

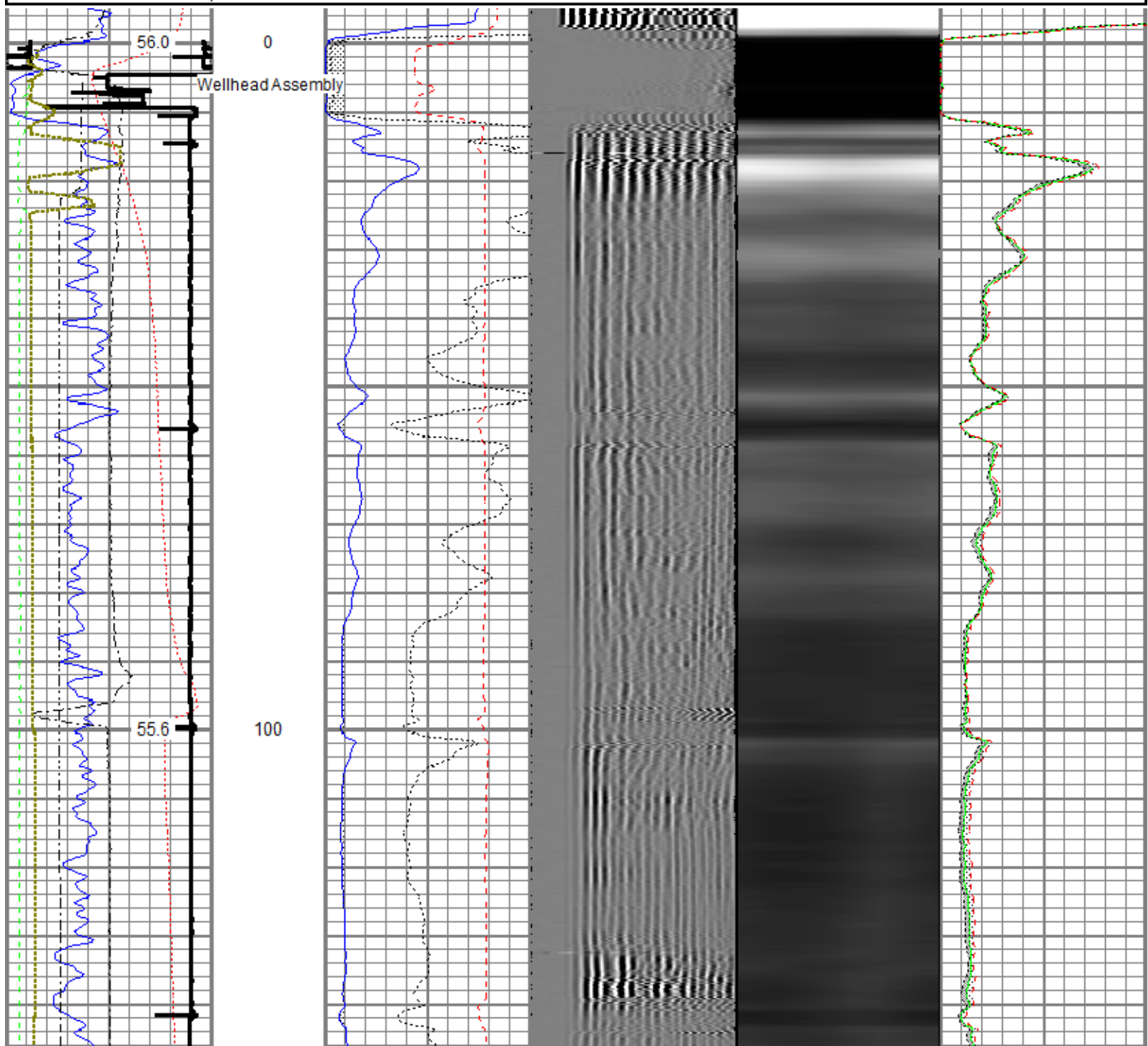
<<< Fold Here >>>
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible 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
<p>Log ran as per customer request Depth referenced to Casing Tally reported Liner Top at 5657 FT Adjusted -14 FT to correlate with Liner Top Gauge Ring/Junk Basket ran to 5835 FT with no debris Log ran from as deep as possible in heel to Surface Recorded with 2800 PSI Surface Induced Pressure Logging tools were clean and free of any debris upon completion of operations</p> <p>Thank you for choosing Reliance Oilfield Services, LLC!!</p>

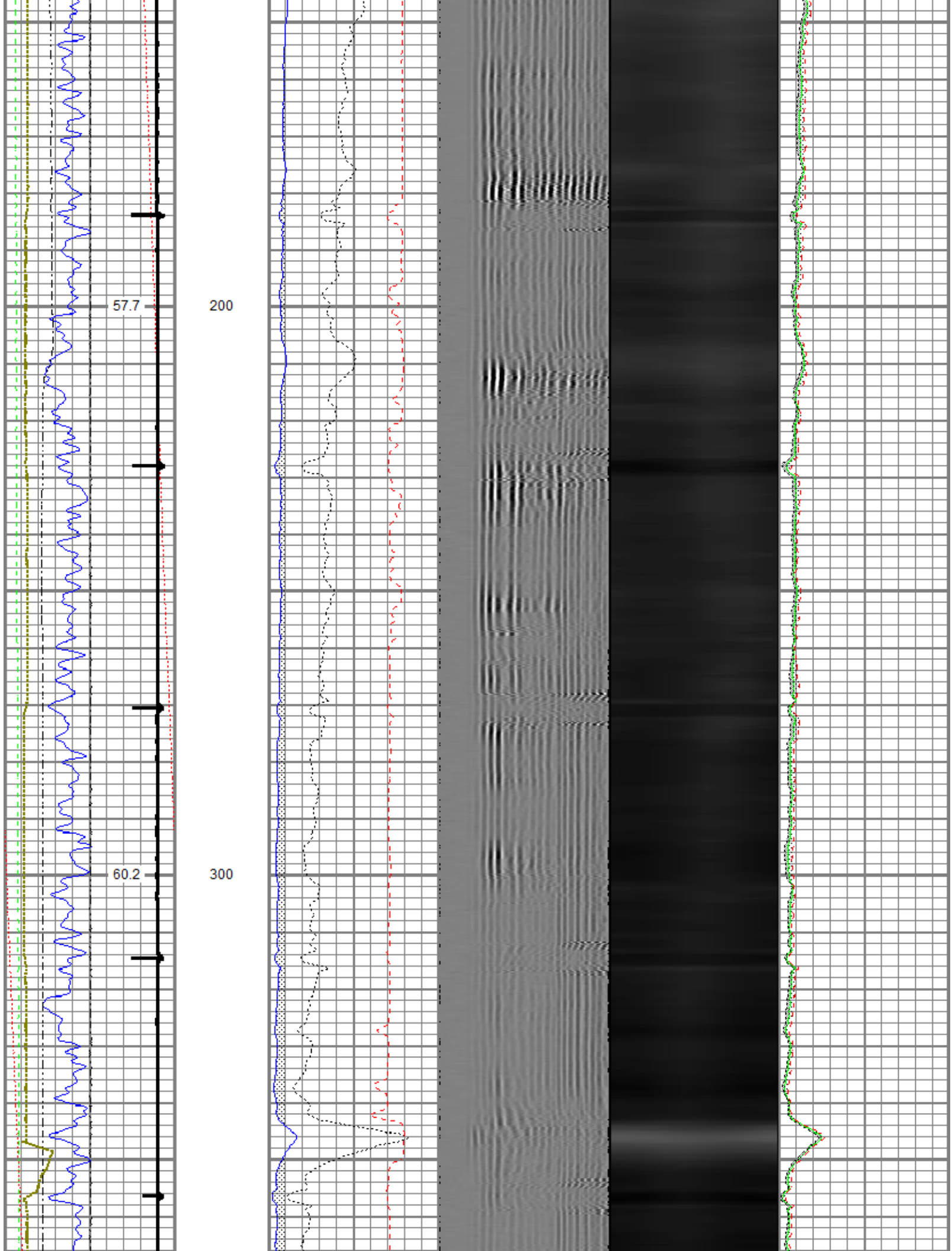


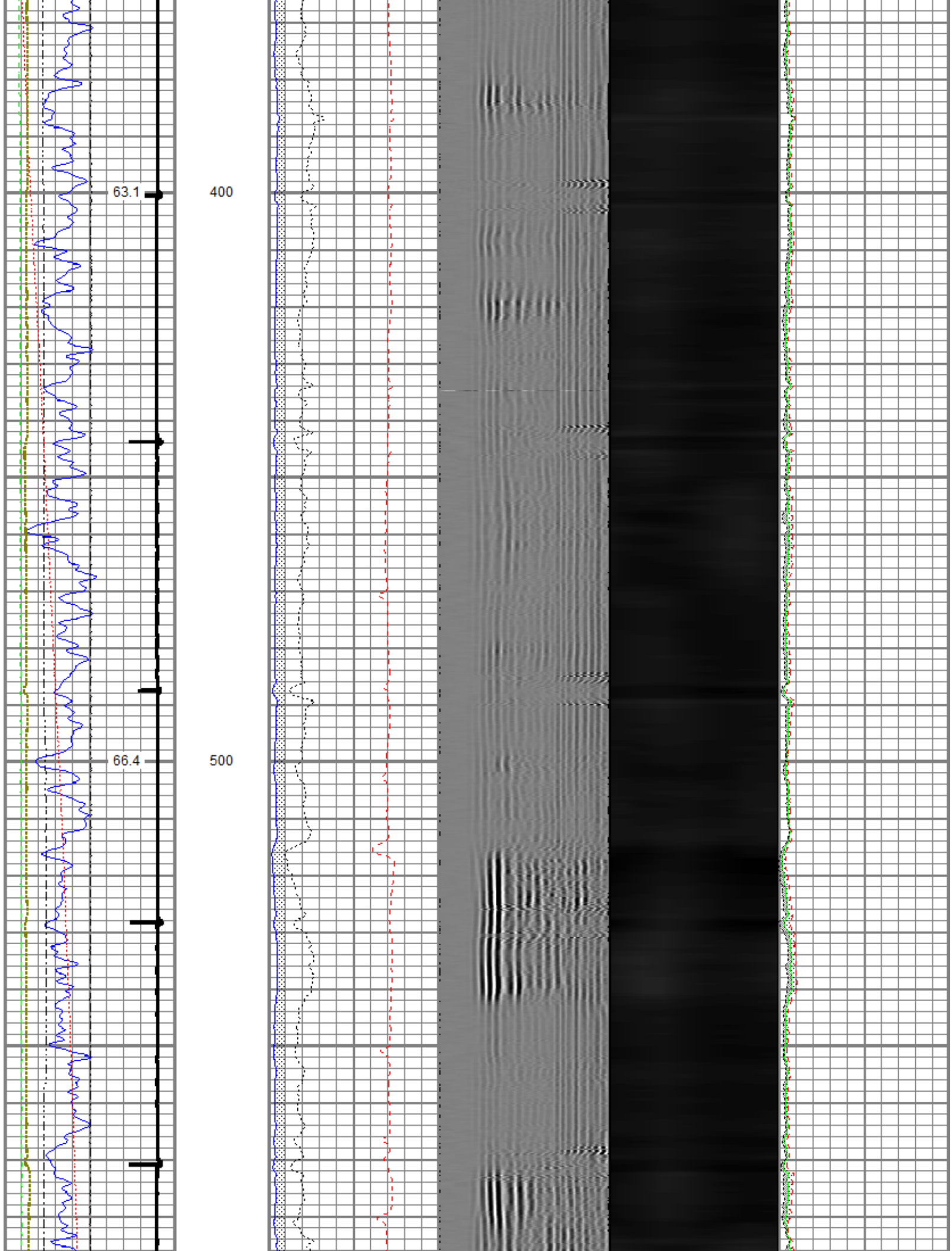
Recorded With 2800 PSI Surface Induced Pressure

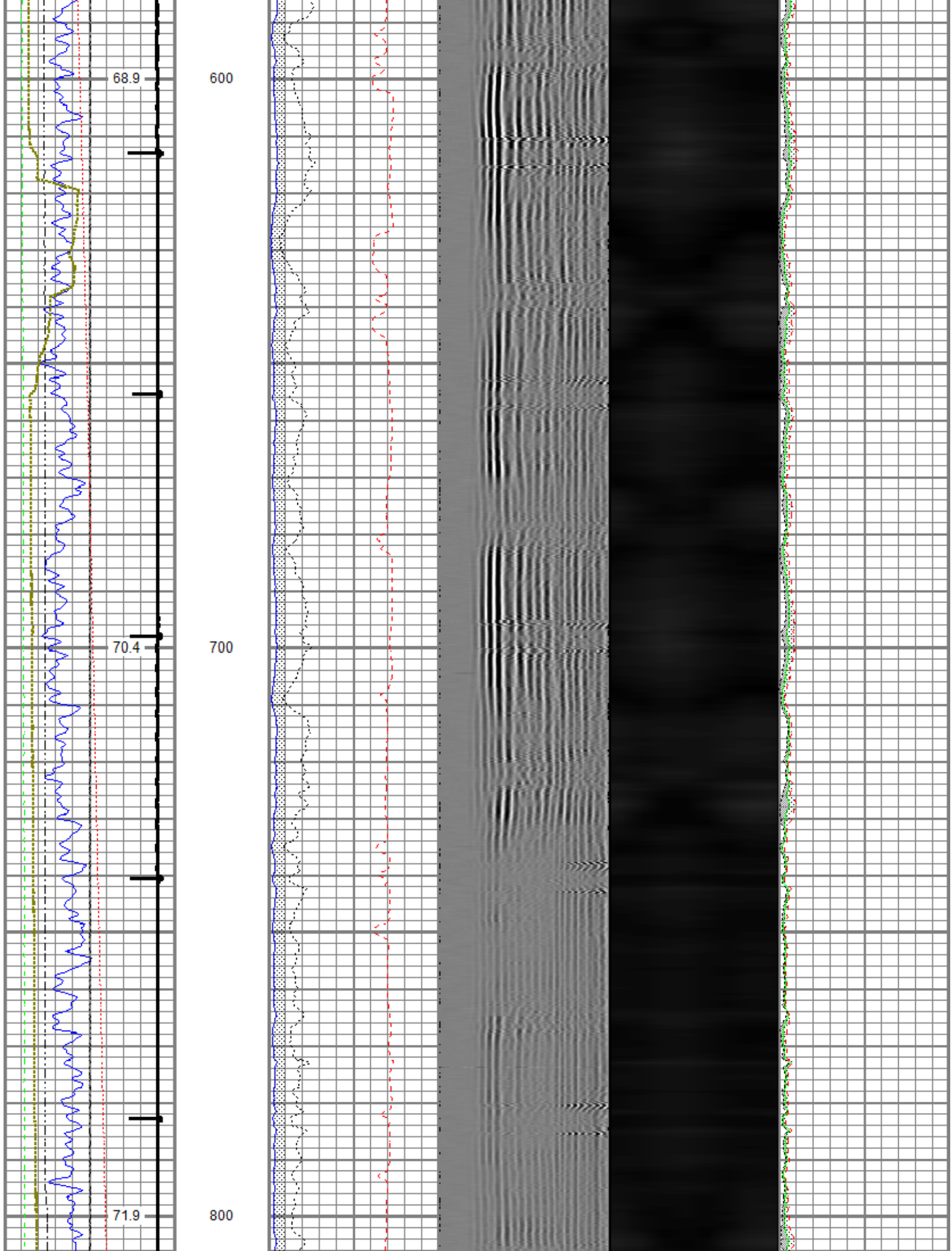
Database File anadarko_wagner 1n-w10hzl0512343476_anadarko_wagner 1n-w10hz_rbl_12-09-17.db
Dataset Pathname pass4
Presentation Format ros_rbt_mit_sx
Dataset Creation Sat Dec 09 08:45:11 2017
Charted by Depth in Feet scaled 1:240

