



Cathedral Energy Services
1949 North Pyrite Road
Casper, Wyoming 82604

145157

5":100' - MD

5/22/2014 8:23:52 AM

CATHEDRAL

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

Country: U.S.A.

State / Province: Colorado

County / Parish: Weld

Started: 05/15/2014 01:00 PM

API/UWI: 05-123-38444000

Field: Wattenburg (Codell)

Well: Bohrer 2B-19H-E368

Rig: Patterson Drilling 326

Ended: 05/22/2014 05:30 AM

Gamma Ray
Section Plane: 90.00
Magnetic North: 8.61
Gamma Attenuation Factor: 2.82
Gamma Averaging:1

Personnel

Day Hand: M. Andrew

Night Hand: J. Minter

Comp. Emp: Mike Quintana

Maximum Temperature: 174°F

Location

Latitude: 40.214450

Longitude: -105.052450

Elev. GL: 5060

Elev. DF:

Elev. KB: 5092

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

Hole Data

| Size | From | To |
|--------|------|-------|
| 12-1/4 | 0 | 880 |
| 8-3/4 | 880 | 7593 |
| 6-1/8 | 7593 | 11588 |

Casing Data

| Size | From | To |
|-------|------|-------|
| 9-5/8 | 0 | 880 |
| 7 | 0 | 7593 |
| 4-1/2 | 0 | 11588 |

Bit Sizes

| Size | From | To |
|--------|------|-------|
| 12-1/4 | 0 | 880 |
| 8-3/4 | 880 | 7593 |
| 6-1/8 | 7593 | 11588 |

Mud Data

| Type | Weight | Density | Viscosity | Rm | Rmf | Rmc | From | To |
|------|--------|---------|-----------|----|-----|-----|------|----|
|------|--------|---------|-----------|----|-----|-----|------|----|

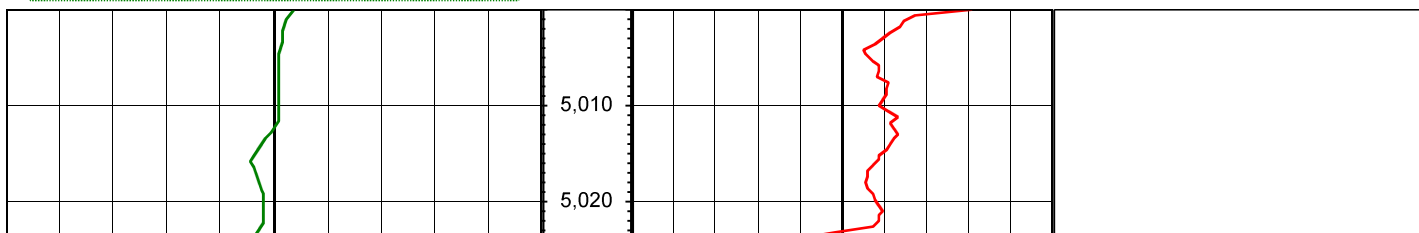
Tool Run Data

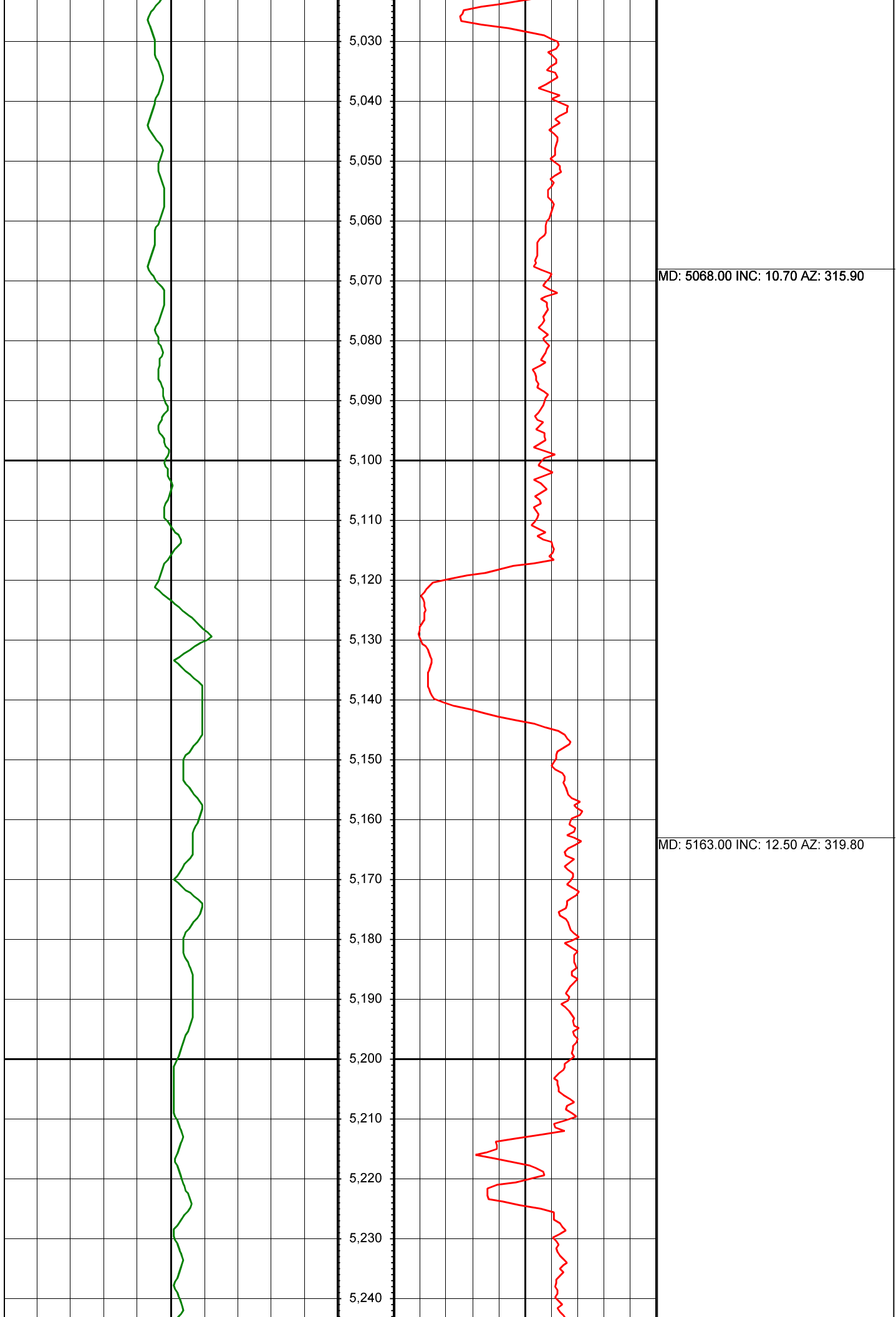
| Serial Number | Gamma Offset | Resist. Offset | Start Time | Start Depth | End Time | End Depth |
|---------------|--------------|----------------|----------------------|-------------|----------------------|-----------|
| 1285 | 37.32 | 0 | 5/15/2014 1:00:51 PM | 880 | 5/17/2014 5:30:51 PM | 7593 |
| 1120 | 38.47 | 0 | 5/20/2014 5:00:45 AM | 7593 | 5/22/2014 5:30:45 AM | 11588 |

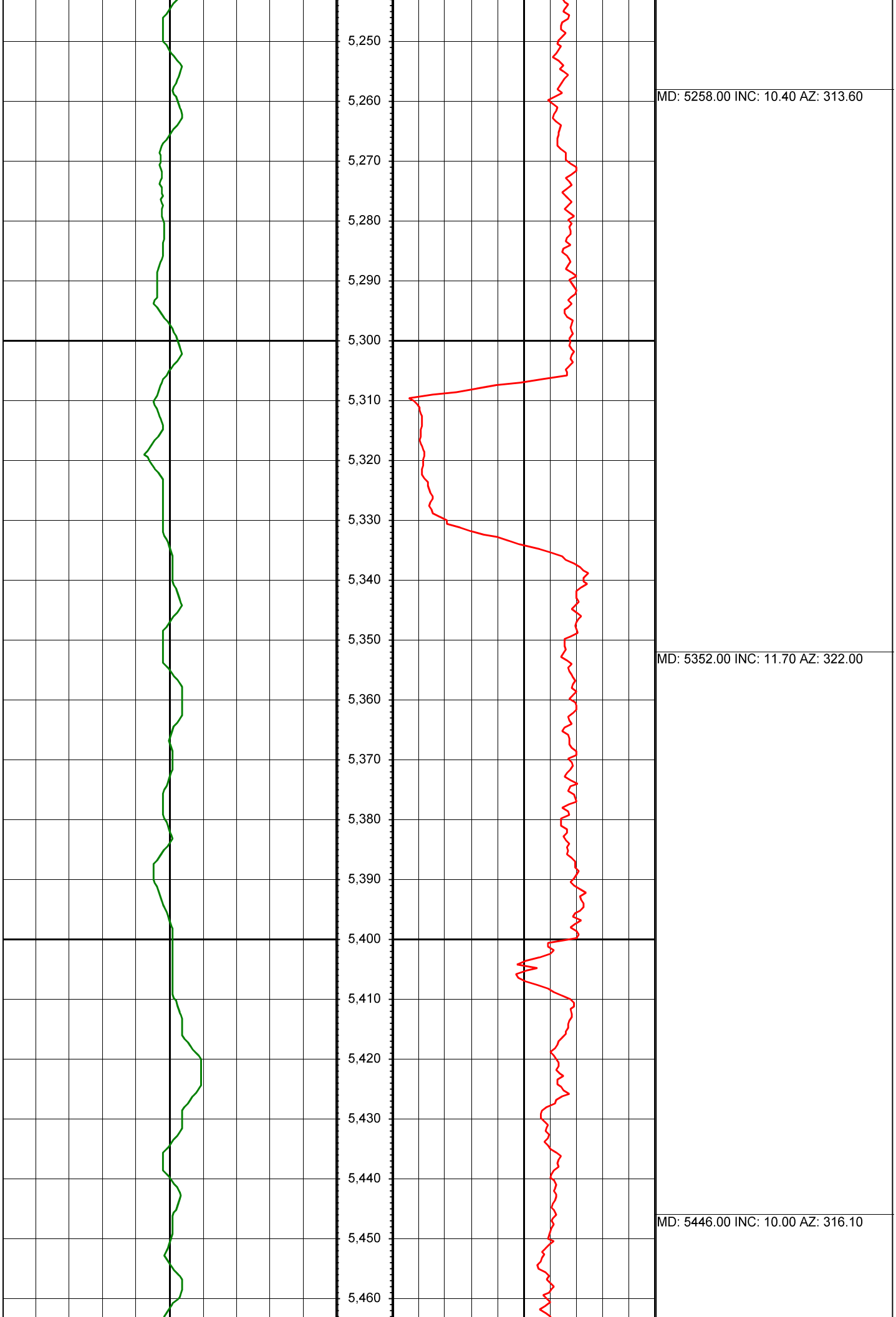
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost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

