



Cathedral Energy Services
1949 North Pyrite Road
Casper, Wyoming 82604

145161

5":100' - MD

6/4/2014 2:14:07 PM

CATHEDRAL

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

Country: U.S.A.

State / Province: Colorado

County / Parish: Weld

Started: 05/24/2014 08:16 AM

API/UWI: 05-123-37780-00

Field: Wattenberg (Niobrara)

Well: Vogl-McCoy 2E-5H-F267

Rig: Helmerich & Payne 278

Ended: 06/03/2014 10:58 PM

Gamma Ray
Section Plane: 180.00
Magnetic North:8.53
Gamma Attenuation Factor
5000-7655 MD: 3.493
7655-14740 MD: 2.762

Gamma Averaging: 7%

Personnel

Day Hand: W. O'Dell

Night Hand: A. Bertagnole

Comp. Emp: Curt Childers

Maximum Temperature: 235°F

Location

Latitude: 40.166330

Longitude: -104.921110

Elev. GL: 4860

Elev. DF:

Elev. KB: 4890

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

Hole Data

Size	From	To
12-1/4	0	868
8-3/4	868	7655
6-1/8	7655	14740

Casing Data

Size	From	To
9-5/8	0	852
7	852	7645
4-1/2	7645	14722

Bit Sizes

Size	From	To
12-1/4	0	868
8-3/4	868	7655
6-18	7655	14740

Mud Data

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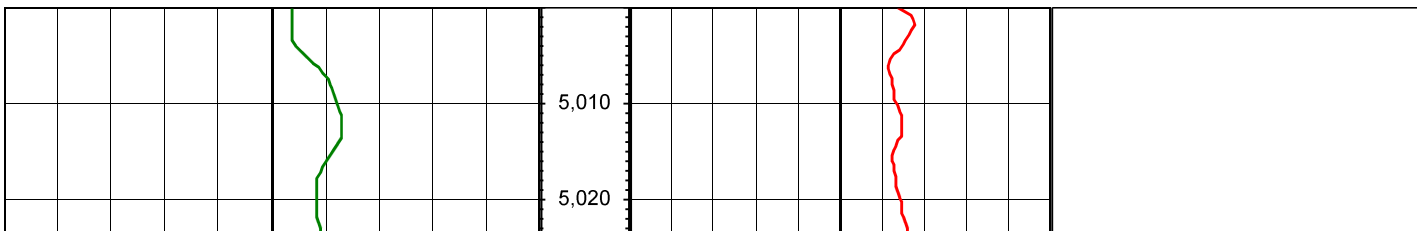
Tool Run Data

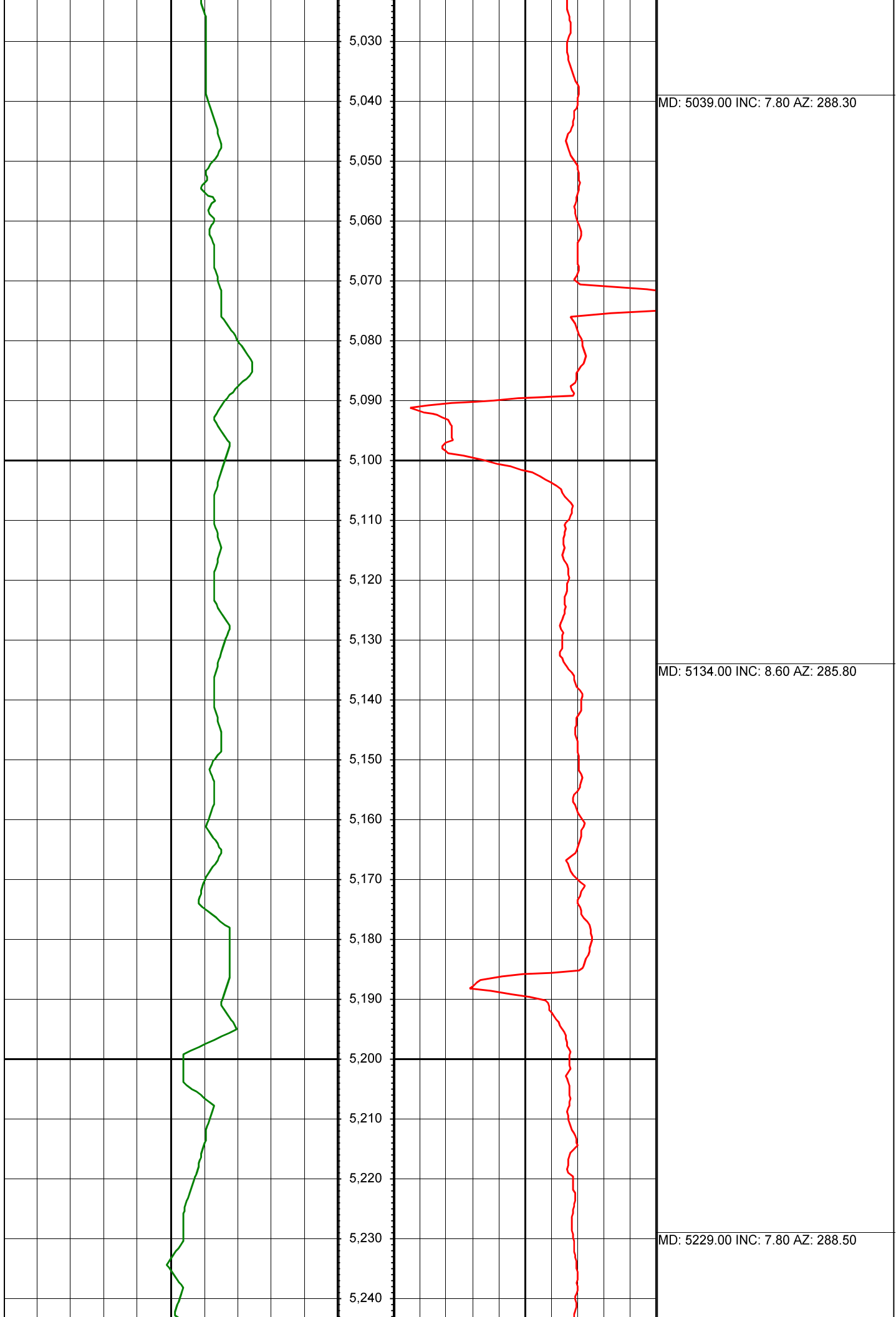
Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
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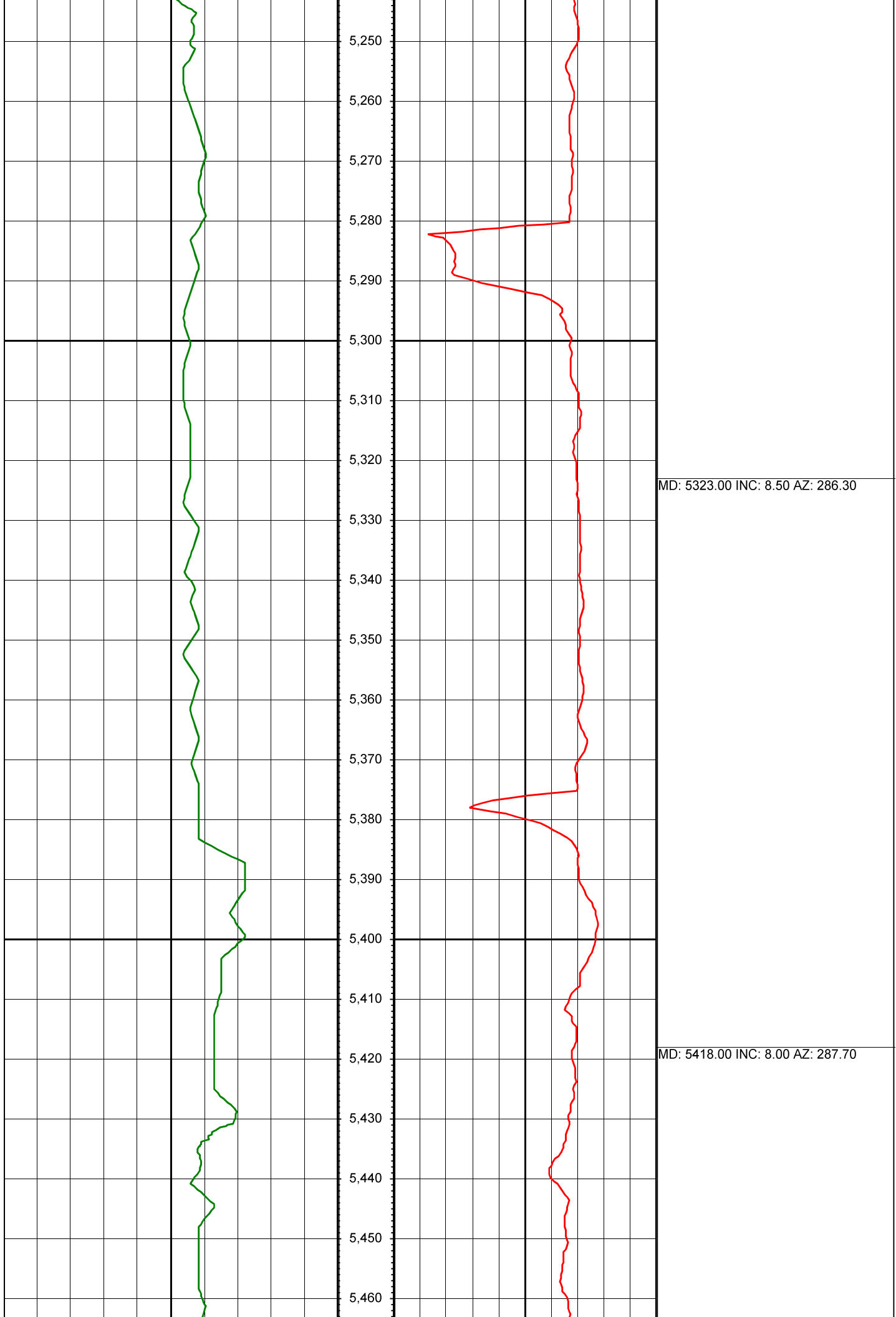
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost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

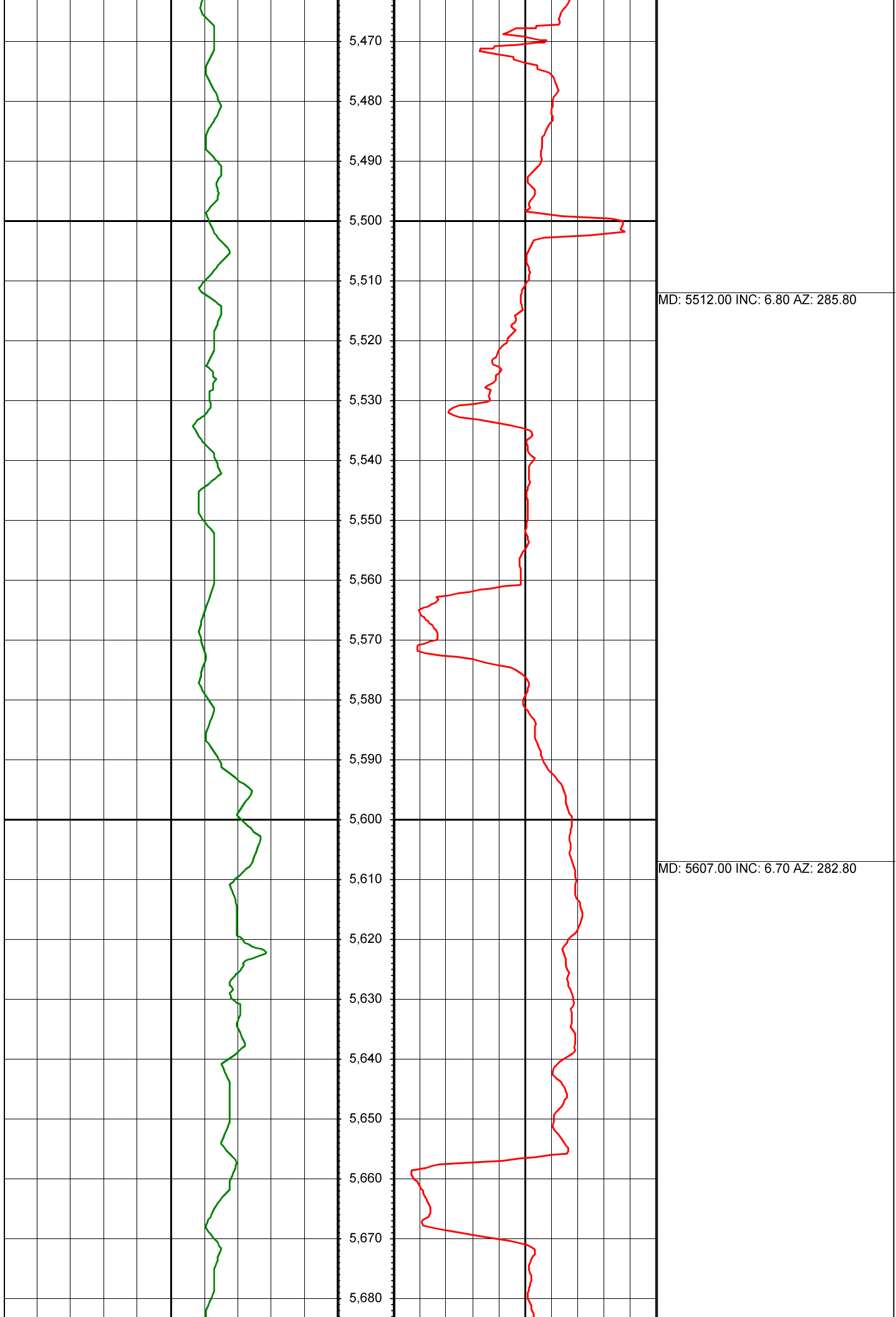
0.00 Gamma Ray (API) 150.00 MD 0.00 ROP (FT/HR) 600.00 Surveys (MD/INC/AZ)

