



Weatherford®

6 3/4 in. & 4 3/4 in. WeatherfordM/LWD™
Spectral Gamma Ray
1 in. & 5 in. MEASURED DEPTH
RECORDED DATA
FINAL PRINT

Company: Anadarko
Well: Nichols 29N-5HZ
Field: Wattenberg
Rig: H&P 307
County: Weld

COMPANY		Anadarko	
WELL		Nichols 29N-5HZ	
FIELD		Wattenberg	
RIG		H&P 307	
COUNTY		Weld	
API #		05-123-35871-0000	
Location	Latitude:	40.154226° N	x = 3,226,772.83 ft
	Longitude:	104.688695° W	y = 1,300,065.21 ft
Other Services:		Directional and Temperature	
		Mag Decl:	8.65°
		Mag Dip:	66.79°

Permanent Datum:	<u>Mean Sea Level</u>		
Log Measured From:	<u>Drill Floor</u>	Elev: <u>4937 ft</u>	above perm. datum
Depth Reference:	<u>Drillers Tally</u>	Total Depth:	<u>13982 ft</u>
Depth Logged:	5783 ft	to	13982 ft
Date Logged:	26-Dec-12	to	2-Jan-13
		Runs:	4
		Spud Date:	24-Dec-12
		Elevation	
		K.B.	Top Drive
		G.L.	4912.0 ft
		D.F.	4937.0 ft
		W.D.	Land

Borehole Record				Casing Record			
Hole Size	From	To	Size	Weight	From	To	
8.750 in.	865 ft	7612 ft	9.625 in.	53.5 lb/ft	Surface	825 ft	
6.125 in.	7612 ft	13982 ft	7.000 in.	39.0 lb/ft	Surface	7572 ft	
Borehole Deviation Record				Mud Record			
Hole Size	Min. Inc.	Max. Inc.	Type	Weight	From	To	
8.750 in.	0.10°	83.91°	WBM	8.40-10.20 ppq	865 ft	7612 ft	
6.125 in.	87.47°	92.47°	WBM	9.30-10.25 ppq	7612 ft	13982 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.	1.242	1.242	0.982	0.982		
Bit Start Depth	ft	865	5825	6712	6712		
Bit End Depth	ft	5825	6712	6712	13982		
Top Log Interval	ft	na	5783	na	7574		
Bottom Log Interval	ft	na	6712	na	13982		
Begin Log Time	hrs	na	22:25	na	23:16		
Begin Log Date	DD-MMM-YY	na	26-Dec-12	na	30-Dec-12		
End Log Time	hrs	na	5:34	na	2:16		
End Log Date	DD-MMM-YY	na	28-Dec-12	na	2-Jan-13		
Drill or Wipe		Drill	Drill	na	Drill		
Flow Rate	gal/min	594	593	270	295		
Max AV / CV @ MWD	ft/min	469 / 171	469 / 392	442 / 365	483 / 251		
Min Inc @ Depth	deg @ ft	0.10 @ 952	0.10 @ 6682	na	87.47 @ 7746		
Max Inc @ Depth	deg @ ft	15.99 @ 5003	83.91 @ 7556	na	92.47 @ 11029		
MUD DATA							
Depth	ft	865	5825	6712	6712		
Fluid Type		Water	Water	WBM	WBM		
Mud Weight	ppg	8.50	8.50	10.25	10.10		
Plastic Viscosity	cP	1	8	13	9		
Solids / Sand	%	1.2 / 0.10	1.2 / 0.10	9.2 / 0.15	9.3 / 0.15		
Total Chlorides	ppm	1000	1000	1000	1000		
pH		7.8	8.2	8.8	9.0		
Oil:Water Ratio	% Vol	0:100	0.5:99.5	0.5:99.5	0.5:99.5		
Rm @ Temperature	ohm-m @ deg F	N/A	N/A	N/A	N/A		
Rmc @ Temperature	ohm-m @ deg F	N/A	N/A	N/A	N/A		
Rmf @ Temperature	ohm-m @ deg F	N/A	N/A	N/A	N/A		
KCl	% Vol	0	0	0	0		
Client Representative		D. Barone	D. Barone	D. Barone	D. Barone		
WeatherfordM/LWD Engineer		W. Volker	W. Volker	E. Dearman	E. Dearman		

EQUIPMENT SUMMARY					
M/LWD Run Number	1	2	3	4	
MWD Build Number	CP20796PDYBG-T01	CP20796PDYBG-T01	N/A	N/A	
HEL Serial Number	N/A	N/A	NW22764PDBI4.75	NW22764PDBI4.75	
SAGR Serial Number	N/A	N/A	NW22765JB4.75	NW22763JB4.75	
CMS	44772	44772	N/A	N/A	
UGR/GR-4	2652	2652	N/A	N/A	
BTR/CDS	44708/44742	44708/44742	N/A	N/A	
Sensor to Bit Offsets / Acquisition Rates					
Directional	ft / sec	57.77 / RT	56.35 / RT	54.14 / RT	53.77 / RT
Gamma Ray	ft / sec	43.56 / 16	42.14 / 16	39.60 / 5	39.28 / 5
Resistivity	ft / sec	N/A	N/A	N/A	N/A
Other Information					
Total BHA Length	ft	96.31	94.89	111.47	111.10
BHA Assembly Type		Steerable	Steerable	Steerable	Steerable
Stabilizer Location	ft	N/A	N/A	34.44	34.44
Stabilizer Location	ft	N/A	N/A	72.94	72.57
Run Circulating Time	hr	42.85	32.91	3.35	62.45
Run Drilling Time	hr	19.18	20.48	0.00	26.19

MUD SUMMARY

Date and Time	Run	Bit Depth	Mud Weight	% K	Rm @ Temp	Rmf @ Temp	Rmc @ Temp	BHCT
24 Dec 12 @ 15:30	01	865 ft	8.50 ppg	0	N/A	N/A	N/A	97 F
26 Dec 12 @ 22:25	02	5825 ft	8.50 ppg	0	N/A	N/A	N/A	124 F
29 Dec 12 @ 23:45	03	6712 ft	10.25 ppg	0	N/A	N/A	N/A	120 F
30 Dec 12 @ 23:16	04	6712 ft	10.10 ppg	0	N/A	N/A	N/A	204 F

M/LWD RUN REMARKS		
Run Number: 1 :: NO DATA LOGGED		
WFT Services Provided:		
Directional Services: On demand Inclination and Azimuth.		
Borehole and Environmental Correction:		
Collar O.D.:	6.870 in.	Gamma Ray: Collar O.D., collar I.D. and K1 factor.
Collar I.D.:	3.250 in.	
K1 Factor:	3.975	
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:		
Collar O.D.:	6.870 in.	Gamma Ray: Collar O.D., collar I.D. and K1 factor.
Collar I.D.:	3.250 in.	
K1 Factor:	3.975	
Run Number: 3 :: NO DATA LOGGED		
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:	6.125 in.	Gamma Ray: Corrected for mud weight, hole size and KCl concentration.
Mud Weight:	10.25 ppg	
Borehole Temperature:	176° F	
KCl Concentration:	0%	
Run Number: 4 :: 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:	6.125 in.	Gamma Ray: Corrected for mud weight, hole size and KCl concentration.
Mud Weight:	10.00 ppg	
Borehole Temperature:	249° F	
KCl Concentration:	0%	

M/LWD LOG COMMENTS

Comment No. 1-1

No Logging Occurred During This Run.

Comment No. 2-1**RECORDED DATA LOG**

Start of MWD Drilling Run 02

Weatherford International provided 6 3/4 in. Directional, Gamma Ray and Temperature for Run 02.

Run 02 started formation drilling December 26, 2012 at 22.25 at 5825 MD / 5704 TVD. Weatherford International logged the 8.750 in. borehole.

The WBM at the start of drilling was 8.50 ppg.

Comment No. 2-2

End of MWD Drilling Run 02

Run 02 ended drilling formation December 28, 2012 at 5:34 at 7612 MD / 7153 TVD.

The WBM at the end of drilling was 10.20 ppg.

Comment No. 3-1

No Logging Occurred During This Run.

Comment No. 4-1**RECORDED DATA LOG**

Start of LWD Drilling Run 04

Weatherford International provided 4 3/4 in. Directional, Gamma Ray, and Temperature for Run 04.

Run 04 started formation drilling December 30, 2012 at 23:16 at 7612 MD / 7153 TVD. Weatherford International logged the 6.125 in. borehole.

The WBM at the start of drilling was 10.10 ppg.

Comment No. 4-2

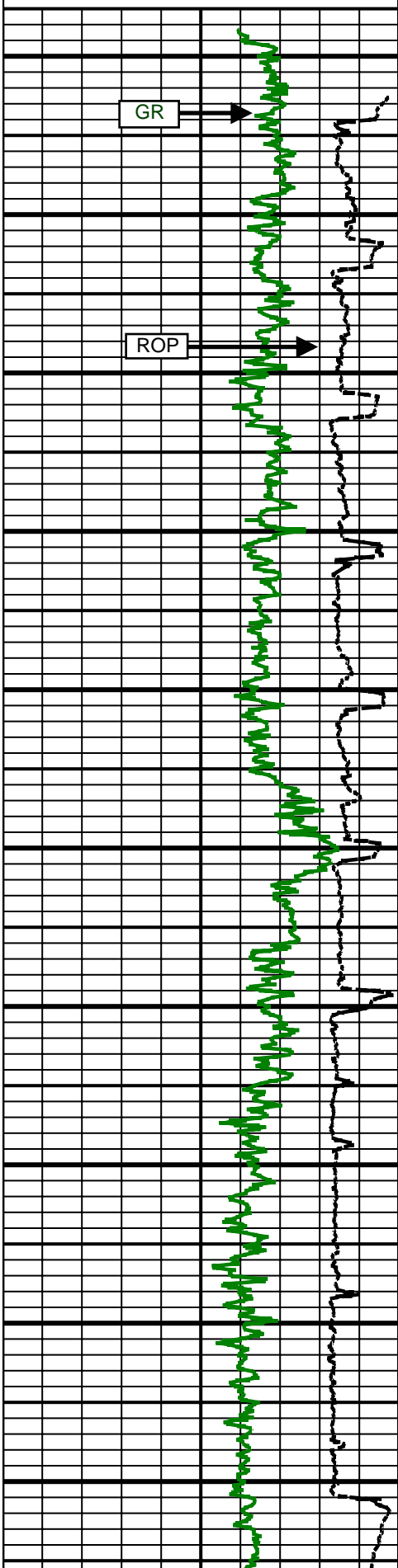
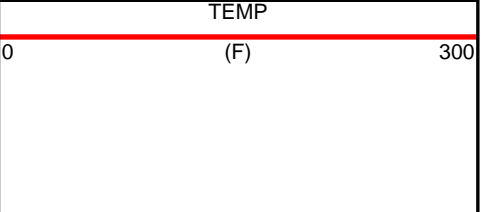
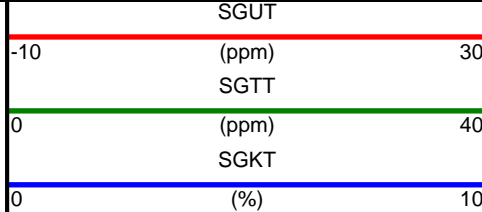
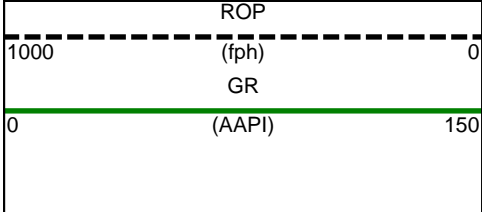
End of LWD Drilling Run 04

Run 04 ended drilling formation January 2, 2013 at 2:16 at 13982 MD / 7162 TVD.

The WBM at the end of drilling was 9.60 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	AAP1	Gamma Ray 3.0 ft window 0.5 ft Exponential Smoothing	See M/LWD Run Remarks
Potassium Total	SGKT	%	Potassium Concentration 3.0 ft window 0.5 ft Two Stage Smoothing	
Thorium Total	SGTT	ppm	Thorium Concentration 3.0 ft window 0.5 ft Two Stage Smoothing	
Uranium Total	SGUT	ppm	Uranium Concentration 3.0 ft window 0.5 ft Two Stage Smoothing	
Temperature	TEMP	F	Temperature 3.0 ft window 0.5 ft Exponential Smoothing	None

1 Inch - Measured Depth



5800 MD

5900 MD

6000 MD

6100 MD

6200 MD

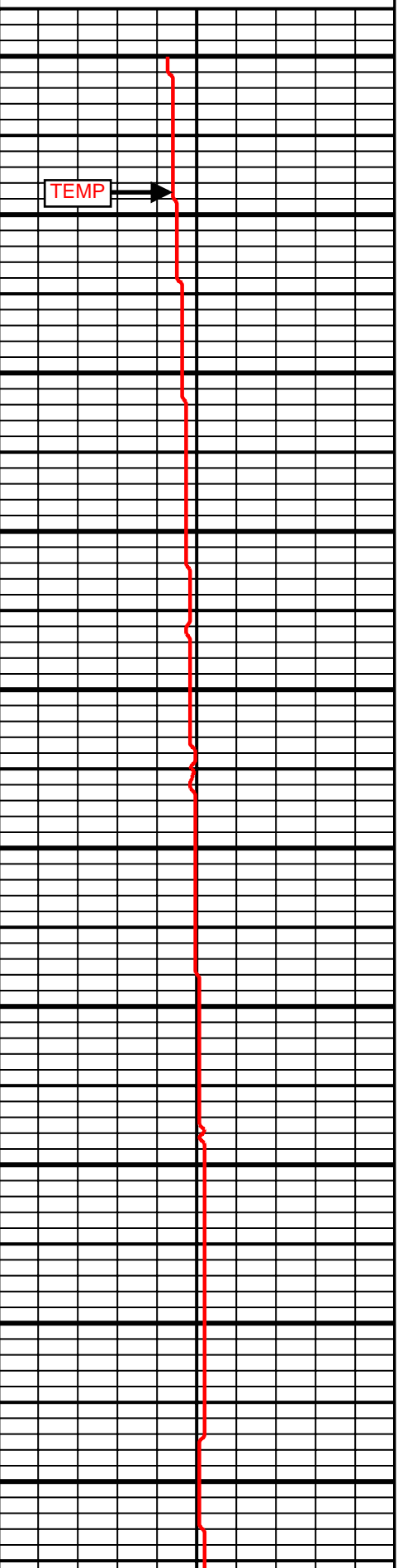
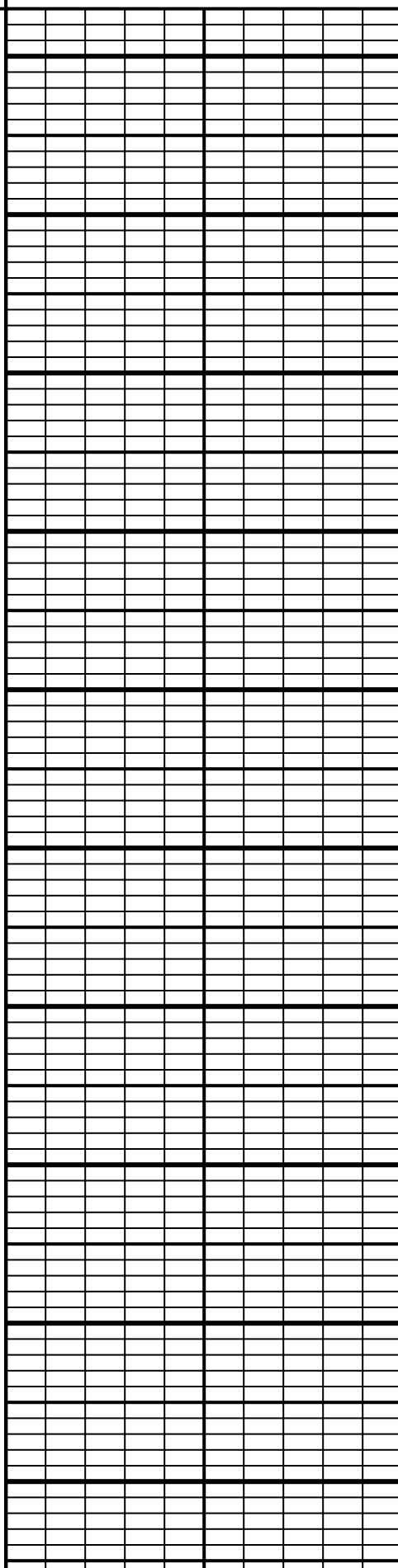
6300 MD

6400 MD

6500 MD

6600 MD

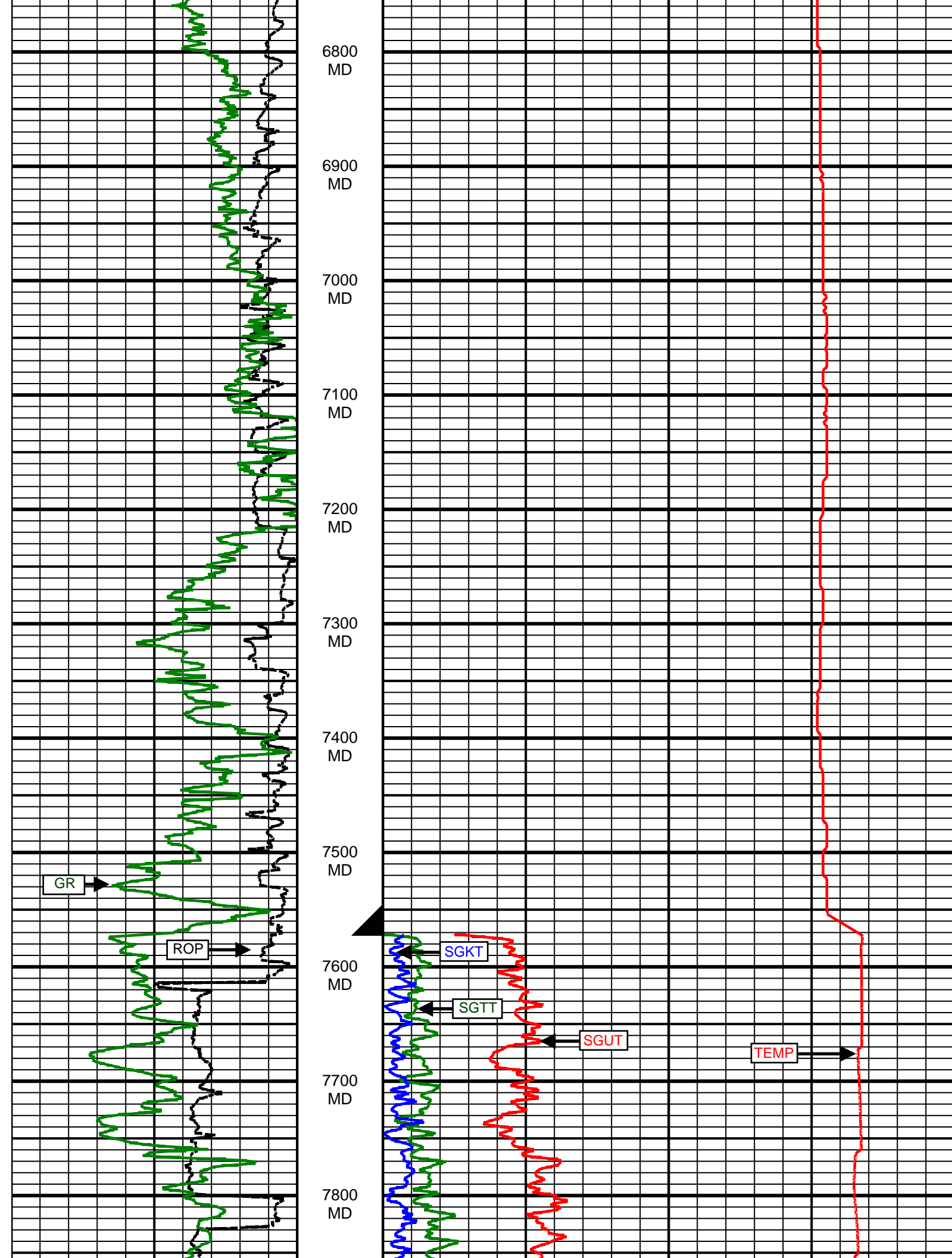
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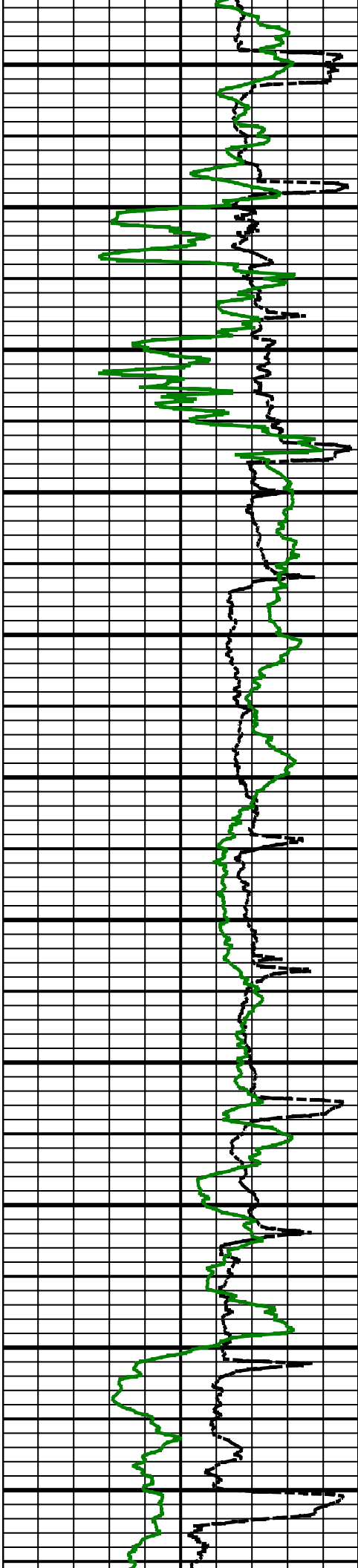


GR

TEMP

ROP





7900 MD

8000 MD

8100 MD

8200 MD

8300 MD

8400 MD

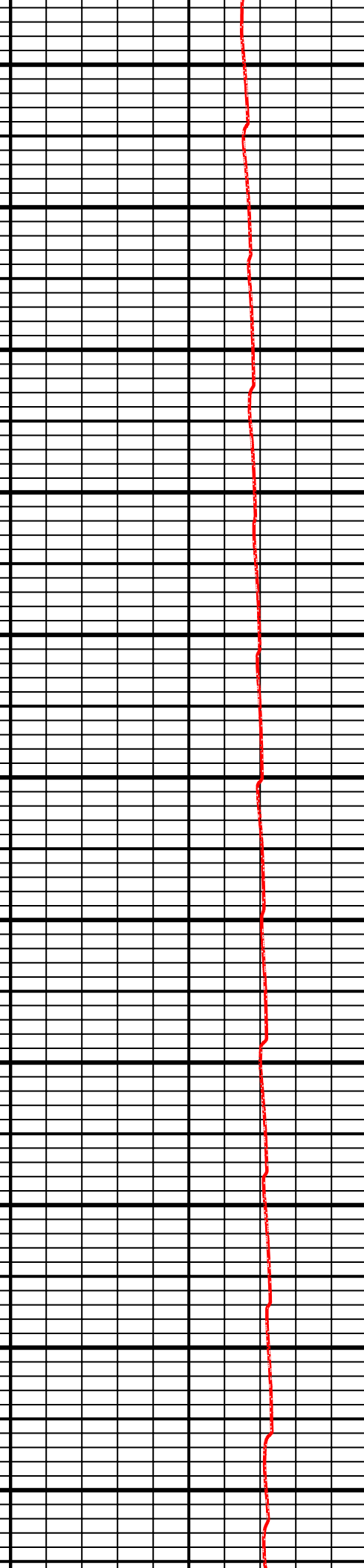
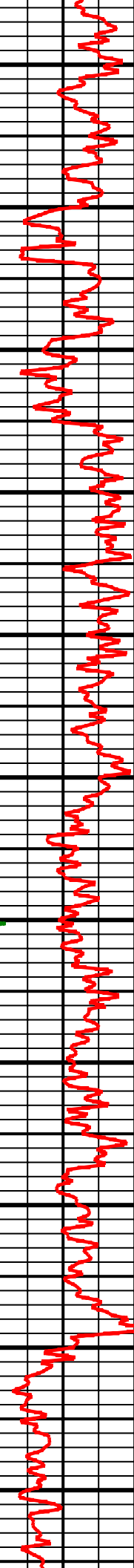
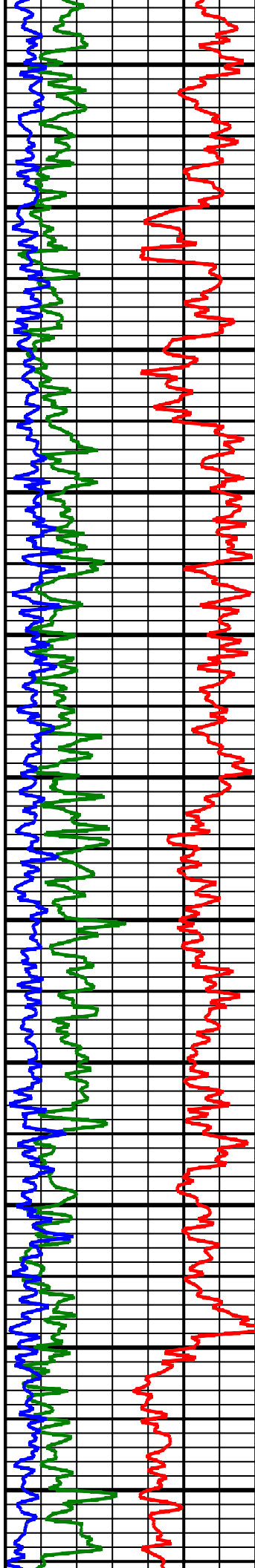
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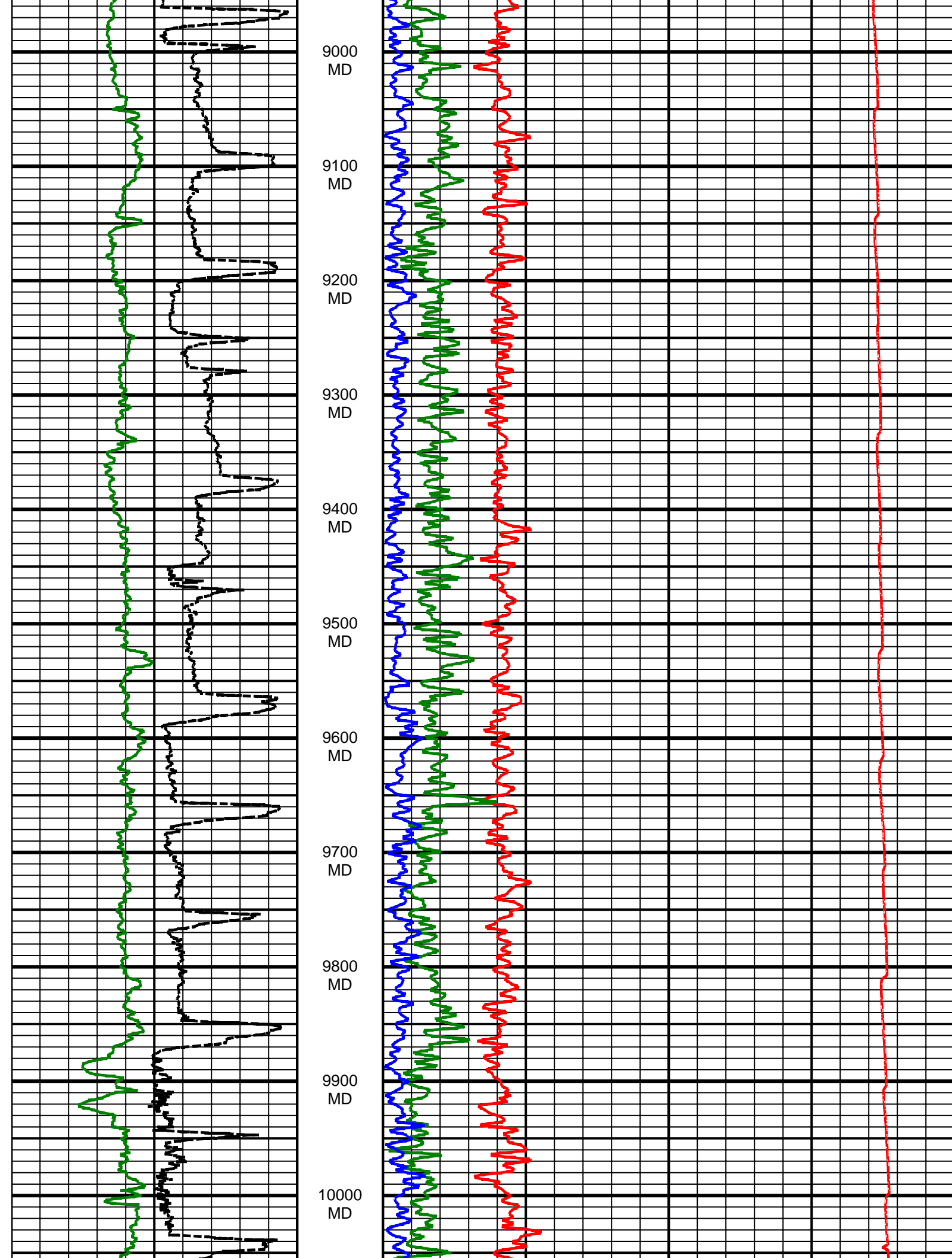
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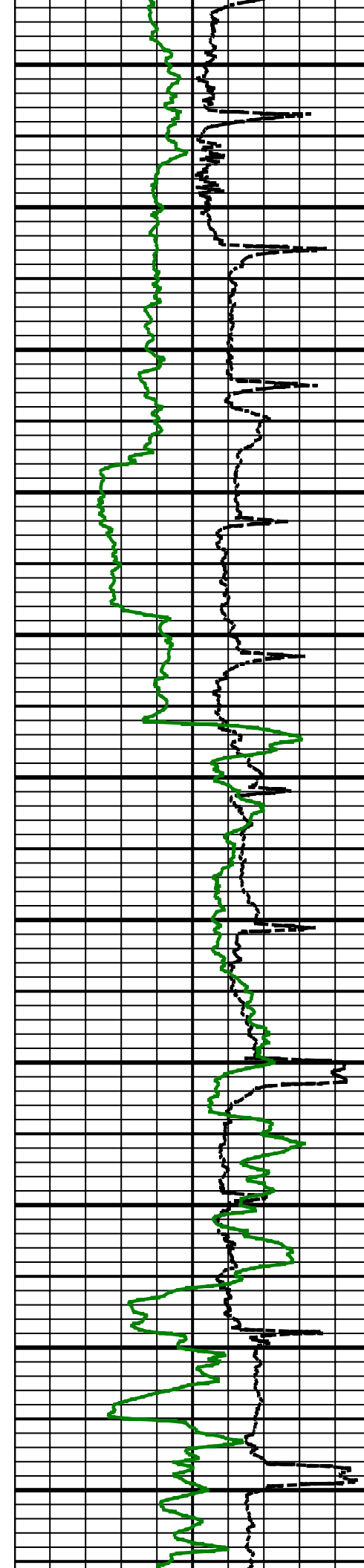
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8800 MD

