



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company				Whiting Oil & Gas Corporation			
Well				Razor 27K-3405A			
Field				Wildcat			
County				Weld			
State				Colorado			
Location:				API # : 05-123-37748			
SHL: 2322' FSL 1914' FWL Lat/Long: 40.808594/-103.853833				Other Services Gauge Ring Set RBP			
SEC 27 TWP 10N RGE 58W				Elevation			
Permanent Datum				Ground Level			
Log Measured From				Kelly Bushing 16.8 FT			
Drilling Measured From				Kelly Bushing			
September 24, 2013				4749'			
One							
12414 FT							
4774 FT							
4774 FT							
Surface							
8.750"							
Water							
8.34 lbm/gal							
188 F							
60 FT							
ROA							

HD-0134							
Fort Lupton, CO							
Ryan Harris							
Bryan Olmstead							
Borehole Record				Tubing Record			
Run Number				Run Number			
Bit				From			
To				Size			
Weight				From			
To							

<<< 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

Radial Cement Bond Log is first recorded log in hole.
Log correlated to 16.8' KB @ ground level.
Run RCBL from just above RBP to surface.
RCBL logged with 1500 PSI surface induced pressure.
Estimated Top of Cement 60'

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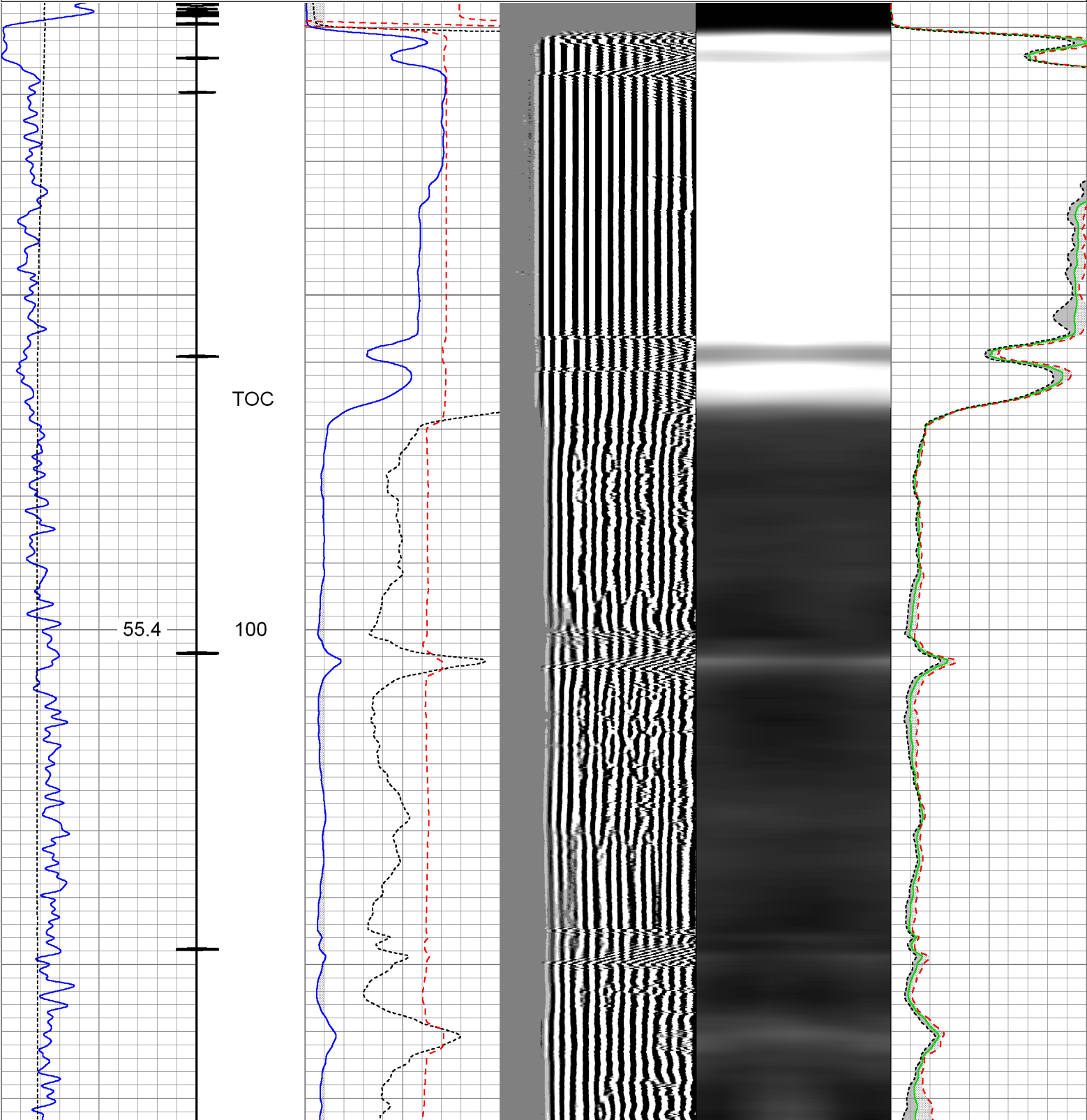


