



Cathedral Energy Services  
1049 Pyrite Rd.  
Casper, Wyoming  
82604

**145021**

5":100' - MD  
2/3/2014 8:17:53 AM

**Oper. Company:** Encana Oil & Gas  
**Country:** USA  
**State / Province:** CO  
**County / Parish:** Weld  
**Started:** 01/21/2014 10:00 PM

**API/UWI:** 05-123-37785-00  
**Field:** DJ Basin  
**Well:** Lochbuie 2F-31H  
**Rig:** H&P 522  
**Ended:** 01/30/2014 07:00 PM

### Personnel

**Day Hand:** Jared Nichols  
**Night Hand:** Clarke Van Oerle  
**Comp. Emp:** Cathedral Energy Service

### Location

**Latitude:** 40.014080  
**Longitude:** -104.712020  
**Elev. GL:** 5007  
**Elev. DF:** 30  
**Elev. KB:** 5037

Gamma Ray  
ROP  
TD 11,821'

### Hole Data

Size	From	To
12.25	0	866
8.75	866	7927
6.13	7927	11821

### Casing Data

Size	From	To
9 5/8	0	1508
7	0	7927
7	0	11620

### Bit Sizes

Size	From	To
12.25	0	866
8.75	866	7927
6.13	7927	11821

### Mud Data

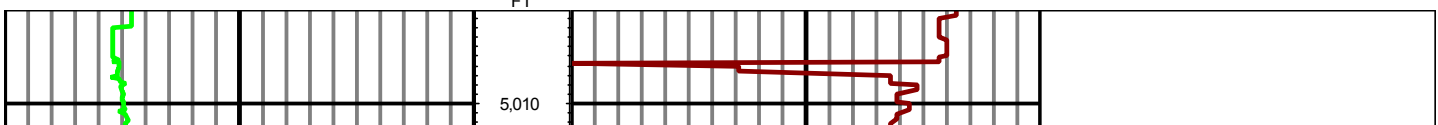
Type	Weight	Density	Viscosity	Rm	Rmf	Rmc	From	To
Water	8.4		28				0	2500
LSND	9.8		35				2501	7500
LSND	10.1		26				7501	11821

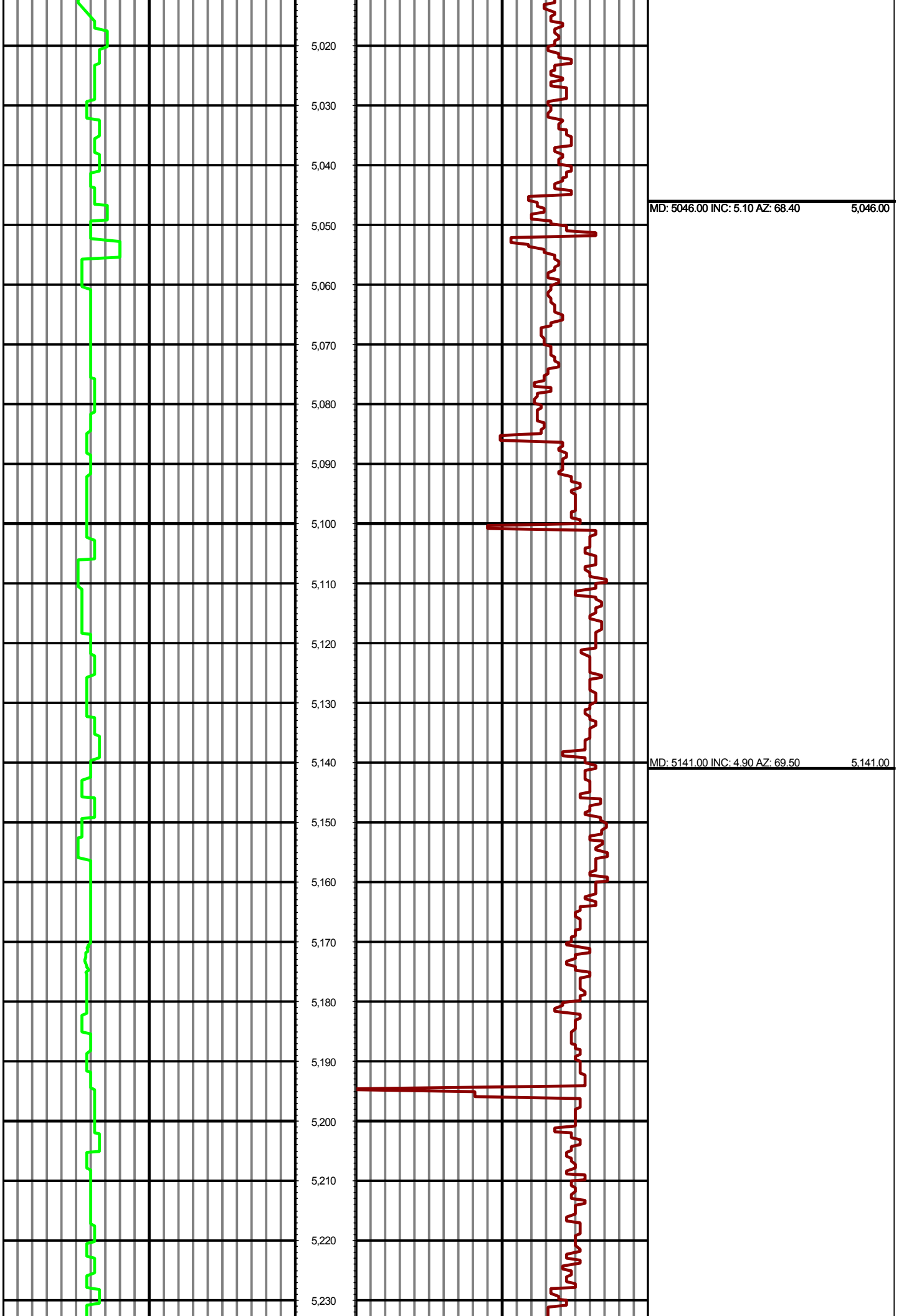
### Tool Run Data

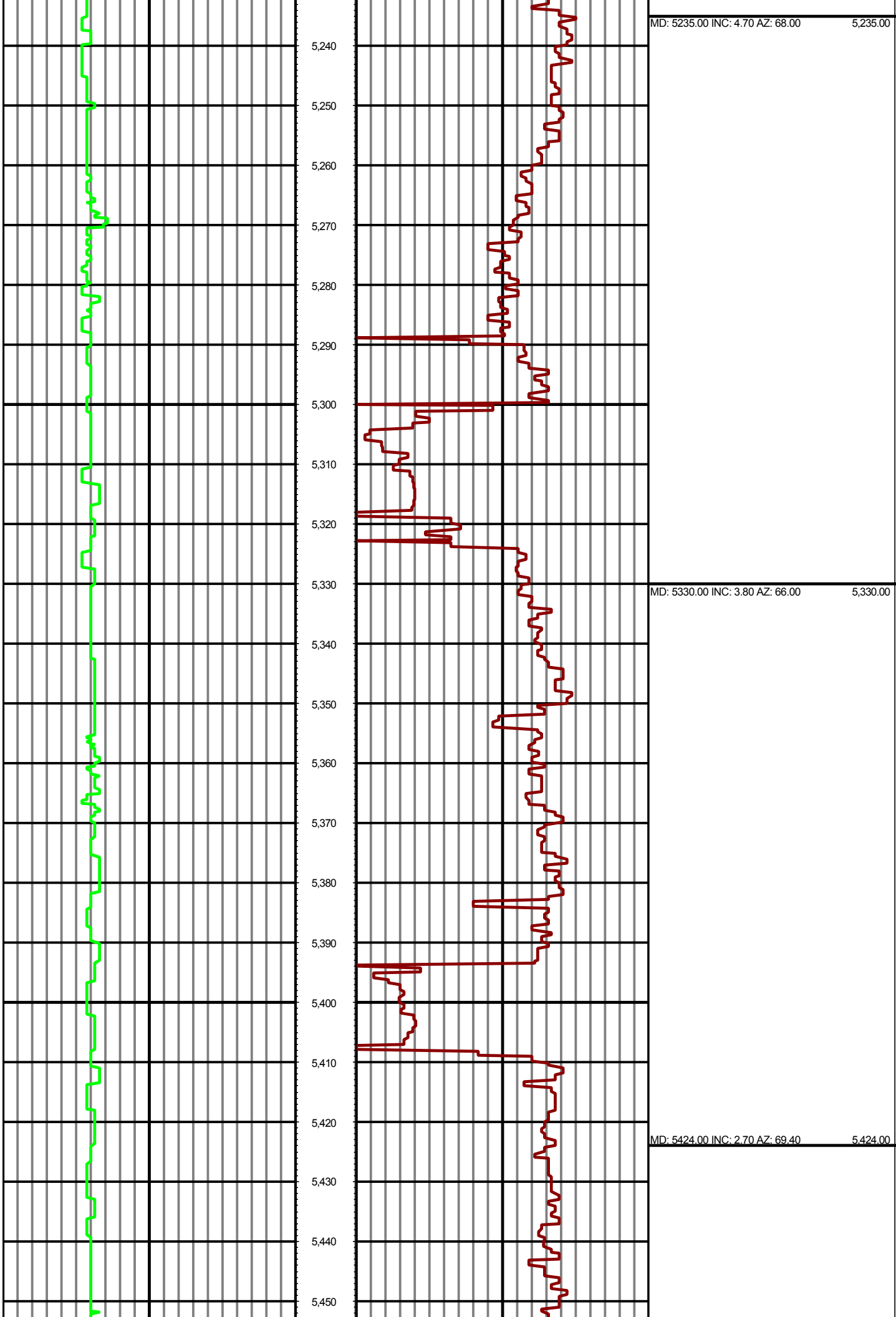
Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
235	35.54	0	1/21/2014 3:00:54 AM	1508	1/22/2014 5:00:54 AM	6991
330	40.76	0	1/22/2014 6:00:35 PM	6991	1/24/2014 5:00:35 AM	7927
330	38.32	0	1/25/2014 4:30:47 PM	7927	1/28/2014 12:00:47 AM	10524
330	38.35	0	1/28/2014 1:00:41 PM	10524	1/31/2014 9:00:41 AM	11821

