



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	Whiting Oil & Gas Corporation	Company	Whiting Oil & Gas Corporation	Well	Horsetail Fed 07G-0611	Field	Wildcat	County	Weld	State	Colorado
Well	Horsetail Fed 07G-0611	Field	Wildcat	County	Weld	State	Colorado	Location:	API # : 05-123-42117	Other Services	GR/JB
Permanent Datum	SEC 7	Ground Level	TWP 10N	RGE 57W	Elevation	4899'	Elevation	K.B. 4920'	D.F. 4919'	G.L. 4899'	
Log Measured From	Kelly Bushing	Drilling Measured From	Kelly Bushing		21 FT						
Date	27-Apr-2016	Run Number	---								
Depth Driller	13392 FT	Depth Logger	5680 FT	Bottom Logged Interval	5678 FT	Top Log Interval	Surface	Open Hole Size	7.875"	Type Fluid	Water
Density / Viscosity	8.34 lbm/gal	Max. Recorded Temp.	206°F	Estimated Cement Top	74 FT	Time Well Ready	ROA	Time Logger on Bottom	10:58 AM	Equipment Number	HD-0311
Location	Fort Lupton, CO	Recorded By	R. Cameron	Witnessed By	Bradd Kothe						
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	---	Surface	1970 FT						
Intermediate #1	5 1/2	20	---	Surface	13392 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 Marker Joint at 5129-5152 FT
Adjusted 20 FT to correlate with Marker Joint
Gauge Ring/Junk Basket ran to 5780 FT with no debris
Log ran from as deep as possible in heel to surface
Recorded with 1500 PSI surface induced pressure
Logging tools were clean and free of any debris upon completion of operations

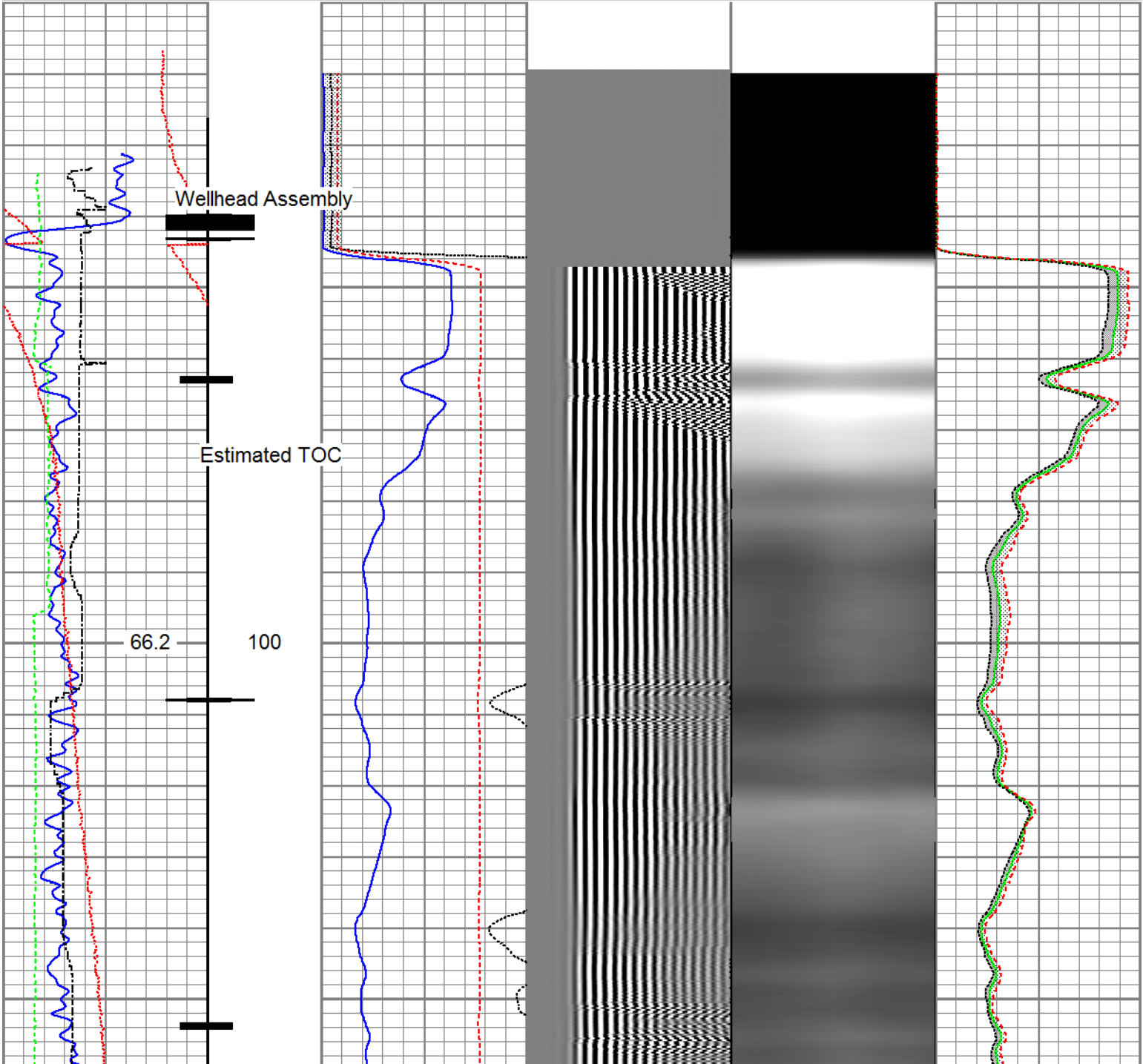
Thank you for choosing FMC Technologies Surface Integrated Services.

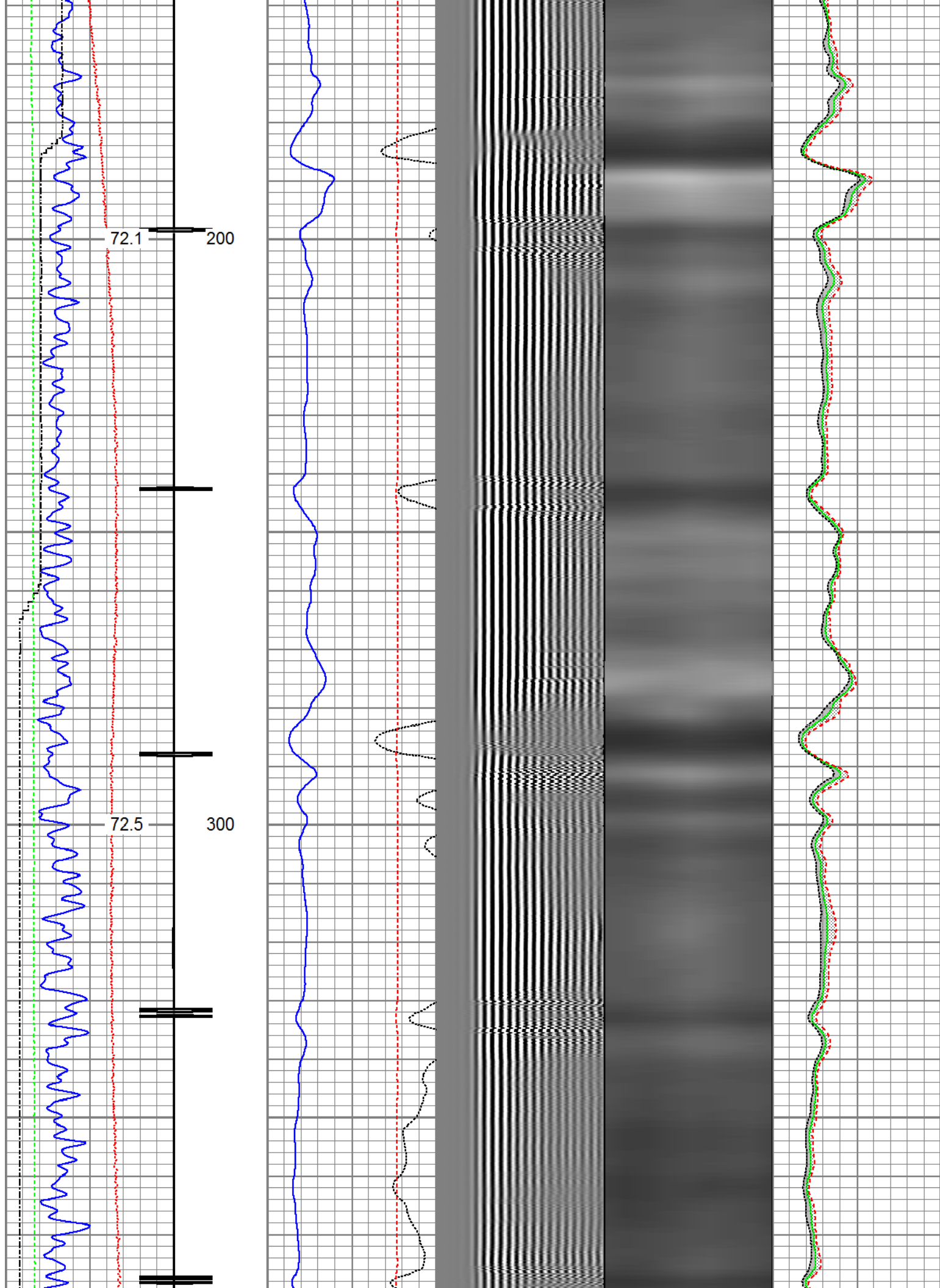


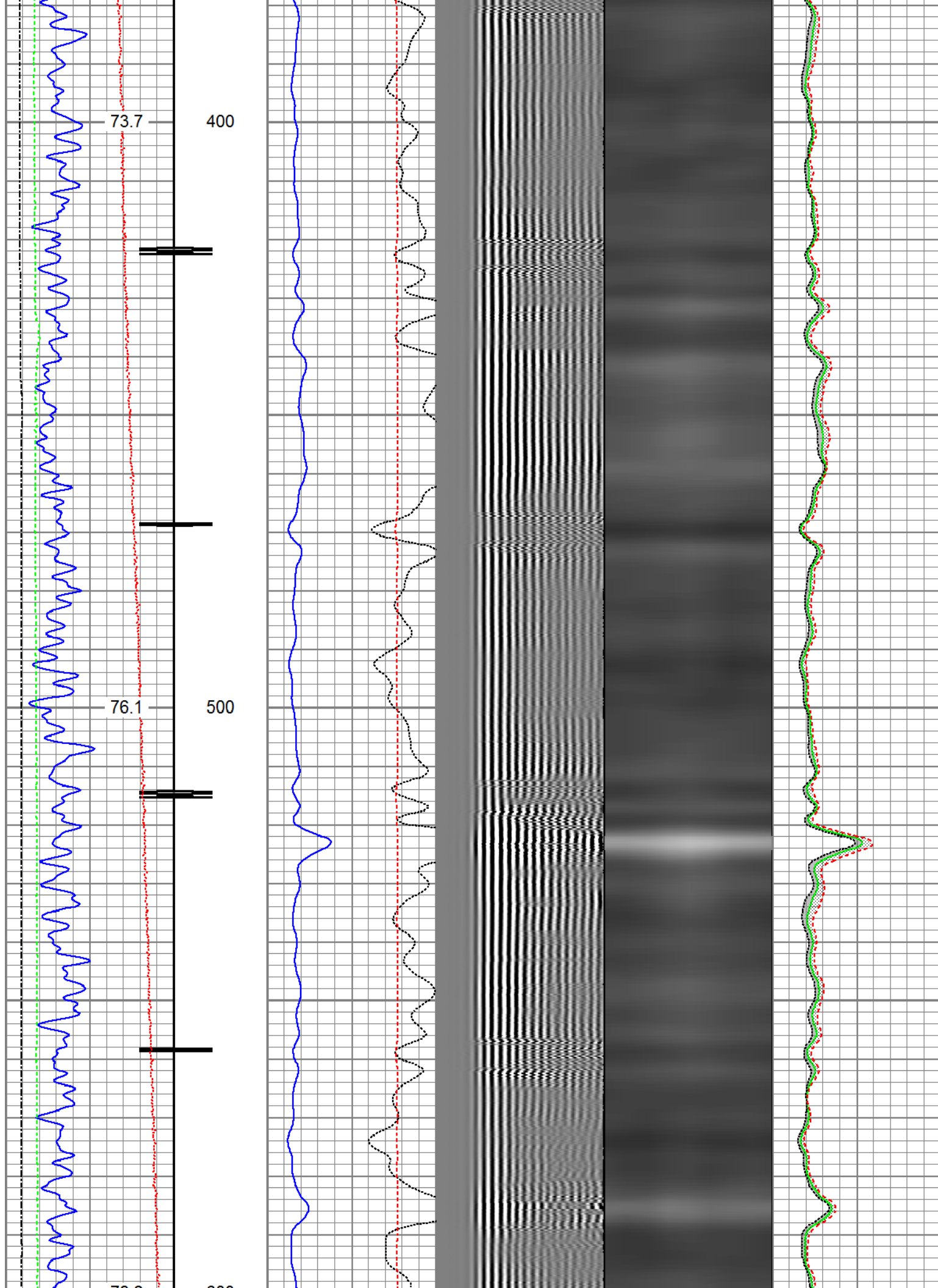
Main Pass

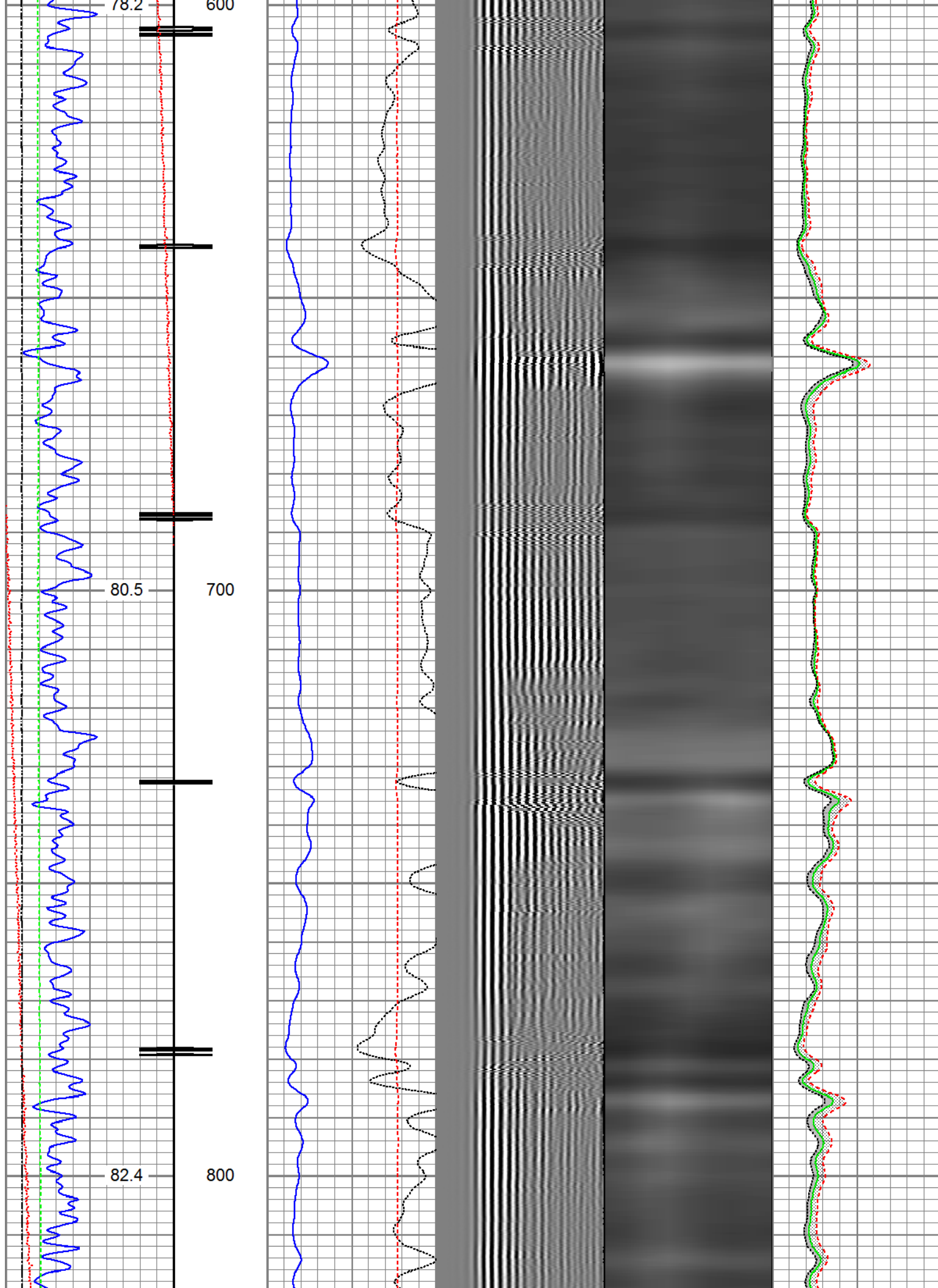
Recorded with 1500 PSI Surface Induced Pressure

