



Weatherford®

4 3/4 in. WeatherfordM/LWDT™
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
Other Services: Directional and Temperature	

Mag Decl: 8.60°
Mag Dip: 66.74°

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: 6602 ft	Runs: 4
Date Logged: 19-Mar-13 to 2-Apr-05	Spud Date: 17-Mar-13

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	
Sensor to Bit Offsets / Acquisition Rates					
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
Other Information					
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

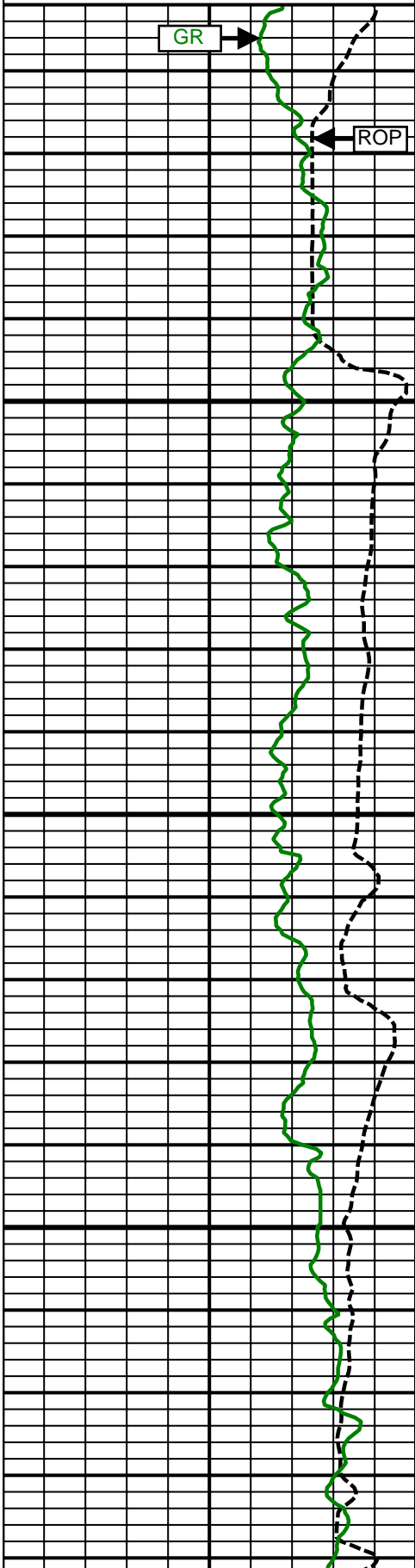
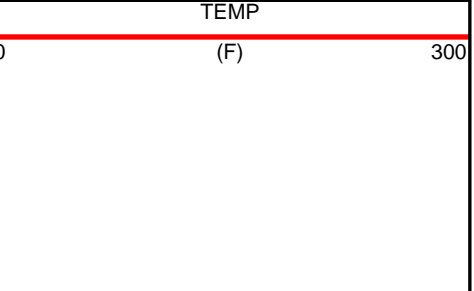
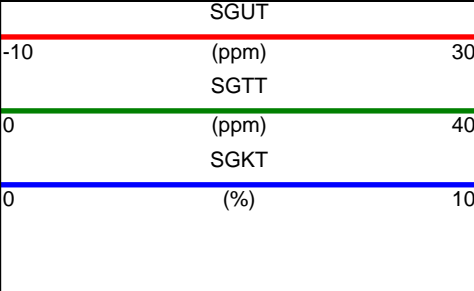
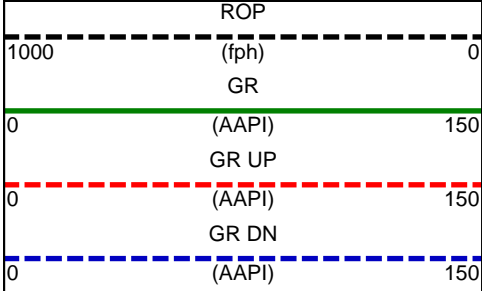
Date and Time	Run	Bit Depth	Mud Weight	% K	Rm @ Temp	Rmf @ Temp	Rmc @ Temp	BHCT
19 Mar 13 @ 00:30	01	5878 ft	8.60 ppg	0	N/A	N/A	N/A	136 F
21 Mar 13 @ 00:30	02	7460 ft	9.90 ppg	0	N/A	N/A	N/A	164 F
27 Mar 13 @ 00:30	03	9800 ft	9.60 ppg	0	OBM	OBM	OBM	235 F
02 Apr 13 @ 03:00	04	17129 ft	10.50 ppg	0	OBM	OBM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

