



**Weatherford®**

**4 3/4 in. WeatherfordM/LWD™**  
**Spectral Gamma Ray**  
**5 in. MEASURED DEPTH**  
**RECORDED DATA**  
**FINAL PRINT**

Company: Anadarko Petroleum Corp.  
Well: Sparboe 27C-26 HZ  
Field: Wattenburg  
Rig: Xtreme 23  
County: Weld

COMPANY Anadarko Petroleum Corp.  
WELL Sparboe 27C-26 HZ  
FIELD Wattenburg  
RIG Xtreme 23  
COUNTY Weld STATE Colorado  
API # 05-123-36247

Location	
Latitude: 40.08845° N	X = 3,243,920 ft
Longitude: 104.62819° W	Y = 1,276,264
Mag Decl: 8.60°	
Mag Dip: 66.74°	

Other Services: DIR/SAGR/MFR

Permanent Datum: <u>Mean Sea Level</u>	
Log Measured From: <u>Drill Floor</u>	Elev: <u>4985 ft</u> above perm. datum
Depth Reference: <u>Drillers Tally</u>	Total Depth: <u>17129 ft</u>
Depth Logged: <u>6602 ft</u>	Runs: <u>4</u>
Date Logged: <u>19-Mar-13</u> to <u>2-Apr-05</u>	Spud Date: <u>17-Mar-13</u>

Elevation	
K.B.	Top Drive
G.L.	4969 ft
D.F.	4985 ft
W.D.	N/A

Borehole Record			Casing Record			
Hole Size	From	To	Size	Weight	From	To
8.750 in	6645 ft	7650 ft	7.000 in	26.0 lb/ft	Surface	7638 ft
6.125 in	7650 ft	17129 ft				

Borehole Deviation Record			Mud Record			
Hole Size	Min. Inc.	Max. Inc.	Type	Weight	From	To
8.750 in	0.14°	92.17°	WBM	8.80 - 9.20 ppq	1800 ft	7650 ft
6.125 in	87.28°	93.64°	OBM	9.40 - 10.50 ppq	7650 ft	17129 ft

**All interpretations of log data are opinions based on inferences from electrical or other measurements. Weatherford International does not guarantee the accuracy or correctness of any interpretation or recommendation and we shall not be liable or responsible for any loss, cost, damages or expenses incurred or sustained by anyone resulting from any interpretation or recommendation made by any of our employees or agents.**

Run Summary							
M/LWD Run Number		1	2	3	4		
Bit Size	in.	8.750	8.750	6.125	6.125		
Bit Type		PDC	PDC	PDC	PDC		
Bit TFA	sq.in.	1.240	1.530	0.980	1.243		
Bit Start Depth	ft	1800	6645	7650	12251		
Bit End Depth	ft	6569	7650	12251	17129		
Top Log Interval	ft	N/A	6602	7595	12174		
Bottom Log Interval	ft	N/A	7606	12171	17129		
Begin Log Time	hrs	N/A	7:07	16:30	6:17		
Begin Log Date	DD-MMM-YY	N/A	19-Mar-13	25-Mar-13	30-Mar-13		
End Log Time	hrs	N/A	10:35	7:28	18:45		
End Log Date	DD-MMM-YY	N/A	21-Mar-13	29-Mar-13	2-Apr-13		
Drill or Wipe		N/A	Drill	Wipe/Drill	Wipe/Drill		
Flow Rate	gal/min	600	600	300	268		
Max AV / CV @ MWD	ft/min	541 / 99	458 / 334	465 / 429	419 / 449		
Min Inc @ Depth	deg @ ft	0.14 @ 6243	0.63 @ 6585	87.28 @ 12180	87.59 @ 12520		
Max Inc @ Depth	deg @ ft	7.60 @ 4450	92.17 @ 75.90	93.64 @ 11838	92.04 @ 12776		
MUD DATA							
Depth	ft	5878	7460	9800	17129		
Fluid Type		Water	Water	OBM	OBM		
Mud Weight	ppg	8.60	9.90	9.60	10.50		
Plastic Viscosity	cP	1	12	20	20		
Solids / Sand	%	1.7 / 0.3	9.2 / 0.3	9.6 / 0.3	15.7 / 1.3		
NaCl Equiv. Chlorides	ppm	3135	3960	102300	56100		
pH		8.8	8.8	OBM	OBM		
Oil:Water Ratio	% Vol	1.7 : 98.3	10.0 : 90.0	72.0 : 28.0	82.0 : 18.0		
Rm @ Temperature	ohm-m @ deg F	N/A	N/A	OBM	OBM		
Rmc @ Temperature	ohm-m @ deg F	N/A	N/A	OBM	OBM		
Rmf @ Temperature	ohm-m @ deg F	N/A	N/A	OBM	OBM		
KCl	% Vol	0	0	0	0		
Client Representative		R. McPeters	R. McPeters	D. Bell	D. Bell		
WeatherfordLWD Engineer		D. Palmer	D. Palmer	A. Danna	M. Nguyen		

## EQUIPMENT SUMMARY

M/LWD Run Number	1	2	3	4	
MWD/HEL Serial Number	CP130111PDYBG-TO3	CP130111PDYBG-TO3	NW130771PDBBI4.75	NW130771PDBBI4.75	
MFR Serial Number	N/A	N/A	NW130770RSBK4.75	NW130770RSBK4.75	
SAGR Serial Number	N/A	N/A	NW130772JS4.75	NW130772JS4.75	
<b>Sensor to Bit Offsets / Acquisition Rates</b>					
Directional	ft / sec	57.08 / RT	57.22 / RT	53.49 / RT	51.42 / RT
Gamma Ray	ft / sec	42.87 / 10	43.01 / 10	38.64 / 5	70.18 / 5
Resistivity	ft / sec	N/A	N/A	81.82 / 10	79.75 / 10
<b>Other Information</b>					
Total BHA Length	ft	1003.57	1003.57	4493.81	4493.81
BHA Assembly Type		Steerable	Steerable	Steerable	Steerable
Stabilizer Location	ft	2.51	2.49	34.02	34.02
Stabilizer Location	ft	80.75	80.75	102.87	102.87
Run Circulating Time	hr	10.04	25.77	78.42	72.57
Run Drilling Time	hr	2.24	12.88	43.20	37.74

## MUD SUMMARY

Date and Time	Run	Bit Depth	Mud Weight	% K	Rm @ Temp	Rmf @ Temp	Rmc @ Temp	BHCT
19 Mar 13 @ 00:30	01	5878 ft	8.60 ppg	0	N/A	N/A	N/A	136 F
21 Mar 13 @ 00:30	02	7460 ft	9.90 ppg	0	N/A	N/A	N/A	164 F
27 Mar 13 @ 00:30	03	9800 ft	9.60 ppg	0	OBM	OBM	OBM	235 F
02 Apr 13 @ 03:00	04	17129 ft	10.50 ppg	0	OBM	OBM	OBM	245 F

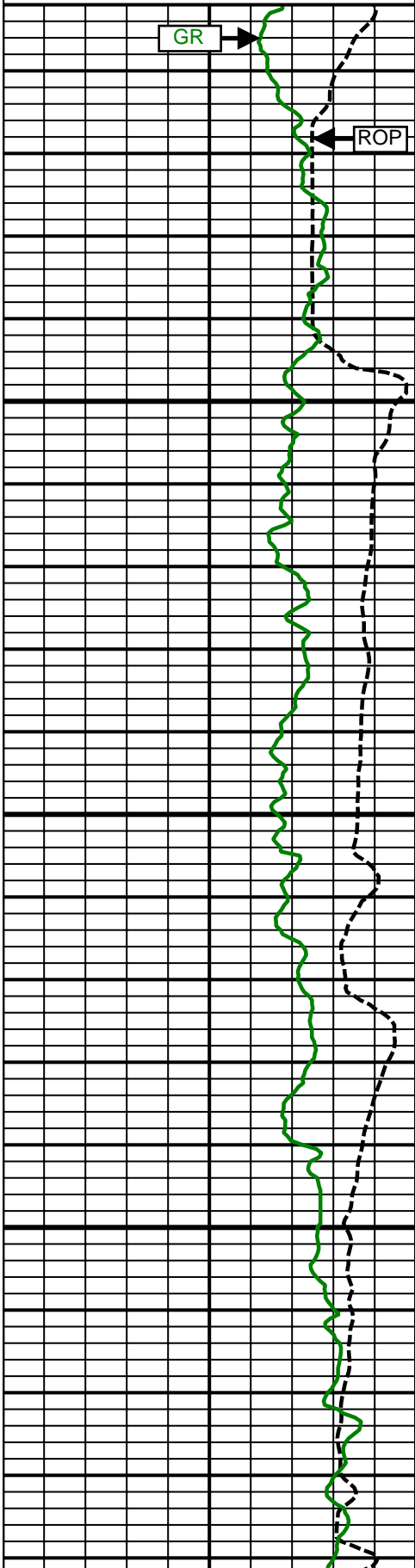
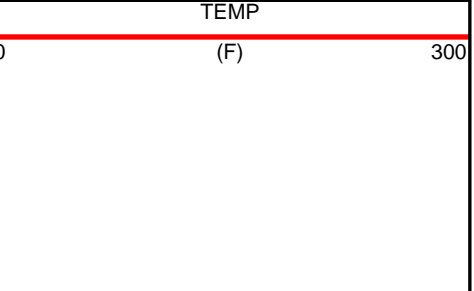
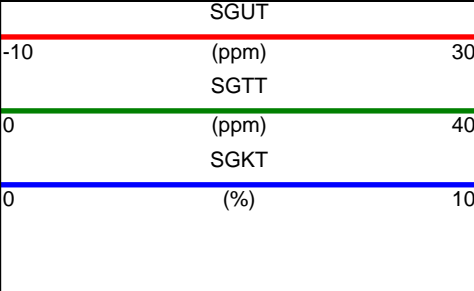
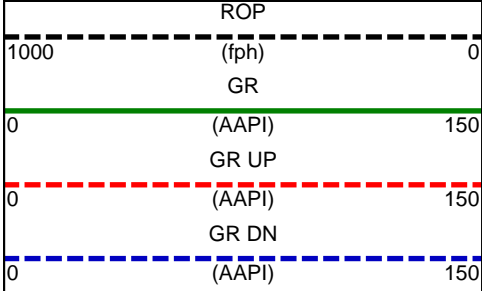
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Run Number: 1 :: RECORDED DATA LOG			
WFT Services Provided:			
Recorded and Real Time Logging: Gamma Ray and Temperature.			
Directional Services: On demand Inclination and Azimuth.			
Borehole and Environmental Correction:			
Hole Size:	8.750 in.	Gamma Ray: Hole size, mudweight, Collar O.D., Collar I.D. and K1 factor.	
Mud Weight:	9.80 ppg	Collar O.D.:	6.750 in.
K1 Factor:	3.179	Collar I.D.:	3.250 in.
Run Number: 2 :: RECORDED DATA LOG			
WFT Services Provided:			
Recorded and Real Time Logging: Gamma Ray and Temperature.			
Directional Services: On demand Inclination and Azimuth.			
Borehole and Environmental Correction:			
Hole Size:	8.750 in.	Gamma Ray: Hole size, mudweight, Collar O.D., Collar I.D. and K1 factor.	
Mud Weight:	9.90 ppg	Collar O.D.:	6.750 in.
K1 Factor:	3.179	Collar I.D.:	3.250 in.
Run Number: 3 :: RECORDED DATA LOG			
WFT Services Provided:			
Recorded and Real Time Logging: Gamma Ray, Deep, Medium and Shallow Resistivity, and Temperature.			
Directional Services: On demand Inclination and Azimuth.			
Borehole and Environmental Correction:			
Hole Size:	6.125 in.	Gamma Ray: Corrected for mud weight, hole size and KCl concentration.	
Mud Weight:	9.60 ppg	Resistivities: Corrected for borehole temperature, hole size, drilling fluid resistivity	
Borehole Temperature:	235° F	and dielectric correction.	
Drilling Fluid Resistivity:	OBM (500 ohm-m)		
KCl Concentration:	0%		
Run Number: 4 :: RECORDED DATA LOG			
WFT Services Provided:			
Recorded and Real Time Logging: Gamma Ray, Deep, Medium and Shallow Resistivity, and Temperature.			
Directional Services: On demand Inclination and Azimuth.			
Borehole and Environmental Correction:			
Hole Size:	6.125 in.	Gamma Ray: Corrected for mud weight, hole size and KCl concentration.	
Mud Weight:	10.50 ppg	Resistivities: Corrected for borehole temperature, hole size, drilling fluid resistivity	
Borehole Temperature:	245° F	and dielectric correction.	
Drilling Fluid Resistivity:	OBM (500 ohm-m)		
KCl Concentration:	0%		

M/LWD LOG COMMENTS	
Comment No. 1-1	No logging during this run.
Comment No. 2-1	RECORDED DATA LOG Start of M/LWD Drilling Run 02 Weatherford International provided 6 3/4 in. Directional, Gamma Ray, and Temperature for Run 02. Run 02 started formation drilling March 19, 2013 at 7:07 at 6645 MD / 6569 TVD. Weatherford International logged the 8.750 in. borehole. The WBM at the start of drilling was 9.90 ppg.
Comment No. 2-2	End of M/LWD Drilling Run 02 Run 02 ended drilling formation March 21, 2013 at 10:35 at 7650 MD / 7218 TVD. The OBM at the end of drilling was 9.90 ppg.
Comment No. 3-1	RECORDED DATA LOG Start of LWD Drilling Run 03 Weatherford International provided 4 3/4 in. Directional, Resistivity, Gamma Ray, and Temperature for Run 03. Run 03 started formation drilling March 25, 2013 at 16:30 at 7650 MD / 7218 TVD. Weatherford International logged the 6.125 in. borehole. The OBM at the start of drilling was 9.40 ppg.
Comment No. 3-2	End of LWD Drilling Run 03 Run 03 ended drilling formation March 29, 2013 at 07:28 at 12251 MD / 7213 TVD. The OBM at the end of drilling was 9.60 ppg.
Comment No. 4-1	RECORDED DATA LOG Start of LWD Drilling Run 04 Weatherford International provided 4 3/4 in. Directional, Resistivity, Gamma Ray, and Temperature for Run 04. Run 04 started formation drilling March 30, 2013 at 6:17 at 12251 MD / 7213 TVD. Weatherford International logged the 6.125 in. borehole. During this run, the Spectral Gamma Ray was providing inconsistent data. Spectral Gamma Ray inconsistent data started at 12300 MD / 7217 TVD. Azimuthal Gamma Ray was spliced in at 12300 MD / 7217 TVD. The OBM at the start of drilling was 9.60 ppg.
Comment No. 4-2	End of LWD Drilling Run 04 Run 04 ended drilling formation April 02, 2013 at 18:45 at 17129 MD / 7229 TVD. The OBM at the end of drilling was 10.50 ppg.

CURVE SPECIFICATIONS				
CURVE TYPE	MNEMONIC	UNITS	COMMENTS	CORRECTIONS
Rate of Penetration	ROP	fph	Rate of Penetration 3.0 ft window 0.5 ft Exponential Smoothing	None
Gamma Ray	GR	AAPI	Gamma Ray 3.0 ft window 0.5 ft Exponential Smoothing	See M/LWD Run Remarks
Potassium Concentration	SGKT	%	Potassium Concentration 3.0 ft window 0.5 ft Exponential Smoothing	
Uranium Concentration	SGUT	ppm	Uranium Concentration 3.0 ft window 0.5 ft Exponential Smoothing	
Thorium Concentration	SGTT	ppm	Thorium Concentration 3.0 ft window 0.5 ft Exponential Smoothing	
Temperature	TEMP	F	Recorded Borehole Tmperature 3.0 ft window 0.5 ft Exponential Smoothing	None



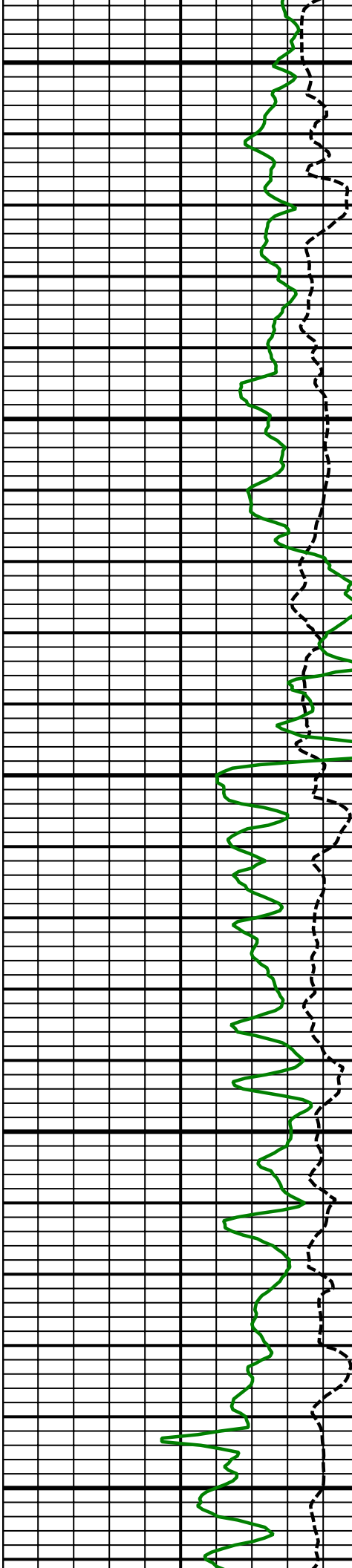
**5 Inch - Measured Depth**



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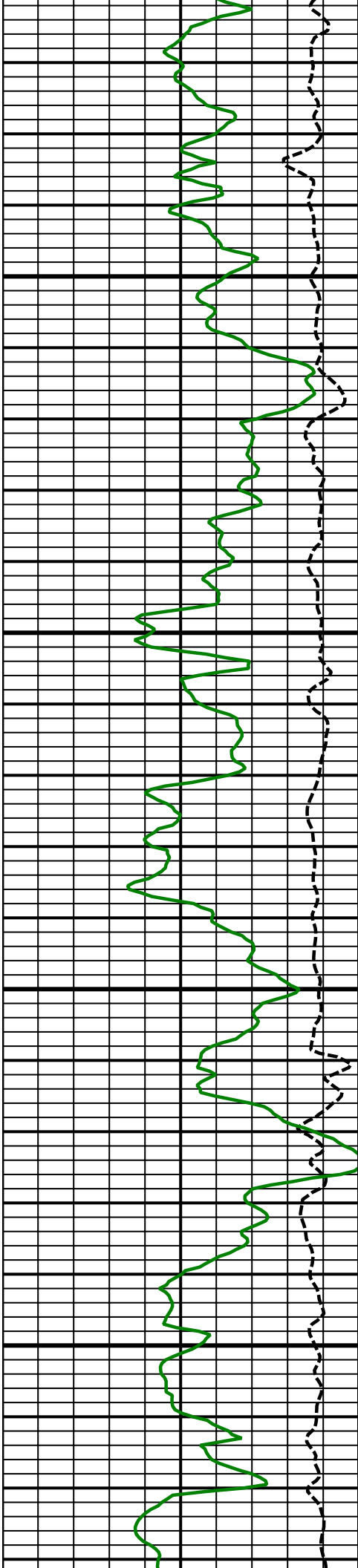
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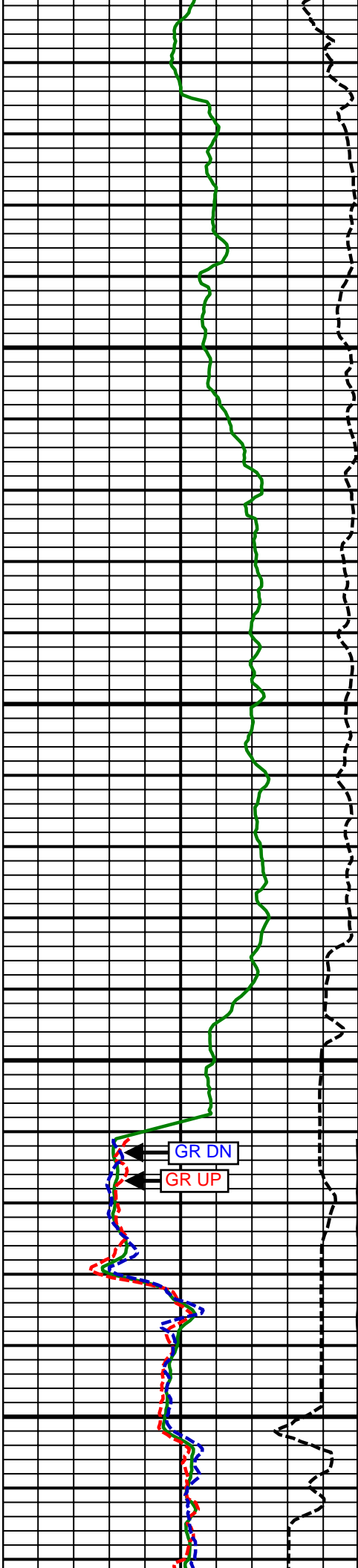
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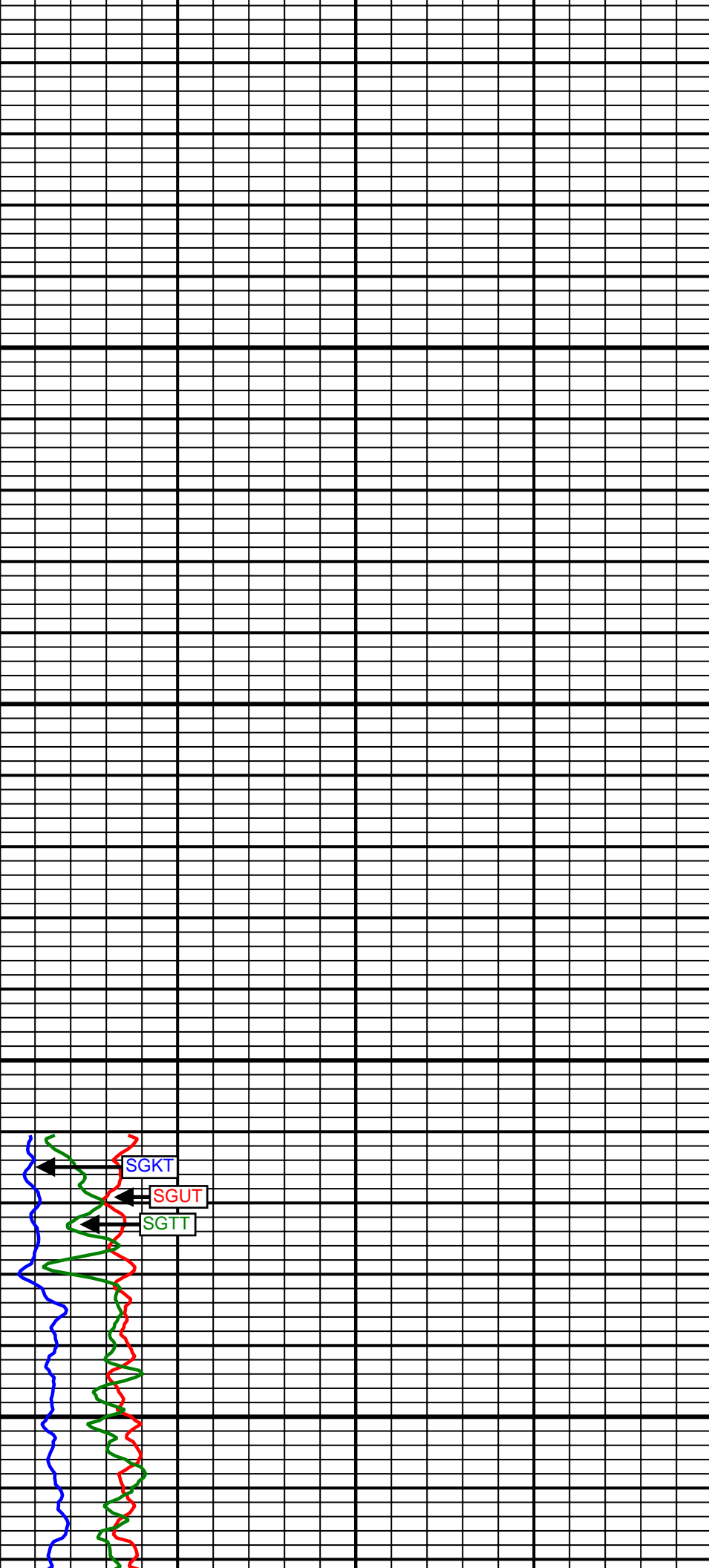


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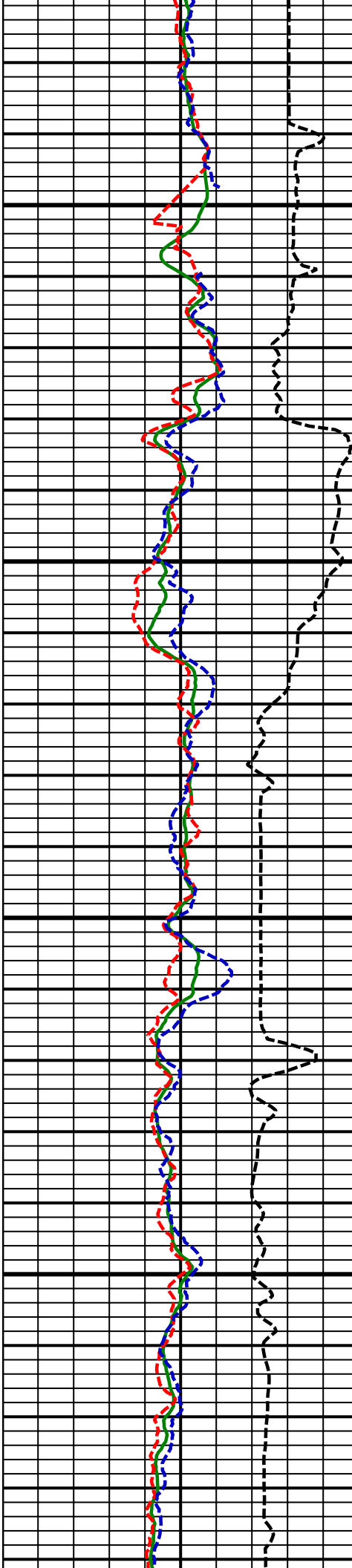
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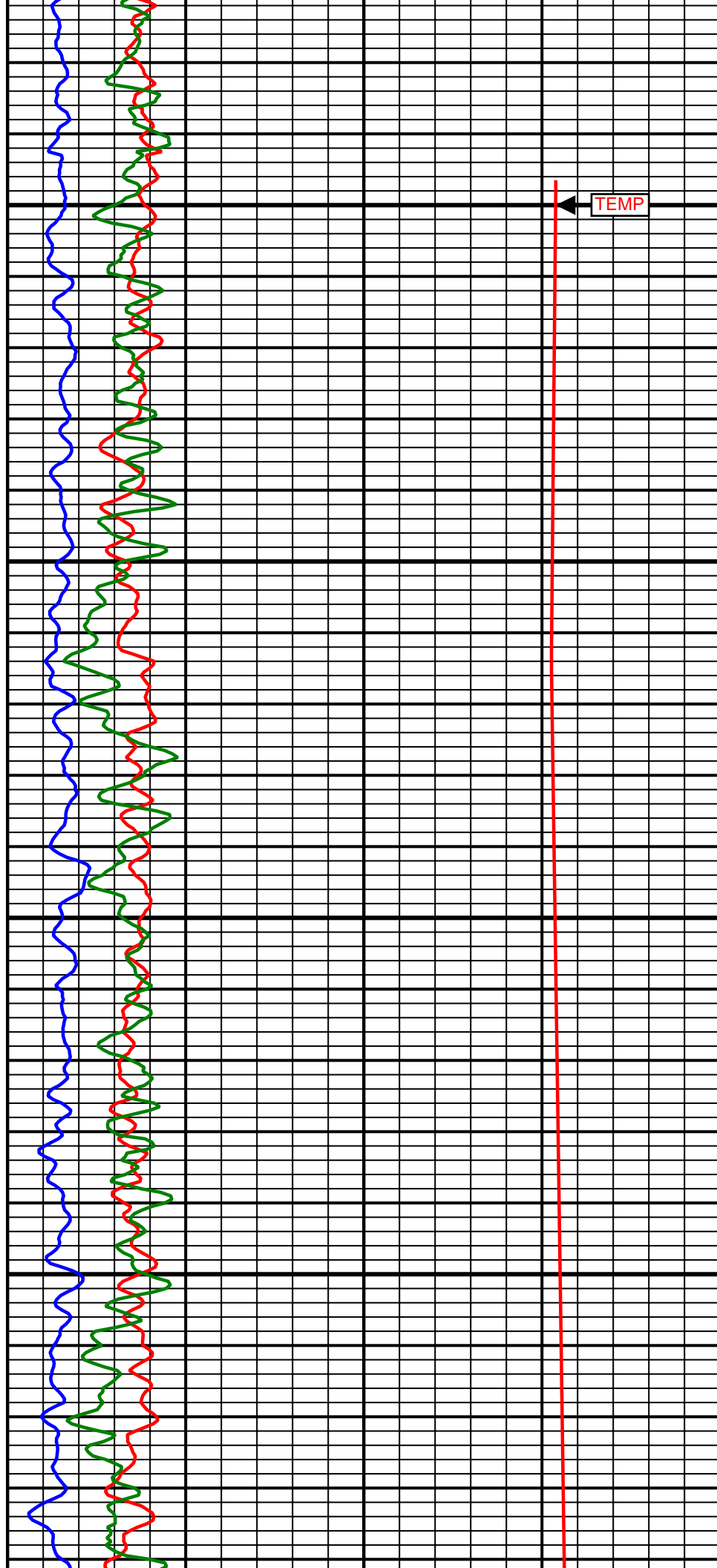
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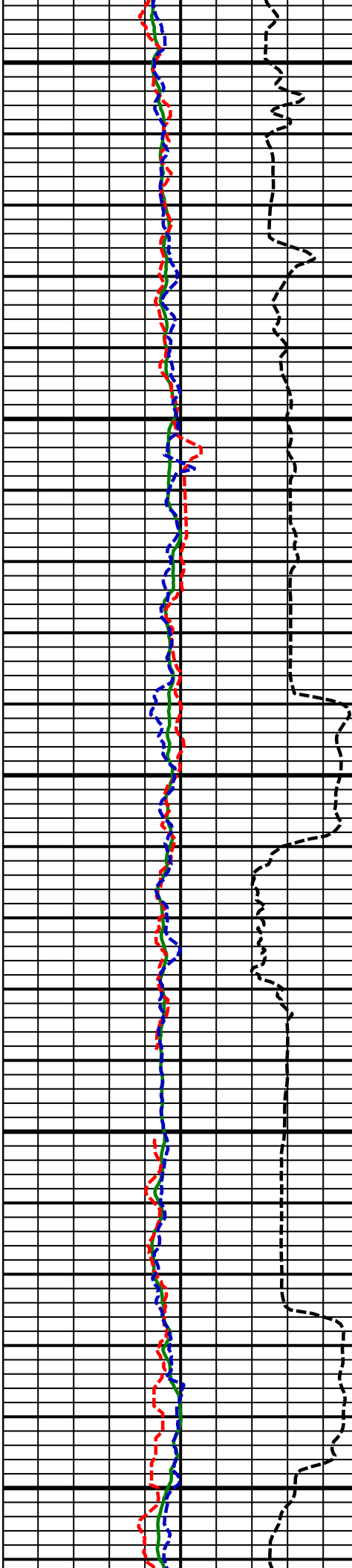
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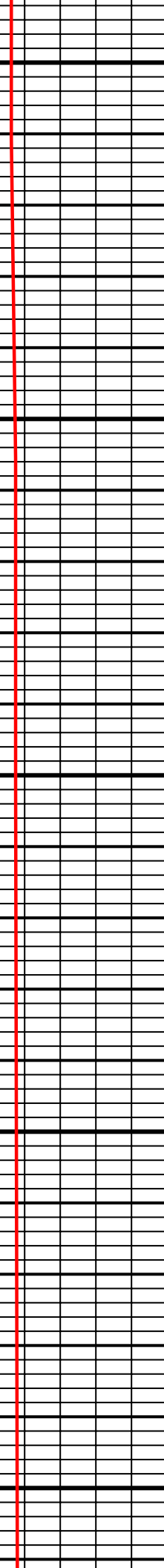
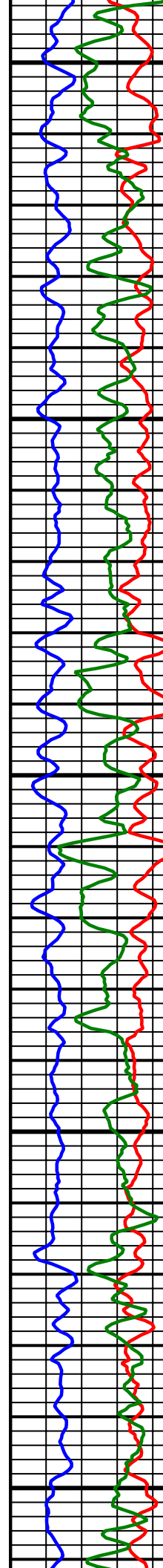




