



# CATHEDRAL

Cathedral Energy Services  
1819 North Pyrite Road  
Casper, Wyoming 82604

**145207**

5"-100' - MD

11/6/2014 1:29:54 PM

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

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

**State / Province:** Colorado

**County / Parish:** Weld

**Started:** 07/02/2014 01:30 PM

**API/UWI:** 05-123-380040-000

**Field:** Wattenberg (B Chalk)

**Well:** Jillson-East Rinn 3I-22H-N268

**Rig:** Helmerich & Payne 278

**Ended:** 07/05/2014 07:00 AM

Gamma Ray  
Section Plane: 0.00  
Magnetic North: 8.56  
Gamma Correction Factor  
2.64 Start 5000' End 7726

## Personnel

**Day Hand:** A. Evans

**Night Hand:** M. Leiberger

**Comp. Emp:** Randy Berk

## Location

**Latitude:** 40.117591

**Longitude:** -104.991241

**Elev. GL:** 4975

**Elev. DF:**

**Elev. KB:** 5000

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

## Hole Data

Size	From	To
12-1/4	0	880
8-3/4	880	7832
6-1/8	7832	15040

## Casing Data

Size	From	To
9-5/8	0	880
7	0	7832

## Bit Sizes

Size	From	To
12-1/4	0	880
8-3/4	880	7832
6-1/8	7832	15040

## Mud Data

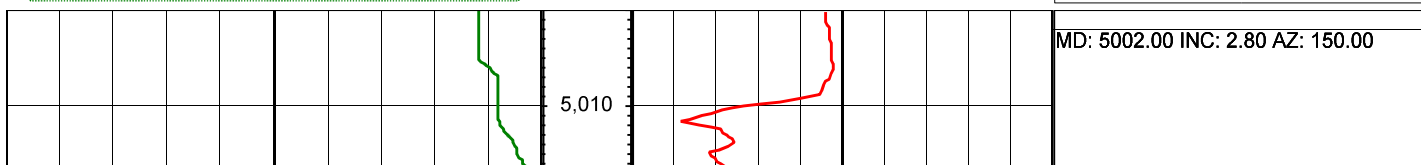
Type	Weight	Density	Viscosity	Rm	Rmf	Rmc	From	To
LSND	8.5						880	5000
LSND	10.2						5000	7832

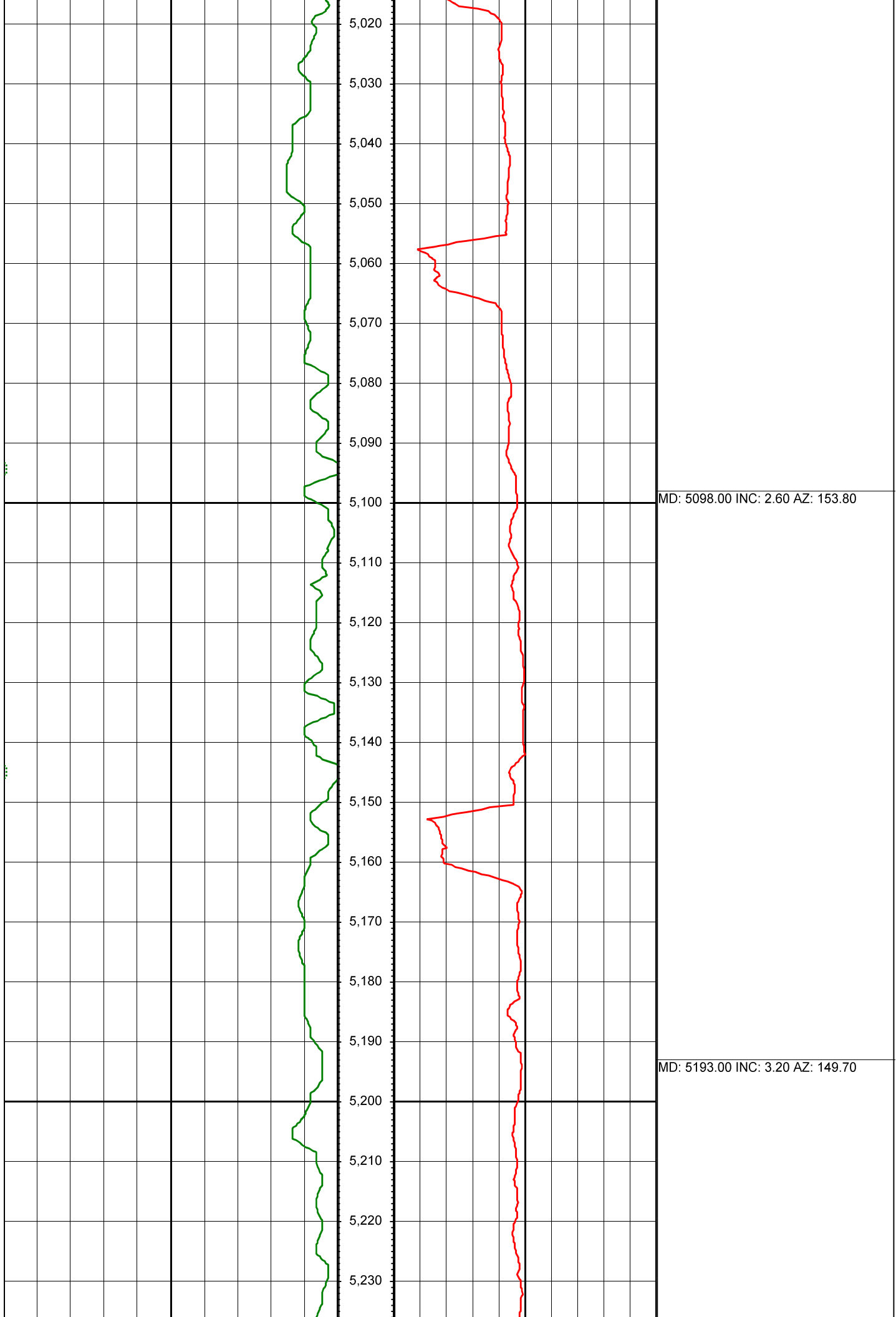
## Tool Run Data

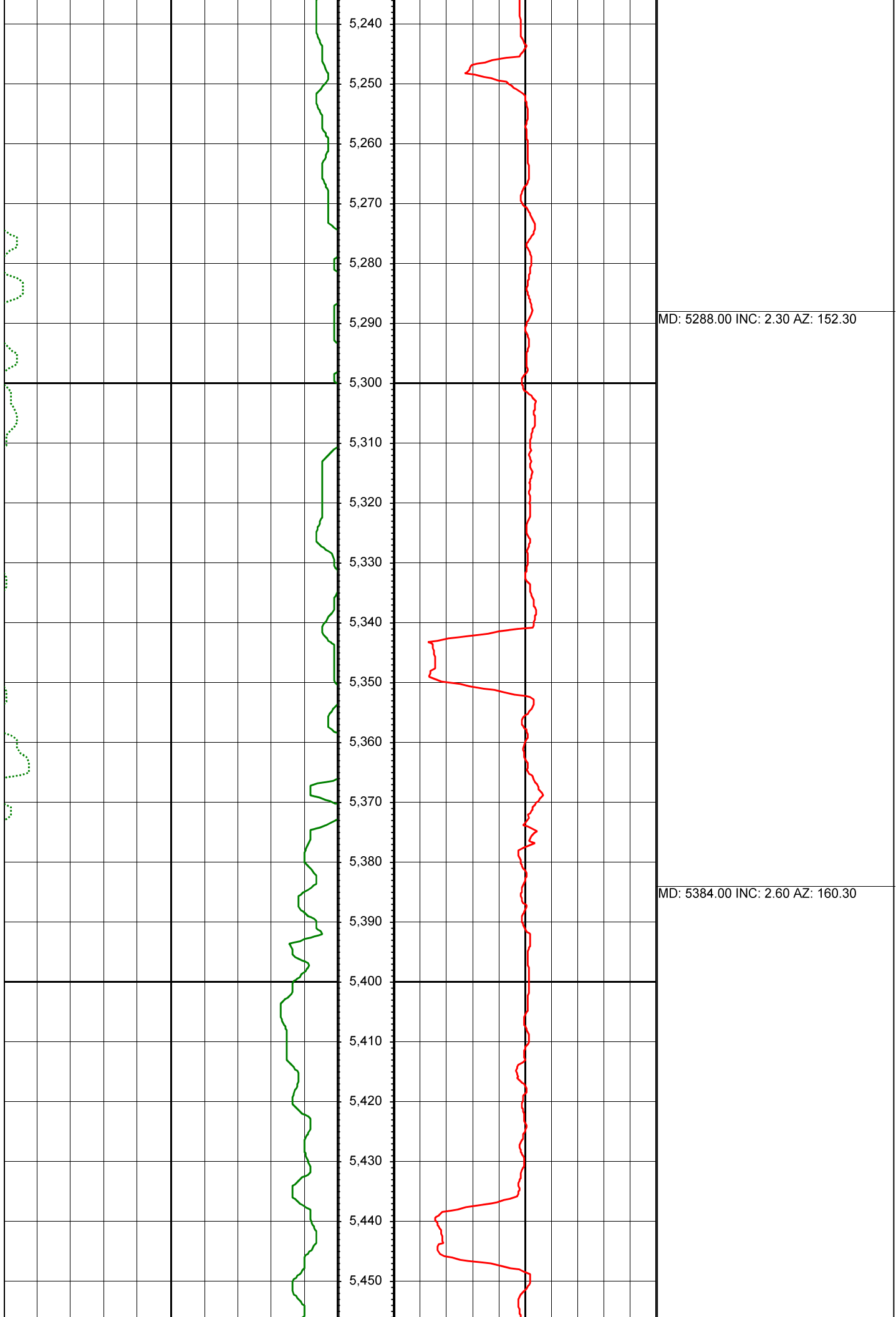
Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
1278	37.21	0	7/2/2014 4:48:23 PM	880	7/3/2014 4:48:23 PM	2342
175-1486	44.05	0	7/3/2014 4:50:25 PM	2342	7/5/2014 7:00:25 AM	7832

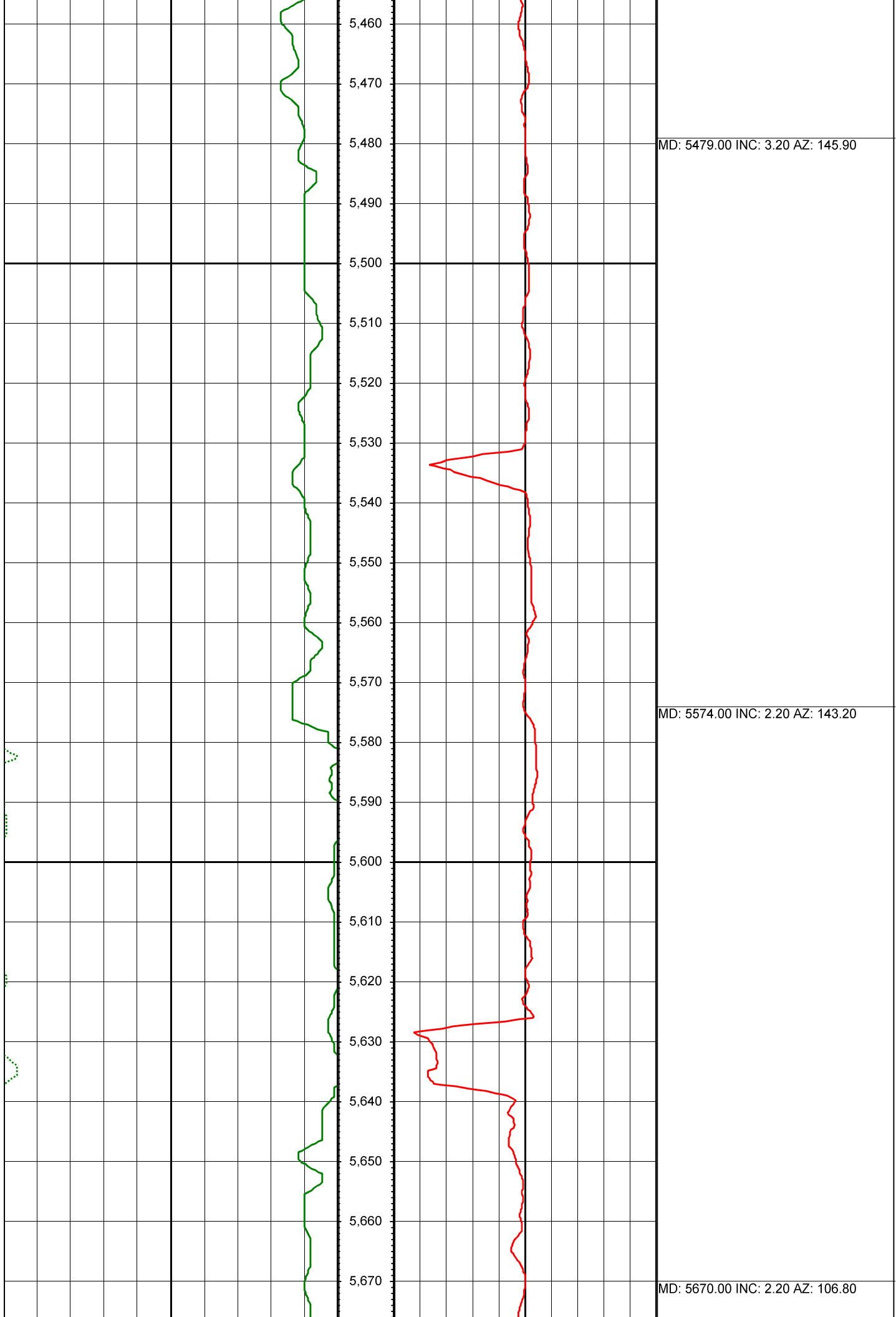
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost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