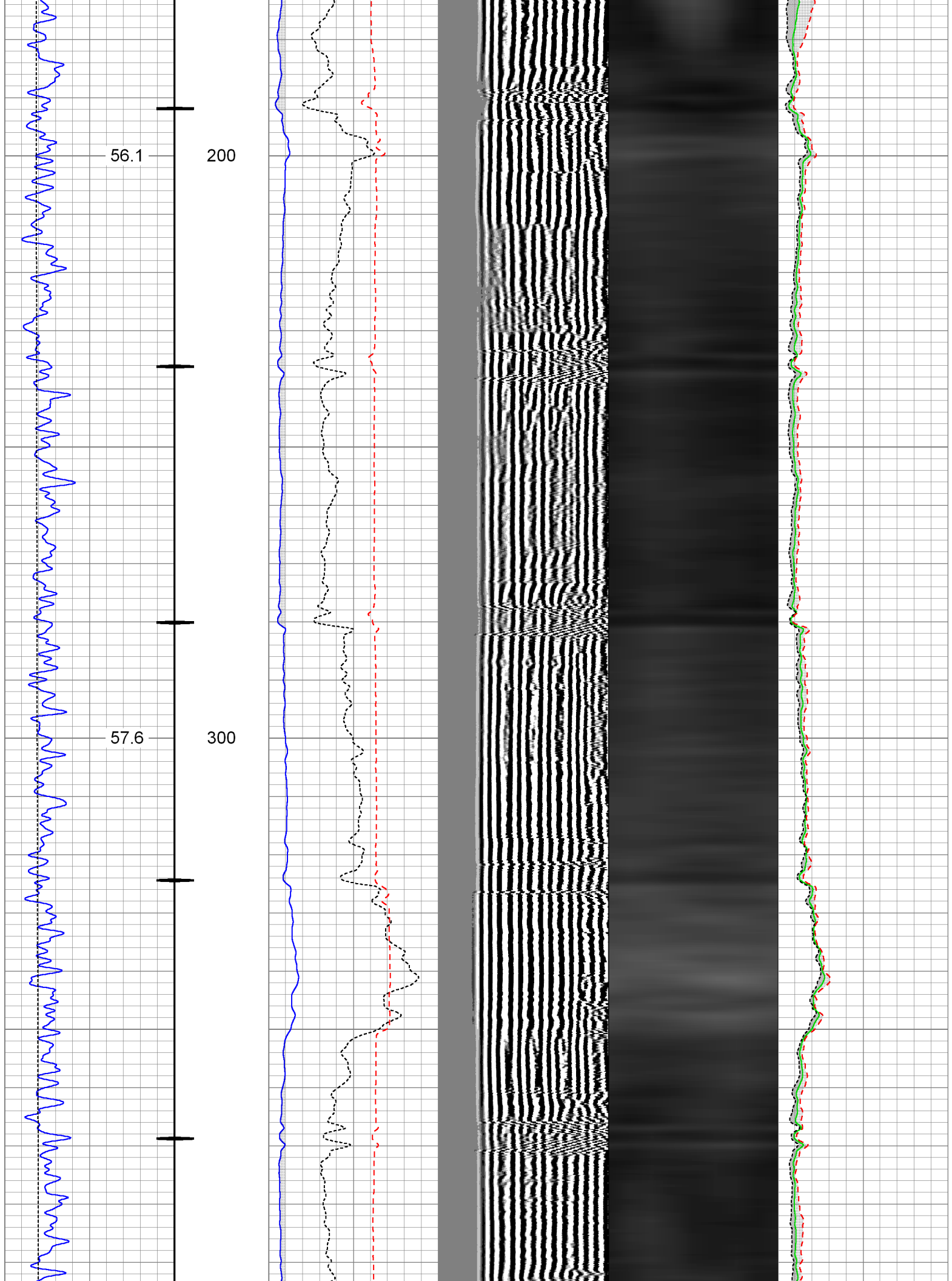
Main Pass

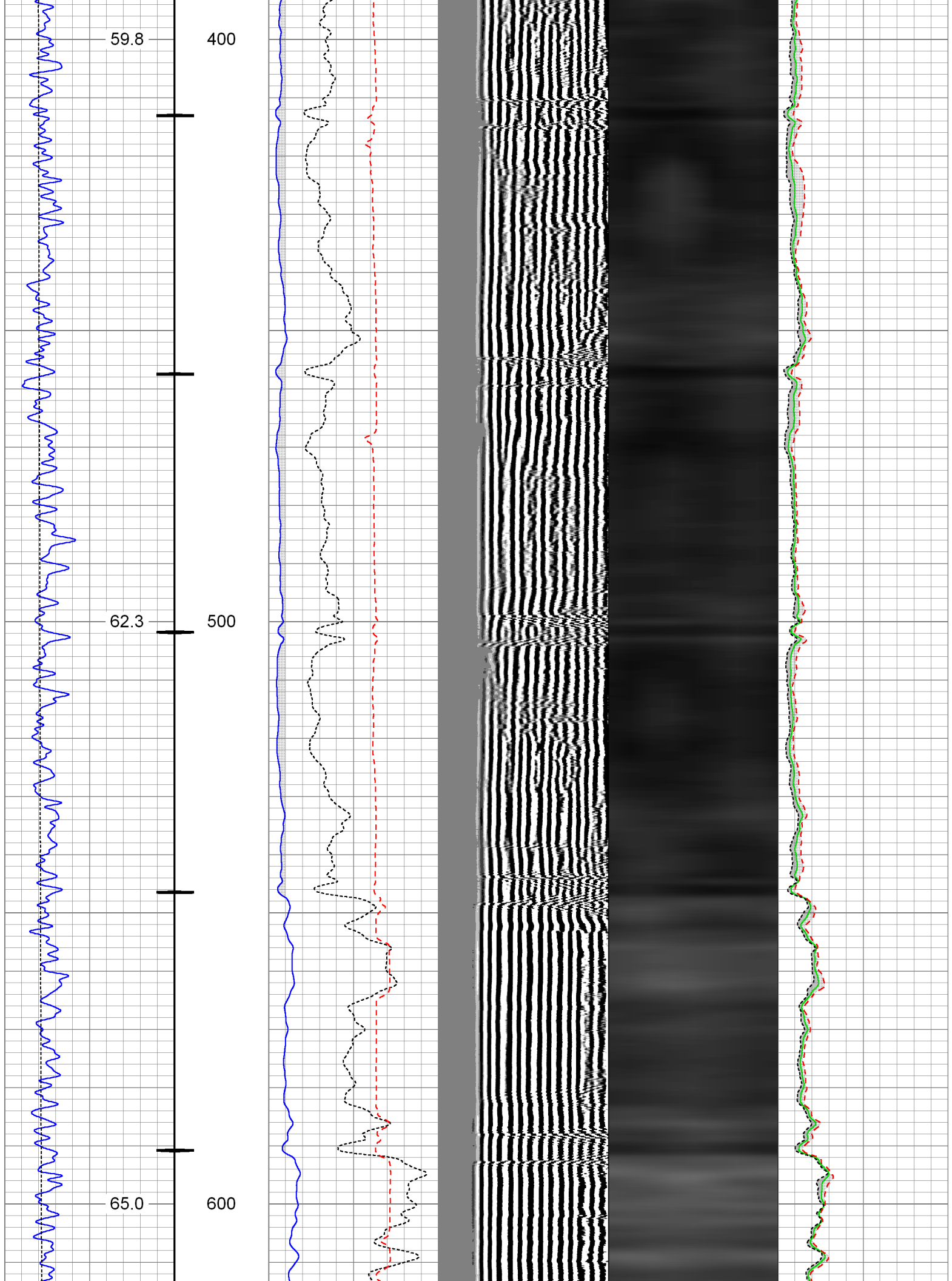
Logged With 1500 PSI @ Surface

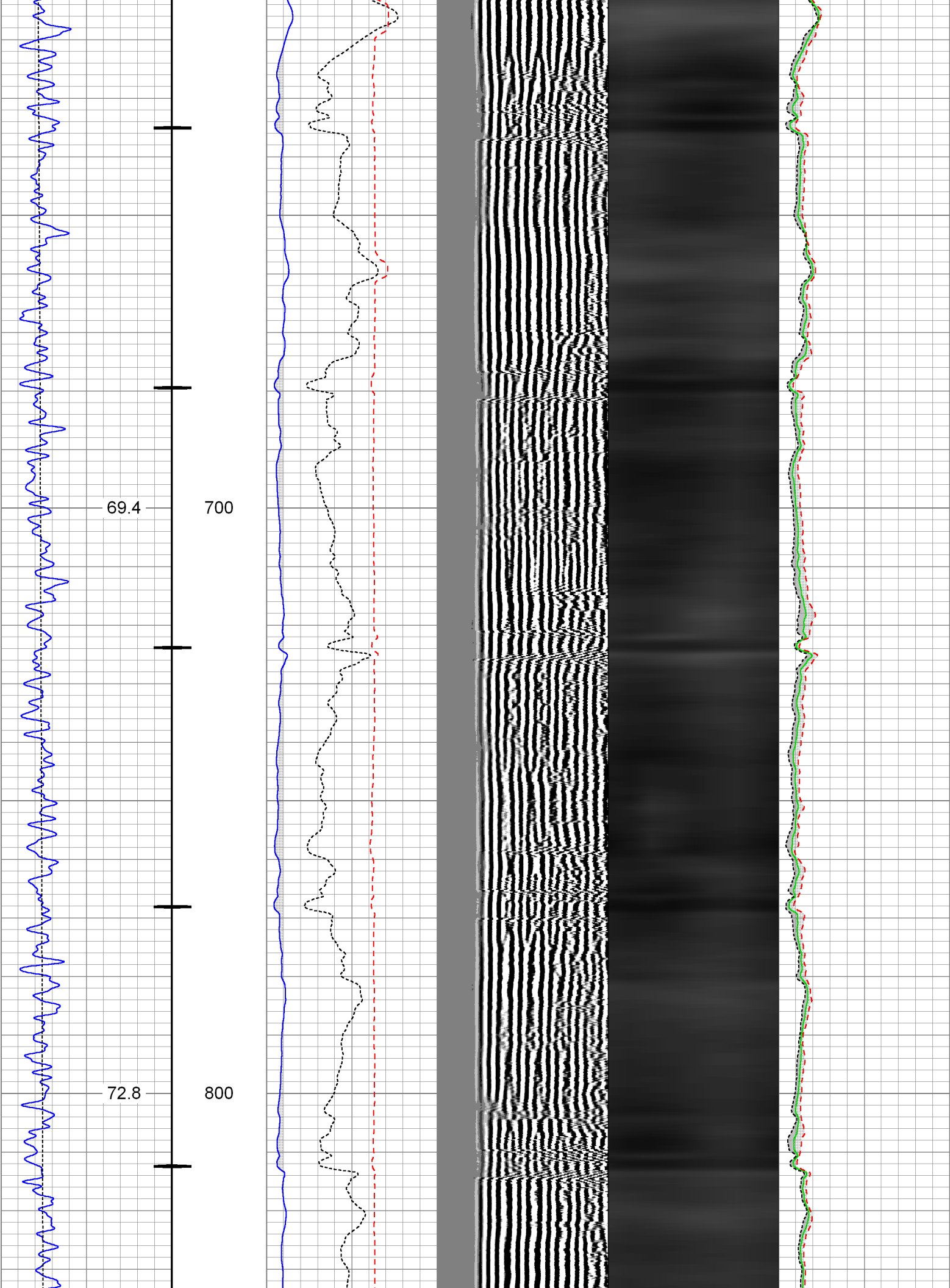
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Dataset Pathname: main
Presentation Format: rbt007
Dataset Creation: Tue Sep 24 12:46:30 2013 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

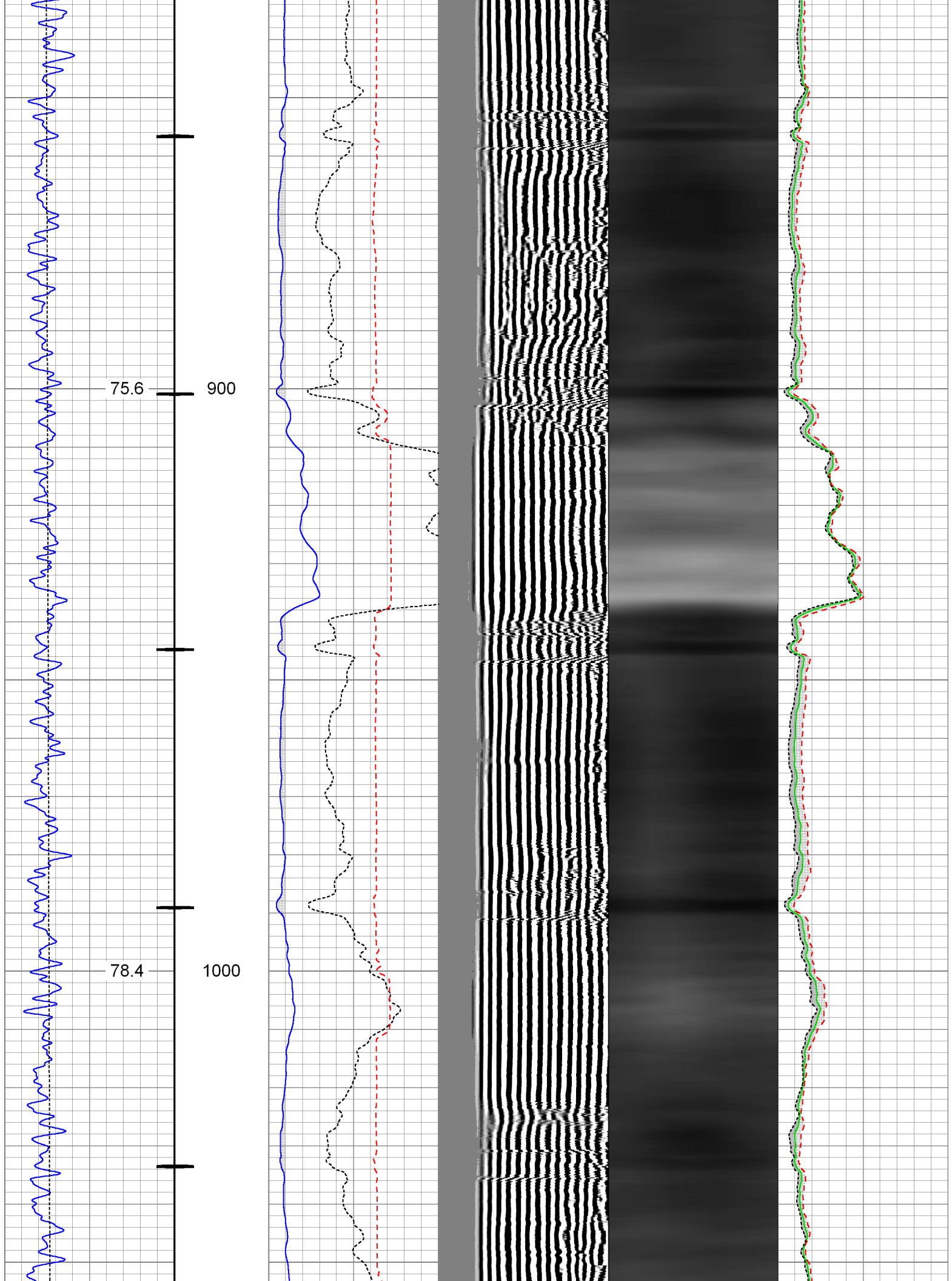
Gamma Ray	0 CCL 10	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 200		0 (mV) 100	200 1200		0 100
Collar Locator		3' Amplitude x 5			Minimum Amplitude
0 TEMP (degF)300		0 (mV) 20			0 100
		3' Travel Time			Maximum Amplitude
		650 (usec) 150			0 100

