



Cathedral Energy Services  
4949 Pyrite Road  
Casper, Wyoming 82604

**145104**

5":100' - MD

4/25/2014 1:57:57 PM

**CATHEDRAL**

**Oper. Company:** EnCana Oil & Gas

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

**State / Province:** Colorado

**County / Parish:** Weld

**Started:** 04/10/2014 12:00 AM

**API/UWI:** 05-123-37818-00

**Field:** Wattenburg

**Well:** Vogl-McCoy 2C-5H-E267

**Rig:** Helmerich and Payne 522

**Ended:** 04/16/2014 02:00 PM

Gamma Ray  
Section Plane: 180.00  
Gamma Attenuation Factor:  
Gamma Averaging: 7%

### Personnel

**Day Hand:** C. Van Oerle

**Night Hand:** A. Stewart

**Comp. Emp:** Sanford Pulley

### Location

**Latitude:** 40.168190

**Longitude:** -104.922290

**Elev. GL:** 4836

**Elev. DF:**

**Elev. KB:** 4866

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

### Hole Data

Size	From	To
8-3/4	877	7570
6-1/8	7570	14648

### Casing Data

Size	From	To
9-5/8	0	807
7	0	7655
6-1/8	0	14648

### Bit Sizes

Size	From	To
12-1/4	0	877
8-3/4	877	7570
6-1/8	7570	14648

### Mud Data

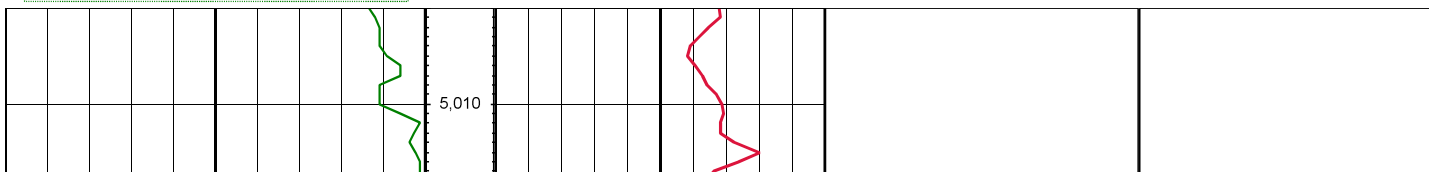
Type	Weight	Density	Viscosity	Rm	Rmf	Rmc	From	To
LSND	9.9	0	40				5000	7500
LSND	10.2	0	44				7500	9500
LSND	10.5	0	55				9500	14648

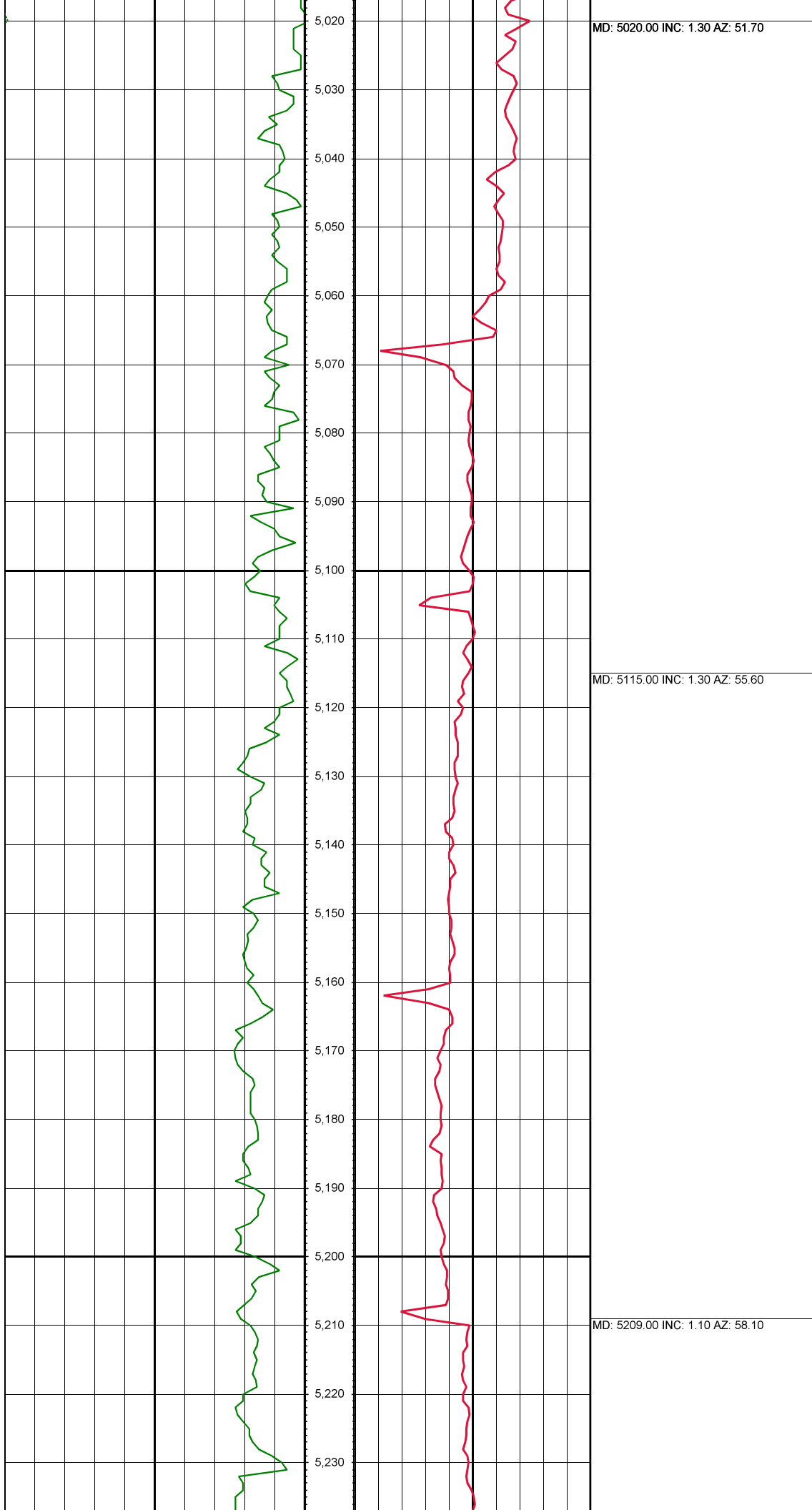
### Tool Run Data

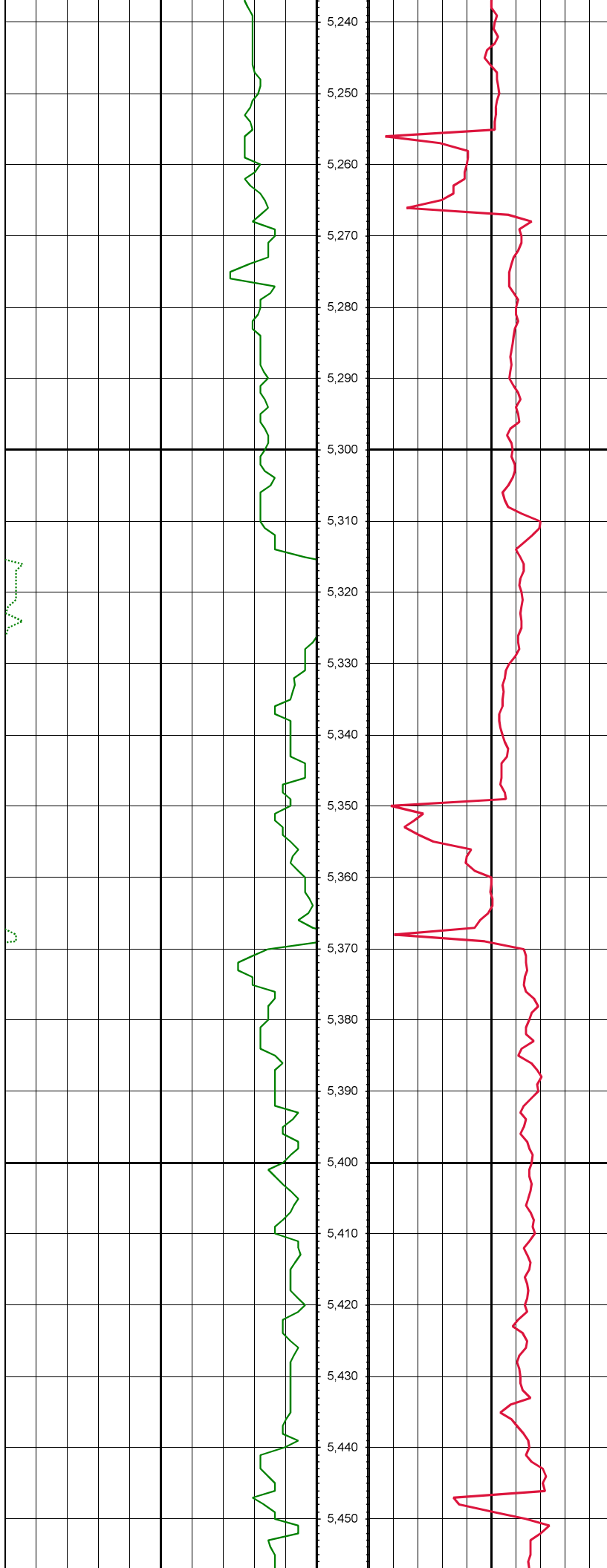
Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
DP8-06	33.89	0	4/10/2014 12:00:48 AM	5000	4/1/2014 1:00:48 AM	7570
309	37.69	0	4/12/2014 2:00:09 PM	7570	4/17/2014 4:00:09 AM	14648

*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) 500.00 Surveys (MD/INC/AZ)  
150.00 2 300.00 FT