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

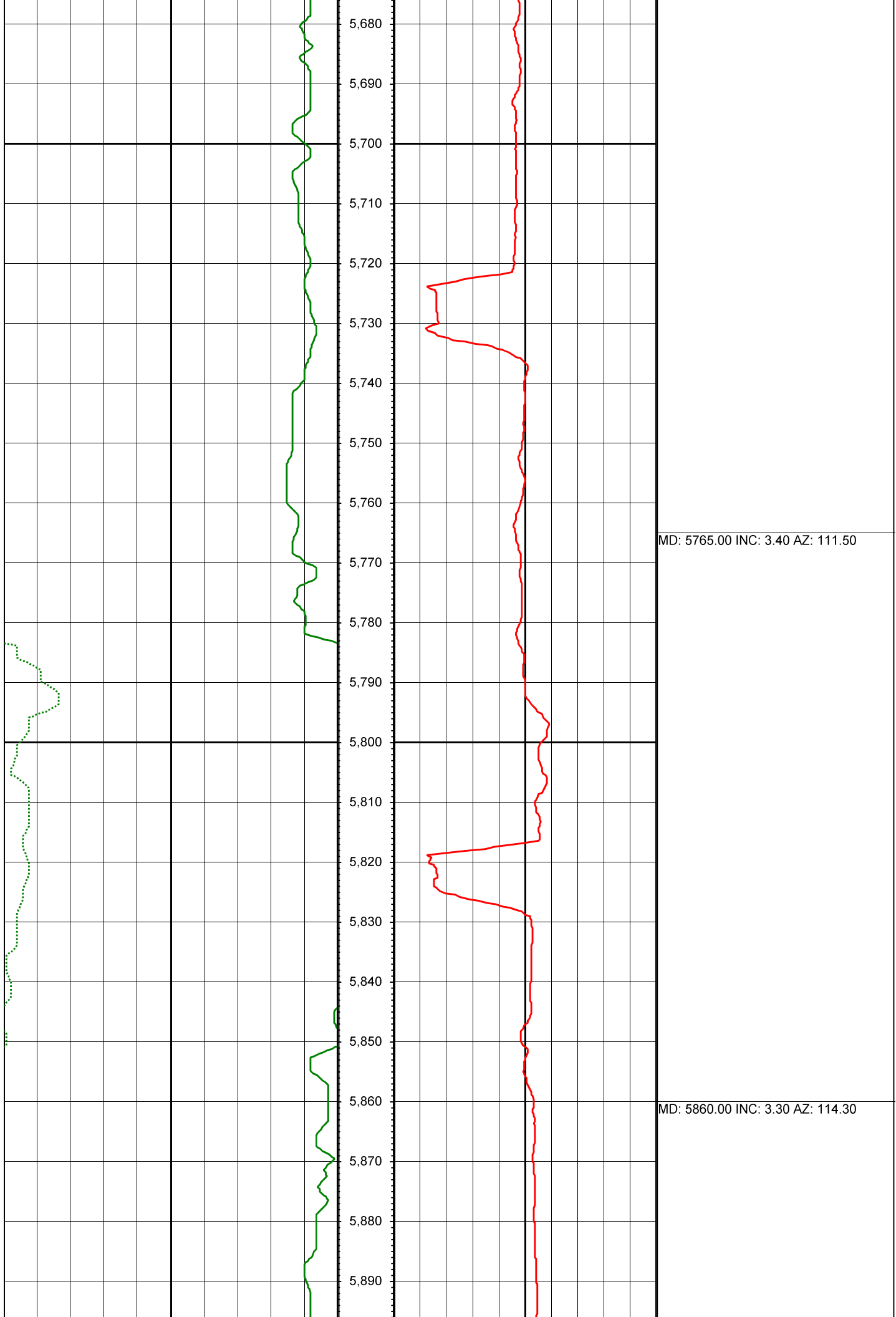


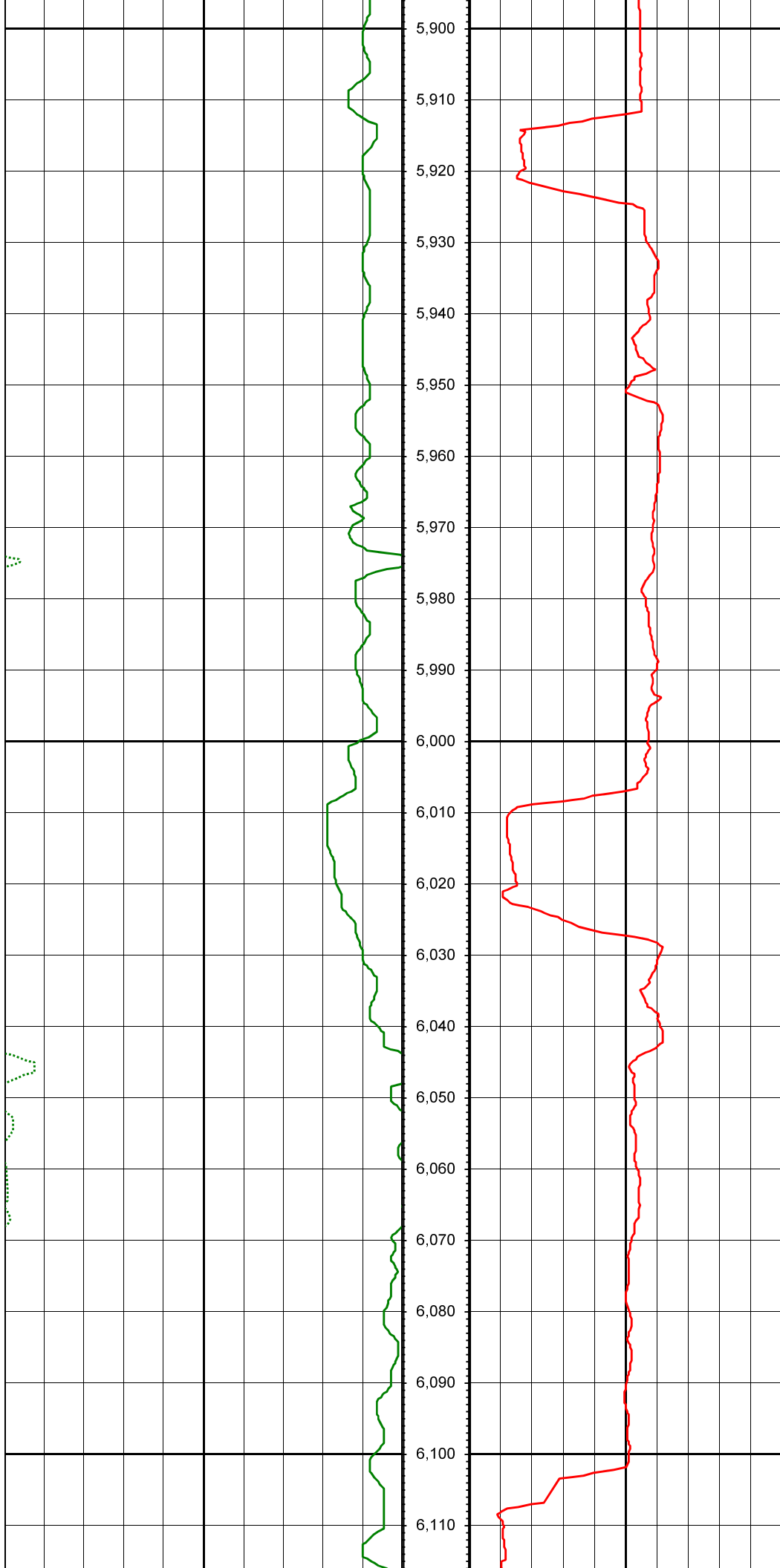






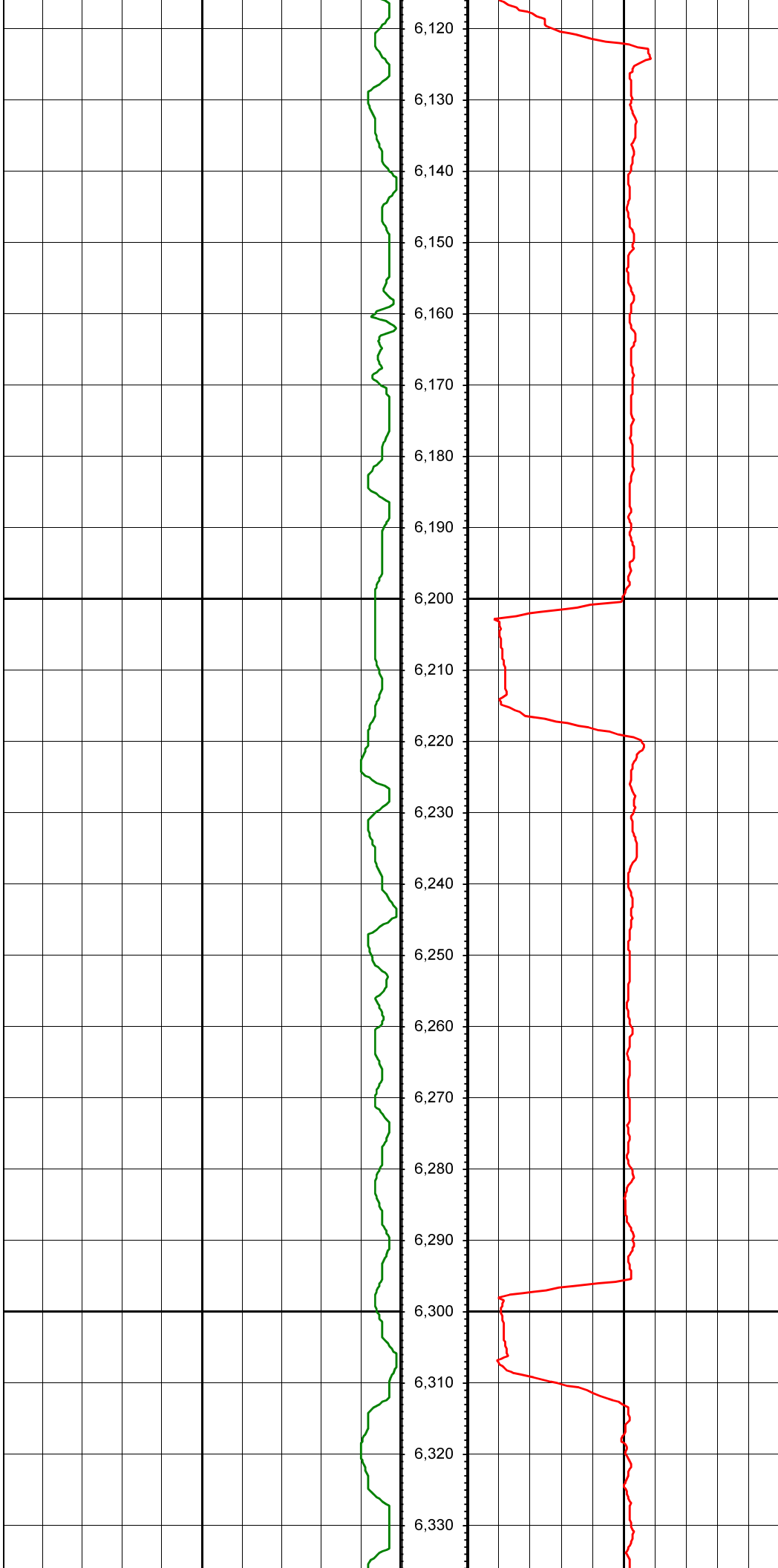






MD: 5956.00 INC: 1.80 AZ: 119.40

MD: 6051.00 INC: 2.30 AZ: 131.90



6,120

6,130

6,140

6,150

6,160

6,170

6,180

6,190

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6,240

6,250

6,260

6,270

6,280

6,290

6,300

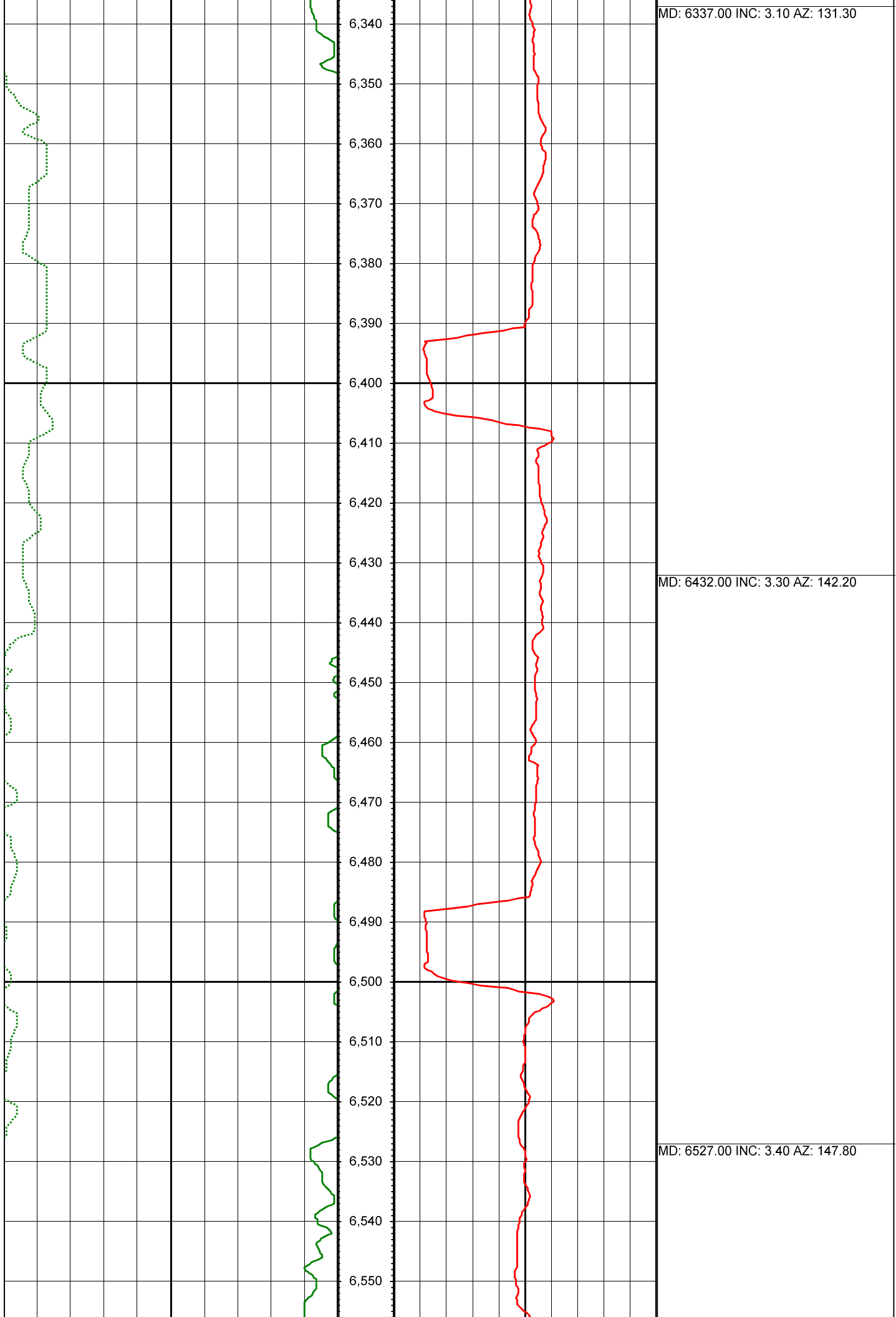
6,310

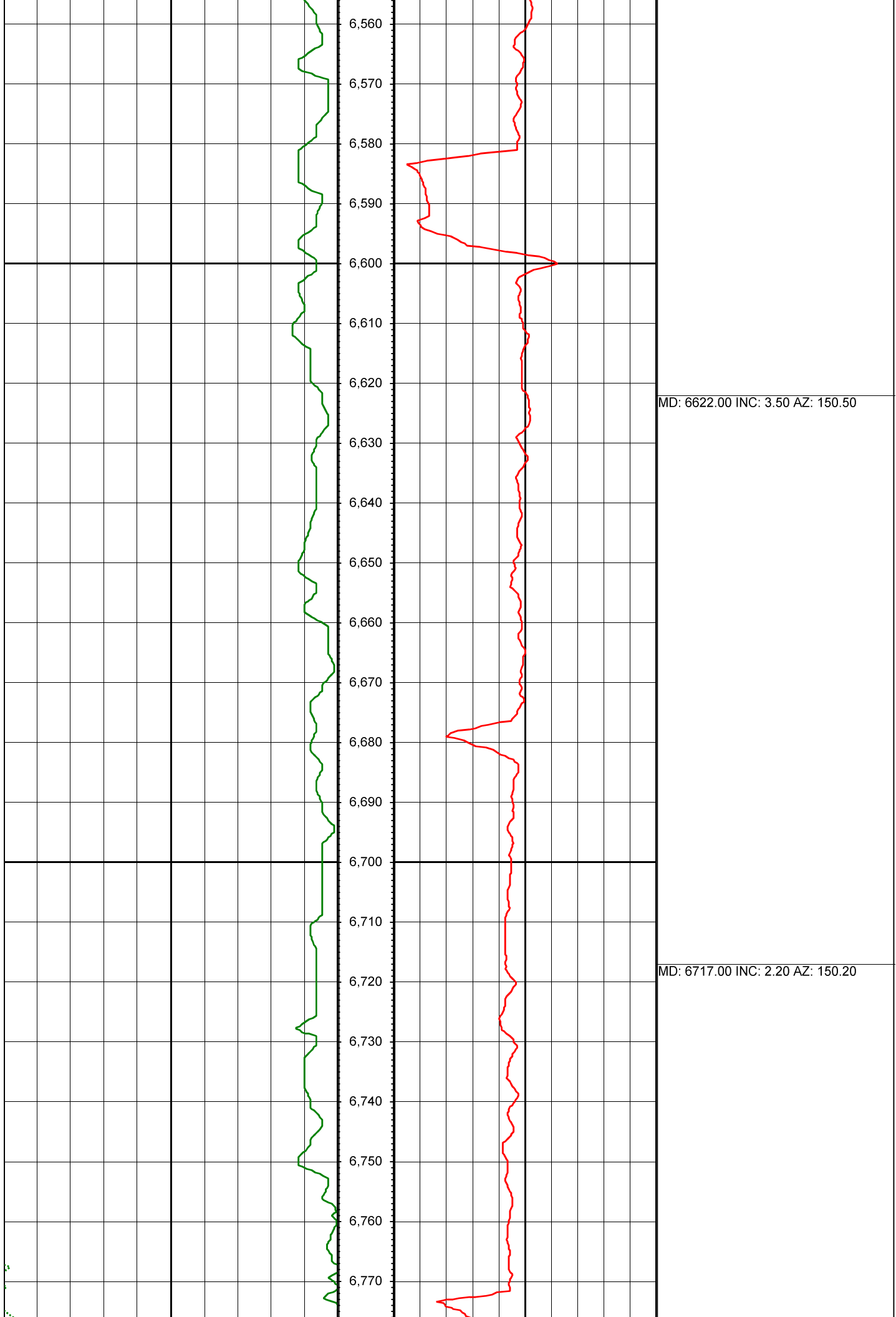
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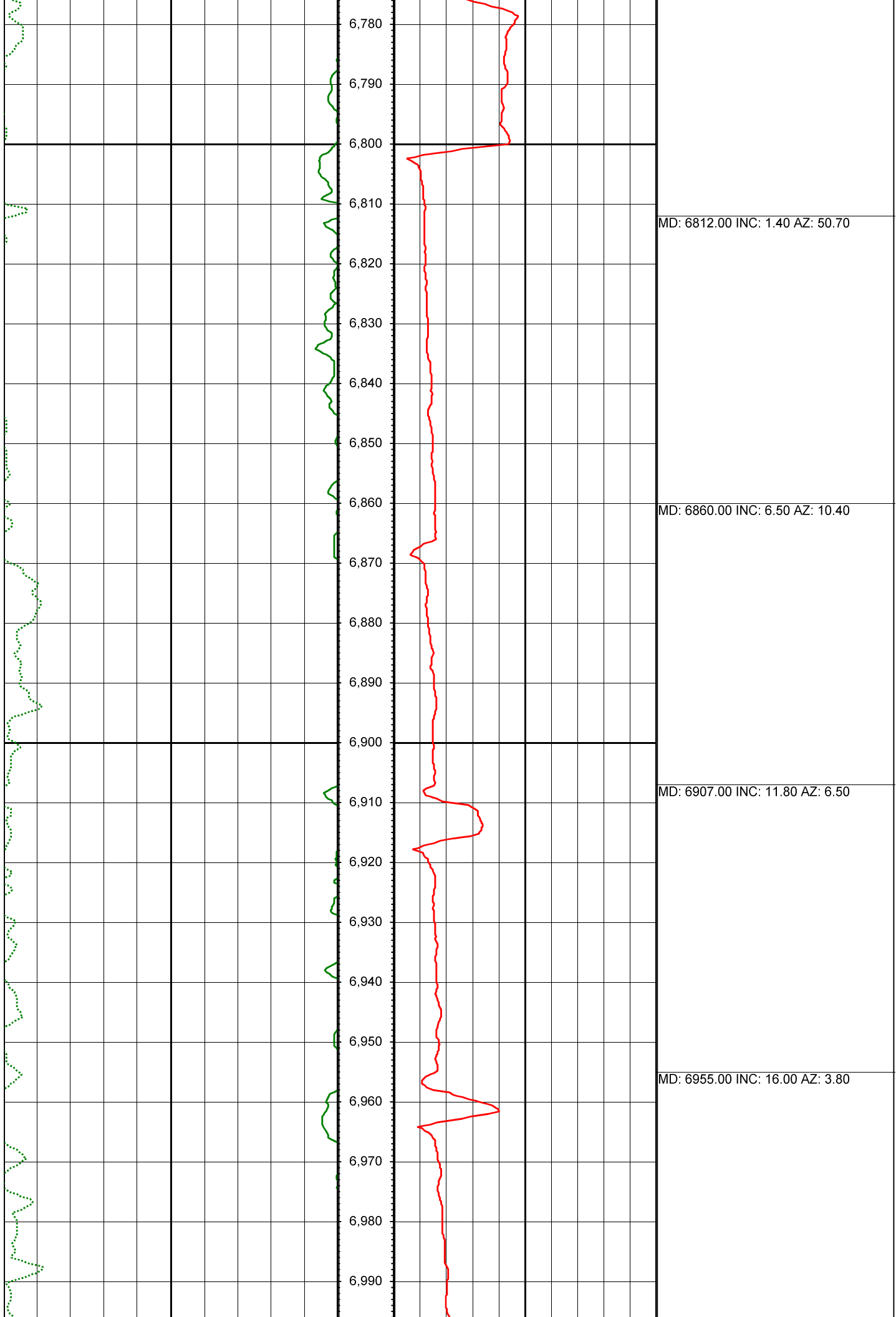
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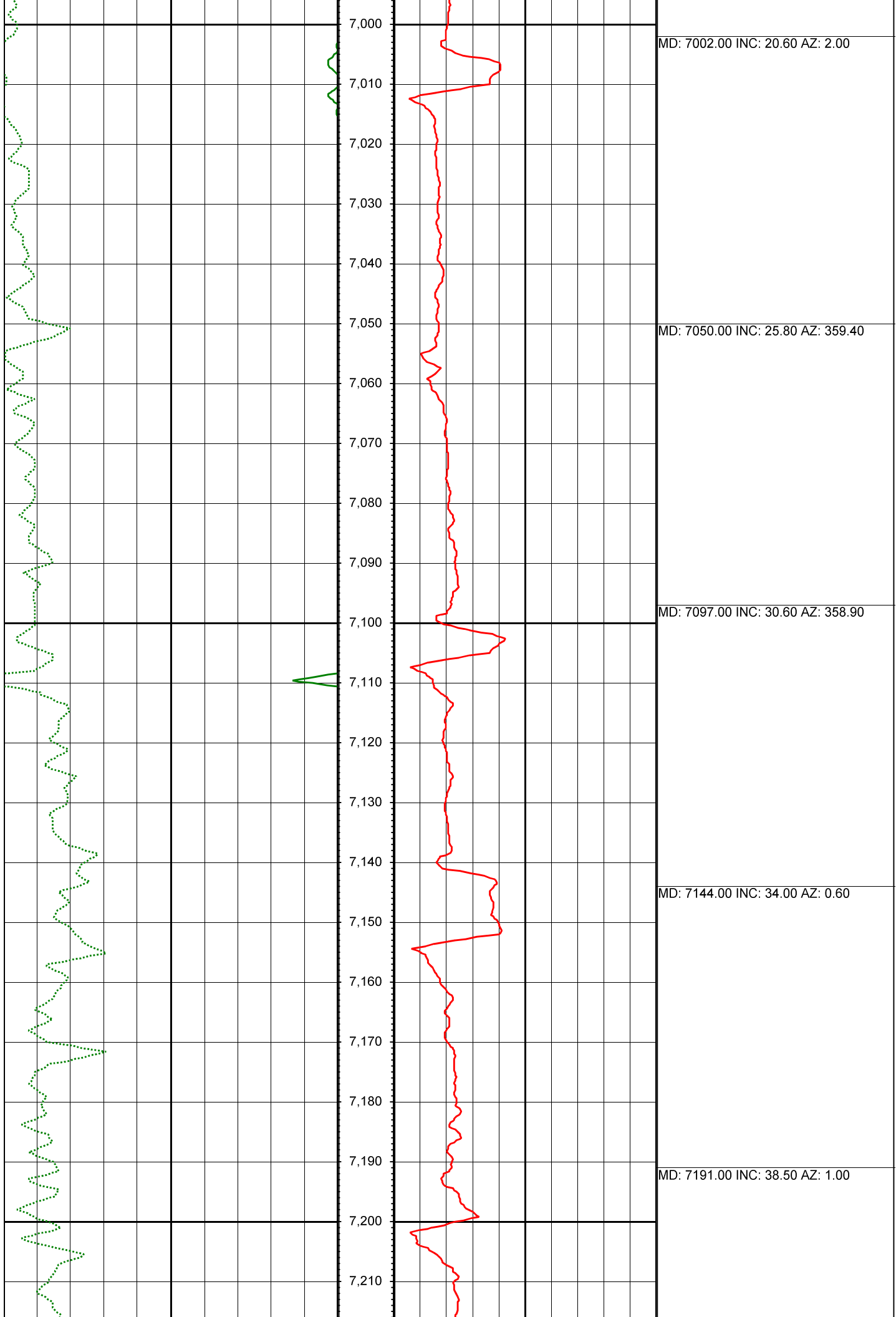
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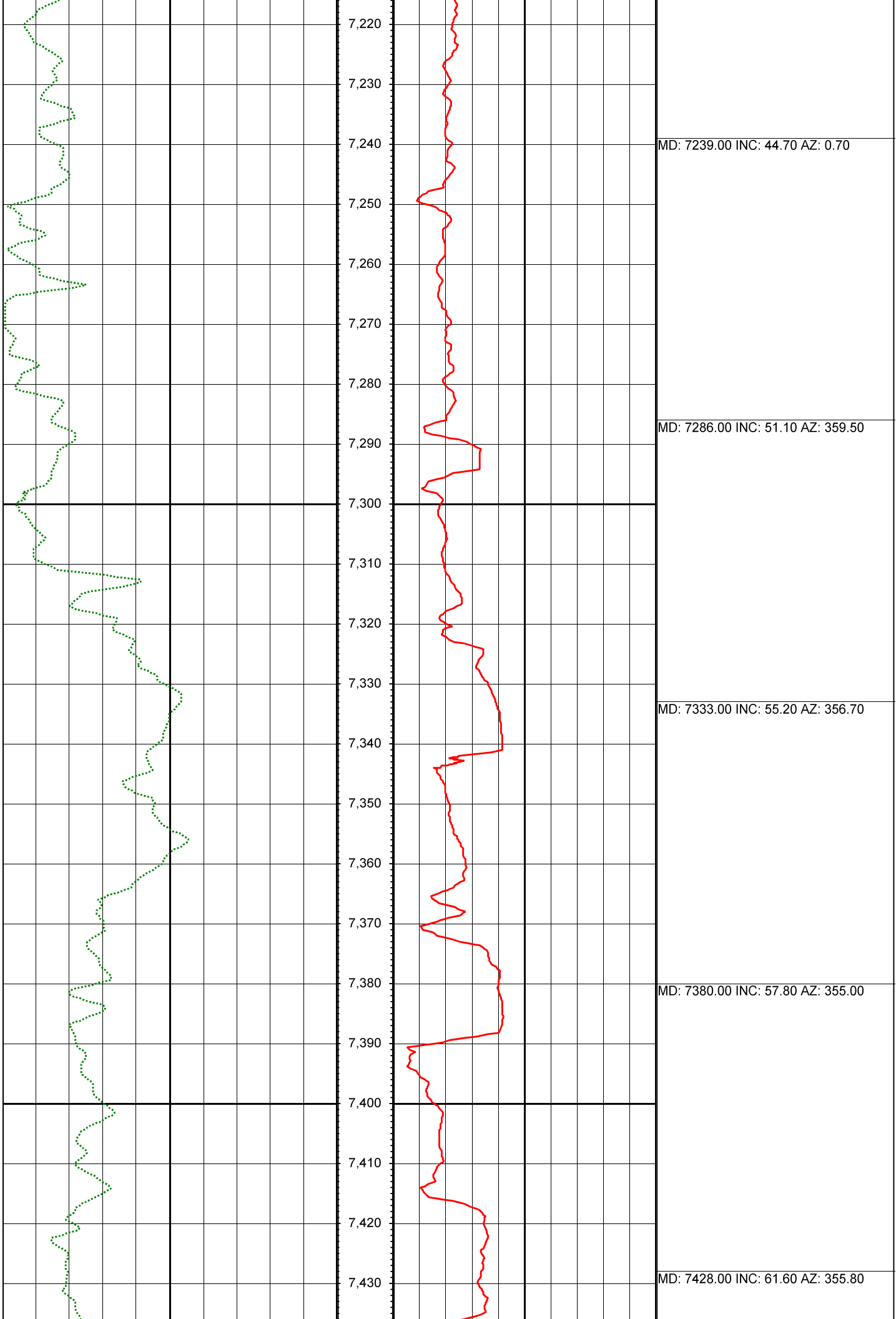
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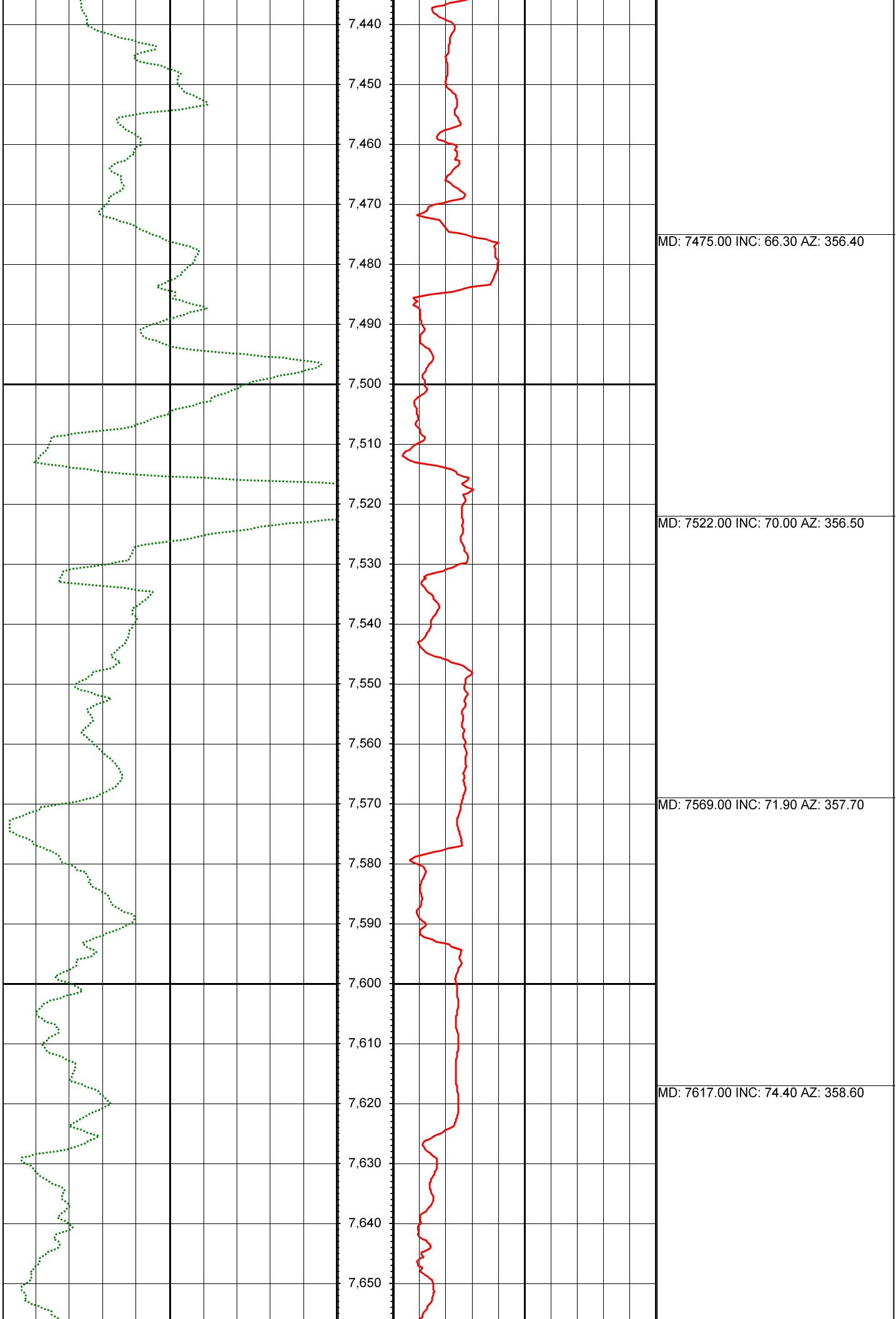


