

**CATHEDRAL**

Cathedral Energy Services
1949 Pyrite Road
Casper, Wyoming, 82604

135562

5":100' - MD

12/20/2013 1:06:15 PM

Oper. Company: Encana Oil & Gas
Country: USA
State / Province: Colorado
County / Parish: Weld
Started: 11/27/2013 02:00 AM

API/UWI: 05-123-37789-00
Field: DJ Basin
Well: Lochbuie 2B-31H
Rig: H&P 522
Ended: 12/09/2013 08:00 AM

Personnel

Day Hand: C. Van Oerle
Night Hand: A. Stewart
Comp. Emp: Cathedral Energy Service

Location

Latitude: 40.014080
Longitude: -104.712170
Elev. GL: 5007
Elev. DF: 30
Elev. KB: 5037

Gamma Ray
ROP
TD 12,051'

Hole Data

Size	From	To
12.25	110	1504
8.75	1506	7784
6.13	7785	12051

Casing Data

Size	From	To
9 5/8	0	1594
7	1595	7784
4 1/2	0	12042

Bit Sizes

Size	From	To
12.25	110	1504
8.75	1505	7784
6.13	7785	12051

Mud Data

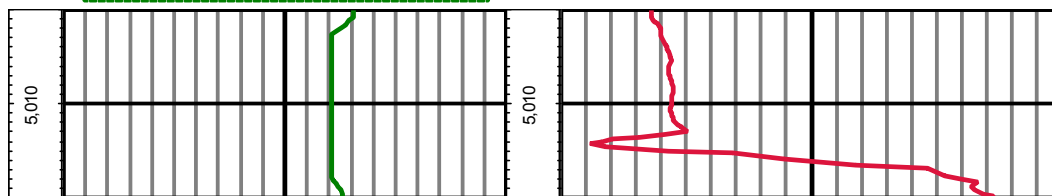
Type	Weight	Density	Viscosity	Rm	Rmf	Rmc	From	To
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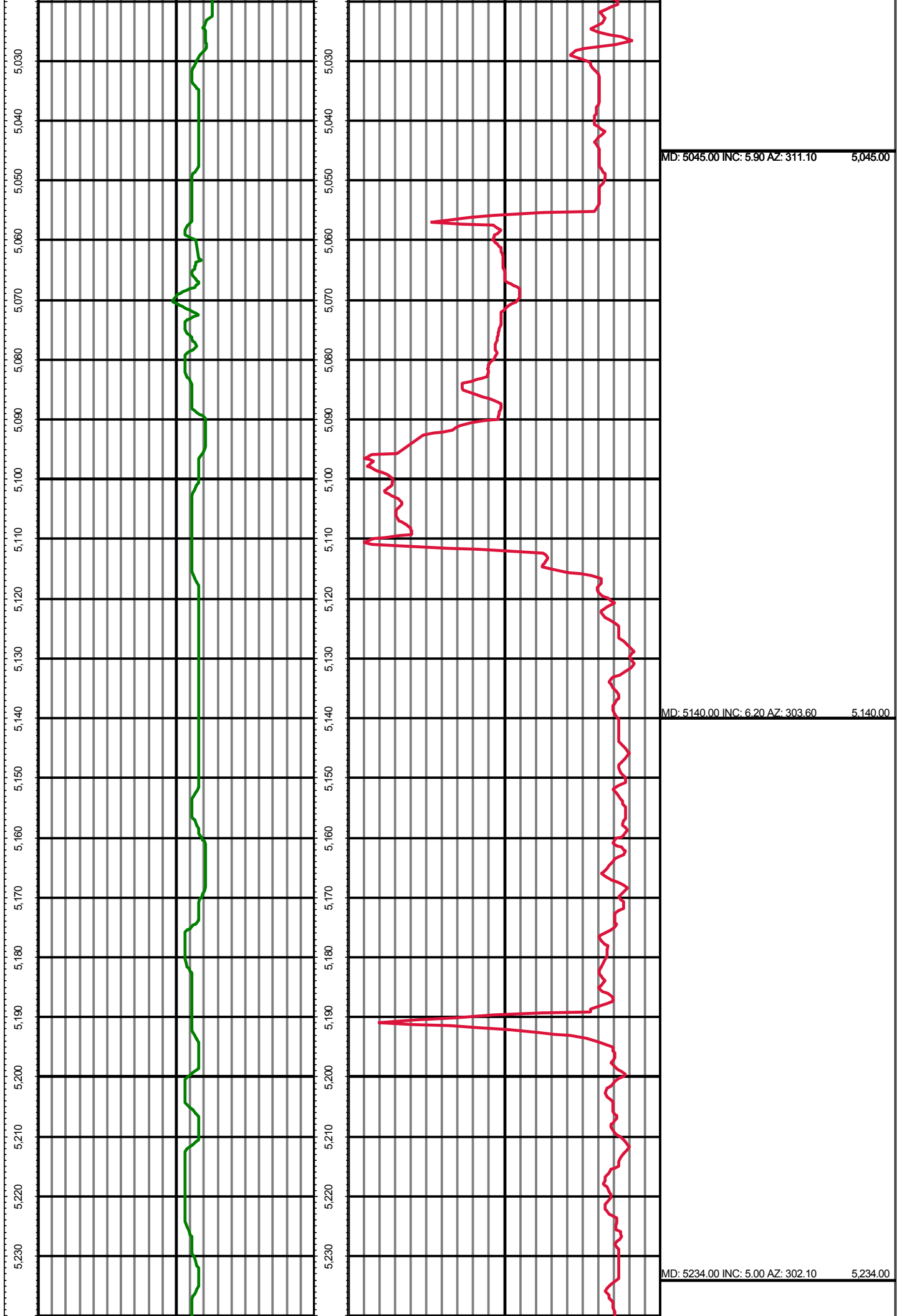
Tool Run Data

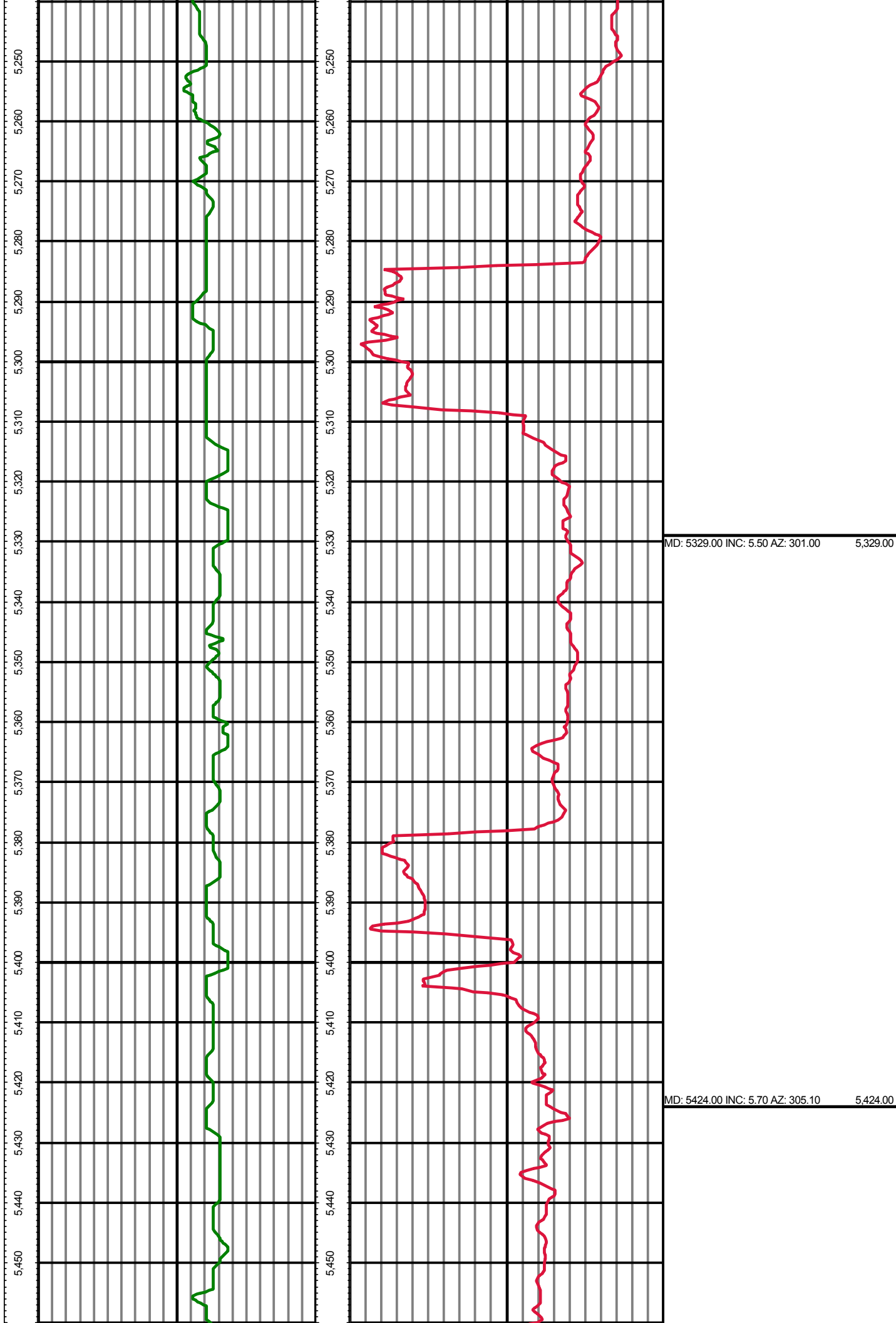
Serial Number	Gamma Offset	Resist. Offset	Start Time	Start Depth	End Time	End Depth
1061	32.59	0	11/30/2013 1:00:23 PM	5000	12/1/2013 3:00:23 AM	6986
1061	32.59	0	12/1/2013 12:30:03 PM	6987	12/2/2013 11:00:03 AM	7784
1061	35.1	0	12/5/2013 8:00:19 PM	7785	12/7/2013 3:30:19 AM	7785
1061	35.1	0	12/10/2013 3:19:59 PM	7785	12/10/2013 3:19:59 PM	10643
1061	35.1	0	12/8/2013 1:00:58 PM	10644	12/9/2013 6:00:58 PM	12051

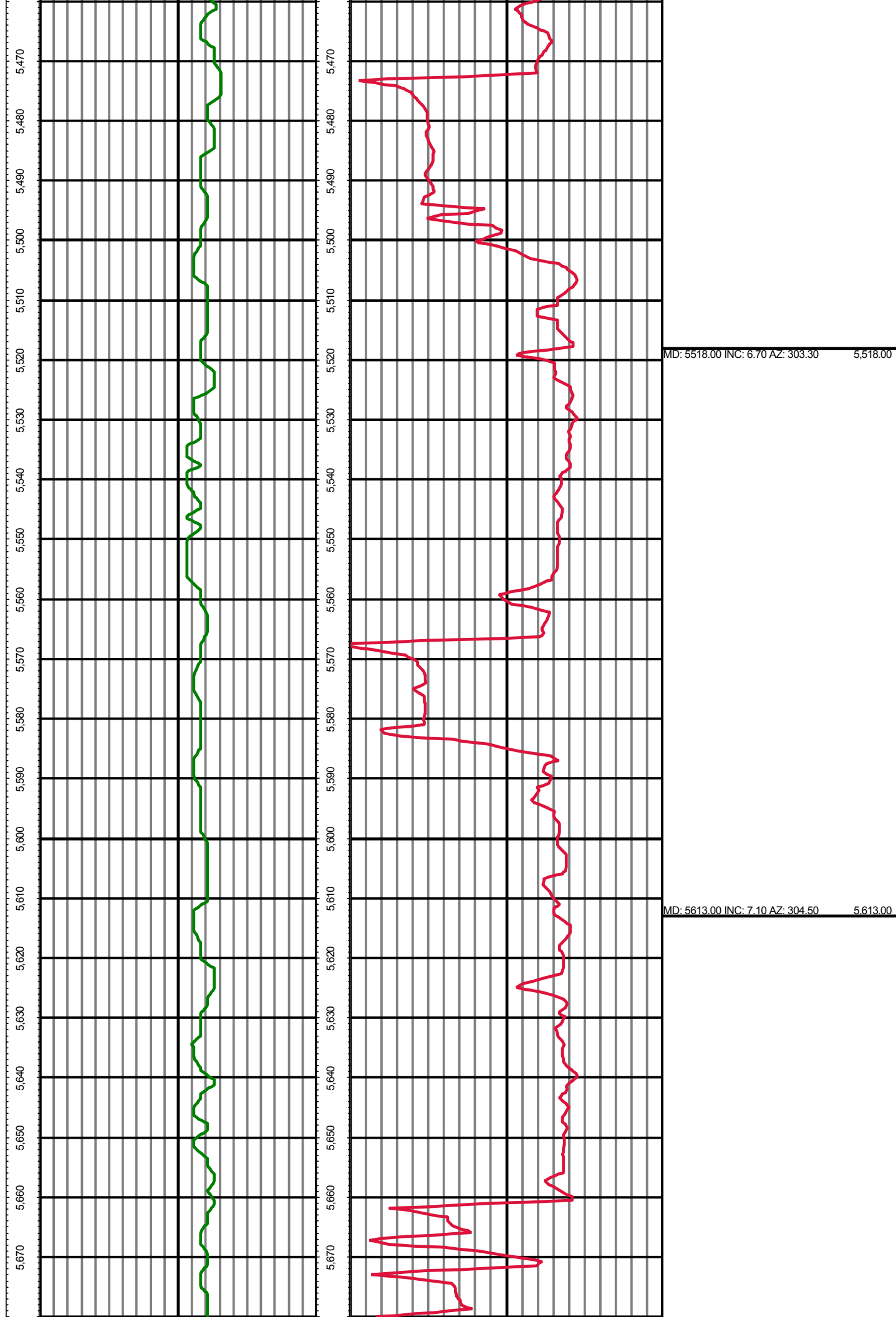
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost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