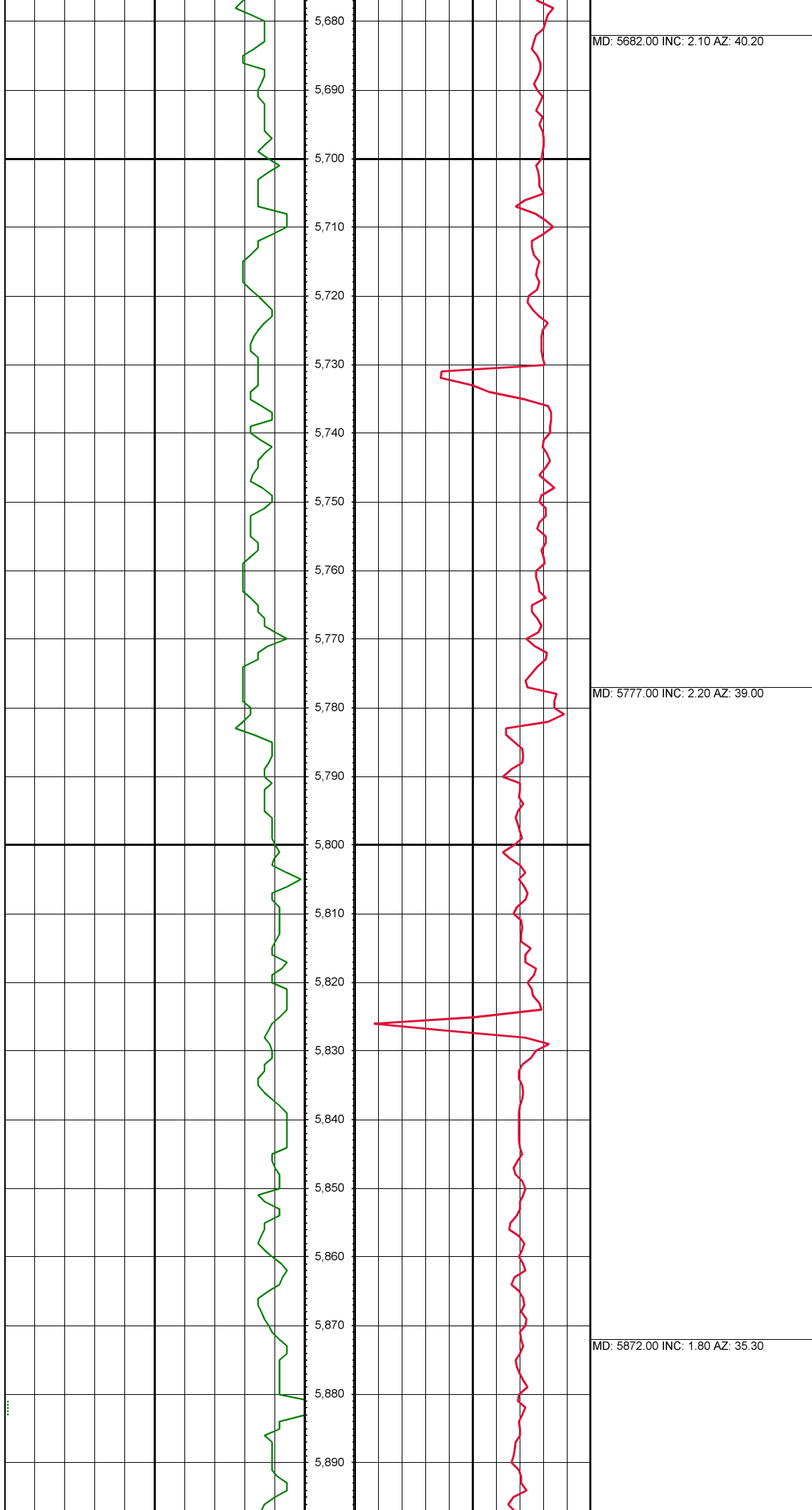
MD: 5304.00 INC: 1.70 AZ: 38.40

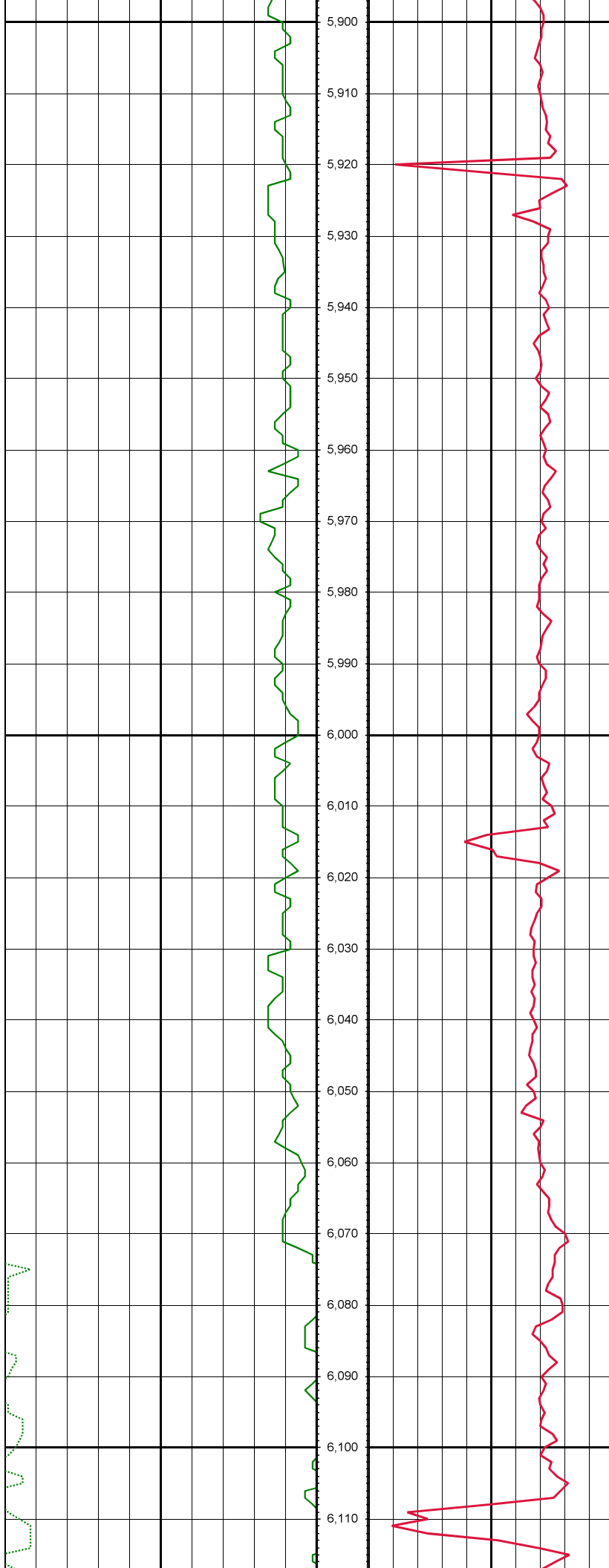
MD: 5399.00 INC: 2.70 AZ: 56.40



MD: 5493.00 INC: 2.70 AZ: 49.60

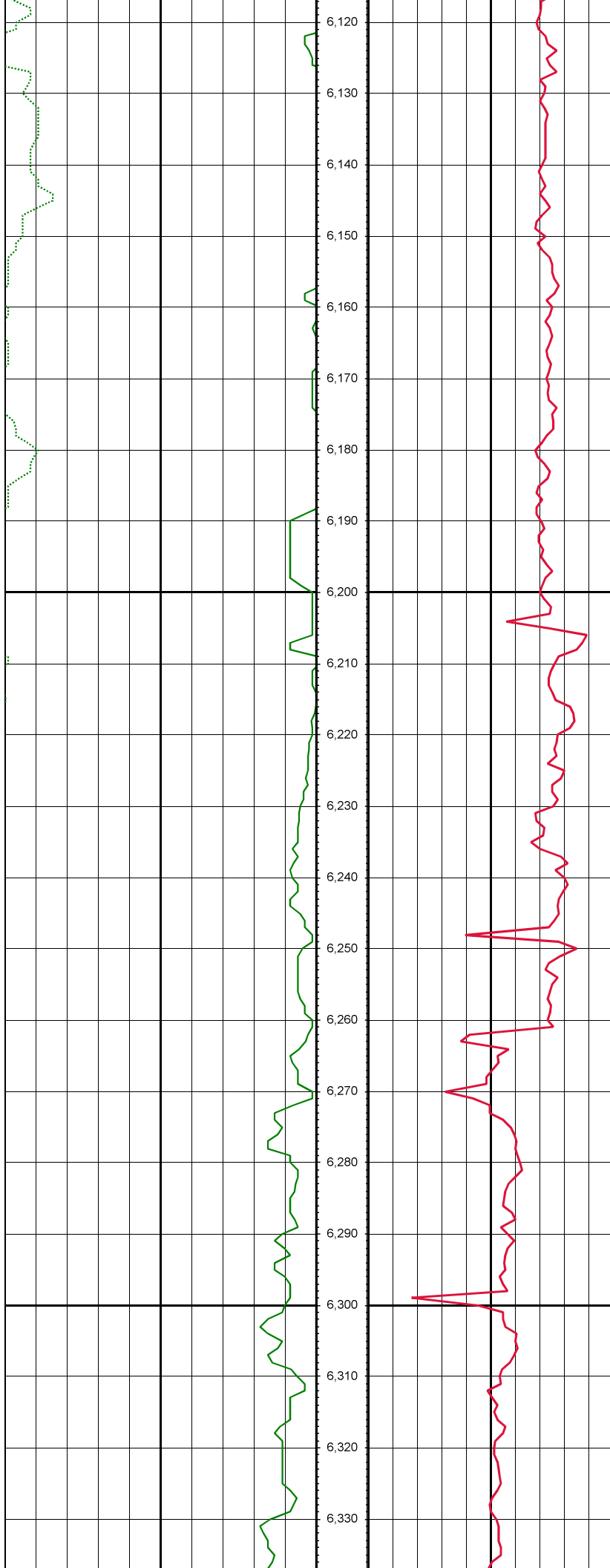
MD: 5588.00 INC: 2.10 AZ: 44.30





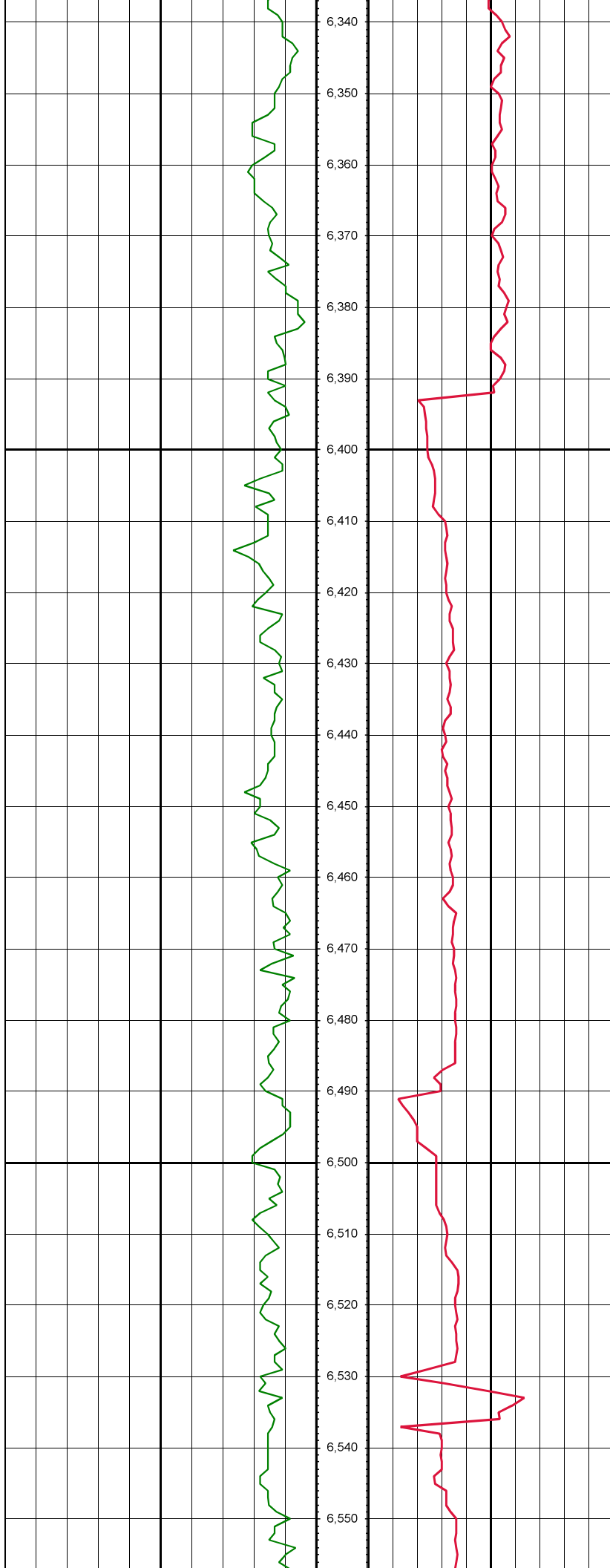
MD: 5966.00 INC: 1.70 AZ: 38.70

MD: 6061.00 INC: 1.20 AZ: 25.00



MD: 6155.00 INC: 1.20 AZ: 14.20

MD: 6250.00 INC: 0.80 AZ: 13.90



