



Cathedral Energy Services  
1949 North Pyrite Road  
Casper, Wyoming 82604

**155055**

5":100' - MD

1/26/2015 10:12:51 AM

**CATHEDRAL**

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

**Country:** U.S.A.

**State / Province:** Colorado

**County / Parish:** Weld

**Started:** 01/19/2015 04:00 AM

**API/UWI:** 05-123-4028600

**Field:** Wattenberg

**Well:** Ruhl 1G-32H-B264

**Rig:** Ensign Drilling 135

**Ended:** 01/24/2015 12:00 PM

Gamma Ray  
Section Plane: 180.00  
Magnetic North: 8.25  
Gamma Averaging: 7%

### Personnel

**Day Hand:** K. Wagoner

**Night Hand:** J. Corby

**Comp. Emp:** Gage Soehner

Maximum Temperature: 206°F

### Location

**Latitude:** 40.101449

**Longitude:** -104.570909

**Elev. GL:** 4997

**Elev. DF:**

**Elev. KB:** 5010

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

### Hole Data

Size	From	To
12-1/4	137	1170
8-3/4	1170	7460
6-1/8	7460	11500

### Casing Data

Size	From	To
9-5/8	0	1160
7	0	7438

### Bit Sizes

Size	From	To
12-1/4	137	1170
8-3/4	1170	7460
6-1/8	7460	11500

### Mud Data

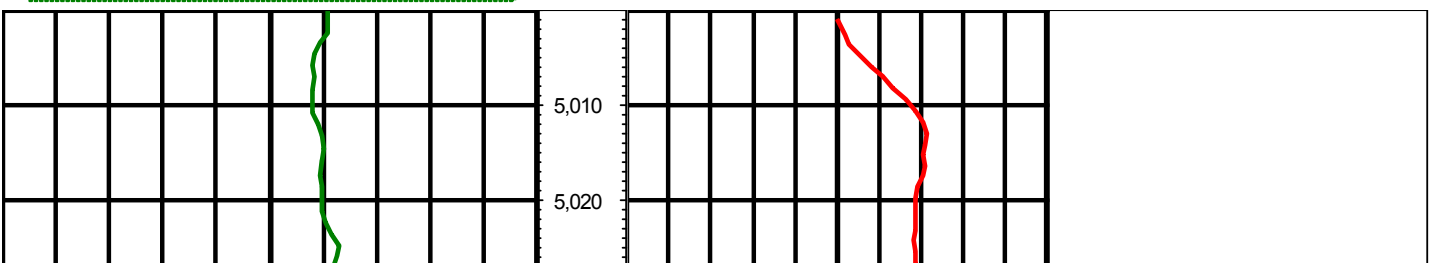
Type	Weight	Density	Viscosity	Rm	Rmf	Rmc	From	To
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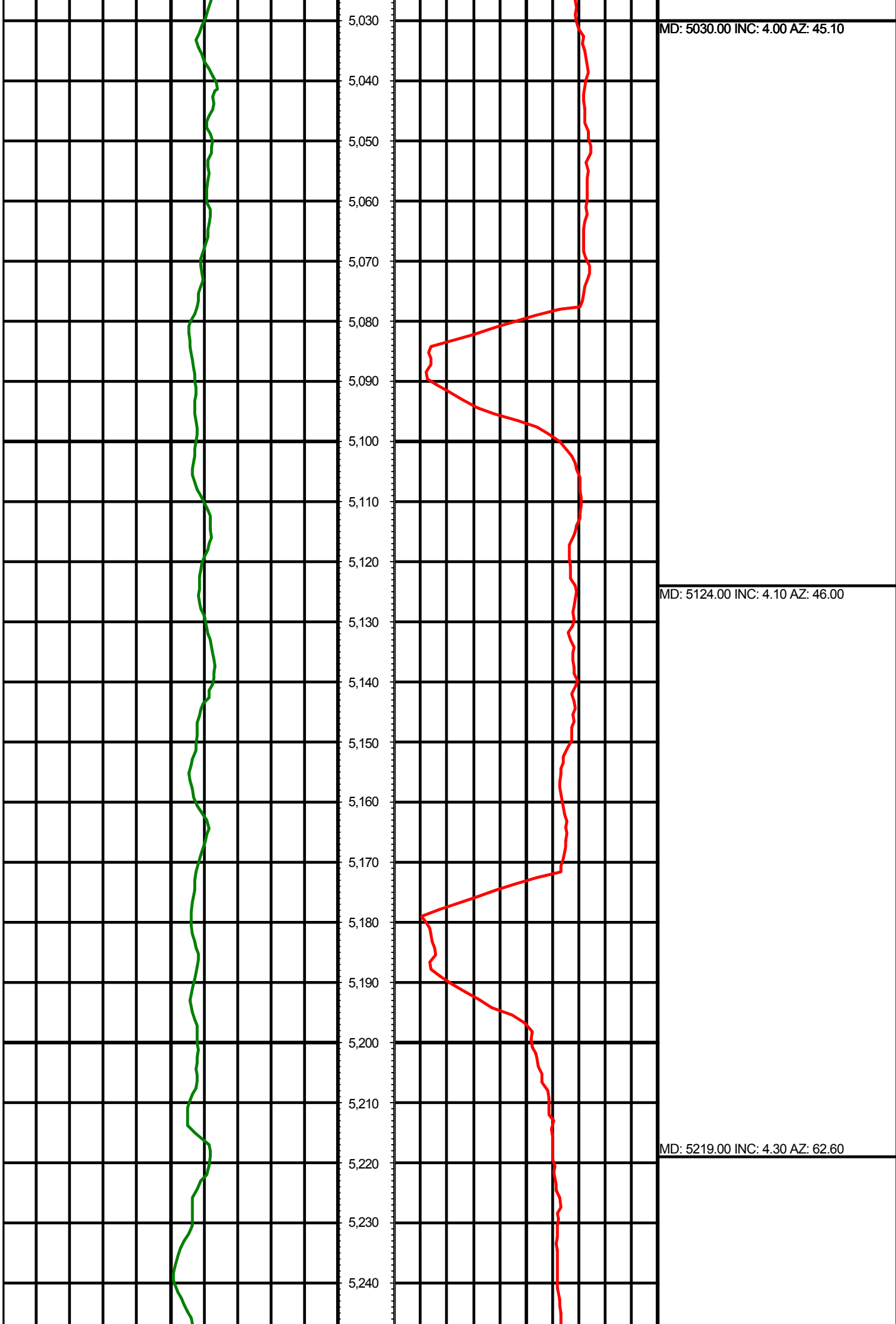
### Tool Run Data

Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
278	36.33	0	1/19/2015 4:31:37 AM	5000	1/20/2015 5:15:37 AM	7460
278	39.44	0	1/21/2015 8:32:09 PM	7460	1/24/2015 7:32:09 AM	11500