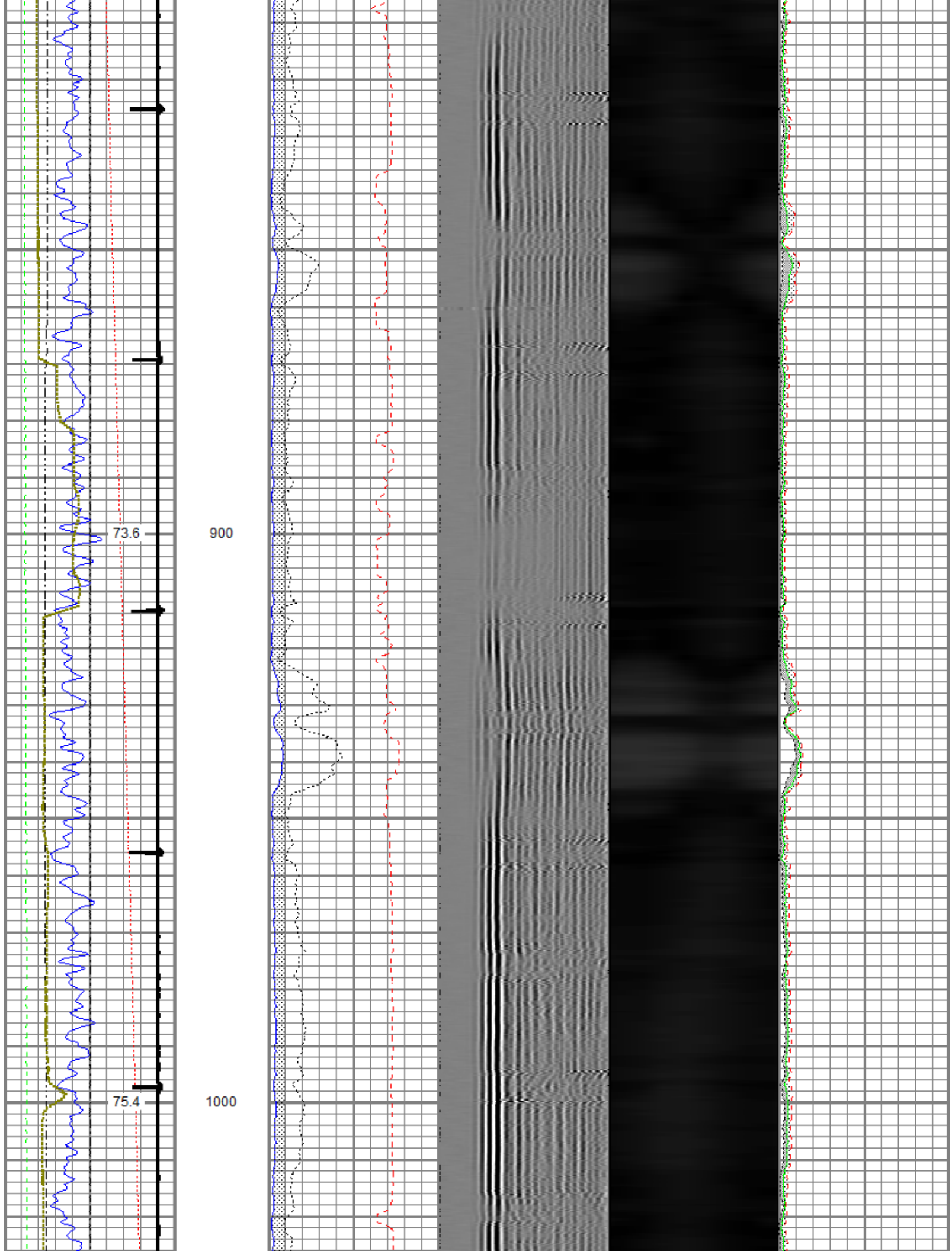
Gamma Ray	0	3' Amplitude (mV) 100	5' Variable Density Log	Sector Map	0	Average Amplitude 100
(GAPI) 120		3' Amplitude x 5	200			Minimum Amplitude
Line Speed	0	(mV) 20			0	100
(ft/min) 100		3' Travel Time				Maximum Amplitude
Line Tension (lb) 2000	0	650 (usec) 150			0	100
Differential Temperature						
(degF) 2						
Temperature (degF) 20						
Casing Collar Locator						
Deviation (deg) 90						

