

**Premier Directional Drilling**


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

**Joker 1N2-9HZ****Scale 5":100' - MD****7/22/2015 7:58 AM****Oper. Company:** Anadarko Petroleum Corporation**State:** Colorado**Well:** Joker 1N2-9HZ**County:** Weld**Field:** Wattenberg**Country:** USA**Rig:** H & P 311**Location:** 1N 65W Sect 9**Well ID:** 05123413280000**Start Date:** 07/20/2015 18:00:00**Job Number:** R15294**End Date:** 07/22/2015 07:07:00**Notes:** LWD Real Time Log  
Gamma Correction Determined by Pipe ID & OD, Mud Weight & Bit Size**Latitude:** 40.060442**Elev KB:** 4994'**Longitude:** -104.662628**Elev DF:** 4994'**Elev GL:** 4969'**Notes:** Datum: NAD 1983Map Zone: 13N (108 W to 102 W)Total Correction: 8.13°Grid Convergence: 0.00° ( True North)**Operator 1:** Robert Grossman**Operator 2:** John Kent**Notes:** Smoothing: 7Gap Fill: 10Survey Tool Type: Mud PulseCalculation Method: Minimum Curvature

Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	DM1319/G161				
Bit Size	8.5				
Cal Factor	6.359				
Gamma Offset	47.00				
Resistivity Offset	0.00				
Start Depth	1871.00				
StartDate	7/20/2015				
StartTime	6:00 PM				
EndDepth	11954.00				
EndDate	7/22/2015				
EndTime	4:00 PM				
Mud Type	OBM				
Mud Weight	9.3				
Funnel Viscosity	58				
Plastic Viscosity	21				
Yield Point	12				
Gel Strength	N/A				
Solids Content	7.9				
Sand Content	N/A				
Mud Alkalinity	3				
Filtrate Alkalinity	N/A				
Chlorides	55,000				
Mud RM	N/A				
Mud RMF	N/A				
Mud RMC	N/A				
Mud RM at BHT	N/A				
Temperature	N/A				

Hole Data			Casing Data		
Size	From	To	Size	From	To
13.5	0.00	1871.00	13.5	0.00	1861.00
8.5	1871.00	11954.00	8.5	1861.00	11954.00

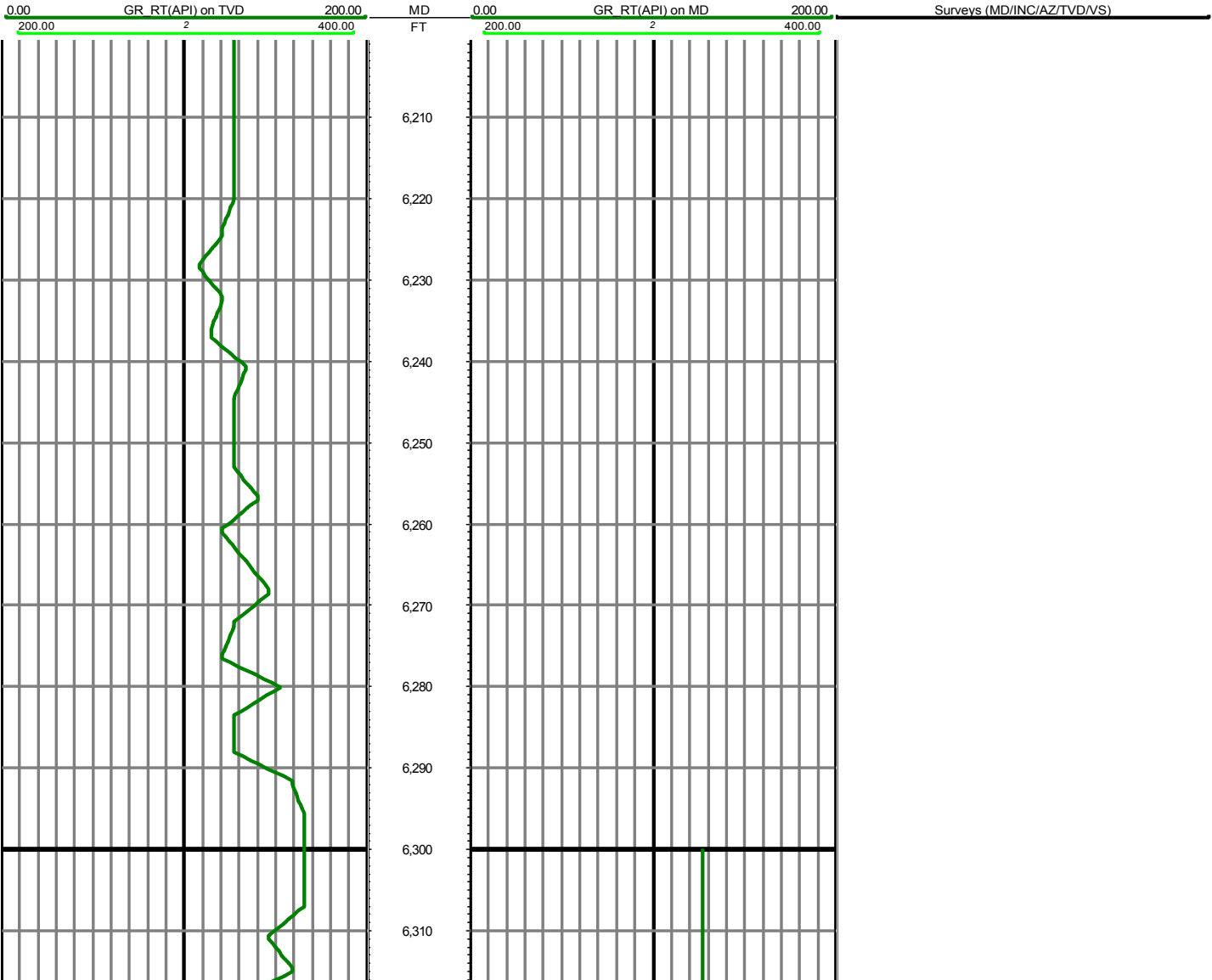
**BHA Data**

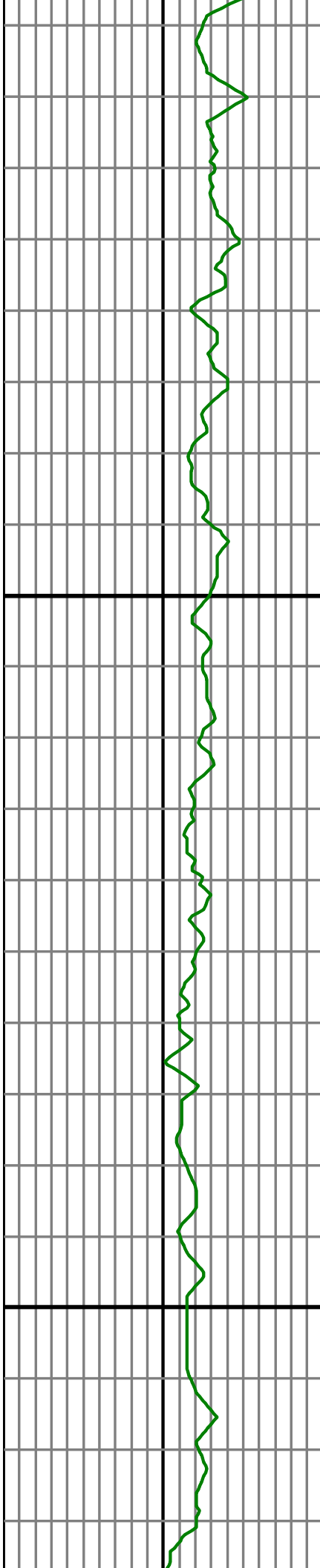
Picture	Type	Length	Description
	Bit	0.7	Baker T405s



Motor	29.03	Turbo Drill 4/5 7stg. 1.75 Fixed
Sub2	3.45	NMDC Pony
Sub2	29.69	NM UBHO
Sub2	30.42	NMDC Slick
Sub2	11.1	NMDC Flex
Sub2	5.89	Filter Sub

*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.*





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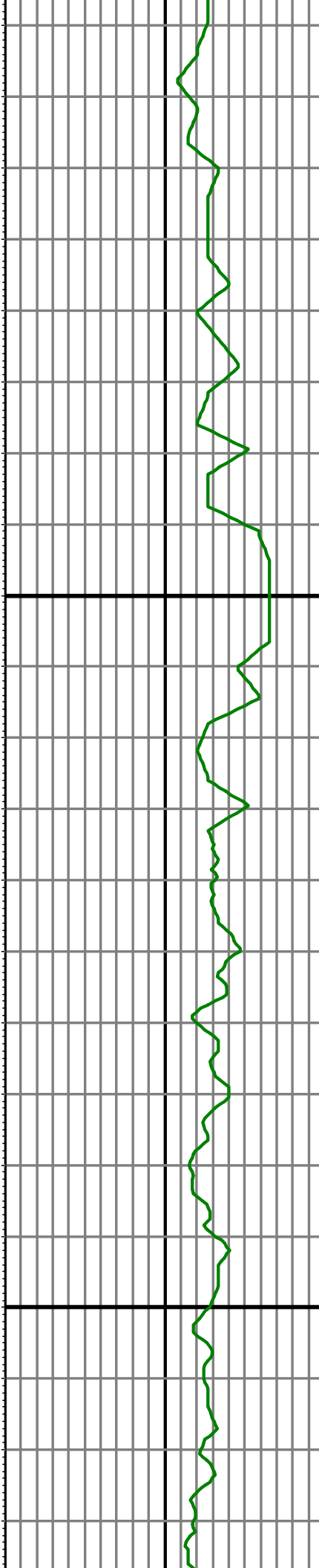
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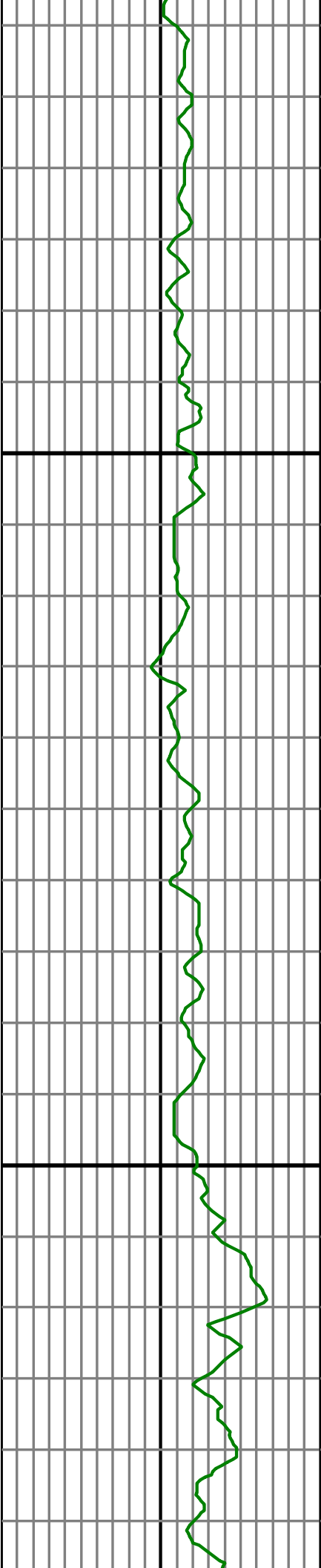
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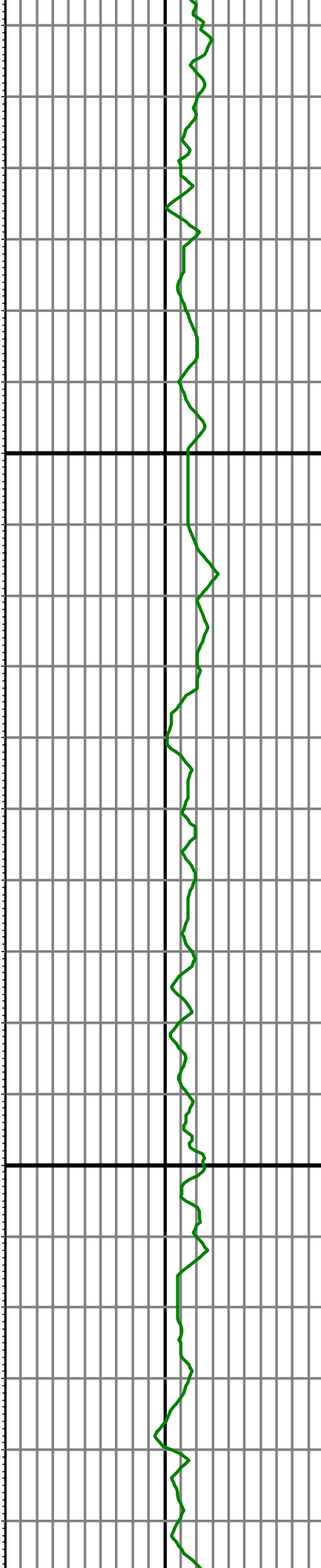
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MD: 6481.00 INC: 1.10 AZ: 330.30 TVD: 6381.54 VS: -873.66

