

**Premier Directional Drilling**

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

Powers 2C-27HZ**Scale 5":100' - MD****10/5/2015 10:32 AM****Oper. Company:** Anadarko Petroleum**State:** Colorado**Well:** Powers 2C-27HZ**County:** Weld**Field:** Wattenberg**Country:** USA**Rig:** H & P 307**Location:** 2N-65W-Sect 22**Well ID:** 05123419550000**Start Date:** 10/01/2015 05:47:00**Job Number:** R15381**End Date:** 10/05/2015 09:15:00

Notes: LWD Real Time Log
Gamma Correction Determined by Pipe ID & OD, Mud Weight & Bit Size

Latitude: 40.130530**Elev KB:** 4919'**Longitude:** -104.645402**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:** Justin Wallace**Notes:** Smoothing : 7Gap Fill : 10Tool Type : Mud PulseCalculation Method : Minimum Curvature

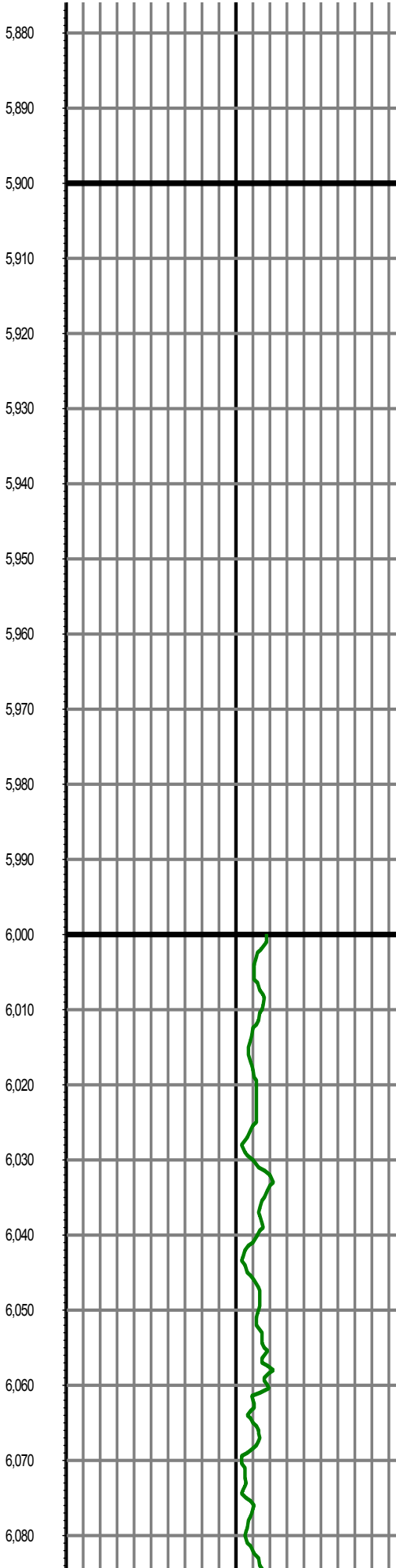
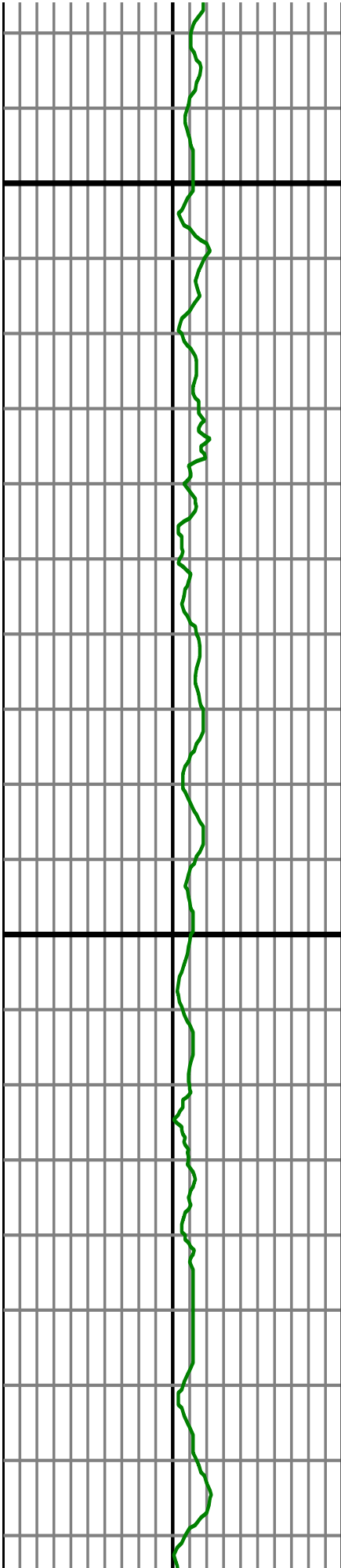
Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	123	123	190		
Bit Size	8 1/2	8 1/2	8 1/2		
Cal Factor	5.88	5.88	6.3844		
Survey Offset:	73.00	75.00	73.00		
Gamma Offset	69.00	69.00	68.00		
Resistivity Offset	0.00	0.00	0.00		
Start Depth	2143.00	7250.00	7550.00		
StartDate	9/30/2015	10/2/2015	10/2/2015		
StartTime	00:00	02:00	17:30		
EndDepth	7250.00	7550.00	13315.00		
EndDate	10/1/2015	10/2/2015	10/5/2015		
EndTime	22:30	17:20	18:00		
Mud Type	OBM	OBM	OBM		
Mud Weight	9.55	9.5	9.55		
Funnel Viscosity	57	60	57		
Plastic Viscosity	18	18	20		
Yield Point	8	9	8		
Gel Strength	NA	NA	NA		
Solids Content	5.66	5.75	7.3		
Sand Content	NA	NA	NA		
Mud Alkalinity	NA	NA	NA		
Filtrate Alkalinity	NA	NA	NA		
Chlorides	60000	61000	55000		
Mud RM	NA	NA	NA		
Mud RMF	NA	NA	NA		
Mud RMC	NA	NA	NA		
Mud RM at BHT	NA	NA	NA		
Temperature	NA	NA	NA		
Hole Data			Casing Data		
Size	From	To	Size	From	To
13 1/2	0.00	1867.00	9 5/8	0.00	1867.00
8 1/2	1867.00	13315.00	5 1/2	0.00	13315.00

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.

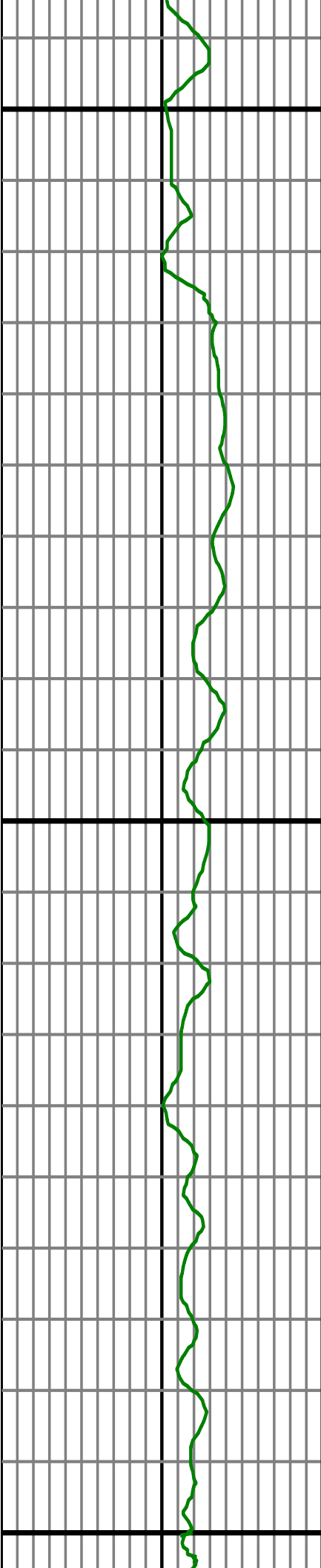
0.00 GR(API) on TVD 200.00
200.00 2 400.00

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

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



MD: 6039.00 INC: 1.30 AZ: 70.70 TVD: 5915.10 VS: -886.62



6,090

6,100

6,110

6,120

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6,180

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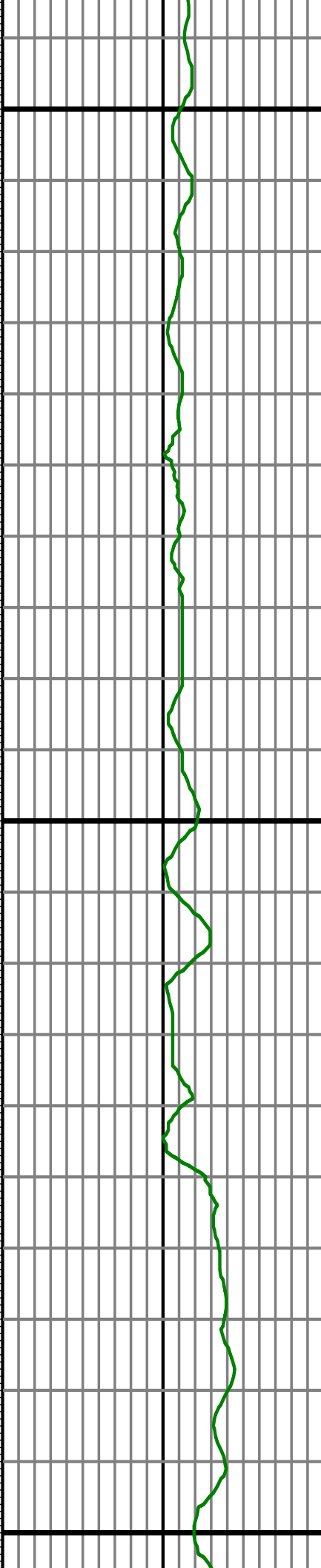
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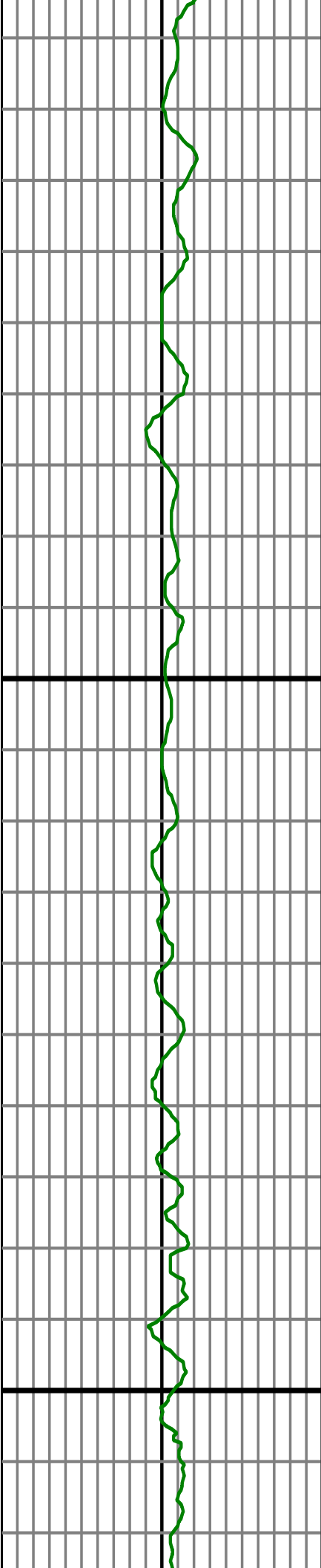
6,290

6,300



MD: 6133.00 INC: 0.70 AZ: 71.10 TVD: 6009.08 VS: -887.16

MD: 6228.00 INC: 1.50 AZ: 294.00 TVD: 6104.07 VS: -887.85



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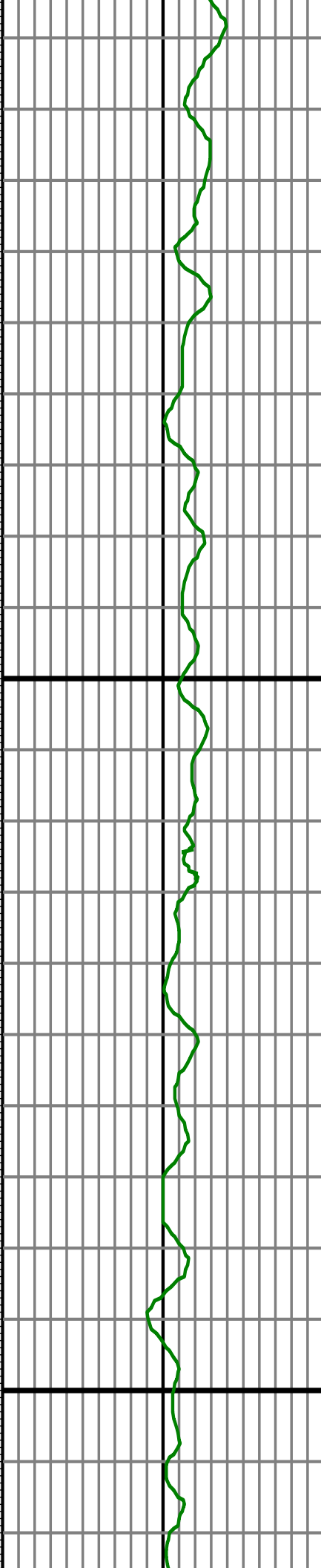
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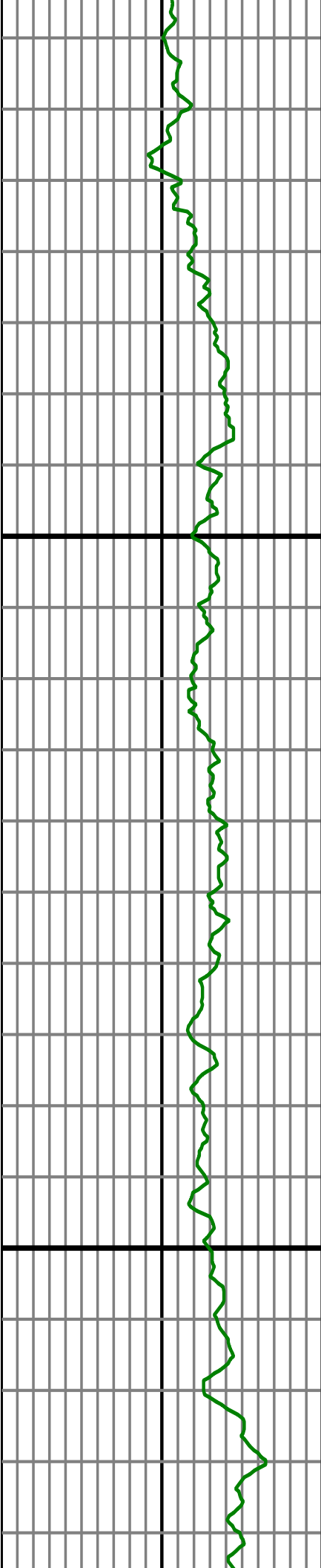
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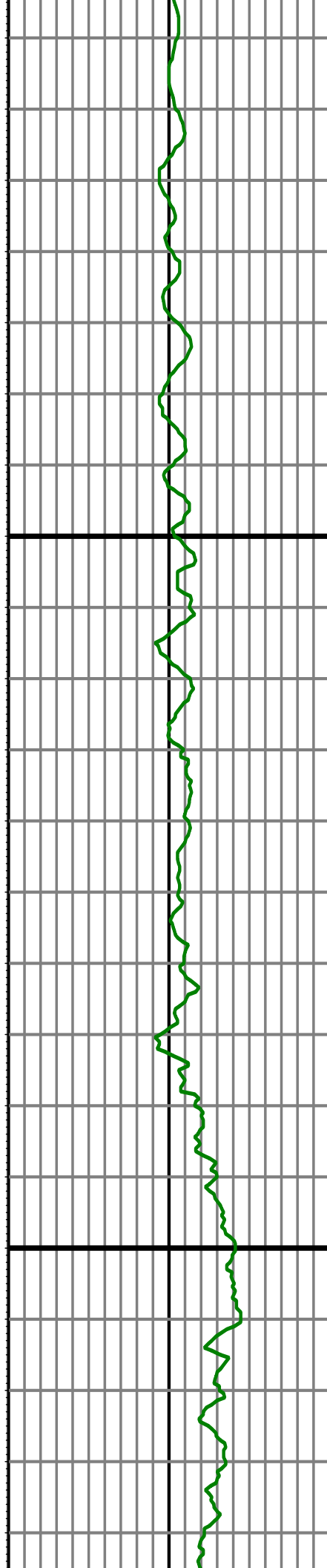
MD: 6322.00 INC: 1.50 AZ: 296.80 TVD: 6198.04 VS: -888.91

