

**Premier Directional Drilling**

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

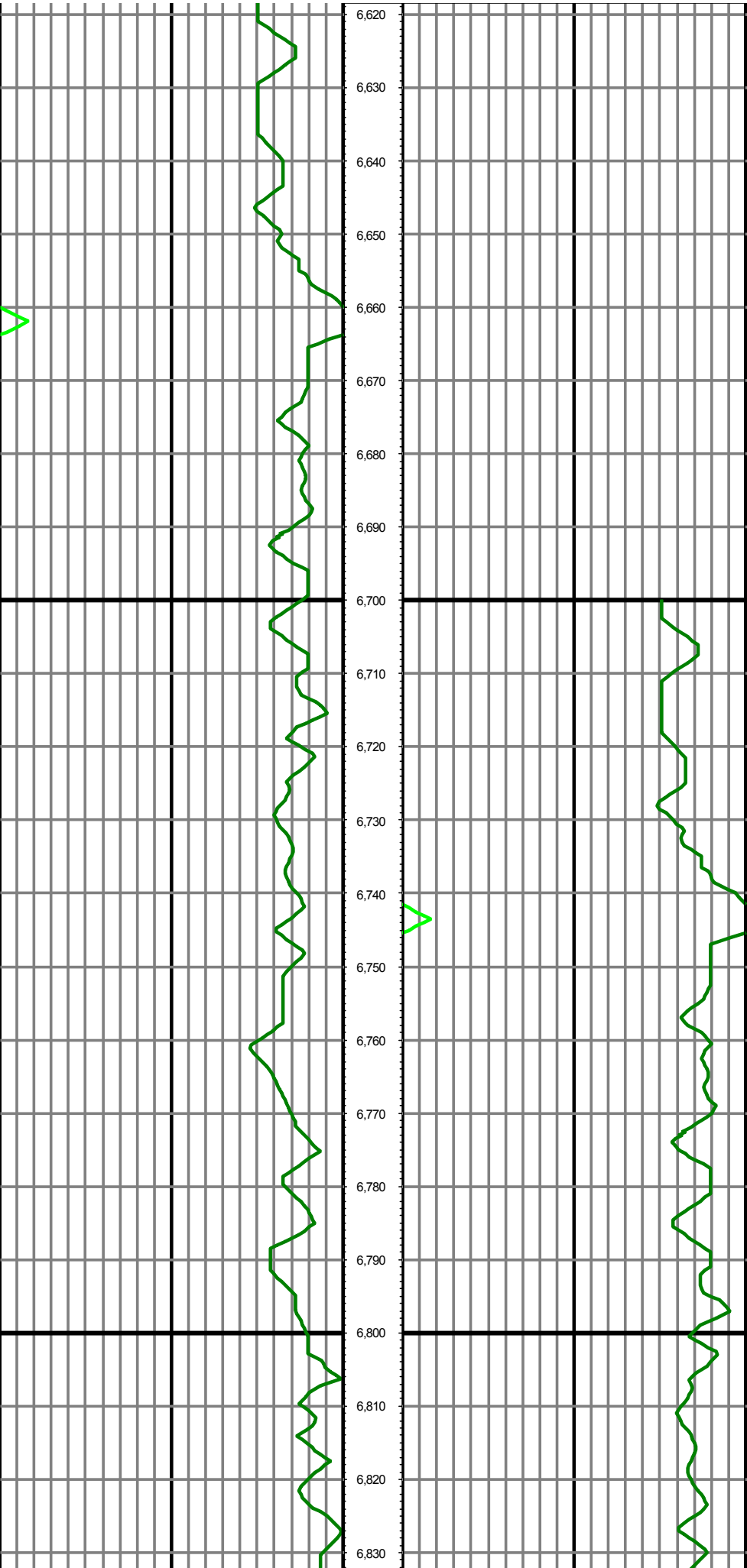
BAT 28C-9HZ**Scale 5":100' - MD****5/28/2015 10:30 AM****Oper. Company:** Anadarko Petroleum Corporation**State:** Colorado**Well:** BAT 28C-9HZ**County:** Weld**Field:** Wattenberg / Codell**Country:** USA**Rig:** H&P 311**Location:** 1N-65W-09 BAT PAD**Well ID:** 05123412890000**Start Date:** 05/25/2015 22:35:00**Job Number:** R15243**End Date:** 05/28/2015 09:55:00

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

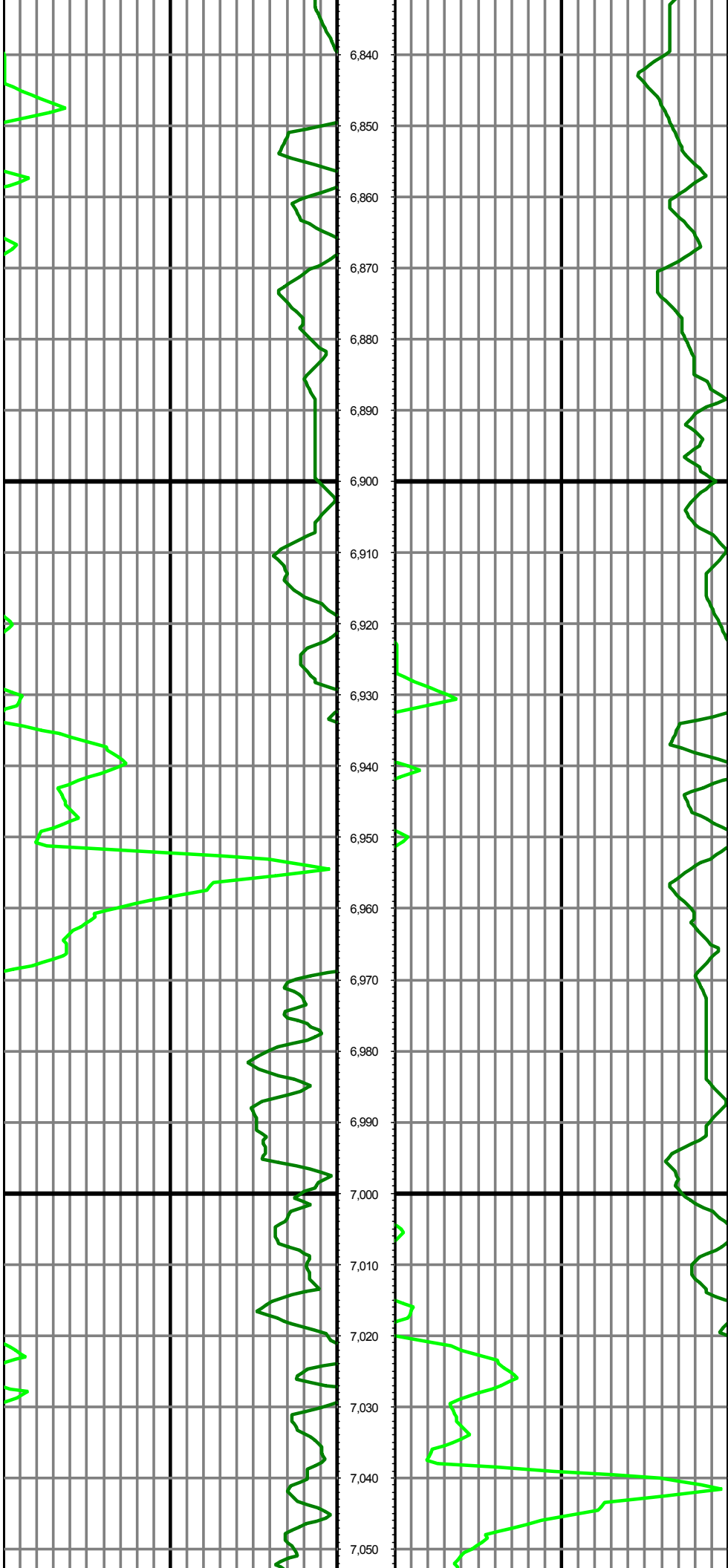
Latitude: 40.060444**Elev KB:** 4956'**Longitude:** -104.668970**Elev DF:** 4956'**Elev GL:** 4931'**Notes:** Datum: NAD 1983 Map Zone: 13N (108 W to 102 W) Total Correction: 8.13° (Mean Mag Var) Grid Convergence: 0.0° (True N)**Operator 1:** Robert Grossman**Operator 2:** Mike Gunther**Notes:** Smoothing: 7Gap Fill: 10Survey Tool Type: Mud Pulse Calculation Method: Minimum Curvature

Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	161	161	214		
Bit Size	7 7/8	7 7/8	7 7/8		
Cal Factor	5.38376	5.38376	5.36978		
Gamma Offset	47.00	46.00	47.00		
Resistivity Offset	0.00	0.00	0.00		
Start Depth	1567.00	7386.00	7544.00		
StartDate	5/25/2015	5/26/2015	5/27/2015		
StartTime	4:30 AM	1:35 PM	5:30 AM		
EndDepth	7386.00	7544.00	12118.00		
EndDate	5/26/2015	5/27/2015	5/28/2015		
EndTime	1:00 PM	4:20 AM	7:00 PM		
Mud Type	OBM	OBM	OBM		
Mud Weight	8.7	9.5	9.5		
Funnel Viscosity	60	57	56		
Plastic Viscosity	14	15	15		
Yield Point	12	12	12		
Gel Strength	NA	NA	NA		
Solids Content	6.01	8.83	8.85		
Sand Content	NA	NA	NA		
Mud Alkalinity	2.8	3.25	3.00		
Filtrate Alkalinity	NA	NA	NA		
Chlorides	50000	55000	54000		
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
13.5	0.00	1567.00	9.625	0.00	1557.00
7.875	1567.00	12118.00	5.5	0.00	12118.00

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.



