

Radial Cement Bond Gamma Ray Casing Collar Log

Company	Kerr-McGee Oil & Gas Onshore, L.P.				
Well	Goodin 38N - B6HZ				
Field	Wattenberg				
County	Weld				
State	Colorado				
Company	Kerr-McGee Oil & Gas Onshore, L.P.				
Well	Goodin 38N - B6HZ				
Field	Wattenberg				
County	Weld	State	Colorado		
Location:	API # : 05-123-40742			Other Services Gauge Ring MIT	
SEC 7		TWP 1N	RGE 65W		
Permanent Datum	Ground Level	Elevation	4979'	Elevation	
Log Measured From	Kelly Bushing	25 FT		K.B. 5004' D.F. 5003' G.L. 4979'	
Drilling Measured From	Kelly Bushing				

Date	27-JUN-2015
Run Number	Two
Depth Driller	13,471 FT
Depth Logger	7443 FT
Bottom Logged Interval	7738 FT
Top Log Interval	50 FT
Open Hole Size	8.750"
Type Fluid	Water
Density / Viscosity	8.34 lbm/gal
Max. Recorded Temp.	215°F
Estimated Cement Top	50 FT
Time Well Ready	ROA
Time Logger on Bottom	7:45 AM
Equipment Number	HD-0343
Location	Ft. Lupton, CO
Recorded By	J. Houlim
Witnessed By	Kent Evers

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	9 5/8	36	J-55	Surface	1582 FT		
Intermediate #1	7	26	HC-P110	Surface	7851 FT		
Intermediate #2							
Liner	4 1/2	11.6	HCP-110	6775 FT	13,741 FT		

<<< 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
 Depth referenced to casing tally reported liner top at 6775 FT
 Adjusted log +21.5 FT to correlate with liner top
 Gauge Ring/Junk Basket ran to 7445 FT no debris was found after run
 Log ran from 7443 FT to surface
 No debris found on logging tools upon completion of run
 Thank you for choosing FMC Technologies Completion Services, Inc.!!

Database File:0512340742_anadarko_goodin 38n-b6hz_06-27-15_mit_rbl.db

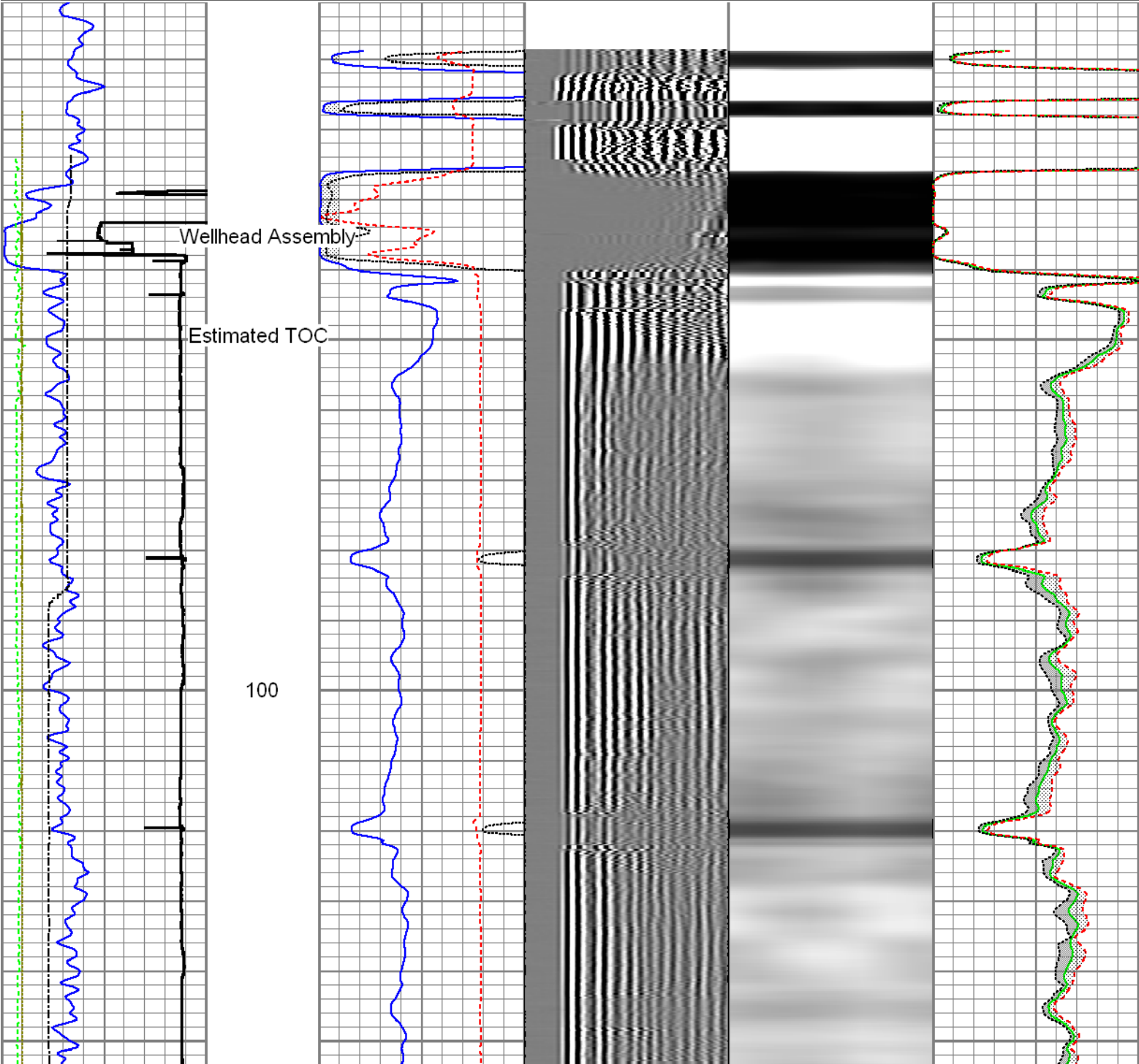
Dataset Pathname:pass4

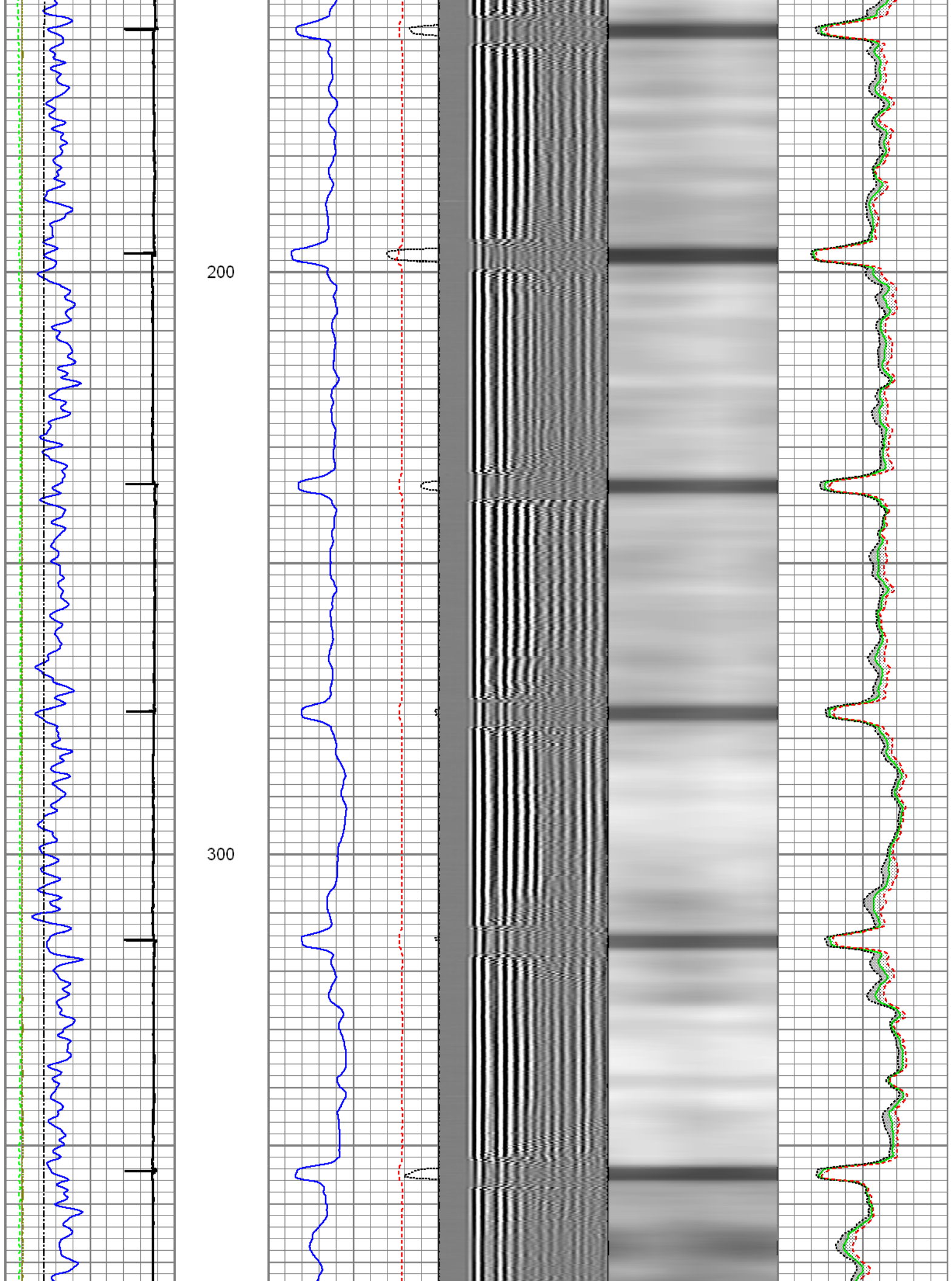
Presentation Format:rbt4_mit

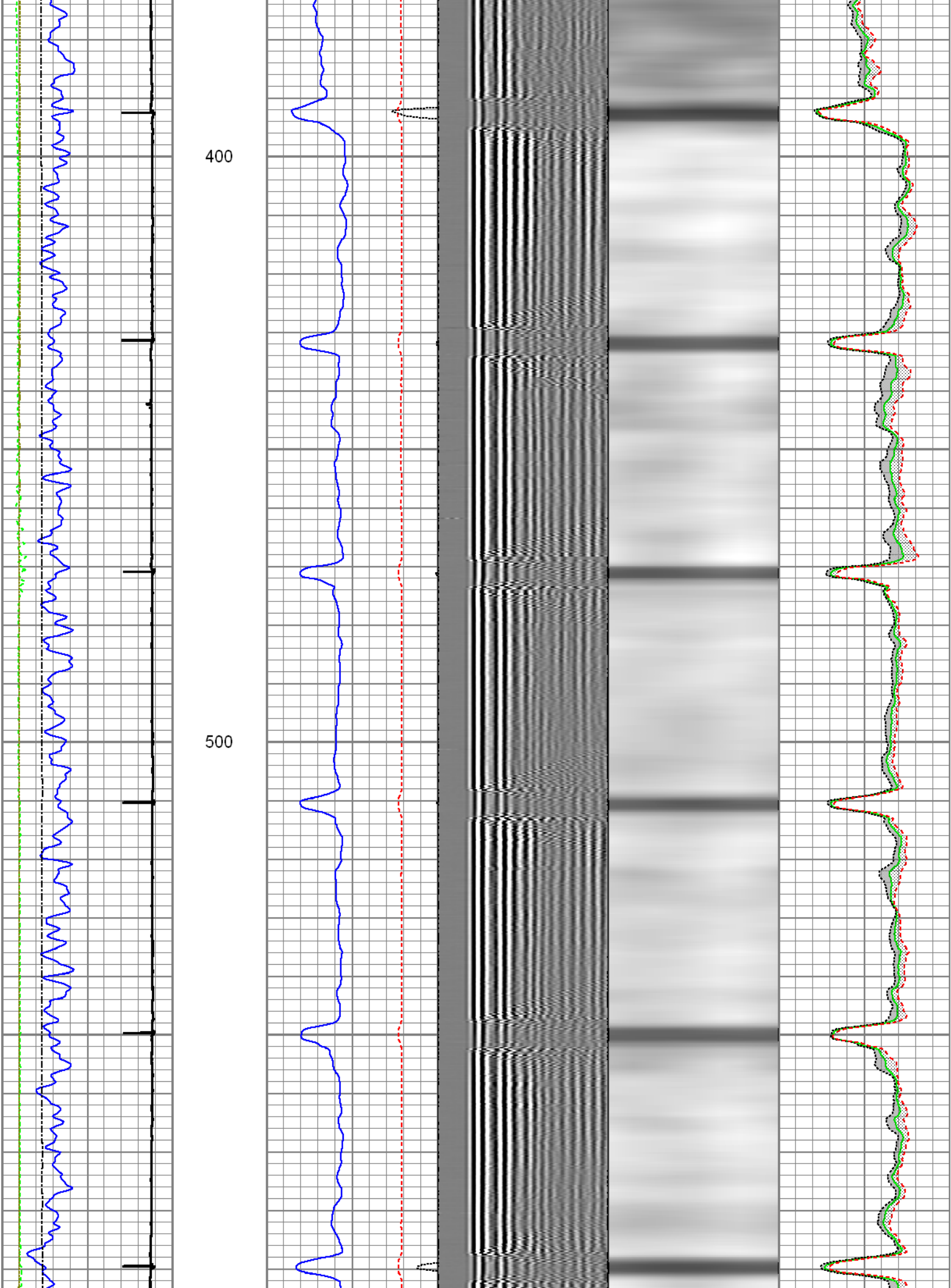
Dataset Creation:Sat Jun 27 07:45:36 2015 by Log 7.0 B1

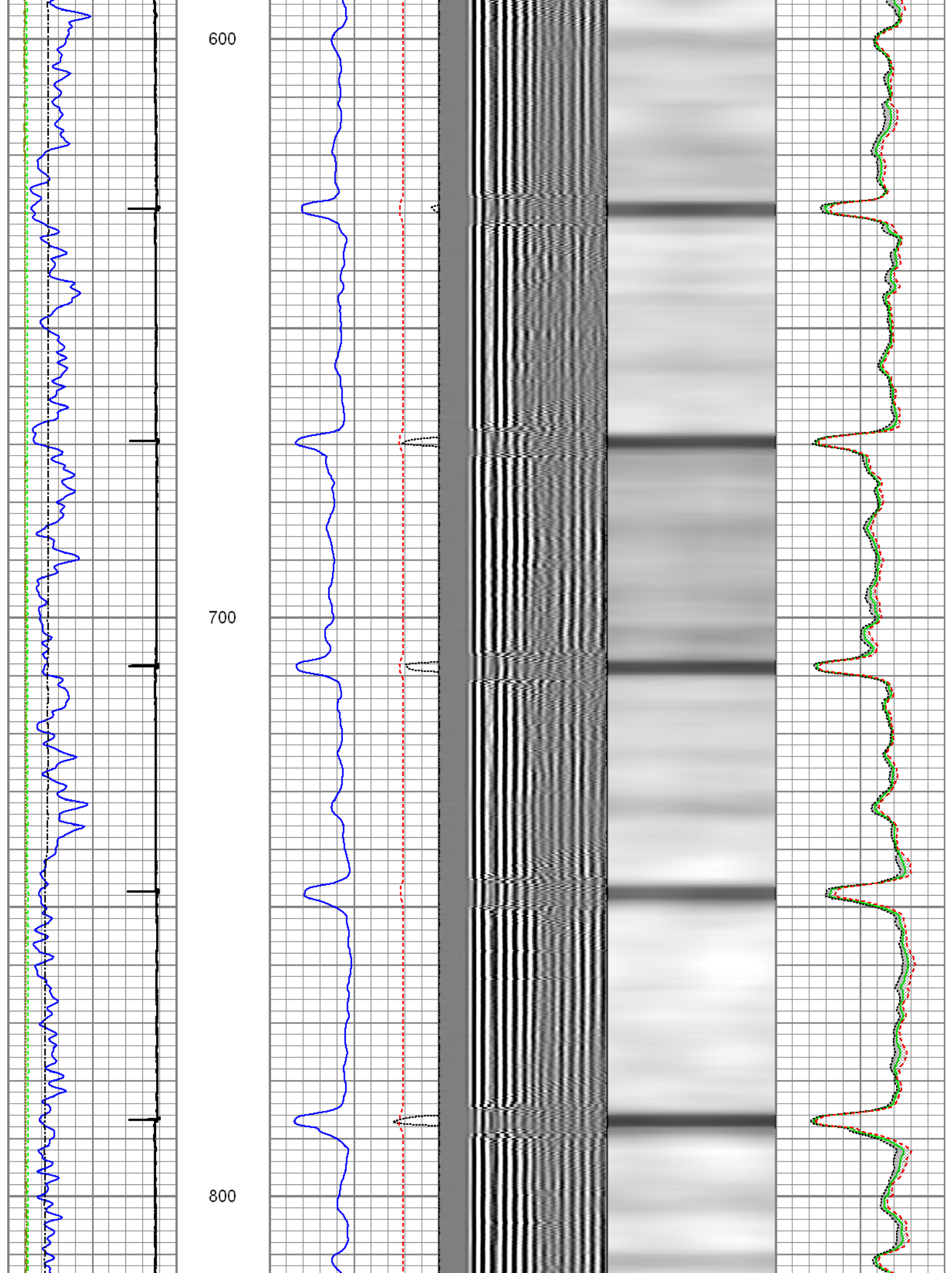
Charted by:Depth in Feet scaled 1:240

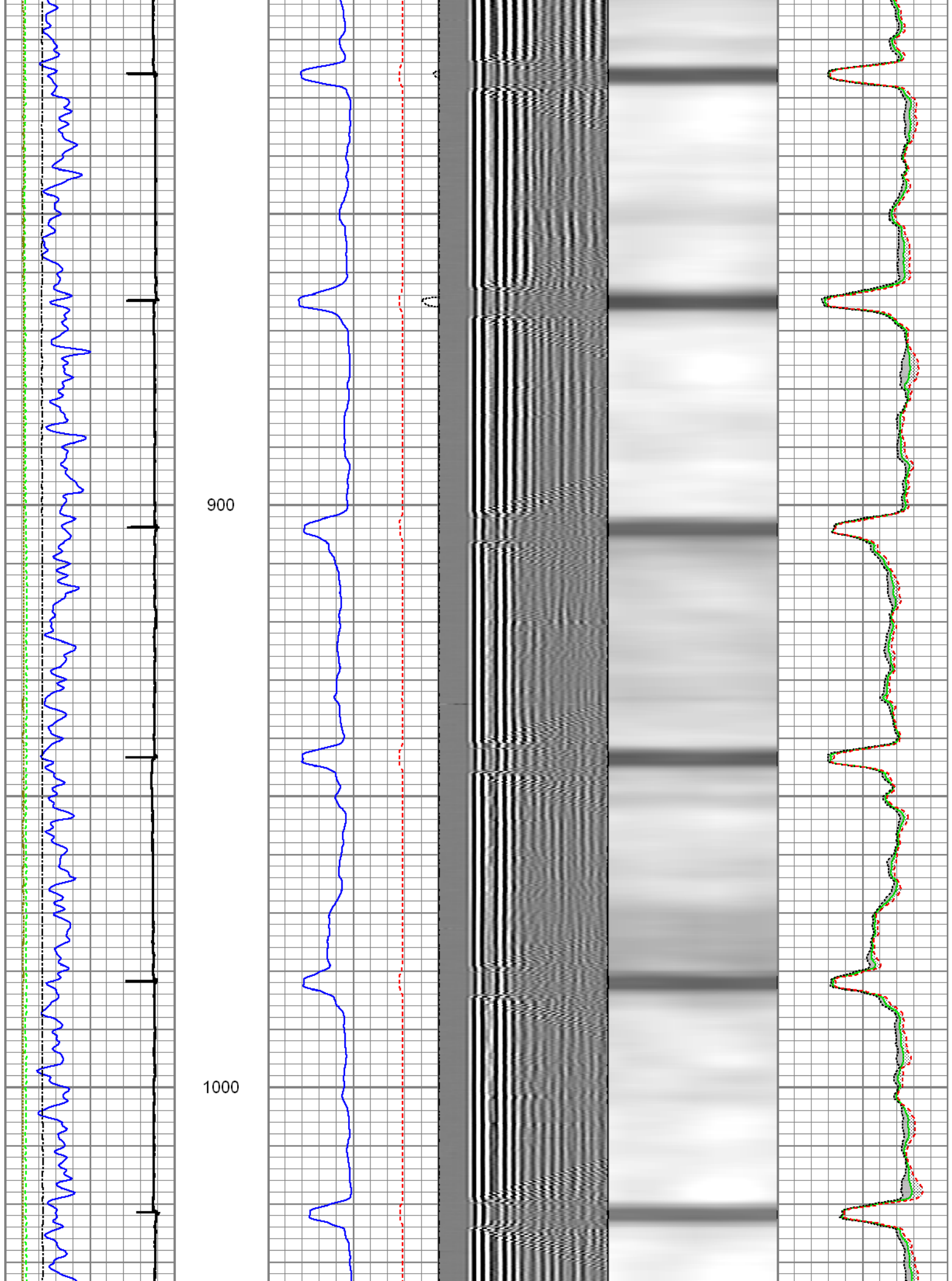
Gamma Ray	3' Amplitude	5' Variable Density Log	Sector Map	Average Amplitude
0 (GAPI) 120	0 (mV) 100	200 1200		0 100
Casing Collar Locator	3' Amplitude x 5			Mimimum Amplitude
Line Speed	0 (mV) 20			0 100
-100 (ft/min) 100	3' Travel Time			Maximum Amplitude
Line Tension	650 (usec) 150			0 100
0 (lb) 2000				
-10 Deviation (°) 90				