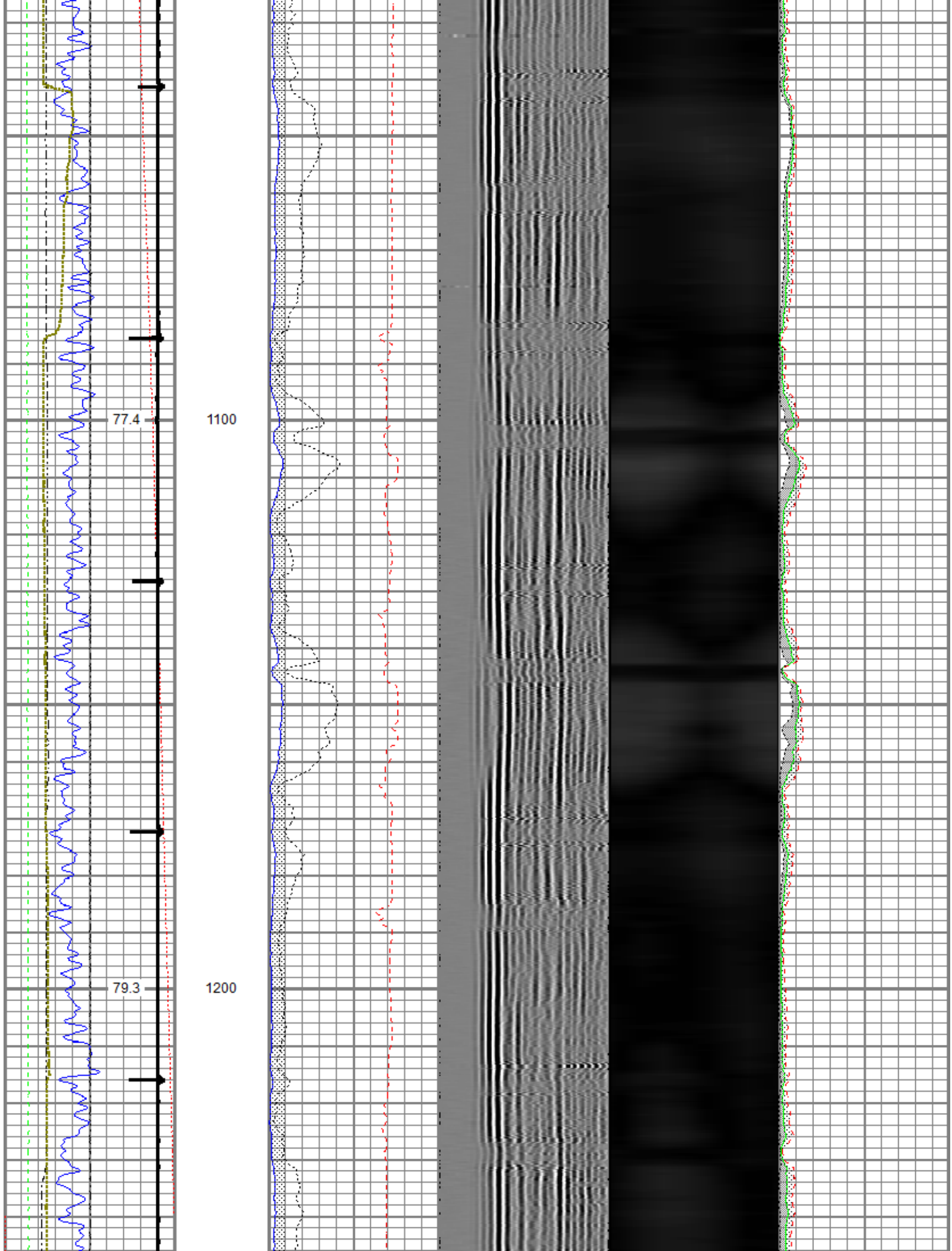


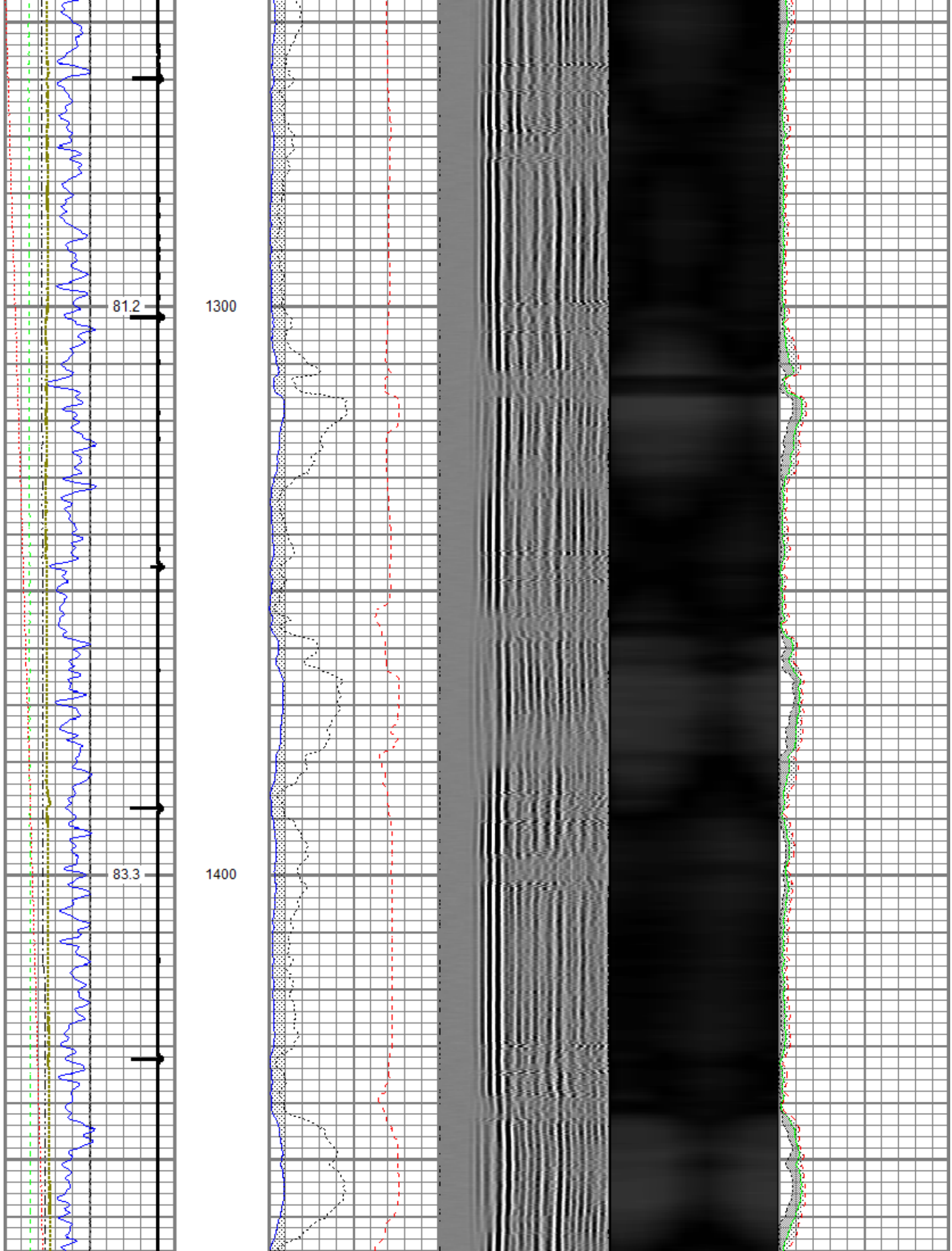


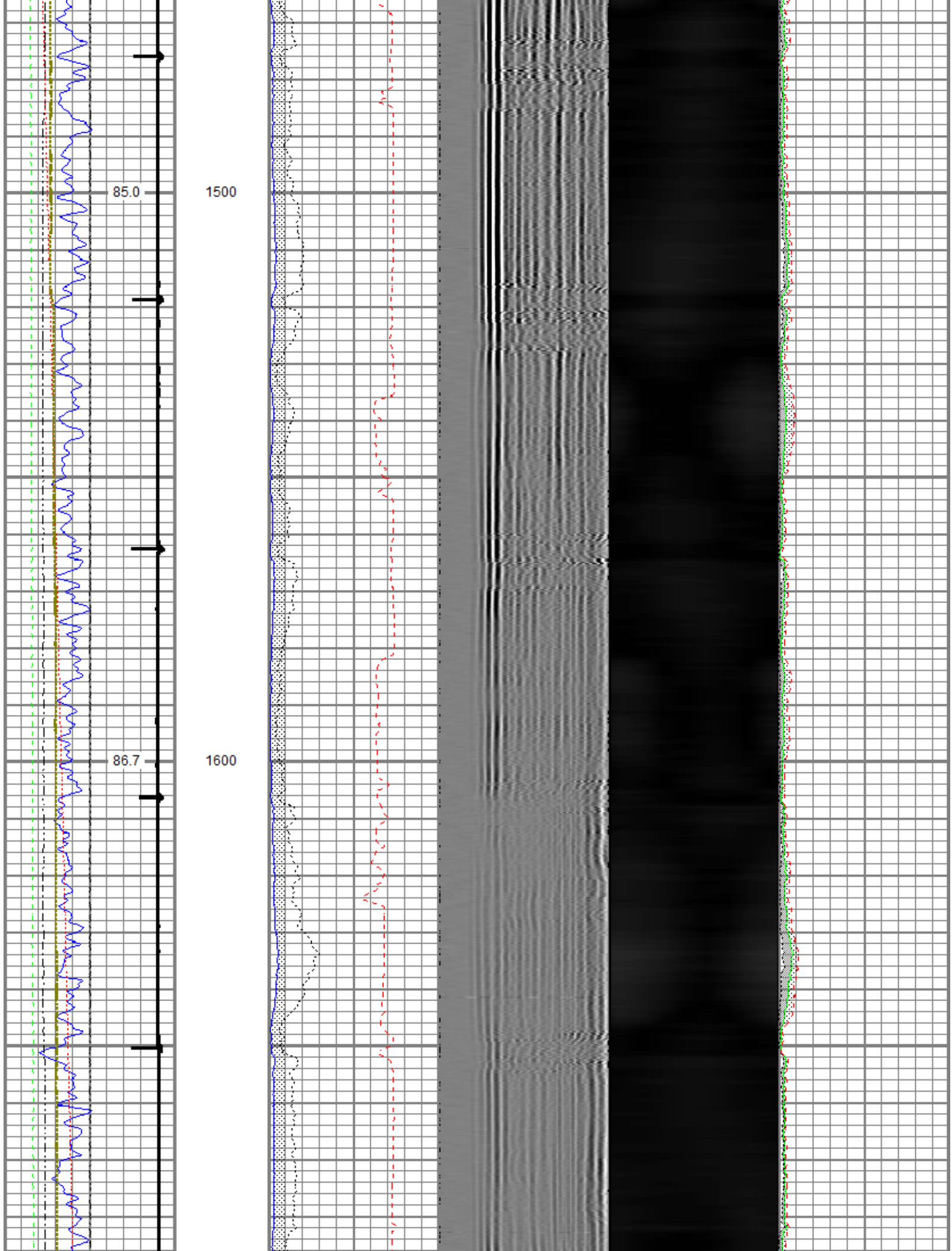


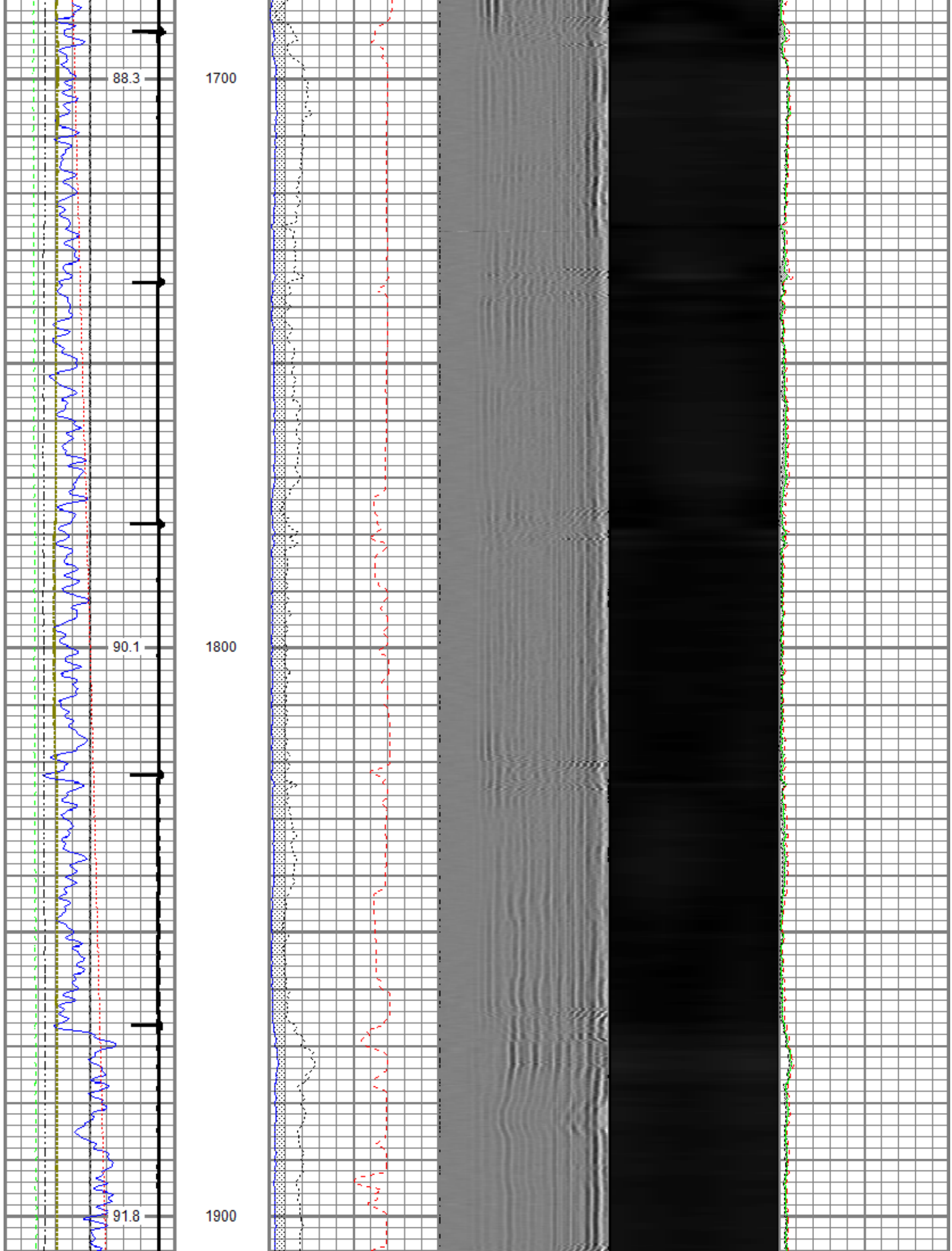


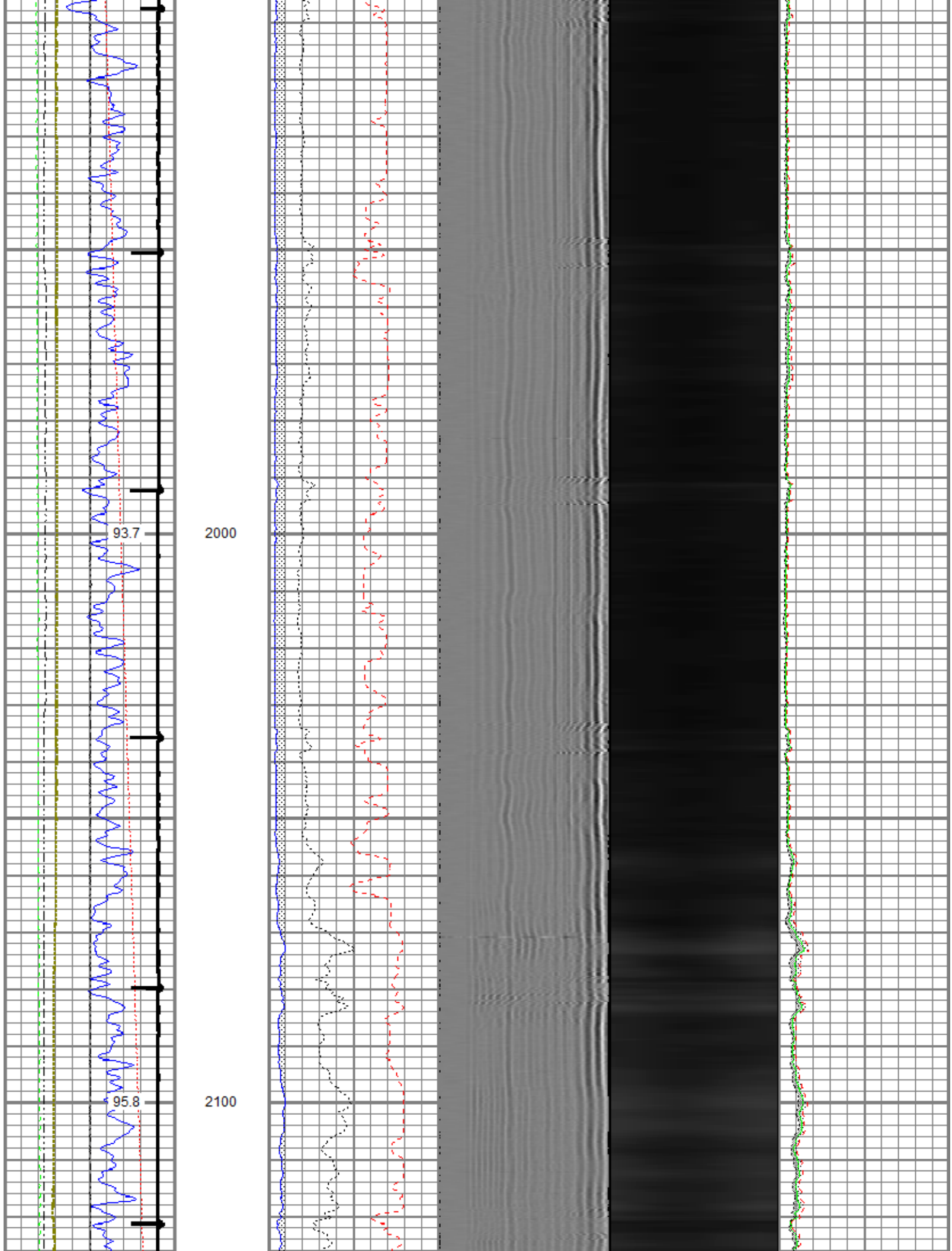