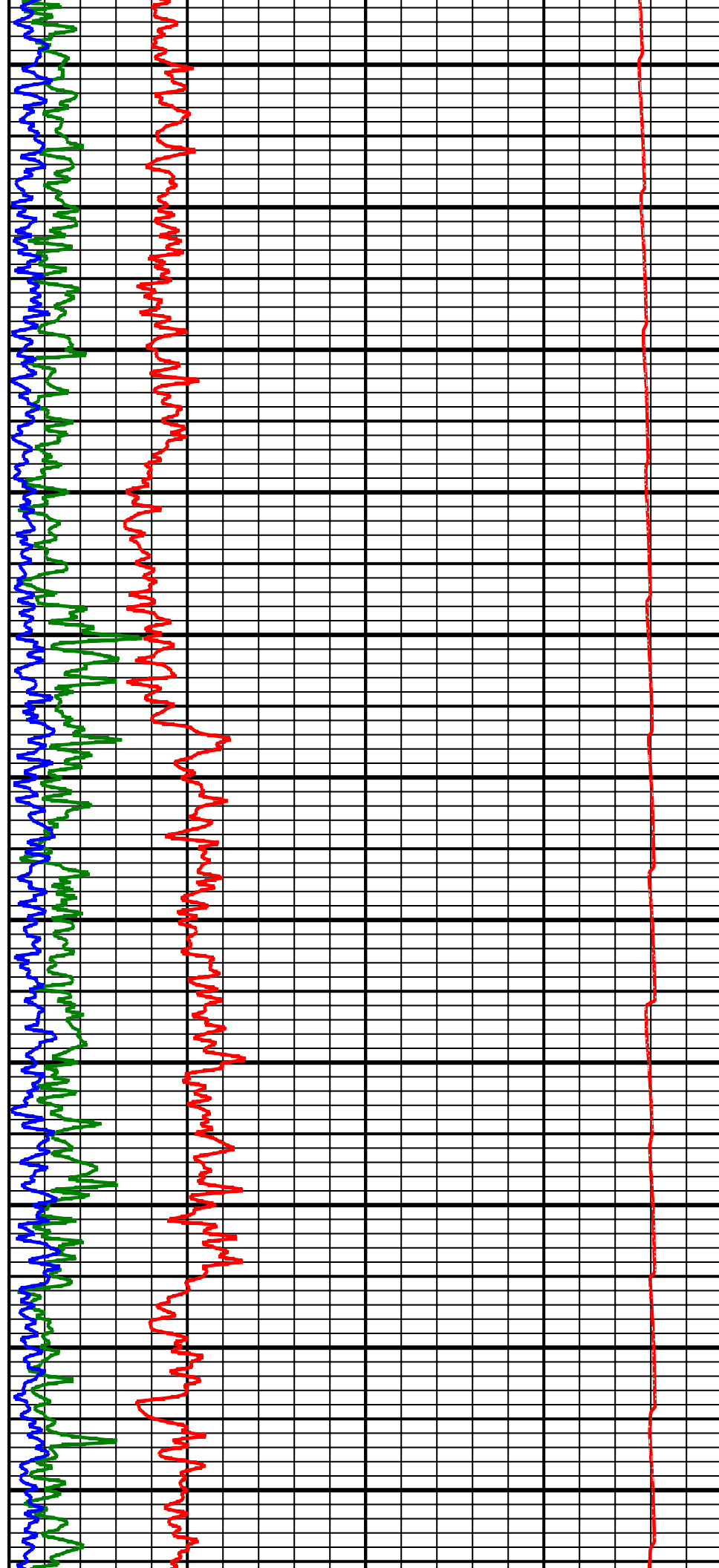
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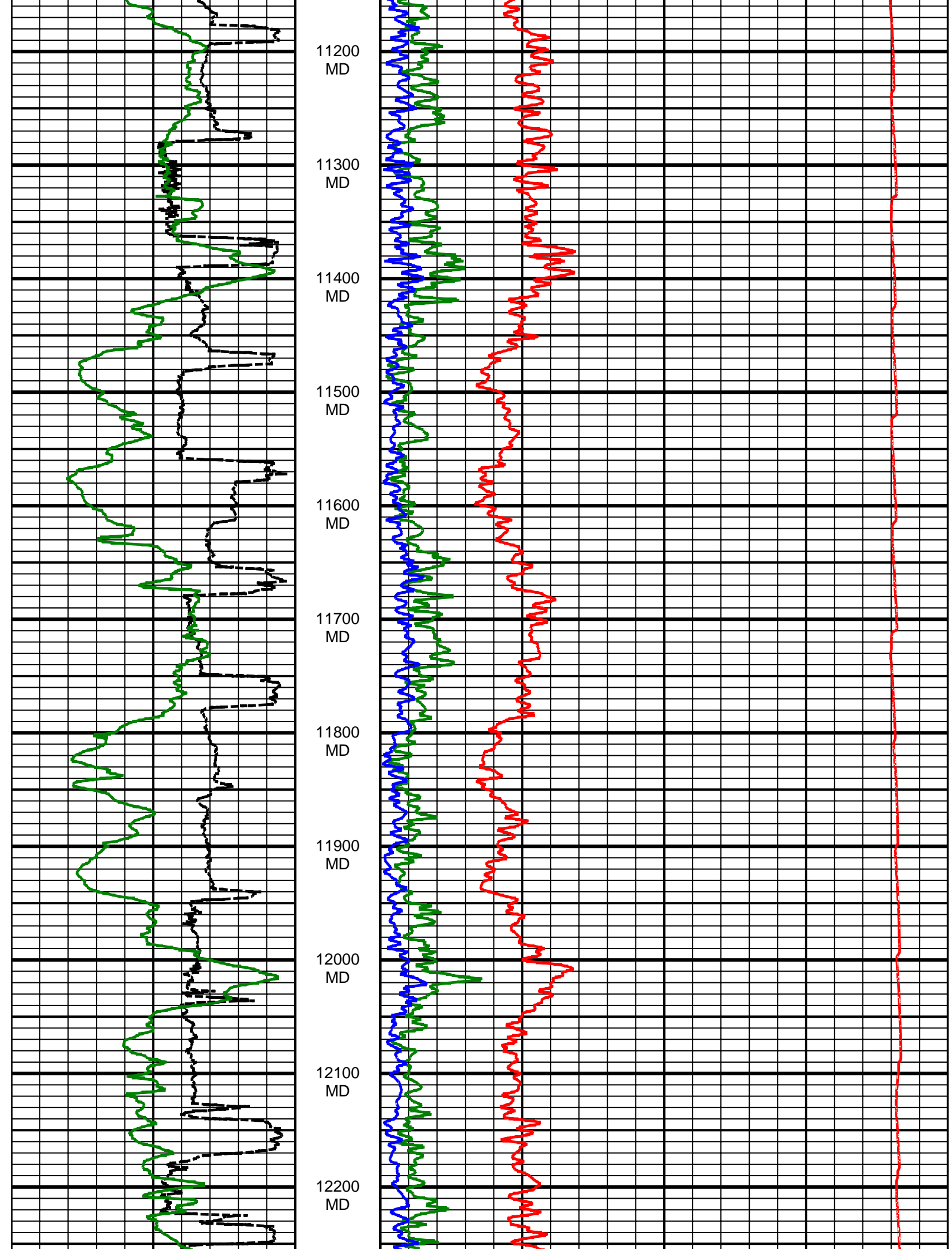


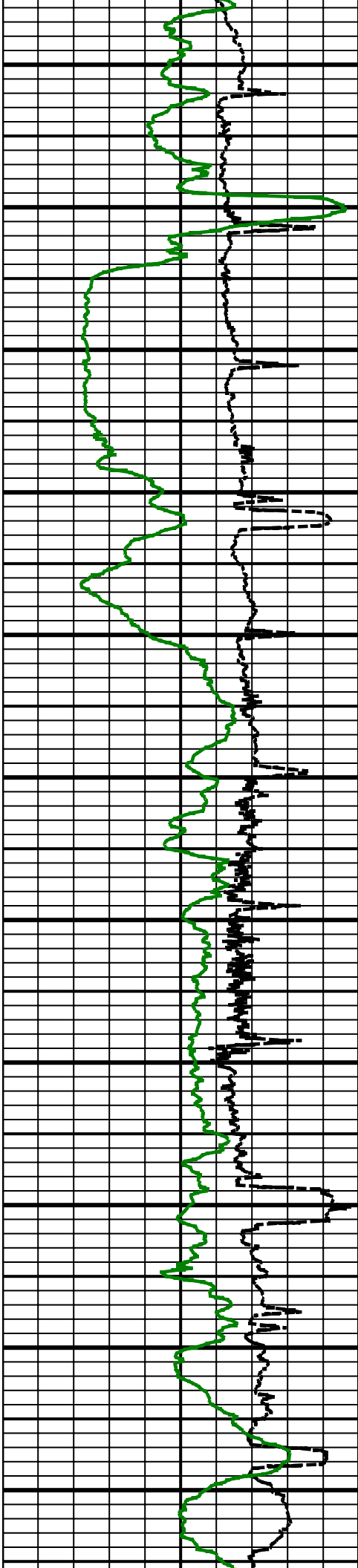




10100 MD
10200 MD
10300 MD
10400 MD
10500 MD
10600 MD
10700 MD
10800 MD
10900 MD
11000 MD
11100 MD







12300 MD

12400 MD

12500 MD

12600 MD

12700 MD

12800 MD

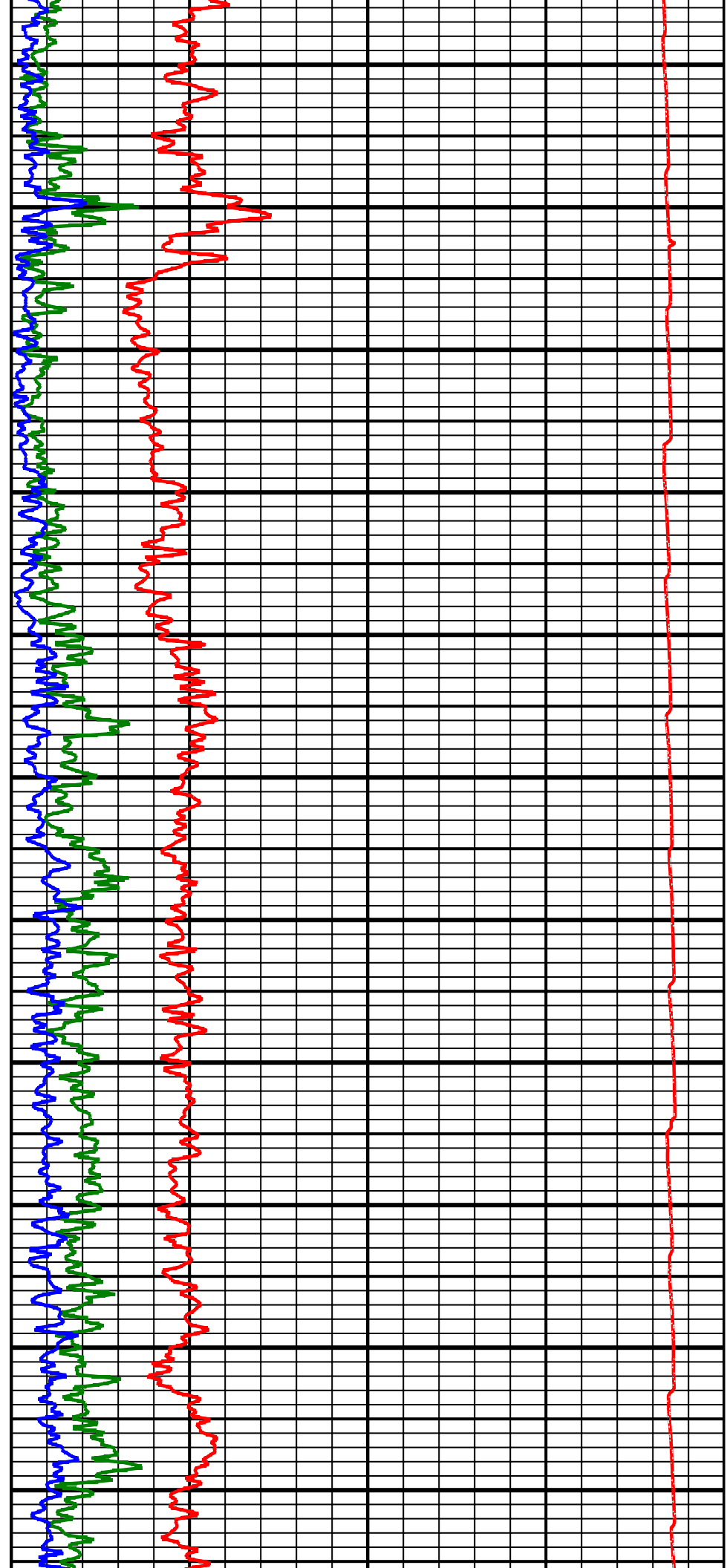
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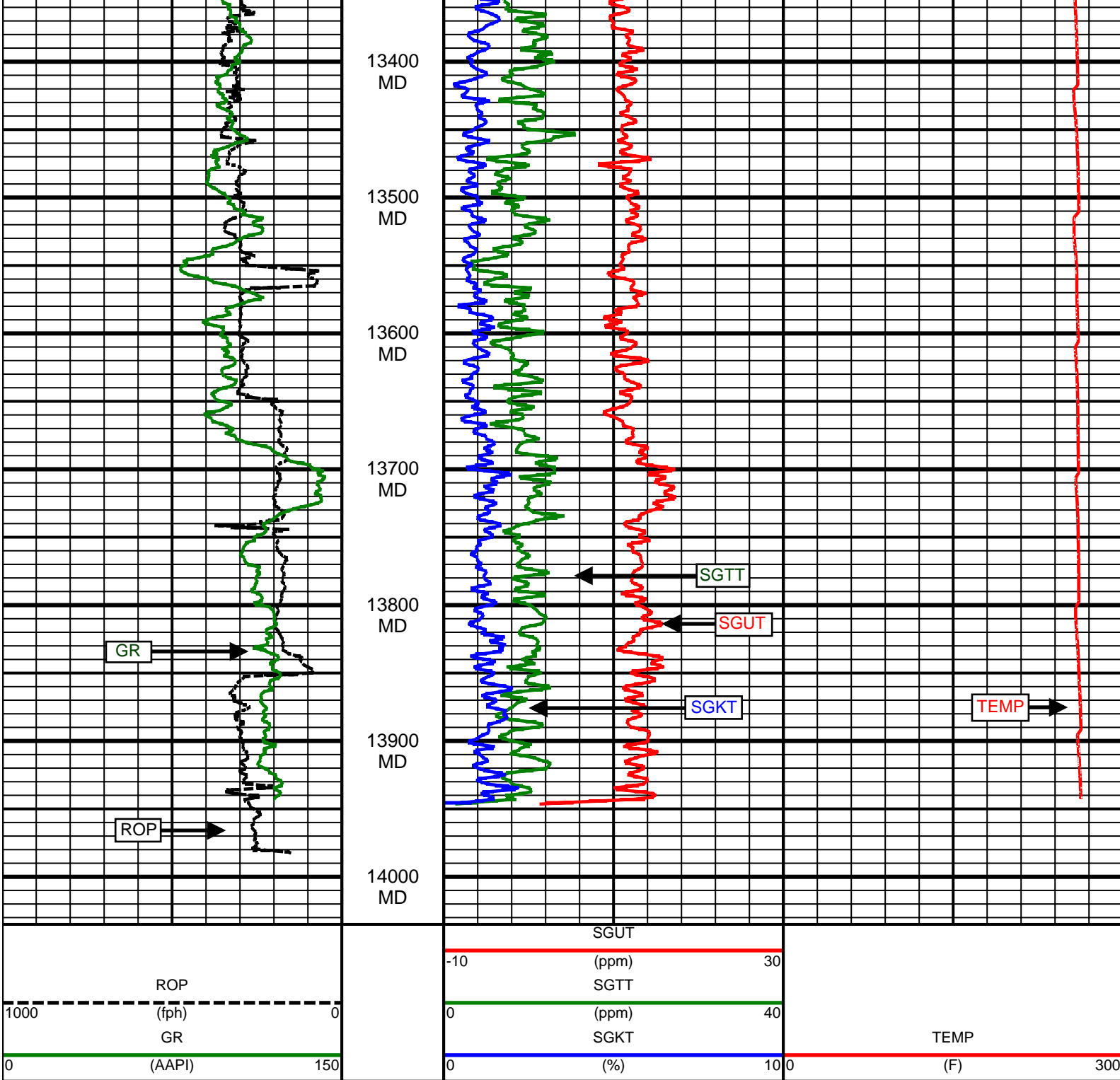
13000 MD

13100 MD

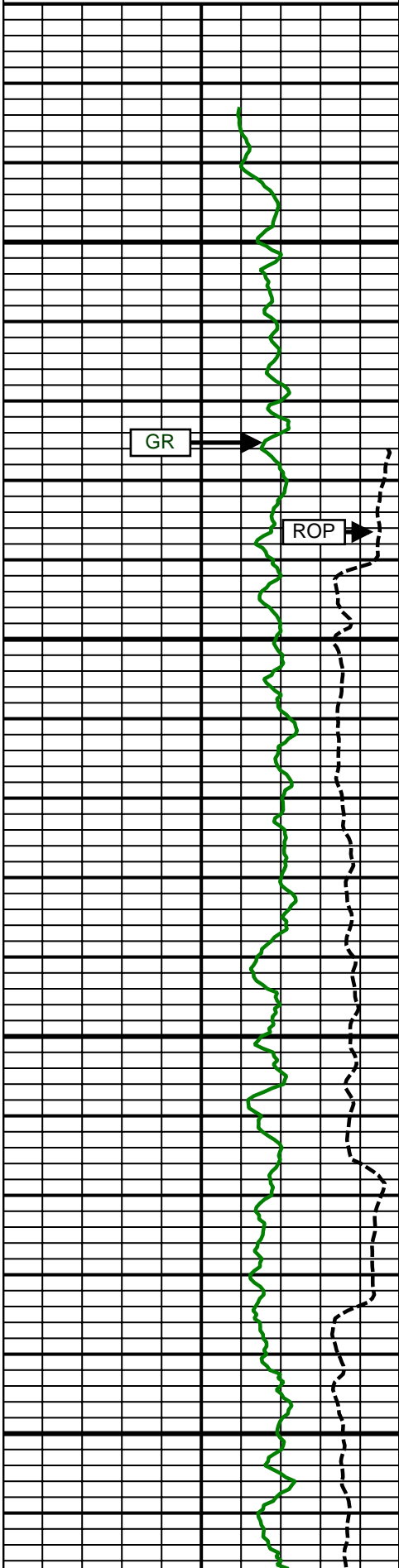
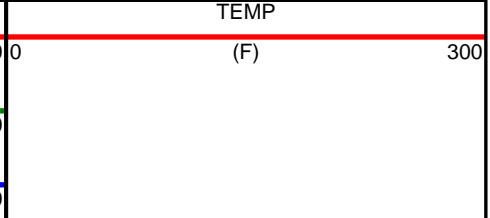
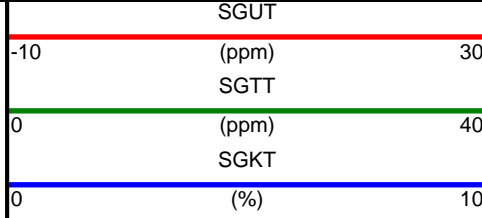
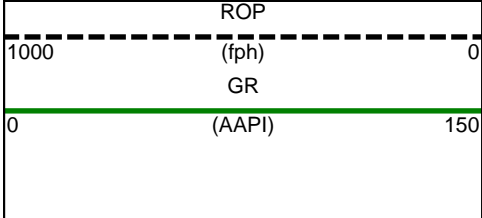
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13300 MD





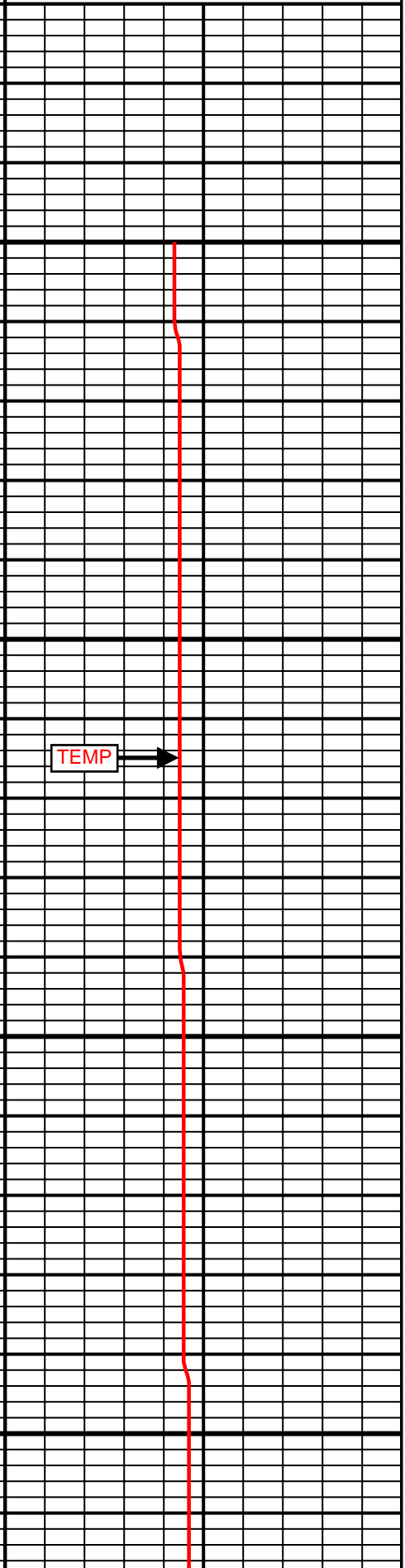
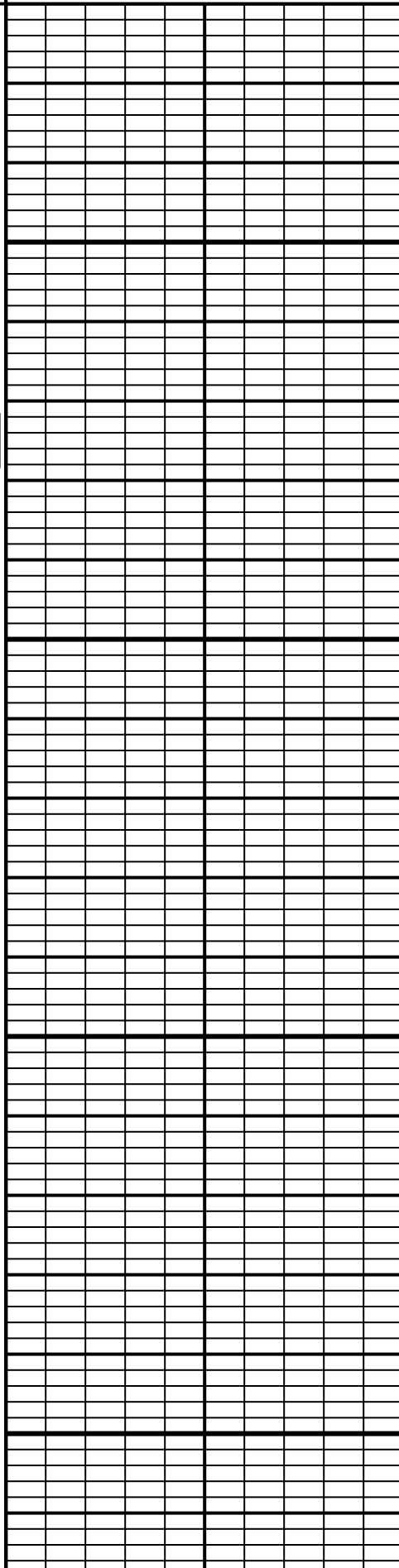
5 Inch - Measured Depth

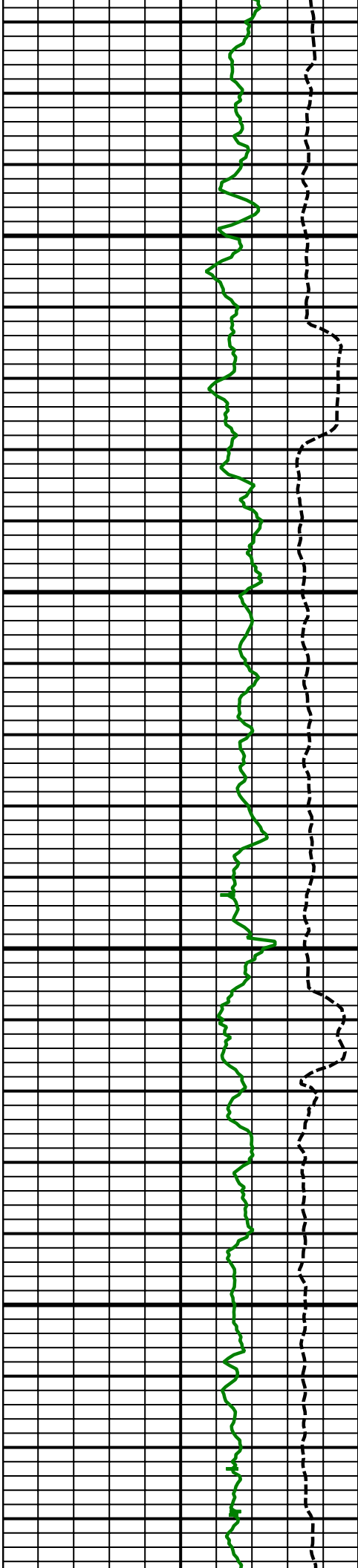


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Comment 2-1

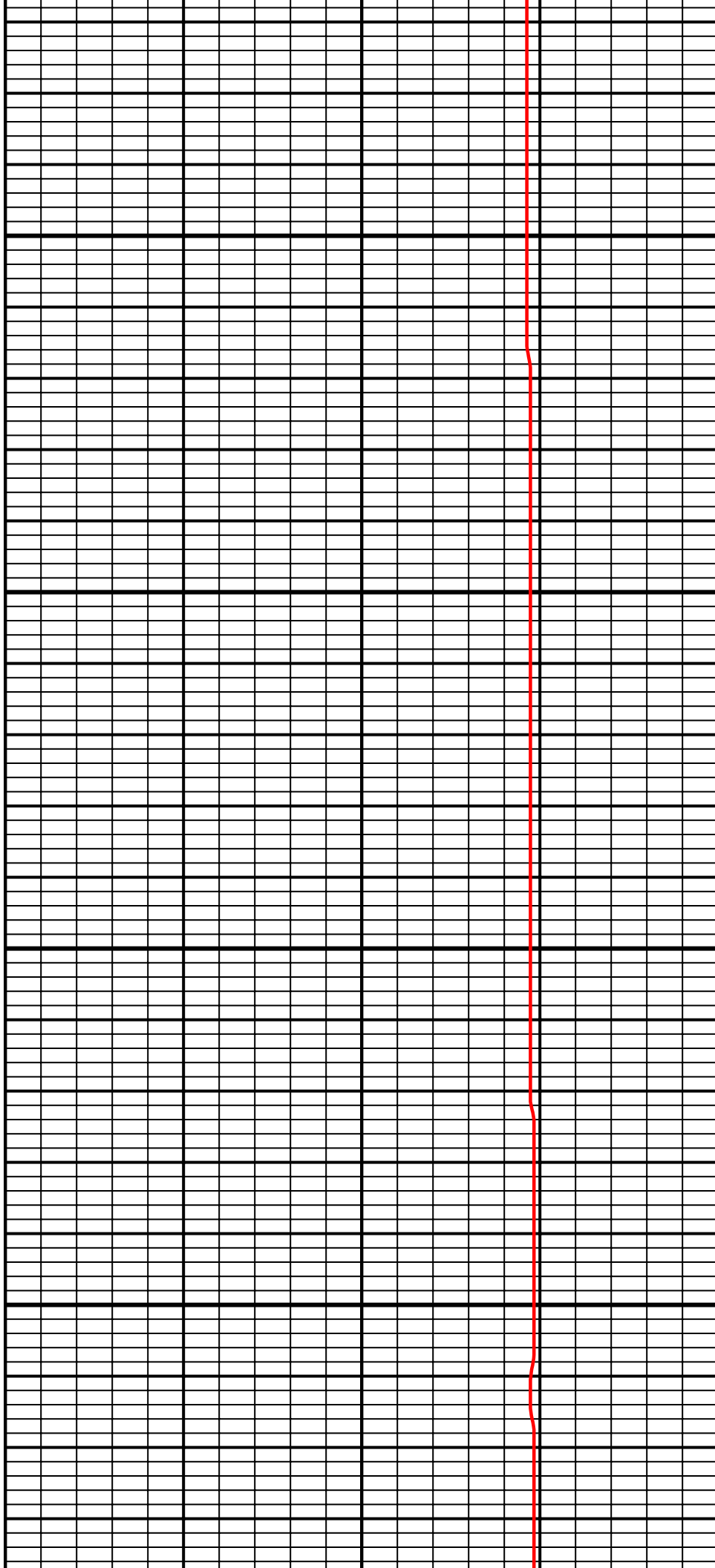
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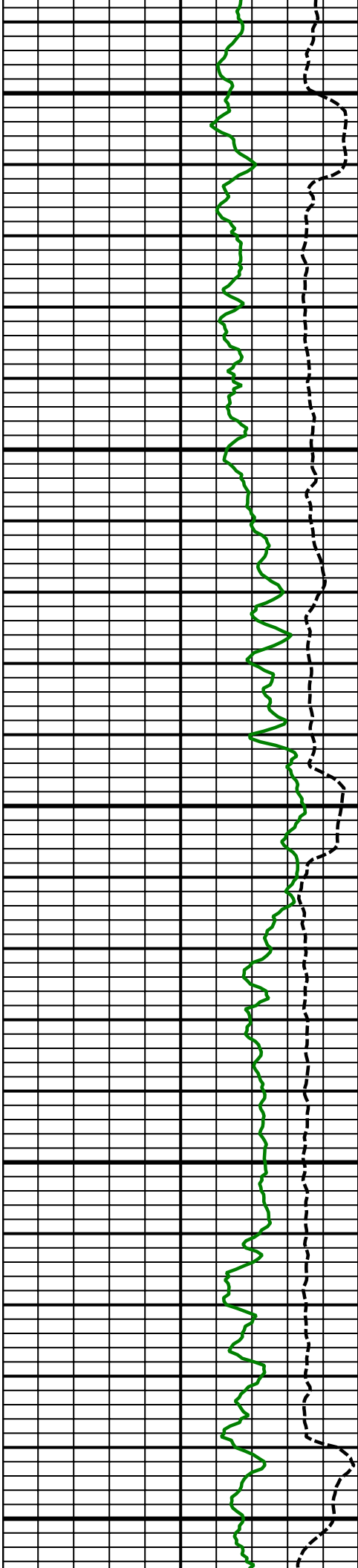




