



Cathedral Energy
4701 United Drive
Oklahoma City, OK 73179
405-261-6011 (Office)
405-261-6188 (Fax)

Melbon Ranch 4C-17H-M265

Scale 5":100' - MD

9/27/2018 12:50 PM

Oper. Company: Crestone Peak Resources

Well: Melbon Ranch 4C-17H-M265

Field: DJ Basin

Rig: Ensign 153

Well ID: 05-123-47753-0000

Job Number: 185289

Notes: Gamma Ray Log
Section Plan: 91.38°
Datum: NAD 1983 (NADCON CONUS)
Magnetic North: 8.15°
Grid Convergence: 0.52°
Gamma Averaging: 7% Smoothing

State: CO

County: Weld

Country: USA

Location: Sec 17 T2N-R65W

Start Date: 09/25/2018 01:30:00

End Date: 09/27/2018 12:30:00

Latitude: 40.134852
Longitude: -104.696635

Elev GL: 4956.00

Elev DF: 4979.00

Elev KB: 4979.00

Notes: Log & Survey Depths Relative to Kelly Bushing (KB) Depth

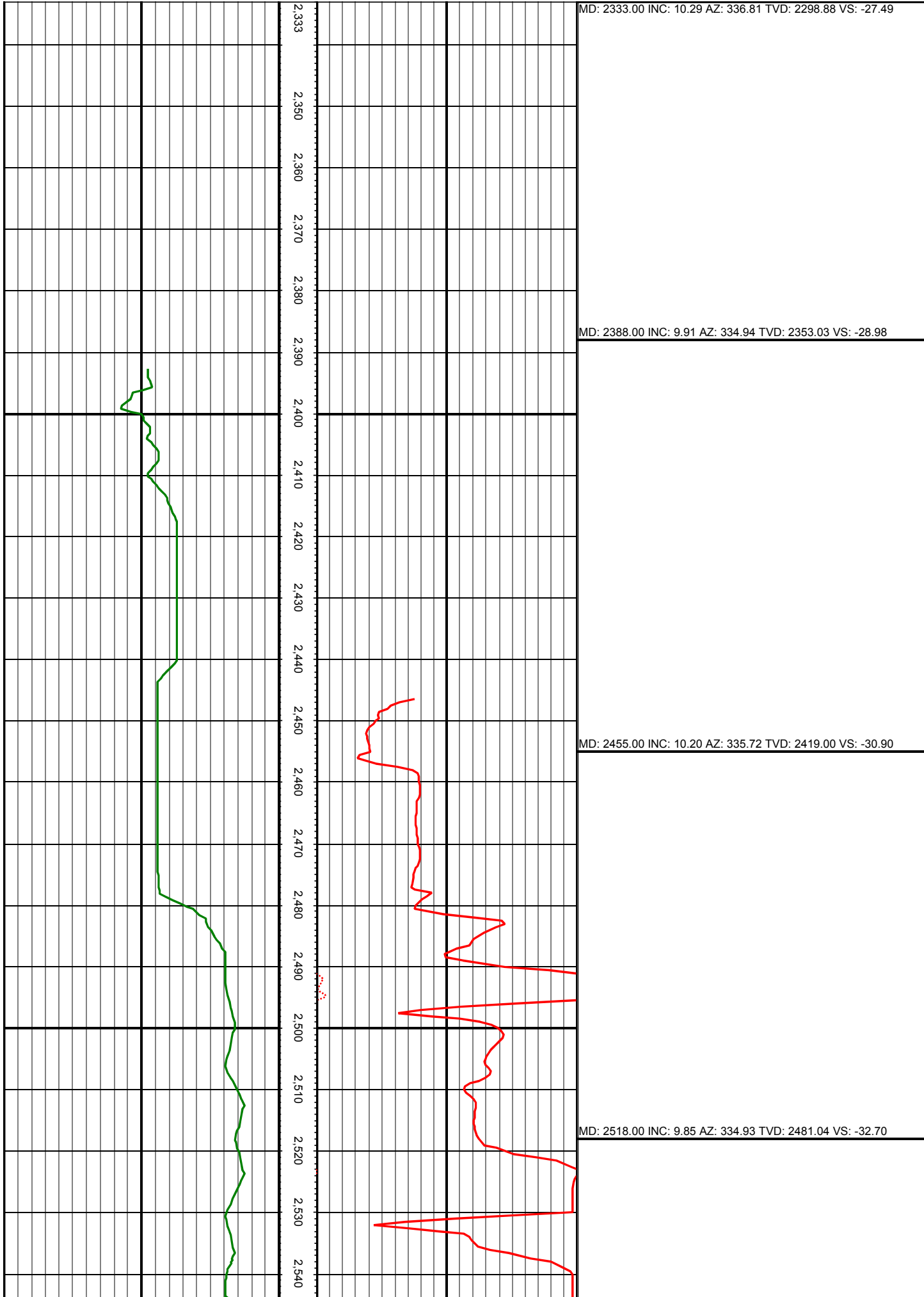
Operator 1: Bob Stahlecker

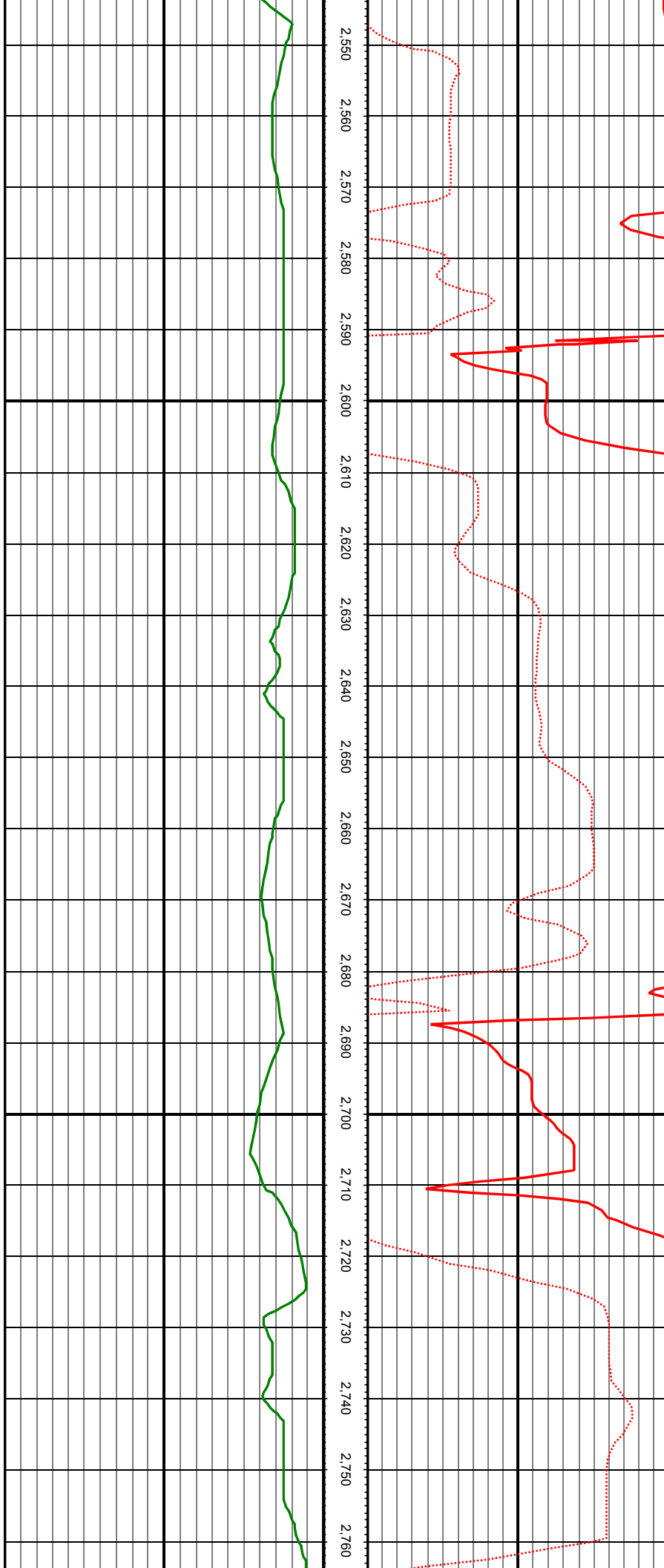
Operator 2: Kyle Regan

Notes: Maximum Temperature: 251.00°F

Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	BTDM-1526				
Bit Size	8.50				
Cal Factor	5.24				
Survey Offset	72.00				
Gamma Offset	53.87				
Resistivity Offset	0.00				
Start Depth	2445.00				
StartDate	9/25/2018				
StartTime	01:30				
EndDepth	12055.00				
EndDate	9/27/2018				
EndTime	12:30				
Mud Type	OBM / INVERT				
Mud Weight	9.85 PPG				
Funnel Viscosity	50.00 SEC/QT				
Plastic Viscosity	18.00 CP				
Yield Point	11.00 LBS/100FT2				
Gel Strength	8.00/10.00/12.00 LBS/100FT2				
Solids Content	8.30 %				
Sand Content	0.01 %				
Mud Alkalinity	3.50 PPG				
Filtrate Alkalinity	0.00 API				
Chlorides	30,000.00 MG/L				
Temperature	251.00 °f				
Hole Data			Casing Data		
Size	From	To	Size	From	To
12.25	0.00	2445.00	9.875	0.00	2445.00
8.50	2445.00	12055.00	8.5	0.00	12055.00

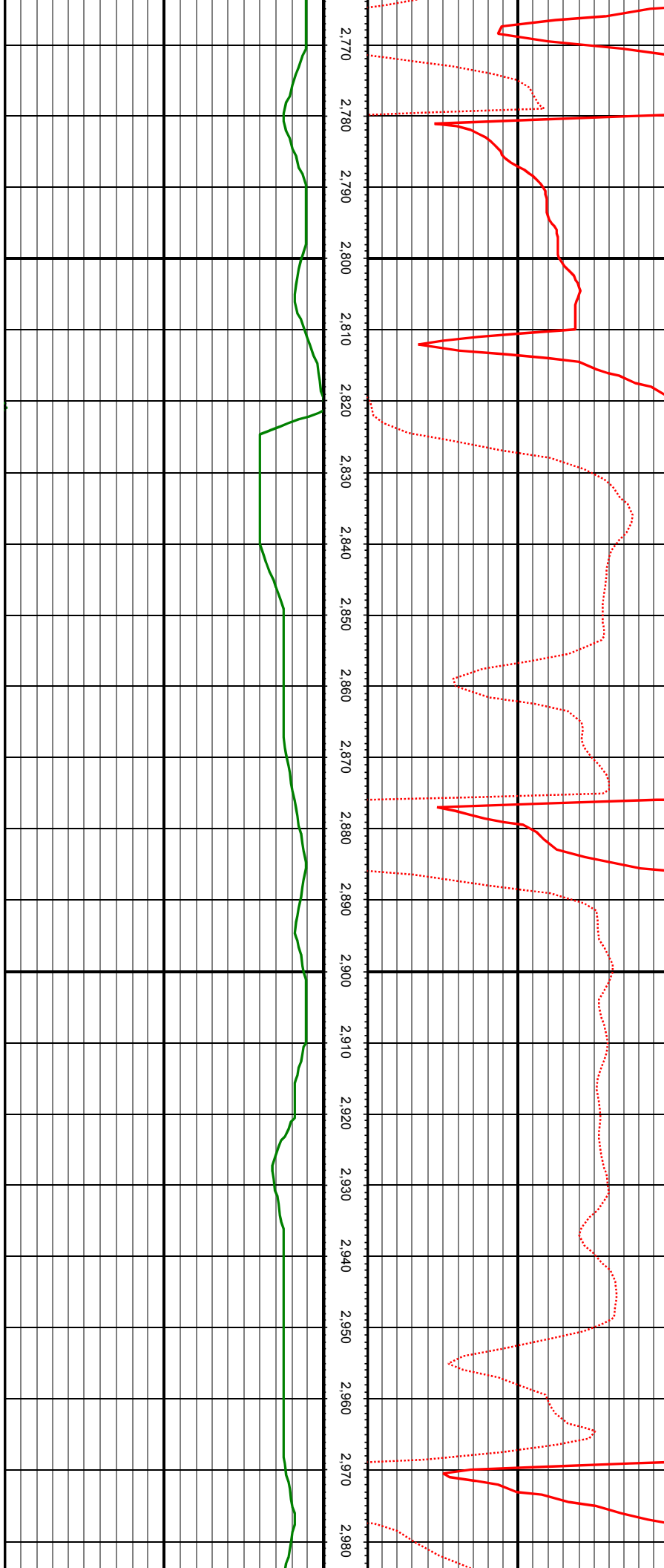
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost damages or expenses incurred or sustained by anyone resulting from an interpretation made by any of our officers, agents, or employees.





MD: 2613.00 INC: 8.79 AZ: 333.35 TVD: 2574.78 VS: -35.53

MD: 2707.00 INC: 9.89 AZ: 340.55 TVD: 2667.54 VS: -37.54



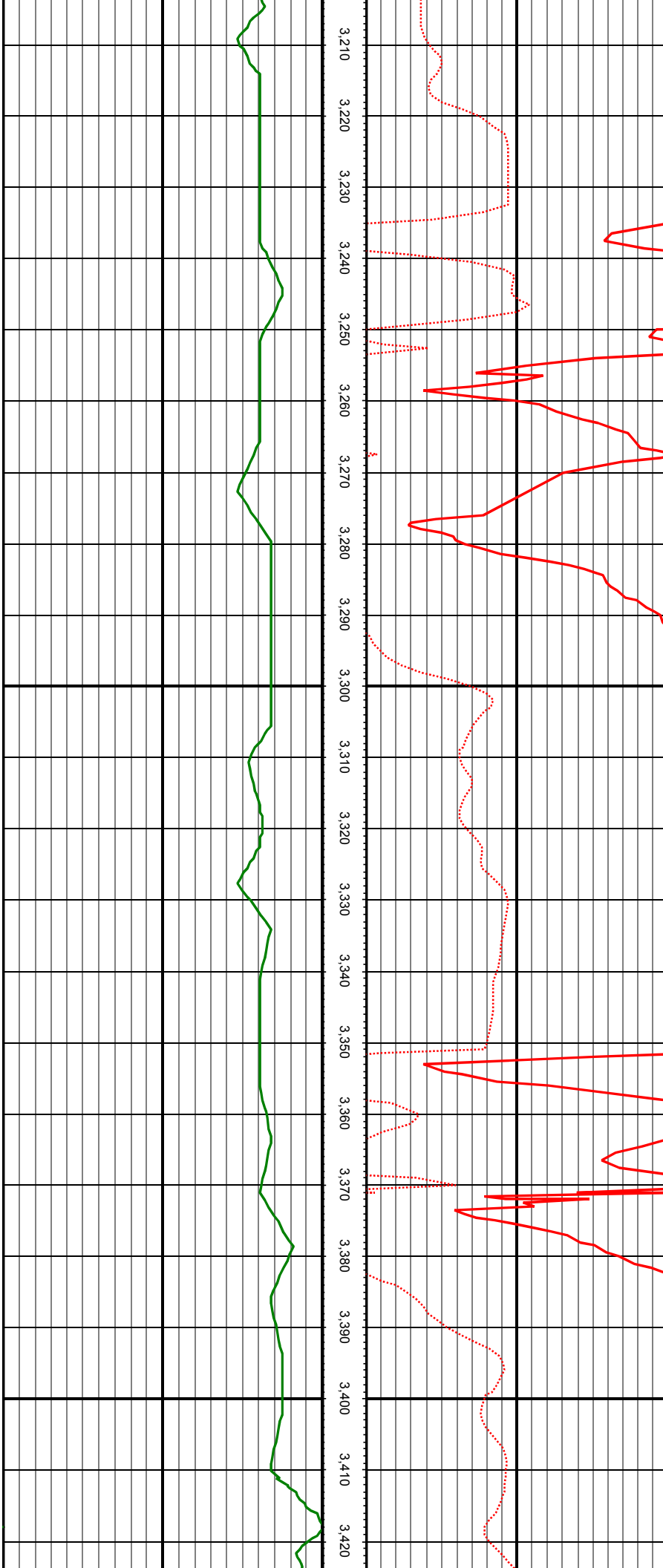
MD: 2802.00 INC: 12.44 AZ: 341.26 TVD: 2760.73 VS: -38.77

MD: 2896.00 INC: 10.86 AZ: 339.85 TVD: 2852.79 VS: -40.15

MD: 2990.00 INC: 9.67 AZ: 338.88 TVD: 2945.29 VS: -41.72

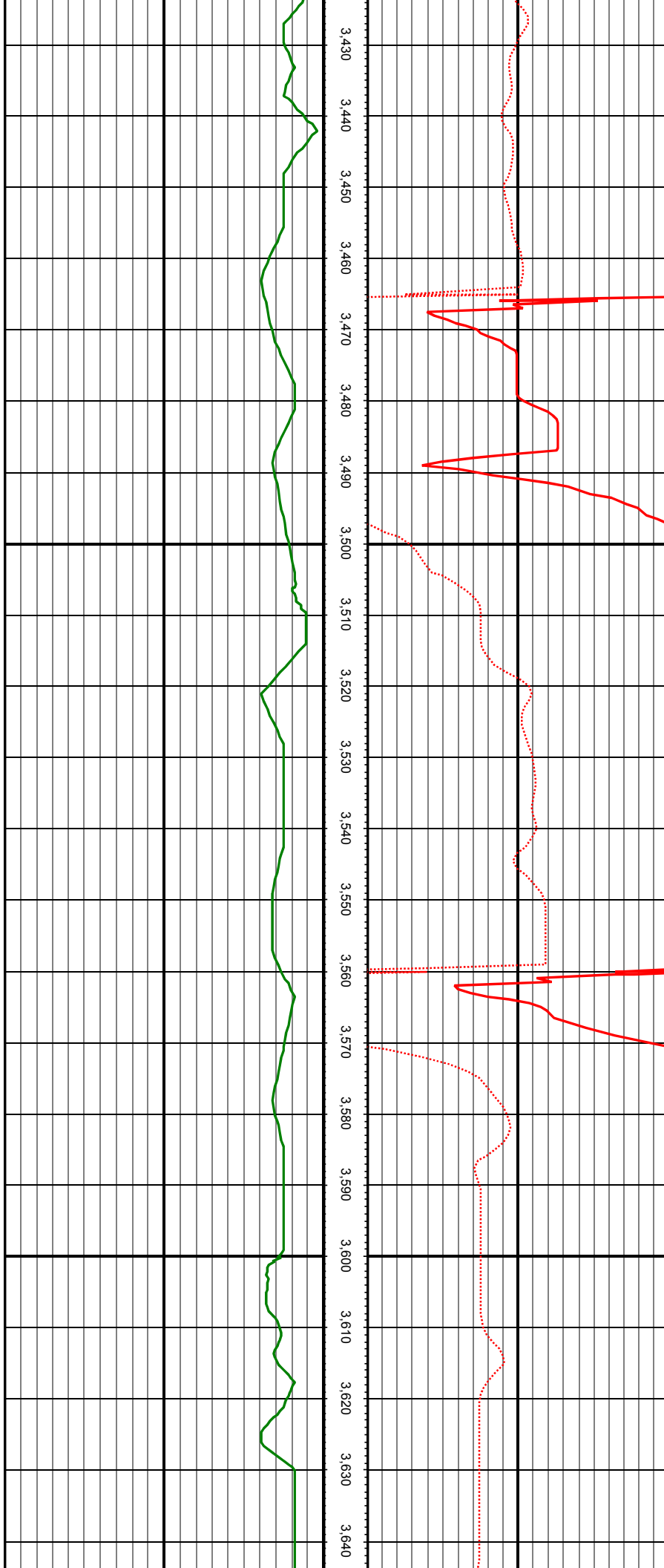
MD: 3085.00 INC: 11.91 AZ: 331.41 TVD: 3038.61 VS: -44.80

