

County Weld State Colorado

K.B.	4982'
D.F.	—
G.L.	4965'

na	4.12	11.0

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.

Log ran as per customer request
Depth referenced to Casing Liner Top at 5883 FT
Adjusted -18 FT to correlate with Liner Top
Gauge Ring/Junk Basket ran to 7777 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 debris upon completion of operations

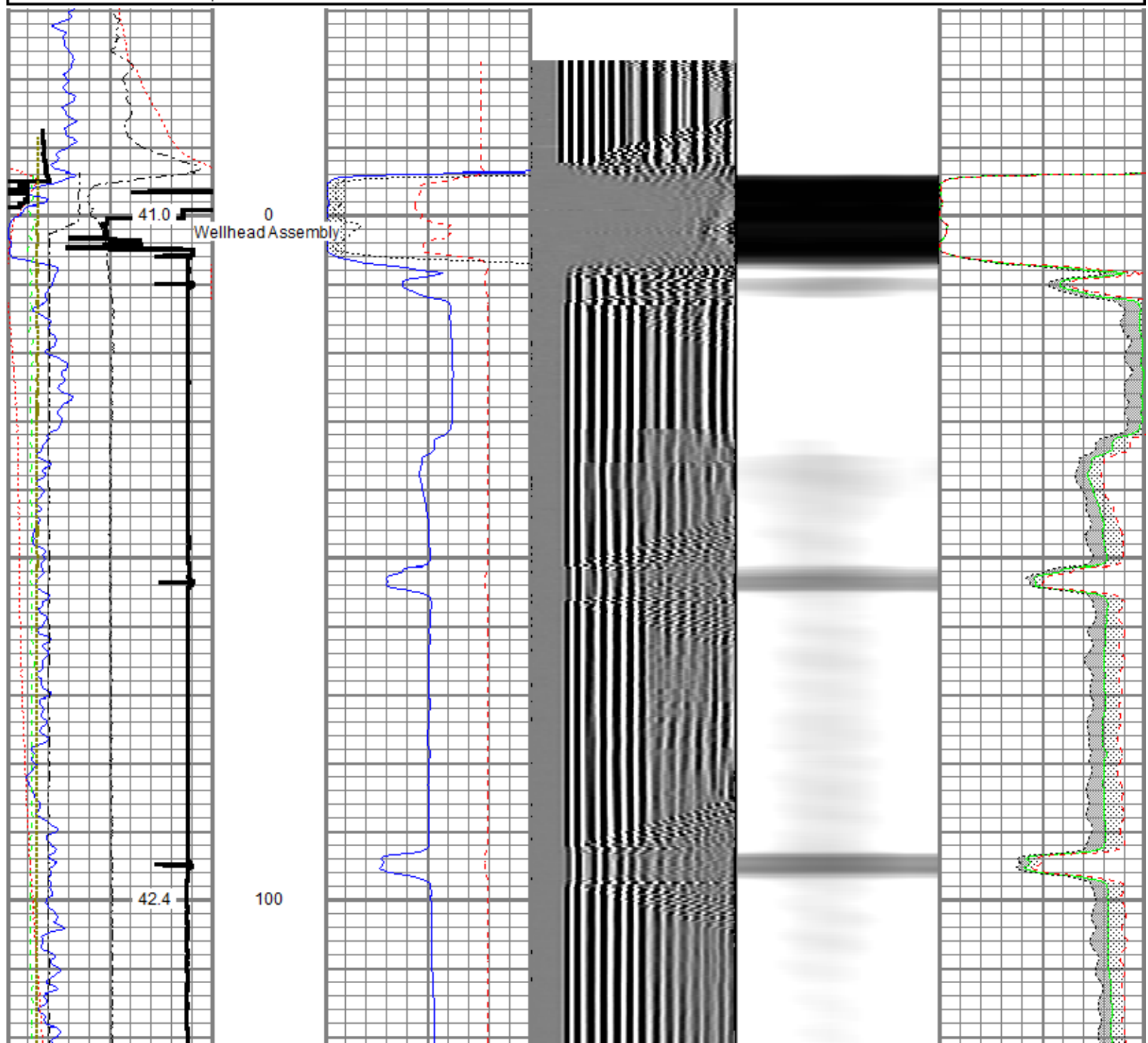
Thank you for choosing Reliance Oilfield Services, LLC!!

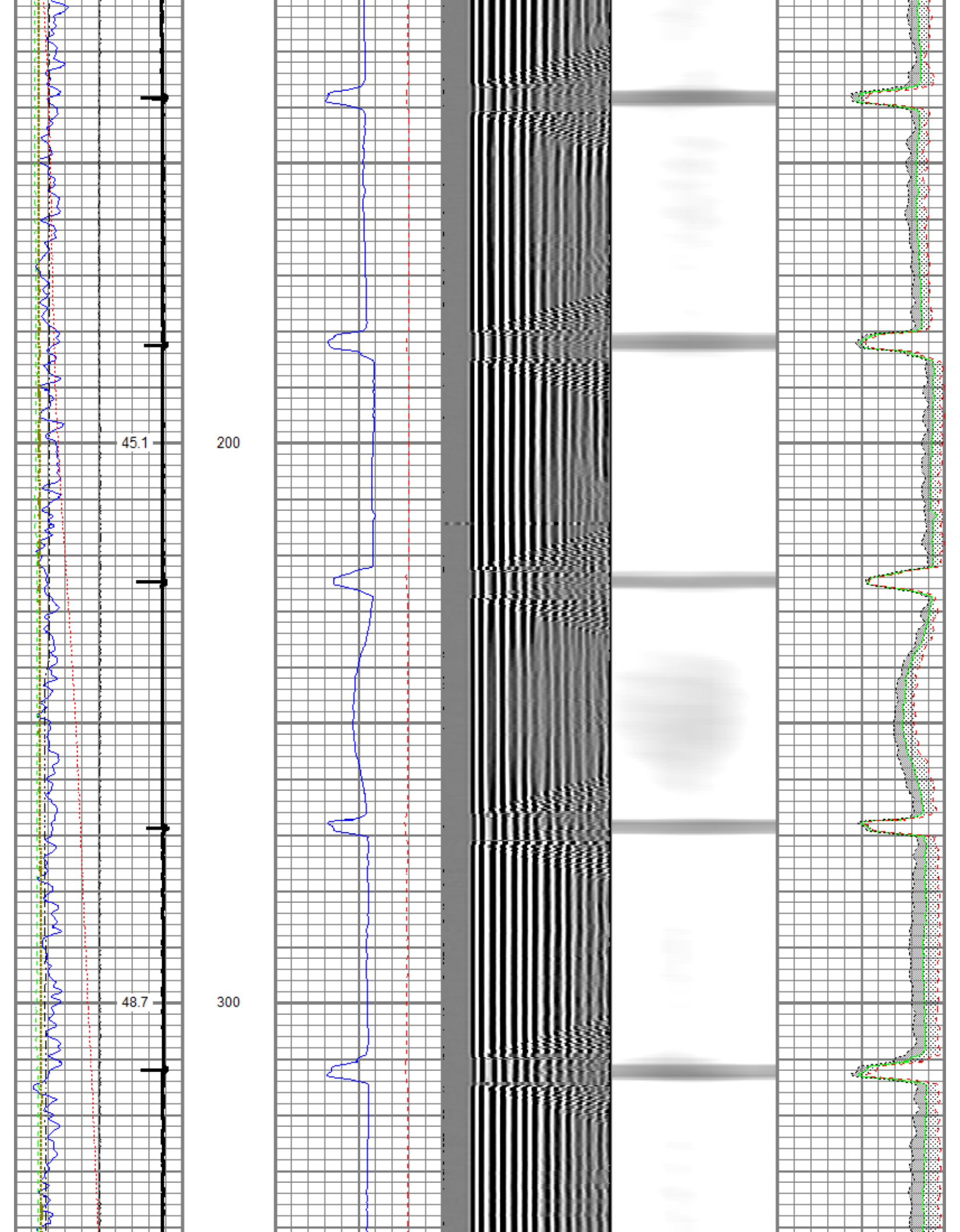
Main Pass

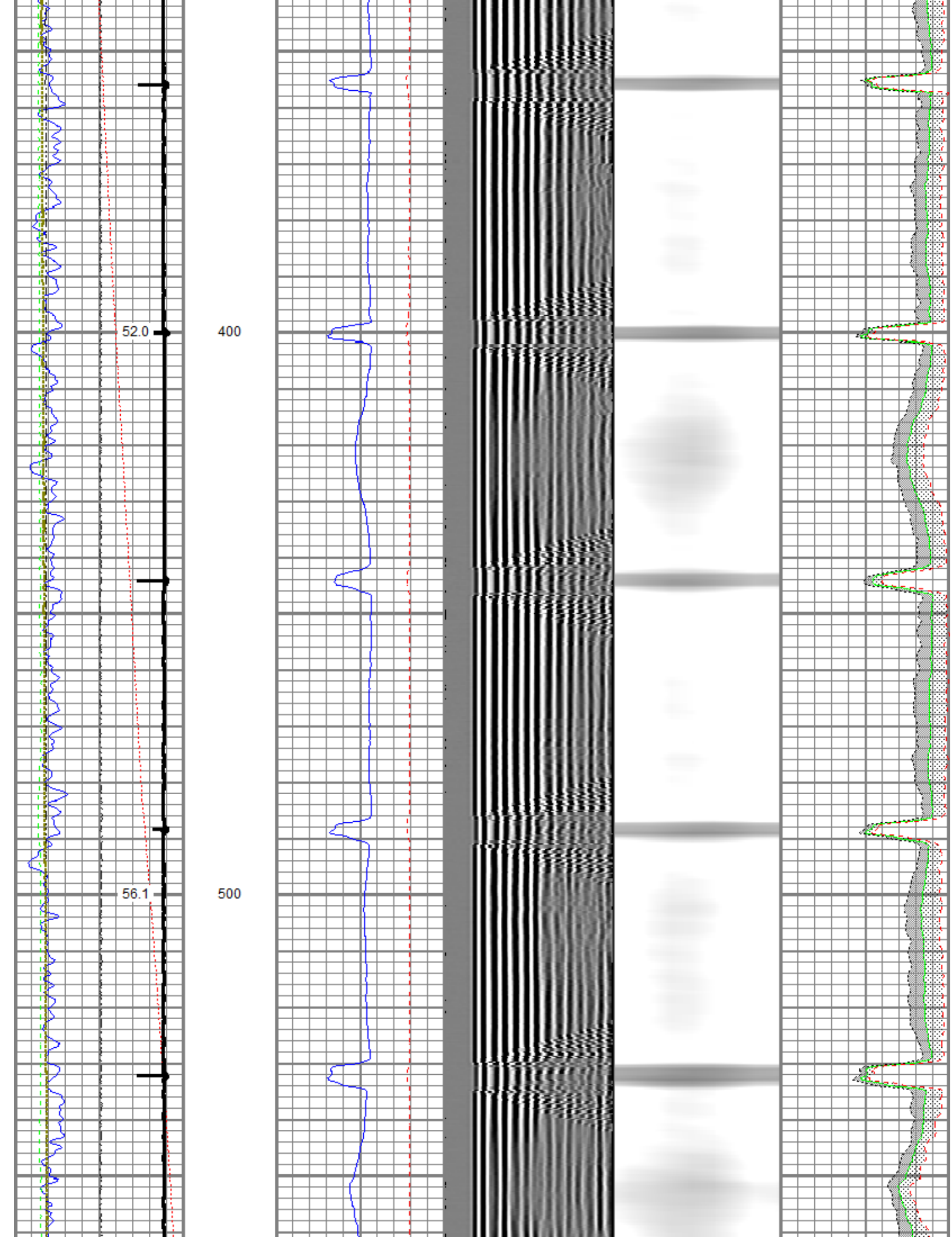


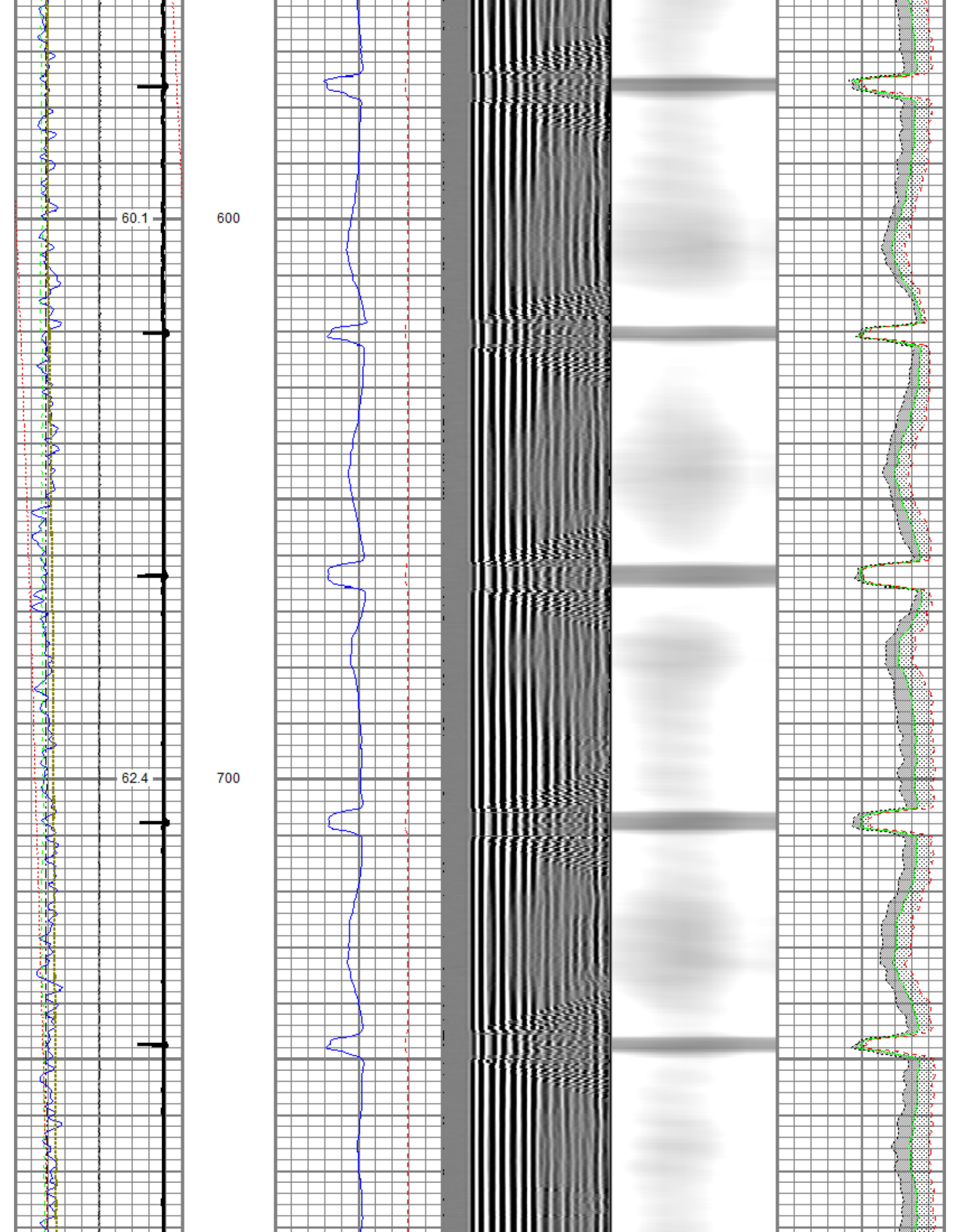
Database File	0512344202_anadarko_leinweber 37n-11hz_rbl_mit_04-20-18\processed_0512344199_anadarko_leinweber 37n-11hz_mit_
Dataset Pathname	2800/pass9
Presentation Format	ros_rbt_mit_sx
Dataset Creation	Sat Apr 21 07:51:24 2018
Charted by	Depth in Feet scaled 1:240

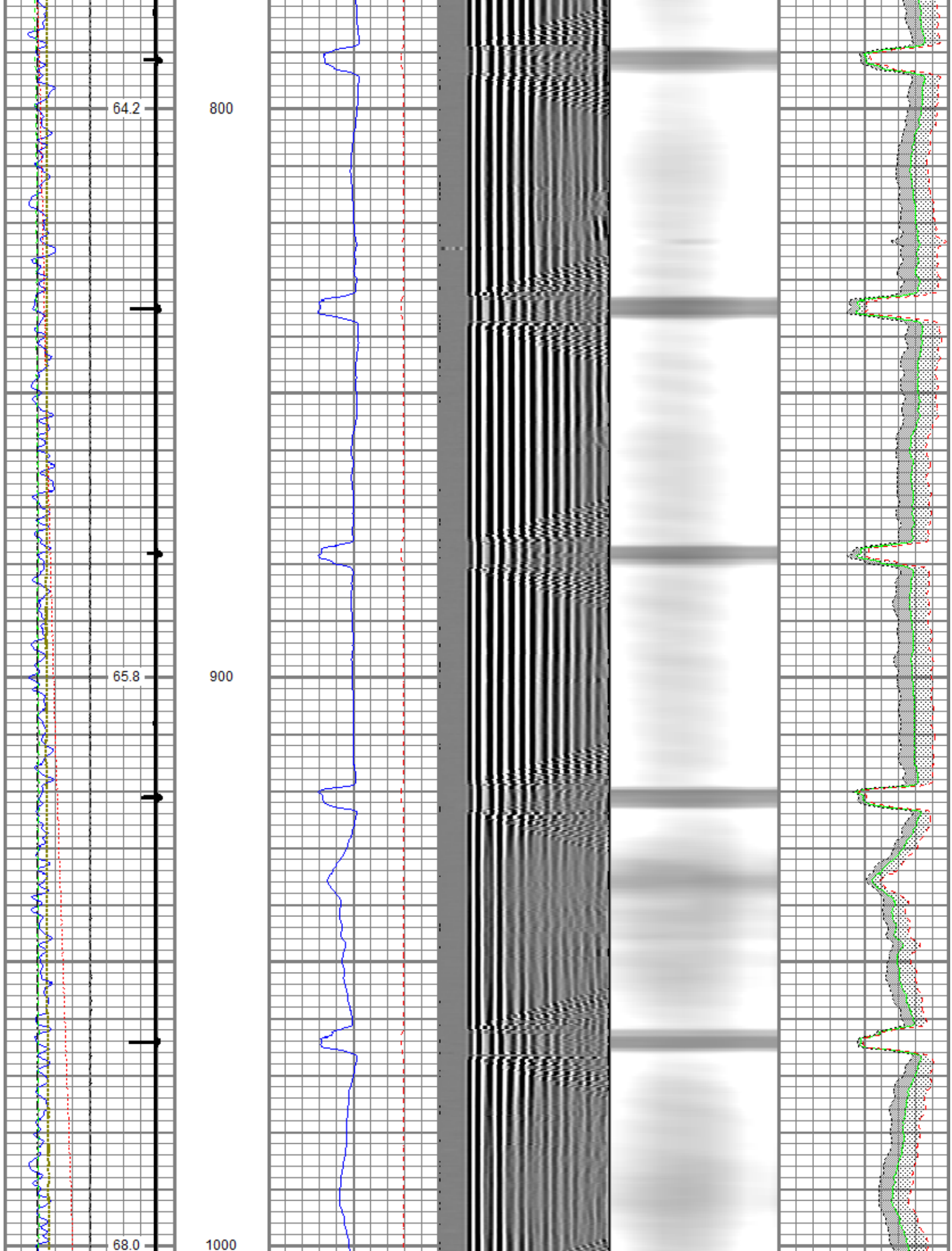
Gamma Ray		0	3' Amplitude (mV)	100	5' Variable Density Log		Sector Map		0	Average Amplitude	100
0	(GAPI)	120	3' Amplitude x 5		200	(usec)	1200		Minimum Amplitude		
Line Speed			0	(mV)	20				0		100
-100	(ft/min)	100	3' Travel Time						Maximum Amplitude		
0	Line Tension (lb)	2000	650	(usec)	150				0		100
Differential Temperature											
-2	(degF)	2									
0	Temperature (degF)	20									
Casing Collar Locator											
-10	Deviation (deg)	90									