MWD RUN REMARKS			
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

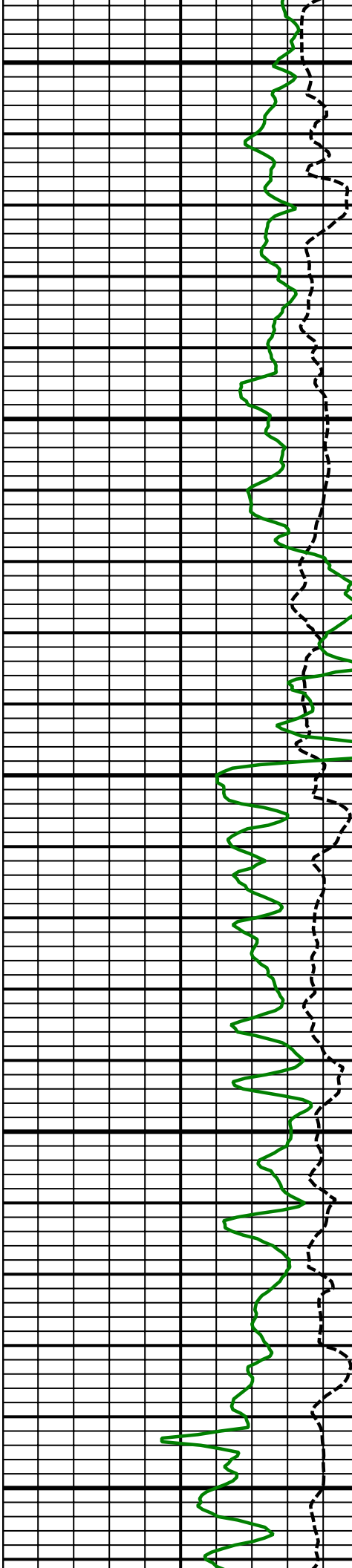
5 Inch - Measured Depth



MD

Comment
2-1

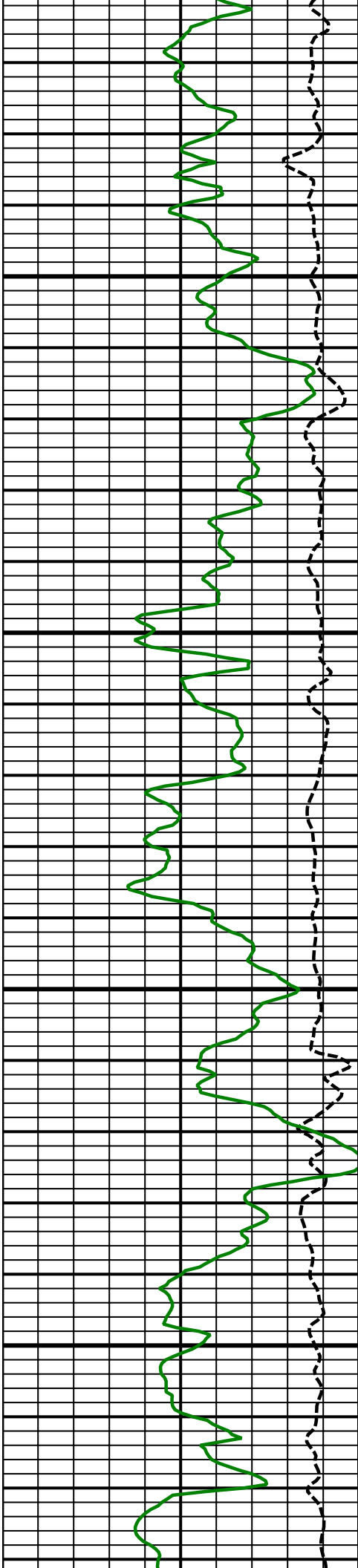
6700
MD



6800
MD

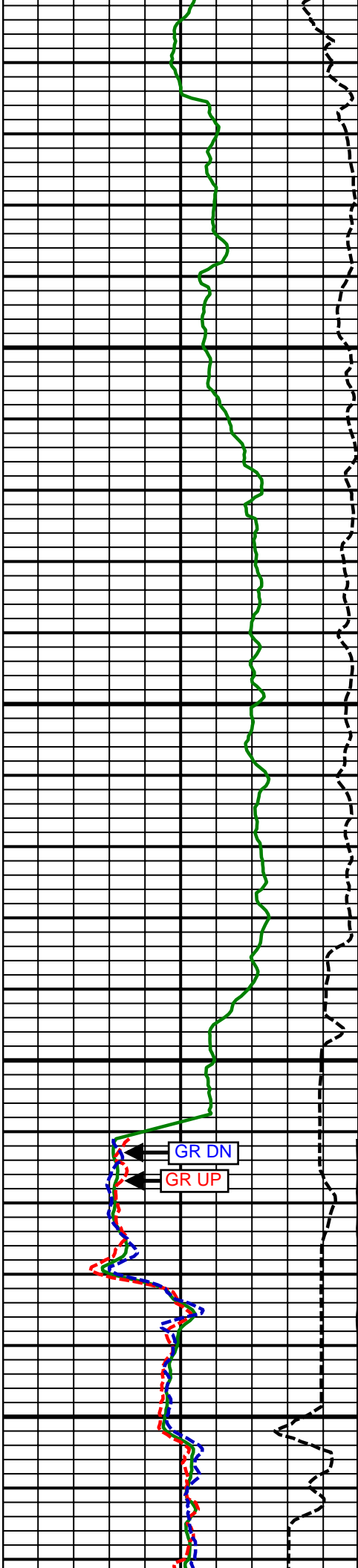
6900
MD

7000
MD



7100
MD

7200
MD



7500
MD

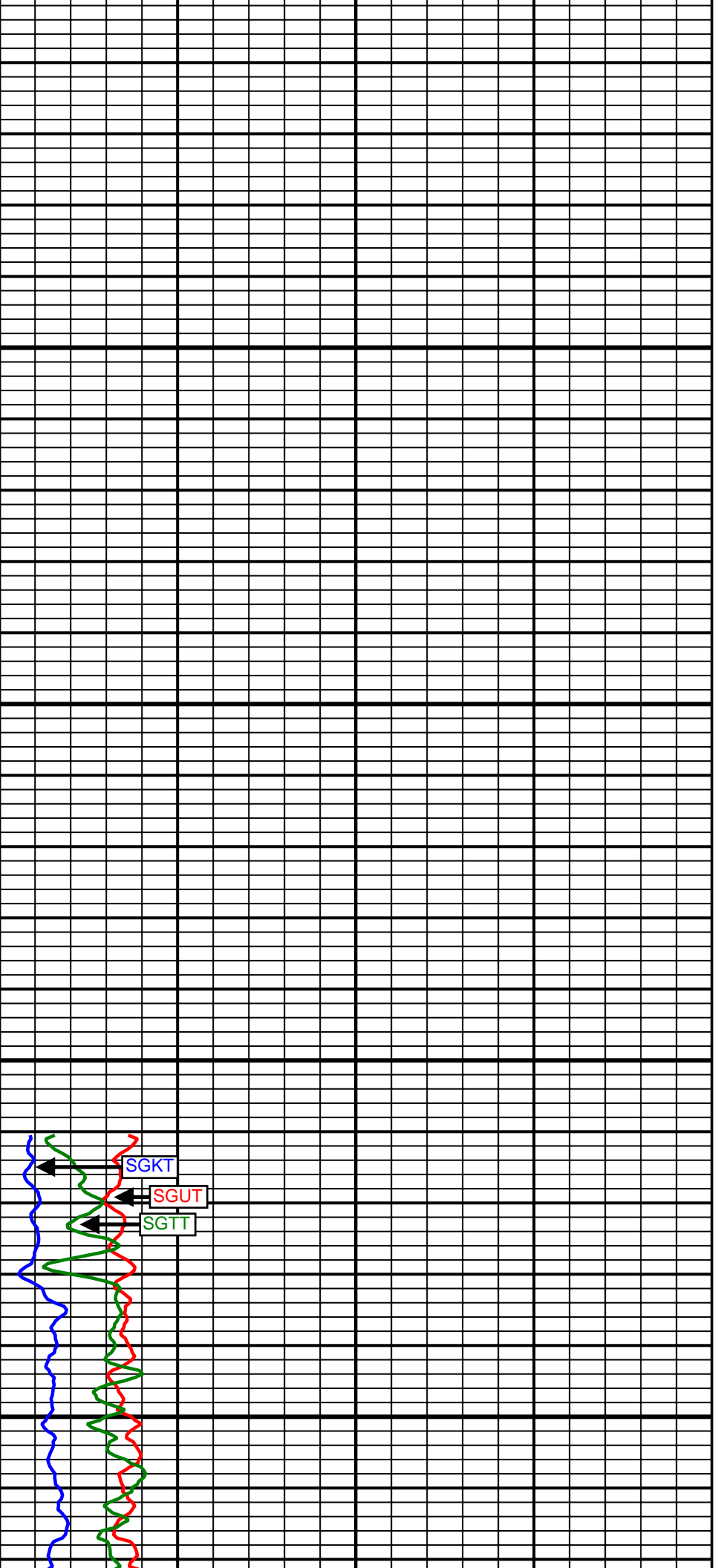
7600
MD

GR DN

GR UP

Comment
2-2

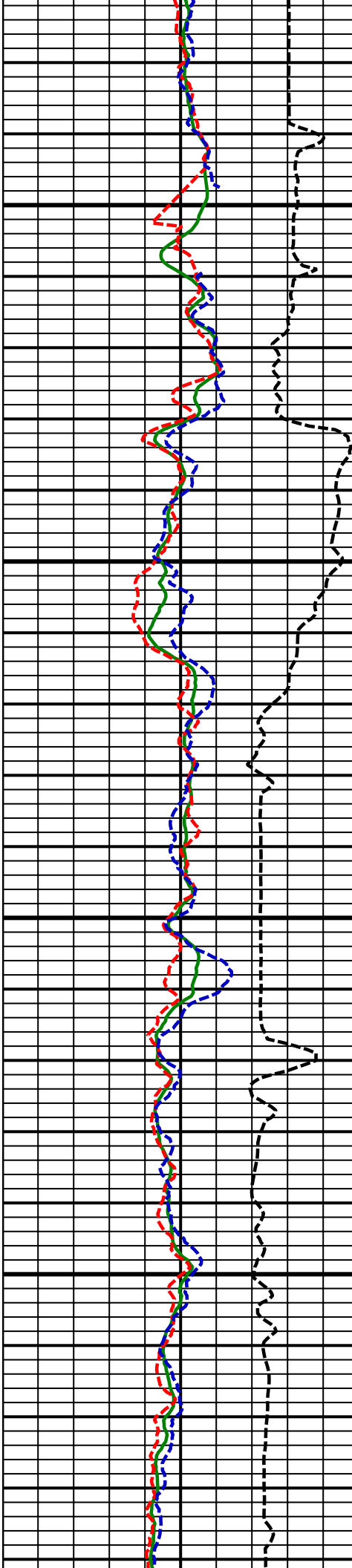
Comment
3-1



SGKT

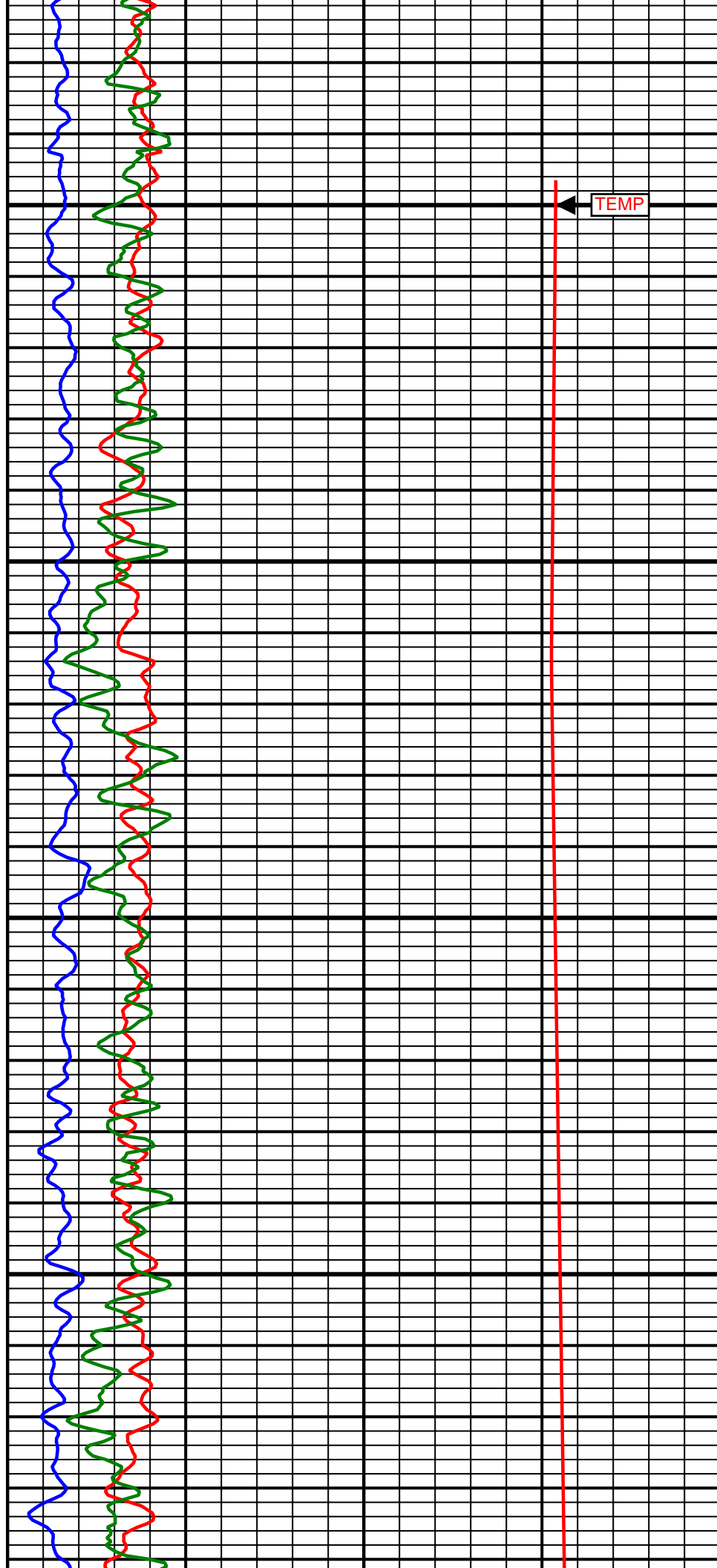
SGUT

SGTT

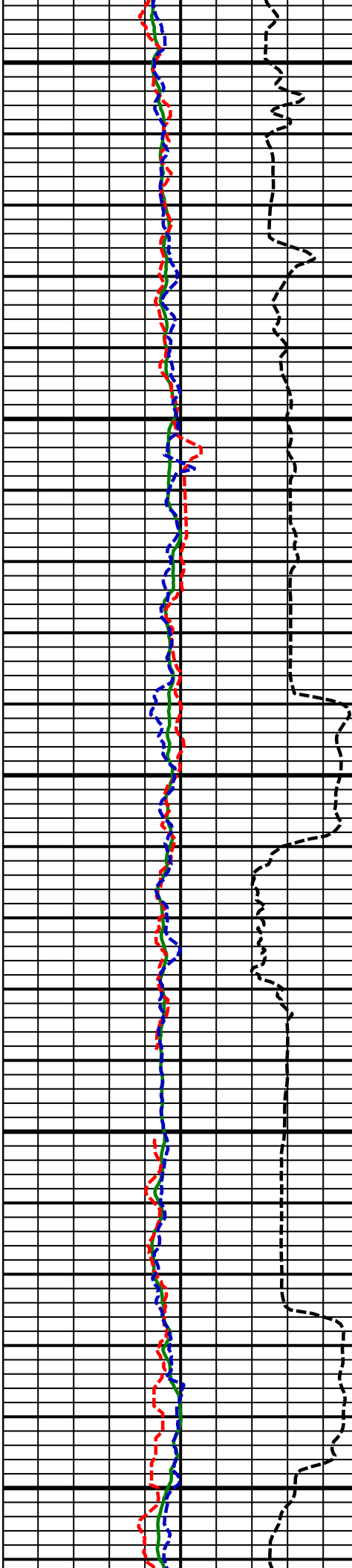


7700
MD

7800
MD



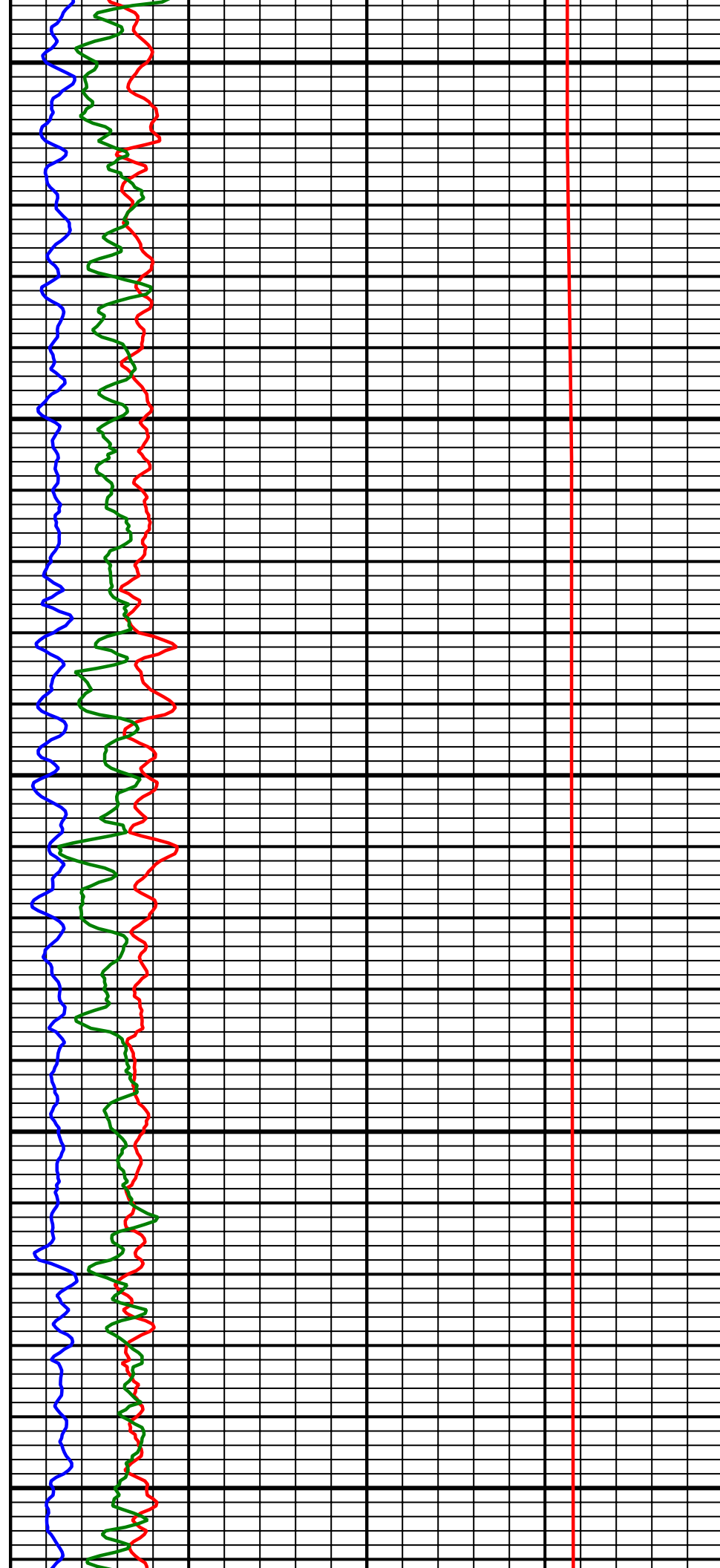
TEMP

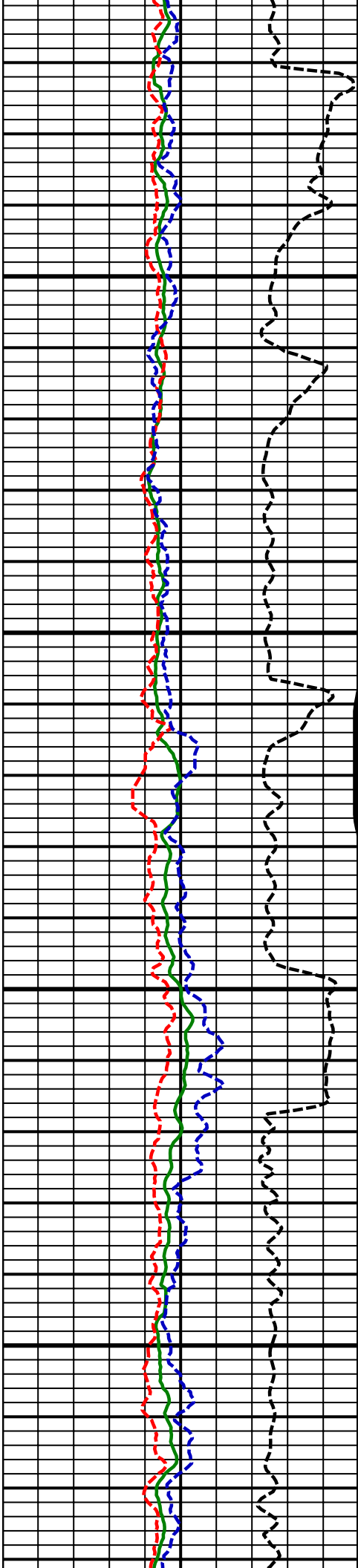


7900
MD

8000
MD

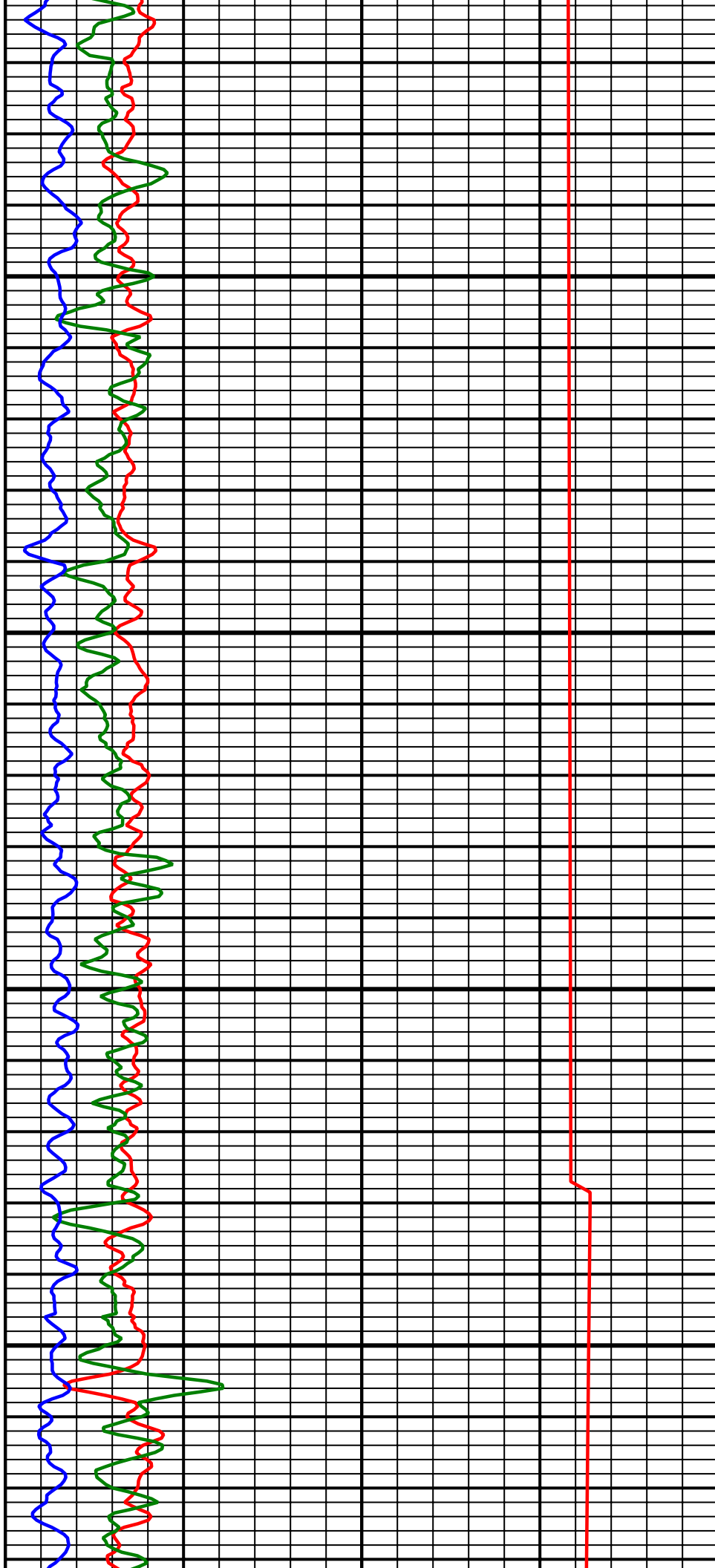
8100
MD

