



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.			
Well	HSR-Jenkins 14-31			
Field	Wattenberg			
County	Weld			
State	Colorado			
Company	Kerr-McGee Oil & Gas Onshore, L.P.	Well	HSR-Jenkins 14-31	
Field	Wattenberg	County	Weld	State Colorado
Location:	API # : 05-123-16697			Other Services
SEC 31 TWP 4N RGE 66W				JB/GR
Permanent Datum	Ground Level	Elevation	4772'	
Log Measured From	Kelly Bushing	10 FT		
Drilling Measured From	Kelly Bushing			
				Elevation
				K.B. 4782'
				D.F. 4781'
				G.L. 4772'

Date	01-Feb-2016
Run Number	One
Depth Driller	7374 FT
Depth Logger	4300 FT
Bottom Logged Interval	4398 FT
Top Log Interval	Surface
Open Hole Size	7.875"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	161.3° F
Estimated Cement Top	Surface
Time Well Ready	ROA
Time Logger on Bottom	9:01 AM
Equipment Number	HD-0311
Location	Ft. Lupton, CO
Recorded By	R Cameron
Witnessed By	Ryan Tompson

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	---	---	---	---	---		
Intermediate #1							
Intermediate #2	4 1/2	11.6	---	Surface	7374 FT		
Liner							

>>> Fold Here >>>

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
Correlated to Brand X Log From 3-9-1993
Log ran from 4300 FT to Surface
Recorded with 0 PSI Surface Induced Pressure
Logging tools were clean and free of debris upon completion of operations

Thank you for choosing FMC Technologies Surface Integrated Services.