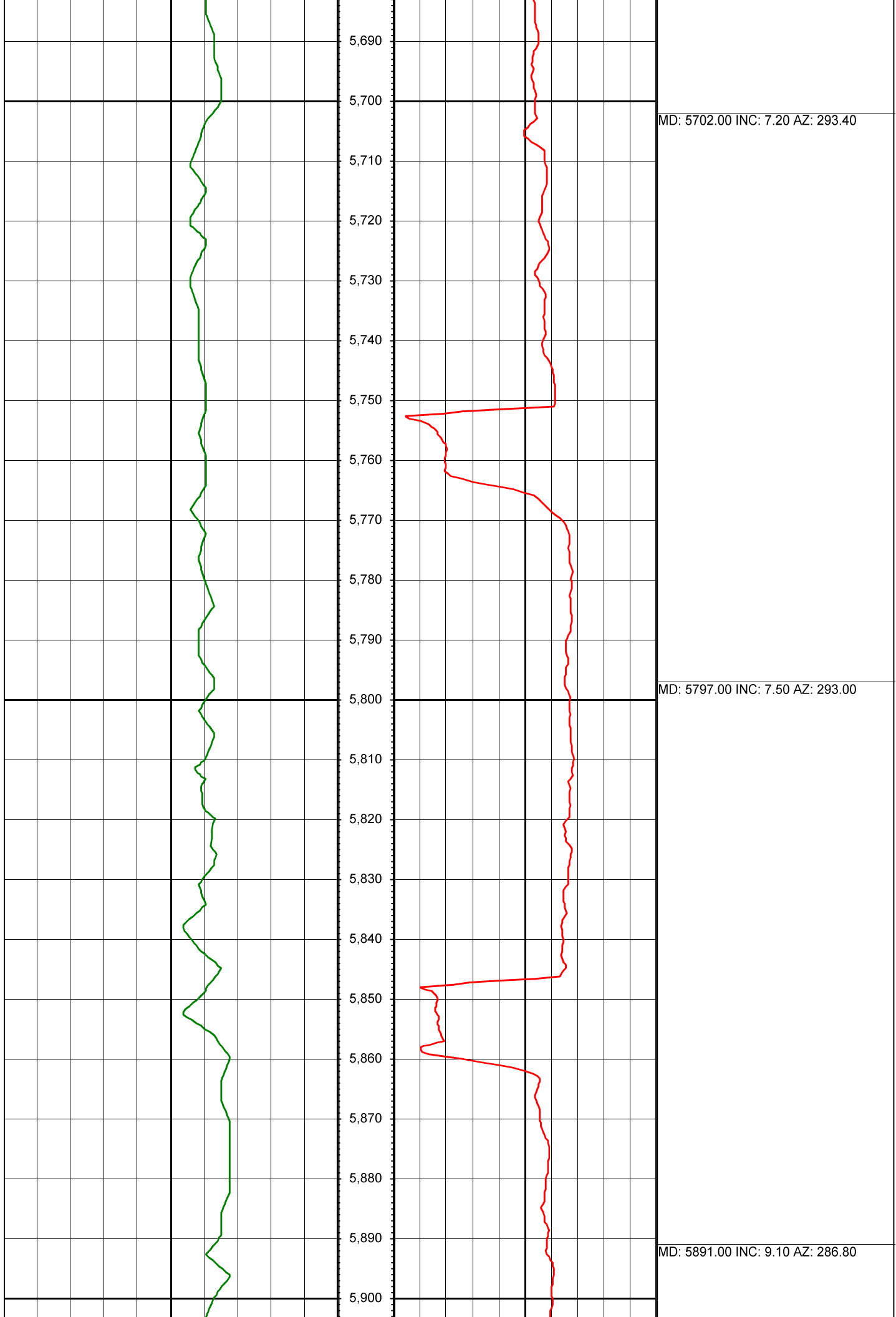
150.00 2 300.00 FT

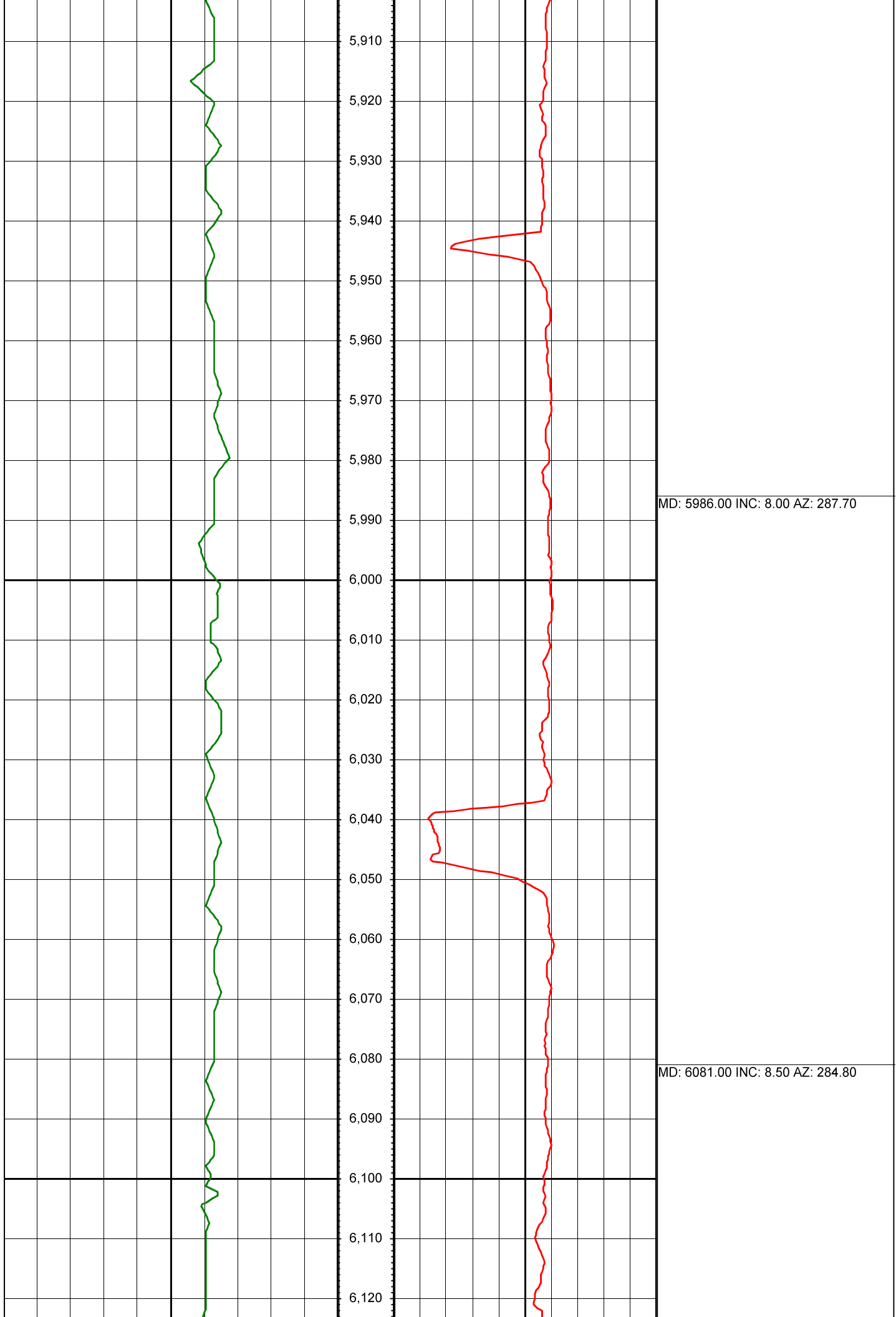


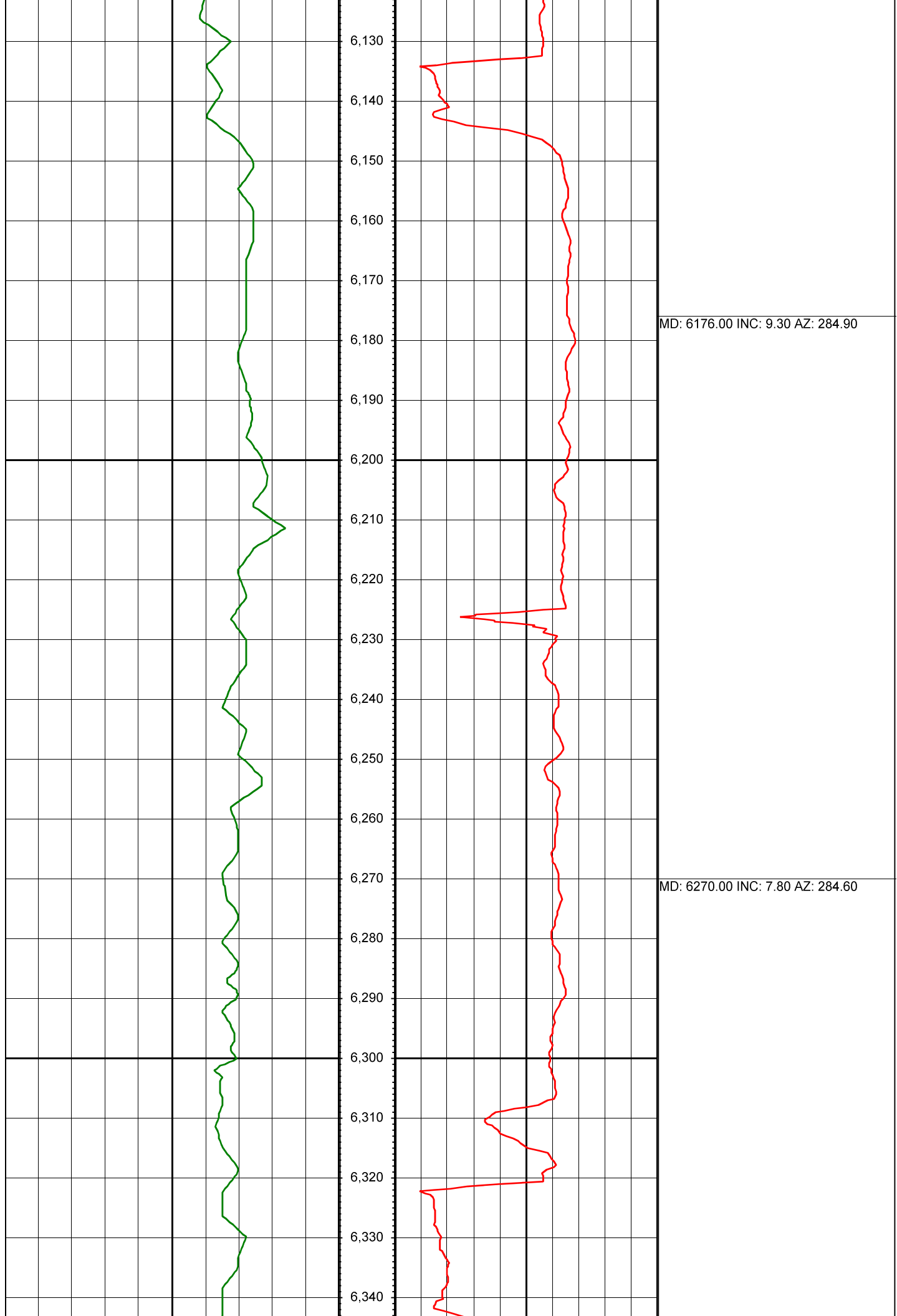


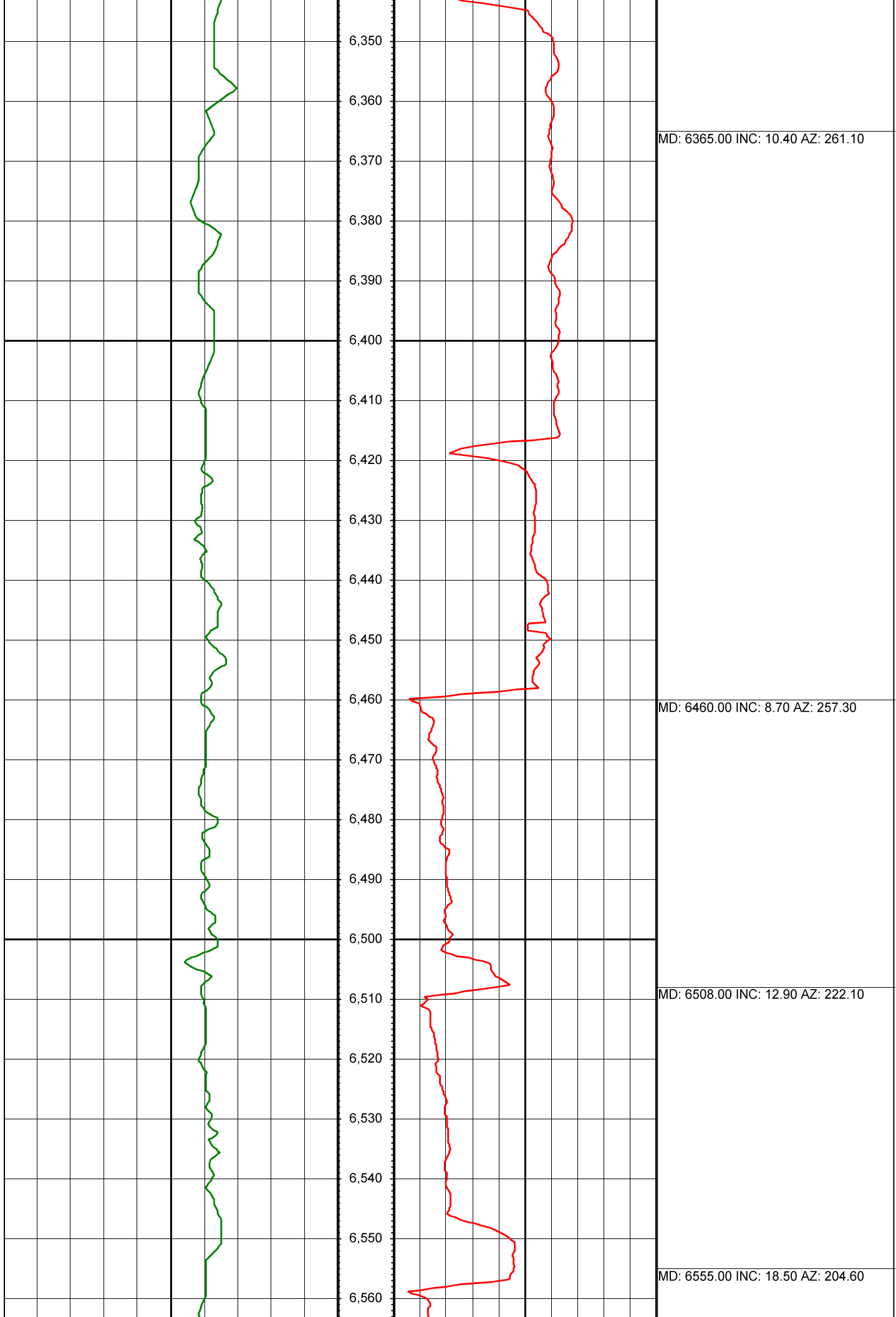


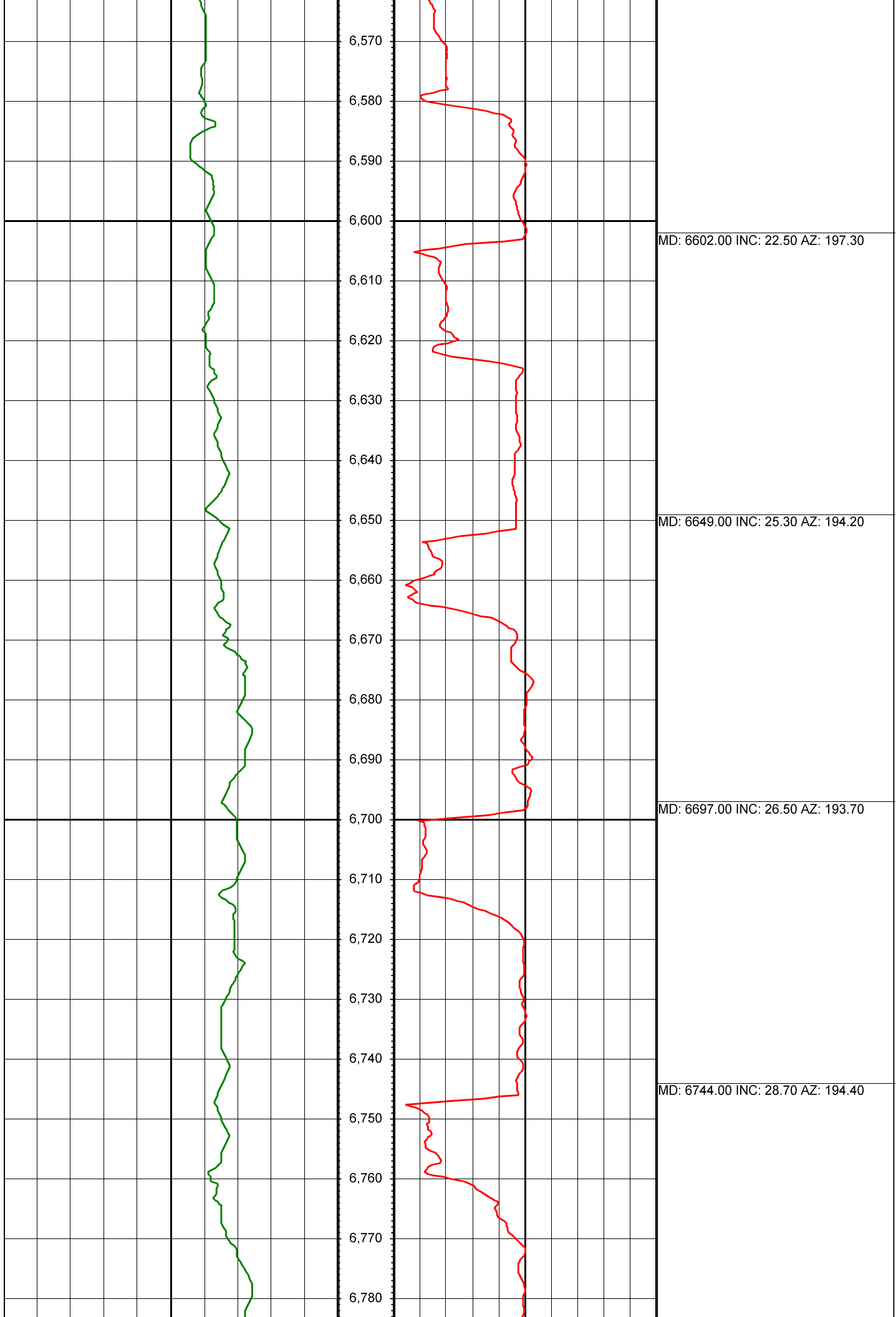


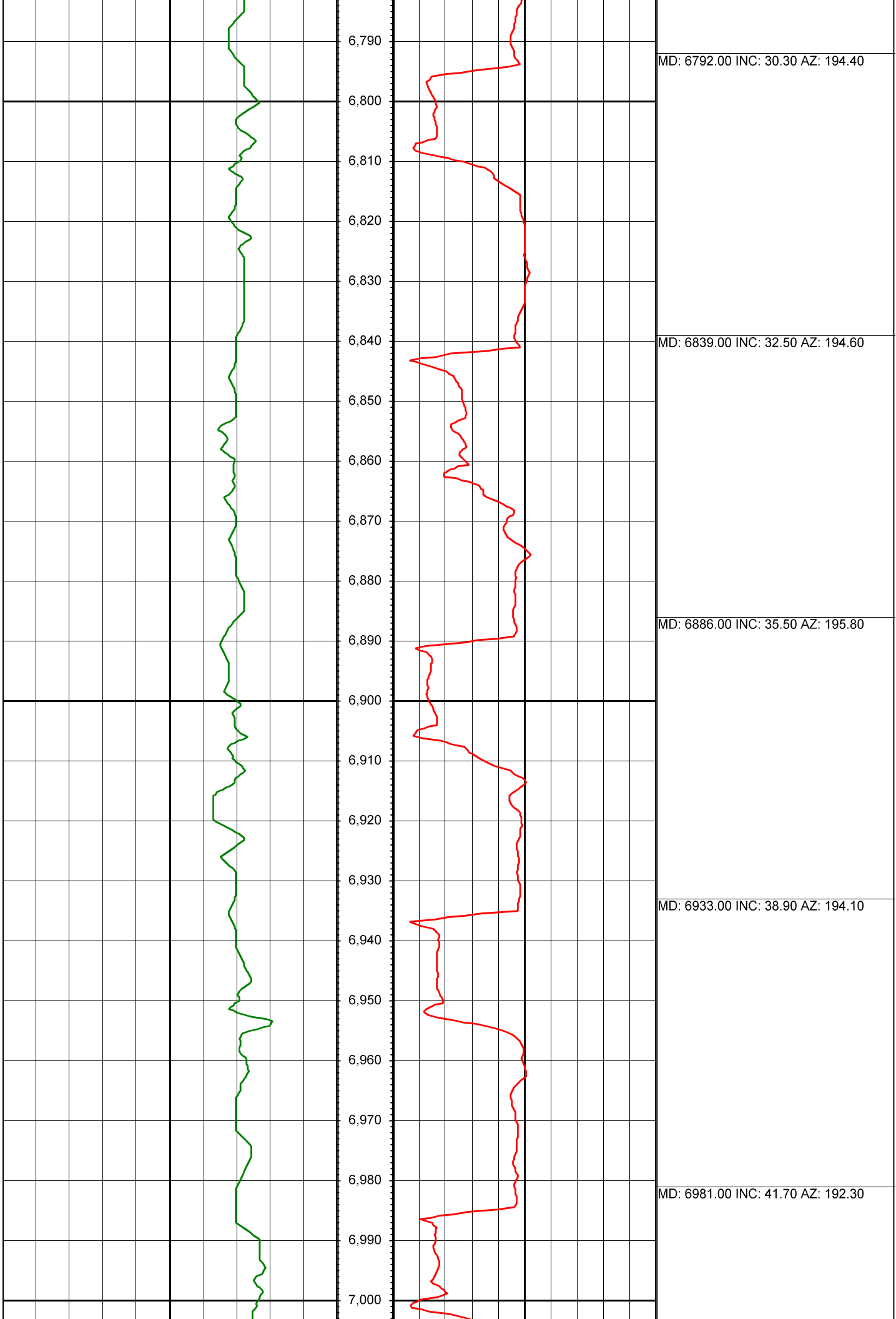


