



Premier Directional Drilling

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

Cook 2G-16HZ
Scale 5":100' - MD
11/11/2015 2:07 PM

Oper. Company: Anadarko Petroleum Corporation

State: Colorado

Well: Cook 2G-16HZ

County: Weld

Field: Wattenberg

Country: United States

Rig: H&P 307

Location: SWSE Sec 16-T2N-R65W

Well ID: 05123421460000

Start Date: 11/07/2015 23:45:00

Job Number: R15423

End Date: 11/10/2015 23:45:00

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

Latitude: 40.132820

Elev KB: 4909'

Longitude: -104.666426

Elev DF: 4909'

Elev GL: 4884'

Notes: Datum: NAD 1983Map Zone: 13N (108 W to 102 W)Total Correction: 8.22°Grid Convergence: 0.21°

Operator 1: Robert Grossman

Operator 2: Jim Thammavong

Notes: Smoothing: 7Gap Fill: 10Survey Tool Type: EVO 1 Dual TelemetryCalculation Method: Minimum Curvature

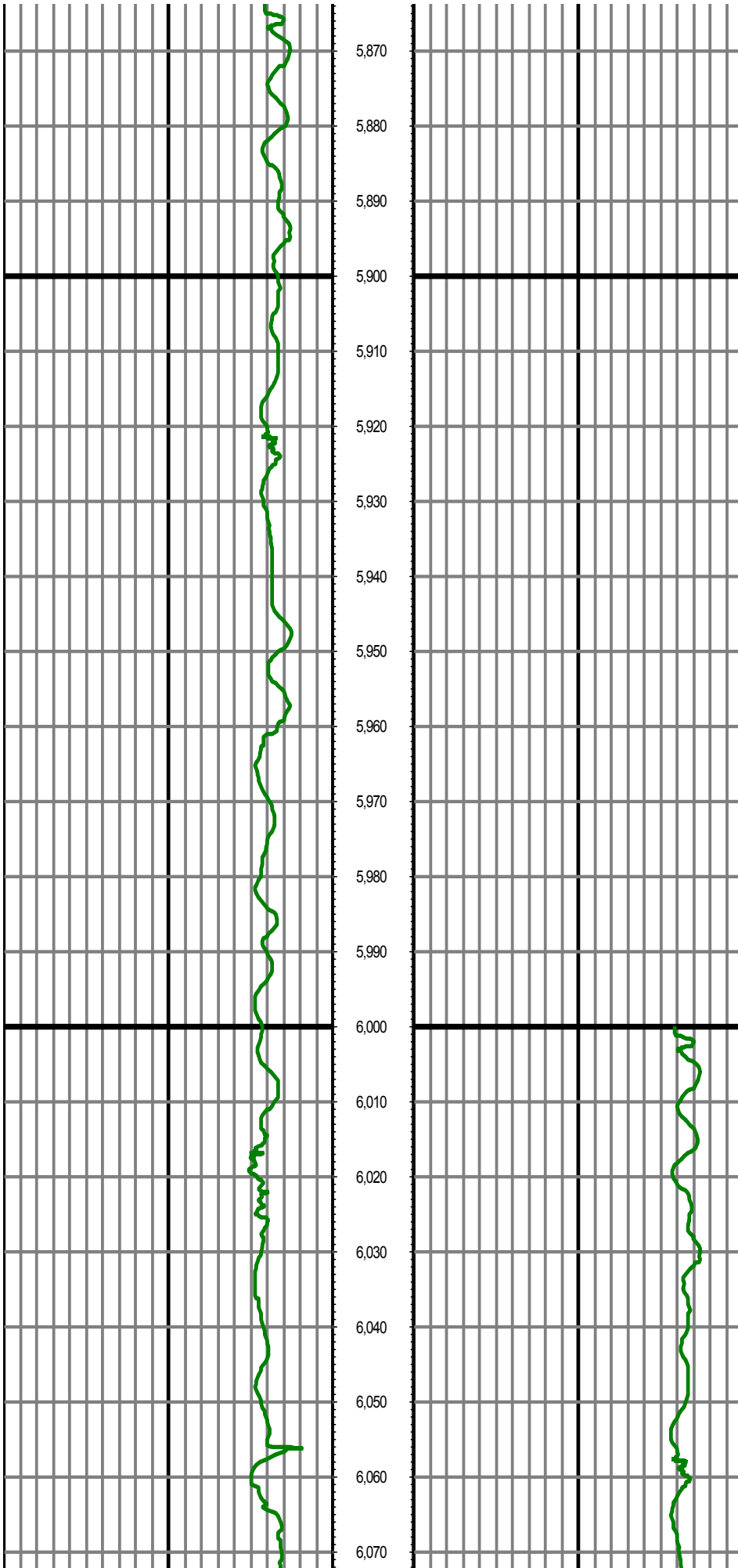
Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	EGNF-0098				
Bit Size	8.5				
Cal Factor	4.282				
Survey Offset:	77.00				
Gamma Offset	72.72				
Resisitivity Offset	0.00				
Start Depth	1937.00				
StartDate	11/7/2015				
StartTime	23:45				
EndDepth	12606.00				
EndDate	11/10/2015				
EndTime	23:45				
Mud Type	OBM				
Mud Weight	9.3				
Funnel Viscosity	54				
Plastic Viscosity	15				
Yield Point	9				
Gel Strength	NA				
Solids Content	7.21				
Sand Content	NA				
Mud Alkalinity	NA				
Filtrate Alkalinity	NA				
Chlorides	55000				
Mud RM	NA				
Mud RMF	NA				
Mud RMC	NA				
Mud RM at BHT	NA				
Temperature	222				
Hole Data			Casing Data		
Size	From	To	Size	From	To
13.5	0.00	1937.00	9.625	0.00	1927.00
8.5	1937.00	12606.00	5.5	0.00	12606.00

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.

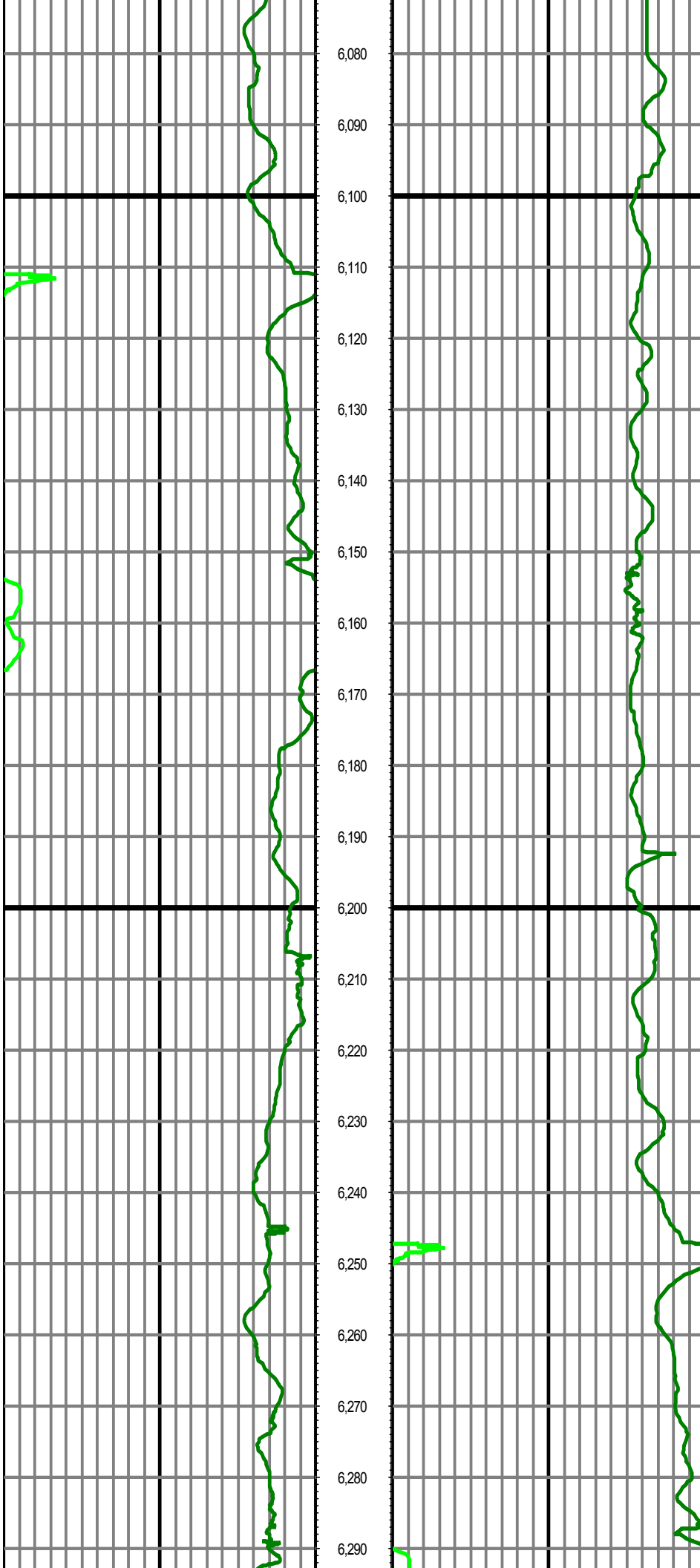
0.00 GR RM(API) on TVD 200.00
200.00 2 400.00