*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

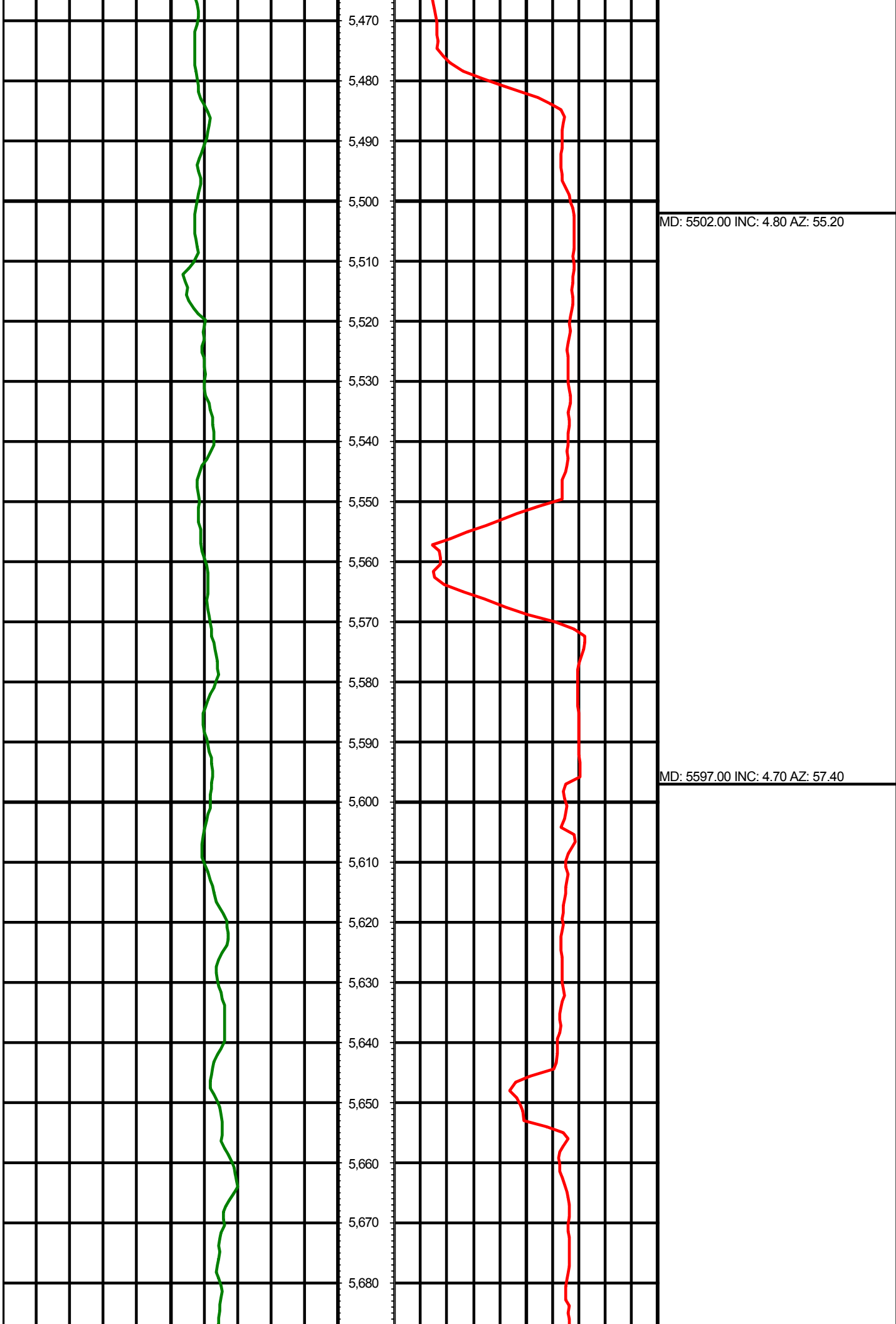


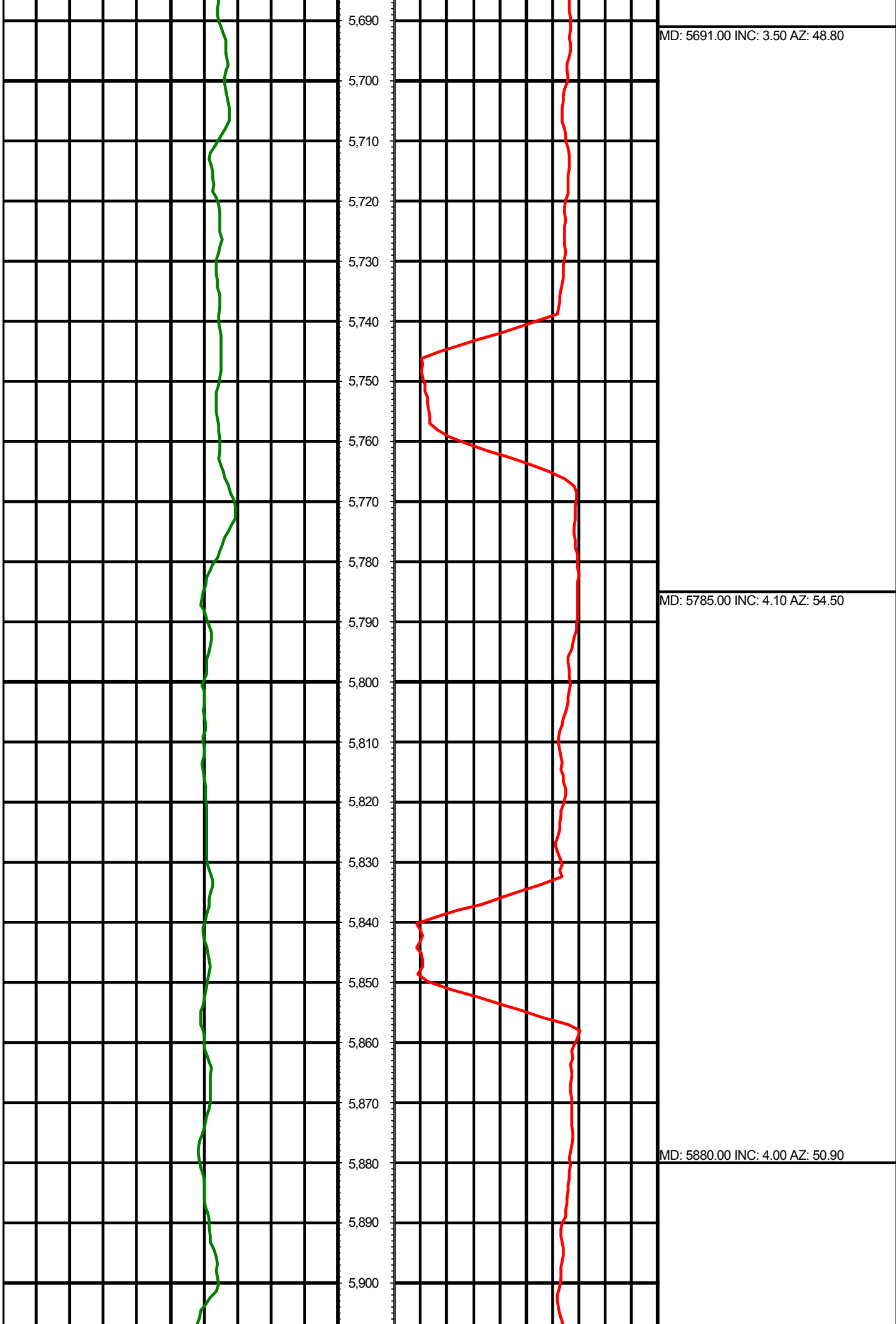


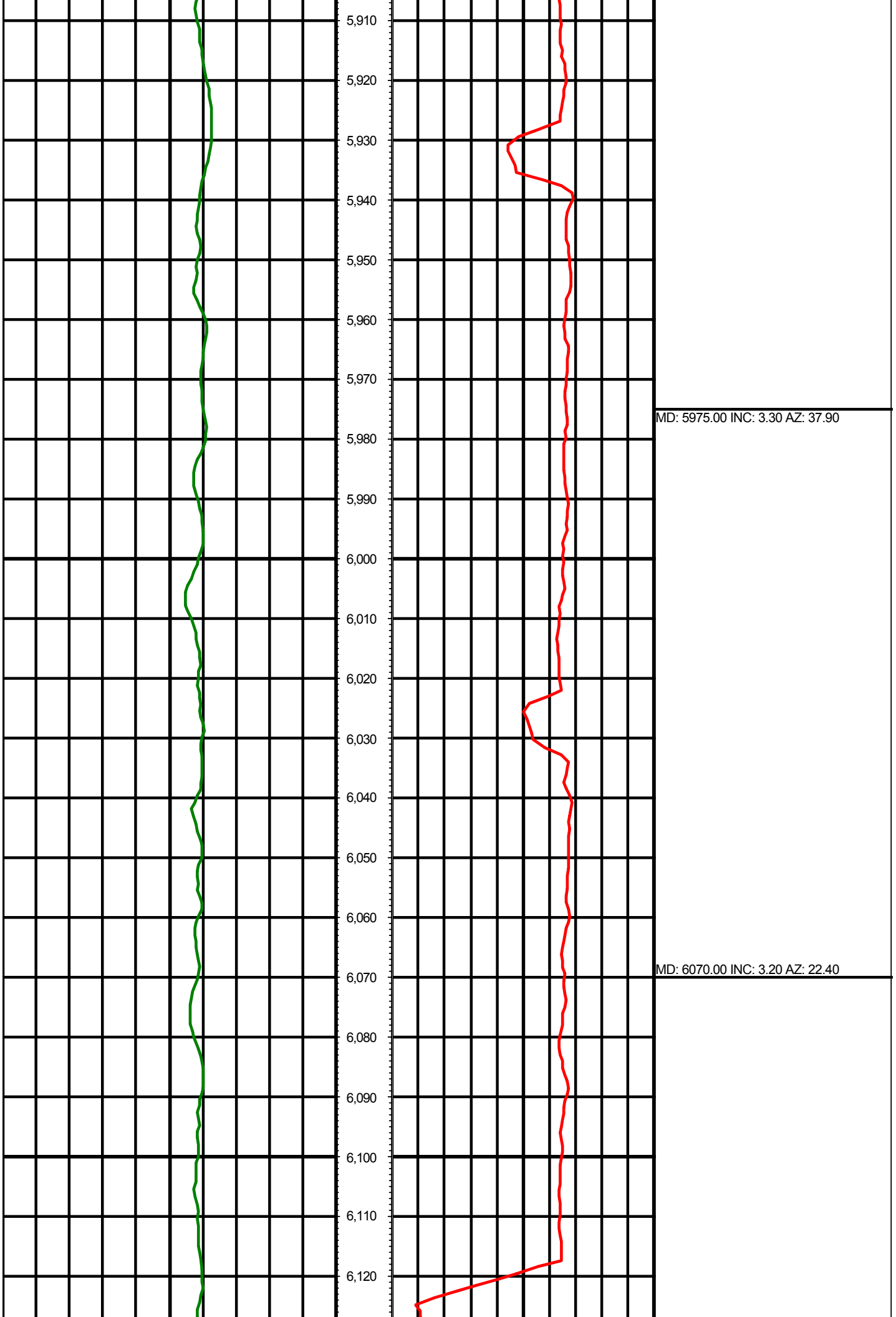


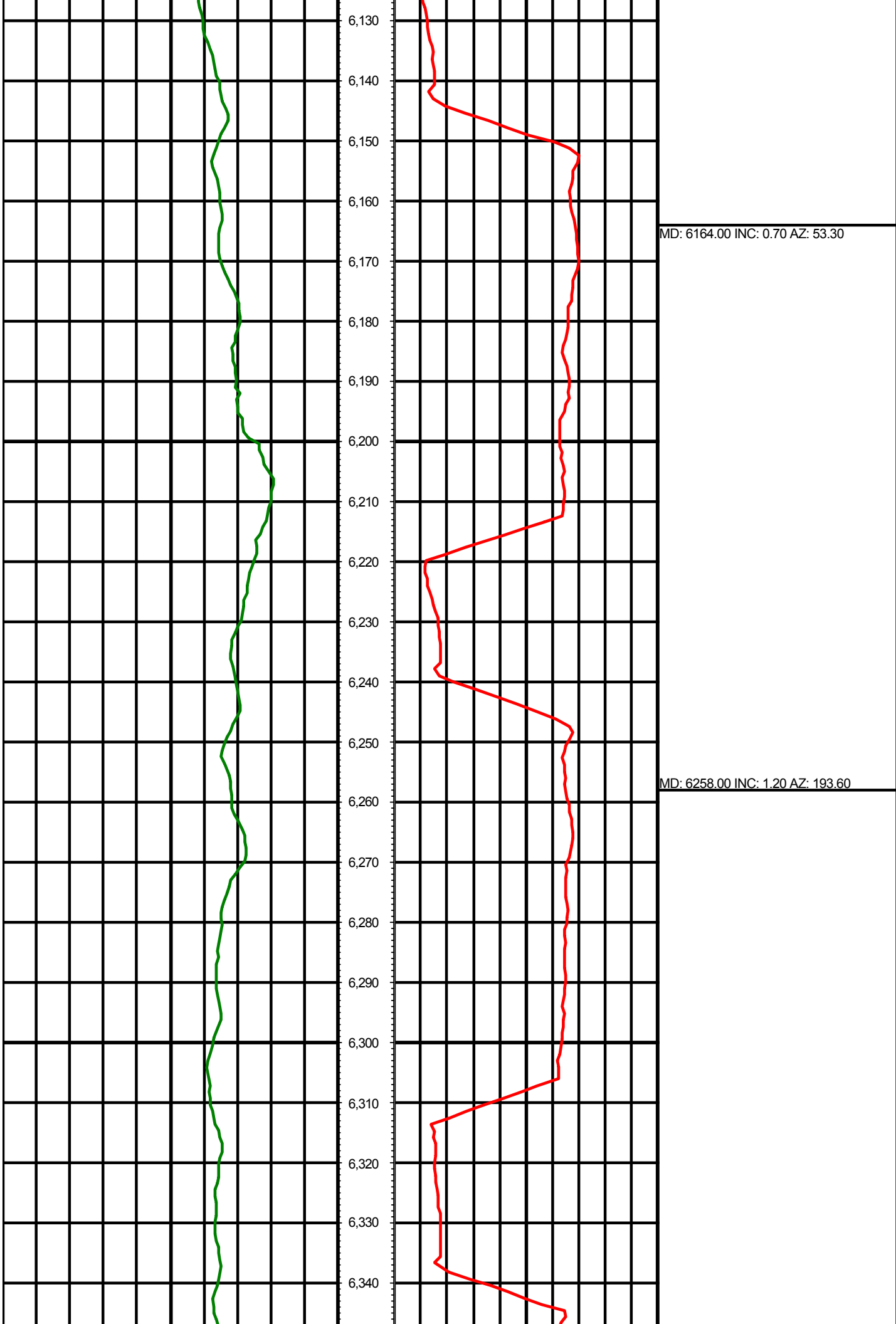
MD: 5313.00 INC: 4.10 AZ: 57.90

