

**Premier Directional Drilling**

12941 North Freeway
#400
Houston, TX 77060
281-673-4000

Powers 27N-27HZ**Scale 5":100' - MD****10/17/2015 7:08 AM****Oper. Company:** Anadarko Petroleum**Well:** Powers 27N-27HZ**Field:** Wattenberg**Rig:** H & P 307**Well ID:** 05123419530000**Job Number:** R15383**Notes:** LWD Real Time Log
Gamma Correction Determined by Pipe OD & ID, Mud Weight & Bit Size**State:** Colorado**County:** Weld**Country:** USA**Location:** NENE Sec 22-T2N-R65W**Start Date:** 10/12/2015 05:50:00**End Date:** 10/15/2015 06:00:00**Latitude:** 40.130530**Longitude:** -104.645187**Elev KB:** 4919'**Elev DF:** 4919'**Elev GL:** 4894'**Notes:** Datum :NAD 1983Map Zone: 13N (108 w to 102 W) Total Correction: 8.22° (Mean MagVar) Grid Convergence: 0.23°**Operator 1:** Robert Grossman**Operator 2:** Mike Gunther**Notes:** Smoothing: 7 Gap:10Survey Tool Type: Mud PulseCalculation Method: Minimum Curvature

| Tool Run Data | Run #1 | Run #2 | Run #3 | Run #4 | Run #5 |
|---------------------|------------|----------|-------------|--------|----------|
| Tool S/N | 268 | | | | |
| Bit Size | 8.5 | | | | |
| Cal Factor | 5.88 | | | | |
| Survey Offset: | 73.00 | | | | |
| Gamma Offset | 68.00 | | | | |
| Resistivity Offset | 0.00 | | | | |
| Start Depth | 1876.00 | | | | |
| StartDate | 10/12/2015 | | | | |
| StartTime | 23:23 | | | | |
| EndDepth | 13037.00 | | | | |
| EndDate | 10/15/2015 | | | | |
| EndTime | 06:00 | | | | |
| Mud Type | OBM | | | | |
| Mud Weight | 9.5 | | | | |
| Funnel Viscosity | 7.6 | | | | |
| Plastic Viscosity | 8 | | | | |
| Yield Point | 22 | | | | |
| Gel Strength | NA | | | | |
| Solids Content | 7.5 | | | | |
| Sand Content | NA | | | | |
| Mud Alkalinity | NA | | | | |
| Filtrate Alkalinity | NA | | | | |
| Chlorides | 55000 | | | | |
| Mud RM | 0 | | | | |
| Mud RMF | 0 | | | | |
| Mud RMC | 0 | | | | |
| Mud RM at BHT | 0 | | | | |
| Temperature | NA | | | | |
| Hole Data | | | Casing Data | | |
| Size | From | To | Size | From | To |
| 13.5 | 0.00 | 1876.00 | 9.625 | 0.00 | 1866.00 |
| 8.5 | 1876.00 | 13037.00 | 5.50 | 0.00 | 13037.00 |

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.

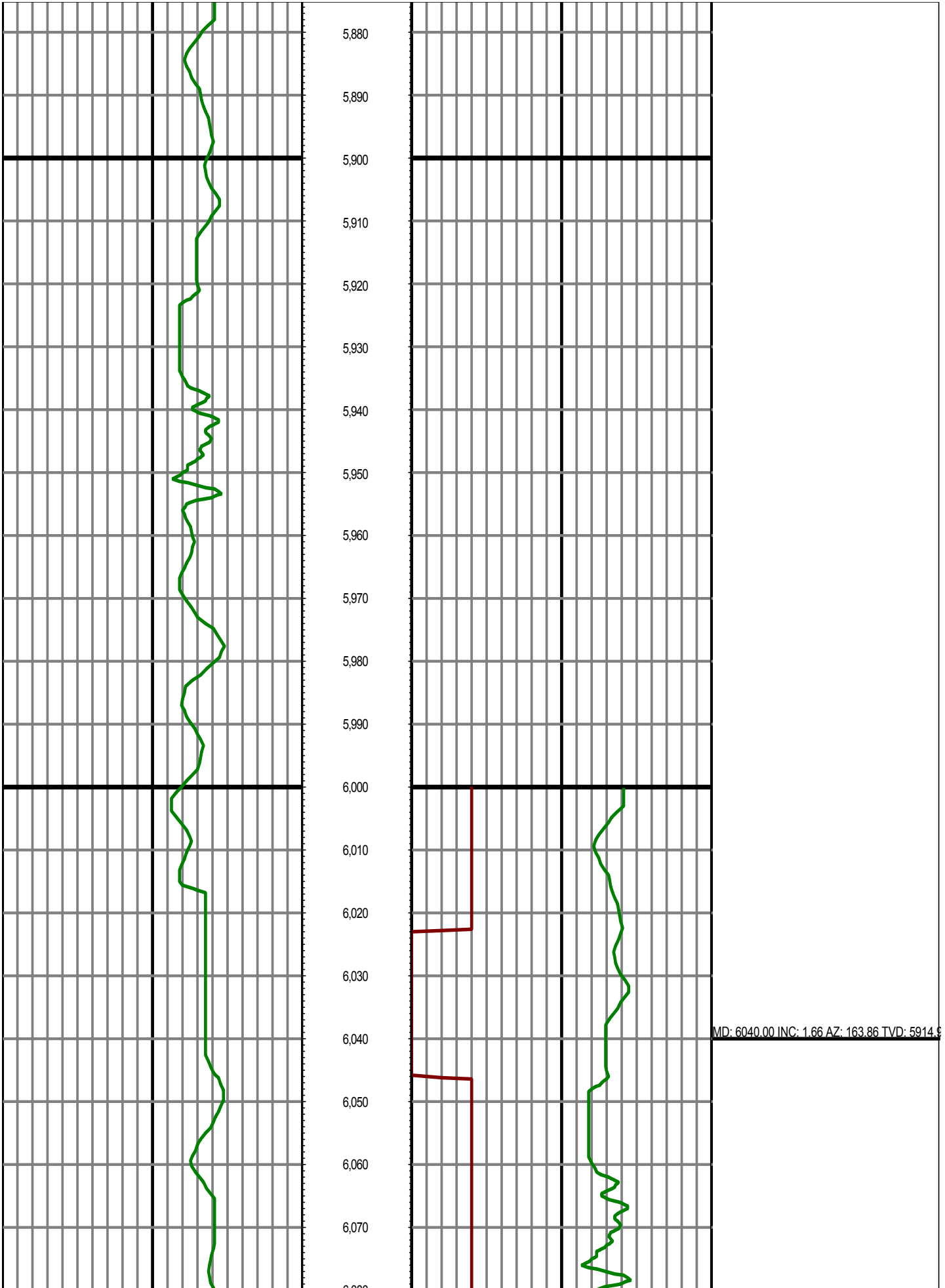
0.00 GR(API) on TVD 200.00
200.00 2 400.00

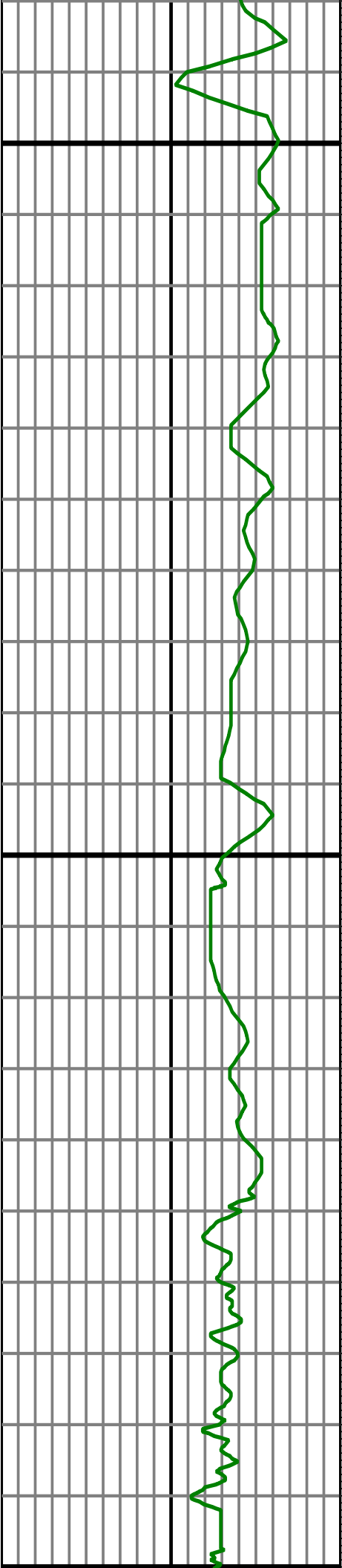
MD
FT

0.00 GR(API) on MD 200.00
200.00 2 400.00

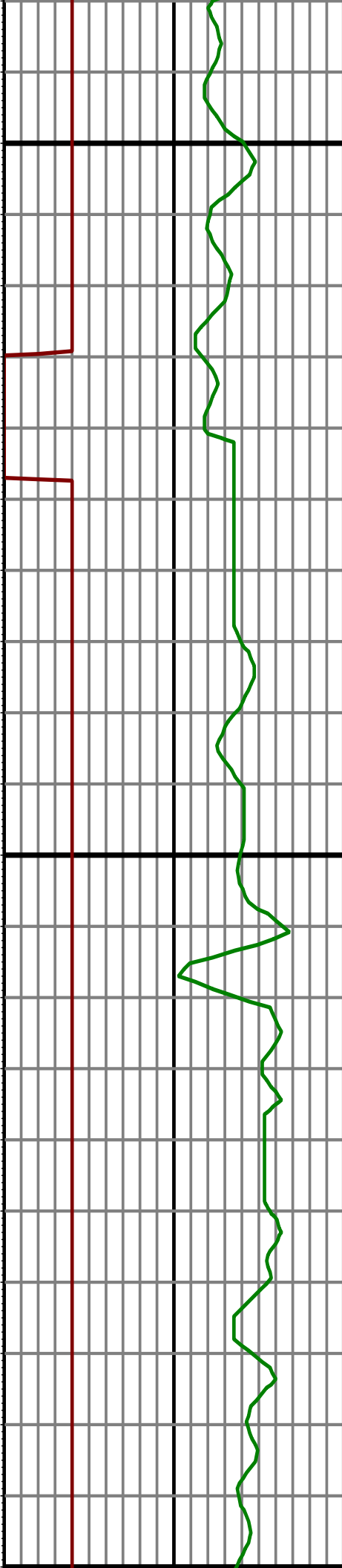
Surveys (MD/INC/AZ/TVD/VS)

0.00 RPM RT(RPM) on MD 300.00



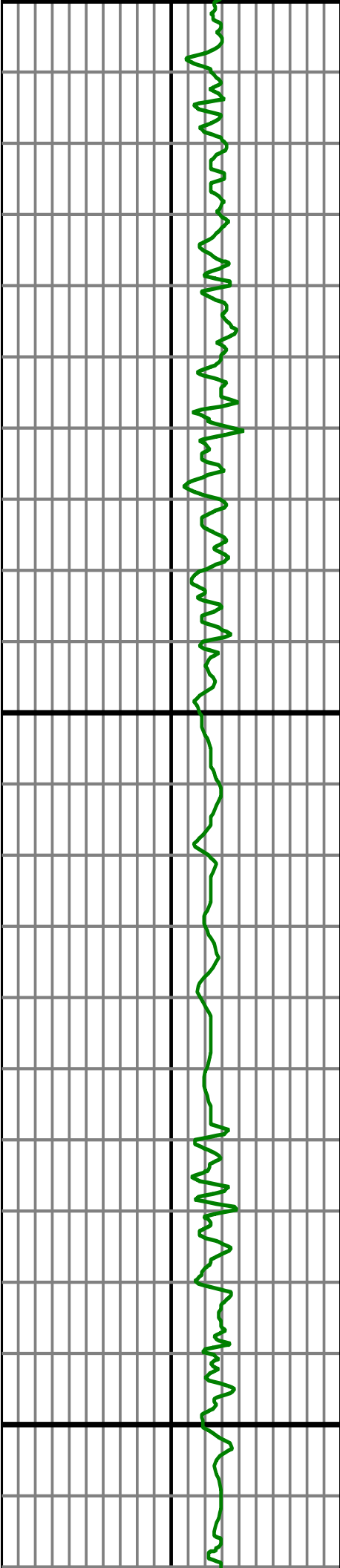


6,090
6,100
6,110
6,120
6,130
6,140
6,150
6,160
6,170
6,180
6,190
6,200
6,210
6,220
6,230
6,240
6,250
6,260
6,270
6,280
6,290
6,300