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

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

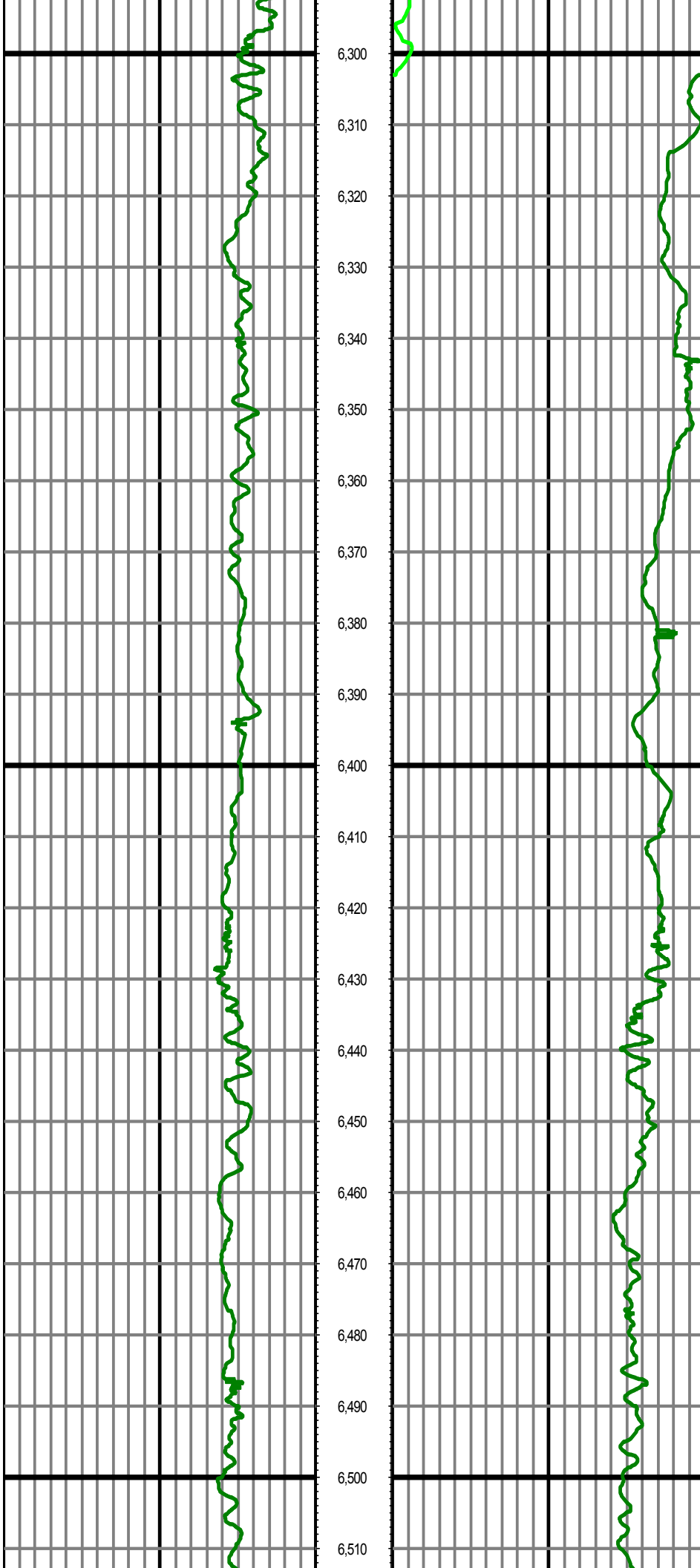


MD: 6055.00 INC: 1.01 AZ: 1.41 TVD: 5918.81 VS: -1075.64



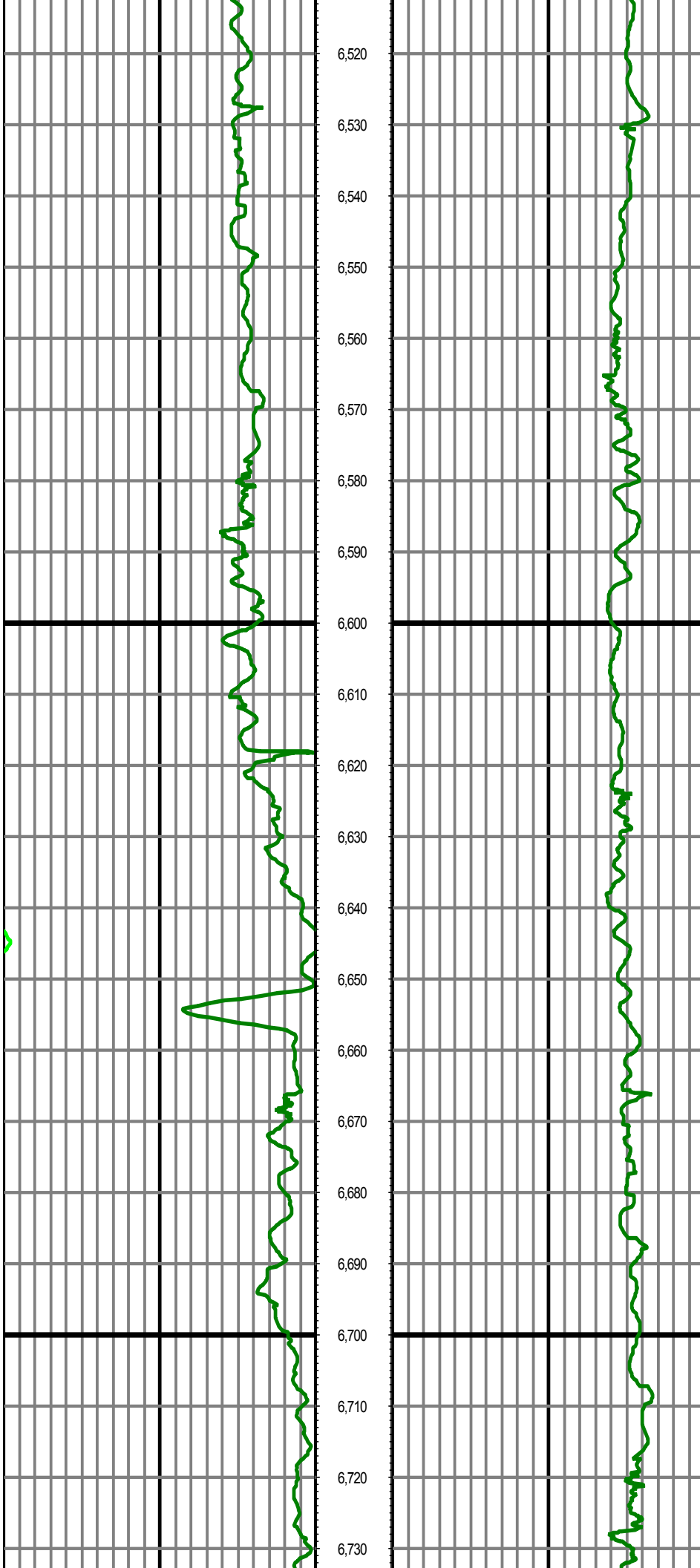
MD: 6150.00 INC: 1.21 AZ: 11.74 TVD: 6013.79 VS: -1073.82

MD: 6244.00 INC: 0.90 AZ: 350.51 TVD: 6107.78 VS: -1072.11



MD: 6339.00 INC: 1.01 AZ: 4.92 TVD: 6202.76 VS: -1070.54

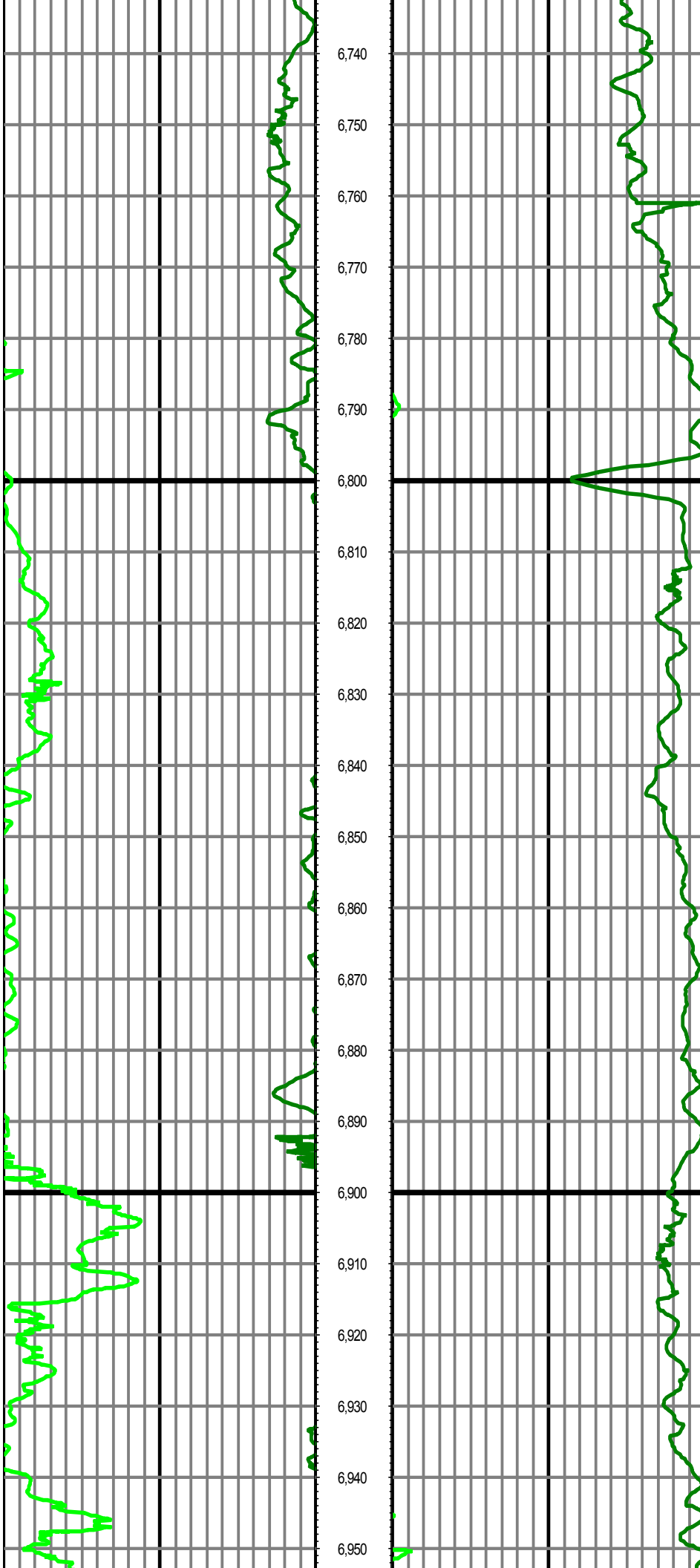
MD: 6433.00 INC: 1.10 AZ: 13.63 TVD: 6296.75 VS: -1068.84



MD: 6528.00 INC: 4.40 AZ: 359.43 TVD: 6391.63 VS: -1064.31

MD: 6622.00 INC: 10.50 AZ: 355.30 TVD: 6484.79 VS: -1052.16

MD: 6717.00 INC: 17.60 AZ: 356.62 TVD: 6576.89 VS: -1029.18



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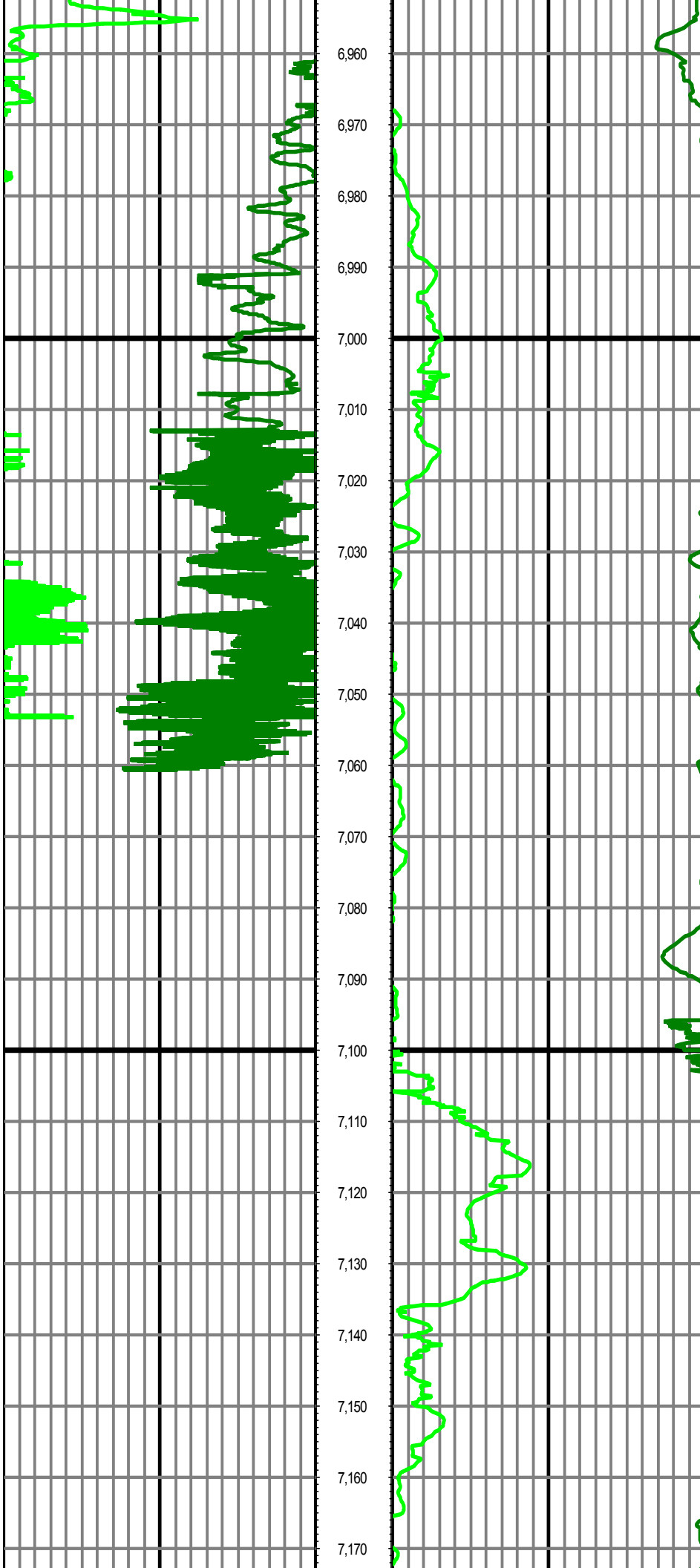
6,930