MD 0.00 GR(API) 150.00 MD 0.00 ROP(FT/HR) 800.00 Surveys (MD/INC/AZ)
FT 150.00 2 300.00 FT



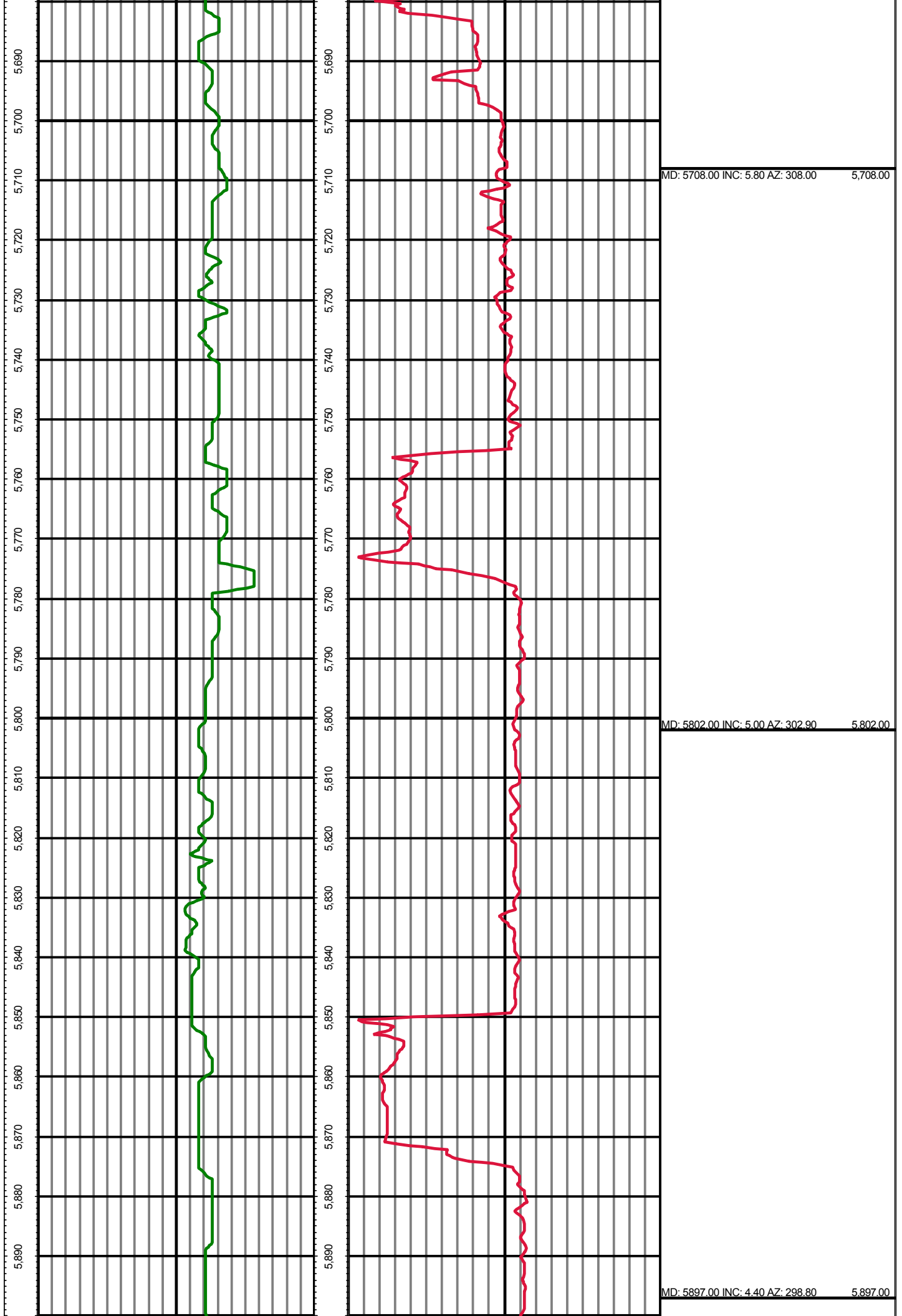


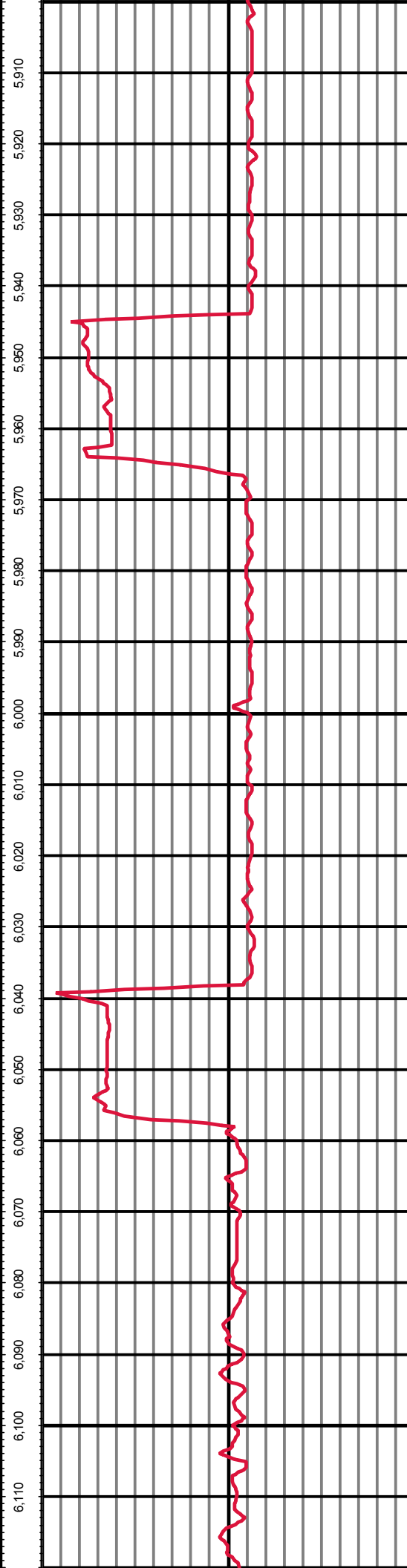
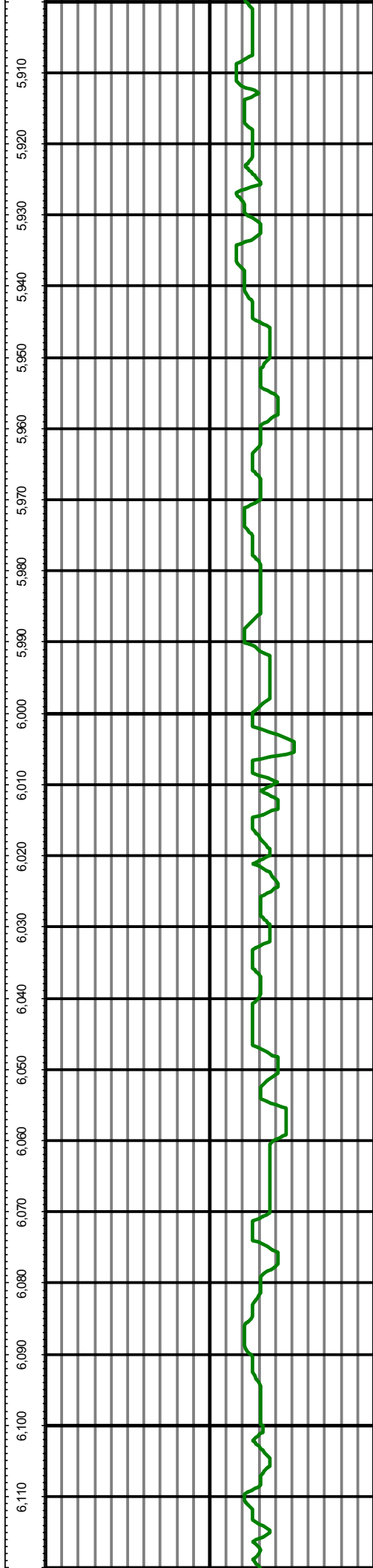




MD: 5518.00 INC: 6.70 AZ: 303.30 5,518.00

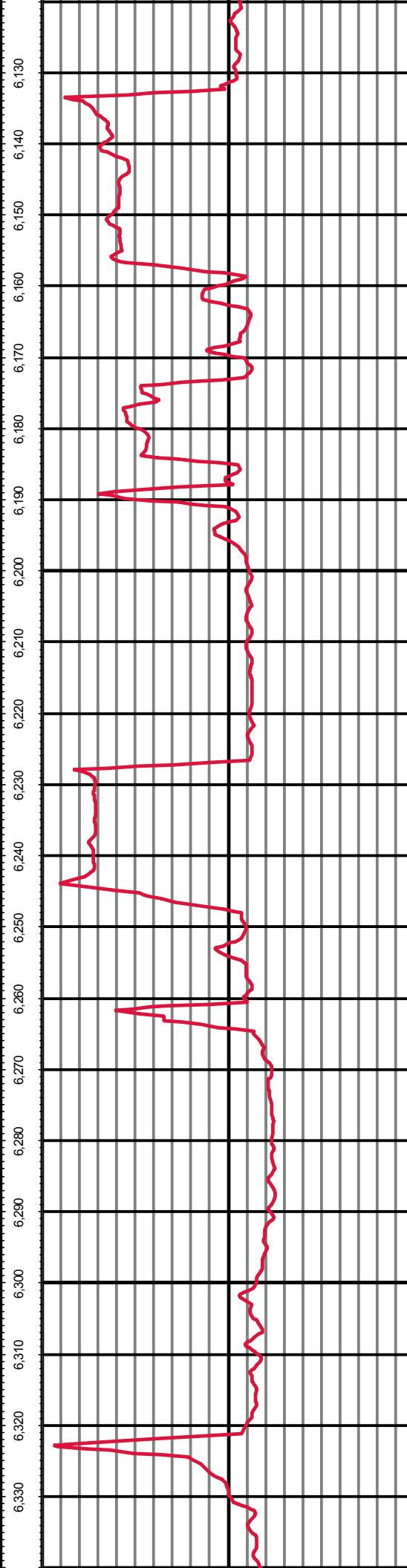
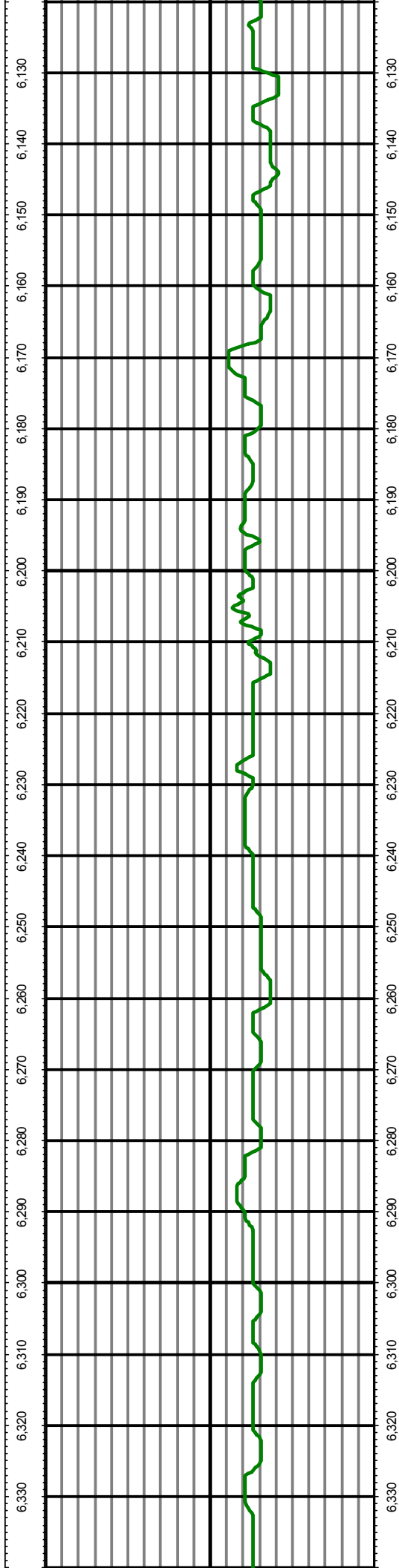
MD: 5613.00 INC: 7.10 AZ: 304.50 5,613.00





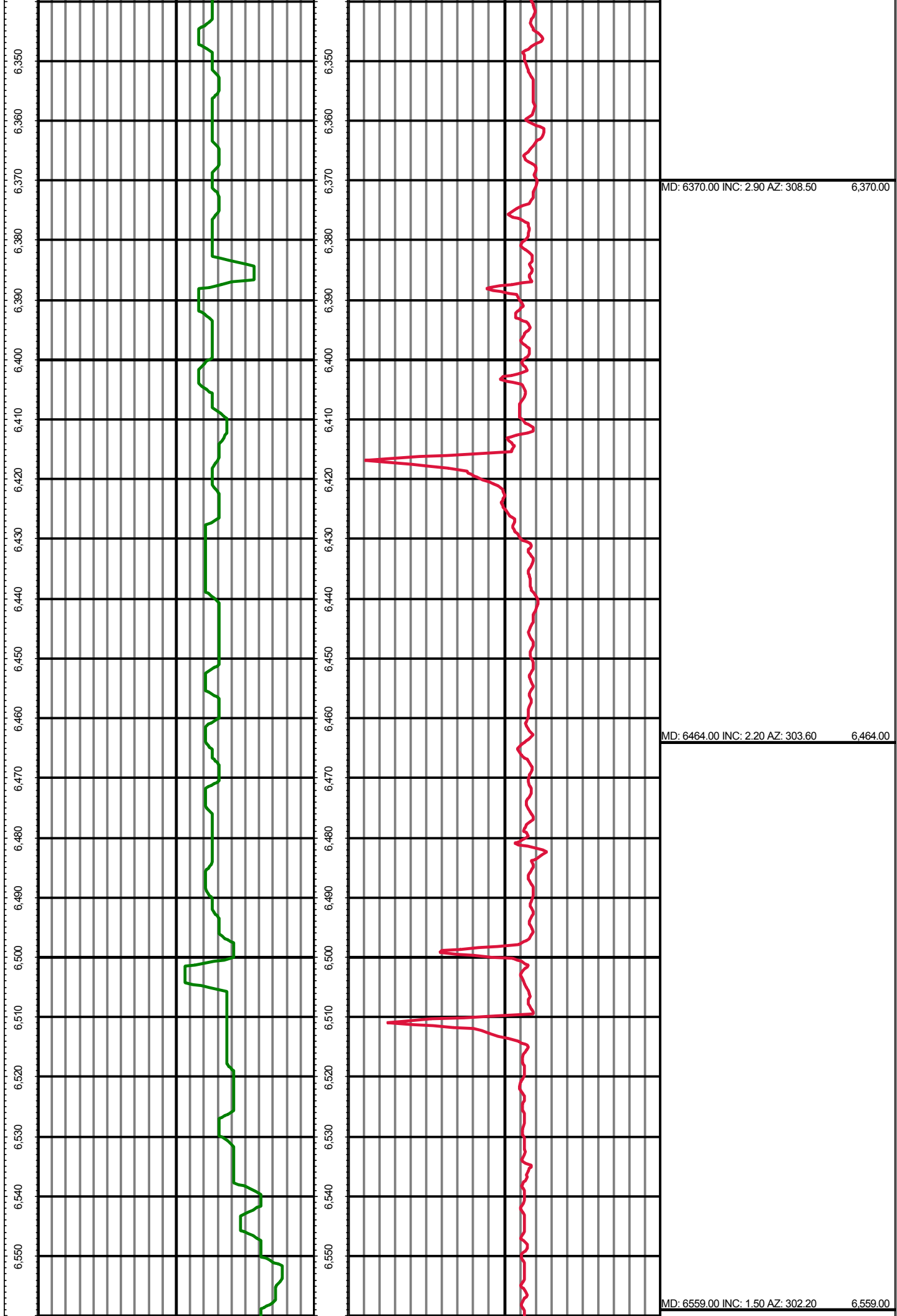
MD: 5991.00 INC: 4.60 AZ: 287.70 5,991.00

