



Cathedral Energy Services
1949 North Pyrite Road
Casper, Wyoming 82604

145400

5":100' - MD

1/14/2015 9:31:47 AM

CATHEDRAL

Oper. Company: Encana Oil & Gas (USA) Inc.

Country: U.S.A.

State / Province: Colorado

County / Parish: Weld

Started: 11/05/2014 12:00 AM

API/UWI: 05-123-37615

Field: Wattenberg (Codell)

Well: Drieth 4G-6H-I368

Rig: Helmerich & Payne 522

Ended: 11/12/2014 12:00 AM

Gamma Ray
Section Plane: 270.00
Magnetic North: 8.54
Gamma Attenuation Factor: 2.933
Gamma Averaging: 7%

Personnel

Day Hand: J. Nichols

Night Hand: A. Stewart

Comp. Emp: Jerry Thorstad

Maximum Temperature: 217°F

Location

Latitude: 40.254080

Longitude: -105.038550

Elev. GL: 5111

Elev. DF:

Elev. KB: 5141

Log and Survey Depths Relative to Kelly Bushing (KB) Depth

Hole Data

Size	From	To
12-1/4	0	880
8-3/4	880	7890
6-1/8	7890	11716

Casing Data

Size	From	To
9-5/8	0	872
7	0	7880
4-1/2	0	11706

Bit Sizes

Size	From	To
12-1/4	0	880
8-3/4	880	7890
6-1/8	7890	11716

Mud Data

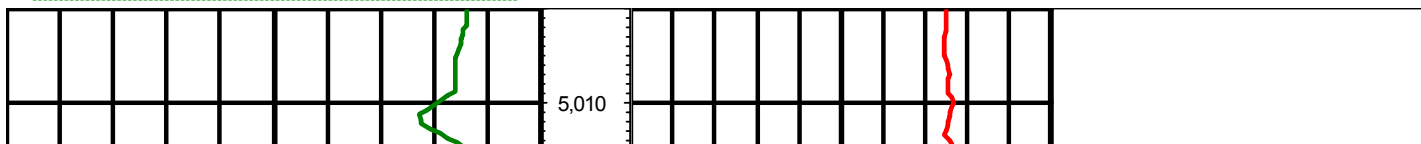
Type	Weight	Density	Viscosity	Rm	Rmf	Rmc	From	To
Gel/Chem	10.9		34				880	7890
Gel/Chem	11.00		44				7890	11716

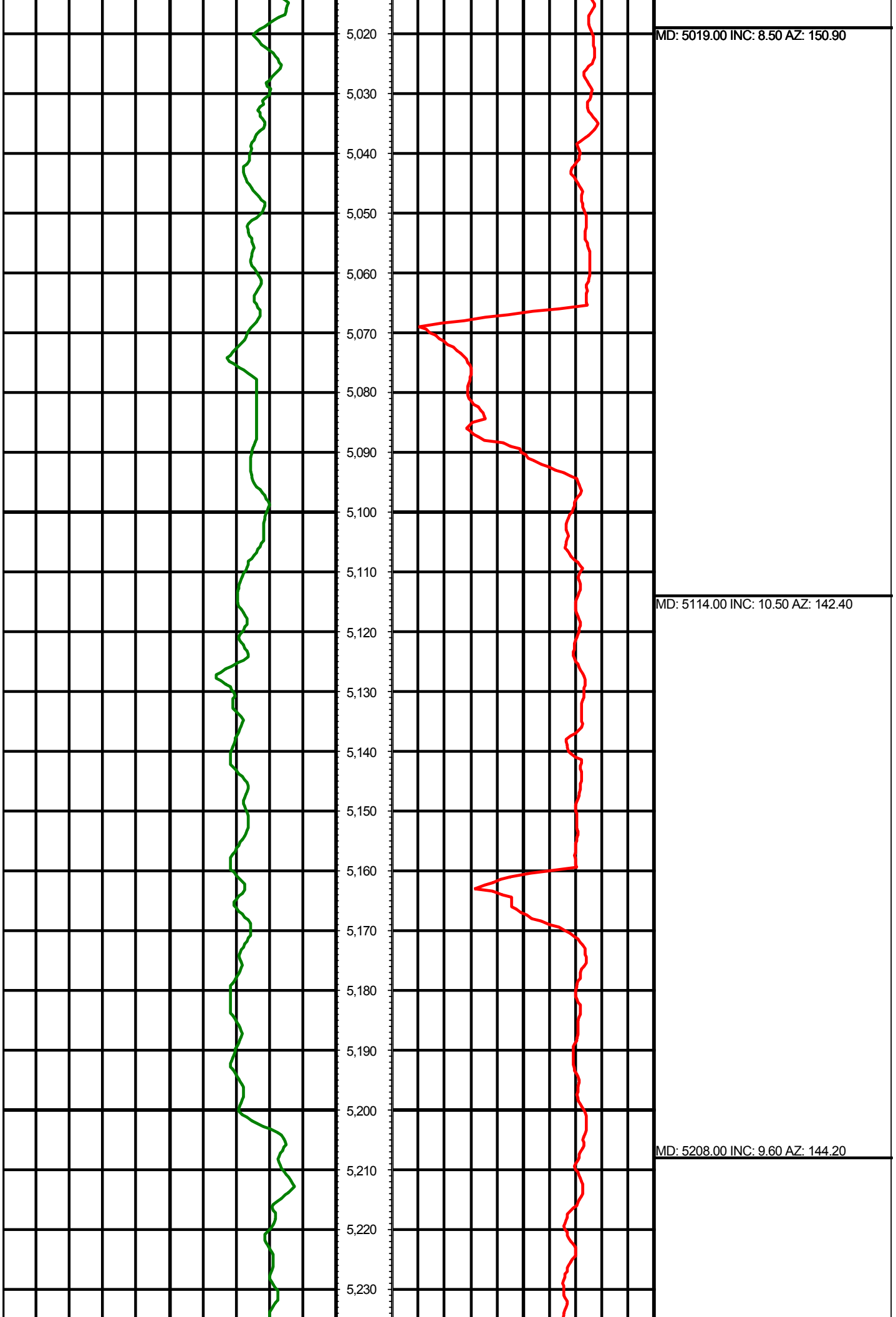
Tool Run Data

Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
248	36.25	0	11/5/2014 6:30:41 AM	880	11/8/2014 11:00:41 AM	7890
GIEKF6-01	37.55	0	11/9/2014 10:30:58 PM	7890	11/12/2014 6:30:58 AM	11716

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.