6,940

6,950

MD: 6811.00 INC: 23.60 AZ: 359.12 TVD: 6664.84 VS: -996.15

MD: 6905.00 INC: 31.60 AZ: 2.33 TVD: 6748.08 VS: -952.65



MD: 7000.00 INC: 40.61 AZ: 1.41 TVD: 6824.75 VS: -896.75

MD: 7094.00 INC: 49.51 AZ: 359.21 TVD: 6891.09 VS: -830.29

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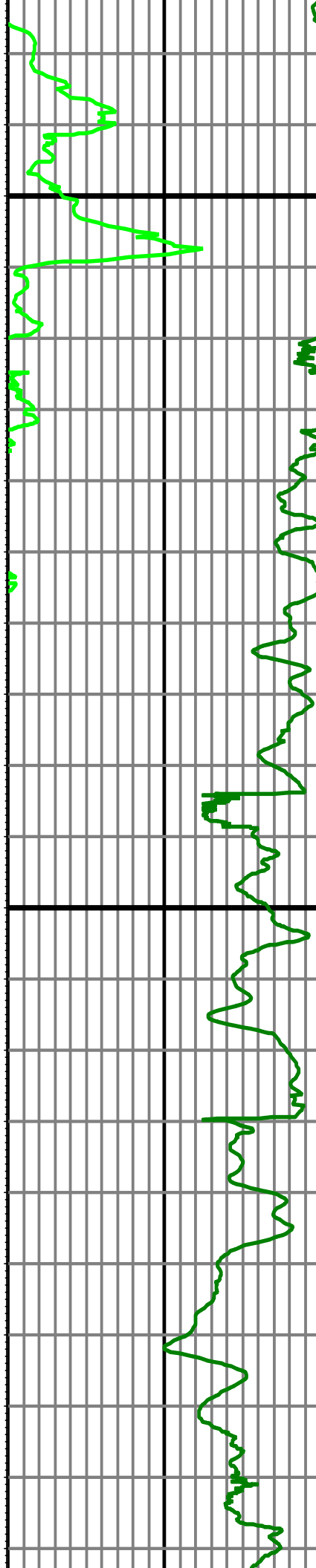
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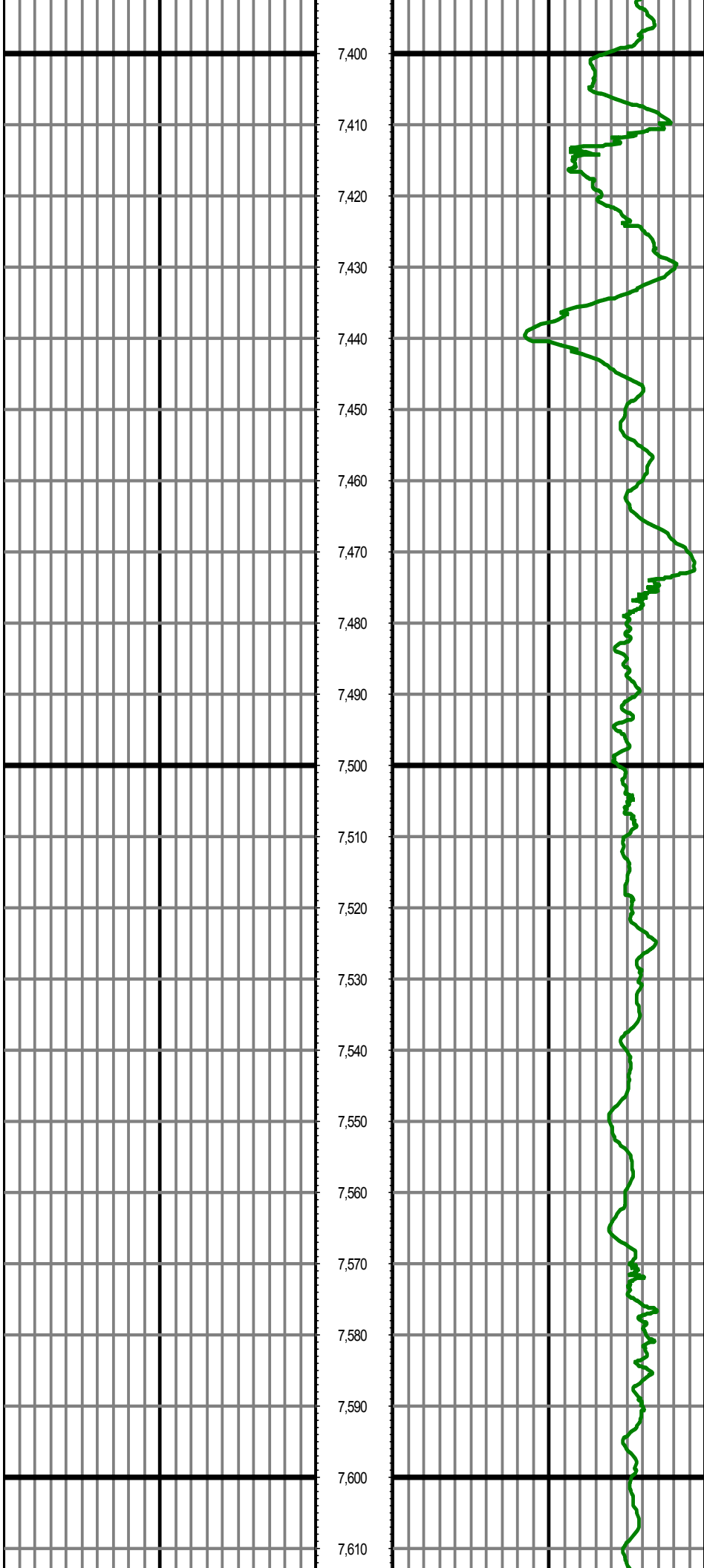
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MD: 7189.00 INC: 59.00 AZ: 357.63 TVD: 6946.52 VS: -753.32

MD: 7283.00 INC: 64.89 AZ: 356.92 TVD: 6990.71 VS: -670.53

MD: 7378.00 INC: 72.21 AZ: 356.84 TVD: 7025.42 VS: -582.34





MD: 7472.00 INC: 80.61 AZ: 358.81 TVD: 7047.49 VS: -491.16

MD: 7567.00 INC: 88.41 AZ: 1.54 TVD: 7056.58 VS: -396.68

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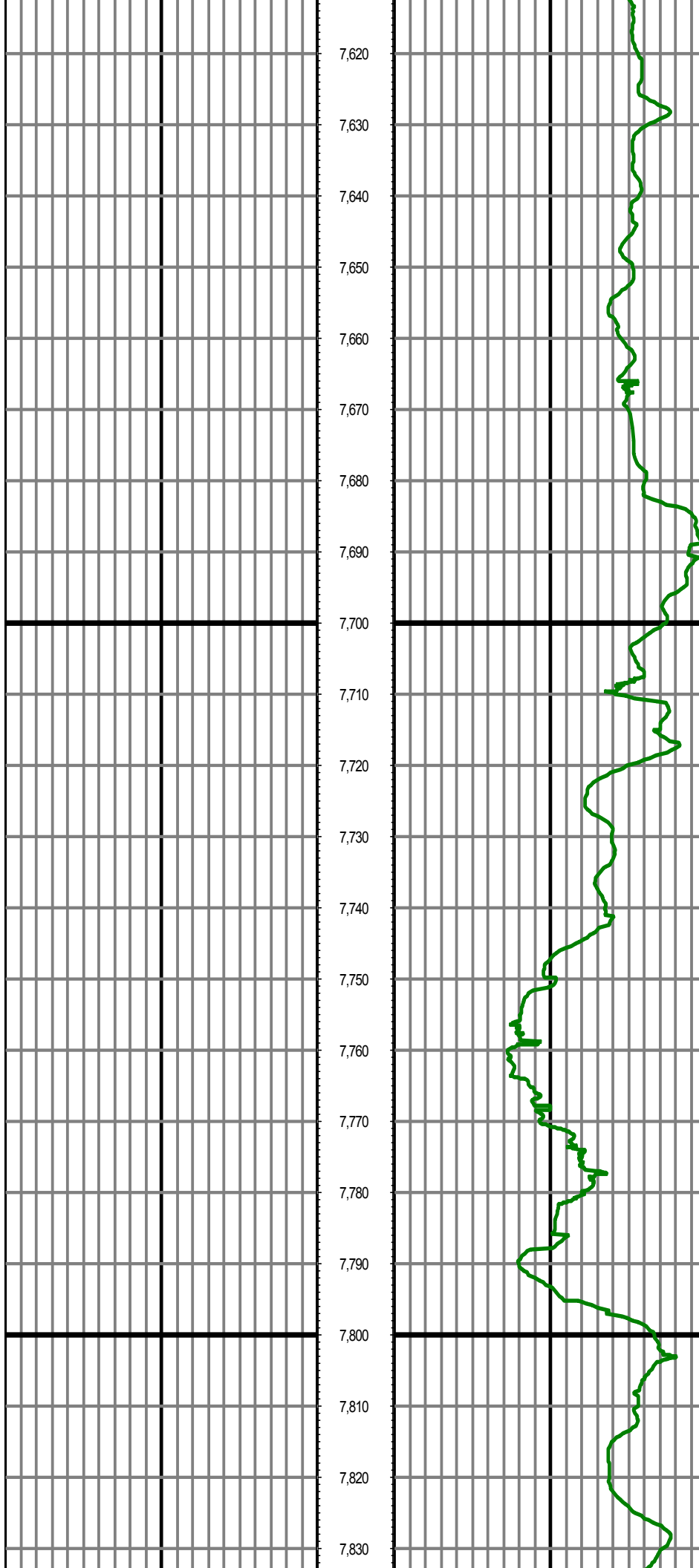
7,810

7,820

7,830

MD: 7661.00 INC: 91.51 AZ: 1.72 TVD: 7056.66 VS: -302.71

MD: 7756.00 INC: 93.59 AZ: 0.53 TVD: 7052.43 VS: -207.81



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MD: 7850.00 INC: 93.11 AZ: 1.32 TVD: 7046.94 VS: -113.98