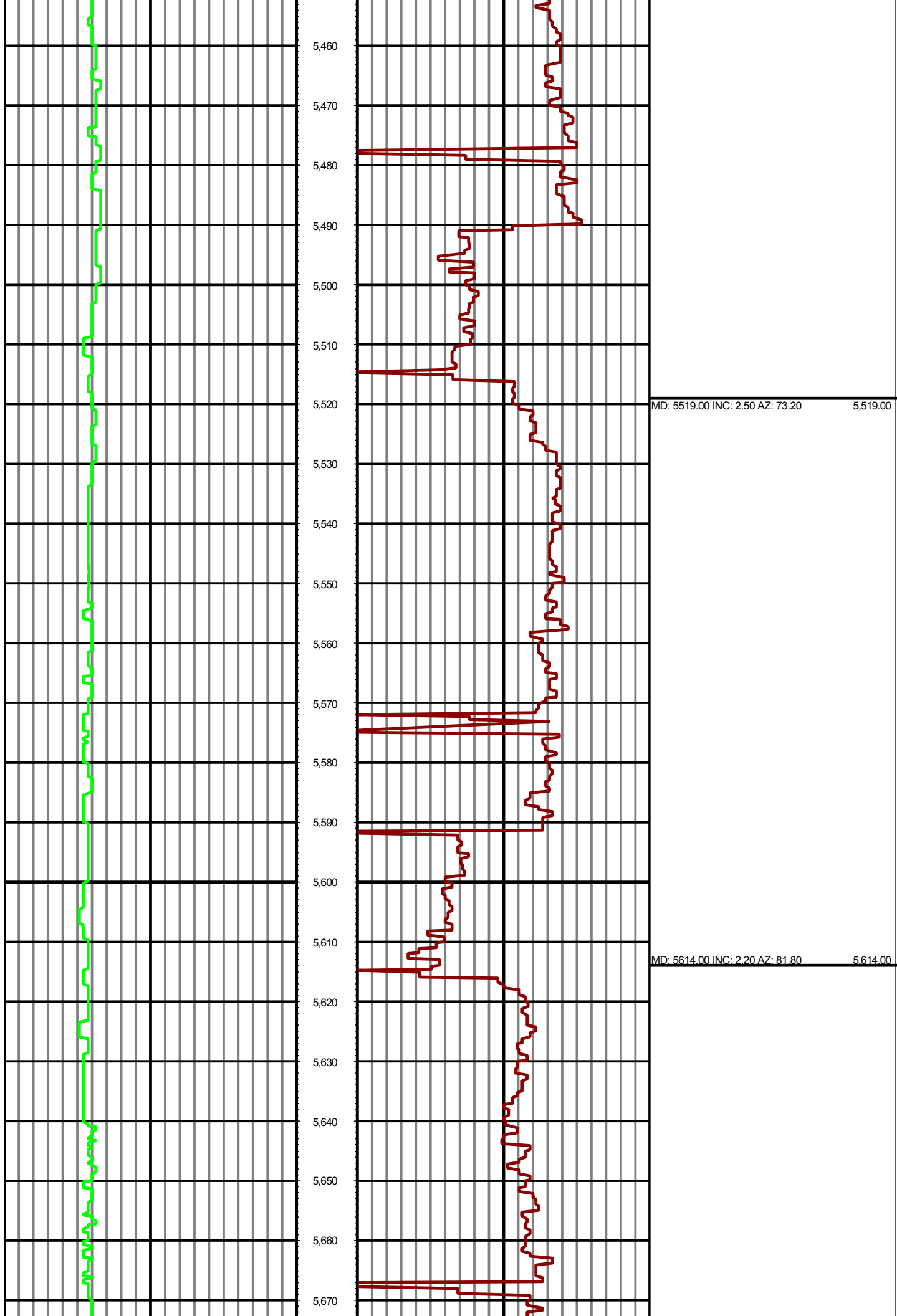
*All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost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

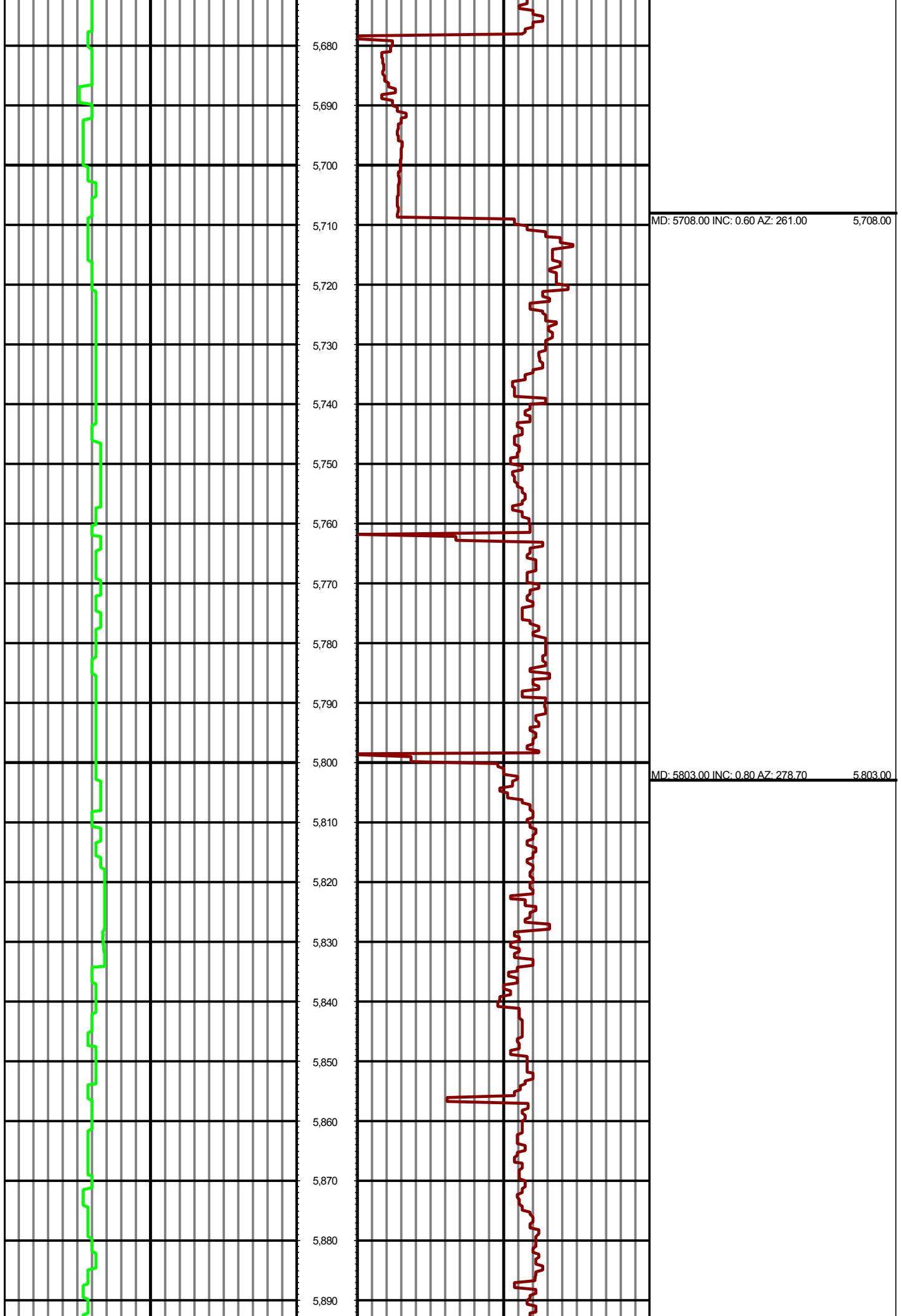
0.00 GR(API) 300.00 MD 0.00 ROP(FT/HR) 500.00 Surveys (MD/INC/AZ)  
FT