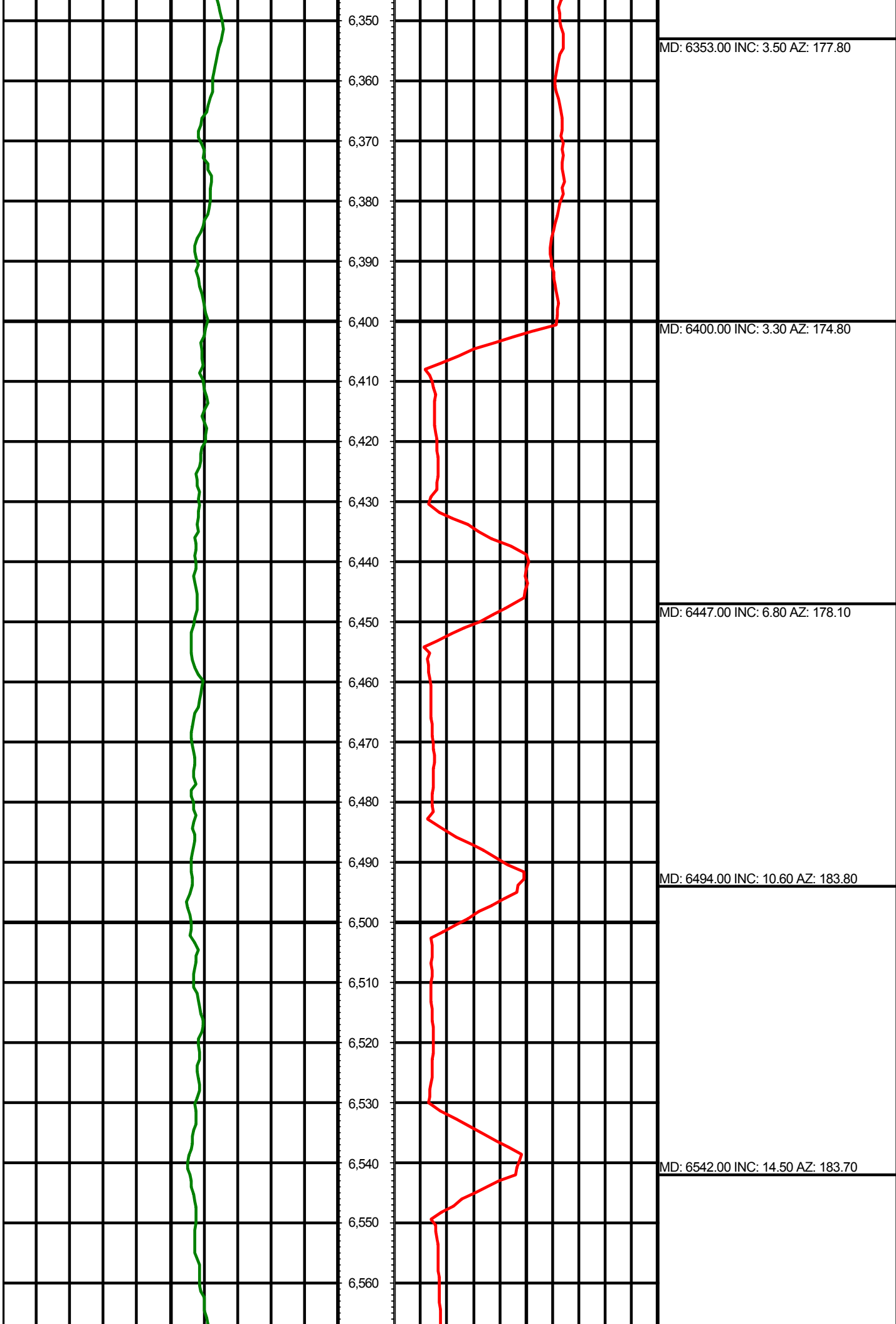
MD: 5408.00 INC: 3.40 AZ: 49.40



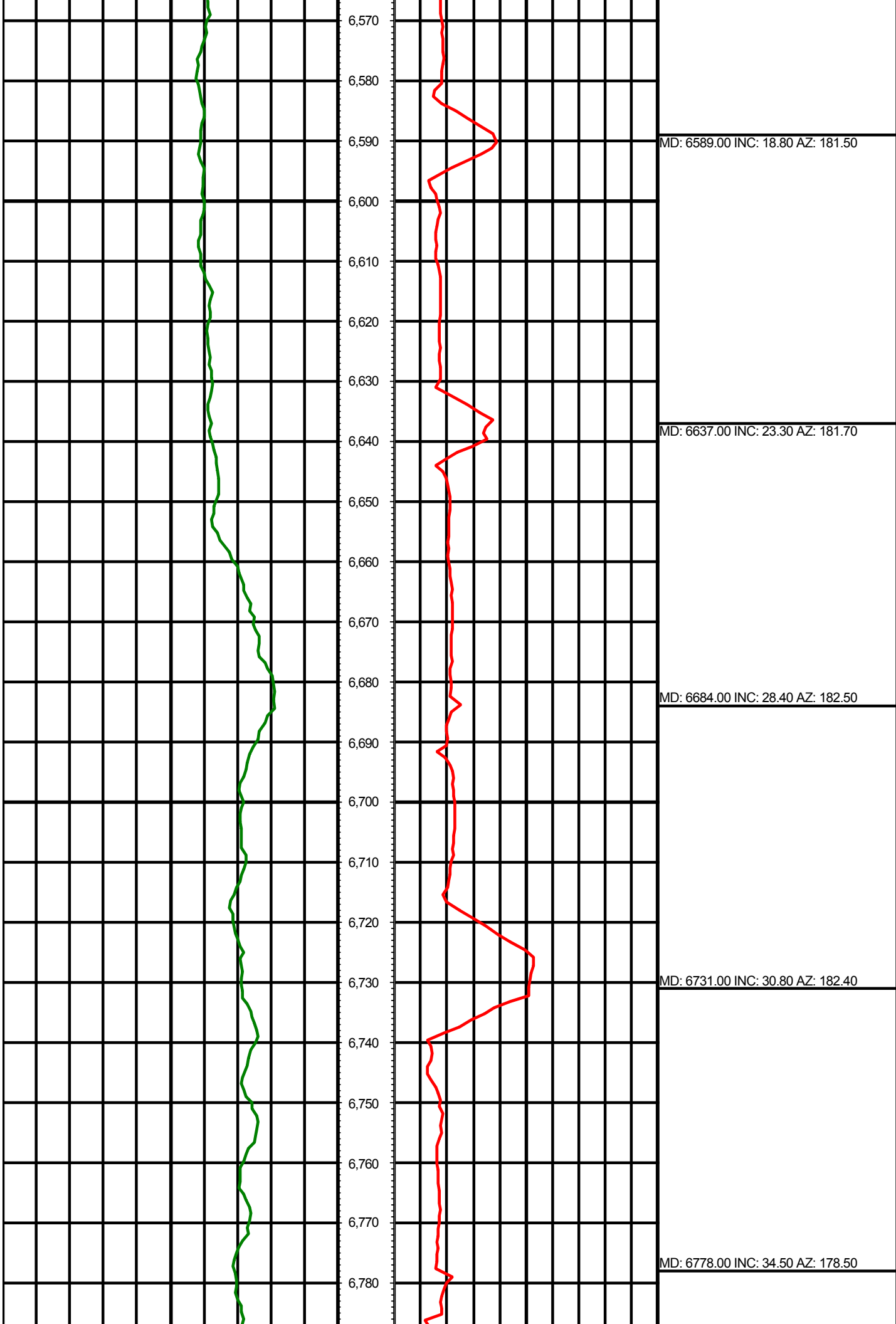


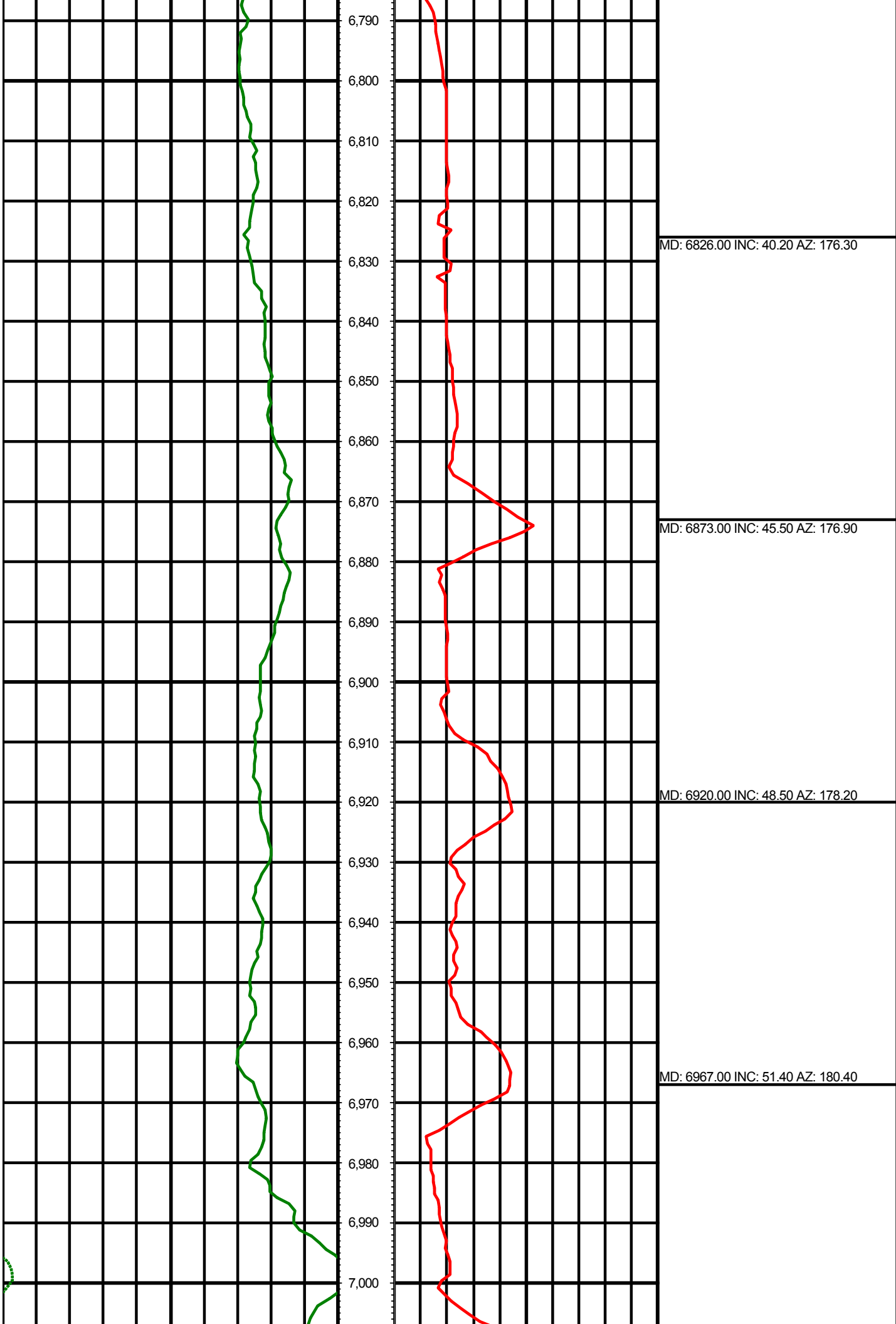


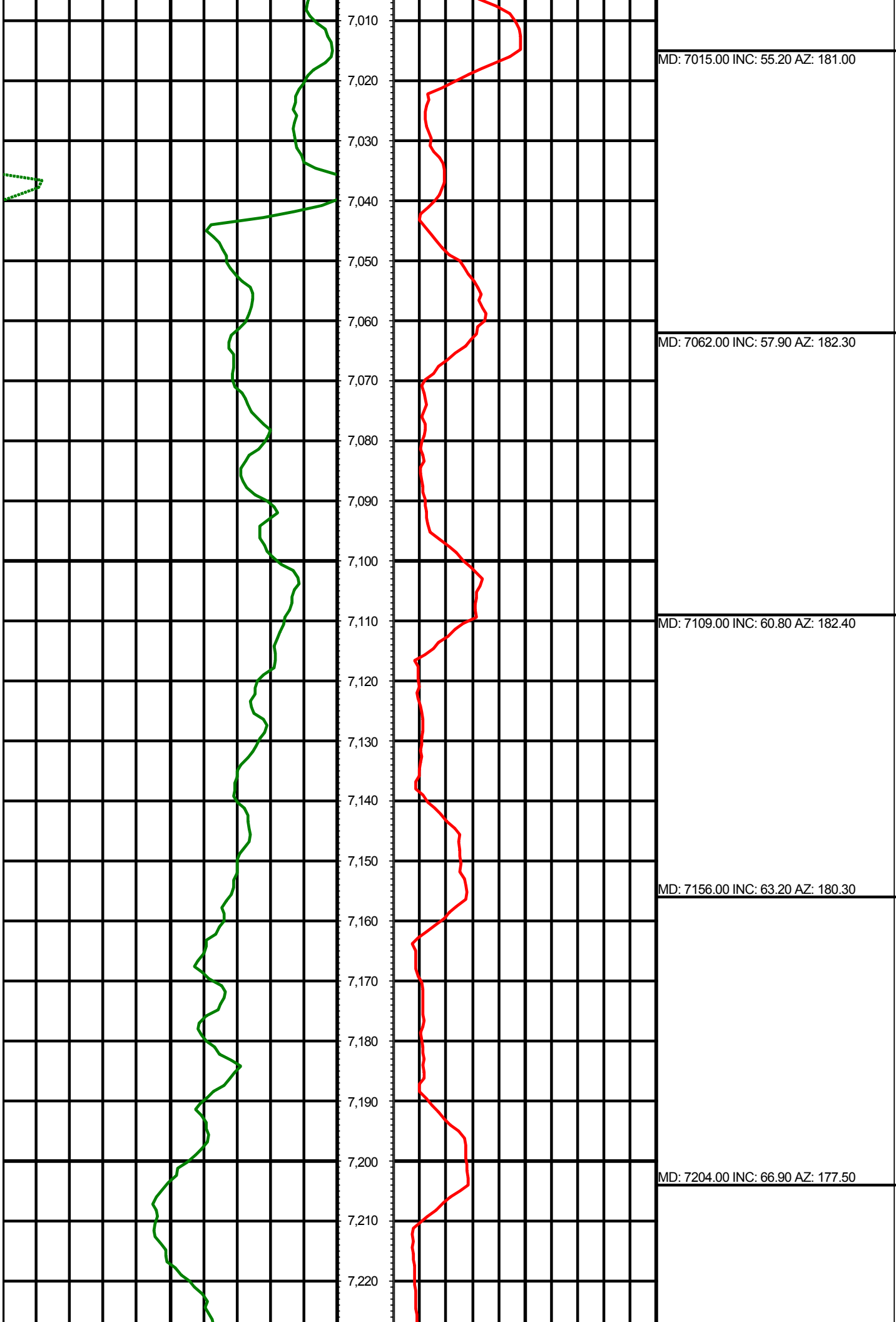


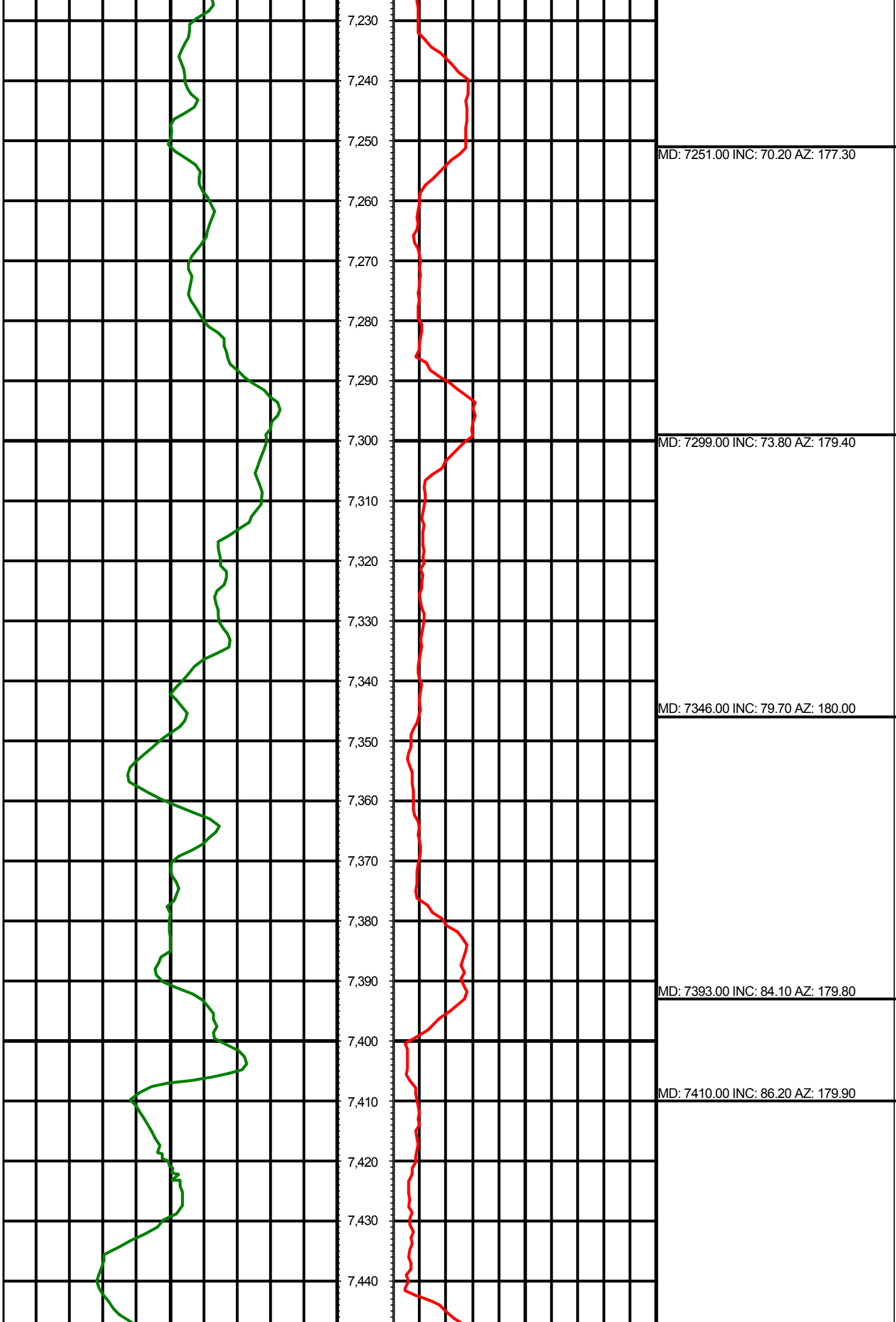