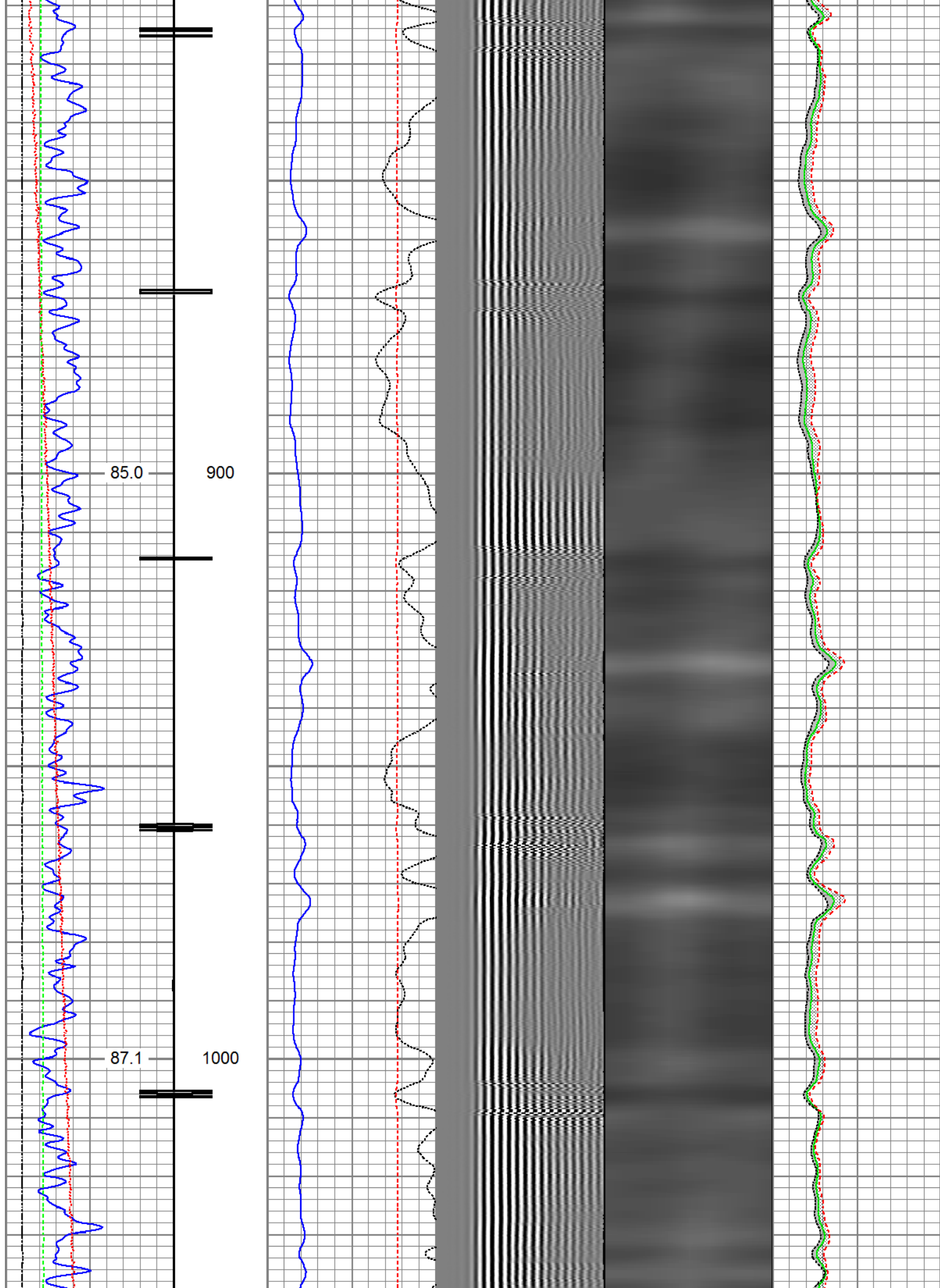
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
	0 (mV) 20			0 100
Temperature	3' Travel Time			Maximum Amplitude
0 (degF) 20	650 (usec) 150			0 100
Line Speed				
-150 (ft/min)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