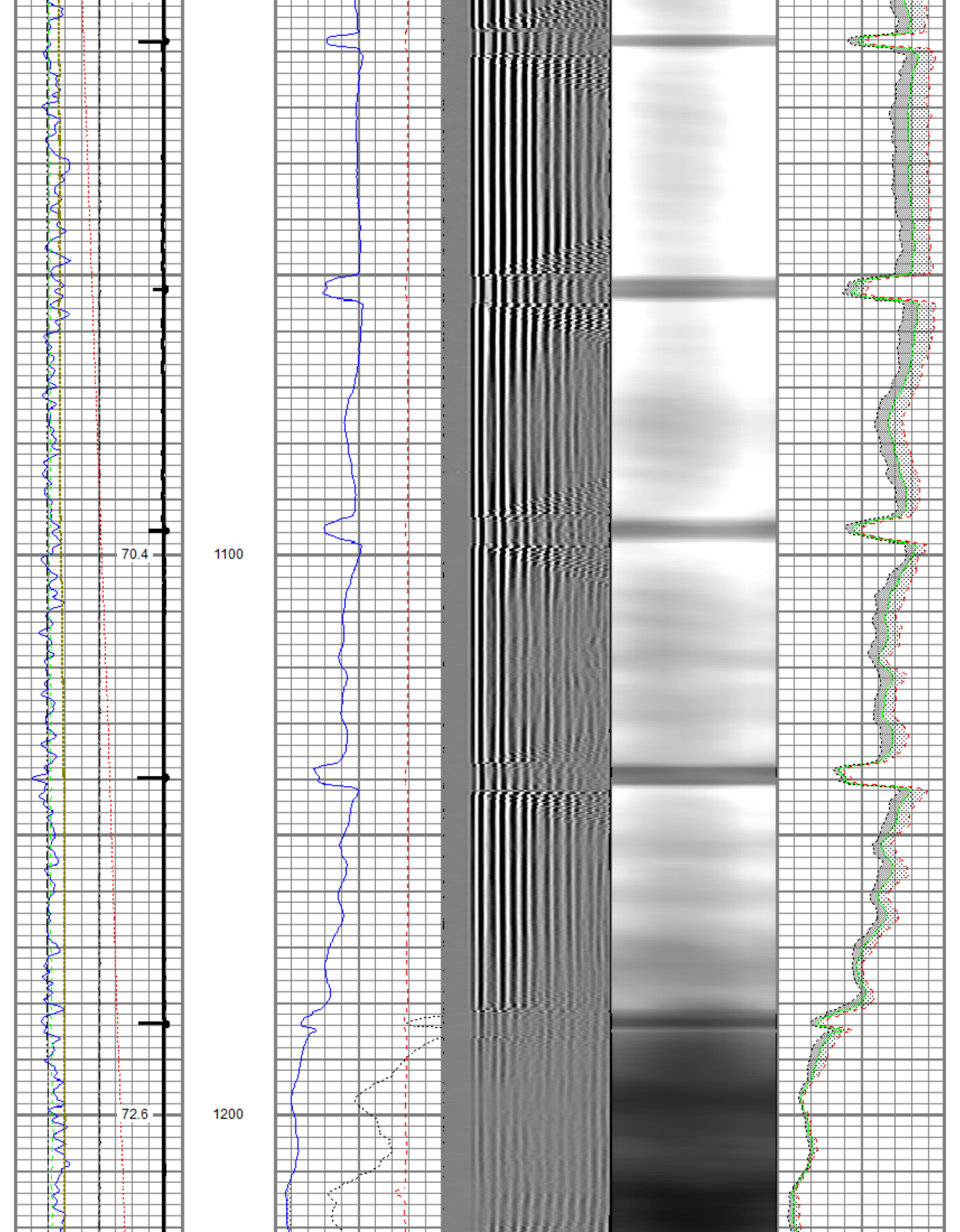


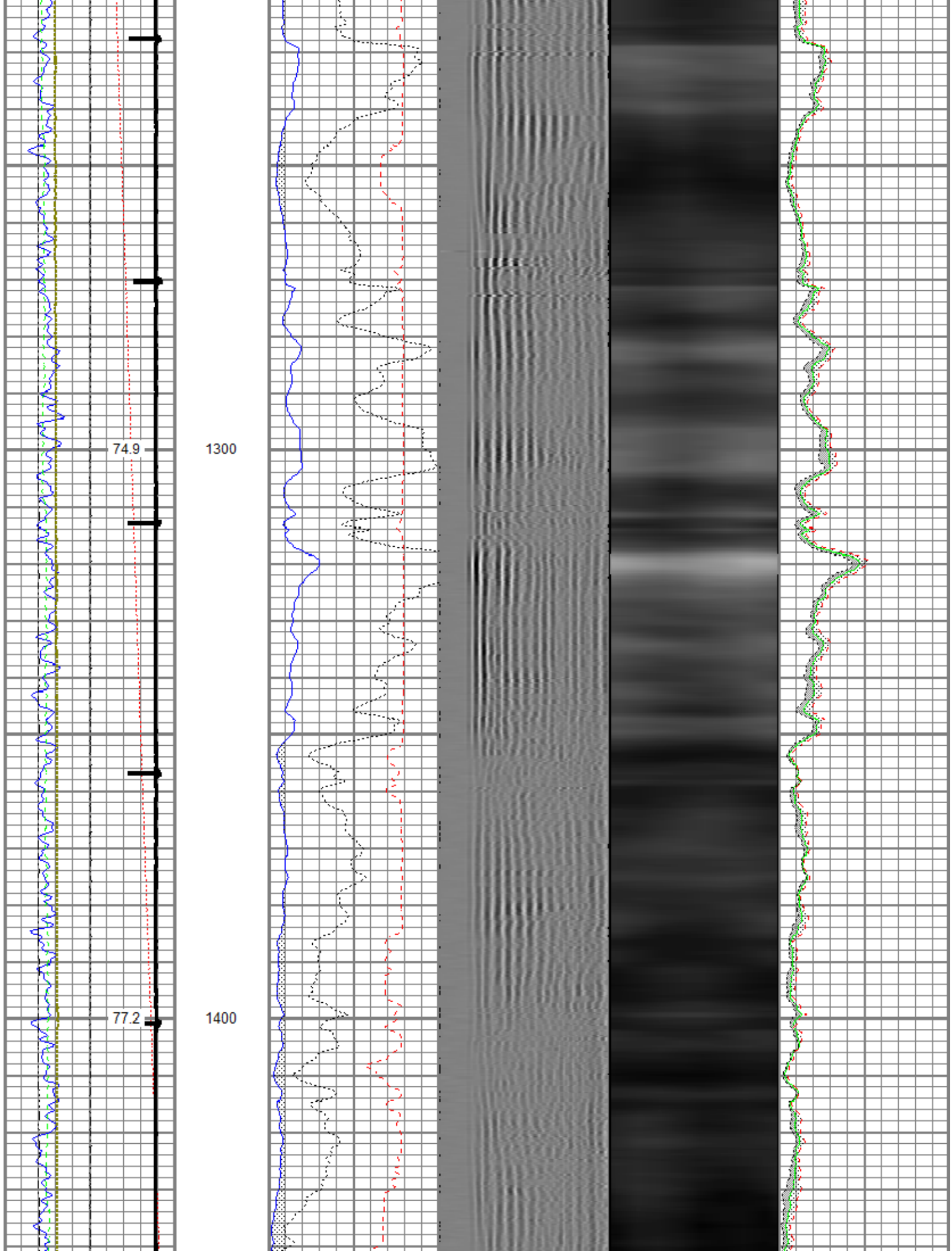


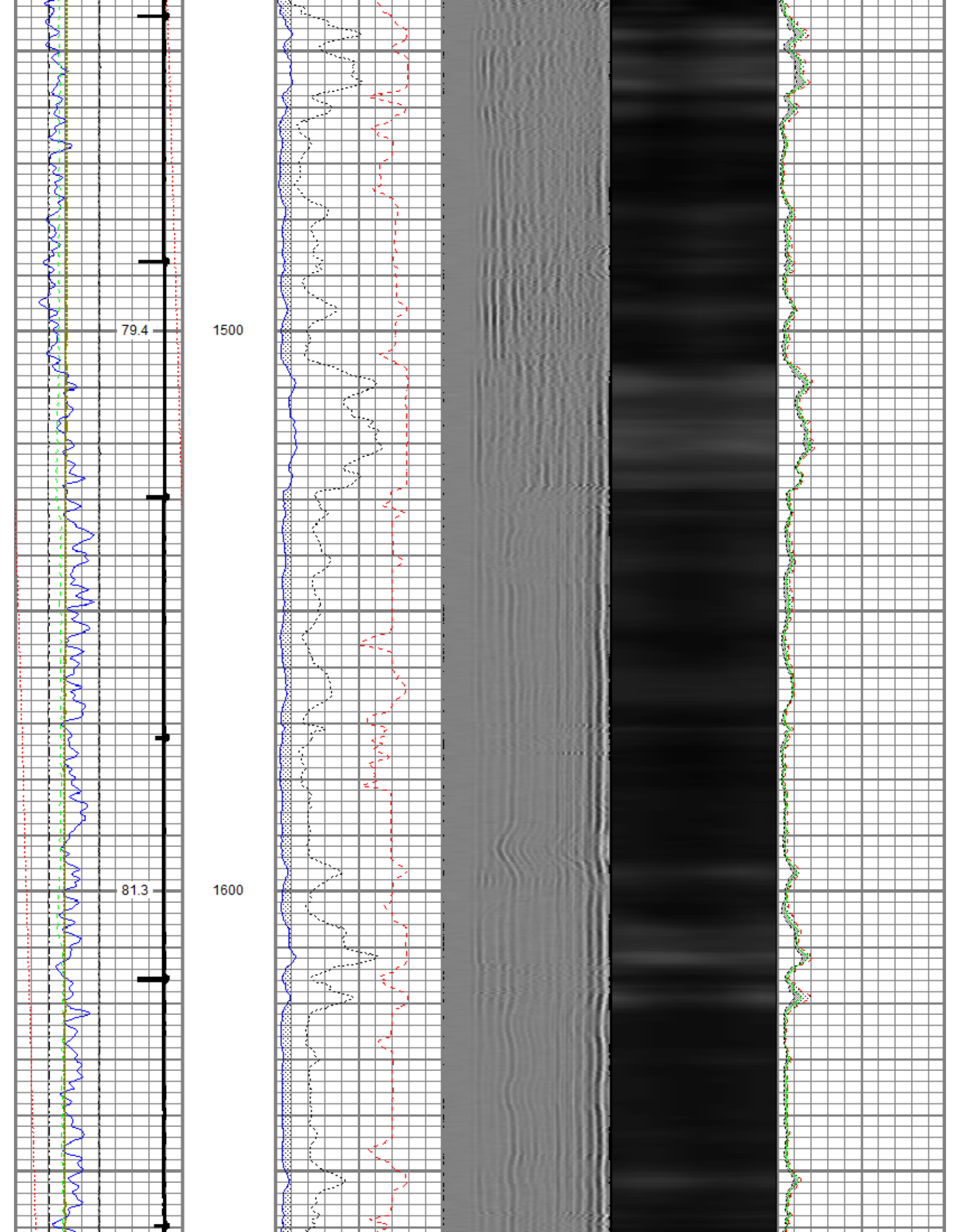


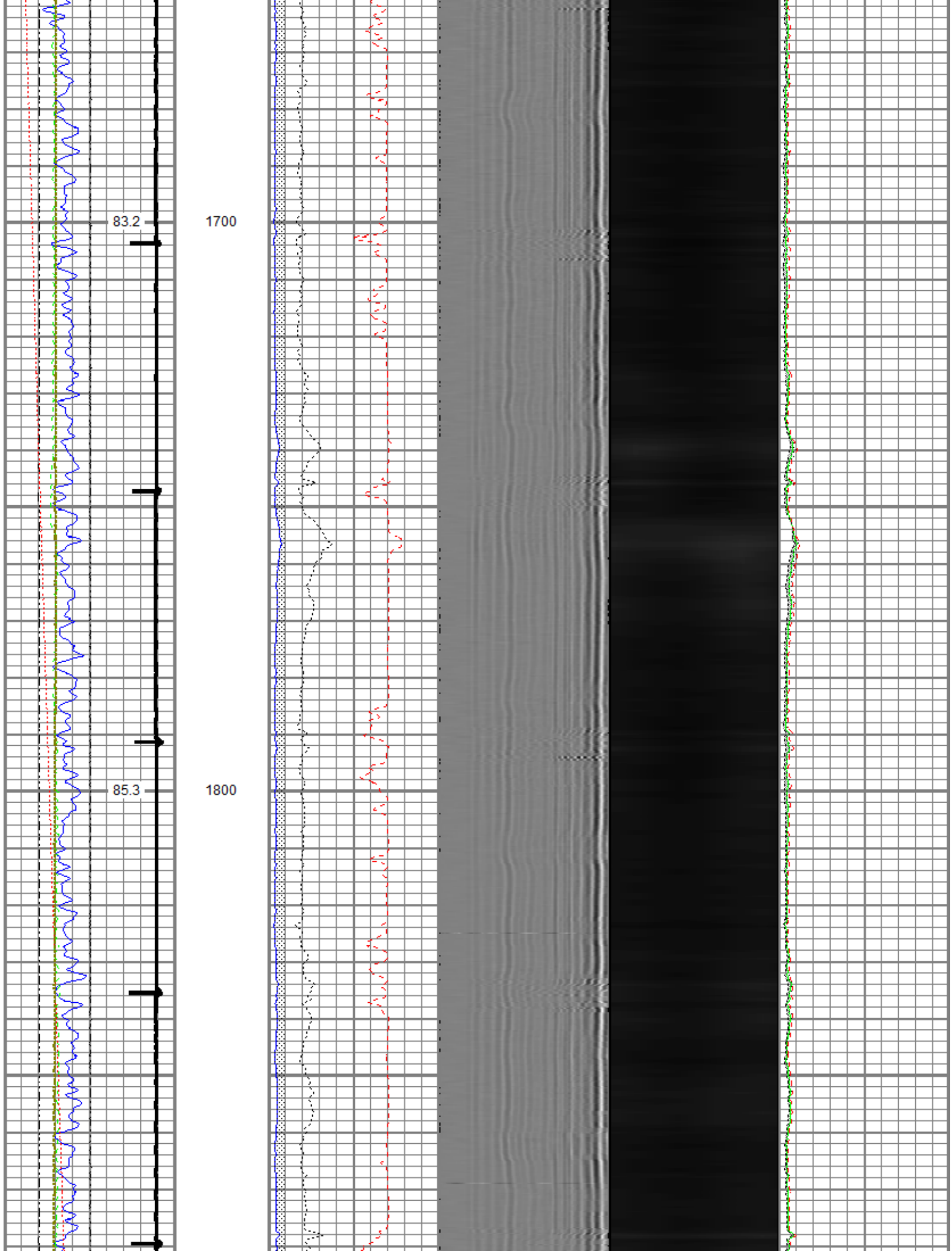


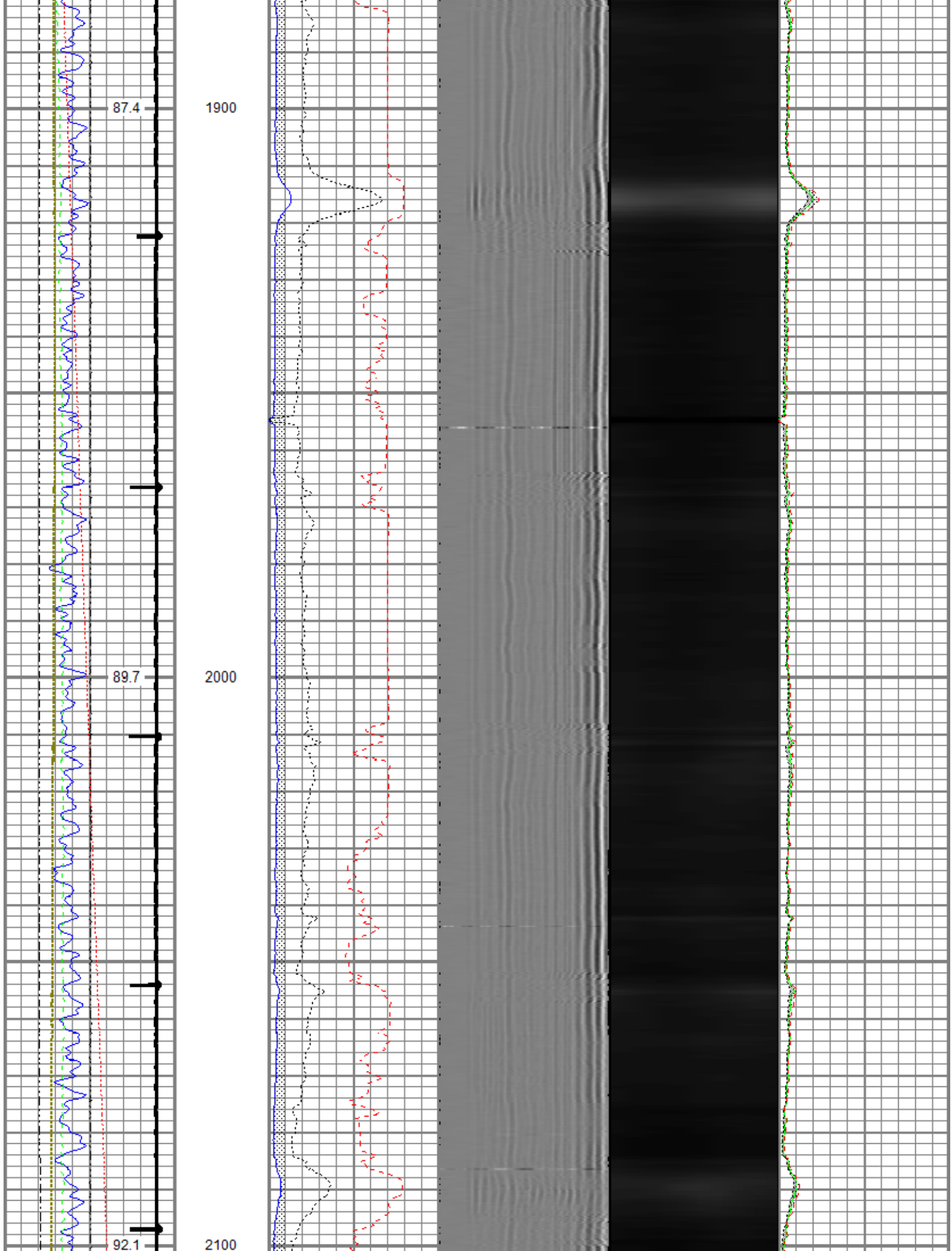