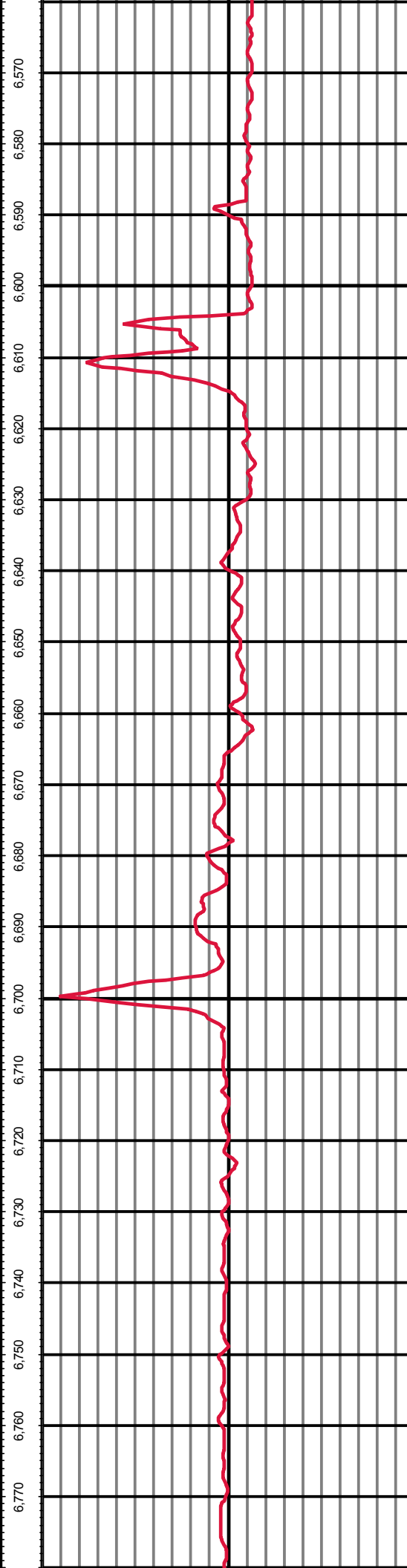
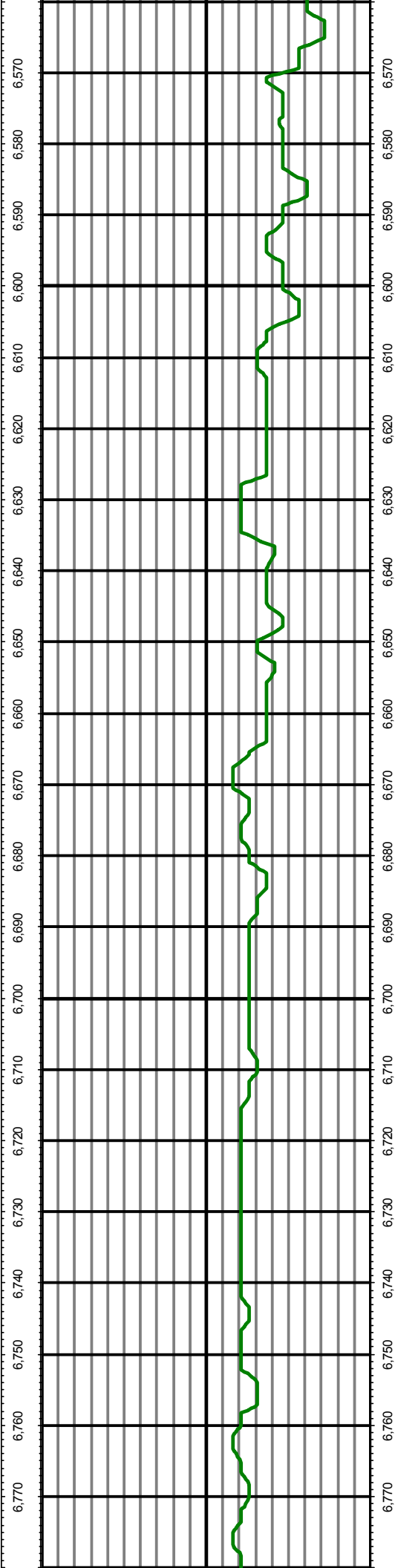
MD: 6086.00 INC: 4.40 AZ: 294.40 6,086.00



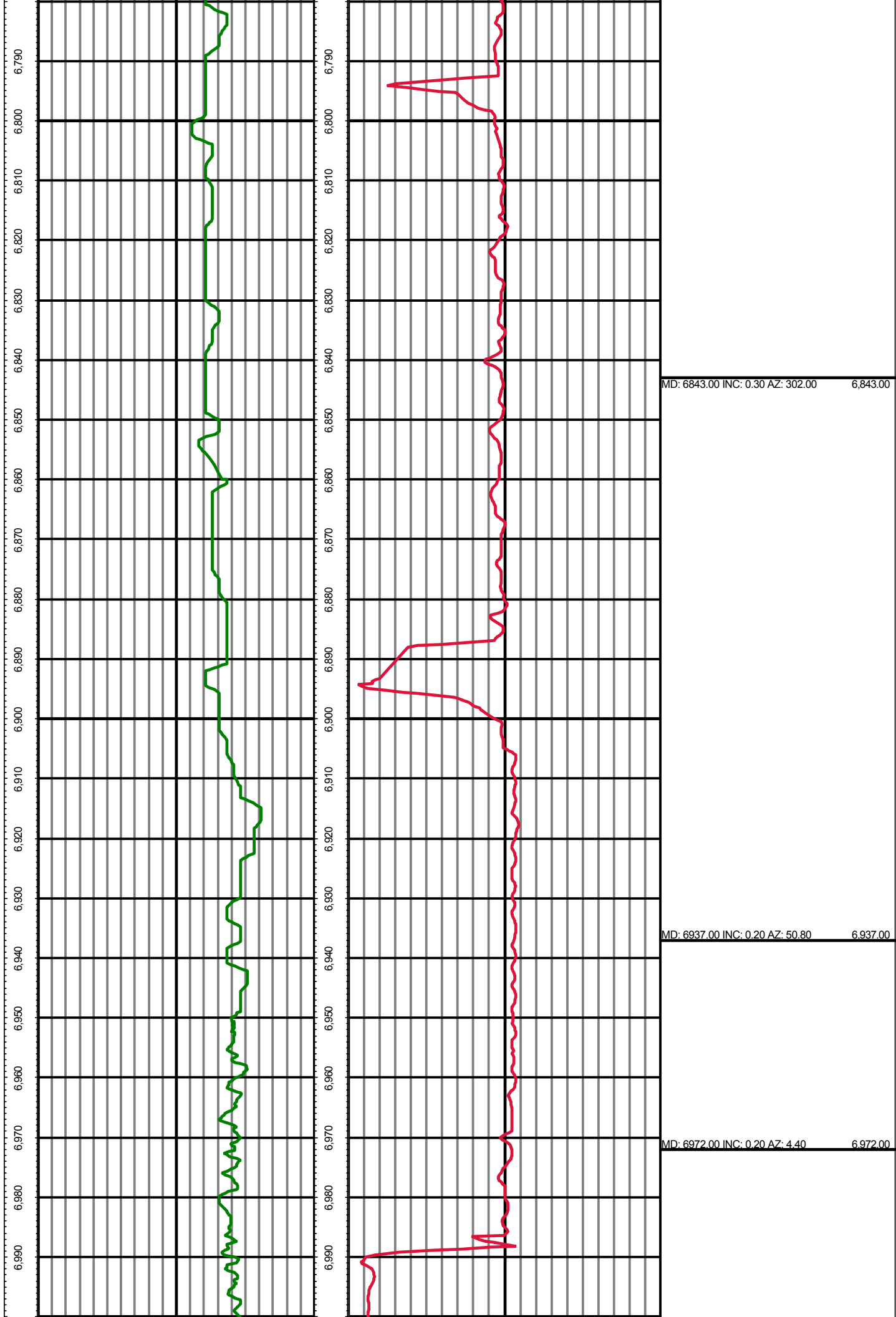
MD: 6181.00 INC: 3.90 AZ: 297.30 6,181.00

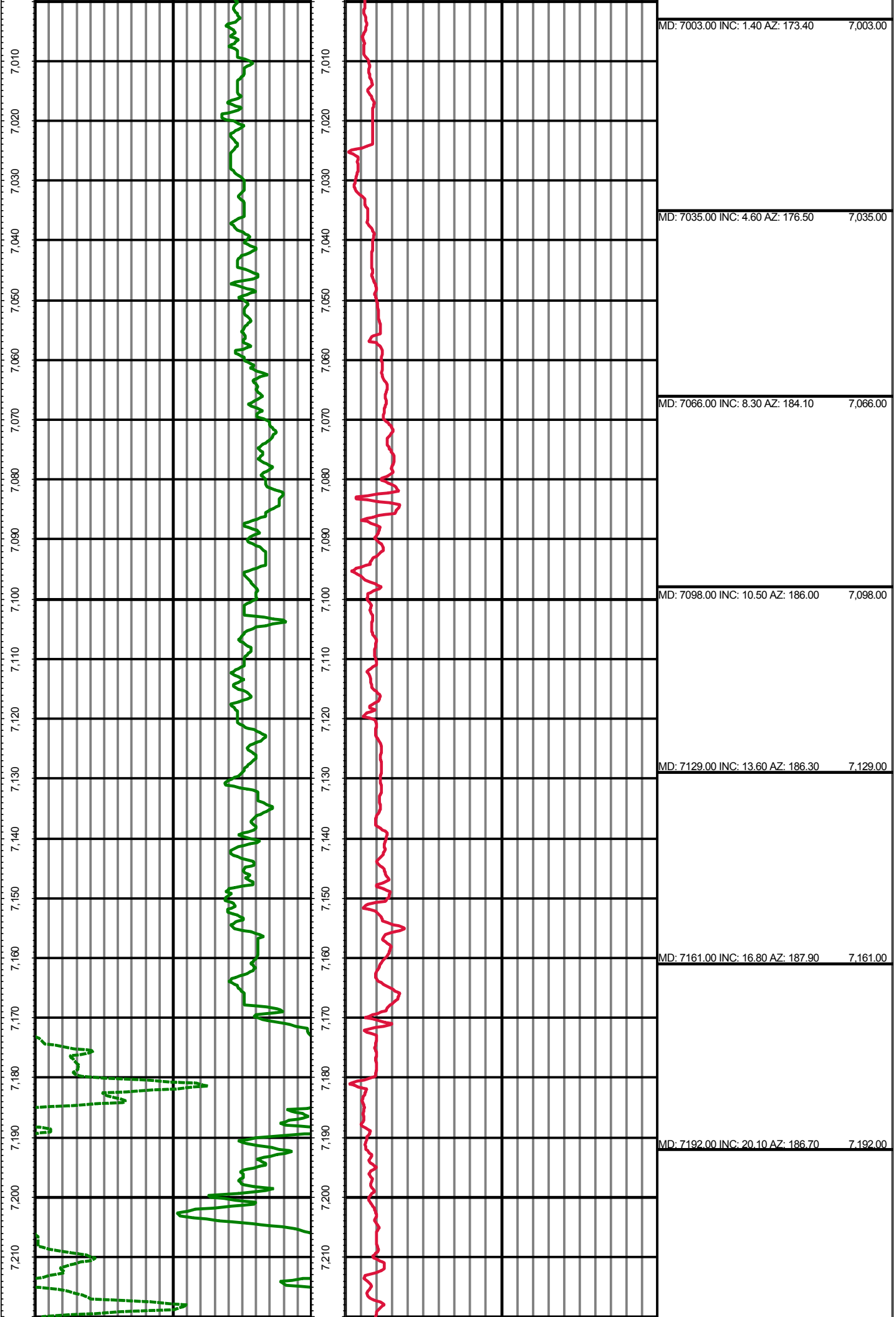
MD: 6275.00 INC: 3.60 AZ: 310.90 6,275.00