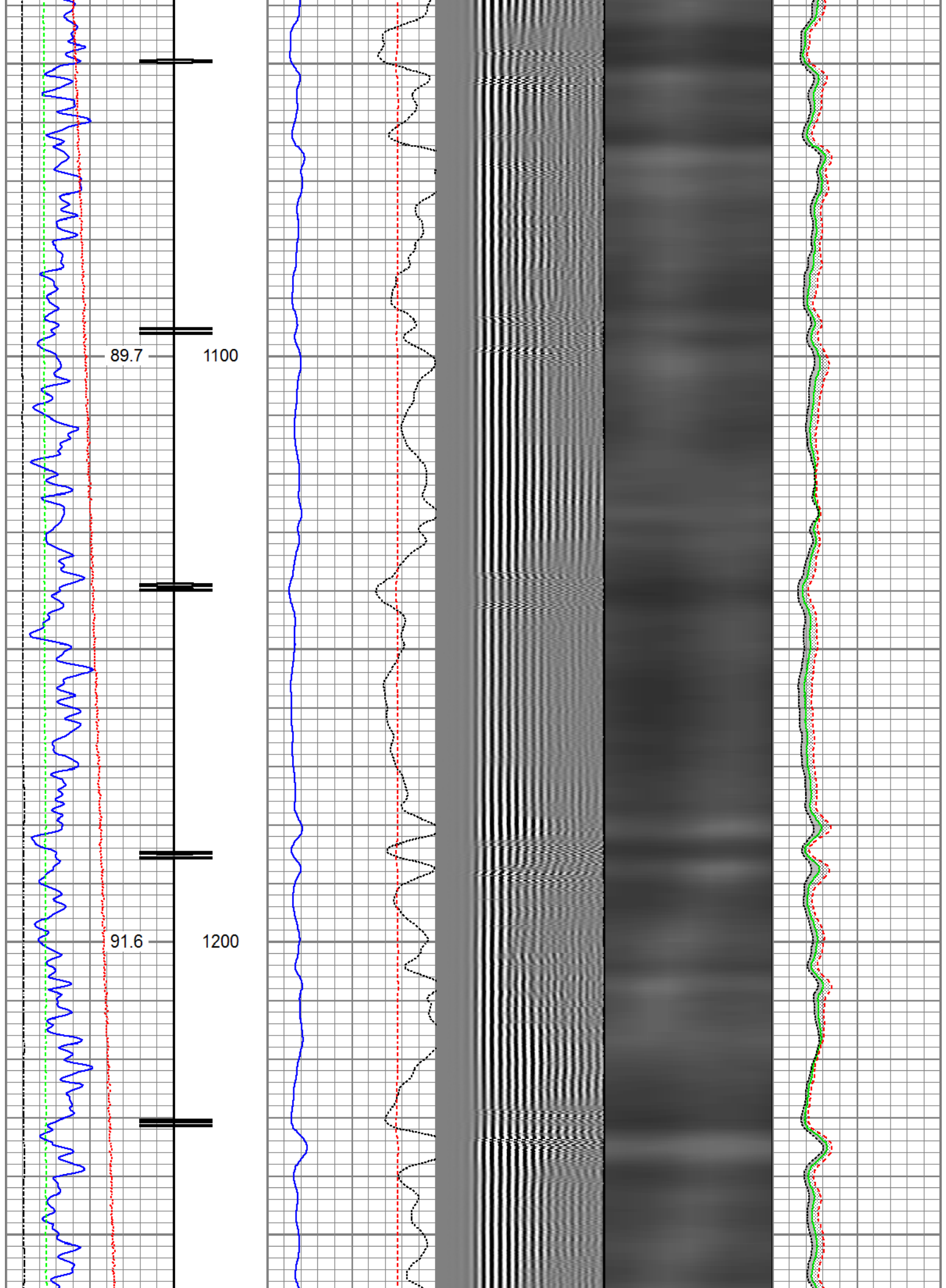


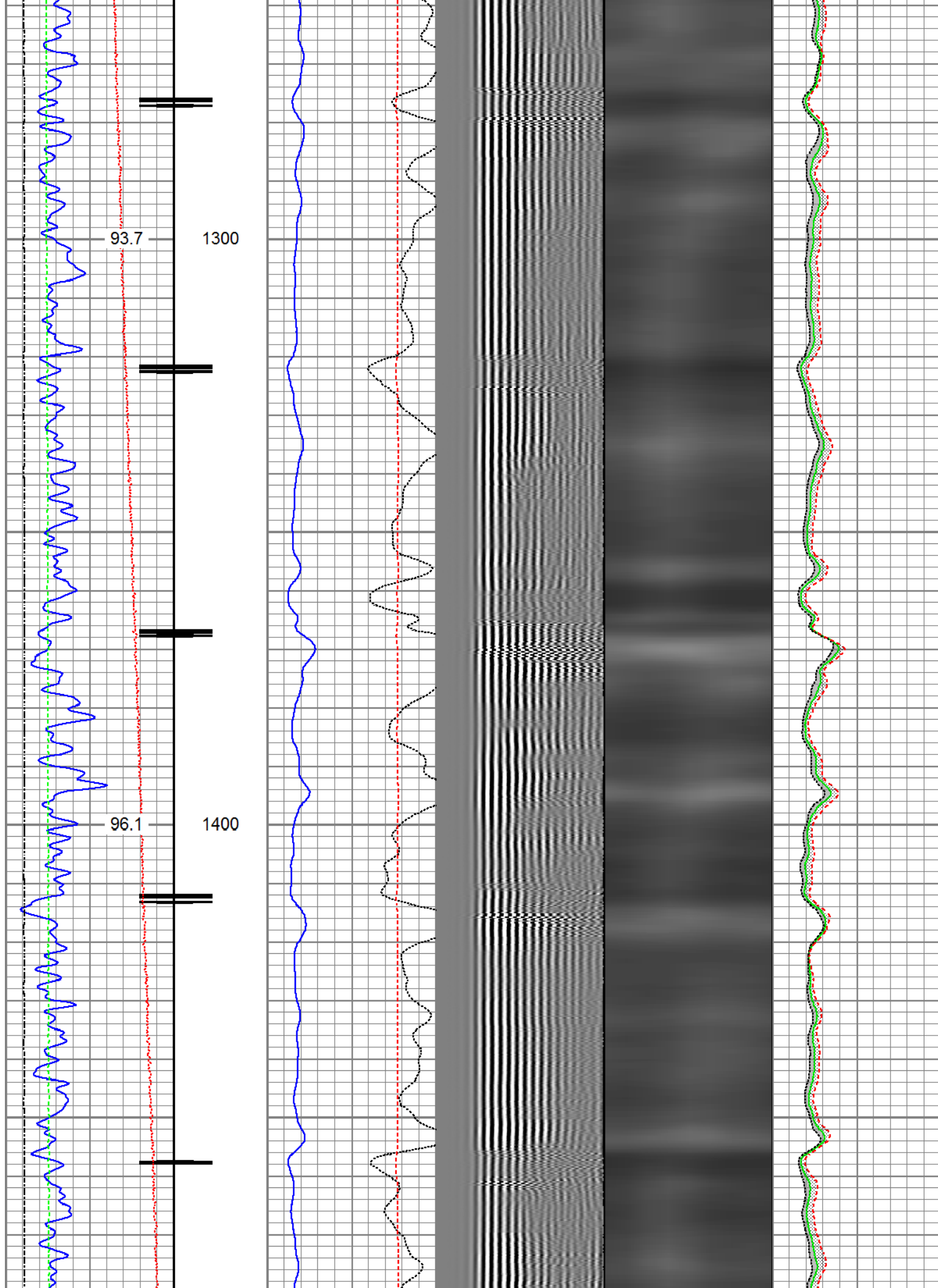


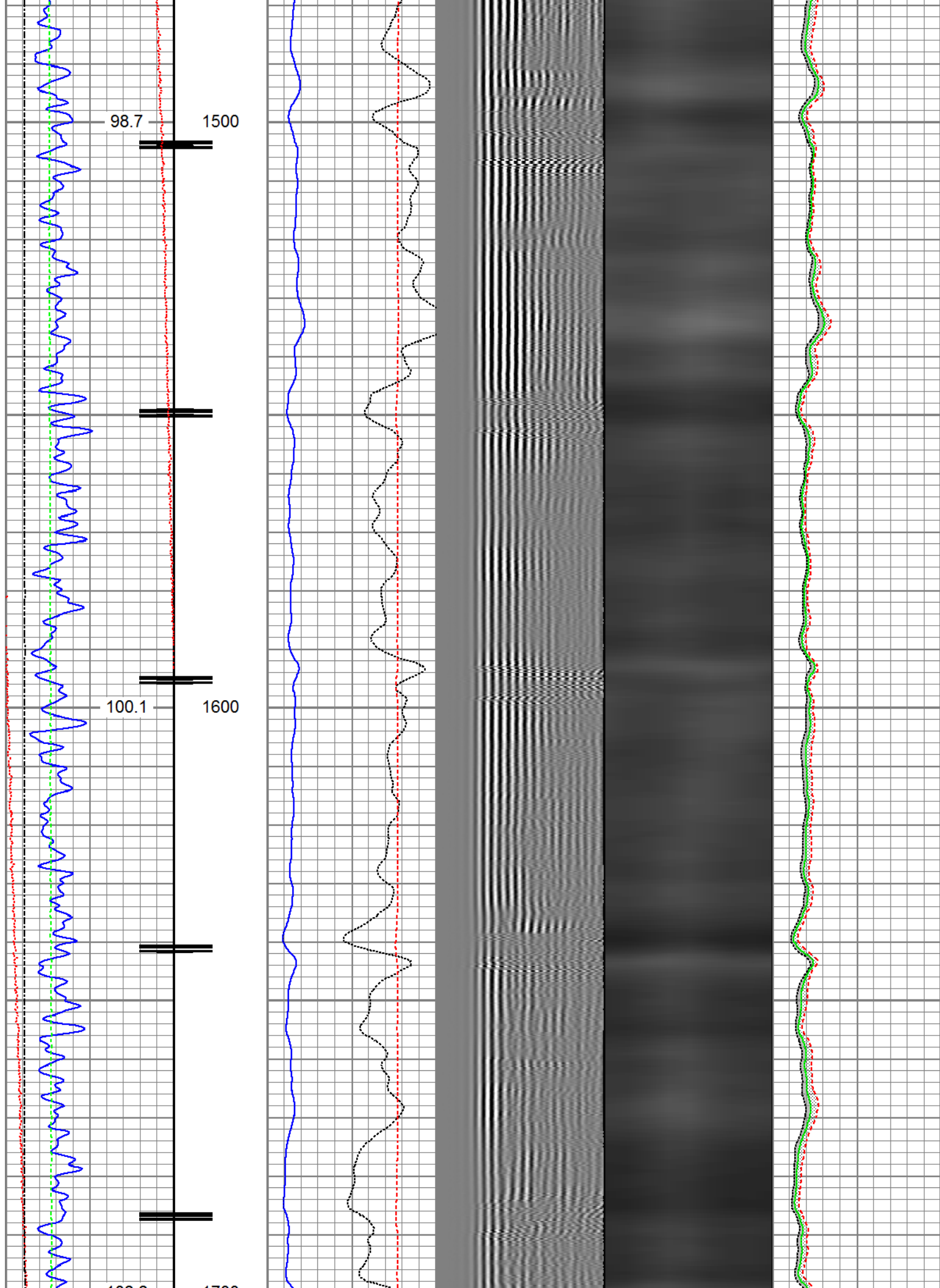


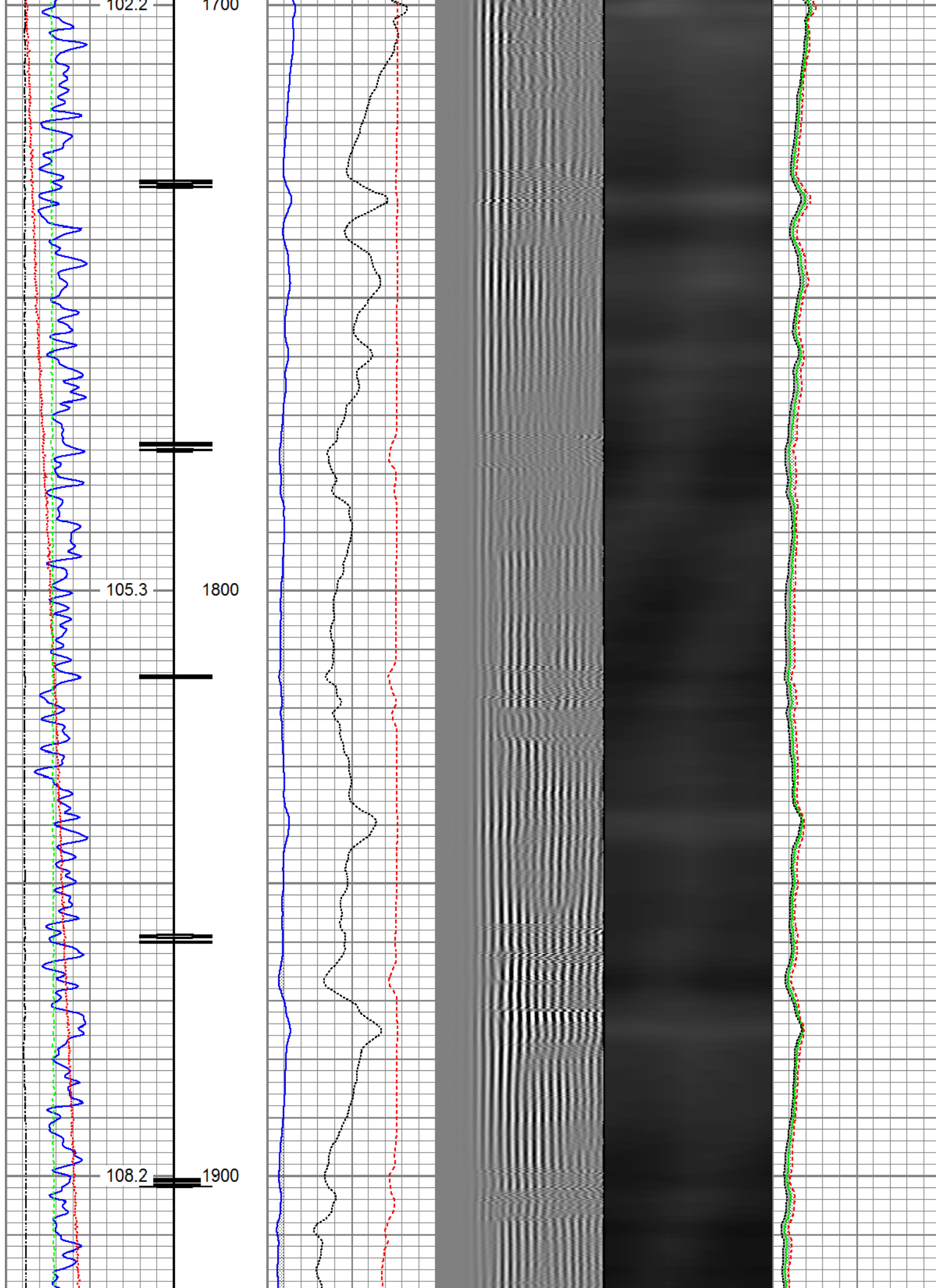


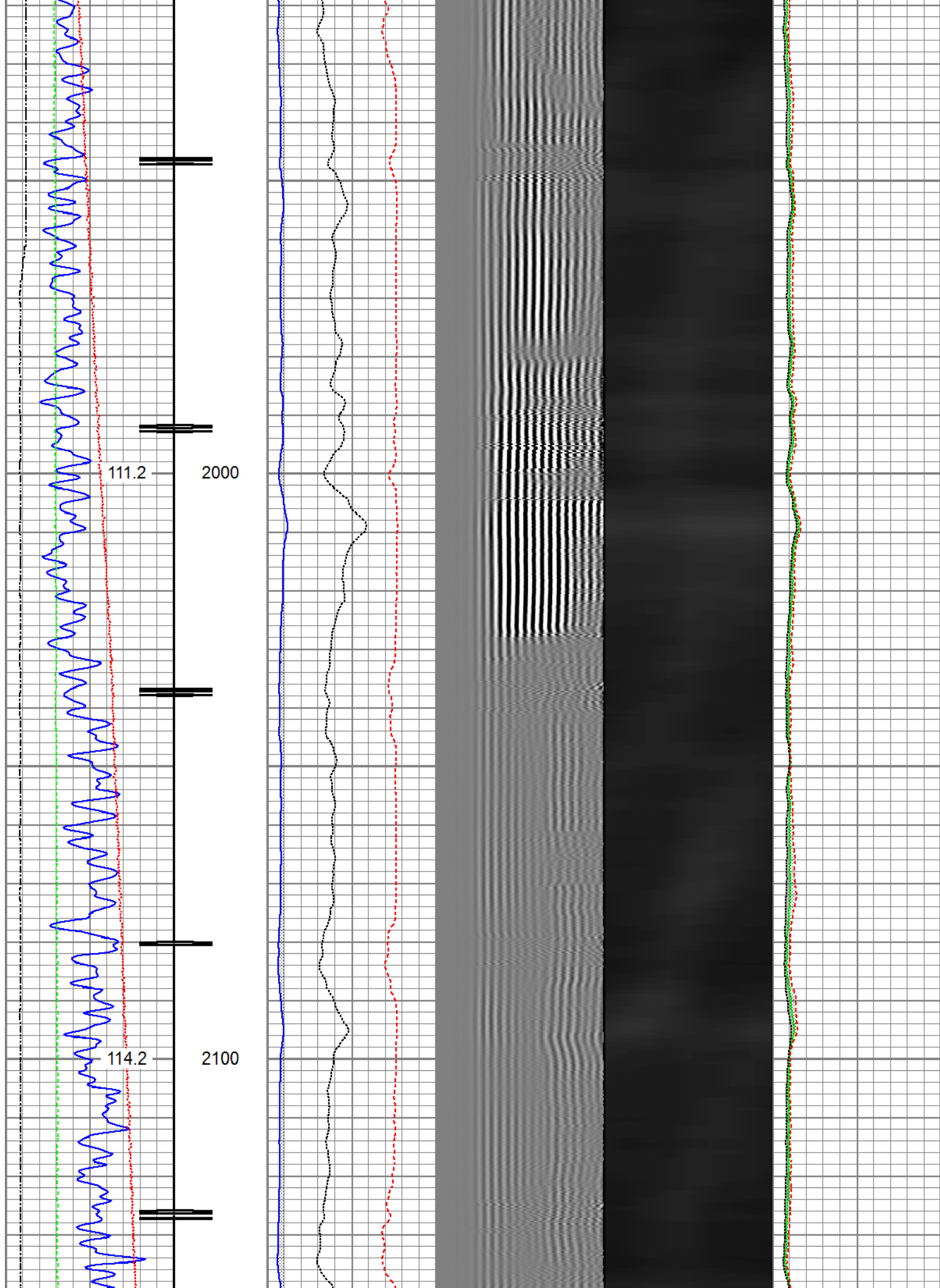


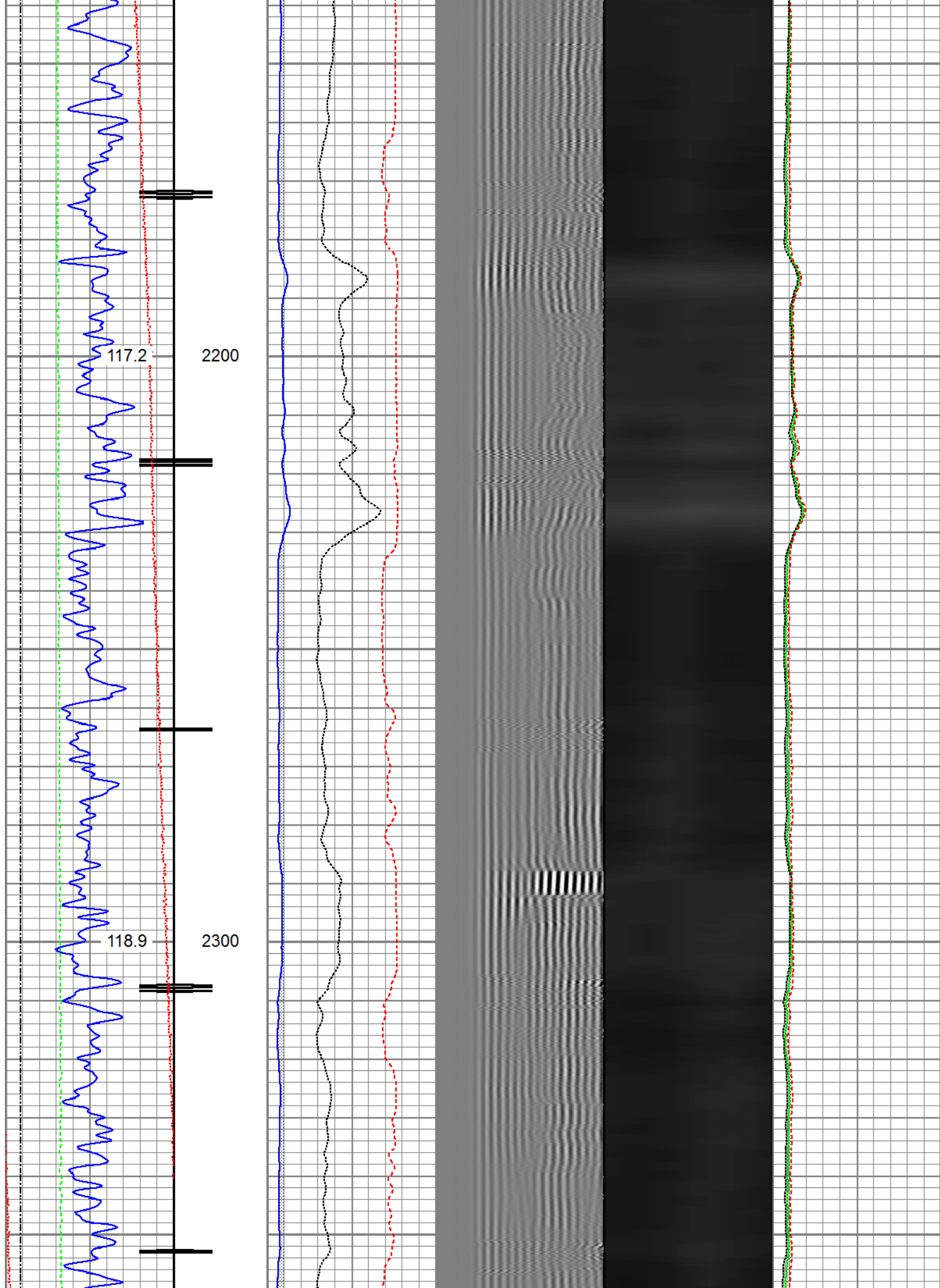


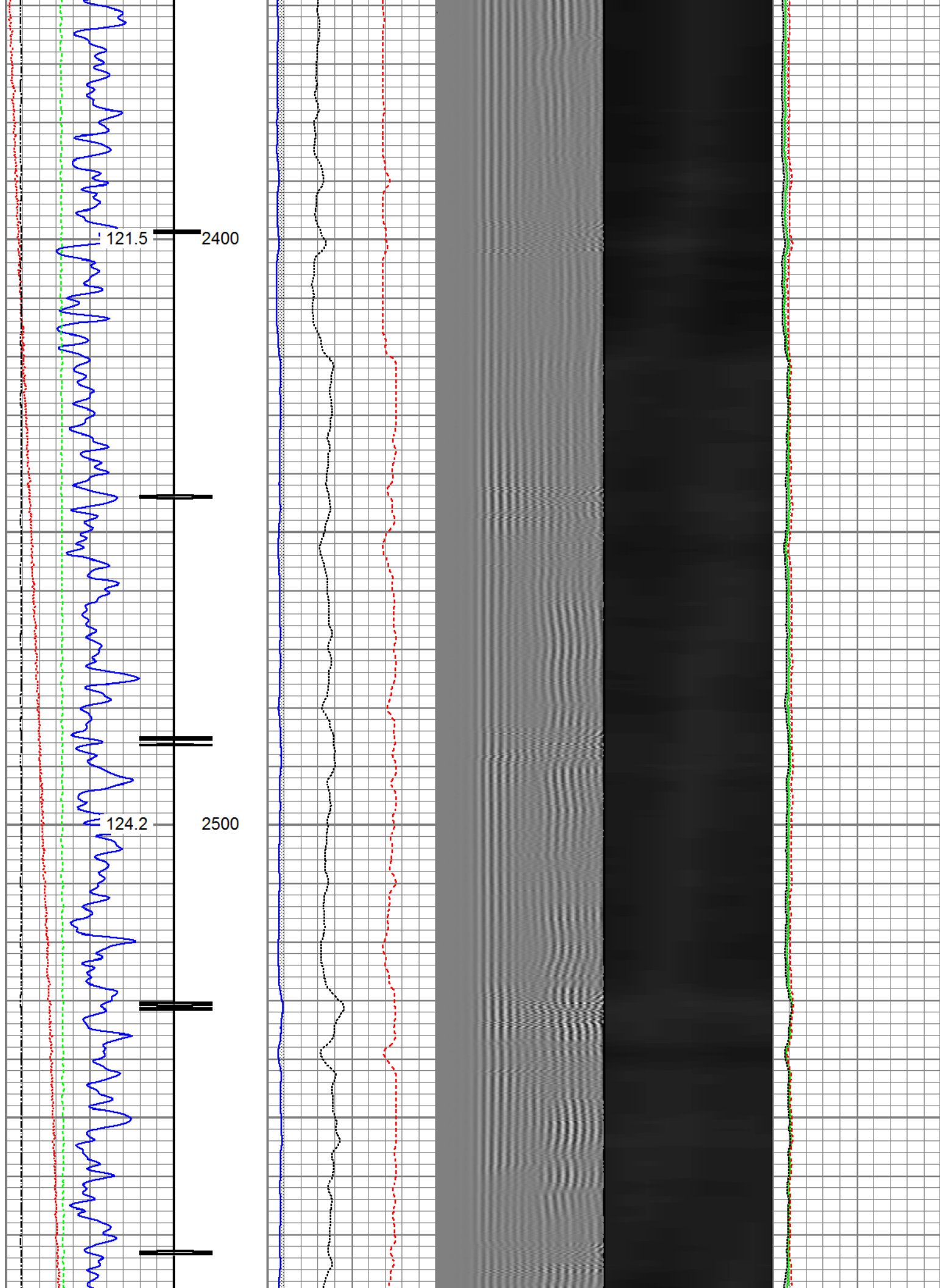


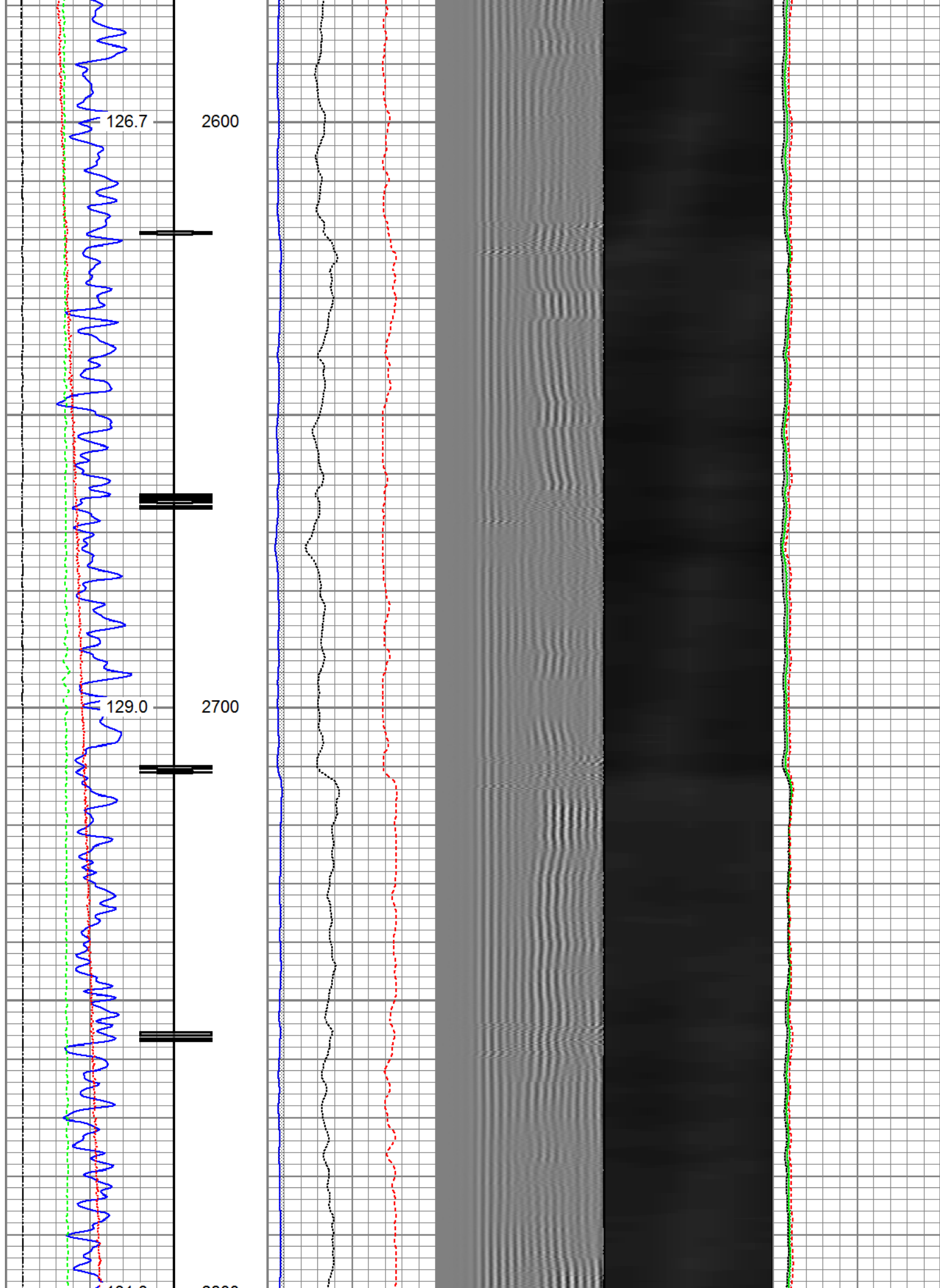


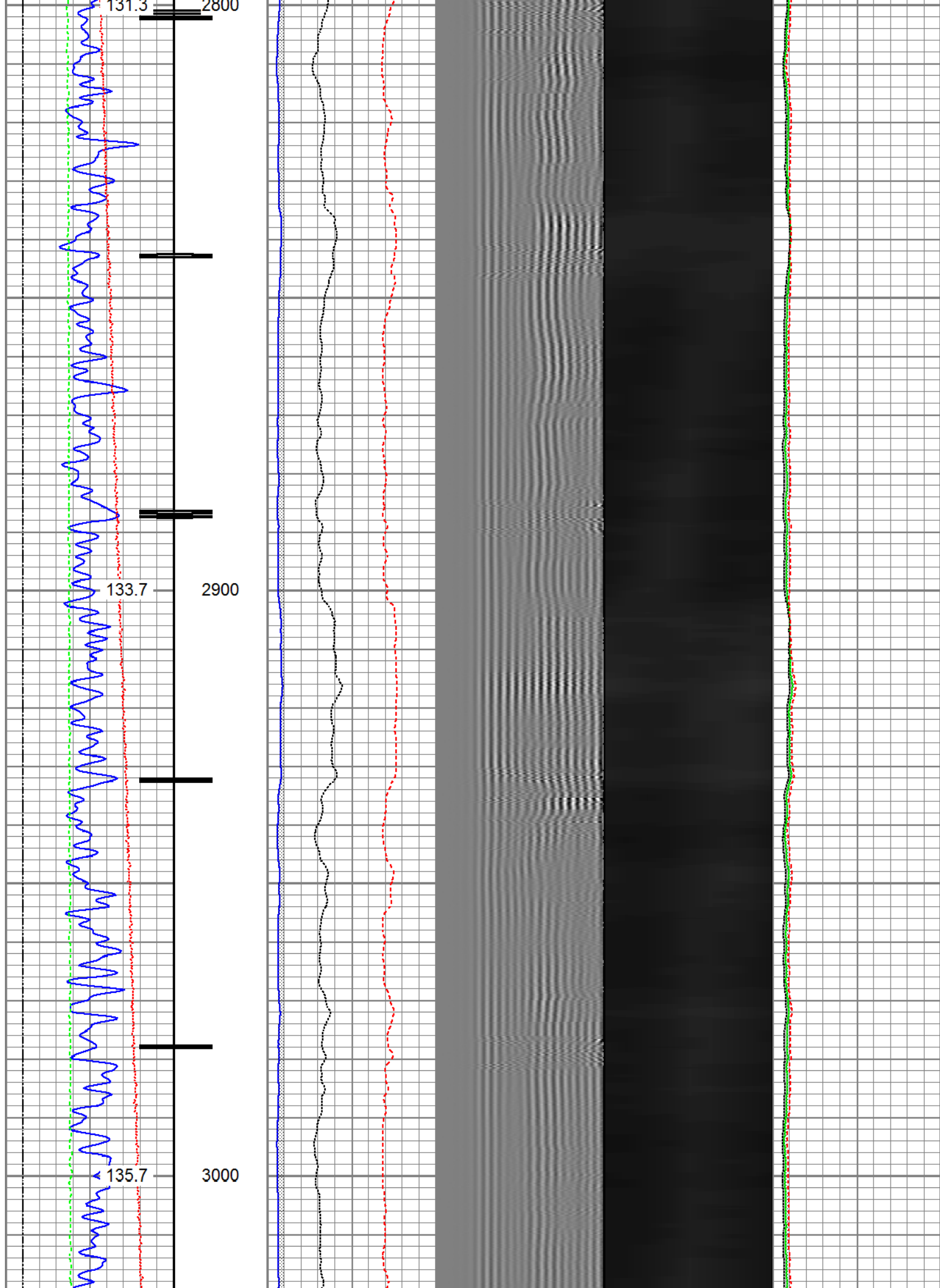


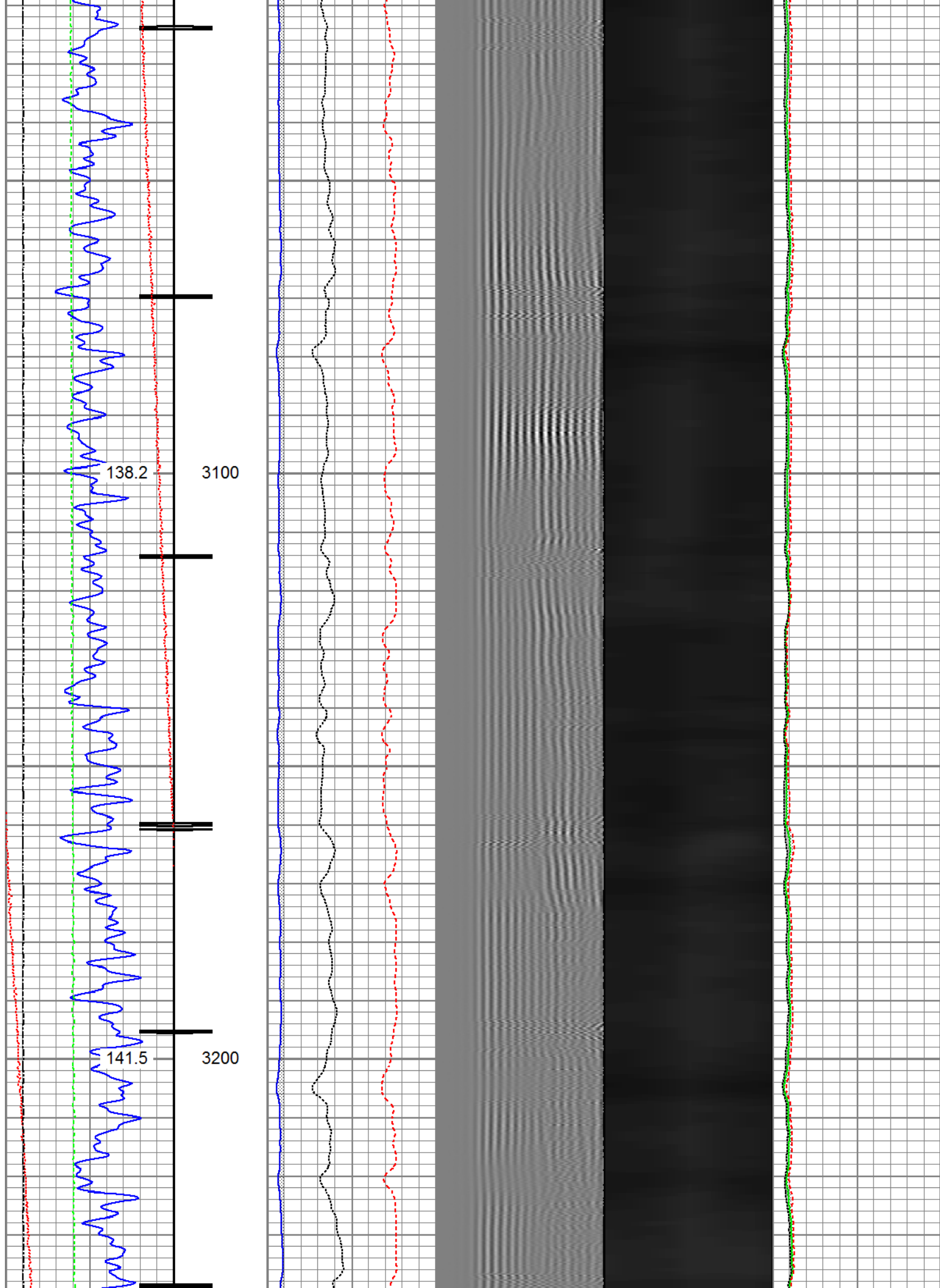


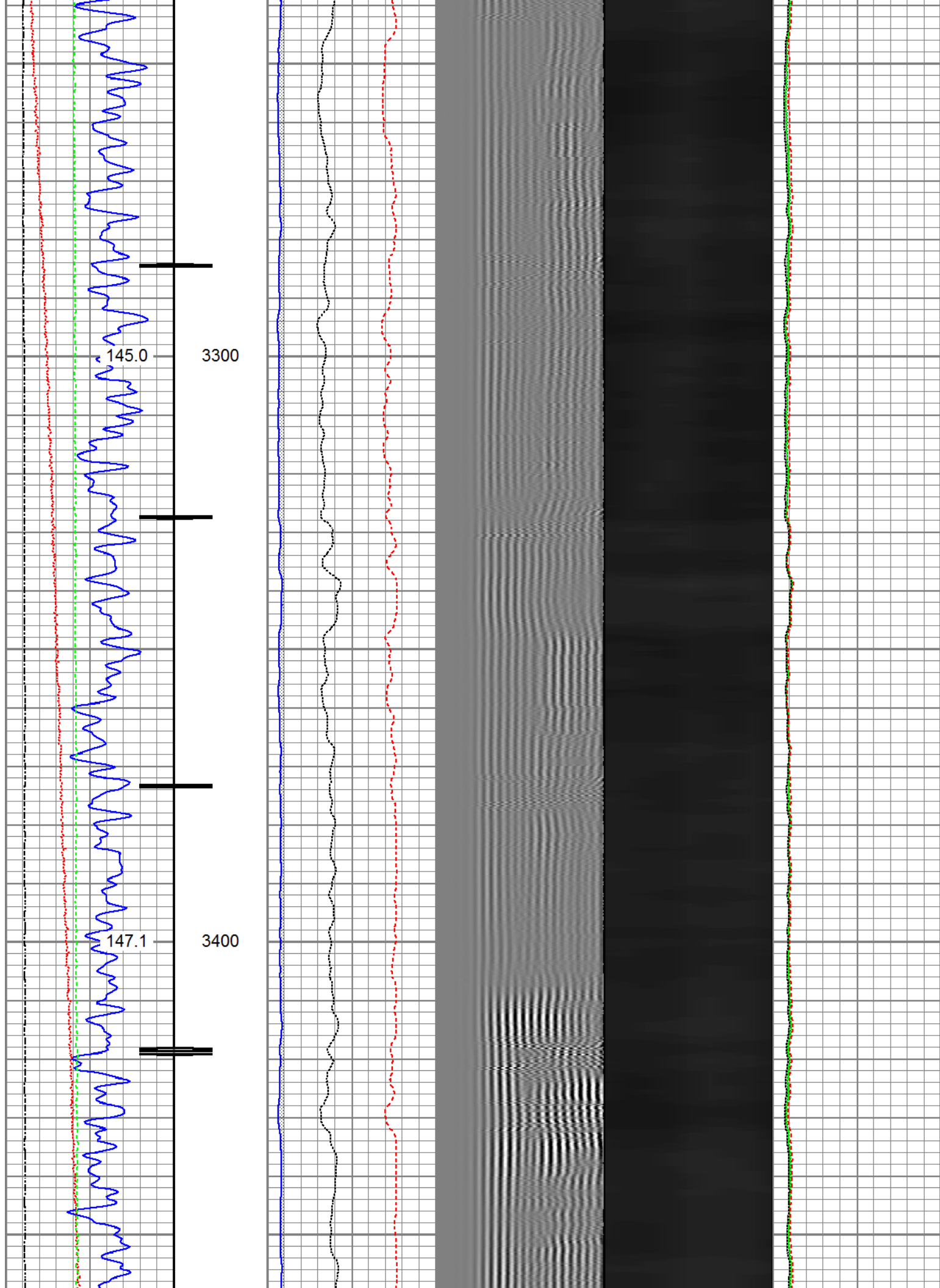


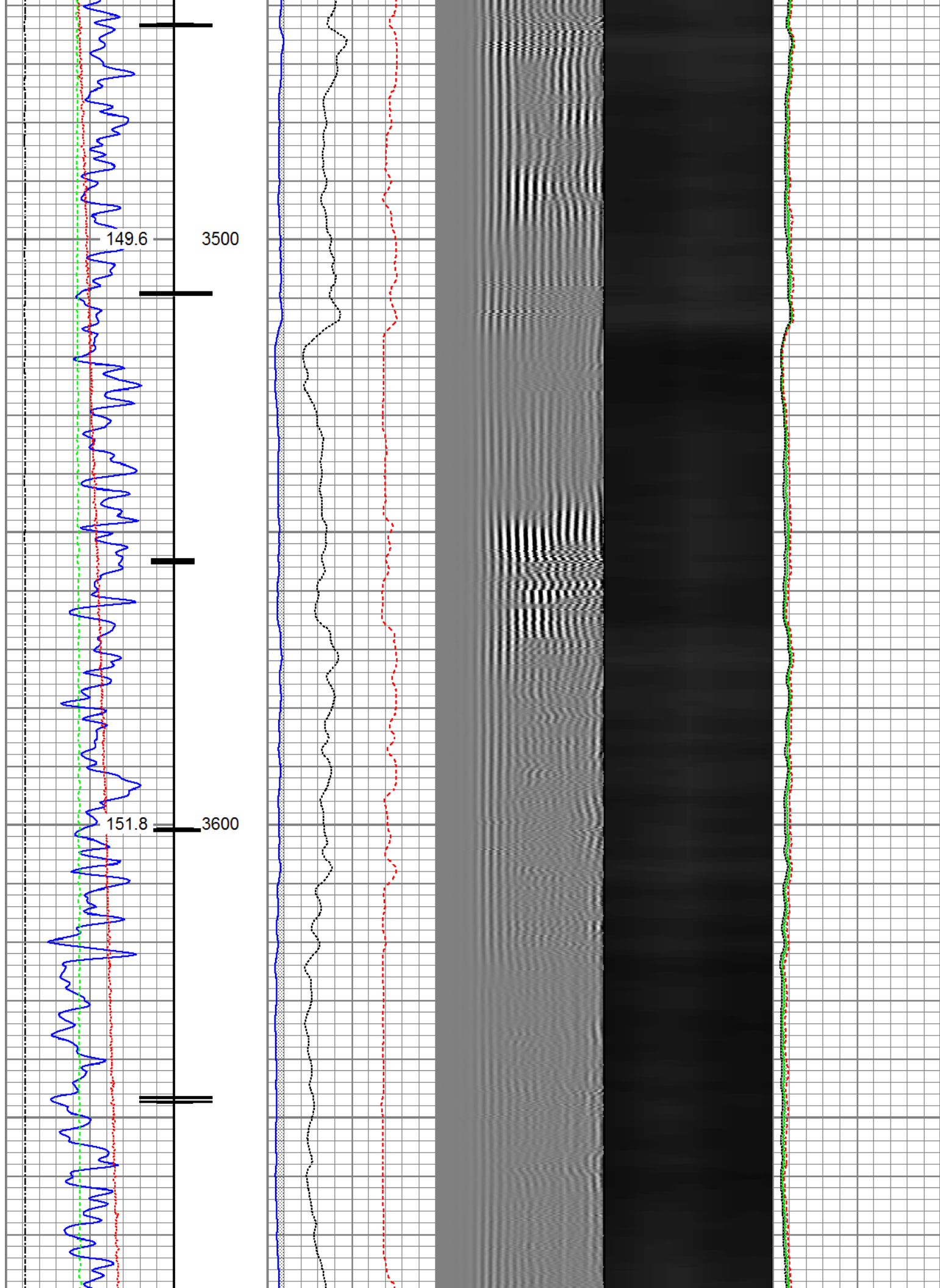


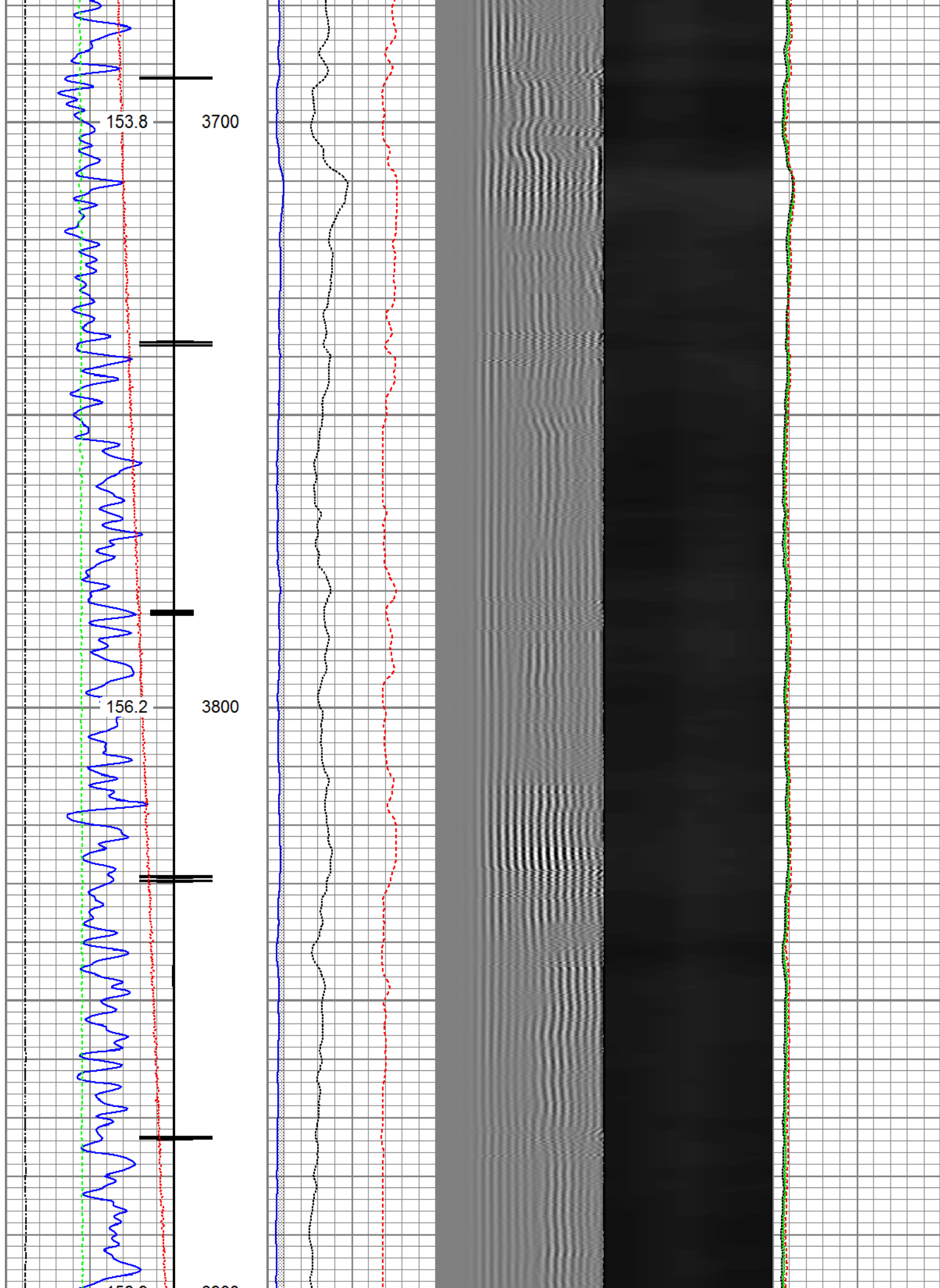


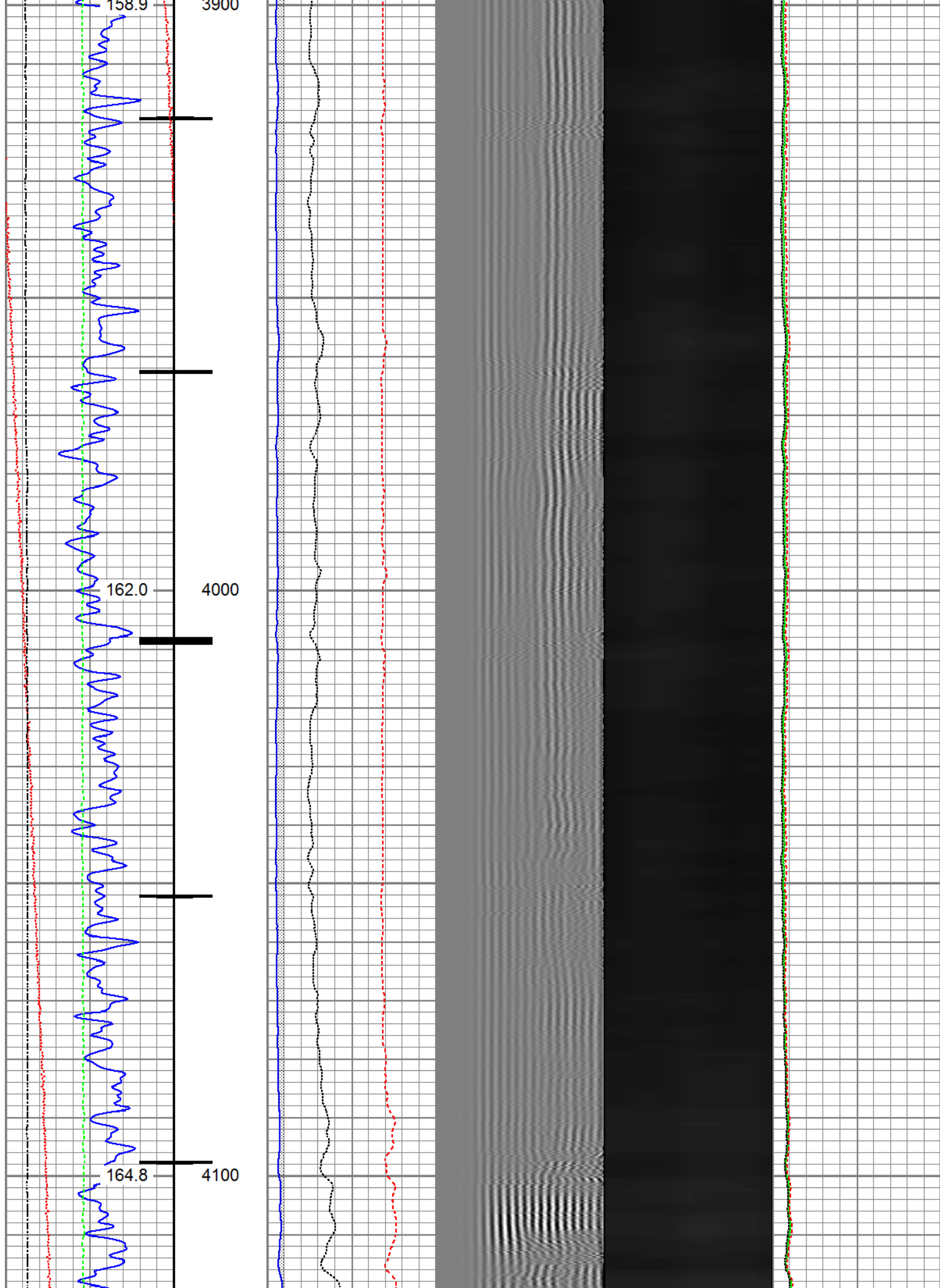


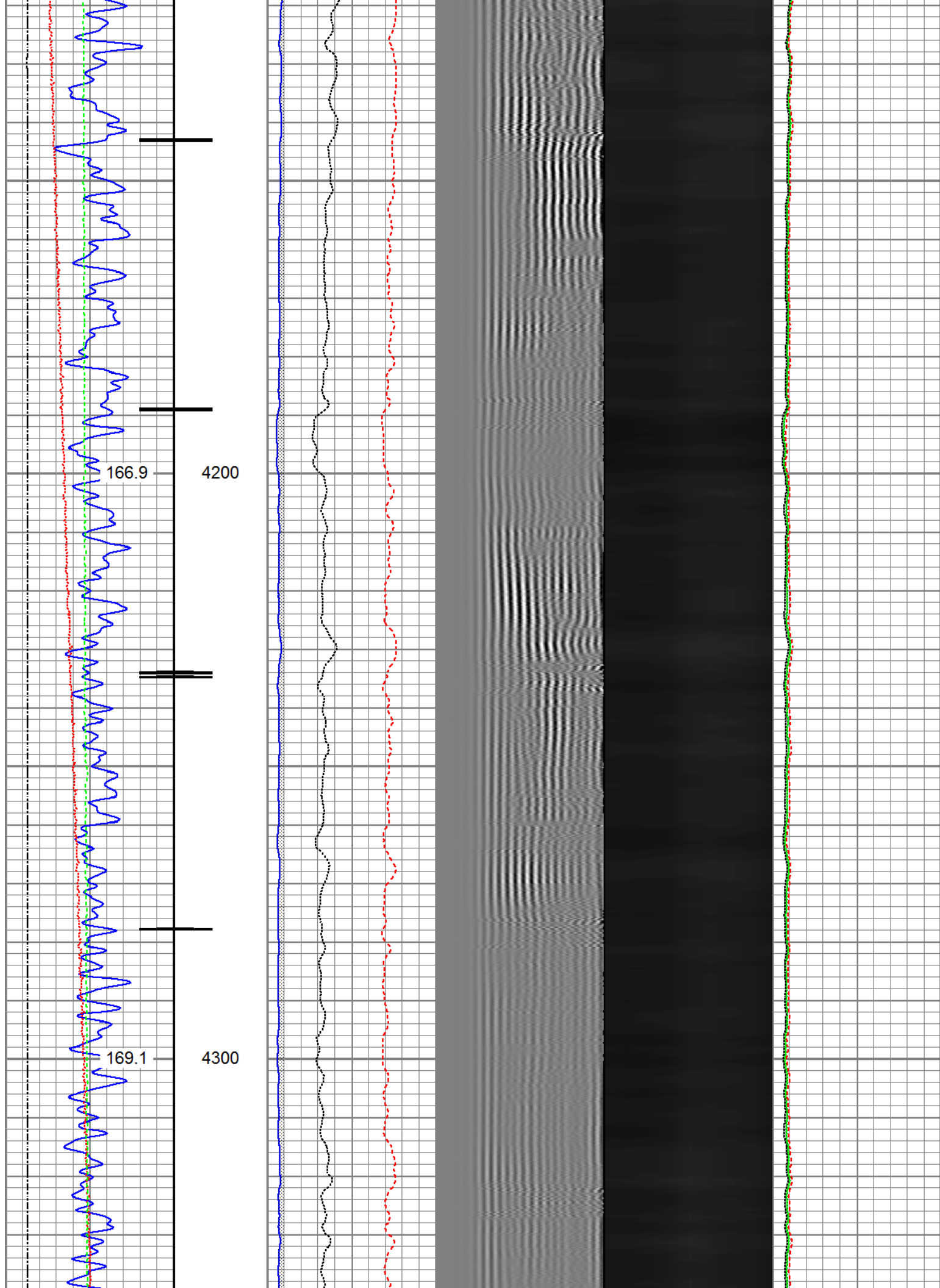


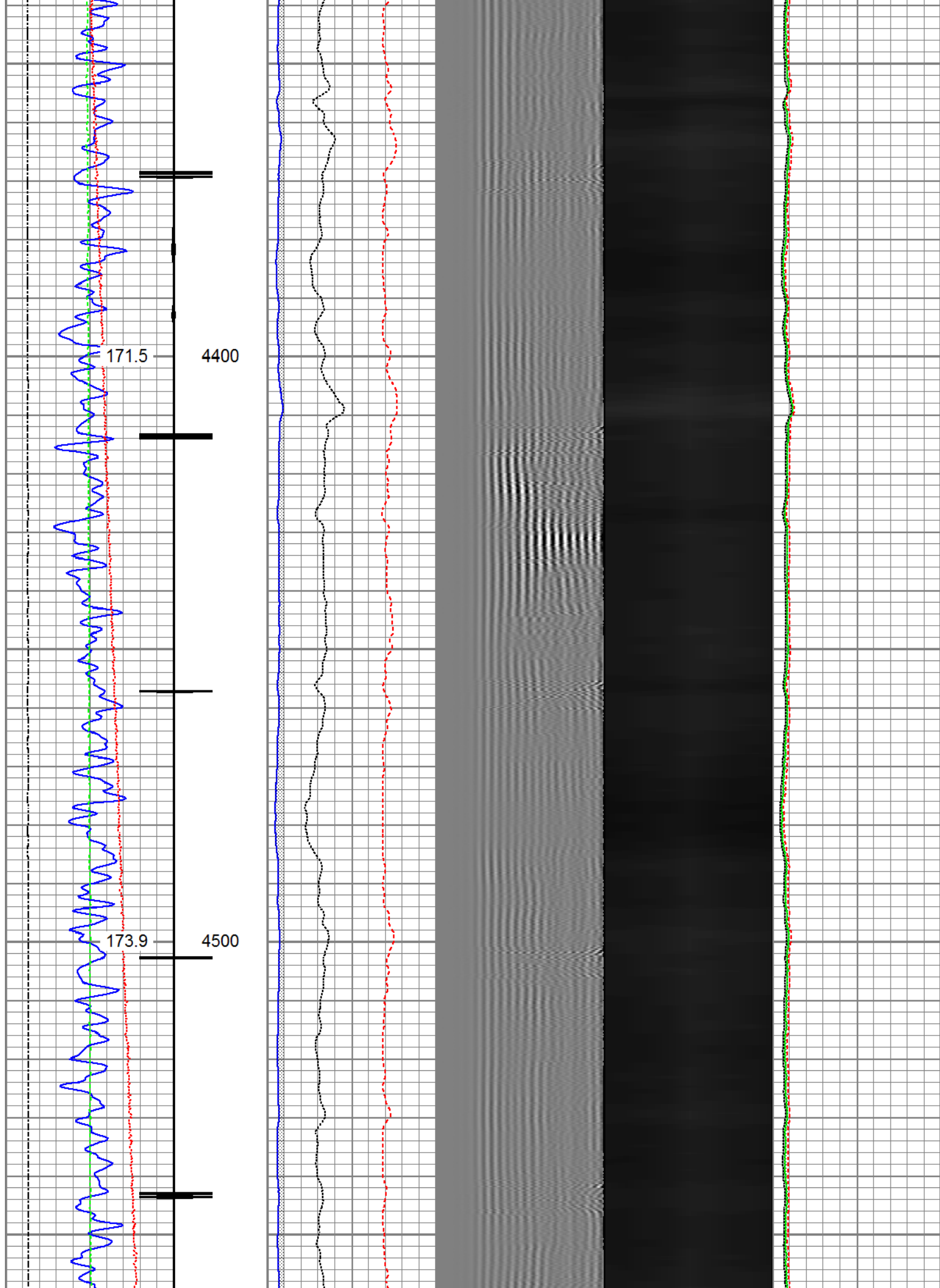


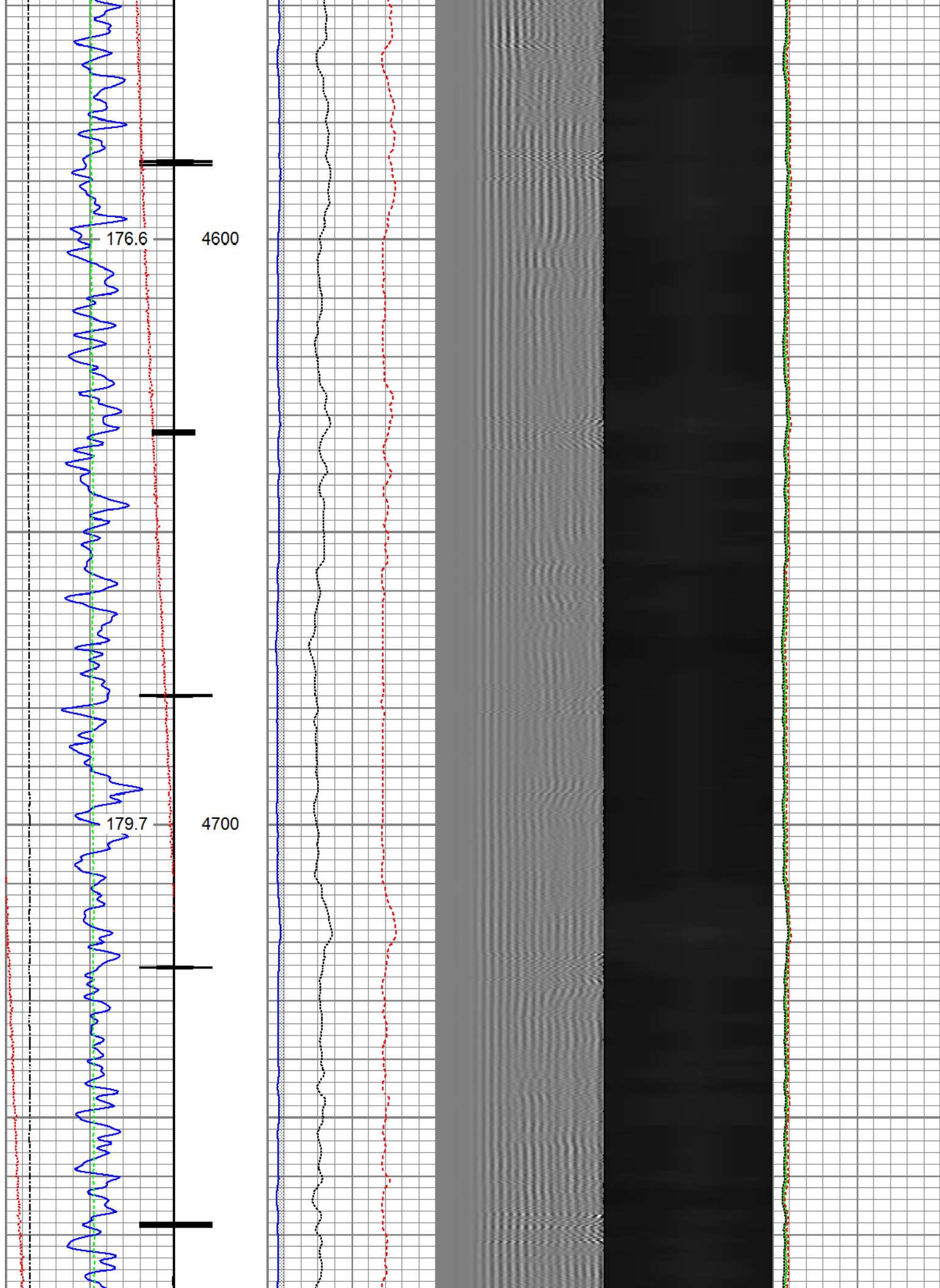