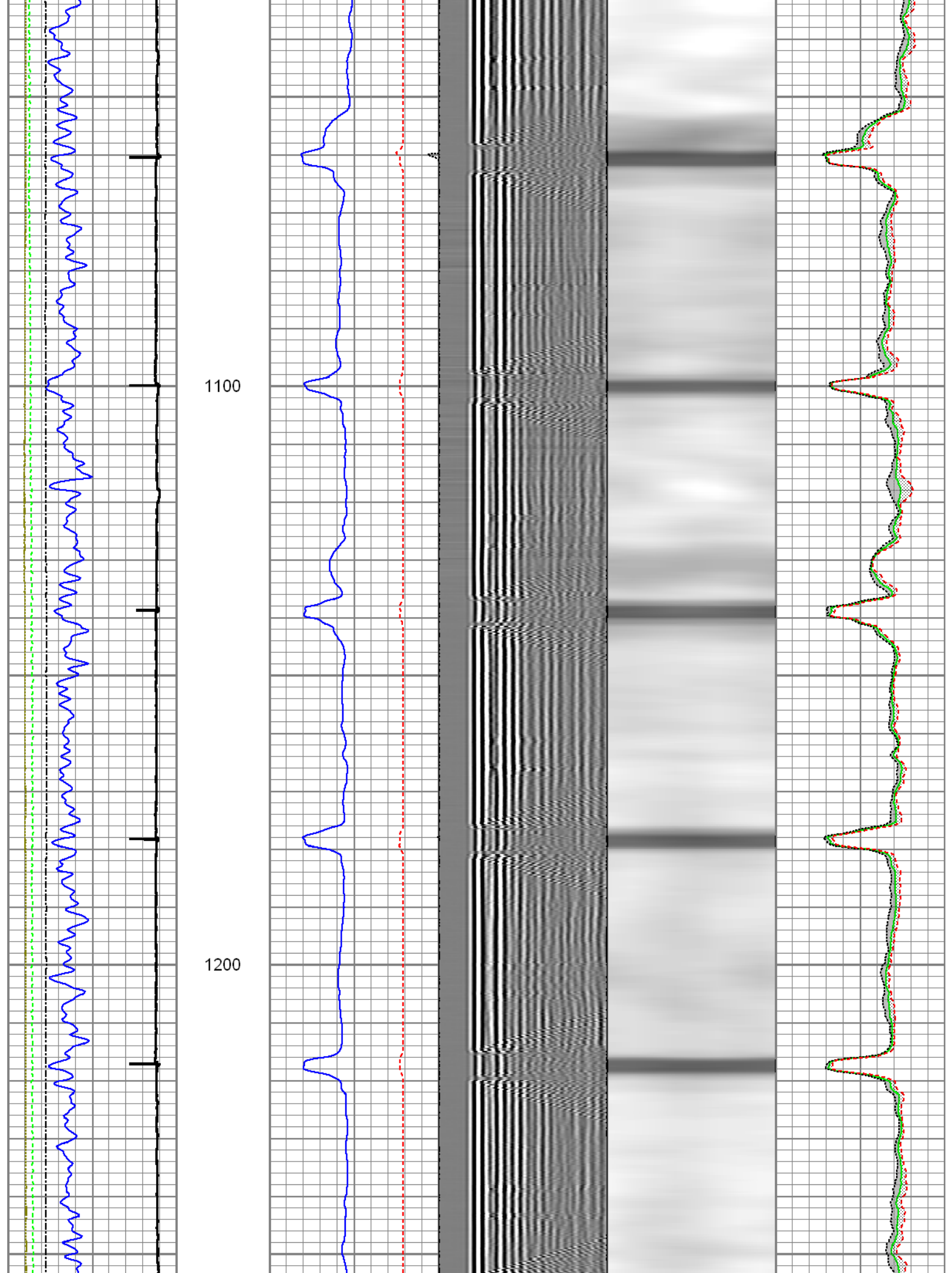


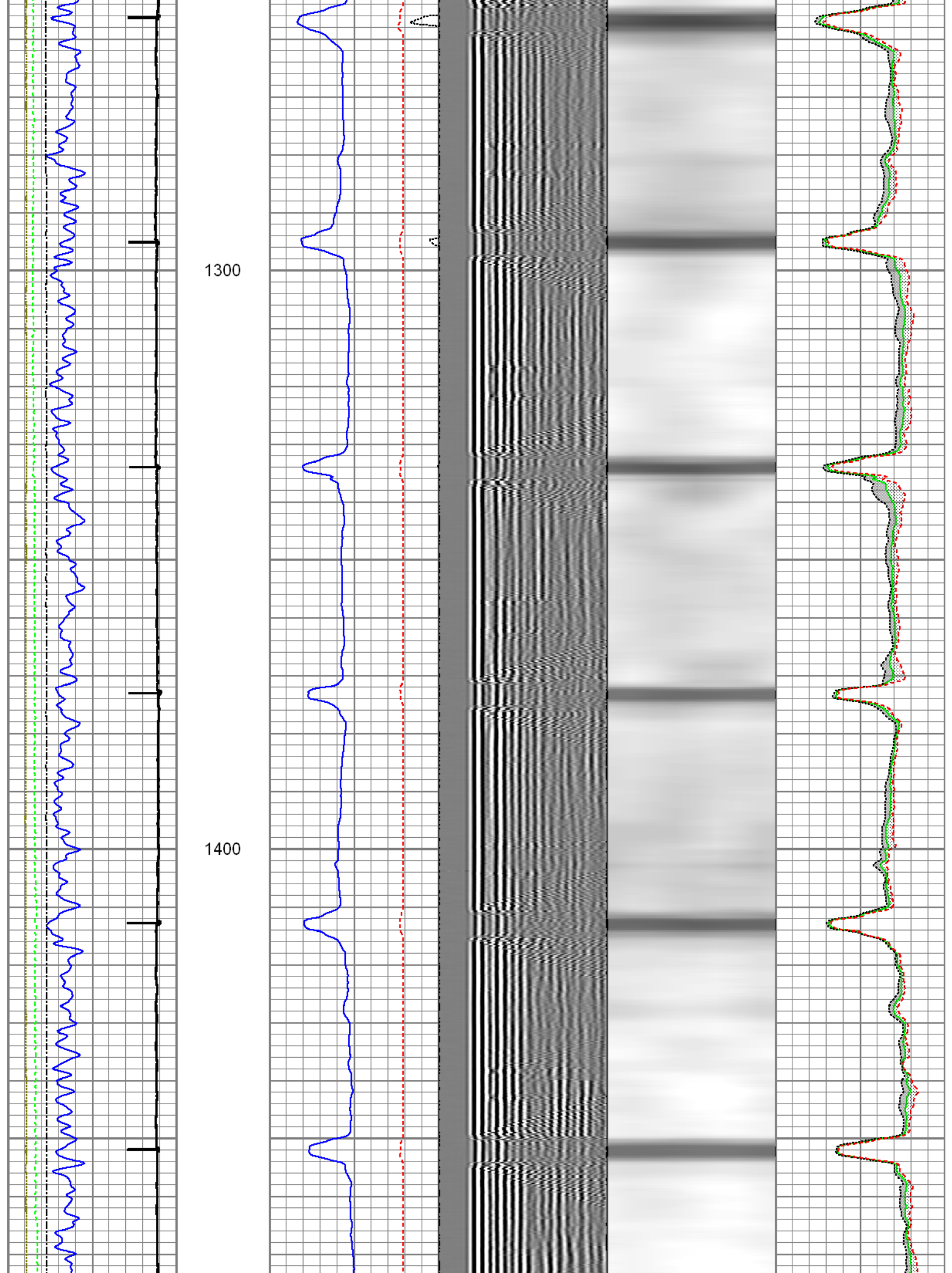


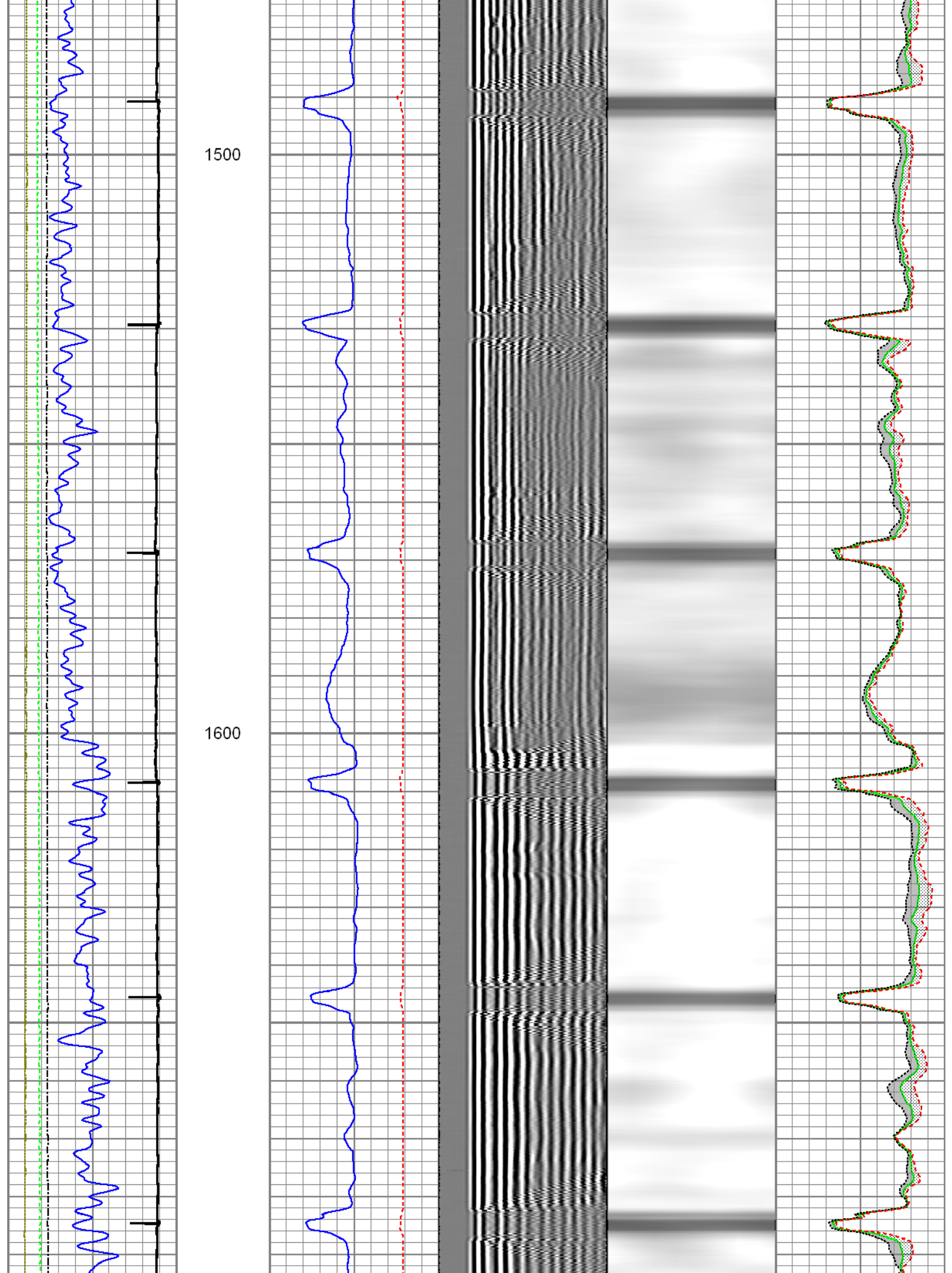


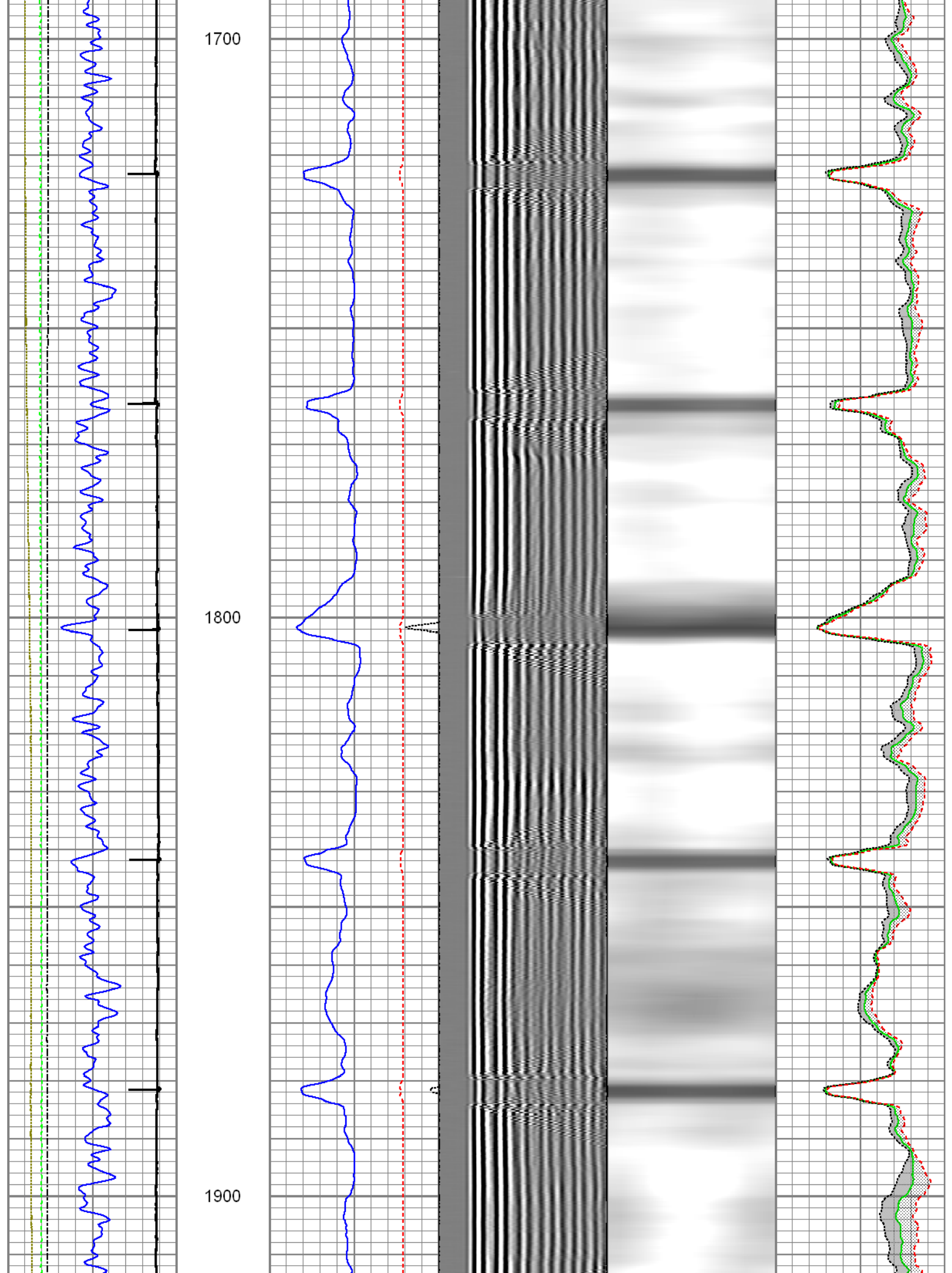


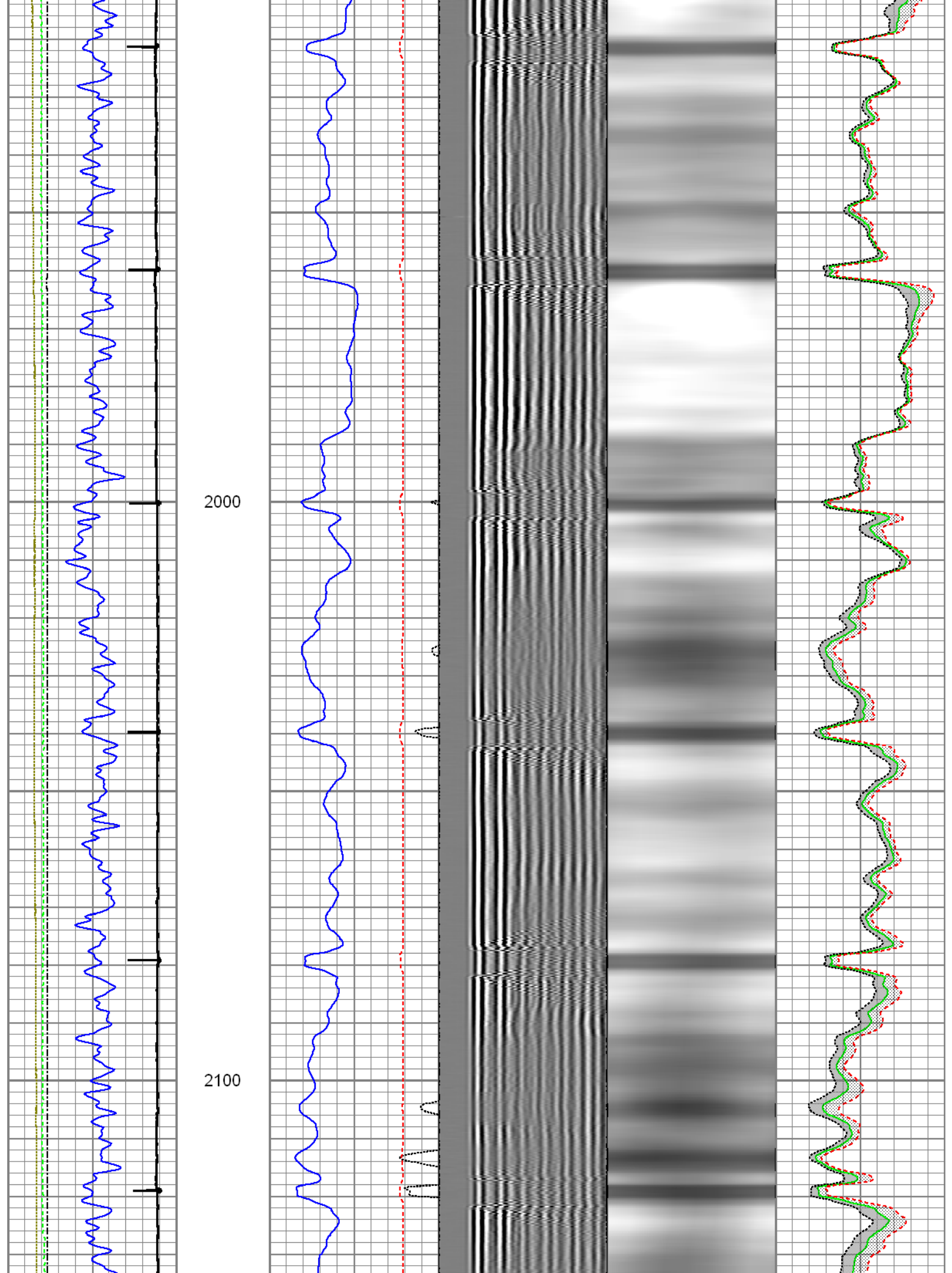






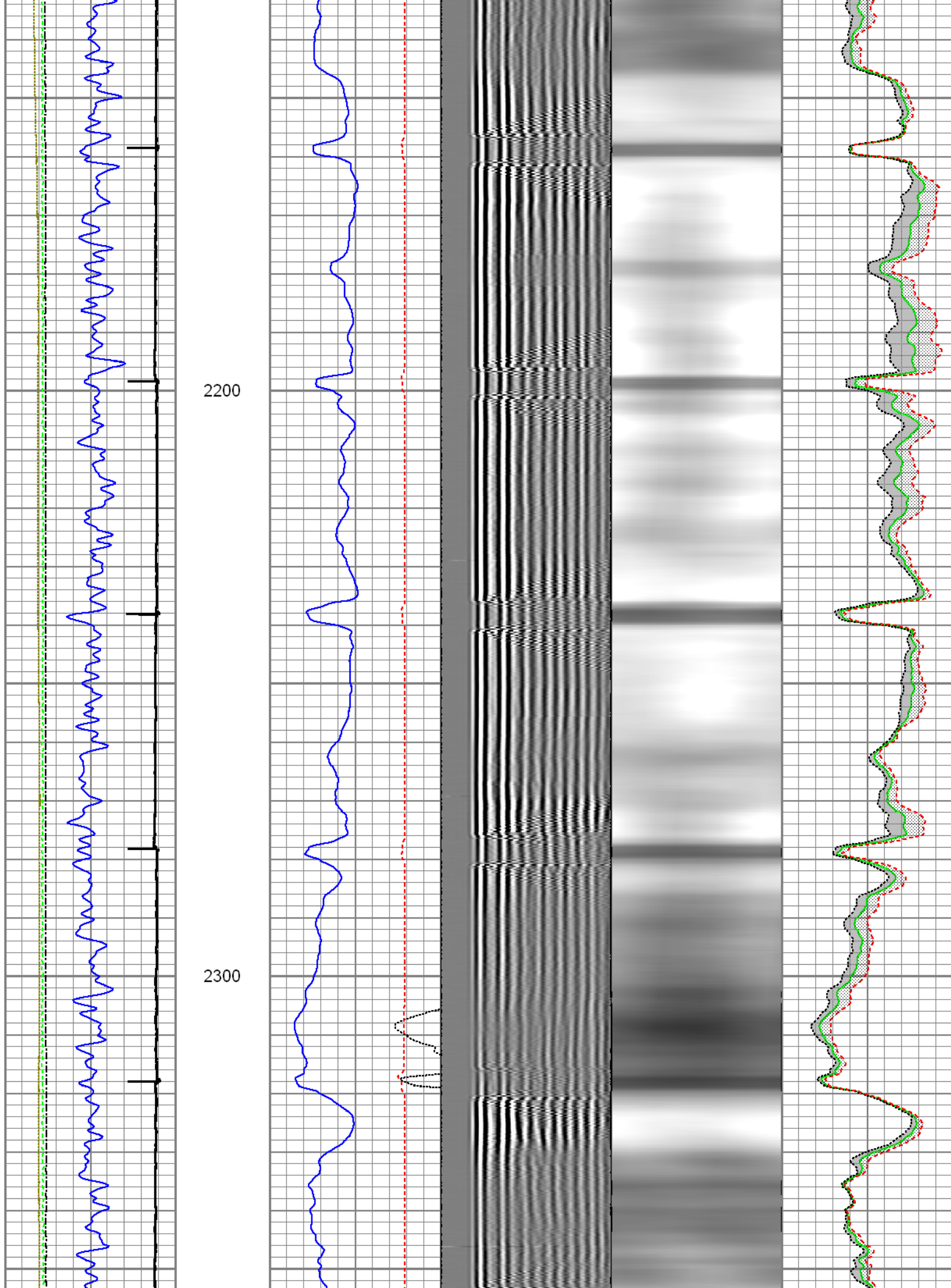


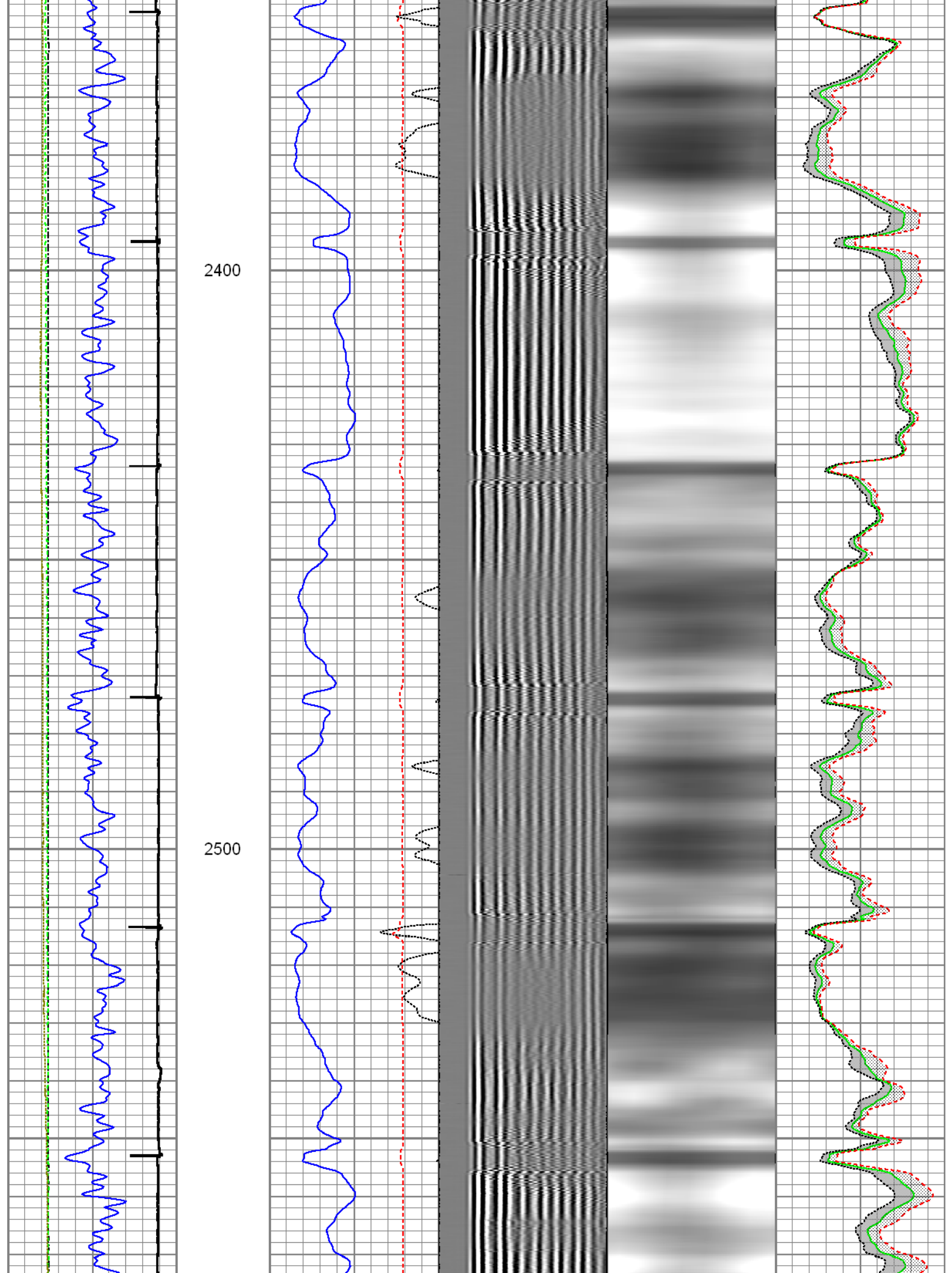


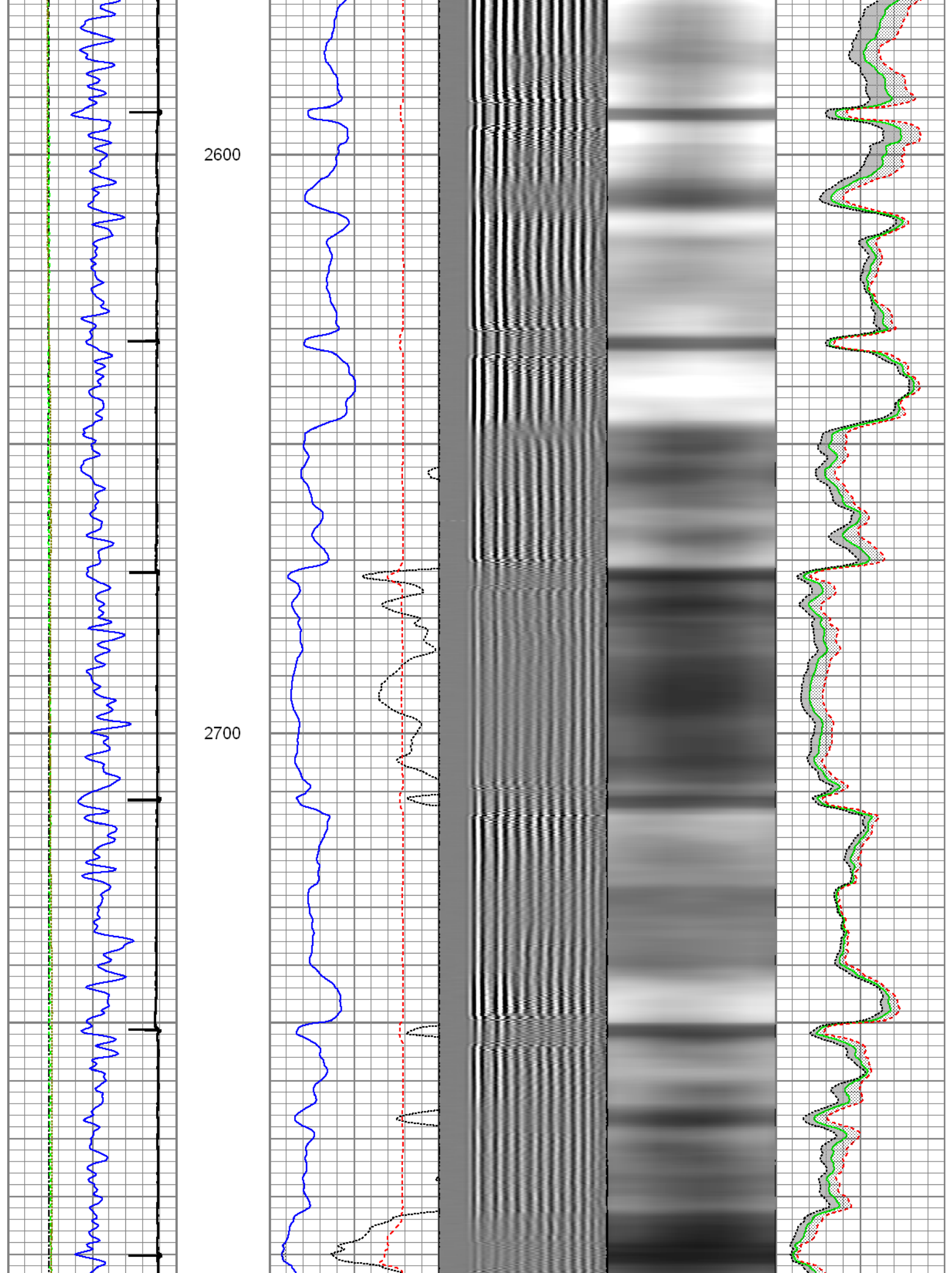


2200

2300



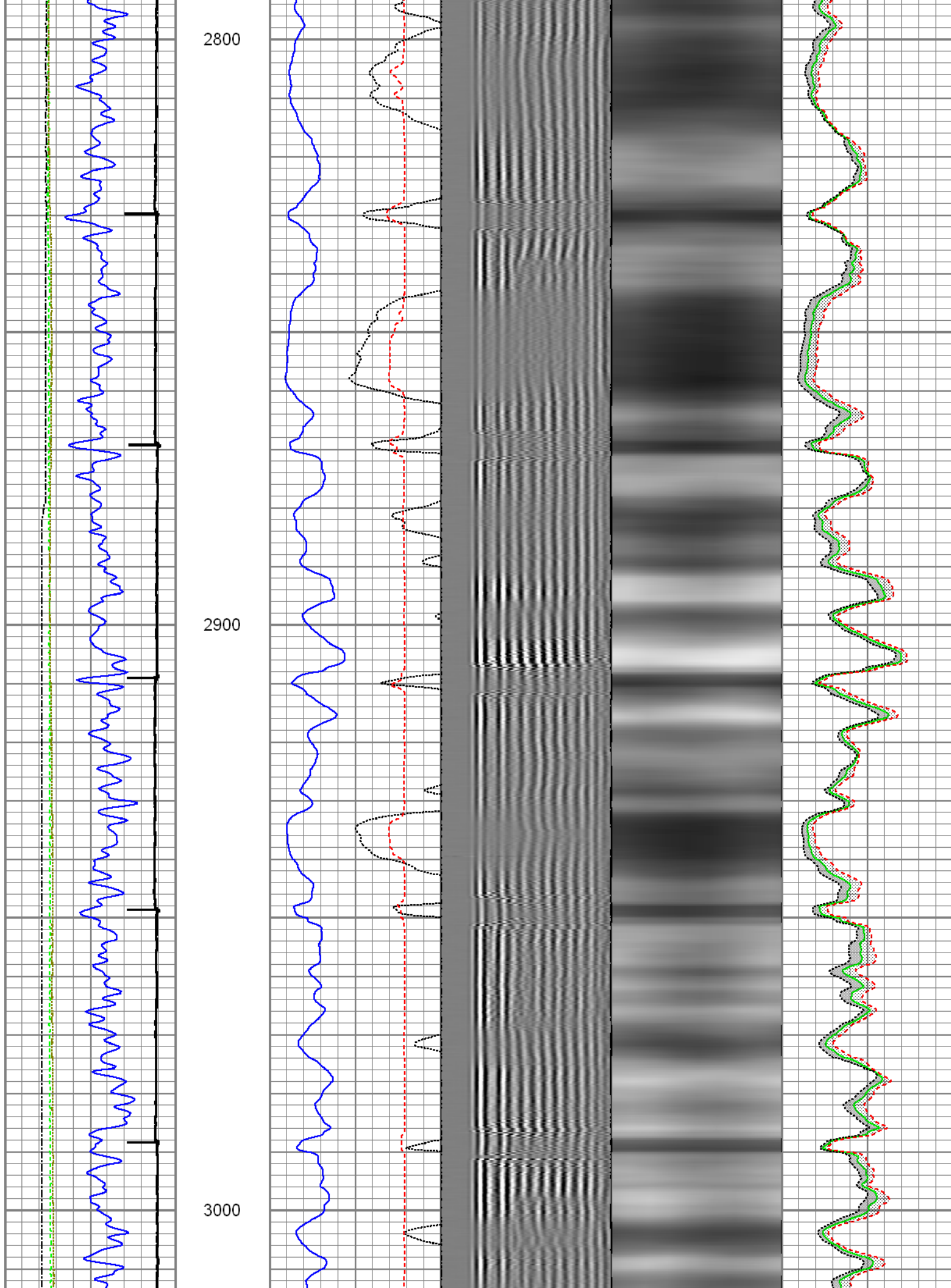


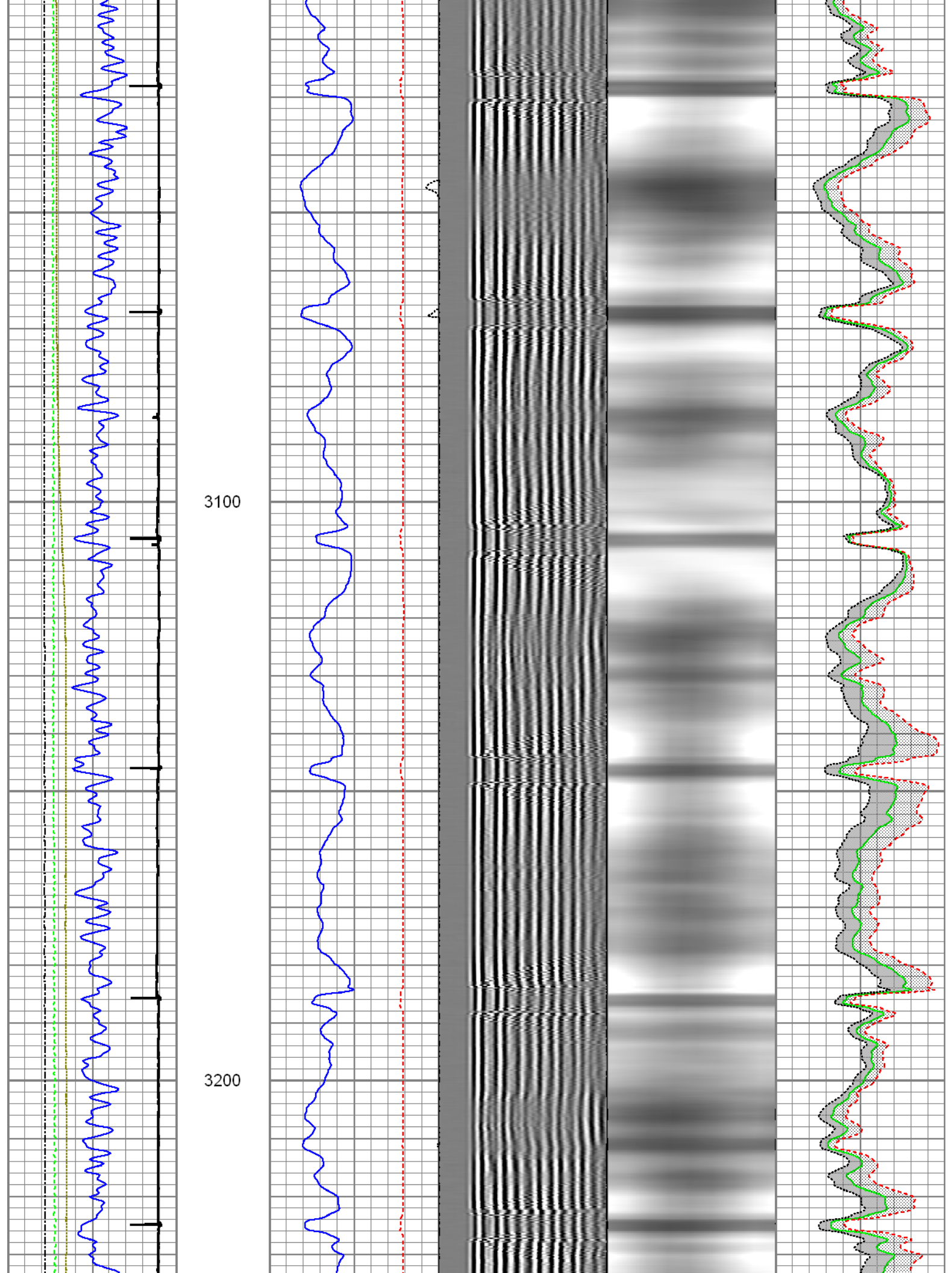


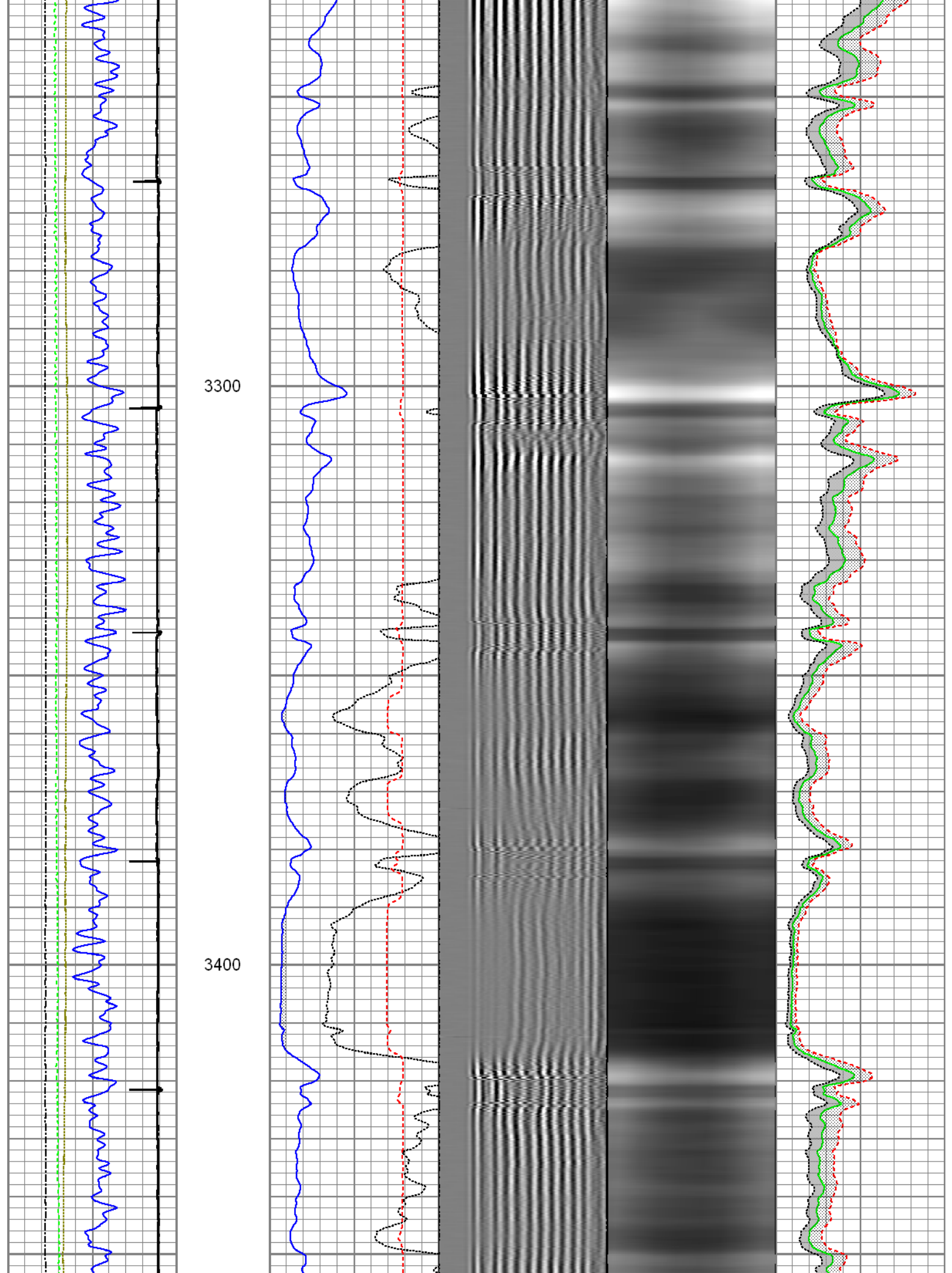
2800

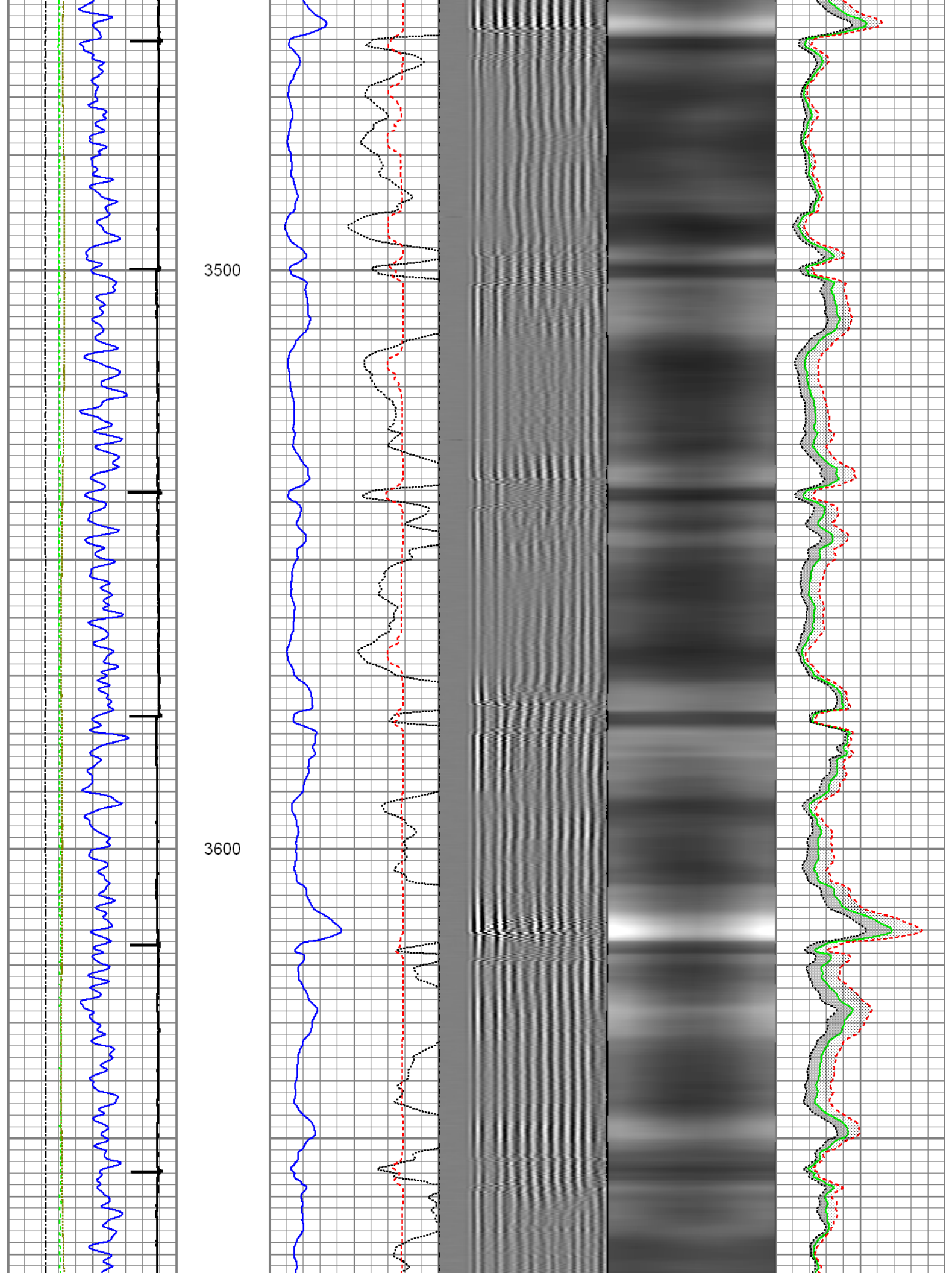
2900

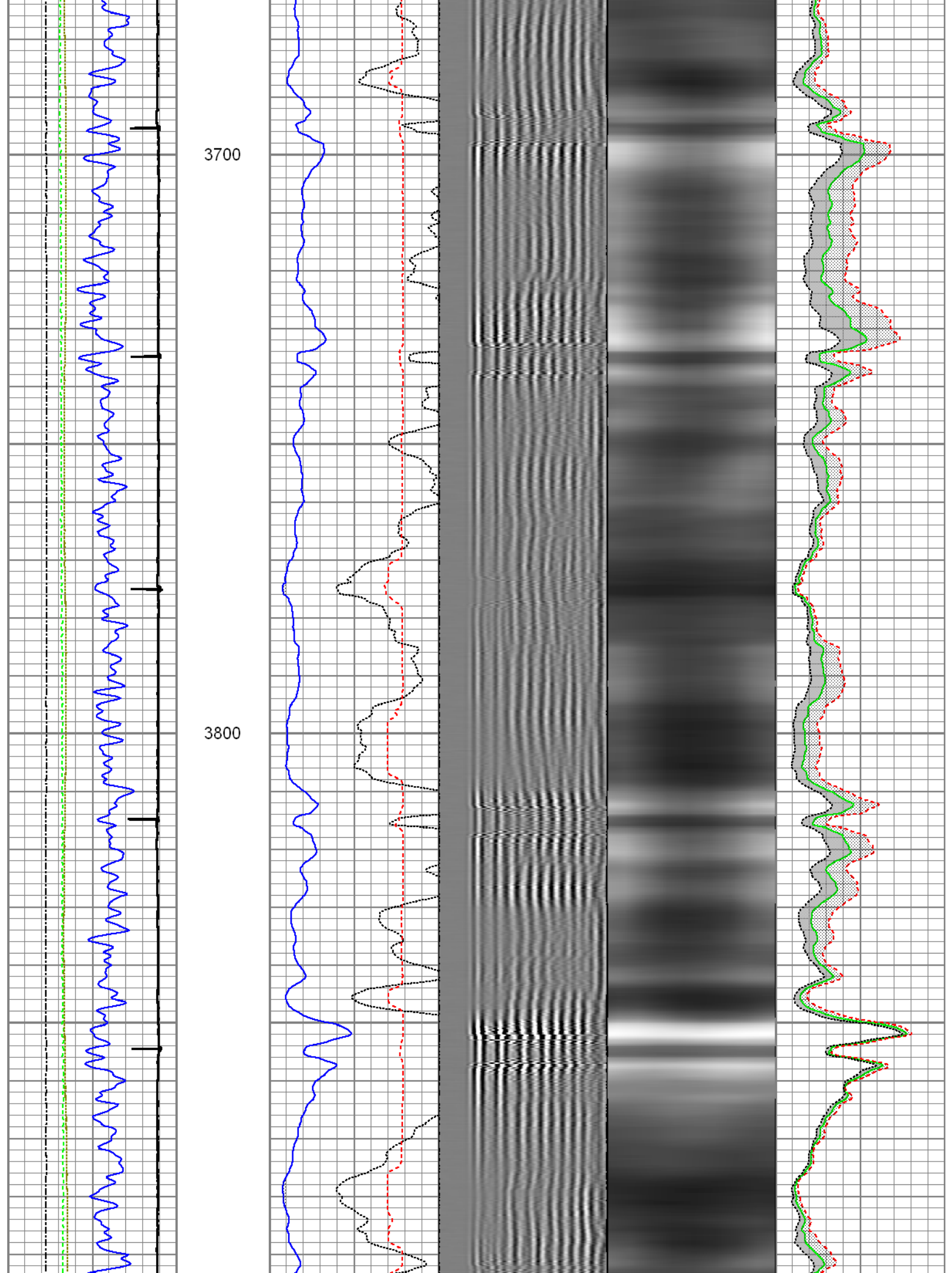
3000

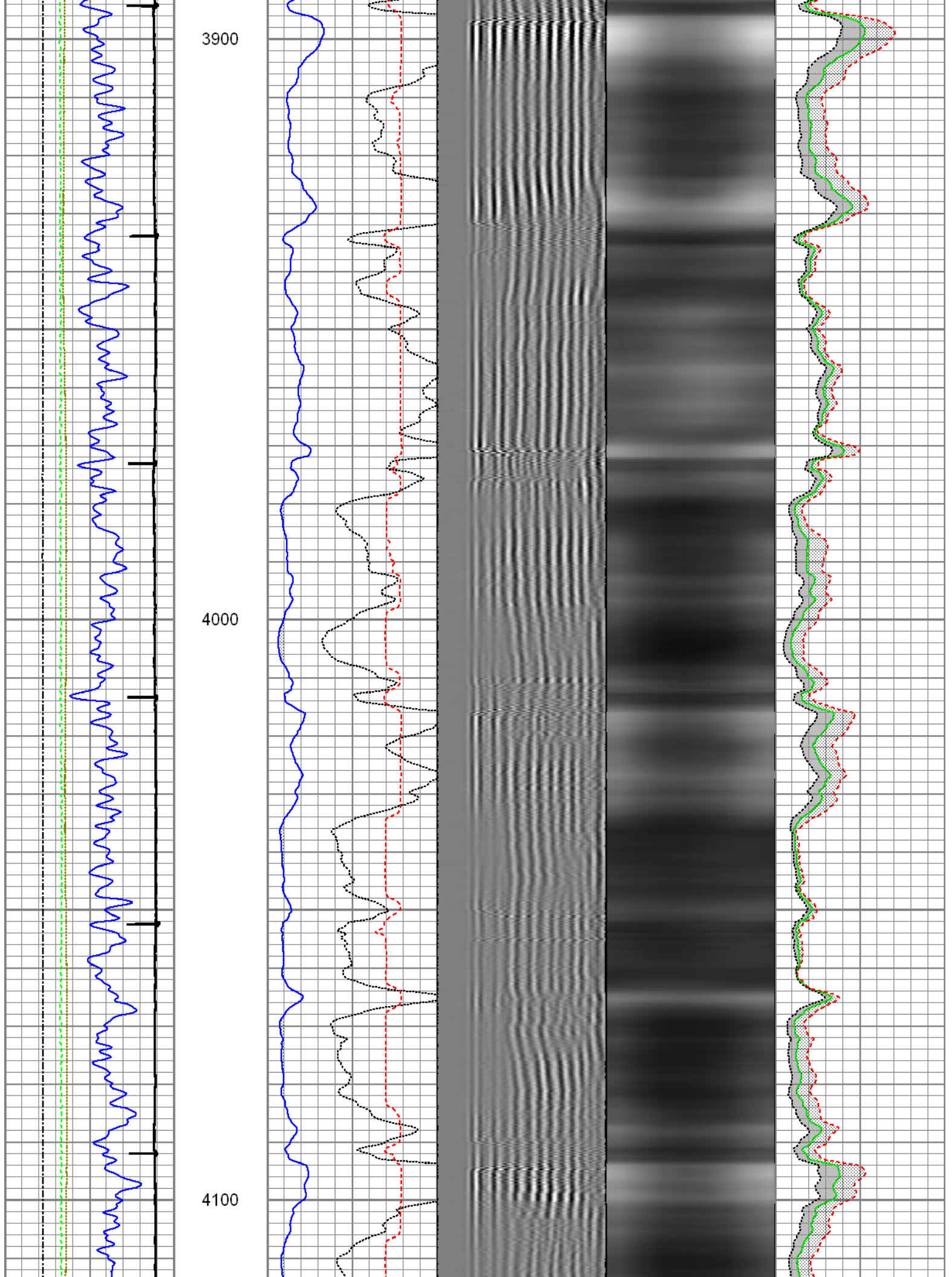


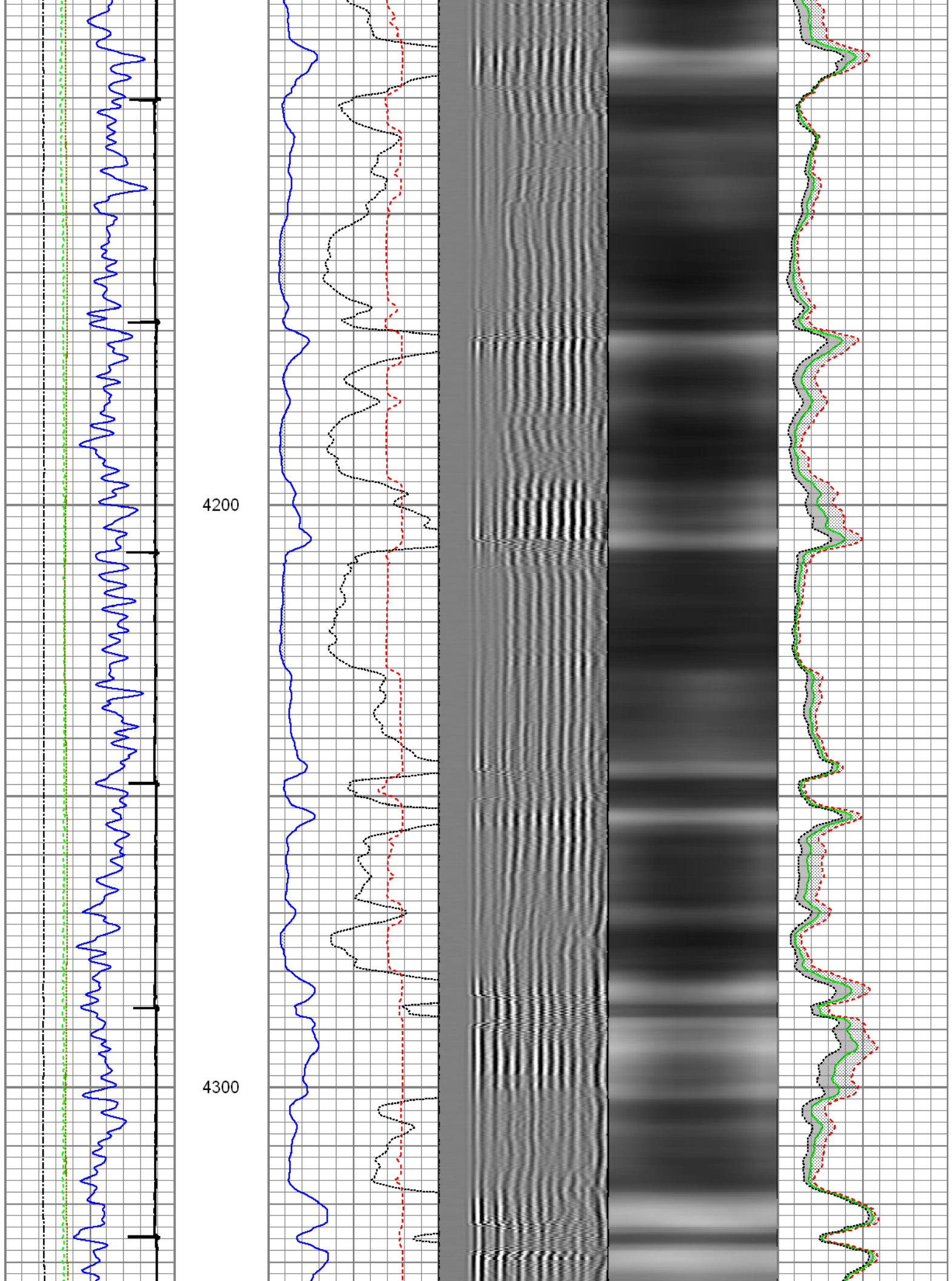


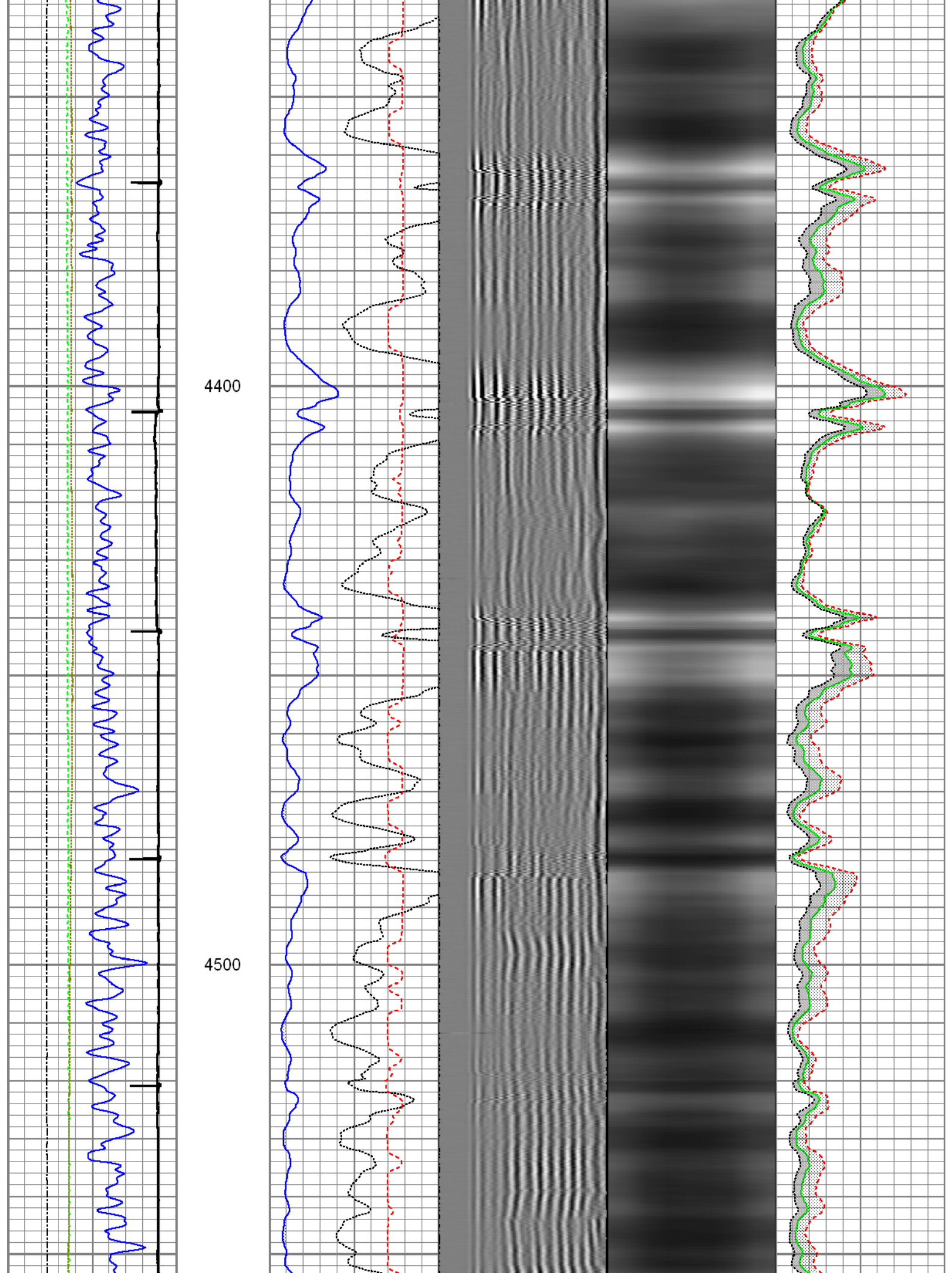


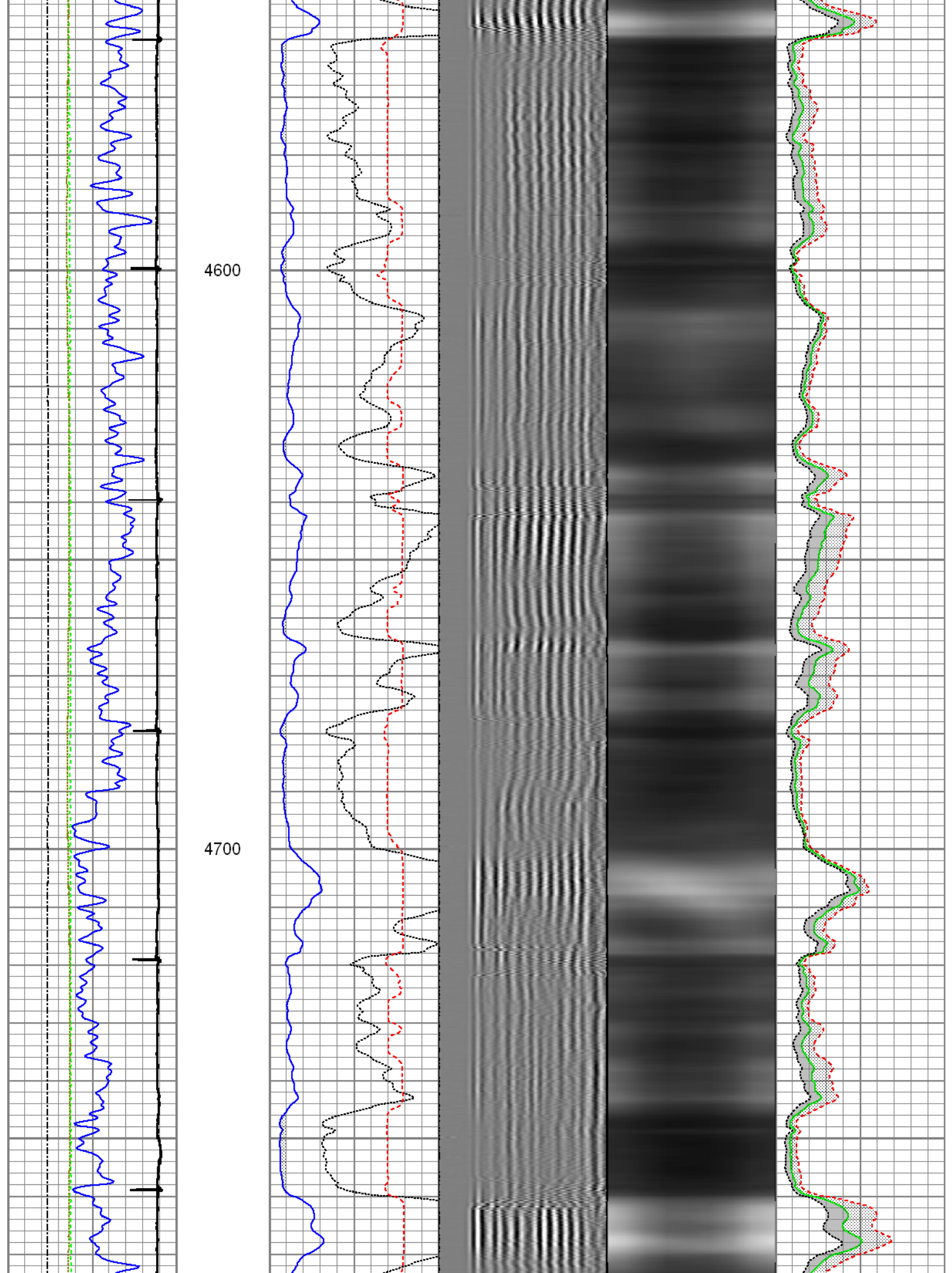


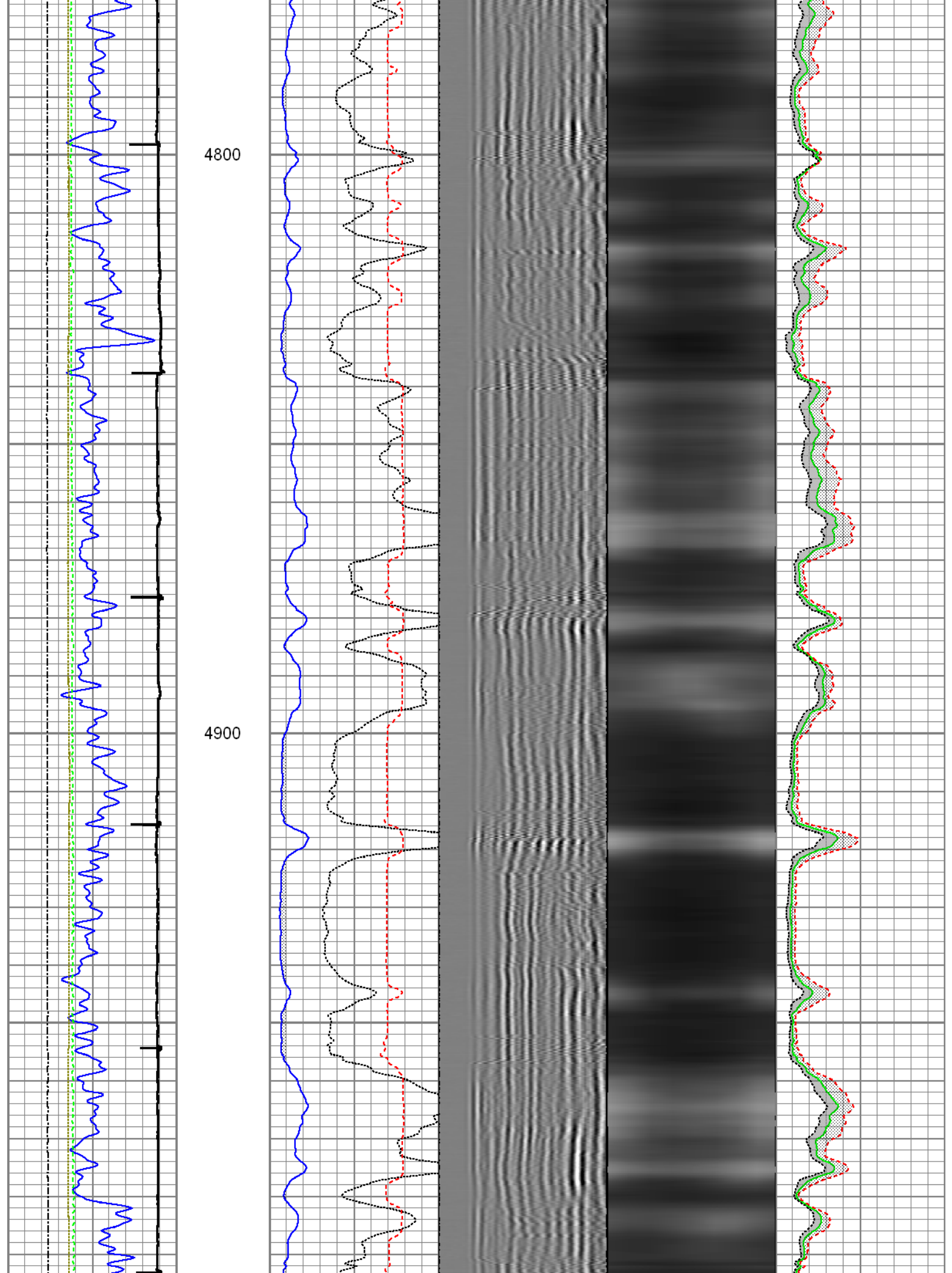








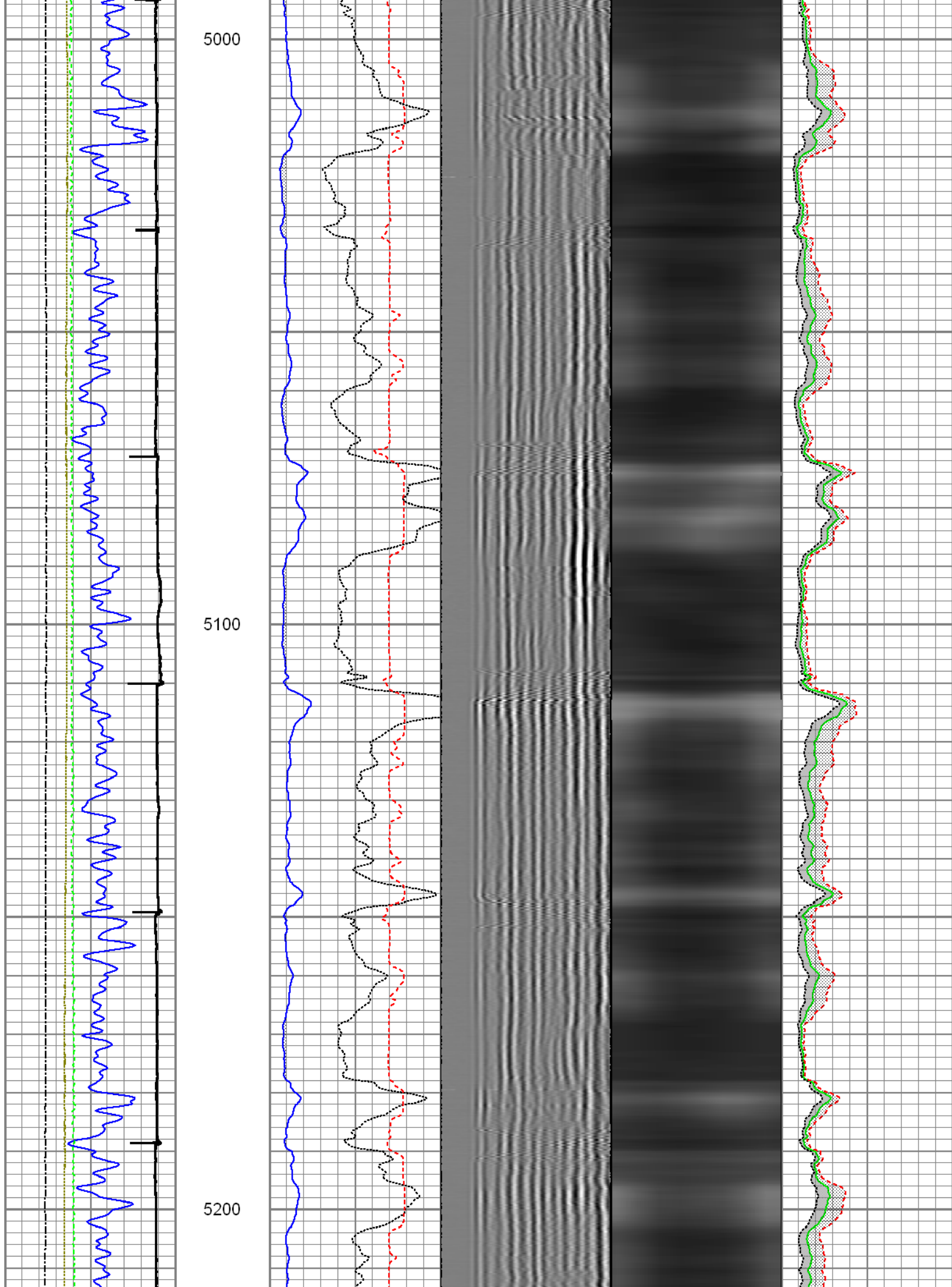


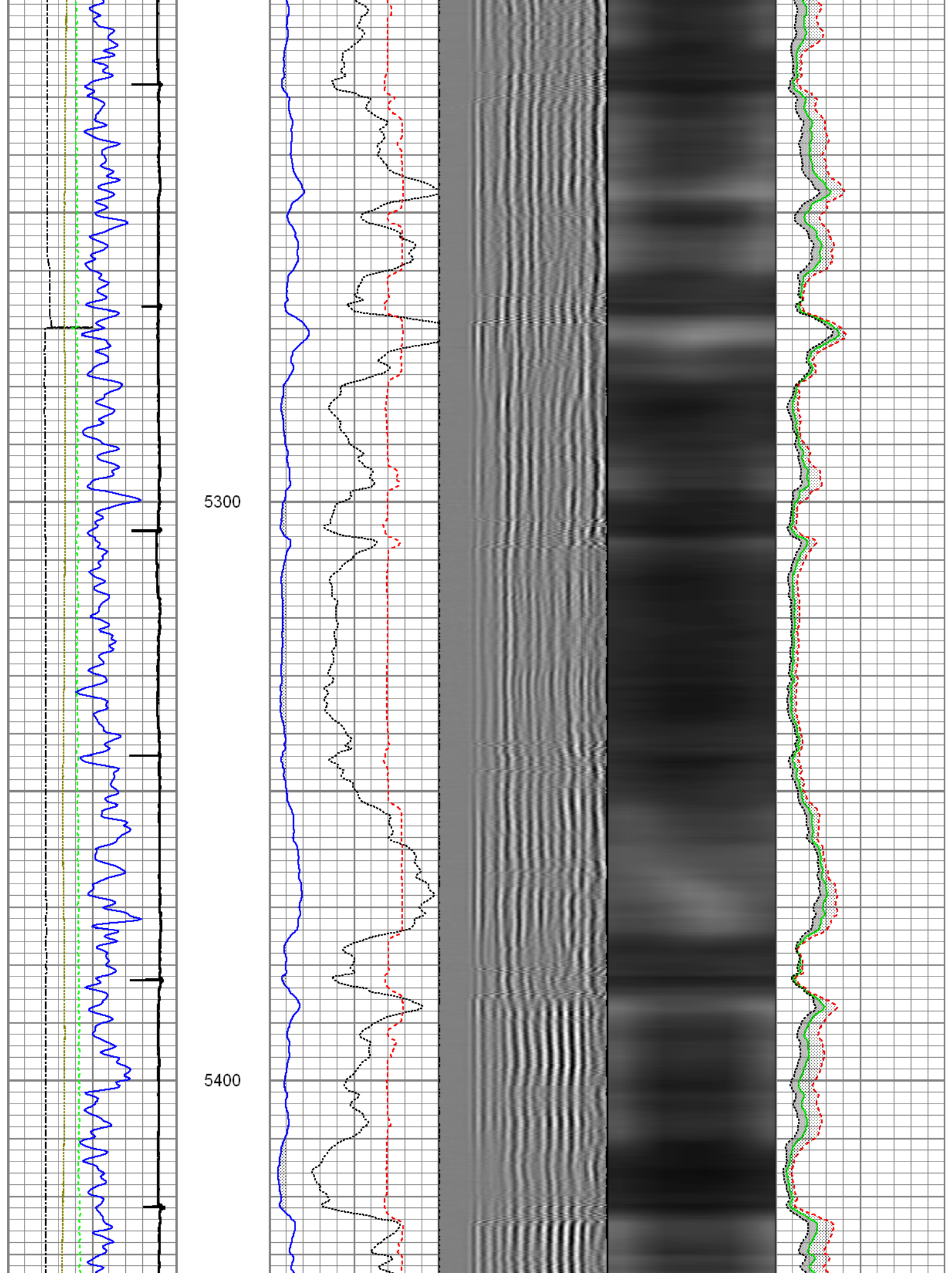


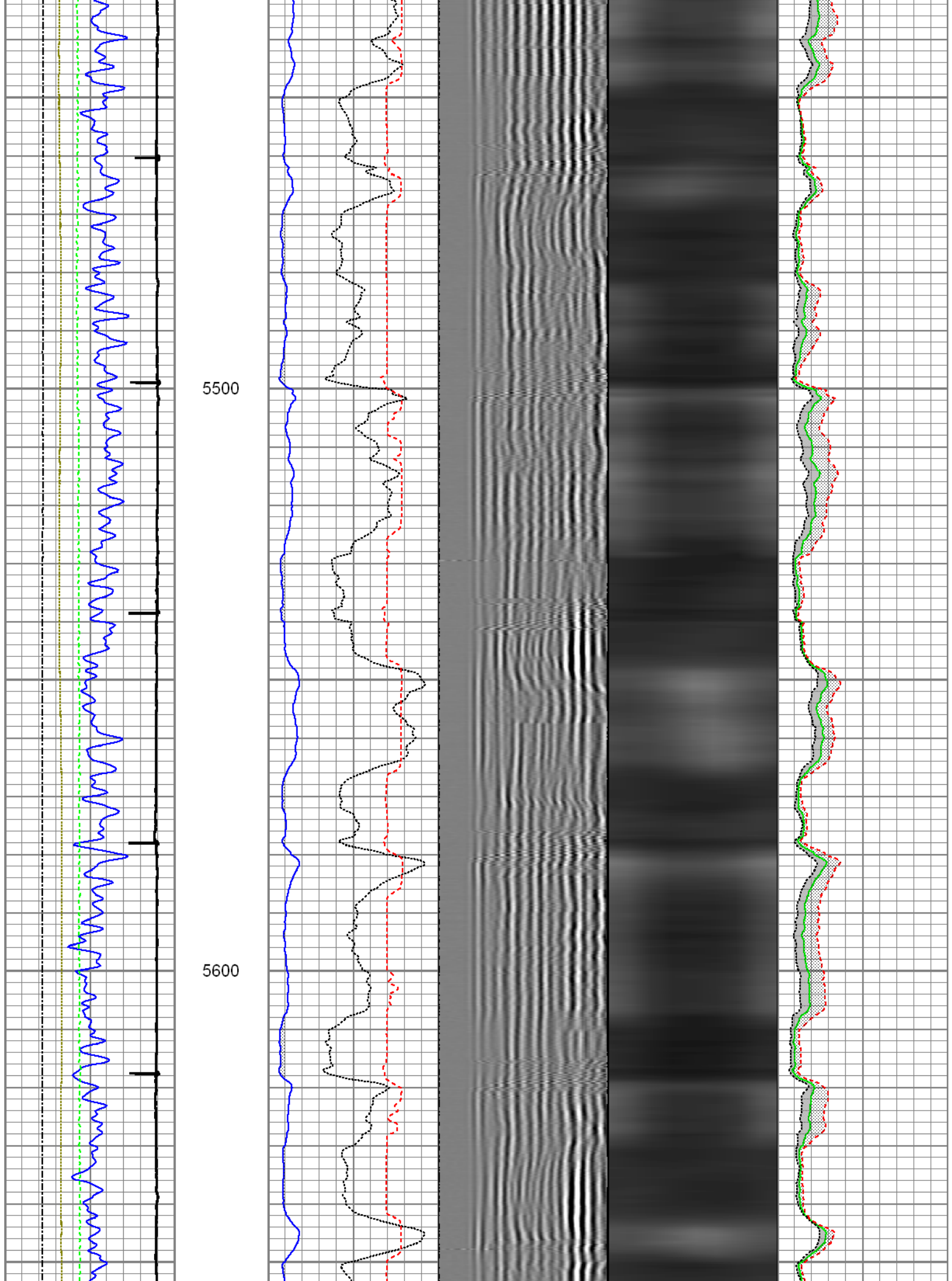
5000

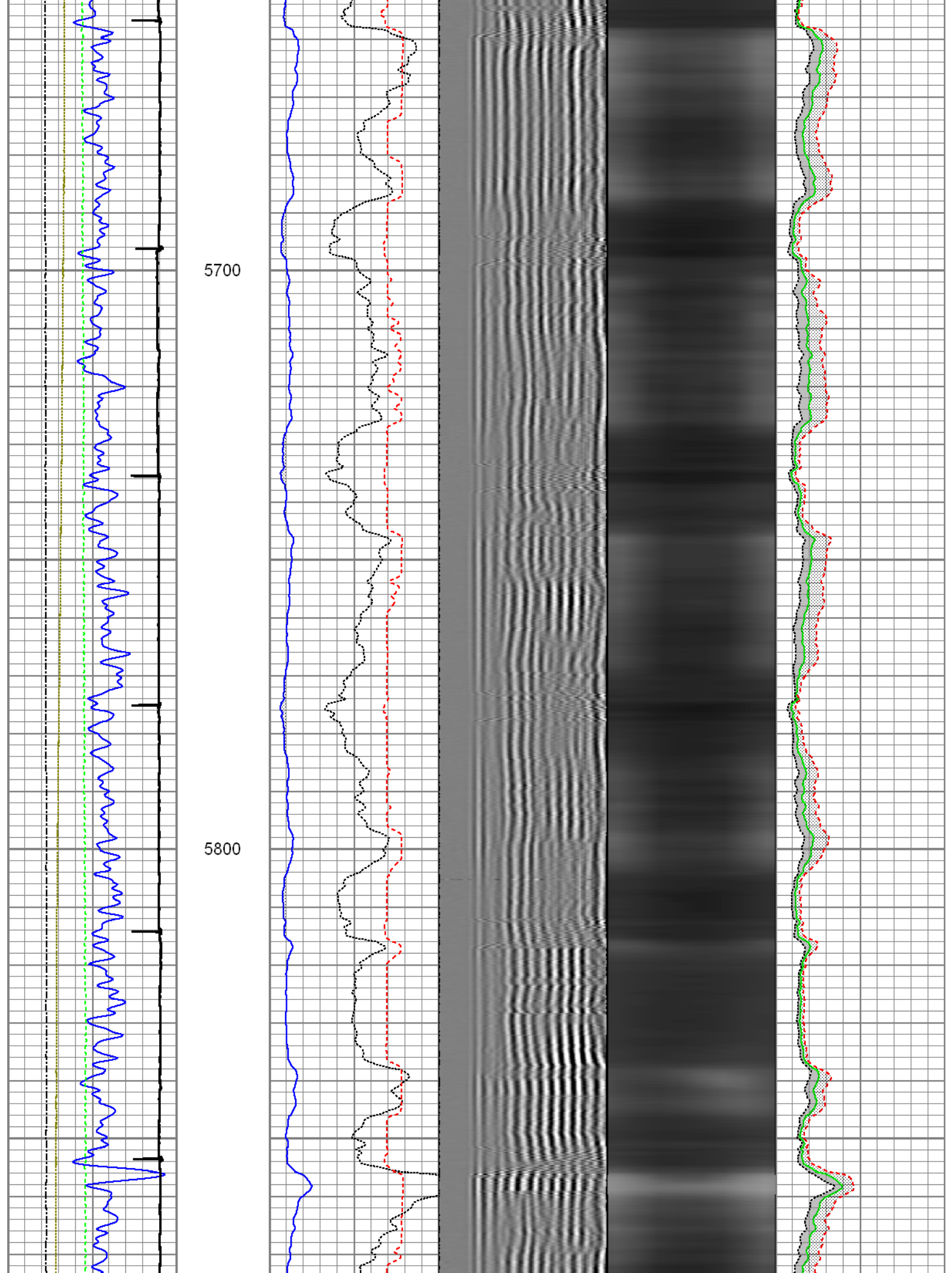
5100