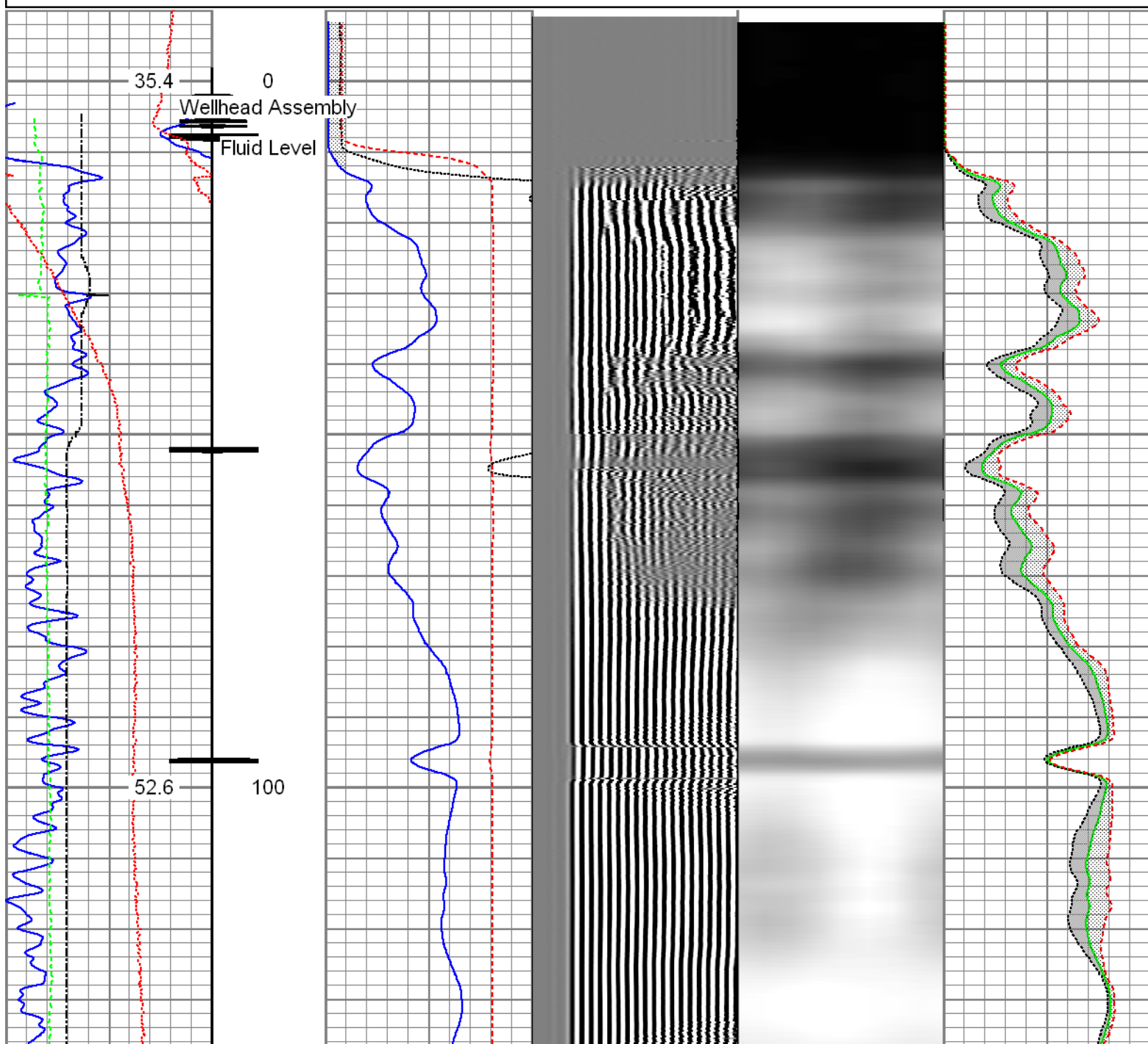


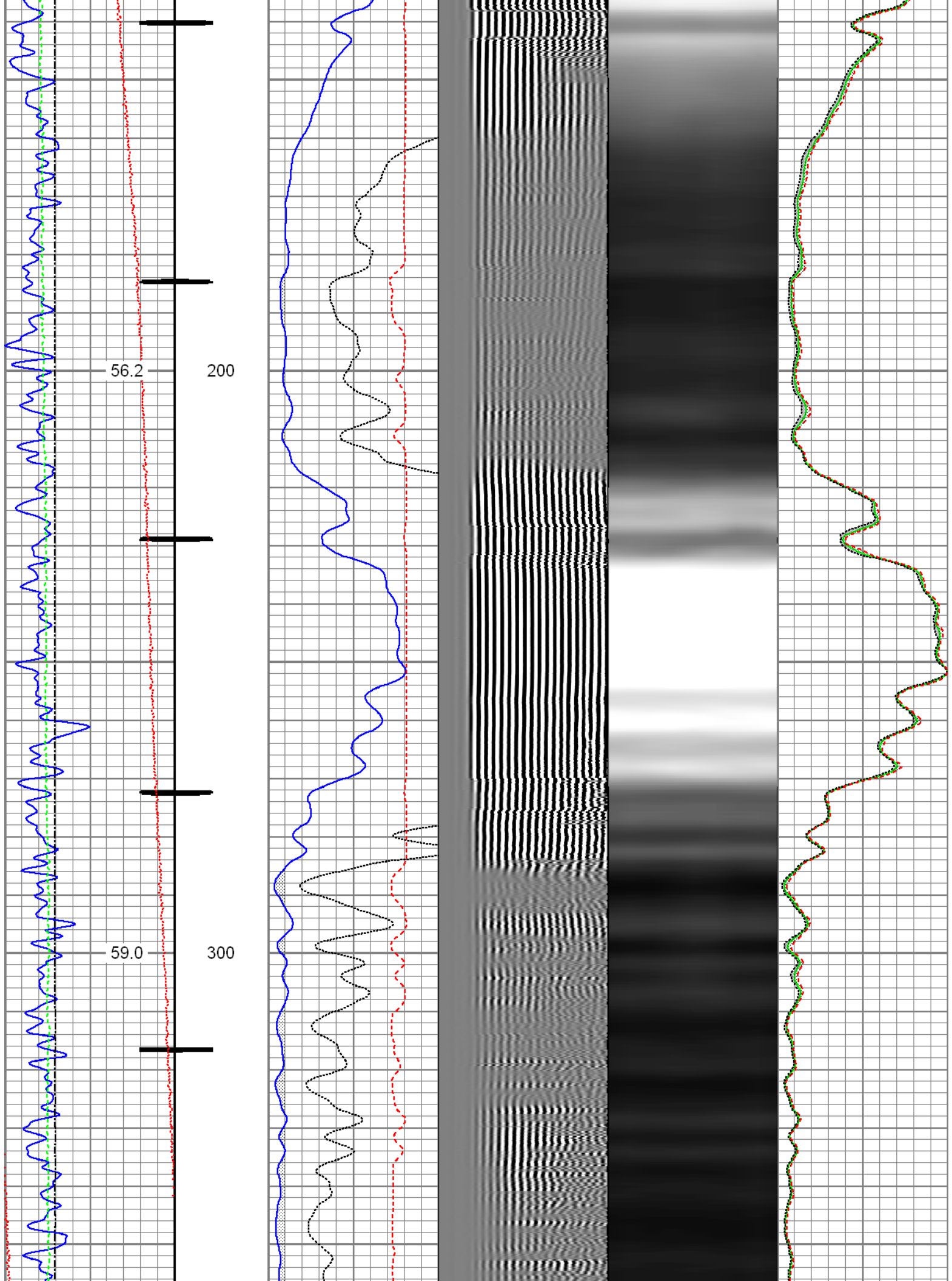
Main Pass

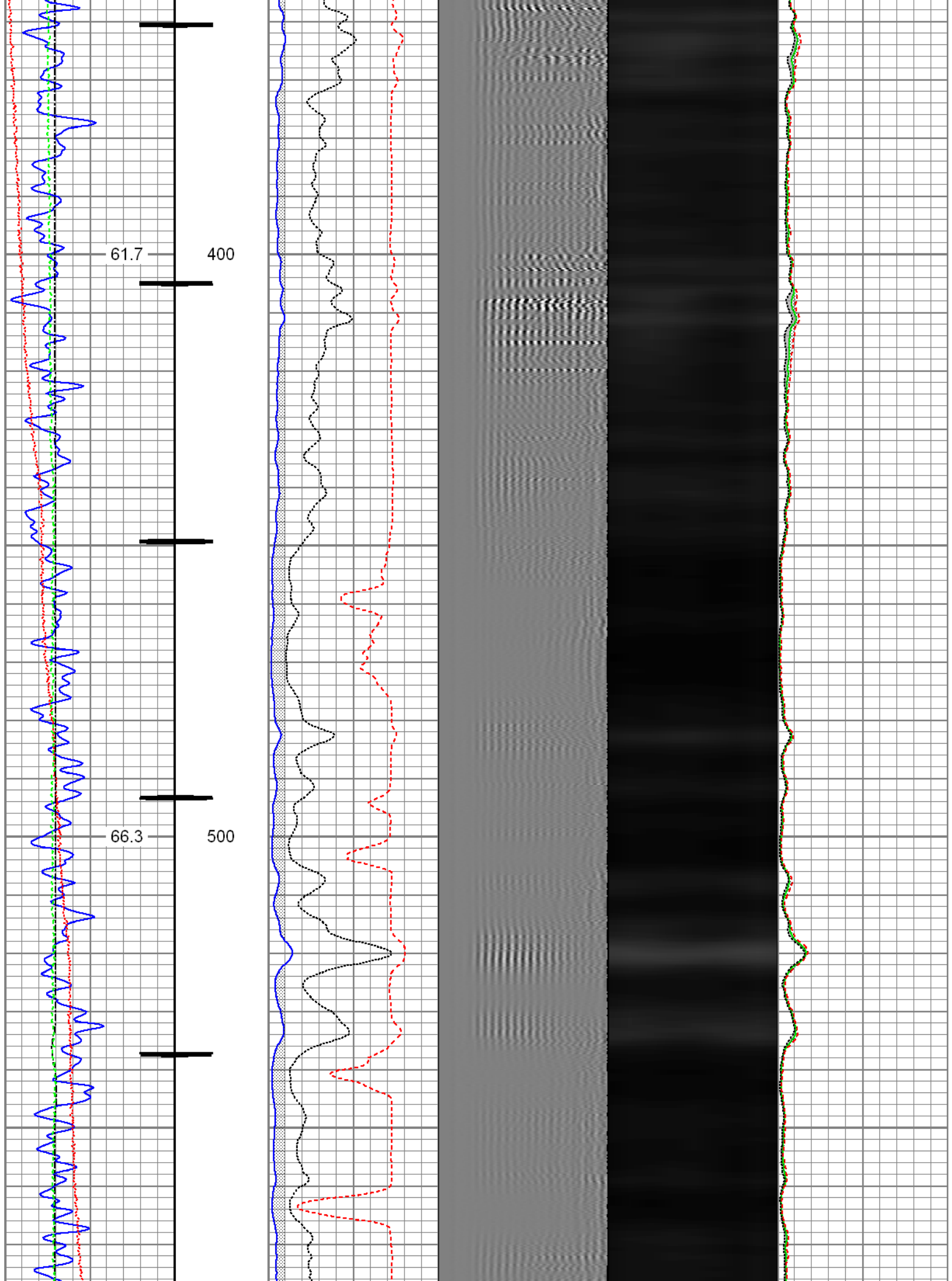
Recorded with 0 PSI Surface Induced Pressure

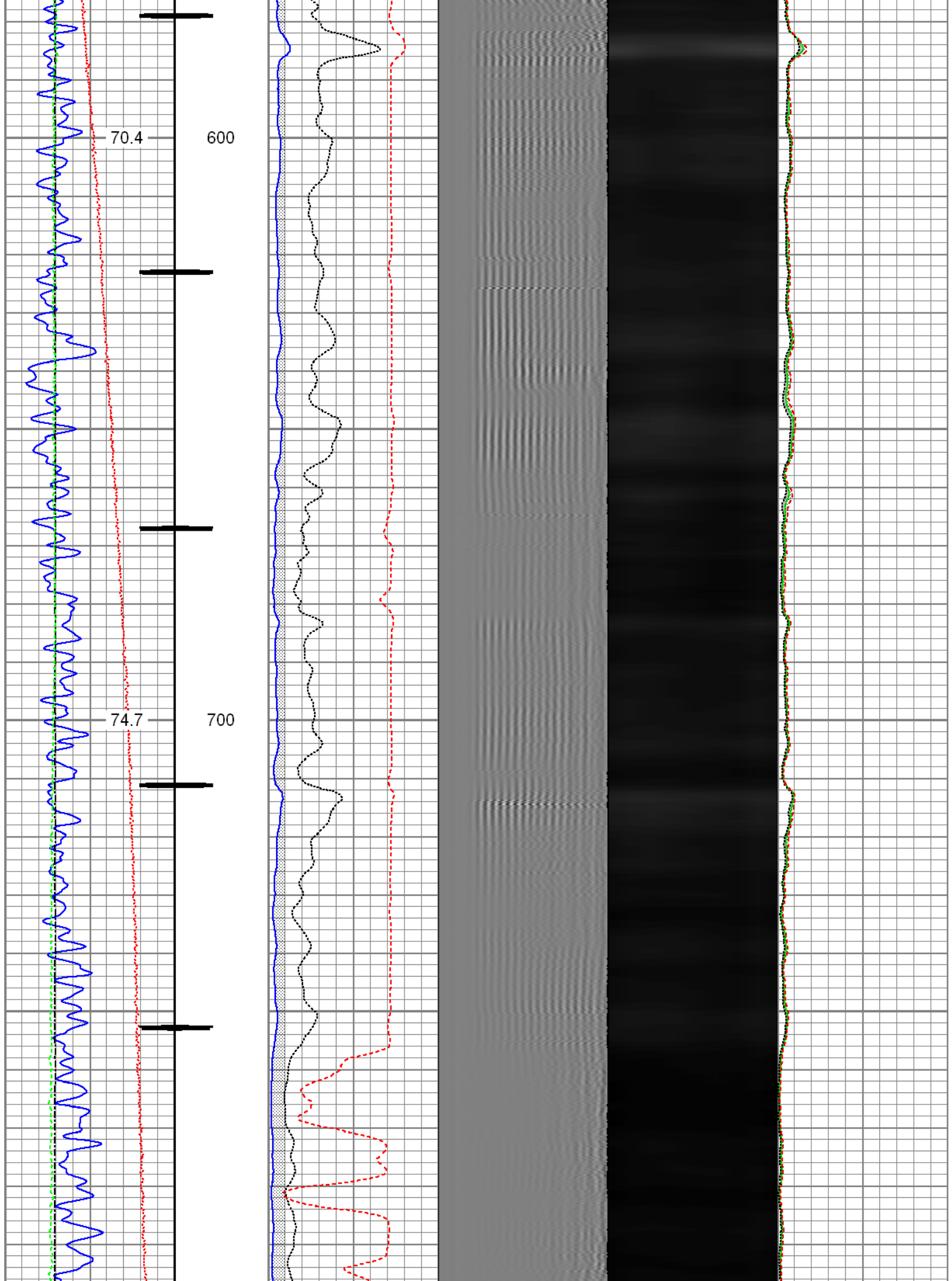
Database File: c:\warrior\data\0512316697_anadarko_hsr-jenkins 14-31_02-01-16_rb\processed_0512316697_anadarko_hsr-jenkins 14-31_02-01-16_rb
Dataset Pathname: pass8.4
Presentation Format: radii
Dataset Creation: Wed Feb 03 11:23:21 2016 by Calc SCH 120430
Charted by: Depth in Feet scaled 1:240

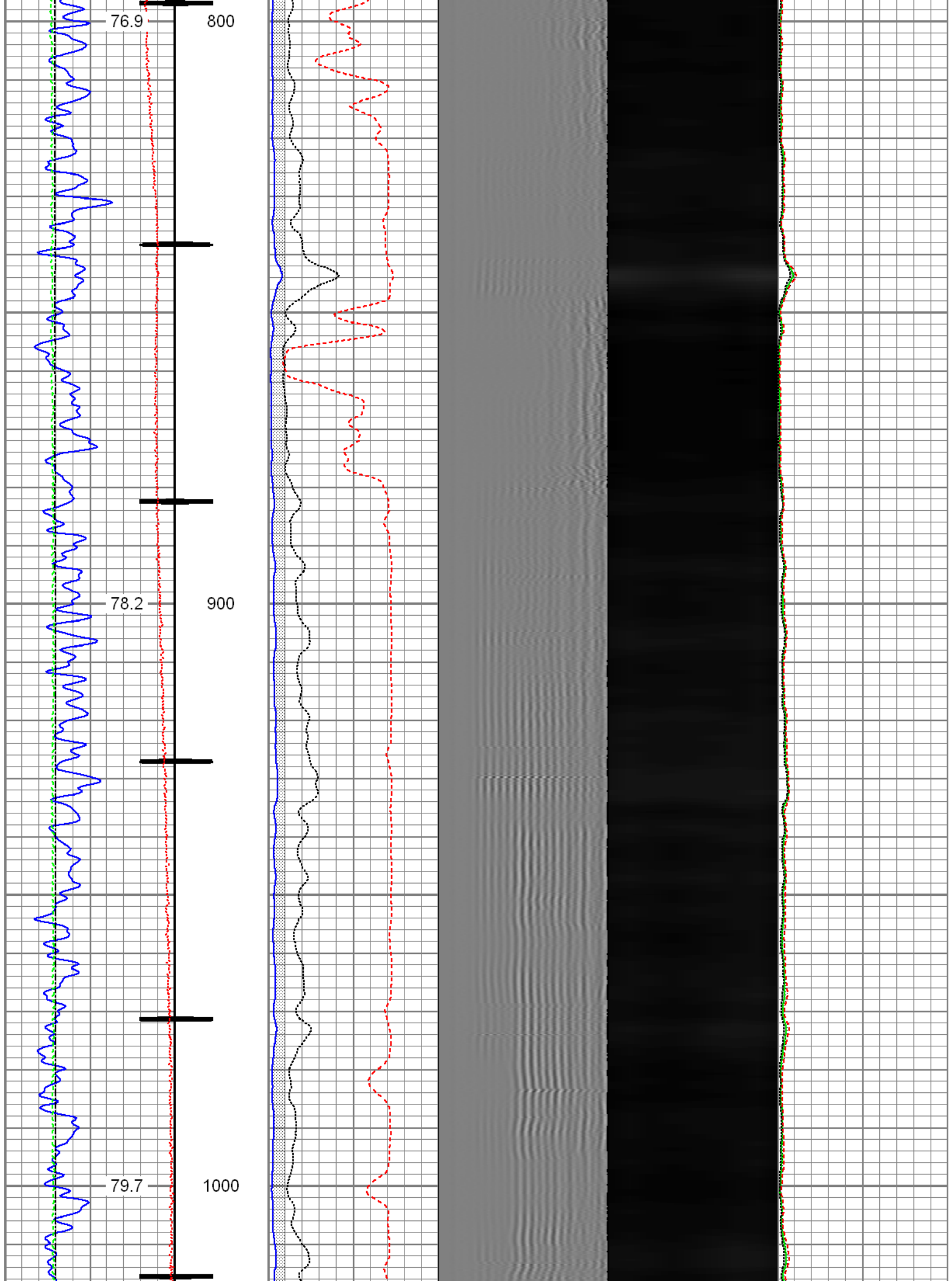
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
30 (GAPI) 130	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude
Temperature	0 (mV) 20			0 100
0 (degF) 20	3' Travel Time			Maximum Amplitude
Line Speed	650 (usec) 150			0 100
-150 (ft/min)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