MD: 6345.00 INC: 0.80 AZ: 10.00

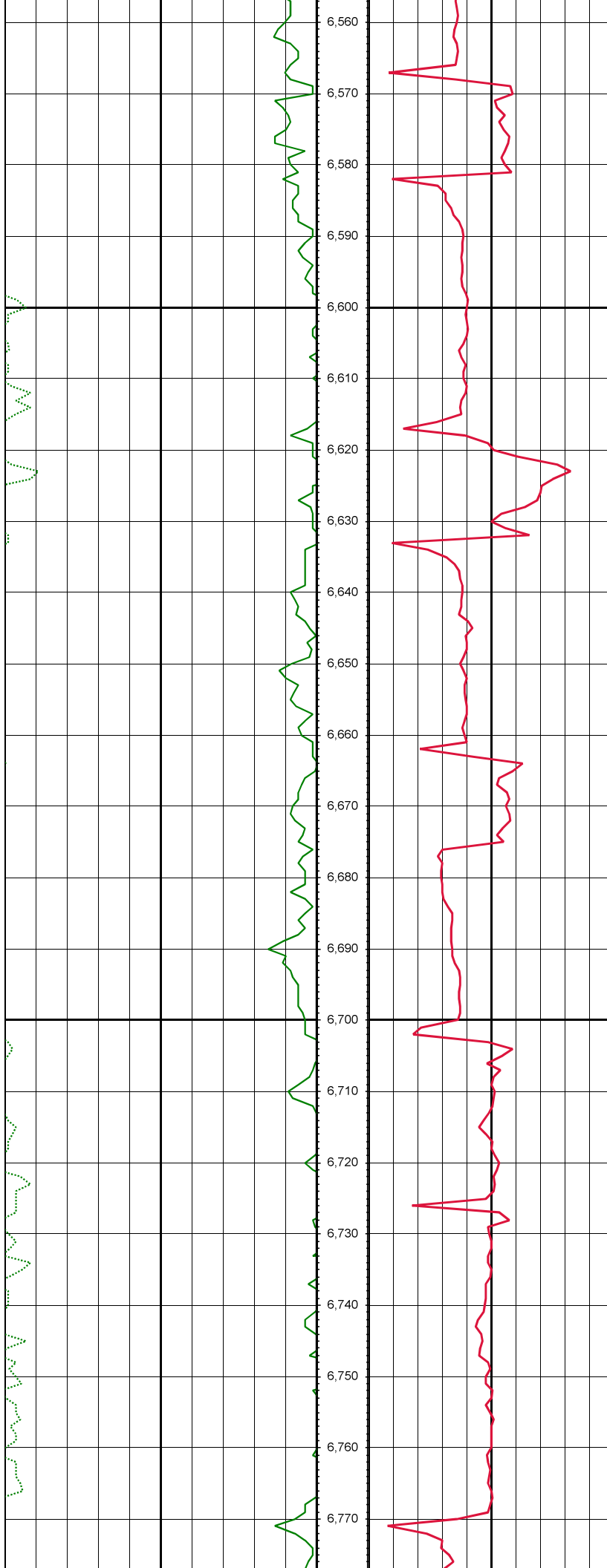
MD: 6392.00 INC: 0.40 AZ: 192.80

MD: 6439.00 INC: 6.30 AZ: 174.90

MD: 6486.00 INC: 13.90 AZ: 175.10

MD: 6534.00 INC: 19.20 AZ: 177.30





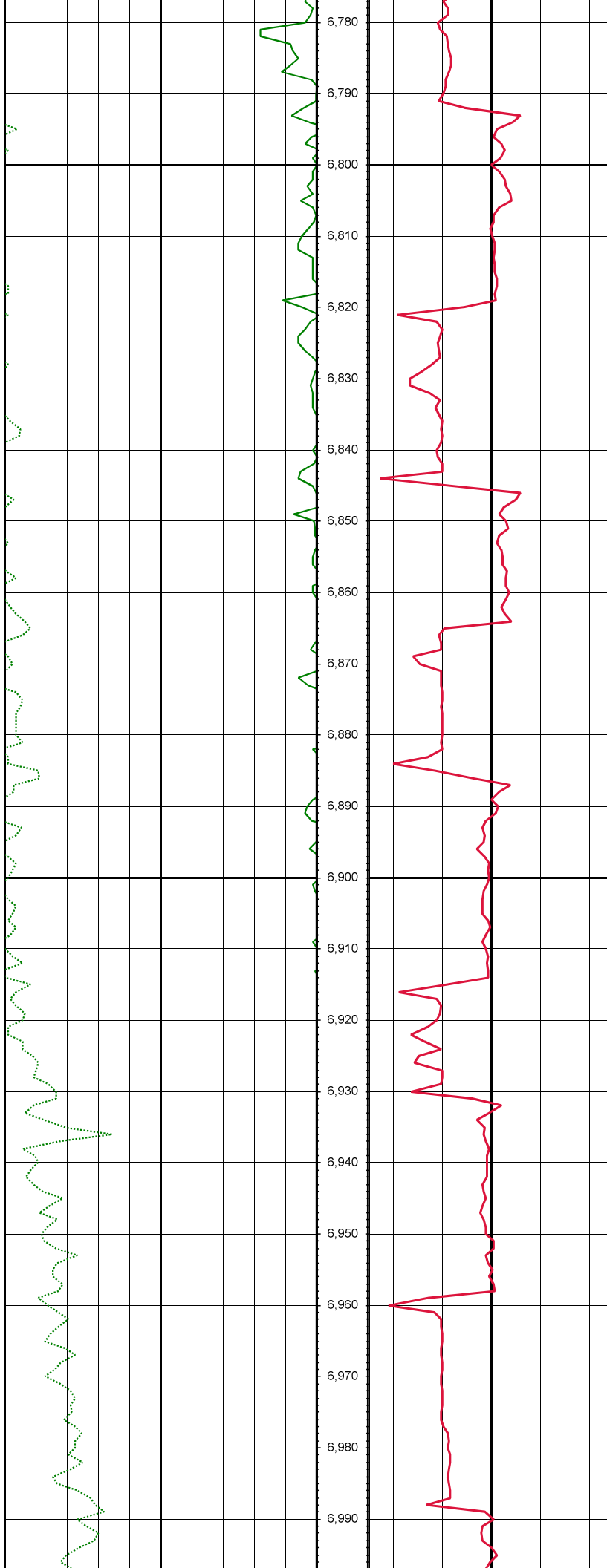
MD: 6581.00 INC: 22.70 AZ: 181.10

MD: 6628.00 INC: 27.30 AZ: 184.40

MD: 6675.00 INC: 32.10 AZ: 184.00

MD: 6723.00 INC: 34.30 AZ: 184.00