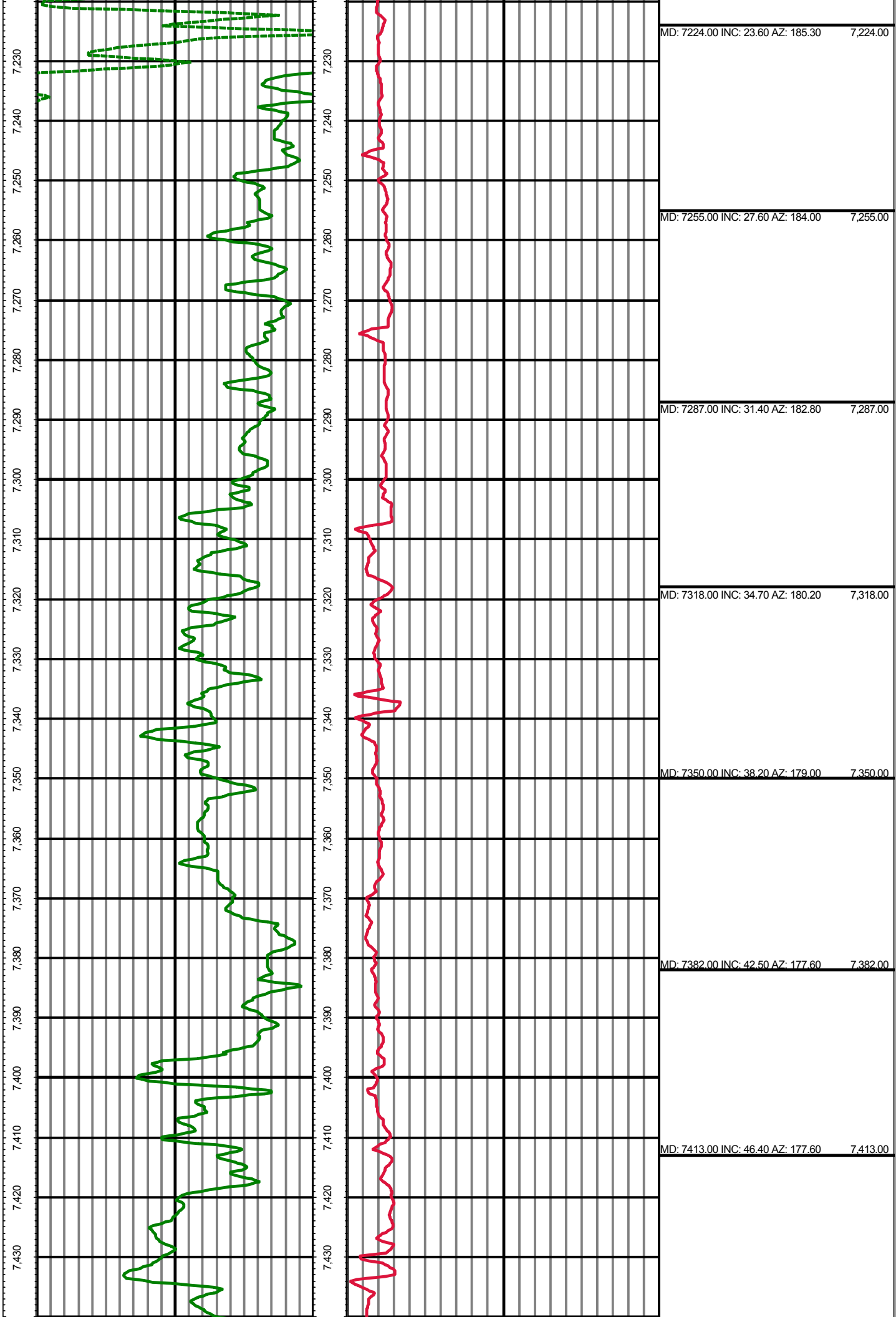


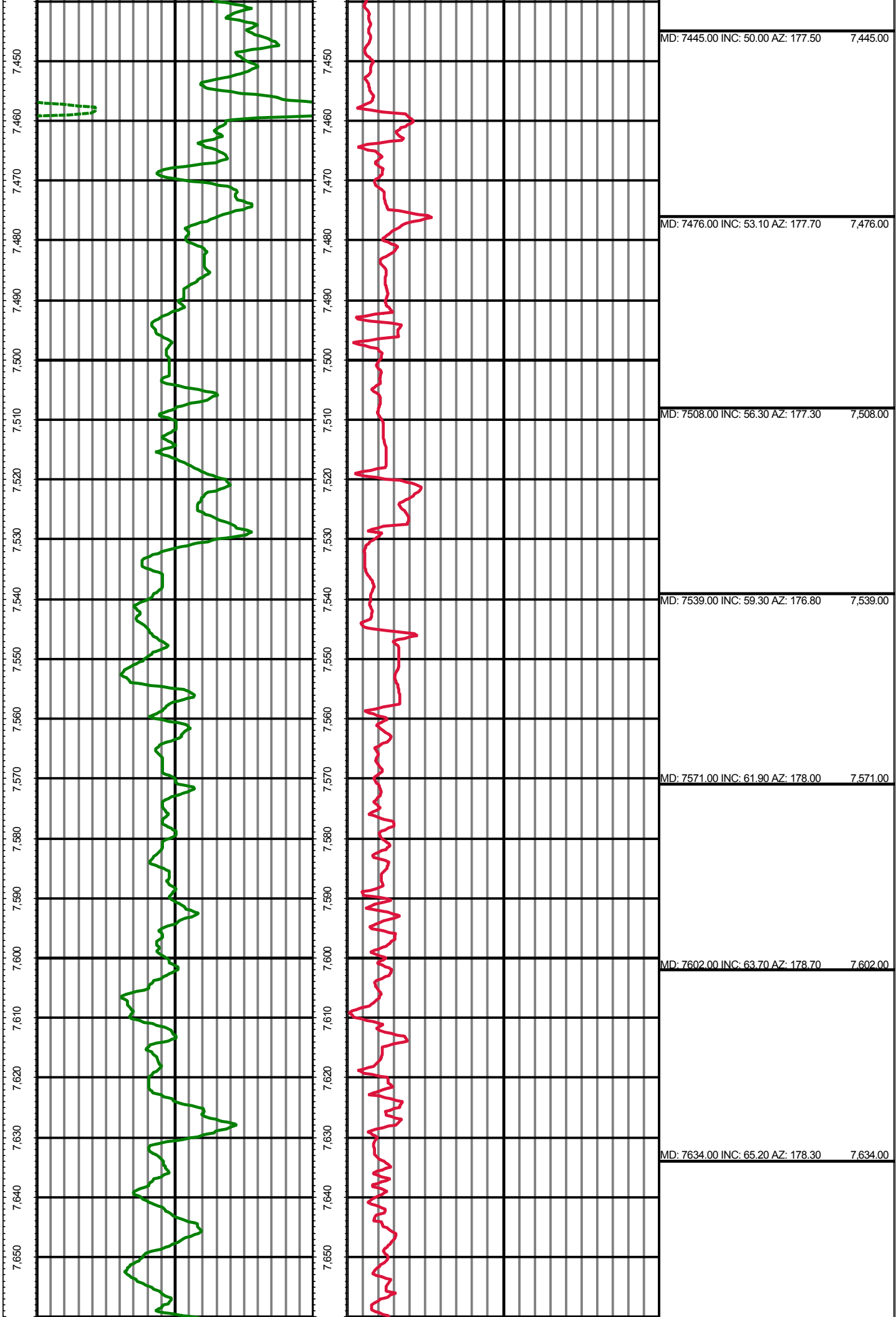


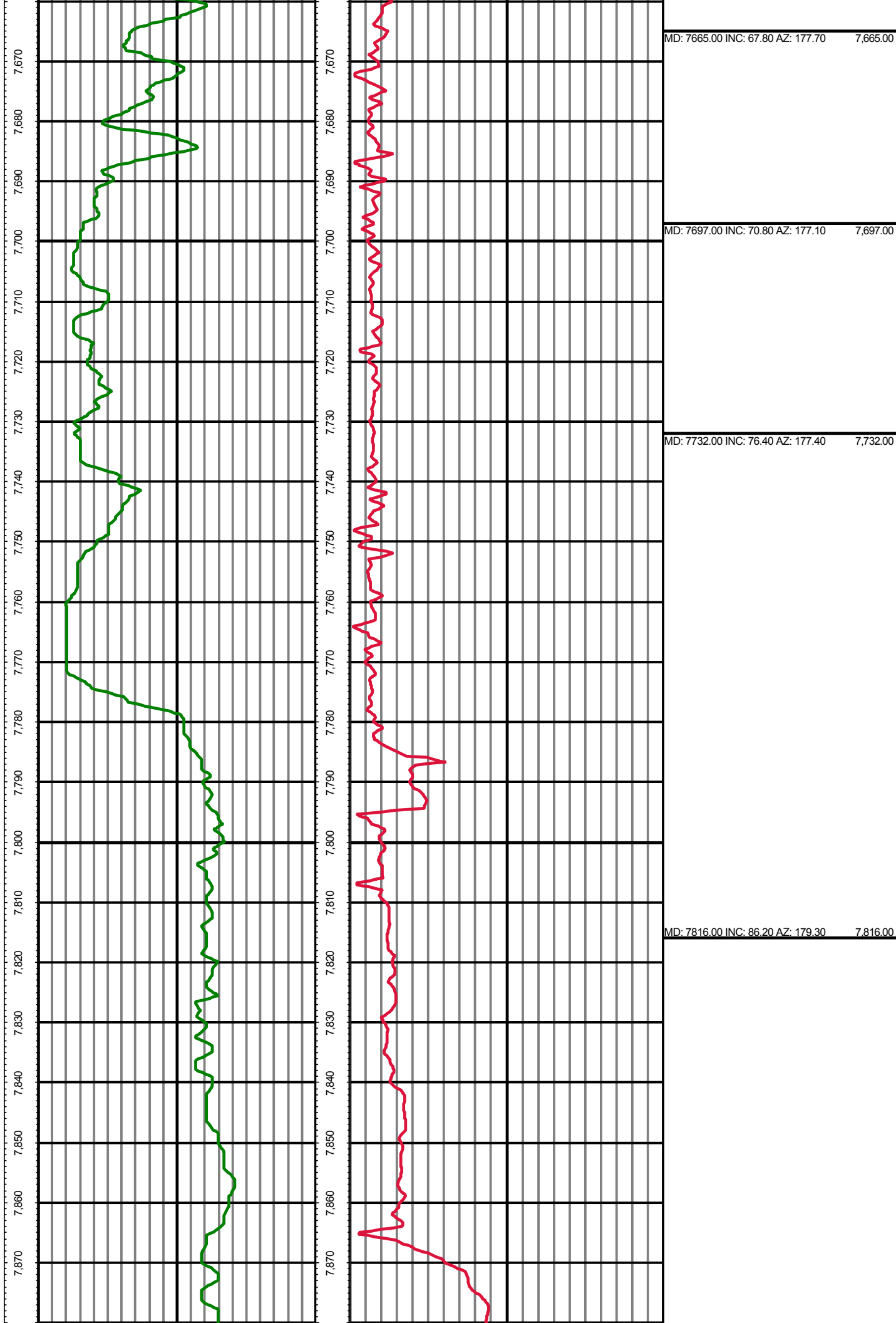
MD: 6559.00 INC: 1.50 AZ: 302.20		6,559.00
MD: 6654.00 INC: 0.80 AZ: 313.90		6,654.00
MD: 6748.00 INC: 0.40 AZ: 299.60		6,748.00

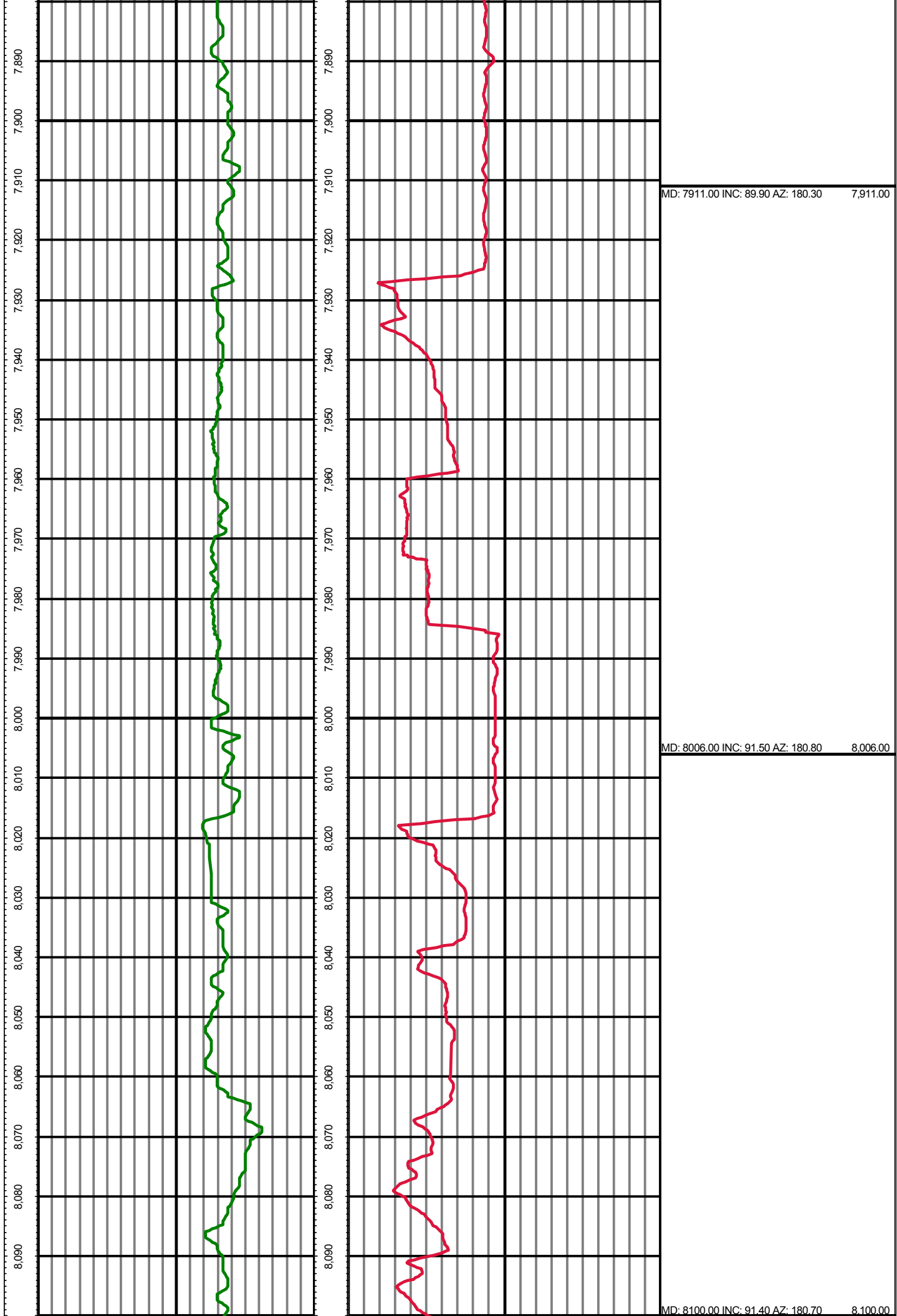


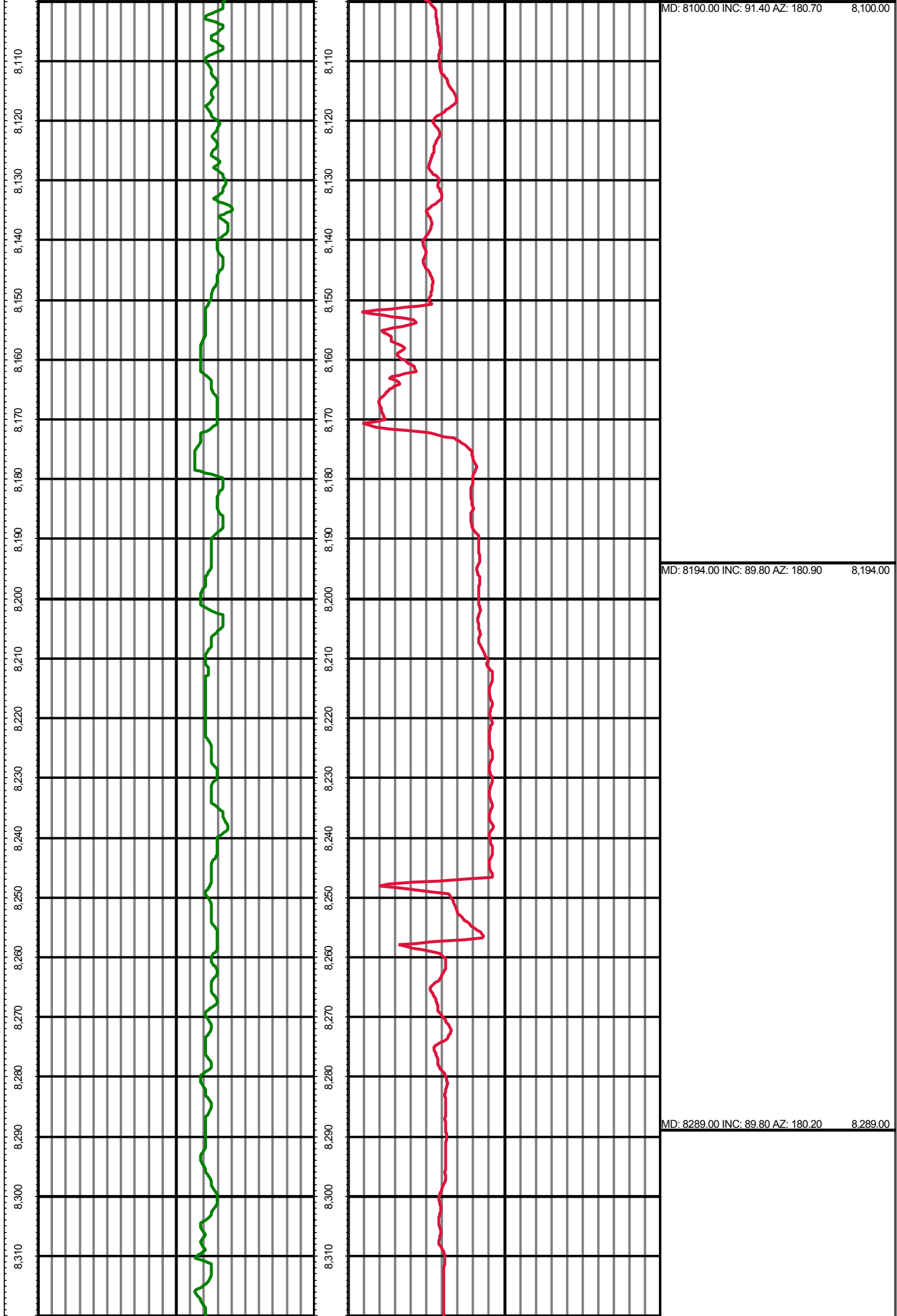


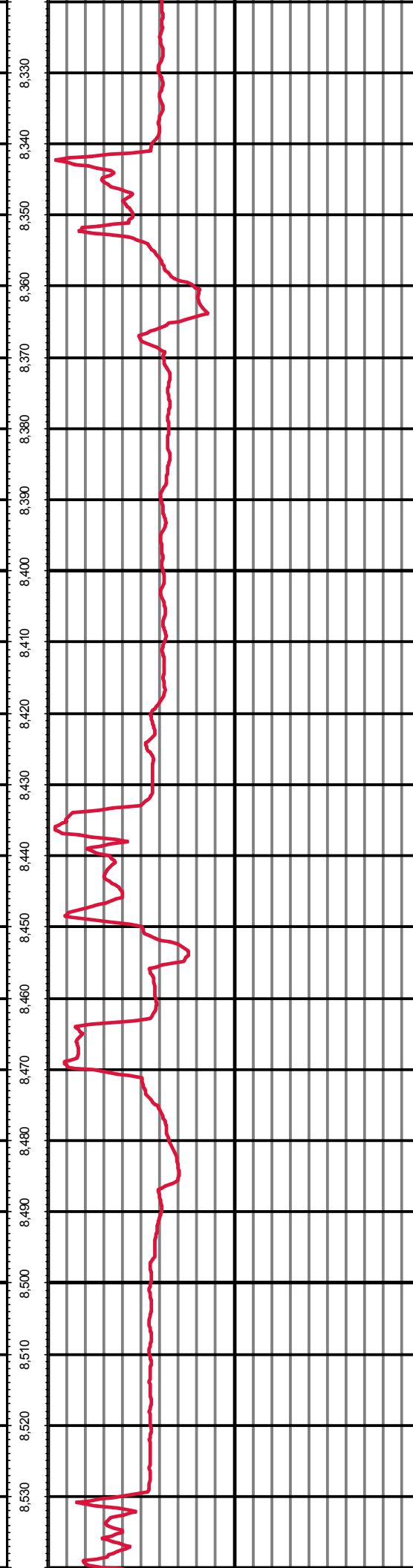
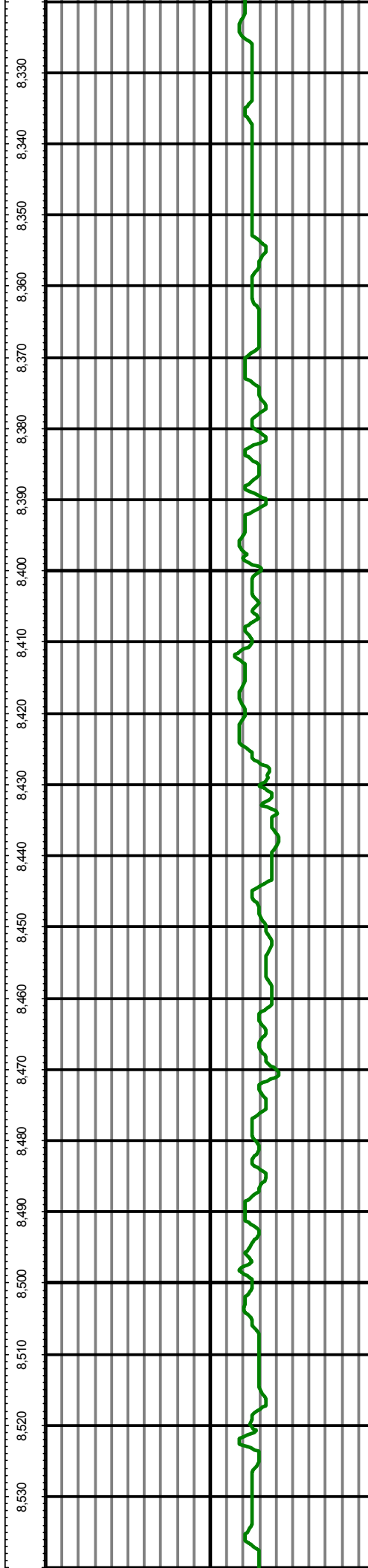