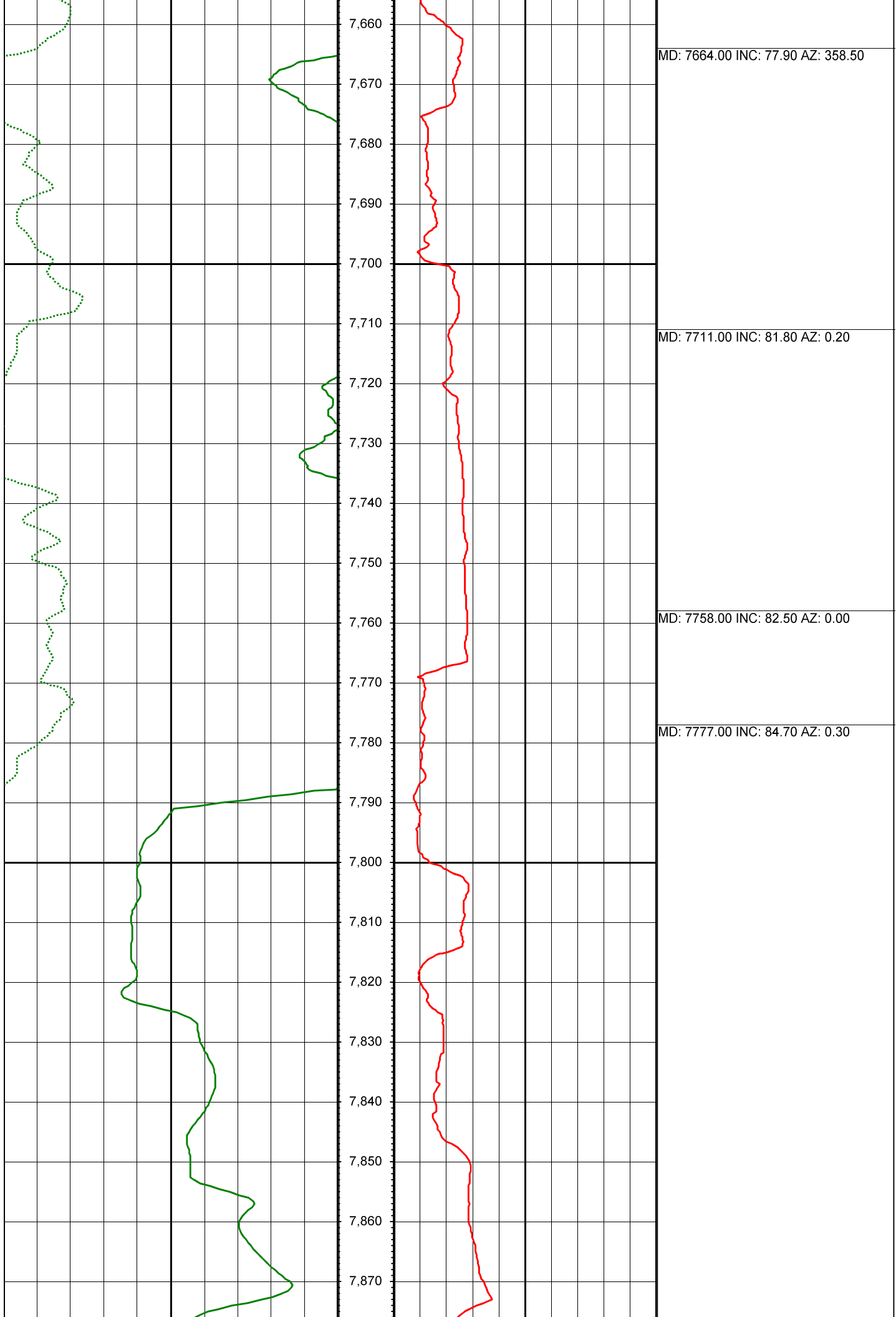


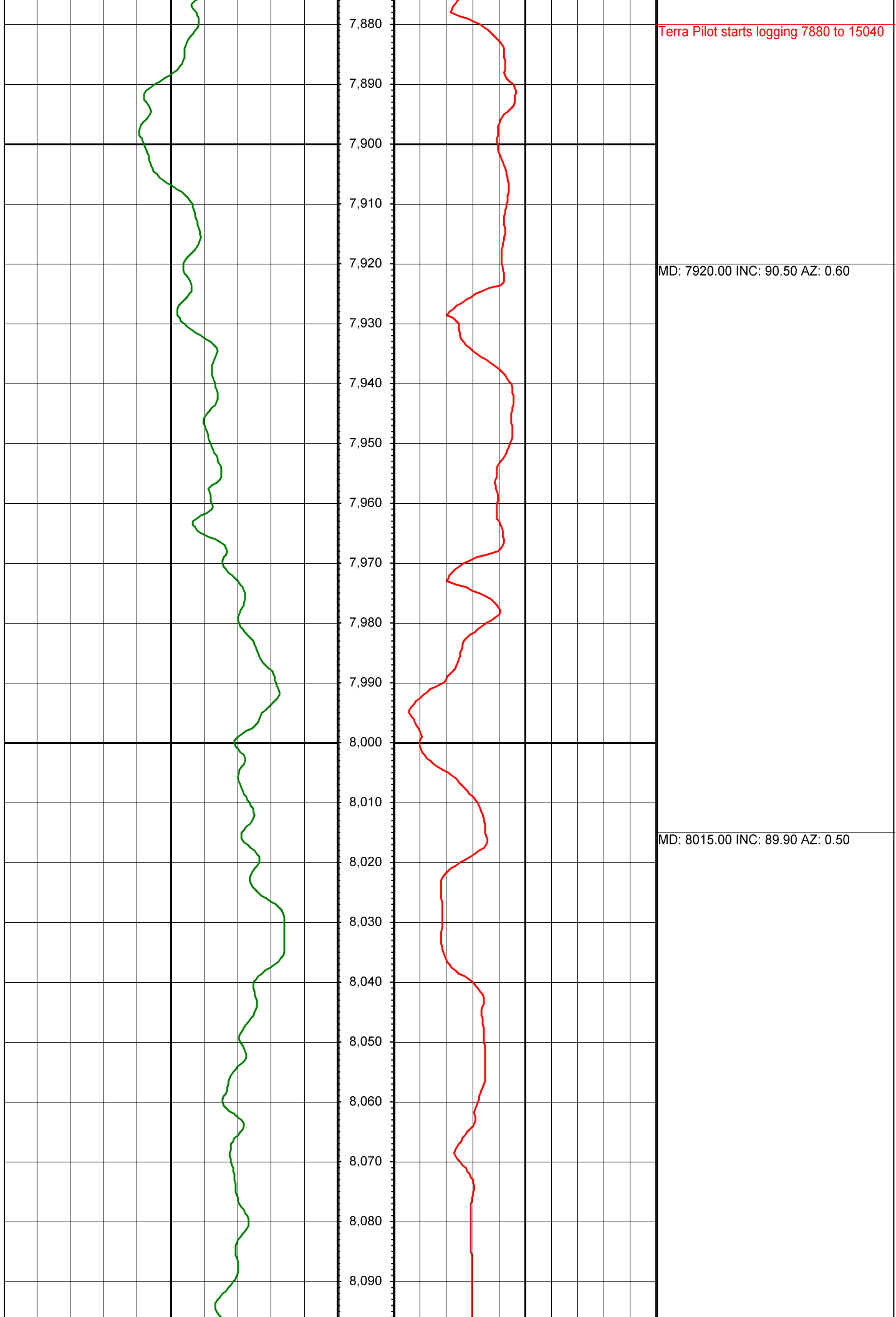


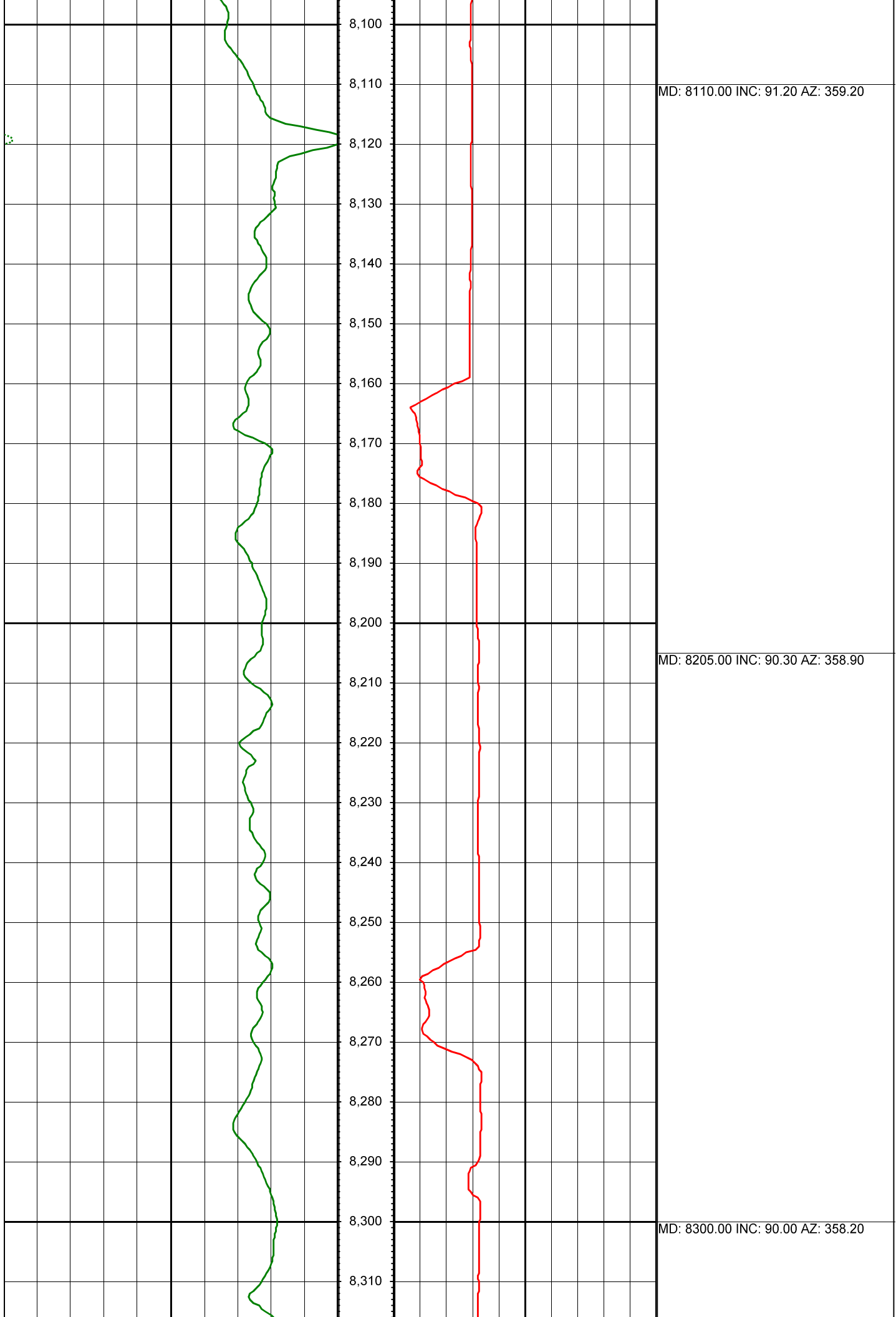


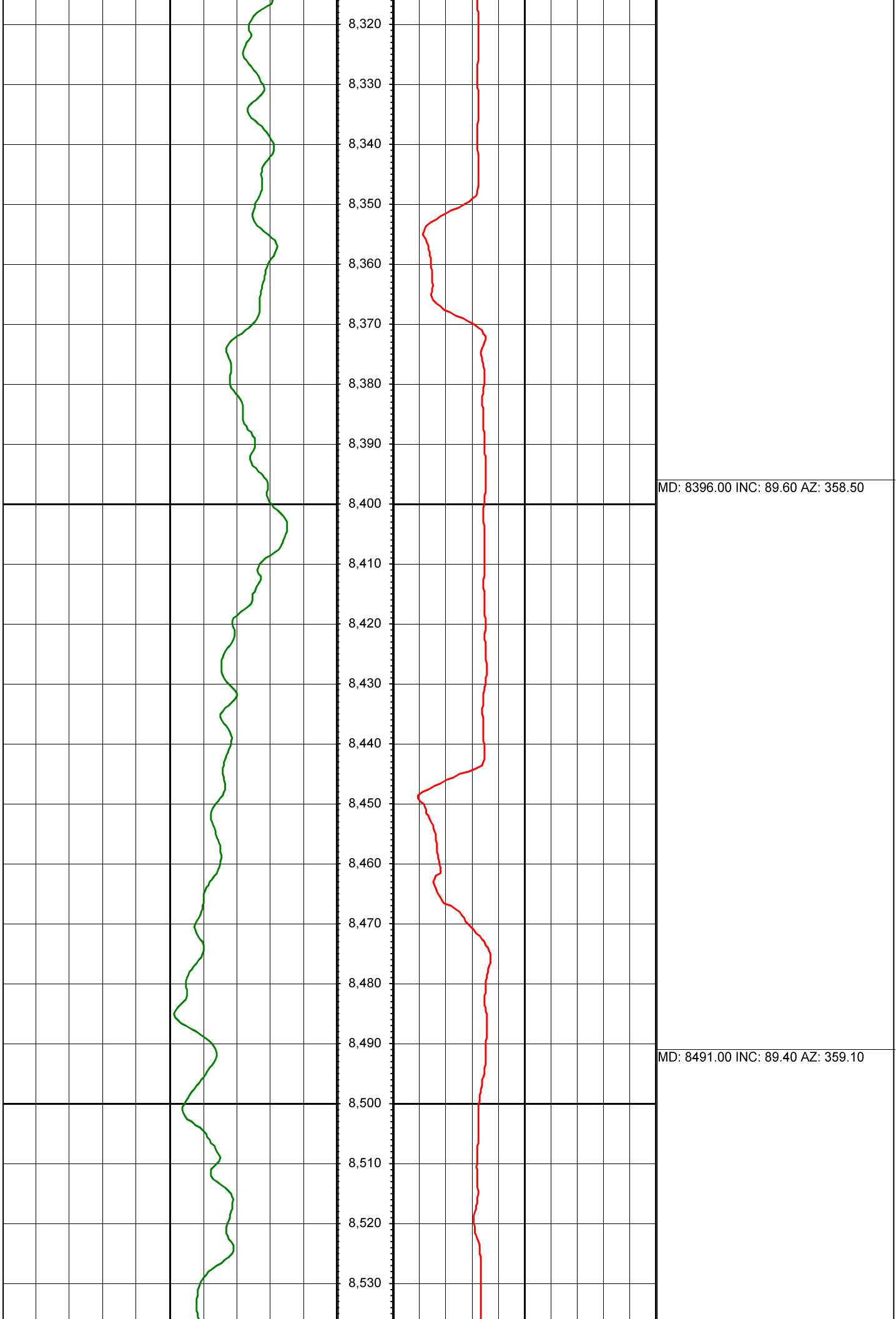


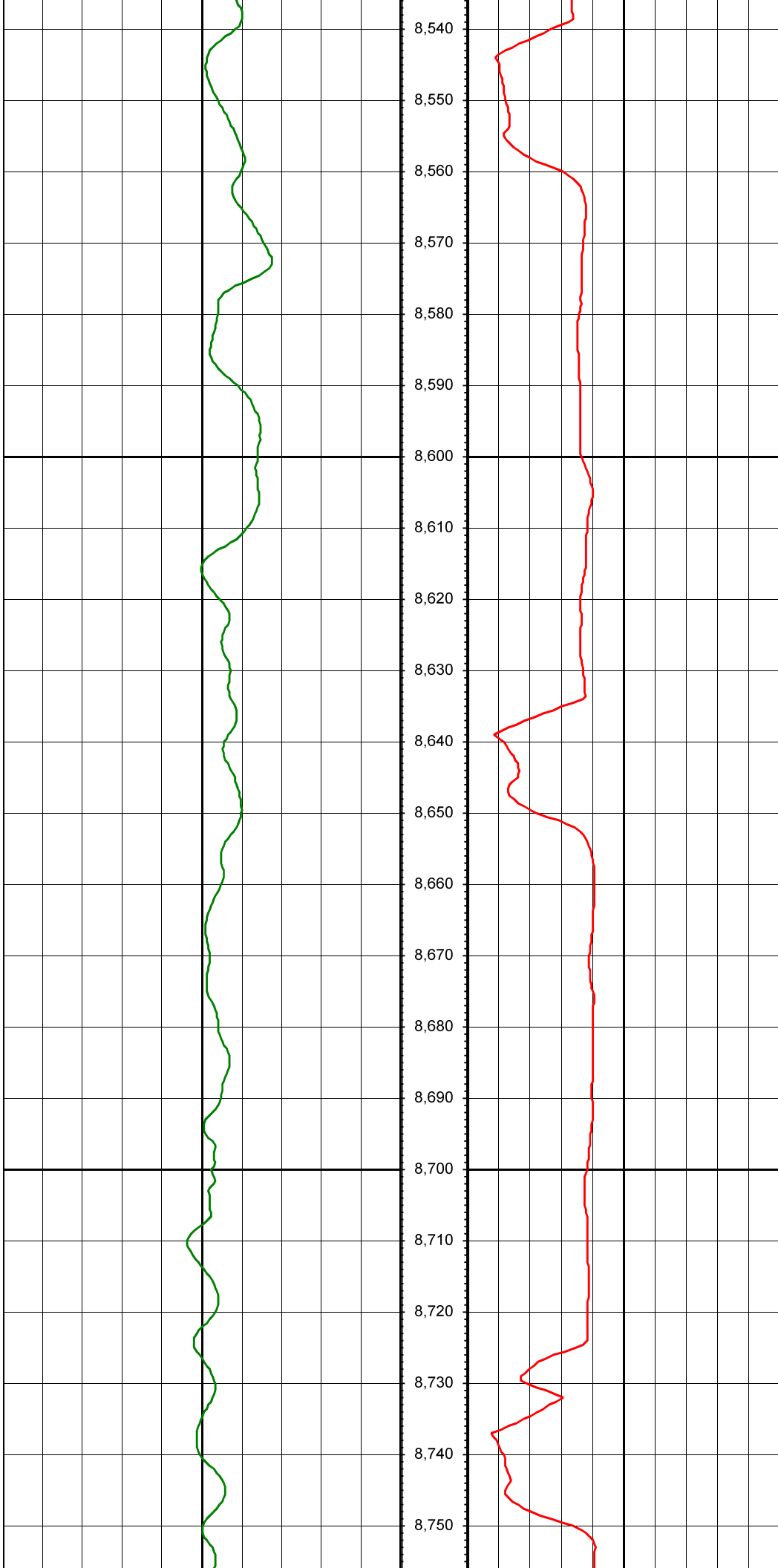






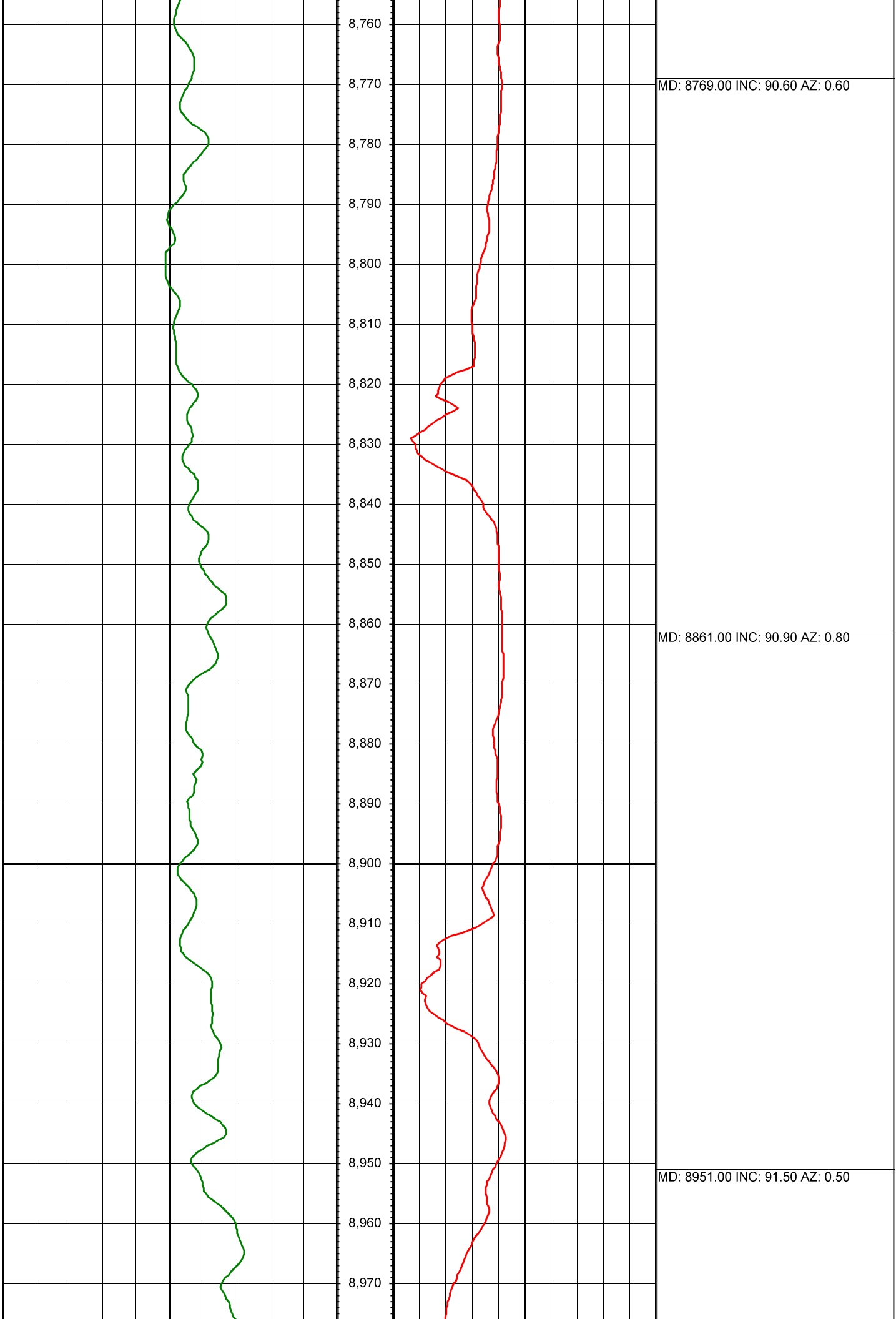


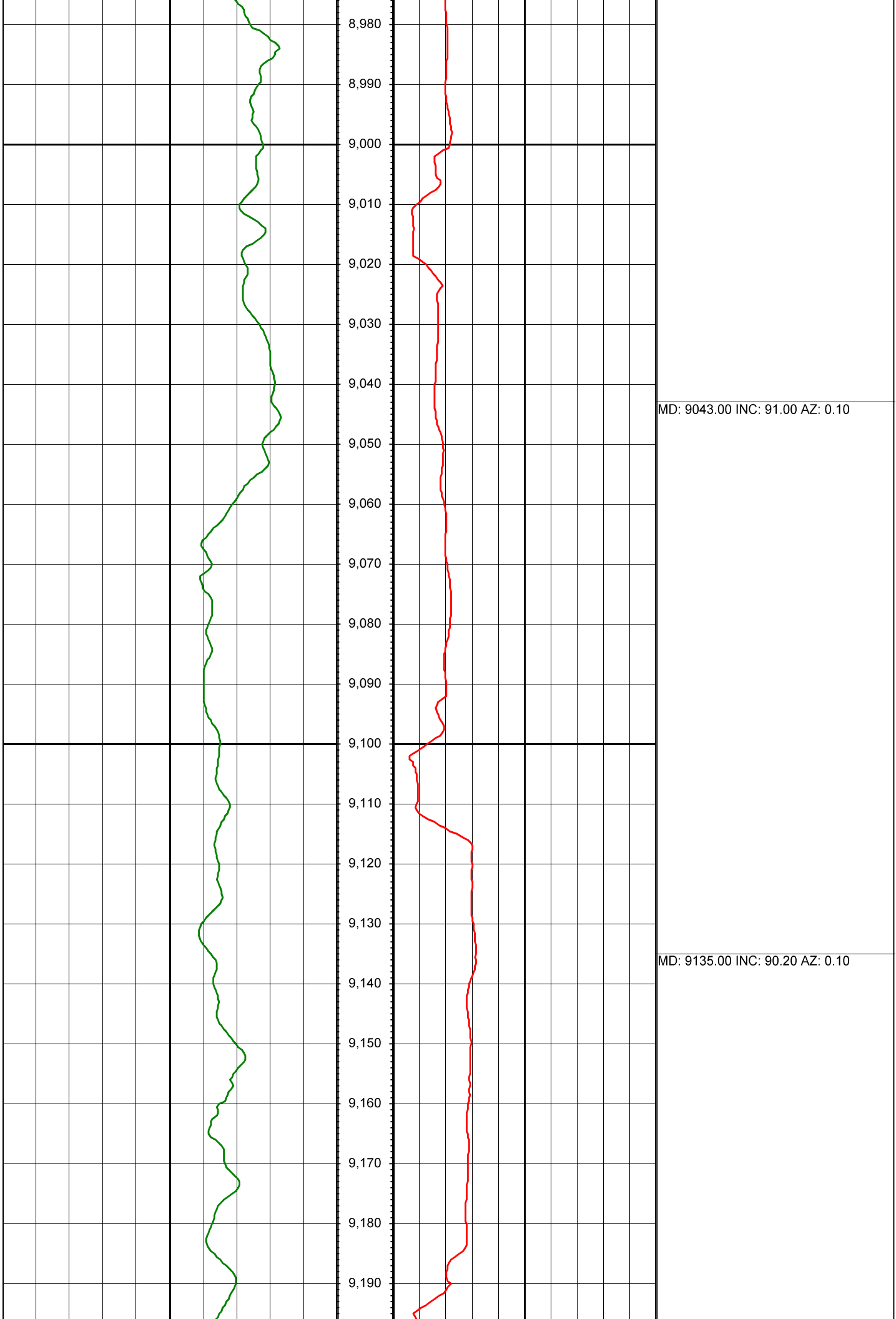