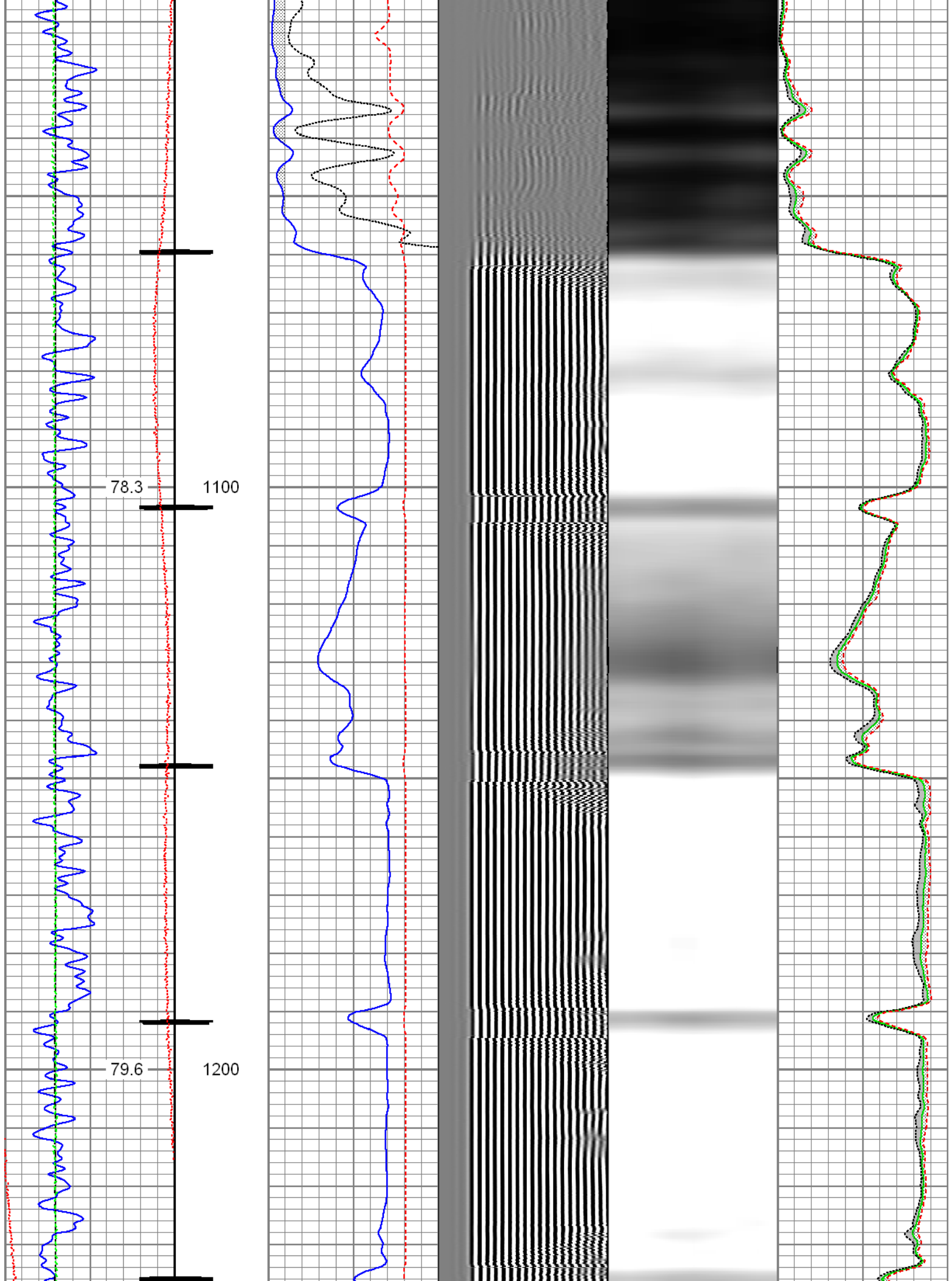


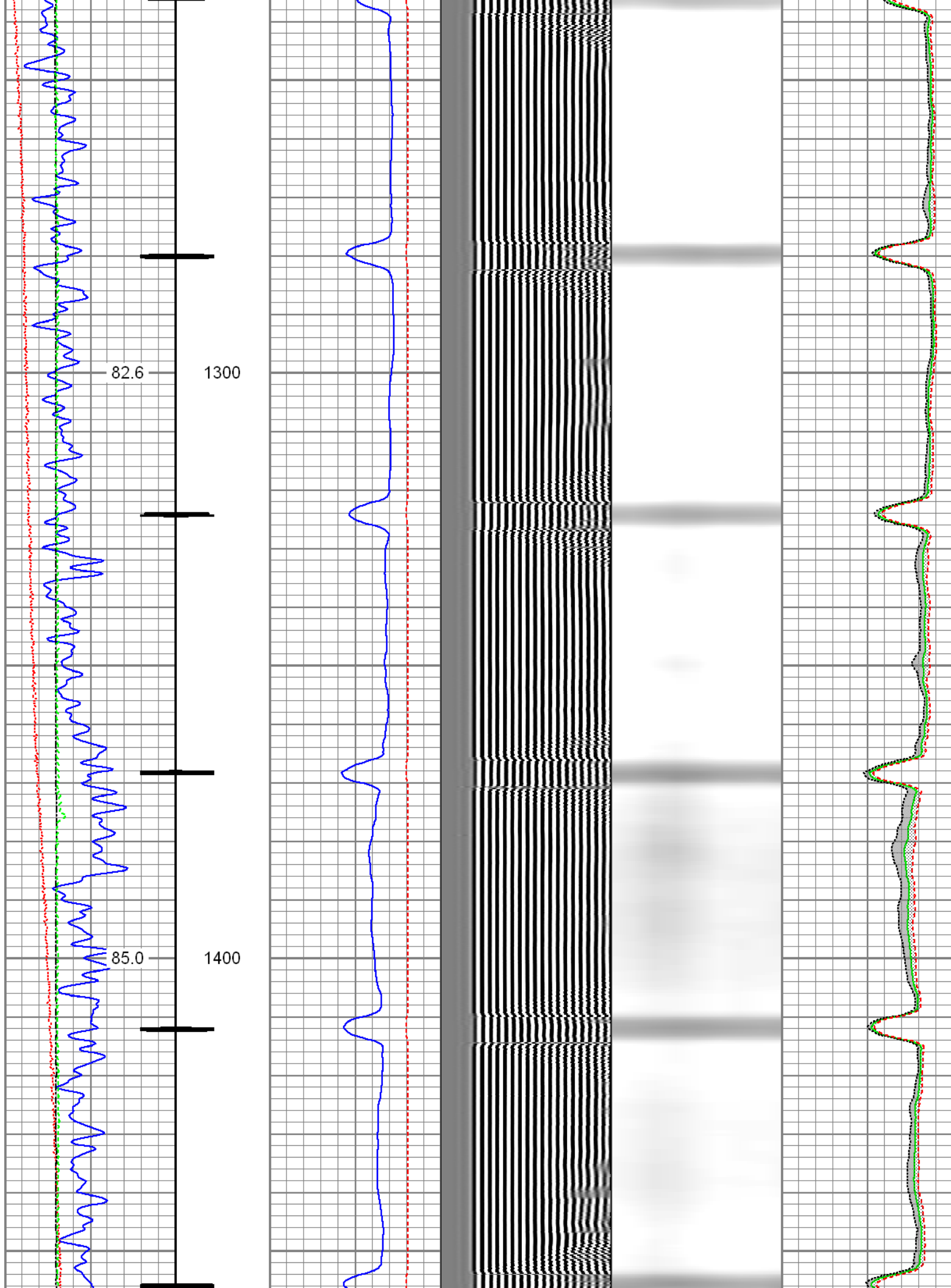


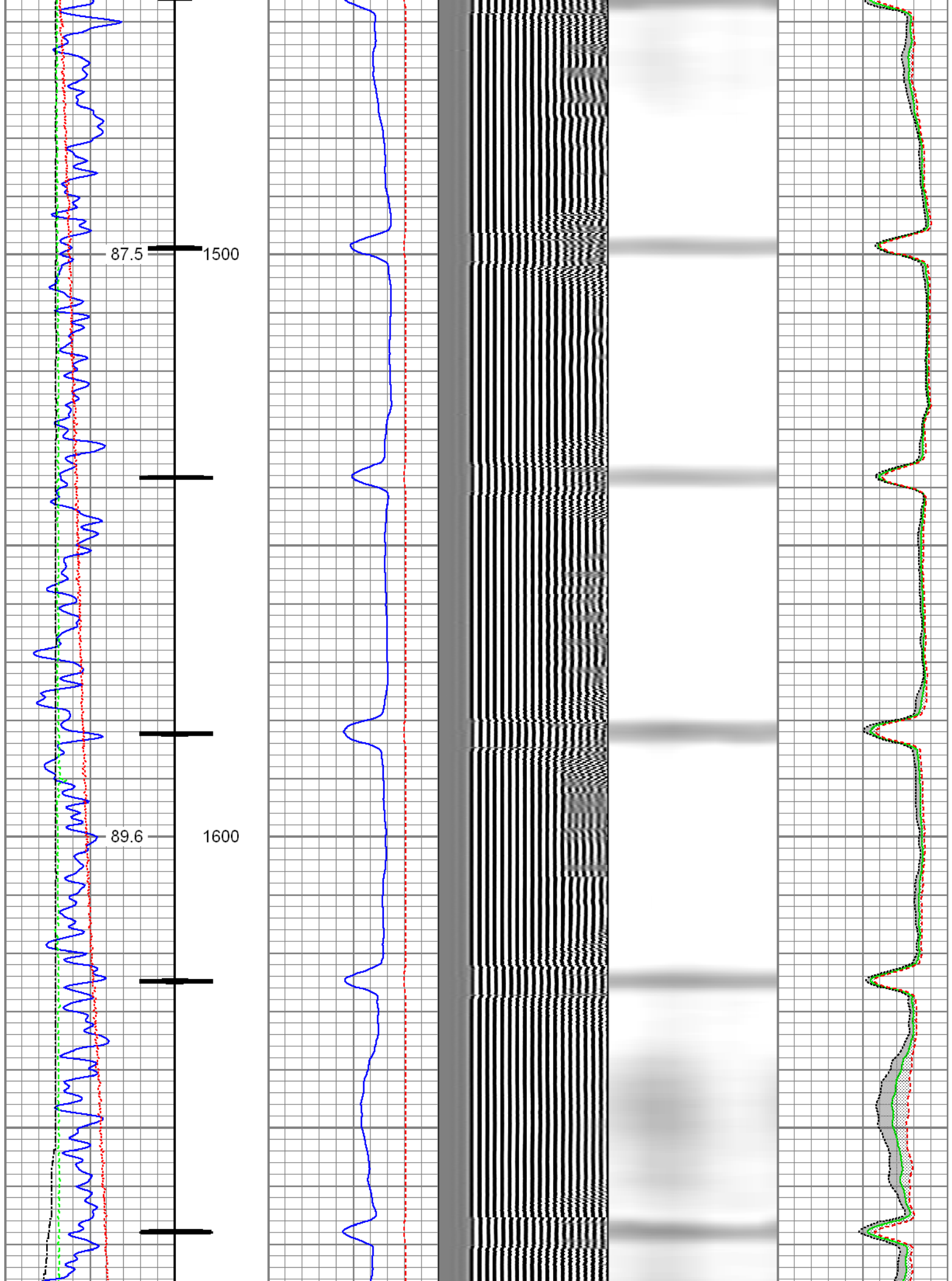


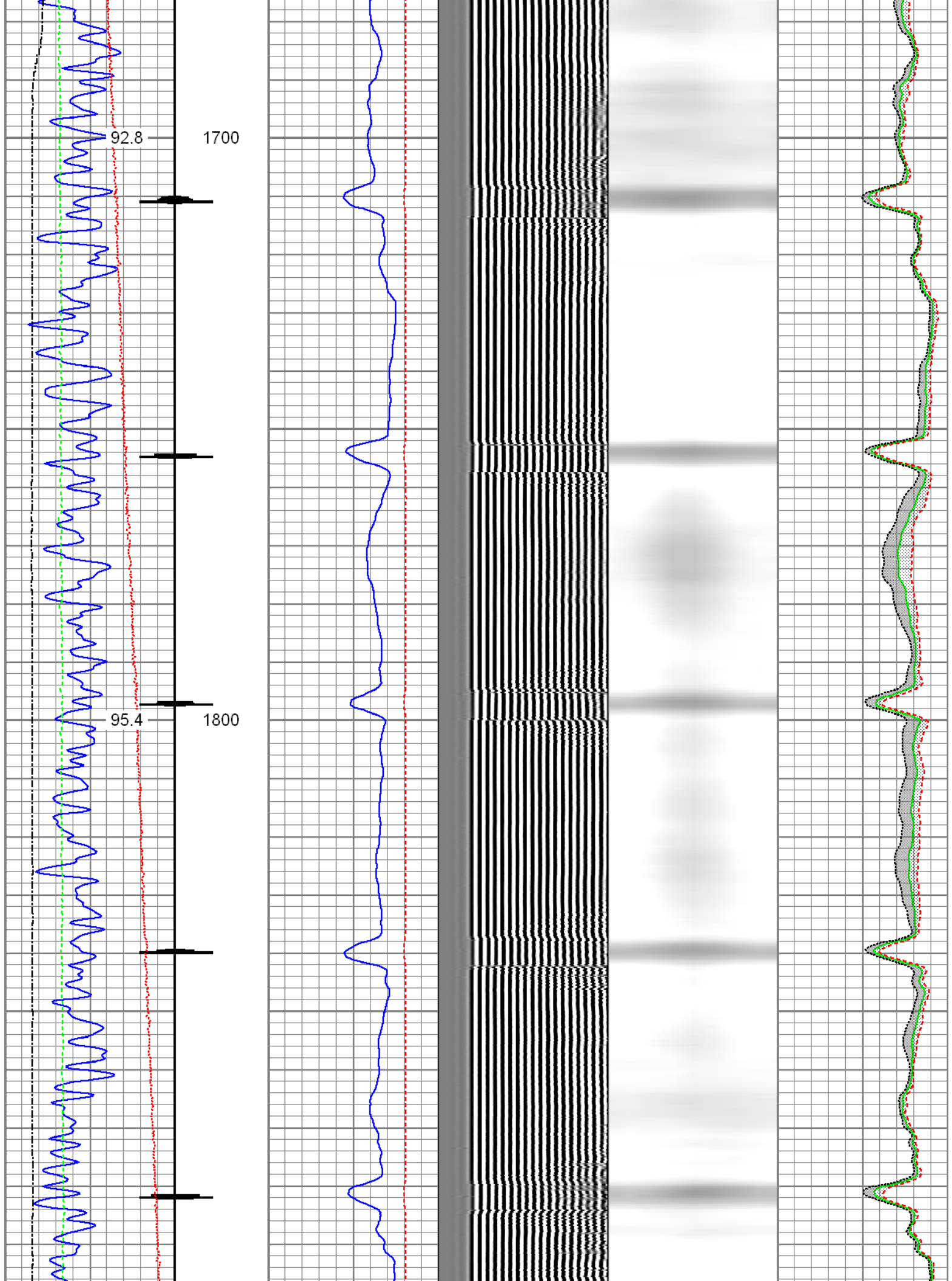


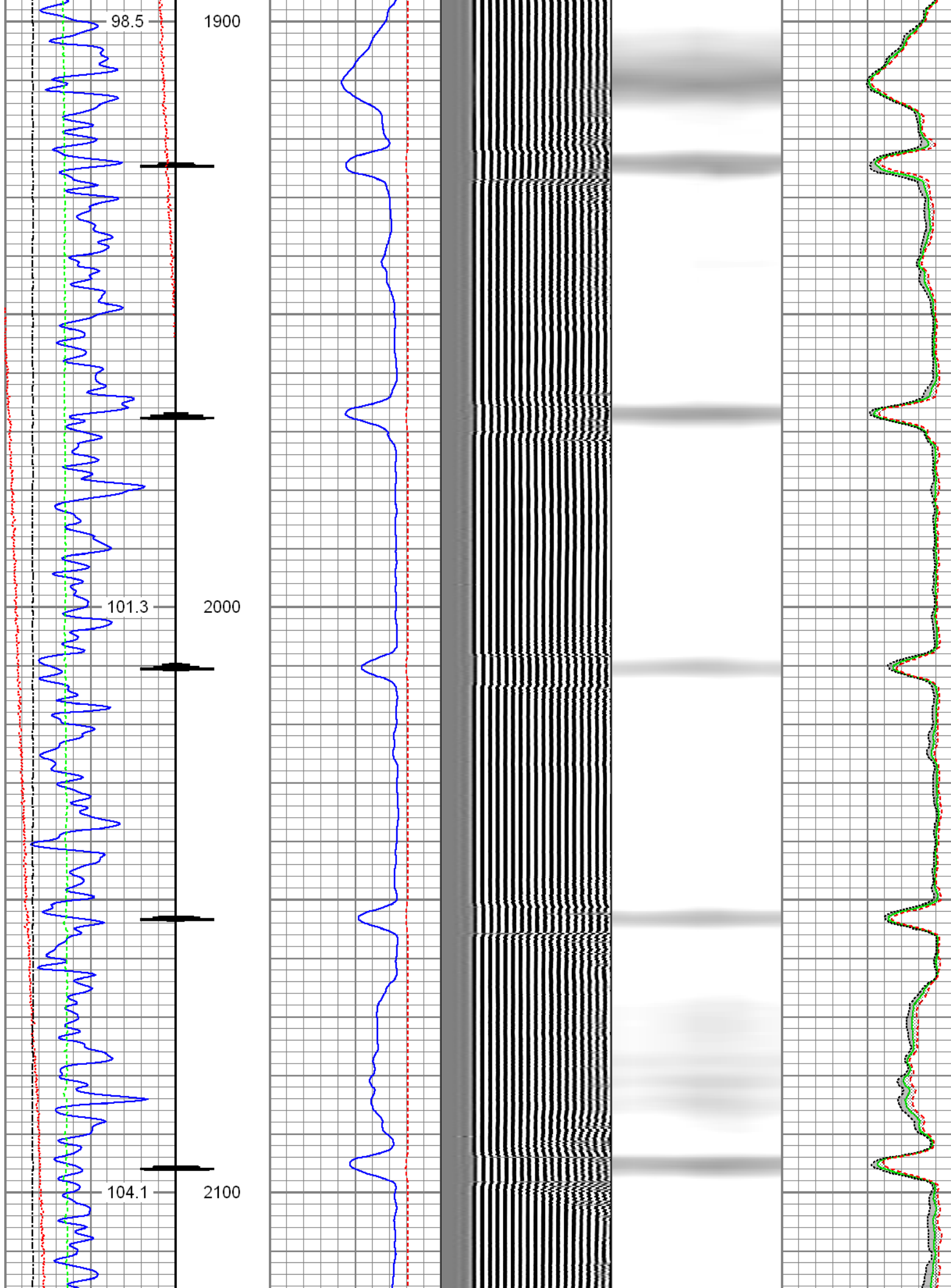


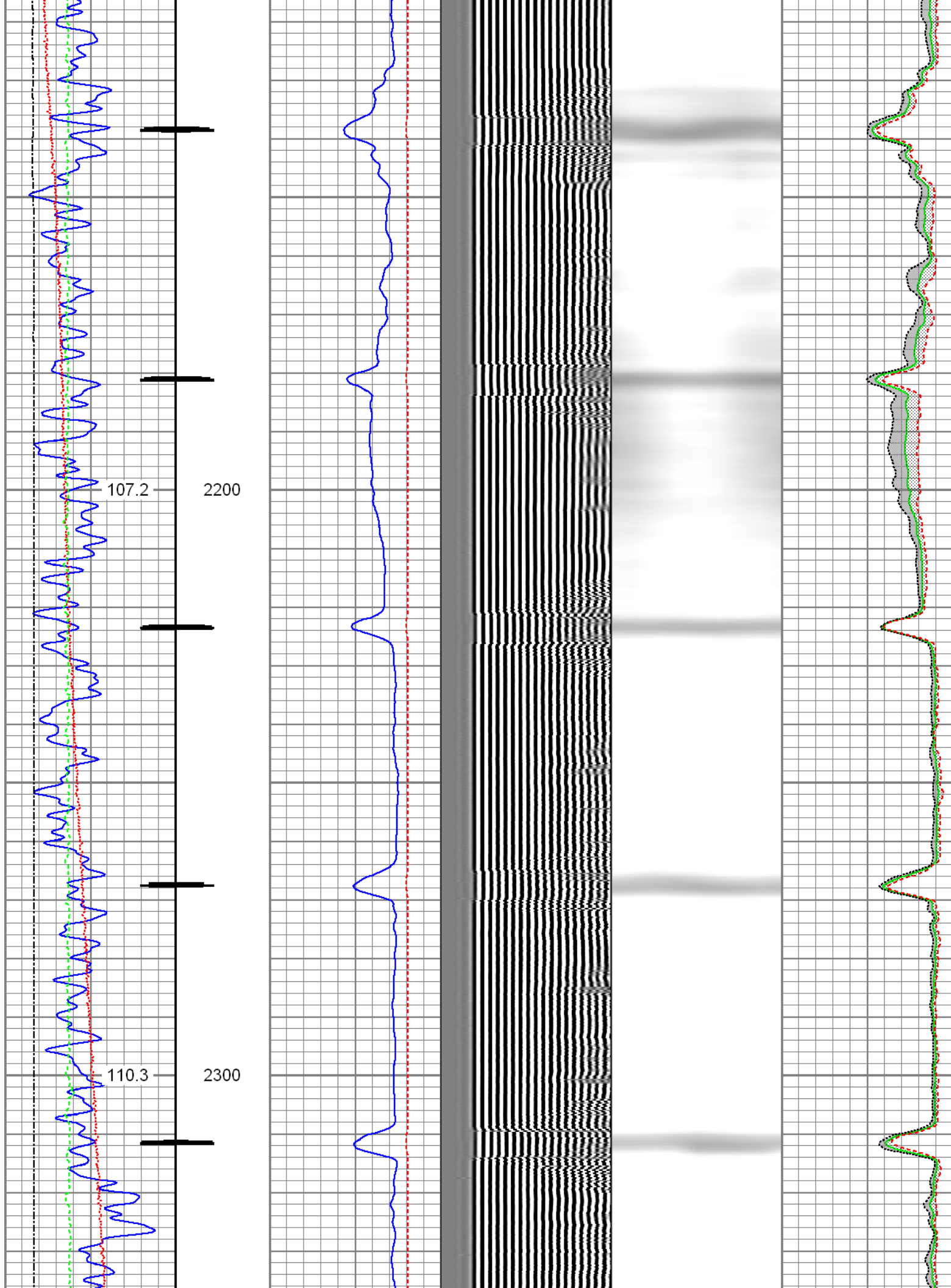


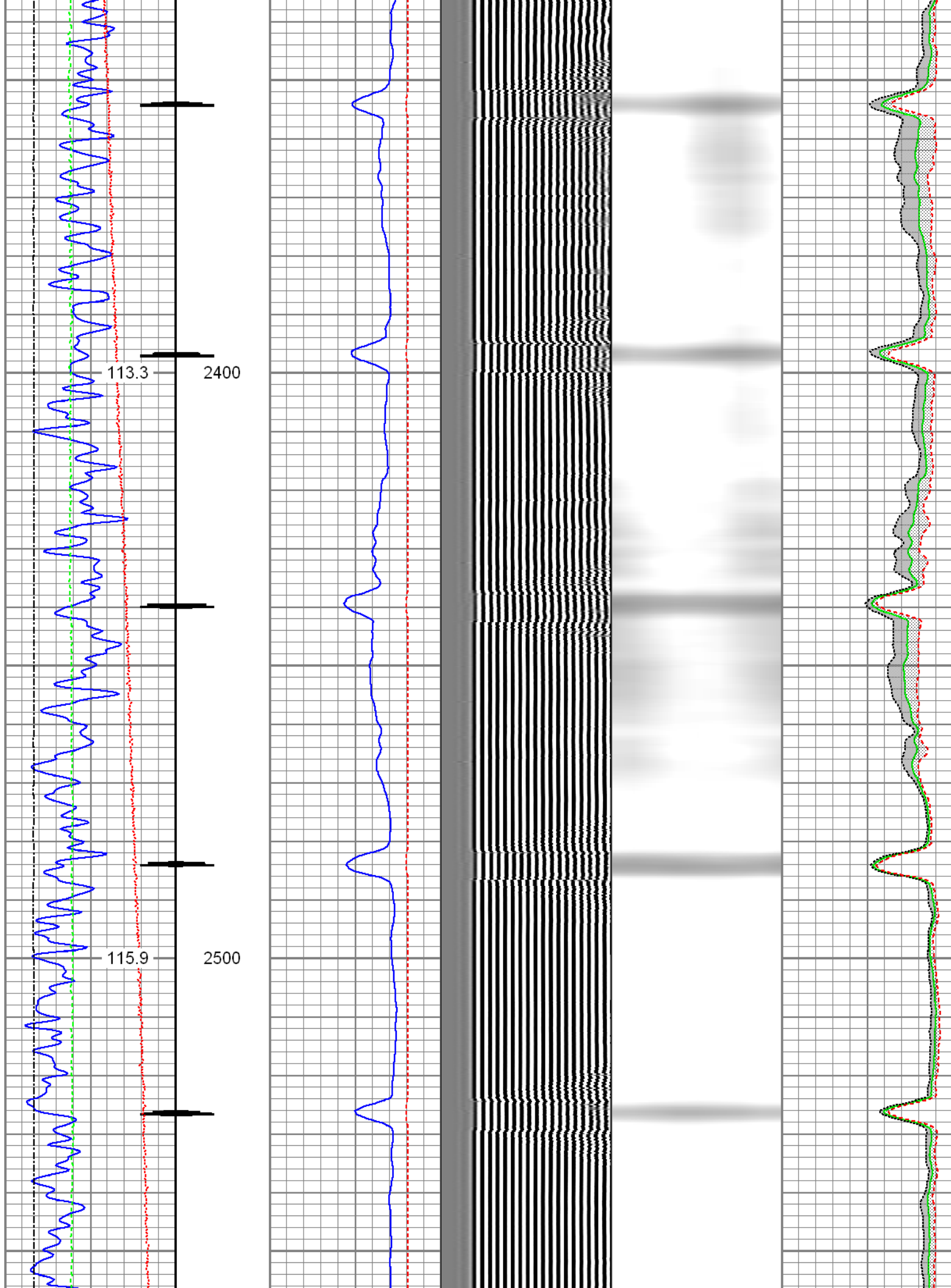


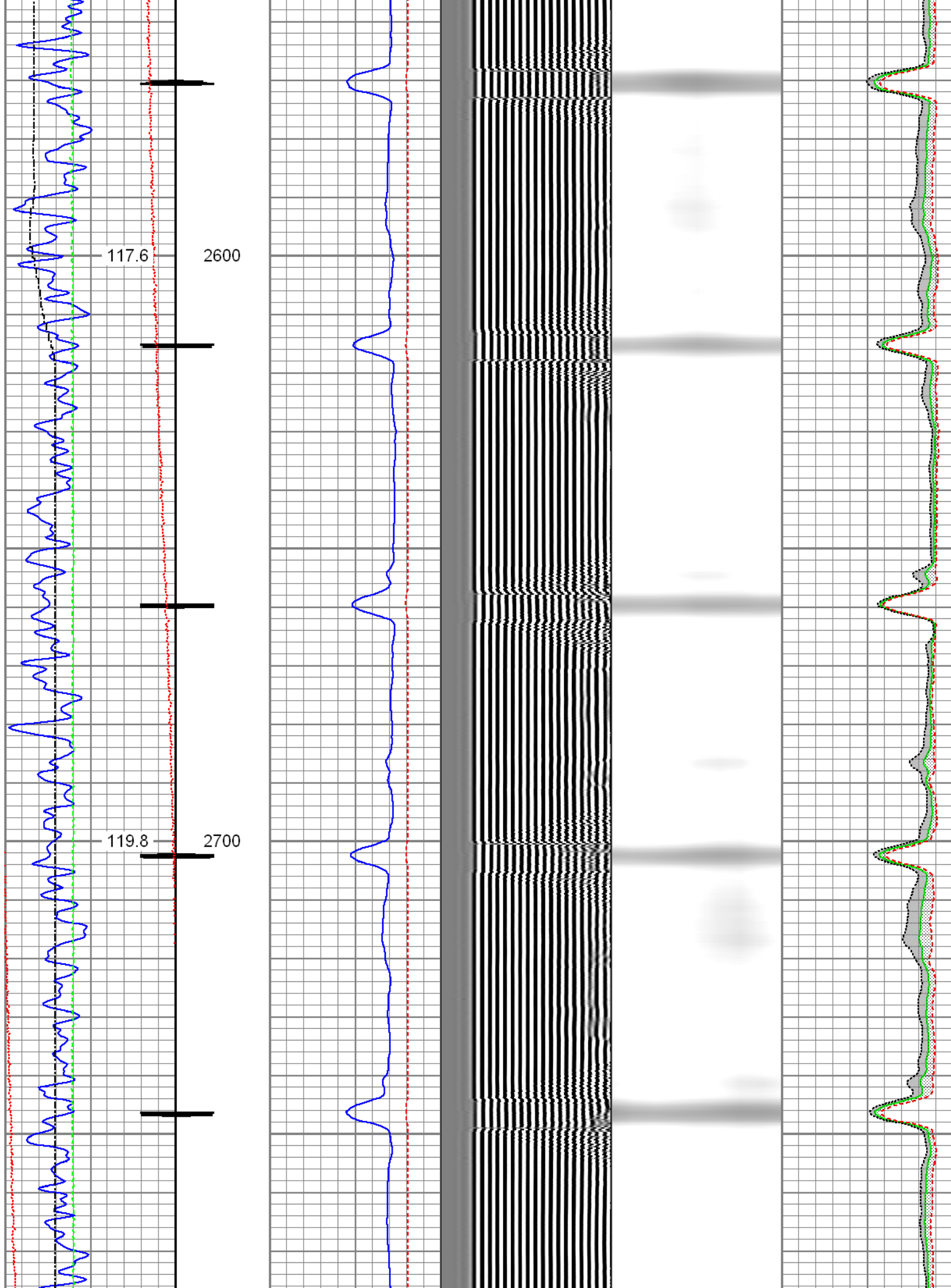


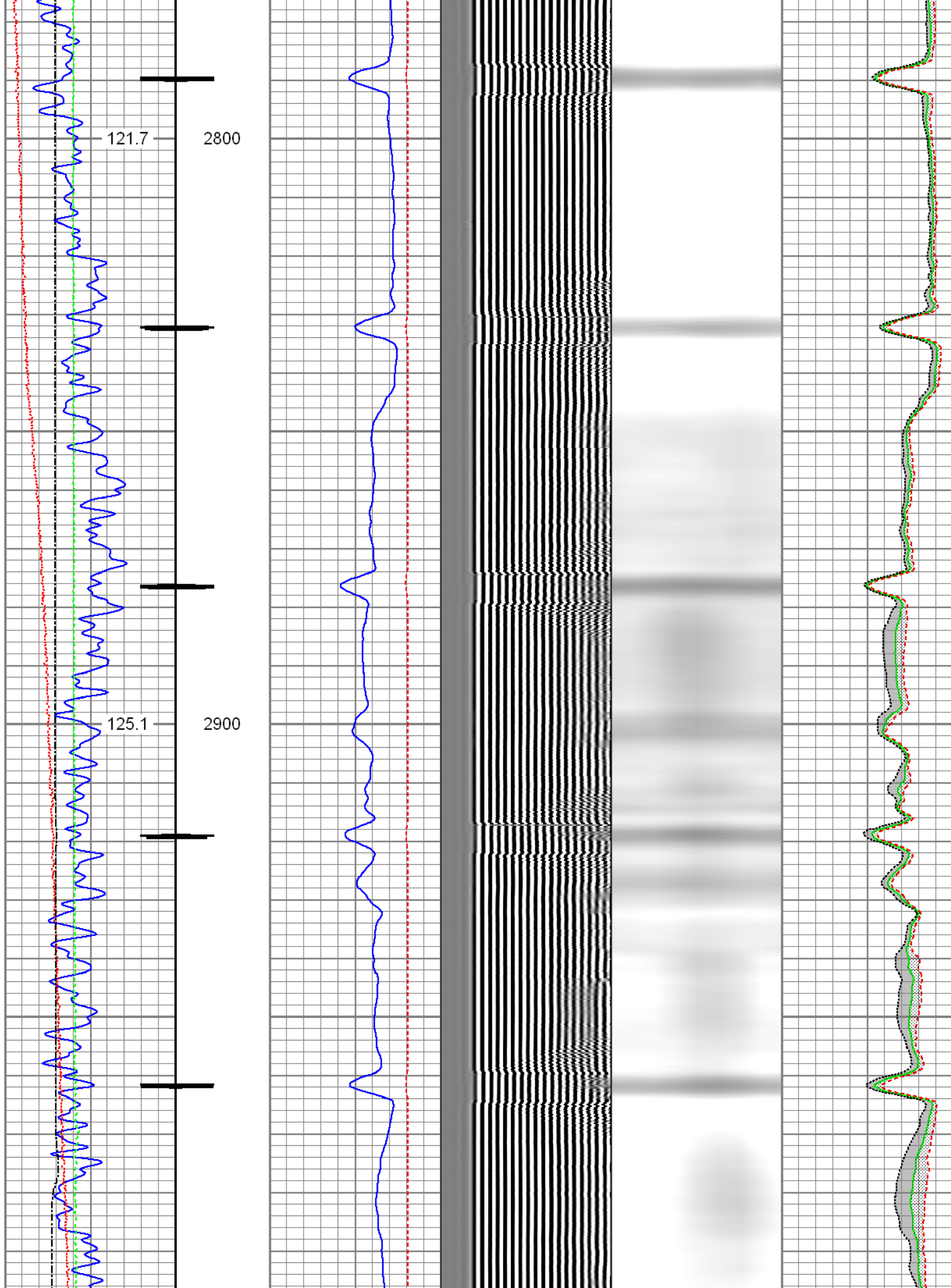


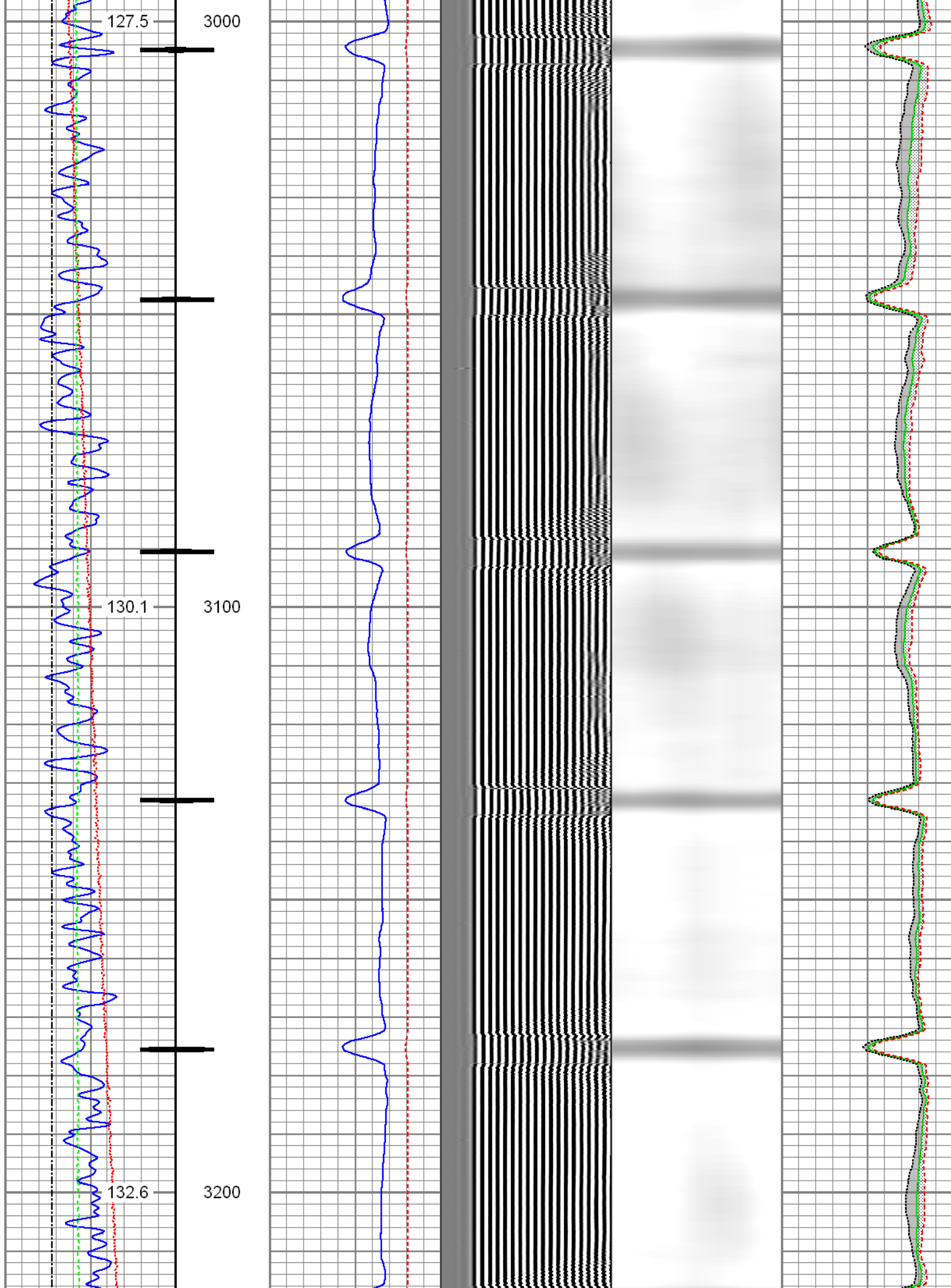


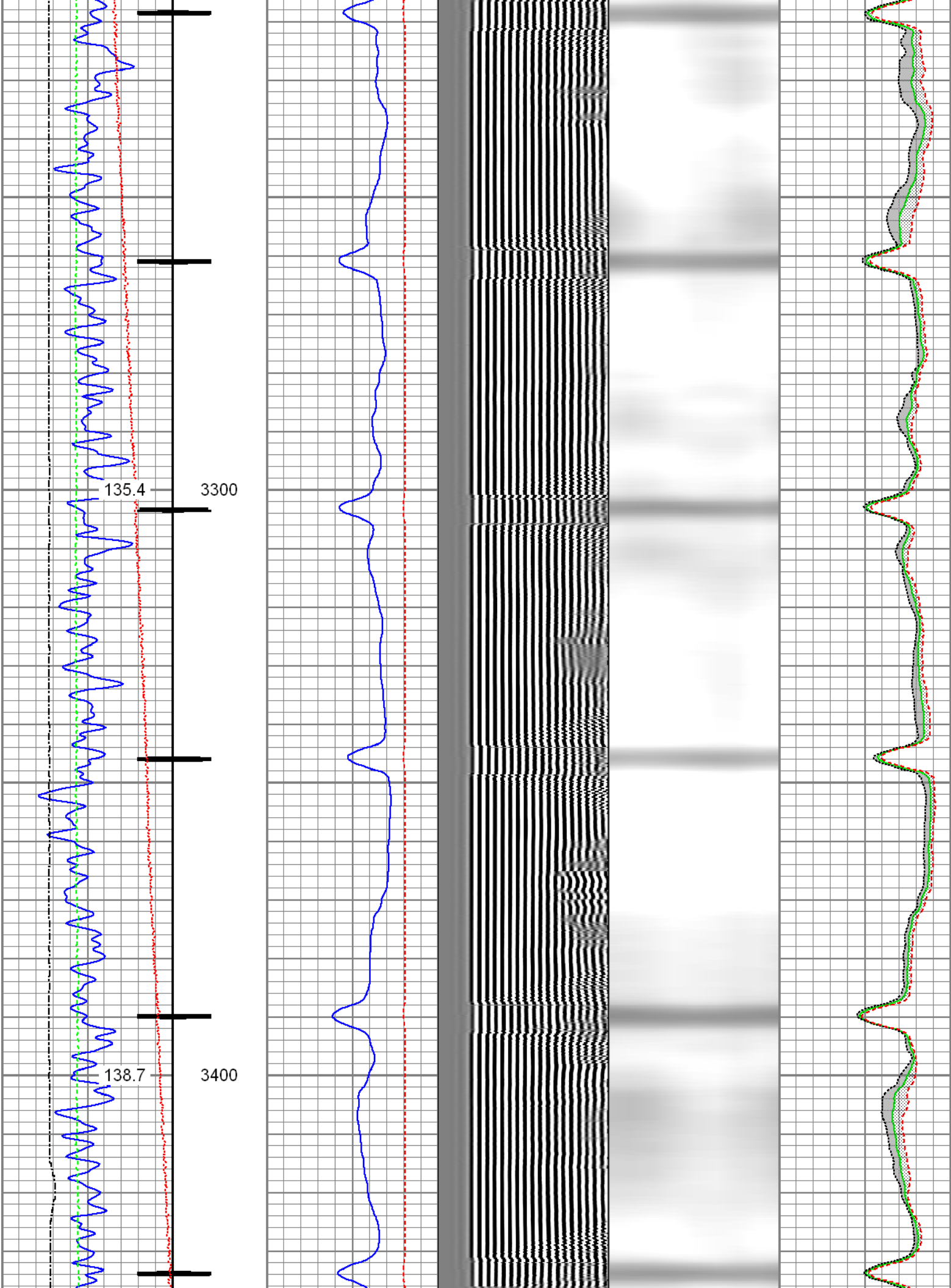