MD: 6135.00 INC: 2.63 AZ: 194.38 TVD: 6009.8

MD: 6229.00 INC: 2.42 AZ: 199.63 TVD: 6103.80



6,310

6,320

6,330

6,340

6,350

6,360

6,370

6,380

6,390

6,400

6,410

6,420

6,430

6,440

6,450

6,460

6,470

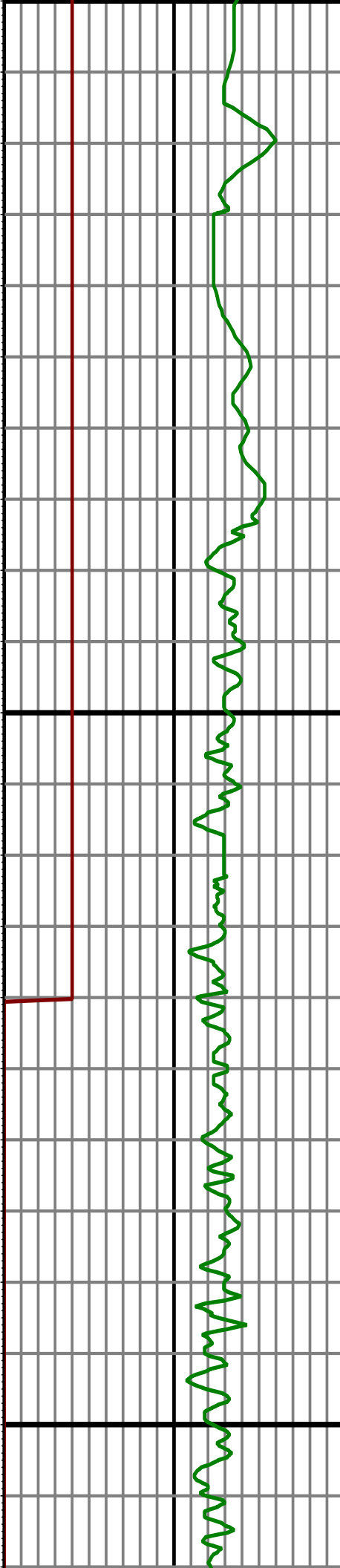
6,480

6,490

6,500

6,510

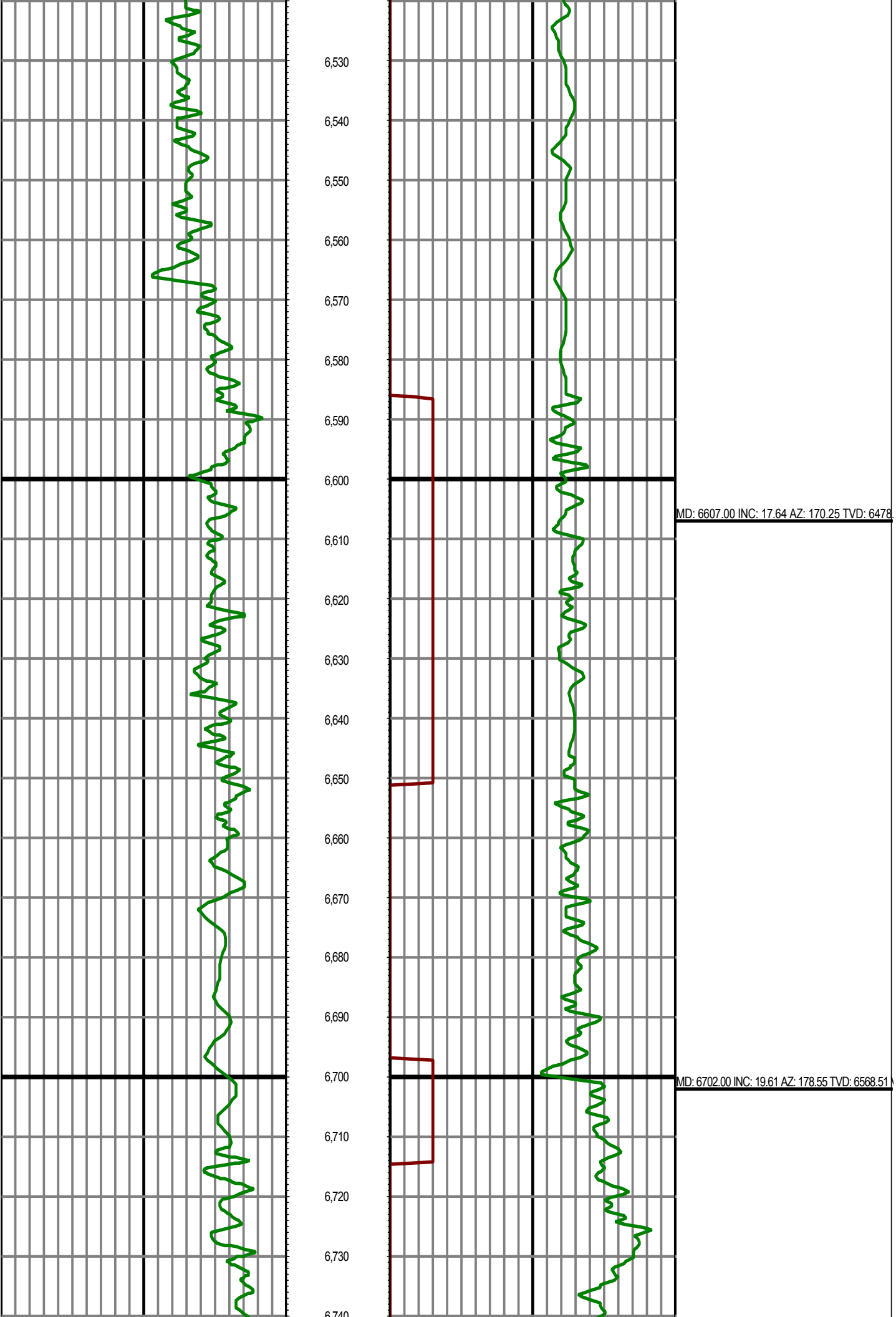
6,520

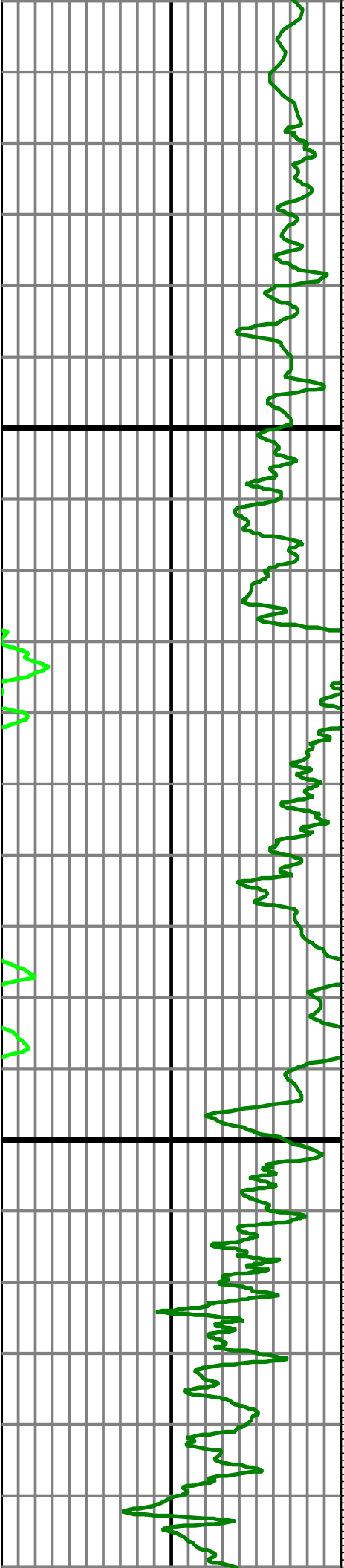


MD: 6324.00 INC: 1.67 AZ: 205.09 TVD: 6198.7

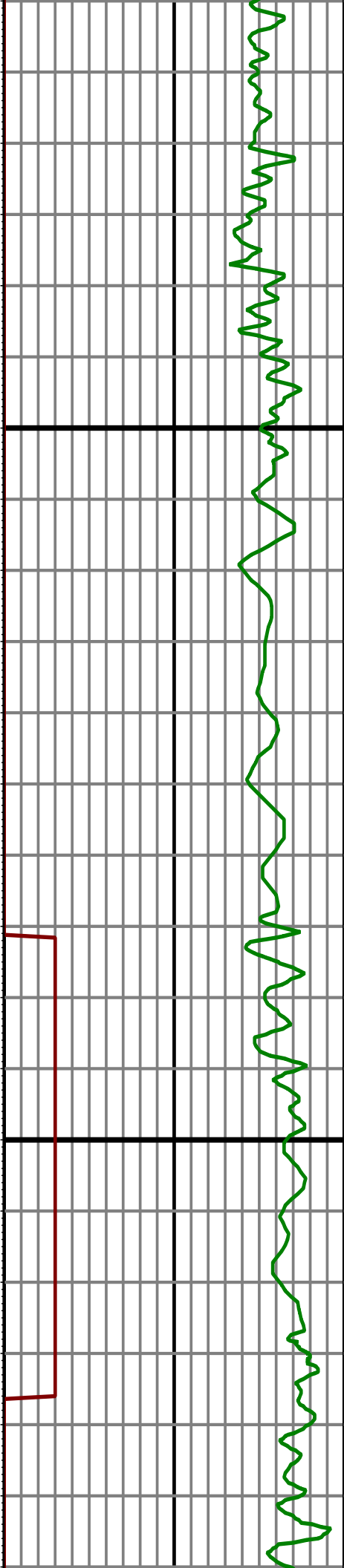
MD: 6418.00 INC: 0.21 AZ: 224.17 TVD: 6292.73

