



Premier Directional Drilling
12941 North Freeway Suite 400
Houston, Texas 77060
PH: #281-673-4000

Iceman State 5N-C16HZ

Scale 5":100' - MD

9/6/2015 2:16 PM

Oper. Company: Anadarko Petroleum Corporation

State: CO

Well: Iceman State 5N-C16HZ

County: Weld

Field: Wattenberg

Country: USA

Rig: Precision 462

Location: 3N67WS15

Well ID: 05123413440000

Start Date: 09/02/2015 10:30:00

Job Number: H15536

End Date: 09/06/2015 03:50:00

Notes: Recorded Memory Log
Gamma Correction Determined by Pipe ID & OD, Mud Weight & Bit Size

Latitude: 40.227742

Elev KB: 20'

Longitude: -104.882658

Elev DF: 4816'

Elev GL: 4796'

Notes: Datum: NAD1983 Map Zone: 13N (108 W to 102 W) Total Correction: 8.43° Grid Convergence: 0.00° (True North)

Operator 1: David Clancy

Operator 2: Austin Capaldo

Notes: Smoothing: 7 Gap Fill: 10 Tool Type: Mud Pulse Calculation Method: Minimum Curvature

Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	173	214			
Bit Size	8 1/2	8 1/2			
Cal Factor	6.2134	6.05796			
Survey Offset:	68.15	68.10			
Gamma Offset	66.15	66.10			
Resistivity Offset	0.00	0.00			
Start Depth	6284.00	6399.00			
StartDate	9/1/2015	9/3/2015			
StartTime	05:00	00:20			
EndDepth	6399.00	13131.00			
EndDate	9/2/2015	9/6/2015			
EndTime	22:30	17:00			
Mud Type	OBM	OBM			
Mud Weight	9.2	9.65			
Funnel Viscosity	92	57			
Plastic Viscosity	18	18			
Yield Point	15	12			
Gel Strength	17	17			
Solids Content	11.14	11.07			
Sand Content	NA	NA			
Mud Alkalinity	2.72	7.4			
Filtrate Alkalinity	NA	NA			
Chlorides	48000	47000			
Mud RM	NA	NA			
Mud RMF	NA	NA			
Mud RMC	NA	NA			
Mud RM at BHT	NA	NA			
Temperature	NA	NA			

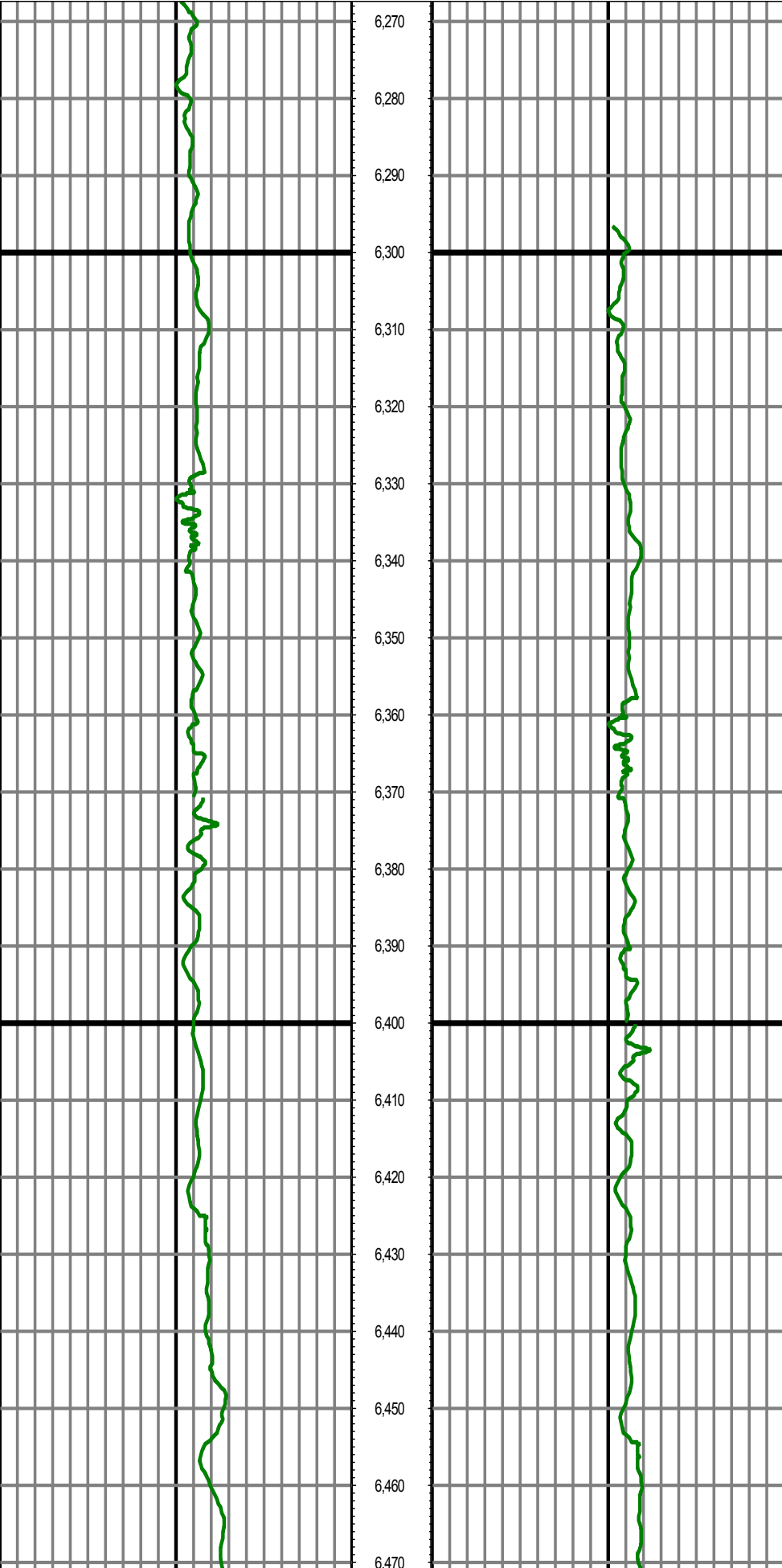
Hole Data			Casing Data		
Size	From	To	Size	From	To
13 1/2	0.00	1665.00	9 5/8	0.00	1655.00
8 1/2	1665.00	13131.00	5 1/2	0.00	13131.00

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	R2(API) on TVD	200.00
200.00		2		400.00
0.00	GR	RM	R1(API) on TVD	200.00
200.00		2		400.00

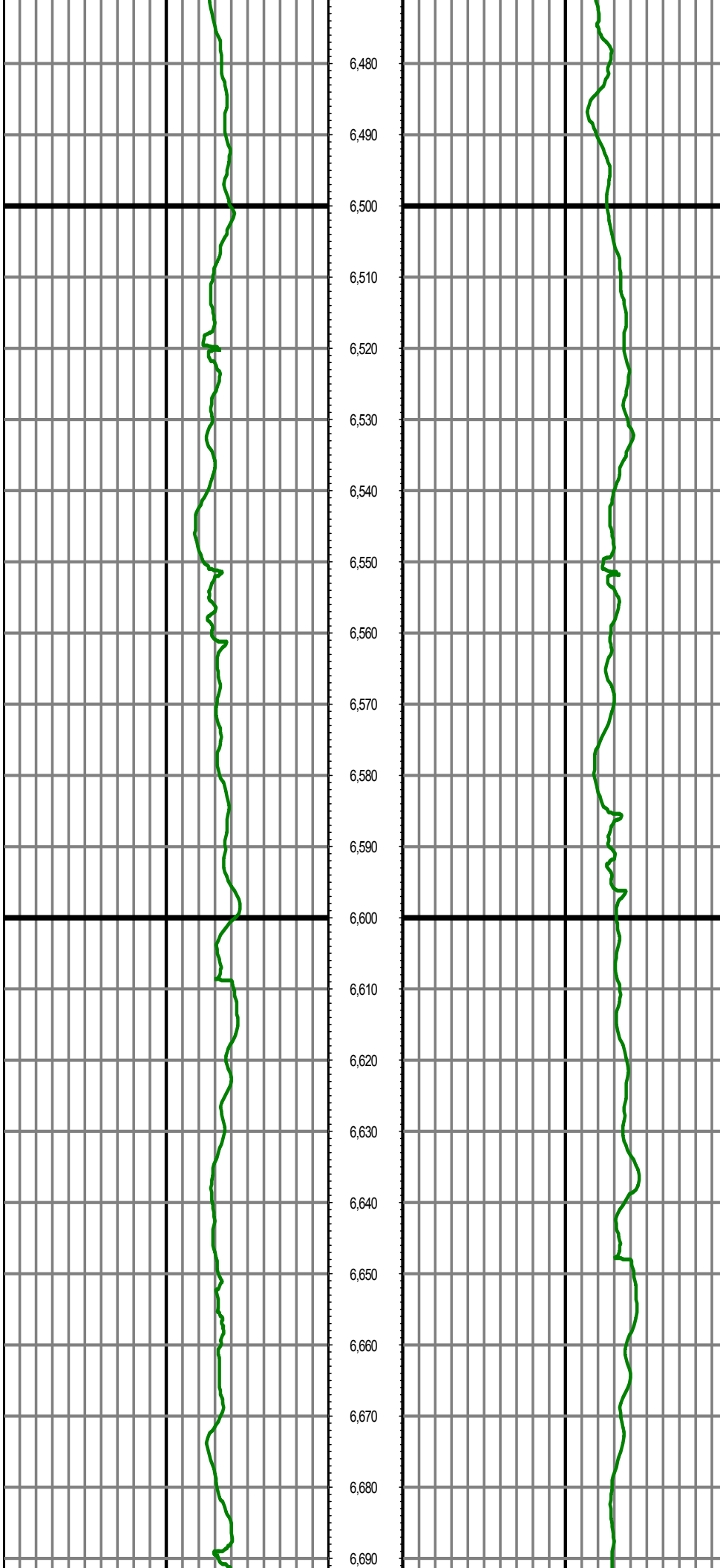
MD	0.00	GR	RM	R2(API) on MD	200.00
FT	200.00		2		400.00
	0.00	GR	RM	R1(API) on MD	200.00
	200.00		2		400.00

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



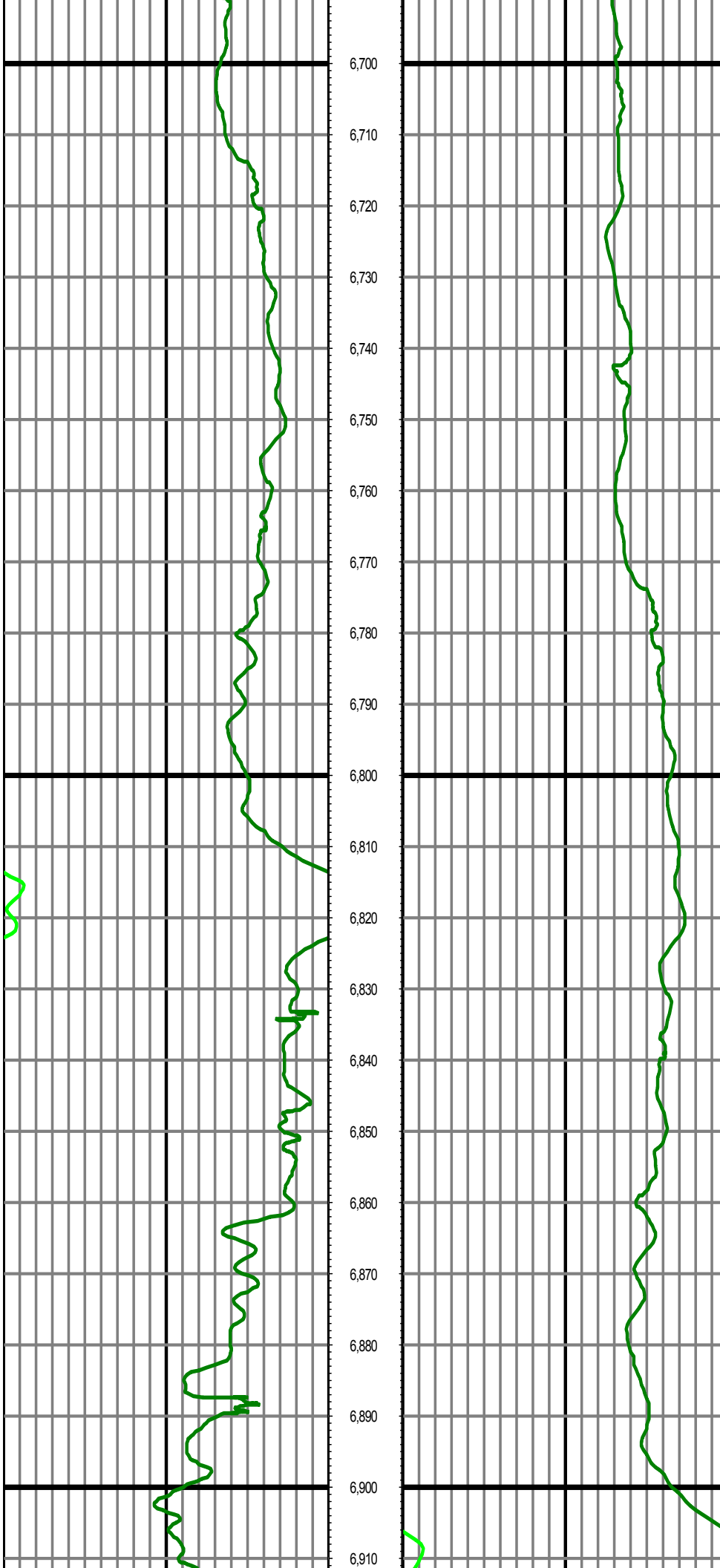
MD: 6361.00 INC: 1.48 AZ: 20.25 TVD: 6331.73 VS: -384.59