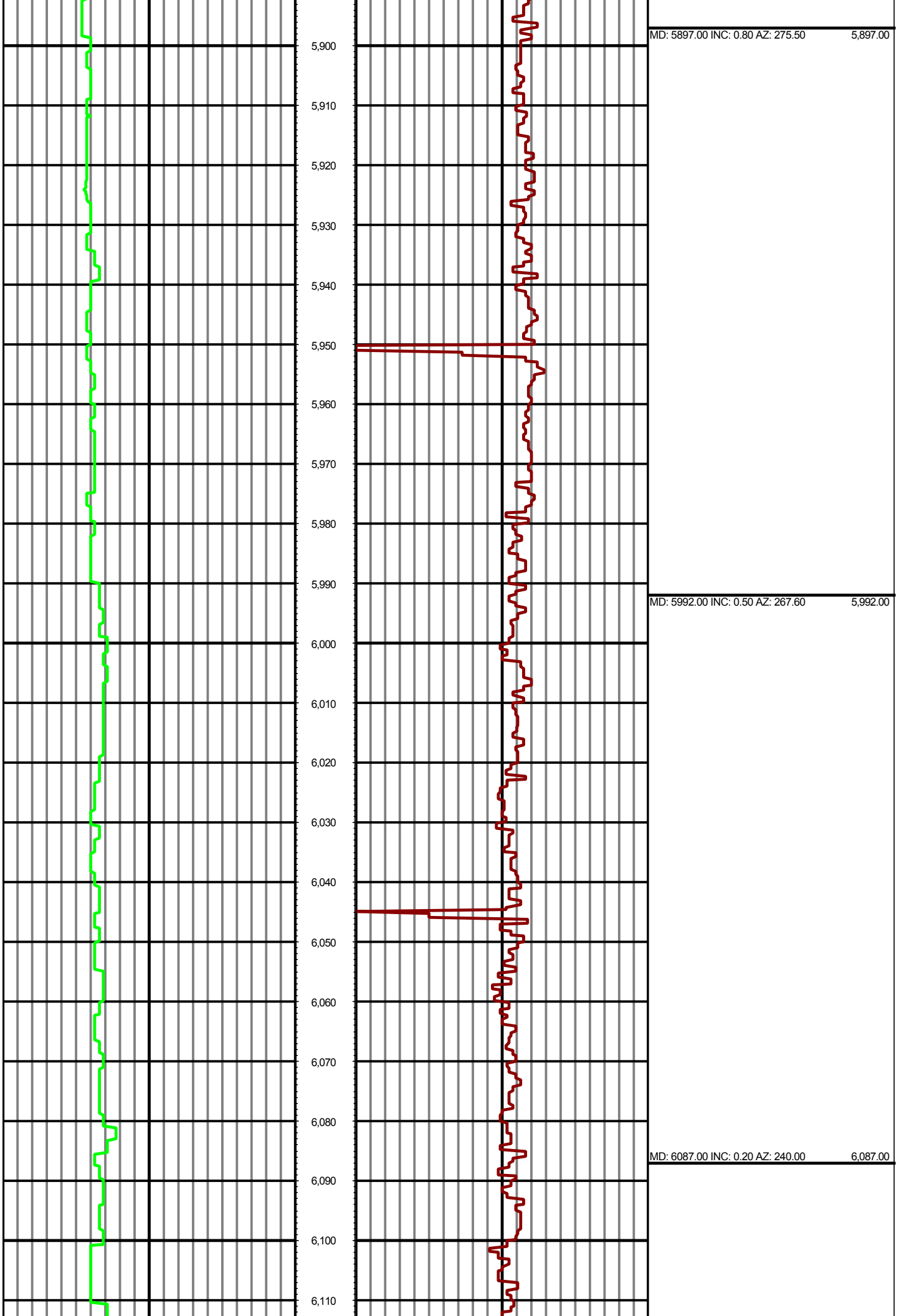


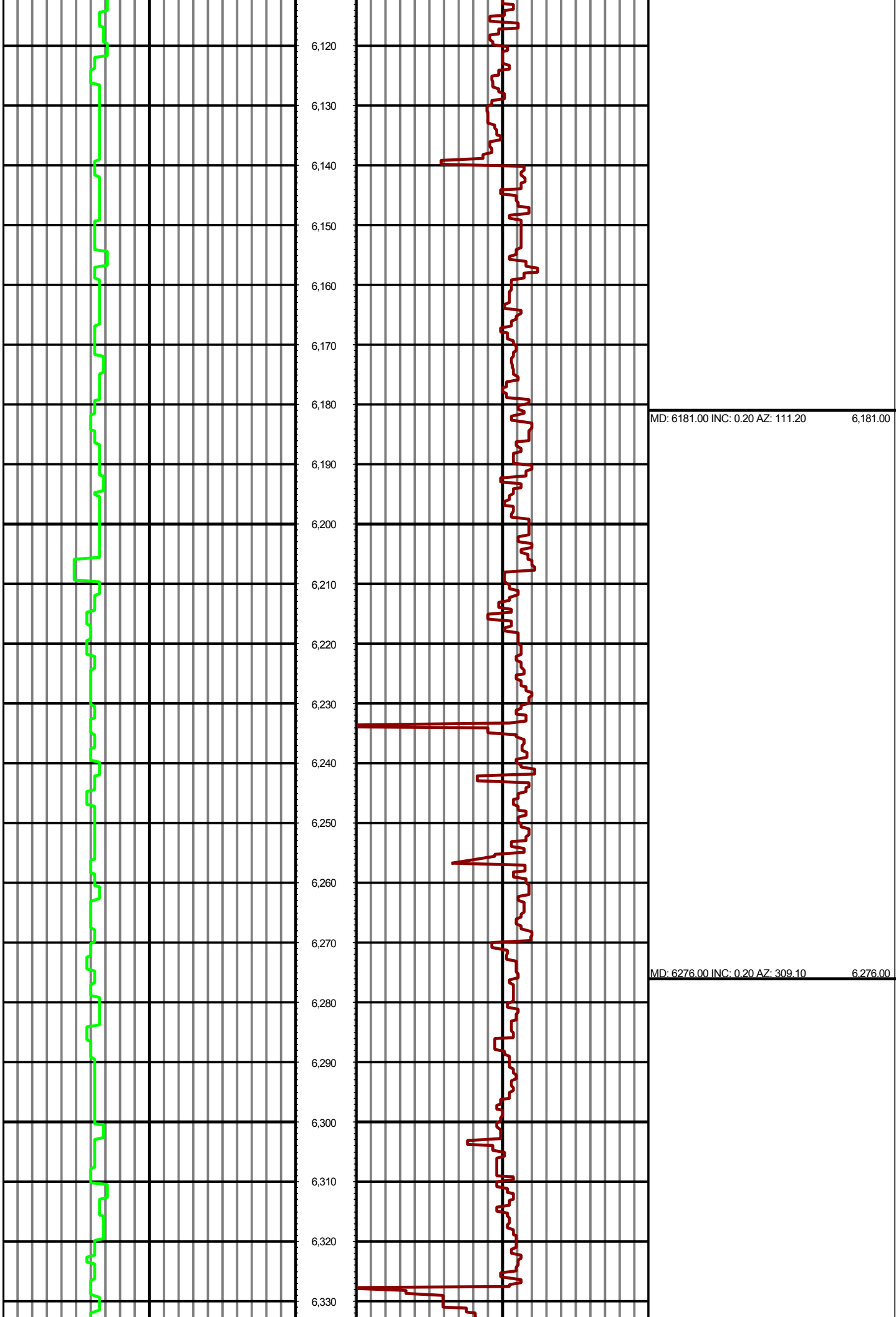


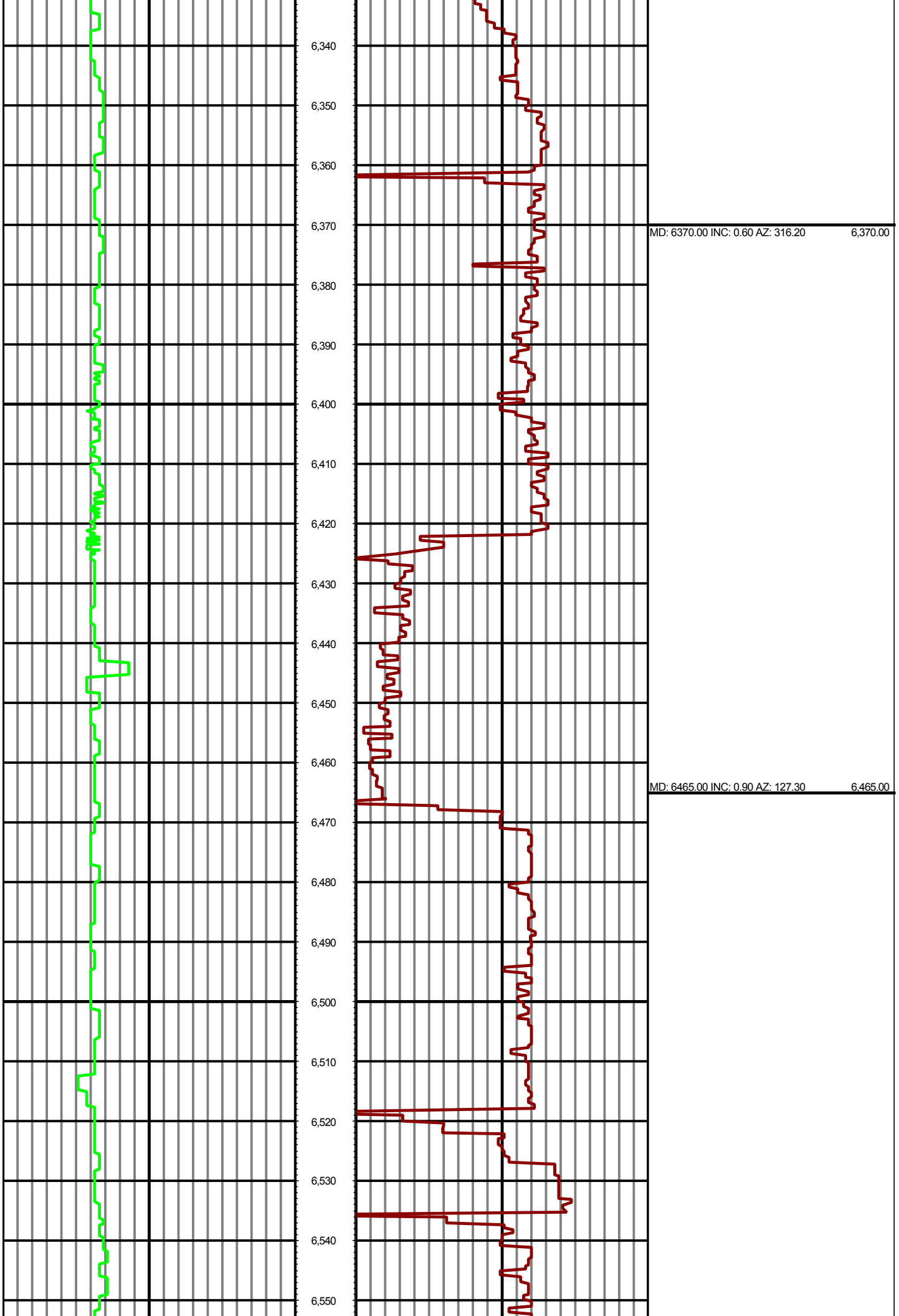




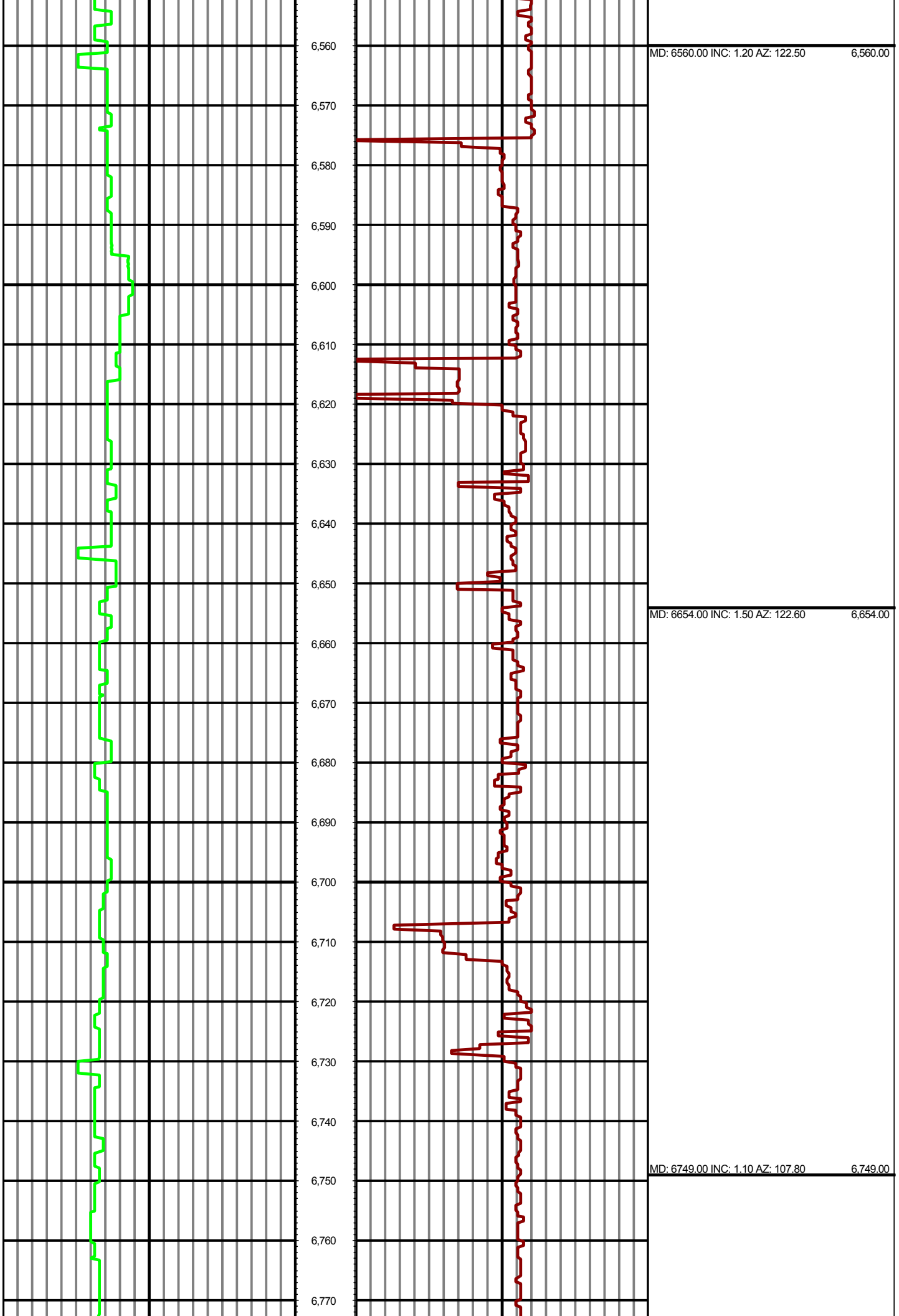


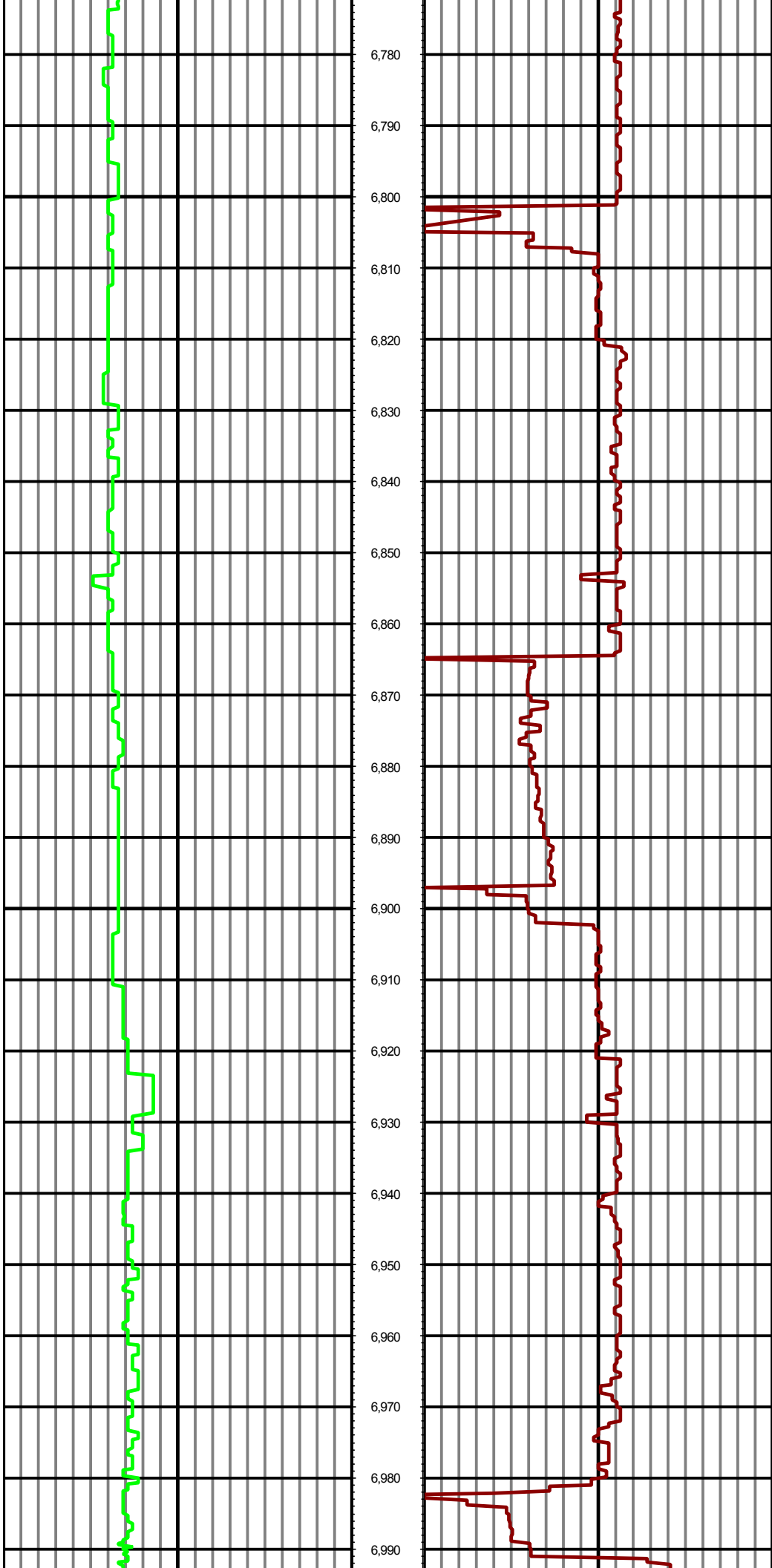