MD: 6417.00 INC: 1.00 AZ: 349.00 TVD: 6293.02 VS: -890.29

MD: 6511.00 INC: 1.50 AZ: 16.30 TVD: 6387.00 VS: -892.28

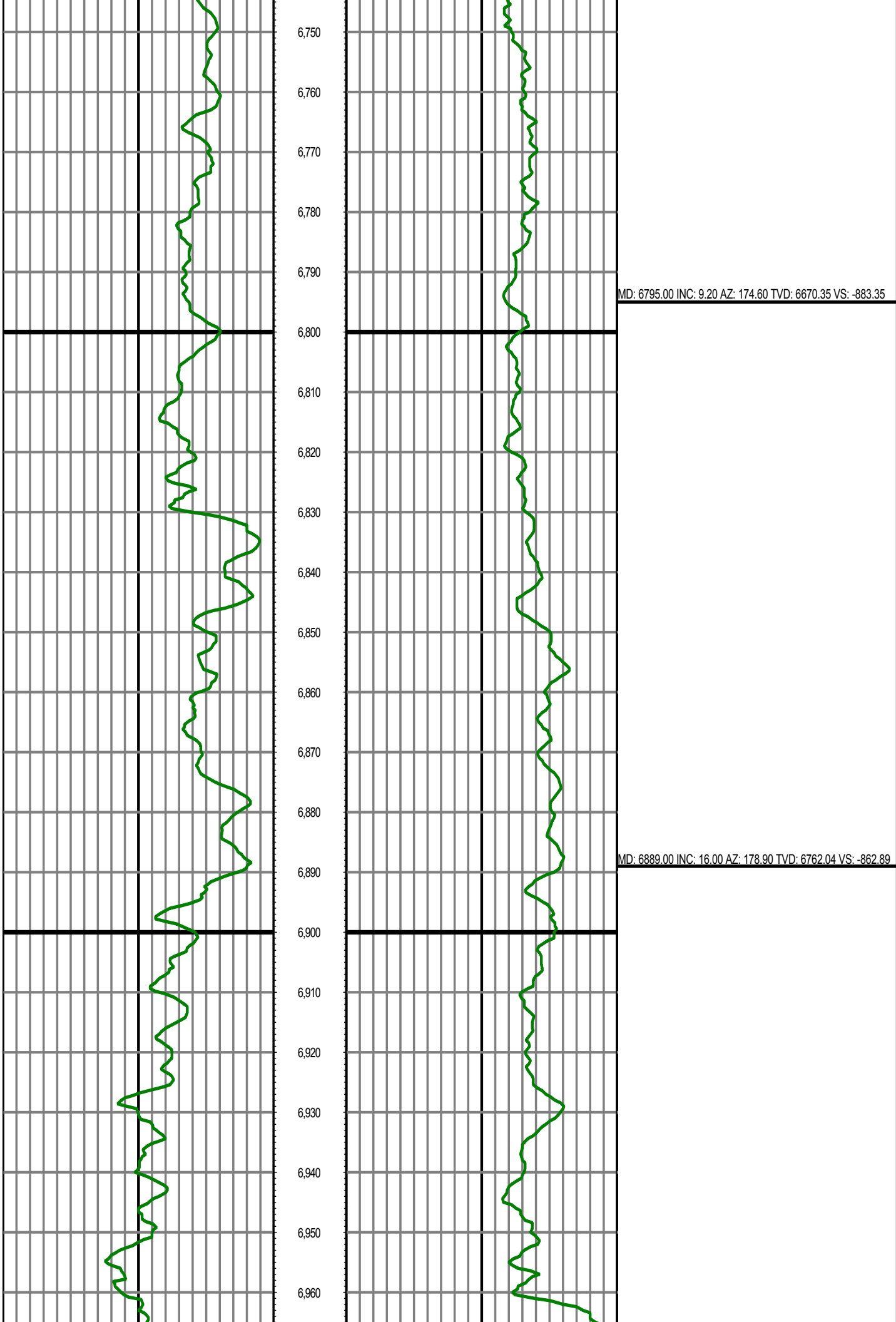


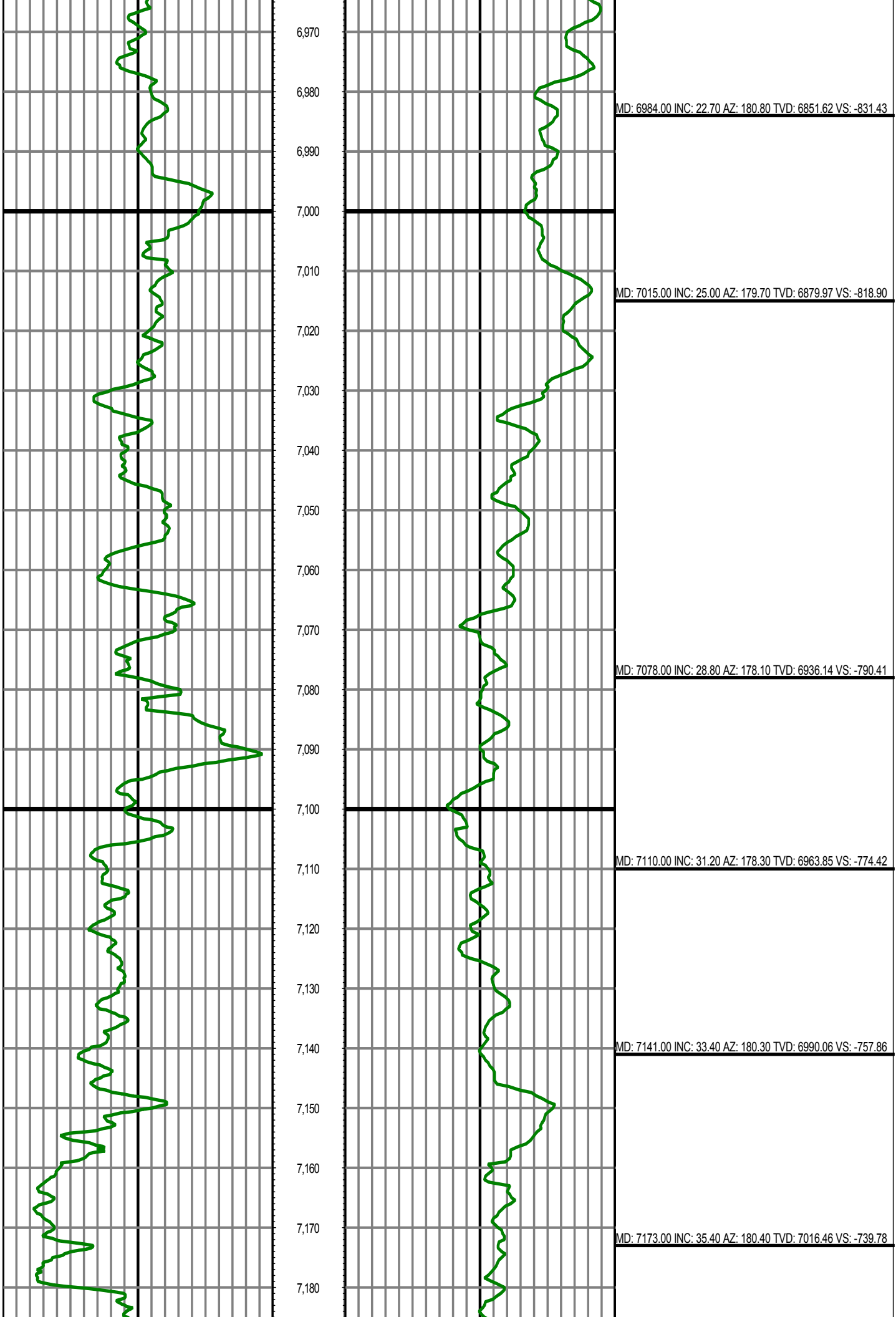
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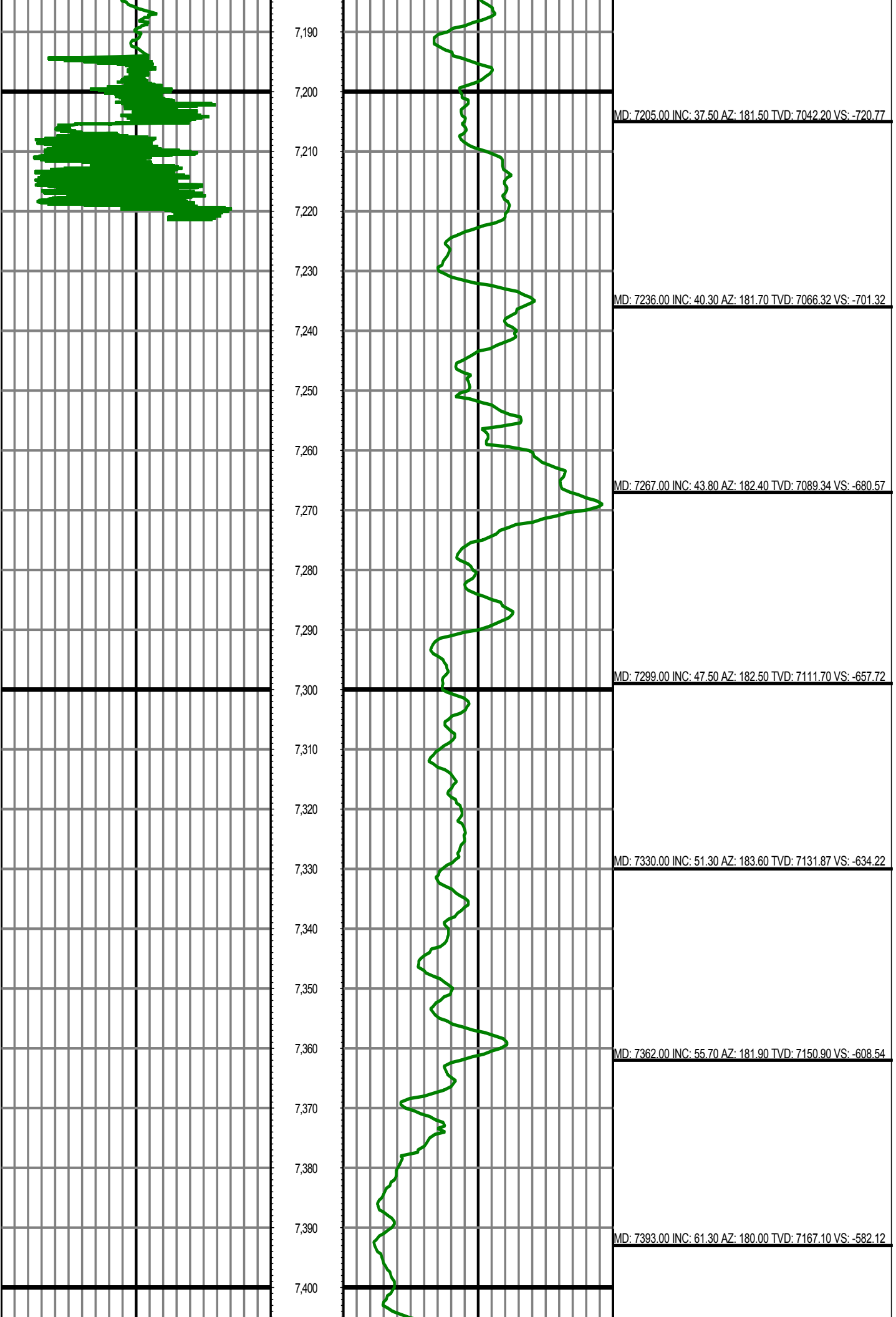


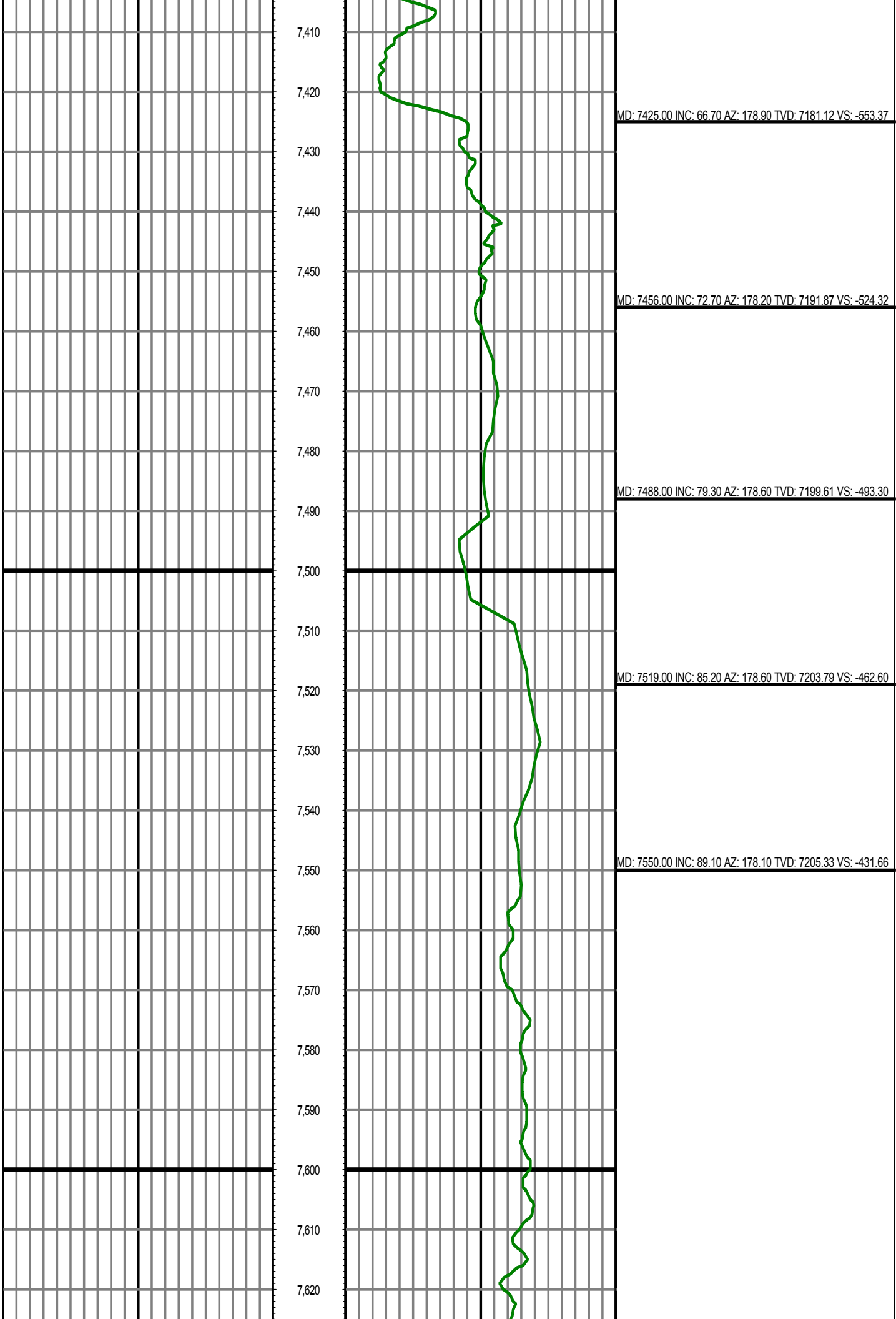
MD: 6606.00 INC: 1.40 AZ: 19.00 TVD: 6481.97 VS: -894.57

