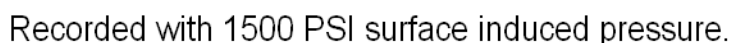


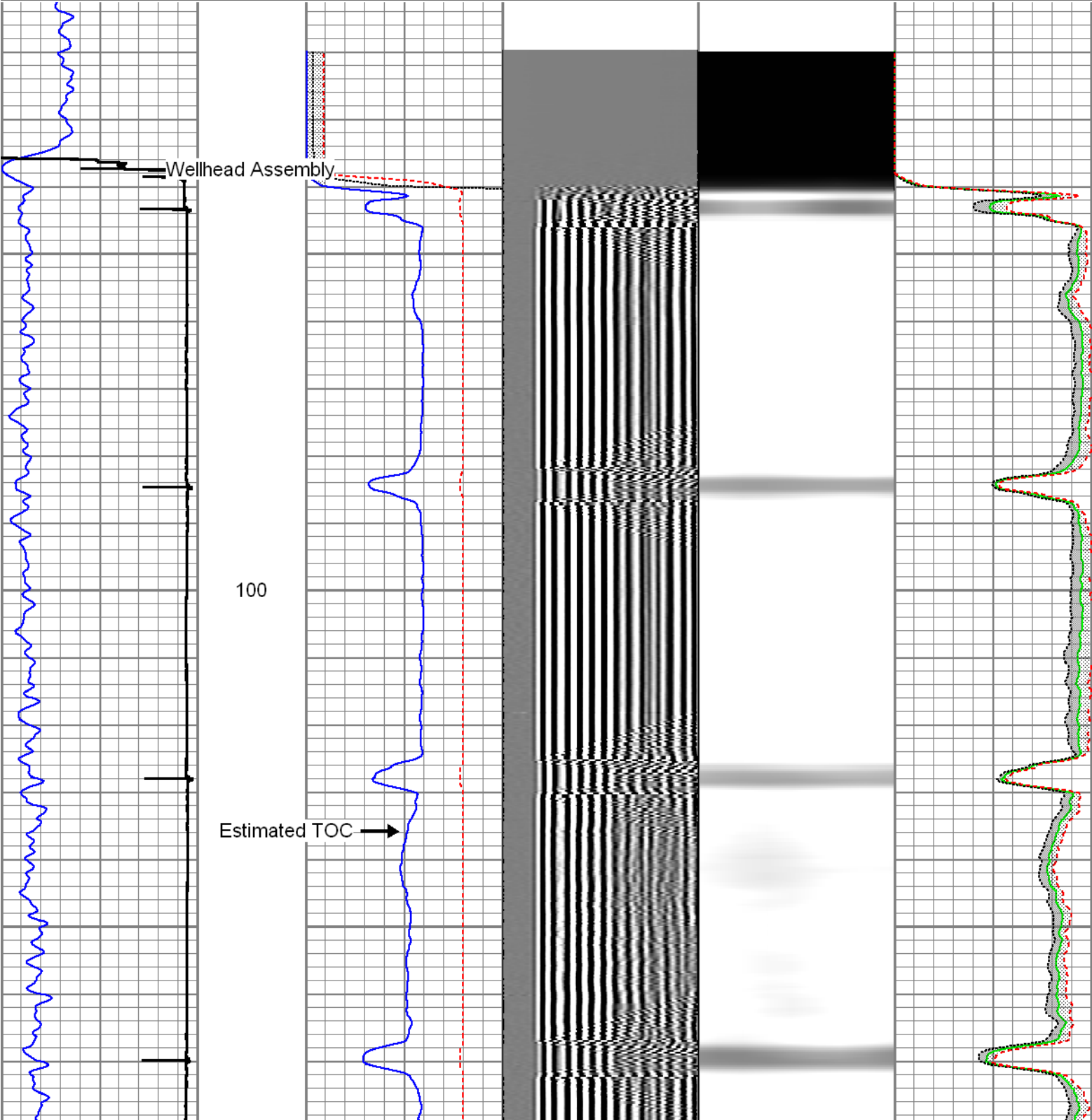


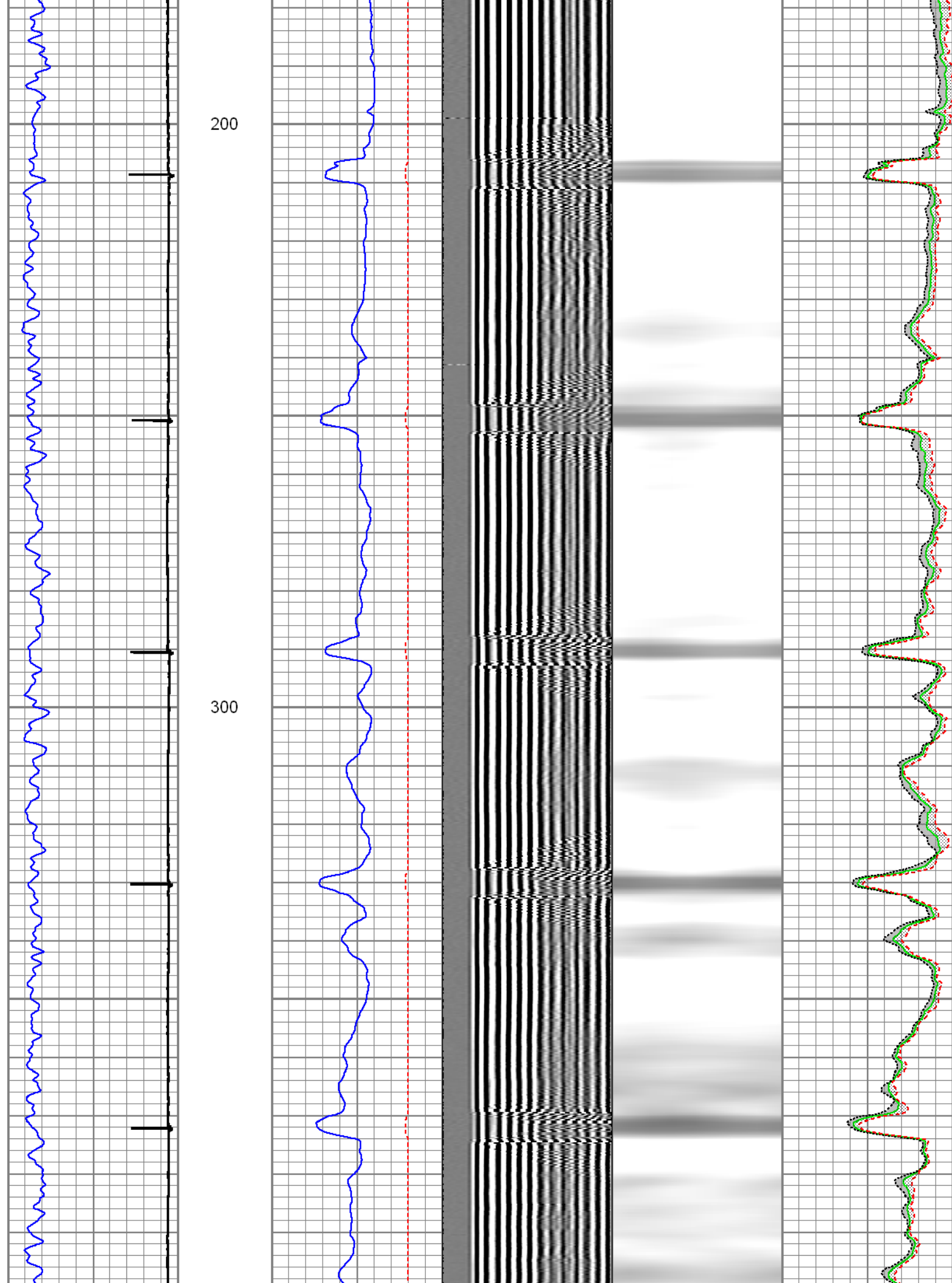
<<< Fold Here >>>
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible 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. All wireline depths measured from KB zero at 17 FT. Depth reference to Casing Tally reported Liner Top at 5209 FT. Adjusted log 20 FT from KB zero to correlate with Liner Top. Log ran from just below liner top to surface. Log ran with 1500 PSI surface induced pressure.  Thank you for choosing FMC Technologies Completion Services, Inc.!!

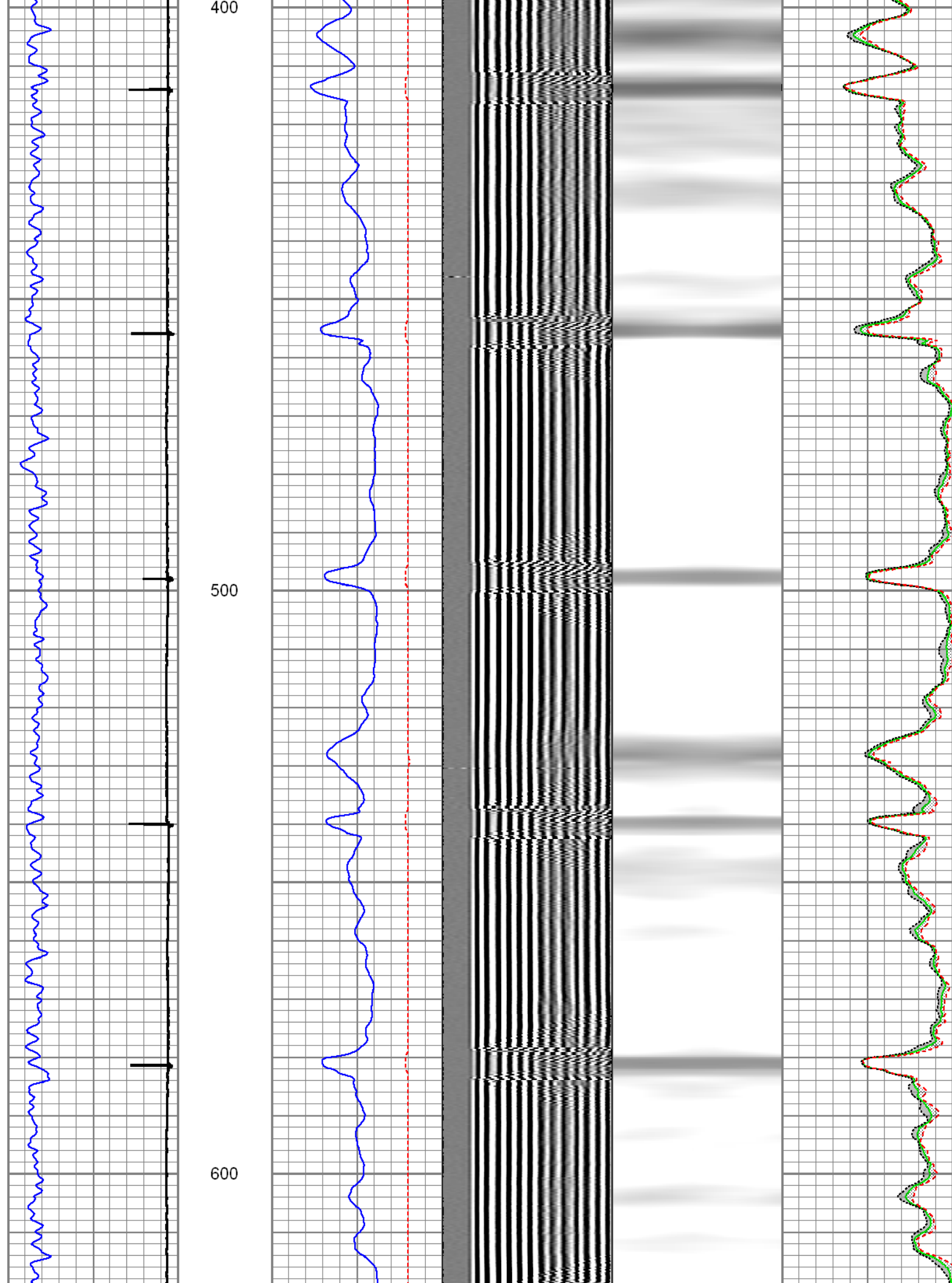


Database File: 07-12-14\_whiting\_razor 26l-3504b\_mit\_rbl.db  
Dataset Pathname: pass7  
Presentation Format: rbt4\_mit  
Dataset Creation: Sat Jul 12 11:13:14 2014 by Log 7.0 B1  
Charted by: Depth in Feet scaled 1:240

