



CATHEDRAL

Cathedral Energy Services
1949 North Pyrite Road
Casper, Wyoming 82604

145269

5":100' - MD

9/22/2014 9:13:16 AM

Oper. Company: Encana Oil & Gas (USA) Inc.
Country: U.S.A.
State / Province: Colorado
County / Parish: Weld
Started: 08/17/2014 09:00 PM

API/UWI: 05-123-38090
Field: Wattenberg (Niobrara)
Well: Grant-Hurt 1D-14H-G268
Rig: Patterson UTI Drilling 326
Ended: 08/24/2014 09:01 AM

Gamma Ray
Section Plane: 0.00
Magnetic North: 8.53
Gamma Averaging: 7%

Personnel

Day Hand: J. Minter
Night Hand: M. Liebergot
Comp. Emp: Mike Quintana

Maximum Temperature: 235 °f

Location

Latitude: 40.139280
Longitude: -104.966630
Elev. GL: 4888
Elev. DF:
Elev. KB: 4920

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

Hole Data

Size	From	To
12-1/4	0	850
8-3/4	850	7886
6-1/8	7886	14255

Casing Data

Size	From	To
9-5/8	0	850
7	850	7786
5	7786	14255

Bit Sizes

Size	From	To
12-1/4	0	850
8-3/4	850	7886
6-1/8	7886	14255

Mud Data

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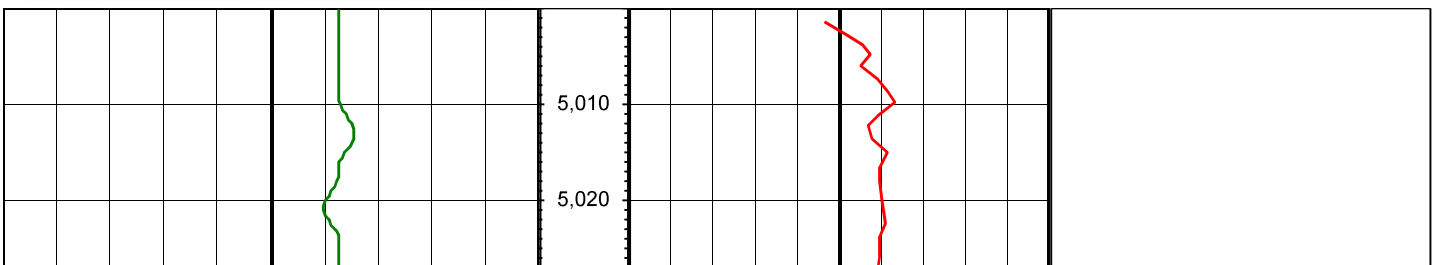
Tool Run Data

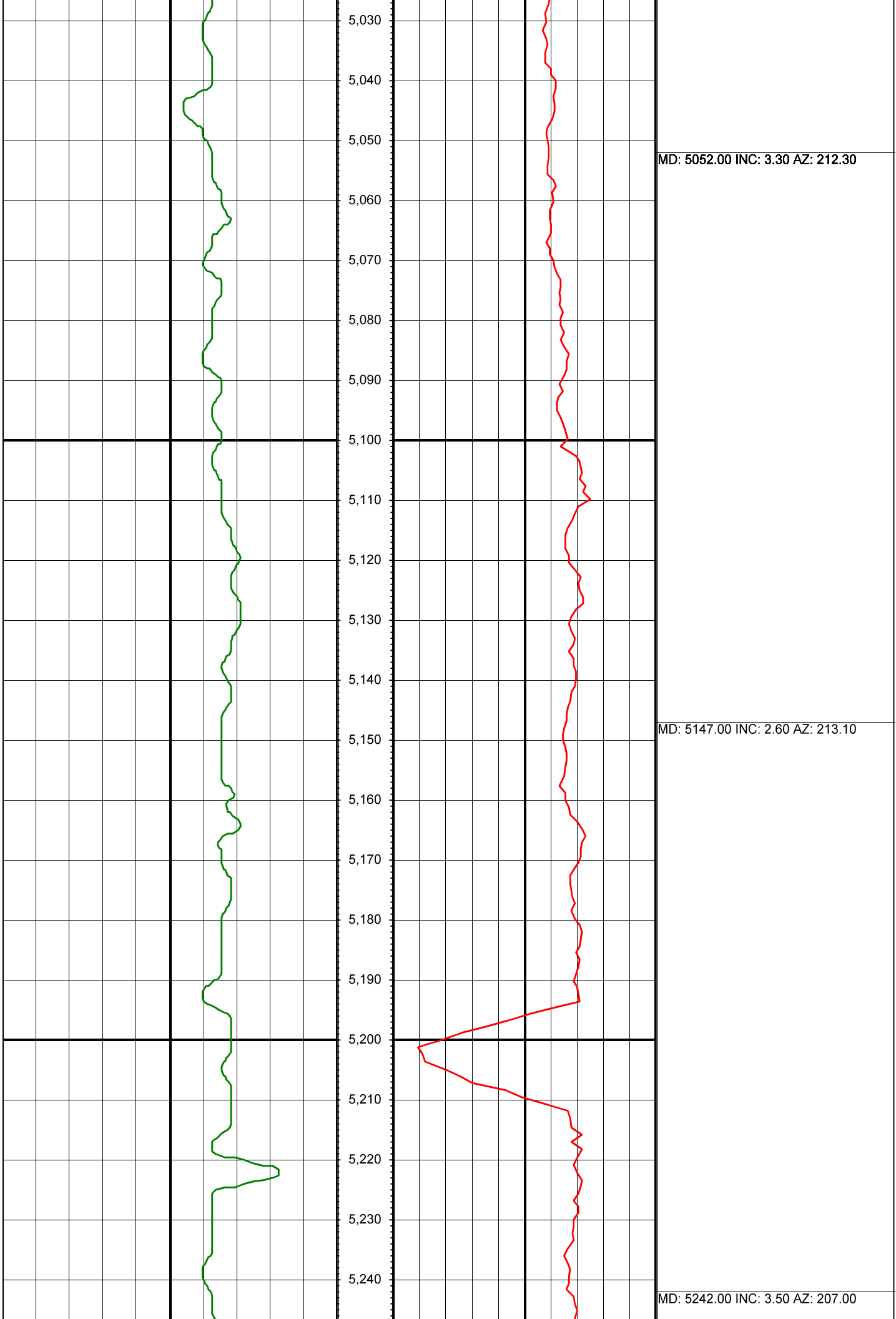
Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
2015	36.9	0	8/17/2014 10:45:05 PM	5000	8/19/2014 1:00:05 AM	7786
2016	40.23	0	8/20/2014 3:00:45 AM	7786	8/24/2014 9:00:45 AM	14255