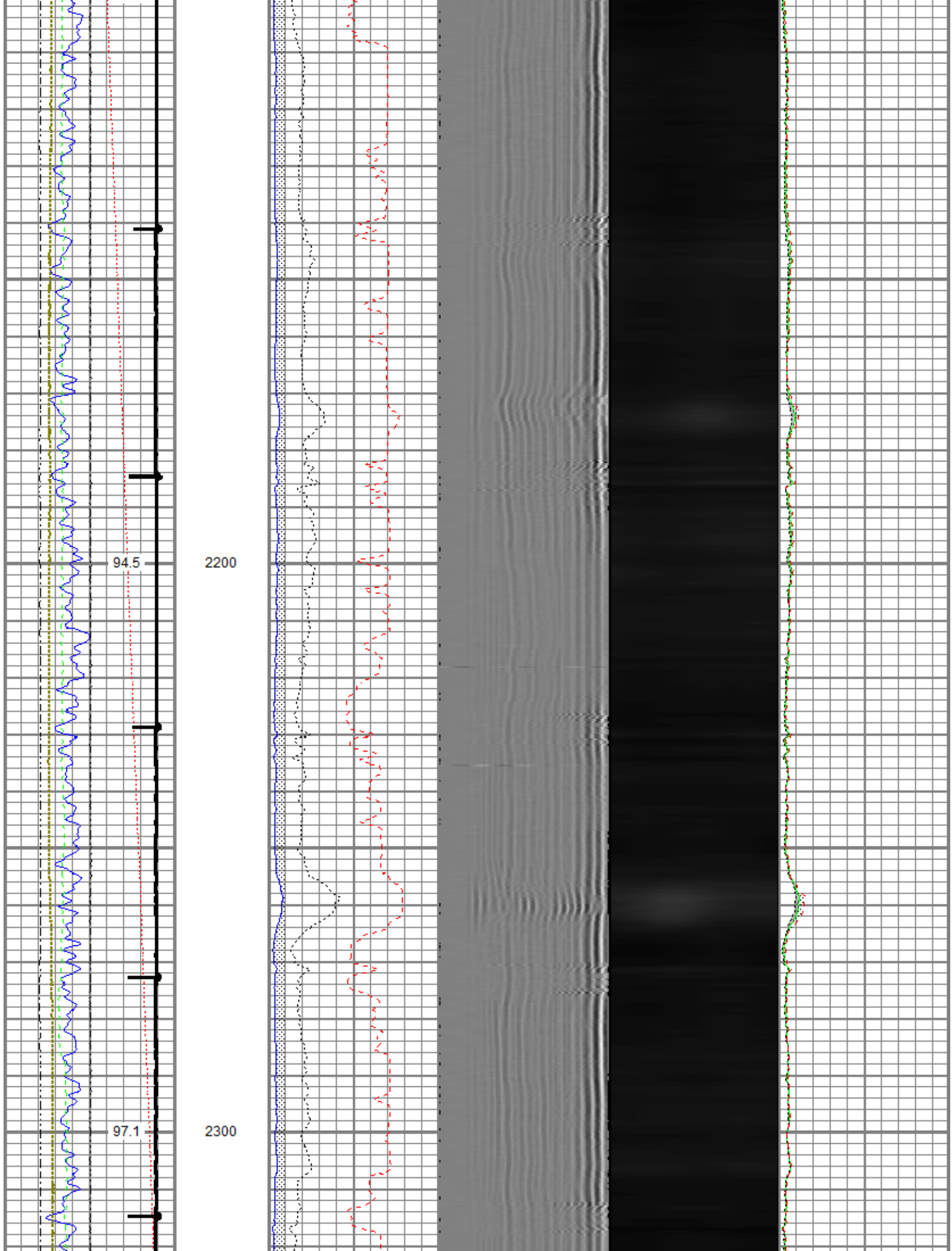


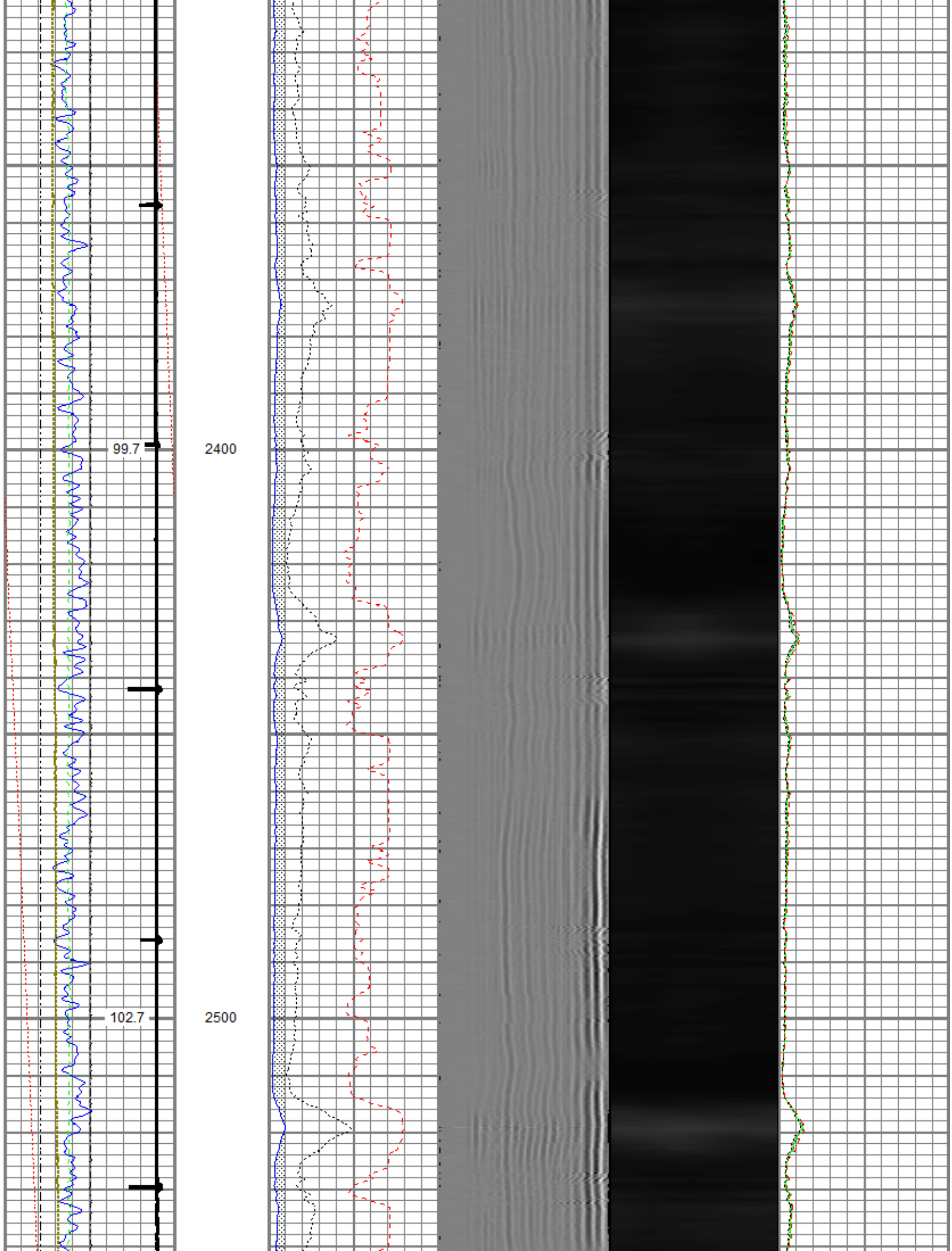


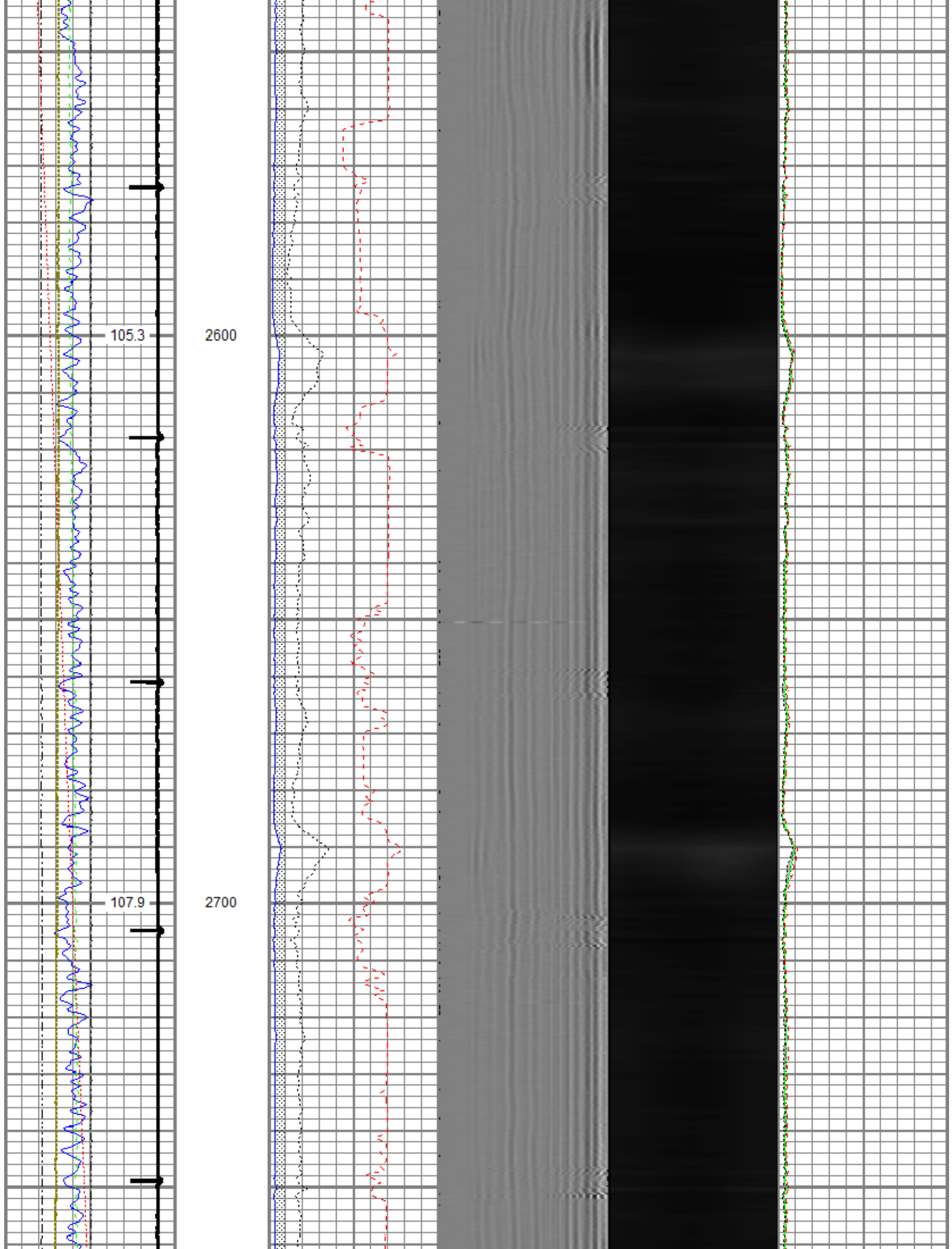


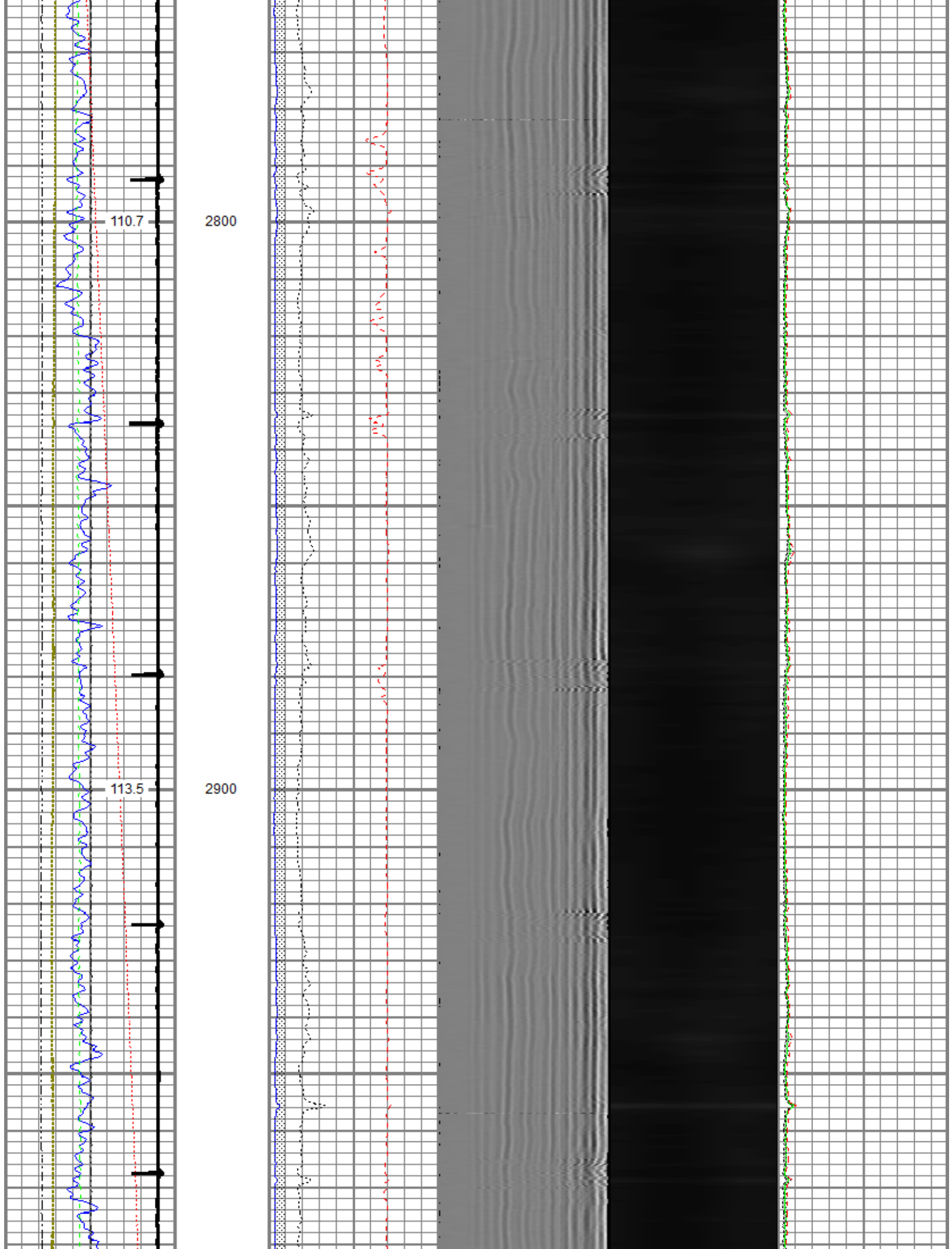


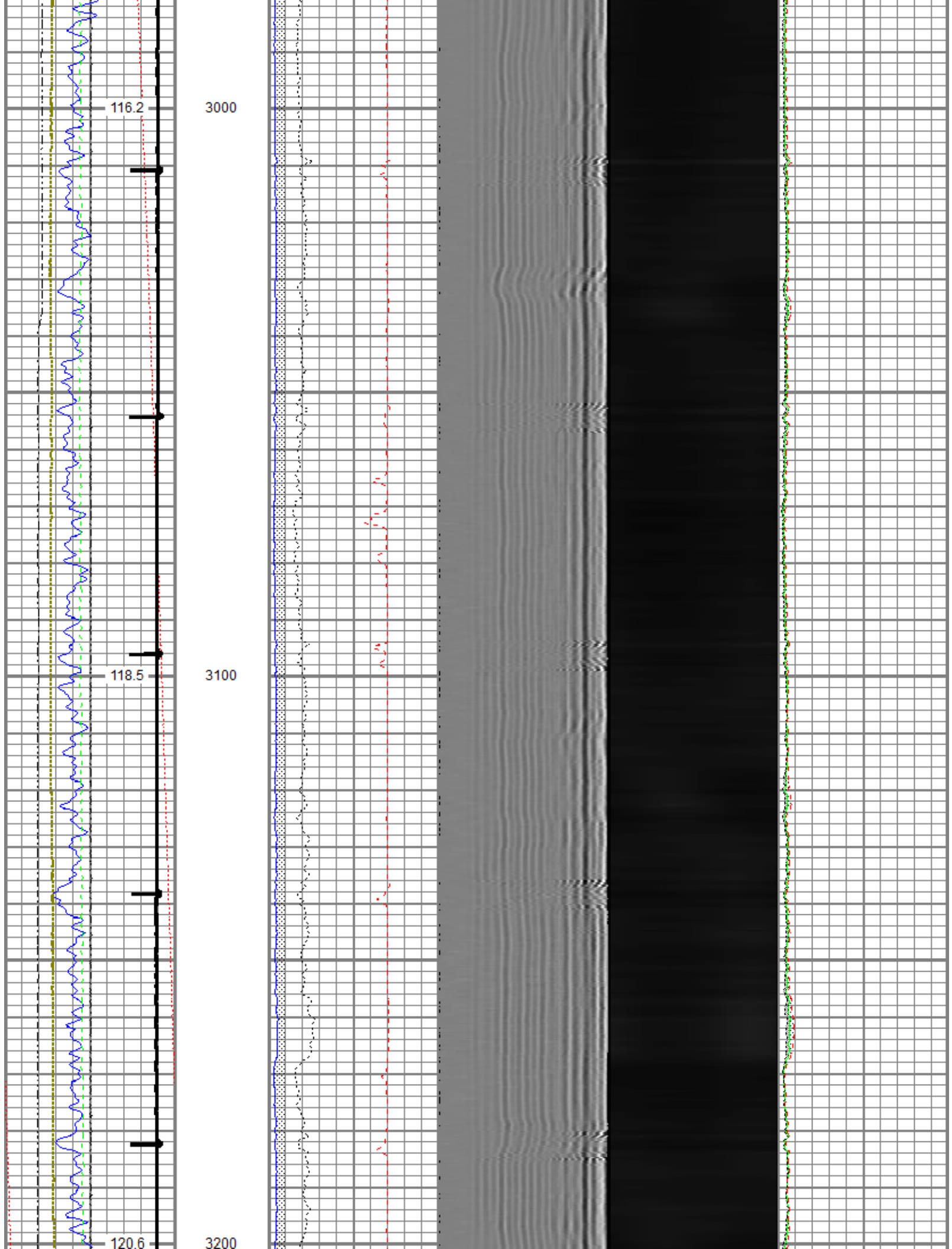


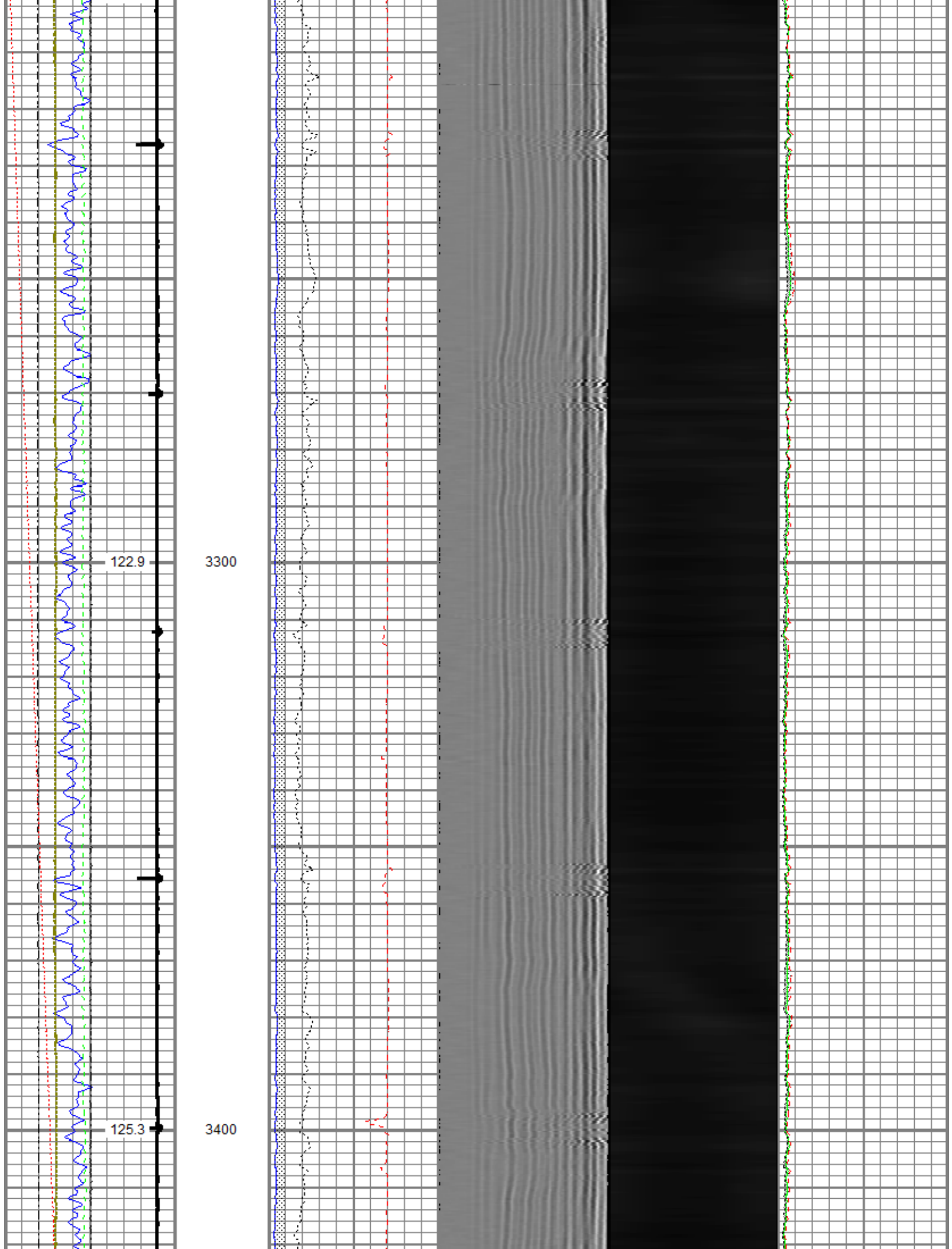