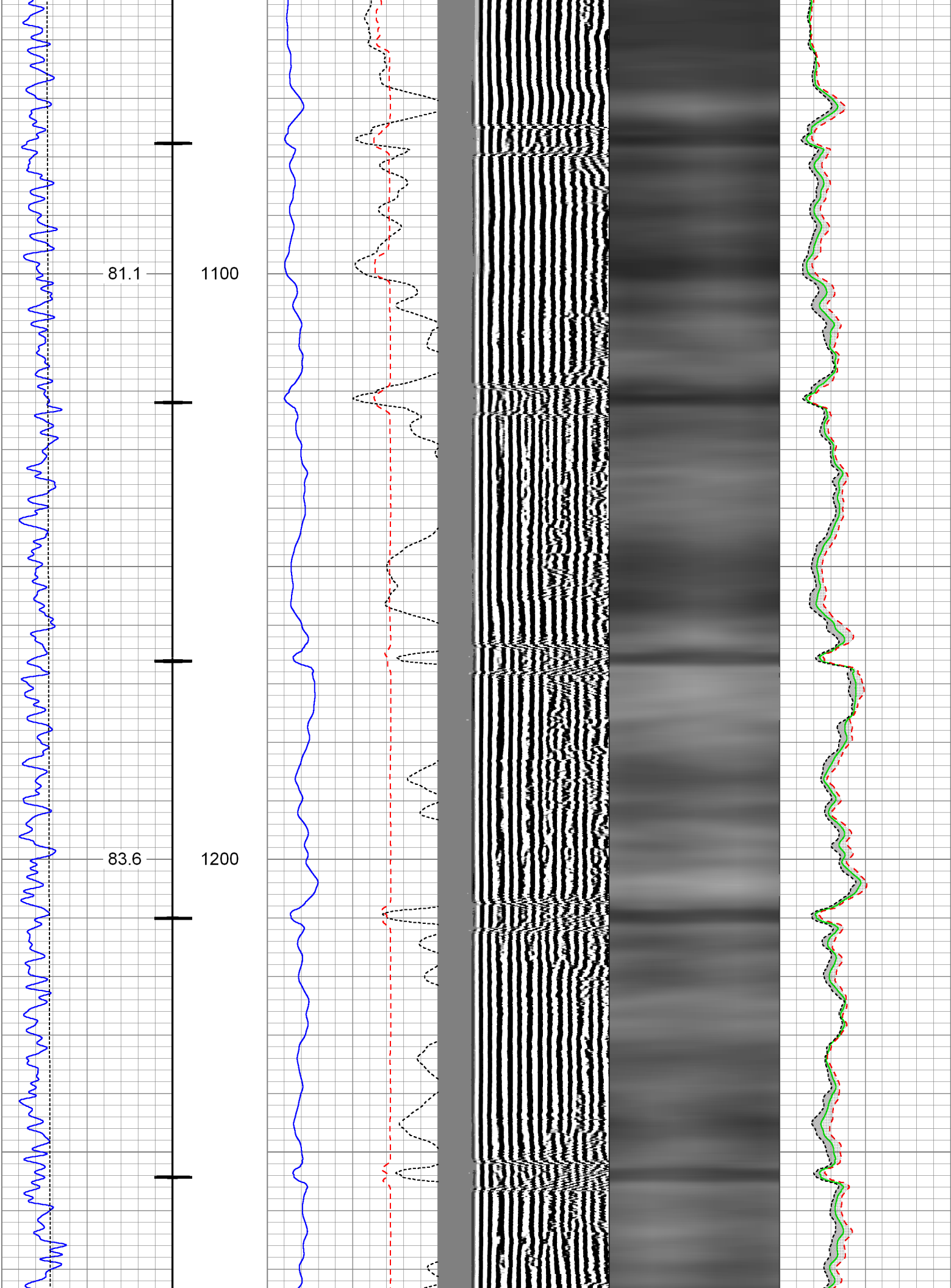


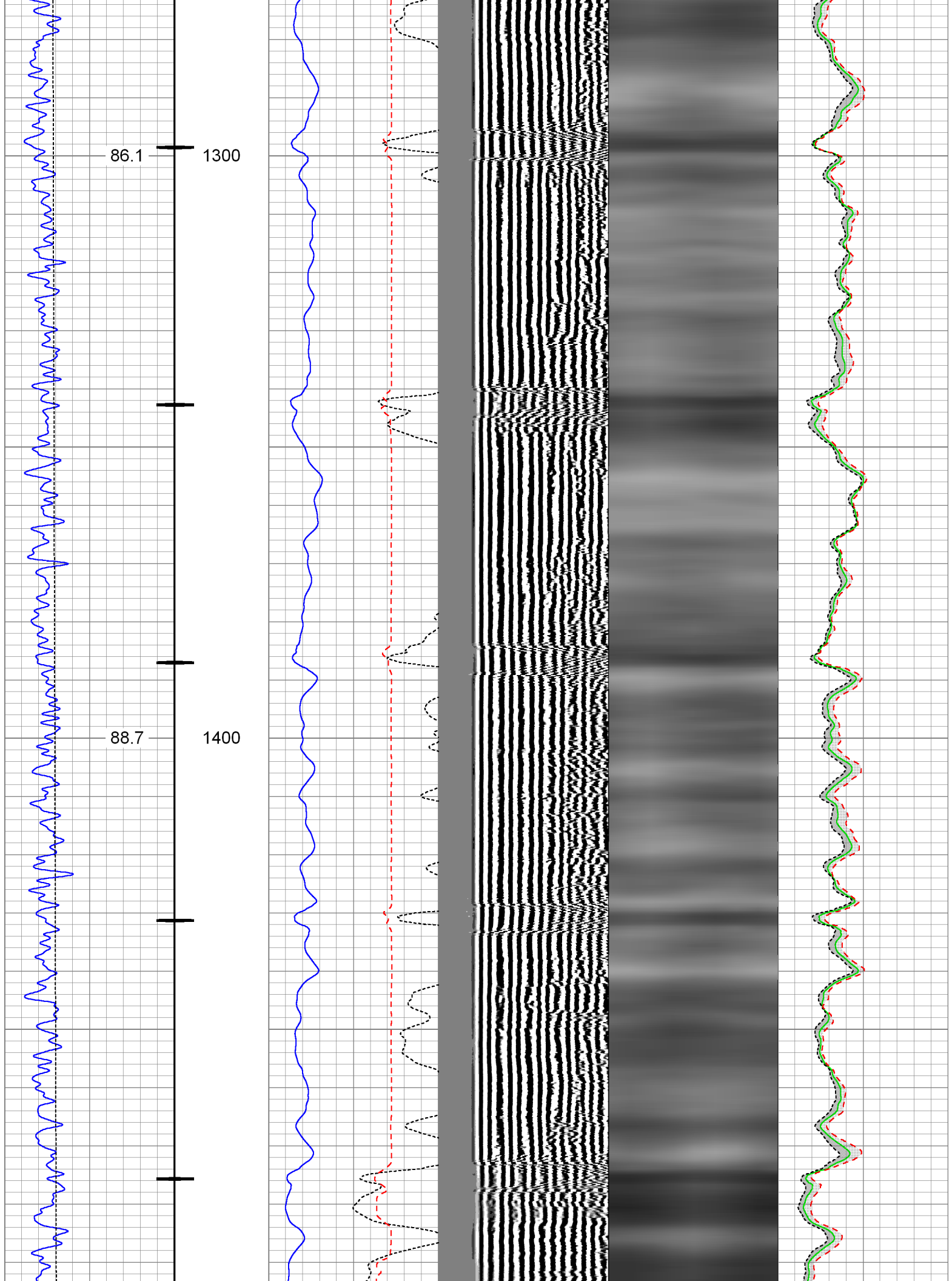


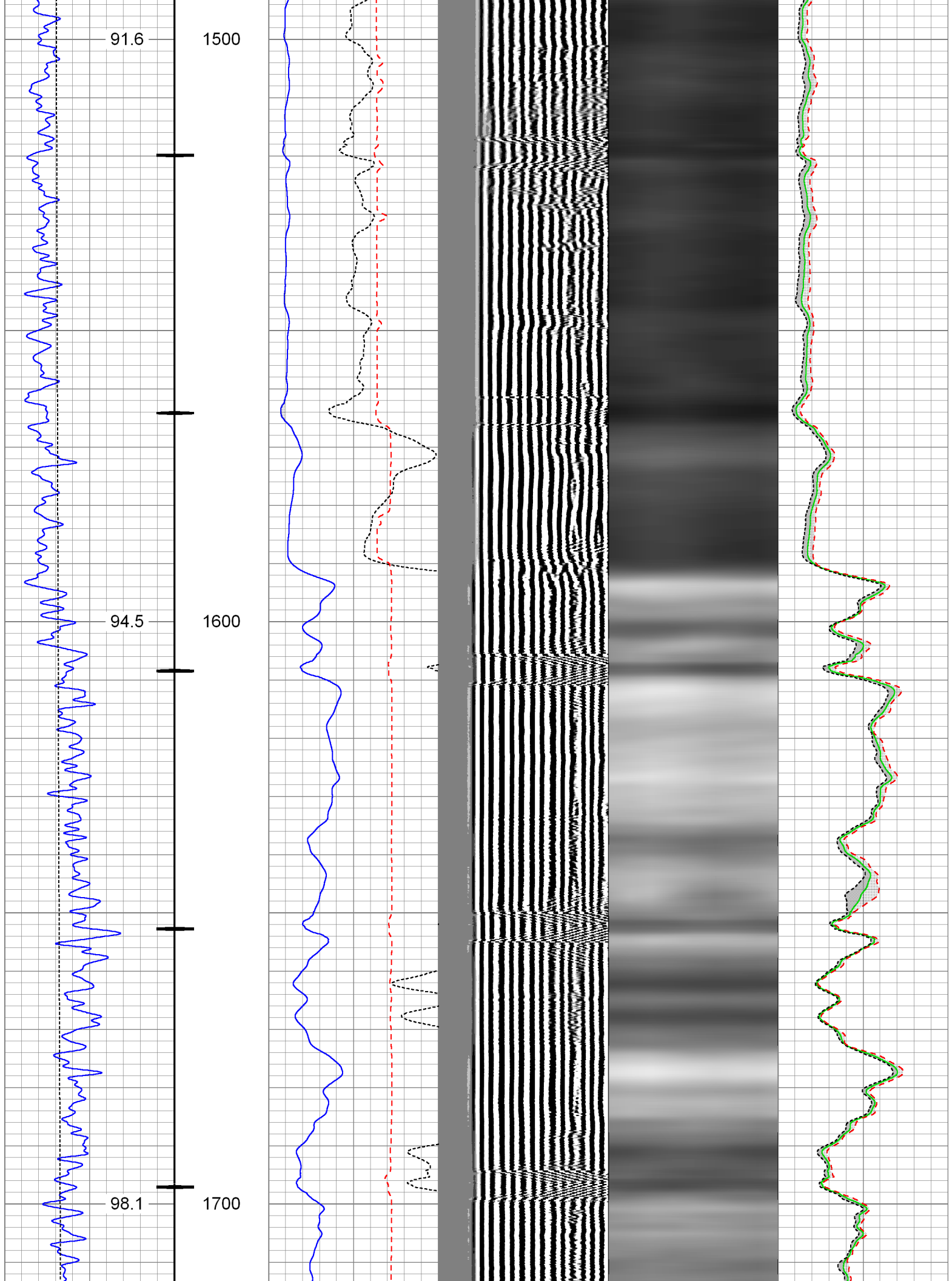


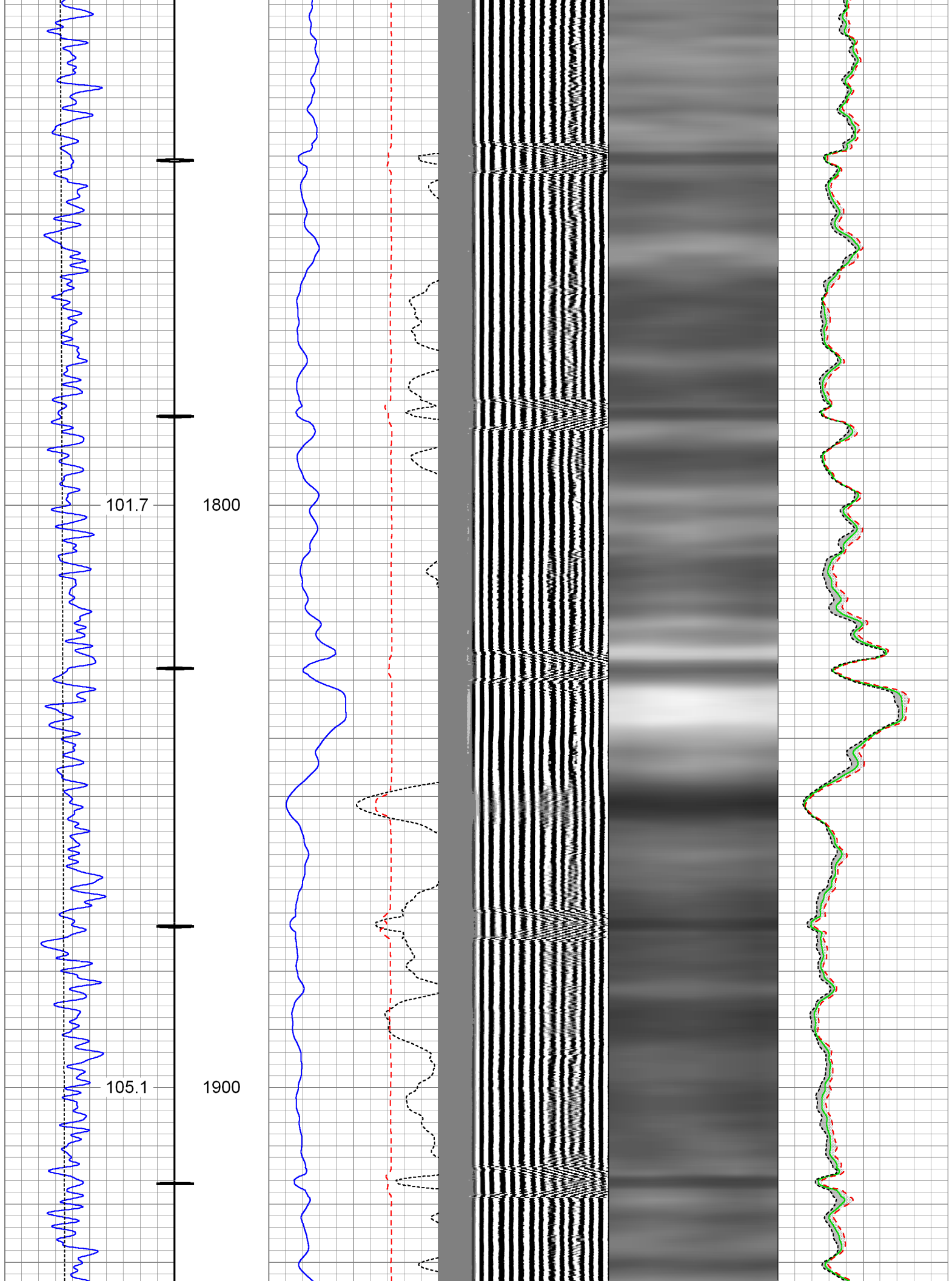