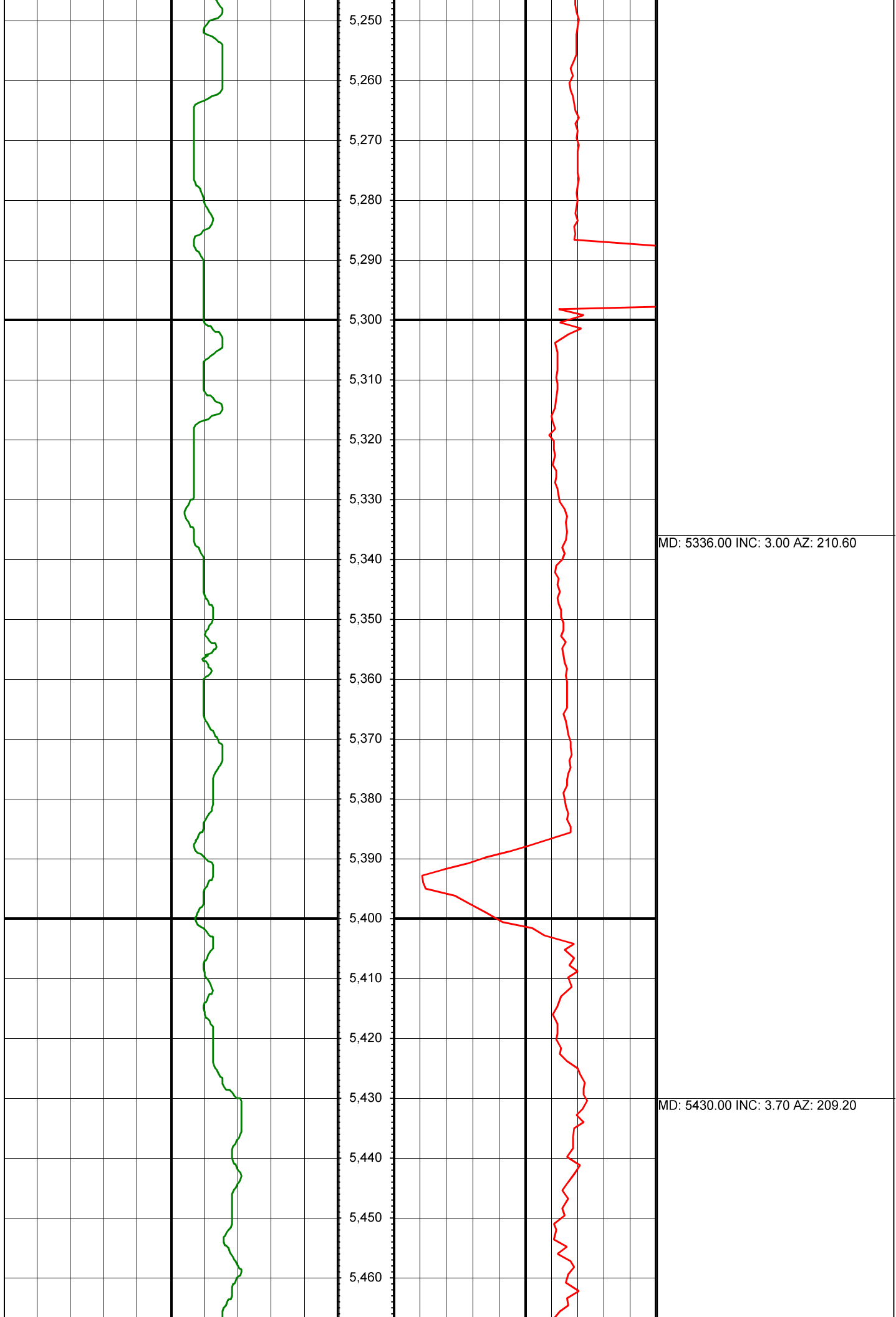
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost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

