



Radial Cement Bond
Gamma Ray
Casing Collar Log

Company Whiting Oil & Gas Corporation					
Well Razor 27L-3404B					
Field Wildcat					
County Weld					
State Colorado					
Location:		API # : 05-123-37744		Other Services Gauge run Plug	
SHL: 2447' FSL 726' FWL Lat/Long: 40.808881/-103.858131 SEC 27 TWP 10N RGE 58W				Elevation	
Permanent Datum	Ground Level	Elevation	4755'	K.B.	4772'
Log Measured From	Kelly Bushing	17 FT		D.F.	---
Drilling Measured From	Kelly Bushing			G.L.	4755'
Date	September 20, 2013				
Run Number	Three				
Depth Driller	---				
Depth Logger	4980 FT				
Bottom Logged Interval	4978 FT				
Top Log Interval	Surface				
Open Hole Size	9.625				
Type Fluid	Water				
Density / Viscosity	8.34 lbm/gal				
Max. Recorded Temp.	198				
Estimated Cement Top	160 FT				
Time Well Ready	ROA				
Time Logger on Bottom	11:50 am				
Equipment Number	HD-0134				
Location	Fort Lupton, CO				
Recorded By	Patrick Grimes				
Witnessed By	Bryan Olmstead				
Borehole Record		Tubing Record			
Run Number	Bit	From	To	Size	Weight
Casing Record	Size (in)	Wgt (lbs/Ft)	Grade	Top	Bottom
Surface Casing	9-5/8"	36#	J-55	Surface	1554 FT
Intermediate #1	7"	29#	L-80	Surface	6082 FT
Intermediate #2					
Liner	4.5	11.6#	SeAH 90	5005 FT	12480 FT

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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

Radial Cement Bond Log is correlated to Casing Tally Liner Top @ 5005
Run RCBL from 4980 to surface.
RCBL logged with 1500 PSI surface induced pressure.
Est top of Cement @ 160'

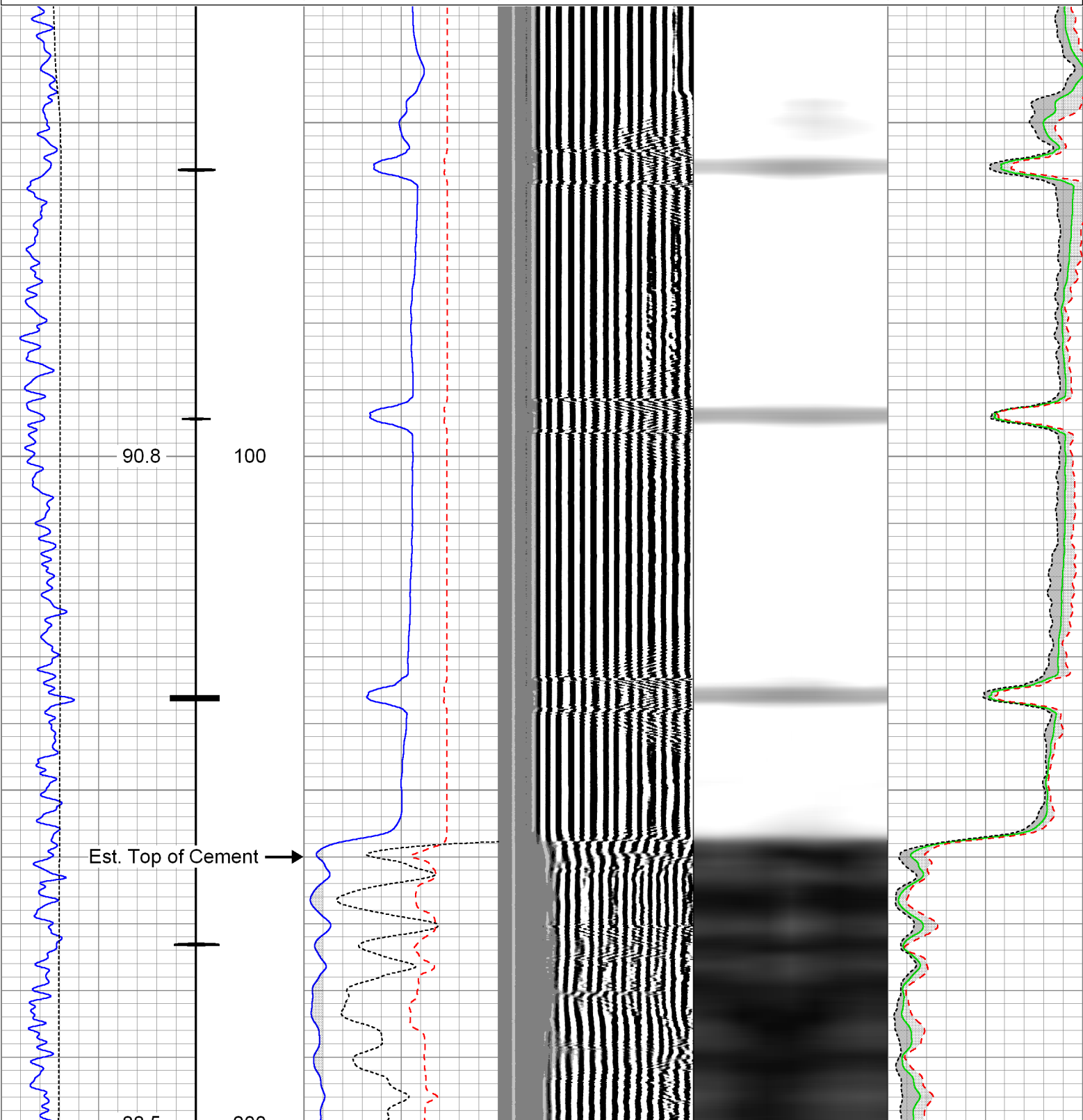
Thank you for choosing FMC Technologies Completion Services, Inc.!!