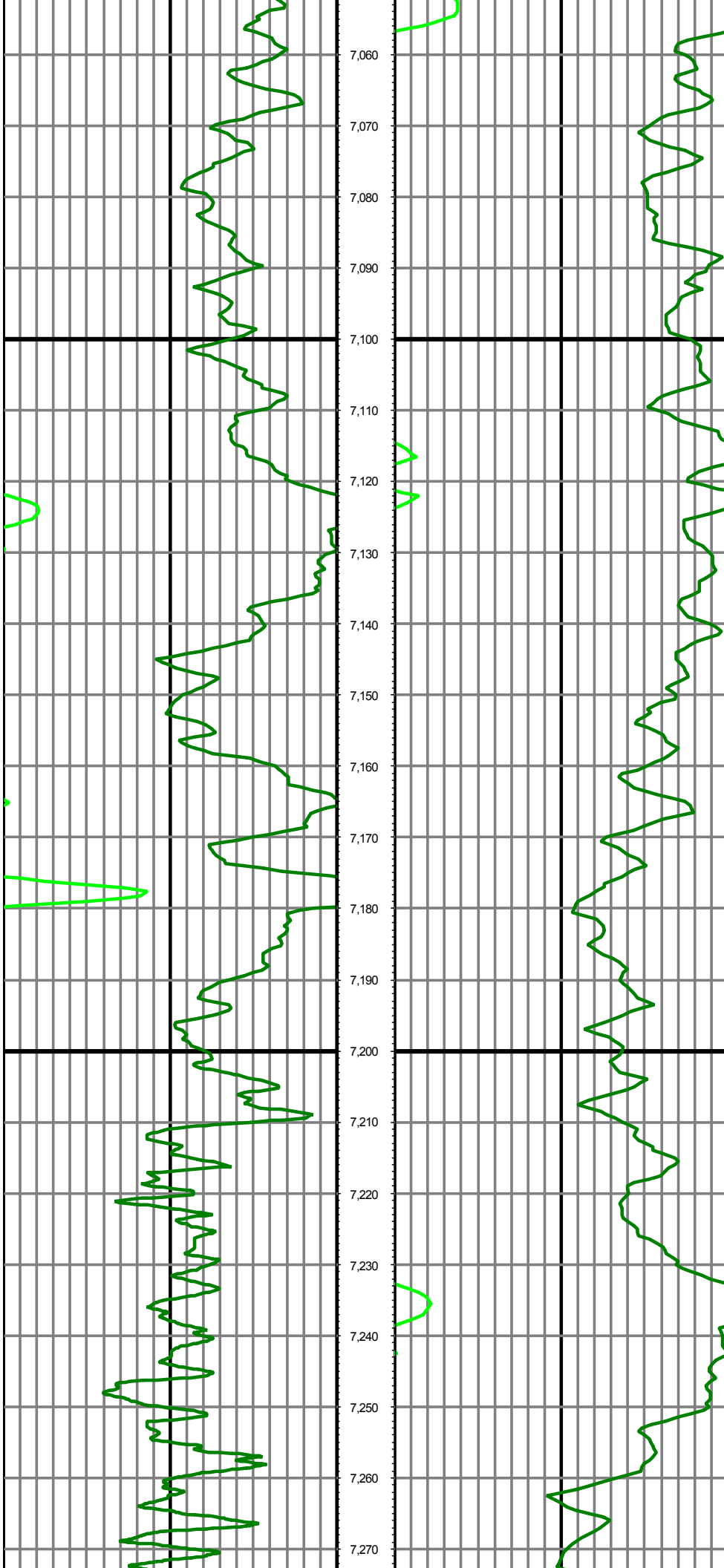
MD: 6767.00 INC: 2.10 AZ: 230.80 TVD: 6685.42 VS: -732.04



MD: 6861.00 INC: 7.30 AZ: 1.60 TVD: 6779.19 VS: -727.15

MD: 6956.00 INC: 12.90 AZ: 0.00 TVD: 6872.68 VS: -710.49

MD: 7050.00 INC: 20.60 AZ: 3.30 TVD: 6962.63 VS: -683.45

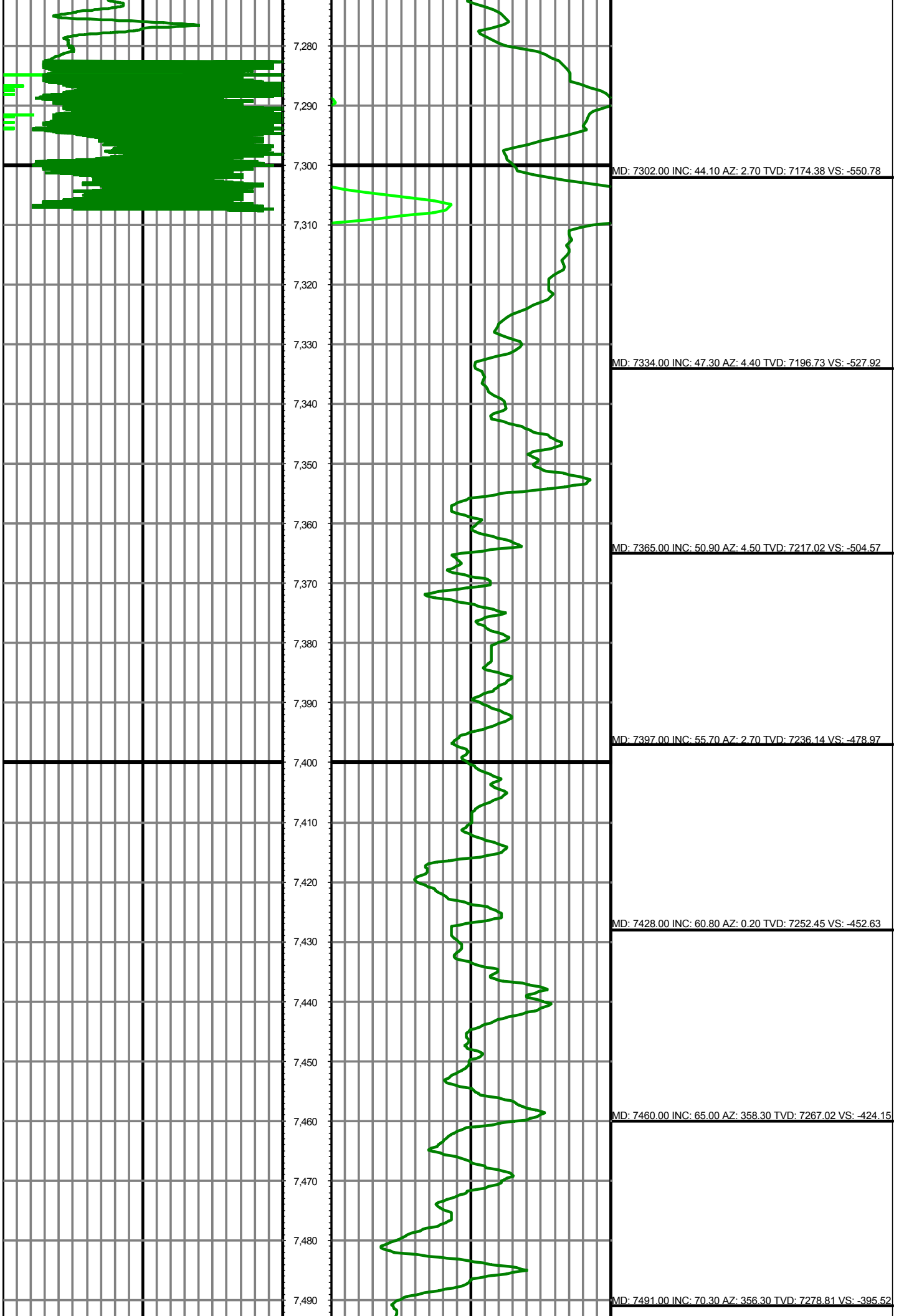


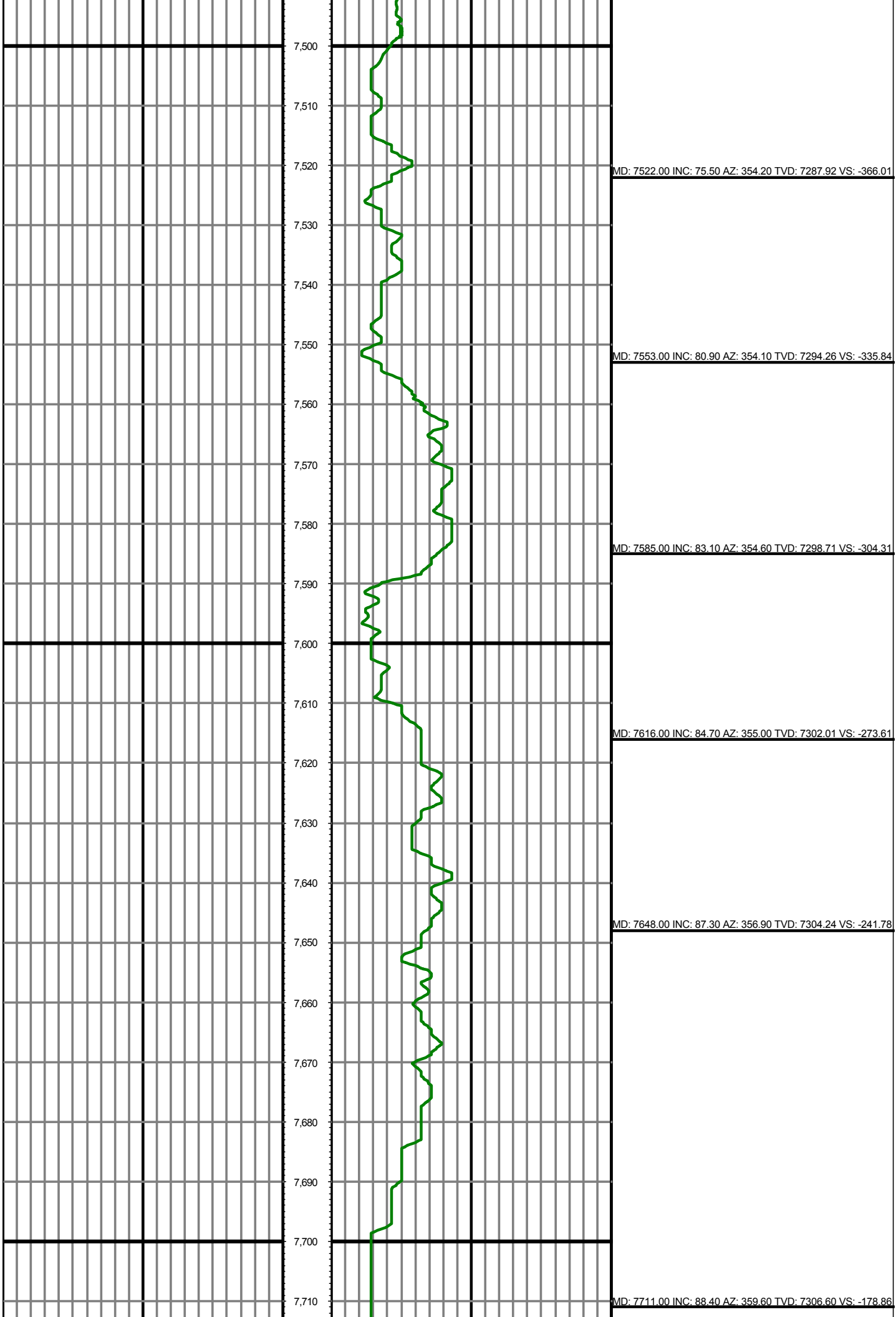
MD: 7145.00 INC: 29.10 AZ: 7.80 TVD: 7048.76 VS: -643.80