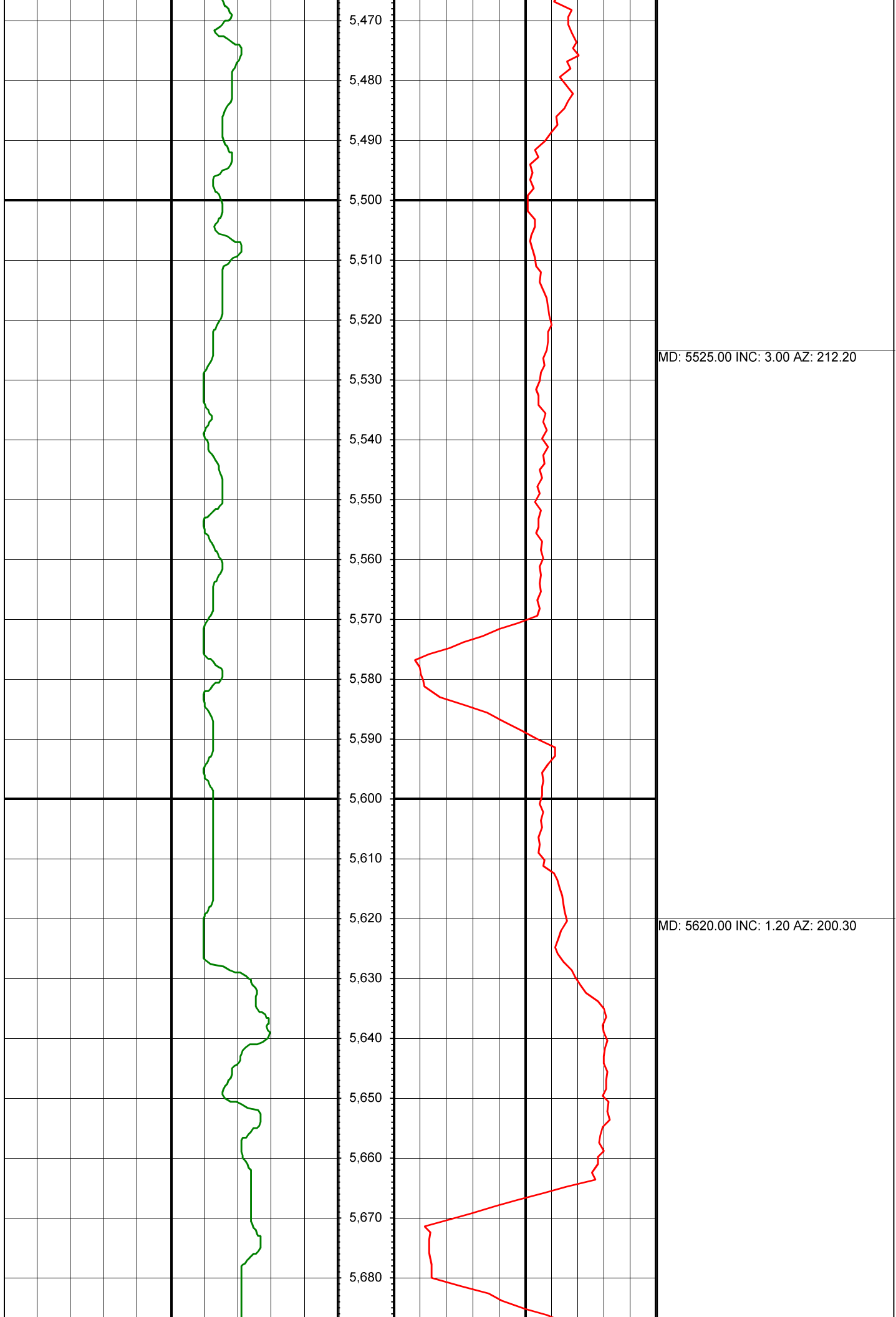
0.00 Gamma Ray (API) 150.00 MD 0.00 ROP (FT/HR) 600.00 Surveys (MD/INC/AZ)