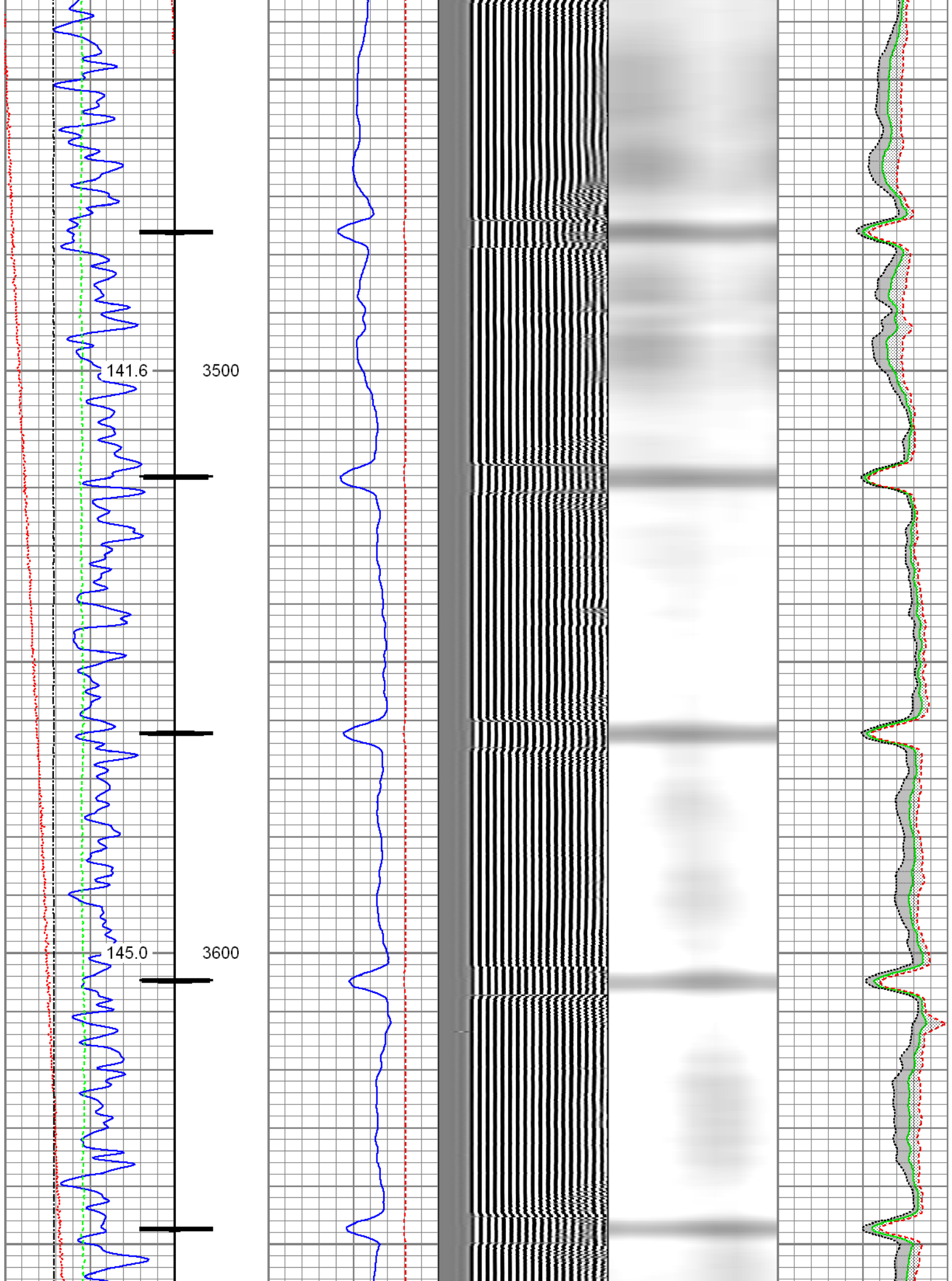


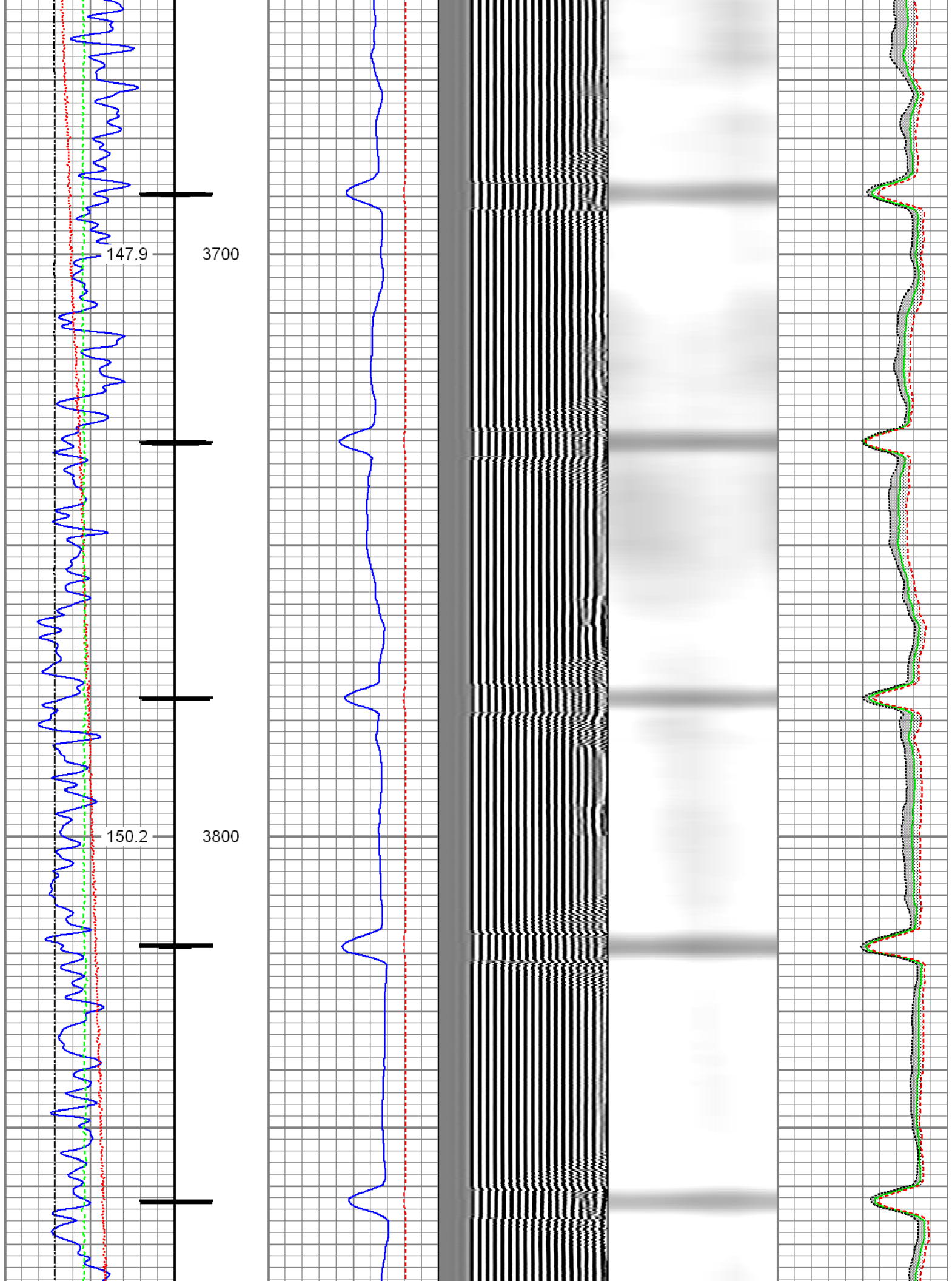


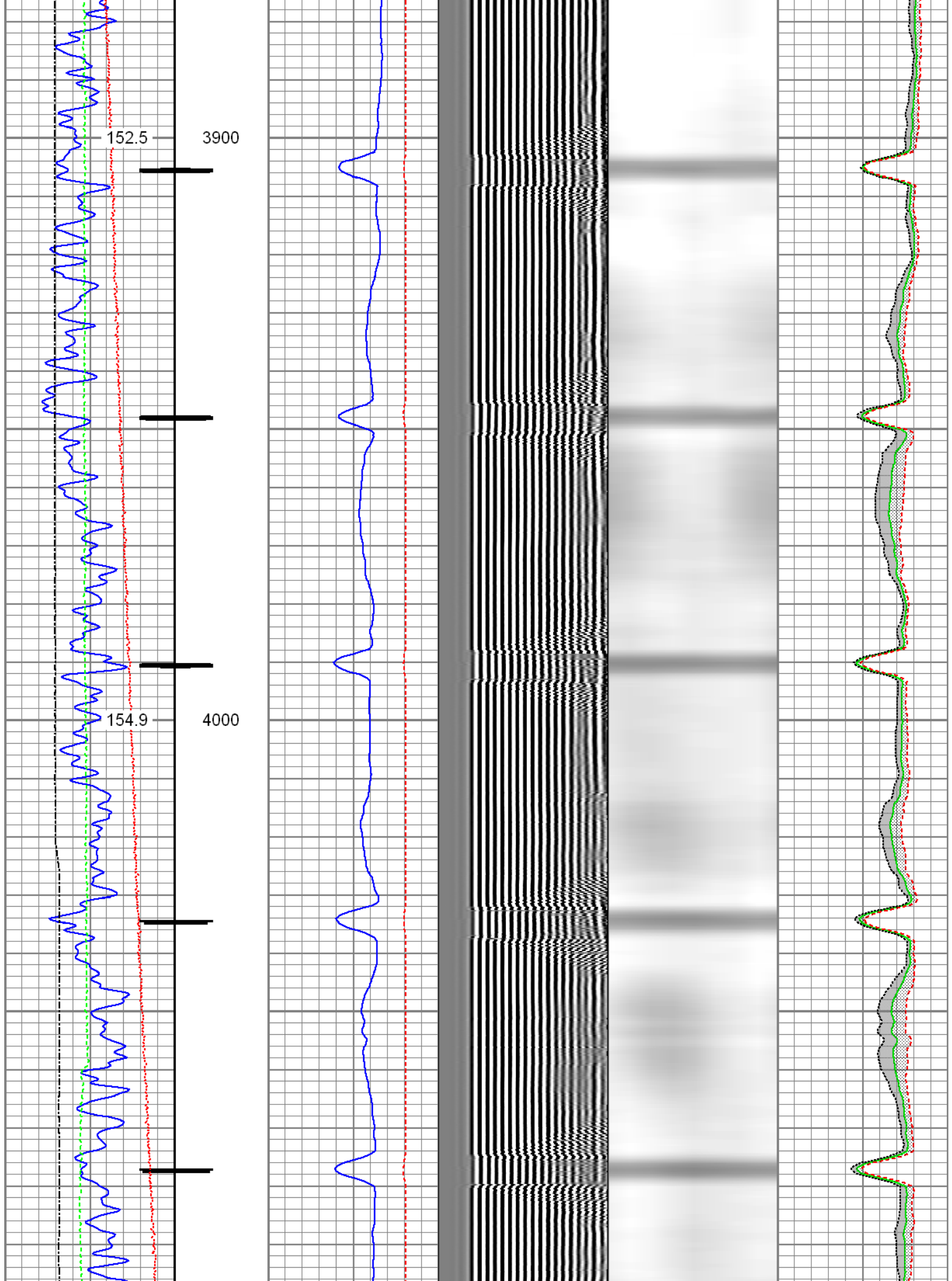


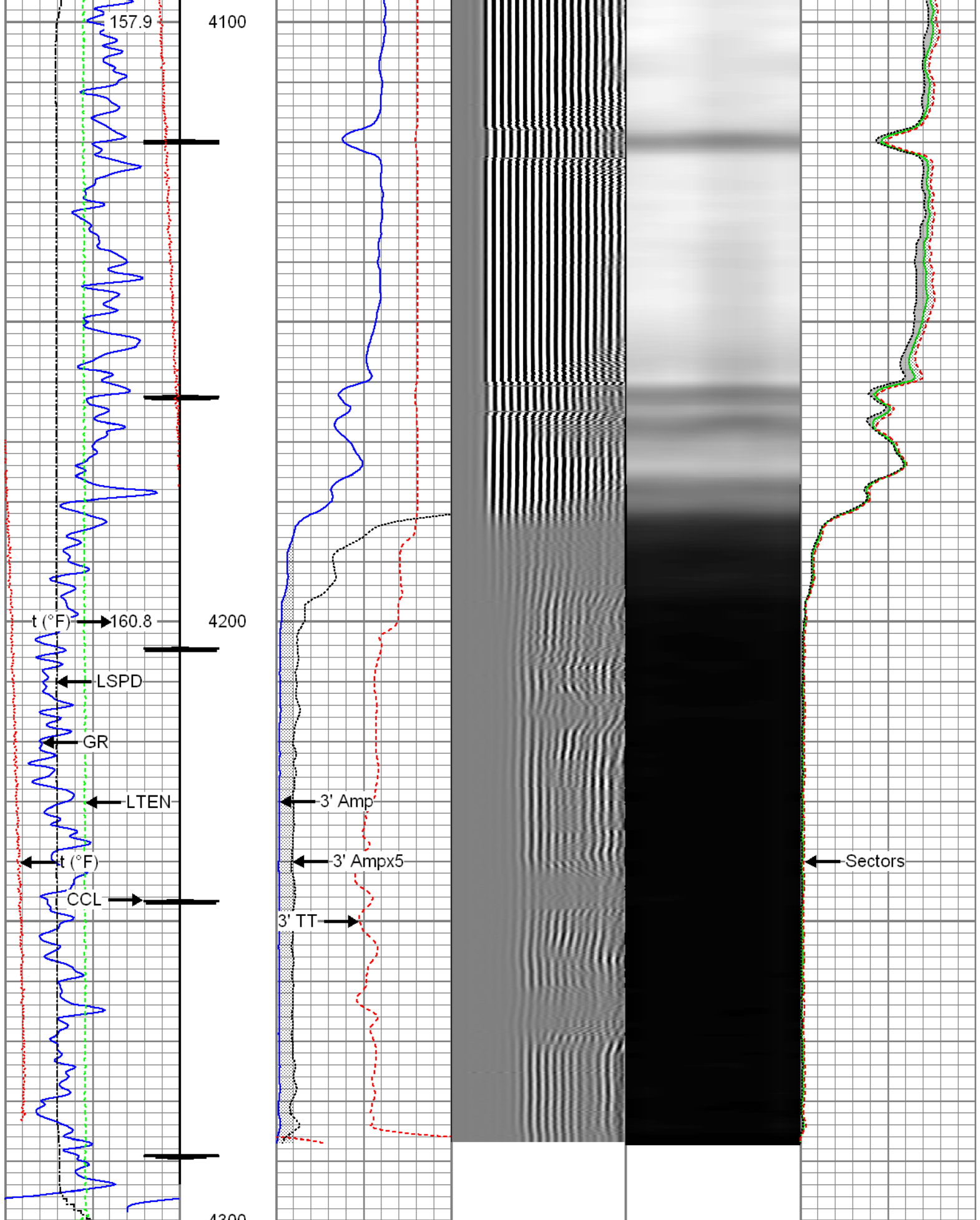




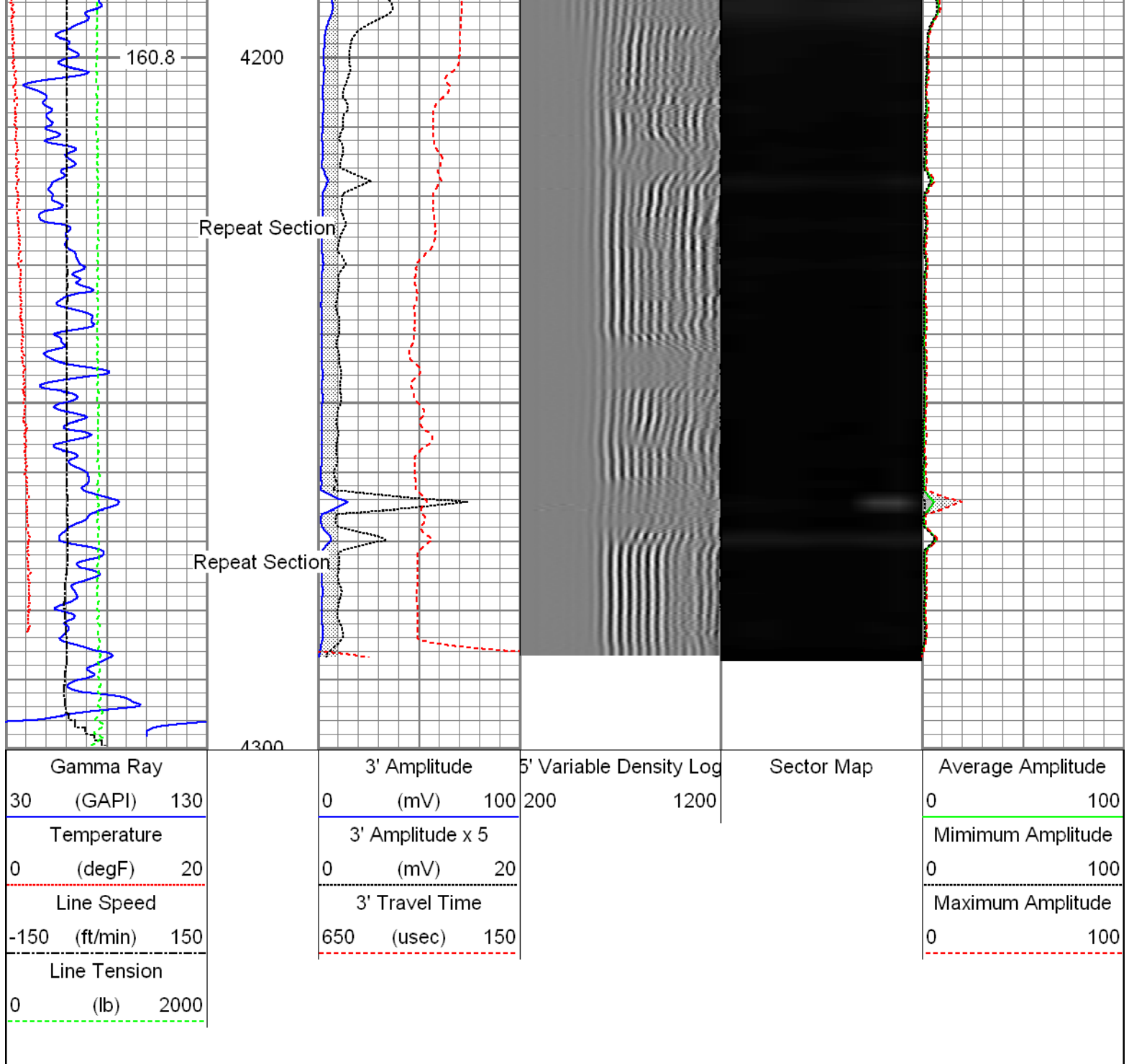


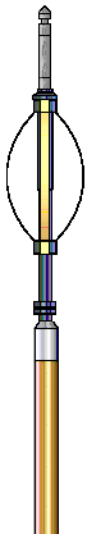








Gamma Ray (GAPI)	3' Amplitude (mV)	5' Variable Density Log	Sector Map	Average Amplitude
30 130	0 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude