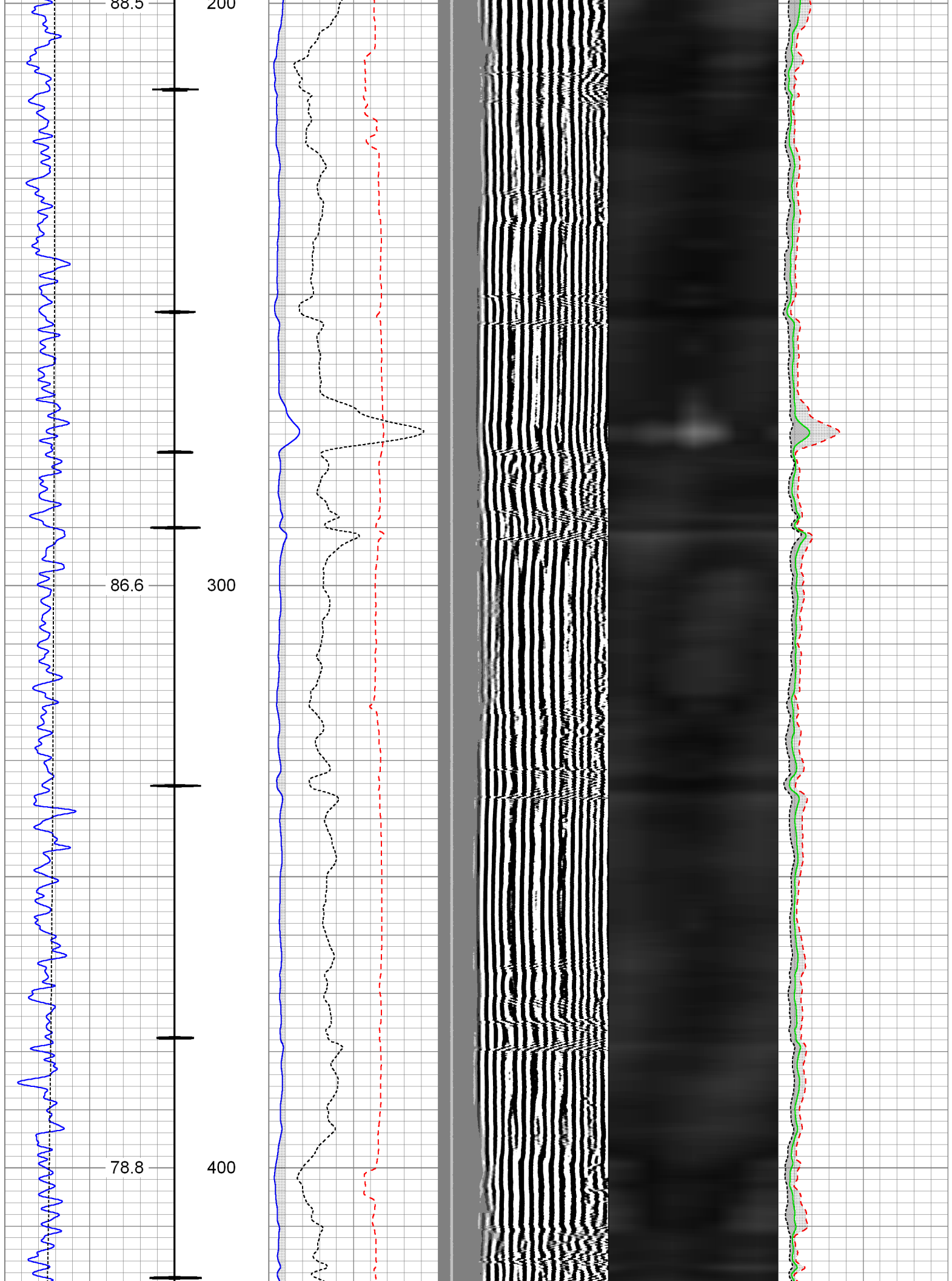


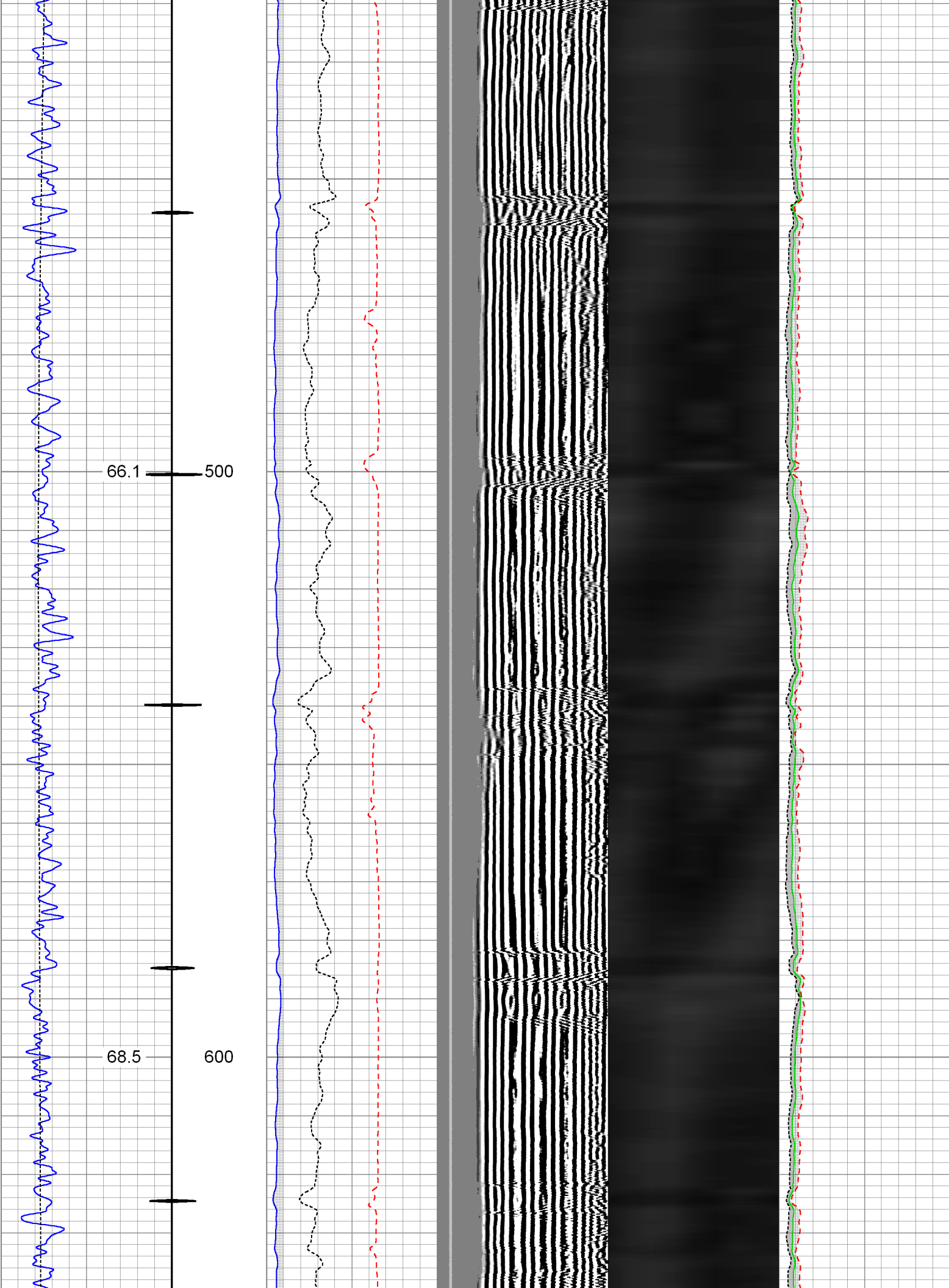
Main Pass: 1500 PSI

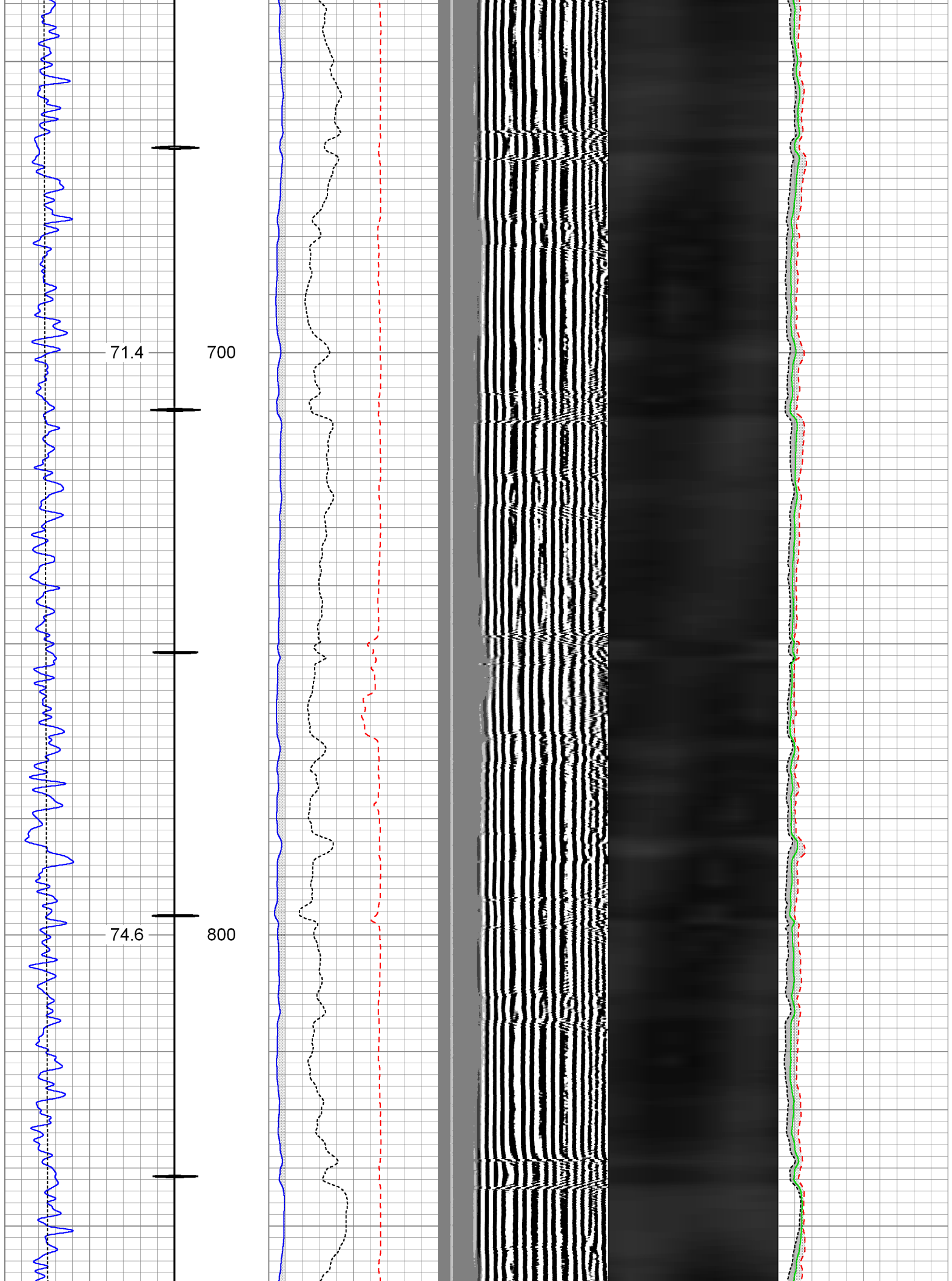
Database File: 05-123-37744_whiting_razor 27I-3404b_20-sep-2013_rcbl.db
Dataset Pathname: pass12
Presentation Format: rbt007
Dataset Creation: Fri Sep 20 11:48:37 2013 by Log SCH 111116
Charted by: Depth in Feet scaled 1:240

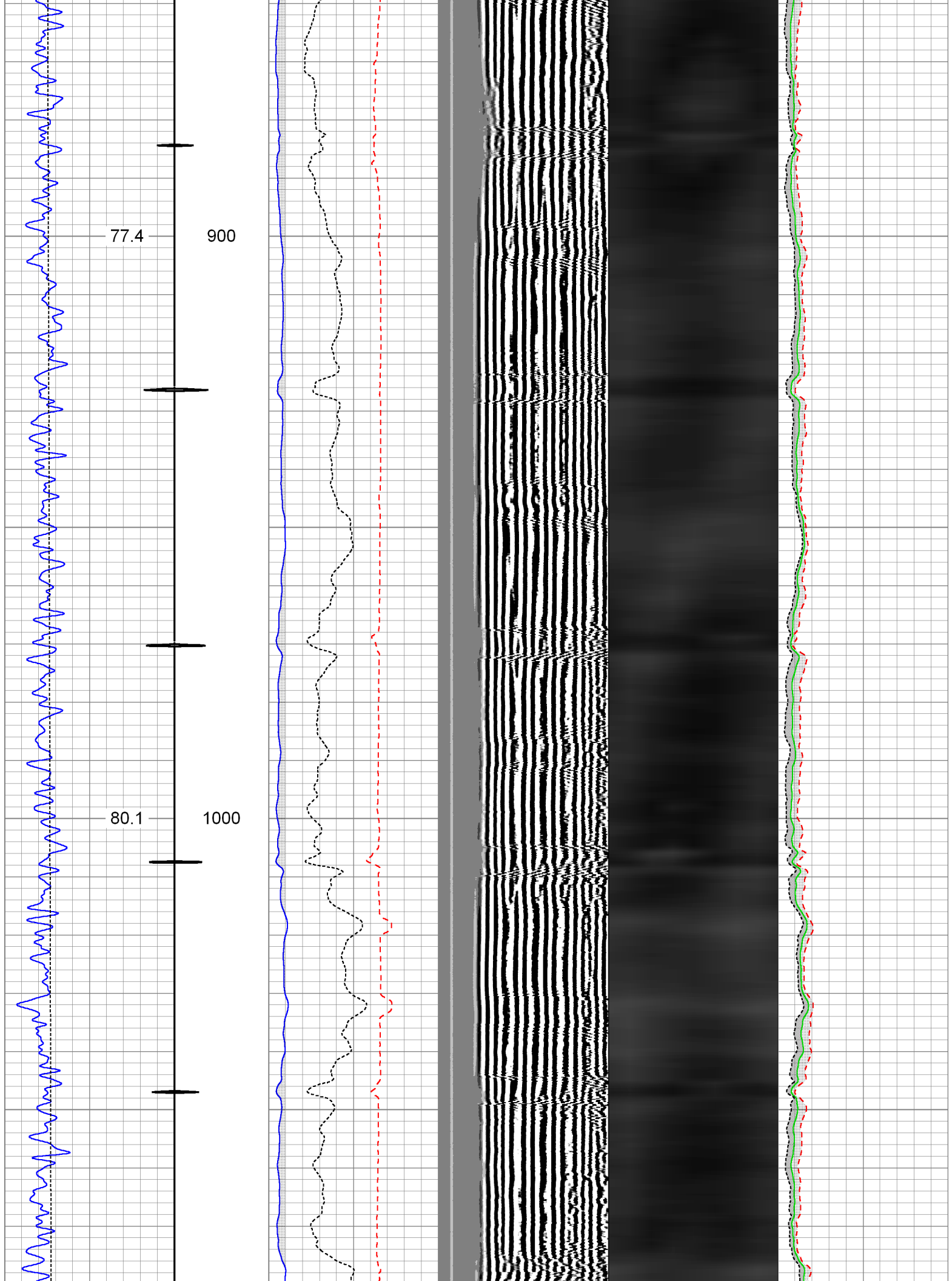
Gamma Ray	0 CCL 10	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 200		0 (mV) 100	200 1200		0 100
Collar Locator		3' Amplitude x 5			Minimum Amplitude
0 TEMP (degF)300		0 (mV) 20			0 100
		3' Travel Time			Maximum Amplitude
		650 (usec) 150			0 100