MD: 7945.00 INC: 91.70 AZ: 2.02 TVD: 7042.95 VS: -19.09

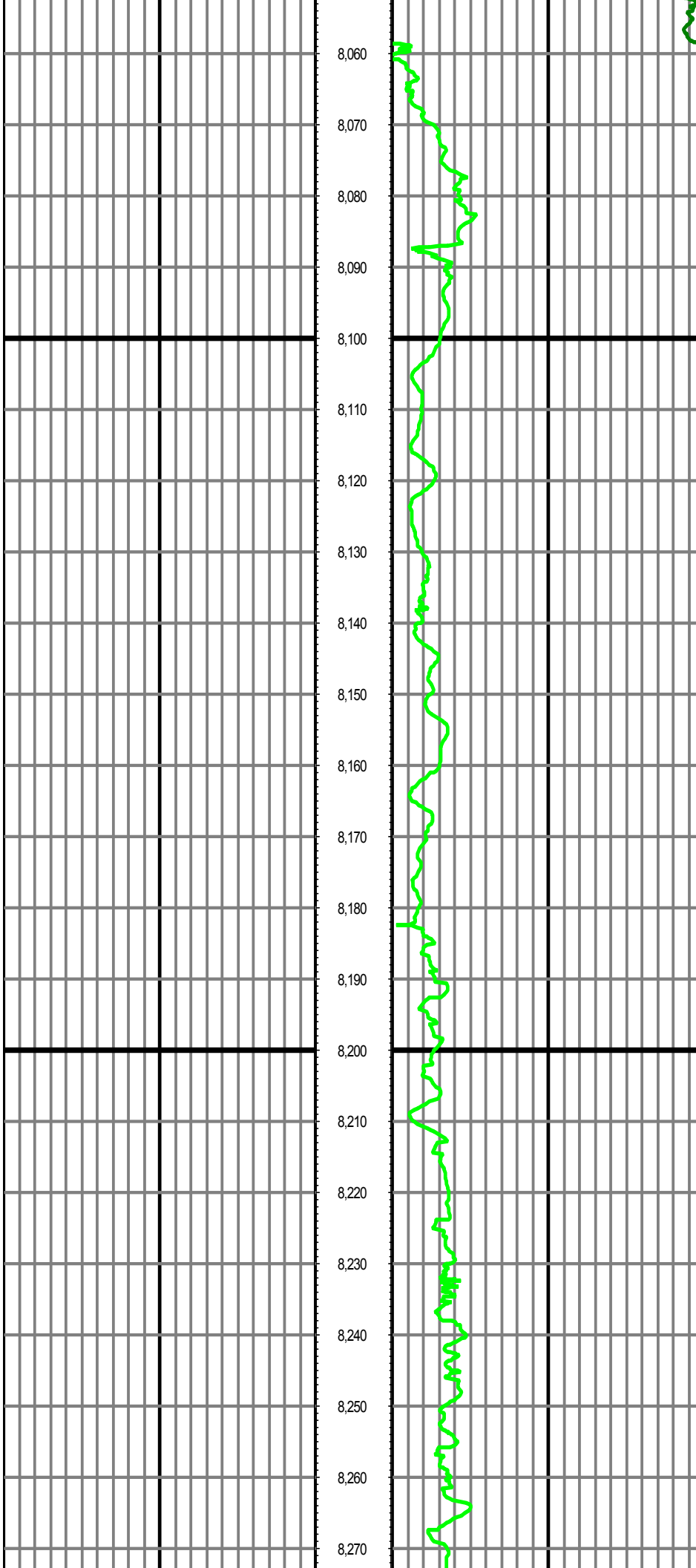
MD: 8039.00 INC: 90.80 AZ: 1.41 TVD: 7040.89 VS: 74.87

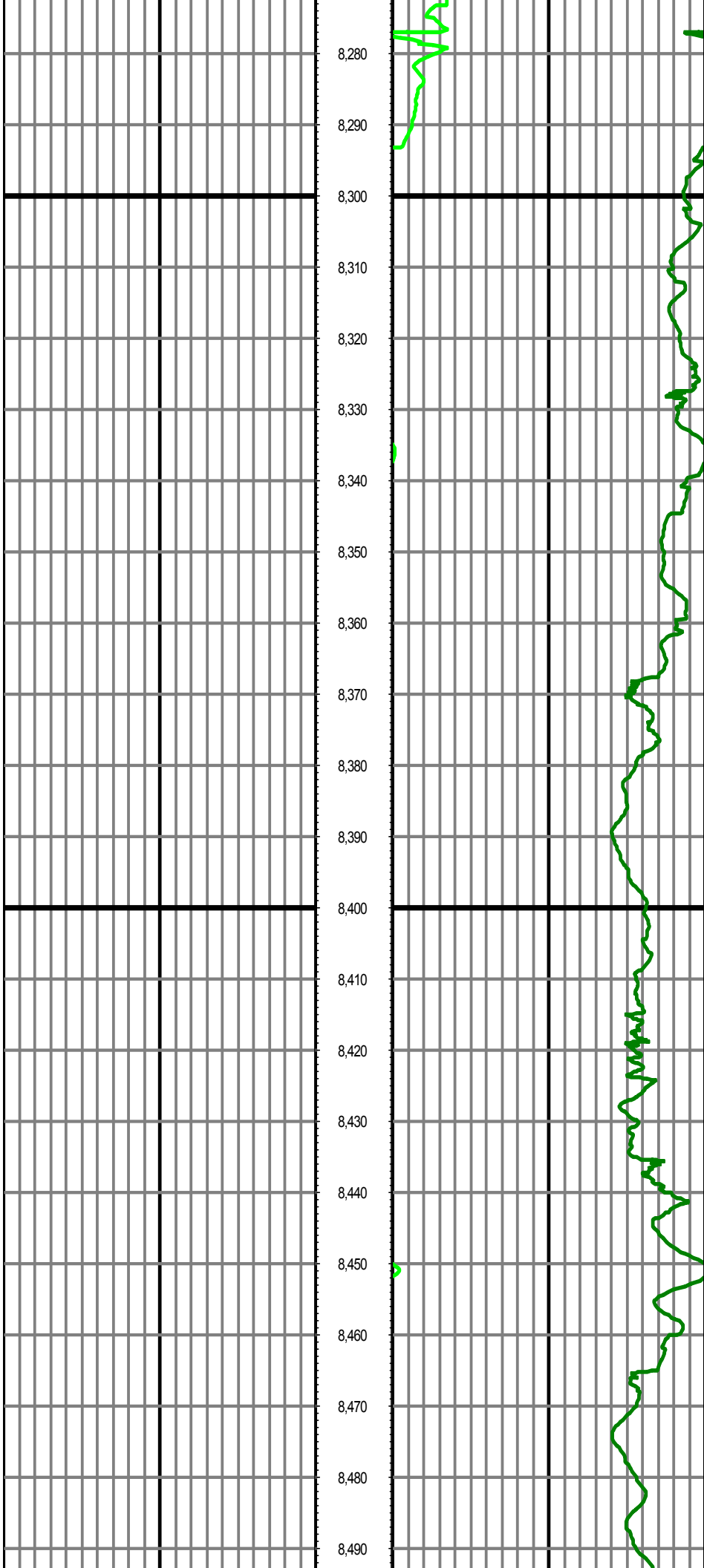


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MD: 8134.00 INC: 88.89 AZ: 0.62 TVD: 7041.15 VS: 169.86

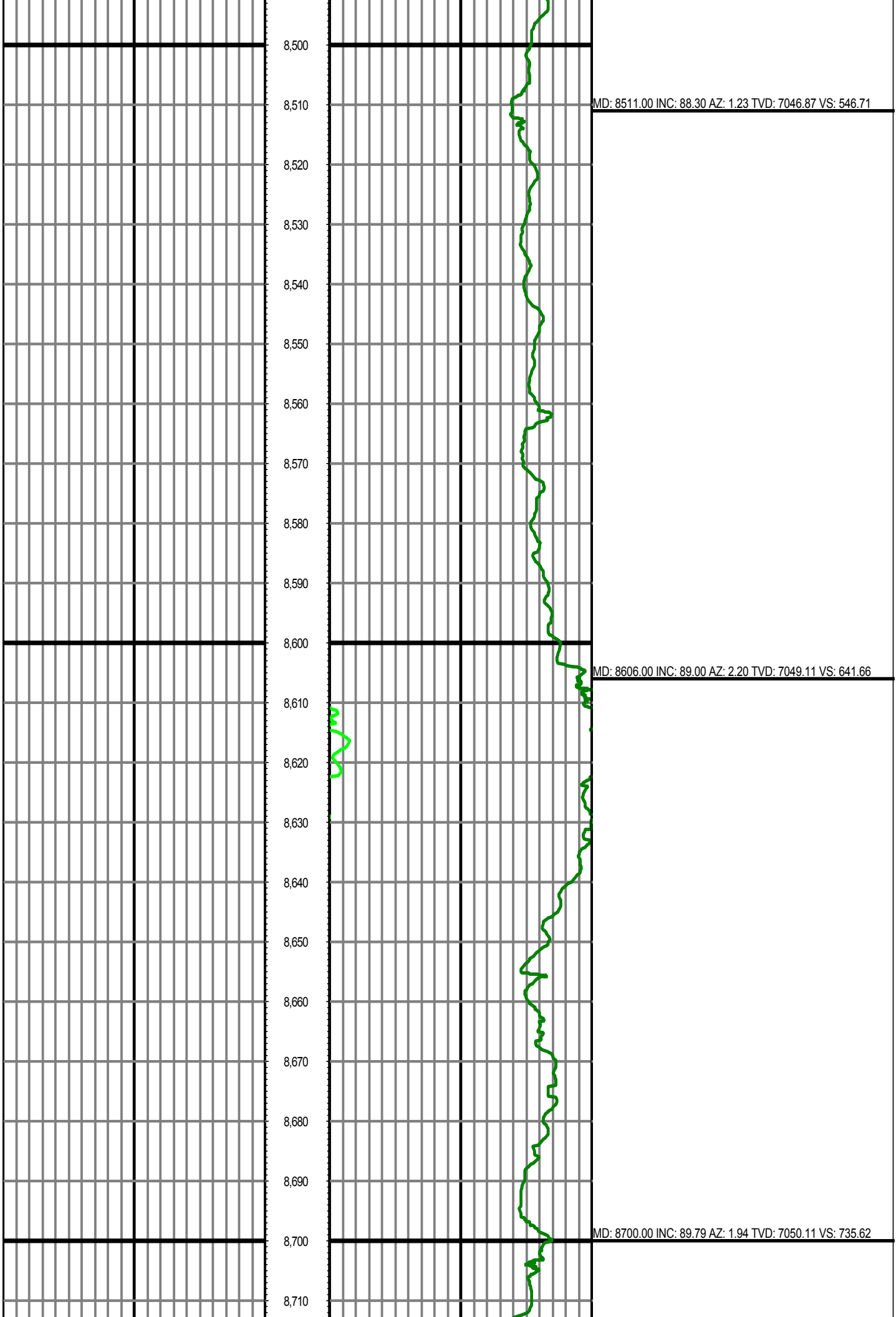
MD: 8228.00 INC: 90.01 AZ: 1.41 TVD: 7042.05 VS: 263.85