MD: 6513.00 INC: 9.90 AZ: 169.96 TVD: 6387.25



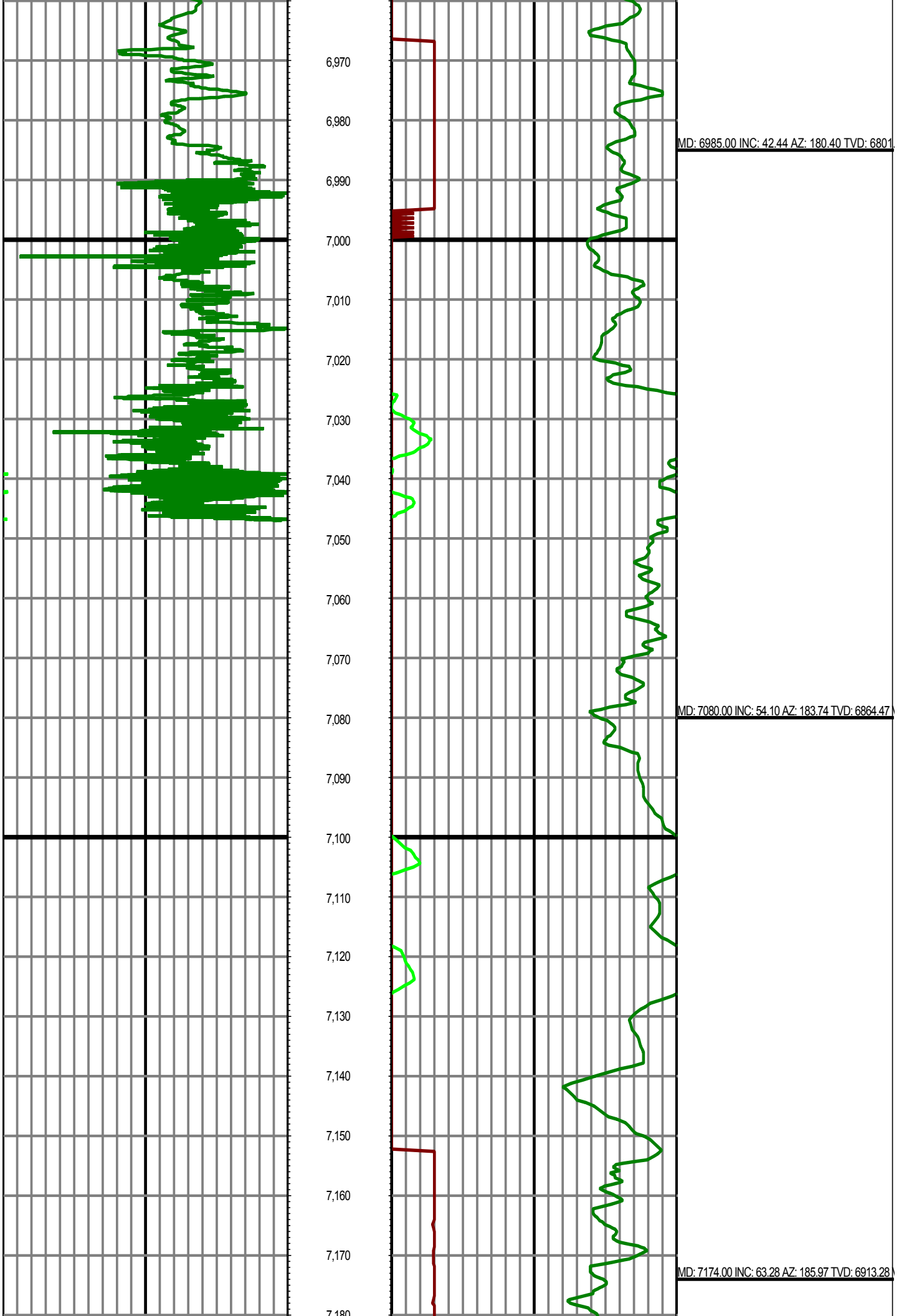


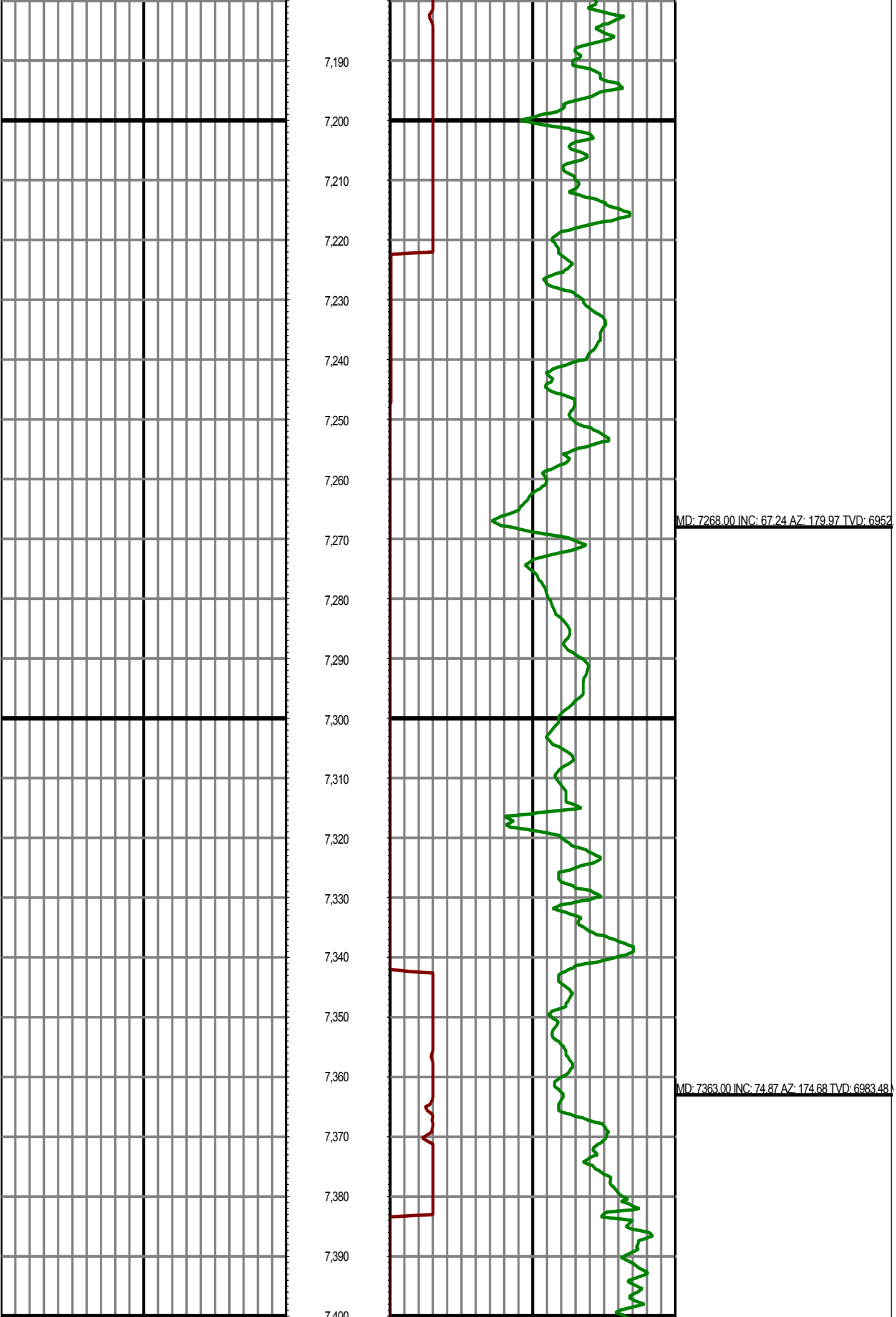
6,750
6,760
6,770
6,780
6,790
6,800
6,810
6,820
6,830
6,840
6,850
6,860
6,870
6,880
6,890
6,900
6,910
6,920
6,930
6,940
6,950
6,960

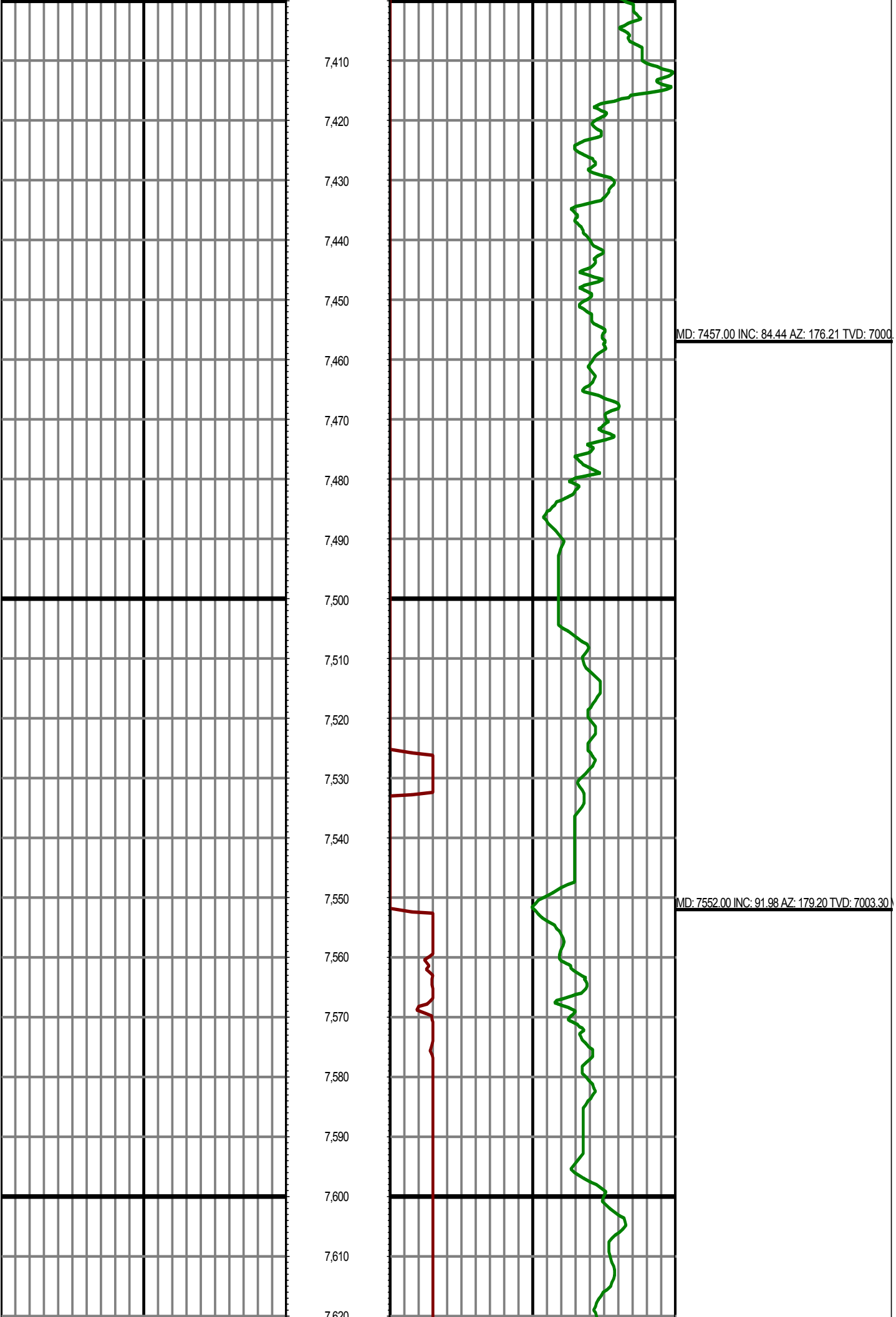


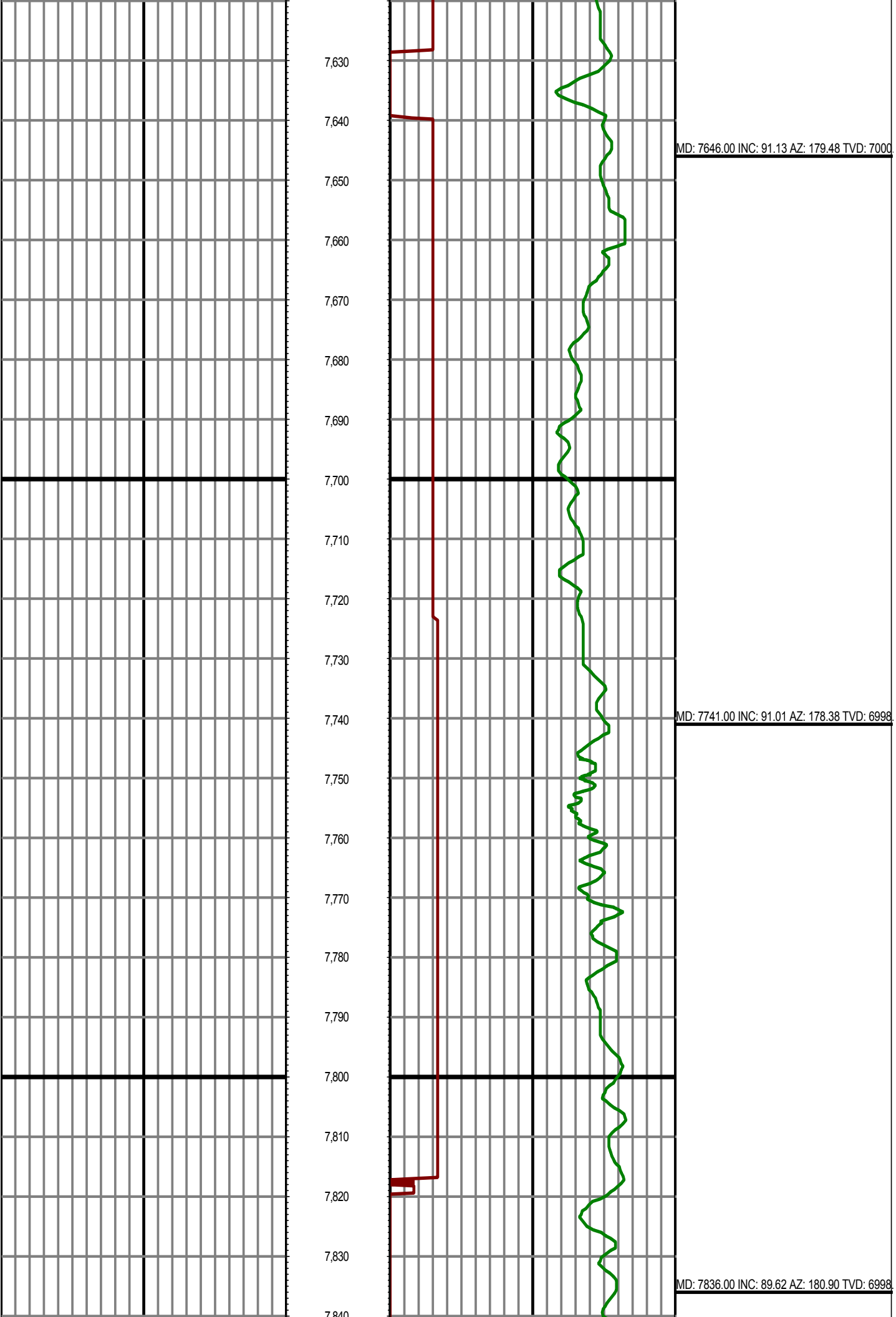
MD: 6796.00 INC: 31.50 AZ: 179.58 TVD: 6653

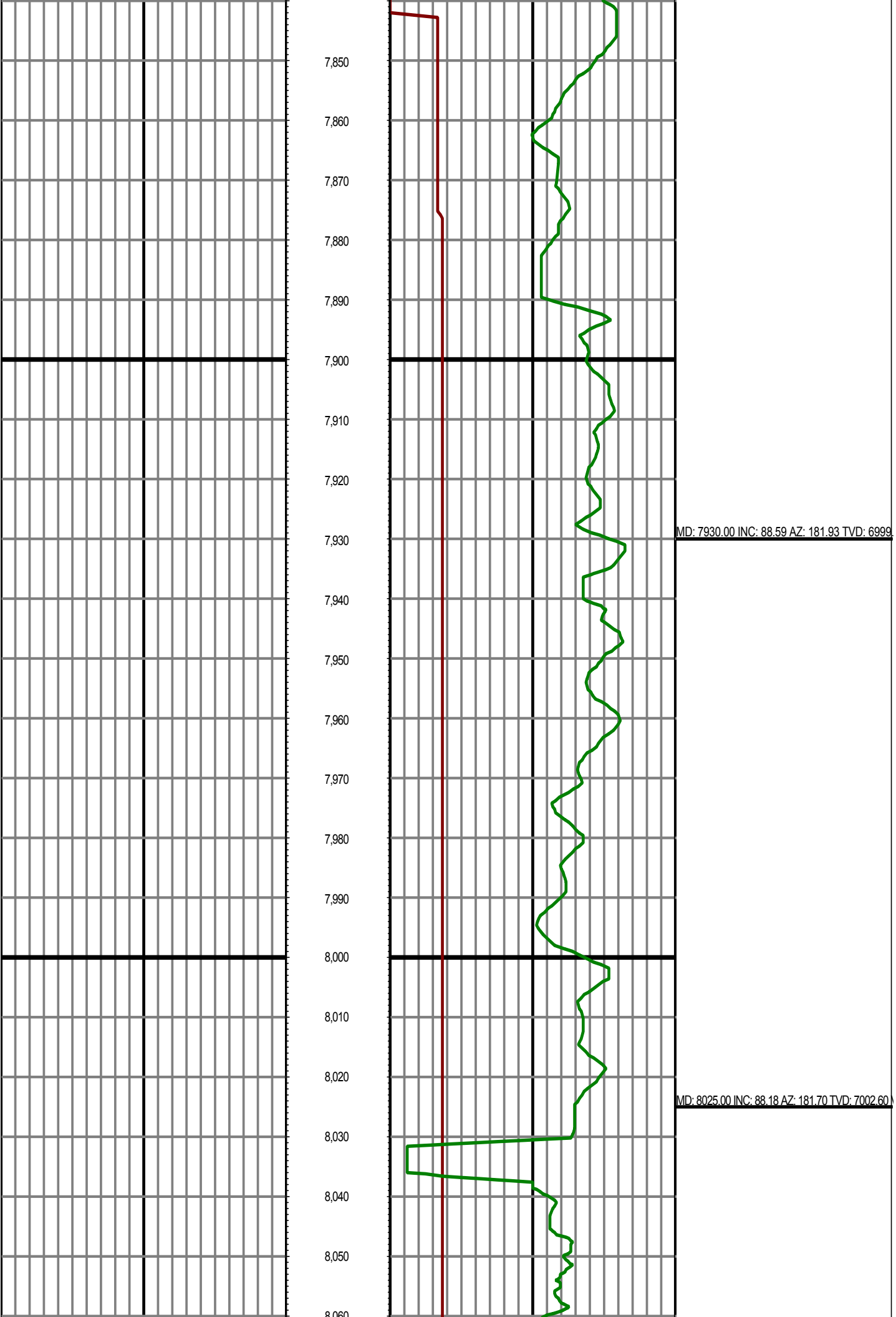
MD: 6891.00 INC: 39.57 AZ: 179.98 TVD: 6730.41