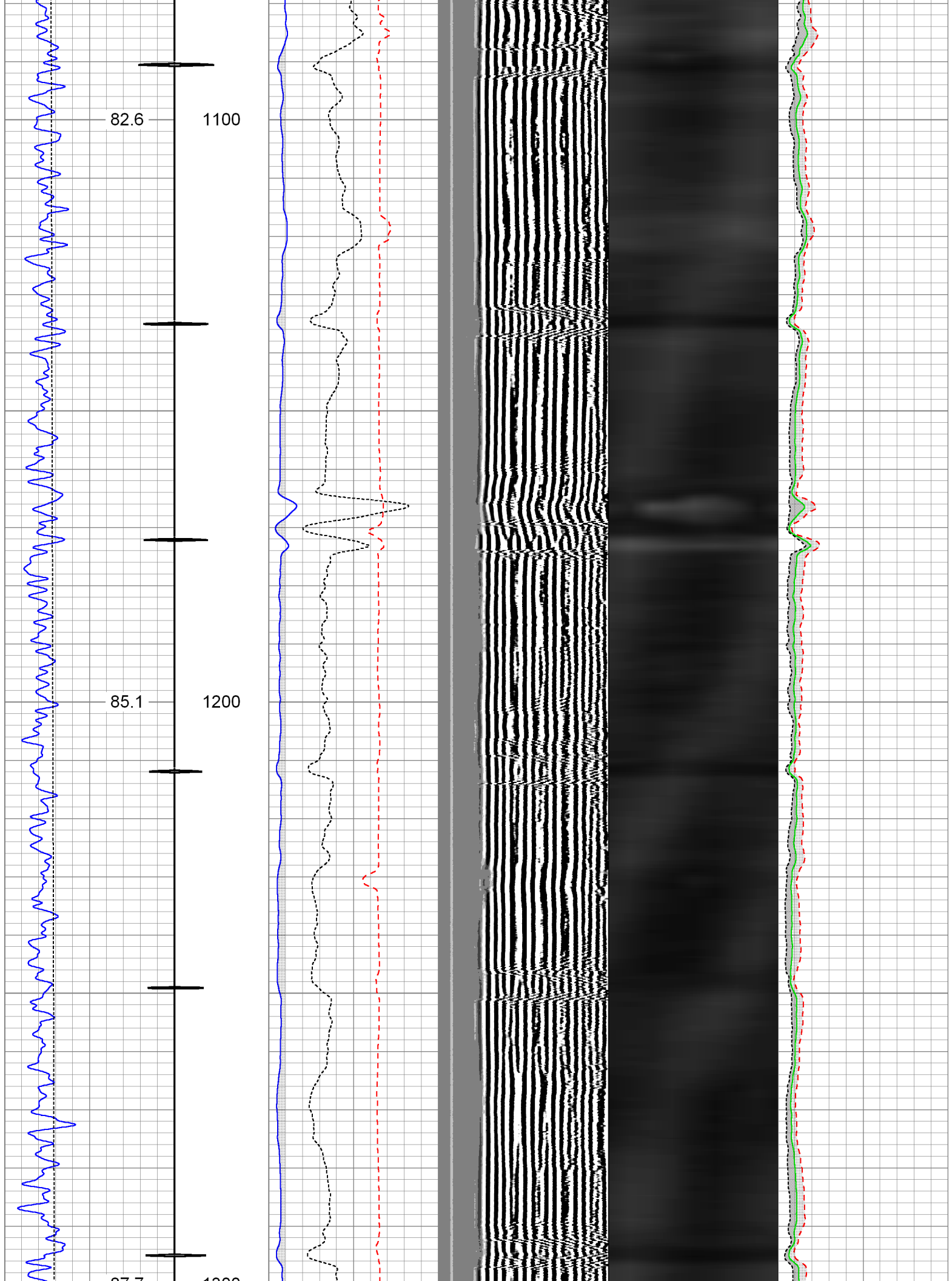


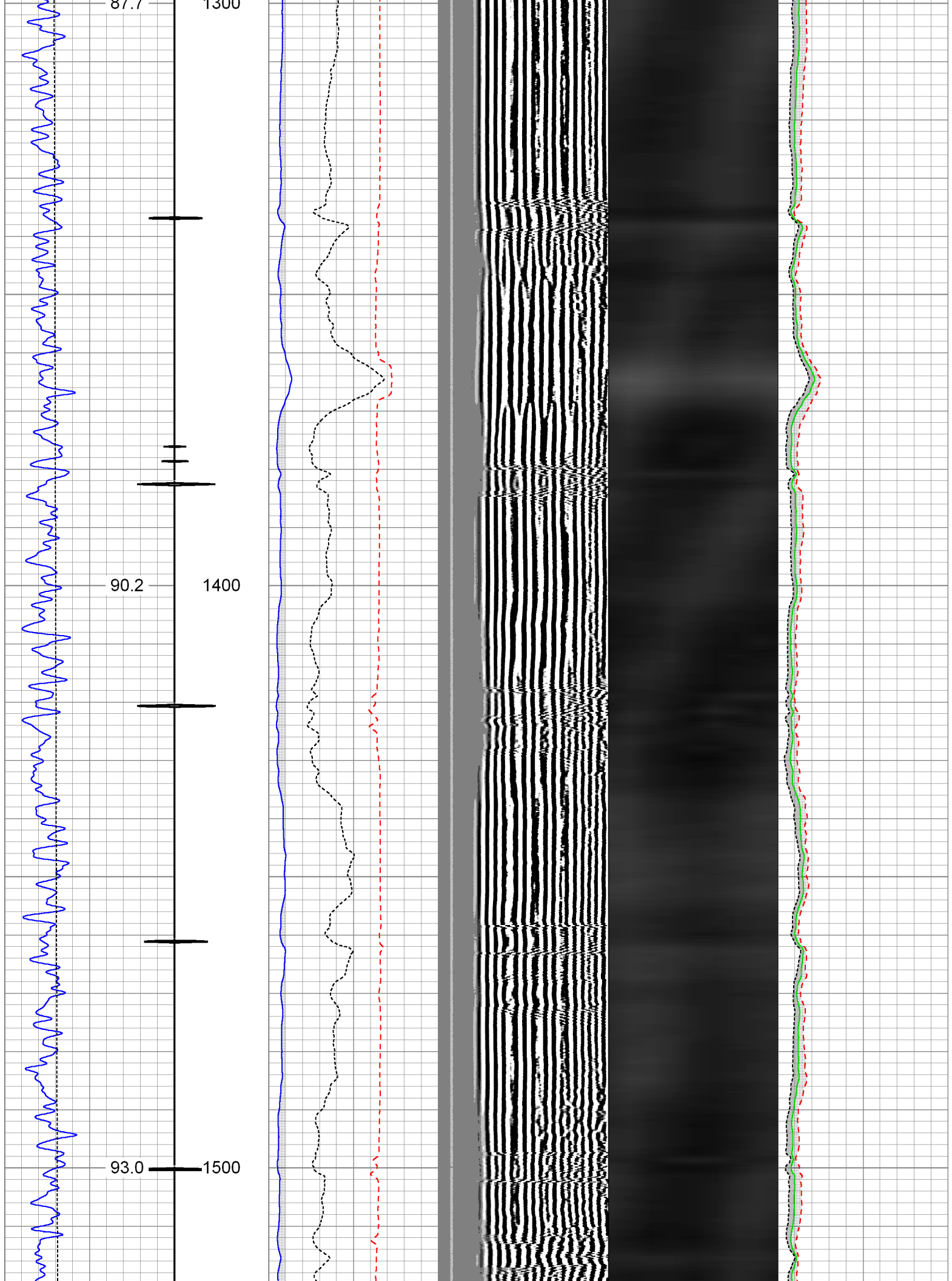


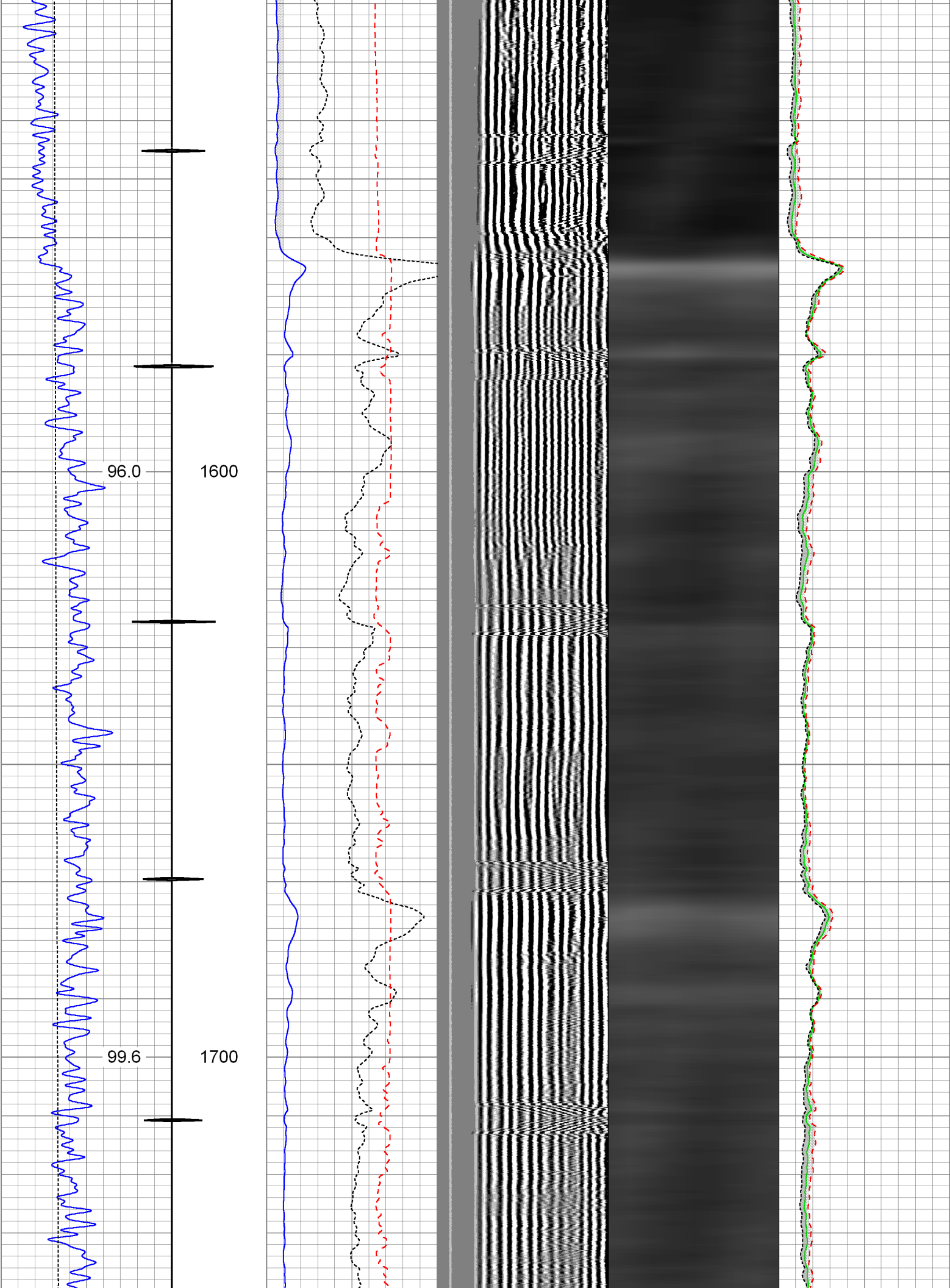


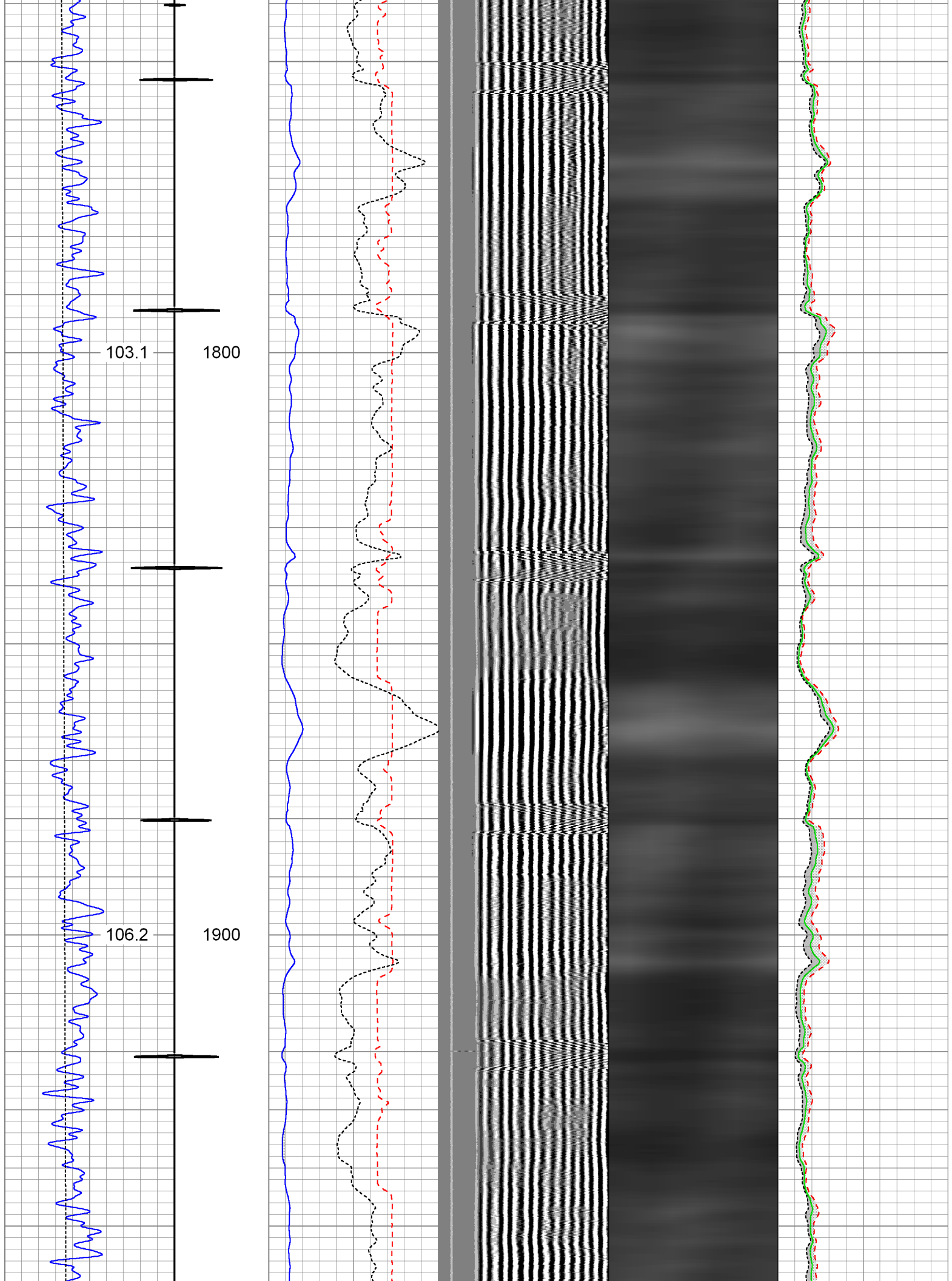


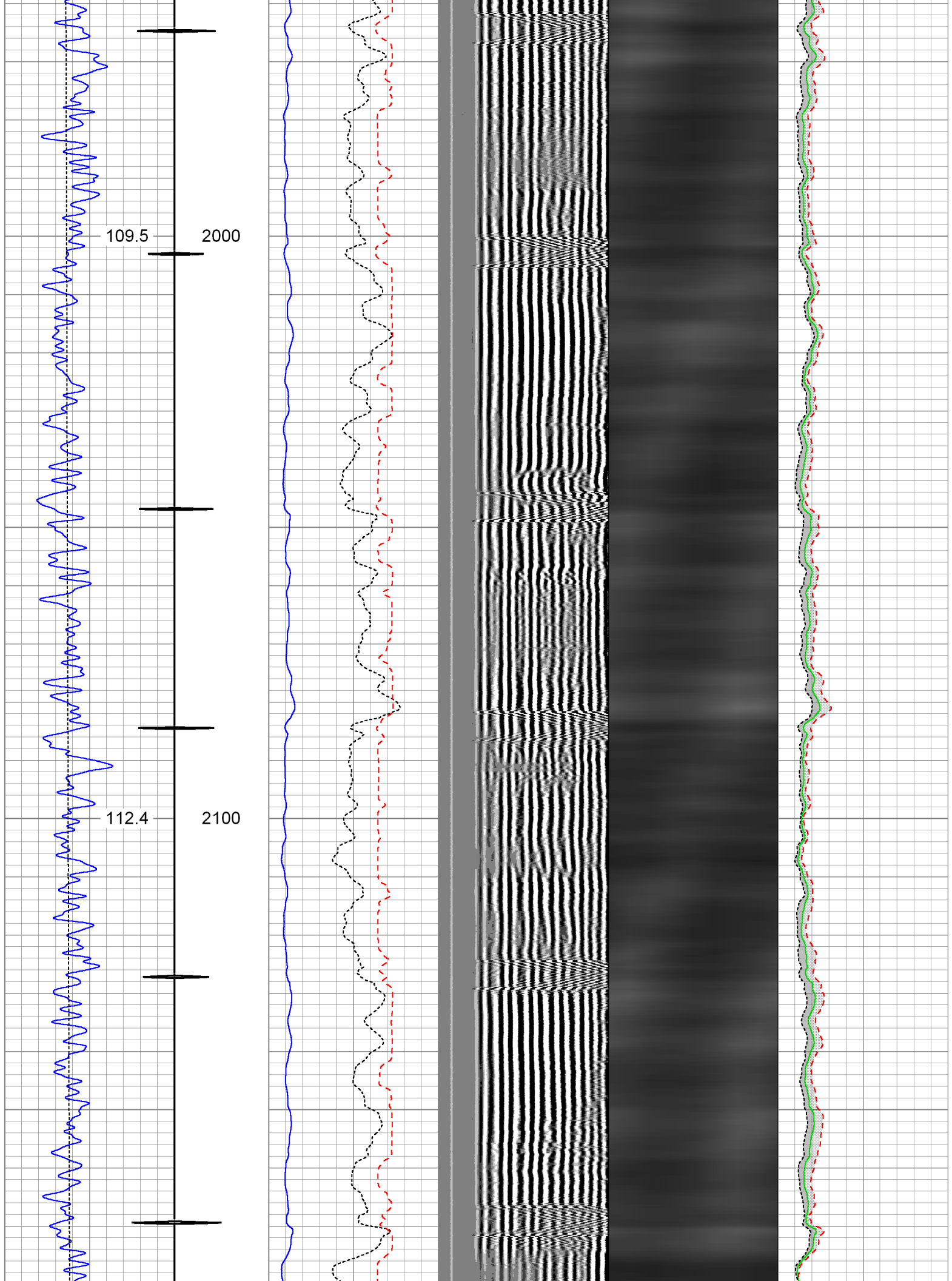


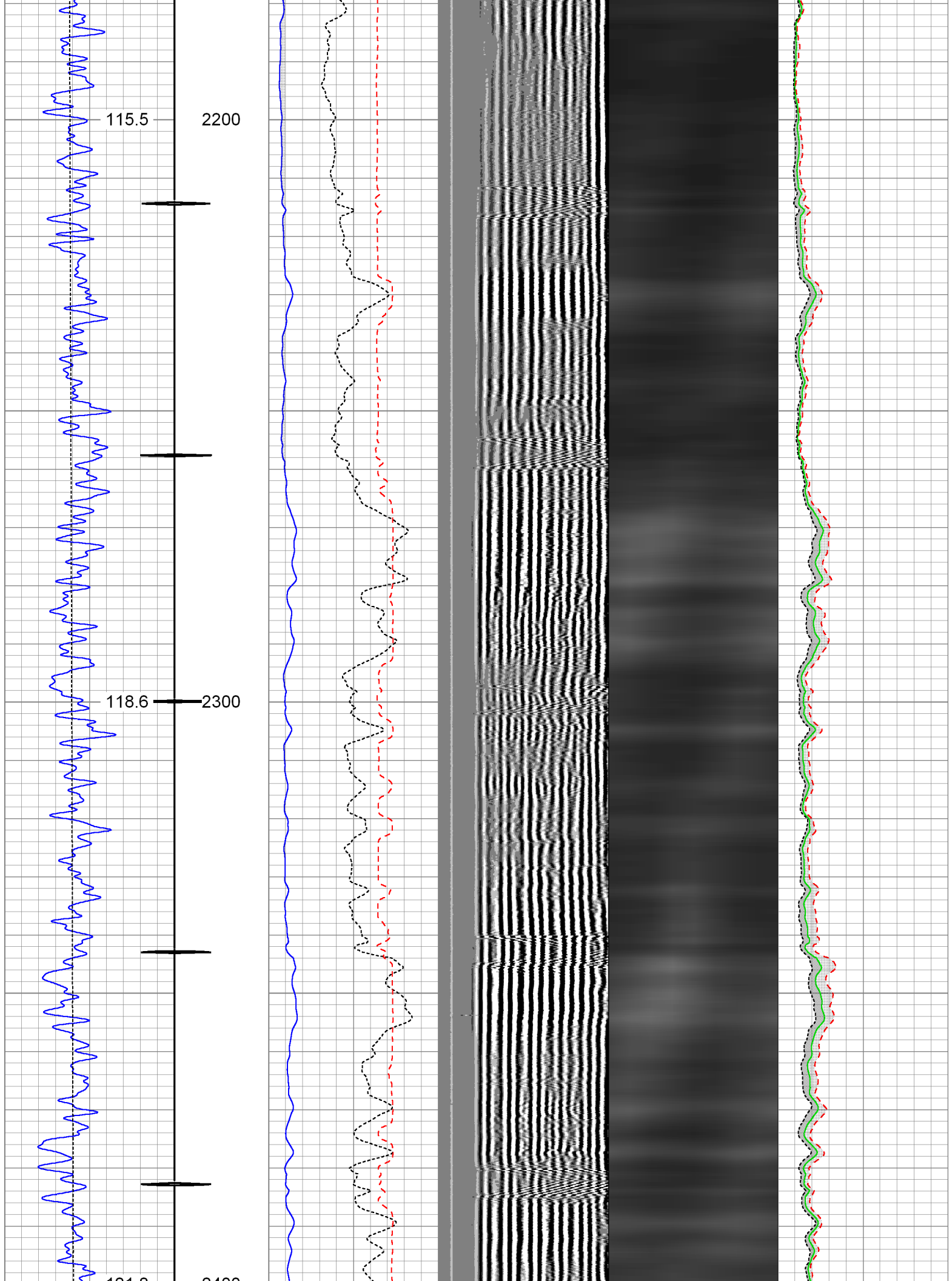


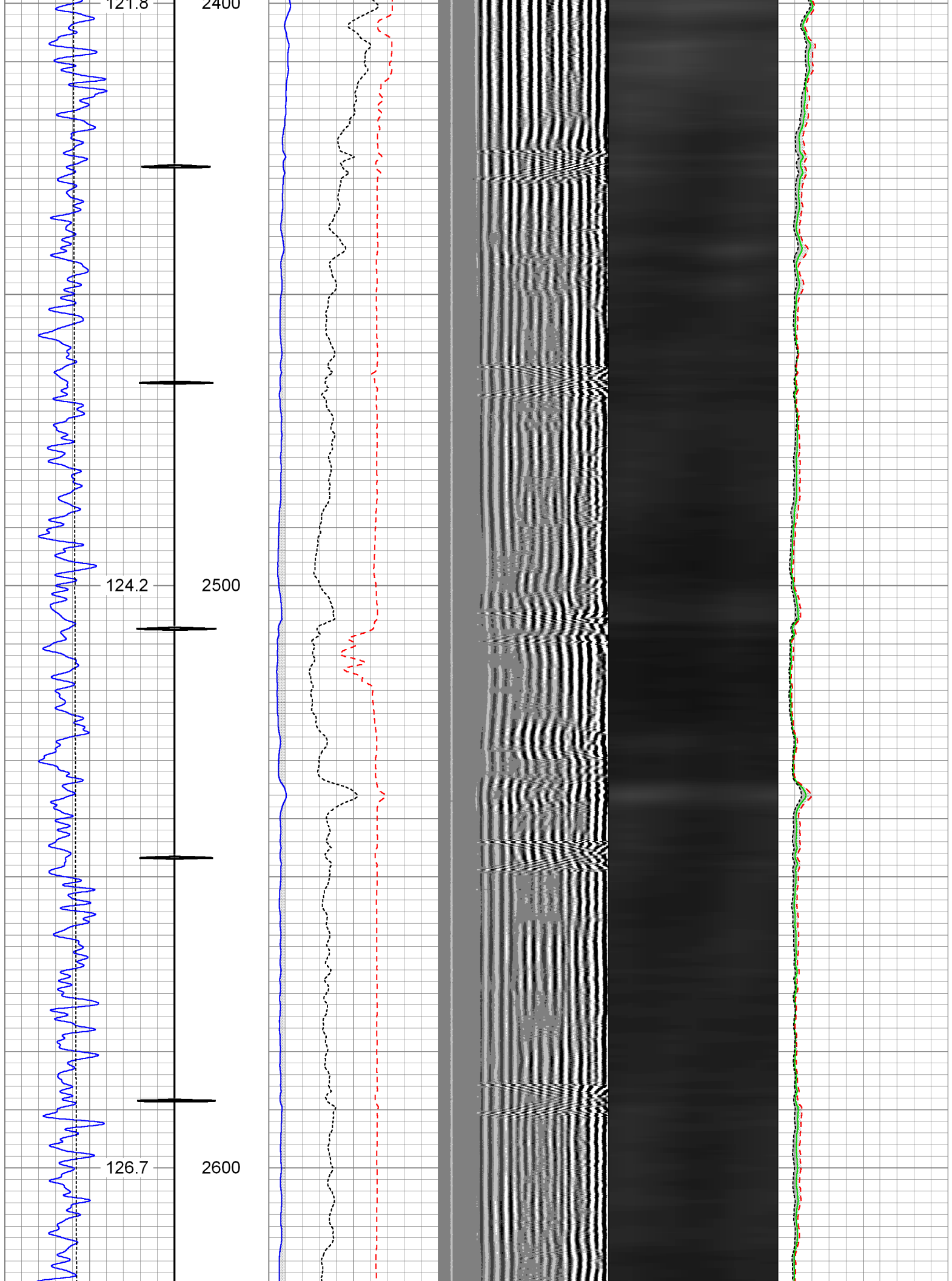


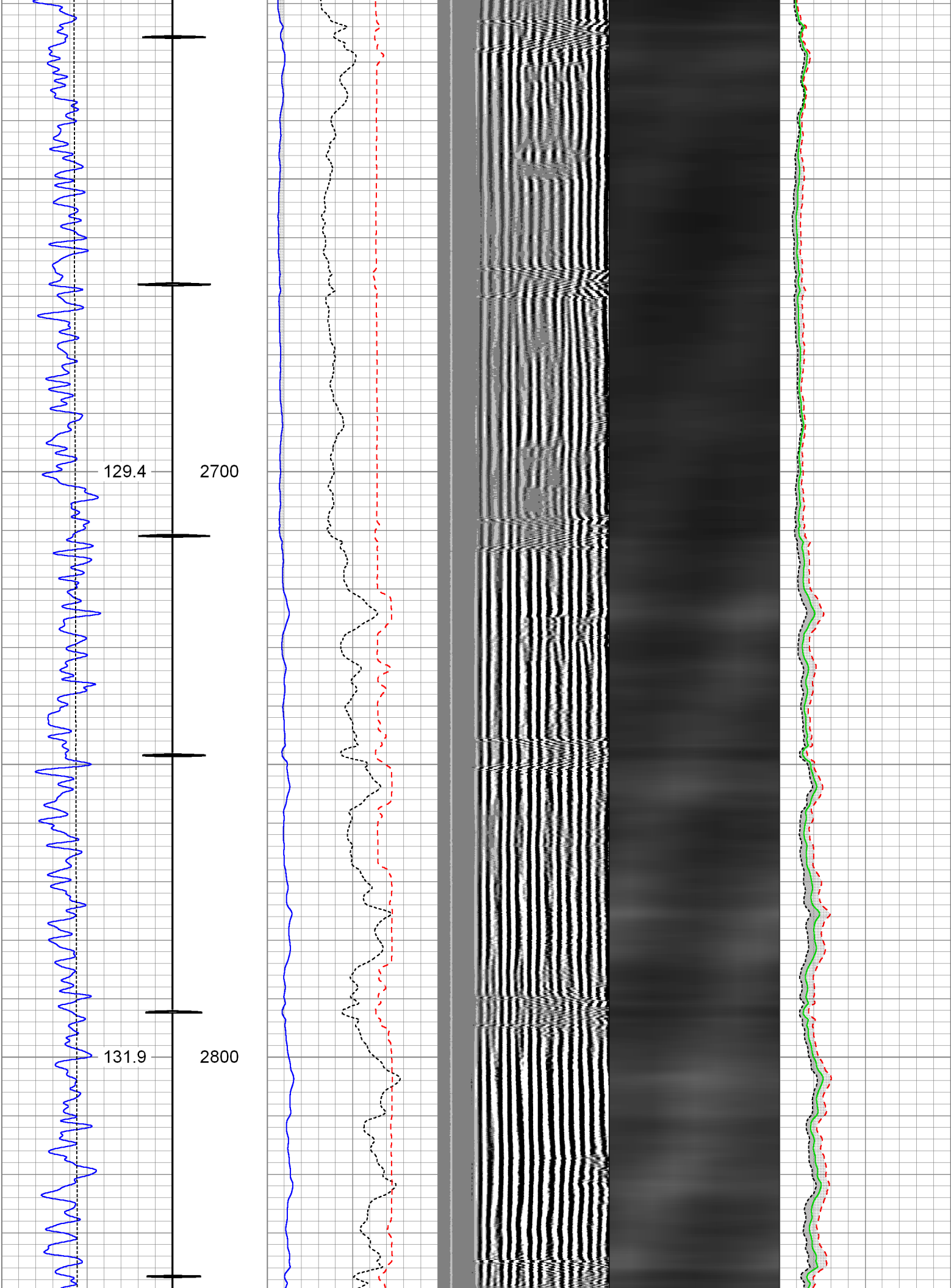


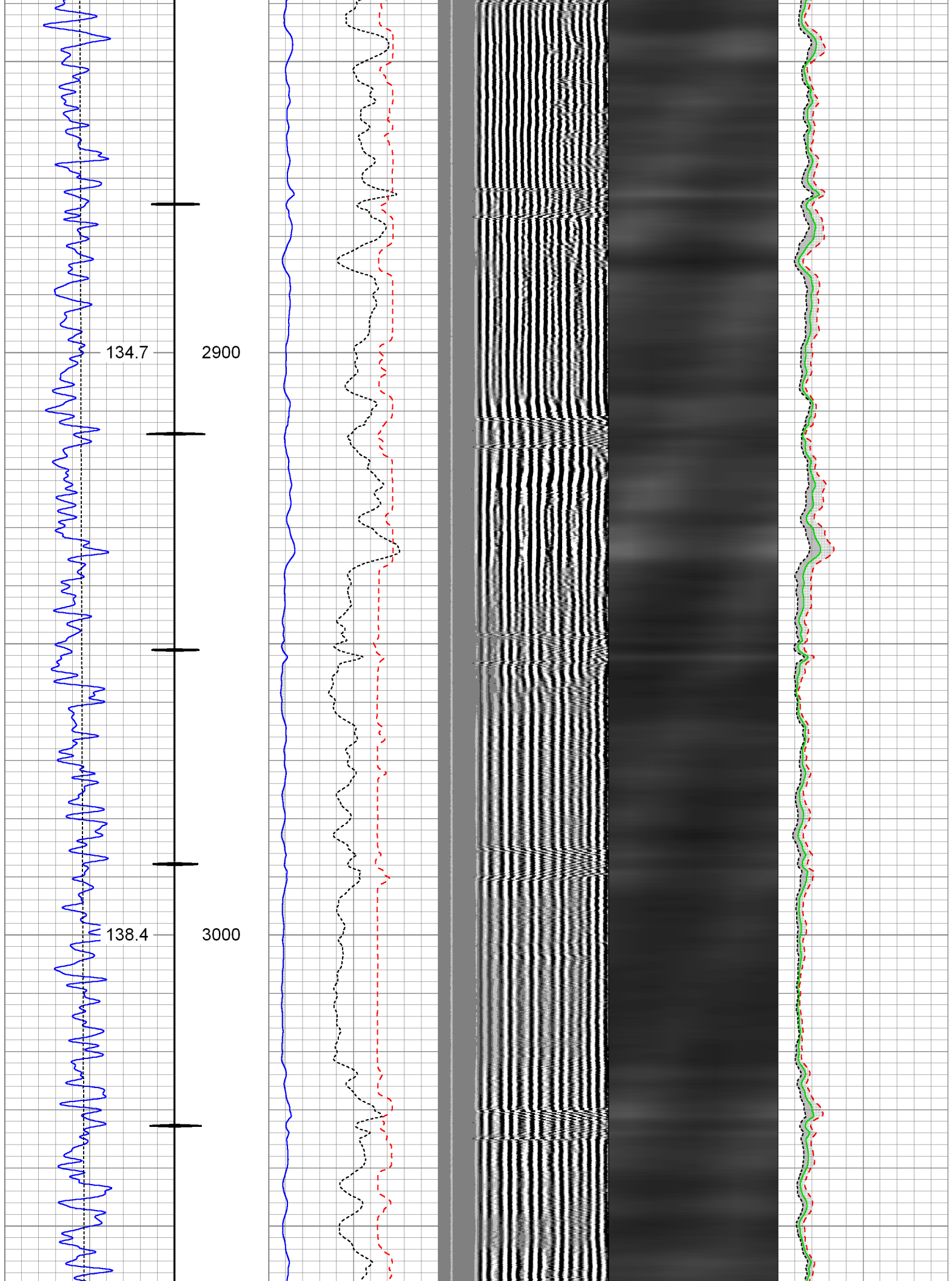


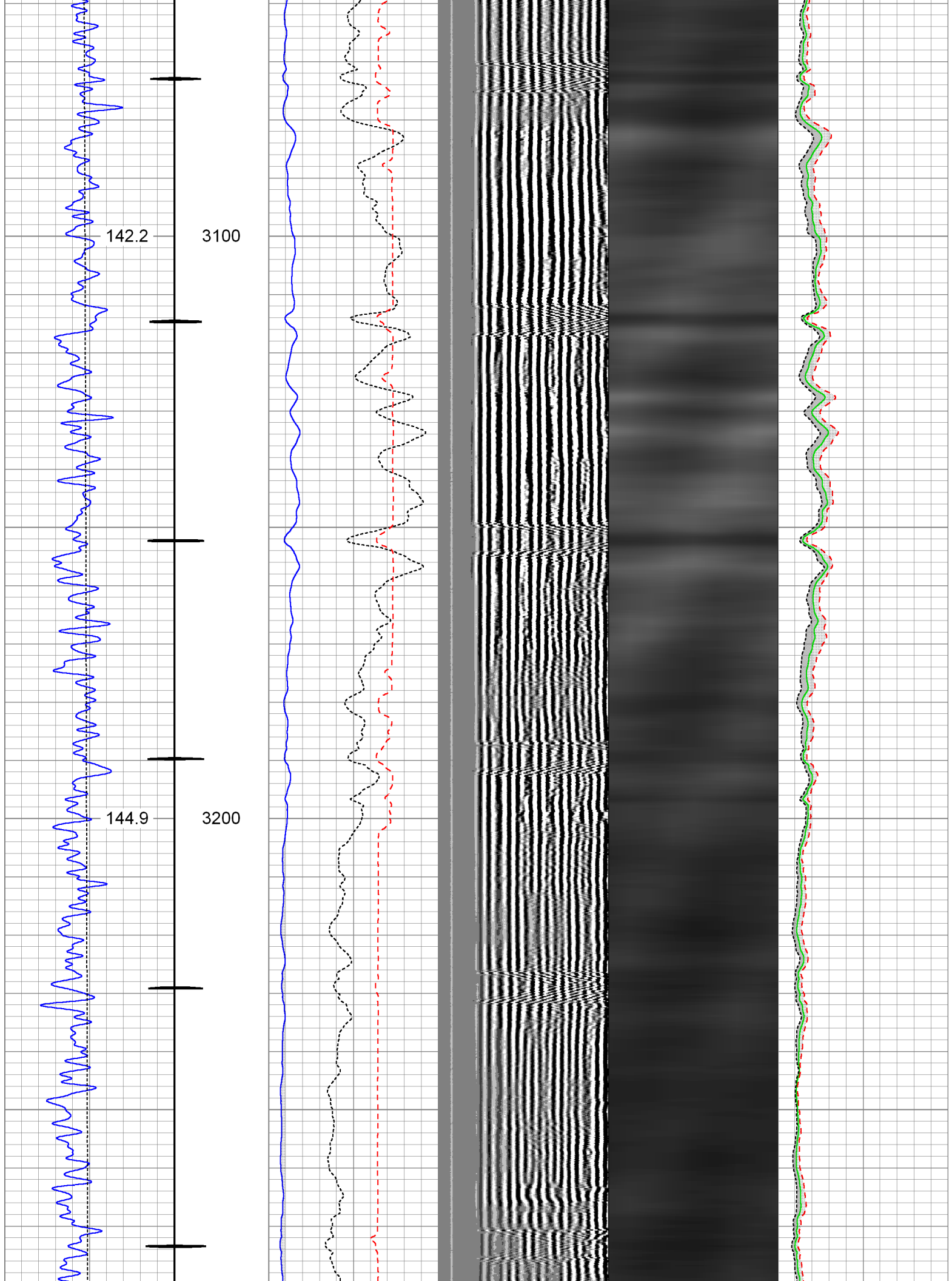


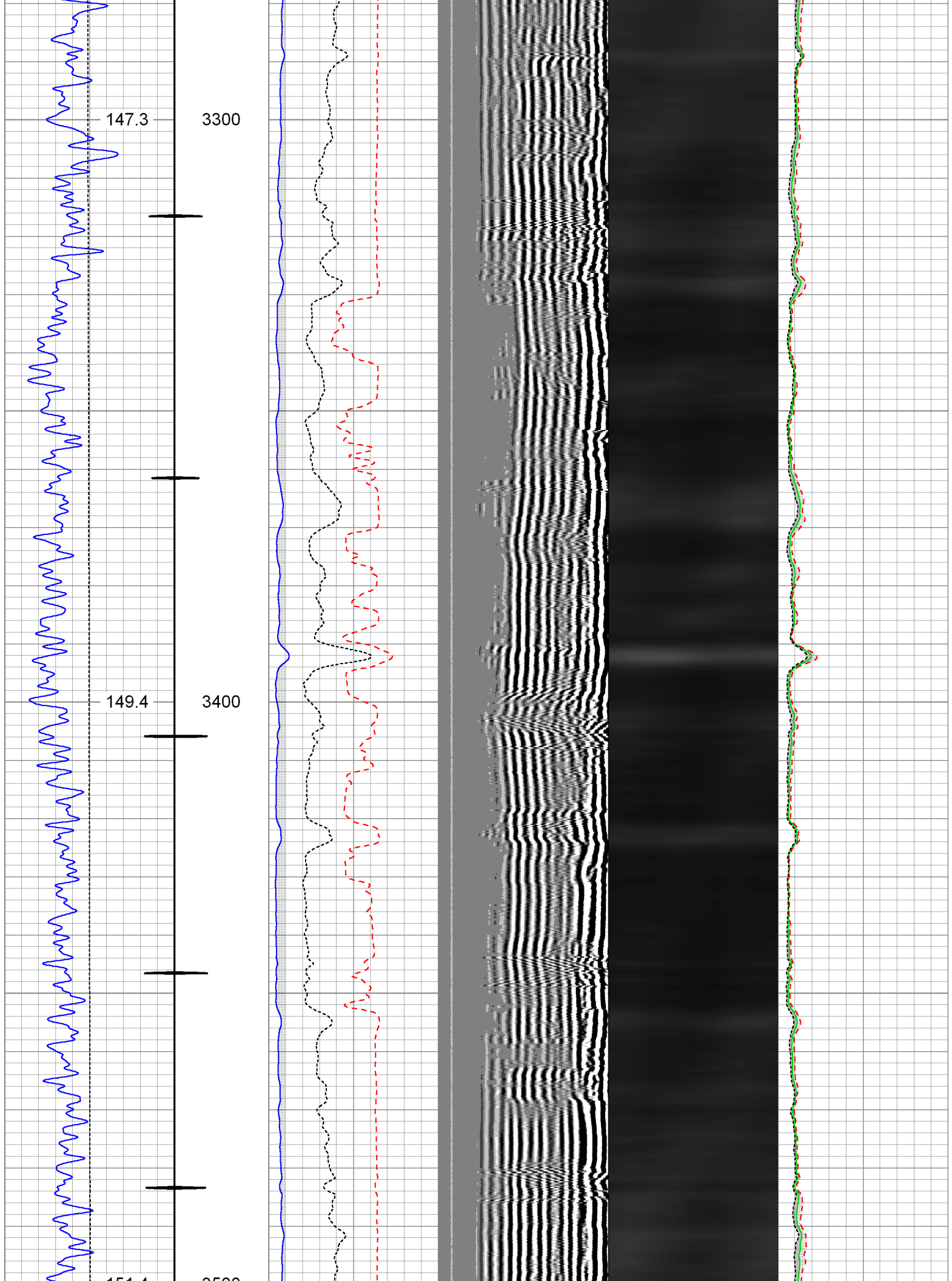


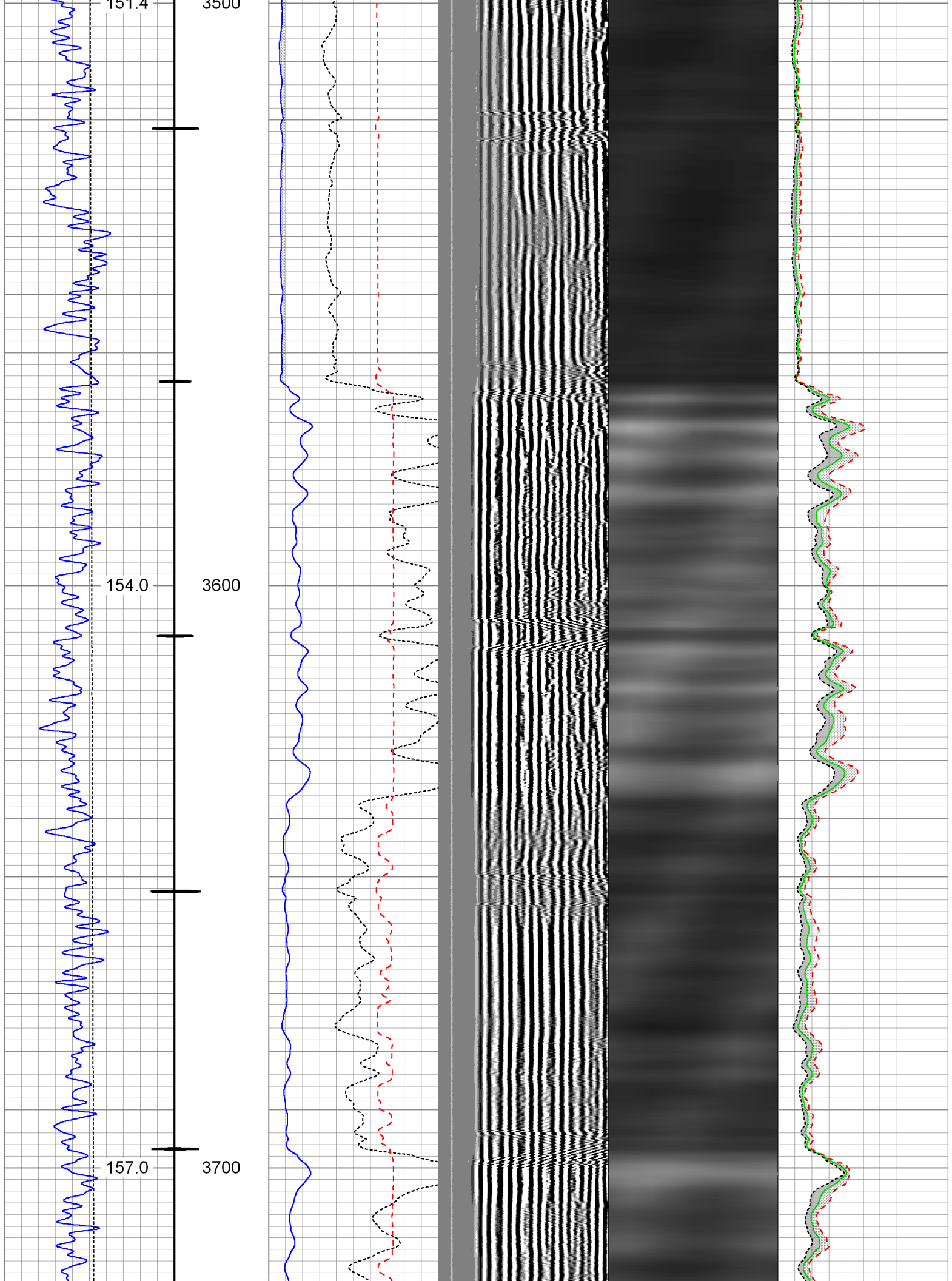


