

**Premier Directional Drilling**

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

Powers 2N-27HZ**Scale 5":100' - MD****9/28/2015 11:19 AM****Oper. Company:** Anadarko Petroleum**Well:** Powers 2N-27HZ**Field:** Wattenberg/ Niobrara**Rig:** H & P 307**Well ID:** 05123419500000**Job Number:** H15387**Notes:** Recorded Mode Log
Gamma Correction Determined by Pipe ID & OD, Mud Weight & Bit Size**State:** CO**County:** Weld**Country:** USA**Location:** 2N 65W Sect. 22**Start Date:** 09/26/2015 02:50:00**End Date:** 09/28/2015 00:46:00**Latitude:** 40.130530**Longitude:** -104.645509**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: 0.00° (True)**Operator 1:** Robert Grossman**Operator 2:** Jeff Clement**Notes:** Smoothing : 7Gap Fill : 10Tool Type : Mud PulseCalculation Method : Minimum Curvature

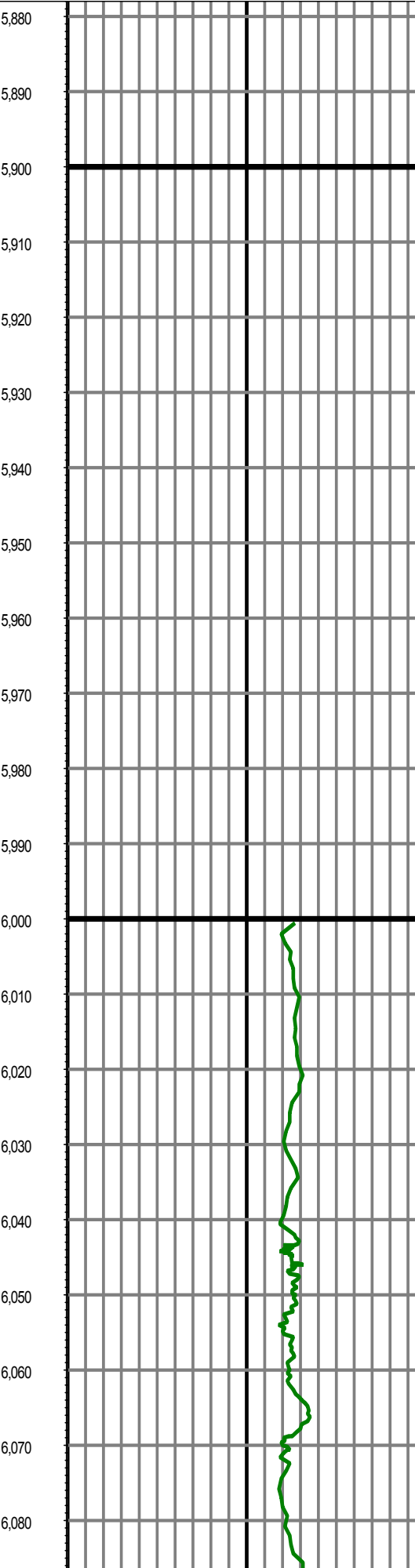
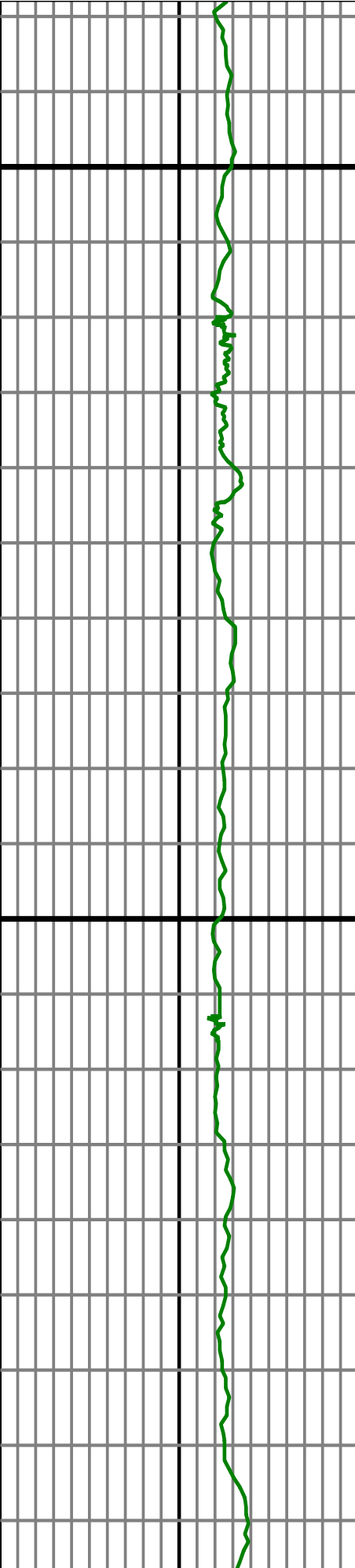
Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	286				
Bit Size	8 1/2				
Cal Factor	6.44432				
Survey Offset:	74.00				
Gamma Offset	69.00				
Resistivity Offset	0.00				
Start Depth	6000.00				
StartDate	9/26/2015				
StartTime	02:50				
EndDepth	13103.00				
EndDate	9/28/2015				
EndTime	00:46				
Mud Type	OBM				
Mud Weight	9.5				
Funnel Viscosity	54				
Plastic Viscosity	19				
Yield Point	10				
Gel Strength	NA				
Solids Content	8.82				
Sand Content	TR				
Mud Alkalinity	NA				
Filtrate Alkalinity	NA				
Chlorides	55000				
Mud RM	NA				
Mud RMF	NA				
Mud RMC	NA				
Mud RM at BHT	NA				
Temperature	NA				
Hole Data			Casing Data		
Size	From	To	Size	From	To
13 1/2	0.00	1888.00	9 5/8	0.00	1888.00
8 1/2	1888.00	13103.00	5 1/2	0.00	13103.00

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.