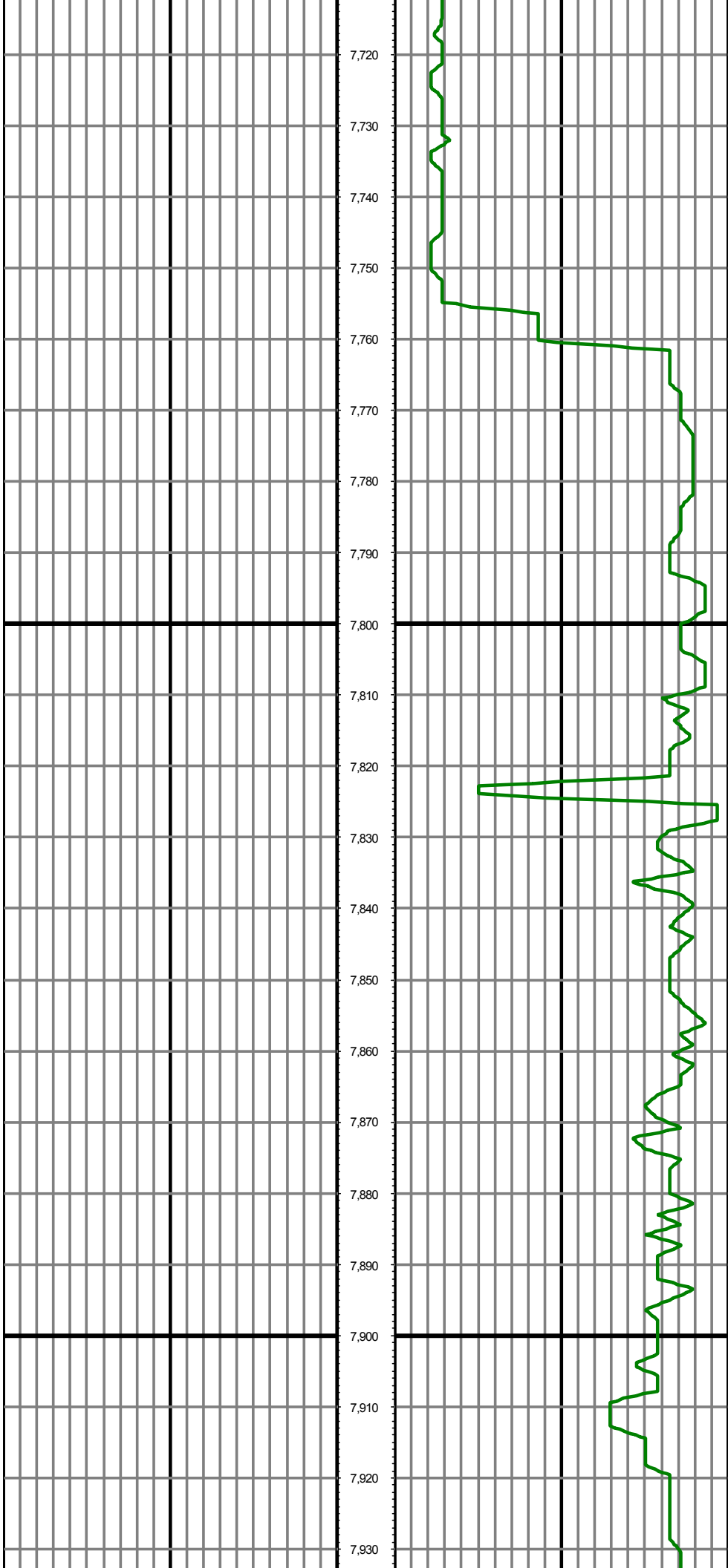
MD: 7208.00 INC: 35.50 AZ: 7.50 TVD: 7101.98 VS: -610.45

MD: 7239.00 INC: 37.90 AZ: 4.00 TVD: 7126.84 VS: -592.02

MD: 7271.00 INC: 41.00 AZ: 2.40 TVD: 7151.54 VS: -571.72

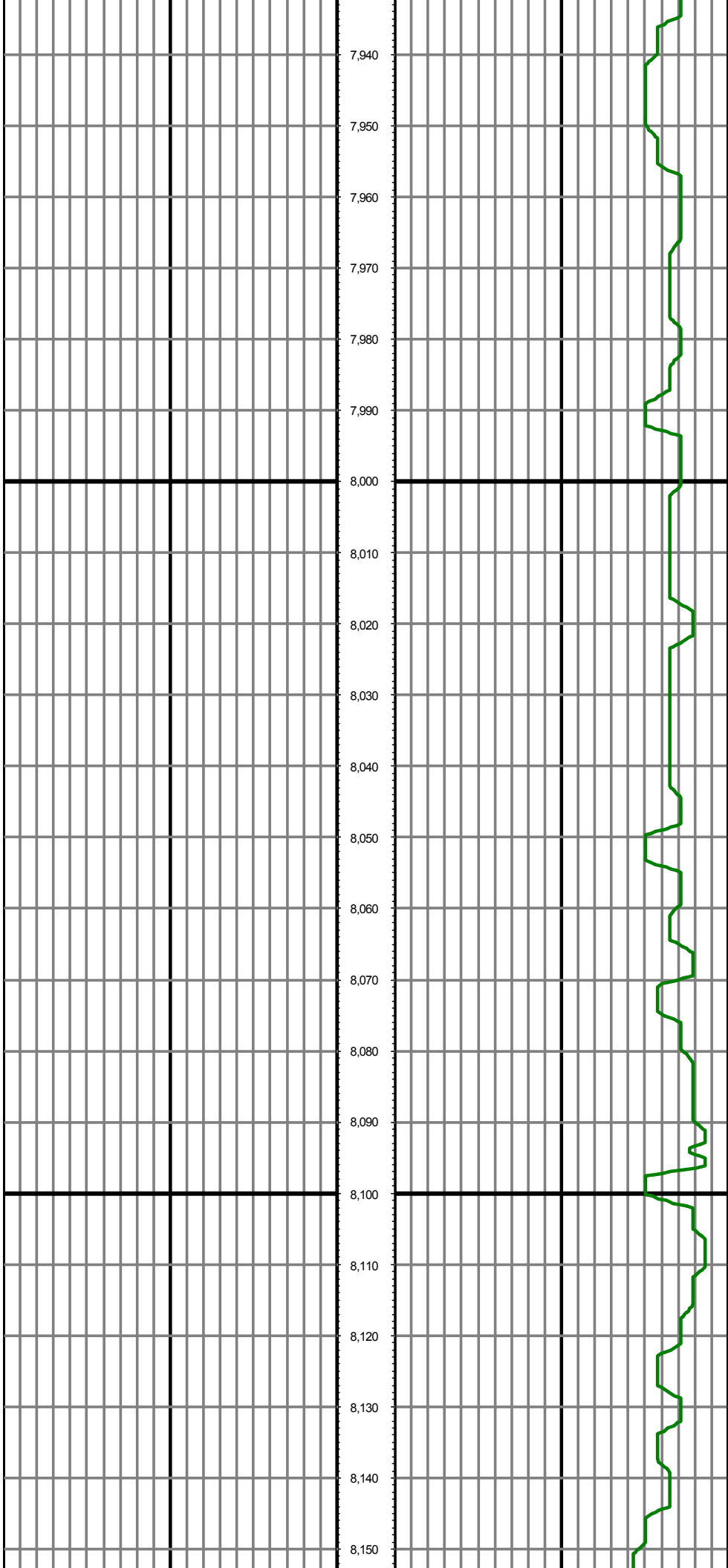






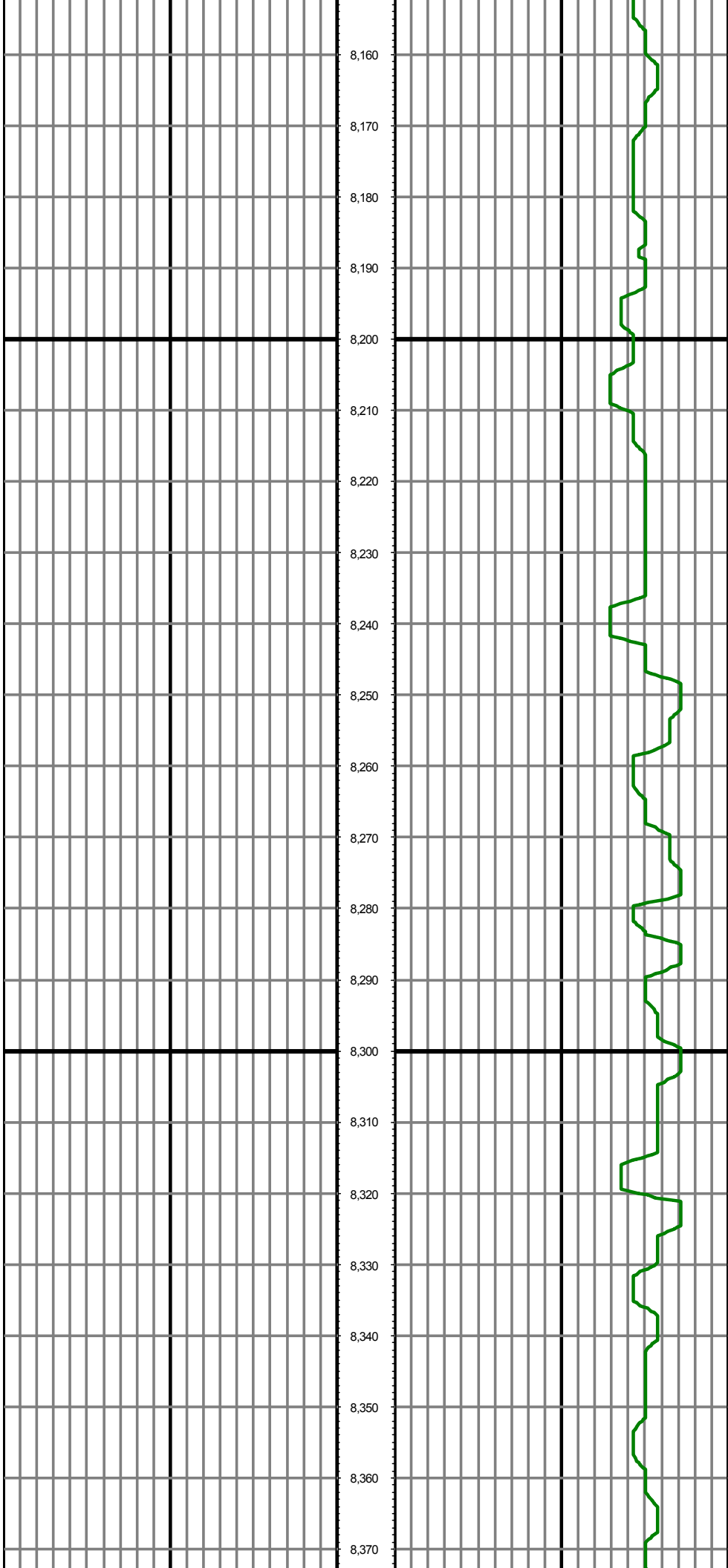
MD: 7806.00 INC: 90.40 AZ: 0.90 TVD: 7307.60 VS: -83.87