MD: 6770.00 INC: 35.10 AZ: 184.30

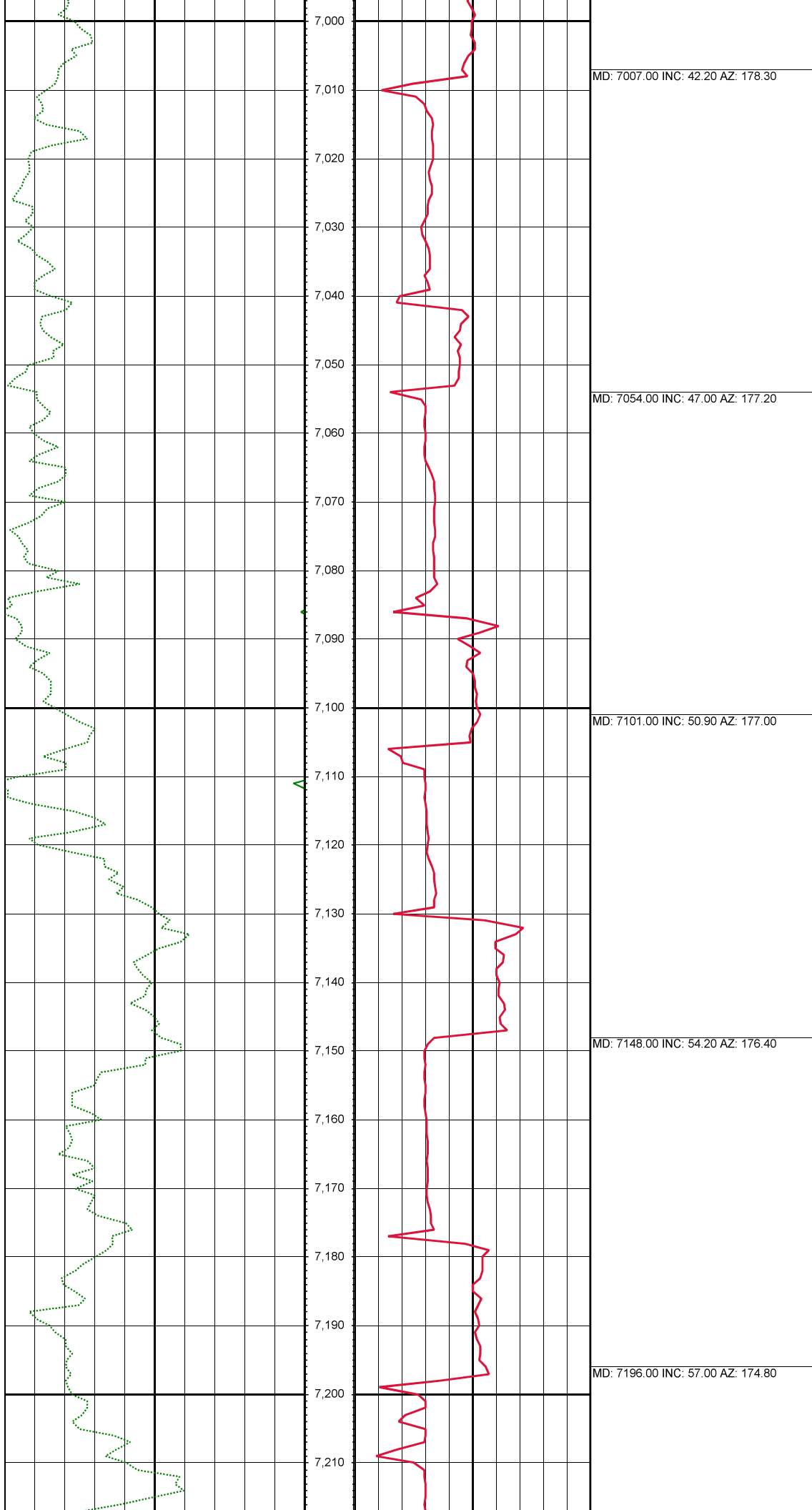


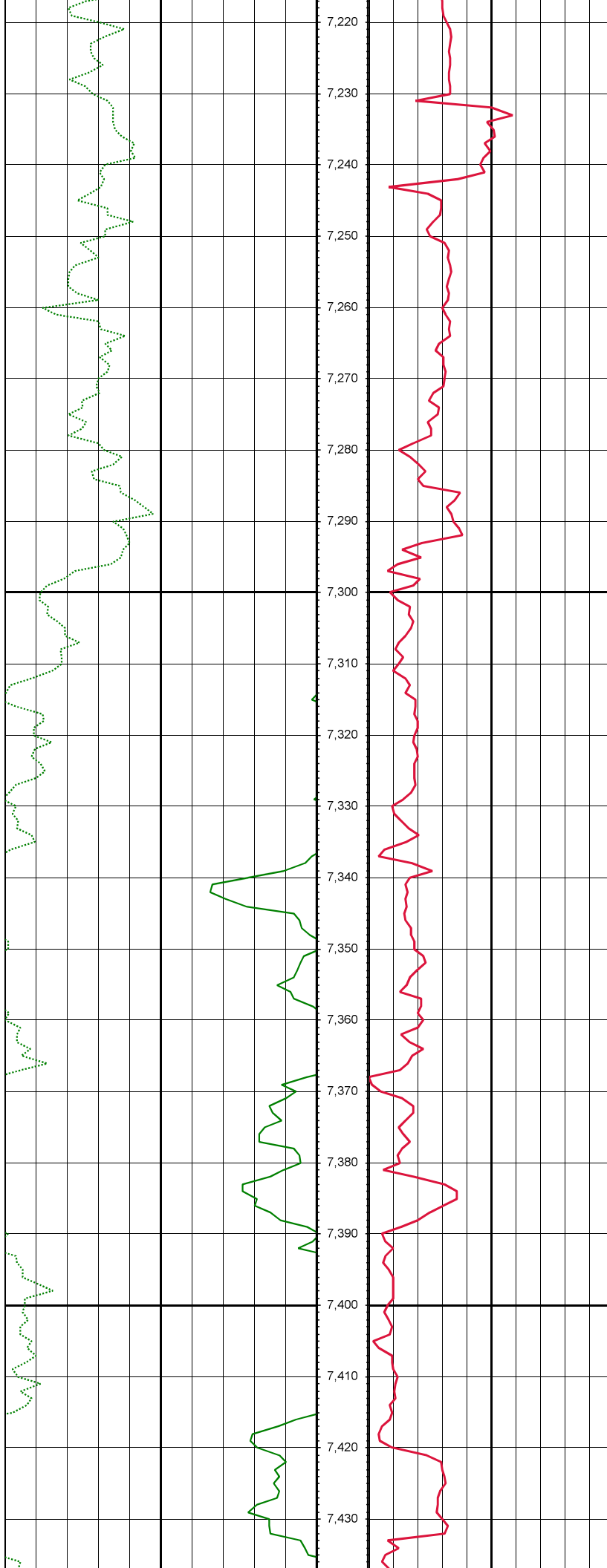
MD: 6818.00 INC: 37.50 AZ: 183.50

MD: 6865.00 INC: 38.20 AZ: 179.90

MD: 6912.00 INC: 37.90 AZ: 177.40

MD: 6959.00 INC: 38.90 AZ: 177.60





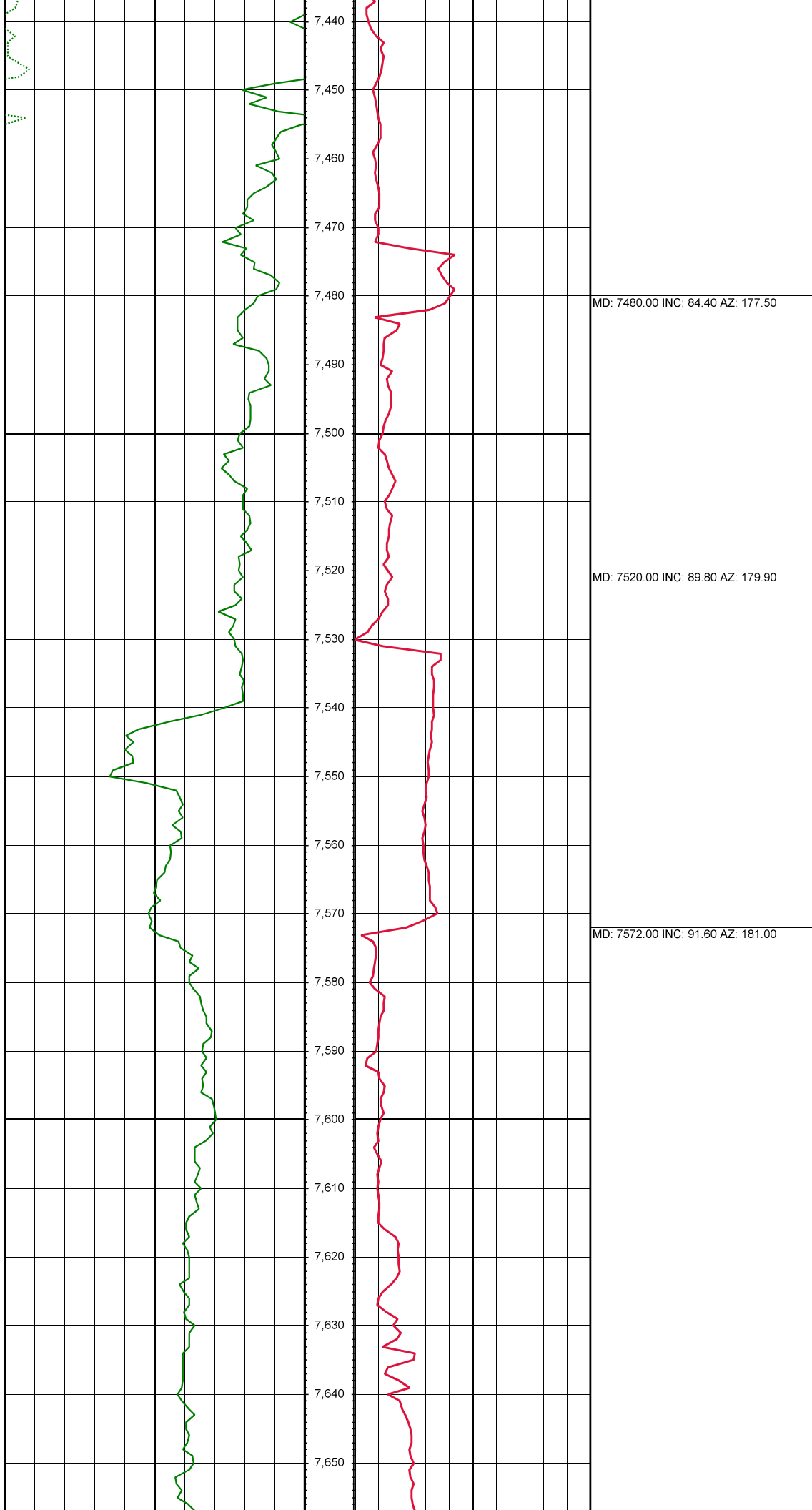
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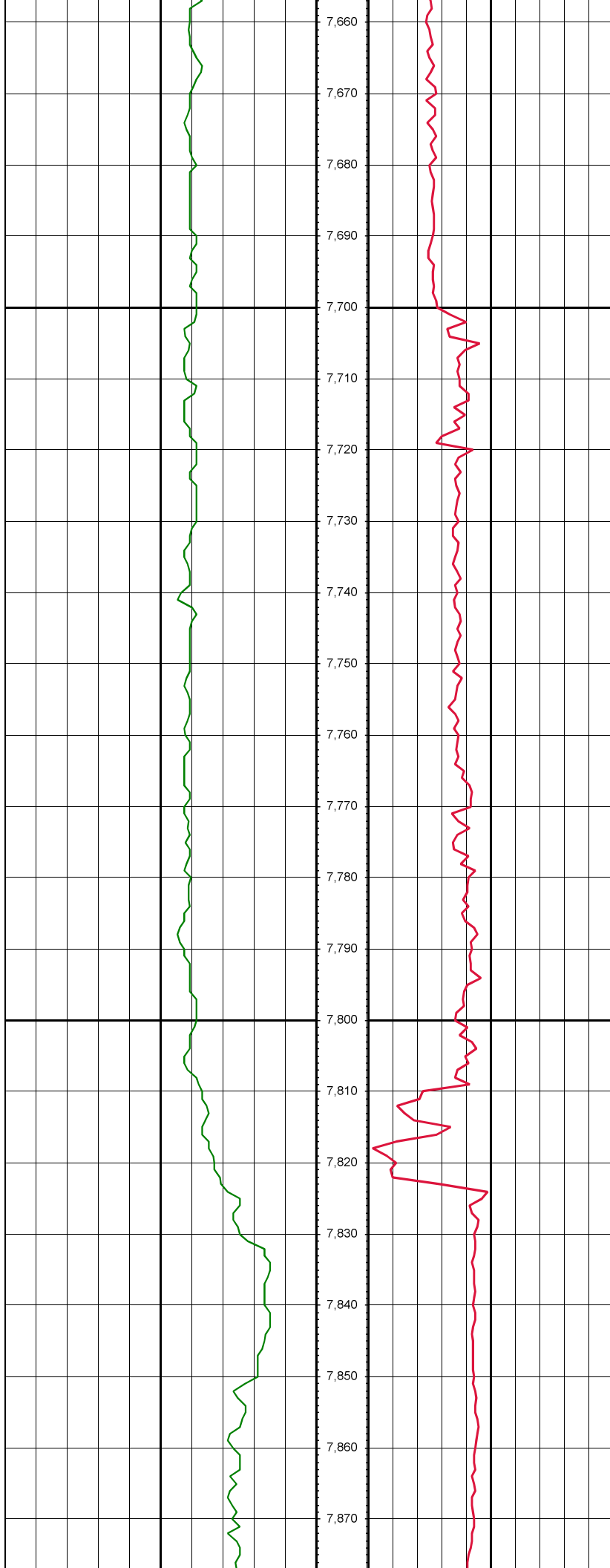
MD: 7291.00 INC: 65.50 AZ: 175.60

