



County Weld State Colorado

K.B.	4995
D.F.	---
G.L.	4974

116	3	116
4 1/2		

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 Tally reported Liner Top at 5771 FT  
Adjusted -2 FT to correlate with Liner Top  
Gauge Ring/Junk Basket ran to 7715 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

Thank you for choosing Reliance Oilfield Services, LLC!!

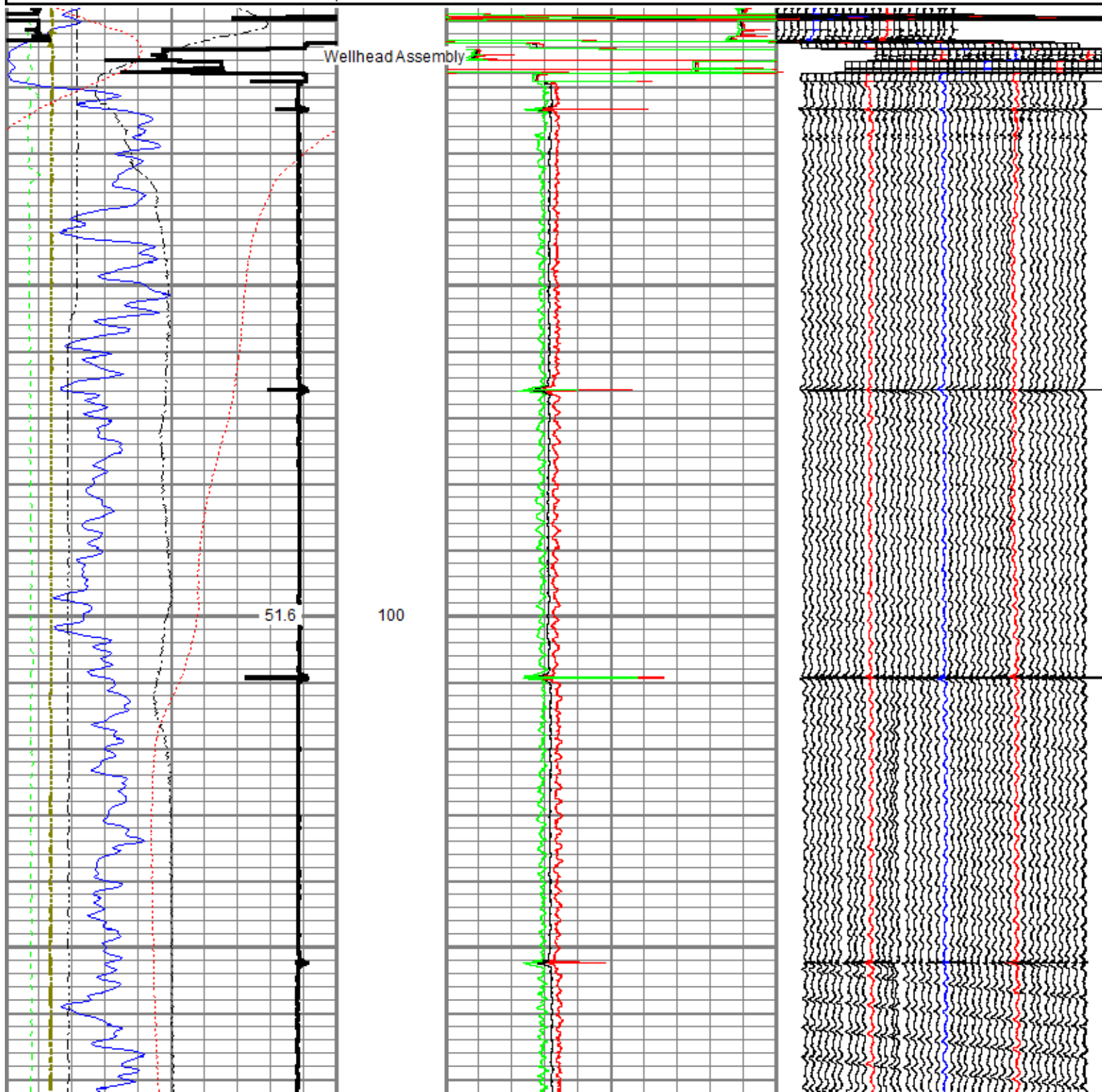
## Main Pass

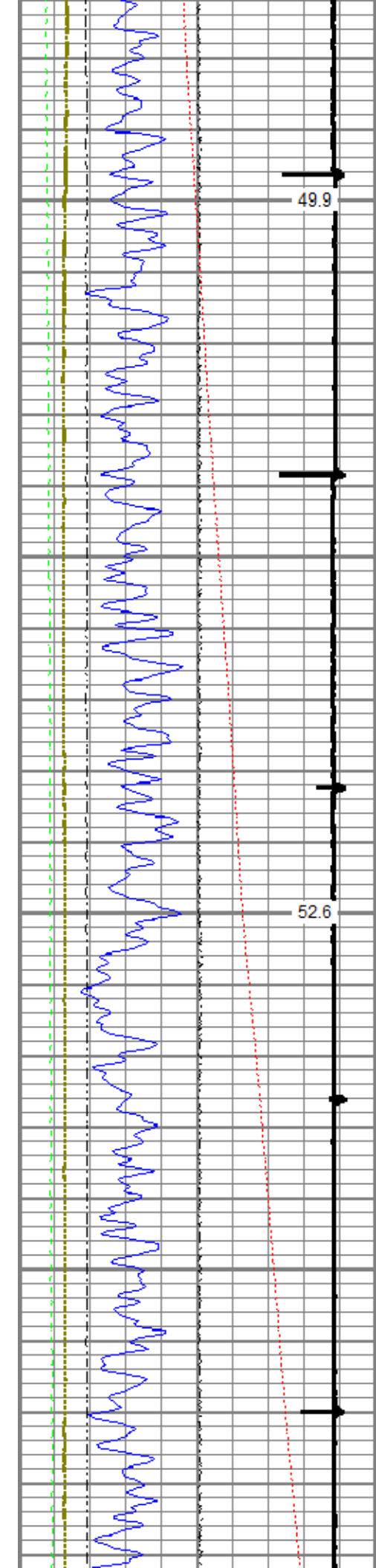


Database File	0512343469_anadarko_wagner 28n-e10hz_mit_rbl_12-29-17\processed_0512343469_anadarko_wagner 28n-e10hz_mit_rbl
Dataset Pathname	pass4
Presentation Format	ros_70mit40sx
Dataset Creation	Fri Dec 29 12:20:23 2017
Charted by	Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	120
-100	Line Speed (ft/min)	100
-10	Deviation (deg)	90
0	Line Tension (lb)	2000
-2	Differential Temperature (degF)	2
0	Temperature (degF)	20
Casing Collar Locator		

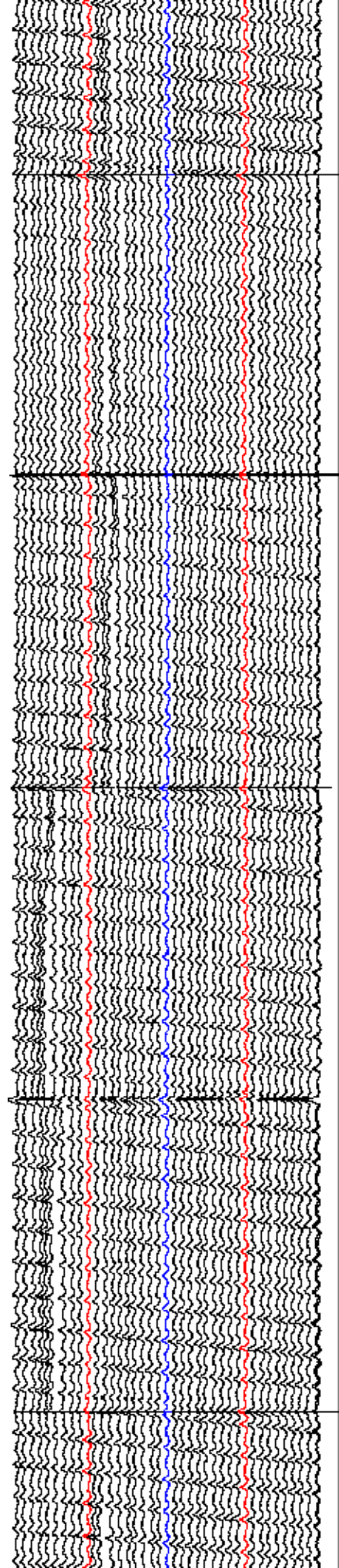
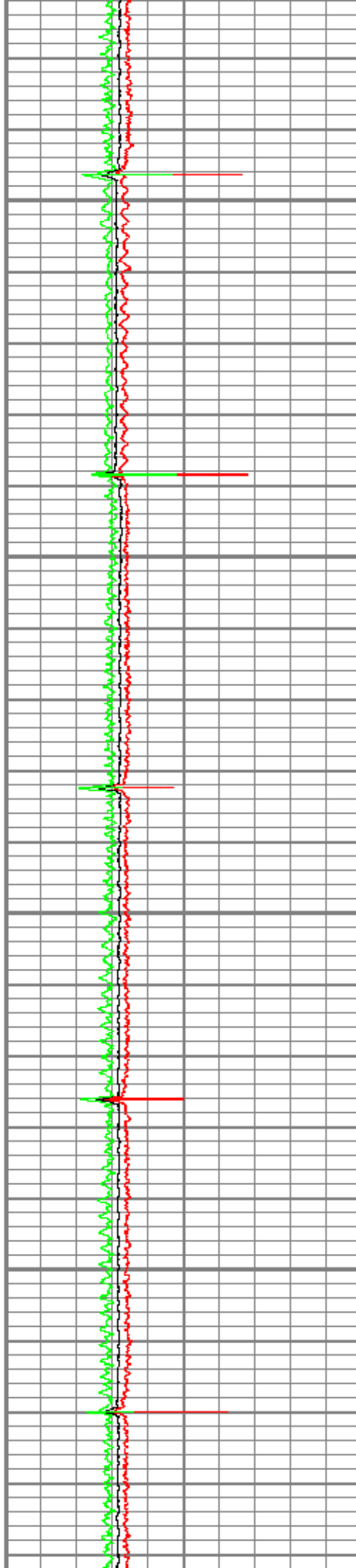
6	Average Diameter (in)	7	Caliper #10
6	Maximum Diameter (in)	7	Caliper #20
6	Minimum Diameter (in)	7	Caliper #30



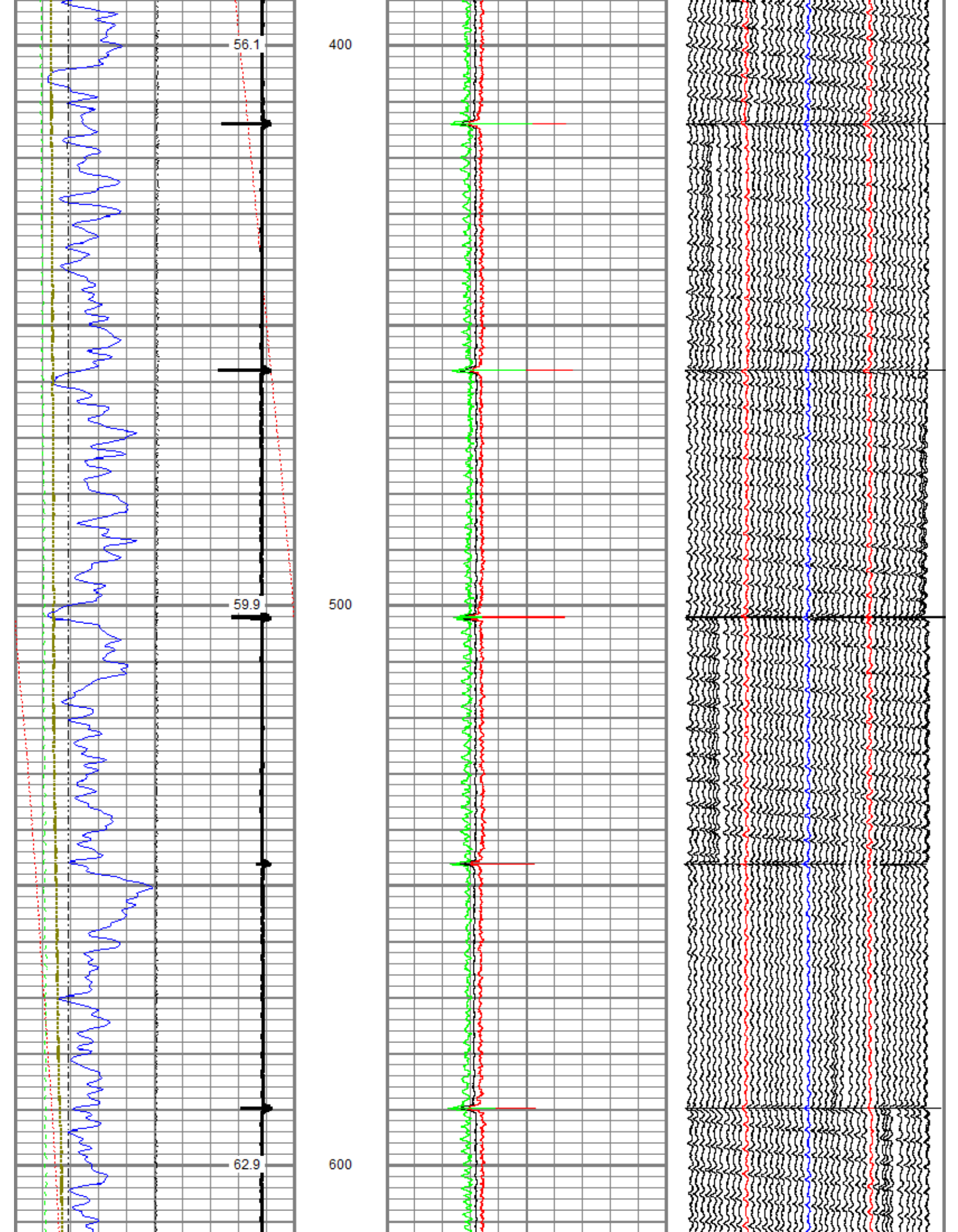


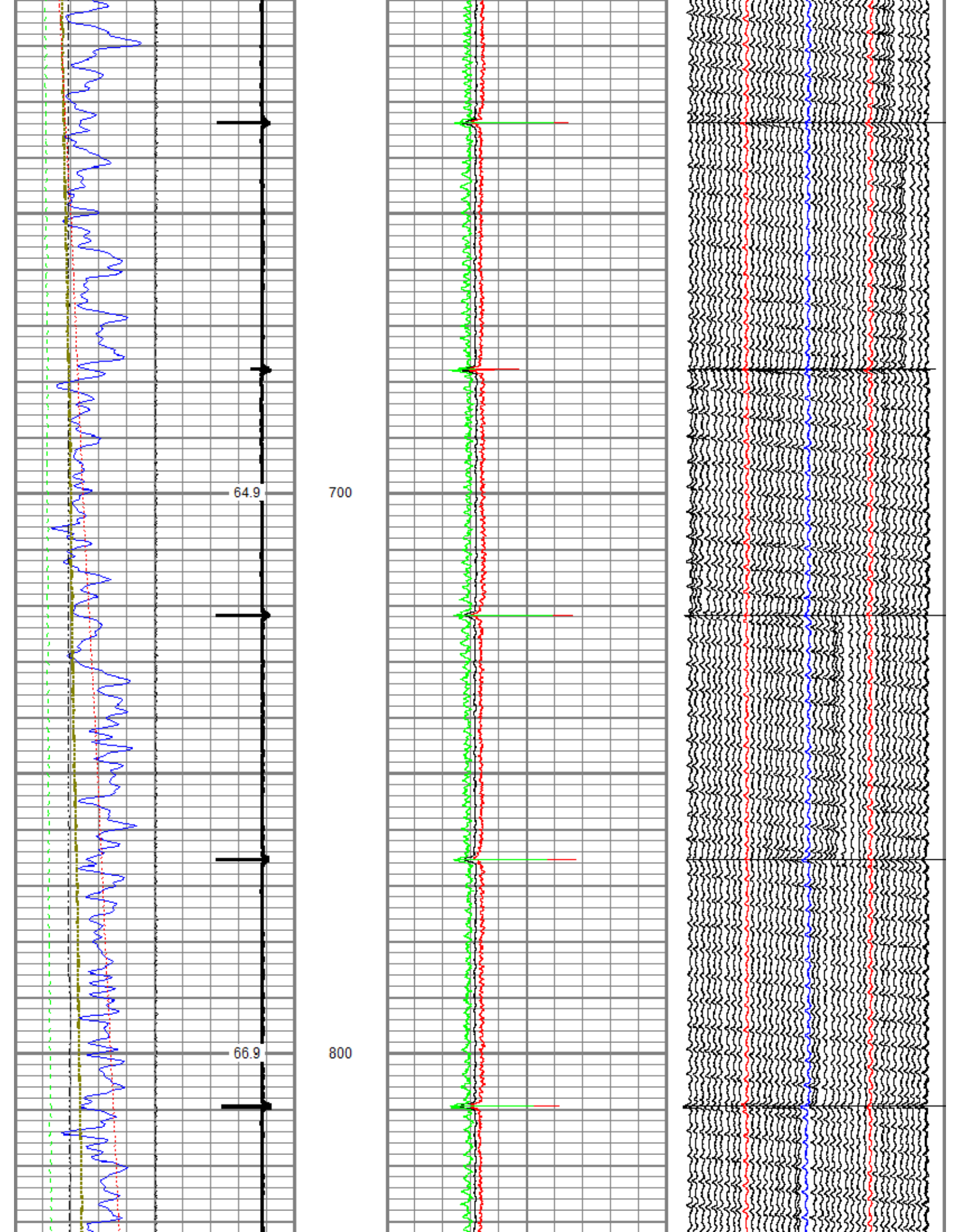
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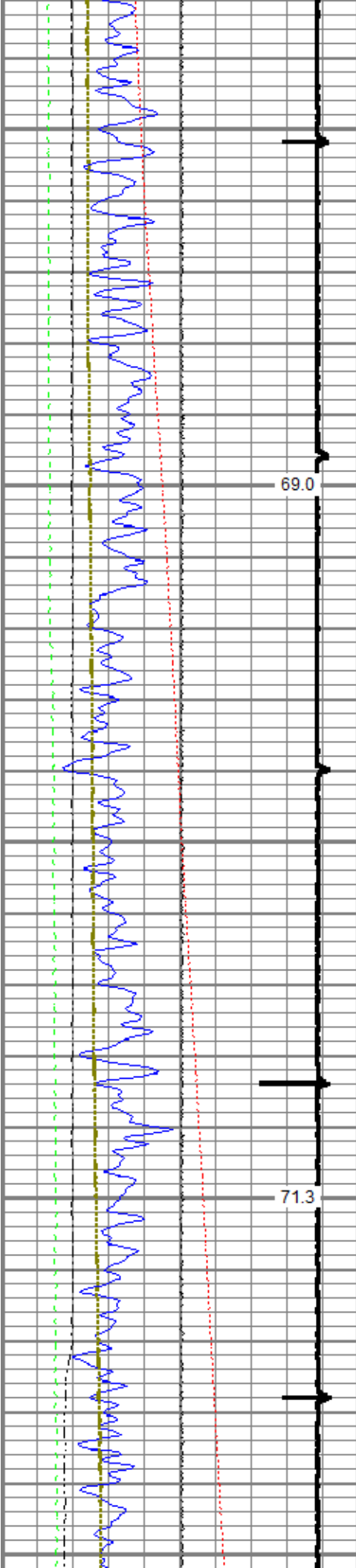






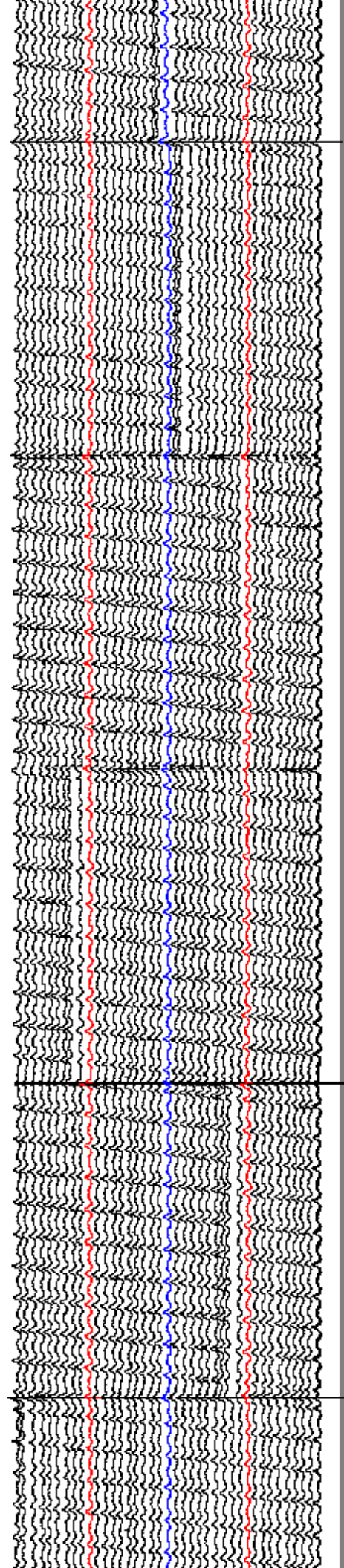
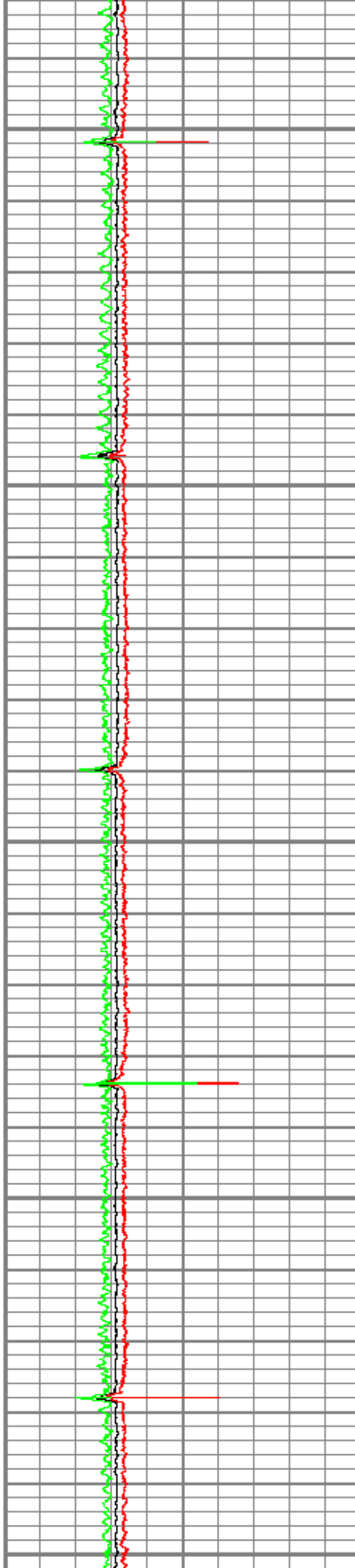