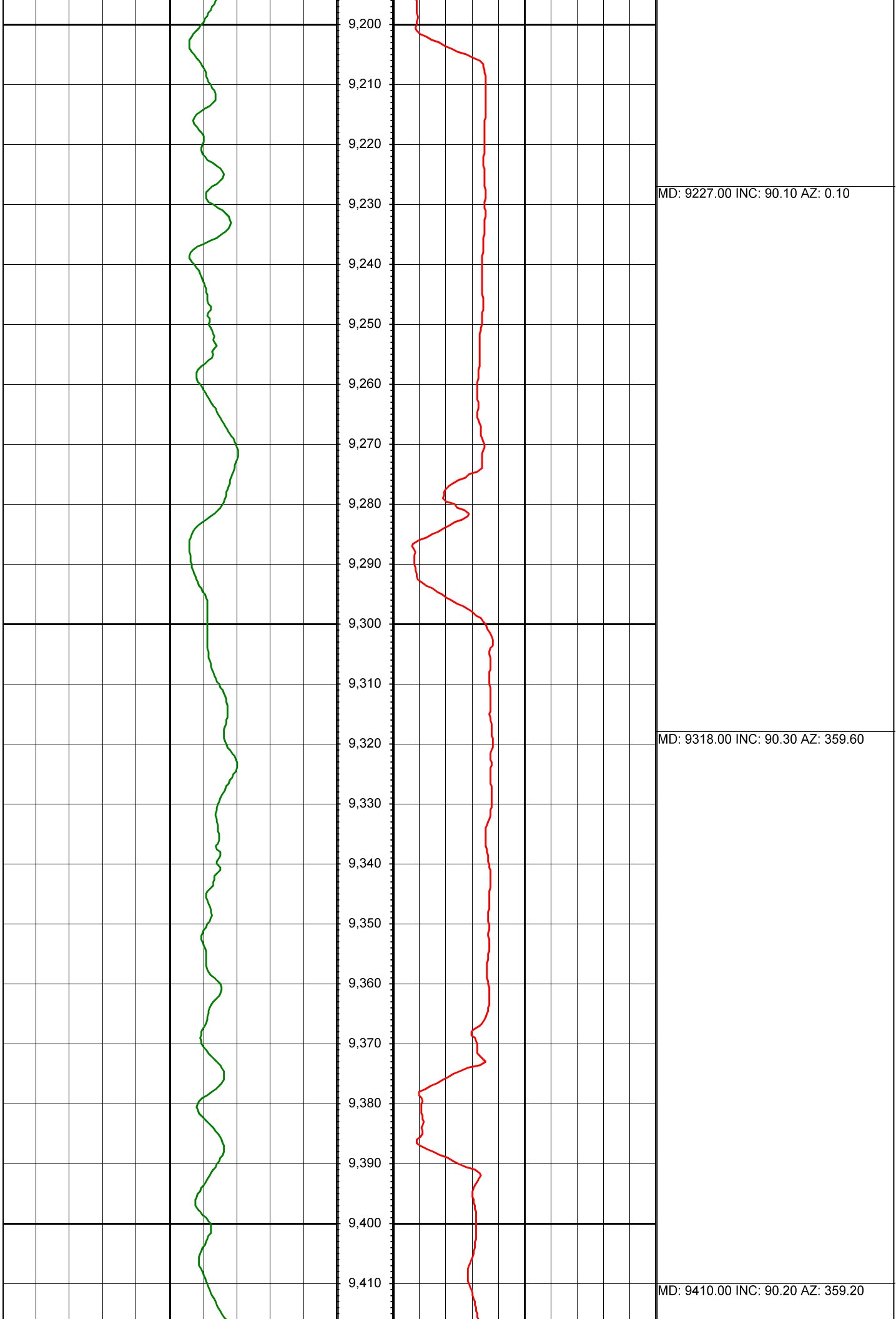
MD: 8586.00 INC: 89.60 AZ: 0.30

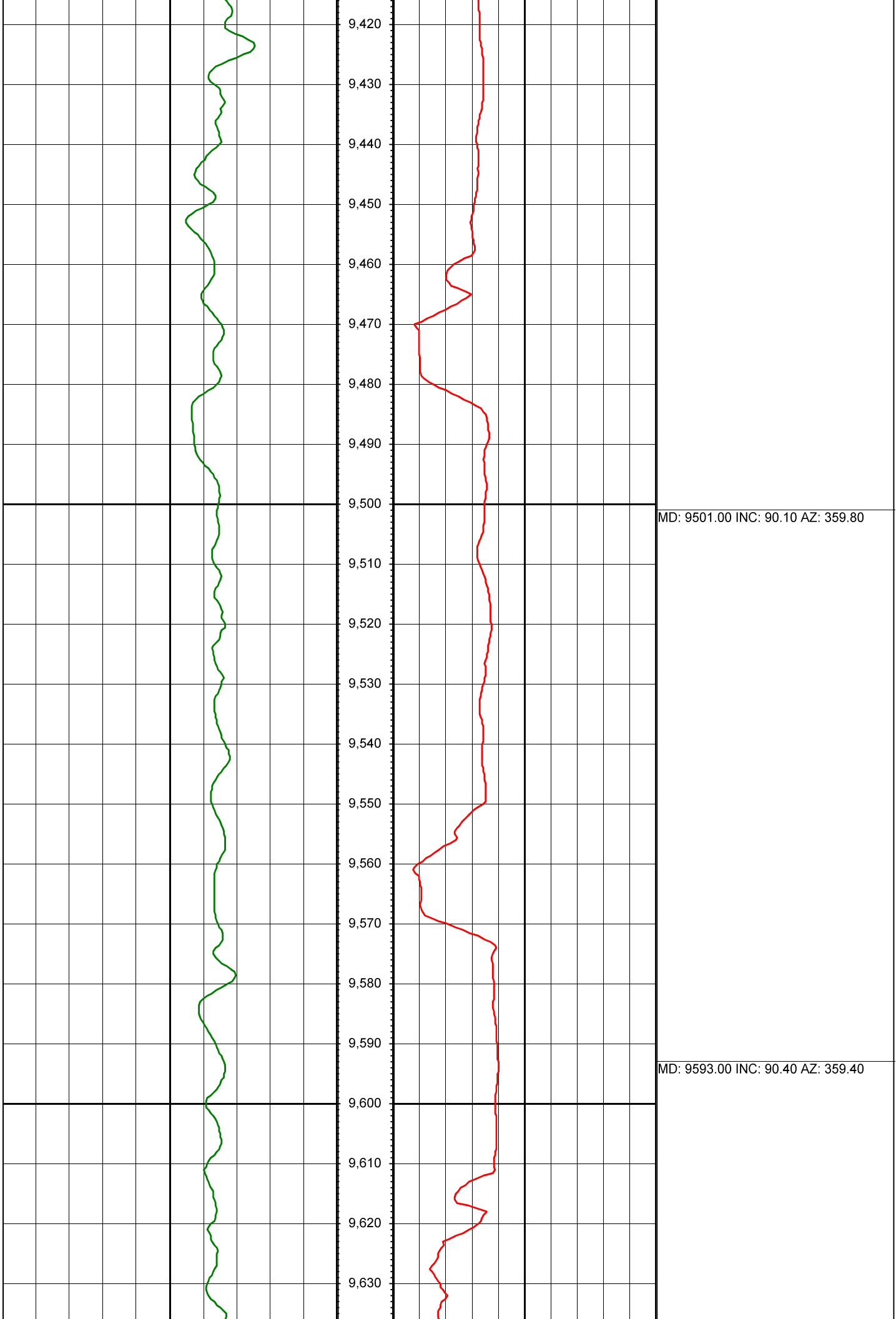
MD: 8677.00 INC: 89.90 AZ: 0.10

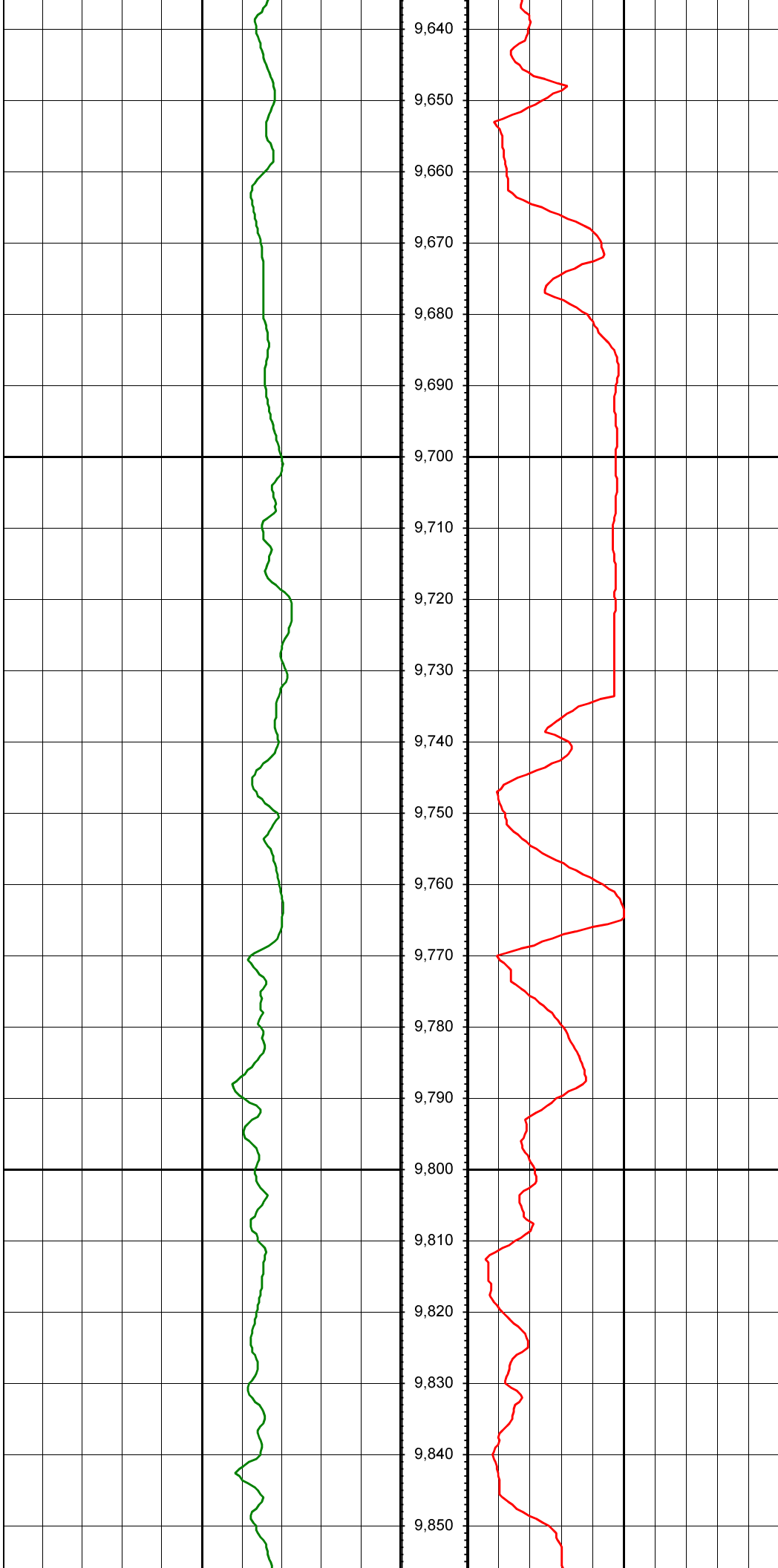






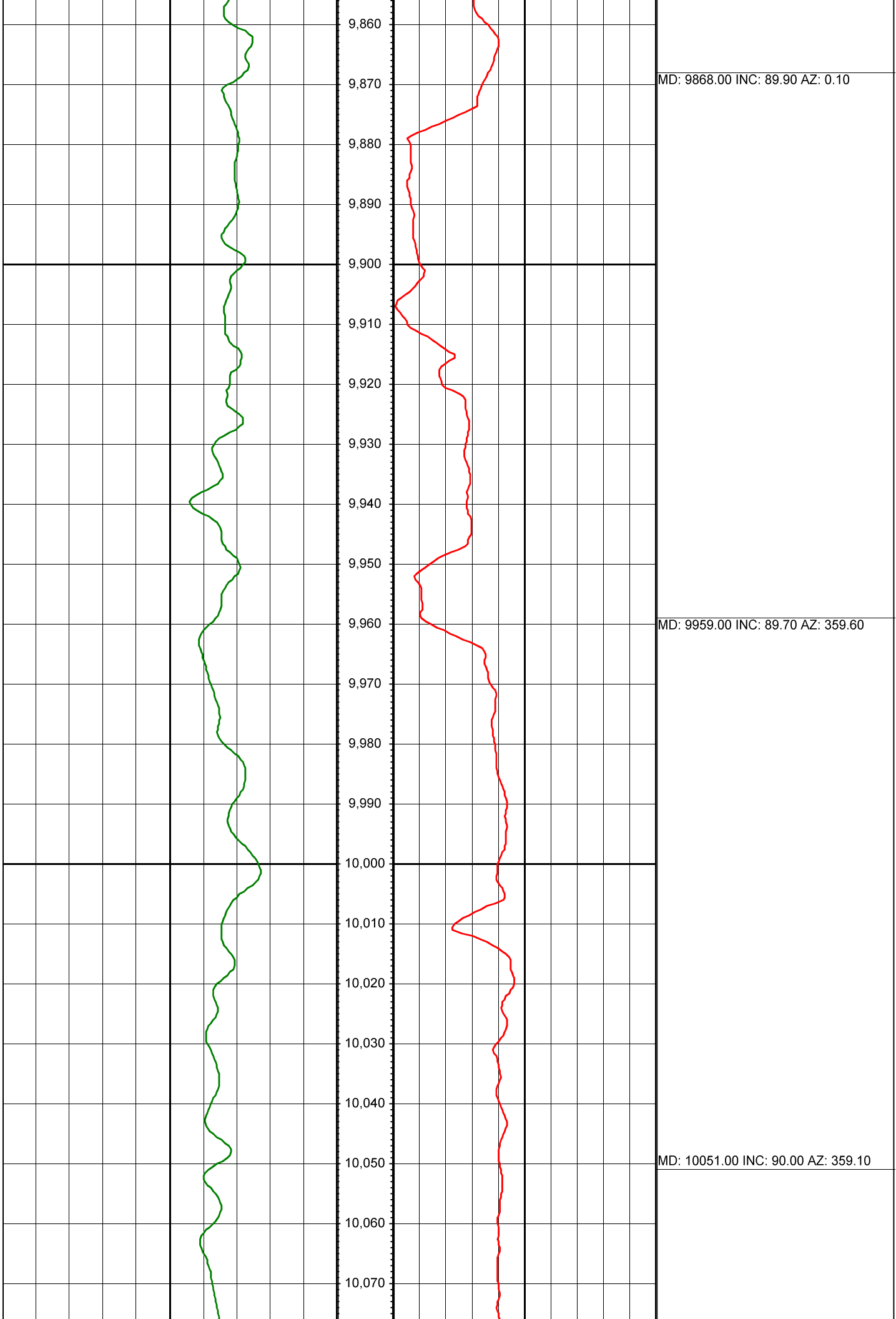


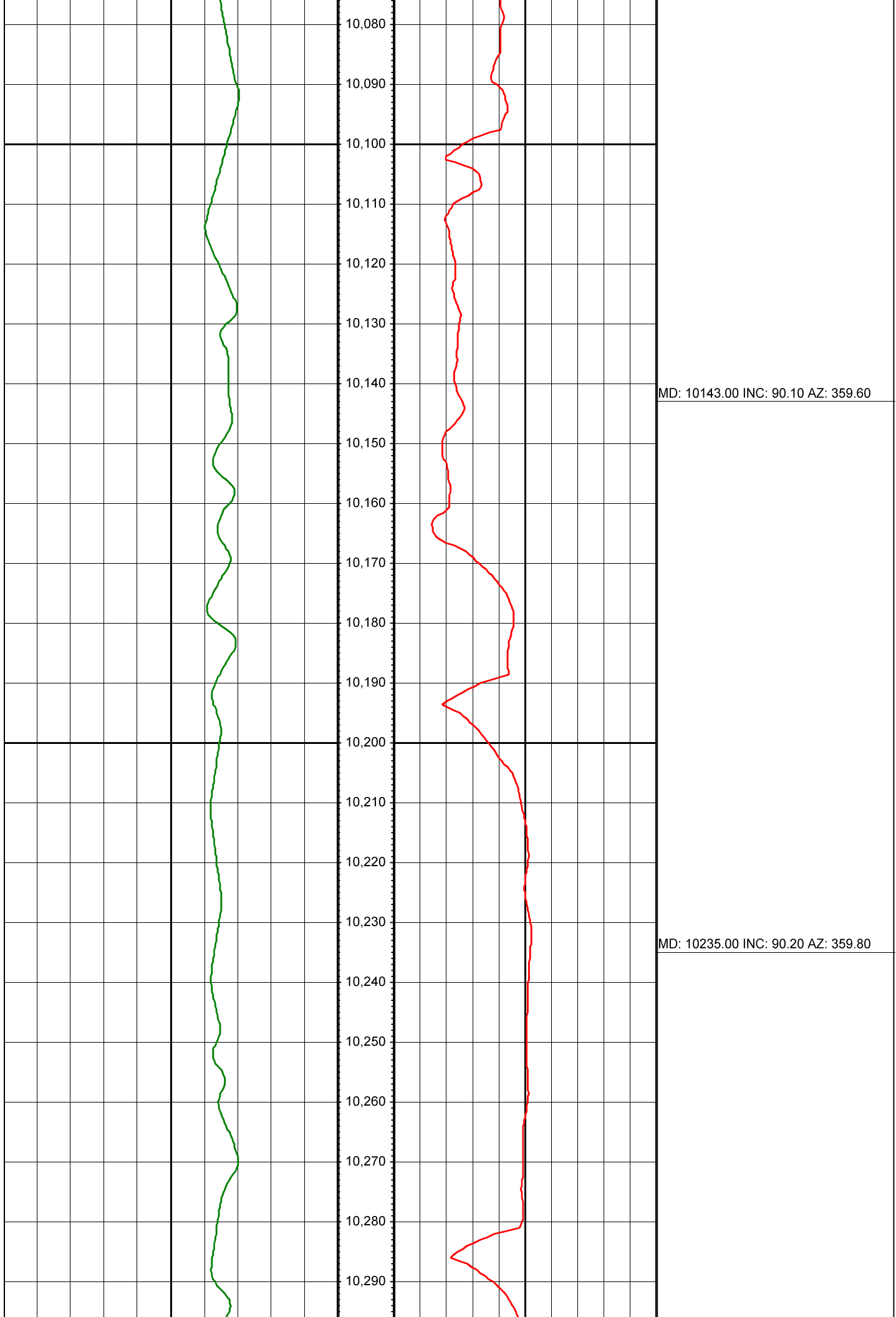