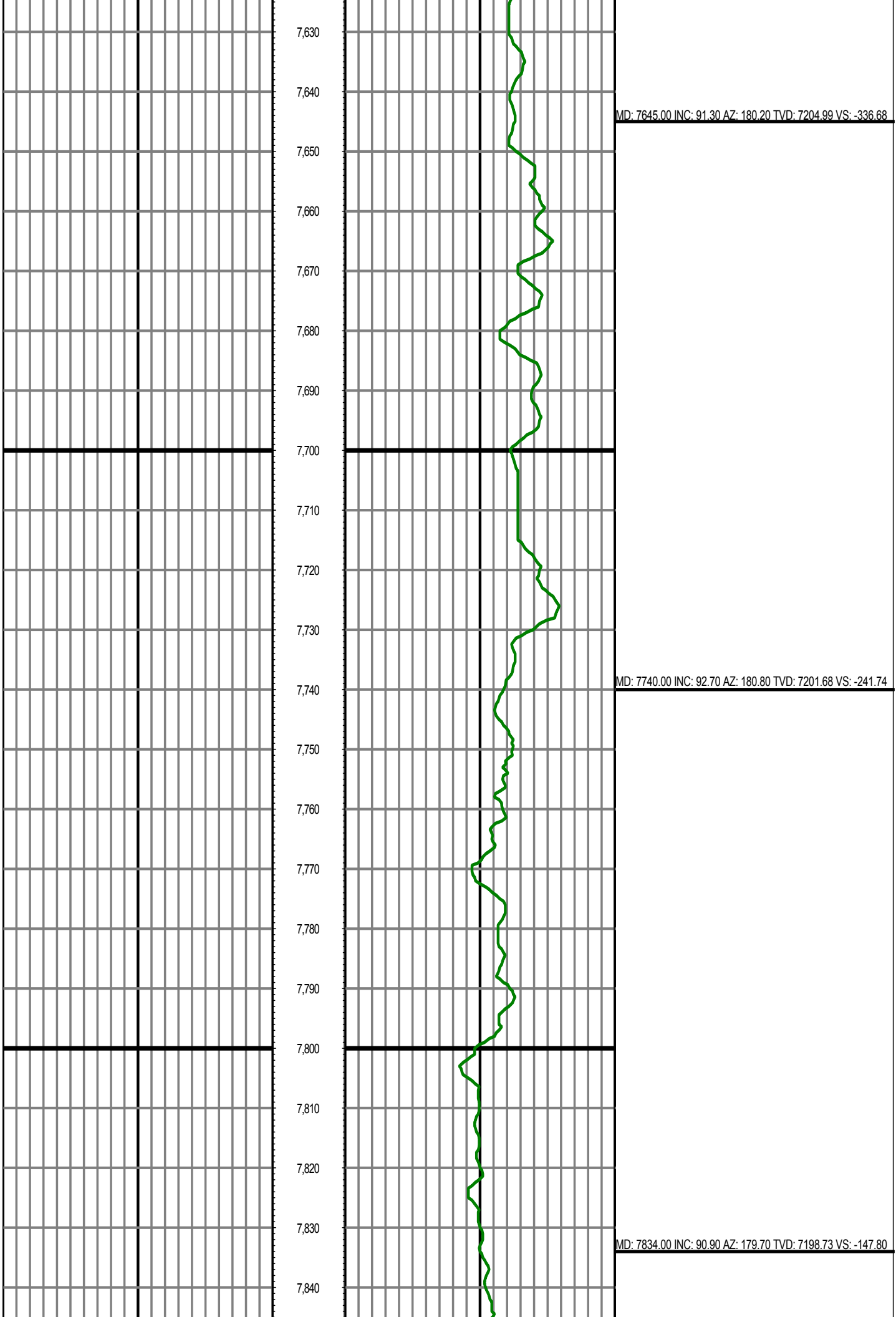
MD: 6700.00 INC: 3.00 AZ: 162.80 TVD: 6575.93 VS: -893.30