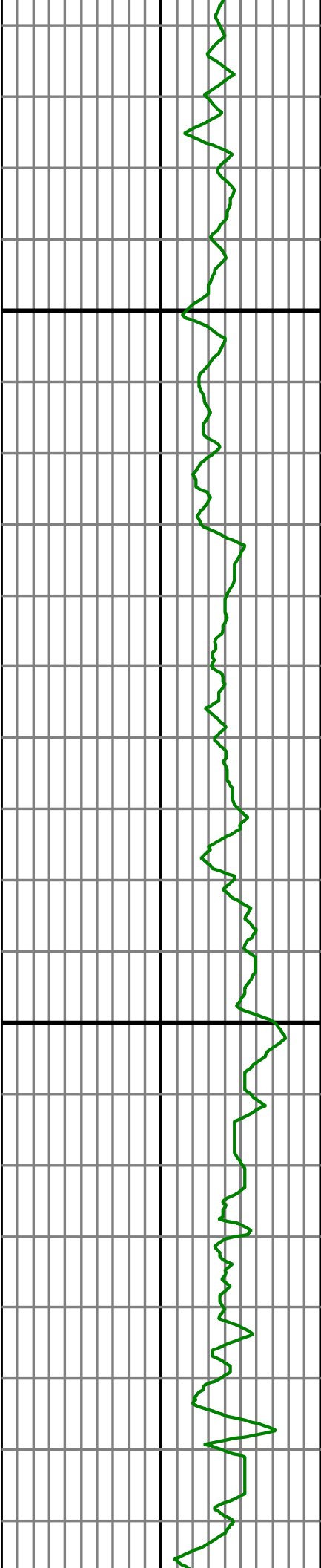


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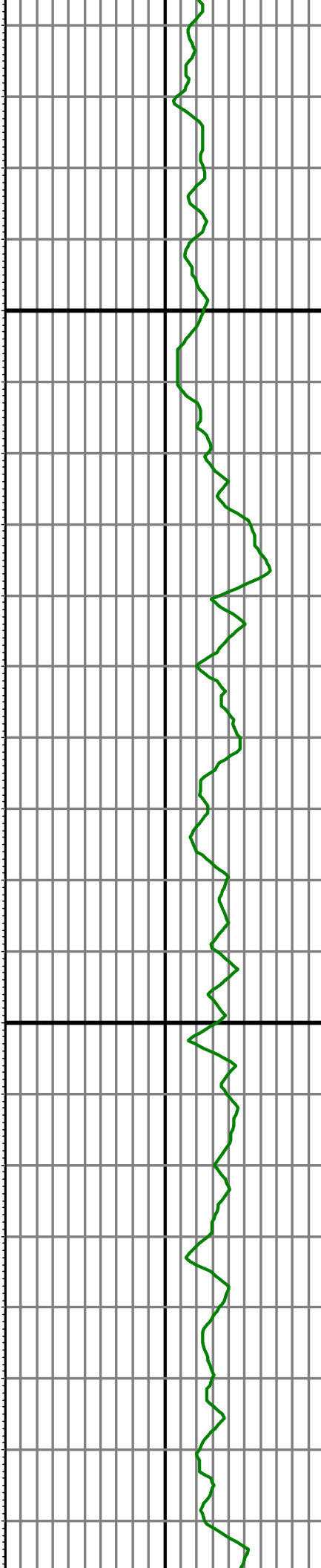


MD: 6575.00 INC: 11.50 AZ: 350.80 TVD: 6474.84 VS: -863.60

MD: 6670.00 INC: 18.20 AZ: 351.10 TVD: 6566.62 VS: -839.57



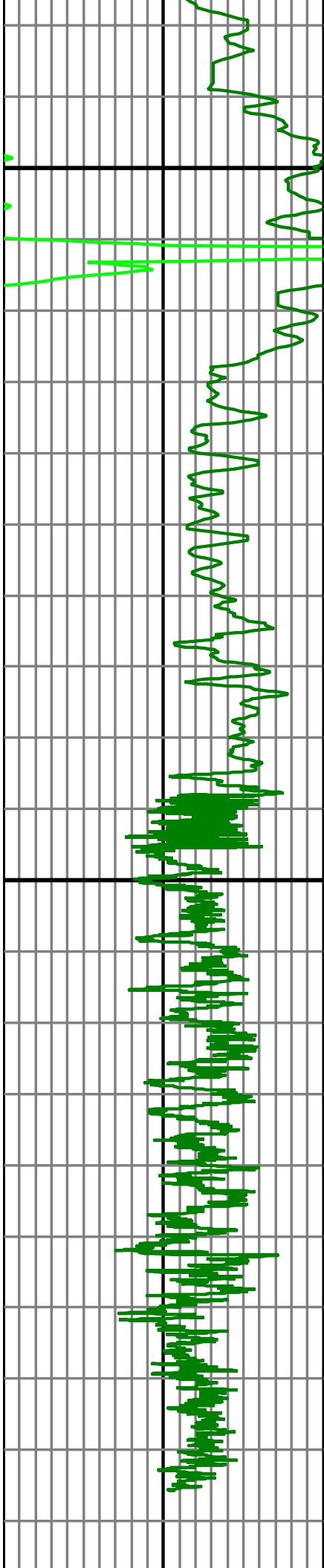
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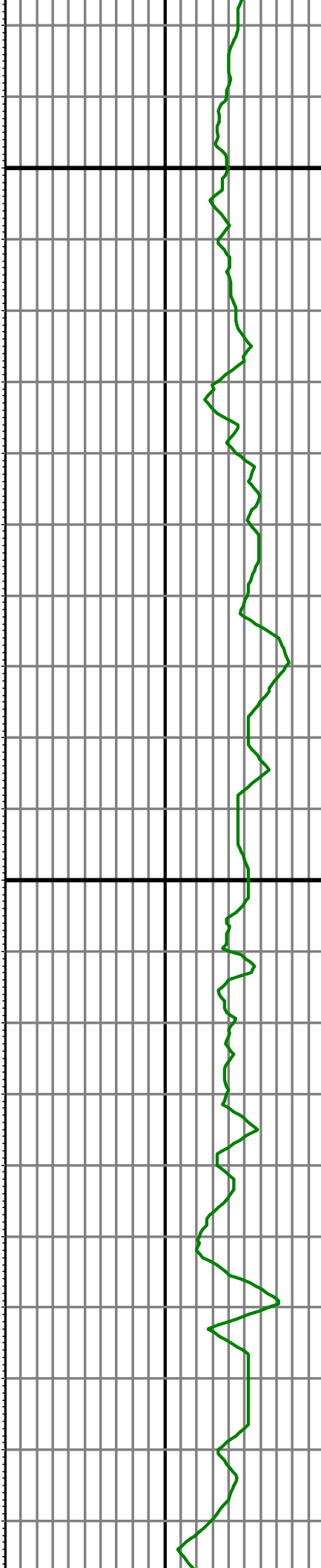
MD: 6765.00 INC: 23.80 AZ: 350.50 TVD: 6655.27 VS: -805.97