MD: 6456.00 INC: 5.85 AZ: 260.64 TVD: 6426.58 VS: -380.23



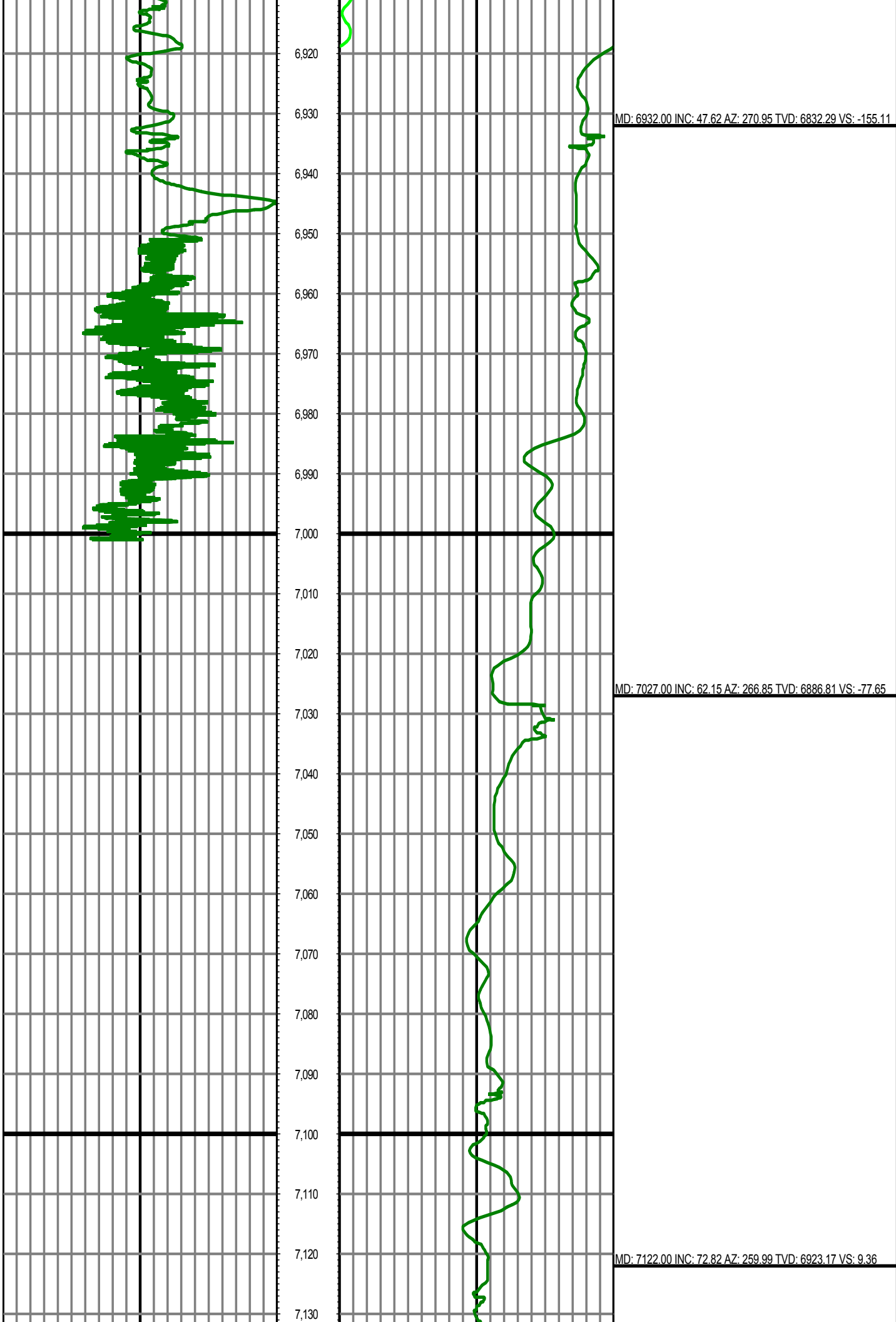
MD: 6551.00 INC: 17.29 AZ: 252.42 TVD: 6519.50 VS: -361.92

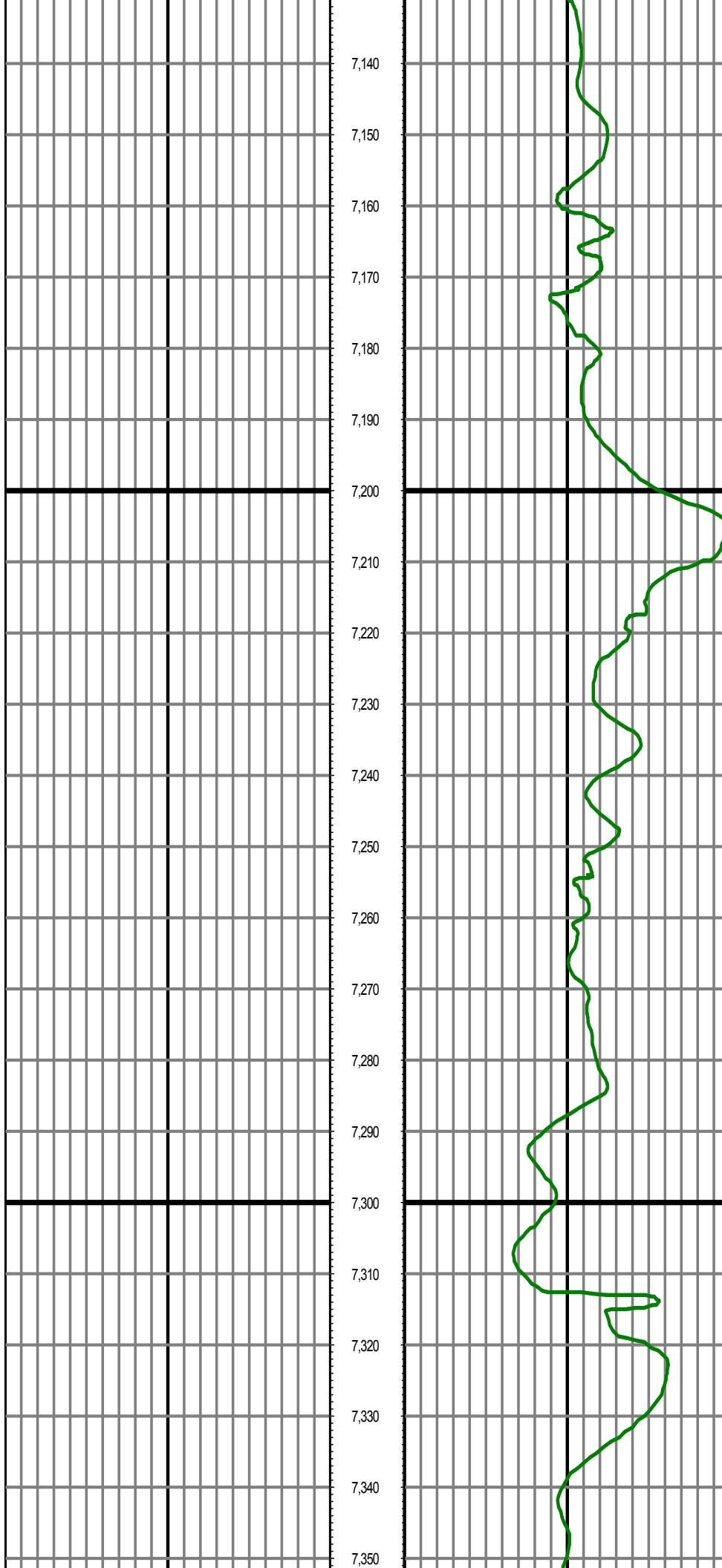
MD: 6646.00 INC: 27.77 AZ: 253.24 TVD: 6607.13 VS: -327.13



MD: 6741.00 INC: 35.69 AZ: 258.11 TVD: 6687.88 VS: -278.69

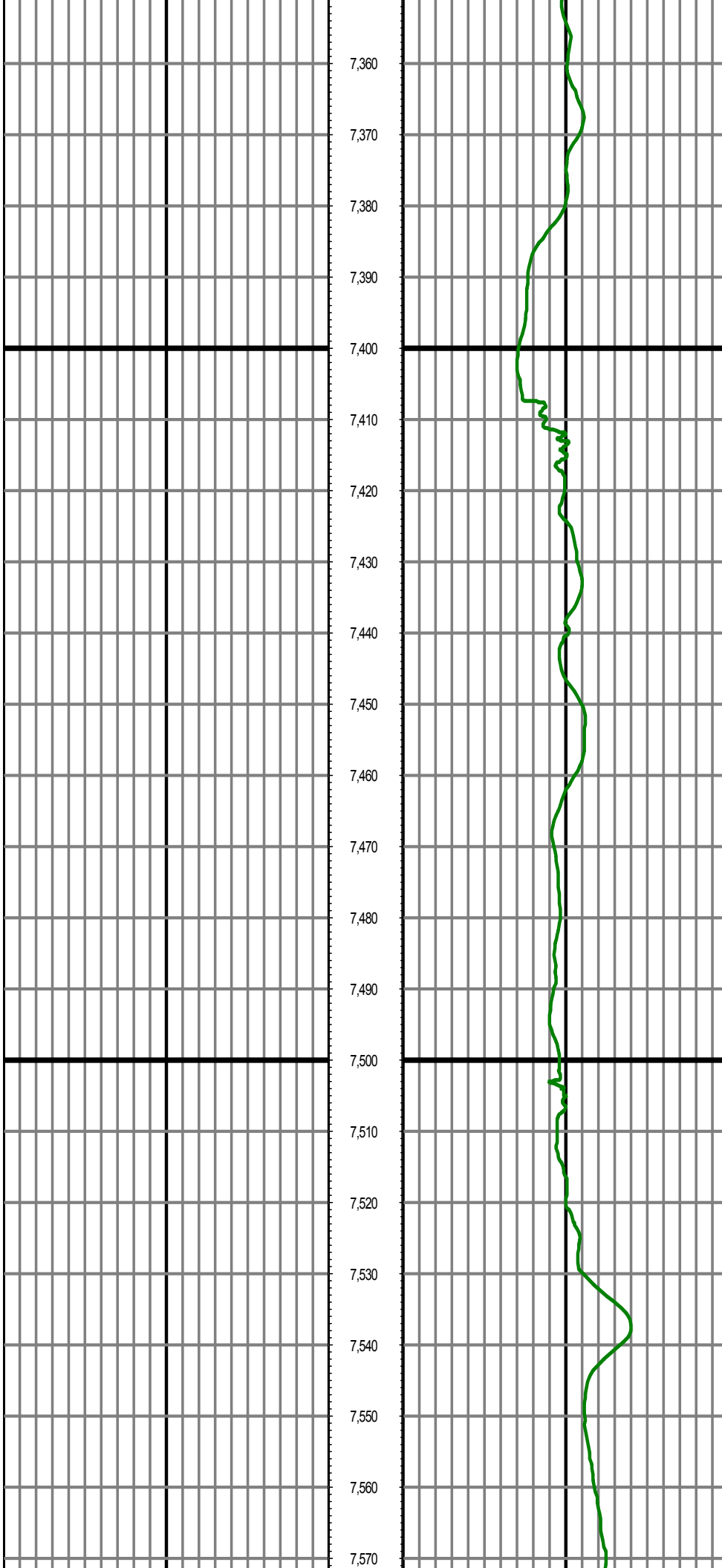
MD: 6836.00 INC: 39.89 AZ: 262.89 TVD: 6762.95 VS: -221.27





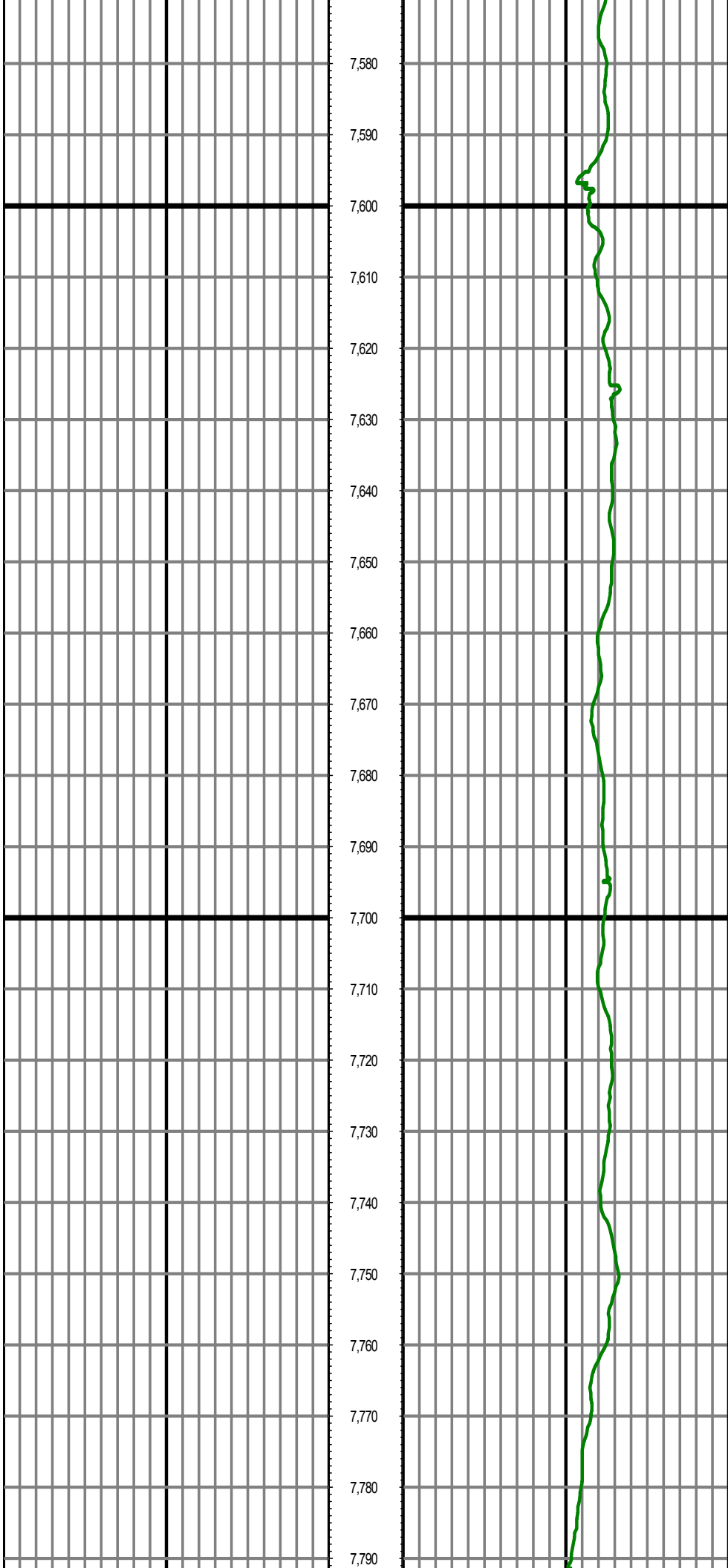
MD: 7217.00 INC: 77.05 AZ: 259.59 TVD: 6947.86 VS: 99.68