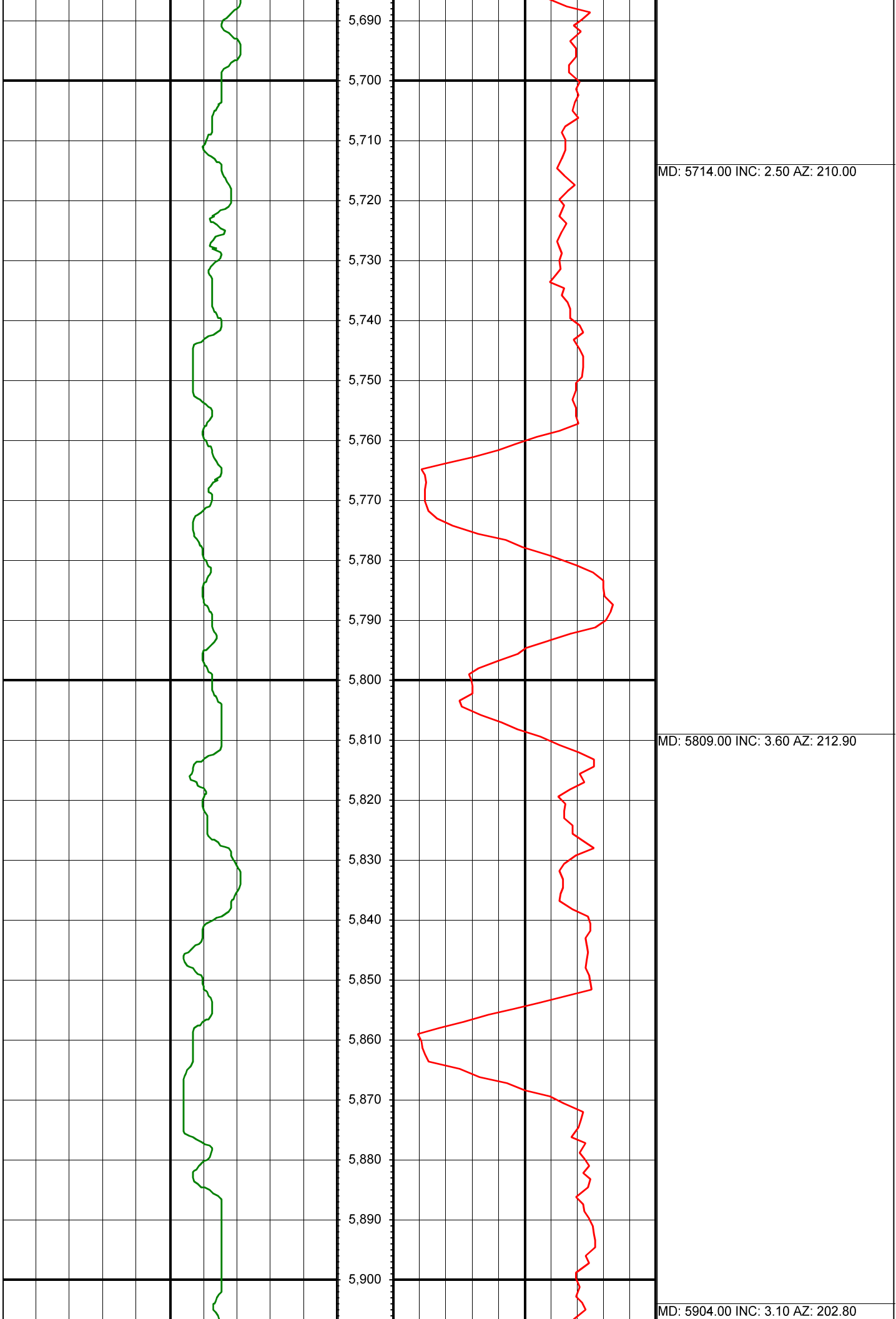
150.00 2 300.00 FT

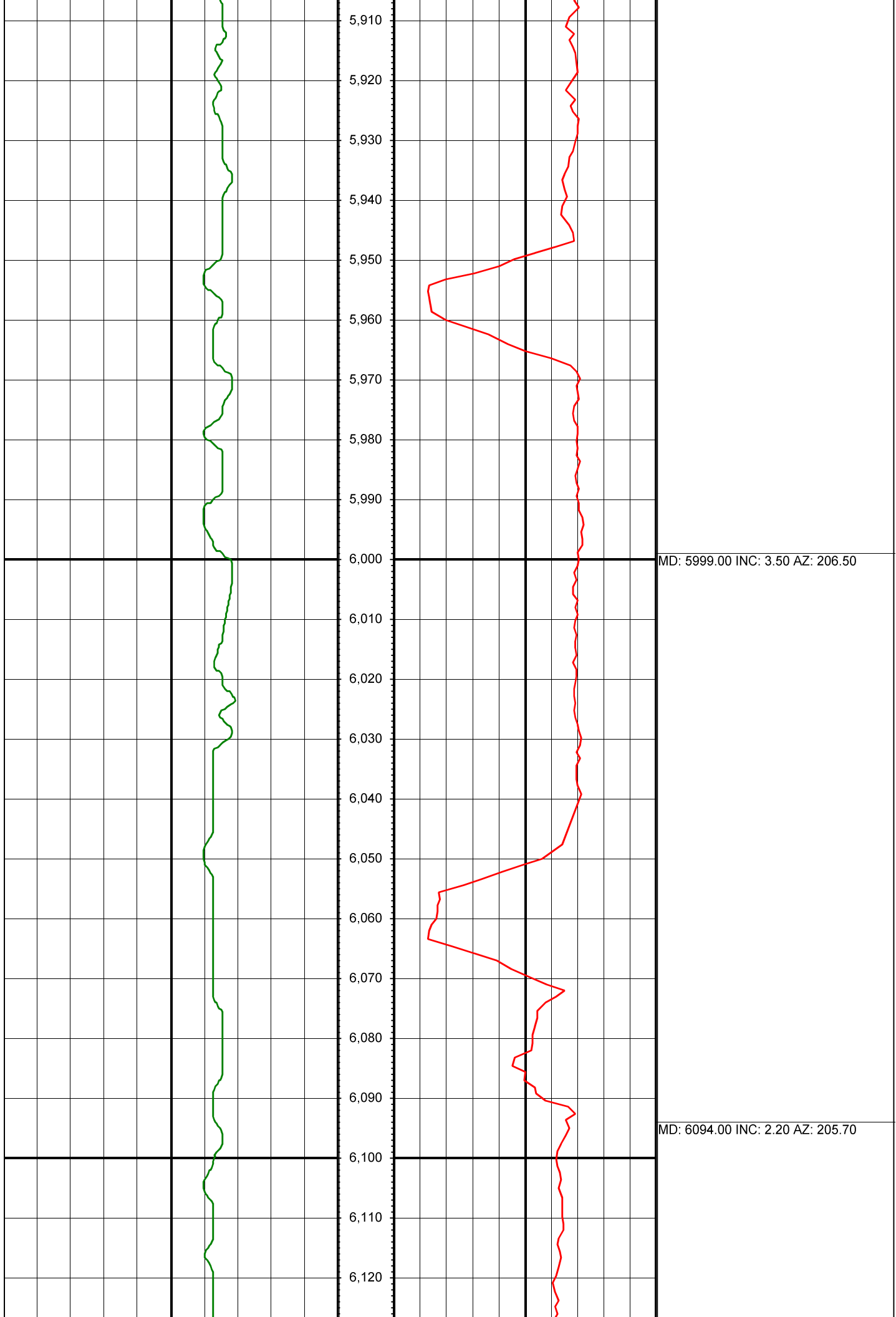