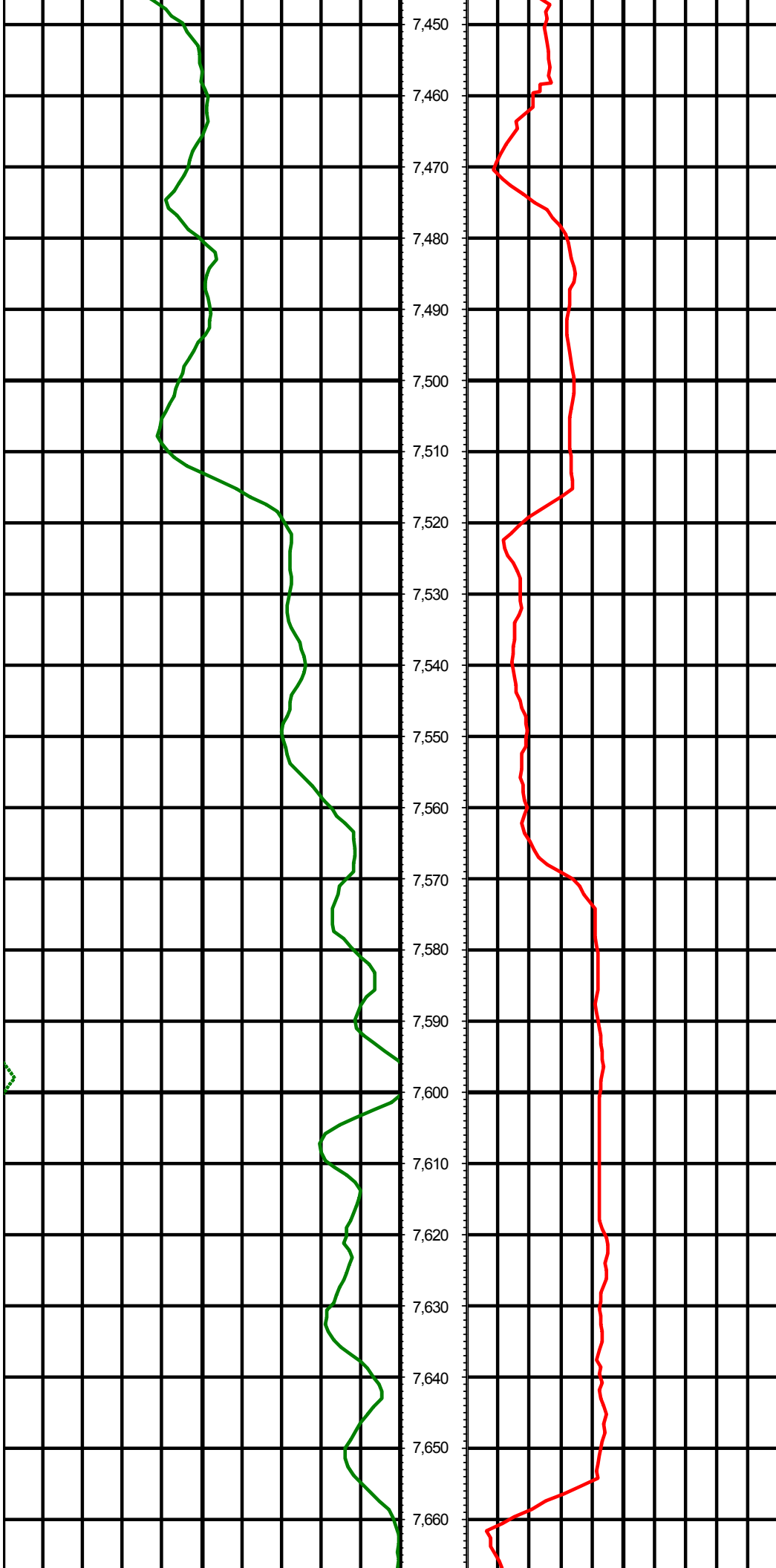






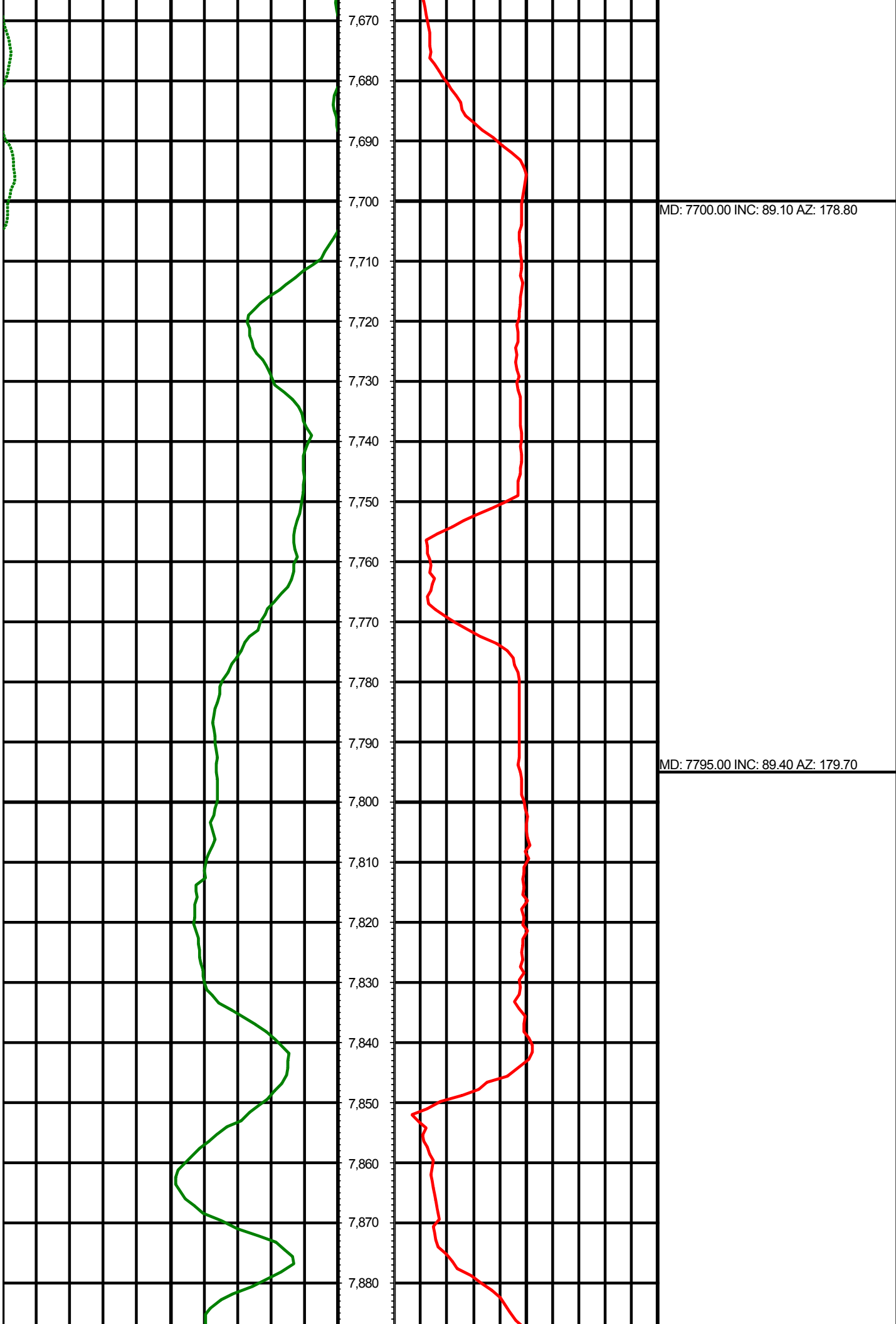


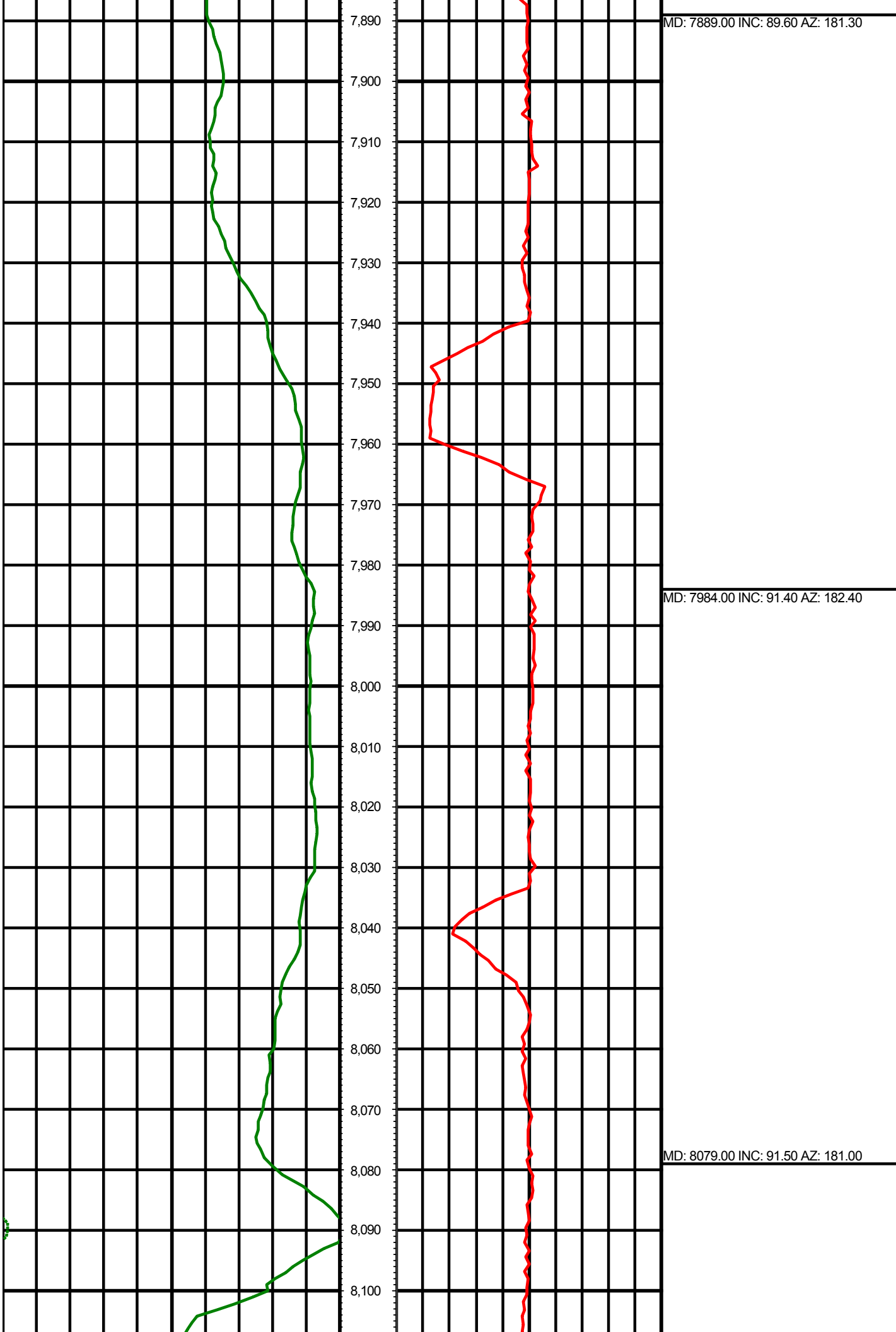


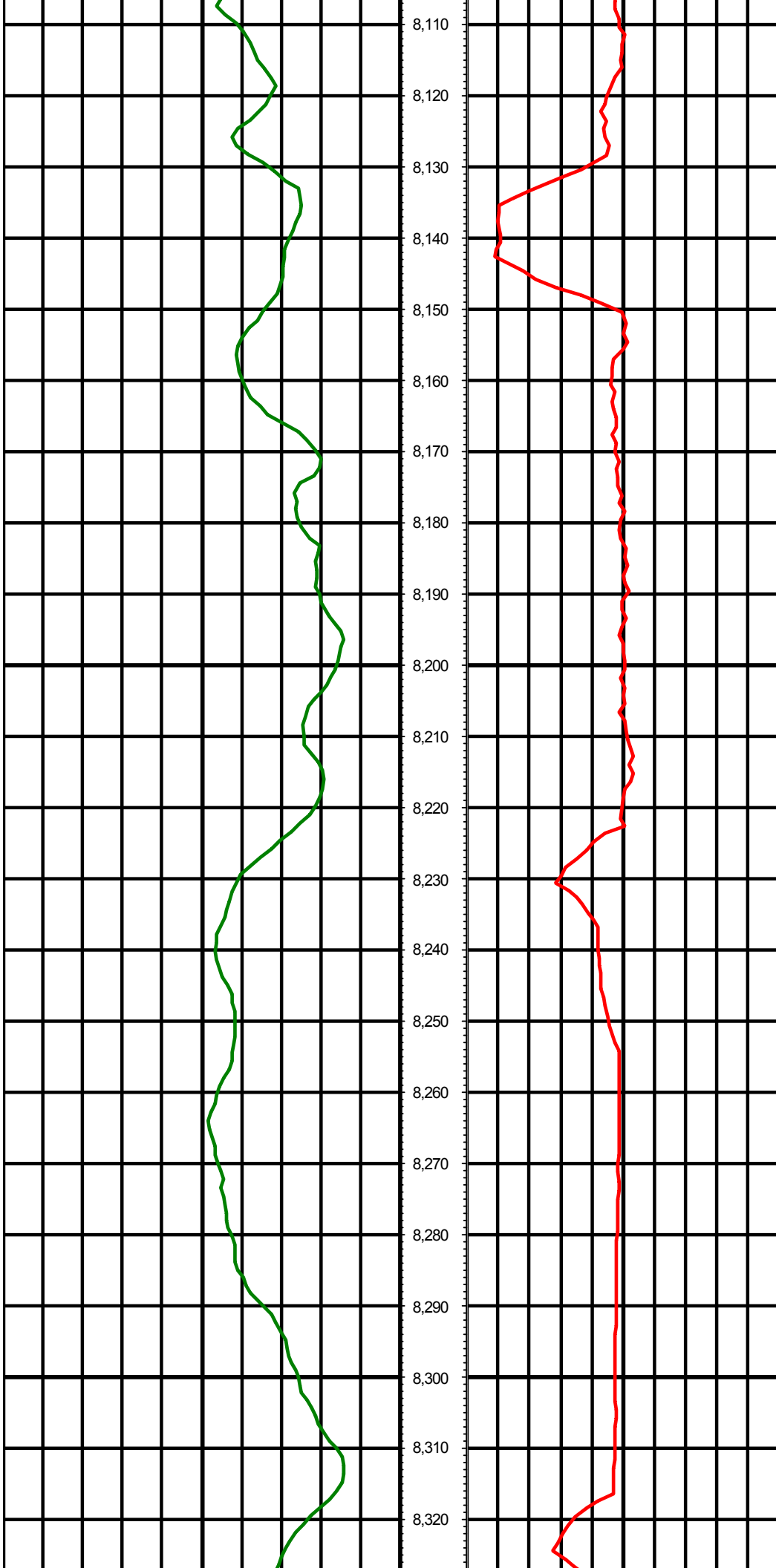


MD: 7511.00 INC: 88.70 AZ: 178.70

MD: 7606.00 INC: 87.50 AZ: 178.40