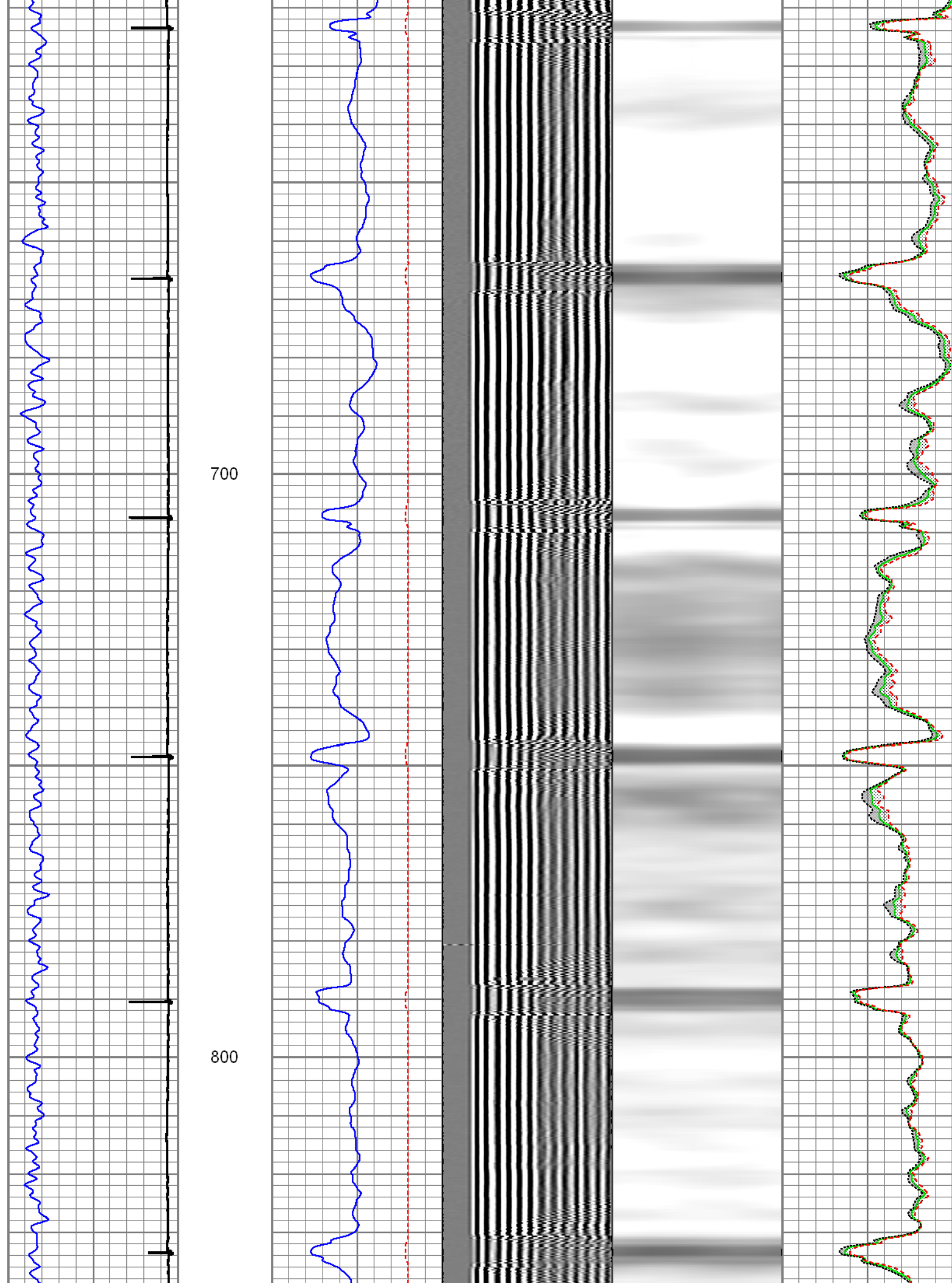
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude
	0 (mV) 20			0 100
	3' Travel Time			Maximum Amplitude
	650 (usec) 150			0 100