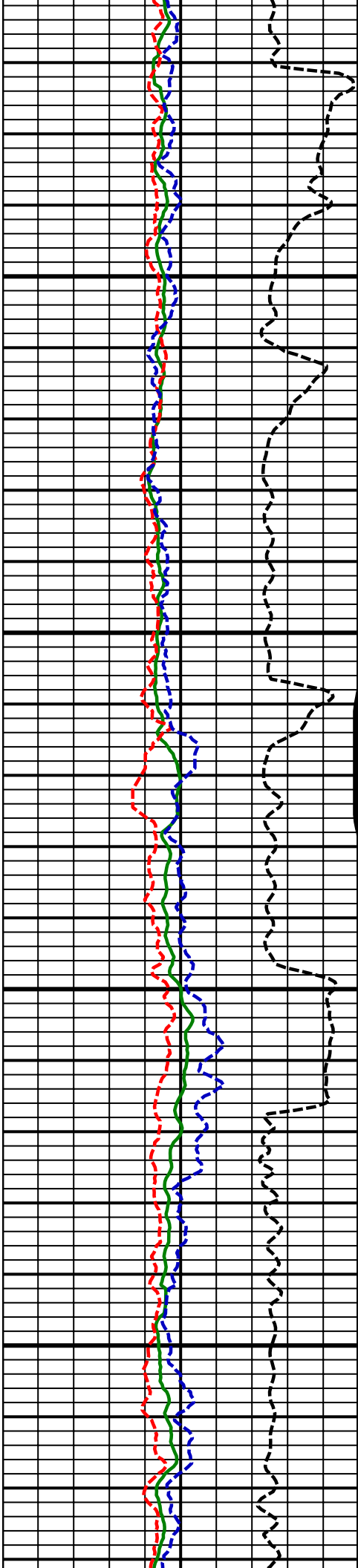
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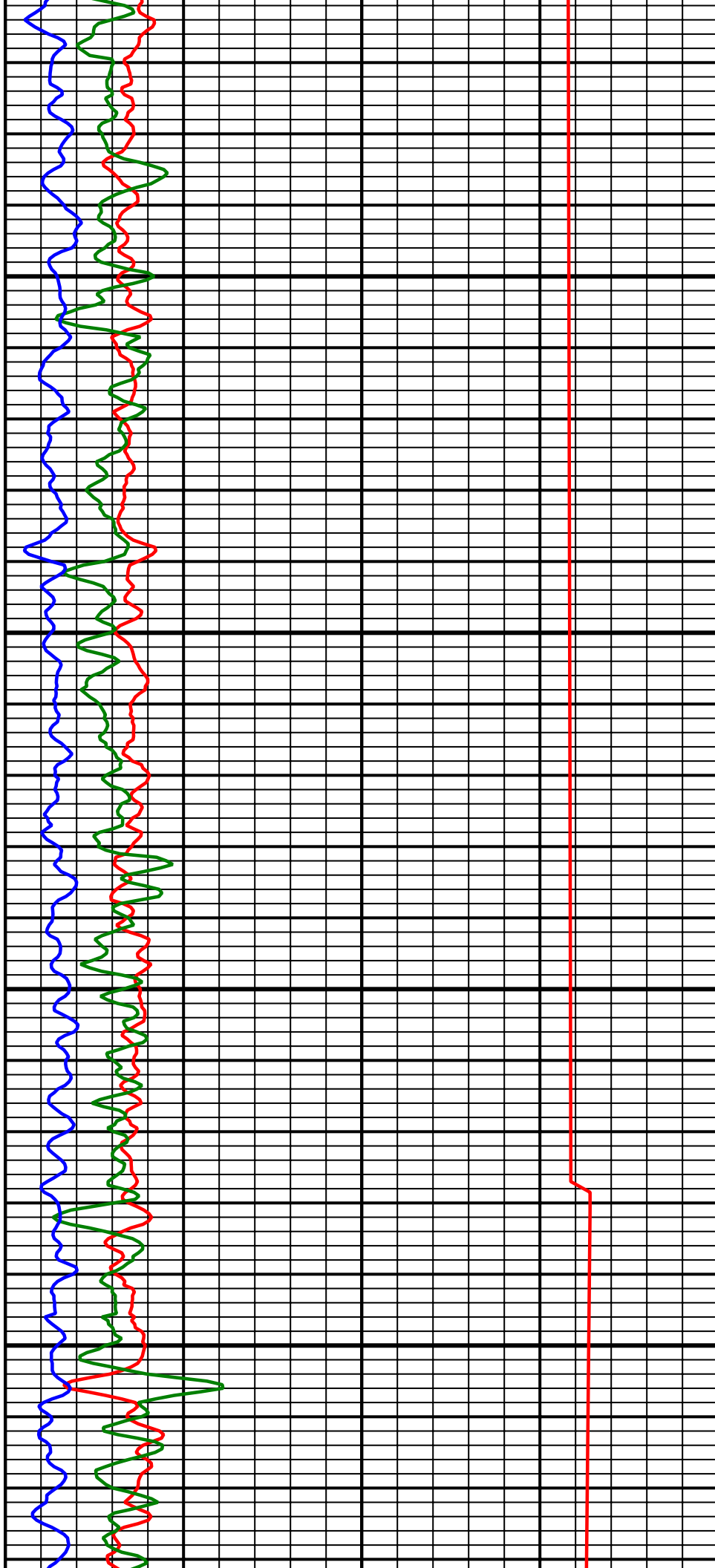


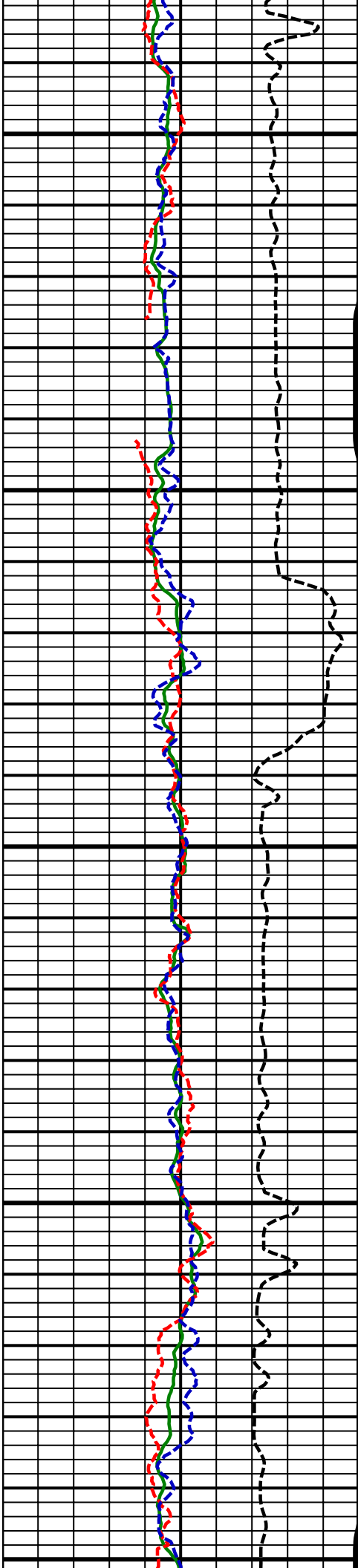




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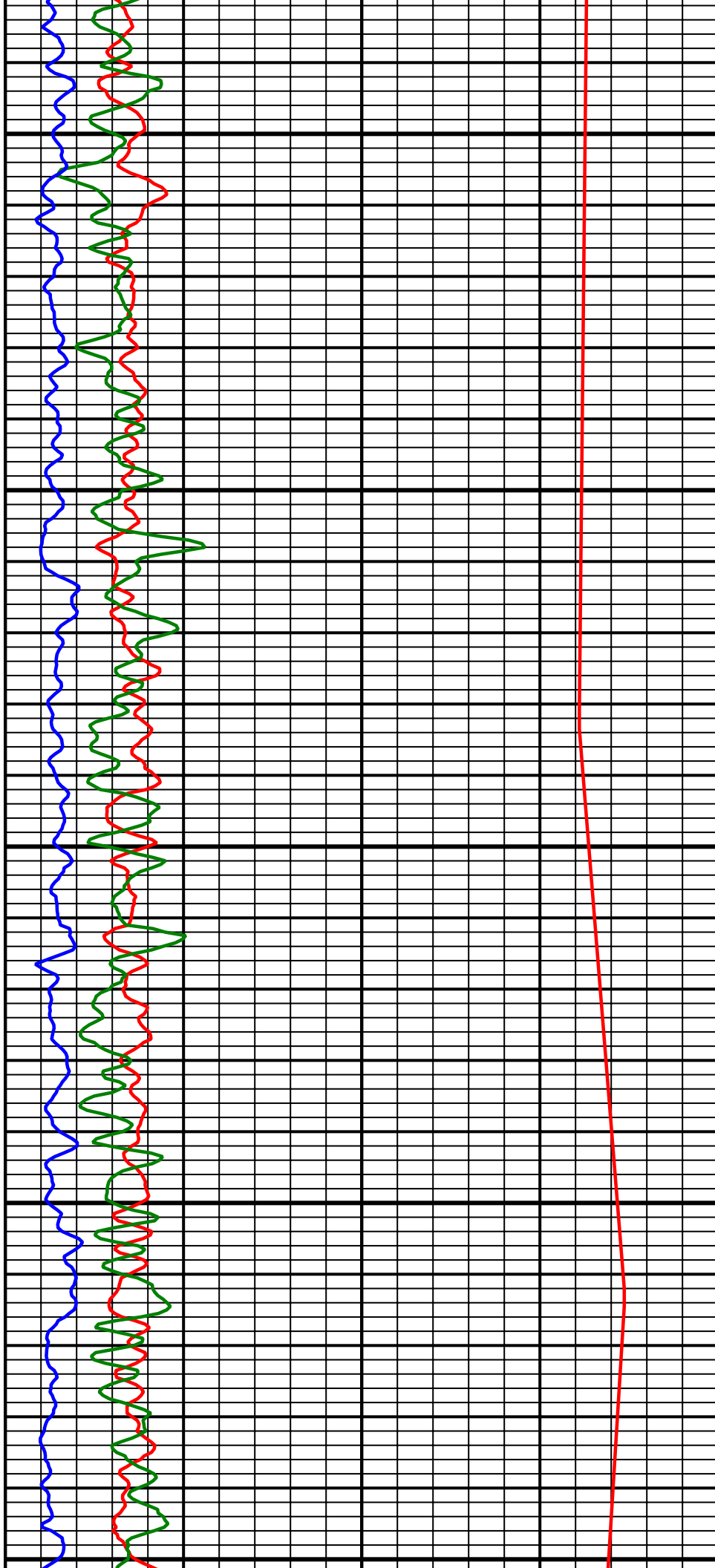
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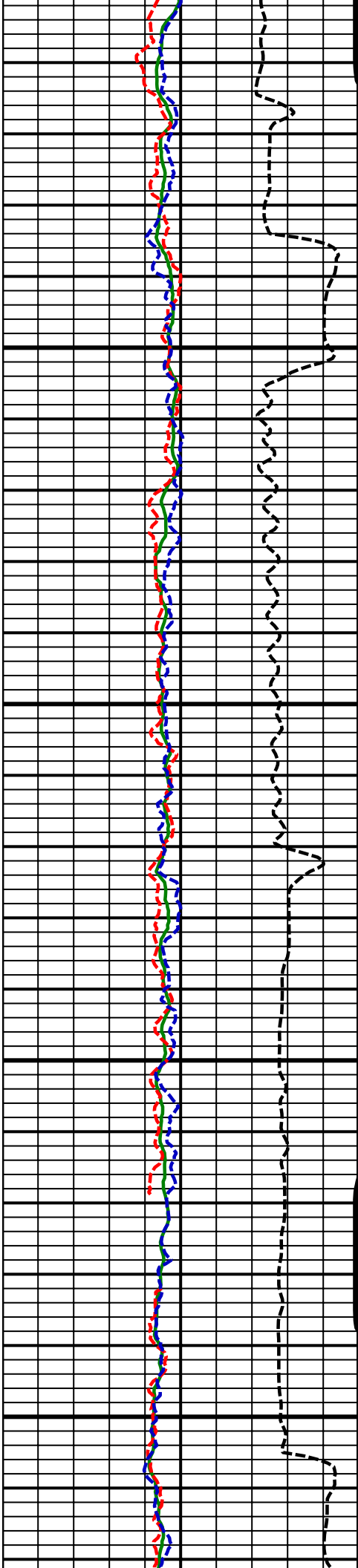




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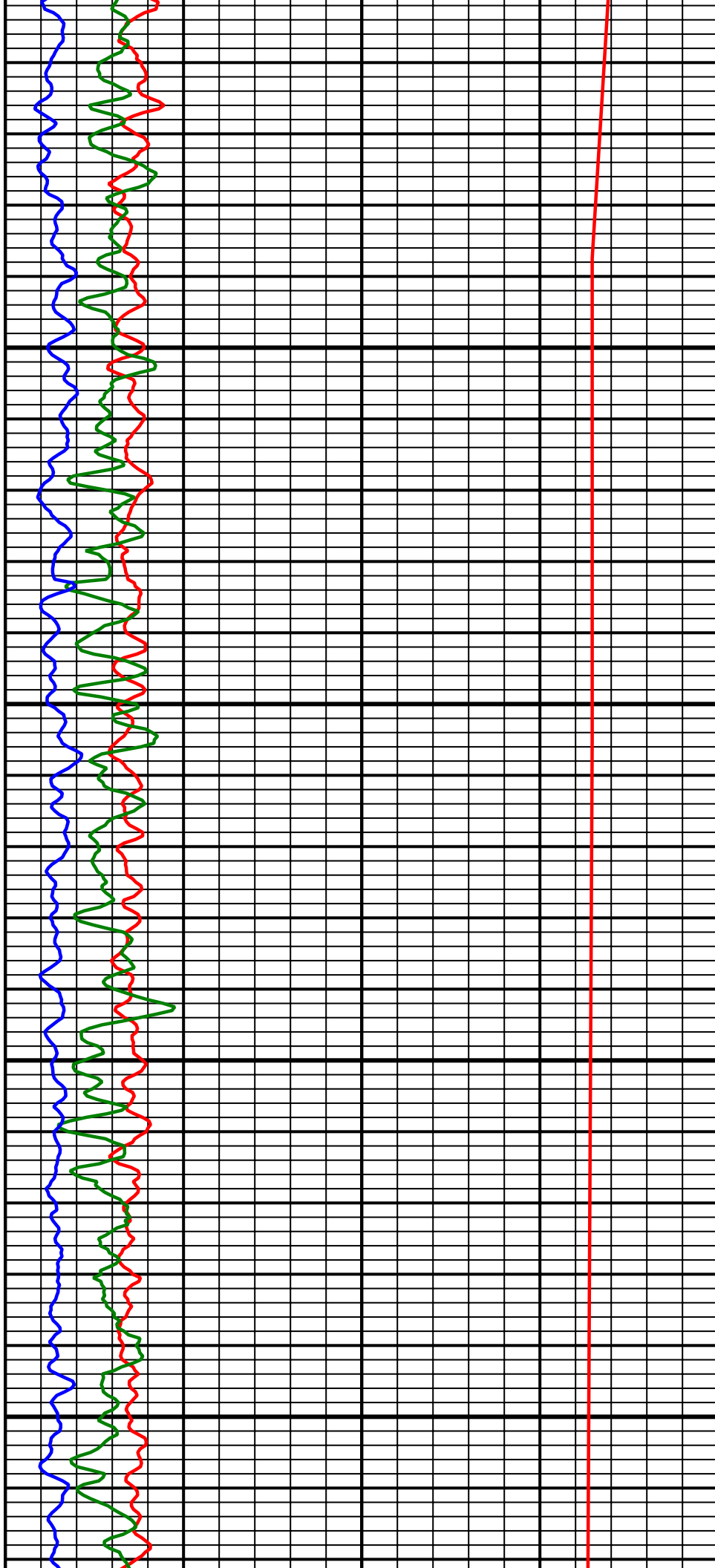
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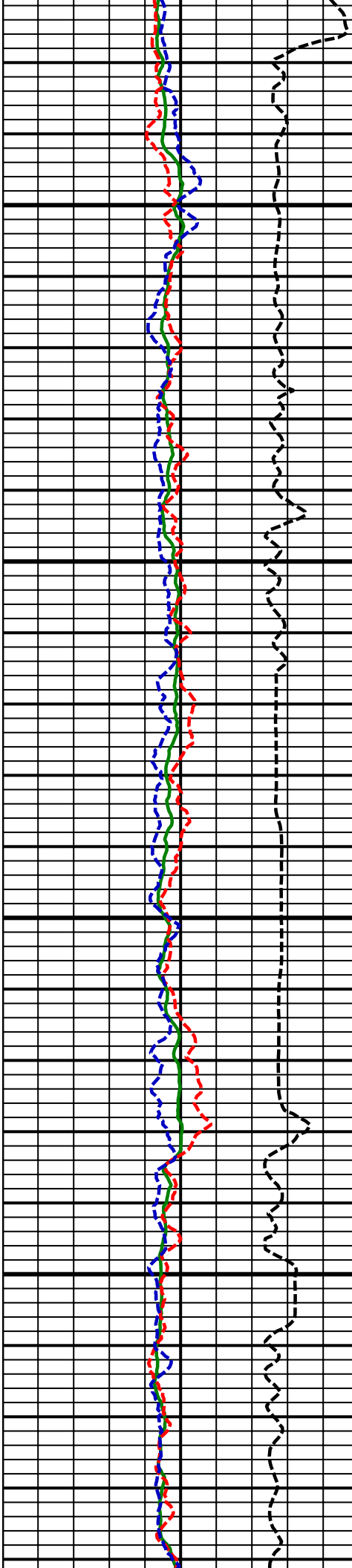




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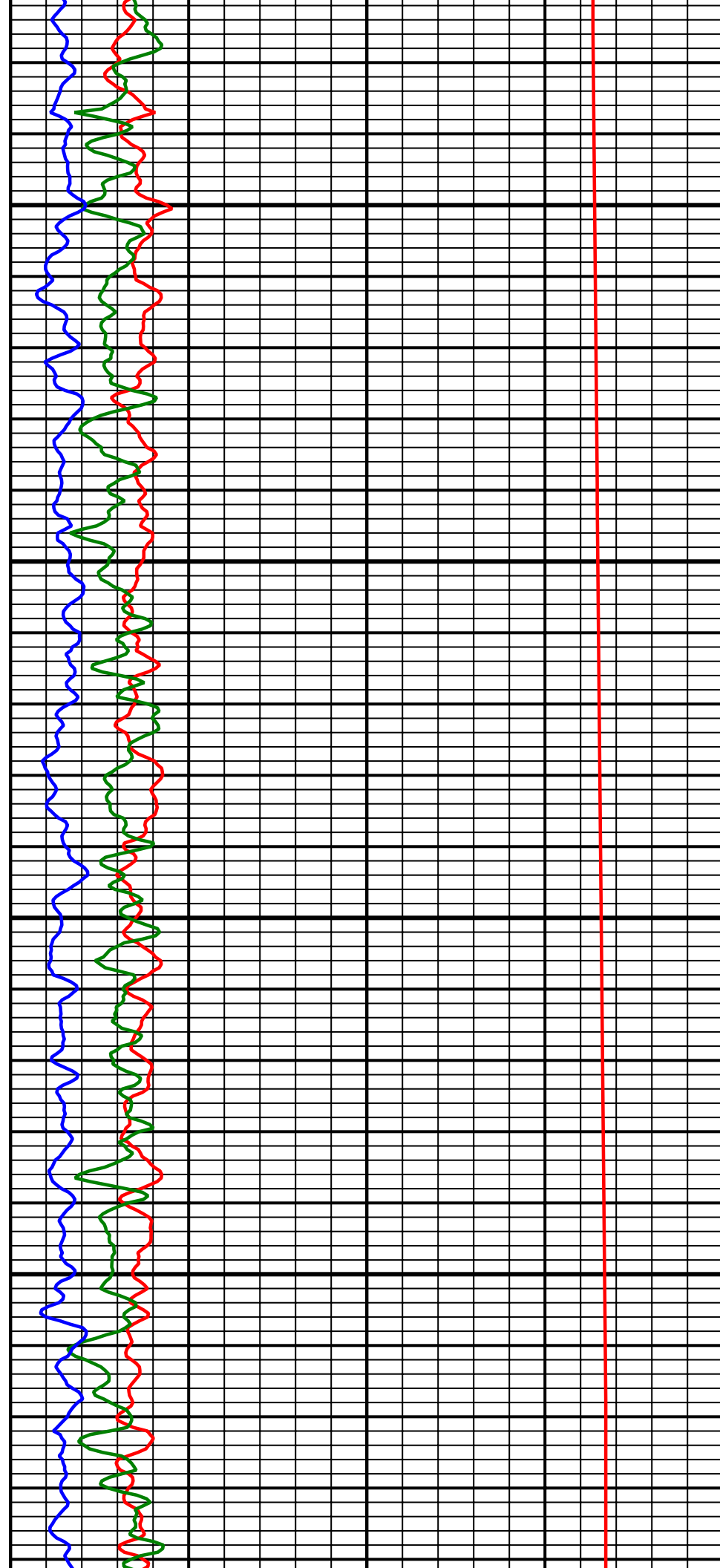
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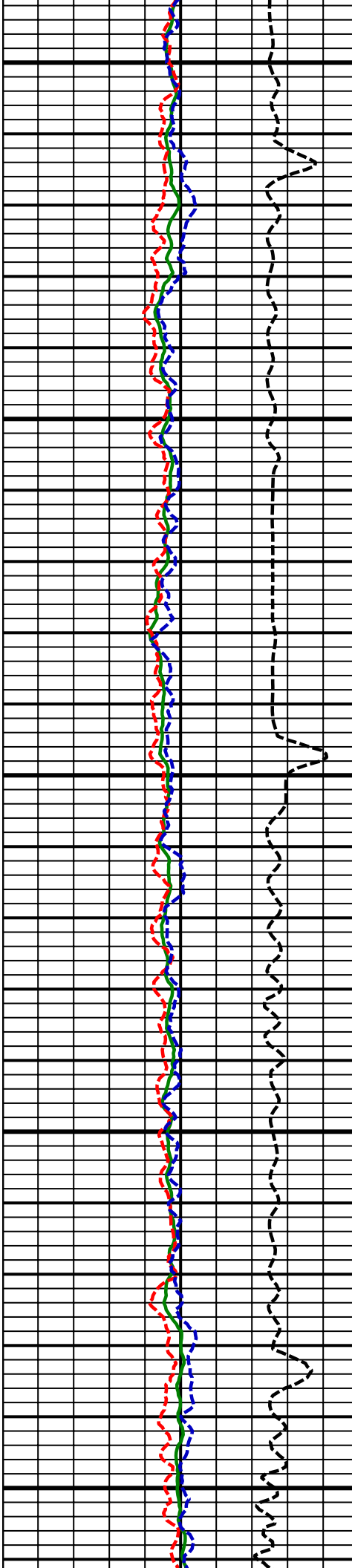




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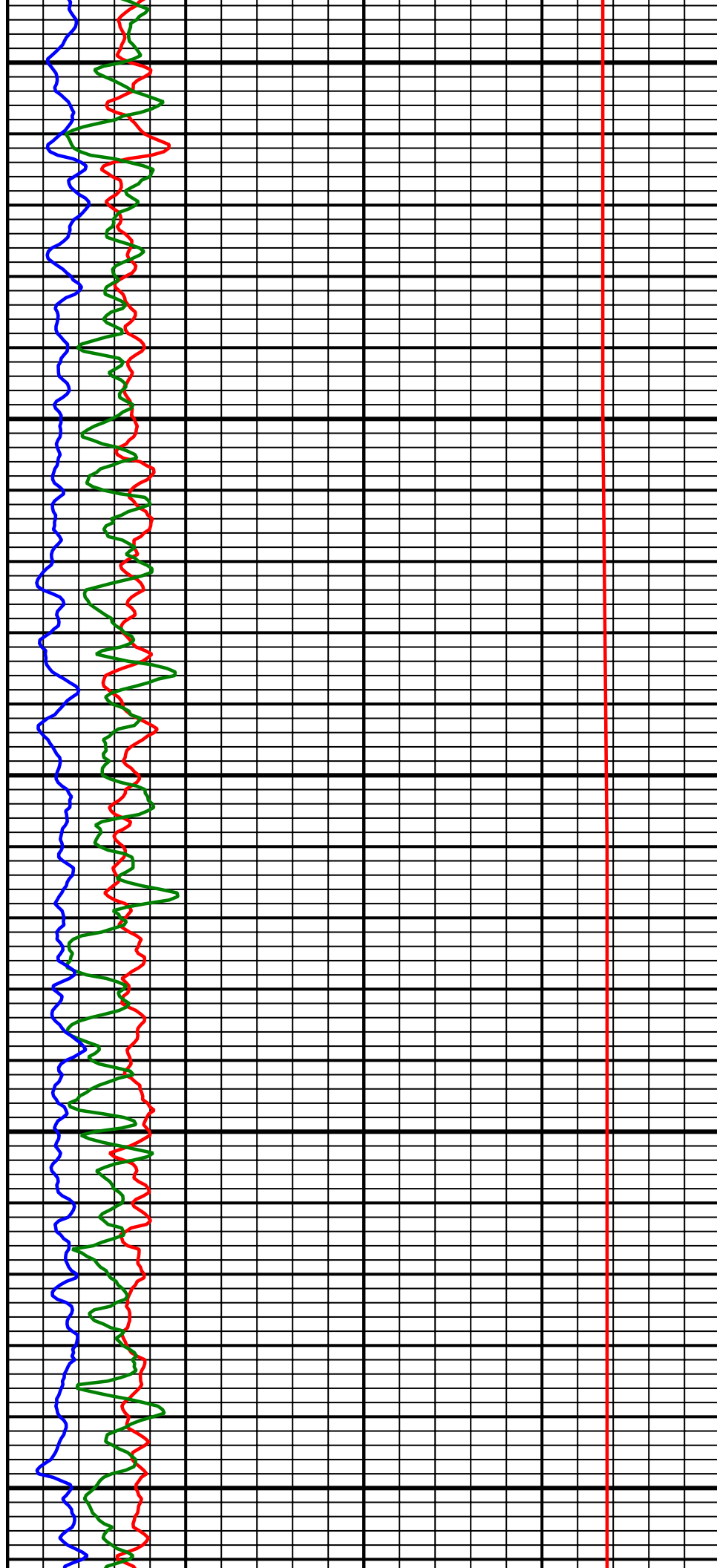