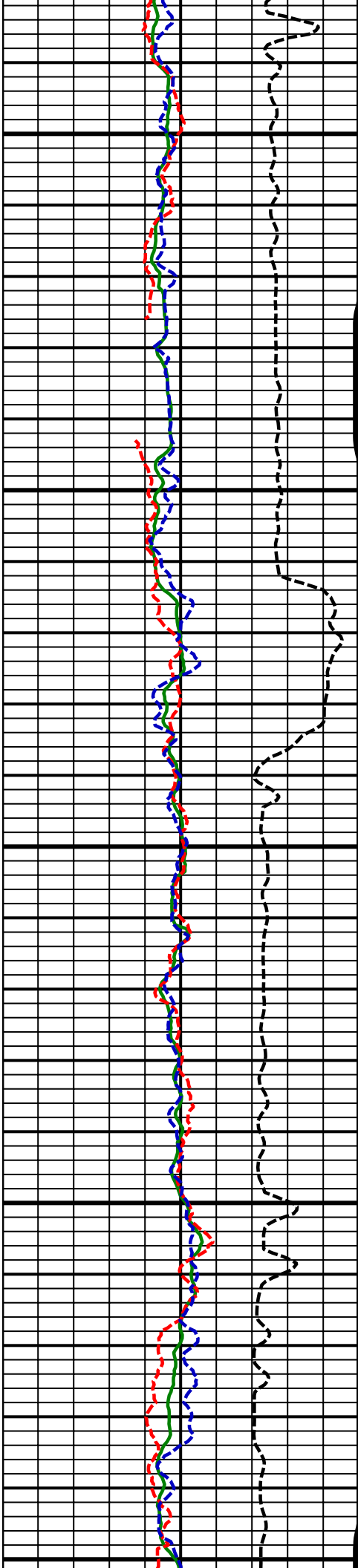




8200
MD

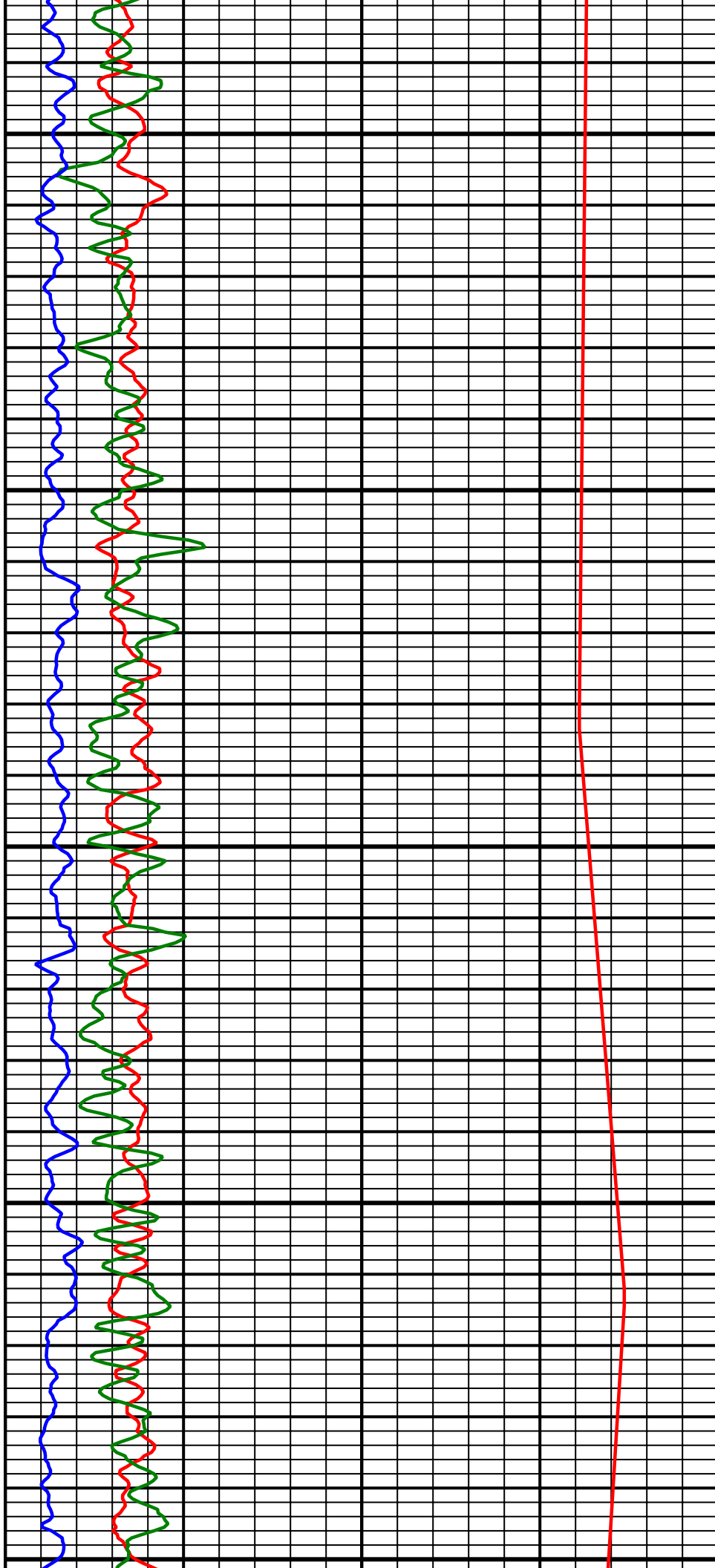
8300
MD

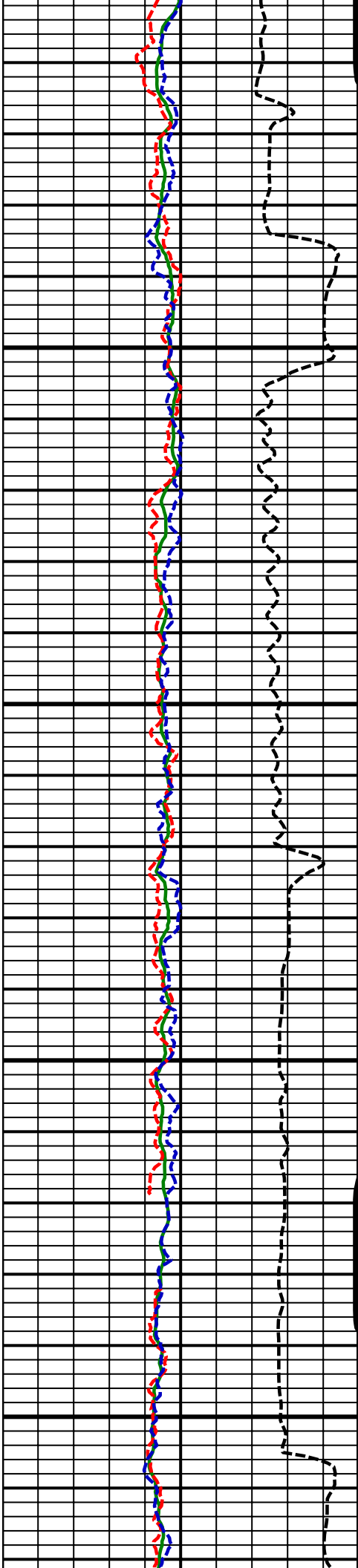




8400
MD

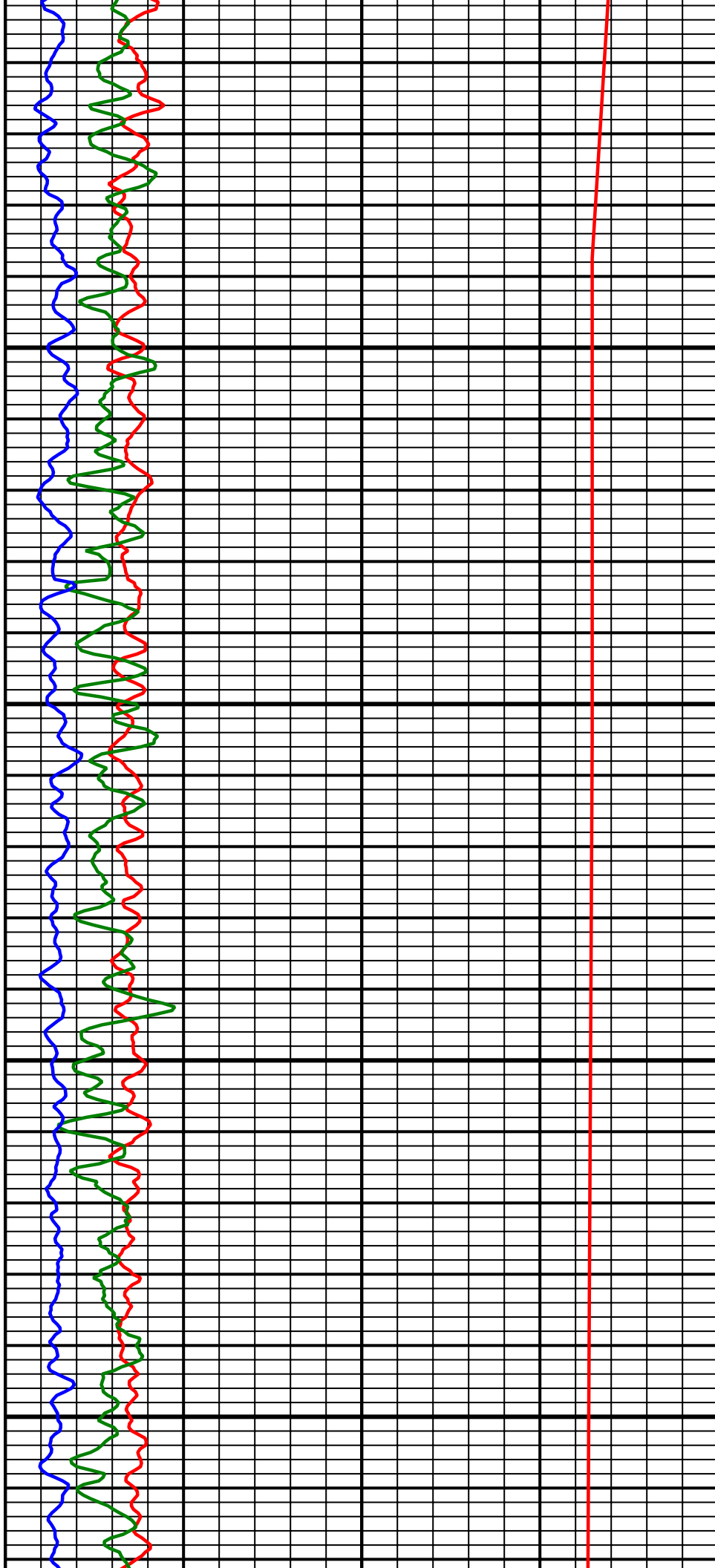
8500
MD

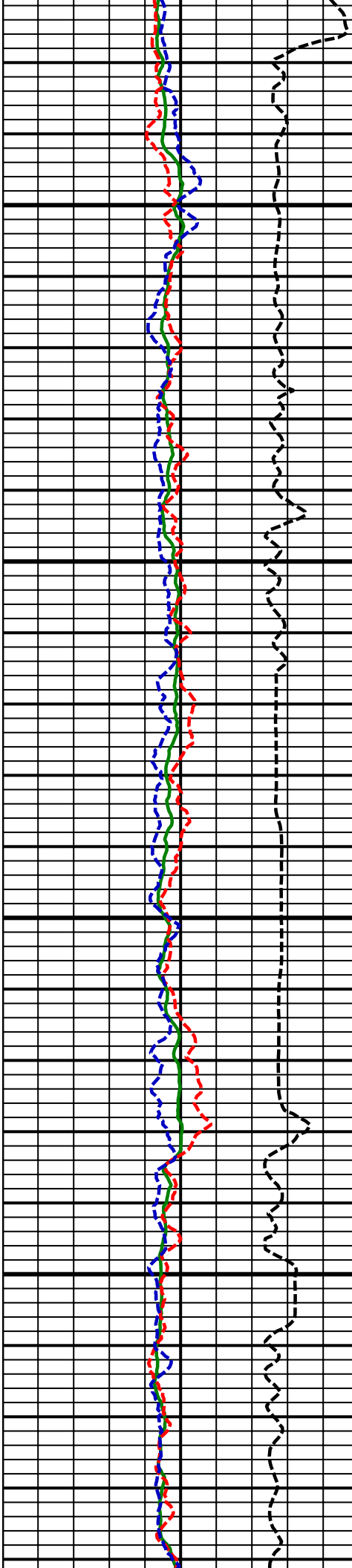




8600
MD

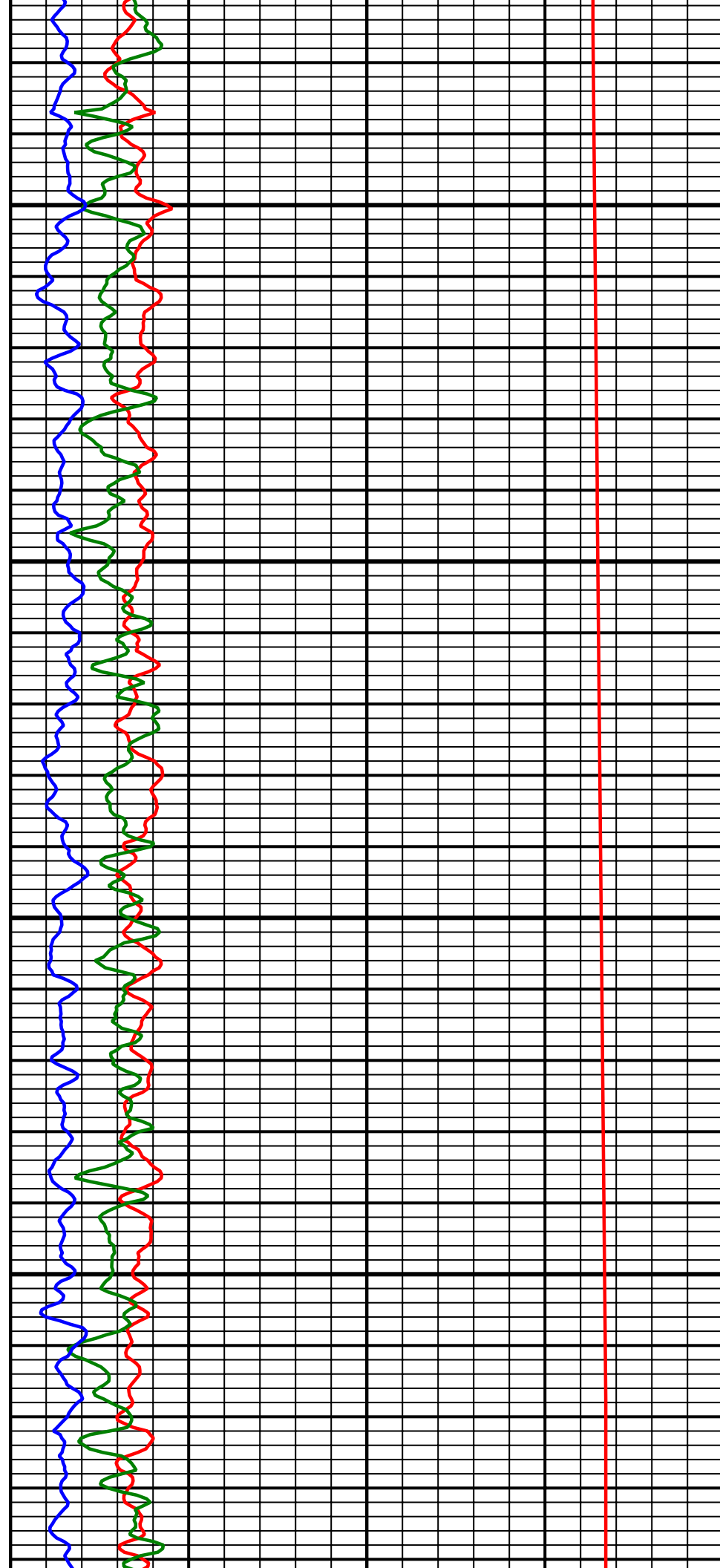
8700
MD

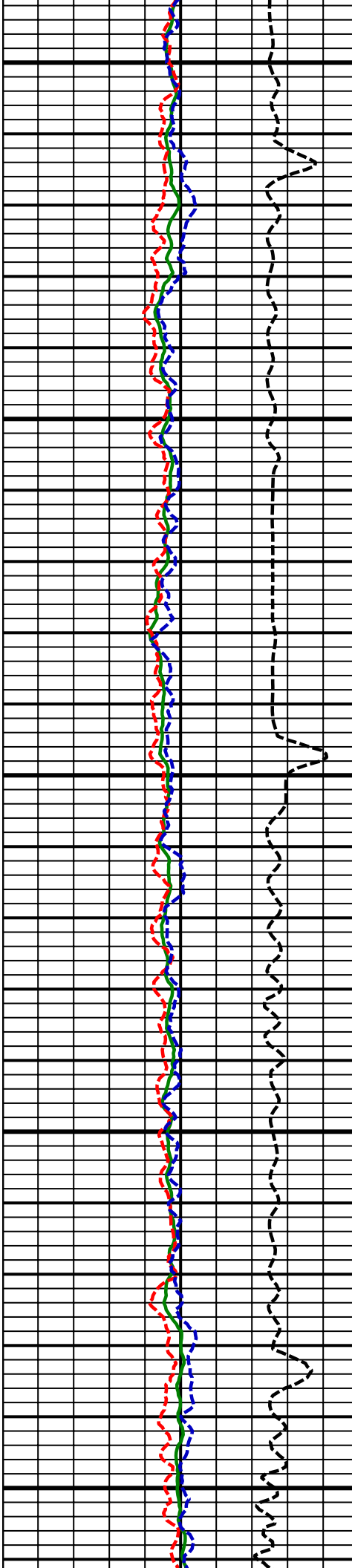




8800
MD

8900
MD

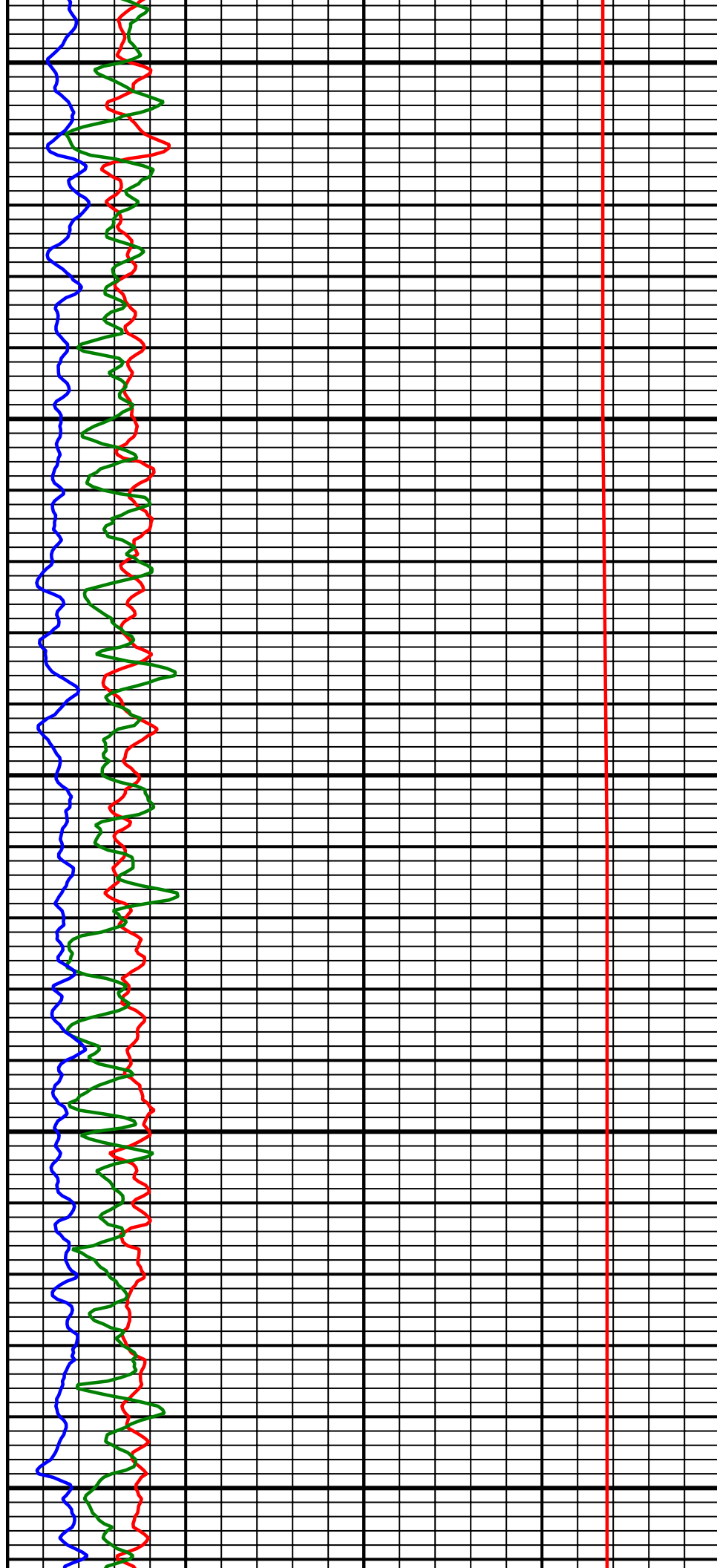


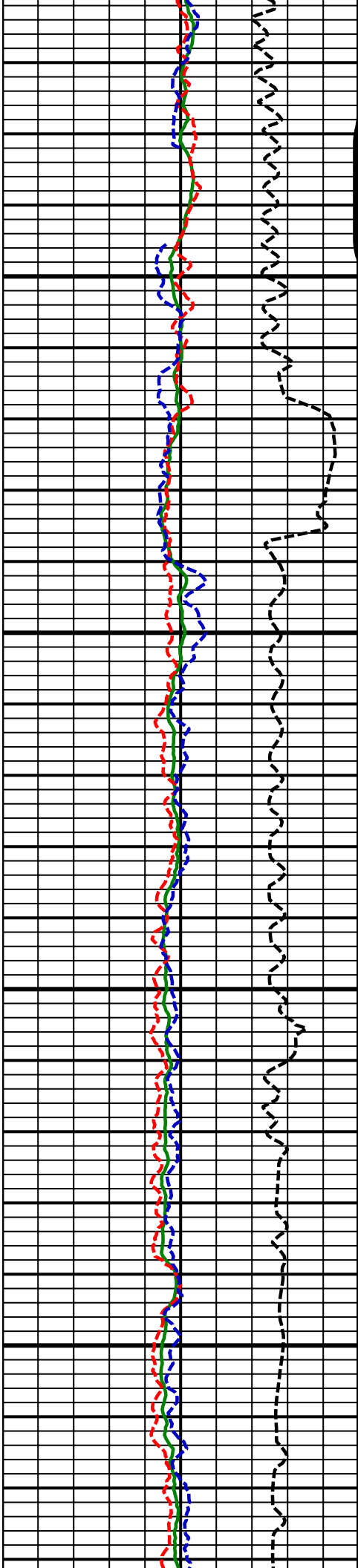


9000
MD

9100
MD

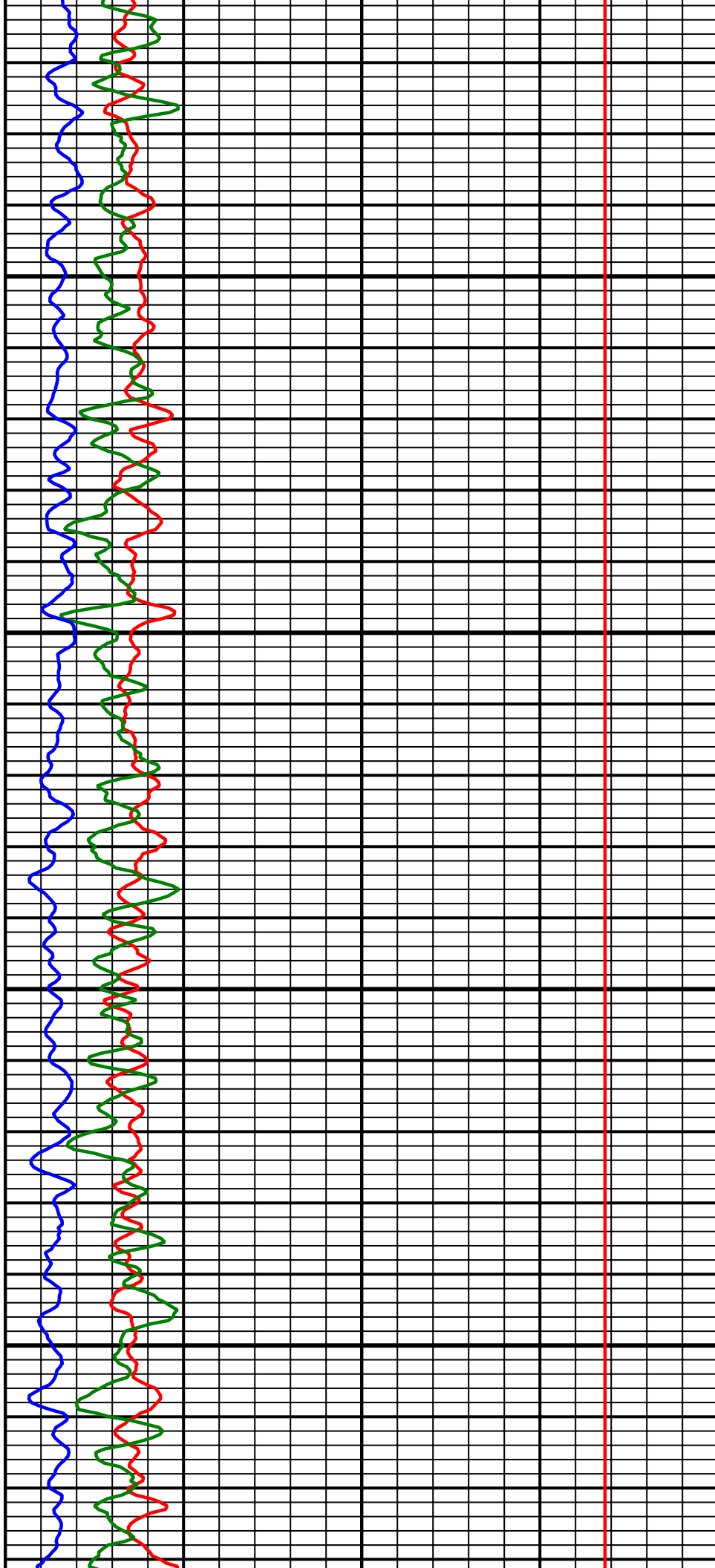
9200
MD

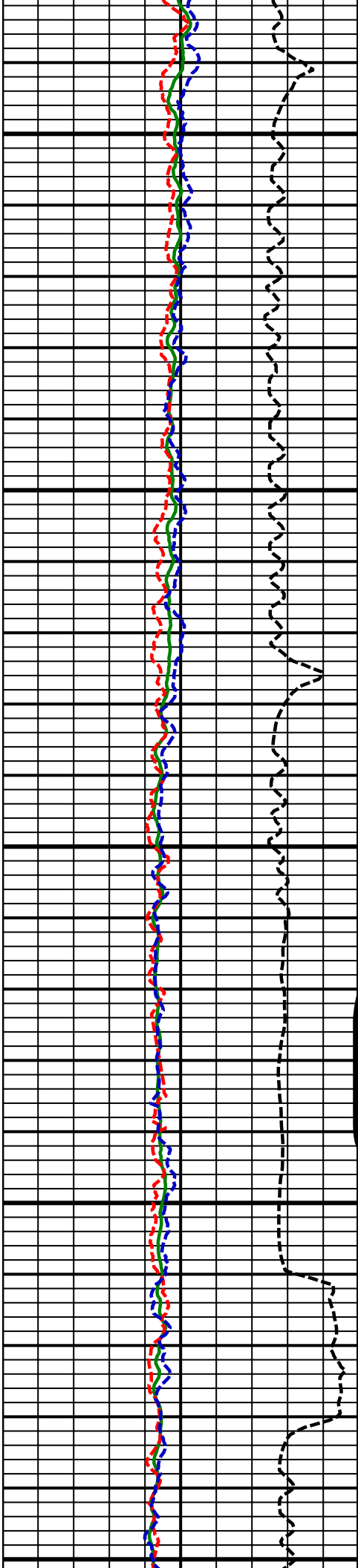




9300
MD

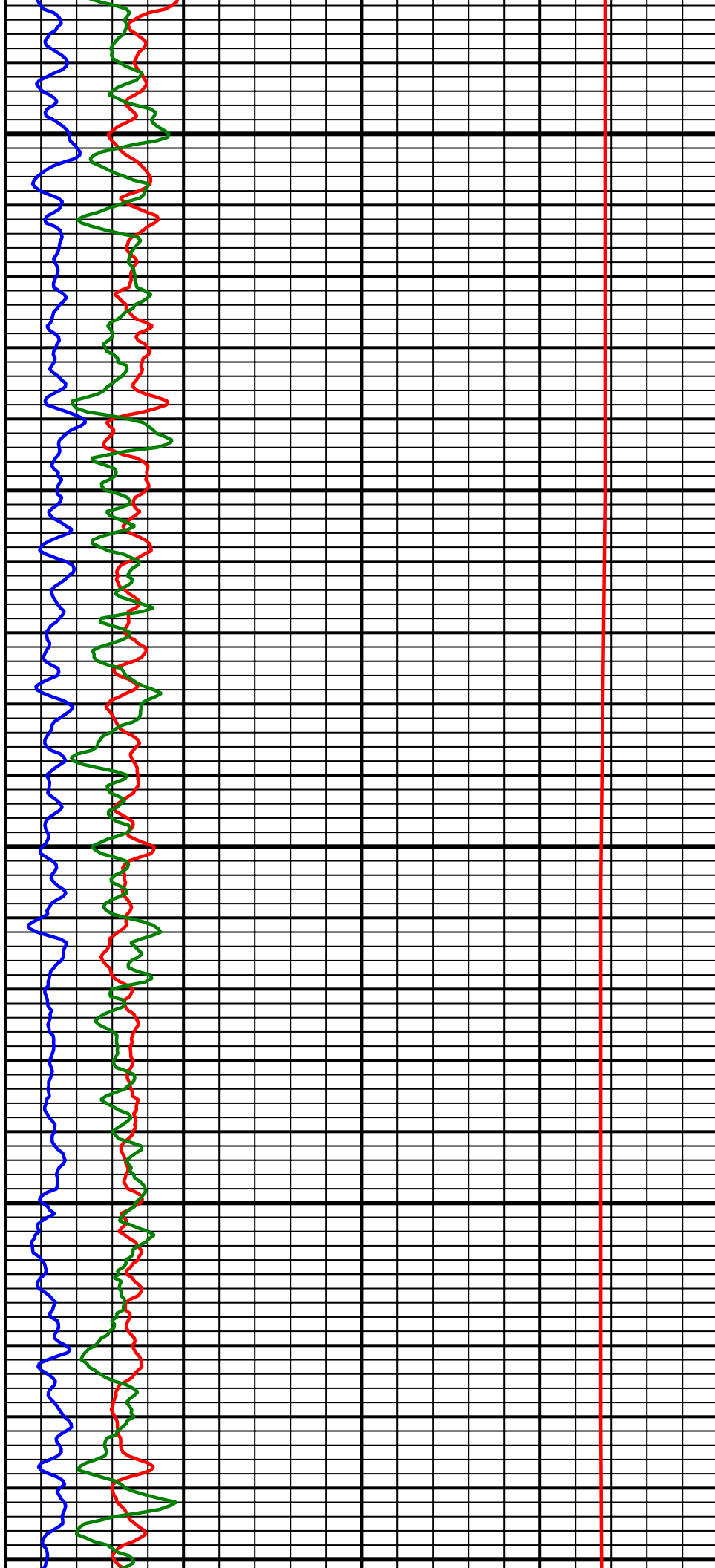
9400
MD

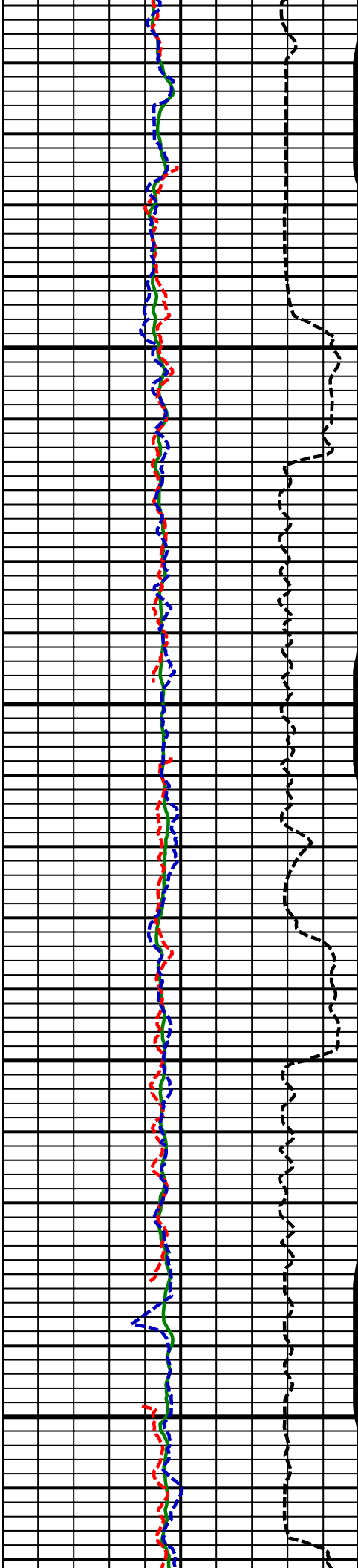




9500
MD

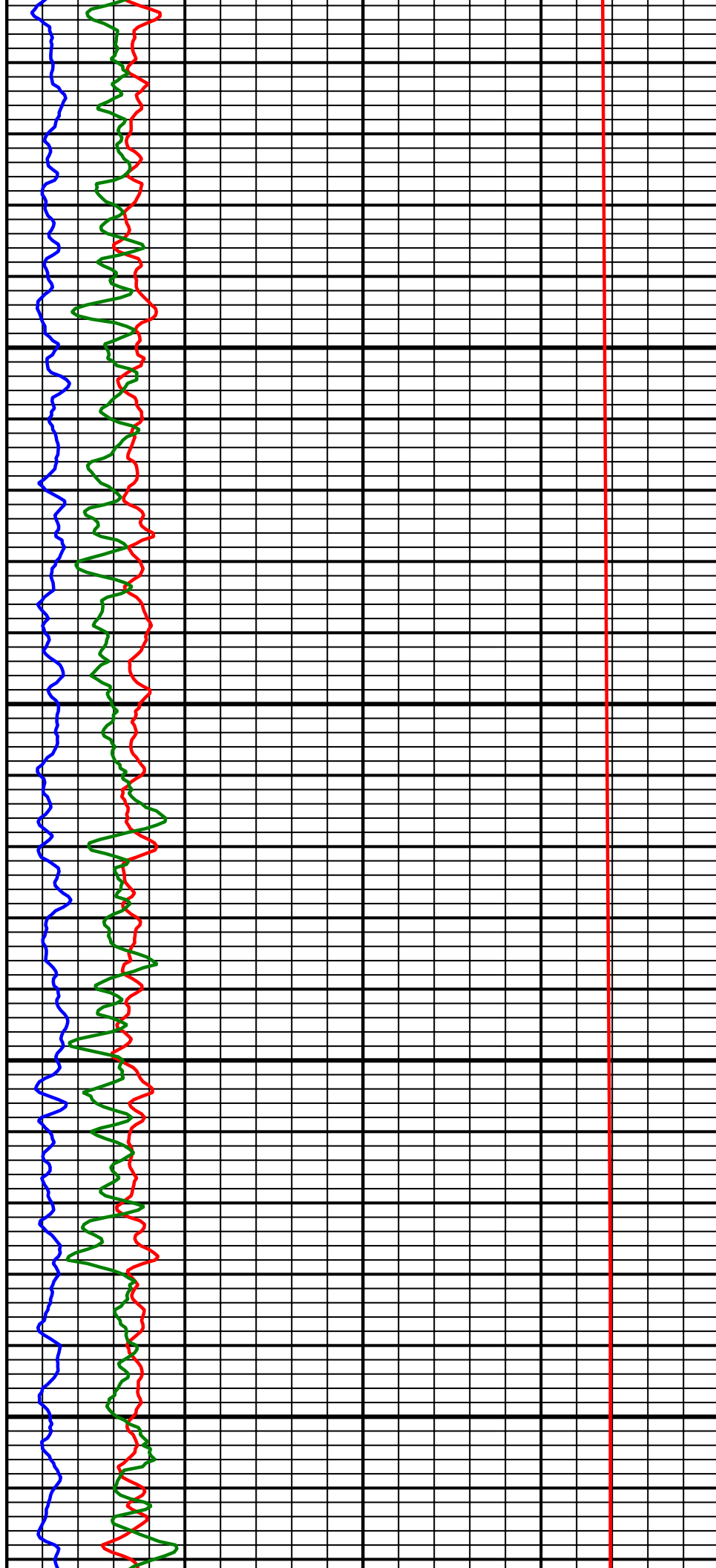
9600
MD