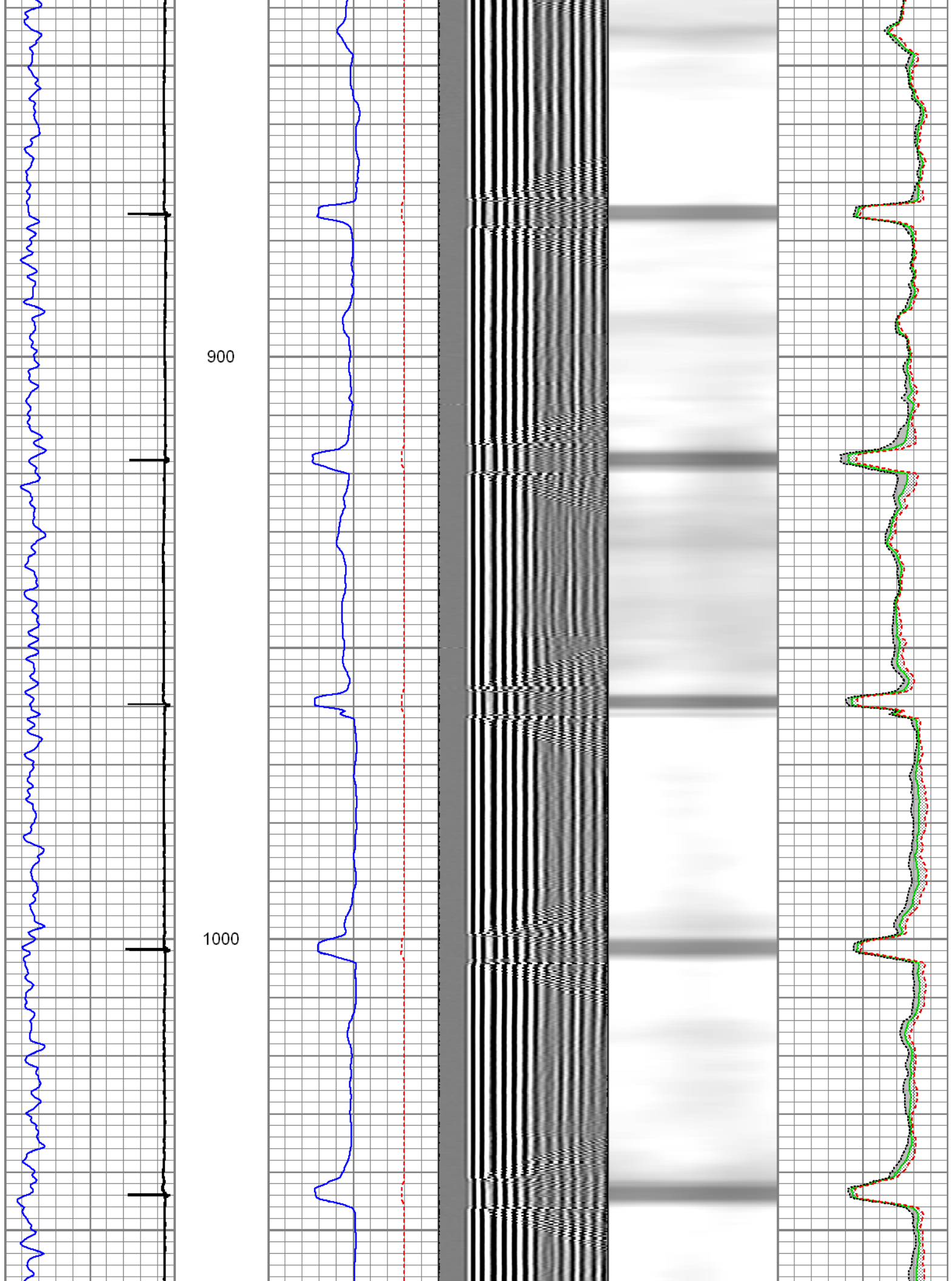


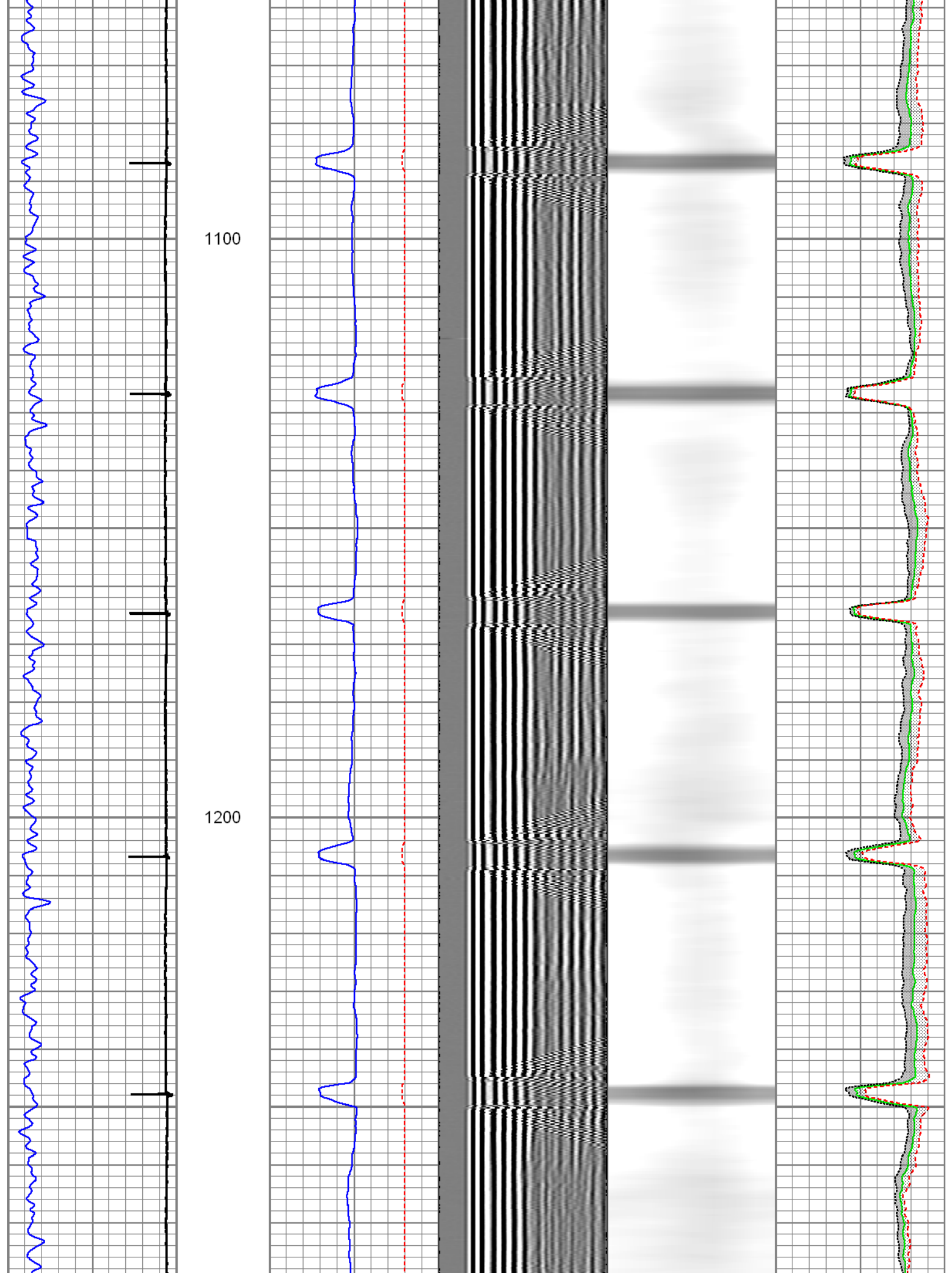


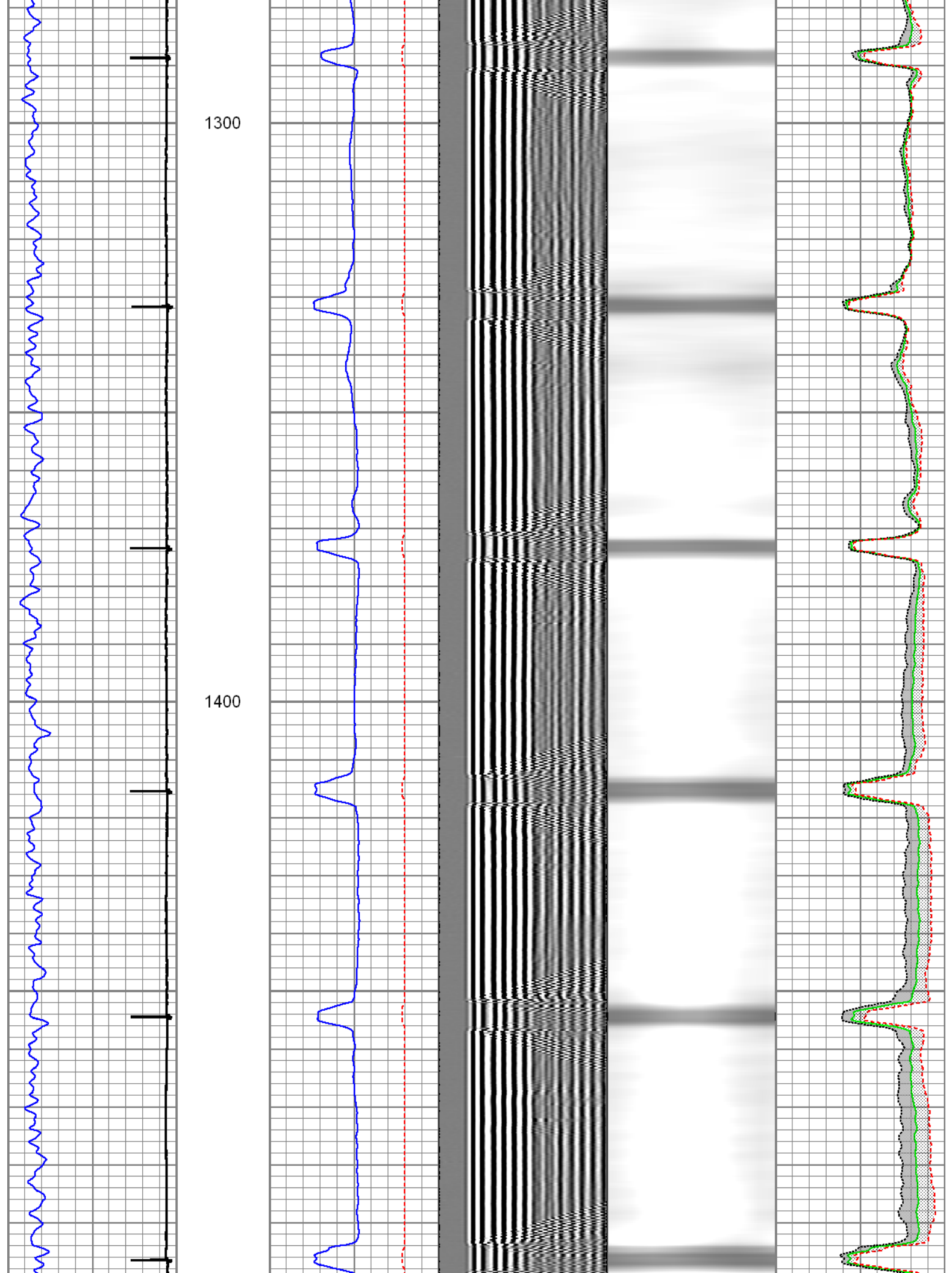




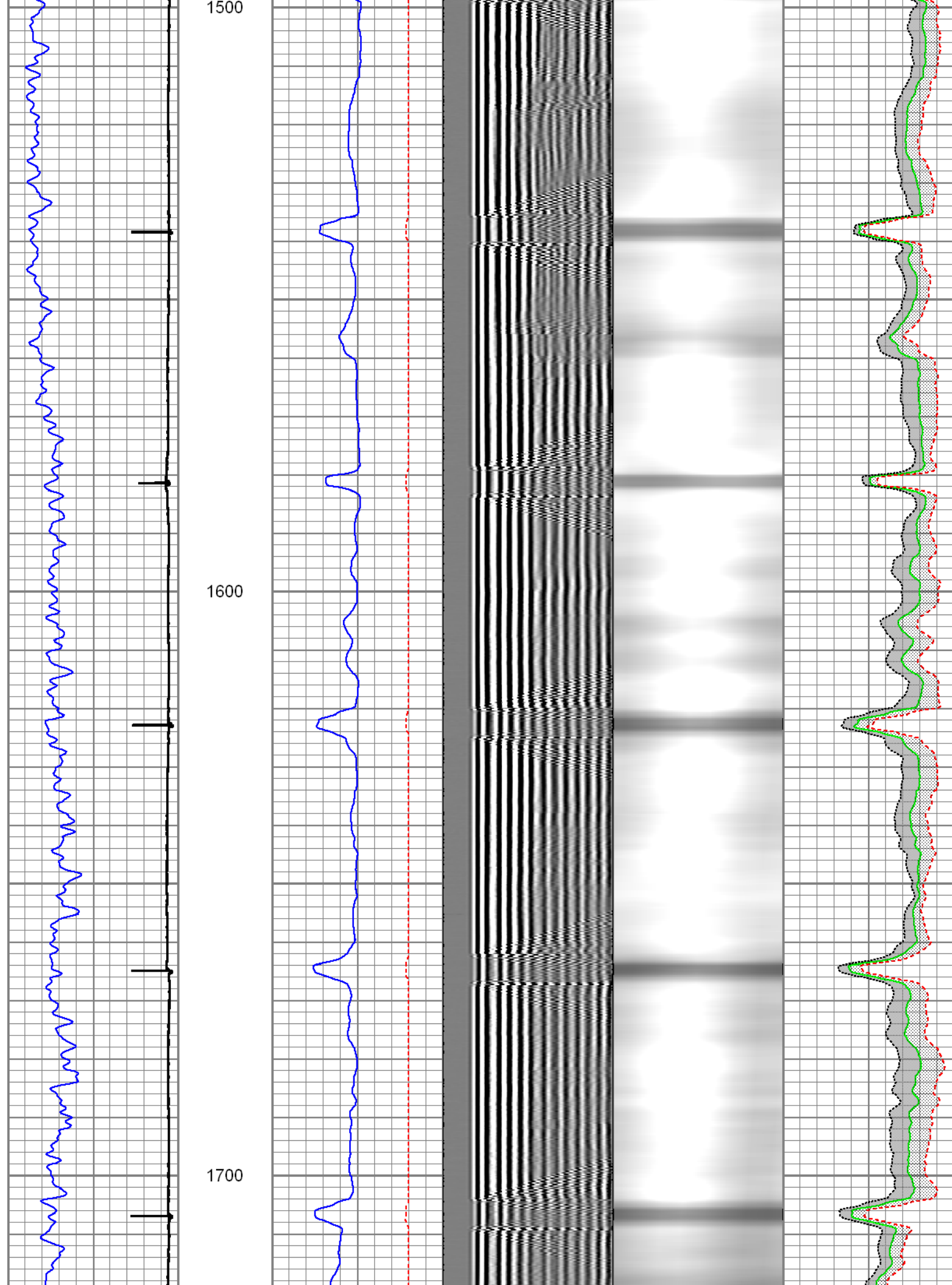


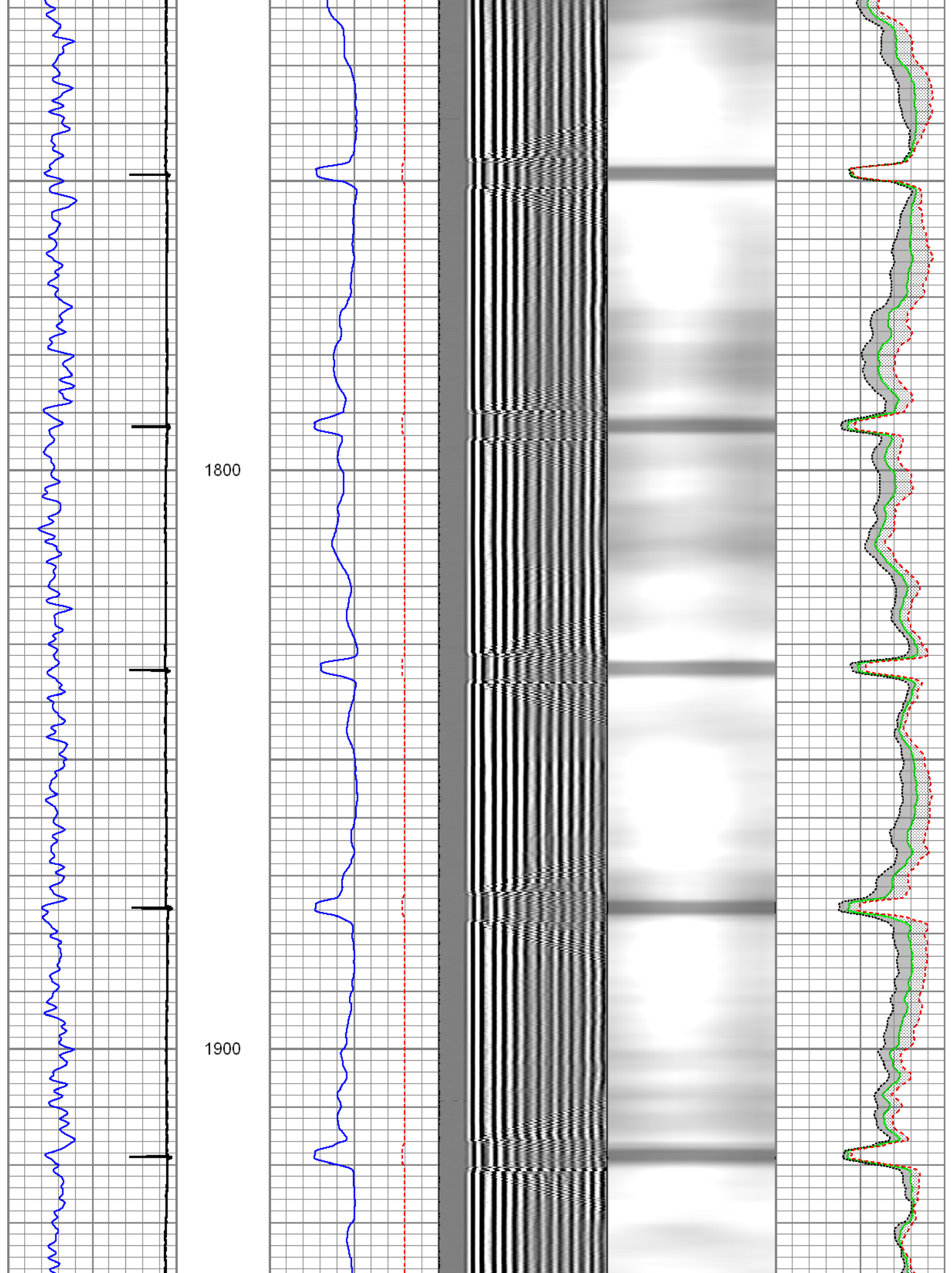


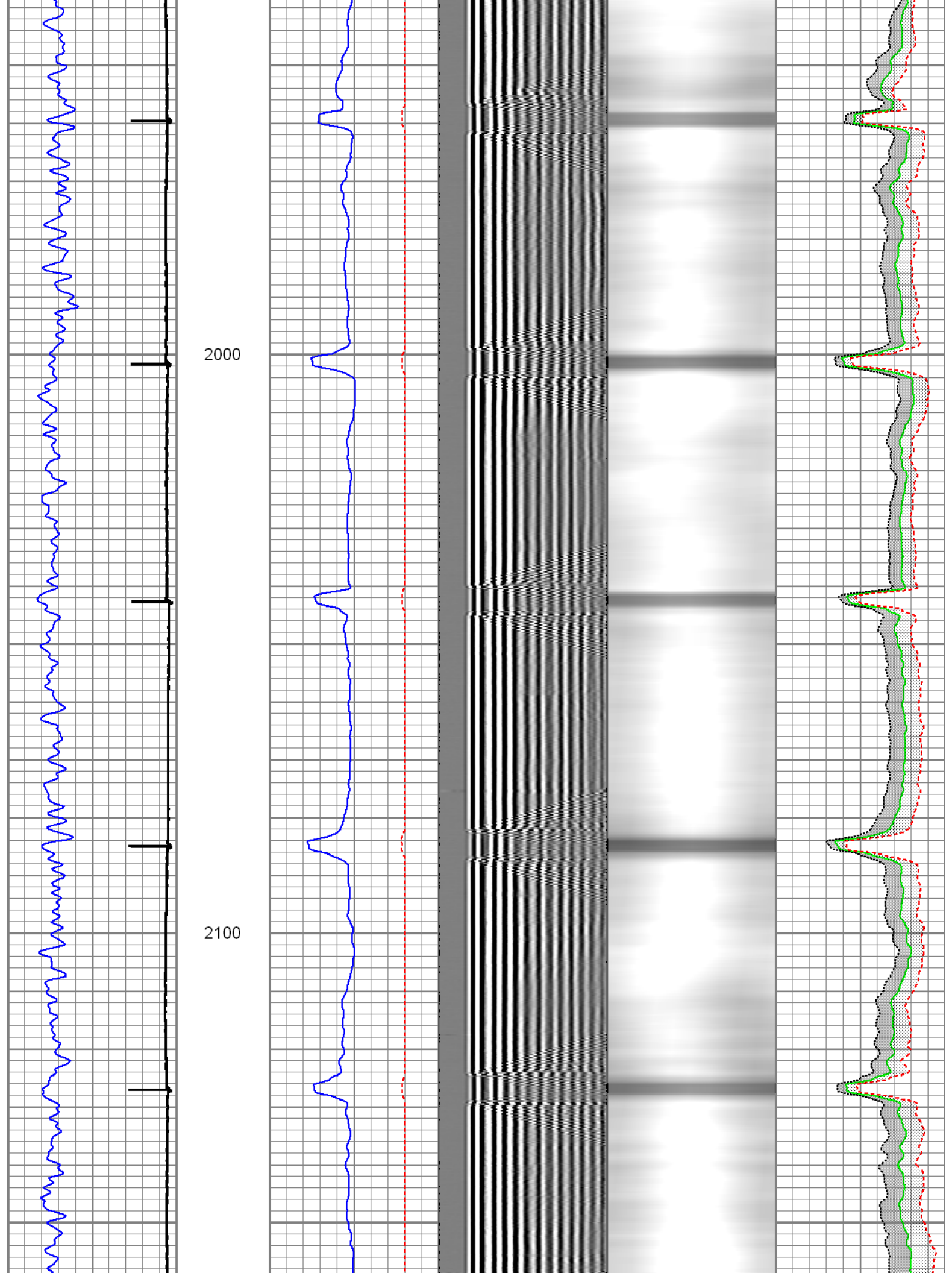




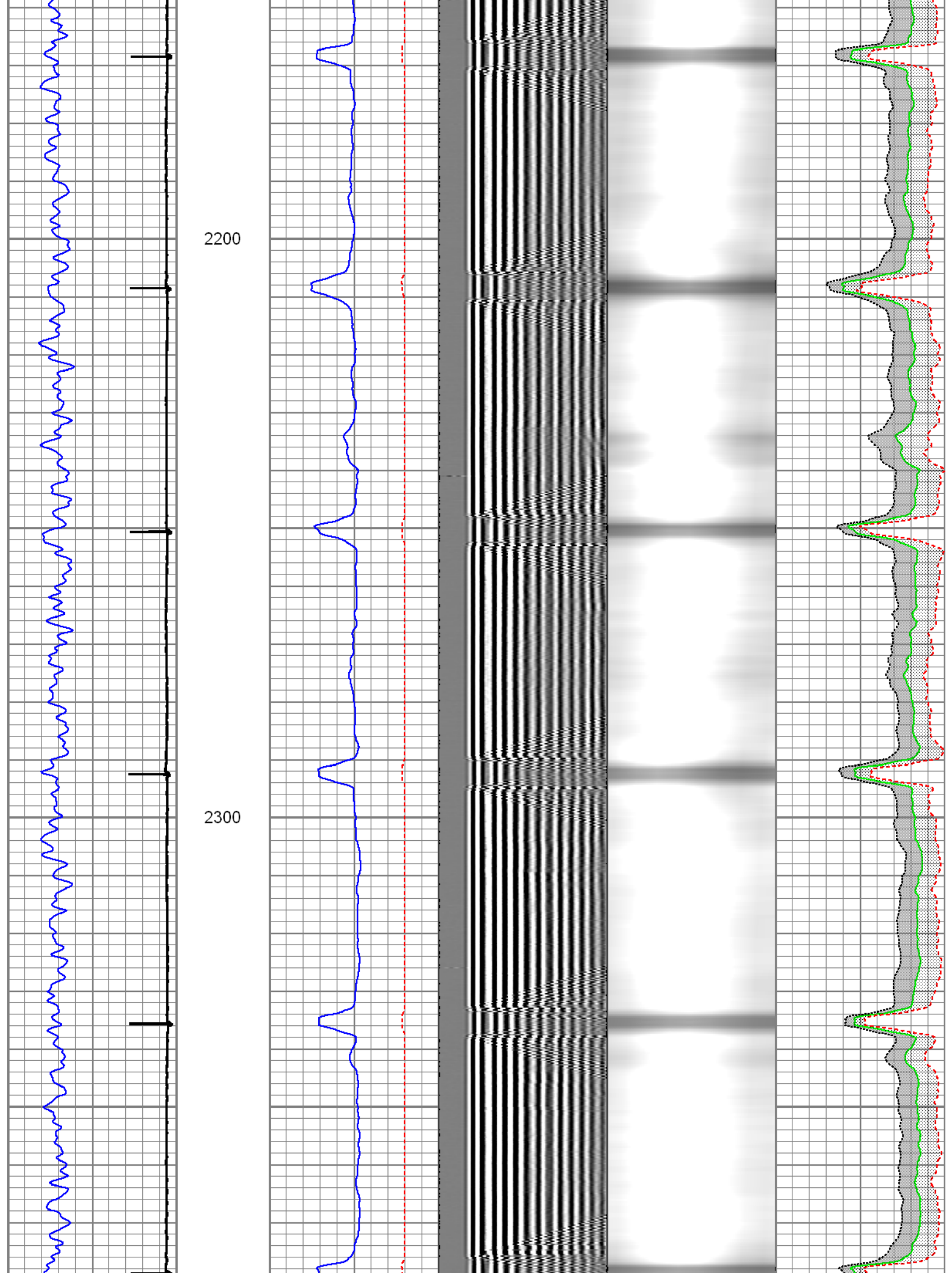




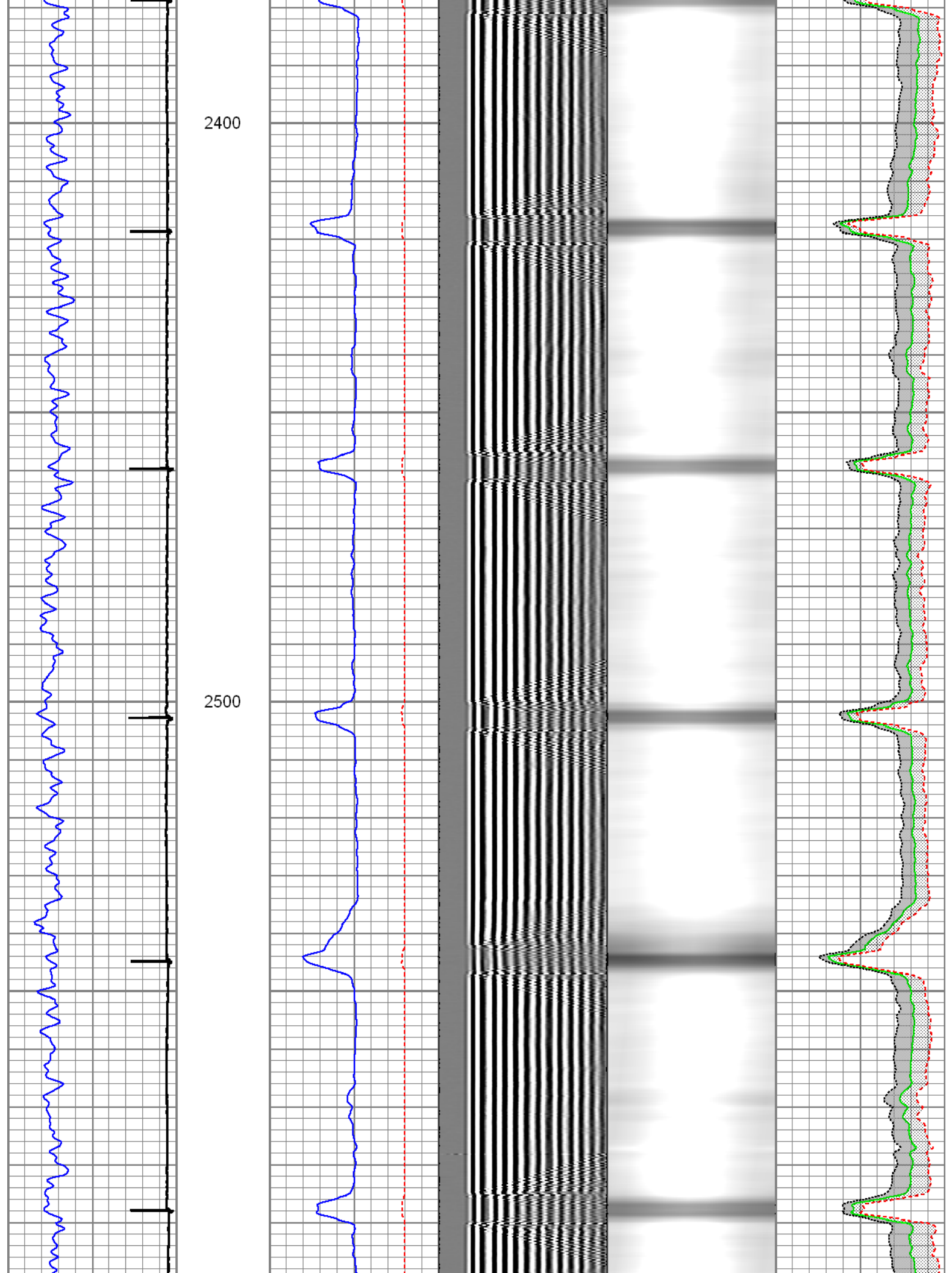








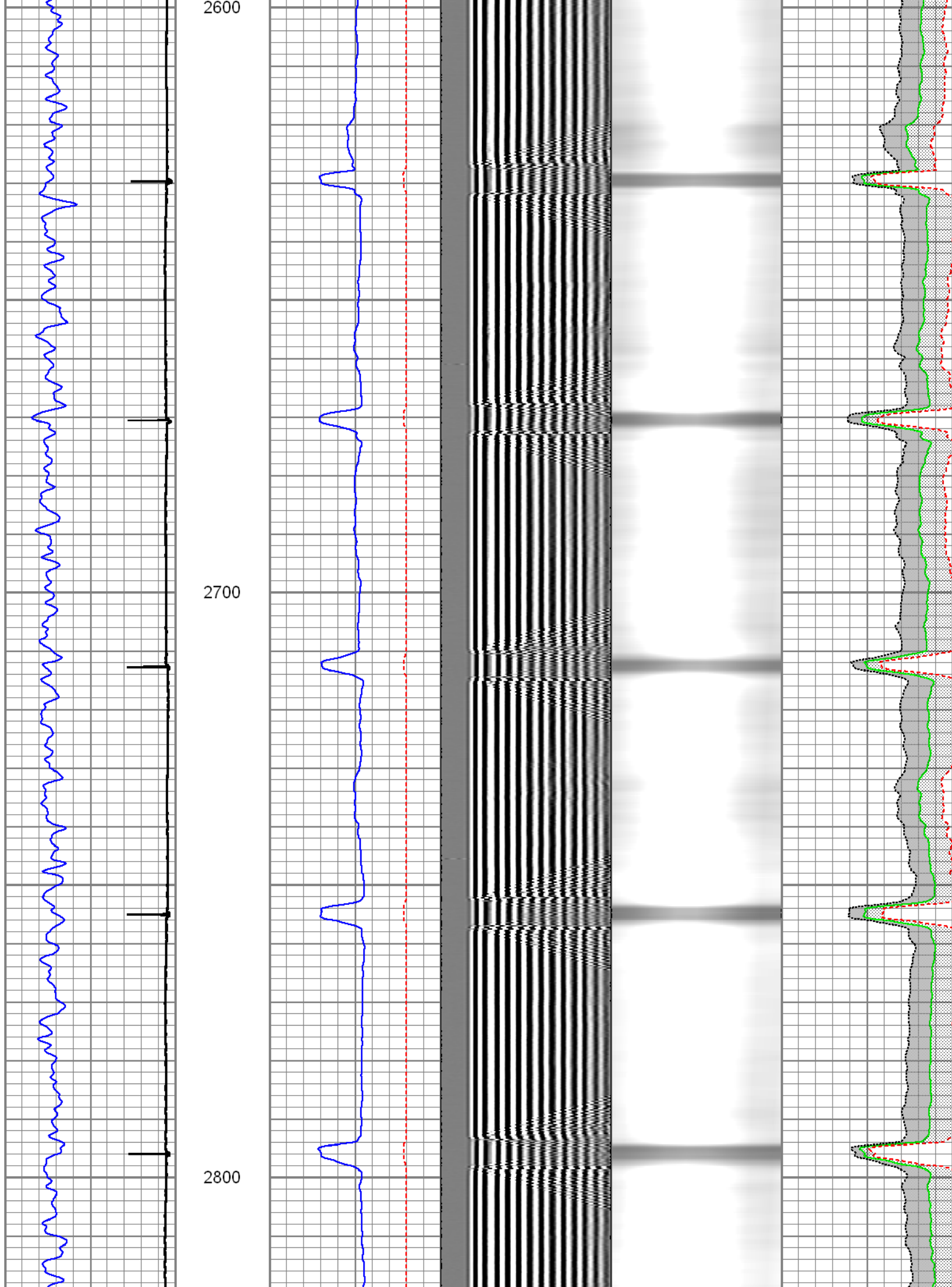


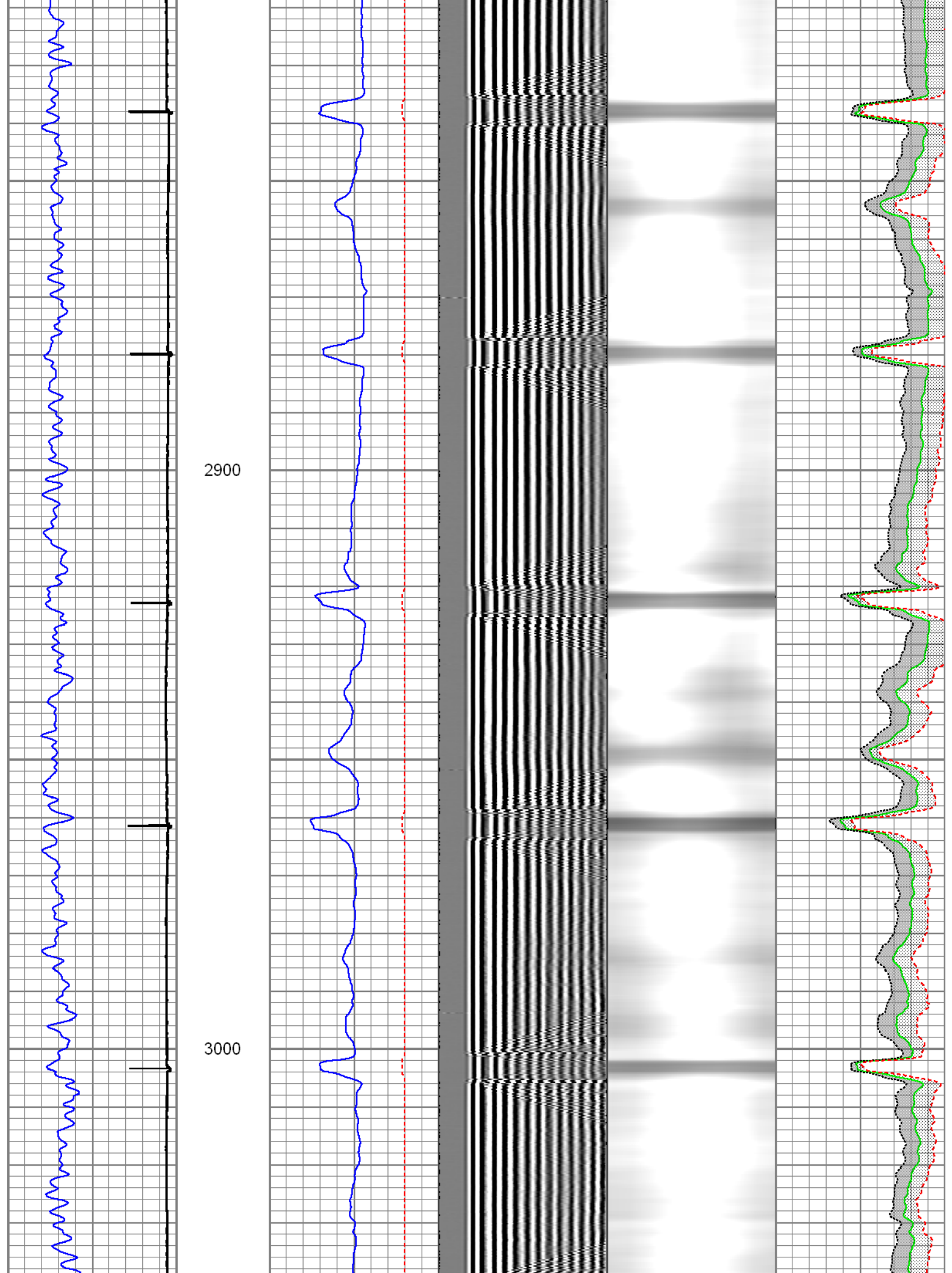


2600

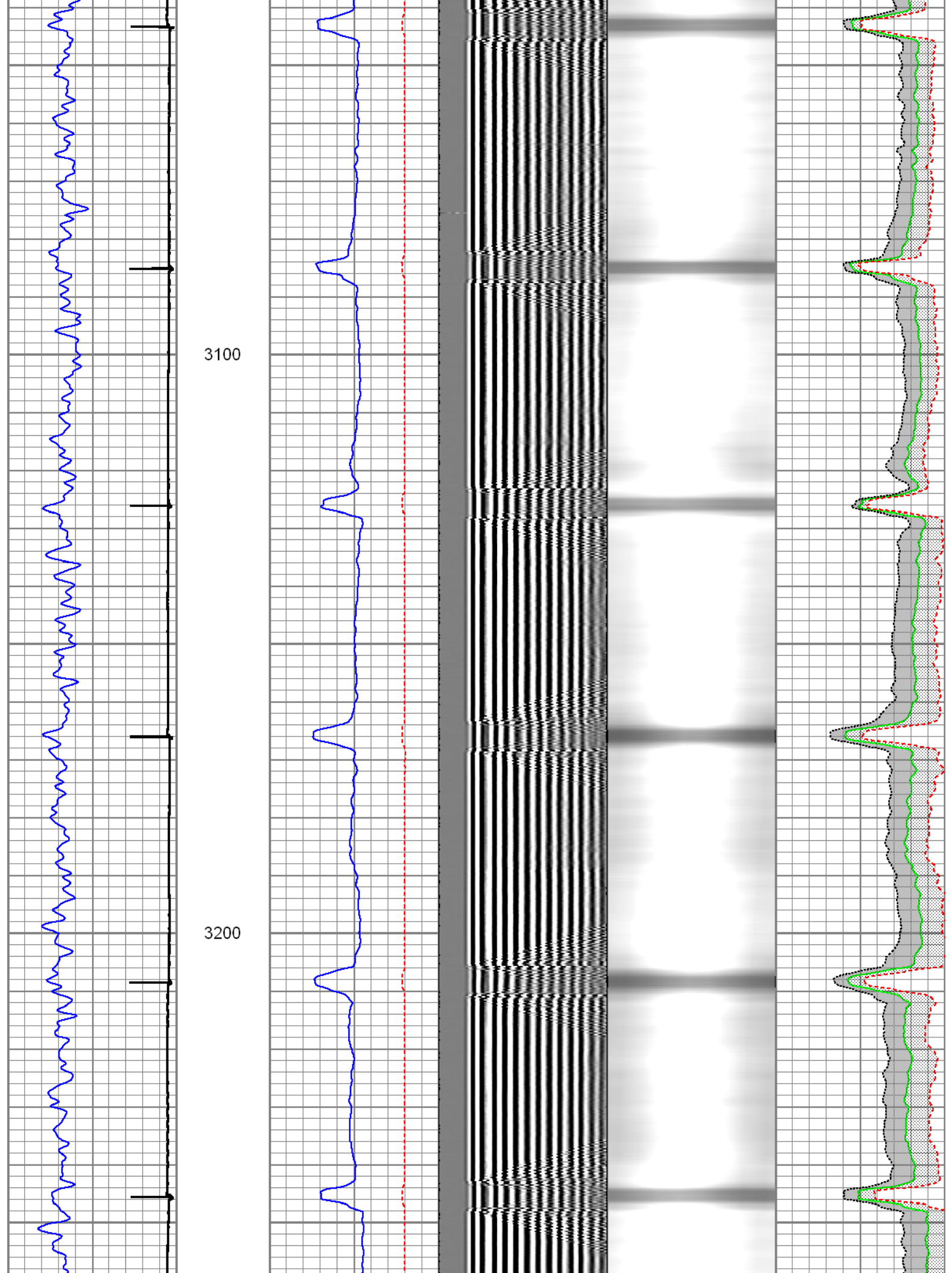
2700

2800

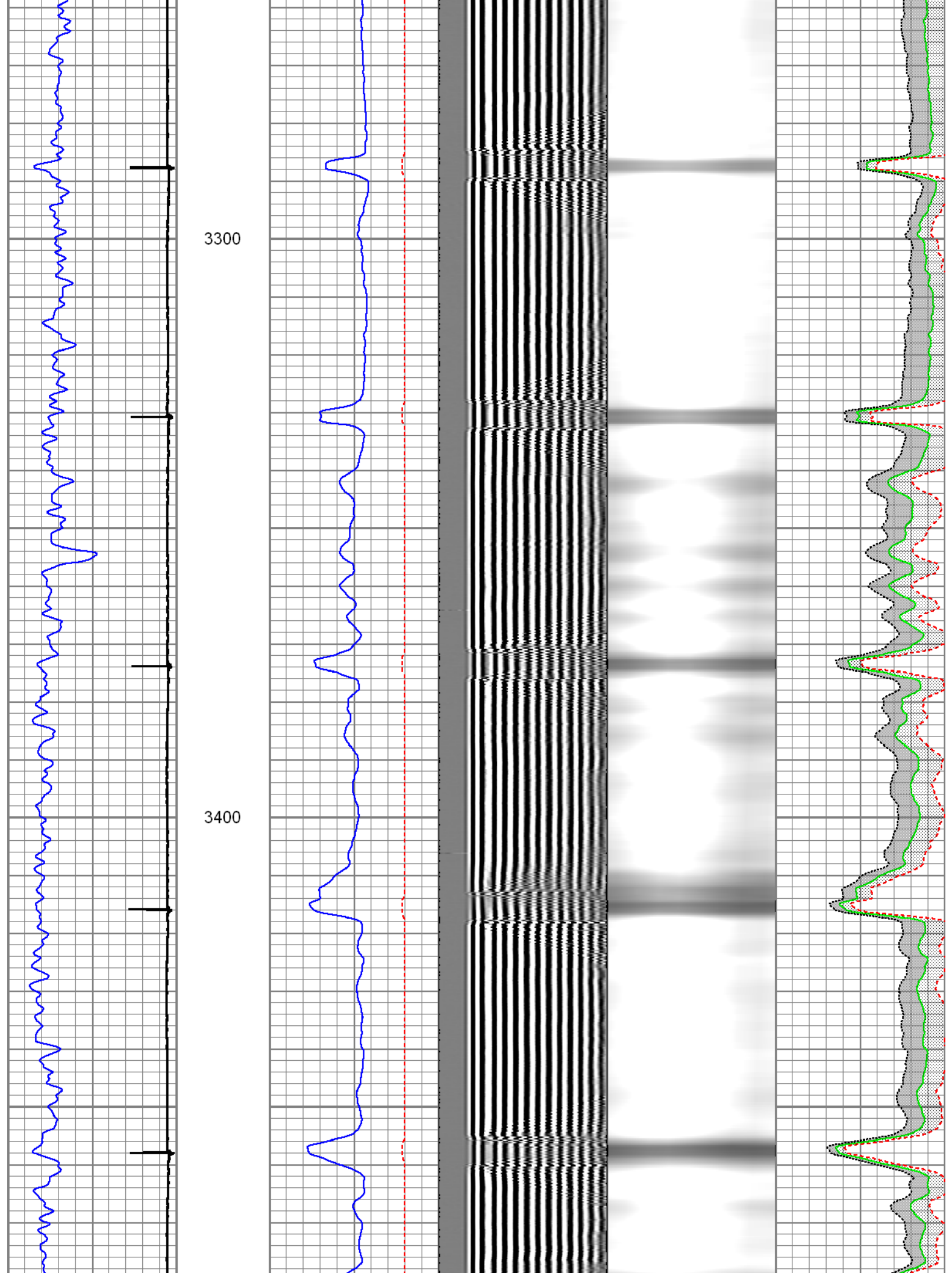


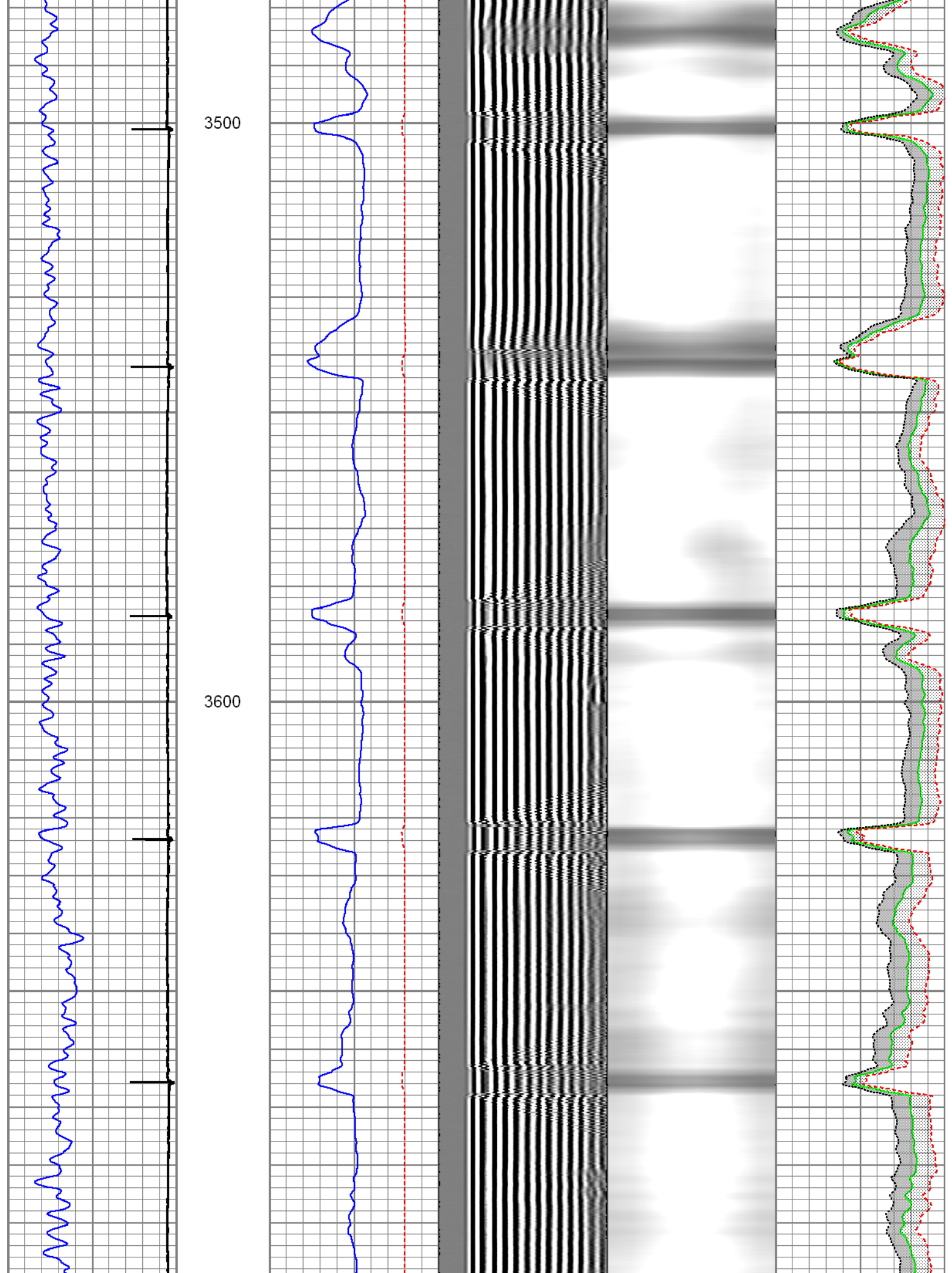


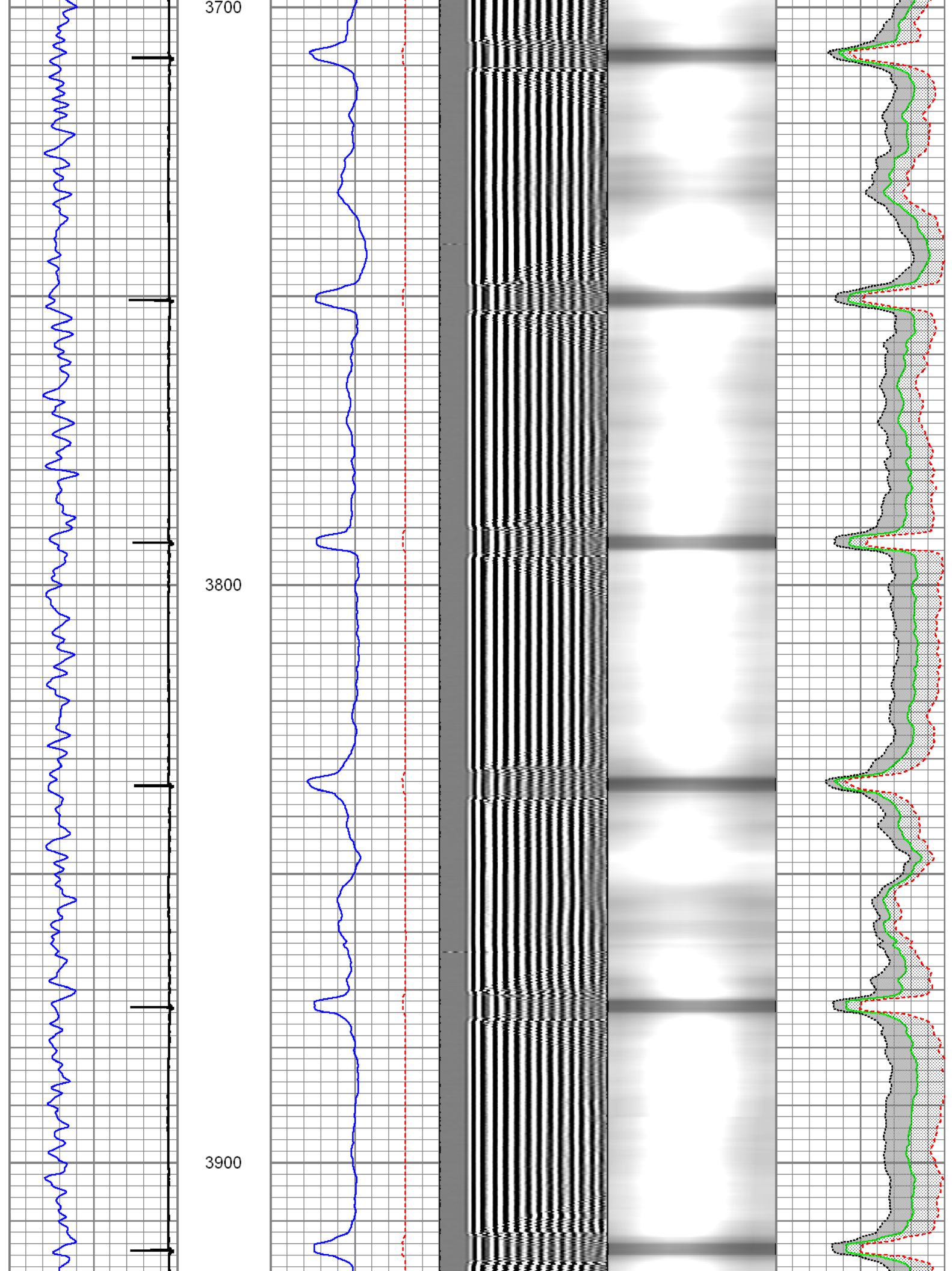




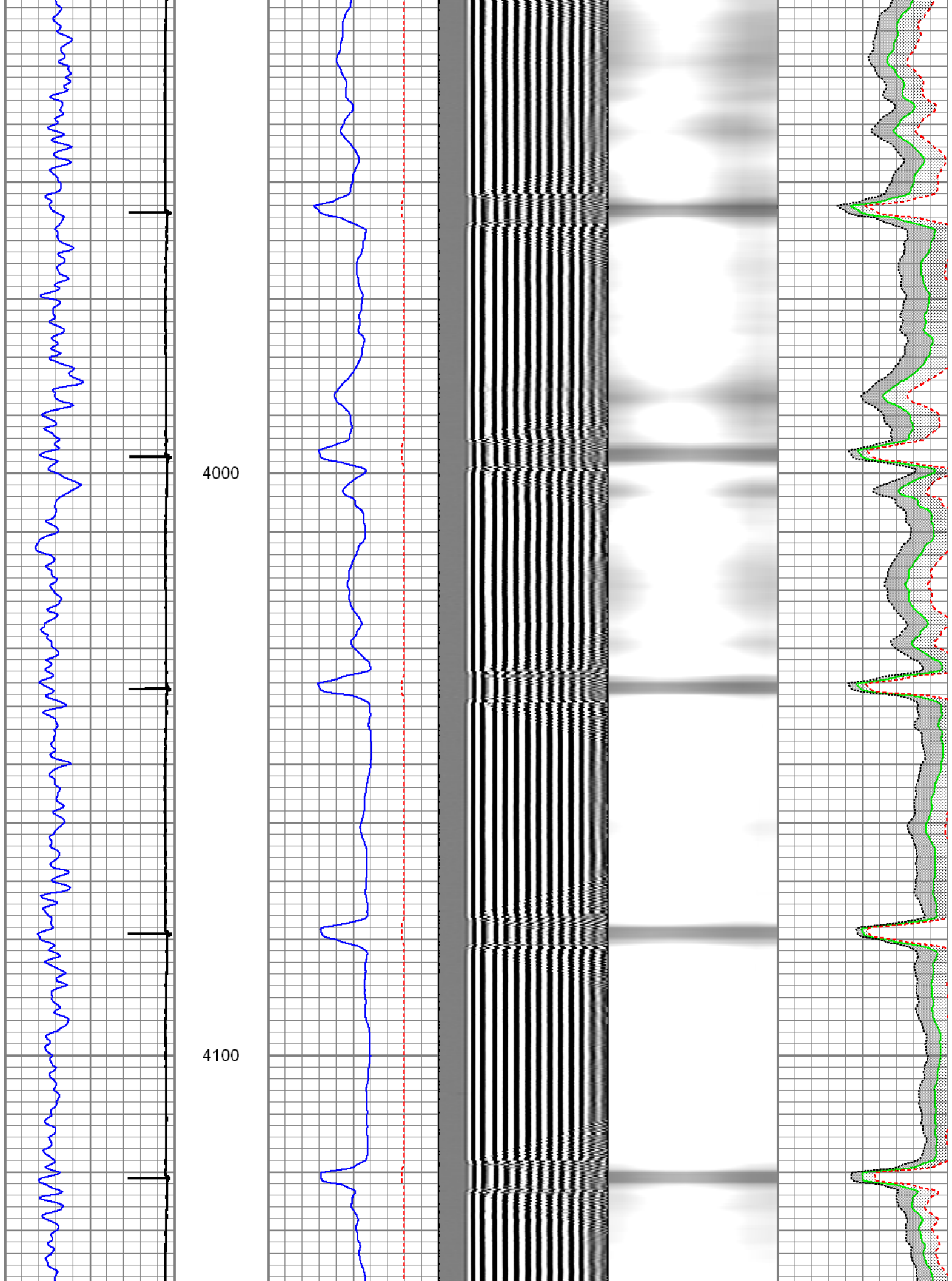




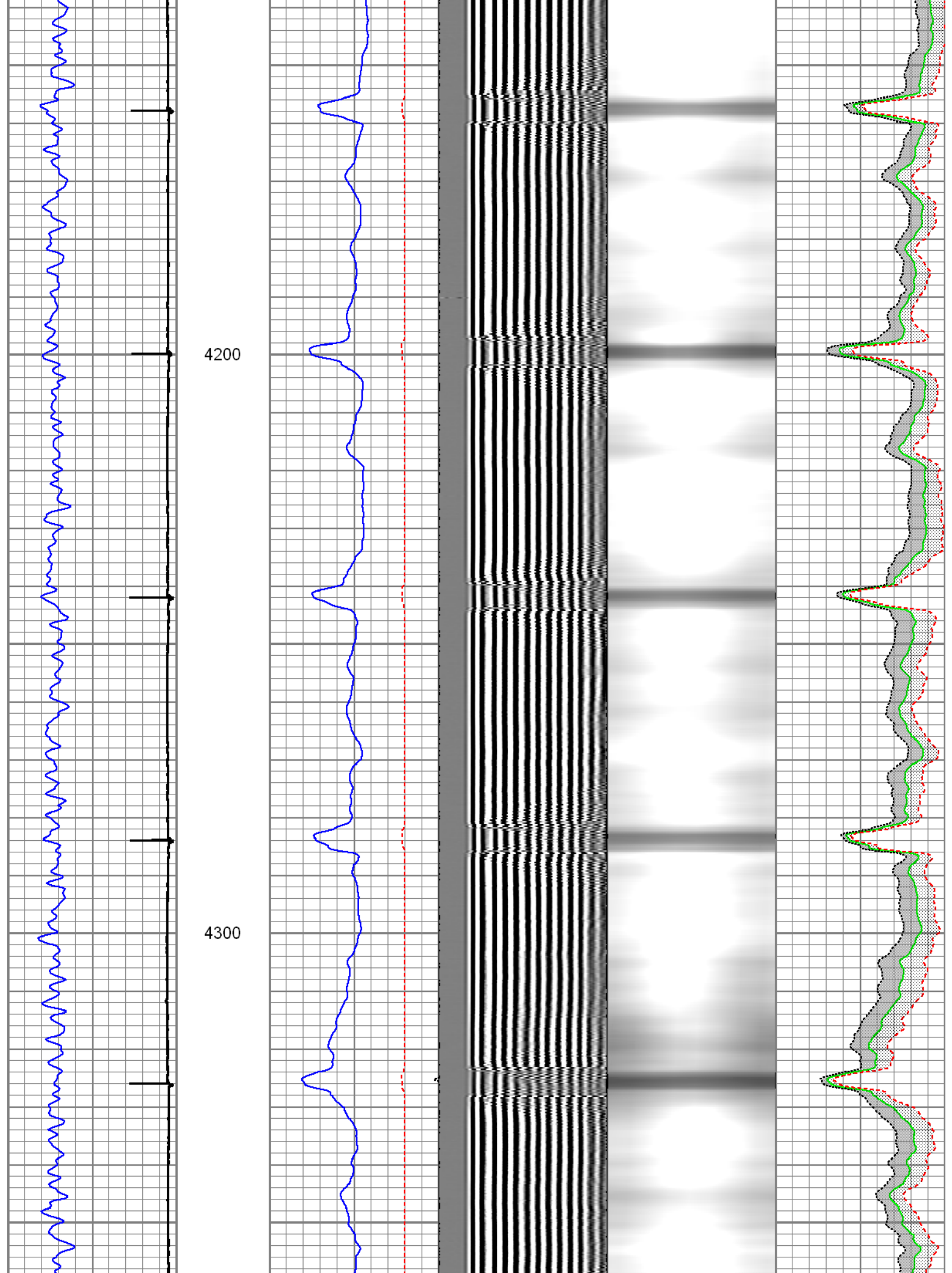


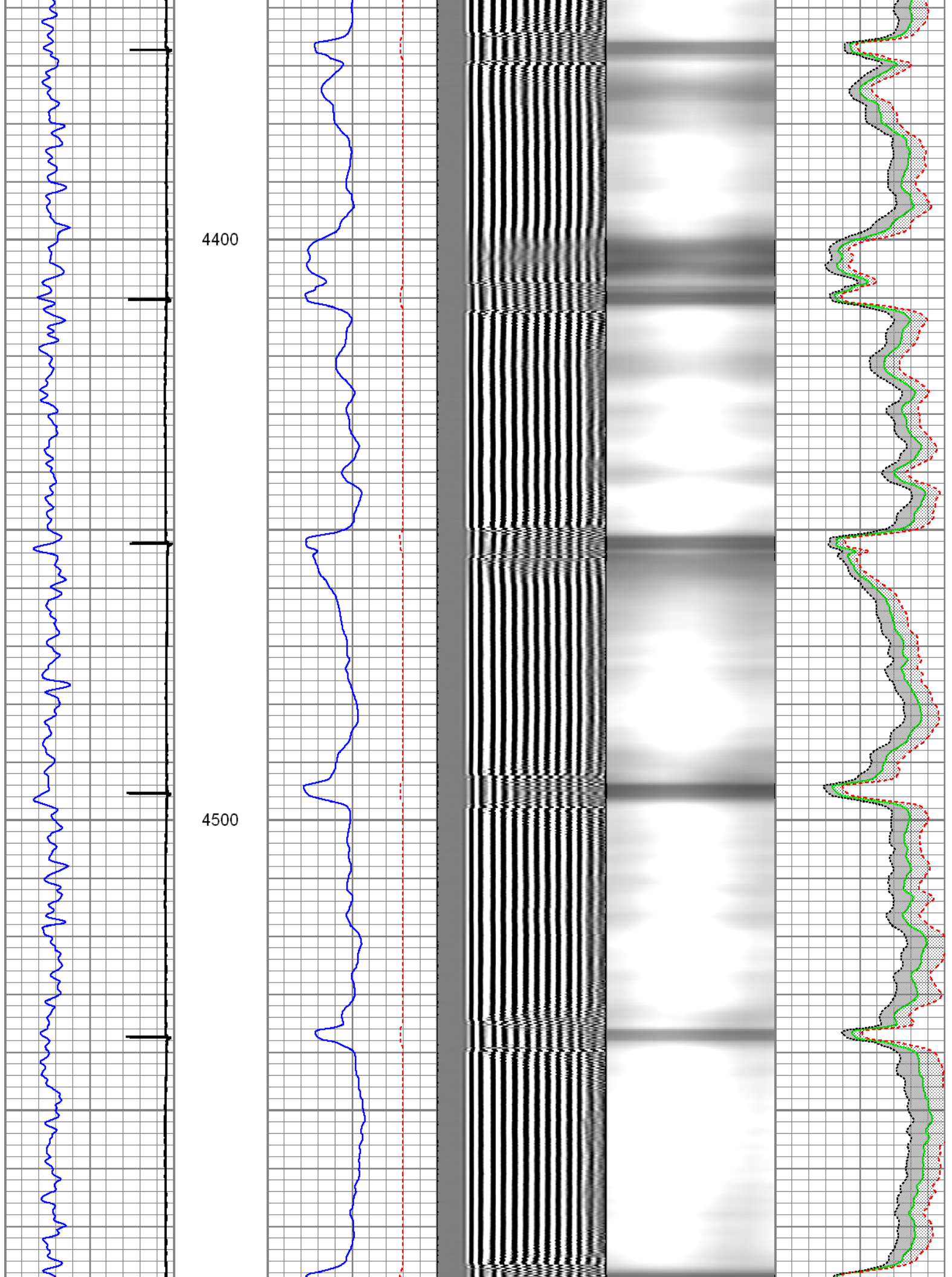


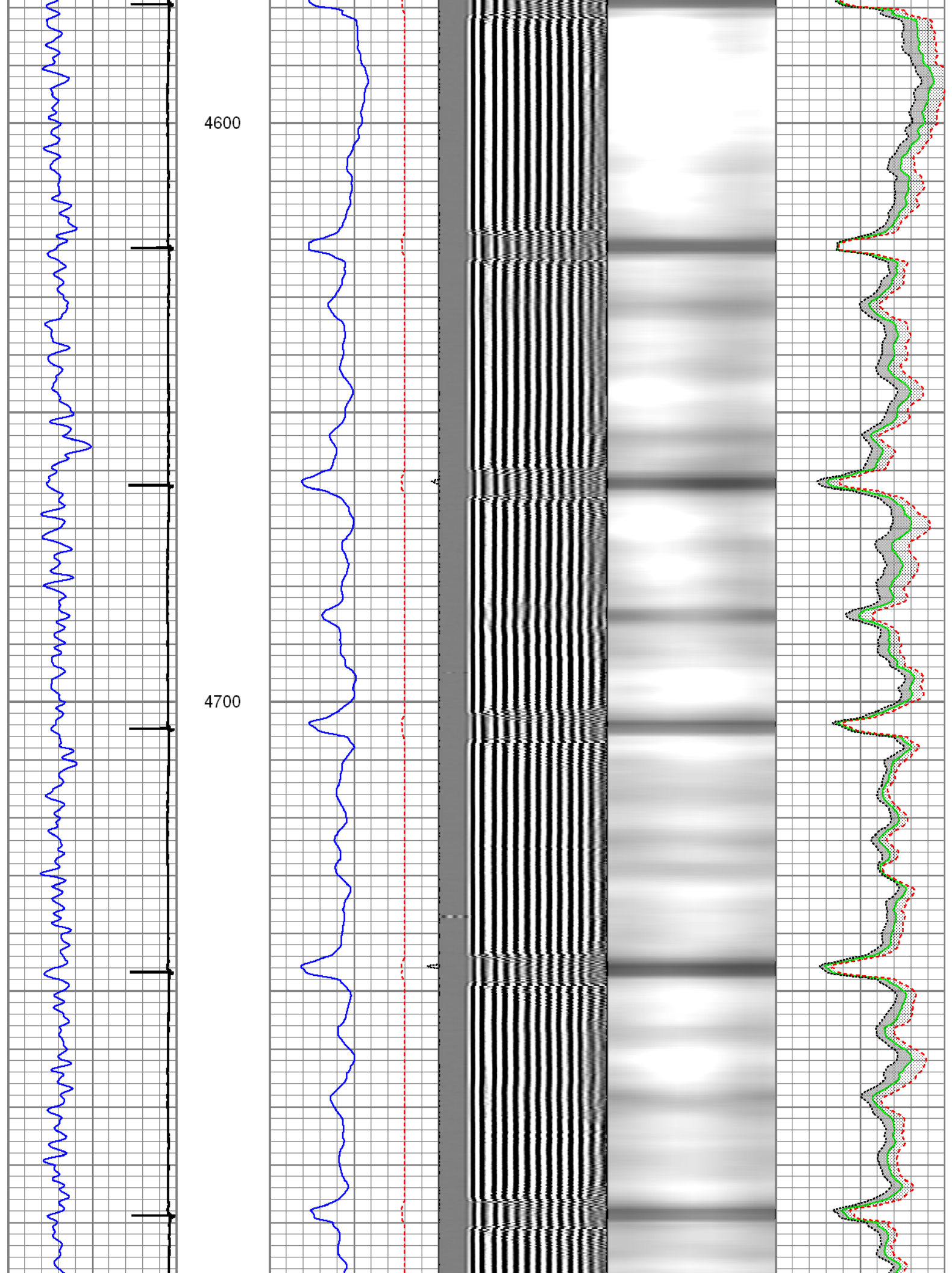










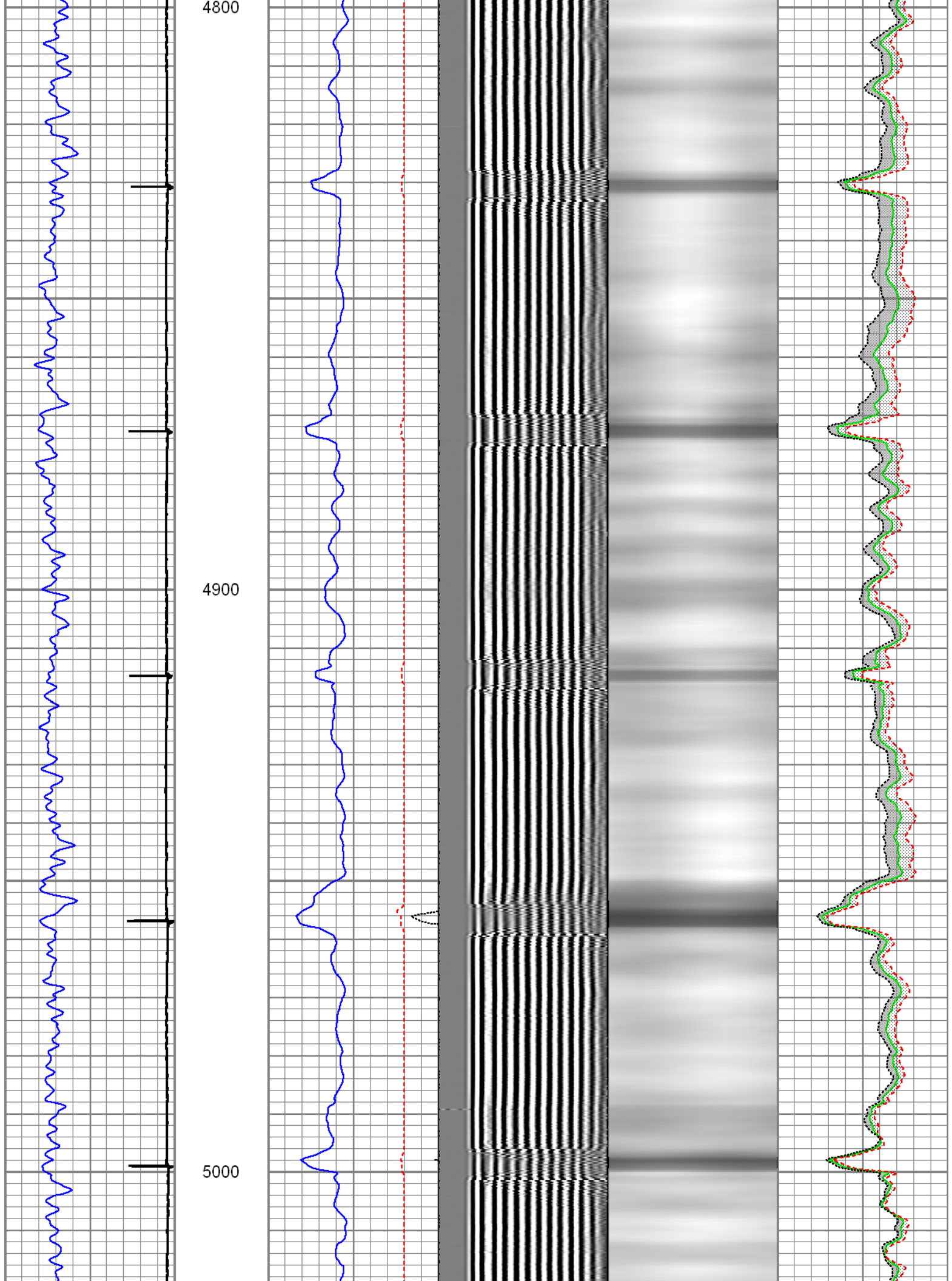




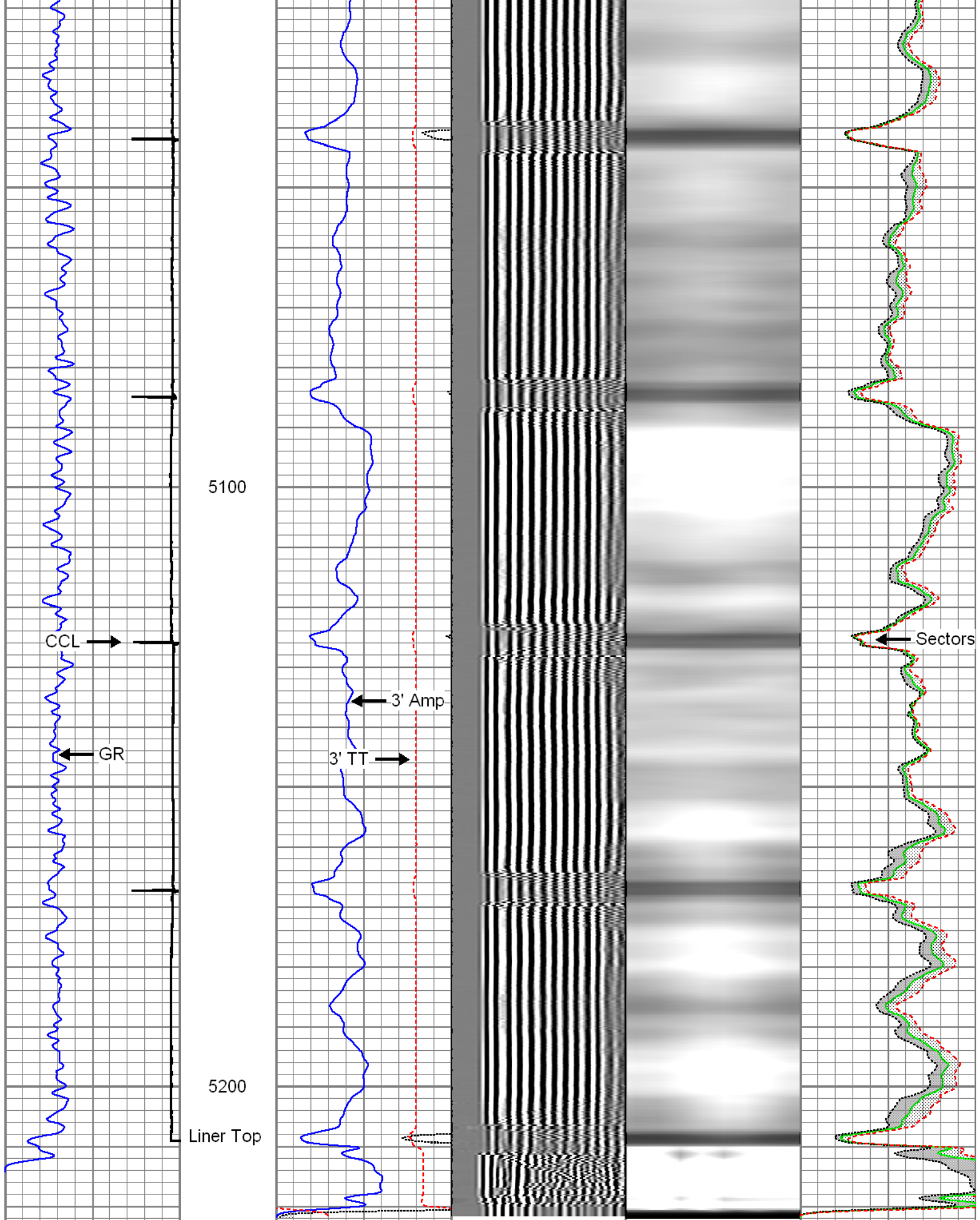
4800

4900


5000

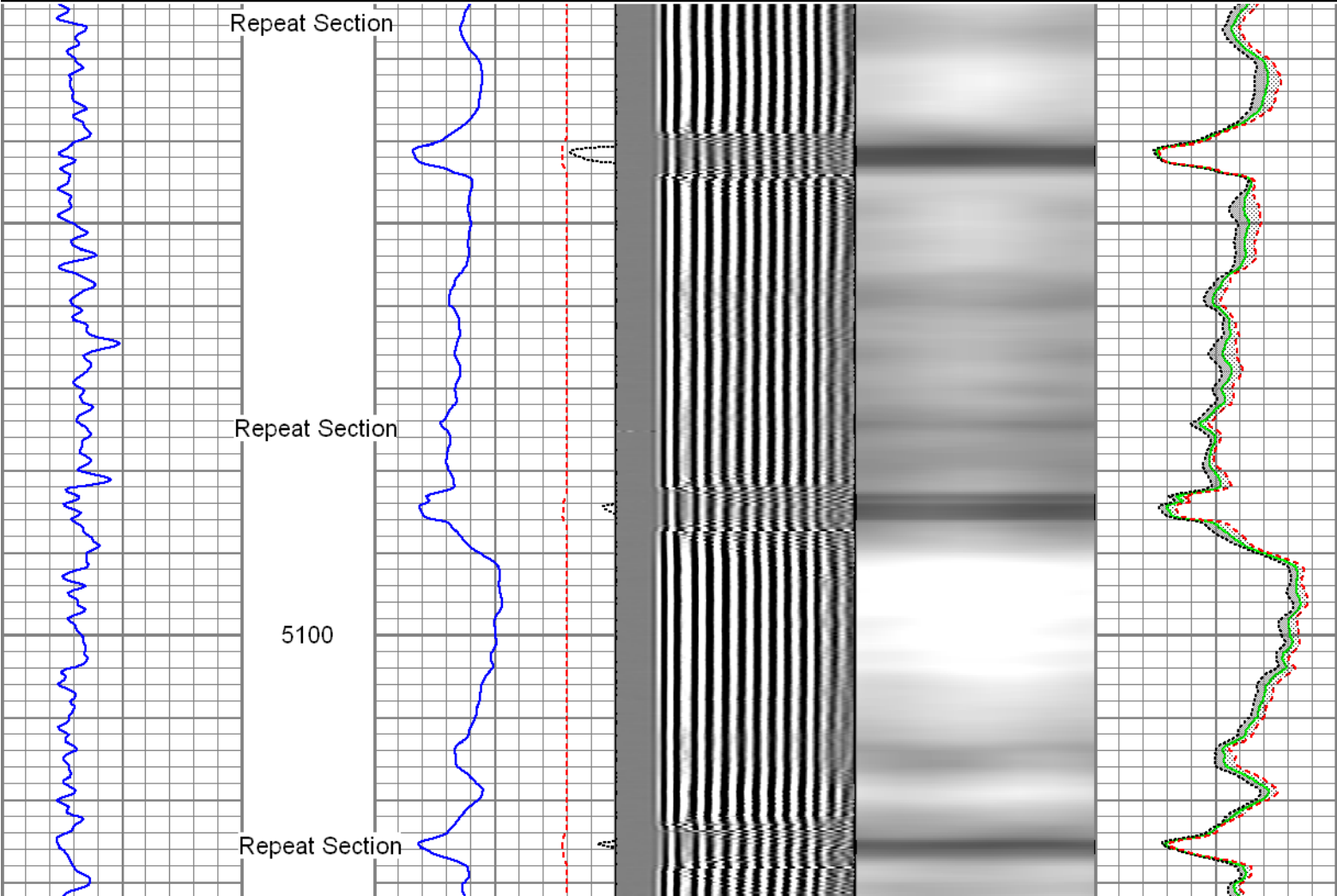


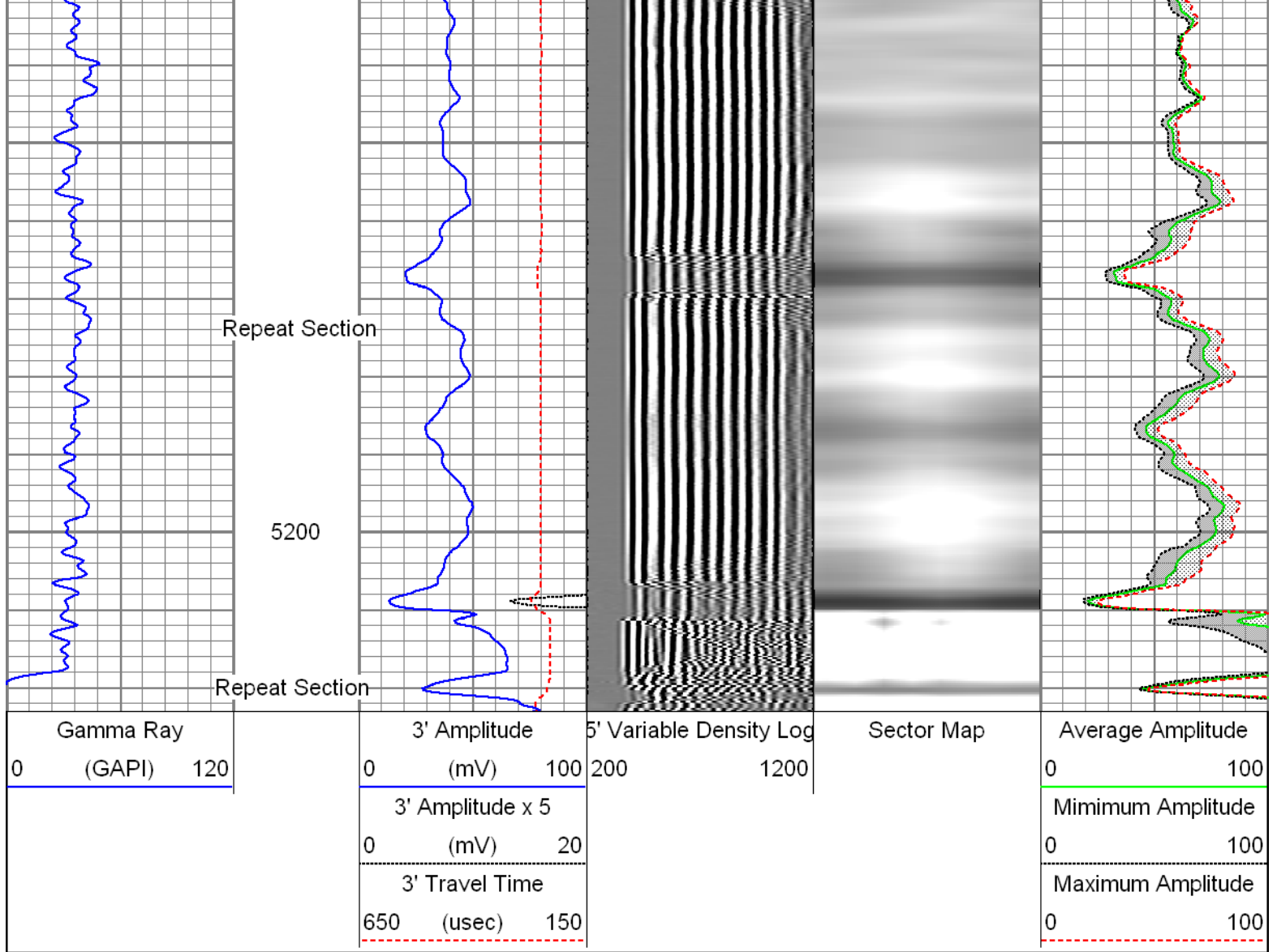


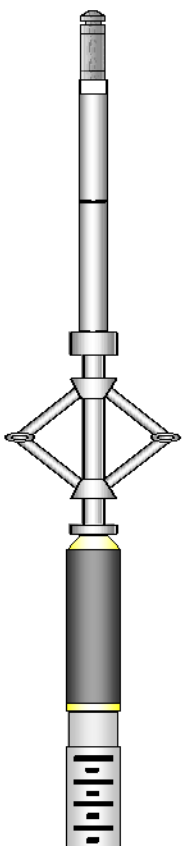



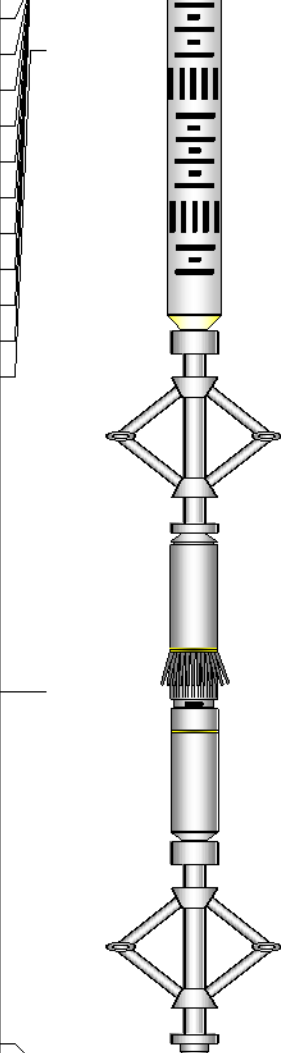
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Minimum Amplitude
	0 (mV) 20			0 100
	3' Travel Time			Maximum Amplitude
	650 (usec) 150			0 100

		<h1>Repeat Pass</h1> <p>Recorded with 1500 PSI surface induced pressure.</p>				
Database File: 07-12-14_whiting_razor 26l-3504b_mit_rbl.db Dataset Pathname: pass6 Presentation Format: rbt4_mit Dataset Creation: Sat Jul 12 11:04:48 2014 by Log 7.0 B1 Charted by: Depth in Feet scaled 1:240						