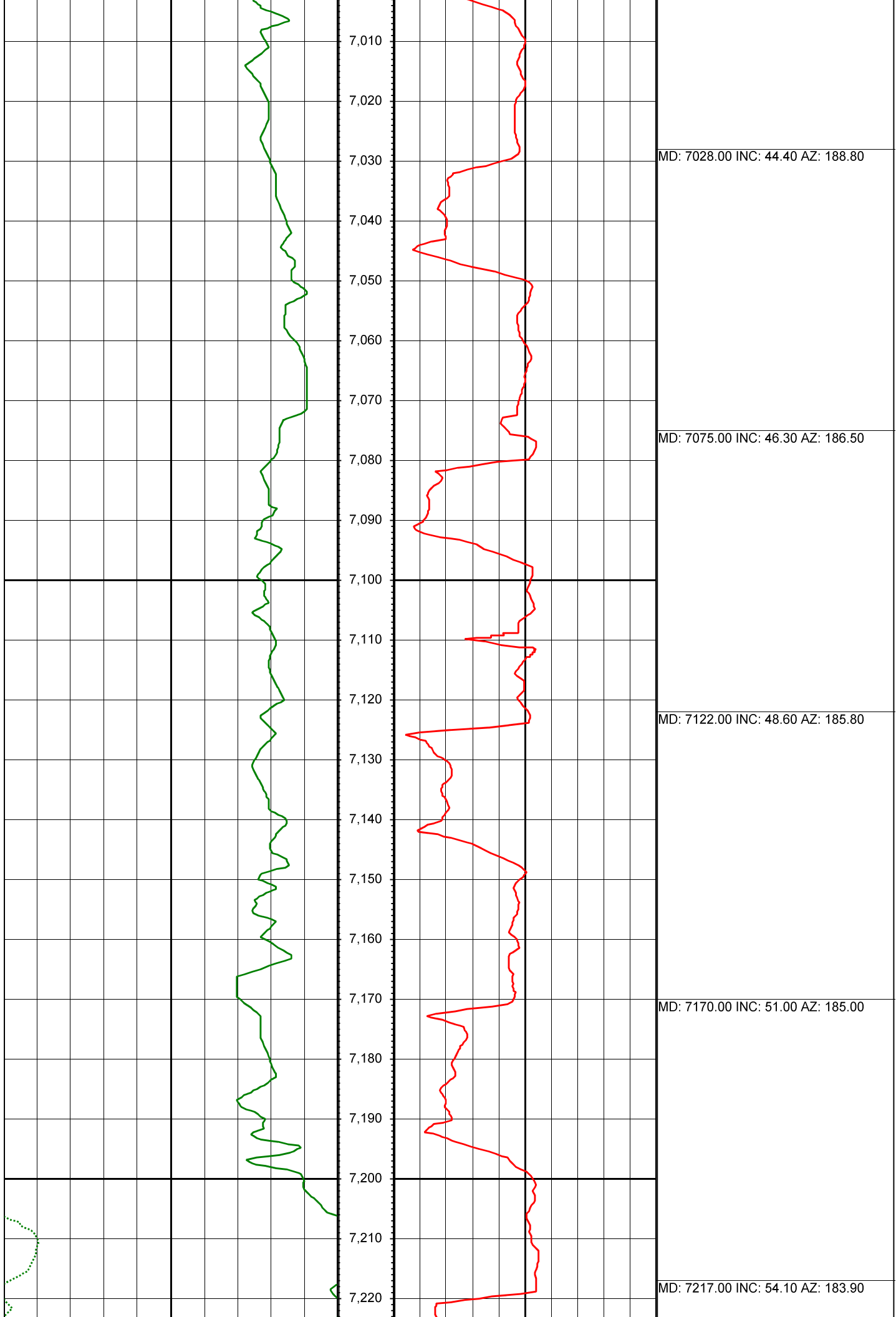


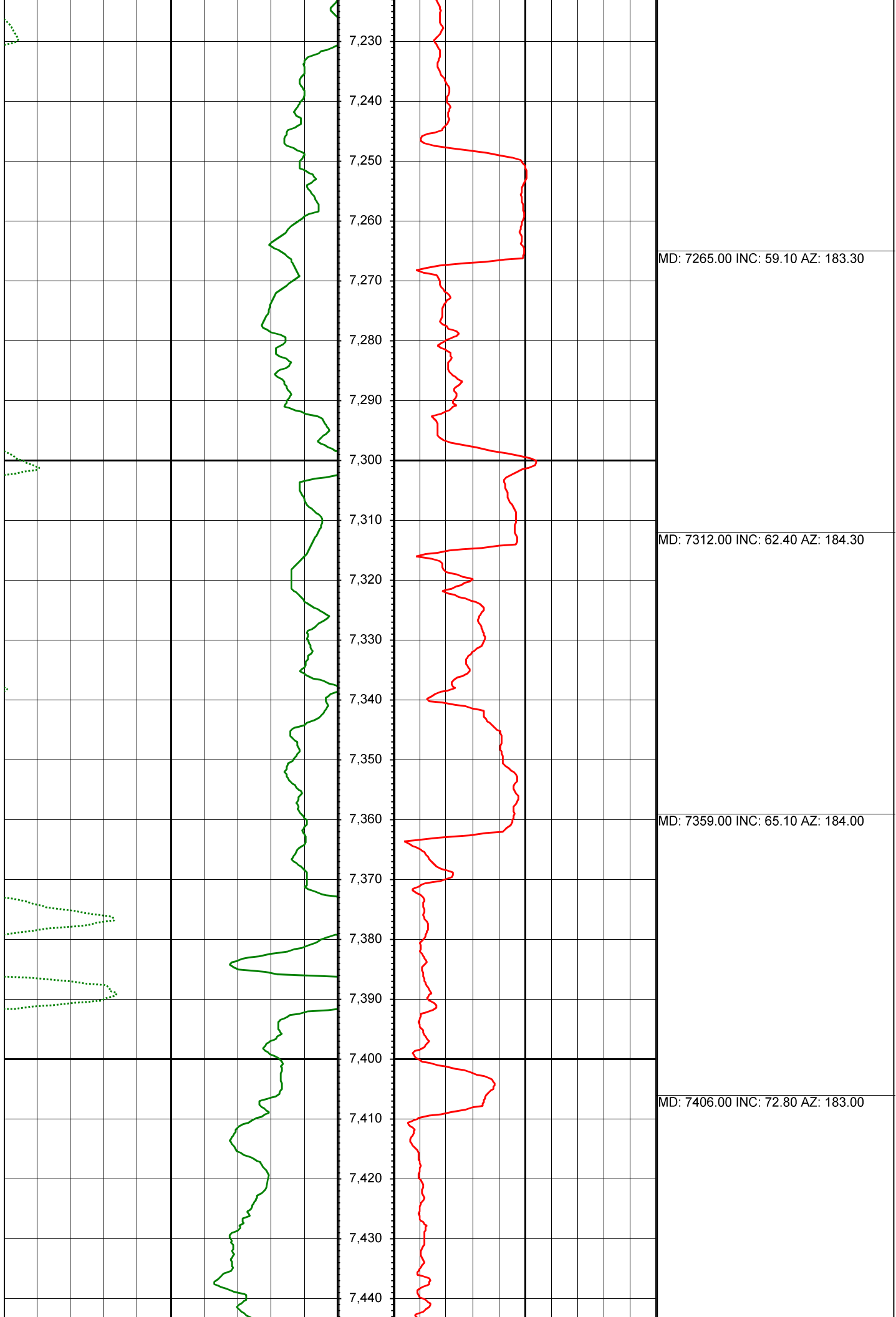


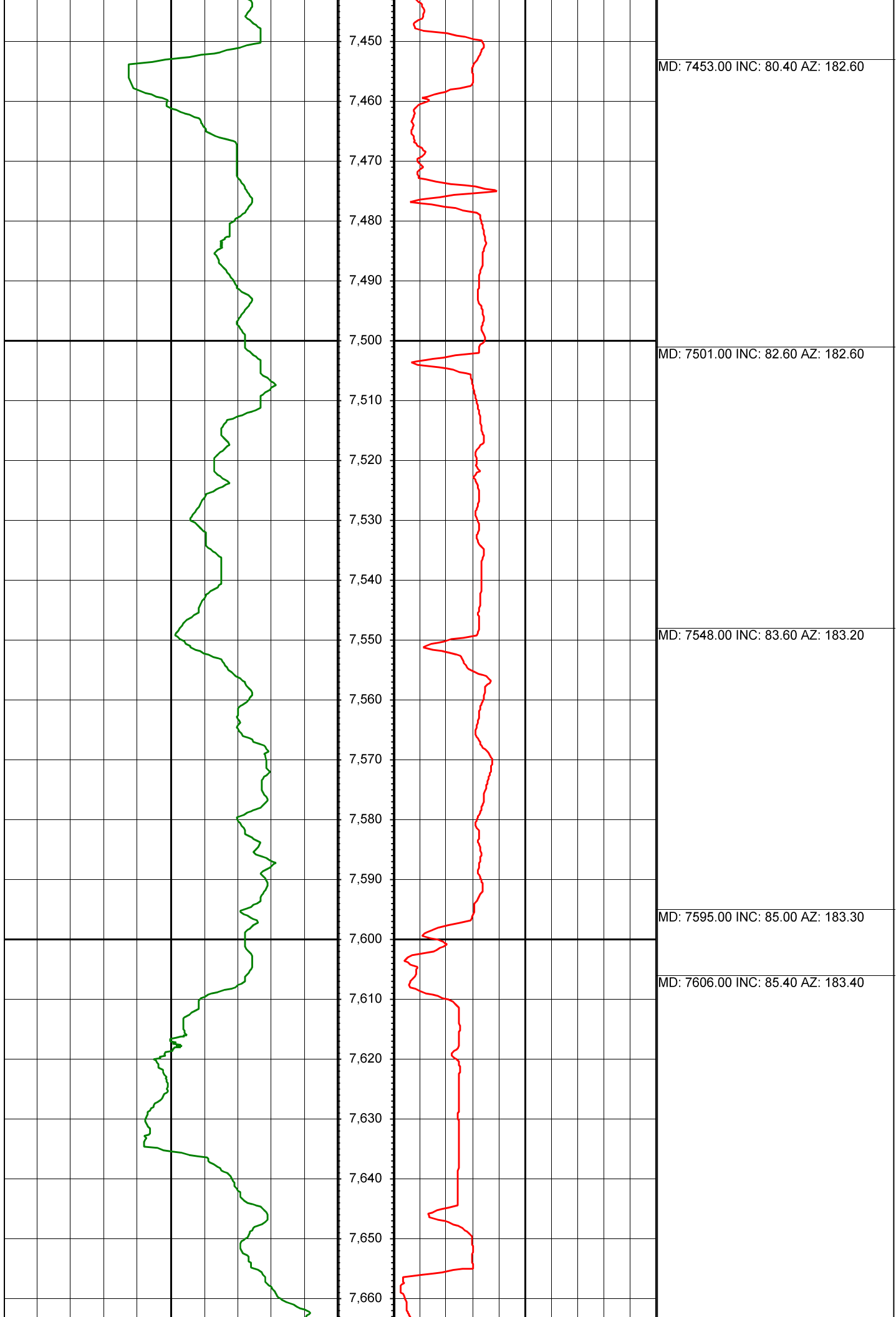


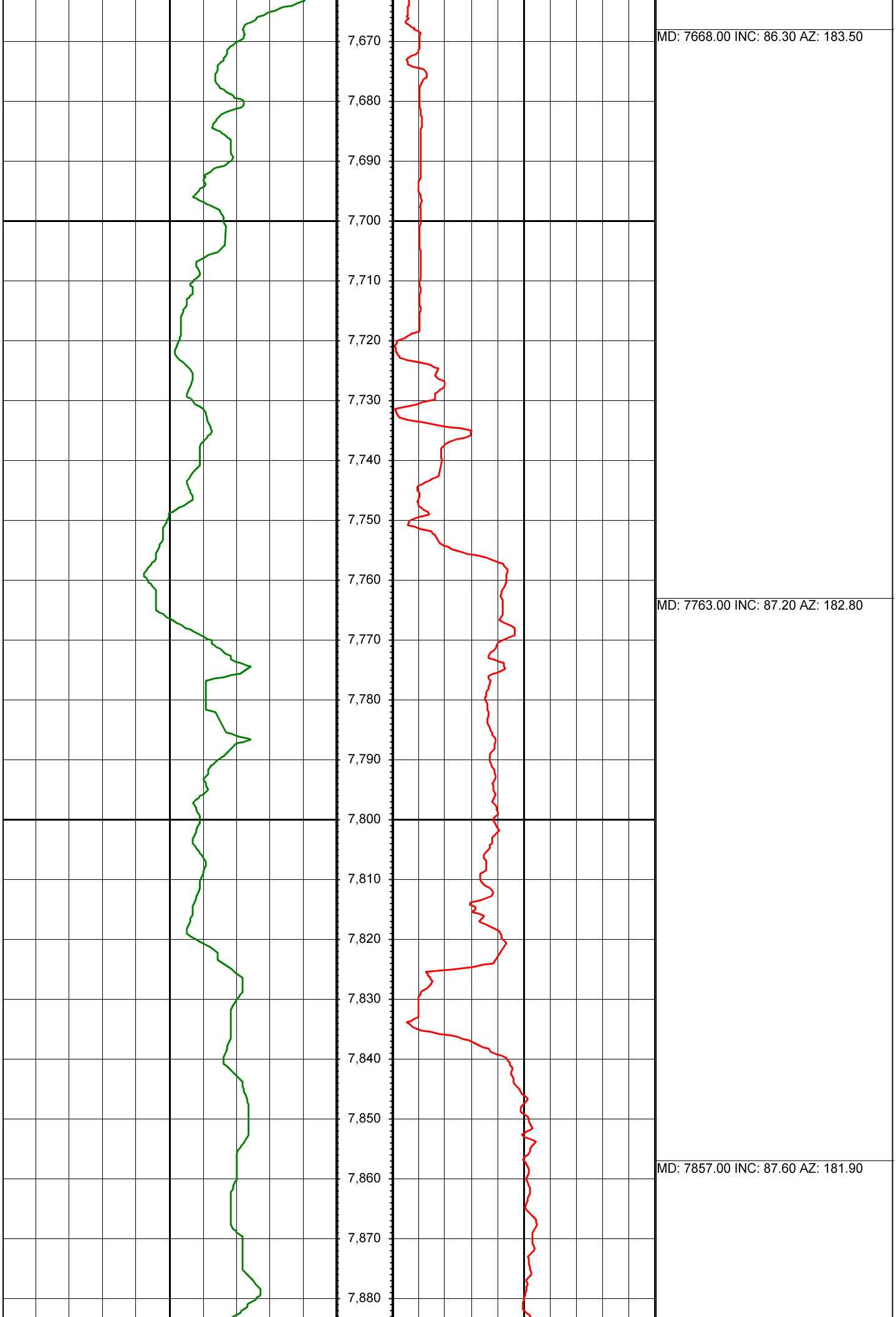


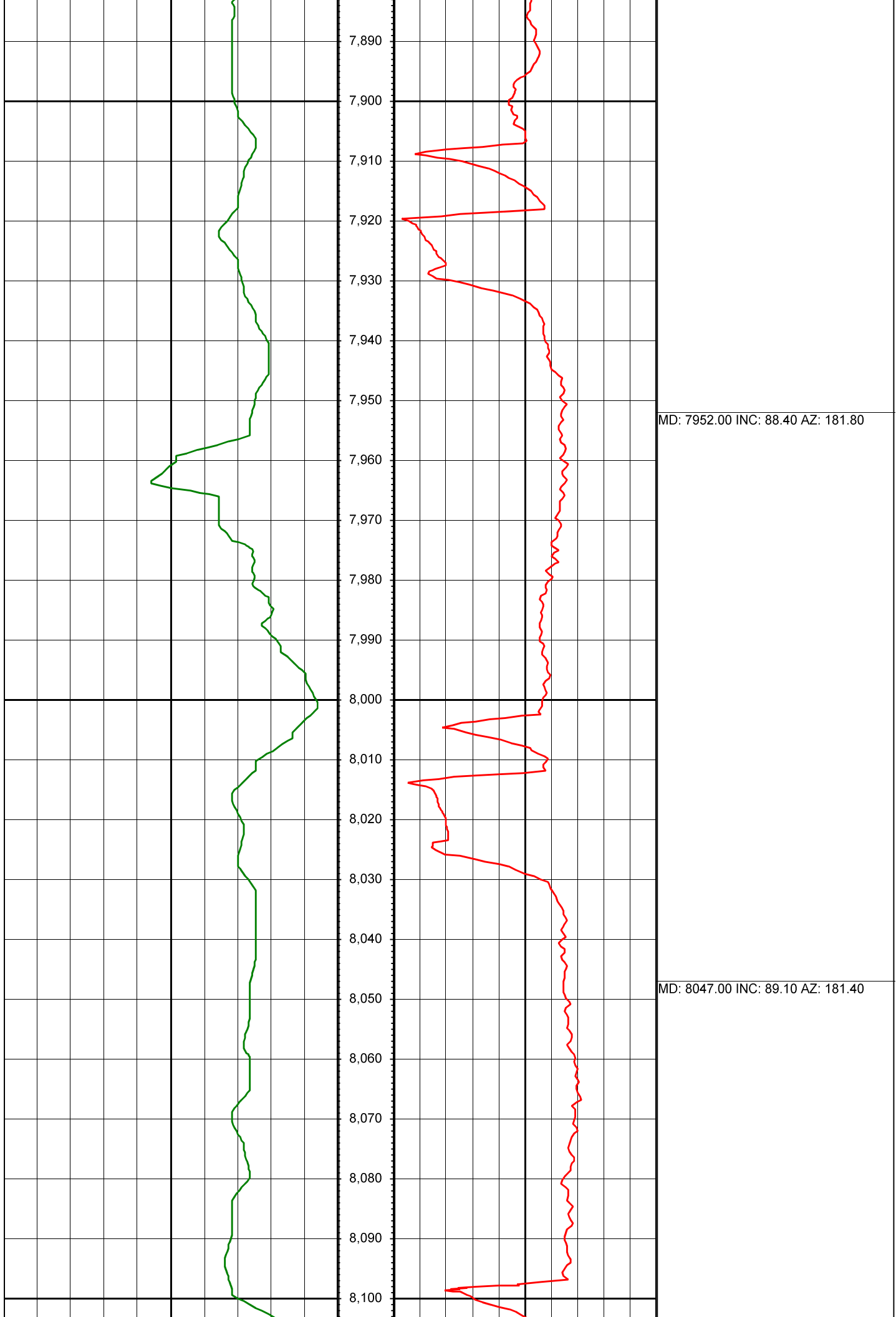


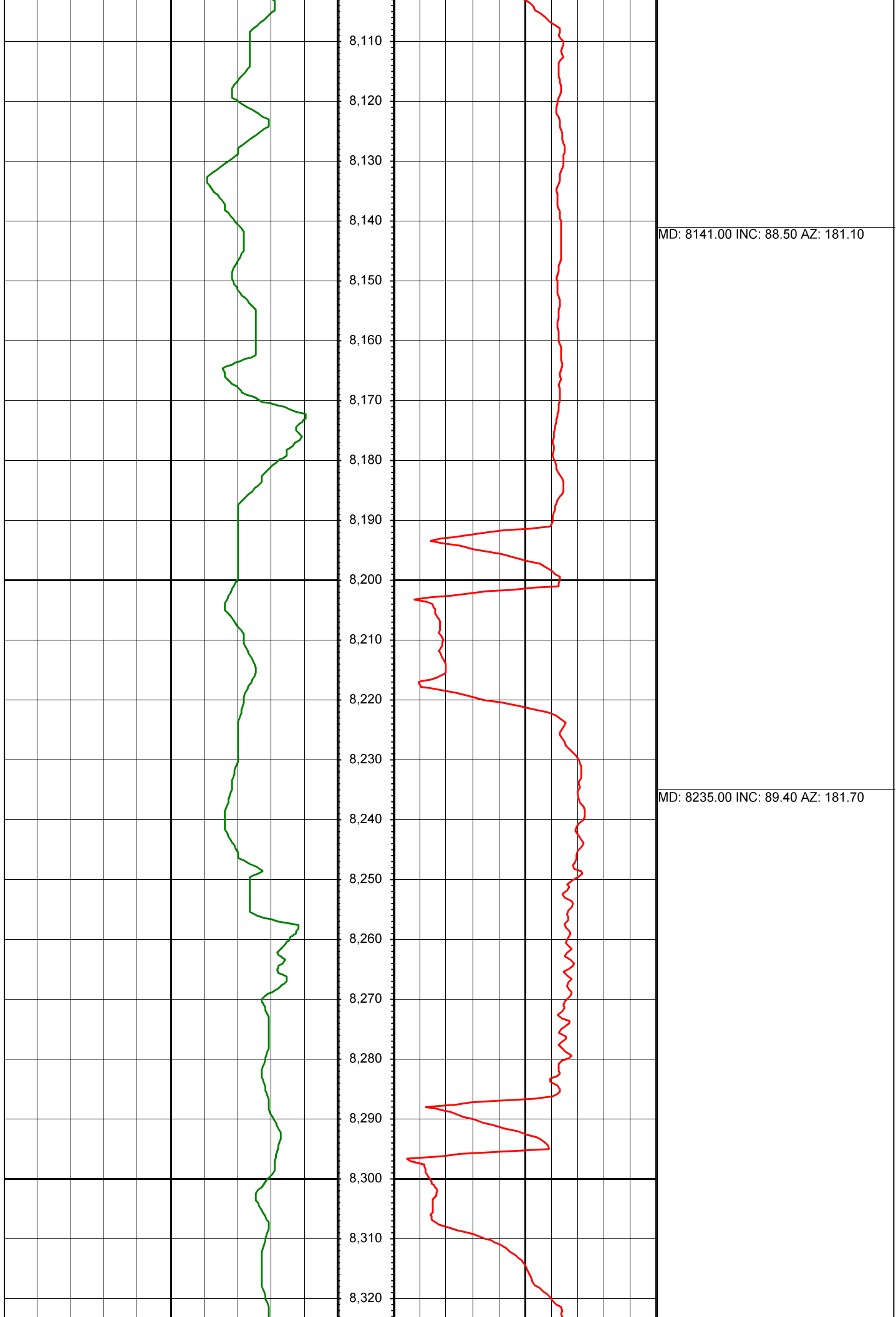


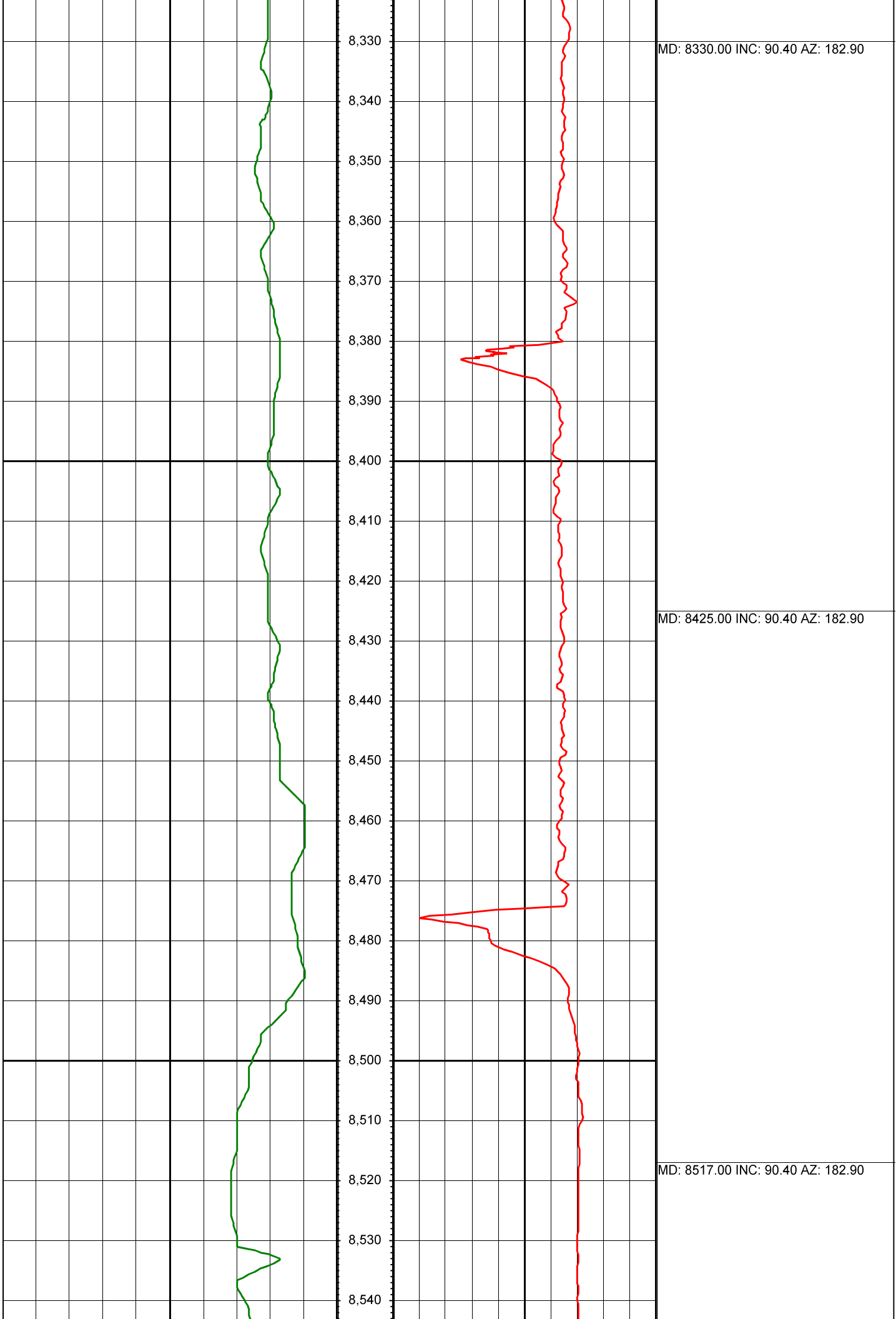