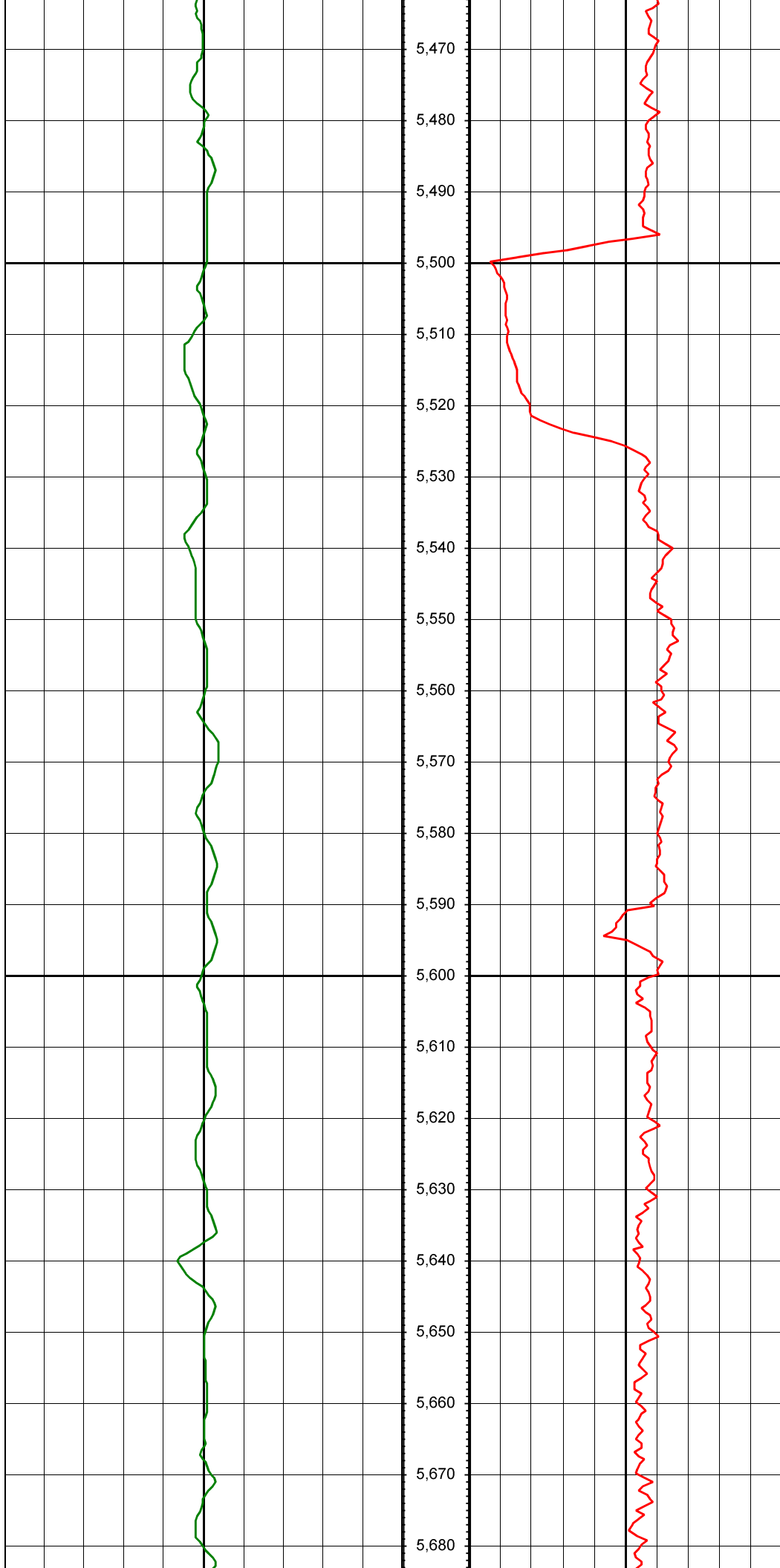
0.00 Gamma Ray (API) 150.00 MD 0.00 ROP (FT/HR) 600.00 Surveys (MD/INC/AZ)