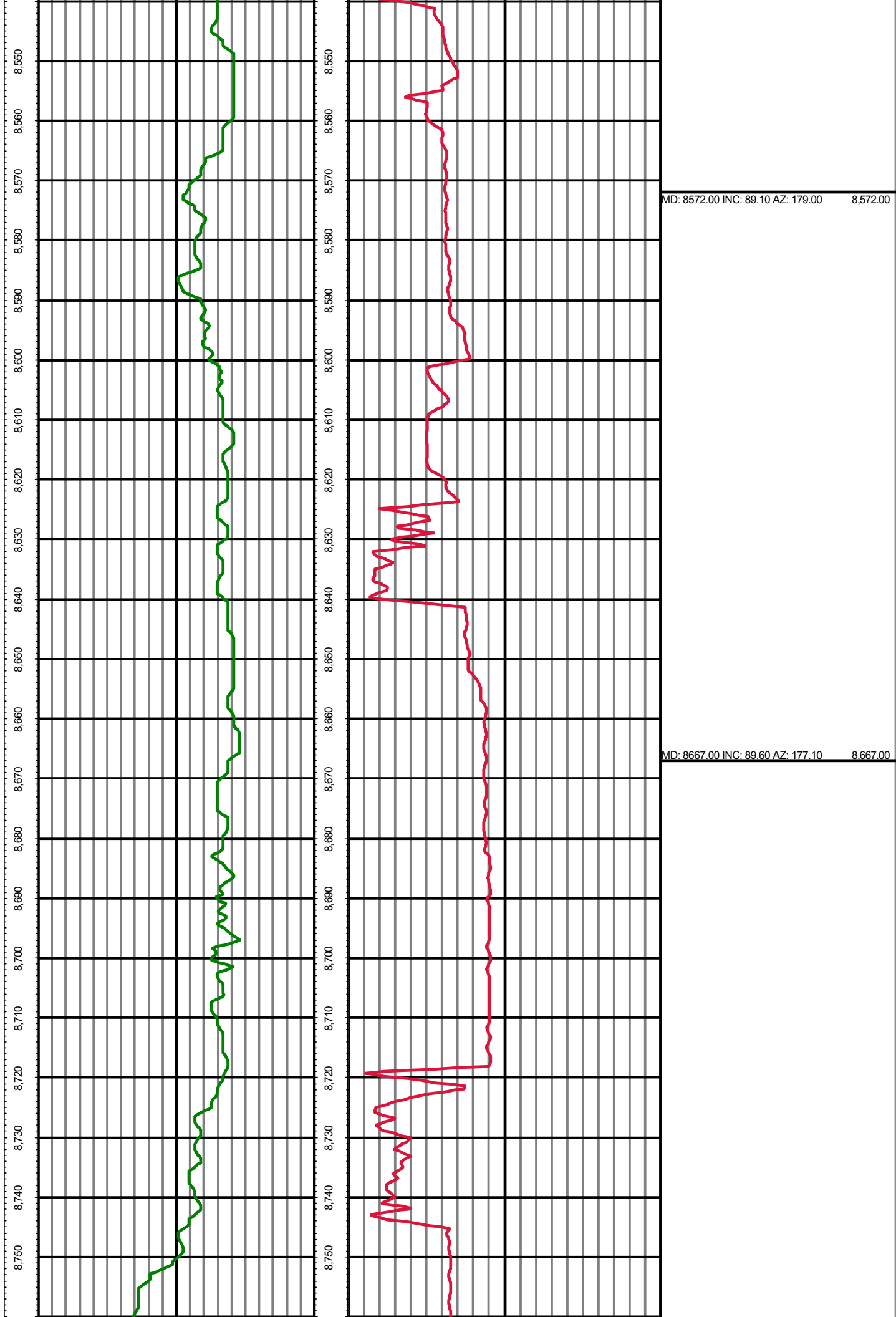


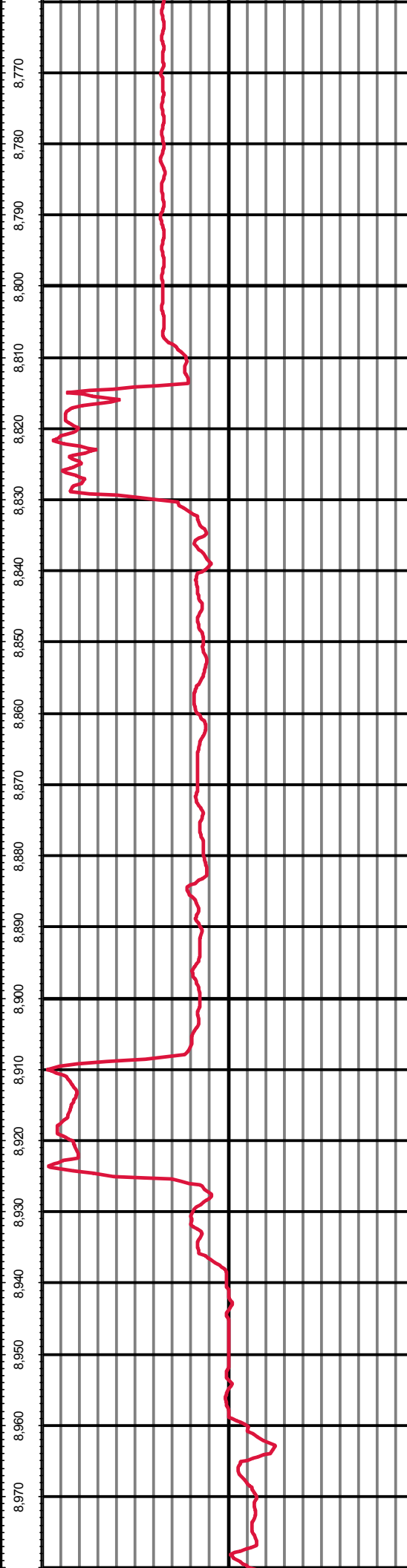
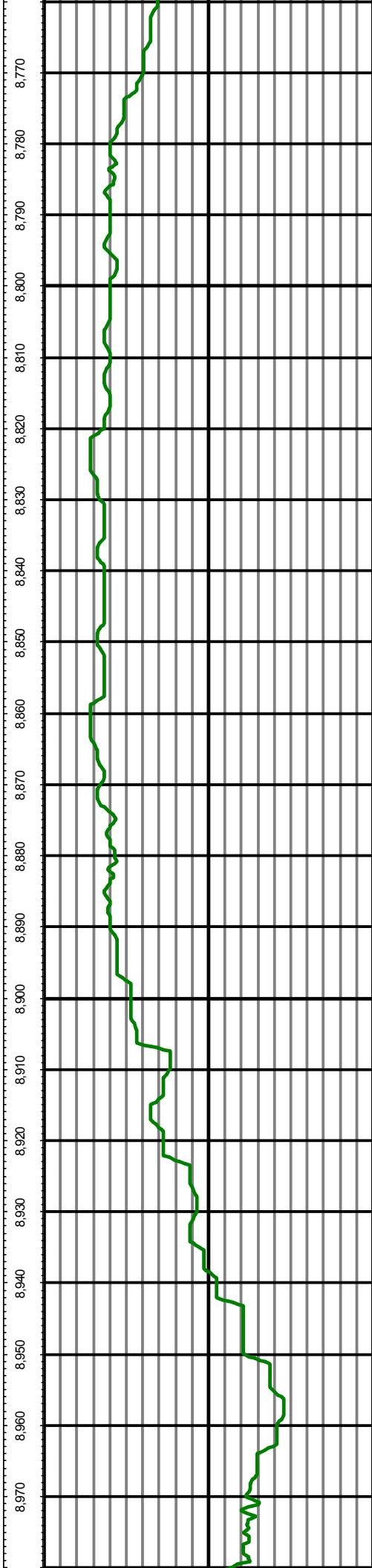




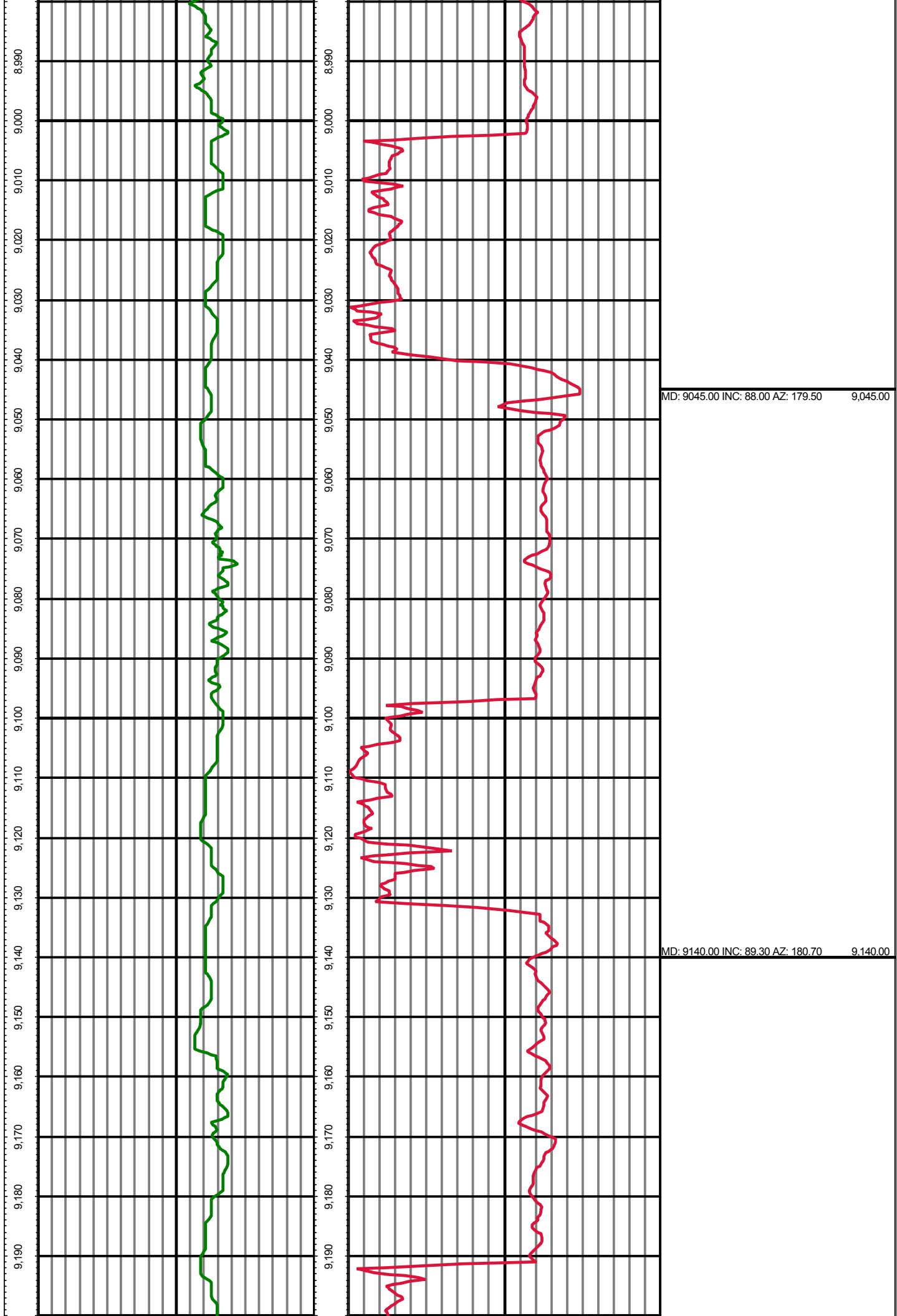
MD: 8383.00 INC: 88.80 AZ: 180.80 8,383.00