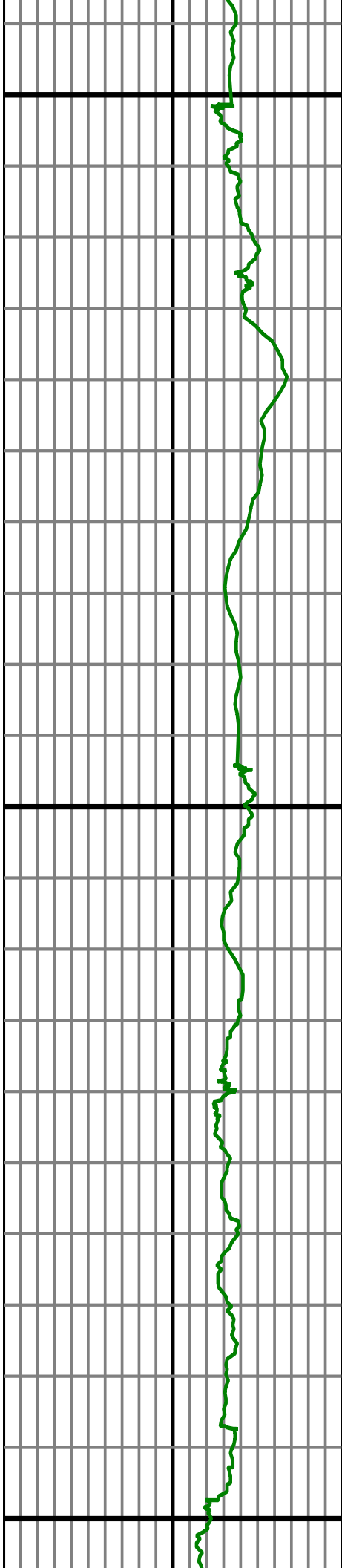
0.00 GR RM(API) on TVD 200.00
200.00 2 400.00