150.00 2 300.00 FT



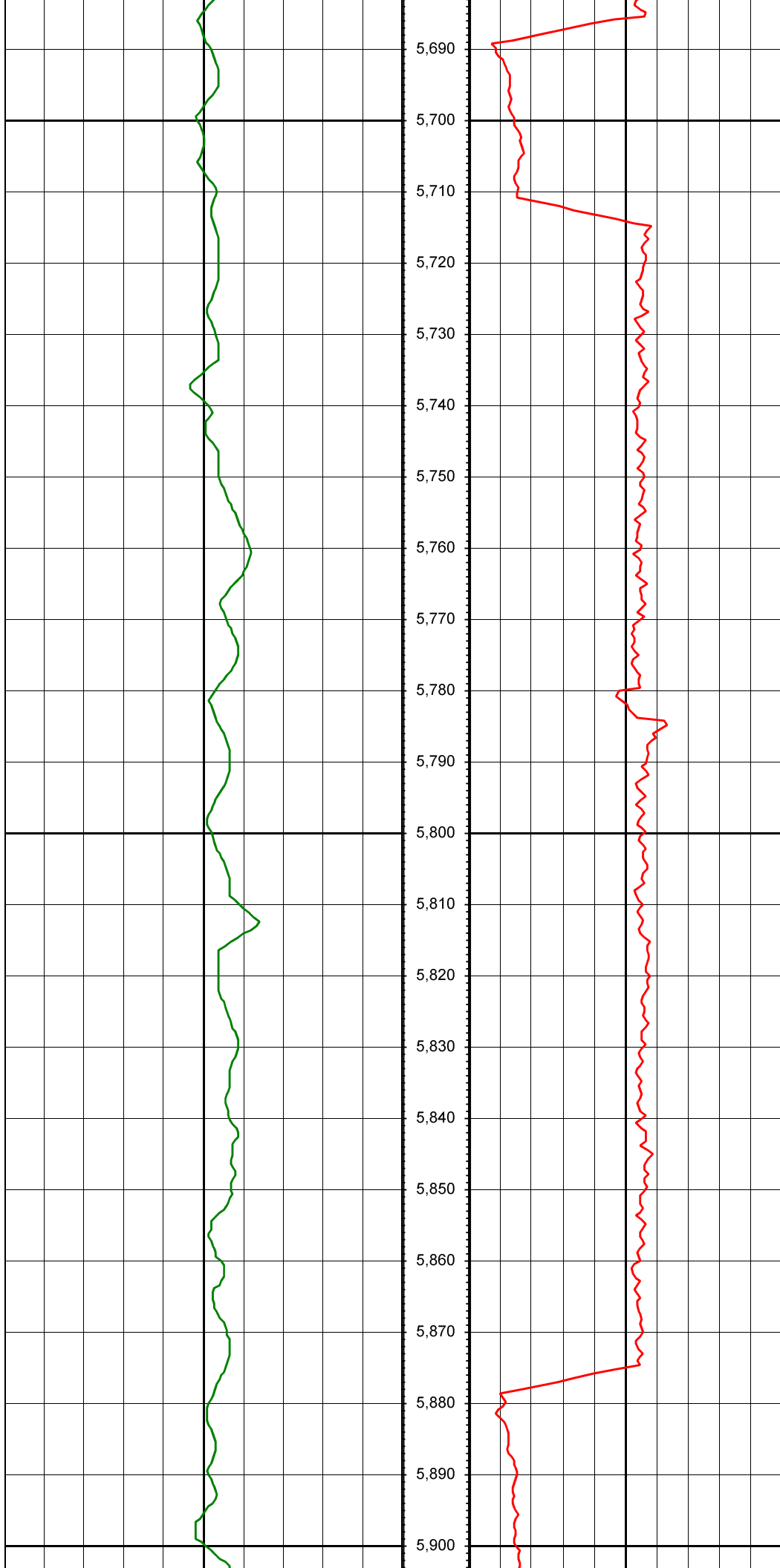






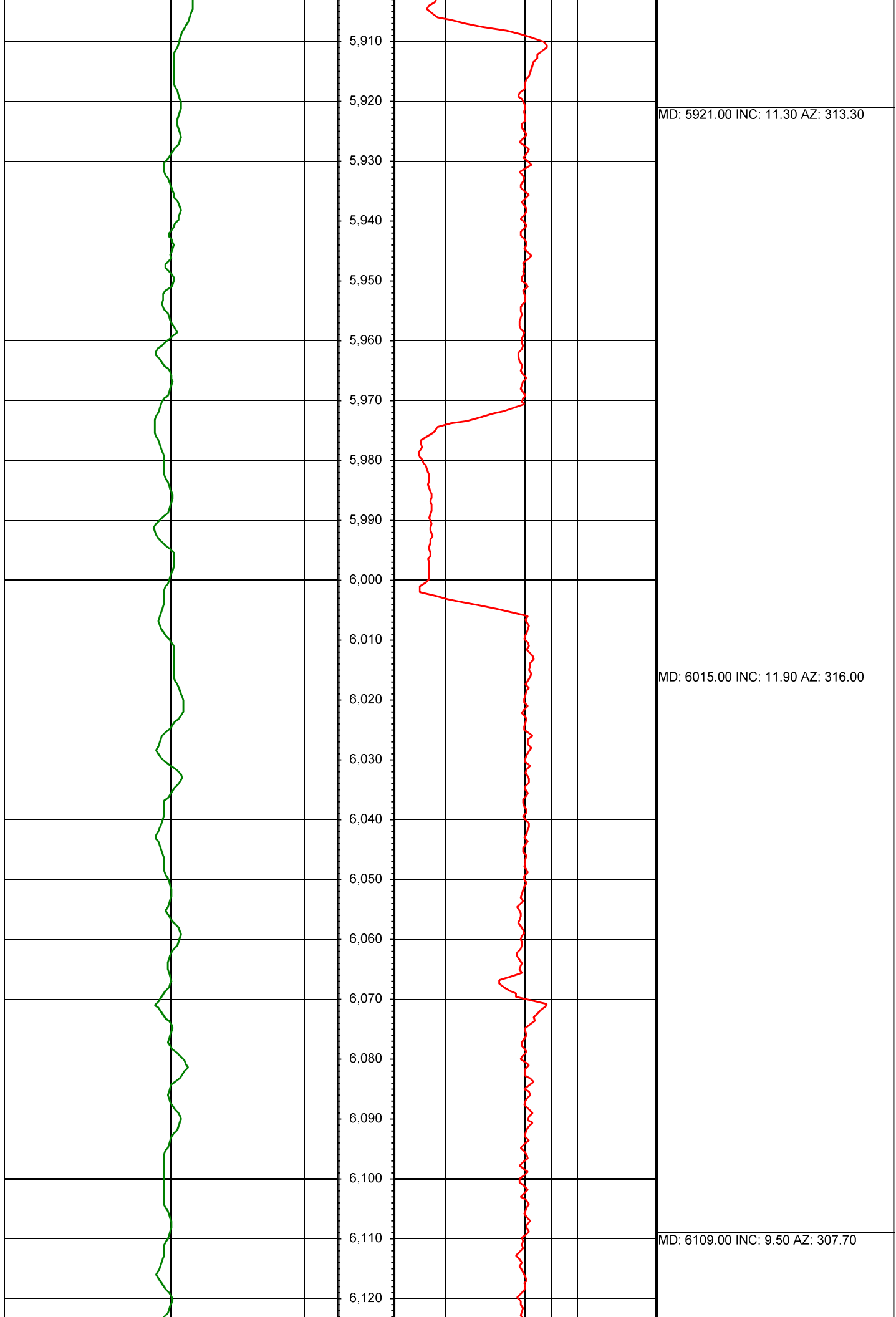
MD: 5541.00 INC: 11.90 AZ: 324.40

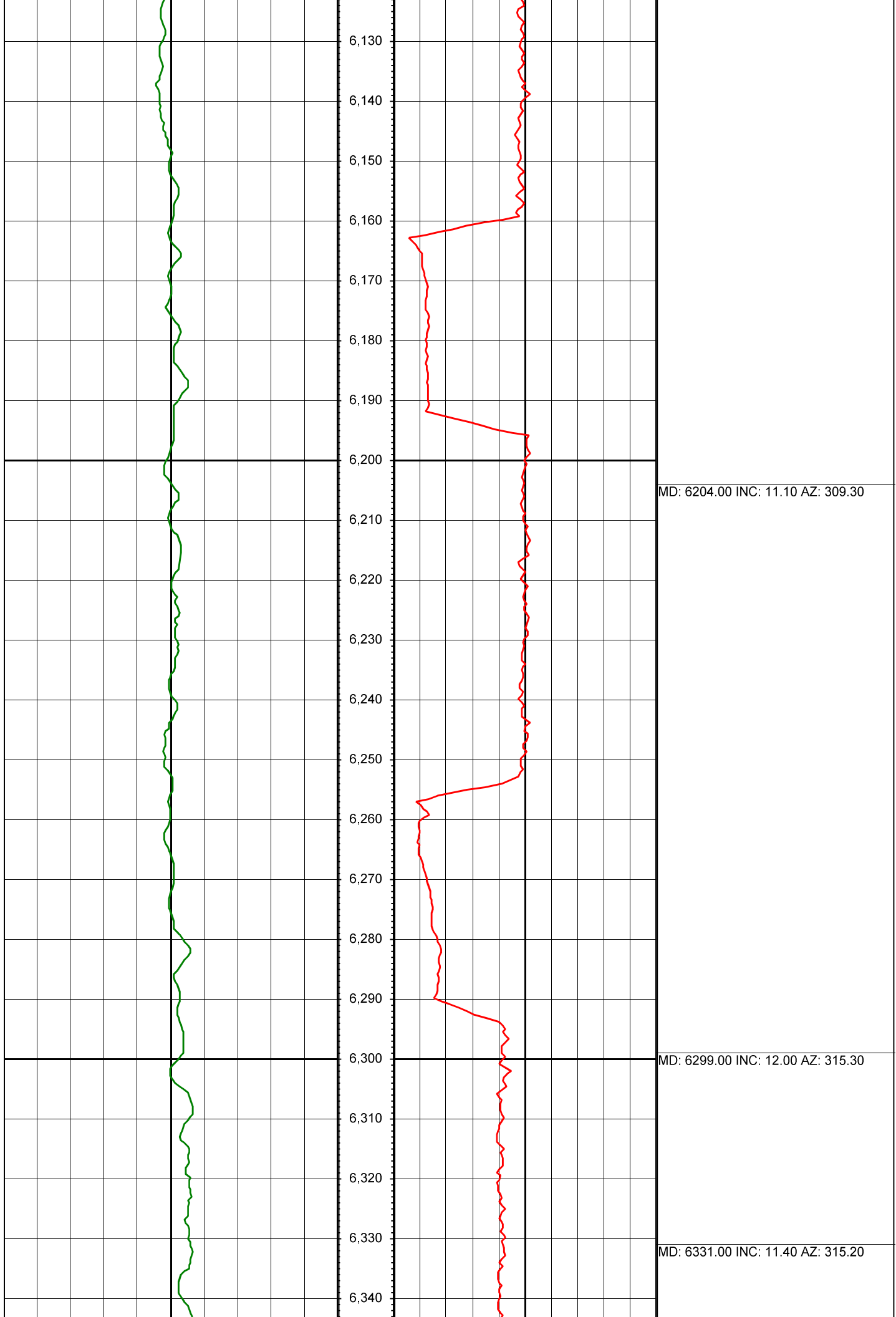
MD: 5636.00 INC: 10.40 AZ: 317.90