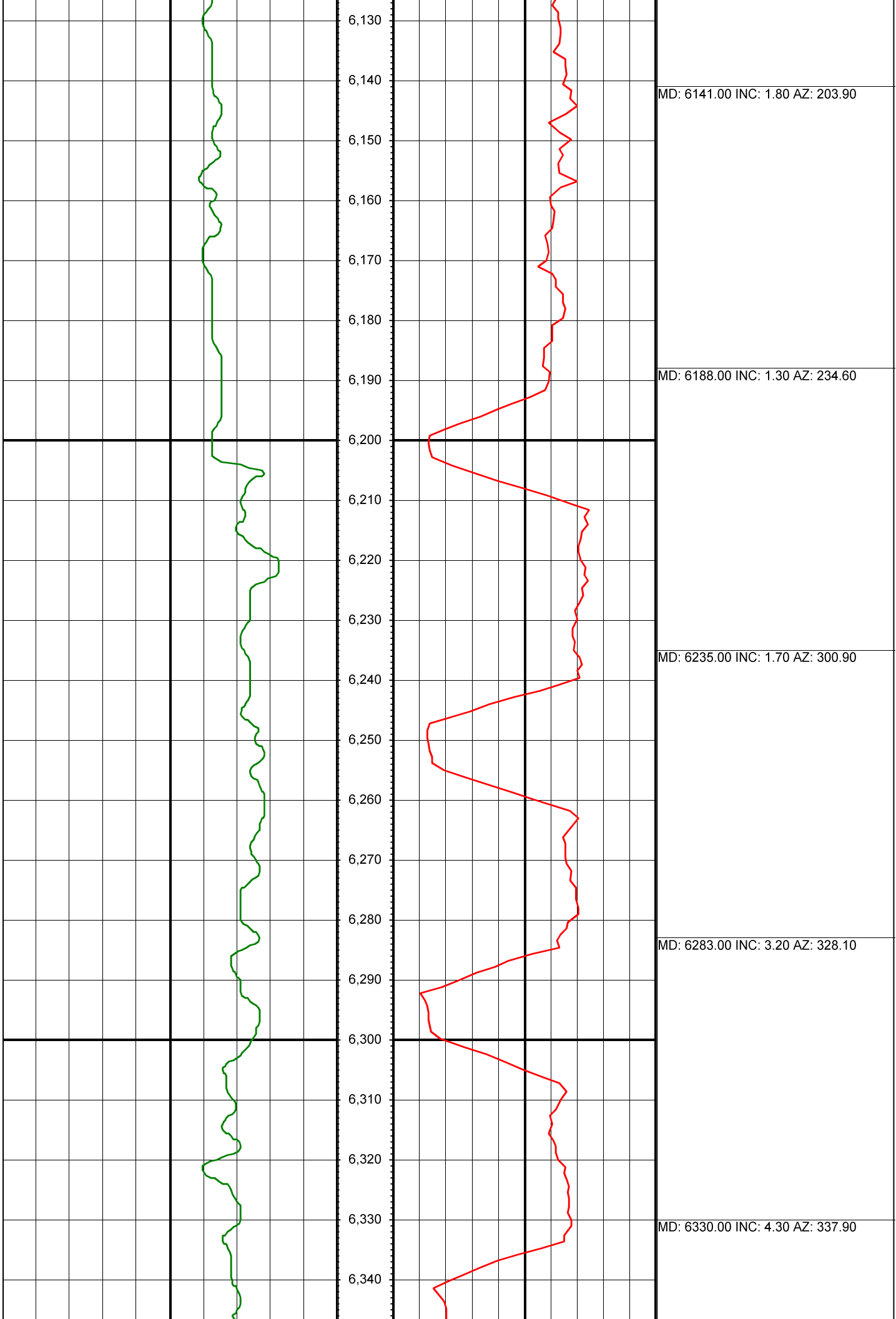


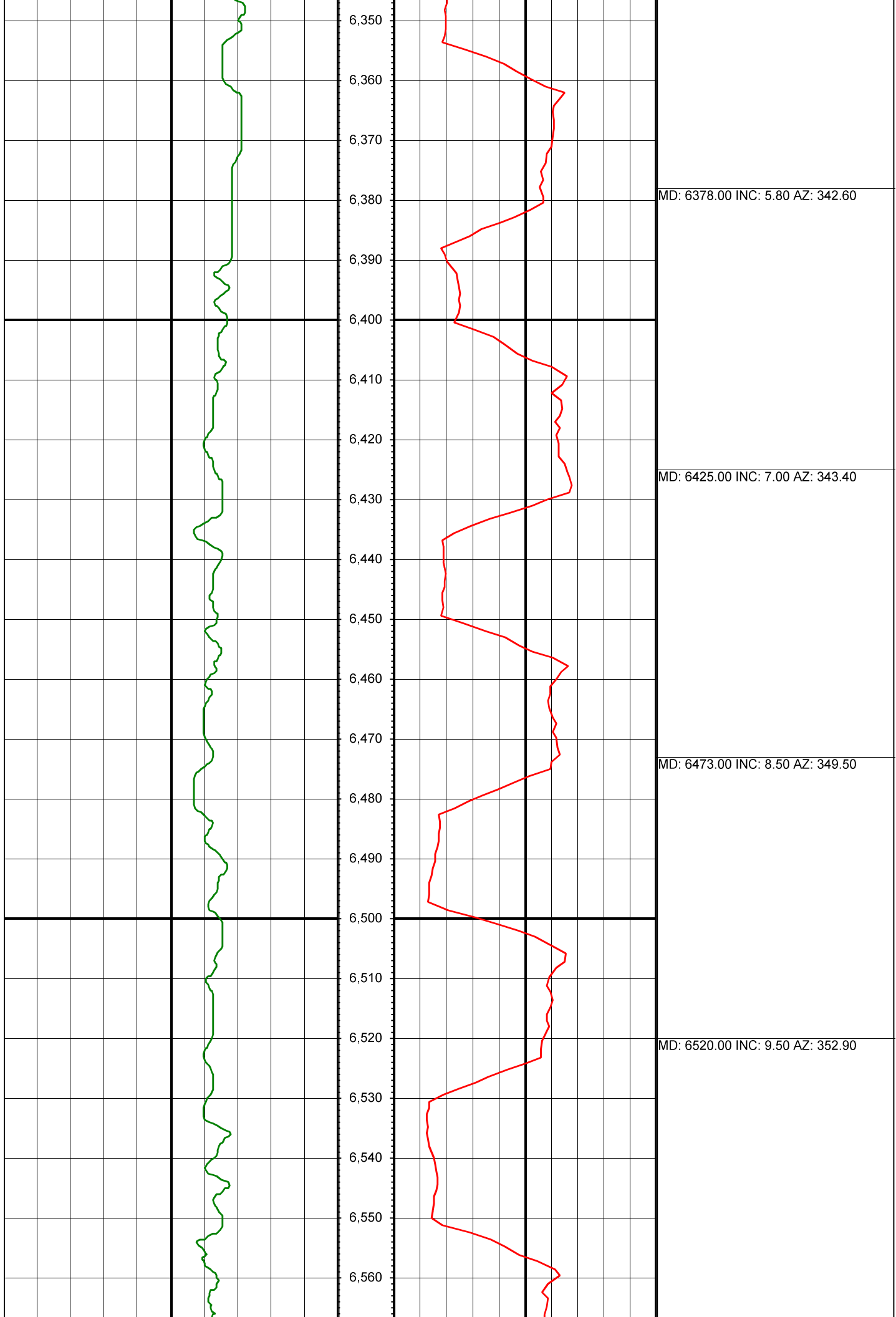


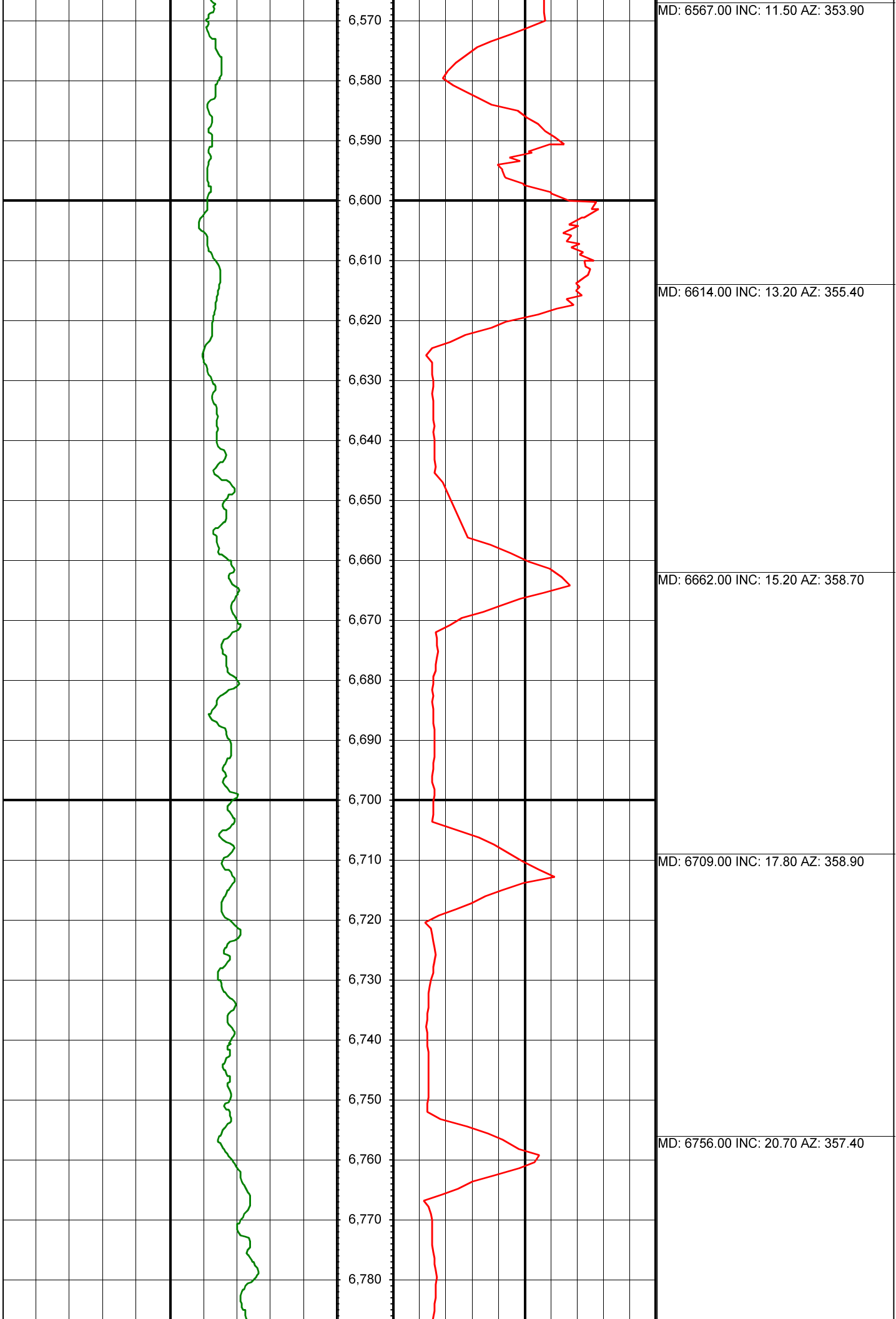