0.00 Gamma Ray (API) 150.00 MD 0.00 ROP (FT/HR) 600.00 Surveys (MD/INC/AZ)
150.00 2 300.00 FT

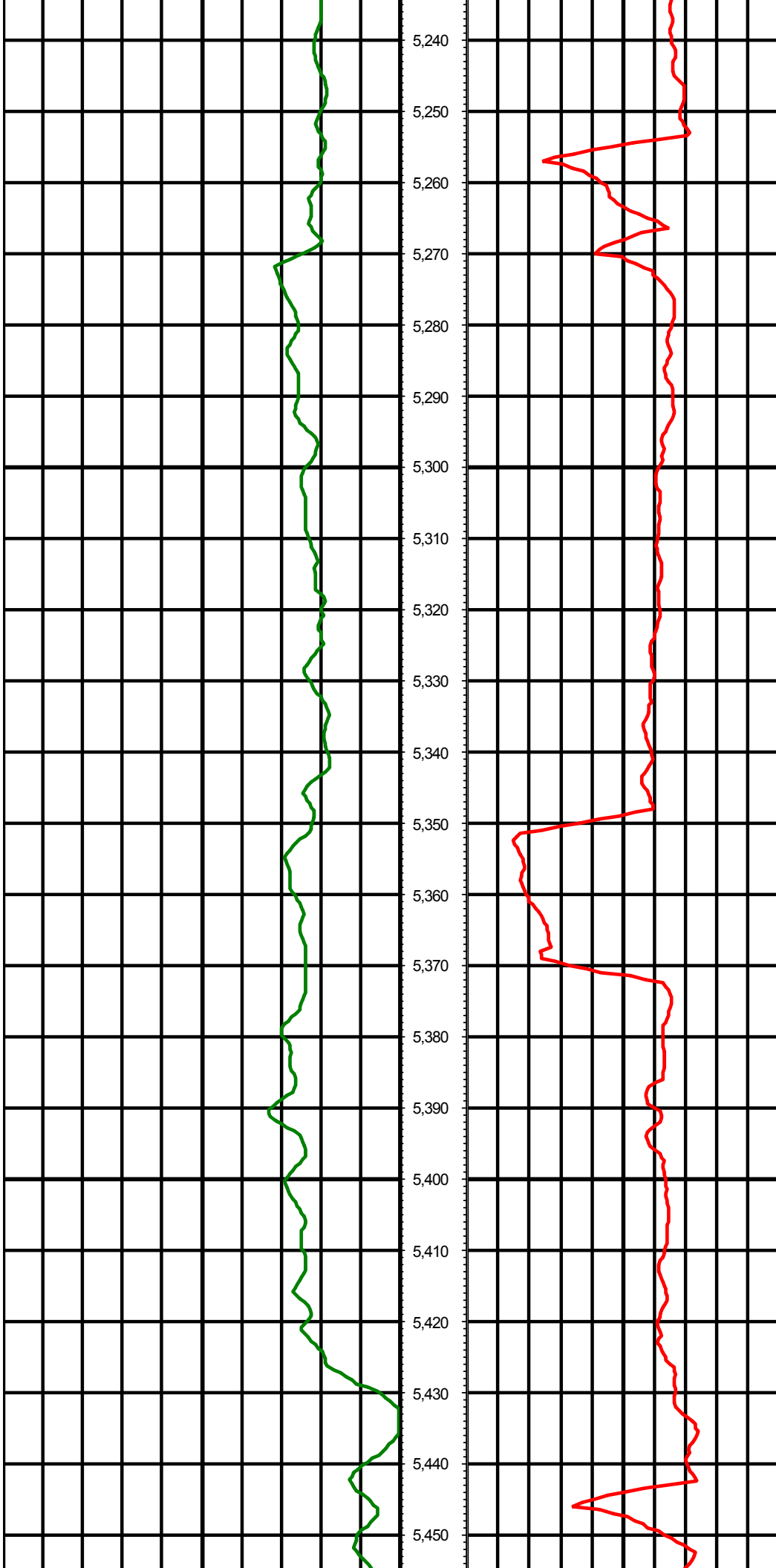




MD: 5019.00 INC: 8.50 AZ: 150.90

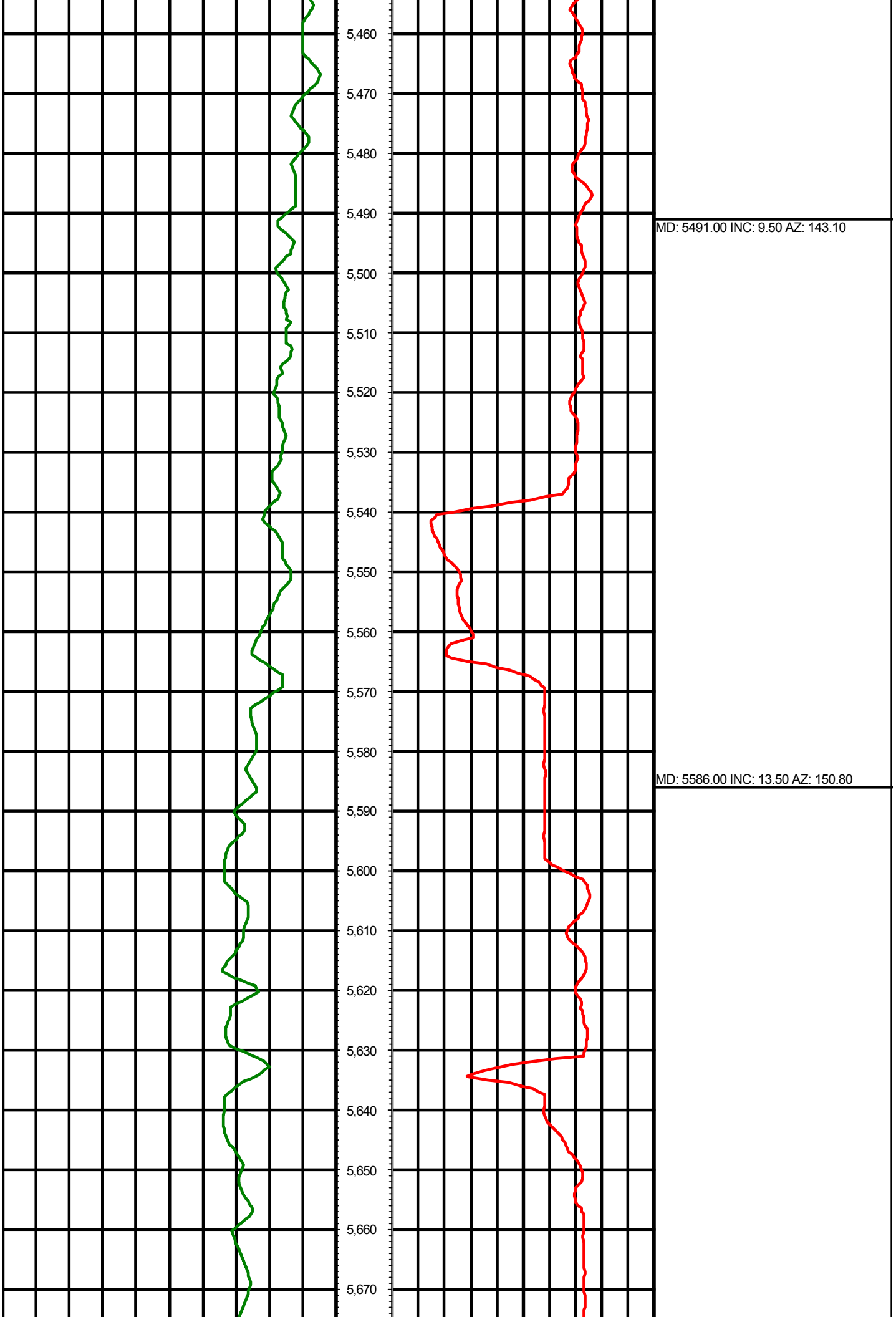
MD: 5114.00 INC: 10.50 AZ: 142.40

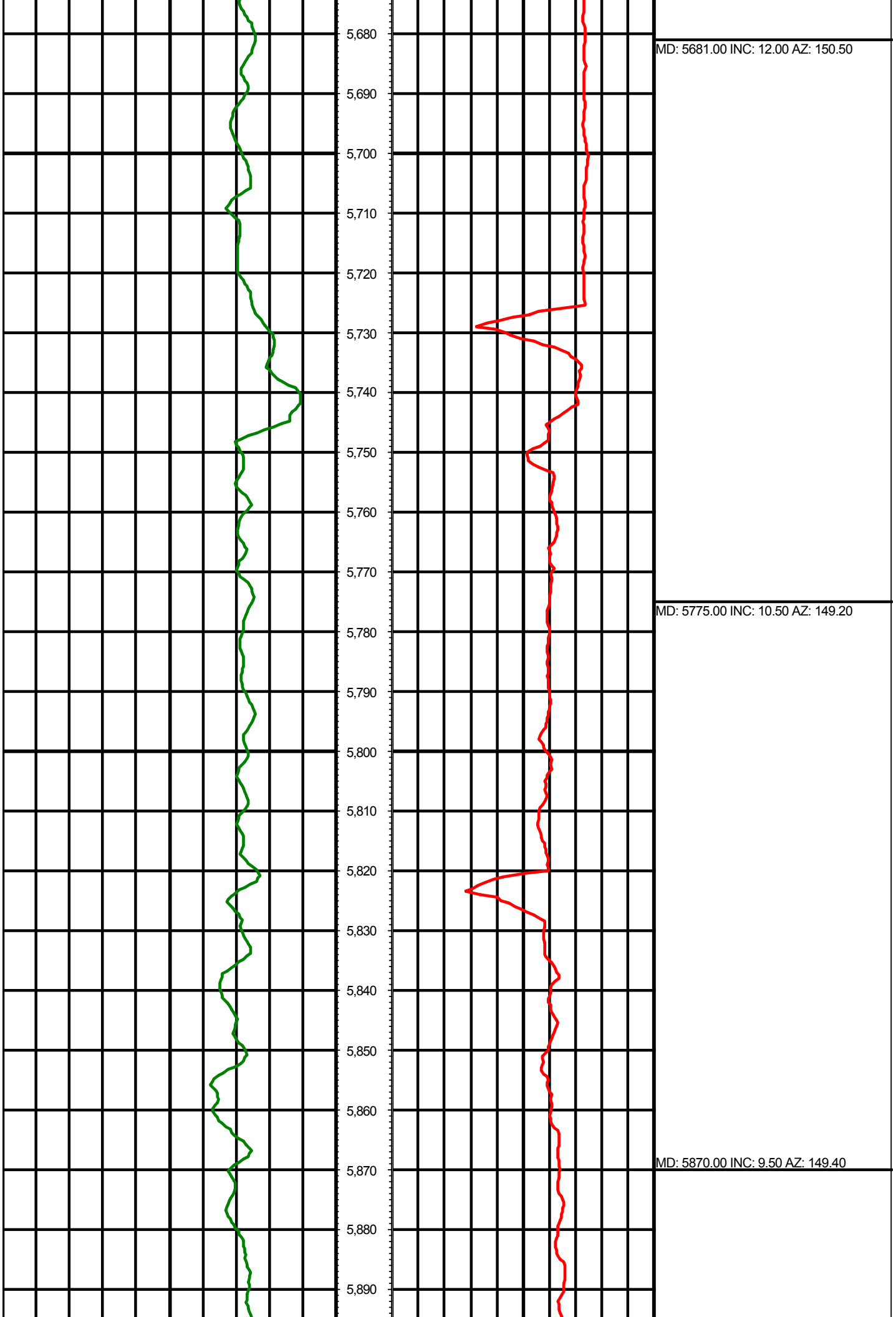
MD: 5208.00 INC: 9.60 AZ: 144.20

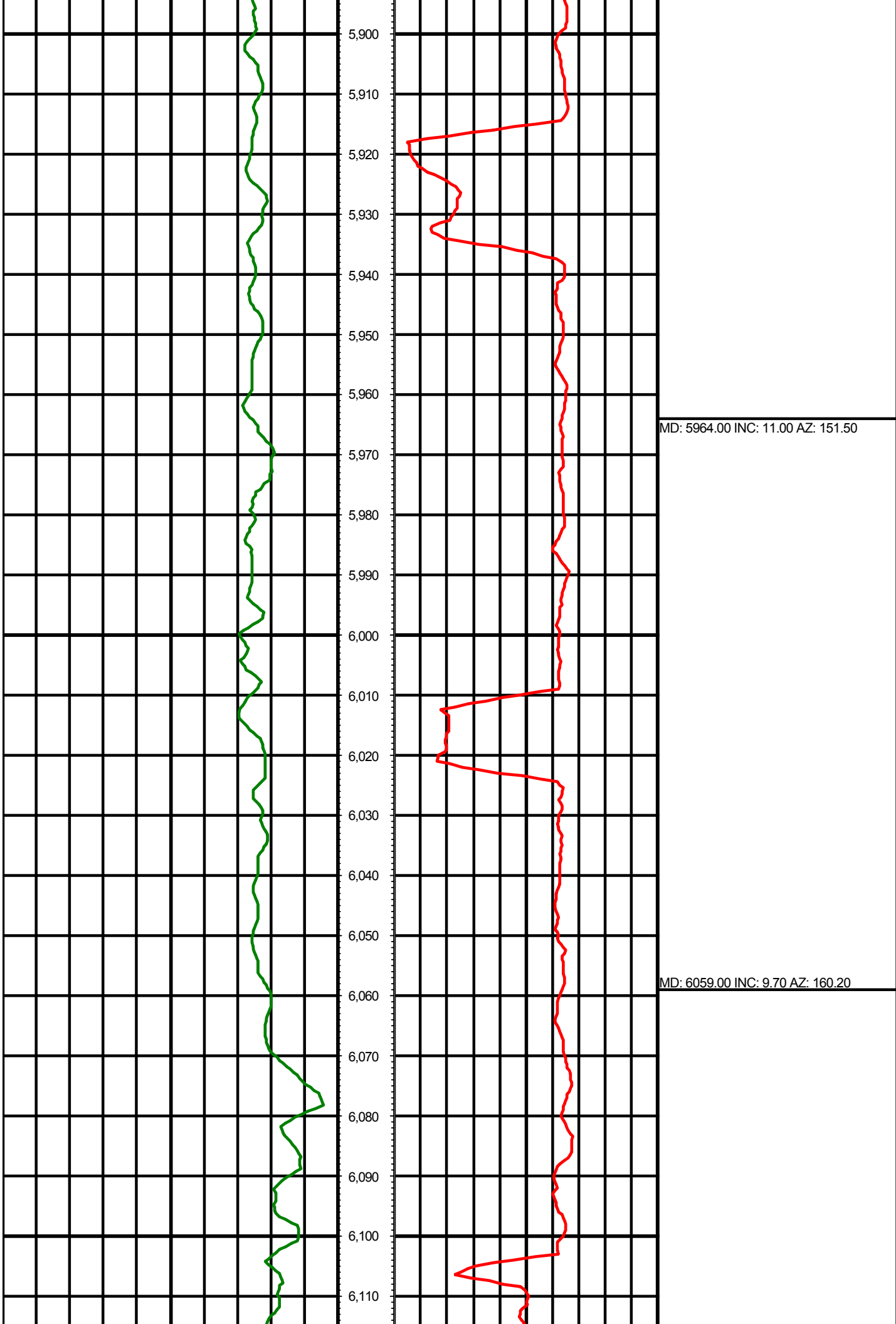