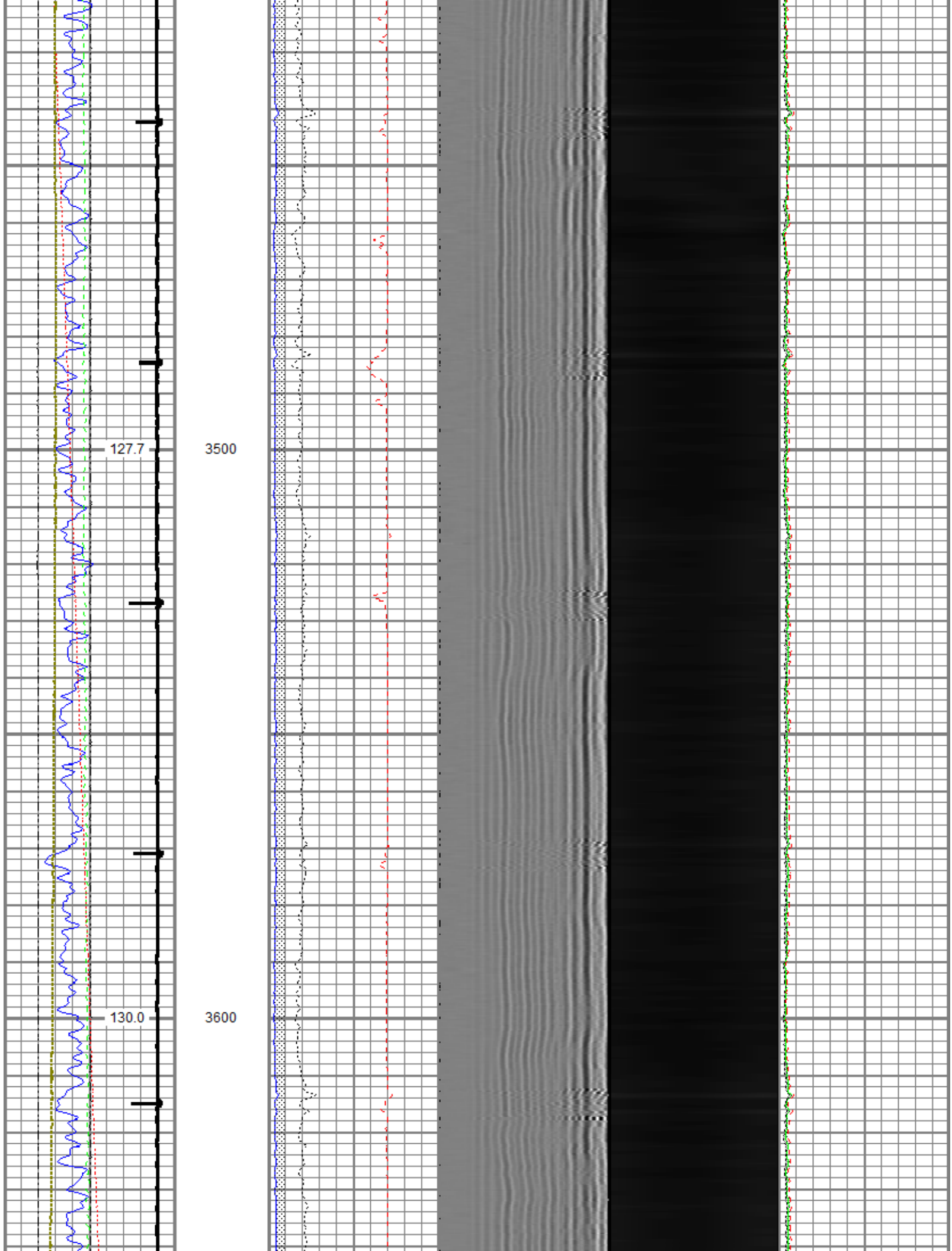


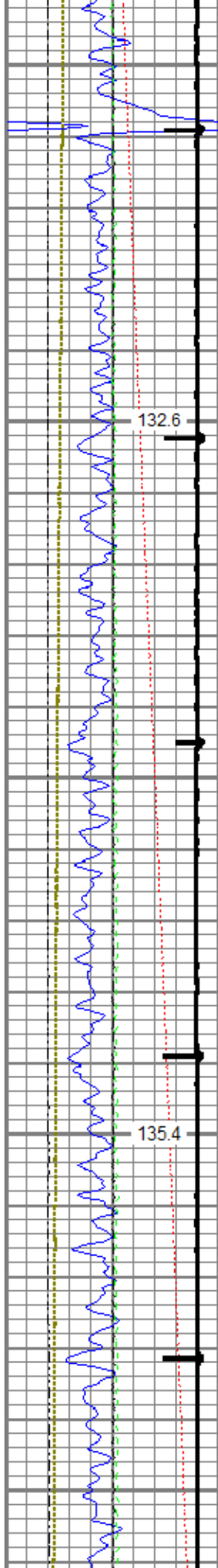










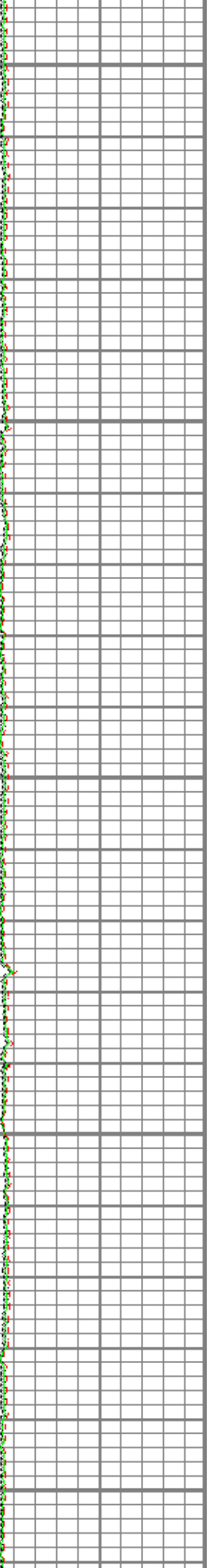
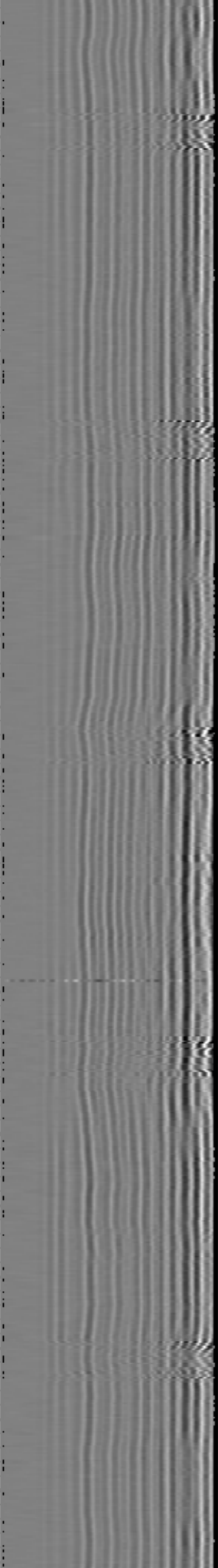
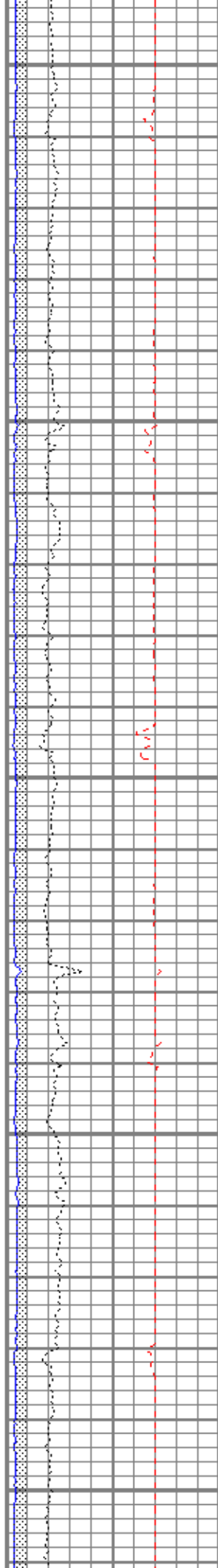