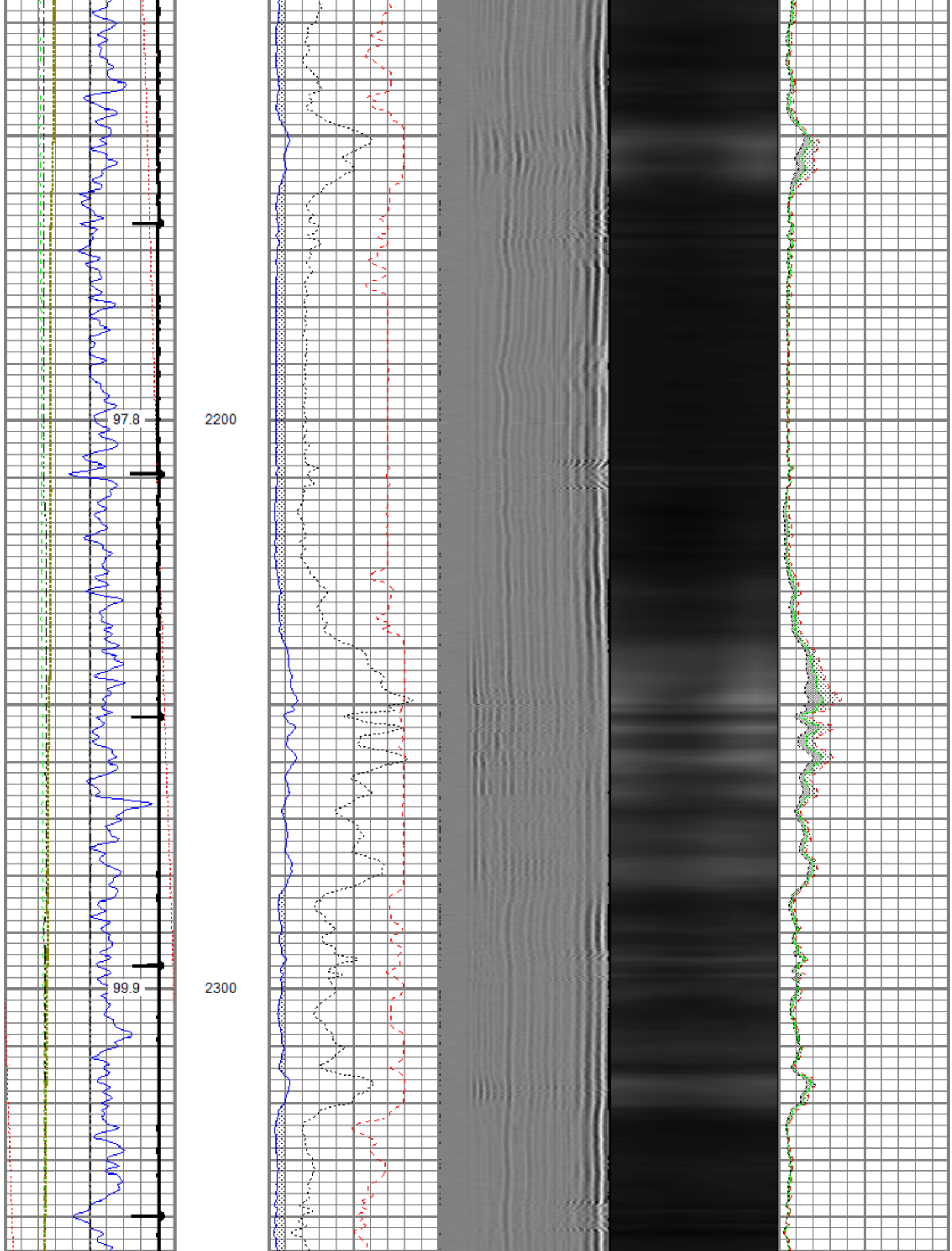


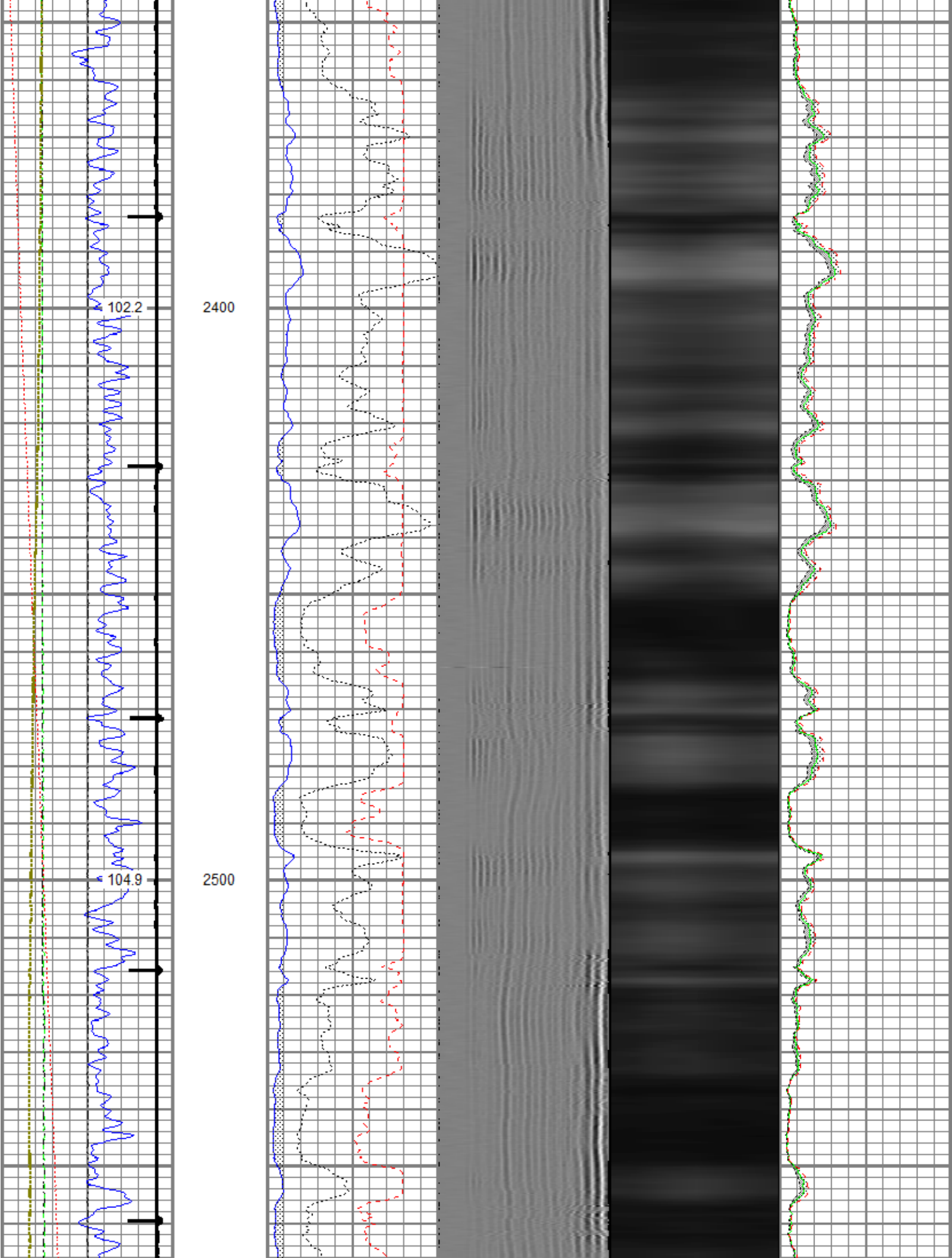


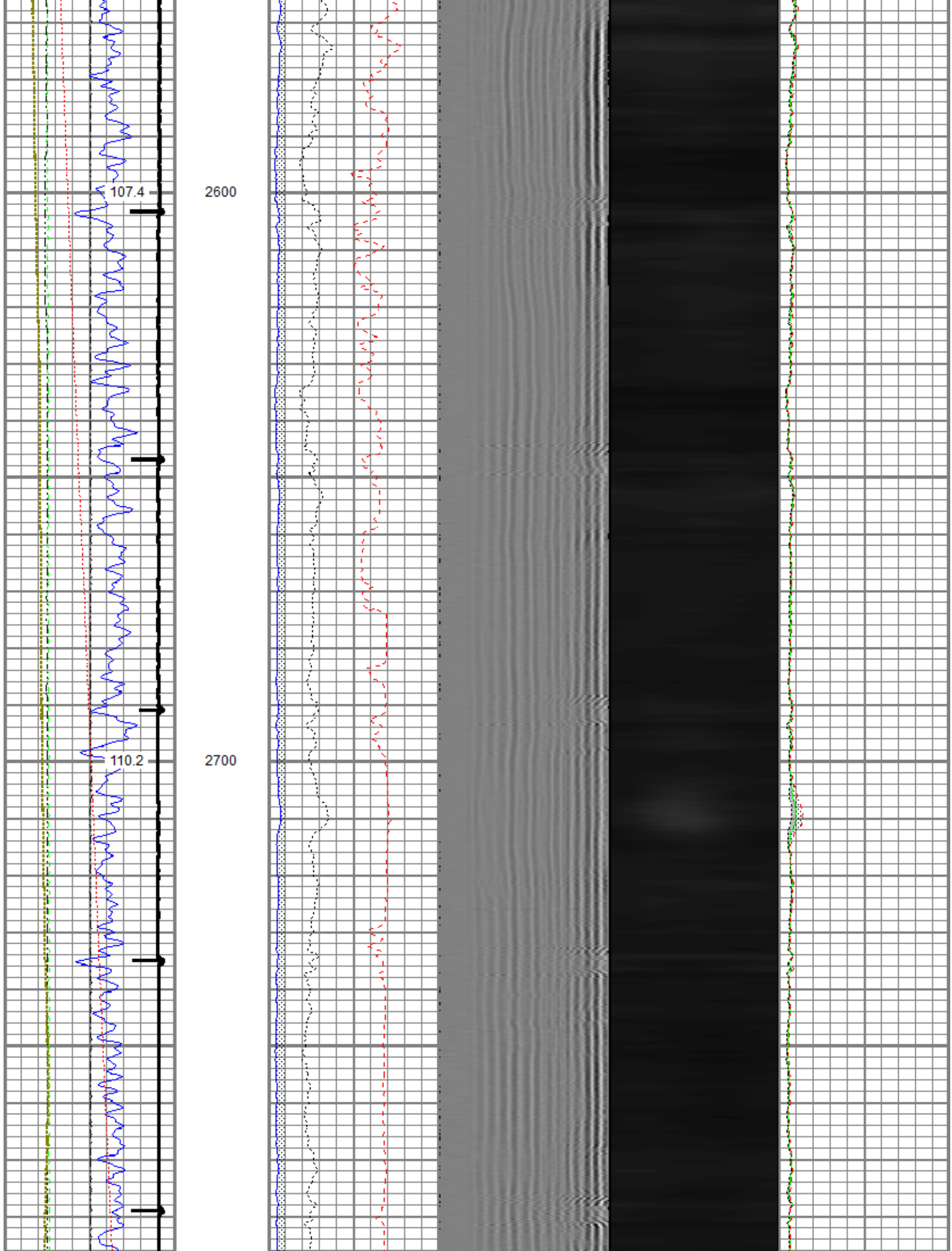


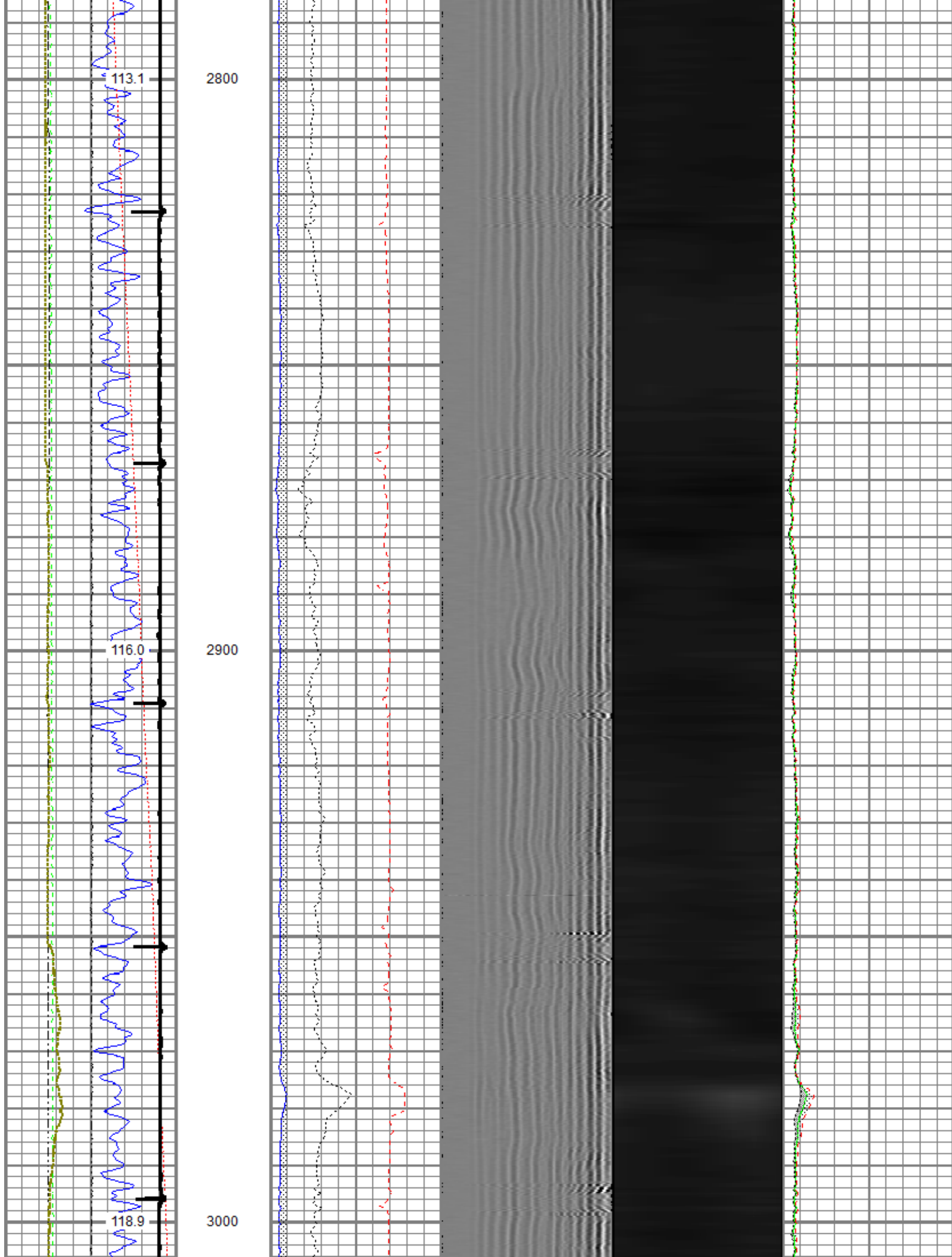


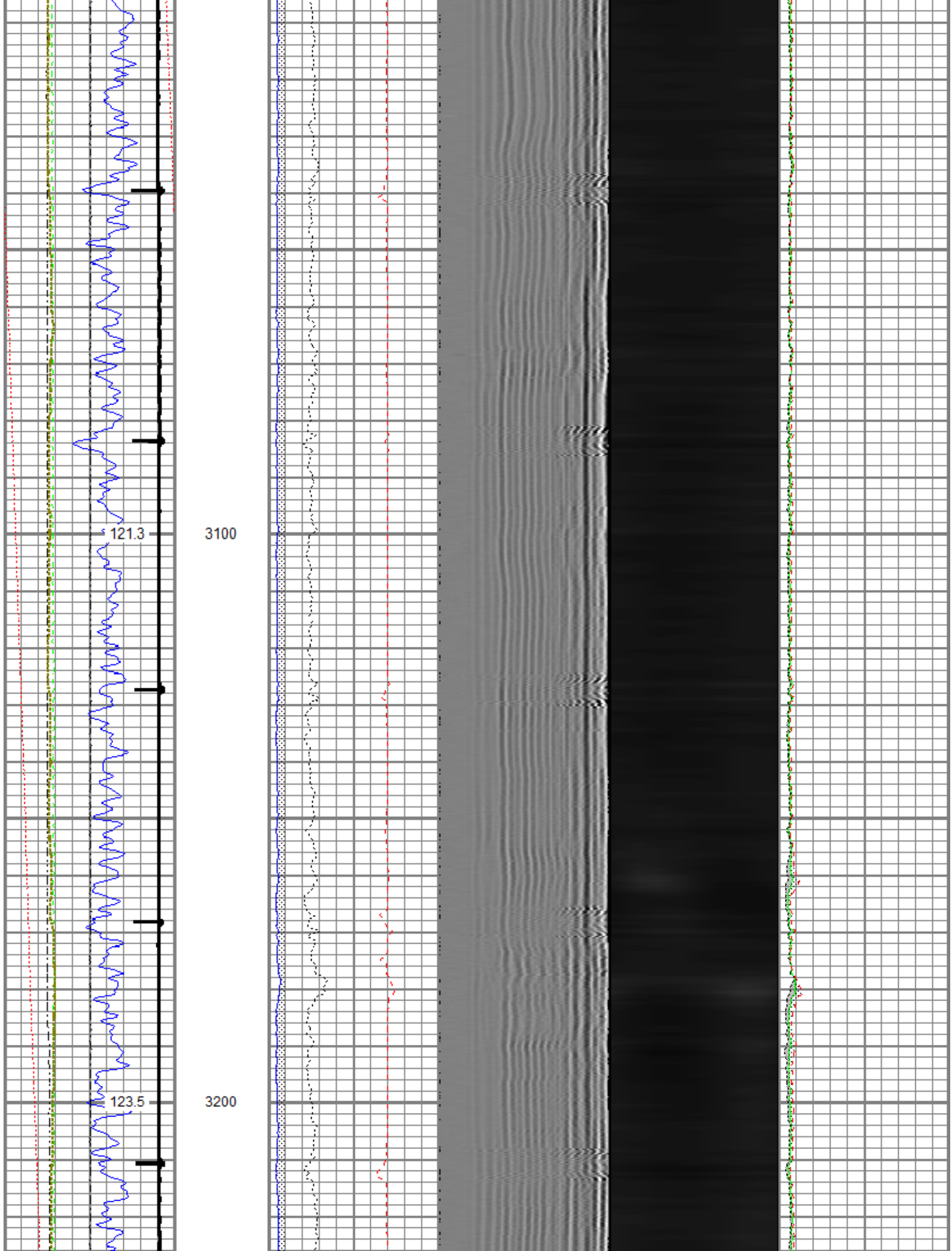