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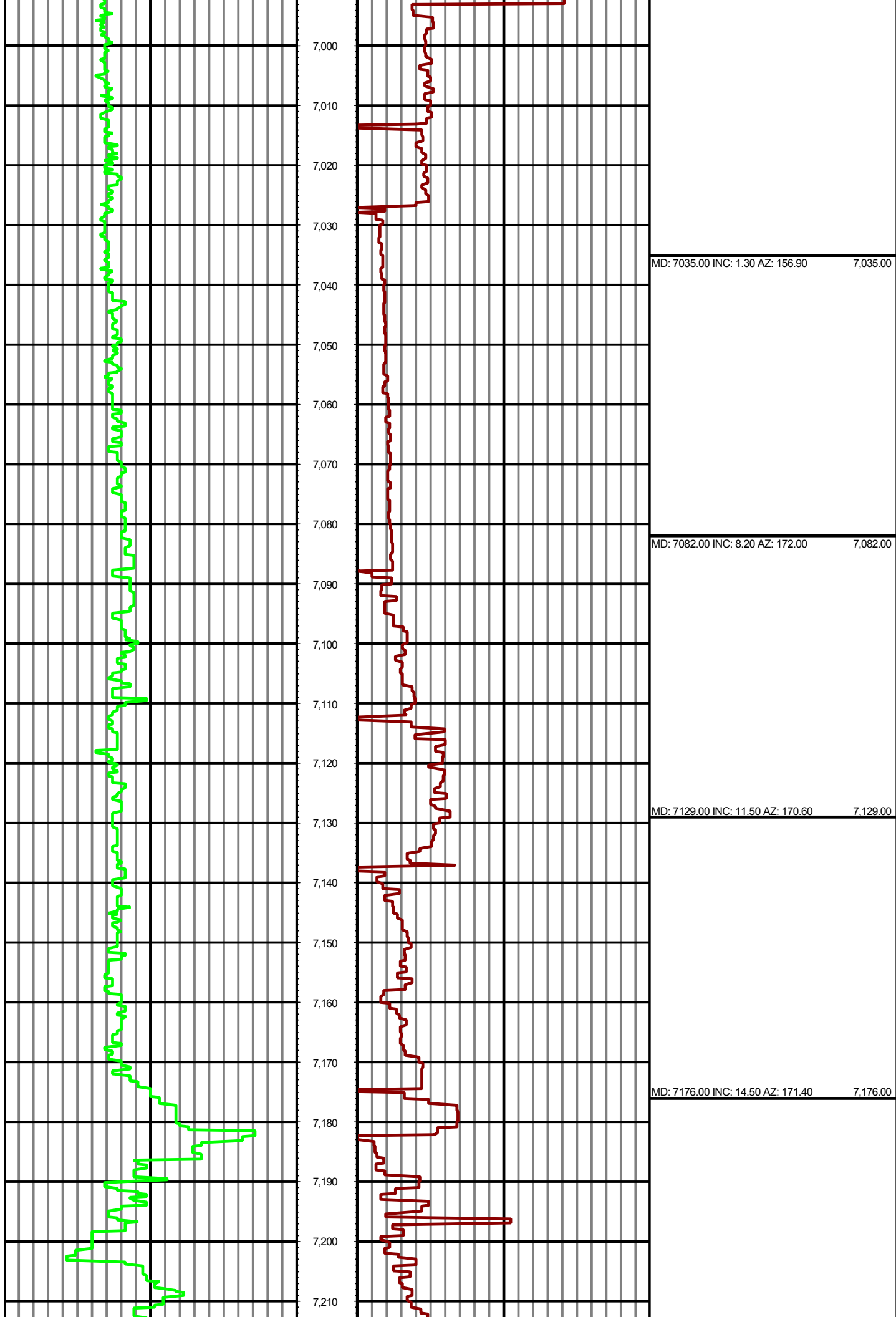
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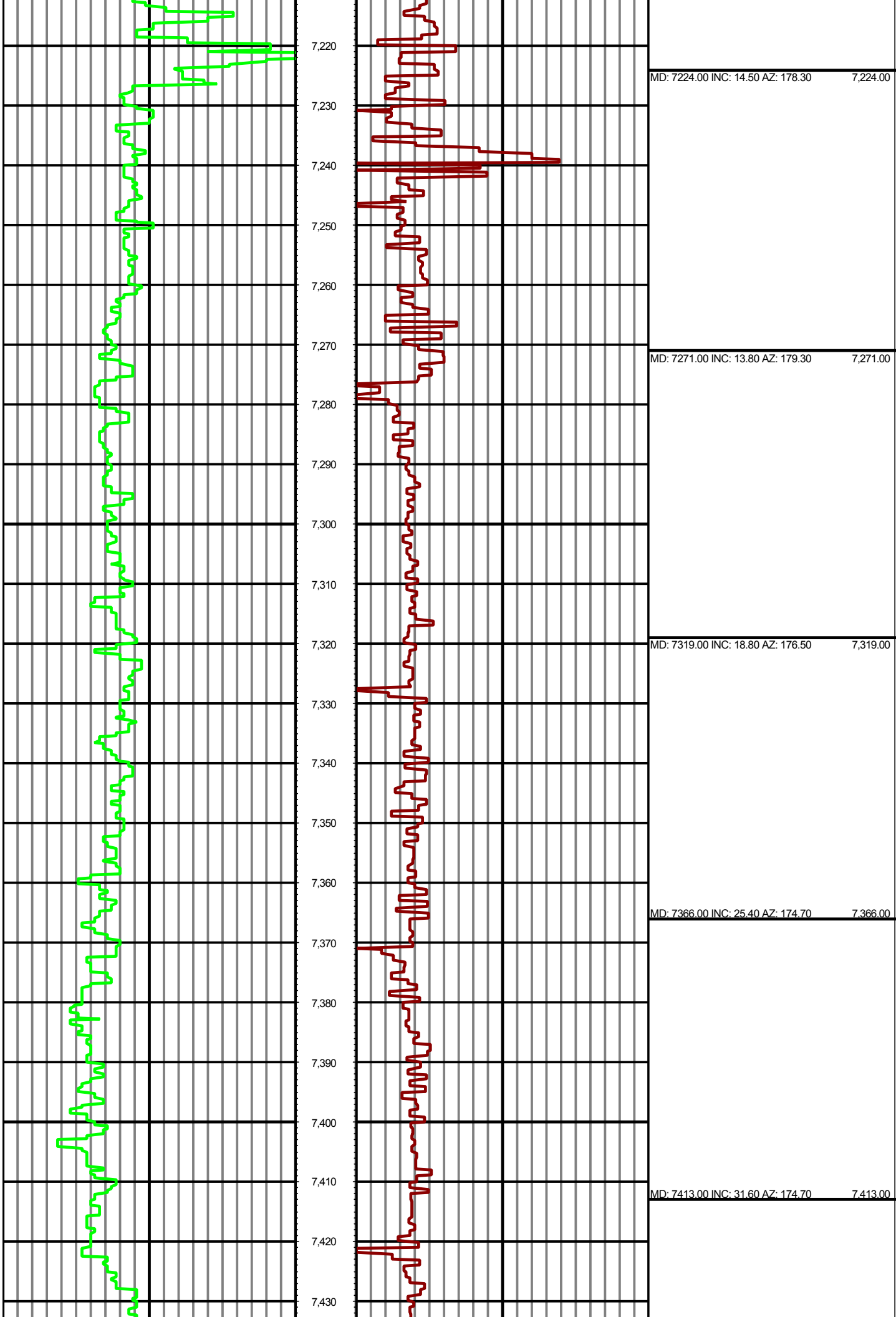
MD: 6843.00 INC: 1.00 AZ: 79.80