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MD

6100
MD

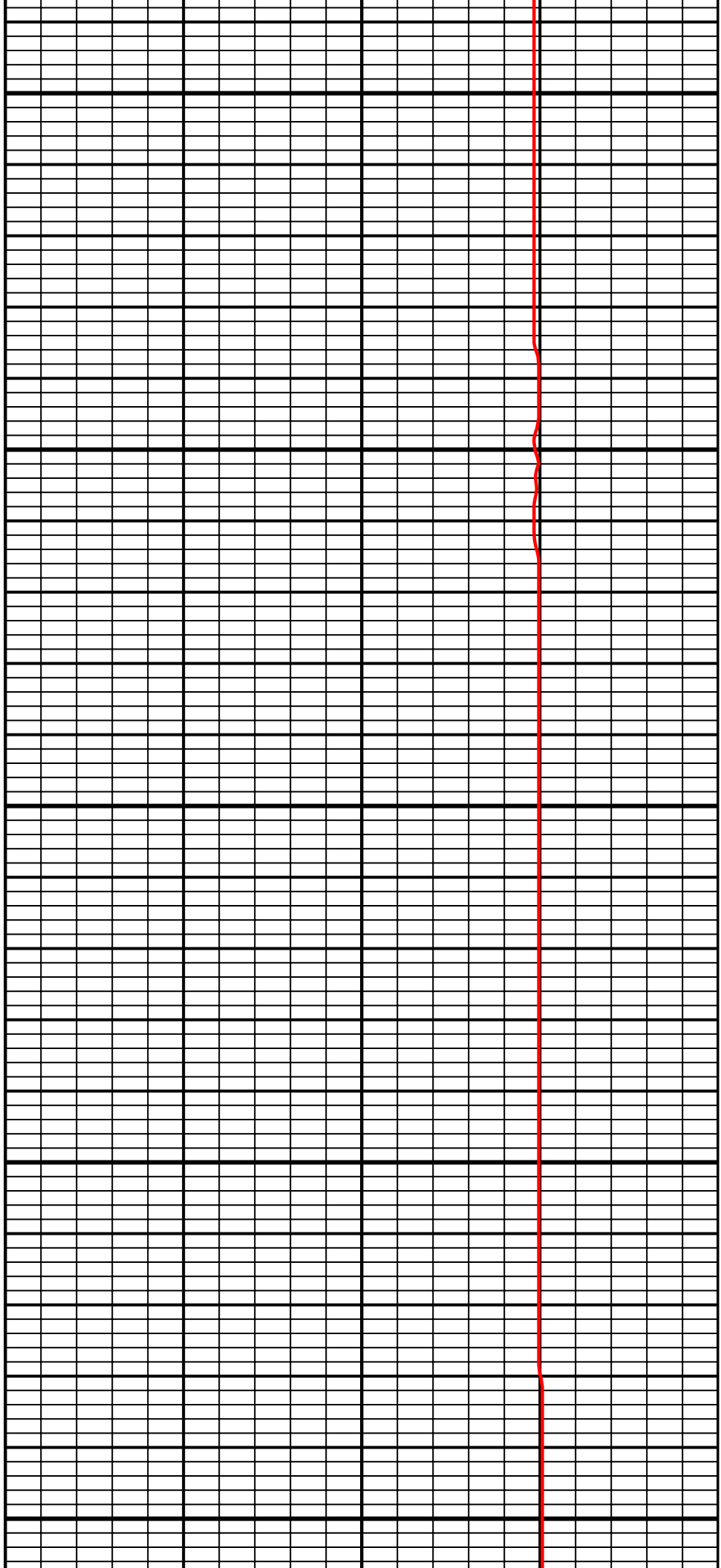


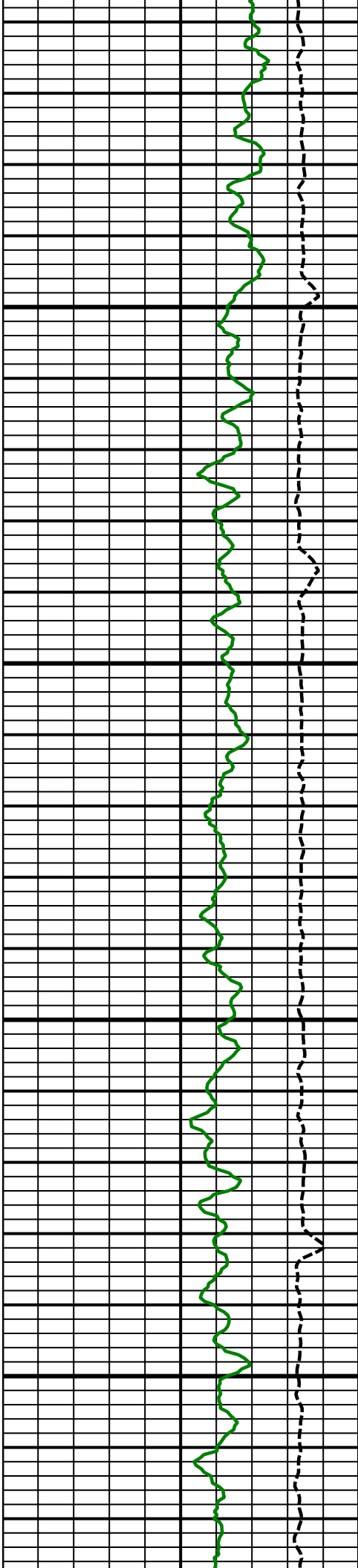


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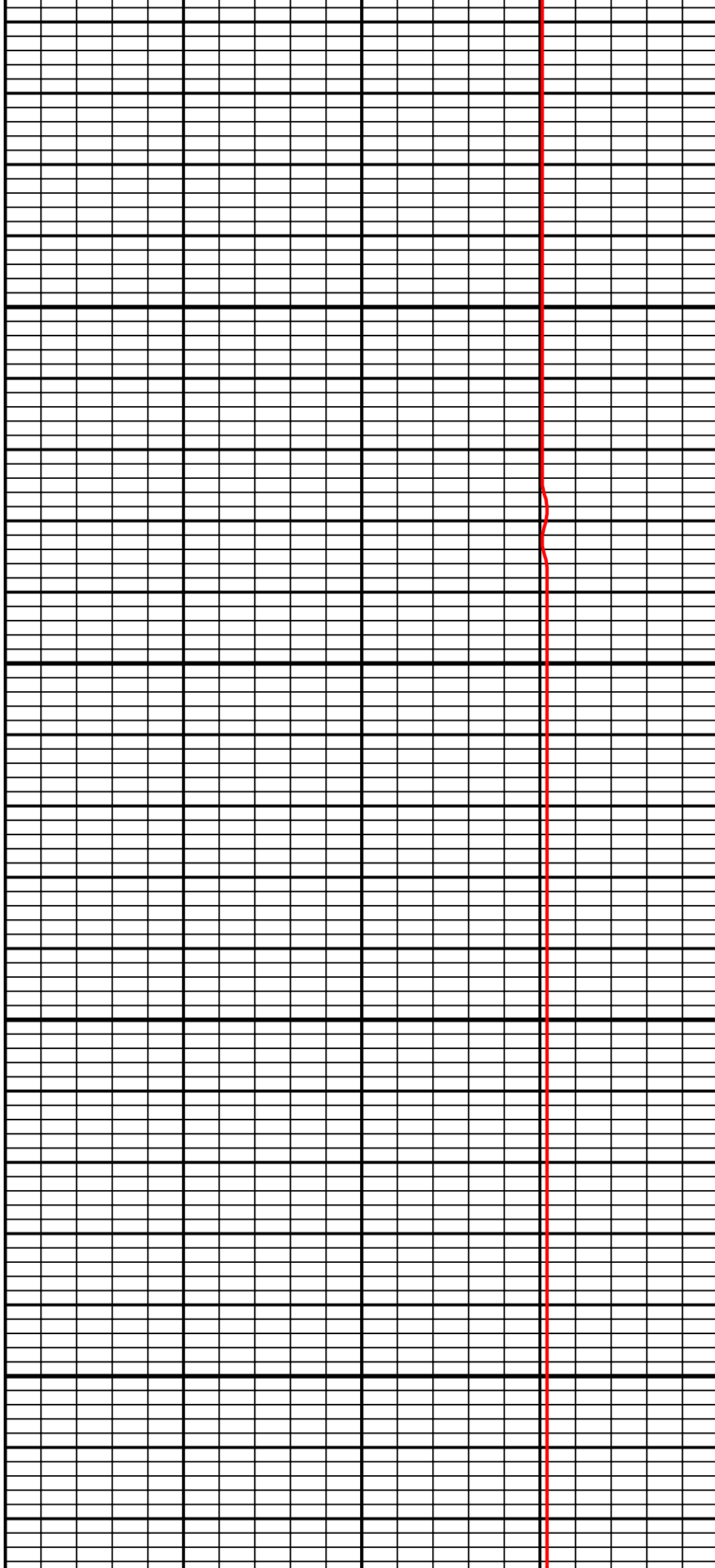
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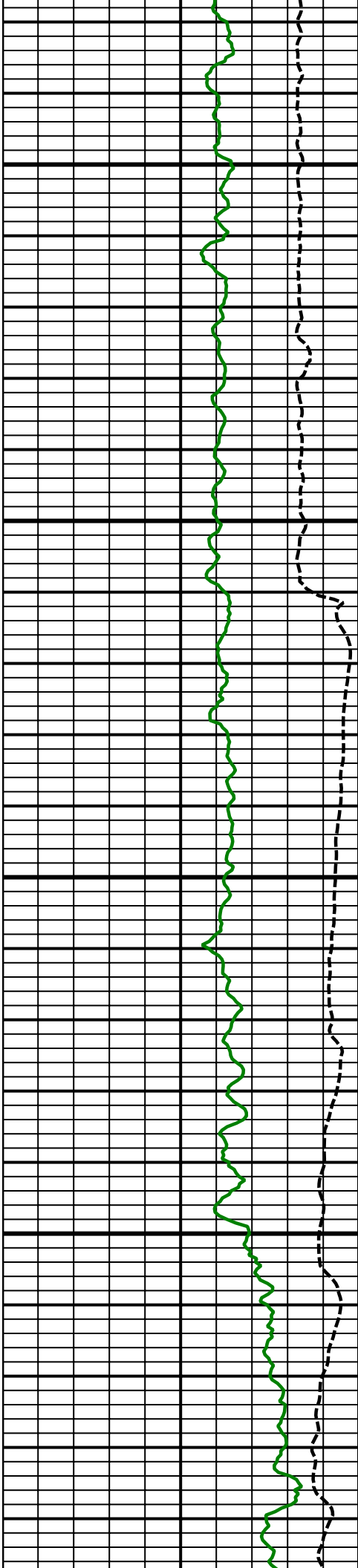




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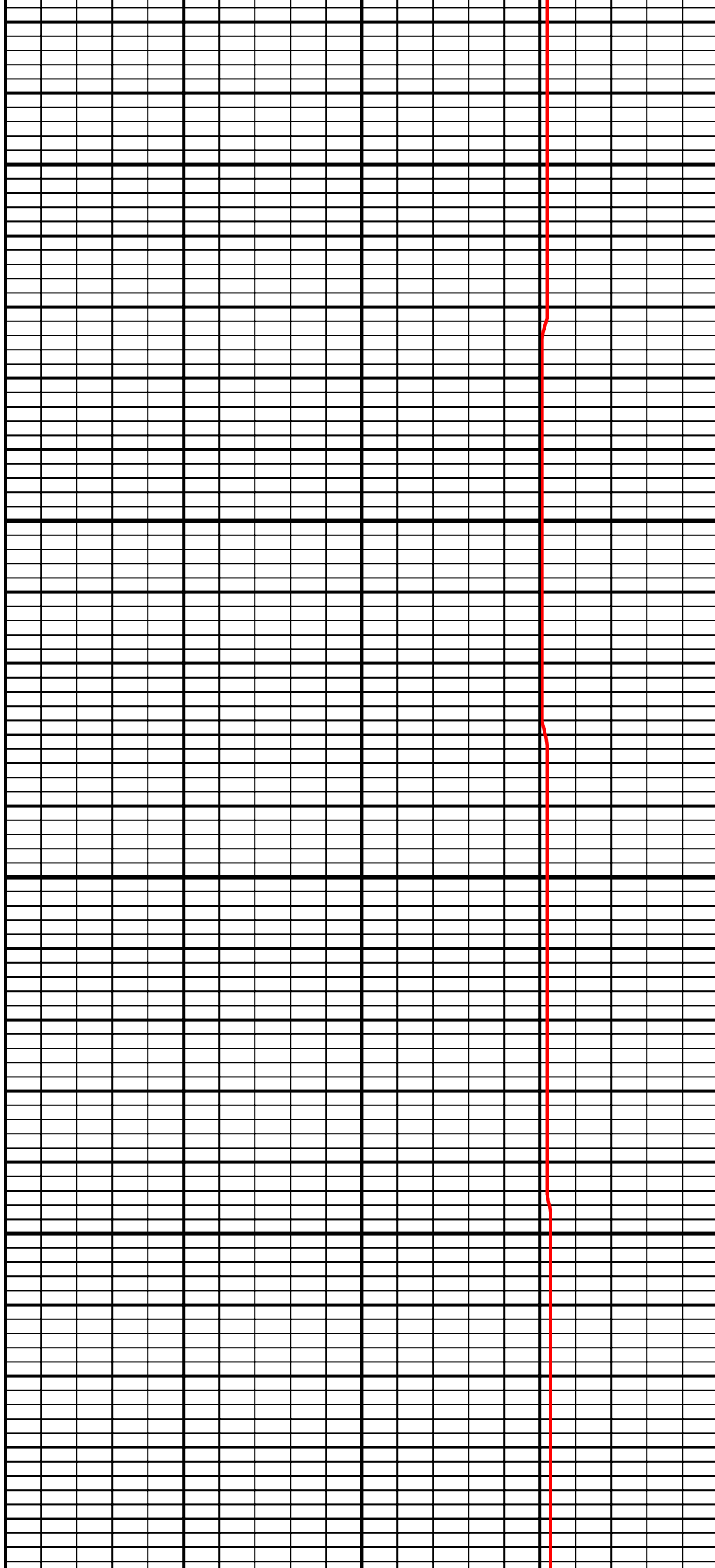
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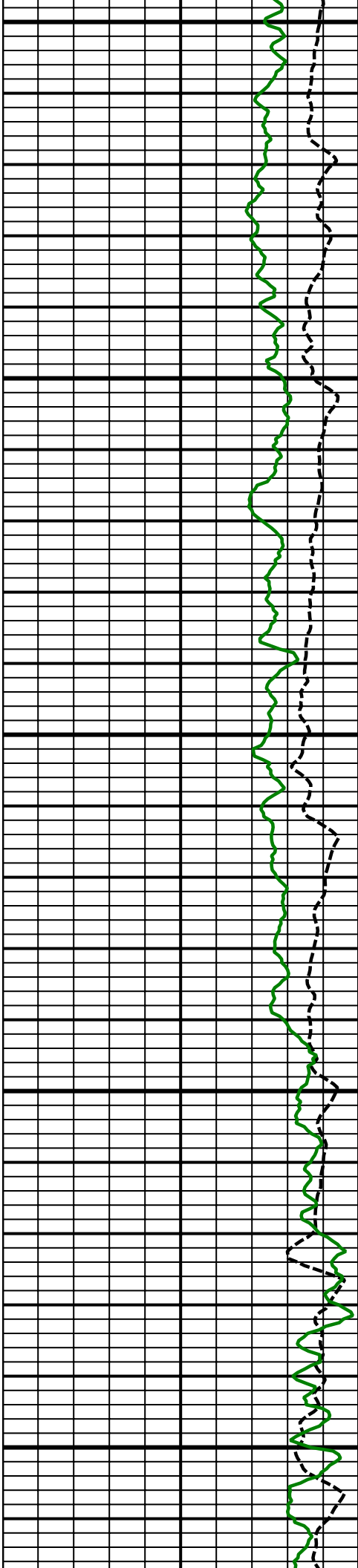




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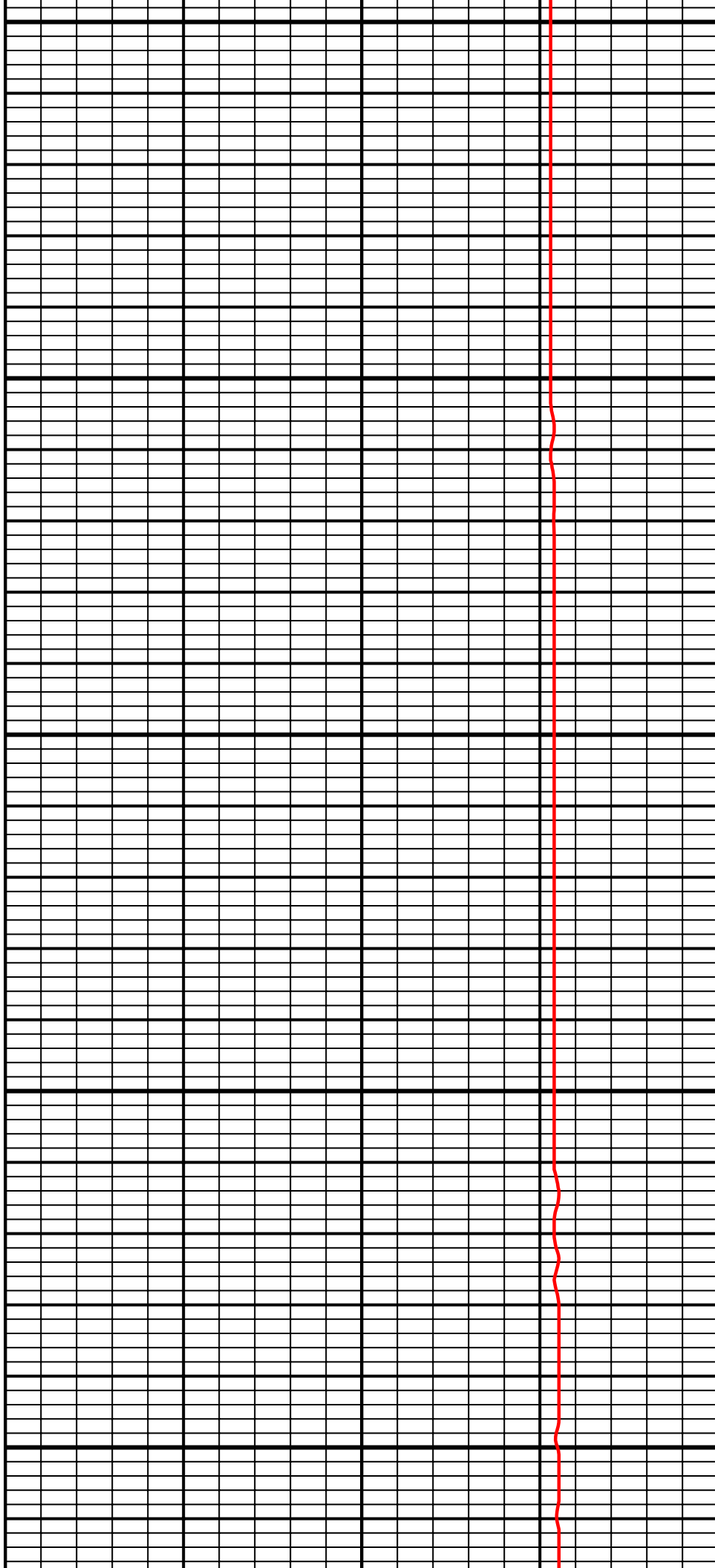
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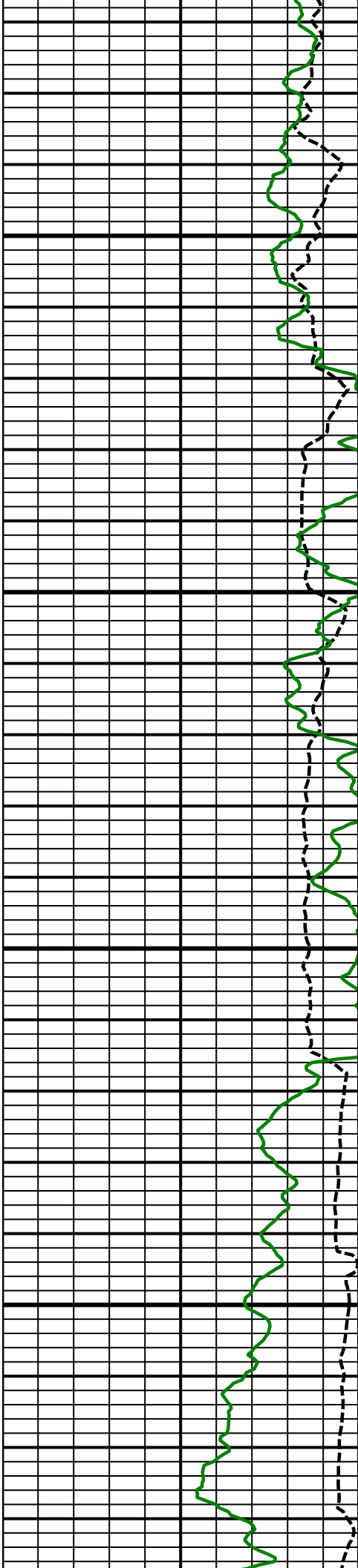




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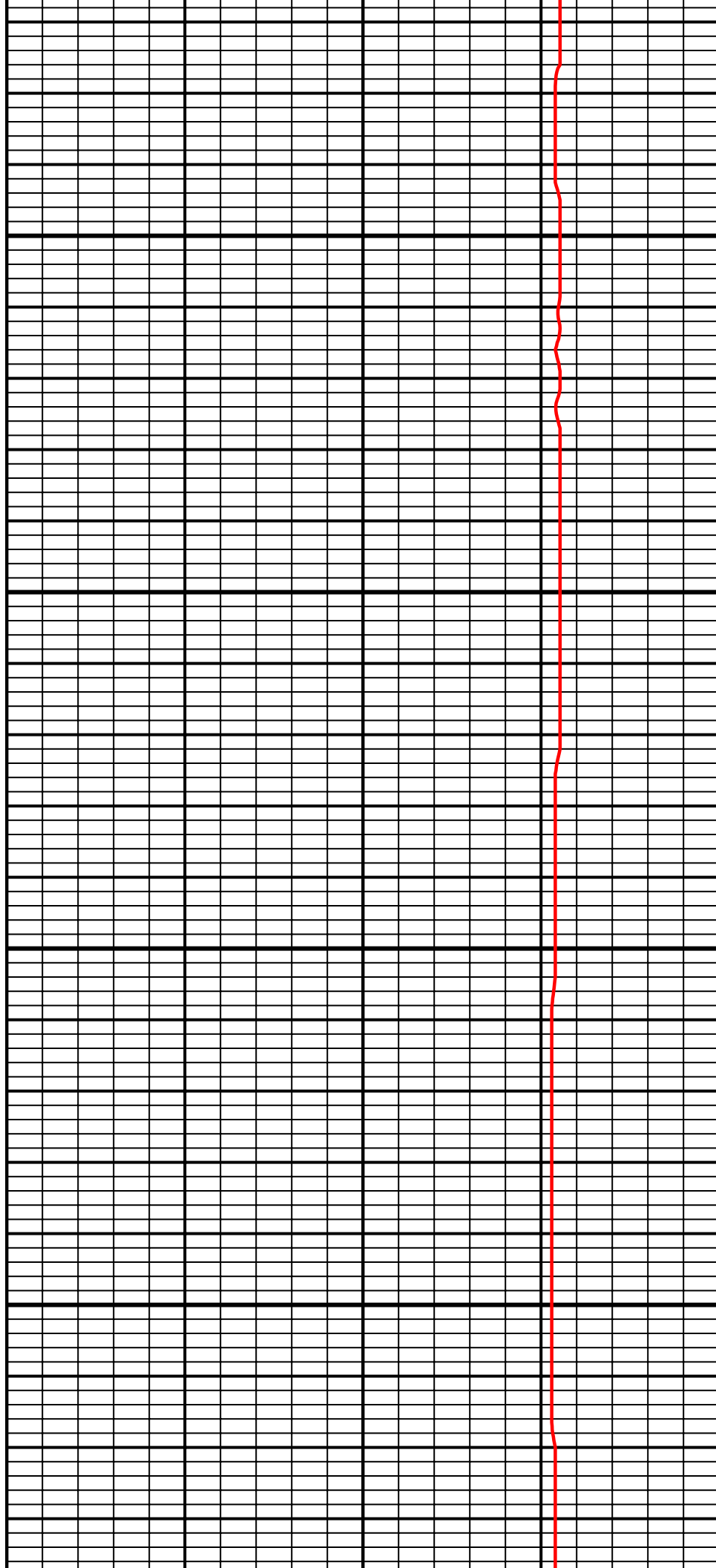
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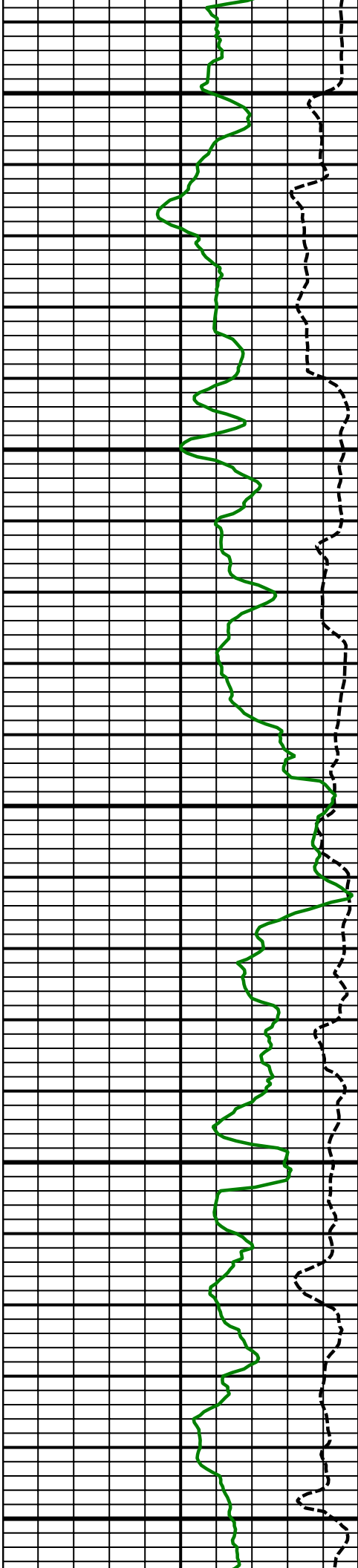




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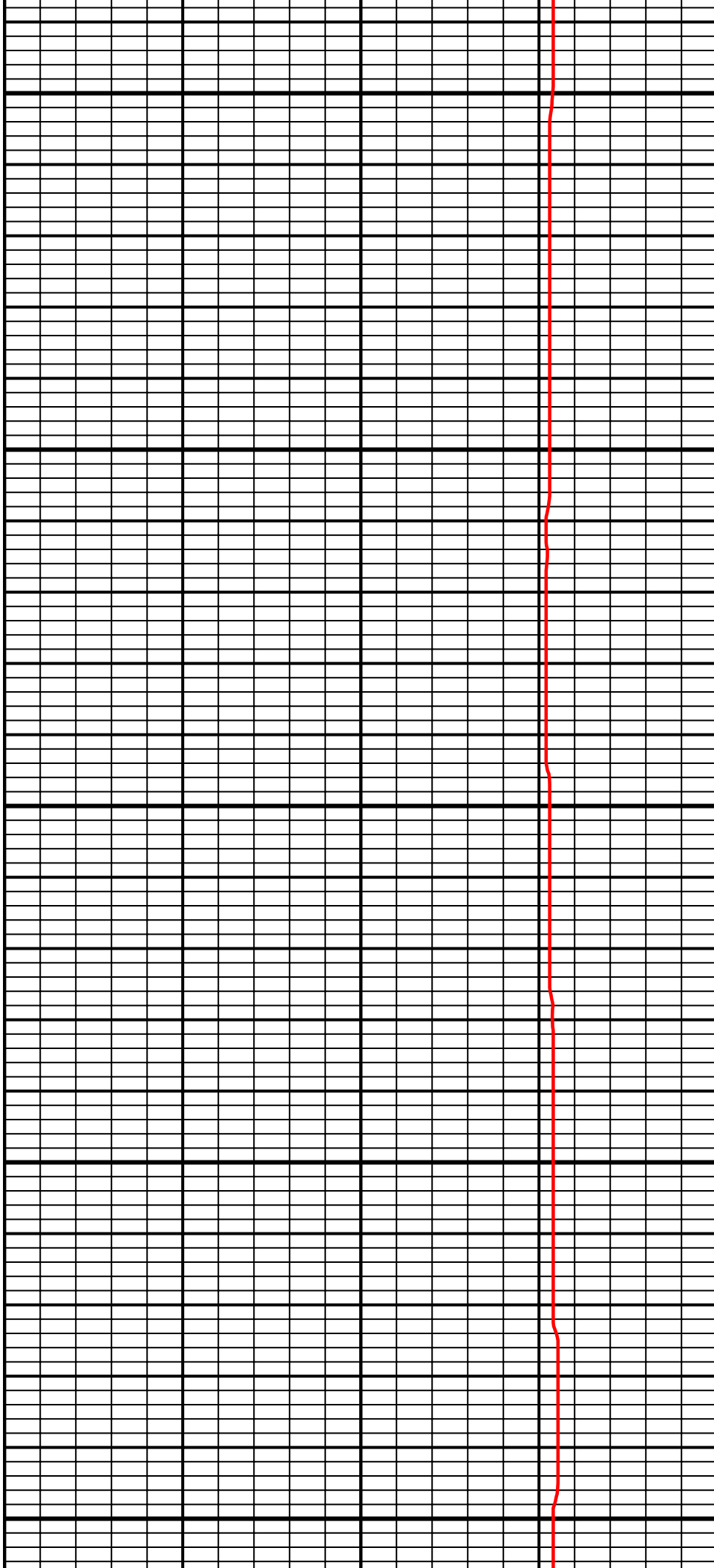


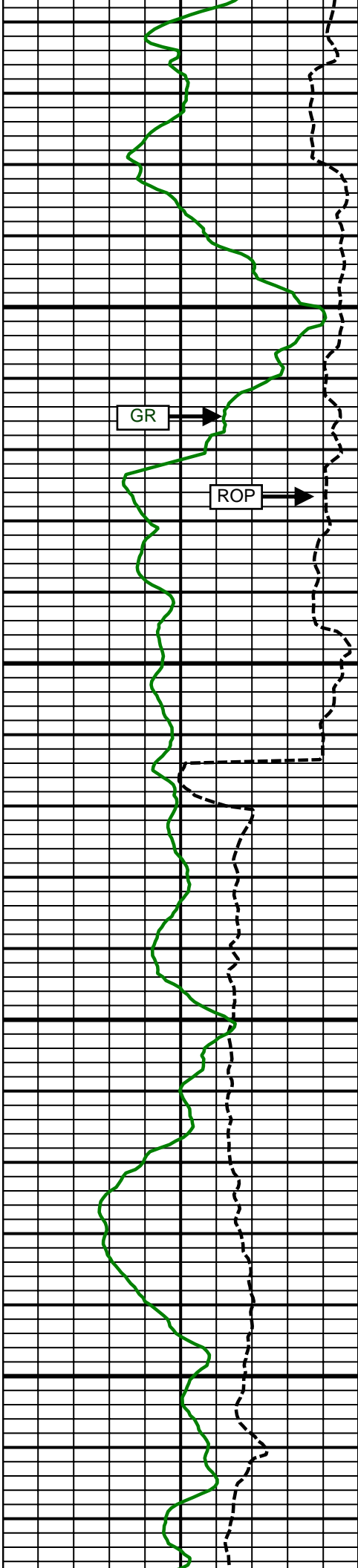


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MD

7400
MD

7500
MD



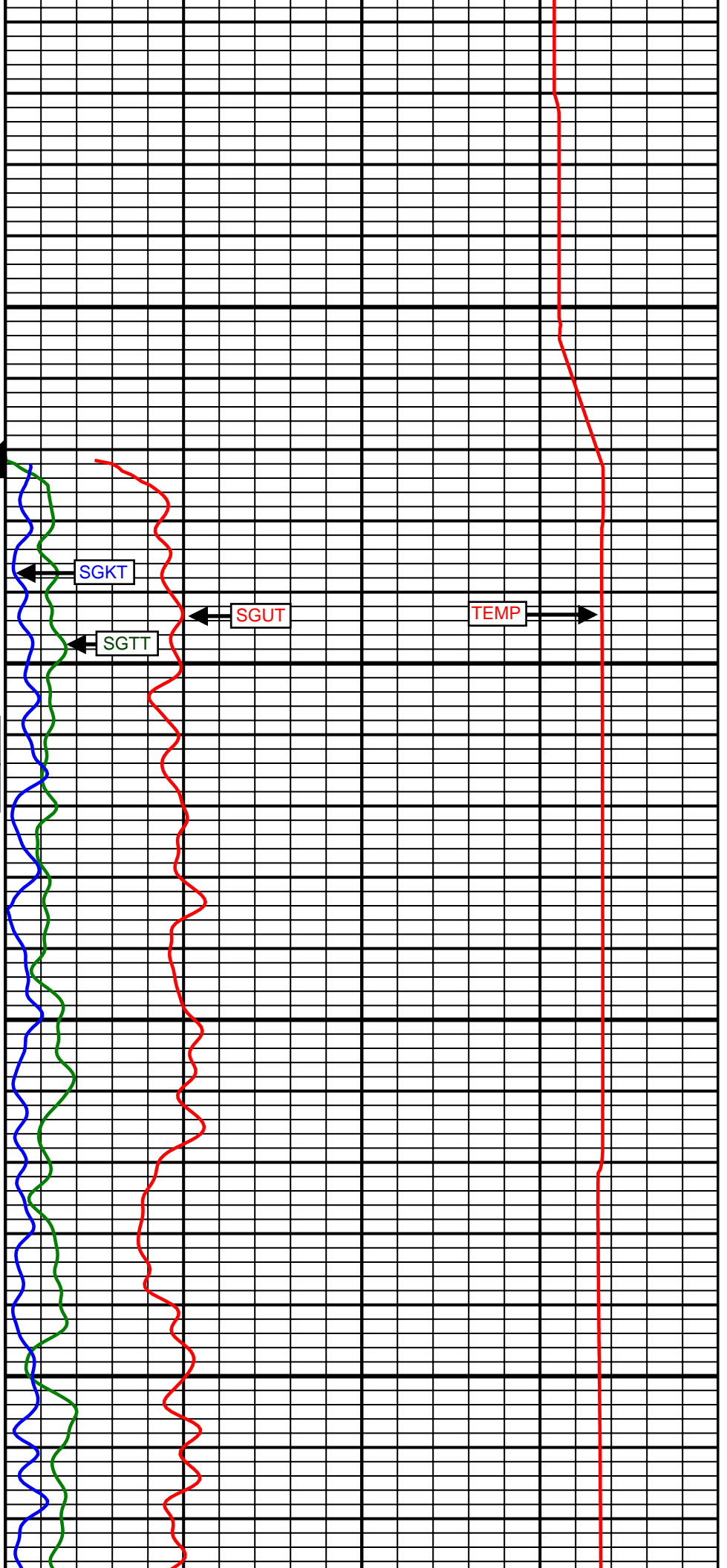


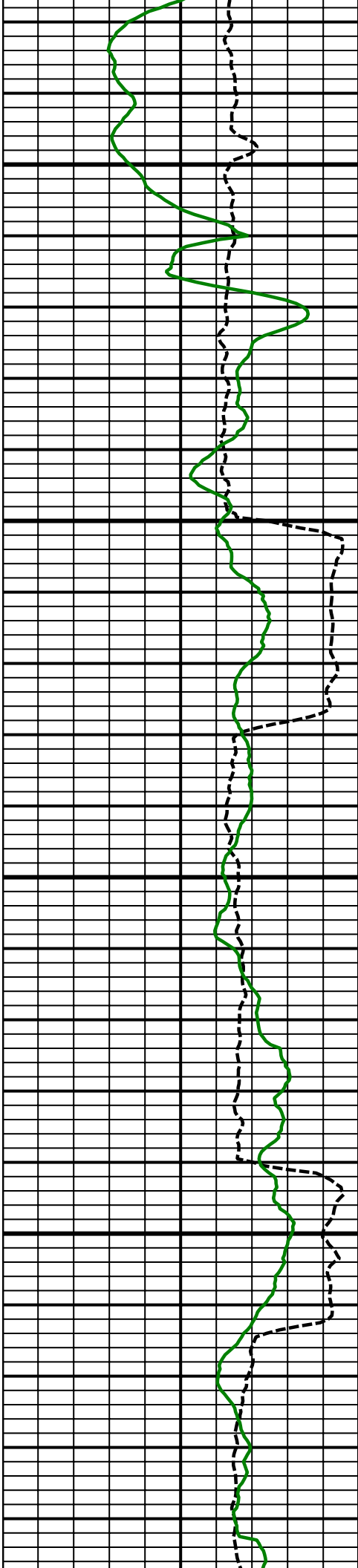
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MD