MD: 6859.00 INC: 30.60 AZ: 358.90 TVD: 6738.86 VS: -763.28

MD: 6954.00 INC: 36.40 AZ: 2.50 TVD: 6818.05 VS: -710.89

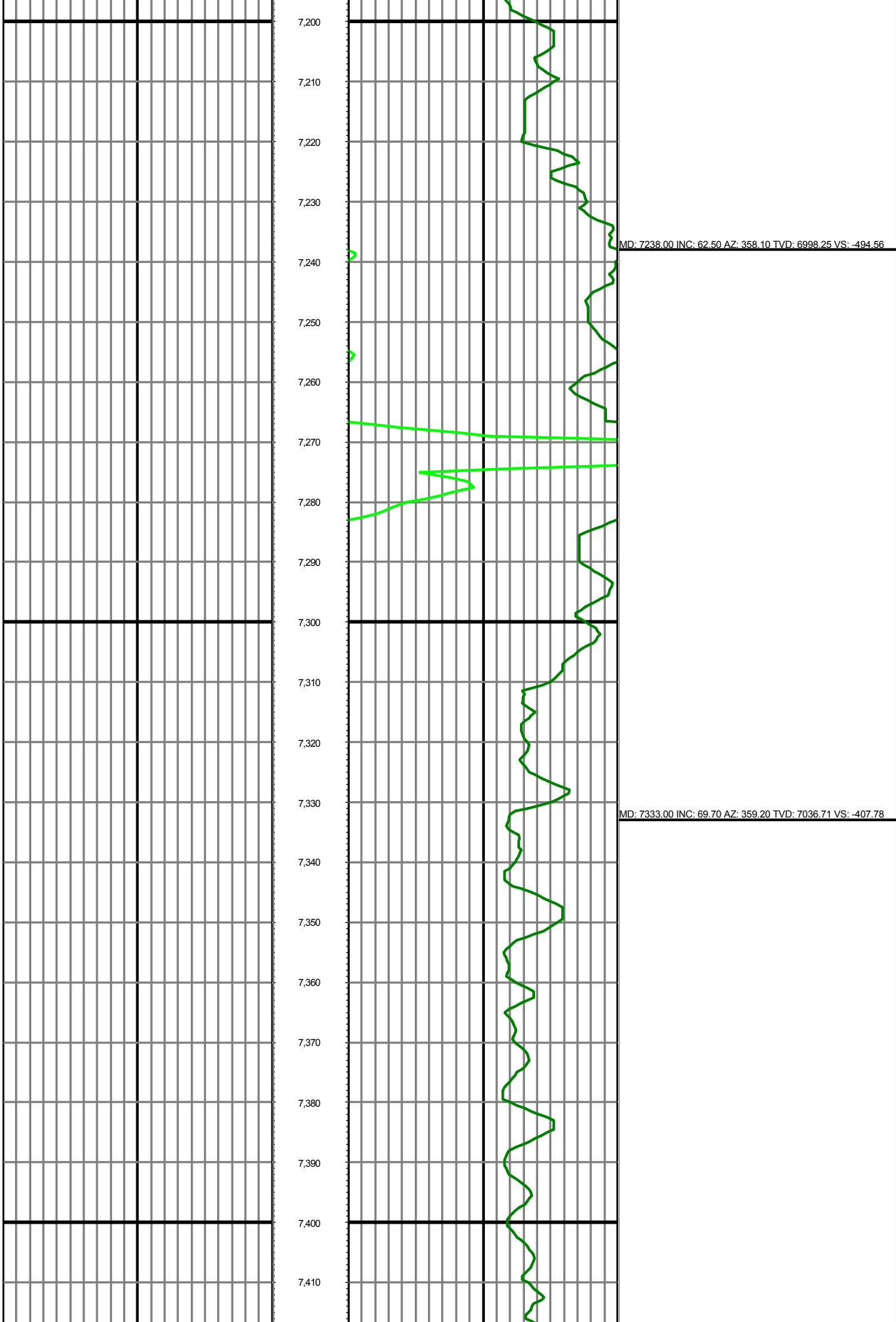


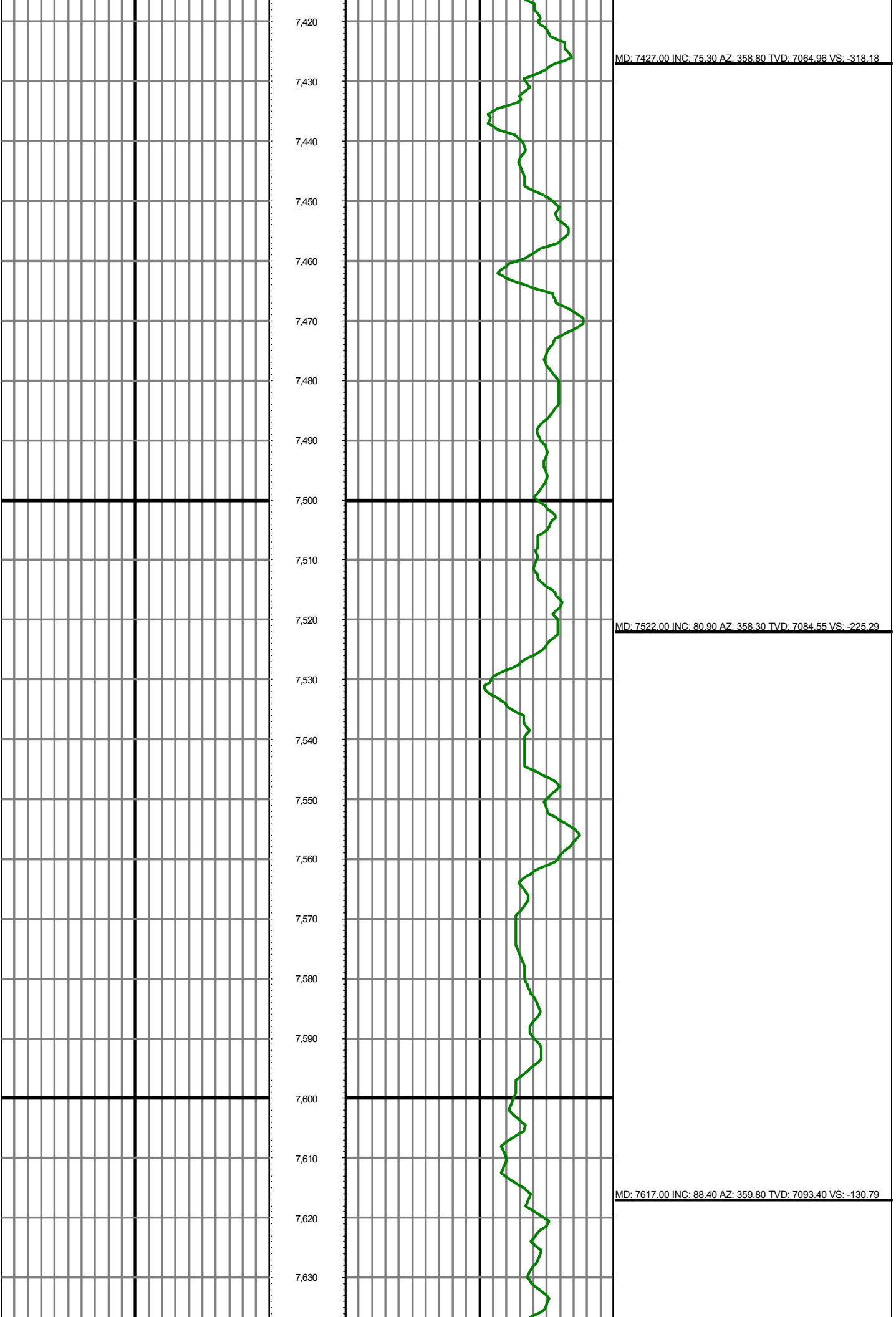
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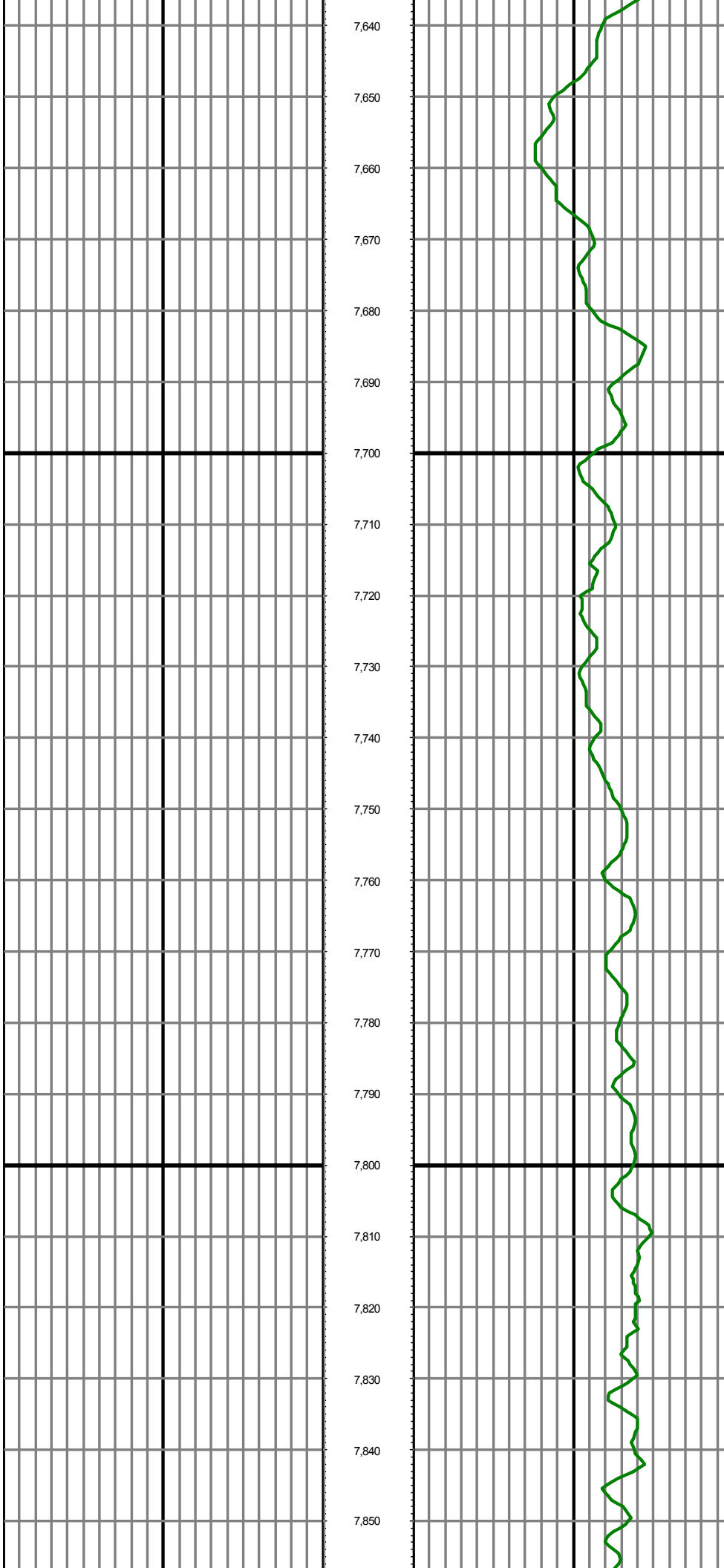
MD: 7049.00 INC: 46.50 AZ: 0.70 TVD: 6889.17 VS: -648.12