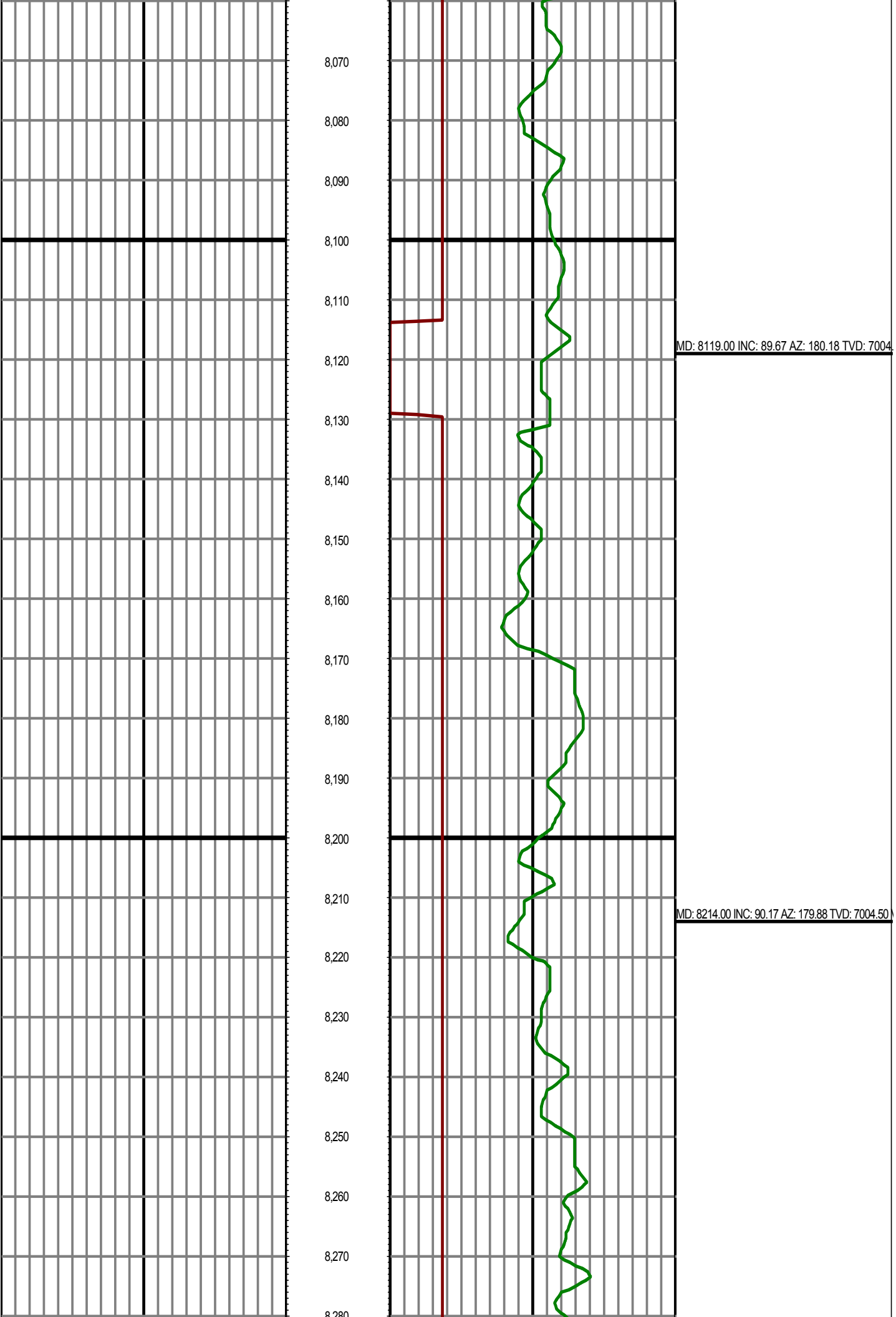


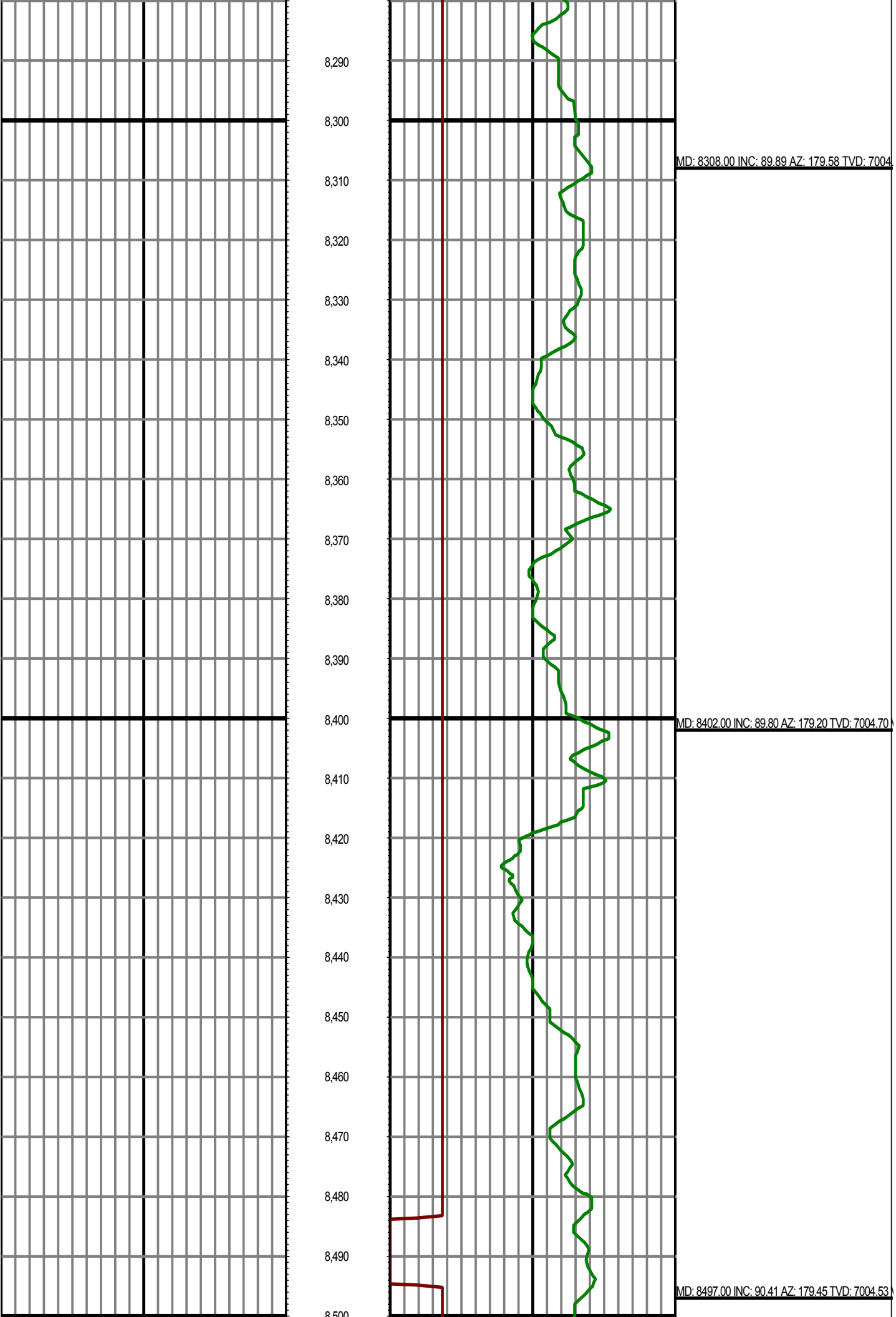


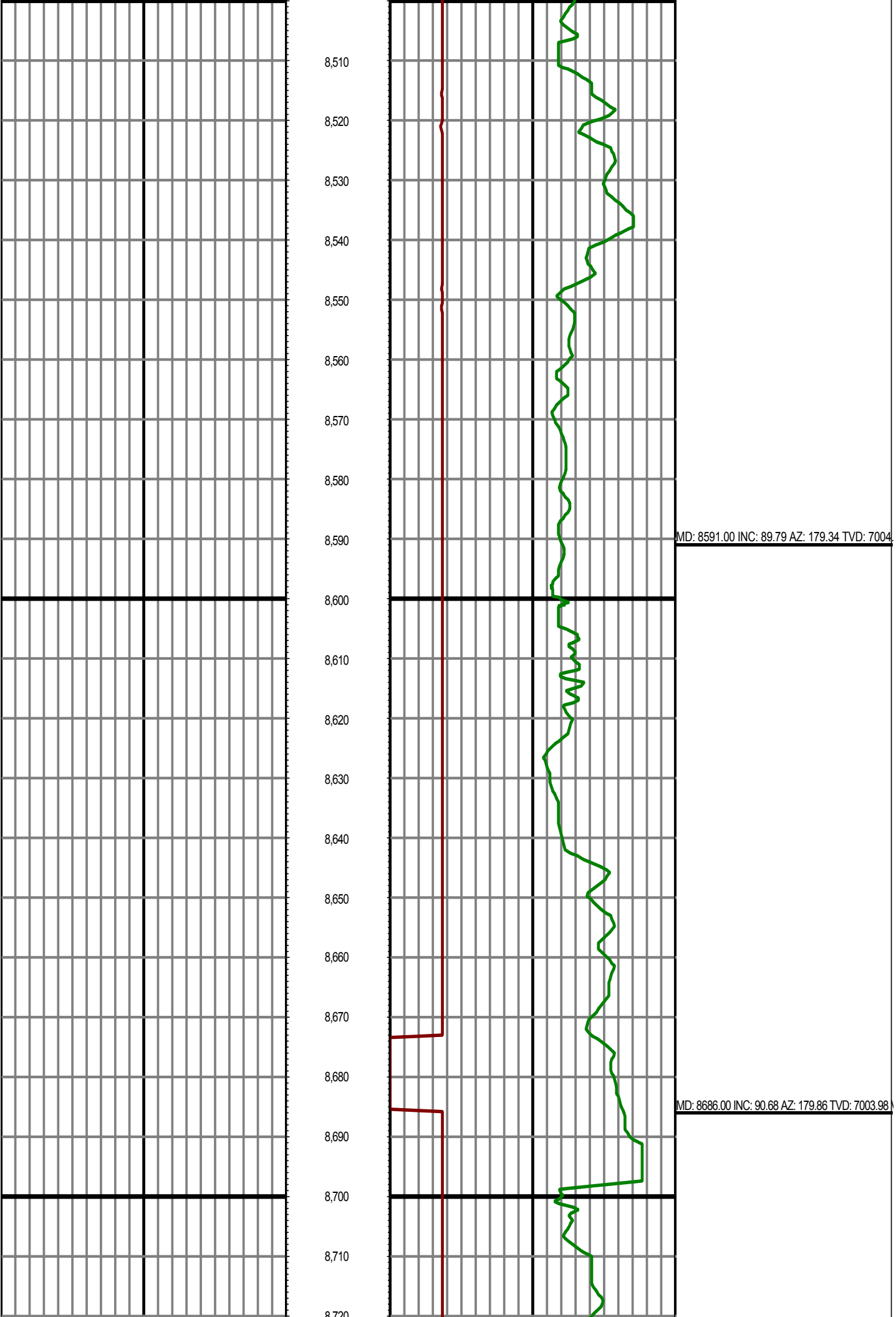


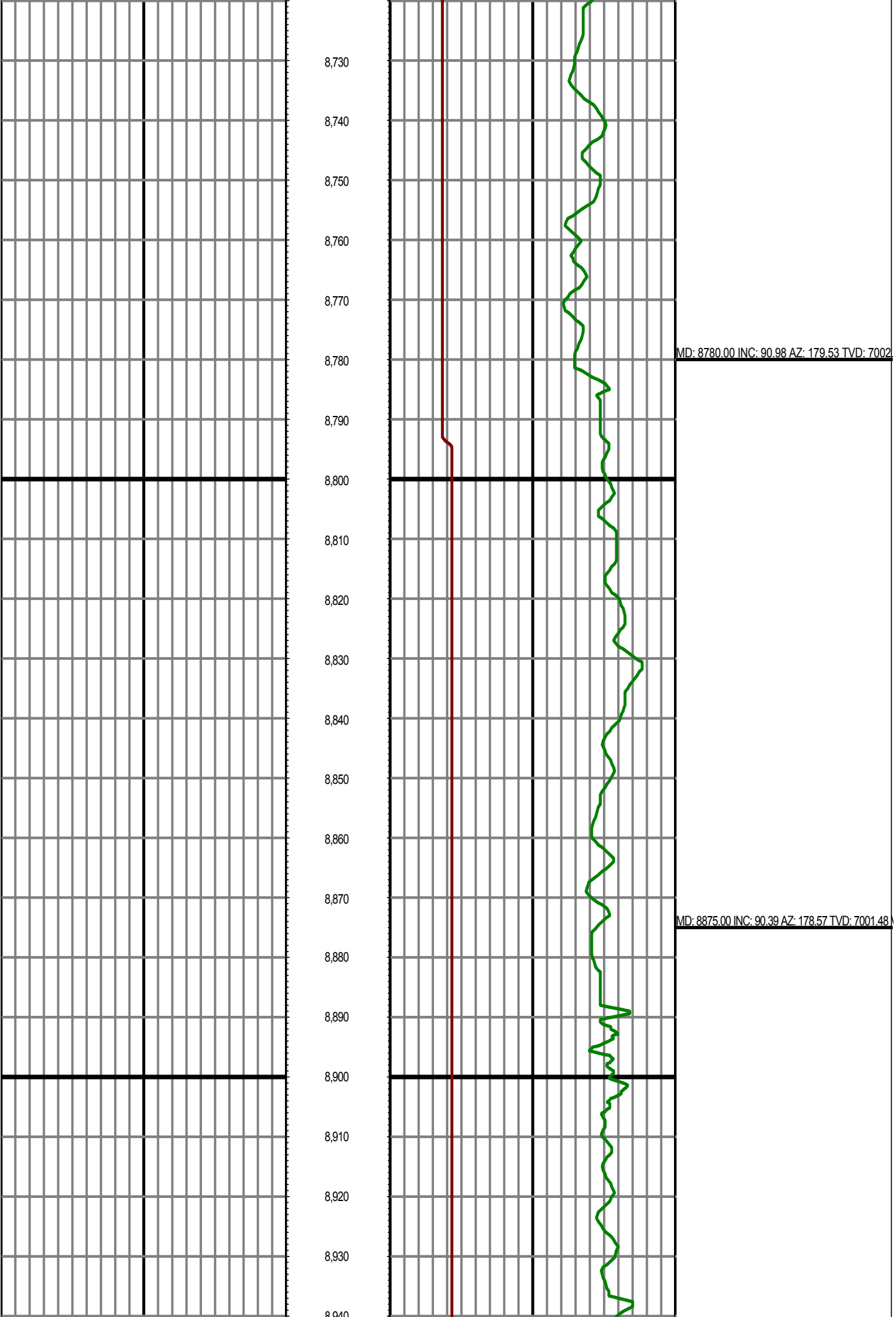


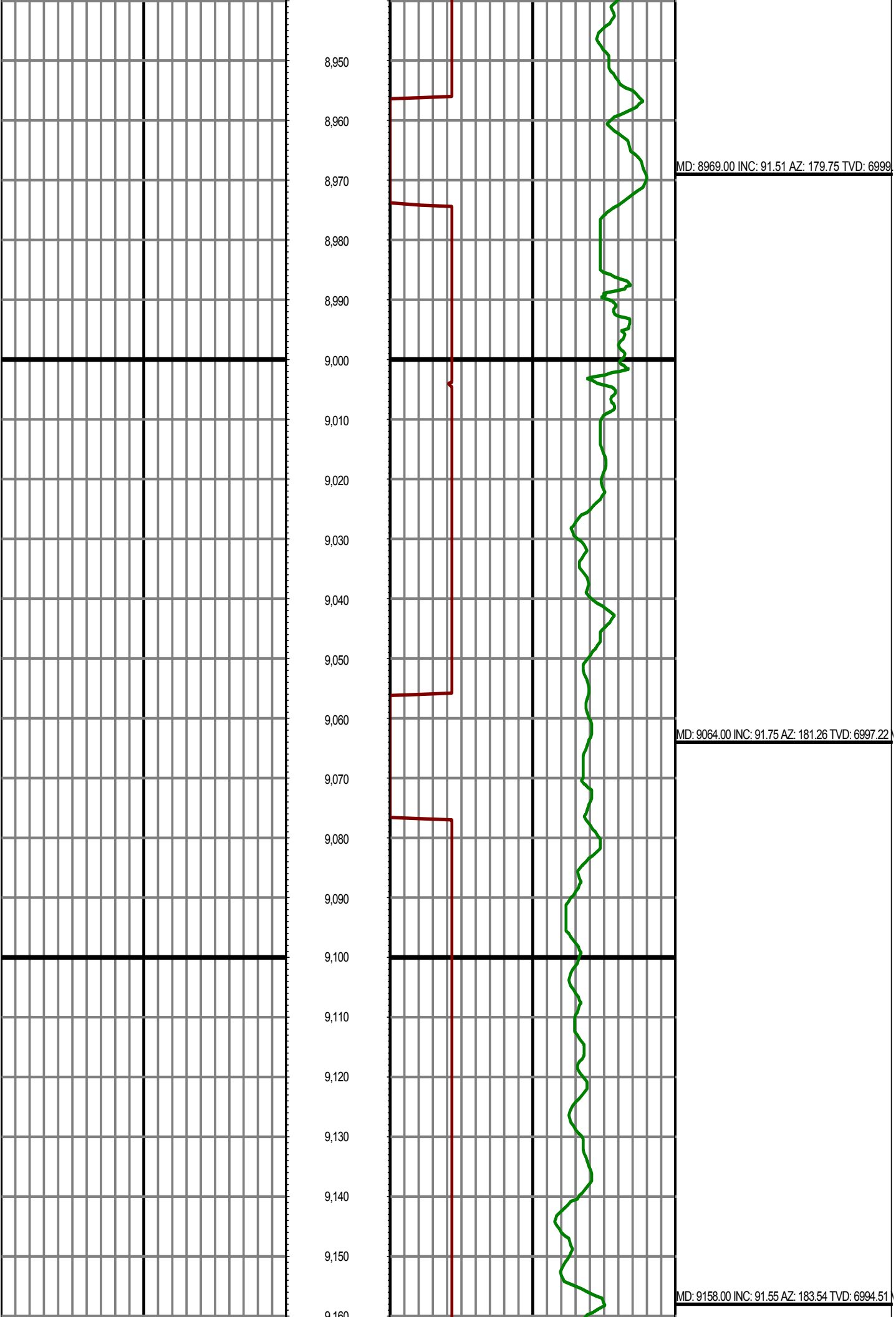