MD: 3204.00 INC: 13.98 AZ: 332.47 TVD: 3154.58 VS: -50.70



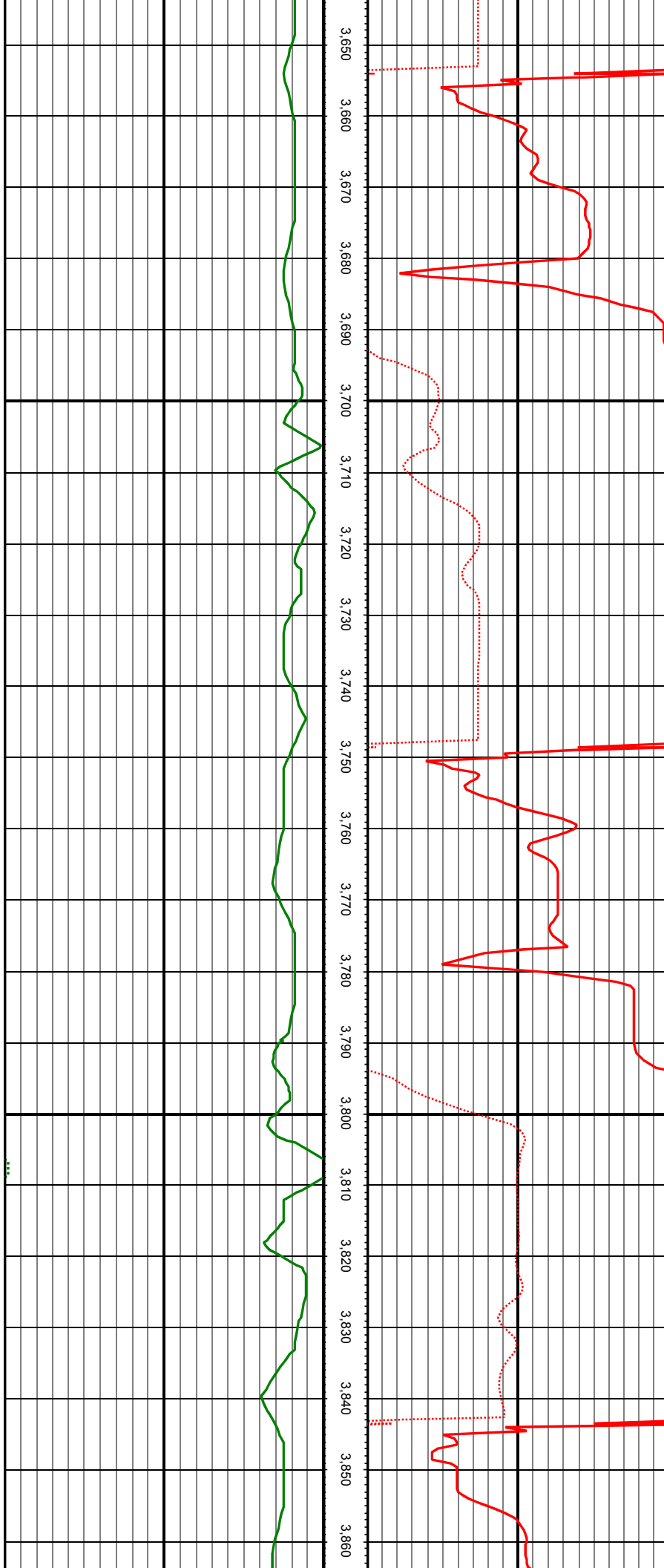
MD: 3298.00 INC: 13.01 AZ: 332.55 TVD: 3245.98 VS: -55.36

MD: 3392.00 INC: 11.03 AZ: 332.73 TVD: 3337.92 VS: -59.48



MD: 3487.00 INC: 11.38 AZ: 333.78 TVD: 3431.10 VS: -63.16

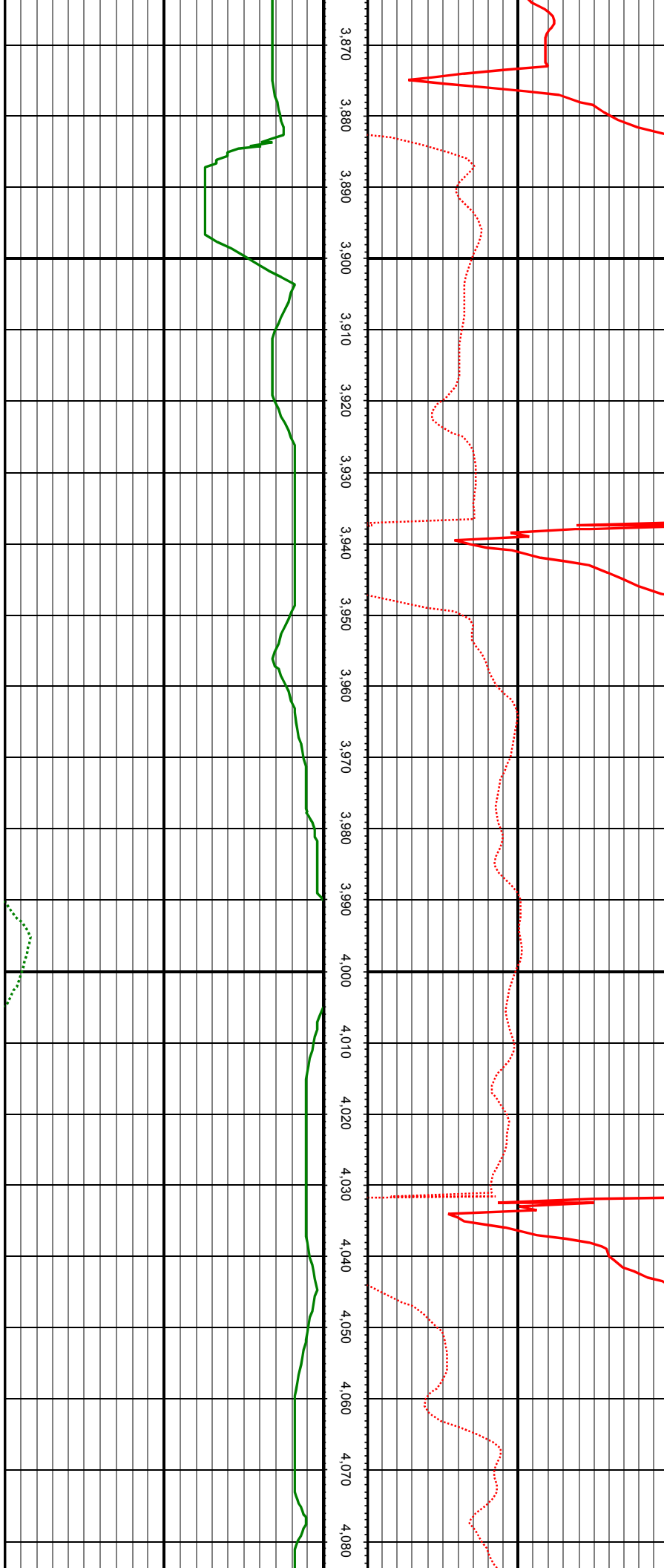
MD: 3581.00 INC: 9.80 AZ: 337.04 TVD: 3523.50 VS: -66.00



MD: 3676.00 INC: 10.68 AZ: 331.15 TVD: 3616.99 VS: -69.16

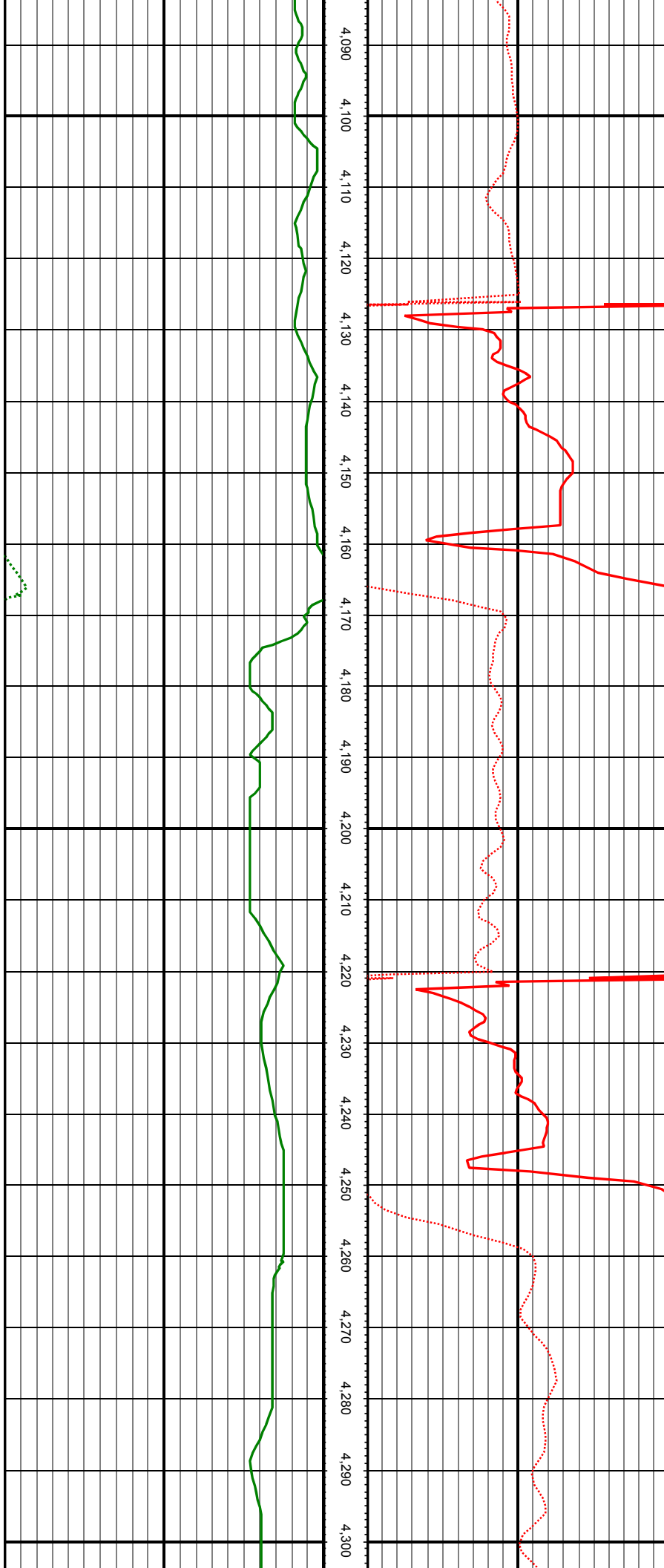
MD: 3770.00 INC: 11.43 AZ: 331.85 TVD: 3709.24 VS: -73.30

MD: 3864.00 INC: 13.01 AZ: 333.78 TVD: 3801.11 VS: -77.40



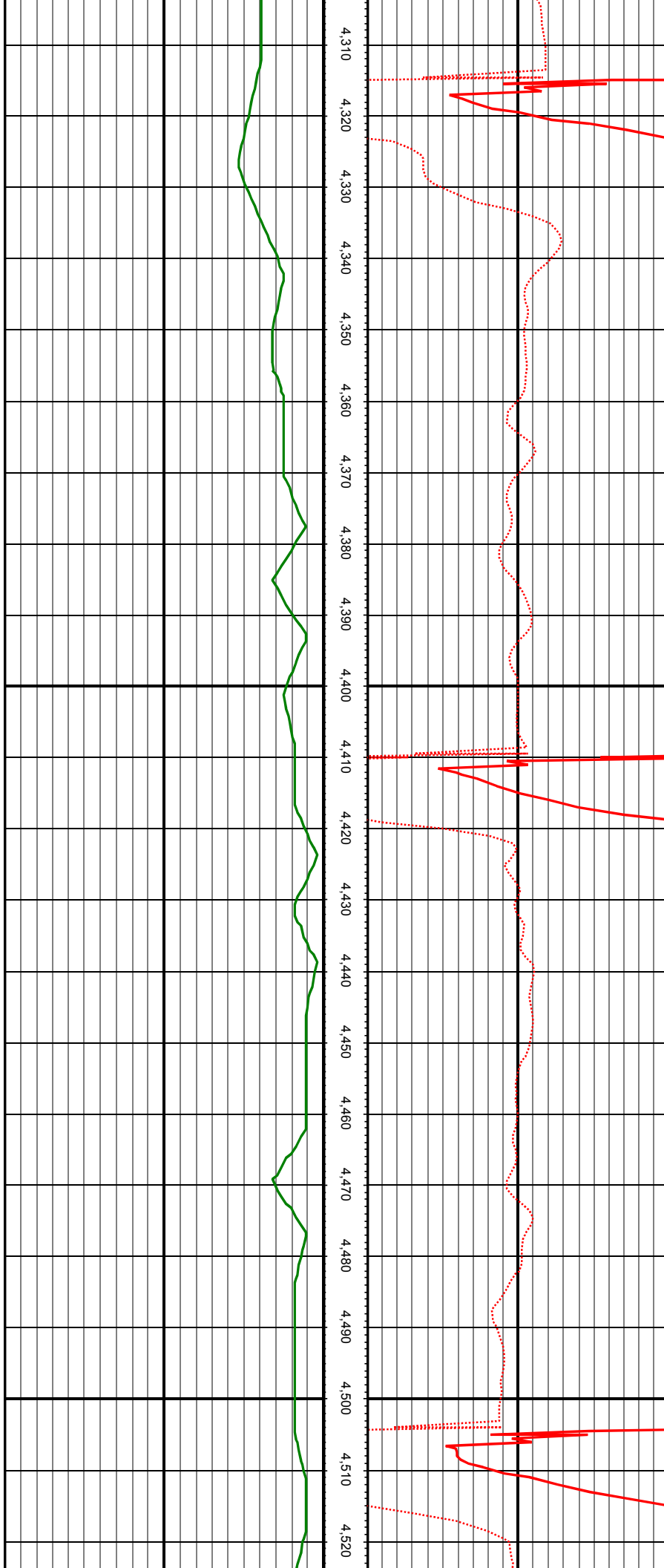
MD: 3959.00 INC: 10.86 AZ: 334.05 TVD: 3894.05 VS: -81.10

MD: 4053.00 INC: 8.62 AZ: 334.05 TVD: 3986.69 VS: -84.06



MD: 4148.00 INC: 10.20 AZ: 338.36 TVD: 4080.41 VS: -86.32

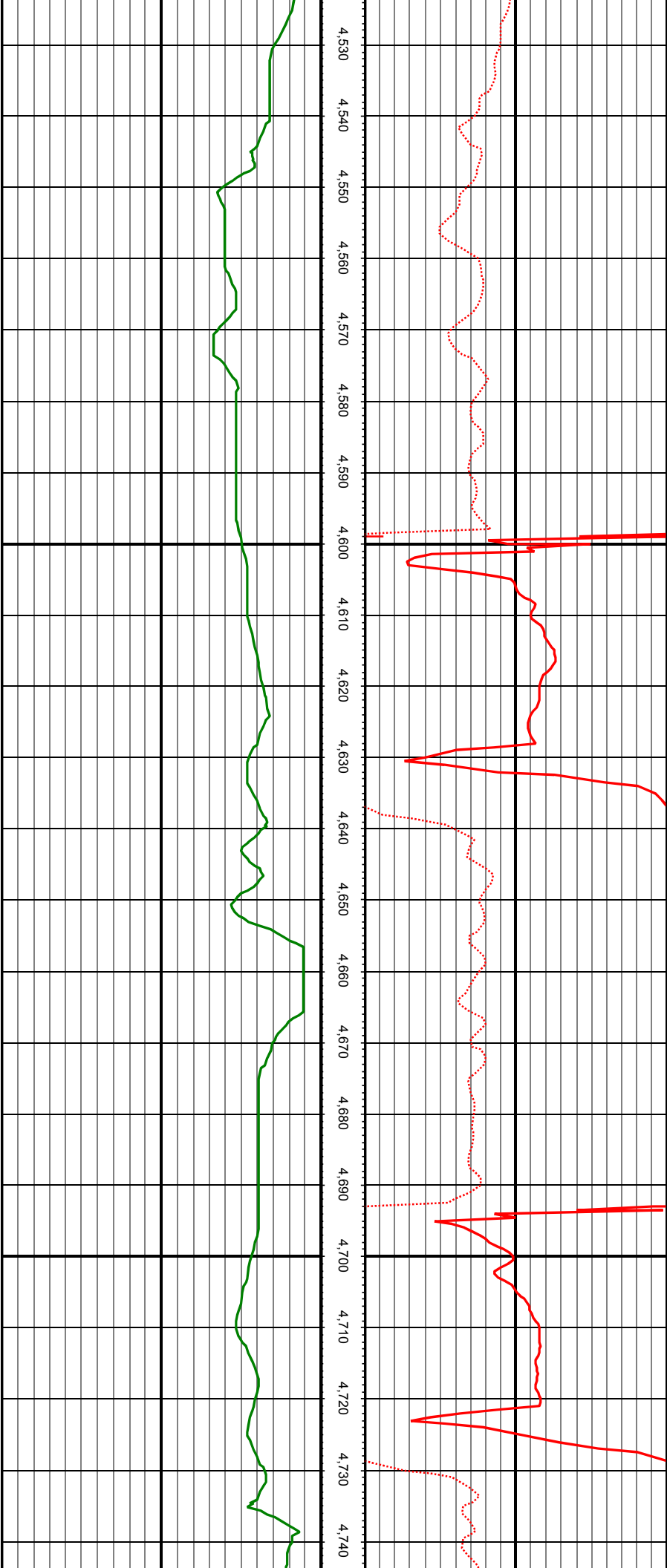
MD: 4242.00 INC: 13.49 AZ: 336.07 TVD: 4172.40 VS: -88.91