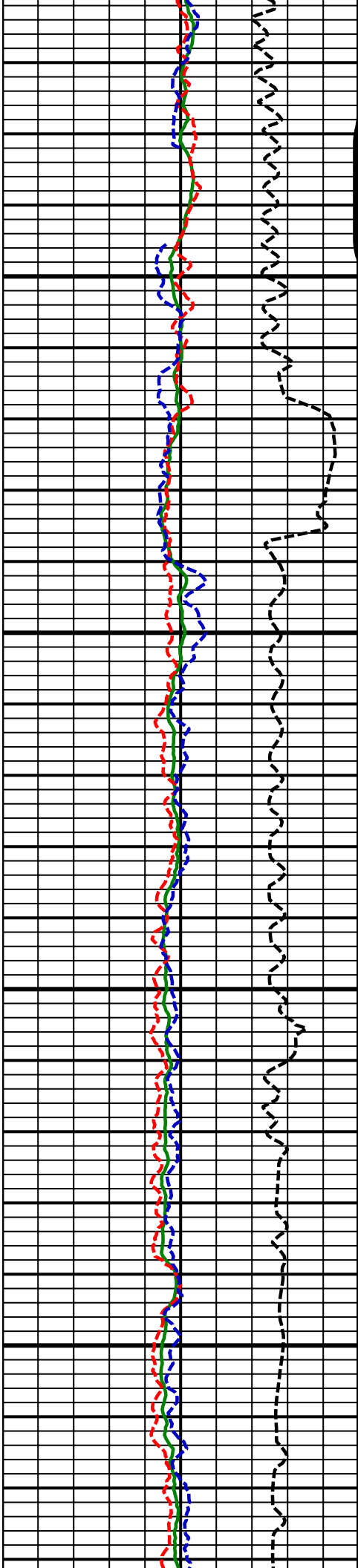


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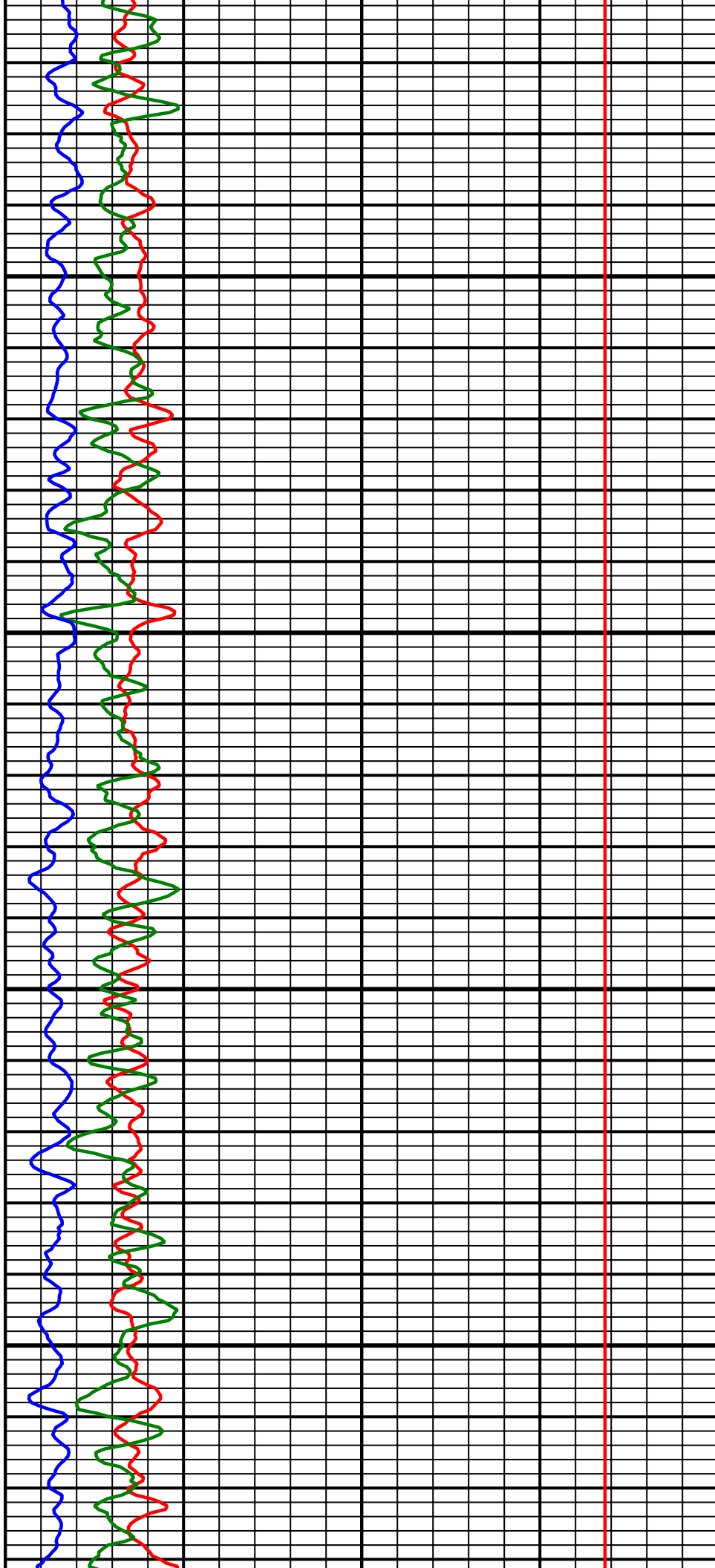
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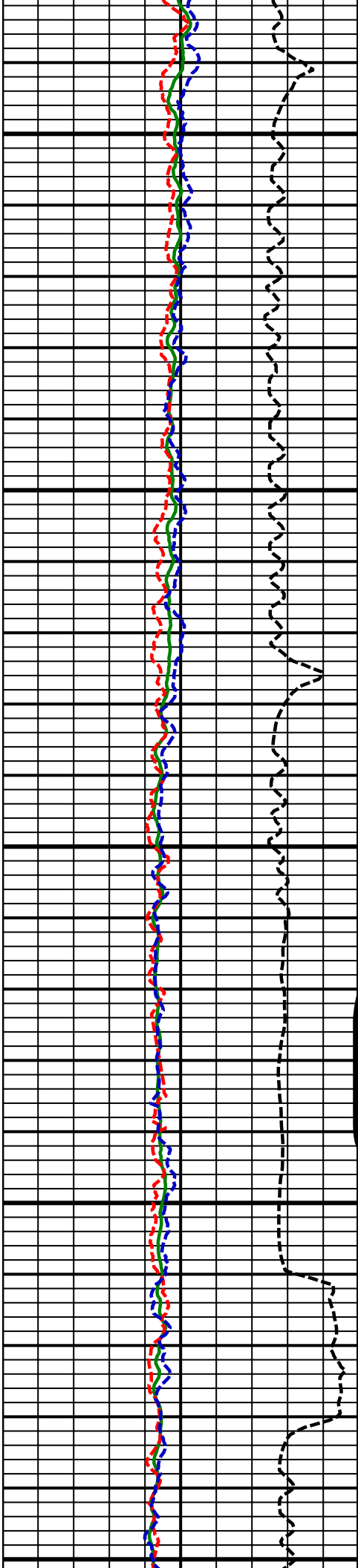




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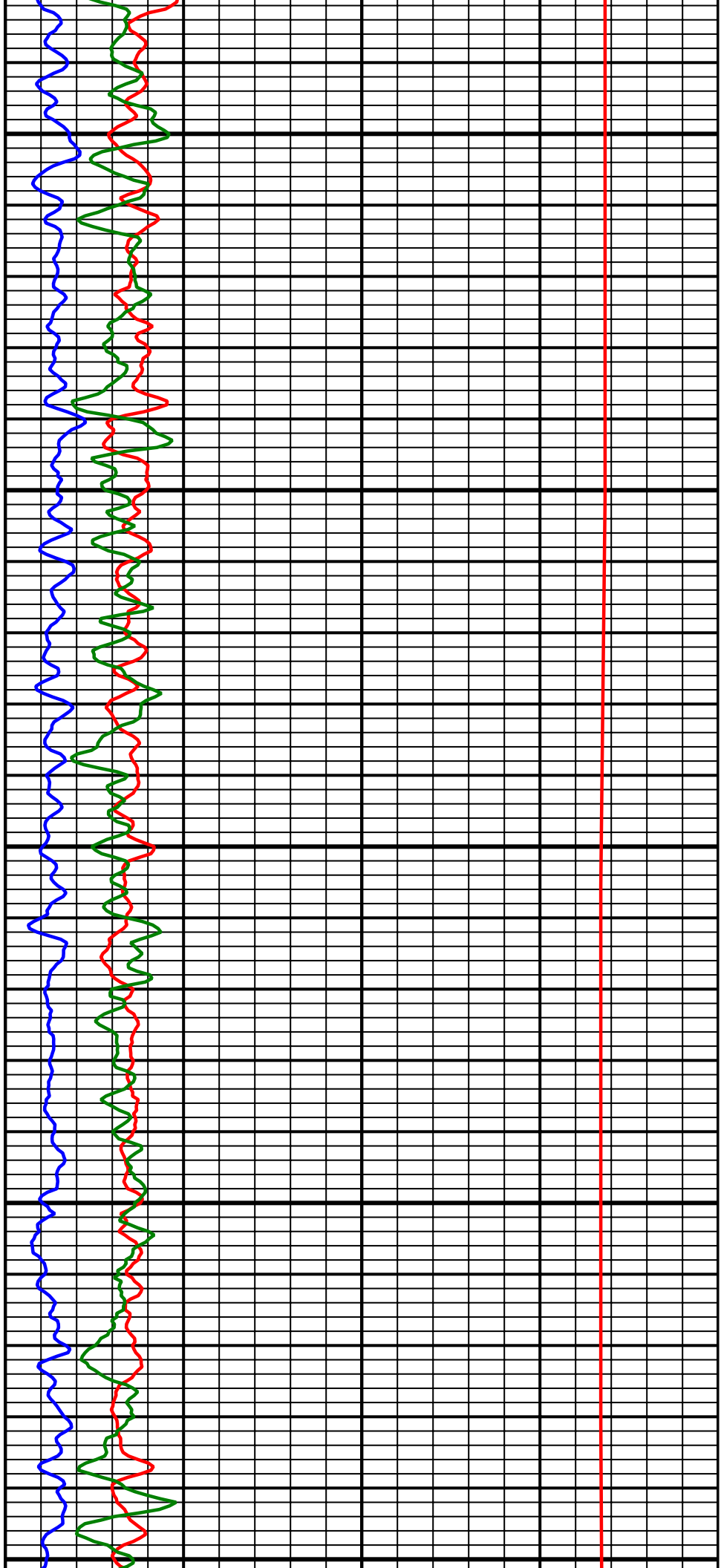
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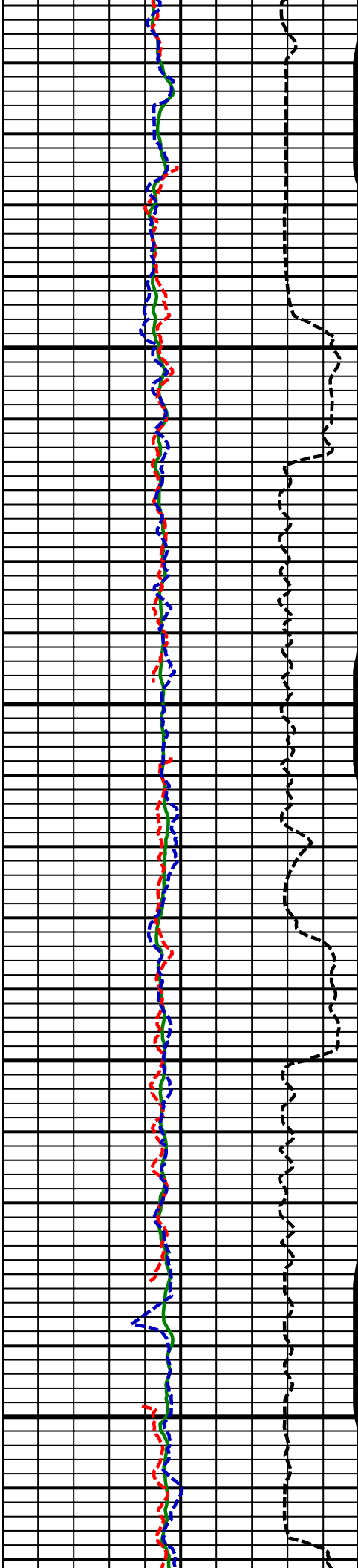




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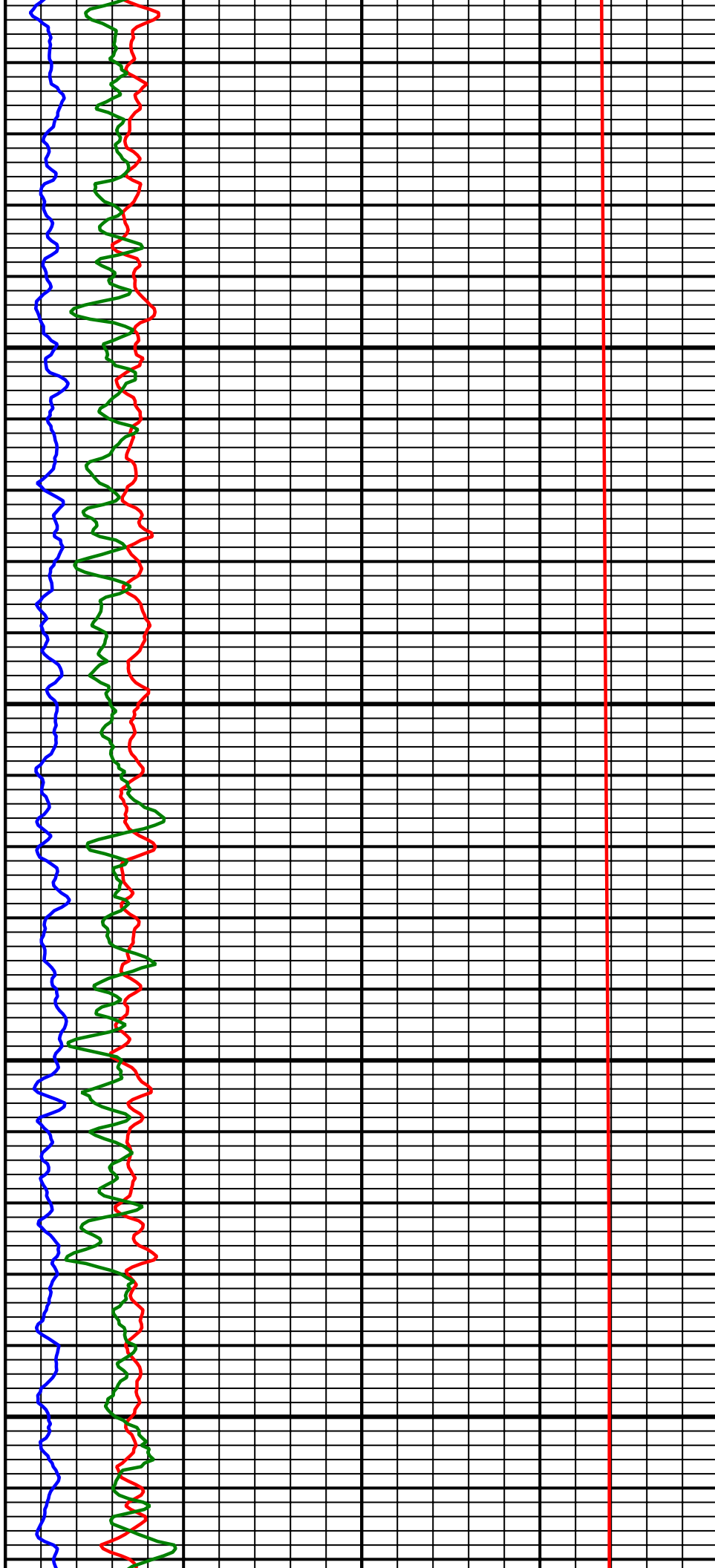
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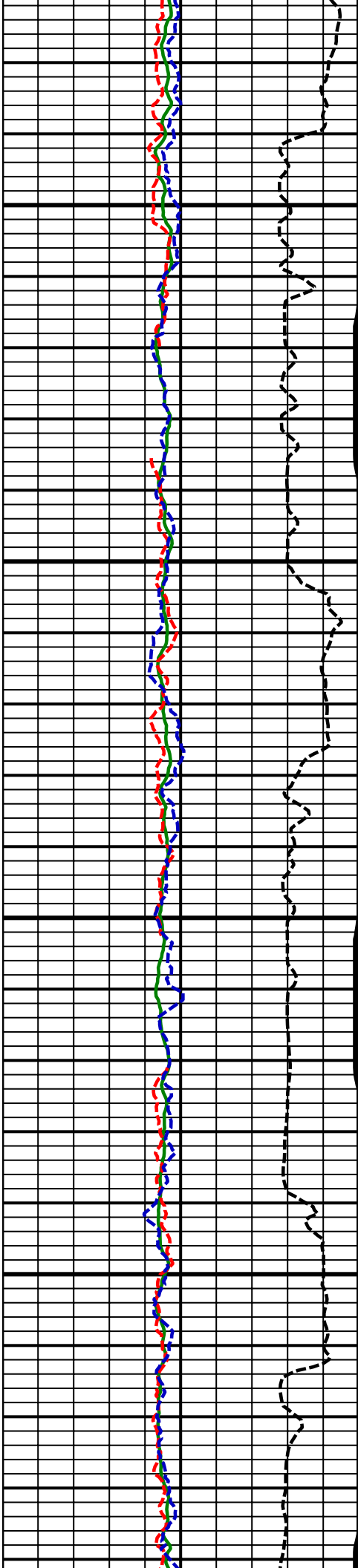


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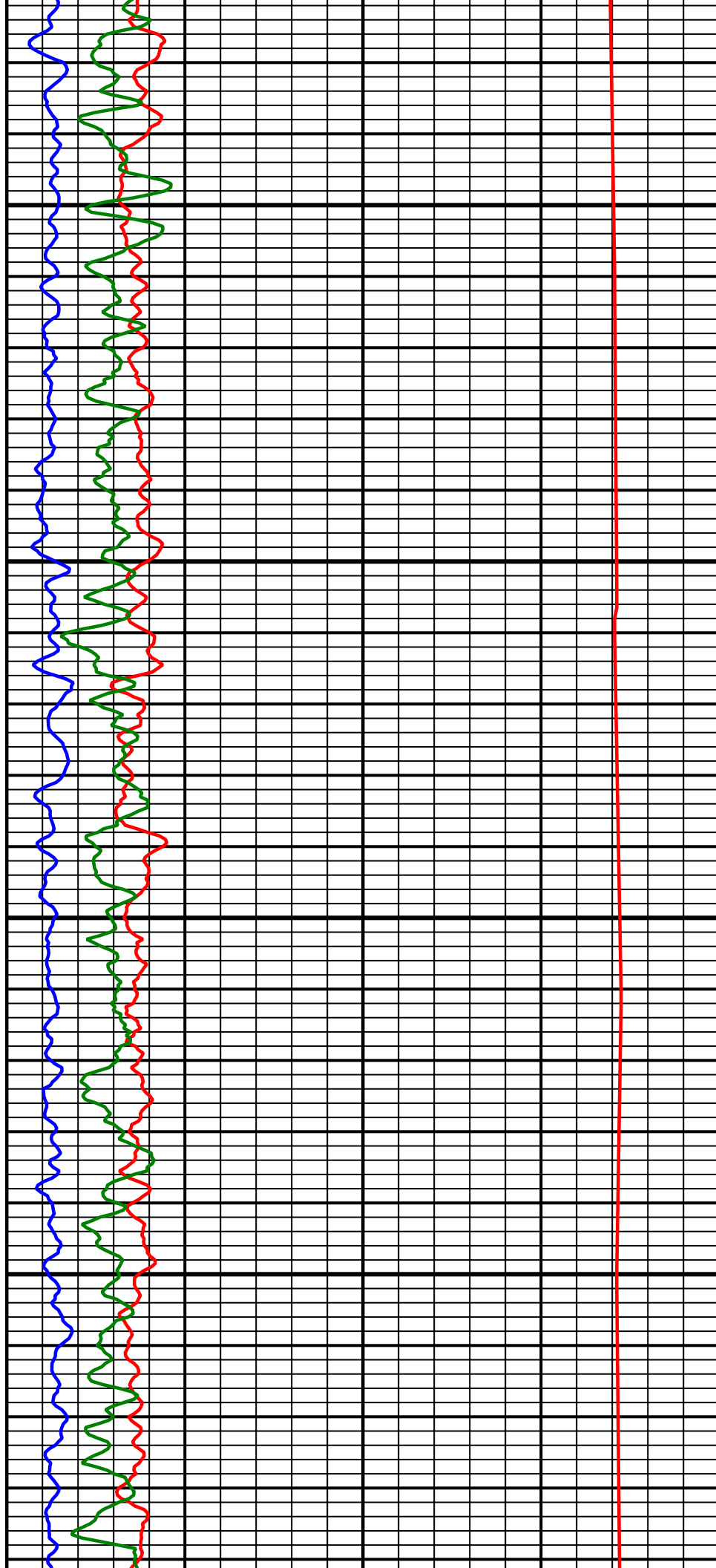


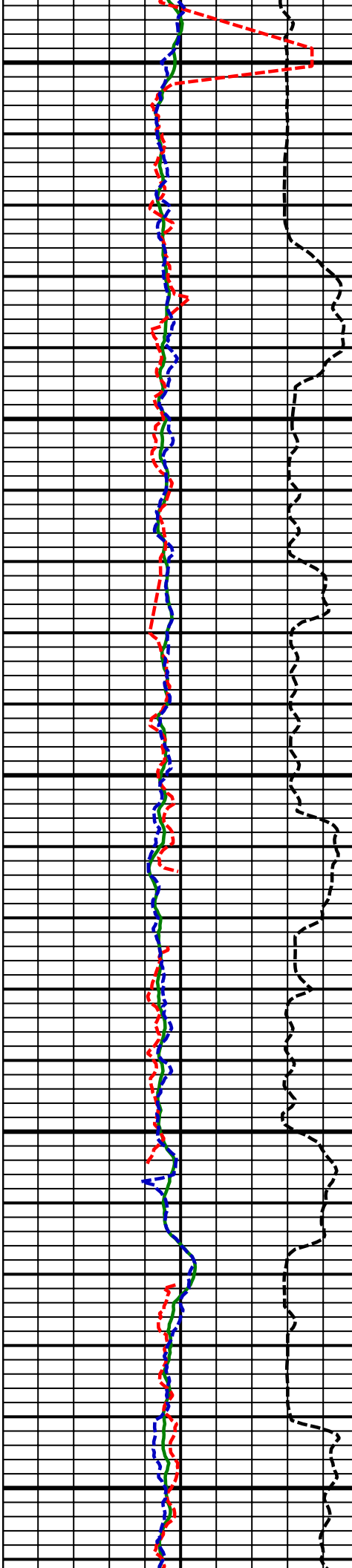




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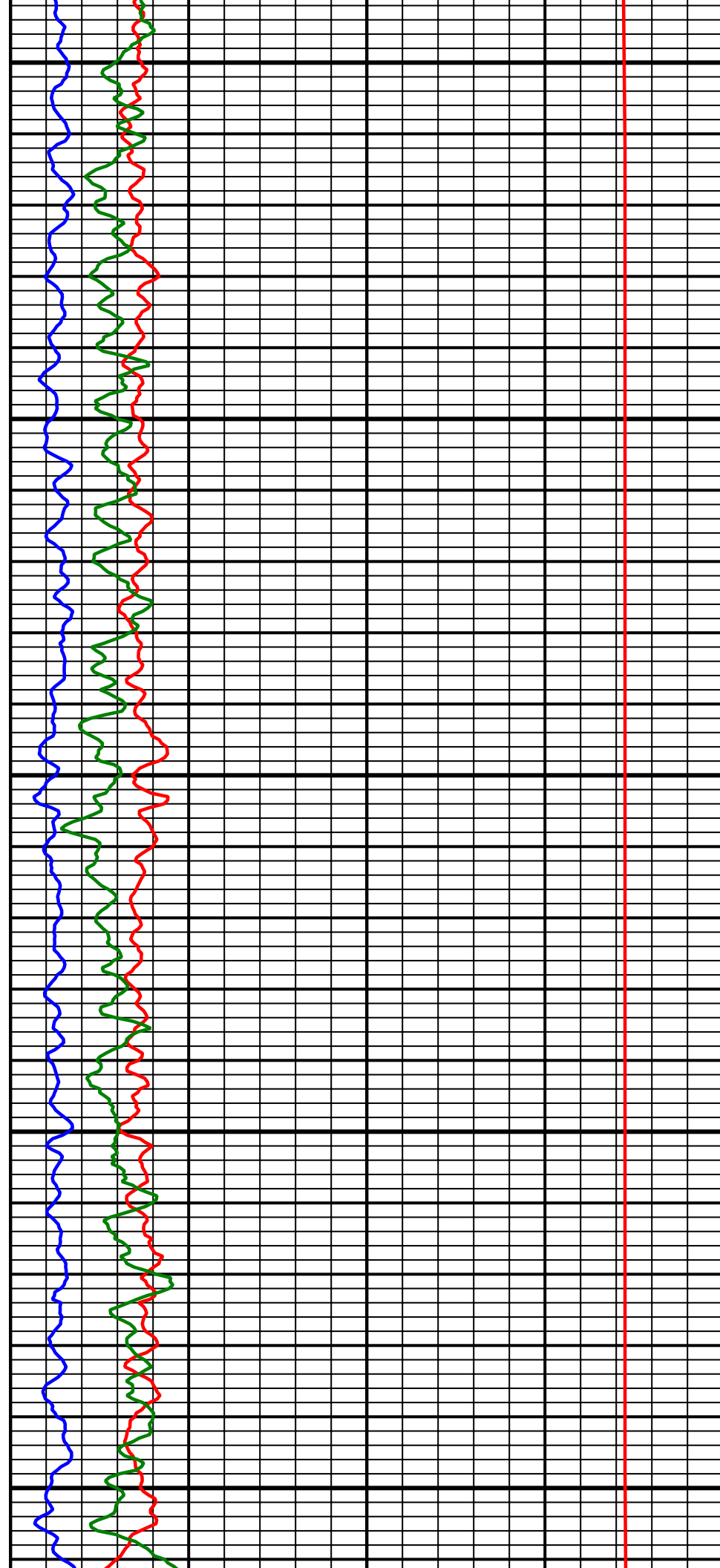


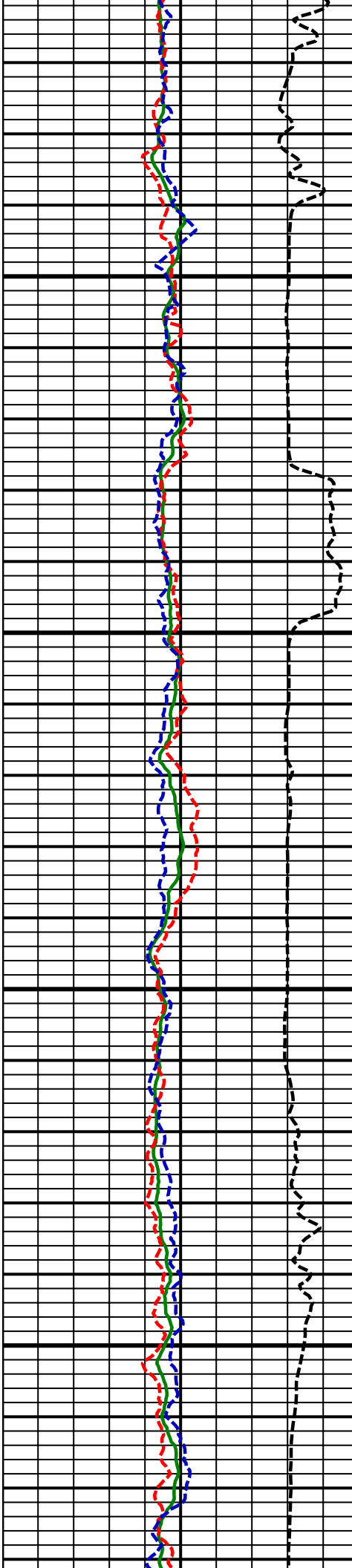


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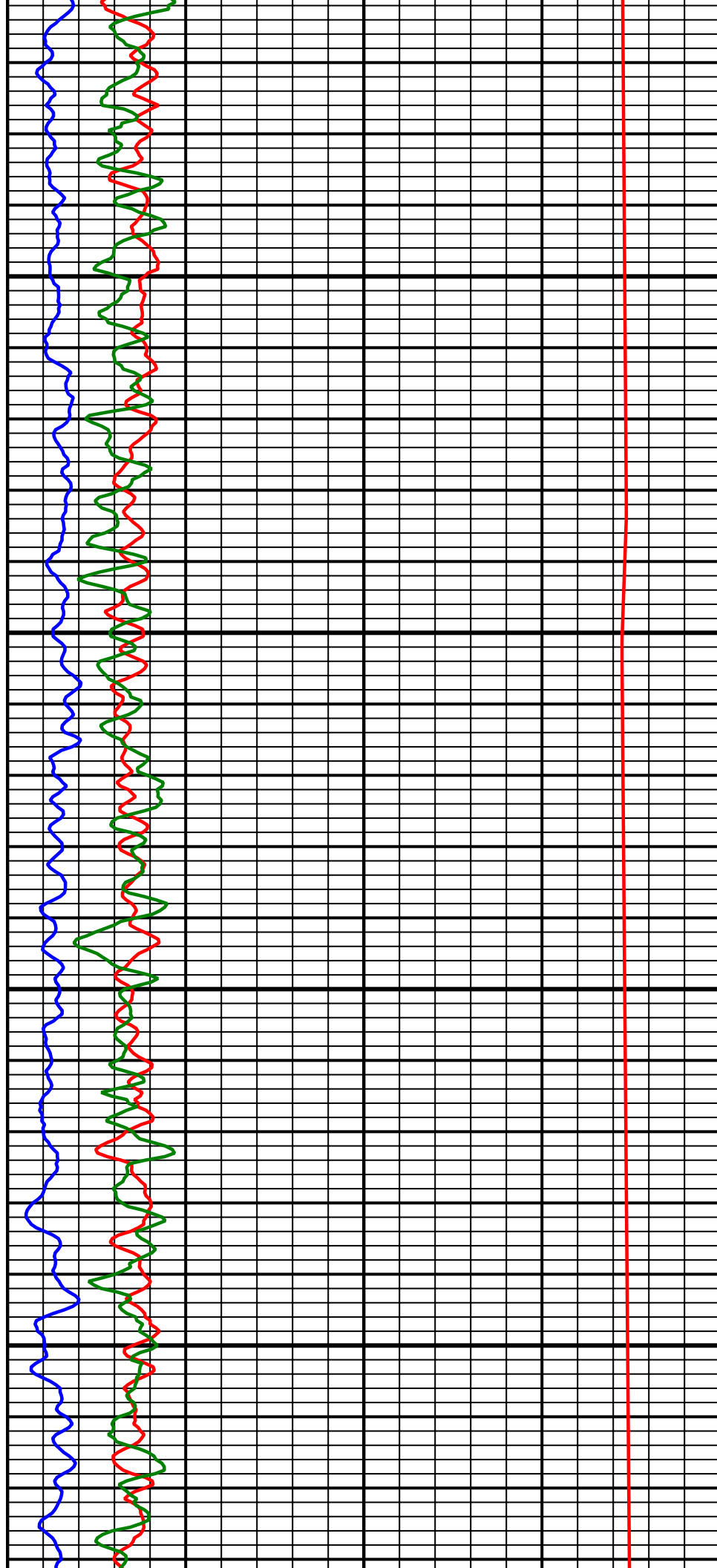
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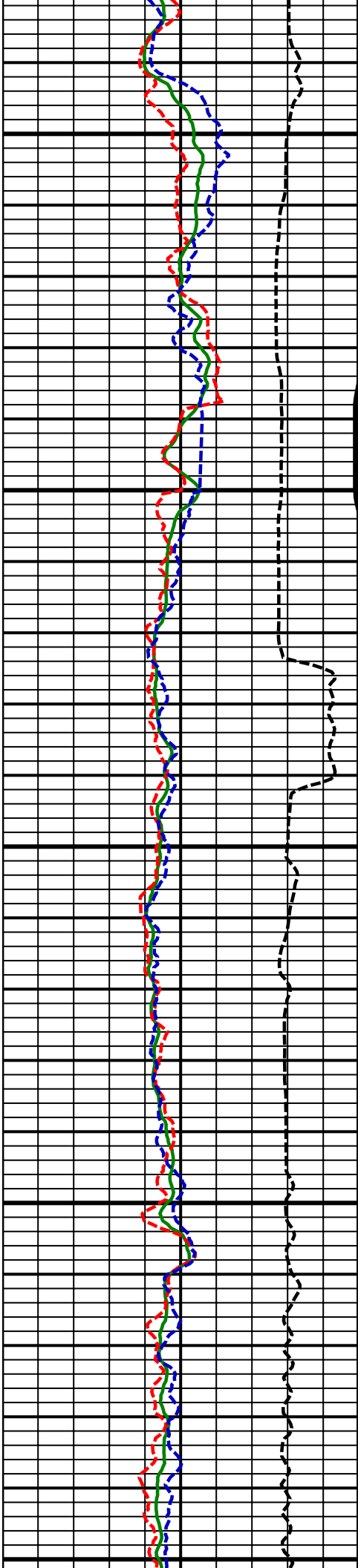