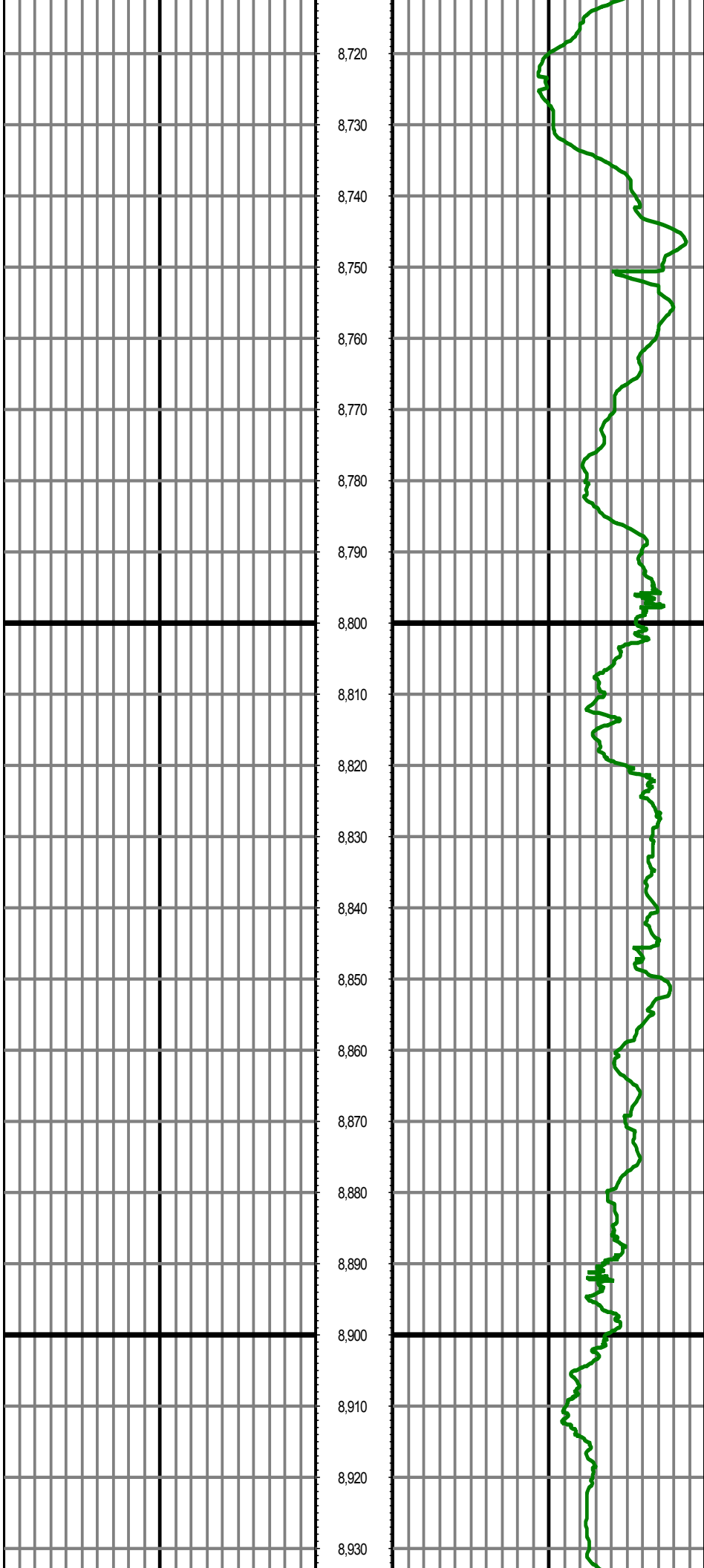




MD: 8323.00 INC: 88.60 AZ: 2.11 TVD: 7043.20 VS: 358.81

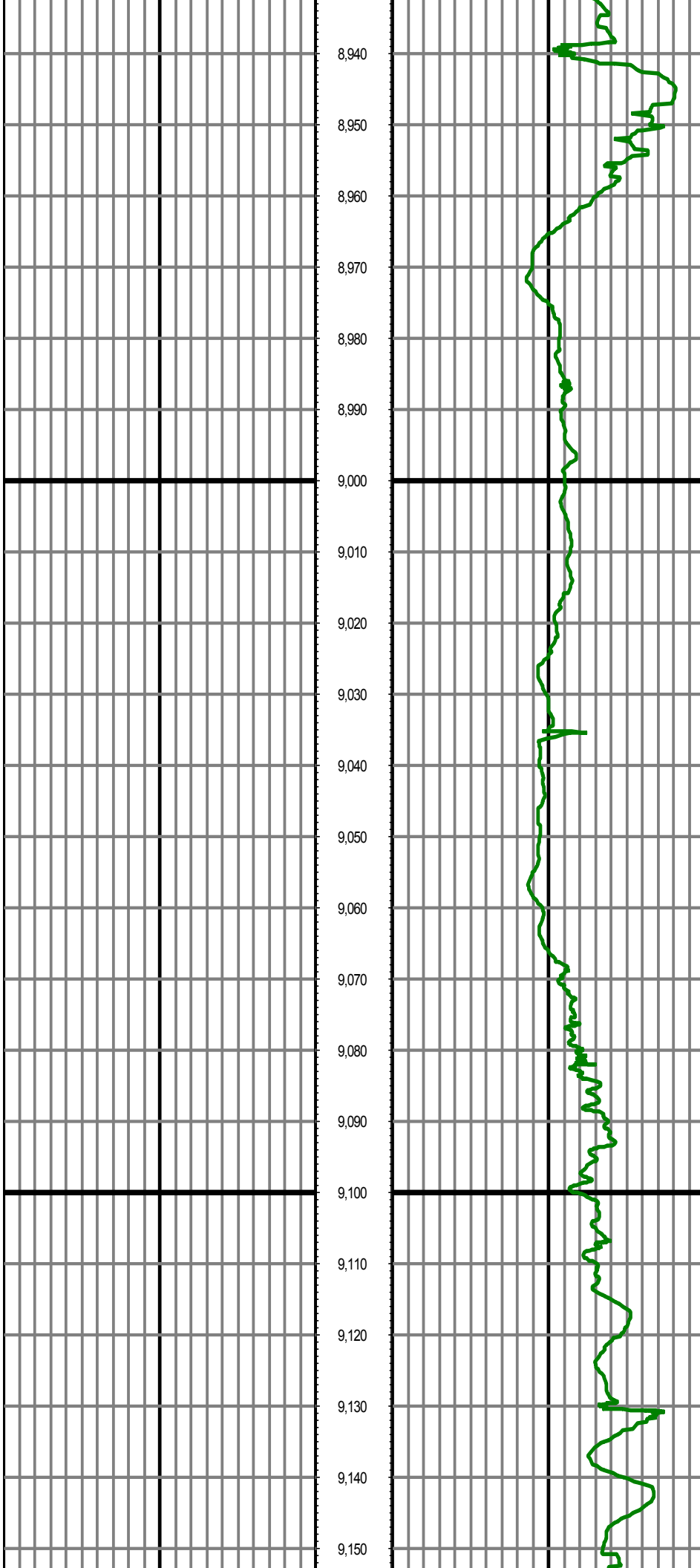
MD: 8417.00 INC: 89.31 AZ: 2.11 TVD: 7044.91 VS: 452.76





MD: 8795.00 INC: 91.00 AZ: 2.20 TVD: 7049.45 VS: 830.58

MD: 8889.00 INC: 90.49 AZ: 0.84 TVD: 7048.22 VS: 924.55



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MD: 8984.00 INC: 88.80 AZ: 0.70 TVD: 7048.81 VS: 1019.54

MD: 9078.00 INC: 90.21 AZ: 0.13 TVD: 7049.62 VS: 1113.54

9,160

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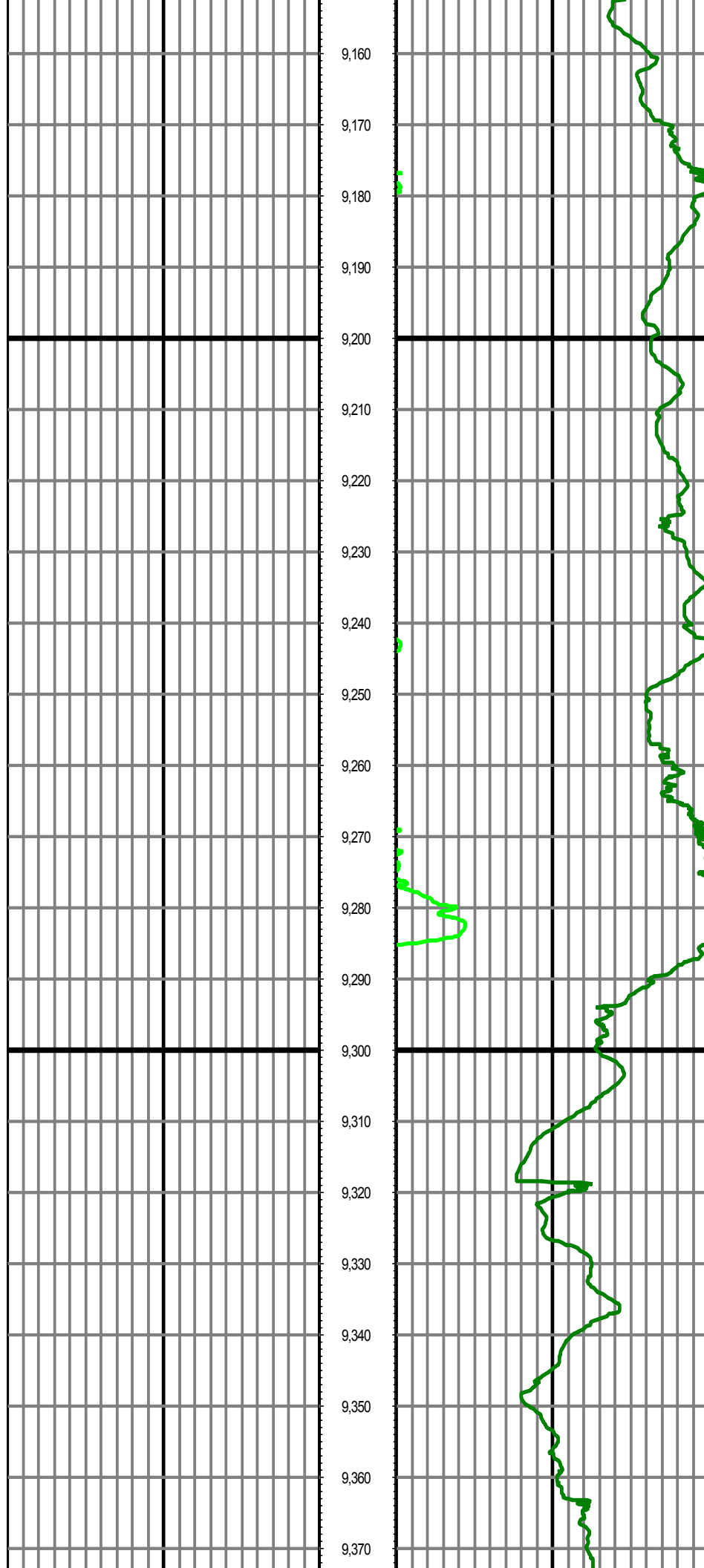
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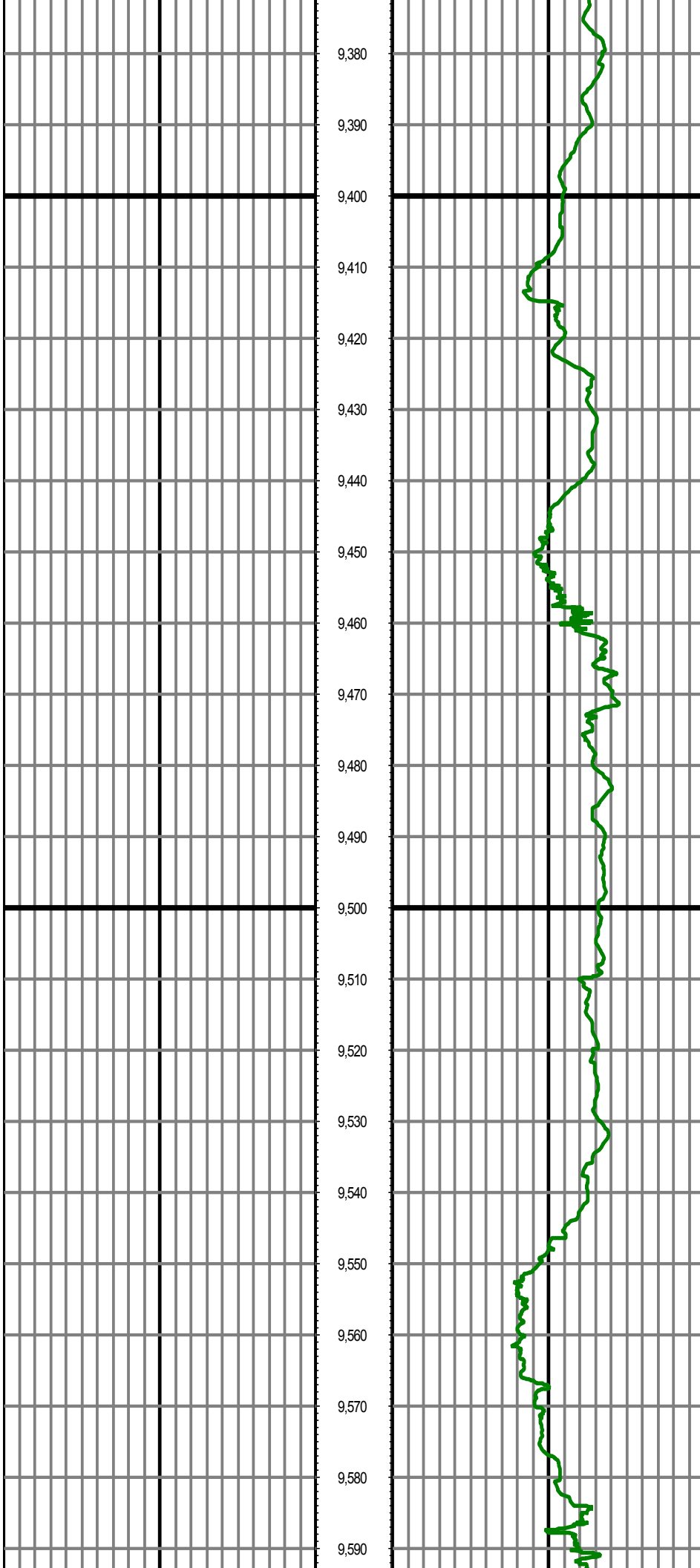
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MD: 9173.00 INC: 88.30 AZ: 1.80 TVD: 7050.86 VS: 1208.52