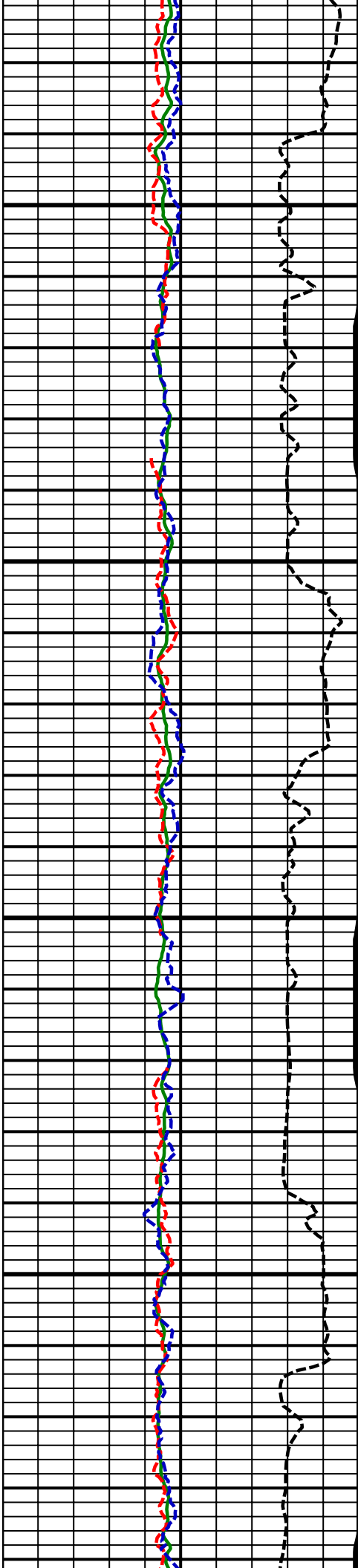




9700
MD

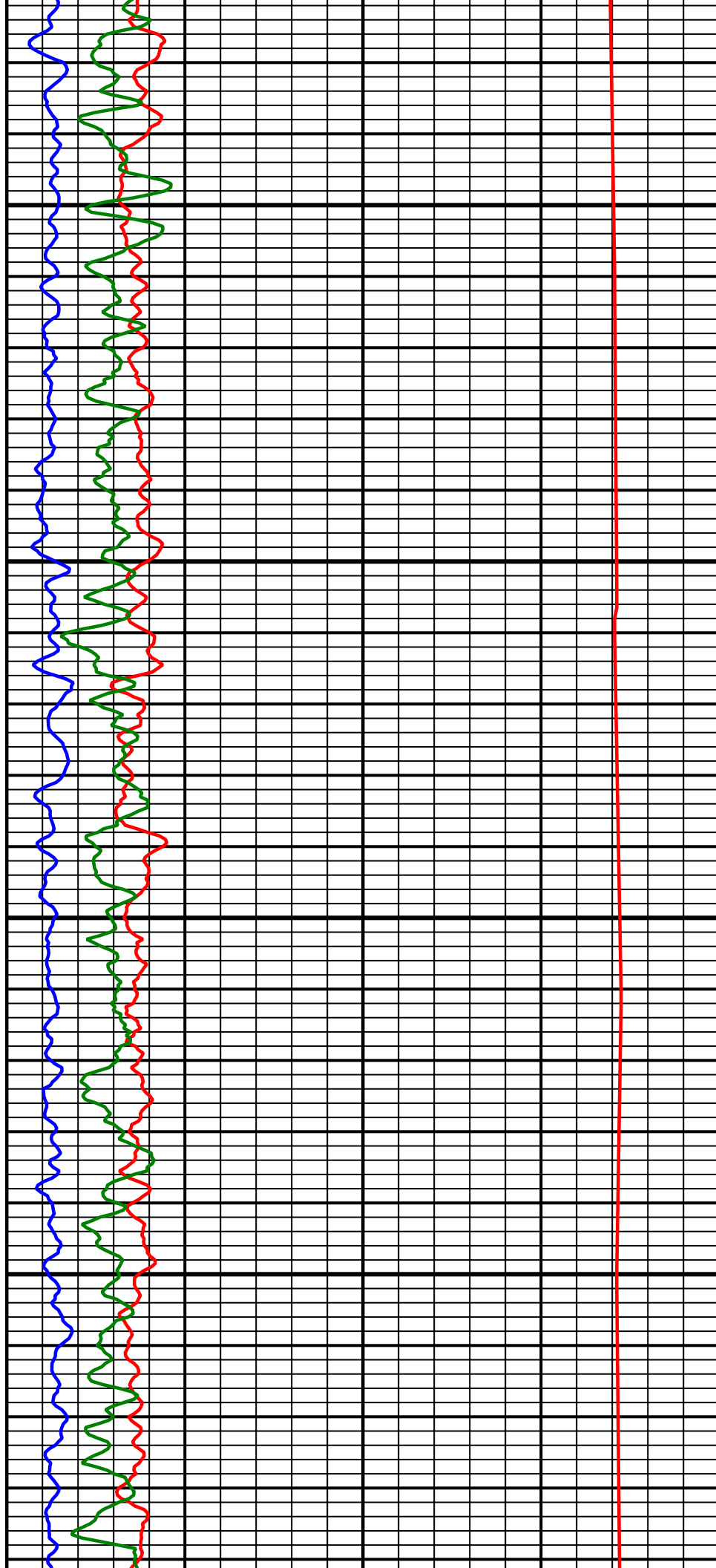
9800
MD

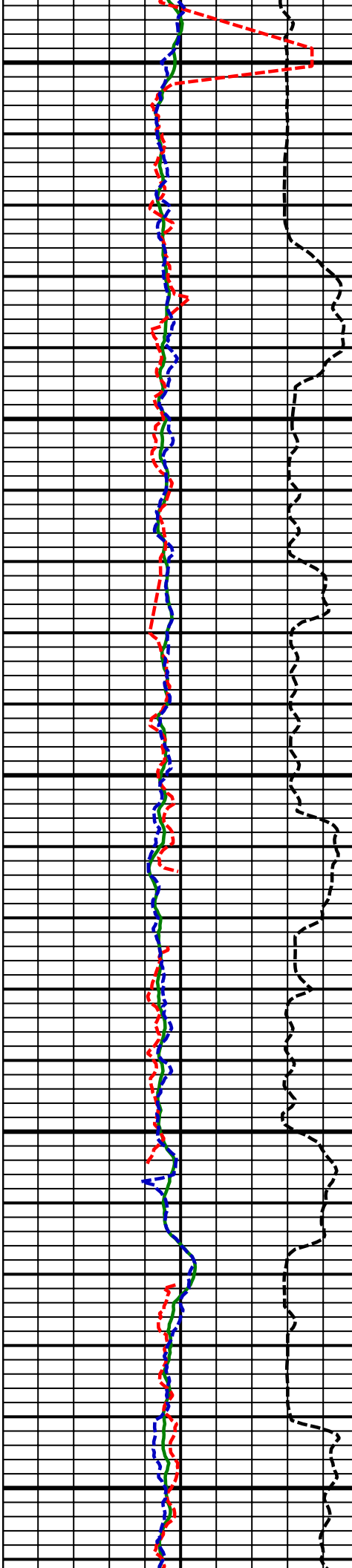




9900
MD

10000
MD

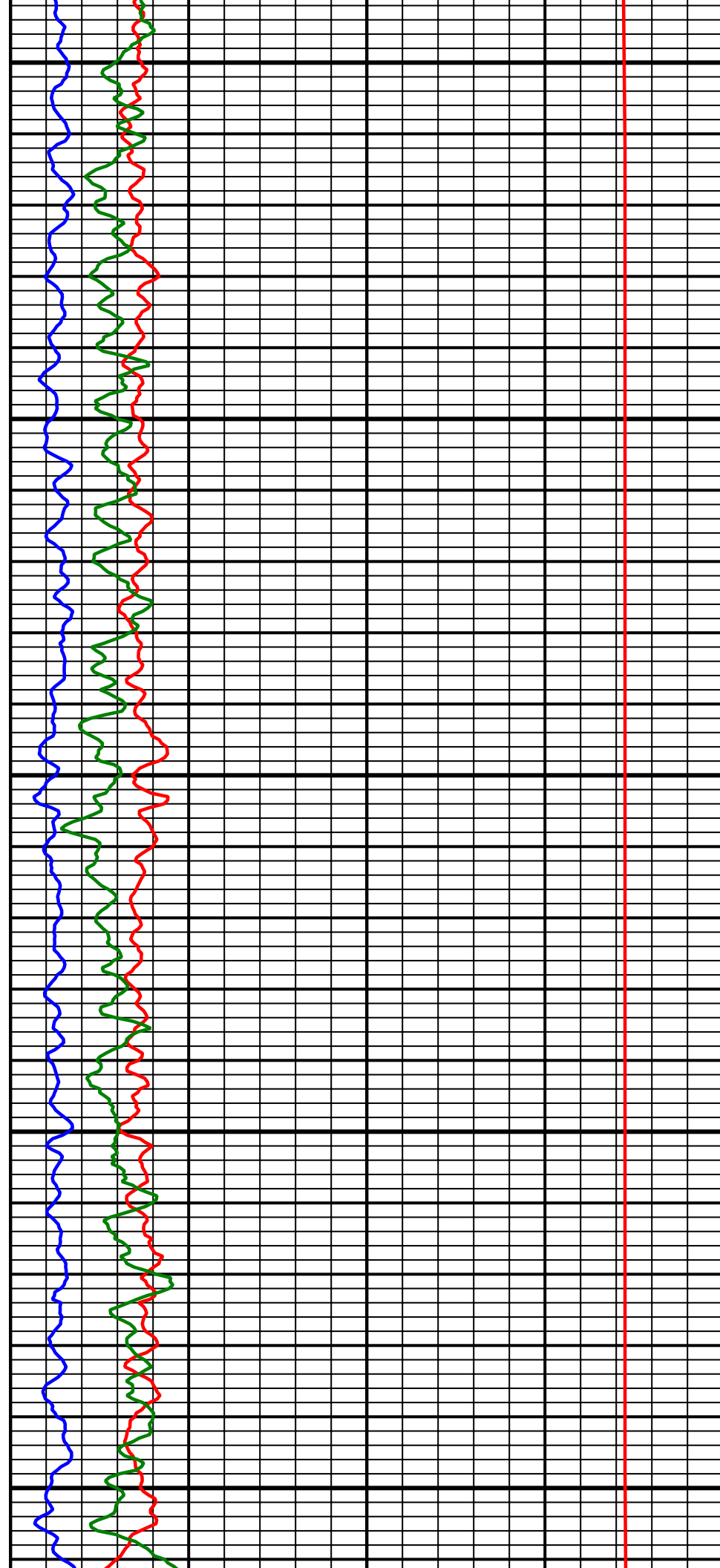


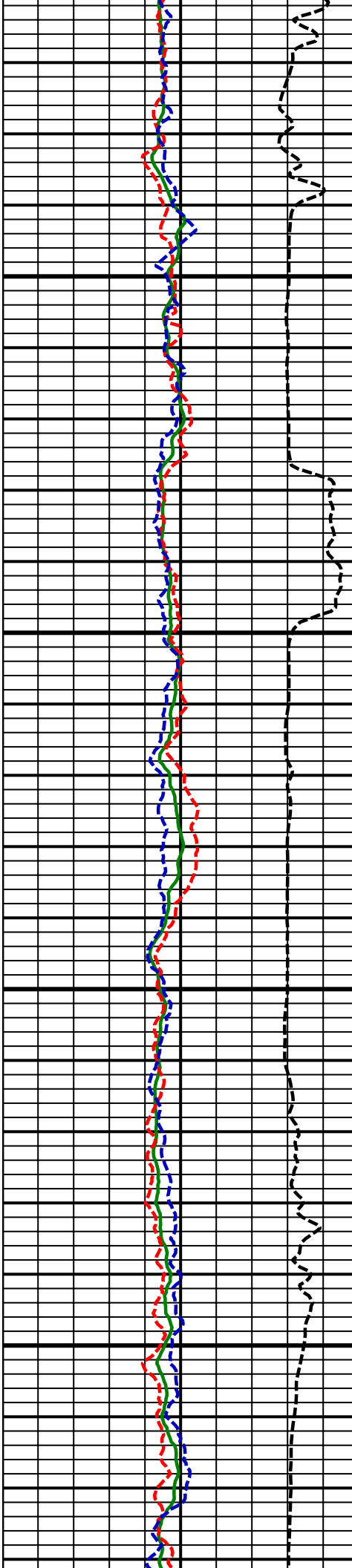


10100
MD

10200
MD

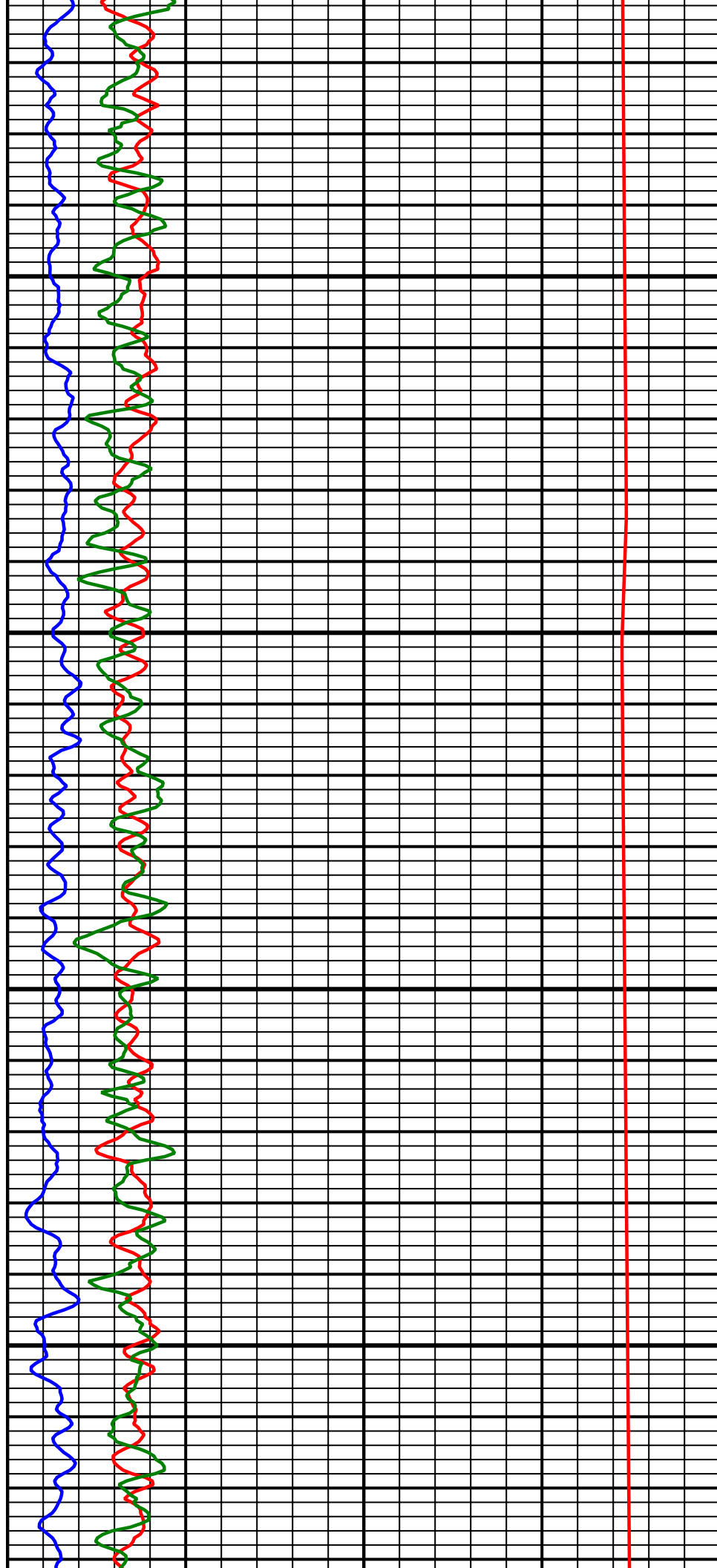
10300
MD

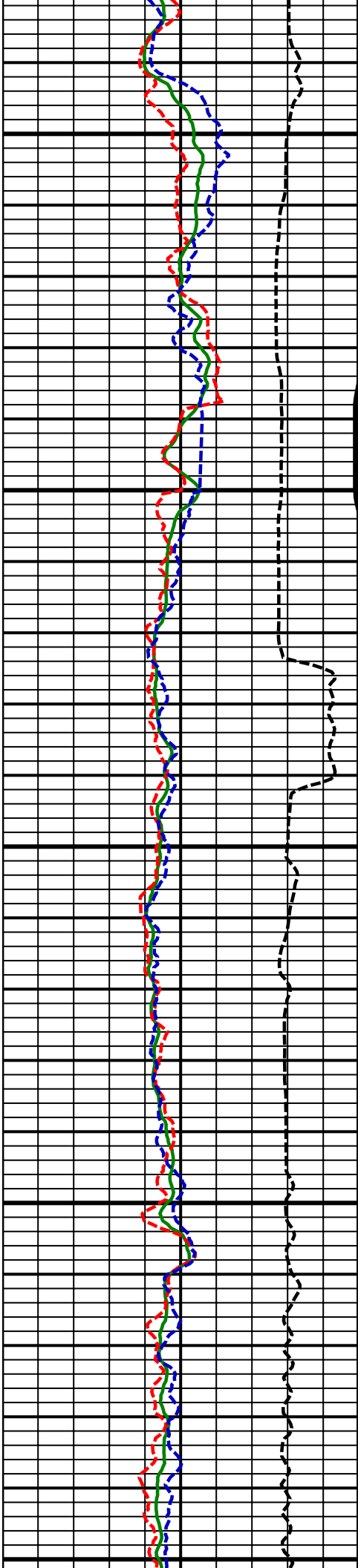




10400
MD

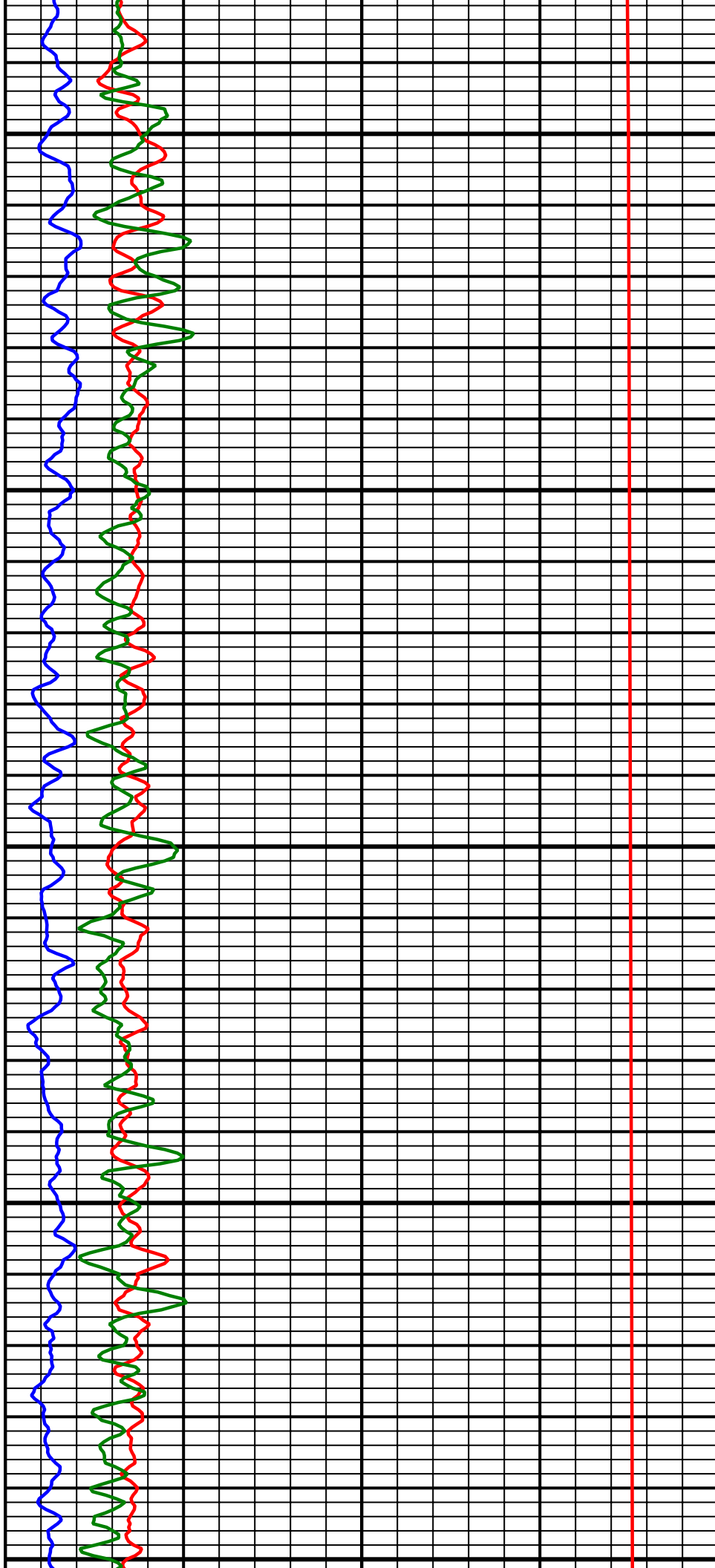
10500
MD

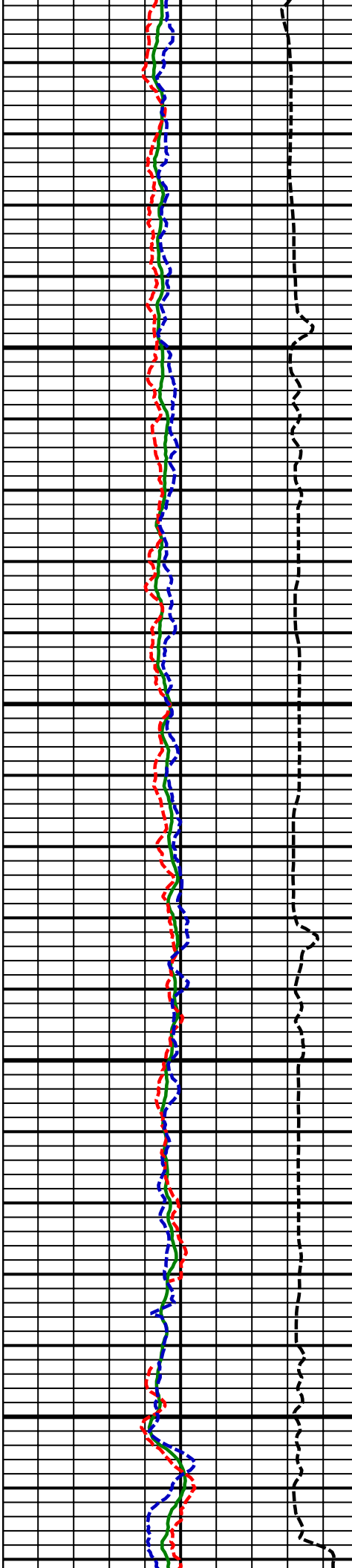




10600
MD

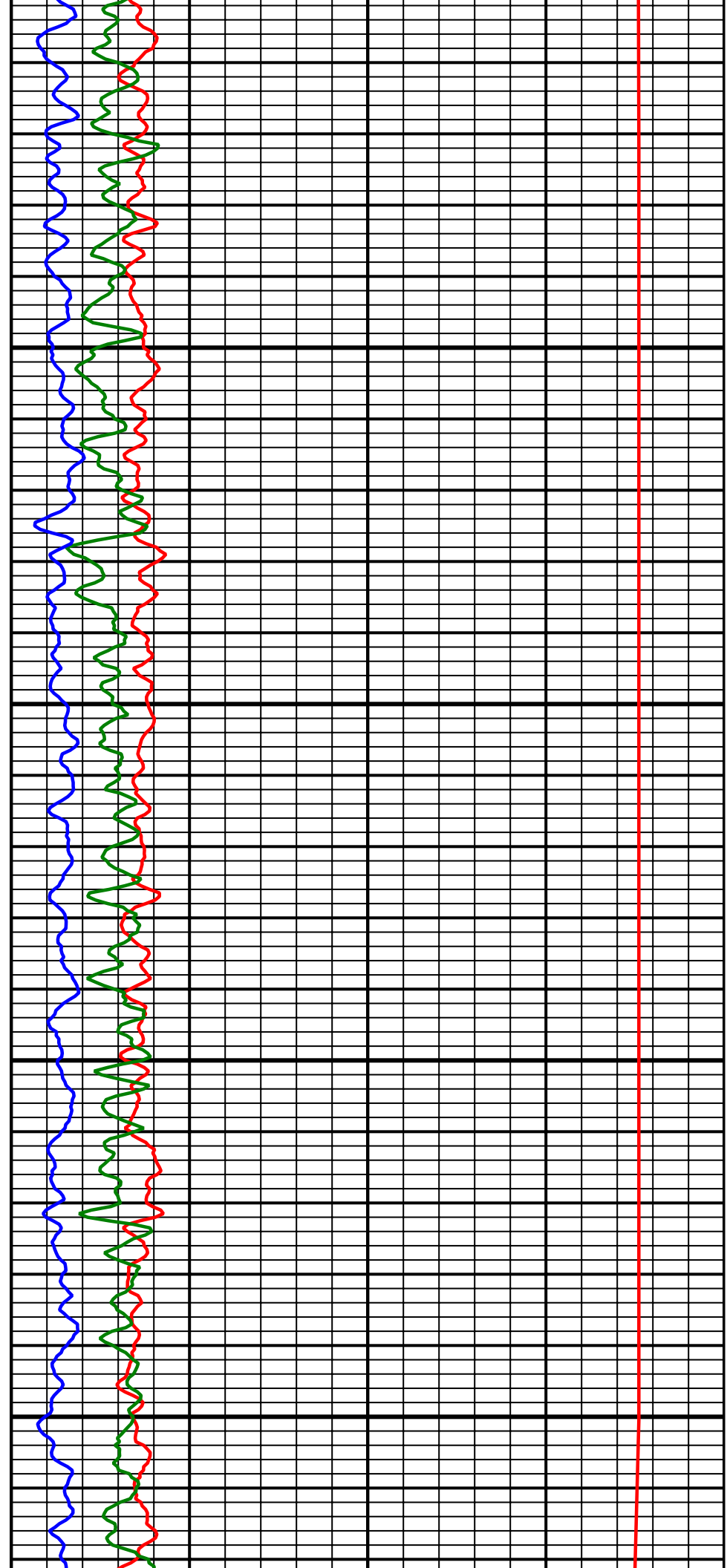
10700
MD

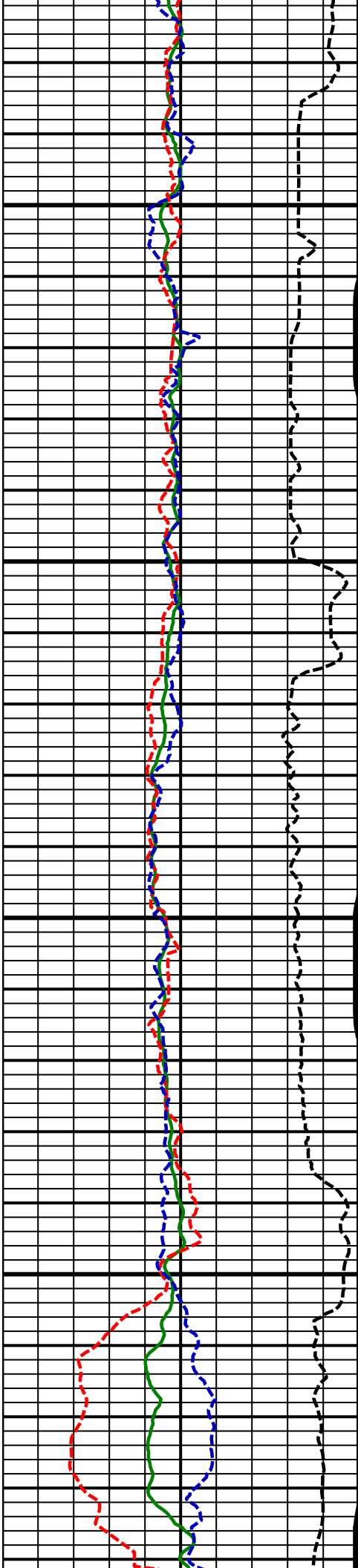




10800
MD

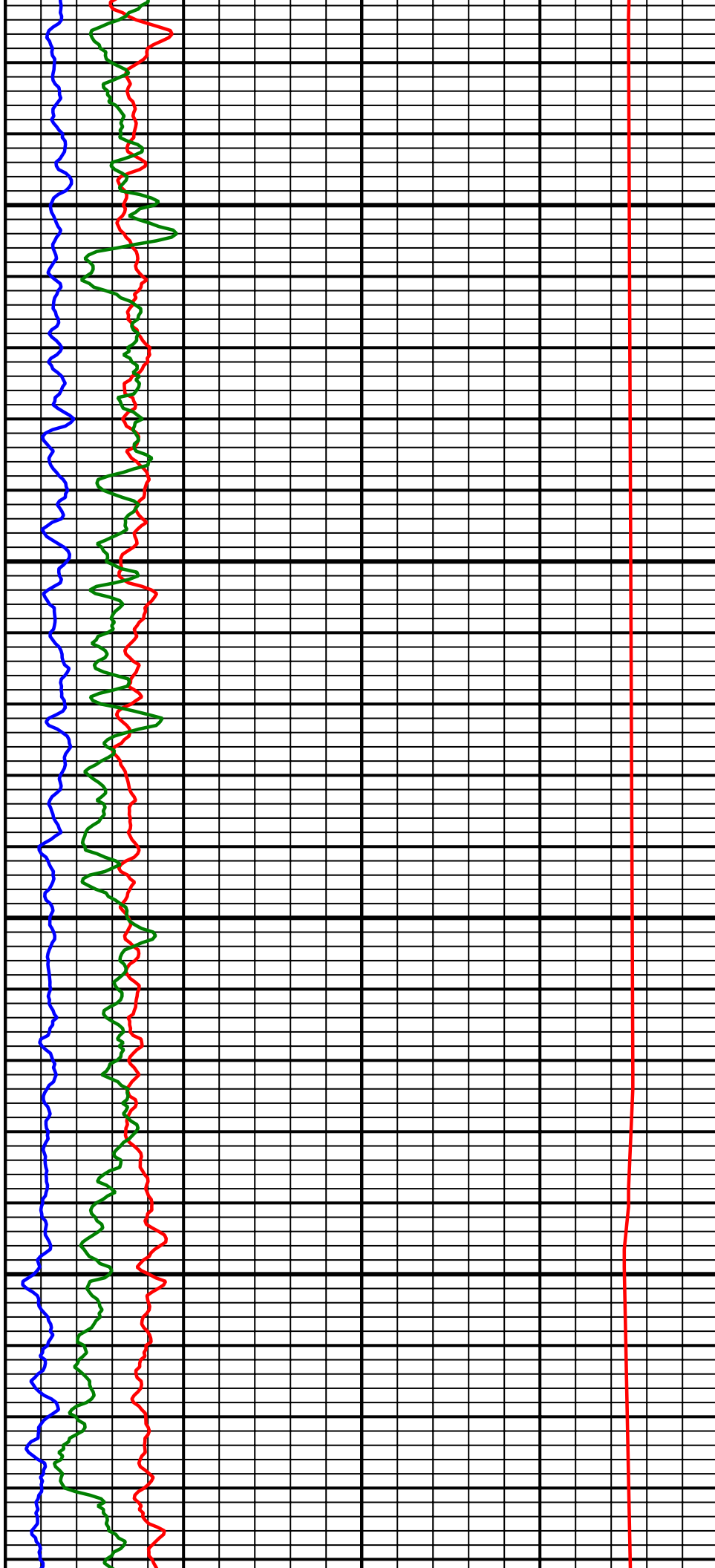
10900
MD

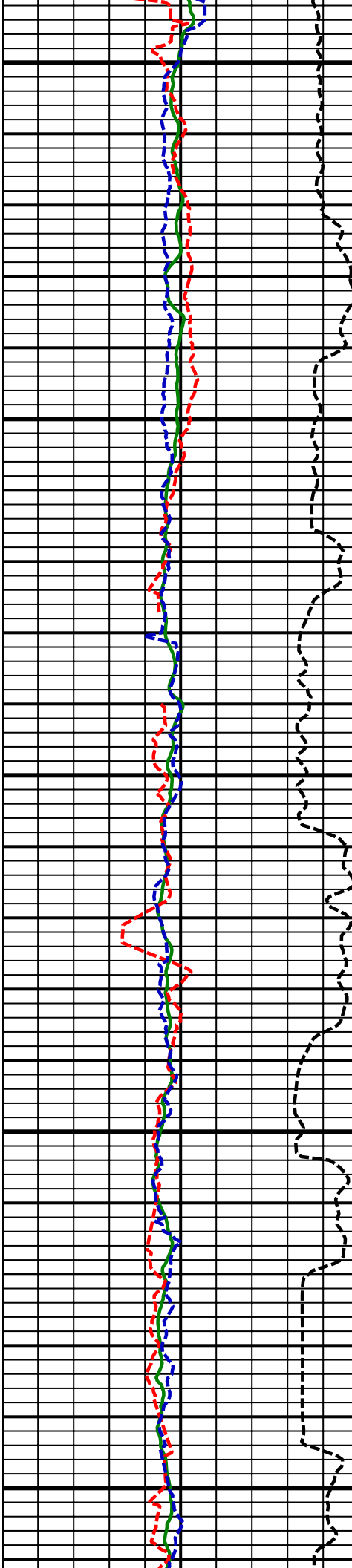




11000
MD

11100
MD

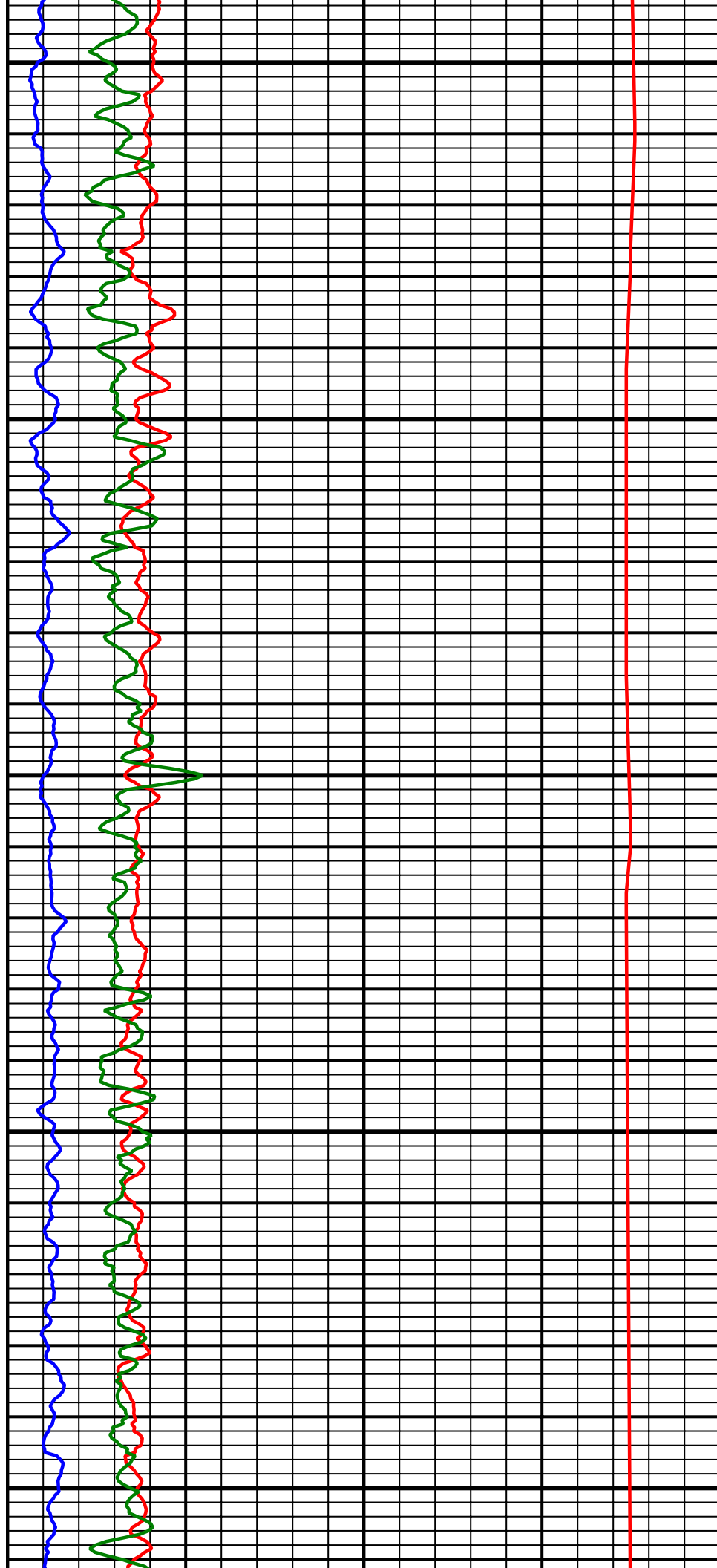