Gamma Ray		3' Amplitude		5' Variable Density Log	Sector Map	Average Amplitude
0	(GAPI) 120	0	(mV) 100	200	1200	0 100
		3' Amplitude x 5				Minimum Amplitude
		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)
GR	23.67		T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			UW_AGS-UW_AGS_001 (215017) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW_XTU-UW_XTU_002 (10010519) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (050836) Production Gamma Ray	1.93	1.69	9.50
			UW_PRC #3 -UW_PRC_057 (1102) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
WVF3FT	15.85					

WVFS1	15.85		UW_RBT-UW_RBT_004 (1066) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.47	3.13	140.00
WVFS2	15.85					
WVFS3	15.85					
WVFS4	15.85					
WVFS5	15.85					
WVFS6	15.85					
WVFS7	15.85					
WVFS8	15.85					
CBLTEMP	15.85					
CBLROT	15.85					
WVF5FT	14.85					
MIT	5.41		UW_PRC #4 -UW_PRC_057 (1038) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
TSTAMP	0.00		UW_MIT-UW_MIT40_027 (218950) 40 Multifinger Imaging Tool	4.54	2.75	61.10
			UW_PRC-UW_PRC_057 (1037) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00
		UW_BUL-UW_BUL_006 (218707) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20	
Dataset: 07-12-14_Whiting_Razor 26L-3504B_MIT_RBL.db: field/well/run1/pass7 Total Length: 27.92 ft Total Weight: 319.30 lb O.D. 3.13 in						

Calibration Report			
Database File:	07-12-14_Whiting_Razor 26L-3504B_MIT_RBL.db		
Dataset Pathname:	pass8		
Dataset Creation:	Sat Jul 12 13:12:02 2014 by Log 7.0 B1		