MD 0.00 GR RM(API) on MD 200.00
FT 200.00 2 400.00

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



MD: 6038.00 INC: 12.60 AZ: 321.50 TVD: 5914.75 VS



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

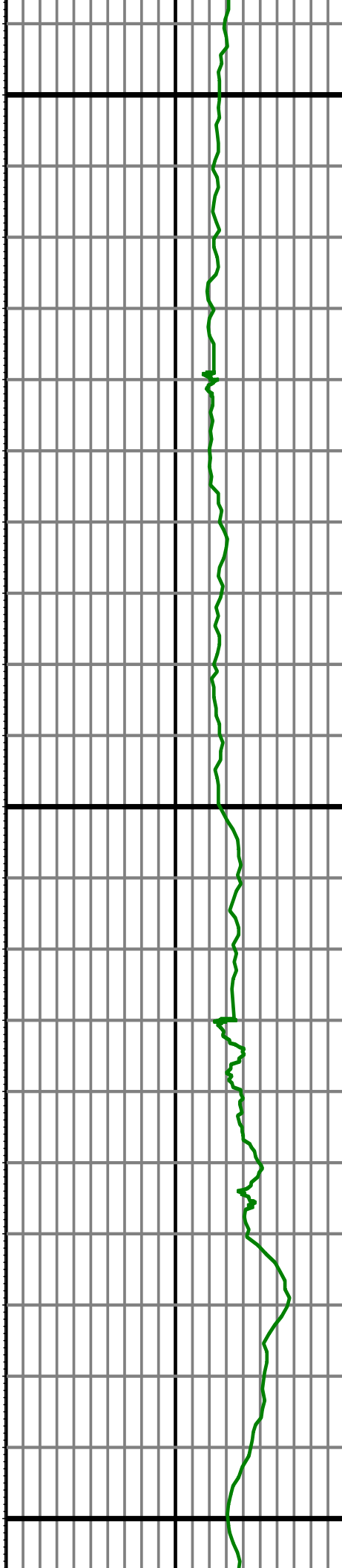
6,260

6,270

6,280

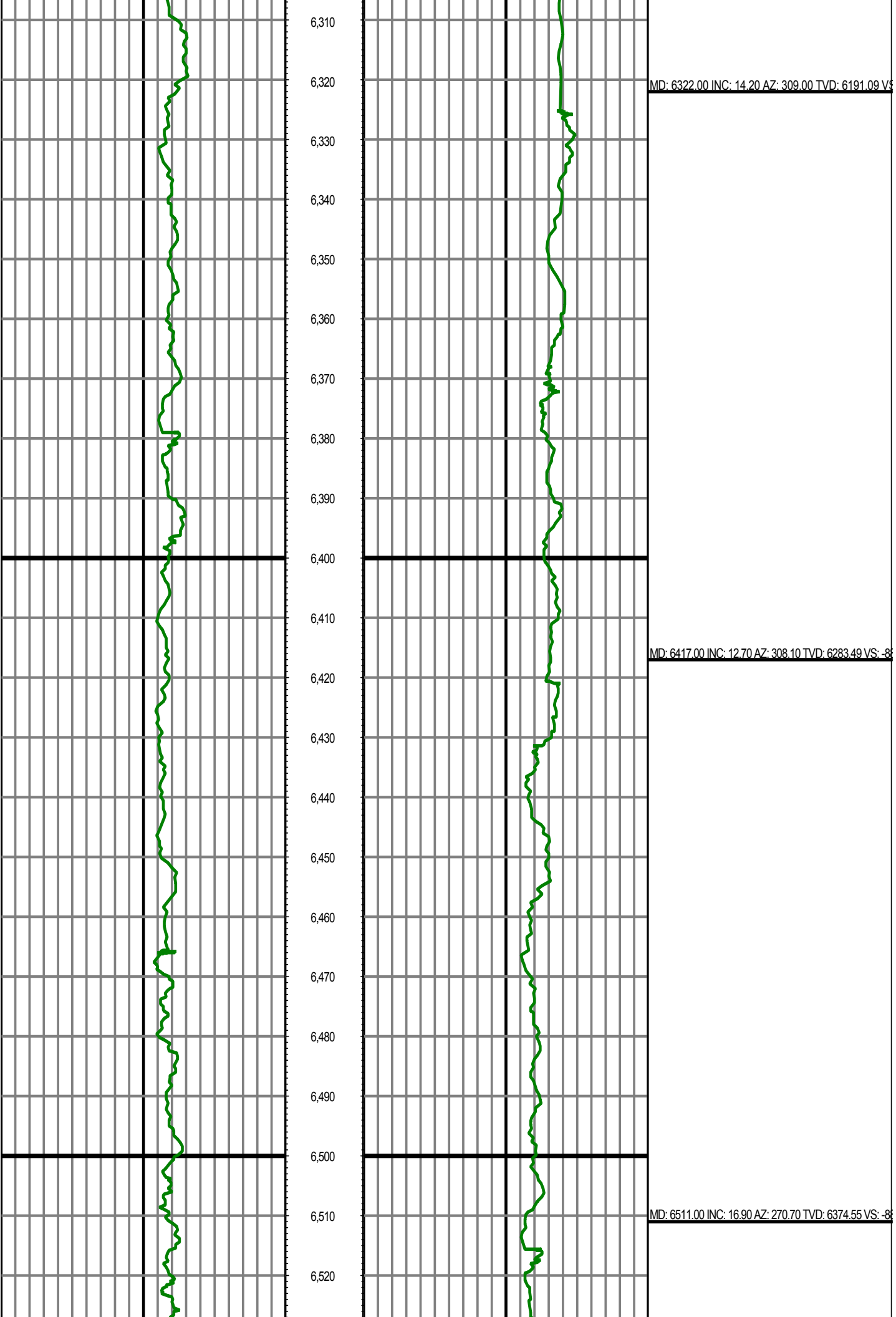