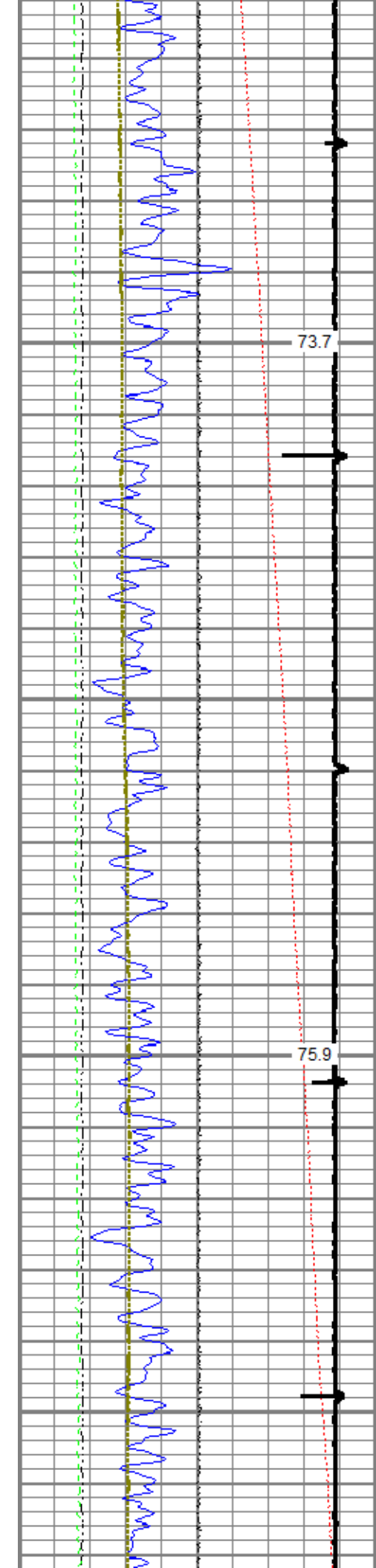




900

1000



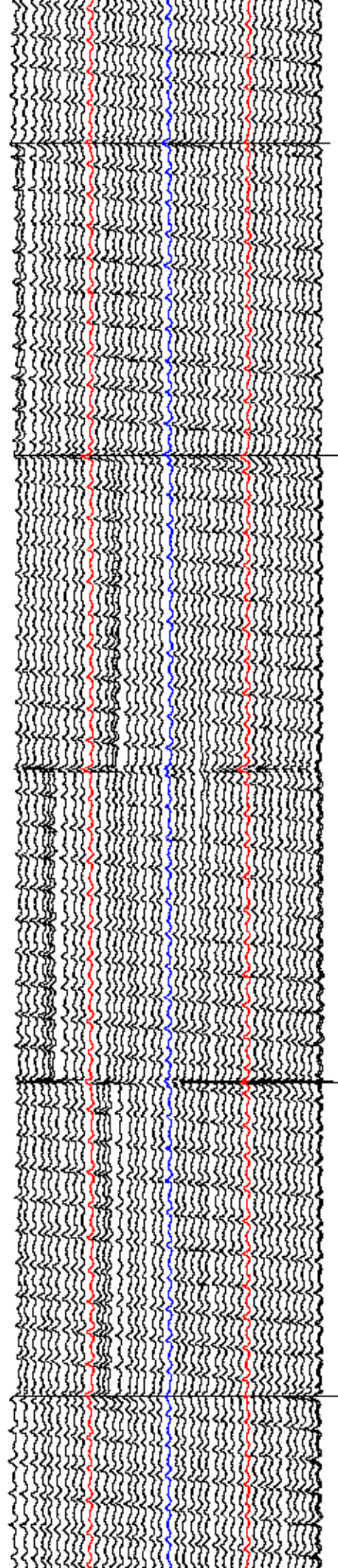
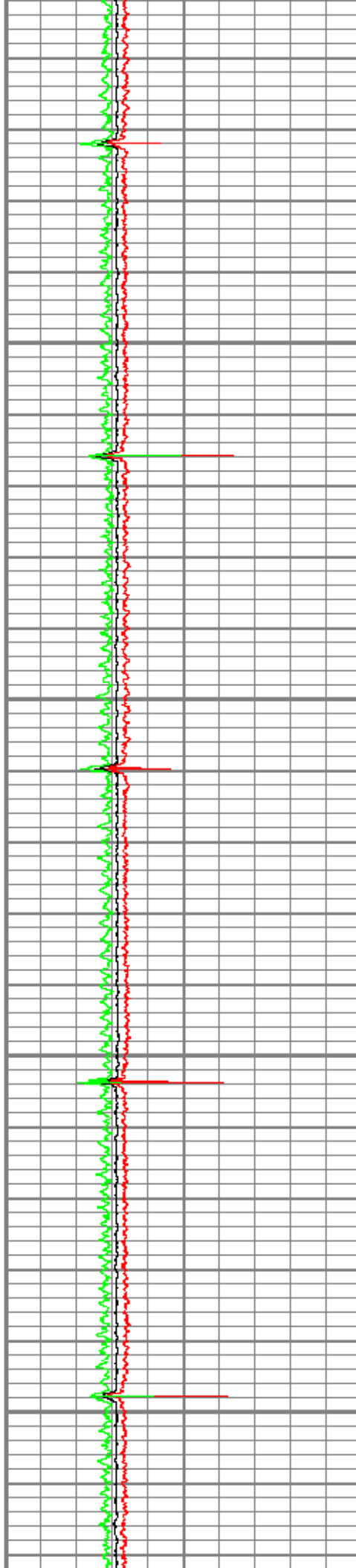


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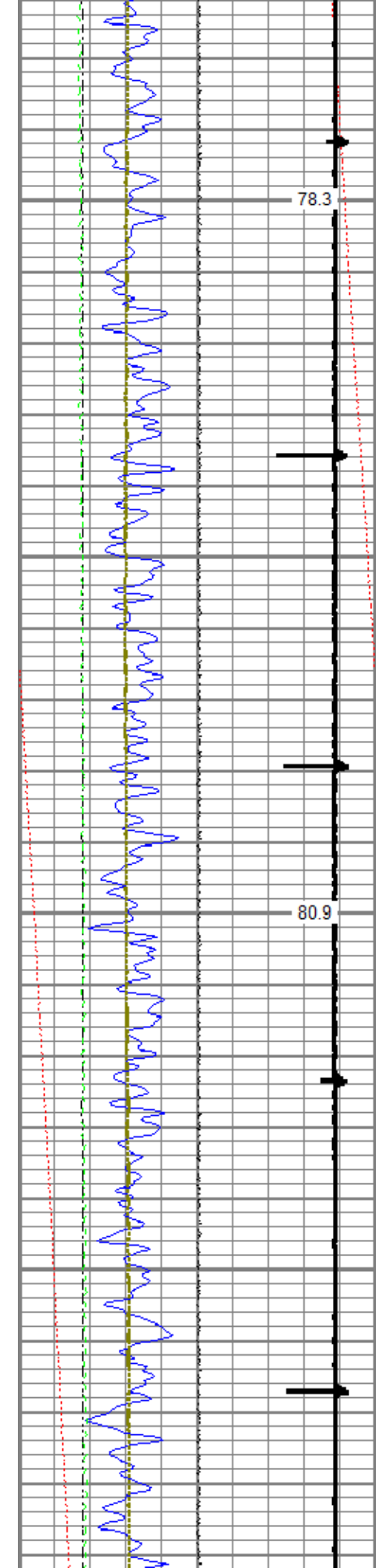
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75.9

1200

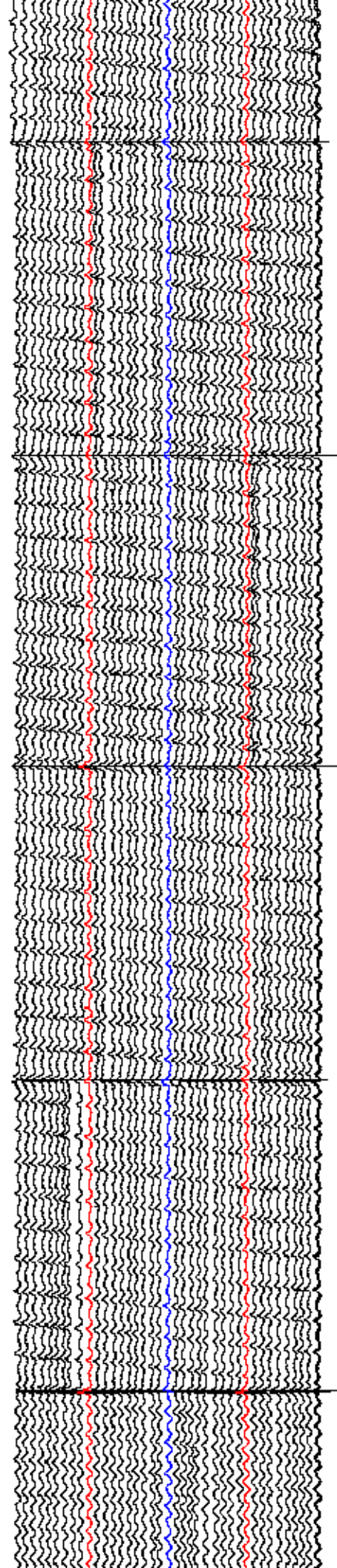
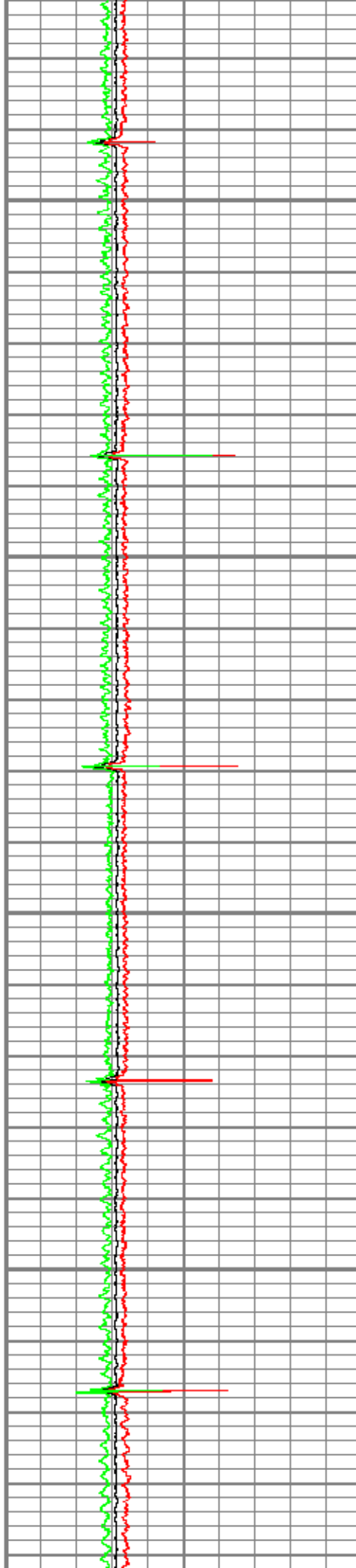




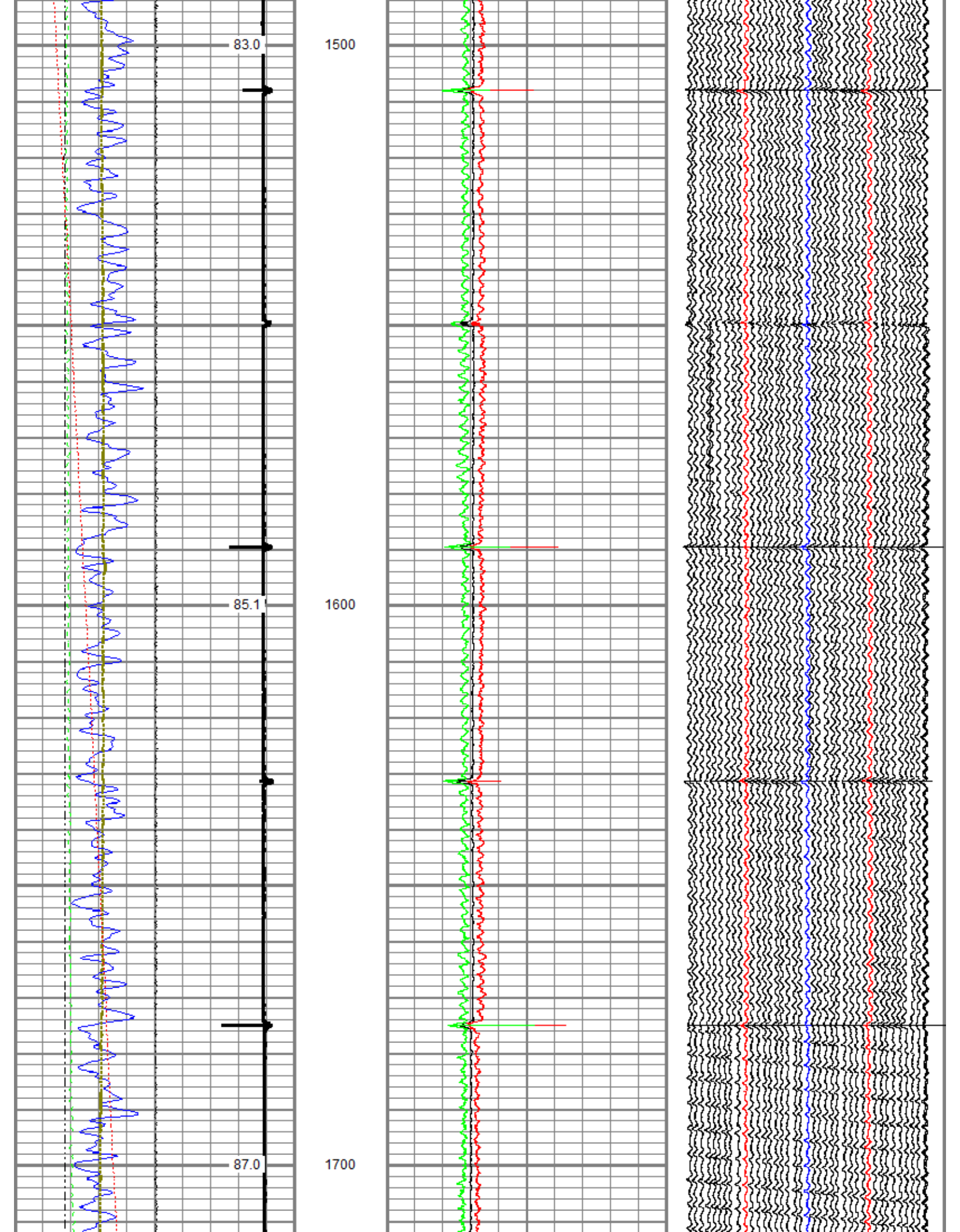


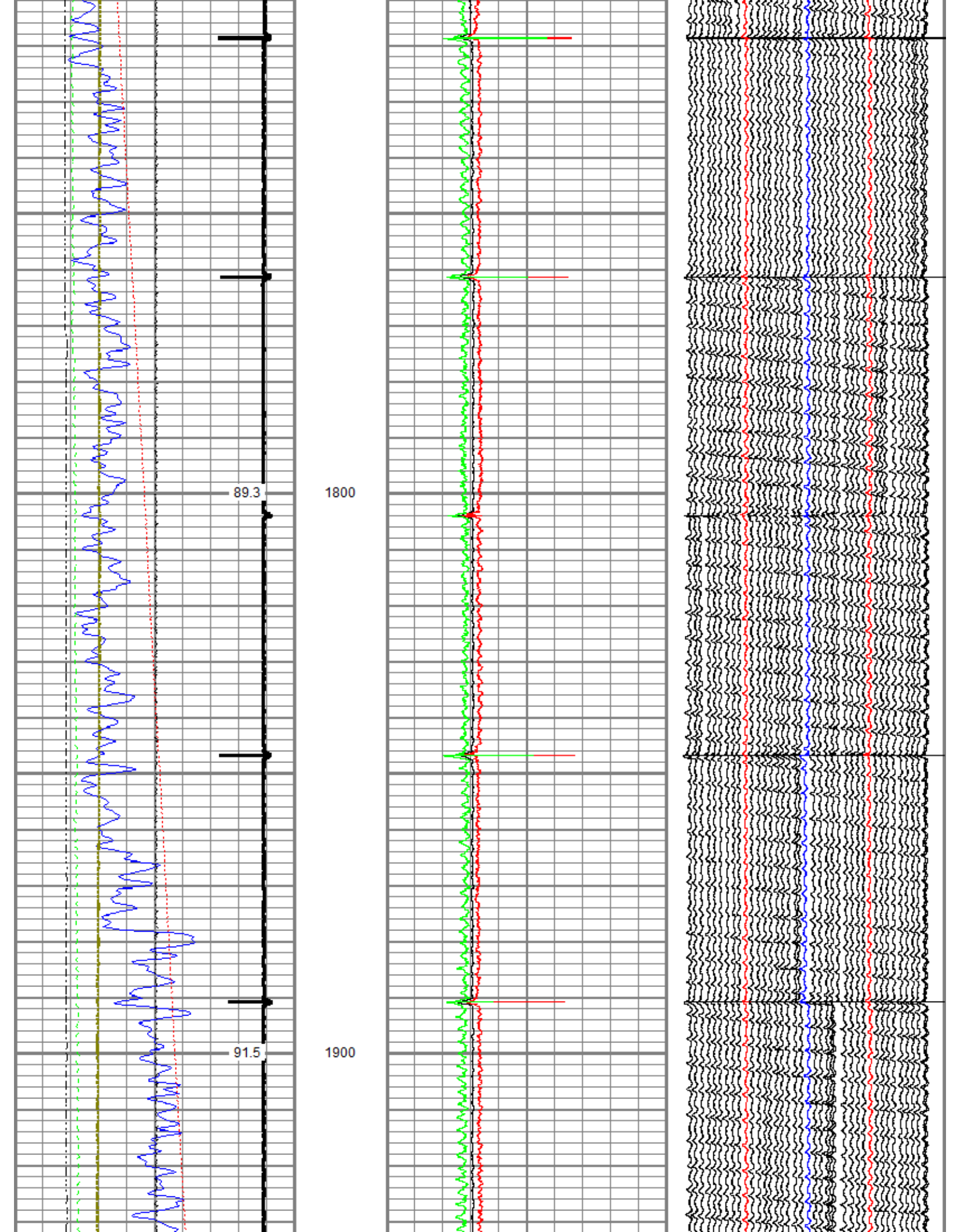
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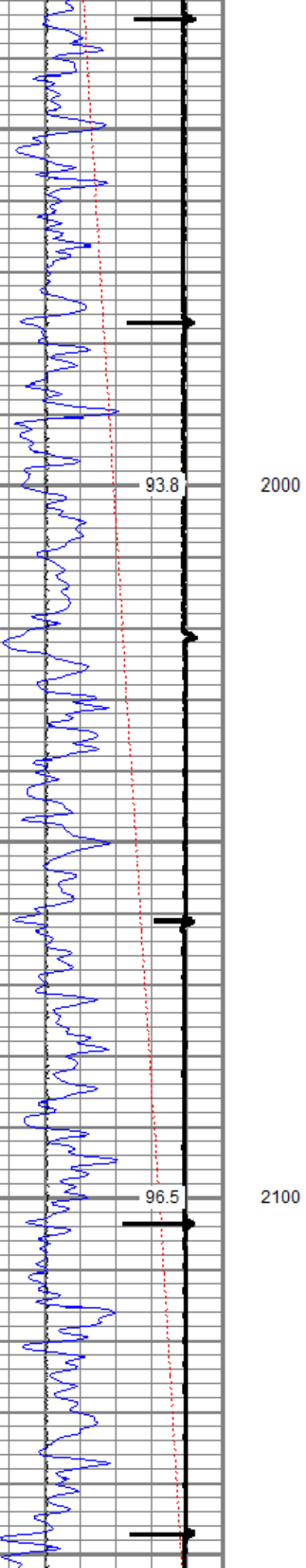