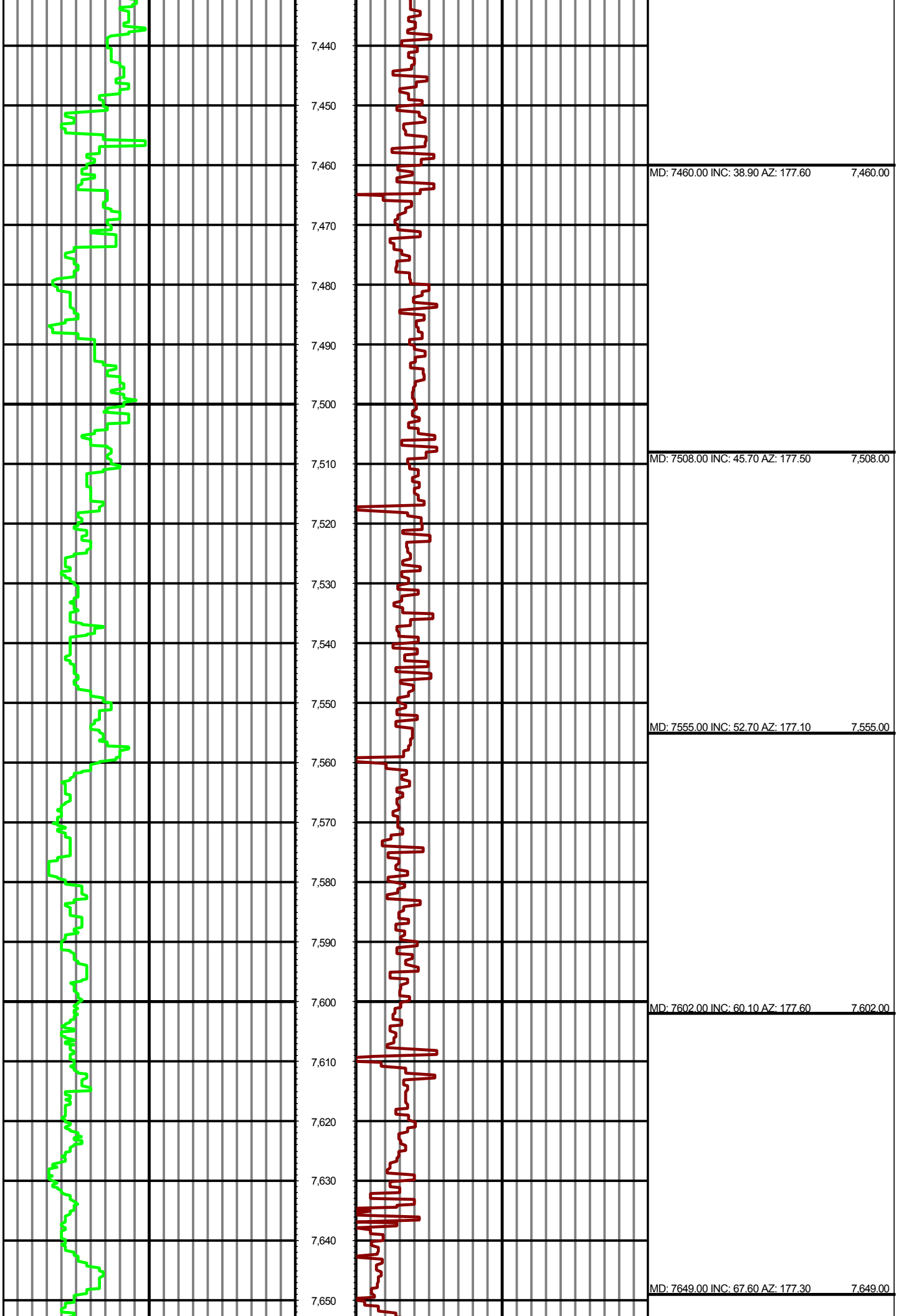
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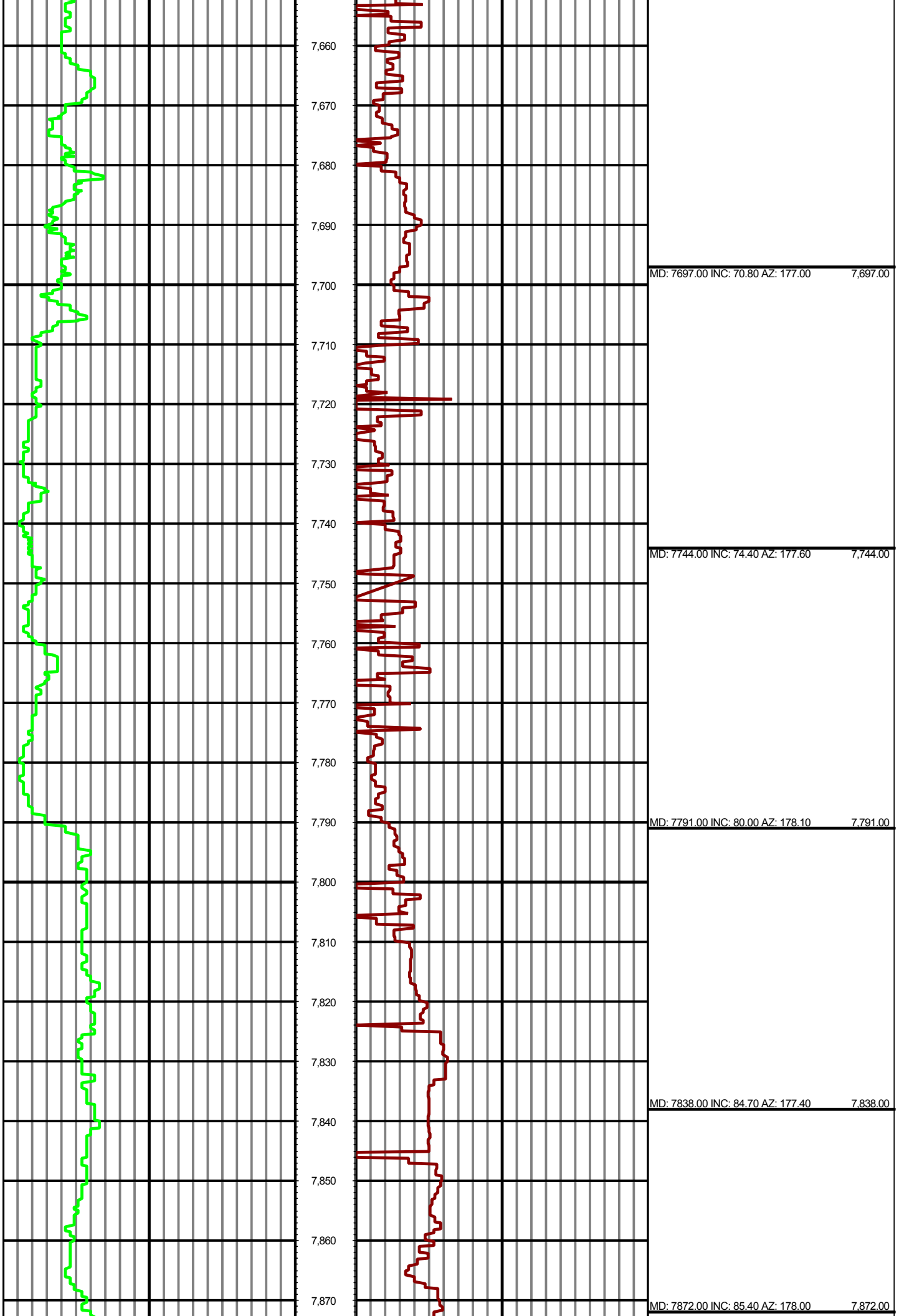
MD: 6938.00 INC: 0.70 AZ: 52.70