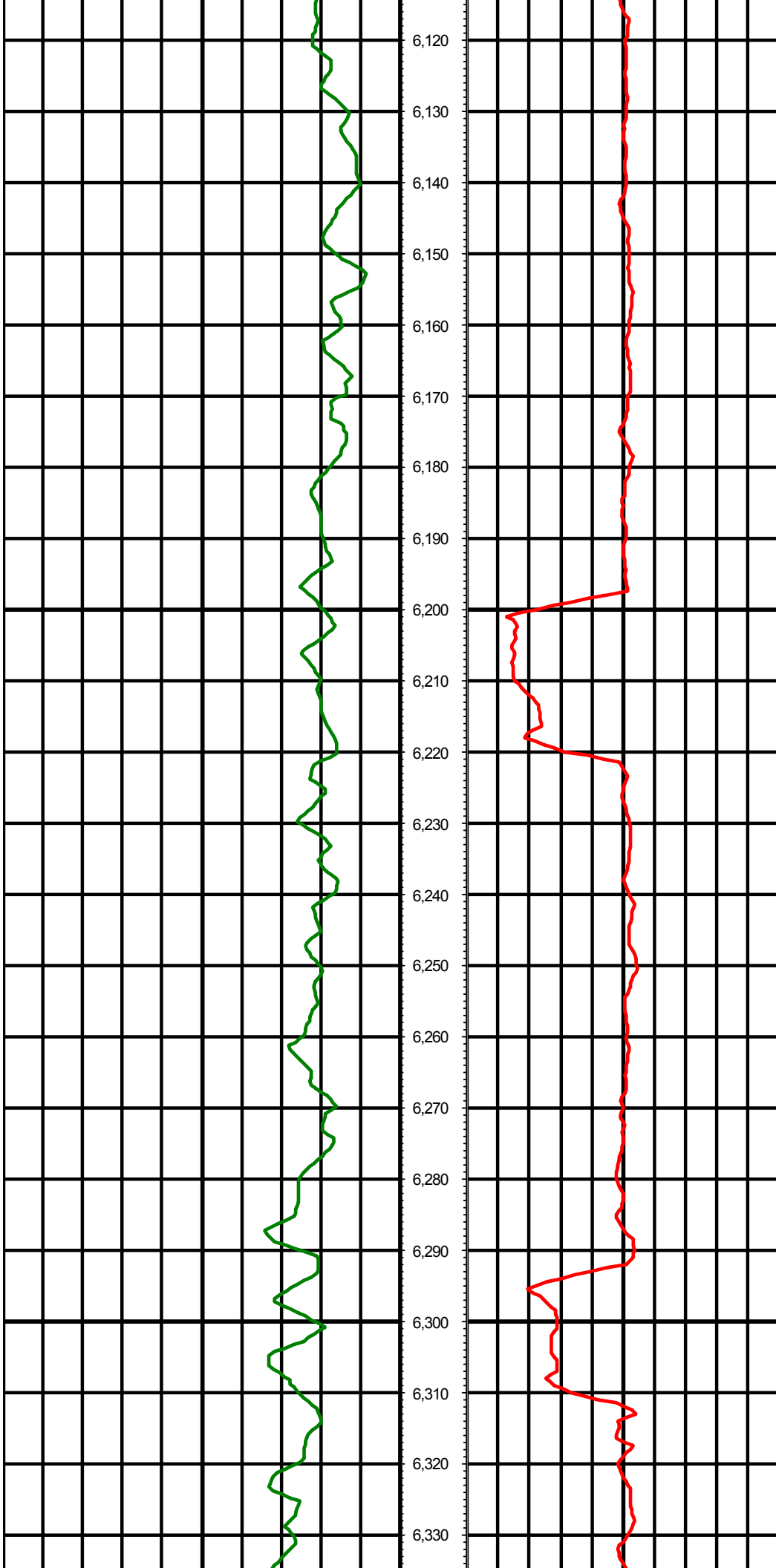
MD: 5302.00 INC: 8.90 AZ: 144.40

MD: 5397.00 INC: 10.90 AZ: 143.00



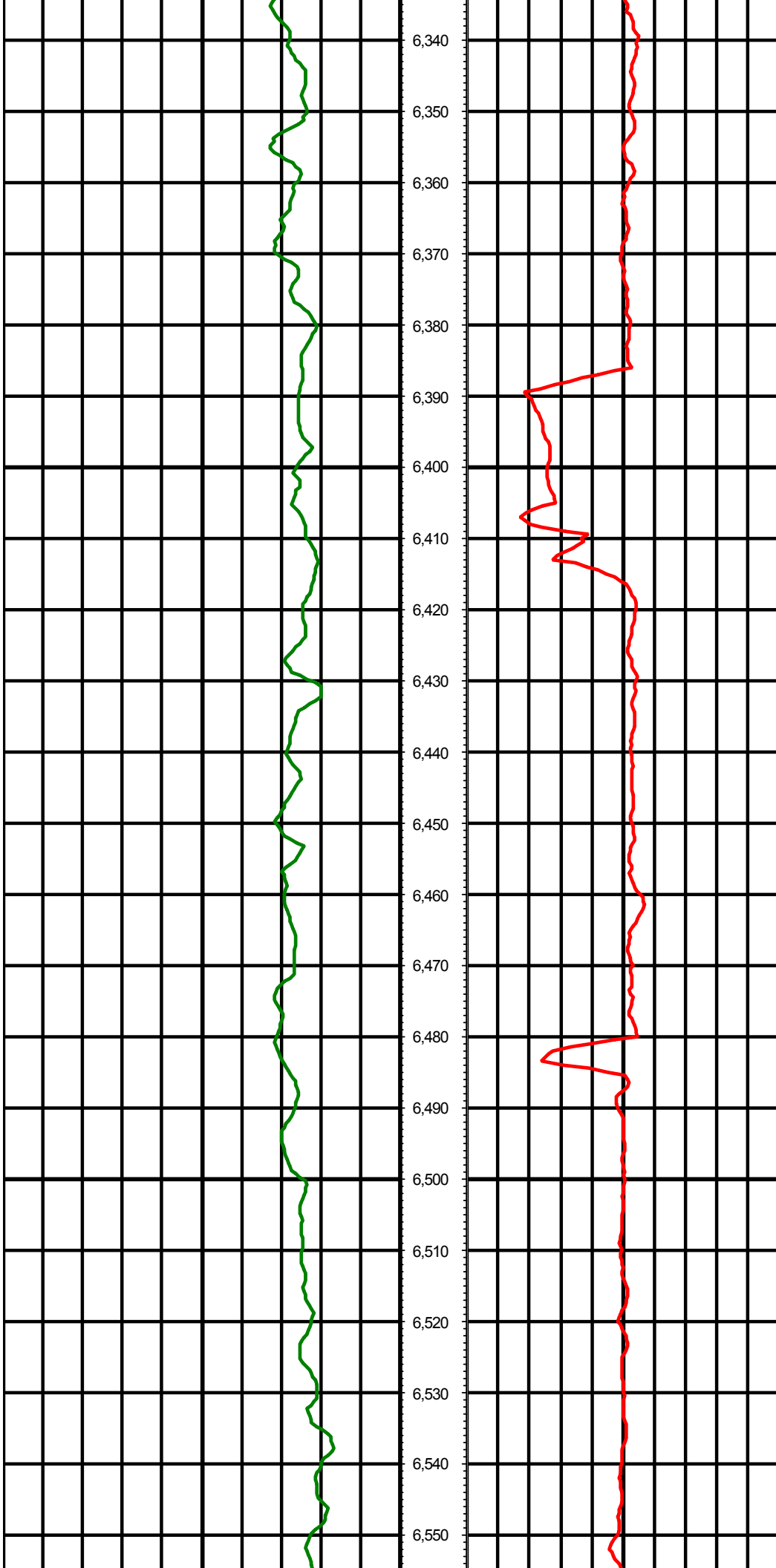






MD: 6154.00 INC: 8.40 AZ: 159.00

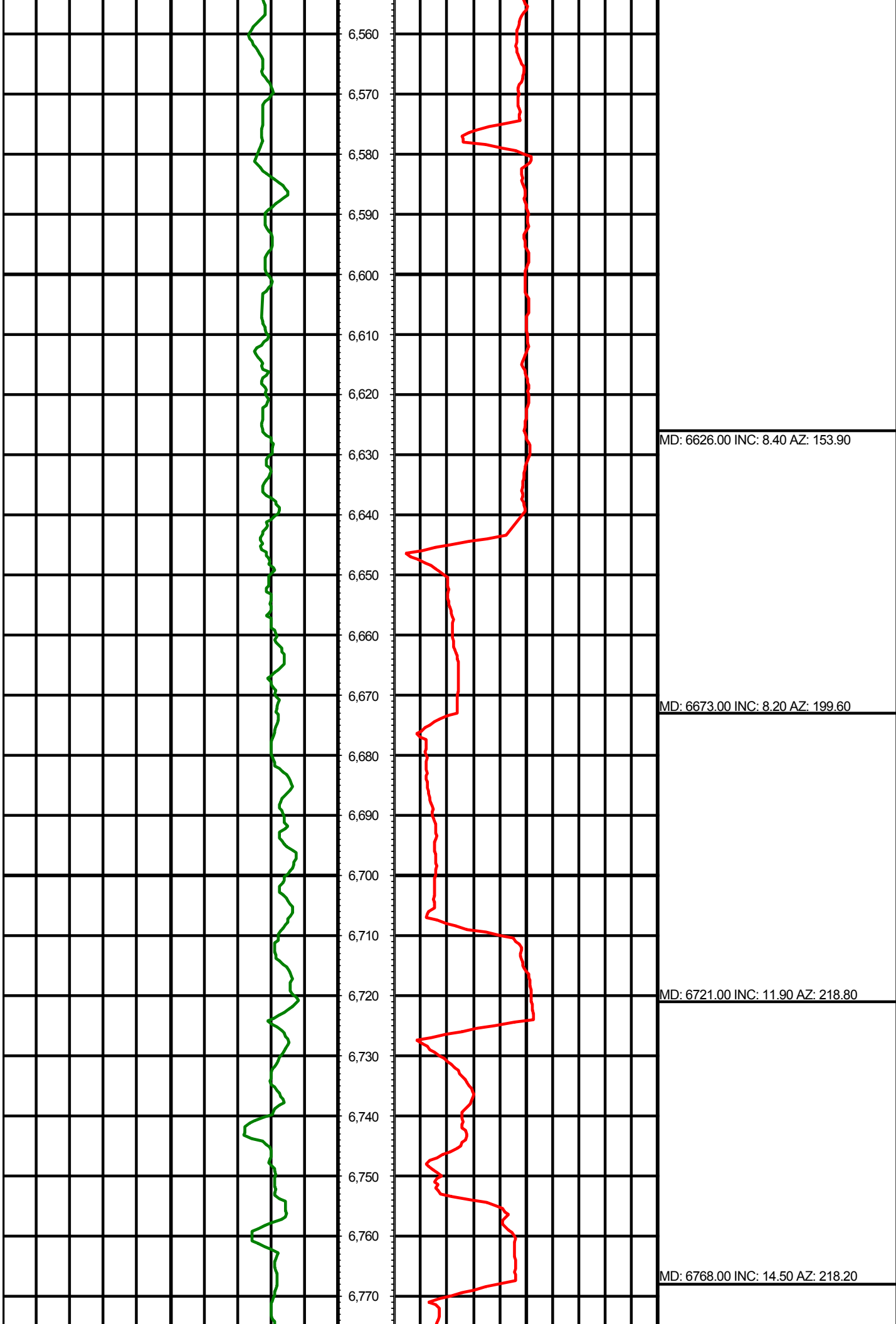
MD: 6248.00 INC: 9.60 AZ: 162.30

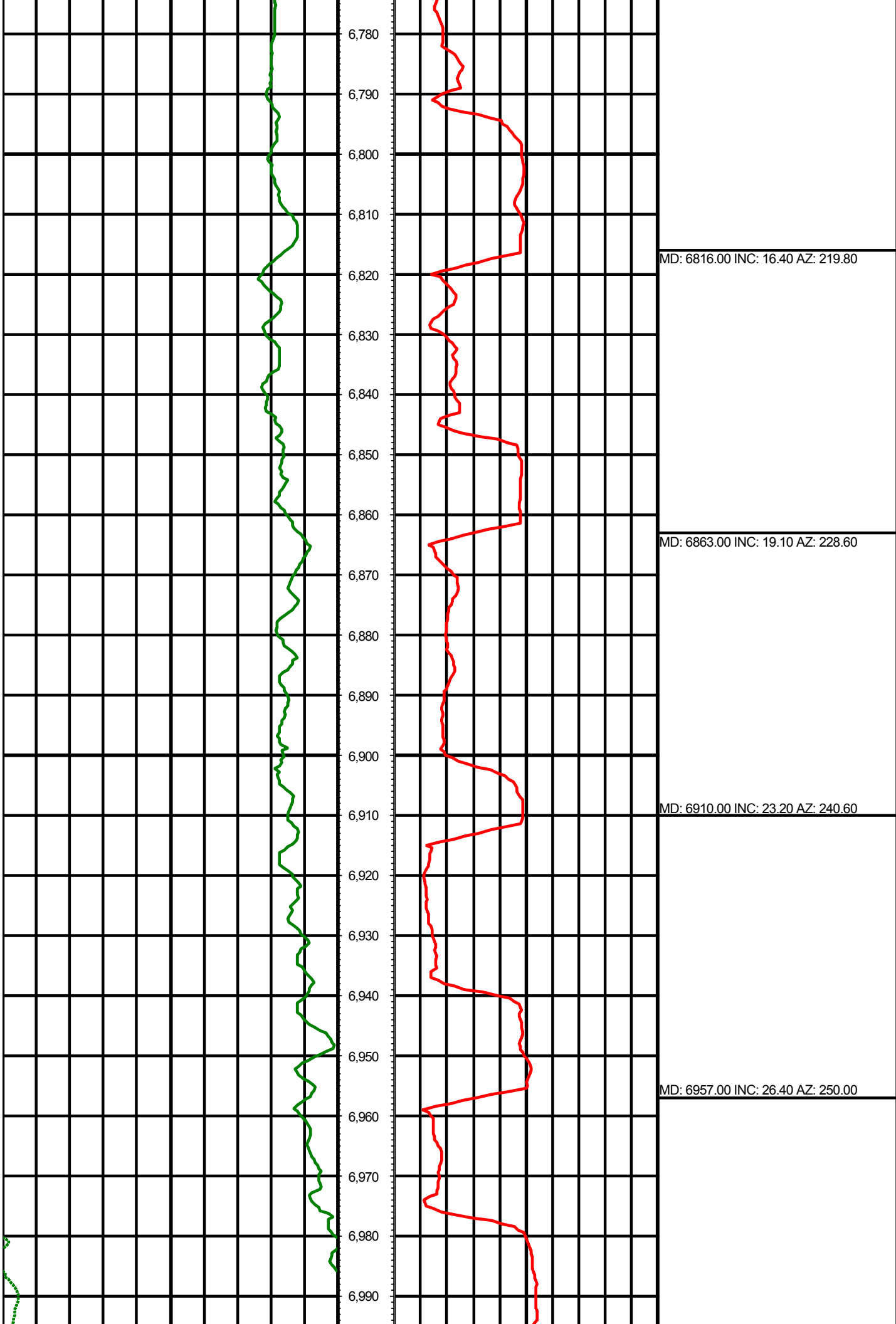


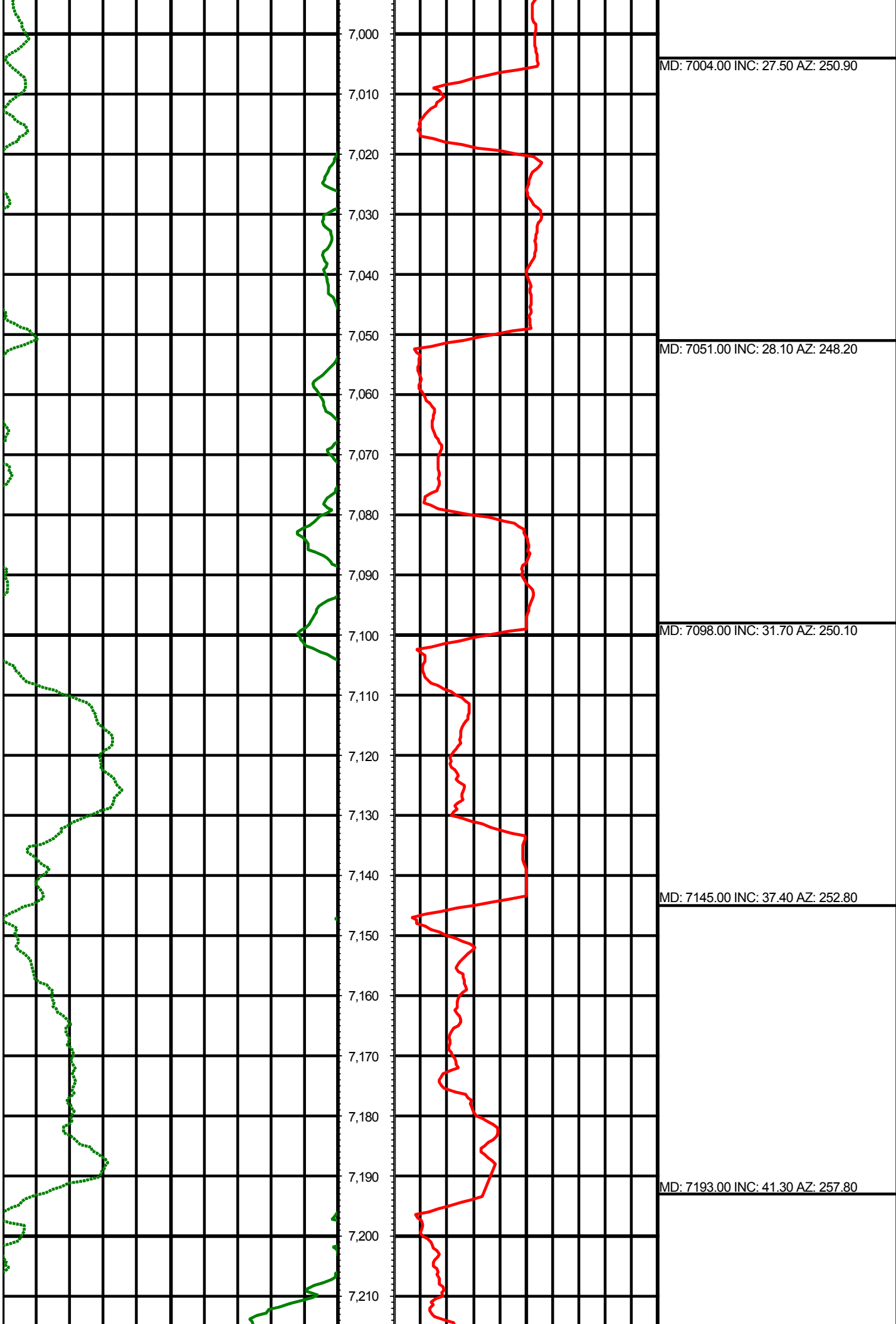