MD: 4337.00 INC: 13.49 AZ: 336.69 TVD: 4264.78 VS: -92.14

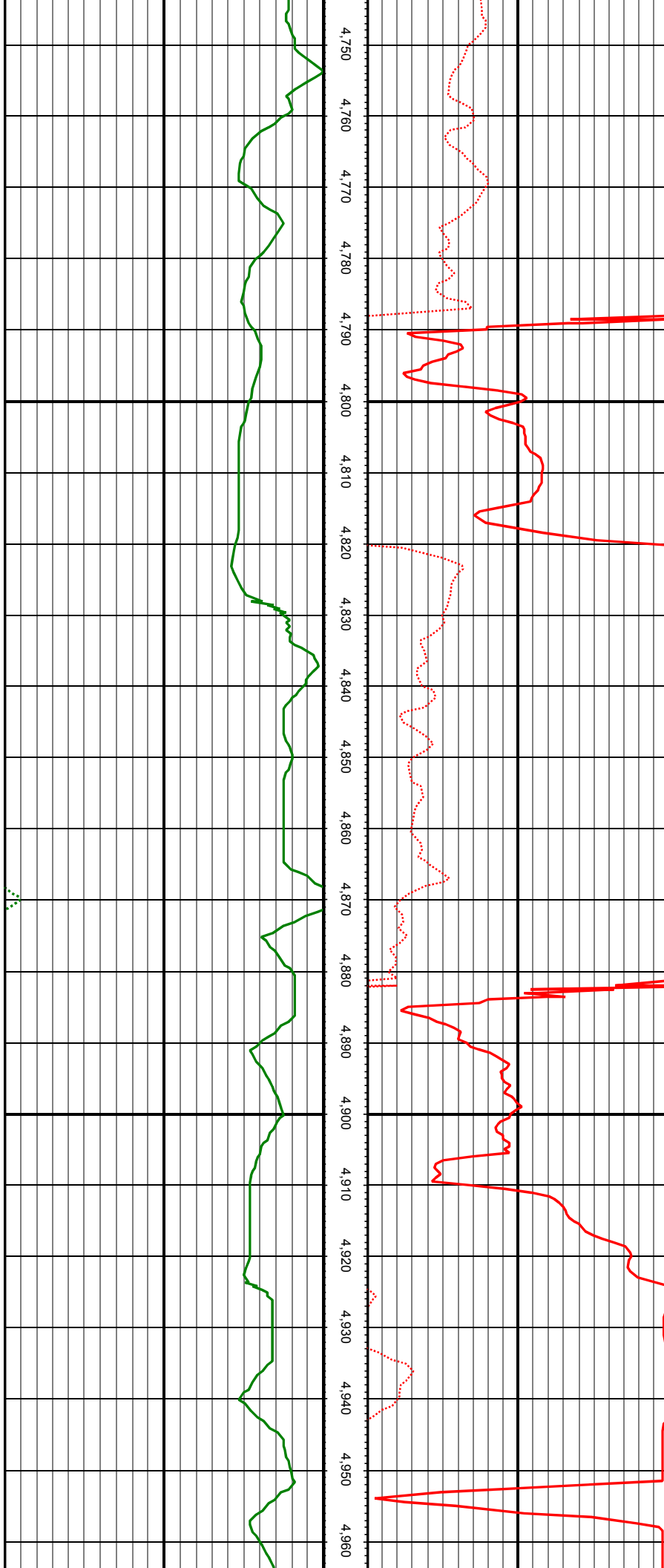
MD: 4432.00 INC: 11.87 AZ: 340.55 TVD: 4357.46 VS: -94.42

MD: 4526.00 INC: 9.98 AZ: 339.67 TVD: 4449.75 VS: -95.86



MD: 4620.00 INC: 10.15 AZ: 341.34 TVD: 4542.30 VS: -97.08

MD: 4715.00 INC: 11.74 AZ: 333.26 TVD: 4635.58 VS: -99.51



MD: 4810.00 INC: 11.82 AZ: 331.32 TVD: 4728.58 VS: -103.70

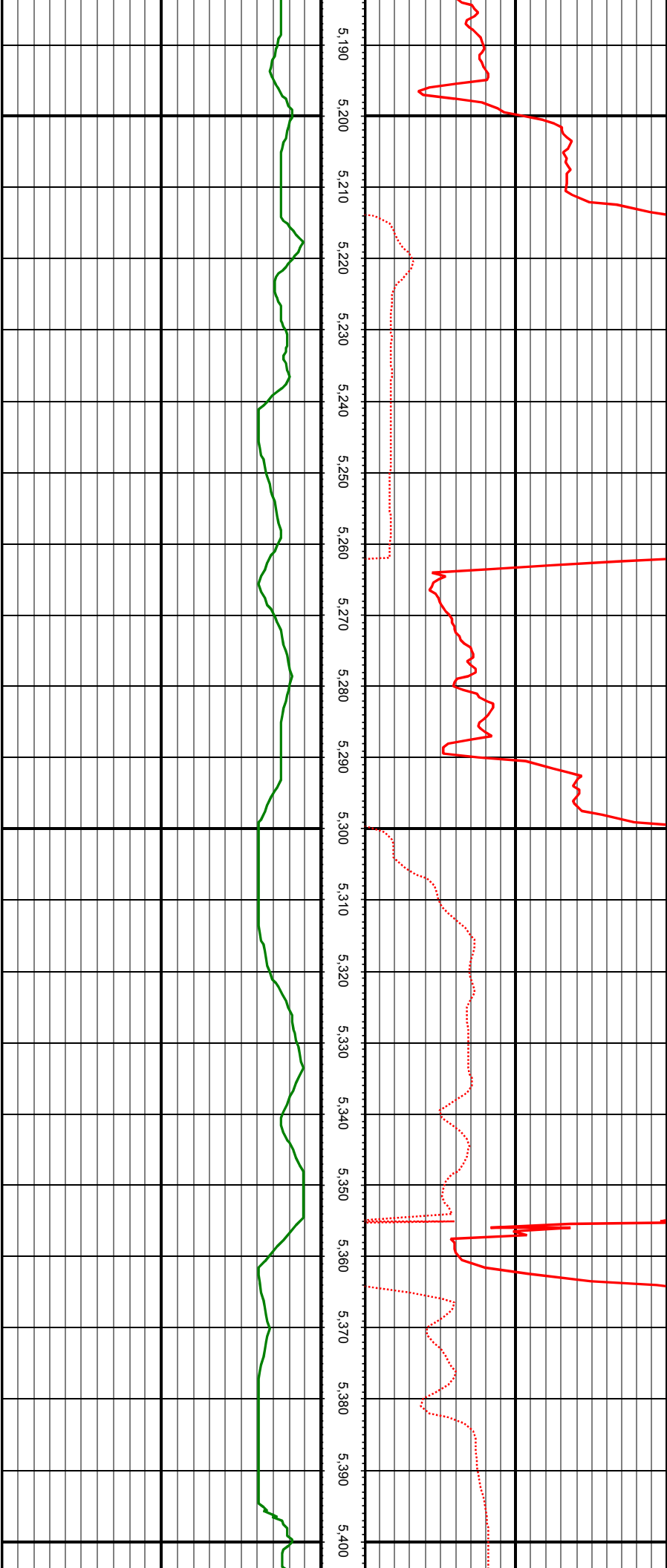
MD: 4904.00 INC: 12.44 AZ: 336.51 TVD: 4820.48 VS: -107.39



MD: 4999.00 INC: 11.69 AZ: 336.86 TVD: 4913.38 VS: -110.19

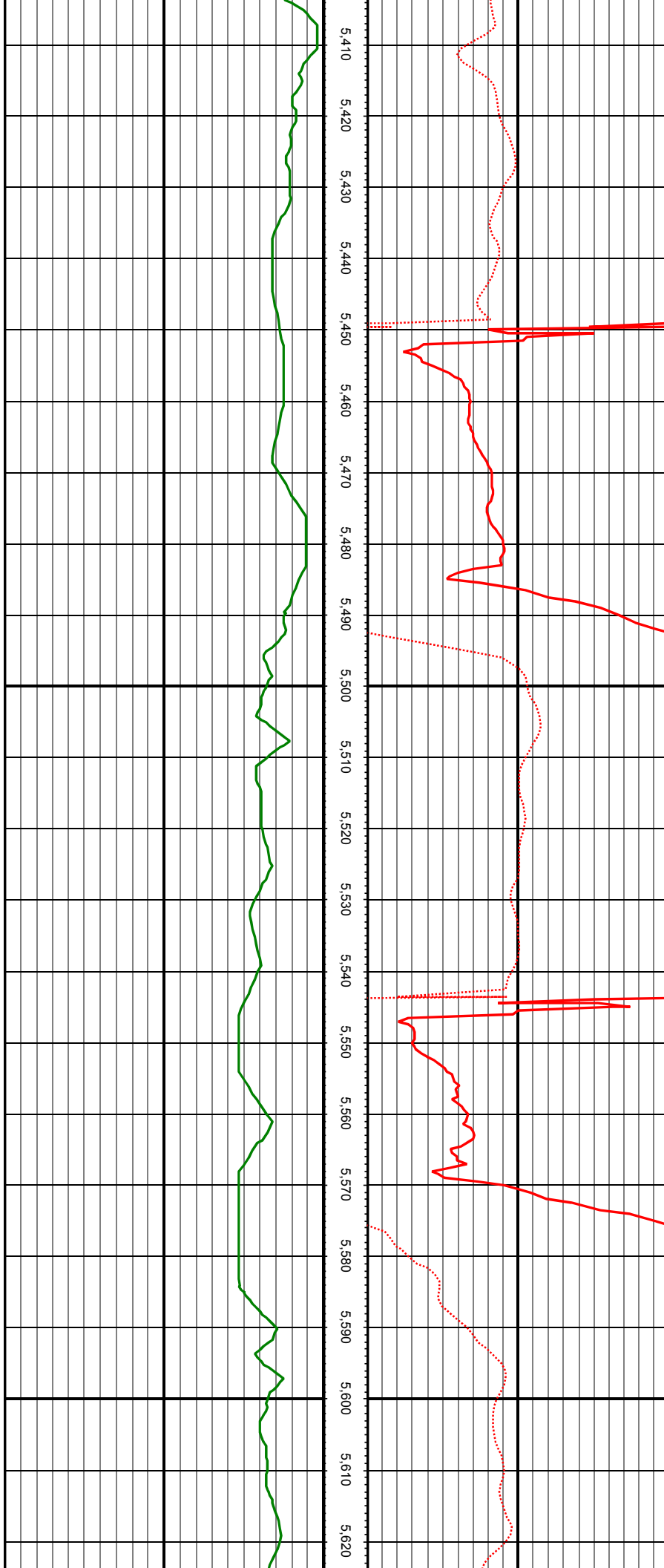
MD: 5094.00 INC: 9.98 AZ: 335.19 TVD: 5006.69 VS: -112.88

MD: 5188.00 INC: 10.64 AZ: 337.21 TVD: 5099.17 VS: -115.38



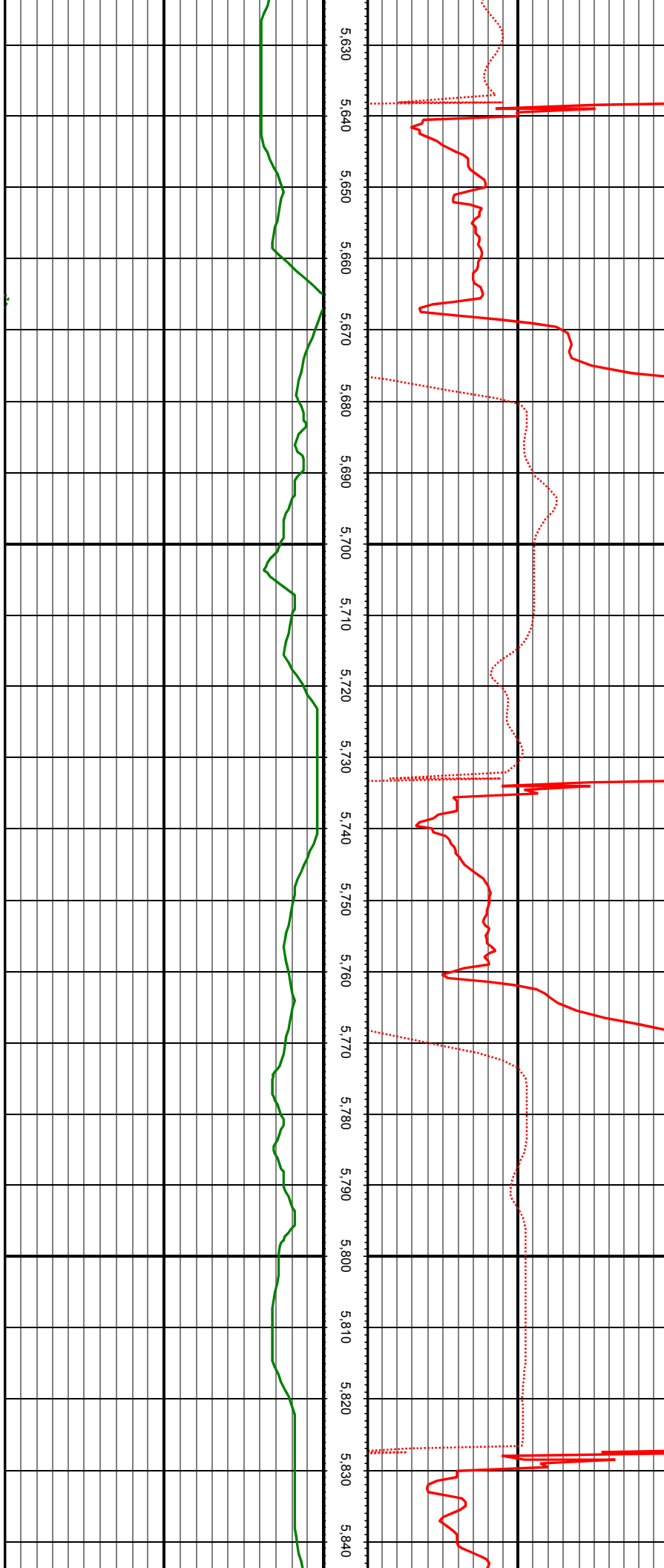
MD: 5282.00 INC: 11.16 AZ: 338.09 TVD: 5191.47 VS: -117.58

MD: 5377.00 INC: 9.14 AZ: 330.01 TVD: 5284.99 VS: -120.57



MD: 5471.00 INC: 9.93 AZ: 339.59 TVD: 5377.69 VS: -123.20

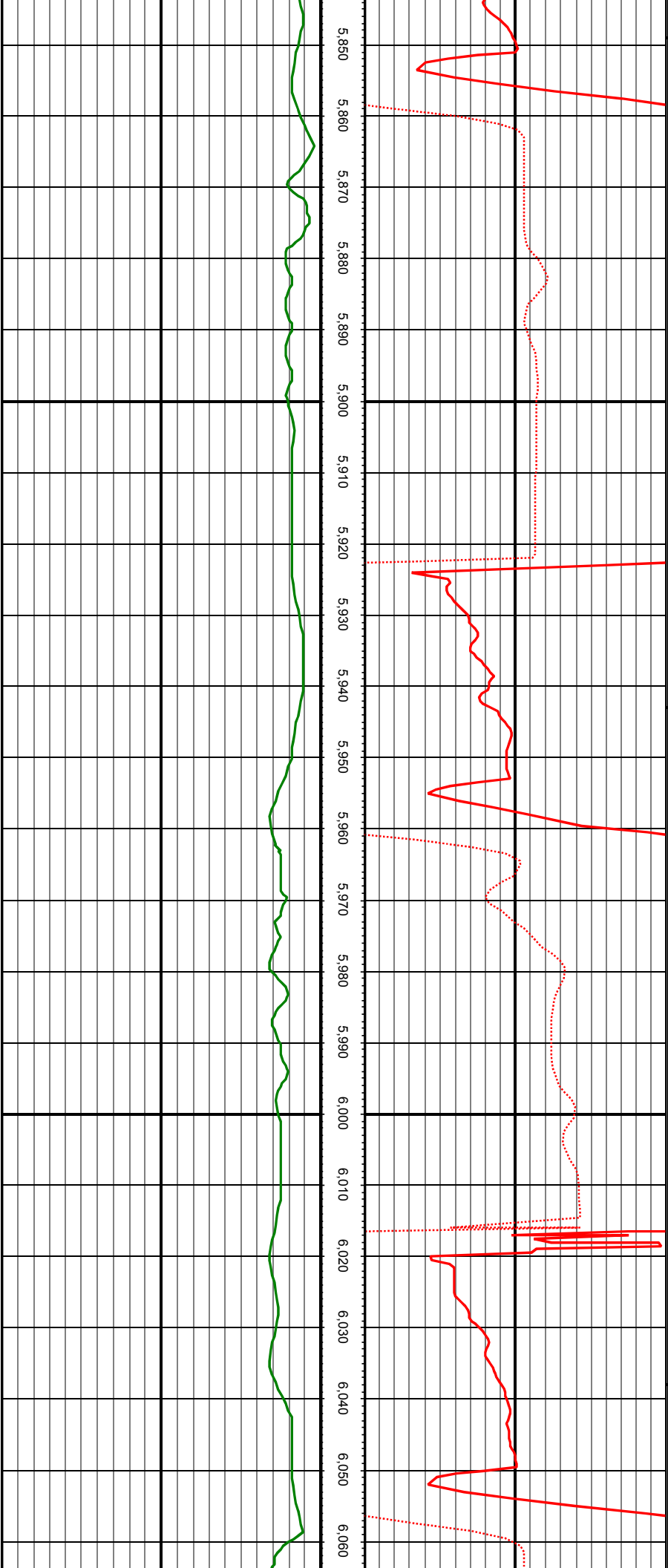
MD: 5565.00 INC: 11.43 AZ: 338.36 TVD: 5470.06 VS: -124.98



MD: 5660.00 INC: 12.26 AZ: 341.69 TVD: 5563.04 VS: -126.57

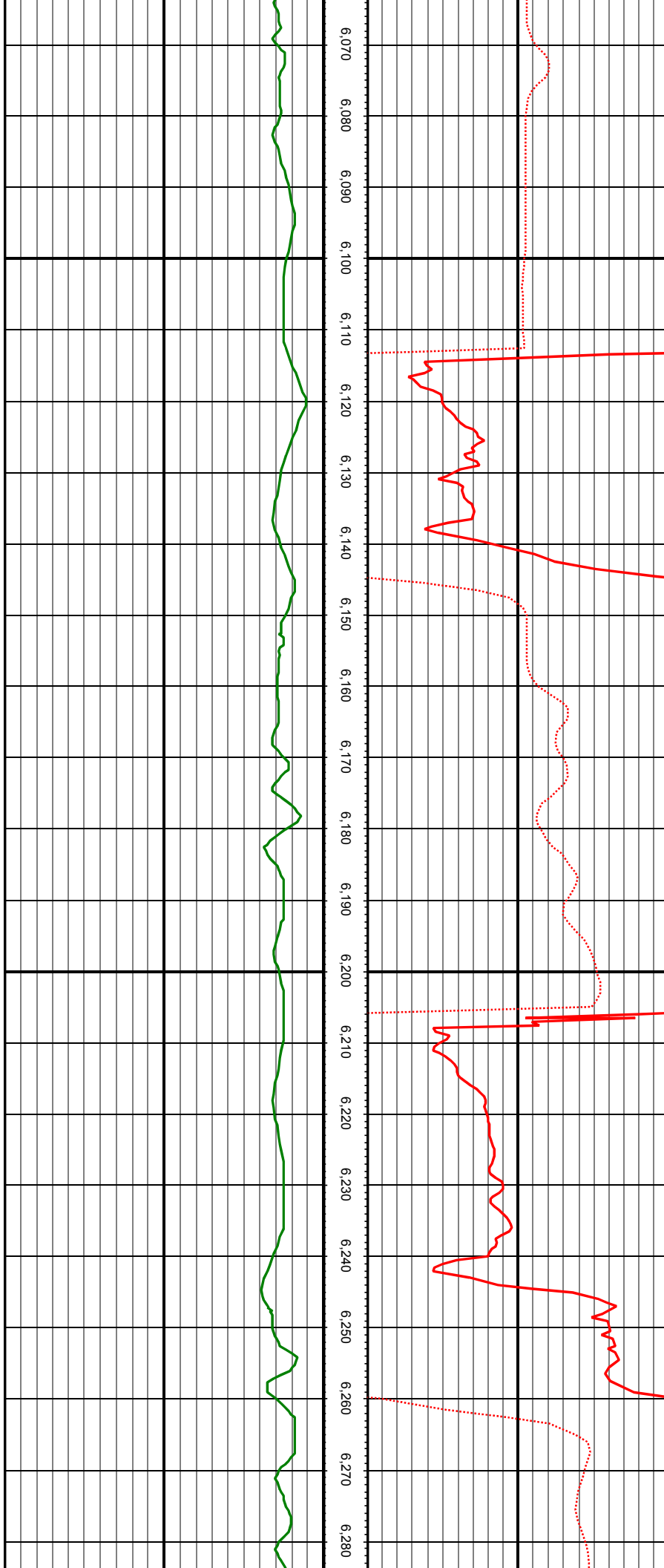
MD: 5754.00 INC: 12.13 AZ: 340.29 TVD: 5654.92 VS: -127.88