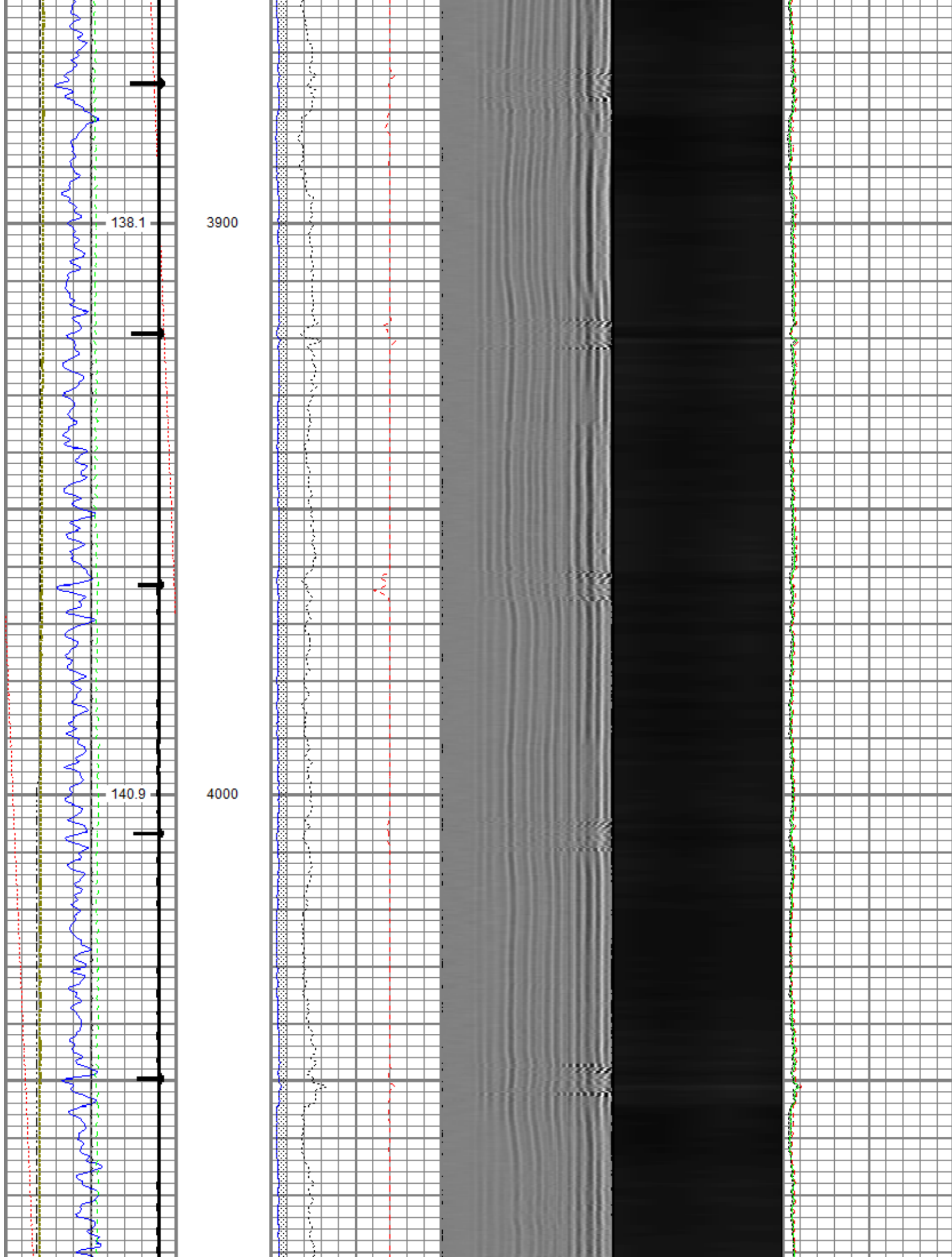
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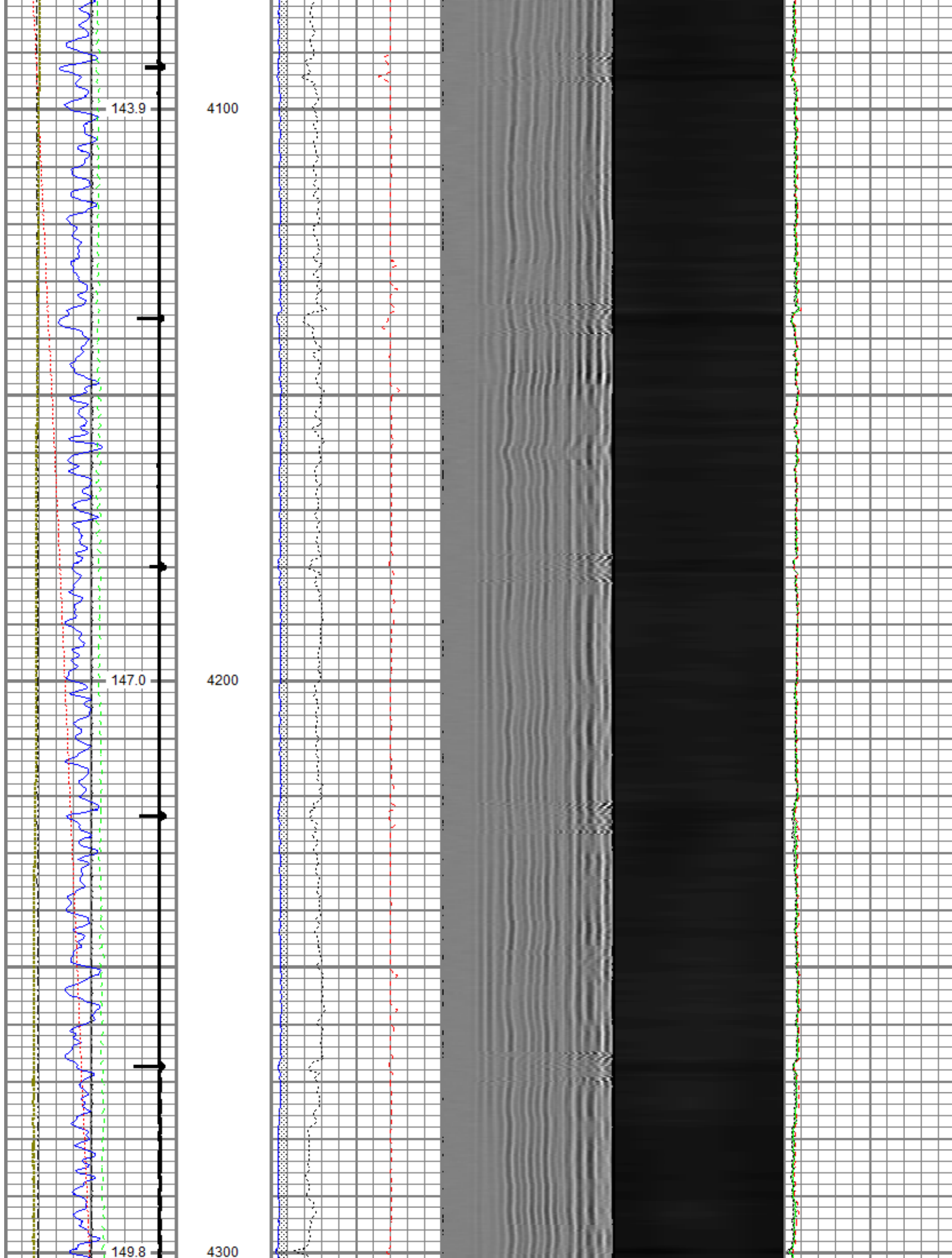
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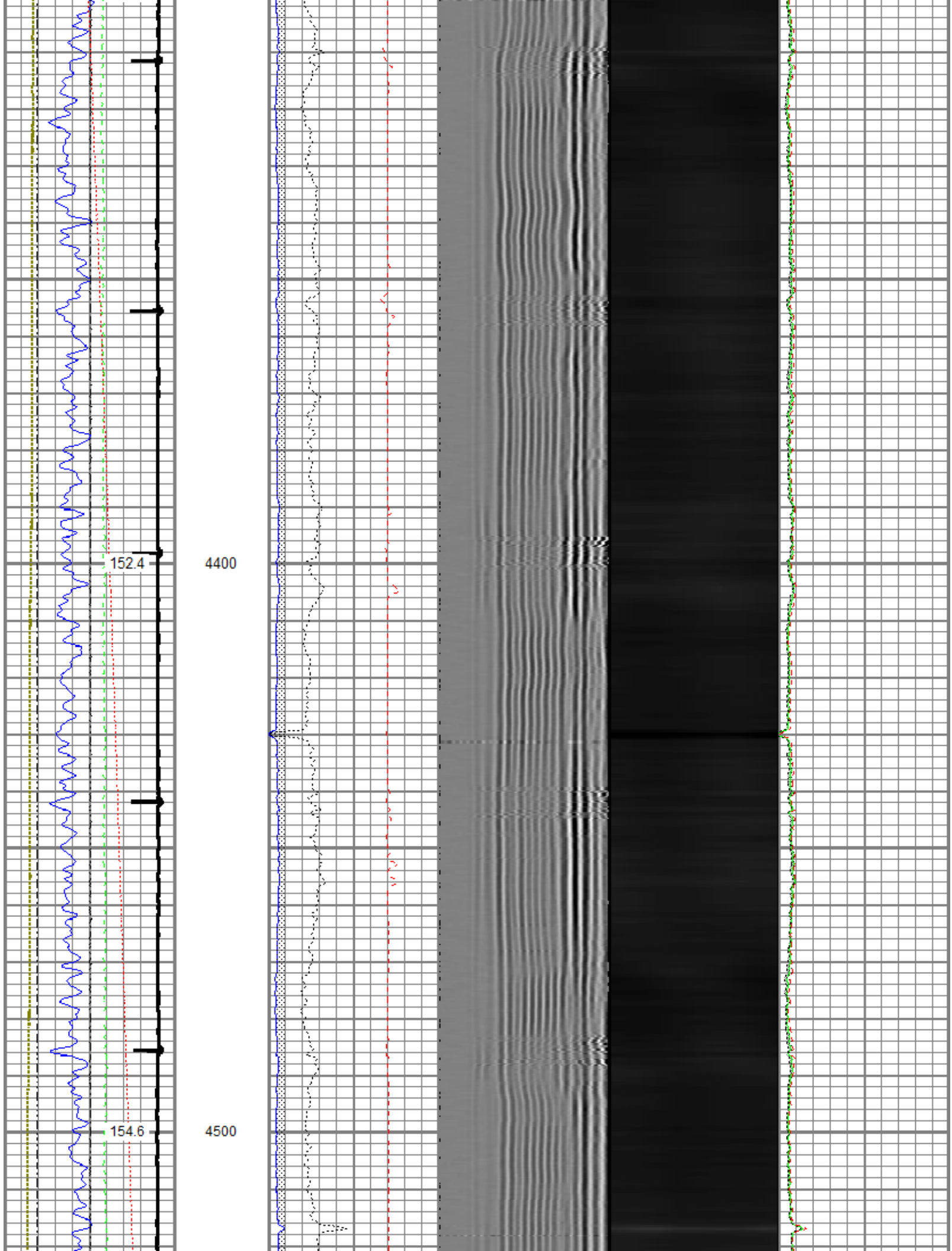
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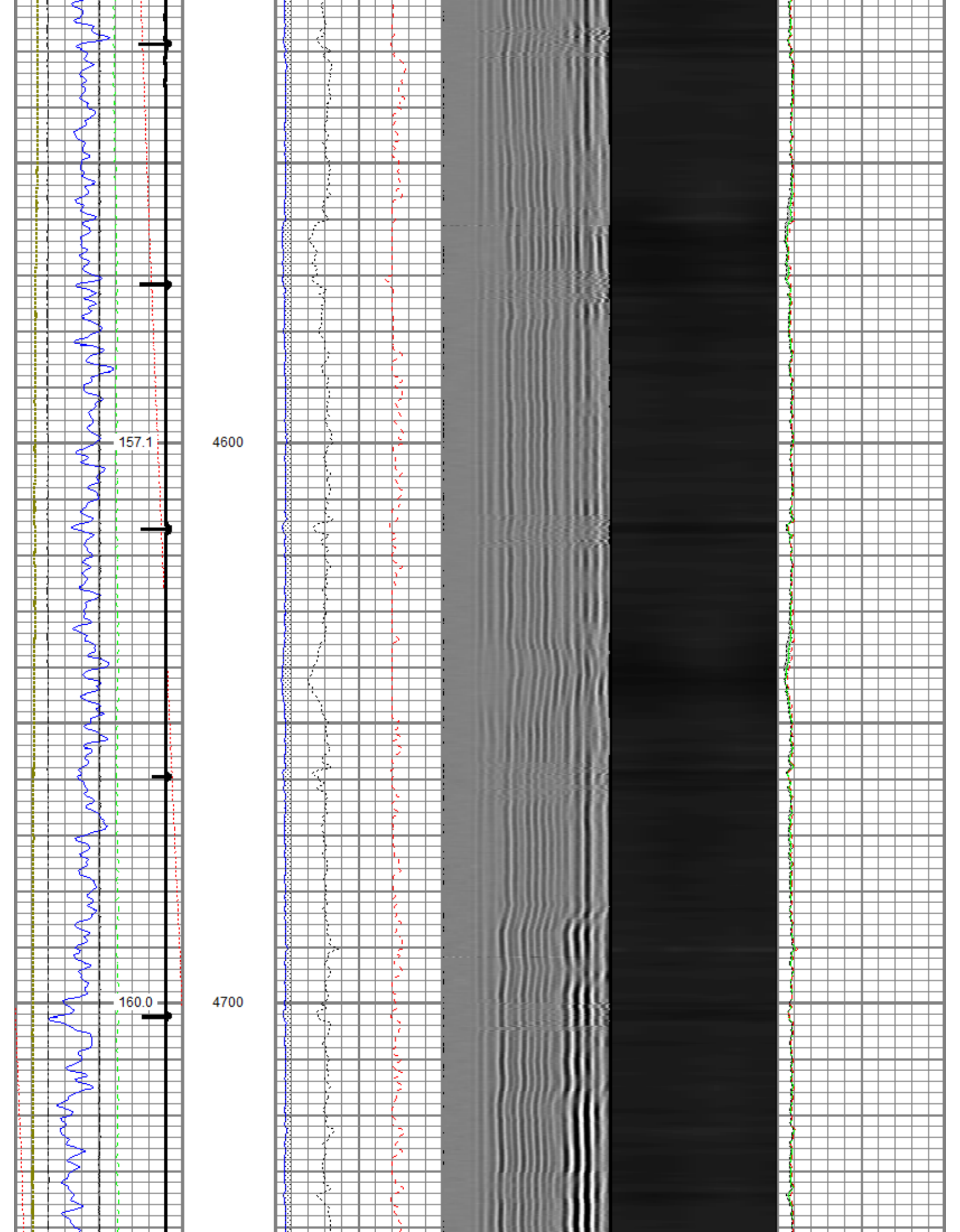
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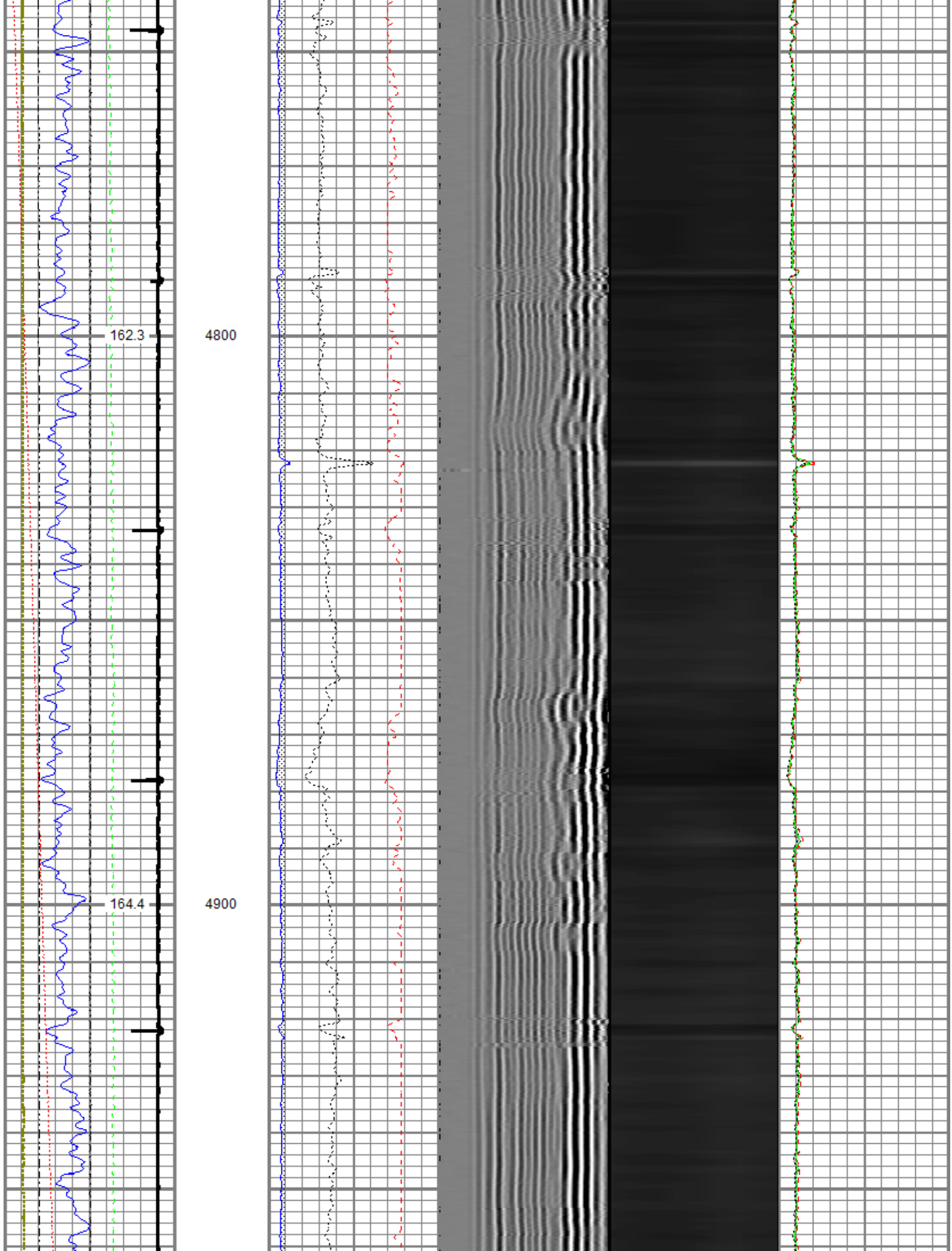