MD: 6343.00 INC: 10.60 AZ: 154.40

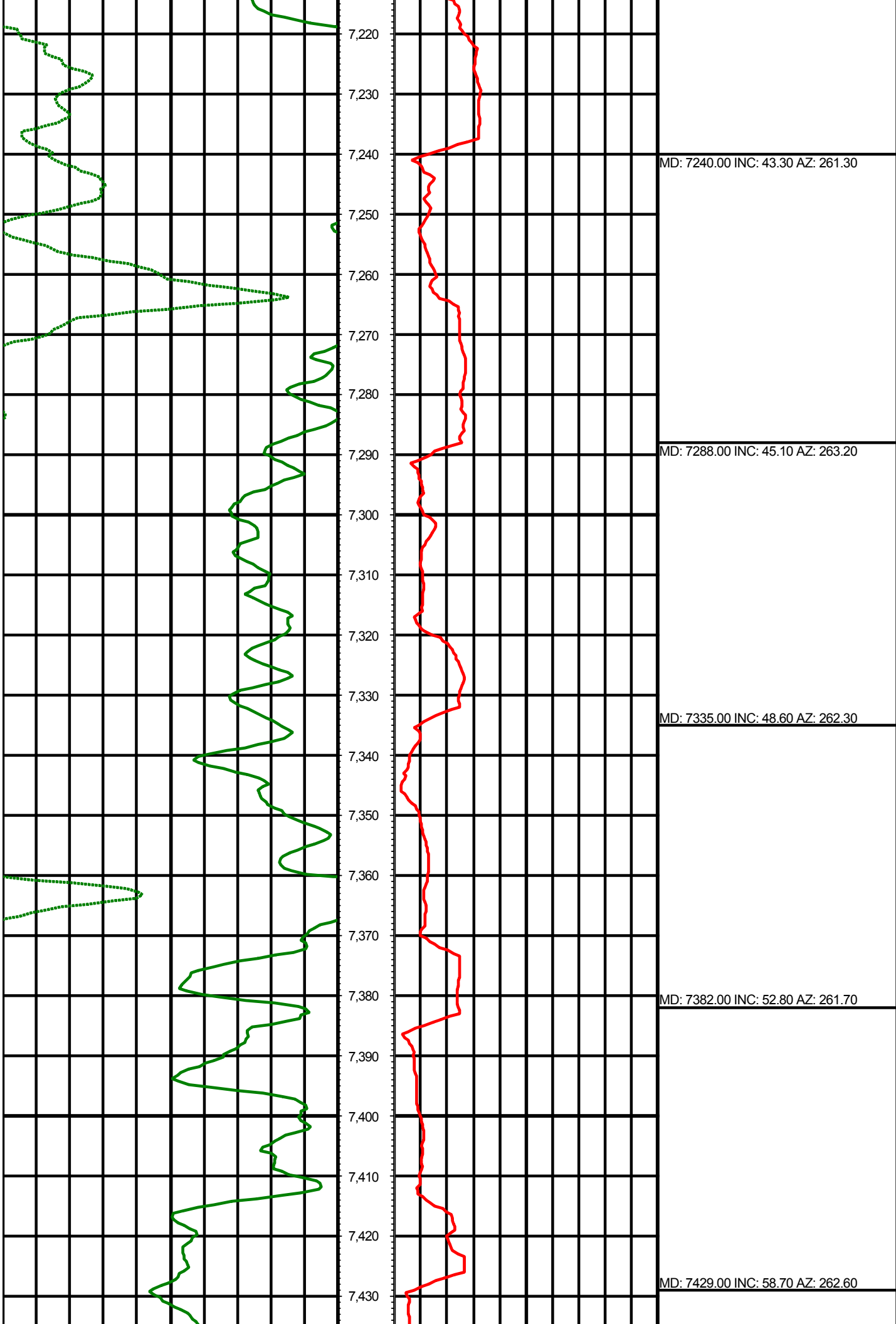
MD: 6437.00 INC: 10.60 AZ: 154.40

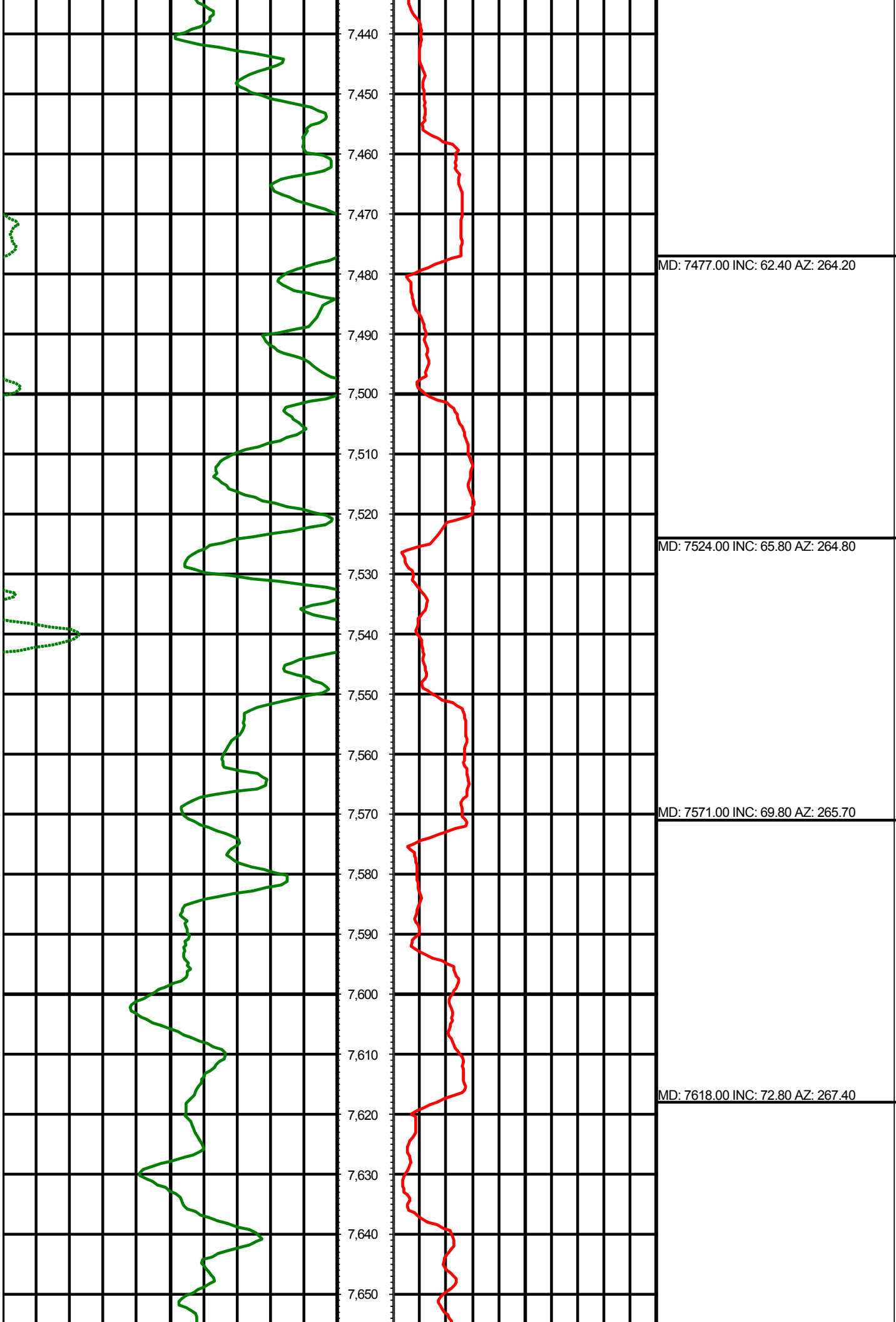
MD: 6532.00 INC: 9.40 AZ: 153.70

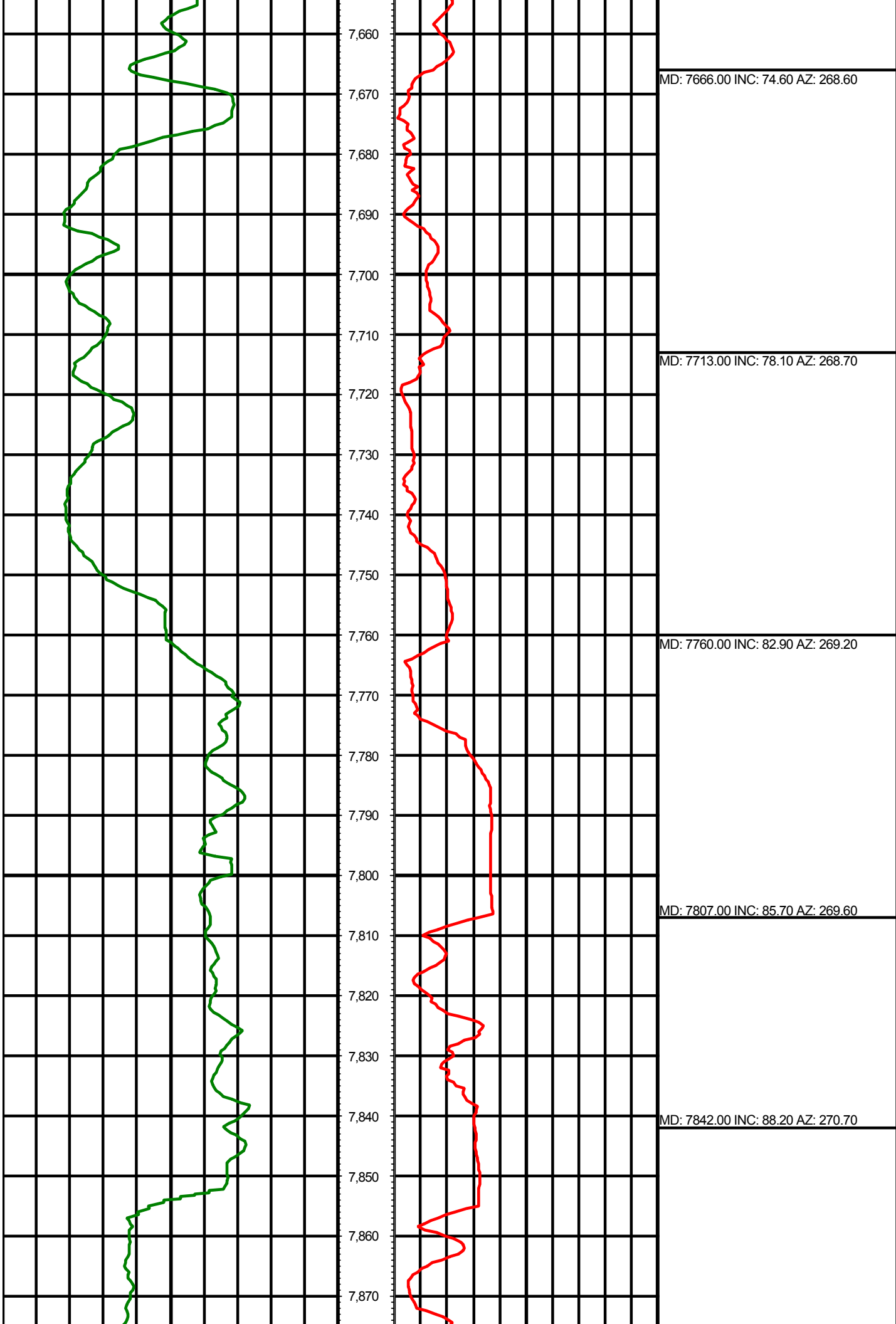














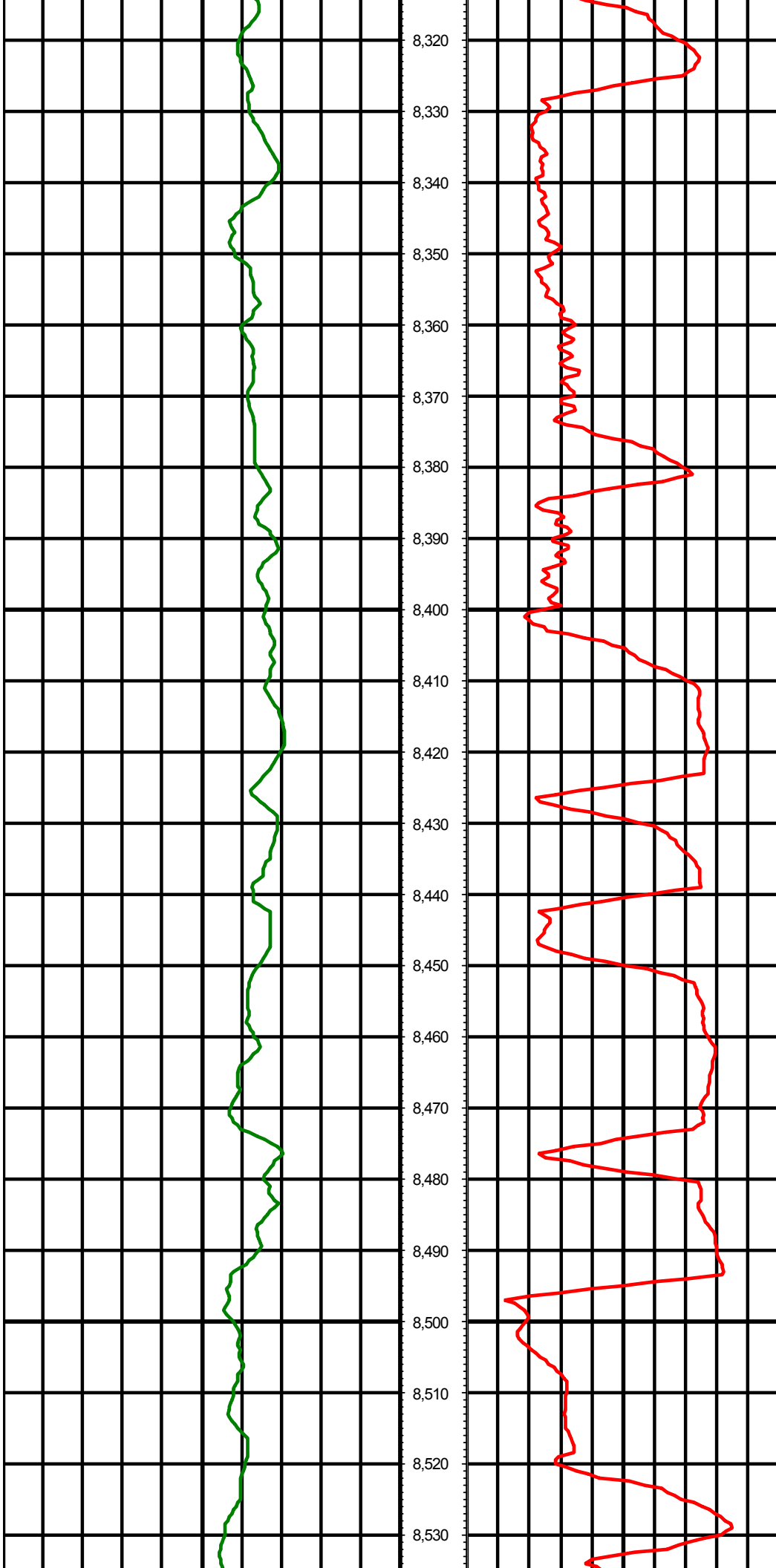
MD: 7974.00 INC: 91.40 AZ: 271.40

MD: 8068.00 INC: 91.40 AZ: 271.40