MD: 7143.00 INC: 54.70 AZ: 358.70 TVD: 6948.79 VS: -575.55



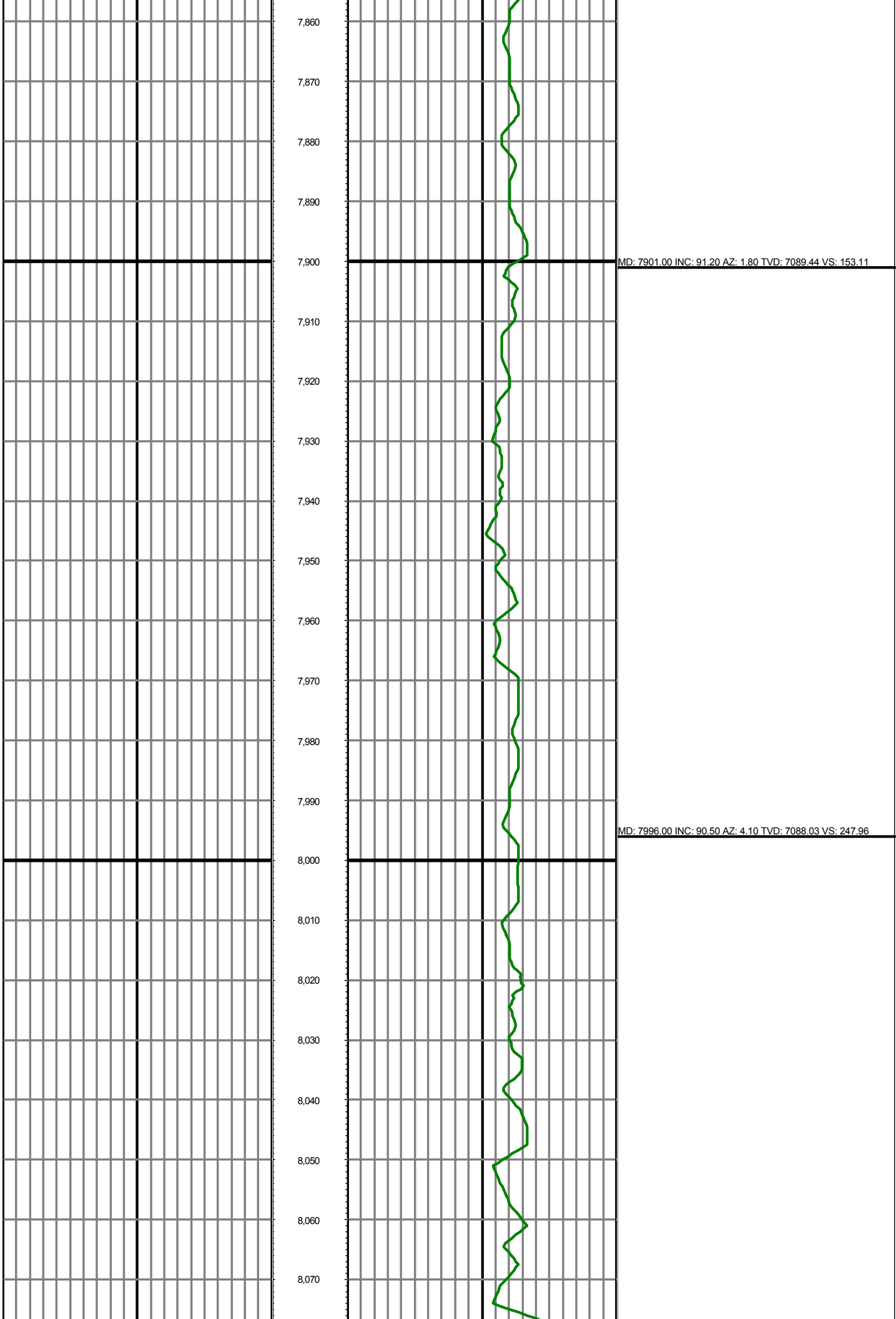


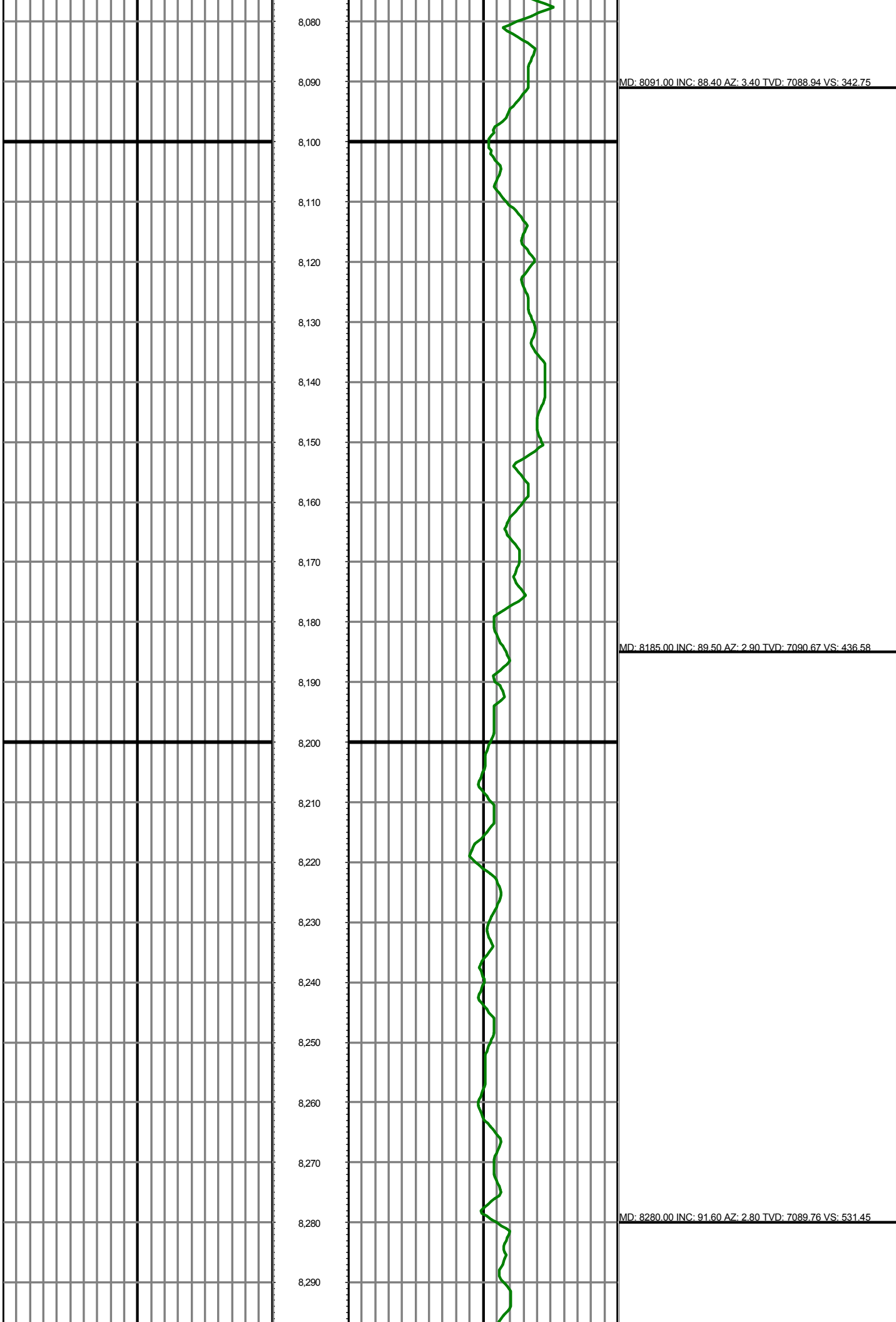


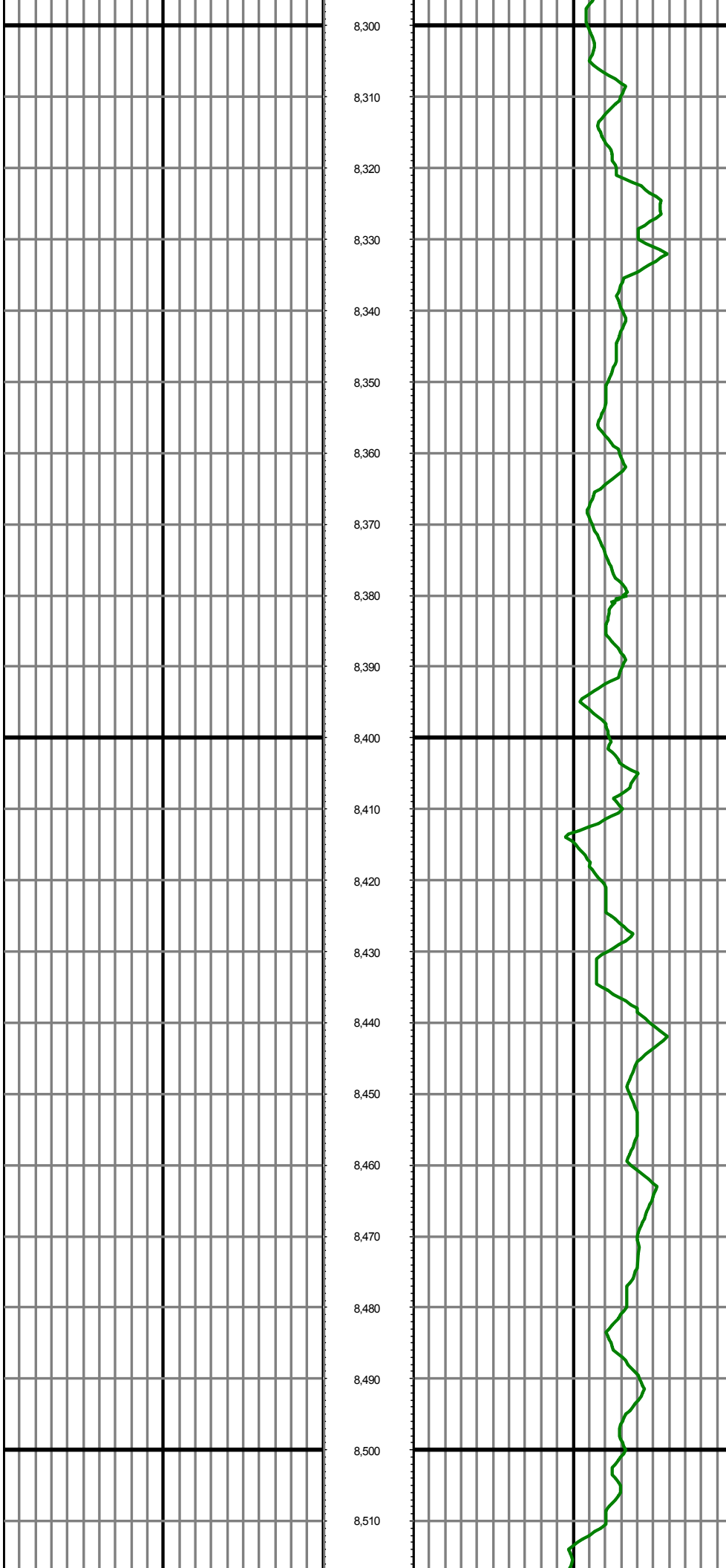


MD: 7712.00 INC: 90.20 AZ: 359.80 TVD: 7094.56 VS: -35.80

MD: 7806.00 INC: 92.40 AZ: 359.70 TVD: 7092.43 VS: 58.17

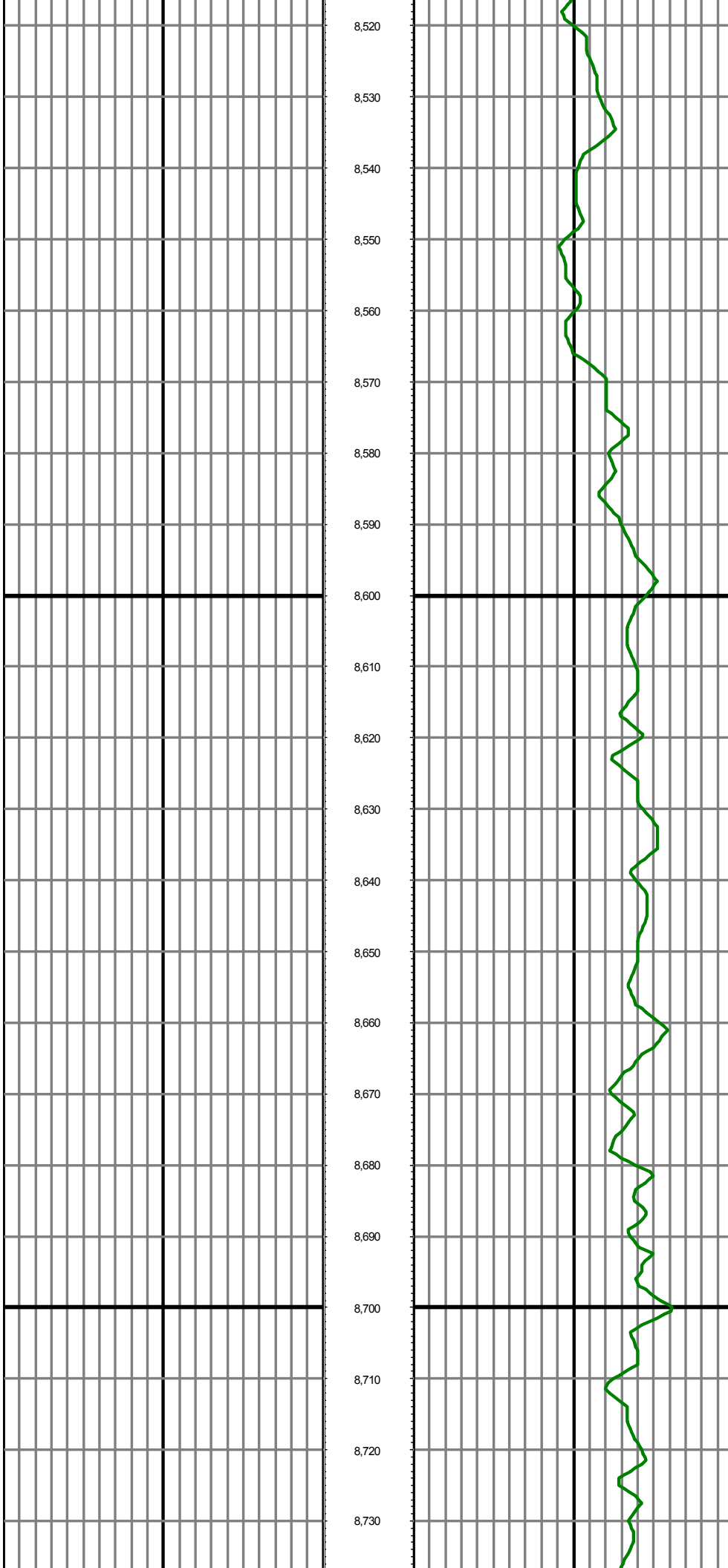






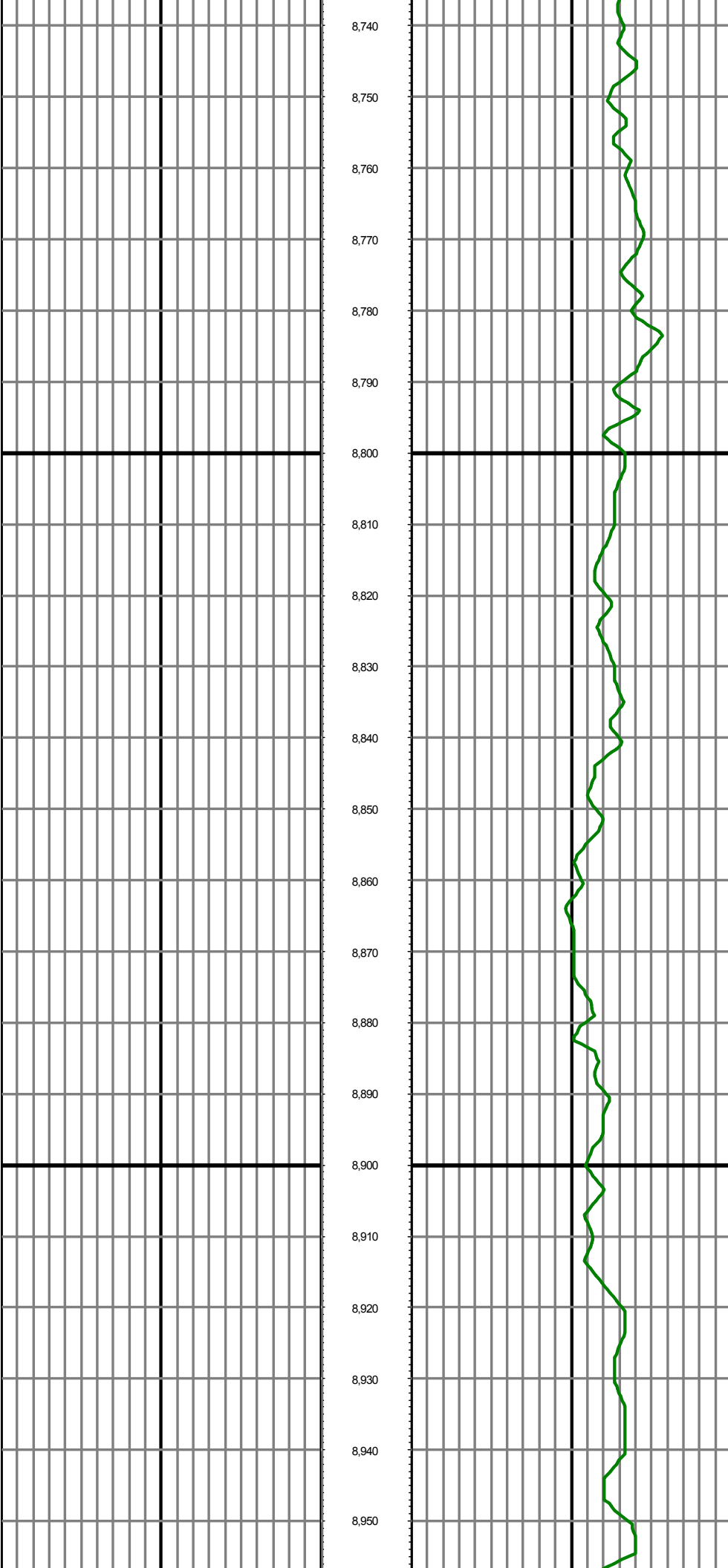