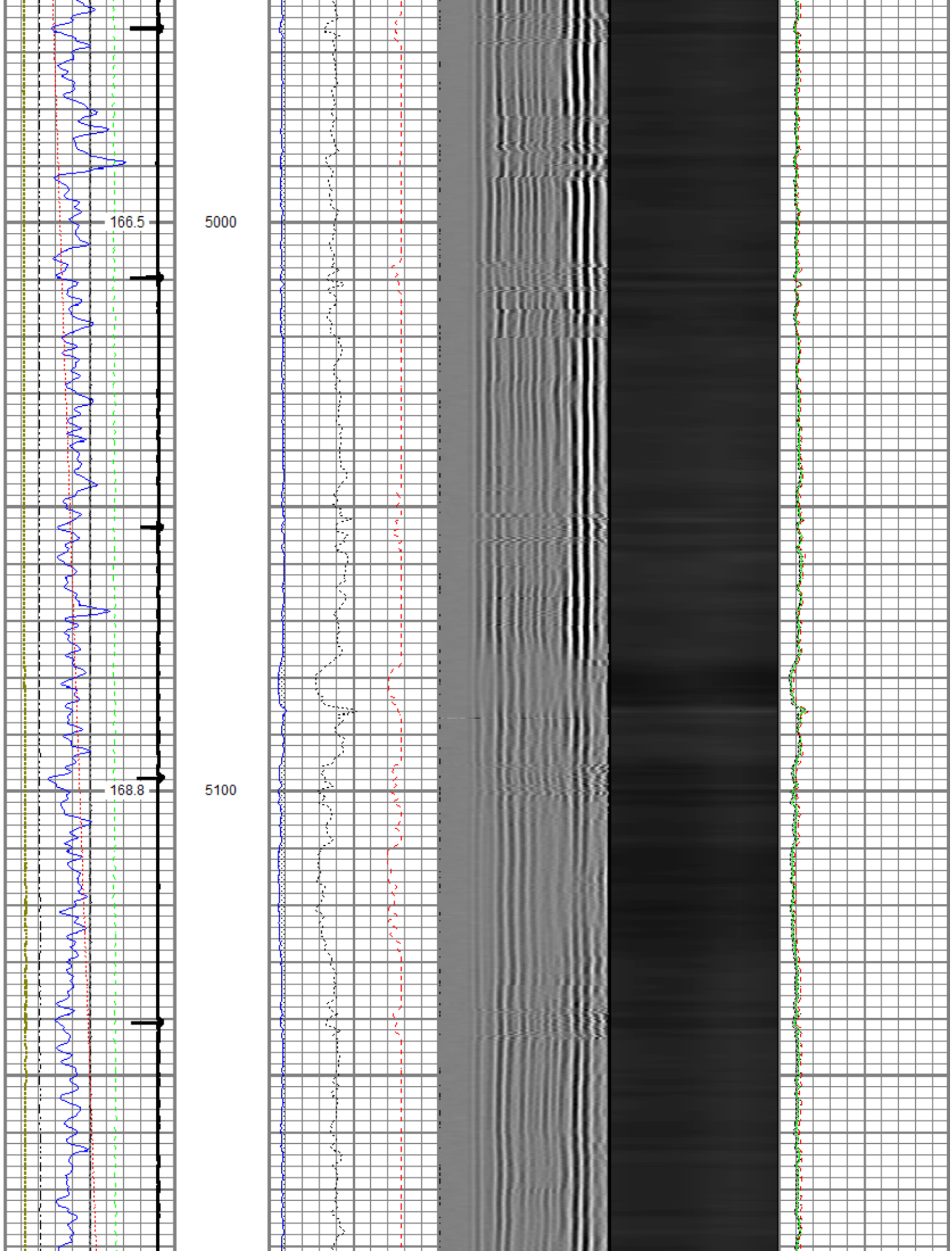


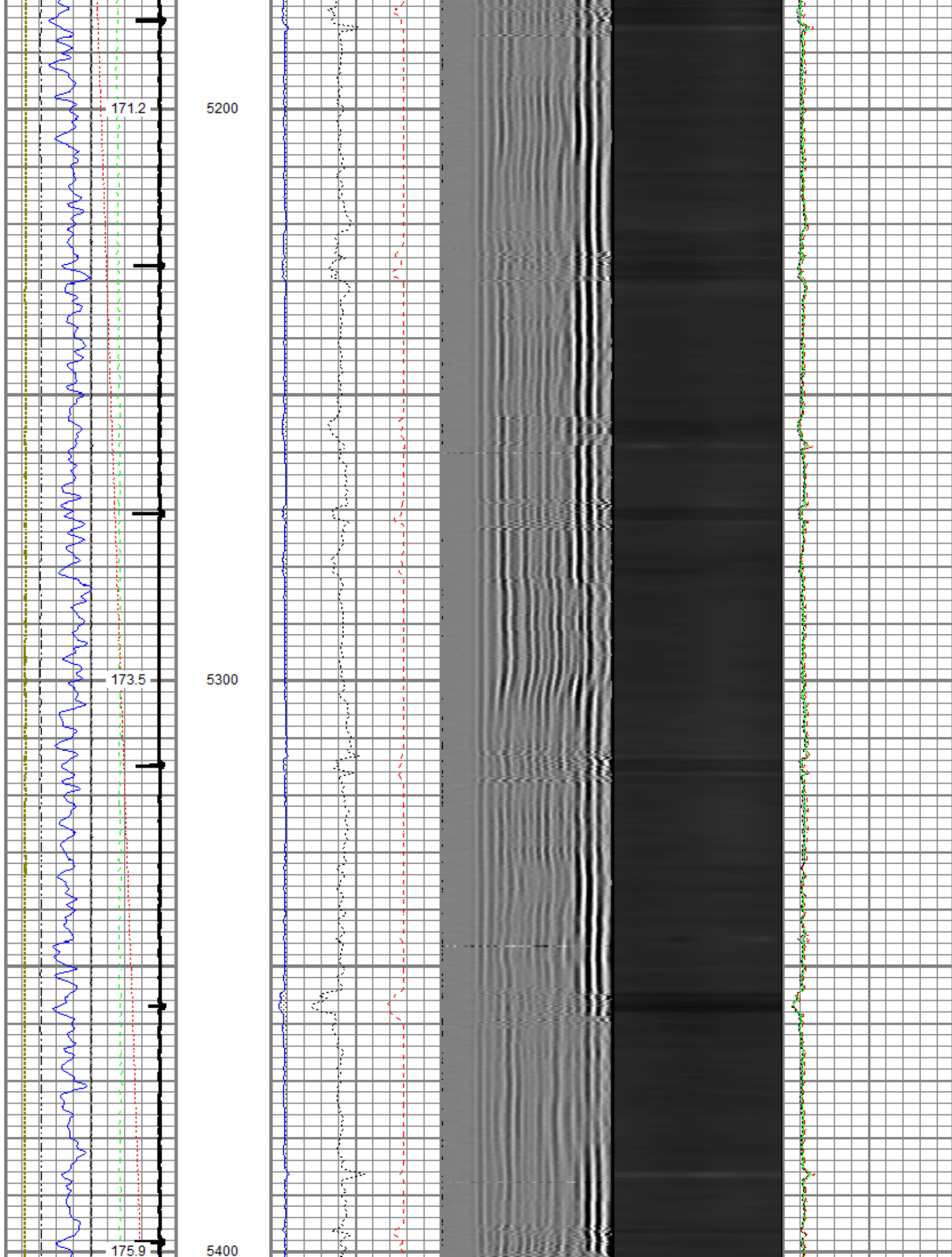


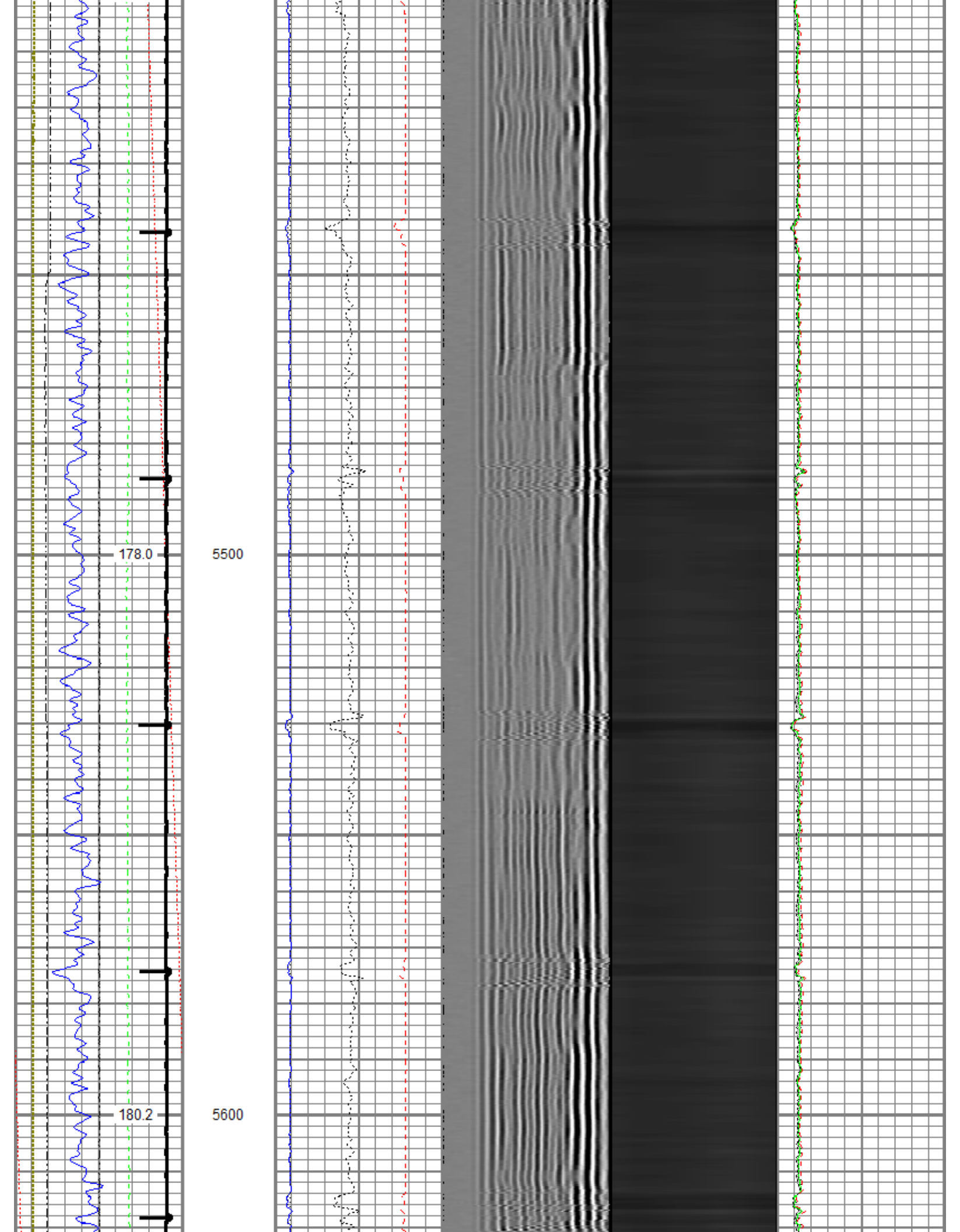


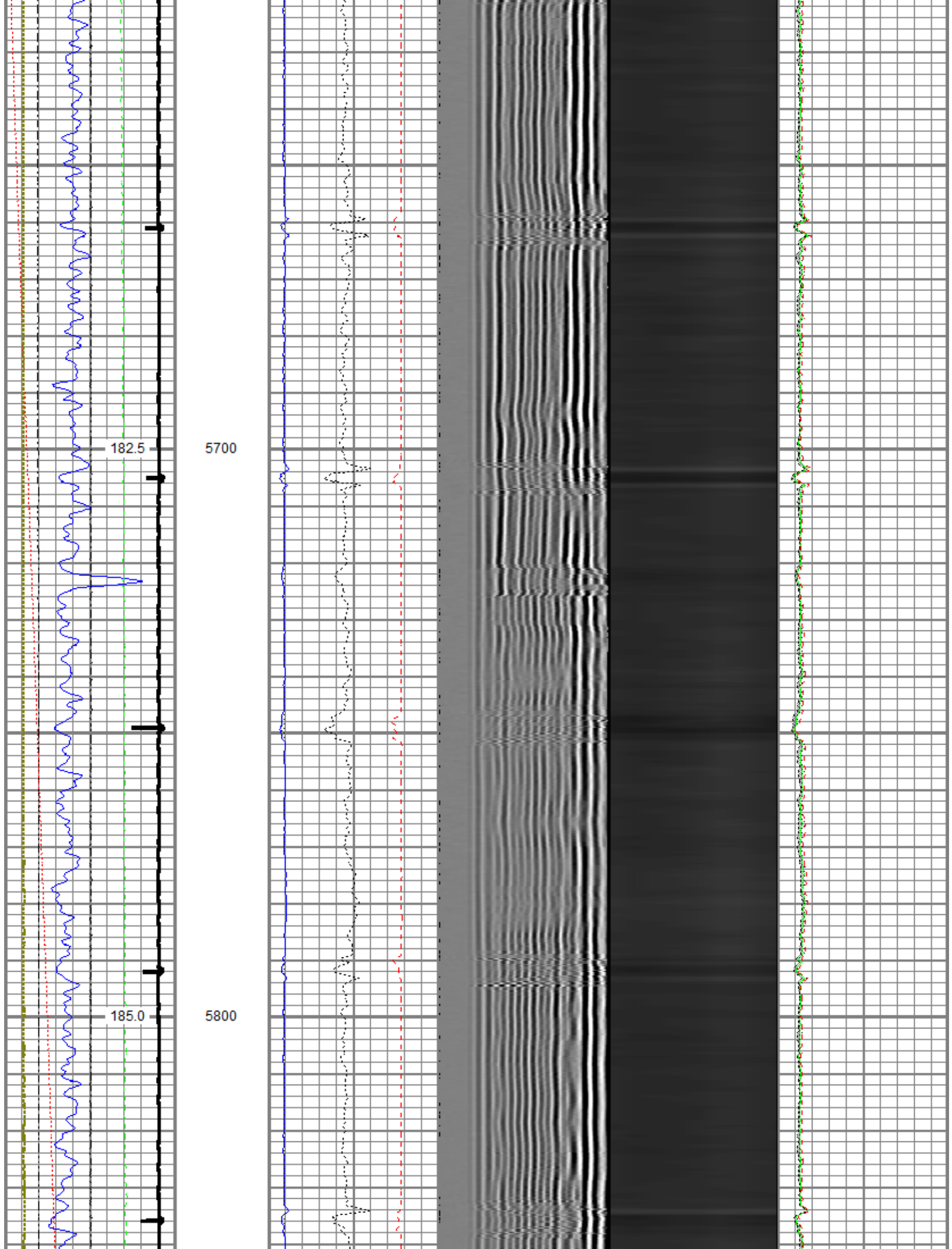


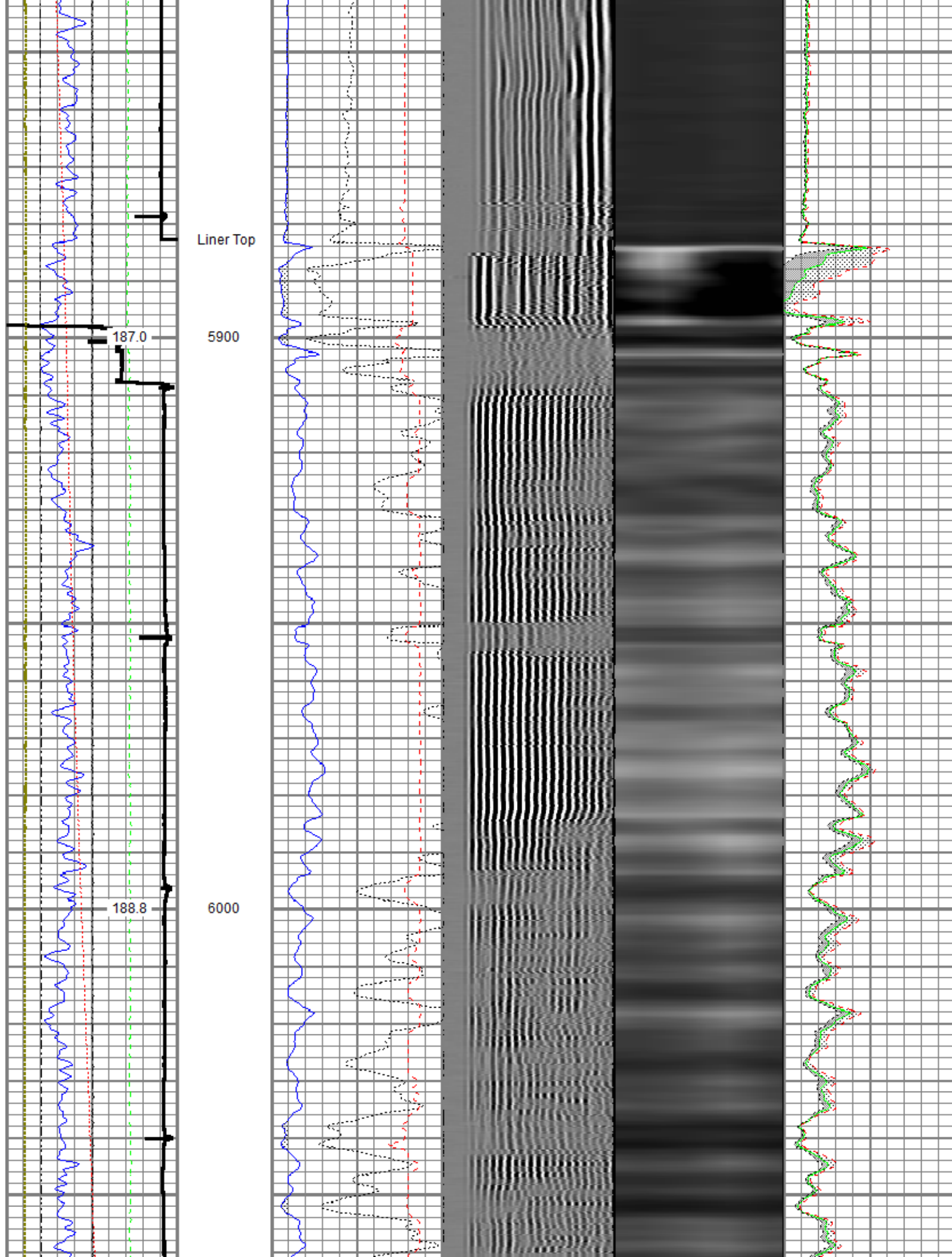


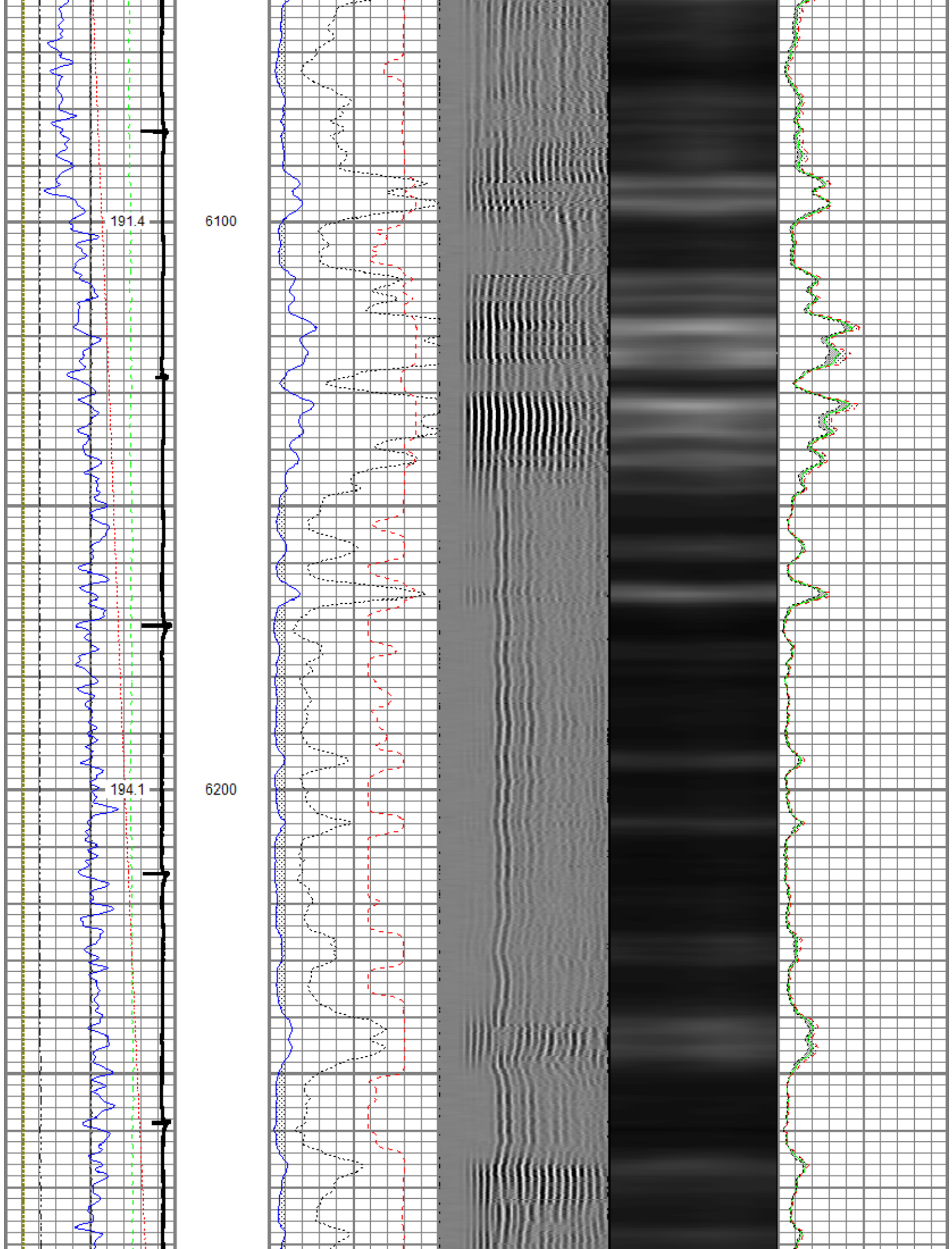


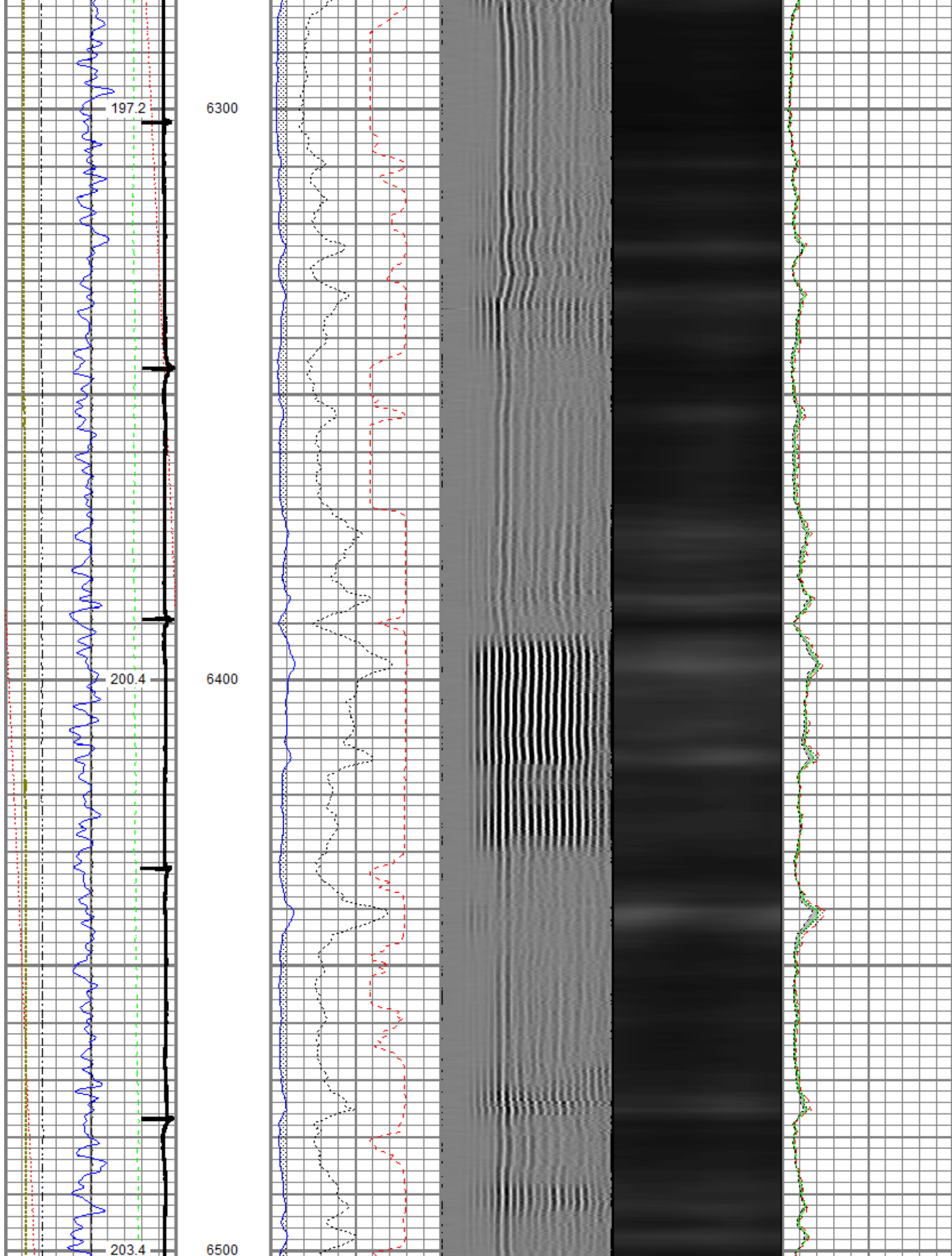


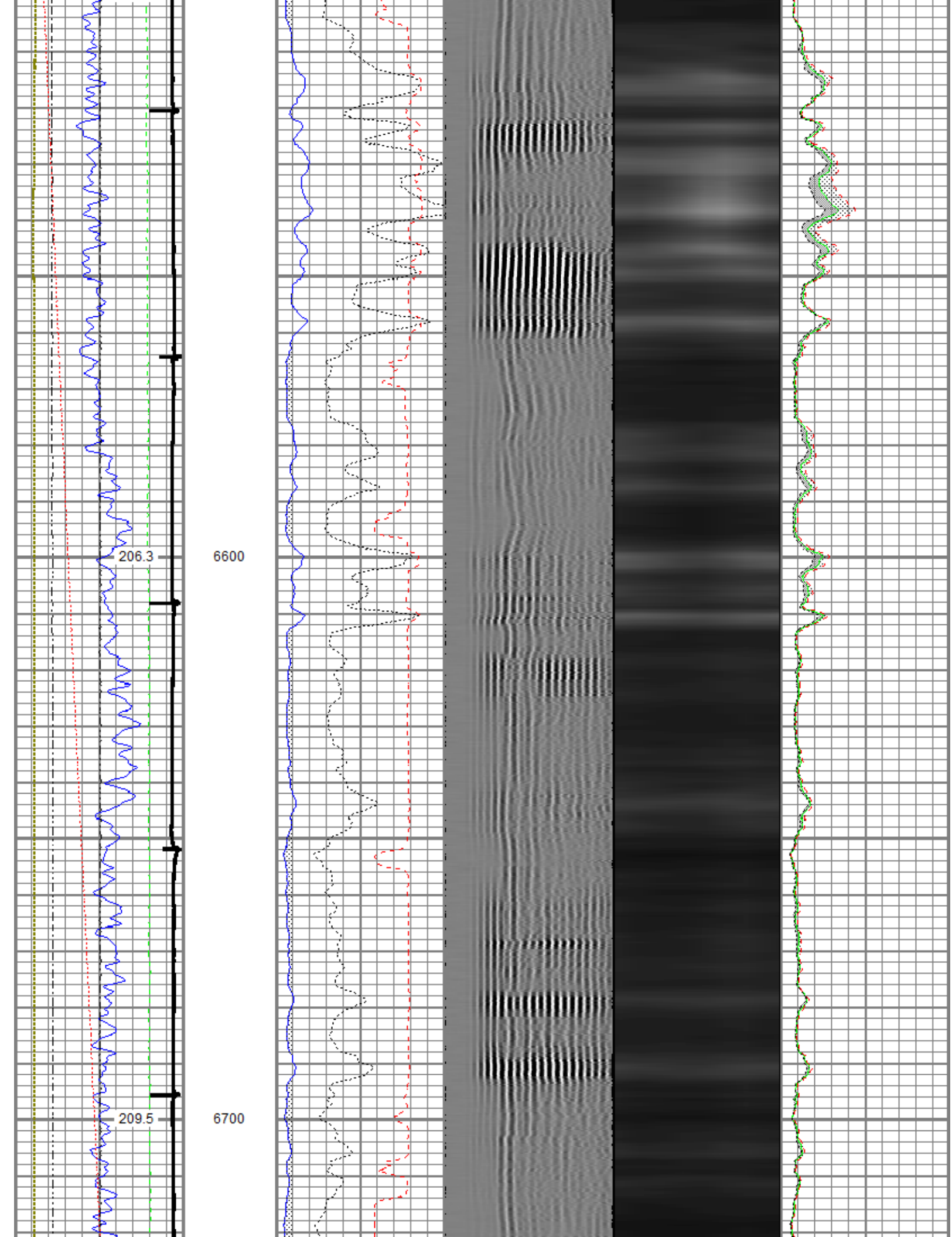


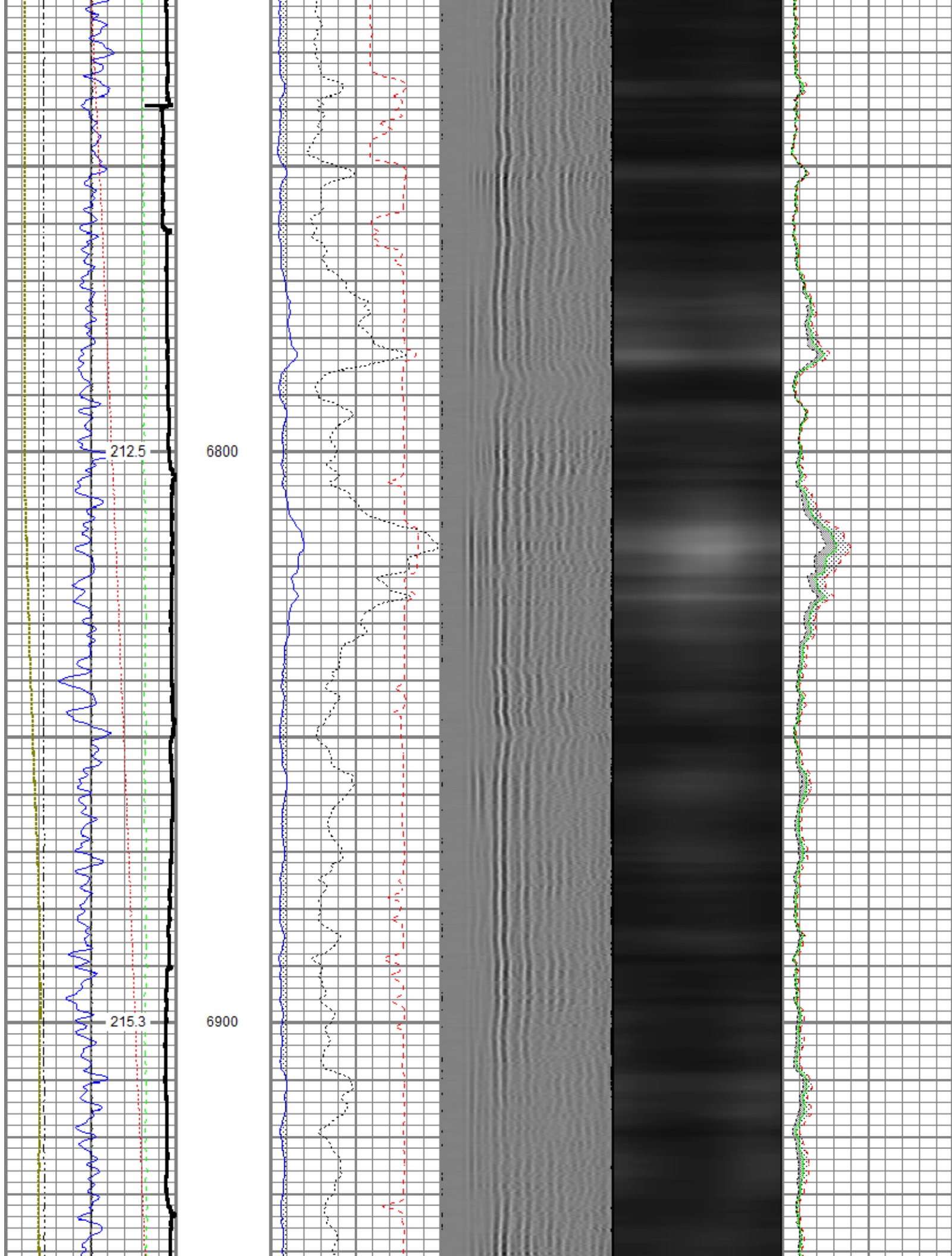


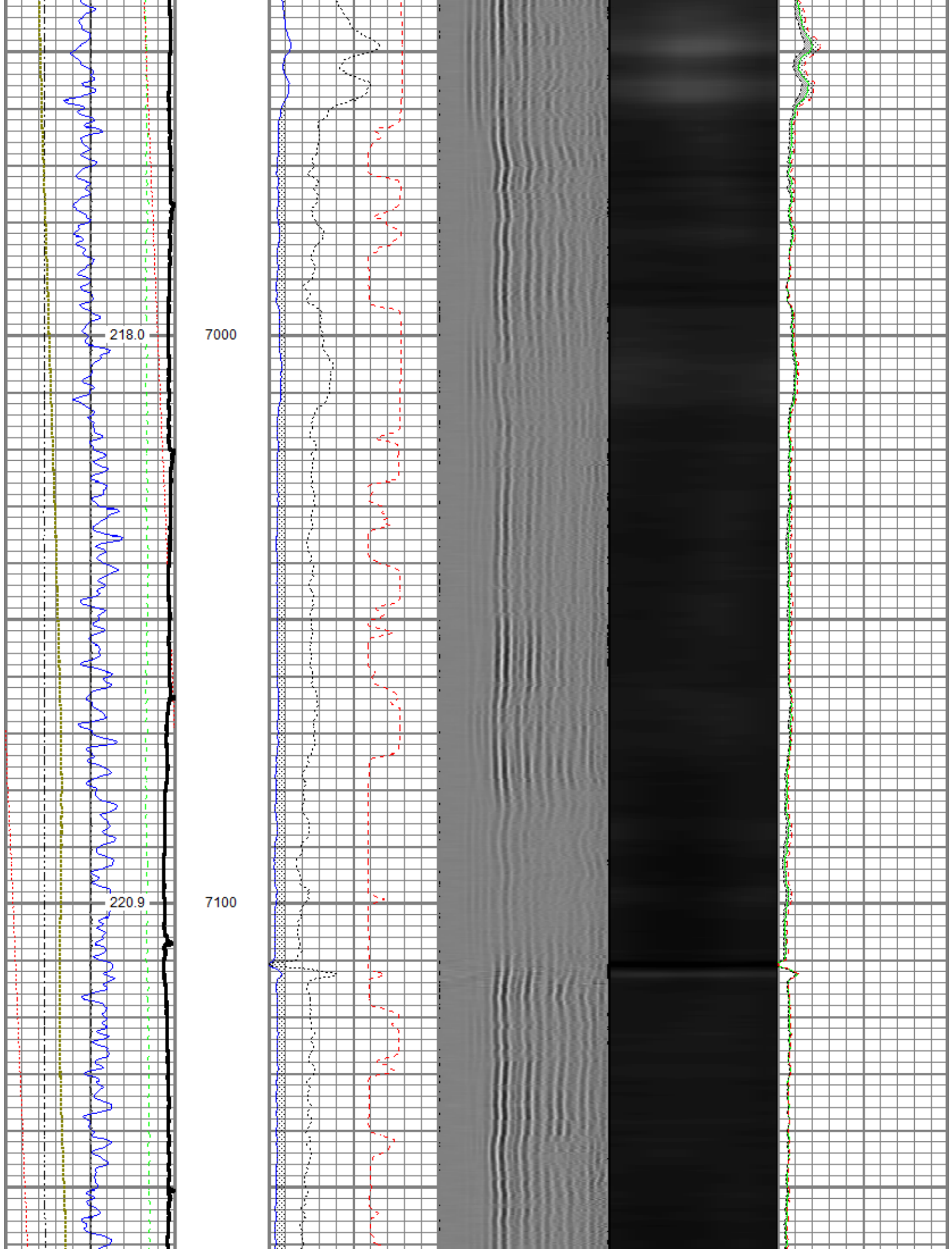


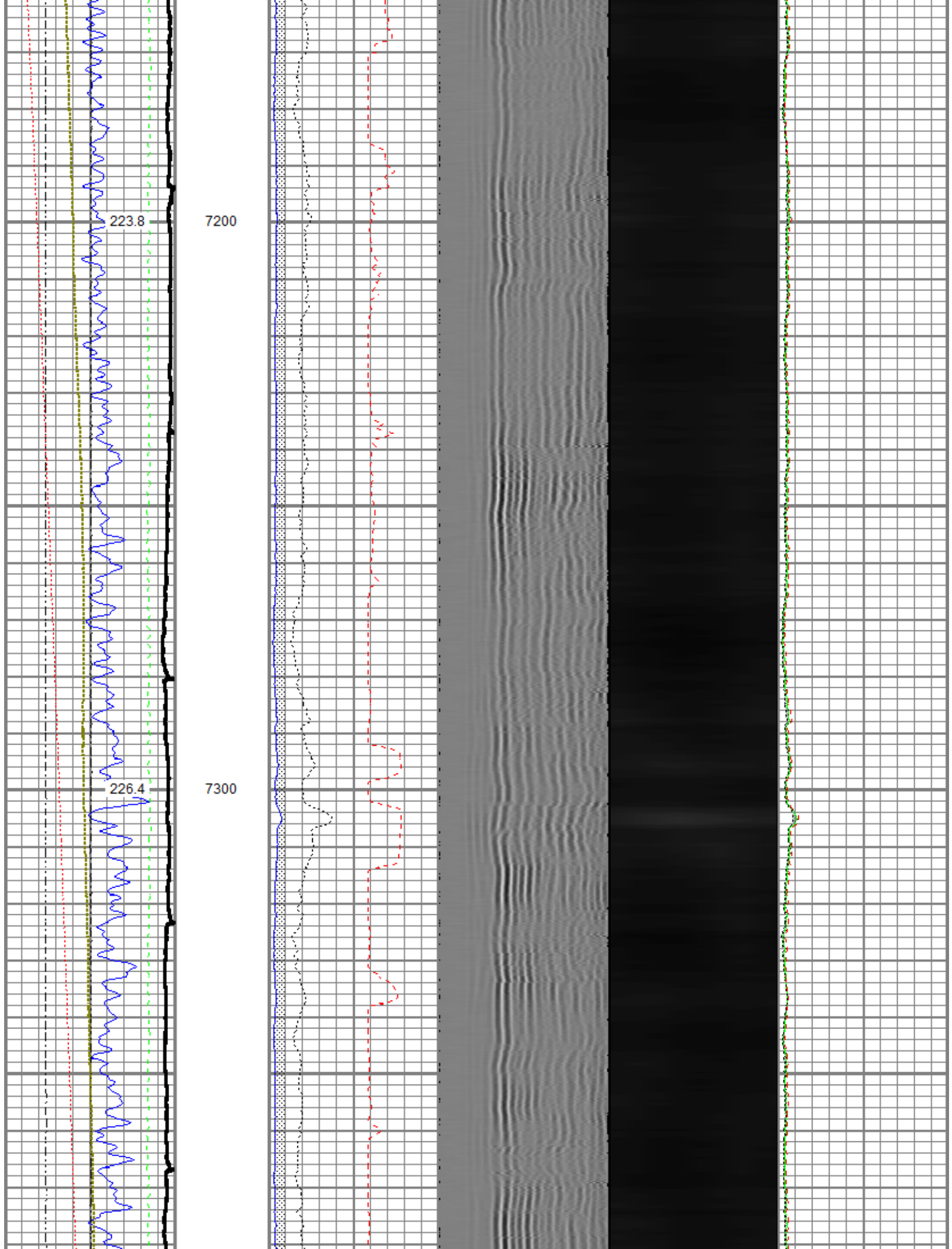


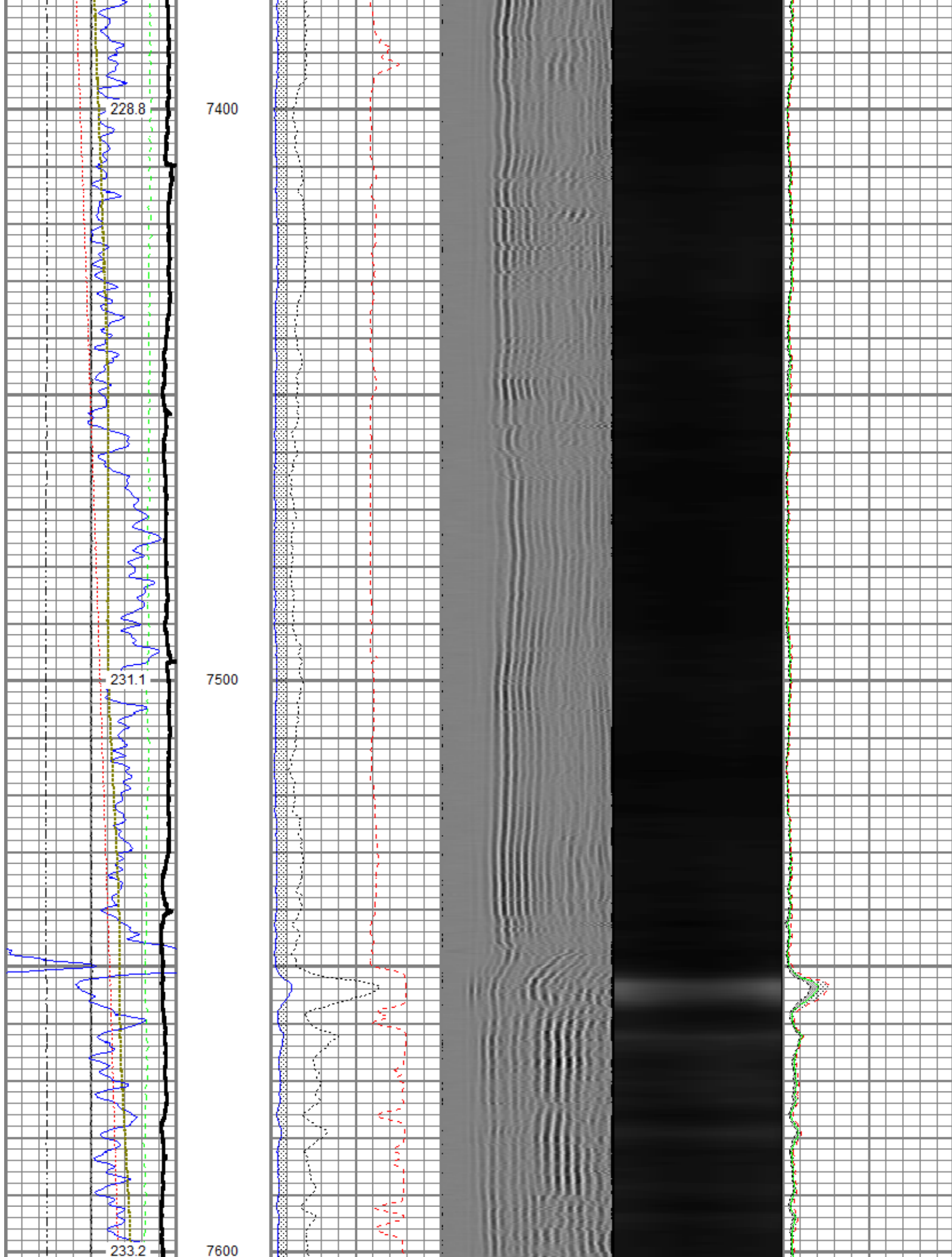






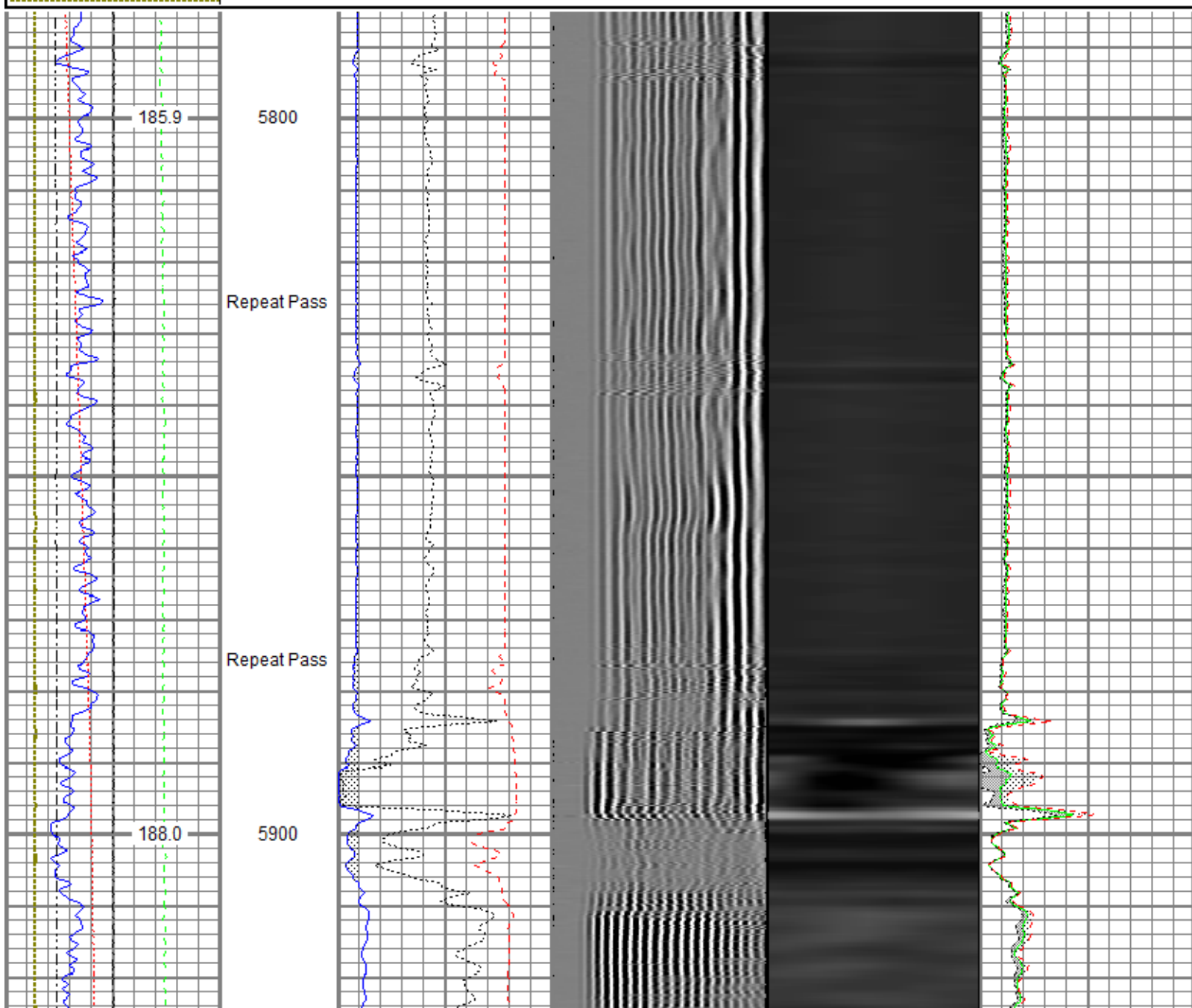


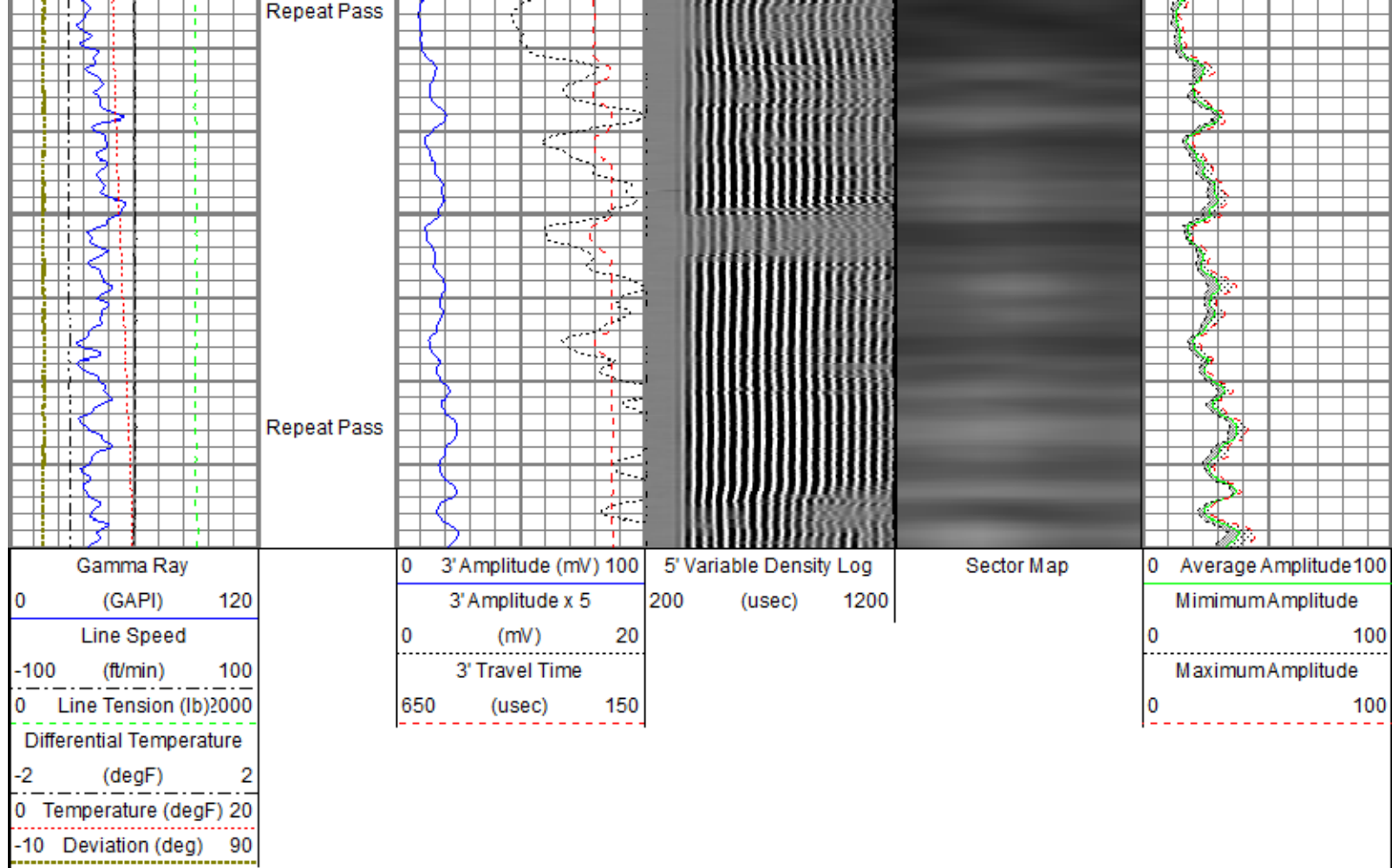




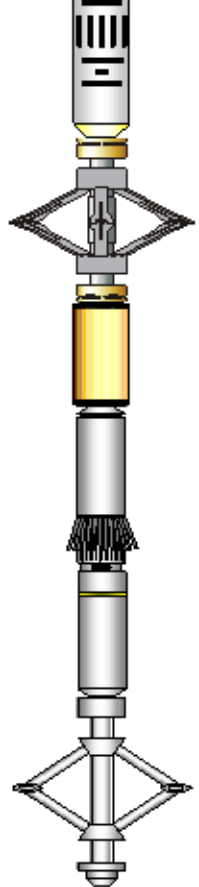
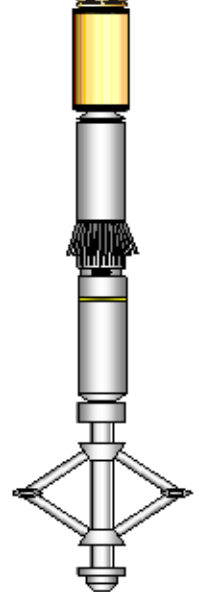
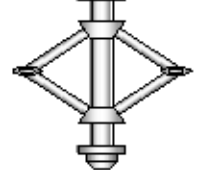
Database File	0512344202_anadarko_leinweber 37n-11hz_rbl_mit_04-20-18\processed_0512344199_anadarko_leinweber 37n-11hz_mit_r
Dataset Pathname	2800/pass6
Presentation Format	ros_rbt_mit_sx
Dataset Creation	Sat Apr 21 07:32:45 2018
Charted by	Depth in Feet scaled 1:240

Gamma Ray	0	3' Amplitude (mV)	100	5' Variable Density Log	Sector Map	0	Average Amplitude	100
(GAPI)	120	3' Amplitude x 5	200	(usec)	1200		Minimum Amplitude	
Line Speed	0	(mV)	20			0	100	
(ft/min)	100	3' Travel Time					Maximum Amplitude	
Line Tension (lb)	0	650	(usec)	150		0	100	
Differential Temperature								
(degF)	-2							
Temperature (degF)	0							
Deviation (deg)	-10							
	90							





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)	
GR	25.19		Titan CHD-14375 GO	1.03	1.44	3.60	
			Titan 1-7/16" Assembled Electric Cable Head w/ 1" Fishing Neck				
			UW AGS-001 (211461) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00	
			UW XTU-002 (10024281) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50	
			UW PGR-020 (050836) Production Gamma Ray	1.92	1.69	9.50	
TEMP	23.79		UW PRT-016 (10025100) Platinum Resistance Thermometer	1.04	1.69	5.20	
			UW CENT-DSS RAC 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00	
CBLROT	16.76			UW RBT-004 (1066) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.48	3.13	140.00
CBLTEMP	16.76						
WVFS8	16.76						
WVFS7	16.76						
WVFS6	16.76						
WVFS5	16.76						

WVFS5	16.76		UW CENT-DSS RAC 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
WVFS4	16.76					
WVFS3	16.76					
WVFS2	16.76					
WVFS1	16.76					
WVF3FT	16.76					