MD: 5849.00 INC: 11.25 AZ: 335.81 TVD: 5747.95 VS: -130.10



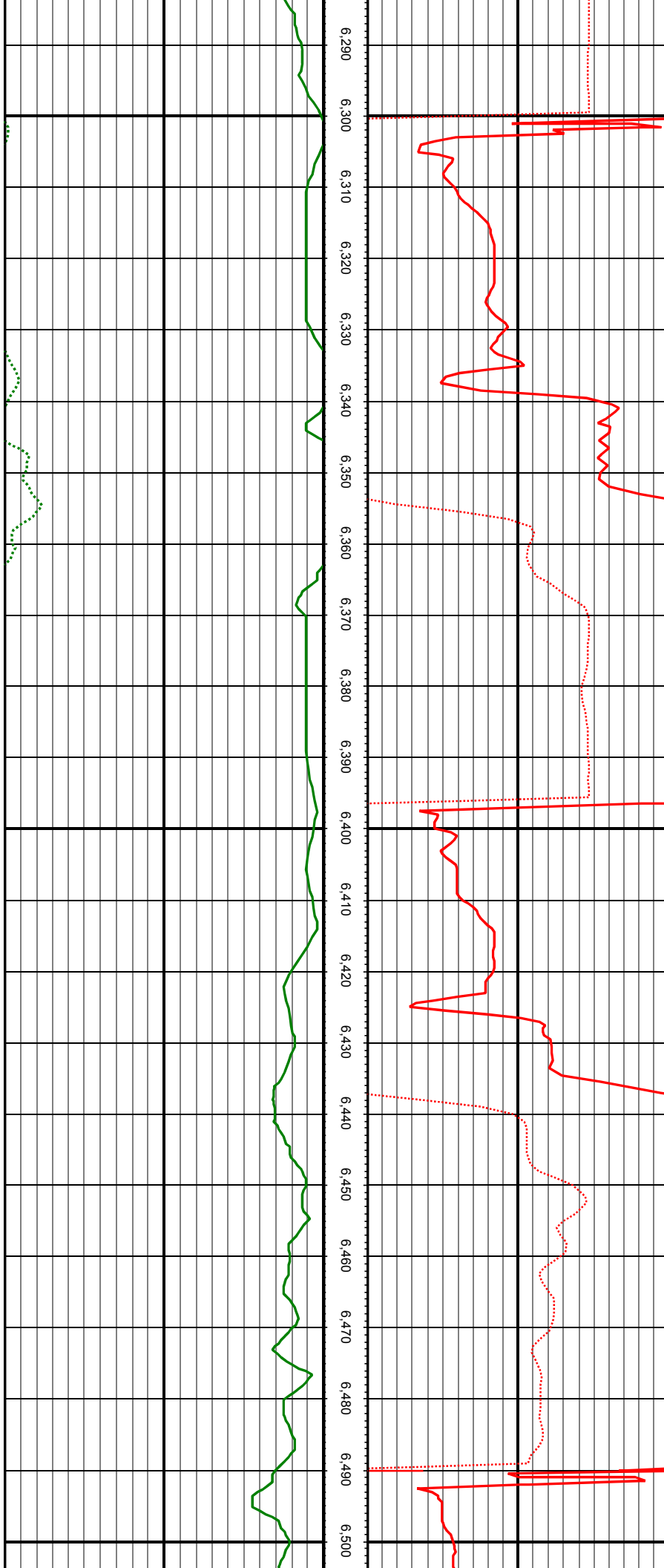
MD: 5943.00 INC: 11.52 AZ: 333.70 TVD: 5840.10 VS: -133.33

MD: 6038.00 INC: 12.09 AZ: 326.58 TVD: 5933.09 VS: -138.26



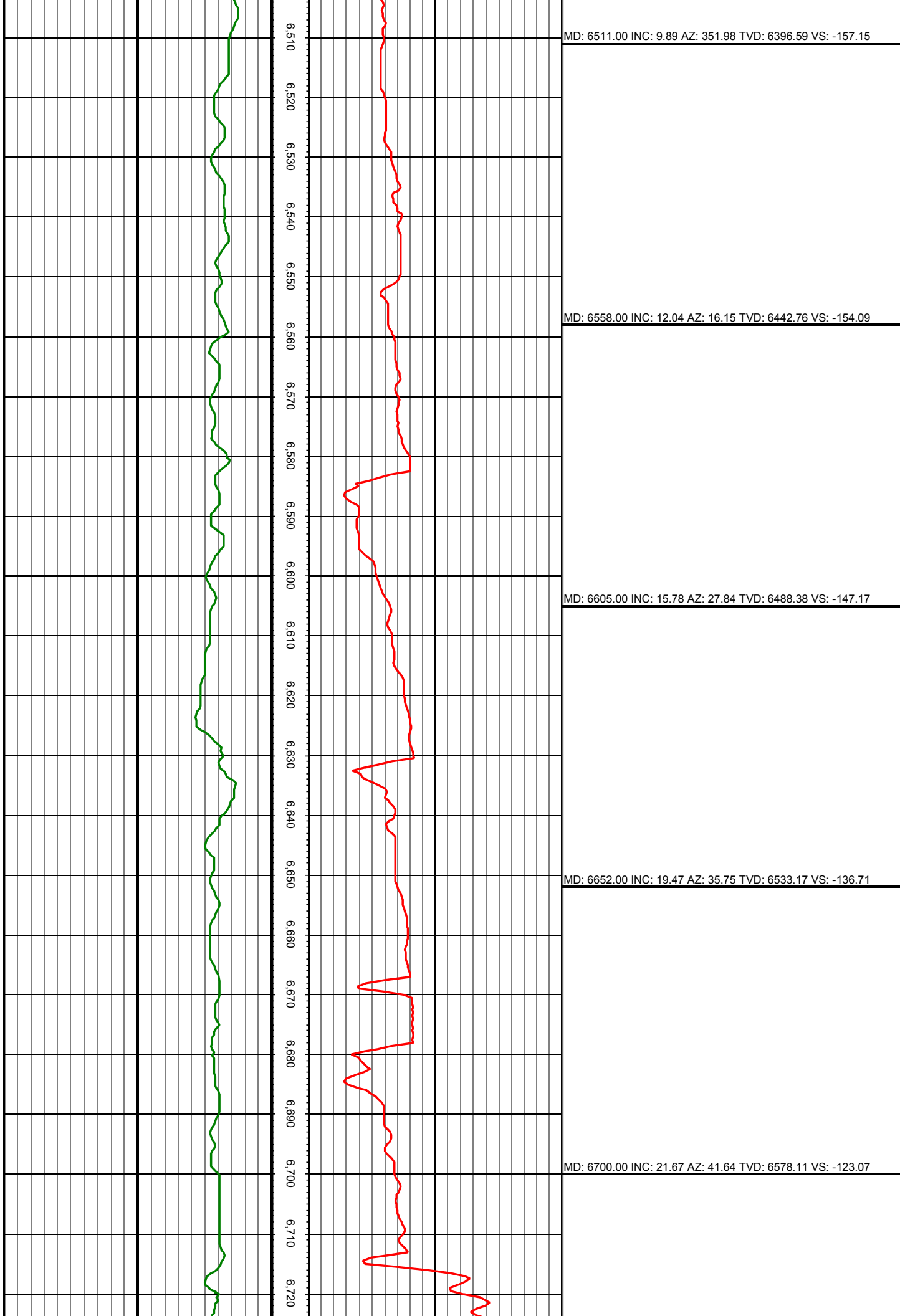
MD: 6133.00 INC: 11.60 AZ: 329.04 TVD: 6026.07 VS: -143.95

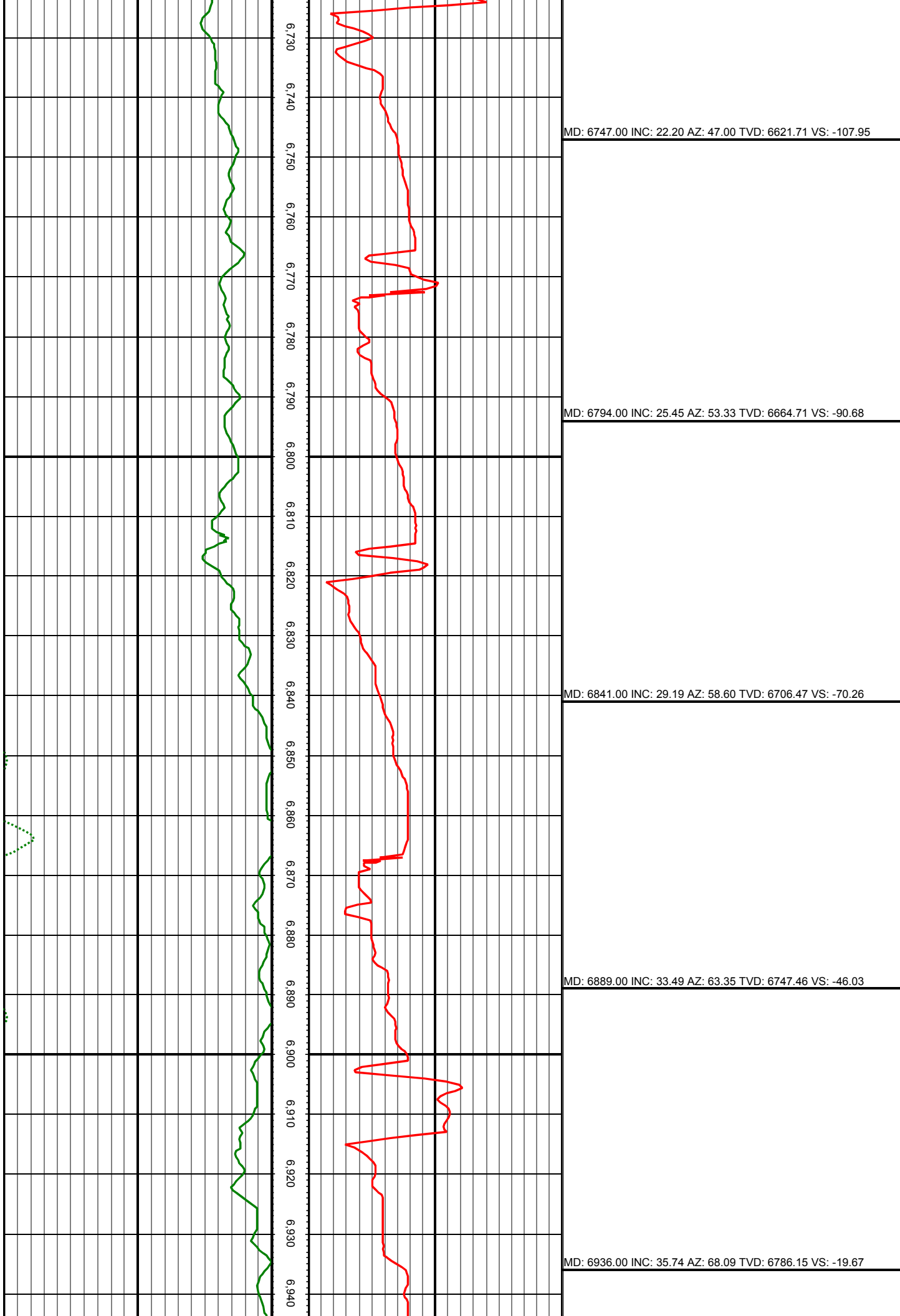
MD: 6228.00 INC: 11.12 AZ: 330.09 TVD: 6119.21 VS: -148.86