MD: 7312.00 INC: 84.07 AZ: 263.55 TVD: 6963.43 VS: 192.36



MD: 7407.00 INC: 93.06 AZ: 269.07 TVD: 6965.81 VS: 287.02

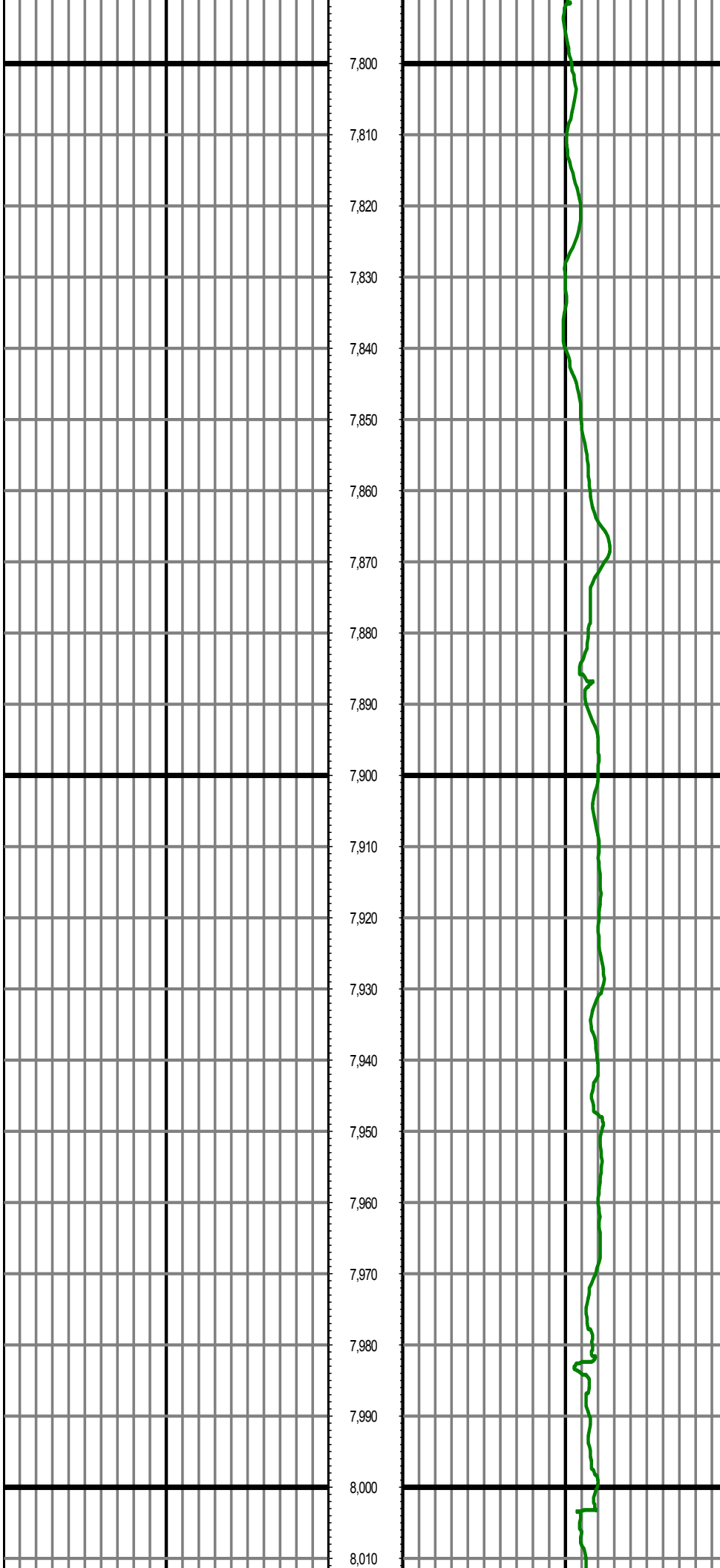
MD: 7502.00 INC: 94.28 AZ: 271.30 TVD: 6959.73 VS: 381.82



MD: 7598.00 INC: 93.25 AZ: 273.34 TVD: 6953.43 VS: 477.51

MD: 7693.00 INC: 89.44 AZ: 273.30 TVD: 6951.20 VS: 572.28

MD: 7788.00 INC: 88.94 AZ: 273.87 TVD: 6952.54 VS: 667.07



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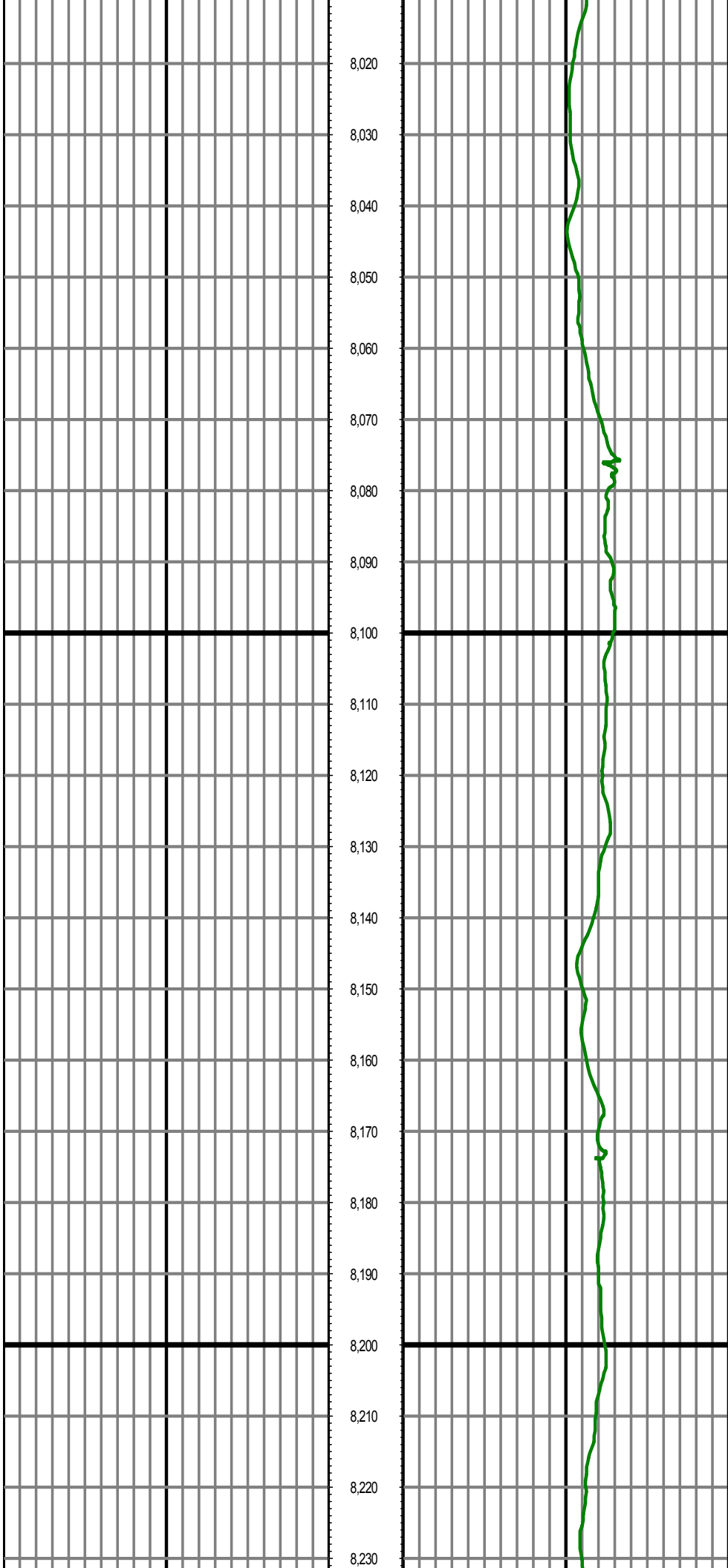
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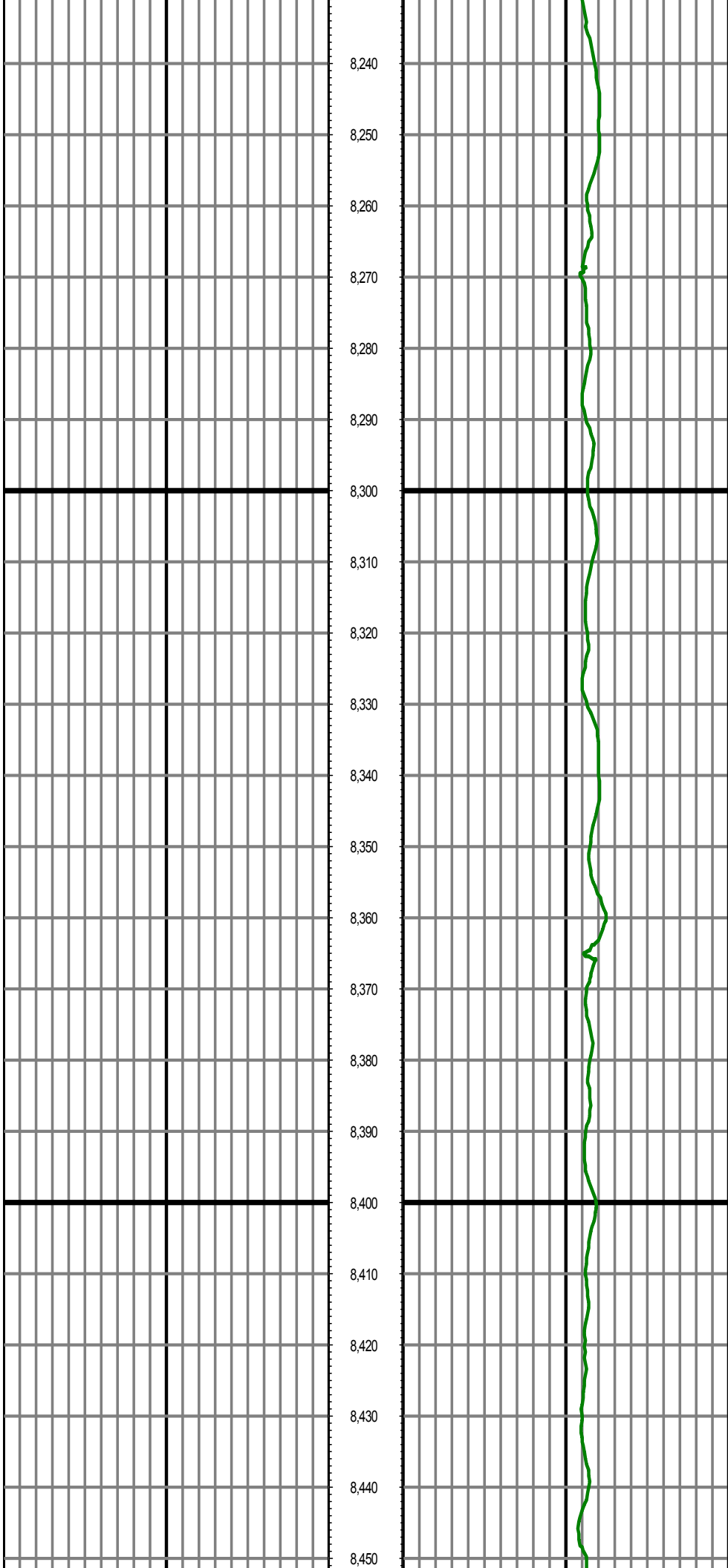
MD: 7883.00 INC: 89.57 AZ: 273.68 TVD: 6953.78 VS: 761.83

MD: 7978.00 INC: 90.69 AZ: 272.63 TVD: 6953.56 VS: 856.66



MD: 8073.00 INC: 92.01 AZ: 271.90 TVD: 6951.32 VS: 951.54

MD: 8168.00 INC: 88.47 AZ: 273.05 TVD: 6950.92 VS: 1046.42



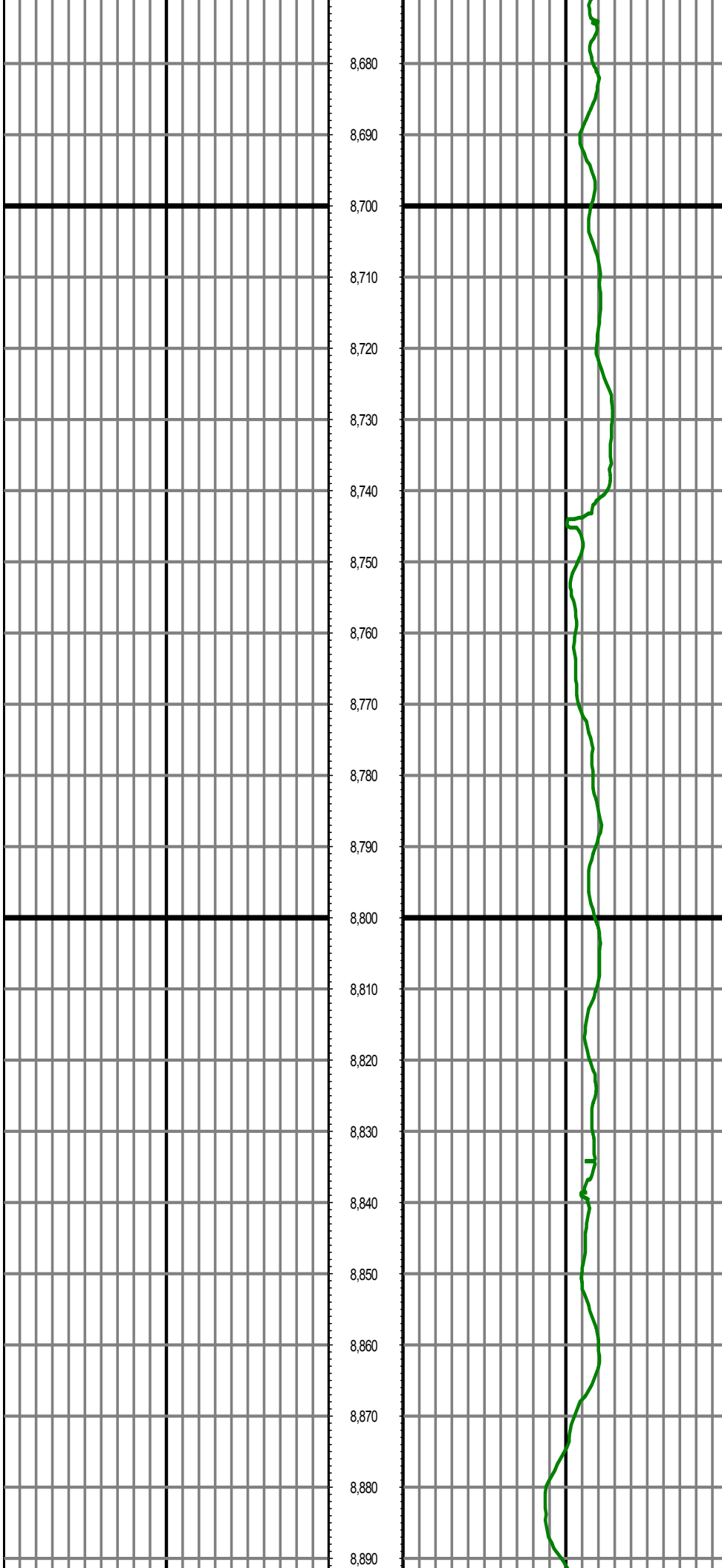
MD: 8263.00 INC: 88.42 AZ: 272.66 TVD: 6953.50 VS: 1141.25