MD: 8478.00 INC: 89.90 AZ: 180.20 8,478.00



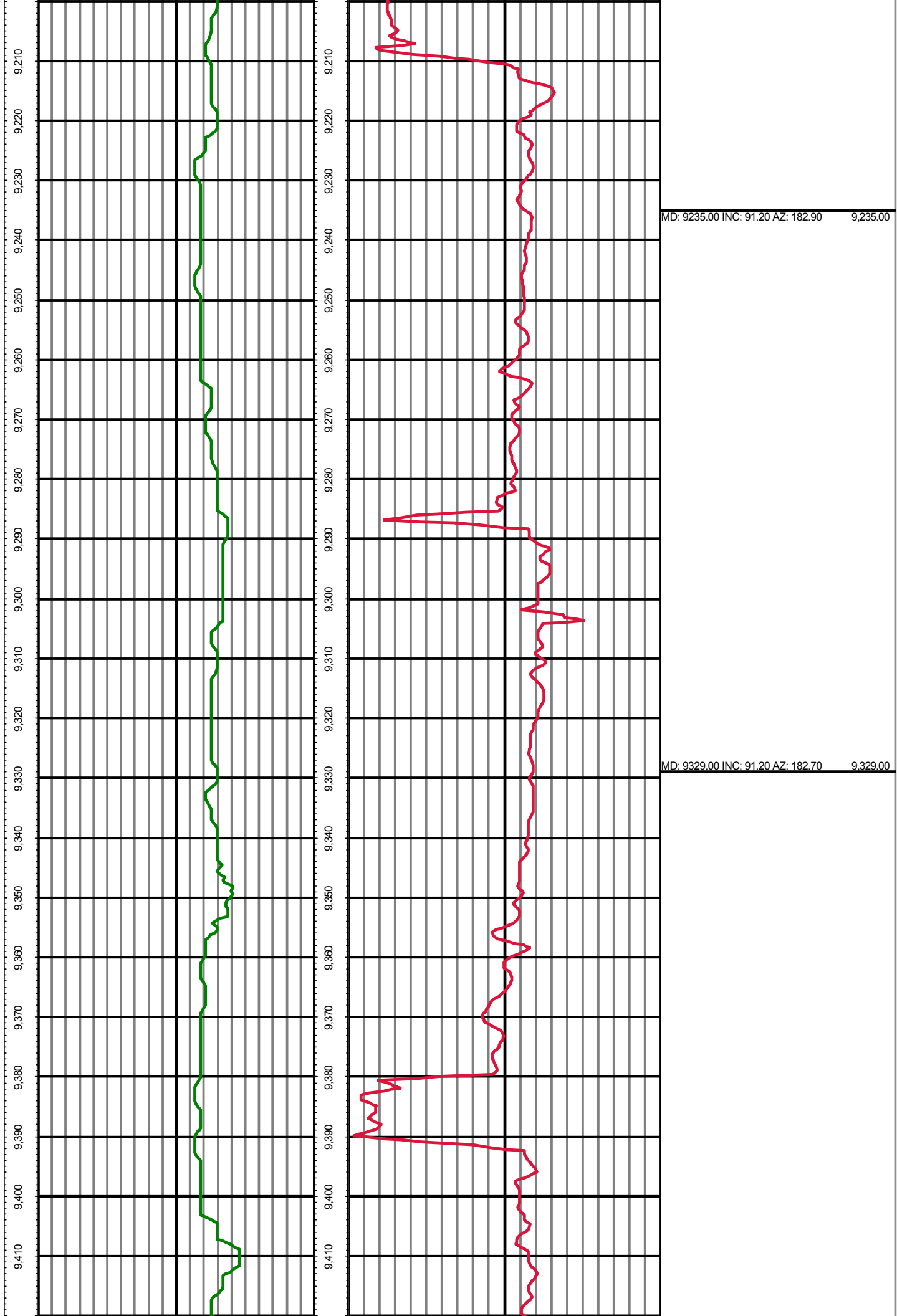


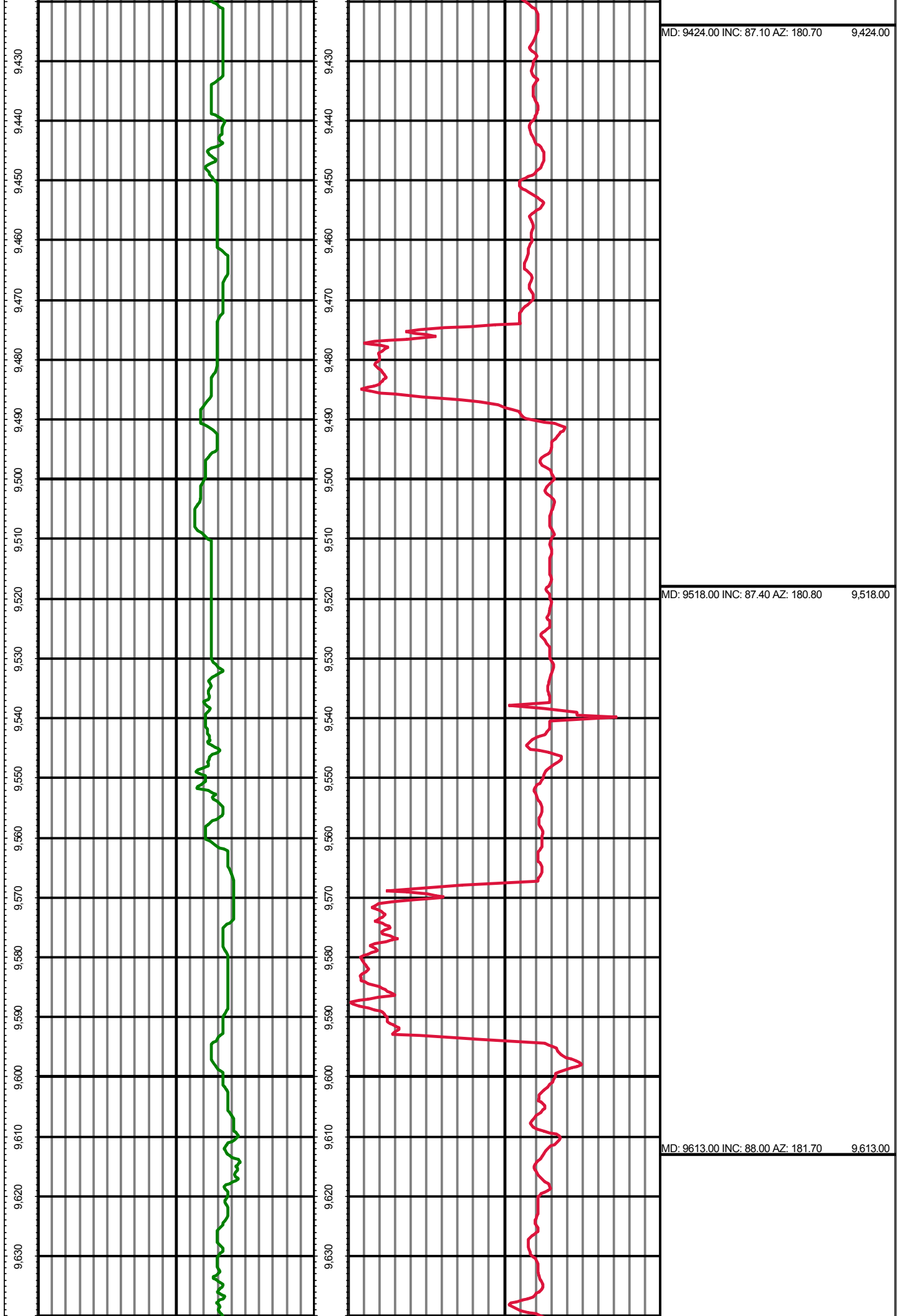
MD: 8762.00 INC: 91.50 AZ: 178.00		8,762.00
MD: 8856.00 INC: 89.60 AZ: 178.00		8,856.00
MD: 8951.00 INC: 87.80 AZ: 178.50		8,951.00



MD: 9045.00 INC: 88.00 AZ: 179.50 9,045.00

MD: 9140.00 INC: 89.30 AZ: 180.70 9,140.00

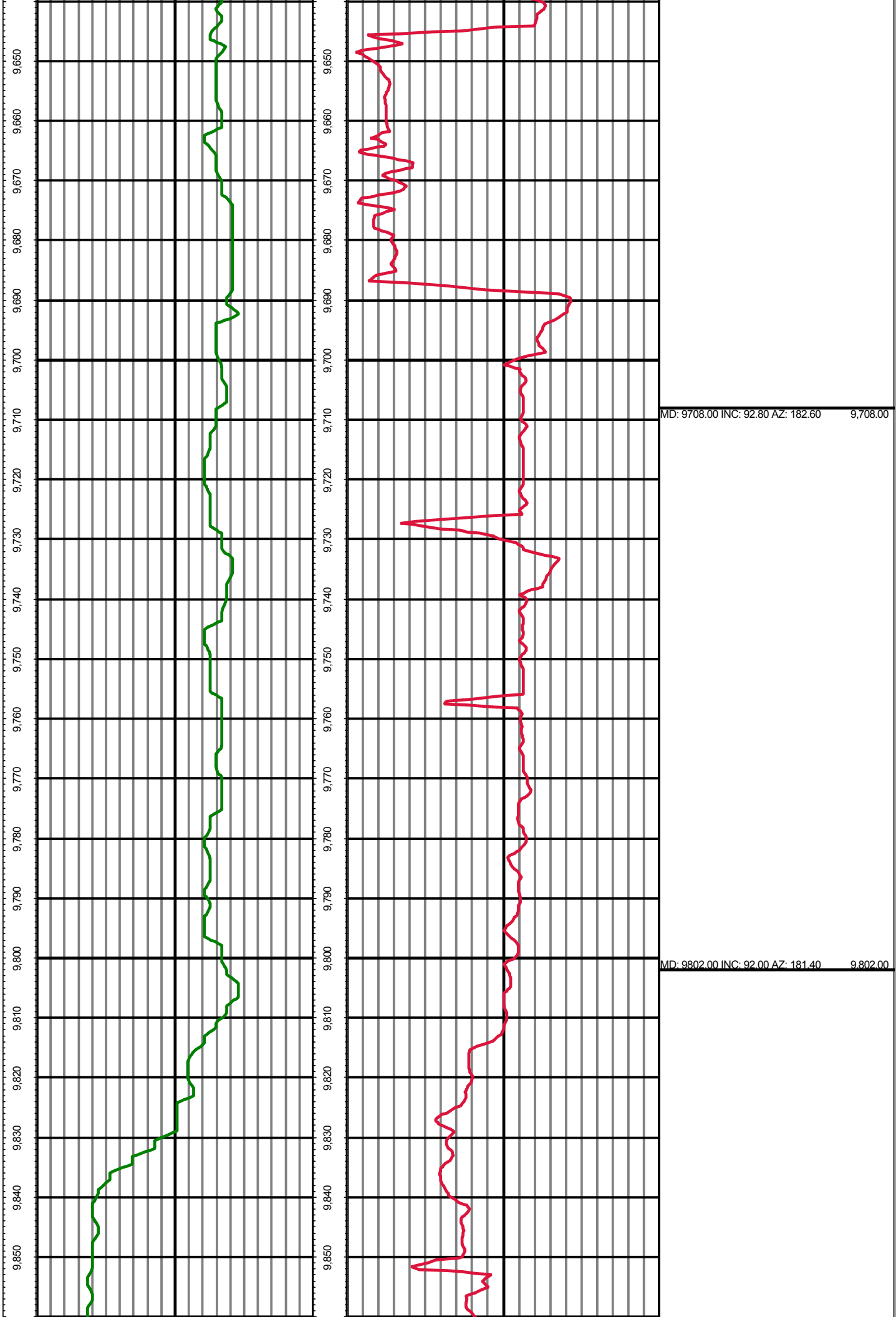




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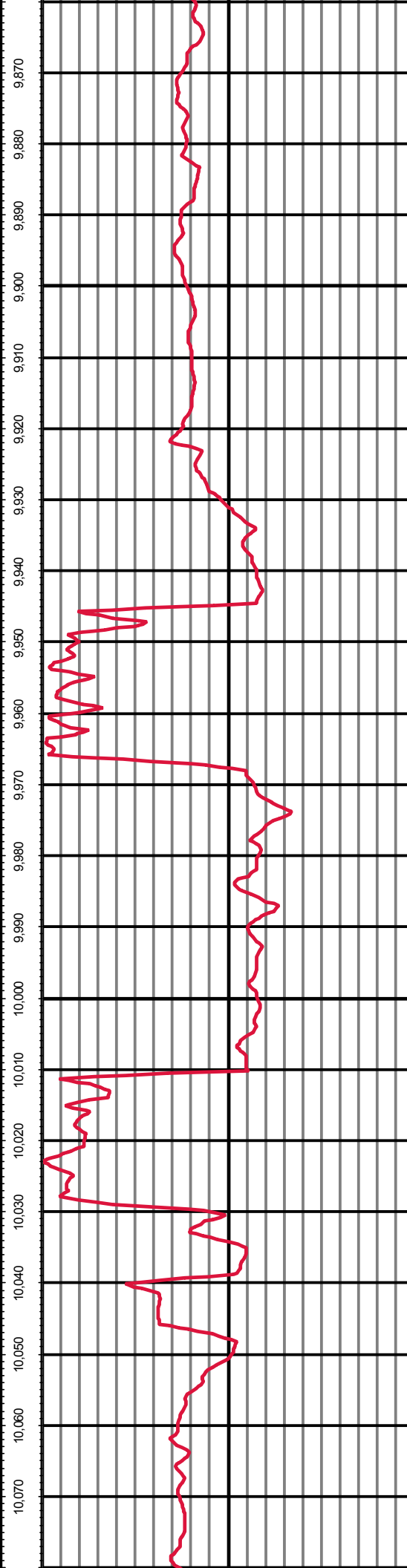
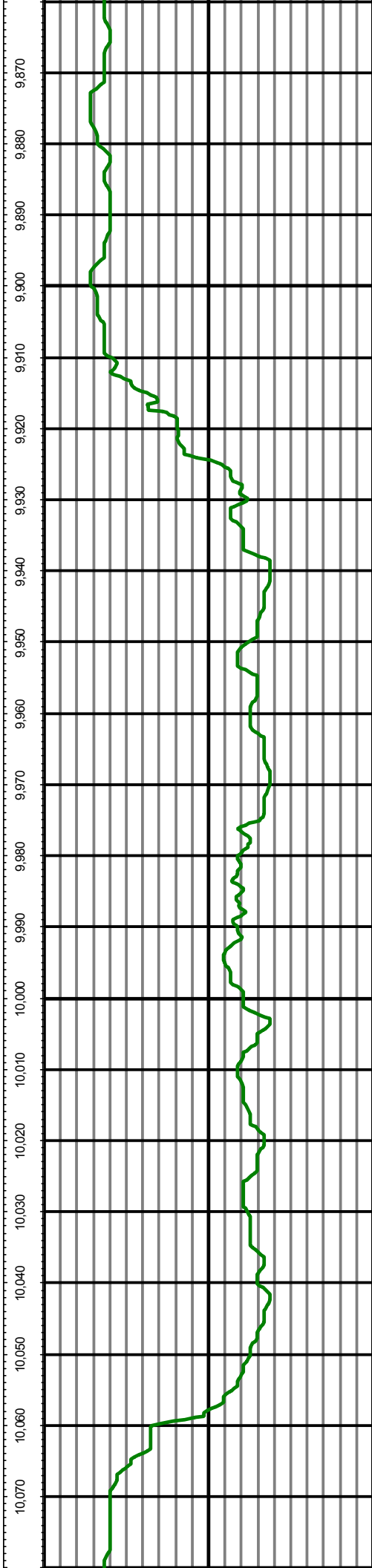
MD: 9518.00 INC: 87.40 AZ: 180.80 9,518.00

MD: 9613.00 INC: 88.00 AZ: 181.70 9,613.00



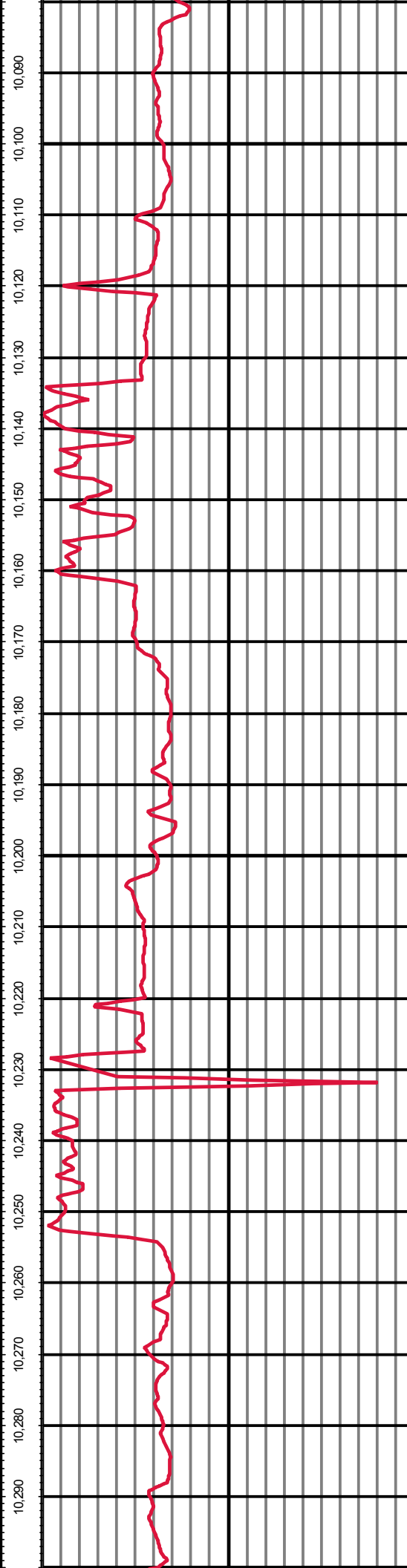
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MD: 9802.00 INC: 92.00 AZ: 181.40 9,802.00