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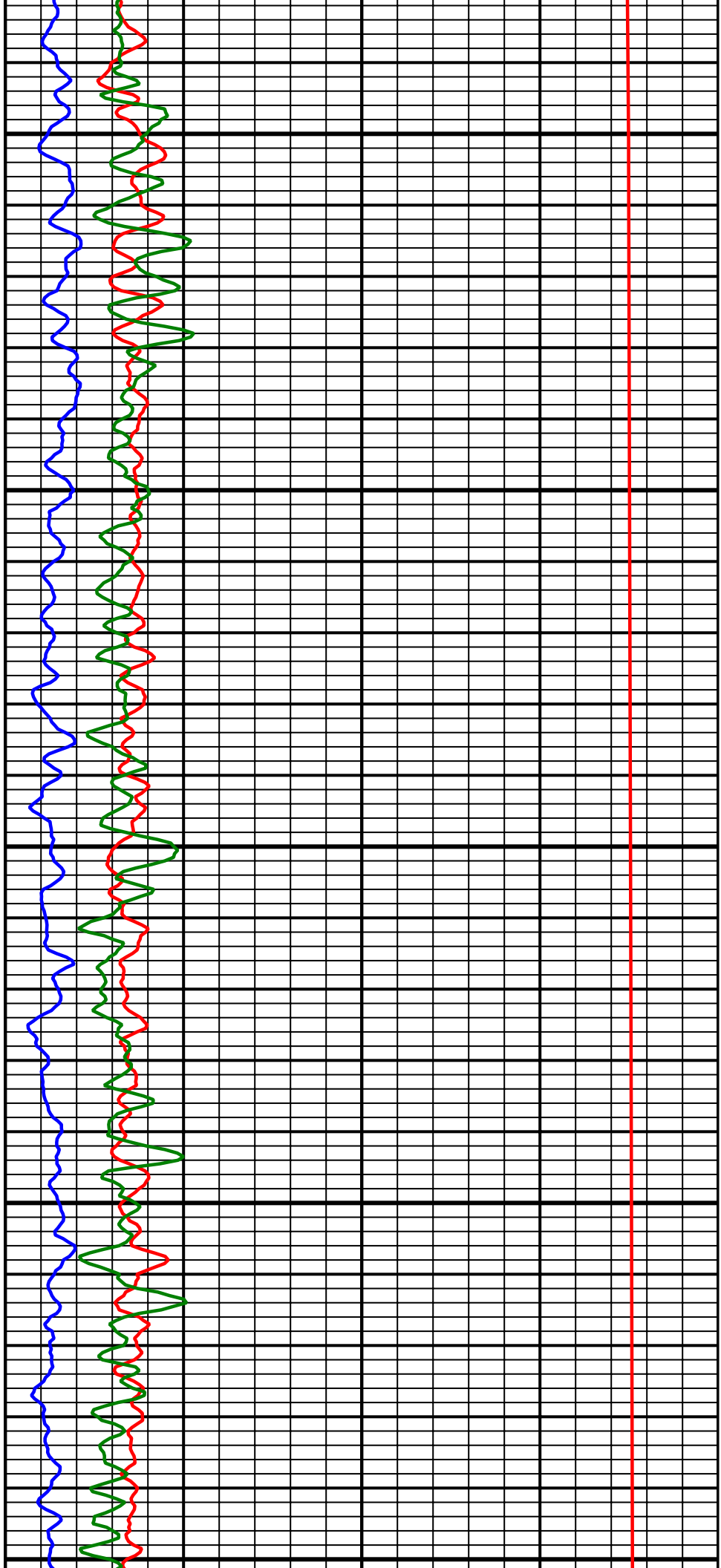
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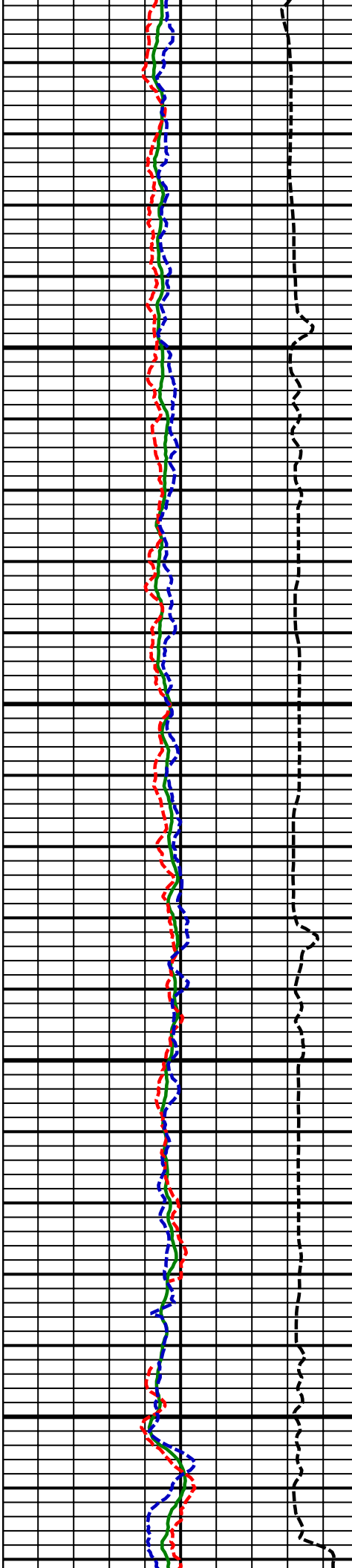




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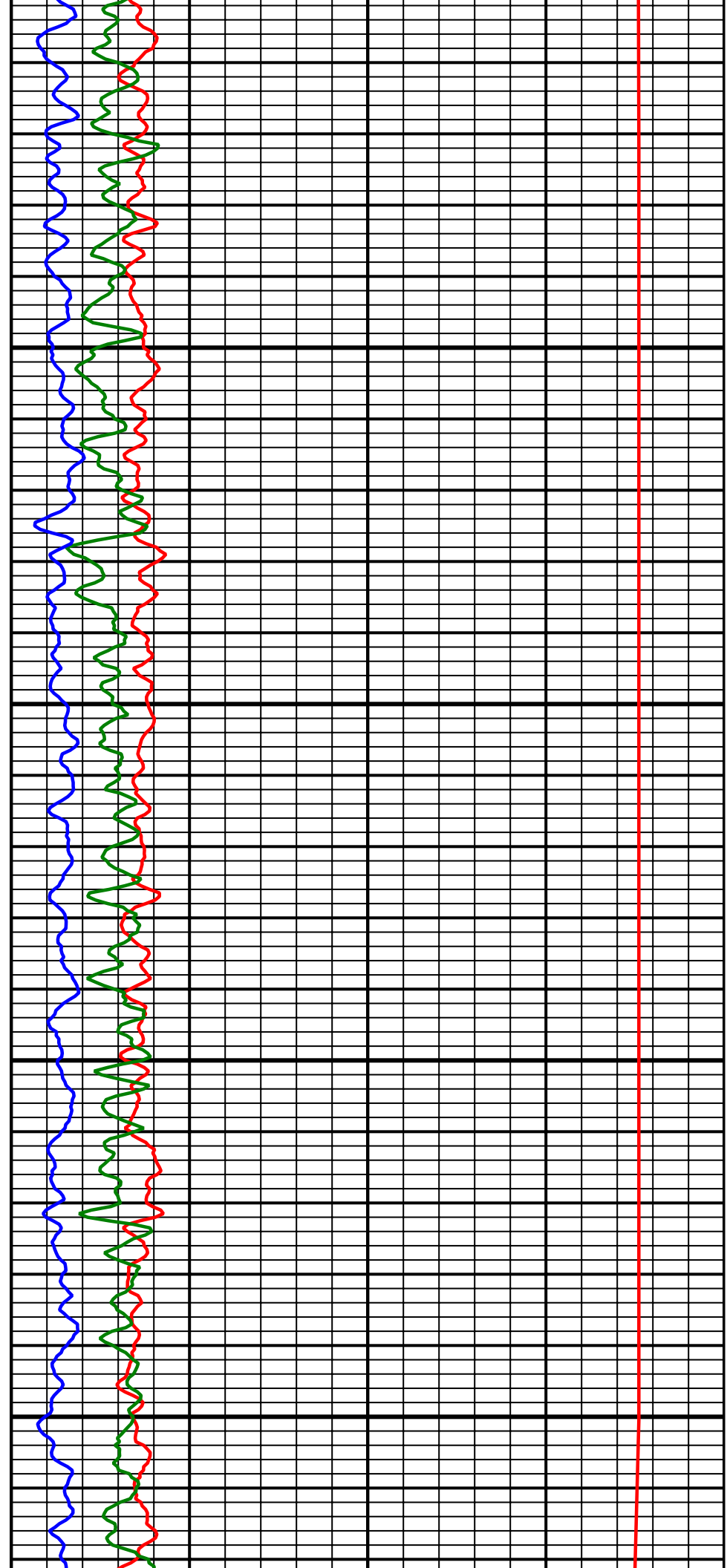
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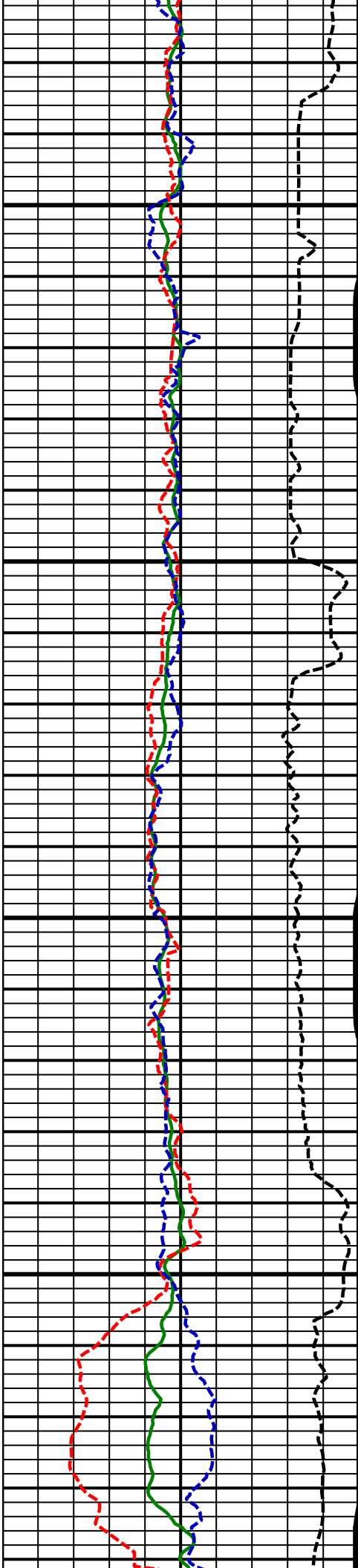




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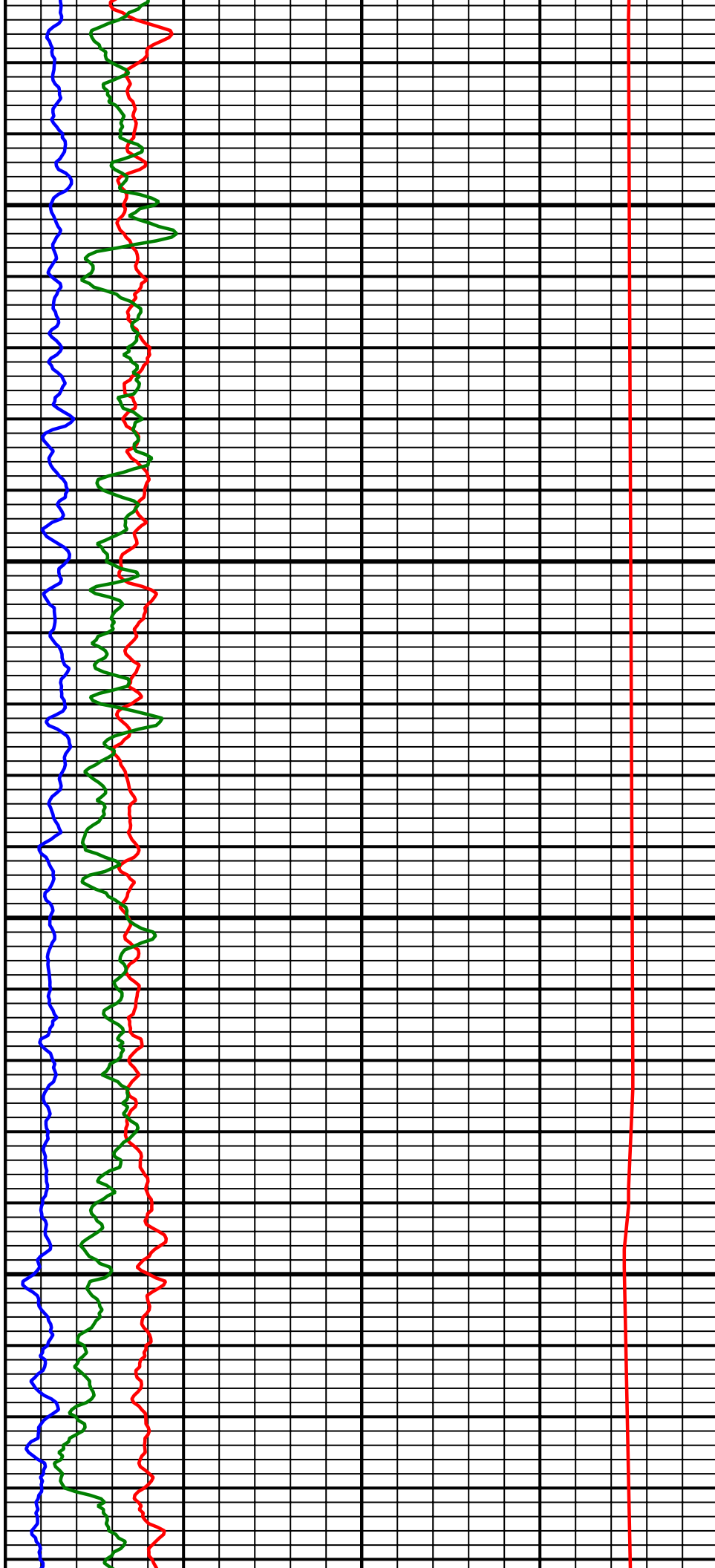
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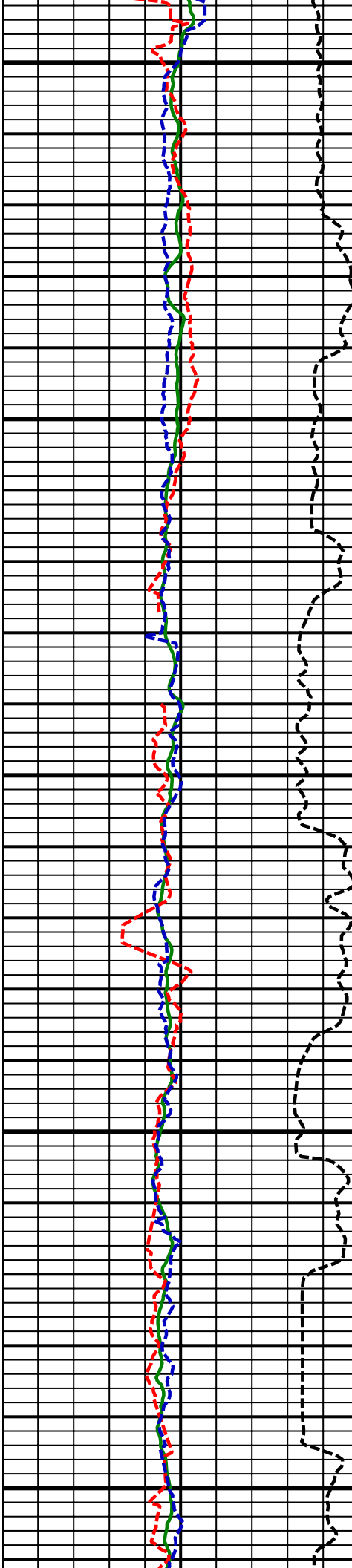




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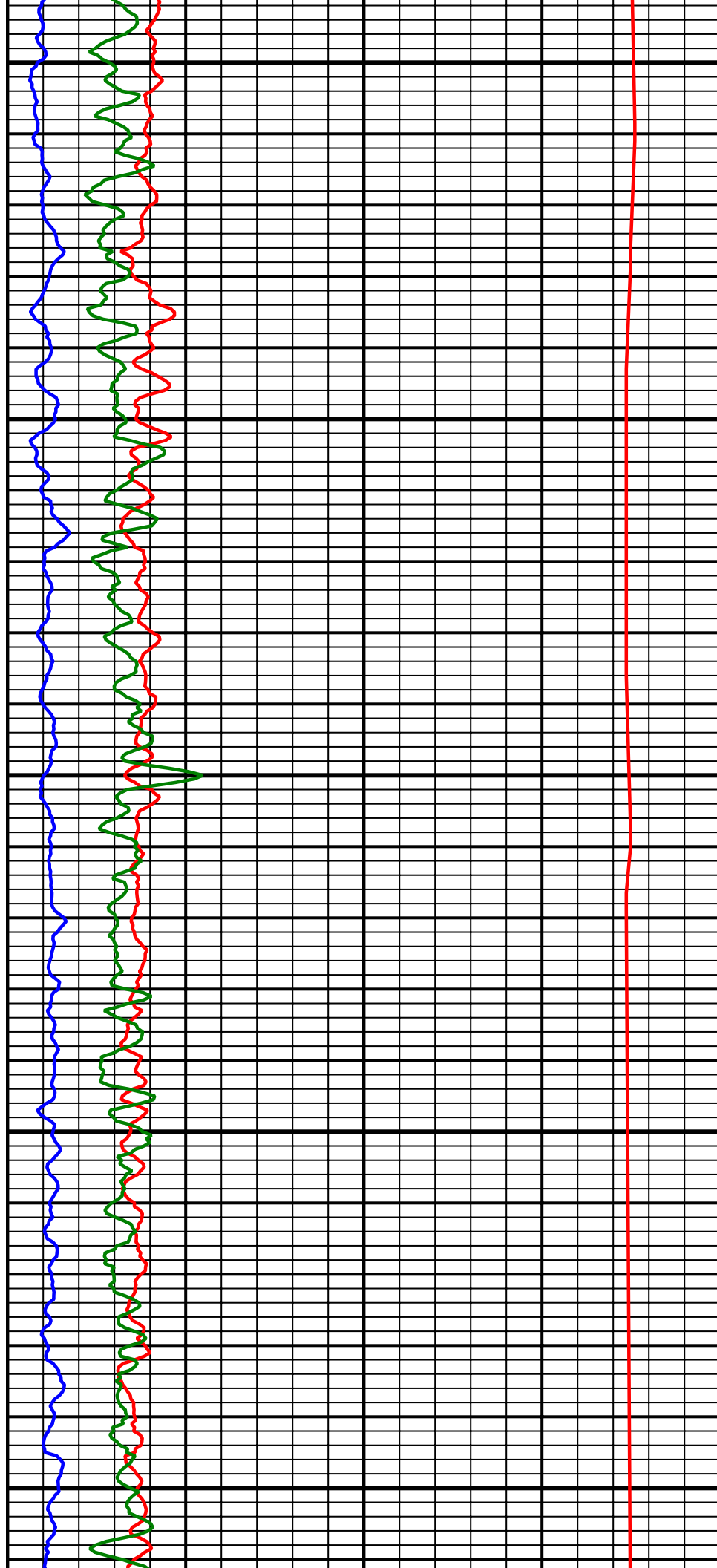


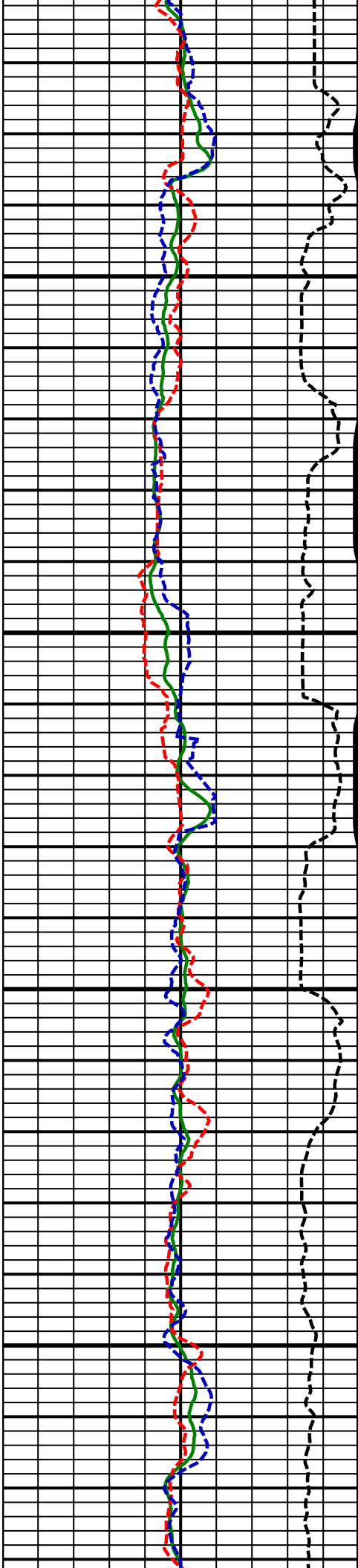


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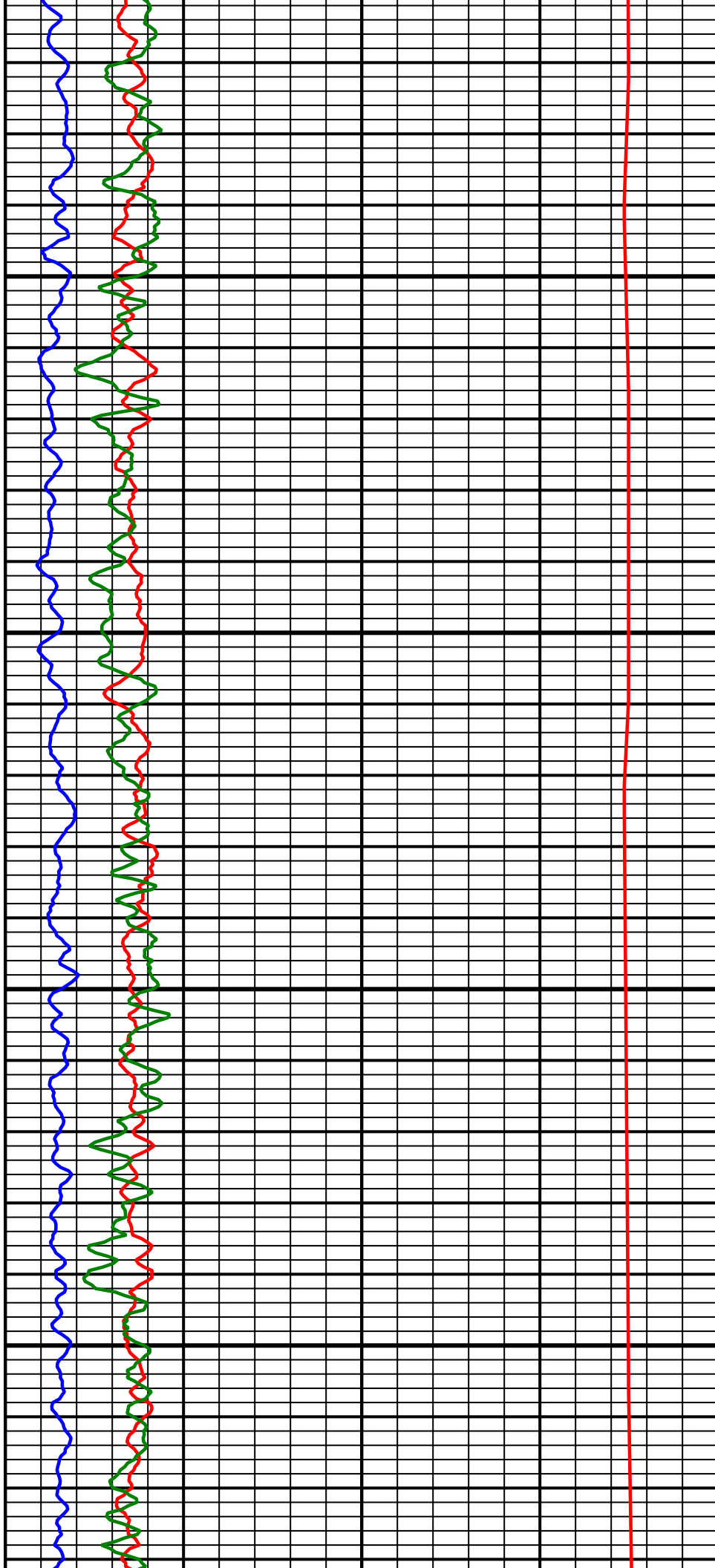
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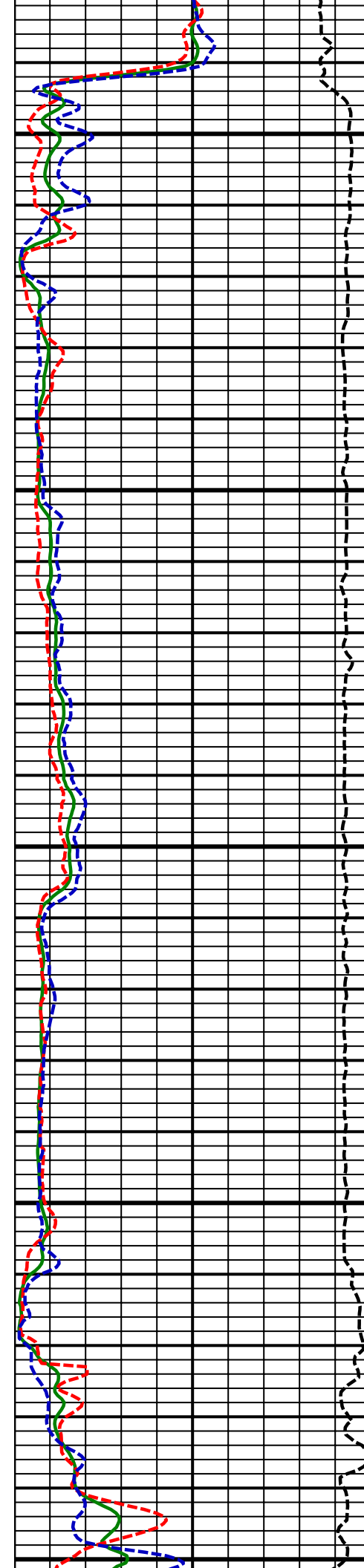


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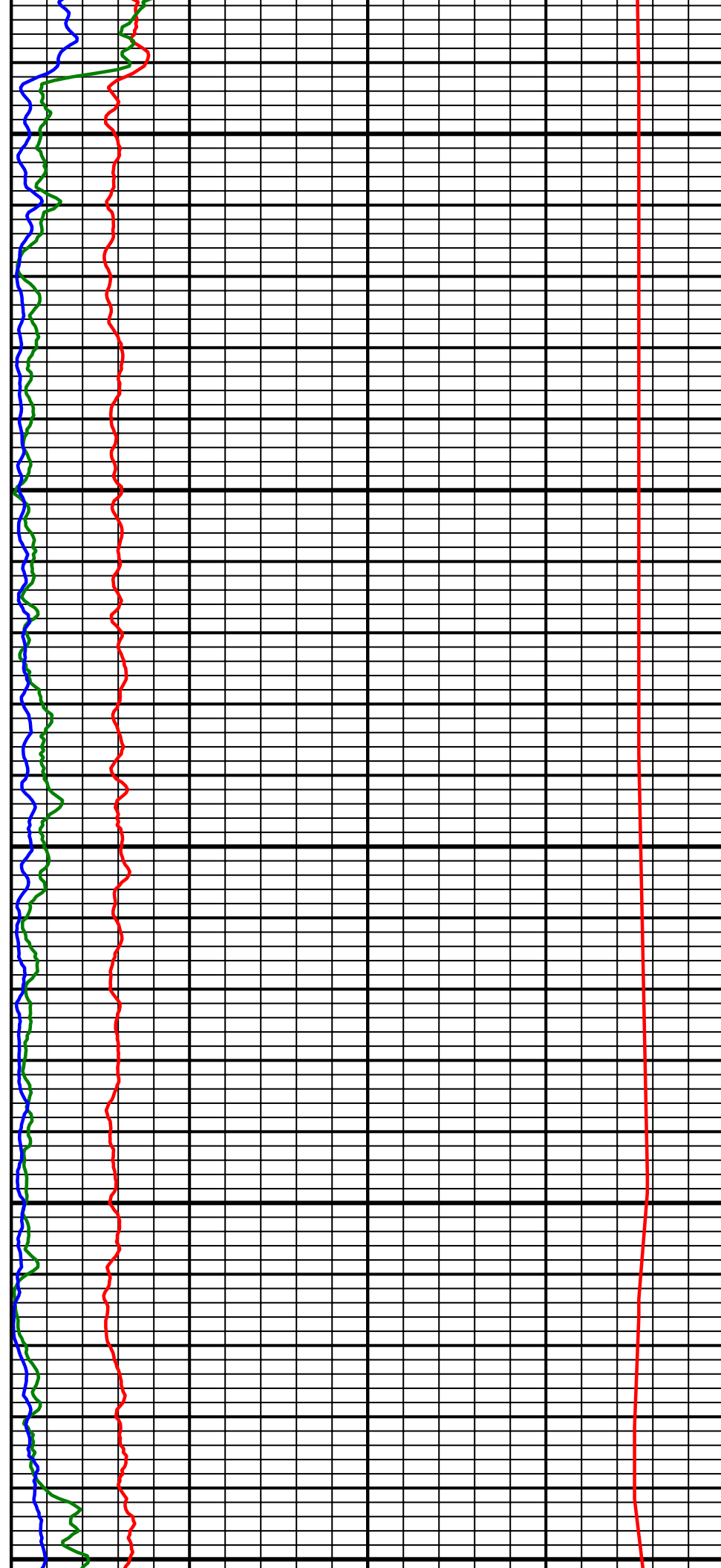