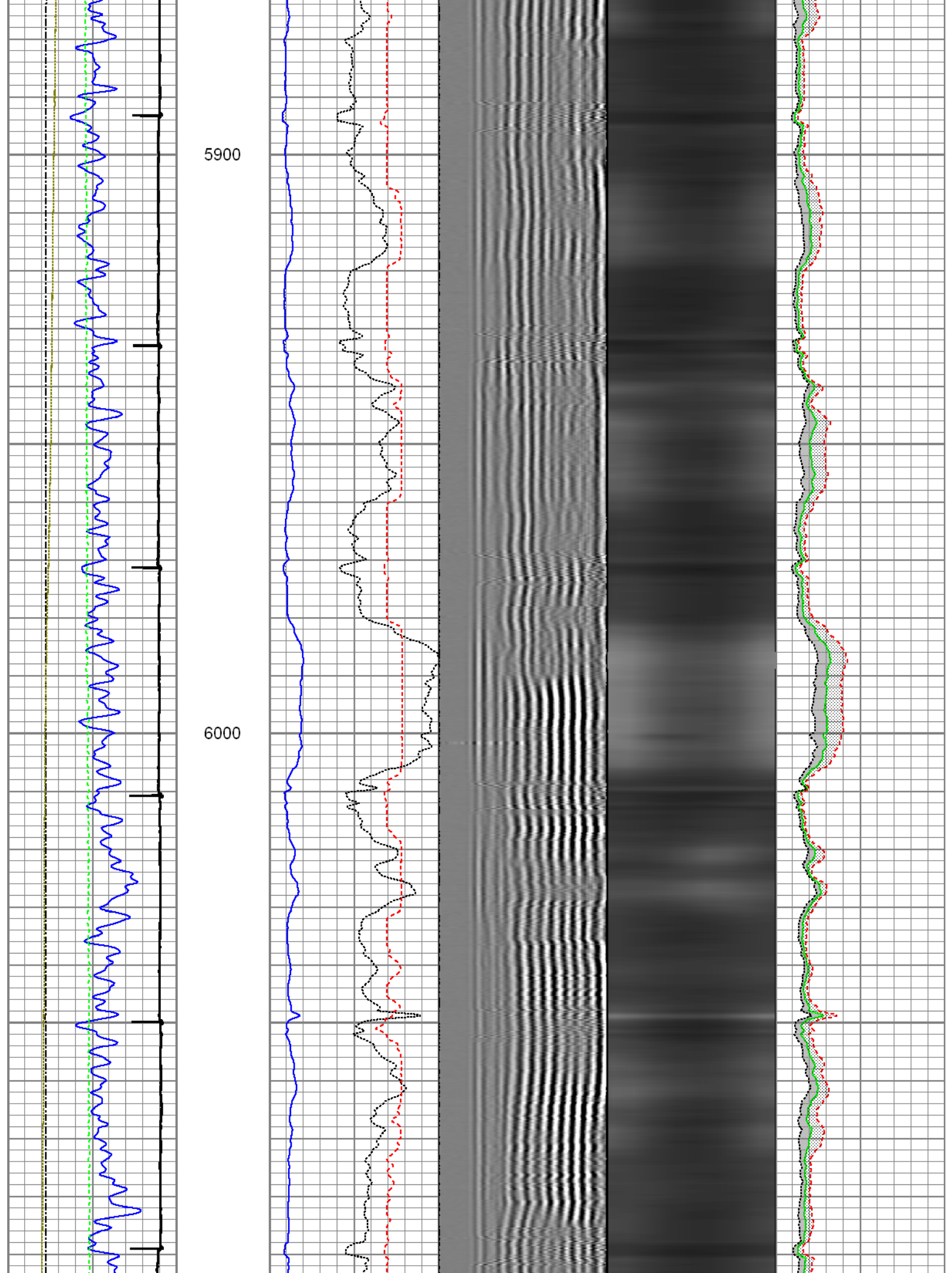
5200







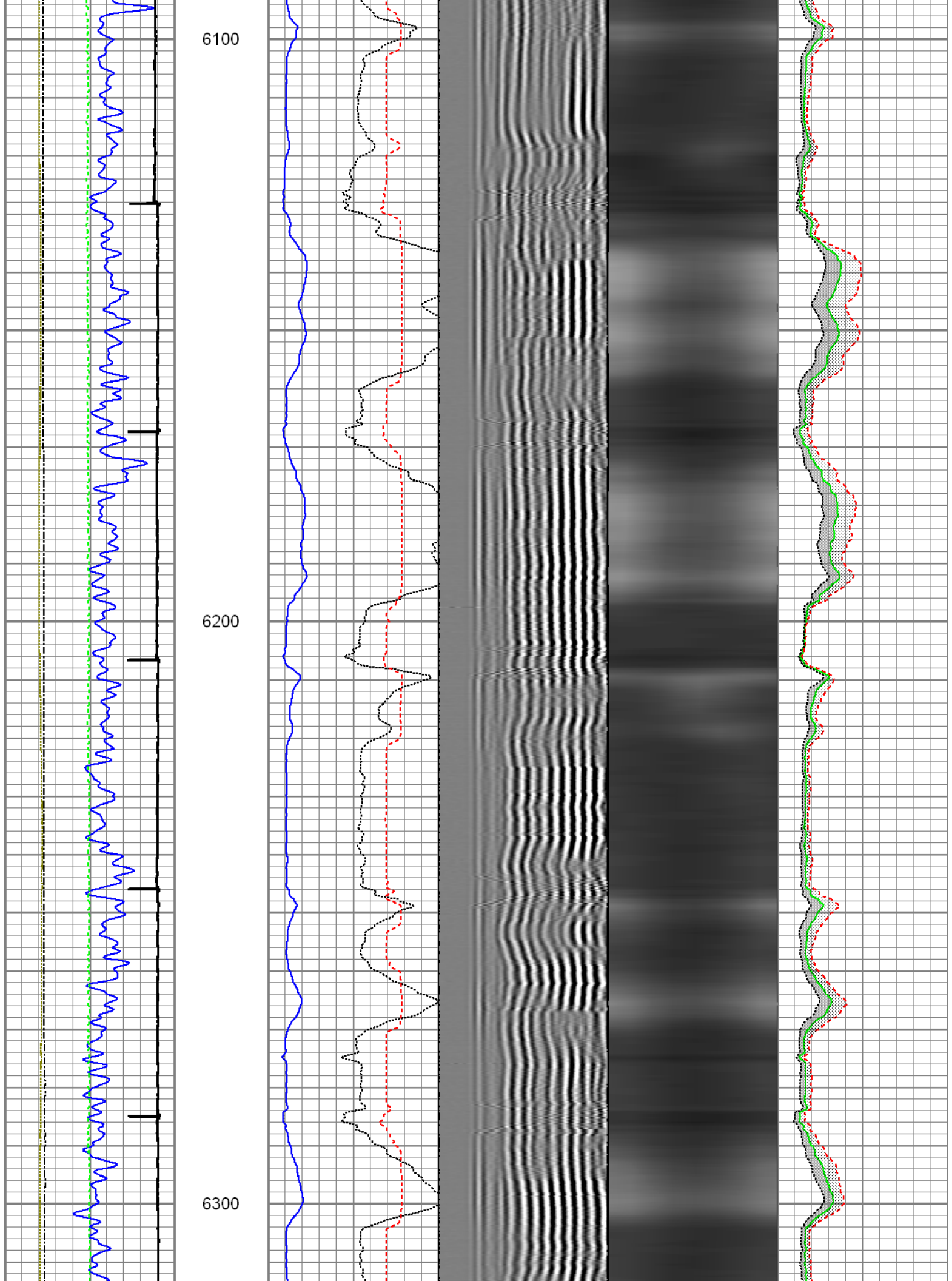


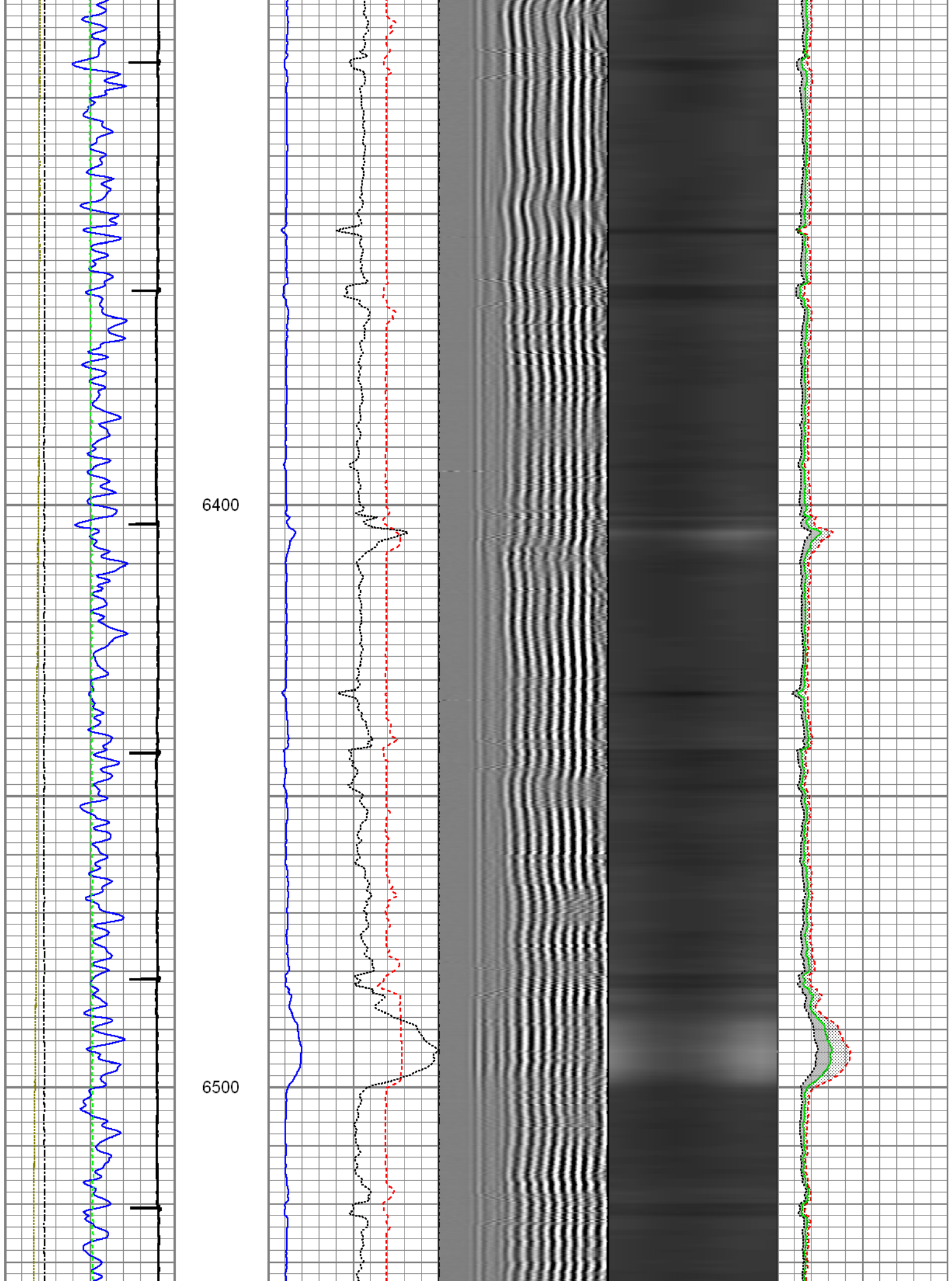


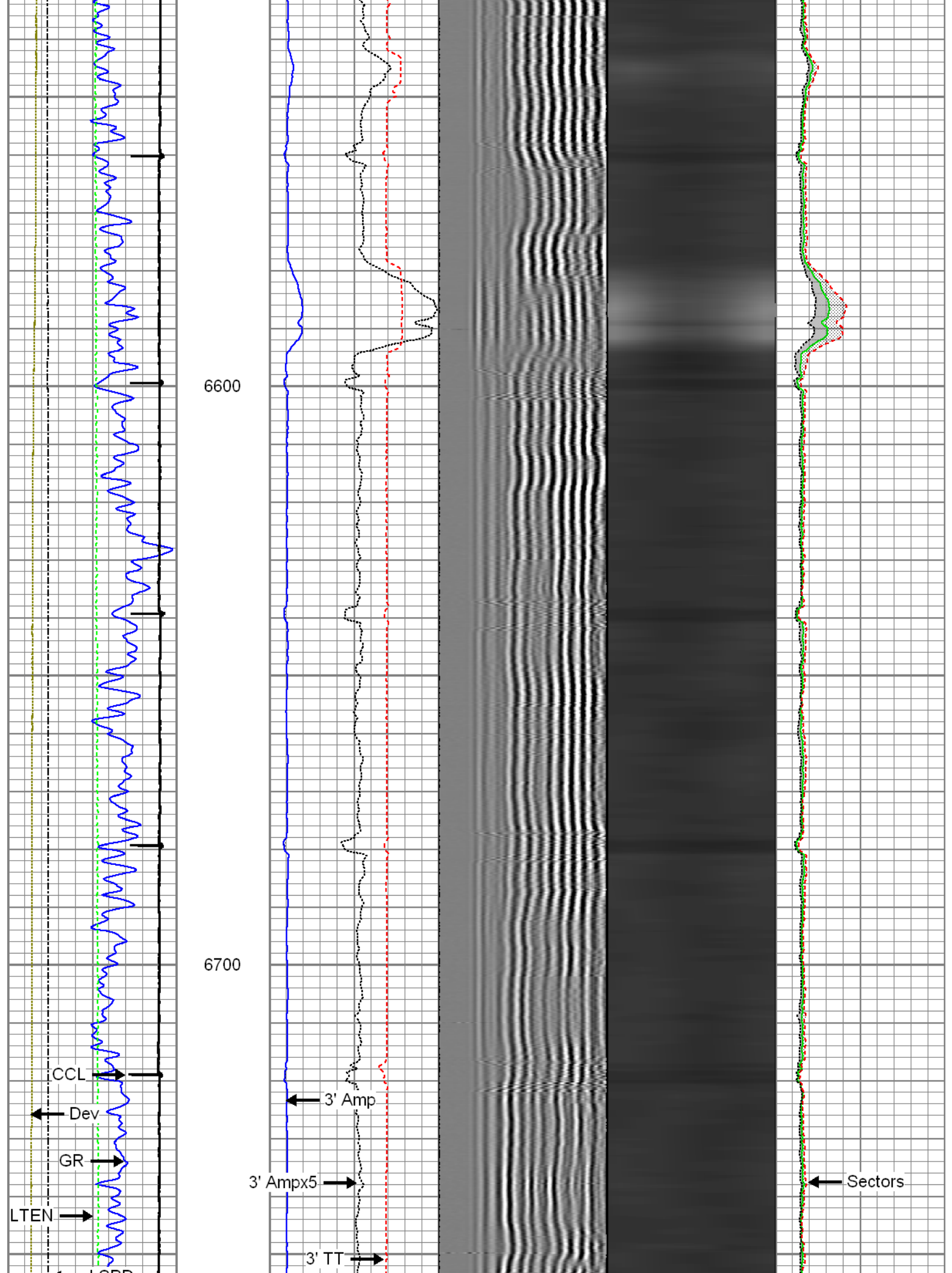
6100

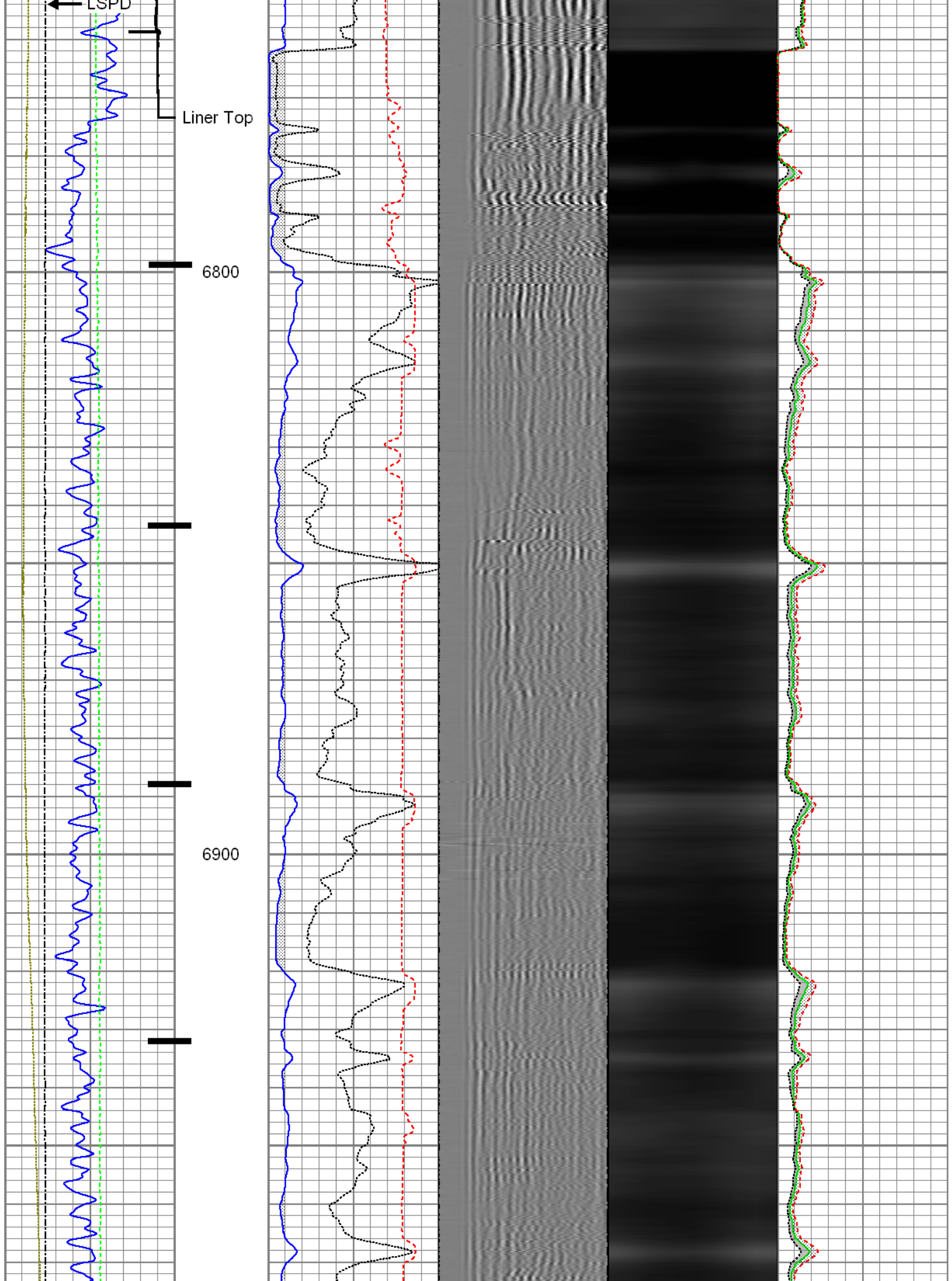
6200

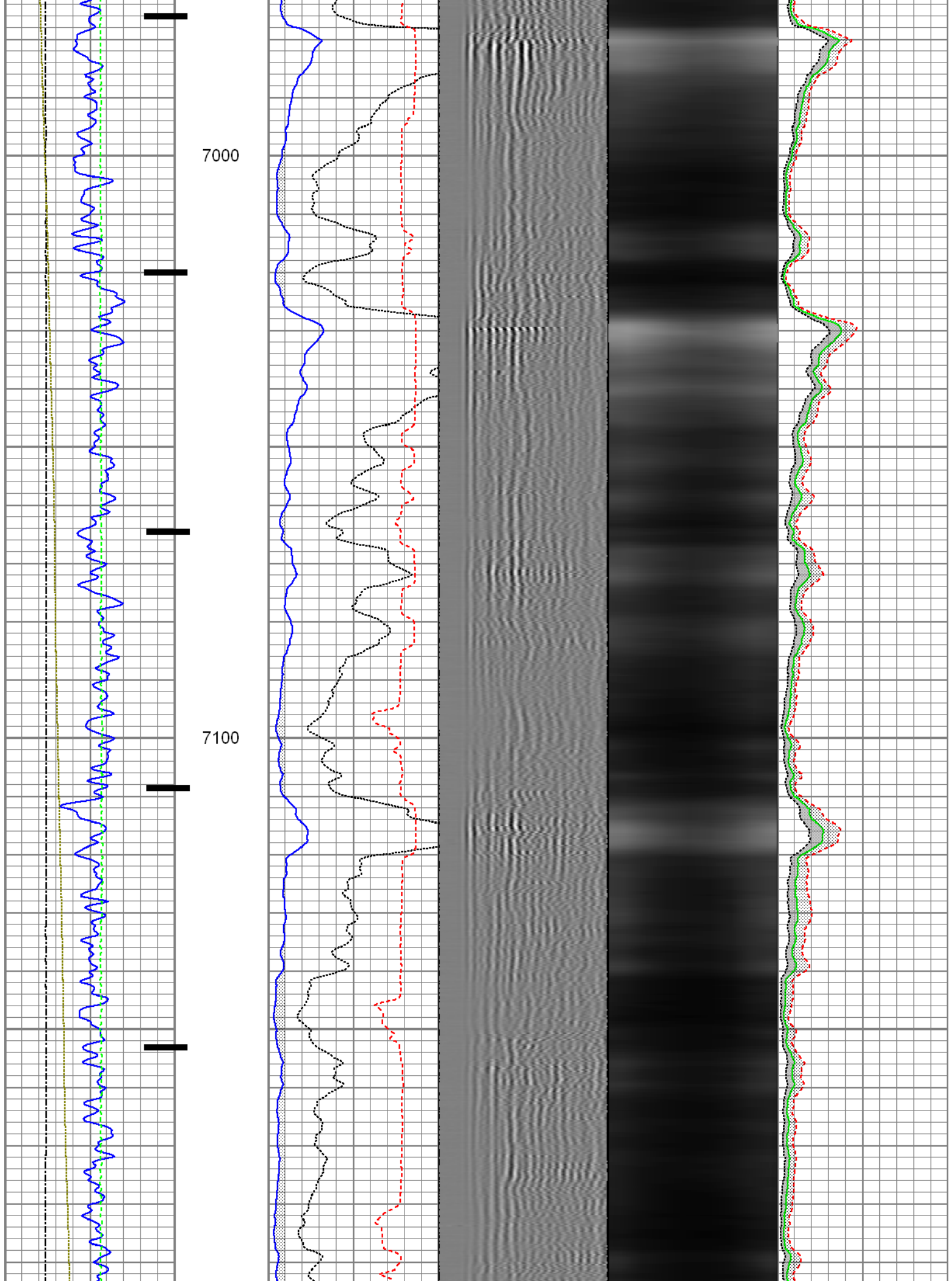
6300

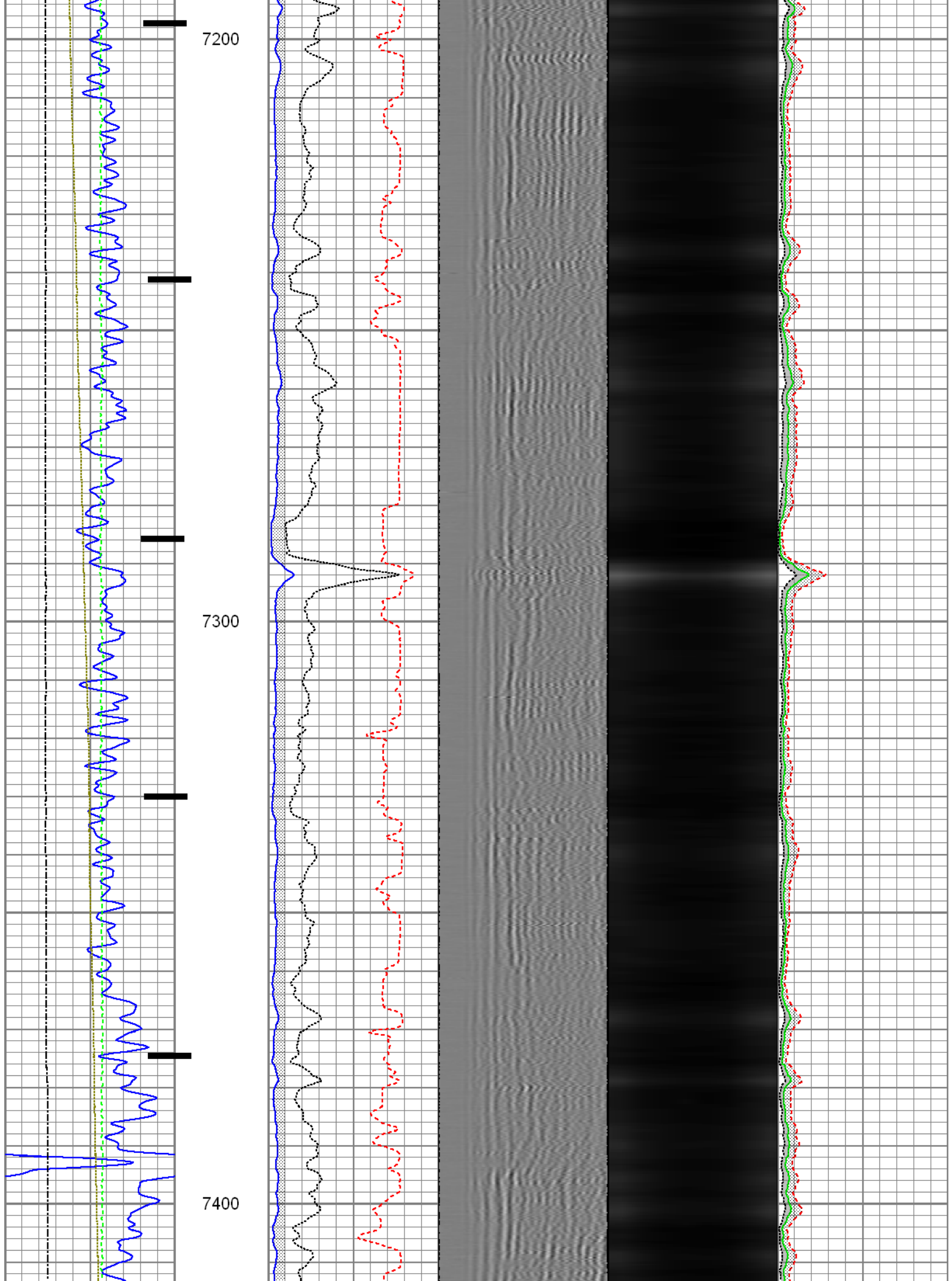


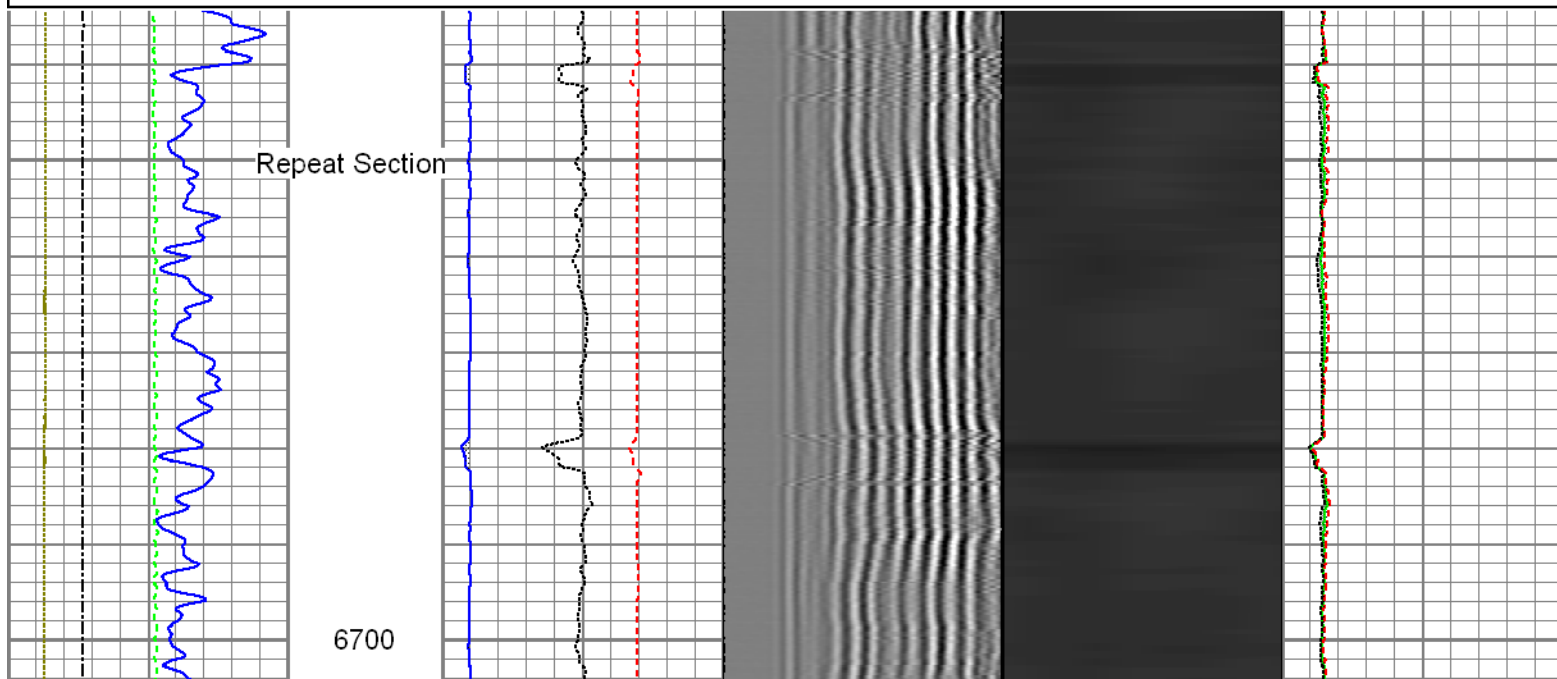
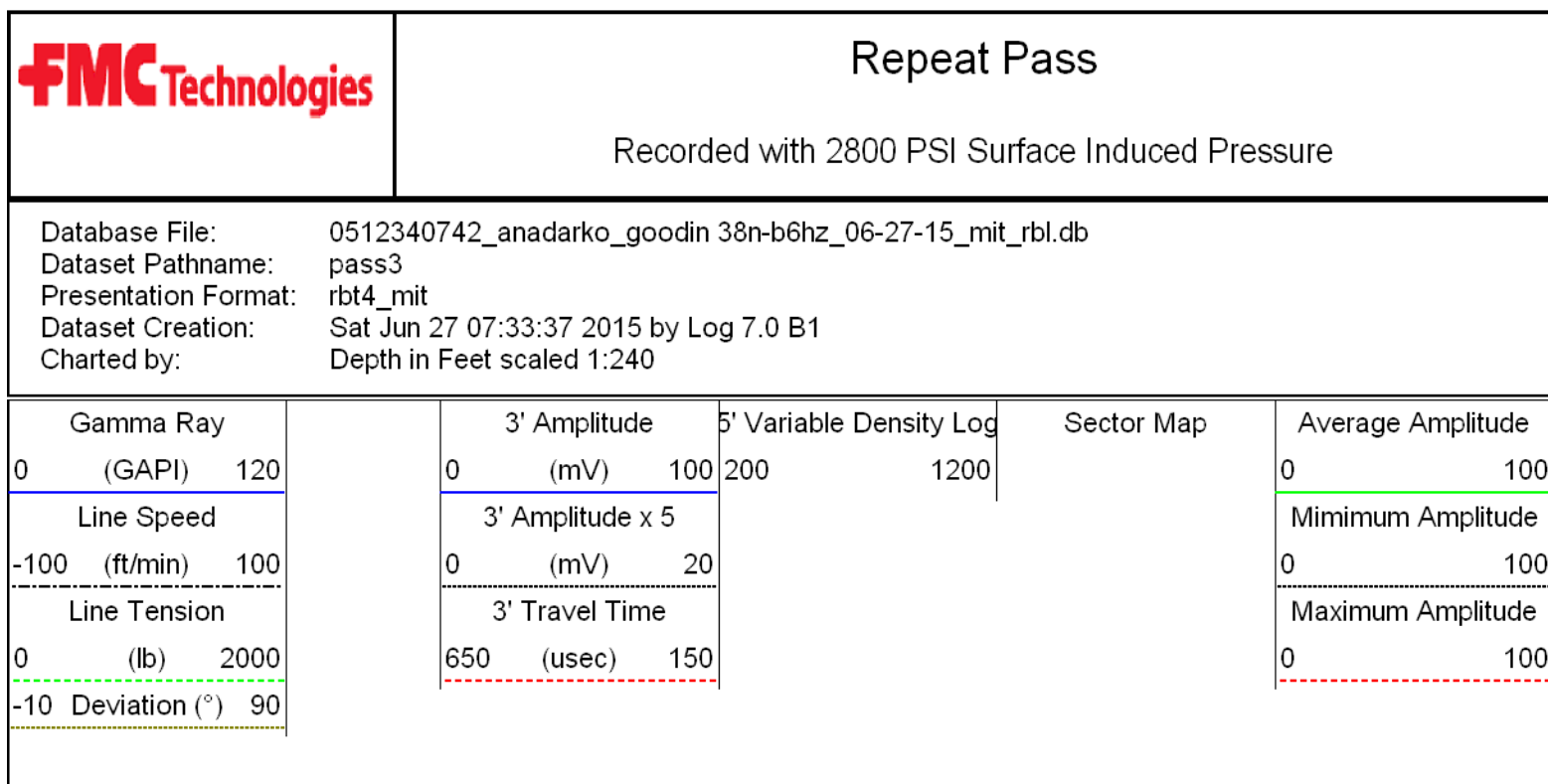
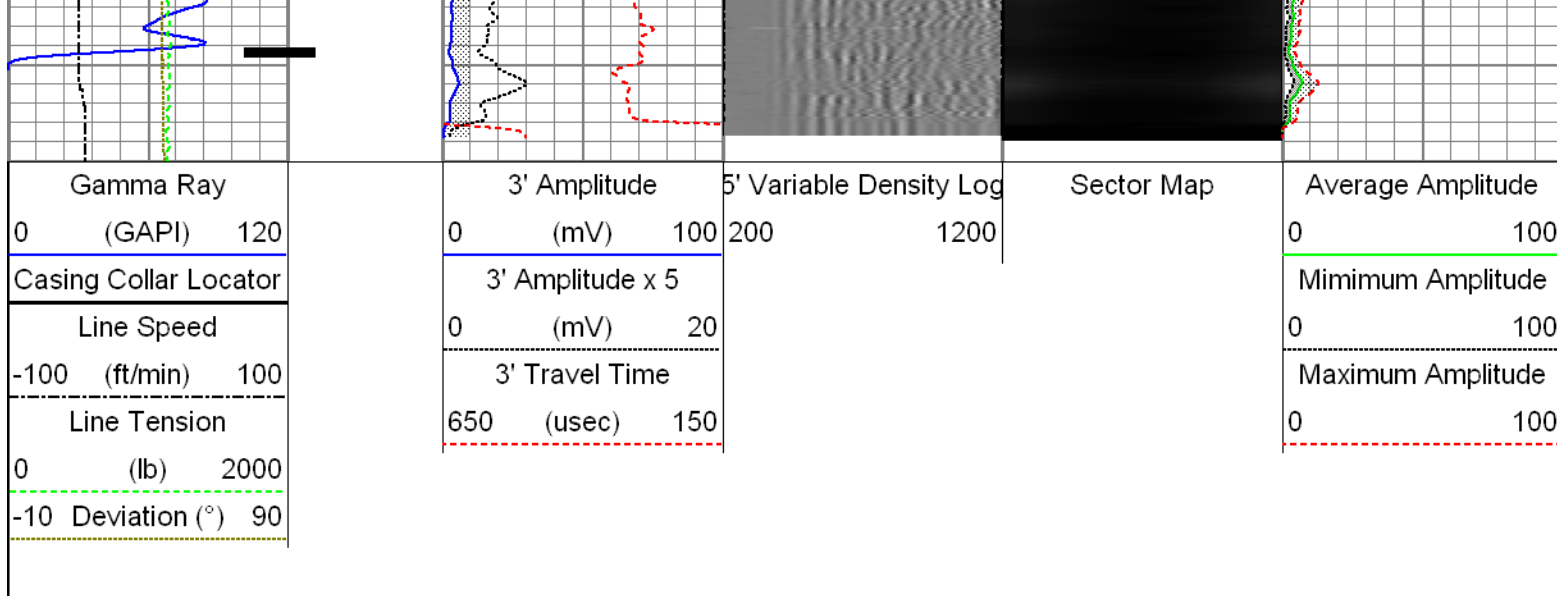


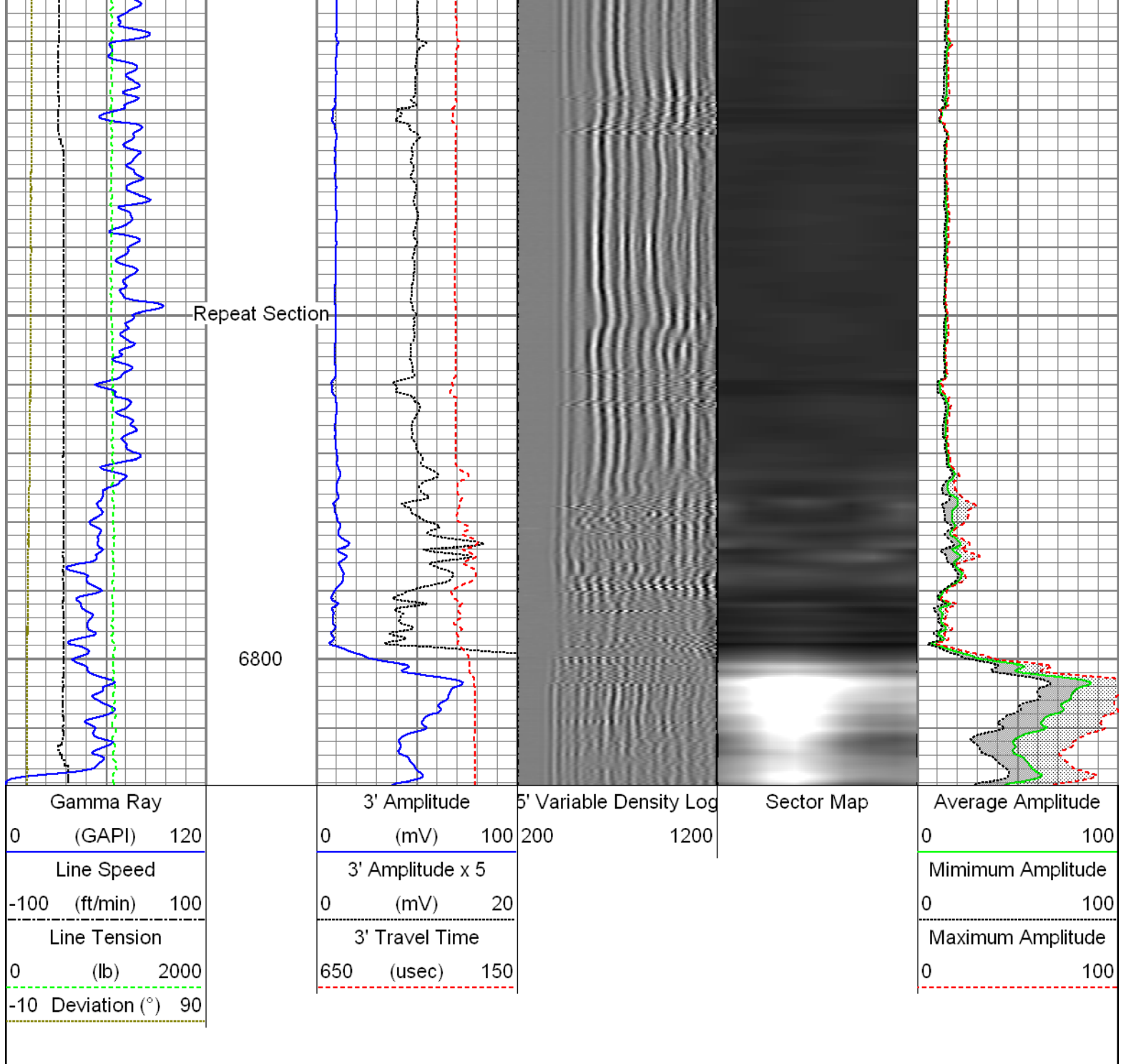


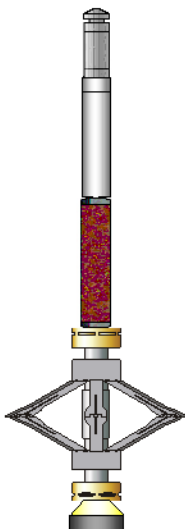


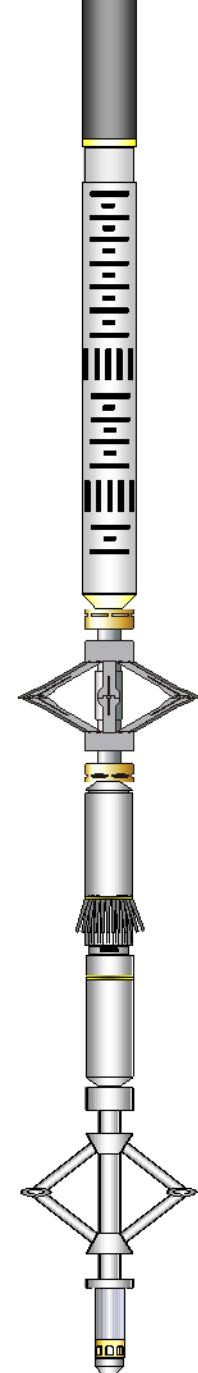








Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
GR	23.85		T_CH14375_1_GO Titan 1-7/16" Assembled Electric Cable Head with 1" Fishing Neck	1.03	1.44	4.00
			UW_AGS-UW_AGS_001 (215017) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW_XTU-UW_XTU_002 (219135) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (10019072) Production Gamma Ray	1.93	1.69	9.50
			UW_PRC #4 -DSSRAC (081) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00

