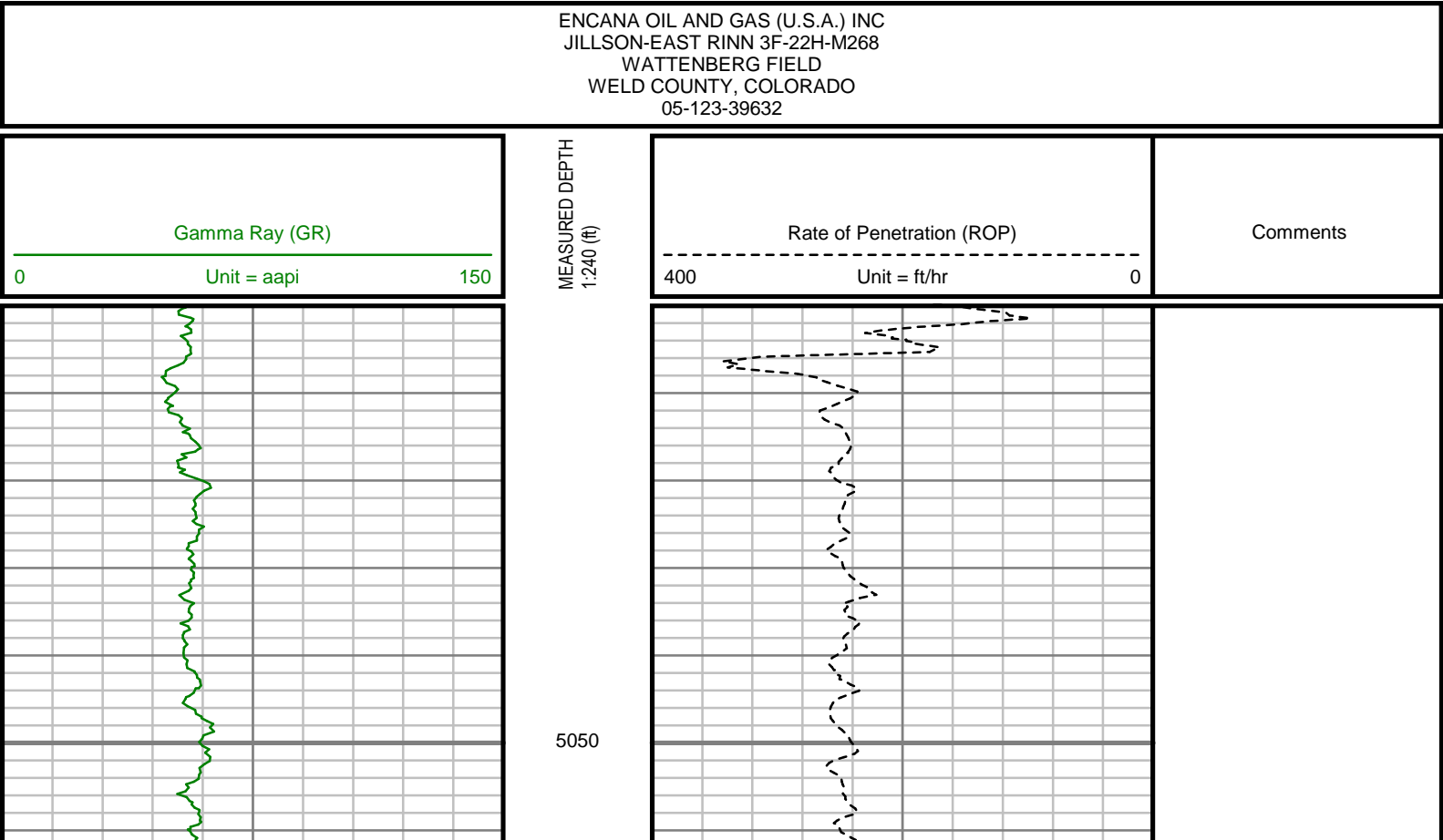
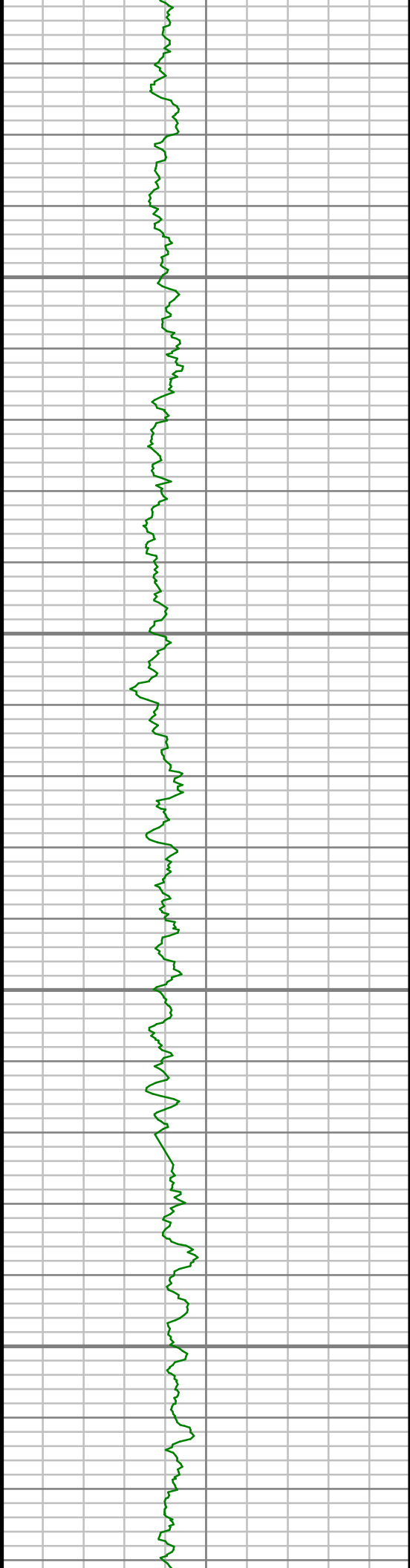