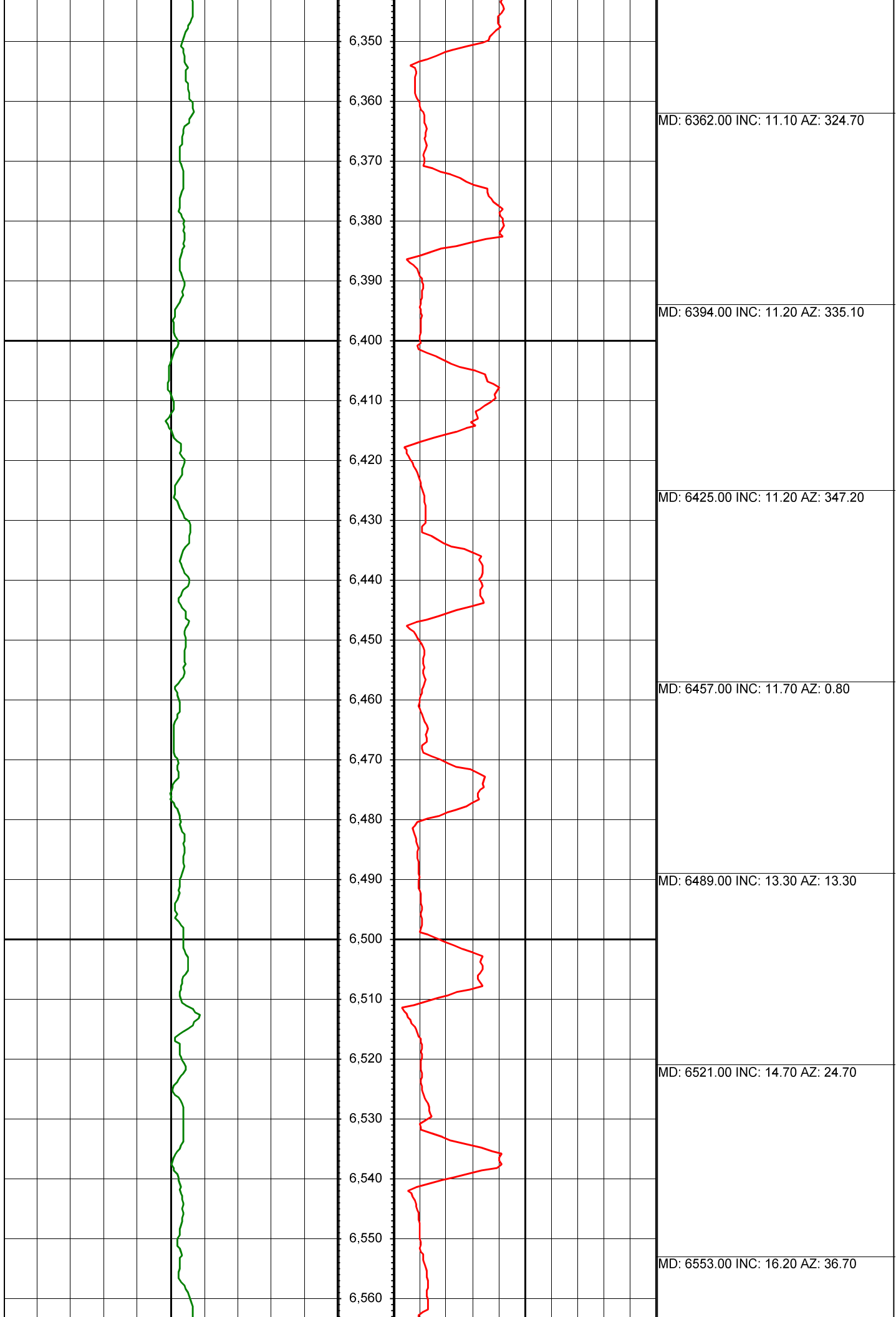


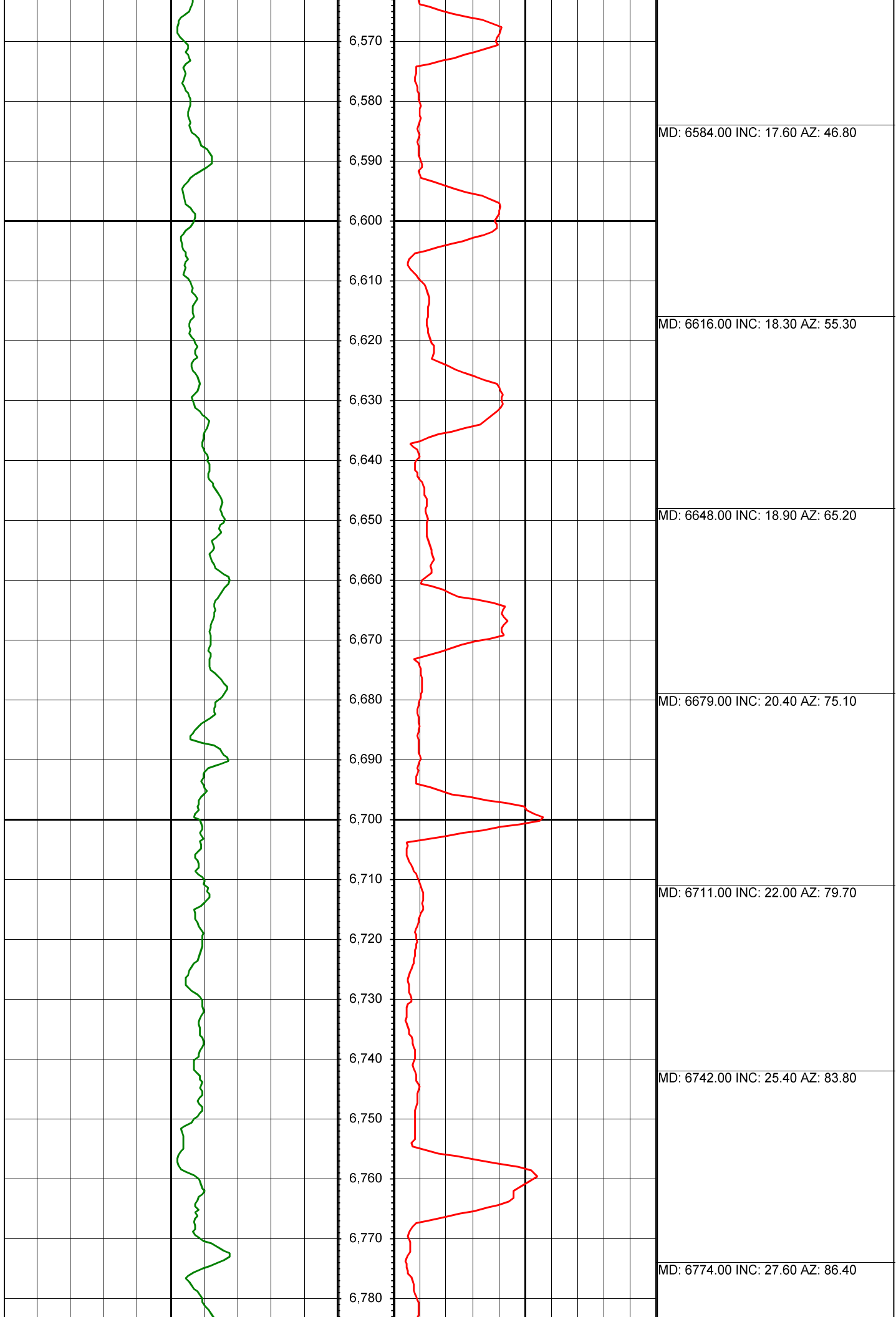
MD: 5731.00 INC: 12.10 AZ: 327.40

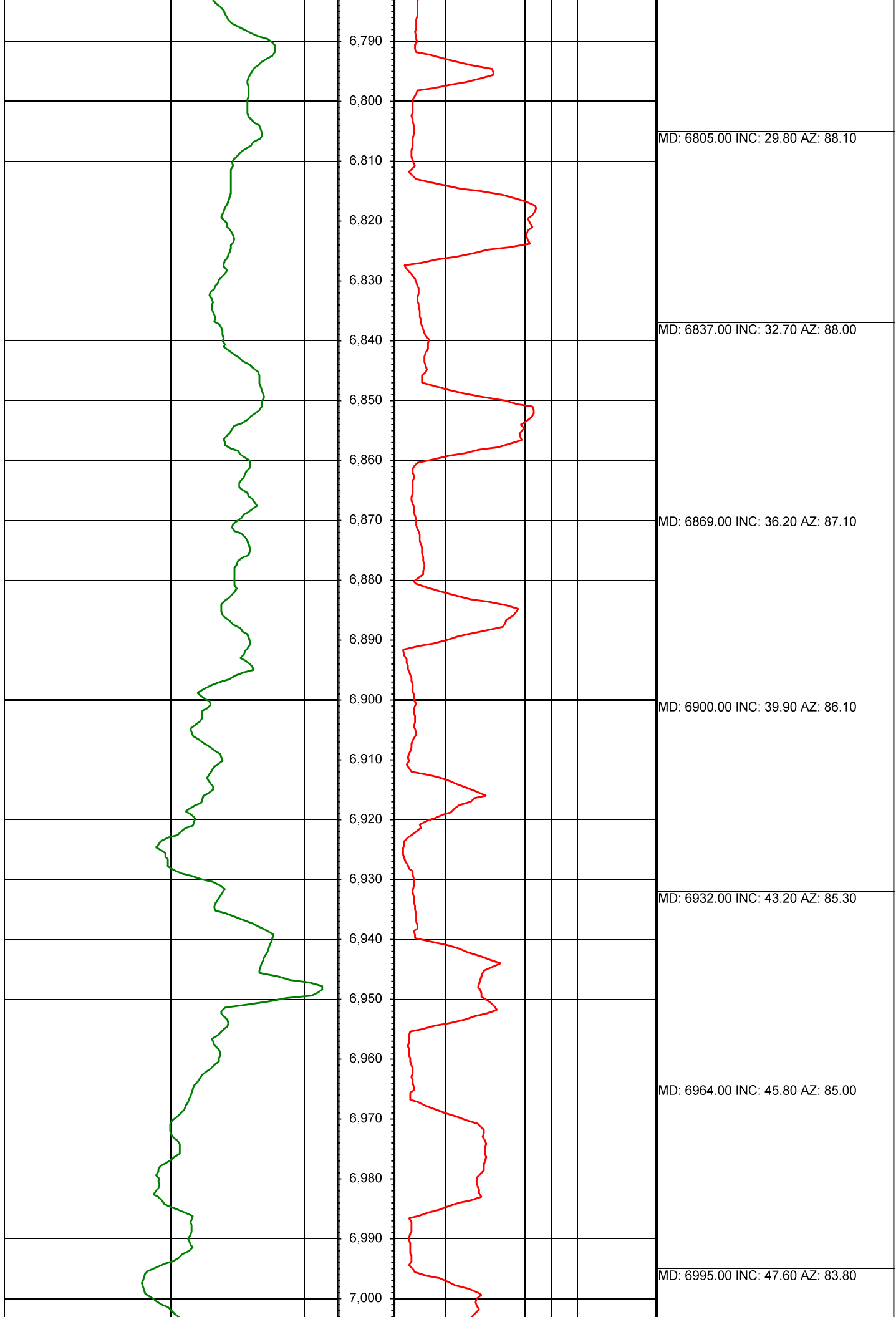
MD: 5826.00 INC: 9.80 AZ: 321.00

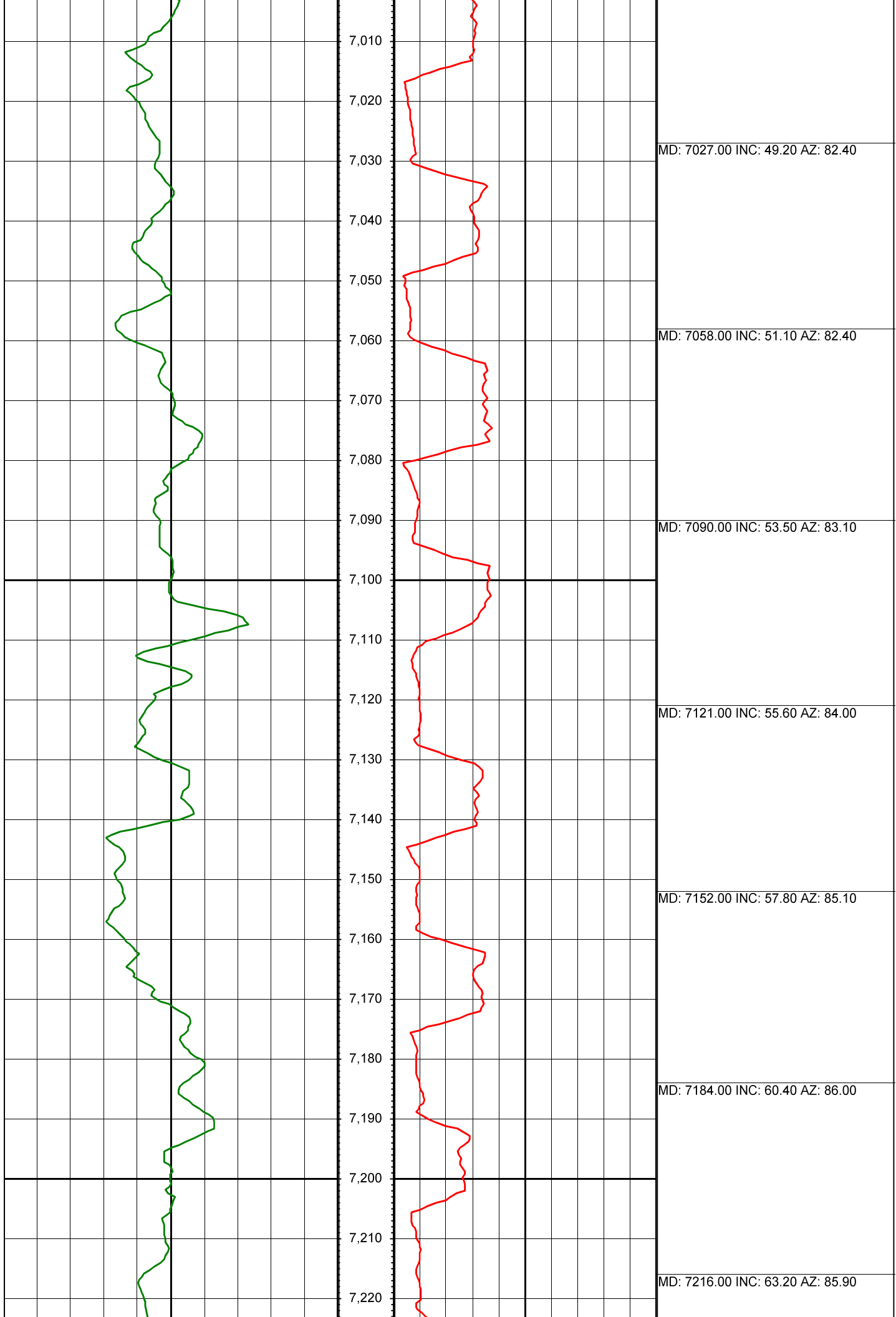