Multi-finger Imaging Tool Calibration Report			
Serial Number:		218950	
Number of Fingers:		40	
Tool Model:		UW_MIT40_027	
Inclinometer Calibration Report			
Performed:		Wed Apr 23 11:10:45 2014	
Calibration Angle:		46	
		Inc X	Inc Y
Vertical:		1983	1966
Finger 1 up:		2225	2223
Finger 31 up:		1727	2194
Finger 21 up:		1746	1724
Finger 11 up:		2256	1730
Sensitivity ratio:	1.04732		
X-axis angle:	312.539		
Deviation const.:	344.577		



Ring size: (in)	4	Sens	5	Sens	6	Sens	7
Finger 01:	1467	273.0	1740	289.0	2029	307.0	2336
Finger 02:	1568	248.0	1816	254.0	2070	266.0	2336
Finger 03:	1435	278.0	1713	291.0	2004	308.0	2312
Finger 04:	1457	280.0	1737	292.0	2029	299.0	2328
Finger 05:	1488	269.0	1757	279.0	2036	288.0	2324
Finger 06:	1425	281.0	1706	296.0	2002	308.0	2310
Finger 07:	1427	278.0	1705	292.0	1997	306.0	2303
Finger 08:	1453	275.0	1728	288.0	2016	296.0	2312
Finger 09:	1438	281.0	1719	296.0	2015	301.0	2316
Finger 10:	1464	272.0	1736	287.0	2023	291.0	2314
Finger 11:	1431	275.0	1706	295.0	2001	300.0	2301
Finger 12:	1413	283.0	1696	301.0	1997	304.0	2301
Finger 13:	1515	262.0	1777	276.0	2053	273.0	2326
Finger 14:	1455	268.0	1723	291.0	2014	291.0	2305
Finger 15:	1443	283.0	1726	300.0	2026	299.0	2325
Finger 16:	1467	272.0	1739	294.0	2033	292.0	2325
Finger 17:	1441	276.0	1717	300.0	2017	298.0	2315
Finger 18:	1474	268.0	1742	284.0	2026	285.0	2311
Finger 19:	1470	272.0	1742	293.0	2035	290.0	2325
Finger 20:	1463	270.0	1733	292.0	2025	294.0	2319
Finger 21:	1438	281.0	1719	306.0	2025	304.0	2329
Finger 22:	1472	262.0	1734	282.0	2016	283.0	2299