MD: 7900.00 INC: 91.10 AZ: 1.00 TVD: 7306.37 VS: 10.11



MD: 7995.00 INC: 90.90 AZ: 0.70 TVD: 7304.71 VS: 105.08

MD: 8089.00 INC: 90.70 AZ: 0.40 TVD: 7303.40 VS: 199.07



MD: 8184.00 INC: 90.50 AZ: 0.00 TVD: 7302.40 VS: 294.06

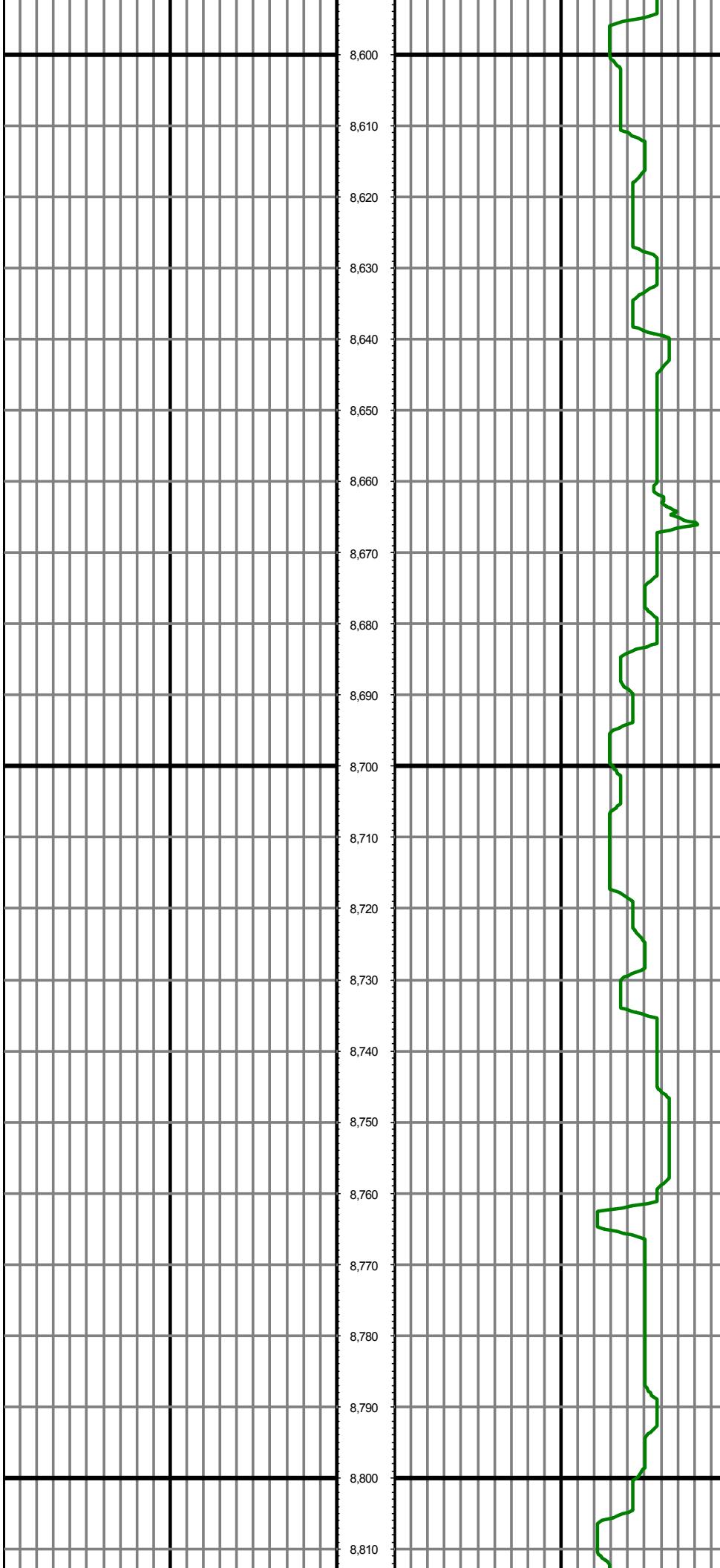
MD: 8278.00 INC: 90.20 AZ: 358.40 TVD: 7301.83 VS: 388.05

MD: 8373.00 INC: 90.30 AZ: 358.60 TVD: 7301.41 VS: 483.01

MD: 8373.00 INC: 90.30 AZ: 358.60 TVD: 7301.41 VS: 483.01

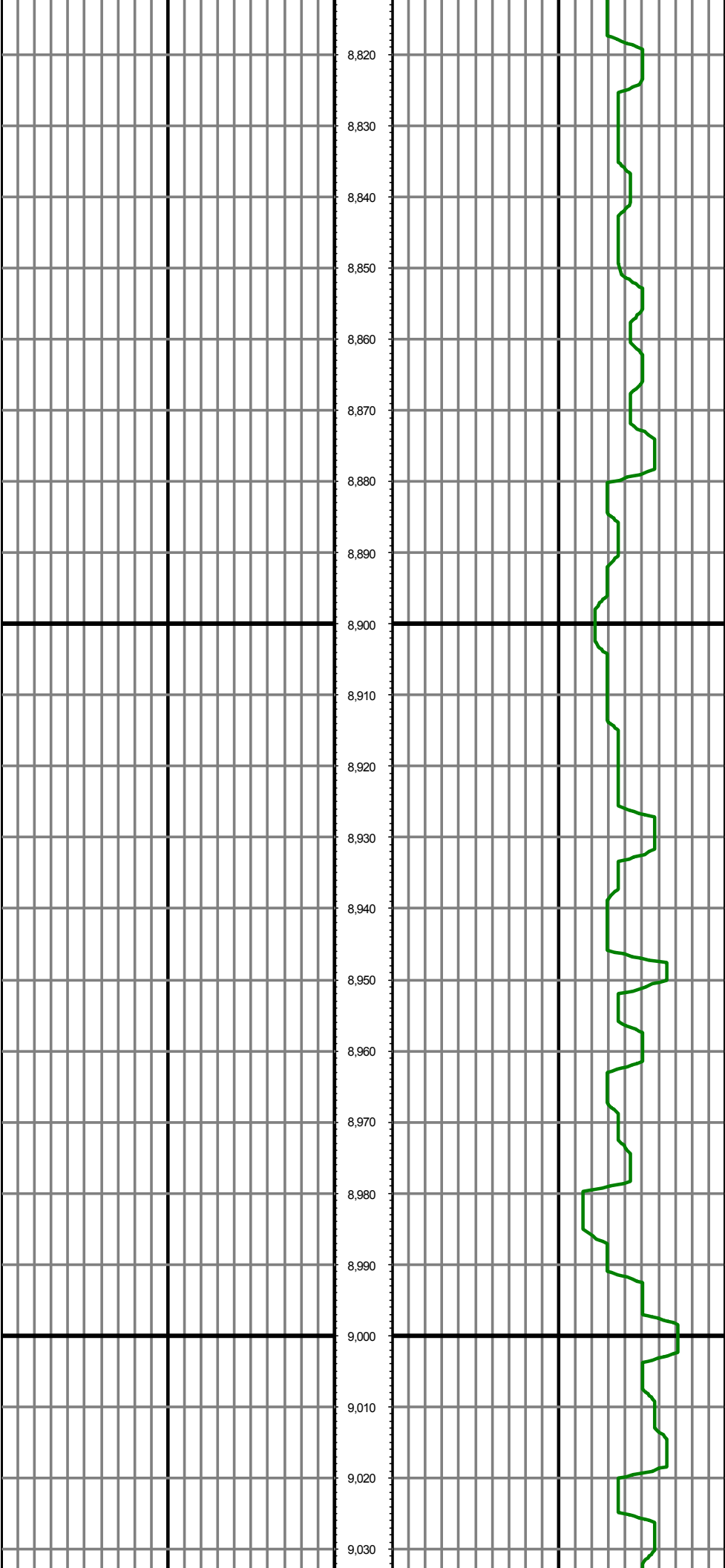
MD: 8467.00 INC: 90.50 AZ: 358.50 TVD: 7300.76 VS: 576.98

MD: 8562.00 INC: 90.70 AZ: 358.20 TVD: 7299.76 VS: 671.93



MD: 8656.00 INC: 89.70 AZ: 0.80 TVD: 7299.43 VS: 765.92

MD: 8751.00 INC: 90.20 AZ: 0.40 TVD: 7299.52 VS: 860.91



MD: 8845.00 INC: 90.00 AZ: 359.80 TVD: 7299.35 VS: 954.91

MD: 8940.00 INC: 90.30 AZ: 359.80 TVD: 7299.10 VS: 1049.91

MD: 9000.00 INC: 90.00 AZ: 359.80 TVD: 7299.00 VS: 1149.91

MD: 9034.00 INC: 90.30 AZ: 359.20 TVD: 7298.61 VS: 1143.91

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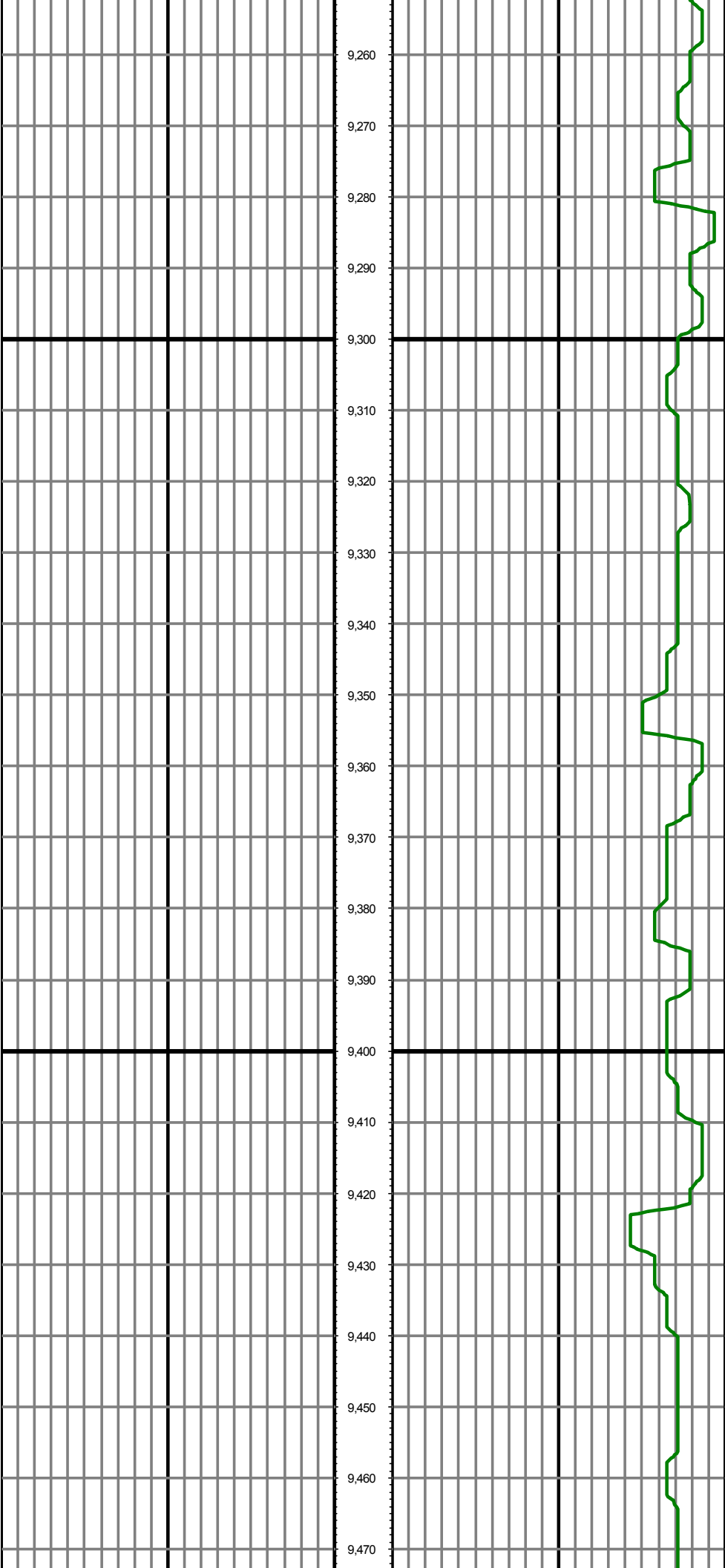
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9,240