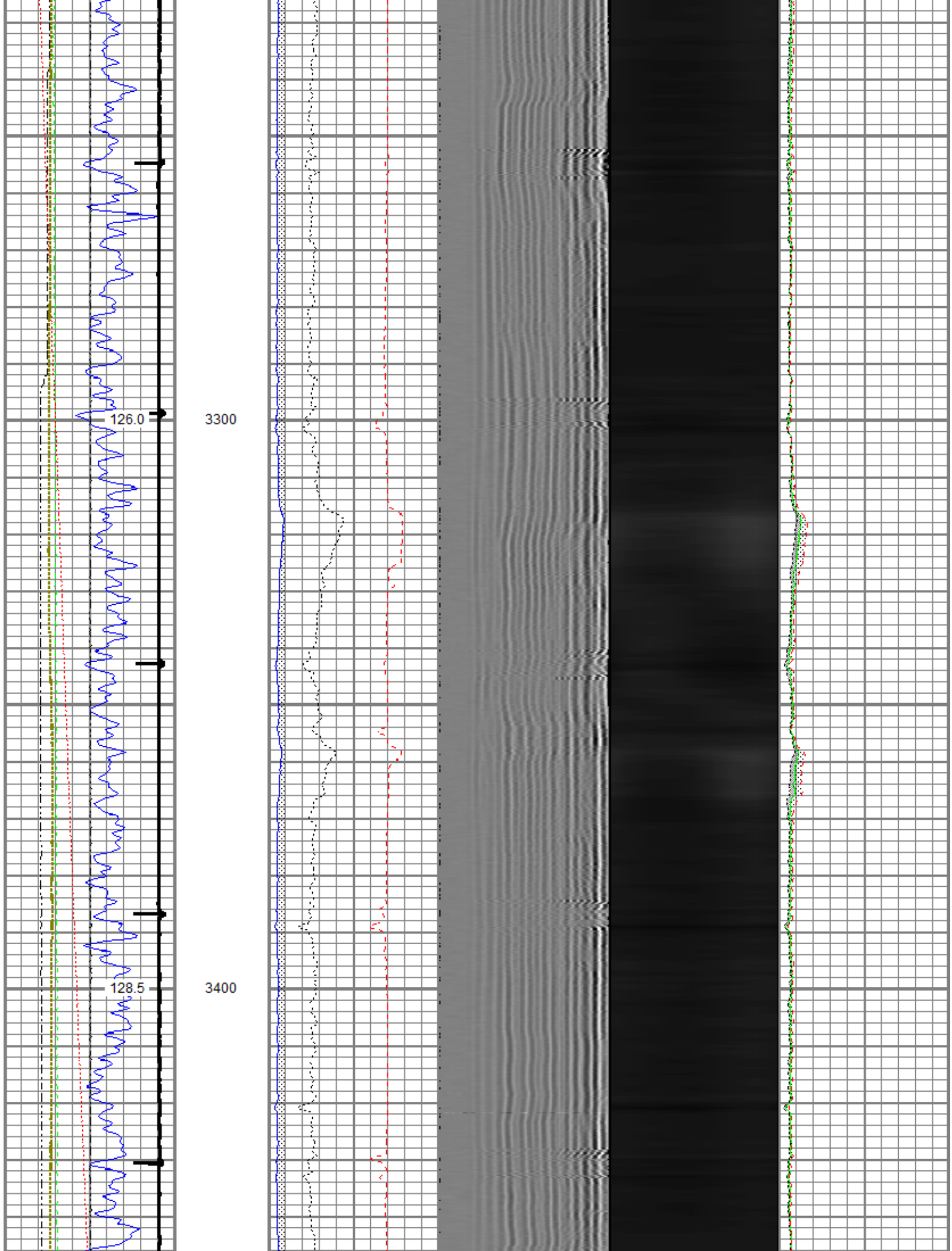


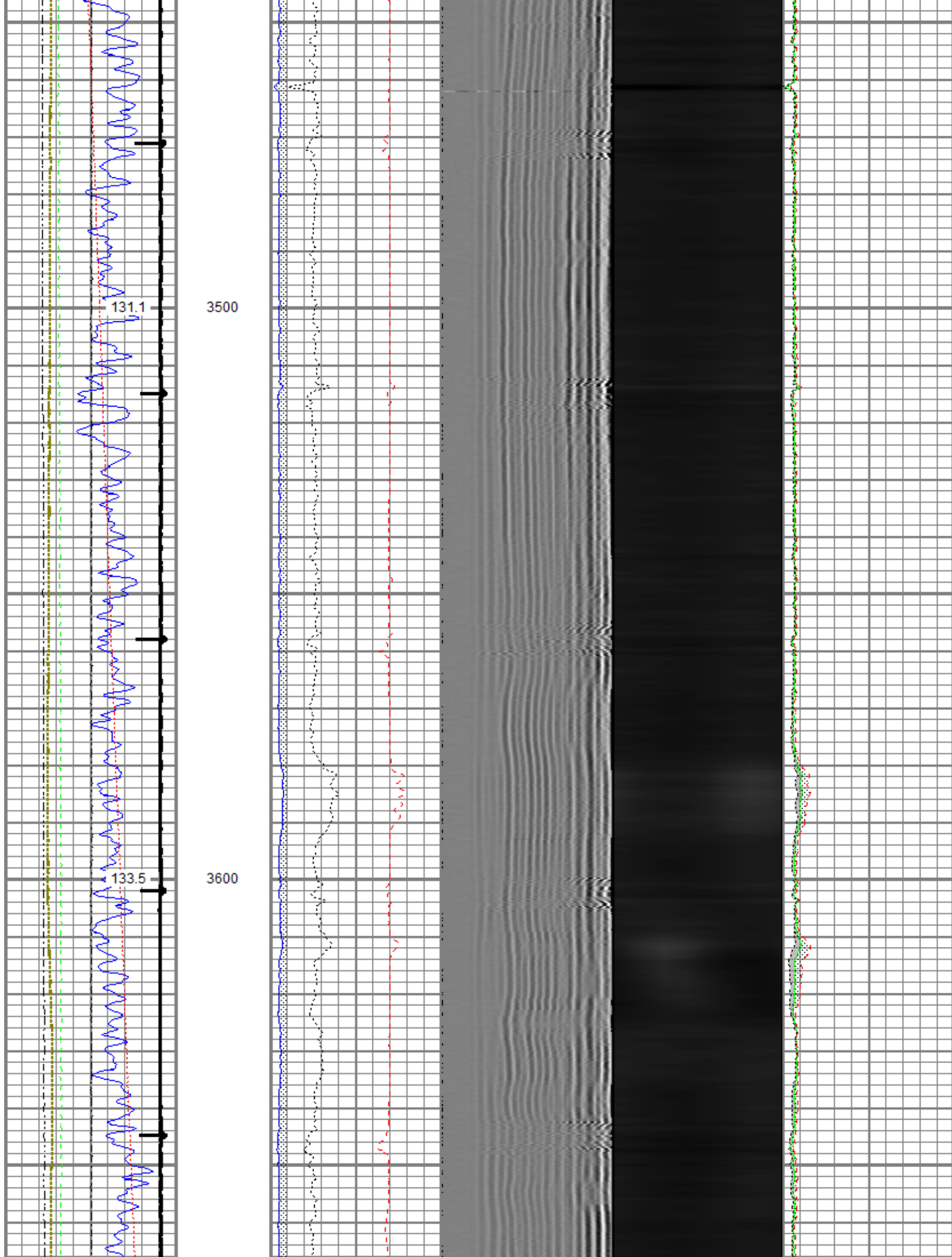


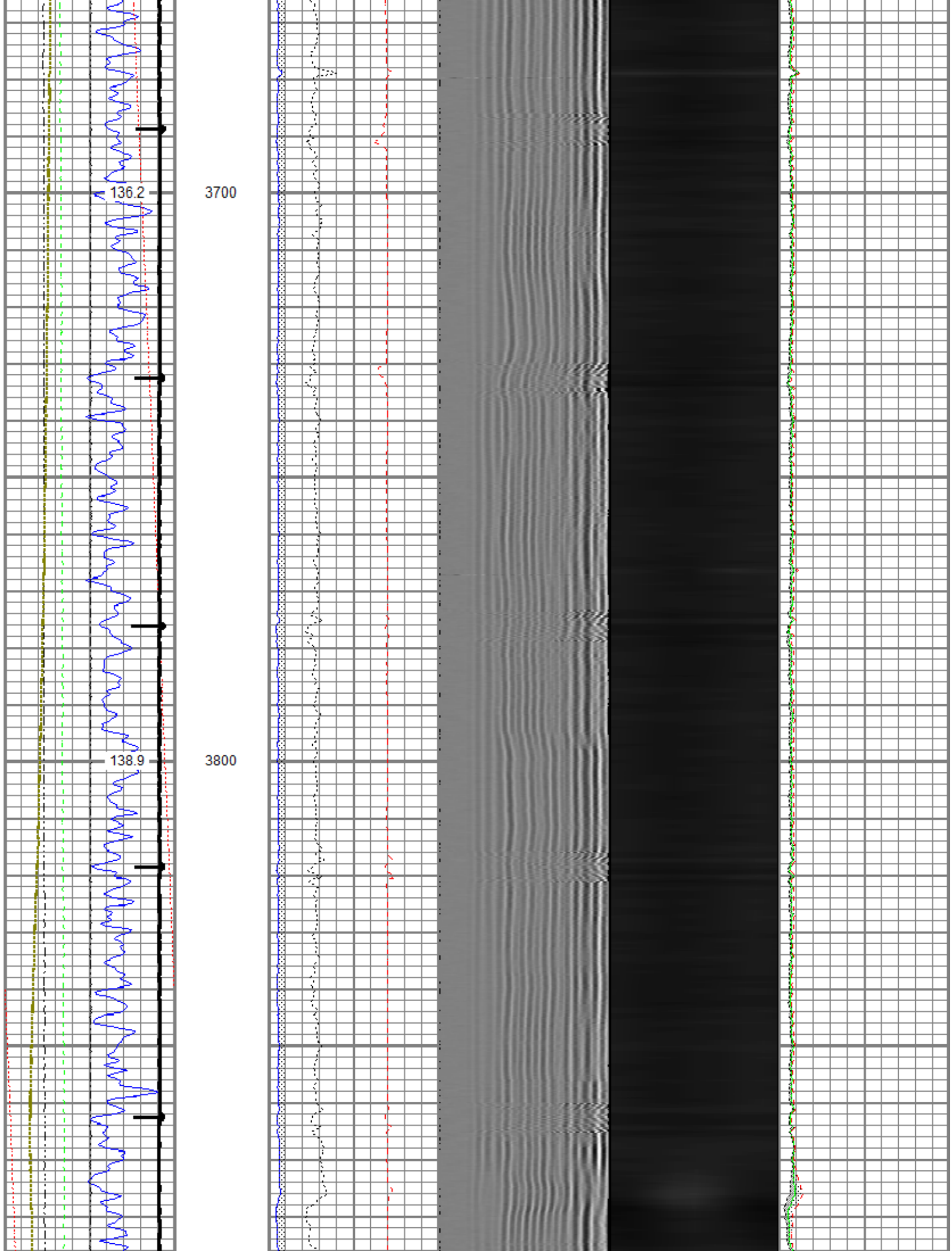


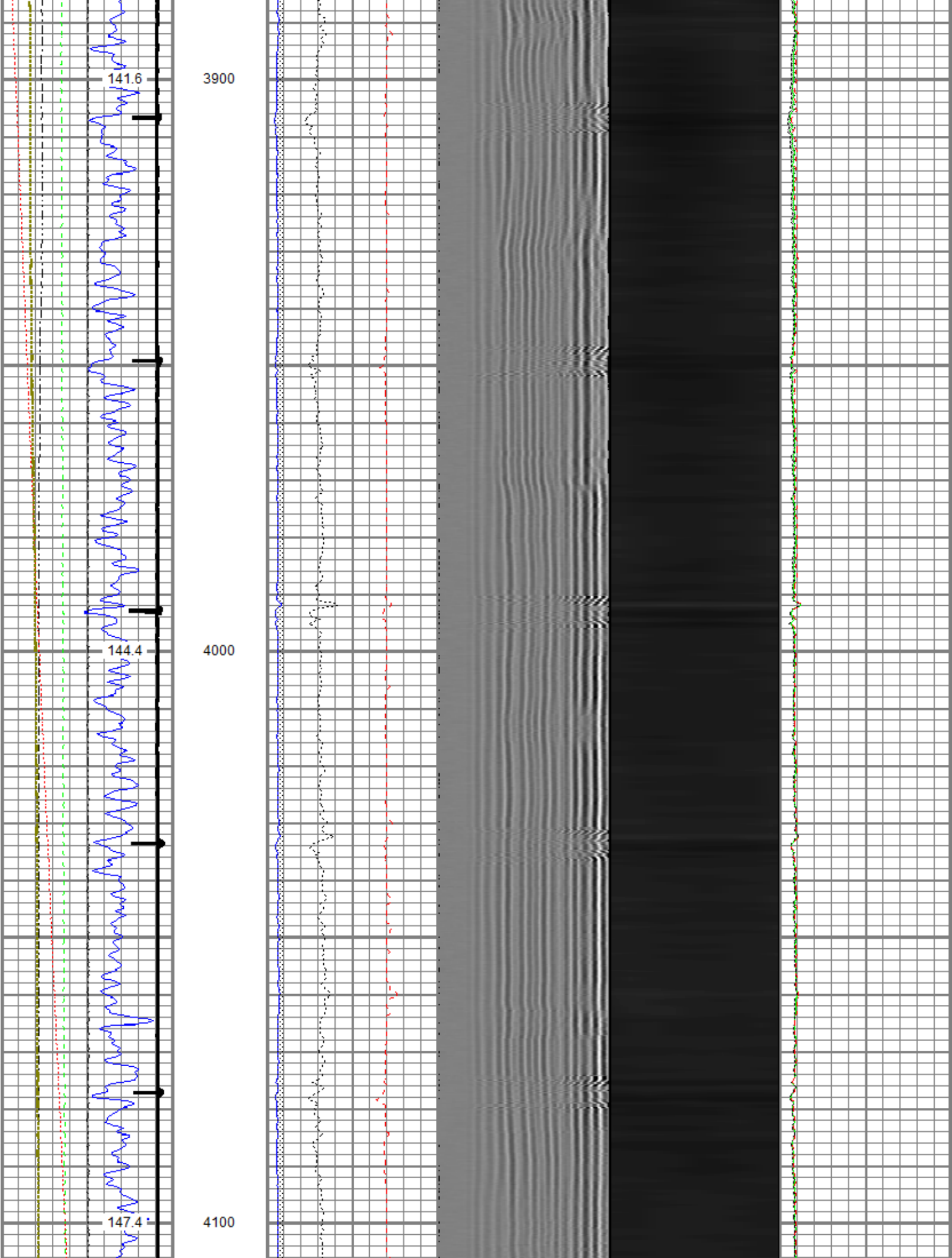