MD: 8358.00 INC: 88.74 AZ: 272.70 TVD: 6955.86 VS: 1236.09

MD: 8454.00 INC: 89.13 AZ: 271.54 TVD: 6957.64 VS: 1332.00

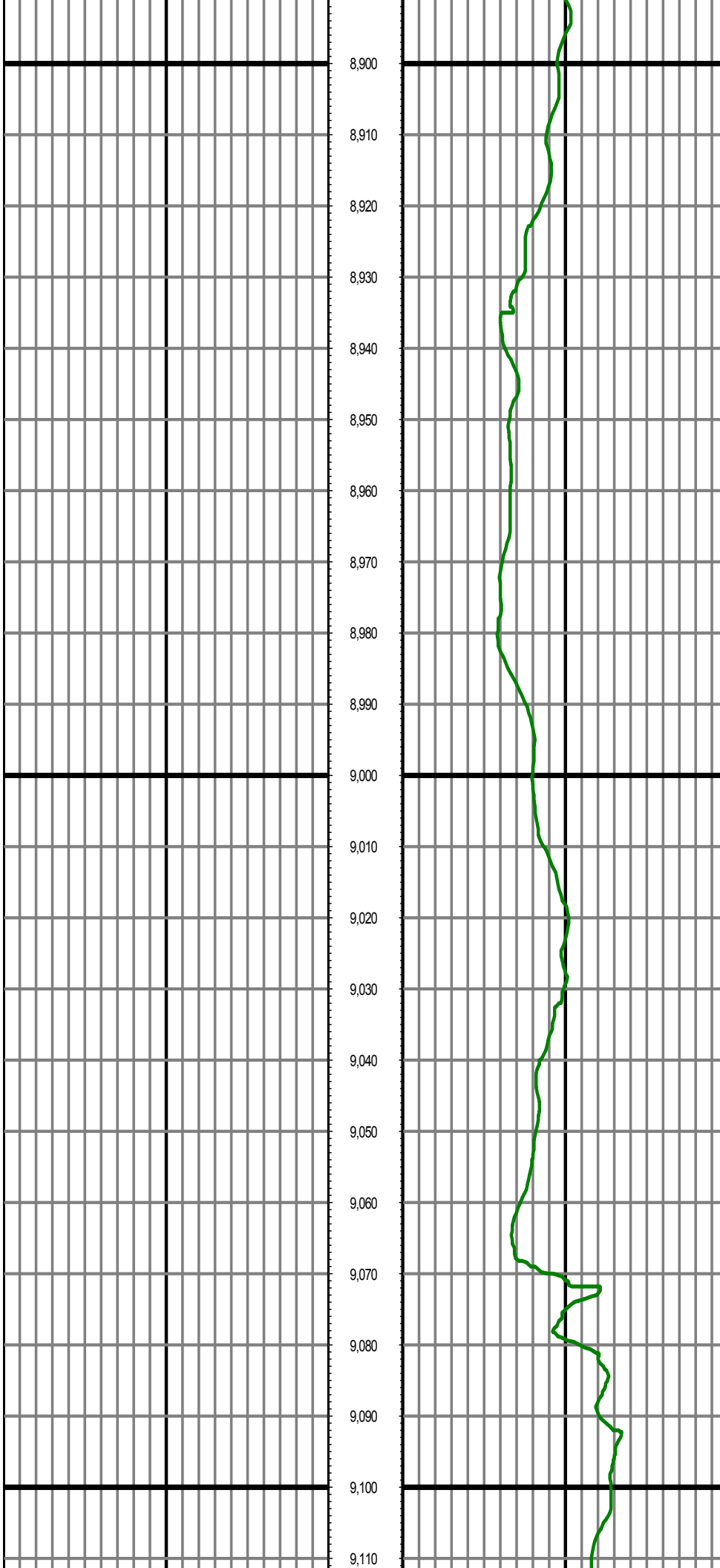
MD: 8549.00 INC: 89.66 AZ: 270.81 TVD: 6958.64 VS: 1426.96

MD: 8645.00 INC: 90.33 AZ: 270.67 TVD: 6958.65 VS: 1522.95



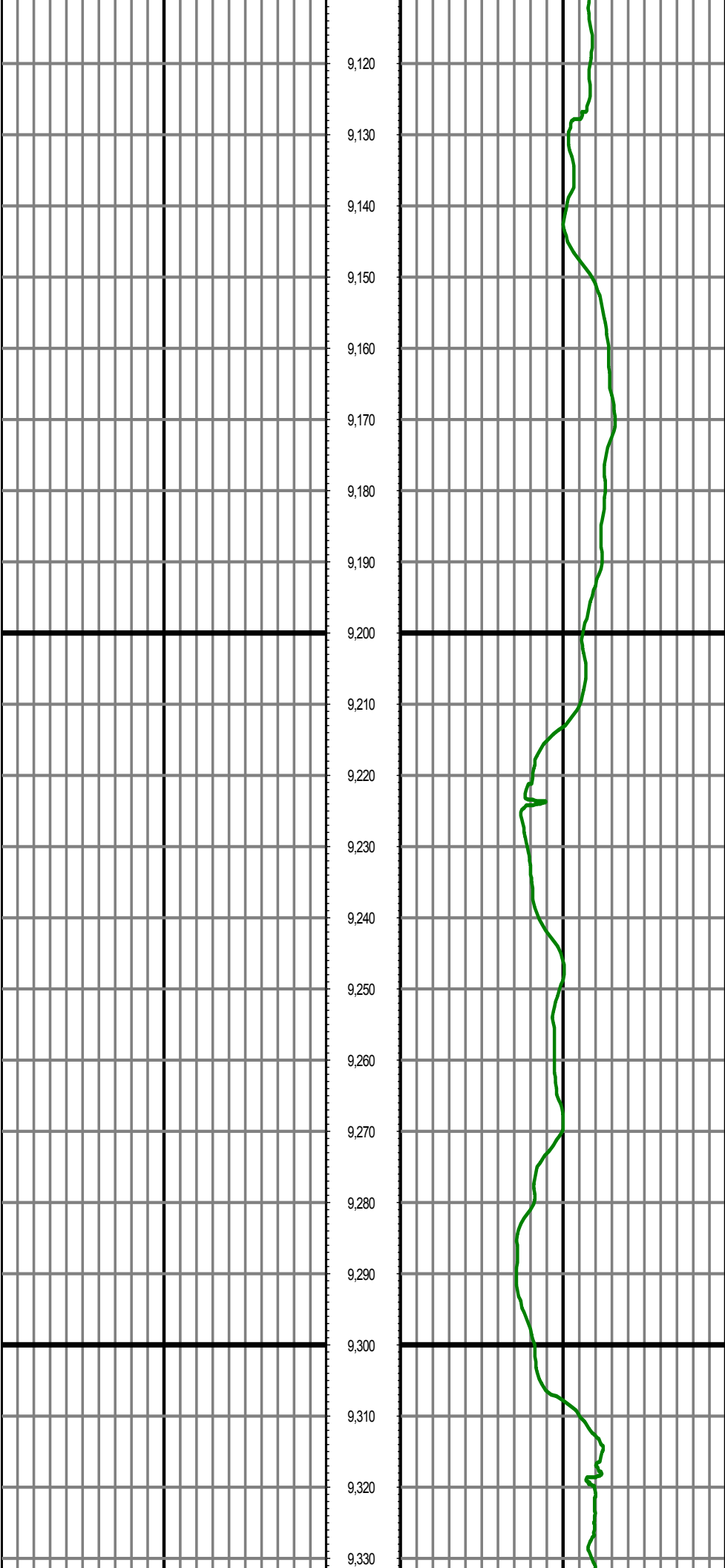
MD: 8740.00 INC: 88.06 AZ: 270.30 TVD: 6959.99 VS: 1617.92

MD: 8835.00 INC: 87.89 AZ: 270.36 TVD: 6963.34 VS: 1712.86



MD: 8931.00 INC: 88.69 AZ: 269.81 TVD: 6966.21 VS: 1808.82

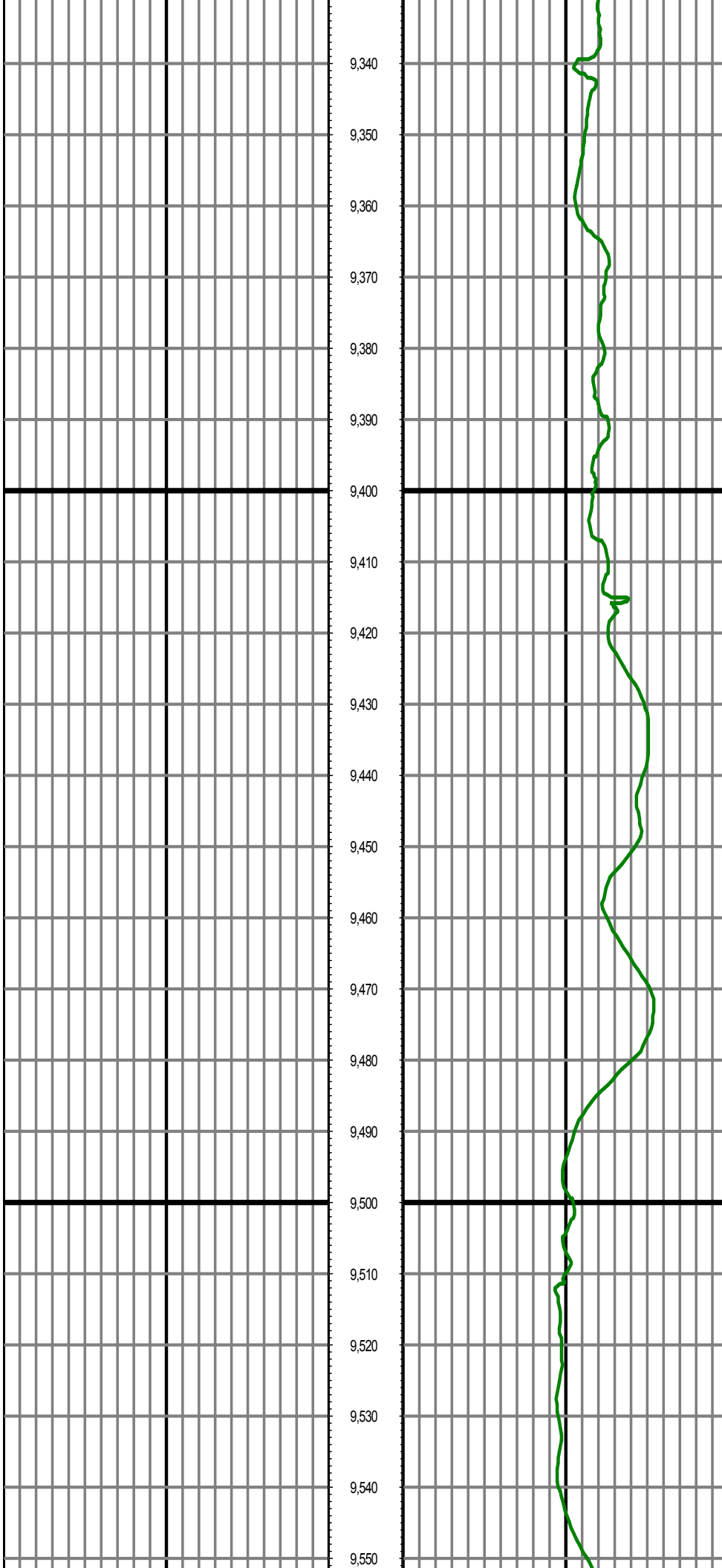
MD: 9026.00 INC: 90.42 AZ: 269.53 TVD: 6966.95 VS: 1903.81



MD: 9122.00 INC: 92.11 AZ: 268.58 TVD: 6964.83 VS: 1999.77

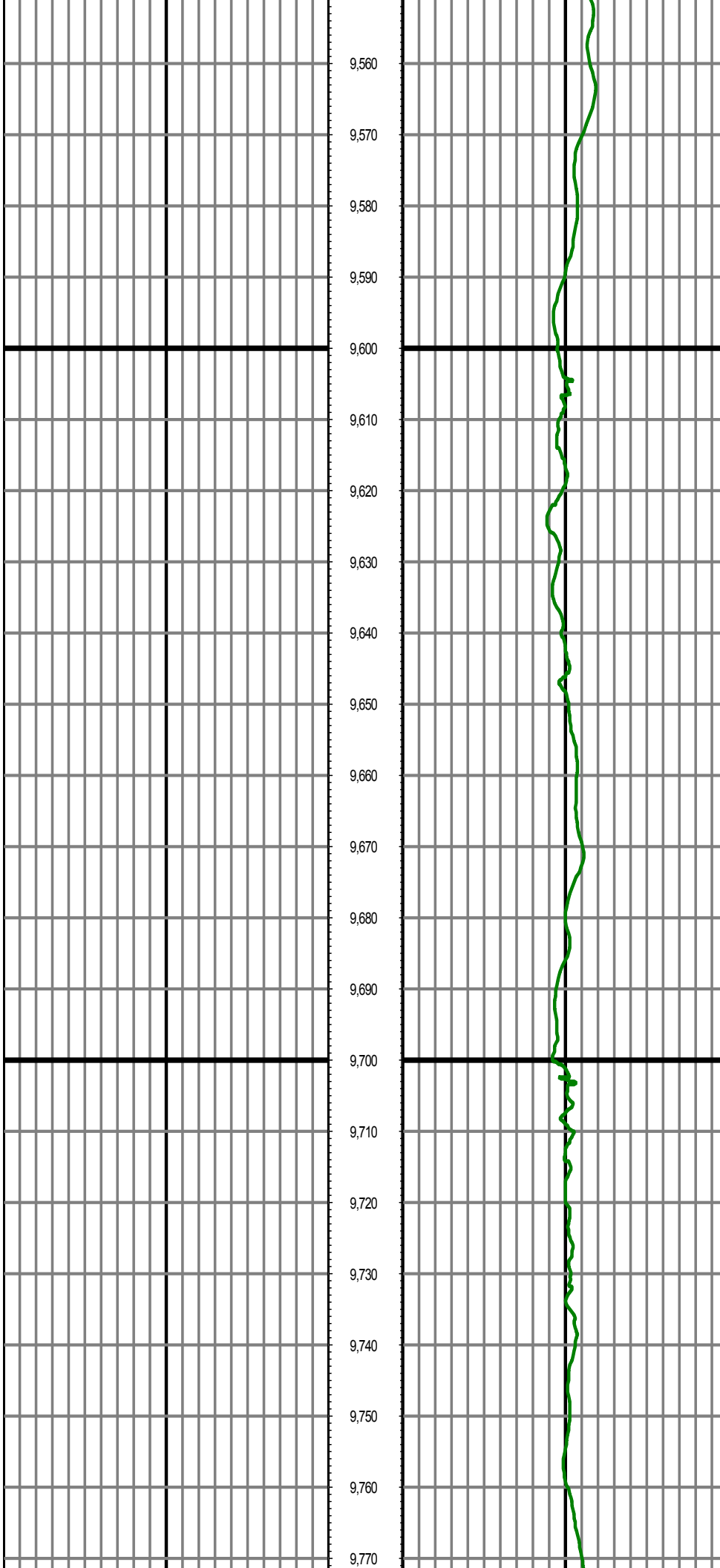
MD: 9217.00 INC: 89.20 AZ: 268.22 TVD: 6963.74 VS: 2094.73