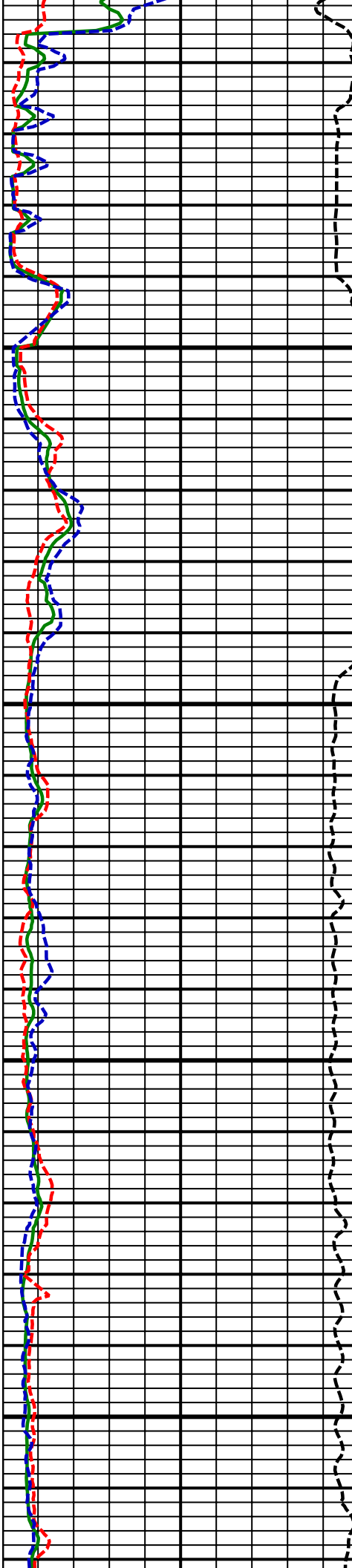




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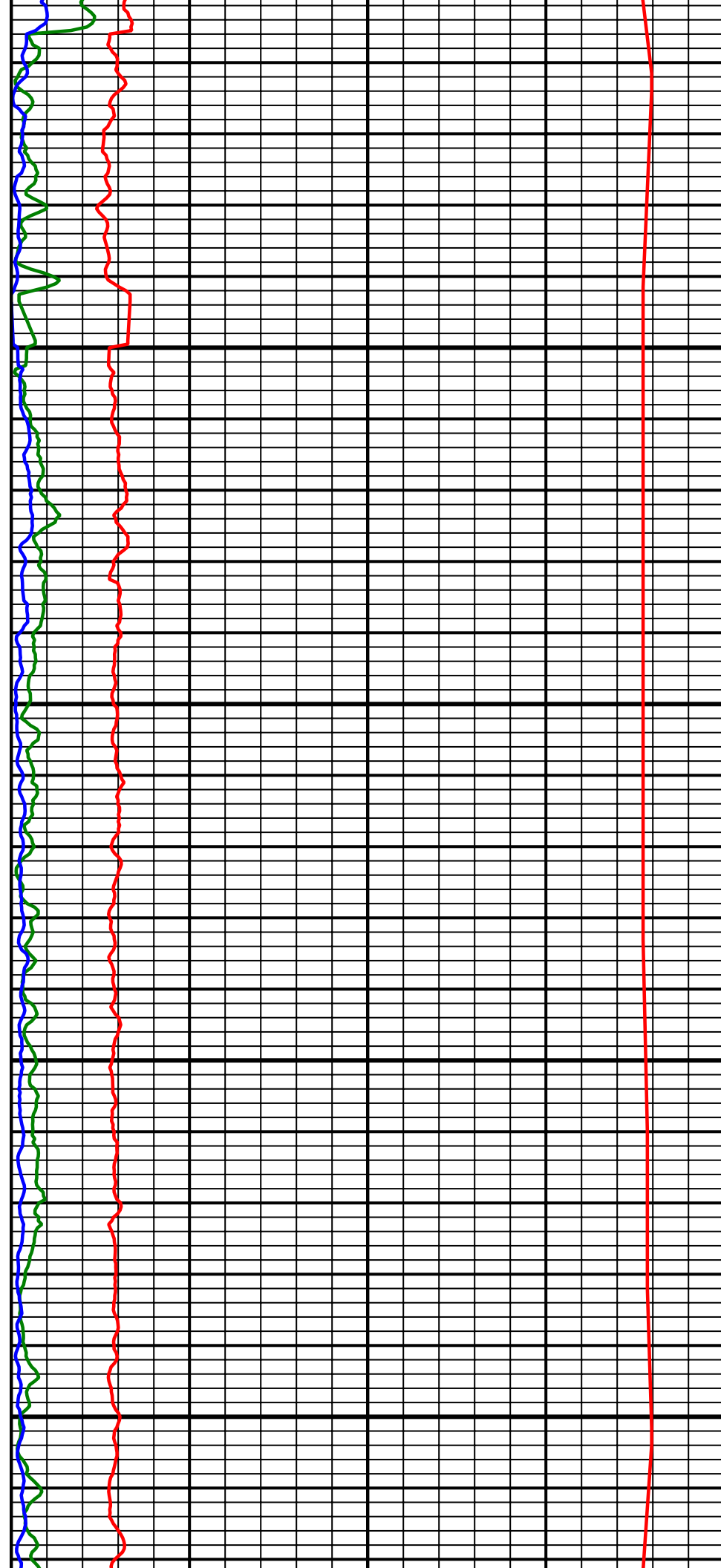
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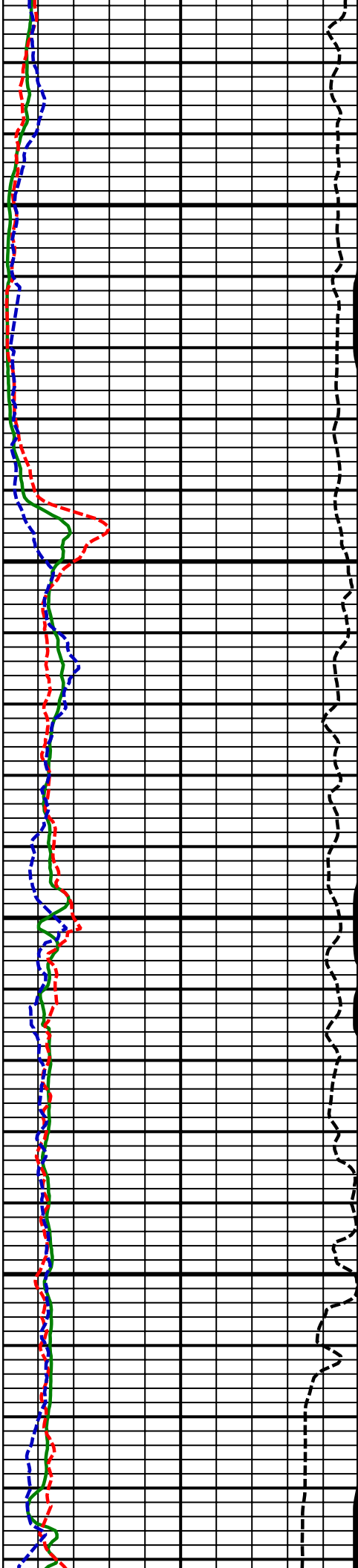




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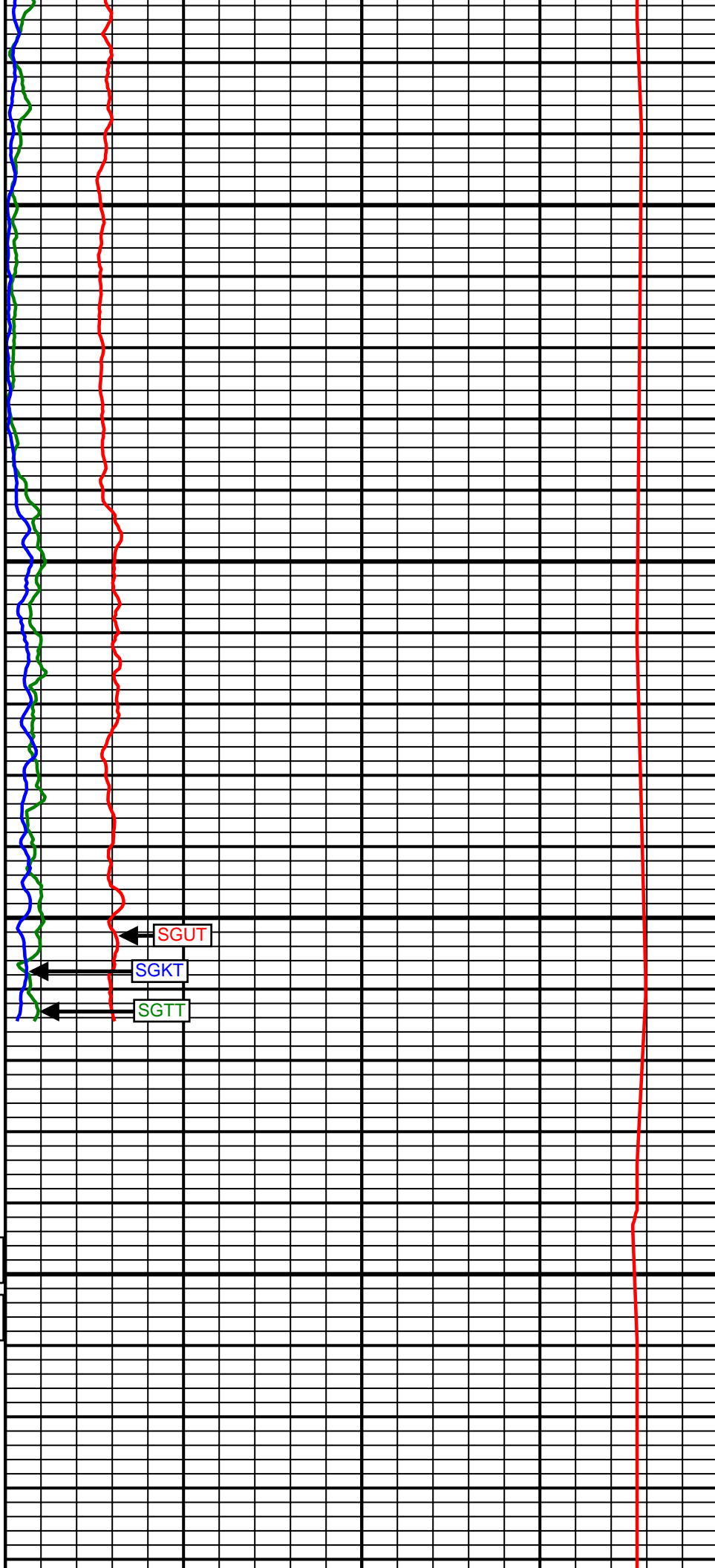


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12200  
MD

Comment  
3-2

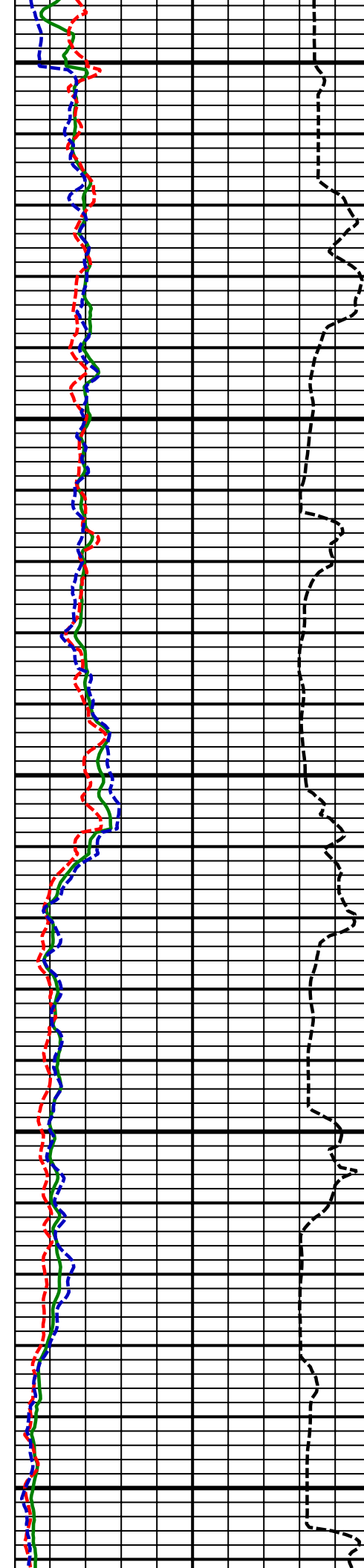
Comment  
4-1



SGUT

SGKT

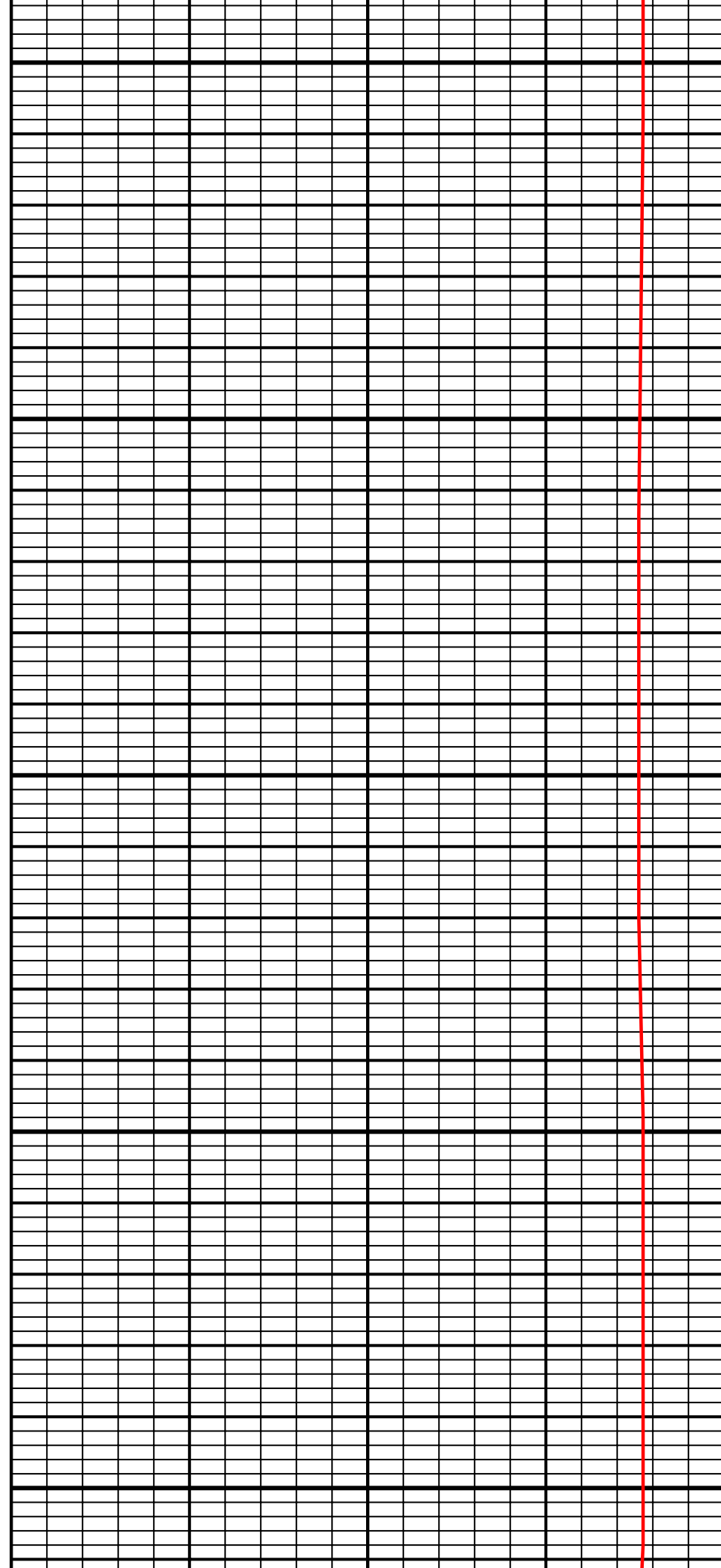
SGT

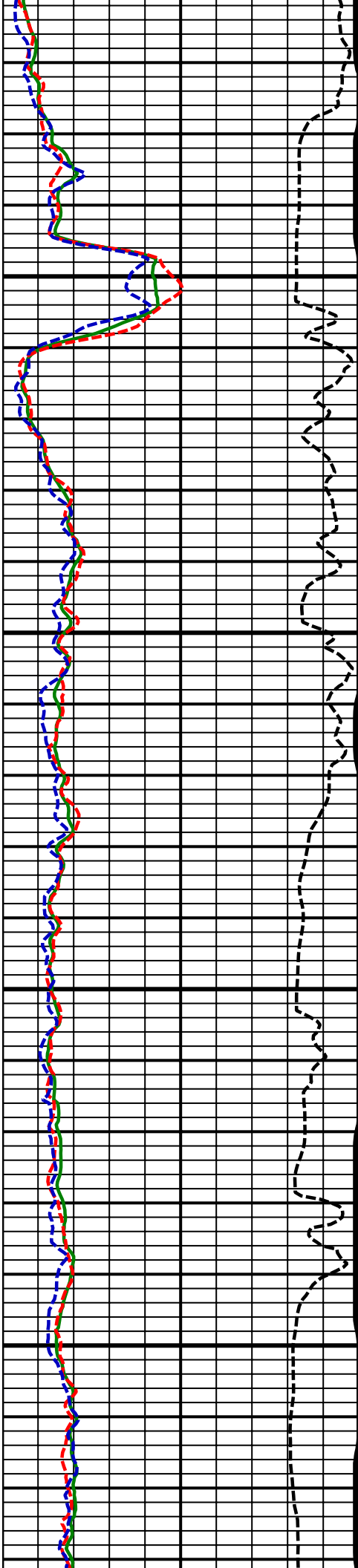


12300  
MD

12400  
MD

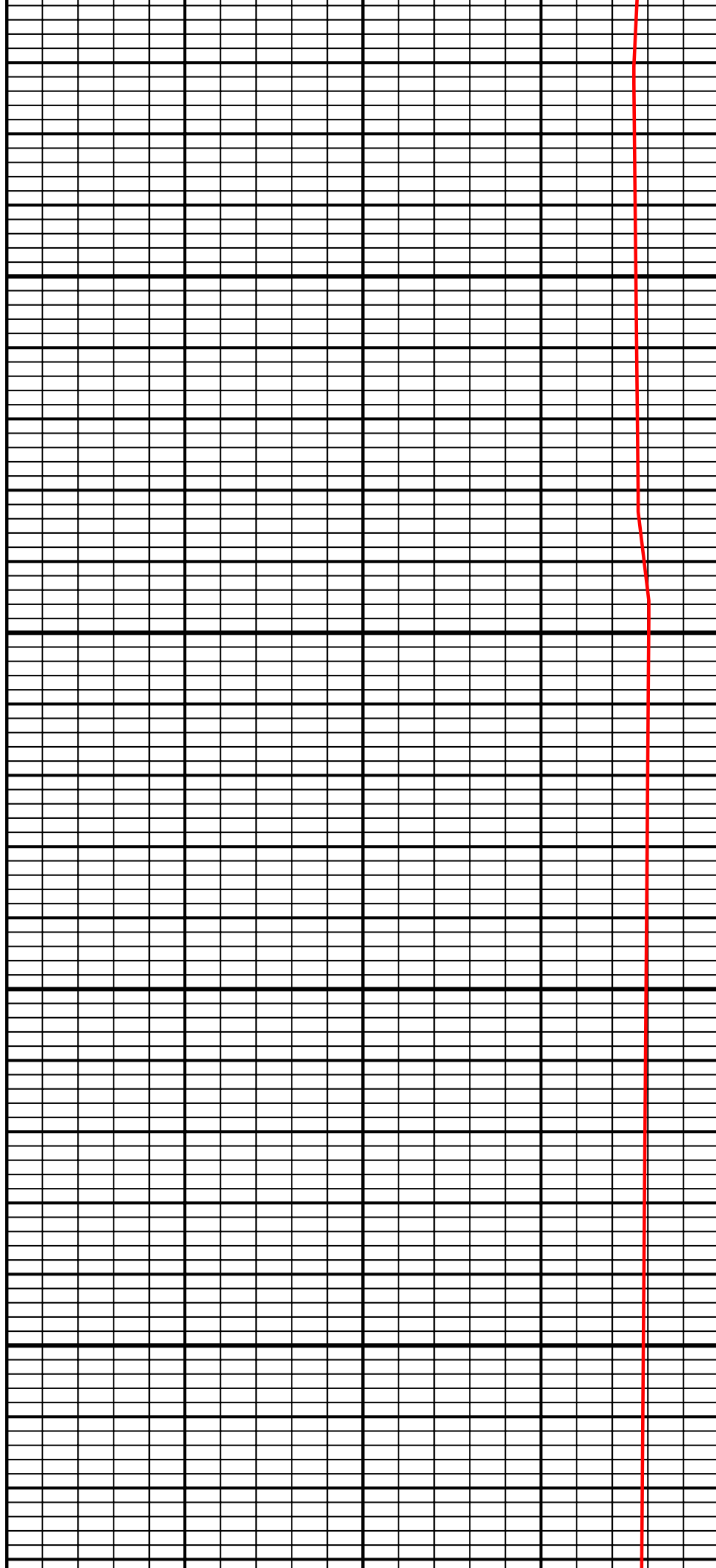
12500  
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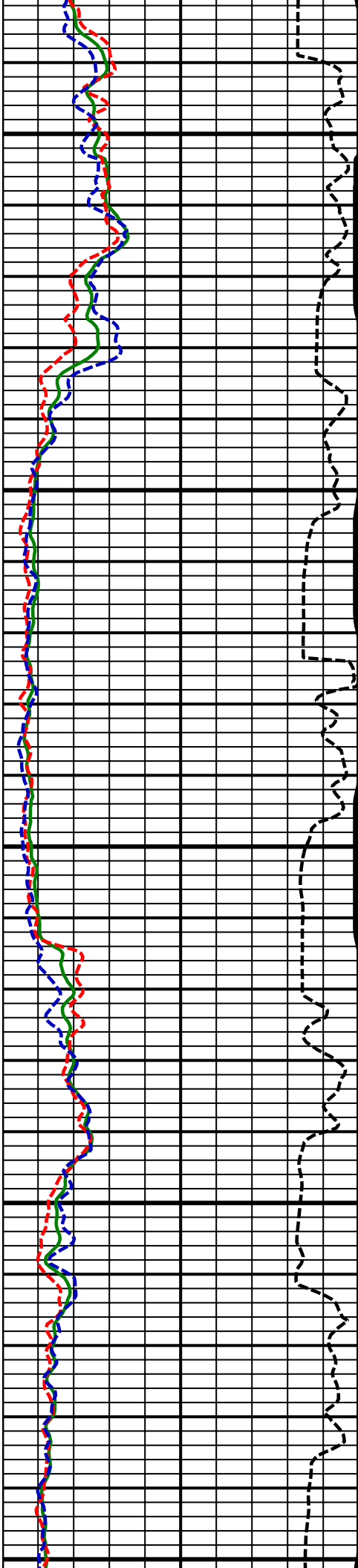