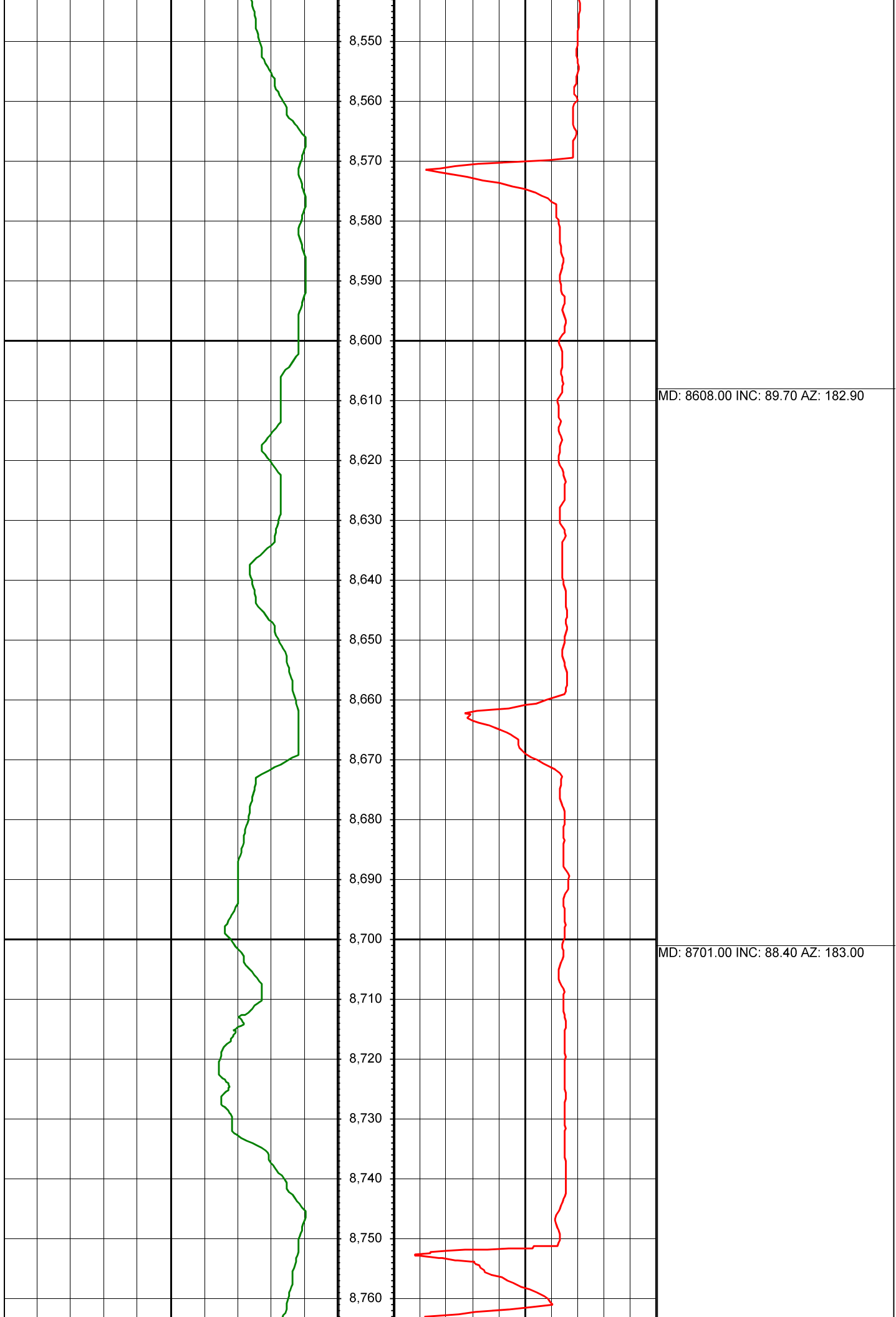


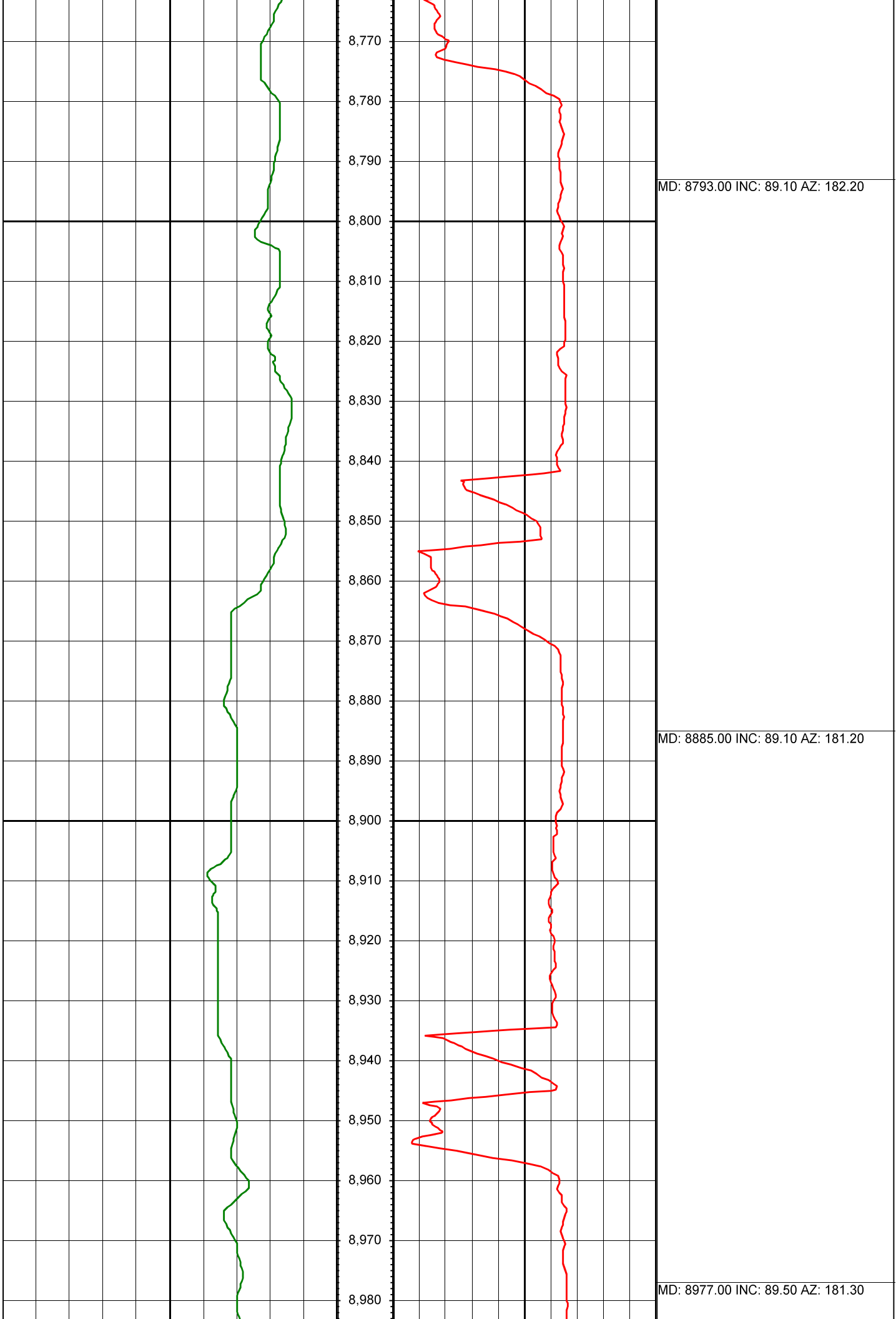


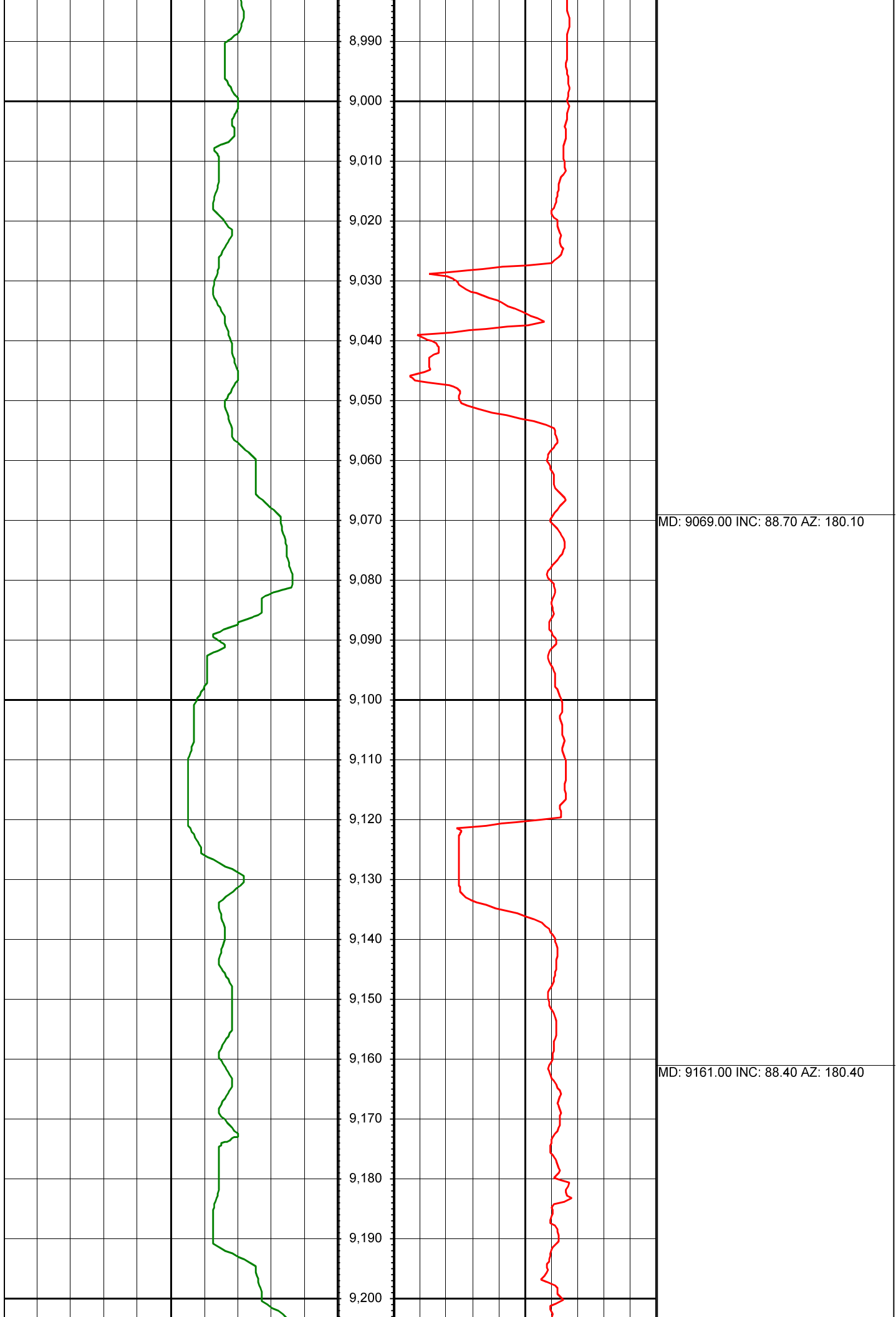


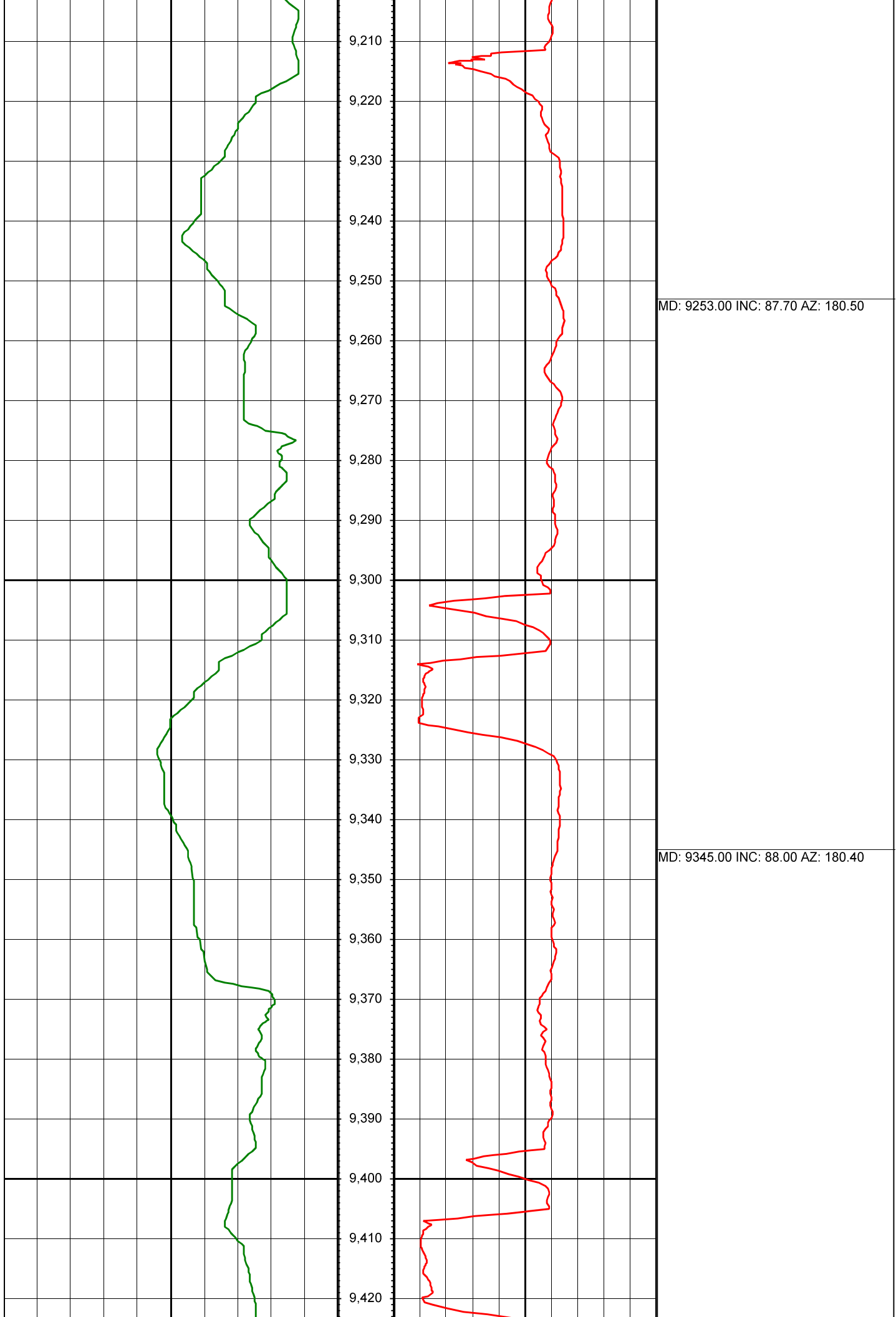


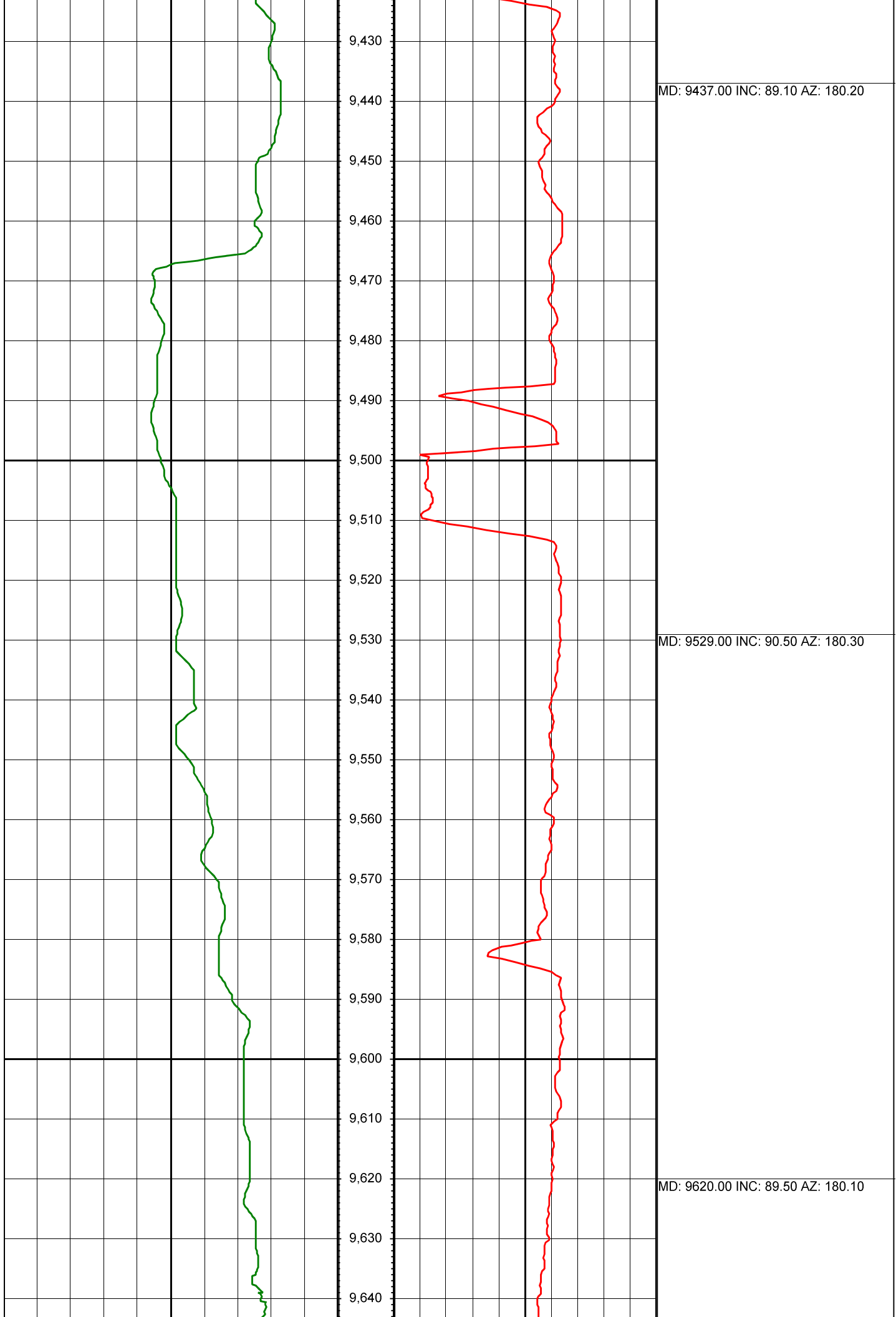


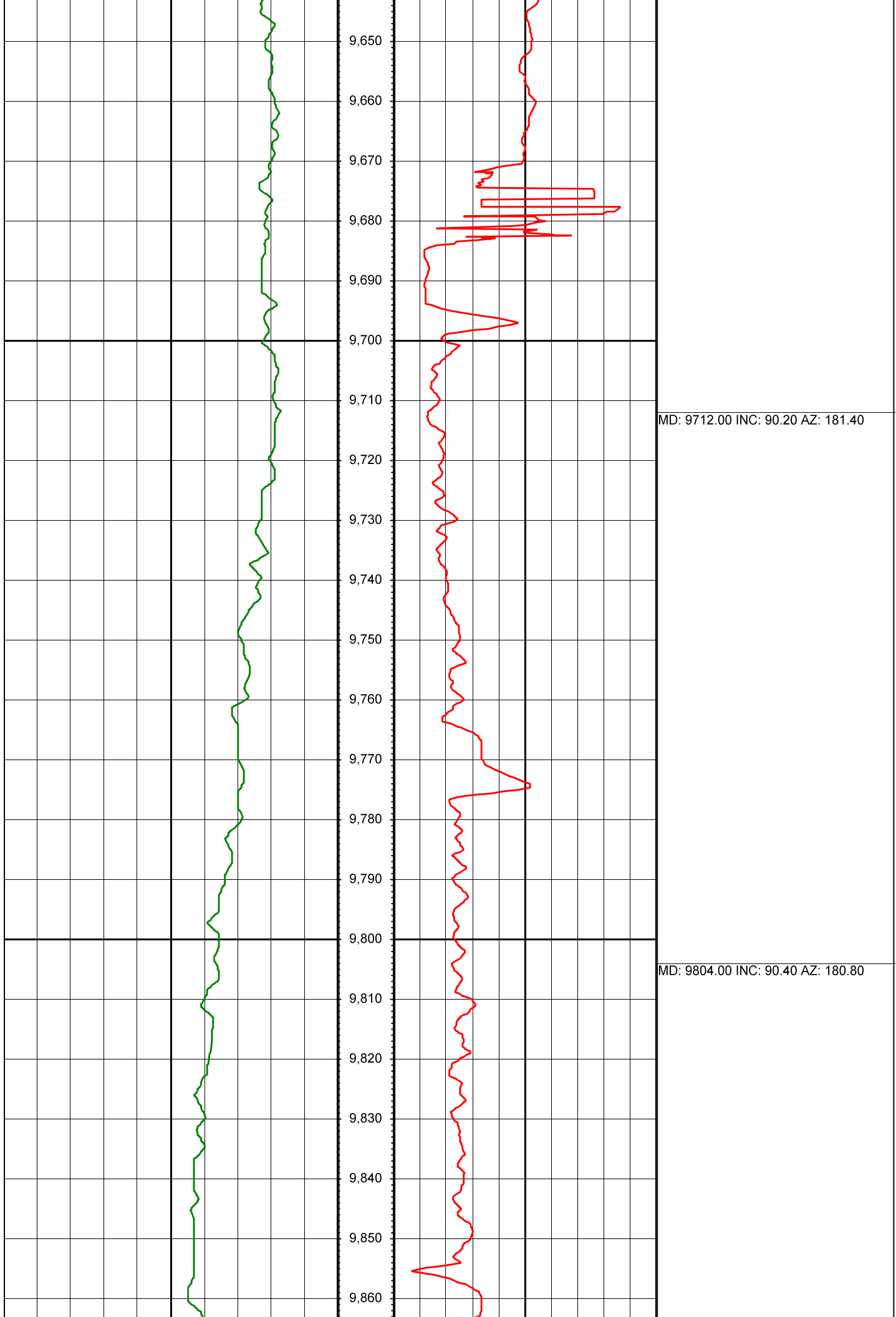


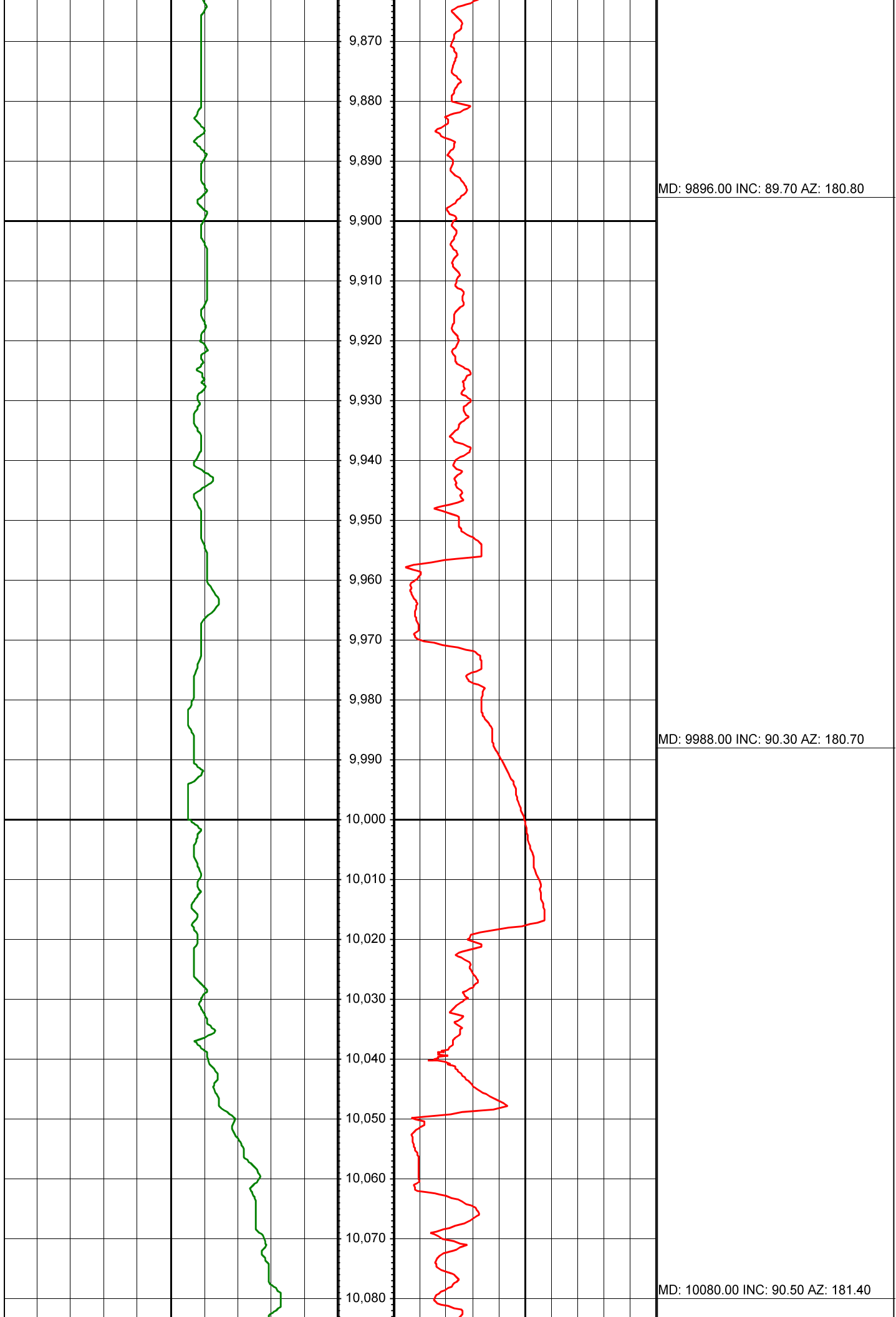