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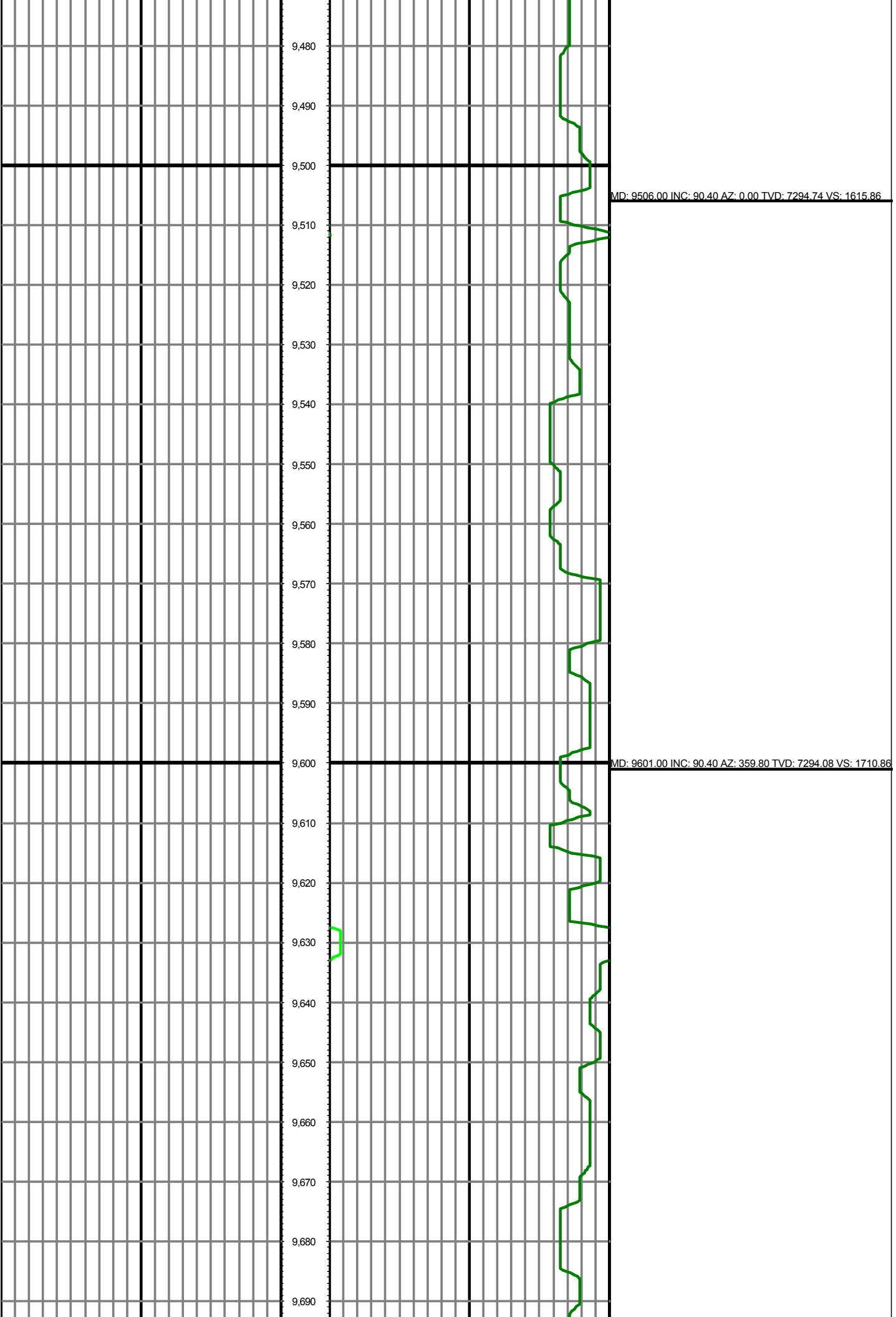
MD: 9129.00 INC: 90.30 AZ: 359.40 TVD: 7298.11 VS: 1238.90

MD: 9223.00 INC: 90.50 AZ: 0.50 TVD: 7297.46 VS: 1332.89



MD: 9318.00 INC: 90.70 AZ: 0.90 TVD: 7296.46 VS: 1427.88

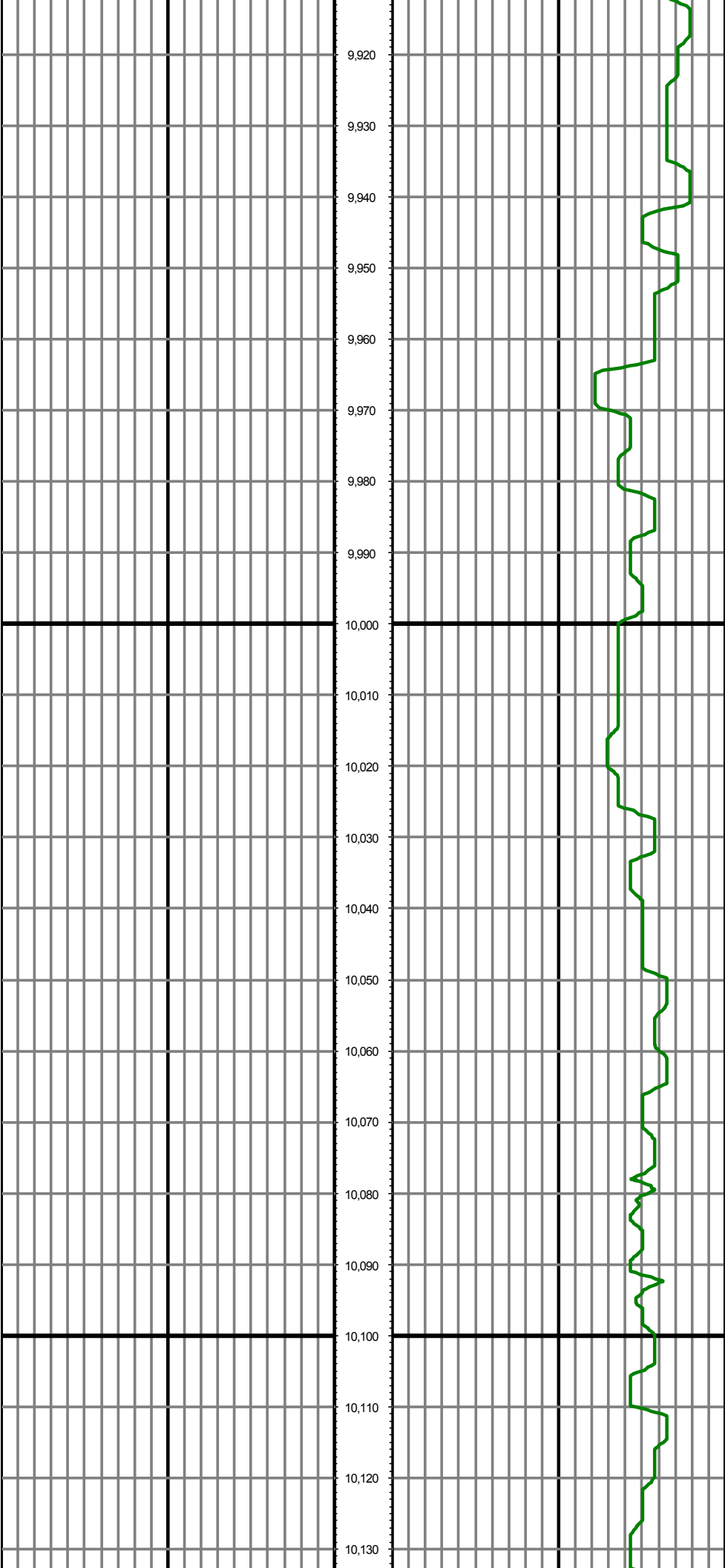
MD: 9412.00 INC: 90.50 AZ: 0.50 TVD: 7295.48 VS: 1521.87



MD: 9695.00 INC: 90.50 AZ: 359.60 TVD: 7293.34 VS: 1804.86

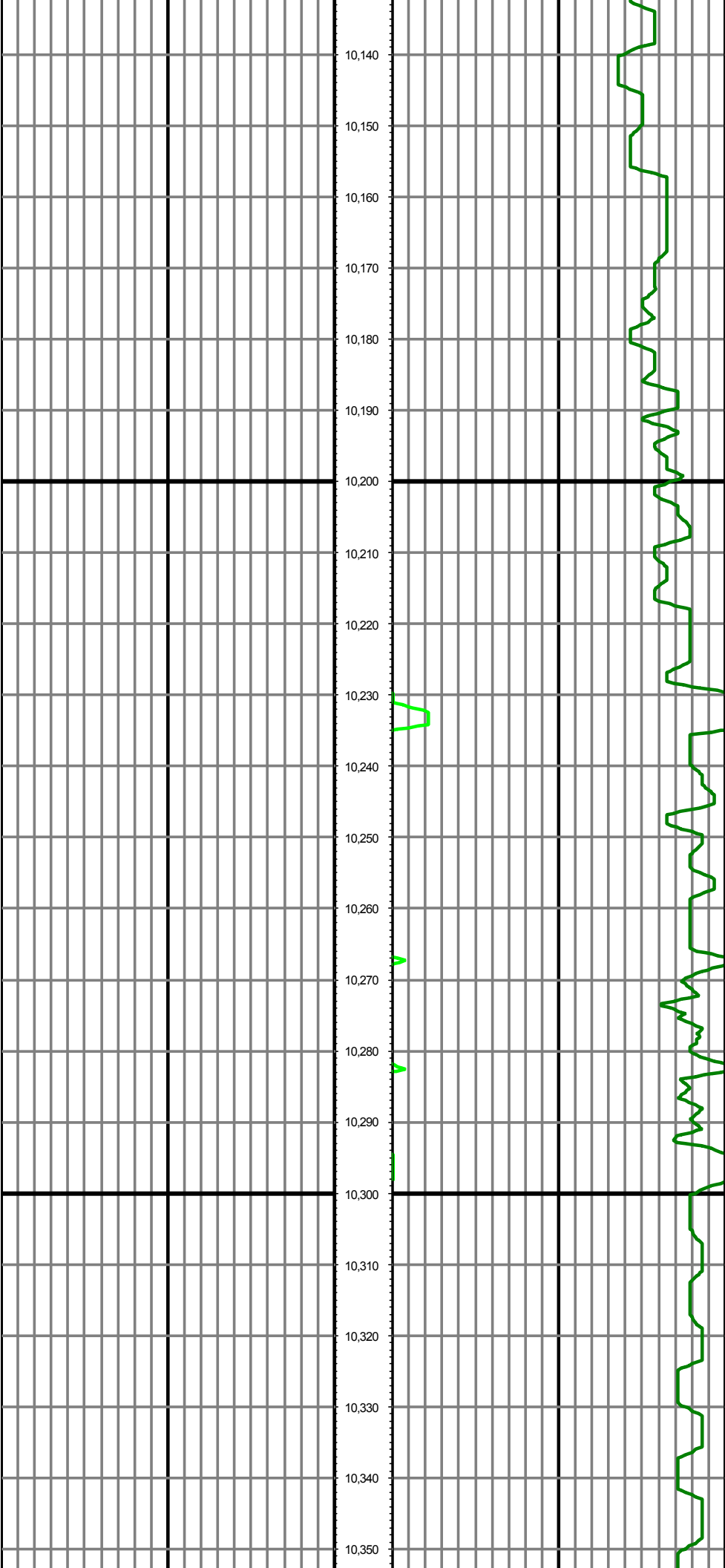
MD: 9789.00 INC: 90.40 AZ: 359.40 TVD: 7292.60 VS: 1898.85