WVF3FT	16.46		UW_RBT-UW_RBT_004 (10022773) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.47	3.13	140.00
WVFS1	16.46					
WVFS2	16.46					
WVFS3	16.46					
WVFS4	16.46					
WVFS5	16.46					
WVFS6	16.46					
WVFS7	16.46					
WVFS8	16.46					
CBLTEMP	16.46	UW_PRC-DSSRAC (080) 2-3/4" DSS 5 Arm Roller Centralizer	2.55	2.75	32.00	
CBLROT	16.46					
WVF5FT	15.46					
MIT	6.45	UW_MIT-UW_MIT40_027 (218950) 40 Multifinger Imaging Tool	4.54	2.75	61.10	
TEMP	0.37	UW_PRC-UW_PRC_057 (1101) Sondex 2-3/4" 4-Arm Production Roller Centraliser	2.98	2.75	32.00	
		UW_PRT-UW_PRT_016 (10025097) Platinum Resistance Thermometer	1.04	1.69	5.20	
		UW_BUL-UW_BUL_006 (218707) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20	
TSTAMP	0.00					
Dataset: 0512340742_anadarko_goodin 38n-b6hz_06-27-15_mit_rbl.db: field/well/run1/pass4 Total Length: 28.09 ft Total Weight: 324.50 lb O.D. 3.13 in						

Calibration Report					
Database File:	0512340742_anadarko_goodin 38n-b6hz_06-27-15_mit_rbl.db				