MD: 9267.00 INC: 89.40 AZ: 1.94 TVD: 7052.75 VS: 1302.47

MD: 9362.00 INC: 87.90 AZ: 0.13 TVD: 7054.98 VS: 1397.43

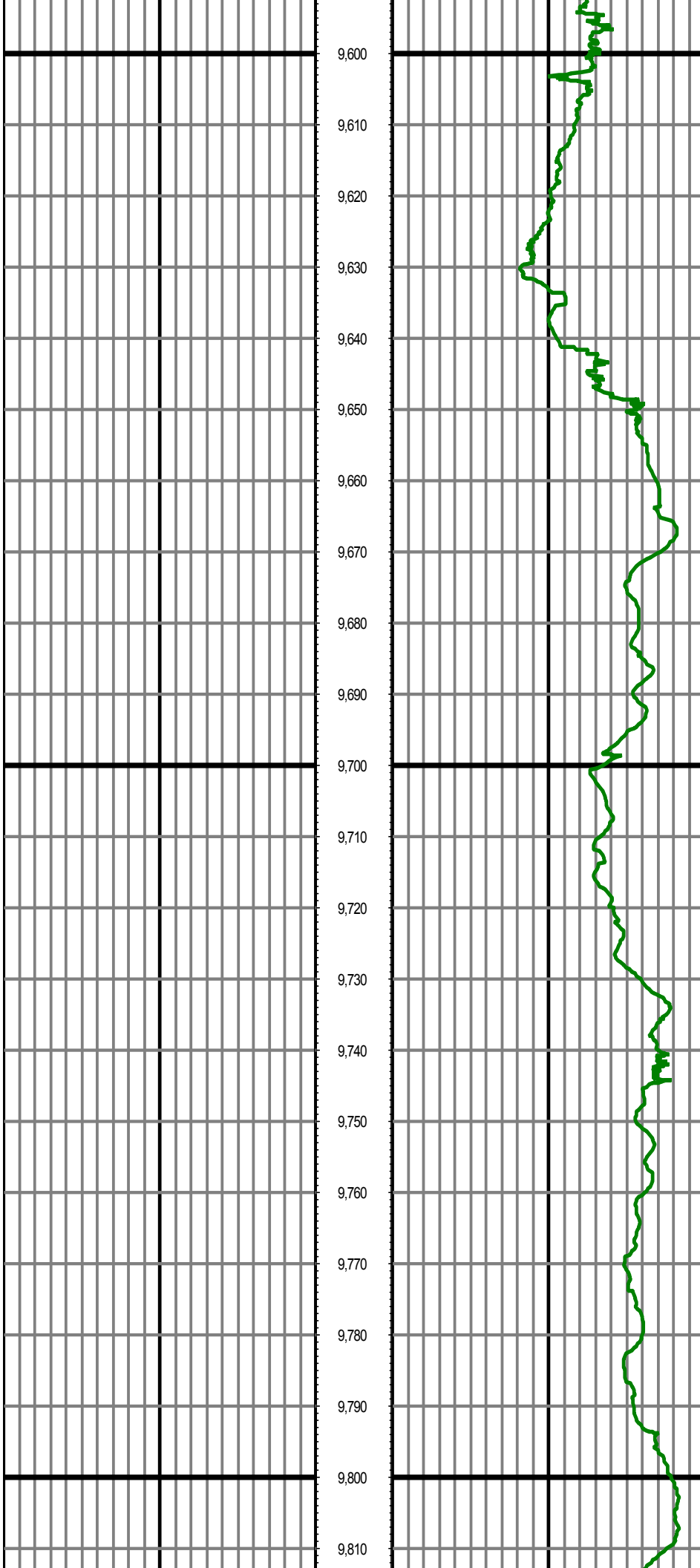




9,380
9,390
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9,570
9,580
9,590

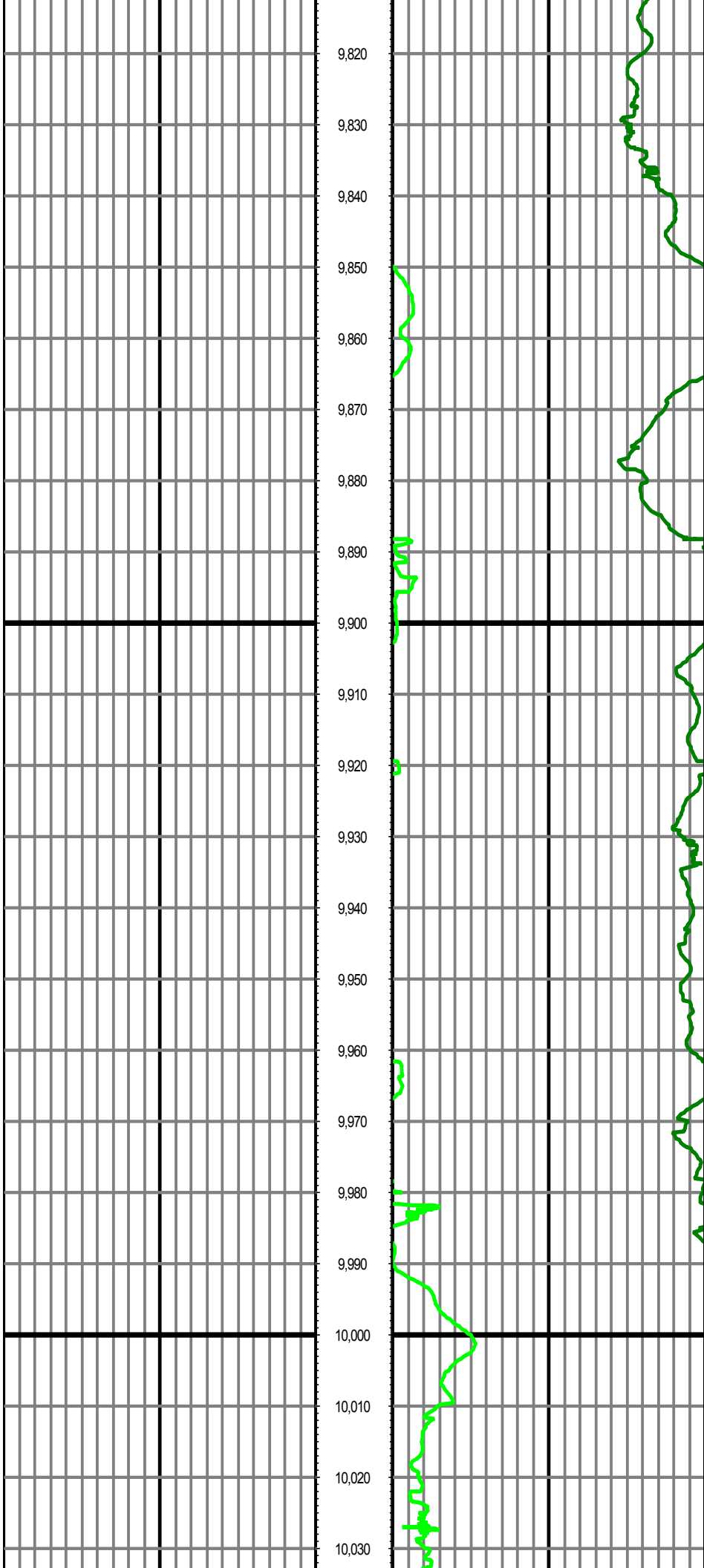
MD: 9456.00 INC: 87.70 AZ: 359.61 TVD: 7058.59 VS: 1491.36

MD: 9551.00 INC: 89.90 AZ: 359.12 TVD: 7060.57 VS: 1586.31



MD: 9645.00 INC: 92.01 AZ: 0.31 TVD: 7059.01 VS: 1680.28

MD: 9740.00 INC: 92.30 AZ: 0.70 TVD: 7055.44 VS: 1775.22



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10,010

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MD: 9834.00 INC: 93.00 AZ: 0.44 TVD: 7051.09 VS: 1869.12

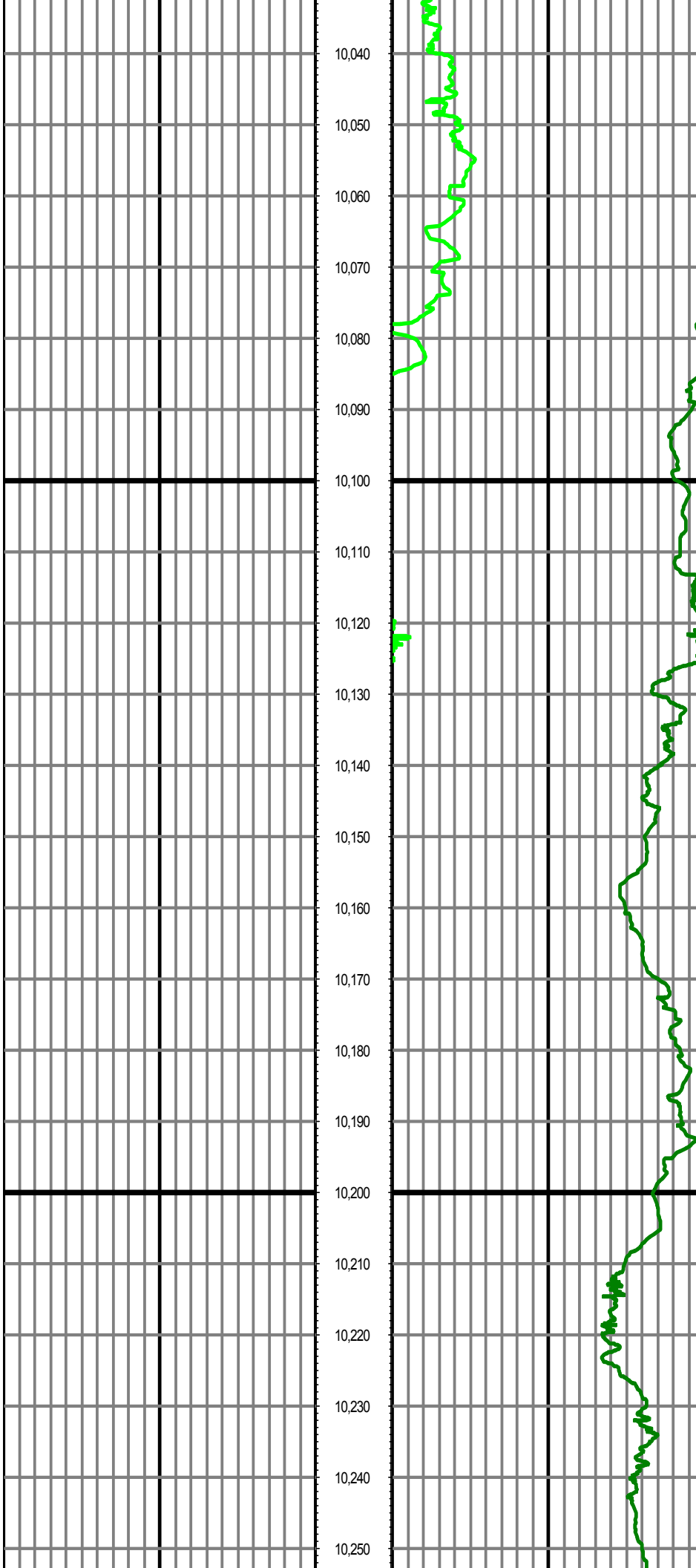
MD: 9929.00 INC: 93.59 AZ: 359.74 TVD: 7045.63 VS: 1963.96