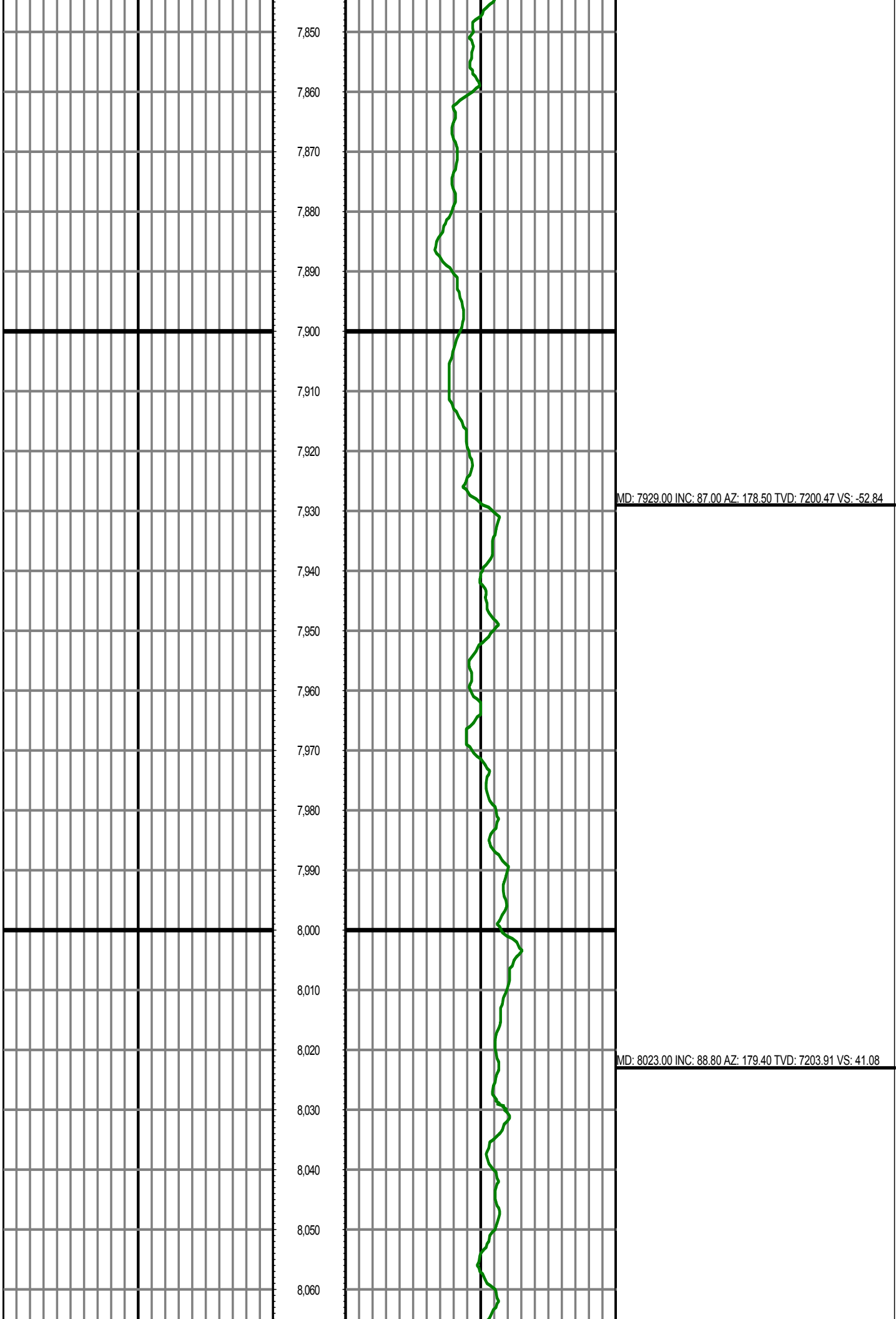


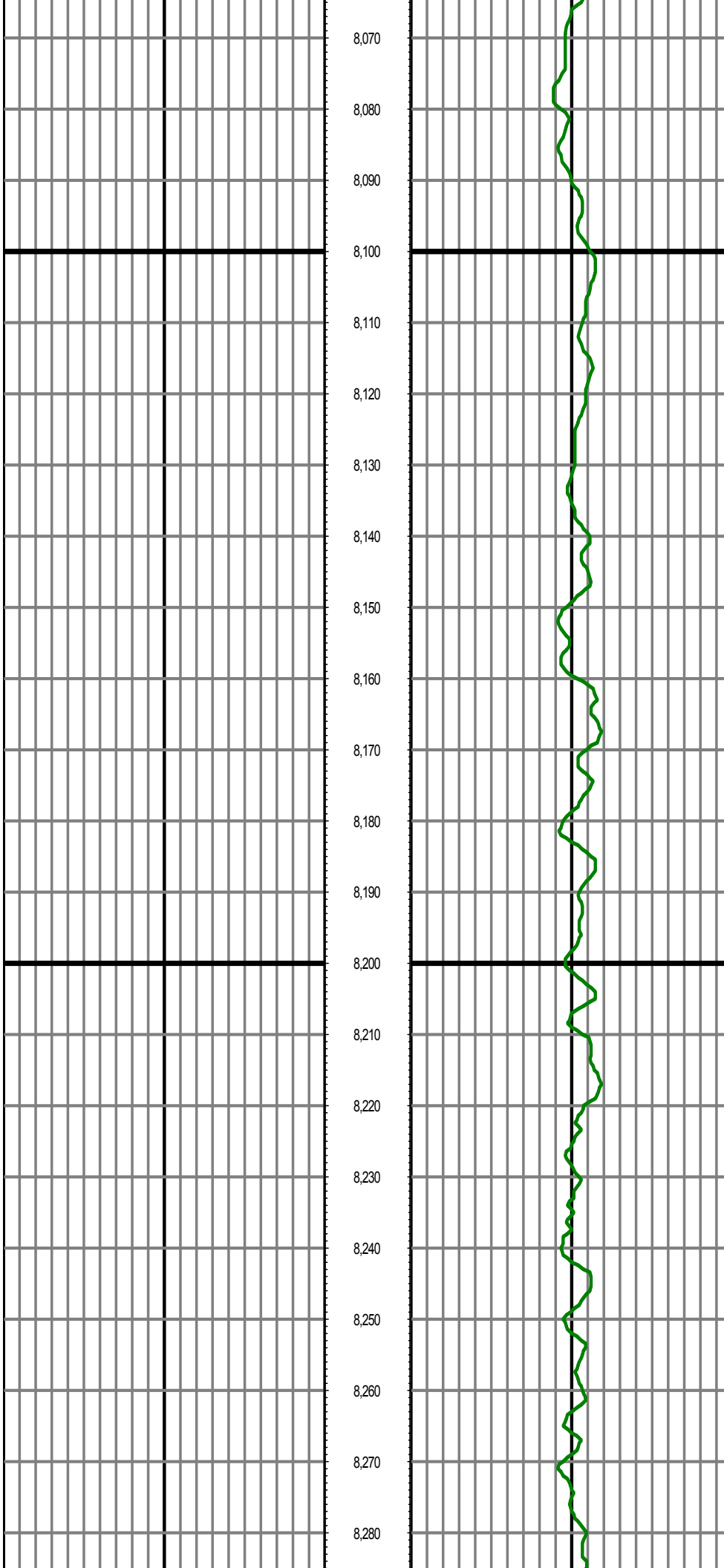






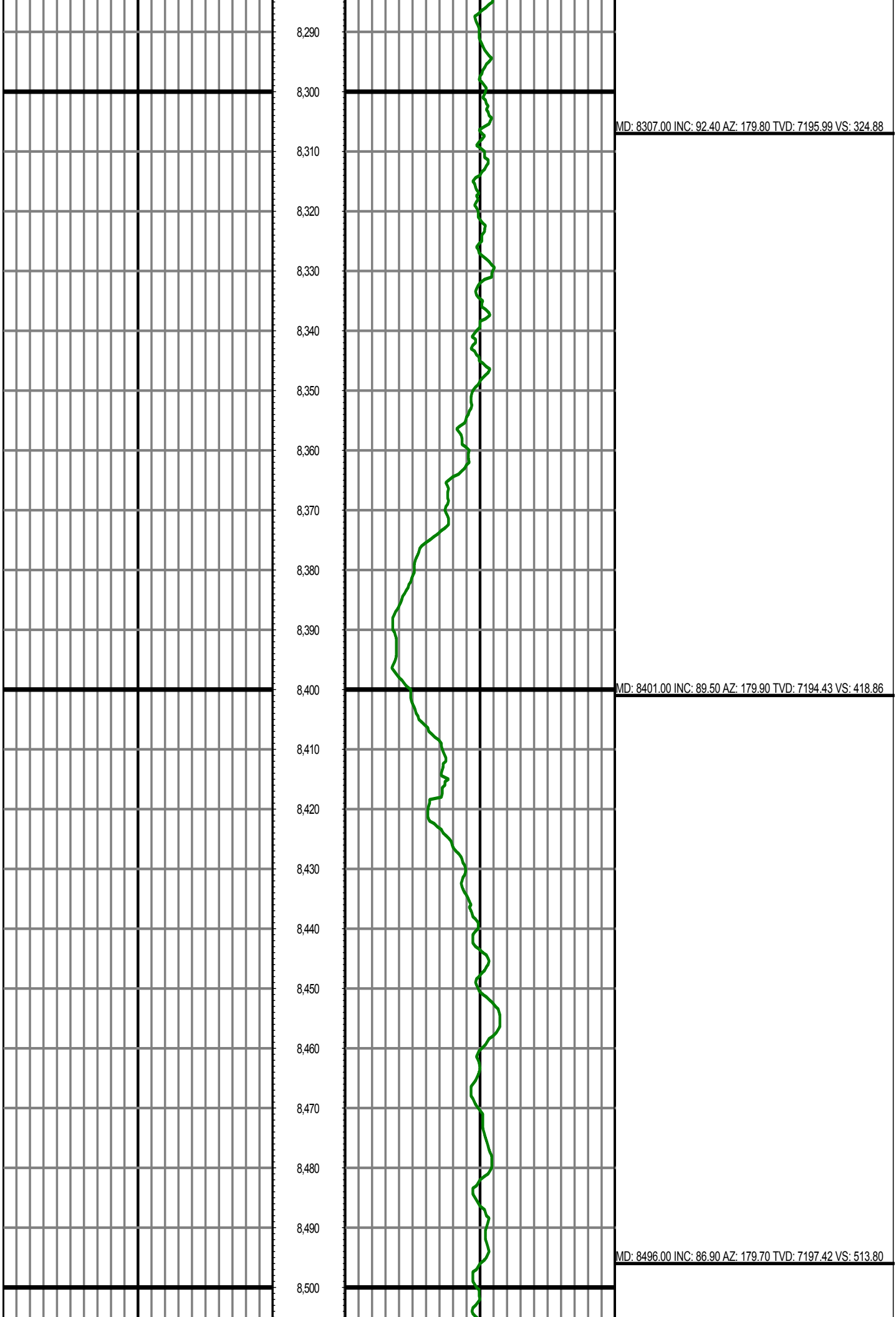


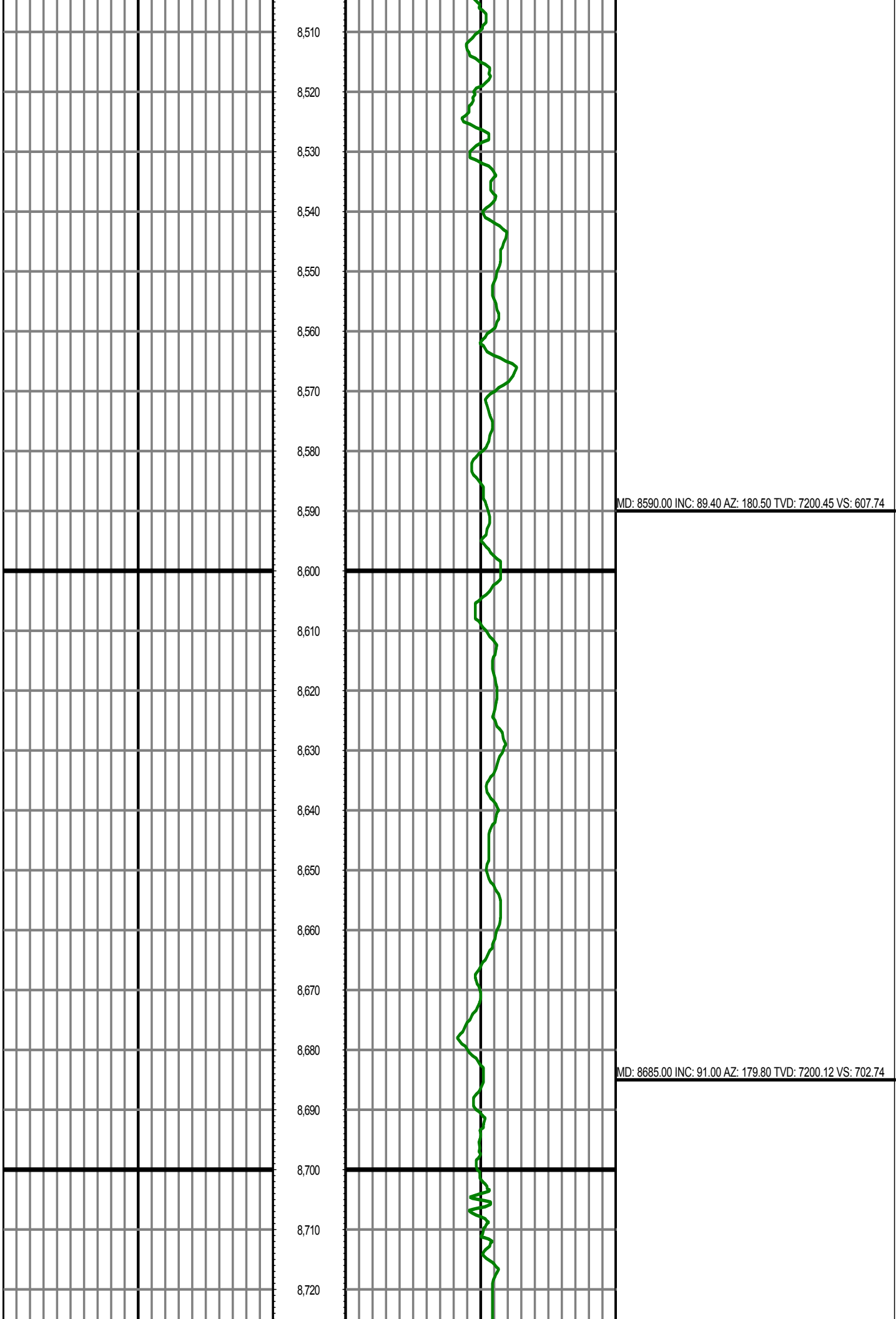


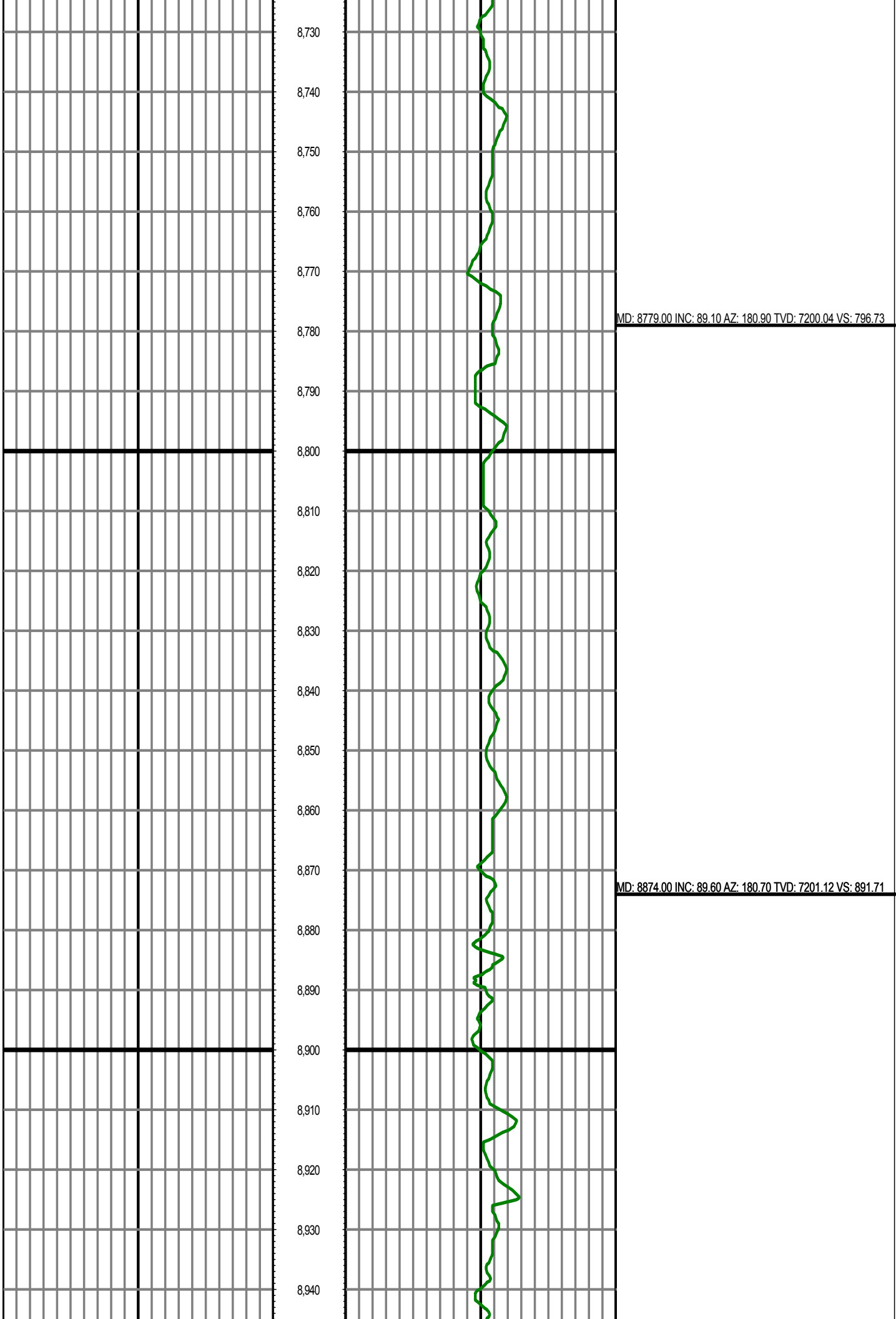


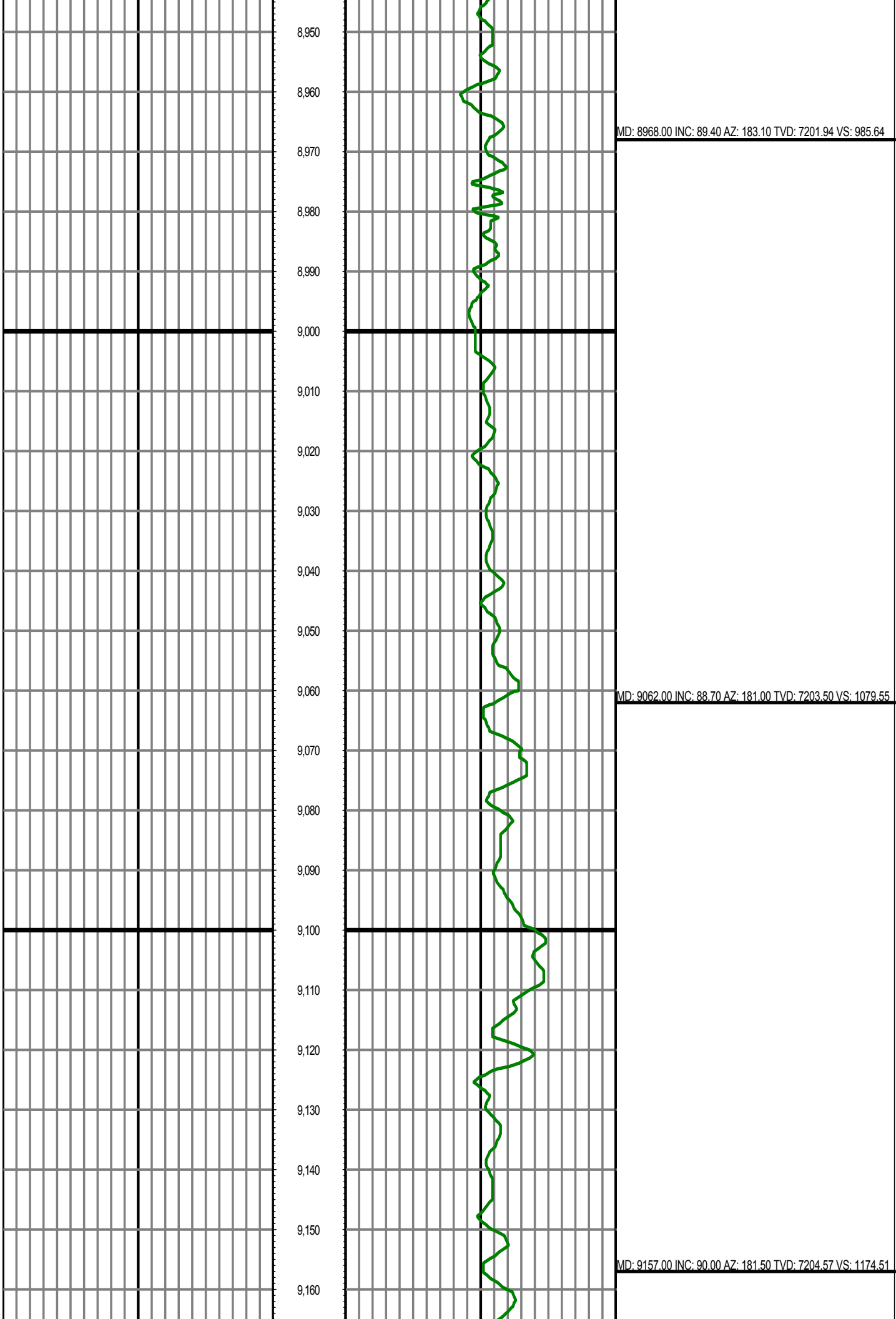
MD: 8118.00 INC: 91.10 AZ: 180.40 TVD: 7203.99 VS: 136.07

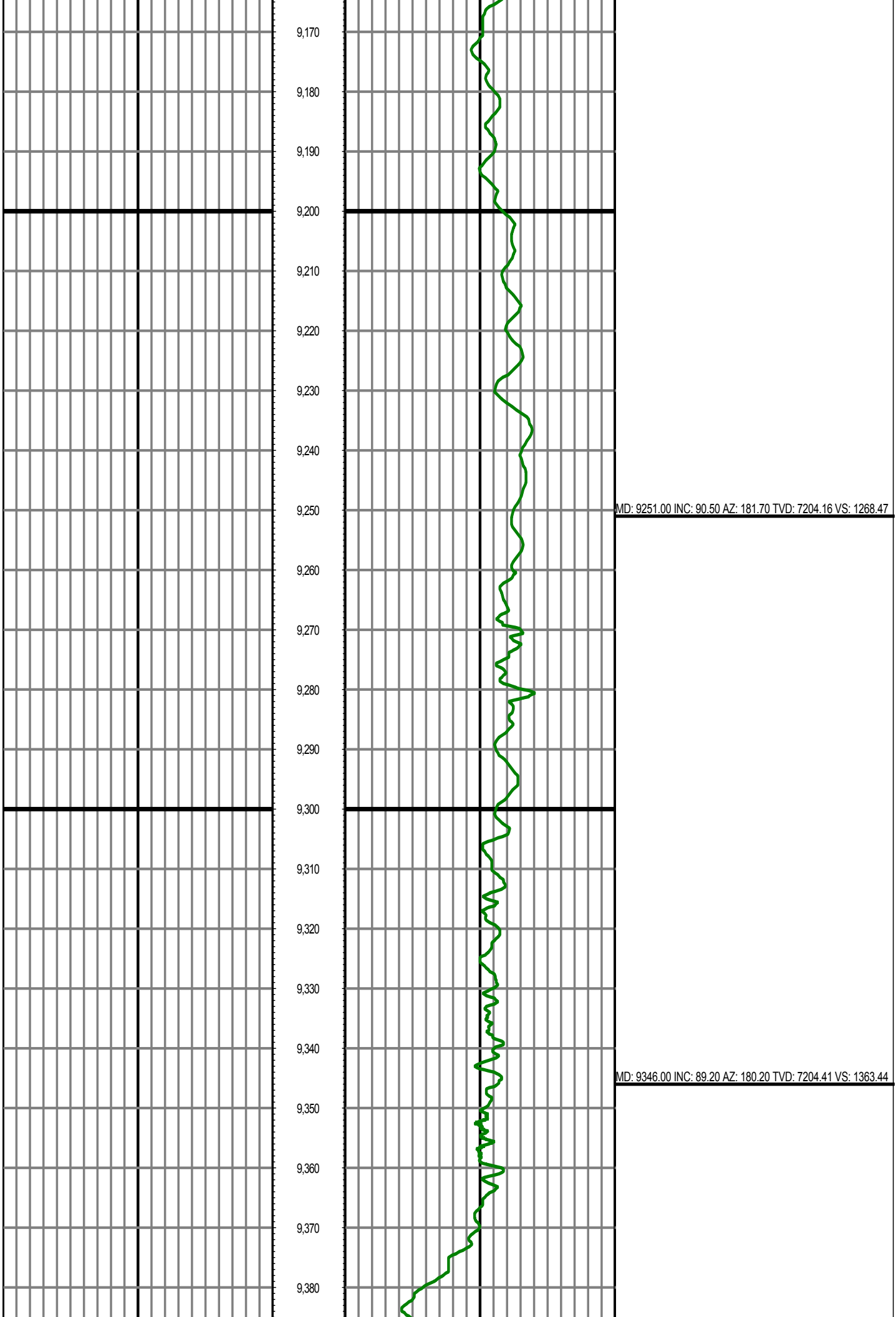
MD: 8212.00 INC: 93.10 AZ: 180.90 TVD: 7200.55 VS: 229.99