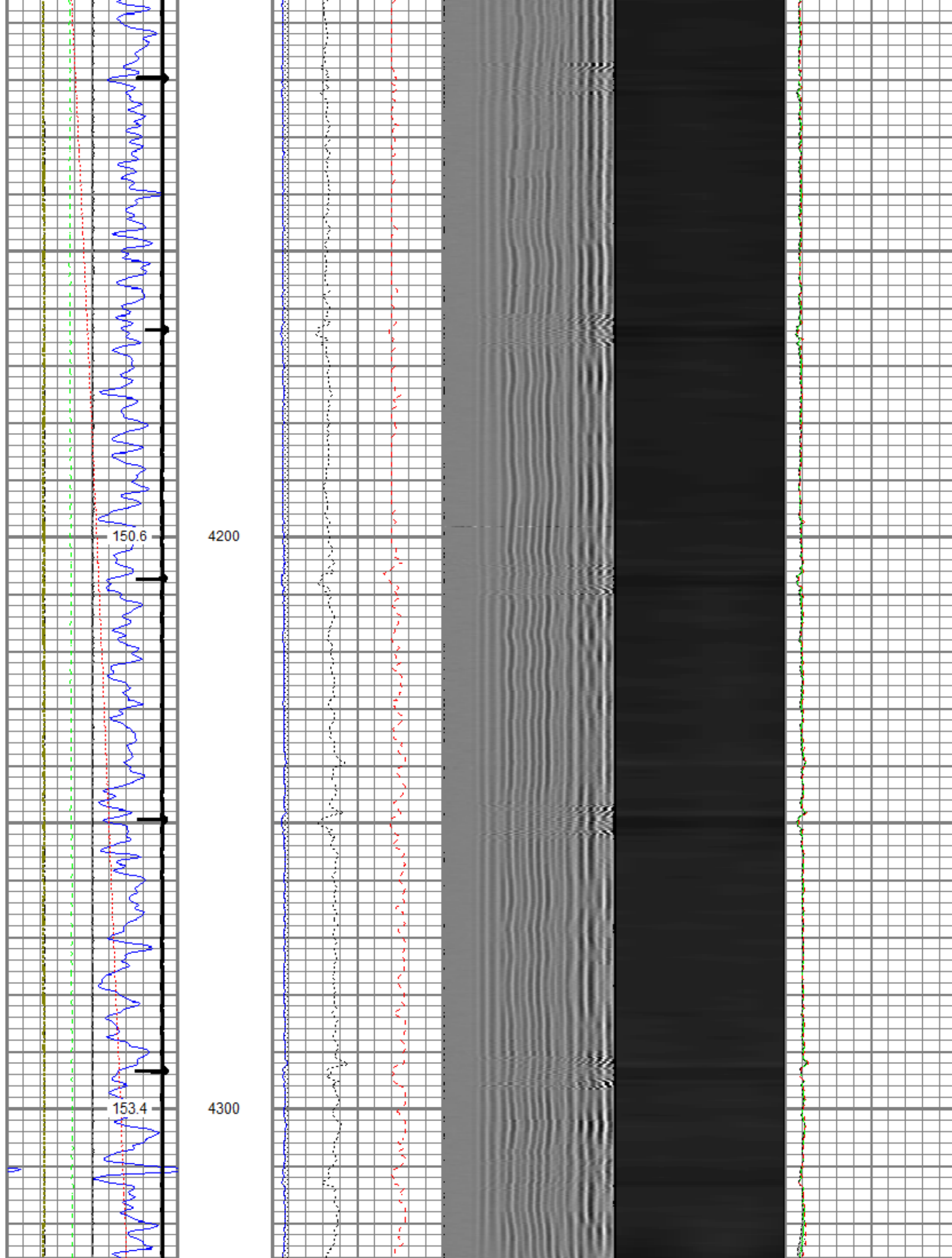


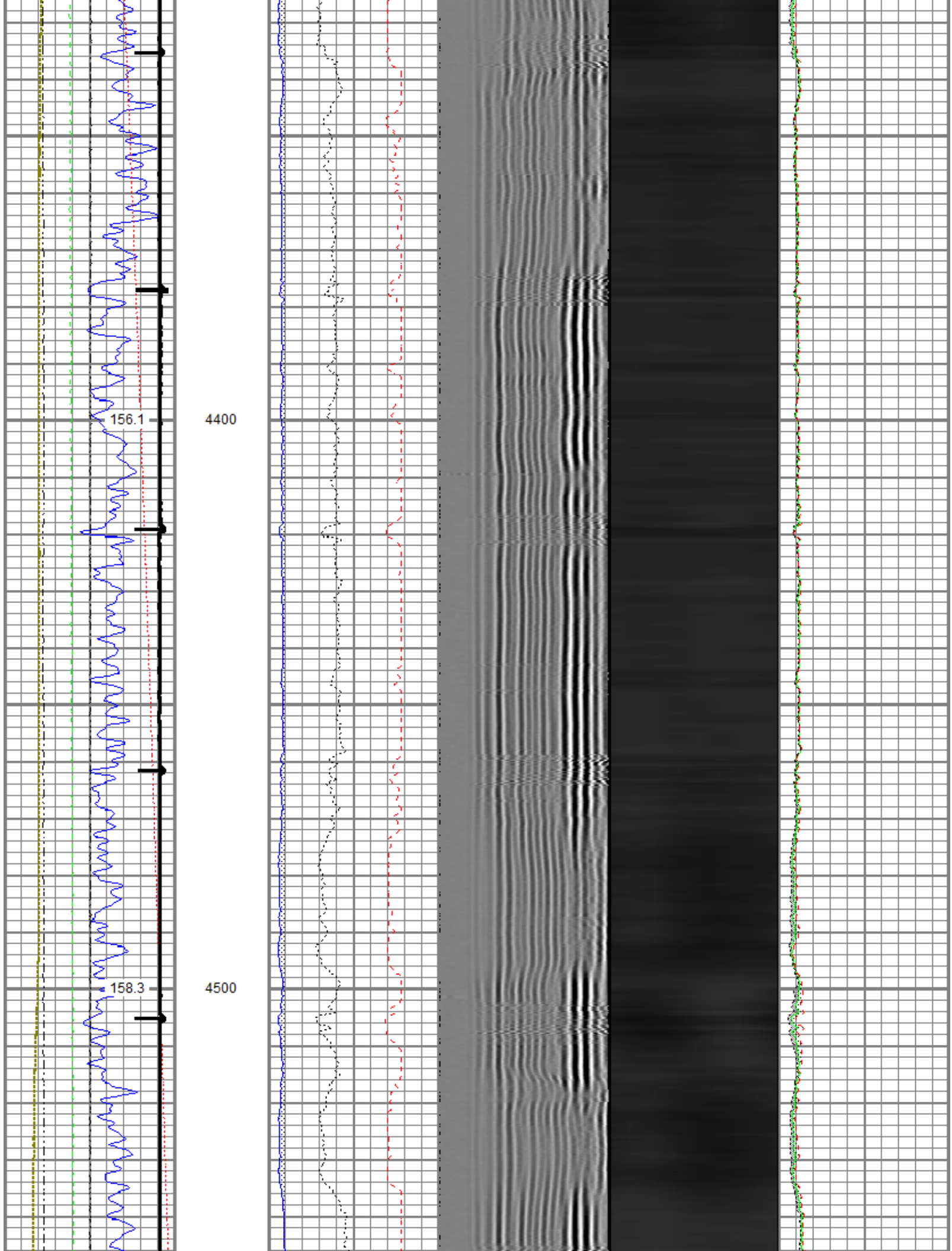


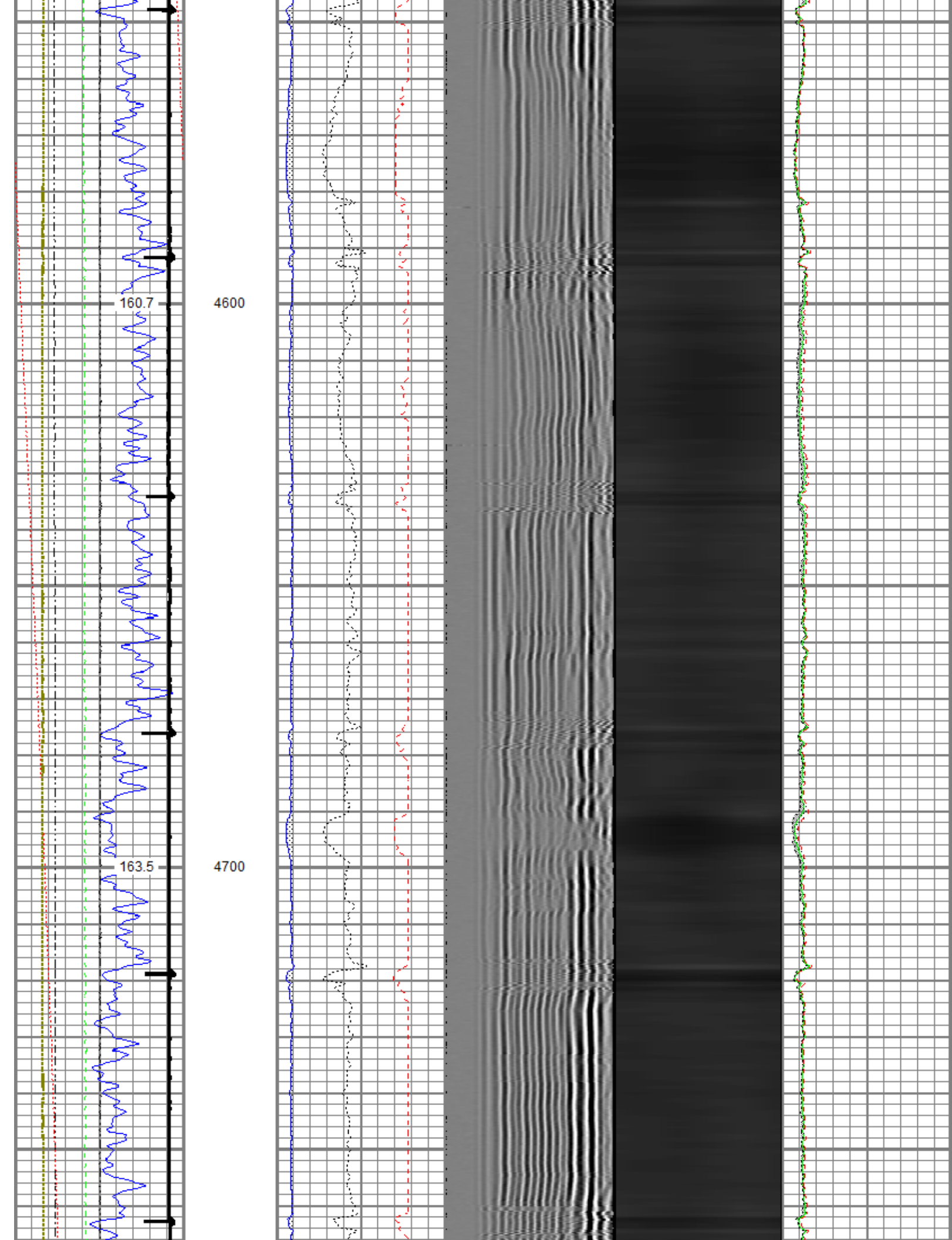


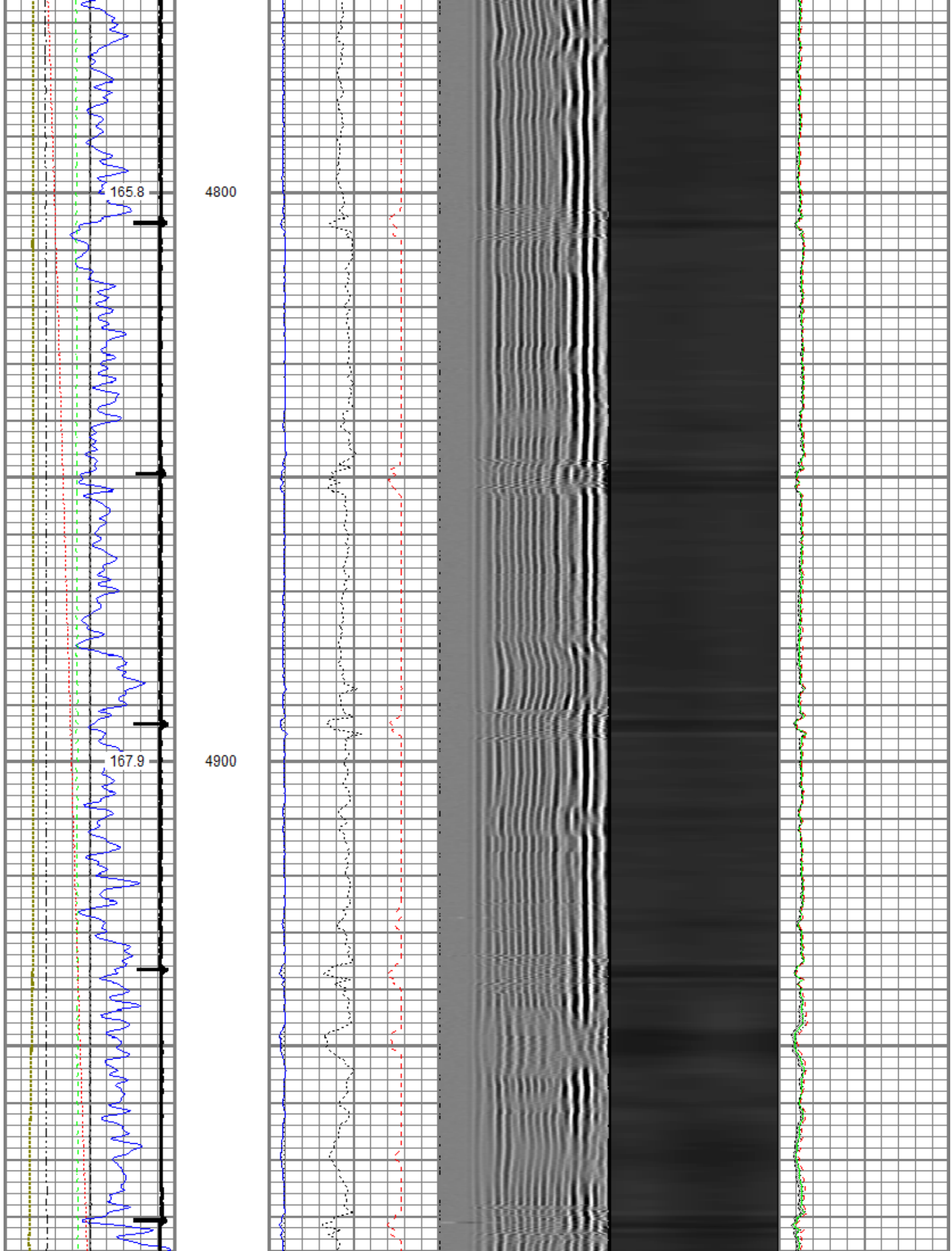


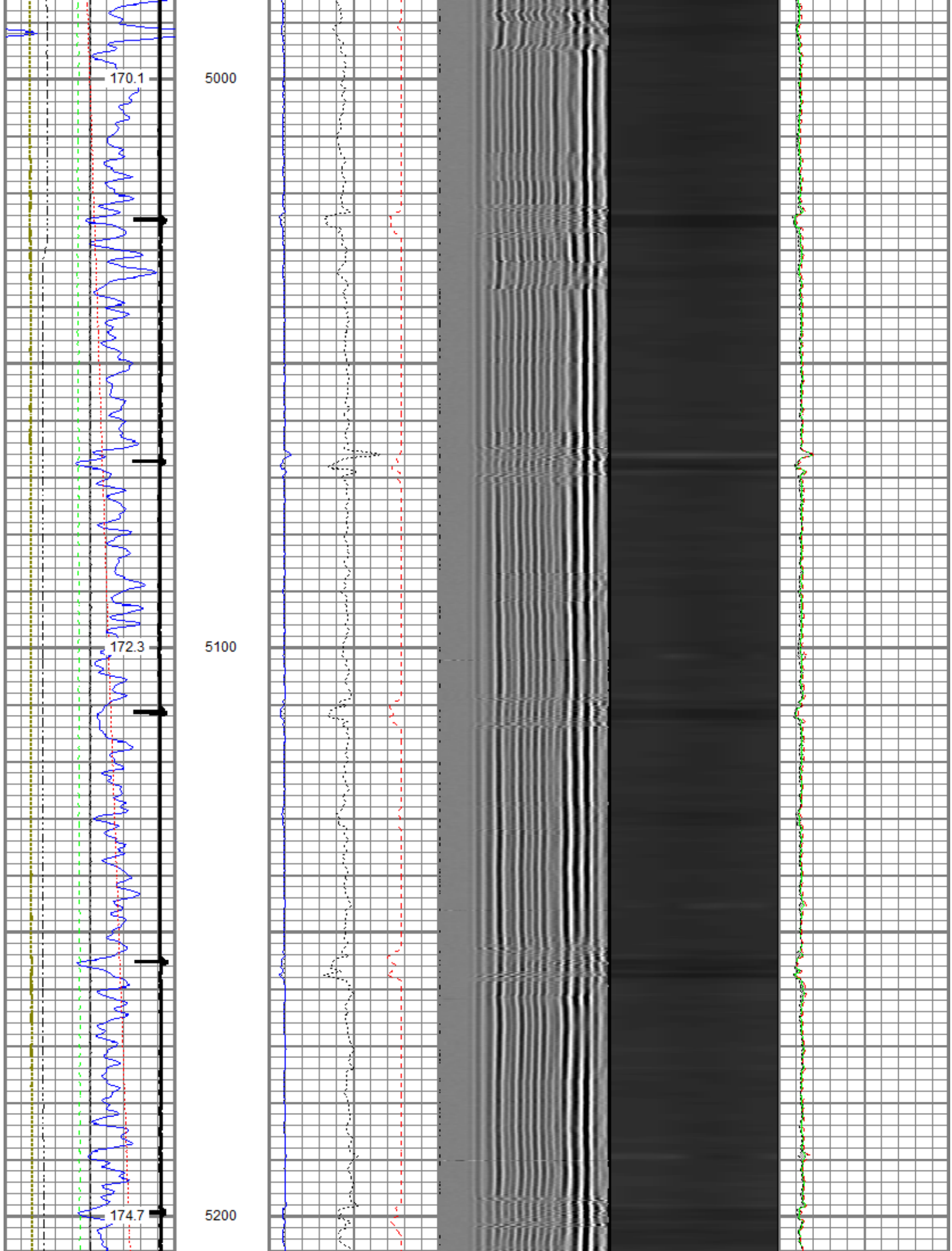