MD: 9897.00 INC: 88.90 AZ: 179.30 9,897.00

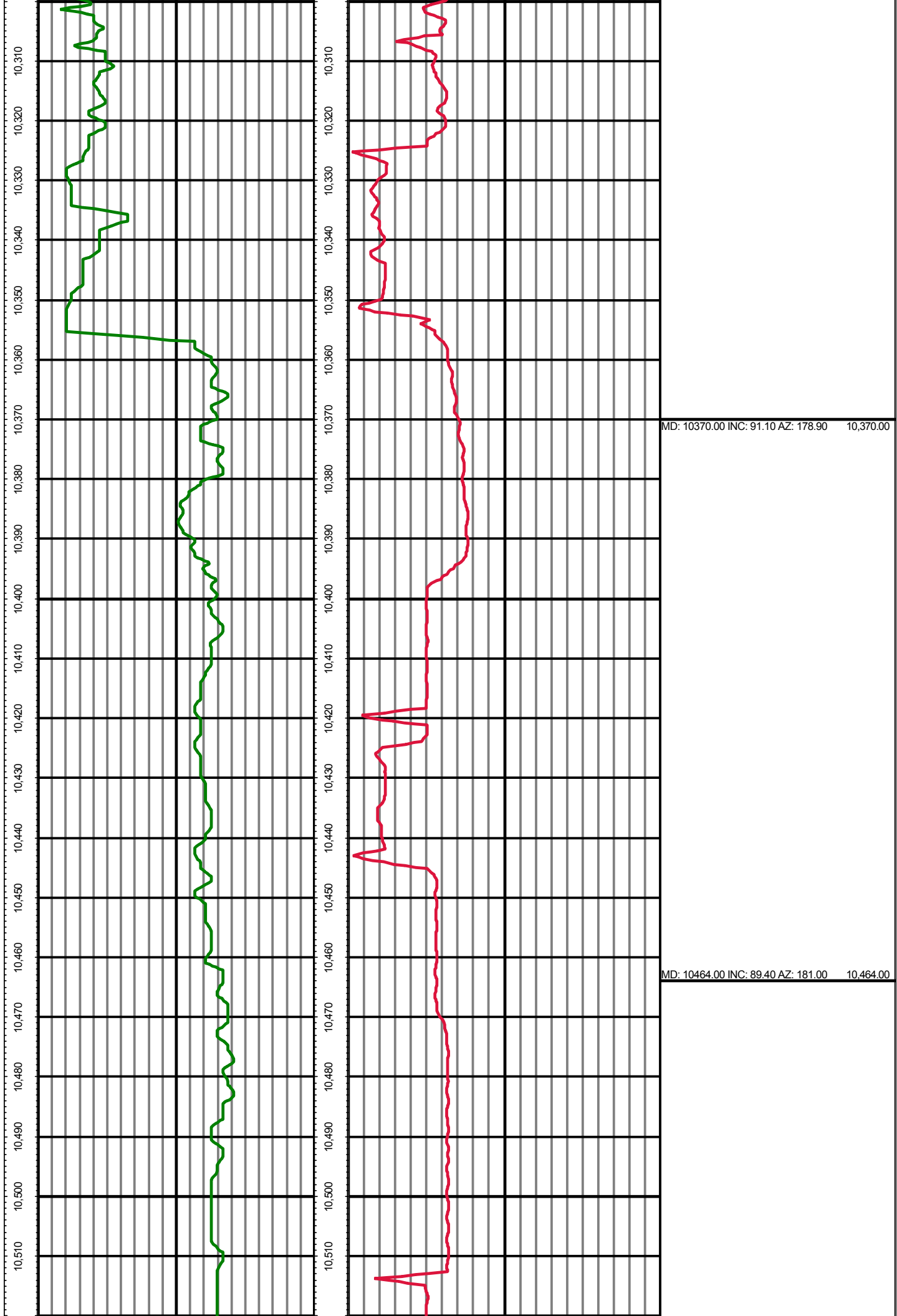
MD: 9991.00 INC: 88.40 AZ: 178.10 9,991.00

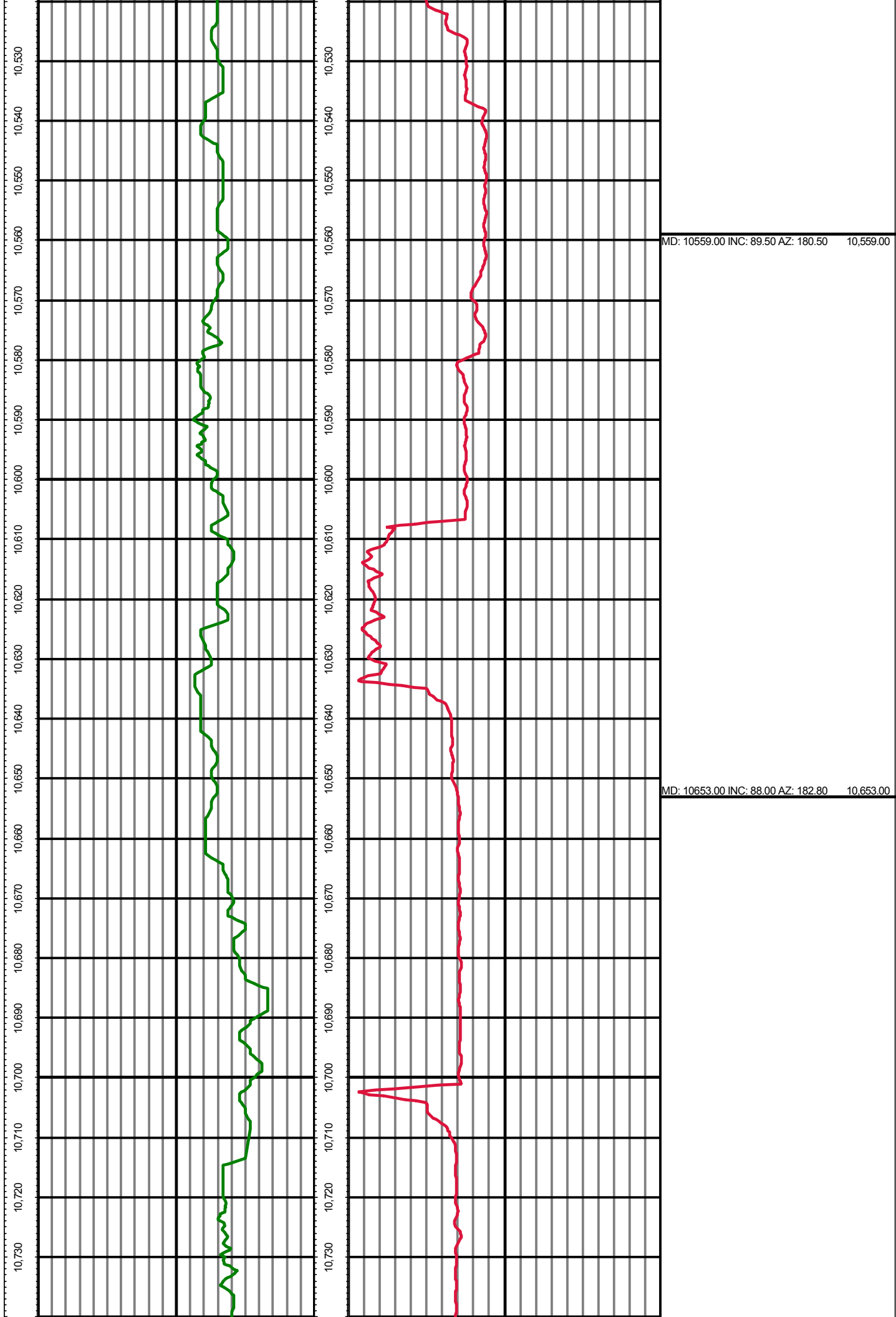


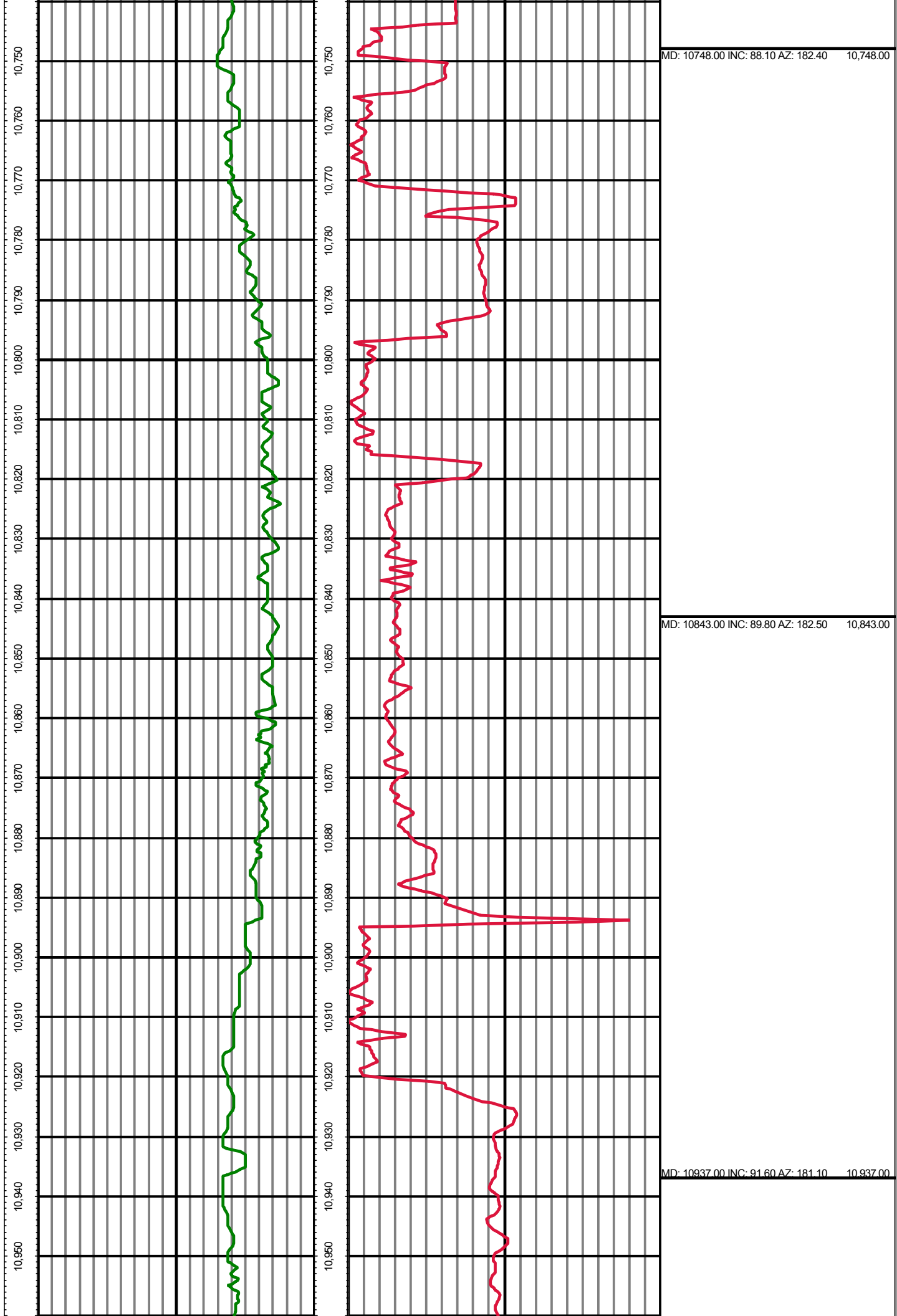
MD: 10086.00 INC: 89.20 AZ: 176.30 10,086.00

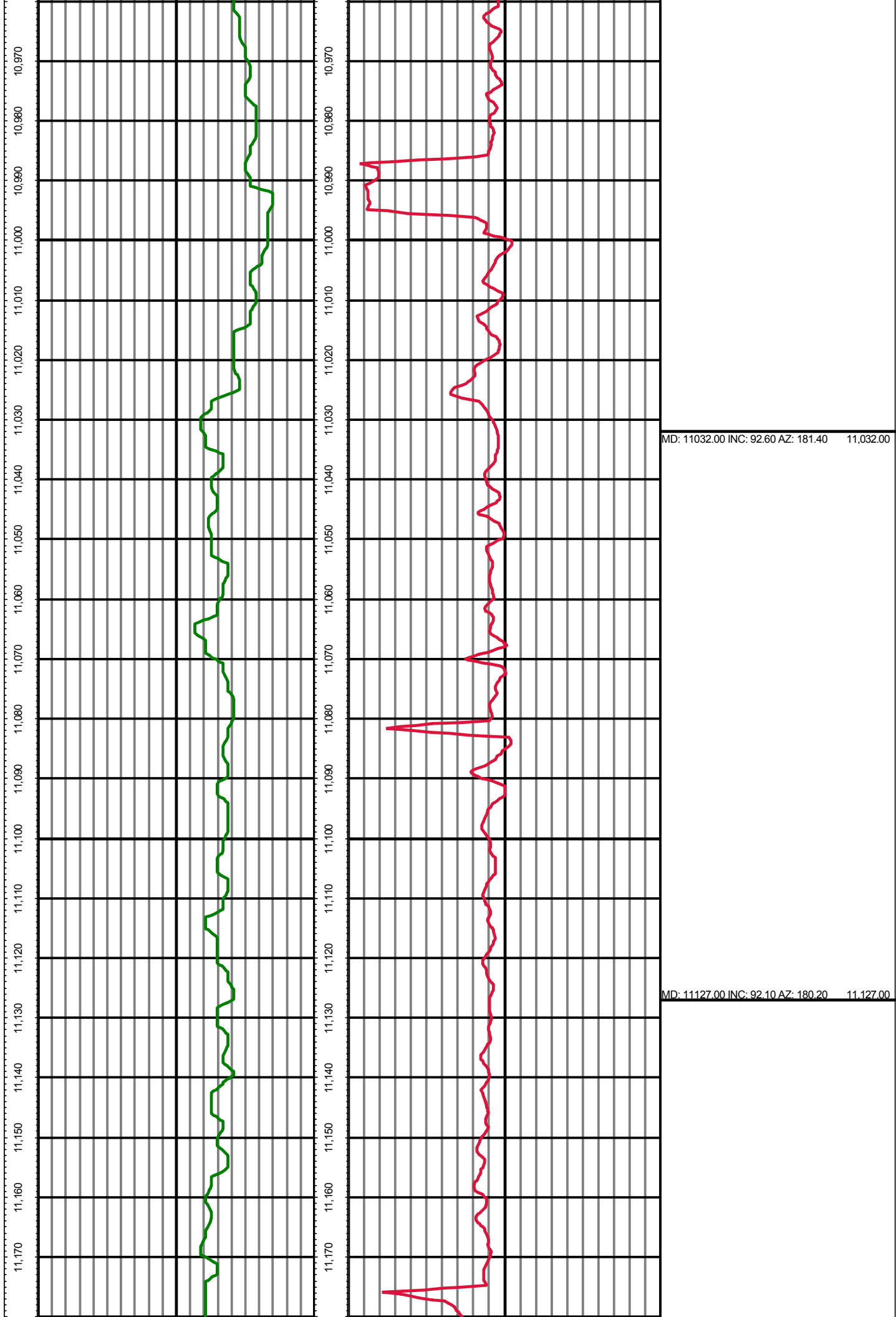
MD: 10181.00 INC: 91.20 AZ: 175.90 10,181.00