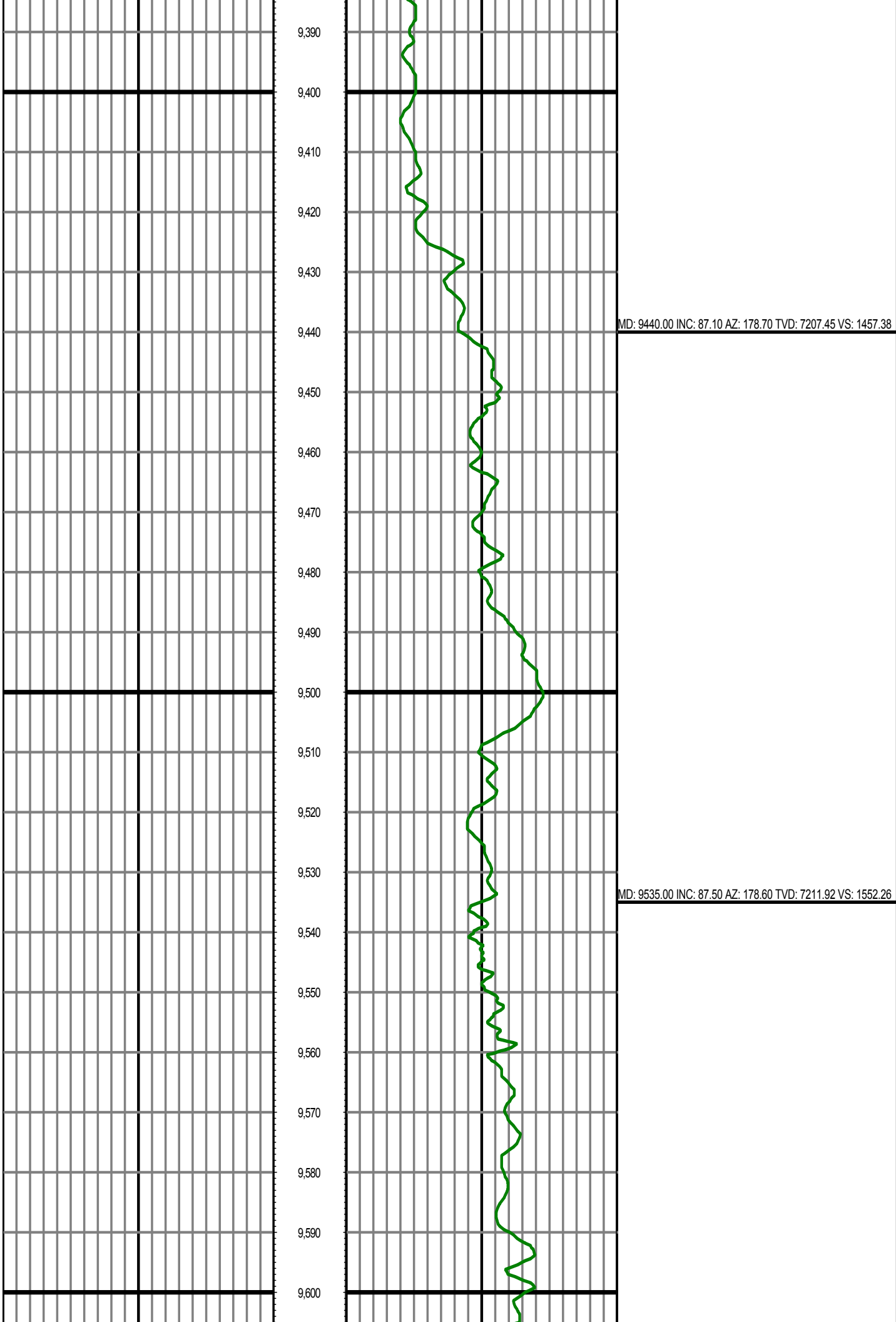


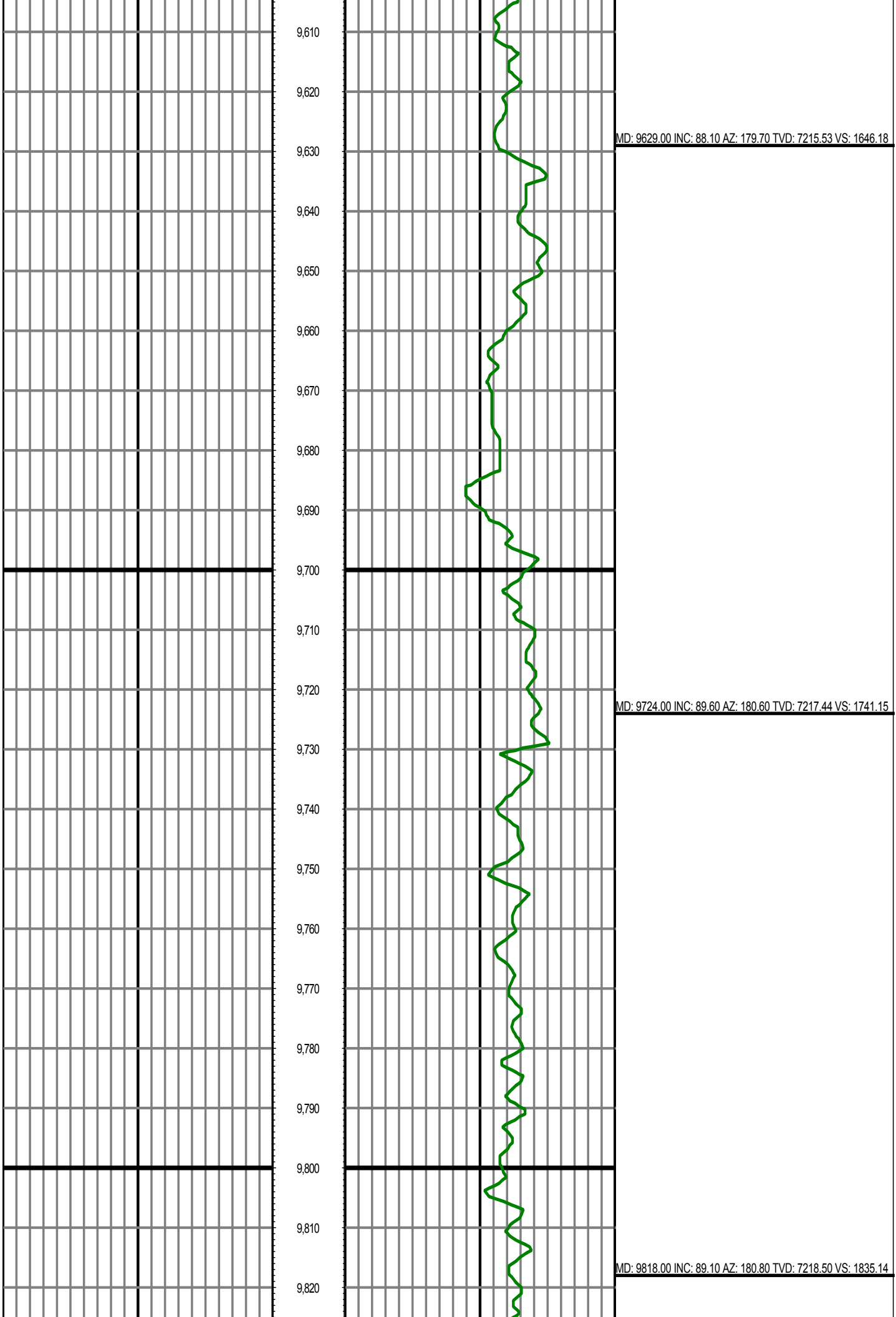


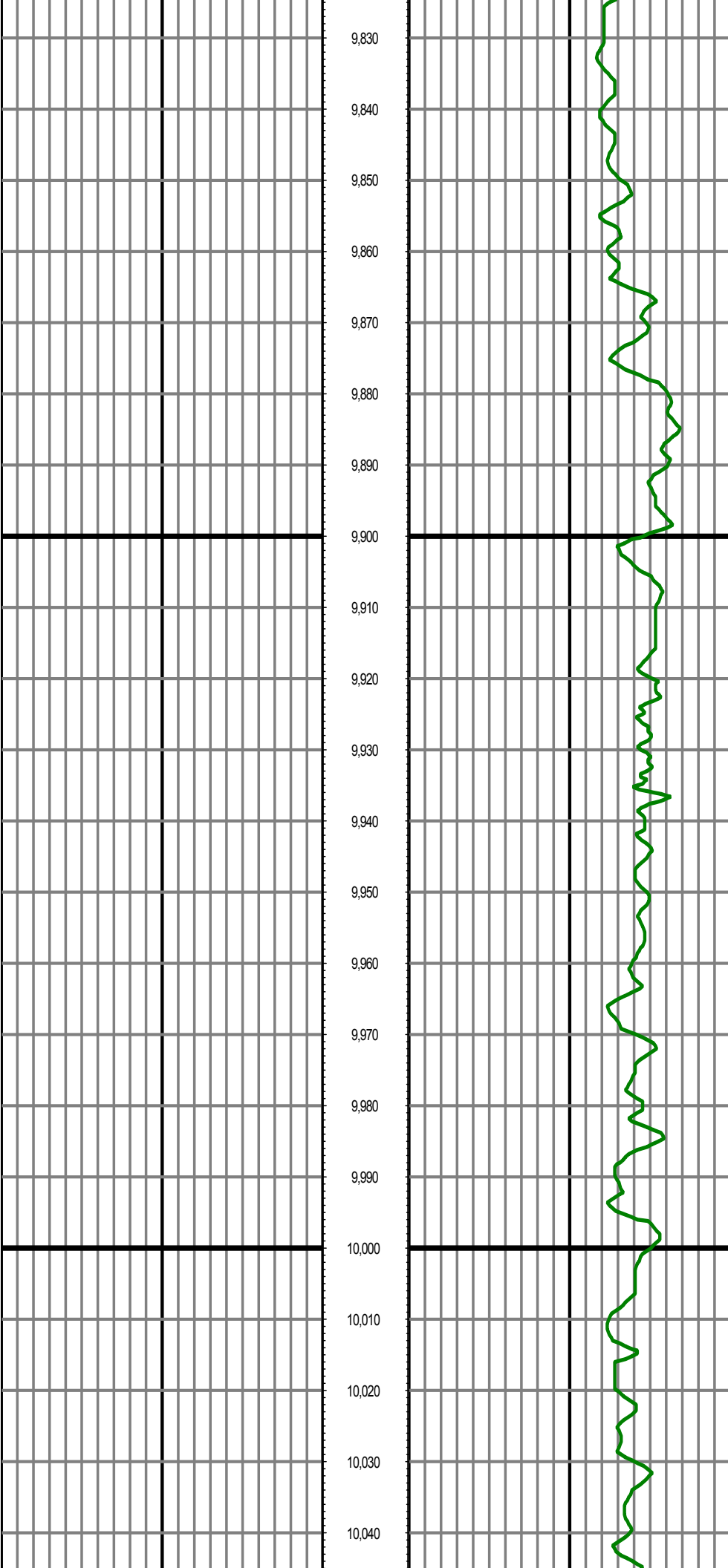






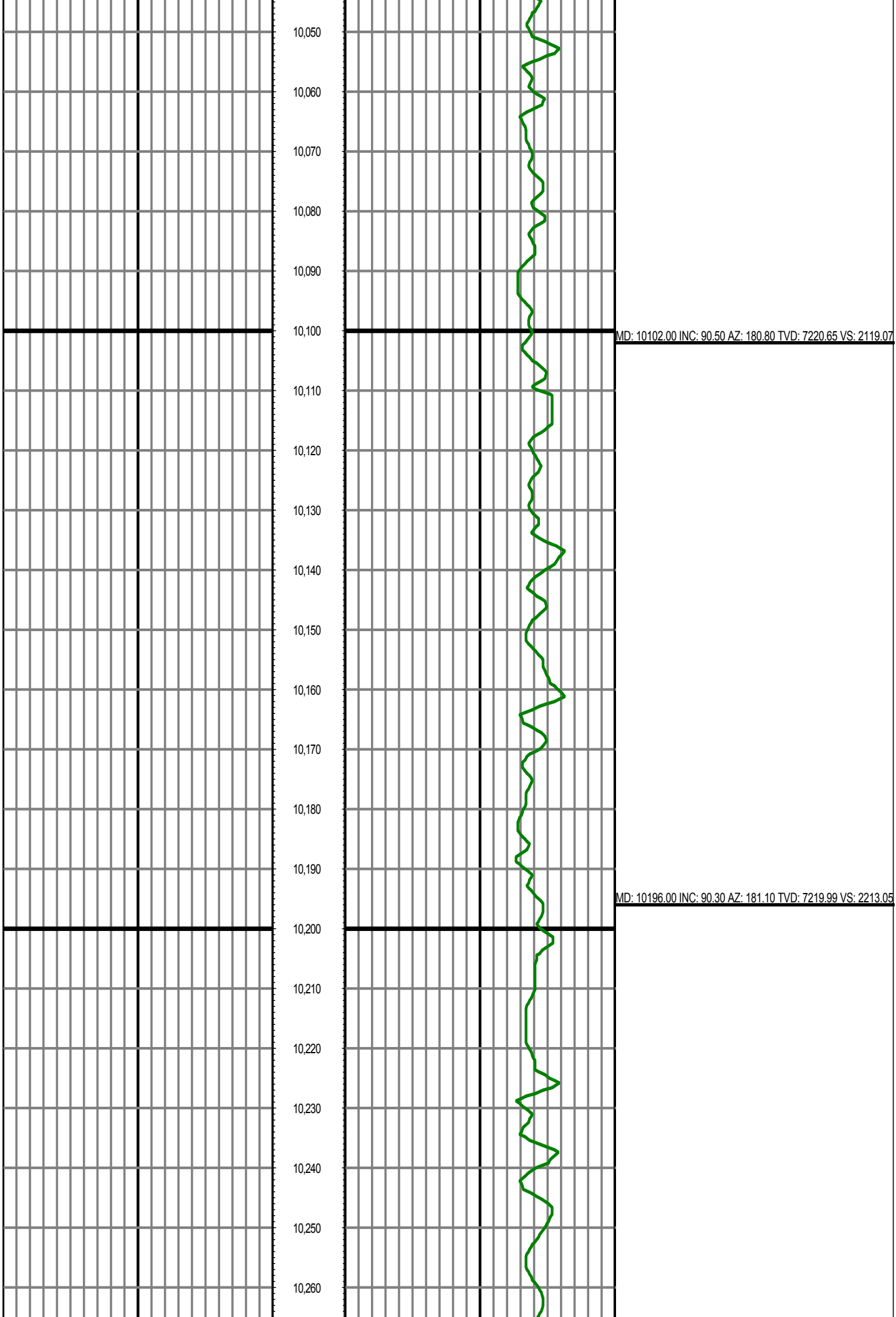


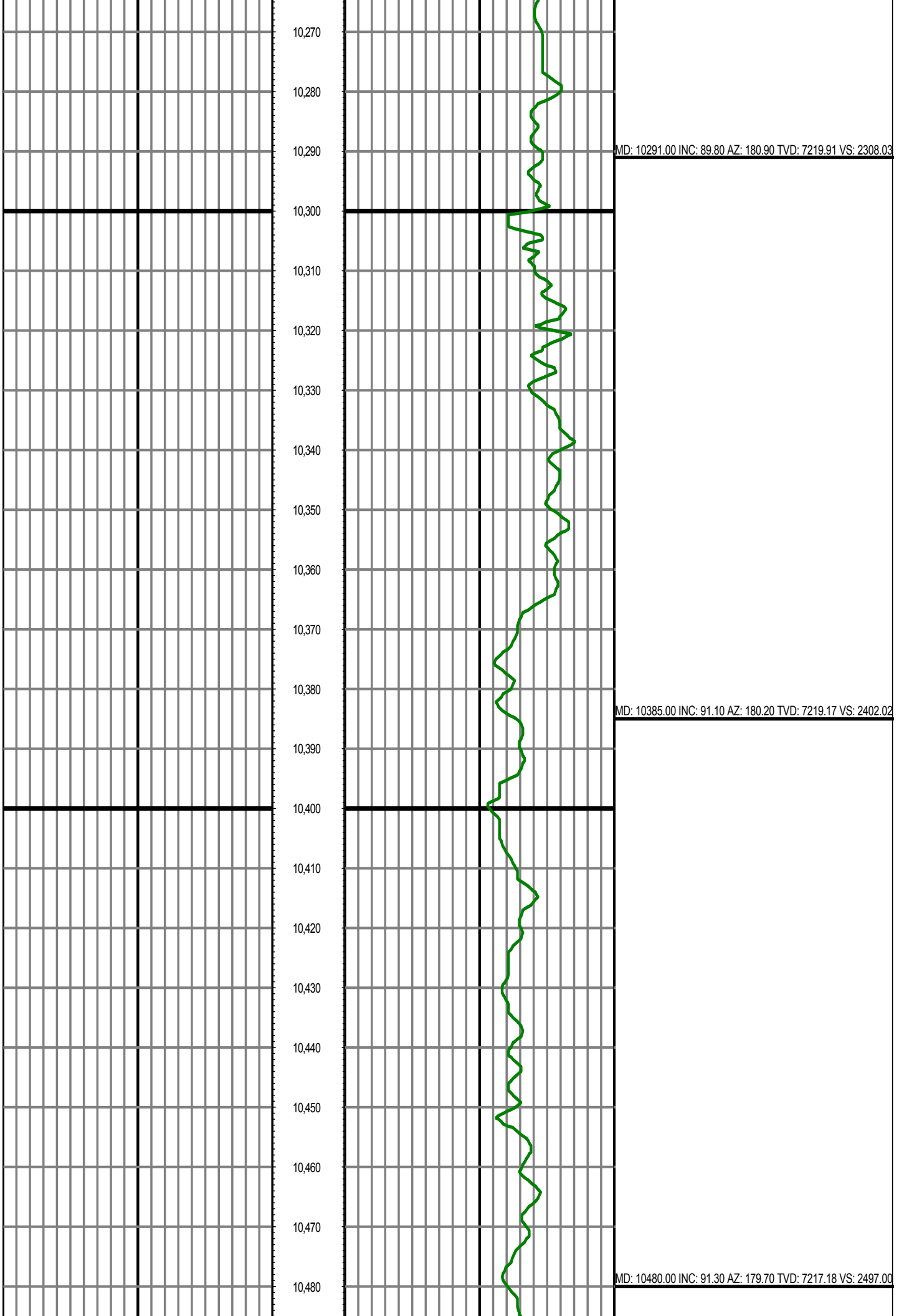