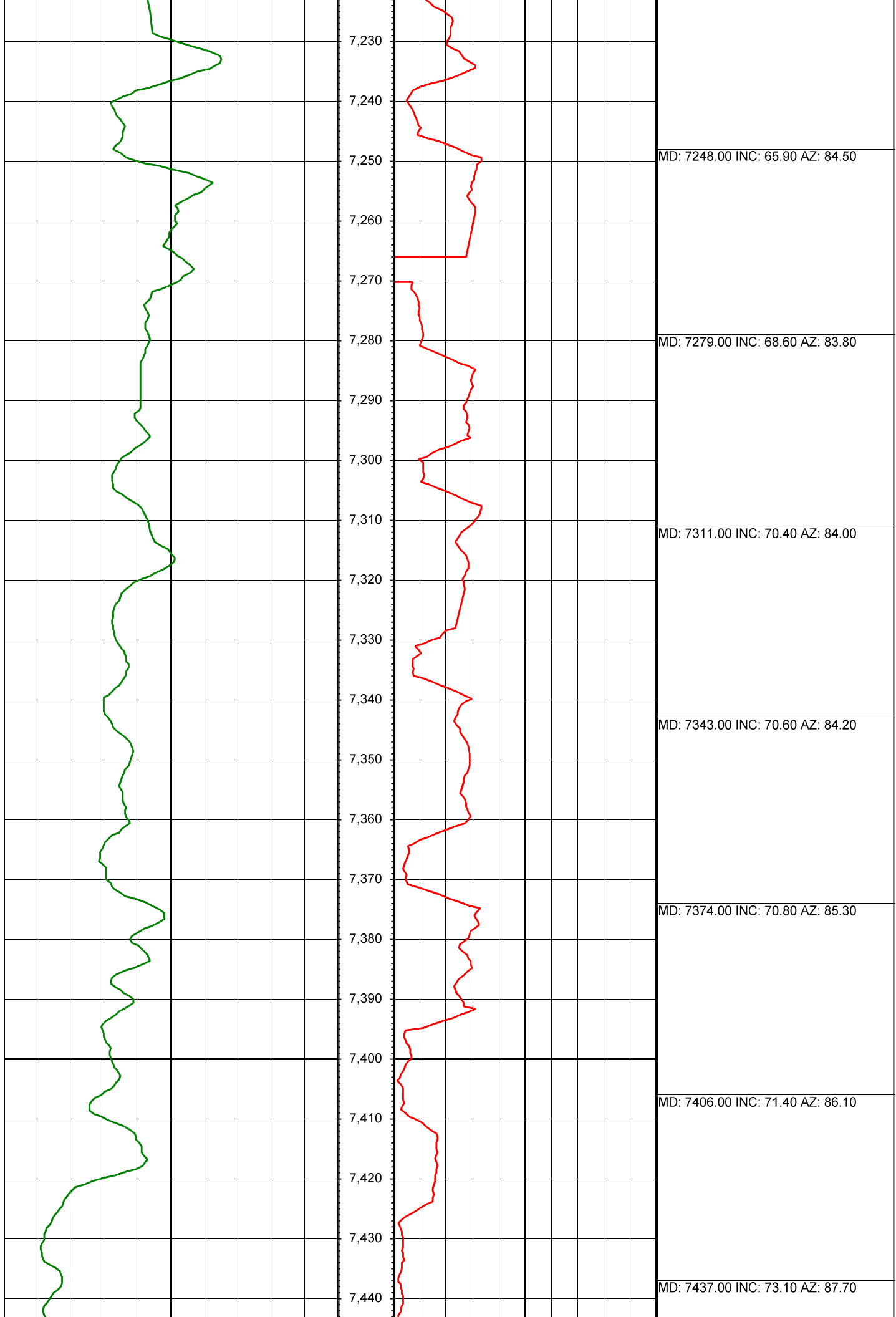


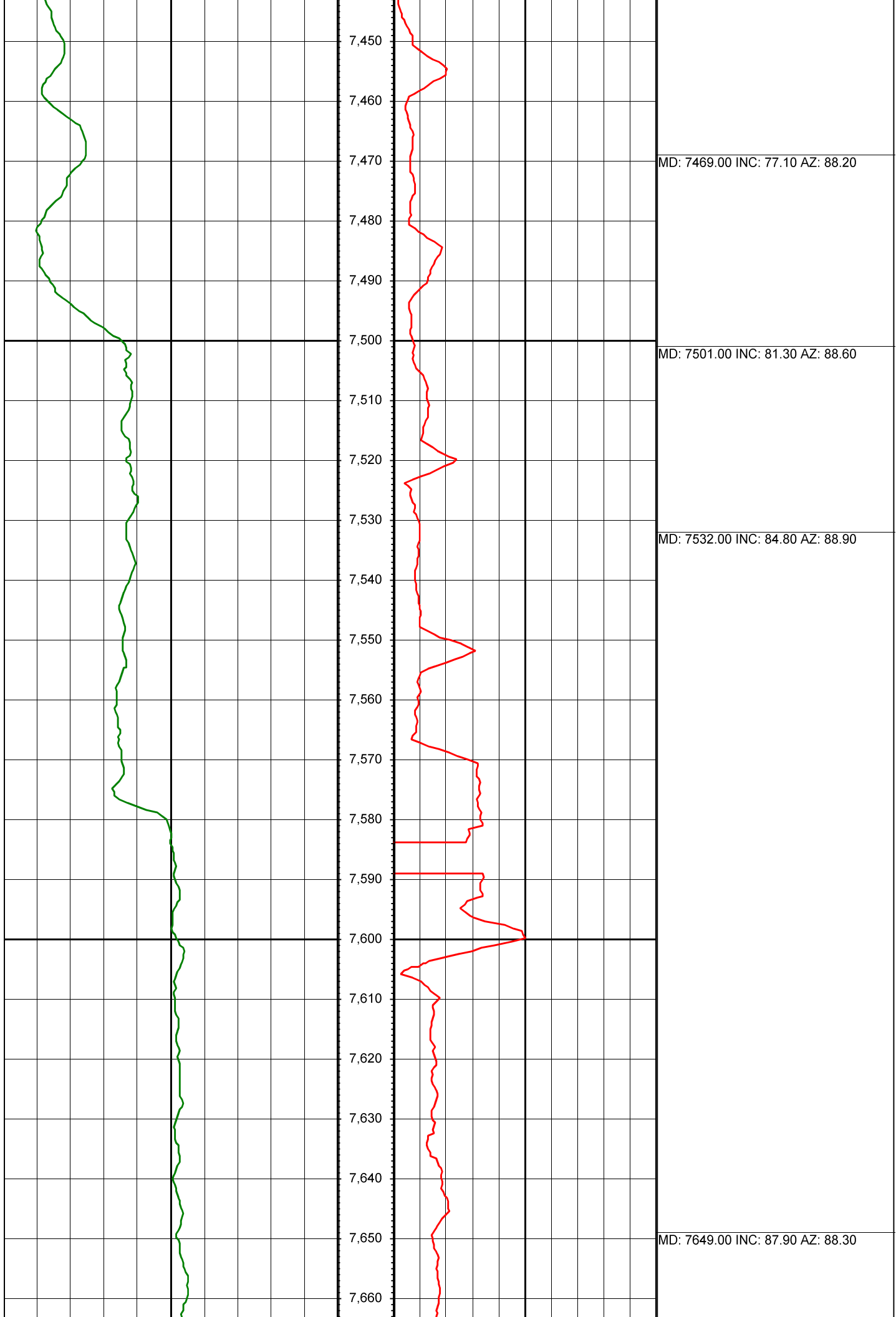














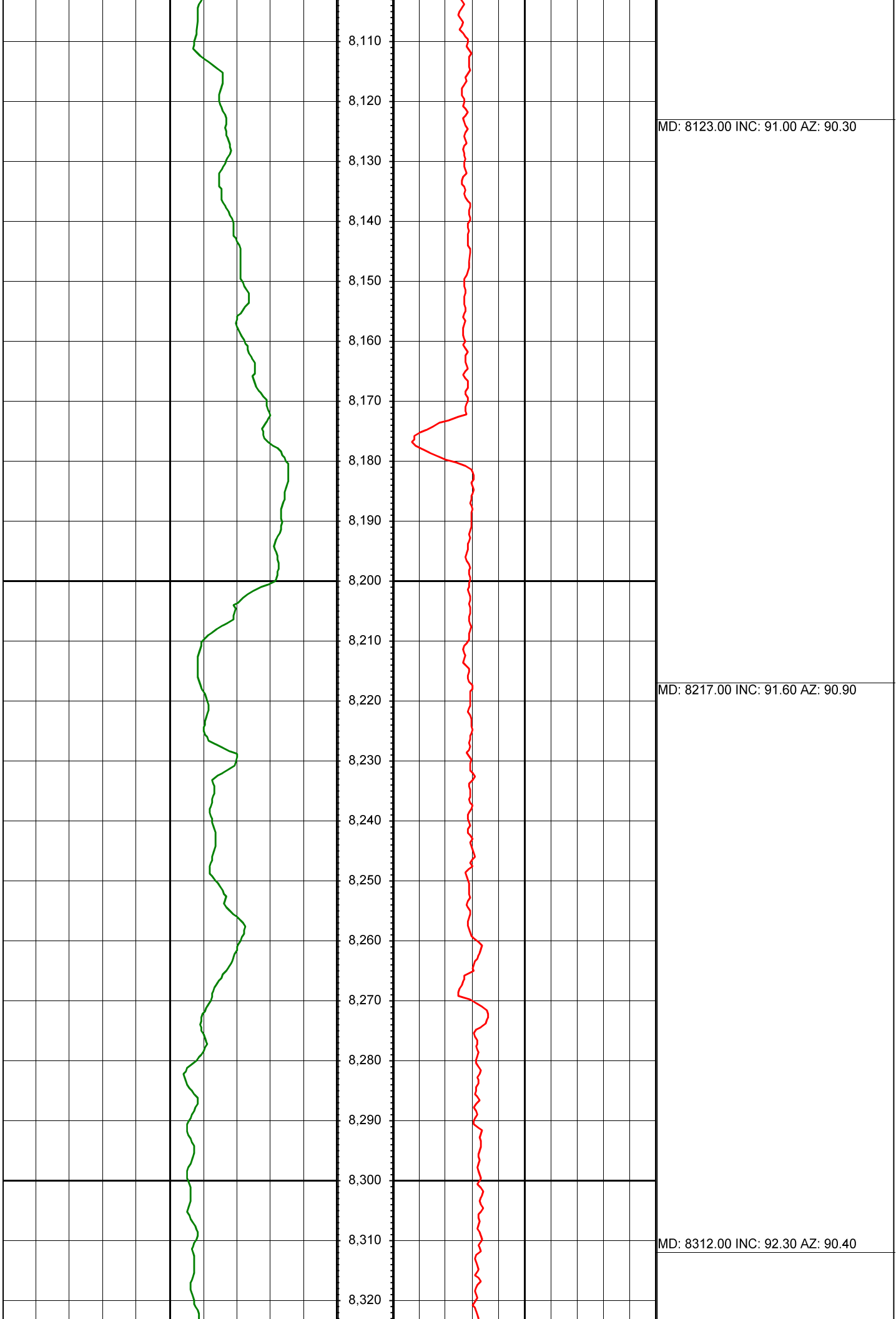
MD: 7744.00 INC: 86.20 AZ: 89.10

MD: 7839.00 INC: 86.60 AZ: 89.90