Remarks
ENCANA OIL AND GAS (U.S.A.) INC PRODUCTION AFE# 14181165
SCIENTIFIC DRILLING INTERNATIONAL JOB# 175638
ALL REFERENCES IN THE DEPTH TRACK ARE AT BIT DEPTH.
ALL DATA IS MEMORY DATA UNLESS STATED OTHERWISE.
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO GAMMA RAY CURVE
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO RATE OF PENETRATION CURVE
RUN # 1: MWD / DIRECTIONAL RUN
SENSORS S/N: CONT = 1011 / MWD EYE = 0349
BIT TO SENSOR OFFSET: SURVEY = 54.33 FT.
RUN # 2: MWD/ GAMMA RAY / LOGGING RUN
SENSORS S/N: PULSER = 128-047 / CONT = 831 / MWD EYE = 0429 / GAMMA RAY = 1194
BIT TO SENSOR OFFSETS: SURVEY = 69.01 FT. / GAMMMA RAY = 55.00 FT.
RUN # 3: MWD/ GAMMA RAY / LOGGING RUN
SENSORS S/N: PULSER = 78-108 / CONT = 882 / MWD EYE = 0349 / GAMMA RAY = 1074
BIT TO SENSOR OFFSETS: SURVEY = 65.70 FT. / GAMMMA RAY = 52.49 FT.
MNEMONICS LIST:
GR = GAMMA RAY
ROP = RATE OF PENETRATION

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 interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions as set out in our current price schedule.