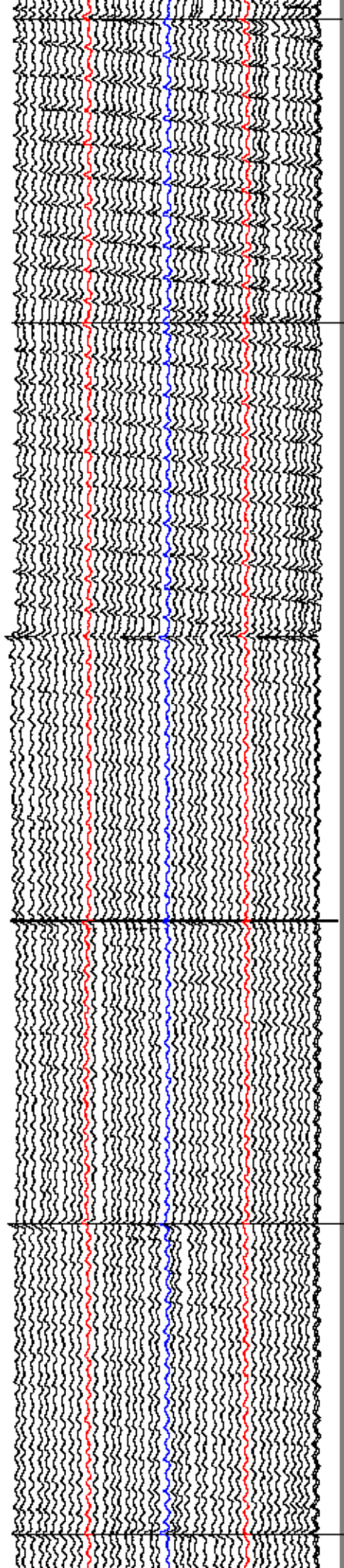
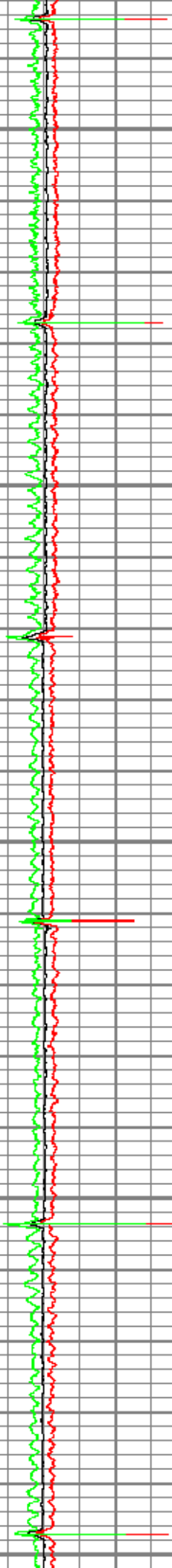


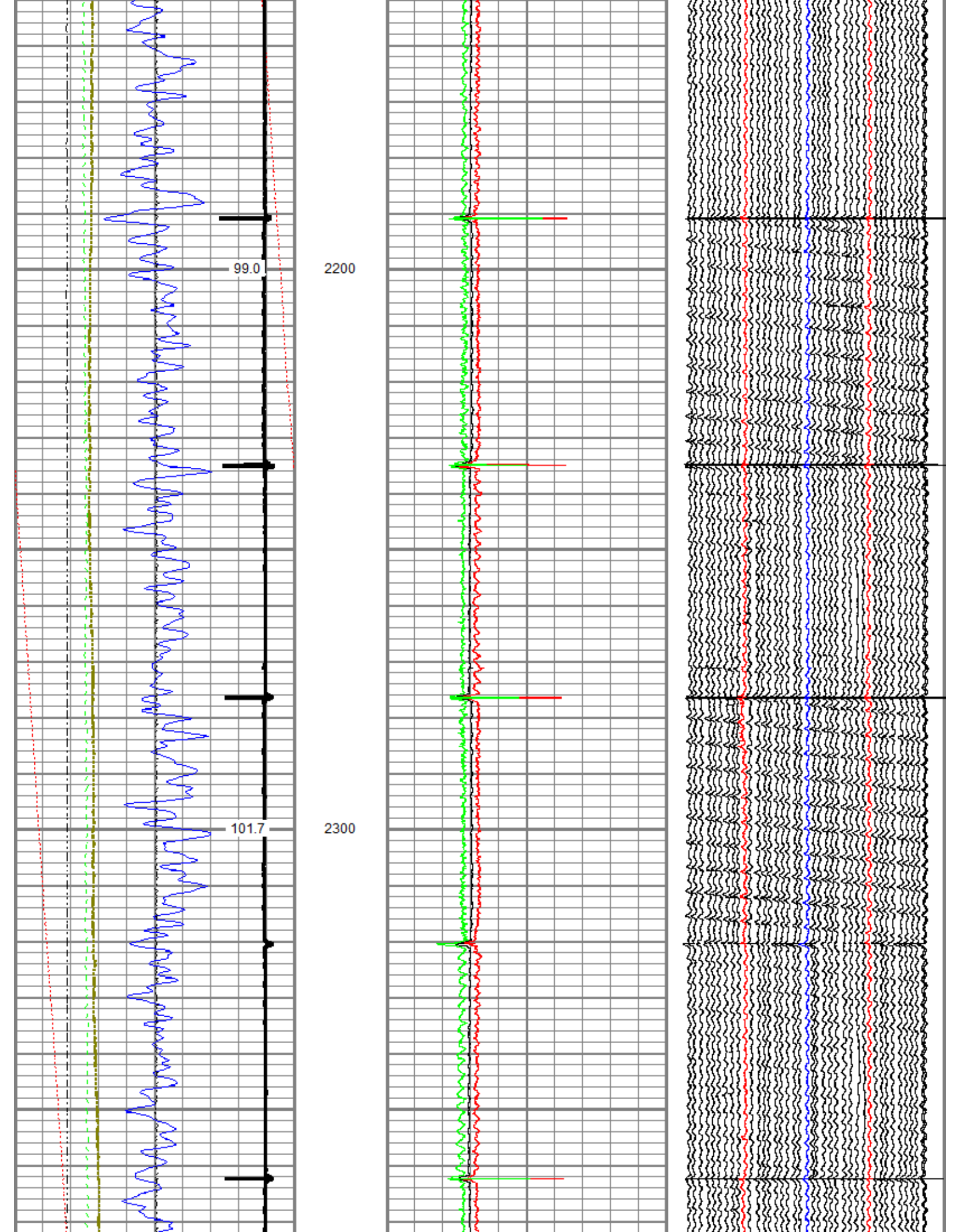




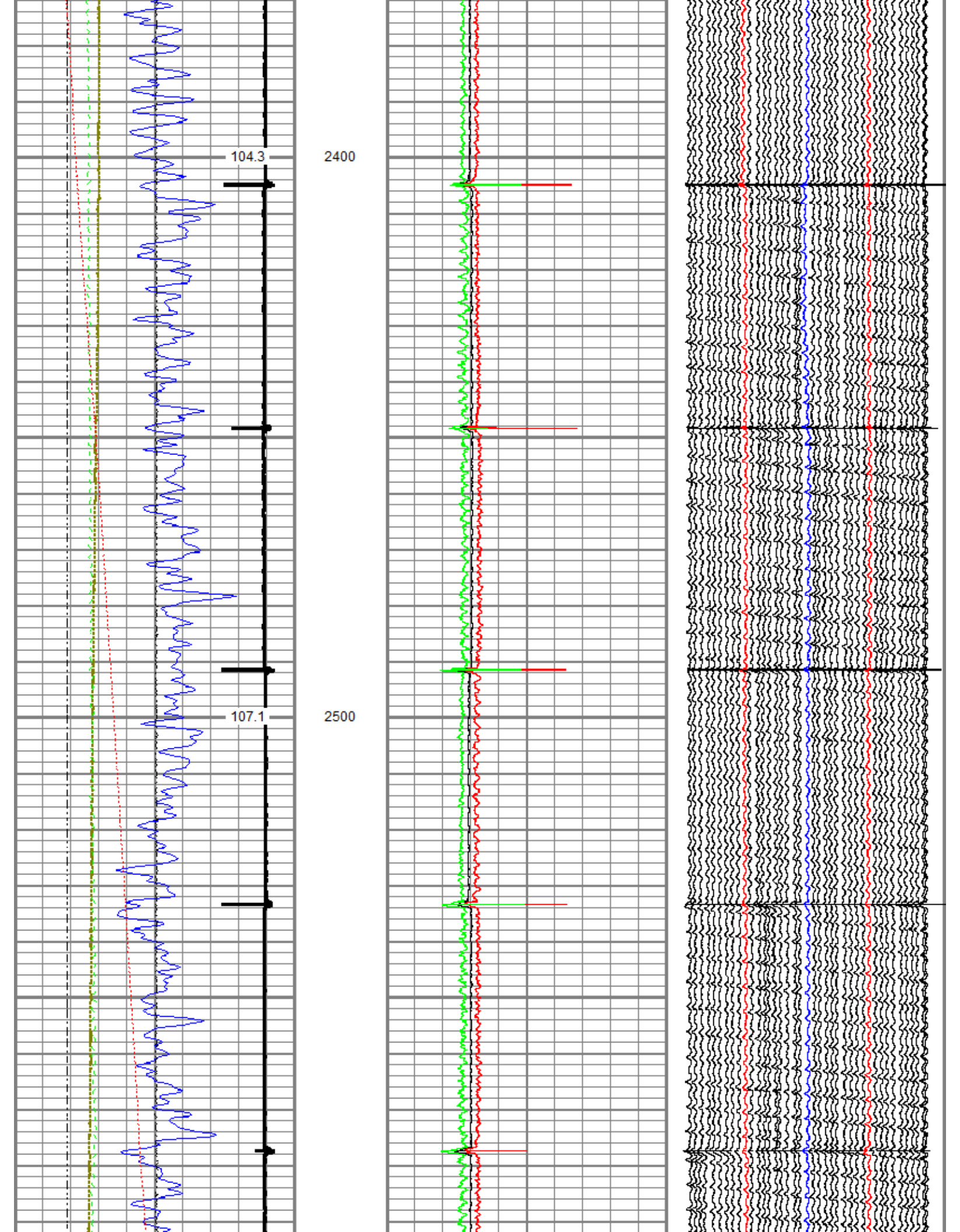
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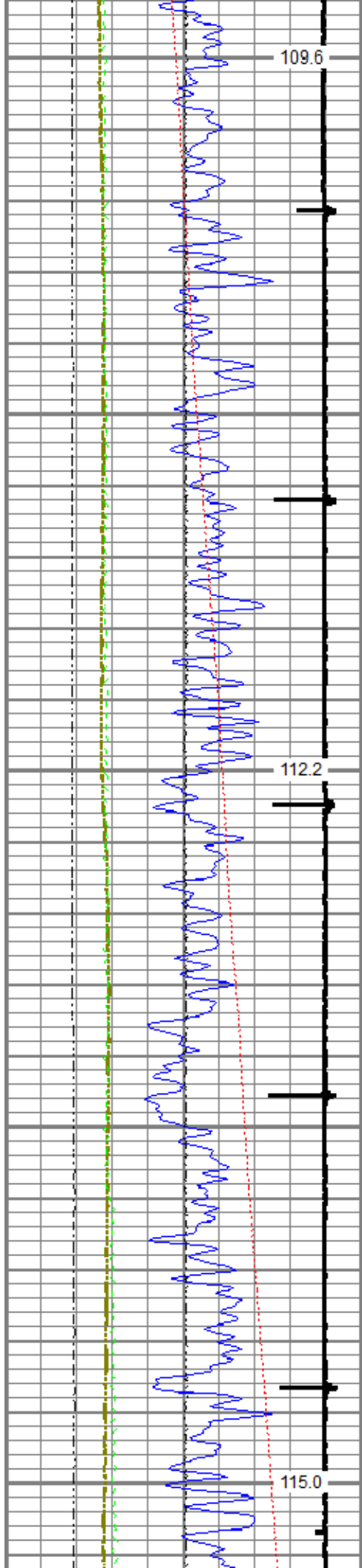
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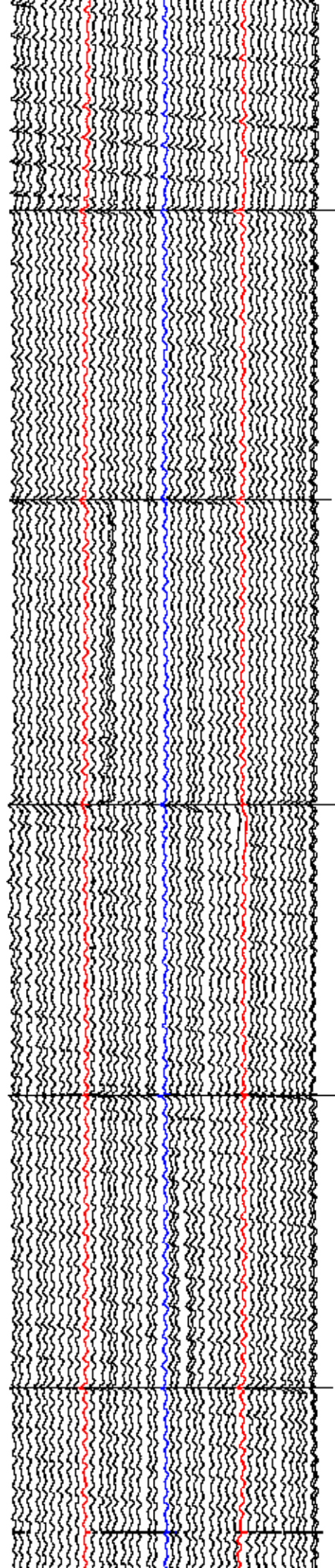




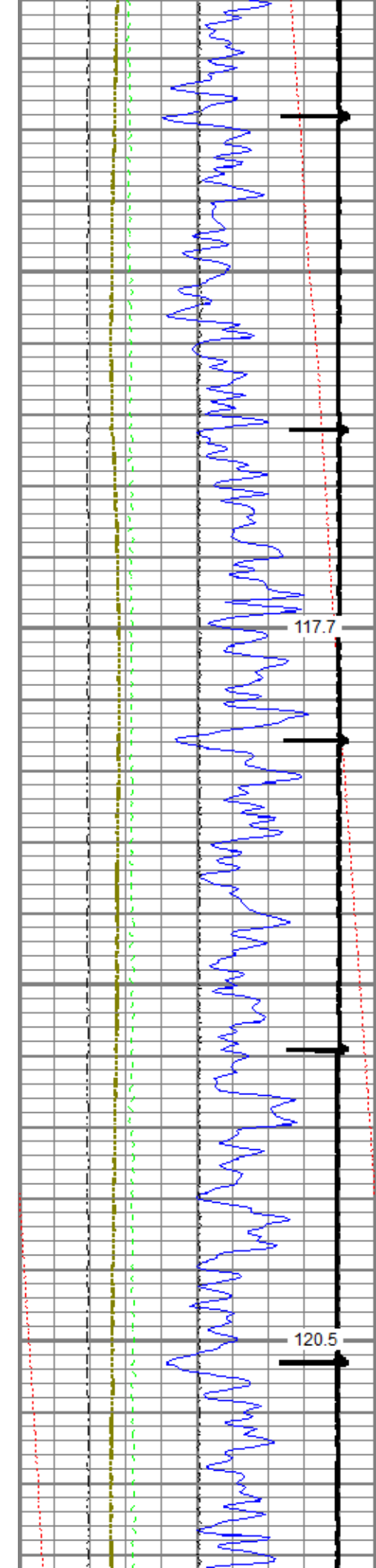
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2700

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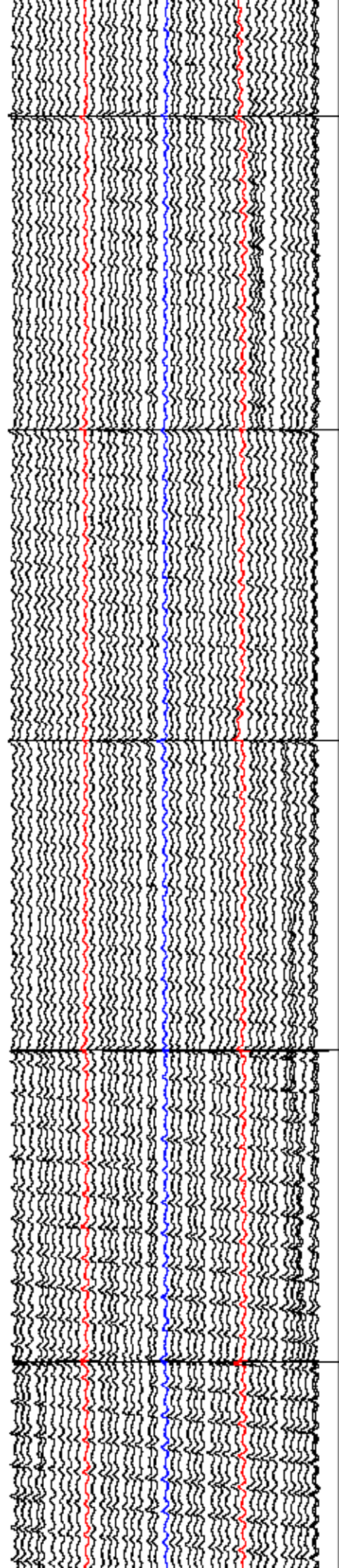