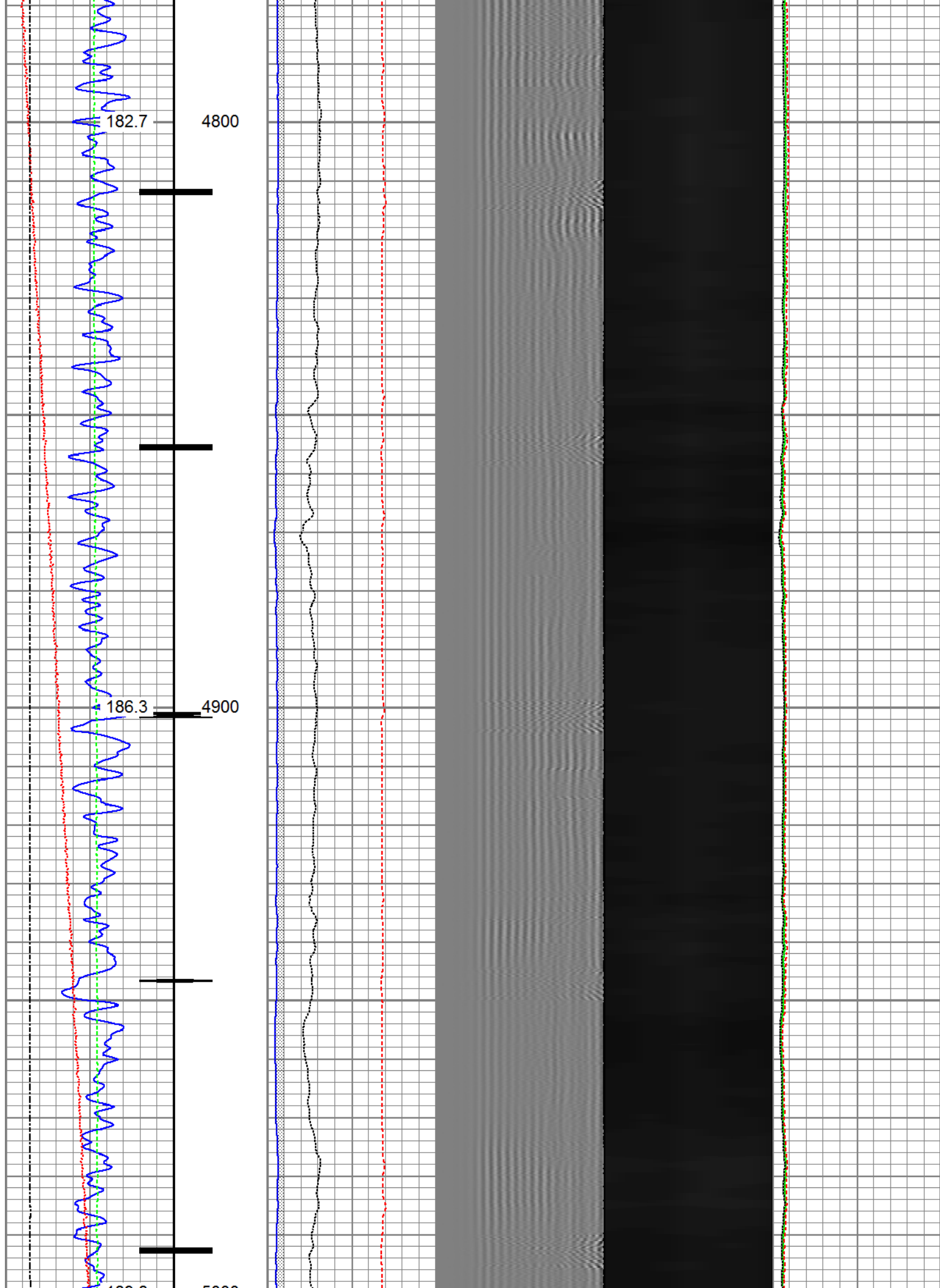


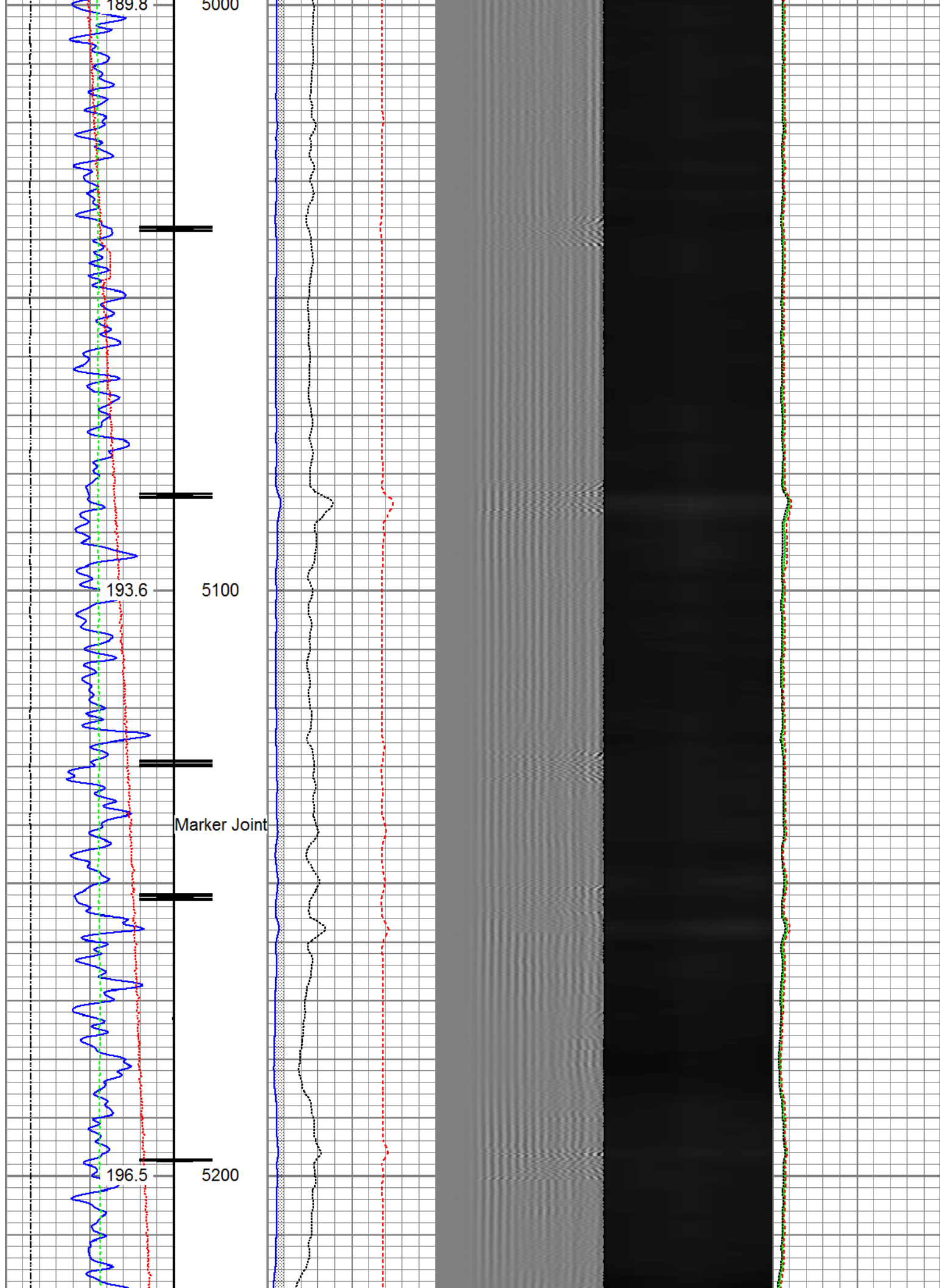


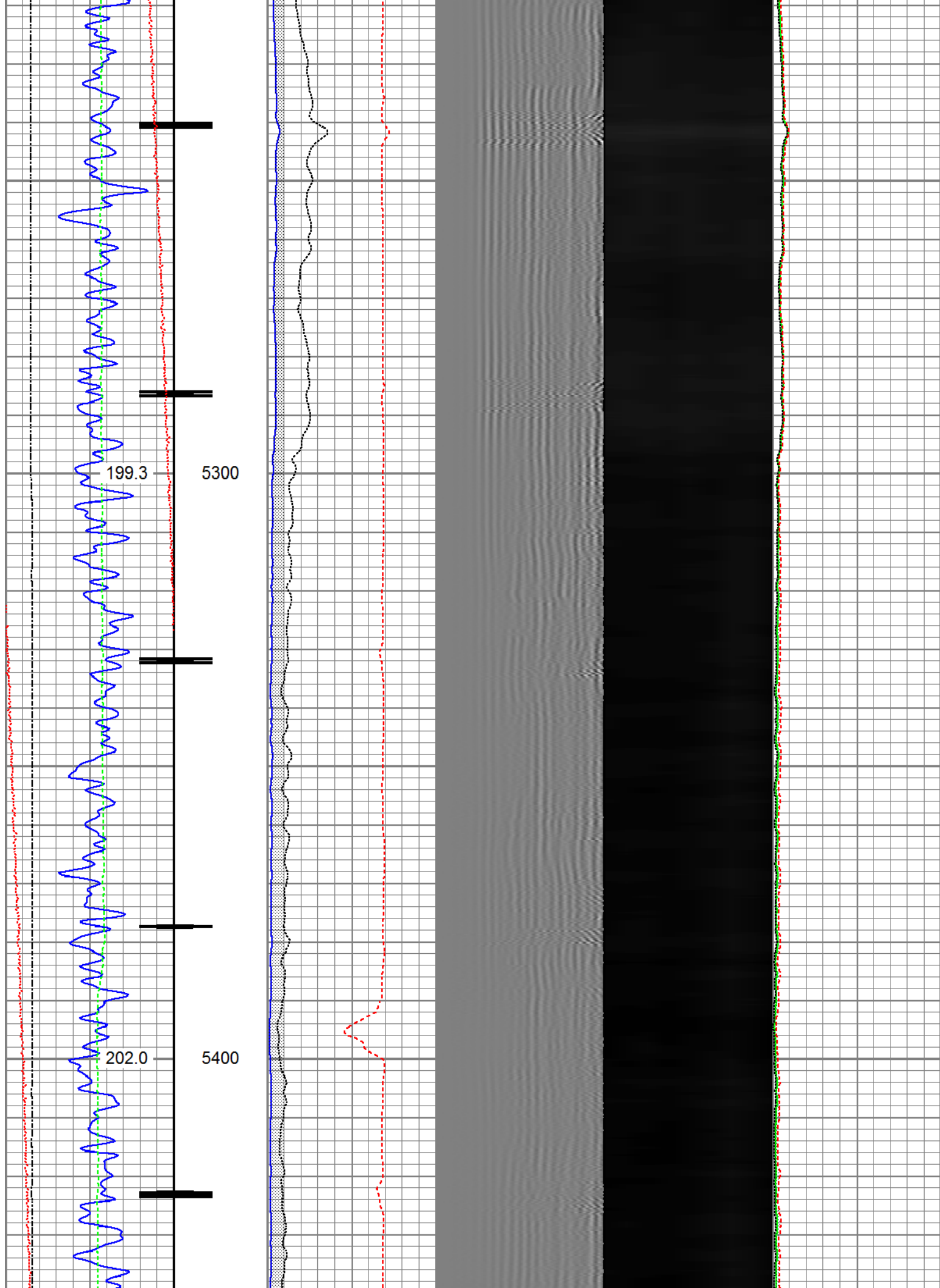


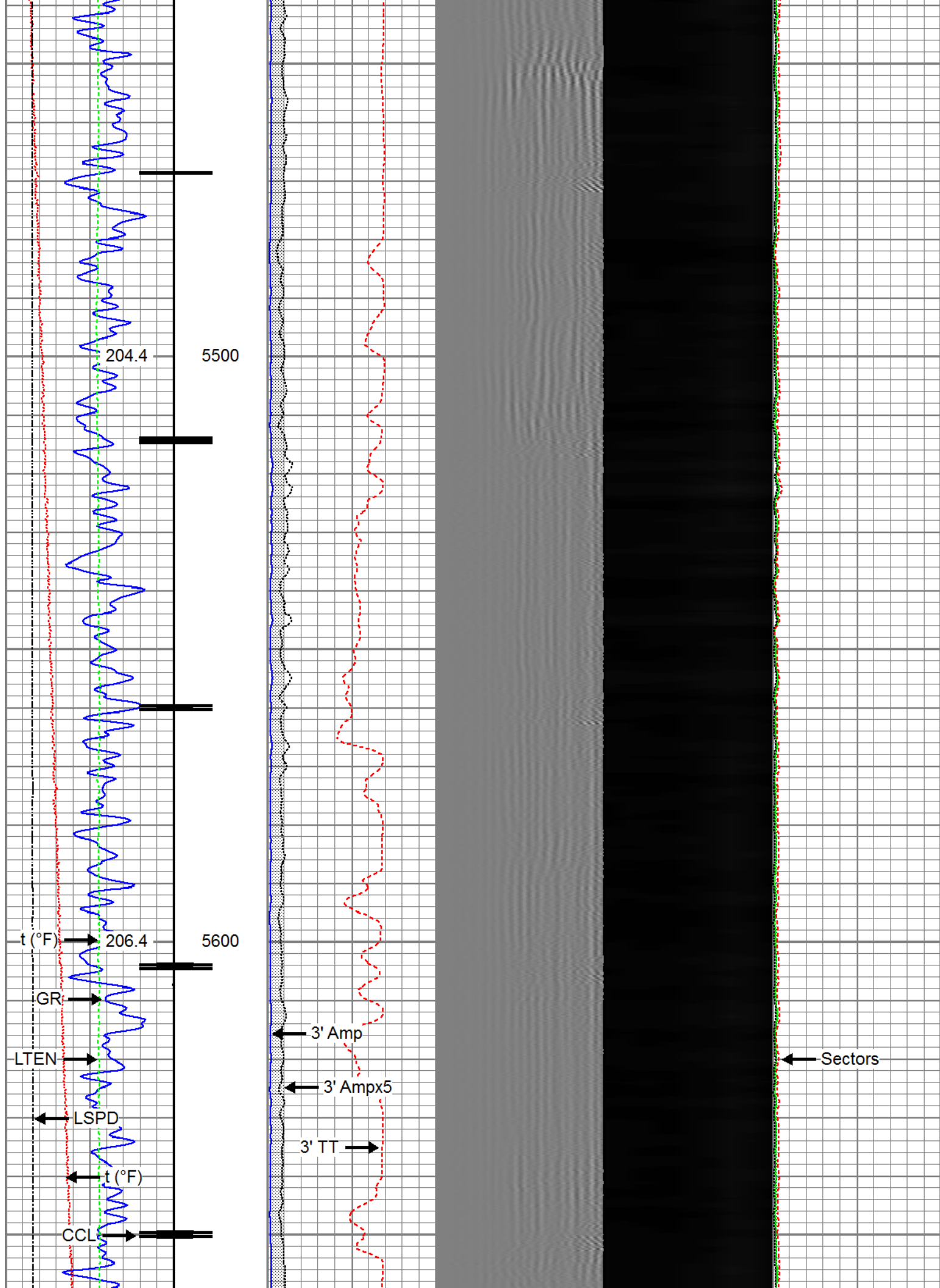


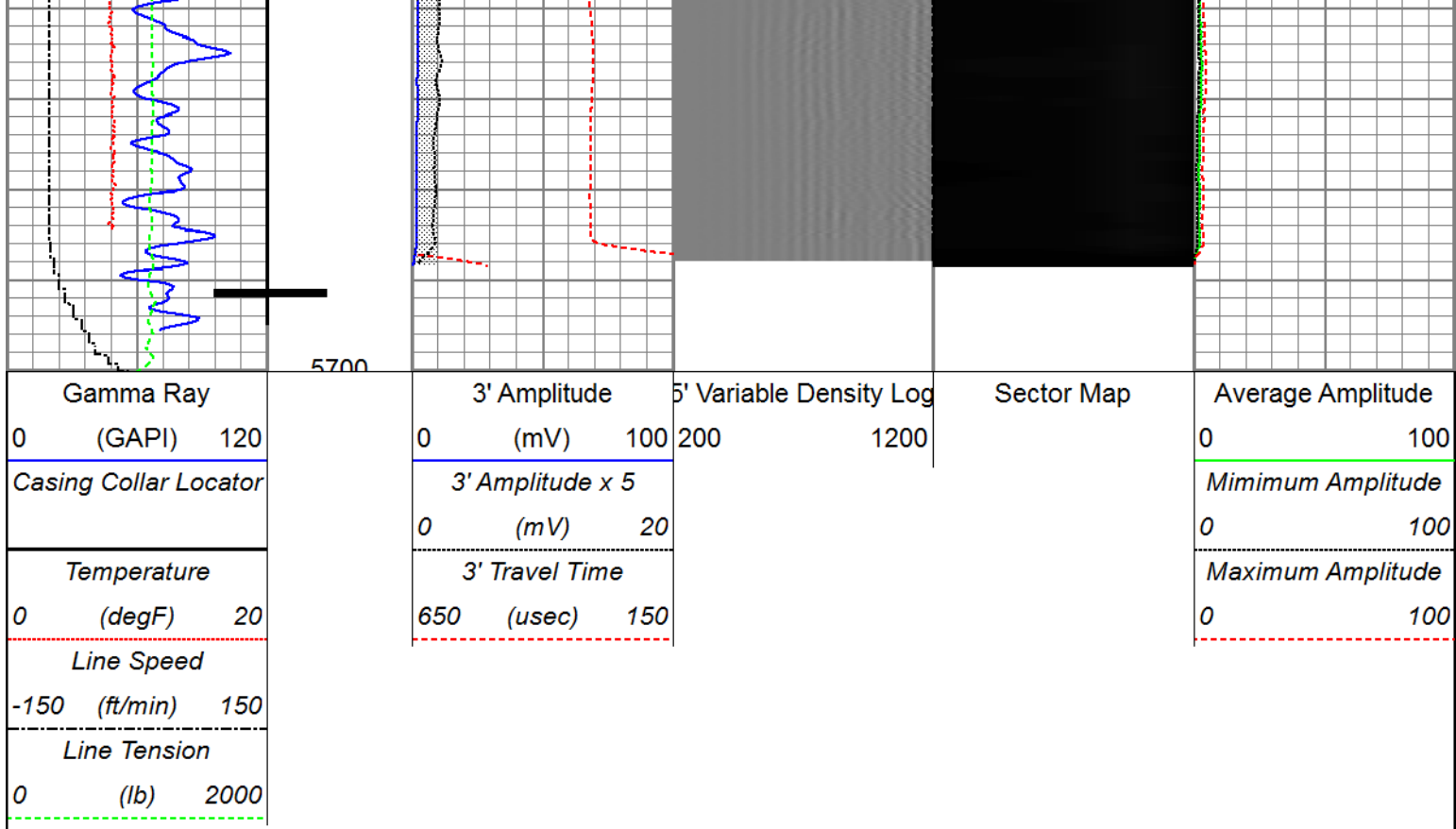








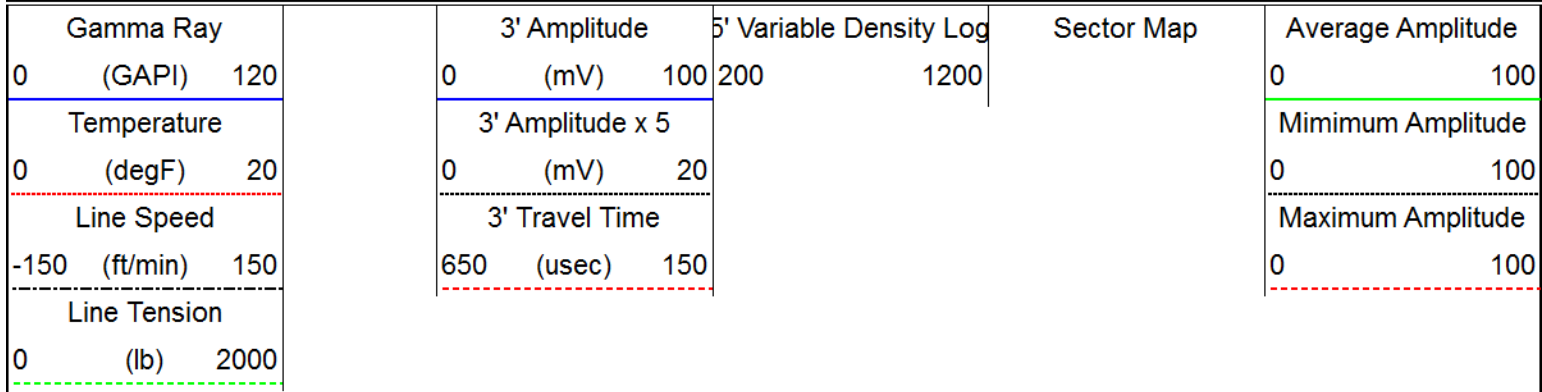




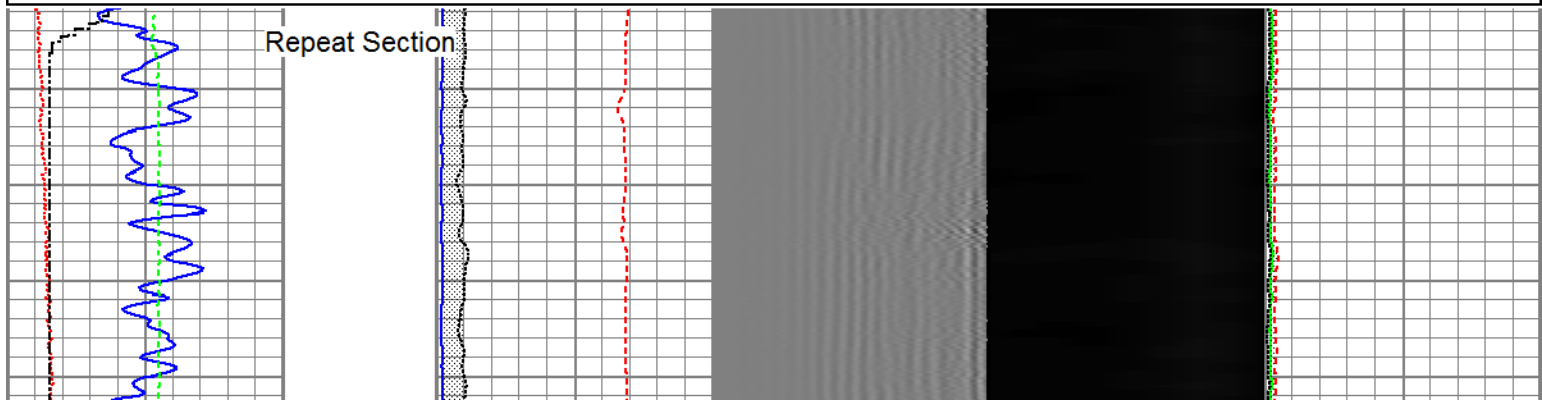
Repeat Pass

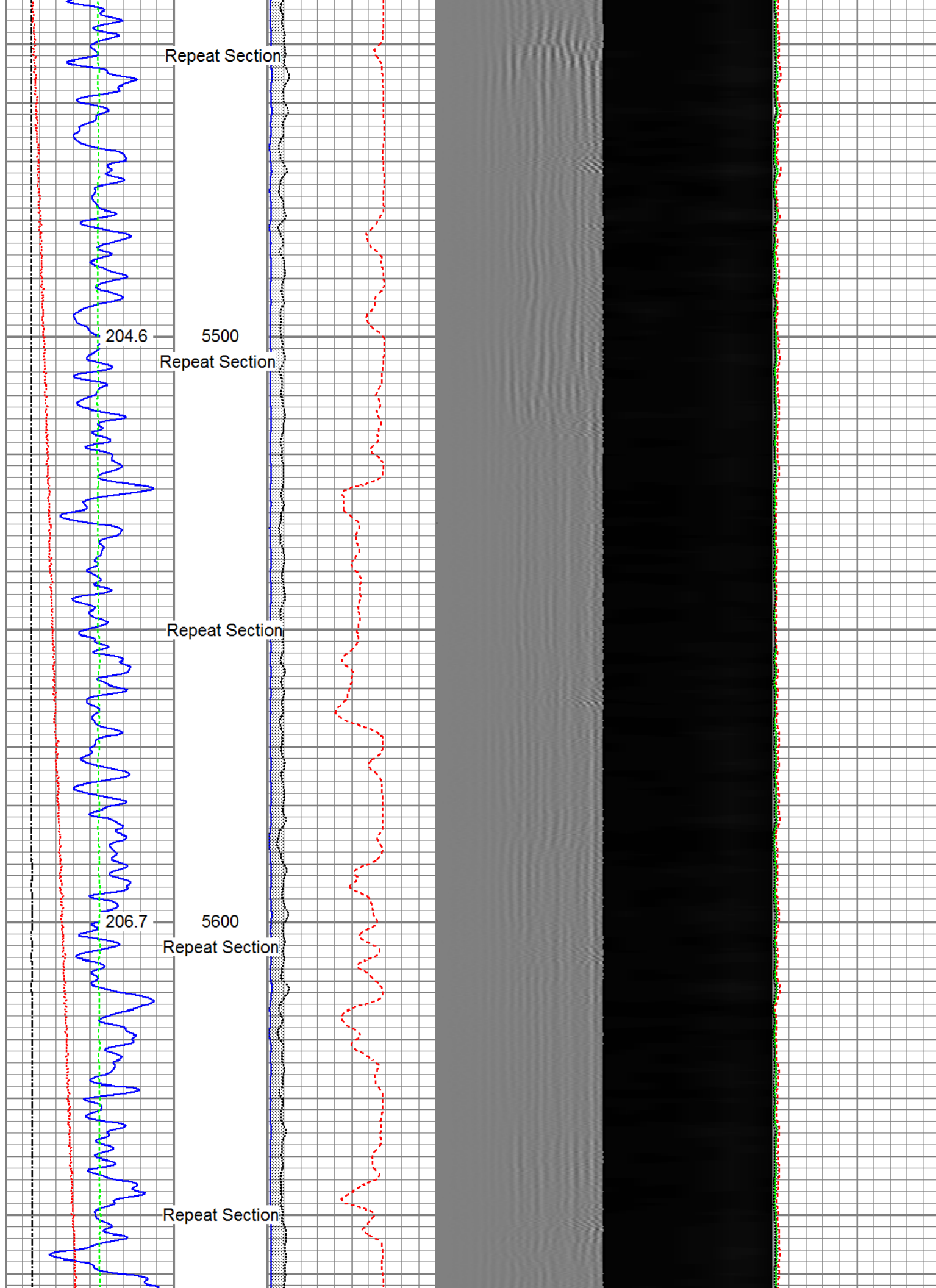
Recorded with 1500 PSI Surface Induced Pressure

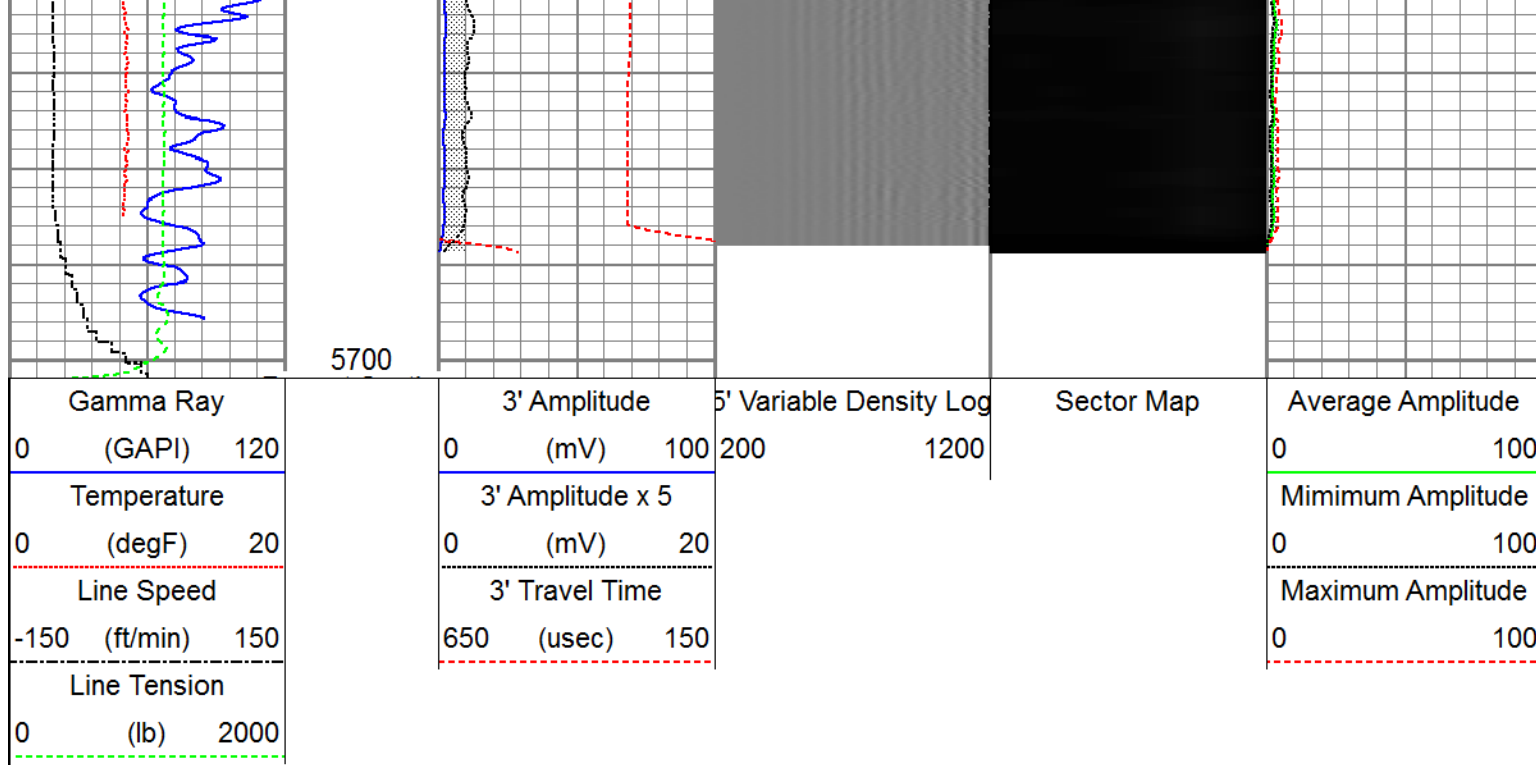
Database File c:\users\shelly.horner\desktop\04-27-16_whiting_horsetail fed 07g-0611_rbl_w8.db
 Dataset Pathname pass3
 Presentation Format fmc_radrii
 Dataset Creation Wed Apr 27 10:55:26 2016
 Charted by Depth in Feet scaled 1:240



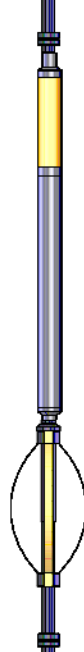