MD: 8174.00 INC: 88.90 AZ: 180.60

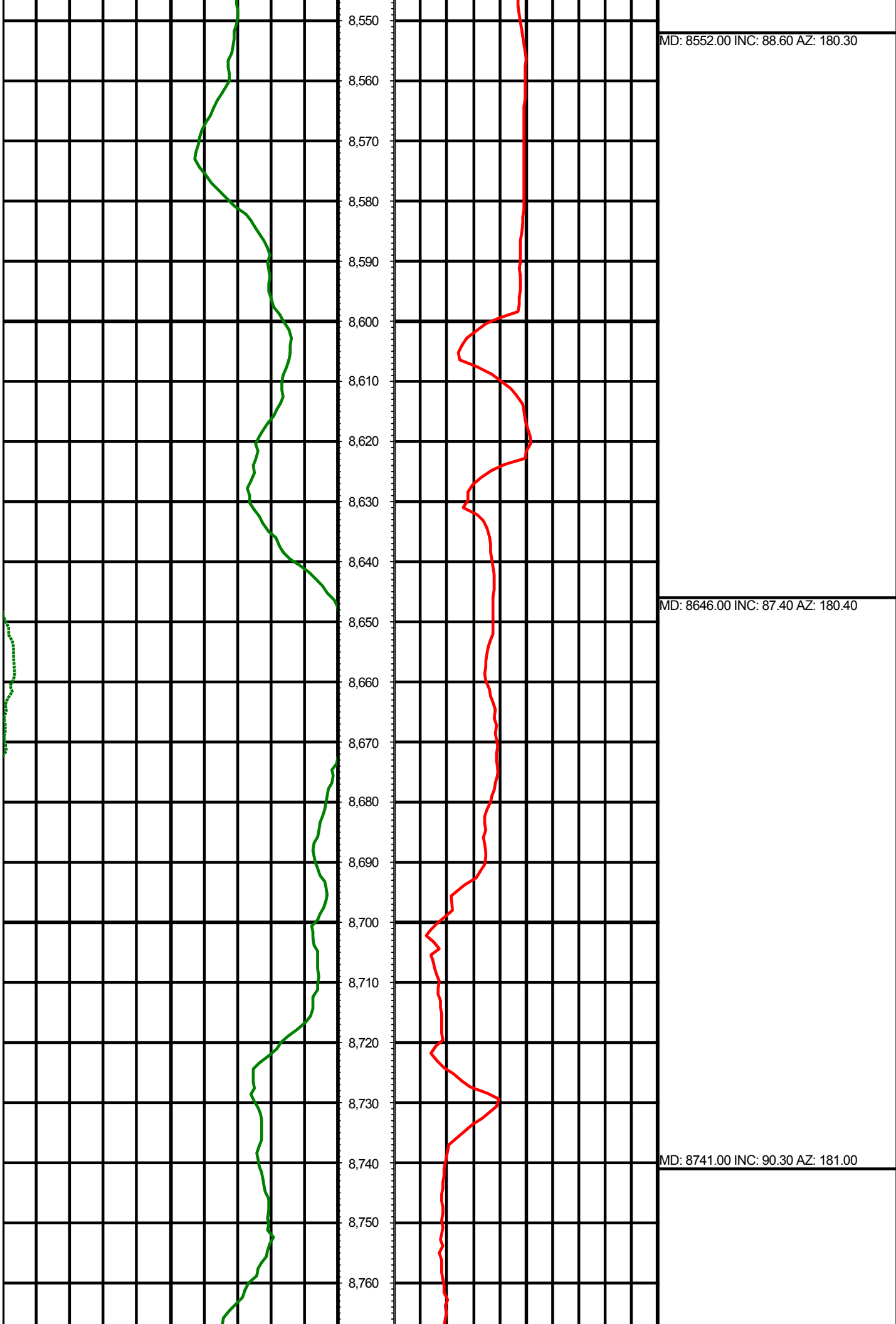
MD: 8268.00 INC: 89.20 AZ: 180.70

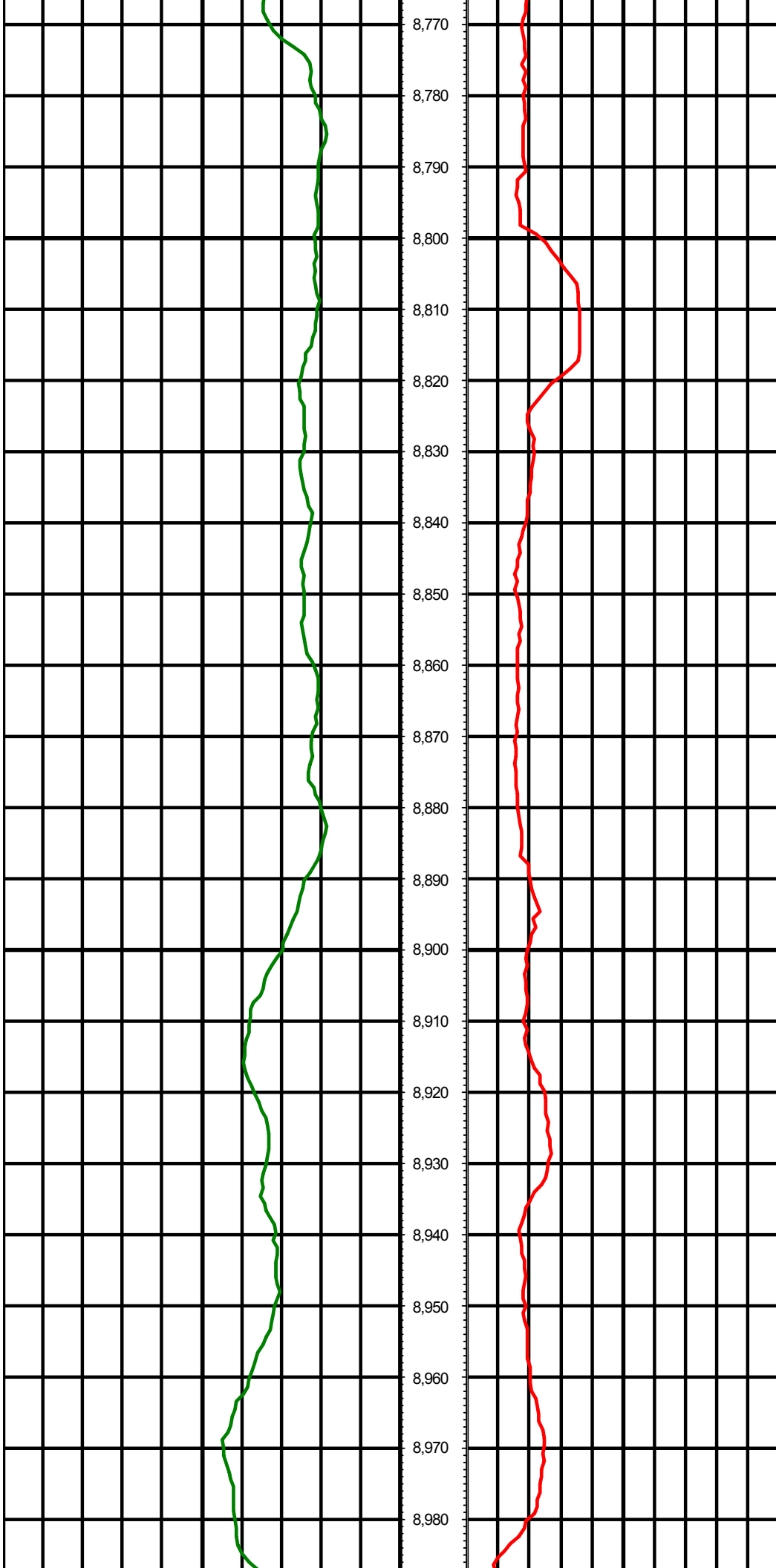




MD: 8363.00 INC: 88.70 AZ: 179.60

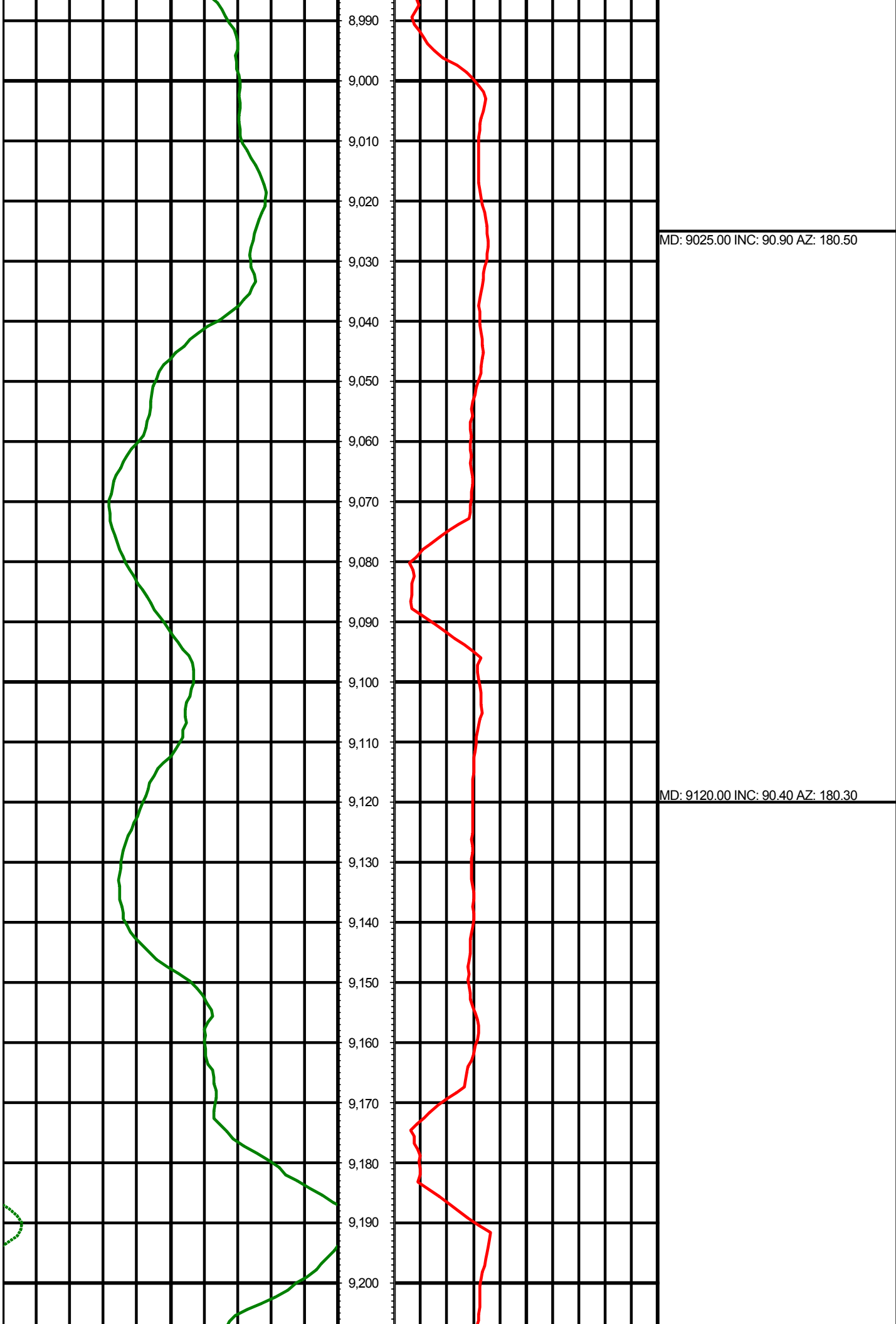