MD: 9884.00 INC: 90.60 AZ: 359.50 TVD: 7291.77 VS: 1993.84



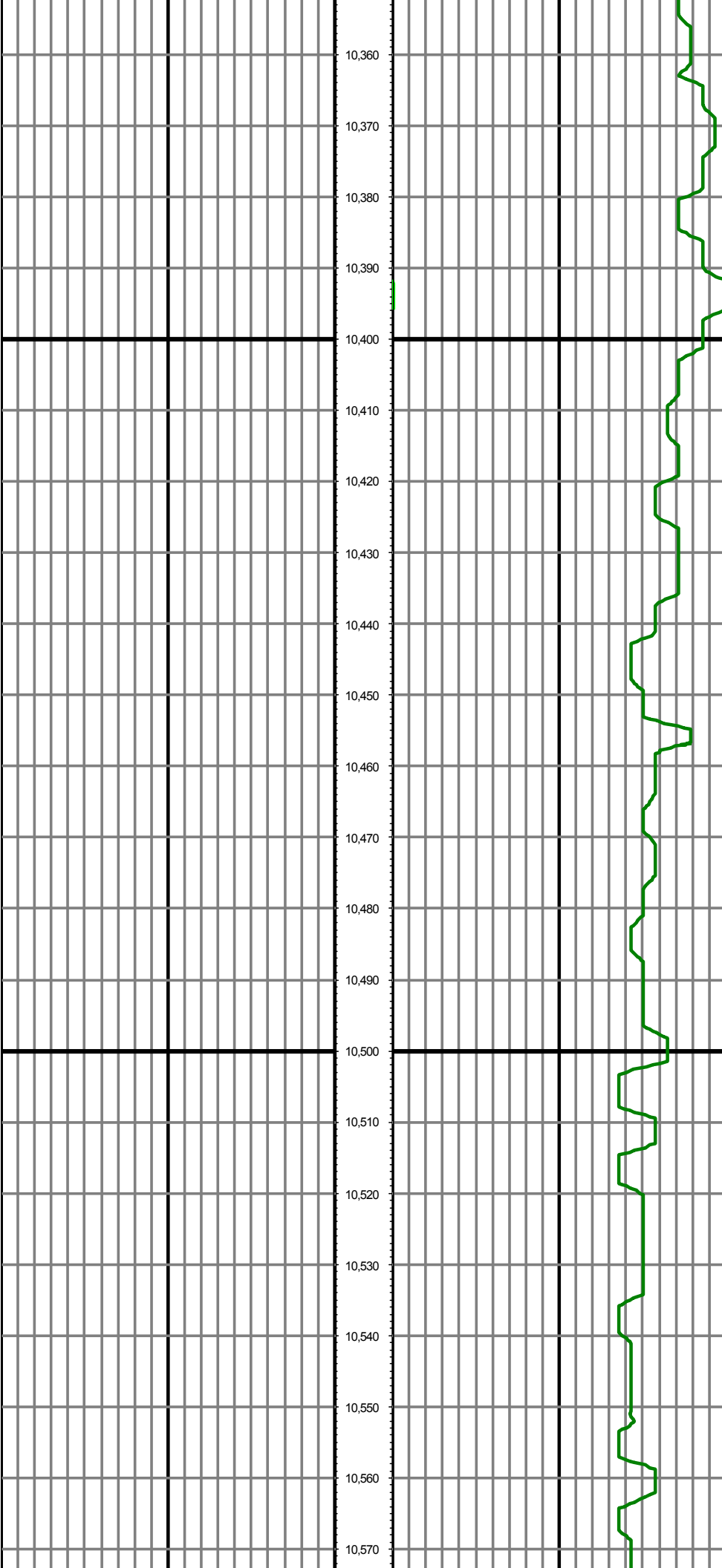
MD: 9978.00 INC: 90.40 AZ: 358.50 TVD: 7290.95 VS: 2087.82

MD: 10073.00 INC: 90.50 AZ: 358.60 TVD: 7290.21 VS: 2182.7



MD: 10167.00 INC: 89.00 AZ: 0.40 TVD: 7290.62 VS: 2276.77

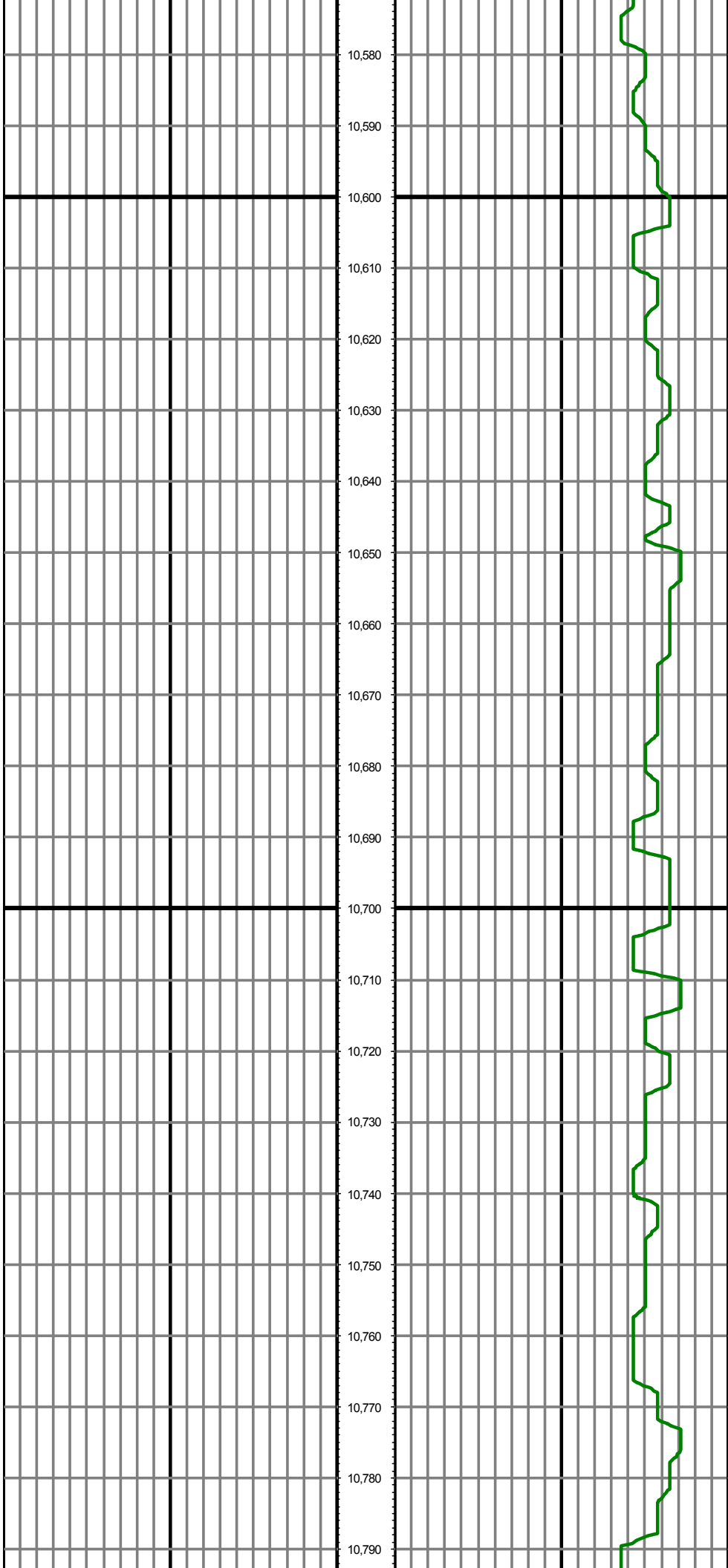
MD: 10262.00 INC: 89.40 AZ: 2.50 TVD: 7291.94 VS: 2371.73