Dataset Pathname:	pass4				
Dataset Creation:	Sat Jun 27 07:45:36 2015 by Log 7.0 B1				
Temperature Calibration Report					
Serial Number:		10025097			
Tool Model:		UW_PRT_016			
Performed:		Wed Feb 11 13:44:44 2015			
Point #	Reading			Reference	
1	13053.00	cps	68.00	degF	
2	18014.00	cps	104.00	degF	
3	29668.00	cps	176.00	degF	

4	41181.00	cps	248.00	degF
5	52983.00	cps	320.00	degF
6	58931.00	cps	356.00	degF
7		cps		degF
8		cps		degF
9		cps		degF
10		cps		degF

Multi-finger Imaging Tool Calibration Report

Serial Number:	218950
Number of Fingers:	40
Tool Model:	UW_MIT40_027

Inclinometer Calibration Report			
Performed:	Fri, Oct, 10 10:41:51 2008		
Calibration Angle:	45		
	Inc X	Inc Y	
Vertical:	1996	1975	
Finger 1 up:	2238	2226	
Finger 31 up:	1760	2216	
Finger 21 up:	1769	1745	
Finger 11 up:	2250	1738	
Sensitivity ratio:	1.00023		
X-axis angle:	314.283		
Deviation const.:	339.139		

Finger Calibration Report							
Performed:				Sat Jun 27 06:54:44 2015			
Ring size:	4	5	6	7			
(in)	Sens	Sens	Sens				