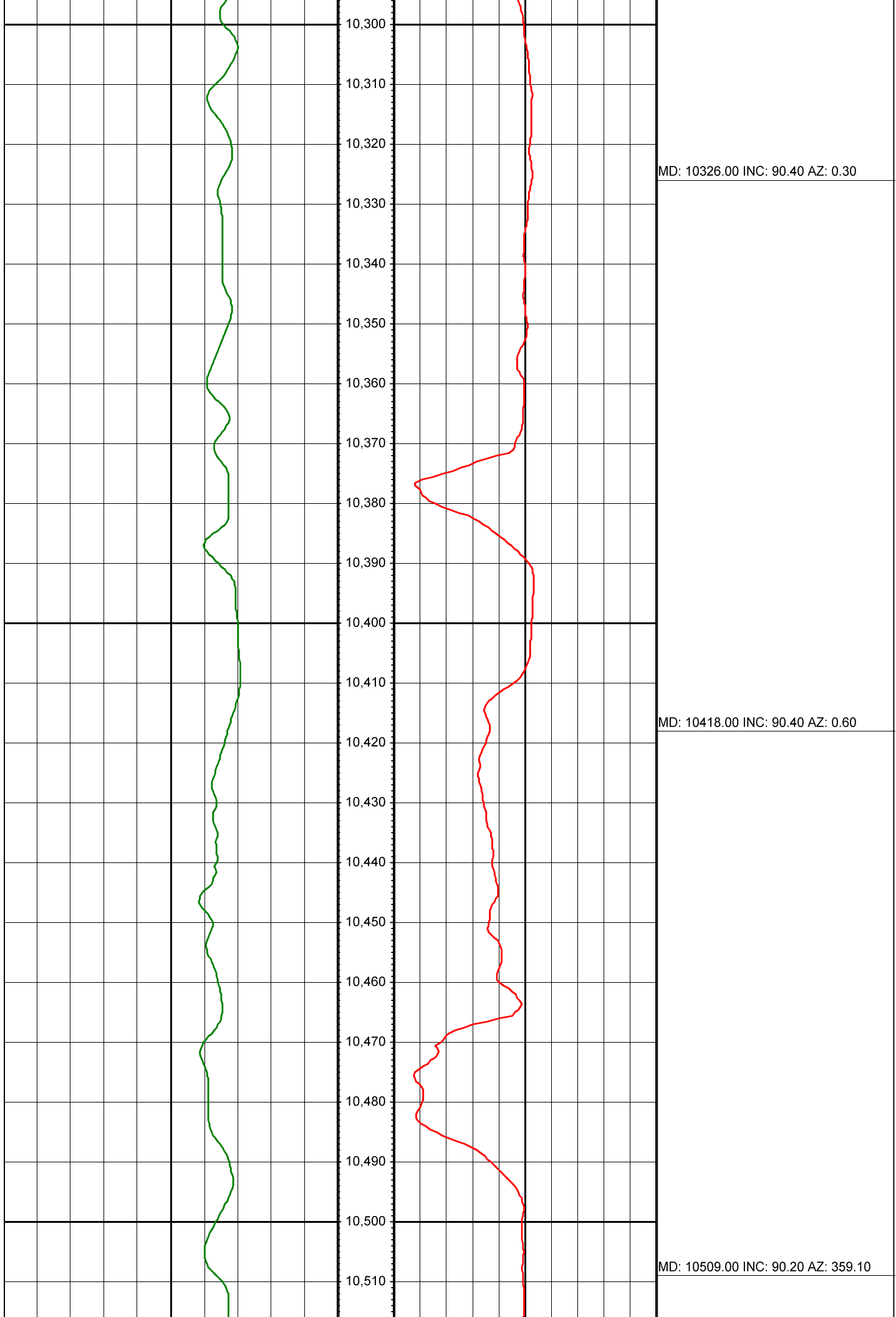


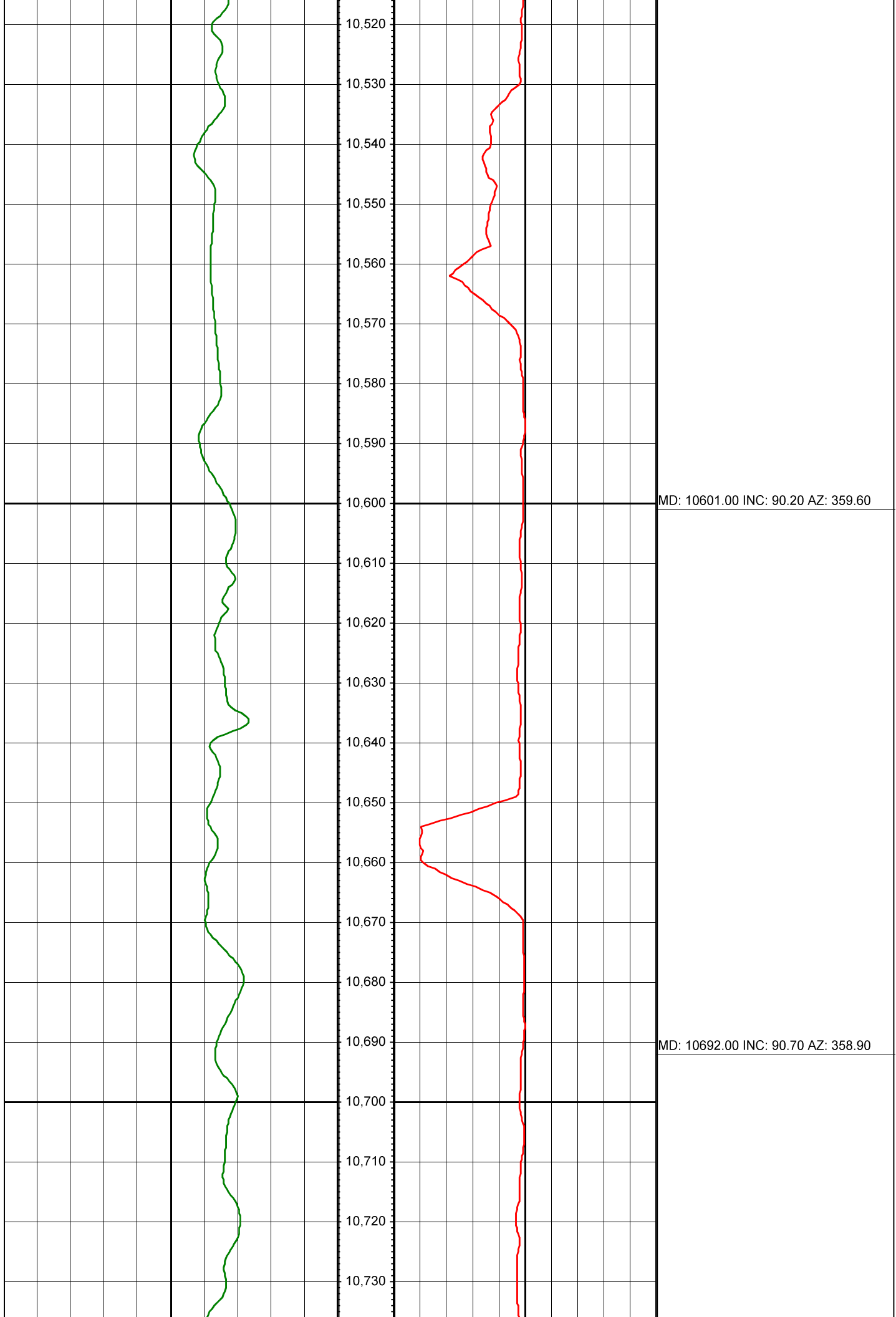
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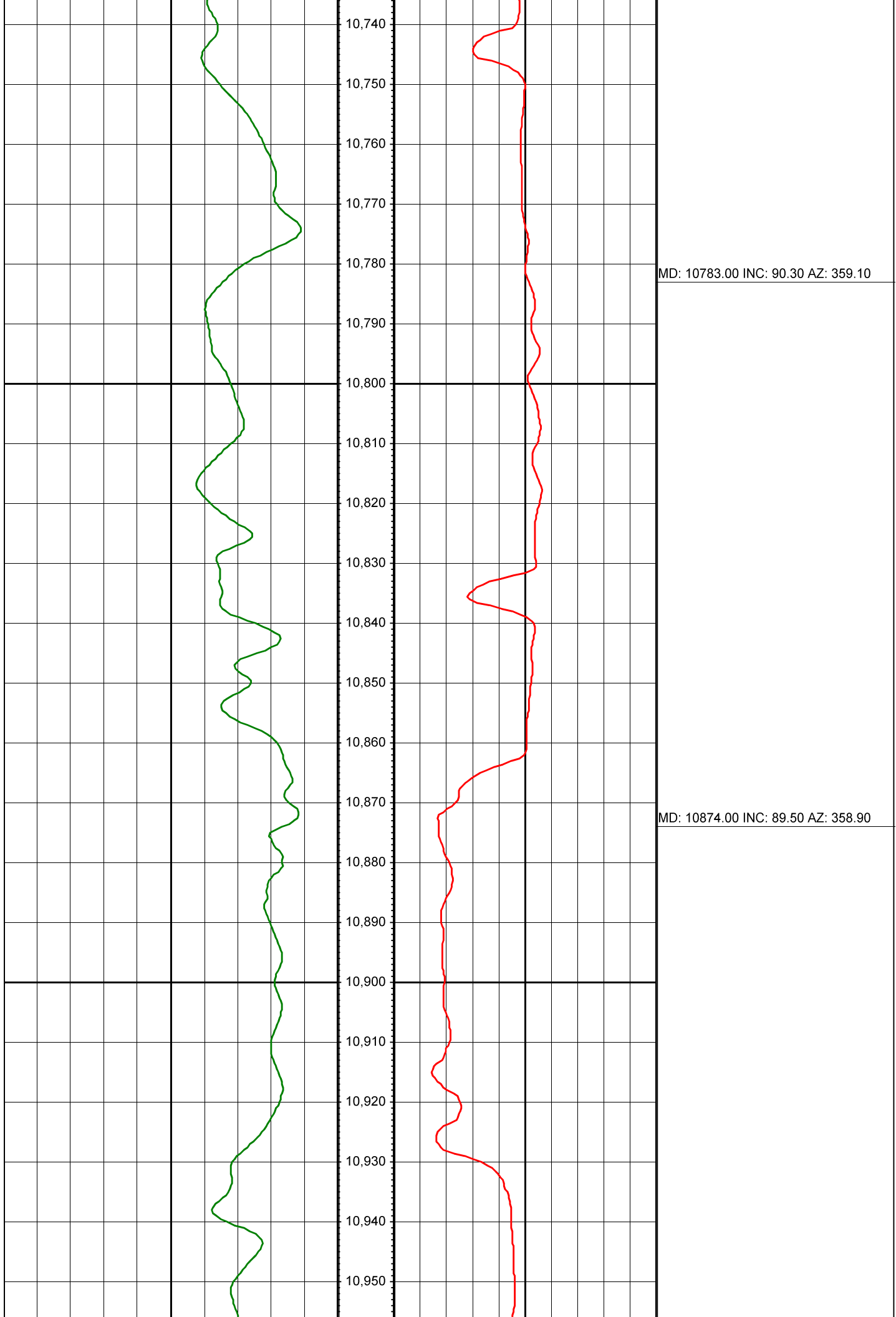
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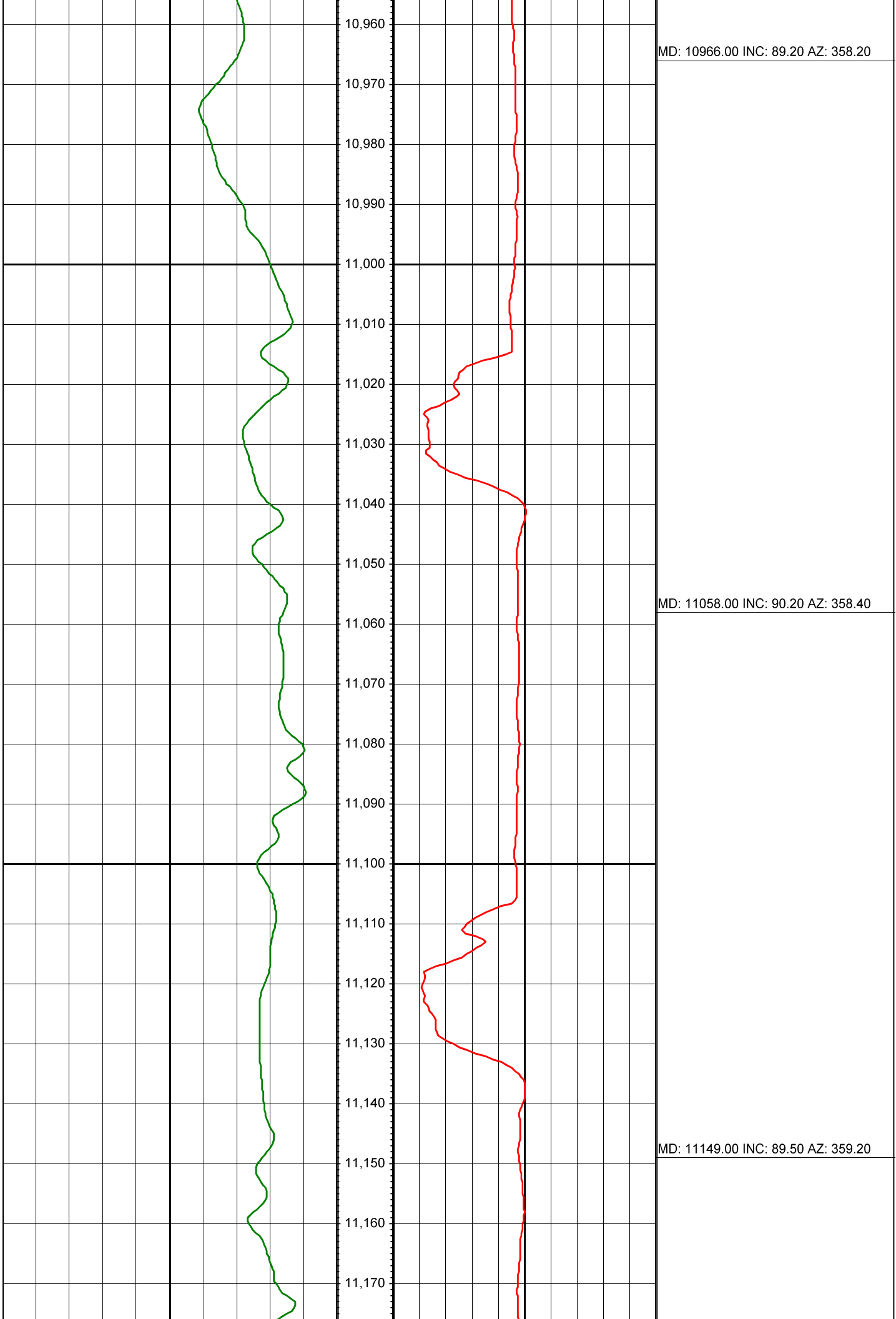