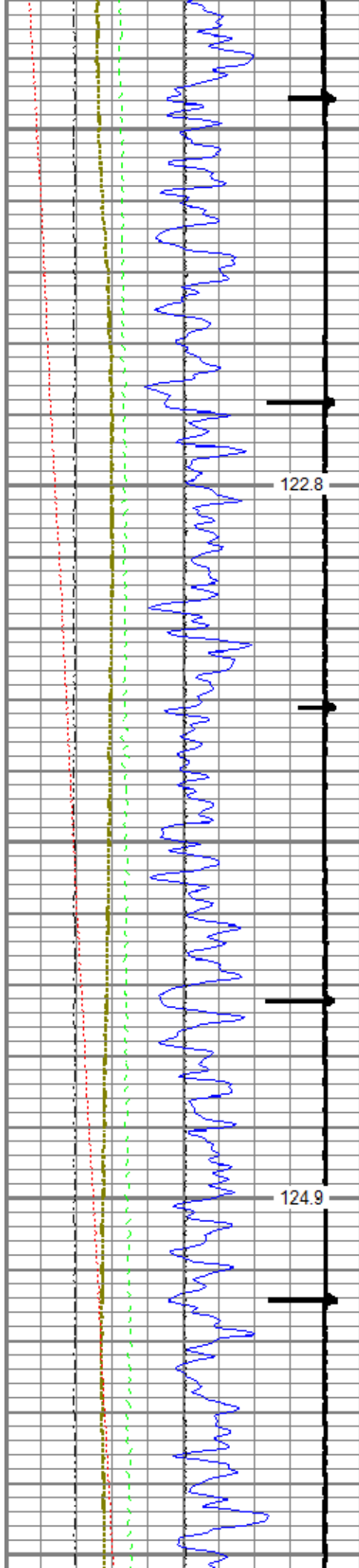




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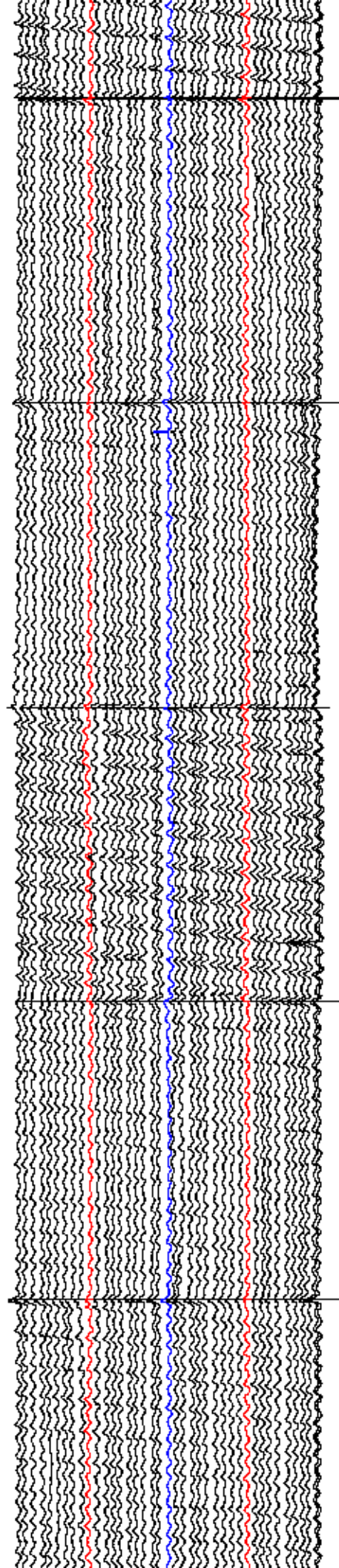
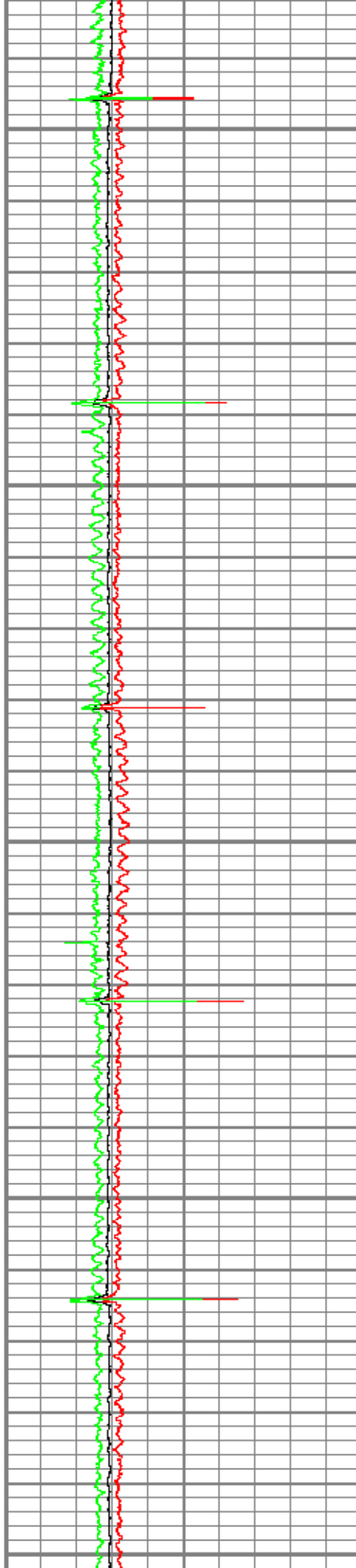
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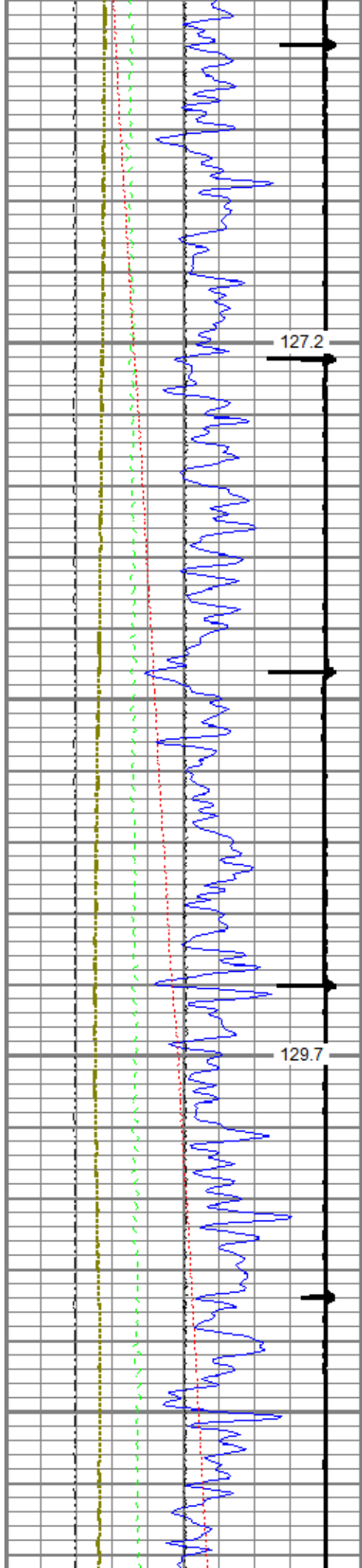


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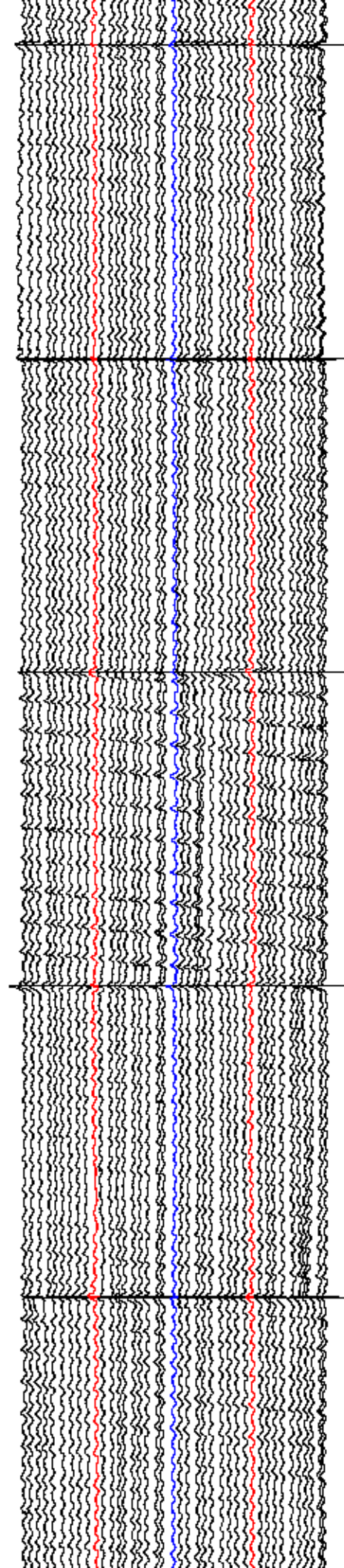
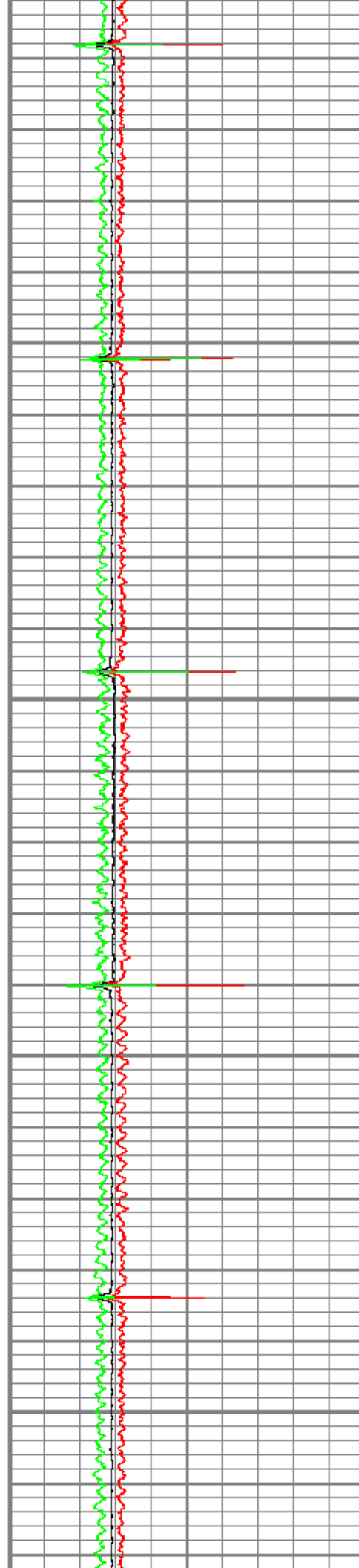


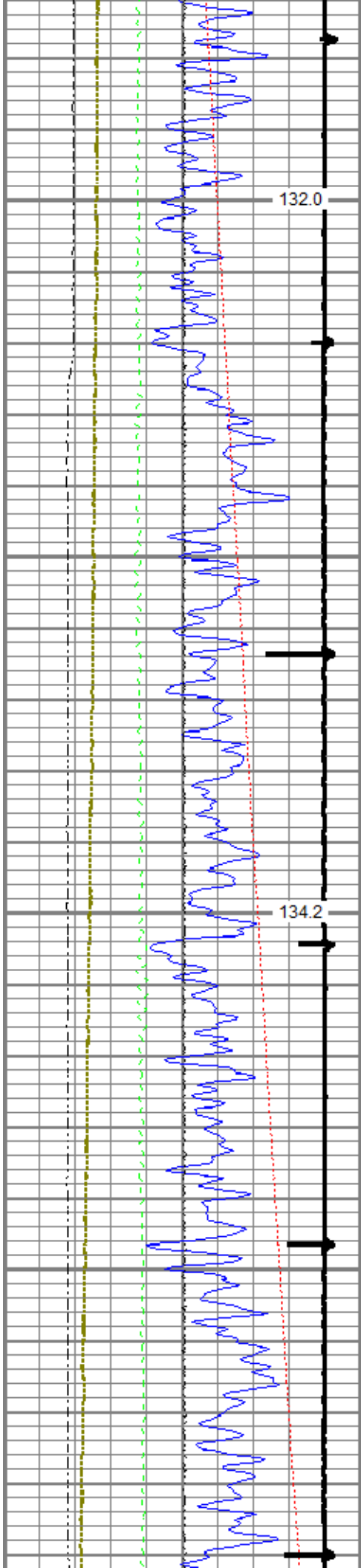




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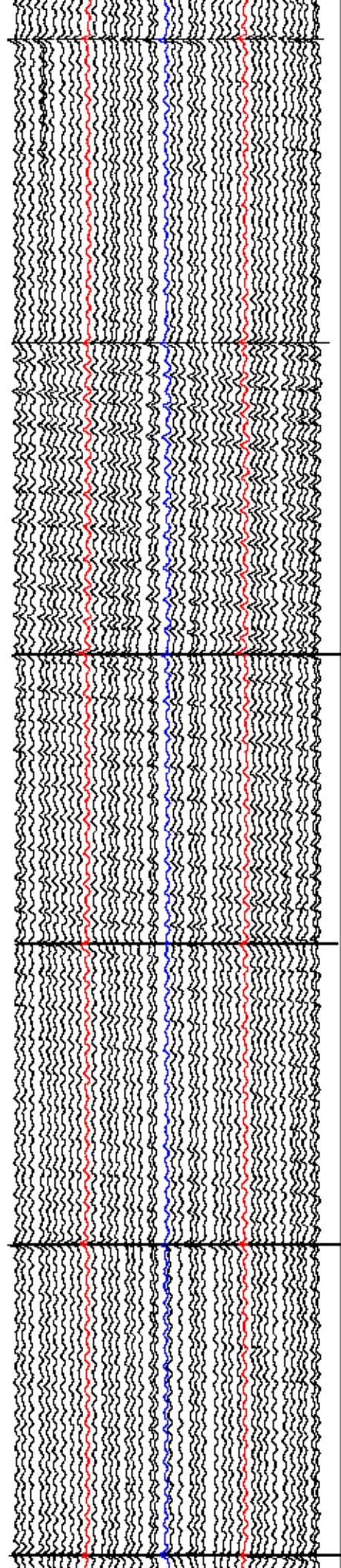
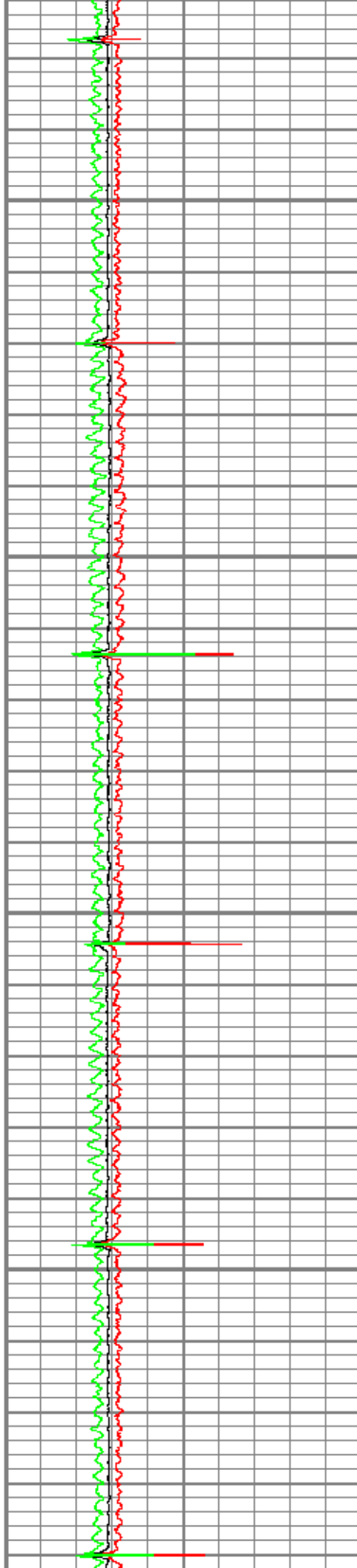
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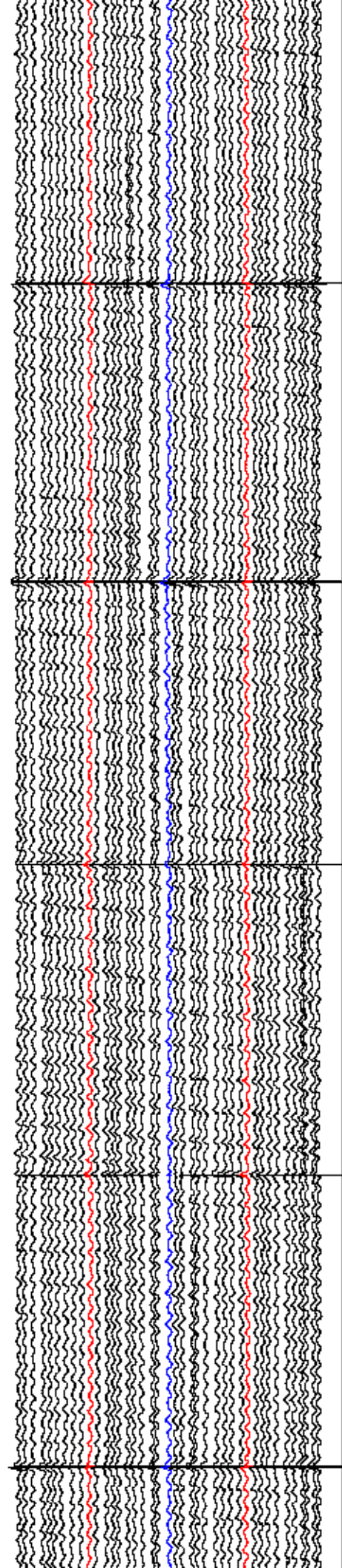
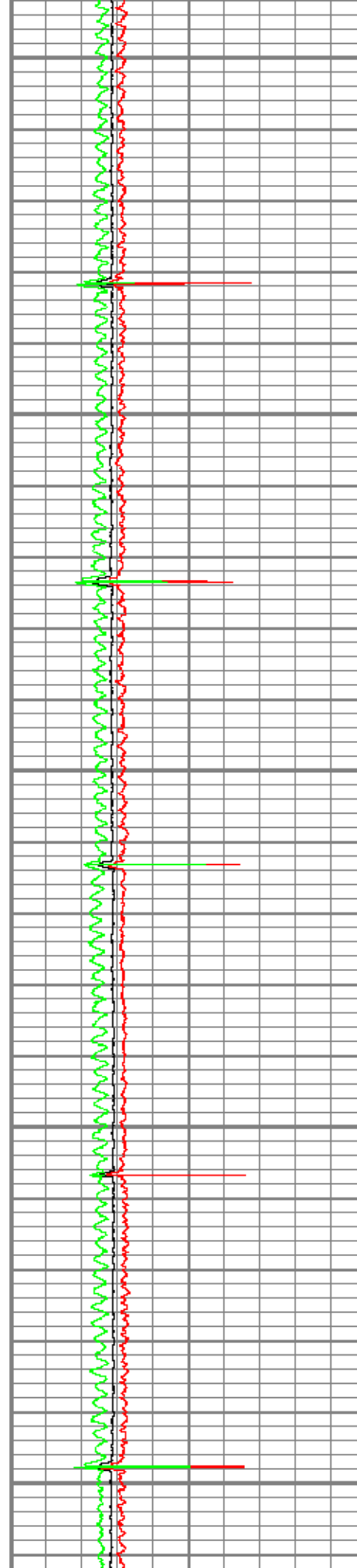
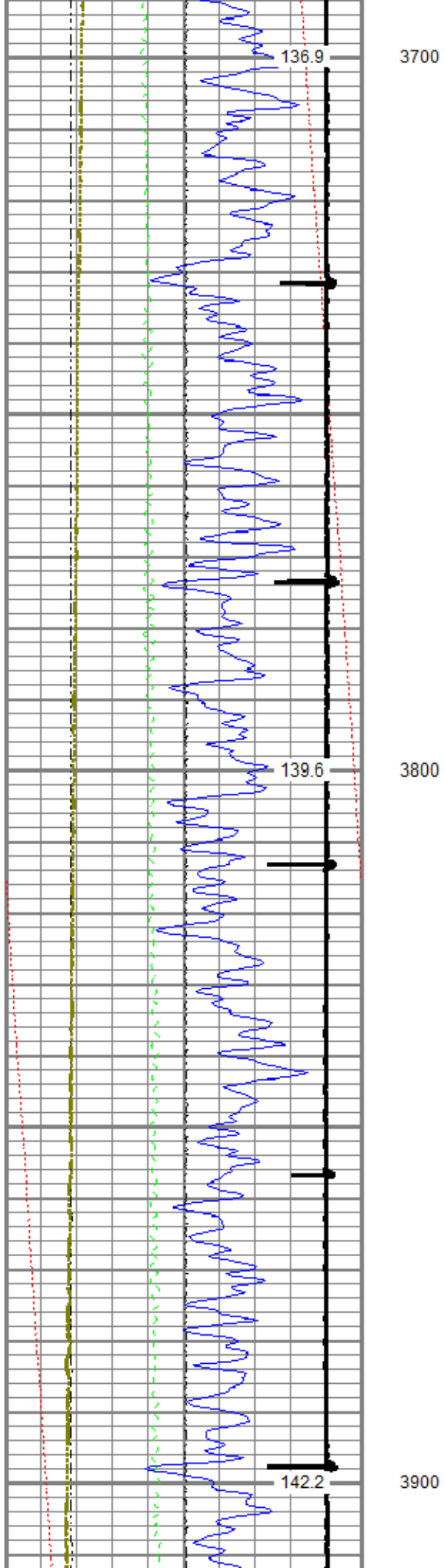


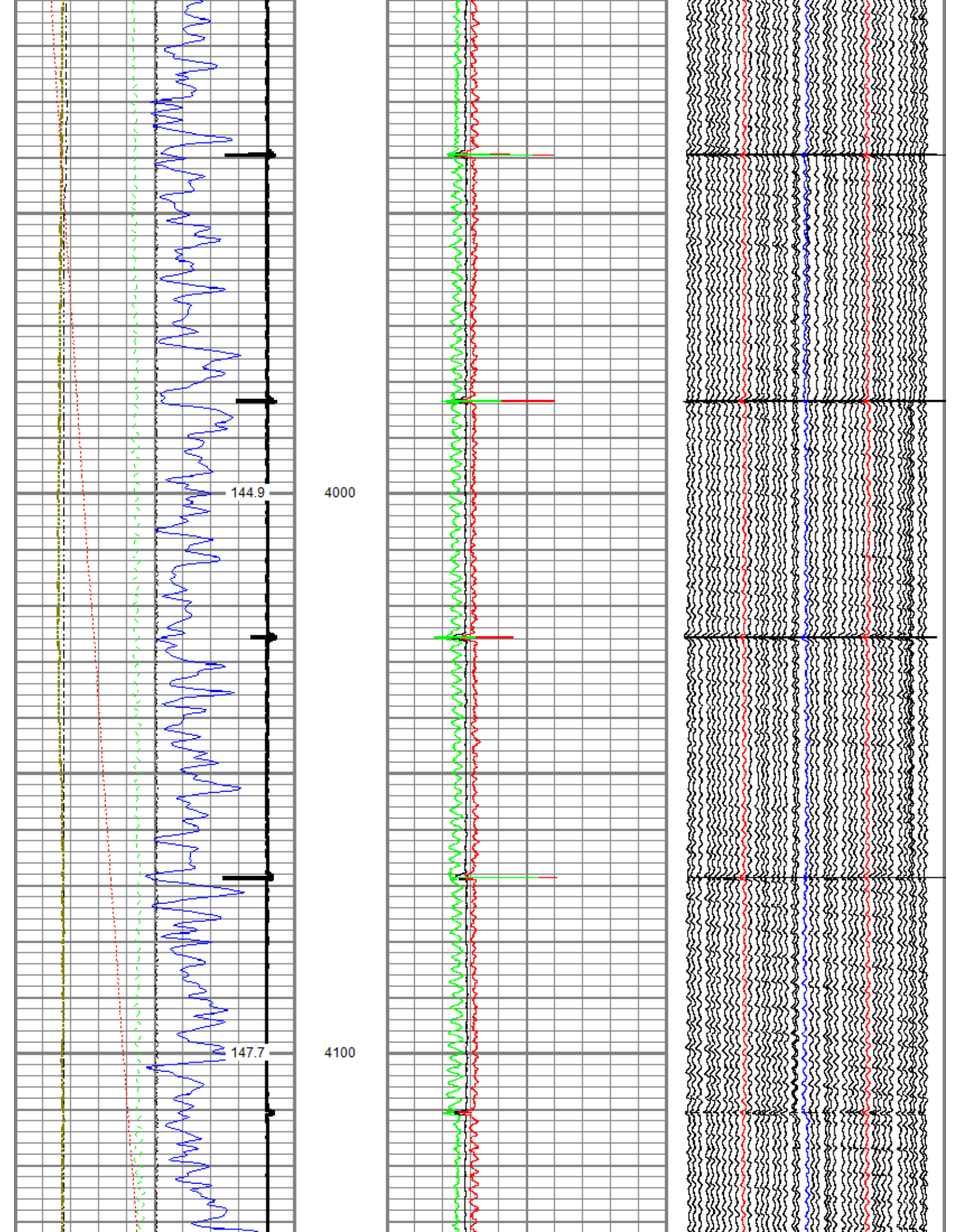
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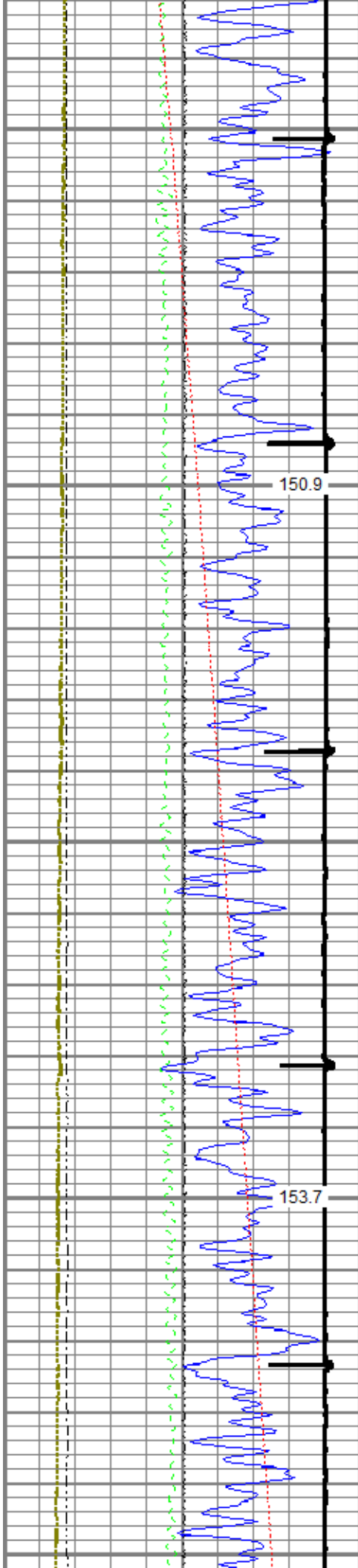