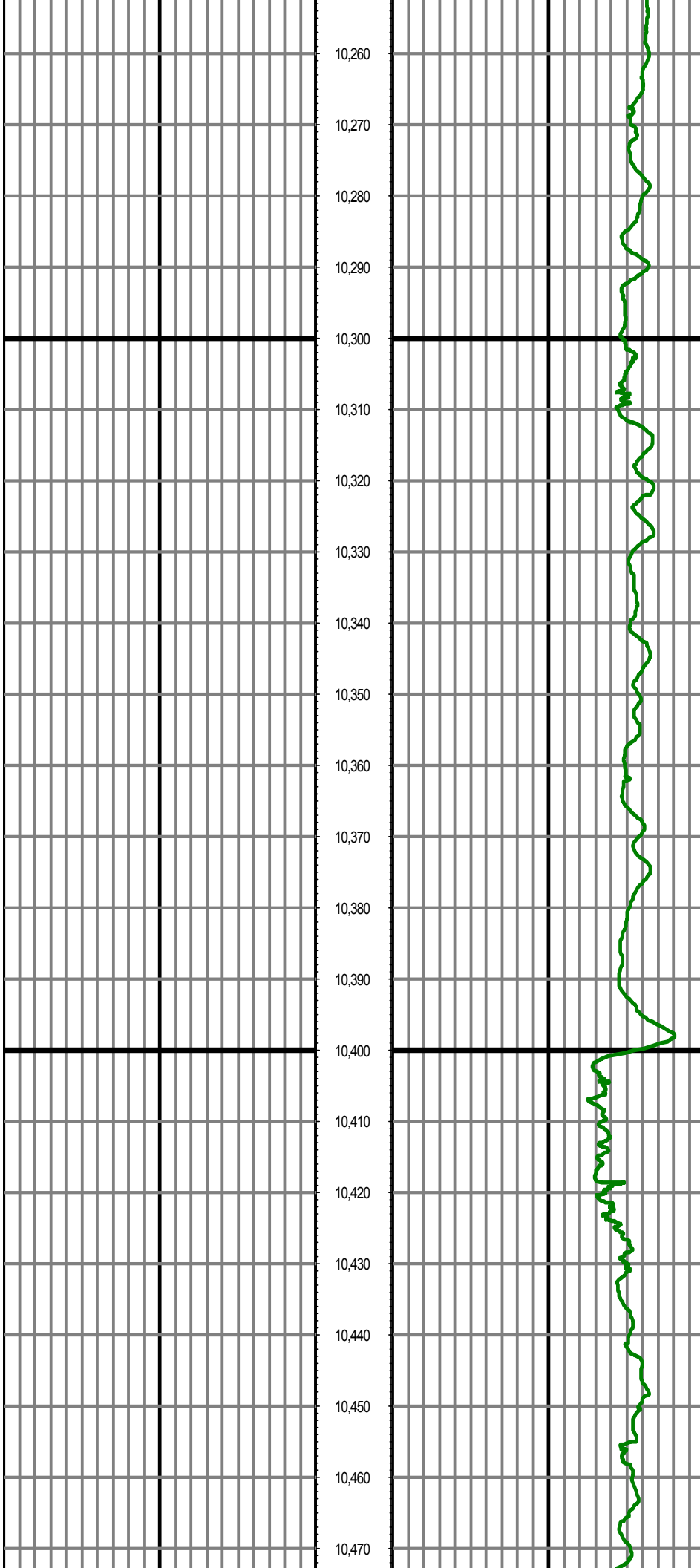
MD: 10023.00 INC: 94.89 AZ: 359.03 TVD: 7038.68 VS: 2057.68

10,040
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10,250

MD: 10118.00 INC: 93.51 AZ: 358.90 TVD: 7031.73 VS: 2152.39

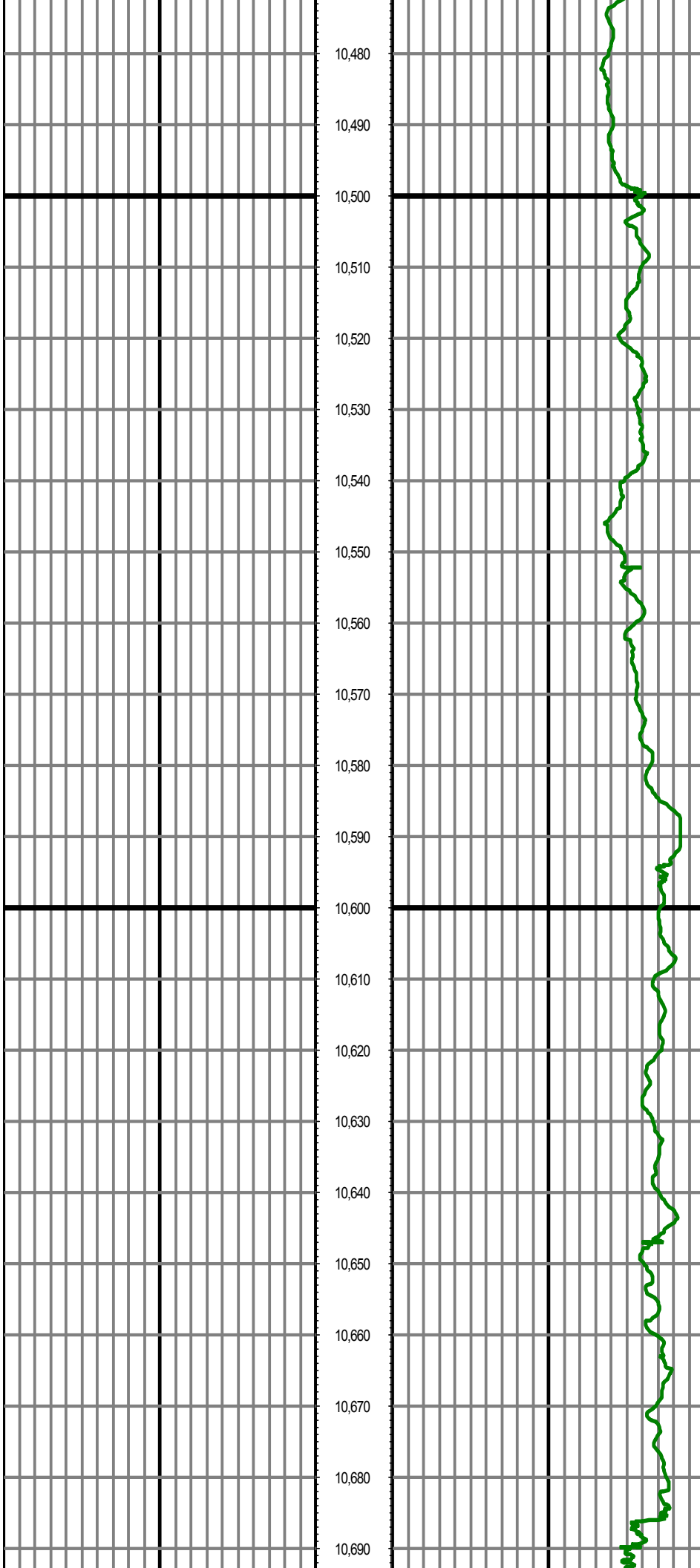
MD: 10212.00 INC: 92.30 AZ: 0.00 TVD: 7026.97 VS: 2246.25





MD: 10307.00 INC: 90.69 AZ: 0.53 TVD: 7024.49 VS: 2341.22

MD: 10401.00 INC: 91.20 AZ: 0.53 TVD: 7022.94 VS: 2435.20



10,480

10,490

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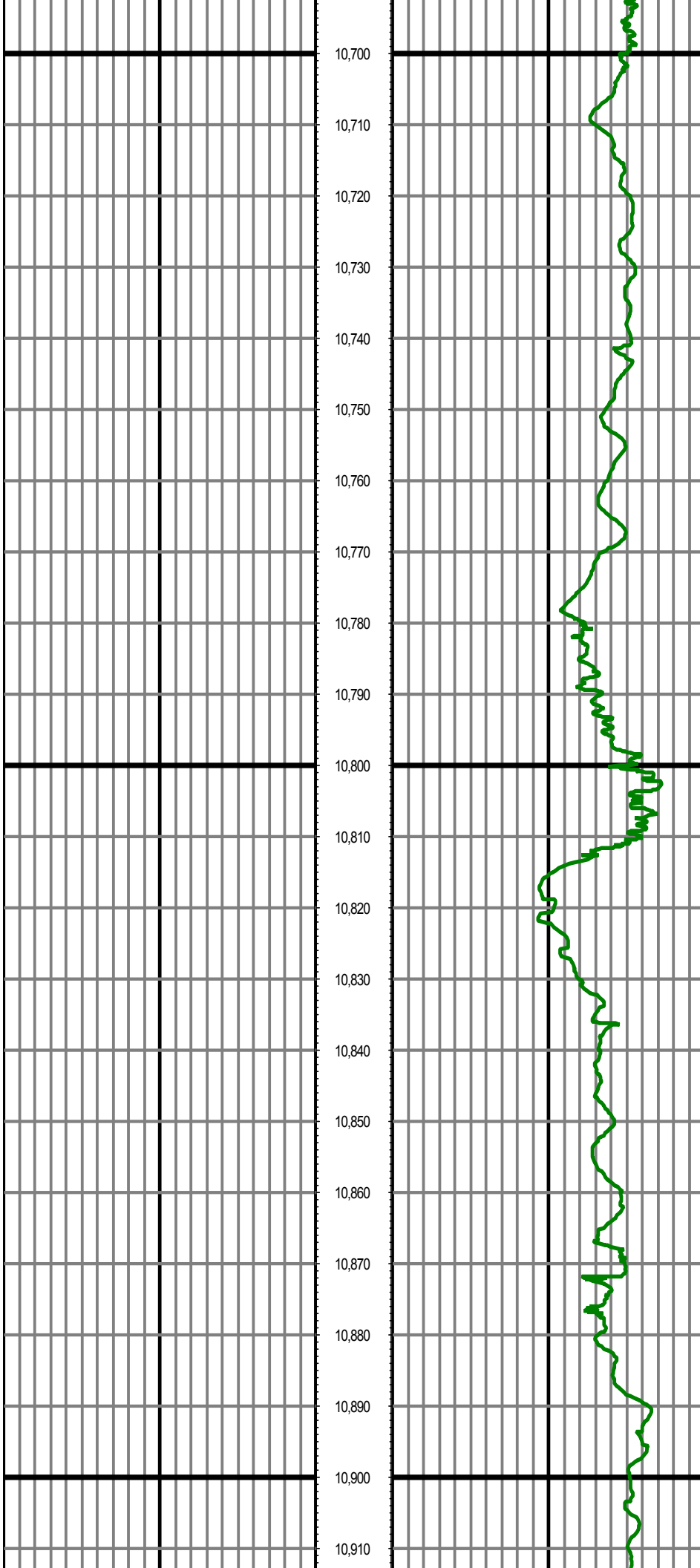
10,680