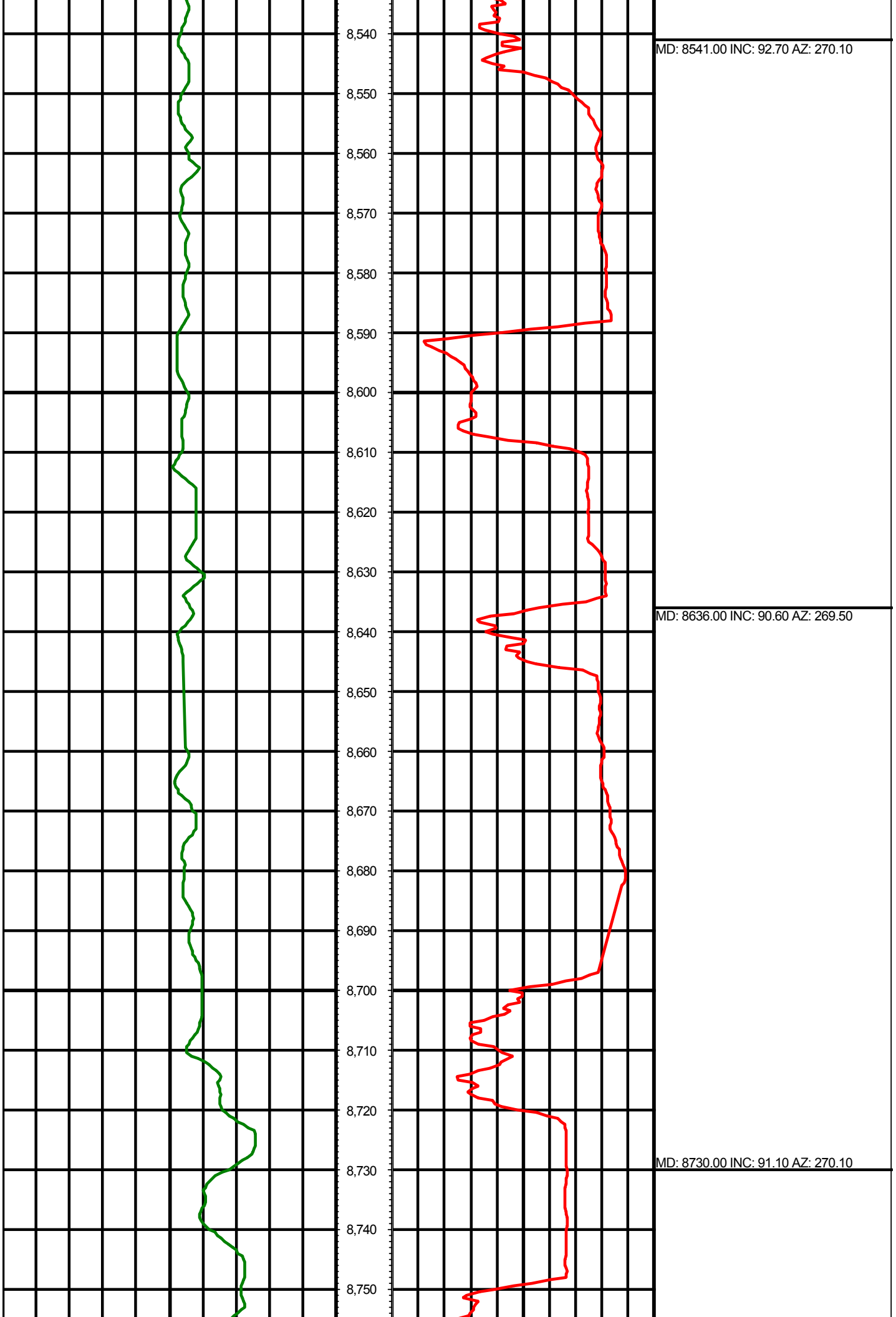
MD: 8163.00 INC: 91.40 AZ: 271.40

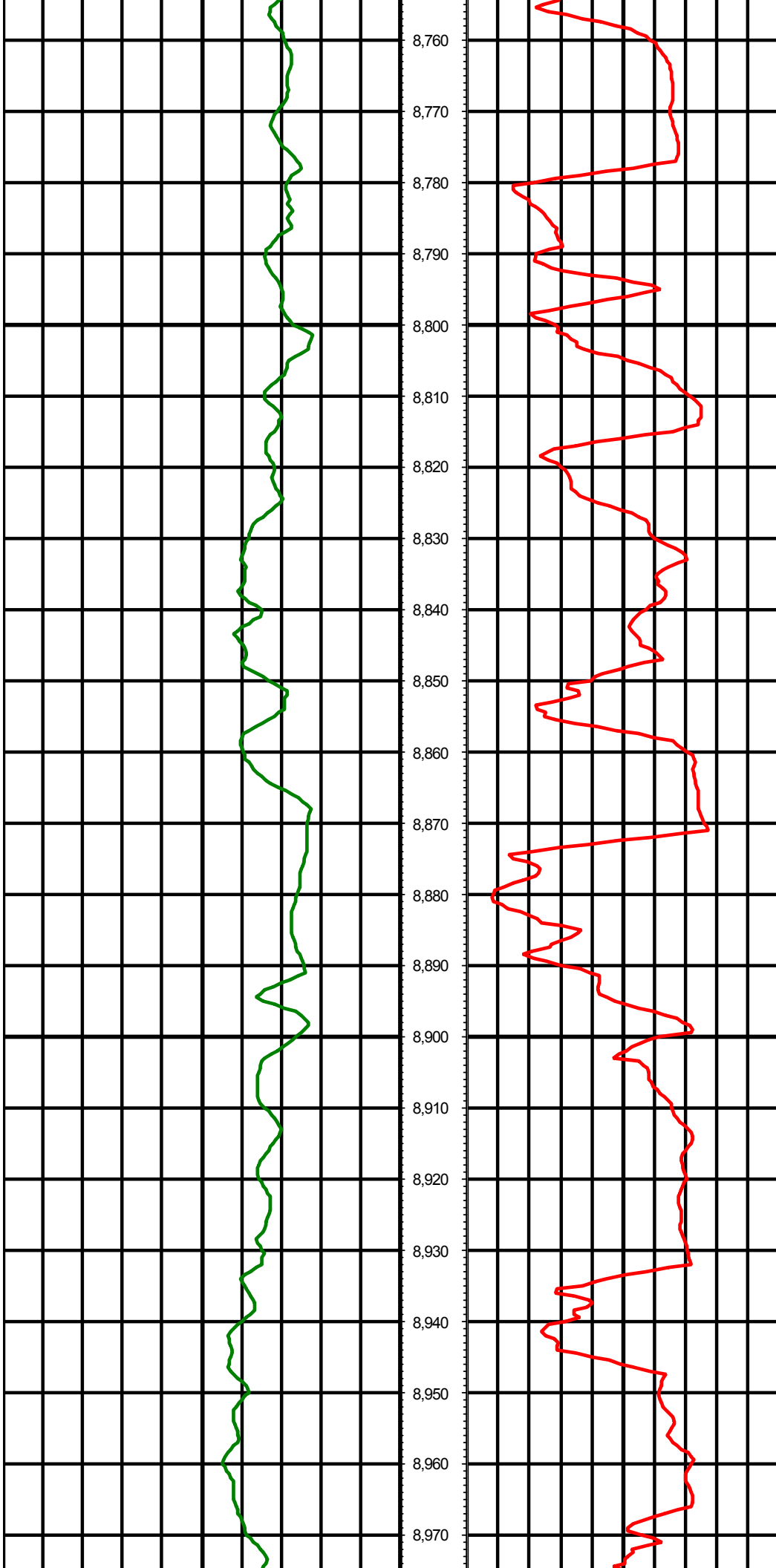
MD: 8257.00 INC: 92.00 AZ: 271.80



MD: 8352.00 INC: 92.50 AZ: 271.60

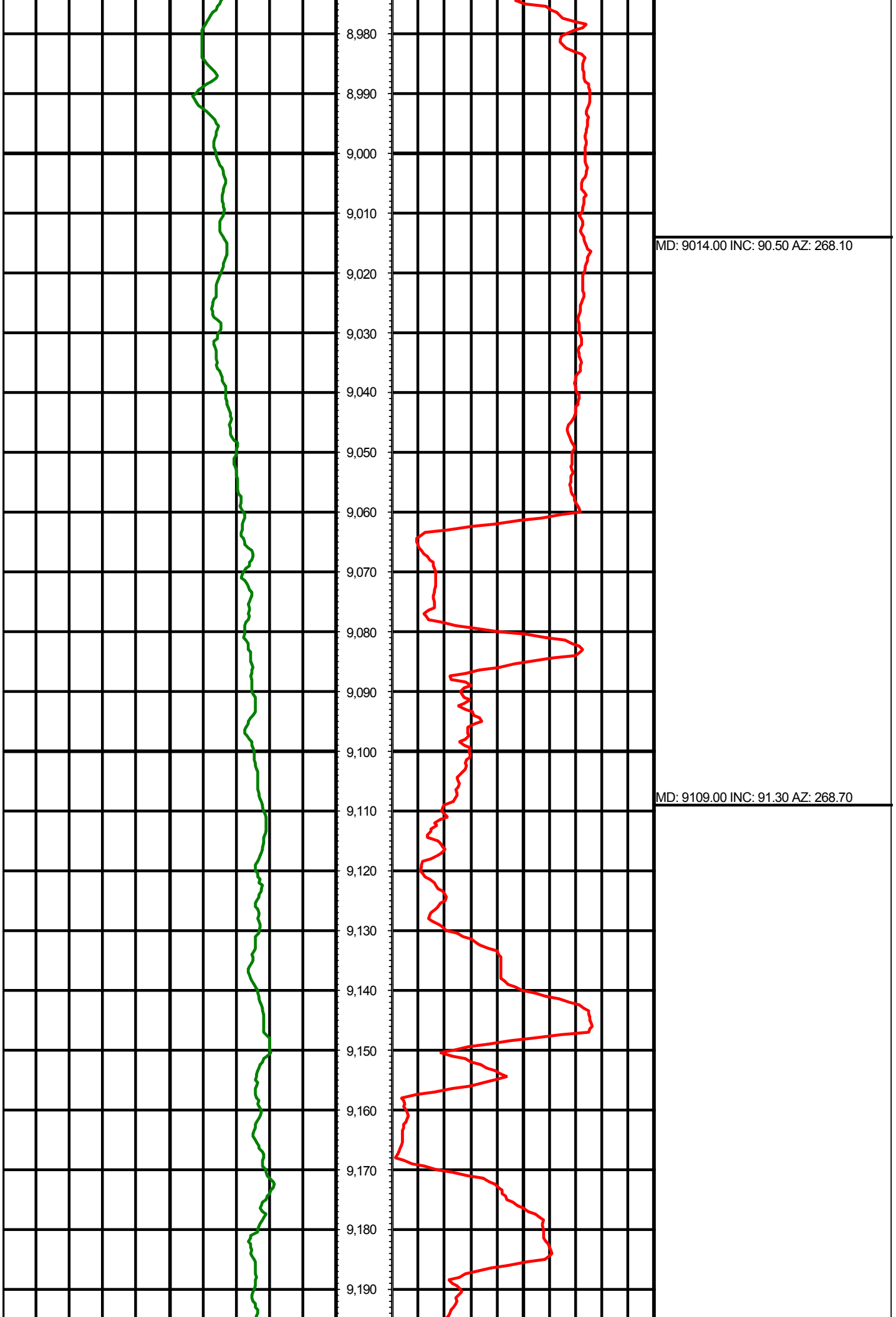
MD: 8447.00 INC: 93.70 AZ: 273.40

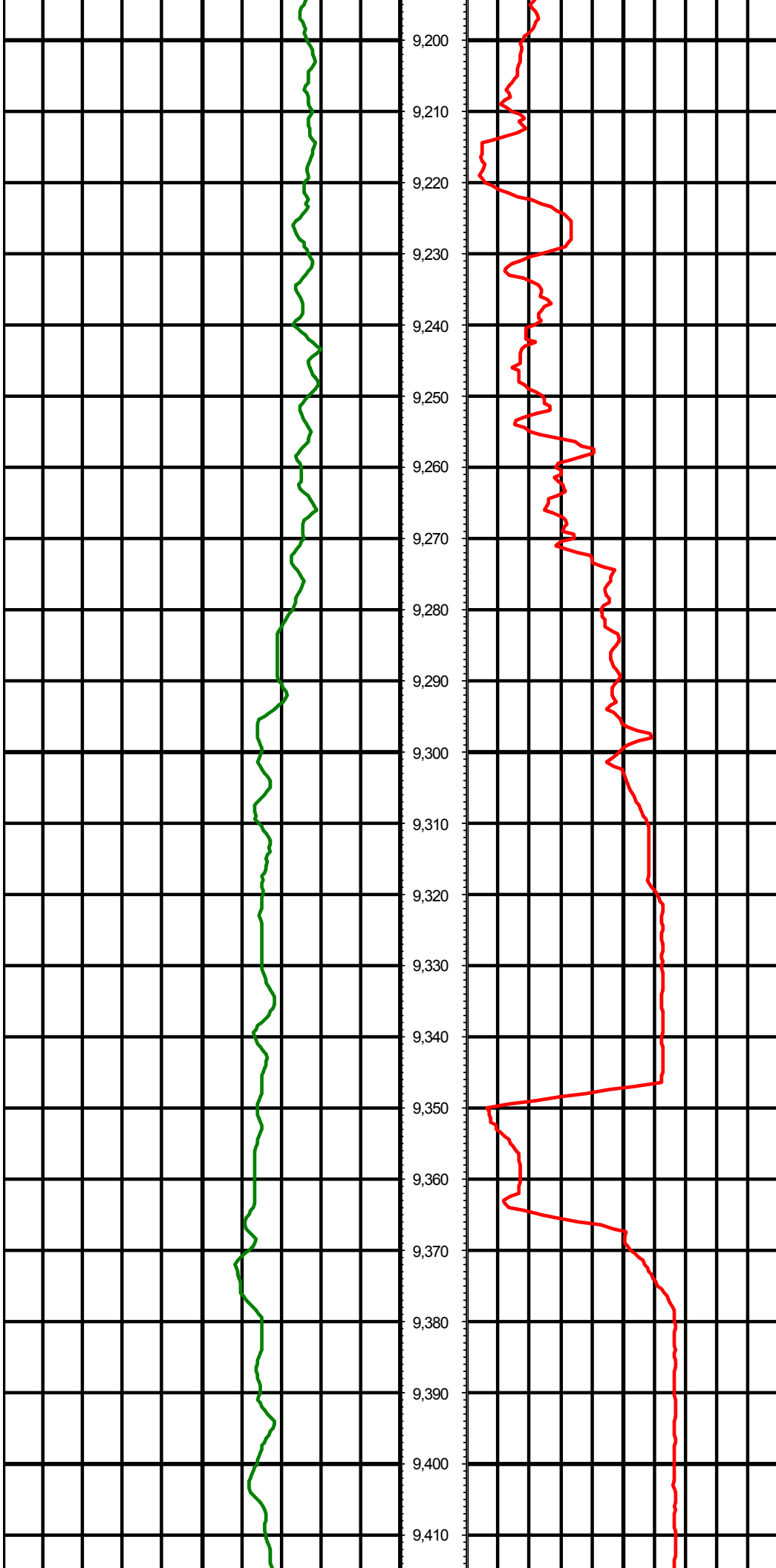




MD: 8825.00 INC: 90.80 AZ: 269.80

MD: 8920.00 INC: 90.70 AZ: 268.60