6,938.00









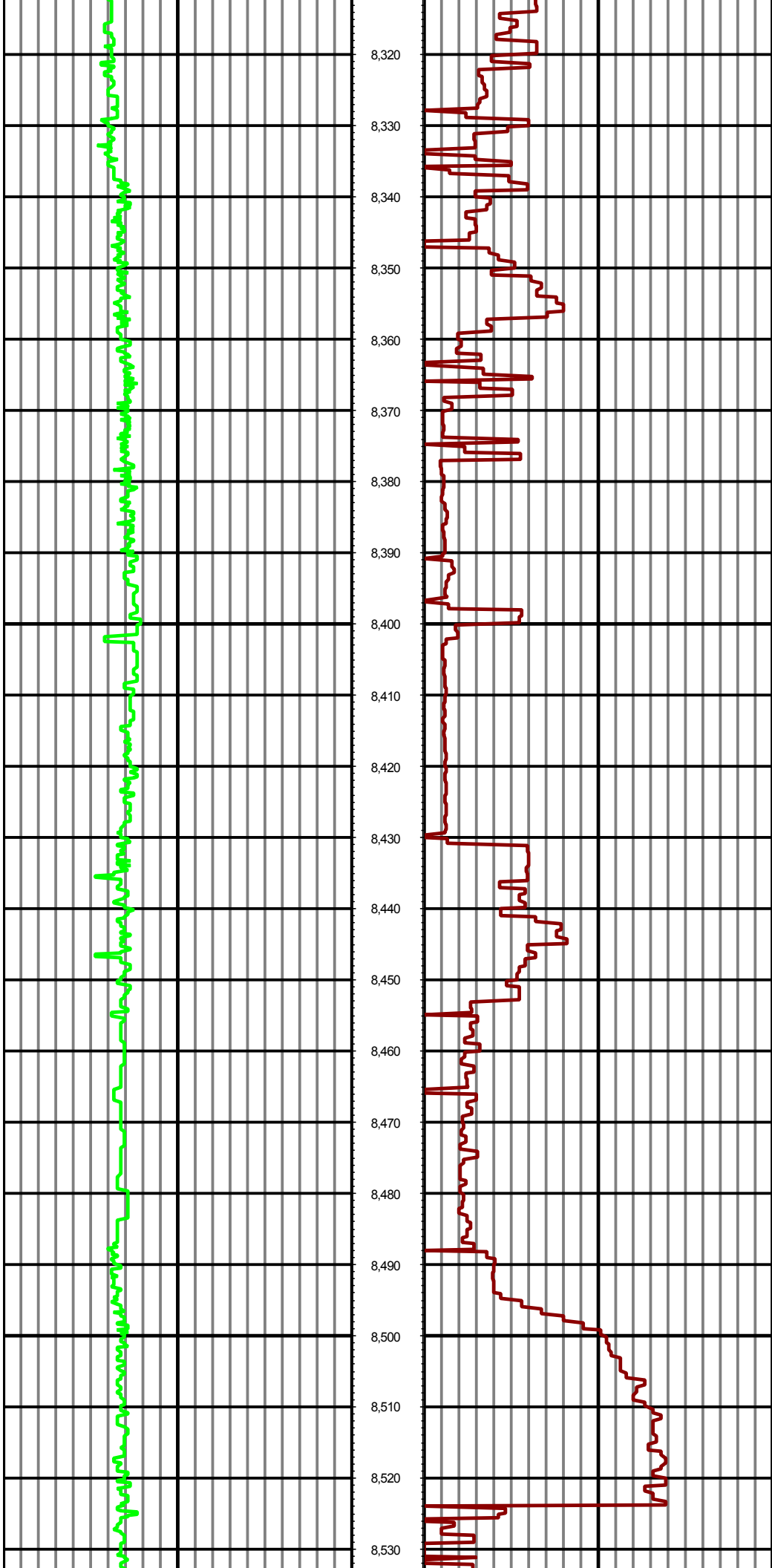
MD: 7872.00 INC: 85.40 AZ: 178.00 7,872.00

MD: 7937.00 INC: 86.80 AZ: 178.90 7,937.00

MD: 8000.00 INC: 87.70 AZ: 179.30 8,000.00

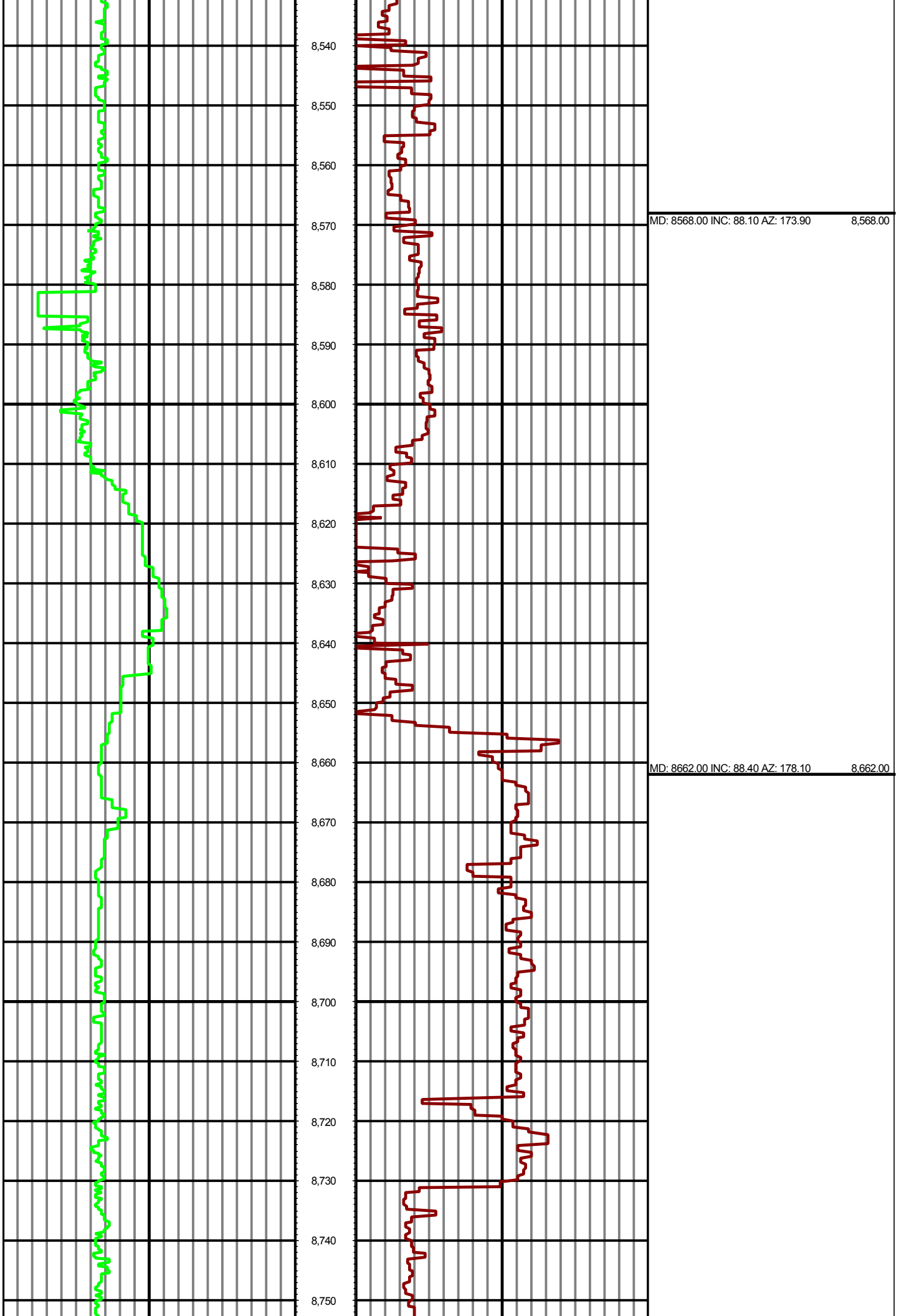
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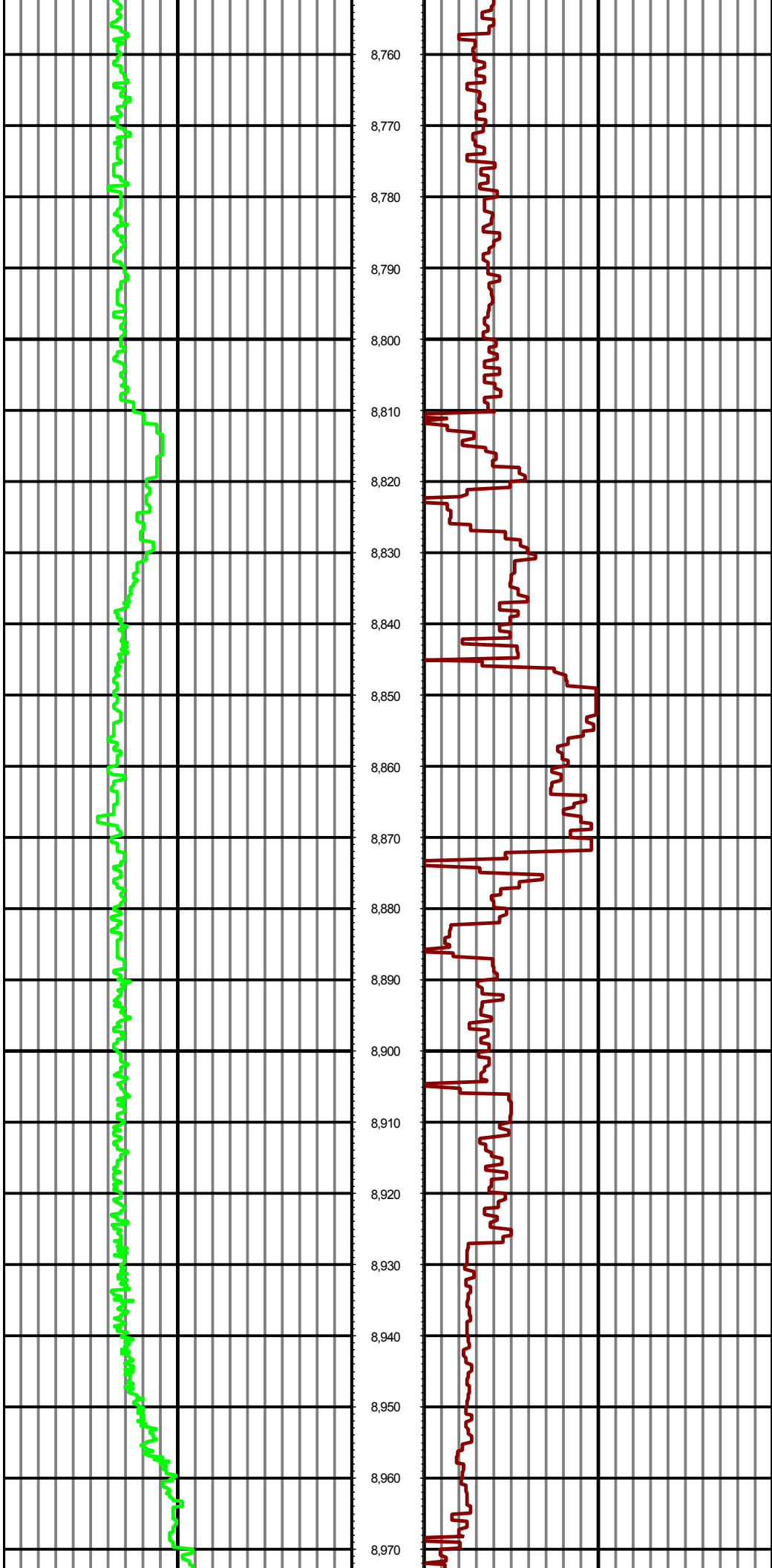