MD: 8374.00 INC: 90.50 AZ: 2.50 TVD: 7088.03 VS: 625.33

MD: 8469.00 INC: 87.20 AZ: 3.10 TVD: 7089.94 VS: 720.18



MD: 8564.00 INC: 88.20 AZ: 3.20 TVD: 7093.75 VS: 814.96

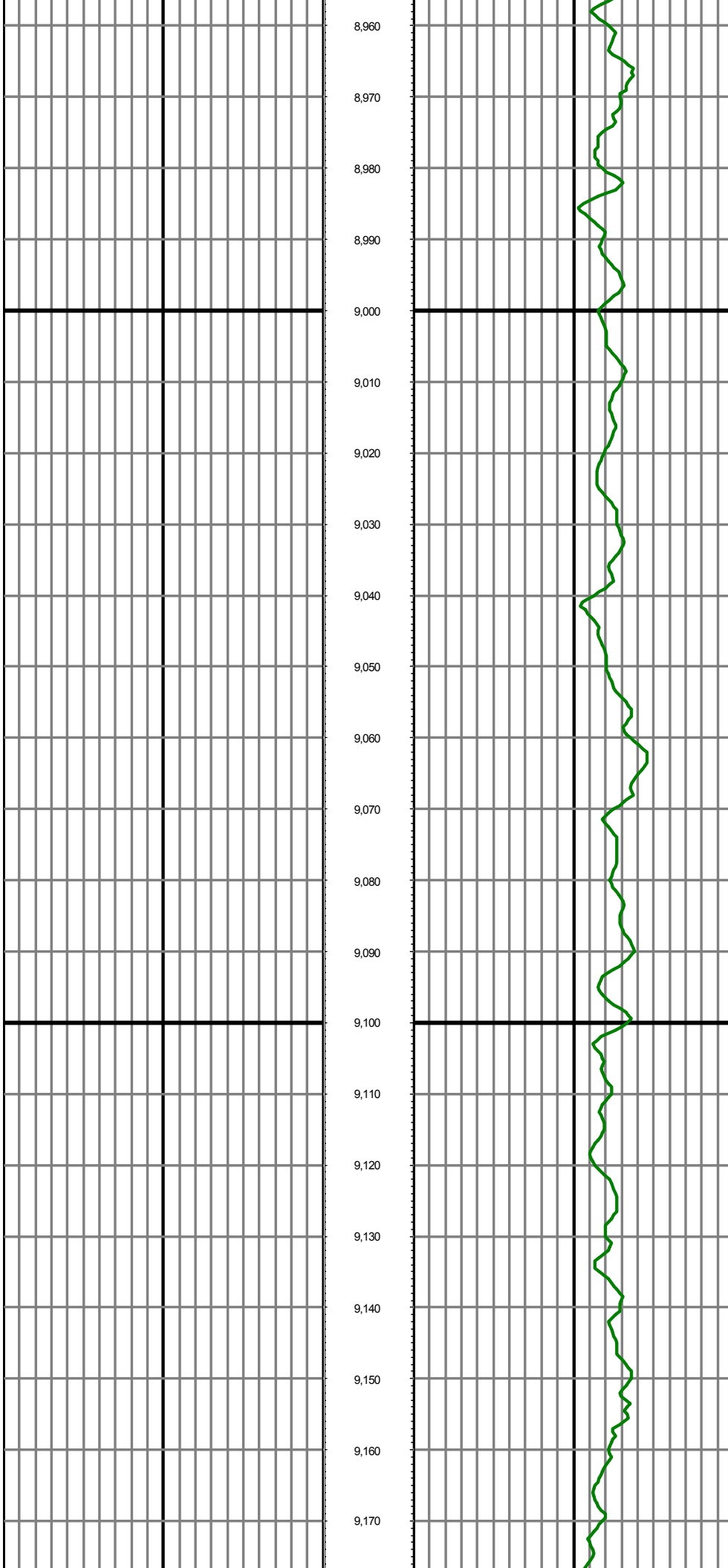
MD: 8658.00 INC: 90.00 AZ: 3.00 TVD: 7095.23 VS: 908.80



MD: 8753.00 INC: 89.70 AZ: 1.90 TVD: 7095.48 VS: 1003.71

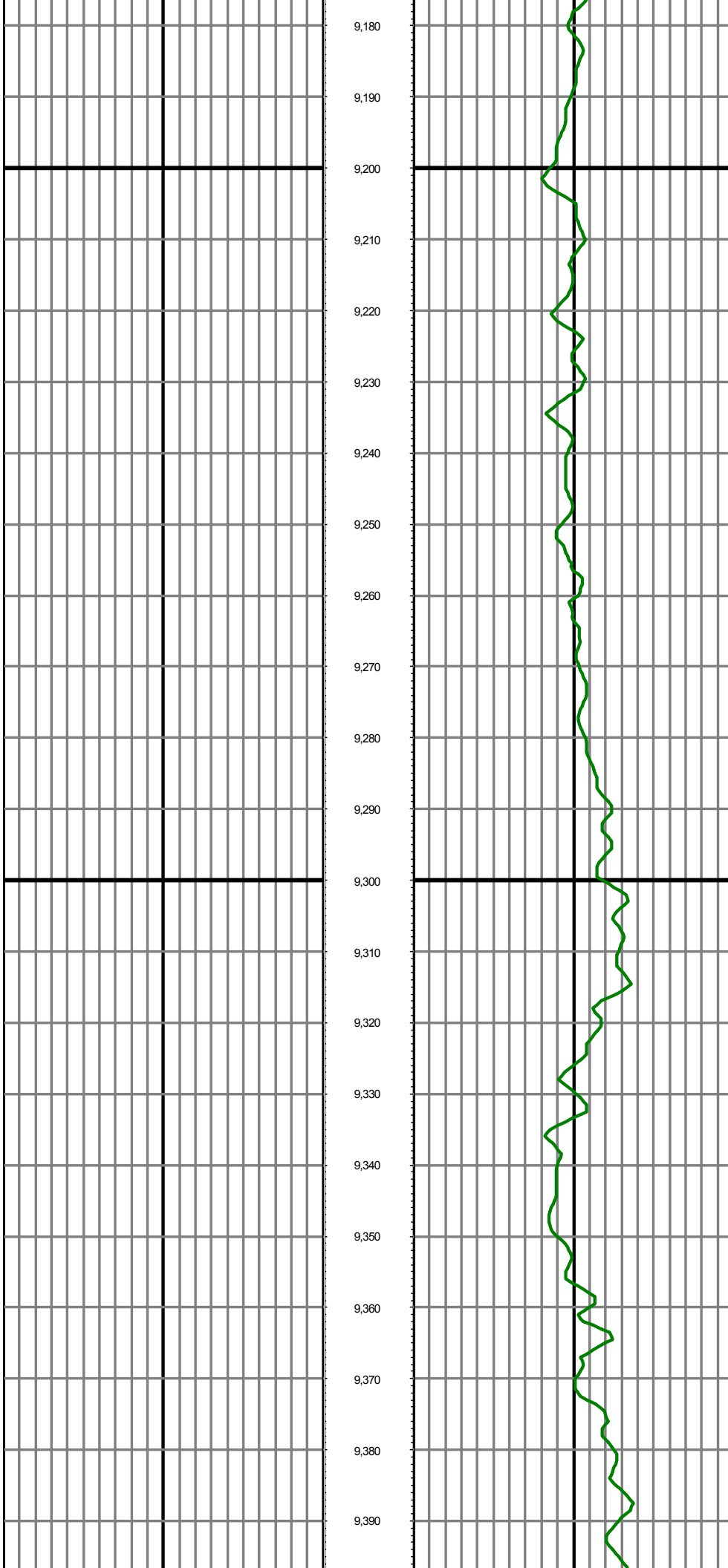
MD: 8848.00 INC: 91.30 AZ: 1.80 TVD: 7094.65 VS: 1098.66