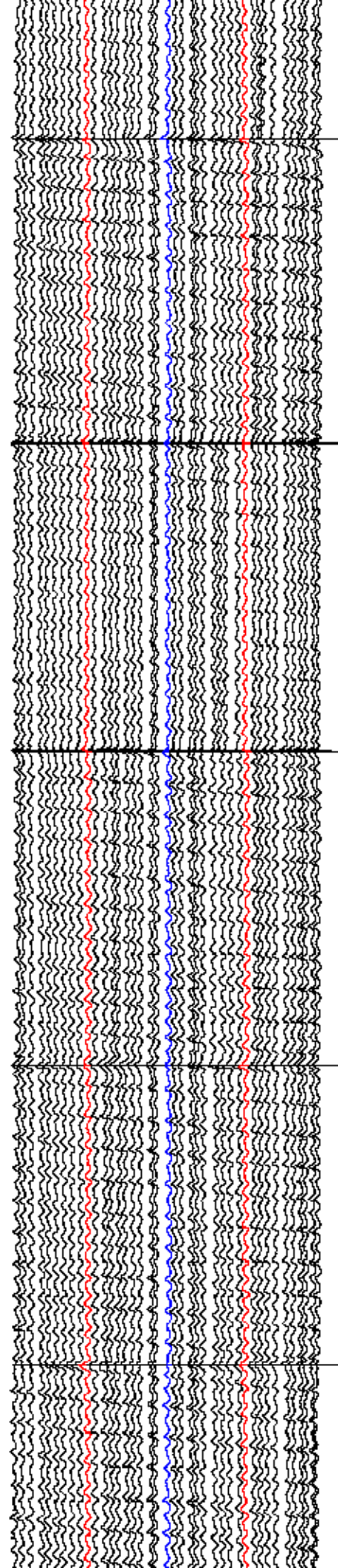
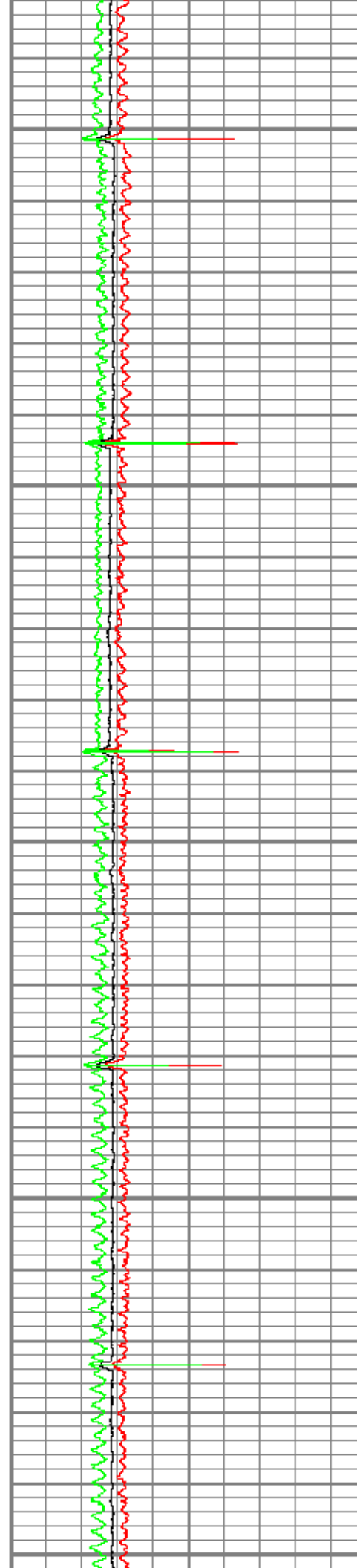


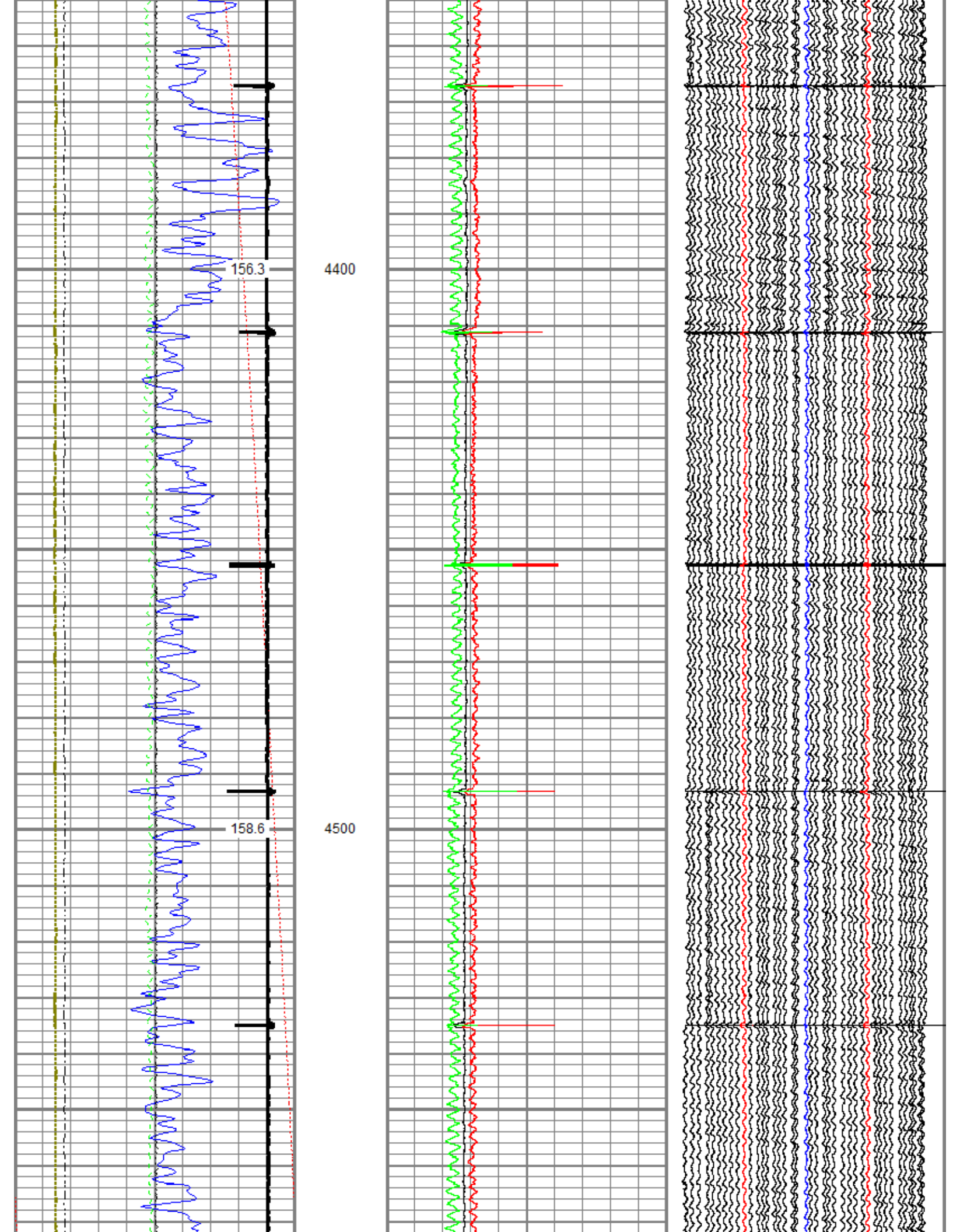




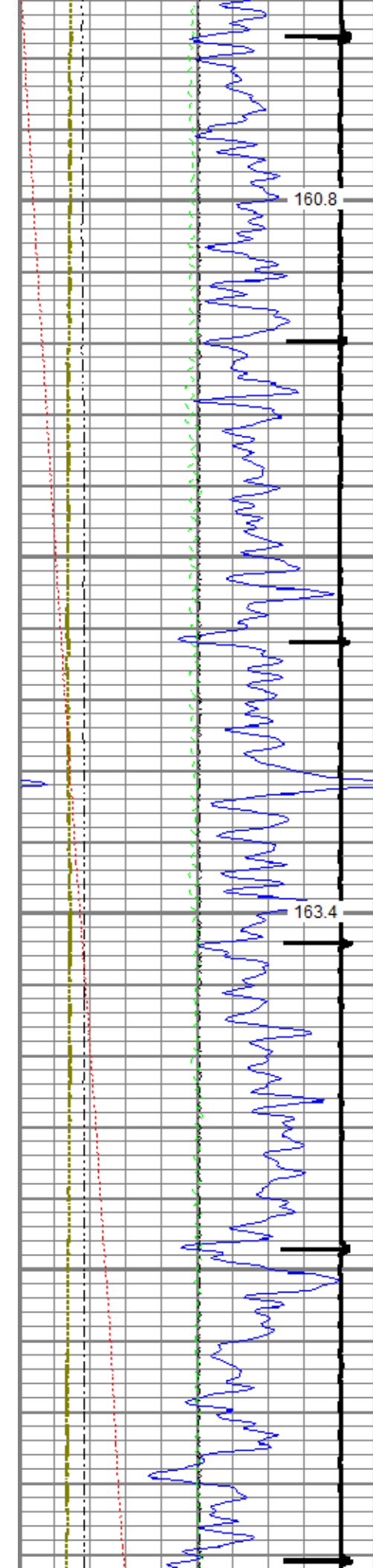
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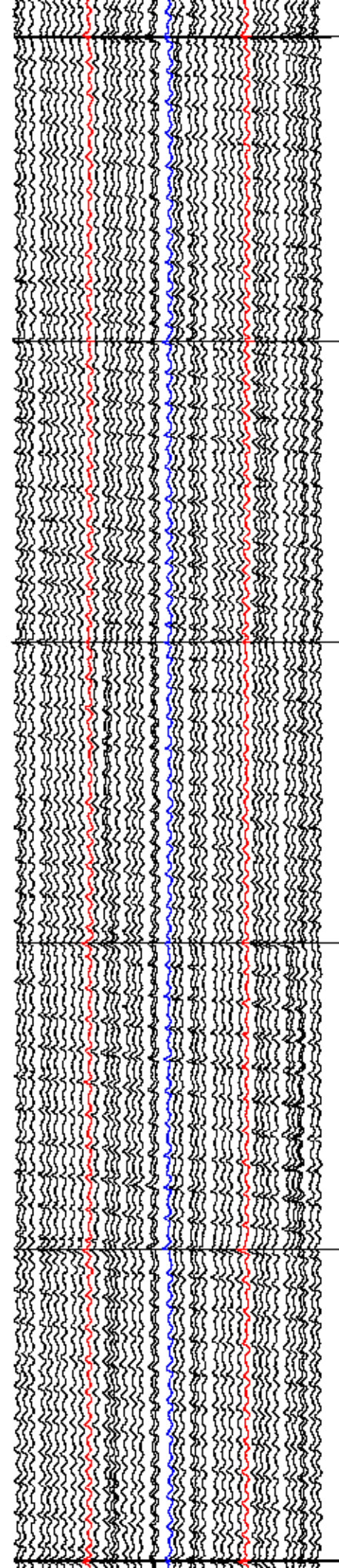
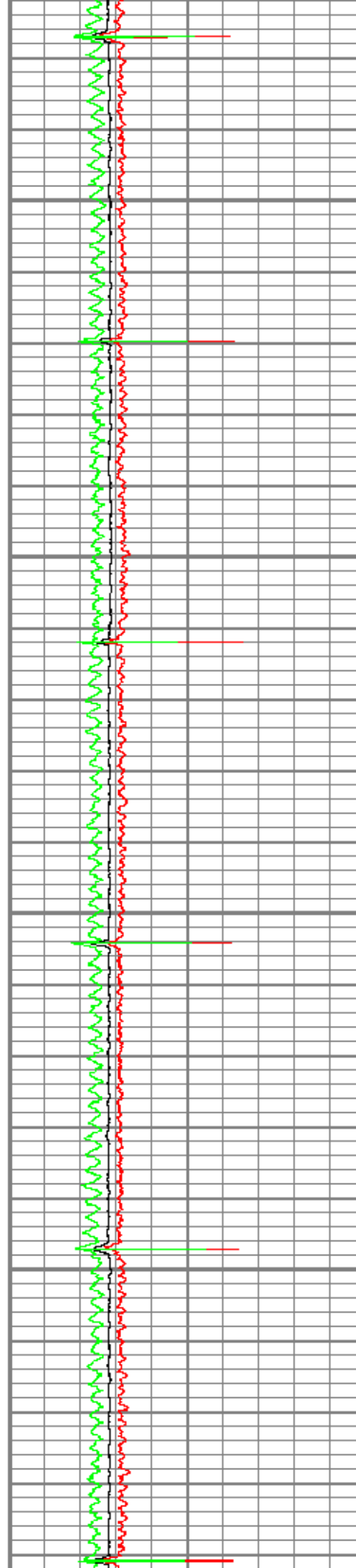


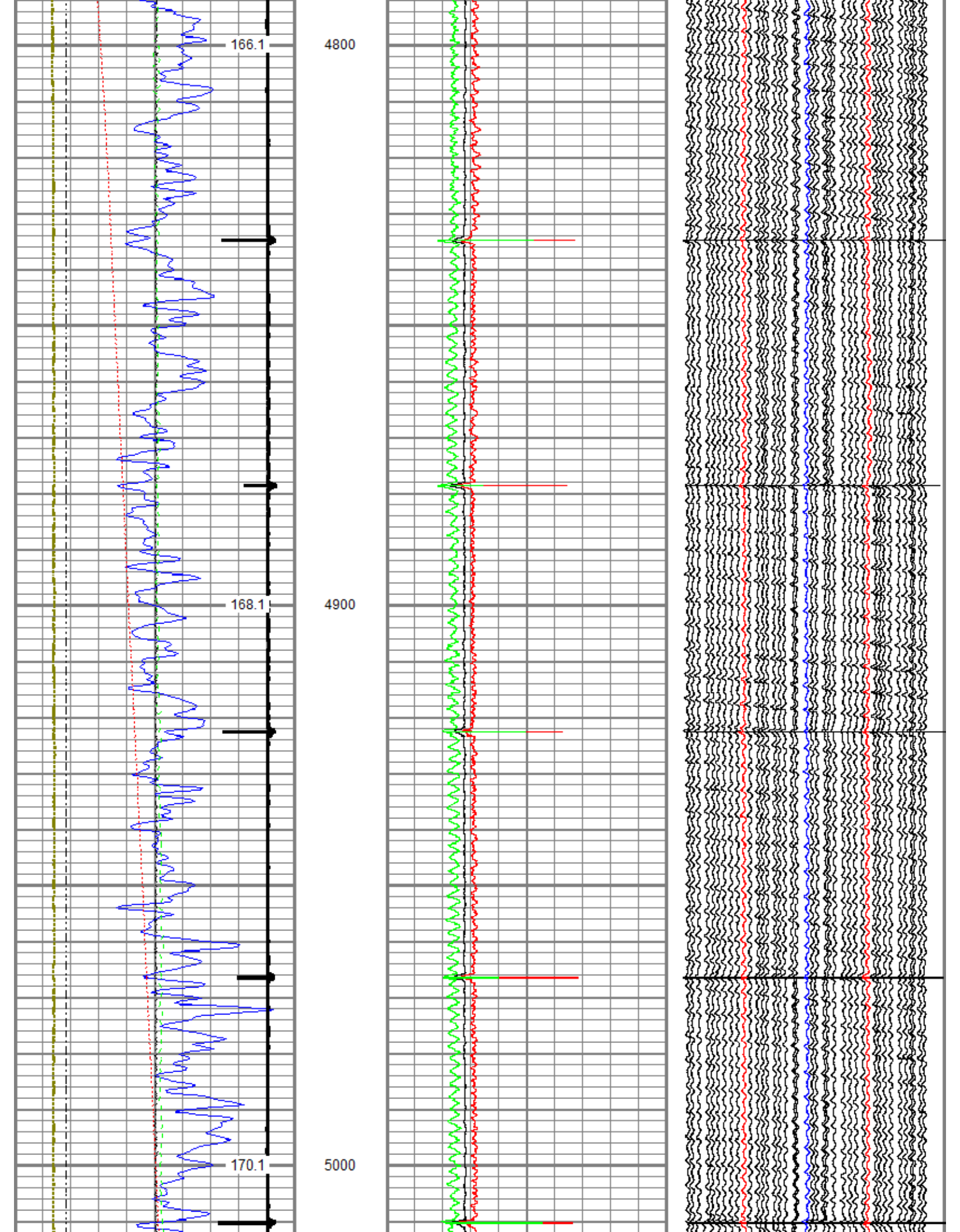
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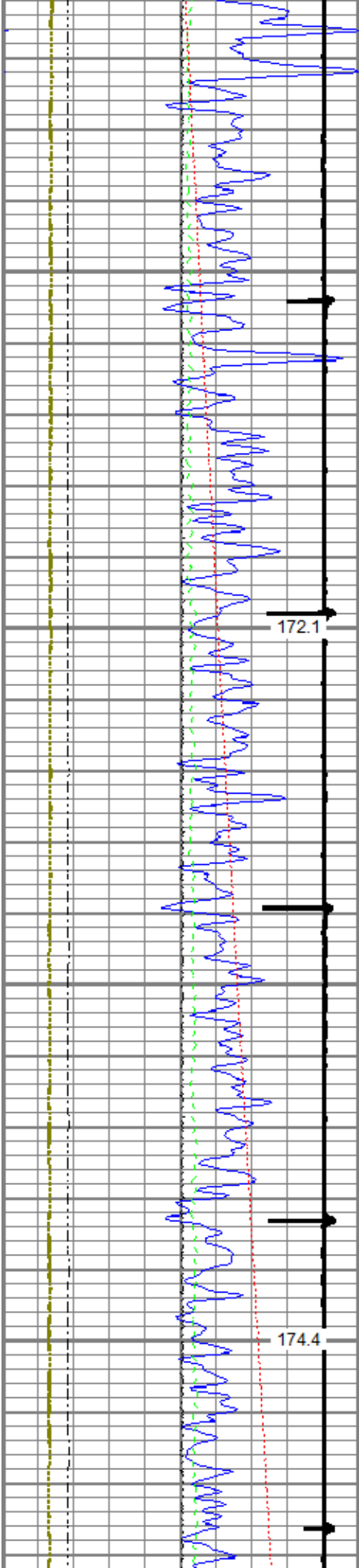
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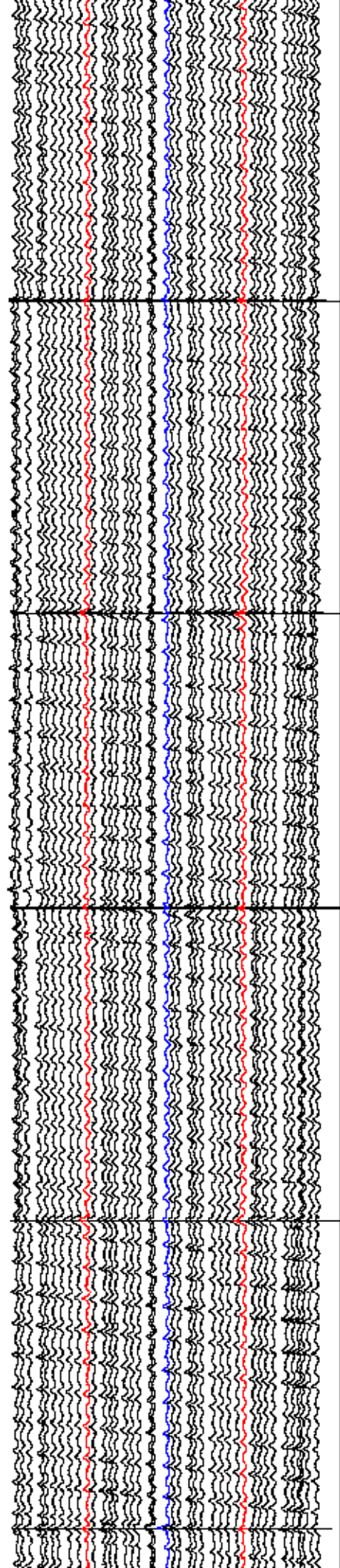
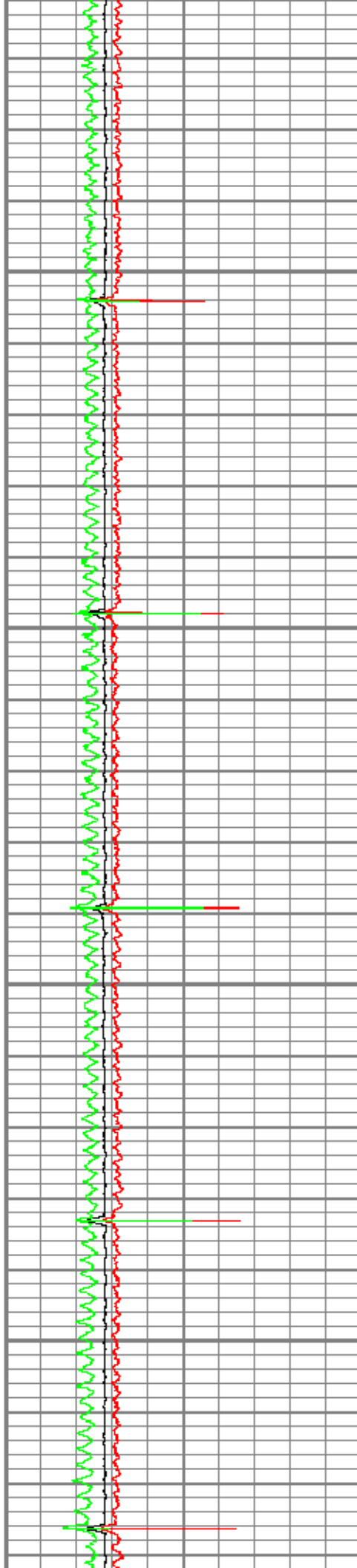