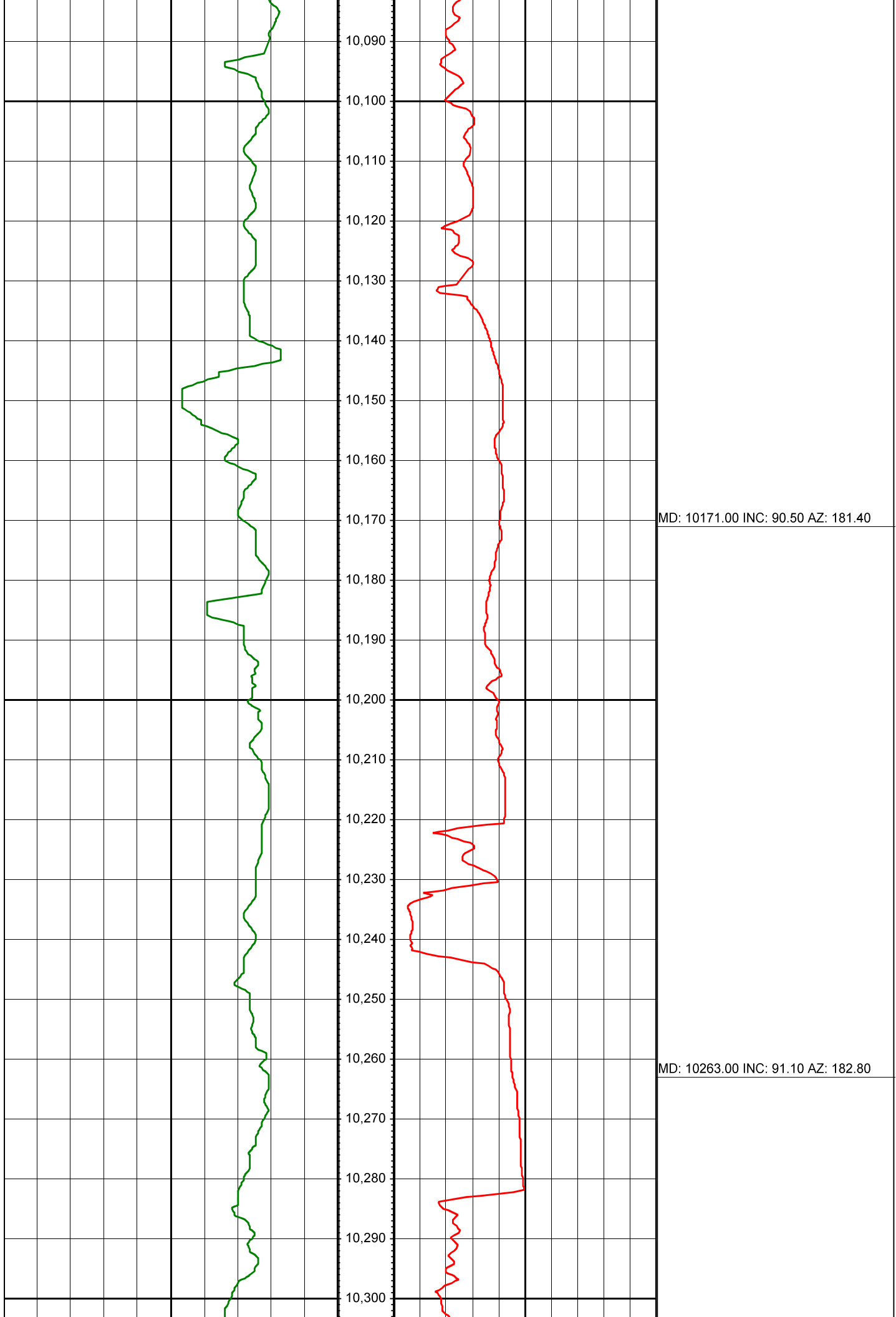


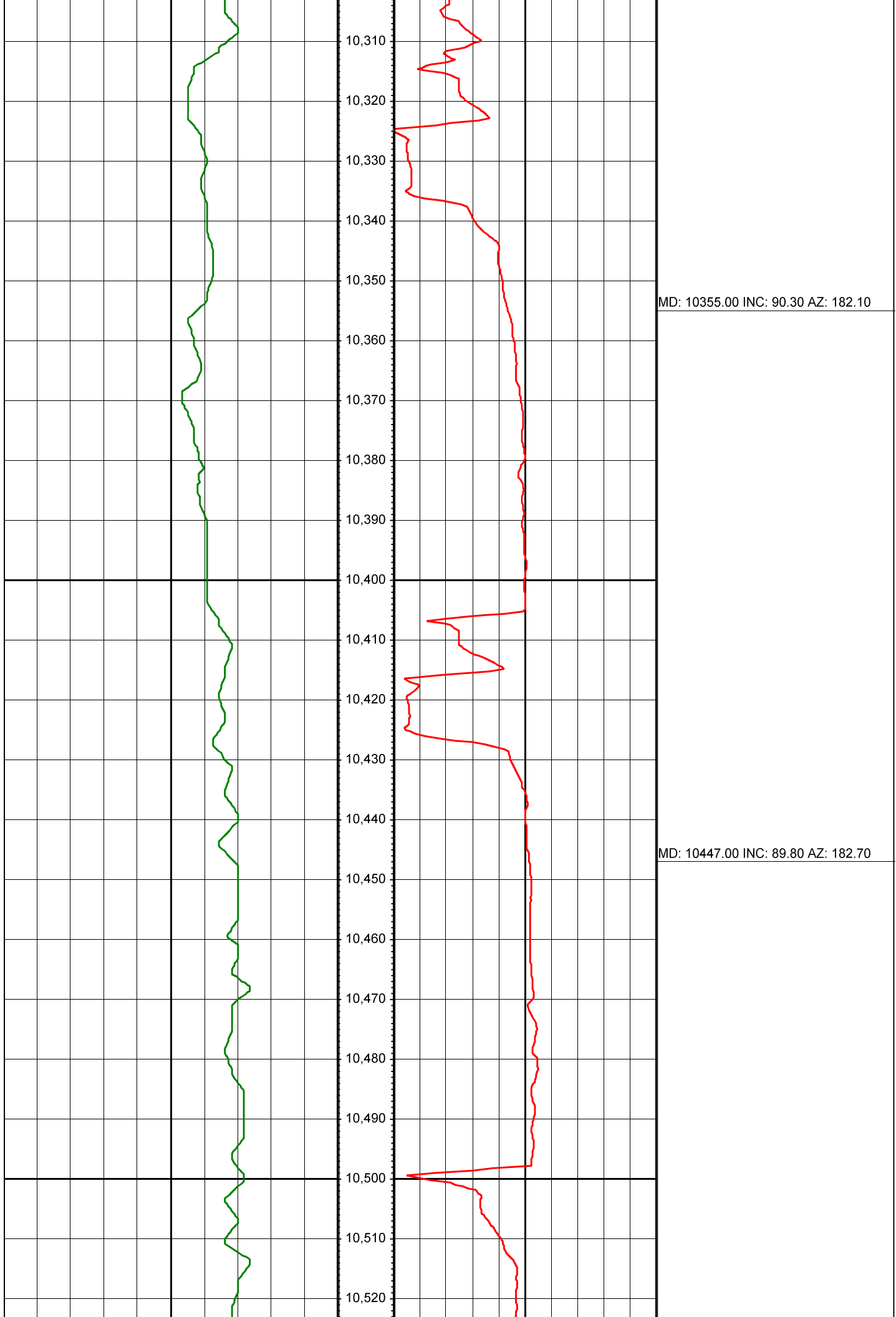


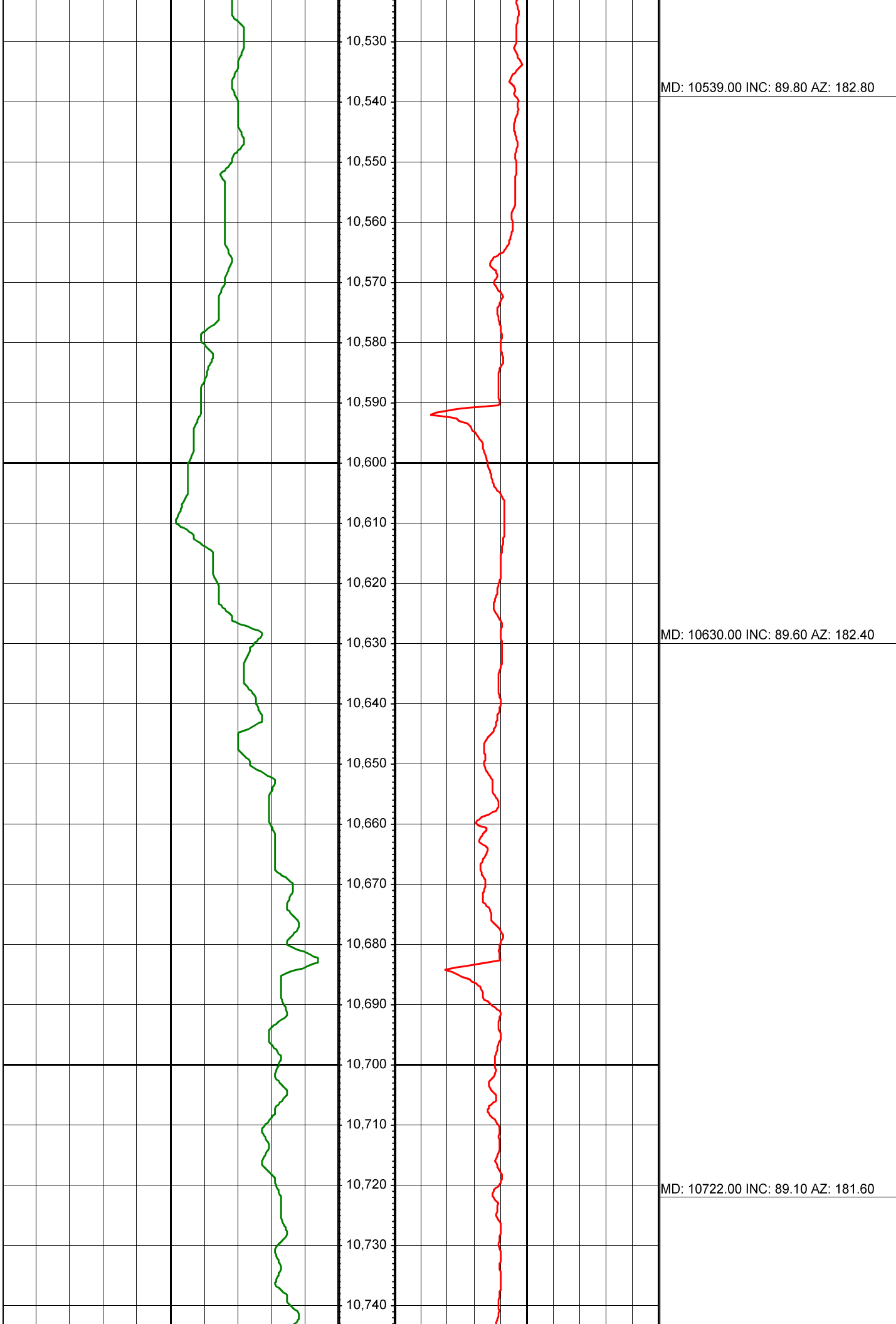


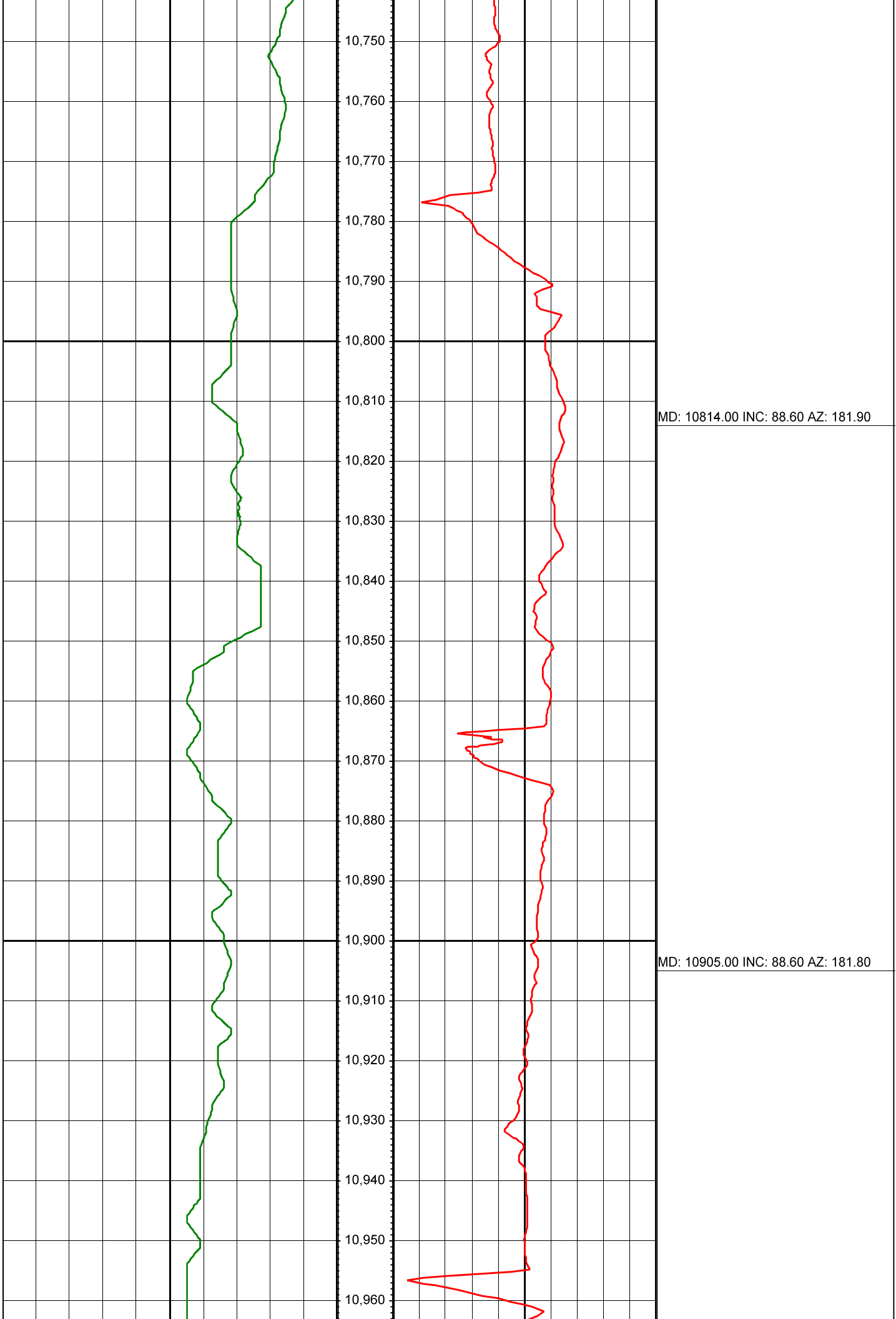


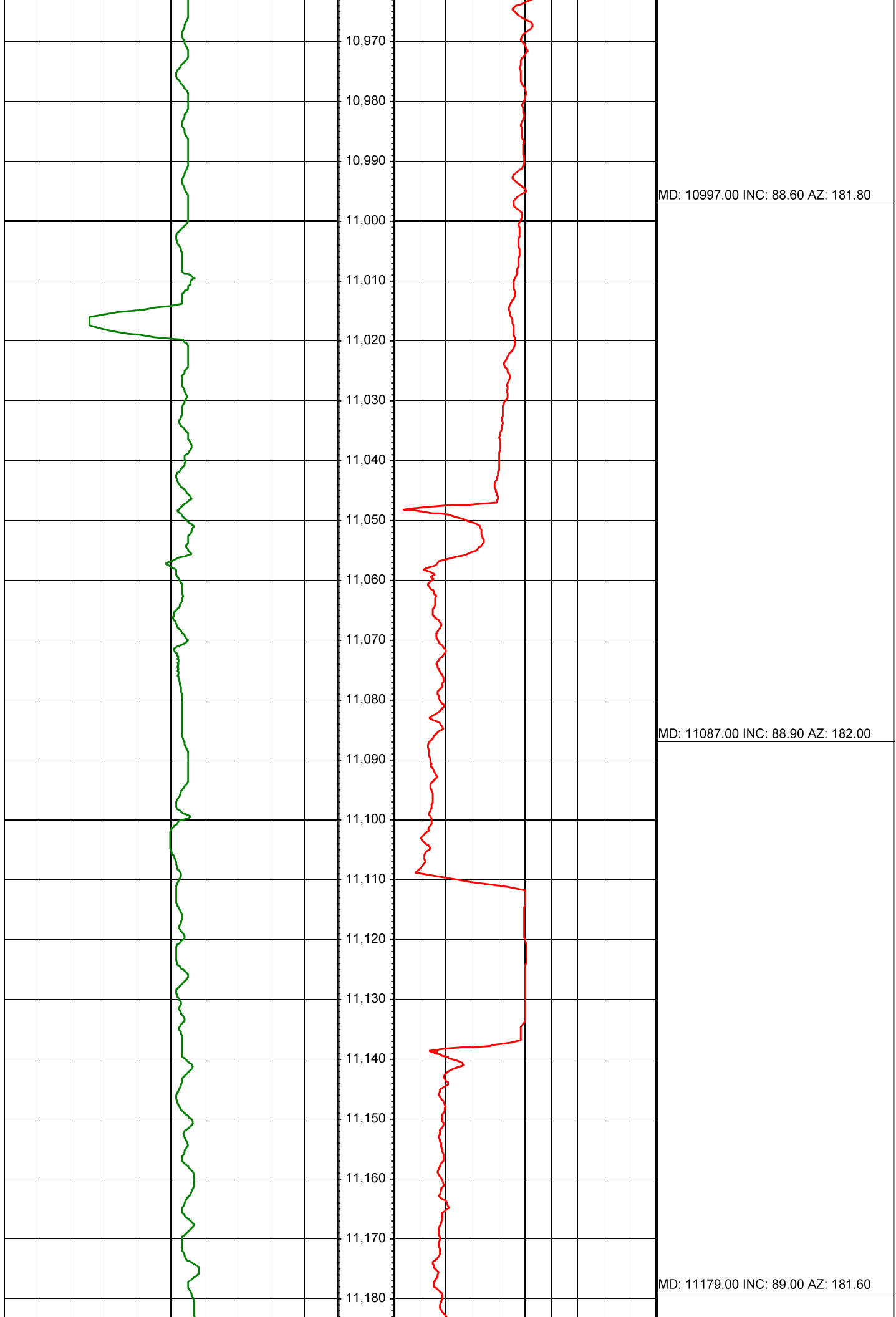


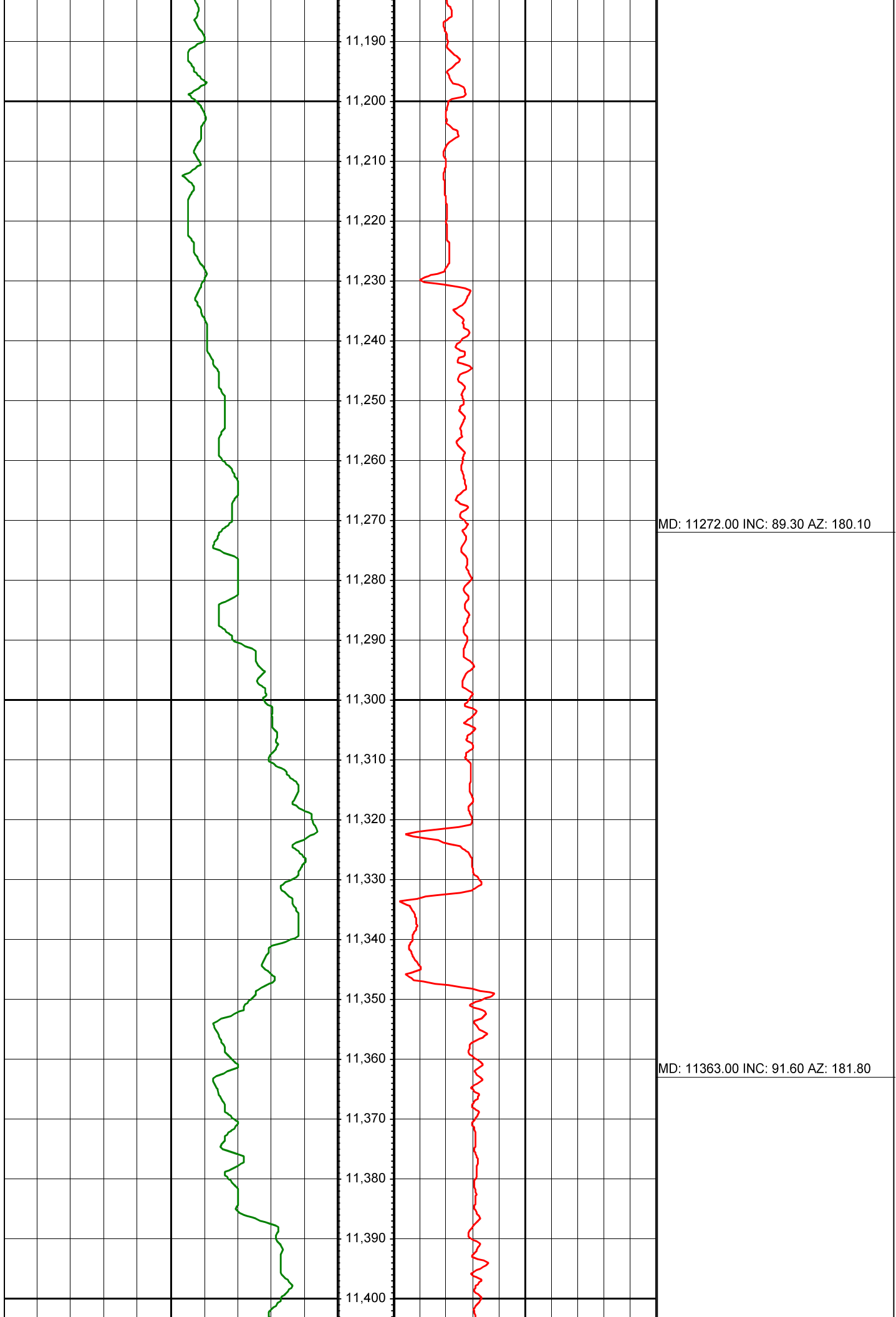


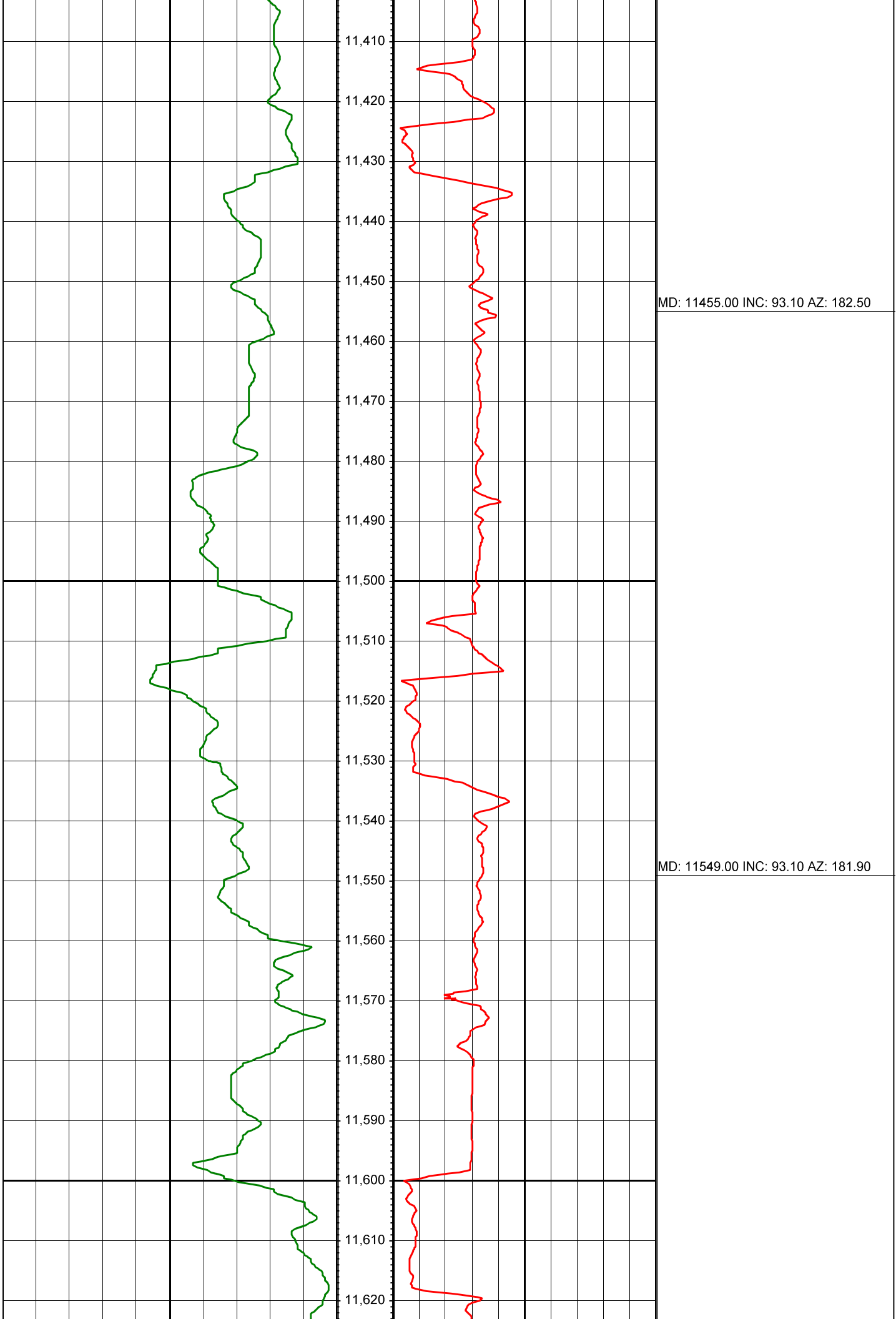