Finger 01:	1442 258.0	1700 302.0	2002 308.0	2310			
Finger 02:	1510 235.0	1745 270.0	2015 271.0	2286			
Finger 03:	1426 260.0	1686 303.0	1989 307.0	2296			
Finger 04:	1448 260.0	1708 302.0	2010 299.0	2309			
Finger 05:	1487 251.0	1738 290.0	2028 286.0	2314			
Finger 06:	1414 264.0	1678 309.0	1987 307.0	2294			
Finger 07:	1438 262.0	1700 303.0	2003 303.0	2306			
Finger 08:	1434 260.0	1694 299.0	1993 294.0	2287			
Finger 09:	1426 265.0	1691 305.0	1996 300.0	2296			
Finger 10:	1443 258.0	1701 293.0	1994 288.0	2282			
Finger 11:	1428 271.0	1699 300.0	1999 295.0	2294			
Finger 12:	1383 276.0	1659 302.0	1961 302.0	2263			
Finger 13:	1480 259.0	1739 276.0	2015 272.0	2287			
Finger 14:	1419 264.0	1683 288.0	1971 289.0	2260			
Finger 15:	1414 282.0	1696 294.0	1990 297.0	2287			
Finger 16:	1418 276.0	1694 289.0	1983 292.0	2275			
Finger 17:	1424 290.0	1714 295.0	2009 300.0	2309			
Finger 18:	1368 280.0	1648 278.0	1926 287.0	2213			
Finger 19:	1424 286.0	1710 283.0	1993 292.0	2285			