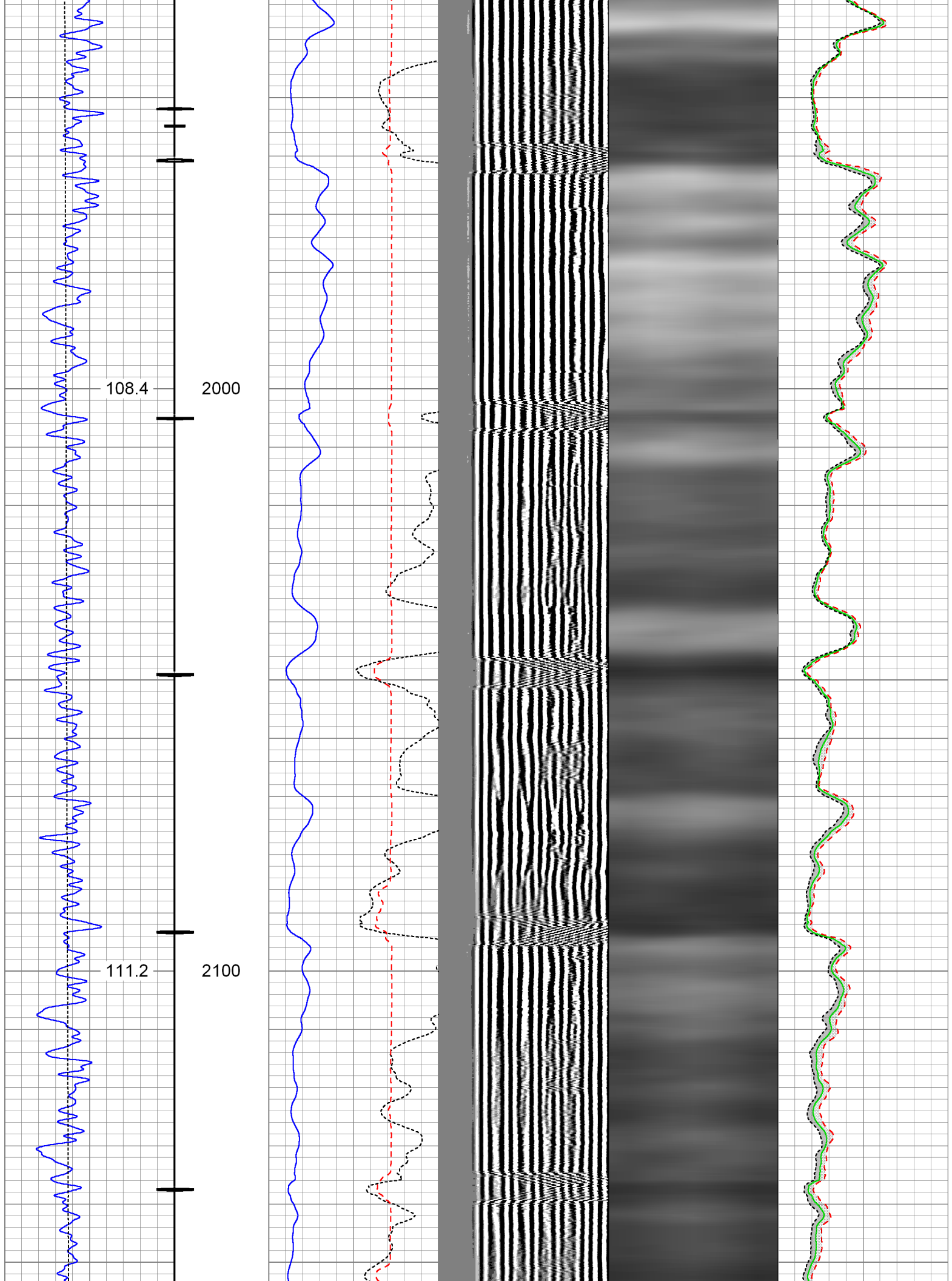


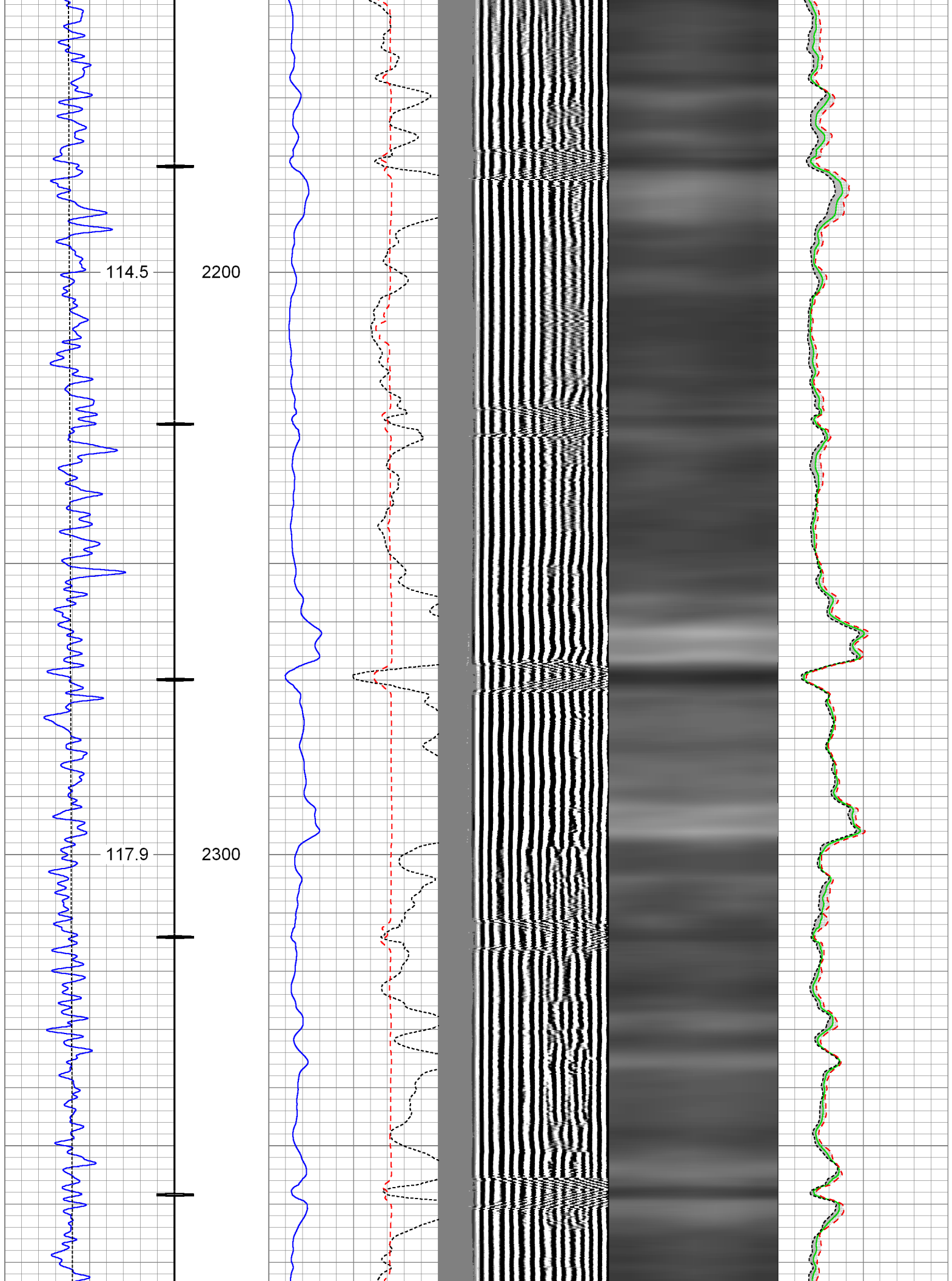


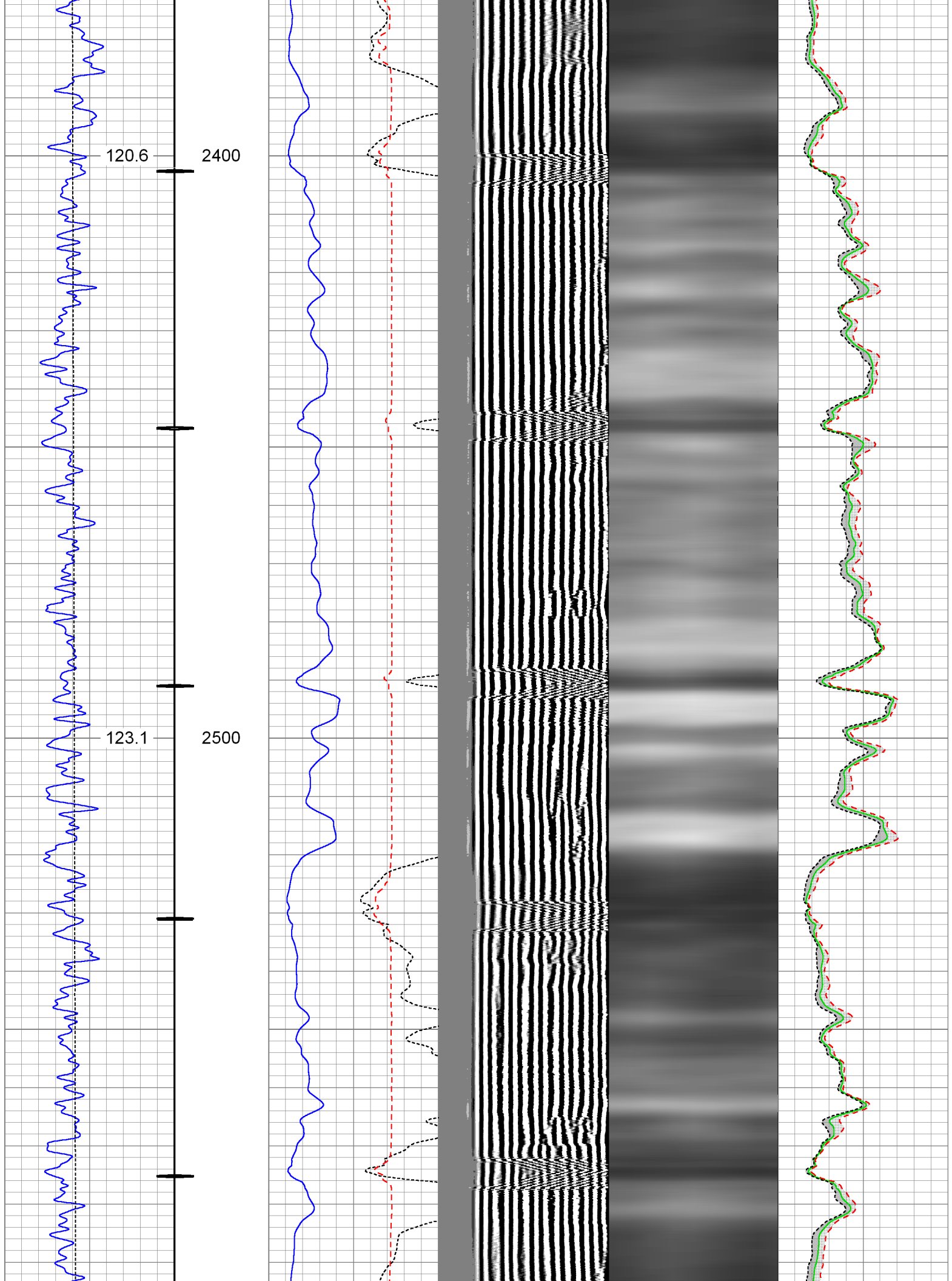


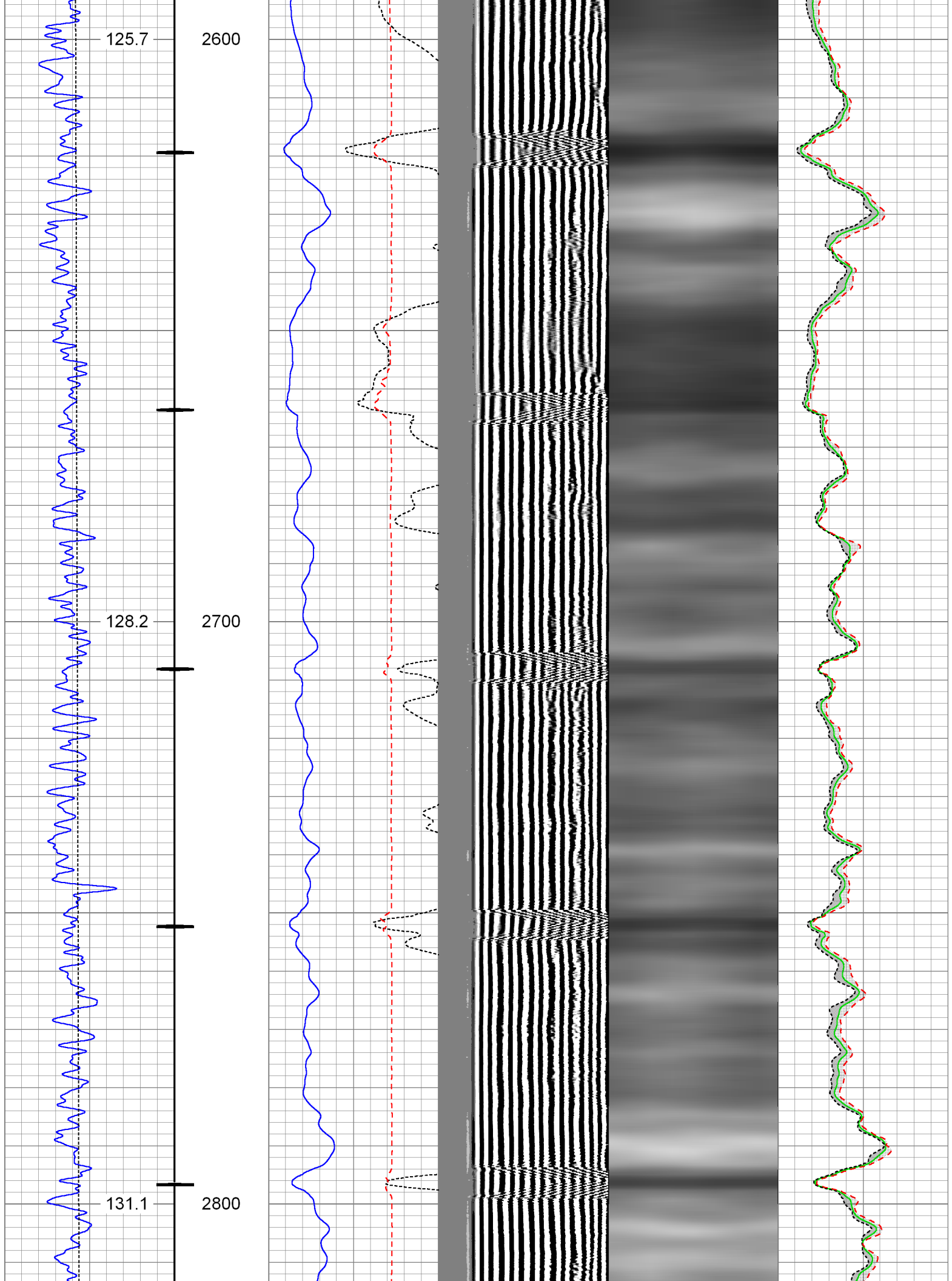


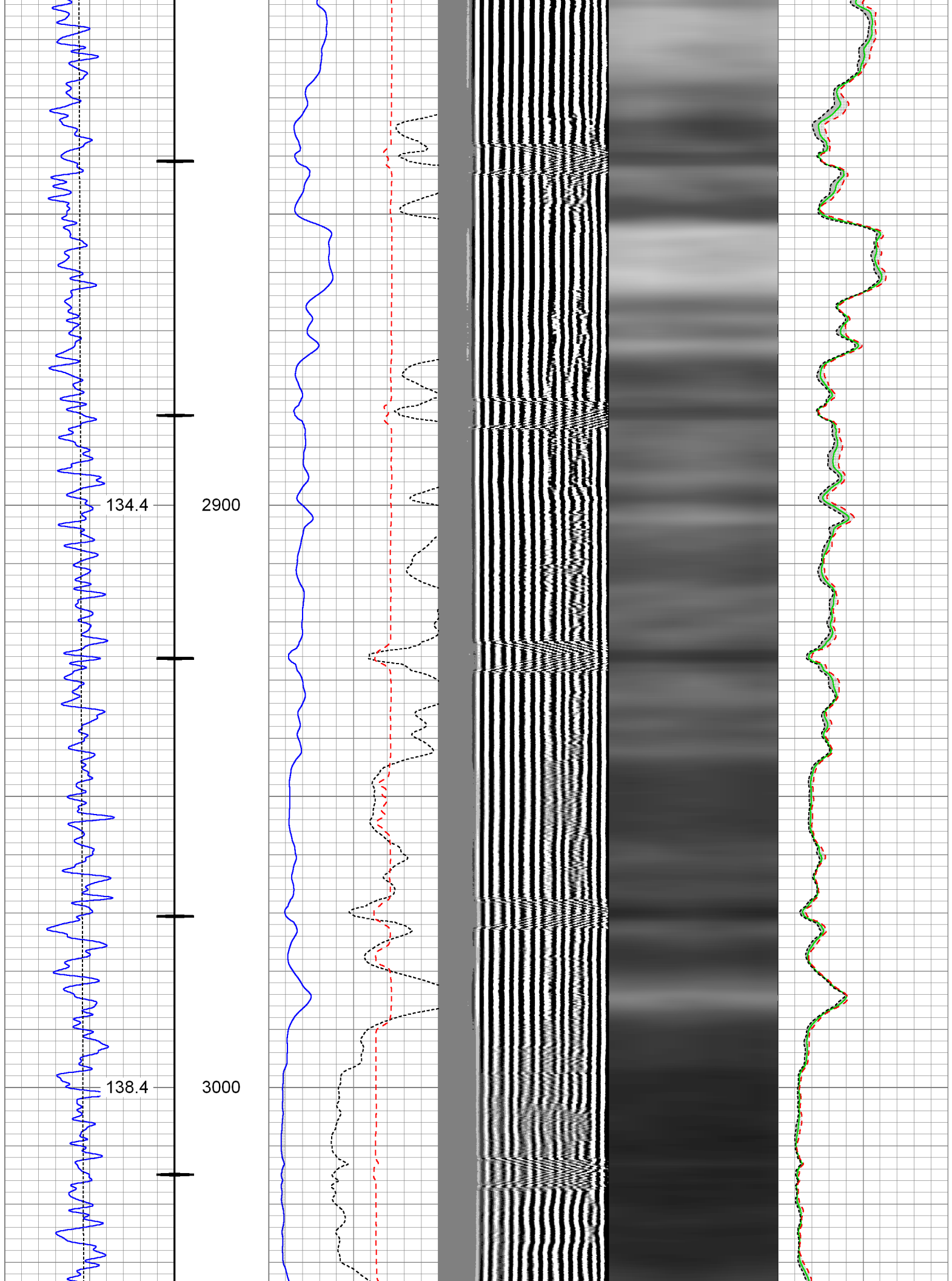