MD: 9313.00 INC: 90.71 AZ: 268.04 TVD: 6963.82 VS: 2190.69



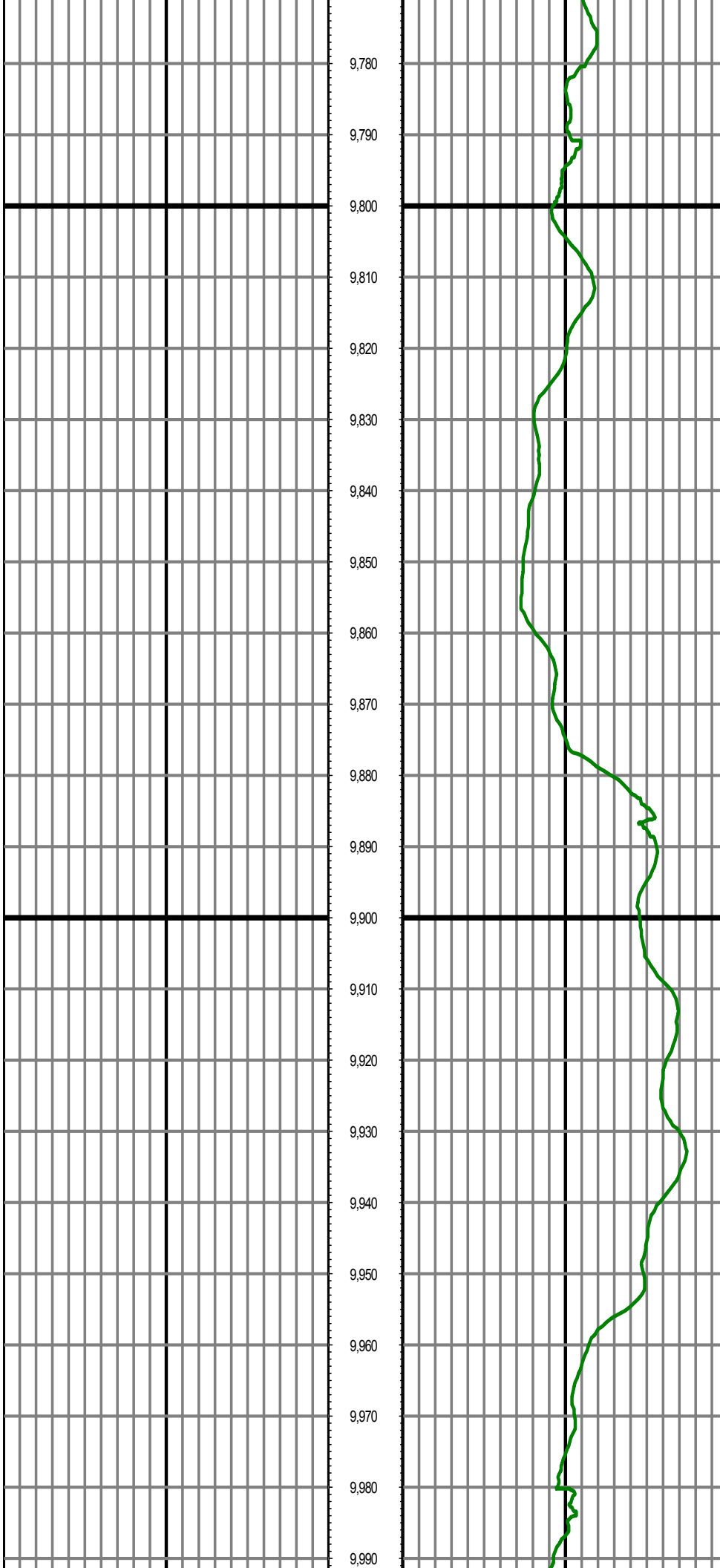
MD: 9408.00 INC: 88.81 AZ: 268.18 TVD: 6964.21 VS: 2285.64

MD: 9503.00 INC: 89.42 AZ: 267.71 TVD: 6965.68 VS: 2380.58



MD: 9598.00 INC: 91.13 AZ: 266.79 TVD: 6965.22 VS: 2475.48

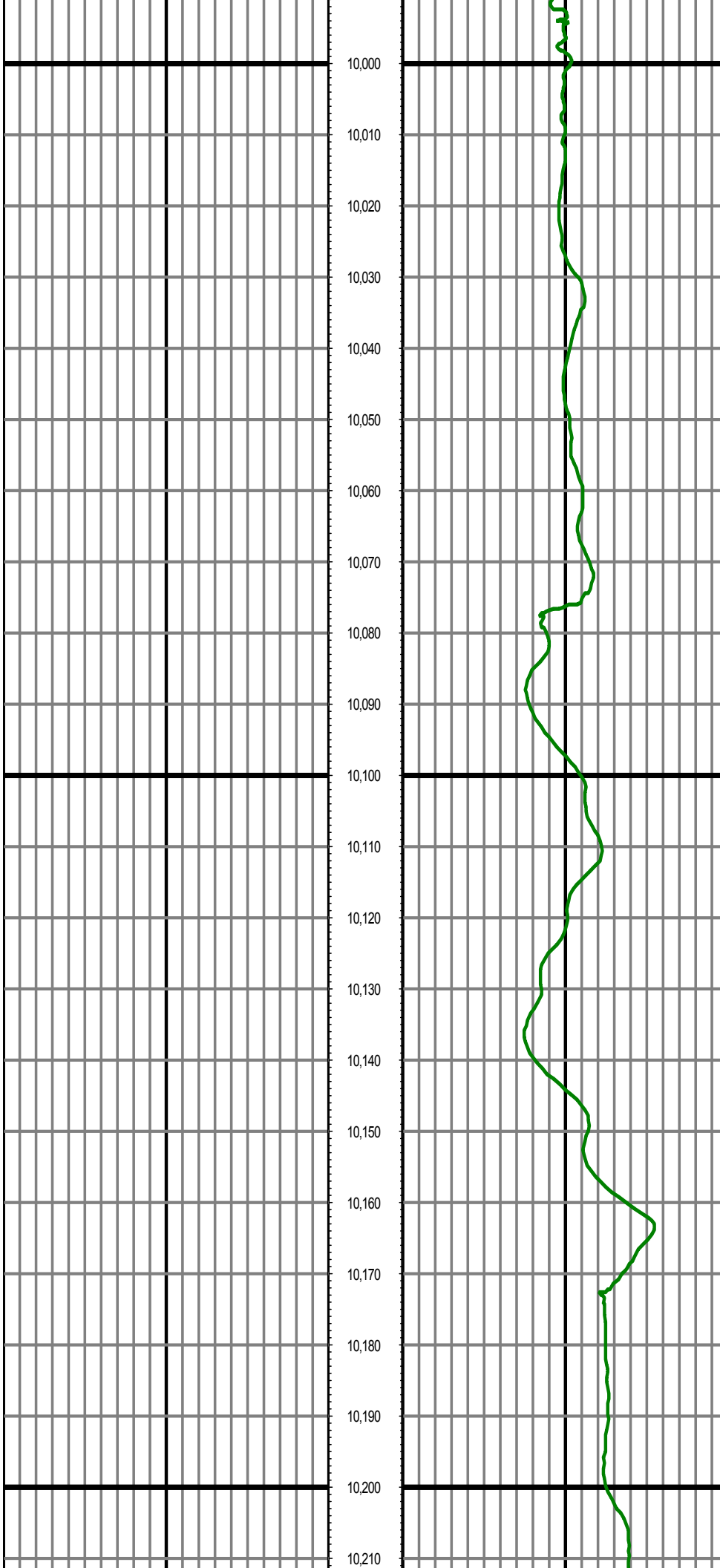
MD: 9694.00 INC: 91.57 AZ: 267.86 TVD: 6962.96 VS: 2571.37



MD: 9789.00 INC: 88.92 AZ: 272.80 TVD: 6962.56 VS: 2666.32

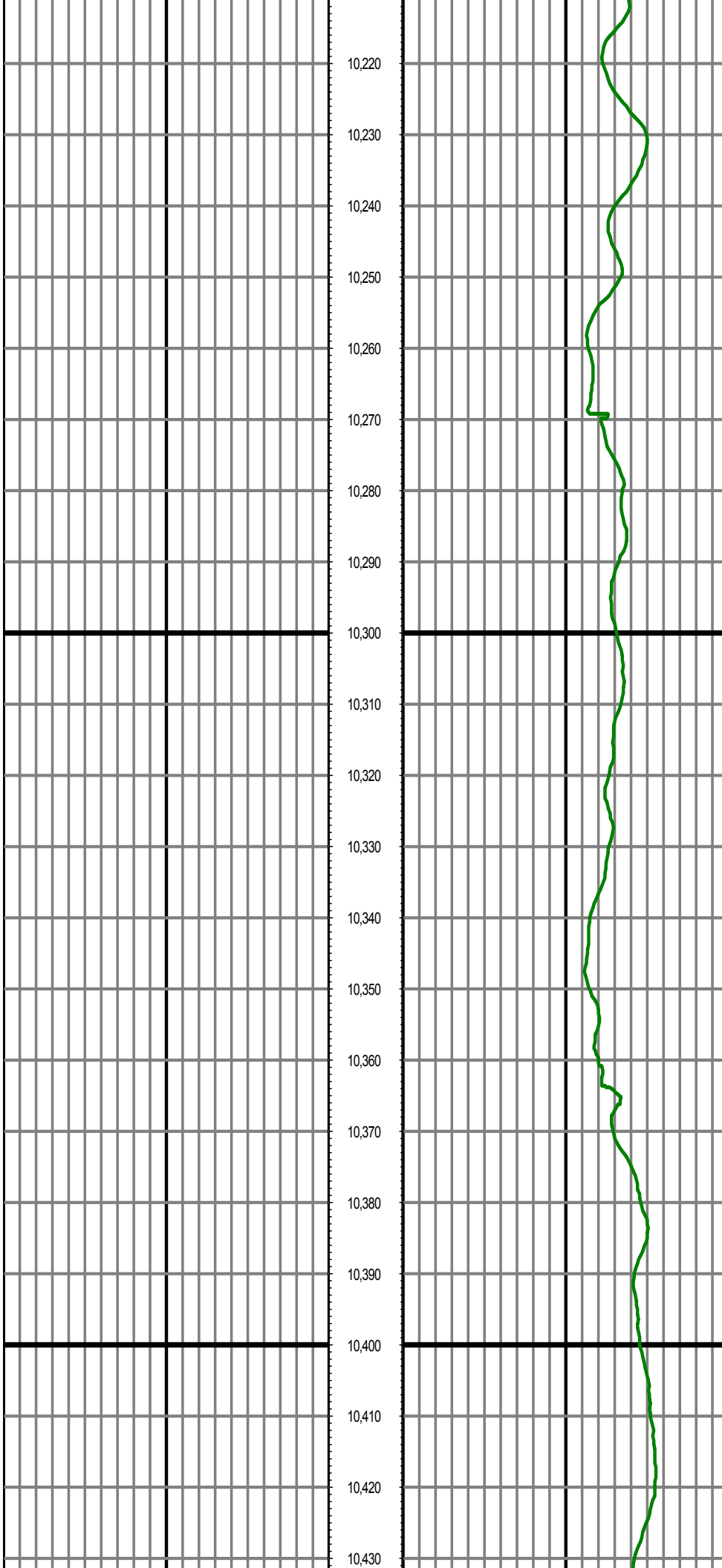
MD: 9884.00 INC: 88.84 AZ: 273.64 TVD: 6964.41 VS: 2761.13

MD: 9979.00 INC: 90.19 AZ: 272.82 TVD: 6965.22 VS: 2855.95



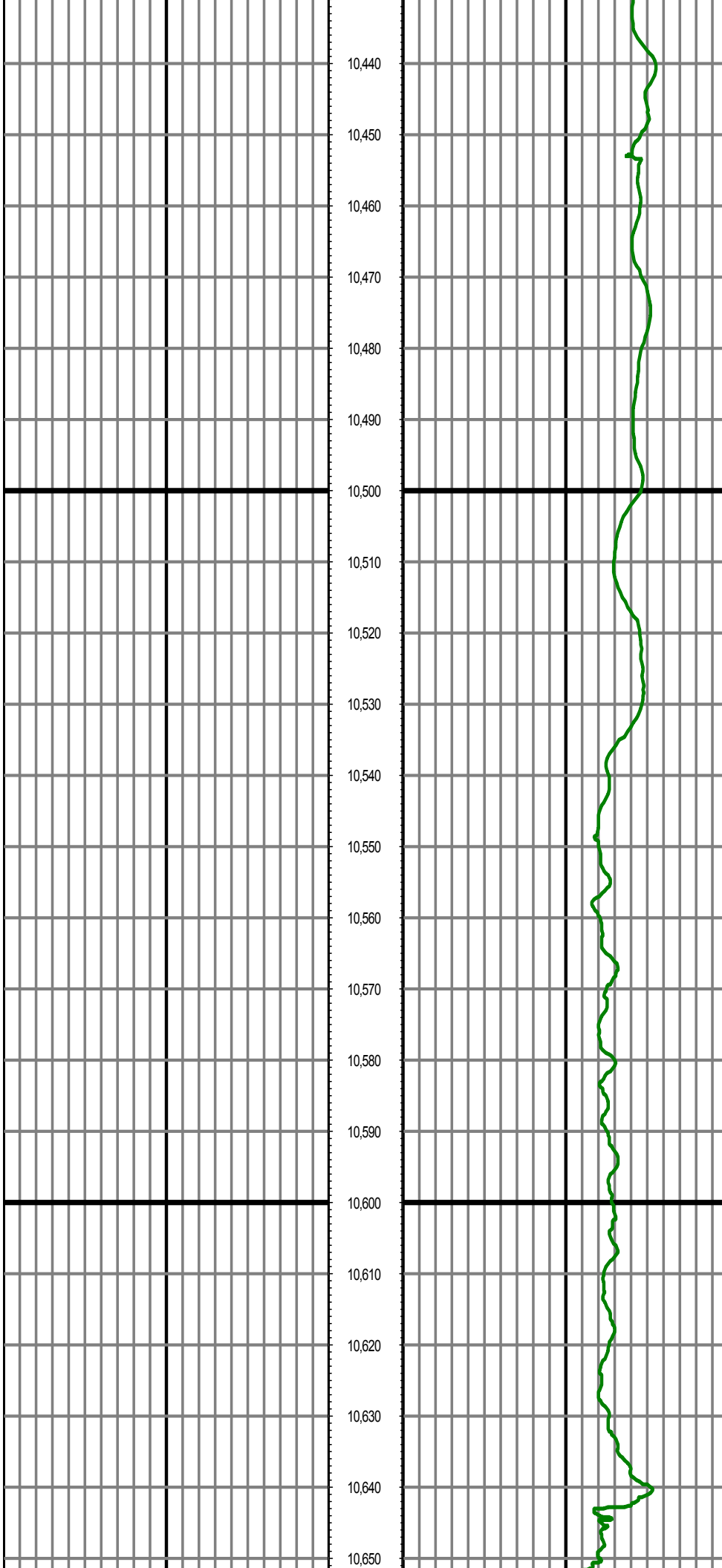
MD: 10073.00 INC: 87.26 AZ: 272.01 TVD: 6967.31 VS: 2949.82