9,200

9,210

9,220

9,230

9,240

9,250

9,260

9,270

9,280

9,290

9,300

9,310

9,320

9,330

9,340

9,350

9,360

9,370

9,380

9,390

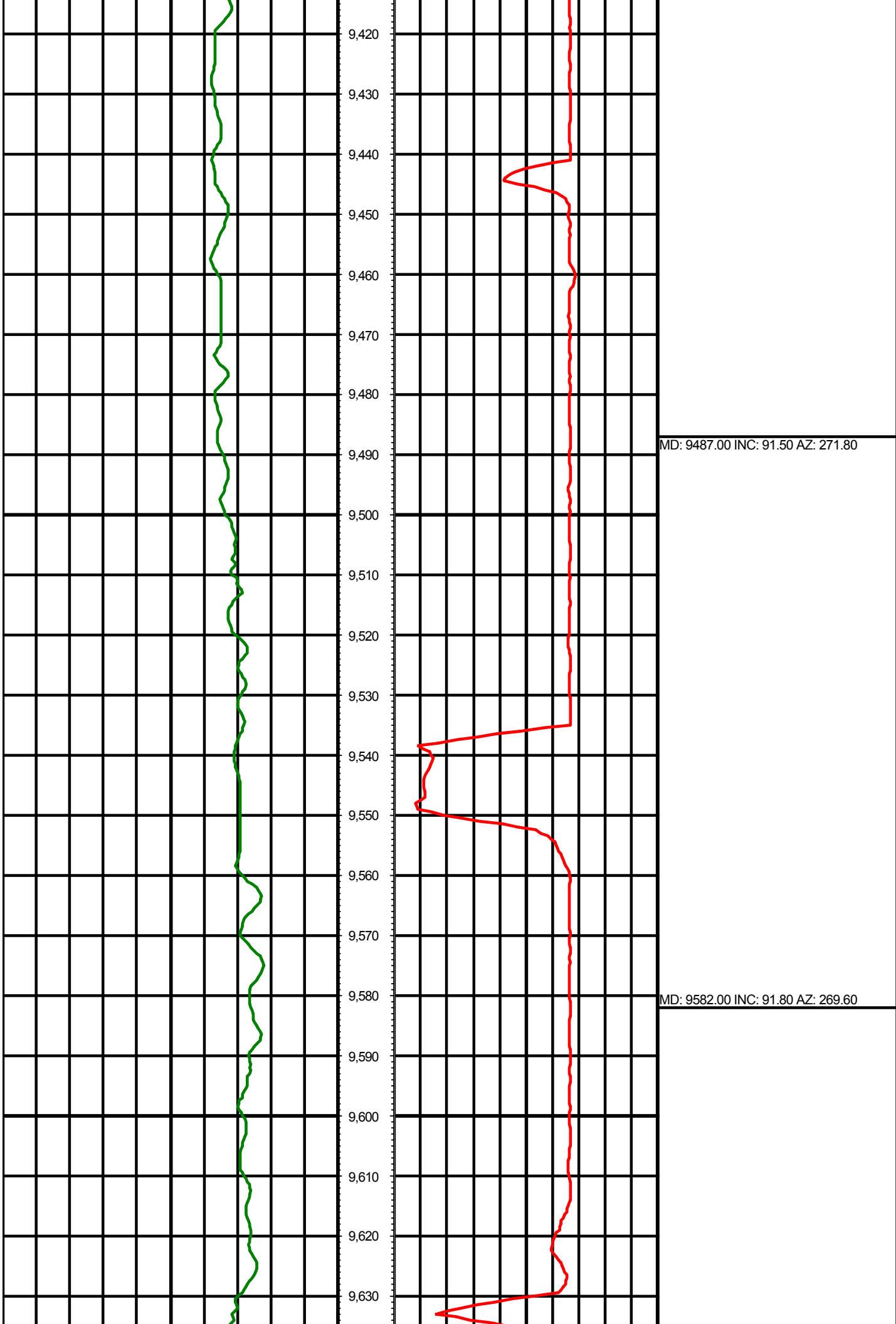
9,400

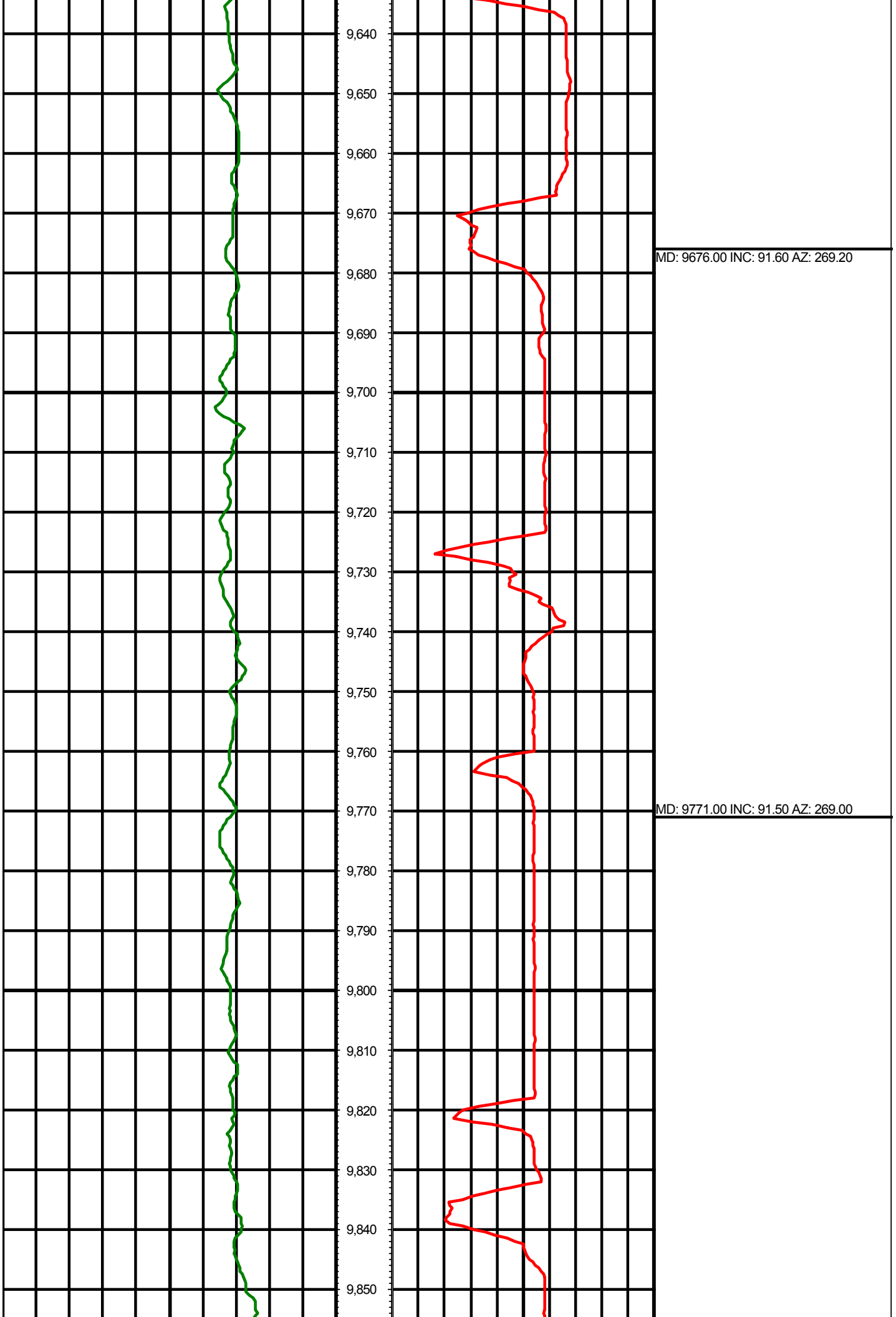
9,410

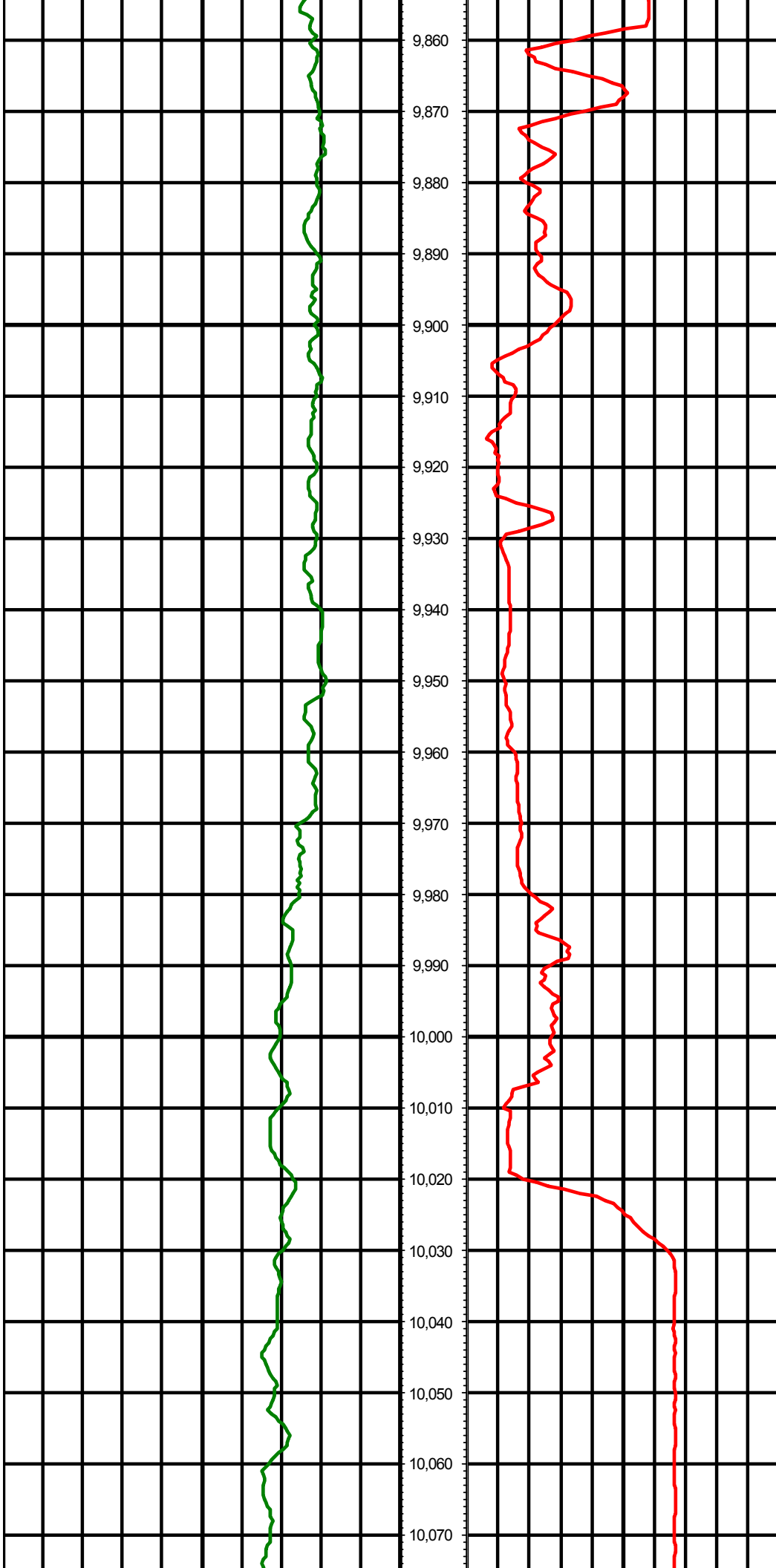
MD: 9203.00 INC: 92.30 AZ: 272.50

MD: 9298.00 INC: 93.10 AZ: 272.40