MD: 8942.00 INC: 91.40 AZ: 0.20 TVD: 7092.43 VS: 1192.61



MD: 9036.00 INC: 88.50 AZ: 359.40 TVD: 7092.51 VS: 1286.60

MD: 9131.00 INC: 89.50 AZ: 359.30 TVD: 7094.17 VS: 1381.58



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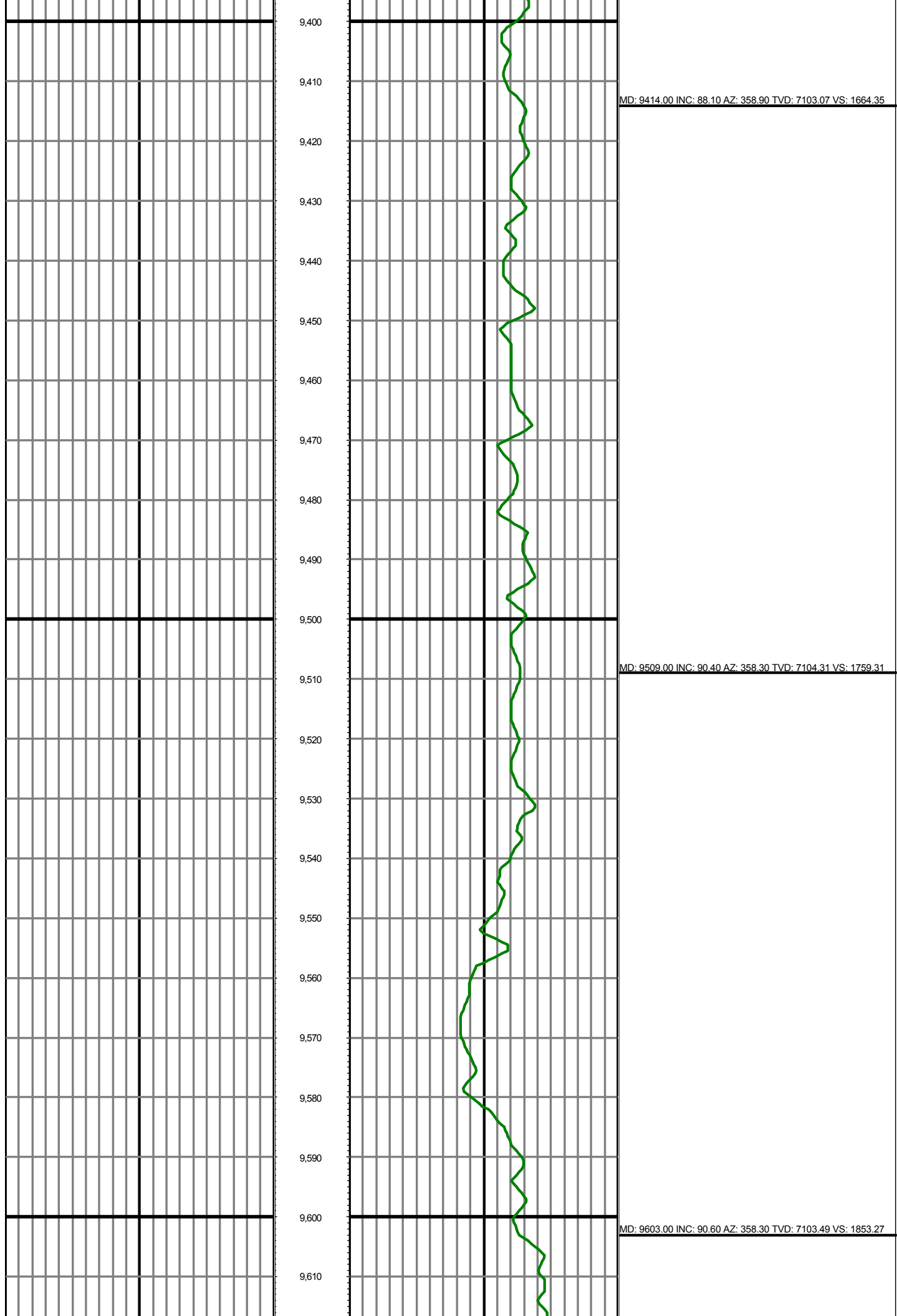
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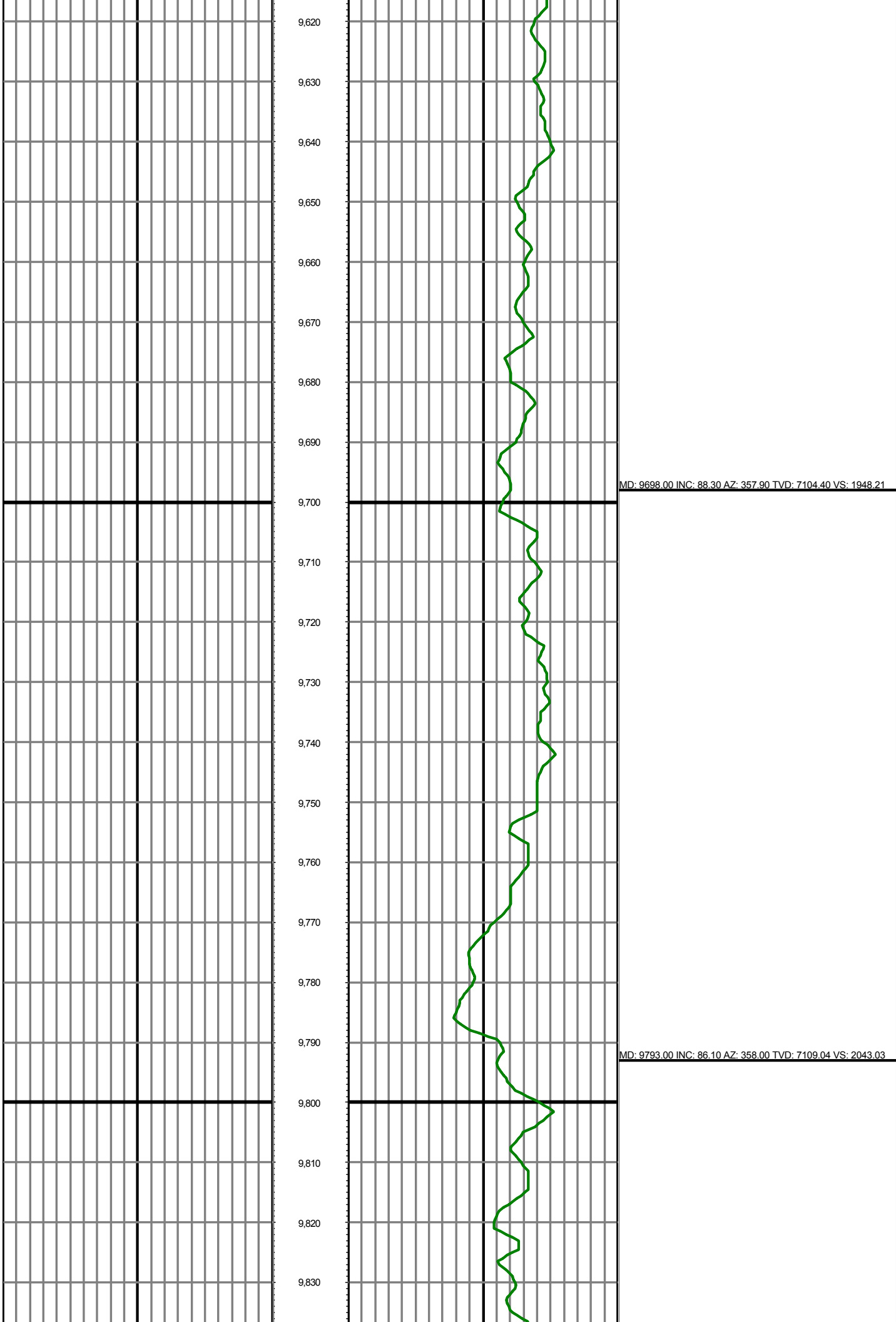
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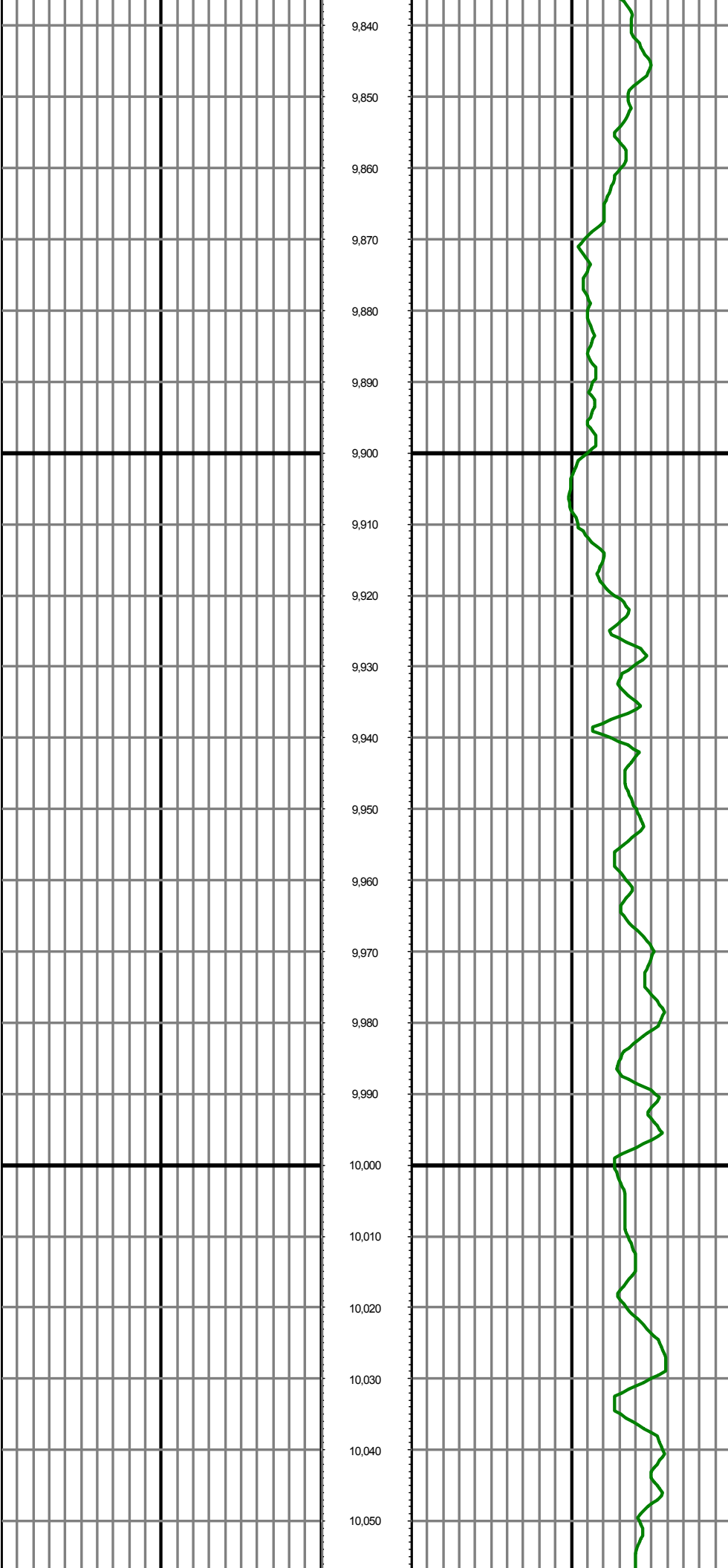
MD: 9225.00 INC: 88.70 AZ: 358.40 TVD: 7095.65 VS: 1475.55