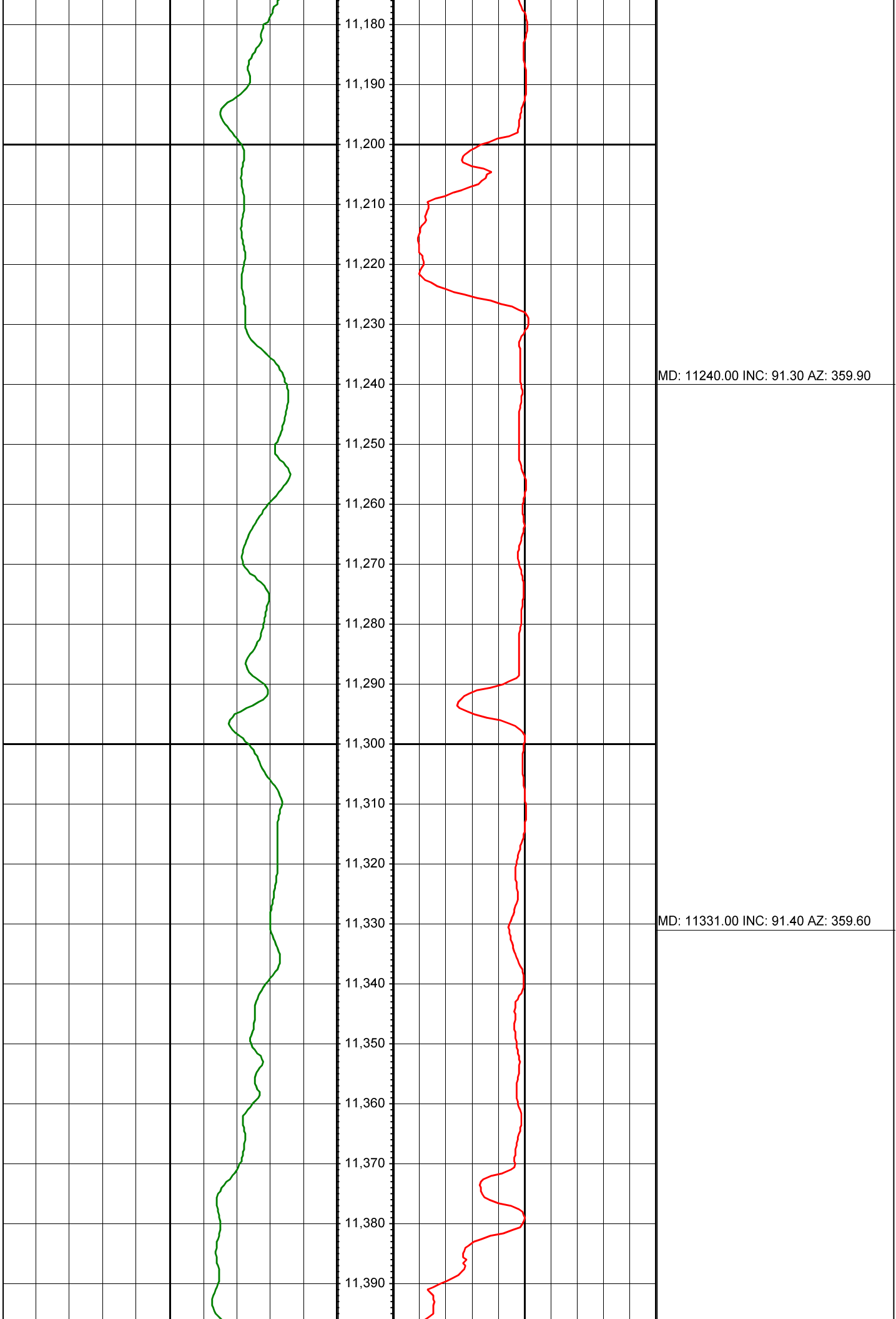


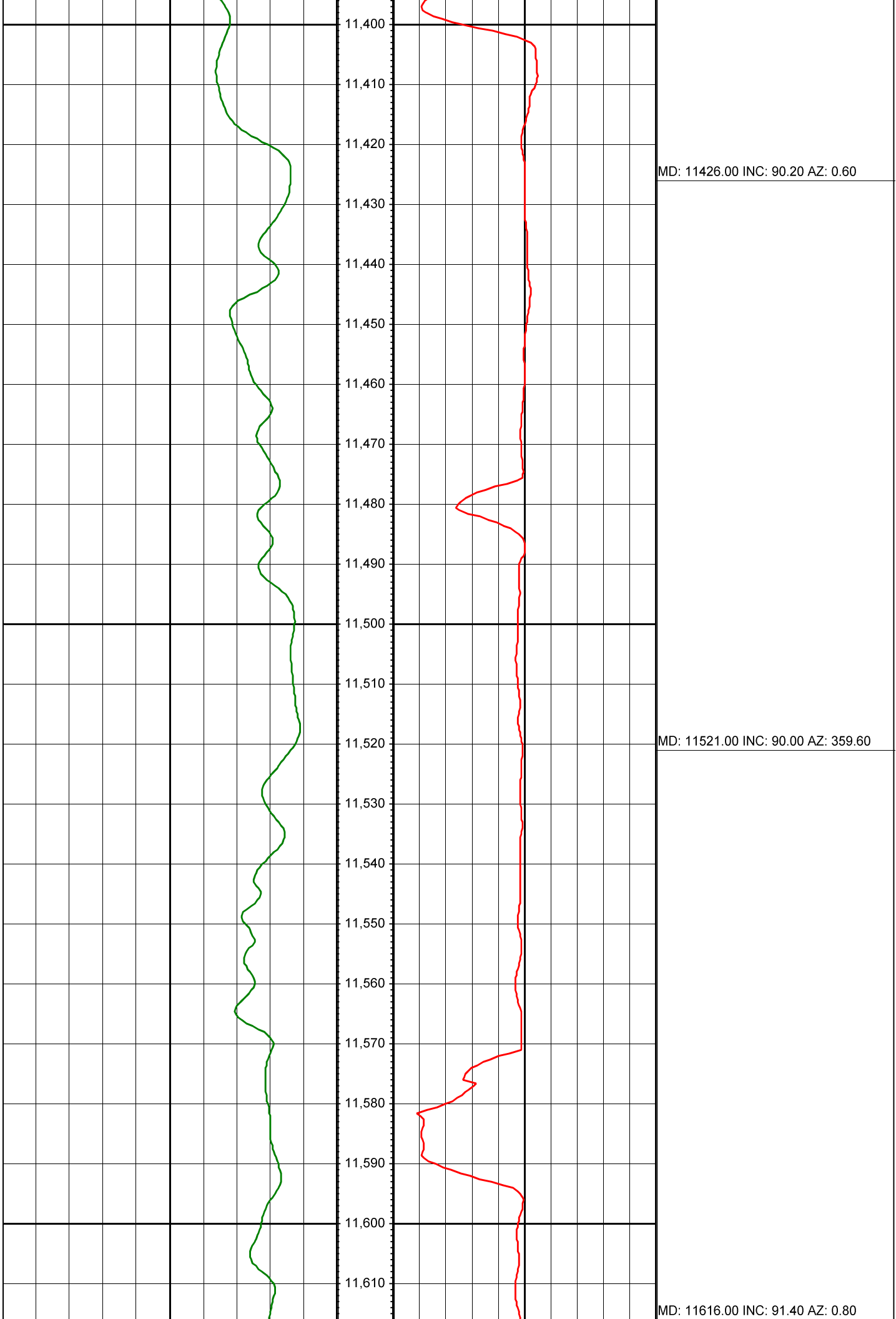


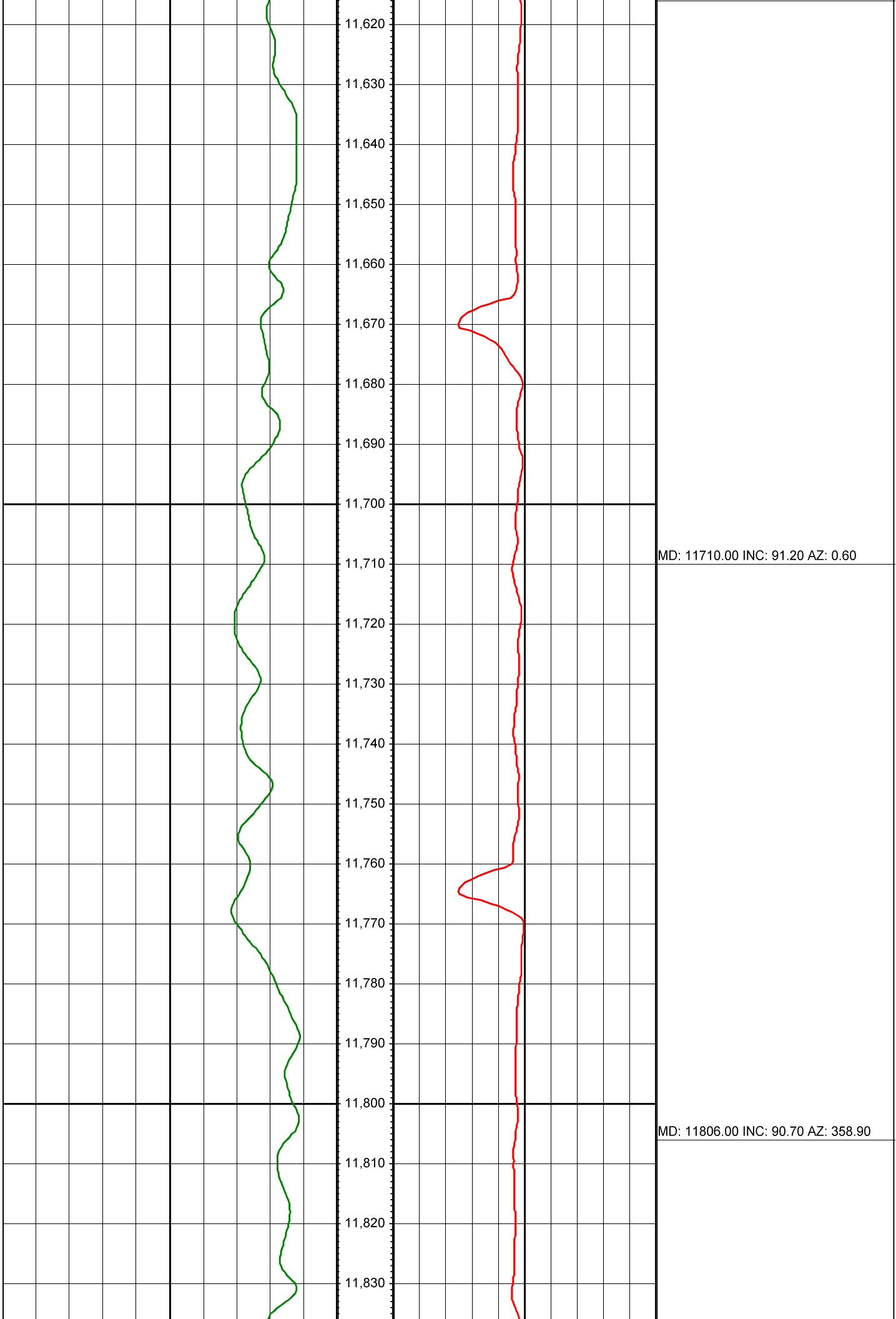


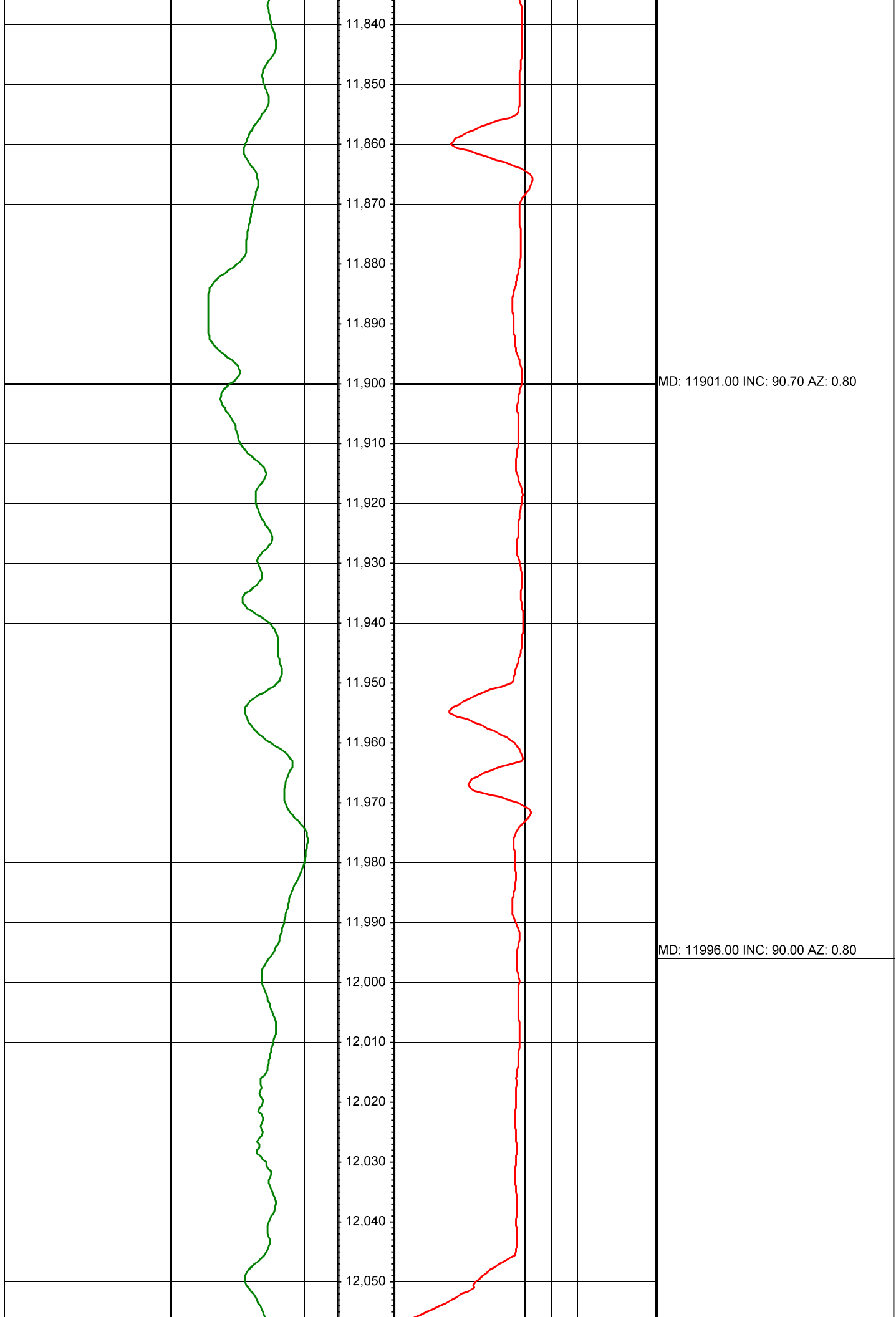


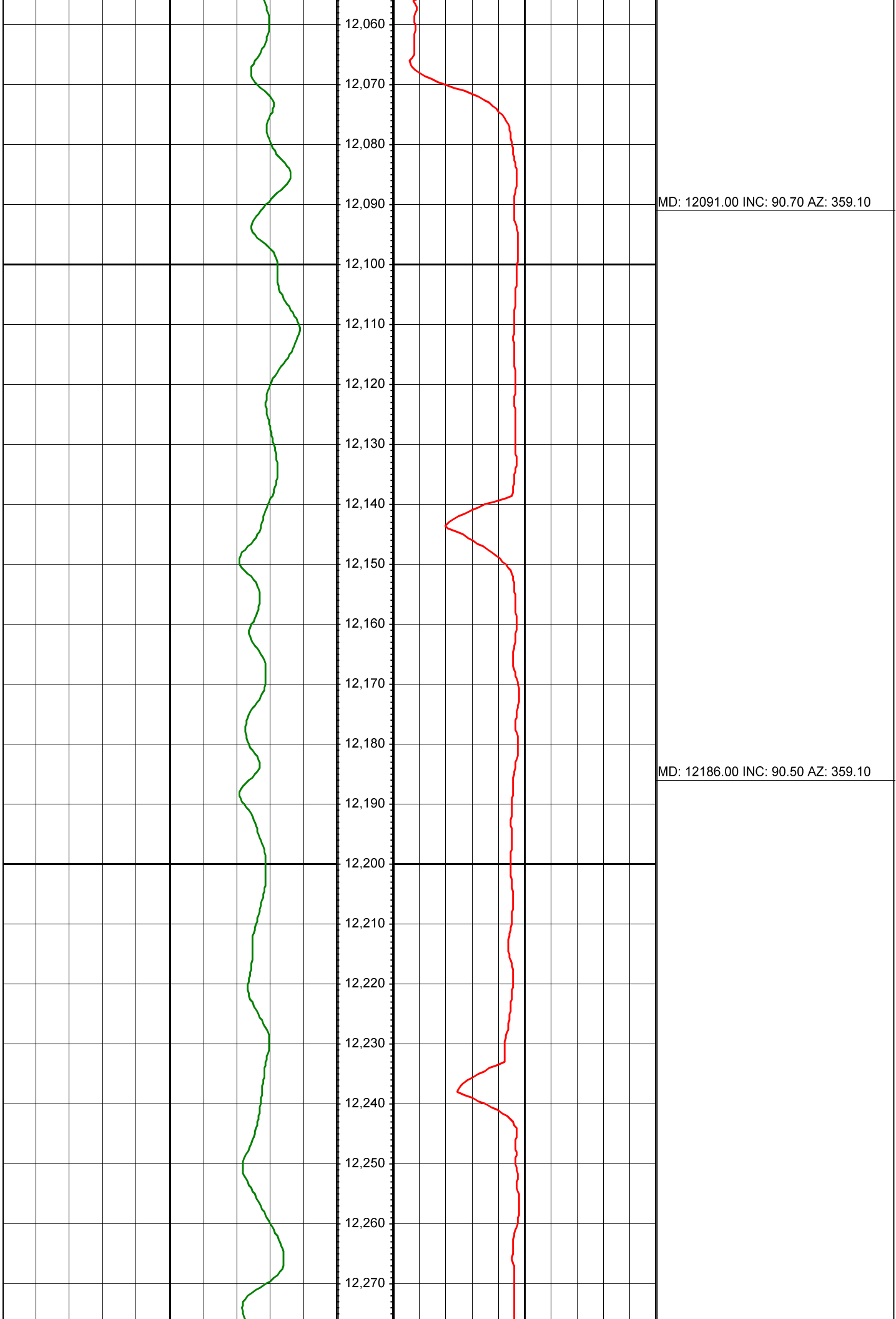


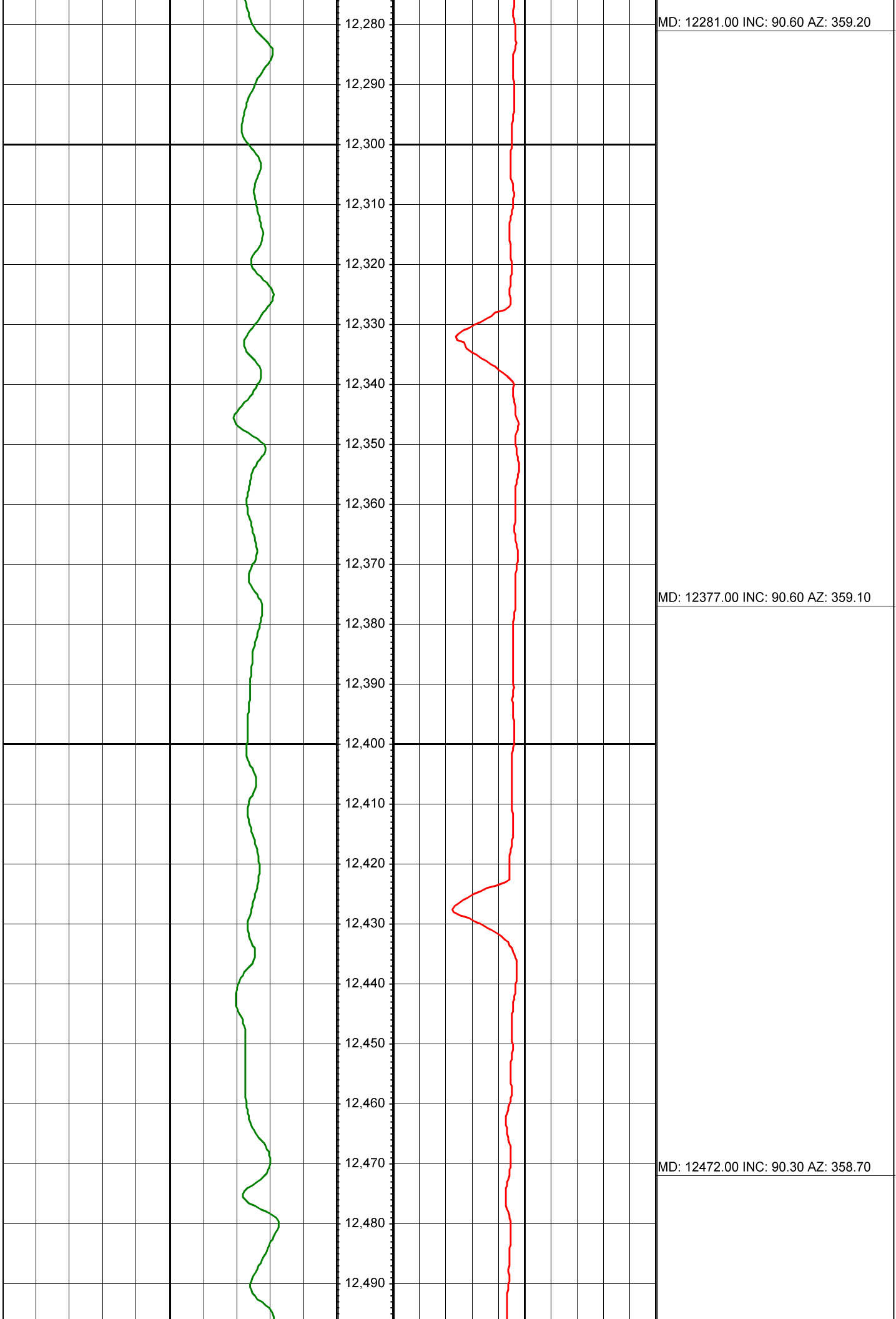


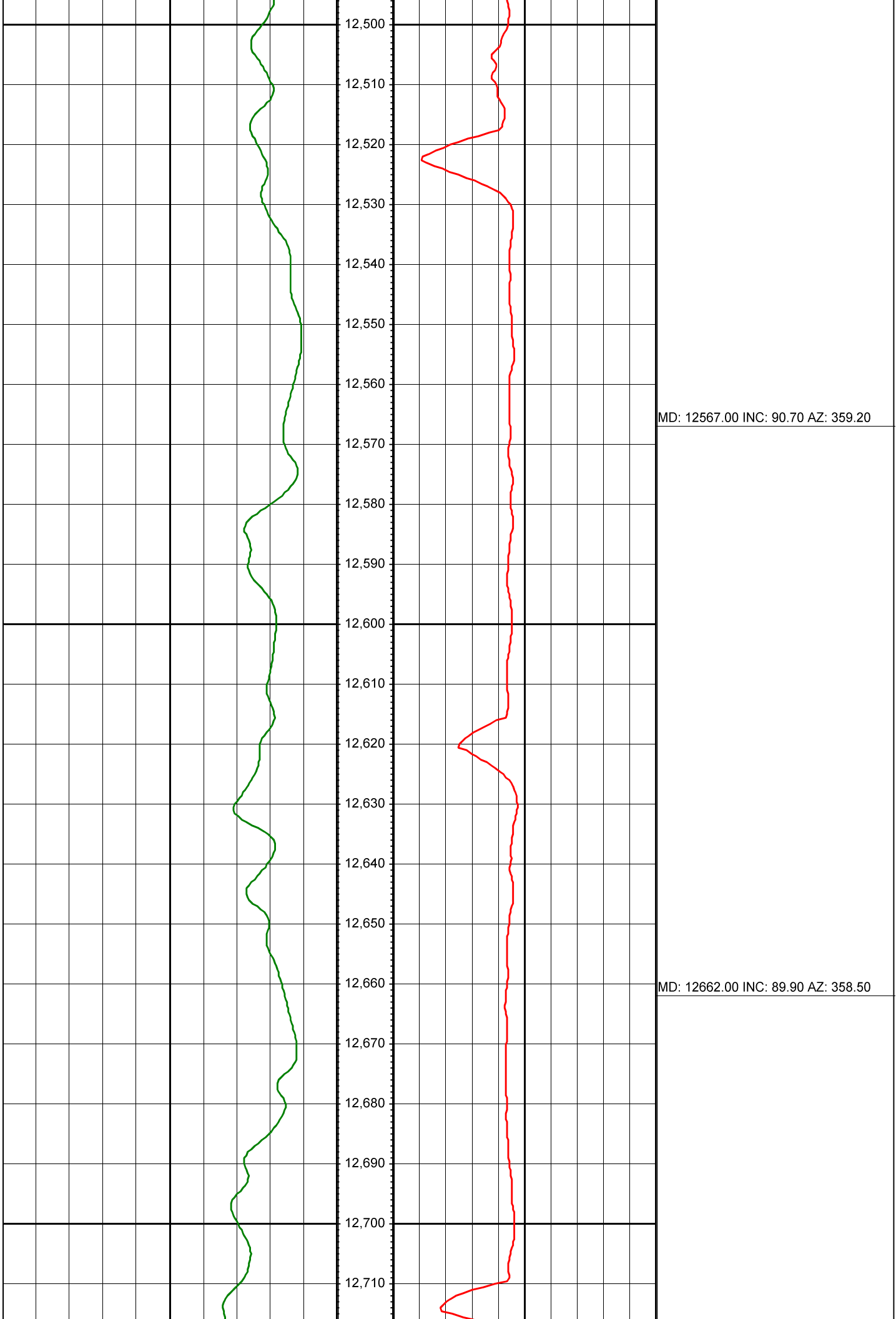