Finger 20:	1434 286.0	1720 283.0	2003 294.0	2297			
Finger 21:	1387 296.0	1683 295.0	1978 308.0	2286			
Finger 22:	1410 280.0	1690 274.0	1964 285.0	2249			
Finger 23:	1407 286.0	1693 278.0	1971 293.0	2264			
Finger 24:	1442 288.0	1730 278.0	2008 286.0	2294			
Finger 25:	1417 290.0	1707 280.0	1987 294.0	2281			
Finger 26:	1386 292.0	1678 285.0	1963 301.0	2264			
Finger 27:	1441 282.0	1723 275.0	1998 290.0	2288			
Finger 28:	1429 288.0	1717 283.0	2000 300.0	2300			
Finger 29:	1481 270.0	1751 267.0	2018 282.0	2300			
Finger 30:	1392 284.0	1676 283.0	1959 307.0	2266			
Finger 31:	1421 287.0	1708 290.0	1998 310.0	2308			
Finger 32:	1481 267.0	1748 273.0	2021 287.0	2308			
Finger 33:	1437 279.0	1716 296.0	2012 313.0	2325			

Finger 33:	1437	270.0	1710	290.0	2012	310.0	2320
Finger 34:	1445	271.0	1716	291.0	2007	311.0	2318
Finger 35:	1494	248.0	1742	268.0	2010	282.0	2292
Finger 36:	1477	258.0	1735	283.0	2018	299.0	2317
Finger 37:	1451	266.0	1717	299.0	2016	308.0	2324
Finger 38:	1522	237.0	1759	264.0	2023	276.0	2299