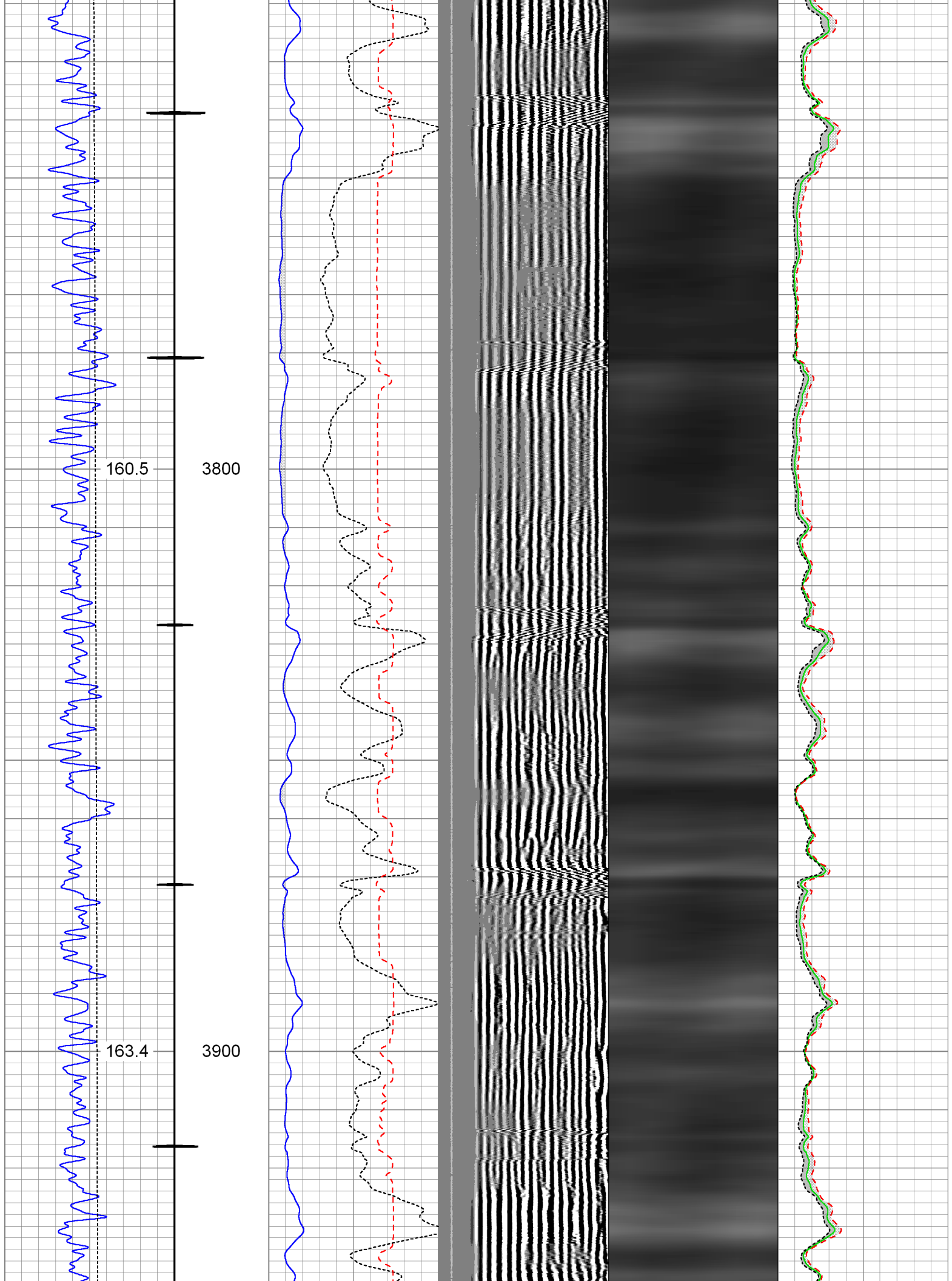


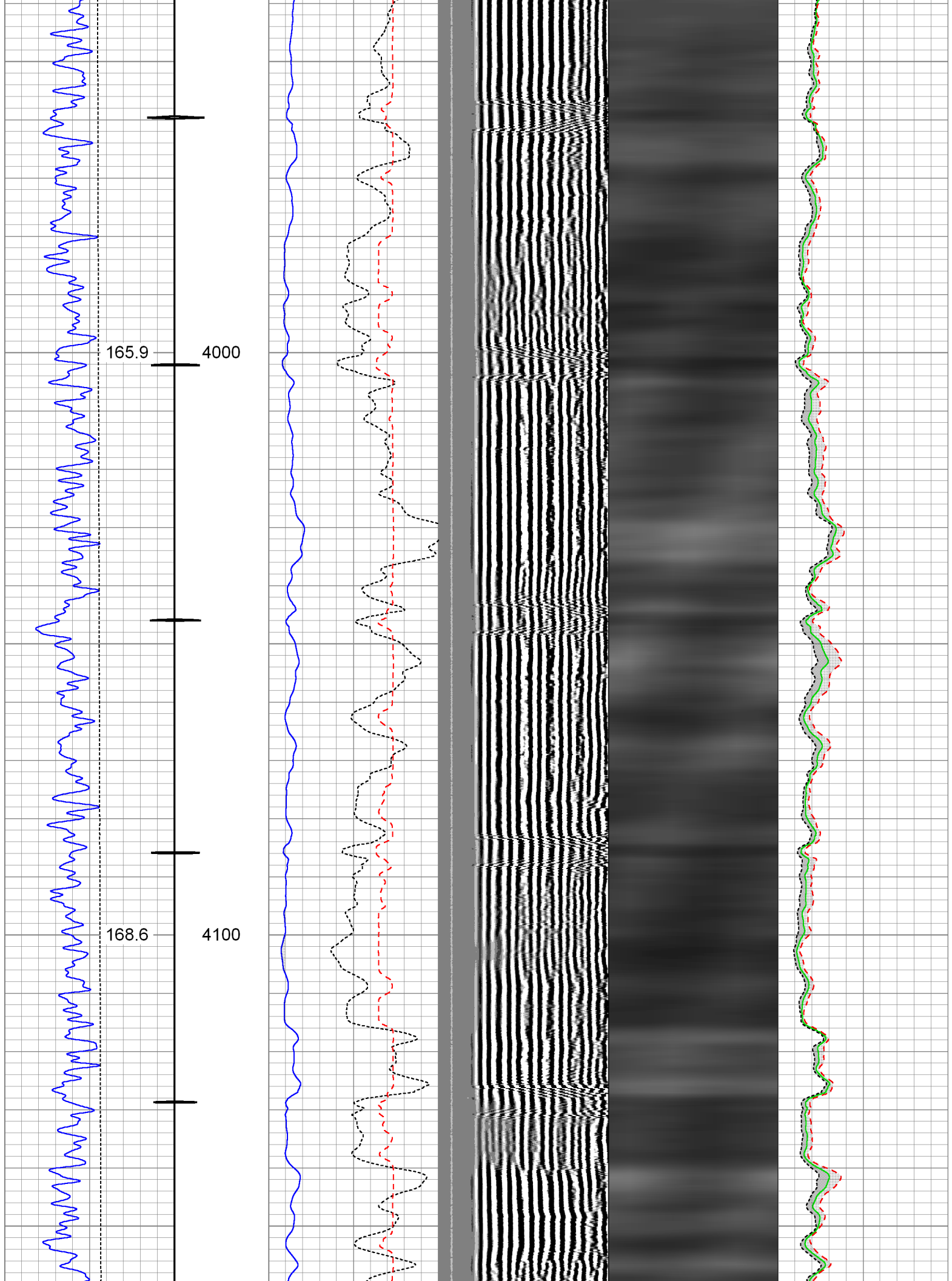


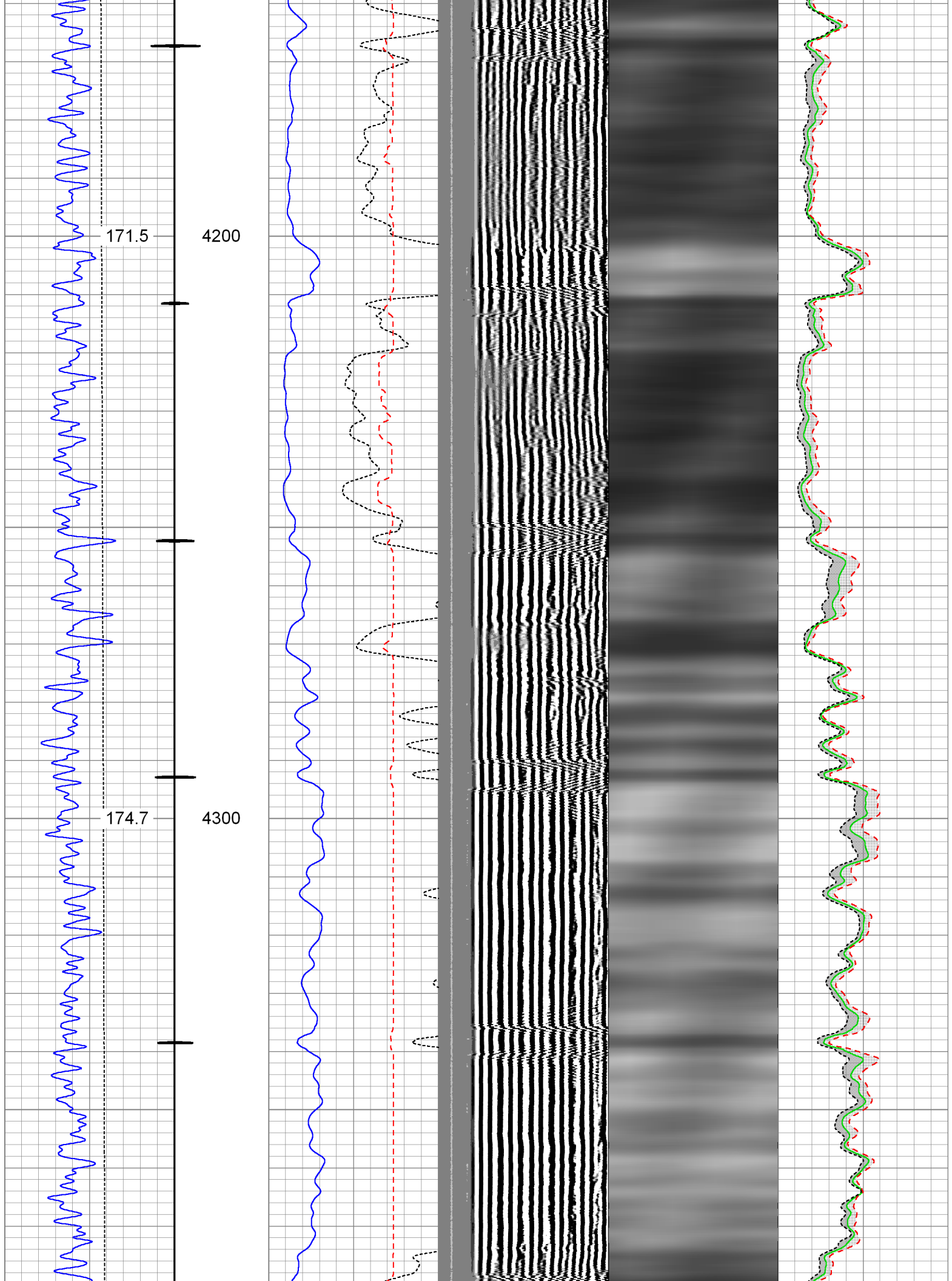


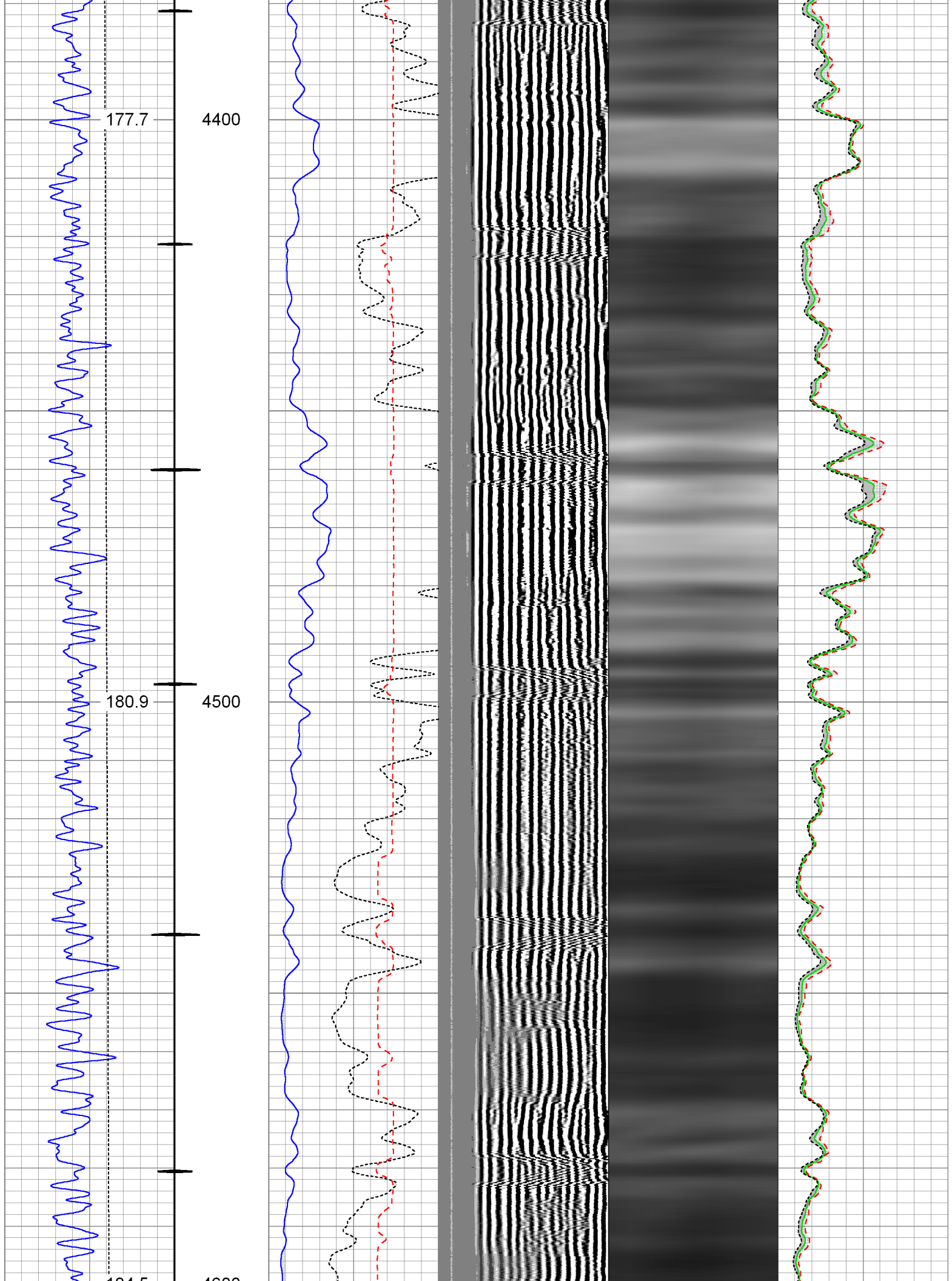


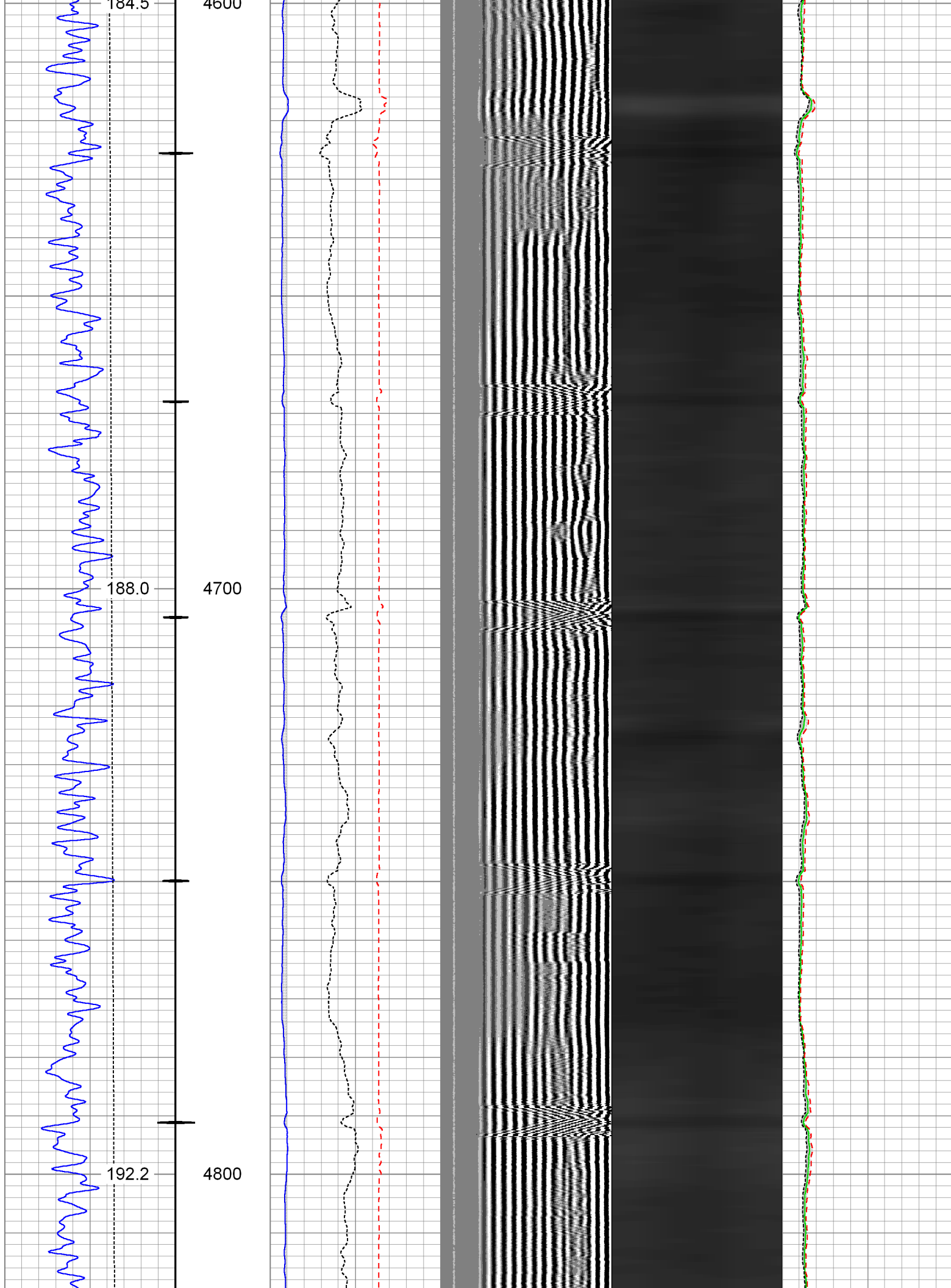


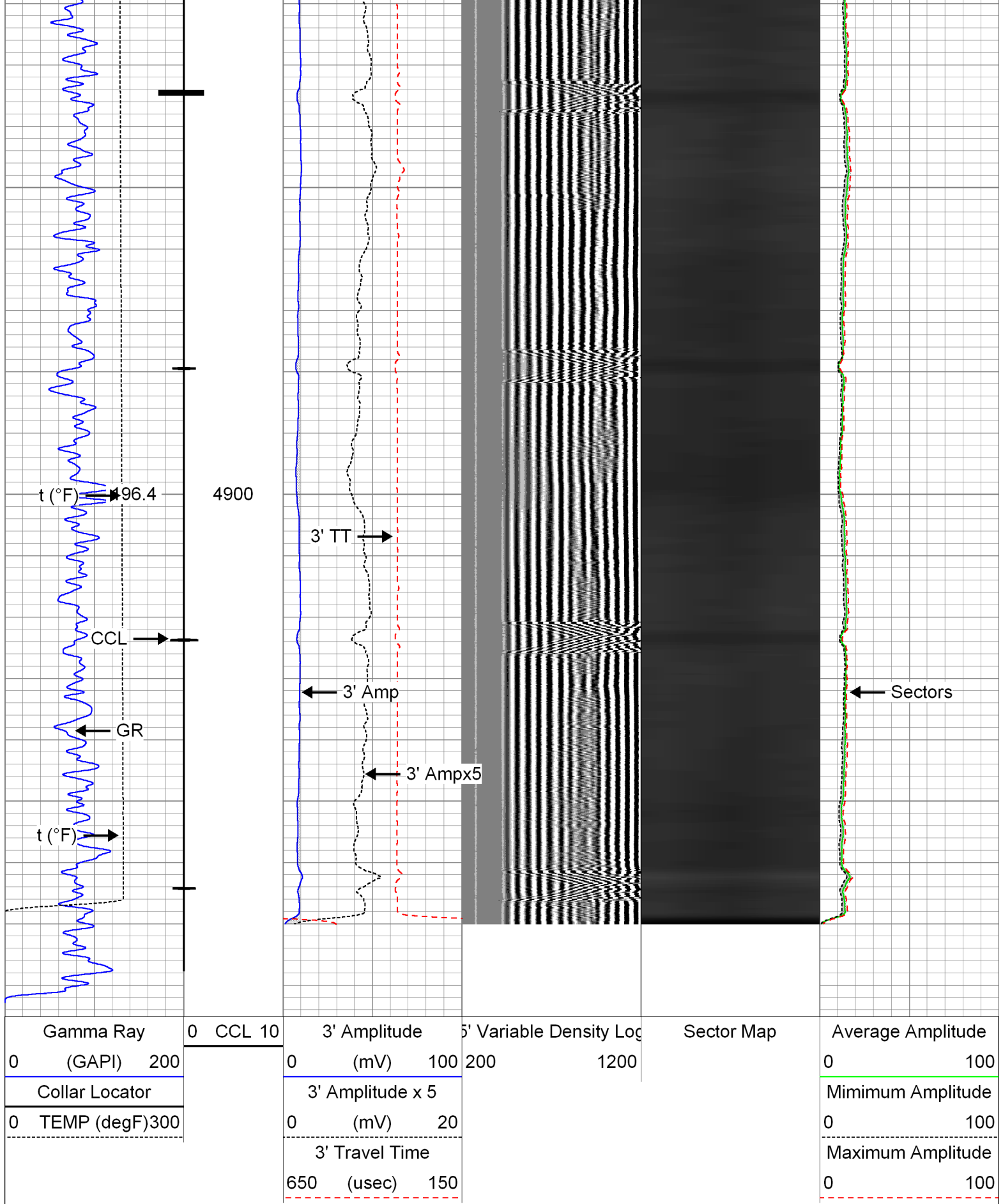












Database File: 05-123-37744_whiting_razor 27l-3404b_20-sep-2013_rcbl.db

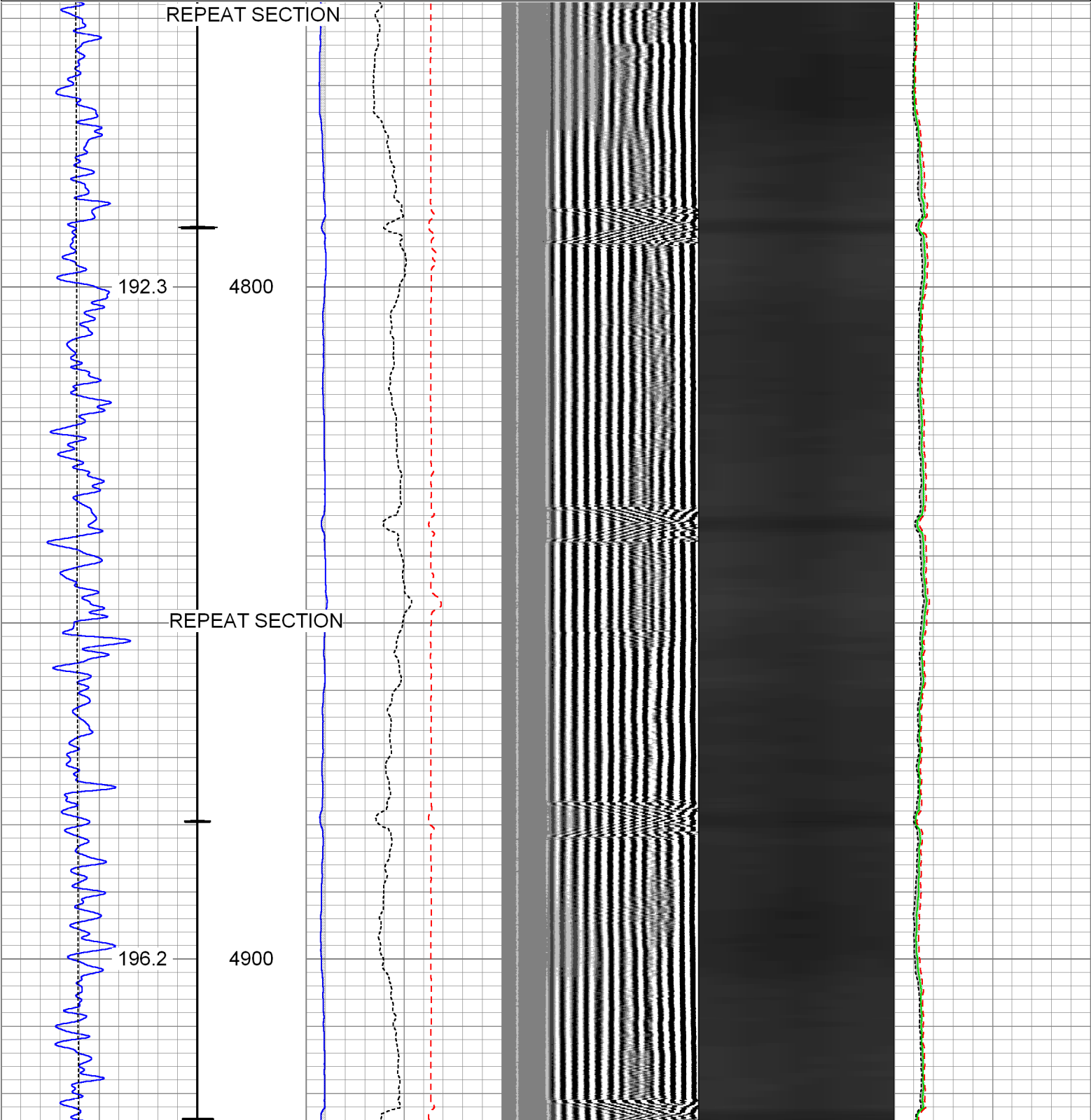
Dataset Pathname: pass11

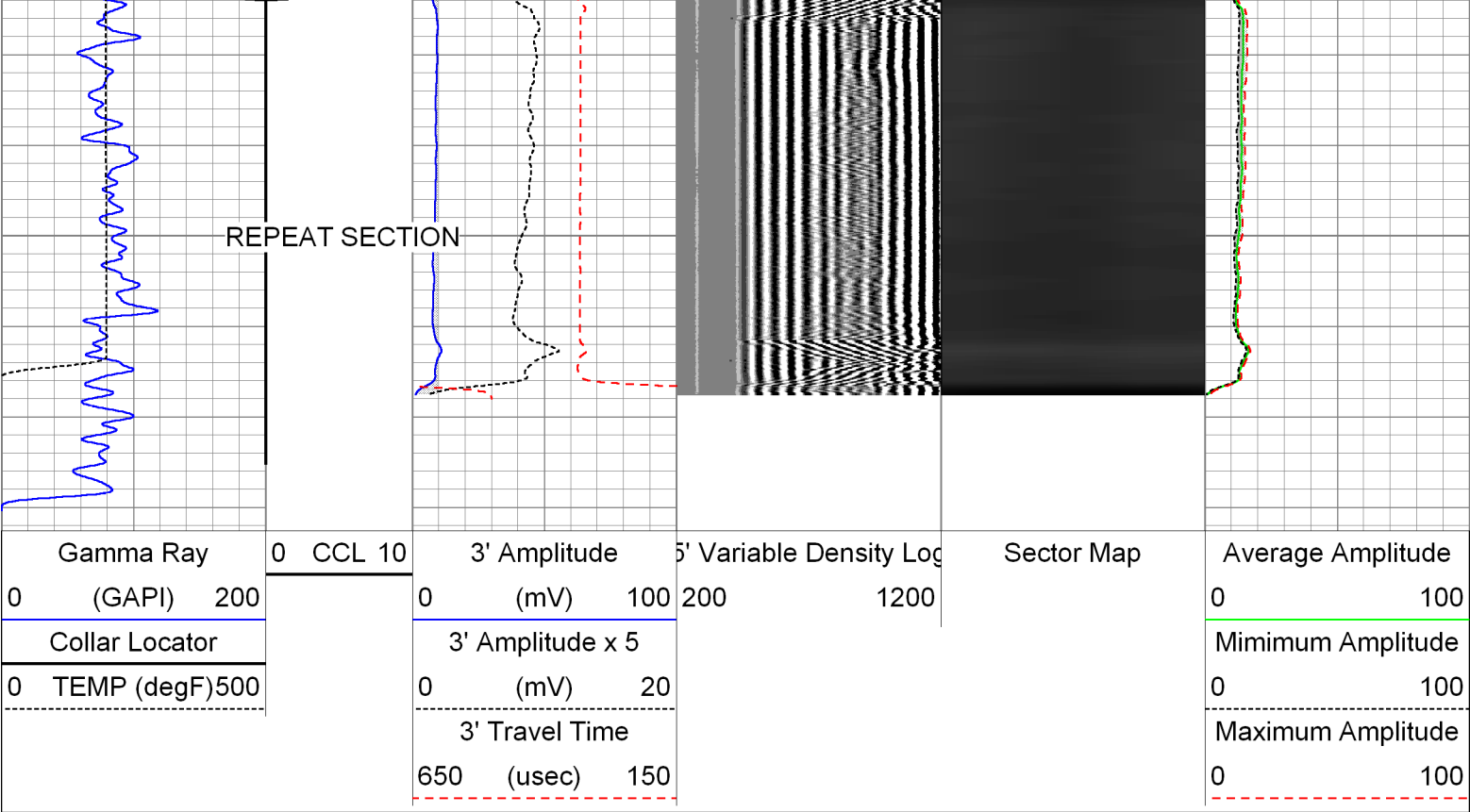
Presentation Format: rbt007