12600  
MD

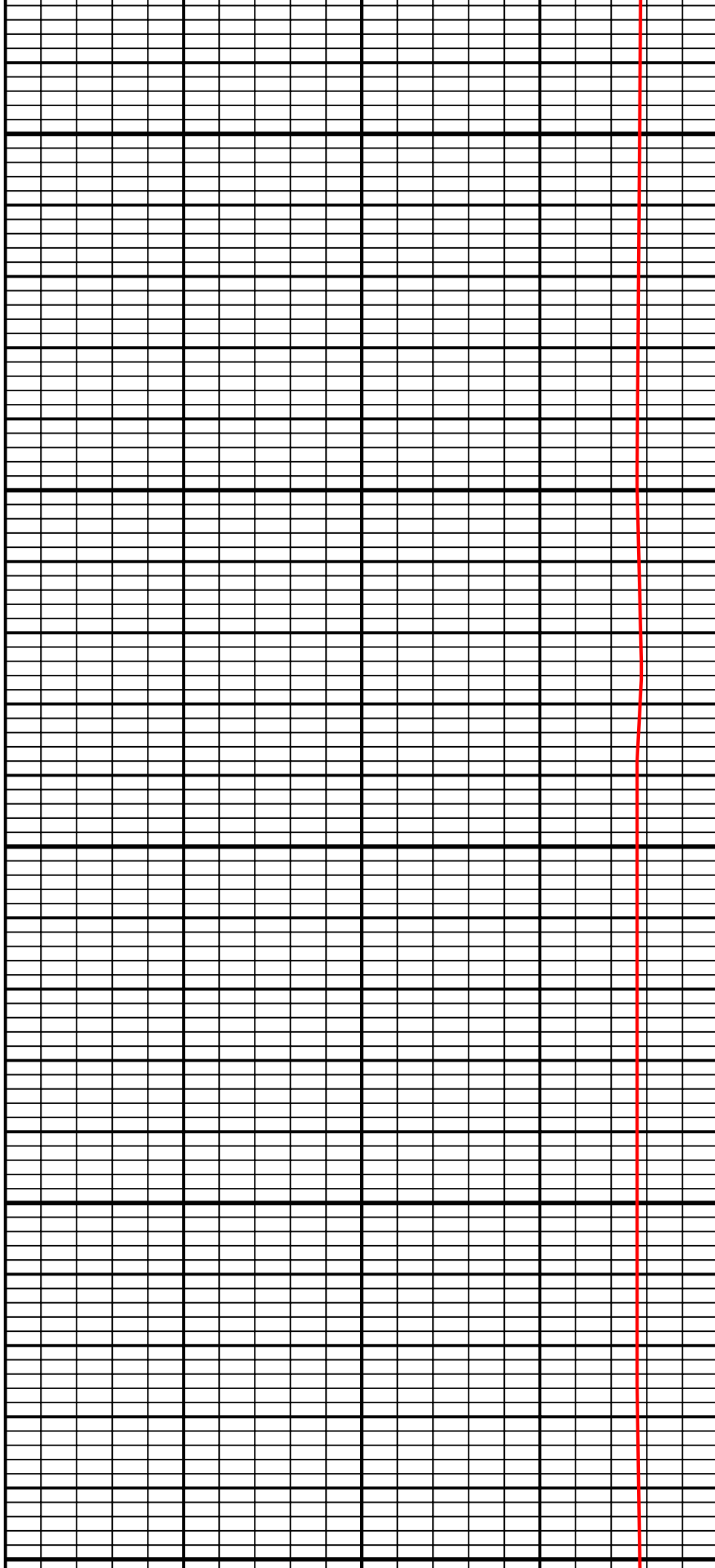
12700  
MD

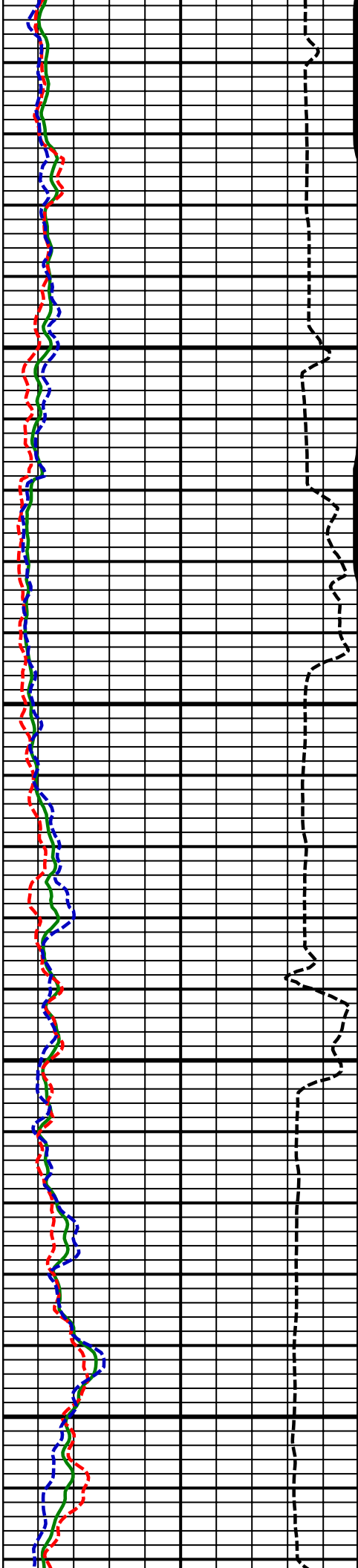




12800  
MD

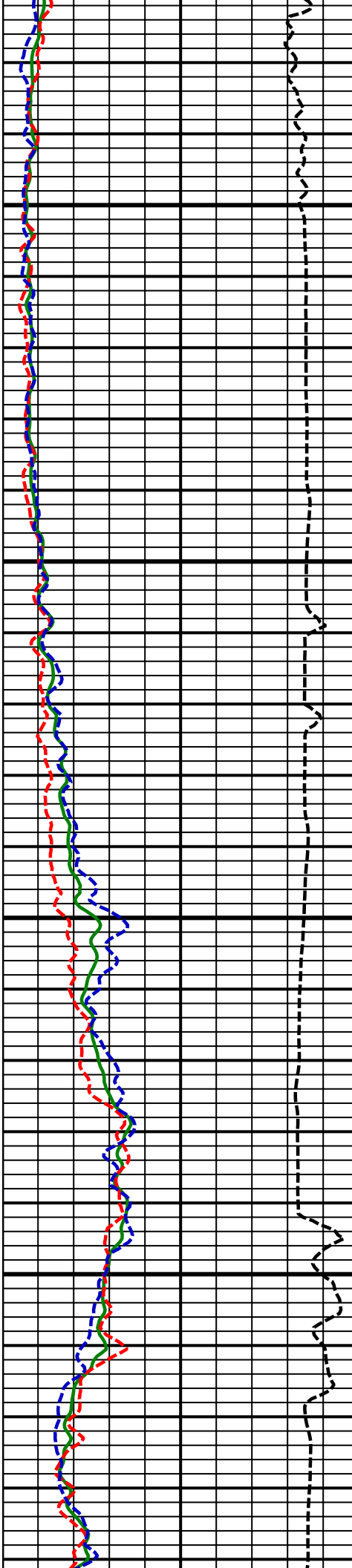
12900  
MD





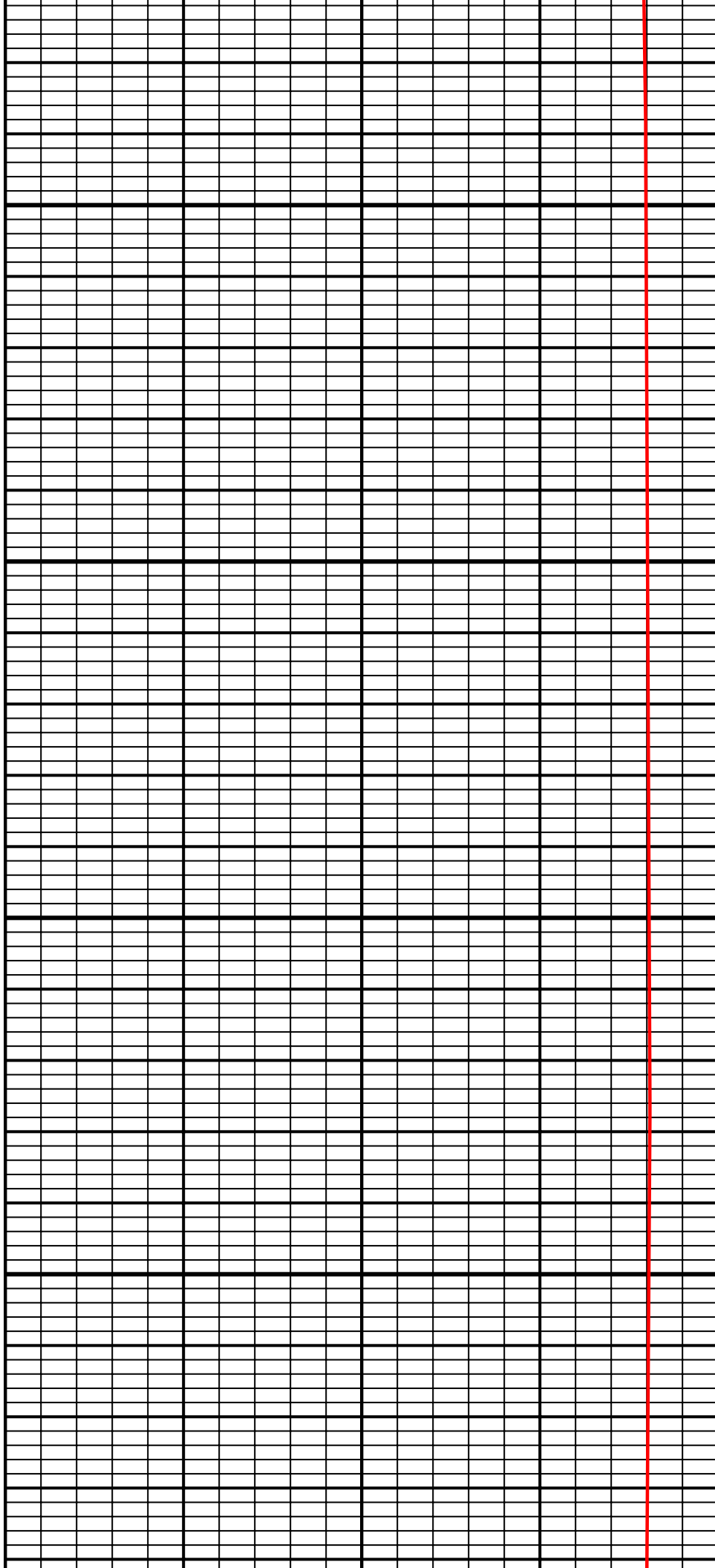
13000  
MD

13100  
MD

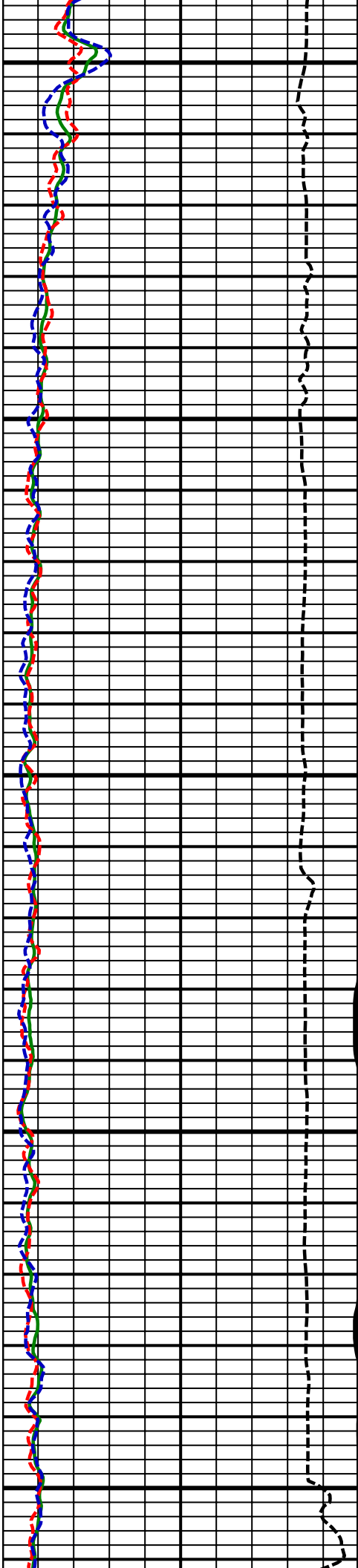


13200  
MD

13300  
MD



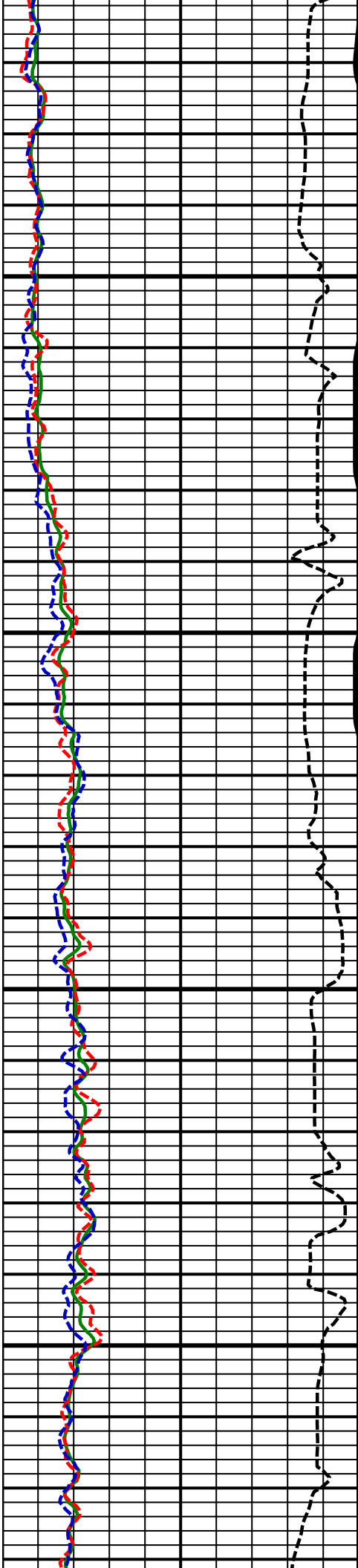




13400  
MD

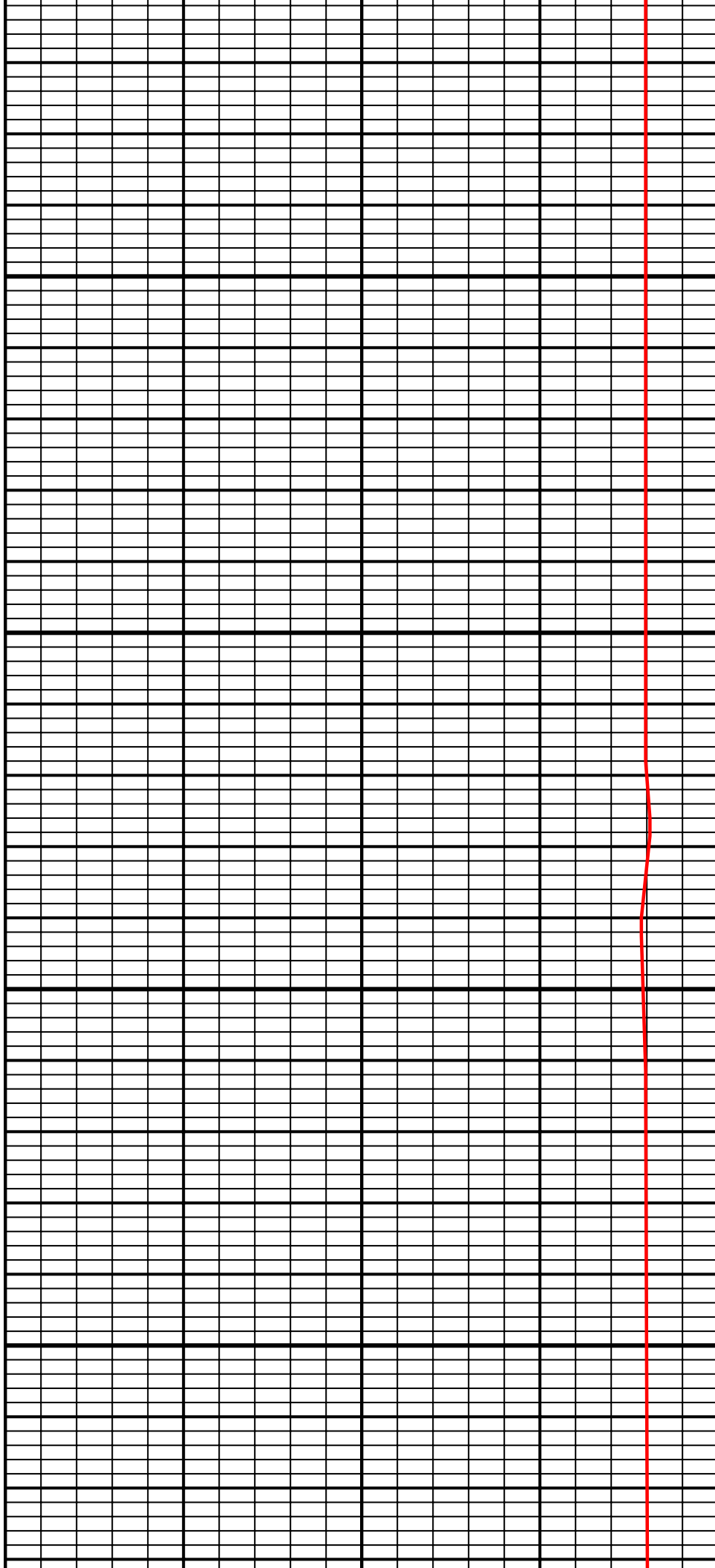
13500  
MD

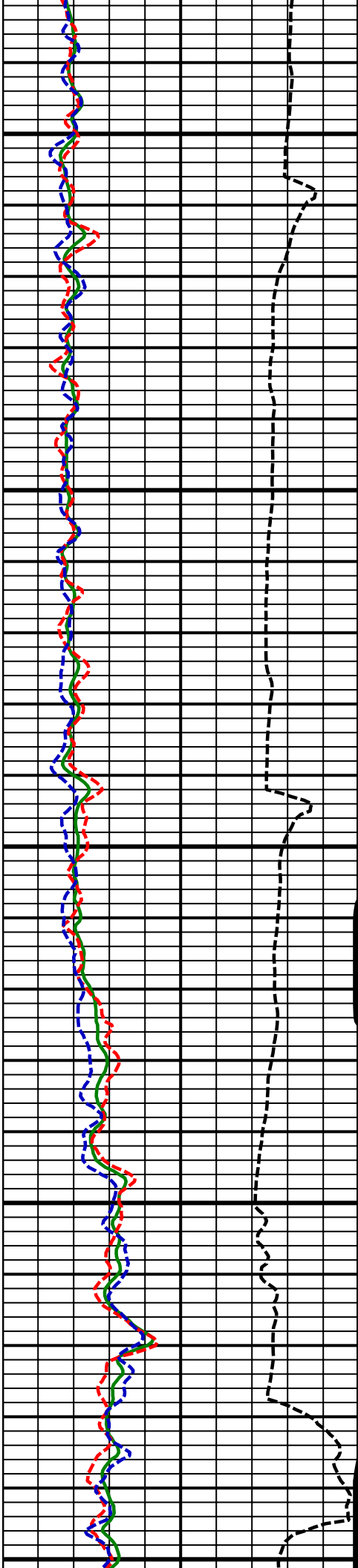
13600  
MD



13700  
MD

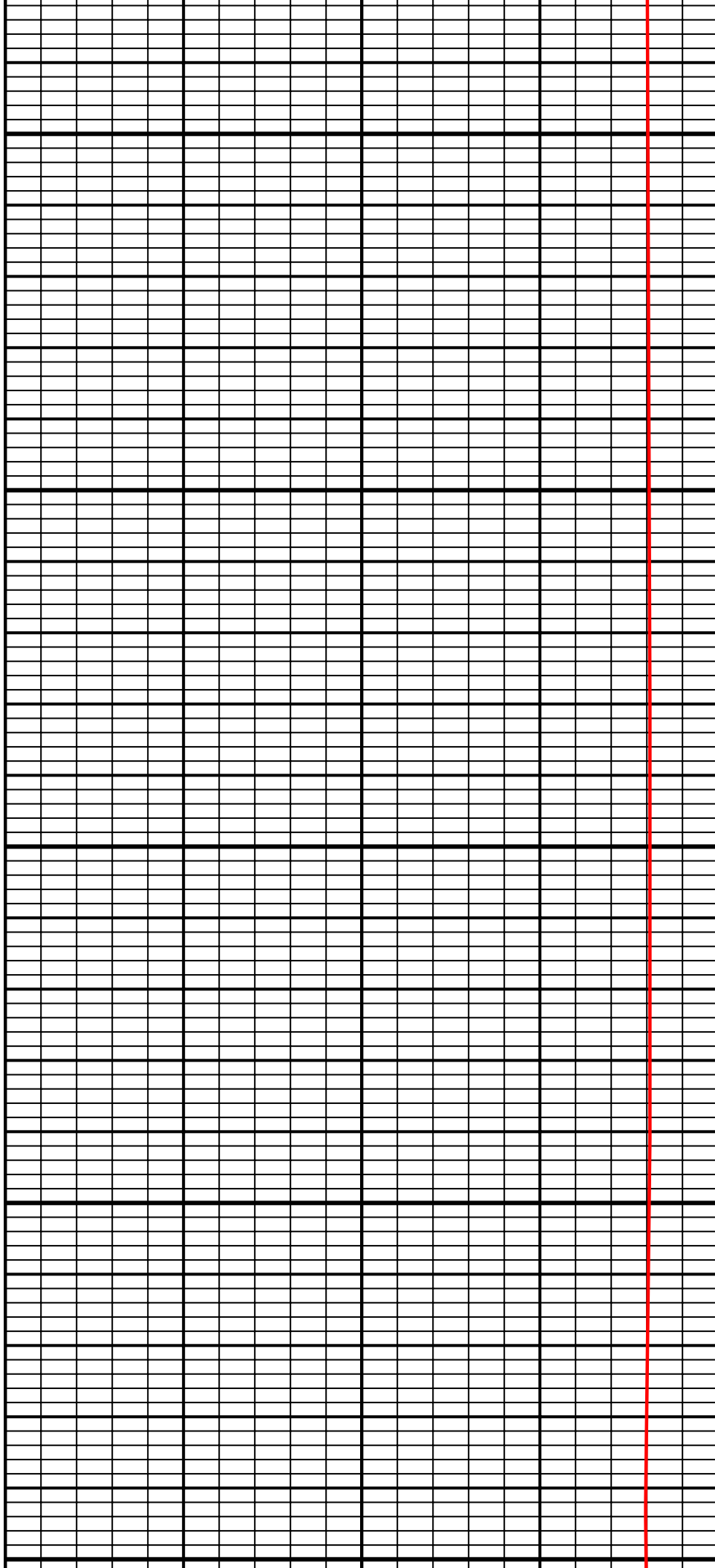
13800  
MD

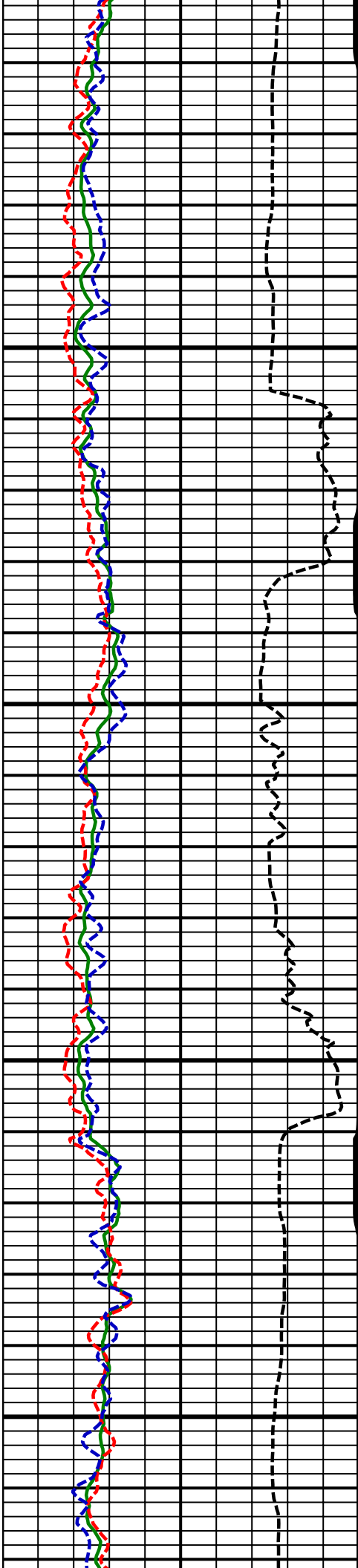




13900  
MD

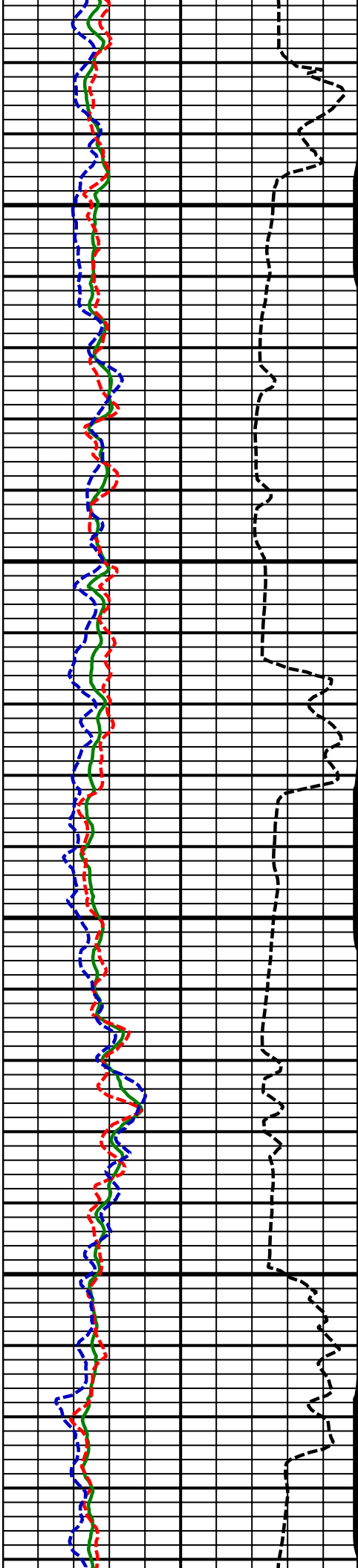
14000  
MD





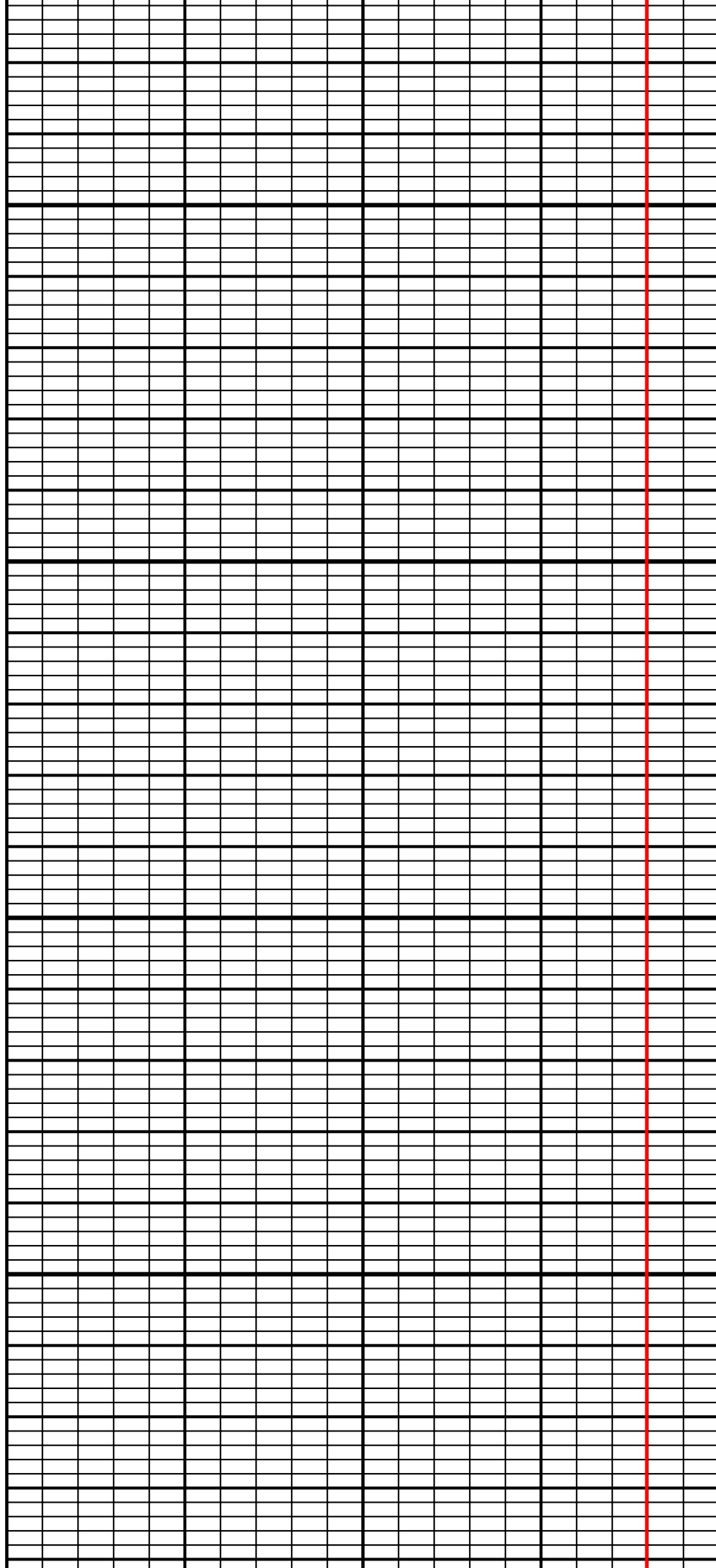
14100  
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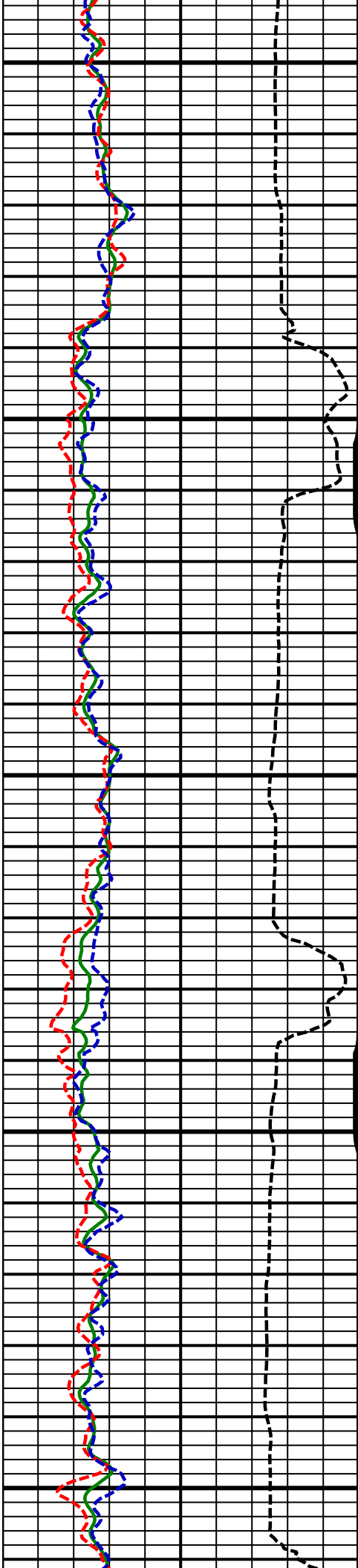
14200  
MD