6,290

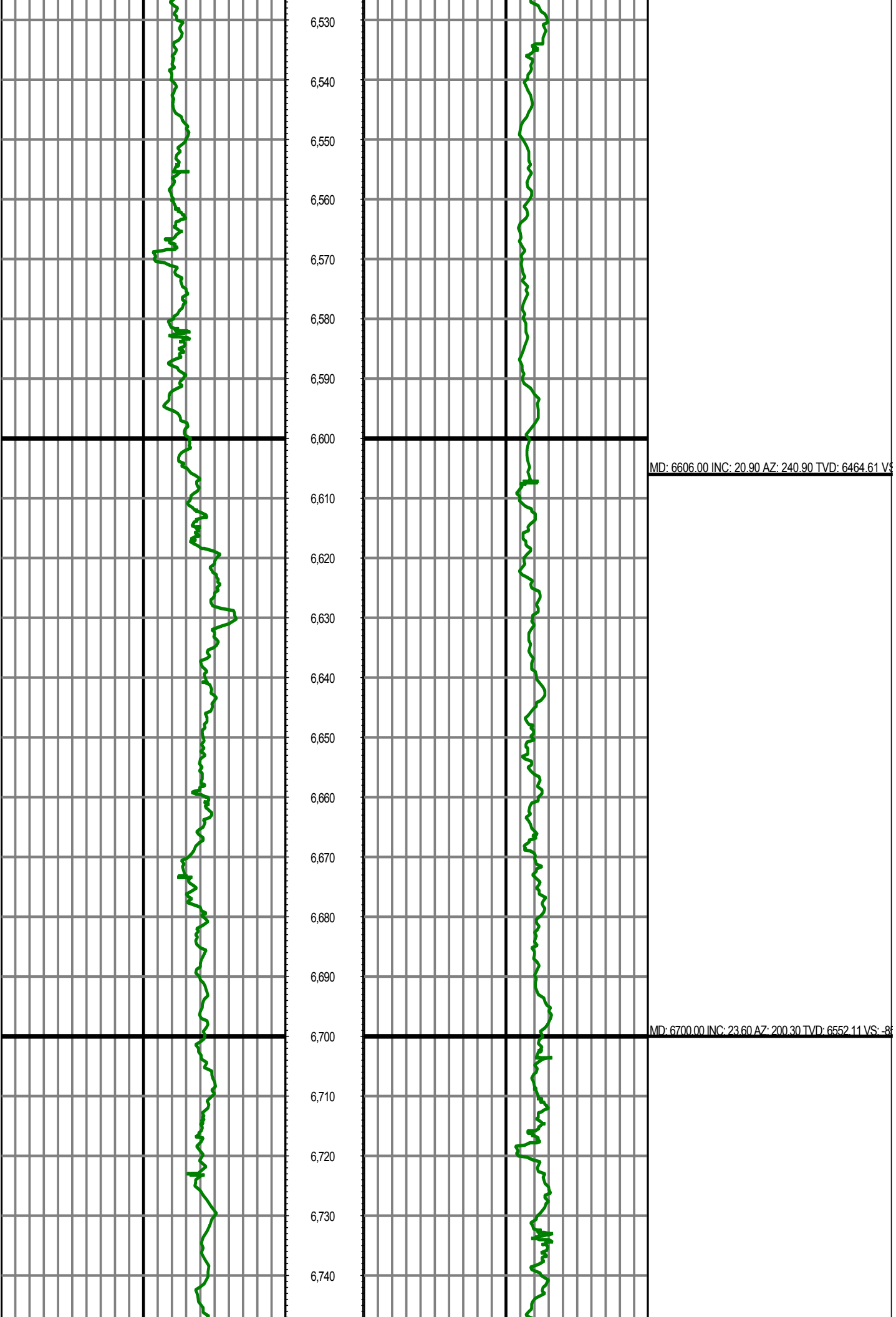
6,300

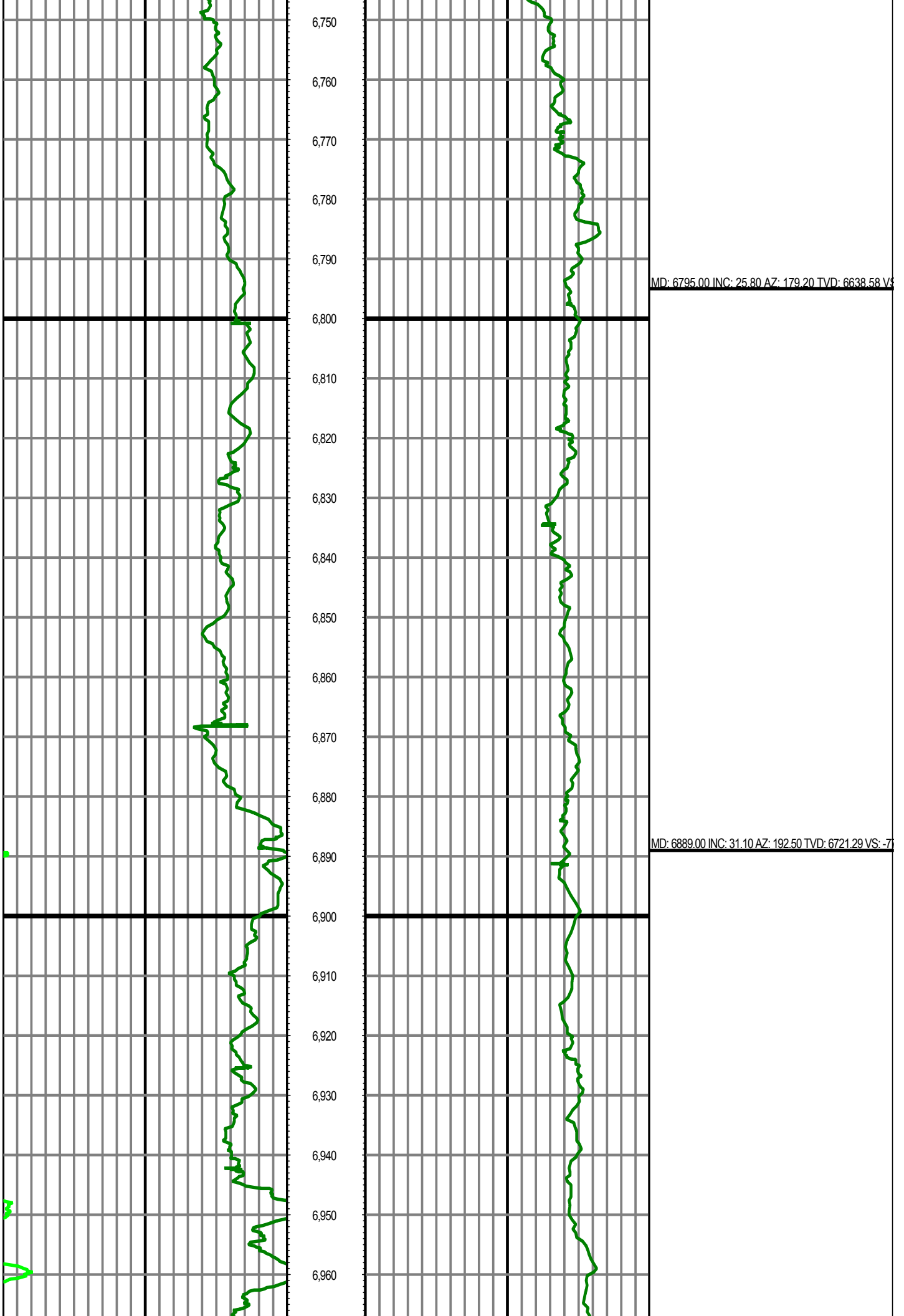


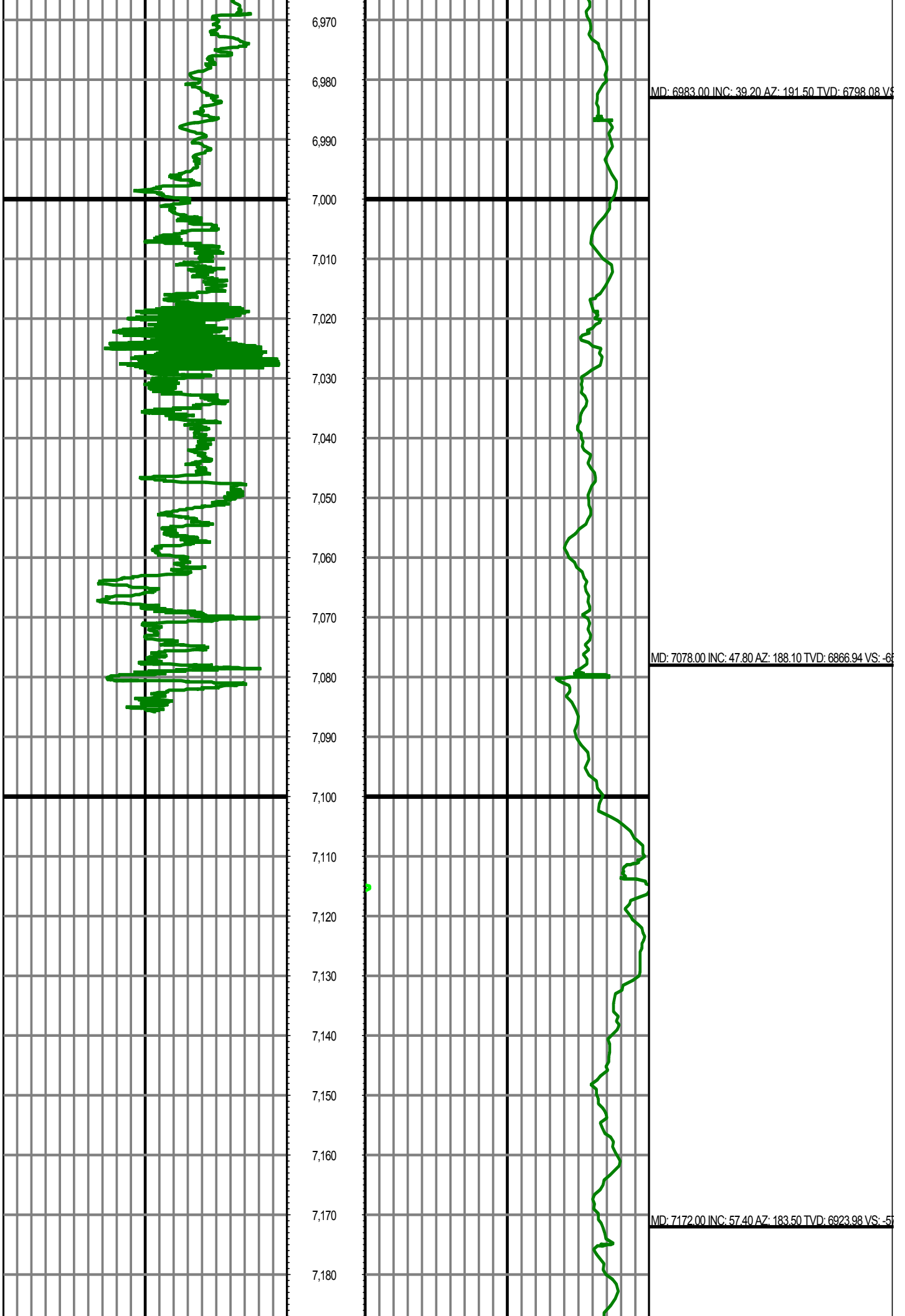