MD: 10357.00 INC: 91.30 AZ: 1.40 TVD: 7291.36 VS: 2466.67

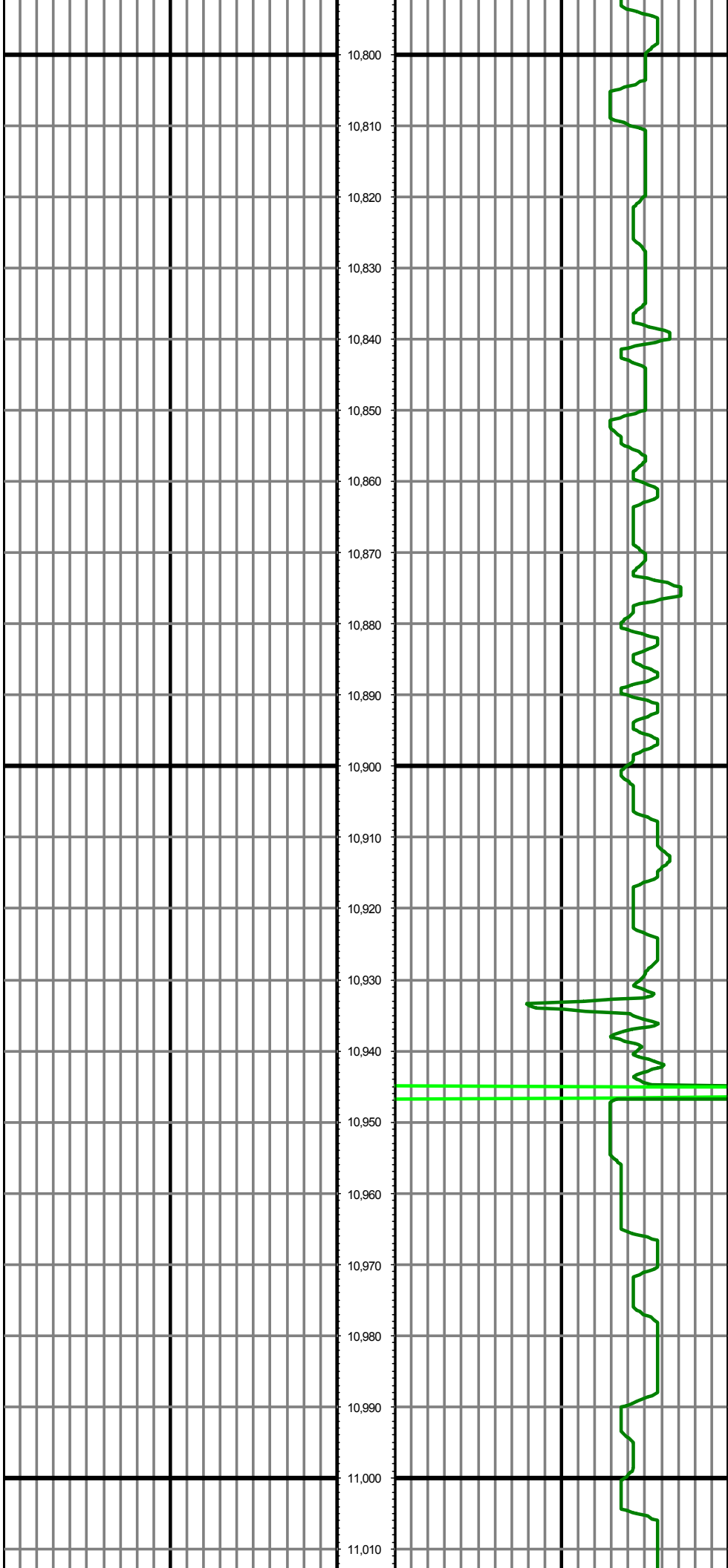
MD: 10451.00 INC: 91.20 AZ: 1.00 TVD: 7289.31 VS: 2560.63

MD: 10546.00 INC: 91.10 AZ: 1.00 TVD: 7287.40 VS: 2655.60



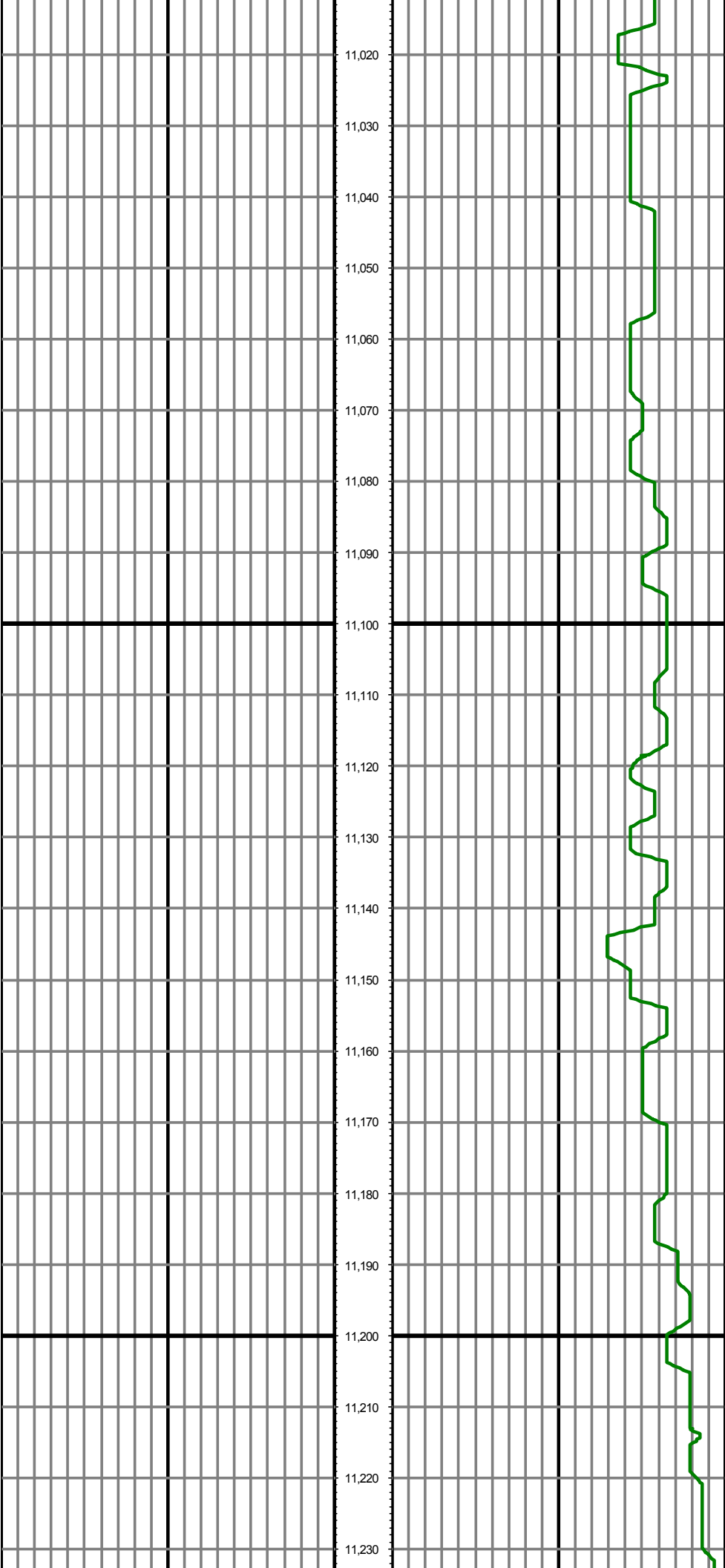
MD: 10640.00 INC: 90.60 AZ: 0.70 TVD: 7286.01 VS: 2749.58

MD: 10735.00 INC: 90.50 AZ: 0.90 TVD: 7285.10 VS: 2844.56



MD: 10829.00 INC: 90.20 AZ: 0.60 TVD: 7284.52 VS: 2938.56

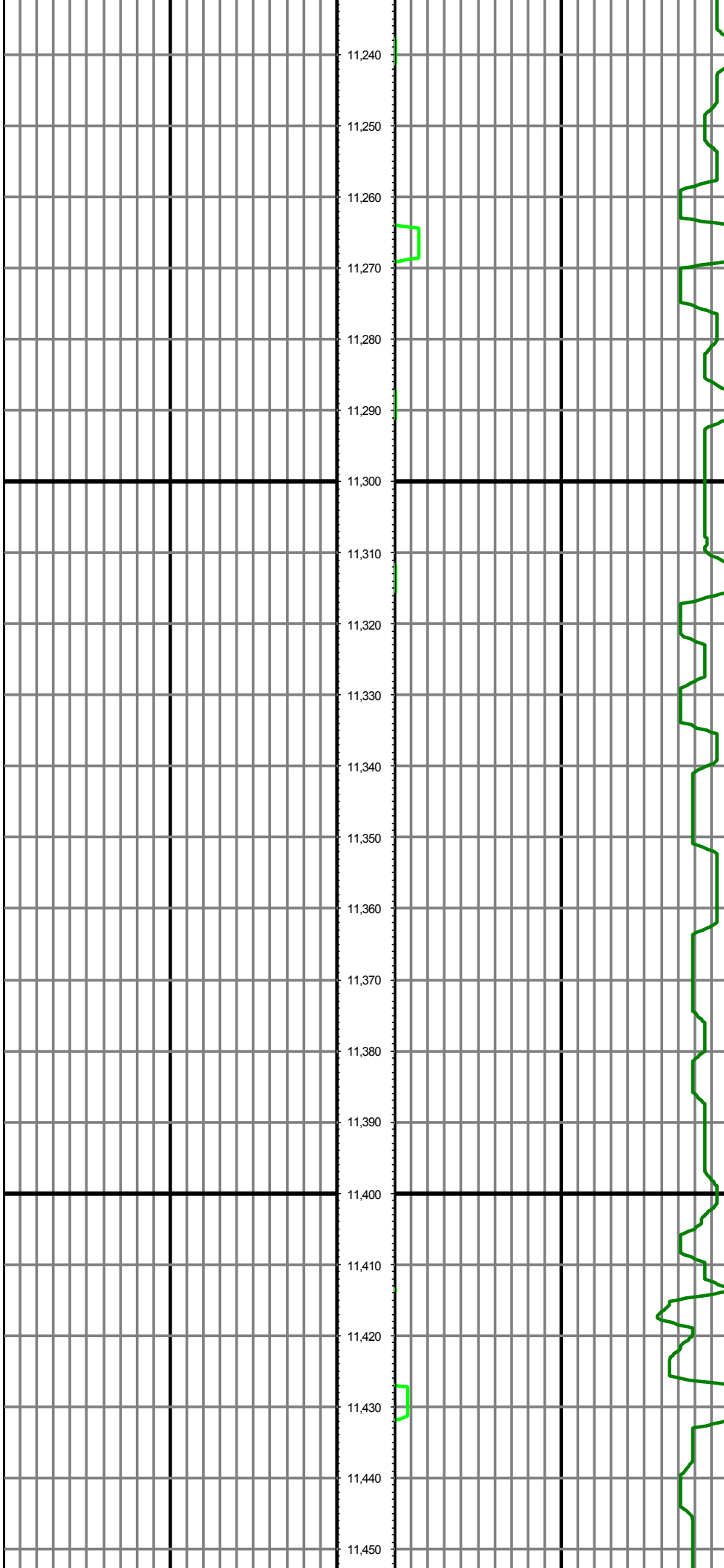
MD: 10924.00 INC: 89.50 AZ: 0.10 TVD: 7284.77 VS: 3033.55