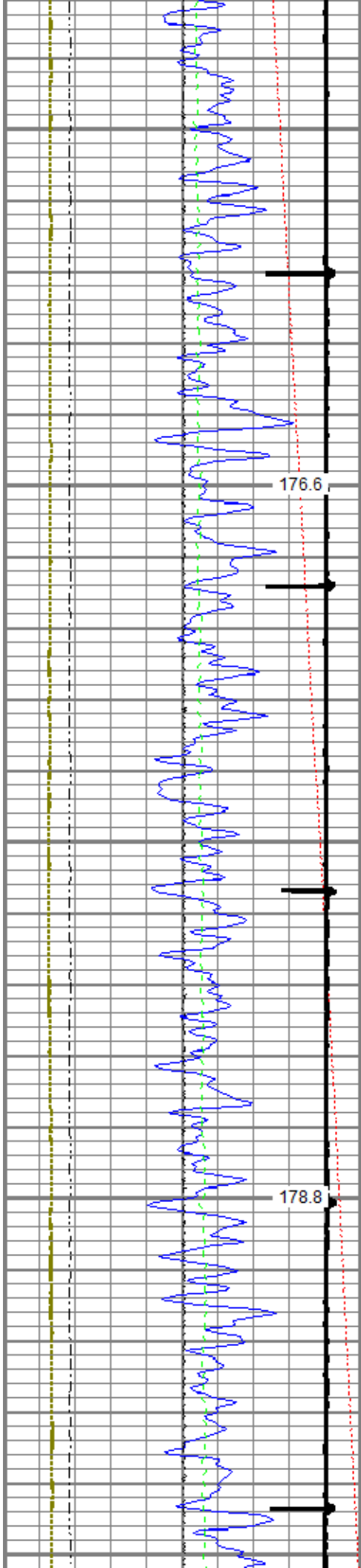




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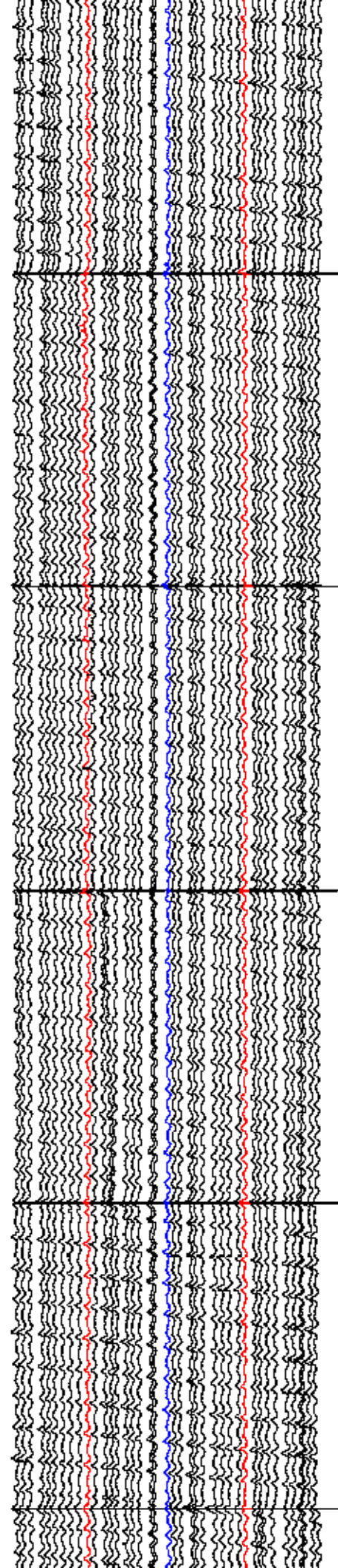
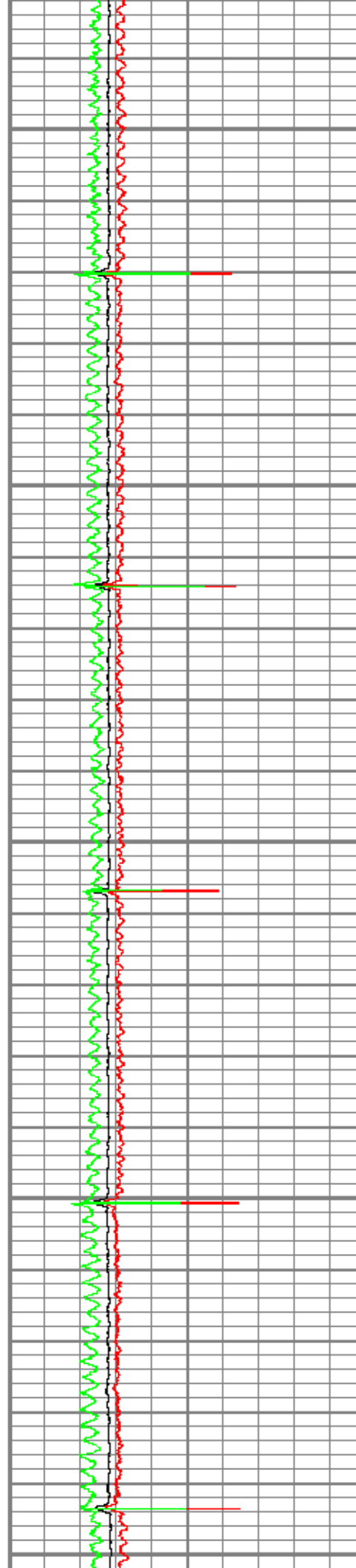
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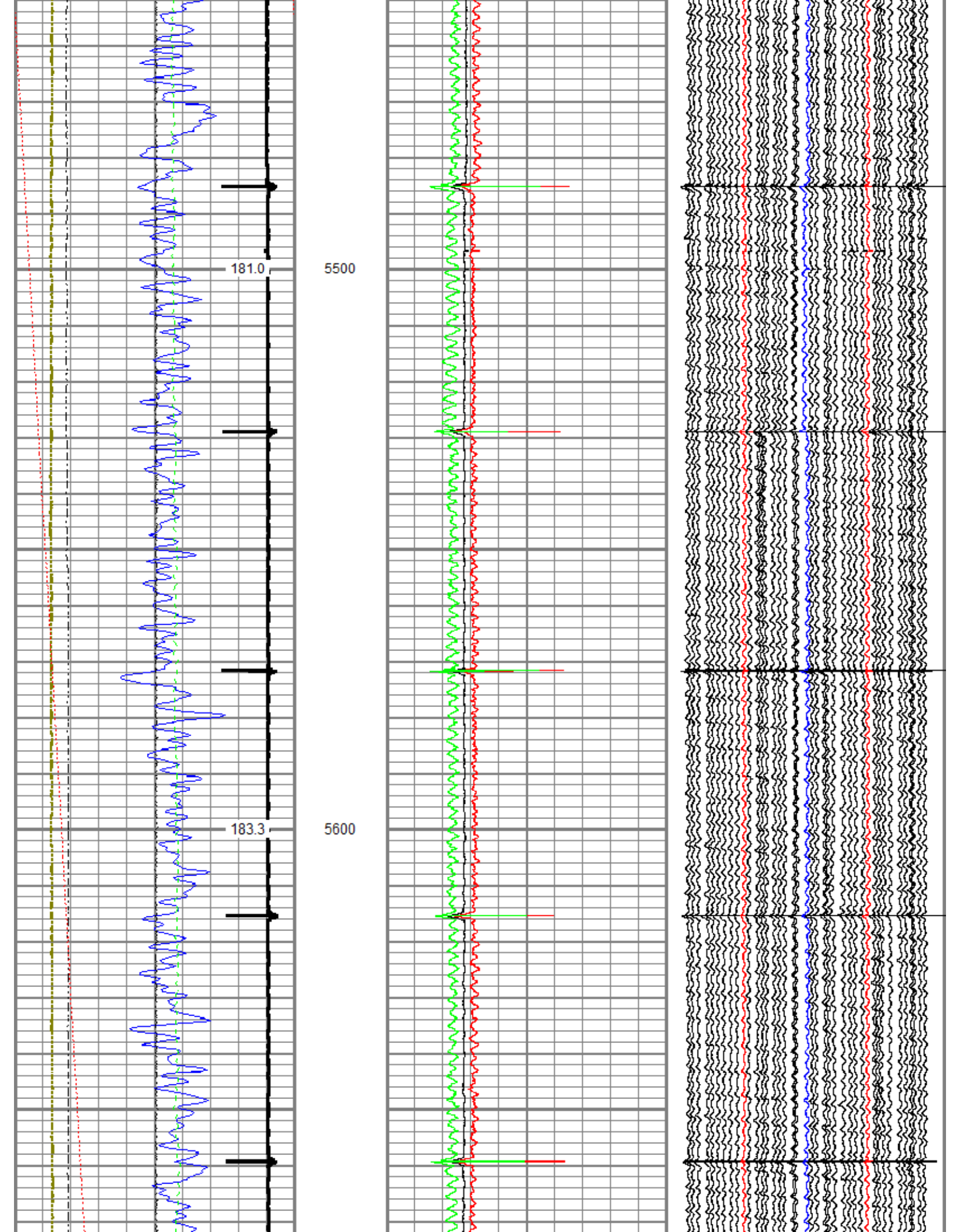


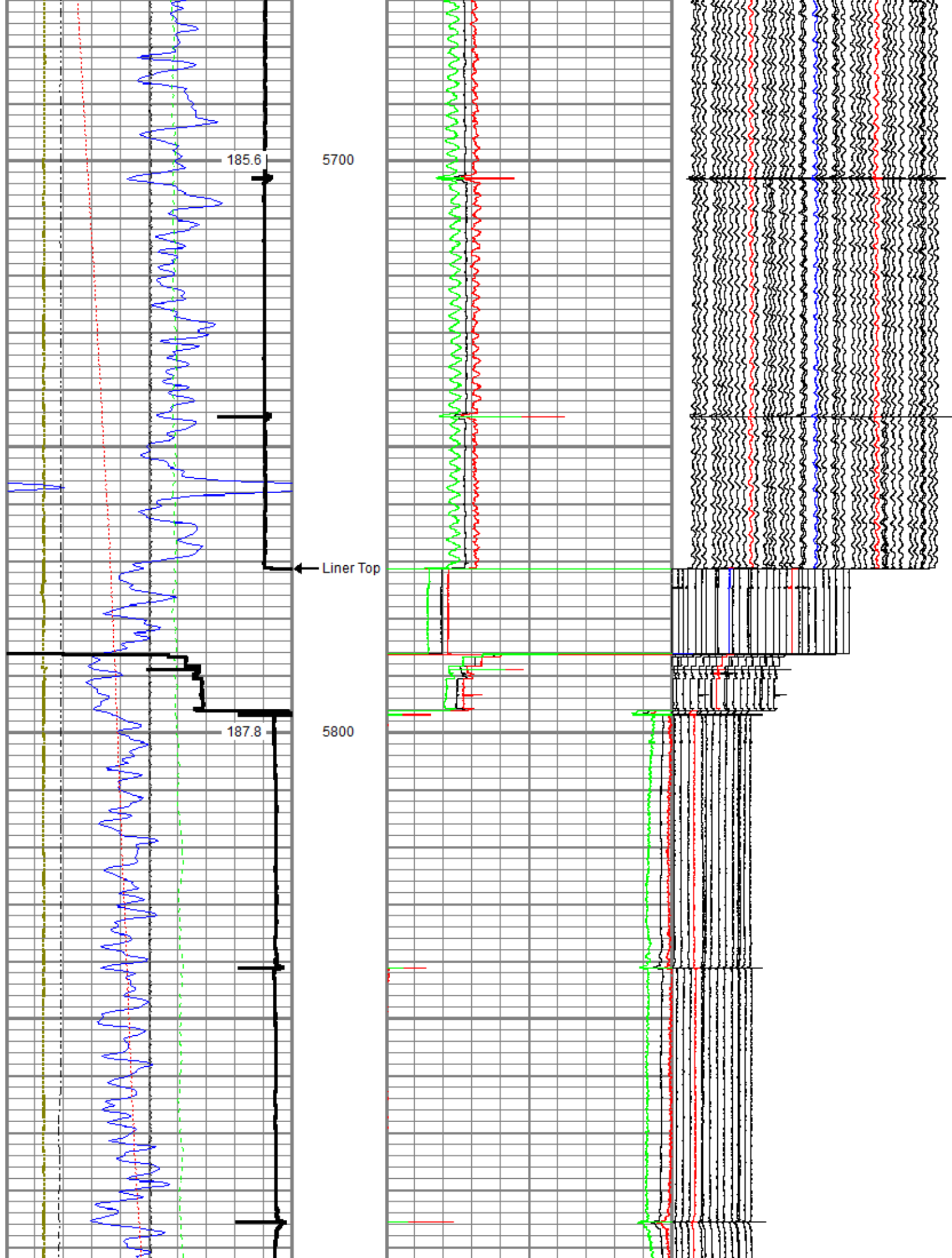
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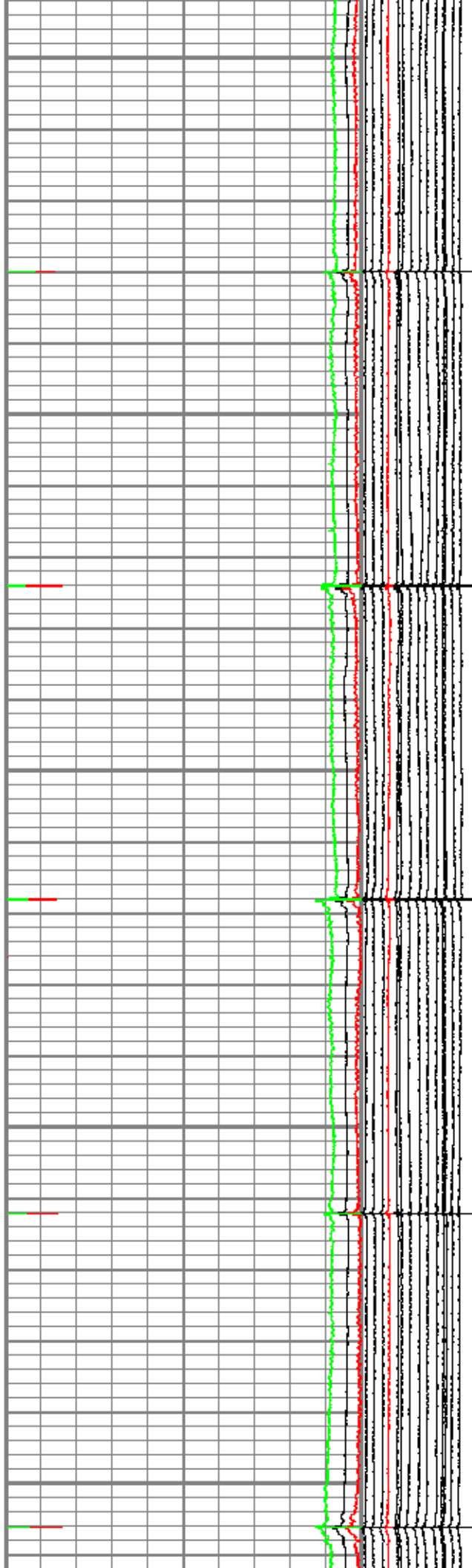
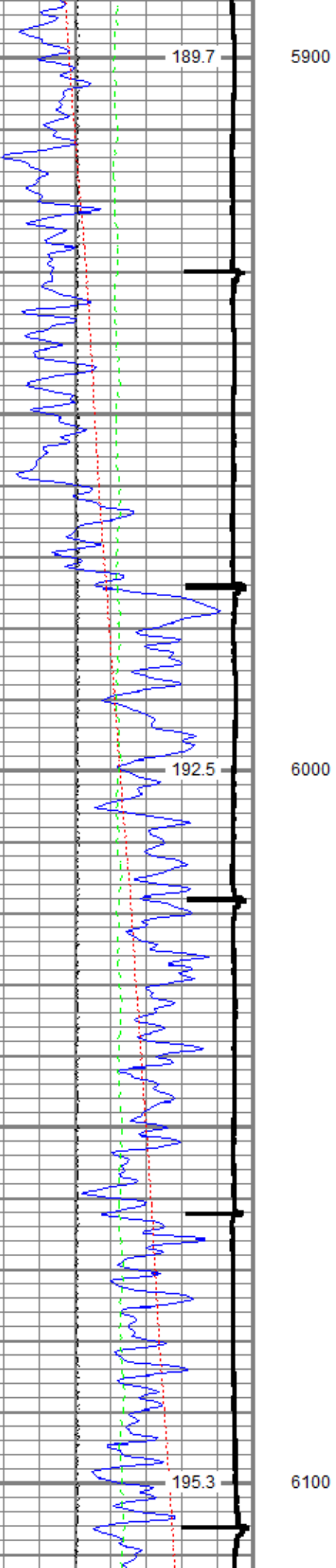