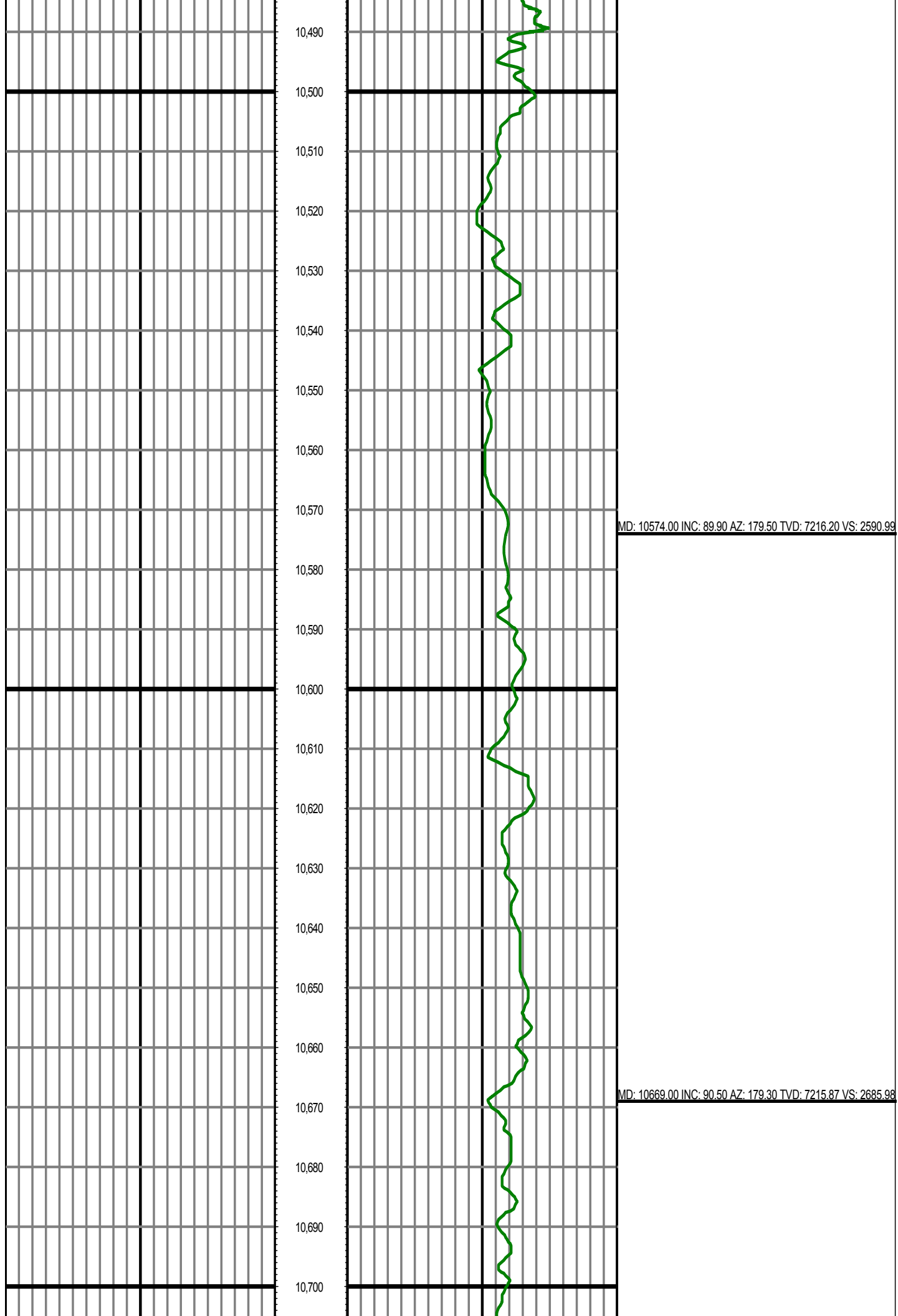


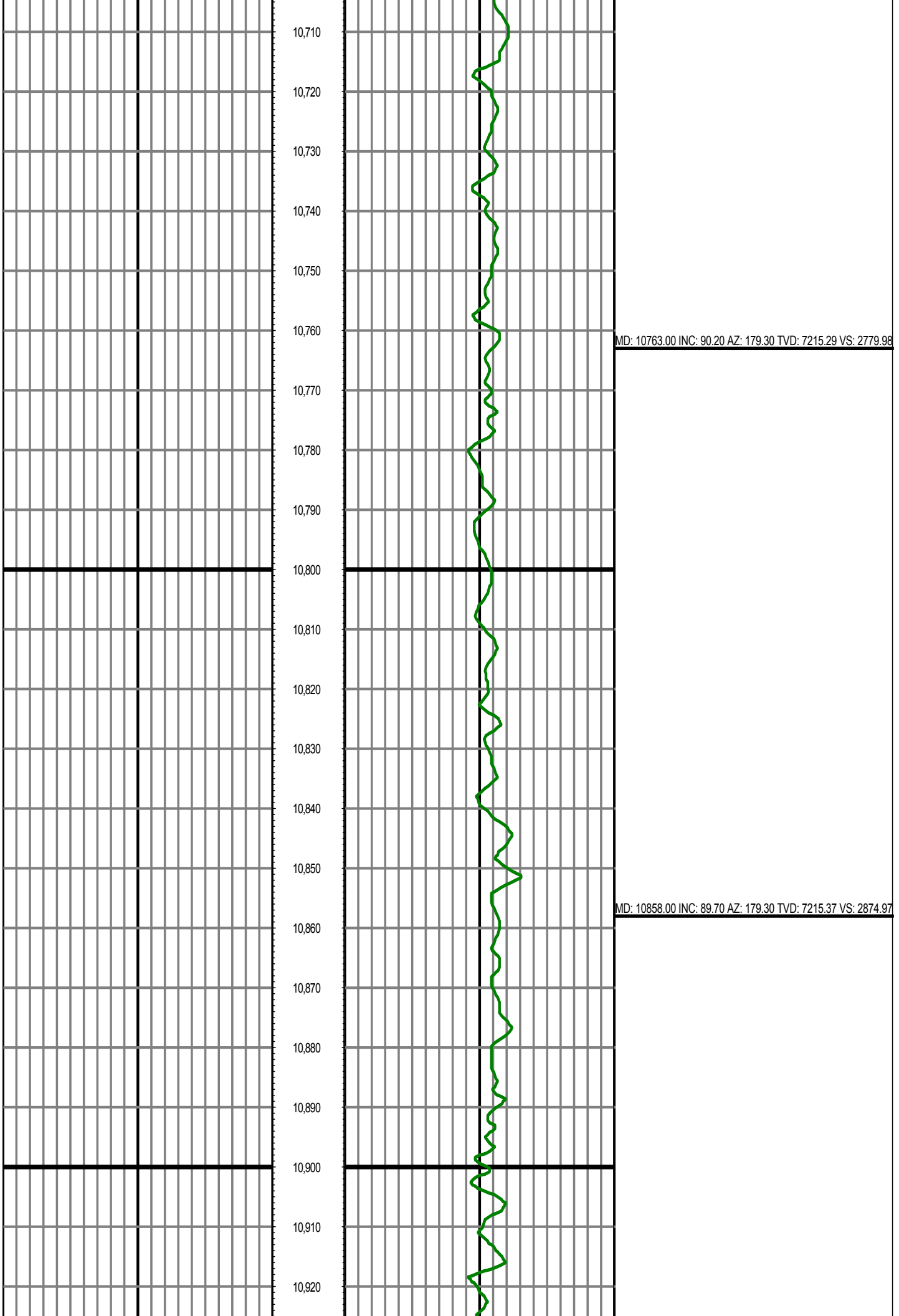
MD: 9913.00 INC: 88.40 AZ: 180.80 TVD: 7220.57 VS: 1930.10

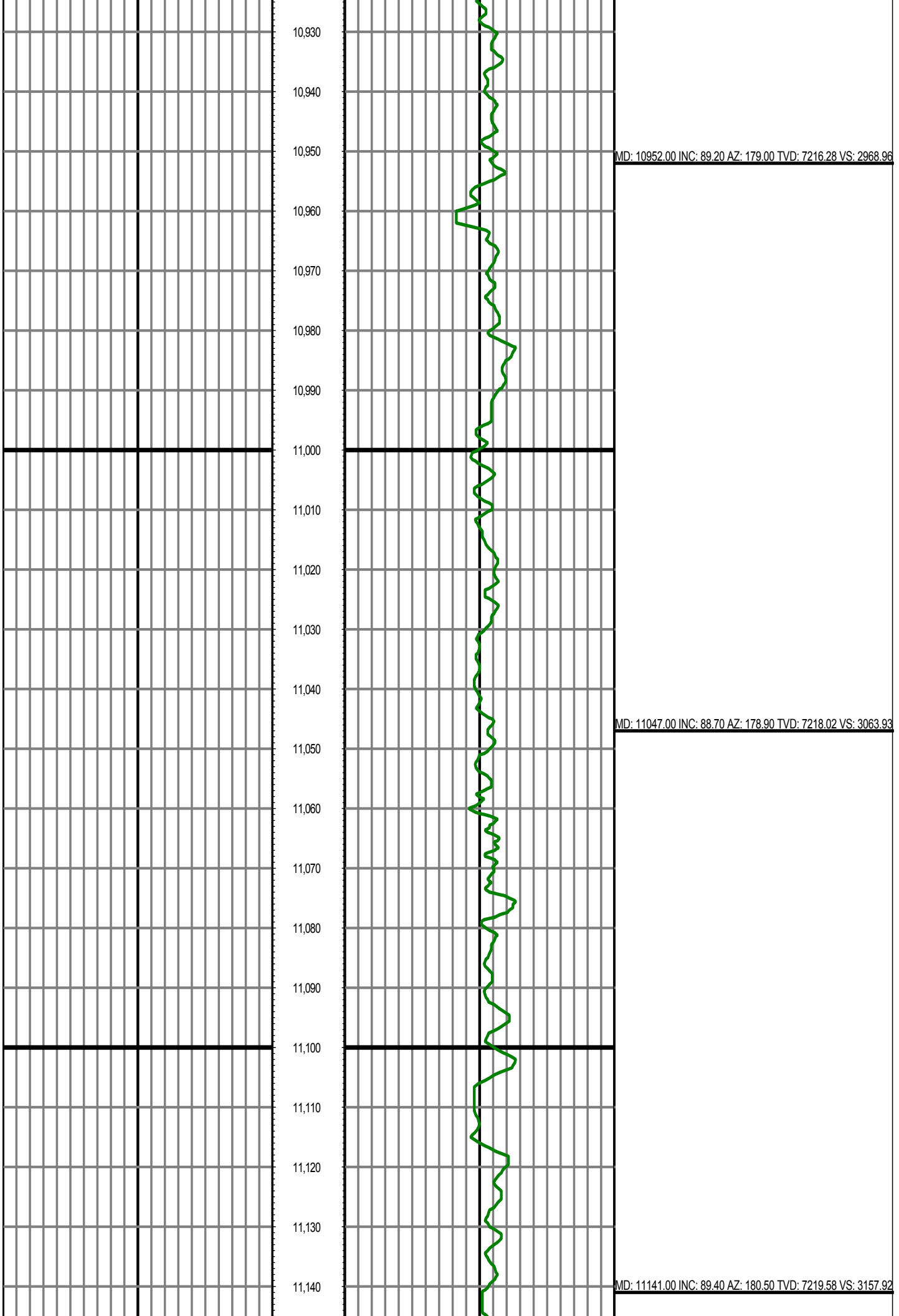
MD: 10007.00 INC: 90.50 AZ: 180.50 TVD: 7221.48 VS: 2024.08