MD: 11019.00 INC: 90.20 AZ: 1.20 TVD: 7285.02 VS: 3128.55

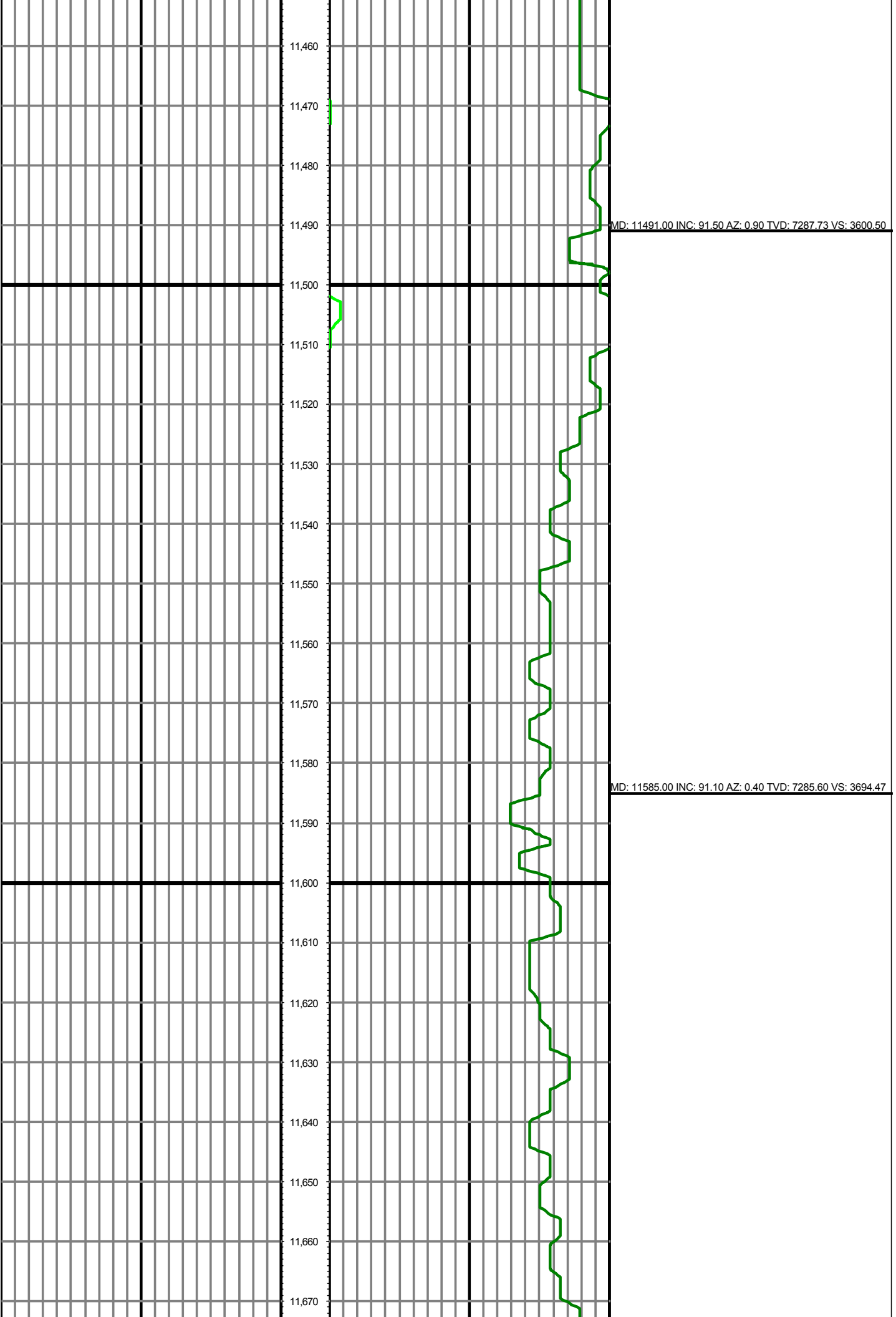
MD: 11113.00 INC: 89.80 AZ: 0.60 TVD: 7285.02 VS: 3222.53

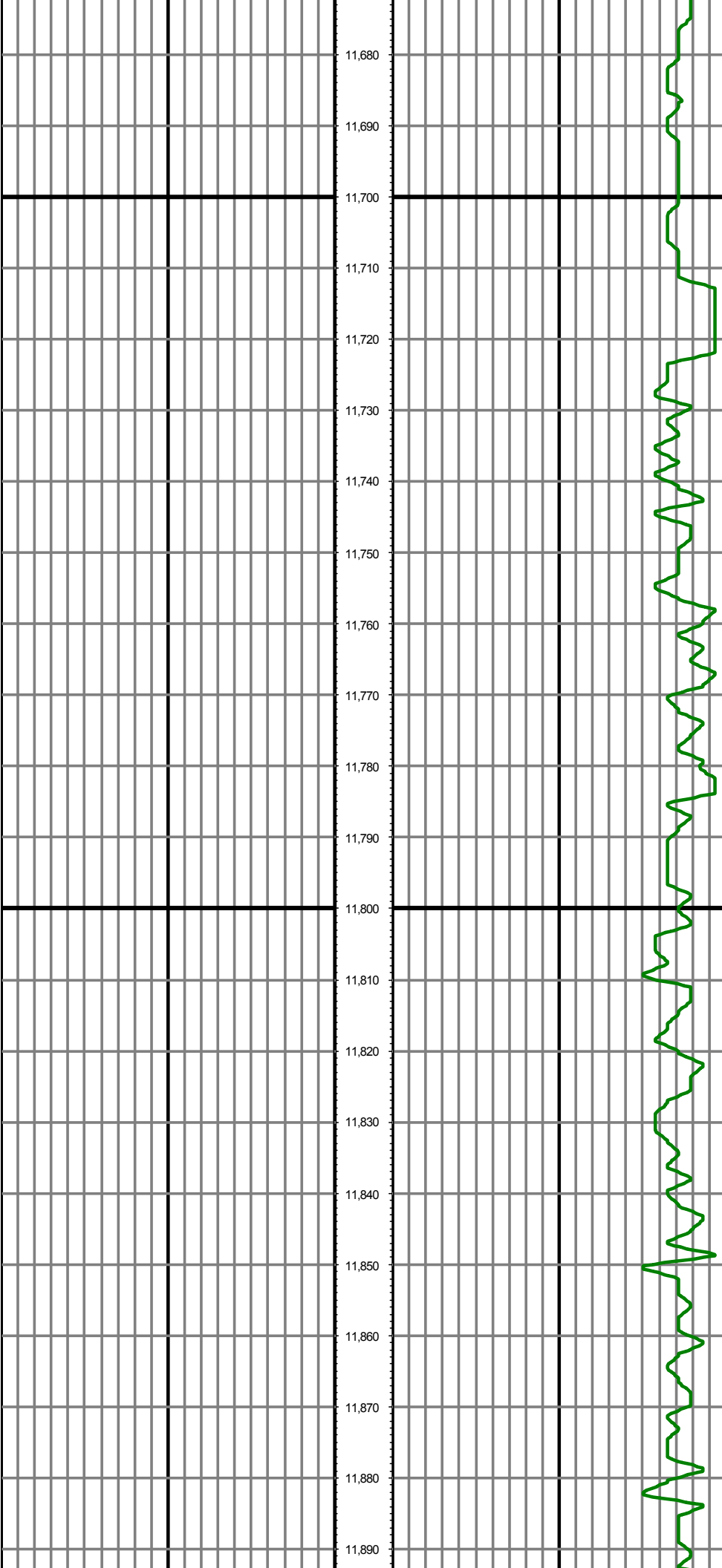
MD: 11207.00 INC: 89.10 AZ: 359.80 TVD: 7285.92 VS: 3316.5



MD: 11302.00 INC: 89.30 AZ: 359.80 TVD: 7287.25 VS: 3411.5

MD: 11396.00 INC: 89.30 AZ: 359.60 TVD: 7288.40 VS: 3505.51

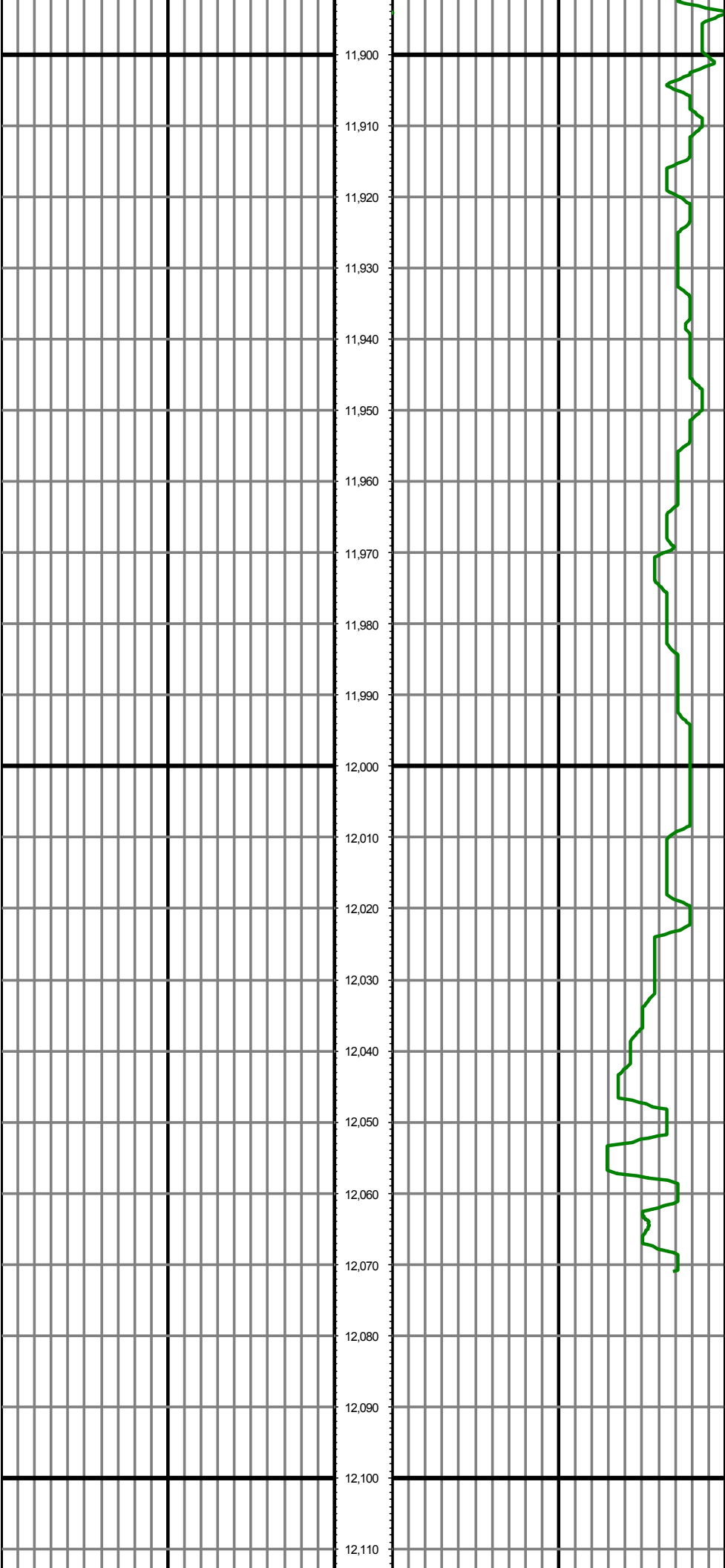




MD: 11680.00 INC: 90.70 AZ: 0.10 TVD: 7284.11 VS: 3789.46

MD: 11775.00 INC: 90.50 AZ: 0.10 TVD: 7283.12 VS: 3884.45

MD: 11869.00 INC: 90.10 AZ: 0.20 TVD: 7282.62 VS: 3978.45



MD: 11964.00 INC: 89.50 AZ: 0.40 TVD: 7282.95 VS: 4073.45

MD: 12058.00 INC: 89.50 AZ: 0.80 TVD: 7283.77 VS: 4167.44