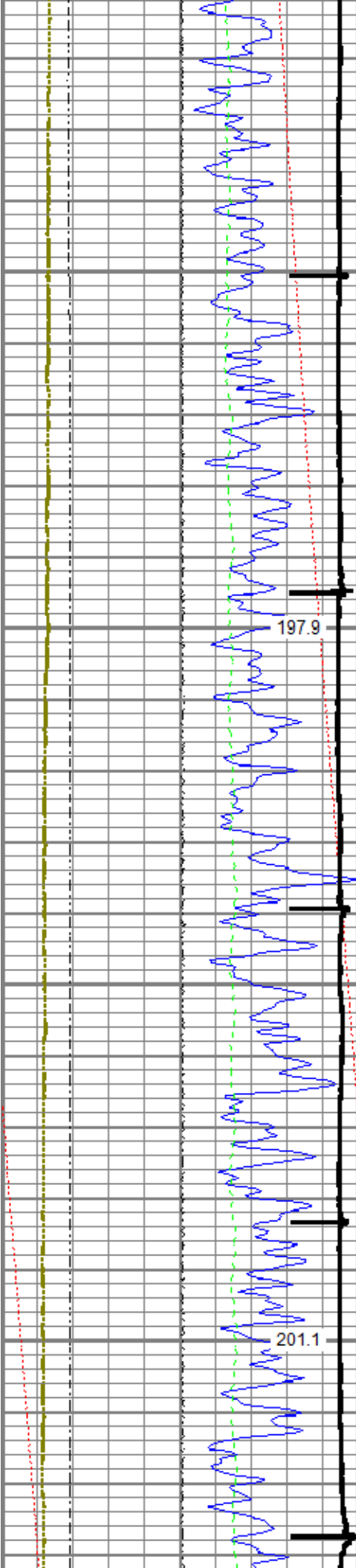










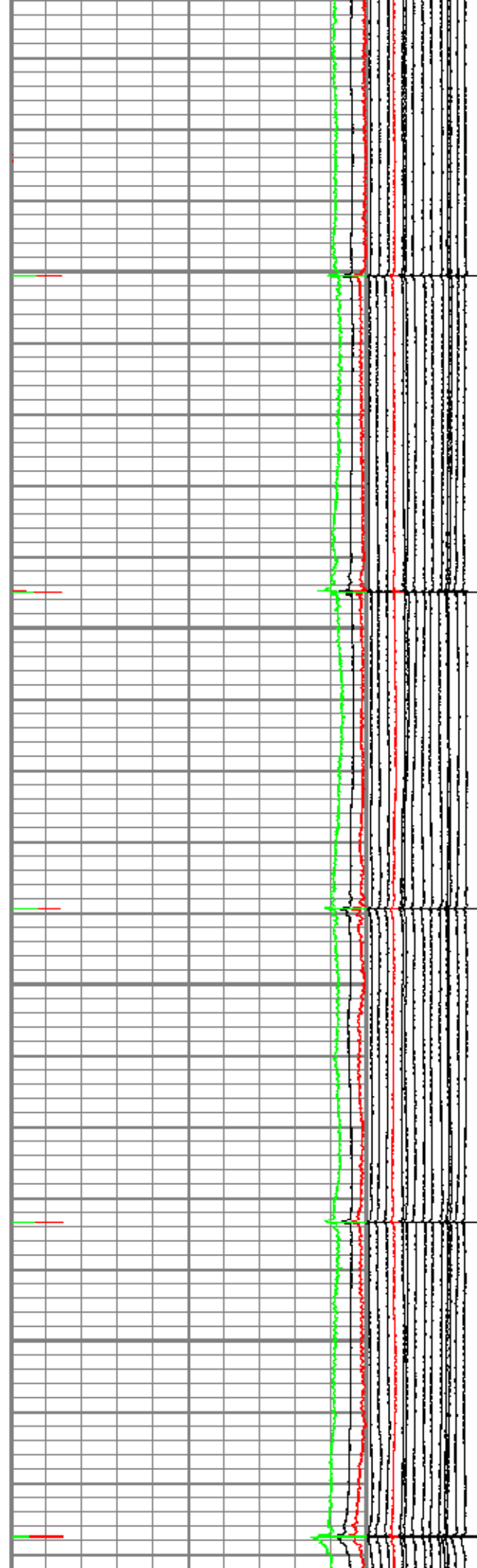


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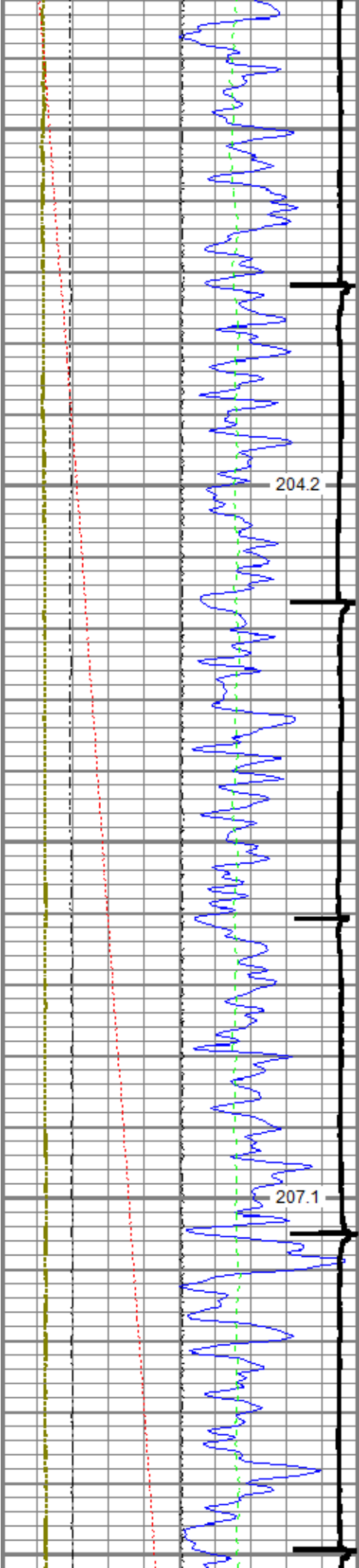
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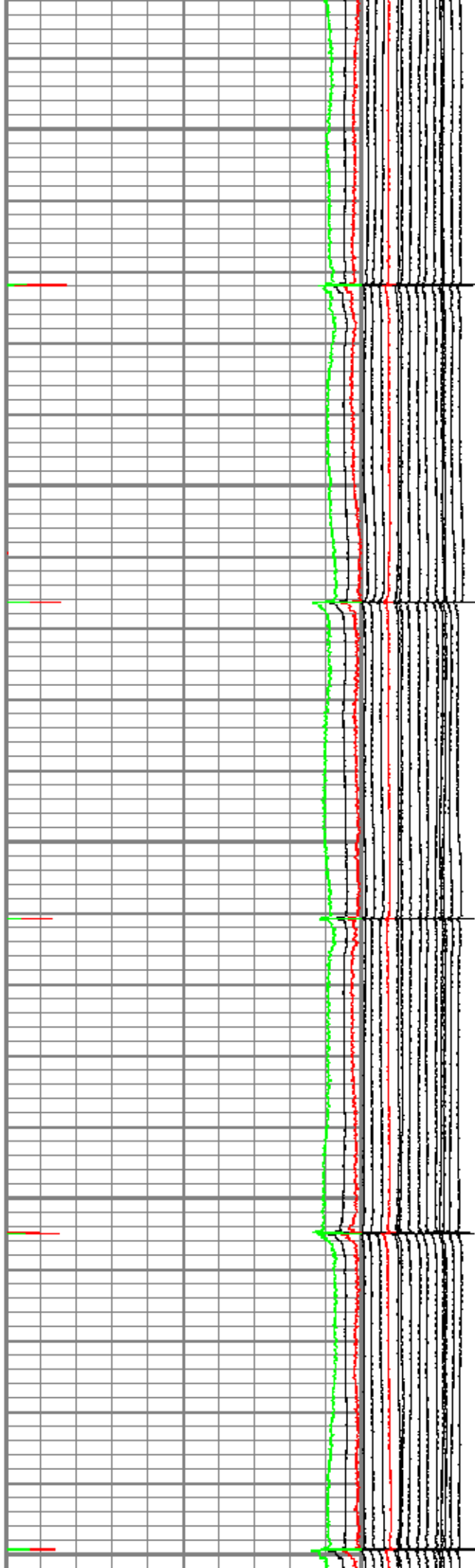


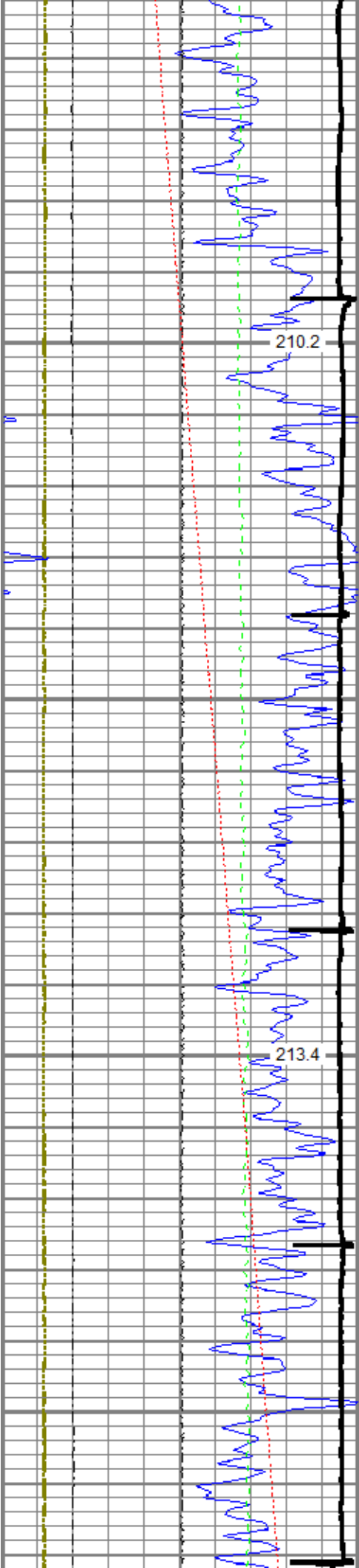




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6500



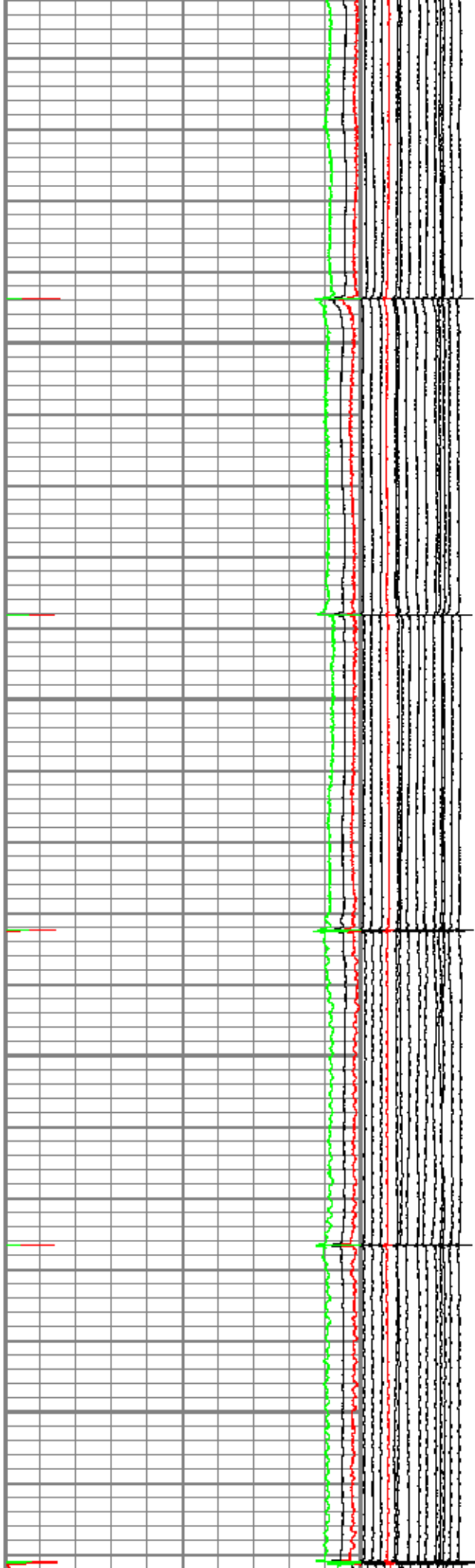


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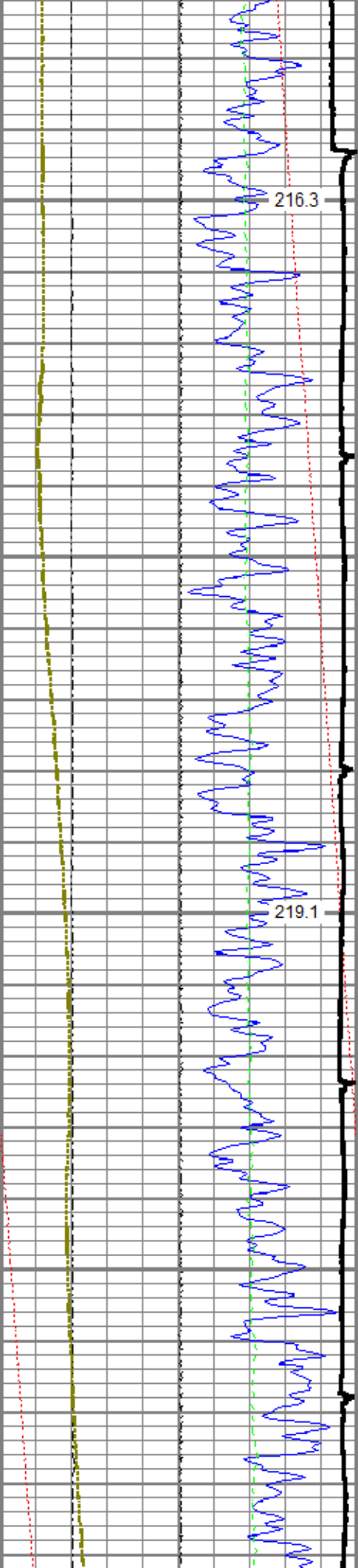
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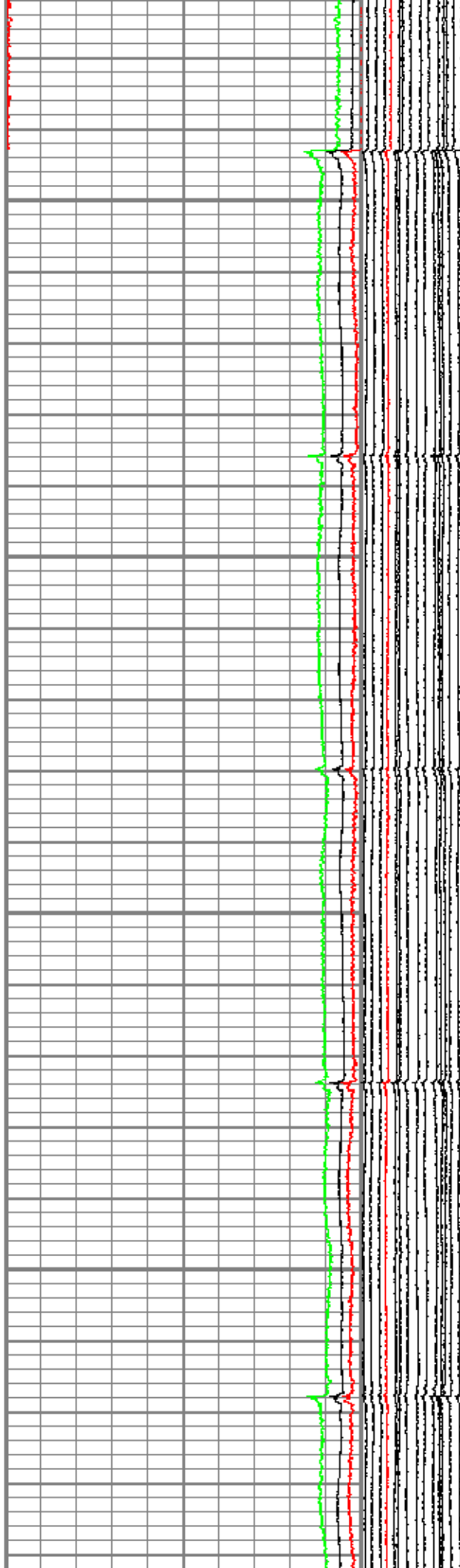


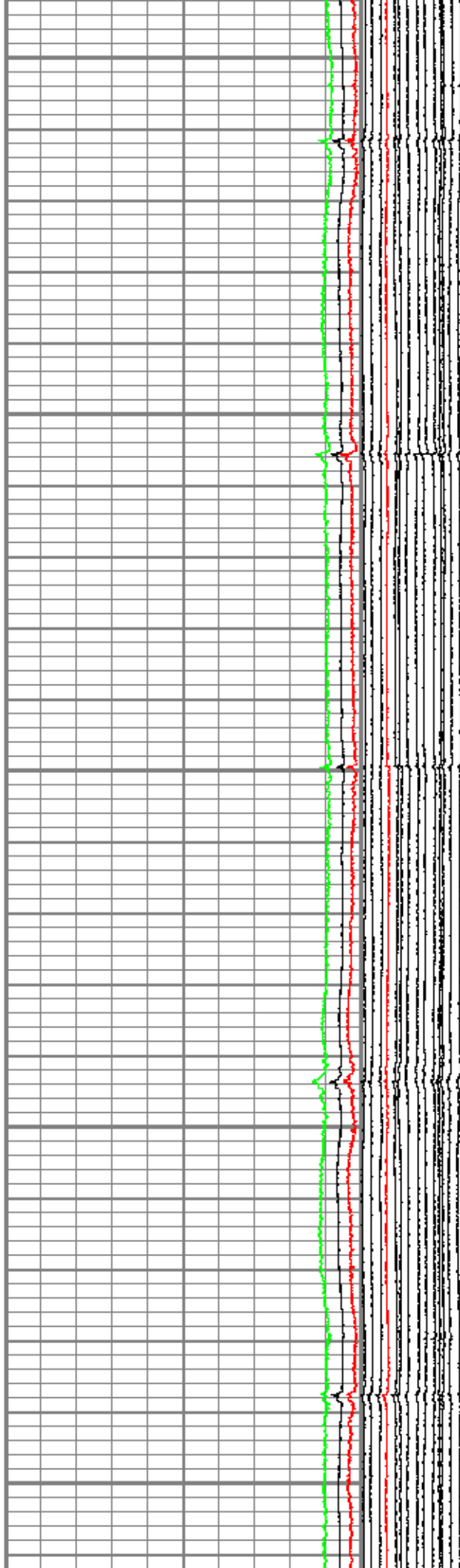
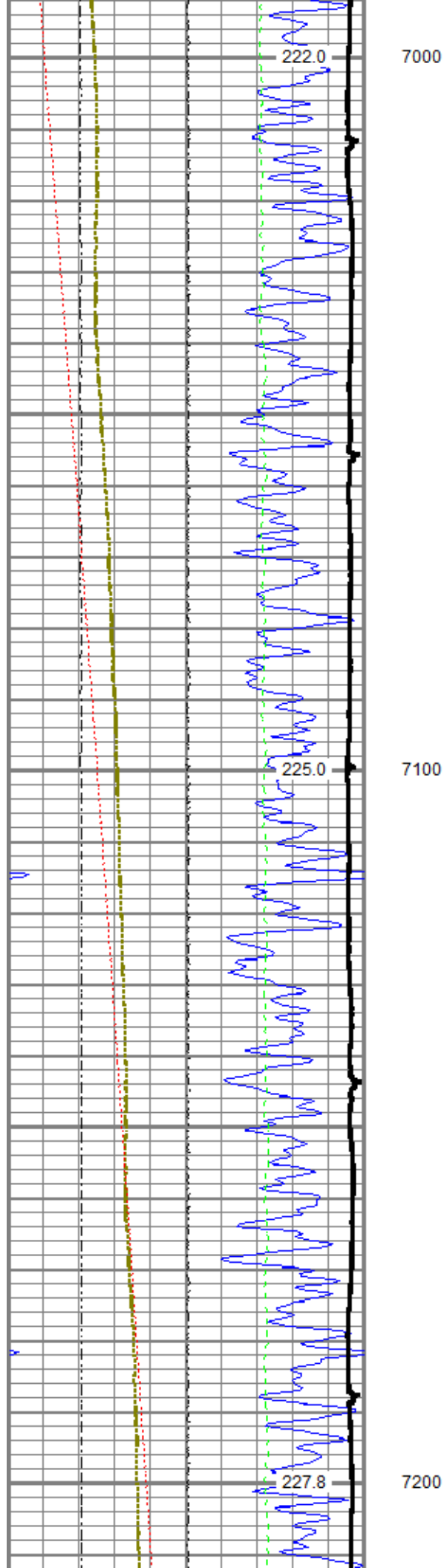
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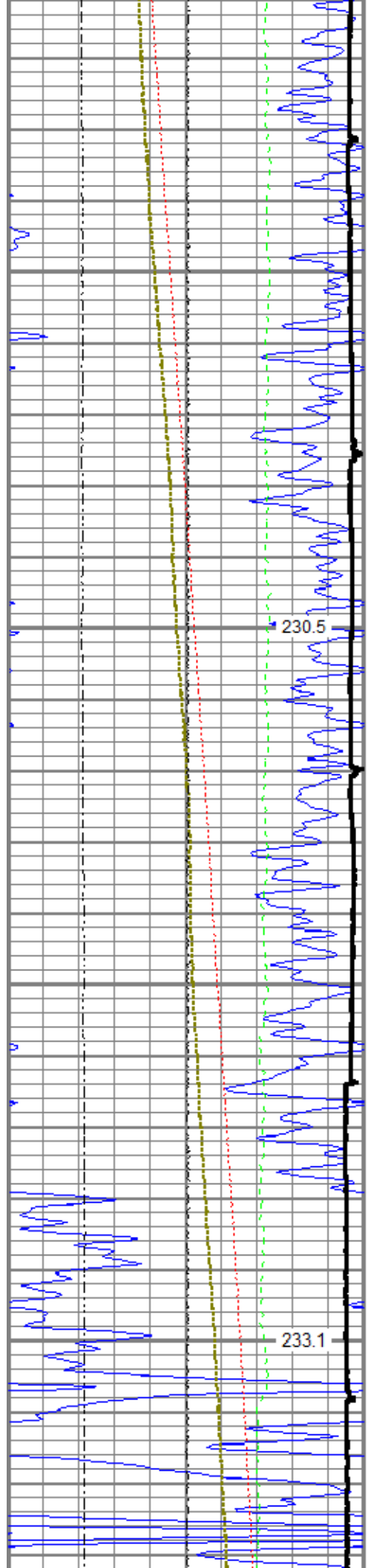
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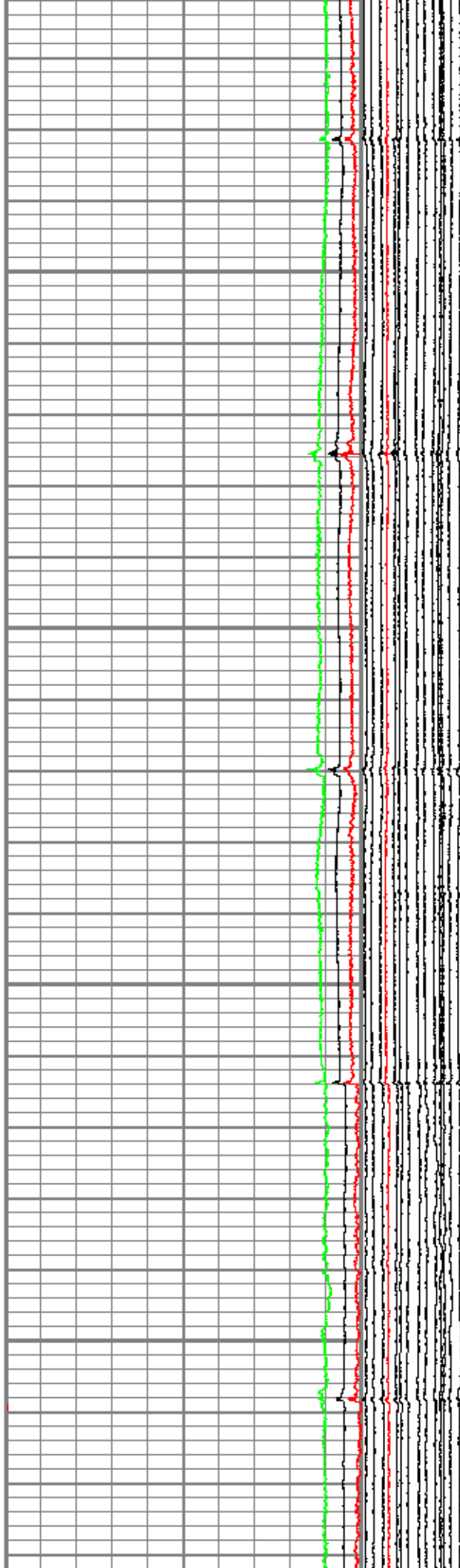