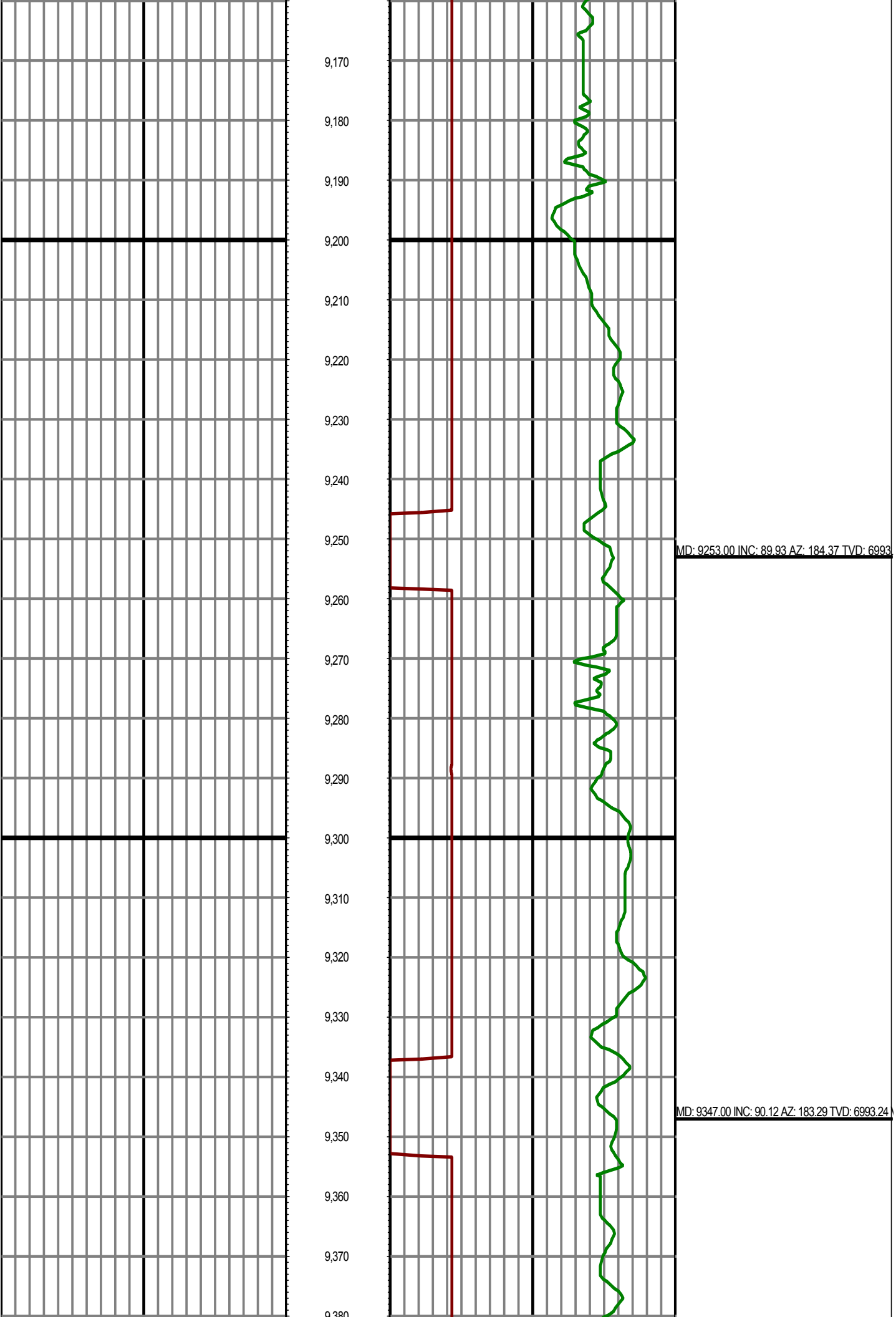


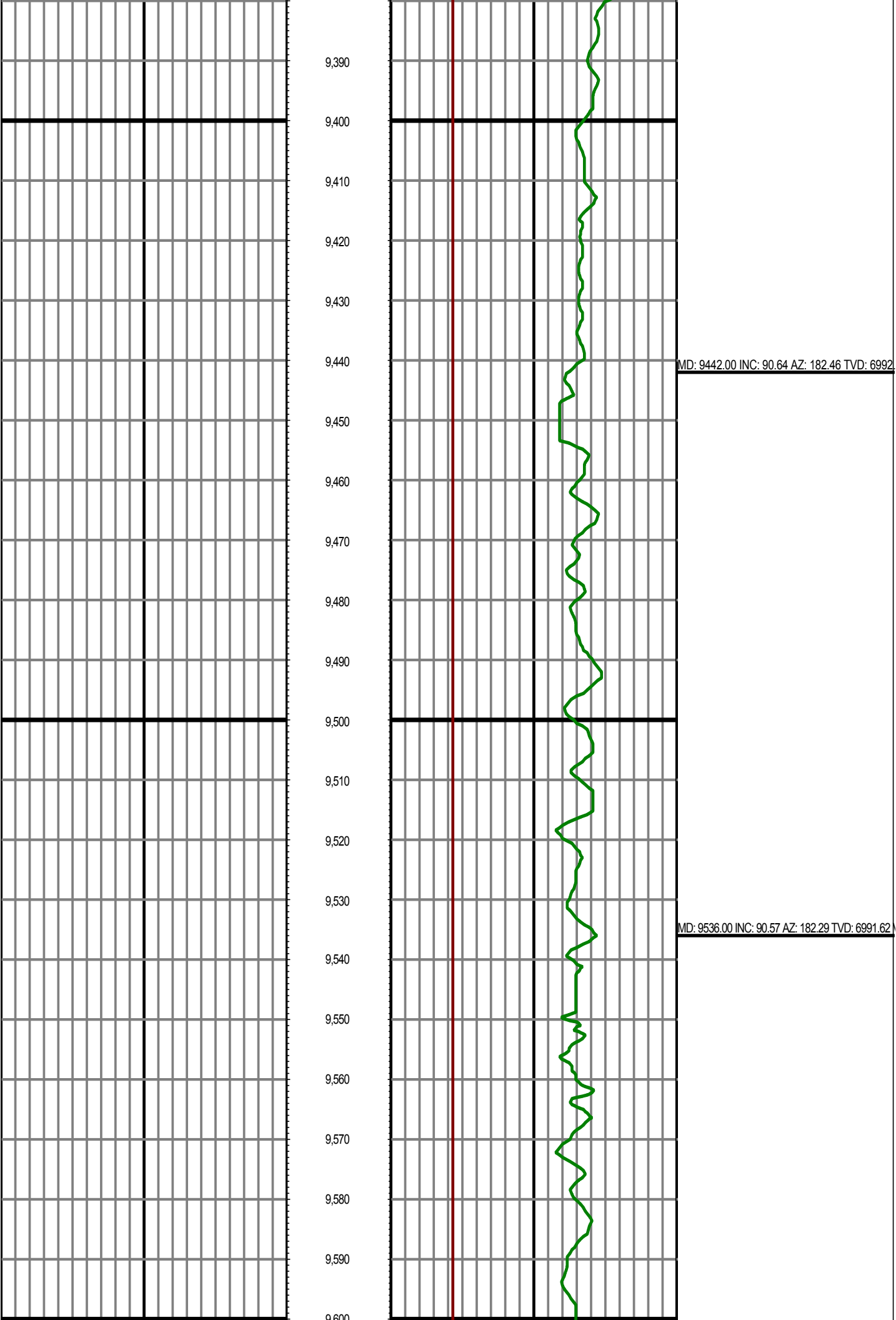


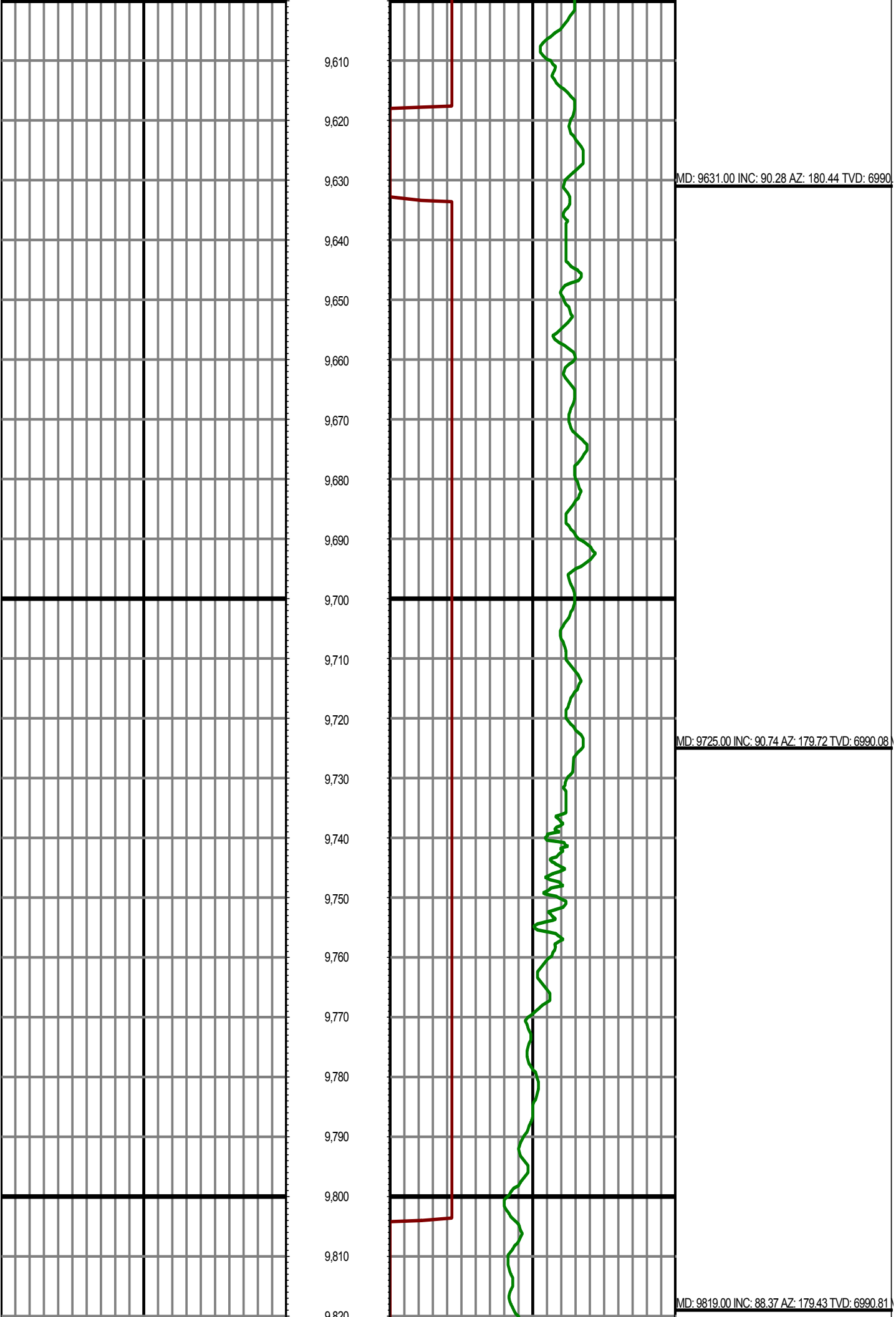


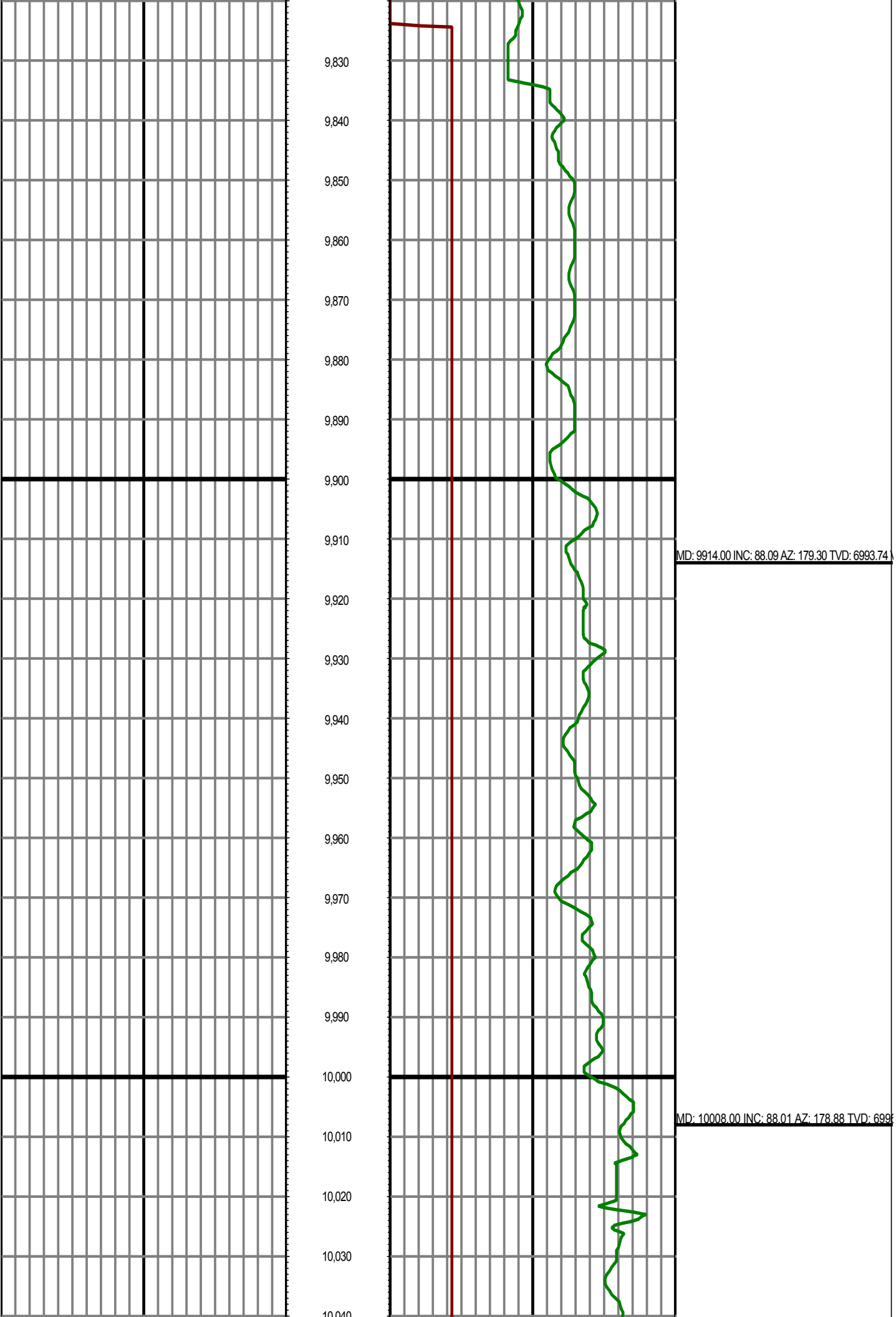


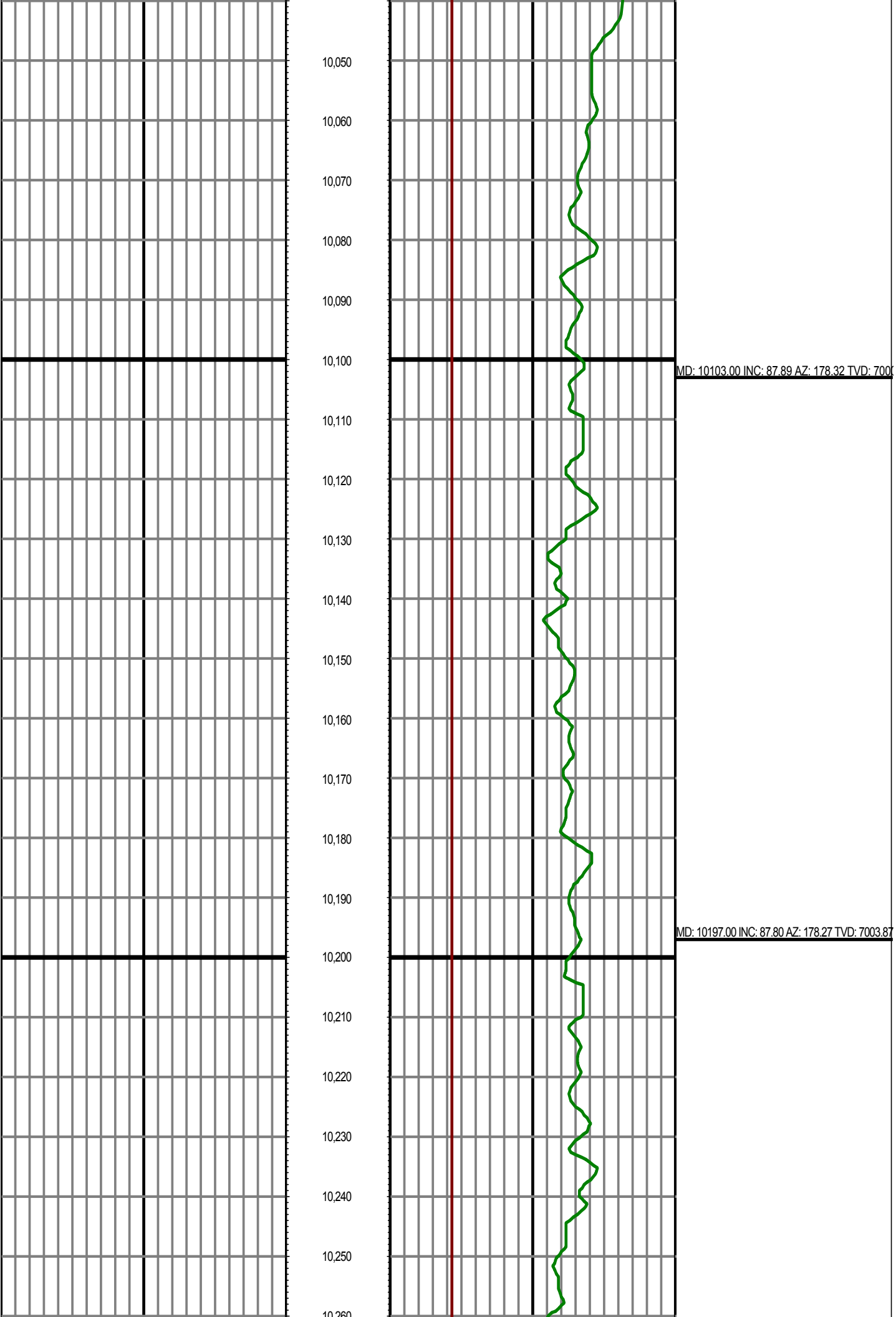