Comment
2-2

Comment
4-1

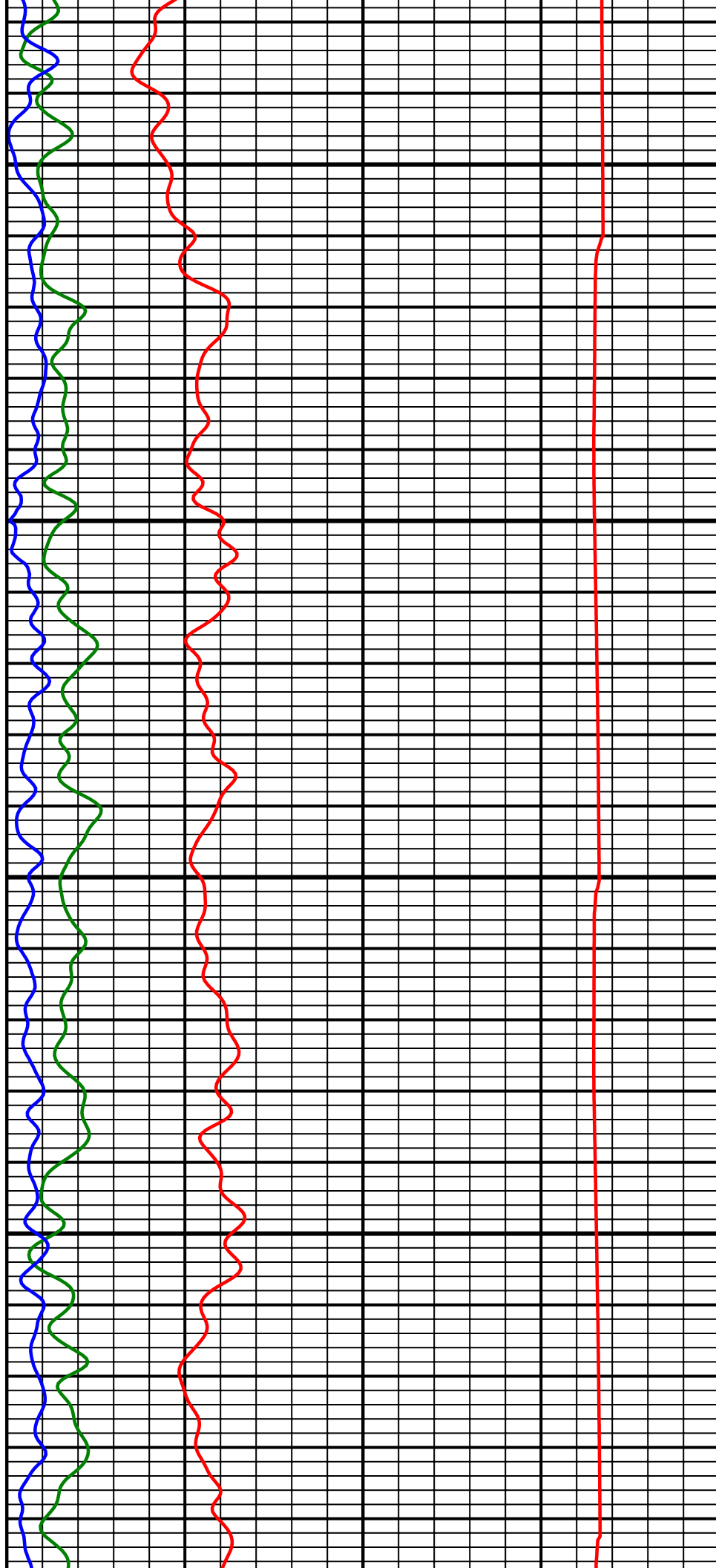
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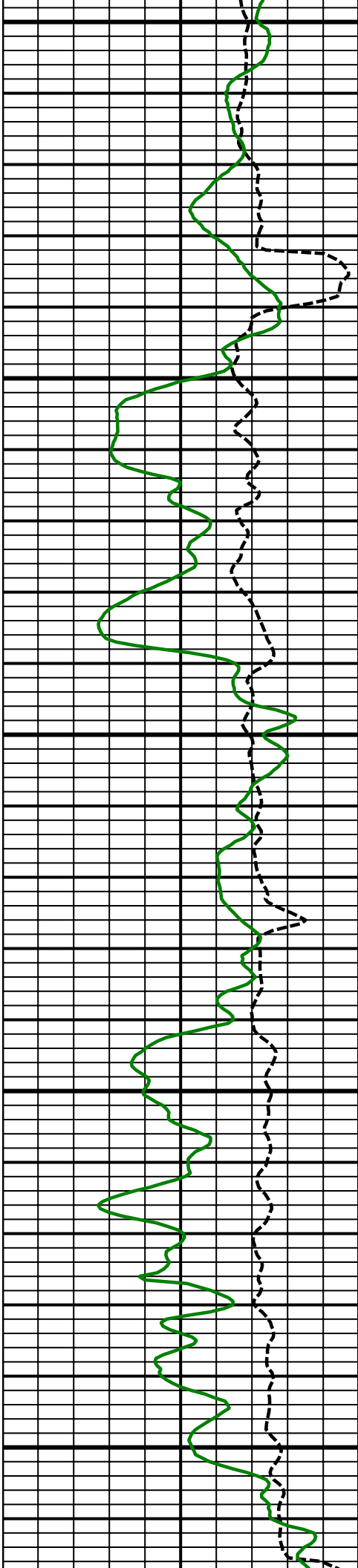




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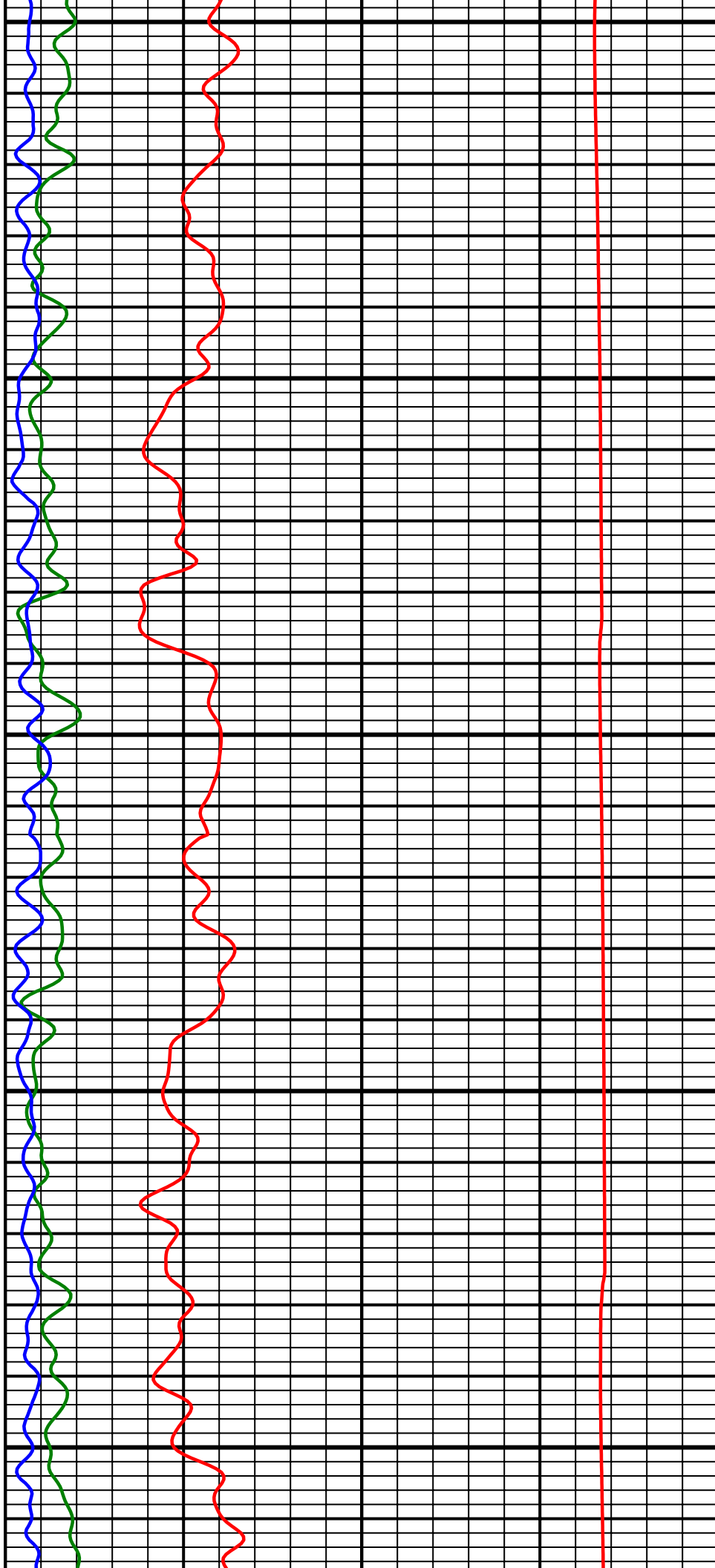
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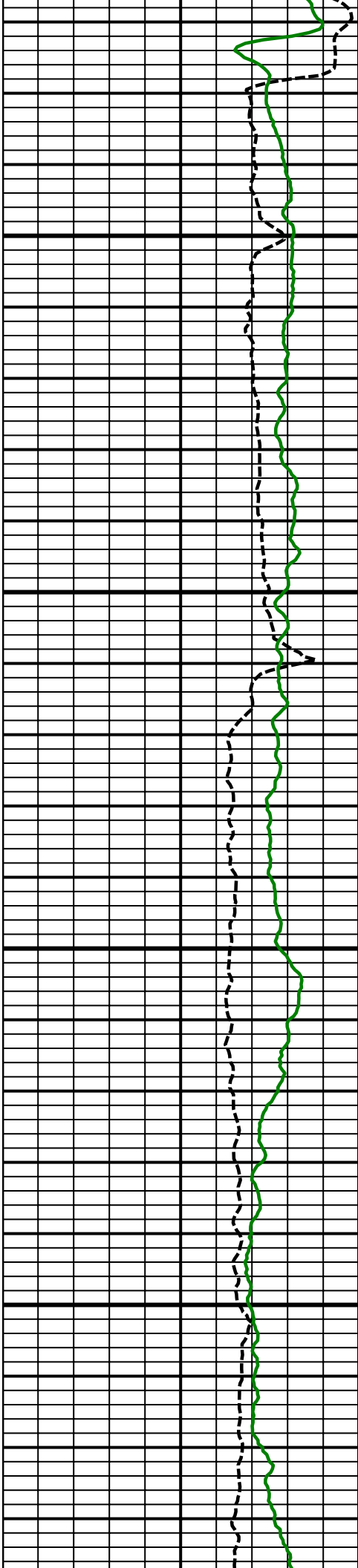




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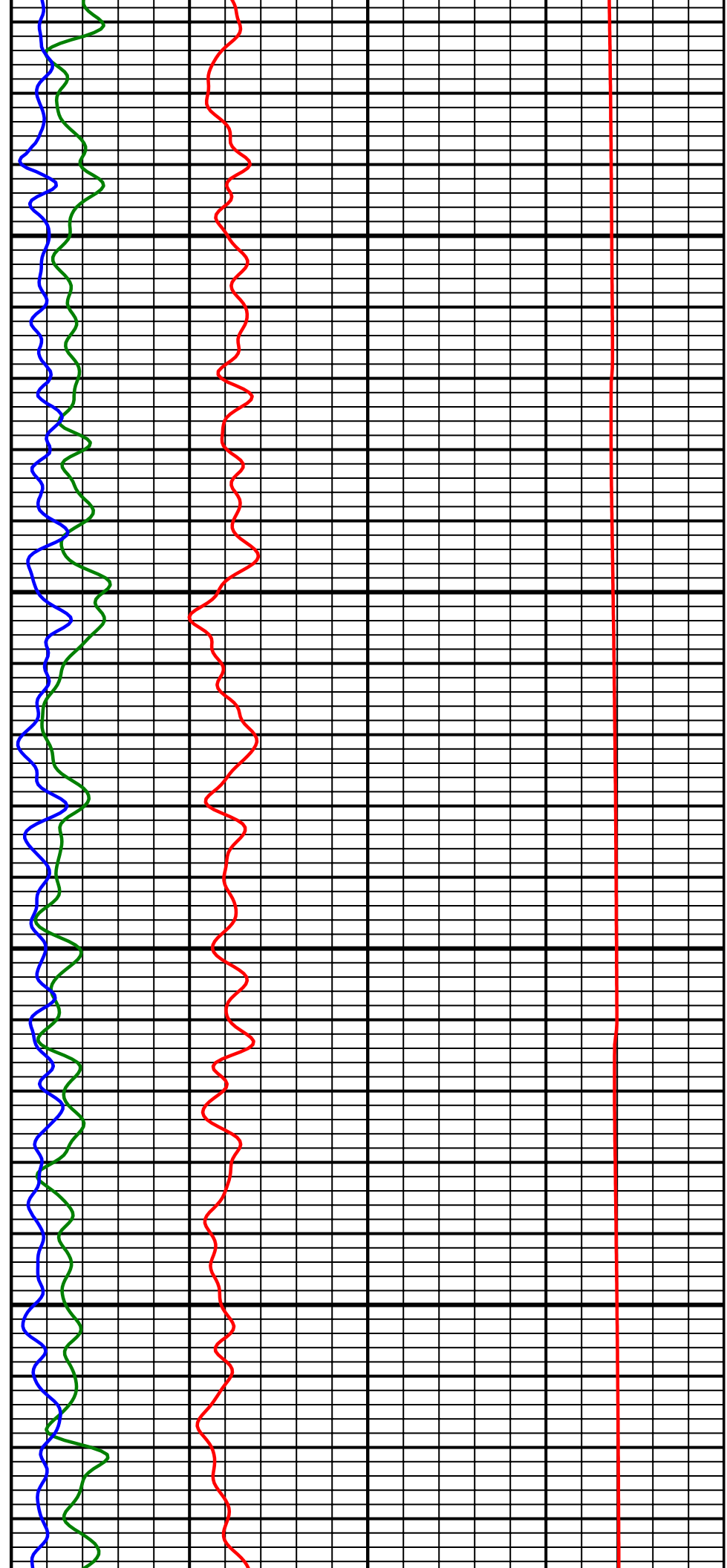
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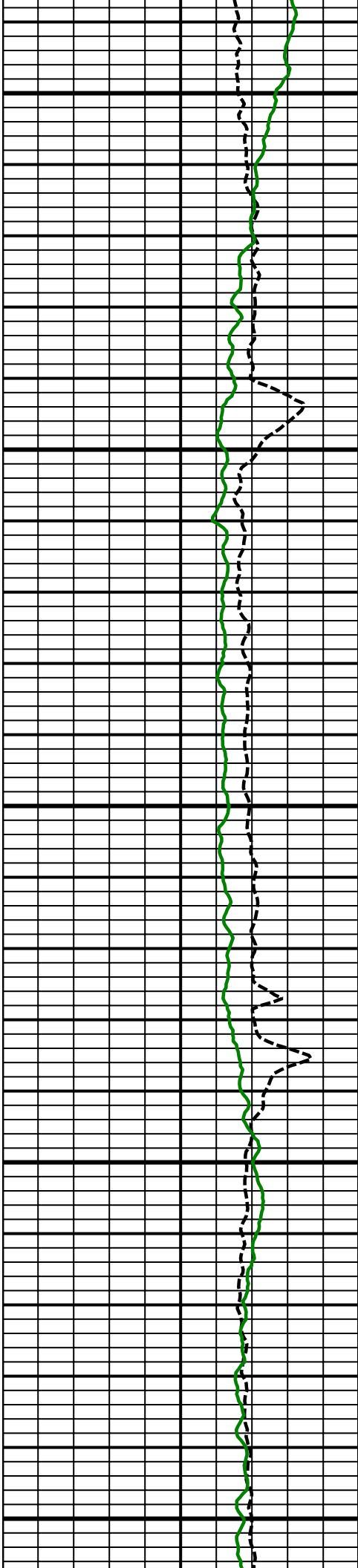




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MD

8300
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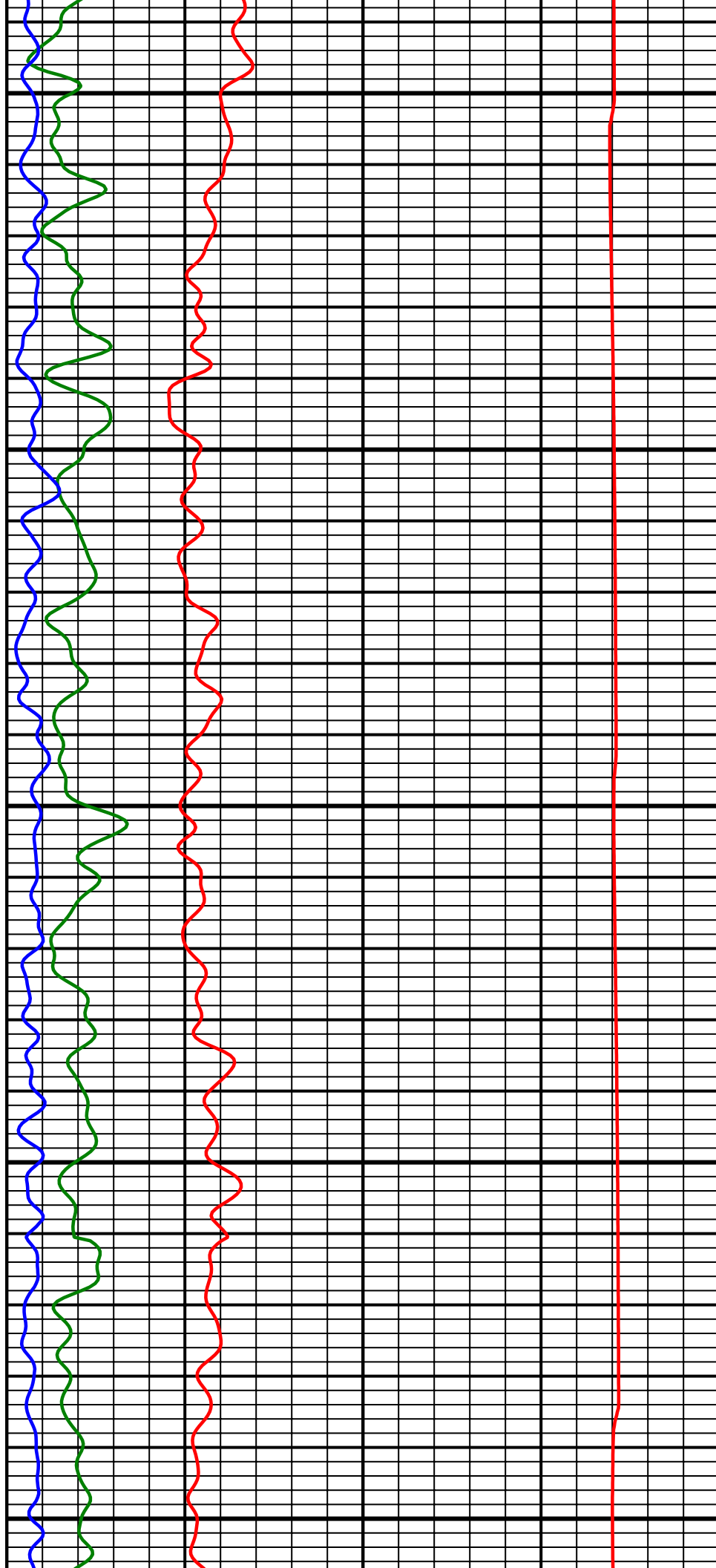


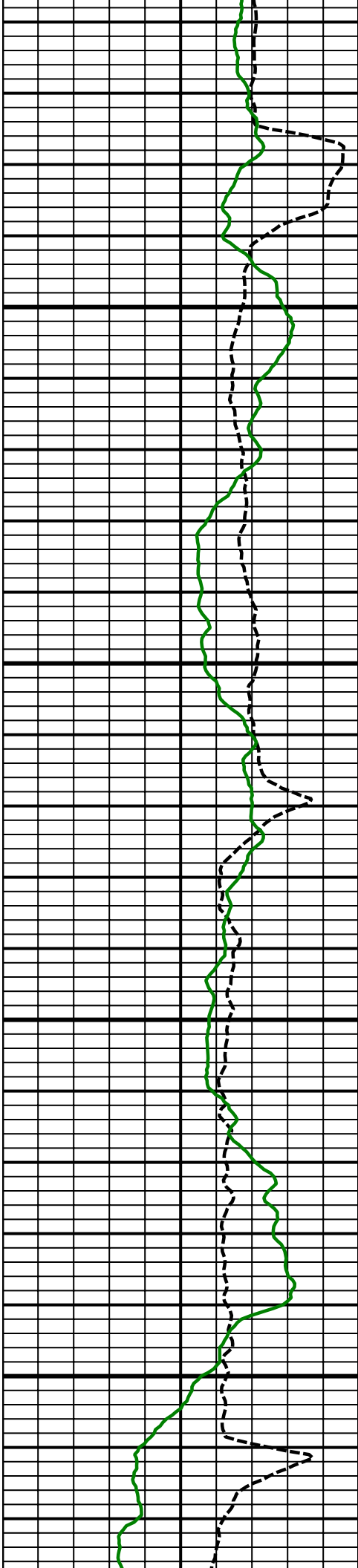


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MD

8500
MD

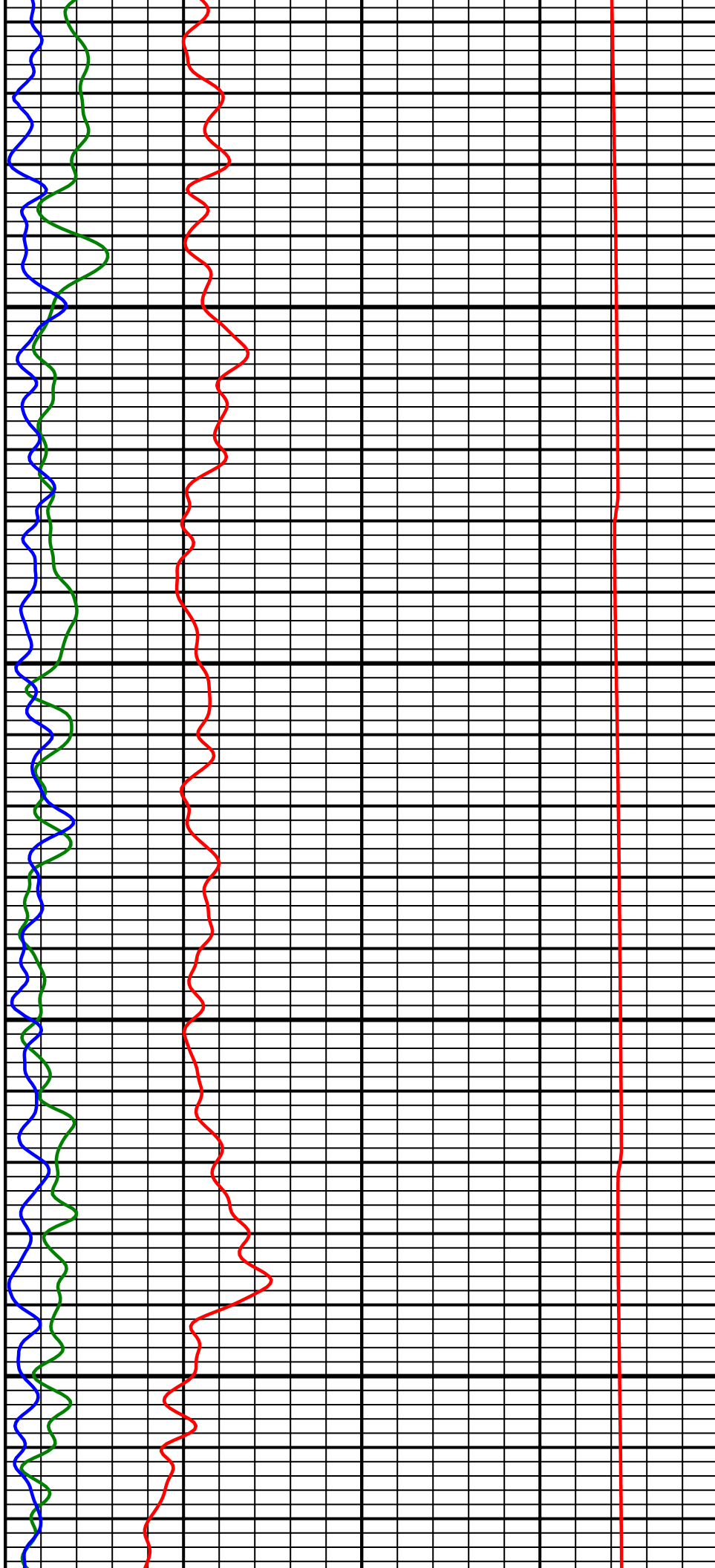
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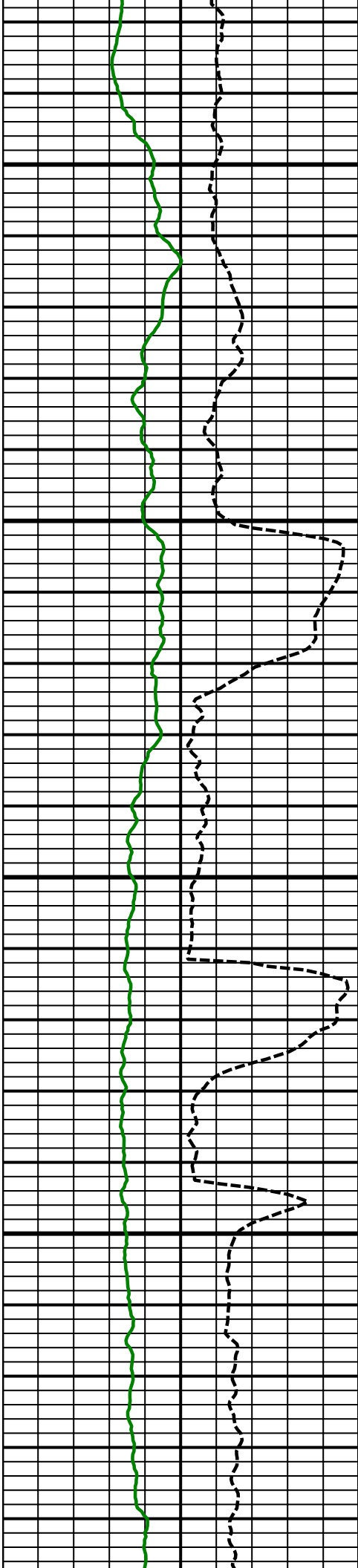




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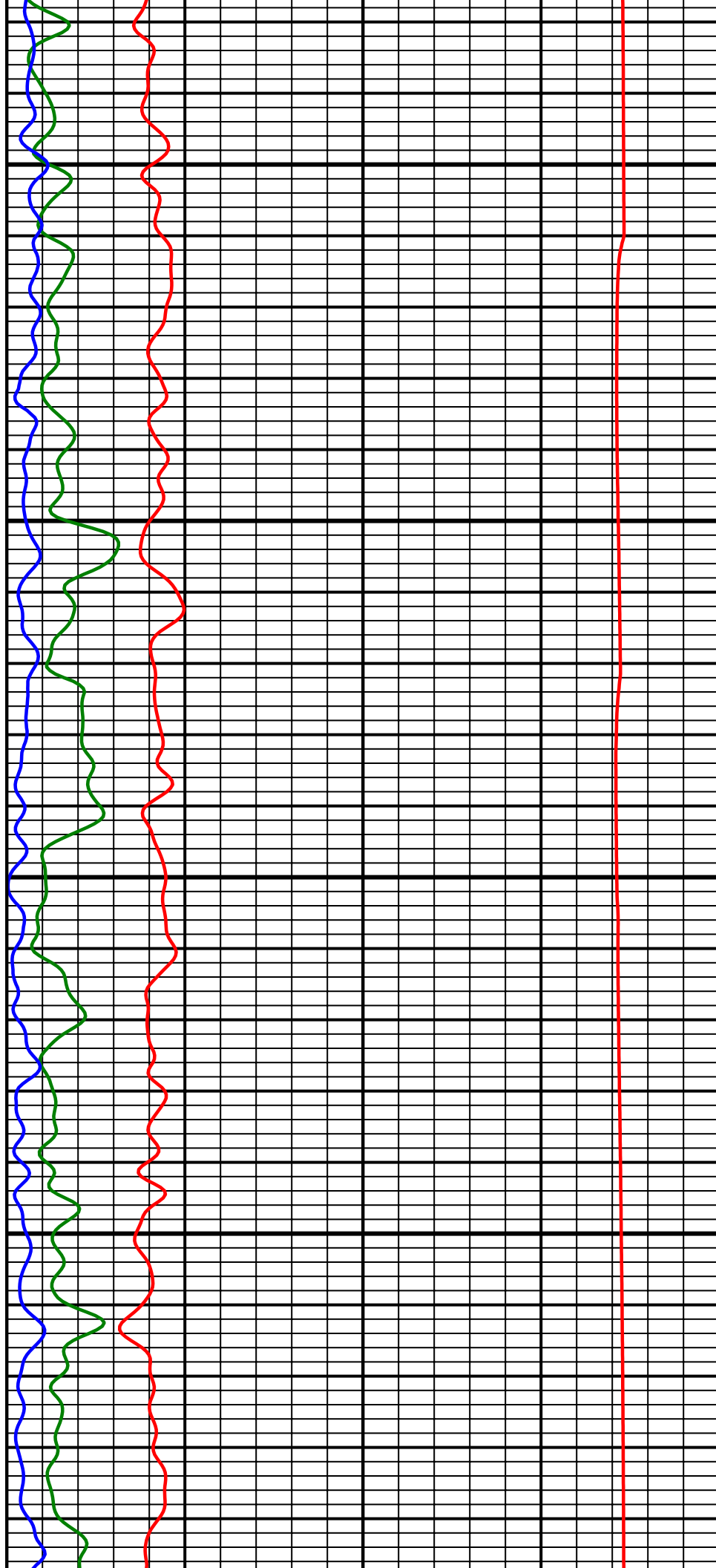
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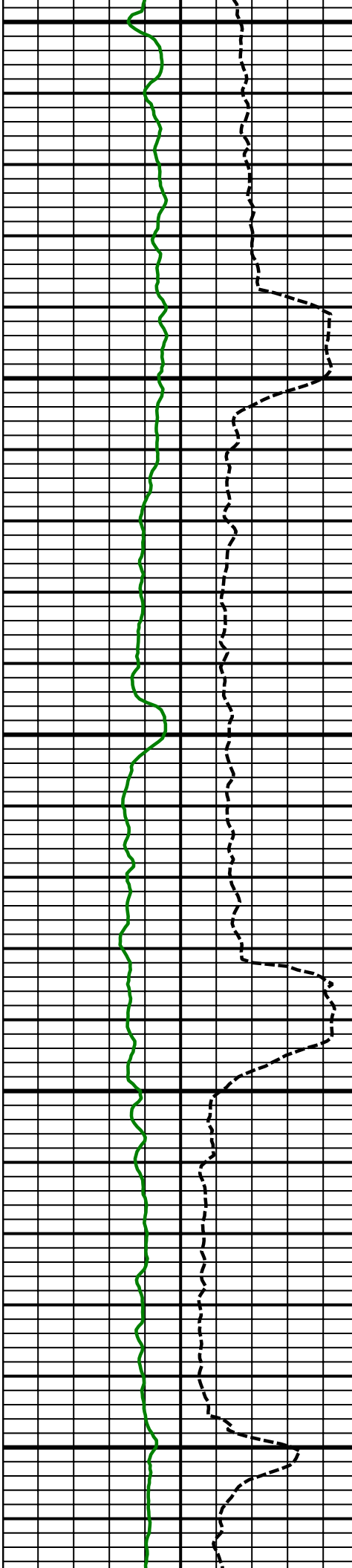




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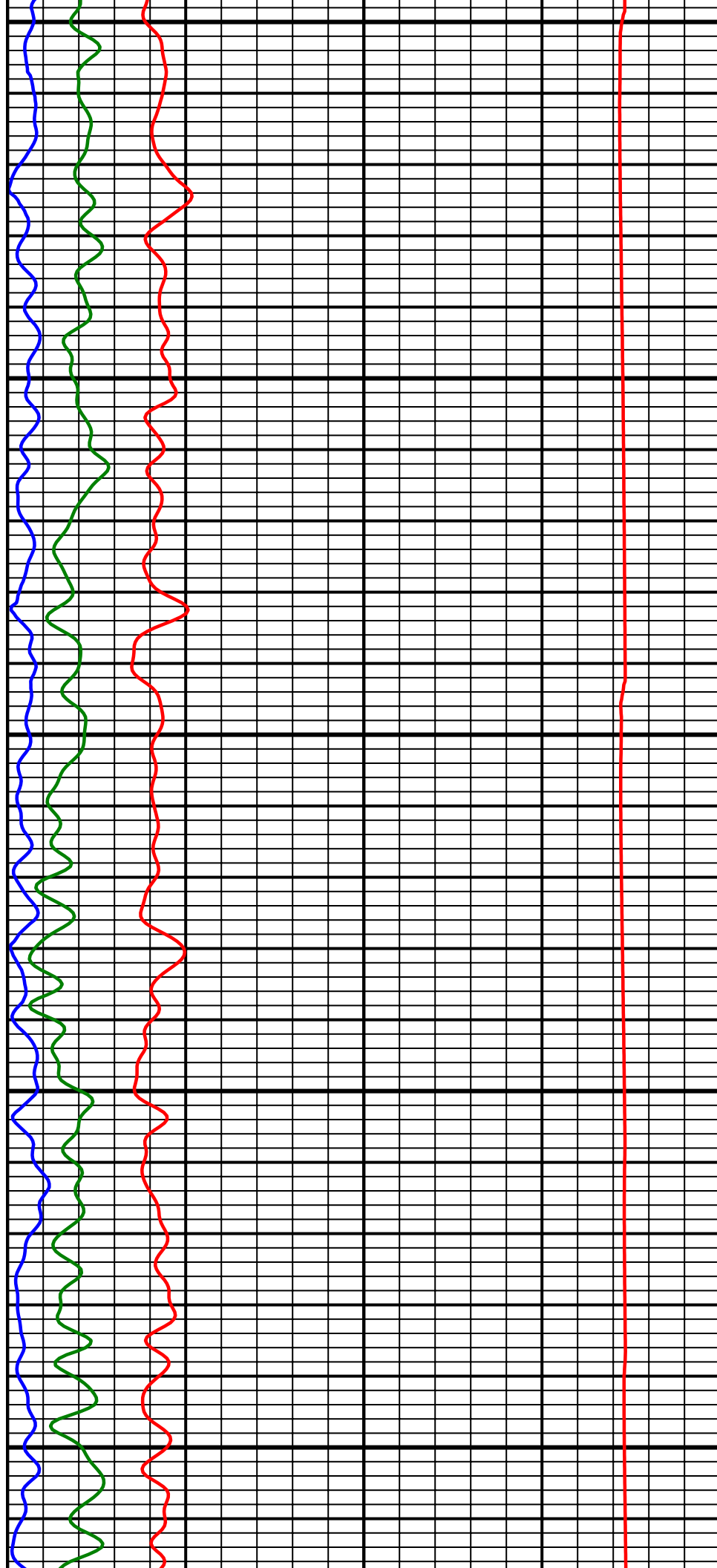
9000
MD