Dataset Creation: Fri Sep 20 11:43:53 2013 by Log SCH 111116

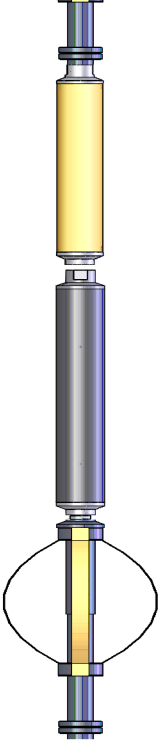
Charted by: Depth in Feet scaled 1:240

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) 500		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					
WVFS6	15.98					
WVFS7	15.98					
WVFS8	15.98					
WVF5FT	14.98		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring	2.88	2.75	10.00

CCL	7.38		Centralizer			
			Probe_CCL-2.75"_SA_6MAG_CCL (FW1307-76)	2.66	2.75	50.00
			Probe_CCL_GR-2.75"_SA_Corrosion_GR Probe 2.75 Inch Stand Alone Corrosion GR			50.00
GR	3.67		Probe_IL_BS_Cent Probe 2-3/4" Inline Electrical Inline Bowspring Centralizer	2.88	2.75	10.00
Dataset: 05-123-37744_whiting_razor 27l-3404b_20-sep-2013_rcbl.db: field/well/run1/pass12 Total Length: 24.88 ft Total Weight: 235.00 lb O.D. 2.75 in						

Calibration Report	
Database File:	05-123-37744_whiting_razor 27l-3404b_20-sep-2013_rcbl.db
Dataset Pathname:	pass12
Dataset Creation:	Fri Sep 20 11:48:37 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
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Serial Number:	FW1305-96in7"	
Tool Model:	2-3/4"	
Calibration Casing Diameter:	7.000	in
Calibration Depth:	1042.113	ft

Master Calibration, performed Sun Sep 08 13:10:35 2013:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.006	0.771	0.800	62.165	78.937	1.267
CAL	-0.009	0.969				
FL	0.005	0.778	0.800	62.165	78.937	1.267

S	-0.005	0.778	0.800	62.165	78.364	1.205
SUM						
S1	-0.015	0.717	0.000	100.000	136.554	2.070
S2	-0.007	0.724	0.000	100.000	136.766	0.937
S3	-0.007	0.749	0.000	100.000	132.259	0.906
S4	-0.007	0.793	0.000	100.000	124.983	0.908
S5	-0.007	0.819	0.000	100.000	121.166	0.805
S6	-0.006	0.815	0.000	100.000	121.858	0.744
S7	-0.007	0.775	0.000	100.000	127.852	0.891
S8	-0.007	0.751	0.000	100.000	131.965	0.936

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	-0.009	0.969	1.000	0.000

Air Zero Calibration, performed Sun Sep 08 12:34:09 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 27L-3404B
Field Wildcat
County Weld
State Colorado