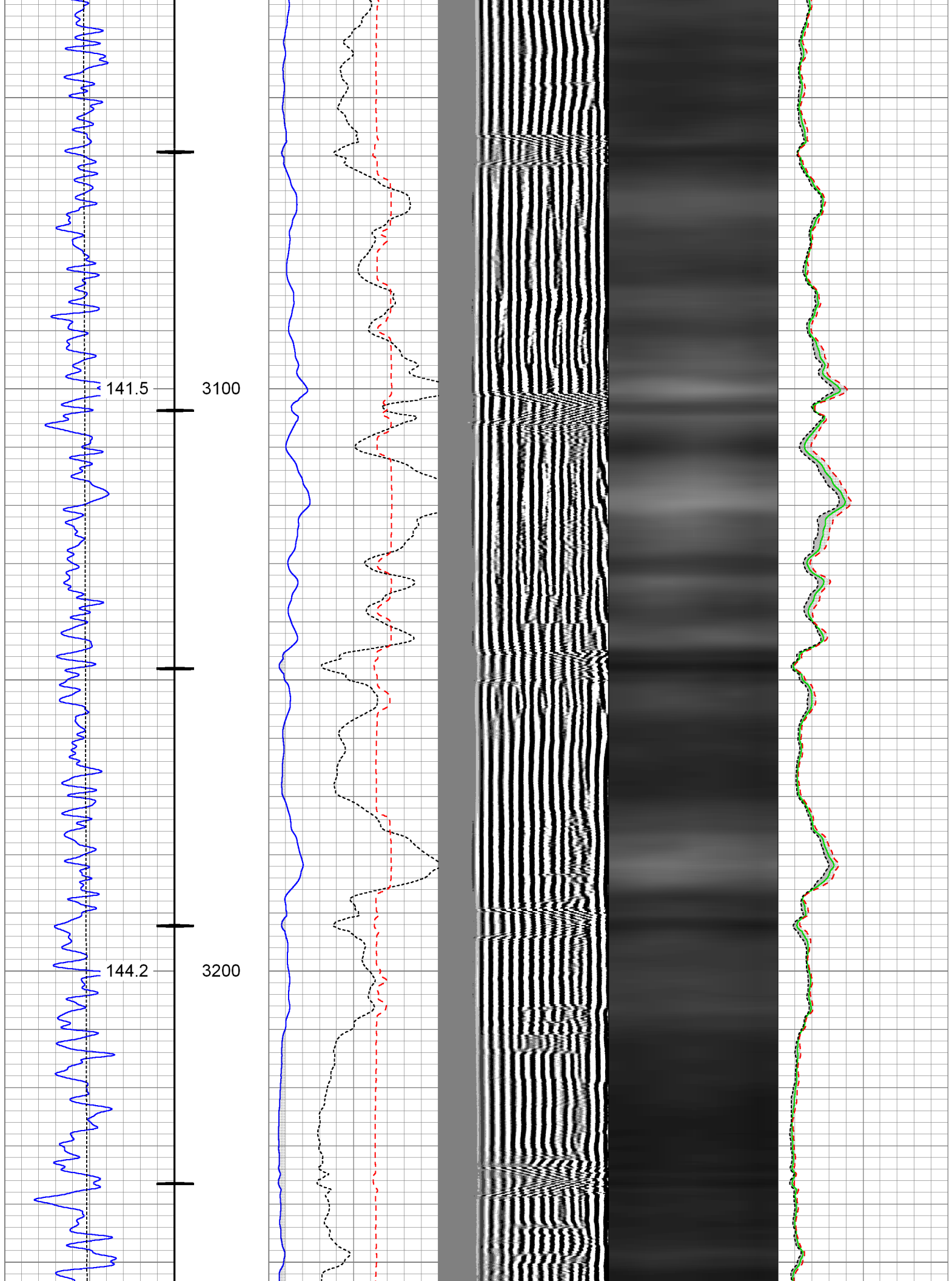


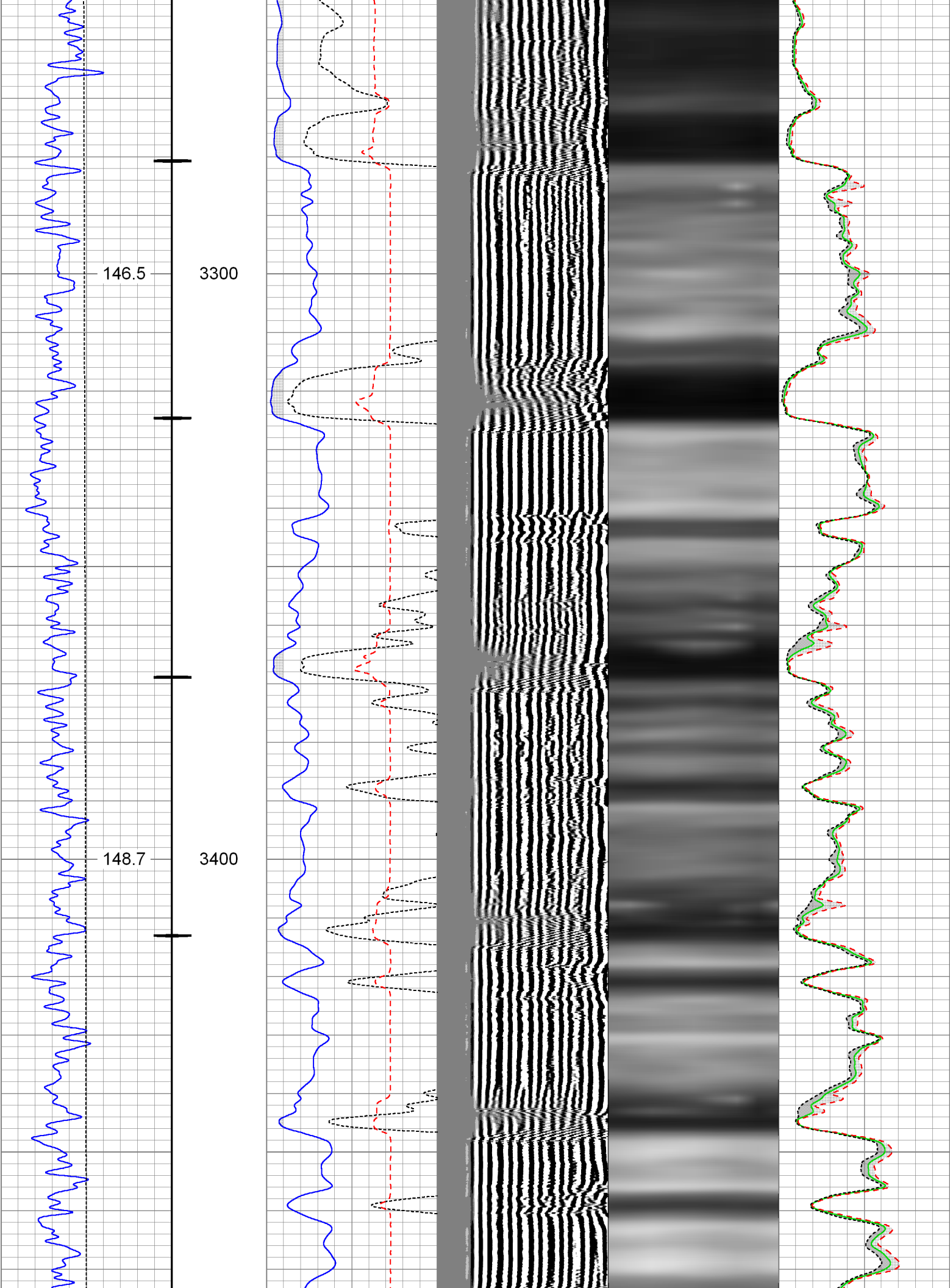


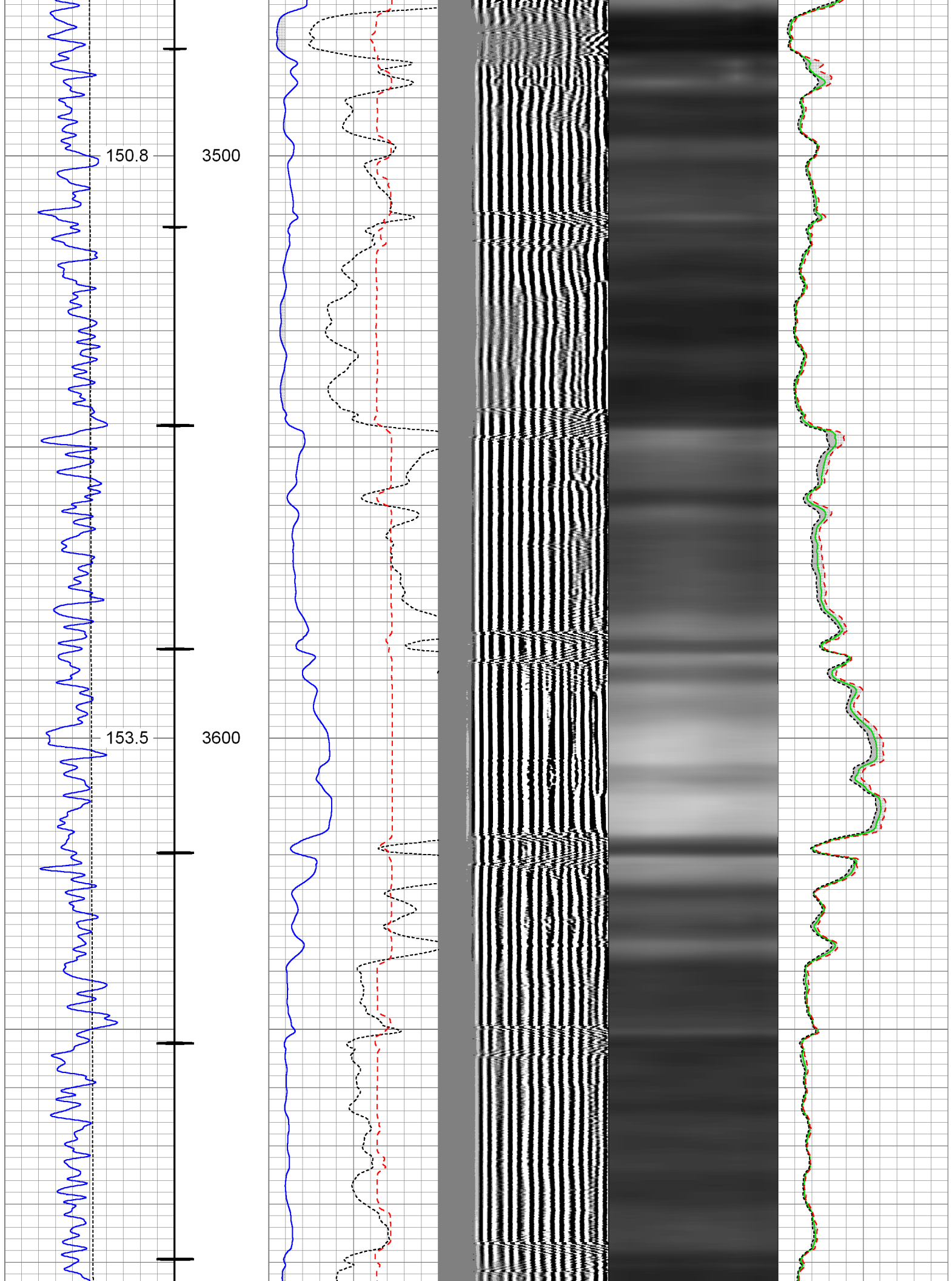


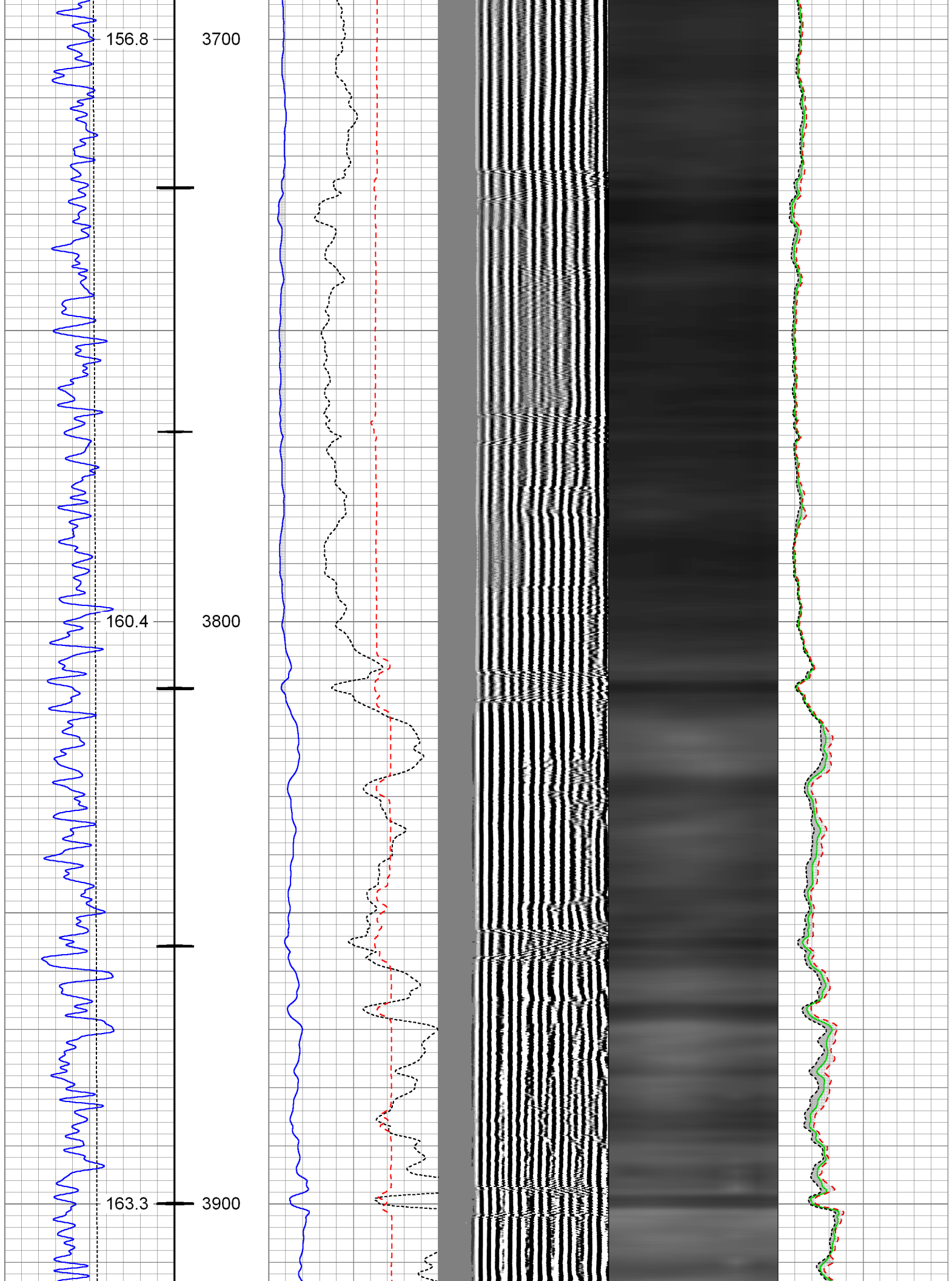