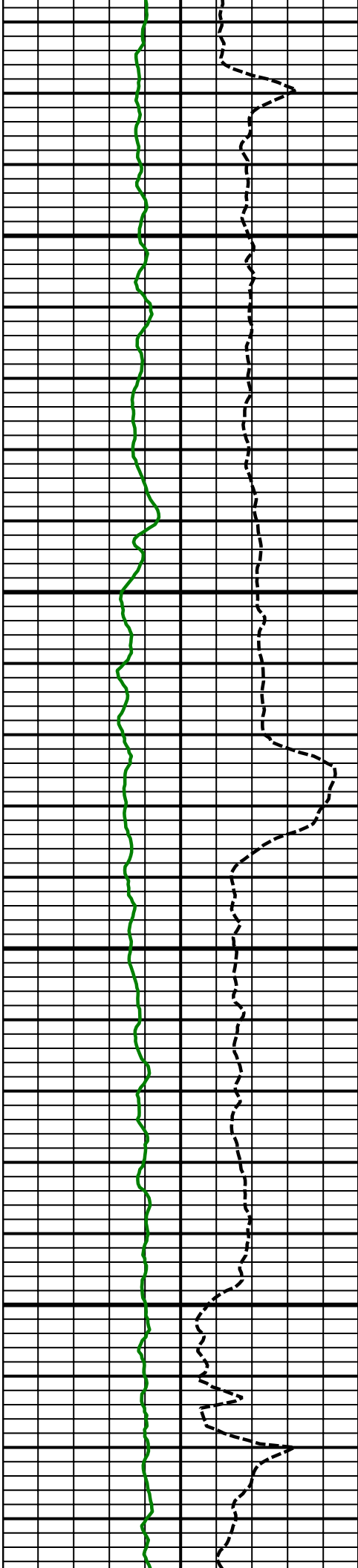




9100
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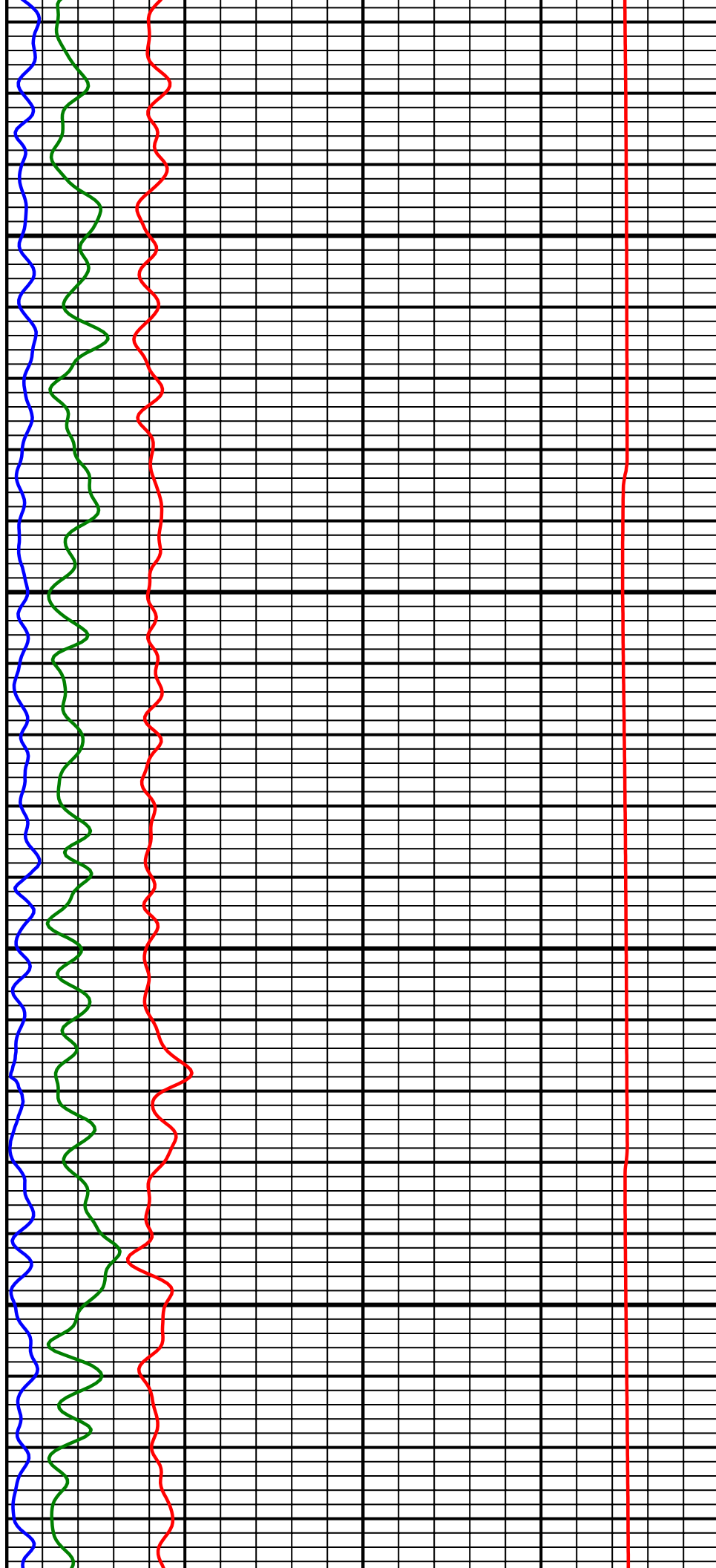
9200
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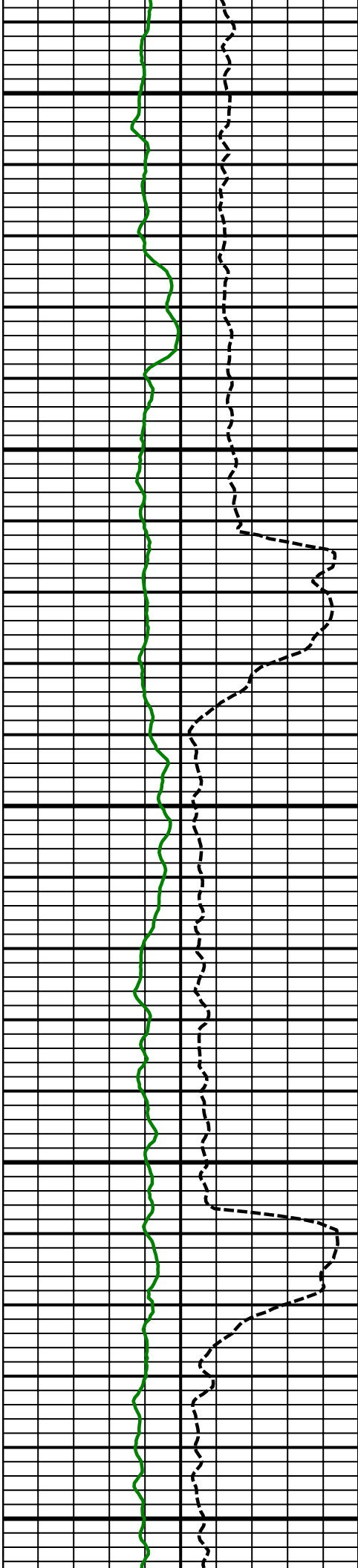




9300
MD

9400
MD

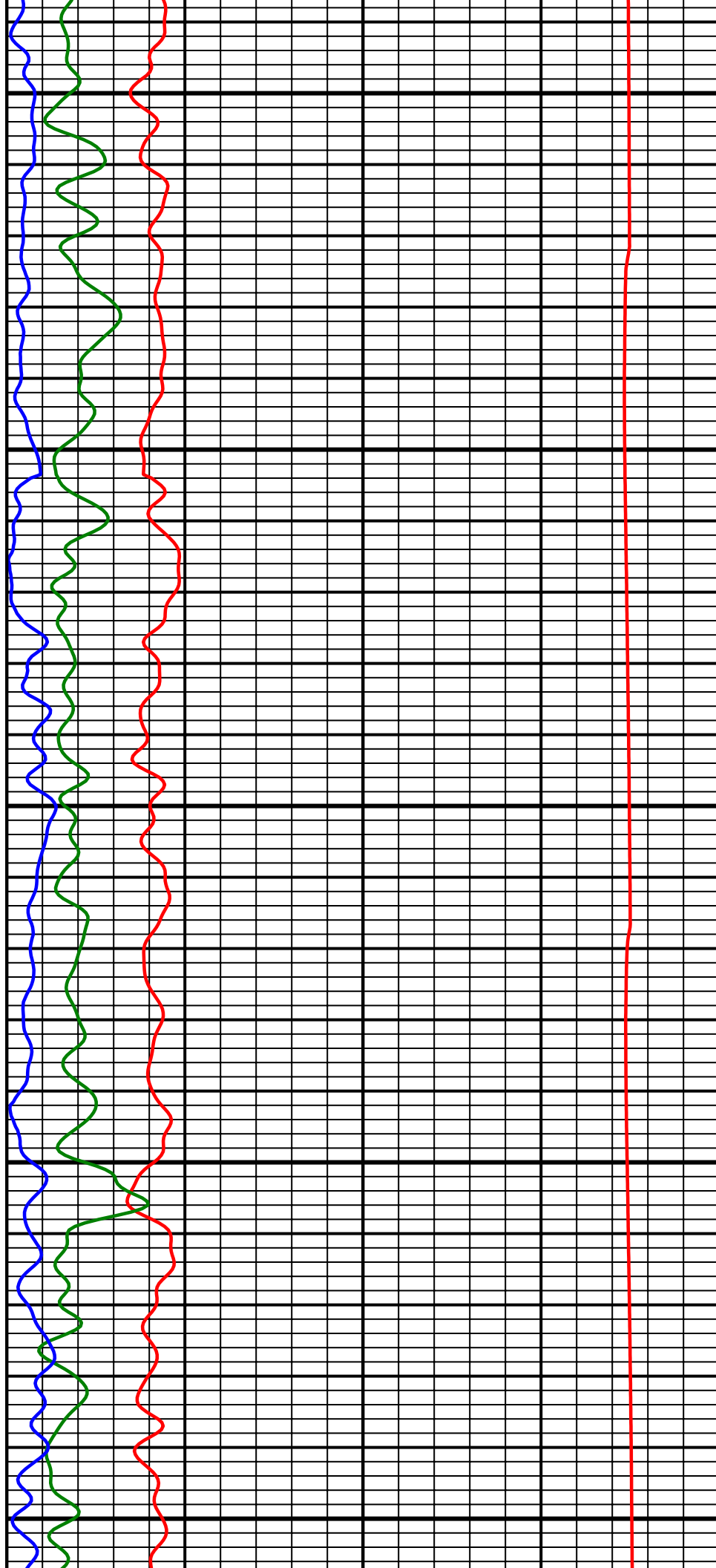


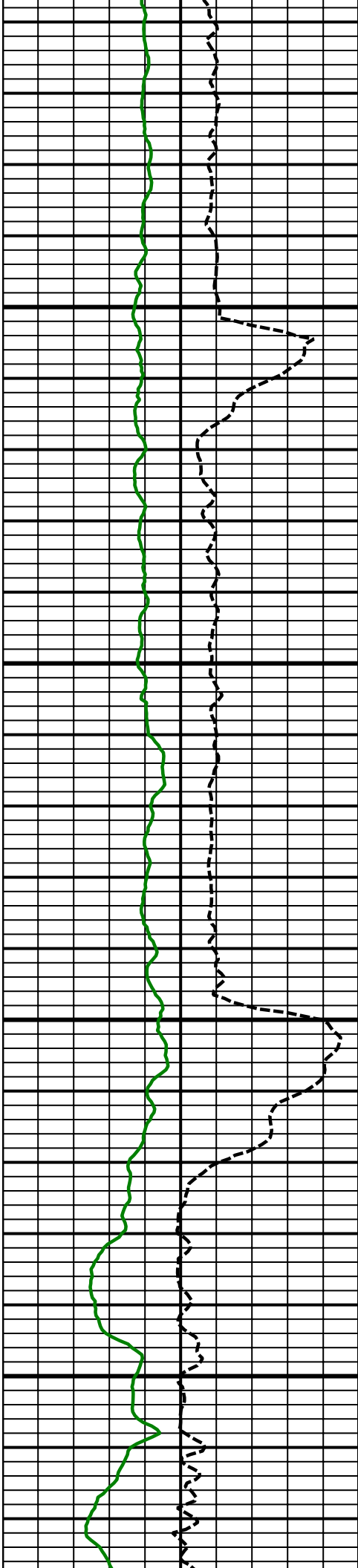


9500
MD

9600
MD

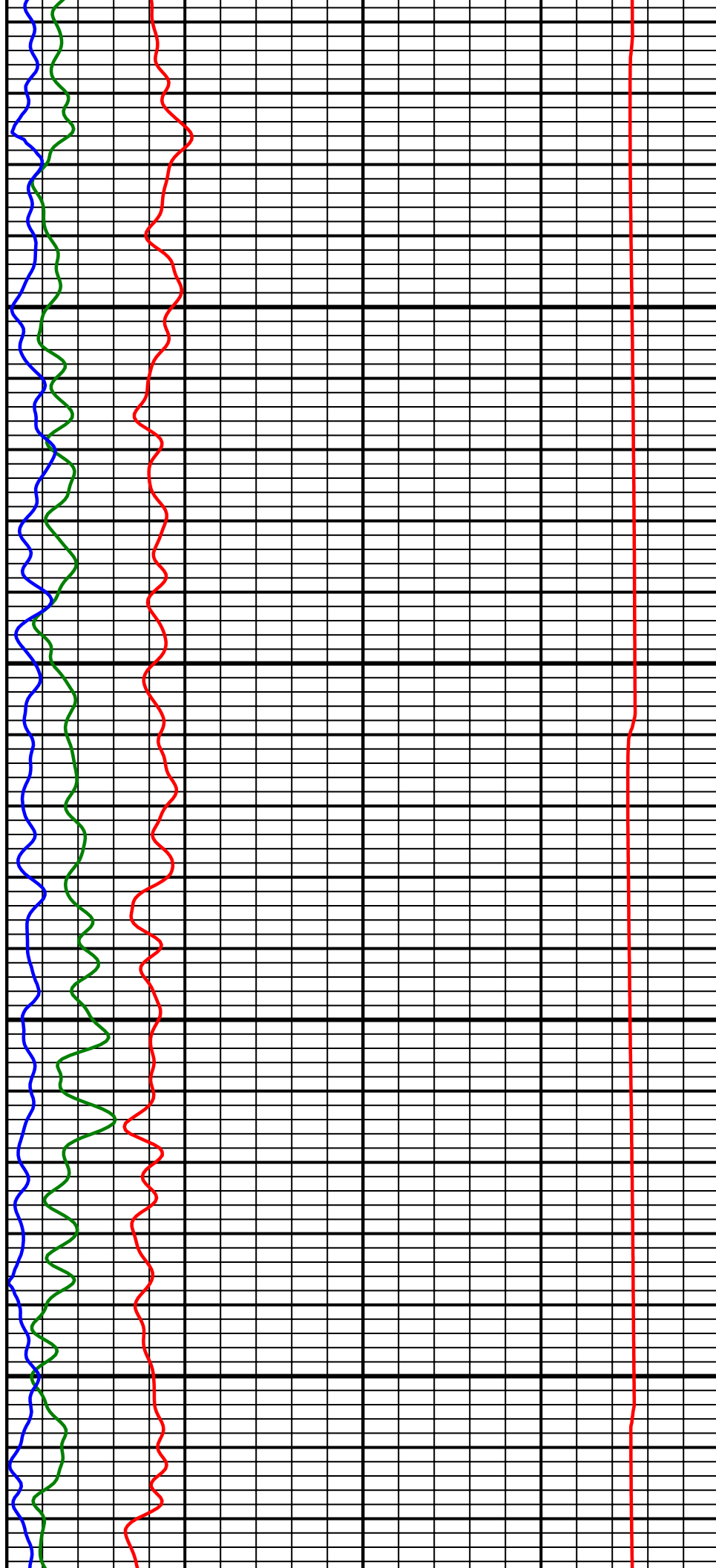
9700
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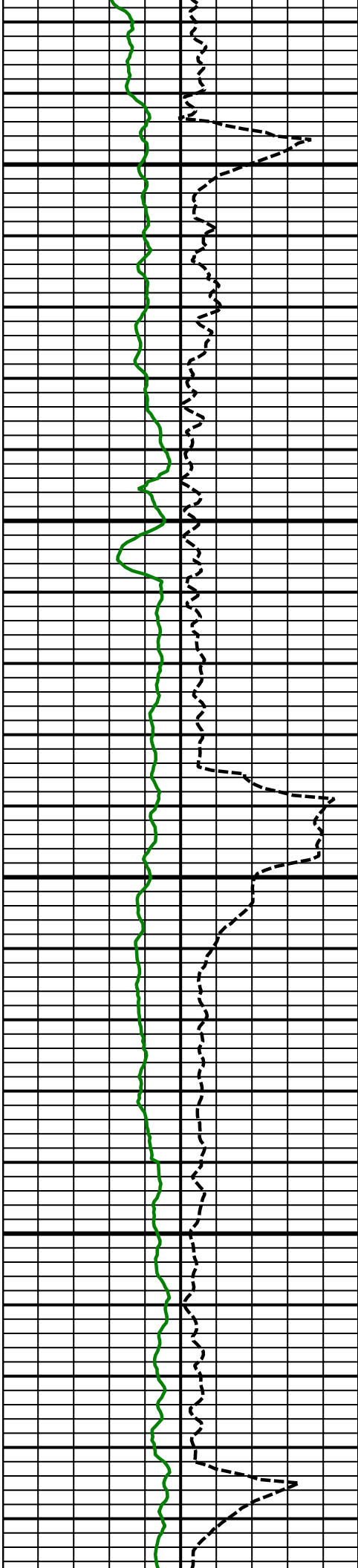




9800
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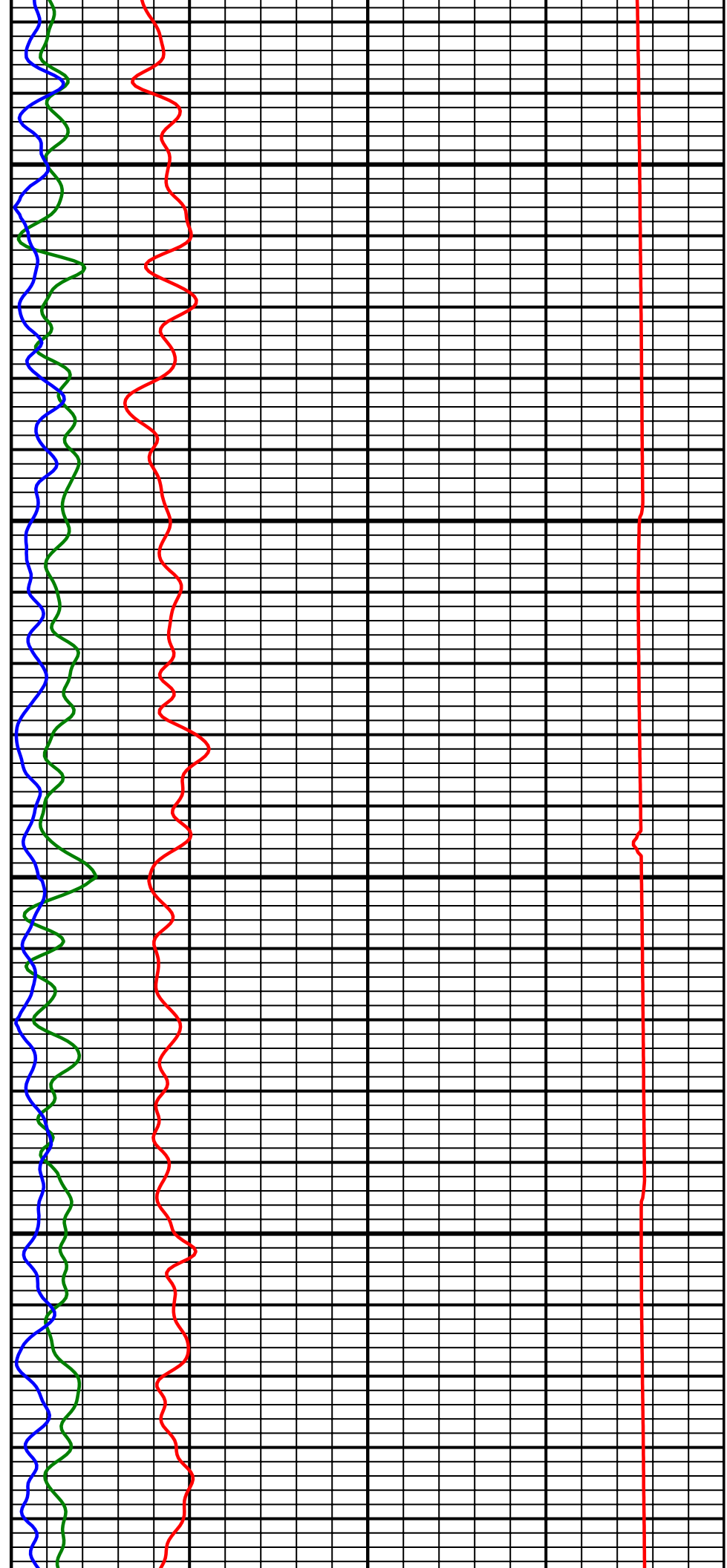
9900
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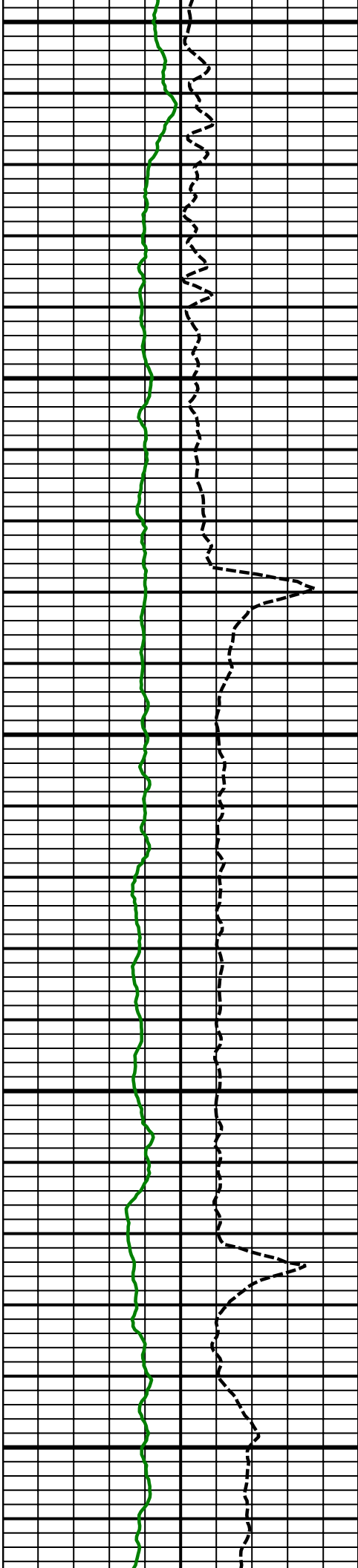




10000
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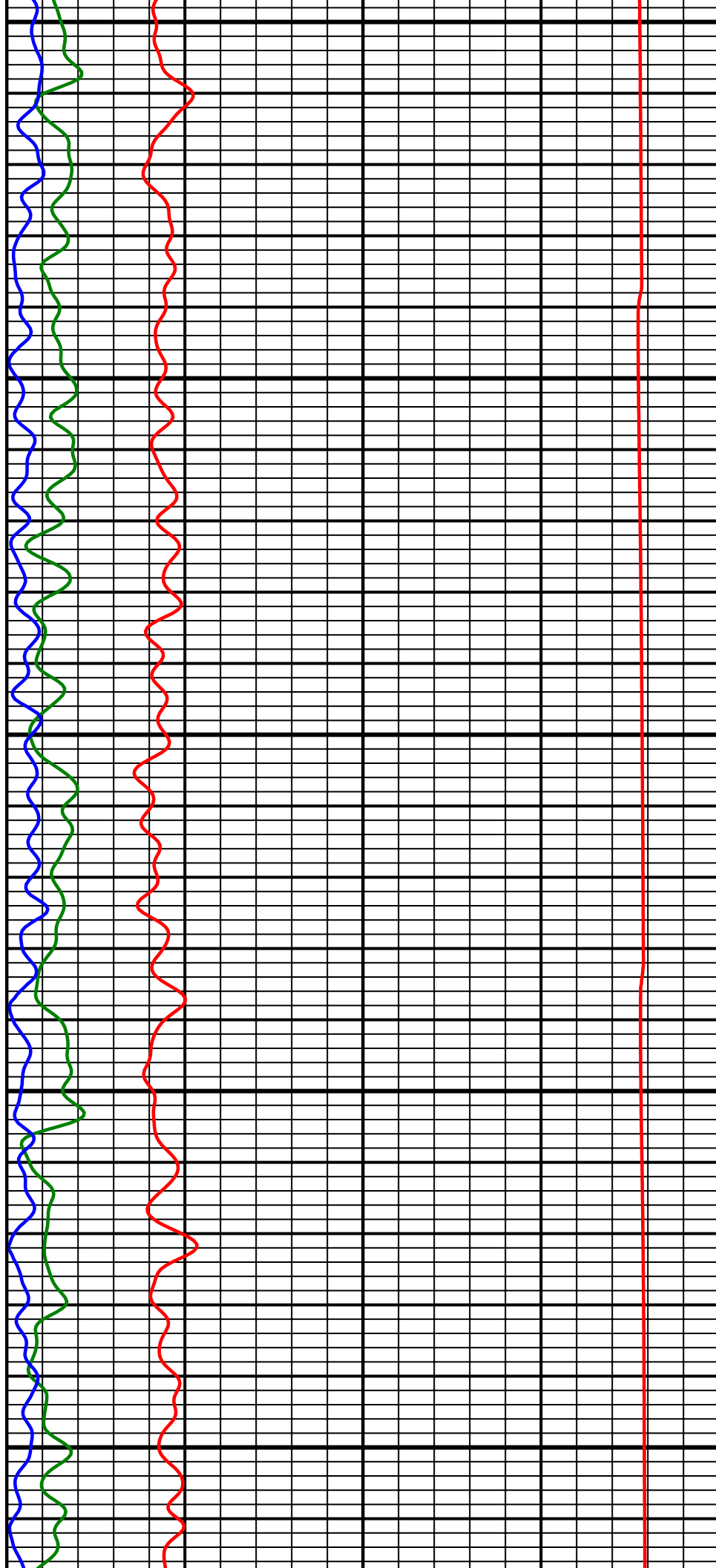
10100
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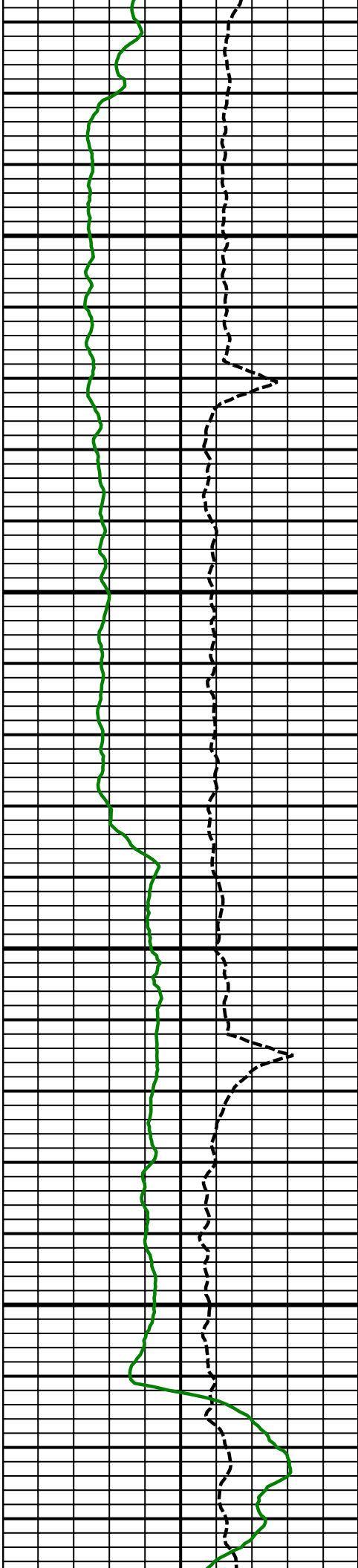




10200
MD

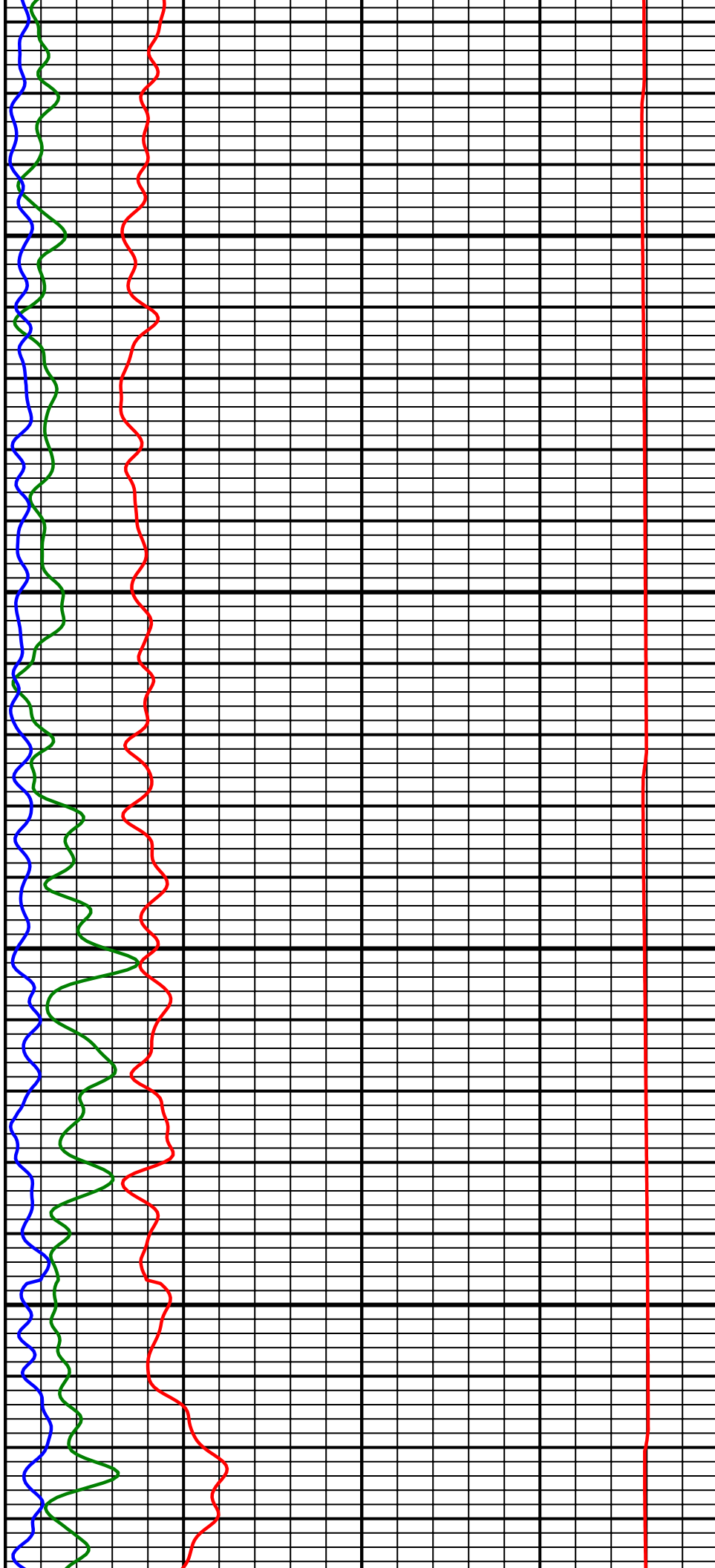
10300
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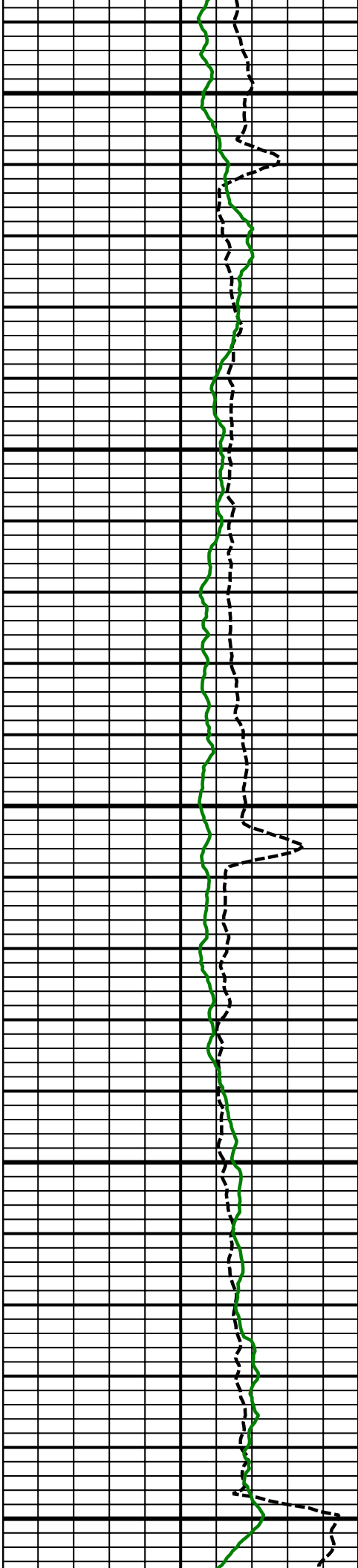