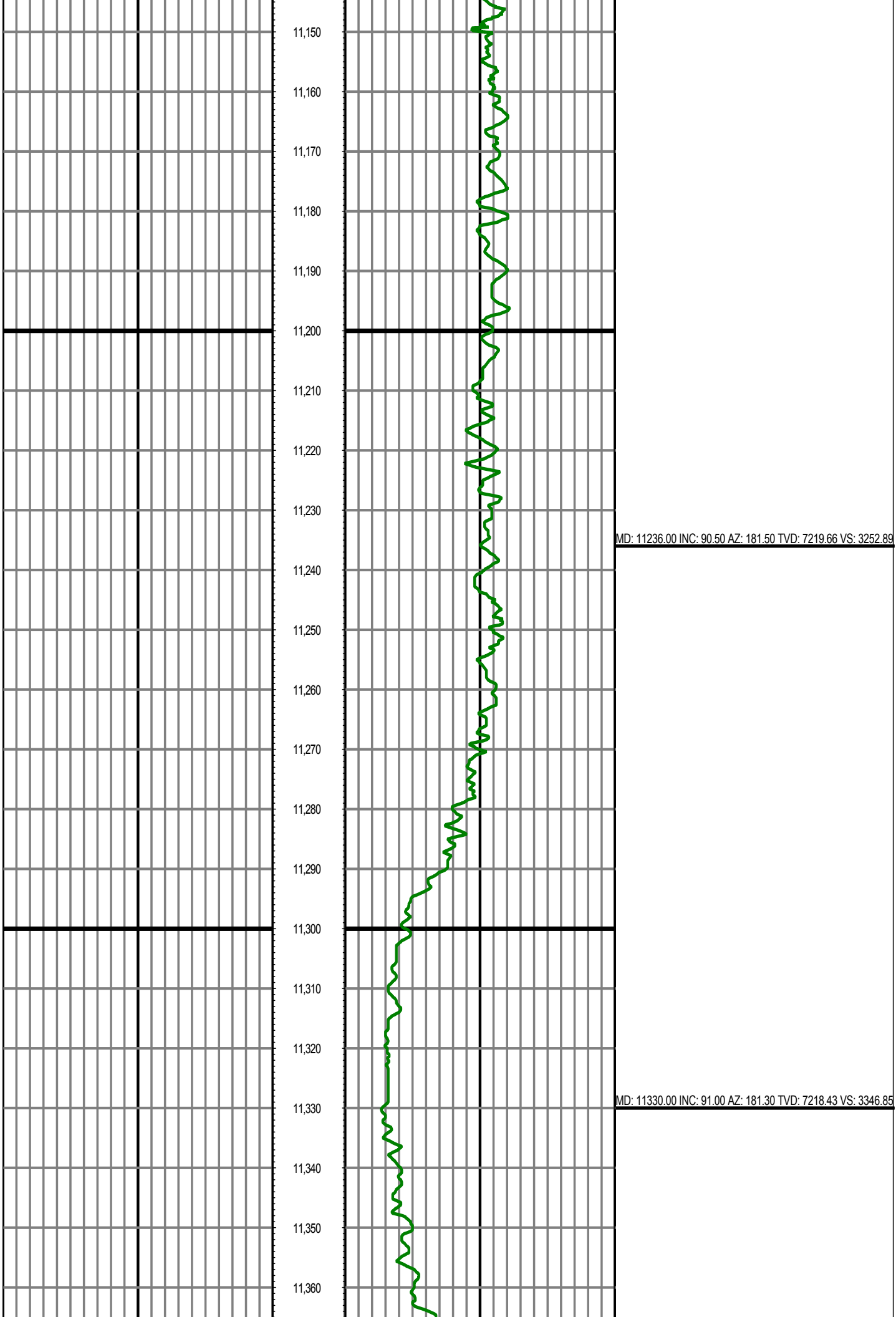


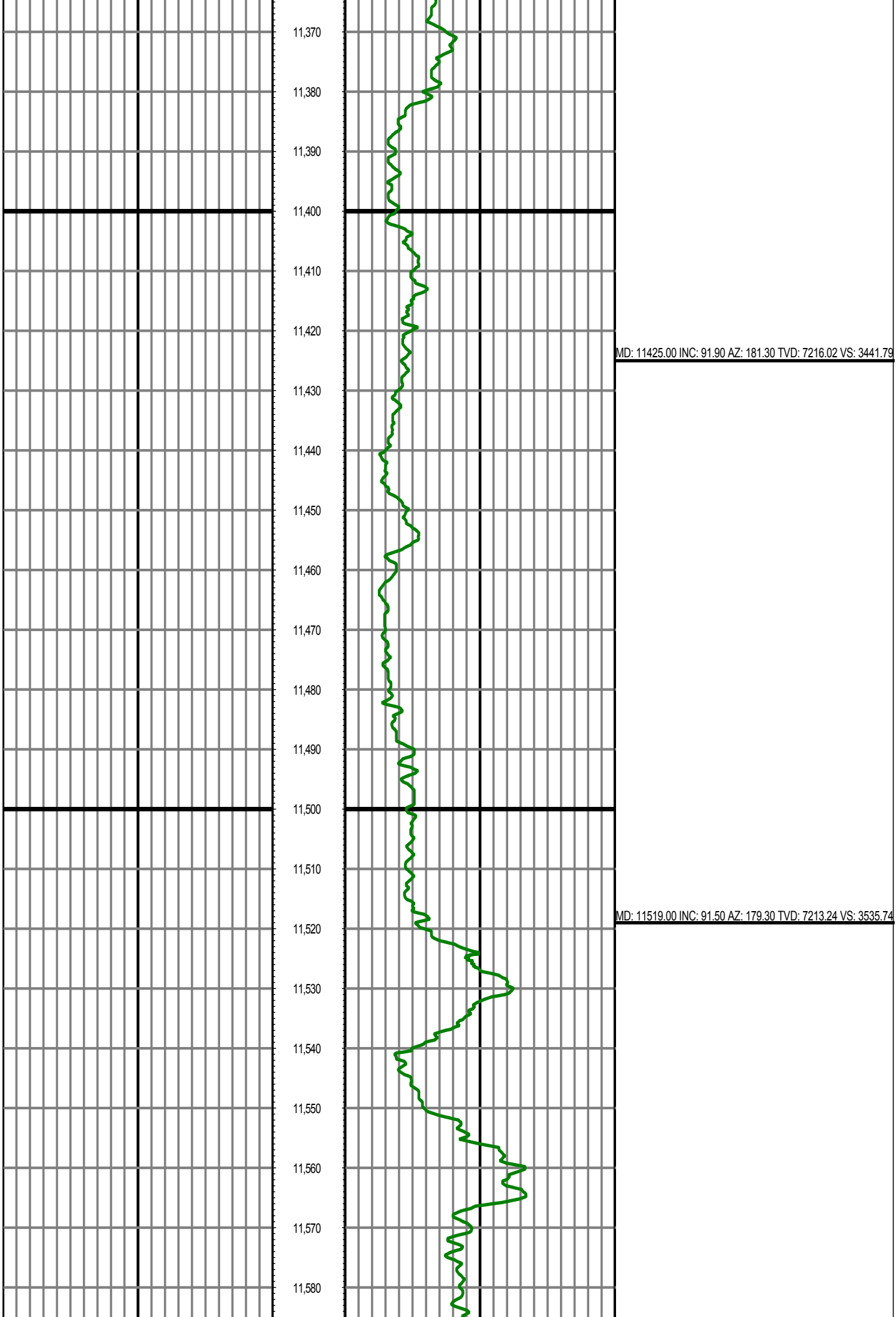


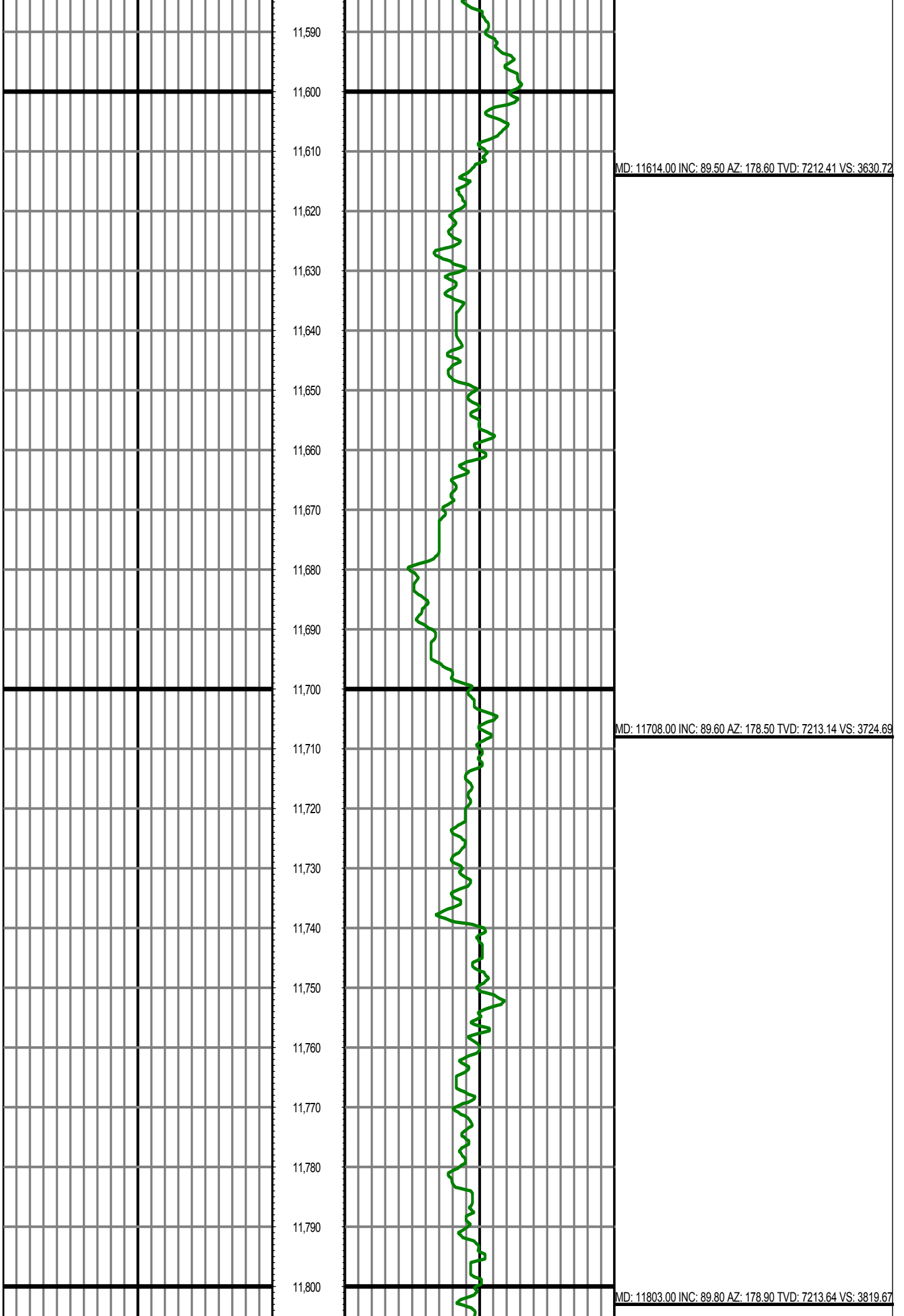


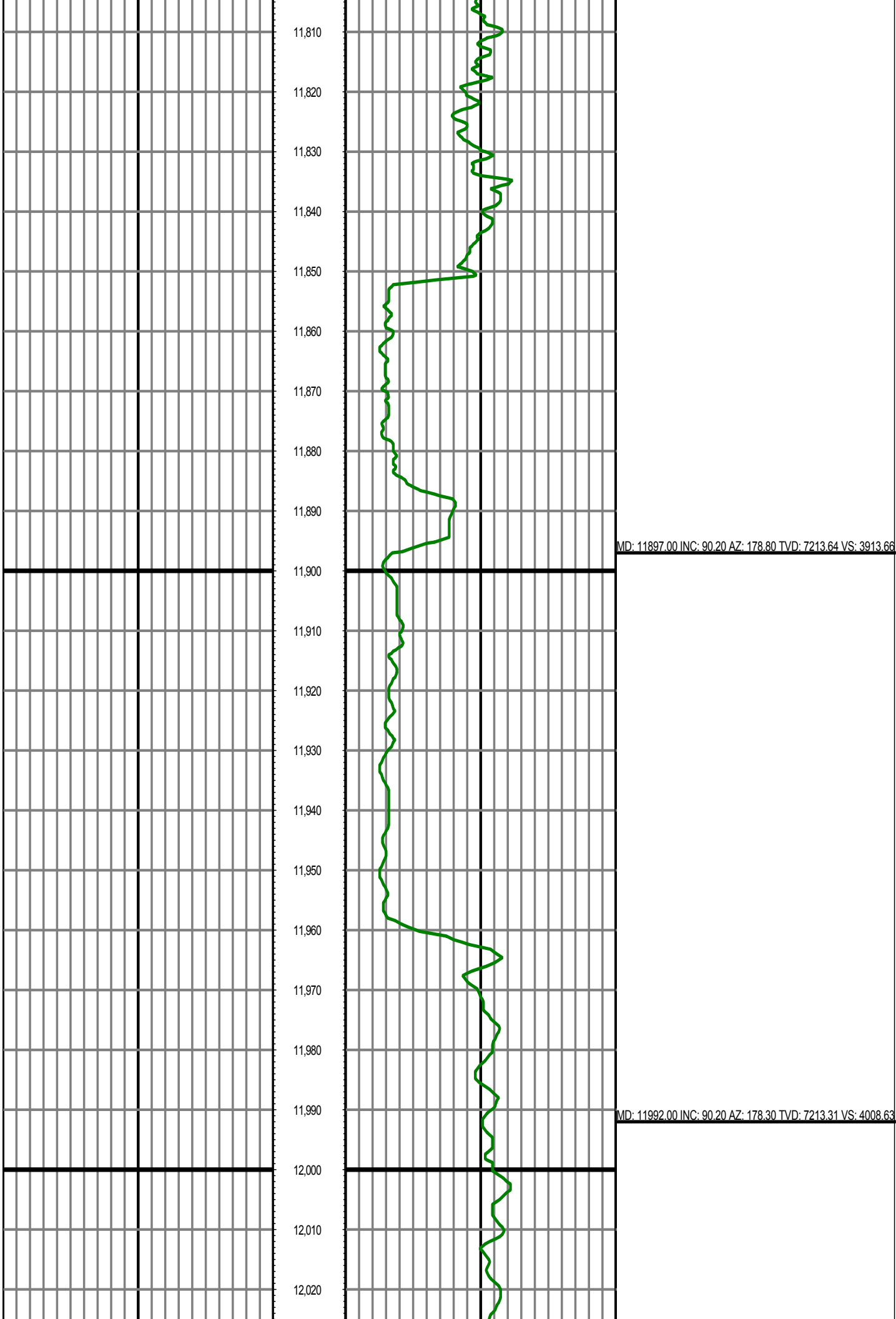


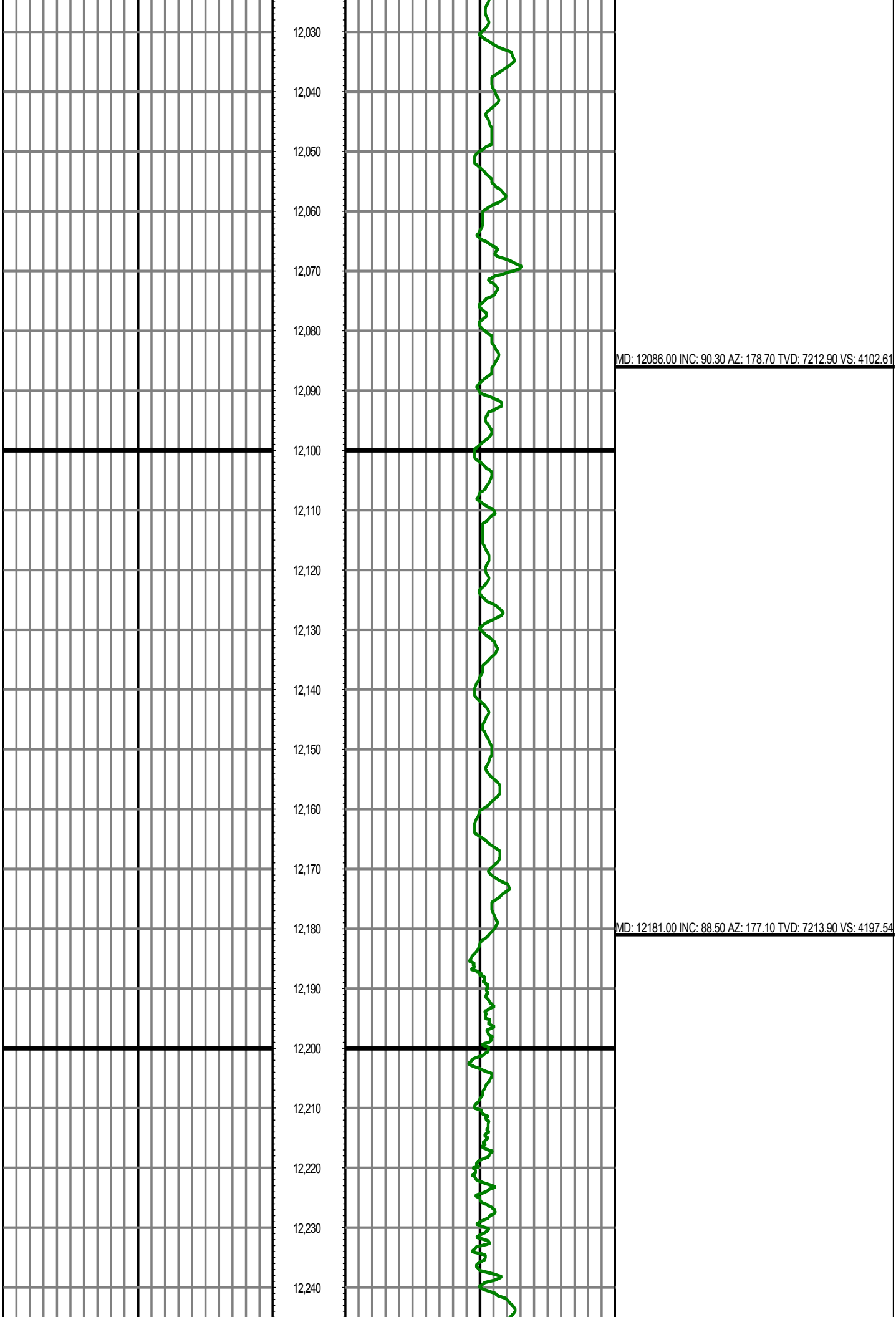


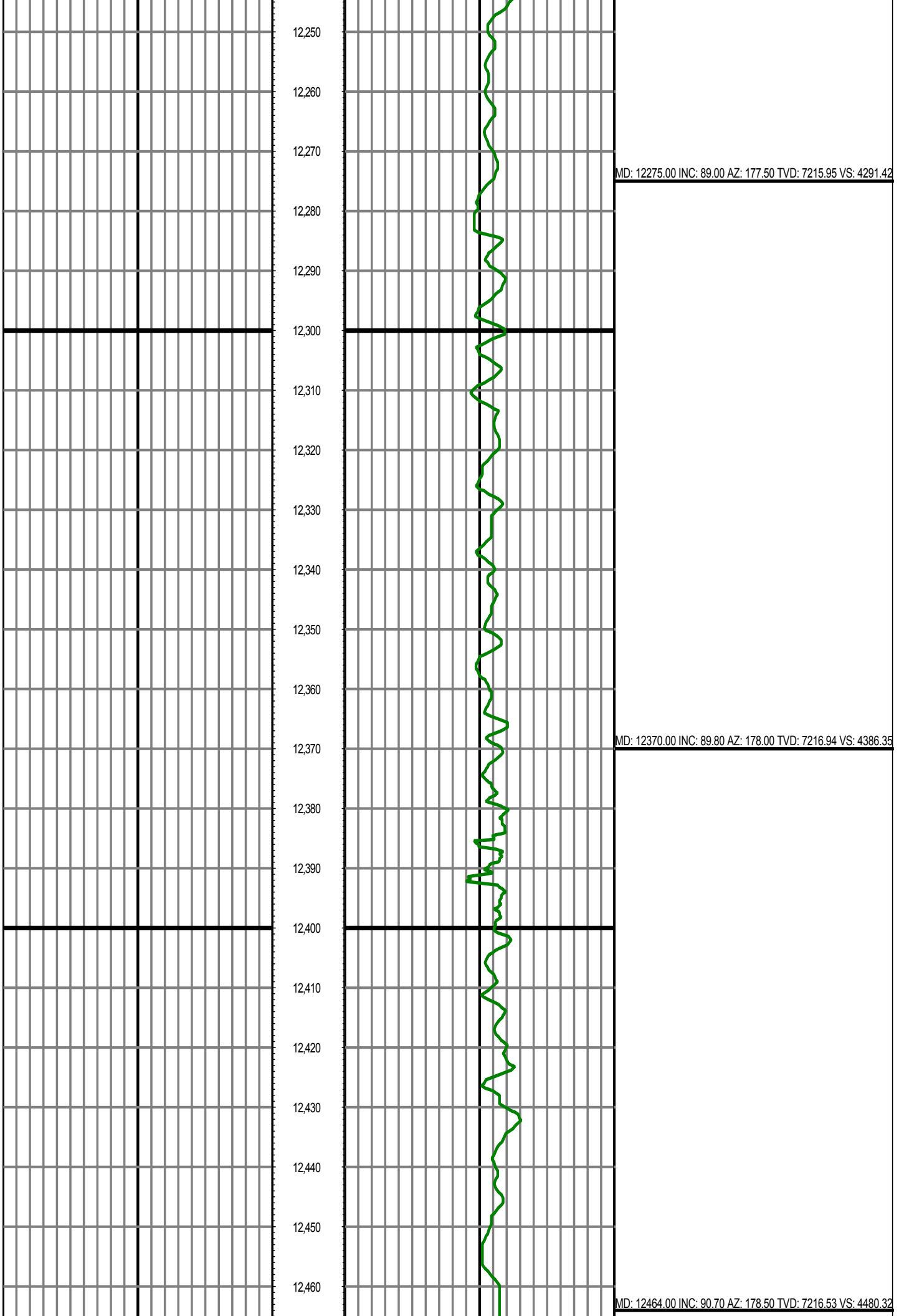


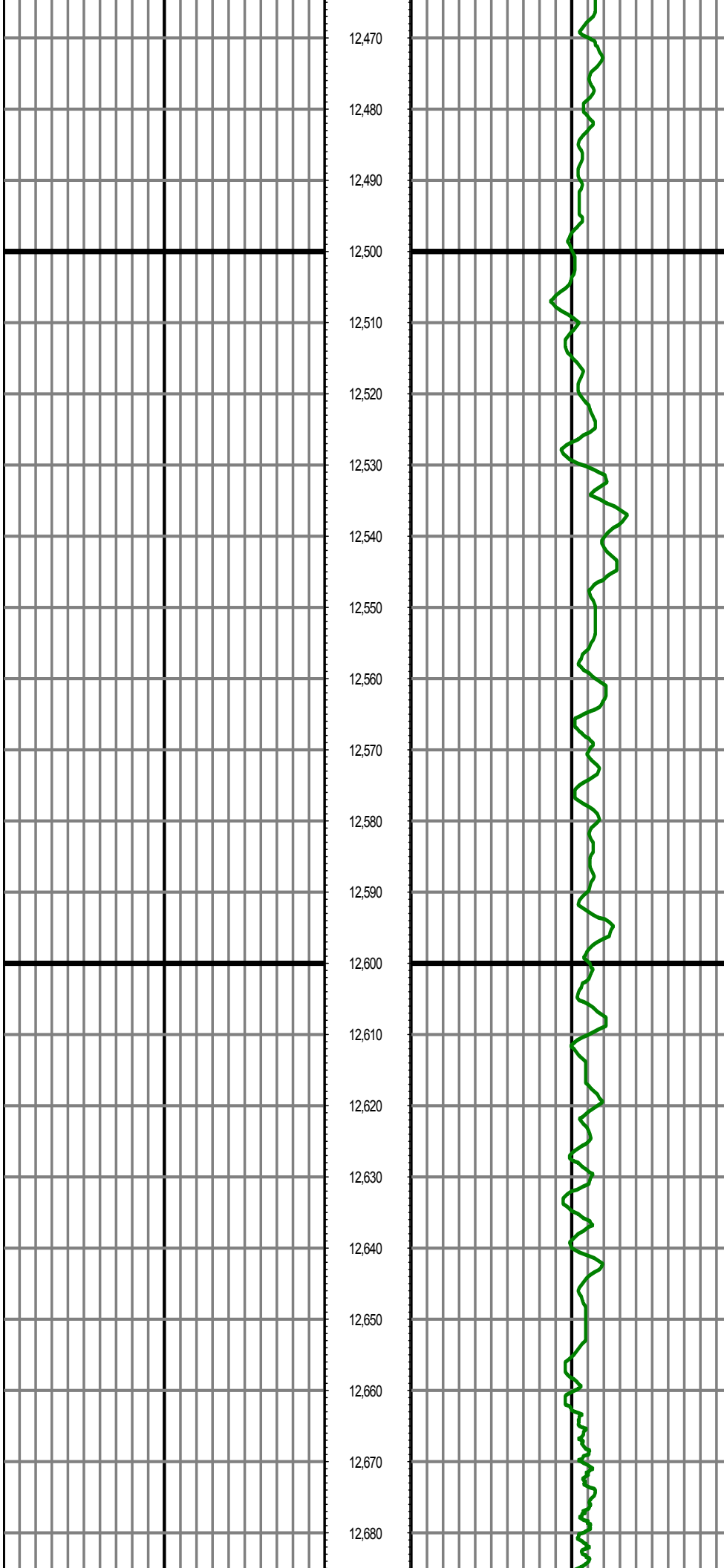






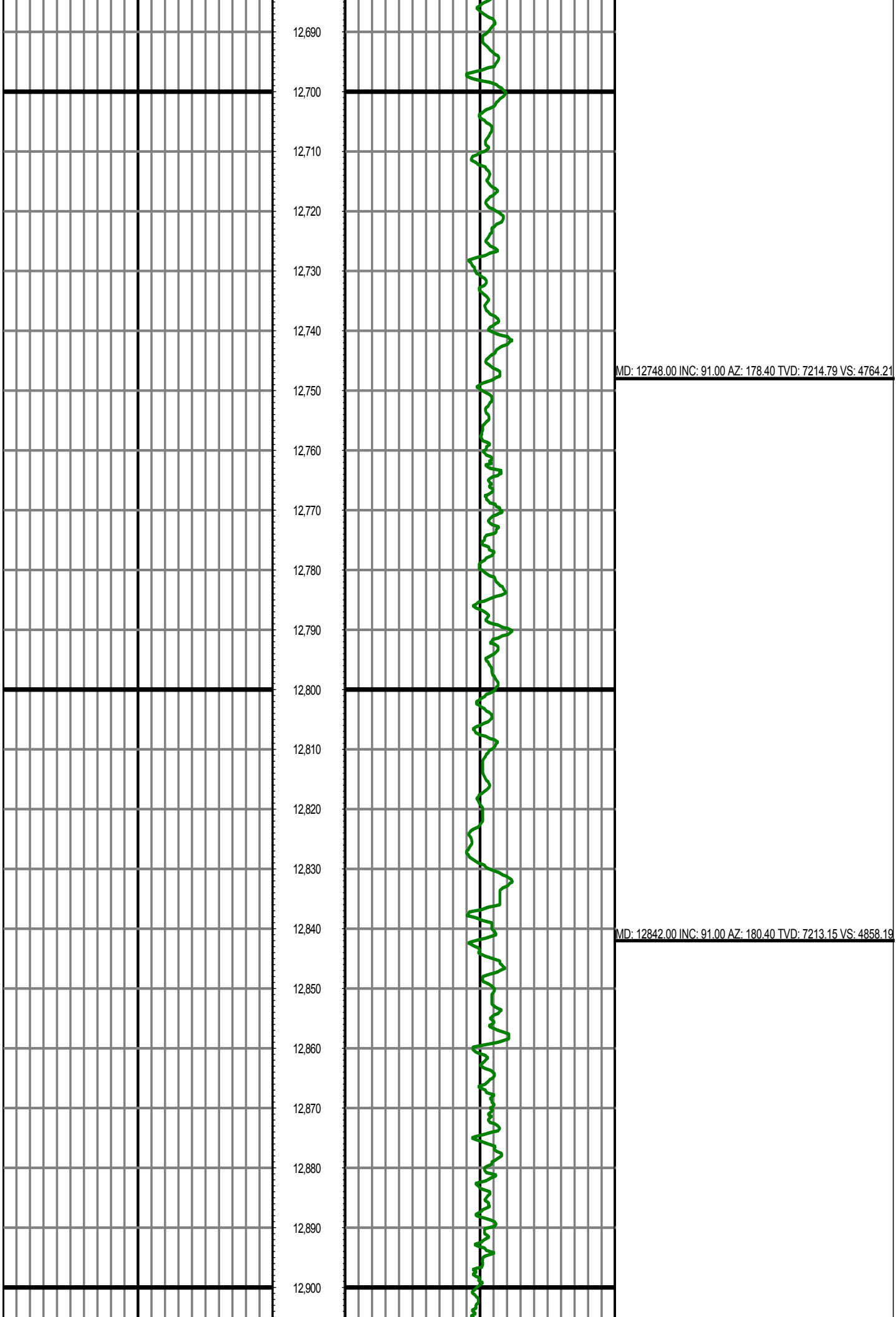