MD: 9393.00 INC: 91.60 AZ: 271.50







9,860

9,870

9,880

9,890

9,900

9,910

9,920

9,930

9,940

9,950

9,960

9,970

9,980

9,990

10,000

10,010

10,020

10,030

10,040

10,050

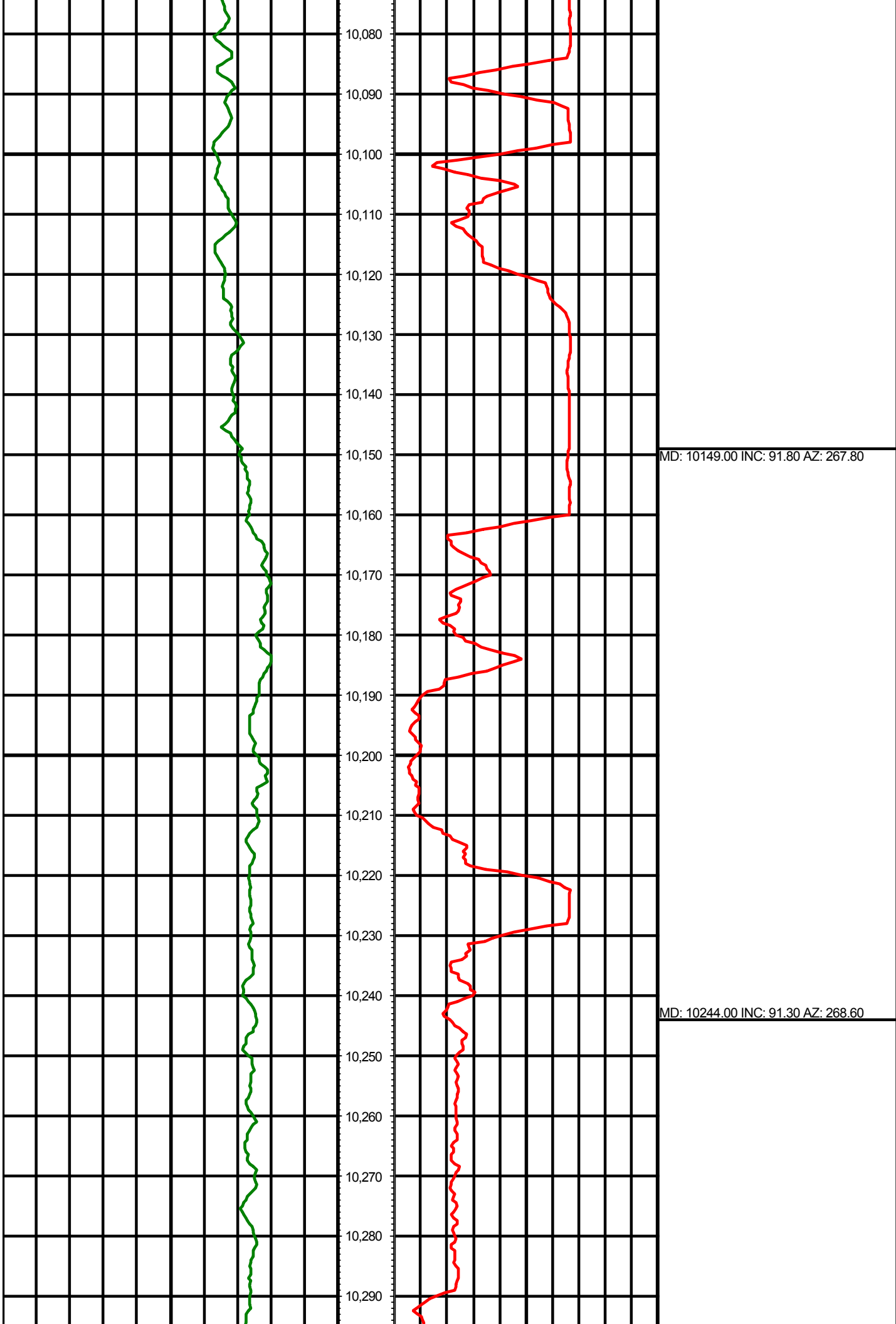
10,060

10,070

MD: 9866.00 INC: 91.20 AZ: 268.90

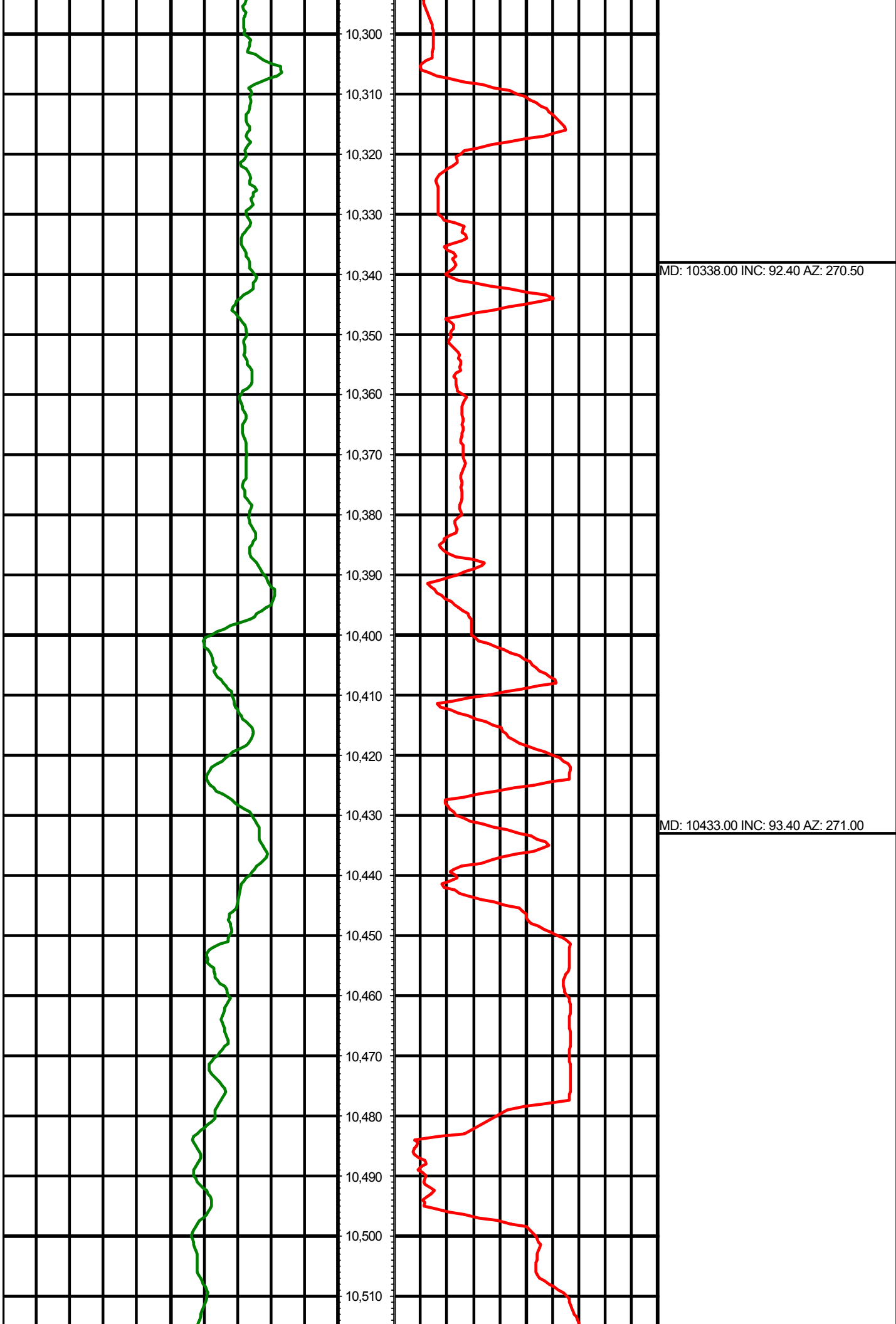
MD: 9960.00 INC: 92.60 AZ: 267.20

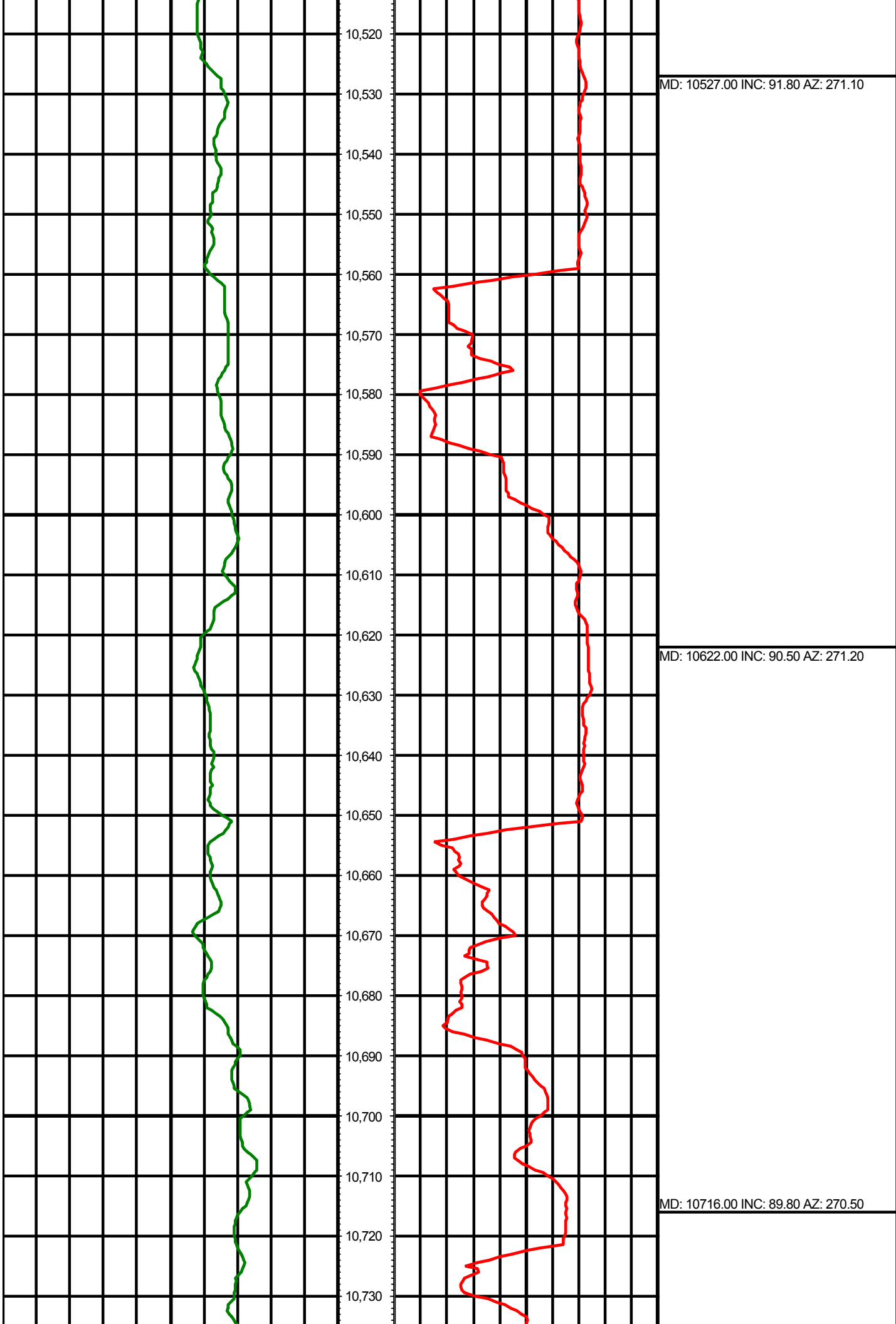