Repeat Section







Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
HeadVolt	19.51		Titan_Electric_Cable_Heads-Titan_1-11/16" 1.03 Electric Cable Head with 1" Fishing Neck	1.03	1.69	5.40
			Probe_ELine_BowSpring_Centralizer-P_EB2.8875 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.8875	2.75	20.00
Temp	16.72		Probe_RADII-C-P_RBT_2750 (FW1302-0029.19 Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	29.19	2.75	105.00
WVFS8	14.55					
WVFS7	14.55					
WVFS6	14.55					
WVFS5	14.55					
WVFS4	14.55					
WVFS3	14.55					
WVFS2	14.55					
WVFS1	14.55					
WVFCAL	14.55					
WVF3FT	14.55					
WVF5FT	13.55					
HEADVOLT	10.30		Probe_ELine_BowSpring_Centralizer-P_EB2.8875 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.8875	2.75	20.00

DCCL	6.51				
CCL	6.51		Probe_GR_CCL-P_CGR_2750_S (FW1307-4.54) Probe 2-3/4" Digital CCL / Gamma Ray Combined	2.75	55.00
GR	3.77		Probe_ELine_BowSpring_Centralizer-P_EB52.8875 Probe 2-3/4" Electric Inline Bowspring Centralizer	2.75	20.00
Dataset: 04-27-16_Whiting_Horsetail Fed 07G-0611_RBL_W8.db: field/well/run1/pass5 Total length: 23.40 ft Total weight: 225.40 lb O.D.: 2.75 in					

Calibration Report	
Database File	C:\Users\shelly.horner\Desktop\04-27-16_Whiting_Horsetail Fed 07G-0611_RBL_W8.db
Dataset Pathname	pass5
Dataset Creation	Wed Apr 27 11:04:15 2016

Gamma Ray Calibration Report		
Serial Number:	FW1307-038	
Tool Model:	P_CGR_2750_S	
Performed:	Sat Feb 06 11:43:09 2016	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.6	cps