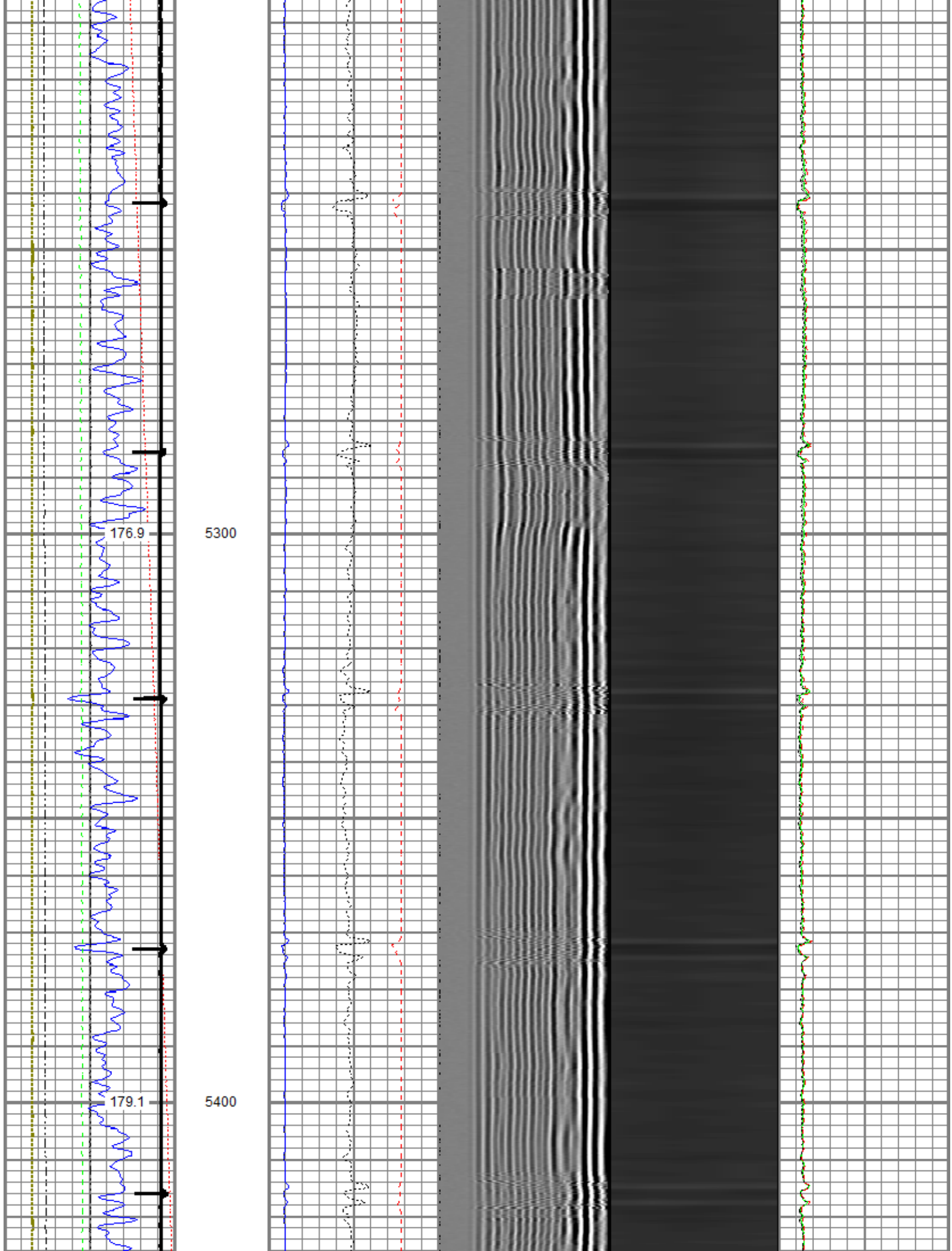


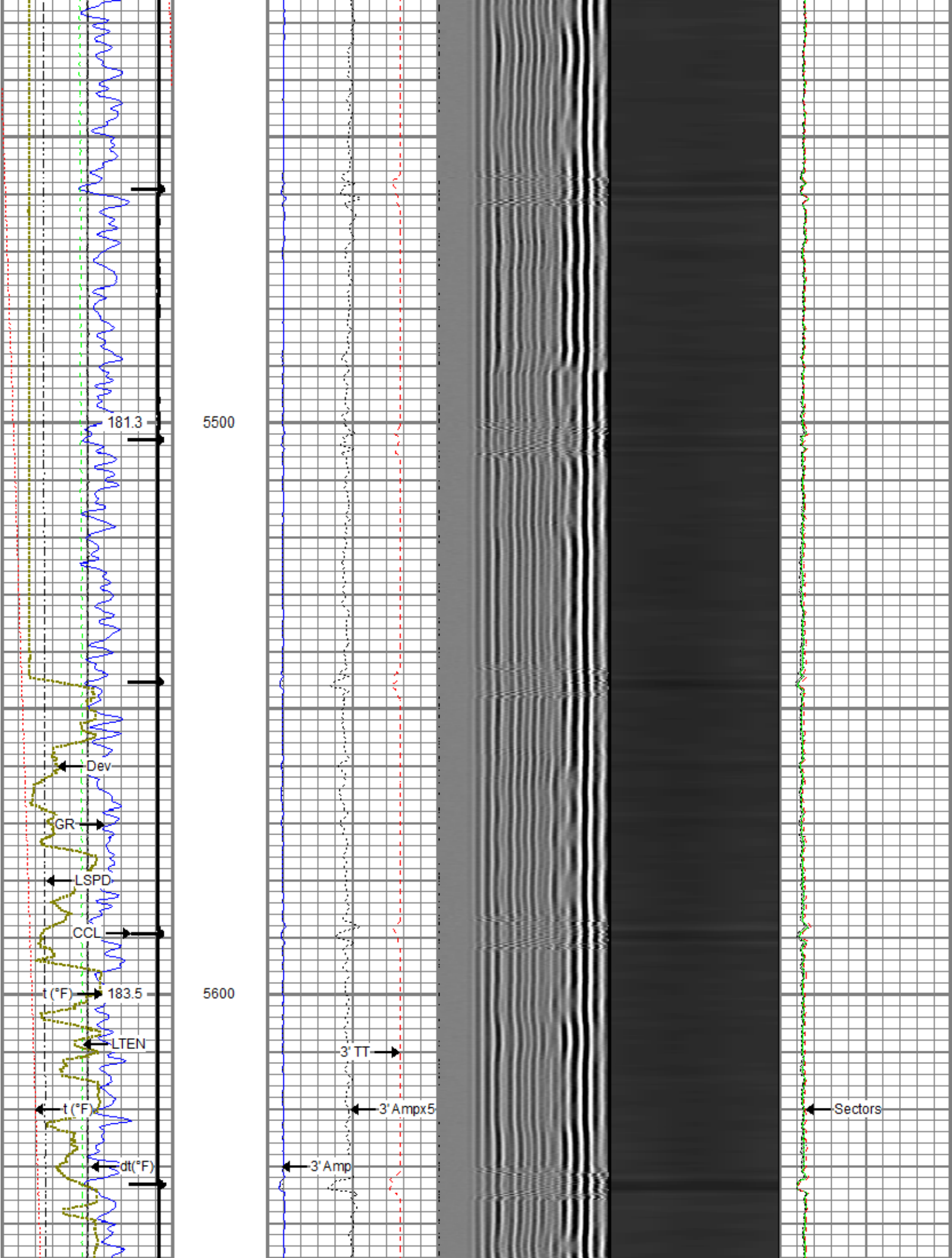


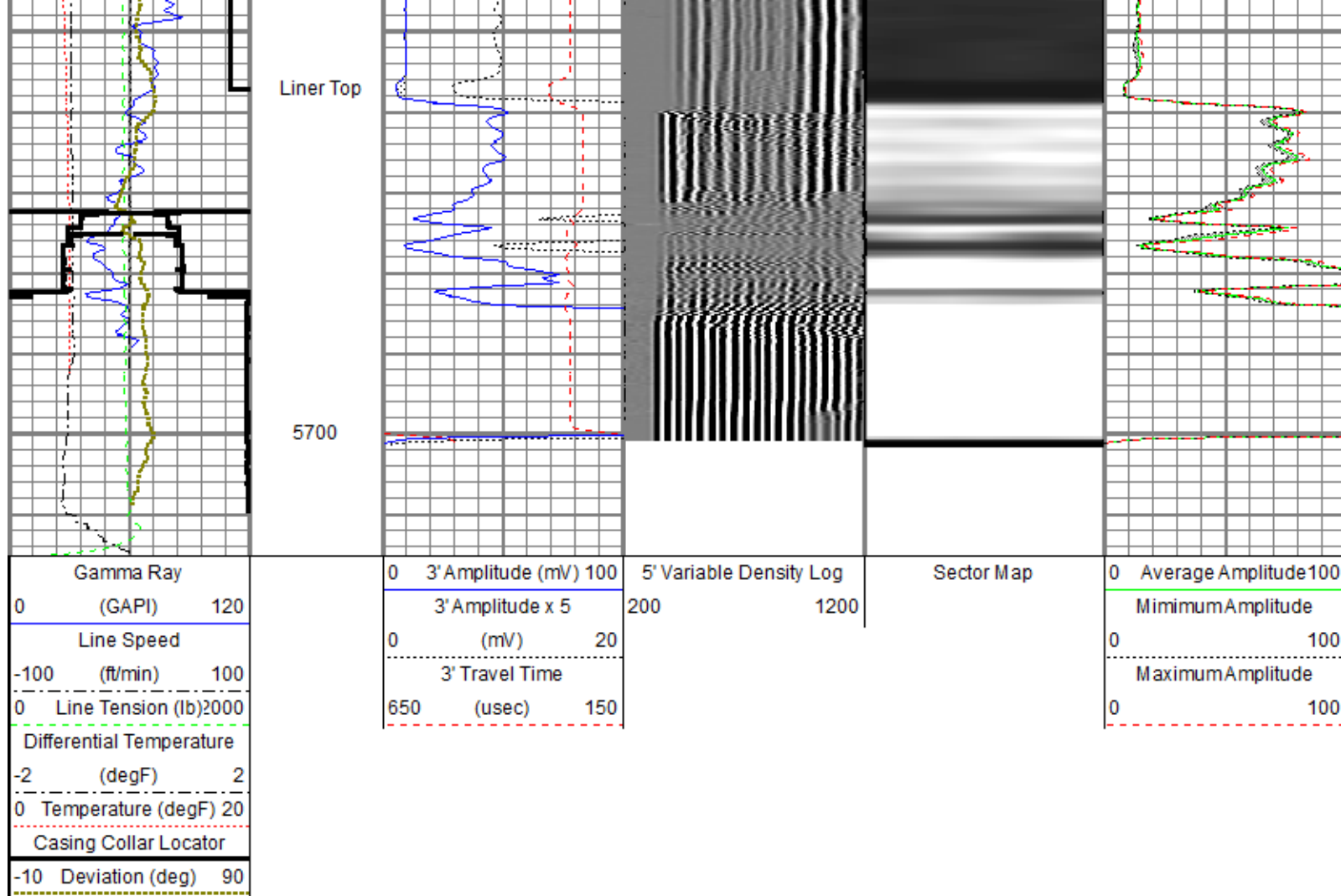








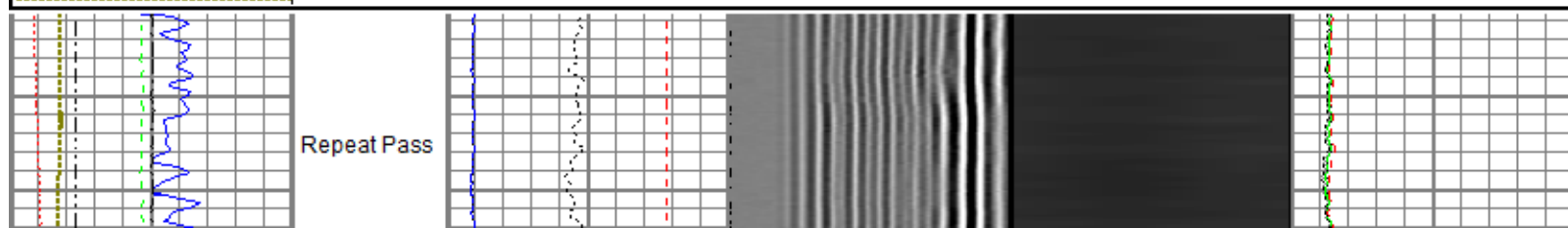
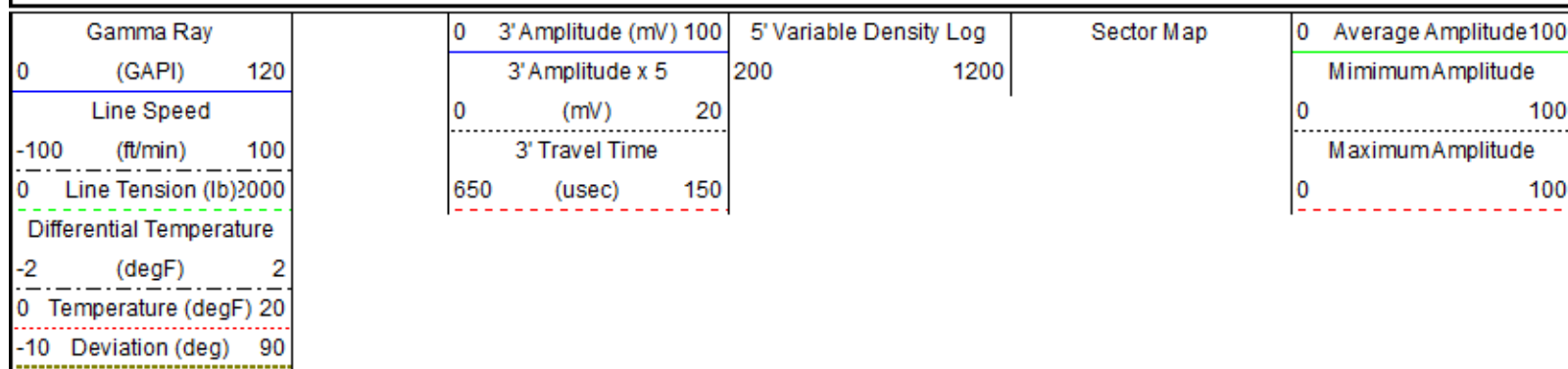