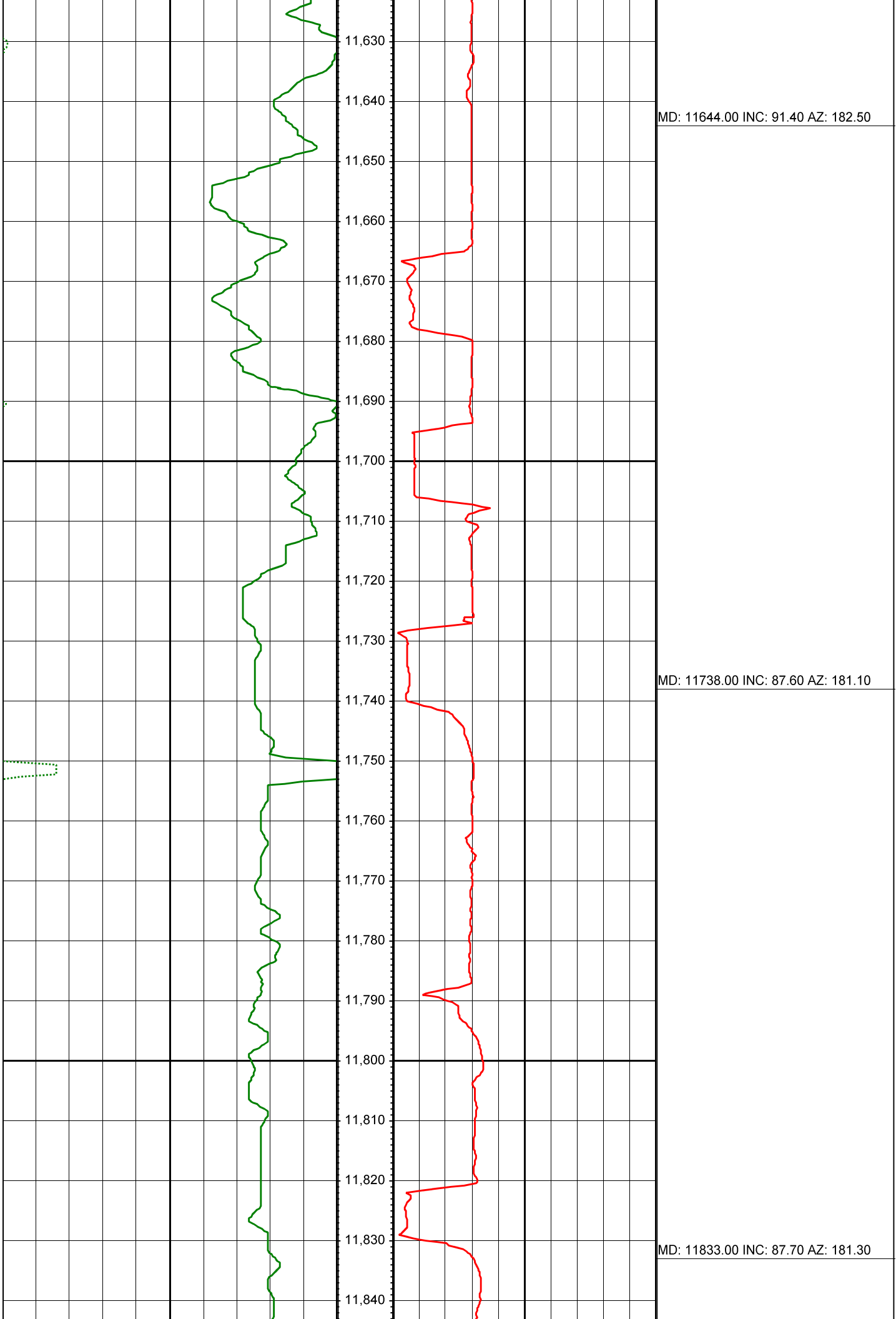


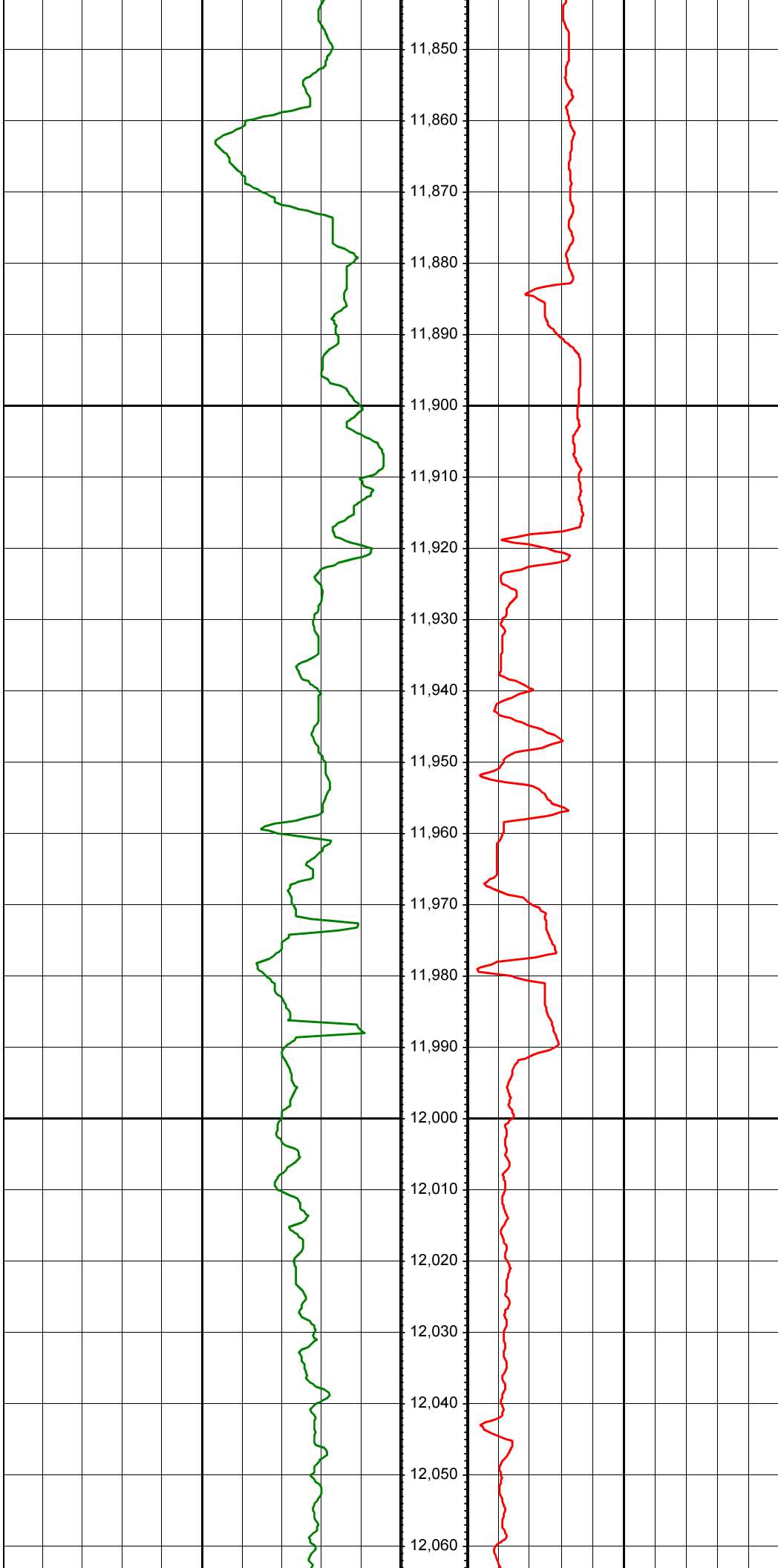






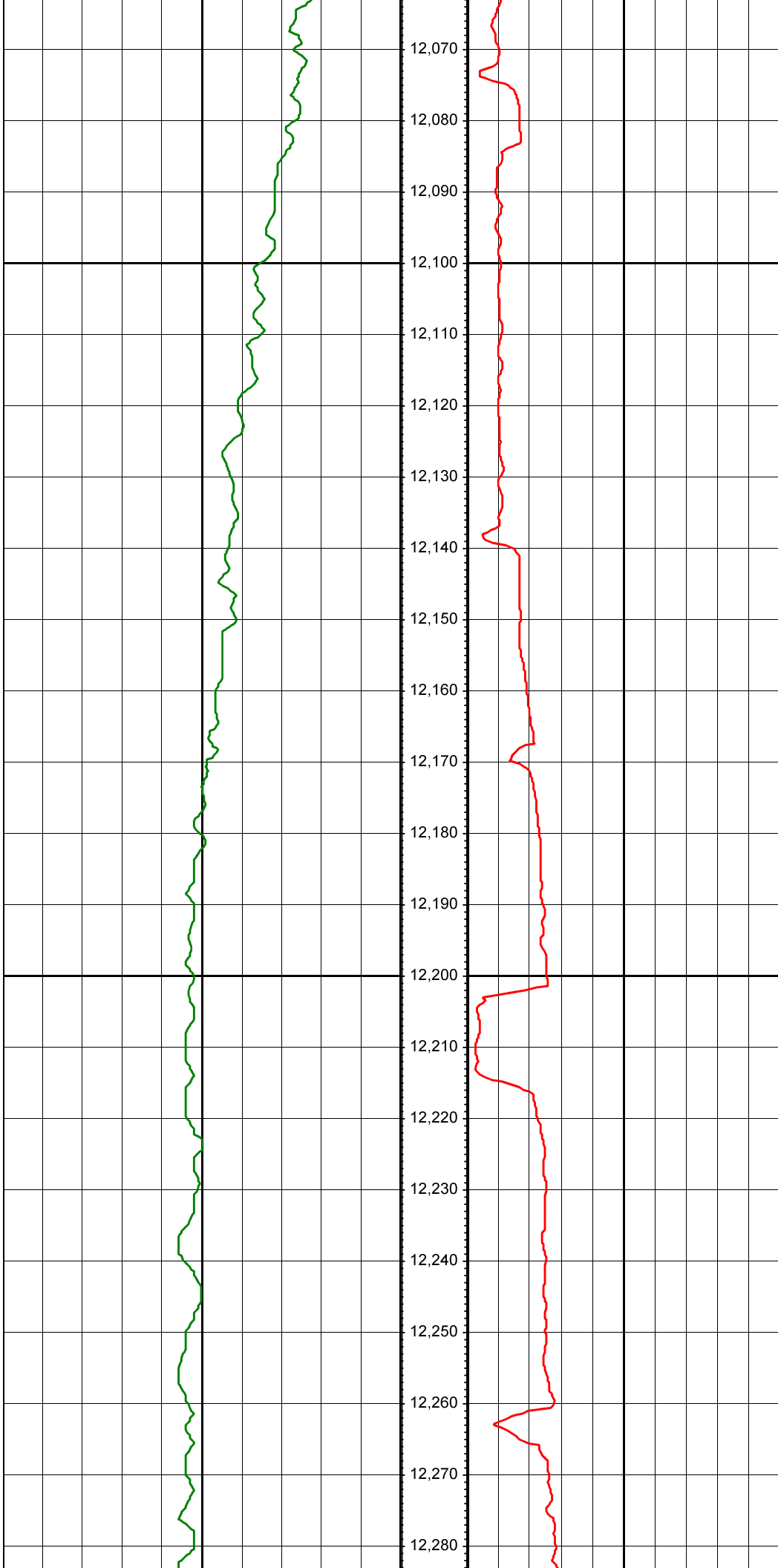






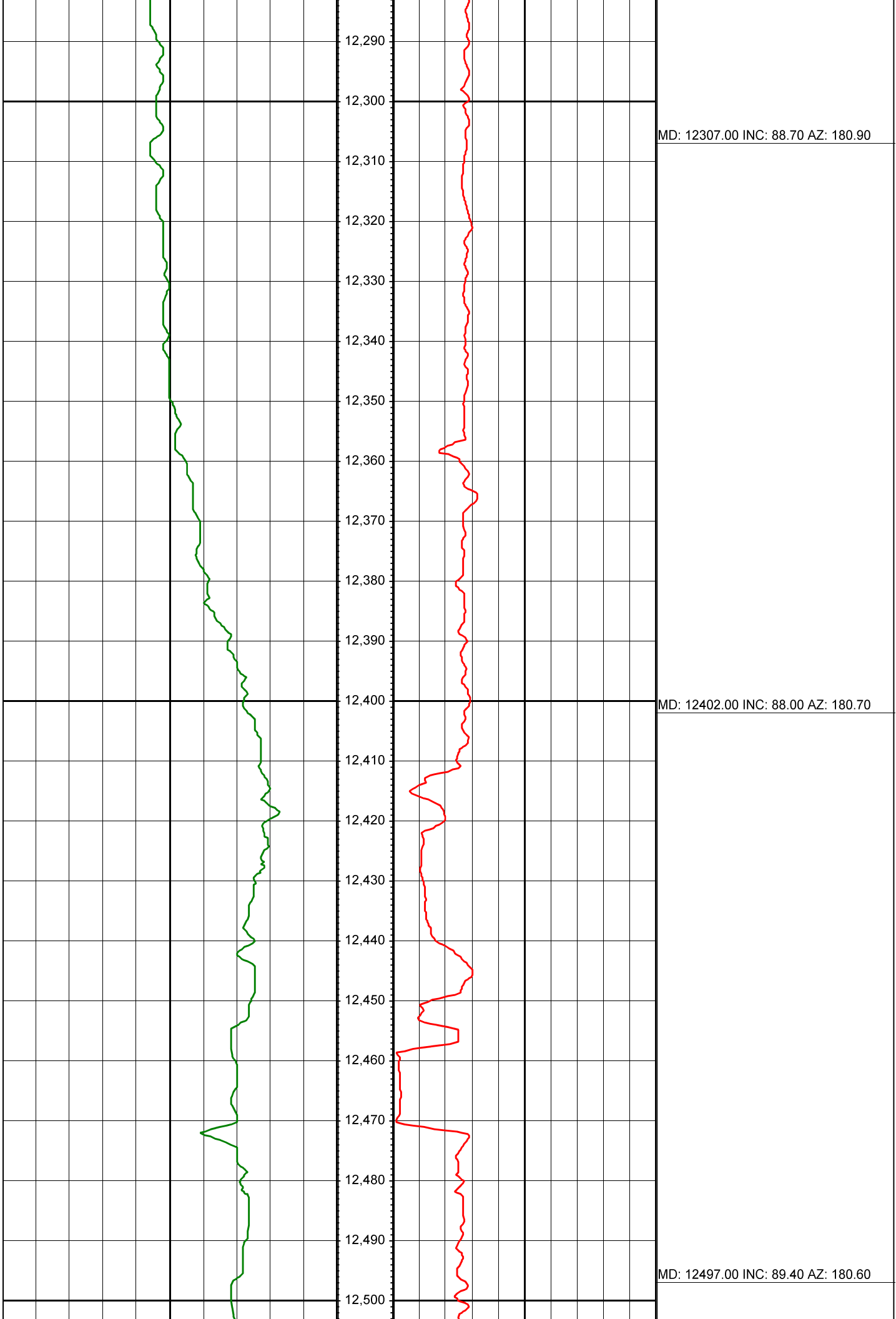
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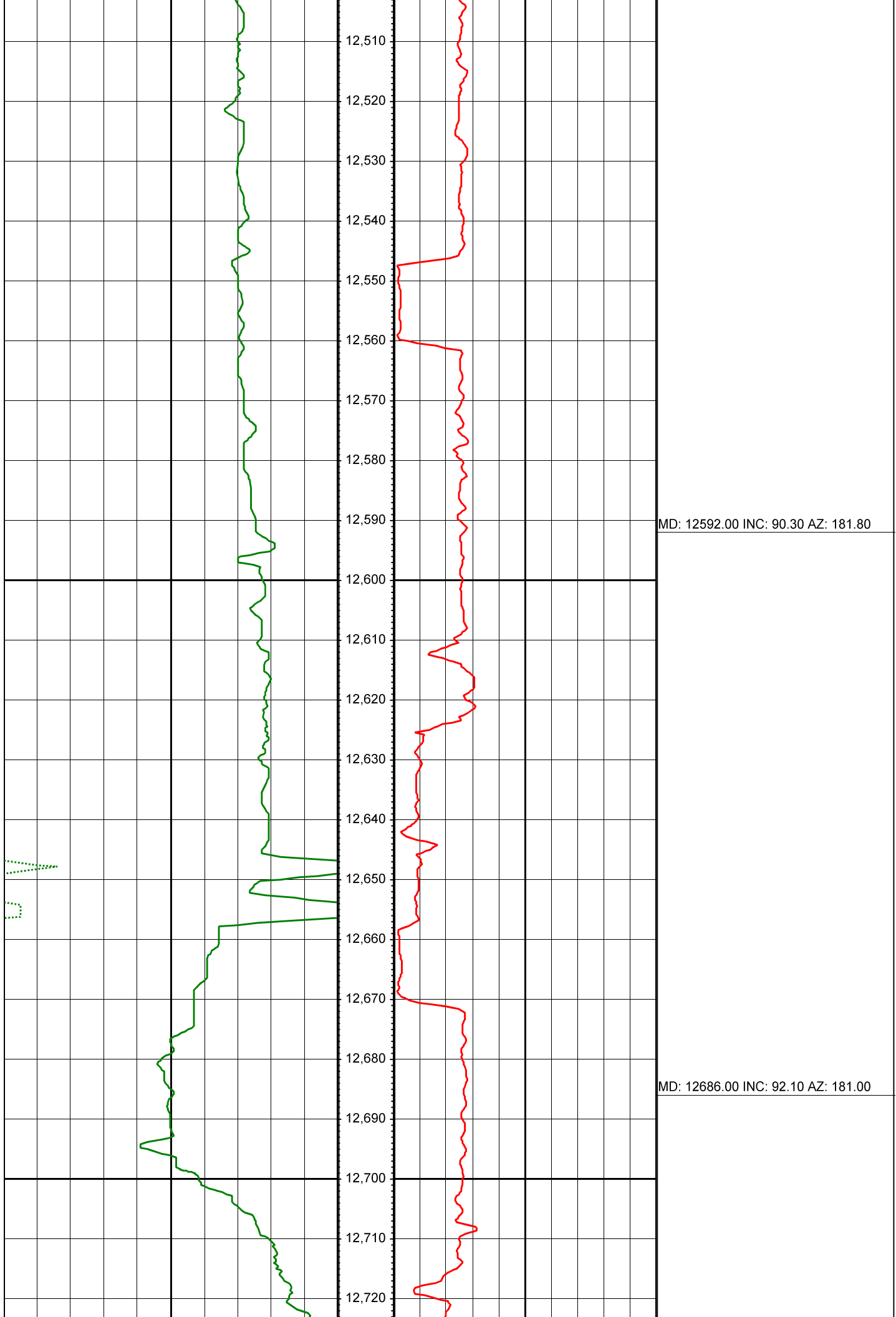