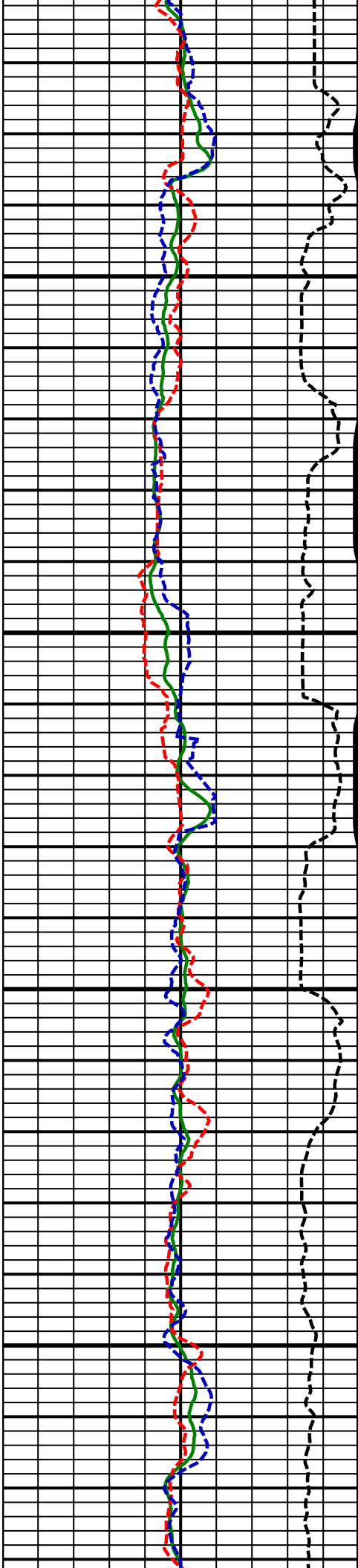


11200
MD

11300
MD

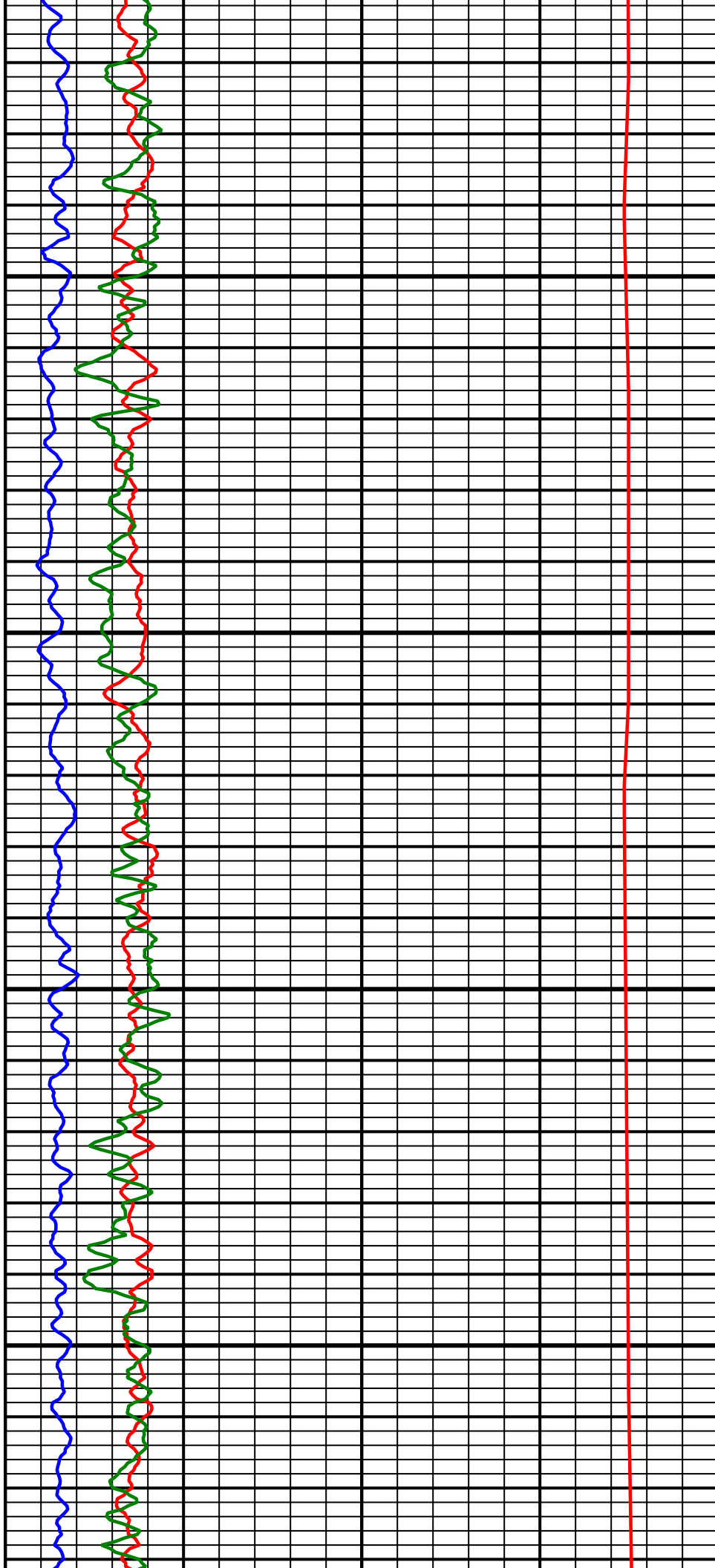
11400
MD

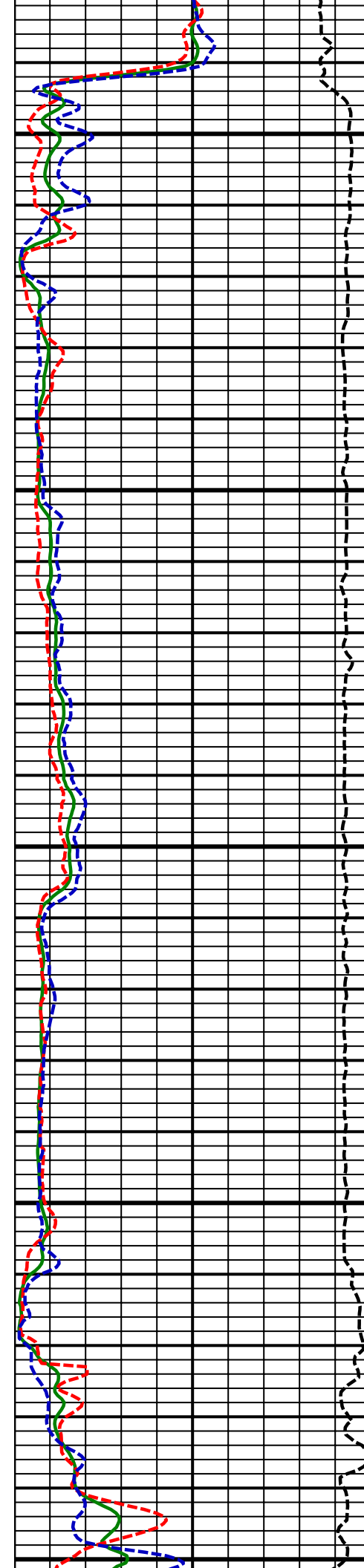




11500
MD

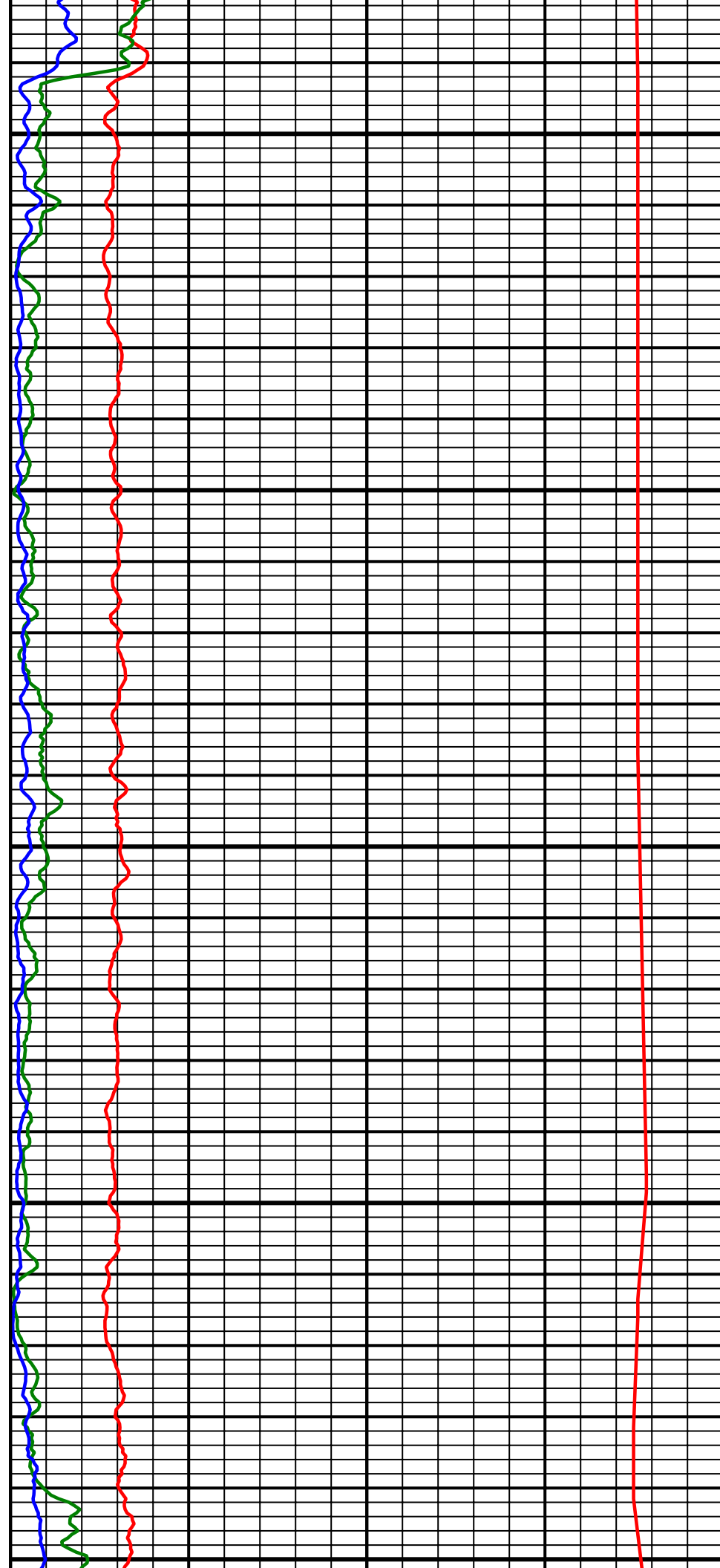
11600
MD

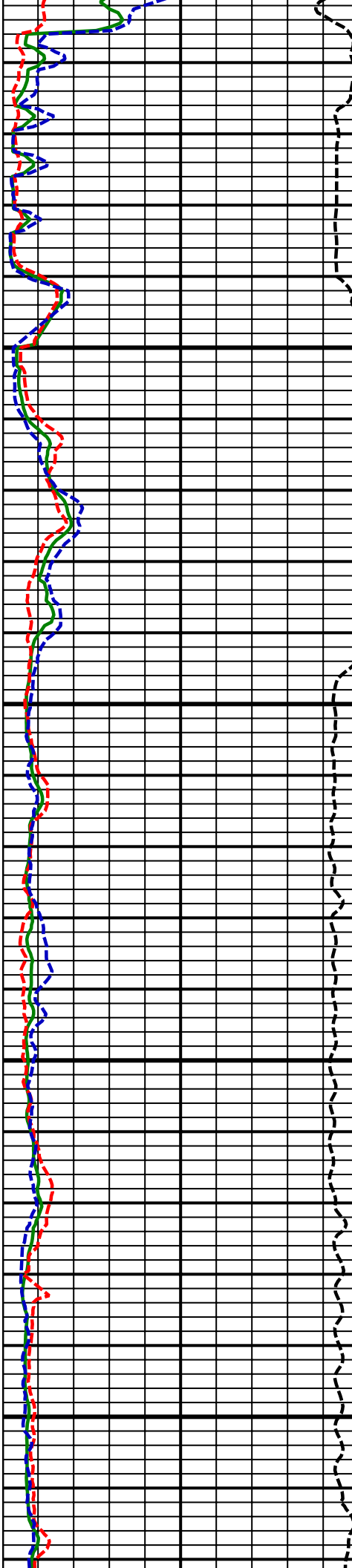




11700
MD

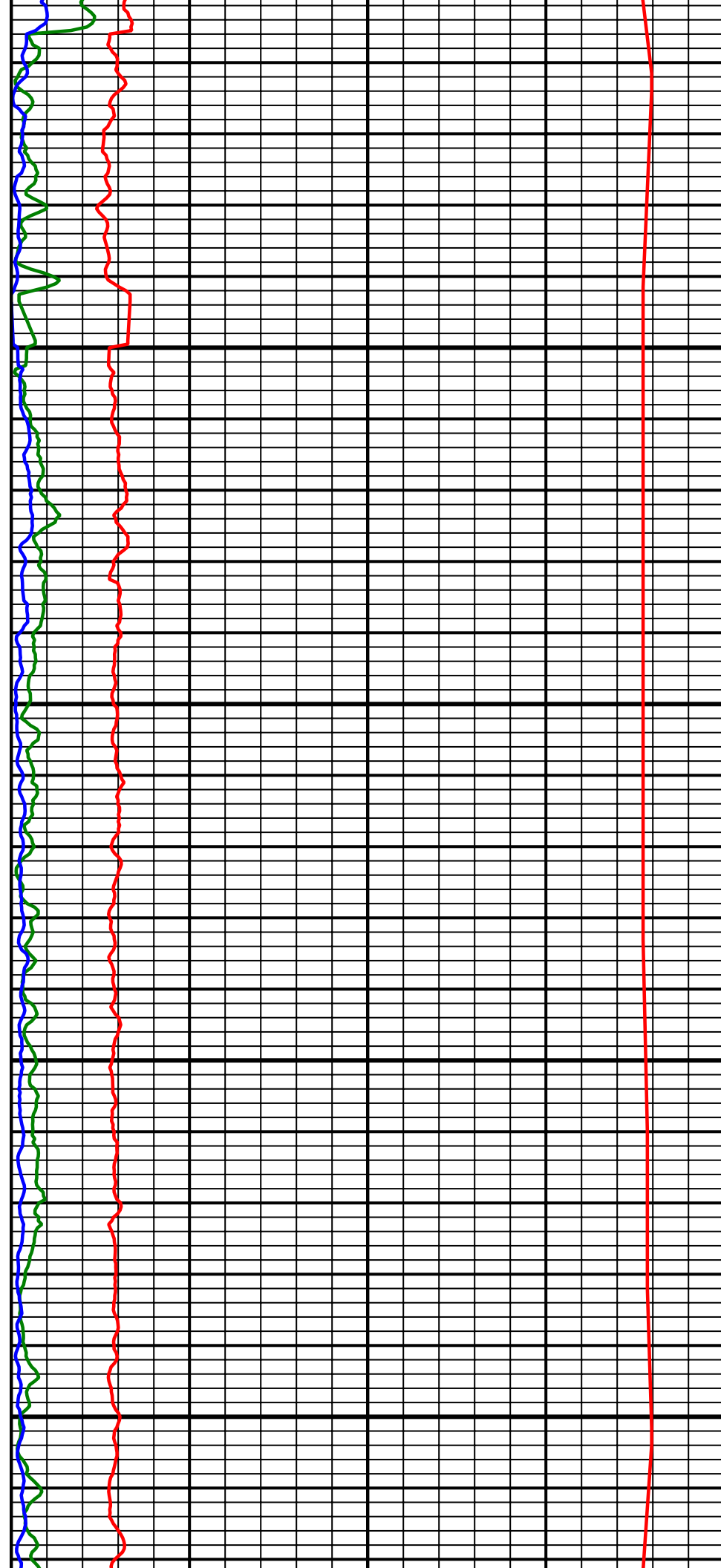
11800
MD

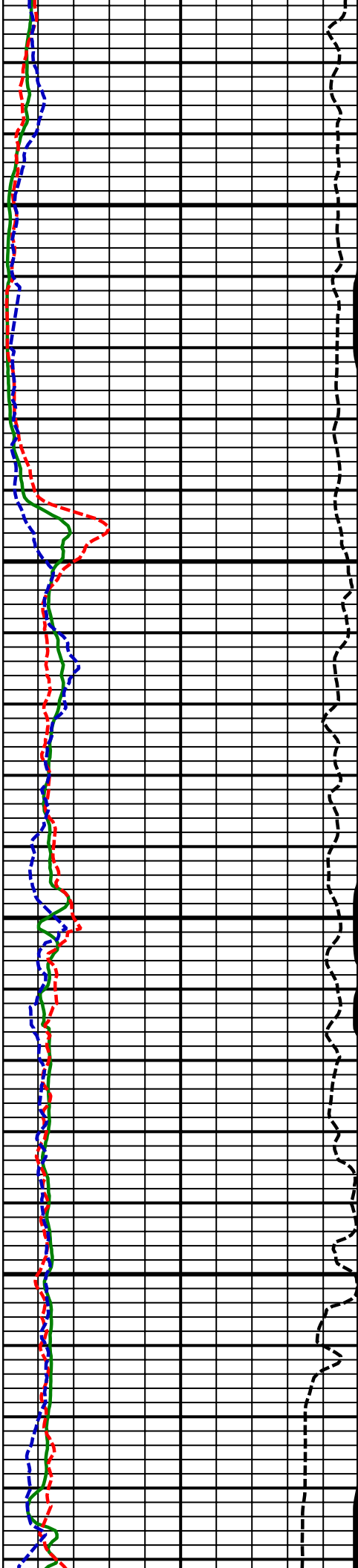




11900
MD

12000
MD



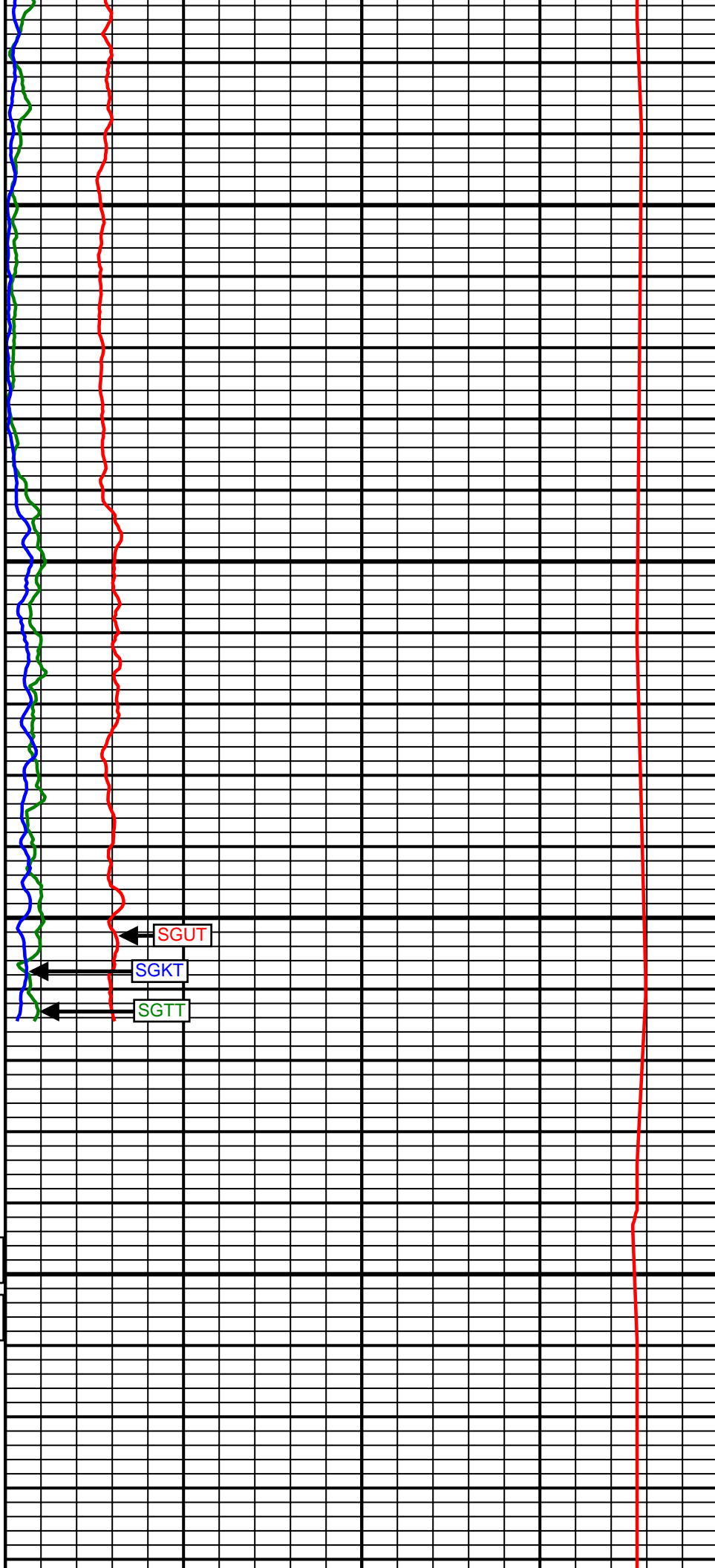


12100
MD

12200
MD

Comment
3-2

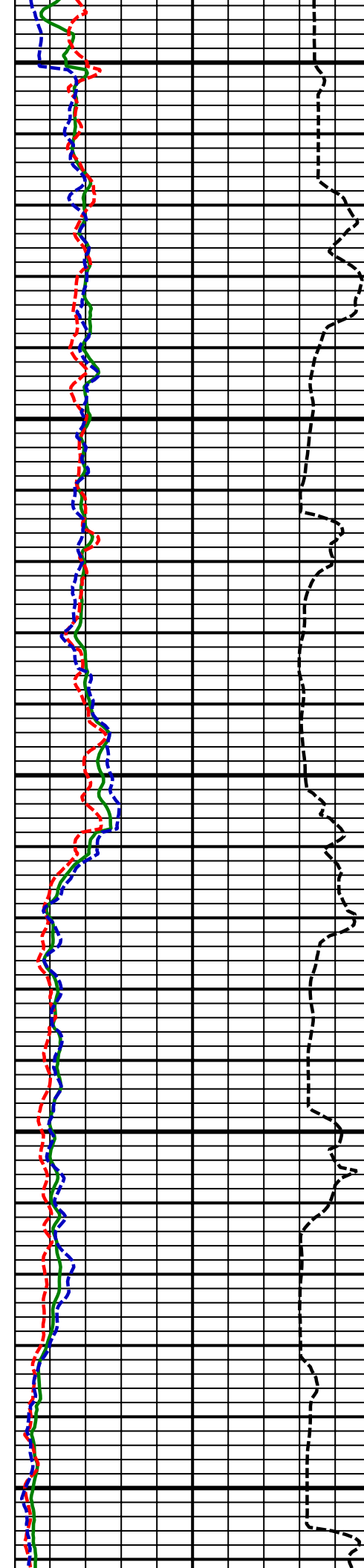
Comment
4-1



SGUT

SGKT

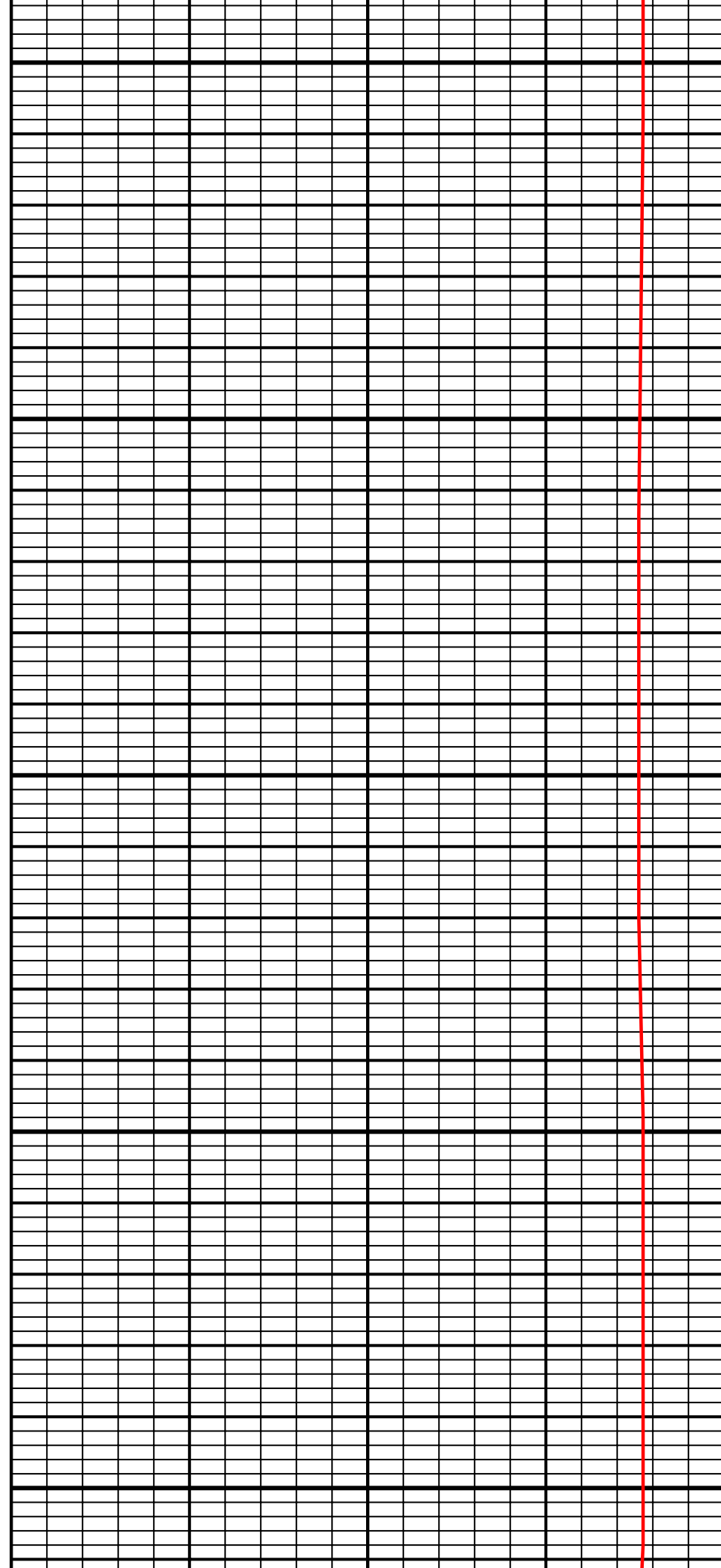
SGTI

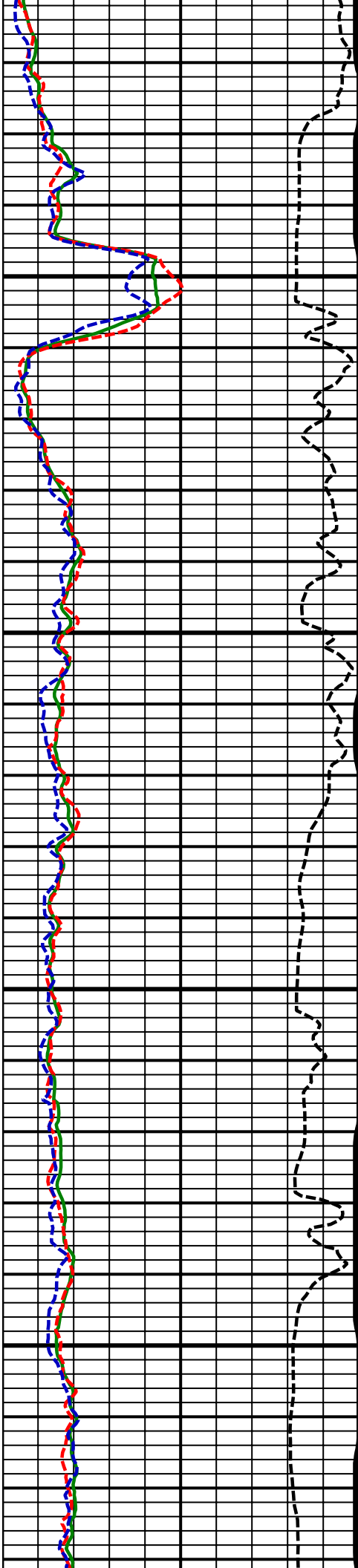


12300
MD

12400
MD

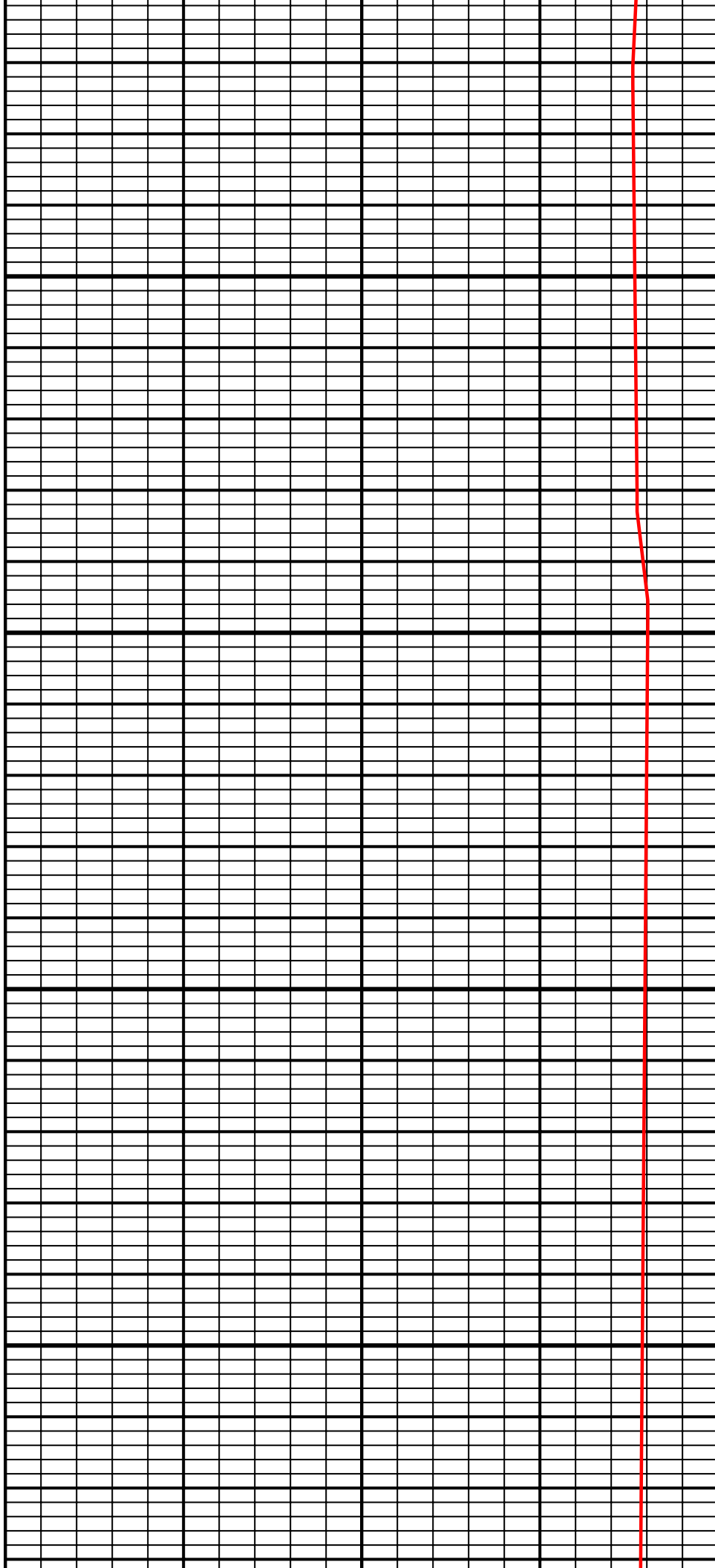
12500
MD

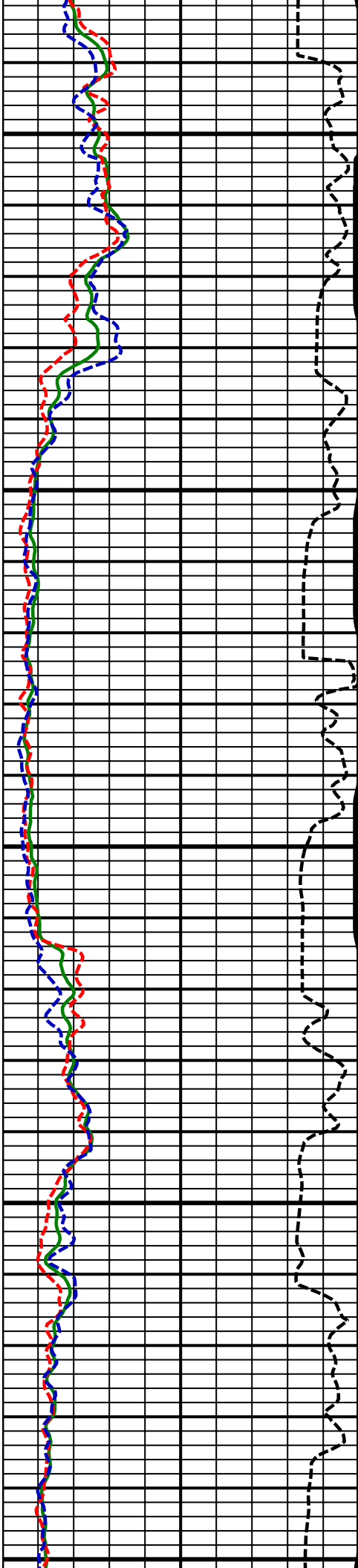