MD: 7934.00 INC: 87.70 AZ: 90.60

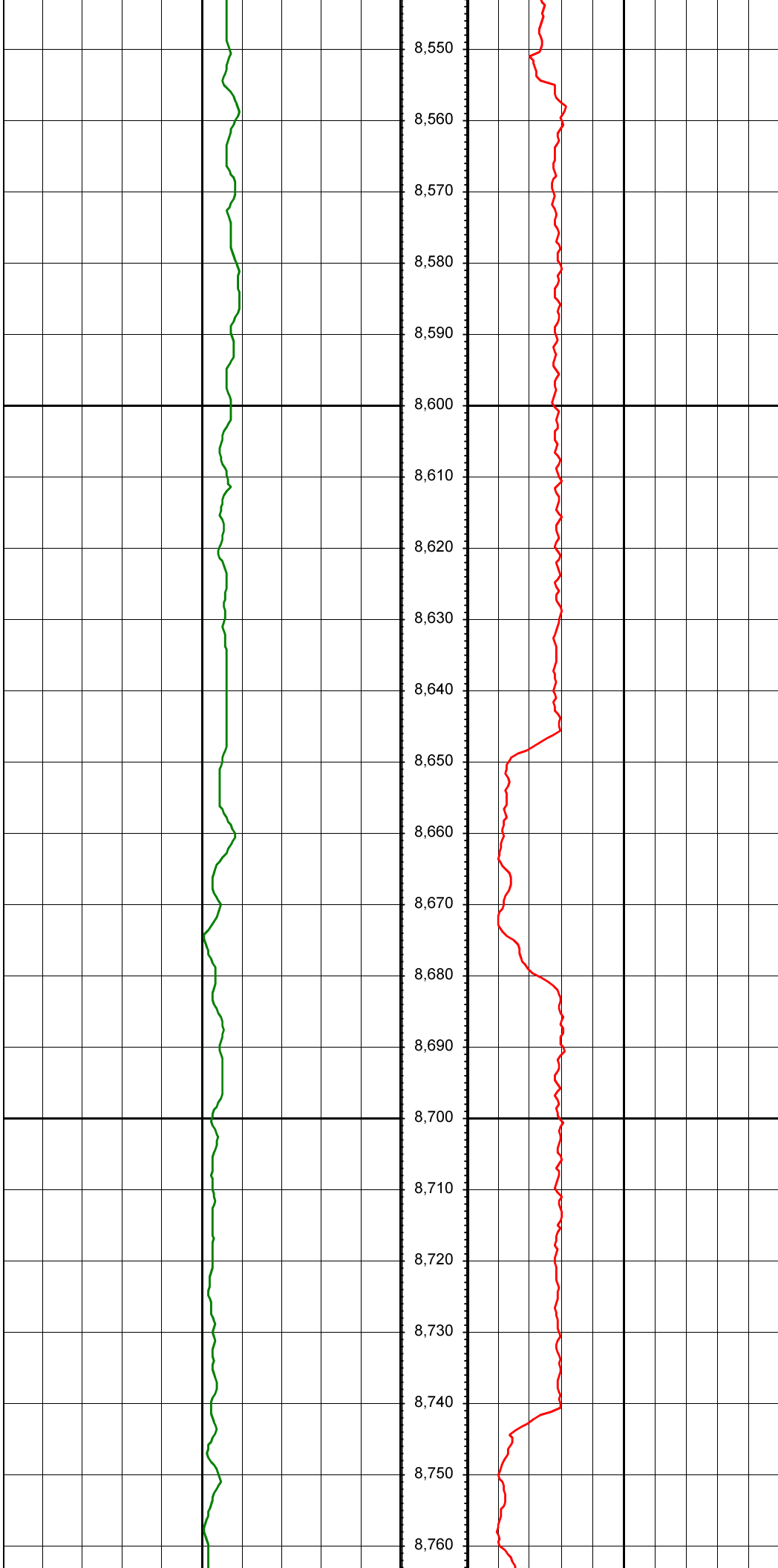
MD: 8029.00 INC: 89.80 AZ: 91.00





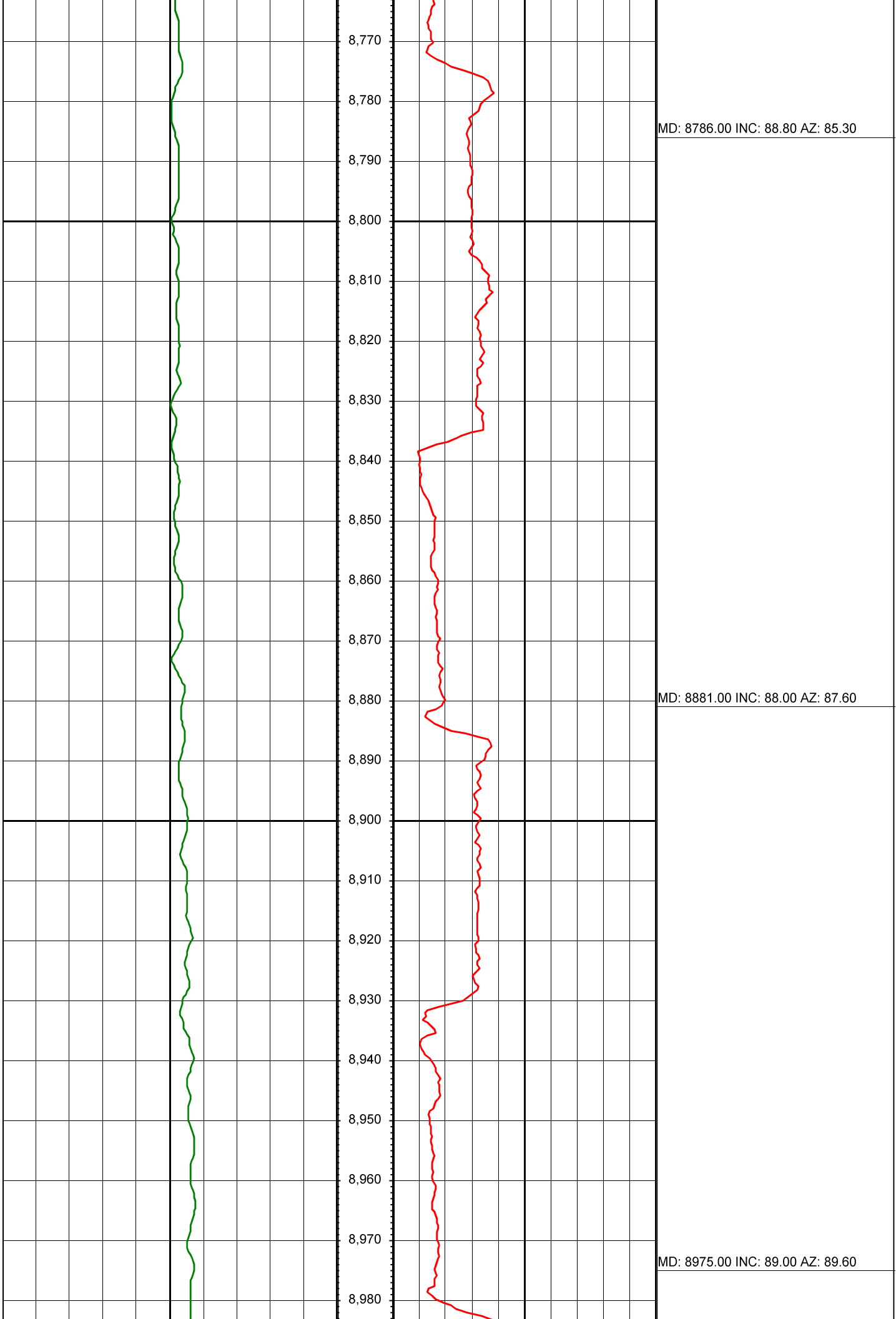
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MD: 8502.00 INC: 88.70 AZ: 86.60