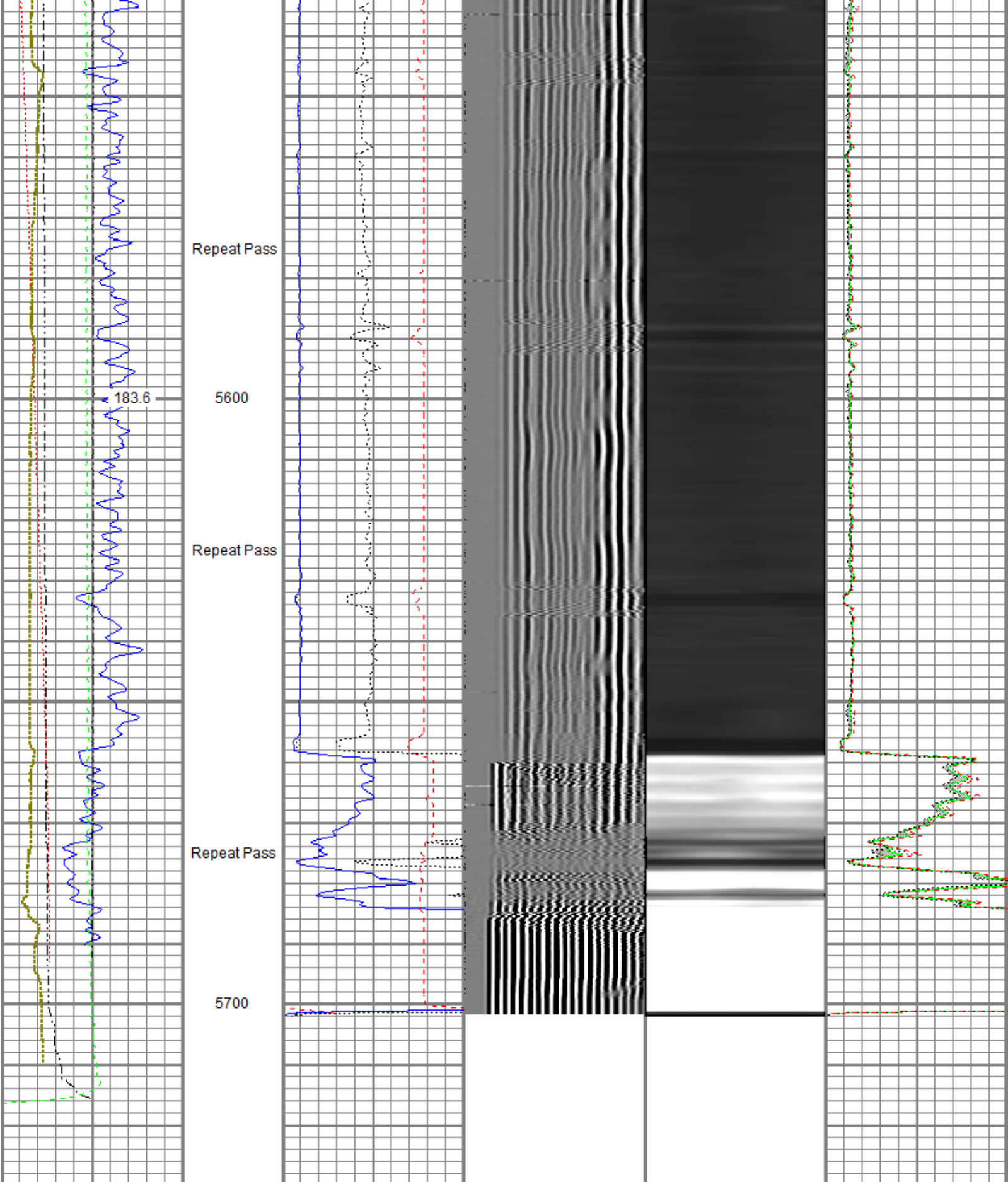


Repeat Pass

Recorded With 2800 PSI Surface Induced Pressure

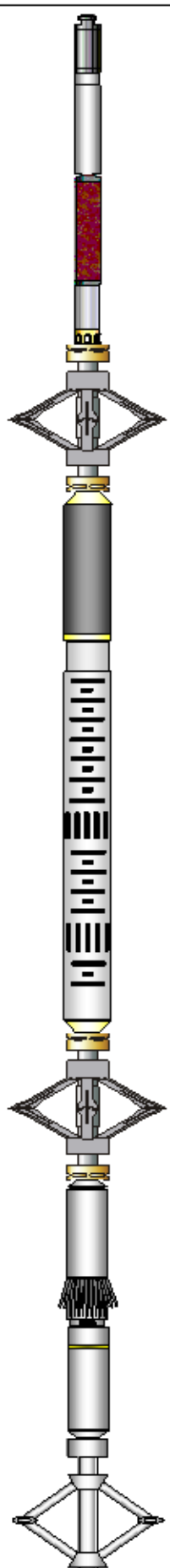
Database File: anadarko_wagner 1n-w10hz10512343476_anadarko_wagner 1n-w10hz_rbl_12-09-17.db
 Dataset Pathname: pass2
 Presentation Format: ros_rbt_mit_sx
 Dataset Creation: Sat Dec 09 08:37:15 2017
 Charted by: Depth in Feet scaled 1:240





Gamma Ray		0	3' Amplitude (mV)	100	5' Variable Density Log	Sector Map	0	Average Amplitude	100
0	(GAPI)	120	3' Amplitude x 5	200	1200			Minimum Amplitude	
Line Speed		0	(mV)	20			0	100	
-100	(ft/min)	100	3' Travel Time					Maximum Amplitude	
0	Line Tension (lb)	2000	650	(usec)	150		0	100	
Differential Temperature									

-2	(degF)	2
0	Temperature (degF)	20
-10	Deviation (deg)	90

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	23.58		Titan_Electric_Cable_Heads-Titan_1-11/16"	1.03	1.69	5.40
			Electric Cable Head with 1" Fishing Neck			
			UW_AGS-UW_AGS_001 (219135)	0.21	1.69	1.00
			Sondex Adapter - GO Box to Sondex Pin			
UW_XTU-UW_XTU_002 (051219)	1.58		1.69	6.50		
Crossover Ultrawire Toolbus to Ultralink						
UW_PGR-UW_PGR_020 (10013902)	1.92		1.69	9.50		
Production Gamma Ray						
UW_PRT-PRT_016 (10024052)	1.04		1.69	5.20		
Platinum Resistance Thermometer						
UW_PRC-DSS_RAC	2.55		2.75	32.00		
5 Arm 2-3/4" Roller Centralizer						
UW_RBT-UW_RBT_004 (1066)	9.48		3.13	140.00		
Sondex Ultrawire 3-1/8" Radial Bond Tool						
UW_PRC-DSS_RAC	2.55		2.75	32.00		
5 Arm 2-3/4" Roller Centralizer						
UW_MIT-UW_MIT40_027 (218949)	4.54	2.75	65.00			
40 Multifinger Imaging Tool						
UW_PRC-PRC_057	2.71	2.75	32.00			
4 Arm 2-3/4" Production Roller Centralizer						

STAMP	0.00			UW_BUL-UW_BUL_006 (031422)	0.22	1.69	1.20
Sondex Ultrawire Bullnose Terminator							
Dataset:	0512343476_Anadarko_Wagner 1N-W10HZ_RBL_12-09-17.db: field/well/run1/pass1						
Total length:	27.83 ft						
Total weight:	329.80 lb						
O.D.:	3.13 in						

Calibration Report	
Database File	C:\ProgramData\Warrior\Data\Anadarko_Wagner 1N-W10HZ\0512343476_Anadarko_Wagner 1N-W10HZ_RBL_12-09-17.db
Dataset Pathname	calreport
Dataset Creation	Sat Dec 09 10:50:31 2017

Multifinger Imaging Tool Calibration Report	
Serial Number:	218949
Number of Fingers:	40
Tool Model:	UW_MIT40_027

Inclinometer Calibration Report		
Performed:	Mon, Oct, 06 14:03:04 2008	
Calibration Angle:	45	
	Inc X	Inc Y
Vertical:	1996	1984
Finger 1 up:	1780	1738
Finger 31 up:	2235	1756
Finger 21 up:	2216	2228
Finger 11 up:	1736	2196
Sensitivity ratio:	1.0062	
X-axis angle:	131.534	
Deviation const.:	331.322	

Finger Calibration Report							
Performed:				Sat Dec 09 07:24:41 2017			
Ring size:	4	5	6	7			
(in)							
	Sens	Sens	Sens				
Finger 01:	1391	275.0	1666	299.0	1965	309.0	2274
Finger 02:	1475	263.0	1738	288.0	2026	298.0	2324
Finger 03:	1660	268.0	1928	281.0	2209	287.0	2496
Finger 04:	1657	268.0	1925	280.0	2205	274.0	2479
Finger 05:	1559	254.0	1813	268.0	2081	281.0	2362
Finger 06:	1543	245.0	1788	262.0	2050	271.0	2321
Finger 07:	1374	265.0	1639	288.0	1927	306.0	2233
Finger 08:	1554	246.0	1800	260.0	2060	276.0	2336
Finger 09:	1444	261.0	1705	281.0	1986	298.0	2284
Finger 10:	1499	258.0	1757	275.0	2032	284.0	2316
Finger 11:	1492	257.0	1749	266.0	2015	282.0	2297
Finger 12:	1324	276.0	1600	293.0	1893	314.0	2207
Finger 13:	1591	276.0	1867	287.0	2154	294.0	2448
Finger 14:	1423	284.0	1707	294.0	2001	312.0	2313
Finger 15:	1552	261.0	1813	269.0	2082	285.0	2367
Finger 16:	1401	284.0	1685	293.0	1978	313.0	2291
Finger 17:	1627	274.0	1901	276.0	2177	285.0	2462
Finger 18:	1385	294.0	1679	308.0	1987	324.0	2311
Finger 19:	1642	264.0	1906	257.0	2163	264.0	2427
Finger 20:	1511	269.0	1780	274.0	2054	290.0	2344
Finger 21:	1597	255.0	1852	255.0	2107	267.0	2374
Finger 22:	1528	280.0	1808	283.0	2091	294.0	2385
Finger 23:	1344	288.0	1632	297.0	1929	299.0	2228
Finger 24:	1670	268.0	1938	270.0	2208	275.0	2483
Finger 25:	1364	297.0	1661	311.0	1972	321.0	2293
Finger 26:	1530	292.0	1822	300.0	2122	306.0	2428
Finger 27:	1456	267.0	1723	273.0	1996	278.0	2274
Finger 28:	1644	282.0	1926	287.0	2213	287.0	2500
Finger 29:	1467	278.0	1745	293.0	2038	296.0	2334
Finger 30:	1412	275.0	1687	290.0	1977	301.0	2278
Finger 31:	1521	268.0	1789	280.0	2069	284.0	2353
Finger 32:	1342	265.0	1607	283.0	1890	290.0	2180
Finger 33:	1627	301.0	1928	313.0	2241	314.0	2555
Finger 34:	1545	269.0	1814	281.0	2095	282.0	2377

Finger 35:	1446	265.0	1711	286.0	1997	290.0	2287
Finger 36:	1597	282.0	1879	288.0	2167	293.0	2460
Finger 37:	1606	273.0	1879	284.0	2163	293.0	2456
Finger 38:	1507	269.0	1776	288.0	2064	299.0	2363
Finger 39:	1465	277.0	1742	295.0	2037	307.0	2344
Finger 40:	1604	281.0	1885	298.0	2183	304.0	2487

Post Survey Calibration Check								
Performed: Sat Dec 09 10:48:52 2017								
Ring size: (in)	4	Nom. wear	5	Nom. wear	6	Nom. wear	7	Nom. wear
Finger 01:	3.999	-0.001	4.995	-0.002	5.985	-0.007	6.985	-0.007
Finger 02:	3.963	-0.018	4.974	-0.013	5.982	-0.009	6.991	-0.004
Finger 03:	3.979	-0.011	4.988	-0.006	5.983	-0.009	6.994	-0.003
Finger 04:	3.988	-0.006	4.975	-0.013	5.973	-0.014	7.019	0.009
Finger 05:	3.976	-0.012	4.971	-0.014	5.992	-0.004	6.982	-0.009
Finger 06:	3.979	-0.010	4.987	-0.006	5.984	-0.008	6.992	-0.004
Finger 07:	3.980	-0.010	4.975	-0.013	6.002	0.001	7.038	0.019
Finger 08:	3.979	-0.010	4.986	-0.007	5.992	-0.004	6.990	-0.005
Finger 09:	3.962	-0.019	4.964	-0.018	5.968	-0.016	6.960	-0.020
Finger 10:	3.975	-0.013	4.987	-0.006	5.967	-0.016	6.971	-0.015
Finger 11:	3.984	-0.008	4.985	-0.007	5.989	-0.006	6.991	-0.005
Finger 12:	3.991	-0.004	4.985	-0.007	5.986	-0.007	6.987	-0.006
Finger 13:	3.977	-0.012	4.980	-0.010	5.964	-0.018	6.985	-0.007
Finger 14:	3.988	-0.006	4.987	-0.007	5.983	-0.009	6.981	-0.009
Finger 15:	3.963	-0.019	4.972	-0.014	5.985	-0.008	7.035	0.017
Finger 16:	3.987	-0.007	4.988	-0.006	6.007	0.003	6.995	-0.002
Finger 17:	3.956	-0.022	4.970	-0.015	5.983	-0.008	6.998	-0.001
Finger 18:	3.988	-0.006	4.976	-0.012	5.978	-0.011	6.969	-0.016
Finger 19:	3.999	-0.001	4.994	-0.003	5.999	-0.000	7.004	0.002
Finger 20:	3.987	-0.007	4.981	-0.009	5.992	-0.004	6.999	-0.000
Finger 21:	3.983	-0.009	4.991	-0.004	5.998	-0.001	7.003	0.002
Finger 22:	3.990	-0.005	4.983	-0.008	5.988	-0.006	6.999	-0.001
Finger 23:	3.984	-0.008	4.975	-0.013	5.954	-0.023	6.958	-0.021
Finger 24:	3.986	-0.007	4.993	-0.004	5.995	-0.003	7.003	0.002
Finger 25:	3.979	-0.010	4.988	-0.006	5.987	-0.007	6.986	-0.007
Finger 26:	3.982	-0.009	4.990	-0.005	5.987	-0.006	6.993	-0.003
Finger 27:	3.953	-0.024	4.968	-0.016	5.967	-0.016	6.983	-0.008
Finger 28:	3.972	-0.014	4.968	-0.016	5.973	-0.013	6.992	-0.004
Finger 29:	3.977	-0.012	4.981	-0.010	5.975	-0.013	6.996	-0.002
Finger 30:	3.982	-0.009	4.975	-0.013	5.999	-0.001	7.001	0.000
Finger 31:	3.981	-0.010	4.986	-0.007	5.990	-0.005	7.009	0.005
Finger 32:	3.976	-0.012	4.976	-0.012	5.976	-0.012	6.993	-0.003
Finger 33:	3.984	-0.008	4.986	-0.007	5.990	-0.005	6.995	-0.003
Finger 34:	3.980	-0.010	4.979	-0.011	5.985	-0.007	6.985	-0.008
Finger 35:	3.976	-0.012	4.987	-0.006	5.991	-0.005	6.990	-0.005
Finger 36:	3.982	-0.009	4.971	-0.014	5.978	-0.011	6.988	-0.006
Finger 37:	3.989	-0.005	4.983	-0.008	5.989	-0.005	6.989	-0.006
Finger 38:	3.975	-0.012	4.981	-0.009	5.984	-0.008	6.980	-0.010
Finger 39:	3.991	-0.004	4.994	-0.003	5.994	-0.003	7.001	0.000
Finger 40:	3.981	-0.009	4.986	-0.007	5.981	-0.009	6.991	-0.004
Average:	3.980	-0.010	4.982	-0.009	5.984	-0.008	6.993	-0.004

Segmented Cement Bond Log Calibration Report			
Serial Number:		1066	
Tool Model:		UW_RBT_004	
Calibration Casing Diameter:		7.000	in
Calibration Depth:		21.037	ft

Master Calibration, performed Fri Dec 08 15:20:27 2017:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.002	0.580	0.800	62.165	106.226	0.546
5FT	-0.002	0.568	0.800	62.165	107.645	1.063
S1	0.002	0.567	0.000	100.000	177.194	-0.430

S2	0.001	0.588	0.000	100.000	170.284	-0.208
S3	0.002	0.582	0.000	100.000	172.246	-0.296
S4	0.001	0.592	0.000	100.000	169.288	-0.198
S5	0.002	0.586	0.000	100.000	171.292	-0.364
S6	0.001	0.586	0.000	100.000	170.941	-0.248
S7	0.002	0.592	0.000	100.000	169.610	-0.408
S8	0.003	0.573	0.000	100.000	175.223	-0.473

Temperature Calibration Report

Serial Number: 10024052
Tool Model: PRT_016
Performed: Sun Oct 11 12:16:39 2015

Point #	Reading		Reference	
1	12242.00	cps	68.00	degF
2	18329.00	cps	104.00	degF
3	29563.00	cps	176.00	degF
4	41222.00	cps	248.00	degF
5	52988.00	cps	320.00	degF
6	58824.00	cps	356.00	degF
7		cps		degF
8		cps		degF
9		cps		degF
10		cps		degF

Gamma Ray Calibration Report

Serial Number: 10013902
Tool Model: UW_PGR_020
Performed: (Not Performed)

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 Wagner 1N-W10HZ
Field Wattenberg
County Weld
State Colorado