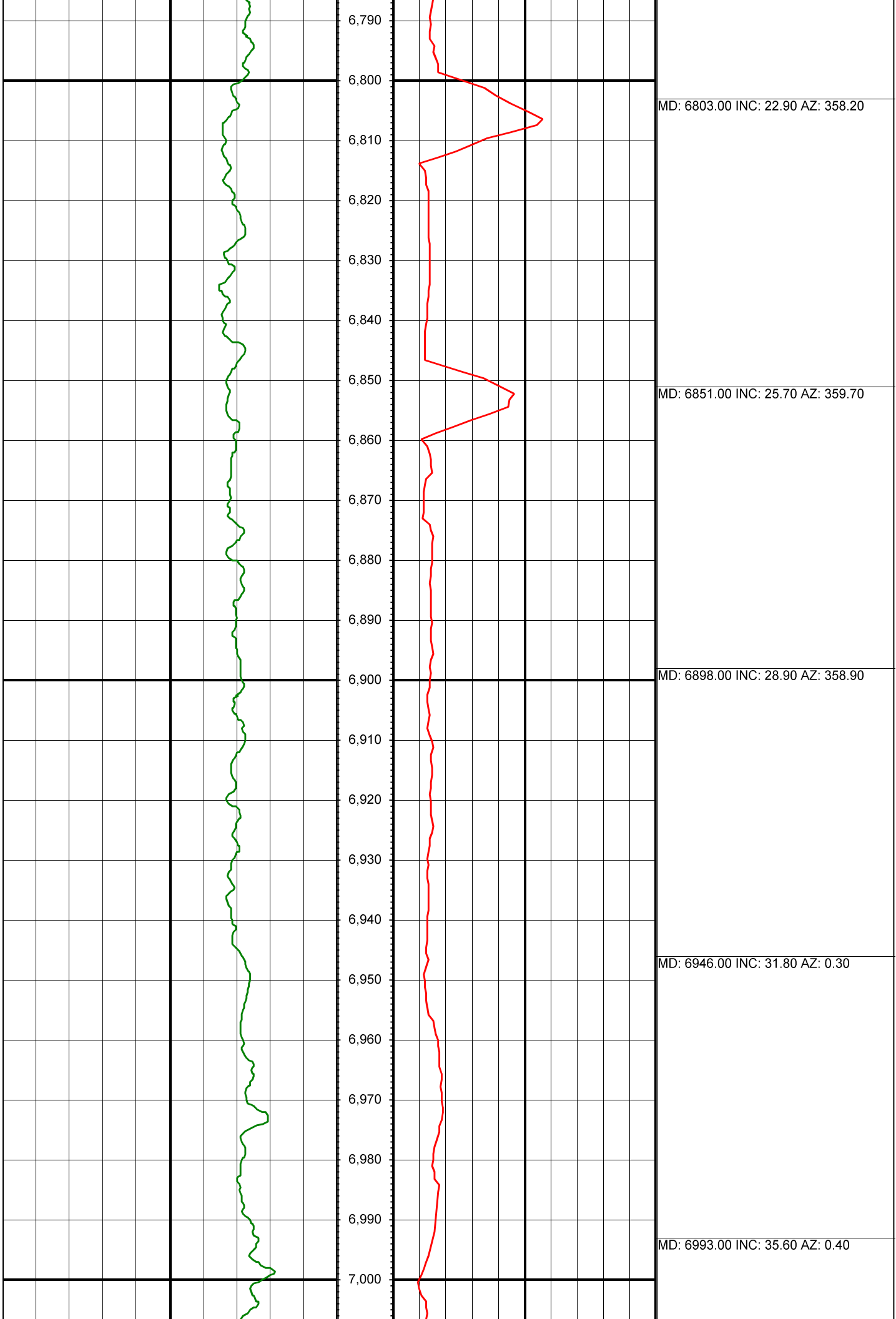


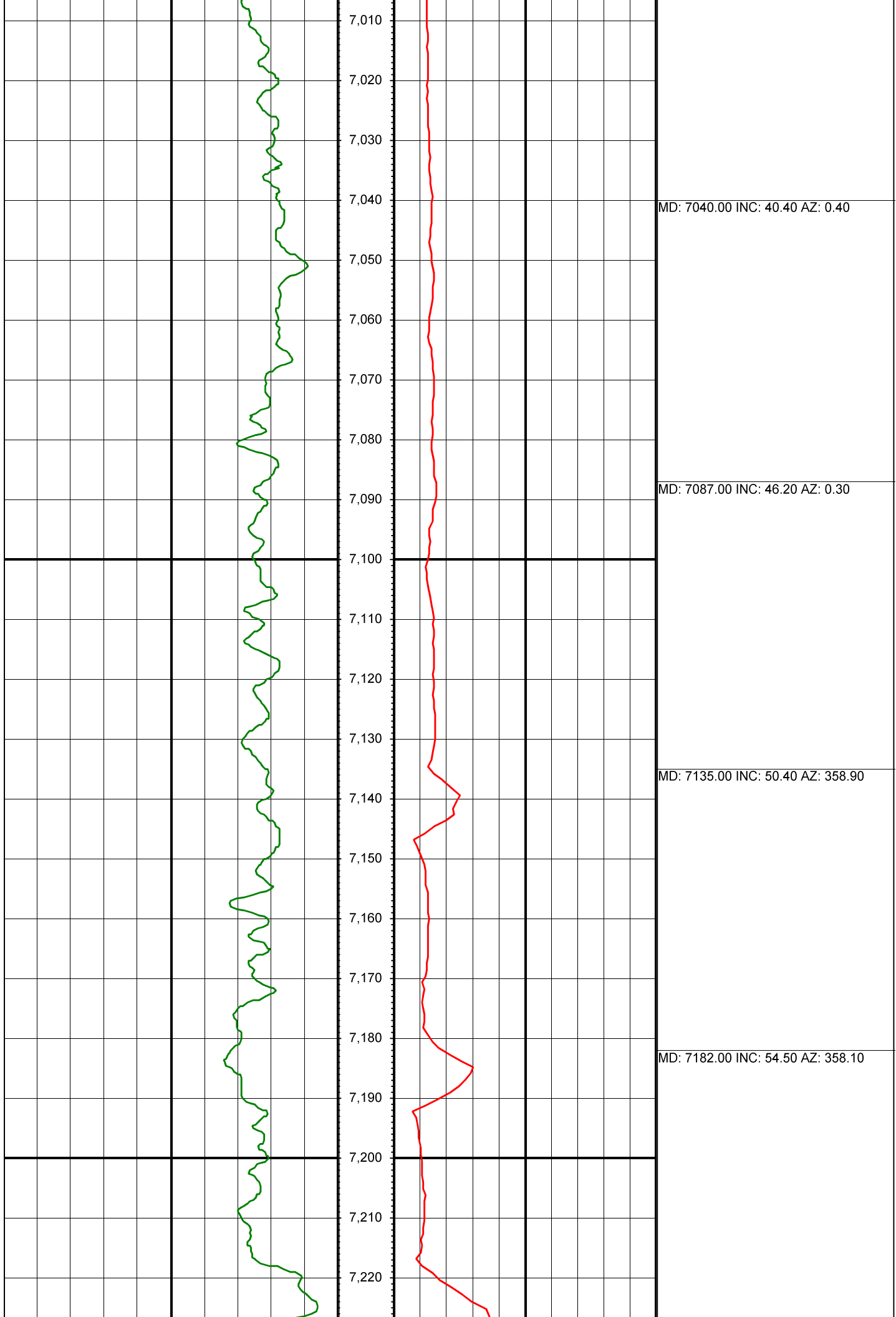