Sensitivity:	0.6061	GAPI/cps

Segmented Cement Bond Log Calibration Report		
Serial Number:	FW1302-002	
Tool Model:	P_RBT_2750	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	5152.994	ft

Master Calibration, performed Wed Apr 27 10:49:54 2016:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.004	0.608	0.800	71.921	117.711	0.365
CAL	0.004	0.603				
5'	0.004	0.589	0.800	71.921	121.572	0.352
SUM						
S1	0.004	0.604	0.000	100.000	166.477	-0.610

S2	0.004	0.604	0.000	100.000	166.457	-0.614
S3	0.004	0.606	0.000	100.000	166.156	-0.608
S4	0.004	0.607	0.000	100.000	165.649	-0.609
S5	0.004	0.614	0.000	100.000	163.866	-0.602
S6	0.004	0.612	0.000	100.000	164.518	-0.623
S7	0.004	0.612	0.000	100.000	164.419	-0.610
S8	0.004	0.610	0.000	100.000	165.005	-0.641

Internal Reference Calibration, performed Wed Apr 27 10:50:48 2016:

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.004	0.603	0.004	0.603	1.000	0.000

Air Zero Calibration, performed Wed Apr 27 10:50:12 2016:

	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.004		0.000		0.000	
5'	0.004		0.000		0.000	
SUM						
S1	0.004		0.000		-0.000	
S2	0.004		0.000		-0.000	
S3	0.004		0.000		-0.000	
S4	0.004		0.000		-0.000	
S5	0.004		0.000		0.000	
S6	0.004		0.000		-0.000	
S7	0.004		0.000		0.000	
S8	0.004		0.000		0.000	



Company	Whiting Oil & Gas Corporation		
Well	Horsetail Fed 07G-0611		
Field	Wildcat		
County	Weld		
State	Colorado	Country	USA