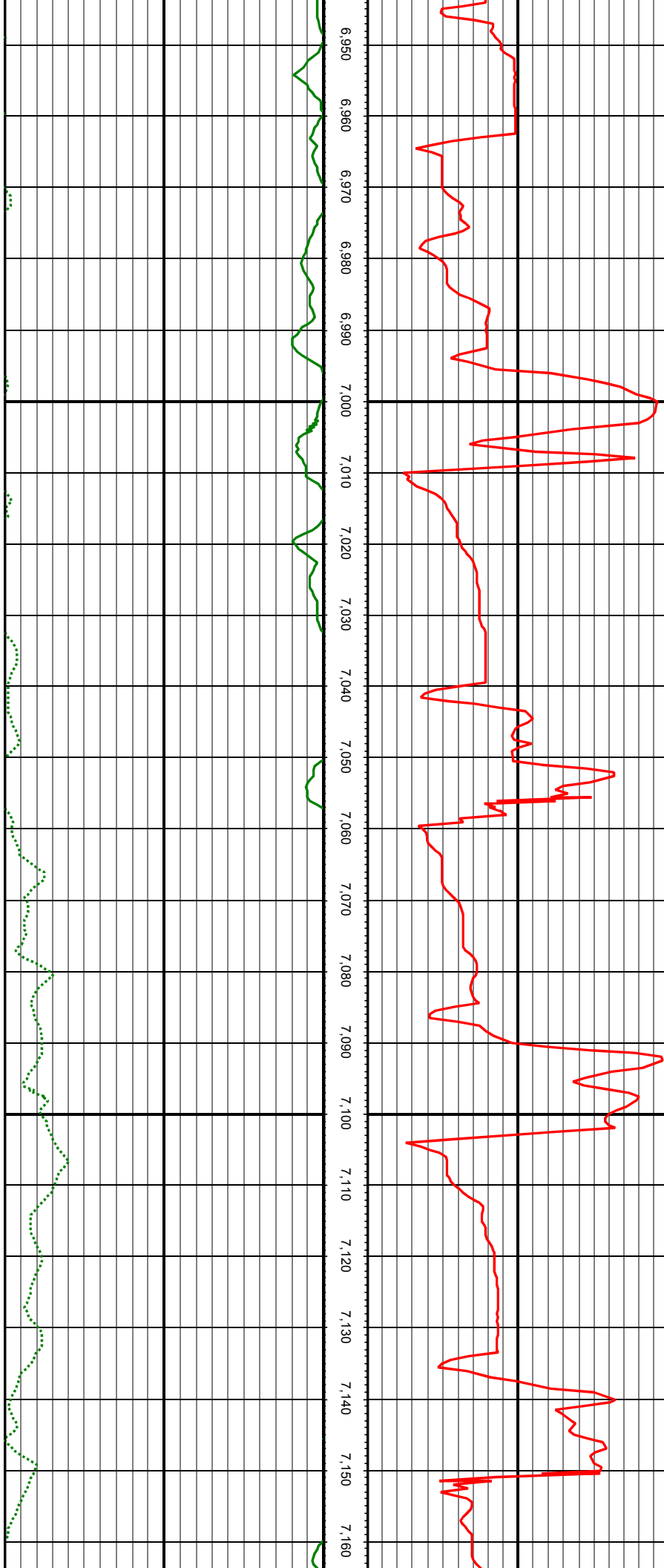


MD: 6322.00 INC: 11.65 AZ: 332.91 TVD: 6211.36 VS: -153.11

MD: 6417.00 INC: 12.18 AZ: 335.89 TVD: 6304.32 VS: -156.63





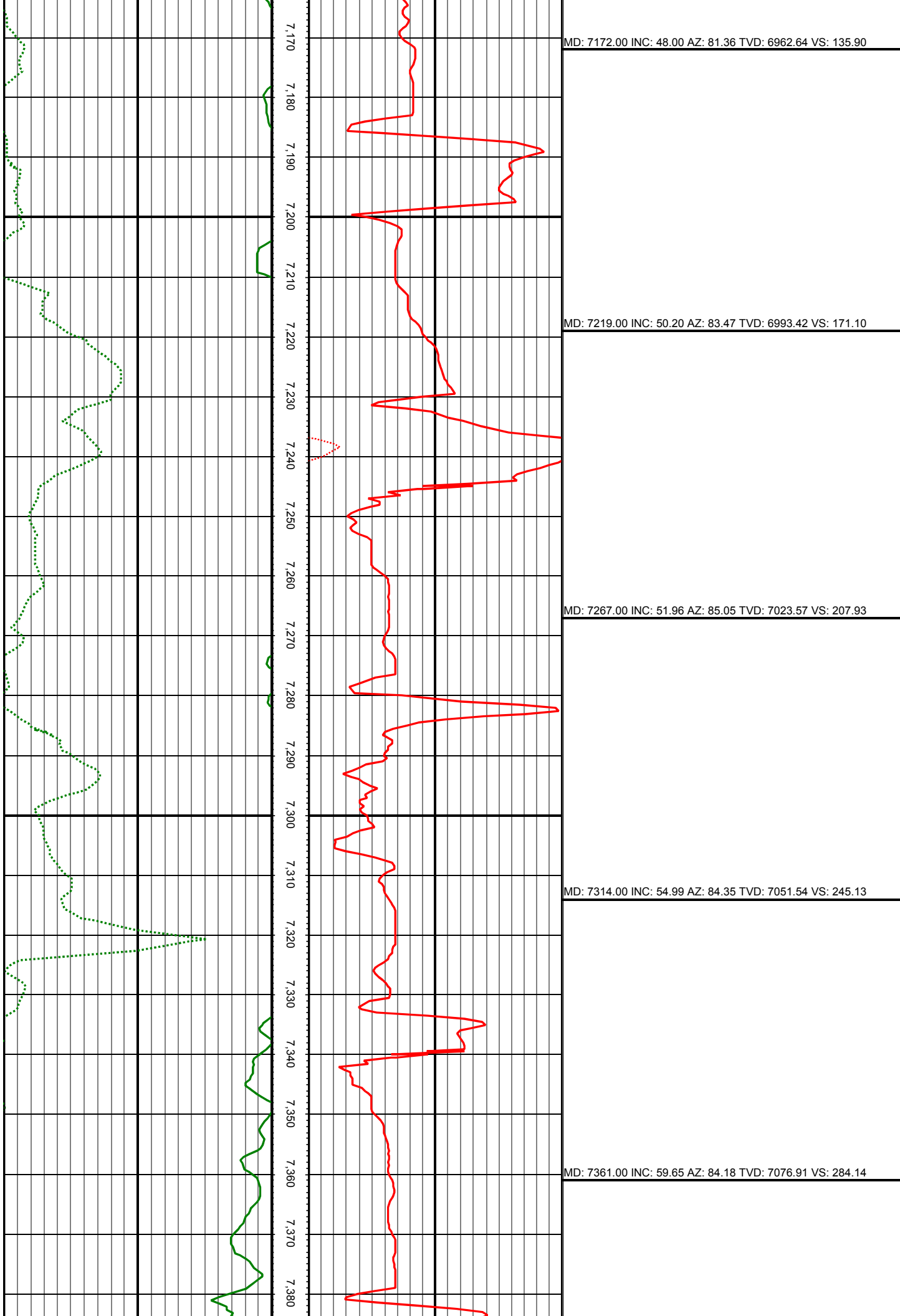


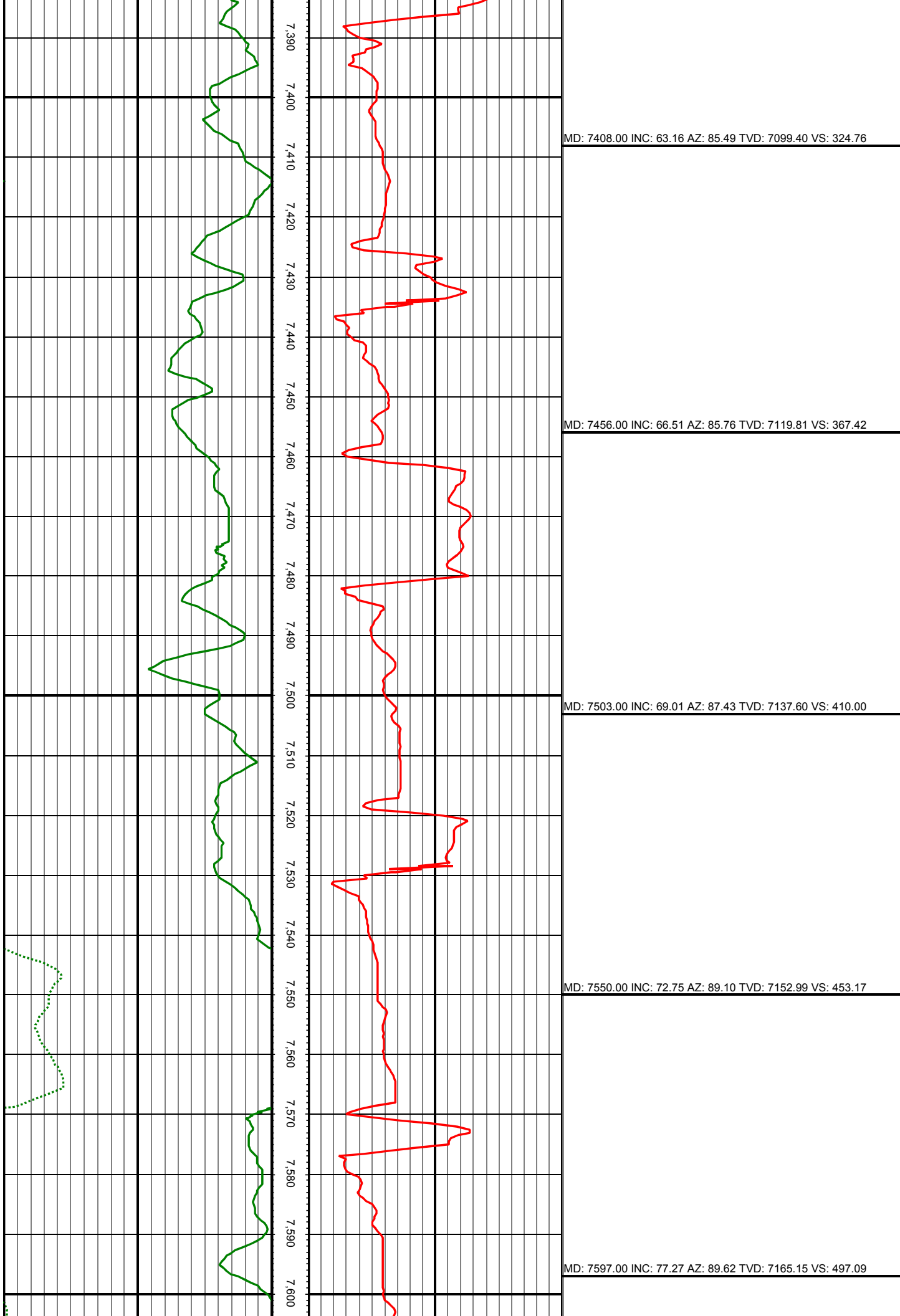
MD: 6983.00 INC: 38.33 AZ: 70.99 TVD: 6823.66 VS: 8.51

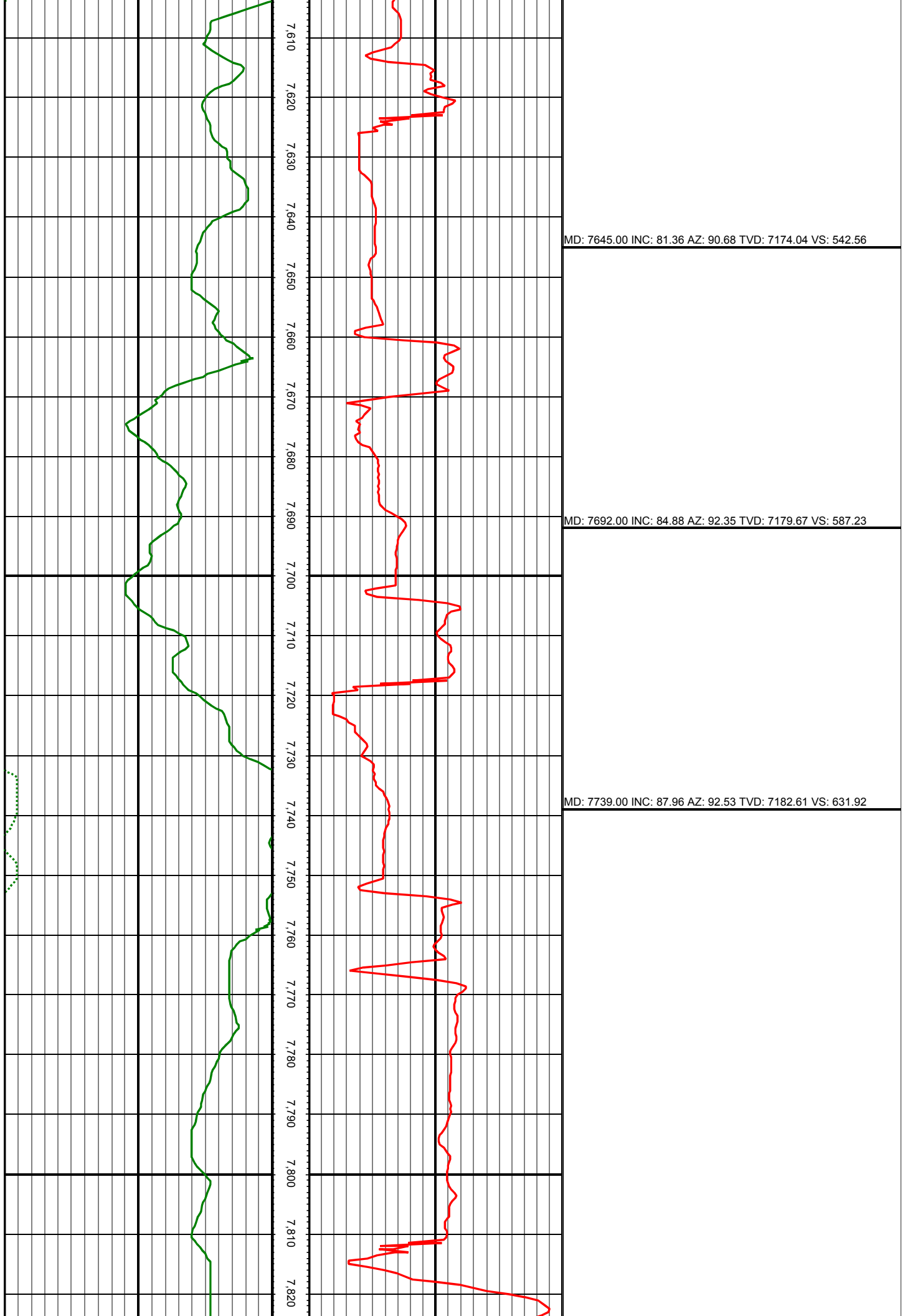
MD: 7030.00 INC: 40.04 AZ: 75.74 TVD: 6860.10 VS: 38.18

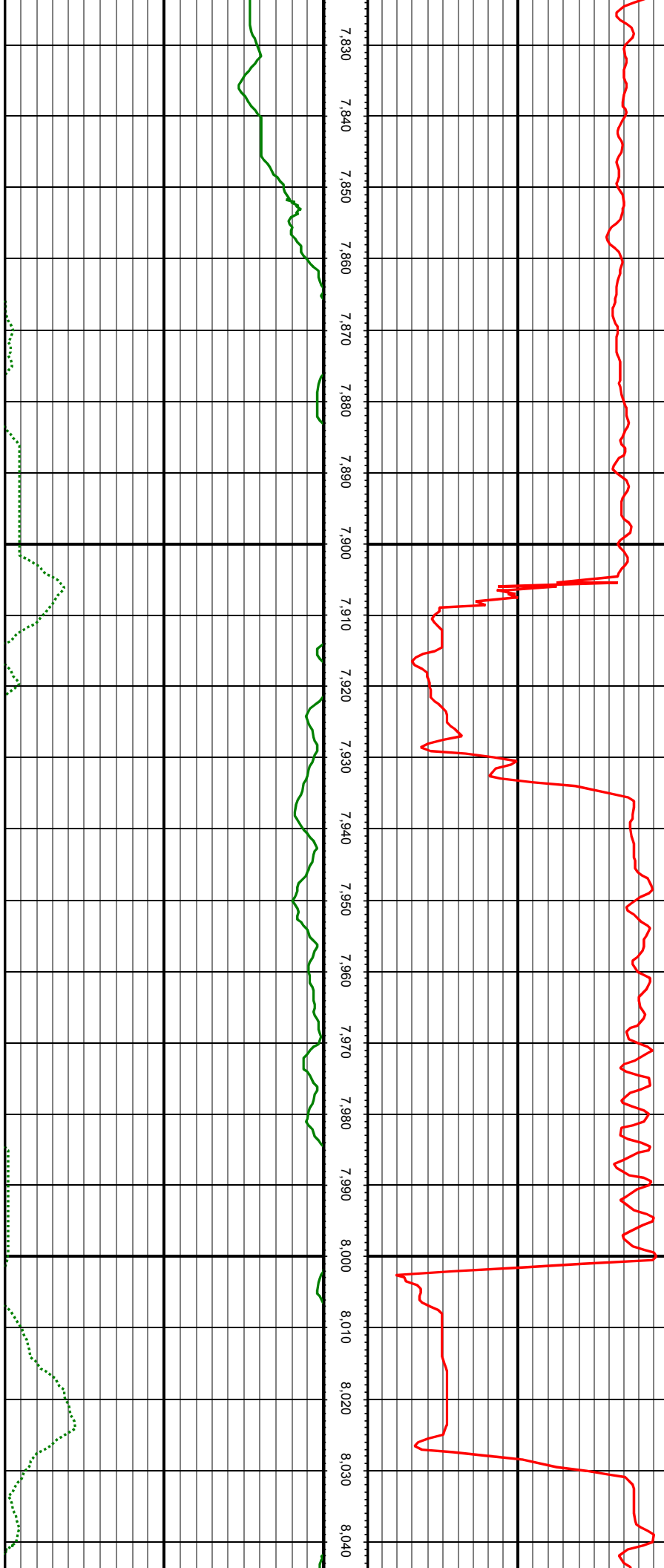
MD: 7078.00 INC: 42.33 AZ: 78.64 TVD: 6896.23 VS: 69.75

MD: 7125.00 INC: 44.88 AZ: 80.40 TVD: 6930.26 VS: 102.04





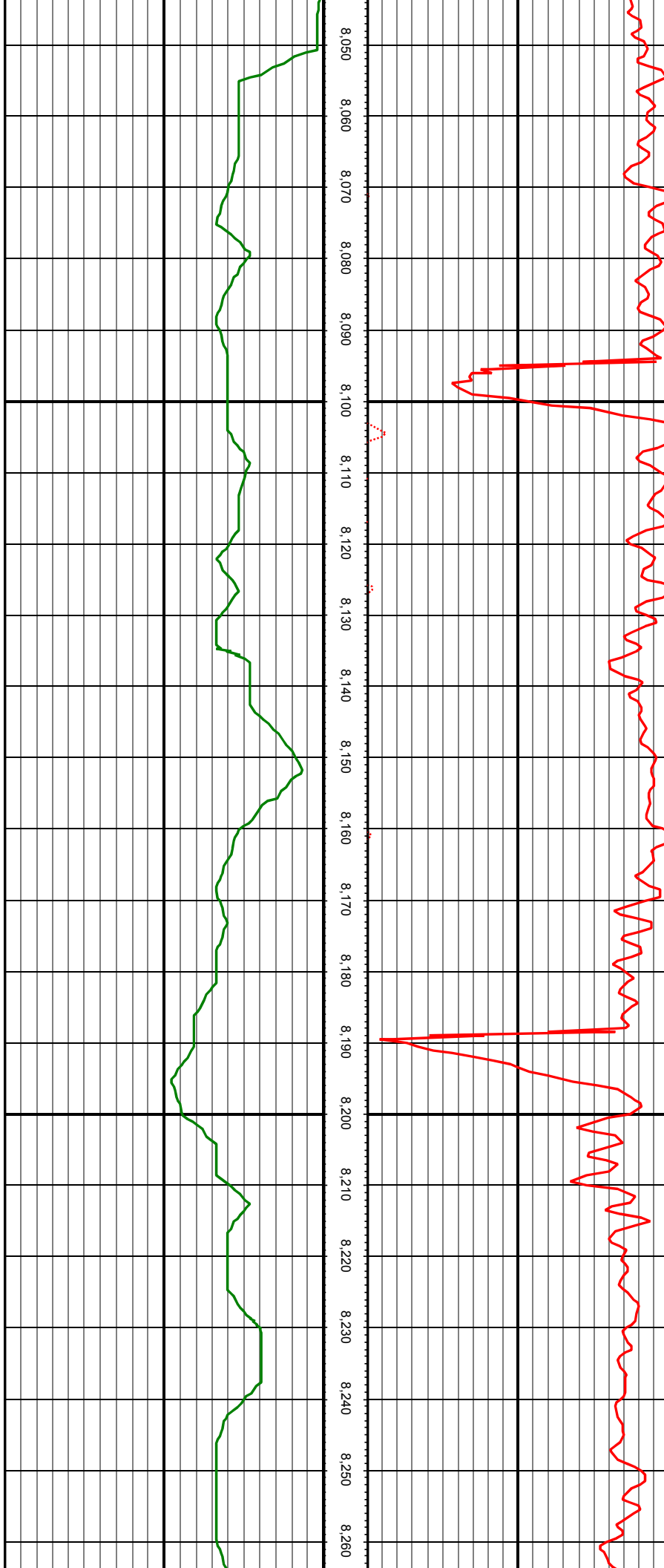




MD: 7833.00 INC: 90.33 AZ: 95.34 TVD: 7184.01 VS: 720.69

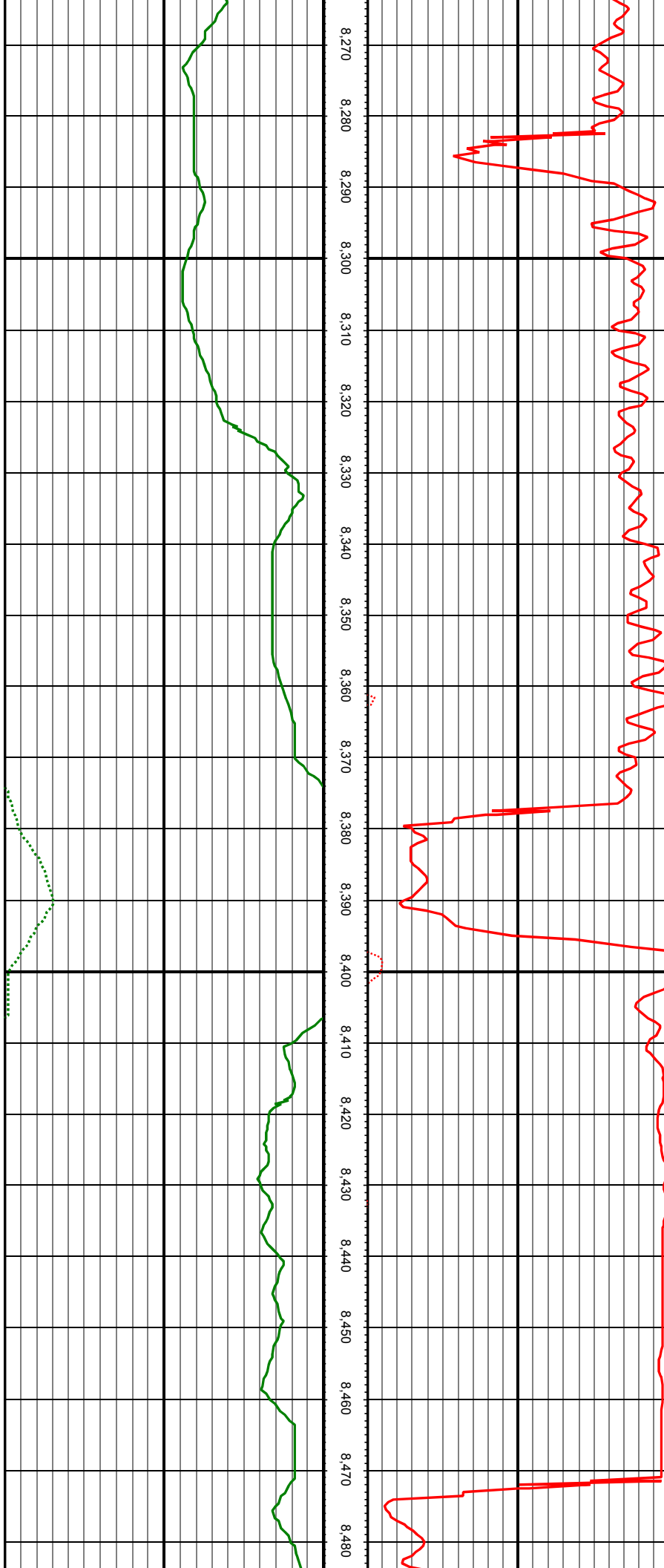
MD: 7928.00 INC: 90.02 AZ: 94.11 TVD: 7183.72 VS: 809.98

