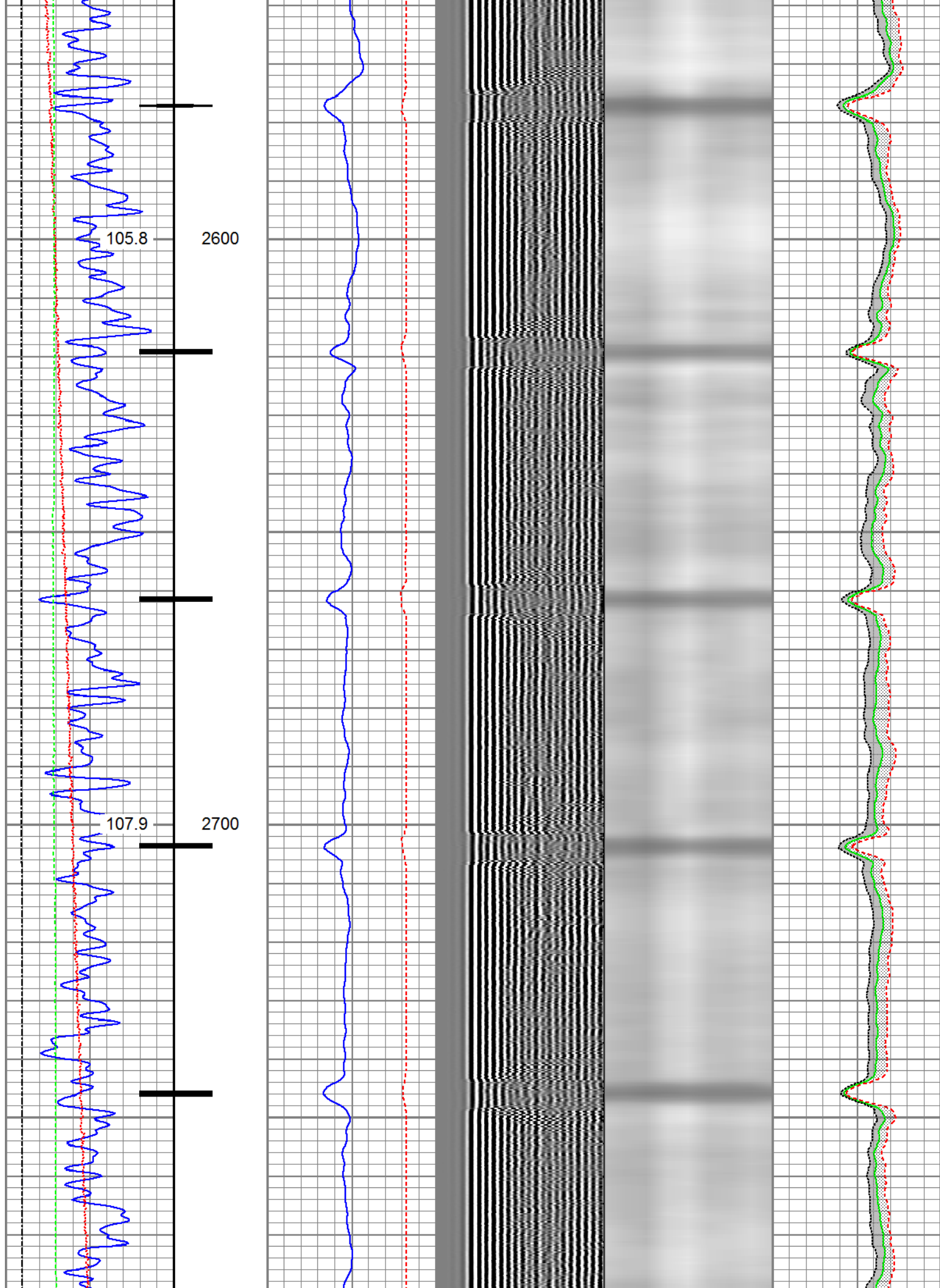


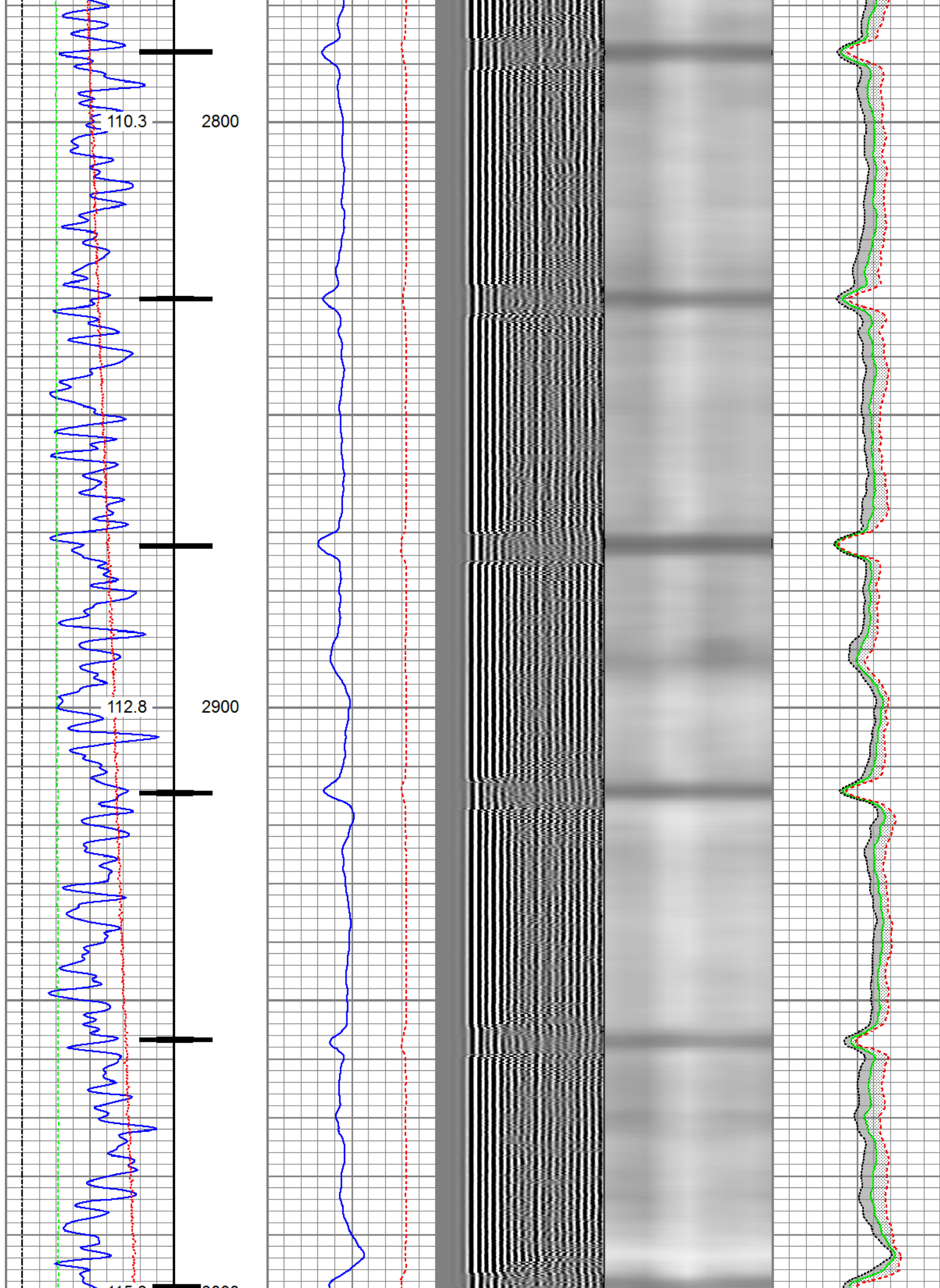


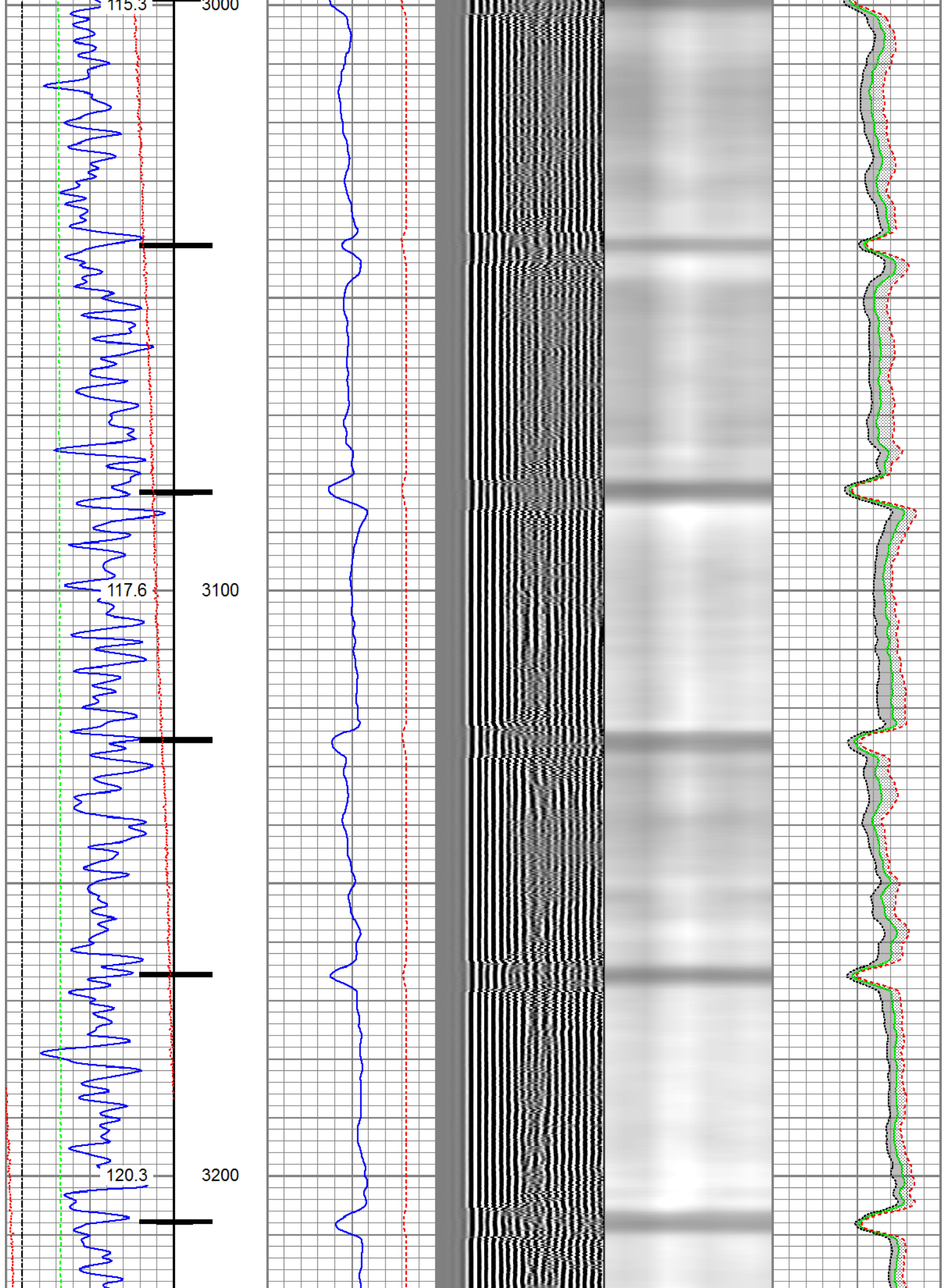


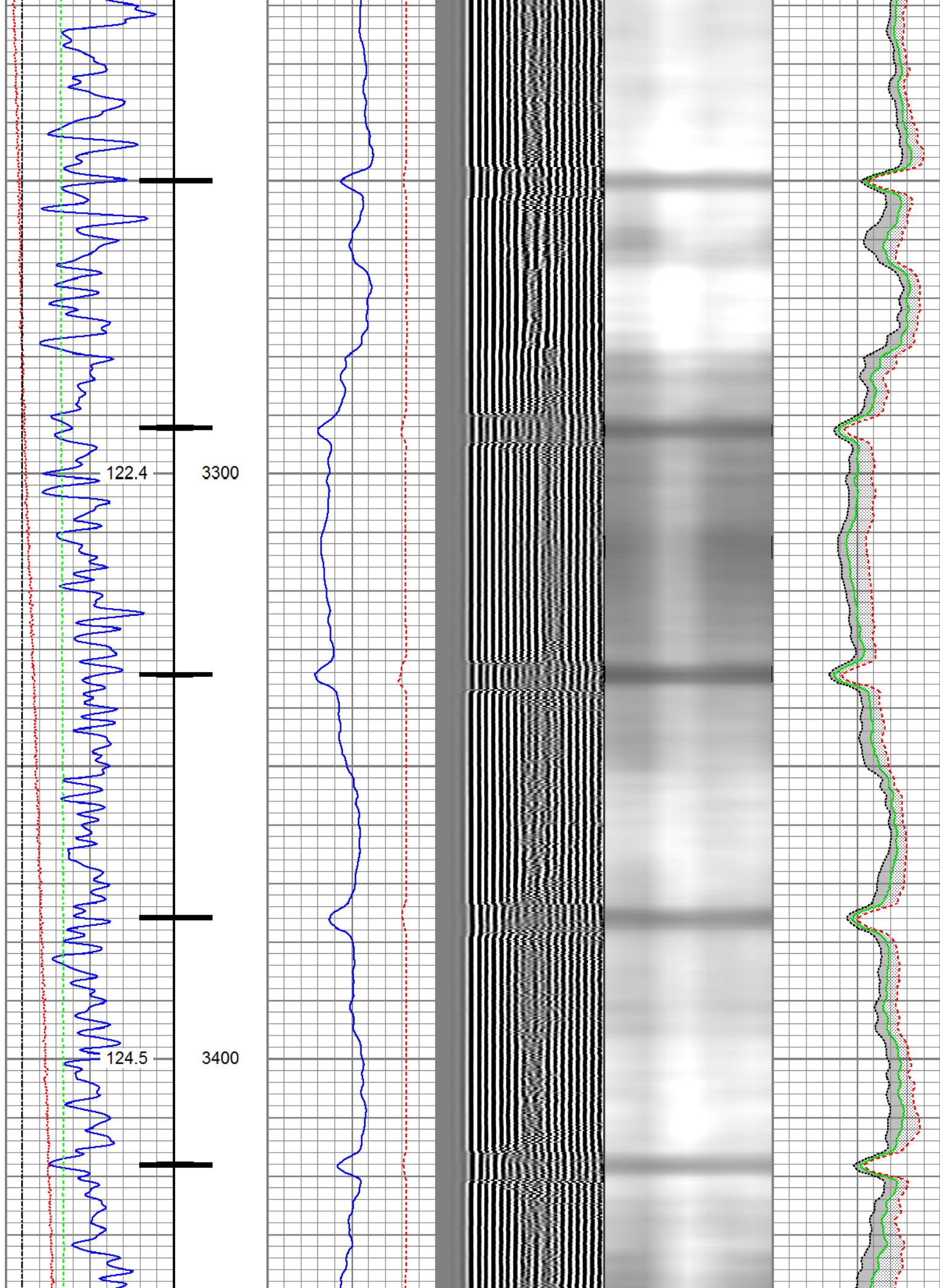


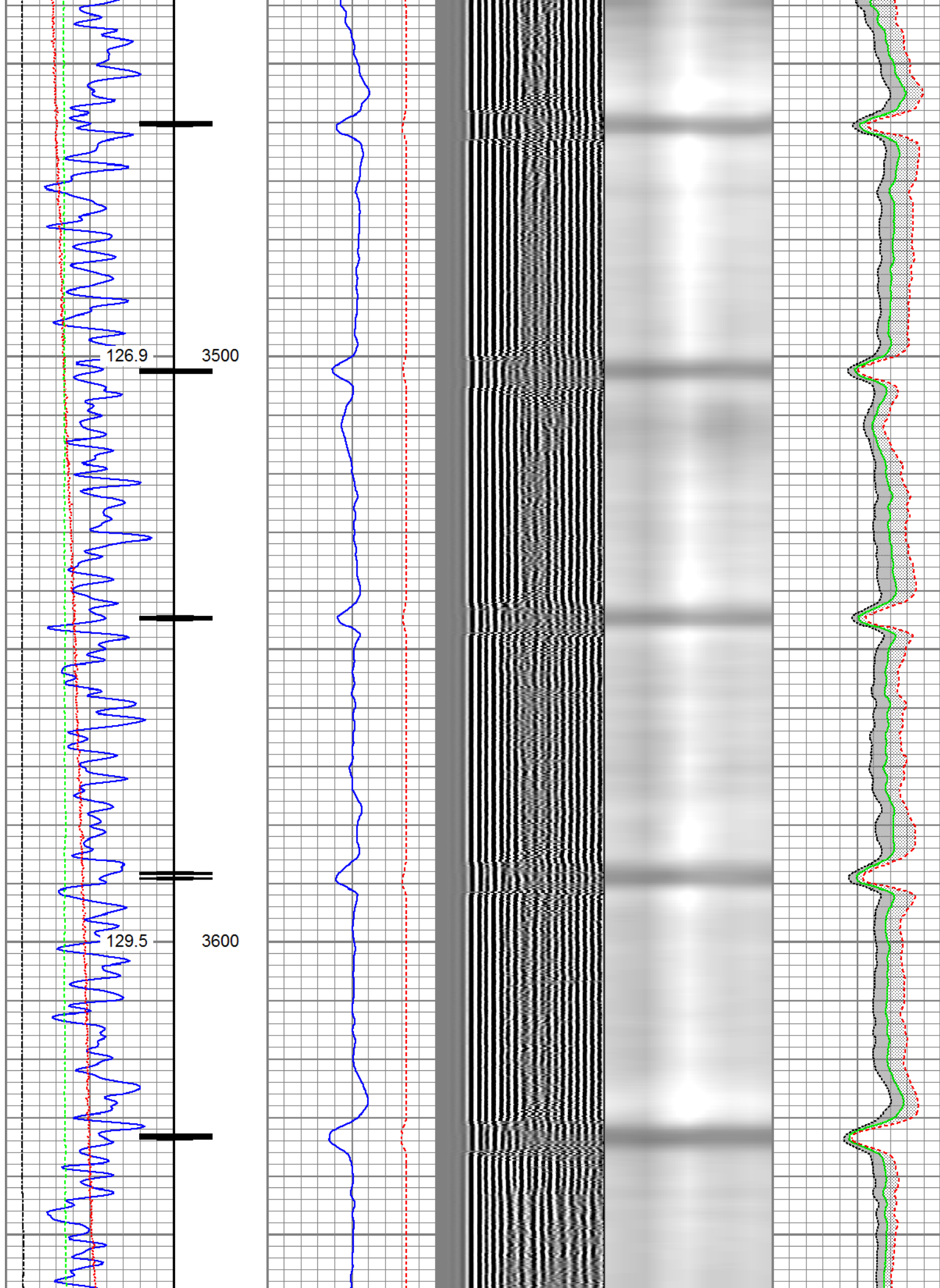


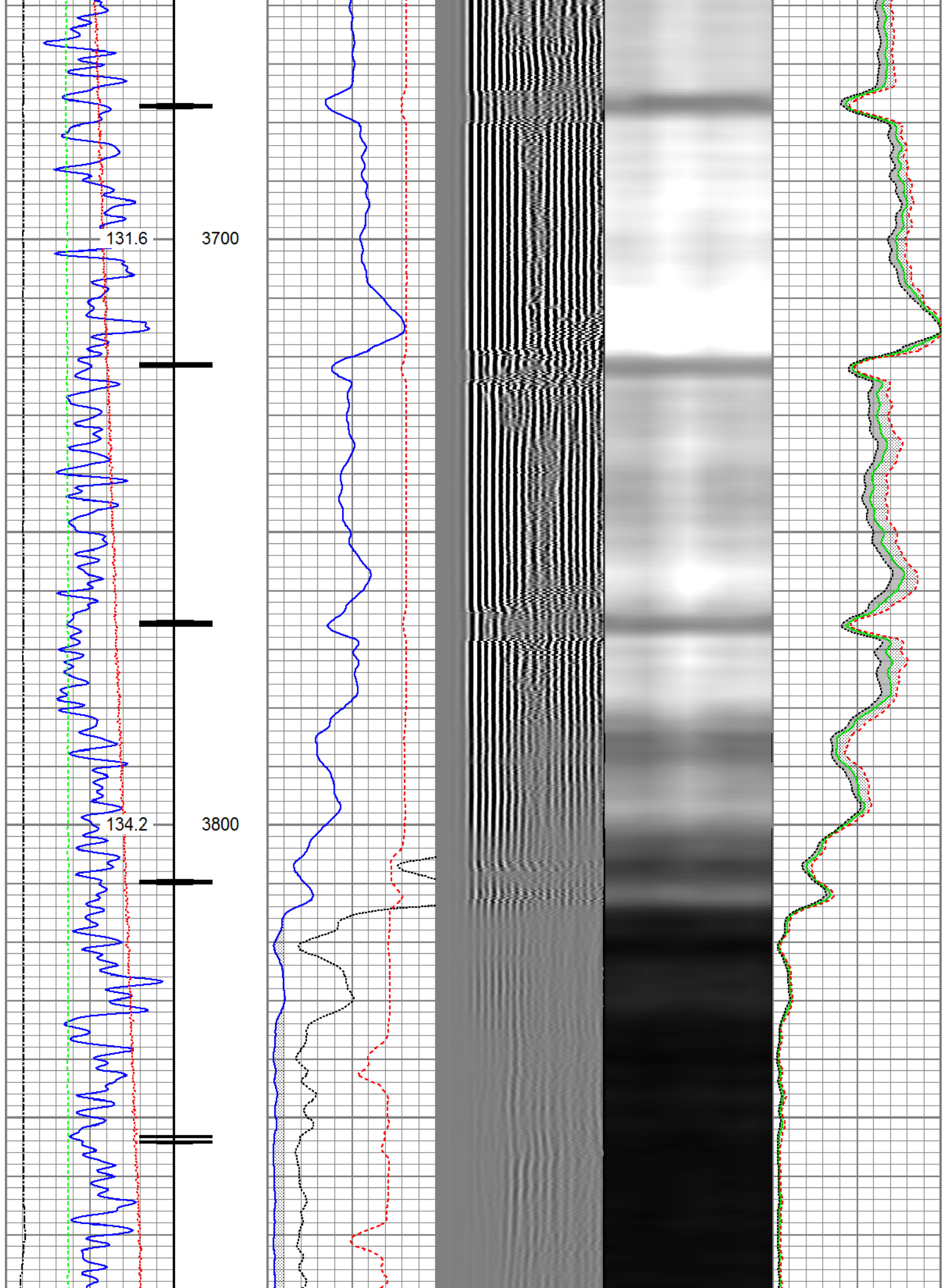


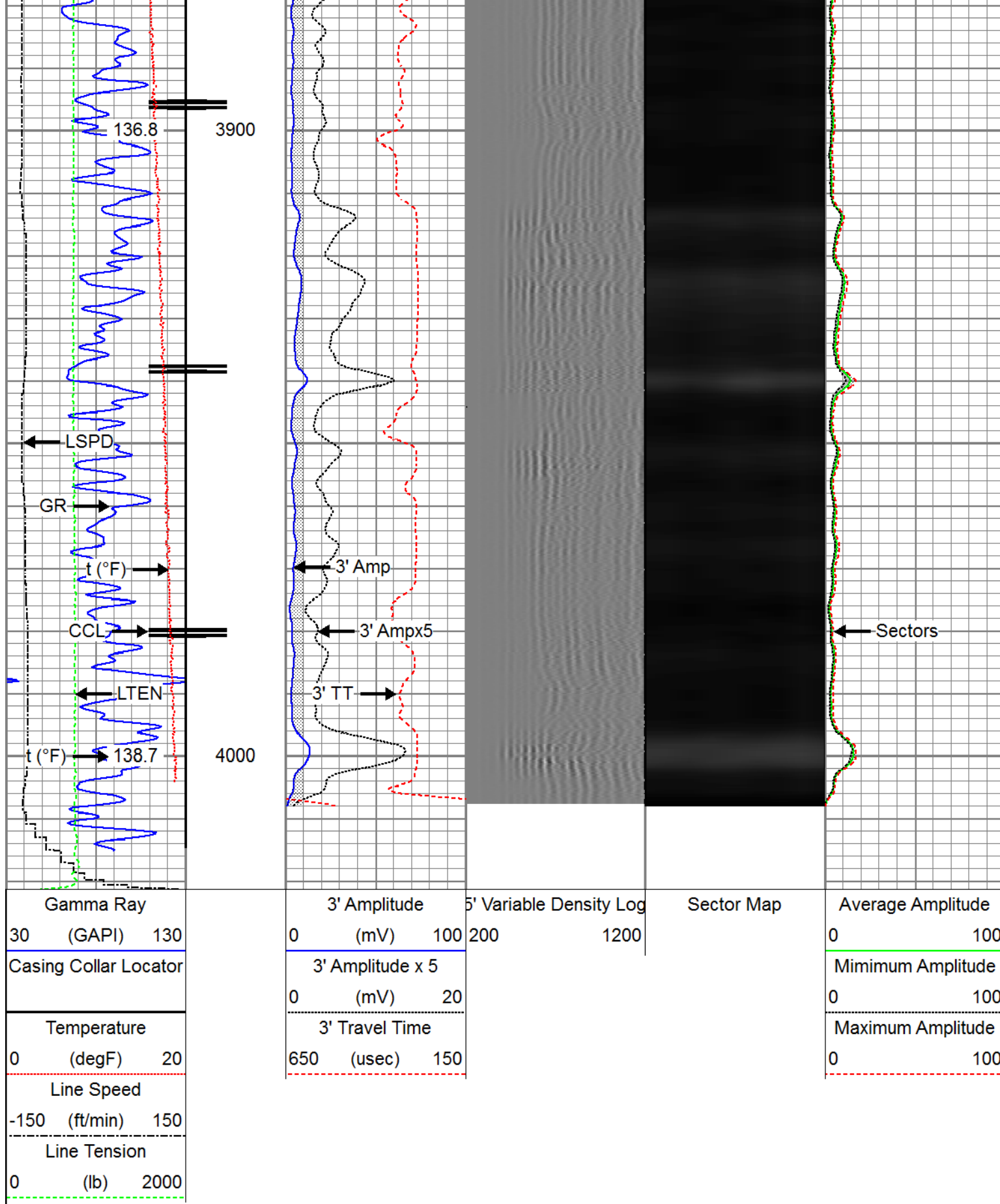






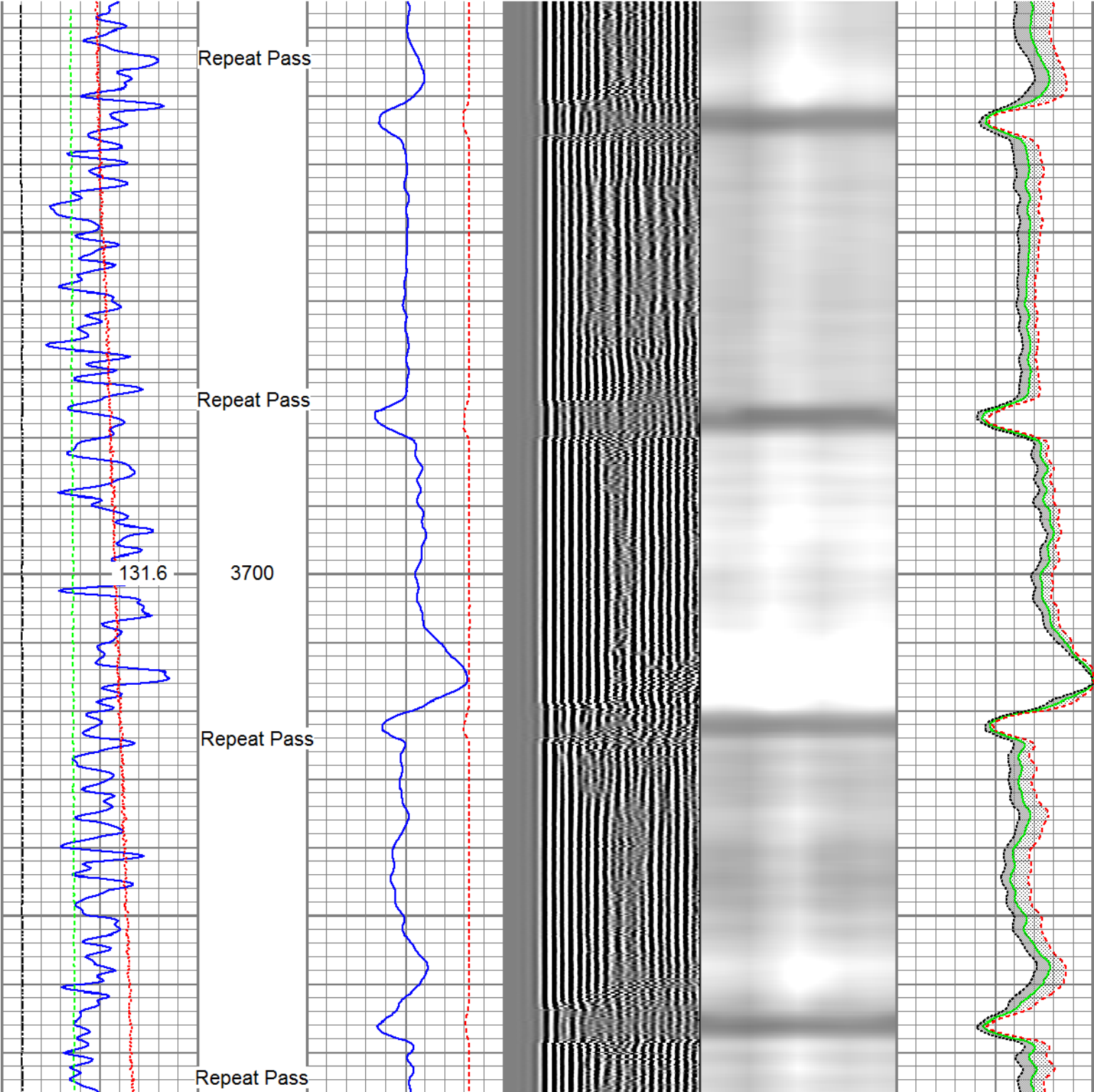


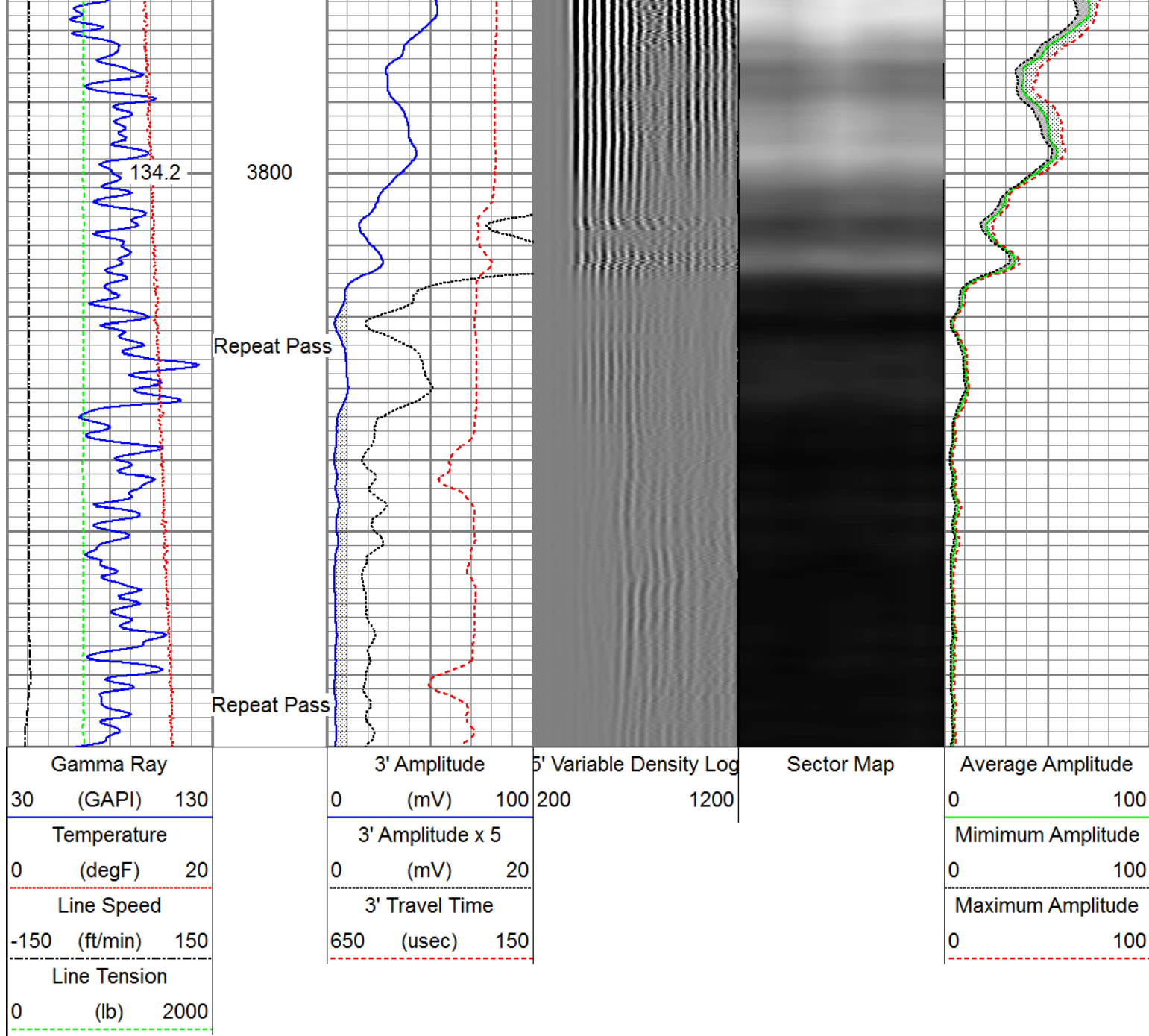


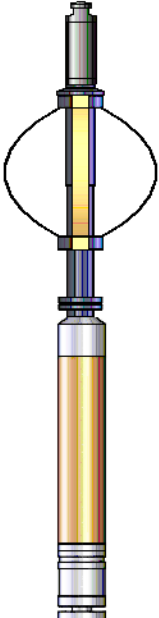


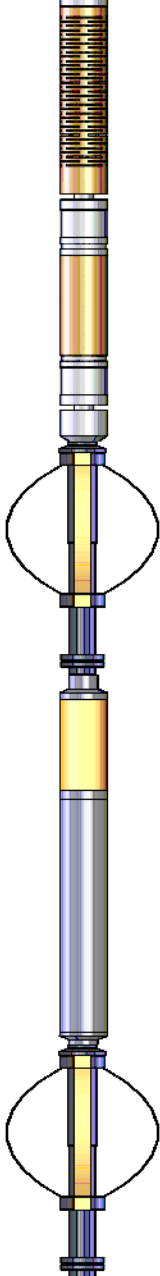