Finger 23:	1474	270.0	1744	288.0	2032	289.0	2321
Finger 24:	1477	268.0	1745	287.0	2032	285.0	2317
Finger 25:	1455	270.0	1725	289.0	2014	291.0	2305
Finger 26:	1455	273.0	1728	291.0	2019	297.0	2316
Finger 27:	1491	265.0	1756	283.0	2039	288.0	2327
Finger 28:	1480	272.0	1752	286.0	2038	294.0	2332
Finger 29:	1541	258.0	1799	272.0	2071	279.0	2350
Finger 30:	1439	278.0	1717	289.0	2006	303.0	2309
Finger 31:	1461	279.0	1740	292.0	2032	304.0	2336
Finger 32:	1520	263.0	1783	274.0	2057	282.0	2339
Finger 33:	1465	277.0	1742	294.0	2036	308.0	2344
Finger 34:	1448	273.0	1721	291.0	2012	310.0	2322
Finger 35:	1510	256.0	1766	268.0	2034	279.0	2313
Finger 36:	1496	265.0	1761	278.0	2039	296.0	2335
Finger 37:	1465	276.0	1741	290.0	2031	307.0	2338
Finger 38:	1533	250.0	1783	259.0	2042	278.0	2320
Finger 39:	1484	270.0	1754	280.0	2034	292.0	2326
Finger 40:	1424	282.0	1706	299.0	2005	316.0	2321

Ring size: (in)	4	Nom. wear	5	Nom. wear	6	Nom. wear	7	Nom. wear
Finger 01:	4.003	0.001	5.003	0.002	6.003	0.002	6.999	-0.000
Finger 02:	4.002	0.001	5.003	0.002	6.002	0.001	7.000	0.000
Finger 03:	4.002	0.001	5.001	0.000	6.001	0.000	7.001	0.000
Finger 04:	4.005	0.003	5.005	0.002	6.000	-0.000	7.003	0.002
Finger 05:	4.001	0.001	5.001	0.001	5.998	-0.001	7.001	0.001
Finger 06:	4.004	0.002	5.005	0.002	6.004	0.002	7.004	0.002
Finger 07:	4.004	0.002	5.001	0.000	6.002	0.001	6.999	-0.001
Finger 08:	4.003	0.002	5.004	0.002	6.005	0.002	7.002	0.001
Finger 09:	4.003	0.001	4.996	-0.002	5.995	-0.003	6.999	-0.000
Finger 10:	4.002	0.001	4.999	-0.001	6.003	0.001	7.002	0.001