MD: 8378.00 INC: 87.20 AZ: 173.20 8,378.00

MD: 8473.00 INC: 87.90 AZ: 173.30 8,473.00

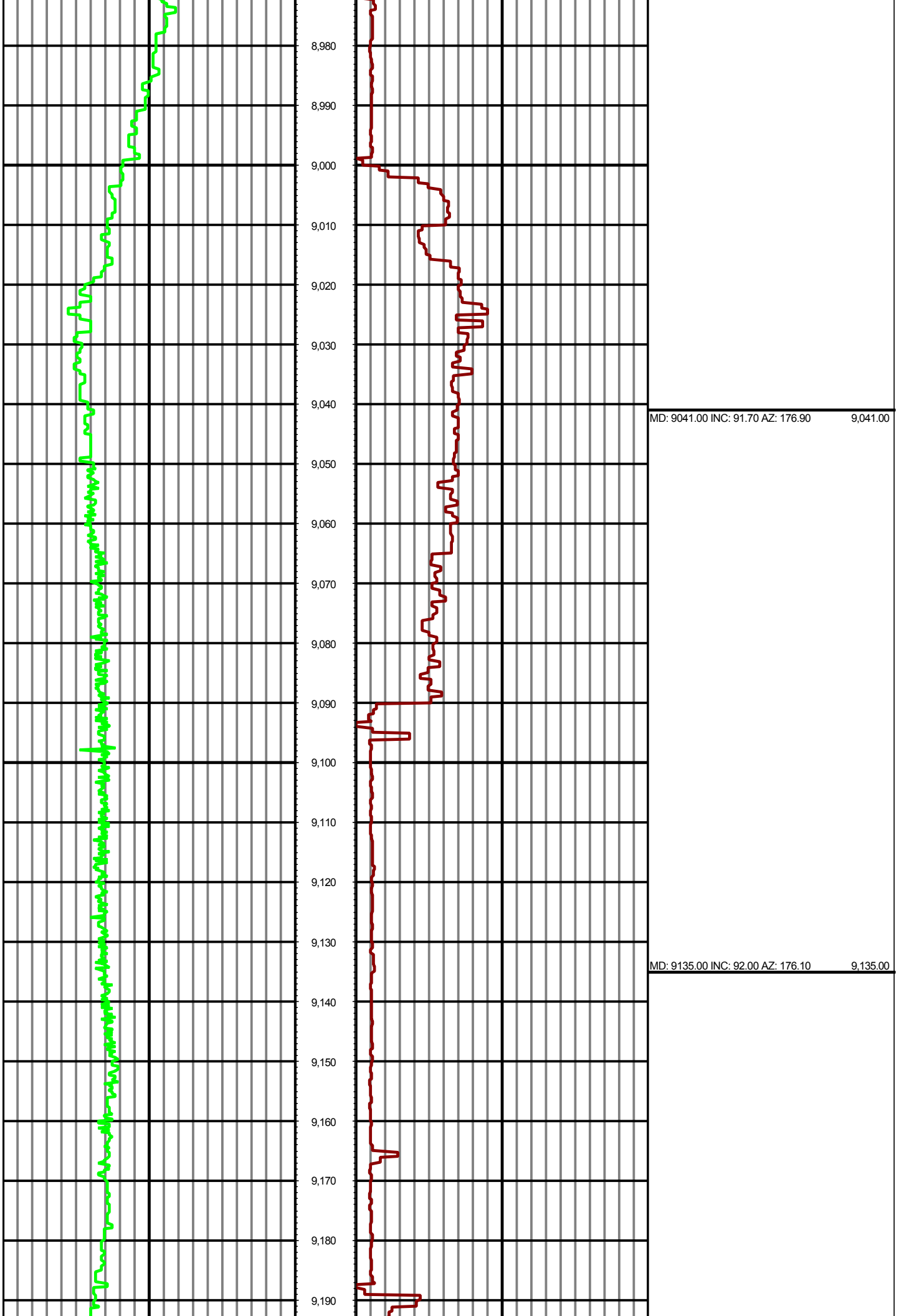


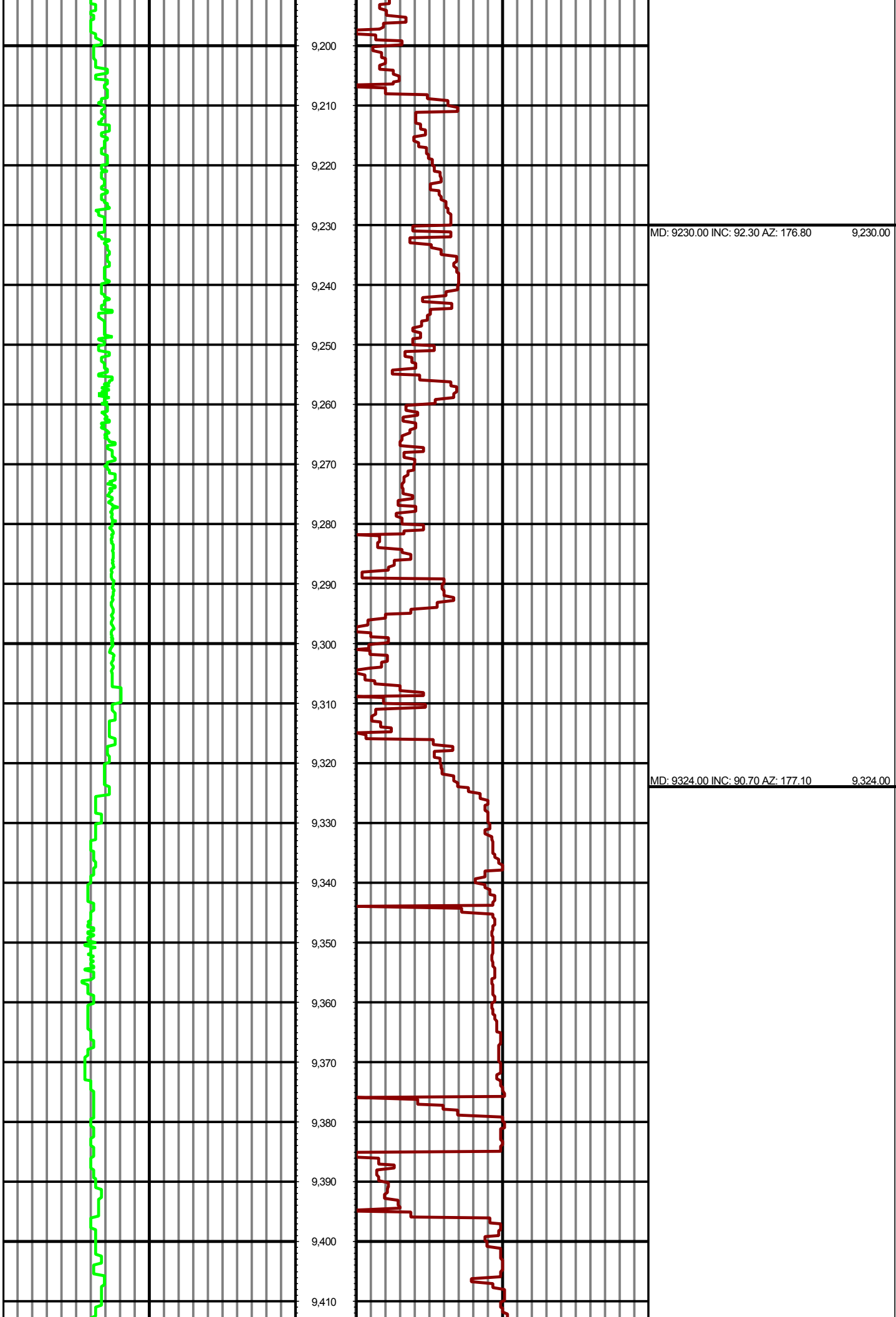


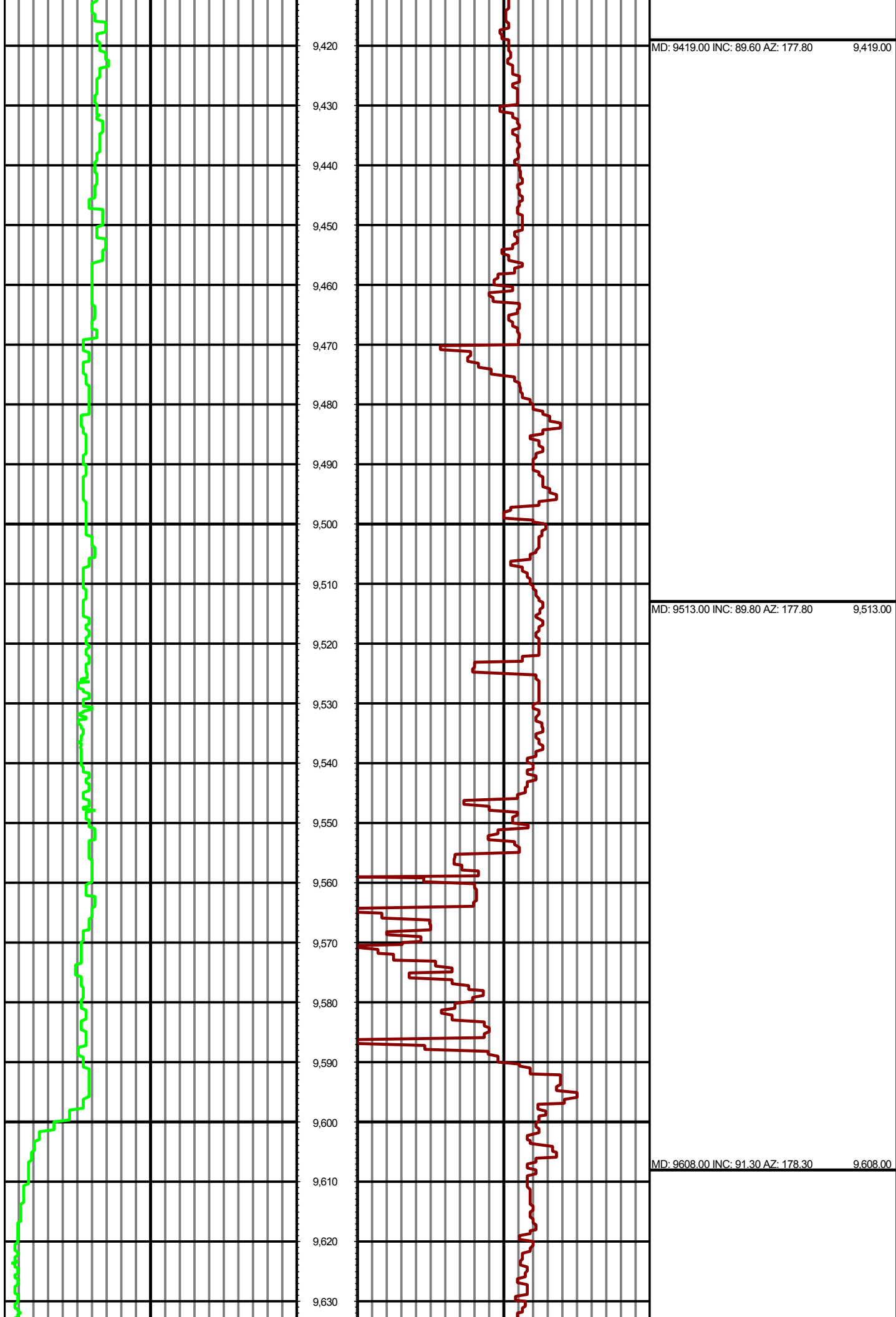
MD: 8757.00 INC: 88.30 AZ: 177.10 8,757.00

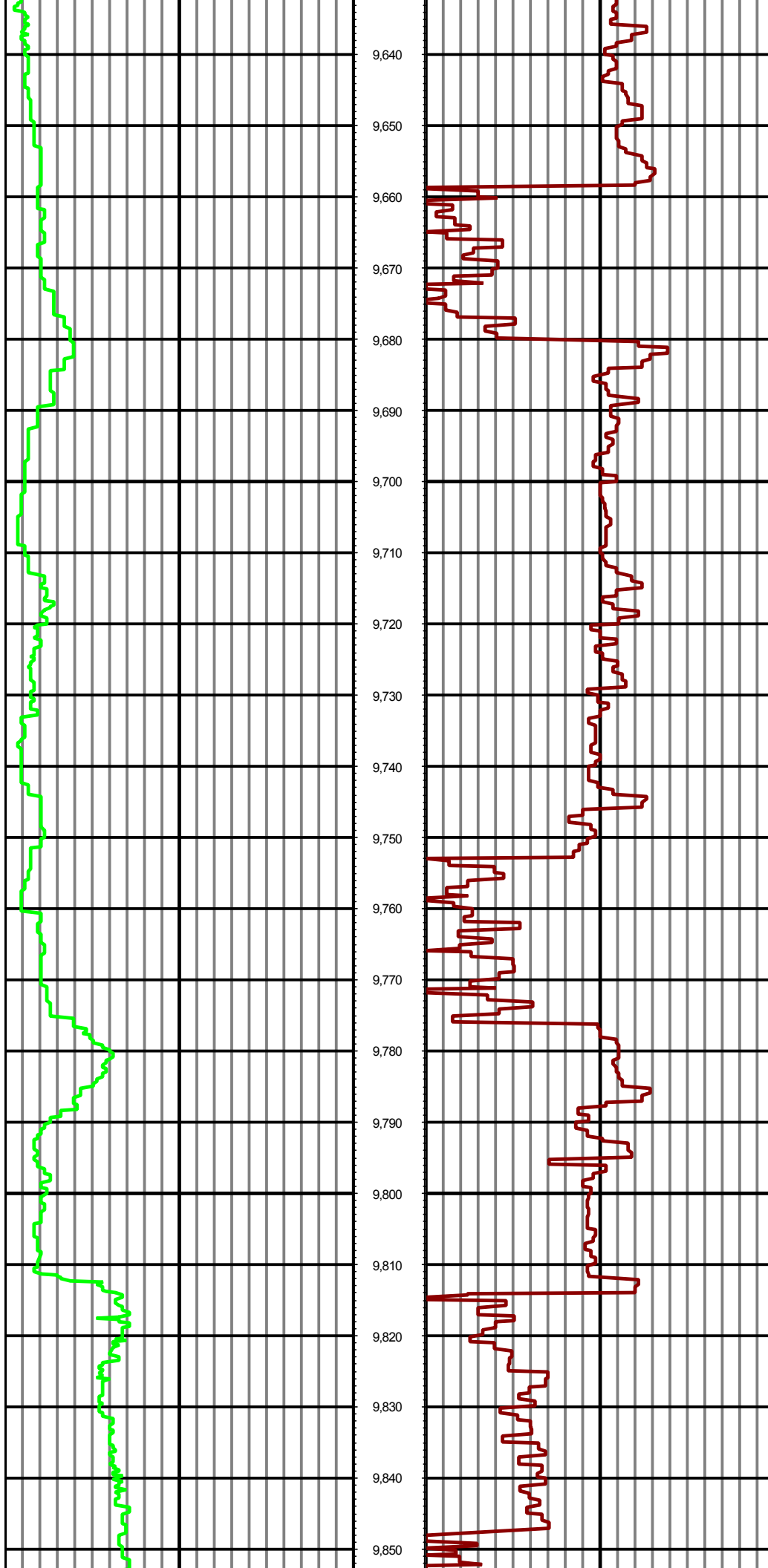