12600
MD

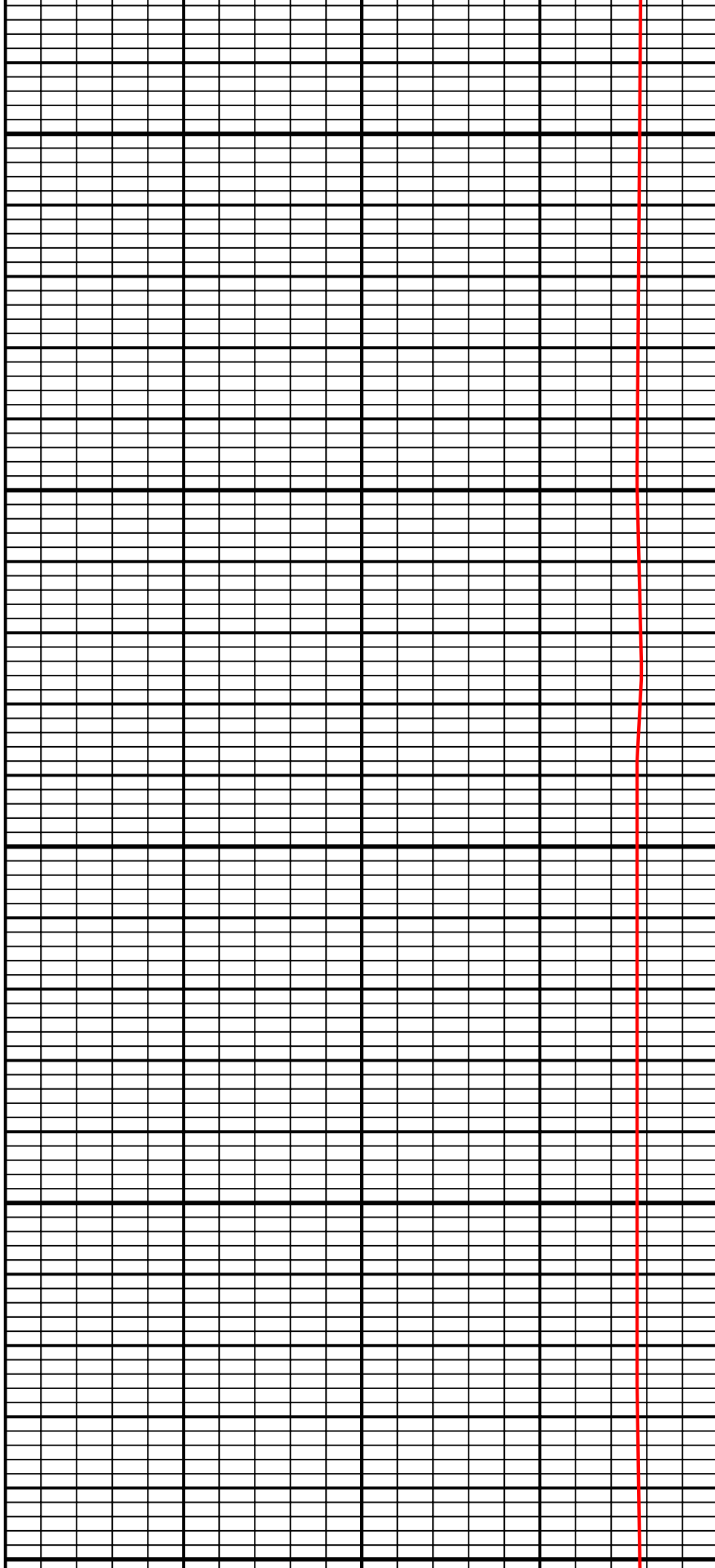
12700
MD

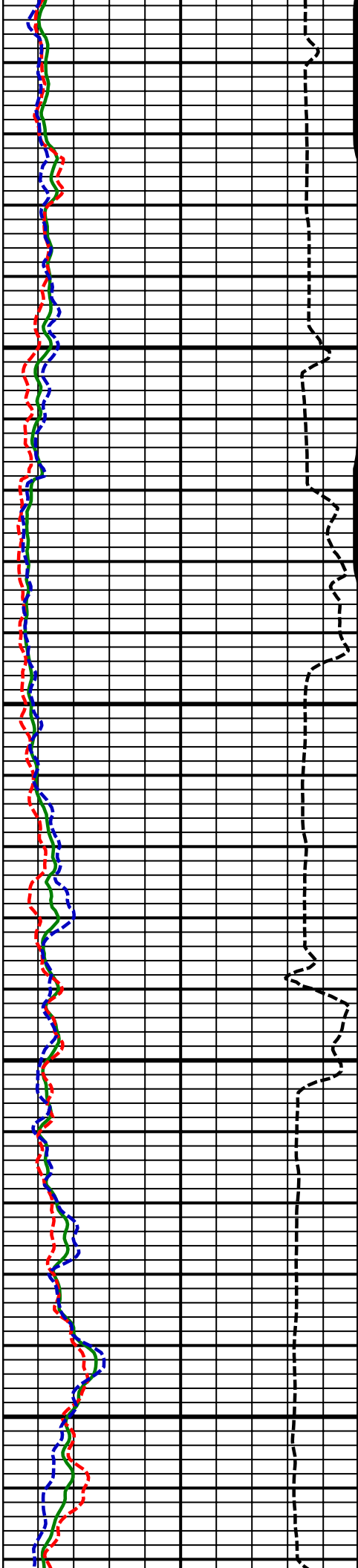




12800
MD

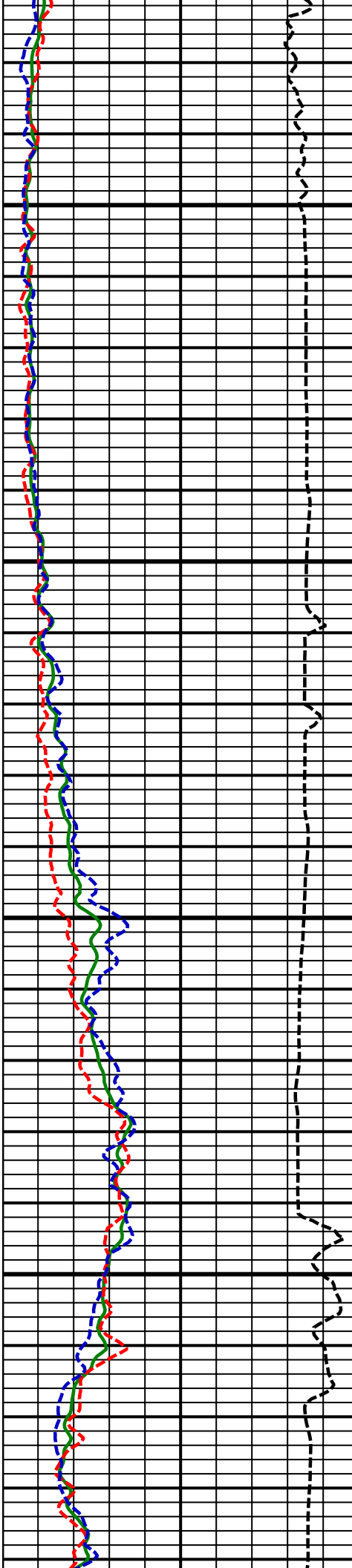
12900
MD





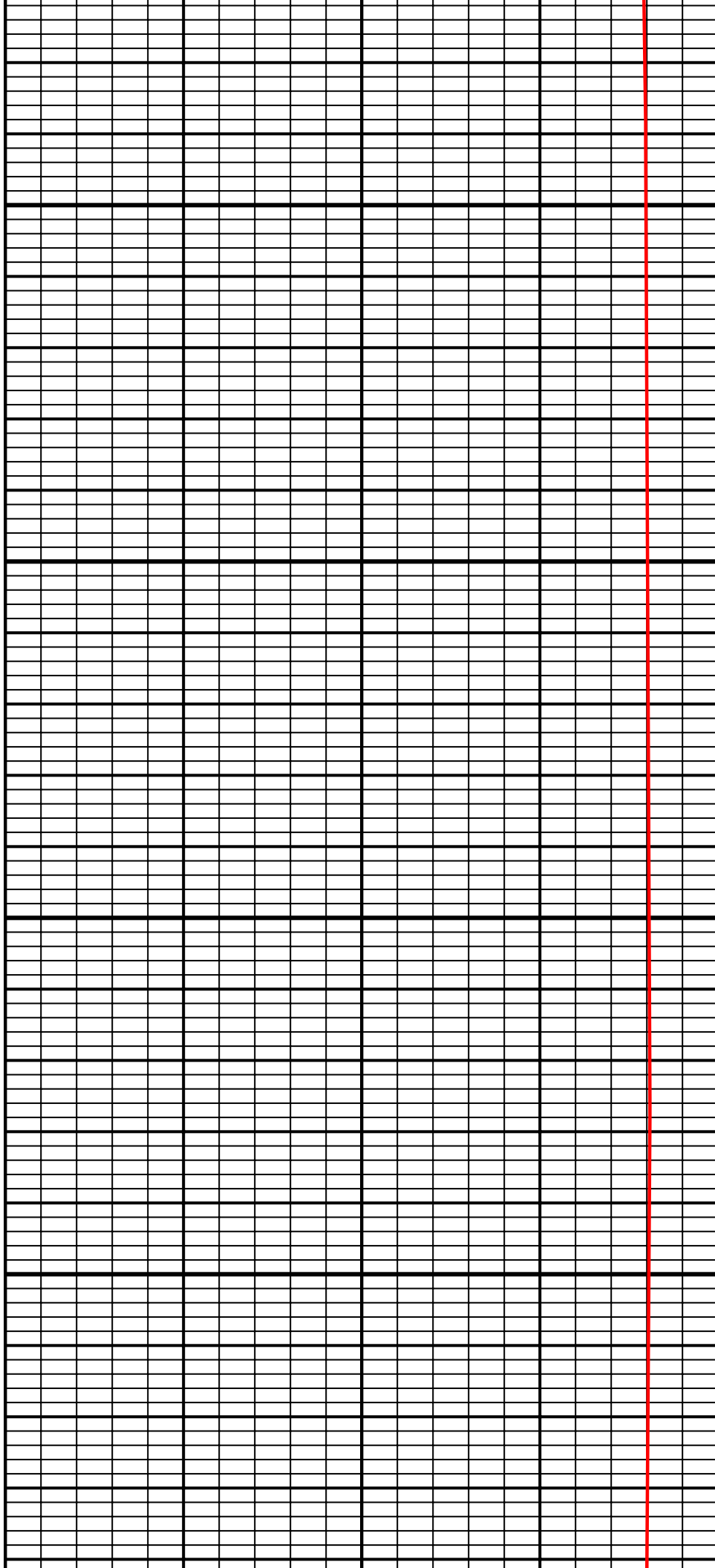
13000
MD

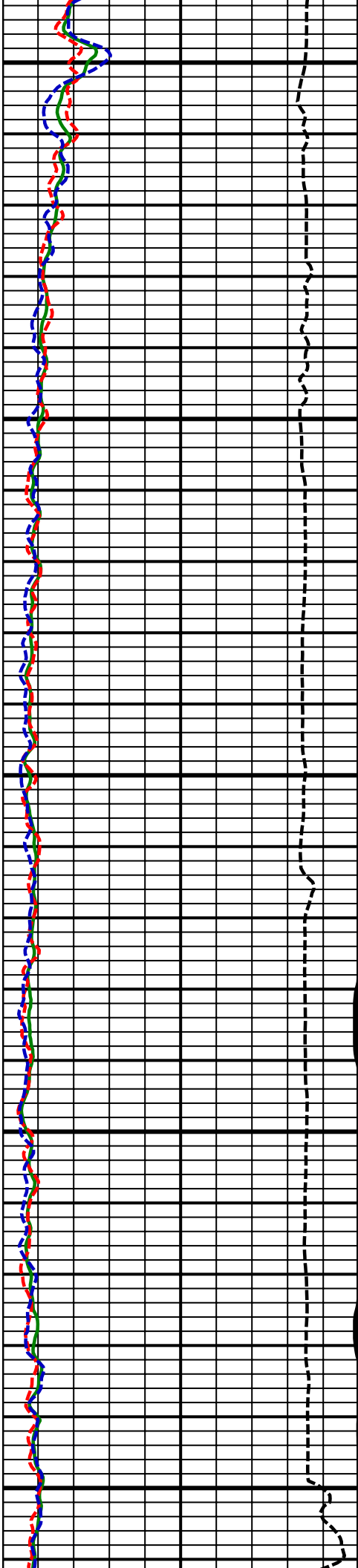
13100
MD



13200
MD

13300
MD

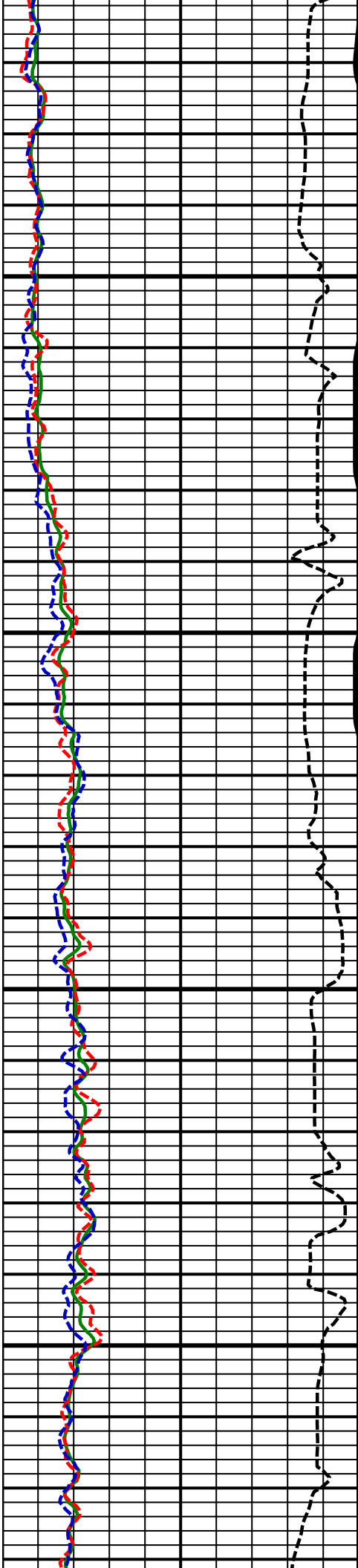




13400
MD

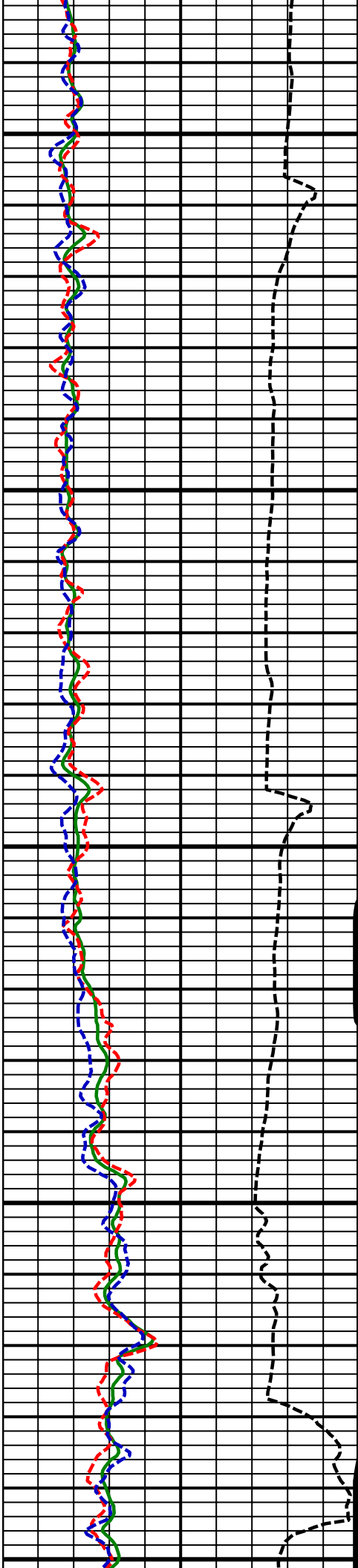
13500
MD

13600
MD



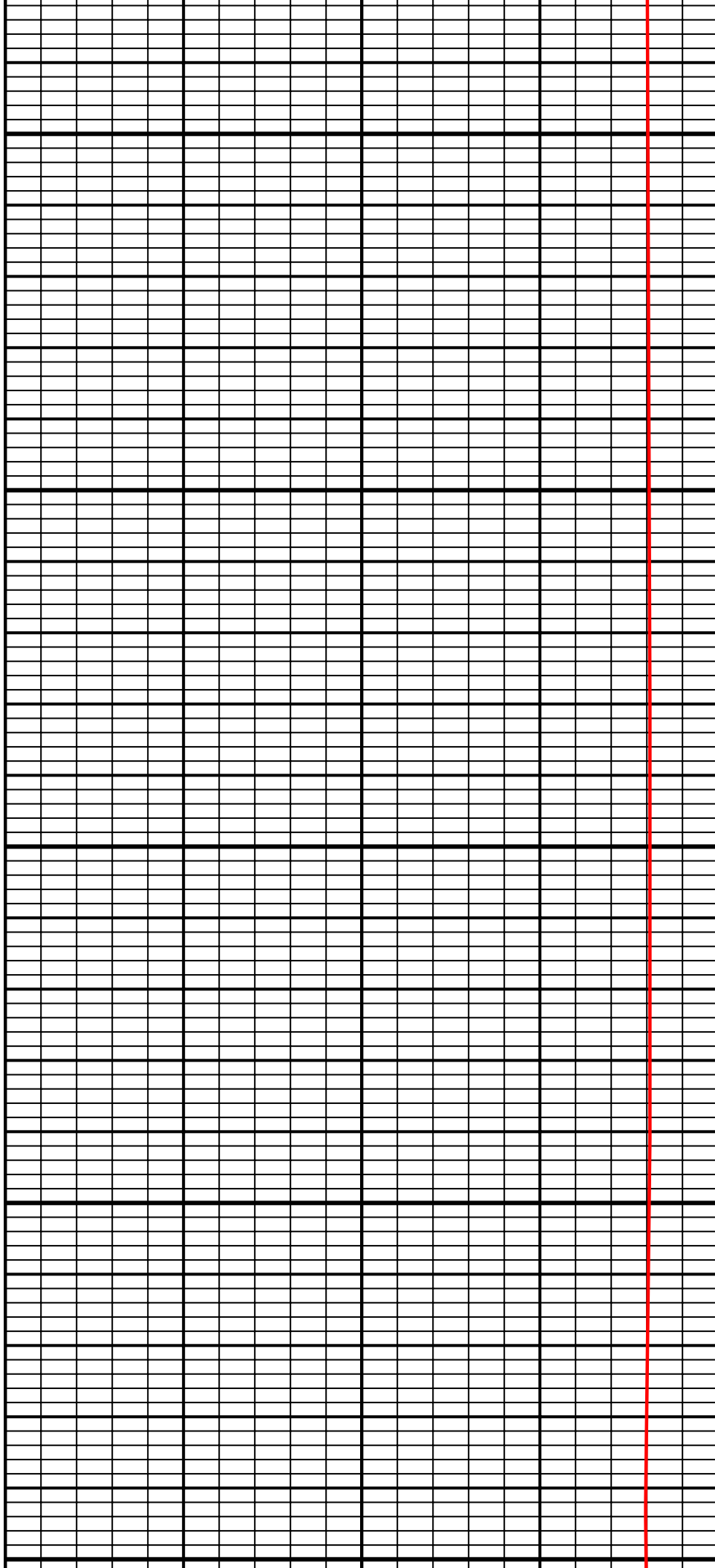
13700
MD

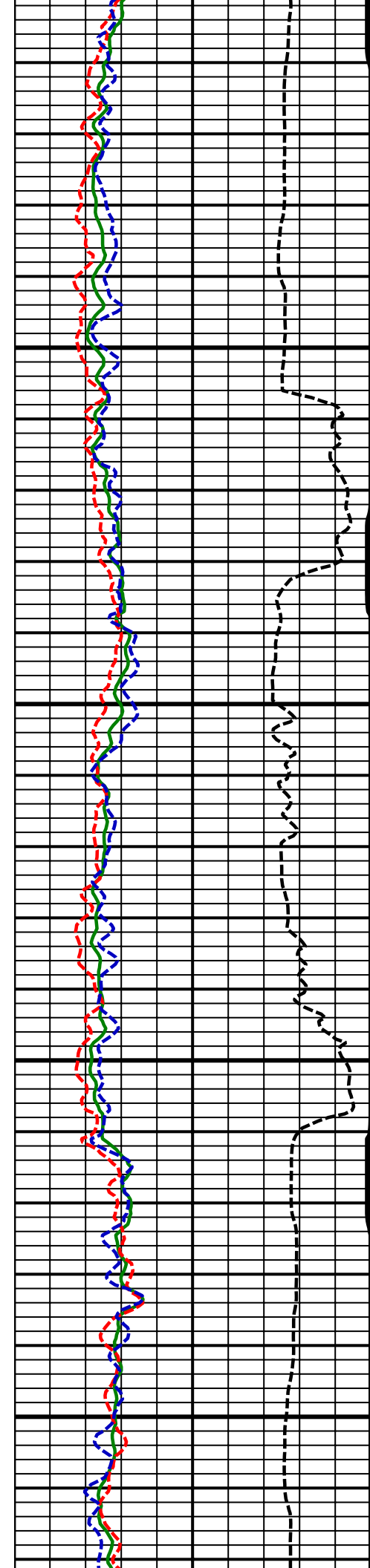
13800
MD



13900
MD

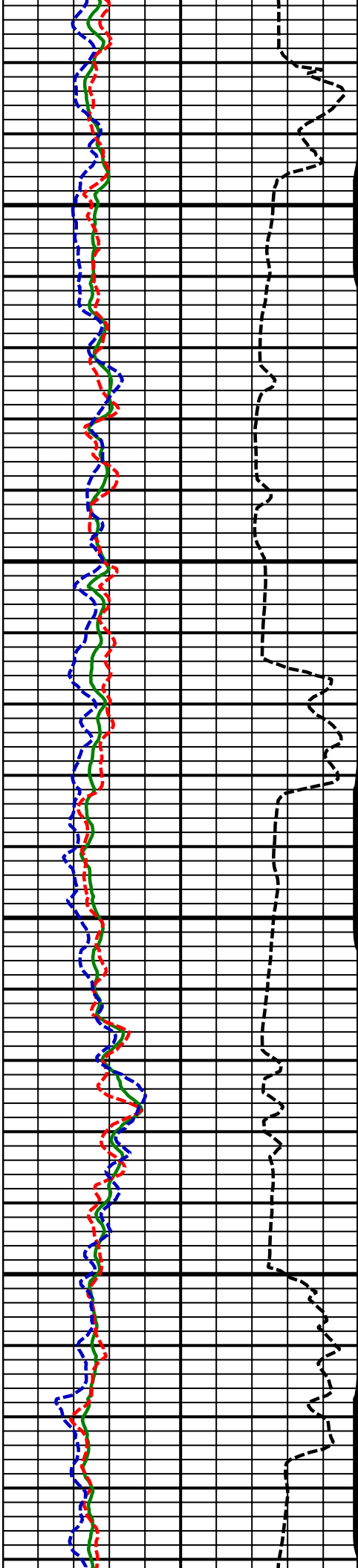
14000
MD





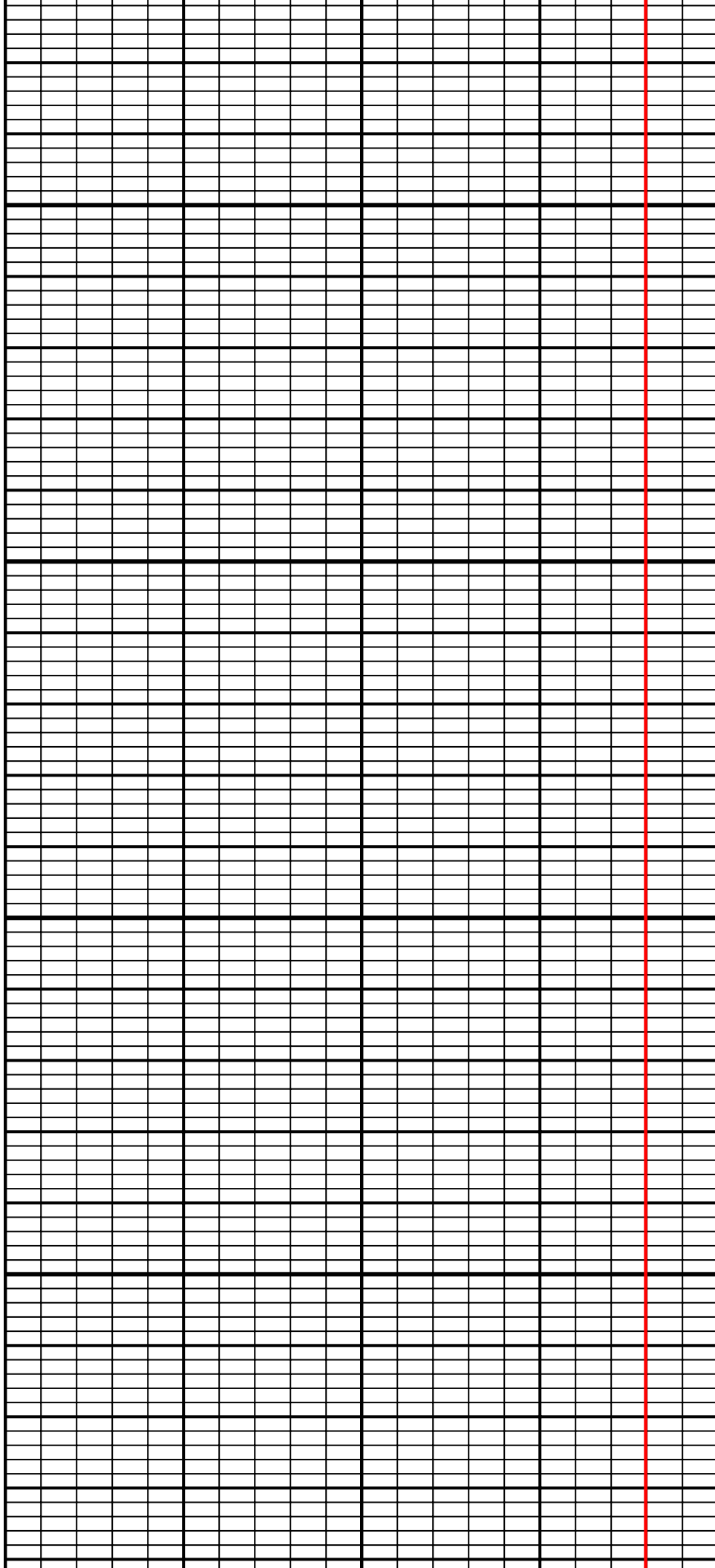
14100
MD

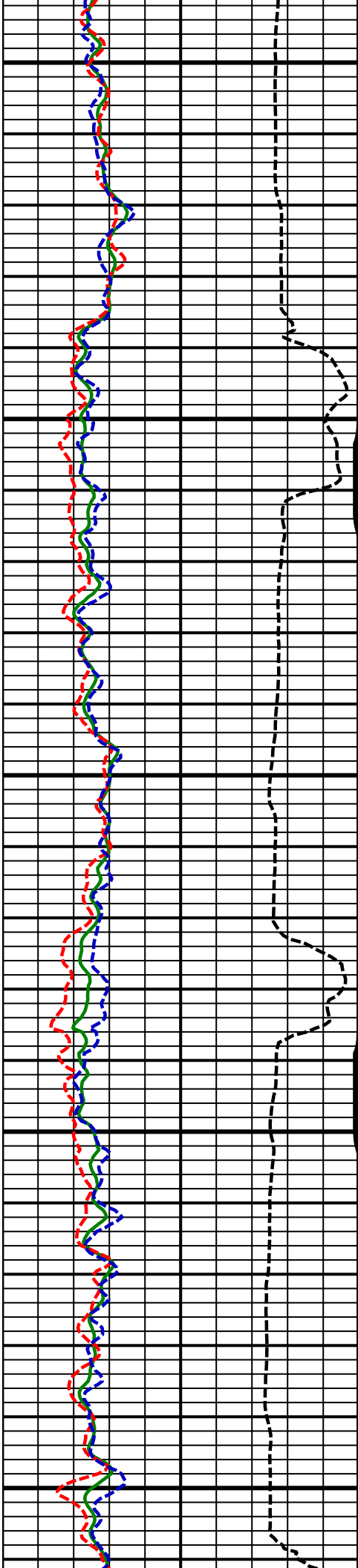
14200
MD



14300
MD

14400
MD

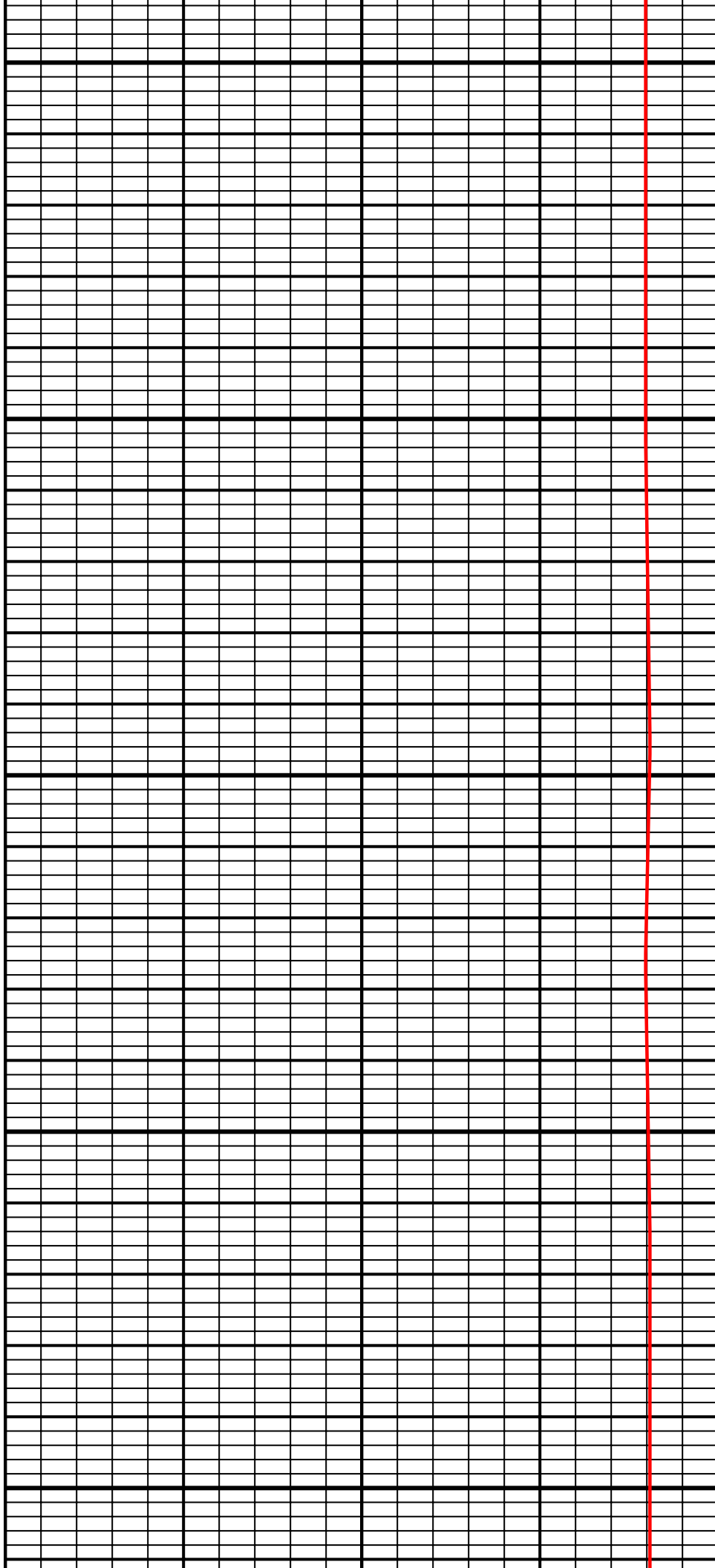