10,690

MD: 10496.00 INC: 89.59 AZ: 0.70 TVD: 7022.29 VS: 2530.20

MD: 10590.00 INC: 90.10 AZ: 0.84 TVD: 7022.54 VS: 2624.19

MD: 10685.00 INC: 90.80 AZ: 1.80 TVD: 7021.79 VS: 2719.18



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MD: 10779.00 INC: 90.10 AZ: 2.51 TVD: 7021.05 VS: 2813.13

MD: 10874.00 INC: 90.01 AZ: 0.70 TVD: 7020.96 VS: 2908.11

10,920

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MD: 10968.00 INC: 91.51 AZ: 359.21 TVD: 7019.72 VS: 3002.09

10,970

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MD: 11063.00 INC: 89.79 AZ: 0.70 TVD: 7018.64 VS: 3097.08

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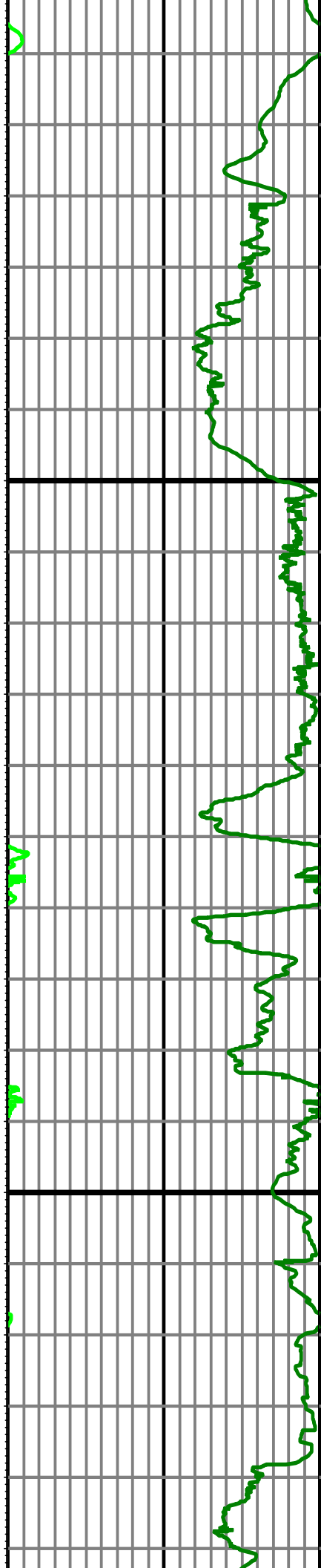
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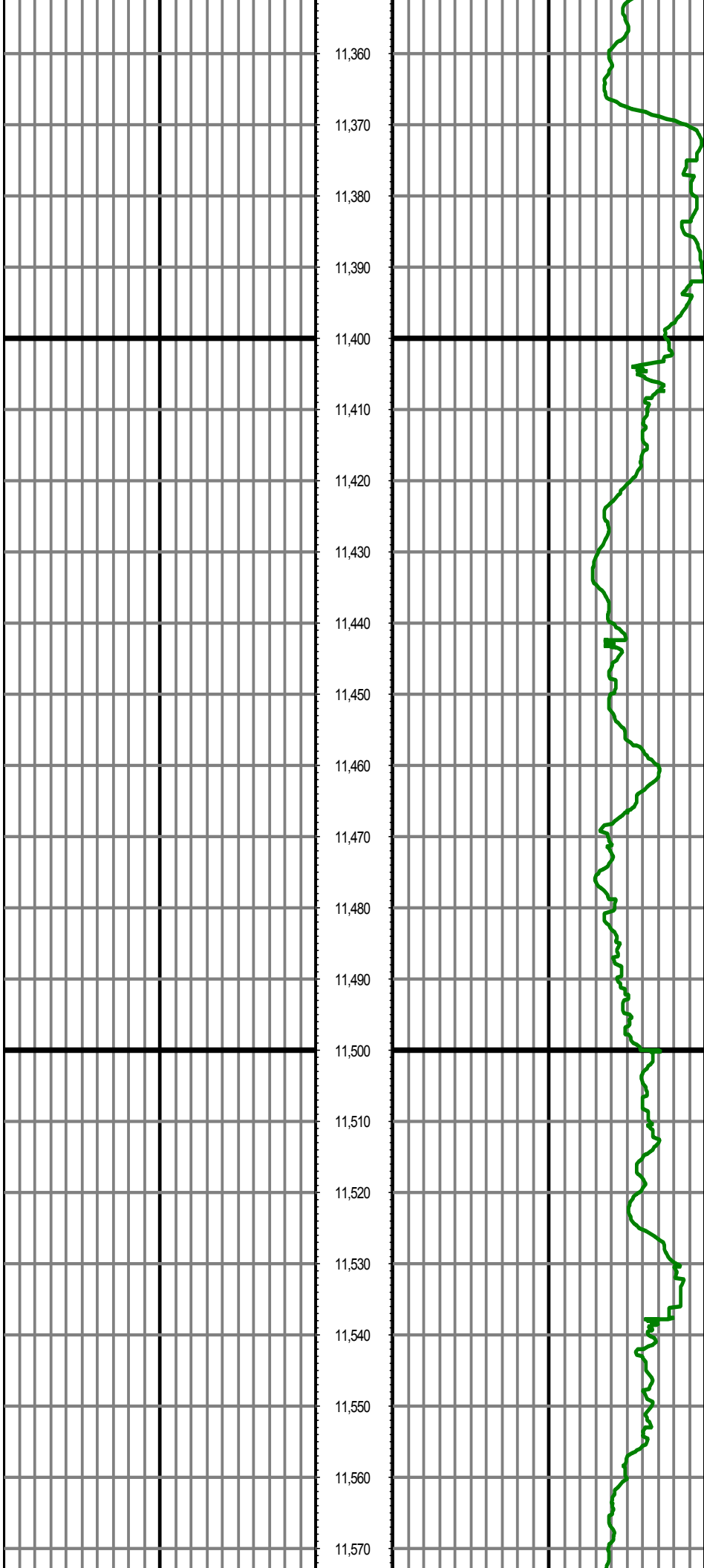
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MD: 11157.00 INC: 90.89 AZ: 359.34 TVD: 7018.08 VS: 3191.07

MD: 11251.00 INC: 89.40 AZ: 359.61 TVD: 7017.85 VS: 3285.05

MD: 11346.00 INC: 89.70 AZ: 0.44 TVD: 7018.60 VS: 3380.05





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MD: 11440.00 INC: 90.49 AZ: 359.74 TVD: 7018.43 VS: 3474.04

MD: 11535.00 INC: 90.89 AZ: 1.01 TVD: 7017.29 VS: 3569.03

11,580

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MD: 11629.00 INC: 92.10 AZ: 1.41 TVD: 7014.83 VS: 3662.99

MD: 11723.00 INC: 90.30 AZ: 0.22 TVD: 7012.87 VS: 3756.96



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12,010

MD: 11818.00 INC: 89.40 AZ: 0.13 TVD: 7013.12 VS: 3851.96

MD: 11912.00 INC: 90.41 AZ: 0.31 TVD: 7013.28 VS: 3945.96

MD: 12007.00 INC: 89.31 AZ: 1.80 TVD: 7013.52 VS: 4040.95



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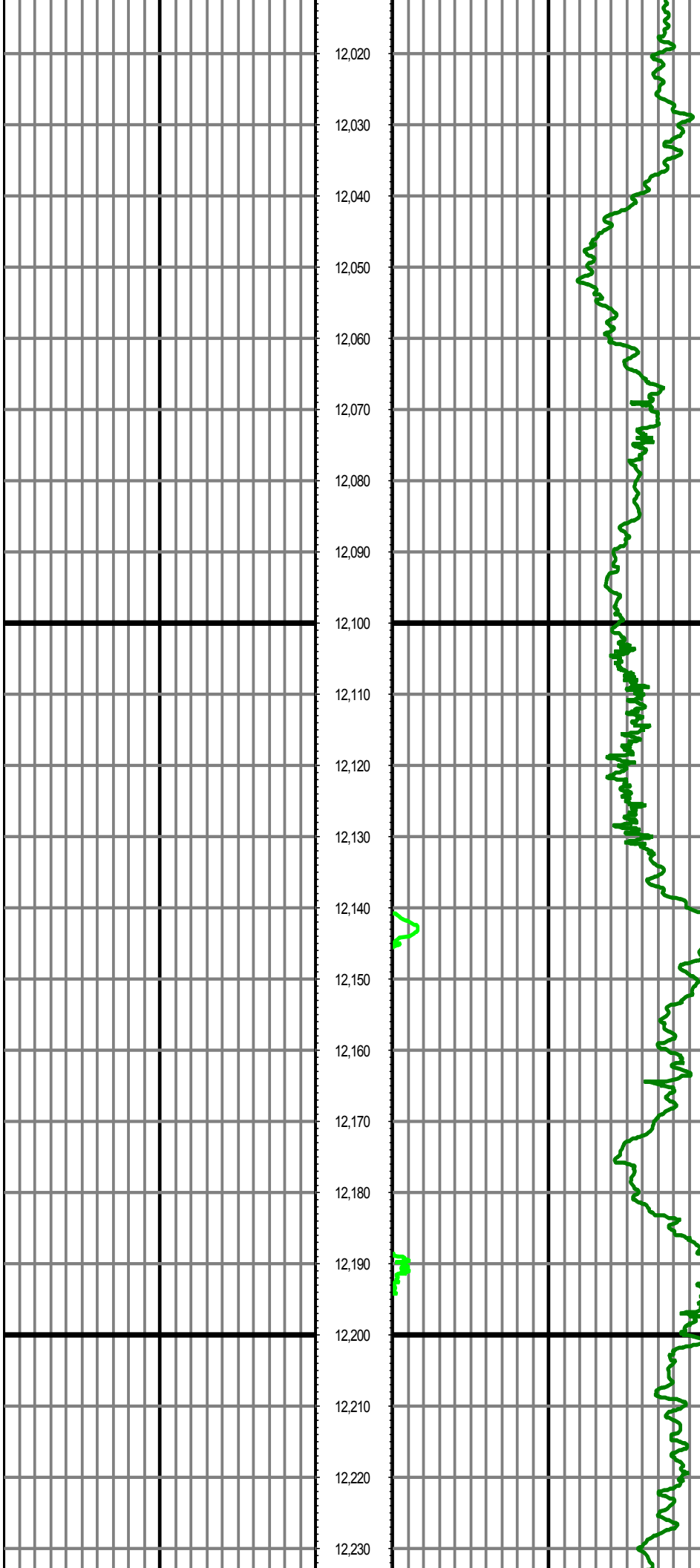
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12,230

MD: 12070.00 INC: 89.00 AZ: 1.23 TVD: 7014.45 VS: 4103.93

MD: 12101.00 INC: 89.51 AZ: 1.32 TVD: 7014.85 VS: 4134.93

MD: 12196.00 INC: 87.90 AZ: 2.11 TVD: 7017.00 VS: 4229.87



12,240

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MD: 12290.00 INC: 87.40 AZ: 2.33 TVD: 7020.86 VS: 4323.75

MD: 12385.00 INC: 87.90 AZ: 1.80 TVD: 7024.76 VS: 4418.63