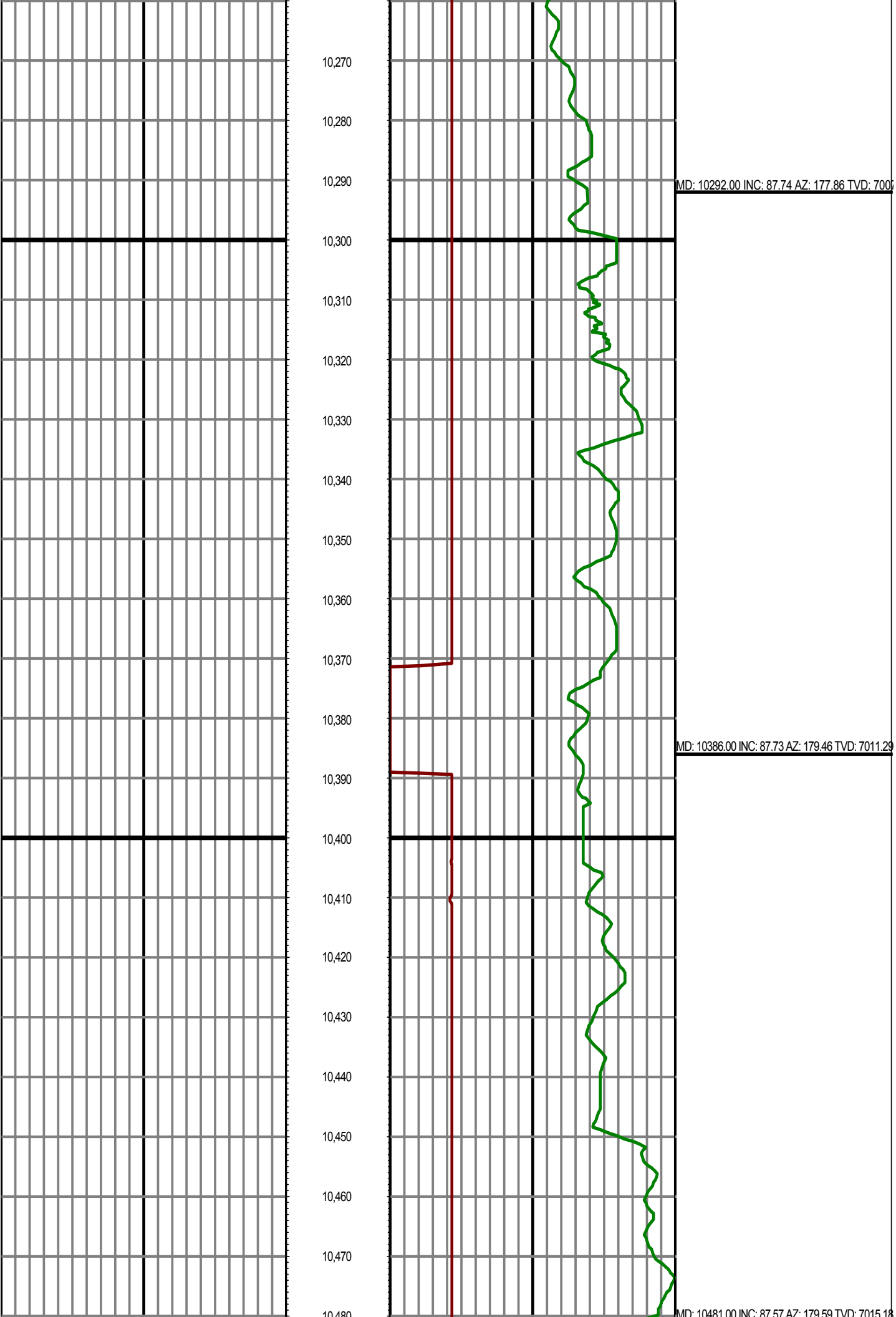


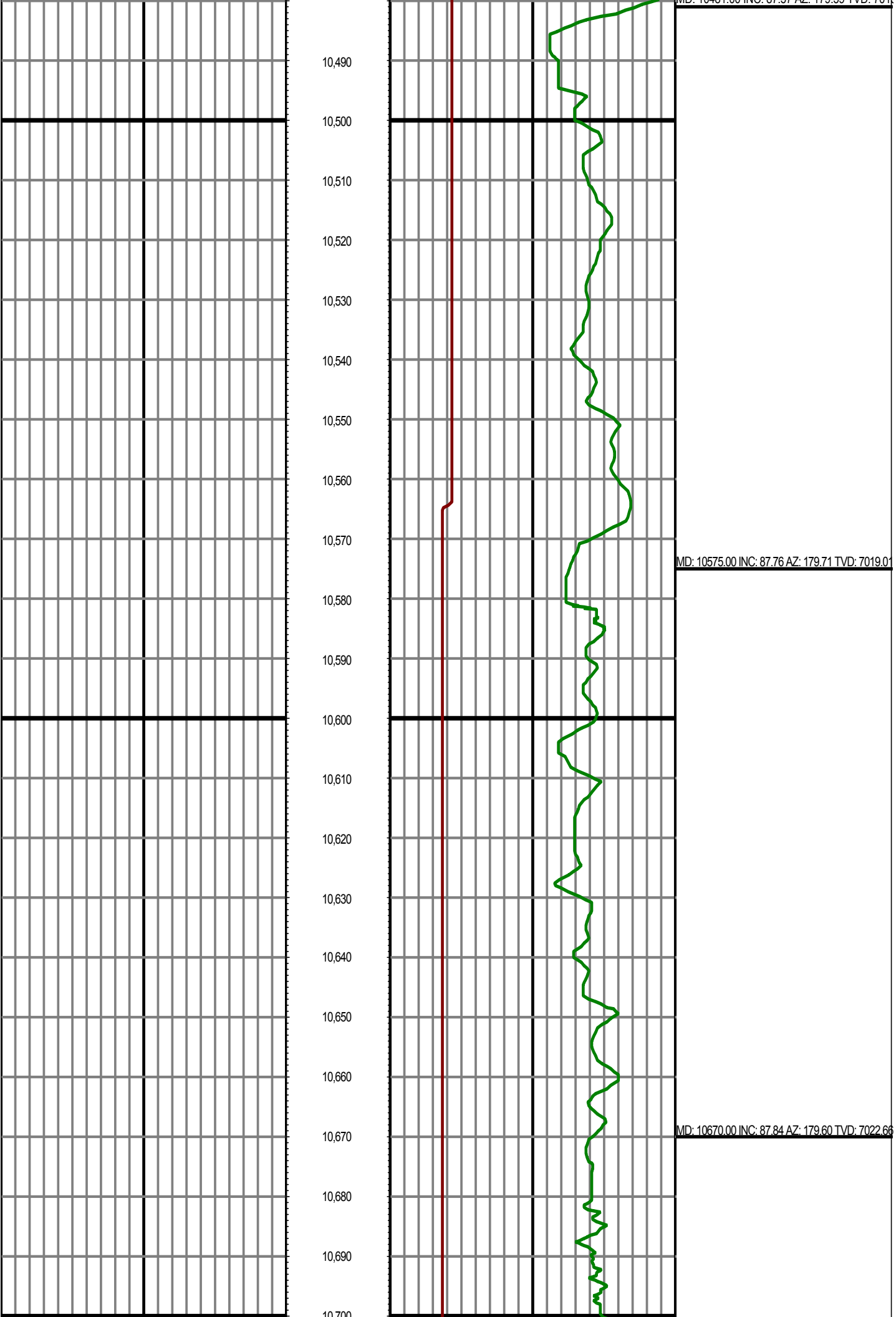


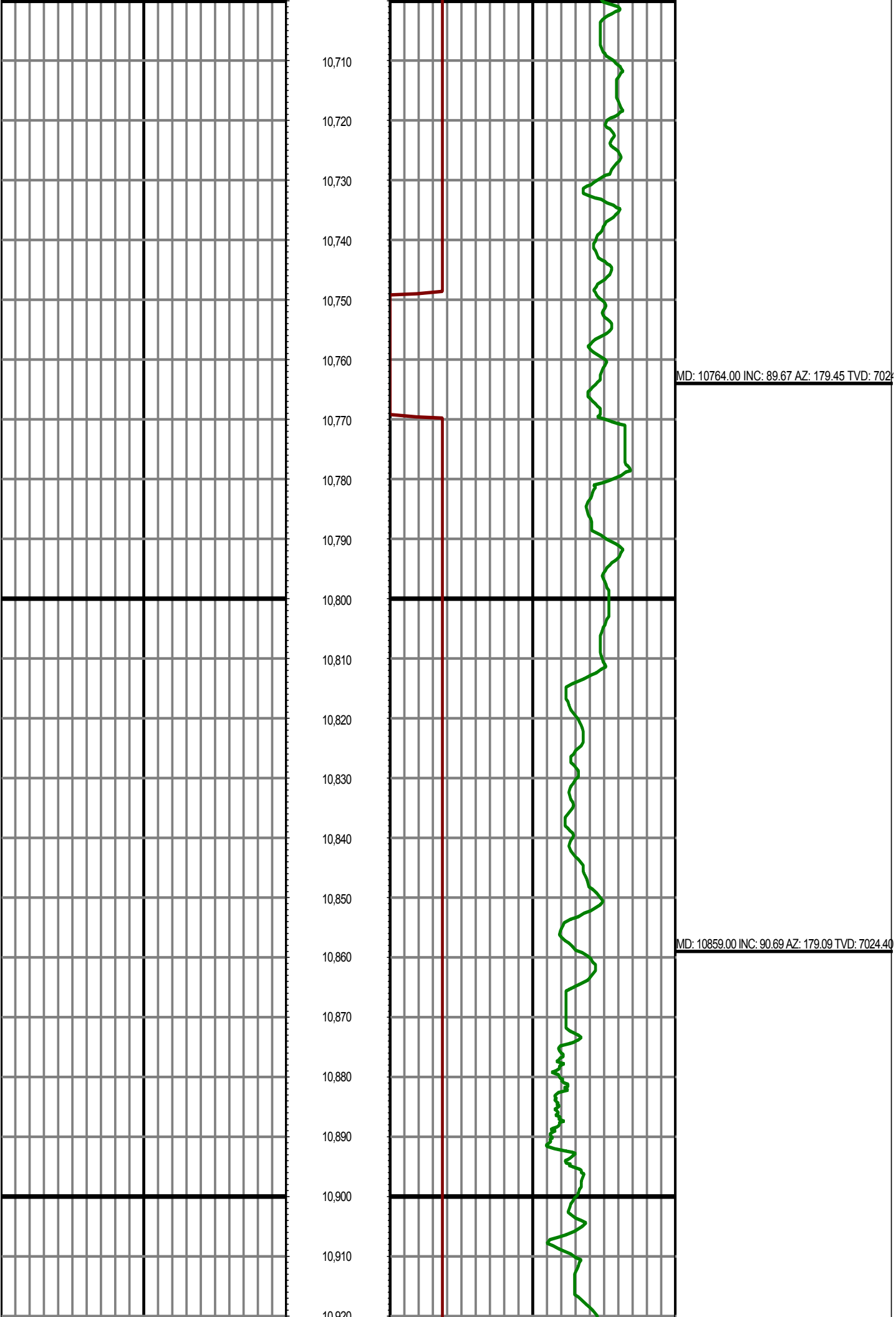


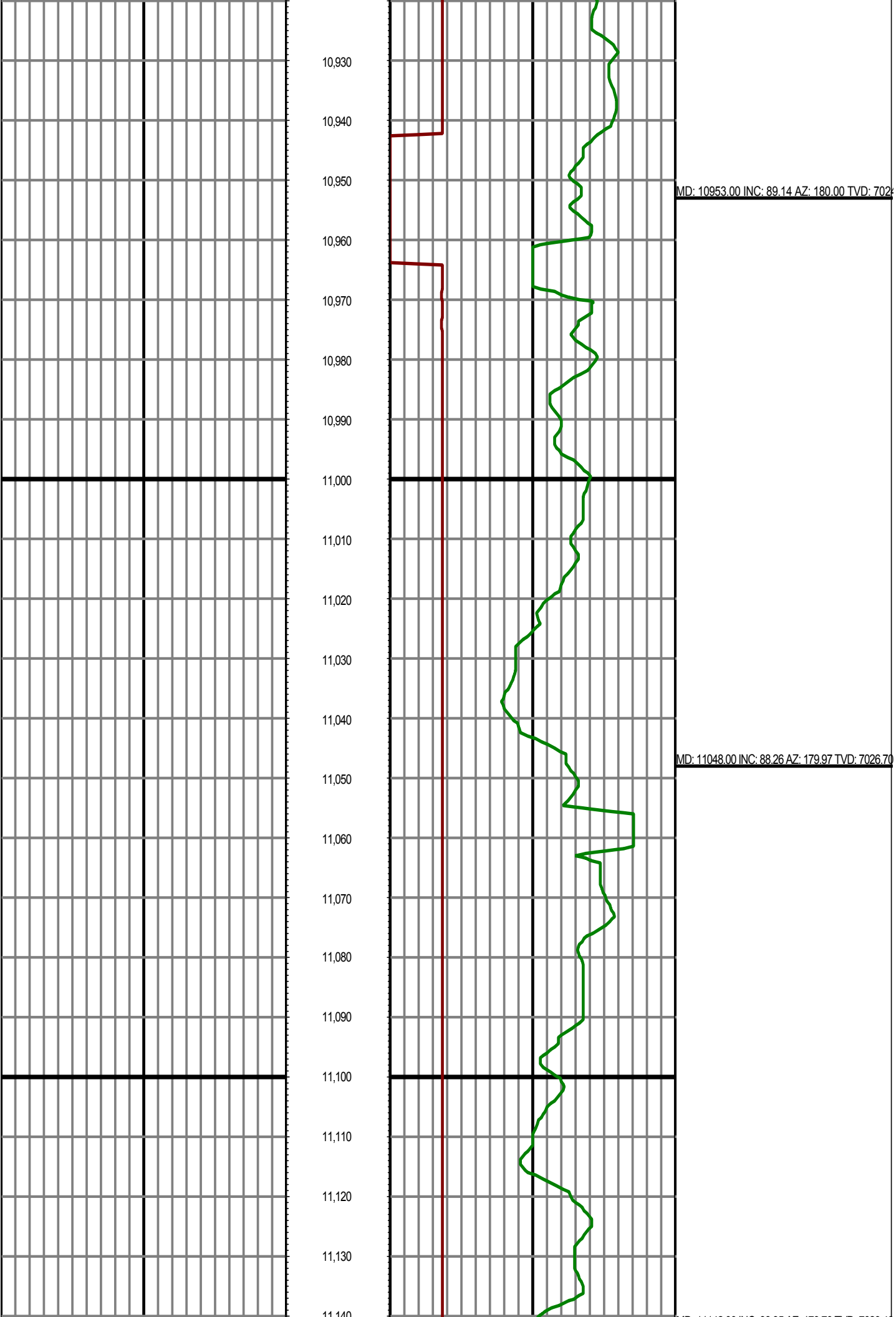


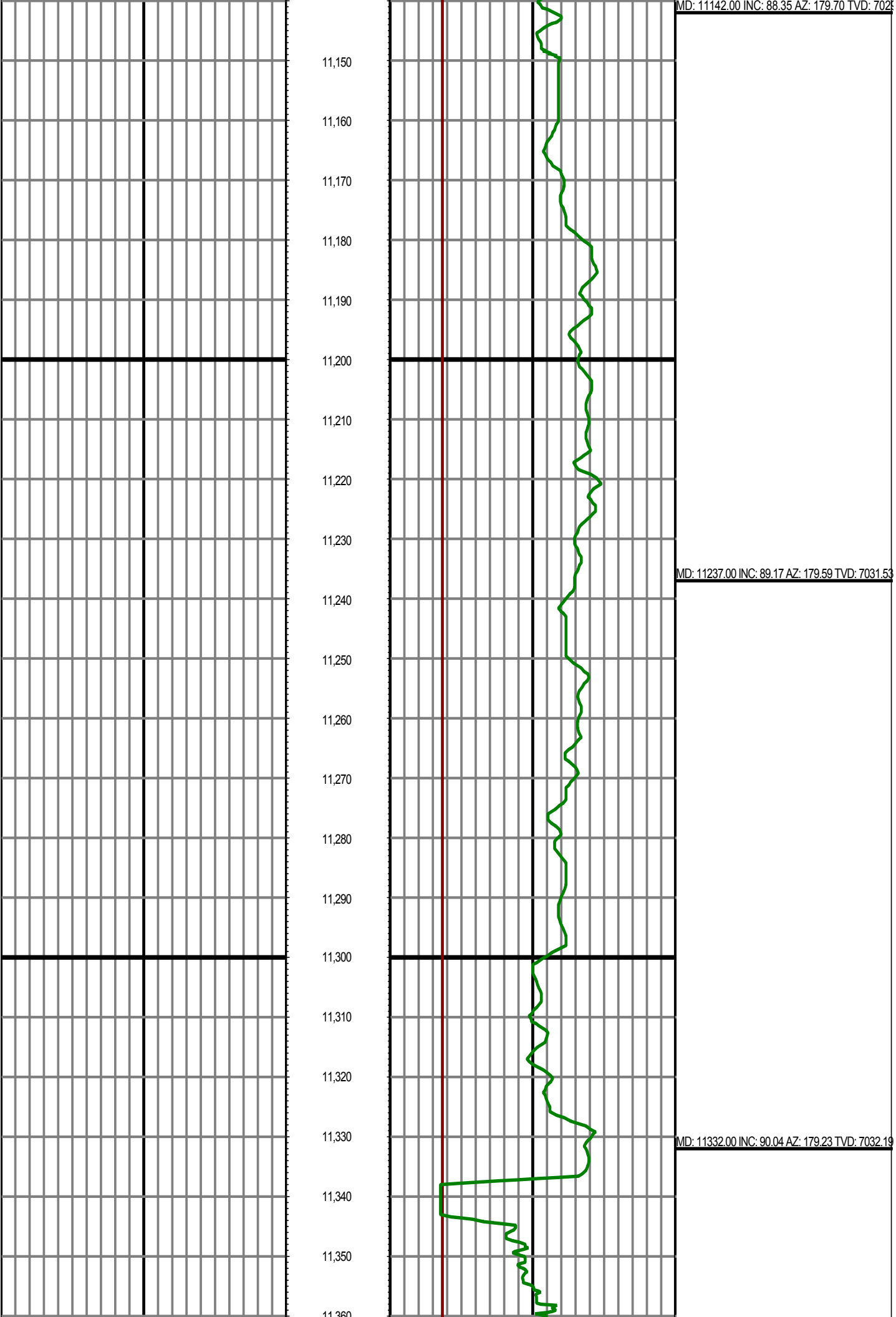