MD: 10167.00 INC: 86.89 AZ: 271.75 TVD: 6972.11 VS: 3043.63



MD: 10263.00 INC: 87.56 AZ: 271.68 TVD: 6976.75 VS: 3139.47

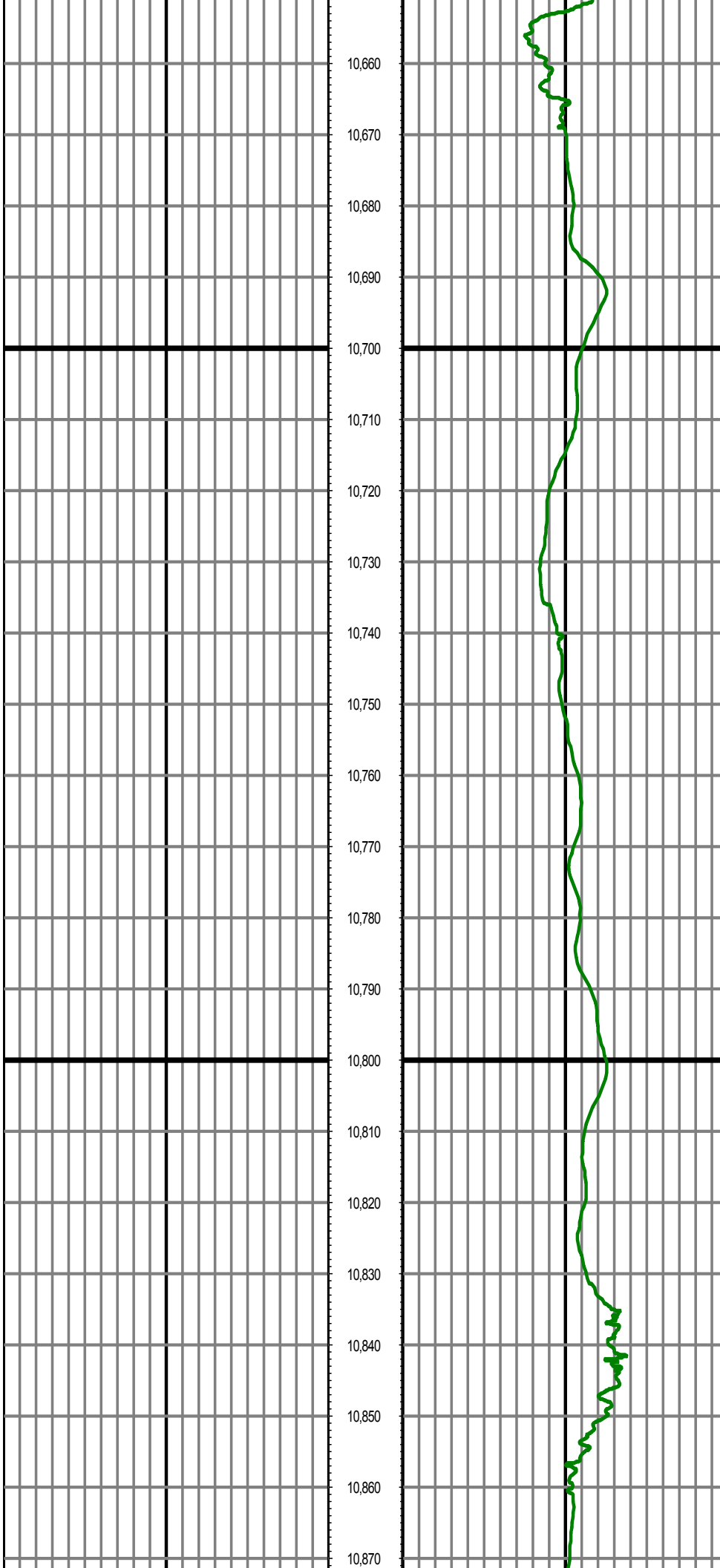
MD: 10358.00 INC: 88.93 AZ: 270.60 TVD: 6979.66 VS: 3234.39



MD: 10453.00 INC: 90.33 AZ: 270.06 TVD: 6980.28 VS: 3329.38

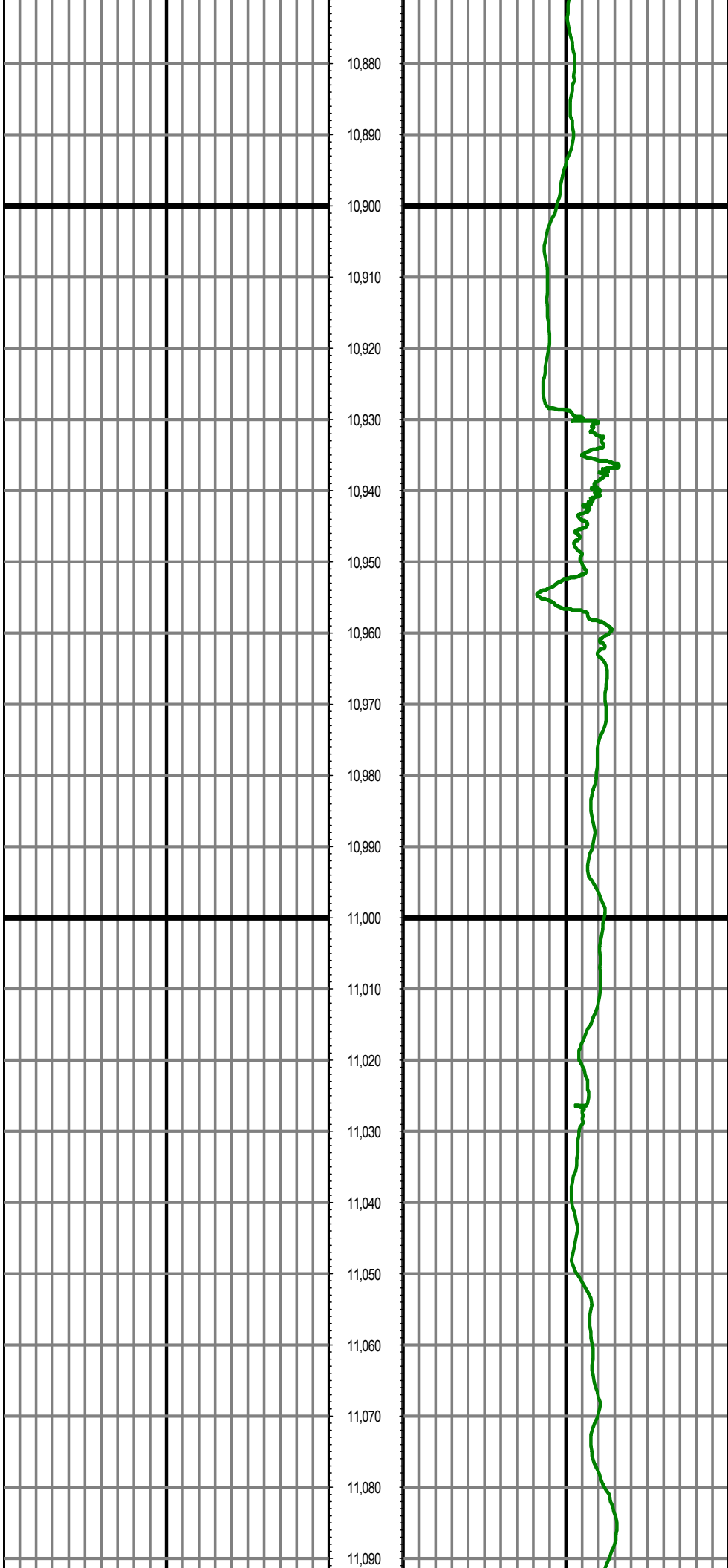
MD: 10548.00 INC: 91.66 AZ: 270.18 TVD: 6978.63 VS: 3424.36

MD: 10643.00 INC: 93.33 AZ: 269.39 TVD: 6974.49 VS: 3519.27



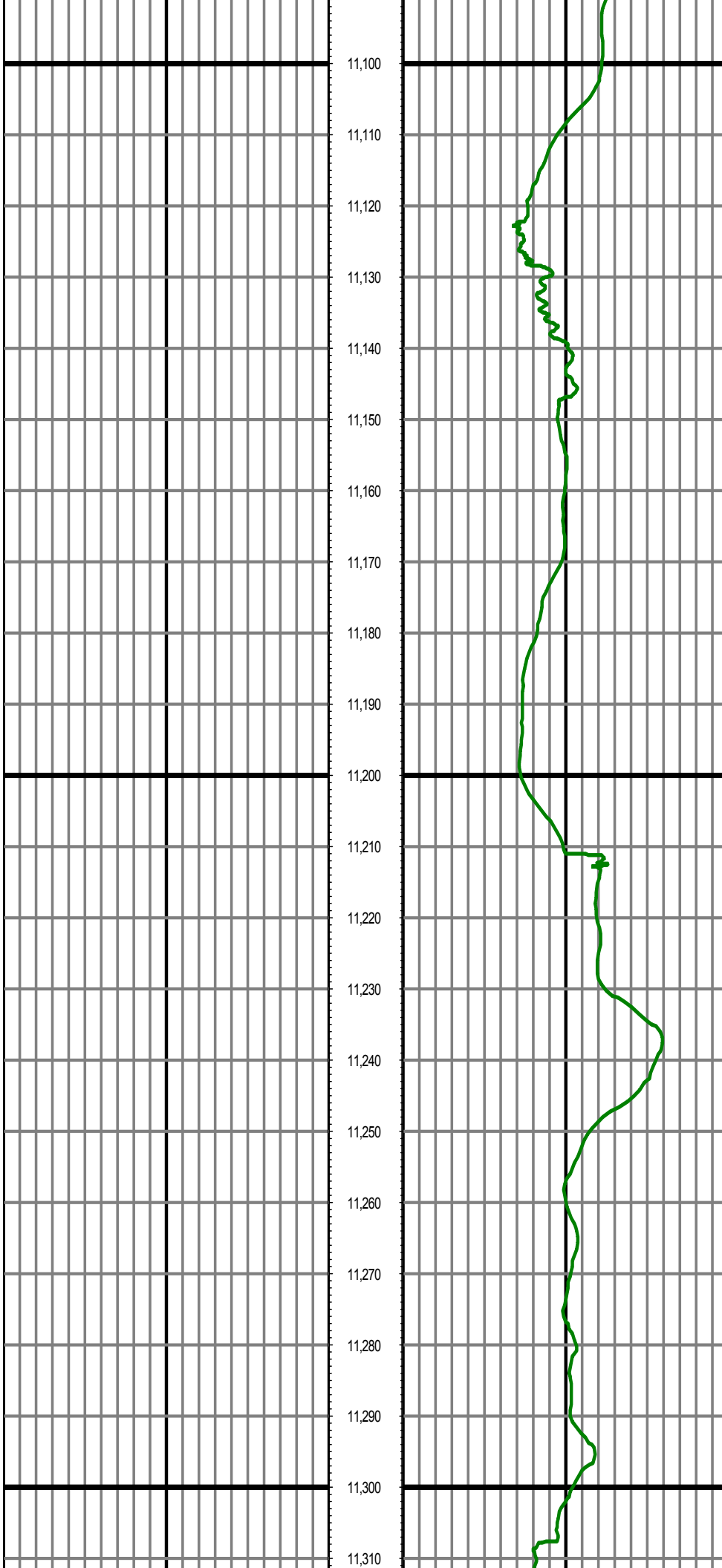
MD: 10738.00 INC: 90.95 AZ: 268.06 TVD: 6970.94 VS: 3614.18