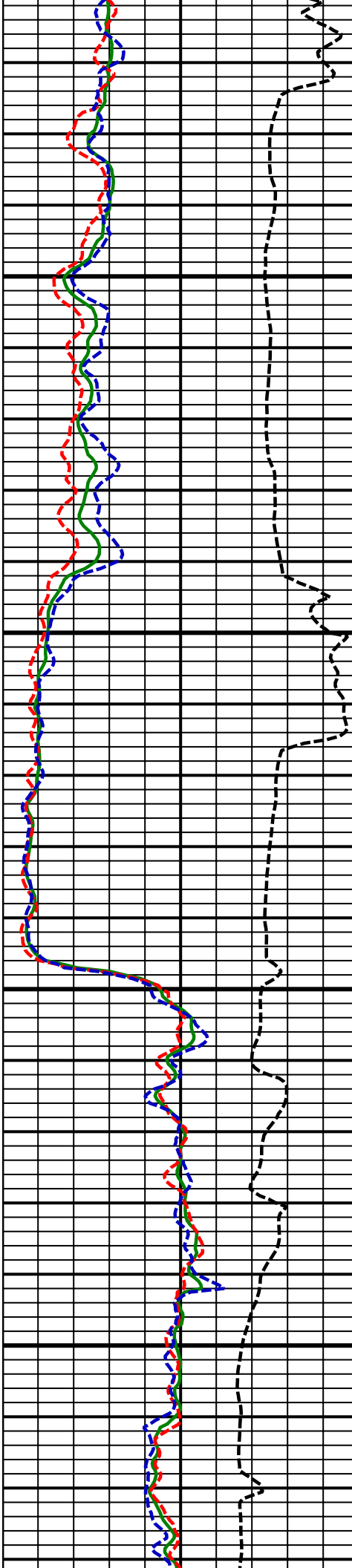


14500
MD

14600
MD

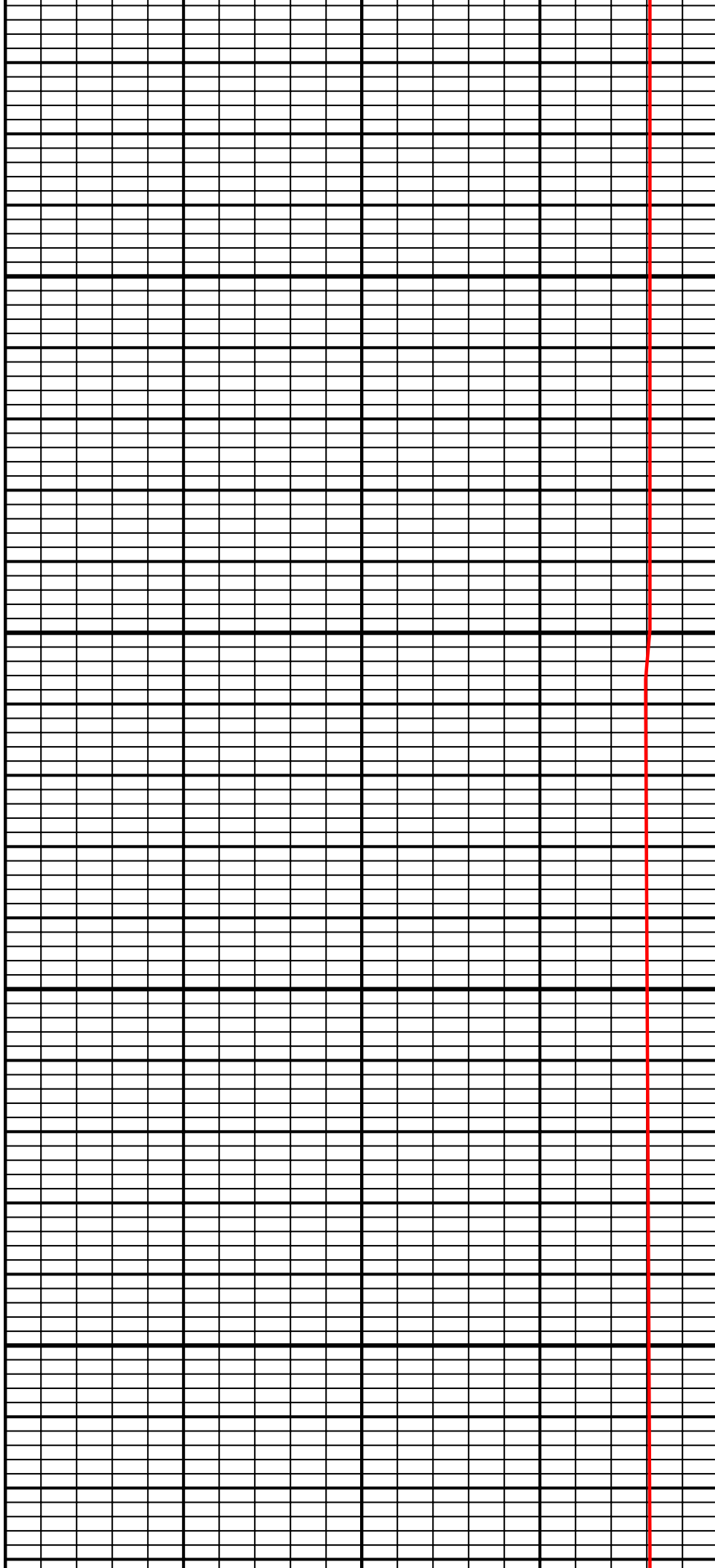
14700
MD

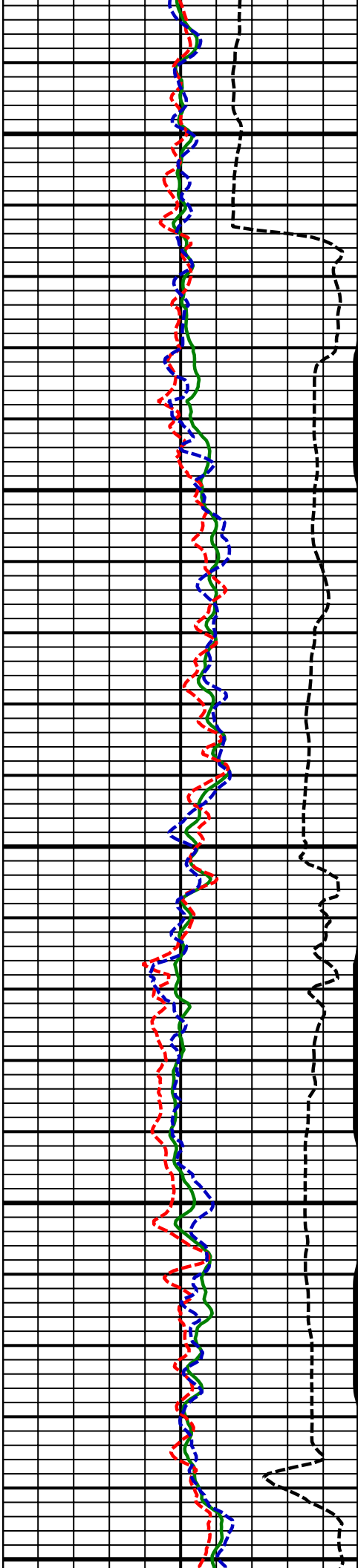




14800
MD

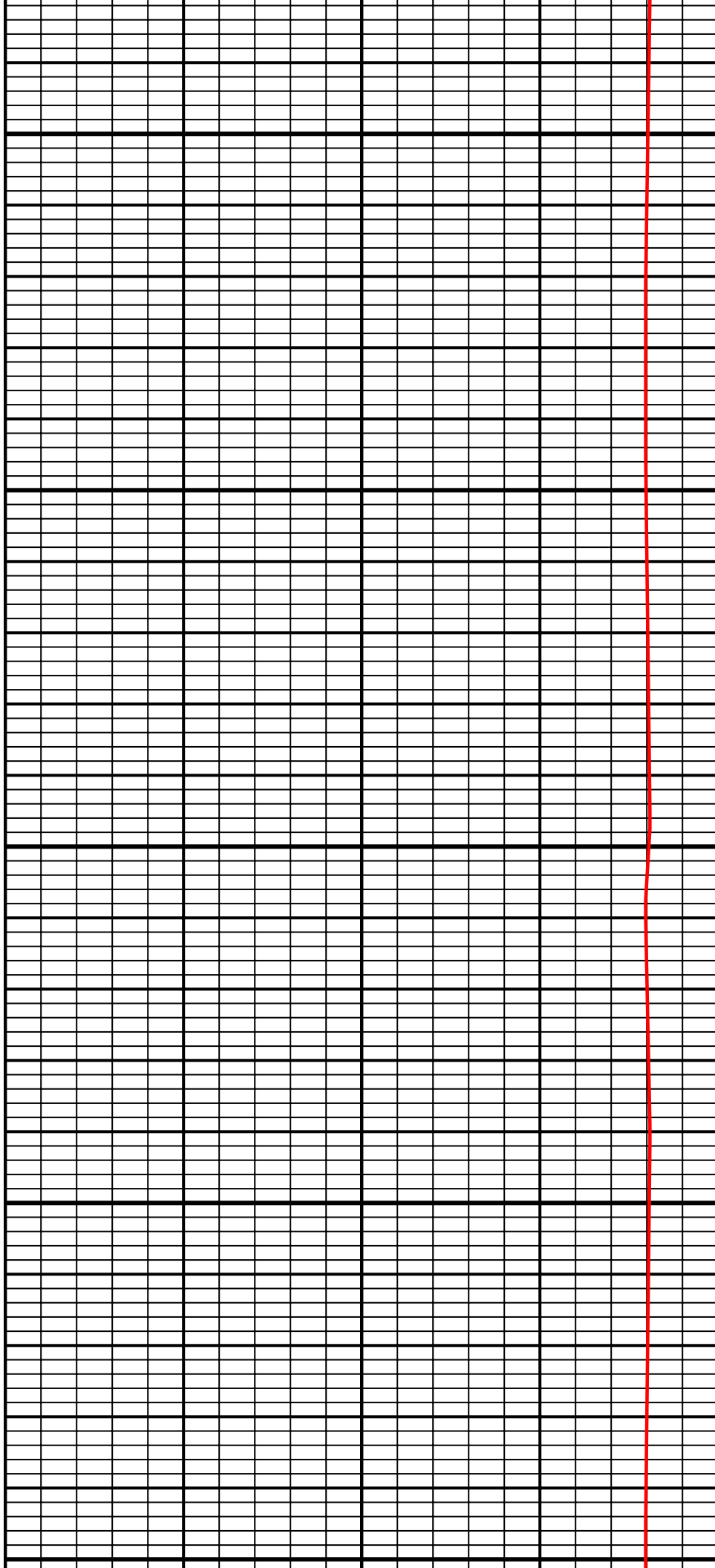
14900
MD

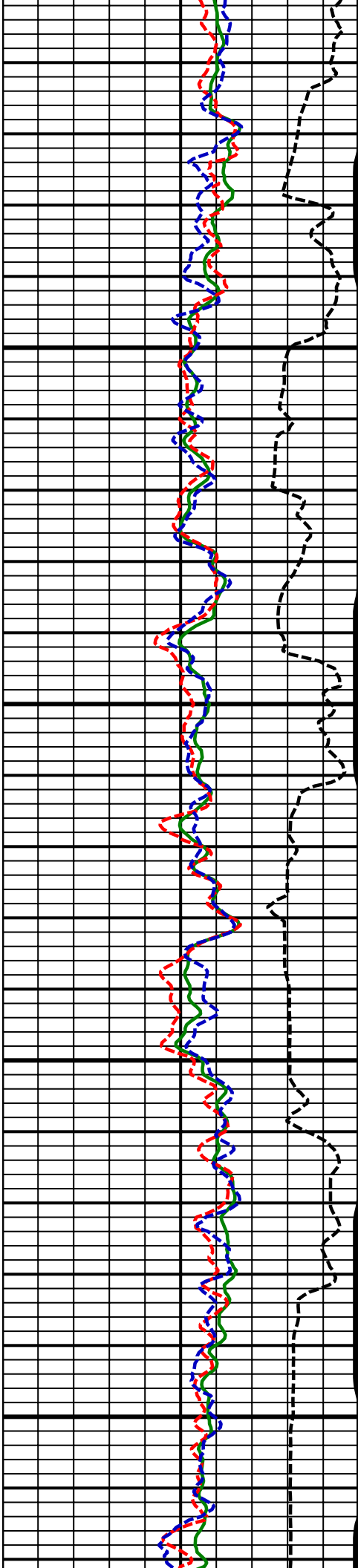




15000
MD

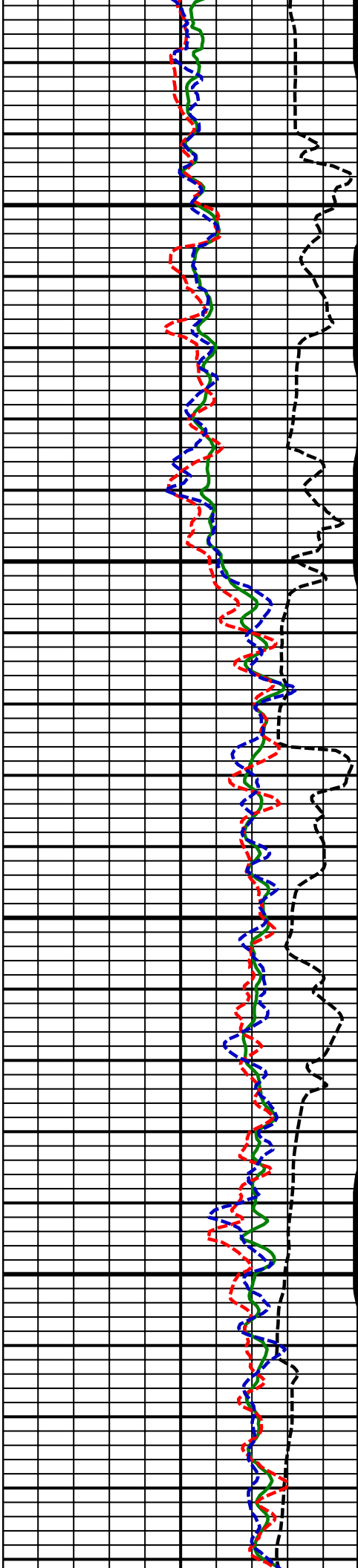
15100
MD





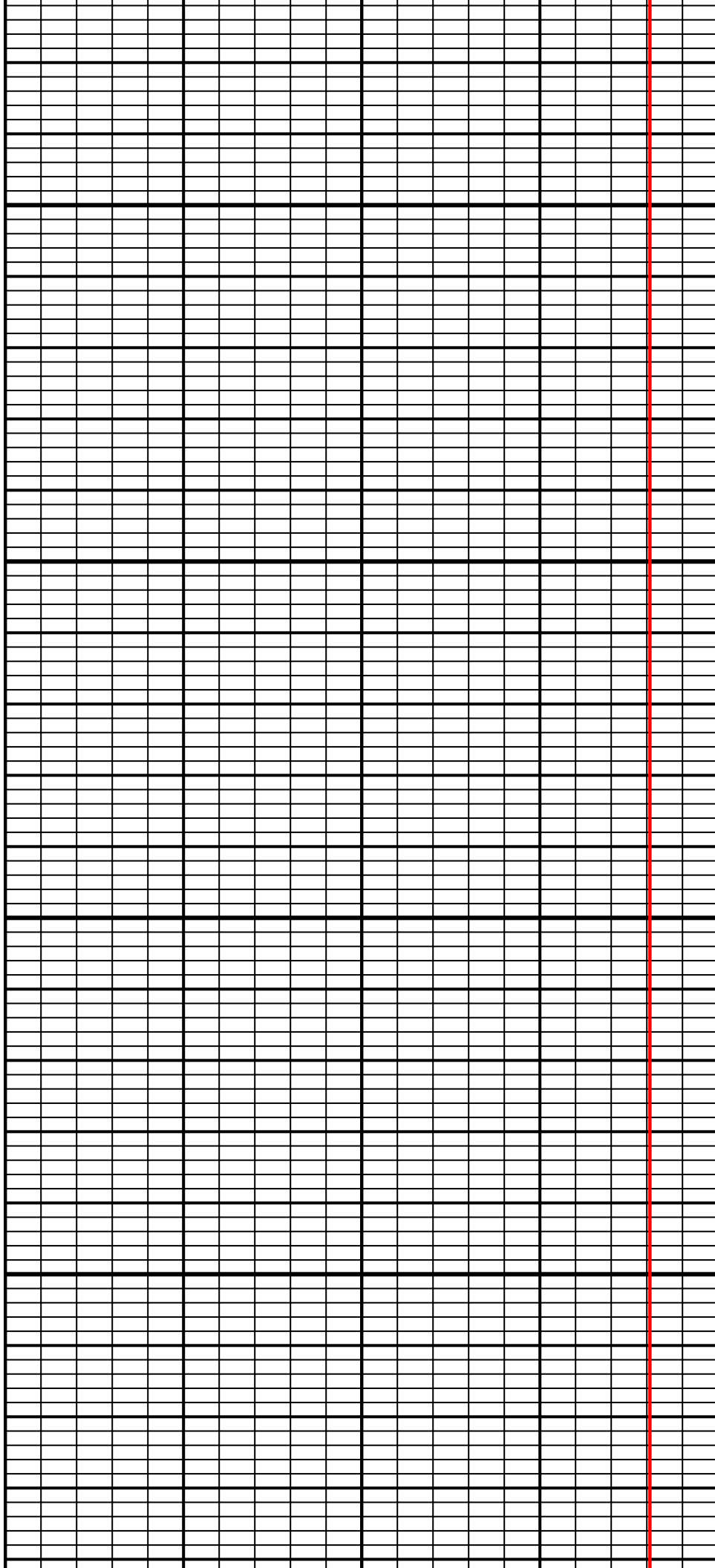
15200
MD

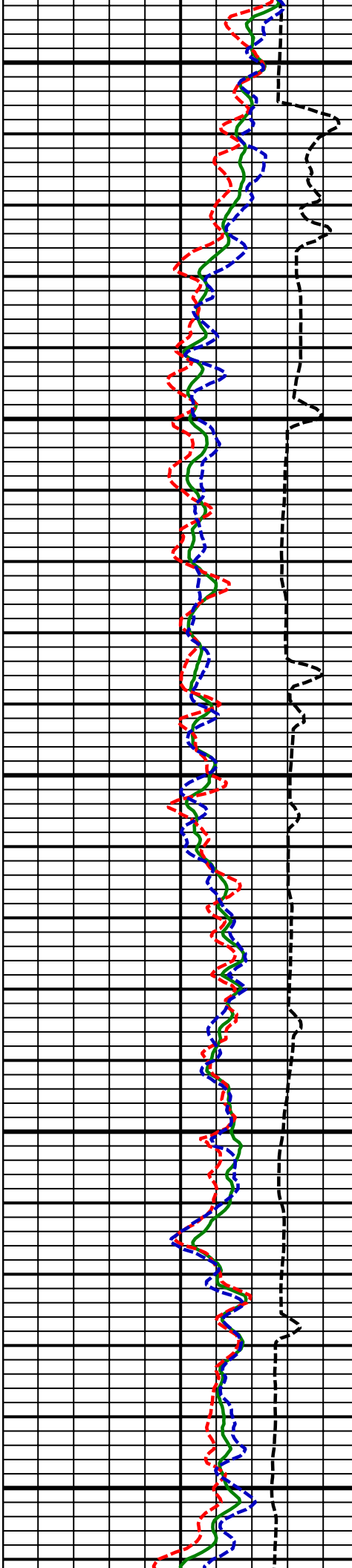
15300
MD



15400
MD

15500
MD

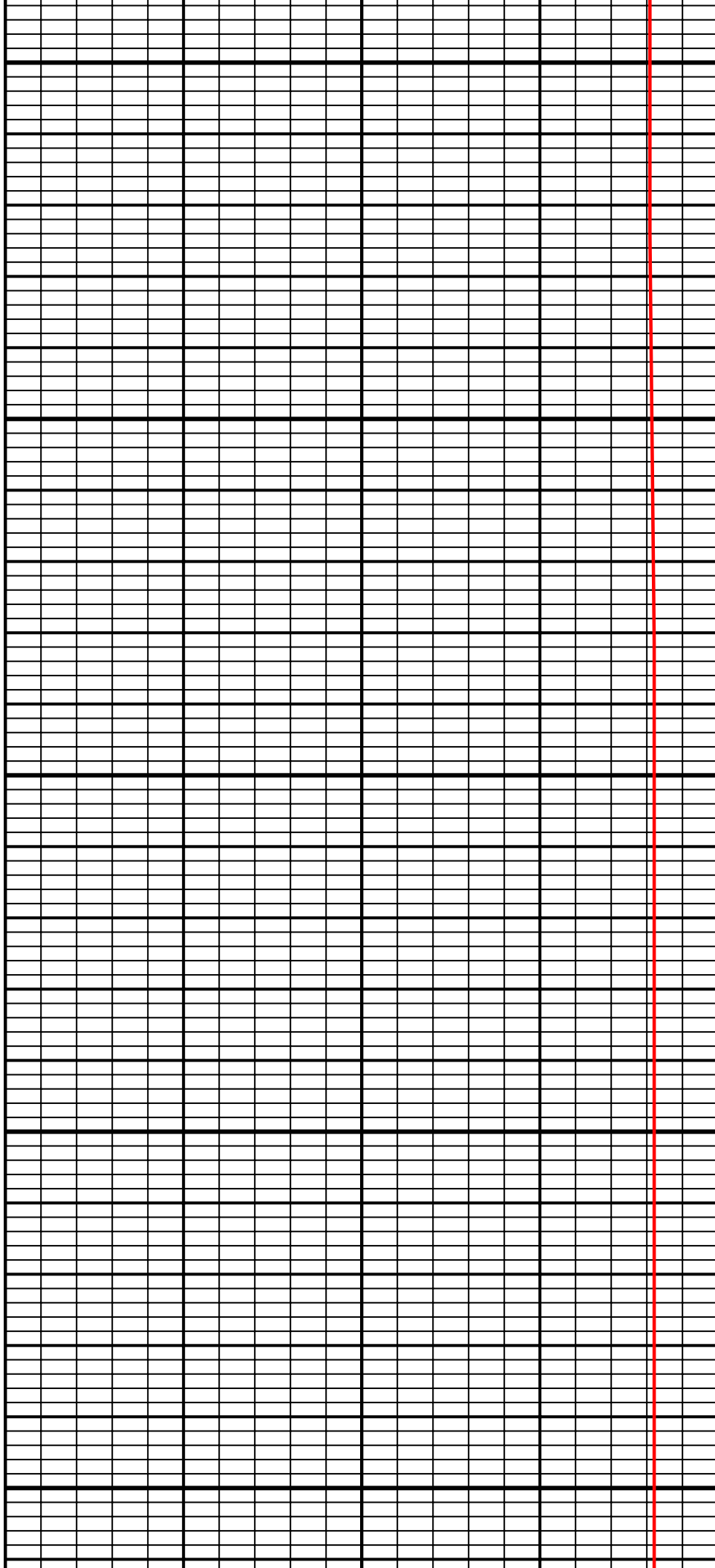


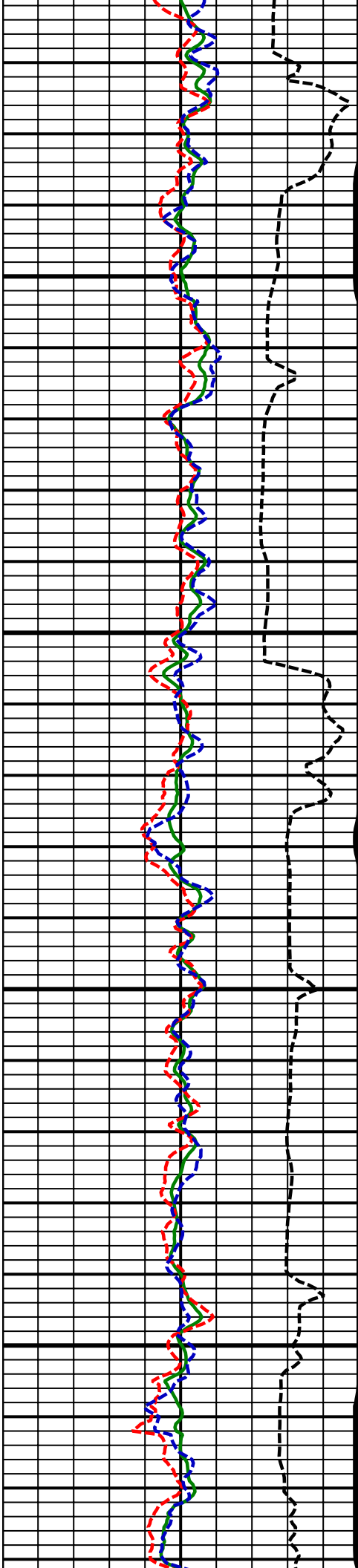


15600
MD

15700
MD

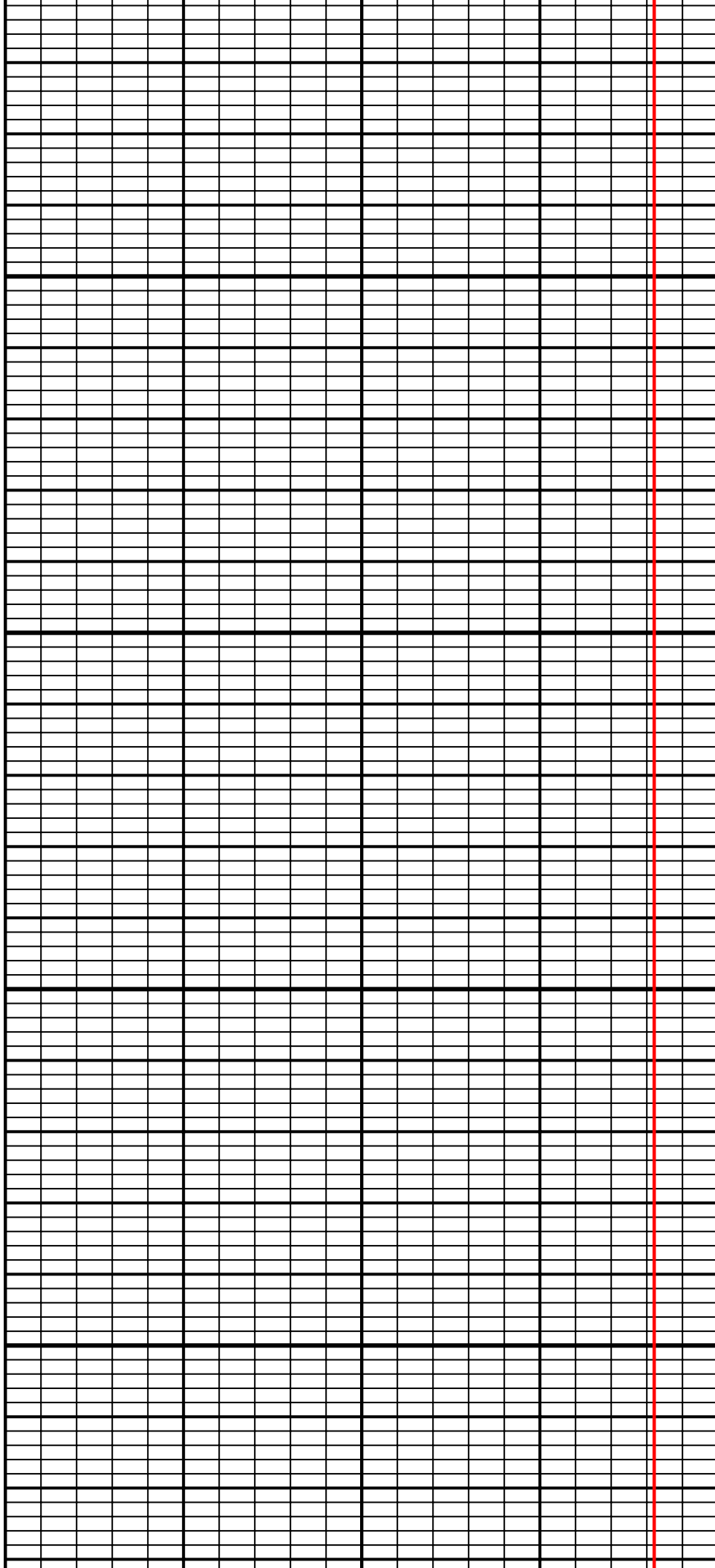
15800
MD

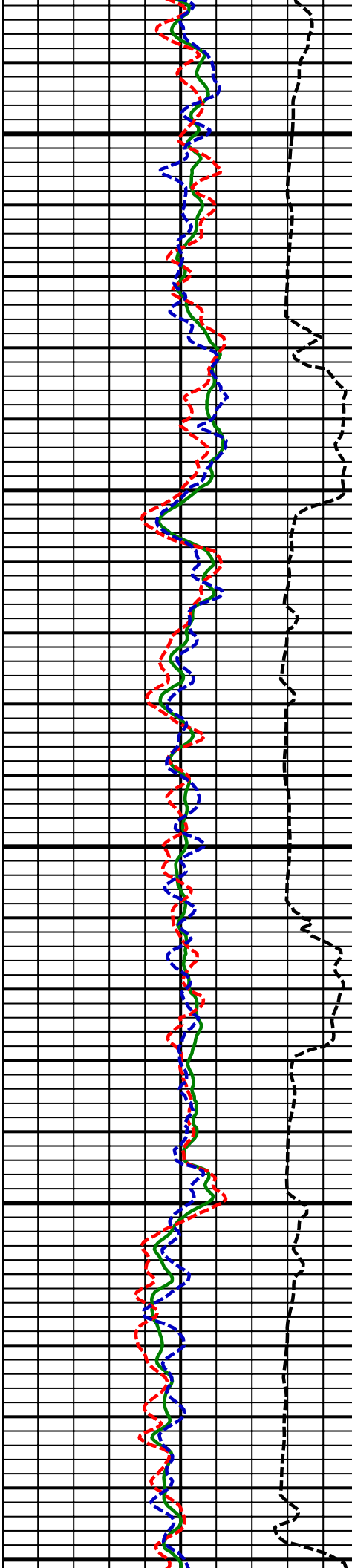




15900
MD

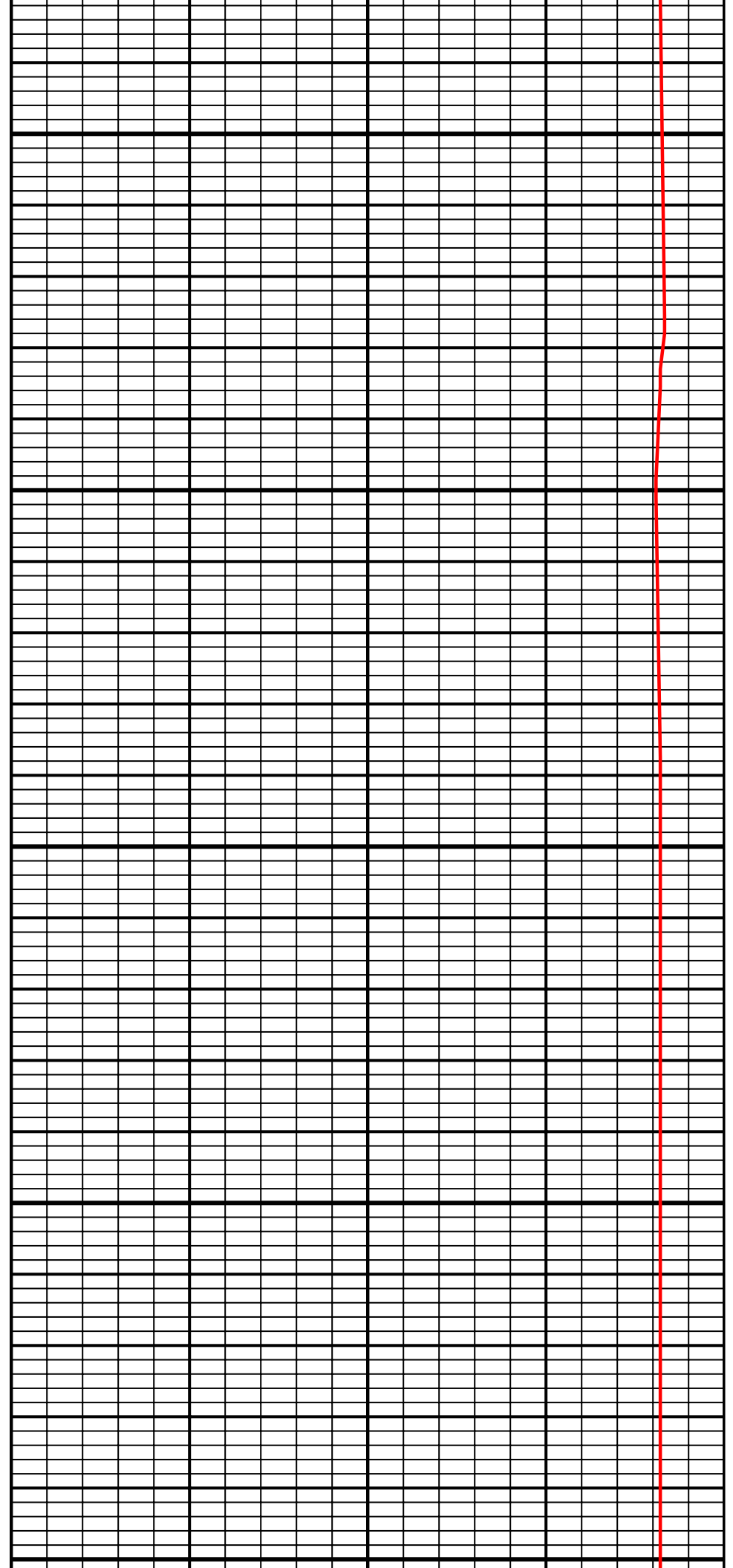
16000
MD