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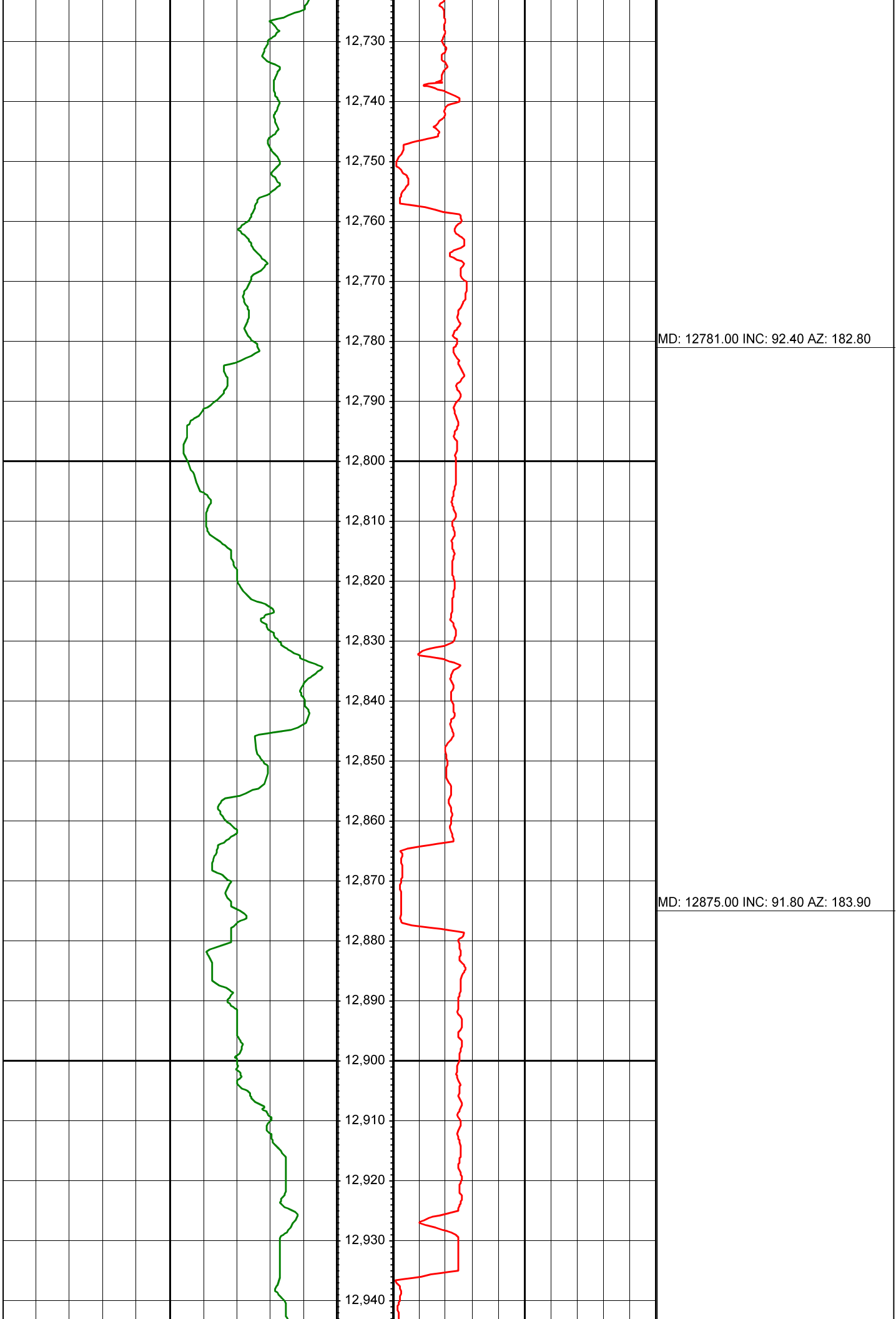


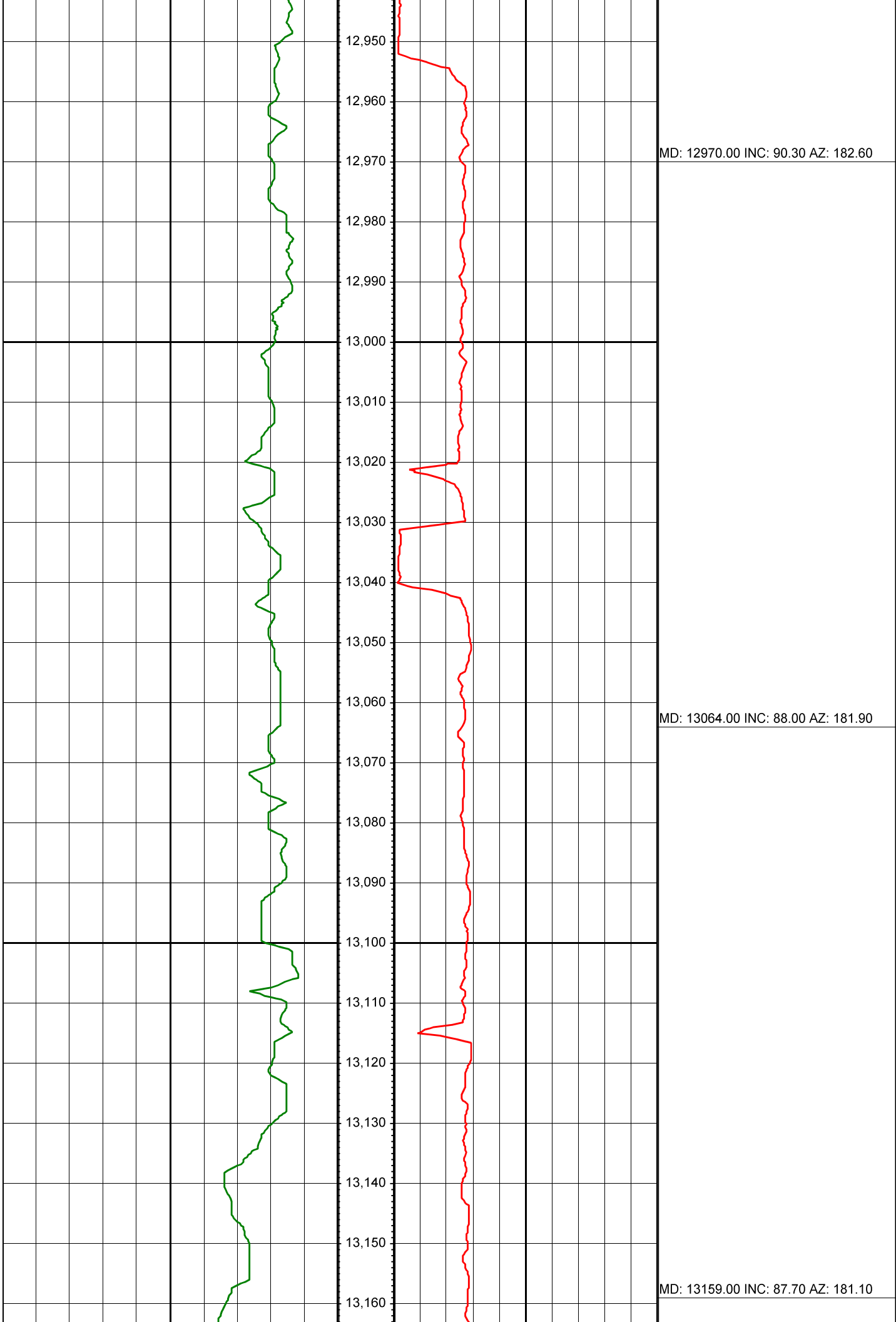
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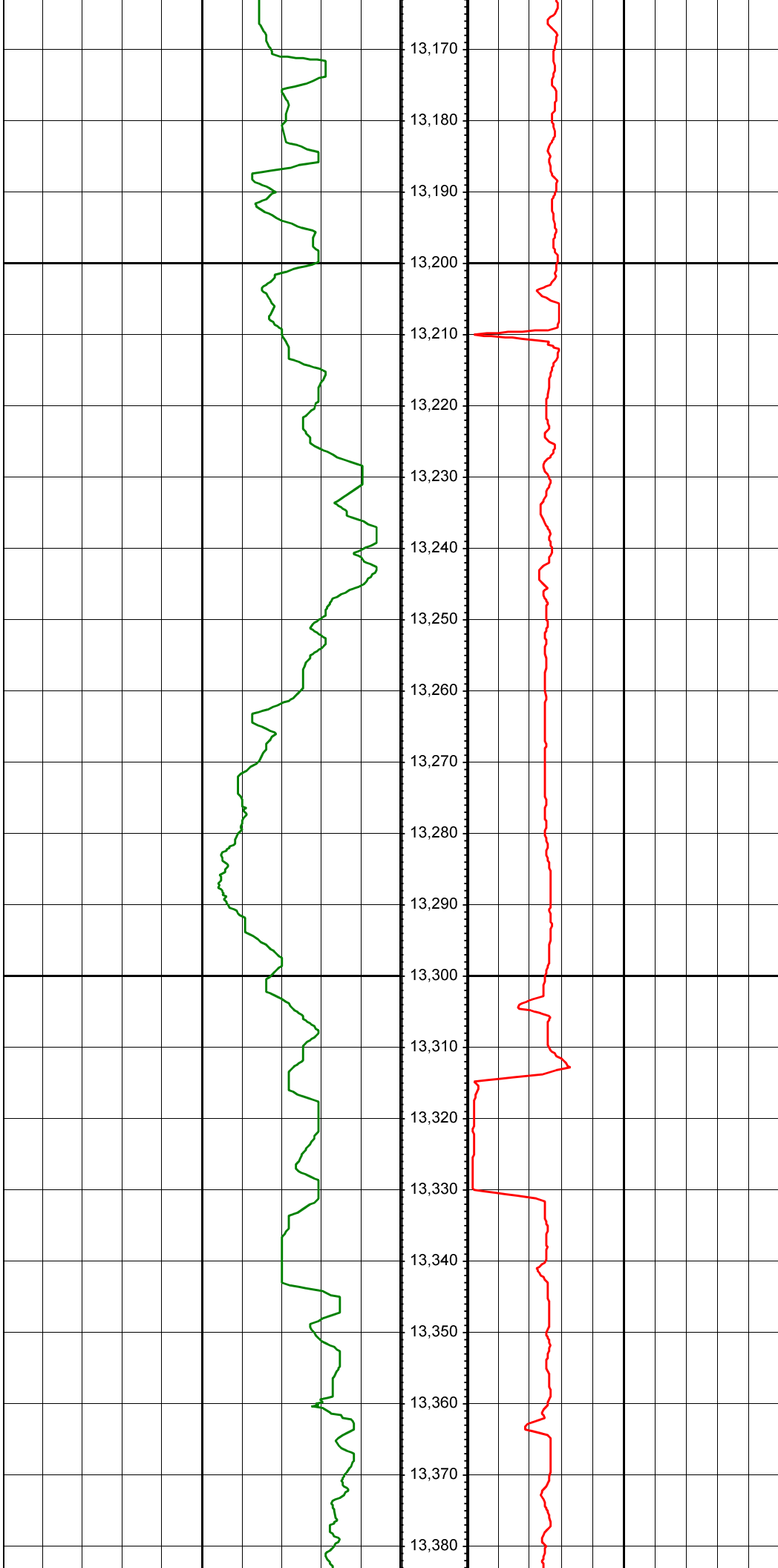
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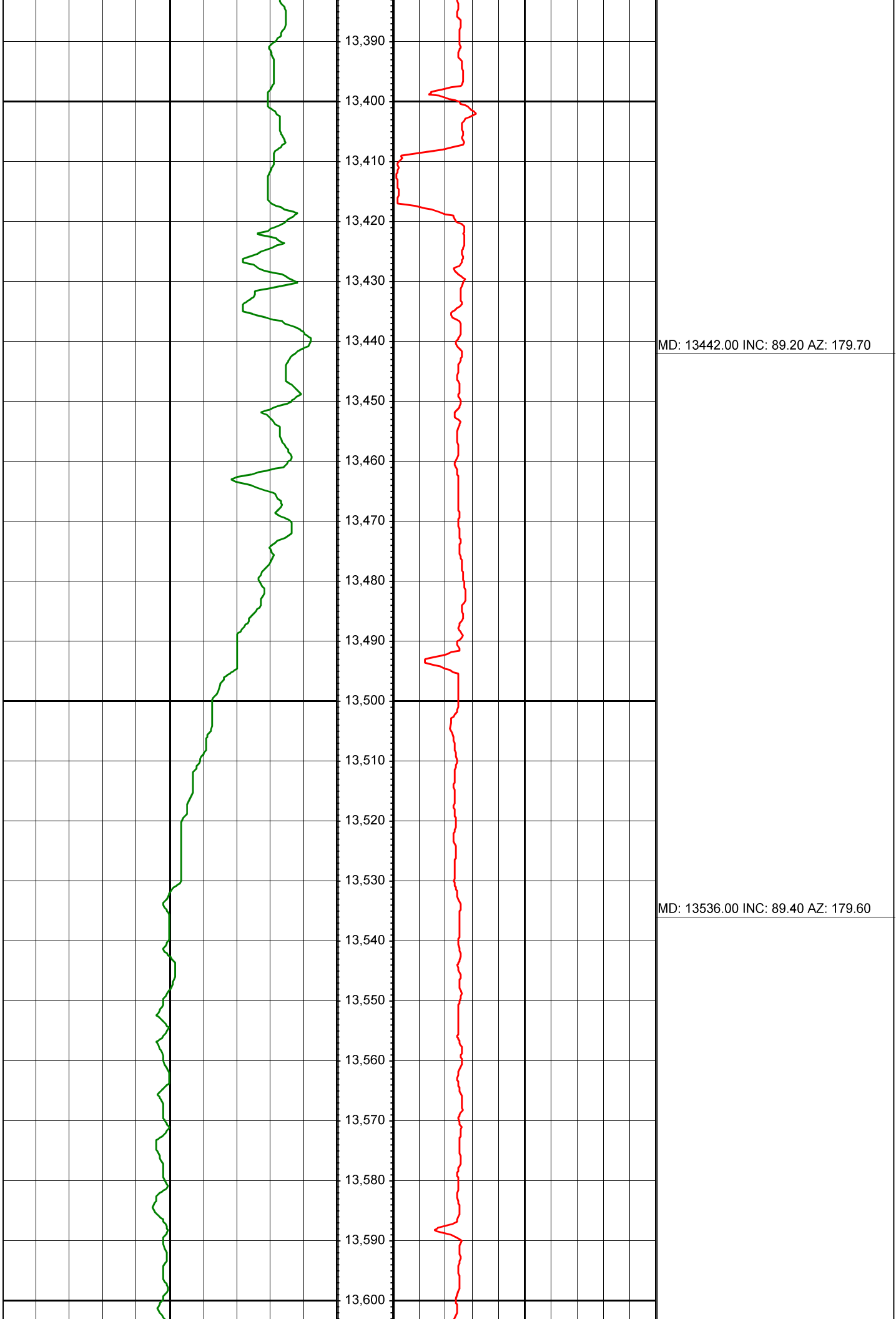