MD: 7338.00 INC: 71.60 AZ: 176.50

MD: 7385.00 INC: 75.40 AZ: 176.30

MD: 7432.00 INC: 79.40 AZ: 176.30





MD: 7667.00 INC: 90.00 AZ: 179.60

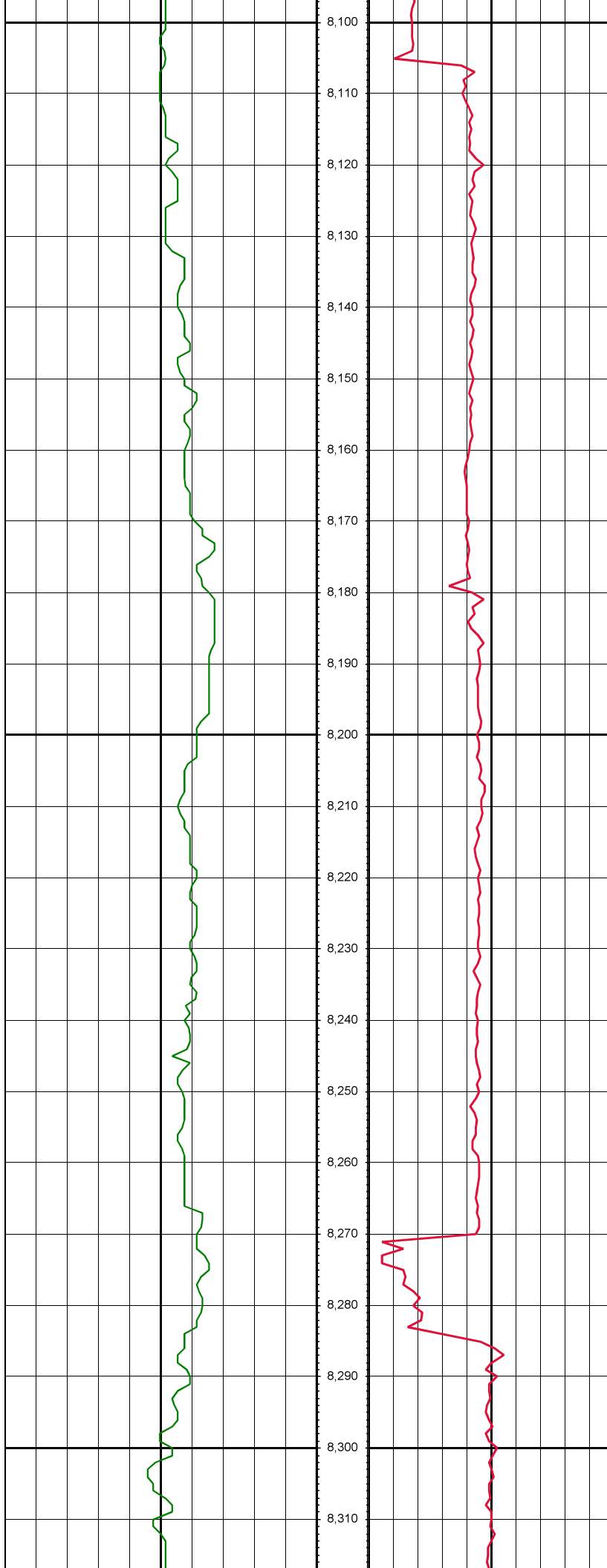
MD: 7759.00 INC: 88.90 AZ: 178.00

MD: 7851.00 INC: 89.00 AZ: 176.80



MD: 7943.00 INC: 92.00 AZ: 176.10

MD: 8035.00 INC: 92.10 AZ: 178.30







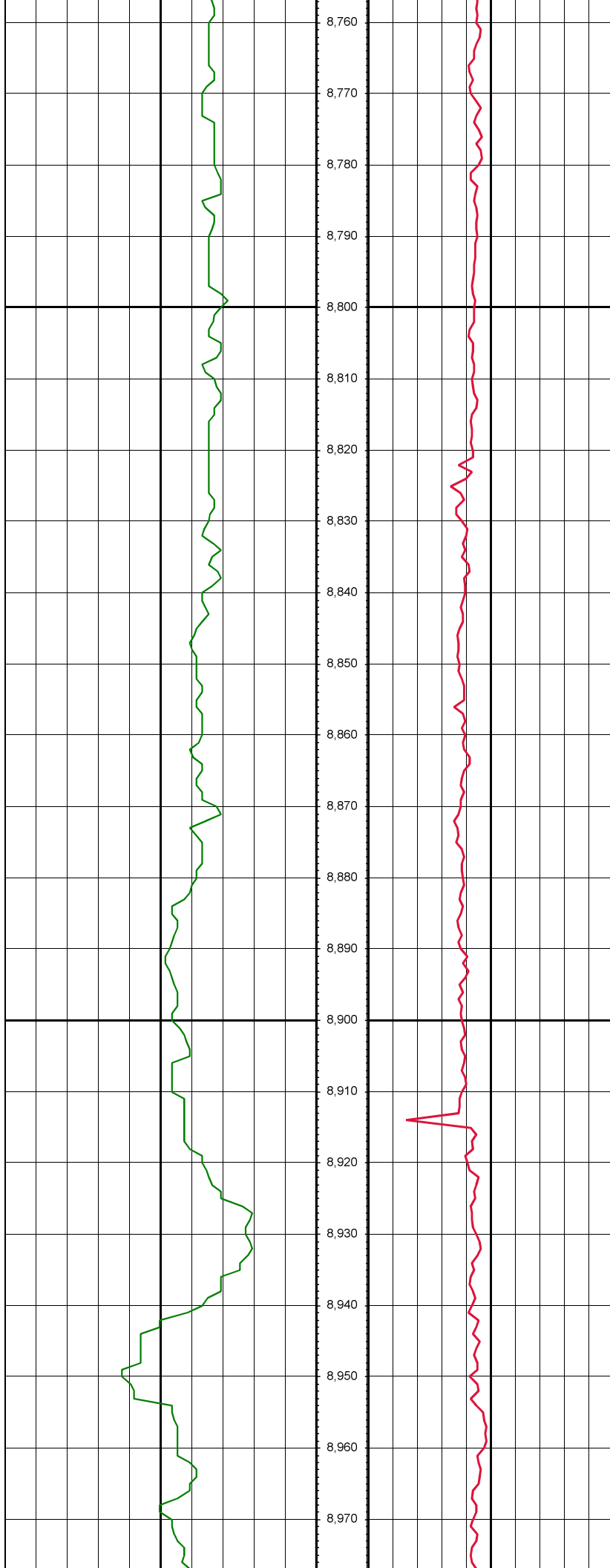
MD: 8403.00 INC: 86.60 AZ: 178.00

MD: 8494.00 INC: 88.10 AZ: 177.10



MD: 8587.00 INC: 89.80 AZ: 177.00

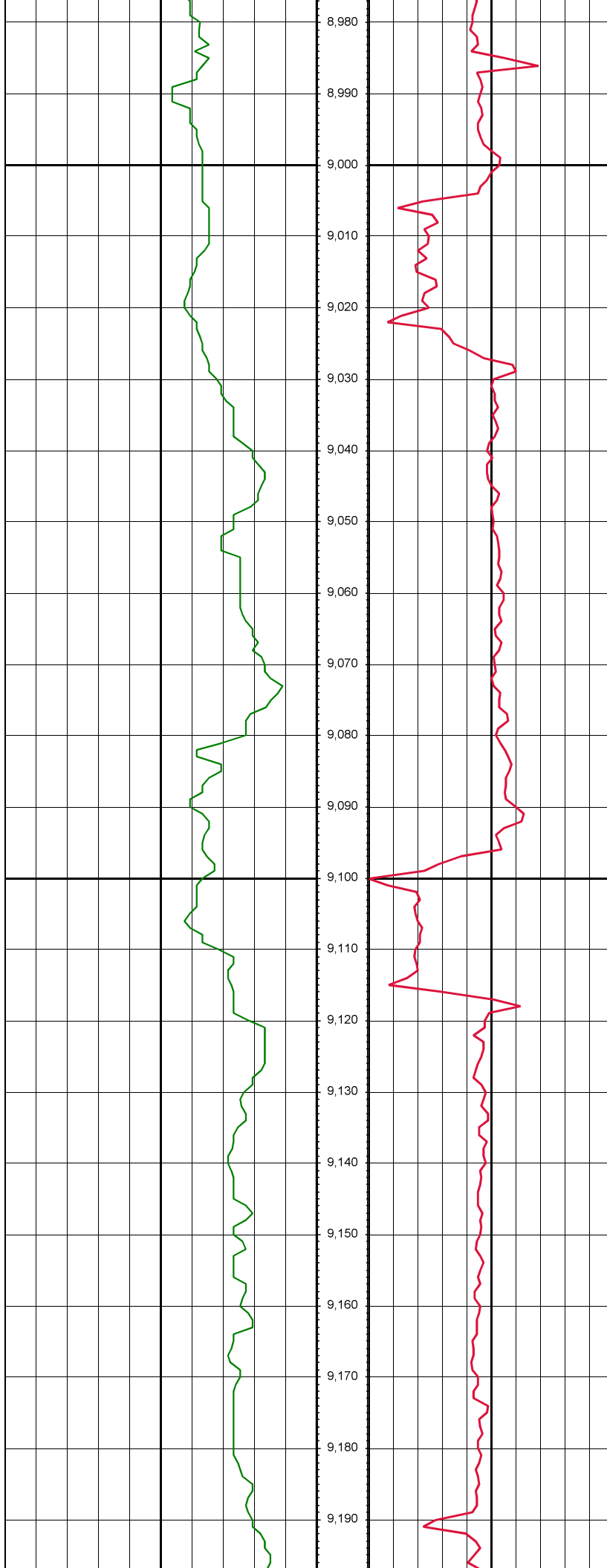
MD: 8678.00 INC: 90.20 AZ: 177.10



MD: 8770.00 INC: 90.10 AZ: 177.20

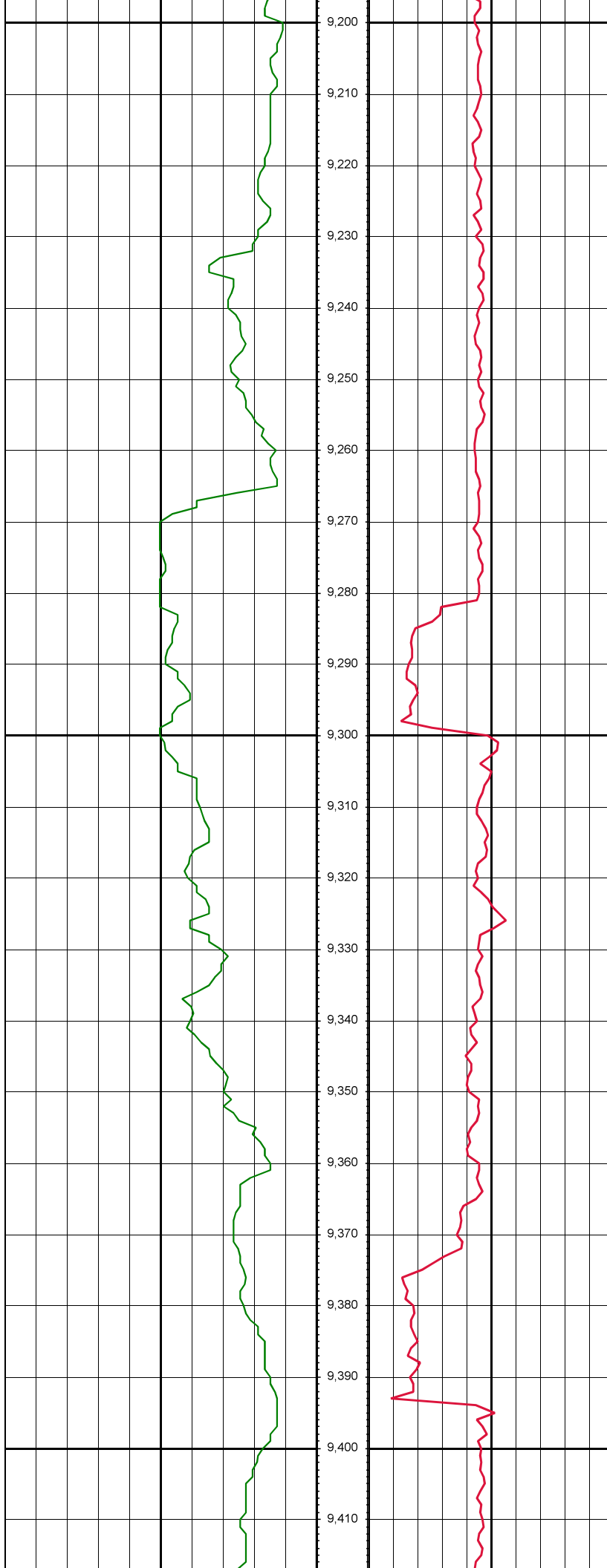
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MD: 8954.00 INC: 92.40 AZ: 177.70



MD: 9046.00 INC: 91.90 AZ: 178.40

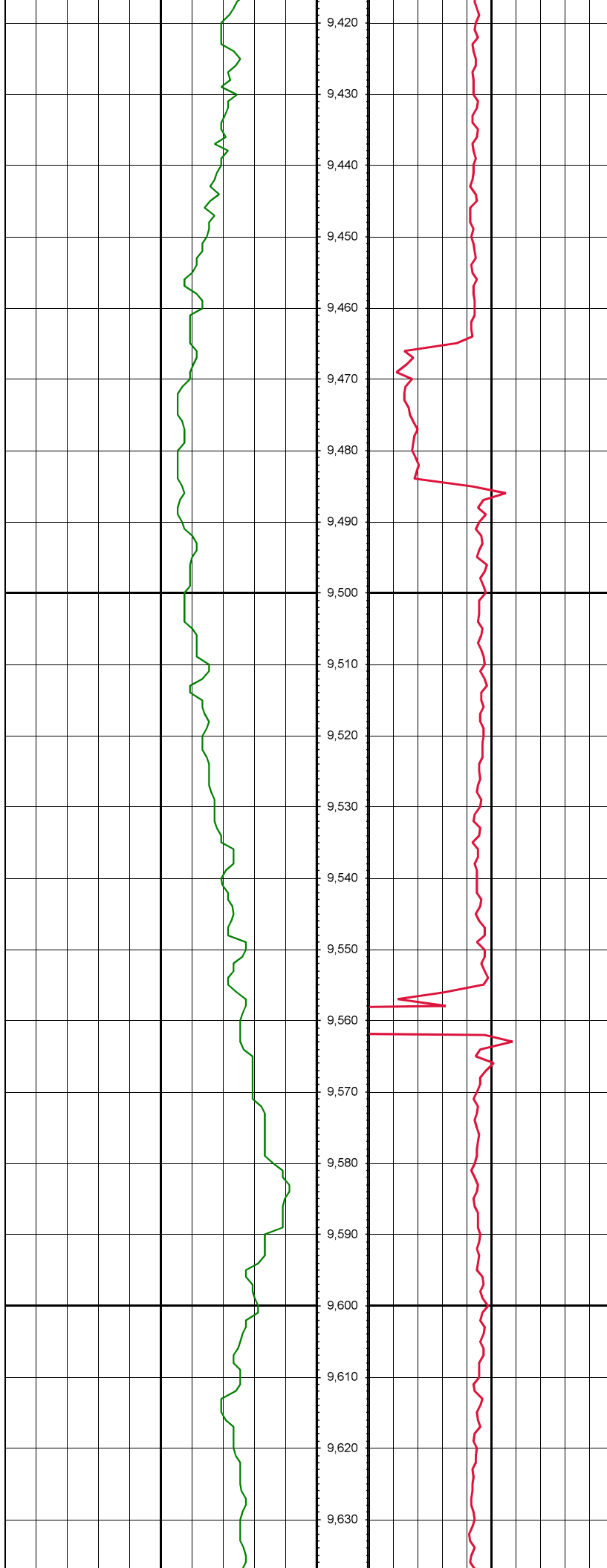
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MD: 9230.00 INC: 90.70 AZ: 176.50

MD: 9322.00 INC: 92.40 AZ: 177.90

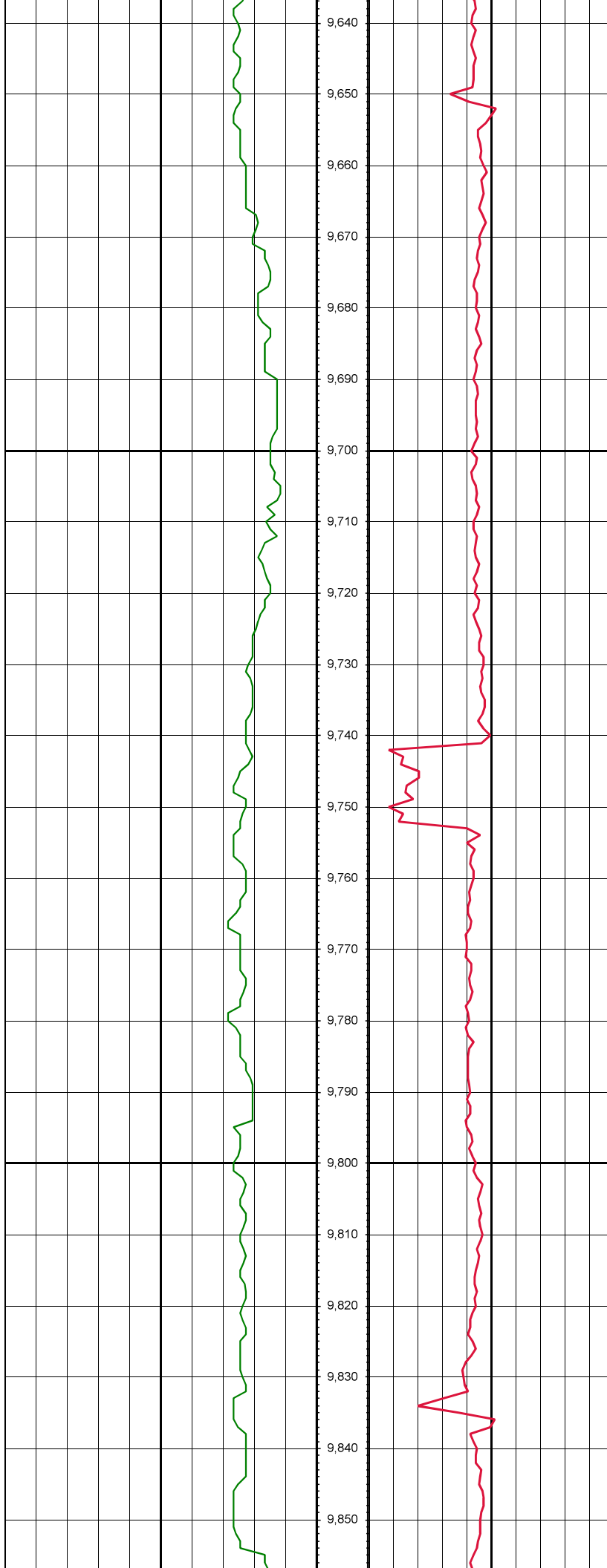
MD: 9414.00 INC: 90.30 AZ: 178.50



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MD: 9597.00 INC: 88.40 AZ: 177.90