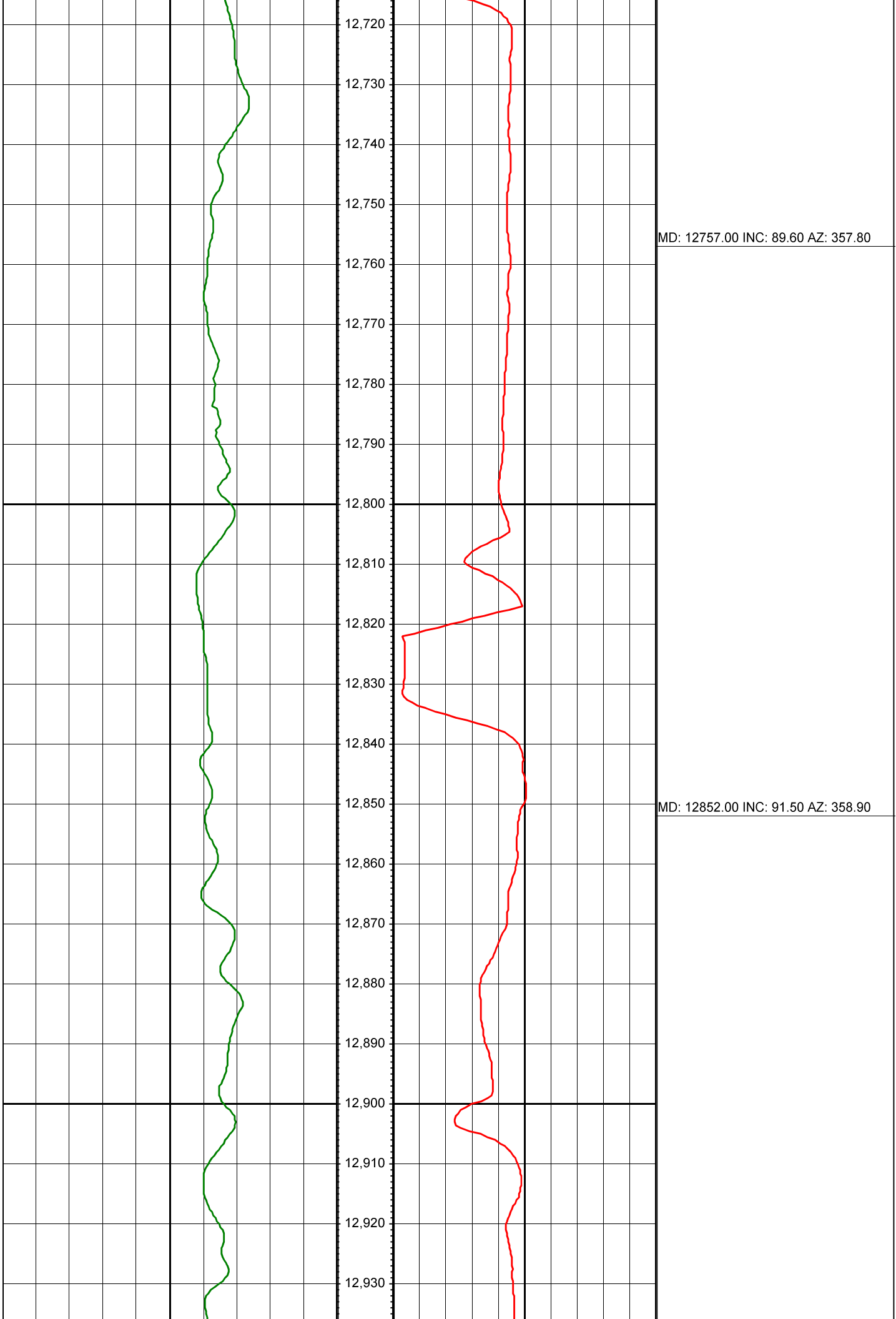


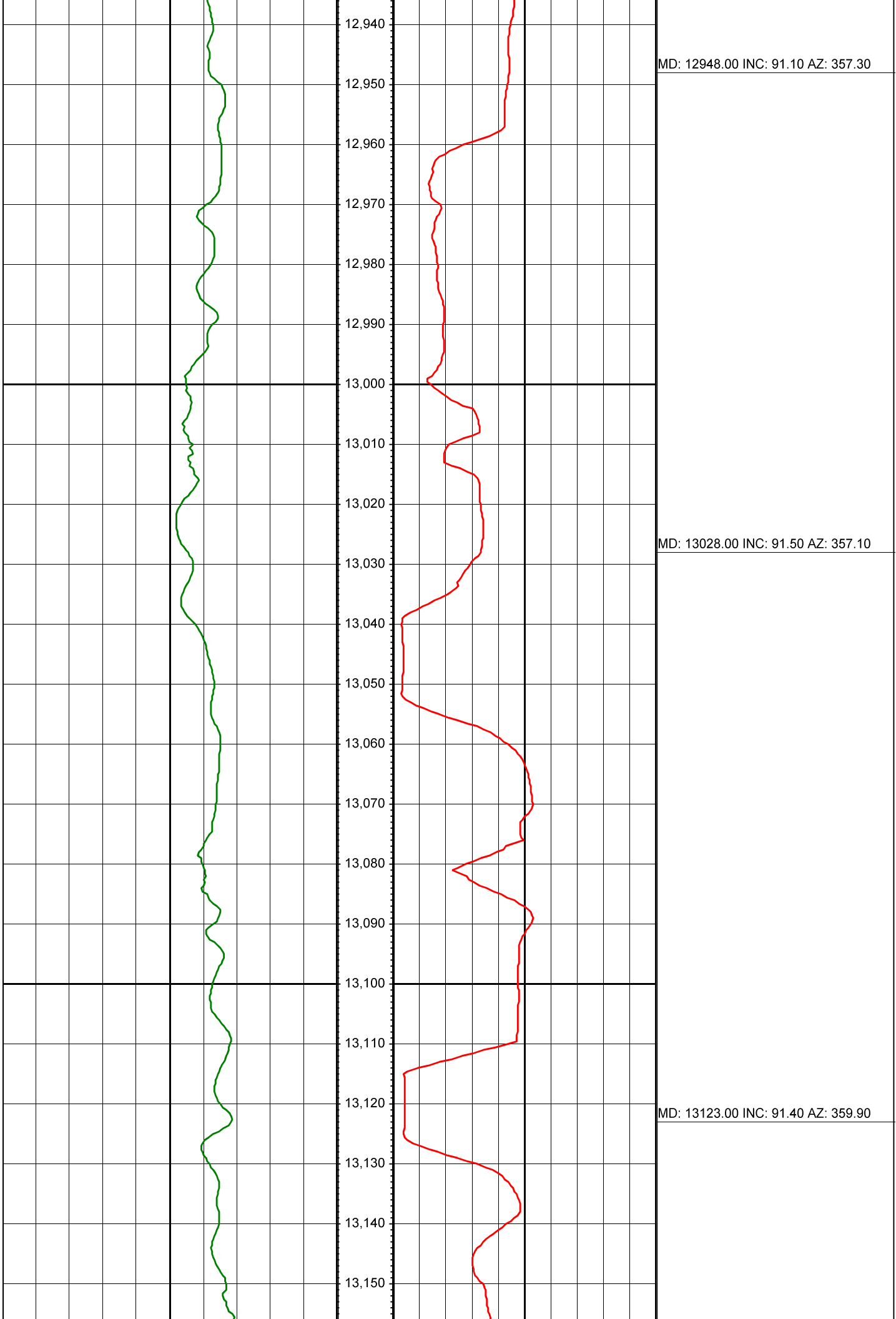


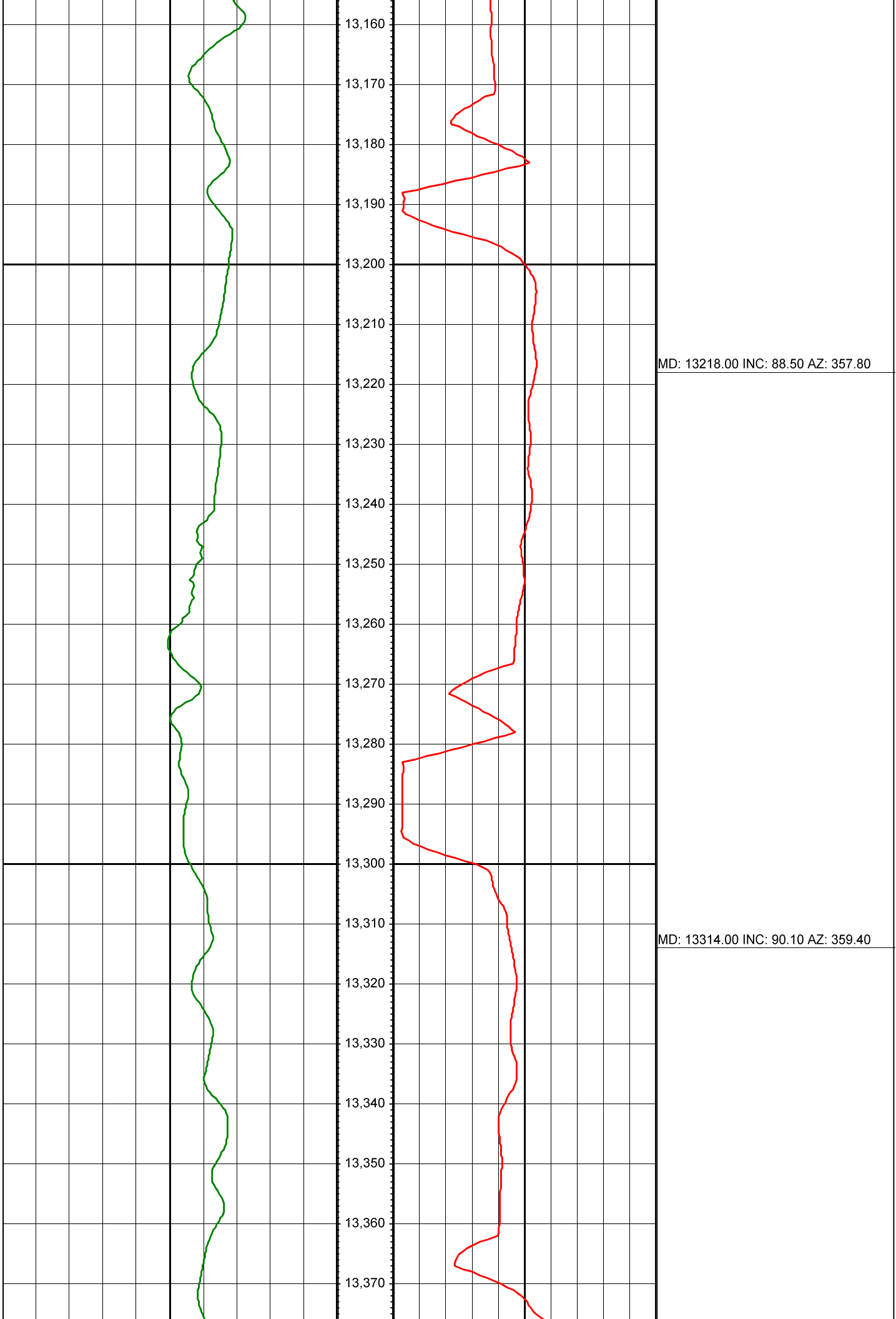


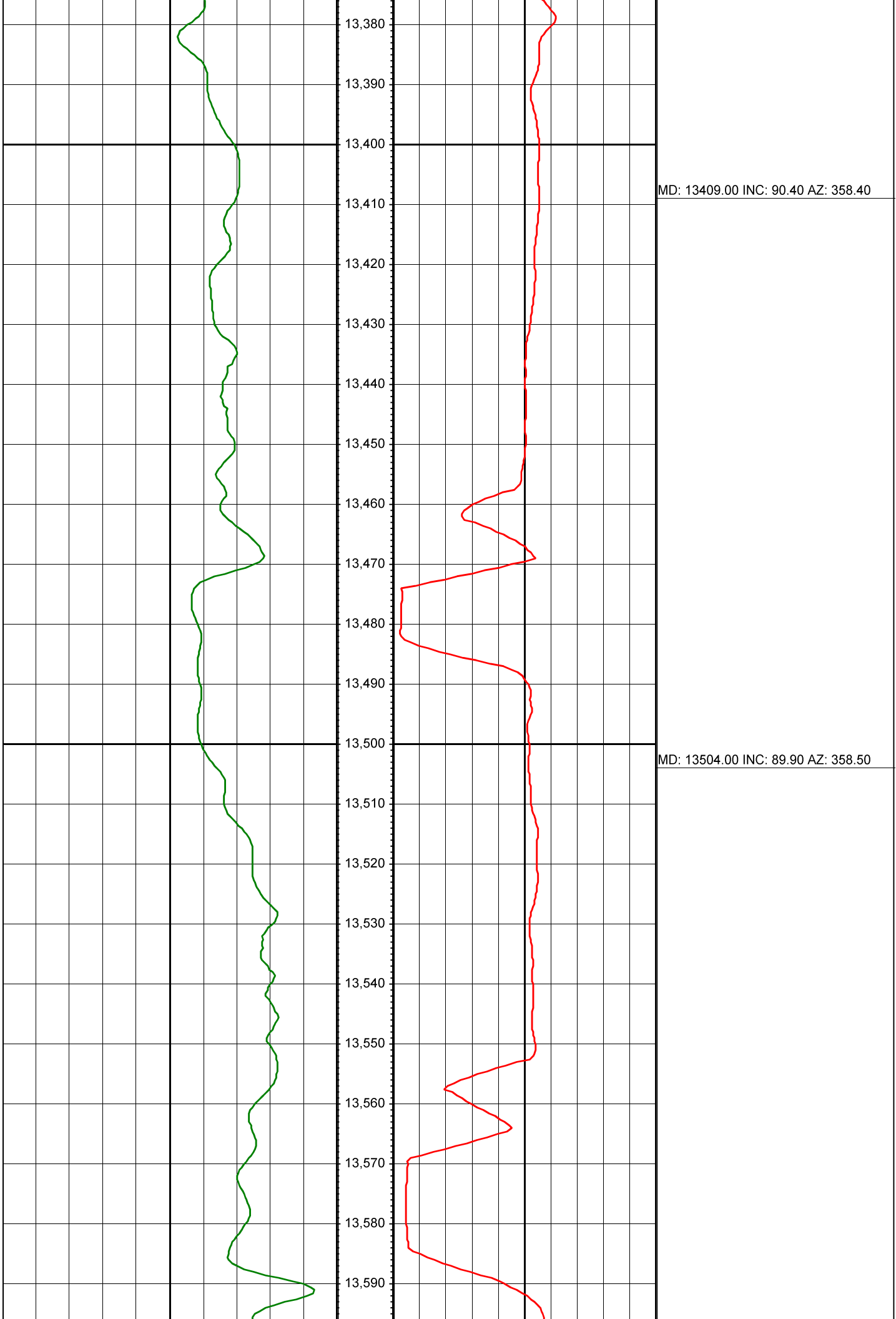


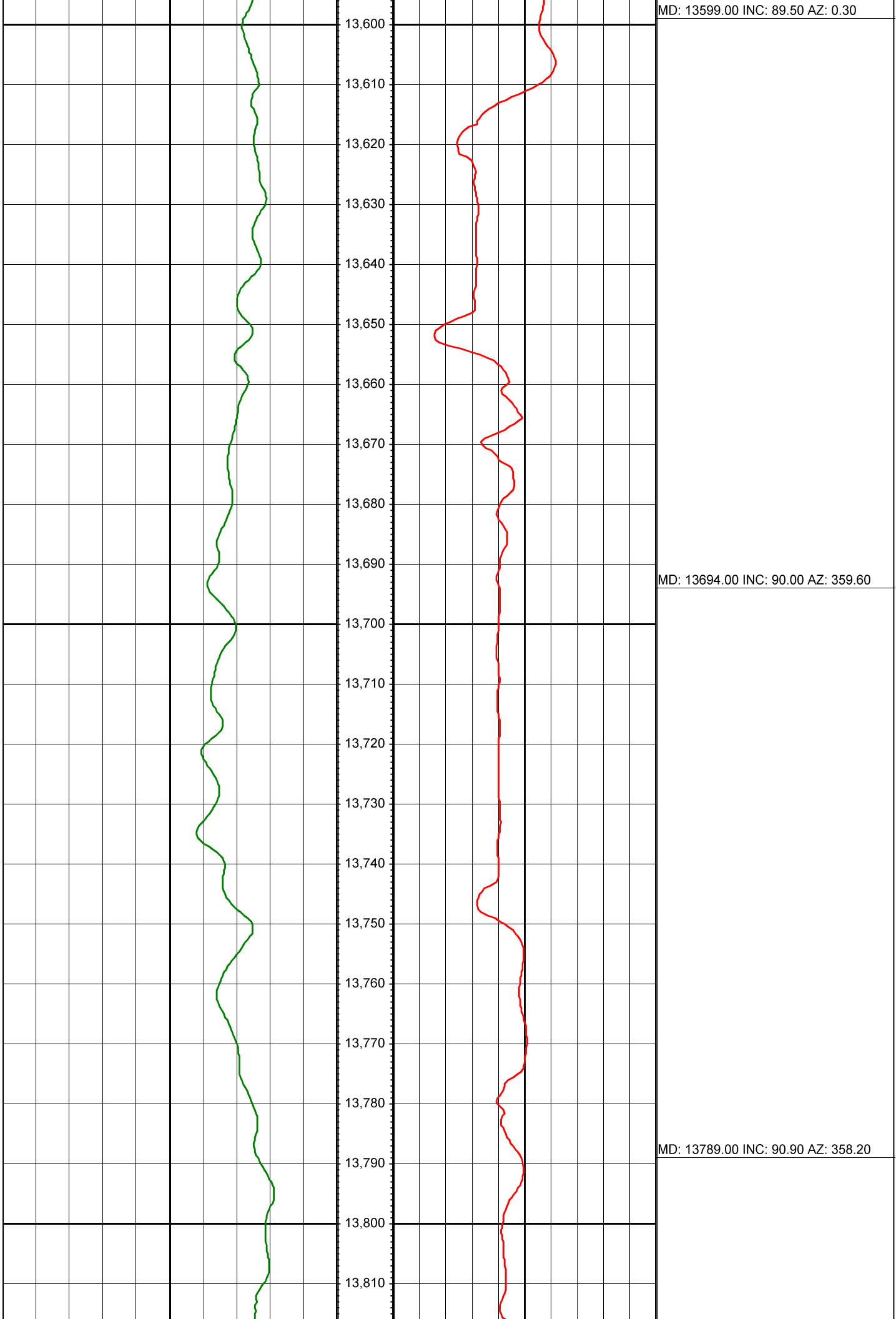


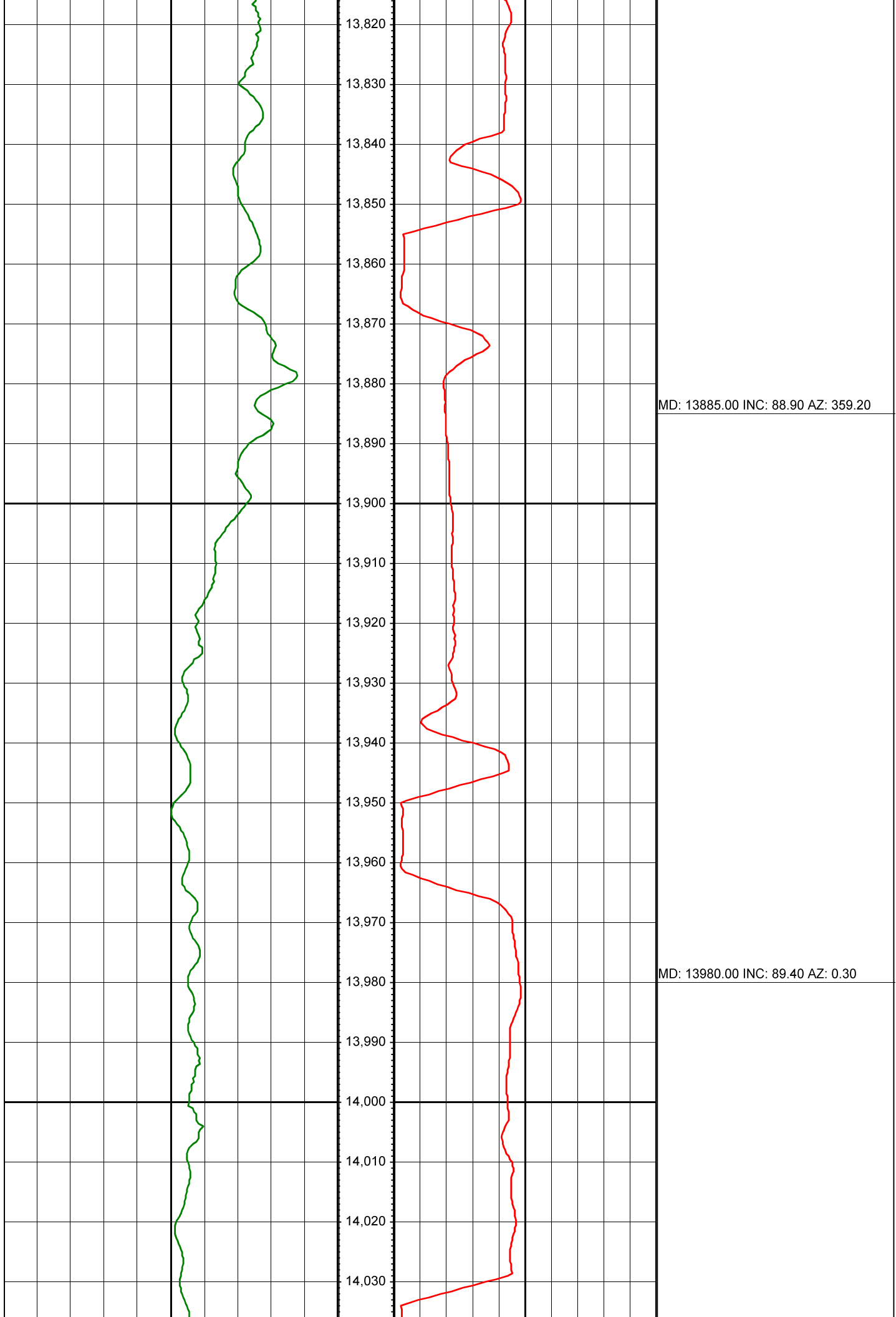


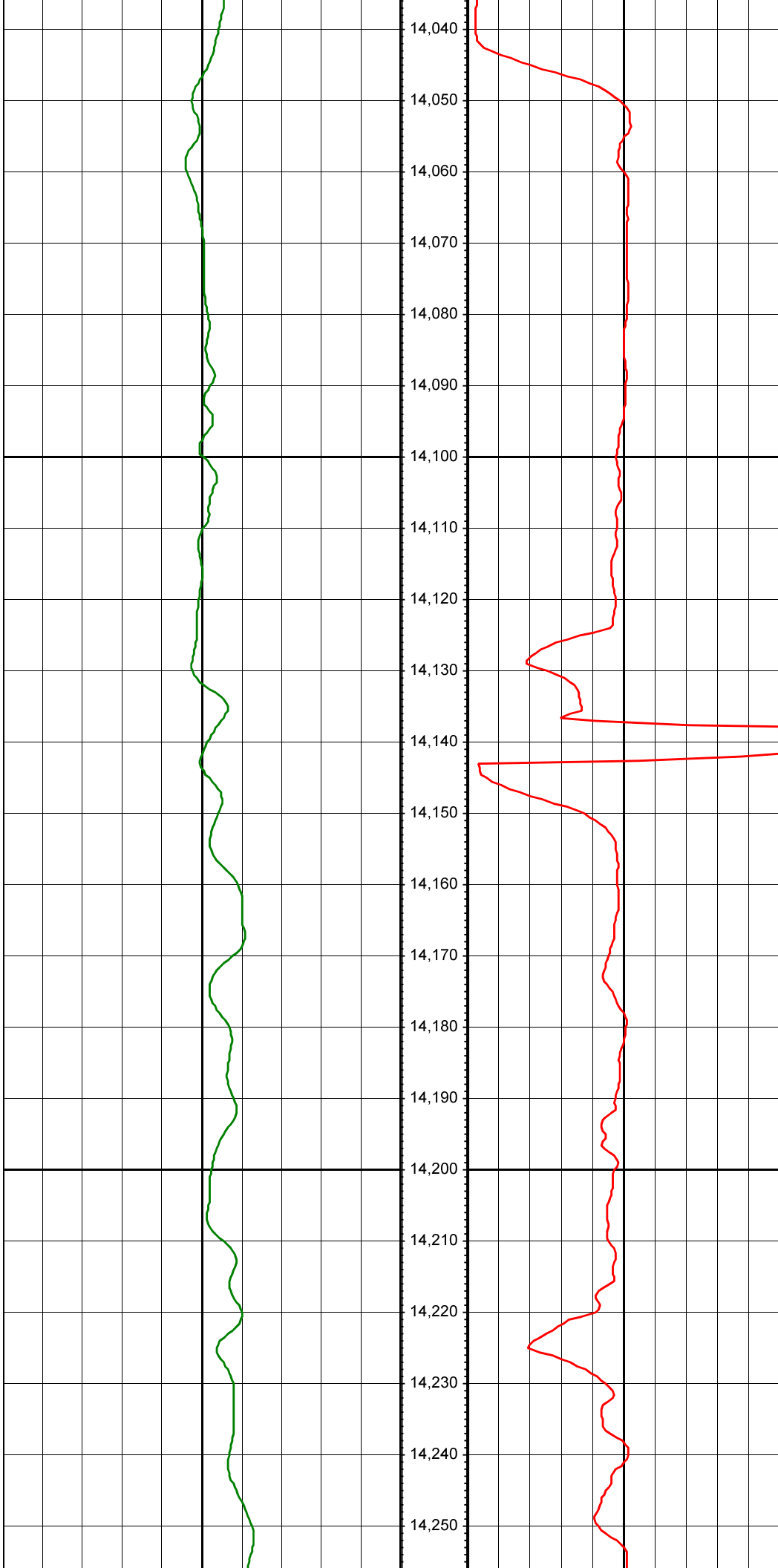