MD: 8851.00 INC: 91.60 AZ: 177.00 8,851.00

MD: 8946.00 INC: 91.60 AZ: 175.50 8,946.00



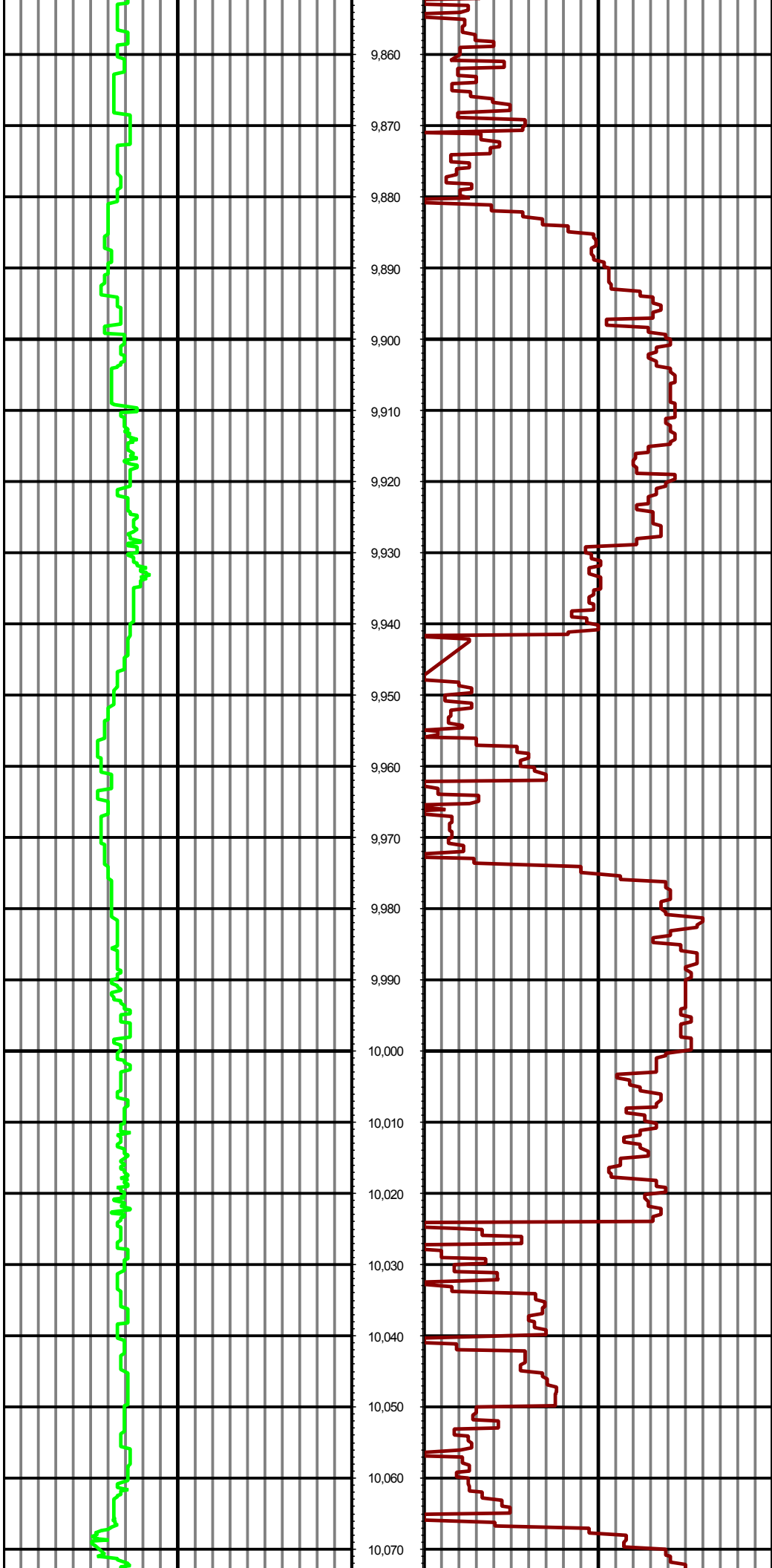






MD: 9702.00 INC: 92.40 AZ: 179.70 9,702.00

MD: 9797.00 INC: 92.60 AZ: 178.80 9,797.00



MD: 9892.00 INC: 91.30 AZ: 180.50 9,892.00

MD: 9986.00 INC: 90.30 AZ: 181.80 9,986.00