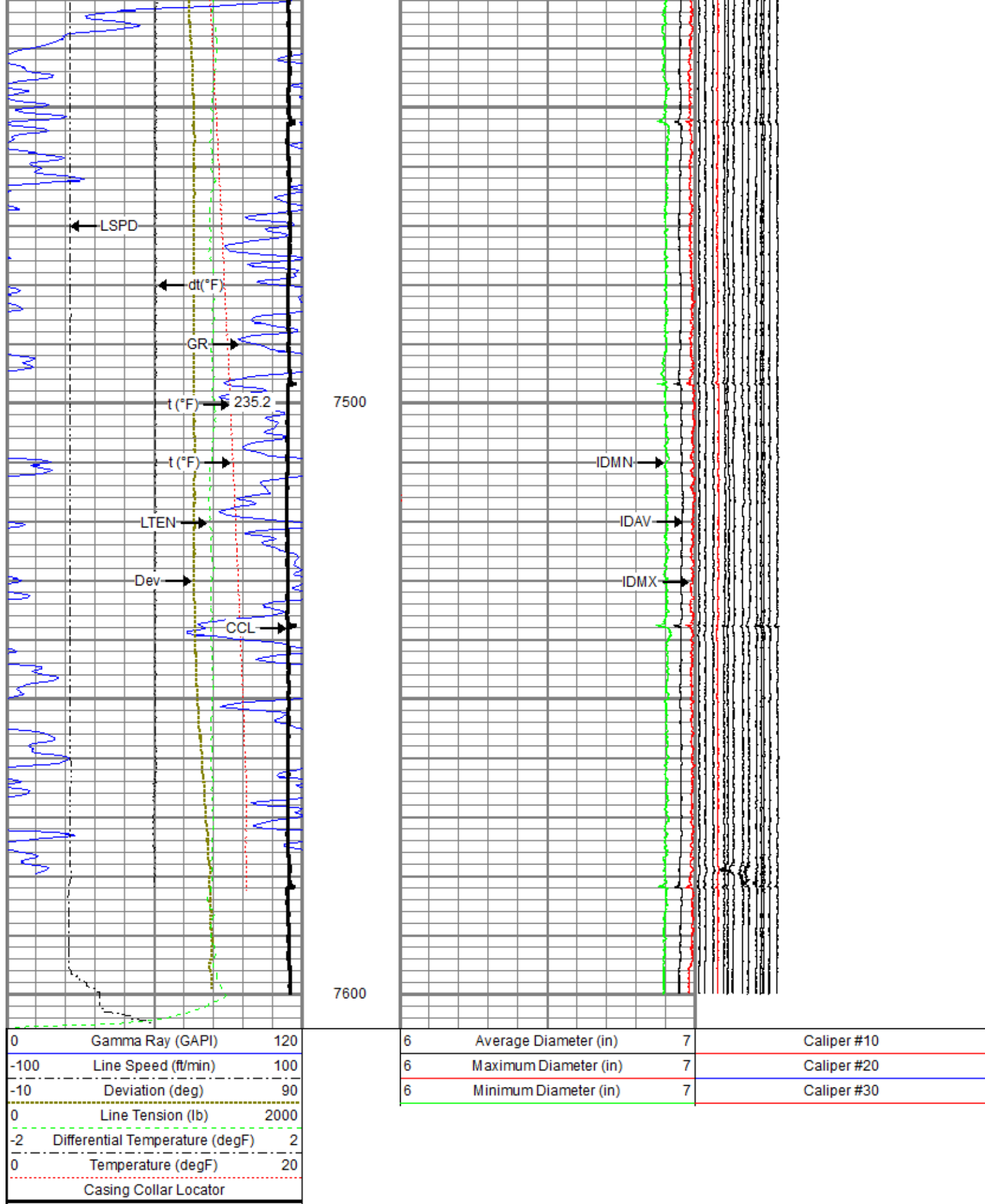
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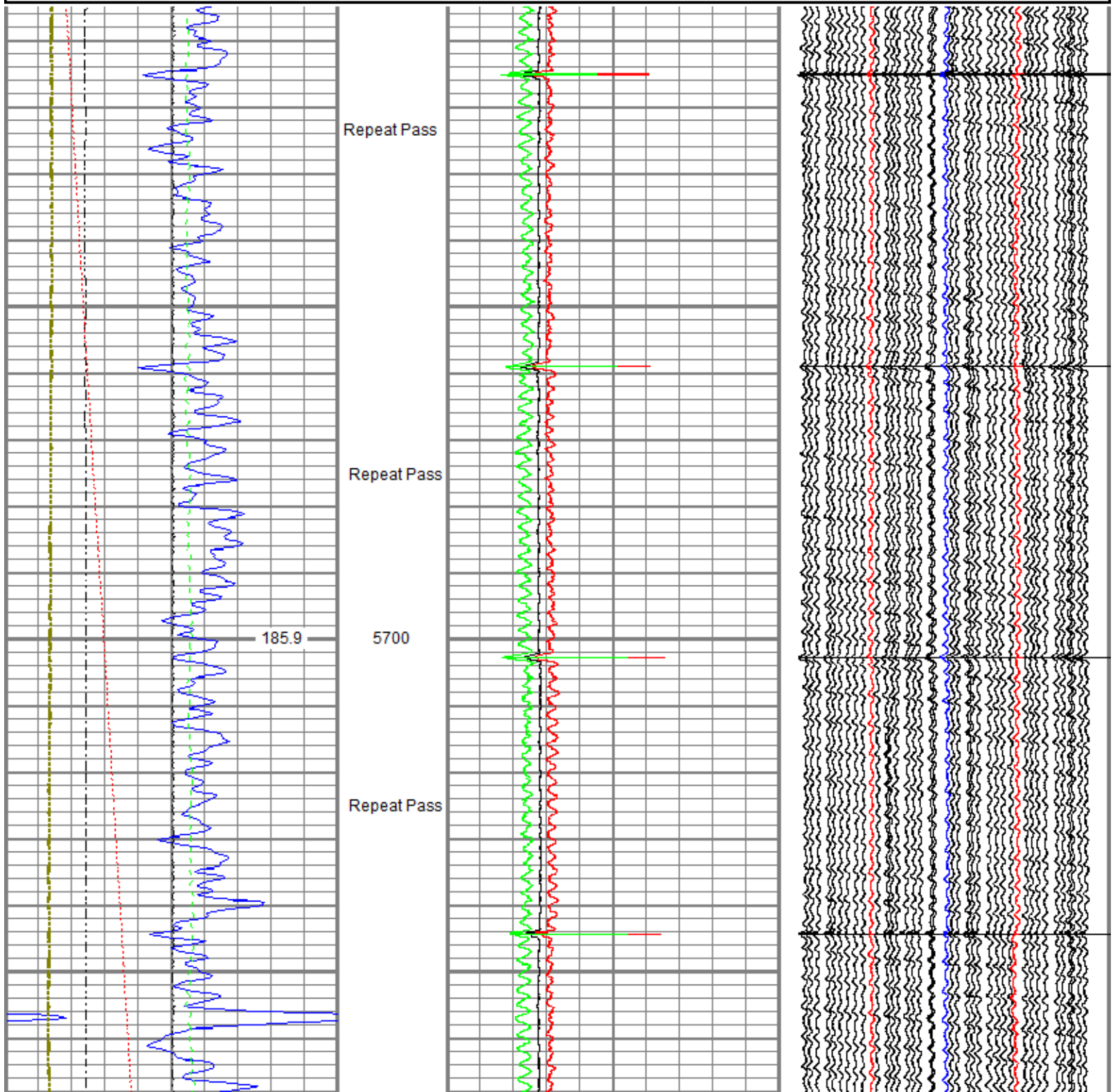


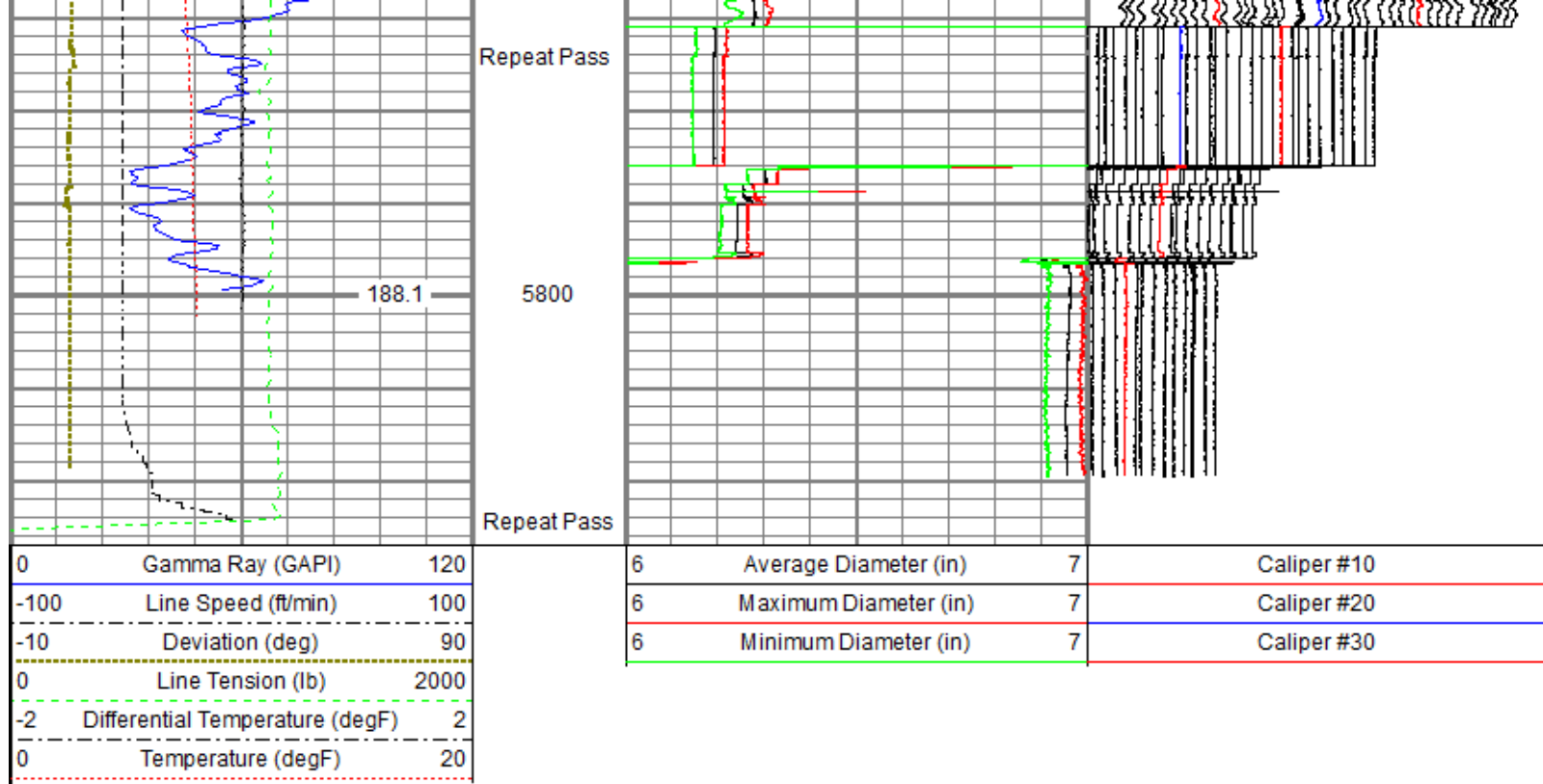
Repeat Pass


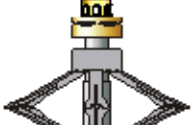

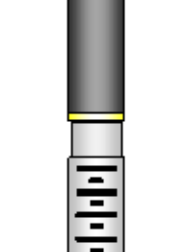


Database File	0512343469_anadarko_wagner 28n-e10hz_mit_rbl_12-29-17\processed_0512343469_anadarko_wagner 28n-e10hz_mit_rbl
Dataset Pathname	pass2
Presentation Format	ros_70mit40sx
Dataset Creation	Fri Dec 29 12:04:33 2017
Charted by	Depth in Feet scaled 1:240

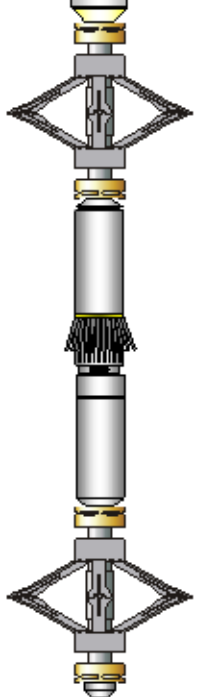
0	Gamma Ray (GAPI)	120	6	Average Diameter (in)	7	Caliper #10
-100	Line Speed (ft/min)	100	6	Maximum Diameter (in)	7	Caliper #20
-10	Deviation (deg)	90	6	Minimum Diameter (in)	7	Caliper #30
0	Line Tension (lb)	2000				
-2	Differential Temperature (degF)	2				
0	Temperature (degF)	20				





Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb)
GR	23.41		Titan_Electric_Cable_Heads-Titan_1-11/16" Electric Cable Head with 1" Fishing Neck	1.03	1.69	5.40
			UW_AGS-UW_AGS_001 (219135) Sondex Adapter - GO Box to Sondex Pin	0.21	1.69	1.00
			UW_XTU-UW_XTU_002 (051219) Crossover Ultrawire Toolbus to Ultralink	1.58	1.69	6.50
			UW_PGR-UW_PGR_020 (10013902) Production Gamma Ray	1.92	1.69	9.50
TEMP	22.02		UW_PRT-PRT_016 (10025097) Platinum Resistance Thermometer	1.04	1.69	5.20
			DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
CBLROT	14.99		UW_RBT-UW_RBT_004 (10022773) Sondex Ultrawire 3-1/8" Radial Bond Tool	9.48	3.13	140.00
CBLTEMP	14.99					
WVFS8	14.99					
WVFS7	14.99					
WVFS6	14.99					
WVFS5	14.99					
WVFS4	14.99					
WVFS3	14.99					
WVFS2	14.99					



WVFS1	14.99		DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
WVF3FT	14.99					
WVF5FT	13.99					
CBLTEMP	9.85					
MIT	5.11		UW_MIT-UW_MIT40_042 (10012912) 40 Multifinger Imaging Tool Ext.	4.54	2.75	65.00
HVOLTX	0.00		DSS_RAC-RAC_5-Arm 5 Arm 2-3/4" Roller Centralizer	2.55	2.75	32.00
ITEMPX	0.00					
TSTAMP	0.00		UW_BUL-UW_BUL_006 (10019616) Sondex Ultrawire Bullnose Terminator	0.22	1.69	1.20
Dataset: processed_0512343469_anadarko_wagner 28n-e10hz_mit_rbl_12-29-17.db: field/well/run1/pass4 Total length: 27.66 ft Total weight: 329.80 lb O.D.: 3.13 in						

Calibration Report			
Database File	c:\programdata\warrior\data\0512343469_anadarko_wagner 28n-e10hz_mit_rbl_12-29-17\processed_0512343469_anadarko_w		
Dataset Pathname	pass4		
Dataset Creation	Fri Dec 29 12:20:23 2017		
Multifinger Imaging Tool Calibration Report			
Serial Number:		10012912	
Number of Fingers:		40	
Tool Model:		UW_MIT40_042	
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:		Fri Dec 29 11:09:13 2017				
Ring size:	4	5	6	7		
(in)						
	Sens	Sens	Sens			
Finger 01:	1065 340.0	1405 395.0	1800 405.0	2205		
Finger 02:	1206 347.0	1553 396.0	1949 397.0	2346		
Finger 03:	1079 355.0	1434 413.0	1847 424.0	2271		
Finger 04:	1113 349.0	1462 402.0	1864 414.0	2278		
Finger 05:	1120 354.0	1474 400.0	1874 417.0	2291		
Finger 06:	1111 357.0	1468 408.0	1876 416.0	2292		
Finger 07:	1098 362.0	1460 406.0	1866 418.0	2284		
Finger 08:	1130 357.0	1487 397.0	1884 417.0	2301		
Finger 09:	1115 361.0	1476 399.0	1875 412.0	2287		
Finger 10:	1124 362.0	1486 395.0	1881 414.0	2295		
Finger 11:	1124 363.0	1487 389.0	1876 408.0	2284		

Finger 11:	1121	368.0	1487	388.0	1876	414.0	2290
Finger 12:	1127	361.0	1488	388.0	1876	414.0	2290
Finger 13:	1138	363.0	1501	381.0	1882	402.0	2284
Finger 14:	1133	365.0	1498	390.0	1888	420.0	2308
Finger 15:	1079	376.0	1455	400.0	1855	431.0	2286
Finger 16:	1092	369.0	1461	401.0	1862	429.0	2291
Finger 17:	999	355.0	1354	383.0	1737	433.0	2170
Finger 18:	1134	373.0	1507	377.0	1884	415.0	2299
Finger 19:	1103	371.0	1474	385.0	1859	419.0	2278
Finger 20:	1091	373.0	1464	393.0	1857	430.0	2287
Finger 21:	1093	377.0	1470	389.0	1859	412.0	2271
Finger 22:	1069	375.0	1444	394.0	1838	431.0	2269
Finger 23:	1019	374.0	1393	403.0	1796	443.0	2239
Finger 24:	1102	371.0	1473	380.0	1853	401.0	2254
Finger 25:	1040	373.0	1413	401.0	1814	441.0	2255
Finger 26:	1165	355.0	1520	371.0	1891	397.0	2288
Finger 27:	1098	365.0	1463	392.0	1855	422.0	2277
Finger 28:	1130	357.0	1487	381.0	1868	406.0	2274
Finger 29:	1061	361.0	1422	401.0	1823	426.0	2249
Finger 30:	1089	357.0	1446	394.0	1840	419.0	2259
Finger 31:	1124	352.0	1476	393.0	1869	409.0	2278
Finger 32:	1189	379.0	1568	416.0	1984	435.0	2419
Finger 33:	1176	351.0	1527	380.0	1907	391.0	2298
Finger 34:	1113	354.0	1467	405.0	1872	419.0	2291
Finger 35:	988	325.0	1313	385.0	1698	407.0	2105
Finger 36:	1083	350.0	1433	407.0	1840	422.0	2262
Finger 37:	1128	348.0	1476	404.0	1880	407.0	2287
Finger 38:	1148	347.0	1495	389.0	1884	396.0	2280
Finger 39:	1161	342.0	1503	389.0	1892	397.0	2289
Finger 40:	1111	351.0	1462	405.0	1867	413.0	2280

Segmented Cement Bond Log Calibration Report						
Serial Number:			10022773			
Tool Model:			UW_RBT_004			
Calibration Casing Diameter:			7.000	in		
Calibration Depth:			-76.502	ft		

Master Calibration, performed Fri Dec 29 11:27:31 2017:						
	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3FT	0.002	0.773	0.800	62.165	79.638	0.606
5FT	-0.002	0.768	0.800	62.165	79.716	0.925
S1	0.002	0.769	0.000	100.000	130.427	-0.318
S2	0.001	0.788	0.000	100.000	127.133	-0.155
S3	0.002	0.788	0.000	100.000	127.264	-0.222
S4	0.001	0.788	0.000	100.000	127.085	-0.186
S5	0.002	0.776	0.000	100.000	129.185	-0.279
S6	0.001	0.765	0.000	100.000	130.877	-0.171
S7	0.002	0.750	0.000	100.000	133.710	-0.326
S8	0.002	0.755	0.000	100.000	132.829	-0.281

Temperature Calibration Report					
Serial Number:			10025097		
Tool Model:			PRT_016		
Performed:			Sun Oct 11 12:34:58 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

## 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



<b>Company</b>	Kerr-McGee Oil & Gas Onshore, L.P.
<b>Well</b>	Wagner 28N-E10HZ
<b>Field</b>	Wattenberg
<b>County</b>	Weld
<b>State</b>	Colorado