MD: 9689.00 INC: 89.60 AZ: 177.70

MD: 9781.00 INC: 88.30 AZ: 177.80

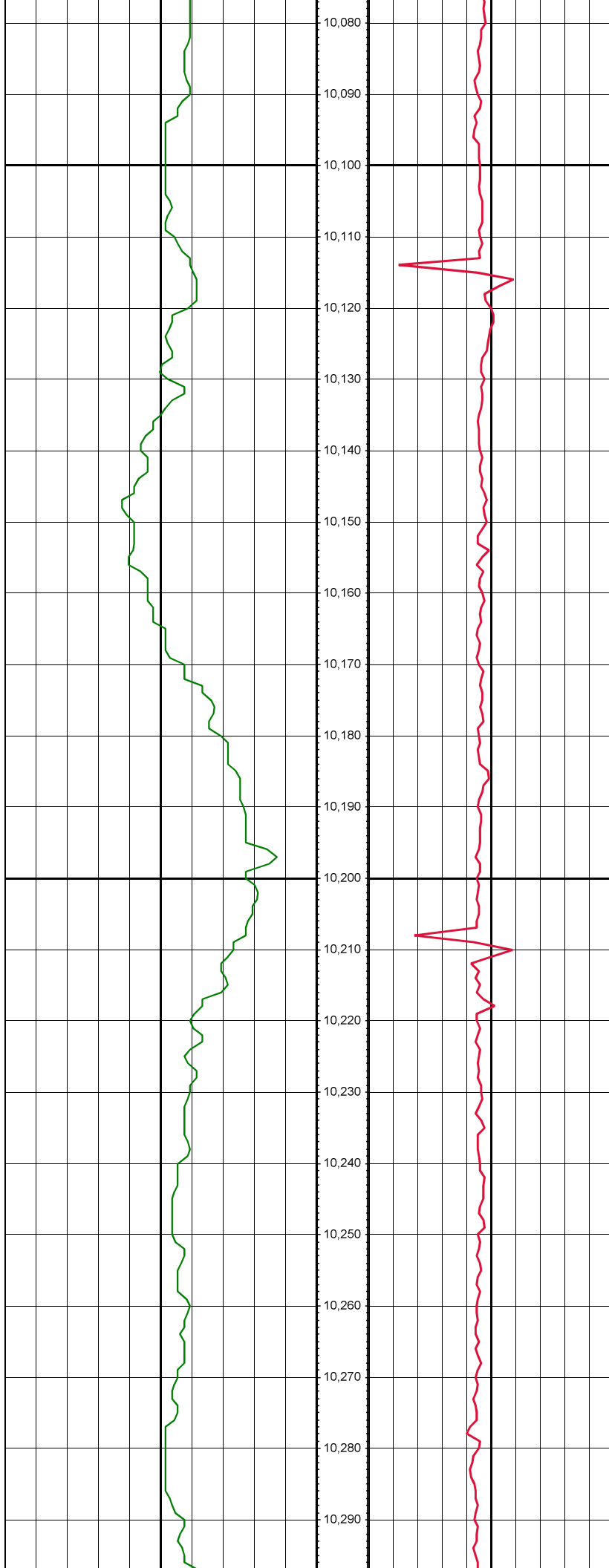


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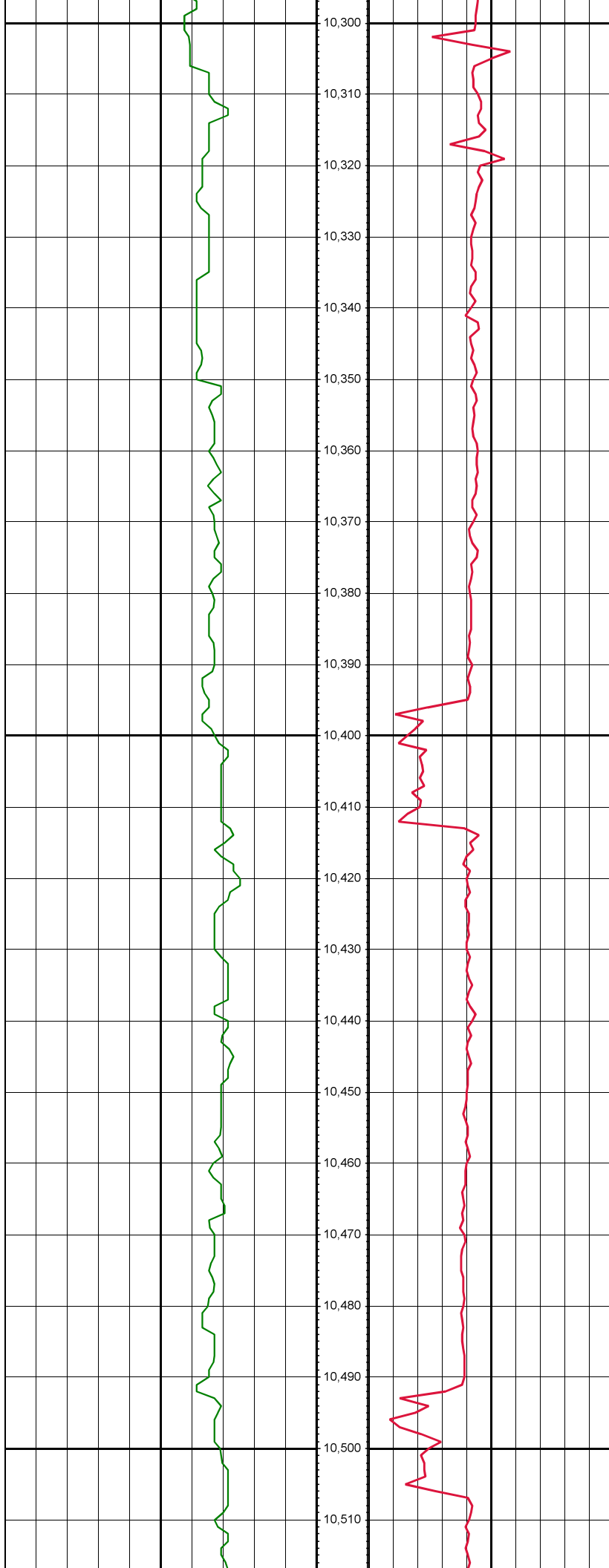
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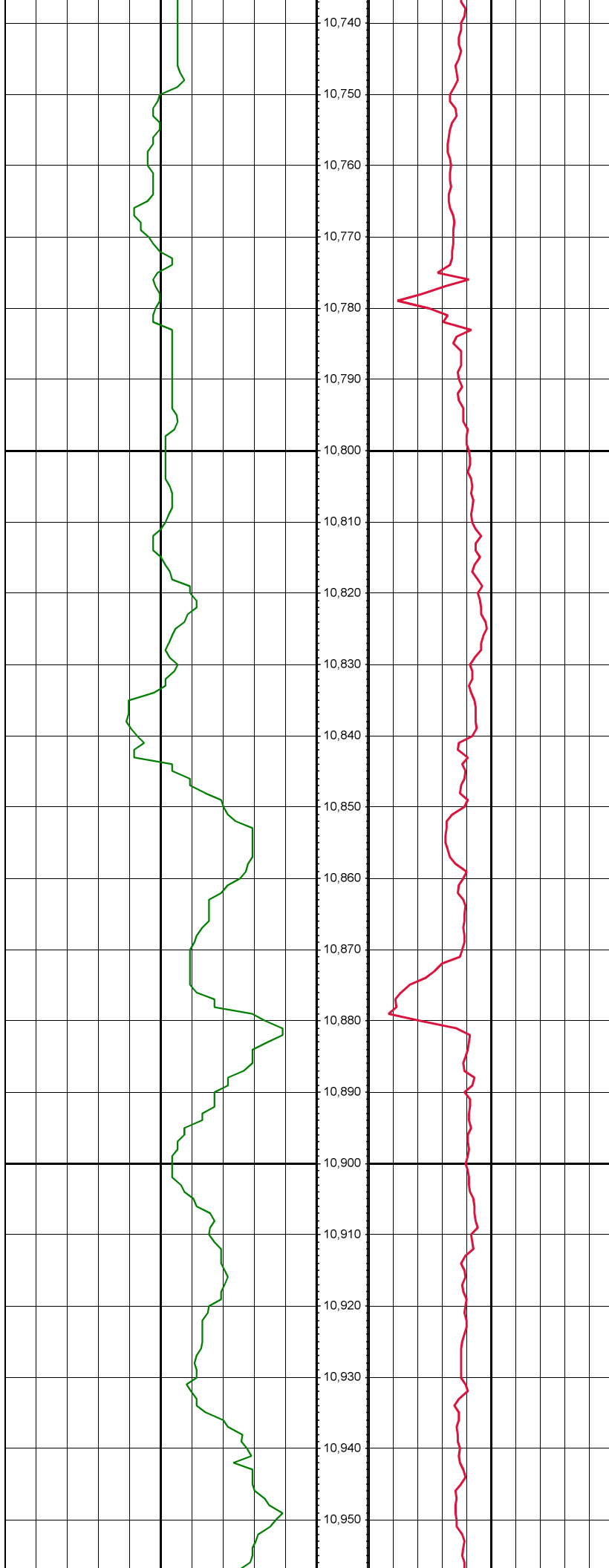
MD: 10441.00 INC: 88.70 AZ: 178.60



MD: 10535.00 INC: 91.80 AZ: 179.30

MD: 10630.00 INC: 90.90 AZ: 180.40

MD: 10725.00 INC: 90.20 AZ: 179.00



MD: 10819.00 INC: 90.30 AZ: 178.40

MD: 10914.00 INC: 89.00 AZ: 179.50



MD: 11008.00 INC: 87.80 AZ: 179.60

MD: 11103.00 INC: 87.60 AZ: 181.00



MD: 11198.00 INC: 86.60 AZ: 180.20

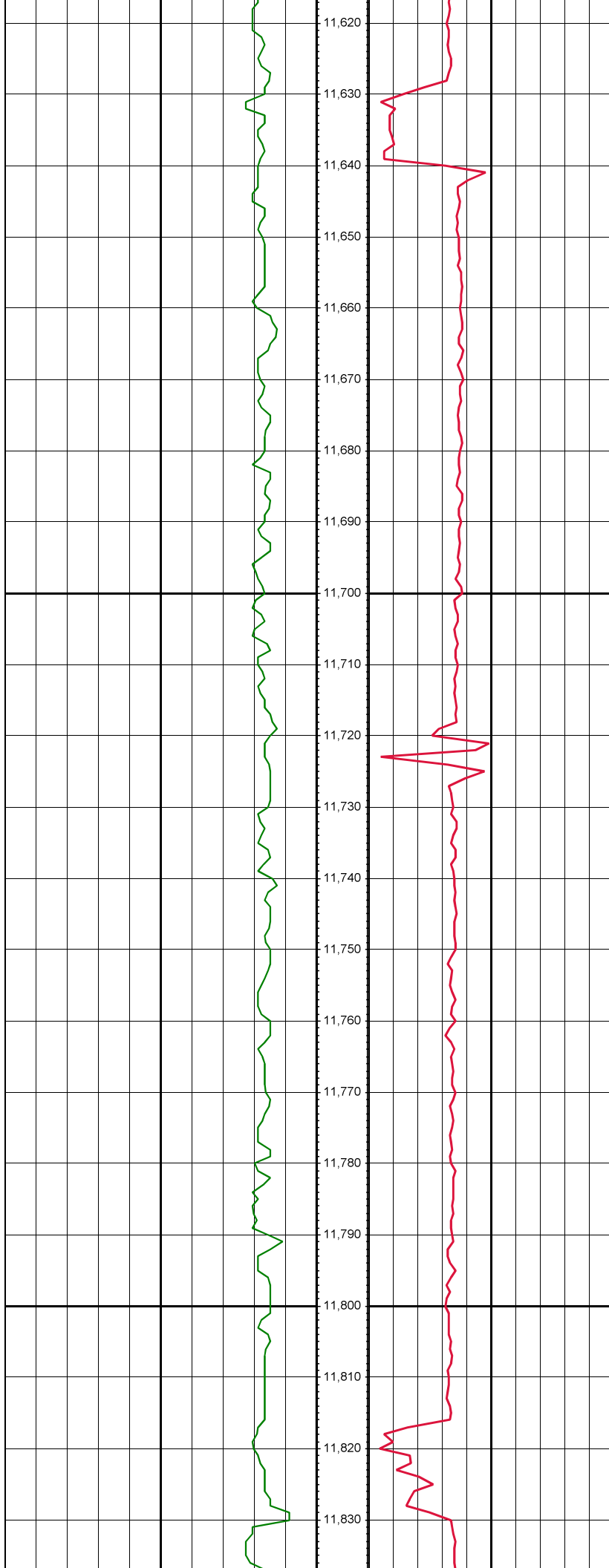
MD: 11292.00 INC: 86.90 AZ: 180.60

MD: 11387.00 INC: 89.50 AZ: 181.30



MD: 11482.00 INC: 92.00 AZ: 180.70

MD: 11576.00 INC: 92.70 AZ: 180.70

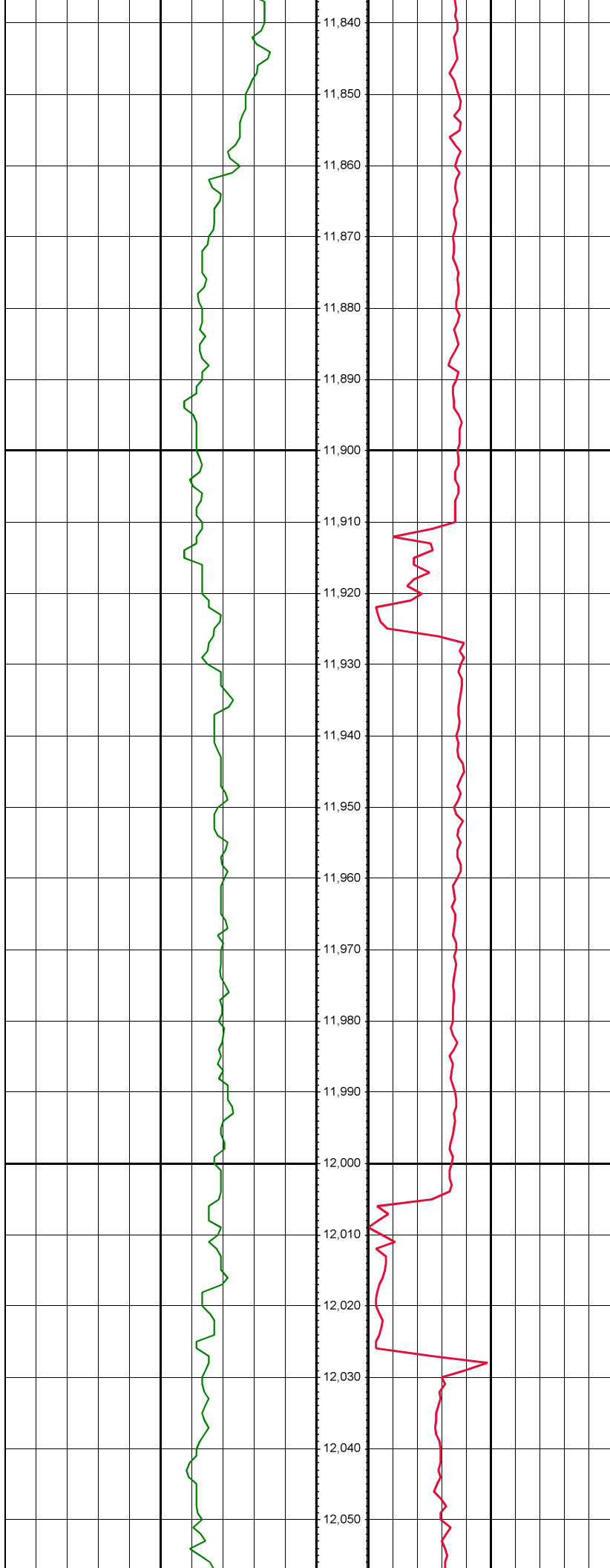


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MD: 11671.00 INC: 90.70 AZ: 180.90