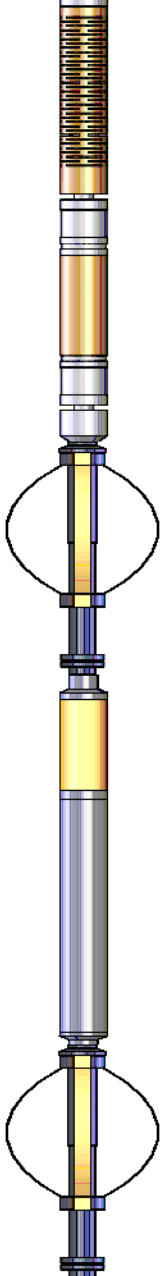
Database File	anadarko_dry creek 11-35_26-aug-2016_rbl_w8\processed_0512331019_anadarko_dry creek 11-35
Dataset Pathname	pass2.1
Presentation Format	ros_radji_vert
Dataset Creation	Fri Aug 26 08:51:38 2016
Charted by	Depth in Feet scaled 1:240

Gamma Ray		3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
30 (GAPI) 130		0 (mV) 100	200 1200		0 100
Temperature		3' Amplitude x 5			Minimum Amplitude
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	Length (ft)	O.D. (in)	Weight (lb)
Temp	16.75		Titan_Electric_Cable_Heads-Titan_1-11/16"	1.03	1.69	5.40
			Electric Cable Head with 1" Fishing Neck			
			Probe_ELine_BowSpring_Centralizer-P_EB	2.8875	2.75	20.00
			Probe 2-3/4" Electric Inline Bowspring Centralizer			

WVFS8	14.58		Probe_RADII-C-P_RBT_2750 (FW1305-09)9.19 Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	2.75	105.00
WVFS7	14.58				
WVFS6	14.58				
WVFS5	14.58				
WVFS4	14.58				