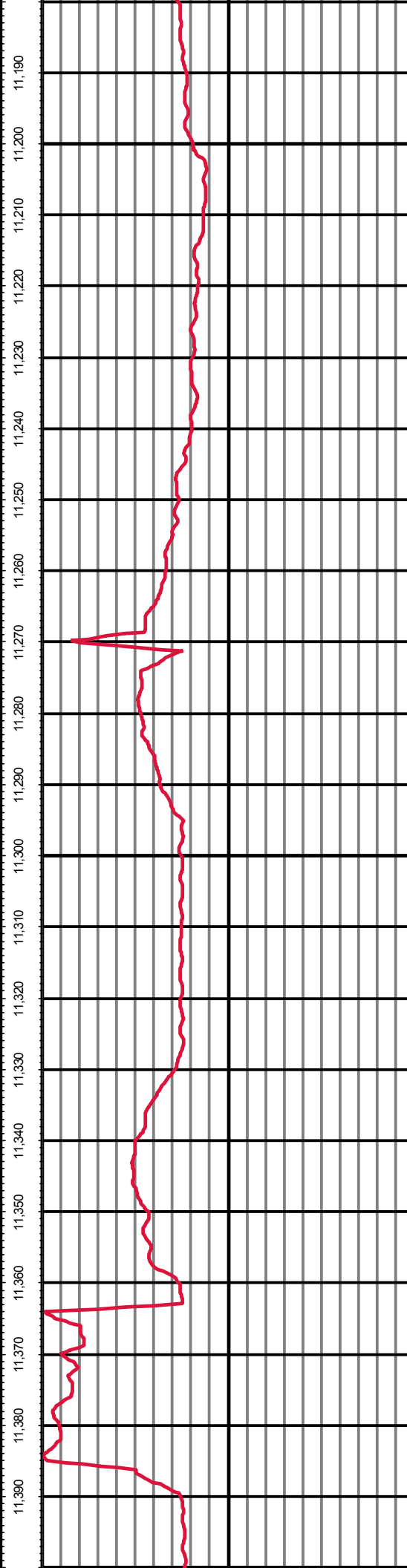
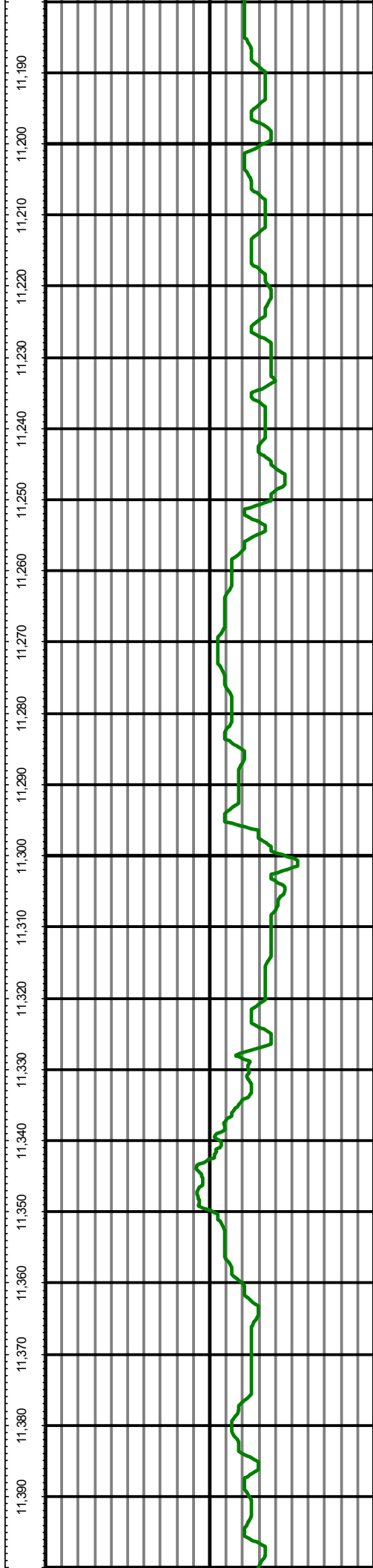
MD: 10275.00 INC: 92.40 AZ: 177.10 10,275.00





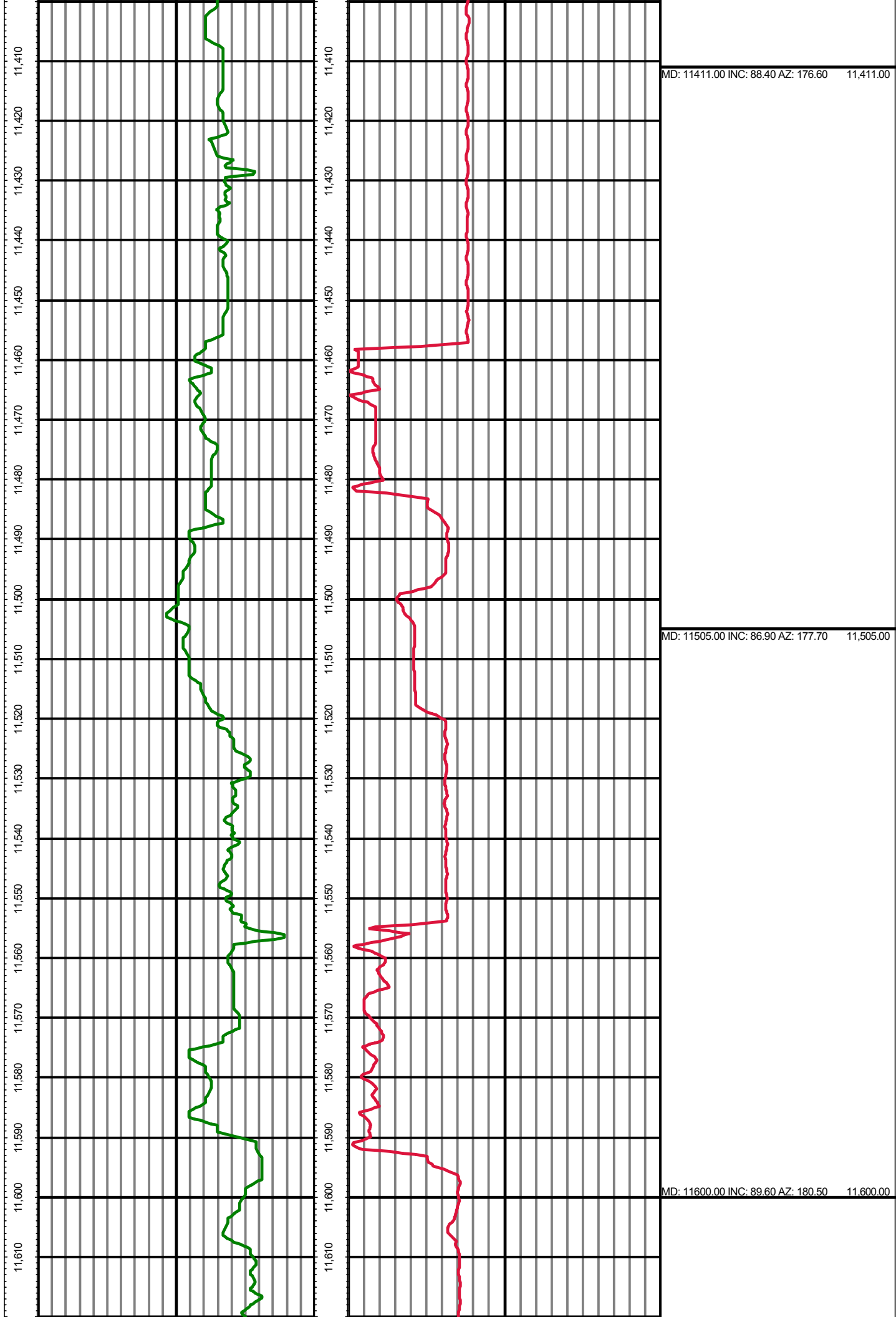


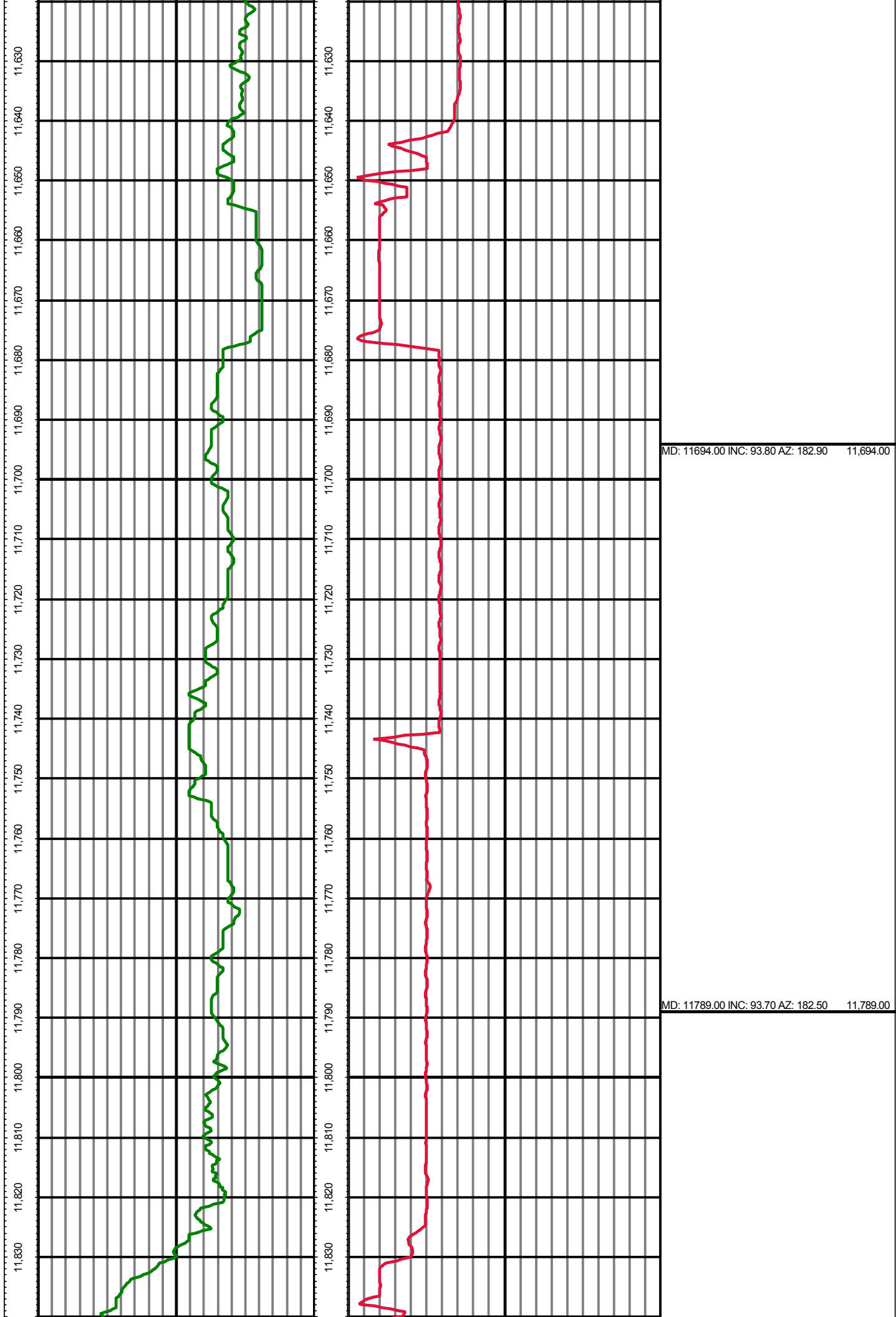


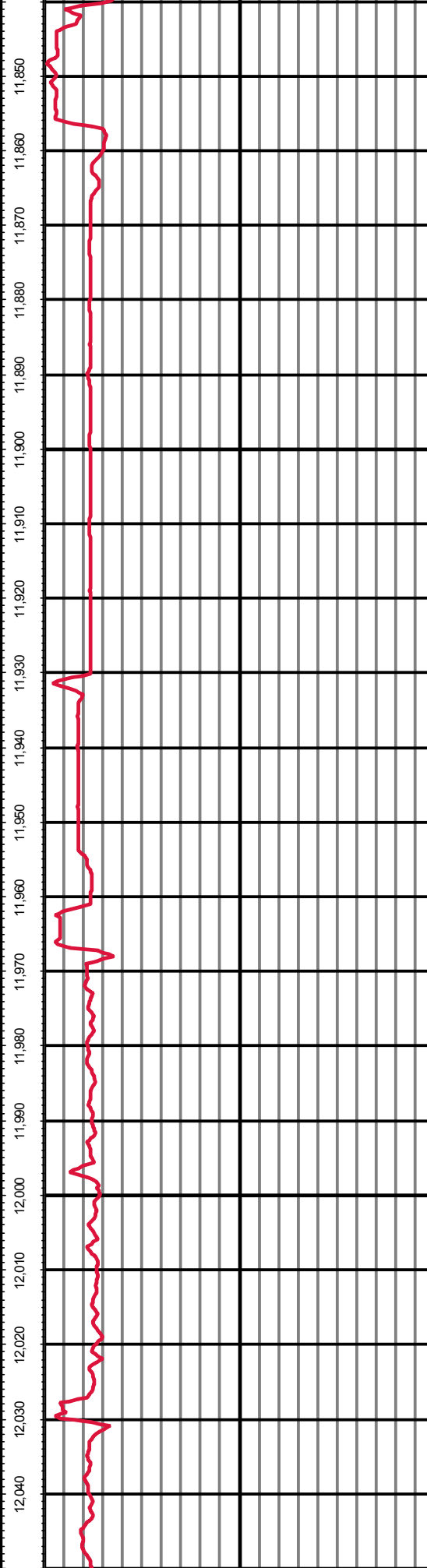
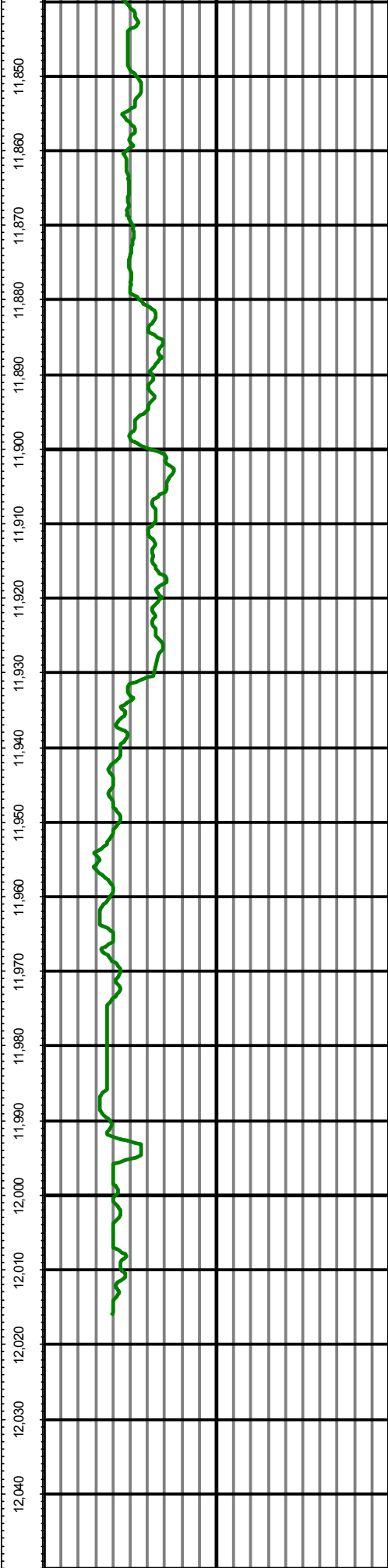


MD: 11221.00 INC: 92.00 AZ: 179.50 11,221.00

MD: 11316.00 INC: 88.80 AZ: 176.70 11,316.00







MD: 11883.00 INC: 90.40 AZ: 181.50 11,883.00

MD: 12001.00 INC: 90.20 AZ: 180.70 12,001.00