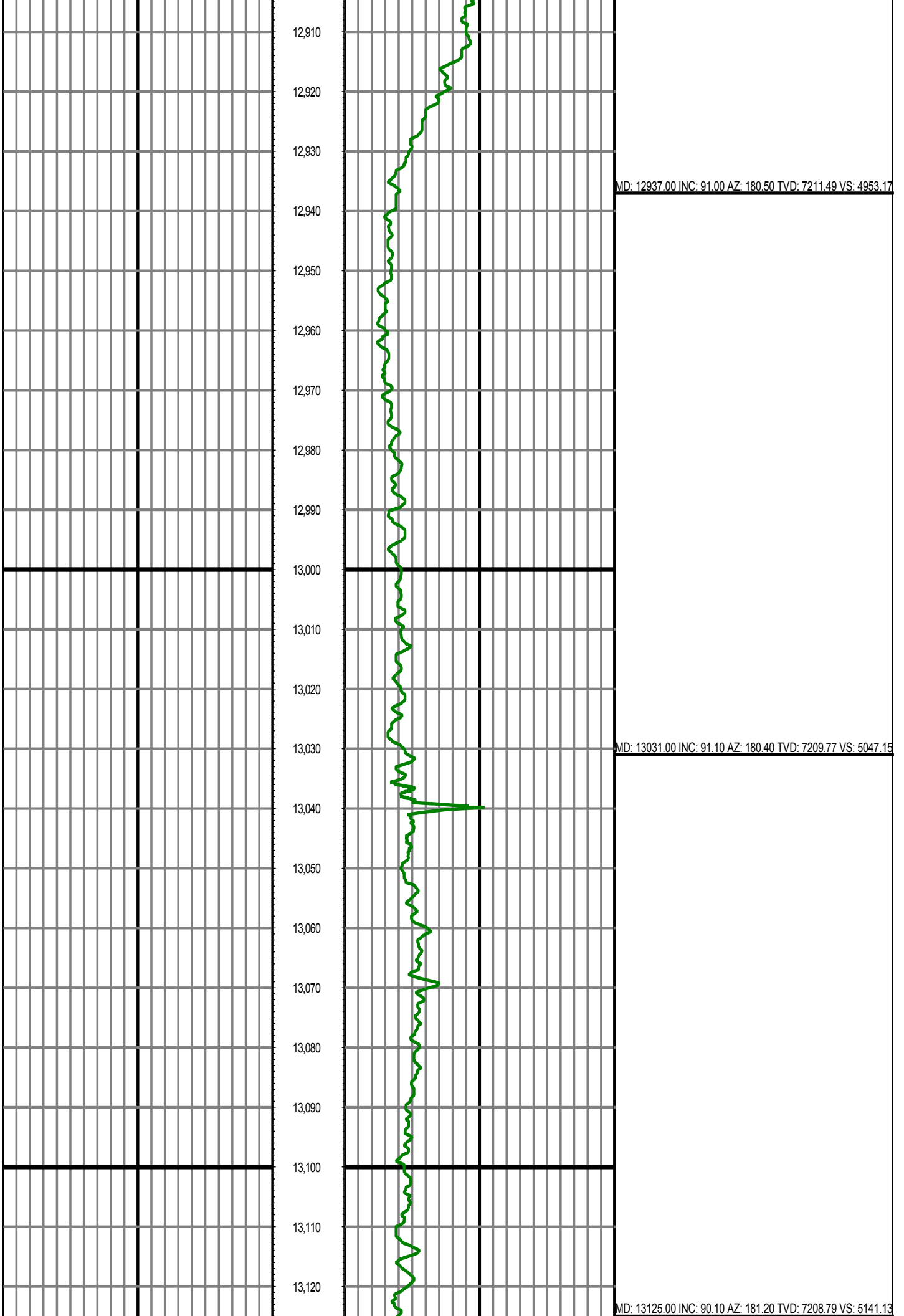


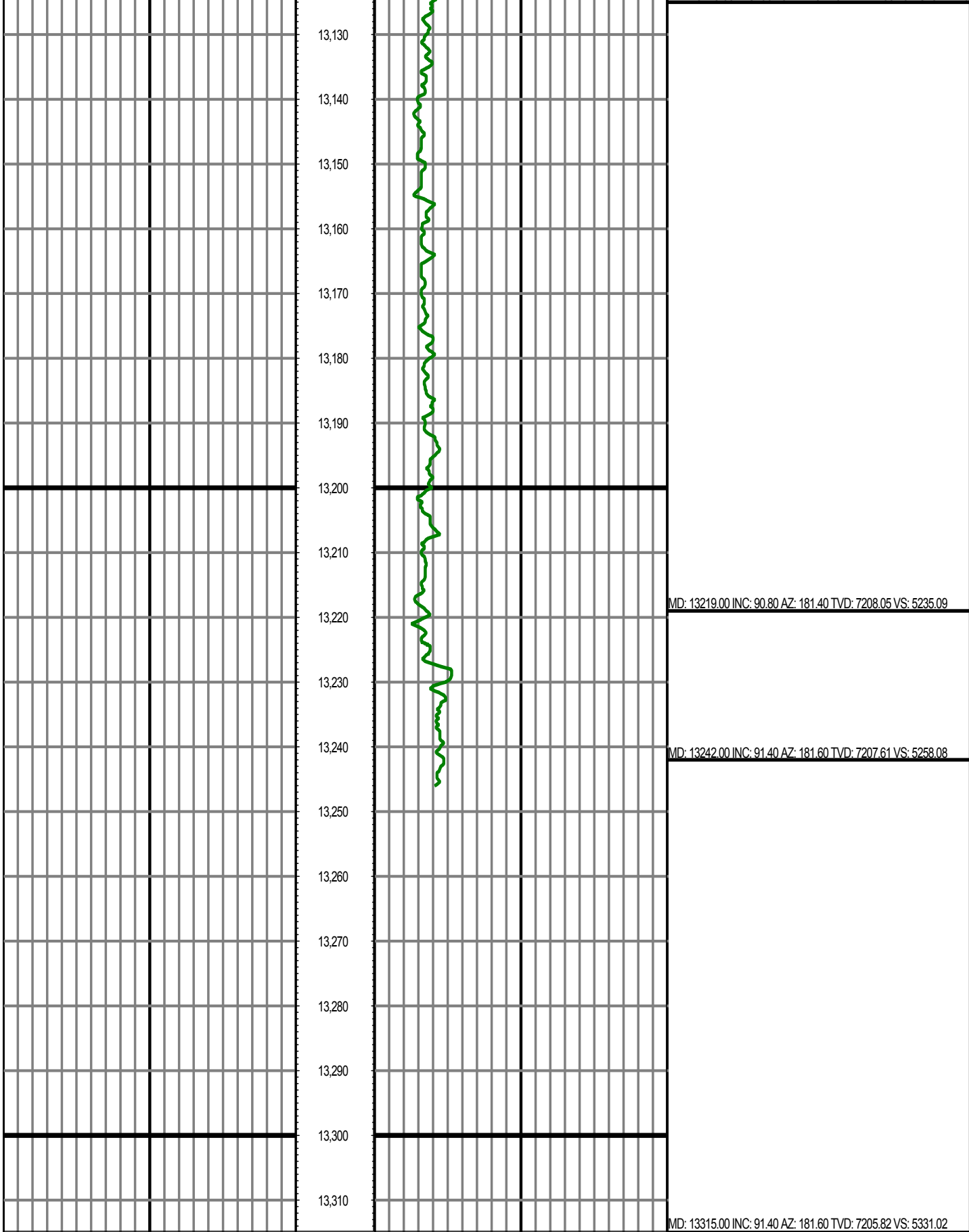


MD: 12559.00 INC: 90.20 AZ: 178.40 TVD: 7215.78 VS: 4575.28

MD: 12653.00 INC: 90.00 AZ: 178.20 TVD: 7215.62 VS: 4669.25







0.00 GR(API) on TVD 200.00
200.00 2 400.00

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

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