MD: 8022.00 INC: 87.96 AZ: 90.24 TVD: 7185.38 VS: 899.64



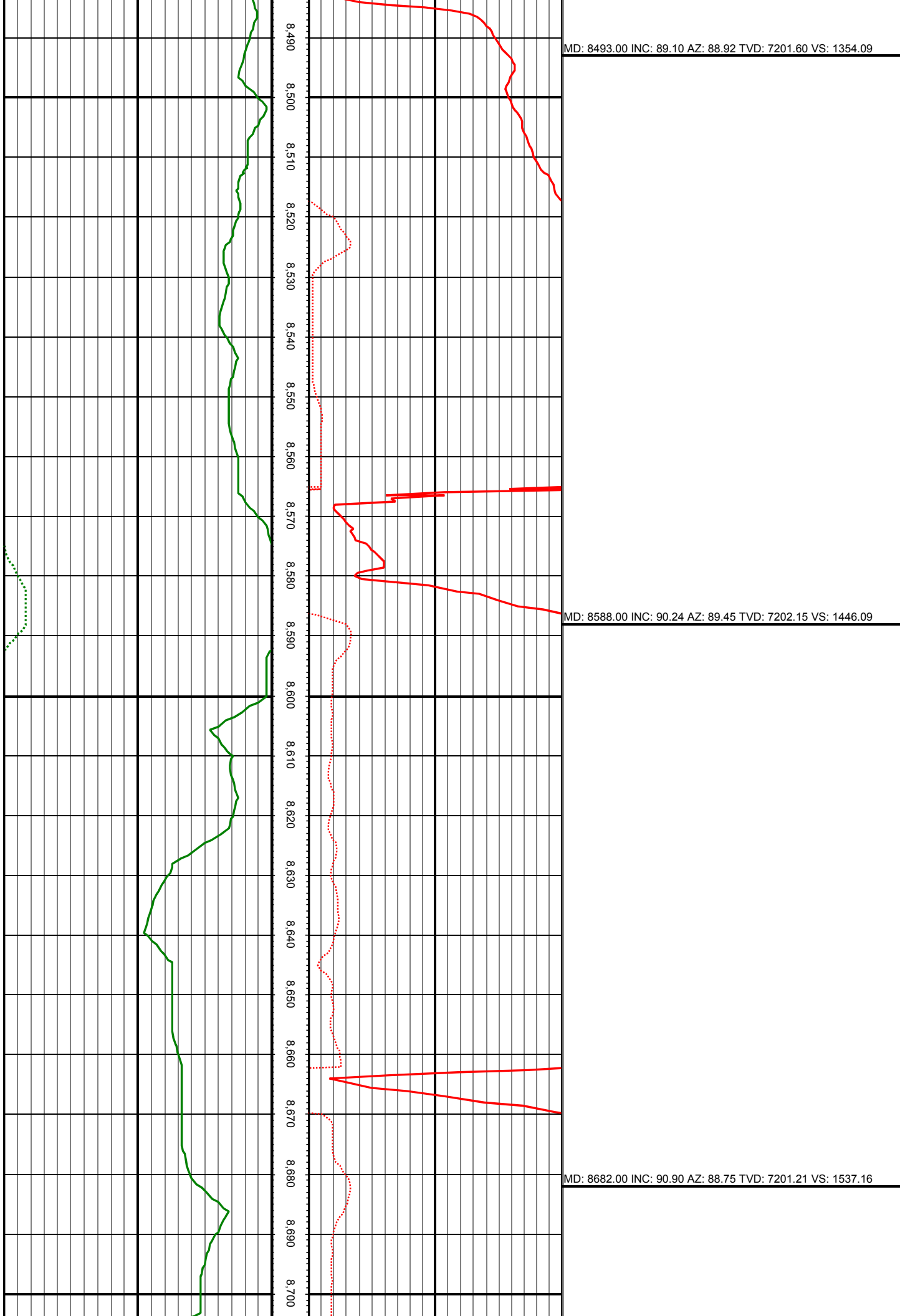
MD: 8116.00 INC: 87.82 AZ: 90.50 TVD: 7188.84 VS: 990.12

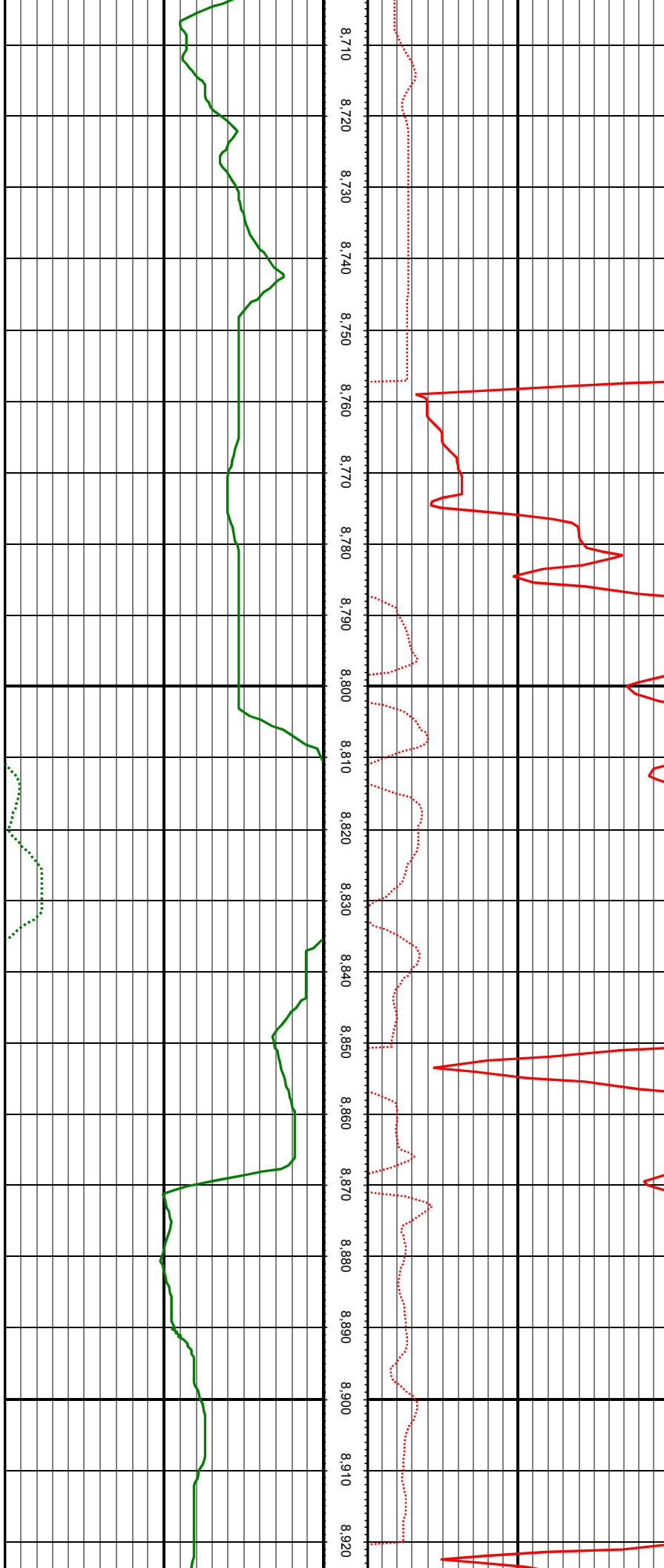
MD: 8210.00 INC: 87.56 AZ: 90.24 TVD: 7192.63 VS: 1080.58



MD: 8304.00 INC: 88.09 AZ: 90.59 TVD: 7196.20 VS: 1171.03

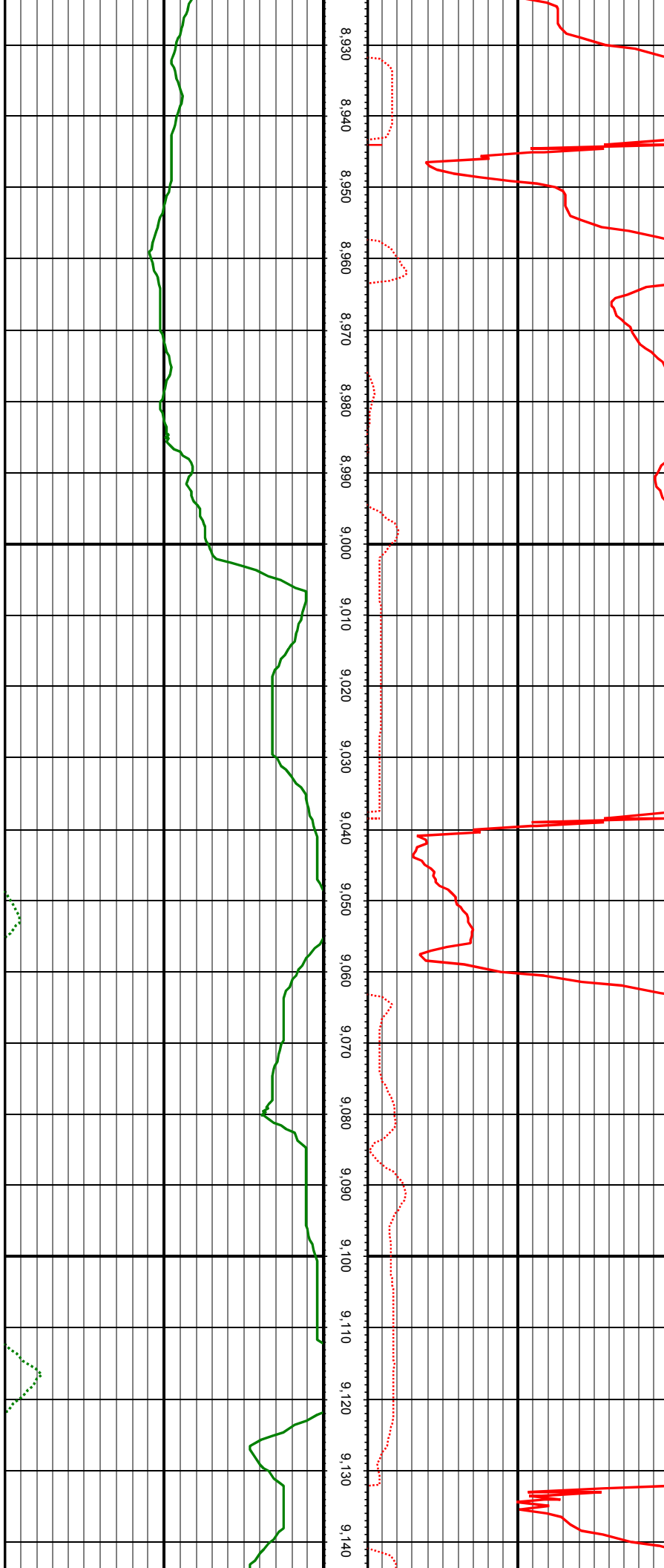
MD: 8399.00 INC: 88.13 AZ: 88.39 TVD: 7199.33 VS: 1262.86





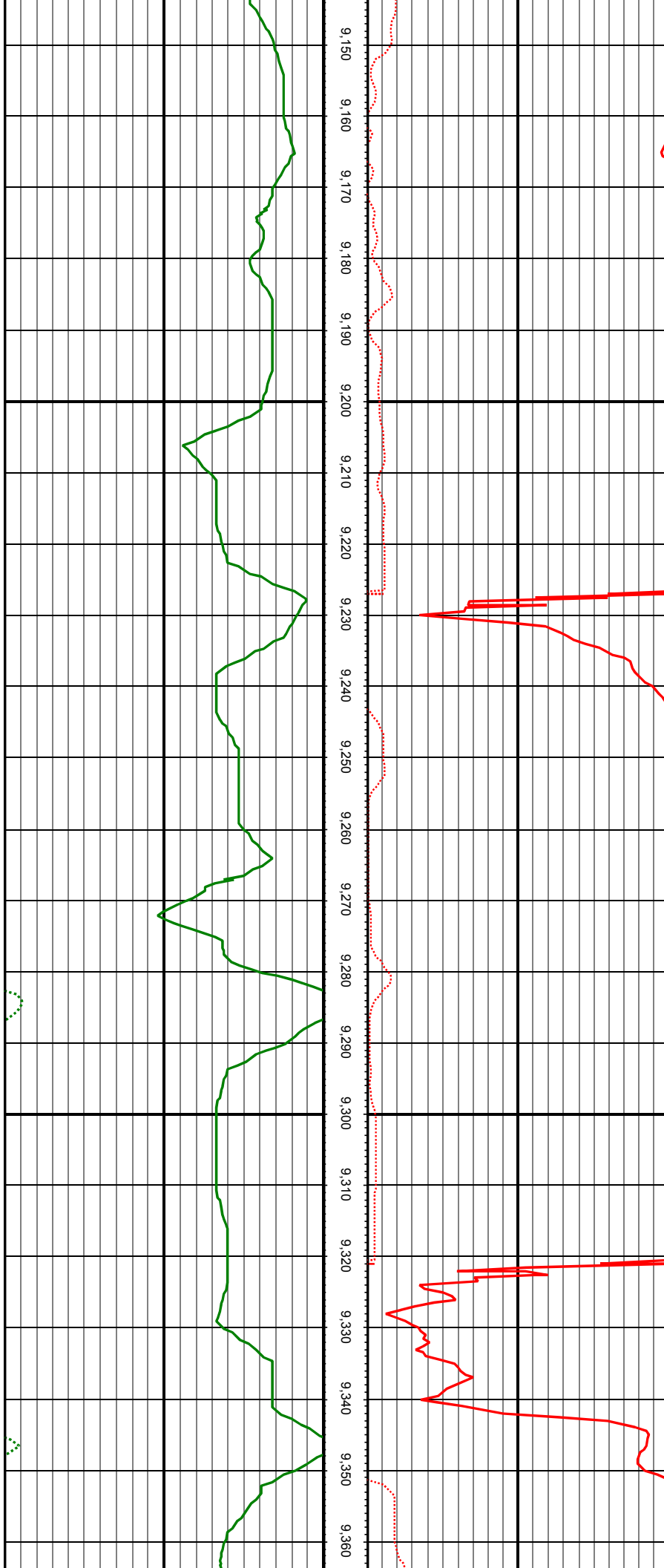
MD: 8777.00 INC: 90.59 AZ: 90.06 TVD: 7199.98 VS: 1629.07

MD: 8871.00 INC: 90.33 AZ: 89.54 TVD: 7199.22 VS: 1719.85



MD: 8966.00 INC: 91.30 AZ: 88.66 TVD: 7197.87 VS: 1811.88

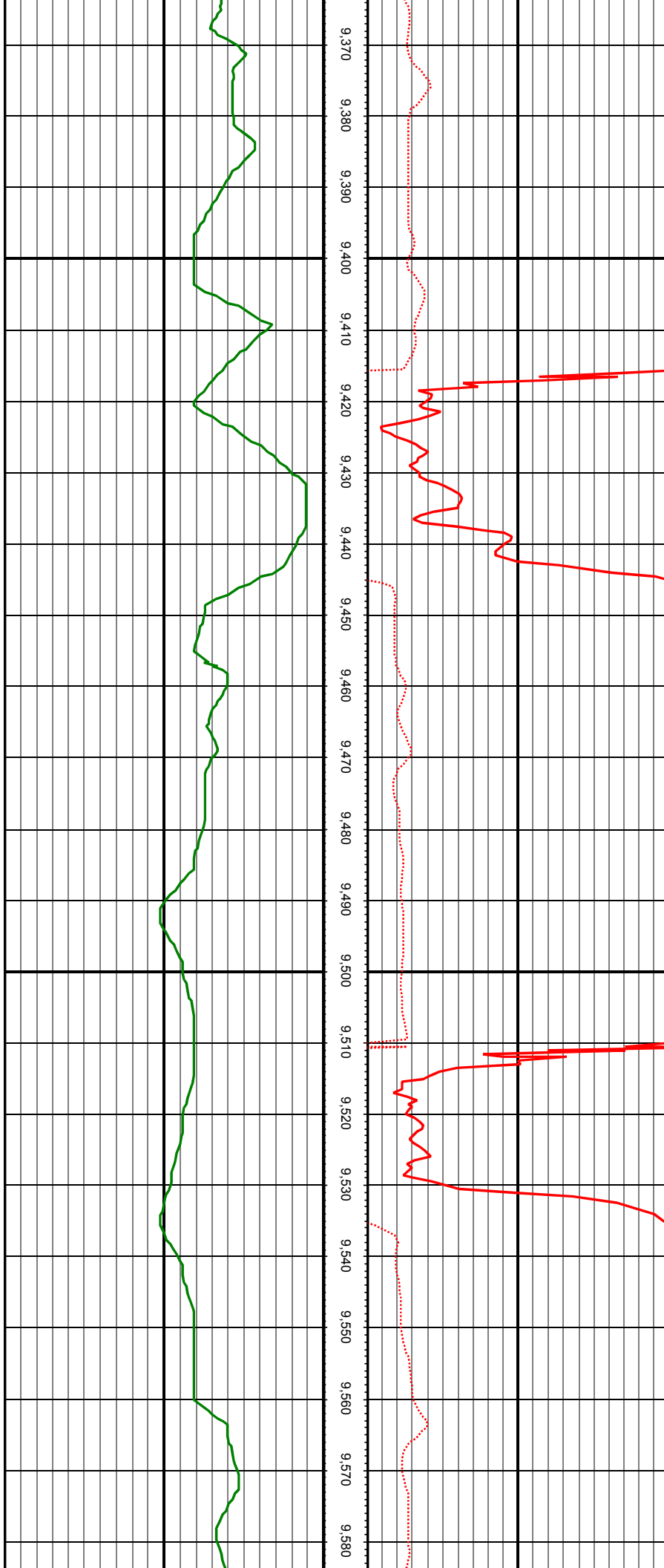
MD: 9060.00 INC: 89.58 AZ: 89.89 TVD: 7197.15 VS: 1902.88