Finger 39:	1451	255.0	1706	291.0	1997	295.0	2292
Finger 40:	1417	265.0	1682	309.0	1991	314.0	2305

Segmented Cement Bond Log Calibration Report

Serial Number:	10022773
Tool Model:	UW_RBT_004
Calibration Casing Diameter:	5.500 in
Calibration Depth:	-32.891 ft

Master Calibration, performed Sat Jun 27 06:57:01 2015:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.002	0.763	0.800	71.921	93.530	0.572
5FT	-0.002	0.702	0.800	71.921	101.054	0.967
S1	0.002	0.755	0.000	100.000	132.901	-0.324
S2	0.002	0.837	0.000	100.000	119.735	-0.189
S3	0.002	0.835	0.000	100.000	120.144	-0.263
S4	0.002	0.781	0.000	100.000	128.406	-0.285
S5	0.002	0.725	0.000	100.000	138.348	-0.333
S6	0.001	0.667	0.000	100.000	150.136	-0.189
S7	0.001	0.659	0.000	100.000	151.969	-0.208
S8	0.001	0.697	0.000	100.000	143.672	-0.202

Gamma Ray Calibration Report

Serial Number:	10019072
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	Kerr-McGee Oil & Gas Onshore, L.P.
Well	Goodin 38N - B6HZ
Field	Wattenberg
County	Weld
State	Colorado