MD: 8597.00 INC: 87.40 AZ: 83.10

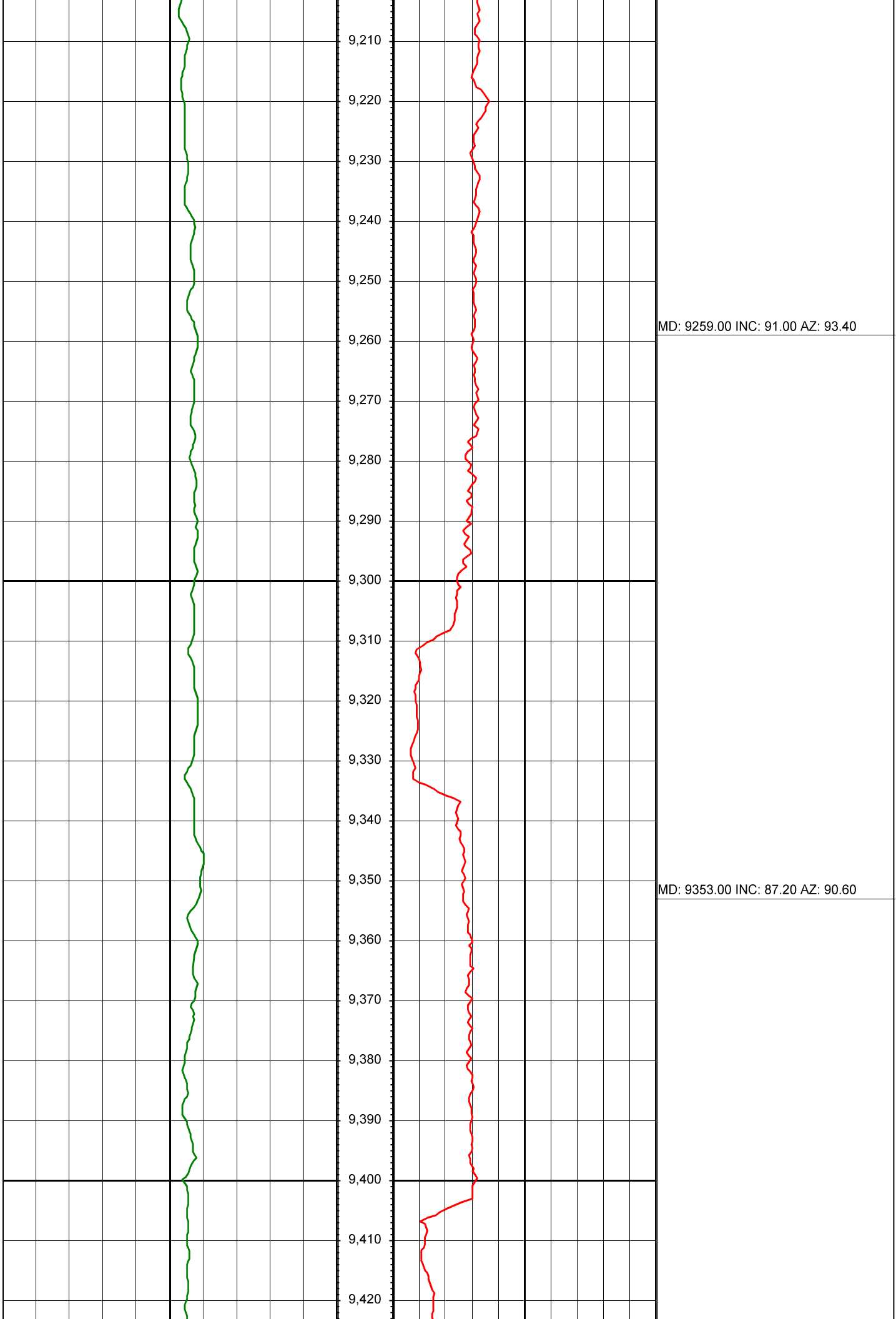
MD: 8691.00 INC: 88.00 AZ: 84.40

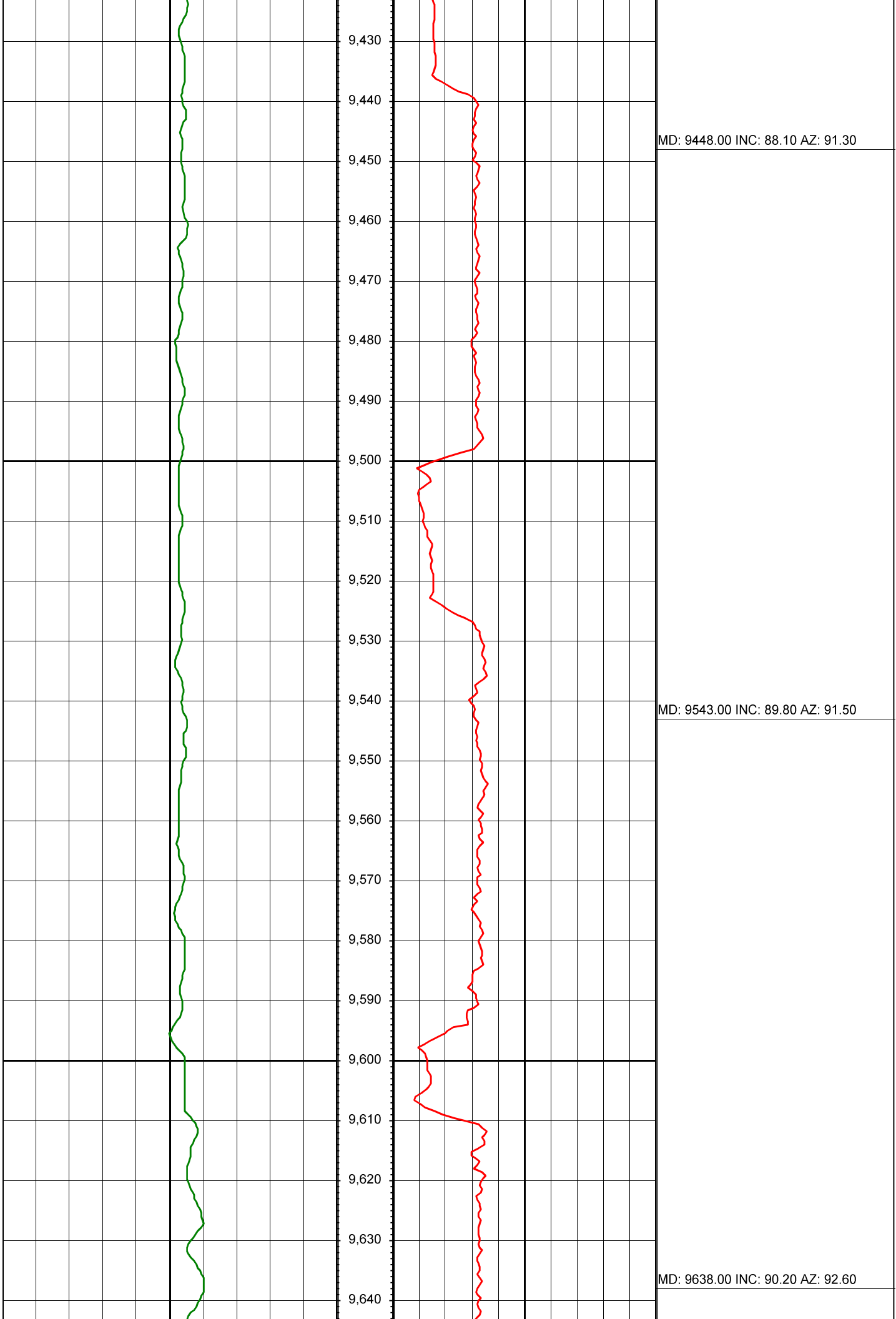


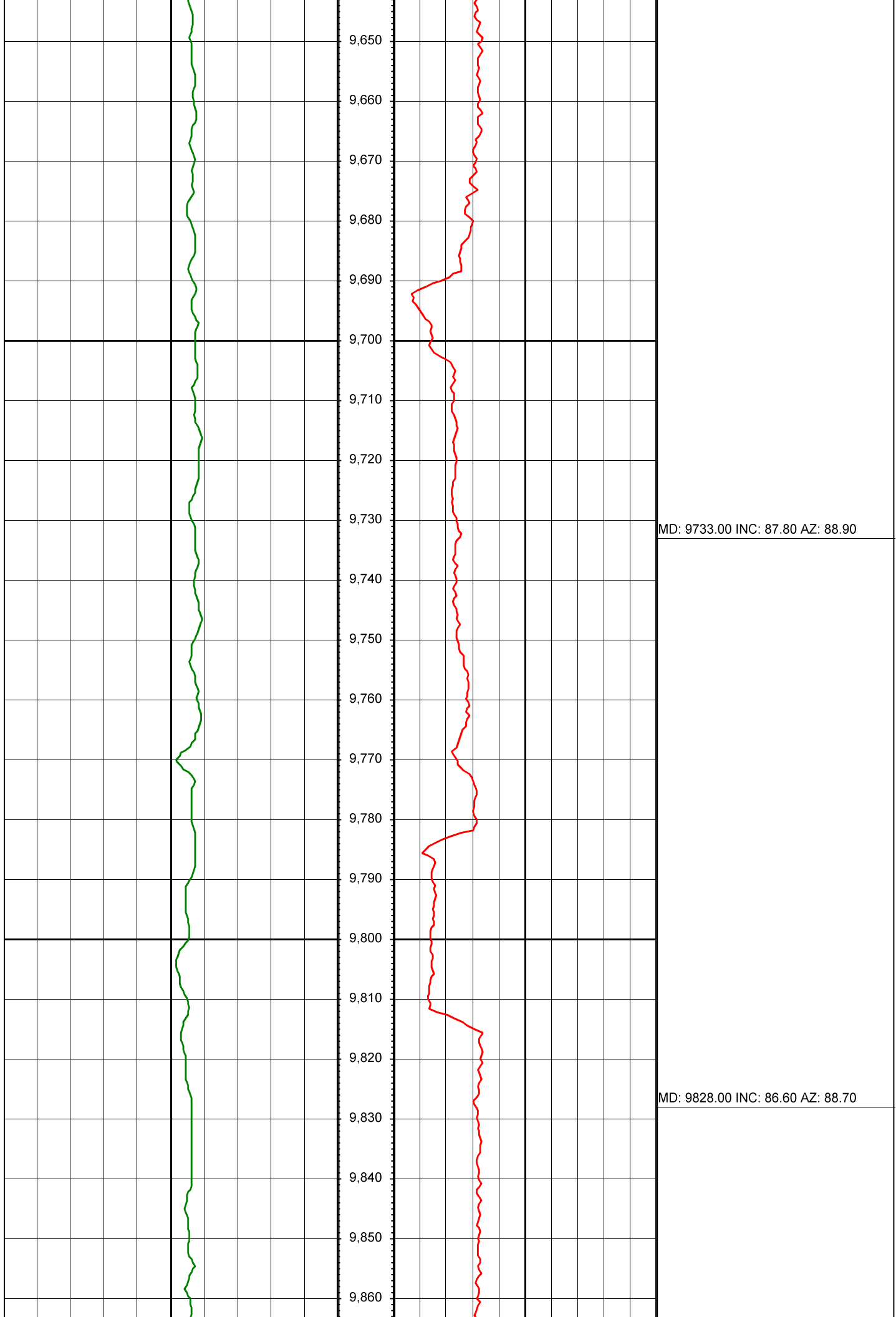


MD: 9070.00 INC: 90.00 AZ: 92.80

MD: 9165.00 INC: 90.40 AZ: 93.80



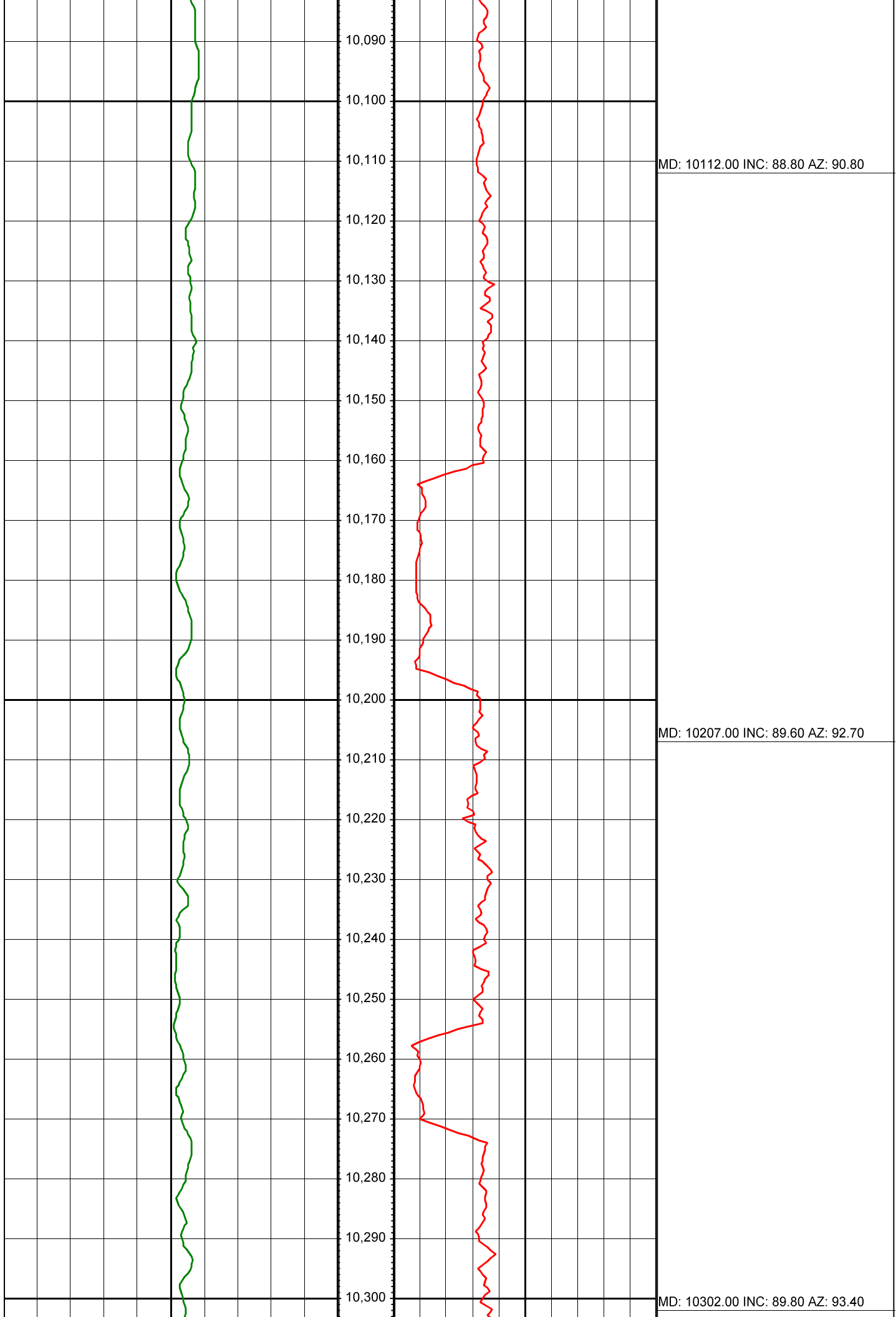


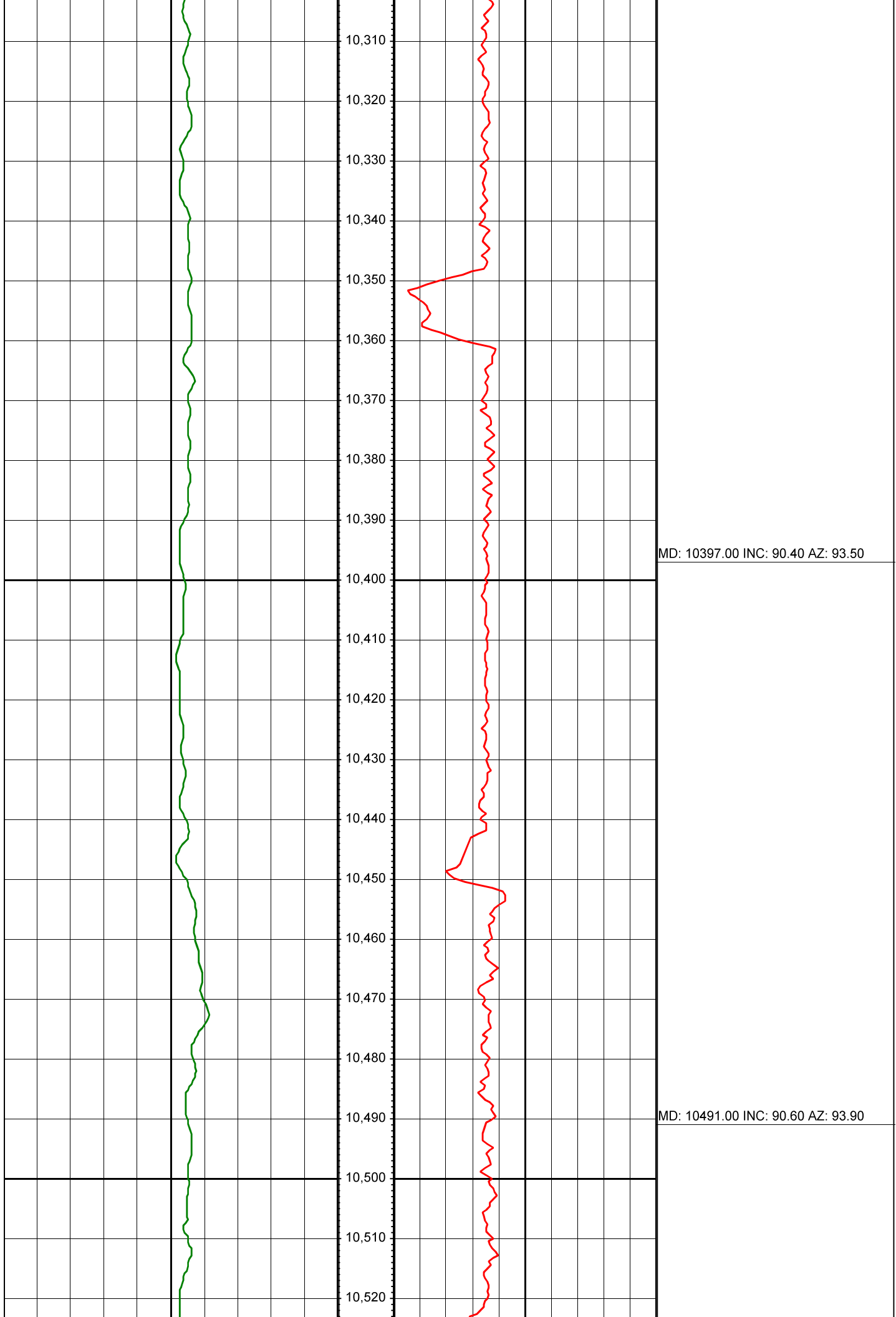




MD: 9923.00 INC: 88.40 AZ: 90.10