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" (FW1305-096) 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					
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
CCL	6.51		Probe_CCL_GR-2.75"Digital (FW1212-026) Probe 2-3/4" Digital CCL / Gamma Ray Combined	4.54	2.75	55.00
DCCL	6.51					
GR	3.77		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Dataset: PROCESSED_0512316697_Anadarko_HSR-Jenkins 14-31_02-01-16_RBL.db: field/well/run1/pass8						
Total Length: 23.40 ft						
Total Weight: 194.00 lb						
O.D. 2.75 in						

Calibration Report		
Database File:	c:\warrior\data\0512316697_anadarko_hsr-jenkins 14-31_02-01-16_rbl\processed_0512316697_anada	
Dataset Pathname:	pass8.4	
Dataset Creation:	Wed Feb 03 11:23:21 2016 by Calc SCH 120430	
Gamma Ray Calibration Report		
Serial Number:	FW1212-026	
Tool Model:	2.75"Digital	
Performed:	Mon Jan 04 08:17:20 2016	
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: FW1305-096

Tool Model: 2-3/4"

Calibration Casing Diameter: 4.500 in

Calibration Depth: 4181.435 ft

Master Calibration, performed Wed Feb 03 11:22:56 2016:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.000	0.556	0.800	81.196	144.761	0.747
CAL	0.004	0.736				
5'	0.000	0.469	0.800	81.196	171.658	0.775
SUM						
S1	-0.000	0.521	0.000	100.000	191.795	0.019
S2	0.000	0.526	0.000	100.000	190.232	-0.028
S3	0.000	0.552	0.000	100.000	181.297	-0.020
S4	0.000	0.600	0.000	100.000	166.746	-0.027
S5	0.000	0.665	0.000	100.000	150.464	-0.028
S6	0.000	0.661	0.000	100.000	151.361	-0.010
S7	0.000	0.593	0.000	100.000	168.602	-0.033
S8	0.000	0.546	0.000	100.000	183.425	-0.077

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	0.004	0.736	1.000	0.000

Air Zero Calibration, performed Mon Feb 01 08:59:27 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 Kerr-McGee Oil & Gas Onshore, L.P.

Well HSR-Jenkins 14-31

Field Wattenberg

County Weld

	State	Colorado
--	-------	----------