Finger 11:	4.005	0.003	5.005	0.002	6.002	0.001	7.002	0.001
Finger 12:	4.012	0.006	5.004	0.002	6.000	-0.000	7.001	0.000
Finger 13:	4.020	0.010	5.003	0.001	5.998	-0.001	7.000	0.000
Finger 14:	4.005	0.002	4.998	-0.001	6.006	0.003	7.003	0.001
Finger 15:	4.008	0.004	4.997	-0.002	5.999	-0.000	7.002	0.001
Finger 16:	4.000	0.000	5.002	0.001	6.002	0.001	7.002	0.001

Finger 16:	4.000	0.000	5.002	0.001	6.002	0.001	7.002	0.001
Finger 17:	4.000	0.000	5.007	0.004	5.997	-0.001	6.998	-0.001
Finger 18:	4.001	0.000	5.000	-0.000	6.000	-0.000	6.995	-0.002
Finger 19:	4.001	0.000	4.999	-0.001	5.999	-0.001	6.999	-0.000
Finger 20:	4.004	0.002	5.004	0.002	5.998	-0.001	6.997	-0.002
Finger 21:	4.001	0.000	5.000	-0.000	5.997	-0.002	7.001	0.000
Finger 22:	4.001	0.001	5.003	0.002	6.004	0.002	7.002	0.001
Finger 23:	3.998	-0.001	4.999	-0.000	5.997	-0.001	7.001	0.000
Finger 24:	4.002	0.001	5.002	0.001	5.998	-0.001	6.998	-0.001
Finger 25:	4.006	0.003	5.002	0.001	6.002	0.001	7.009	0.004
Finger 26:	4.003	0.002	5.002	0.001	6.010	0.005	7.010	0.005
Finger 27:	4.004	0.002	5.010	0.005	6.007	0.003	6.999	-0.000
Finger 28:	3.997	-0.002	4.996	-0.002	6.002	0.001	7.001	0.001
Finger 29:	4.005	0.002	5.001	0.000	6.001	0.000	6.999	-0.001
Finger 30:	4.027	0.013	5.005	0.002	5.996	-0.002	6.998	-0.001
Finger 31:	4.009	0.004	4.999	-0.001	6.001	0.001	7.002	0.001
Finger 32:	4.006	0.003	5.004	0.002	5.999	-0.001	6.999	-0.000
Finger 33:	3.999	-0.001	4.997	-0.001	5.997	-0.002	7.000	0.000
Finger 34:	4.003	0.001	4.999	-0.001	6.000	-0.000	7.001	0.000