MD: 9154.00 INC: 90.02 AZ: 90.59 TVD: 7197.48 VS: 1993.47

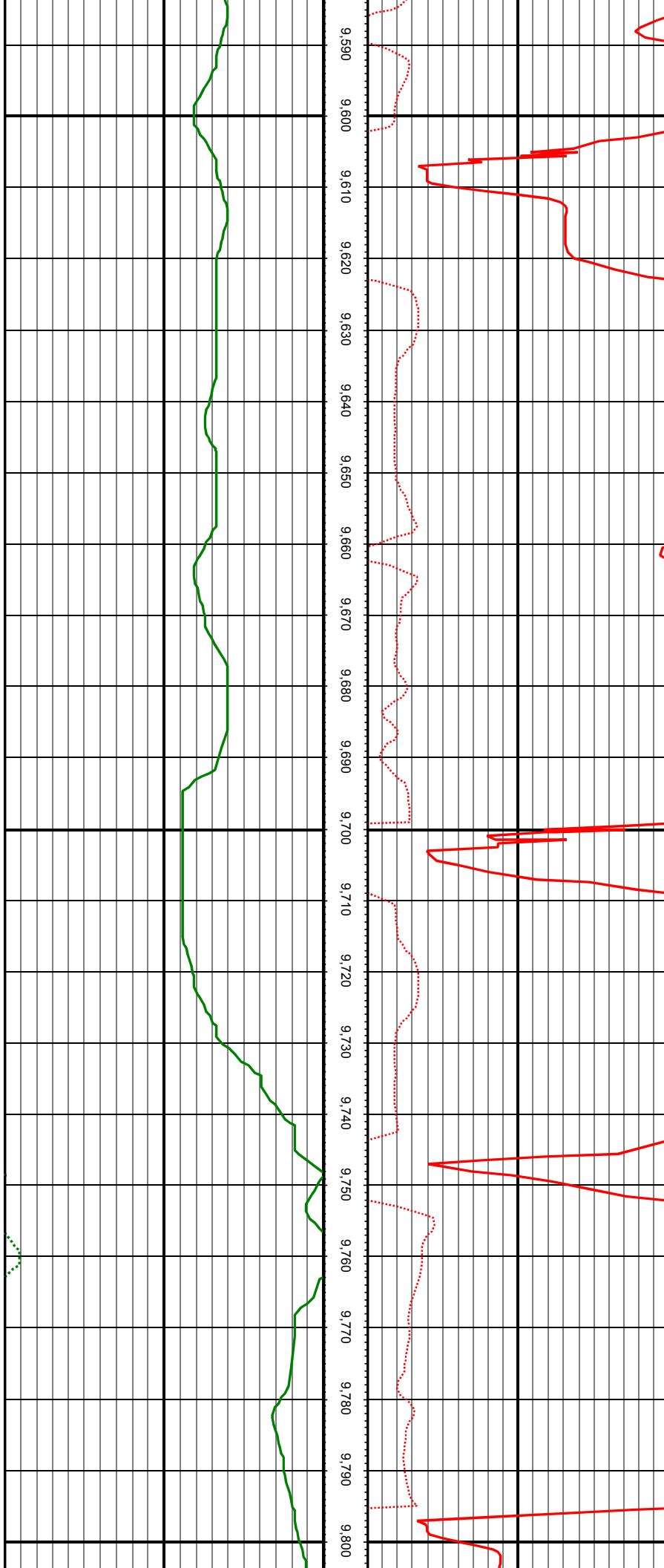
MD: 9249.00 INC: 88.84 AZ: 89.98 TVD: 7198.42 VS: 2085.00

MD: 9343.00 INC: 88.70 AZ: 89.89 TVD: 7200.44 VS: 2175.71



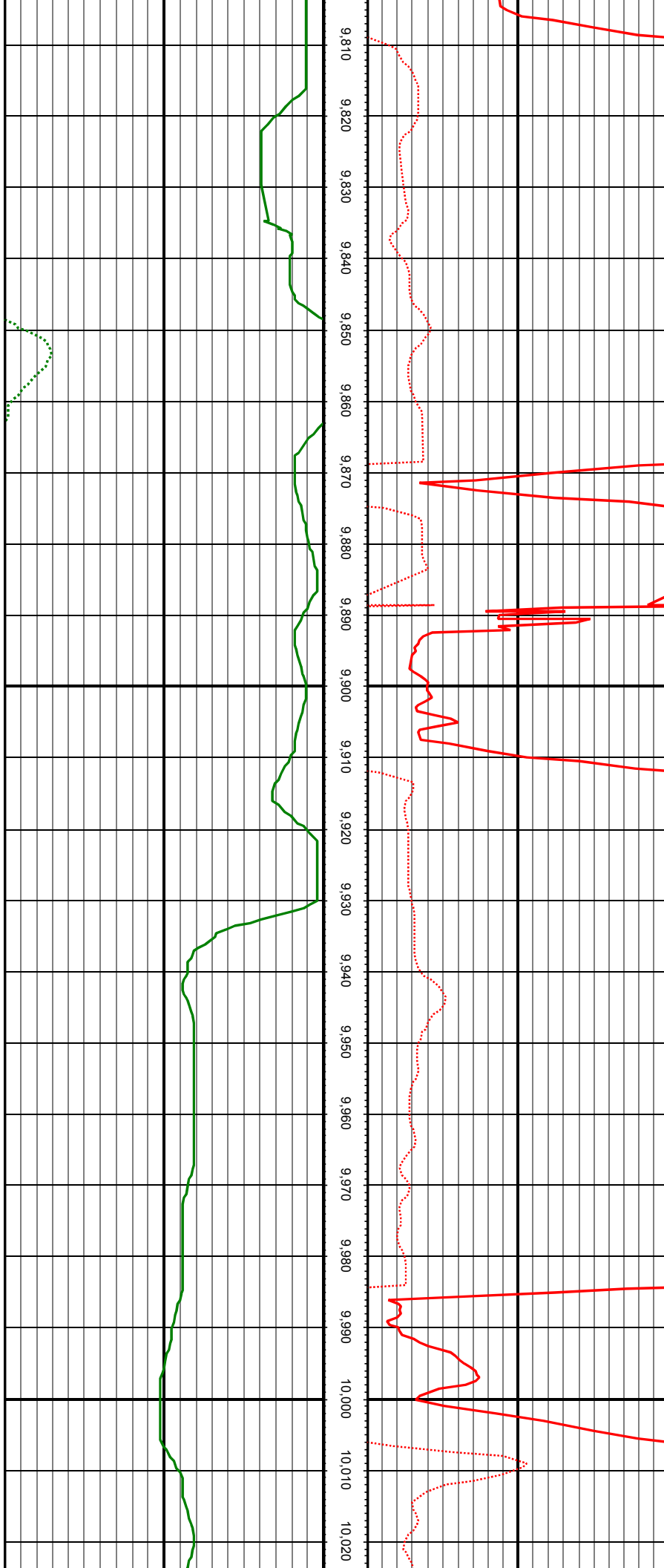
MD: 9438.00 INC: 89.76 AZ: 90.86 TVD: 7201.72 VS: 2267.20

MD: 9532.00 INC: 90.90 AZ: 89.54 TVD: 7201.18 VS: 2357.80



MD: 9627.00 INC: 91.30 AZ: 88.48 TVD: 7199.35 VS: 2449.87

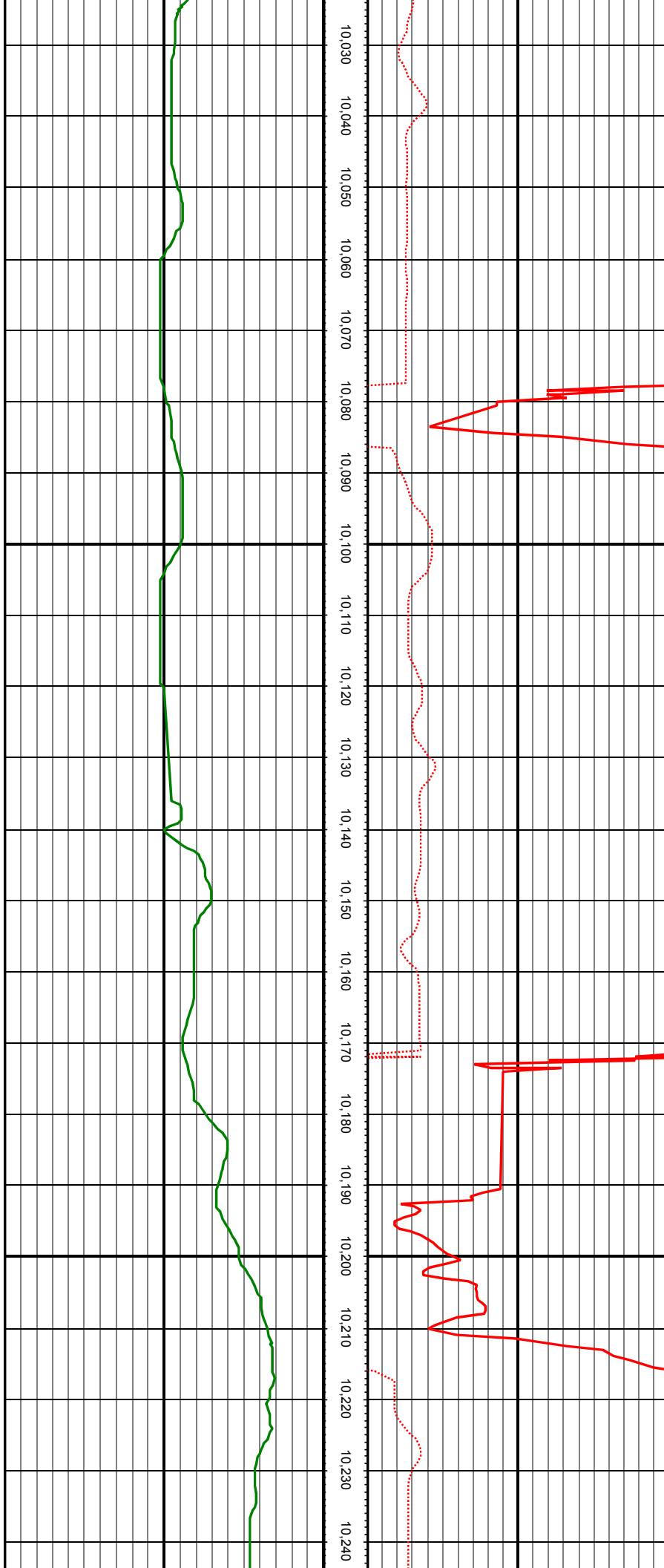
MD: 9722.00 INC: 92.00 AZ: 88.39 TVD: 7196.62 VS: 2542.14



MD: 9816.00 INC: 92.57 AZ: 87.87 TVD: 7192.87 VS: 2633.52

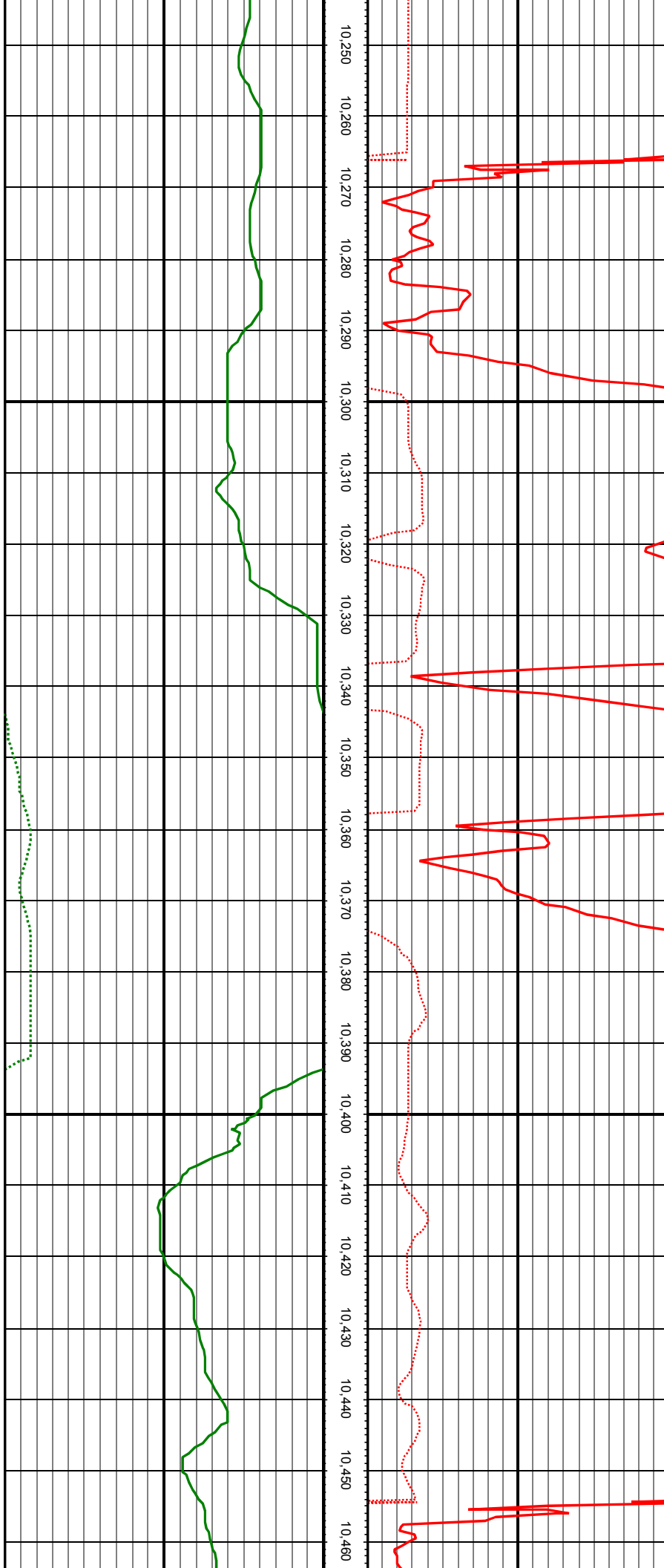
MD: 9911.00 INC: 91.87 AZ: 88.92 TVD: 7189.19 VS: 2725.78

MD: 10005.00 INC: 91.52 AZ: 89.98 TVD: 7186.41 VS: 2816.67



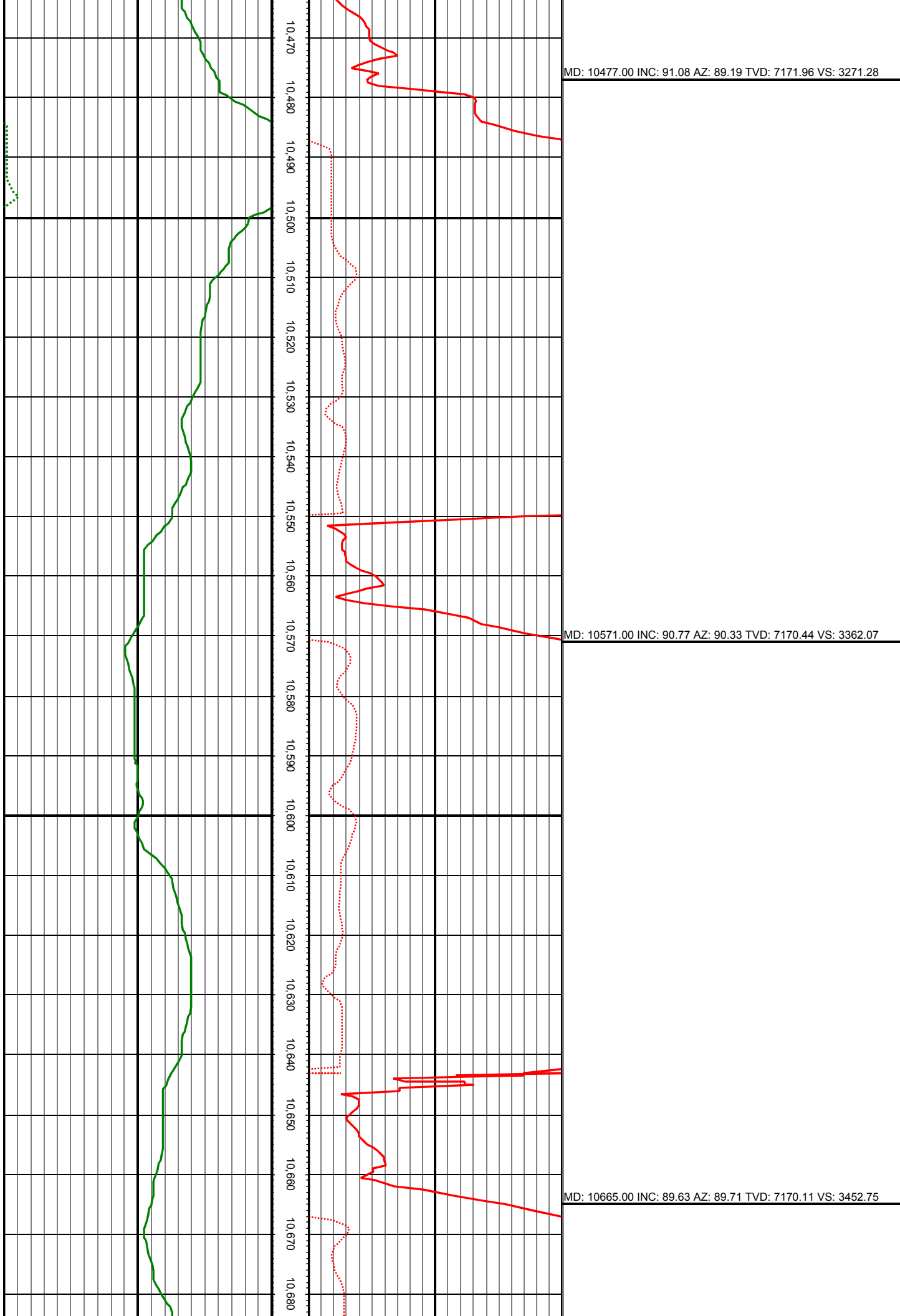
MD: 10099.00 INC: 92.18 AZ: 90.42 TVD: 7183.37 VS: 2907.23

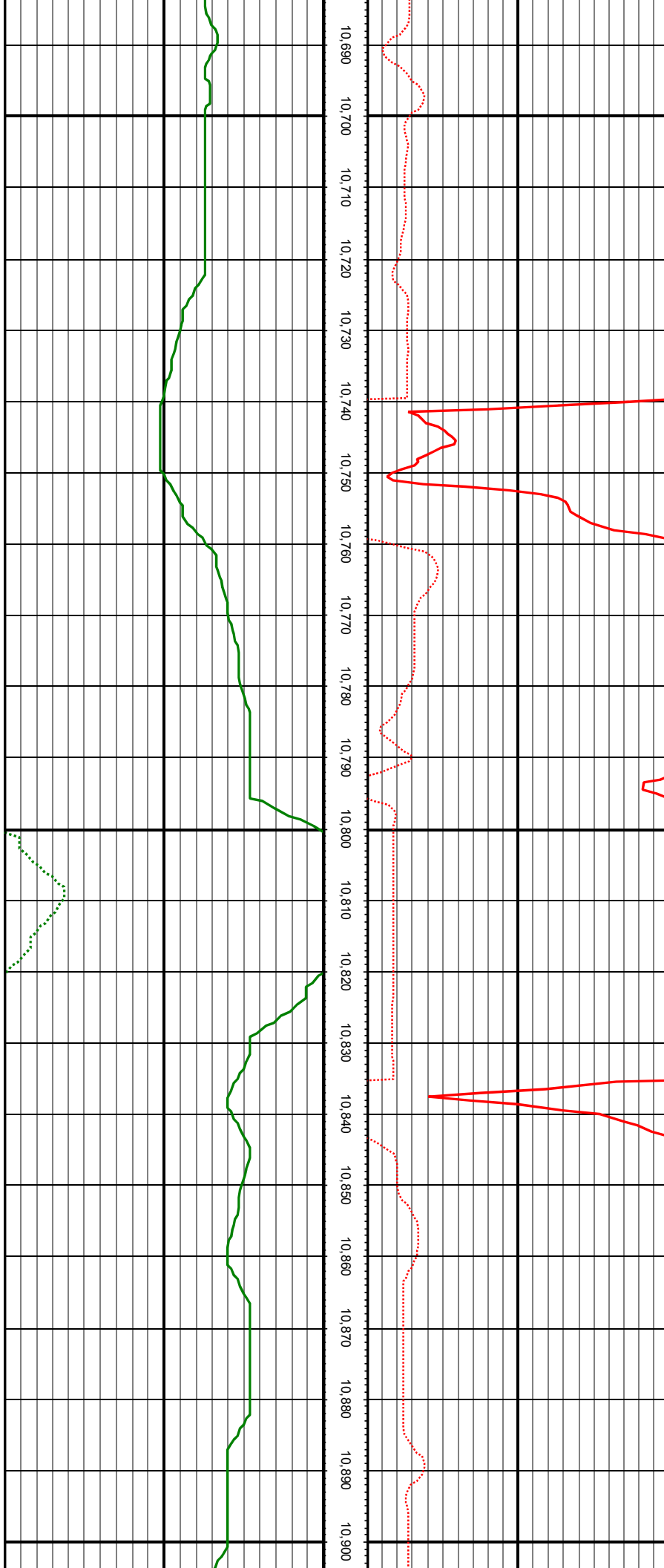
MD: 10194.00 INC: 91.87 AZ: 90.59 TVD: 7180.02 VS: 2998.61