10400
MD

10500
MD

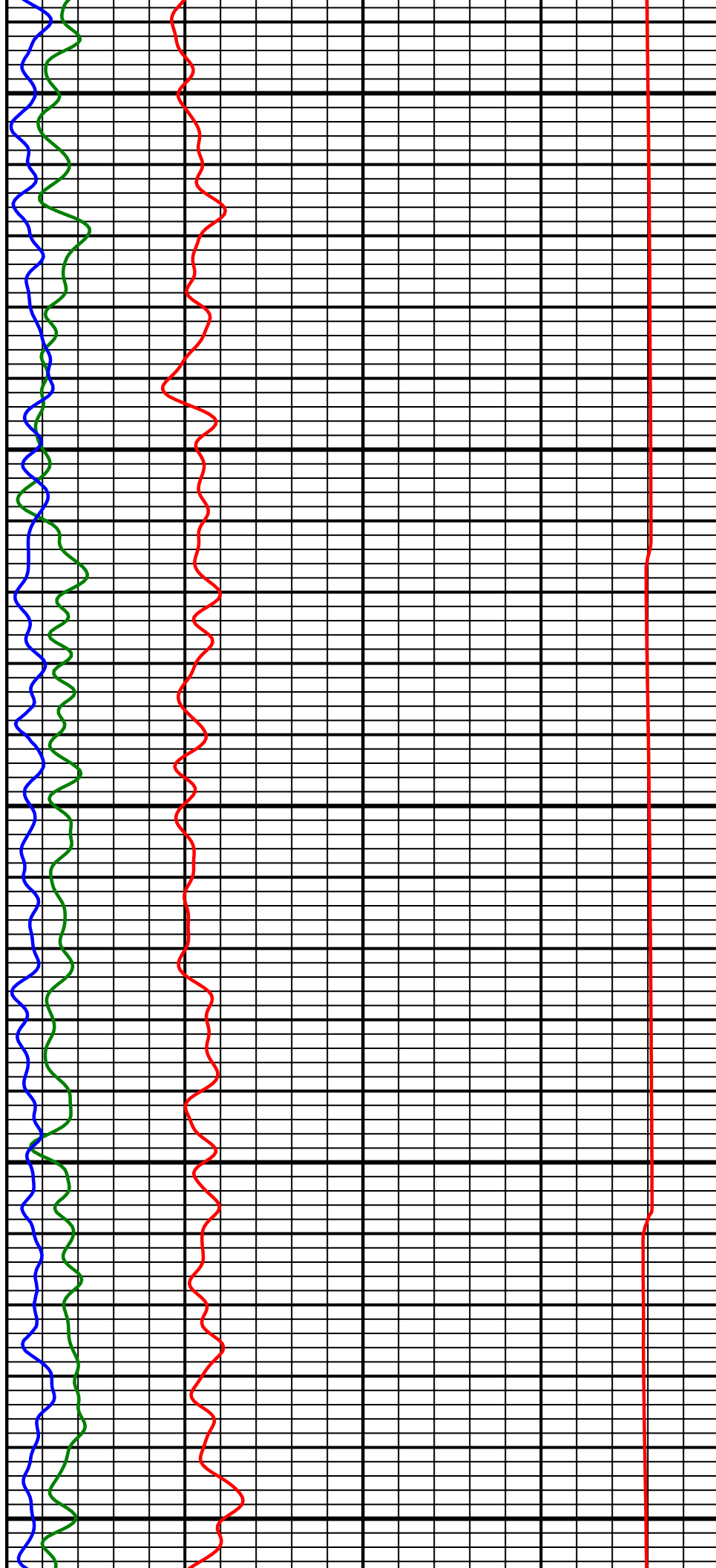


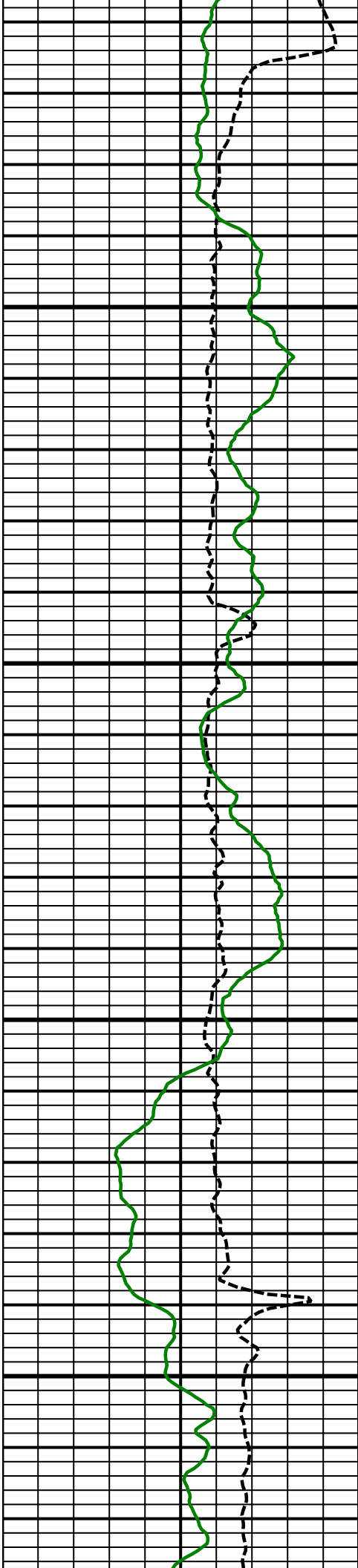


10600
MD

10700
MD

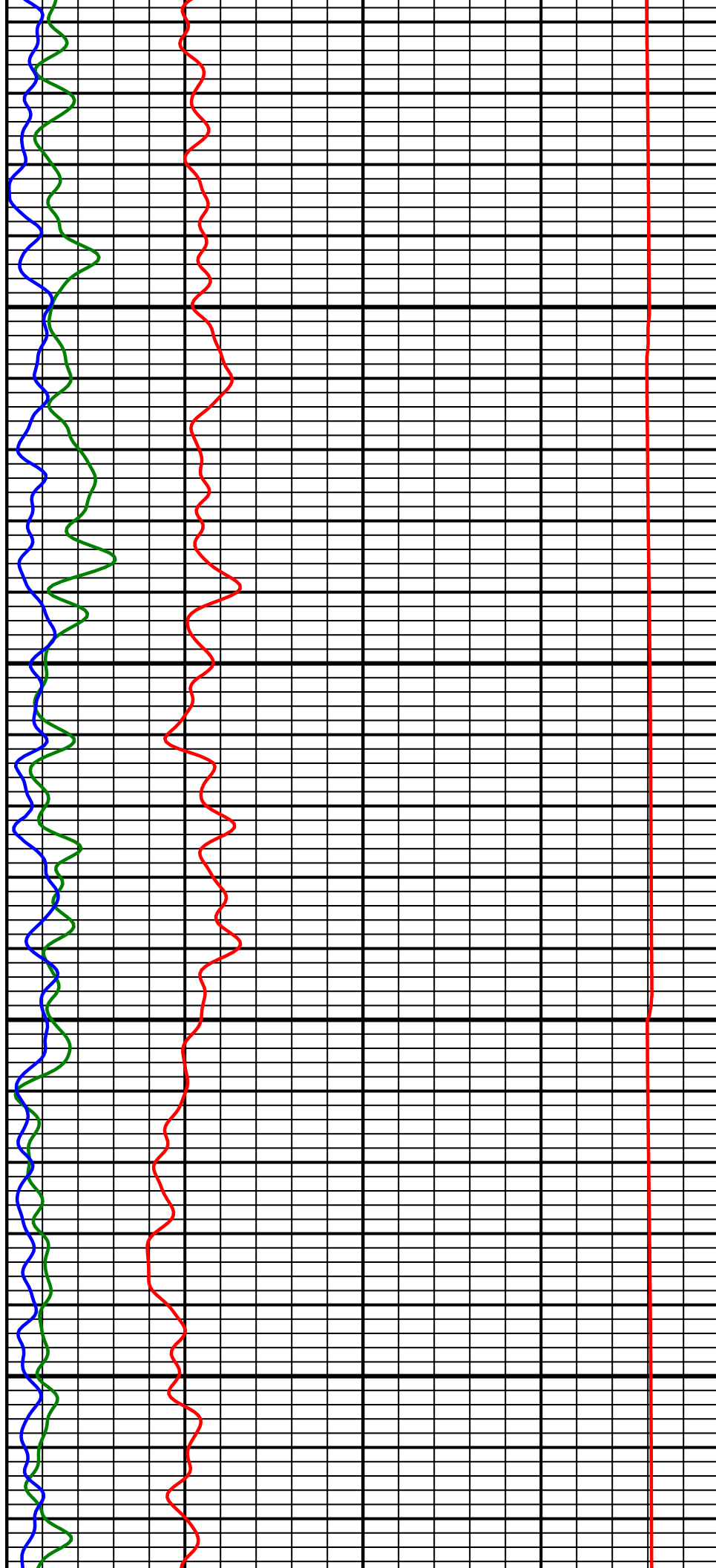
10800
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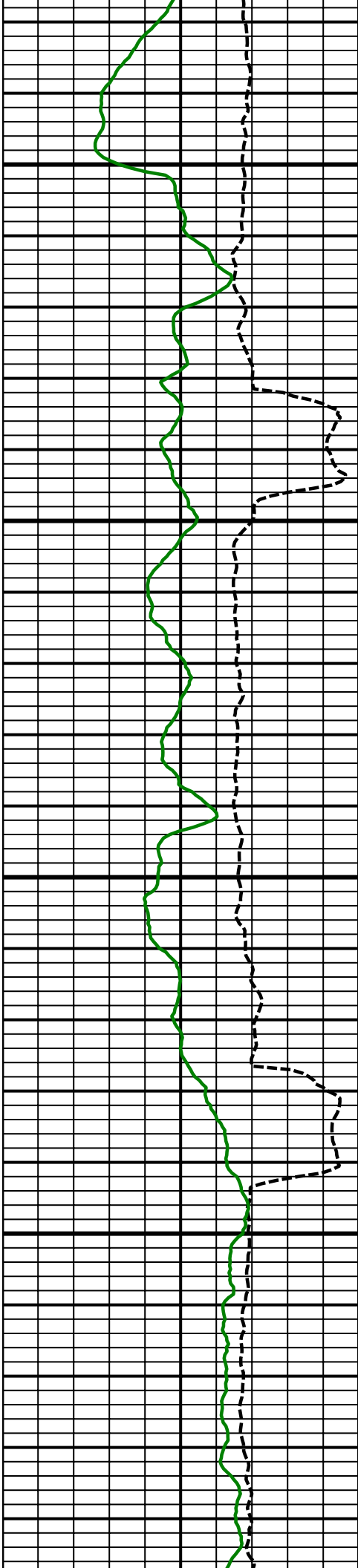




10900
MD

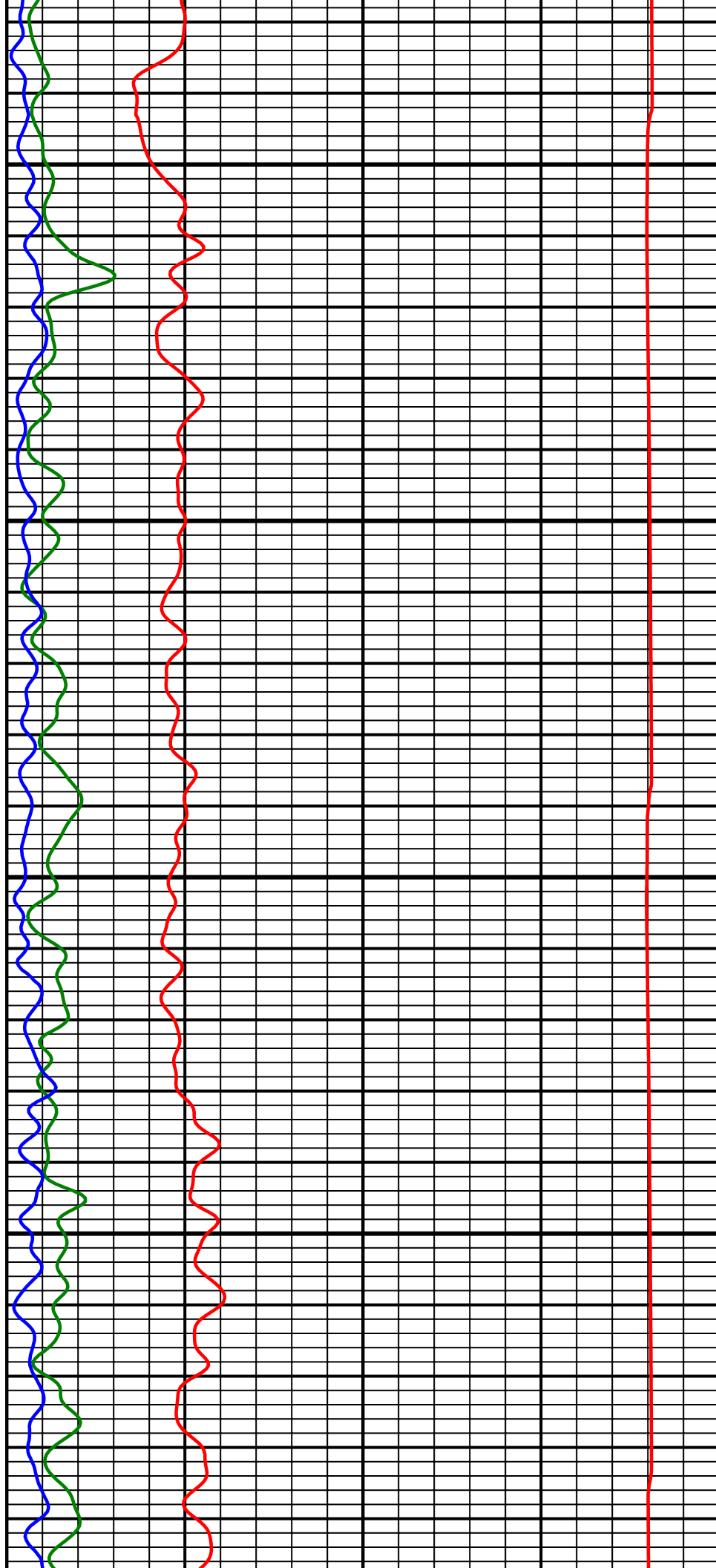
11000
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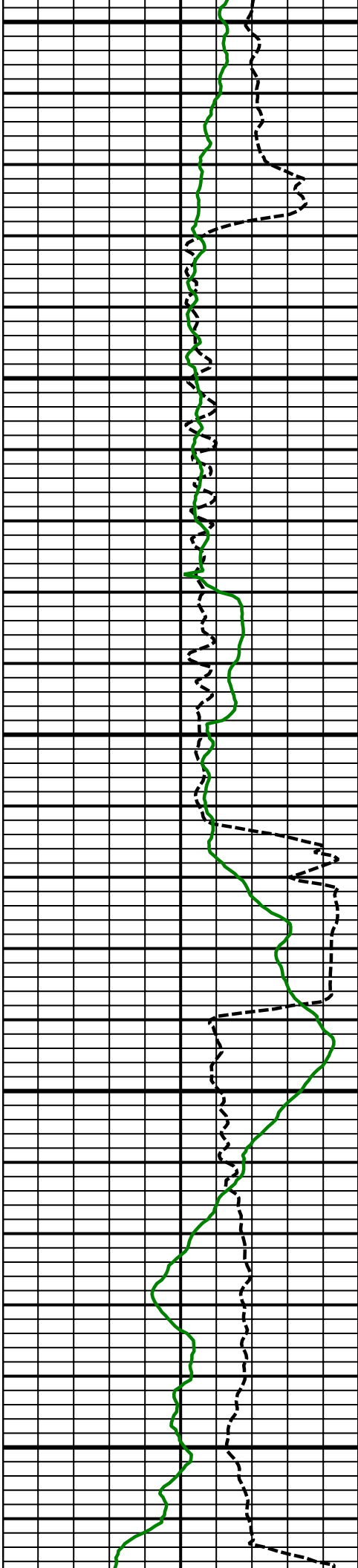




11100
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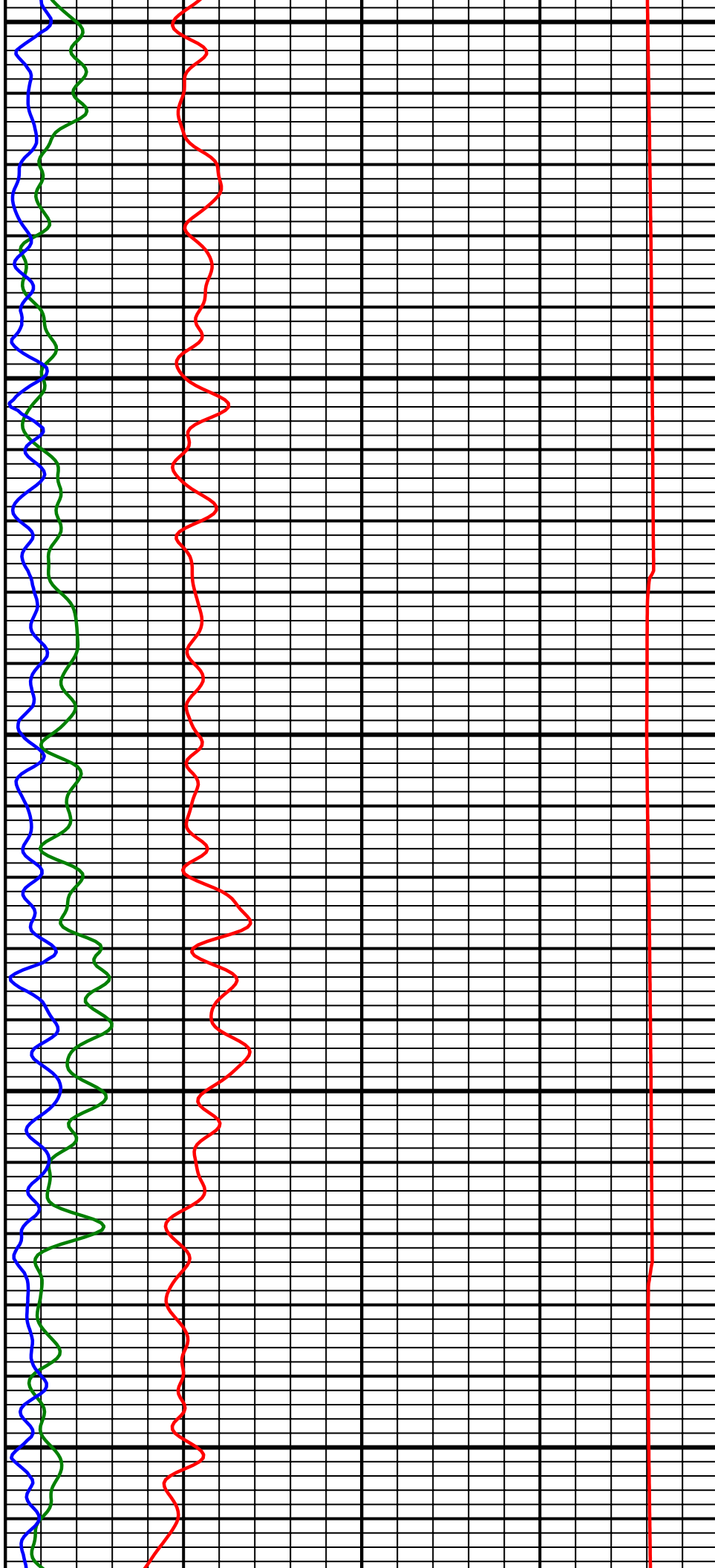
11200
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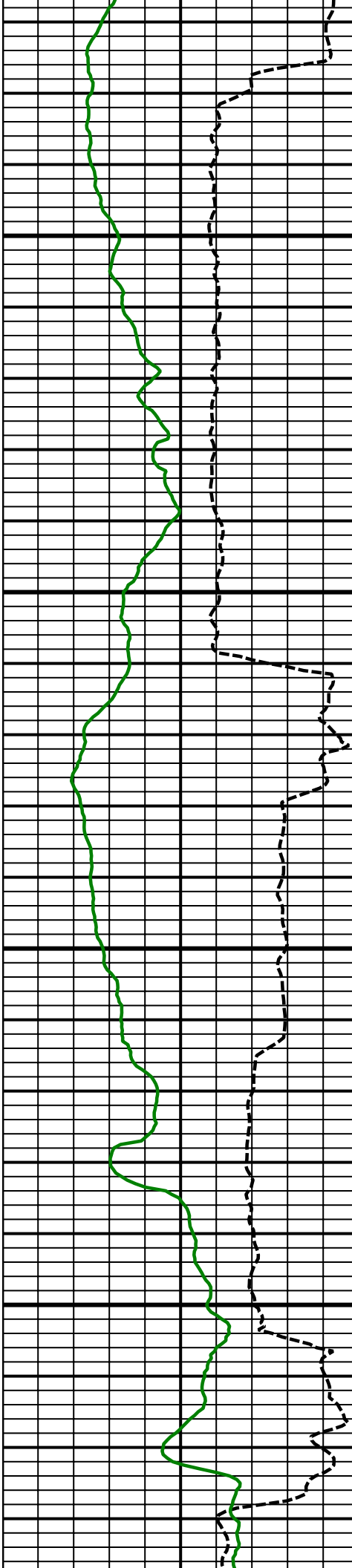




11300
MD

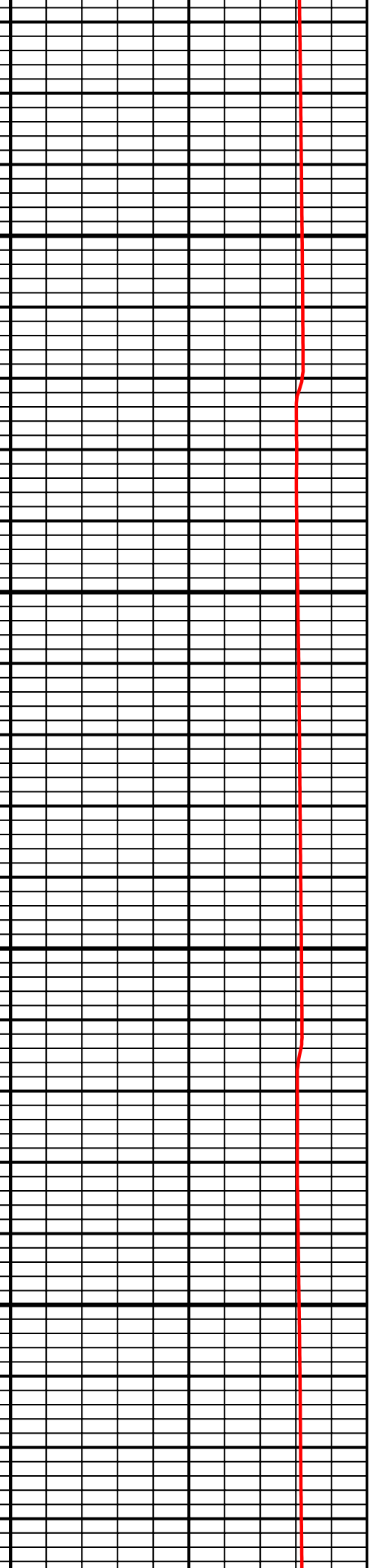
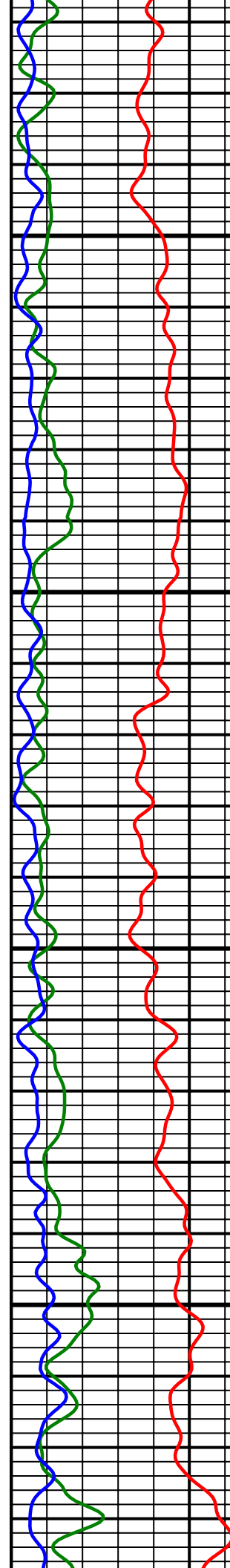
11400
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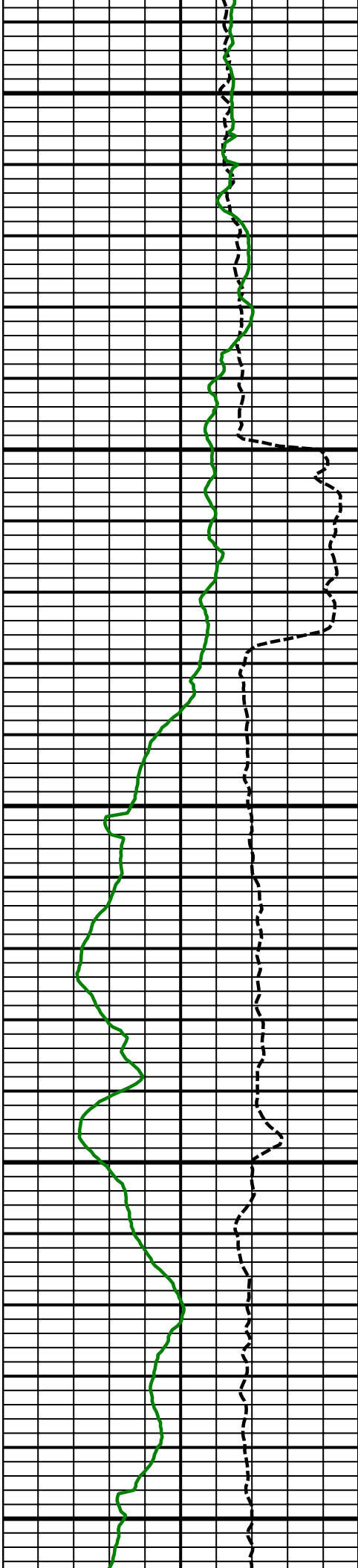




11500
MD

11600
MD

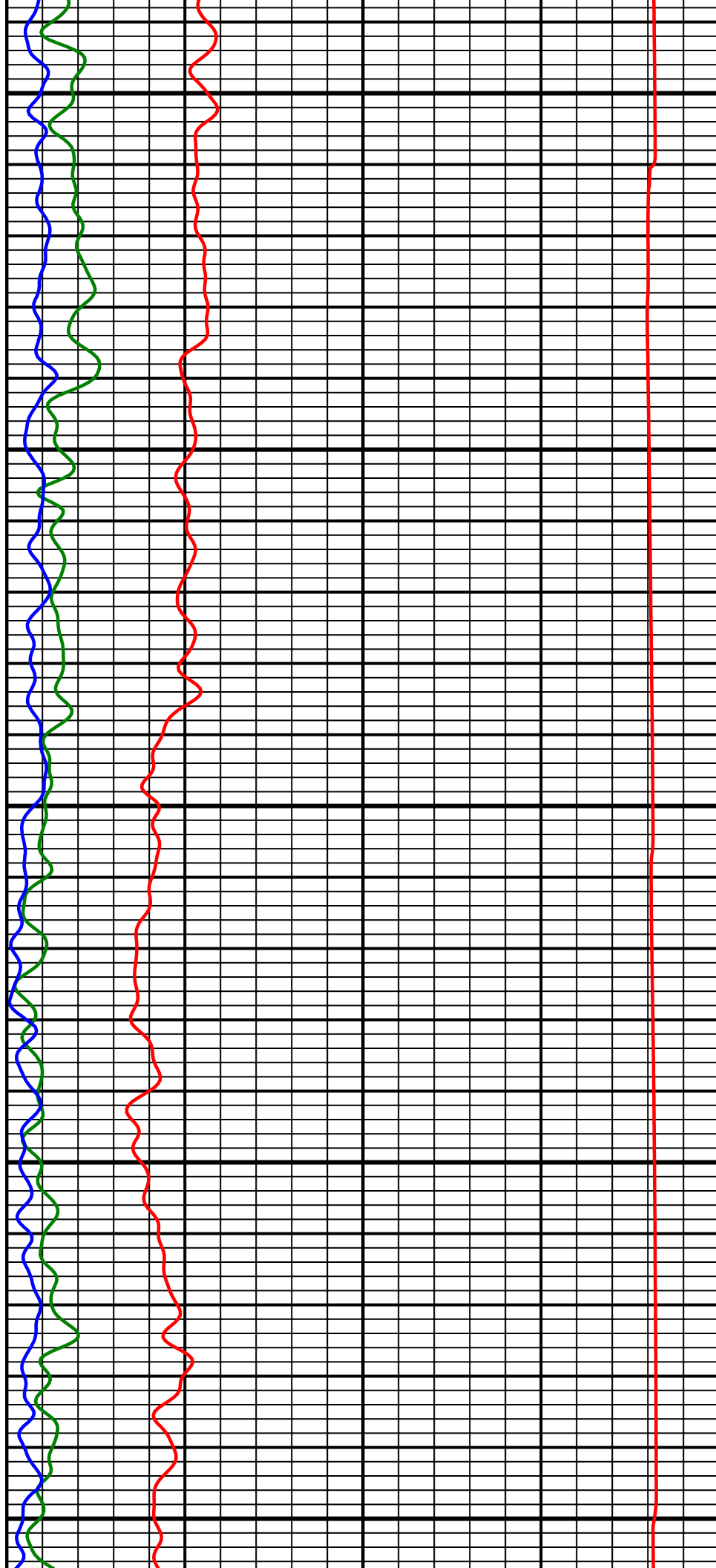


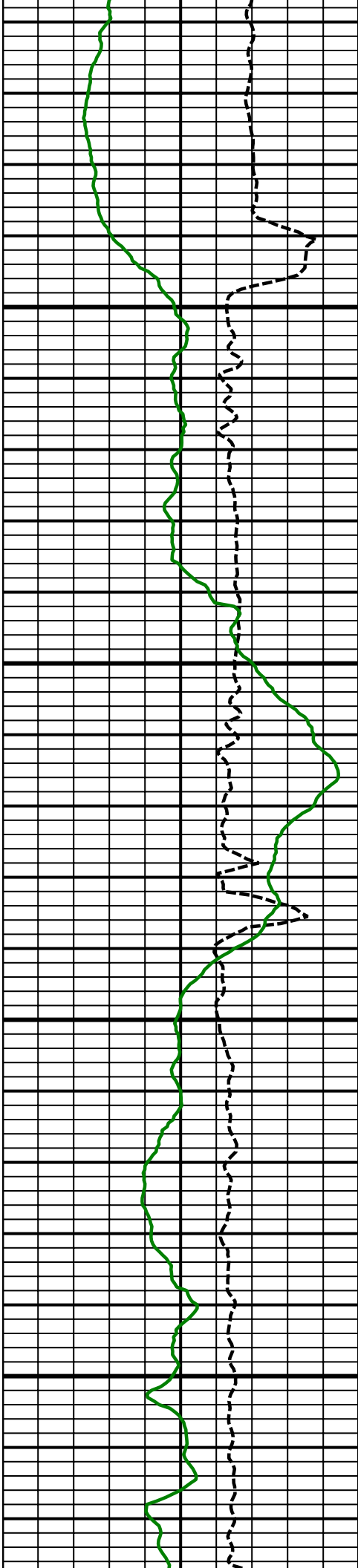


11700
MD

11800
MD

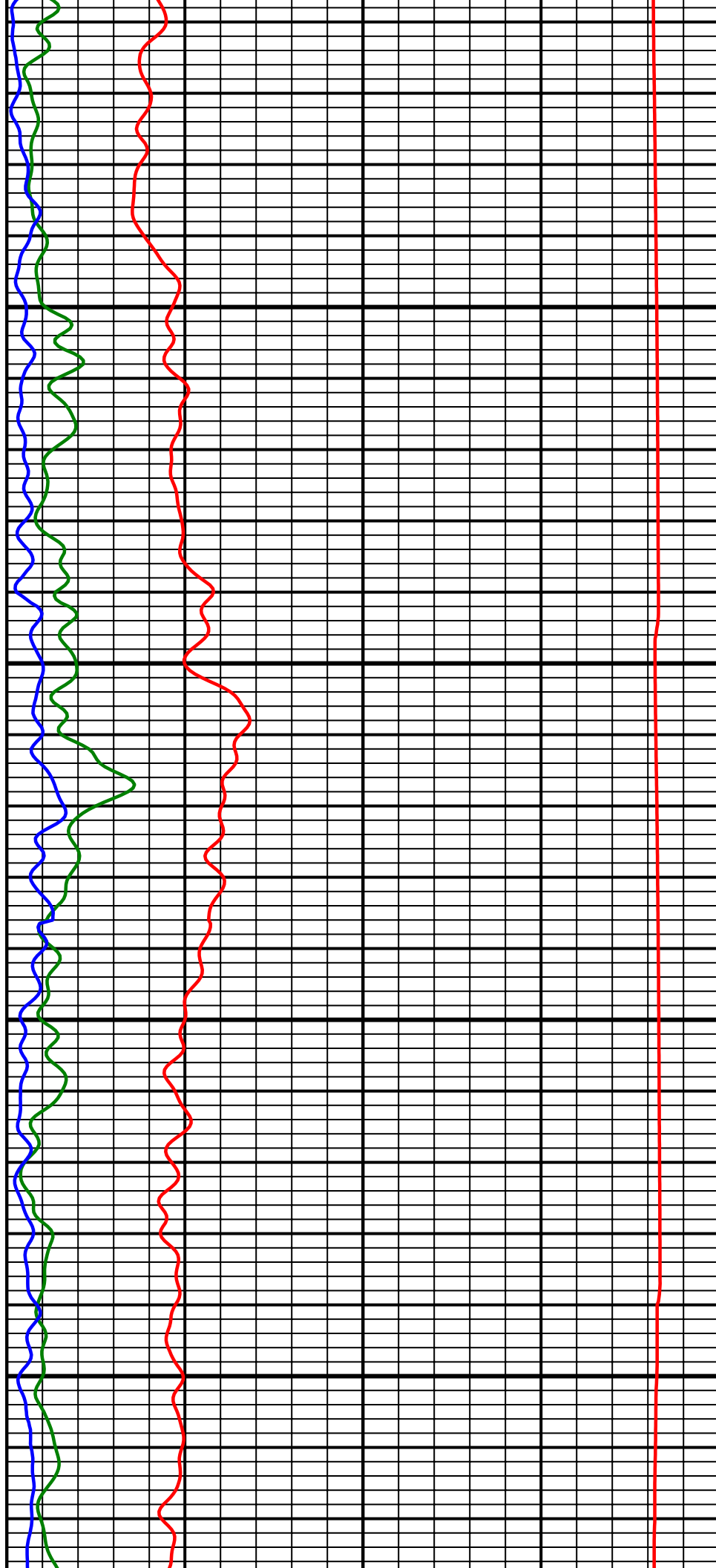
11900
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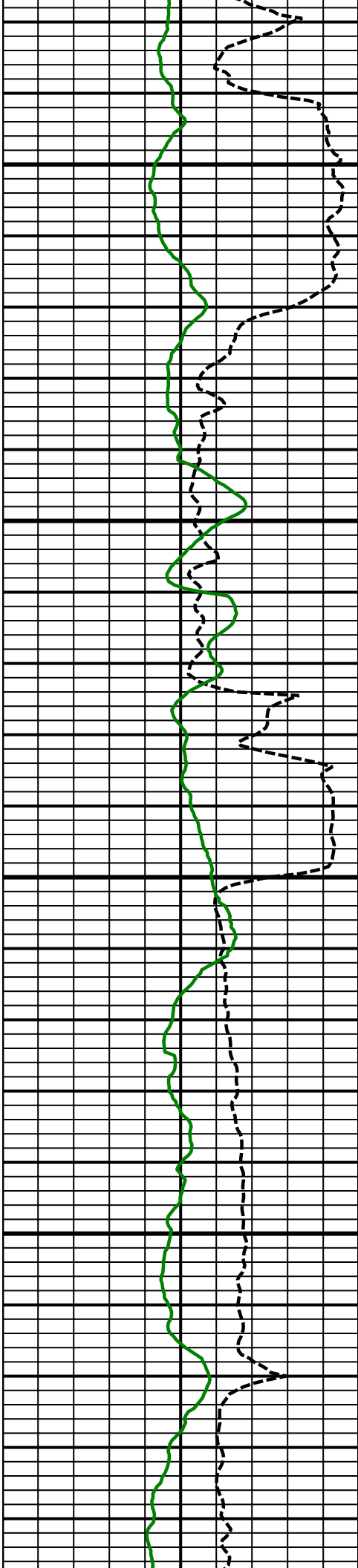