WVF5FT	15.76		UW CCL-028 (10018437) 3-1/8" Ultrawire Casing Collar Locator	1.61	3.13	36.00
CBLTEMP	11.63					
CCL	7.98					
MIT	5.27					
TSTAMP	0.00		UW MIT-40 042 E (10012912) 40 Multifinger Imaging Tool Ext.	4.54	2.75	65.00
			UW CENT-PRC 057 4 Arm 2-3/4" Production Roller Centralizer	2.71	2.75	32.00
			UW BUL-006 (031422) Sondex Ultrawire Bullnose Terminator Sub	0.22	1.69	1.20
Dataset: PROCESSED_0512344199_Anadarko_Leinweber 37N-11HZ_MIT_RBL_04-20-18.db: field/well/2800/pass9 Total length: 29.44 ft Total weight: 364.00 lb O.D.: 3.13 in						

Calibration Report	
Database File	C:\ProgramData\Warrior\Data\0512344202_Anadarko_Leinweber 37N-11HZ_RBL_MIT_04-20-18\PROCESSED_0512344199_A
Dataset Pathname	2800/pass10
Dataset Creation	Sat Apr 21 10:27:00 2018

Multifinger Imaging Tool Calibration Report	
Serial Number:	10012912
Number of Fingers:	40
Tool Model:	40 042 E

Inclinometer Calibration Report			
Performed:		Mon Jul 15 09:39:36 2013	
Calibration Angle:		45	
		Inc X	Inc Y
Vertical:		1968	1974
Finger 1 up:		1740	1744
Finger 31 up:		2215	1741
Finger 21 up:		2205	2224
Finger 11 up:		1731	2217
Sensitivity ratio:	0.992868		
X-axis angle:	134.307		
Deviation const.:	335.589		

Finger Calibration Report							
Performed:				Sat Apr 21 10:24:19 2018			
Ring size:	4	5	6	7			
(in)							
	Sens	Sens	Sens				
Finger 01:	1071	351.0	1422	389.0	1811	408.0	2219
Finger 02:	1213	358.0	1571	388.0	1959	398.0	2357
Finger 03:	1091	368.0	1459	402.0	1861	426.0	2287
Finger 04:	1126	355.0	1481	393.0	1874	416.0	2290

Finger 05:	1128	366.0	1494	393.0	1887	426.0	2313
Finger 06:	1129	363.0	1492	397.0	1889	415.0	2304
Finger 07:	1105	377.0	1482	401.0	1883	415.0	2298
Finger 08:	1149	362.0	1511	392.0	1903	414.0	2317
Finger 09:	1134	363.0	1497	391.0	1888	413.0	2301
Finger 10:	1143	362.0	1505	394.0	1899	410.0	2309
Finger 11:	1138	366.0	1504	387.0	1891	404.0	2295
Finger 12:	1141	359.0	1500	388.0	1888	408.0	2296
Finger 13:	1153	360.0	1513	383.0	1896	396.0	2292
Finger 14:	1139	367.0	1506	392.0	1898	411.0	2309
Finger 15:	1089	372.0	1461	402.0	1863	429.0	2292
Finger 16:	1092	379.0	1471	410.0	1881	423.0	2304
Finger 17:	1004	352.0	1356	386.0	1742	427.0	2169
Finger 18:	1137	365.0	1502	387.0	1889	406.0	2295
Finger 19:	1103	368.0	1471	389.0	1860	415.0	2275
Finger 20:	1088	369.0	1457	399.0	1856	424.0	2280
Finger 21:	1092	370.0	1462	395.0	1857	408.0	2265