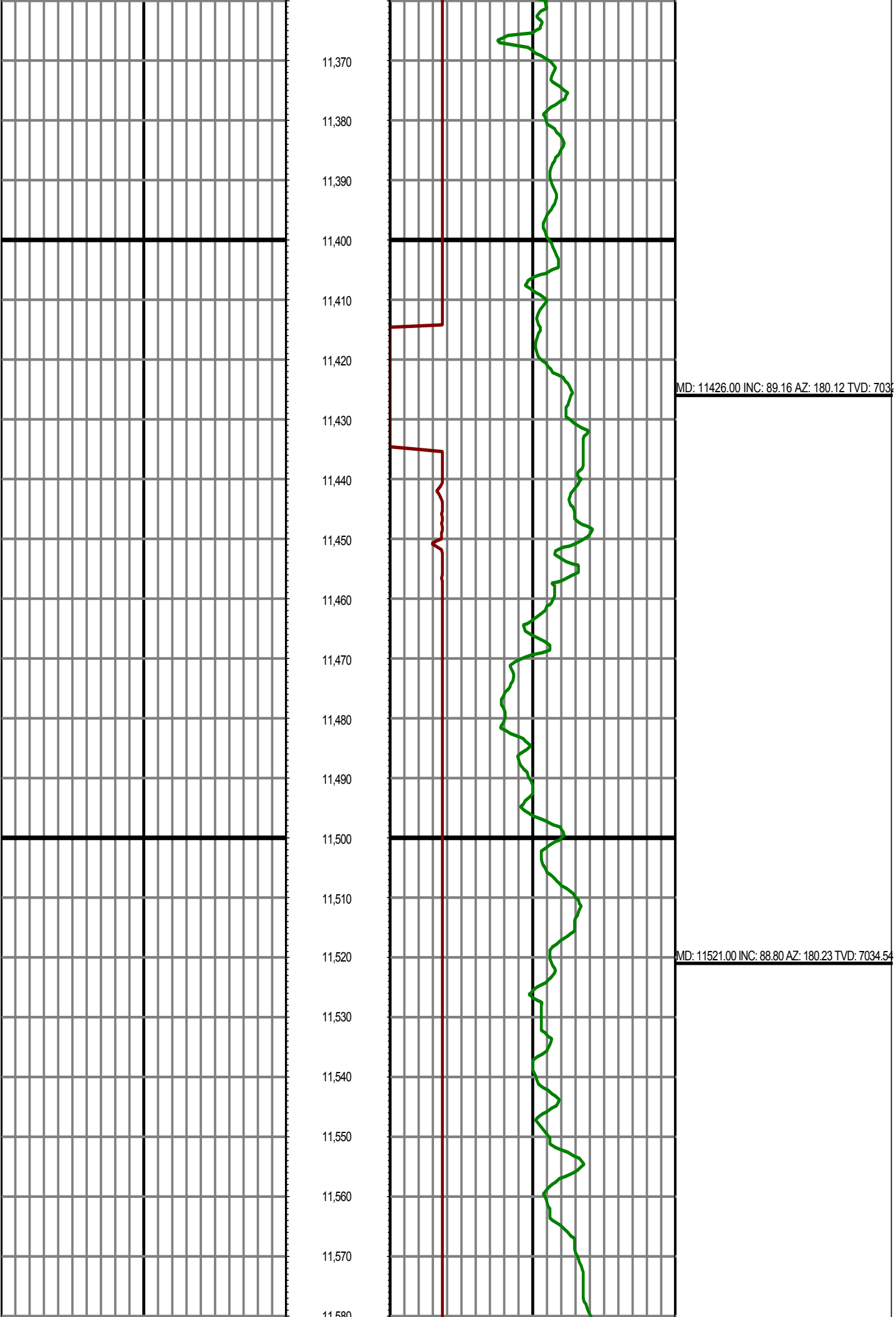


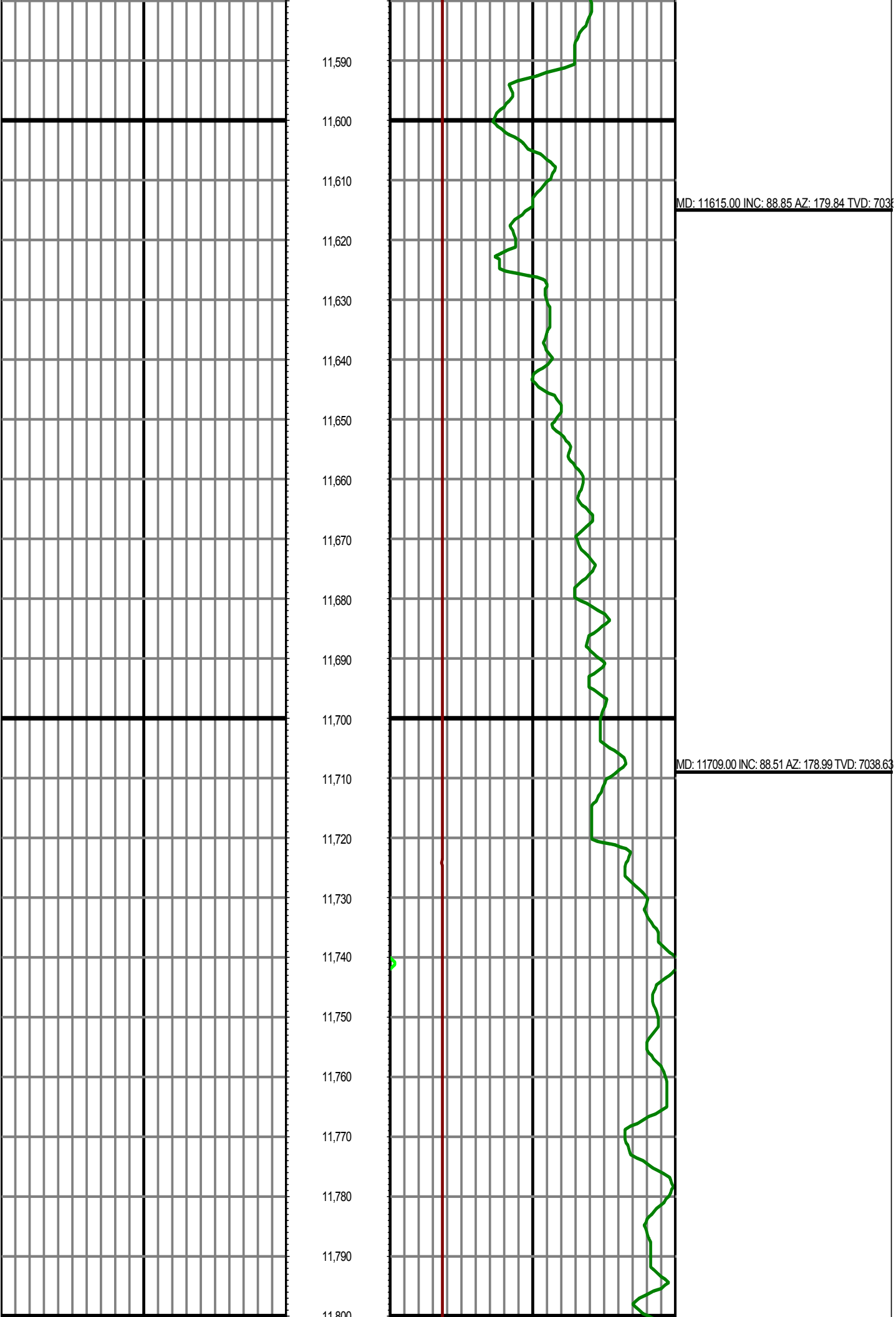


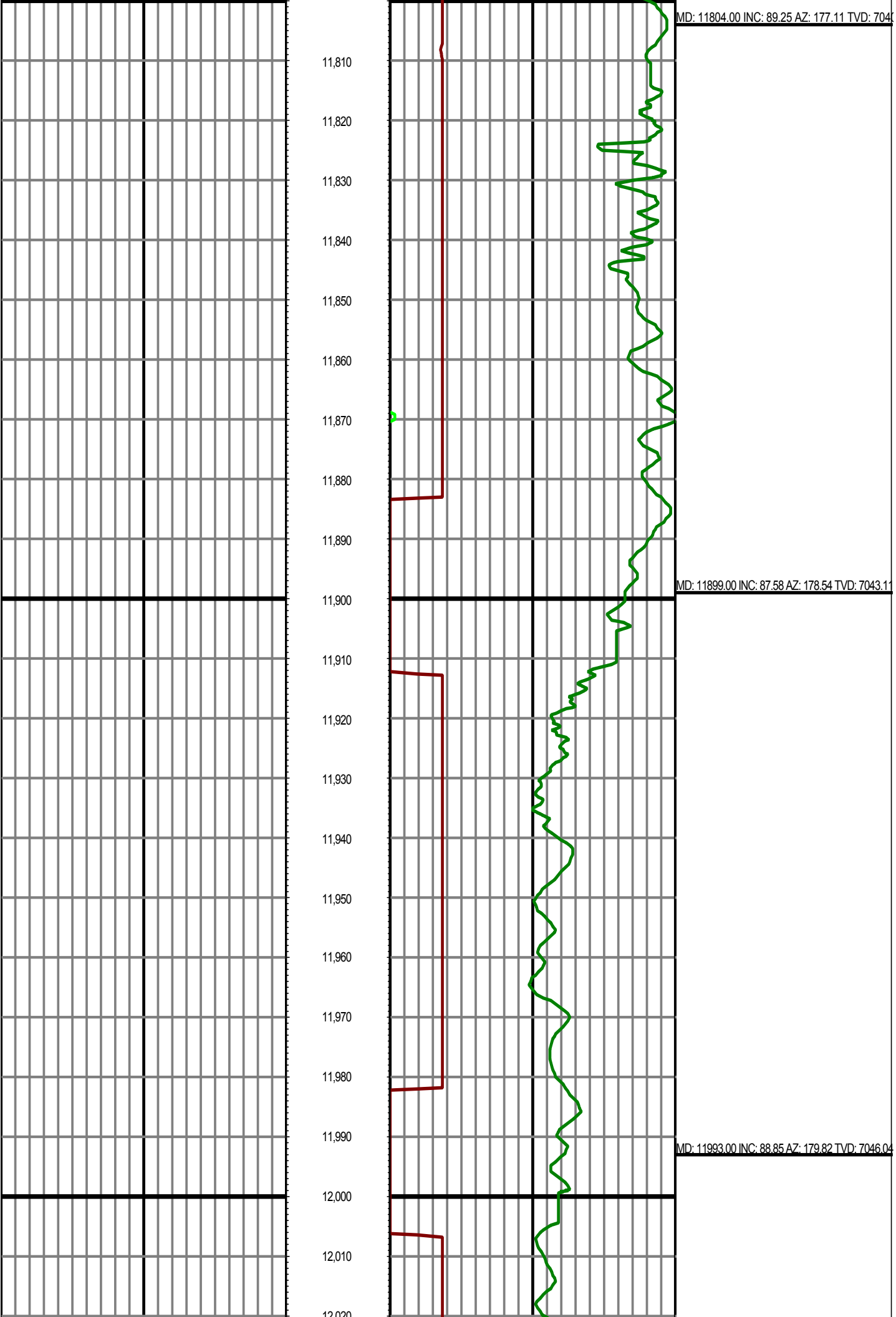
MD: 11142.00 INC: 88.35 AZ: 179.70 TVD: 7025

MD: 11237.00 INC: 89.17 AZ: 179.59 TVD: 7031.53

MD: 11332.00 INC: 90.04 AZ: 179.23 TVD: 7032.19







MD: 11804.00 INC: 89.25 AZ: 177.11 TVD: 7040.00

MD: 11899.00 INC: 87.58 AZ: 178.54 TVD: 7043.11

MD: 11993.00 INC: 88.85 AZ: 179.82 TVD: 7046.04