MD: 10054.00 INC: 92.20 AZ: 268.30

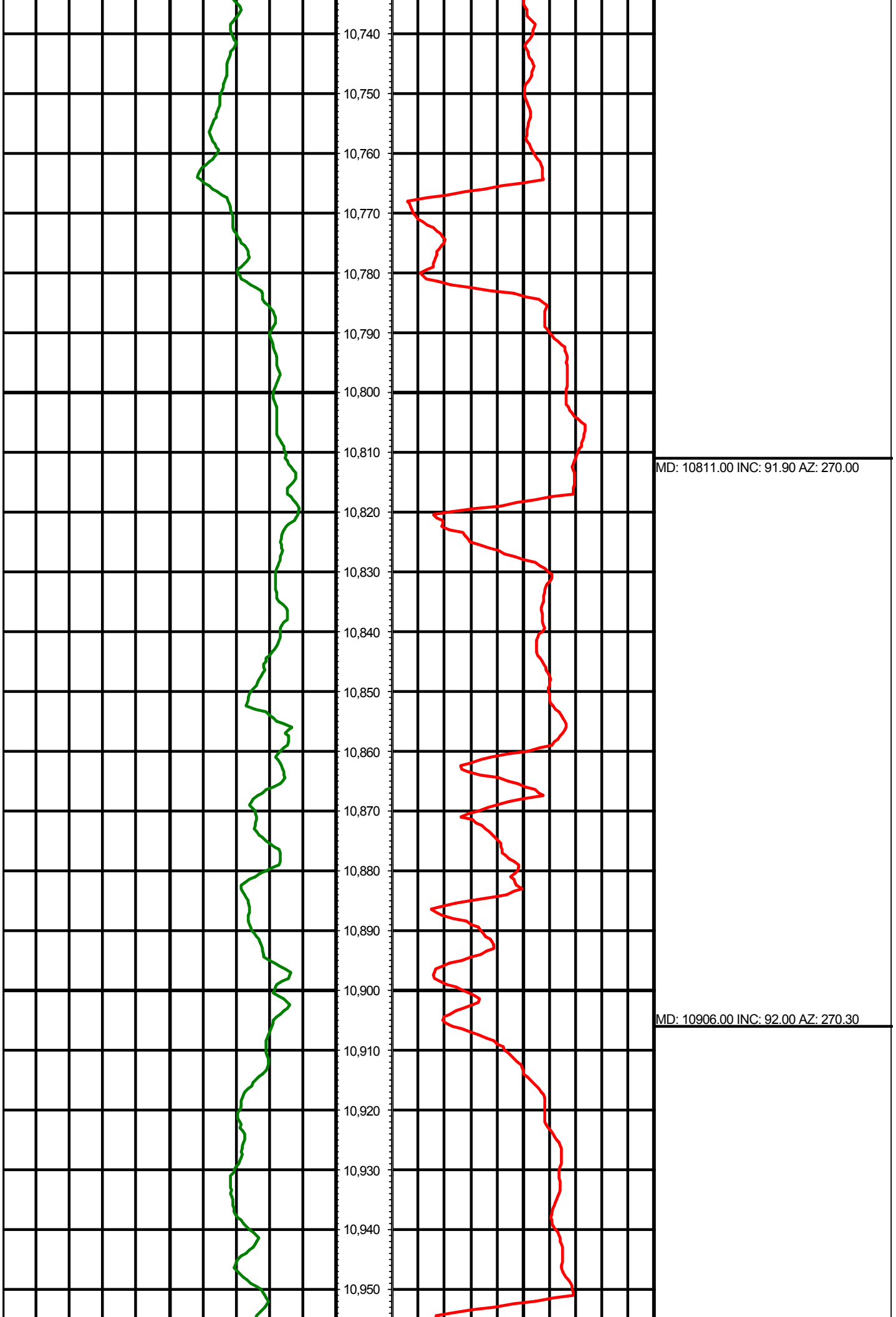


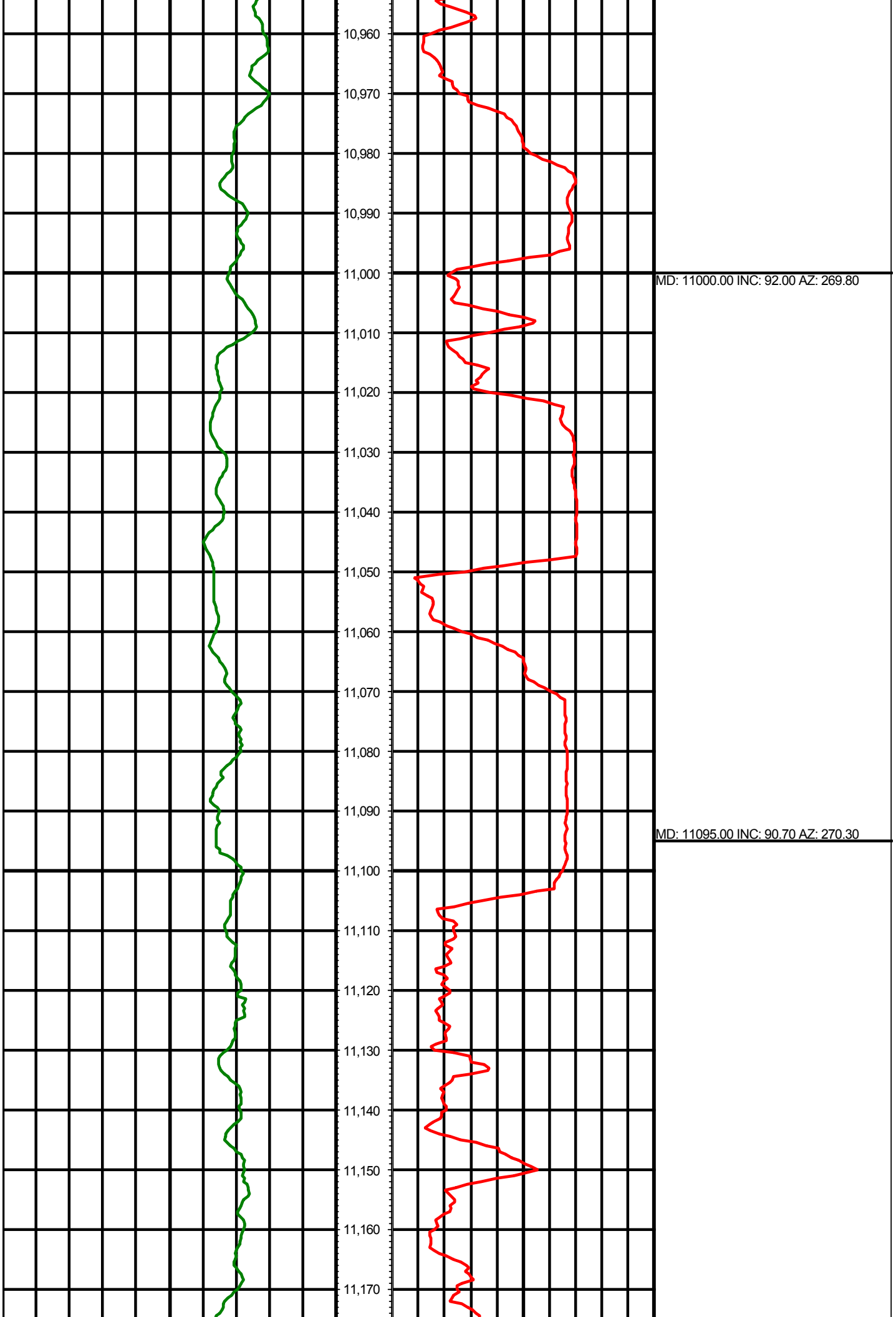
MD: 10149.00 INC: 91.80 AZ: 267.80

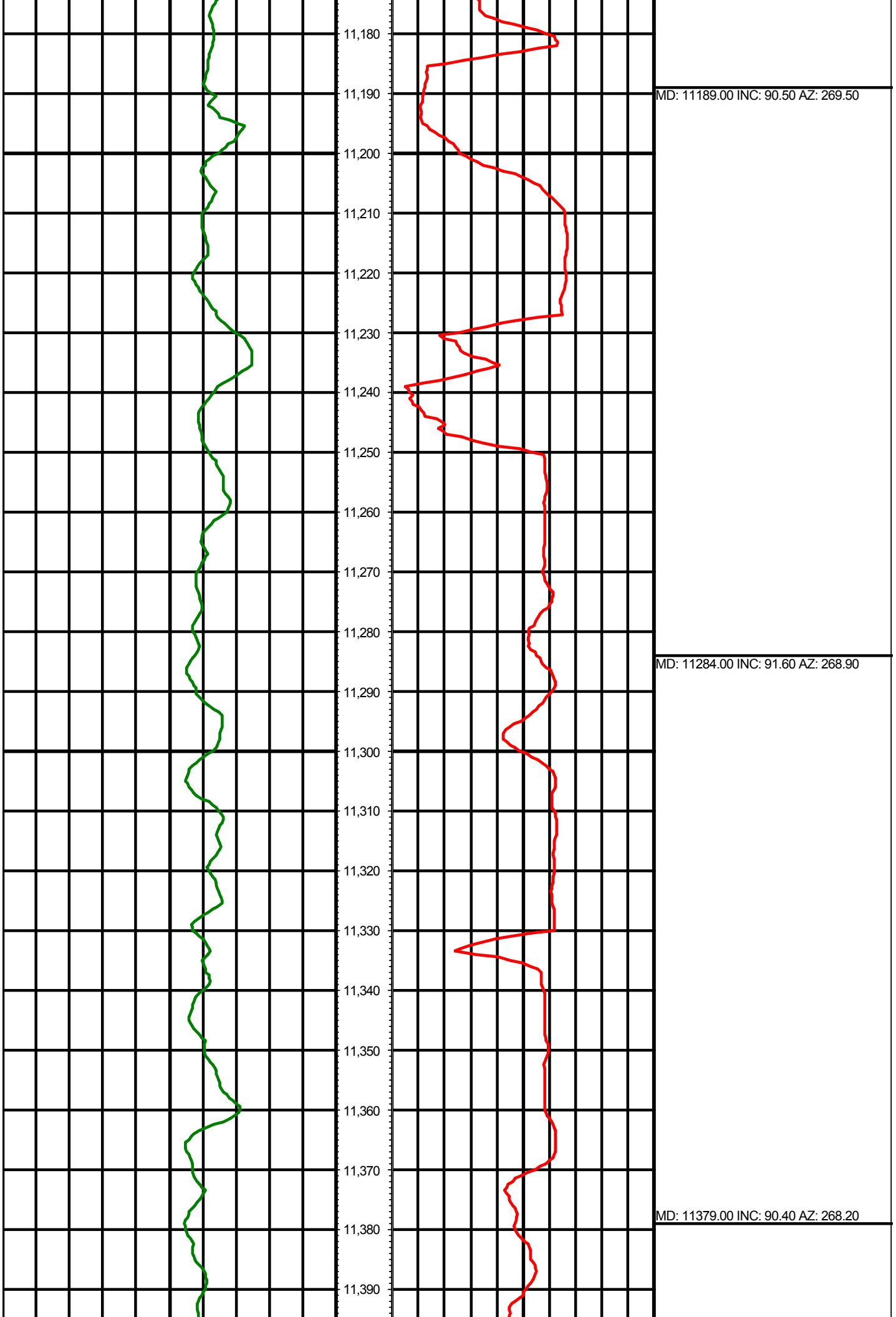
MD: 10244.00 INC: 91.30 AZ: 268.60











MD: 11189.00 INC: 90.50 AZ: 269.50

MD: 11284.00 INC: 91.60 AZ: 268.90

MD: 11379.00 INC: 90.40 AZ: 268.20