MD: 6133.00 INC: 14.10 AZ: 313.20 TVD: 6007.19 VS: -85

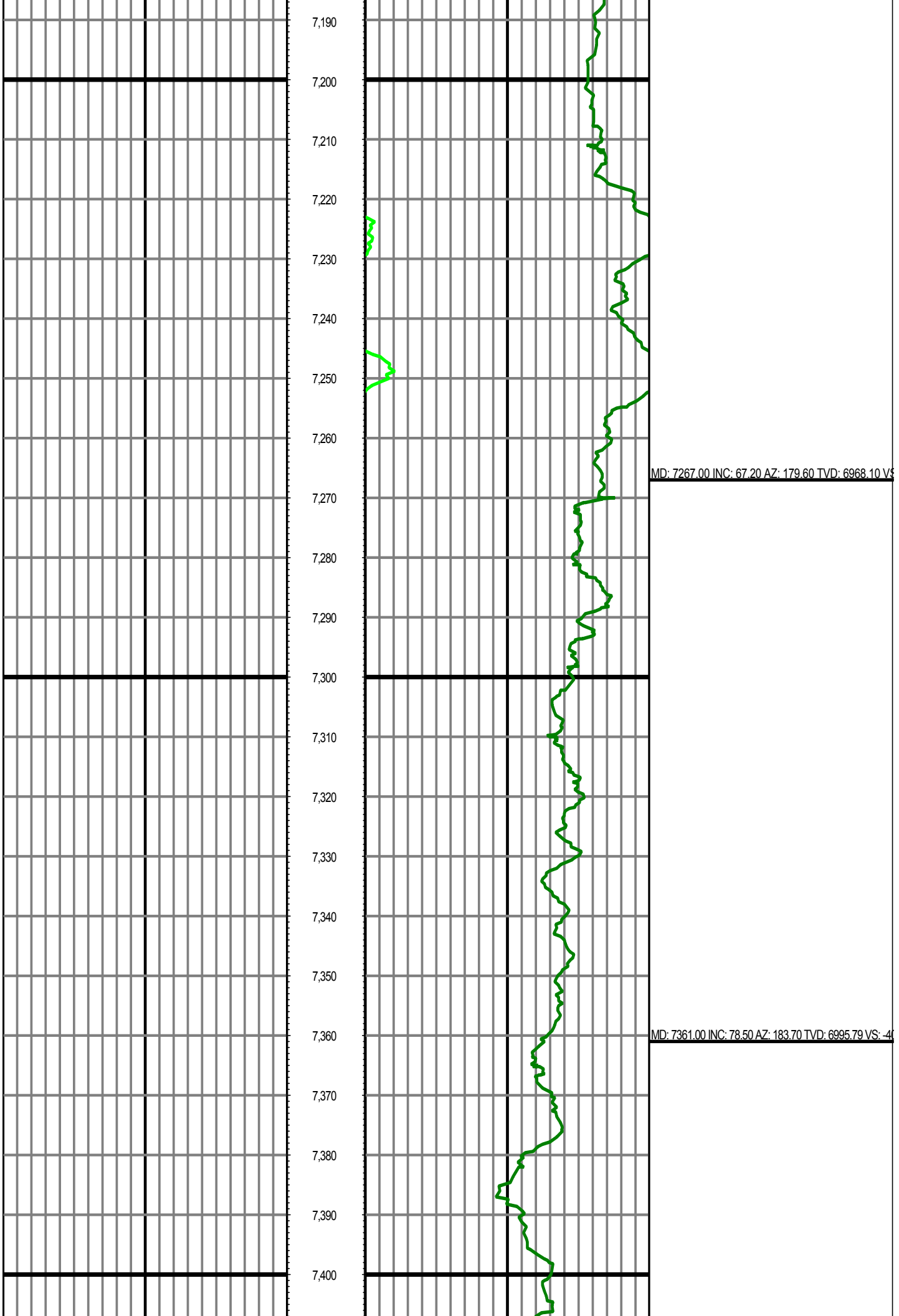
MD: 6228.00 INC: 12.50 AZ: 311.10 TVD: 6099.64 VS: -85