Finger 22:	1065	370.0	1435	402.0	1837	427.0	2264
Finger 23:	1015	367.0	1382	409.0	1791	437.0	2228
Finger 24:	1101	361.0	1462	387.0	1849	397.0	2246
Finger 25:	1032	371.0	1403	407.0	1810	432.0	2242
Finger 26:	1157	352.0	1509	378.0	1887	392.0	2279
Finger 27:	1090	361.0	1451	399.0	1850	414.0	2264
Finger 28:	1122	355.0	1477	385.0	1862	405.0	2267
Finger 29:	1050	360.0	1410	405.0	1815	429.0	2244
Finger 30:	1082	357.0	1439	396.0	1835	418.0	2253
Finger 31:	1117	353.0	1470	389.0	1859	416.0	2275
Finger 32:	1175	381.0	1556	426.0	1982	435.0	2417
Finger 33:	1171	356.0	1527	385.0	1912	382.0	2294
Finger 34:	1111	358.0	1469	404.0	1873	421.0	2294
Finger 35:	985	332.0	1317	383.0	1700	406.0	2106
Finger 36:	1081	359.0	1440	403.0	1843	423.0	2266
Finger 37:	1129	357.0	1486	394.0	1880	410.0	2290
Finger 38:	1157	350.0	1507	387.0	1894	395.0	2289
Finger 39:	1169	350.0	1519	385.0	1904	398.0	2302
Finger 40:	1119	360.0	1479	402.0	1881	412.0	2293

Segmented Cement Bond Log Calibration Report						
		Serial Number:		1066		
		Tool Model:		004		
		Calibration Casing Diameter:		7.000	in	
		Calibration Depth:		17.059	ft	
Master Calibration, performed Wed Apr 18 07:22:05 2018:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	-0.002	0.695	0.800	62.165	88.054	0.973
5FT	-0.006	0.817	0.800	62.165	74.593	1.255
S1	-0.002	0.688	0.000	100.000	144.924	0.294
S2	-0.003	0.721	0.000	100.000	138.125	0.443
S3	-0.003	0.709	0.000	100.000	140.327	0.485
S4	-0.004	0.716	0.000	100.000	138.846	0.549
S5	-0.002	0.683	0.000	100.000	145.925	0.301
S6	-0.003	0.697	0.000	100.000	142.926	0.382
S7	-0.002	0.733	0.000	100.000	136.019	0.332
S8	-0.002	0.696	0.000	100.000	143.285	0.324

Temperature Calibration Report					
		Serial Number:		10025100	
		Tool Model:		016	
		Performed:		Sun Nov 12 14:30:03 2017	
		Point #	Reading	Reference	
		1	13249.00	cps	68.00 degF
		2	18454.00	cps	104.00 degF

3	29735.00	cps	176.00	degF
4	41457.00	cps	248.00	degF
5	52851.00	cps	320.00	degF
6	59128.00	cps	356.00	degF
7		cps		degF
8		cps		degF
9		cps		degF
10		cps		degF

Gamma Ray Calibration Report

Serial Number: 050836
 Tool Model: 020
 Performed: Sun Nov 12 06:37:04 2017

 Calibrator Value: 637.0 GAPI

 Background Reading: 78.8 cps
 Calibrator Reading: 1069.9 cps

 Sensitivity: 0.6427 GAPI/cps



Company Kerr-McGee Oil & Gas Onshore, L.P.
Well Leinweber 37N-11HZ
Field Wattenberg
County Weld
State Colorado