MD: 9320.00 INC: 87.10 AZ: 358.80 TVD: 7099.13 VS: 1570.45









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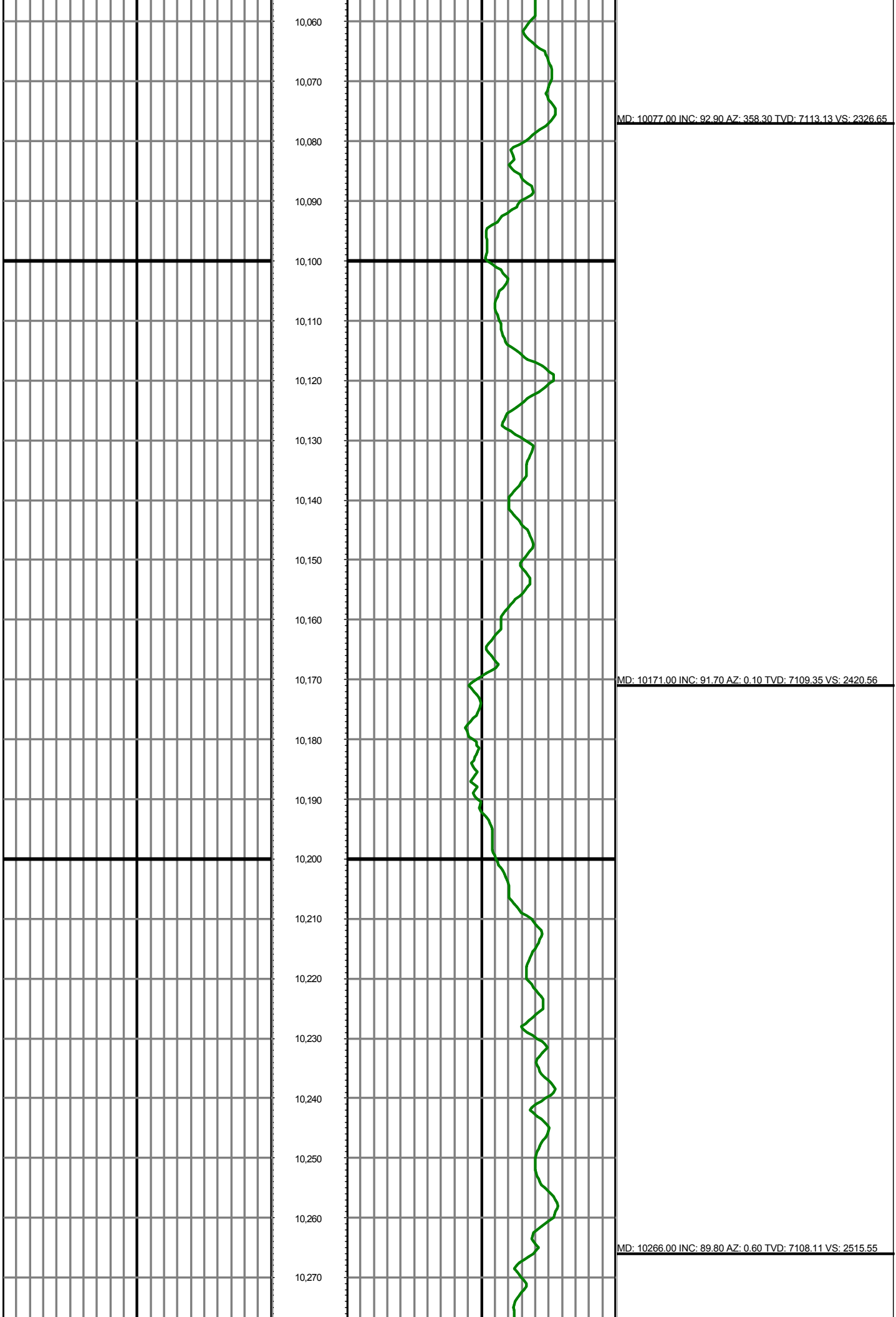
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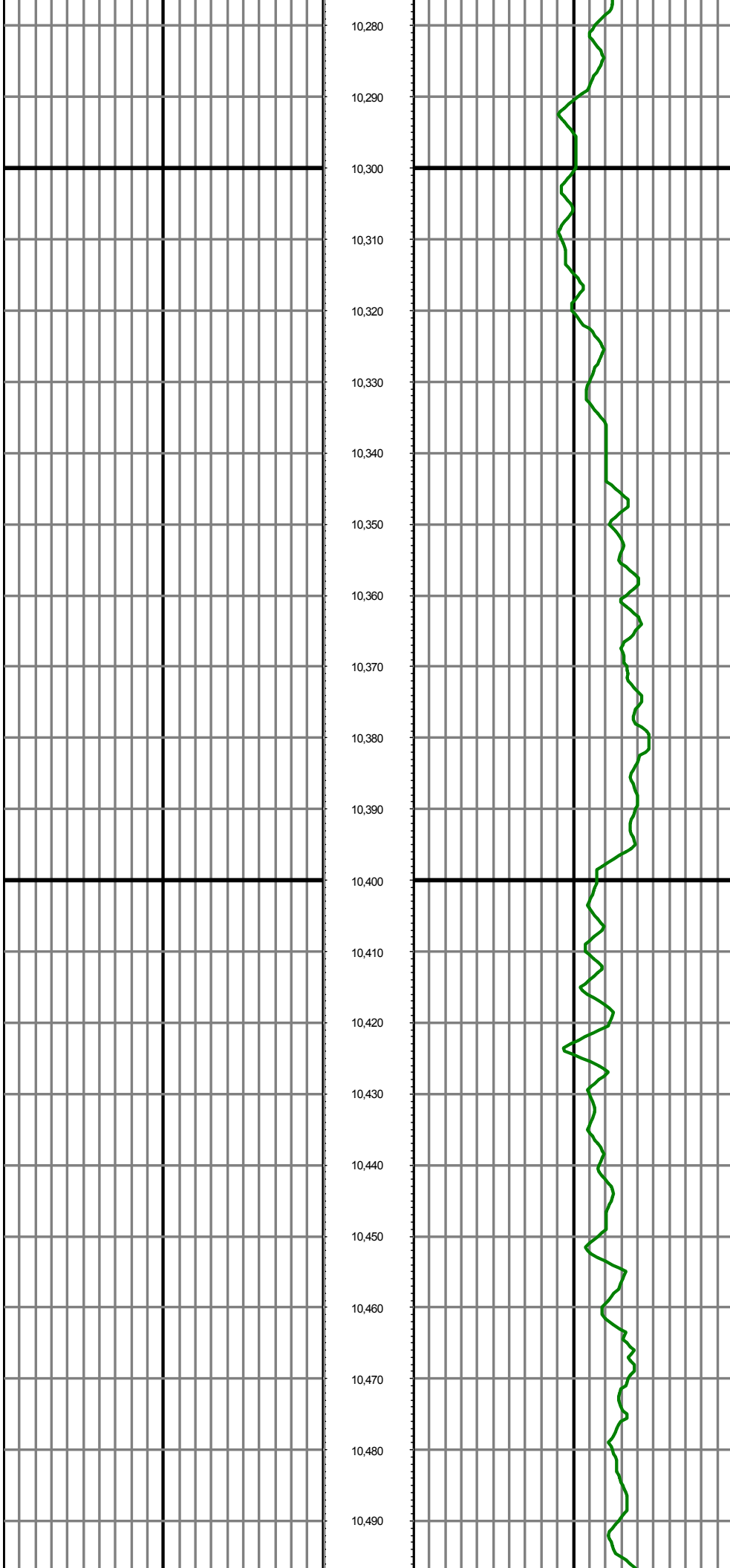
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MD: 9887.00 INC: 87.30 AZ: 357.70 TVD: 7114.45 VS: 2136.81

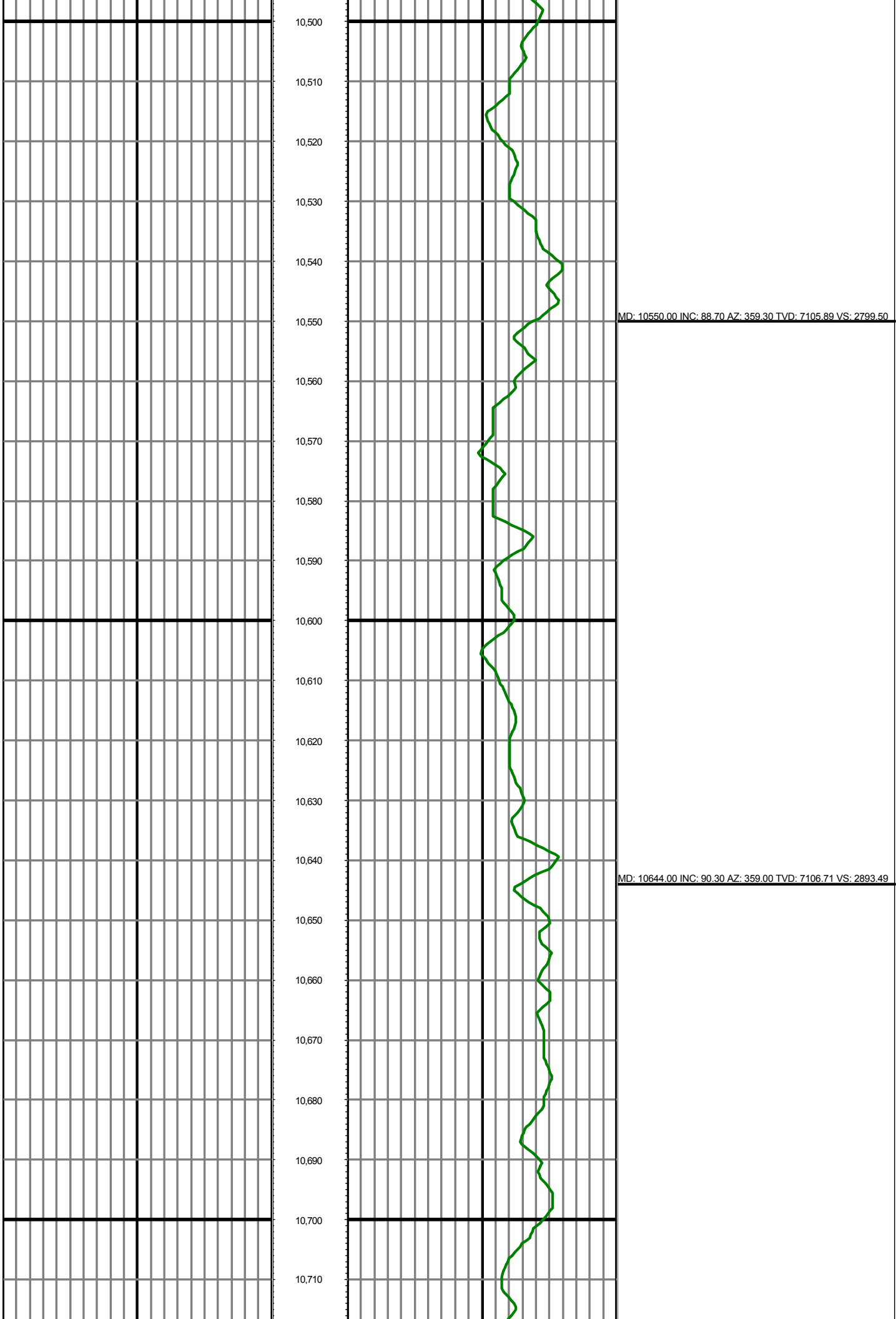
MD: 9982.00 INC: 90.70 AZ: 358.90 TVD: 7116.11 VS: 2231.73