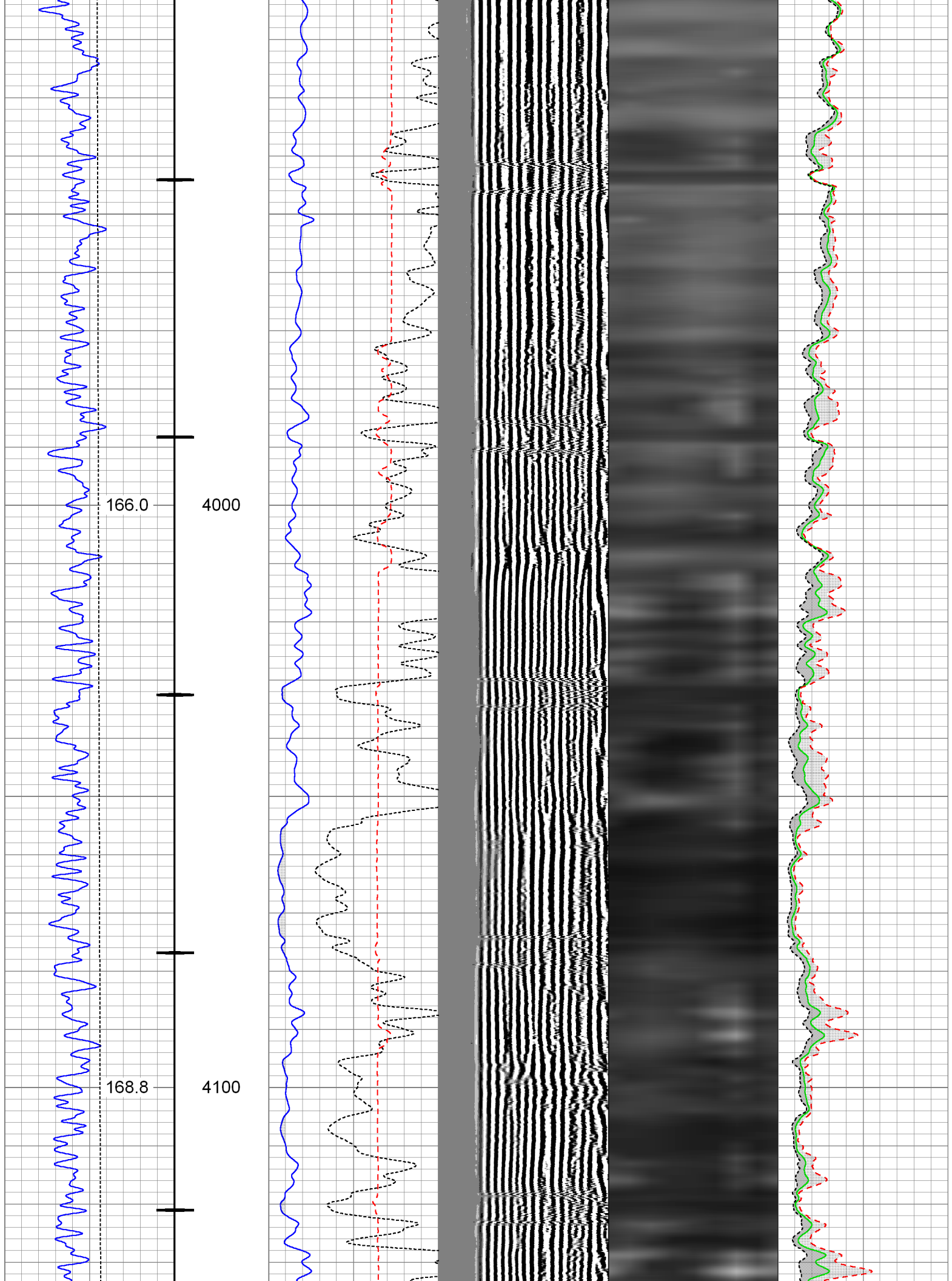


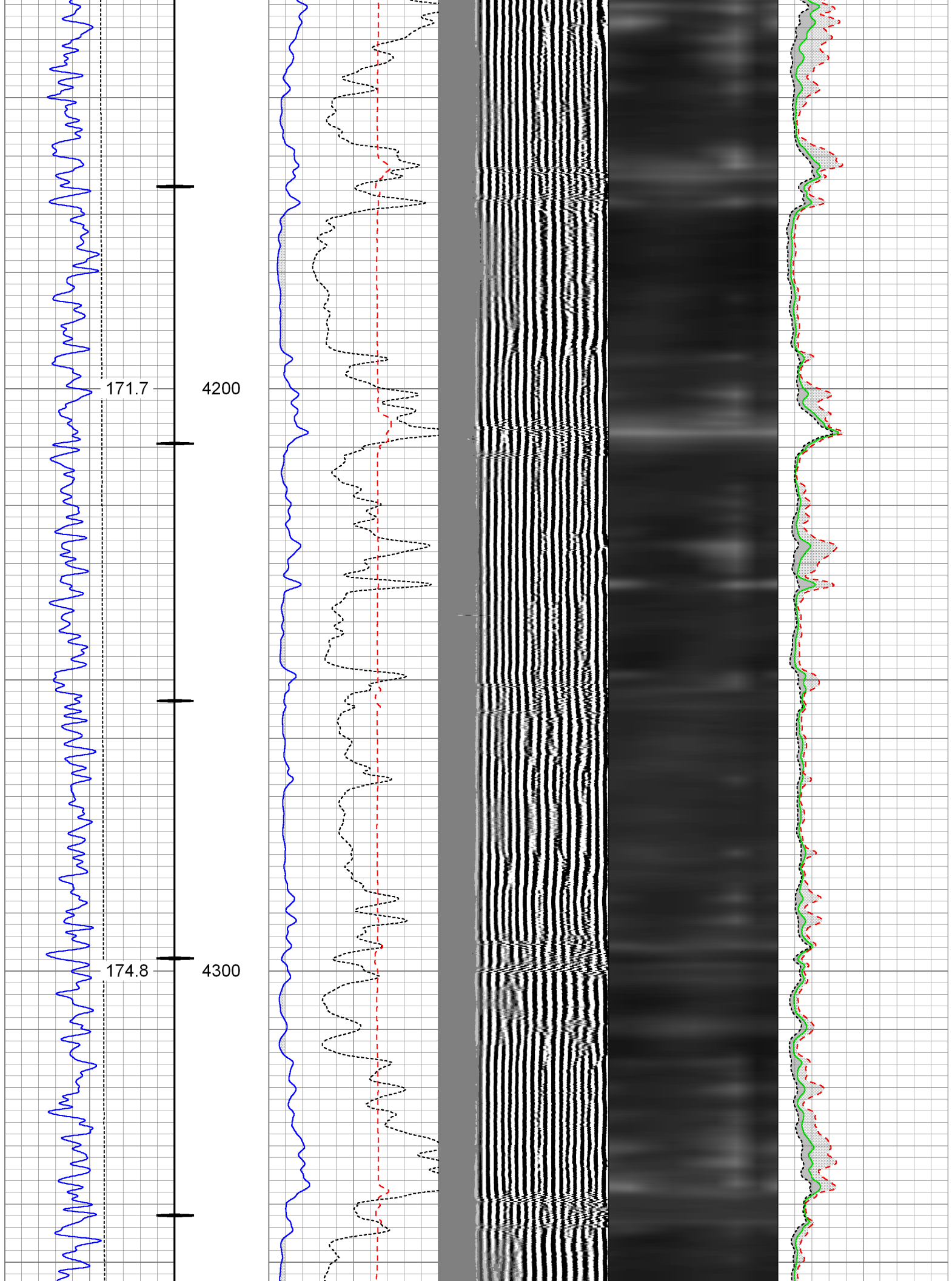


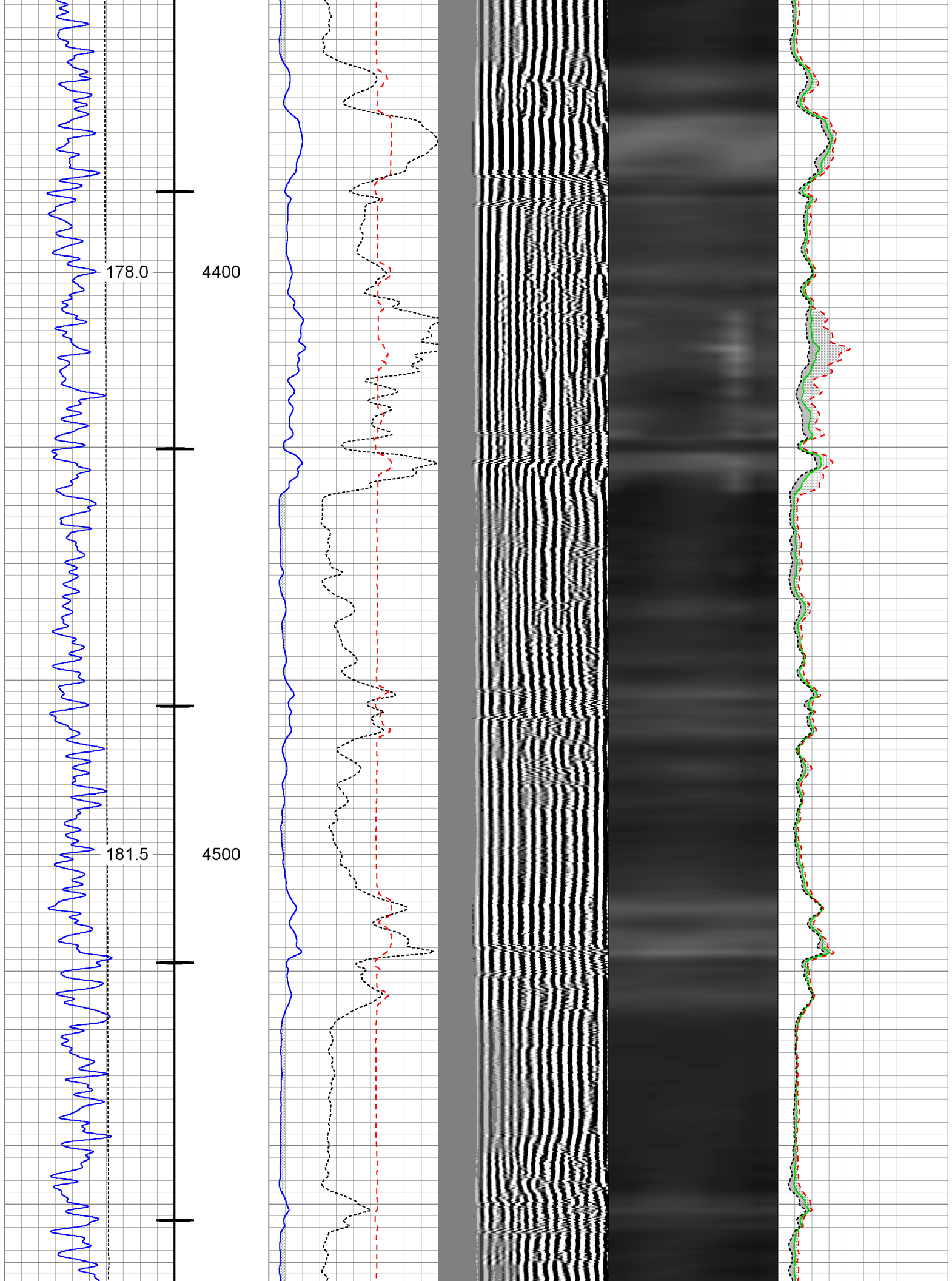


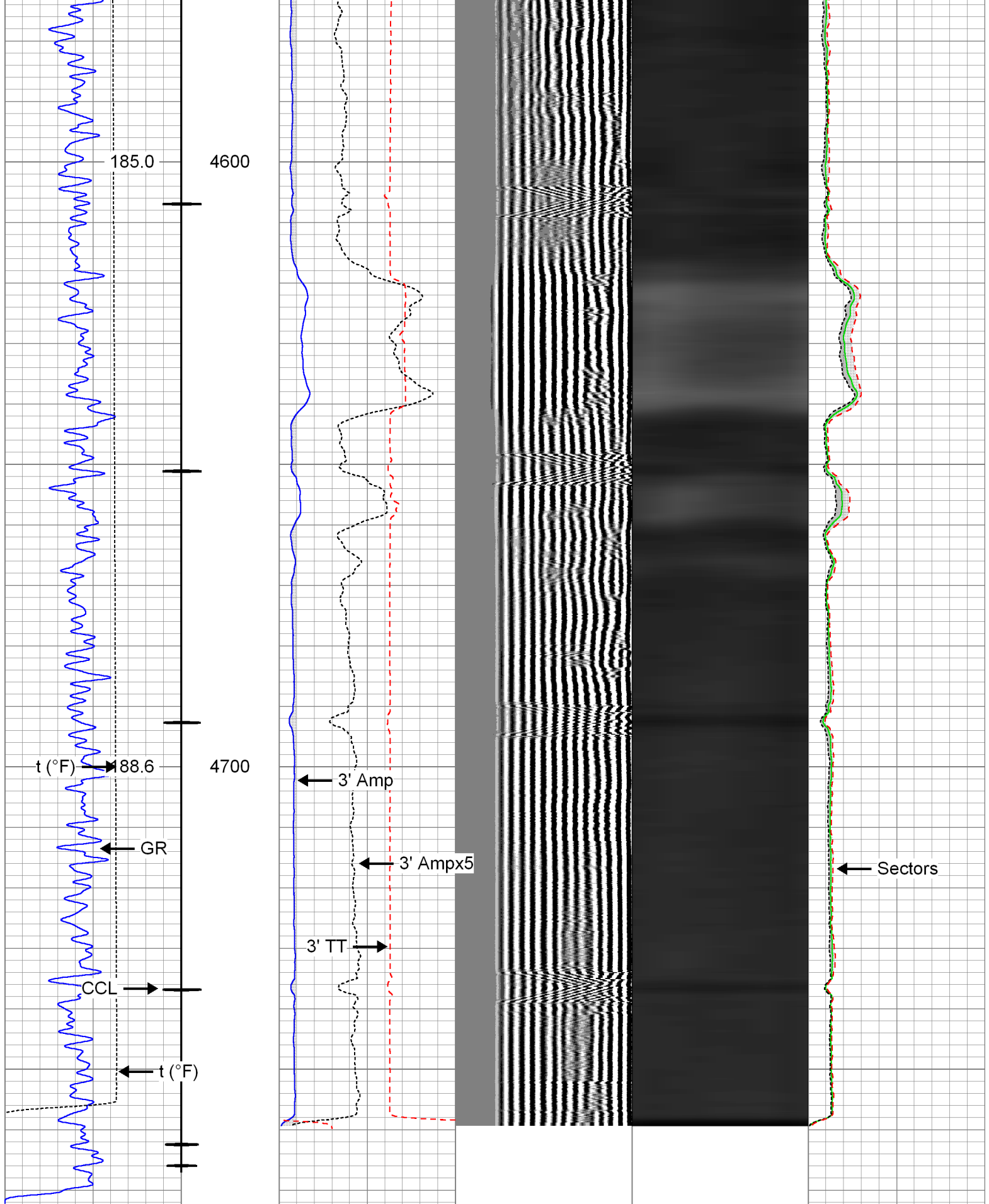












Gamma Ray	0 CCL 10	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
(GAPI)	200	(mV)	200 1200		0 100
Collar Locator		3' Amplitude x 5			Minimum Amplitude
TEMP (degF)	300	(mV)	20		0 100