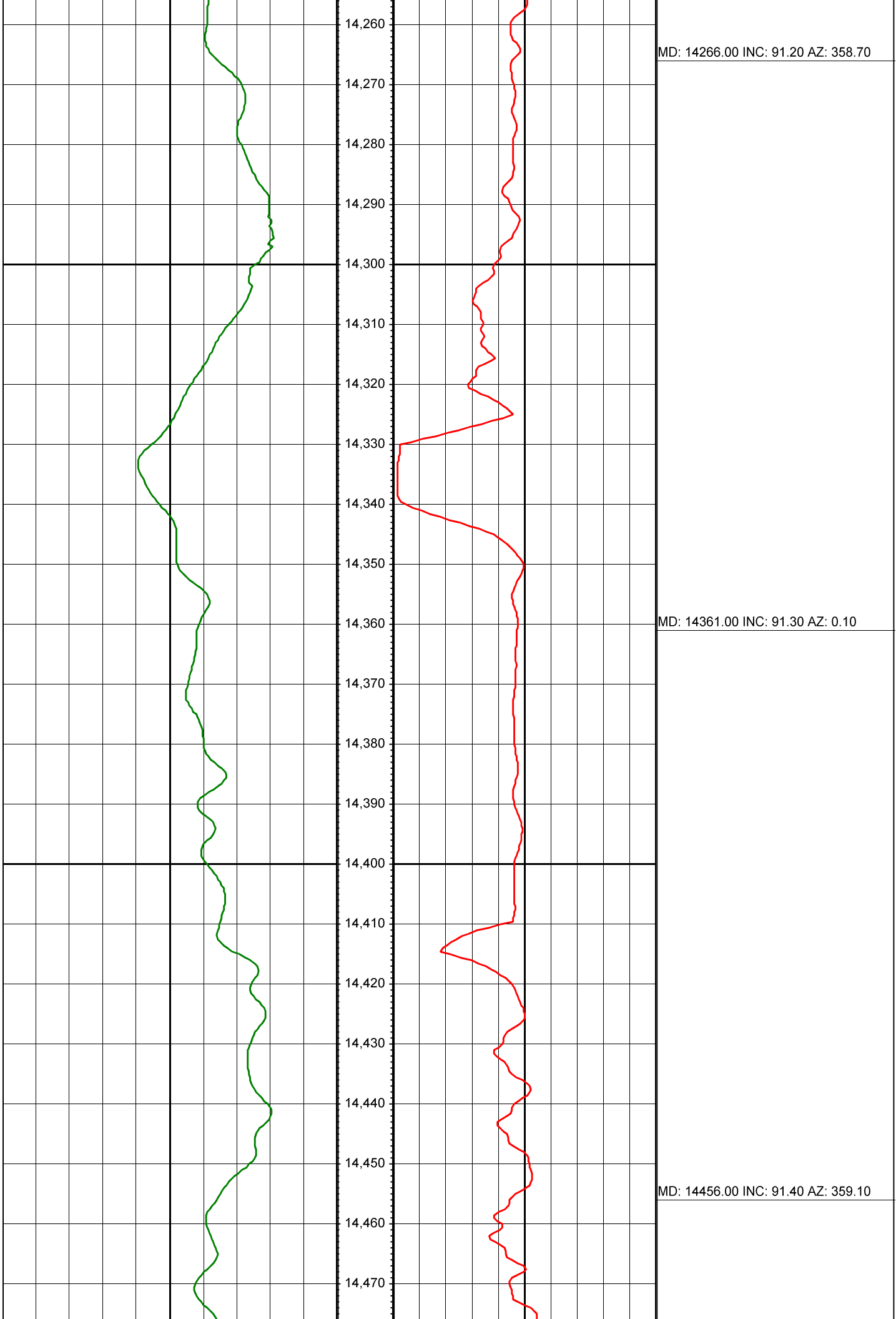




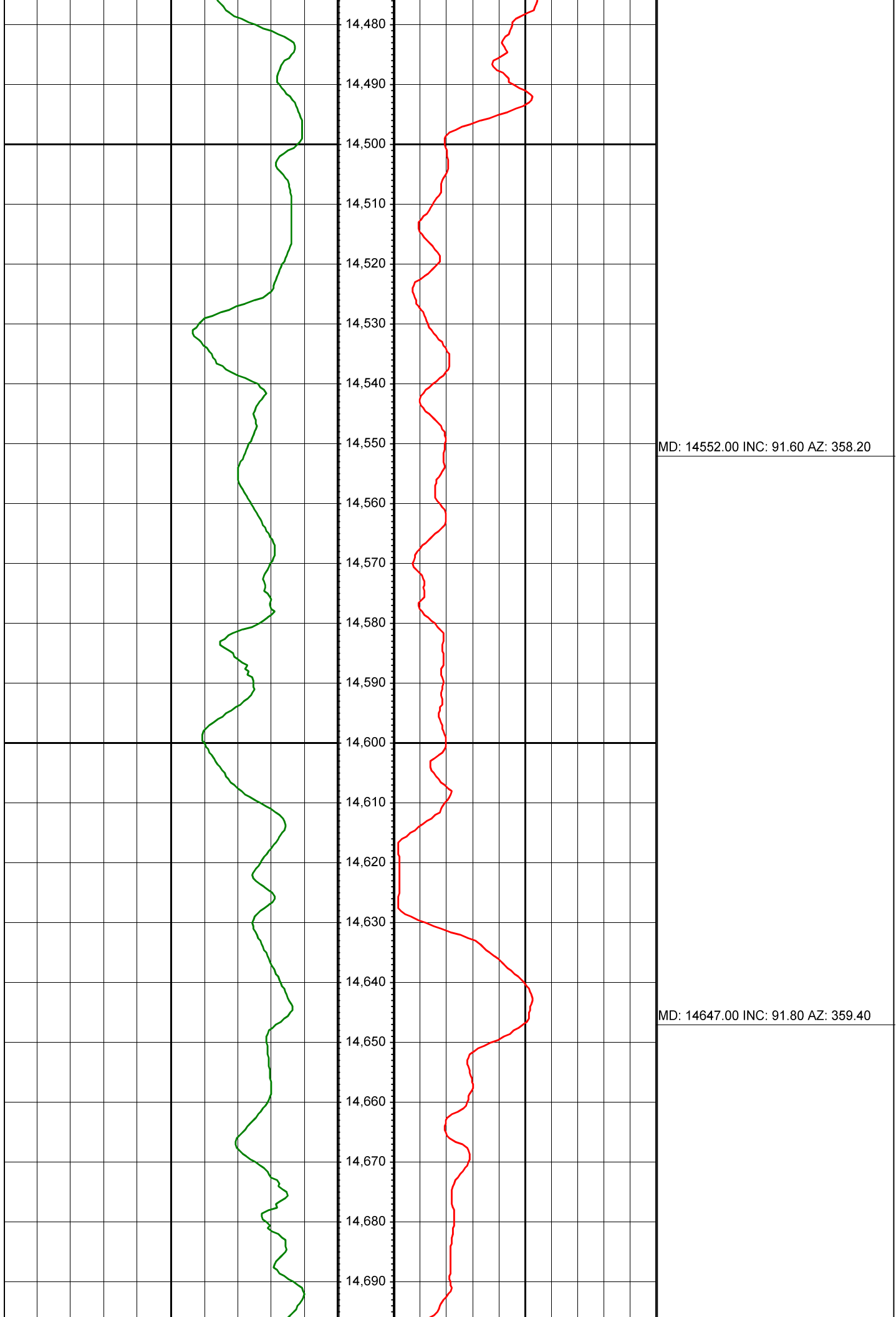


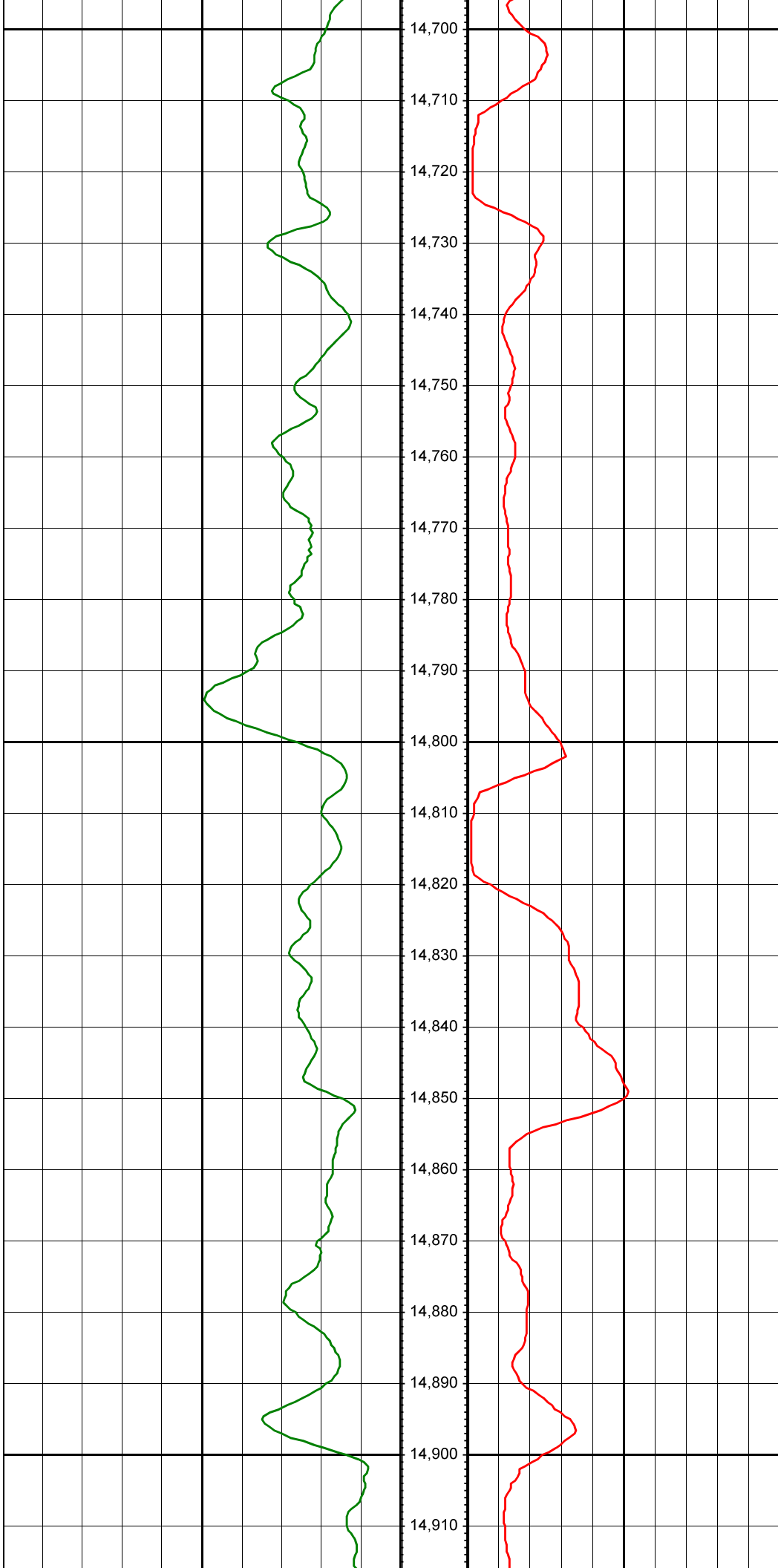
MD: 14075.00 INC: 89.80 AZ: 1.20

MD: 14171.00 INC: 90.80 AZ: 359.90









MD: 14742.00 INC: 91.50 AZ: 0.60

MD: 14837.00 INC: 90.30 AZ: 1.30