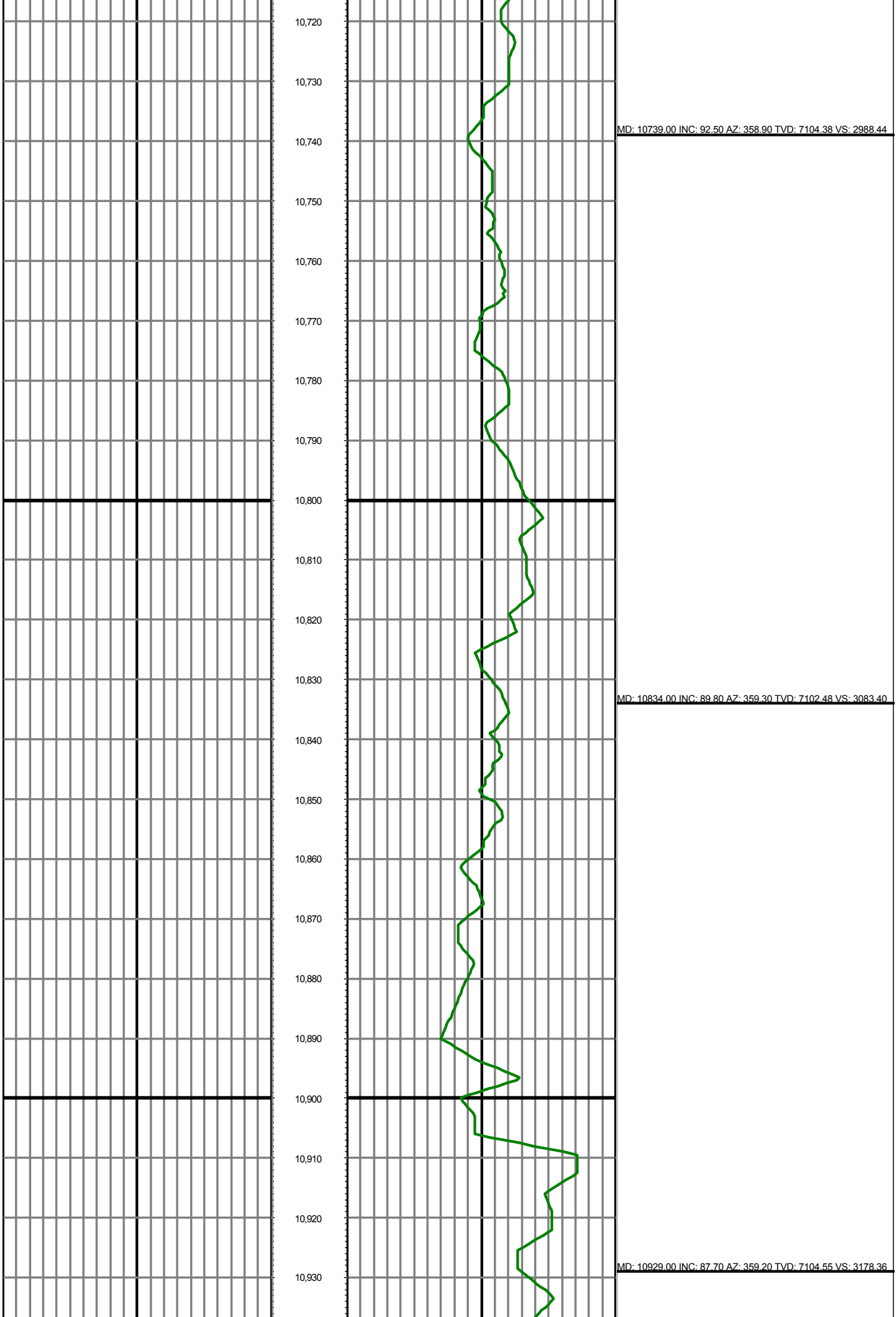


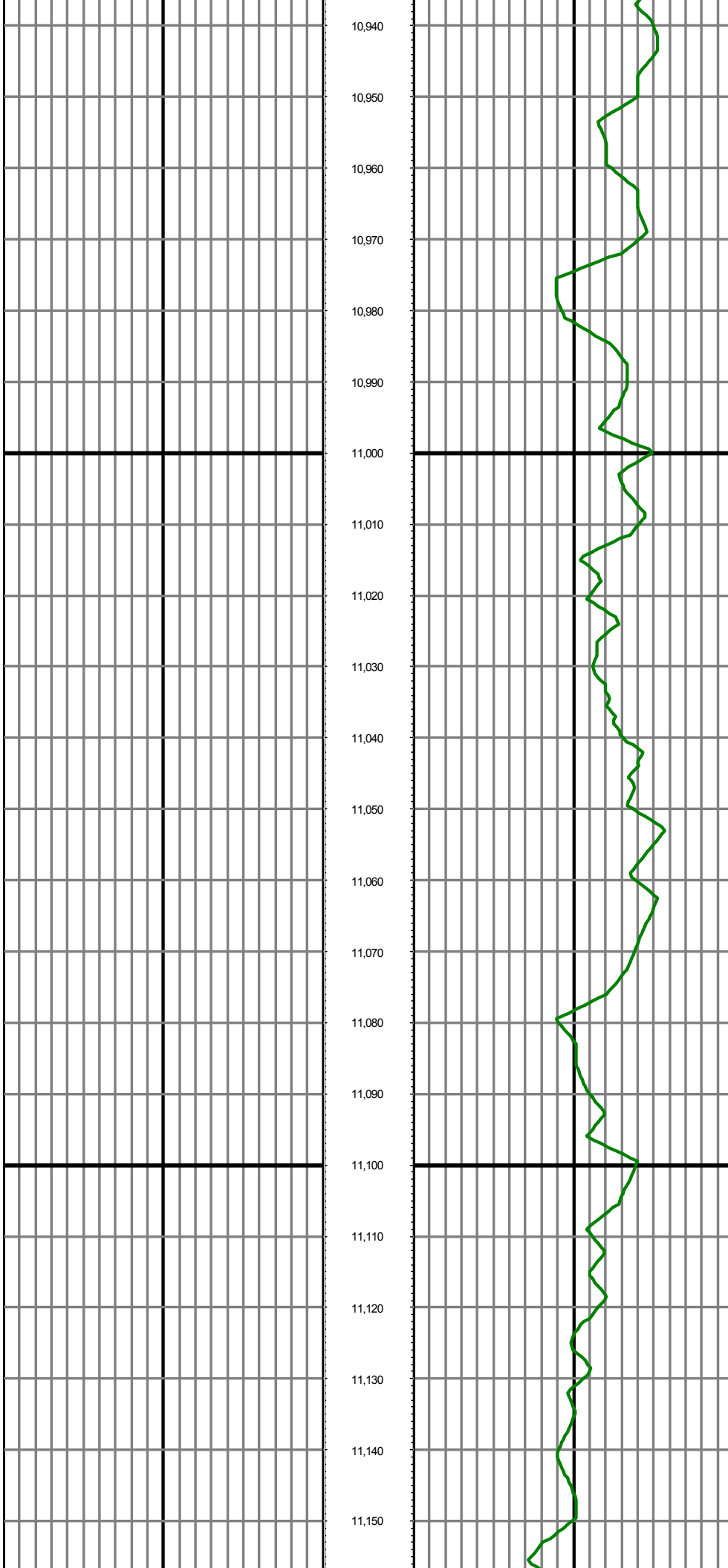


MD: 10360.00 INC: 91.70 AZ: 0.50 TVD: 7106.88 VS: 2609.53

MD: 10455.00 INC: 90.40 AZ: 359.50 TVD: 7105.14 VS: 2704.51



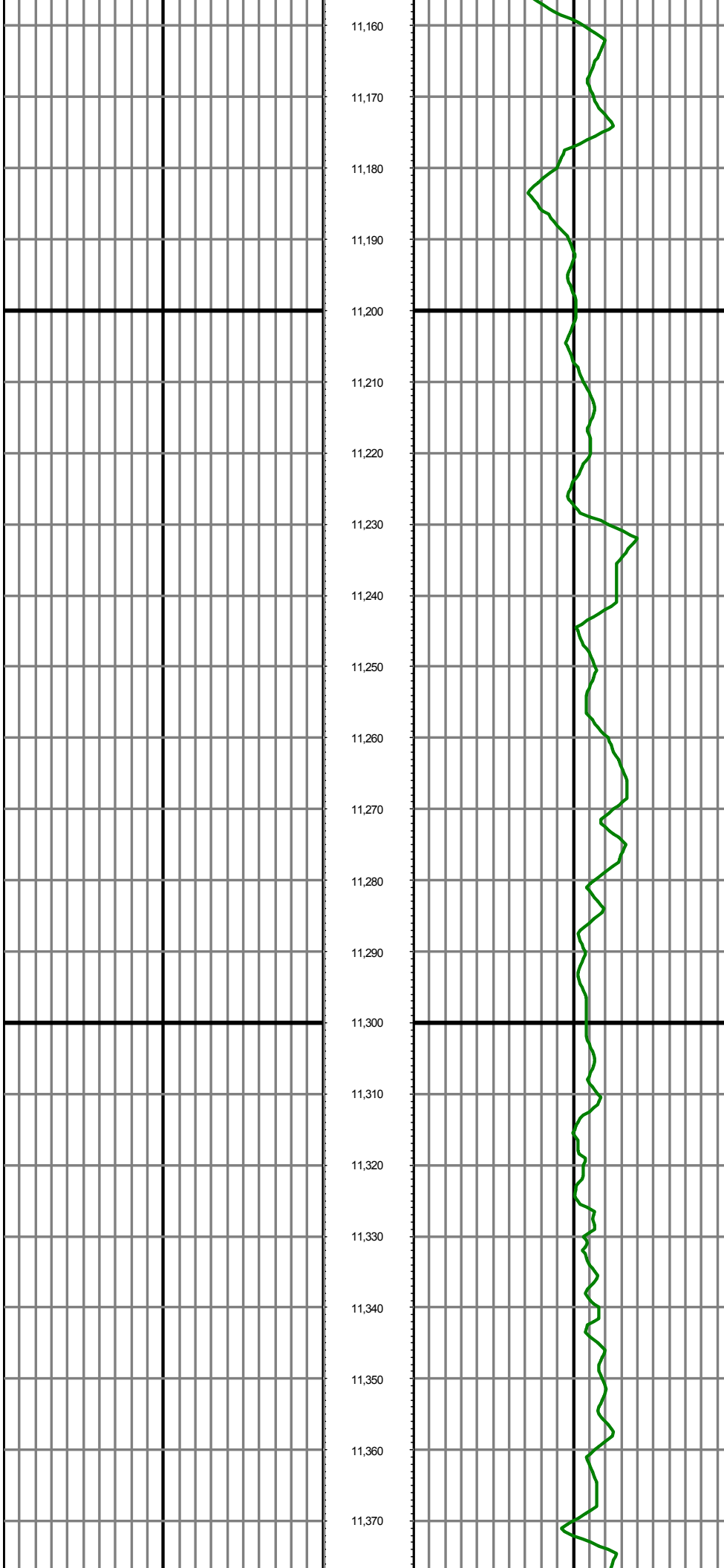




MD: 11023.00 INC: 89.00 AZ: 359.50 TVD: 7107.26 VS: 3272.32

MD: 11118.00 INC: 87.10 AZ: 359.00 TVD: 7110.49 VS: 3367.25





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MD: 11213.00 INC: 88.70 AZ: 358.90 TVD: 7113.97 VS: 3462.17

MD: 11308.00 INC: 90.90 AZ: 358.70 TVD: 7114.30 VS: 3557.14