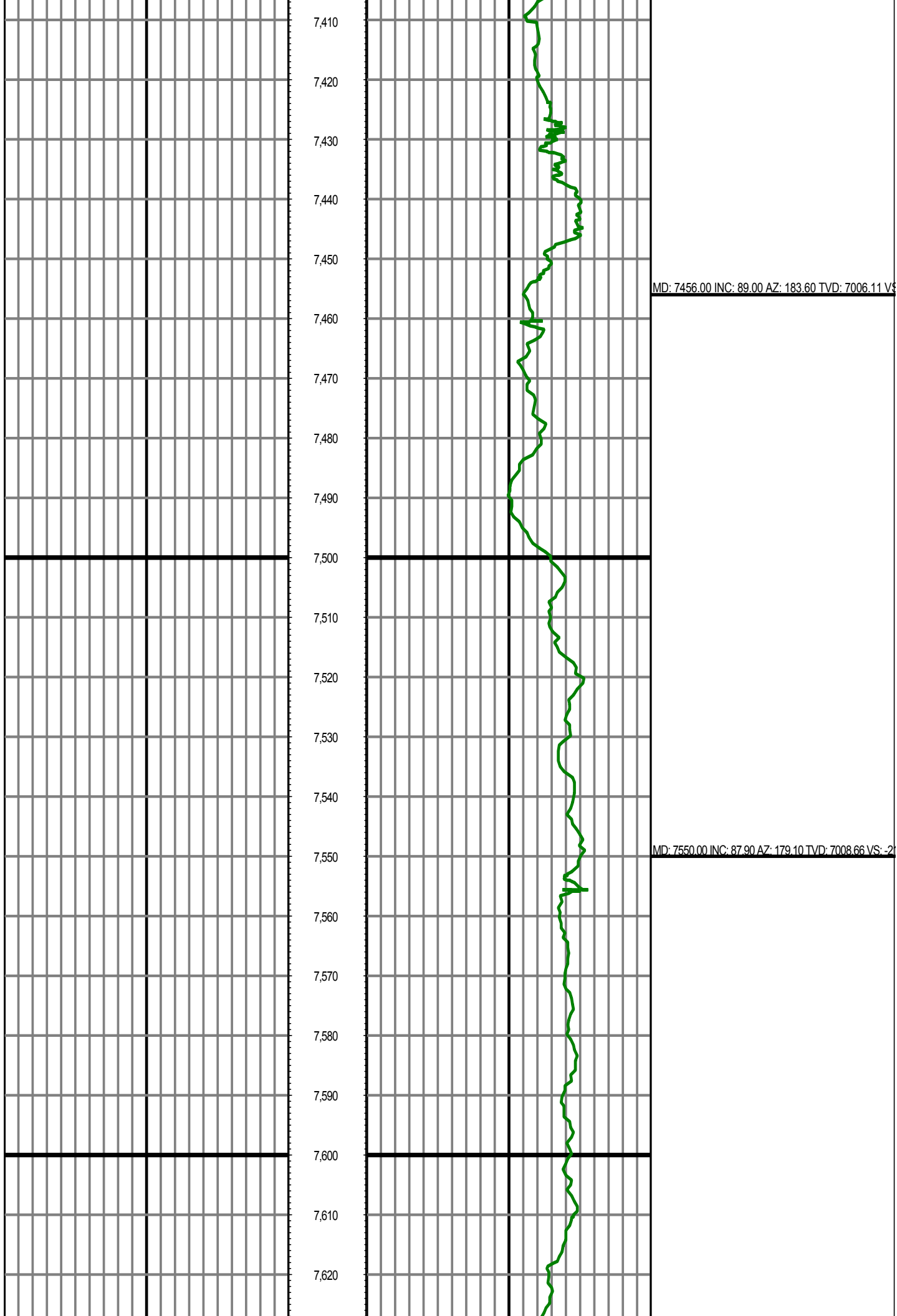


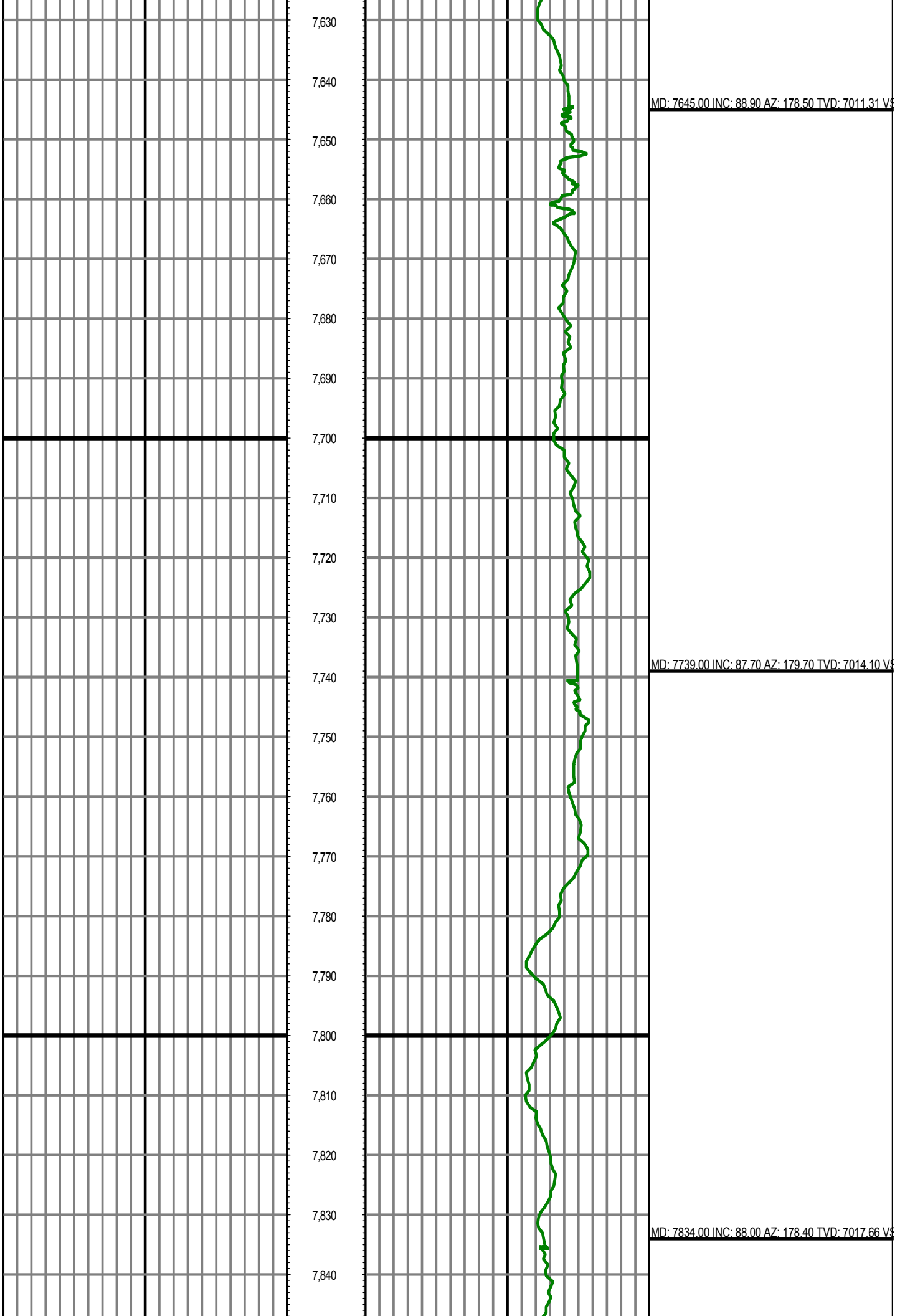


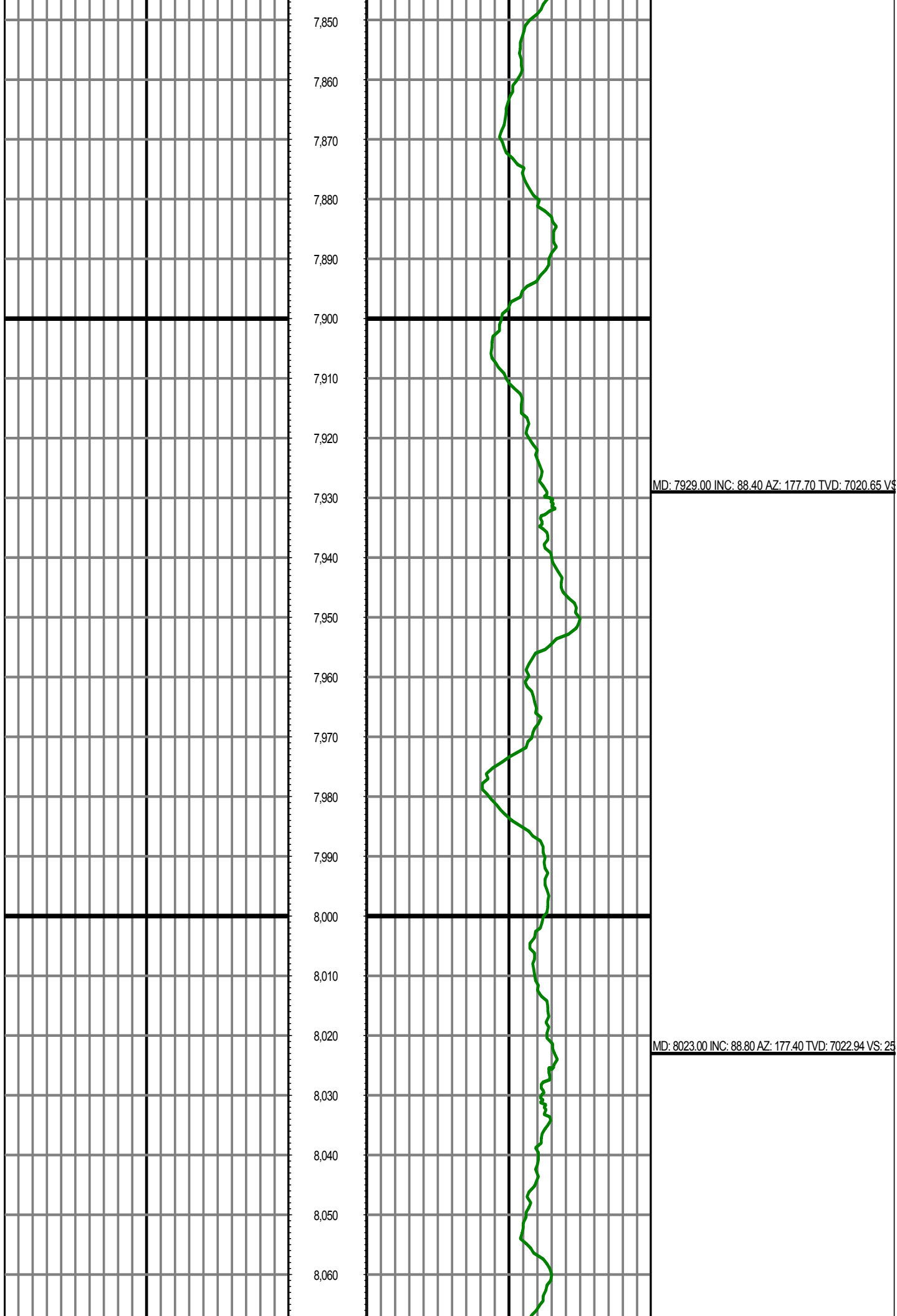