MD: 8457.00 INC: 87.60 AZ: 179.20

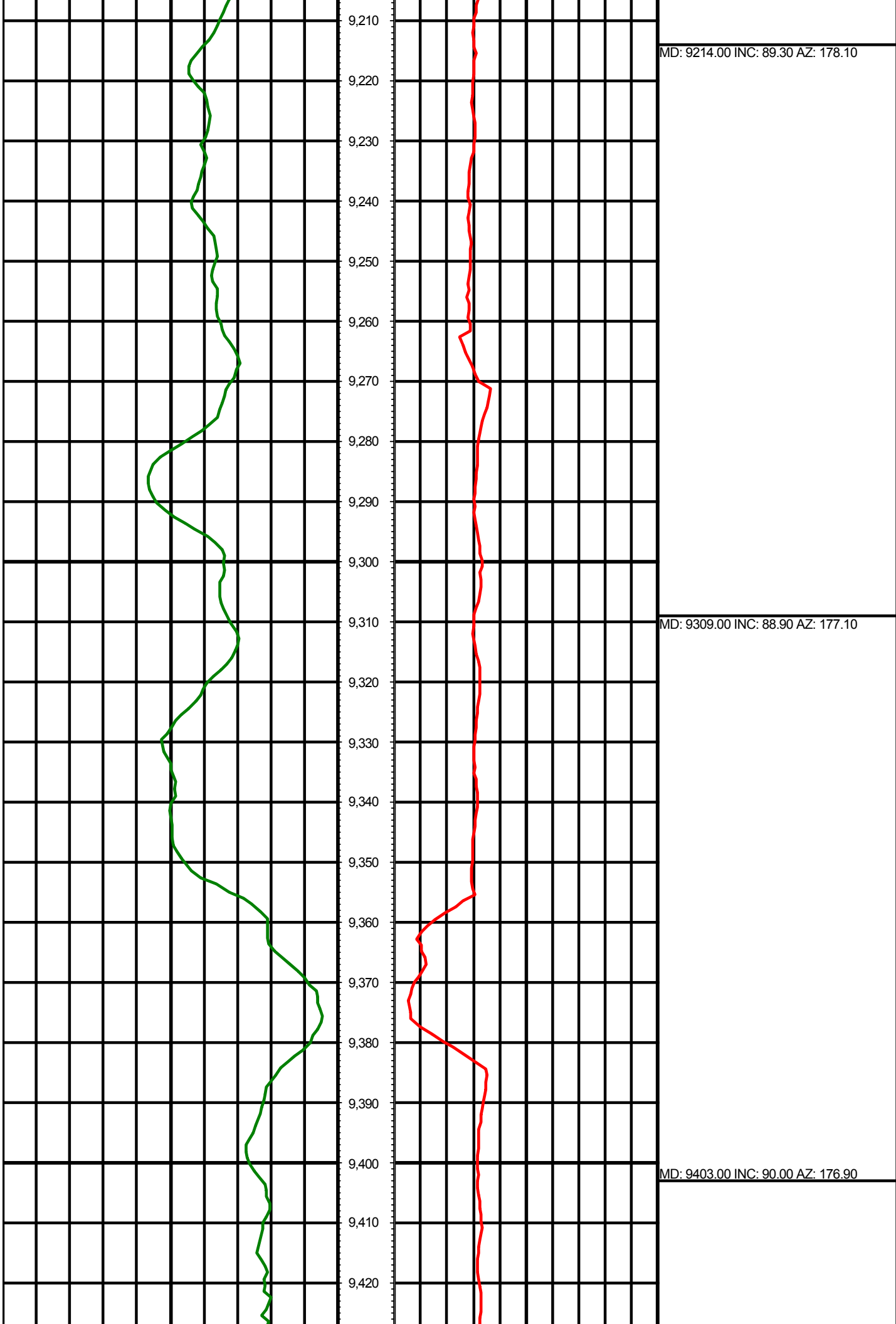


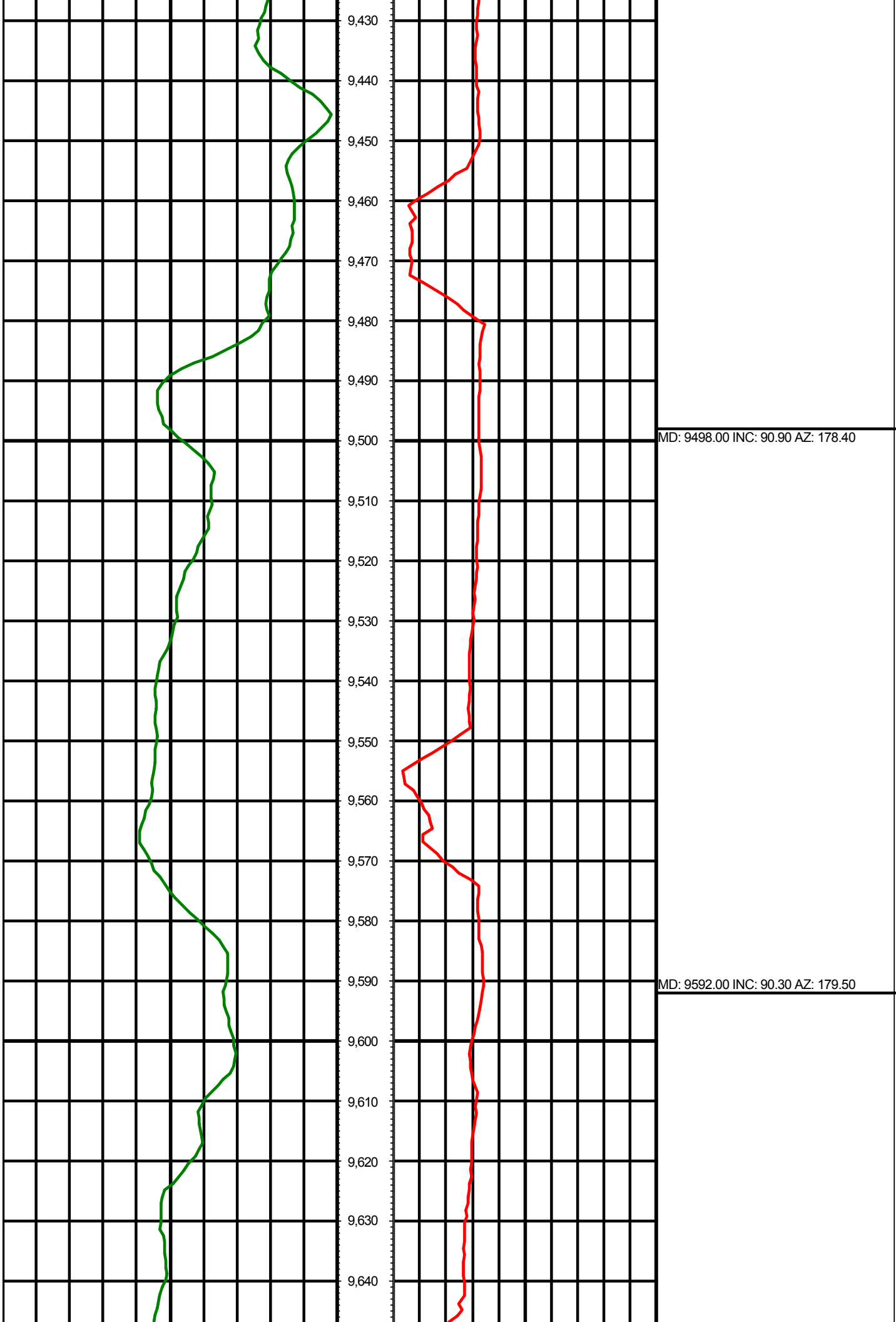


MD: 8836.00 INC: 90.70 AZ: 180.90

MD: 8930.00 INC: 91.50 AZ: 181.20



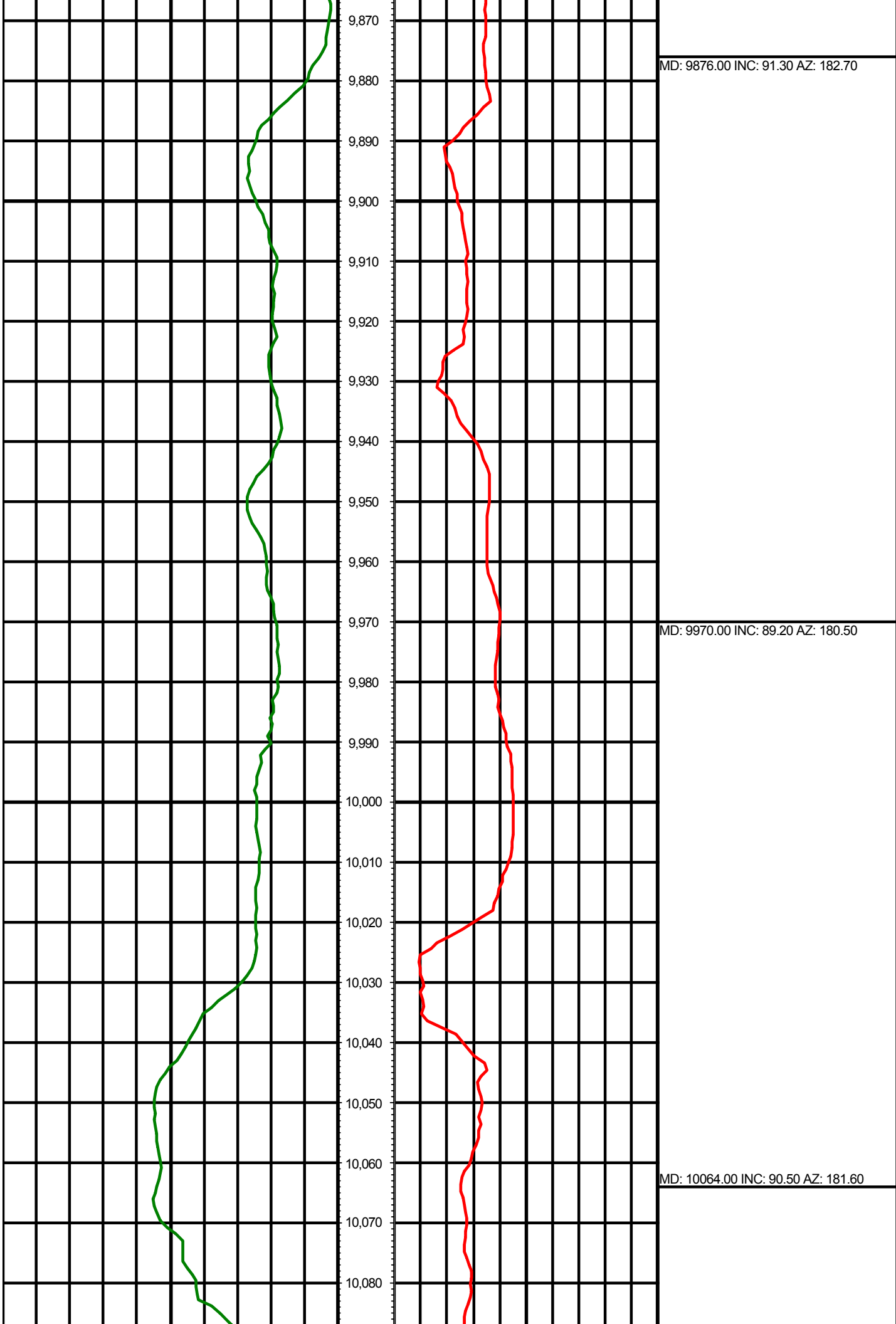