14300  
MD

14400  
MD

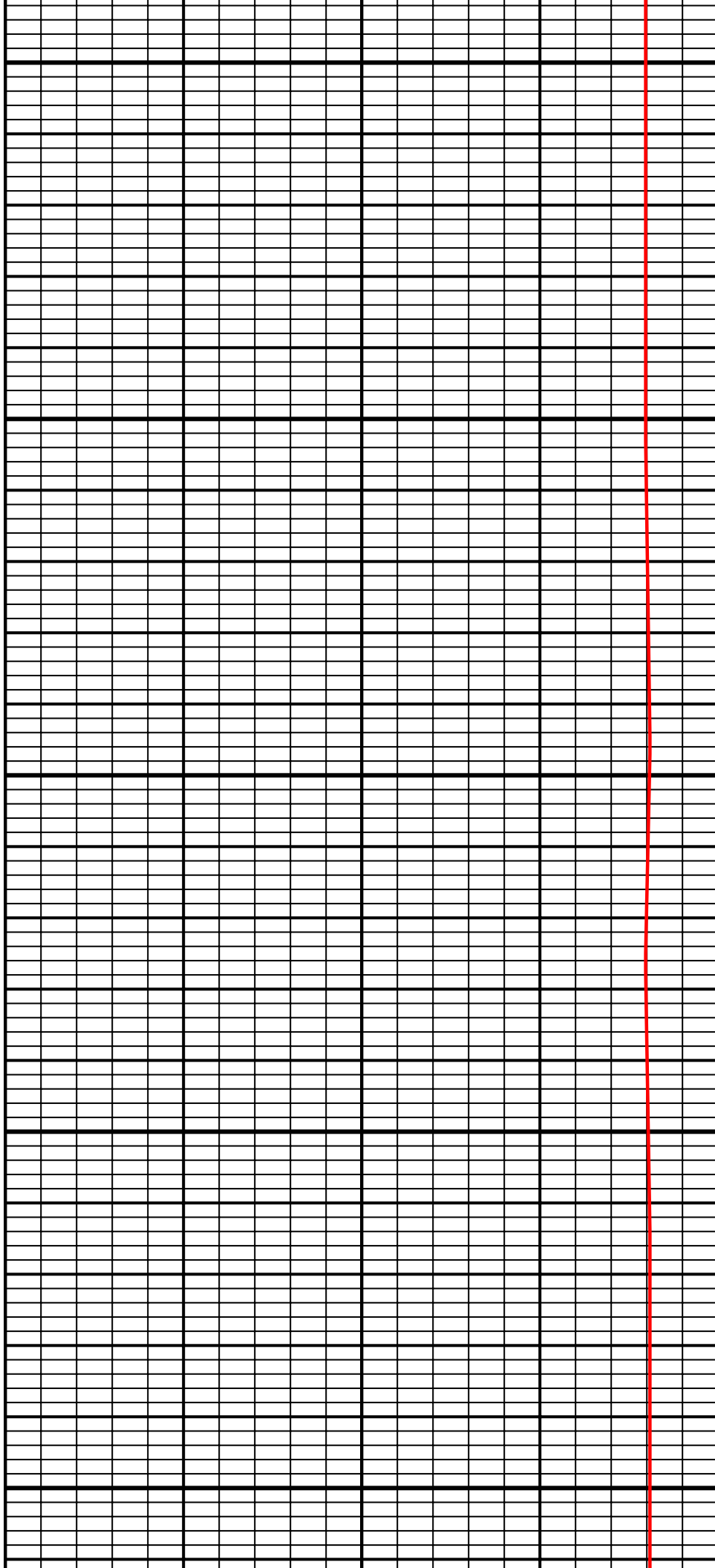


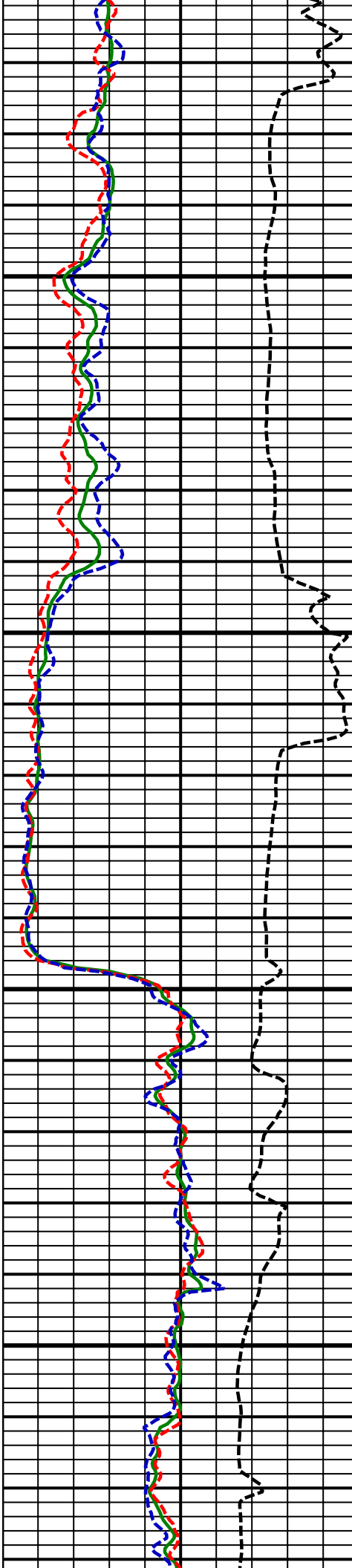


14500  
MD

14600  
MD

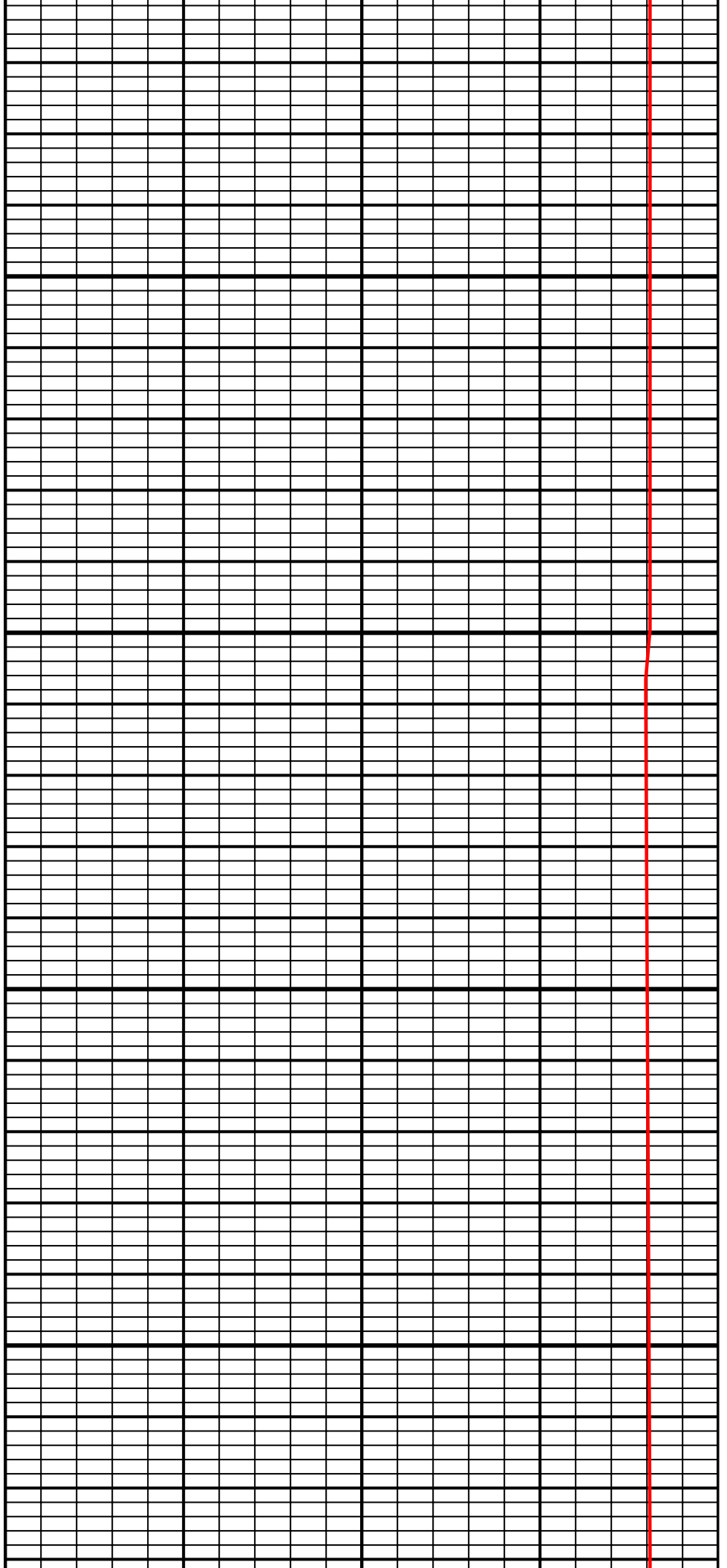
14700  
MD

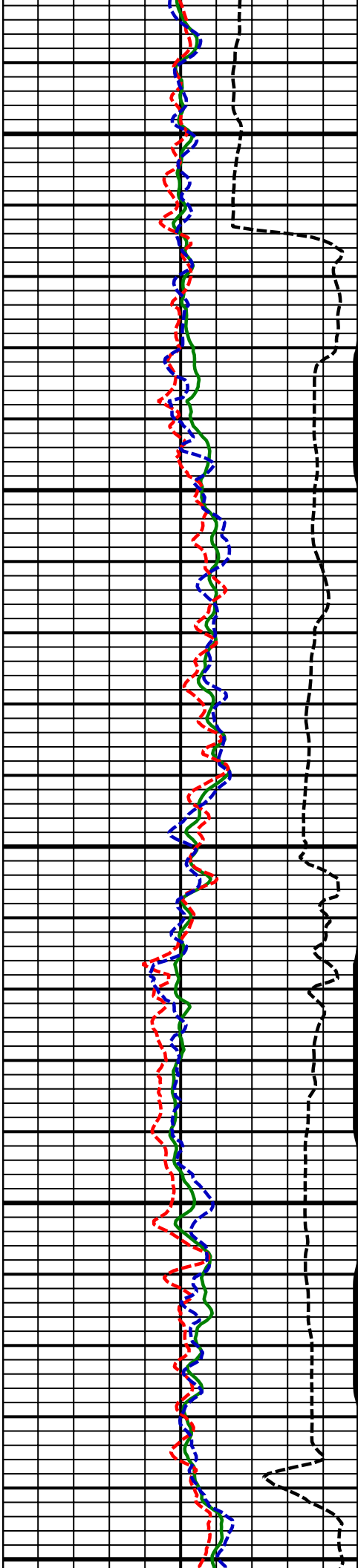




14800  
MD

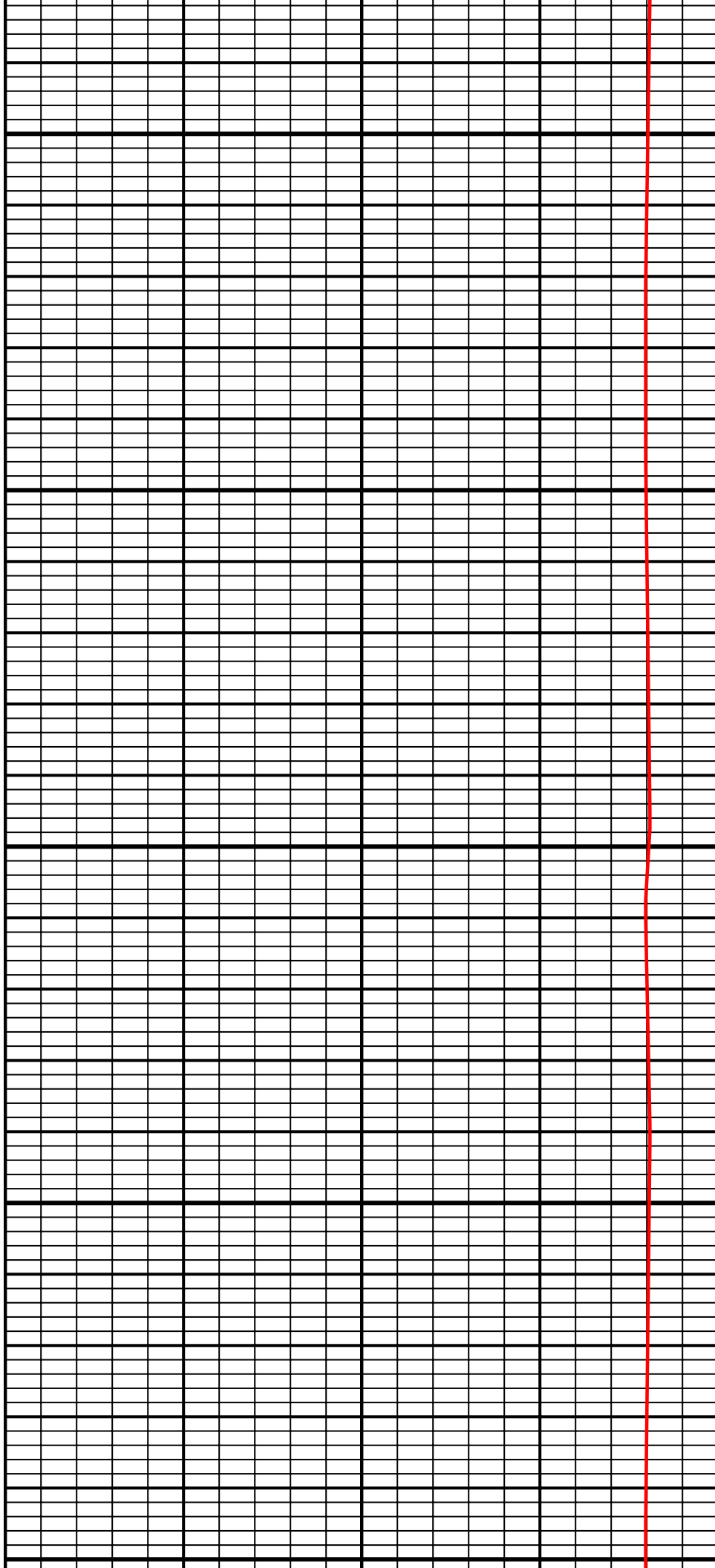
14900  
MD



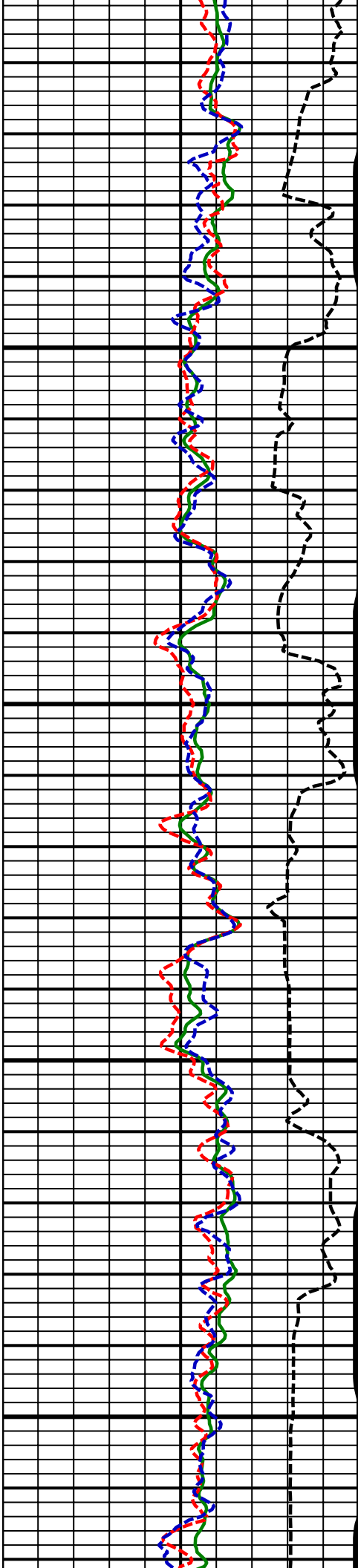


15000  
MD

15100  
MD

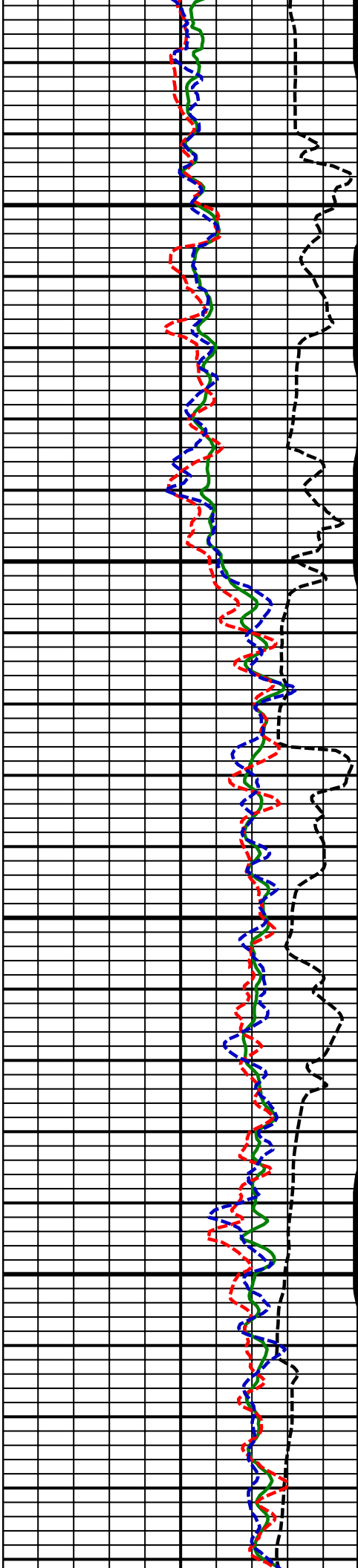






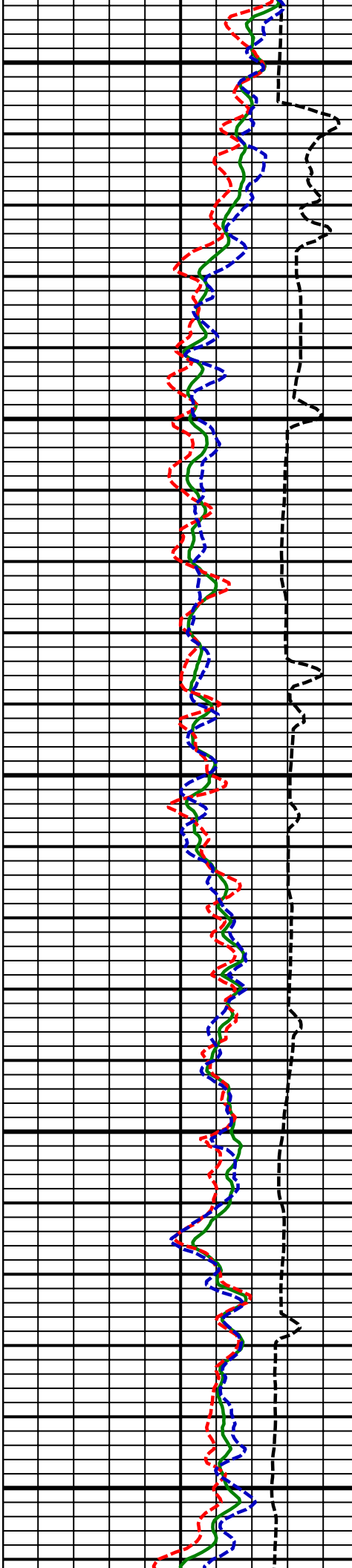
15200  
MD

15300  
MD



15400  
MD

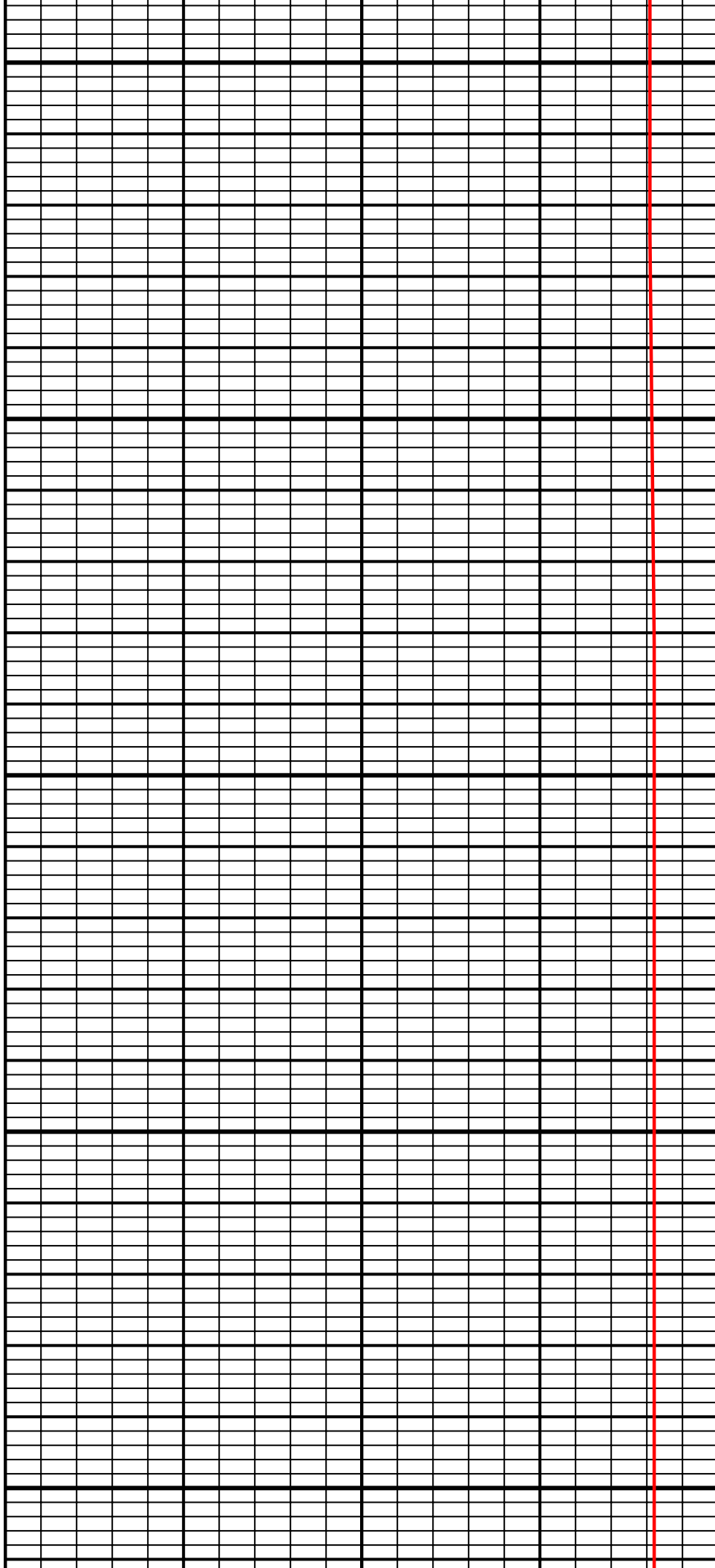
15500  
MD

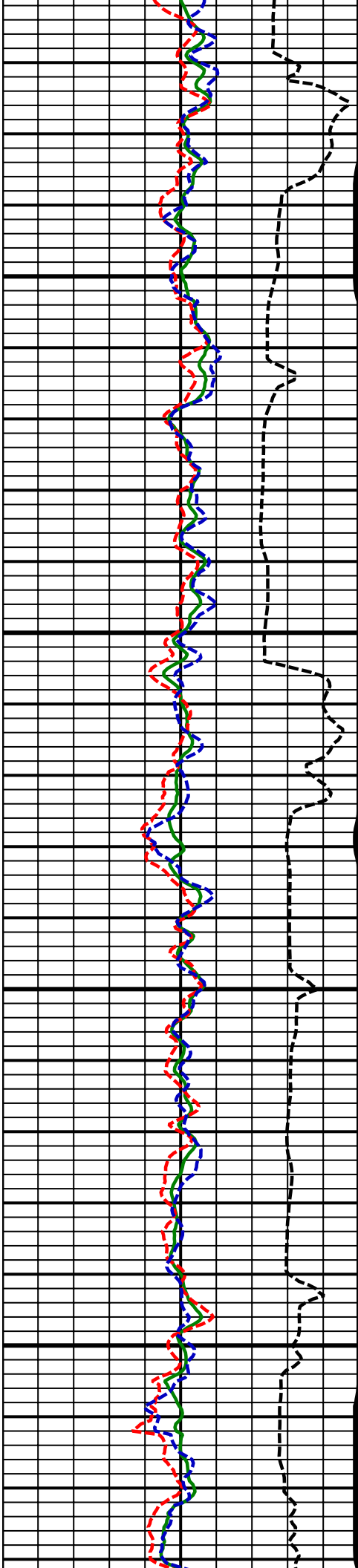


15600  
MD

15700  
MD

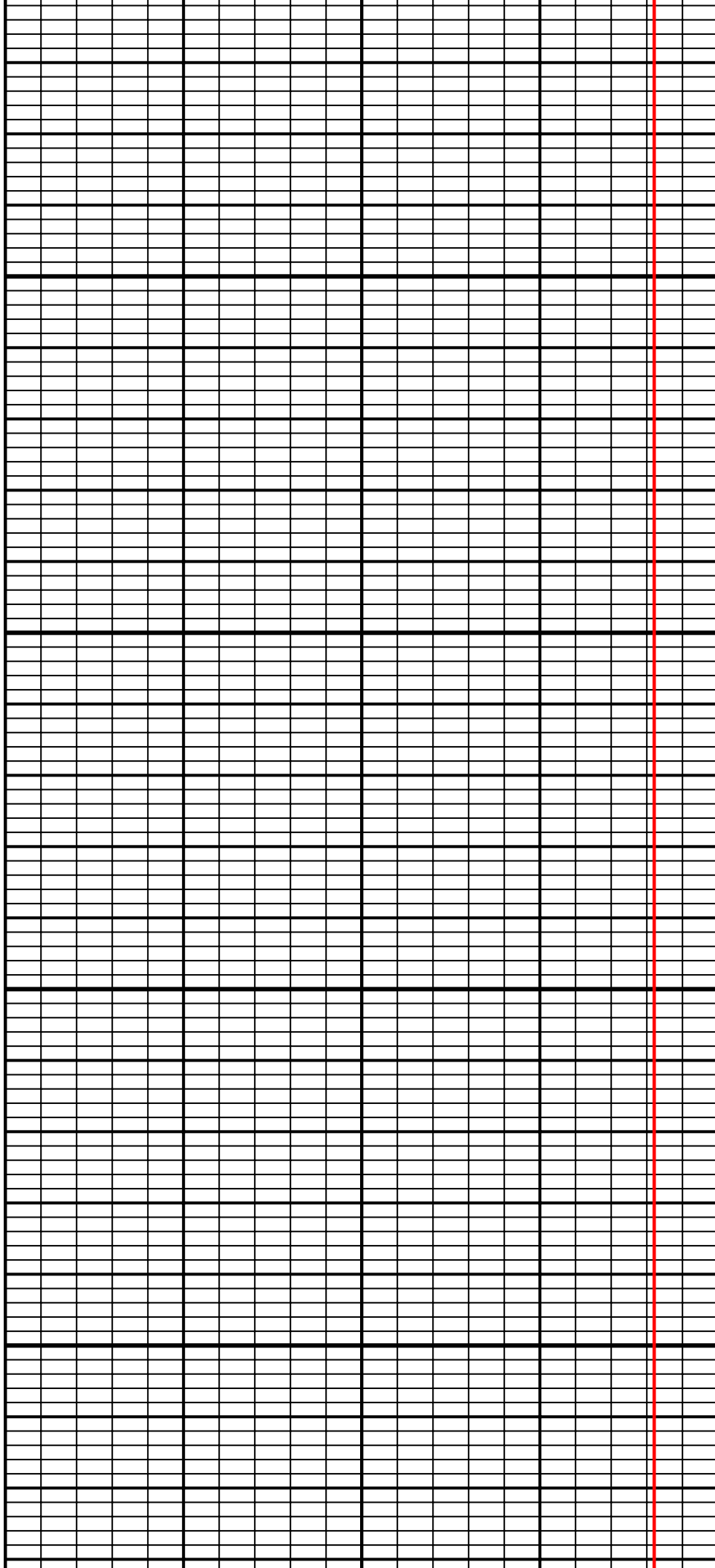
15800  
MD

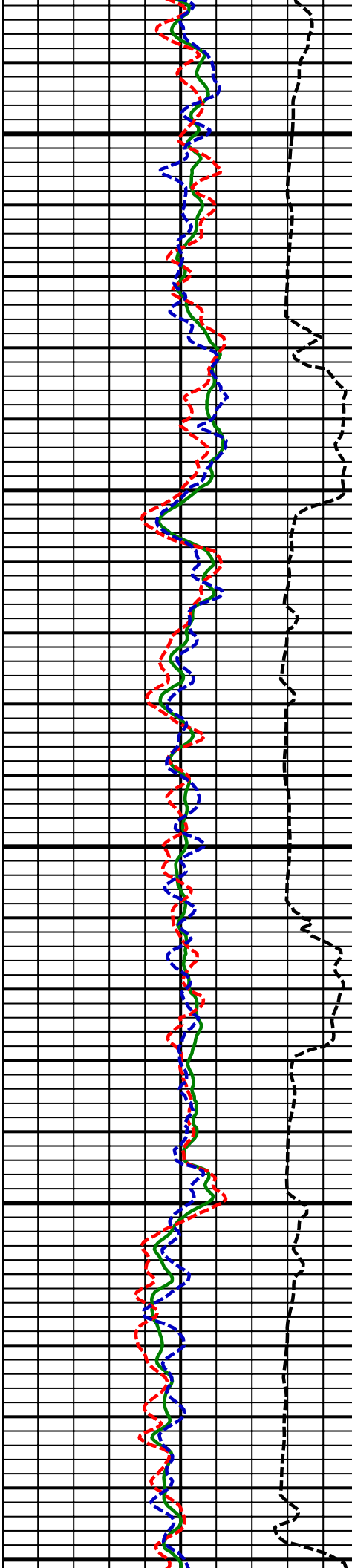




15900  
MD

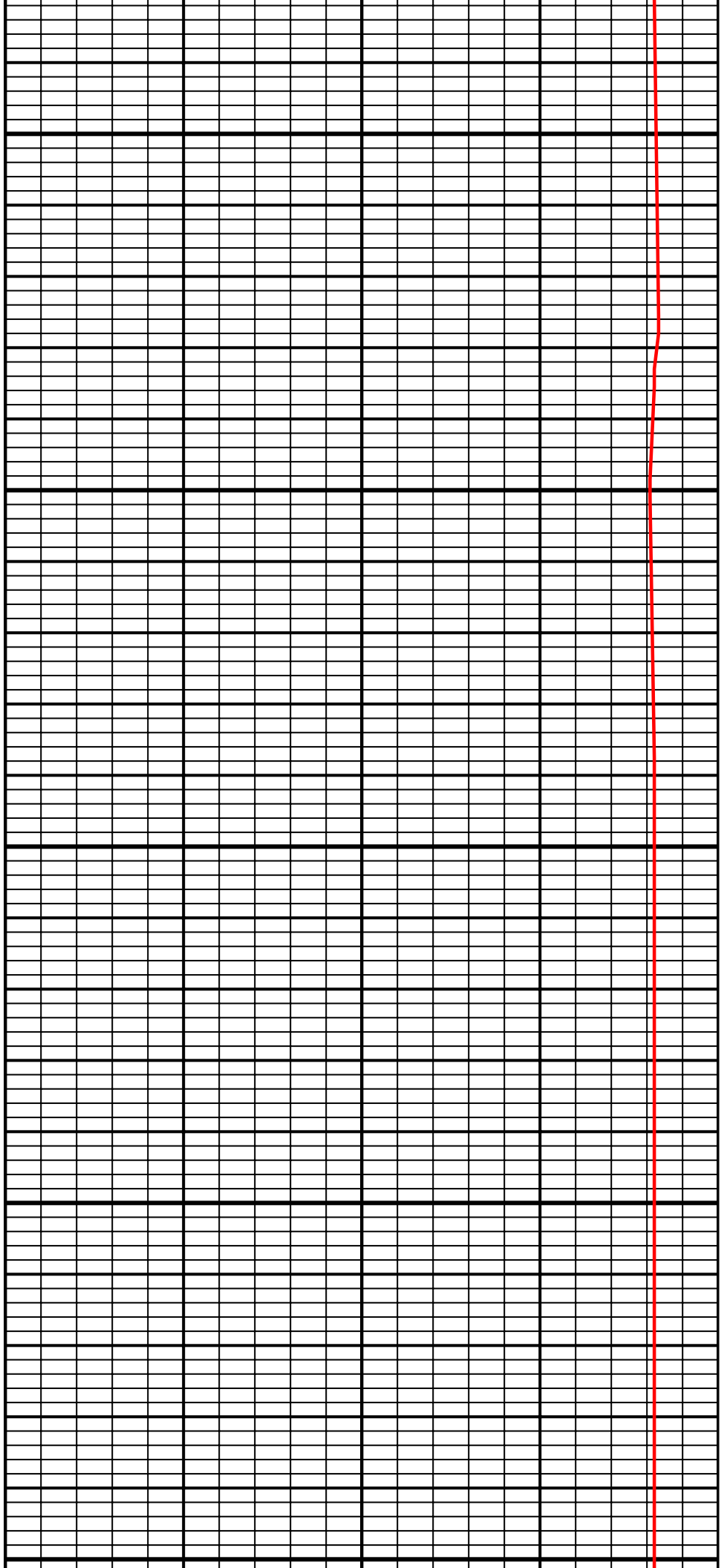
16000  
MD

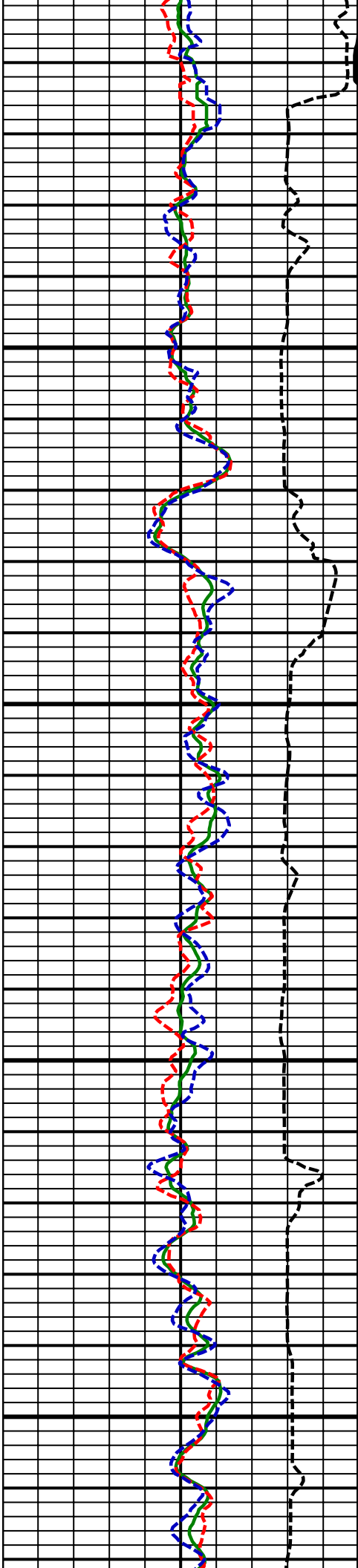




16100  
MD

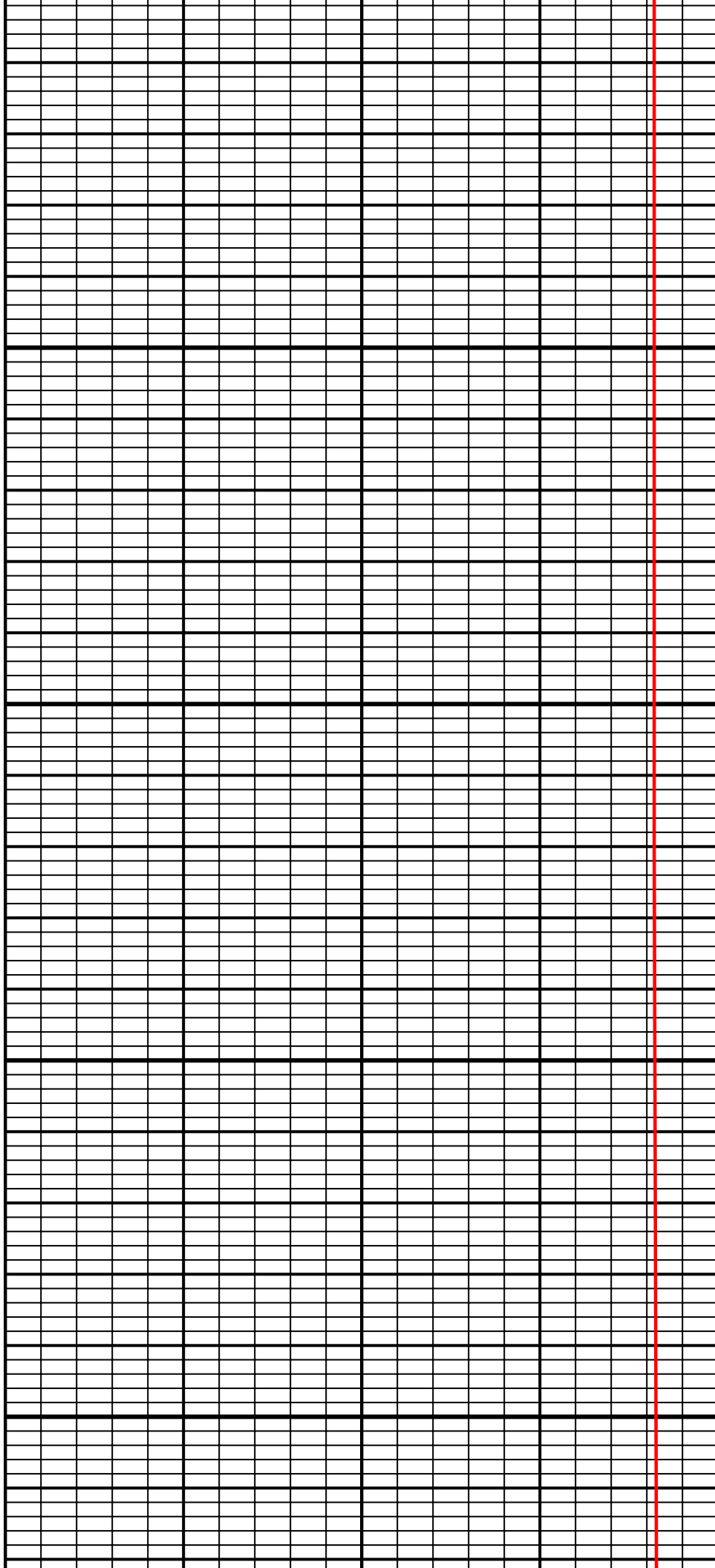
16200  
MD

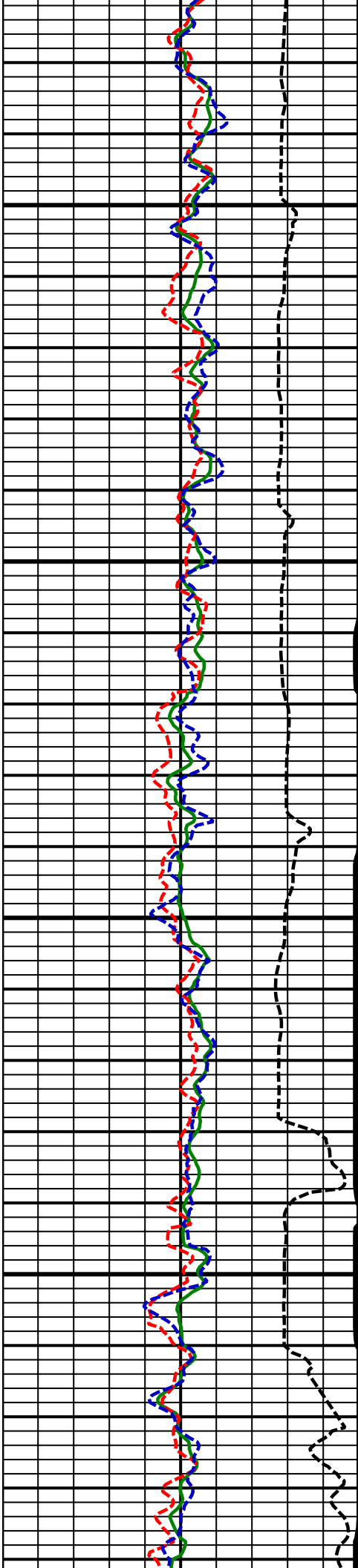




16300  
MD

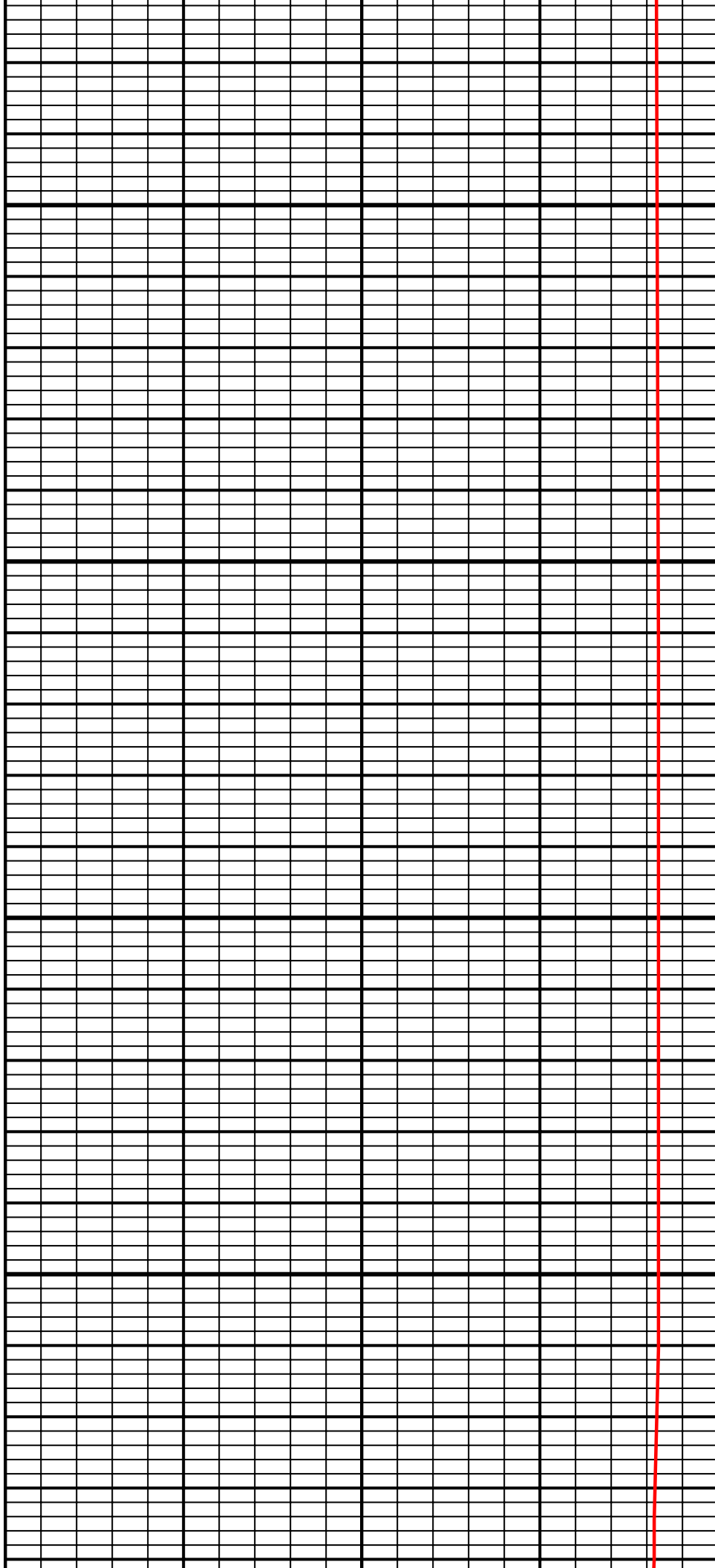
16400  
MD

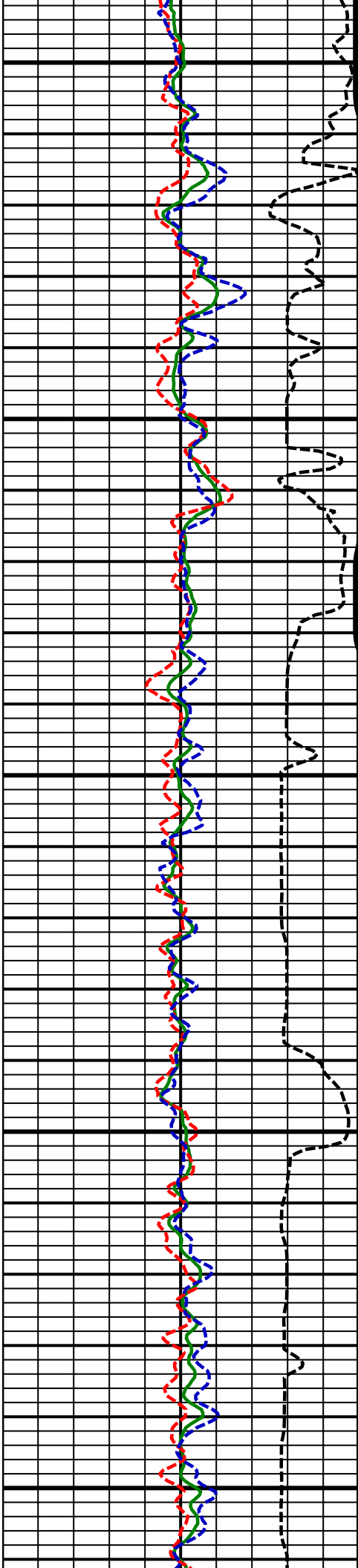




16500  
MD

16600  
MD

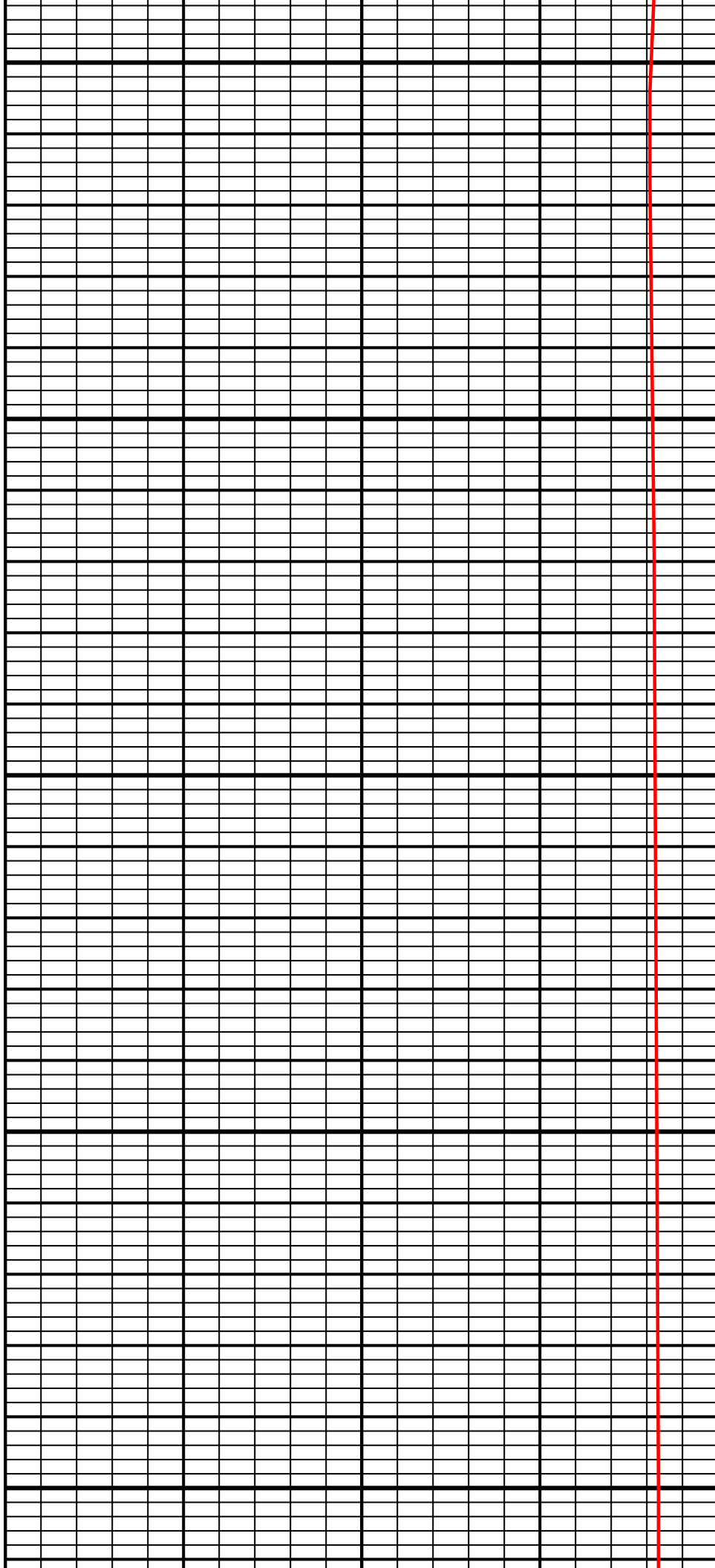




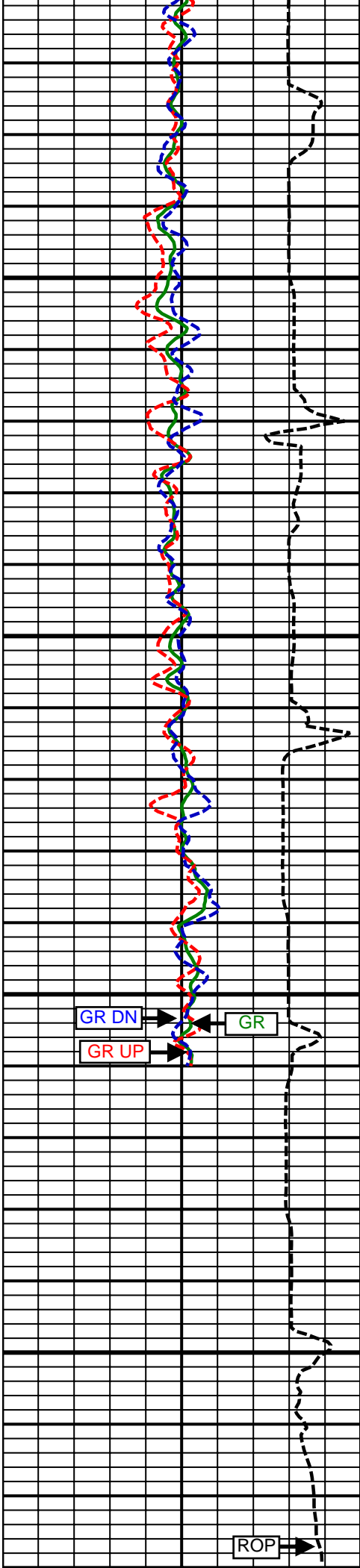
16700  
MD

16800  
MD

16900  
MD



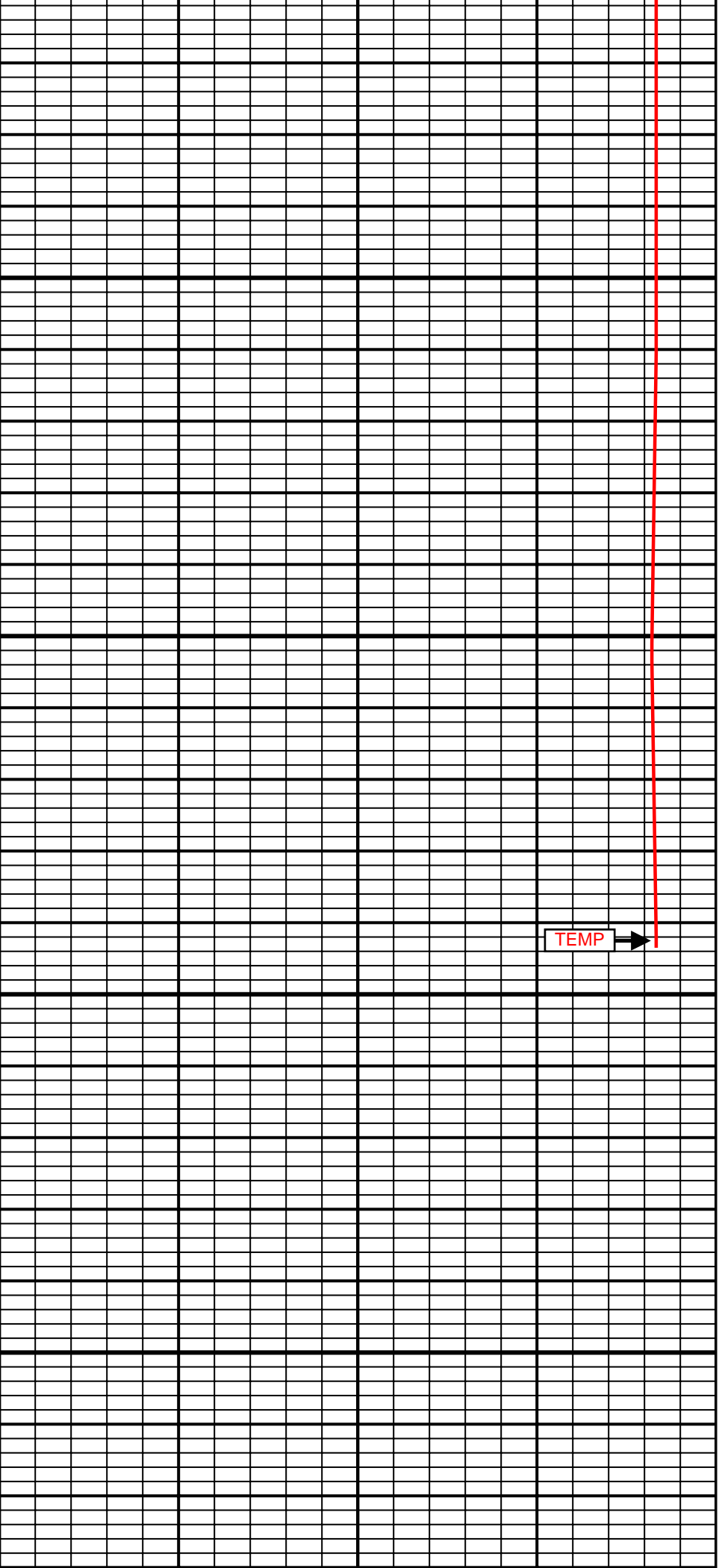




17000  
MD

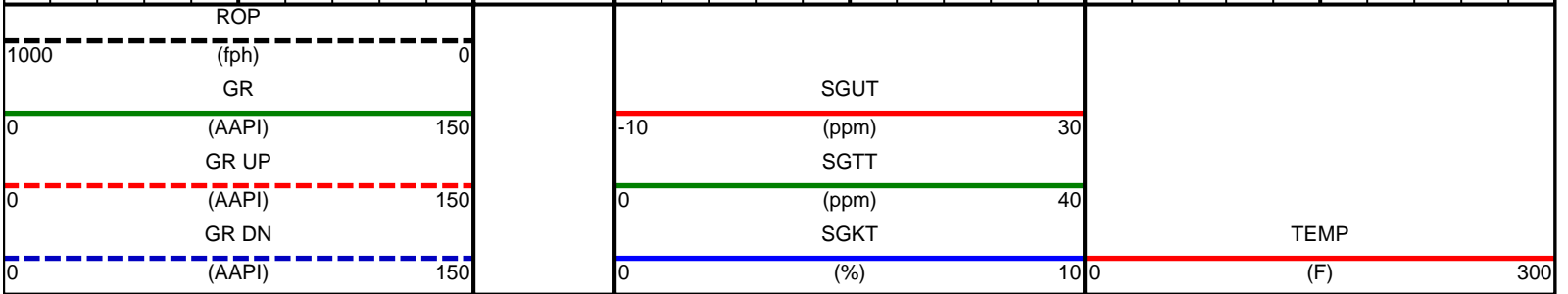
17100  
MD

Comment  
4-2



TEMP →

ROP →



SURVEY						
Survey Calculation Method: <b>Minimum Curvature</b>						
Magnetic Reference	Target Direction	Total Magnetic Field	Magnetic Dip Angle	Magnetic Declination	Grid Convergence	Total Correction
<b>True North</b>	<b>0.02 deg</b>	<b>52935 nT</b>	<b>66.74 deg</b>	<b>8.41 deg</b>	<b>0.00 deg</b>	<b>8.41 deg</b>
<b>Survey Tie-On</b>	Depth	INC	AZ	TVD	NS	EW
	<b>1746.00 ft</b>	<b>0.09 deg</b>	<b>50.15 deg</b>	<b>1745.93 ft</b>	<b>-2.16 ft</b>	<b>1.95 ft</b>

Well Head							
Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	NS (ft)	EW (ft)	VSect (ft)	Dogleg (deg/100ft)
1902.00	1.19	299.62	1901.92	-1.28	0.64	-1.28	0.78
1995.00	0.88	184.05	1994.91	-1.52	-0.25	-1.52	1.89
2087.00	3.09	166.65	2086.85	-4.63	0.27	-4.63	2.46
2178.00	4.41	152.68	2177.66	-10.13	2.44	-10.13	1.75
2271.00	4.21	152.29	2270.39	-16.33	5.67	-16.33	0.22
2363.00	3.57	150.50	2362.18	-21.81	8.65	-21.81	0.71
2457.00	4.42	146.67	2455.95	-27.38	12.08	-27.38	0.95
2549.00	4.01	144.35	2547.70	-32.96	15.90	-32.95	0.48
2642.00	5.01	153.44	2640.41	-39.23	19.62	-39.23	1.32
2735.00	4.34	150.81	2733.10	-45.94	23.15	-45.93	0.76
2827.00	3.94	152.34	2824.86	-51.78	26.31	-51.77	0.45
2912.00	4.48	152.90	2909.63	-57.32	29.18	-57.31	0.64
2997.00	4.57	153.73	2994.37	-63.31	32.19	-63.30	0.13
3083.00	4.12	151.53	3080.12	-69.10	35.18	-69.09	0.56
3168.00	3.72	153.64	3164.92	-74.25	37.86	-74.24	0.50
3254.00	3.99	158.04	3250.73	-79.53	40.22	-79.52	0.47
3339.00	4.29	158.55	3335.51	-85.23	42.49	-85.22	0.36
3425.00	5.42	160.76	3421.20	-92.06	45.00	-92.04	1.33
3510.00	6.34	168.86	3505.75	-100.45	47.23	-100.44	1.46
3595.00	6.27	174.44	3590.24	-109.68	48.59	-109.66	0.73
3681.00	6.45	169.14	3675.71	-119.10	49.95	-119.08	0.71
3766.00	6.87	159.62	3760.14	-128.55	52.62	-128.53	1.39
3852.00	7.07	160.62	3845.50	-138.37	56.17	-138.35	0.27
3937.00	6.09	159.37	3929.94	-147.52	59.49	-147.50	1.17
4023.00	6.18	158.80	4015.45	-156.11	62.78	-156.08	0.13
4108.00	6.84	160.14	4099.90	-165.13	66.15	-165.11	0.80
4193.00	6.63	160.18	4184.31	-174.51	69.53	-174.48	0.25
4279.00	5.59	159.30	4269.82	-183.10	72.70	-183.07	1.21
4364.00	5.80	148.46	4354.41	-190.63	76.41	-190.60	1.29
4450.00	7.60	148.13	4439.81	-199.17	81.68	-199.14	2.09
4536.00	7.15	151.09	4525.10	-208.68	87.27	-208.65	0.68
4621.00	6.83	149.33	4609.47	-217.66	92.41	-217.63	0.45
4706.00	6.69	150.61	4693.88	-226.32	97.42	-226.29	0.24
4792.00	6.66	151.42	4779.30	-235.06	102.26	-235.03	0.11
4877.00	5.85	151.52	4863.79	-243.20	106.68	-243.16	0.95
4963.00	5.00	148.99	4949.41	-250.26	110.71	-250.23	1.03
5048.00	4.65	147.82	5034.10	-256.36	114.45	-256.32	0.43
5133.00	4.36	157.52	5118.84	-262.26	117.52	-262.22	0.96
5218.00	5.05	157.98	5203.56	-268.71	120.16	-268.67	0.81
5304.00	4.90	150.37	5289.23	-275.41	123.39	-275.37	0.79
5389.00	4.14	147.91	5373.97	-281.17	126.82	-281.12	0.92
5474.00	3.71	148.29	5458.77	-286.11	129.89	-286.06	0.51

5560.00	1.83	138.84	5544.66	-289.51	132.26	-289.46	2.24
5645.00	1.17	155.48	5629.63	-291.32	133.51	-291.27	0.92
5731.00	0.82	158.66	5715.62	-292.69	134.10	-292.64	0.41
5901.00	1.09	106.29	5885.60	-294.28	136.10	-294.23	0.52
5987.00	0.98	101.92	5971.59	-294.66	137.60	-294.61	0.16
6072.00	0.56	148.73	6056.58	-295.16	138.53	-295.12	0.85
6158.00	0.30	143.01	6142.58	-295.70	138.88	-295.65	0.31
6243.00	0.14	133.55	6227.58	-295.95	139.09	-295.90	0.19
6328.00	0.21	214.47	6312.58	-296.15	139.08	-296.10	0.27
6414.00	0.30	172.20	6398.58	-296.51	139.02	-296.46	0.24
6499.00	0.42	202.06	6483.57	-297.01	138.93	-296.97	0.26
6585.00	0.63	216.57	6569.57	-297.69	138.53	-297.64	0.29
6663.00	3.07	336.08	6647.53	-296.12	137.43	-296.07	4.39
6748.00	12.13	358.59	6731.71	-285.09	136.28	-285.04	11.02
6834.00	19.00	0.72	6814.51	-262.03	136.24	-261.98	8.01
6919.00	25.70	359.15	6893.08	-229.73	136.14	-229.68	7.91
7004.00	31.88	355.77	6967.54	-188.87	134.21	-188.83	7.52
7090.00	42.05	357.69	7036.17	-137.31	131.36	-137.26	11.90
7175.00	50.27	355.46	7095.00	-76.18	127.62	-76.13	9.85
7260.00	61.21	356.09	7142.78	-6.22	122.48	-6.18	12.89
7303.00	67.18	357.79	7161.49	32.42	120.43	32.46	14.33
7346.00	71.37	358.73	7176.70	72.61	119.21	72.65	9.96
7389.00	73.50	359.79	7189.68	113.60	118.68	113.64	5.48
7431.00	76.25	0.74	7200.63	154.14	118.87	154.18	6.90
7474.00	78.12	1.85	7210.17	196.05	119.82	196.09	5.02
7517.00	83.42	1.49	7217.07	238.46	121.06	238.50	12.35
7559.00	89.93	1.10	7219.50	280.36	122.01	280.40	15.53
7590.00	92.17	0.65	7218.93	311.35	122.48	311.39	7.37
7677.00	93.46	359.65	7214.66	398.24	122.71	398.28	1.88
7762.00	90.86	359.03	7211.46	483.17	121.73	483.21	3.14
7848.00	90.43	358.35	7210.49	569.14	119.76	569.18	0.94
7933.00	89.91	358.01	7210.24	654.09	117.06	654.13	0.73
8018.00	89.20	356.39	7210.90	738.99	112.91	739.03	2.08
8104.00	89.21	358.18	7212.09	824.88	108.84	824.92	2.08
8189.00	88.85	359.95	7213.53	909.85	107.45	909.89	2.12
8275.00	90.18	359.77	7214.26	995.85	107.24	995.88	1.56
8360.00	89.88	358.73	7214.21	1080.84	106.13	1080.87	1.27