MD: 10018.00 INC: 89.10 AZ: 91.70







MD: 10586.00 INC: 90.50 AZ: 93.50

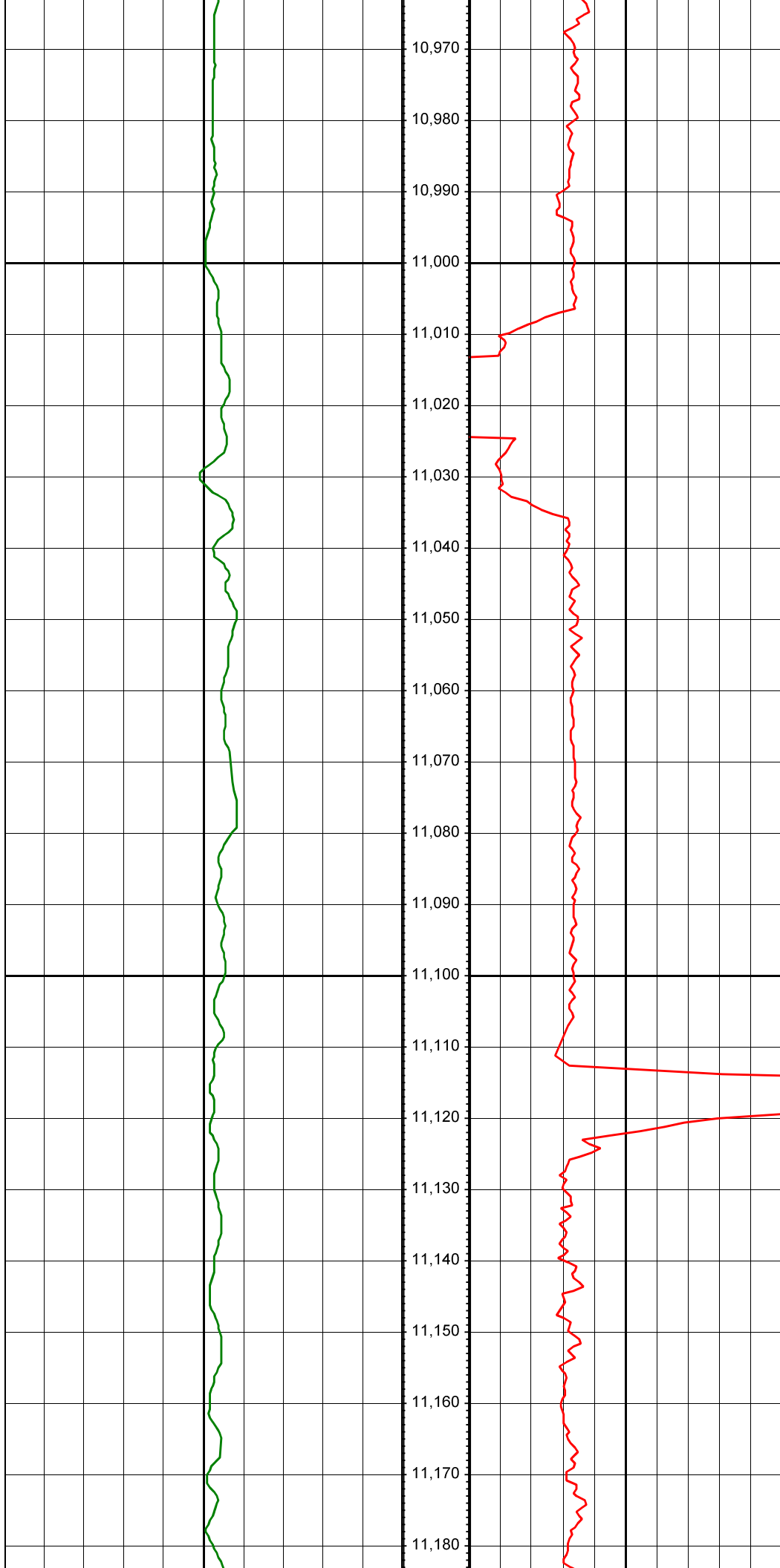
MD: 10682.00 INC: 89.60 AZ: 93.00



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MD: 10777.00 INC: 88.30 AZ: 91.70

MD: 10871.00 INC: 87.60 AZ: 89.80



MD: 10966.00 INC: 88.00 AZ: 88.90

MD: 11061.00 INC: 89.10 AZ: 88.00

MD: 11155.00 INC: 89.10 AZ: 87.60