MD: 11765.00 INC: 90.80 AZ: 181.30

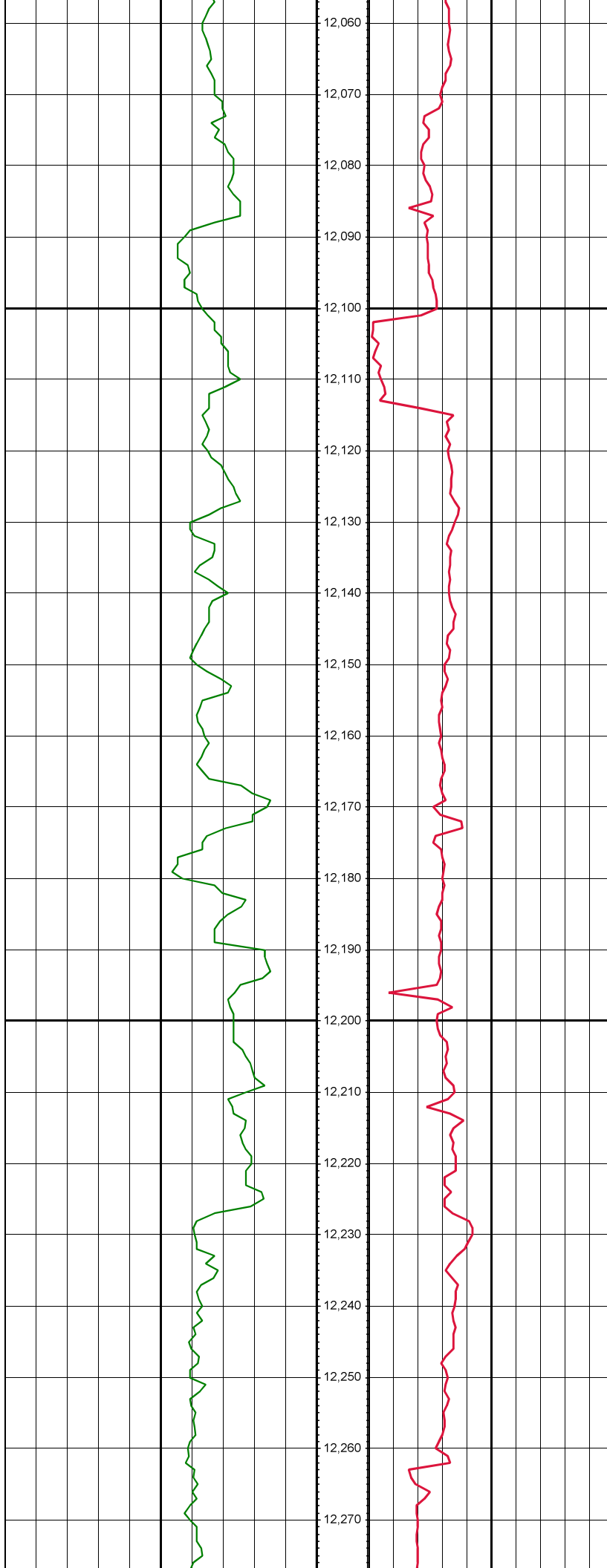




MD: 11860.00 INC: 91.10 AZ: 181.10

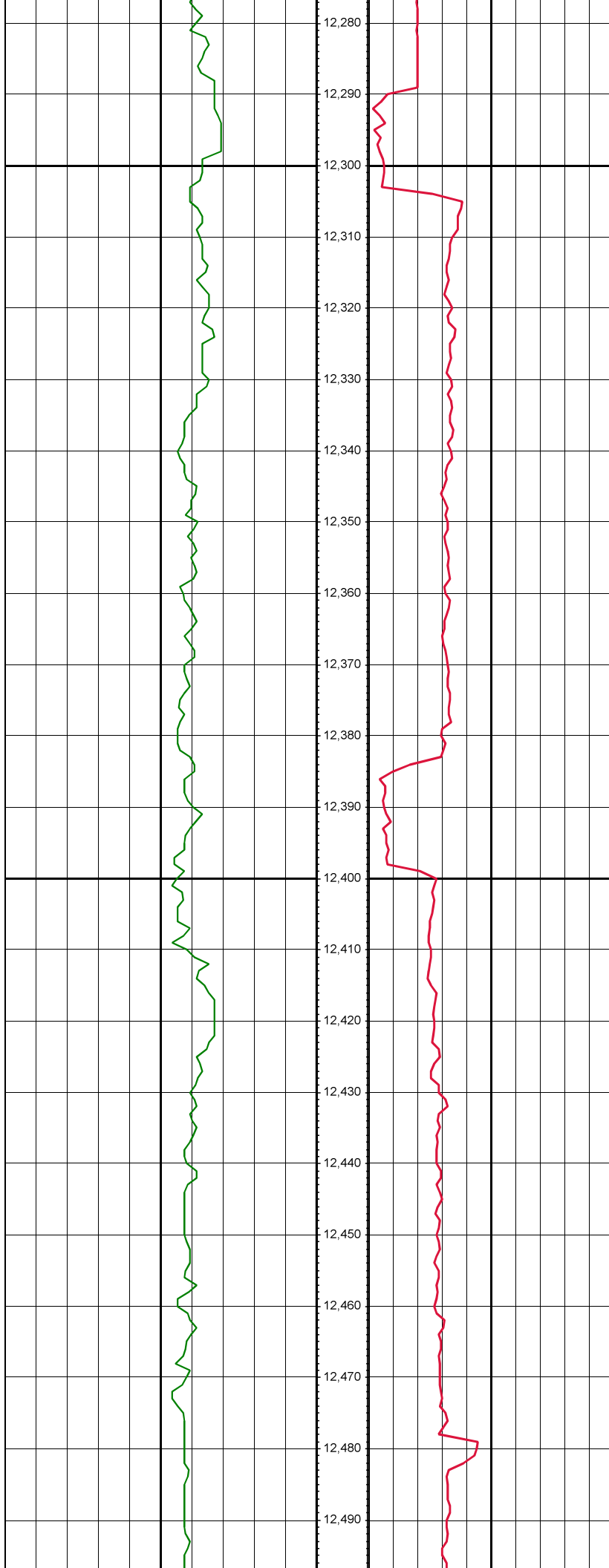
MD: 11955.00 INC: 90.40 AZ: 181.60

MD: 12049.00 INC: 90.10 AZ: 179.70



MD: 12143.00 INC: 90.30 AZ: 178.40

MD: 12238.00 INC: 91.30 AZ: 178.90



MD: 12332.00 INC: 90.20 AZ: 179.40

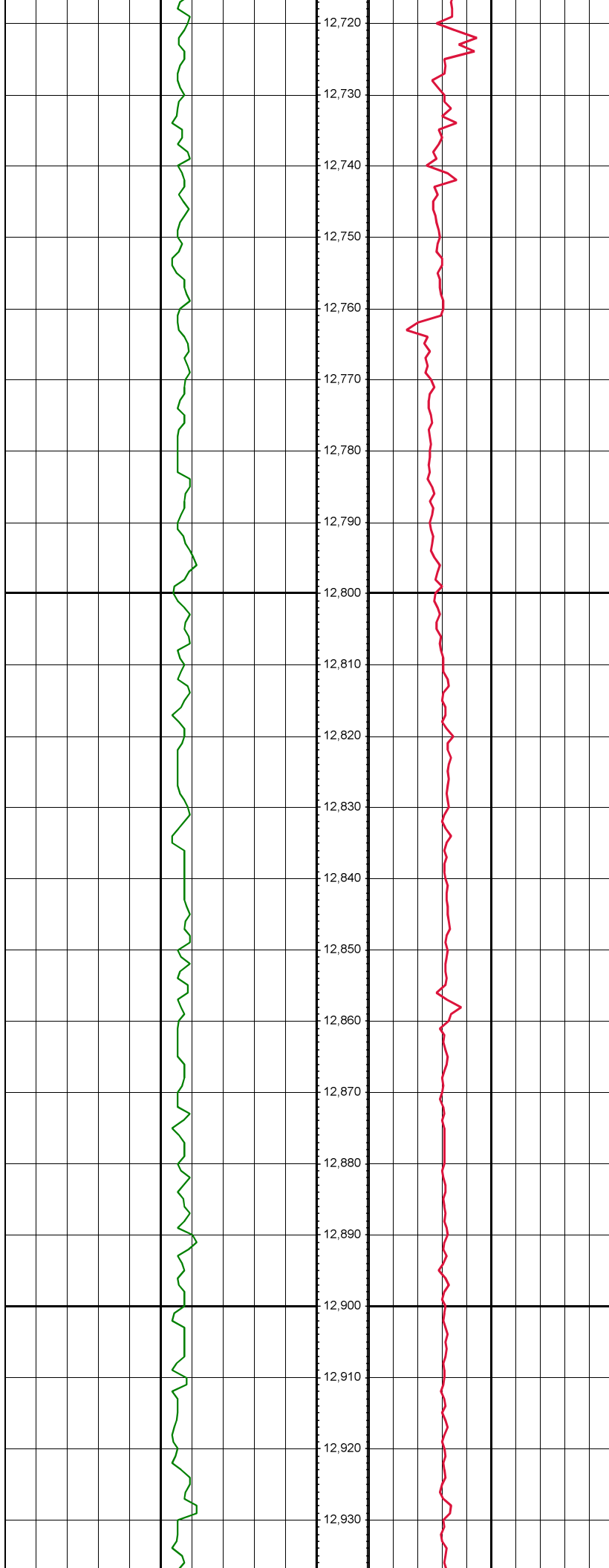
MD: 12427.00 INC: 89.10 AZ: 178.30



MD: 12521.00 INC: 90.70 AZ: 178.60

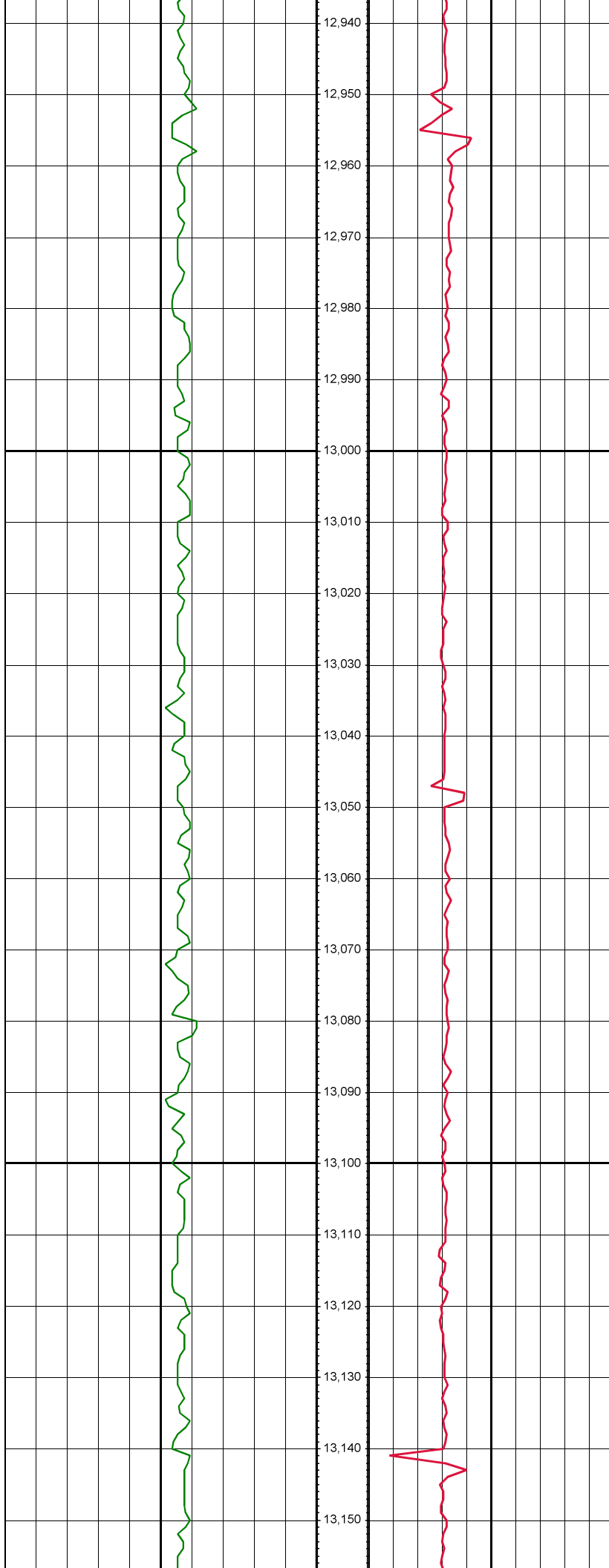
MD: 12616.00 INC: 89.70 AZ: 178.40

MD: 12711.00 INC: 89.80 AZ: 178.60



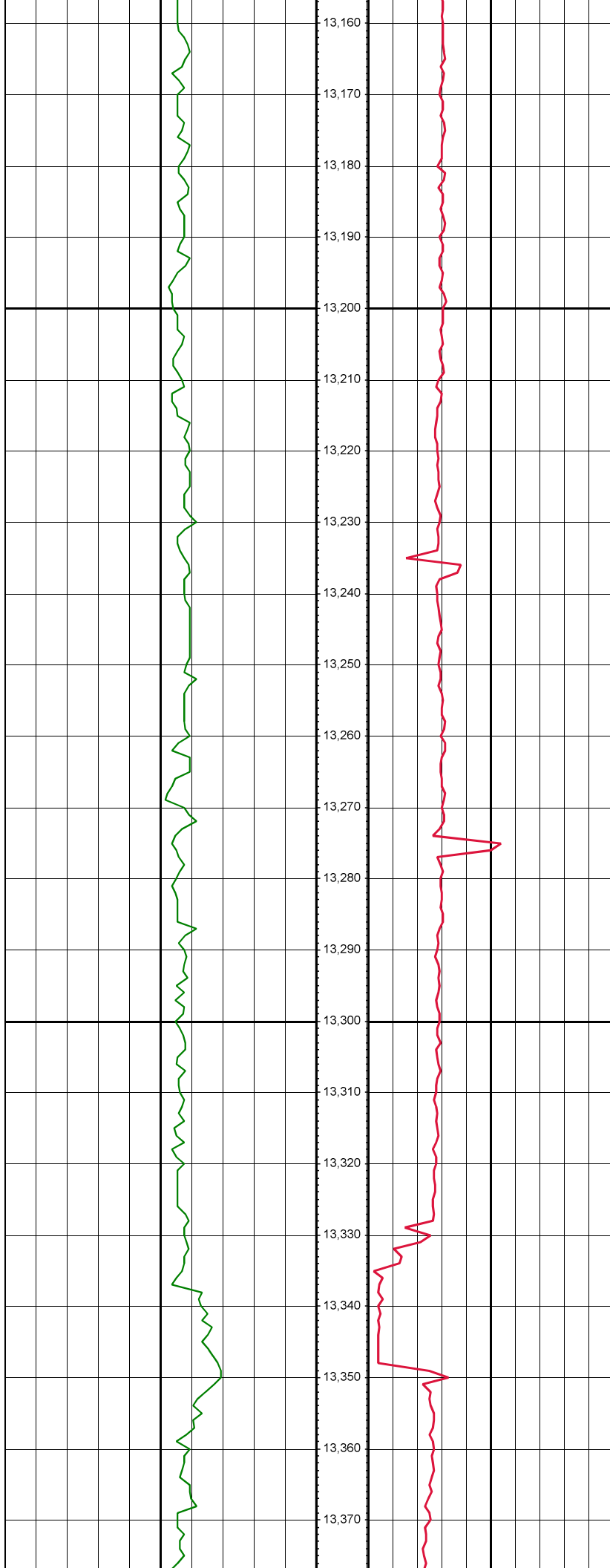
MD: 12805.00 INC: 89.80 AZ: 178.40

MD: 12900.00 INC: 89.70 AZ: 179.30



MD: 12994.00 INC: 89.50 AZ: 179.40