Finger 35:	4.007	0.003	5.004	0.002	5.995	-0.003	7.001	0.001
Finger 36:	3.999	-0.000	5.005	0.002	6.002	0.001	7.002	0.001
Finger 37:	4.007	0.003	4.999	-0.000	6.003	0.001	6.996	-0.002
Finger 38:	4.003	0.002	5.000	-0.000	6.004	0.002	7.001	0.001
Finger 39:	4.007	0.003	5.001	0.001	5.998	-0.001	7.001	0.001
Finger 40:	3.996	-0.002	4.999	-0.000	5.997	-0.002	6.999	-0.001
Average:	4.004	0.002	5.002	0.001	6.000	0.000	7.001	0.000

Segmented Cement Bond Log Calibration Report
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Serial Number:	1066
Tool Model:	UW_RBT_004
Calibration Casing Diameter:	7.000 in
Calibration Depth:	264.371 ft

Master Calibration, performed Sat Jul 12 10:44:58 2014:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.004	0.821	0.800	62.165	75.038	0.525
5FT	-0.002	0.793	0.800	62.165	77.147	0.986
S1	0.005	0.748	0.000	100.000	134.523	-0.657
S2	0.004	0.775	0.000	100.000	129.575	-0.470
S3	0.004	0.814	0.000	100.000	123.387	-0.452
S4	0.003	0.856	0.000	100.000	117.121	-0.295
S5	0.004	0.872	0.000	100.000	115.129	-0.422
S6	0.002	0.866	0.000	100.000	115.844	-0.283
S7	0.004	0.839	0.000	100.000	119.772	-0.443
S8	0.004	0.783	0.000	100.000	128.277	-0.487

Gamma Ray Calibration Report
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Serial Number:	050836
Tool Model:	UW_PGR_020
Performed:	Sun Jun 13 13:33:21 1993
Calibrator Value:	1.0 GAPI
Background Reading:	0.0 cps
Calibrator Reading:	1.0 cps
Sensitivity:	1.0000 GAPI/cps



Company	Whiting Oil and Gas Corporation
Well	Razor 26L-3504B
Field	Wildcat
County	Weld
State	Colorado