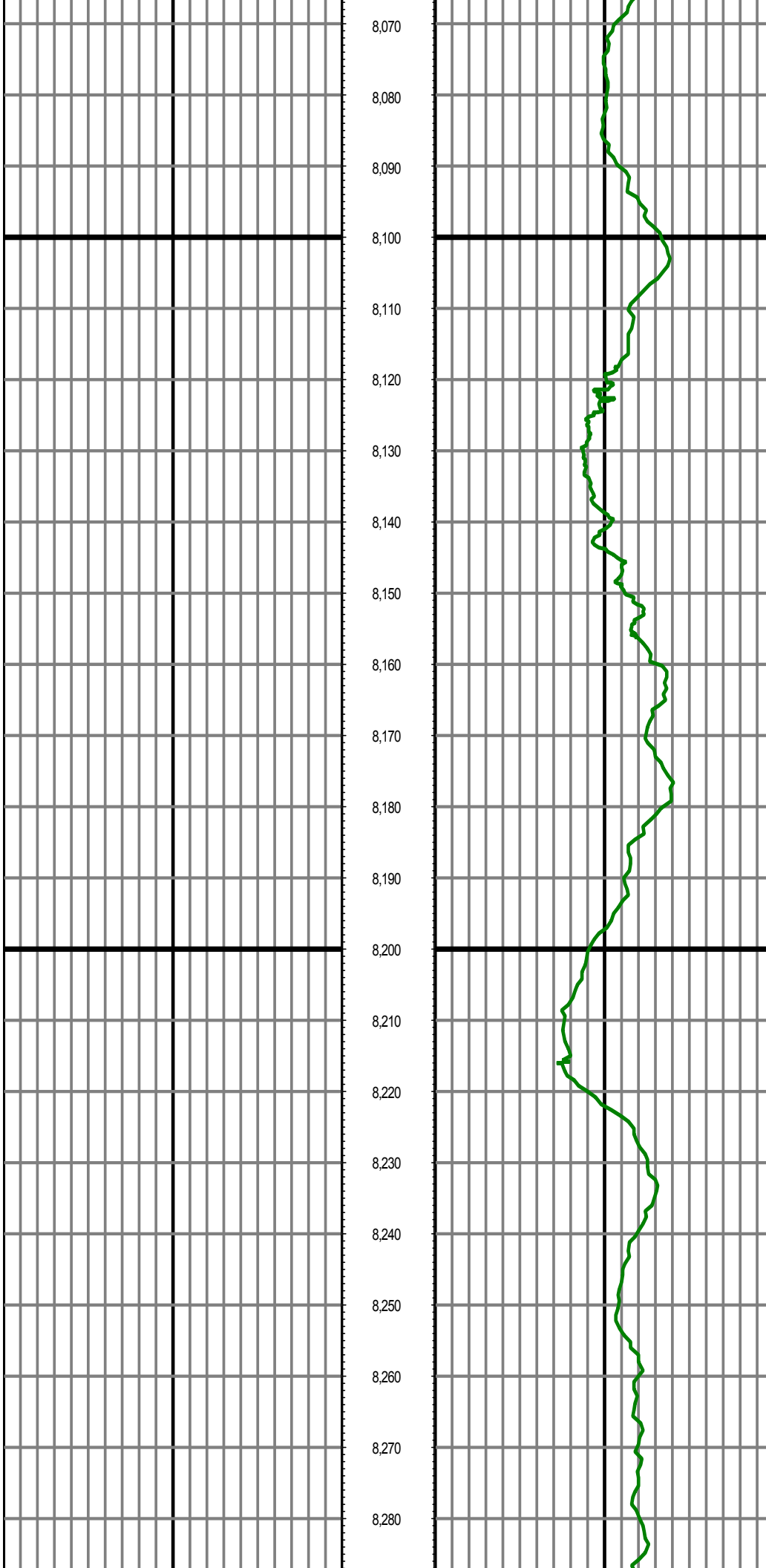












MD: 8117.00 INC: 89.30 AZ: 176.50 TVD: 7024.50 VS

MD: 8212.00 INC: 90.30 AZ: 179.50 TVD: 7024.83 VS: 44