MD: 10288.00 INC: 91.38 AZ: 89.98 TVD: 7177.35 VS: 3089.15

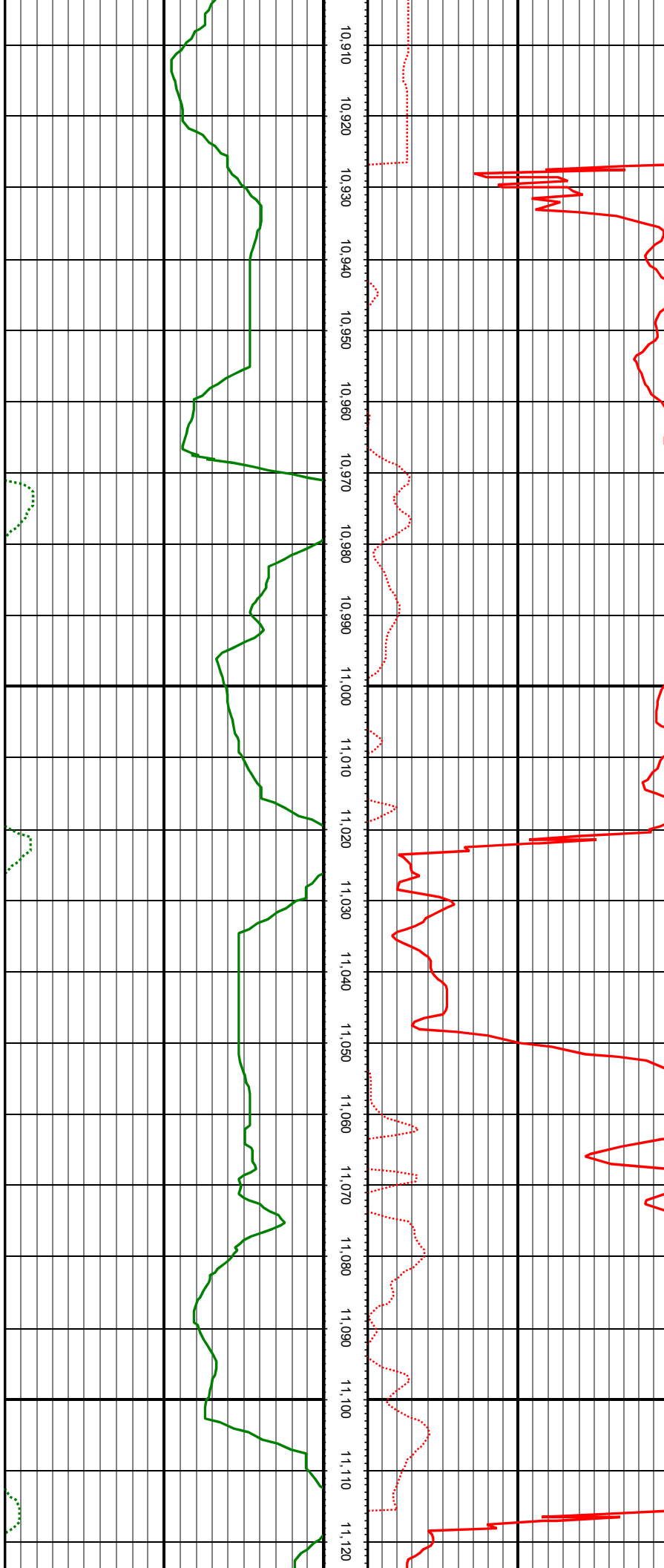
MD: 10382.00 INC: 92.04 AZ: 90.77 TVD: 7174.55 VS: 3179.64





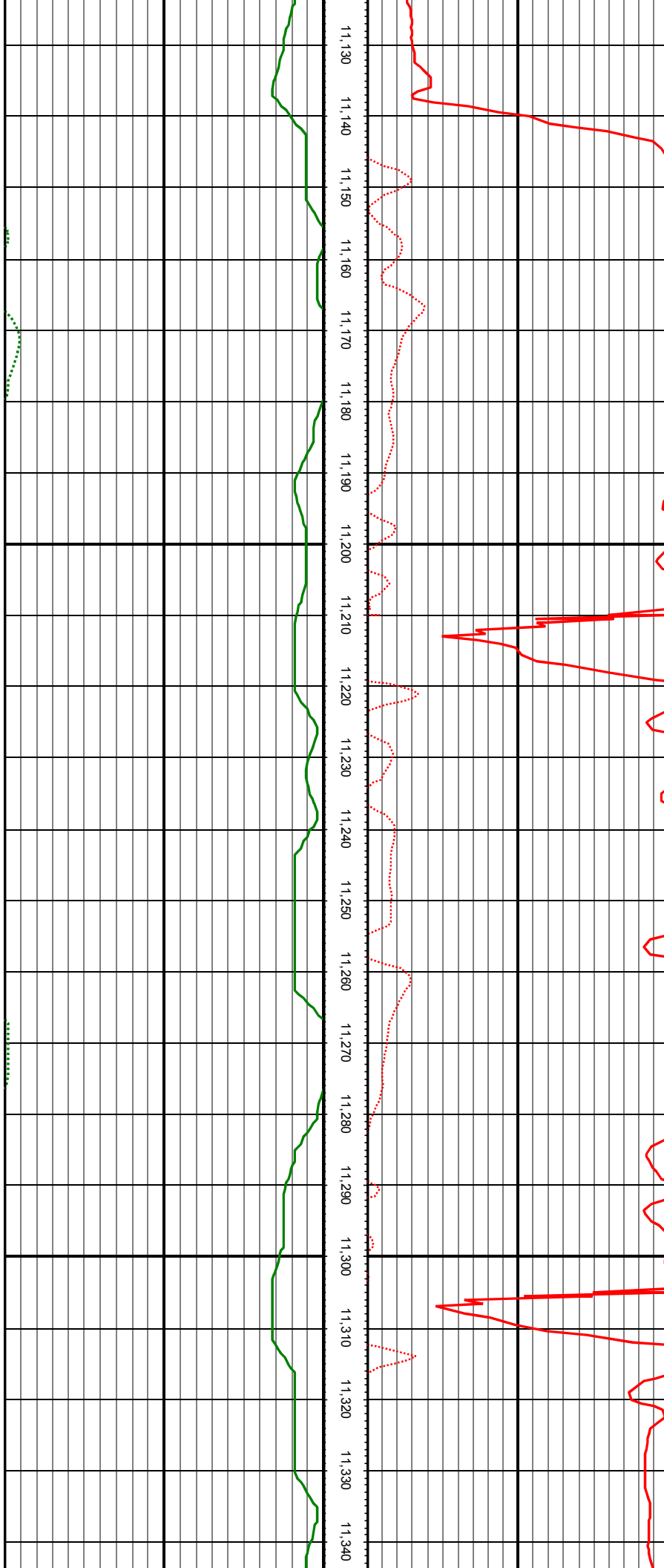
MD: 10760.00 INC: 89.54 AZ: 88.83 TVD: 7170.80 VS: 3544.72

MD: 10854.00 INC: 88.97 AZ: 88.39 TVD: 7172.03 VS: 3635.99



MD: 10949.00 INC: 88.44 AZ: 88.04 TVD: 7174.17 VS: 3728.36

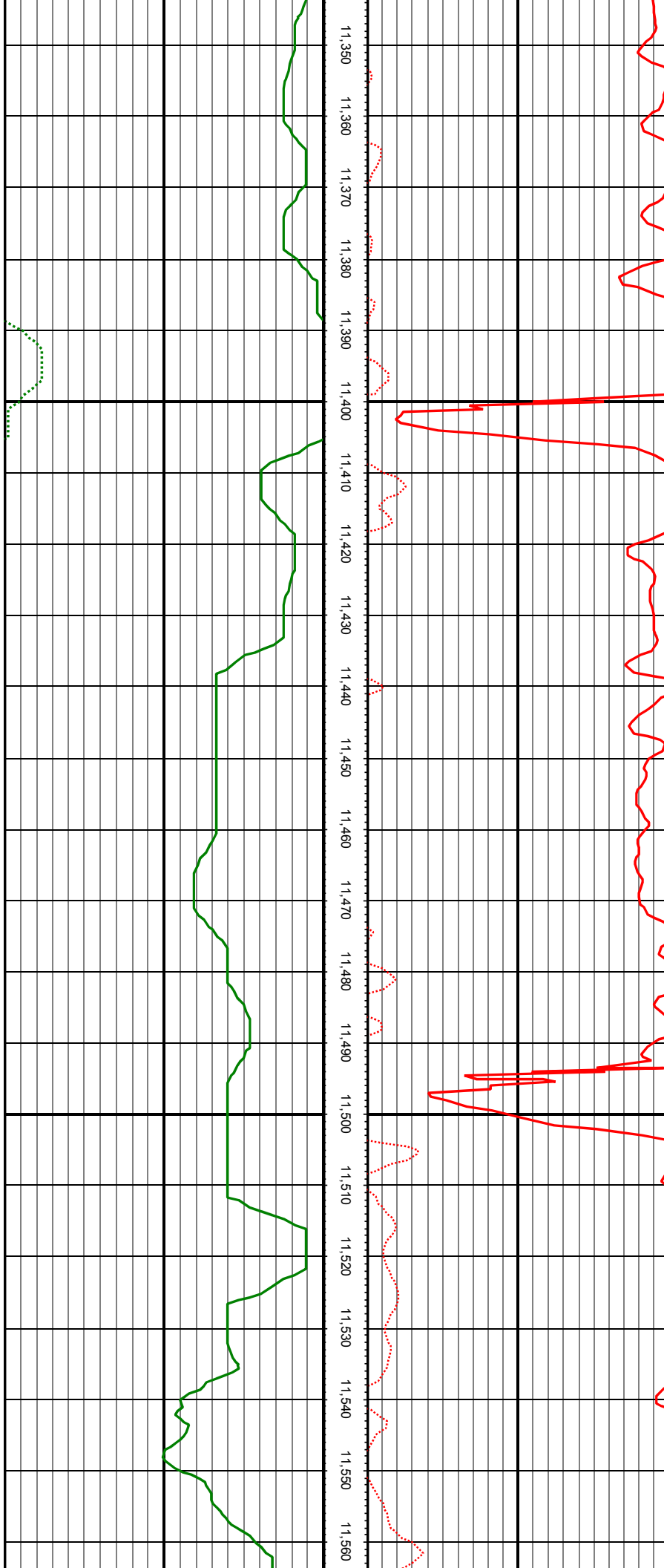
MD: 11043.00 INC: 88.22 AZ: 89.27 TVD: 7176.91 VS: 3819.57



MD: 11138.00 INC: 90.42 AZ: 89.45 TVD: 7178.04 VS: 3911.50

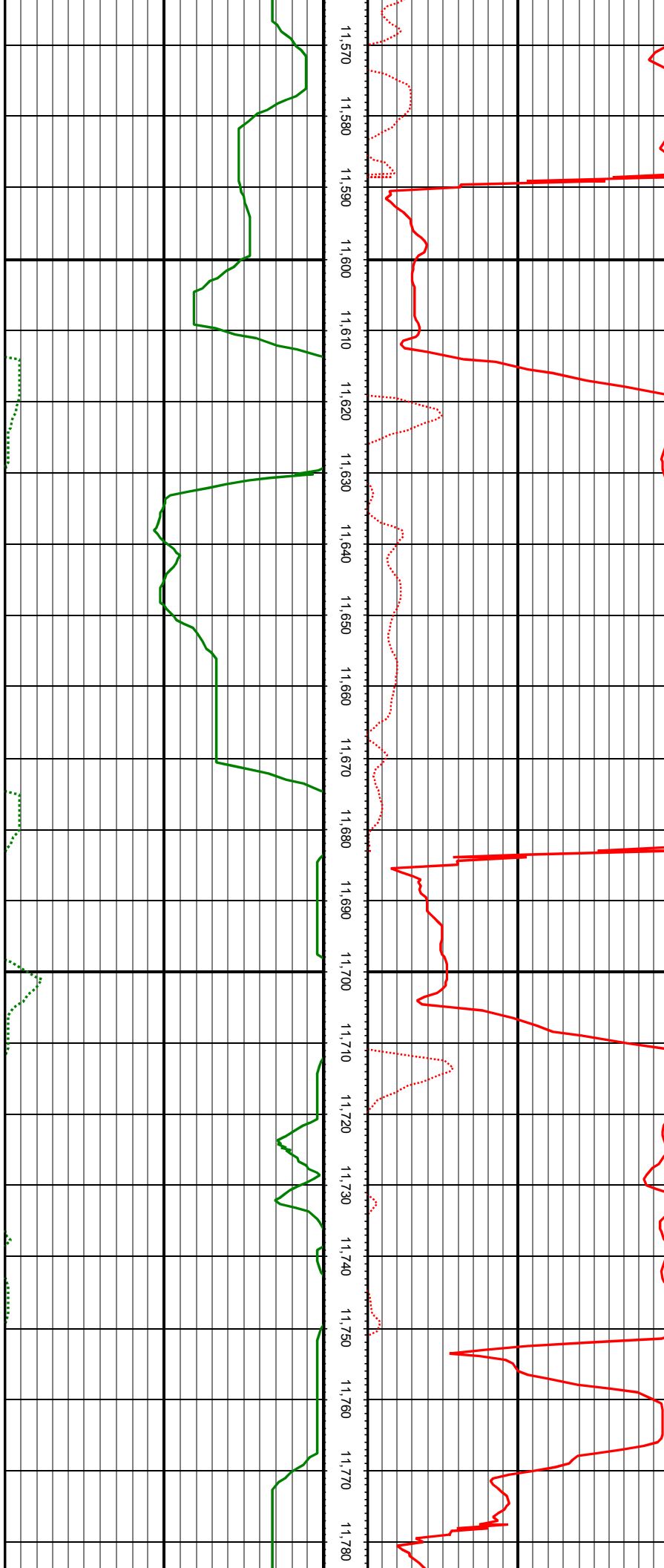
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MD: 11327.00 INC: 91.47 AZ: 90.42 TVD: 7173.03 VS: 4093.40



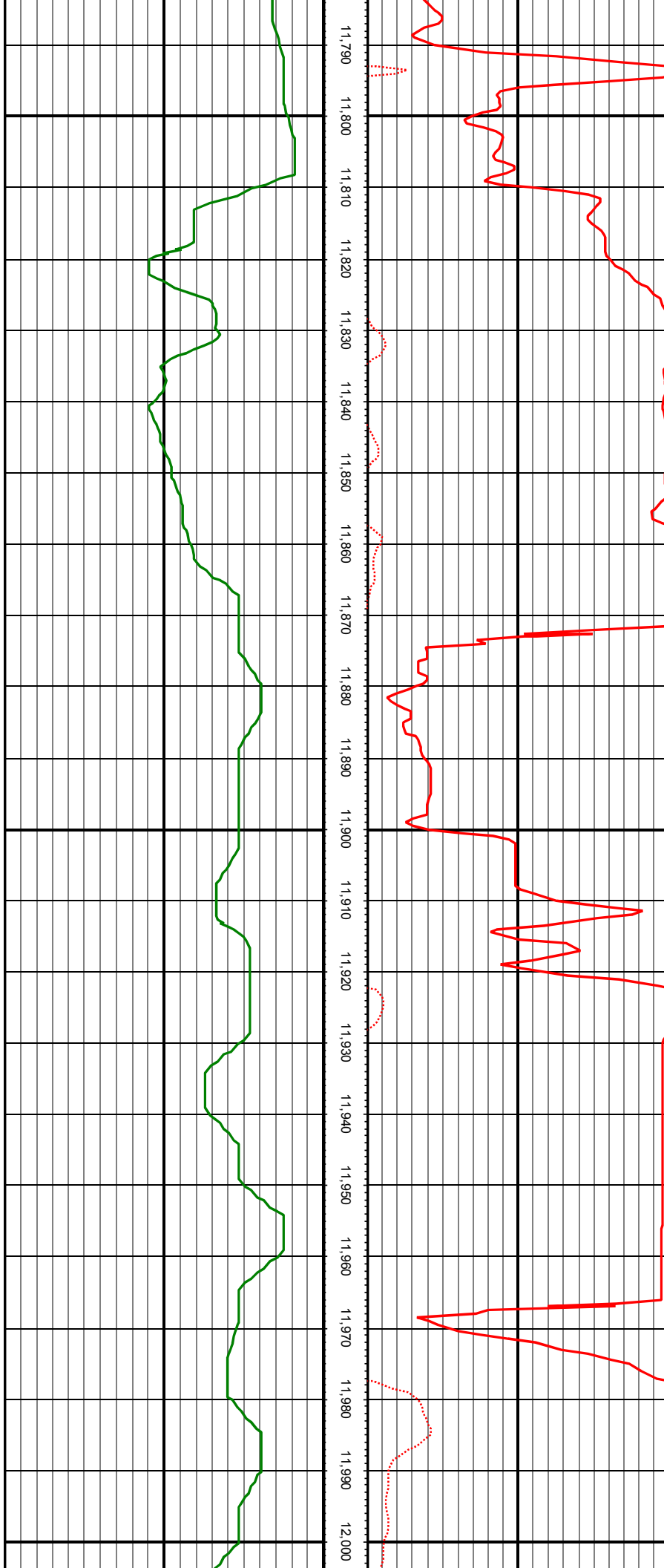
MD: 11421.00 INC: 92.35 AZ: 89.98 TVD: 7169.90 VS: 4183.96

MD: 11516.00 INC: 93.27 AZ: 90.15 TVD: 7165.24 VS: 4275.48



MD: 11611.00 INC: 91.74 AZ: 88.75 TVD: 7161.09 VS: 4367.29

MD: 11705.00 INC: 90.02 AZ: 88.13 TVD: 7159.64 VS: 4458.61



MD: 11799.00 INC: 89.93 AZ: 87.52 TVD: 7159.68 VS: 4550.18

MD: 11894.00 INC: 88.97 AZ: 88.66 TVD: 7160.60 VS: 4642.62

MD: 11983.00 INC: 88.66 AZ: 88.48 TVD: 7162.44 VS: 4729.03