MD: 10833.00 INC: 91.51 AZ: 267.64 TVD: 6968.91 VS: 3709.10



MD: 10928.00 INC: 91.18 AZ: 268.04 TVD: 6966.68 VS: 3804.02

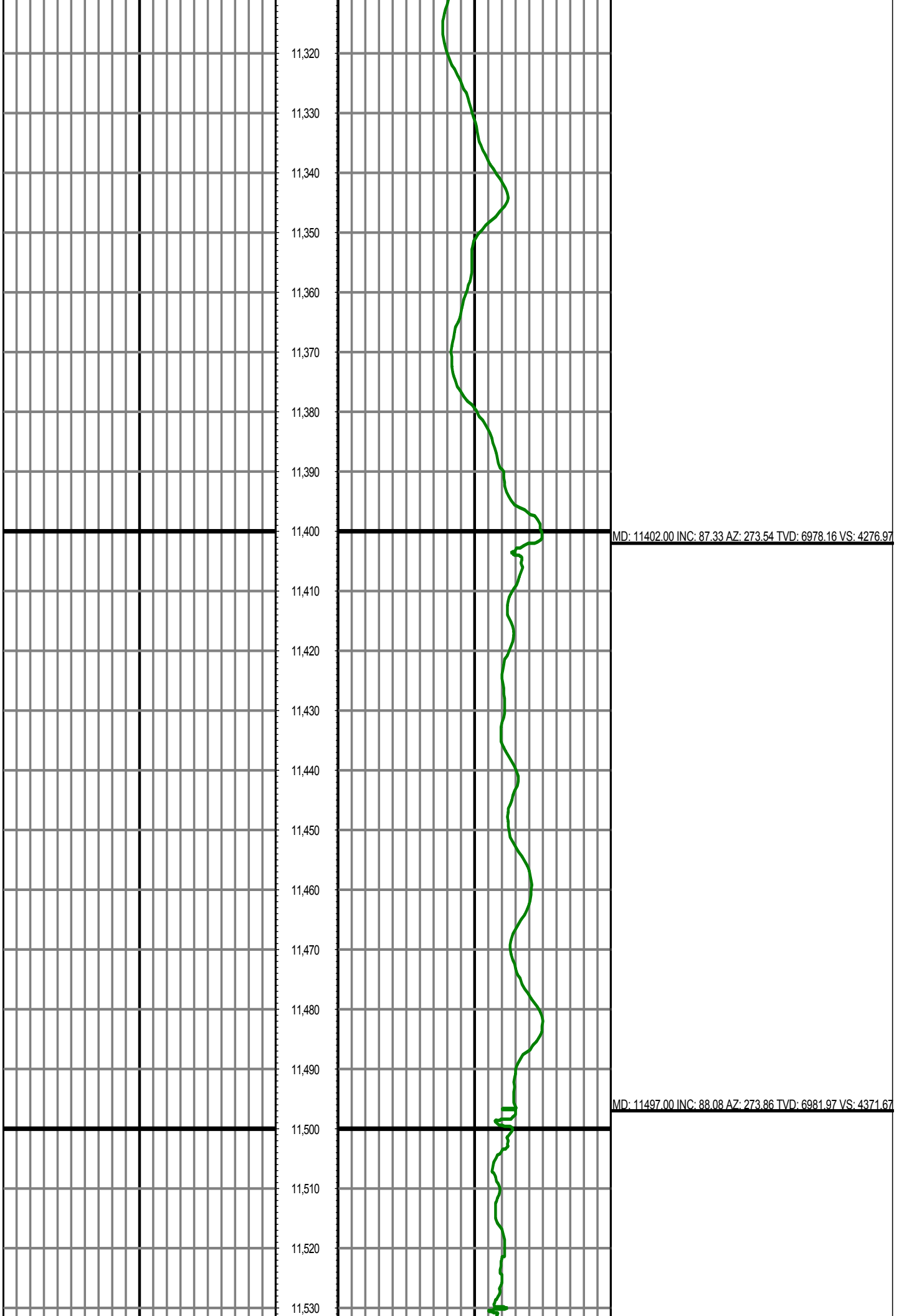
MD: 11023.00 INC: 90.06 AZ: 271.42 TVD: 6965.65 VS: 3899.00

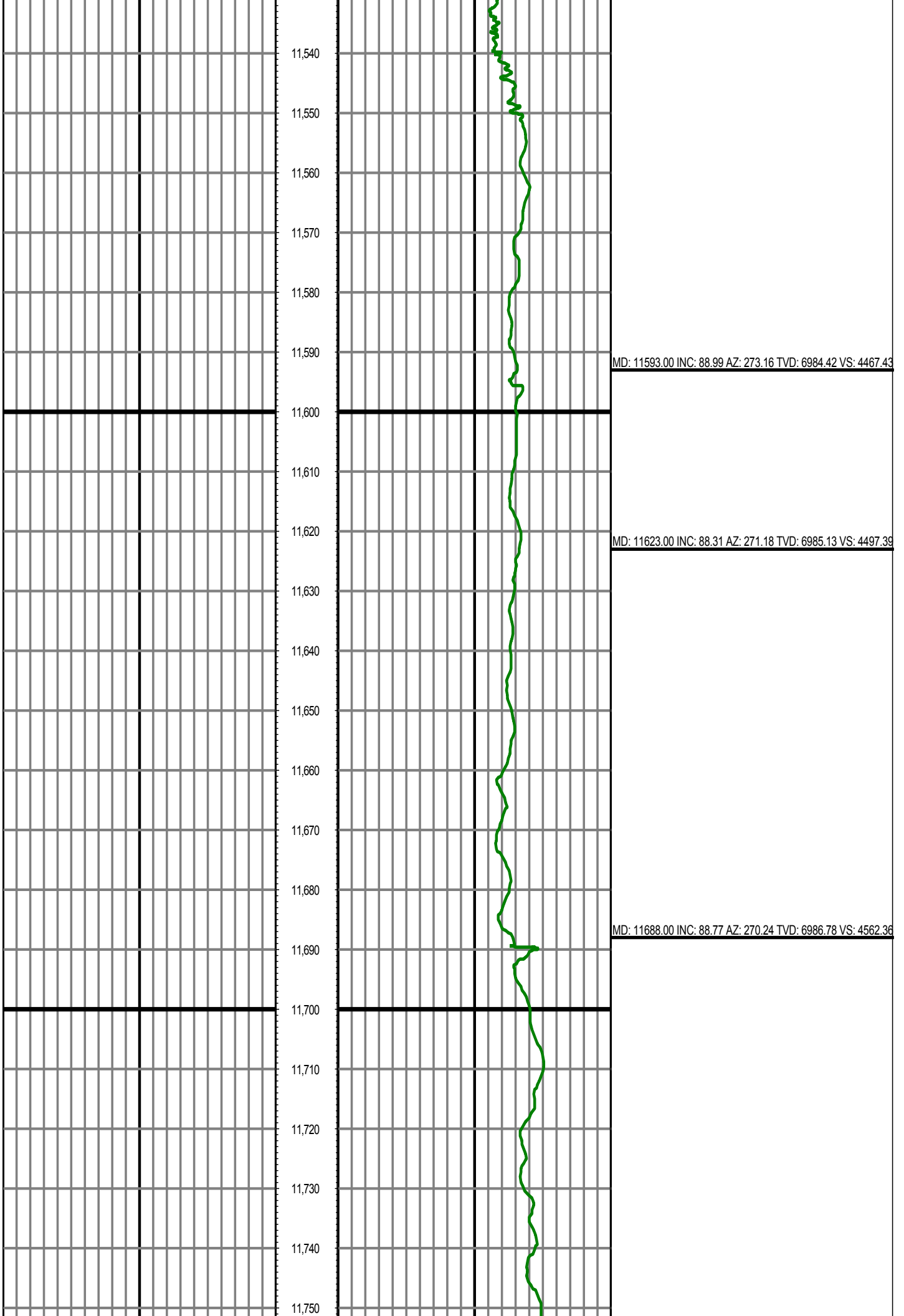


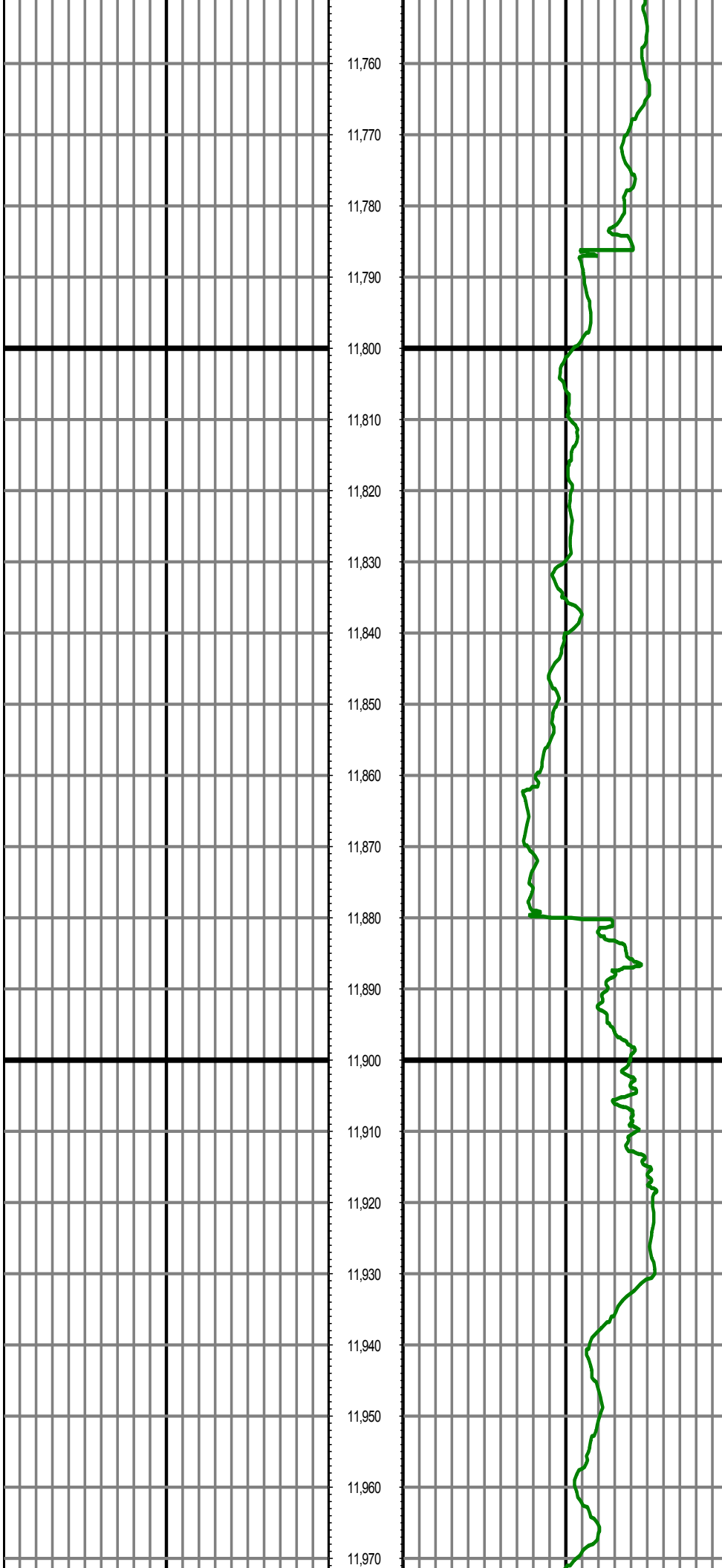
MD: 11118.00 INC: 90.09 AZ: 272.29 TVD: 6965.52 VS: 3993.94

MD: 11213.00 INC: 86.98 AZ: 273.99 TVD: 6967.95 VS: 4088.73

MD: 11307.00 INC: 86.65 AZ: 274.01 TVD: 6973.17 VS: 4182.33







MD: 11783.00 INC: 90.59 AZ: 269.46 TVD: 6987.32 VS: 4657.36

MD: 11878.00 INC: 92.11 AZ: 268.96 TVD: 6985.08 VS: 4752.32

MD: 11974.00 INC: 89.44 AZ: 269.35 TVD: 6983.78 VS: 4848.30

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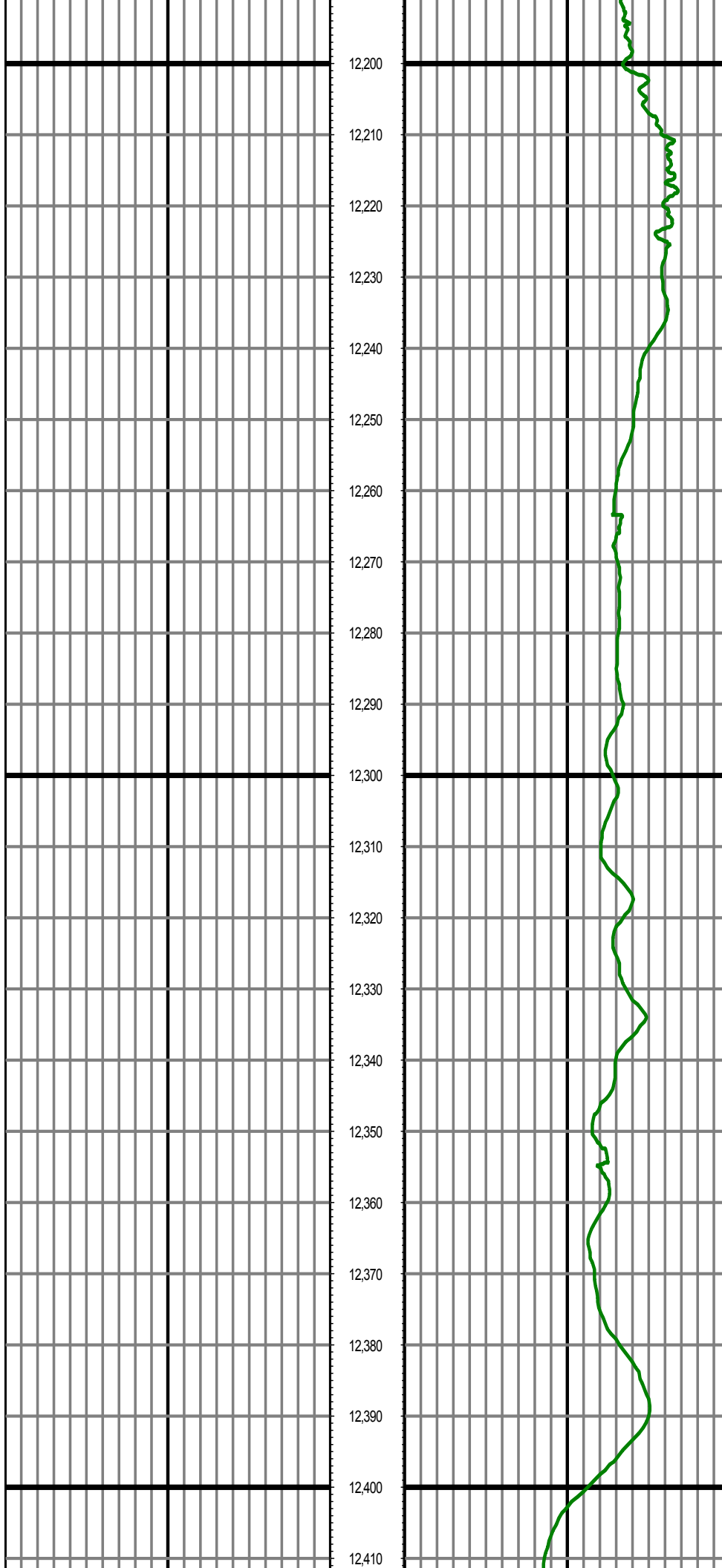
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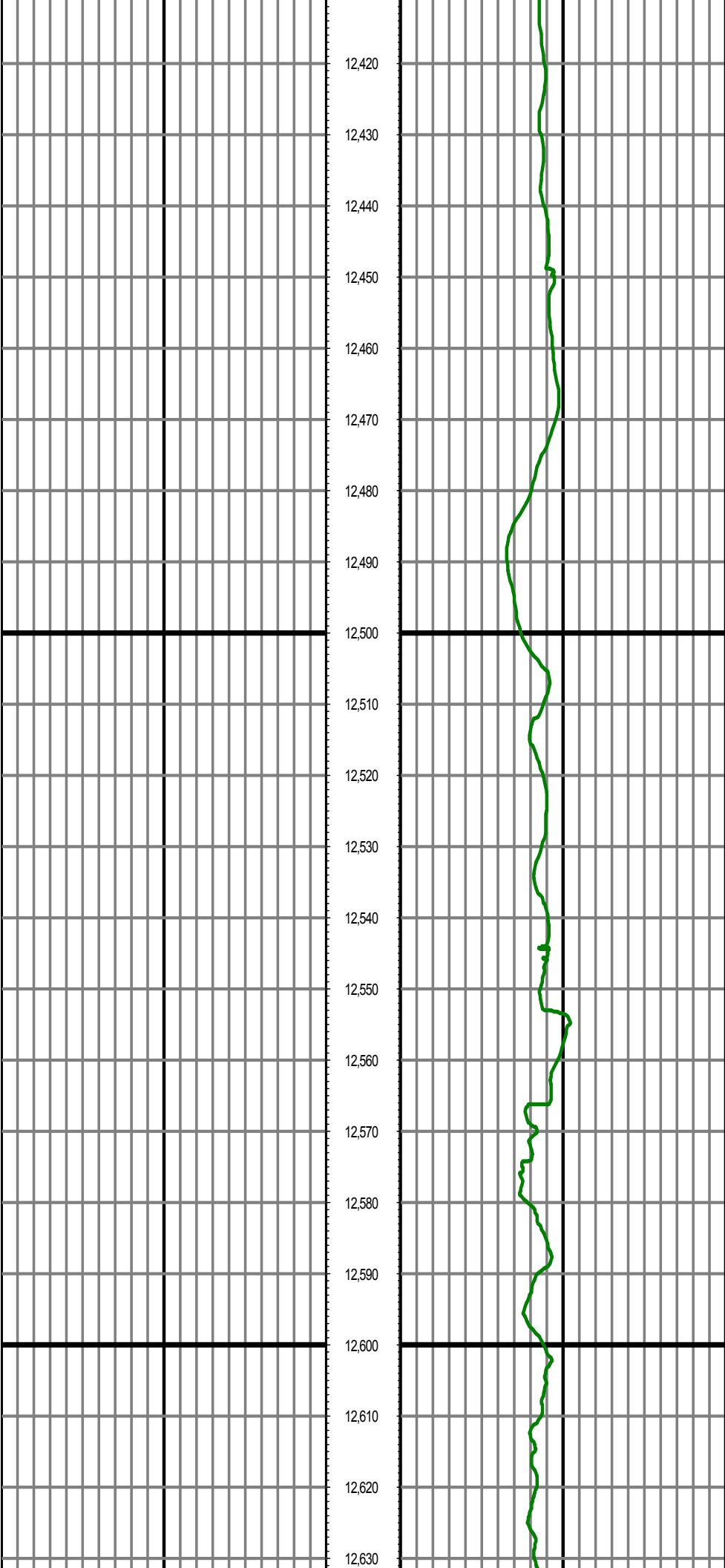
MD: 12069.00 INC: 89.42 AZ: 270.73 TVD: 6984.72 VS: 4943.29