WVFS3	14.58				
WVFS2	14.58				
WVFS1	14.58				
WVFCAL	14.58				
WVF3FT	14.58				
WVF5FT	13.58				
HeadVolt	10.33				
DCCL	6.51		Probe_ELine_BowSpring_Centralizer-P_EB52.8875 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.75	20.00
CCL	6.51				
GR	3.77				
			Probe_GR_CCL-P_CGR_2750_S (FW1307-4.57) Probe 2-3/4" Digital CCL / Gamma Ray Combined	2.75	55.00
			Probe_ELine_BowSpring_Centralizer-P_EB52.8875 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.75	20.00
Dataset: processed_0512331019_anadarko_dry creek 11-35_08-26-16_rbl_w8.db: field/well/run1/pass3.1					
Total length: 23.43 ft					
Total weight: 225.40 lb					
O.D.: 2.75 in					

Calibration Report		
Database File	c:\programdata\warrior\data\anadarko_dry creek 11-35_26-aug-2016_rbl_w8\processed_0512331019	
Dataset Pathname	pass3.1	
Dataset Creation	Fri Aug 26 08:47:26 2016	
Gamma Ray Calibration Report		
Serial Number:	FW1307-038	
Tool Model:	P_CGR_2750_S	
Performed:	Wed Aug 10 15:05:44 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.6	cps
Sensitivity:	0.6300	GAPI/cps

Serial Number: FW1305-096
Tool Model: P_RBT_2750

Calibration Casing Diameter: 4.500 in
Calibration Depth: 20.000 ft

Master Calibration, performed (Derived):

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.461	0.800	81.196	174.477	0.741
CAL	0.002	0.787				
5'	0.000	0.393	0.800	81.196	204.743	0.779
SUM						
S1	0.000	0.483	0.000	100.000	207.098	-0.003
S2	0.000	0.495	0.000	100.000	202.024	-0.075
S3	0.000	0.576	0.000	100.000	173.678	-0.076
S4	0.001	0.698	0.000	100.000	143.387	-0.123
S5	0.001	0.646	0.000	100.000	154.838	-0.095
S6	0.000	0.511	0.000	100.000	195.979	-0.086
S7	-0.001	0.467	0.000	100.000	213.873	0.155
S8	0.001	0.482	0.000	100.000	207.818	-0.147

Internal Reference Calibration, performed Fri Aug 26 07:48:59 2016:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.002	0.786	0.002	0.787	1.002	0.000

Air Zero Calibration, performed Fri Aug 26 07:48:10 2016:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.002		0.000		-0.000	
5'	0.002		0.000		-0.000	
SUM						
S1	0.002		0.000		0.000	
S2	0.002		0.000		0.000	
S3	0.002		0.000		-0.000	
S4	0.002		0.000		0.000	
S5	0.001		0.000		0.000	
S6	0.001		0.000		0.000	
S7	0.001		0.000		0.000	
S8	0.003		0.000		0.000	



Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Dry Creek 11-35
Field Wattenberg
County Weld
State Colorado