12000
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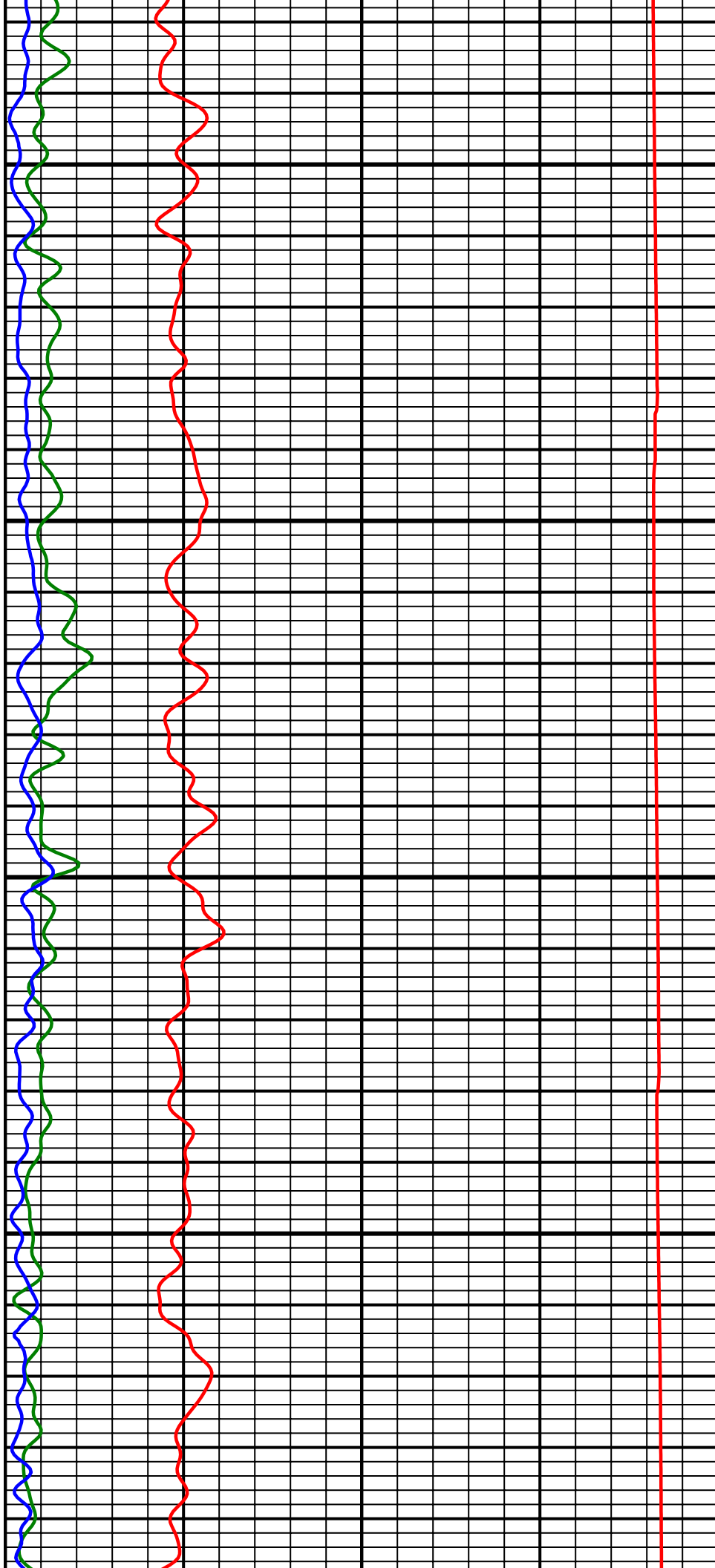
12100
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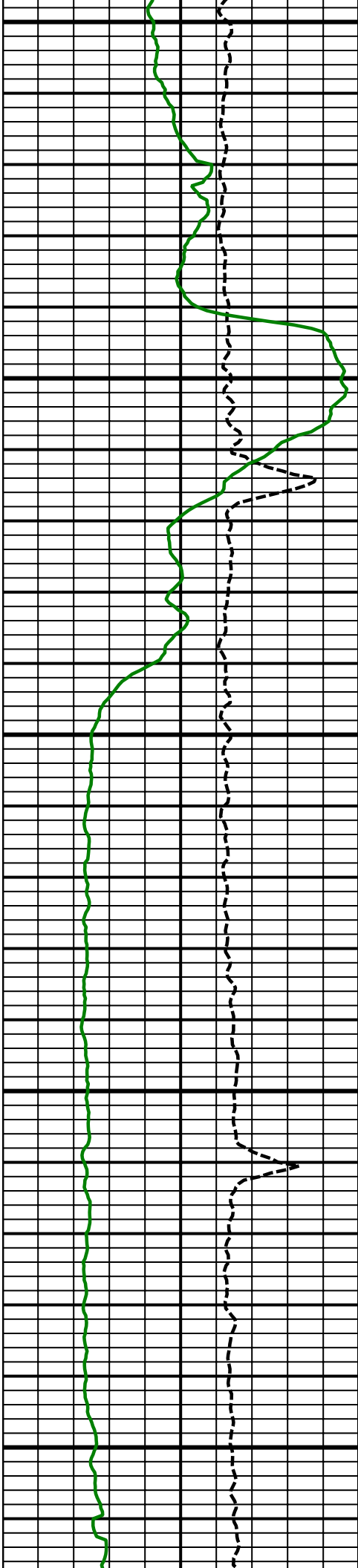




12200
MD

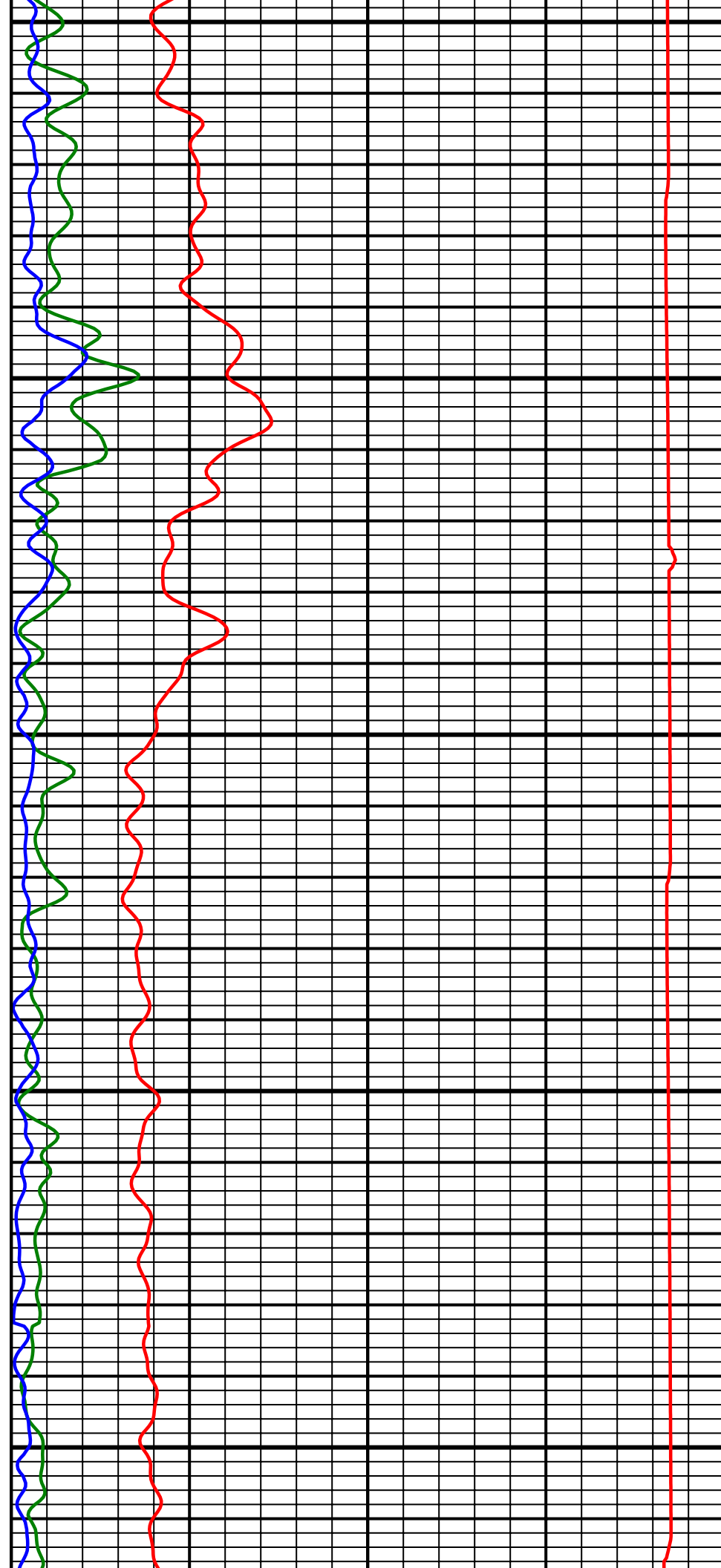
12300
MD

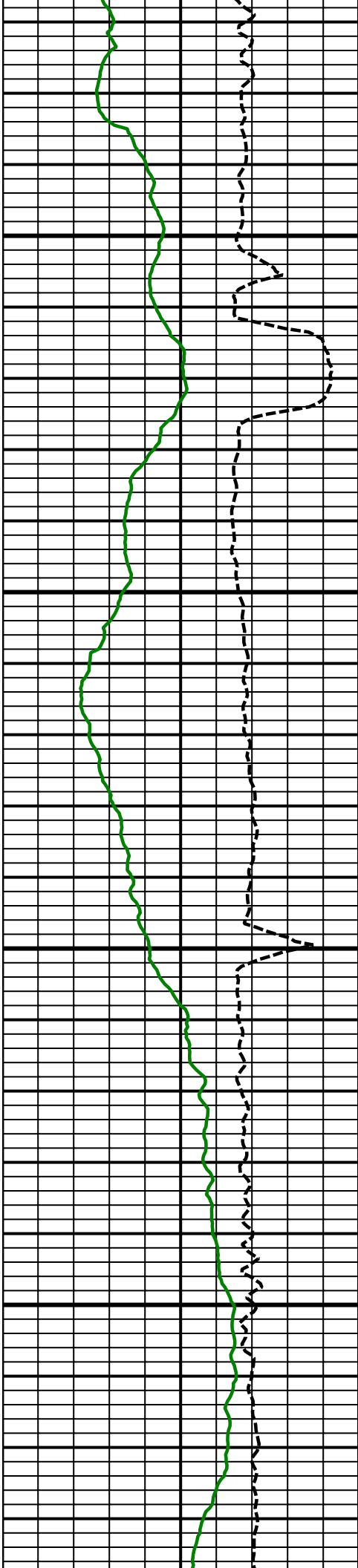




12400
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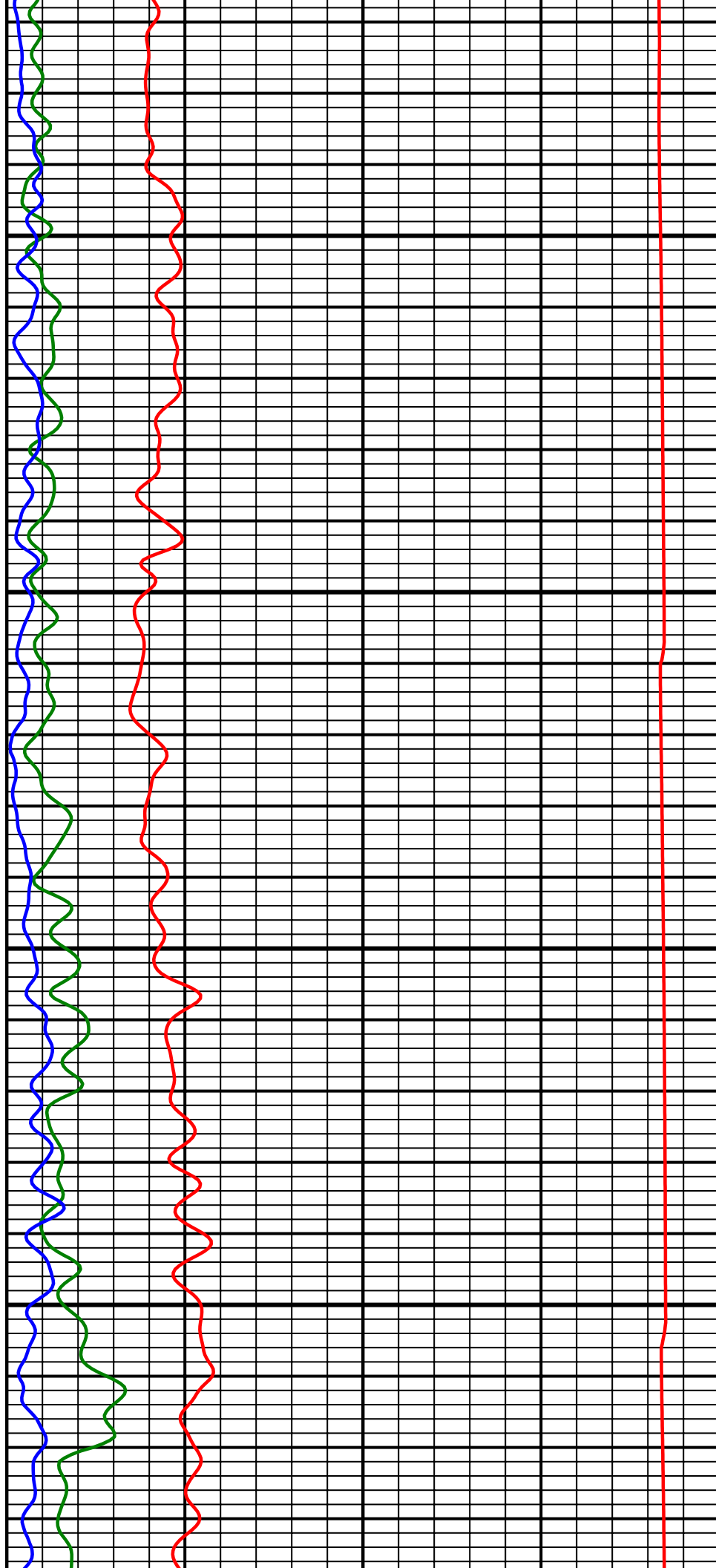
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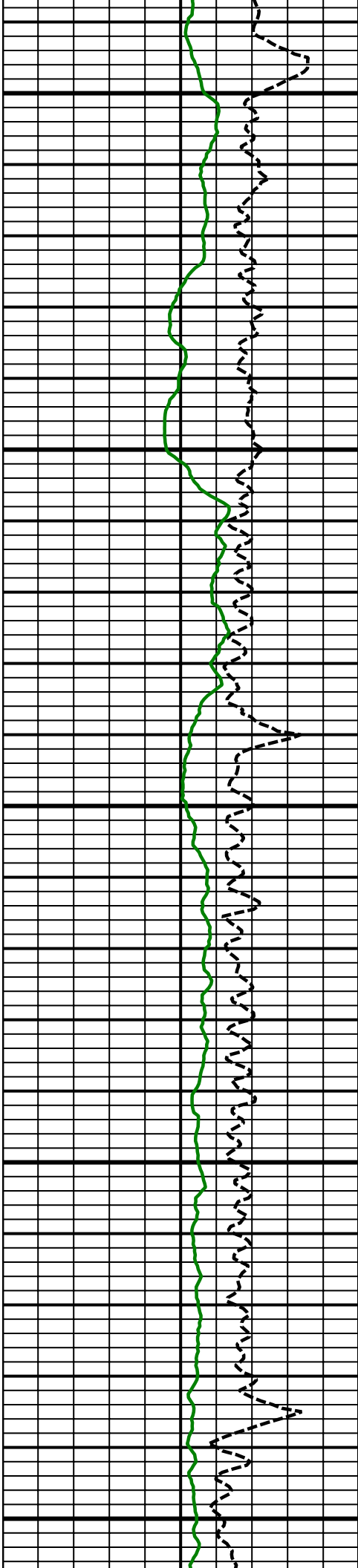




12600
MD

12700
MD

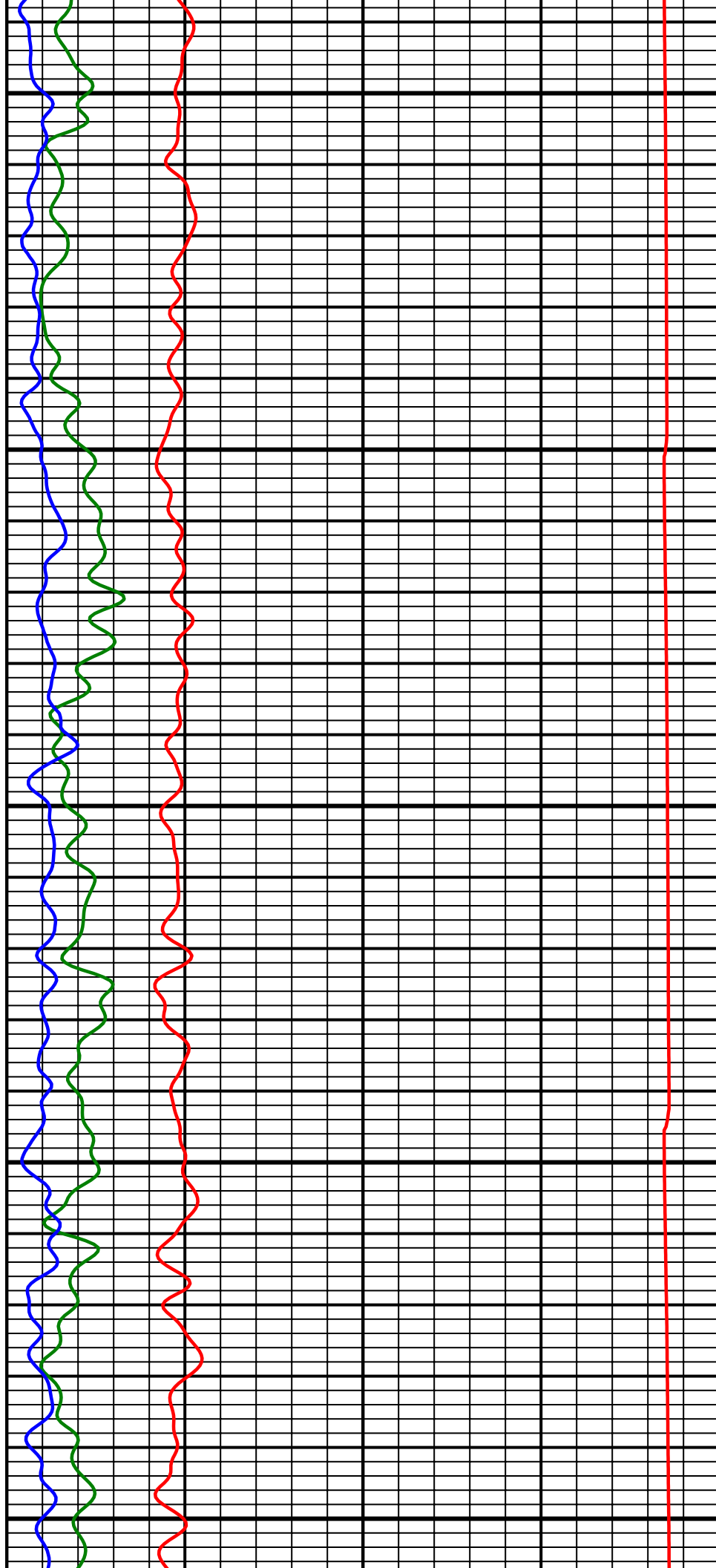


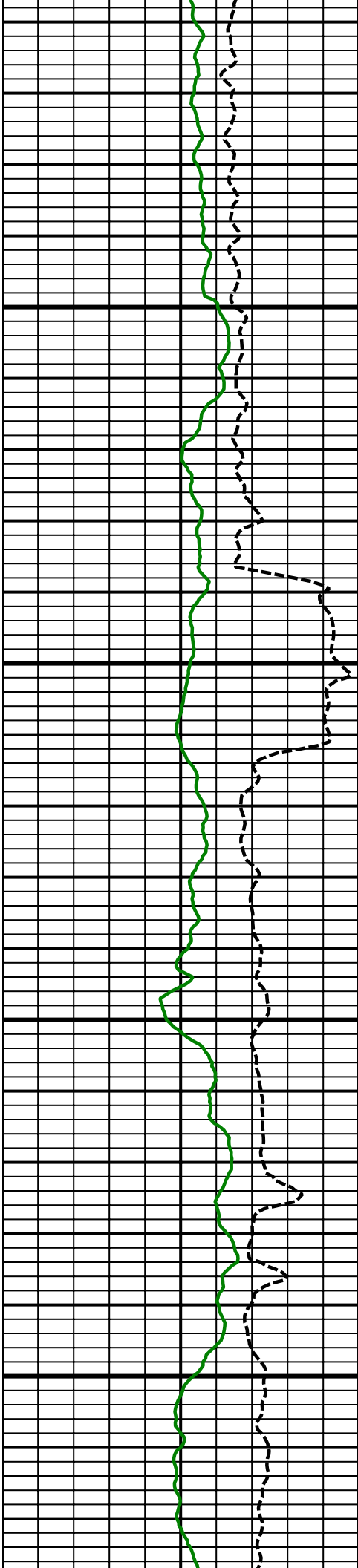


12800
MD

12900
MD

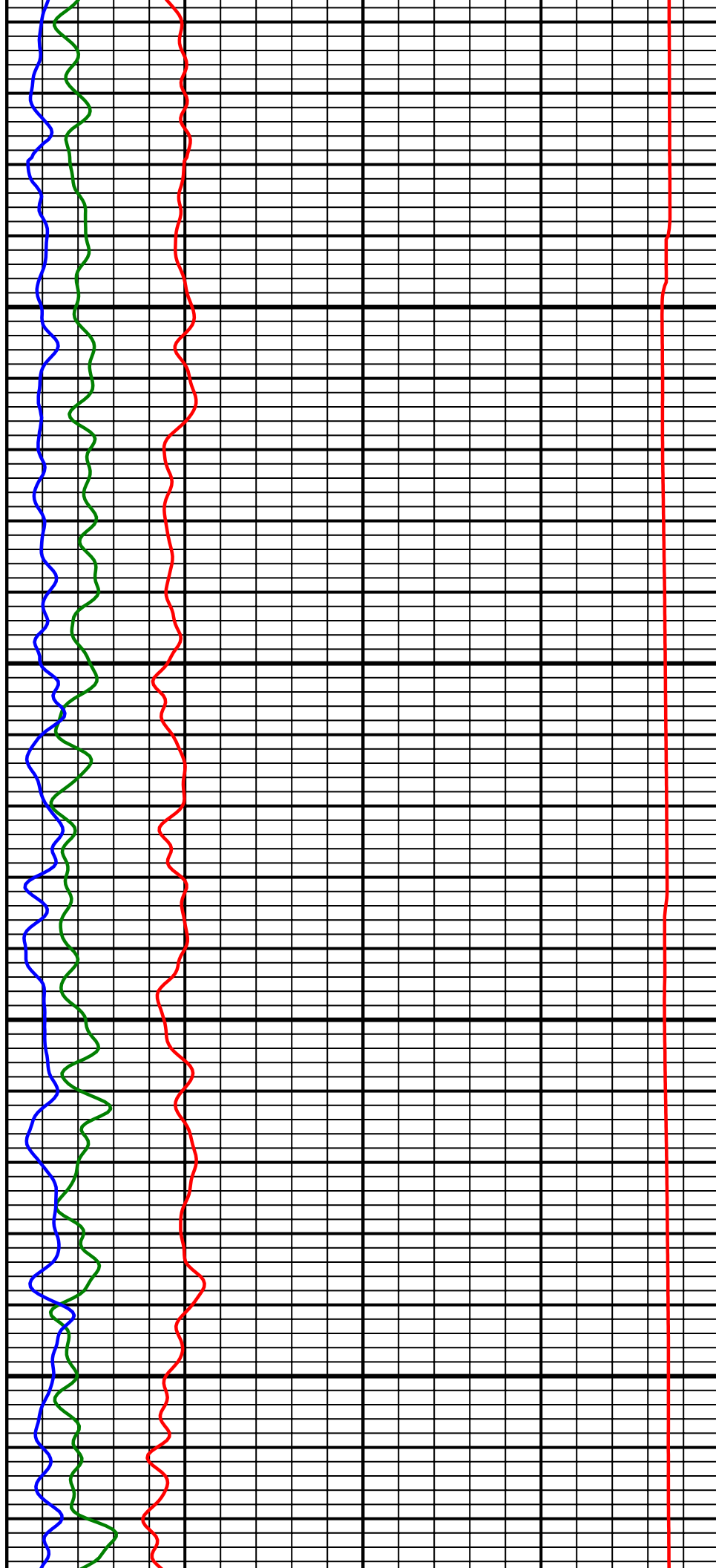
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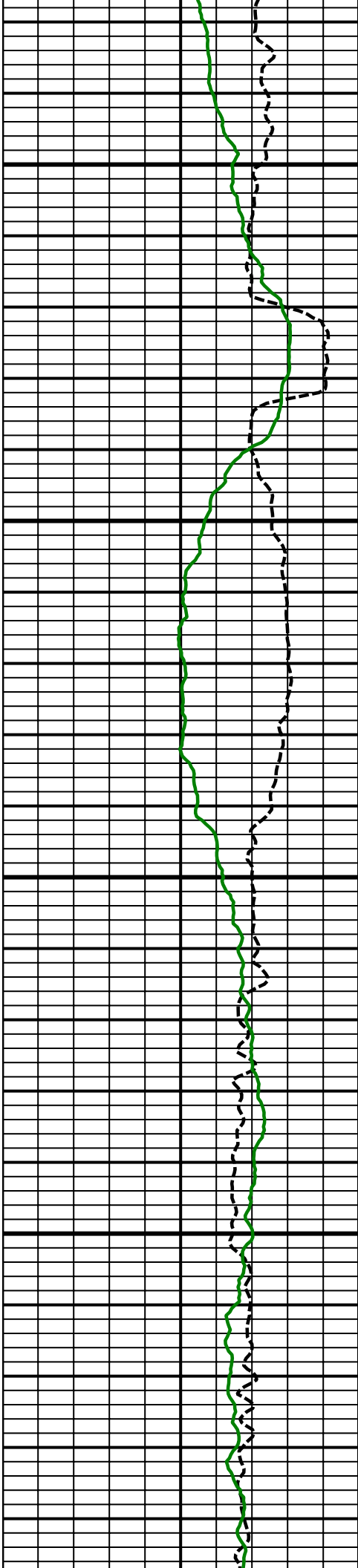