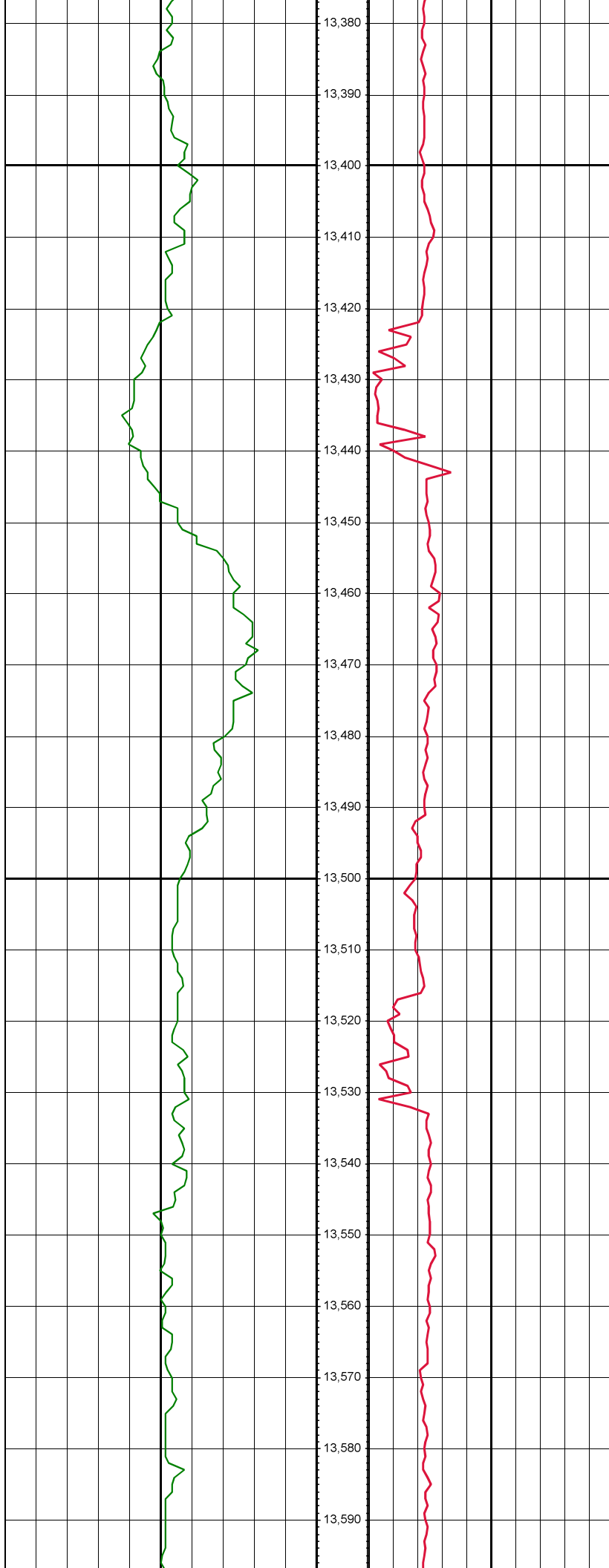
MD: 13089.00 INC: 89.40 AZ: 179.70



MD: 13183.00 INC: 89.60 AZ: 180.60

MD: 13278.00 INC: 89.90 AZ: 181.80

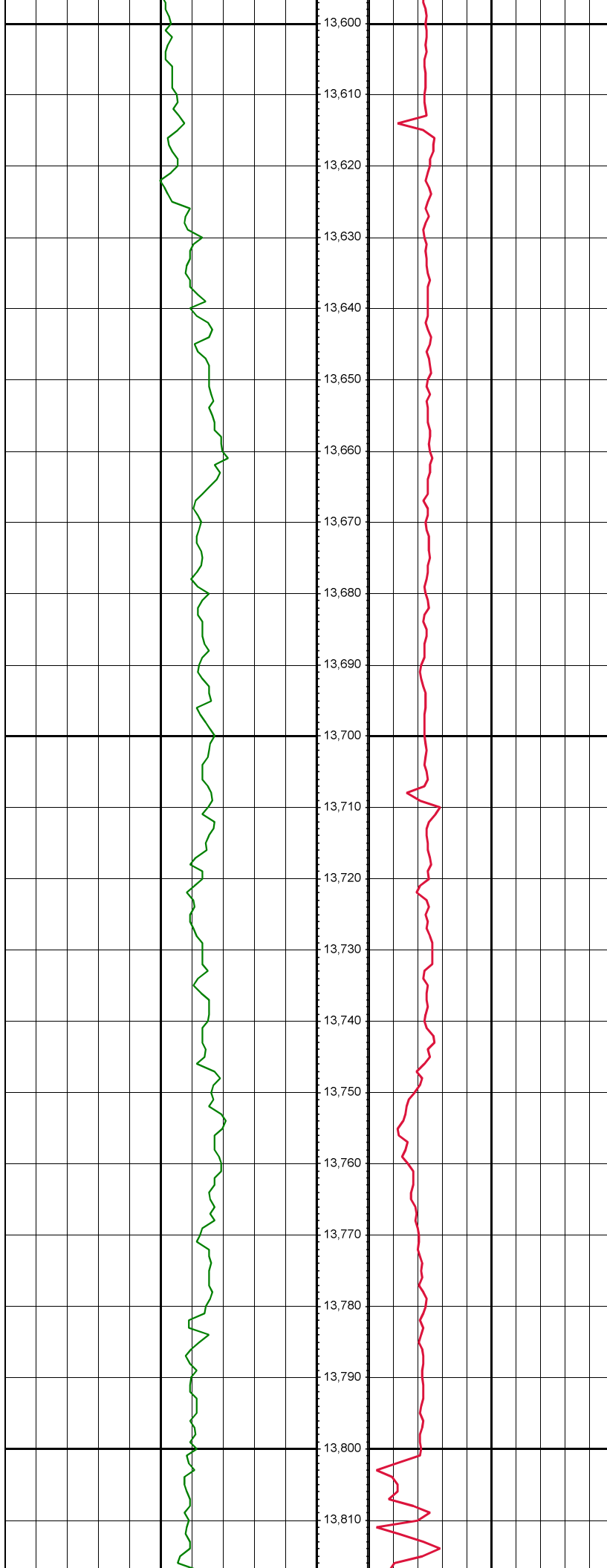
MD: 13372.00 INC: 88.70 AZ: 180.60



MD: 13467.00 INC: 87.90 AZ: 179.10

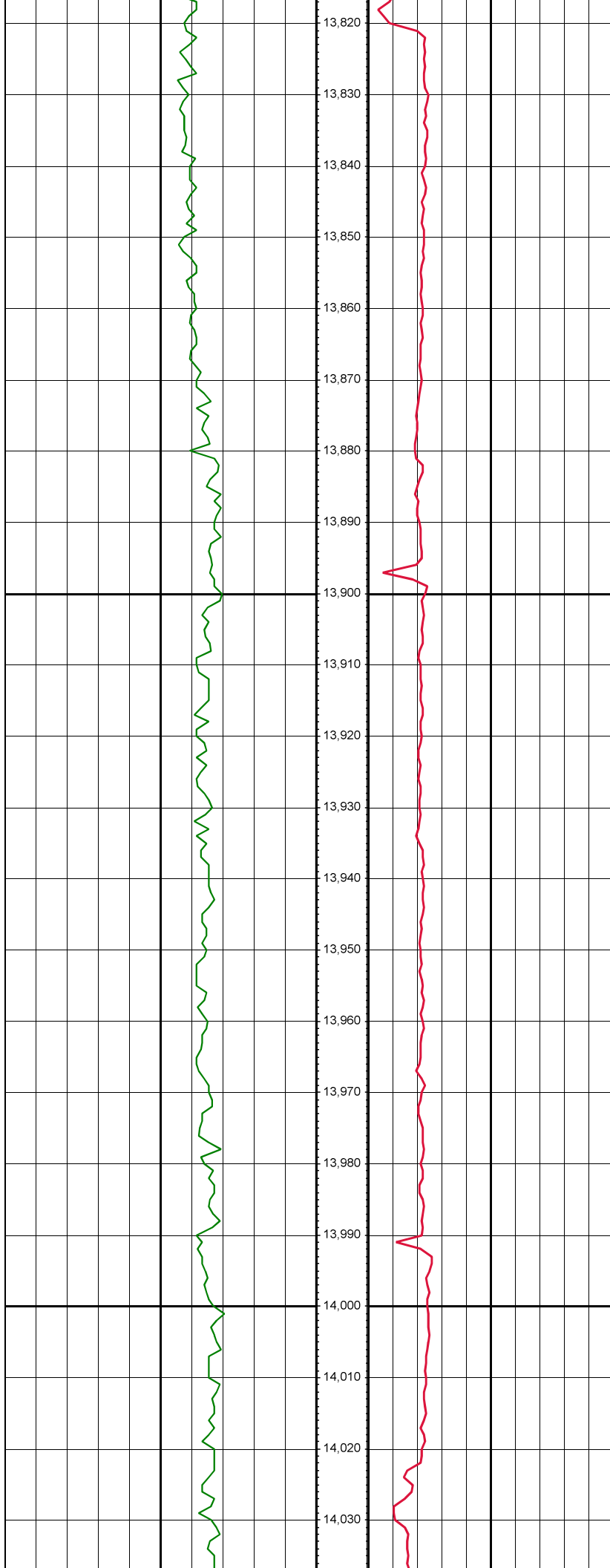
MD: 13561.00 INC: 89.00 AZ: 178.40





MD: 13656.00 INC: 89.10 AZ: 178.50

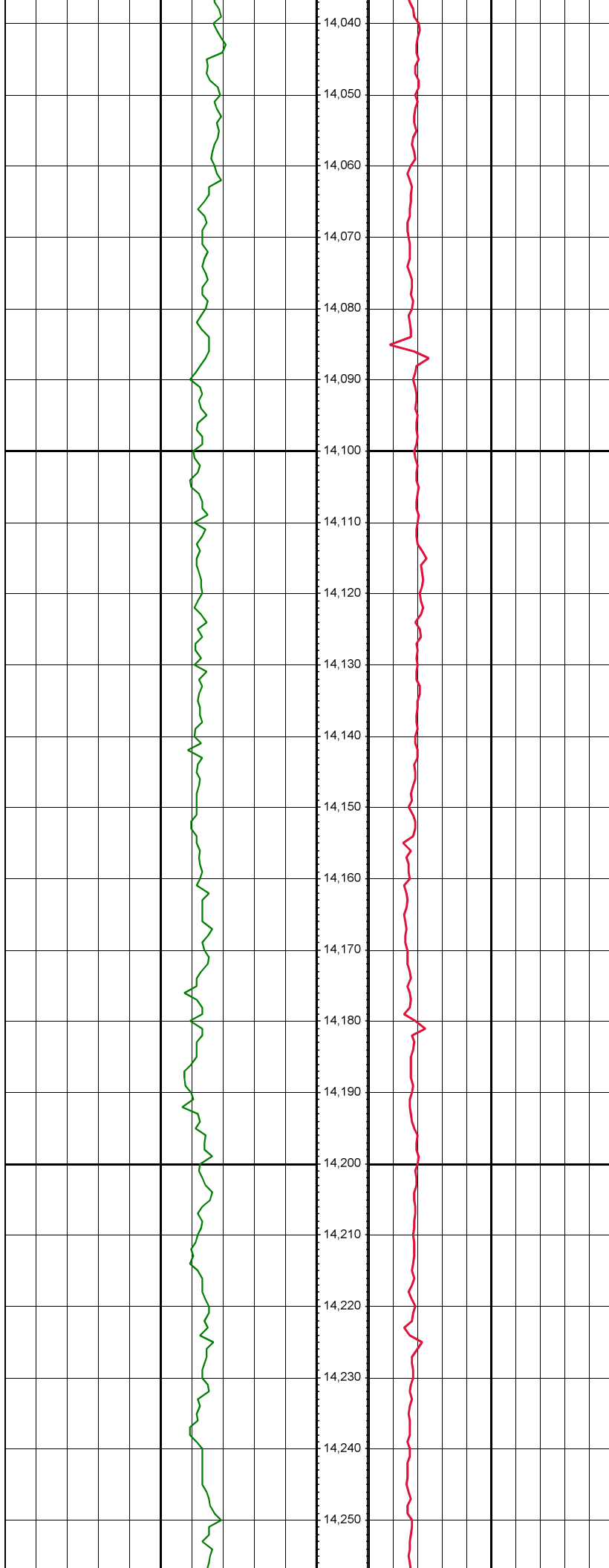
MD: 13751.00 INC: 90.50 AZ: 178.90



MD: 13845.00 INC: 89.80 AZ: 178.70

MD: 13940.00 INC: 89.90 AZ: 179.40

MD: 14034.00 INC: 89.80 AZ: 178.80



MD: 14129.00 INC: 90.20 AZ: 178.70

MD: 14224.00 INC: 89.90 AZ: 177.10



MD: 14318.00 INC: 91.10 AZ: 177.20

MD: 14413.00 INC: 92.30 AZ: 176.90