MD: 12164.00 INC: 90.25 AZ: 270.42 TVD: 6985.00 VS: 5038.28



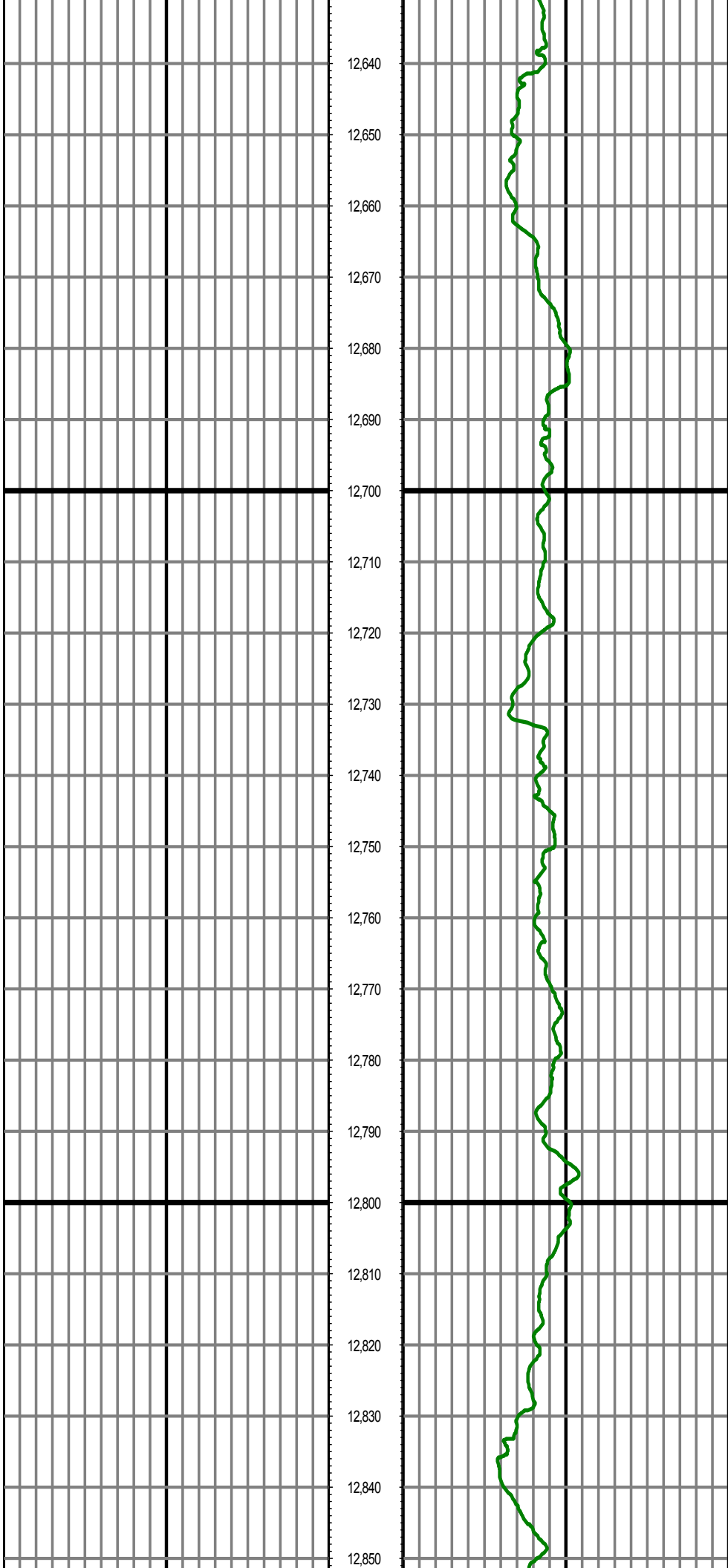
MD: 12259.00 INC: 90.16 AZ: 269.61 TVD: 6984.66 VS: 5133.28

MD: 12354.00 INC: 85.82 AZ: 268.42 TVD: 6987.99 VS: 5228.19



MD: 12450.00 INC: 86.86 AZ: 268.12 TVD: 6994.12 VS: 5323.96

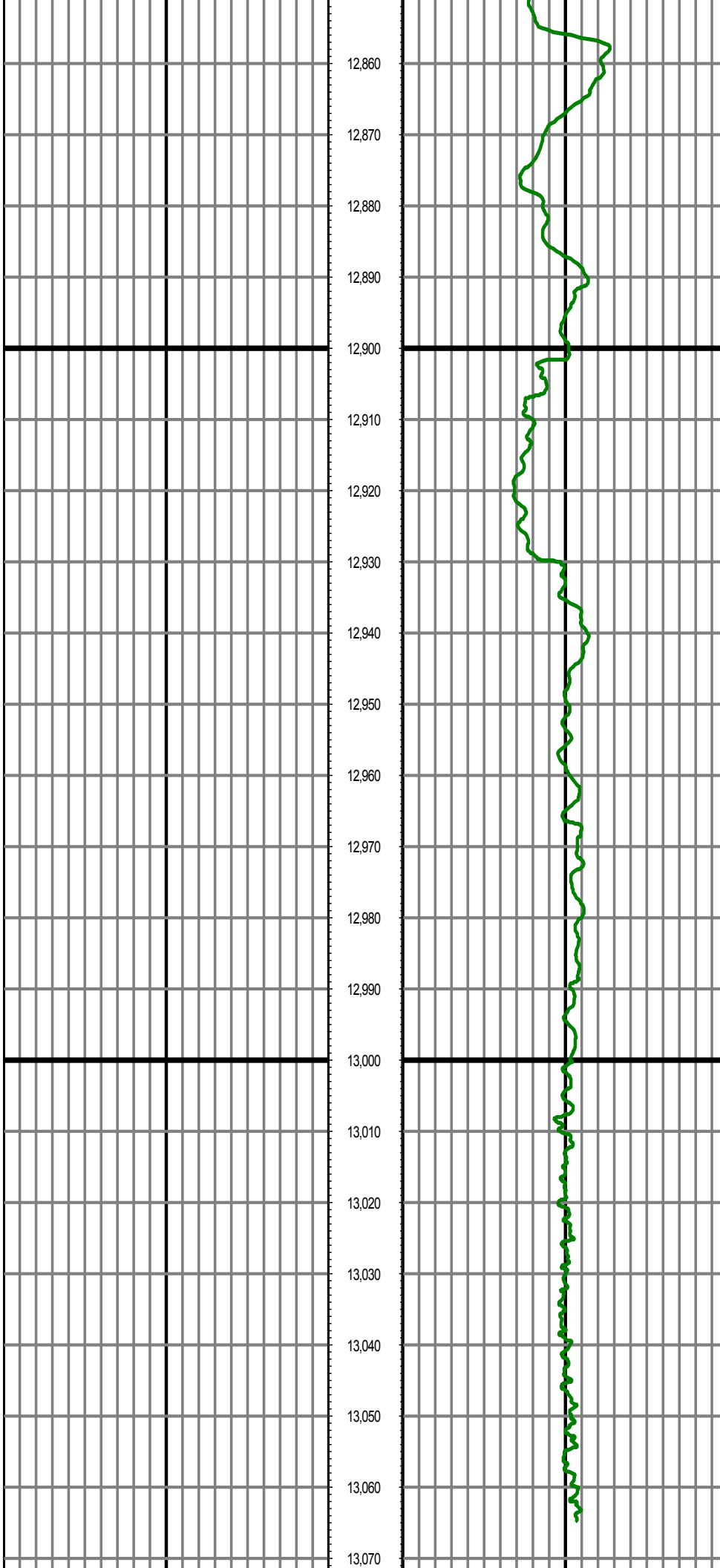
MD: 12545.00 INC: 88.03 AZ: 266.98 TVD: 6998.35 VS: 5418.79



MD: 12641.00 INC: 89.04 AZ: 266.23 TVD: 7000.81 VS: 5514.61

MD: 12736.00 INC: 90.59 AZ: 264.72 TVD: 7001.11 VS: 5609.33

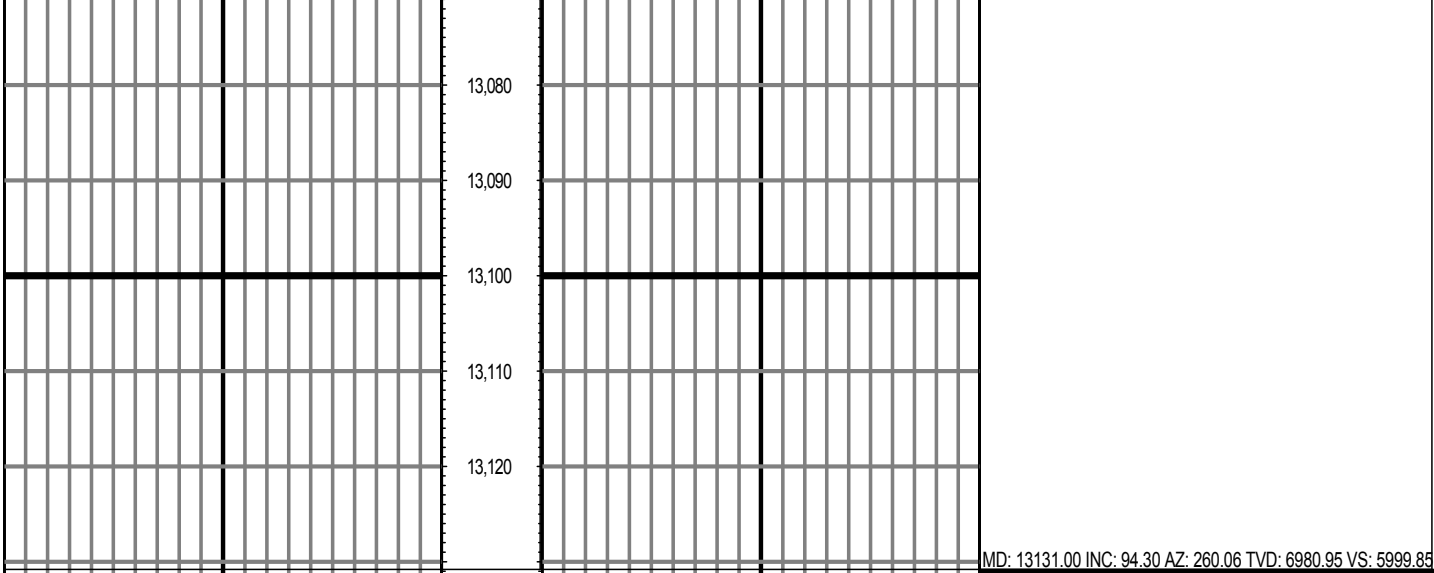
MD: 12831.00 INC: 91.76 AZ: 262.95 TVD: 6999.17 VS: 5703.80



MD: 12927.00 INC: 93.06 AZ: 261.80 TVD: 6995.13 VS: 5798.91

MD: 13021.00 INC: 94.21 AZ: 260.80 TVD: 6989.17 VS: 5891.69

MD: 13061.00 INC: 94.30 AZ: 260.06 TVD: 6986.20 VS: 5931.05



0.00	GR	RM	R2(API) on TVD	200.00	MD	0.00	GR	RM	R2(API) on MD	200.00	Surveys (MD/INC/AZ/TVD/VS)
200.00			2	400.00	FT	200.00			2	400.00	
0.00	GR	RM	R1(API) on TVD	200.00		0.00	GR	RM	R1(API) on MD	200.00	
200.00			2	400.00		200.00			2	400.00	