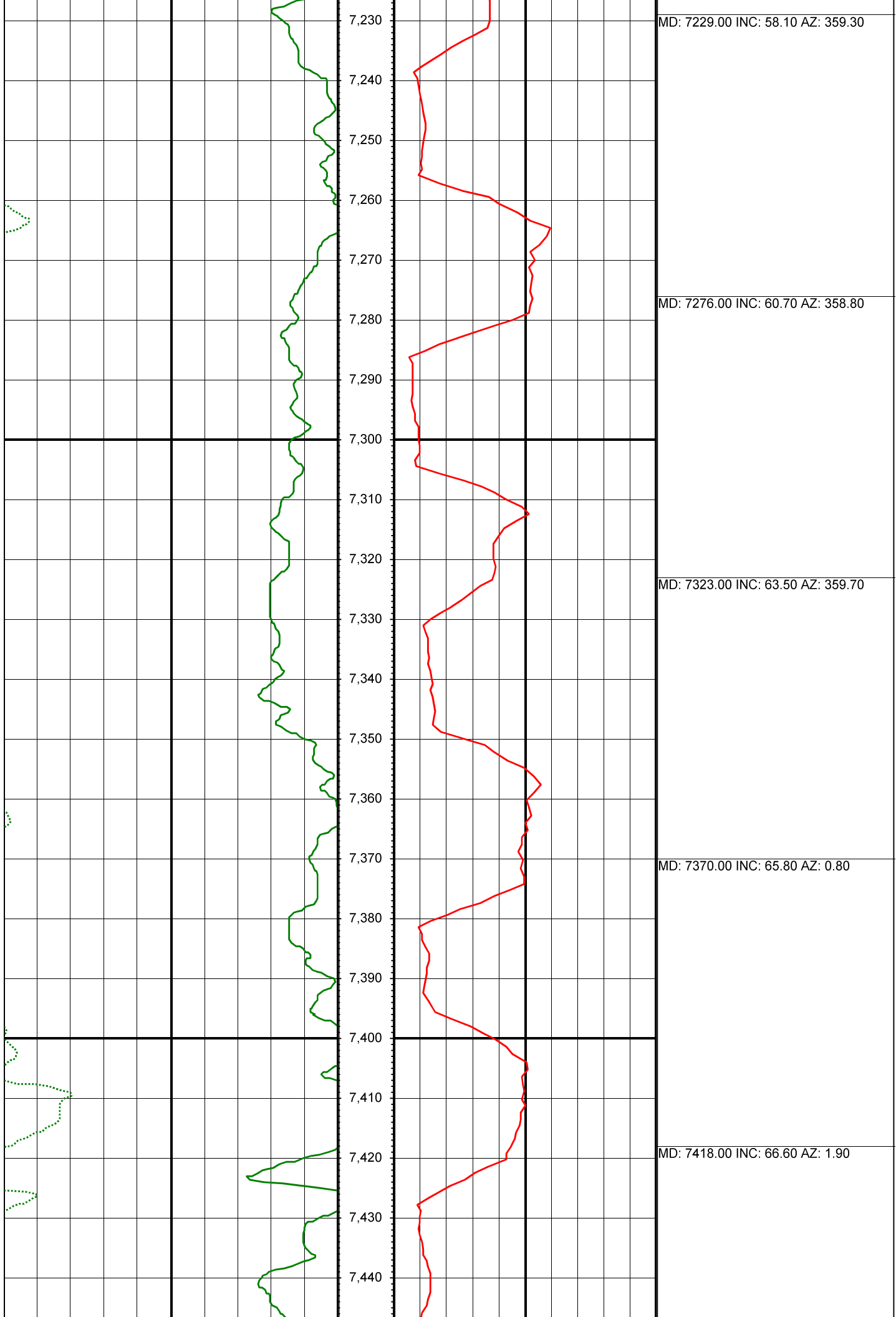












MD: 7229.00 INC: 58.10 AZ: 359.30

MD: 7276.00 INC: 60.70 AZ: 358.80

MD: 7323.00 INC: 63.50 AZ: 359.70

MD: 7370.00 INC: 65.80 AZ: 0.80

MD: 7418.00 INC: 66.60 AZ: 1.90