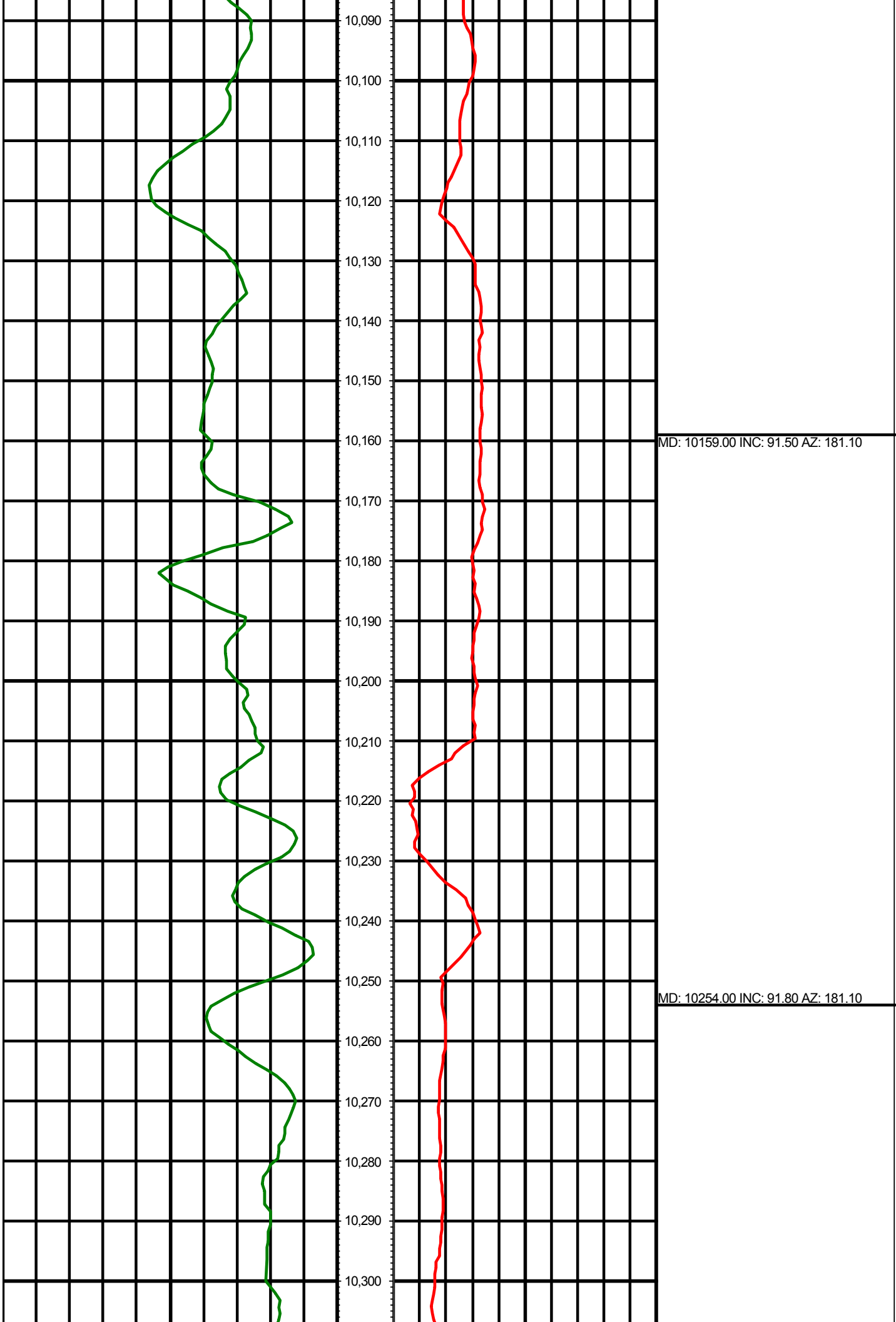


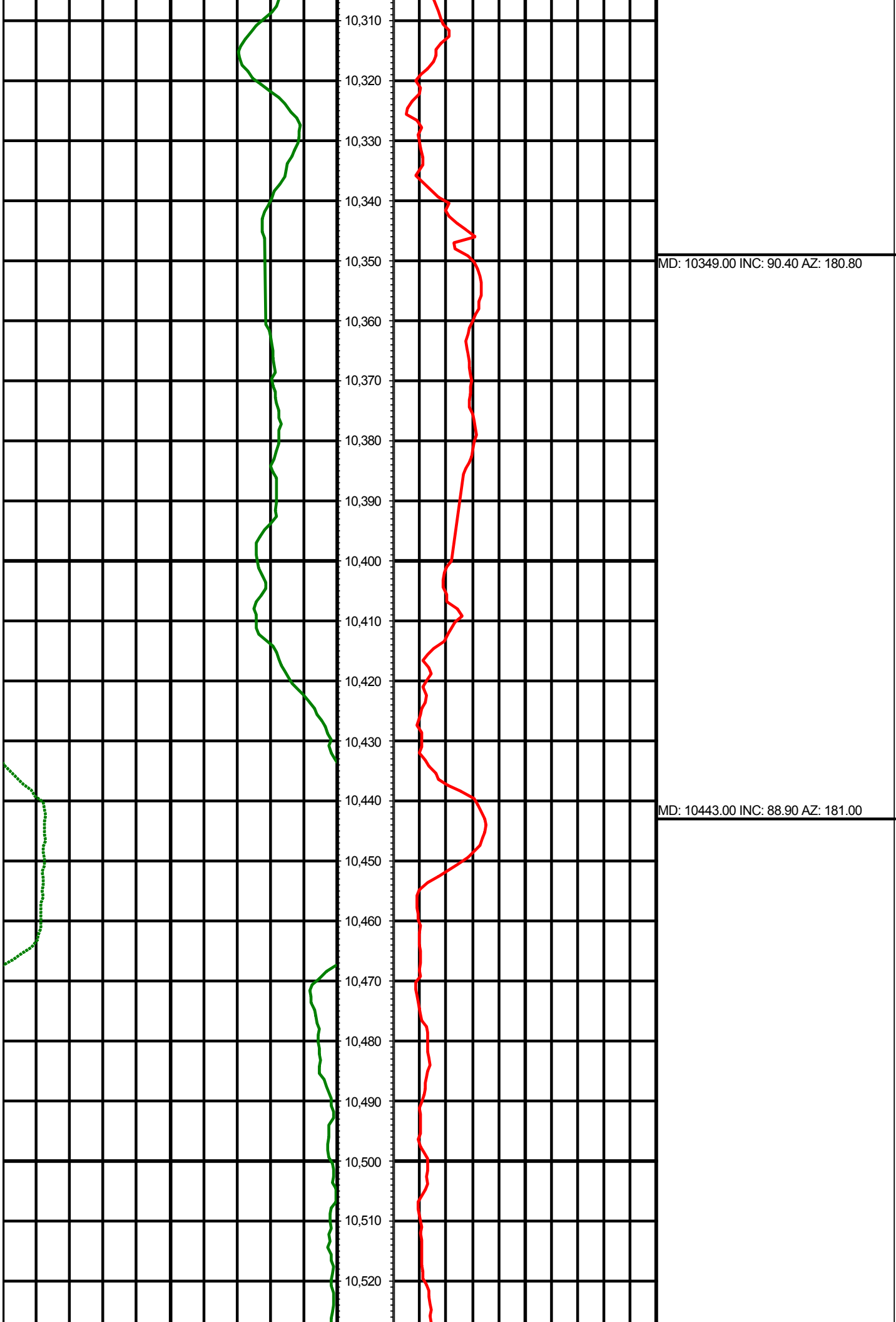
MD: 9687.00 INC: 89.00 AZ: 179.70

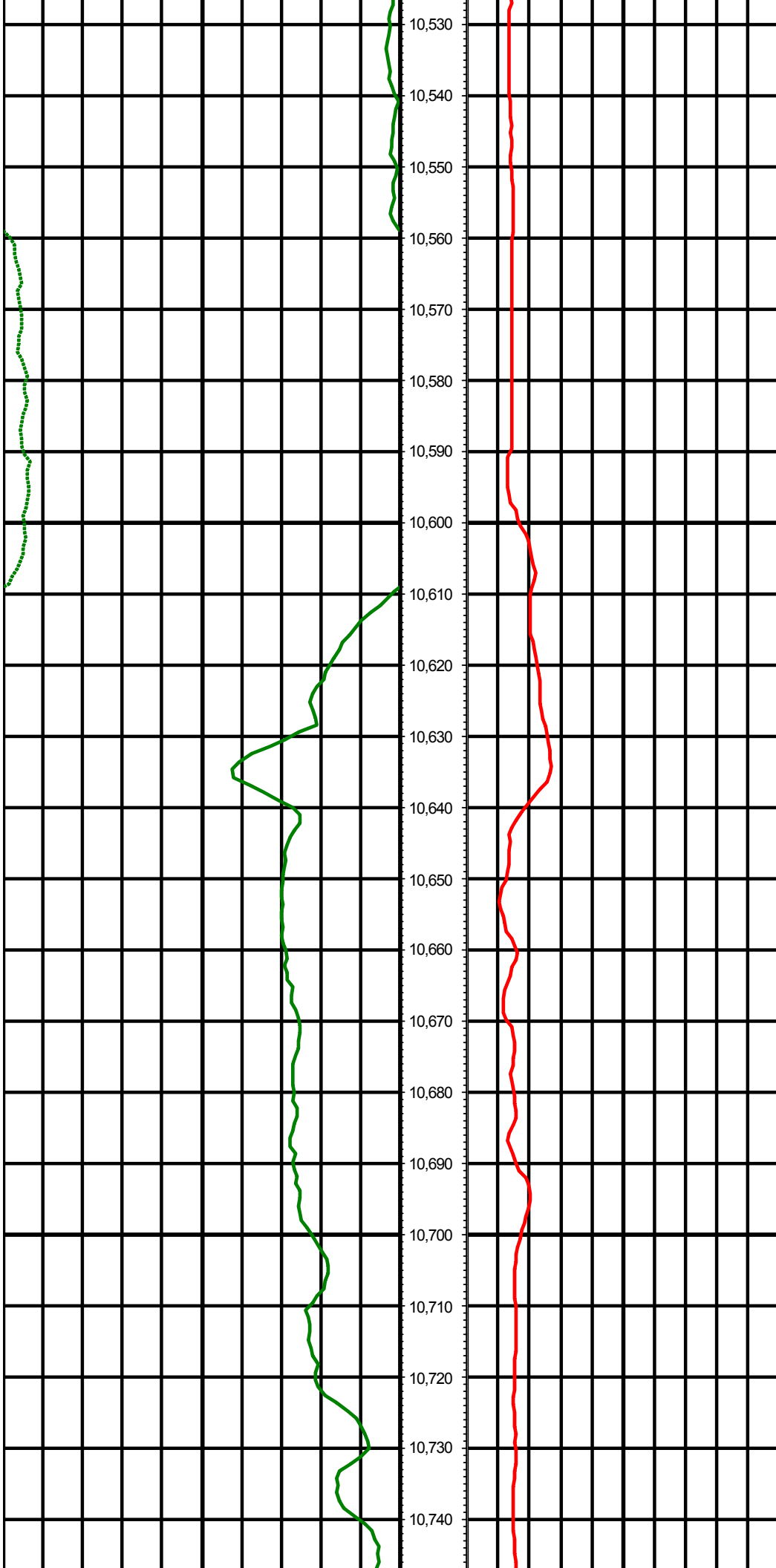
MD: 9781.00 INC: 90.40 AZ: 182.20







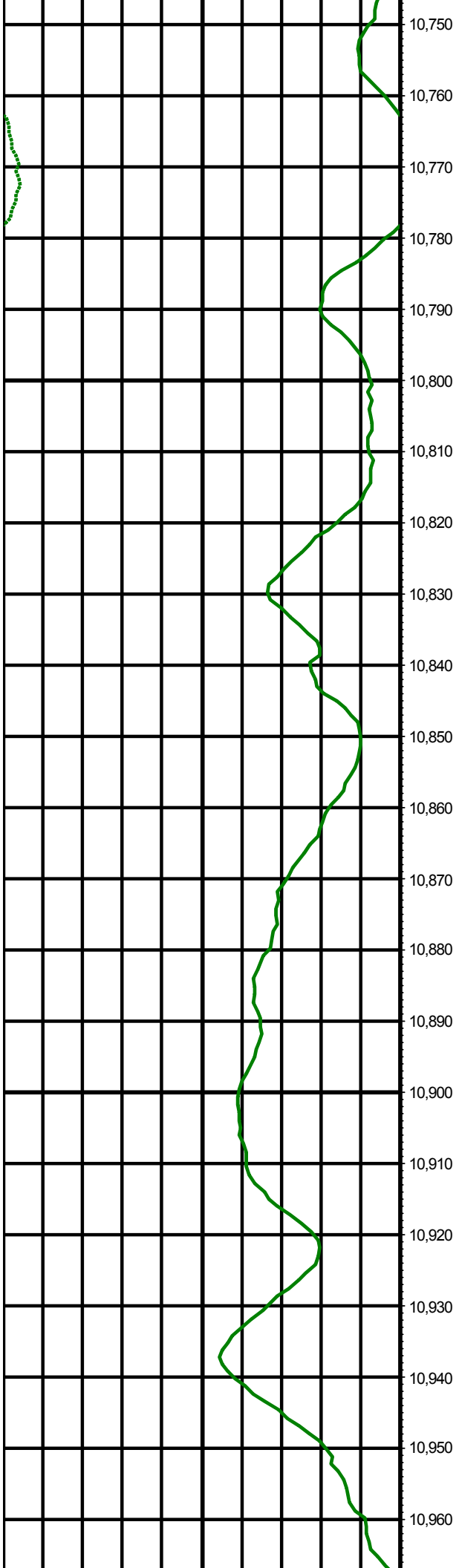




MD: 10537.00 INC: 88.80 AZ: 180.70

MD: 10632.00 INC: 89.00 AZ: 180.50

MD: 10727.00 INC: 88.90 AZ: 179.60



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10,940  
10,950  
10,960

MD: 10821.00 INC: 88.50 AZ: 179.00

MD: 10916.00 INC: 89.40 AZ: 179.50