8445.00	90.68	359.92	7213.80	1165.83	105.13	1165.86	1.69
8530.00	90.79	359.24	7212.71	1250.82	104.50	1250.85	0.81
8616.00	89.75	0.65	7212.30	1336.81	104.42	1336.85	2.04
8701.00	89.57	359.59	7212.81	1421.81	104.60	1421.85	1.26
8787.00	89.56	1.36	7213.46	1507.80	105.31	1507.84	2.06
8872.00	89.88	0.44	7213.87	1592.79	106.65	1592.83	1.15
8957.00	90.35	0.30	7213.70	1677.79	107.20	1677.82	0.58
9043.00	89.94	0.56	7213.49	1763.78	107.84	1763.82	0.56
9128.00	89.57	0.86	7213.85	1848.78	108.89	1848.81	0.56
9214.00	89.14	0.99	7214.82	1934.76	110.28	1934.80	0.52
9299.00	90.74	0.19	7214.91	2019.75	111.16	2019.79	2.10
9384.00	90.37	359.81	7214.08	2104.75	111.16	2104.79	0.62
9470.00	89.81	358.90	7213.95	2190.74	110.19	2190.78	1.24
9555.00	88.77	357.99	7215.00	2275.70	107.88	2275.74	1.63
9640.00	89.01	359.46	7216.65	2360.66	105.99	2360.70	1.75
9726.00	90.62	359.91	7216.93	2446.66	105.52	2446.69	1.94
9811.00	89.63	358.85	7216.74	2531.65	104.60	2531.69	1.71
9896.00	90.26	359.77	7216.82	2616.64	103.58	2616.68	1.31
9982.00	89.51	359.29	7217.00	2702.64	102.87	2702.67	1.04
10067.00	89.82	359.64	7217.49	2787.63	102.08	2787.67	0.55
10152.00	90.06	358.66	7217.58	2872.62	100.82	2872.66	1.19
10238.00	88.89	359.18	7218.37	2958.60	99.20	2958.64	1.49
10323.00	89.63	1.29	7219.47	3043.59	99.54	3043.62	2.63
10409.00	90.43	1.58	7219.42	3129.56	101.70	3129.60	0.99

10485.00	90.55	1.29	7218.77	3205.53	103.60	3205.57	0.41
10570.00	90.06	1.60	7218.32	3290.50	105.74	3290.54	0.68
10656.00	90.43	0.78	7217.95	3376.48	107.53	3376.52	1.05
10741.00	89.94	0.29	7217.68	3461.48	108.32	3461.52	0.82
10826.00	89.20	359.49	7218.32	3546.48	108.16	3546.51	1.28
10912.00	88.40	358.33	7220.12	3632.44	106.53	3632.48	1.64
10997.00	89.82	359.07	7221.44	3717.40	104.60	3717.44	1.88
11082.00	90.25	359.74	7221.38	3802.40	103.71	3802.44	0.94
11168.00	88.33	358.71	7222.45	3888.38	102.55	3888.42	2.53
11253.00	87.66	357.84	7225.42	3973.29	99.99	3973.32	1.29
11339.00	88.40	357.89	7228.38	4059.18	96.79	4059.21	0.86
11412.00	89.94	359.03	7229.44	4132.14	94.83	4132.17	2.62
11497.00	90.31	359.99	7229.25	4217.13	94.10	4217.17	1.21
11582.00	92.64	0.83	7227.06	4302.10	94.71	4302.13	2.91
11668.00	92.56	1.01	7223.16	4388.00	96.09	4388.03	0.23
11753.00	93.46	2.31	7218.70	4472.84	98.55	4472.88	1.86
11838.00	93.64	3.25	7213.44	4557.58	102.66	4557.61	1.12
11924.00	90.80	2.30	7210.11	4643.40	106.82	4643.44	3.48
12009.00	88.83	1.67	7210.38	4728.35	109.77	4728.39	2.43
12095.00	89.88	1.80	7211.35	4814.30	112.37	4814.34	1.23
12180.00	87.28	357.72	7213.46	4899.25	112.02	4899.29	5.69
12264.00	88.15	354.81	7216.81	4982.99	106.55	4983.03	3.61
12349.00	88.95	354.66	7218.96	5067.61	98.75	5067.64	0.96
12435.00	87.84	353.94	7221.36	5153.15	90.22	5153.18	1.54
12520.00	87.59	354.72	7224.75	5237.66	81.82	5237.69	0.96
12605.00	90.68	356.80	7226.04	5322.41	75.54	5322.43	4.38
12691.00	91.42	357.18	7224.46	5408.27	71.03	5408.30	0.97
12776.00	92.04	358.97	7221.89	5493.18	68.17	5493.21	2.23
12861.00	91.30	0.40	7219.42	5578.14	67.71	5578.16	1.89
12947.00	89.82	0.98	7218.58	5664.13	68.74	5664.15	1.85
13032.00	89.51	1.04	7219.07	5749.11	70.24	5749.14	0.37
13118.00	88.40	1.85	7220.64	5835.07	72.41	5835.10	1.60
13203.00	89.32	1.60	7222.33	5920.01	74.97	5920.04	1.12
13289.00	90.18	1.89	7222.71	6005.97	77.58	6006.00	1.06
13374.00	88.71	1.56	7223.53	6090.93	80.14	6090.95	1.77
13460.00	89.12	1.71	7225.16	6176.88	82.60	6176.91	0.51
13545.00	90.18	1.36	7225.68	6261.84	84.87	6261.87	1.31
13631.00	90.00	1.20	7225.54	6347.82	86.79	6347.85	0.28
13716.00	90.68	0.92	7225.04	6432.80	88.37	6432.84	0.87
13801.00	89.44	0.98	7224.95	6517.79	89.78	6517.82	1.46
13887.00	90.06	1.40	7225.33	6603.77	91.56	6603.80	0.87
13972.00	90.86	1.89	7224.64	6688.73	94.00	6688.77	1.10
14058.00	90.43	2.10	7223.68	6774.67	97.00	6774.71	0.56
14143.00	90.00	359.80	7223.36	6859.66	98.41	6859.69	2.75
14228.00	88.94	359.07	7224.14	6944.65	97.57	6944.68	1.51
14314.00	90.43	1.34	7224.62	7030.64	97.87	7030.67	3.16
14398.00	90.74	1.56	7223.76	7114.61	100.00	7114.64	0.45
14484.00	90.53	1.36	7222.81	7200.57	102.19	7200.61	0.34
14569.00	89.38	359.03	7222.87	7285.56	102.48	7285.60	3.06
14654.00	89.45	0.47	7223.74	7370.56	102.11	7370.59	1.70
14740.00	90.00	2.89	7224.15	7456.51	104.63	7456.55	2.89
14825.00	88.03	1.03	7225.61	7541.44	107.54	7541.48	3.19
14911.00	88.64	1.95	7228.11	7627.38	109.77	7627.41	1.28
14996.00	88.03	1.58	7230.58	7712.30	112.39	7712.34	0.84
15081.00	87.53	2.01	7233.88	7797.19	115.05	7797.23	0.78
15167.00	87.47	0.93	7237.63	7883.08	117.25	7883.12	1.26
15252.00	89.20	1.69	7240.10	7968.02	119.20	7968.06	2.22
15338.00	88.71	0.53	7241.66	8053.99	120.86	8054.03	1.46
15423.00	89.63	0.53	7242.90	8138.97	121.65	8139.02	1.08
15508.00	91.11	0.79	7242.35	8223.96	122.63	8224.01	1.77
15593.00	91.23	1.38	7240.61	8308.93	124.24	8308.97	0.71

15678.00	91.23	1.72	7238.79	8393.88	126.54	8393.92	0.40
15764.00	91.36	1.88	7236.84	8479.82	129.24	8479.86	0.24
15849.00	90.88	1.36	7235.18	8564.76	131.64	8564.81	0.83
15935.00	90.06	0.21	7234.48	8650.75	132.82	8650.80	1.64
16020.00	89.26	0.14	7234.98	8735.75	133.08	8735.79	0.94
16105.00	89.94	0.36	7235.57	8820.75	133.45	8820.79	0.84
16191.00	90.00	0.65	7235.62	8906.74	134.21	8906.79	0.34
16276.00	90.35	0.48	7235.36	8991.74	135.04	8991.78	0.46
16362.00	91.06	0.65	7234.30	9077.73	135.89	9077.77	0.85
16447.00	90.71	0.65	7232.99	9162.71	136.86	9162.76	0.41
16533.00	90.37	0.48	7232.18	9248.70	137.70	9248.75	0.44
16618.00	89.32	359.50	7232.41	9333.70	137.69	9333.75	1.69
16704.00	89.94	0.78	7232.96	9419.70	137.90	9419.74	1.65
16789.00	90.93	0.49	7232.32	9504.69	138.84	9504.73	1.21
16875.00	90.93	0.57	7230.92	9590.67	139.64	9590.72	0.09
16960.00	90.37	0.33	7229.96	9675.66	140.30	9675.71	0.72
17075.00	89.63	359.99	7229.96	9790.66	140.63	9790.71	0.71
17129.00	89.63	359.99	7230.31	9844.66	140.62	9844.71	0.00

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\*Weatherford surveys from 1902 ft MD to 17075 ft MD.\*

\*TD well at 17129 ft MD.\*

The total correction is 8.41 deg relative to True North.

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# Weatherford®

Final Print

COMPANY	<u>Anadarko Petroleum Corp.</u>		
WELL	<u>Sparboe 27C-26 HZ</u>		
FIELD	<u>Wattenburg</u>		
RIG	<u>Xtreme 23</u>		
LOC.	<u>Colorado</u>	COUNTY	<u>Weld</u>