3' Travel Time		
650	(usec)	150

Maximum Amplitude	
0	100



Repeat Pass

Logged With 1500 PSI @ Surface

Database File:
05-123-37748_whiting_razor 27k-3405a_rcbl_09-24-13.db

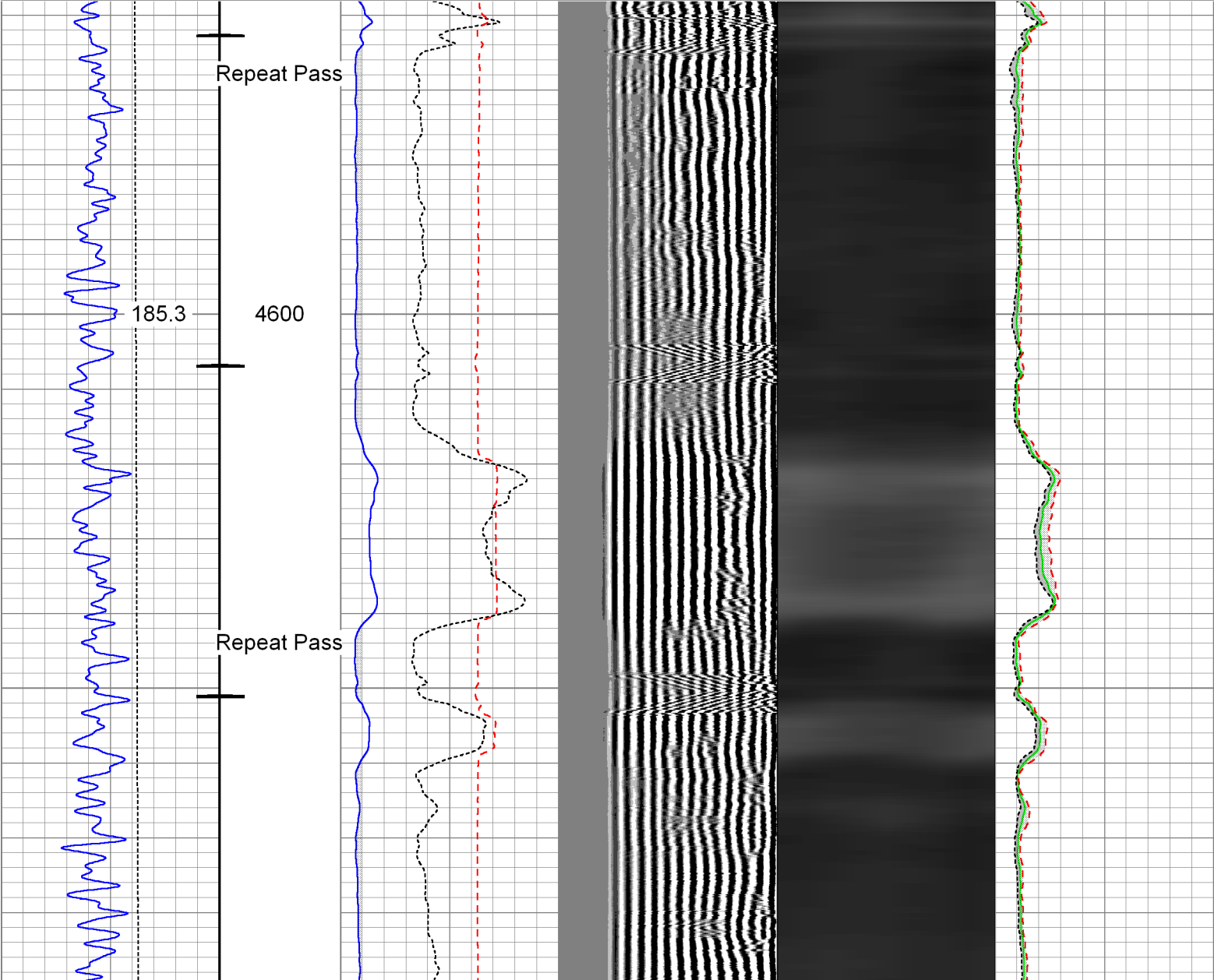
Dataset Pathname:
repeatpas

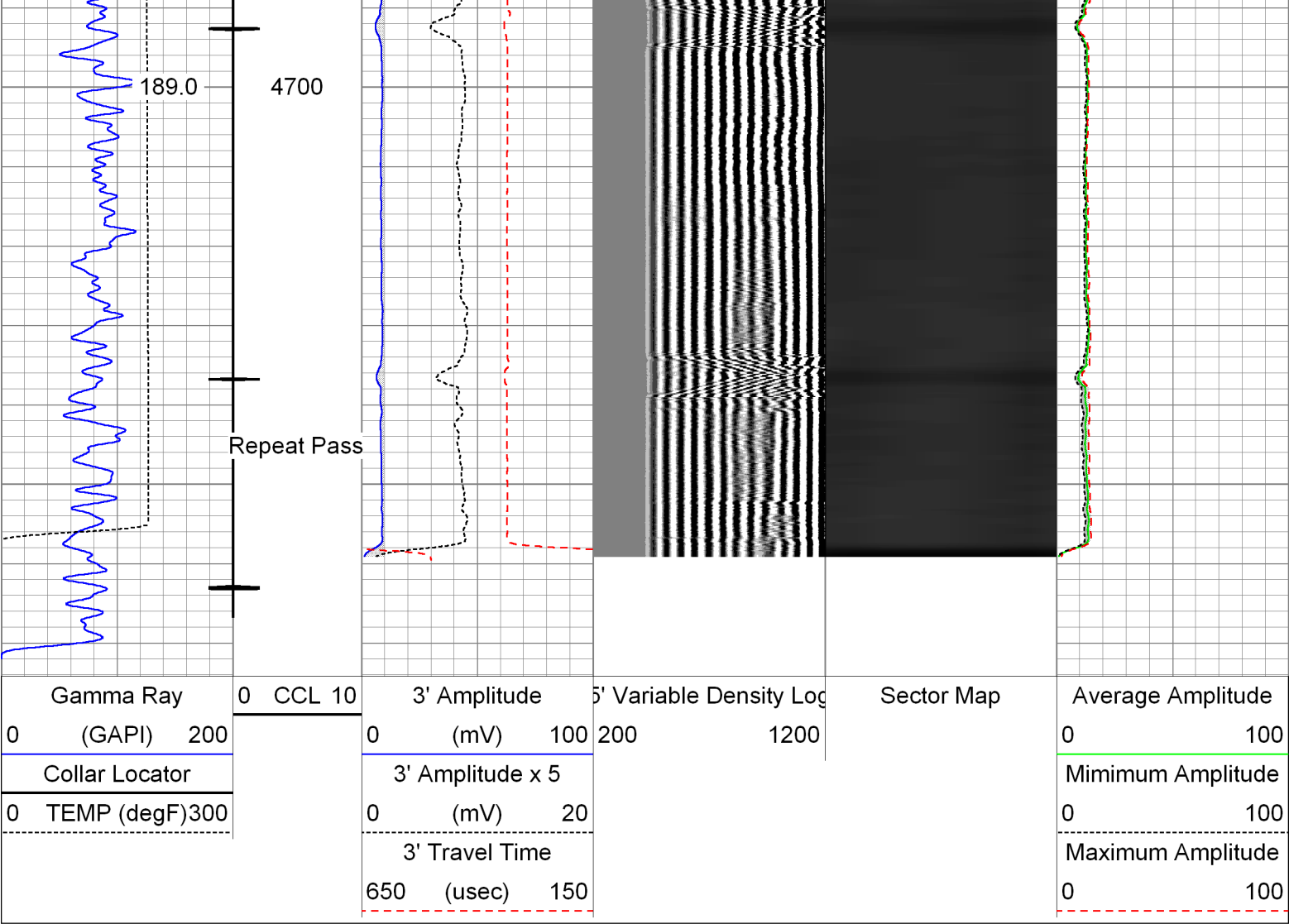
Presentation Format:
rbt007

Dataset Creation:
Tue Sep 24 12:35:53 2013 by Log SCH 111116

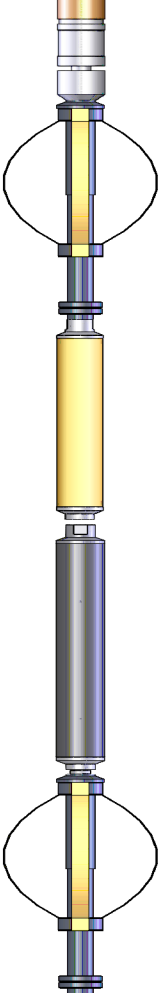
Charted by:
Depth in Feet scaled 1:240

Gamma Ray		0	CCL 10	3' Amplitude		5' Variable Density Log		Sector Map	Average Amplitude	
0	(GAPI) 200			0	(mV) 100	200	1200		0	100
Collar Locator				3' Amplitude x 5					Minimum Amplitude	
0	TEMP (degF) 300			0	(mV) 20				0	100
				3' Travel Time					Maximum Amplitude	
				650	(usec) 150				0	100





Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
			Titan_1_11_16	1.04	1.69	5.00
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
RHeadVolt	20.96					
Temp	18.09					
WVF3FT	15.98		Probe_RADII-C-2-3/4" (FW1305-96in7") Probe 2-3/4" Sector Cement Bond Tool with Temperature Probe	9.21	2.75	100.00
WVFCAL	15.98					
WVFS1	15.98					
WVFS2	15.98					
WVFS3	15.98					
WVFS4	15.98					
WVFS5	15.98					

WVFS5	15.98		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
WVFS6	15.98					
WVFS7	15.98					
WVFS8	15.98					
WVF5FT	14.98					
CCL	7.38		Probe_CCL-2.75"_SA_6MAG_CCL (FW1307-76)	2.66	2.75	50.00
GR	3.67		Probe_CCL_GR-2.75"_SA_Corrosion_GR 3.331307-72.75 Probe 2.75 Inch Stand Alone Corrosion GR			50.00
			Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Dataset: 05-123-37748_whiting_razor 27k-3405a_rcbl_09-24-13.db: field/well/run1/main Total Length: 24.88 ft Total Weight: 235.00 lb O.D. 2.75 in						

Calibration Report		
Database File:	05-123-37748_whiting_razor 27k-3405a_rcbl_09-24-13.db	
Dataset Pathname:	main	
Dataset Creation:	Tue Sep 24 12:46:30 2013 by Log SCH 111116	
Gamma Ray Calibration Report		
Serial Number:	FW1307-78	
Tool Model:	2.75" _SA_Corrosion_GR	
Performed:	Sun Sep 08 13:28:36 2013	
Calibrator Value:	1.0	GAPI
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	0.8000	GAPI/cps
Segmented Cement Bond Log Calibration Report		
Serial Number:	FW1305-96in7"	
Tool Model:	2-3/4"	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	4.494	ft

Master Calibration performed Tue Sep 24 12:17:03 2013:

Master Calibration, performed Tue Sep 24 12:17:02 2013:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.006	0.744	0.800	62.165	81.896	1.274
CAL	1.082	1.052				
5'	-0.004	0.840	0.800	62.165	72.772	1.070
SUM						
S1	-0.015	0.704	0.000	100.000	138.994	2.138
S2	-0.006	0.717	0.000	100.000	138.283	0.832
S3	-0.006	0.735	0.000	100.000	134.897	0.861
S4	-0.006	0.767	0.000	100.000	129.454	0.740
S5	-0.007	0.781	0.000	100.000	127.057	0.828
S6	-0.007	0.773	0.000	100.000	128.285	0.855
S7	-0.007	0.737	0.000	100.000	134.553	0.884
S8	-0.007	0.726	0.000	100.000	136.529	0.897

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	1.082	1.052	1.000	0.000

Air Zero Calibration, performed Tue Sep 24 12:16:38 2013:

	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 Whiting Oil & Gas Corporation
 Well Razor 27K-3405A
 Field Wildcat
 County Weld
 State Colorado