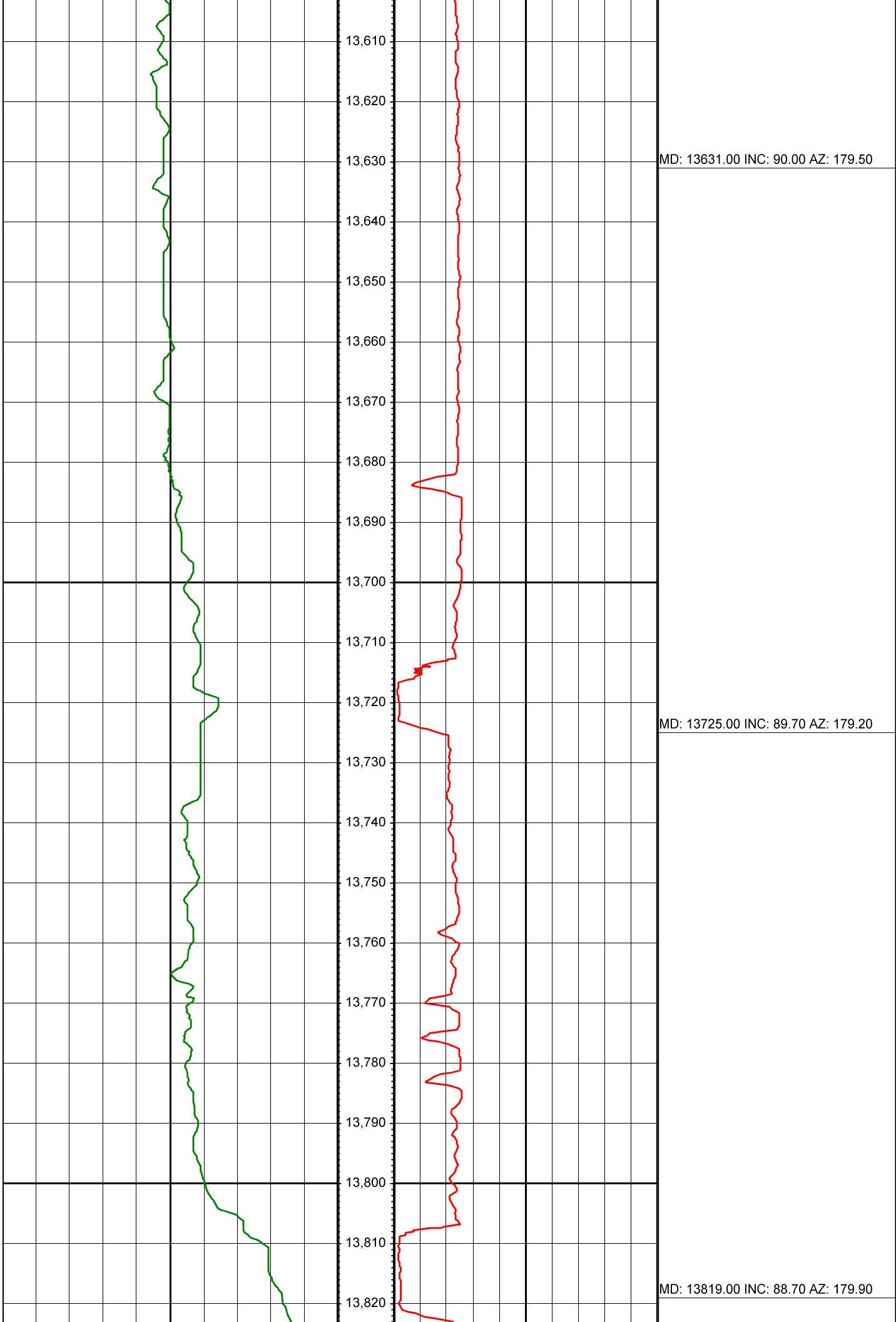


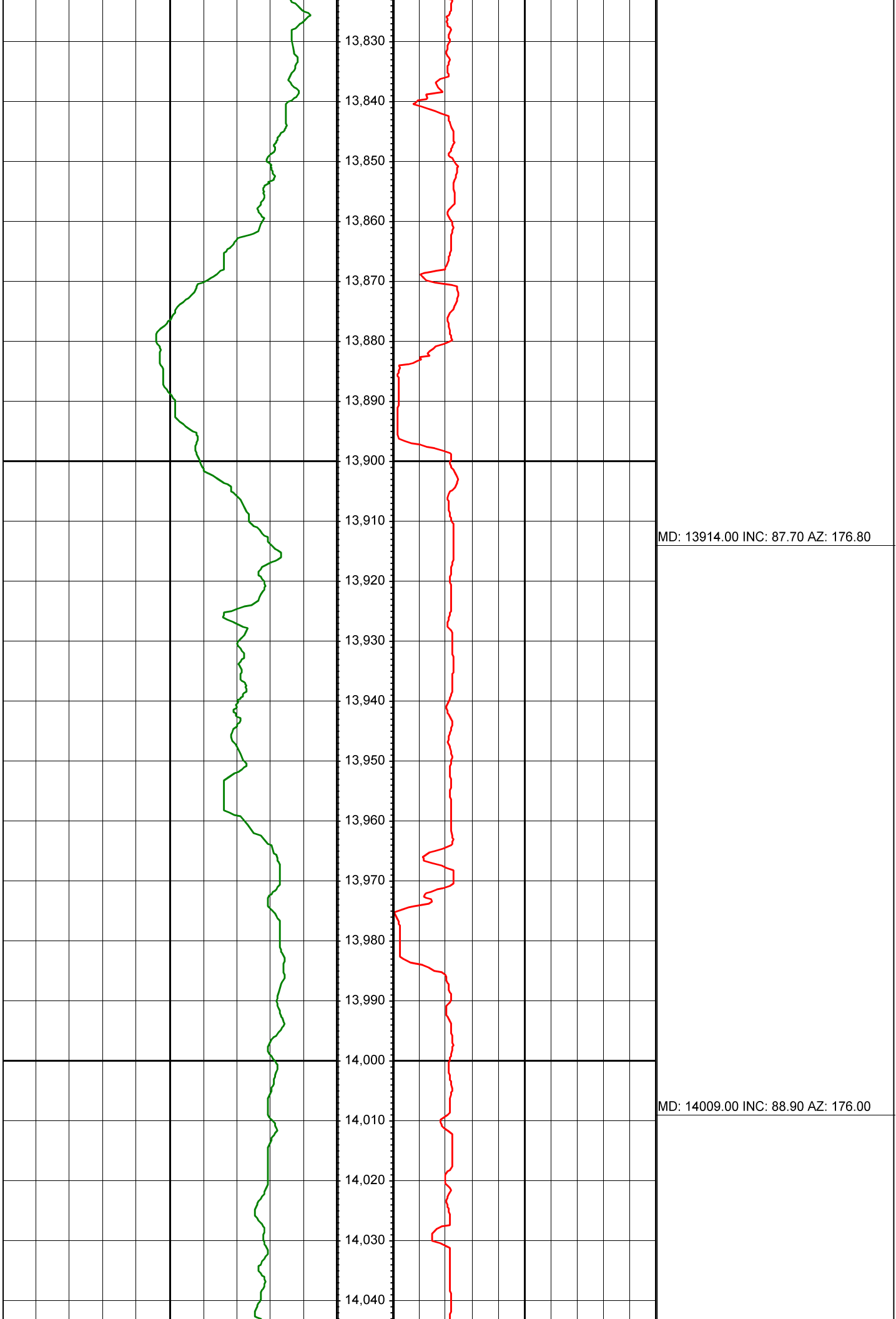
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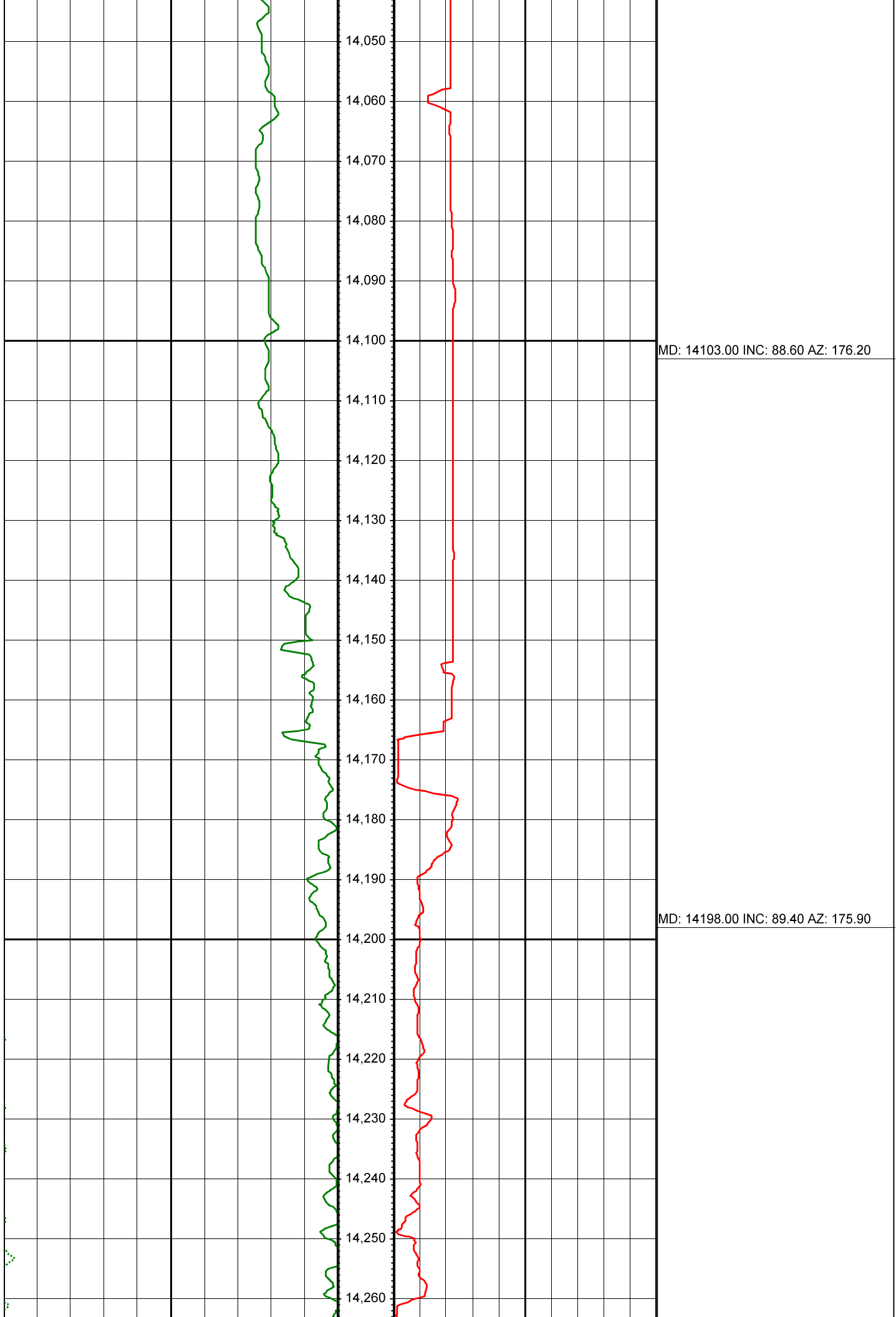
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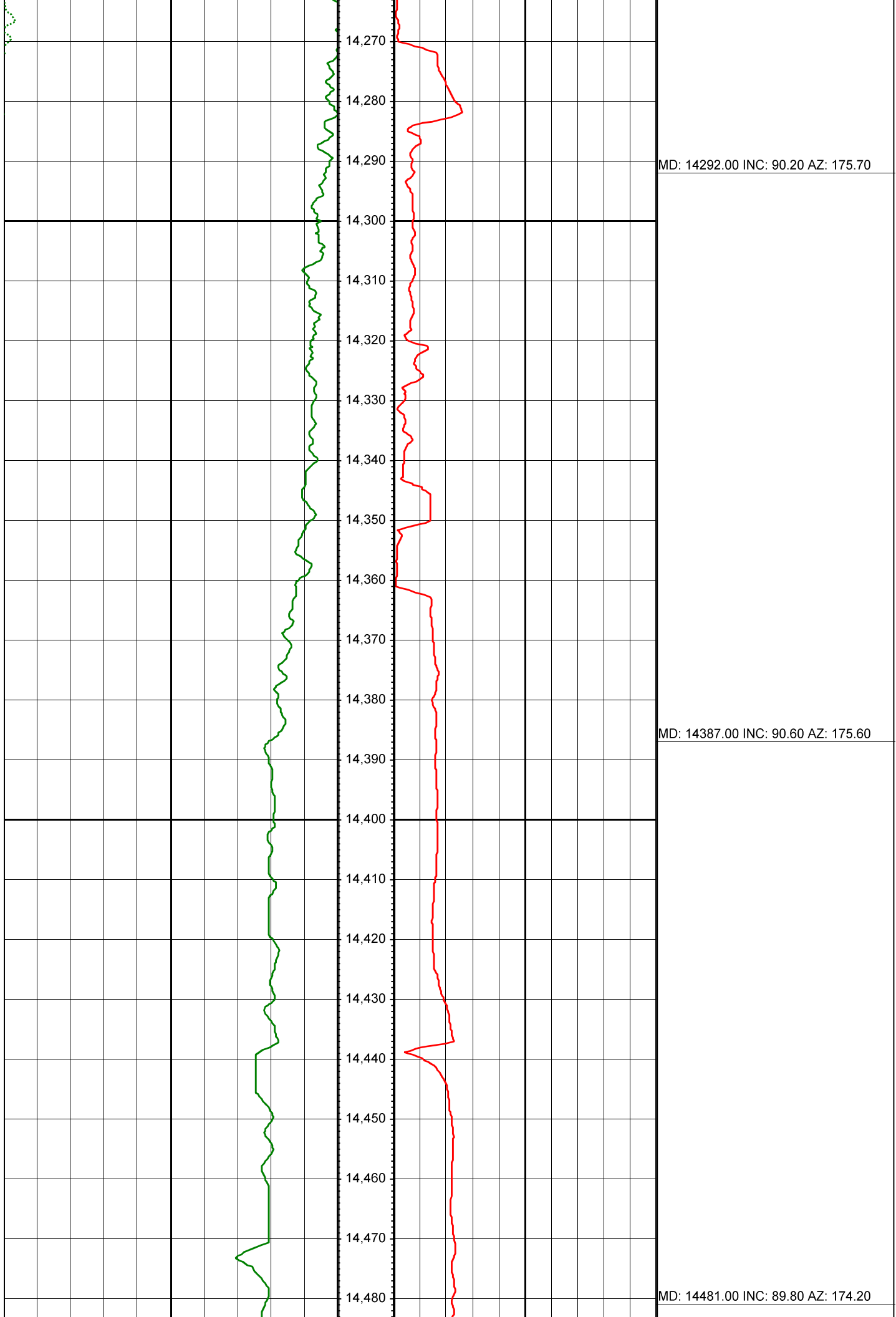
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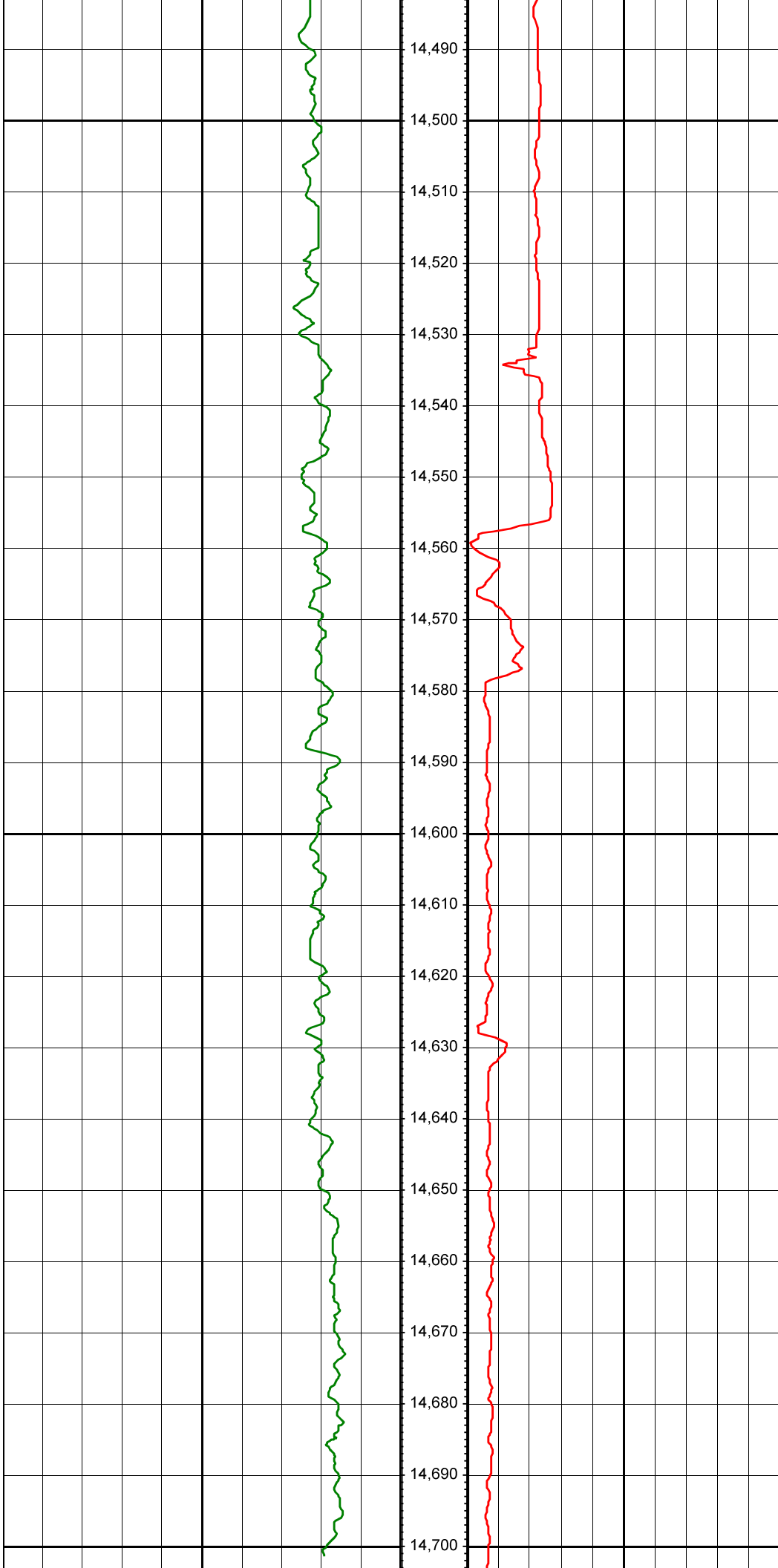












MD: 14576.00 INC: 89.80 AZ: 174.40

MD: 14670.00 INC: 91.20 AZ: 175.30

MD: 14690.00 INC: 91.20 AZ: 175.50