13100
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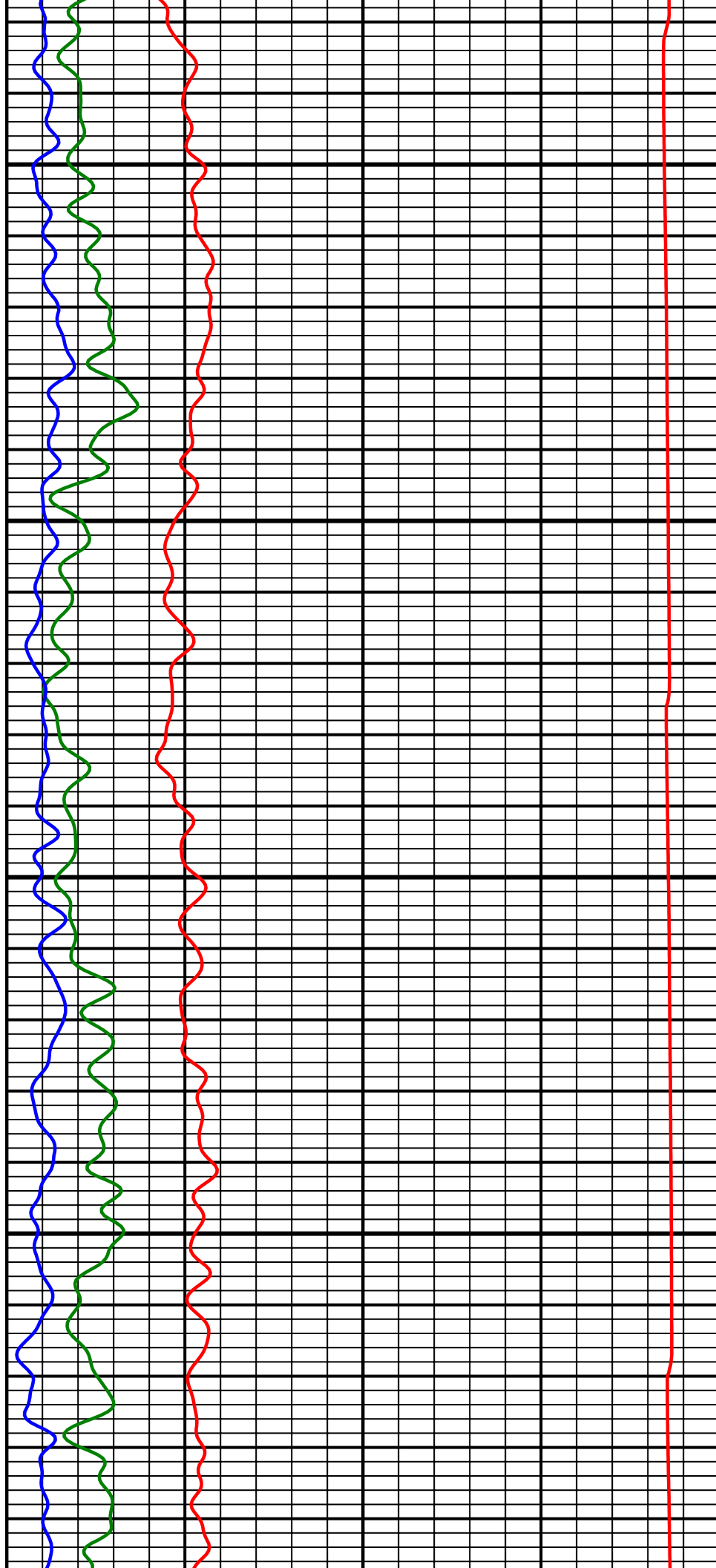
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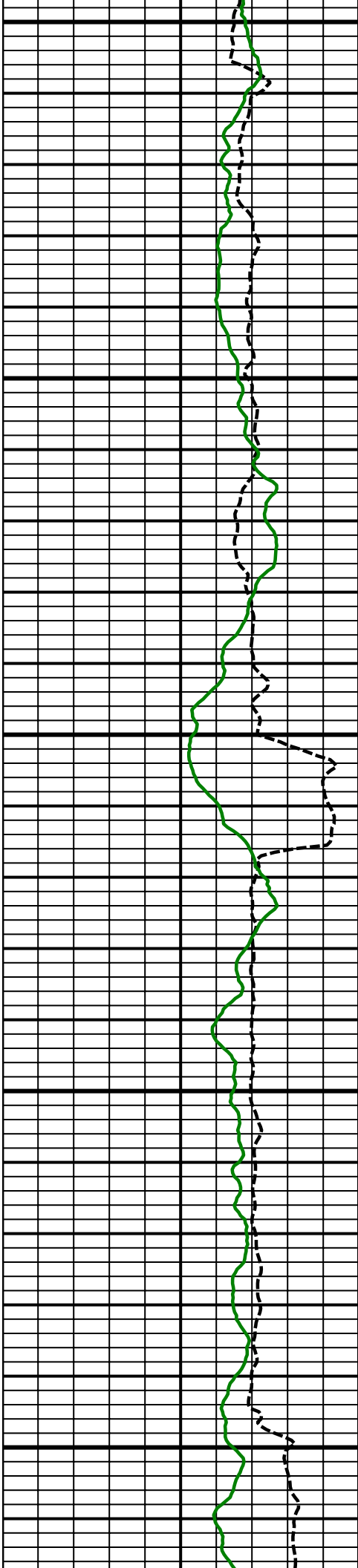




13300
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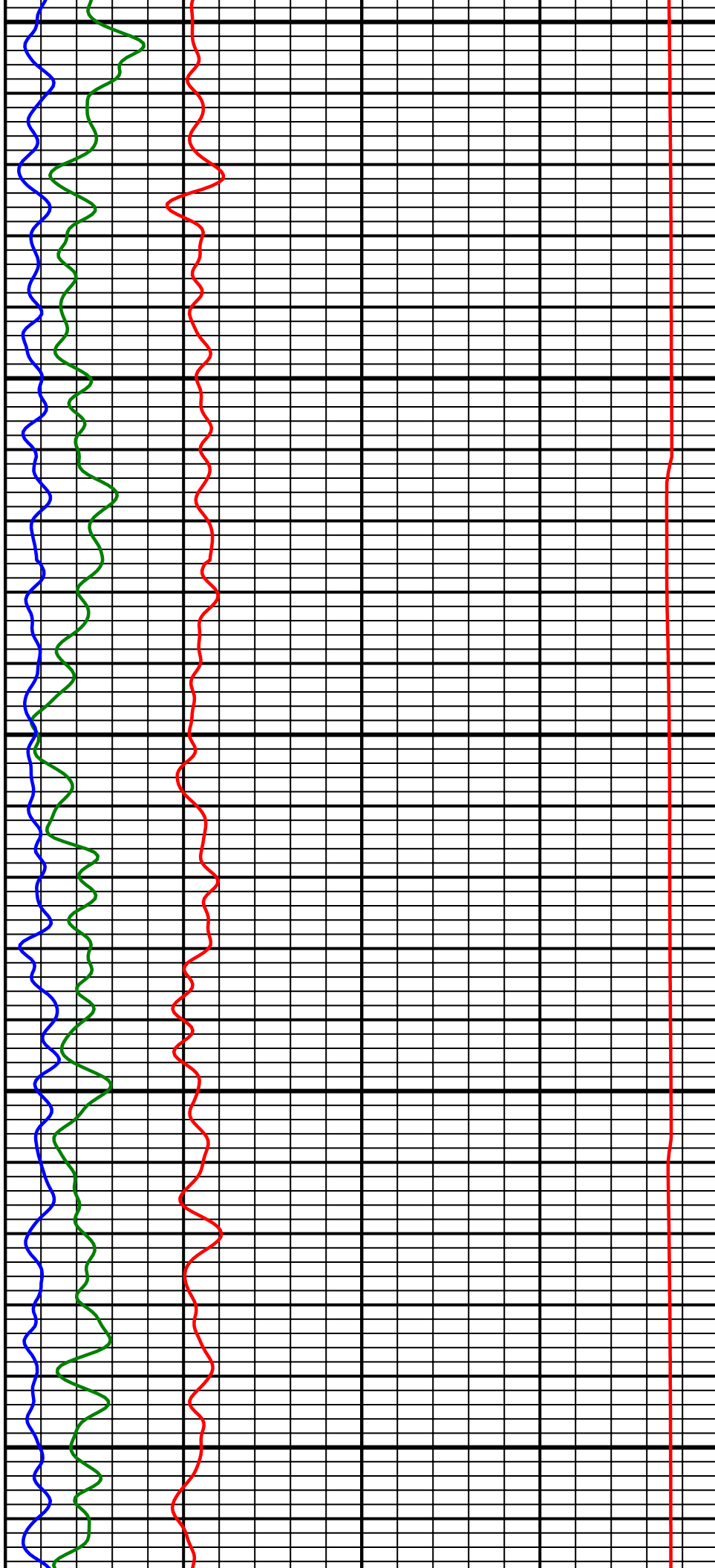
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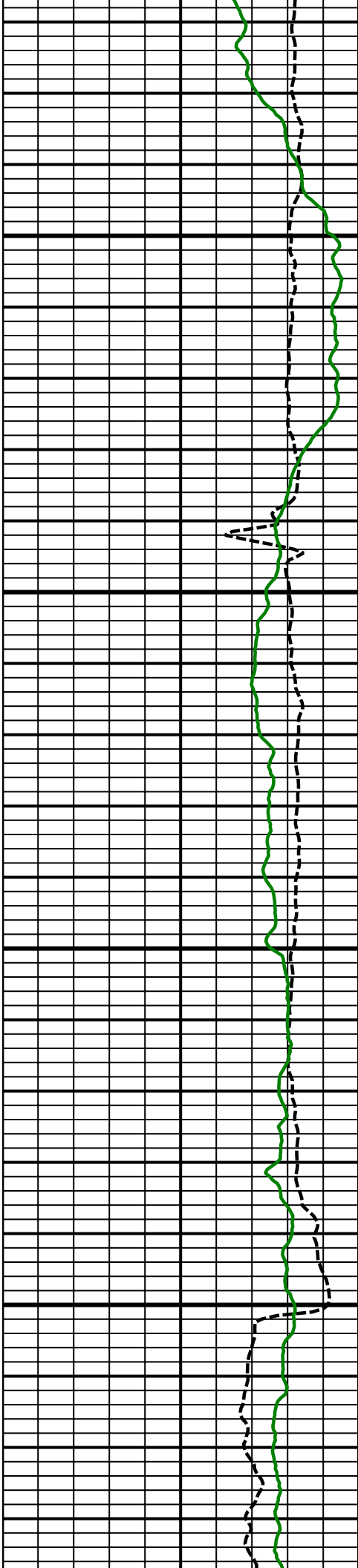




13500
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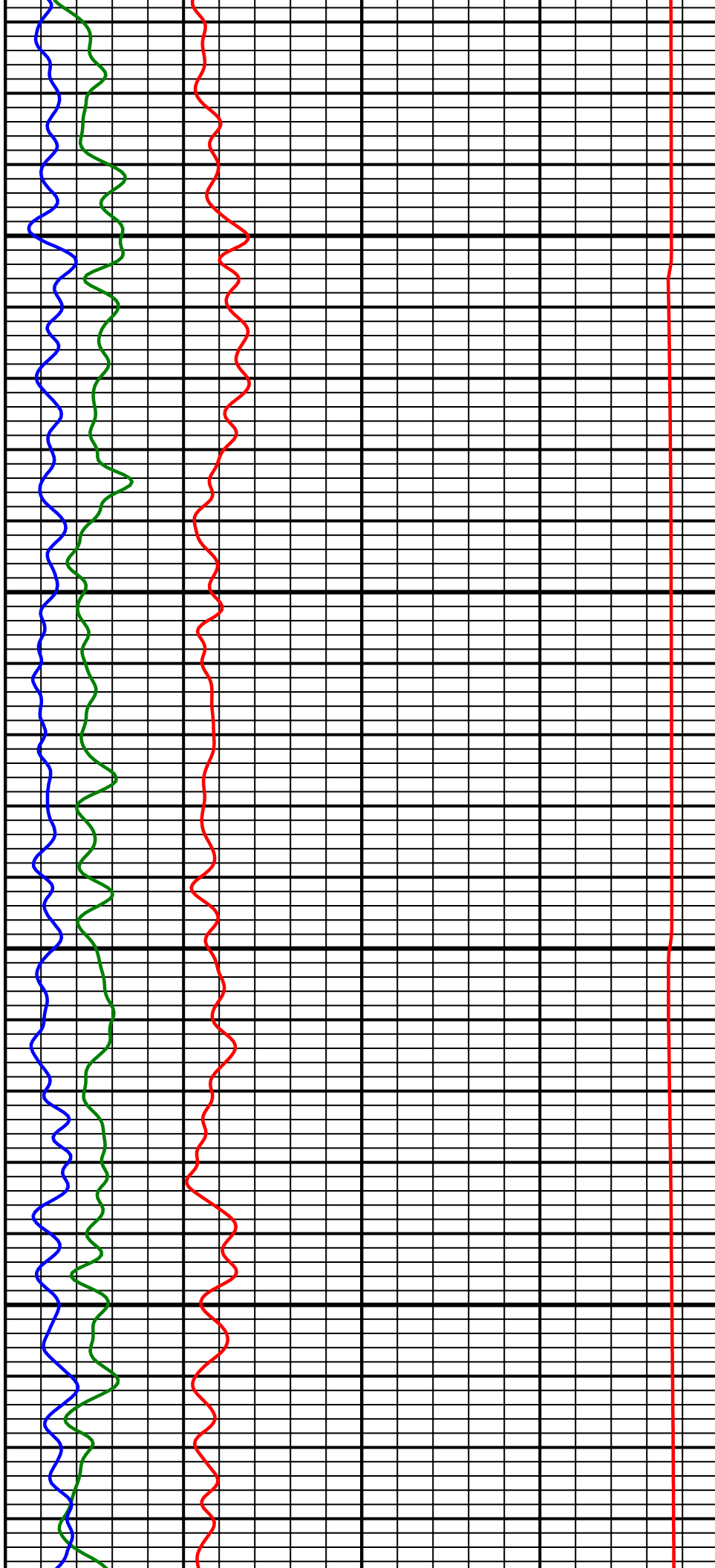
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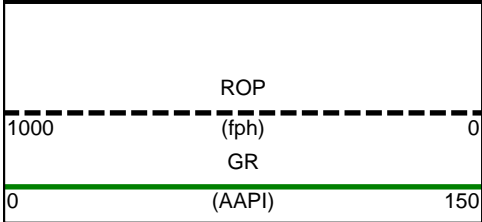
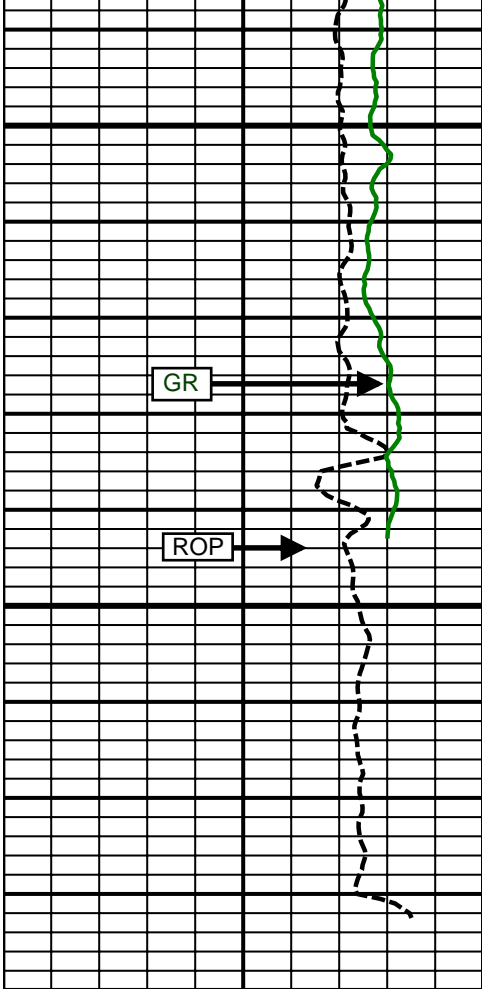




13700
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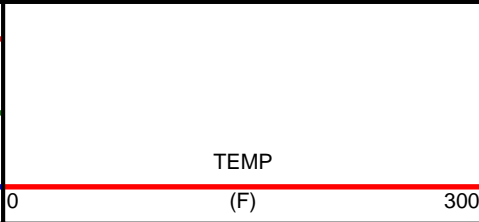
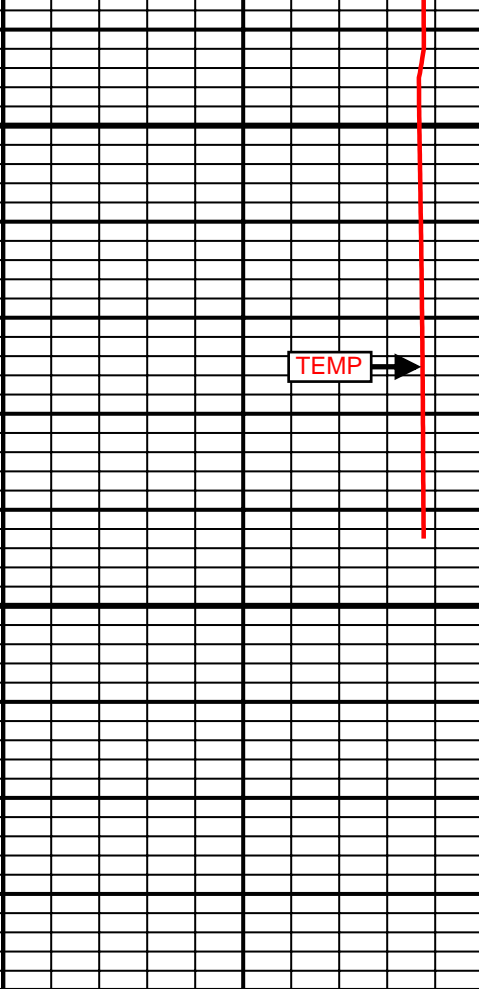
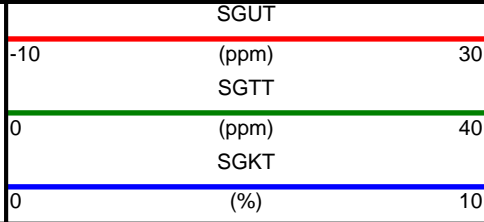
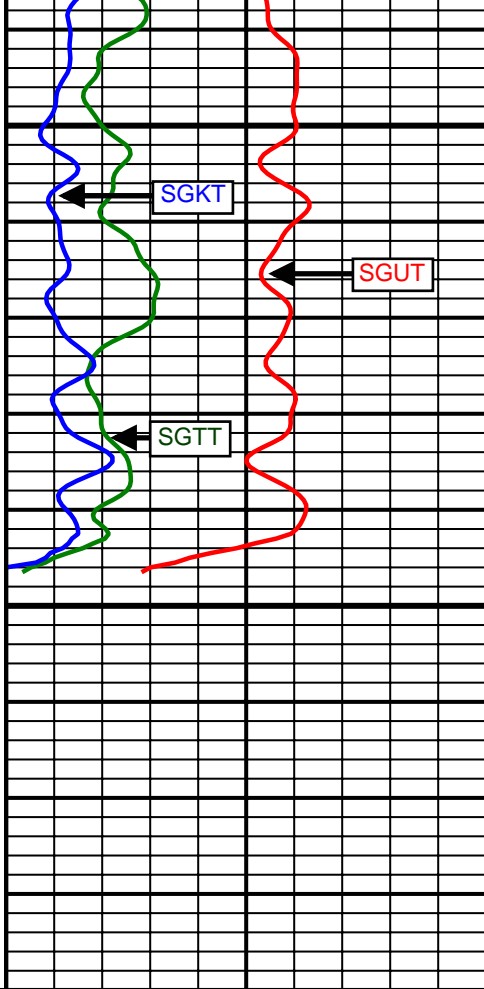
13800
MD





13900
MD

Comment
4-2



SURVEY						
Survey Calculation Method: Minimum Curvature						
Magnetic Reference	Target Direction	Total Magnetic Field	Magnetic Dip Angle	Magnetic Declination	Grid Convergence	Total Correction
True North	352.02 deg	52765 nT	66.79 deg	8.65 deg	0.00 deg	8.65 deg
Survey Tie-On	Depth	INC	AZ	TVD	NS	EW
	790.00 ft	0.17 deg	358.43 deg	789.99 ft	-1.17 ft	-3.18 ft

				Well Head		VSect (ft)	Dogleg (deg/100ft)
Depth (ft)	Inc (deg)	Azm (deg)	TVD (ft)	NS (ft)	EW (ft)		
952.00	0.10	292.84	951.99	-0.87	-3.32	-0.41	0.10
1043.00	2.60	279.27	1042.96	-0.51	-5.43	0.25	2.75
1135.00	4.60	276.12	1134.77	0.22	-11.16	1.76	2.18
1227.00	6.29	278.65	1226.35	1.37	-19.81	4.11	1.85
1318.00	8.28	278.21	1316.61	3.05	-31.22	7.36	2.19
1410.00	9.77	271.97	1407.47	4.27	-45.58	10.56	1.94
1503.00	10.83	272.91	1498.97	4.98	-62.19	13.57	1.15
1594.00	11.94	273.59	1588.18	6.01	-80.13	17.07	1.23
1686.00	14.05	271.76	1677.82	6.95	-100.79	20.87	2.34
1778.00	14.39	269.89	1767.00	7.27	-123.38	24.33	0.62
1870.00	12.84	266.89	1856.42	6.69	-145.02	26.76	1.85
1965.00	12.57	268.17	1949.09	5.79	-165.90	28.76	0.41
2060.00	12.63	270.01	2041.80	5.46	-186.62	31.31	0.43
2154.00	12.59	268.76	2133.54	5.24	-207.13	33.95	0.29
2249.00	12.10	268.01	2226.34	4.67	-227.44	36.20	0.54
2344.00	11.23	269.46	2319.38	4.24	-246.64	38.44	0.97
2439.00	11.50	274.26	2412.51	4.85	-265.33	41.64	1.04
2534.00	10.54	273.89	2505.76	6.15	-283.45	45.44	1.01
2628.00	9.13	274.07	2598.38	7.26	-299.46	48.76	1.50
2723.00	10.35	270.26	2692.01	7.83	-315.52	51.56	1.45
2818.00	10.73	267.01	2785.41	7.41	-332.88	53.55	0.74
2914.00	11.46	266.12	2879.61	6.30	-351.32	55.01	0.78
3008.00	12.55	268.20	2971.55	5.35	-370.85	56.78	1.25
3104.00	13.89	270.30	3065.01	5.08	-392.79	59.56	1.48
3198.00	15.16	272.04	3156.00	5.58	-416.36	63.32	1.43
3293.00	13.80	267.03	3247.99	5.43	-440.09	66.48	1.95
3388.00	13.15	267.58	3340.37	4.39	-462.21	68.51	0.70
3483.00	13.23	268.85	3432.87	3.71	-483.87	70.85	0.32
3578.00	13.88	269.52	3525.22	3.40	-506.13	73.63	0.70
3673.00	14.92	269.67	3617.23	3.23	-529.76	76.75	1.10
3768.00	15.52	272.08	3708.90	3.62	-554.69	80.60	0.92
3864.00	13.64	271.08	3801.81	4.30	-578.84	84.62	1.98
3959.00	13.78	277.20	3894.10	5.93	-601.27	89.35	1.53
4054.00	14.42	276.53	3986.24	8.70	-624.25	95.27	0.70
4149.00	15.90	275.69	4077.93	11.33	-648.95	101.31	1.57
4244.00	15.92	273.52	4169.29	13.42	-674.90	106.99	0.63
4339.00	14.92	271.64	4260.87	14.57	-700.13	111.63	1.18
4434.00	14.09	270.26	4352.85	14.97	-723.92	115.33	0.95
4529.00	14.71	269.41	4444.86	14.90	-747.55	118.54	0.69
4624.00	14.18	272.51	4536.86	15.29	-771.23	122.21	0.99
4718.00	14.58	271.84	4627.91	16.17	-794.56	126.32	0.46
4813.00	15.61	270.92	4719.63	16.76	-819.29	130.34	1.11

4908.00	15.56	271.14	4811.14	17.22	-844.81	134.34	0.08
5003.00	15.99	269.82	4902.56	17.43	-870.64	138.13	0.59
5098.00	14.50	269.88	4994.22	17.37	-895.62	141.53	1.57
5195.00	12.76	265.30	5088.49	16.46	-918.44	143.81	2.11
5289.00	12.94	268.69	5180.13	15.37	-939.31	145.62	0.82
5384.00	13.11	269.38	5272.69	15.01	-960.71	148.24	0.24
5480.00	11.44	270.06	5366.49	14.90	-981.12	150.97	1.75
5575.00	11.82	270.68	5459.54	15.03	-1000.27	153.75	0.42
5670.00	11.14	271.38	5552.64	15.37	-1019.18	156.71	0.73
5765.00	11.21	272.62	5645.84	16.01	-1037.58	159.90	0.26
5860.00	11.99	271.07	5738.90	16.62	-1056.67	163.15	0.88
5955.00	13.24	268.77	5831.60	16.57	-1077.41	165.98	1.42
6049.00	9.18	265.26	5923.79	15.72	-1095.65	167.67	4.38
6144.00	7.05	263.13	6017.83	14.39	-1108.99	168.21	2.26
6239.00	4.96	262.58	6112.31	13.16	-1118.86	168.36	2.20
6334.00	2.26	261.88	6207.11	12.37	-1124.78	168.40	2.84
6428.00	0.14	217.80	6301.08	12.02	-1126.69	168.32	2.30
6524.00	0.22	43.88	6397.08	12.06	-1126.63	168.35	0.37
6619.00	0.16	47.43	6492.08	12.28	-1126.41	168.54	0.06
6651.00	0.16	32.71	6524.08	12.35	-1126.35	168.59	0.13
6682.00	0.10	240.12	6555.08	12.37	-1126.35	168.62	0.82
6714.00	1.62	327.56	6587.08	12.74	-1126.62	169.02	5.06
6746.00	5.76	336.25	6619.01	14.59	-1127.51	170.98	13.02
6777.00	9.37	339.91	6649.73	18.38	-1129.00	174.94	11.74
6809.00	12.74	340.90	6681.13	24.17	-1131.05	180.95	10.55
6841.00	16.24	340.14	6712.11	31.71	-1133.73	188.80	10.95
6873.00	19.45	340.80	6742.57	40.95	-1137.00	198.40	10.05
6904.00	21.52	339.56	6771.61	51.16	-1140.68	209.02	6.82
6936.00	26.83	340.69	6800.79	63.48	-1145.13	221.84	16.66
6967.00	30.14	342.91	6828.03	77.53	-1149.73	236.39	11.21
6999.00	32.78	346.56	6855.33	93.63	-1154.10	252.95	10.17
7031.00	35.19	349.25	6881.86	111.12	-1157.84	270.79	8.88
7062.00	38.13	352.71	6906.73	129.40	-1160.72	289.28	11.59
7094.00	40.00	355.82	6931.58	149.46	-1162.72	309.43	8.46
7126.00	40.16	358.88	6956.06	170.03	-1163.67	329.94	6.18
7157.00	42.30	359.52	6979.38	190.46	-1163.96	350.21	7.04
7189.00	46.22	359.69	7002.29	212.79	-1164.11	372.34	12.26
7221.00	50.92	359.00	7023.46	236.77	-1164.39	396.13	14.78
7253.00	55.91	358.44	7042.53	262.45	-1164.97	421.64	15.66
7285.00	60.29	358.50	7059.43	289.61	-1165.69	448.63	13.69
7317.00	61.45	358.43	7075.01	317.55	-1166.44	476.41	3.63
7348.00	63.32	358.49	7089.38	345.00	-1167.18	503.70	6.03
7379.00	65.78	359.21	7102.70	372.99	-1167.74	531.49	8.21
7411.00	69.07	359.51	7114.98	402.53	-1168.07	560.79	10.32
7443.00	72.45	0.79	7125.52	432.74	-1167.98	590.70	11.22
7474.00	75.66	1.36	7134.04	462.54	-1167.42	620.13	10.50
7505.00	78.95	2.21	7140.85	492.76	-1166.48	649.93	10.94
7536.00	81.94	1.29	7146.00	523.31	-1165.55	680.05	10.08
7556.00	83.91	1.15	7148.46	543.15	-1165.13	699.65	9.87
7654.00	87.78	0.18	7155.56	640.87	-1163.99	796.26	4.07
7746.00	87.47	359.73	7159.37	732.79	-1164.07	887.30	0.59
7837.00	89.45	0.56	7161.82	823.75	-1163.84	977.35	2.36
7928.00	91.54	1.32	7161.03	914.73	-1162.34	1067.24	2.44
8020.00	92.04	1.69	7158.16	1006.65	-1159.93	1157.94	0.68
8112.00	92.16	1.69	7154.79	1098.55	-1157.22	1248.57	0.13
8204.00	90.43	1.60	7152.71	1190.49	-1154.58	1339.25	1.88
8295.00	89.51	0.67	7152.76	1281.47	-1152.77	1429.09	1.44
8387.00	89.57	0.40	7153.49	1373.46	-1151.91	1520.08	0.30
8479.00	89.81	0.31	7153.99	1465.46	-1151.34	1611.10	0.28
8571.00	90.74	0.71	7153.55	1557.45	-1150.53	1702.09	1.10
8662.00	88.68	359.48	7154.01	1648.44	-1150.38	1792.18	2.64

8754.00	88.28	359.30	7156.45	1740.40	-1151.35	1883.39	0.48
8846.00	87.65	358.70	7159.72	1832.33	-1152.96	1974.65	0.95
8938.00	89.29	359.13	7162.17	1924.28	-1154.70	2065.95	1.84
9033.00	90.44	0.54	7162.40	2019.27	-1154.97	2160.06	1.92
9128.00	89.03	0.54	7162.84	2114.27	-1154.08	2254.01	1.48
9223.00	90.00	1.03	7163.64	2209.25	-1152.78	2347.90	1.14
9317.00	89.38	0.31	7164.15	2303.24	-1151.68	2440.83	1.01
9412.00	89.63	1.11	7164.97	2398.23	-1150.50	2534.73	0.88
9508.00	89.38	0.02	7165.80	2494.22	-1149.55	2629.66	1.16
9603.00	90.12	0.92	7166.21	2589.22	-1148.77	2723.63	1.23
9698.00	90.49	1.95	7165.71	2684.18	-1146.40	2817.34	1.15
9794.00	89.51	1.09	7165.71	2780.15	-1143.85	2912.02	1.36
9888.00	90.18	1.83	7165.96	2874.12	-1141.45	3004.75	1.06
9984.00	89.82	1.42	7165.96	2970.08	-1138.73	3099.40	0.57
10078.00	90.74	2.66	7165.50	3064.01	-1135.39	3191.97	1.64
10173.00	91.50	2.13	7163.65	3158.91	-1131.42	3285.39	0.98
10269.00	90.99	1.72	7161.56	3254.83	-1128.19	3379.94	0.68
10364.00	90.37	1.09	7160.43	3349.80	-1125.86	3473.66	0.93
10458.00	90.56	1.54	7159.67	3443.77	-1123.71	3566.42	0.52
10553.00	90.12	1.45	7159.11	3538.74	-1121.23	3660.13	0.47
10648.00	90.37	1.61	7158.70	3633.70	-1118.69	3753.82	0.31
10743.00	89.32	0.46	7158.96	3728.68	-1116.98	3847.64	1.64
10838.00	91.97	2.42	7157.89	3823.63	-1114.59	3941.34	3.47
10933.00	92.41	2.16	7154.26	3918.49	-1110.80	4034.75	0.54
11029.00	92.47	1.86	7150.17	4014.34	-1107.43	4129.21	0.32
11124.00	91.48	2.58	7146.90	4109.21	-1103.75	4222.65	1.29
11219.00	89.51	3.64	7146.08	4204.06	-1098.60	4315.87	2.35
11315.00	89.26	2.76	7147.11	4299.91	-1093.24	4410.04	0.95
11410.00	90.86	2.68	7147.01	4394.80	-1088.73	4503.39	1.69
11505.00	90.93	3.75	7145.52	4489.63	-1083.41	4596.57	1.13
11600.00	91.05	5.00	7143.88	4584.34	-1076.16	4689.35	1.32
11695.00	90.06	5.81	7142.96	4678.91	-1067.21	4781.76	1.35
11789.00	88.64	7.04	7144.03	4772.31	-1056.70	4872.80	2.00
11884.00	88.58	6.39	7146.33	4866.63	-1045.59	4964.66	0.69
11978.00	88.40	6.00	7148.81	4960.05	-1035.45	5055.77	0.46
12073.00	87.88	6.01	7151.89	5054.48	-1025.52	5147.90	0.55
12168.00	88.52	3.52	7154.88	5149.10	-1017.63	5240.51	2.70
12262.00	90.37	3.33	7155.79	5242.92	-1012.01	5332.65	1.98
12358.00	90.31	2.85	7155.22	5338.78	-1006.84	5426.86	0.50
12453.00	90.00	2.90	7154.96	5433.66	-1002.08	5520.16	0.33
12548.00	90.53	2.83	7154.52	5528.54	-997.33	5613.46	0.56
12643.00	90.00	1.88	7154.08	5623.45	-993.42	5706.91	1.15
12738.00	90.19	1.05	7153.93	5718.42	-990.99	5800.63	0.90
12833.00	89.75	0.86	7153.97	5813.41	-989.41	5894.47	0.50
12928.00	89.57	0.61	7154.54	5908.40	-988.19	5988.37	0.32
13023.00	88.71	359.57	7155.96	6003.39	-988.04	6082.42	1.42
13119.00	89.32	1.67	7157.62	6099.36	-987.00	6177.32	2.28
13214.00	89.14	1.39	7158.89	6194.32	-984.47	6271.01	0.35
13308.00	90.06	1.14	7159.55	6288.29	-982.39	6363.78	1.01
13402.00	89.75	1.29	7159.70	6382.27	-980.40	6456.57	0.37
13498.00	89.51	1.16	7160.32	6478.25	-978.35	6551.34	0.28
13593.00	90.55	359.64	7160.27	6573.24	-977.68	6645.32	1.94
13688.00	90.31	359.49	7159.56	6668.23	-978.41	6739.49	0.30
13783.00	89.69	358.35	7159.56	6763.22	-980.20	6833.80	1.37
13878.00	89.38	359.73	7160.33	6858.20	-981.79	6928.09	1.49
13928.00	88.95	359.38	7161.06	6908.19	-982.18	6977.65	1.11
Projected to Total Depth:							
13982.00	88.95	359.38	7162.05	6962.18	-982.76	7031.19	0.00

Weatherford M/LWD surveys from 952.00 MD to 13928.00 MD.

TD at 13982.00 MD.

The total correction is 8.65 deg. realative to True North.



Weatherford®

Final Print

COMPANY	<u>Anadarko</u>
WELL	<u>Nichols 29N-5HZ</u>
FIELD	<u>Wattenberg</u>
RIG	<u>H&P 307</u>
LOC.	<u>Colorado</u>
COUNTY	<u>Weld</u>