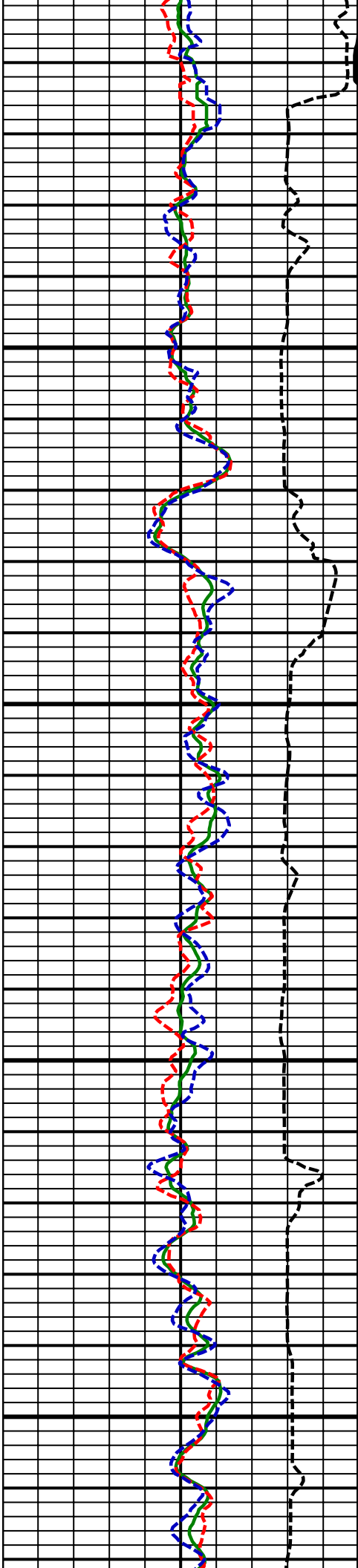




16100
MD

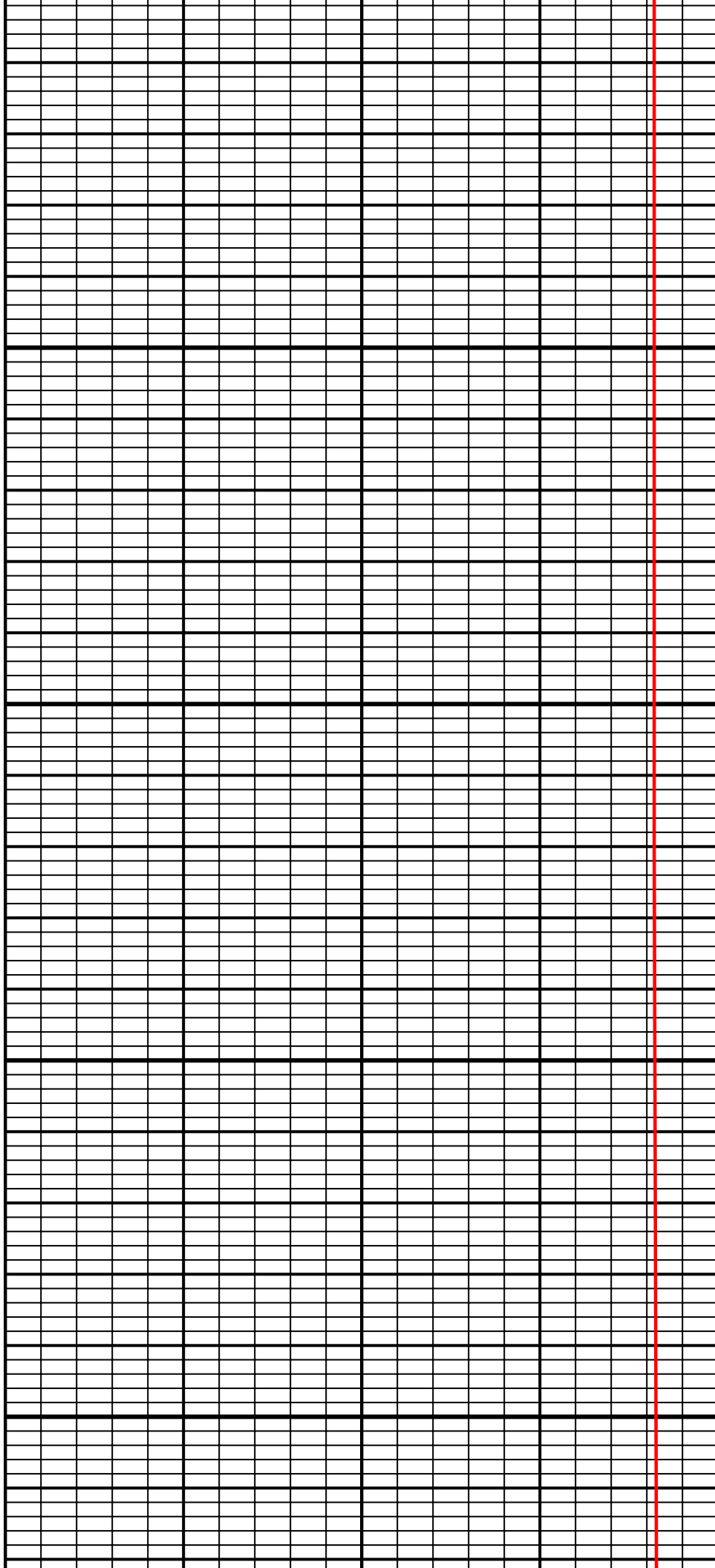
16200
MD

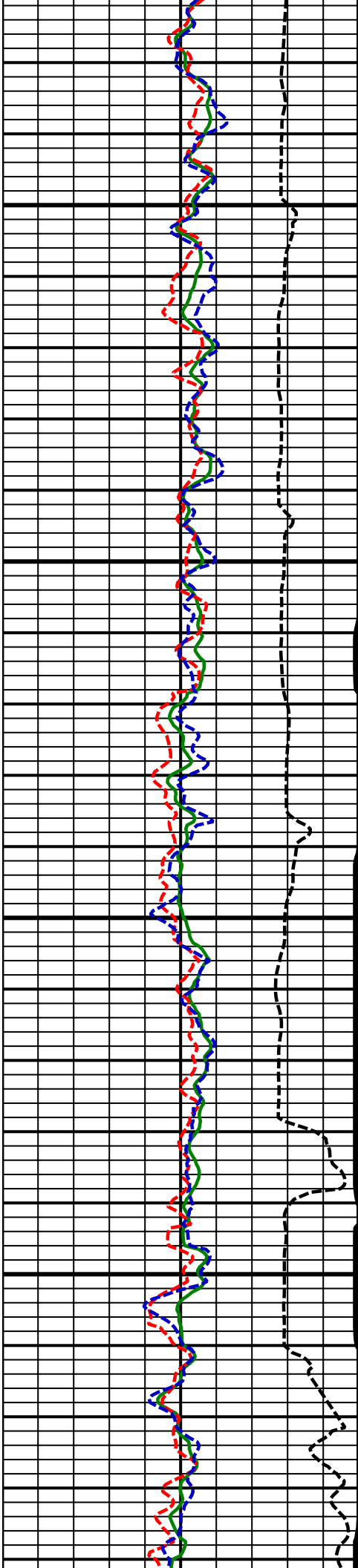




16300
MD

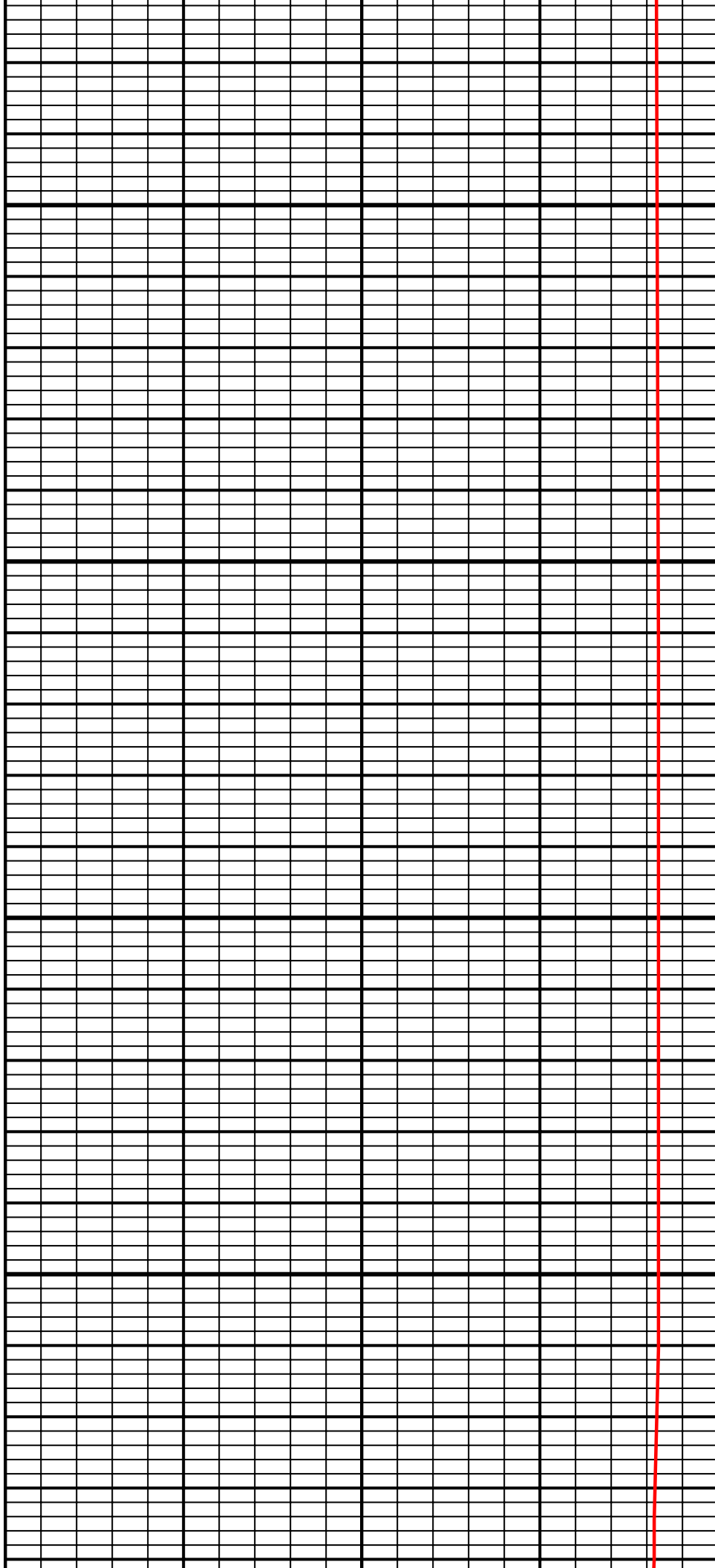
16400
MD

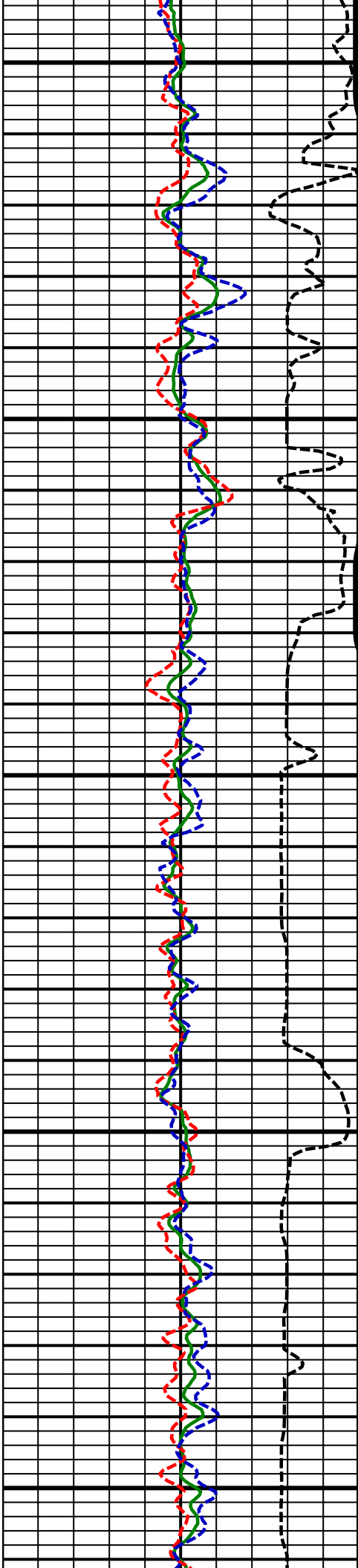




16500
MD

16600
MD

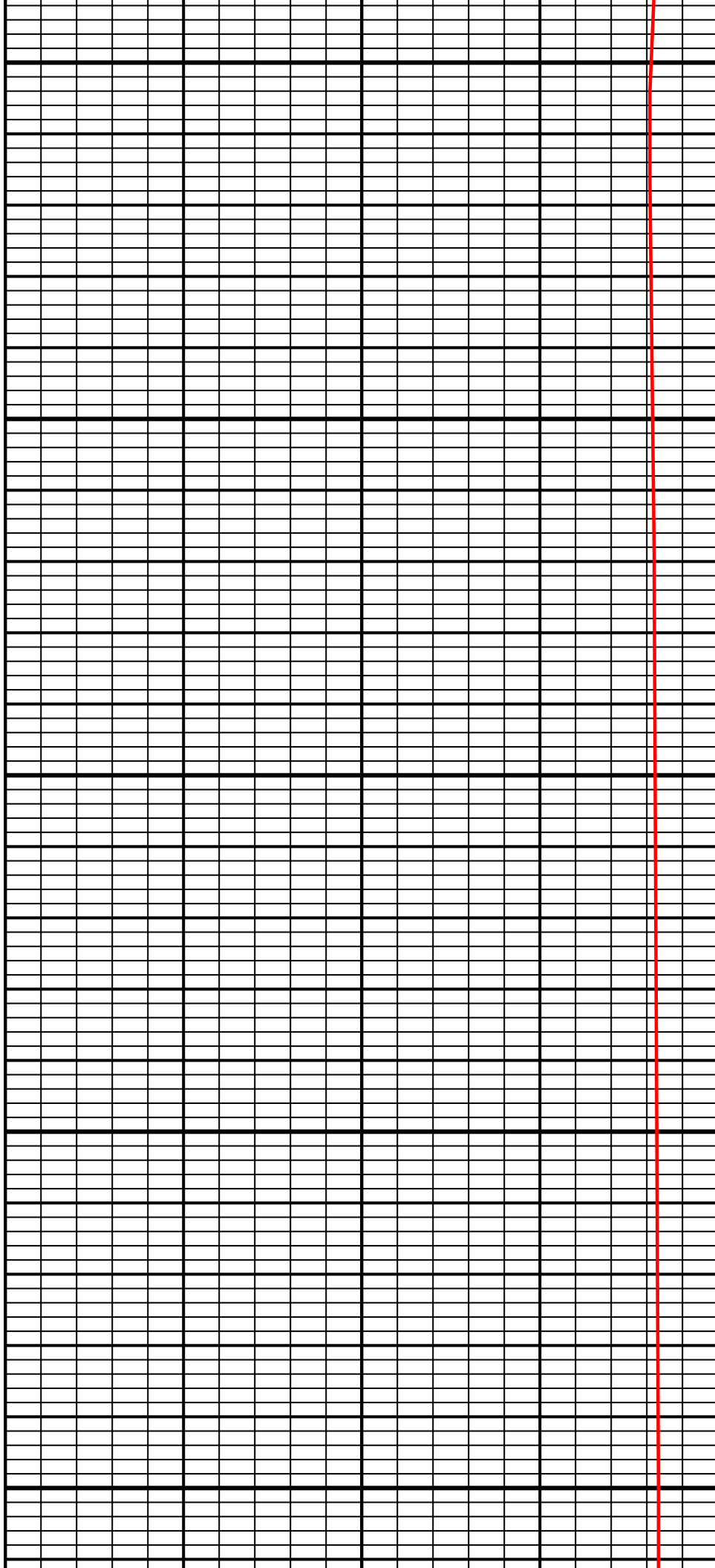


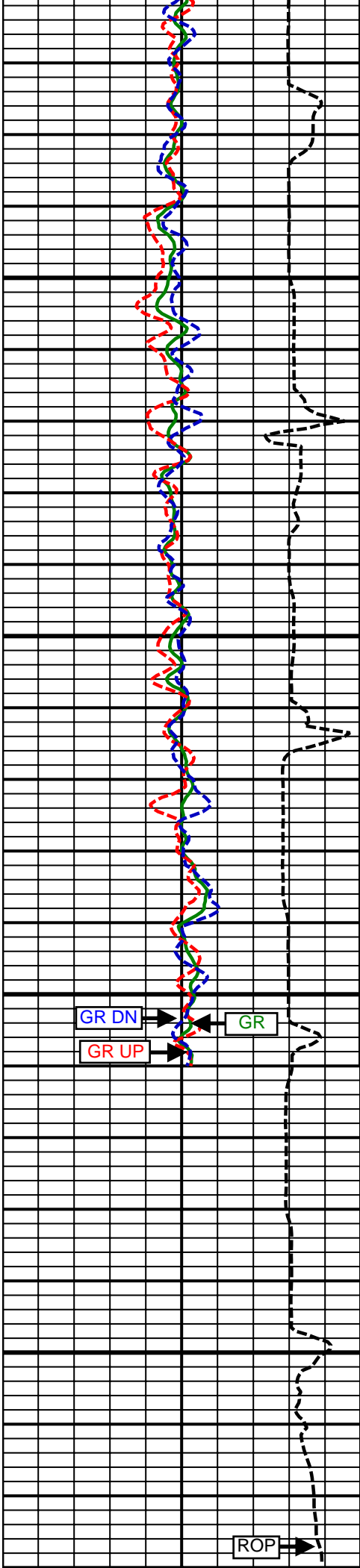


16700
MD

16800
MD

16900
MD

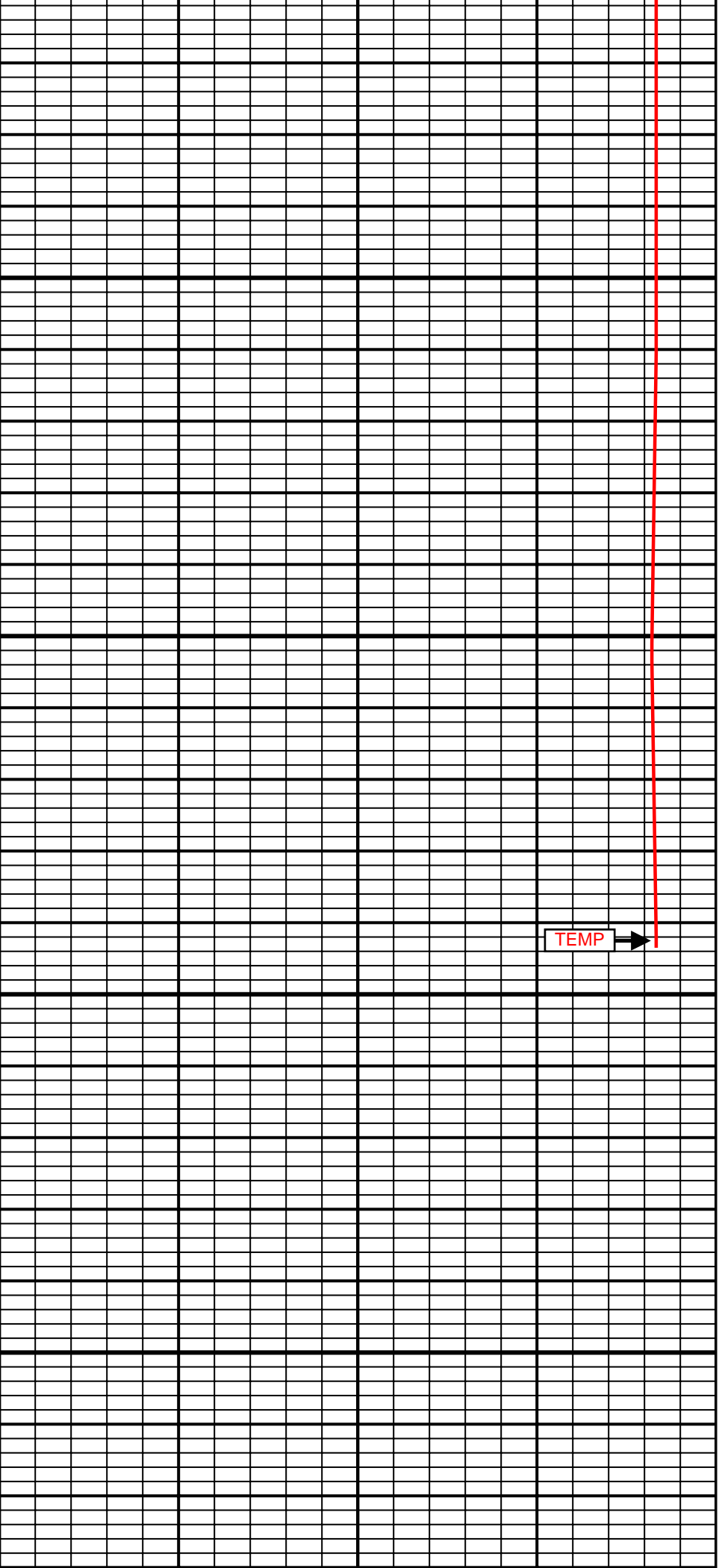




17000
MD

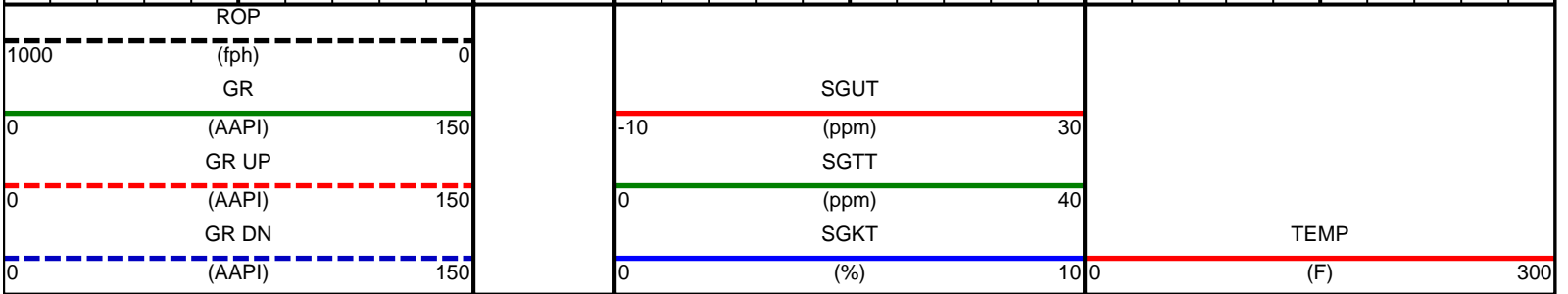
17100
MD

Comment
4-2



TEMP →

ROP →



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

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

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.



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>