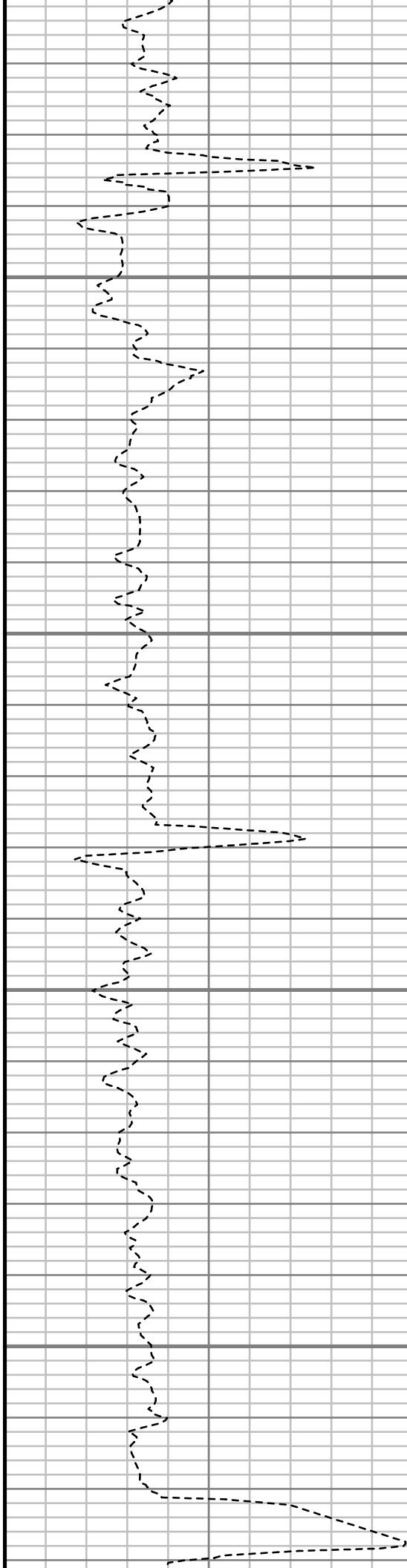


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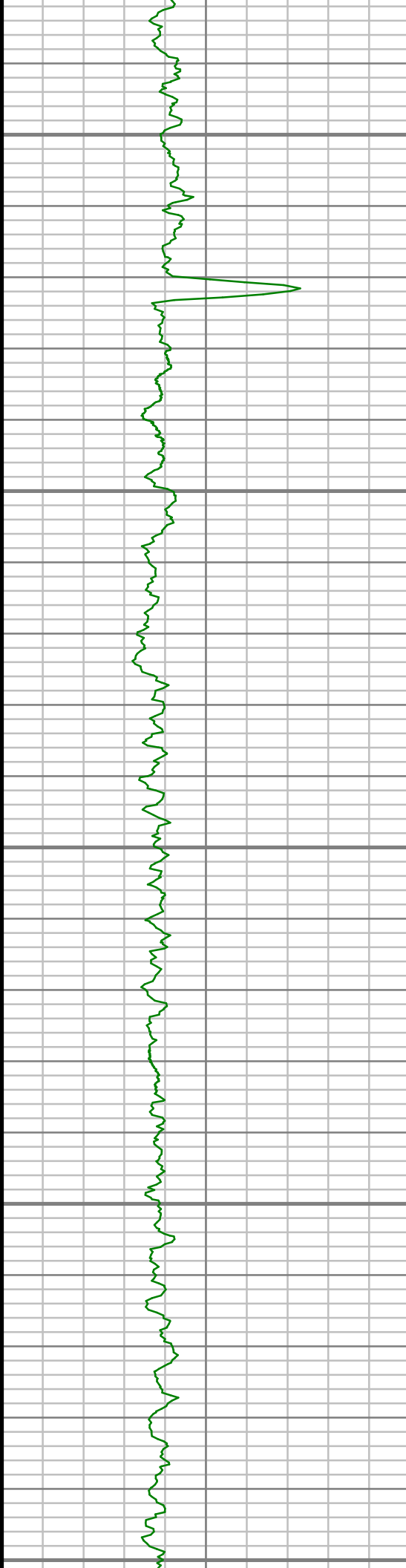
5150

5200

5250



S: 30 MD: 5114.00 ft Inc: 5.44
deg Az: 135.40 deg TVD:
5098.01 ft



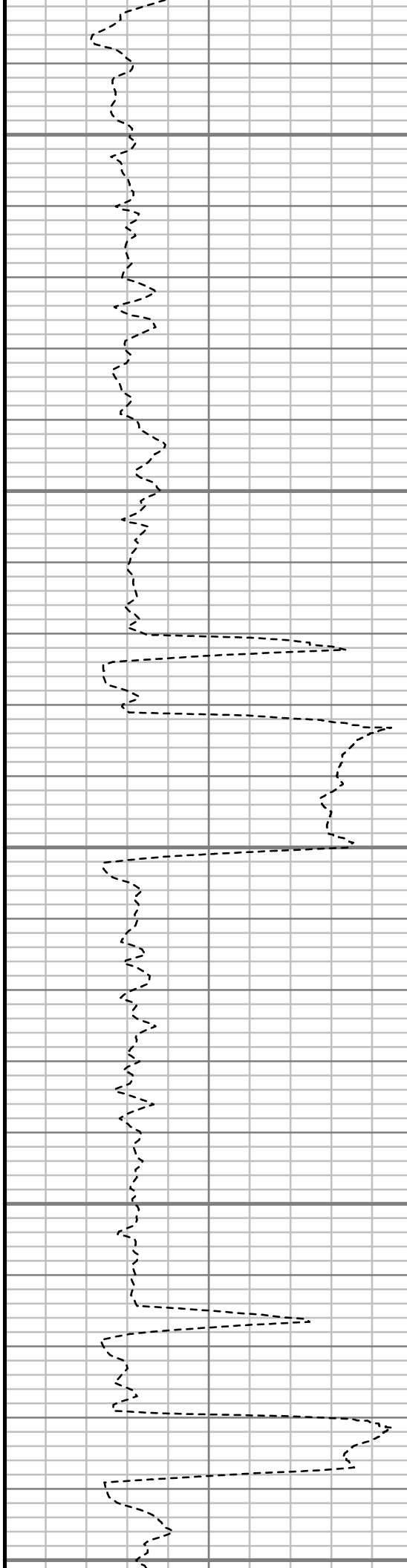
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5400

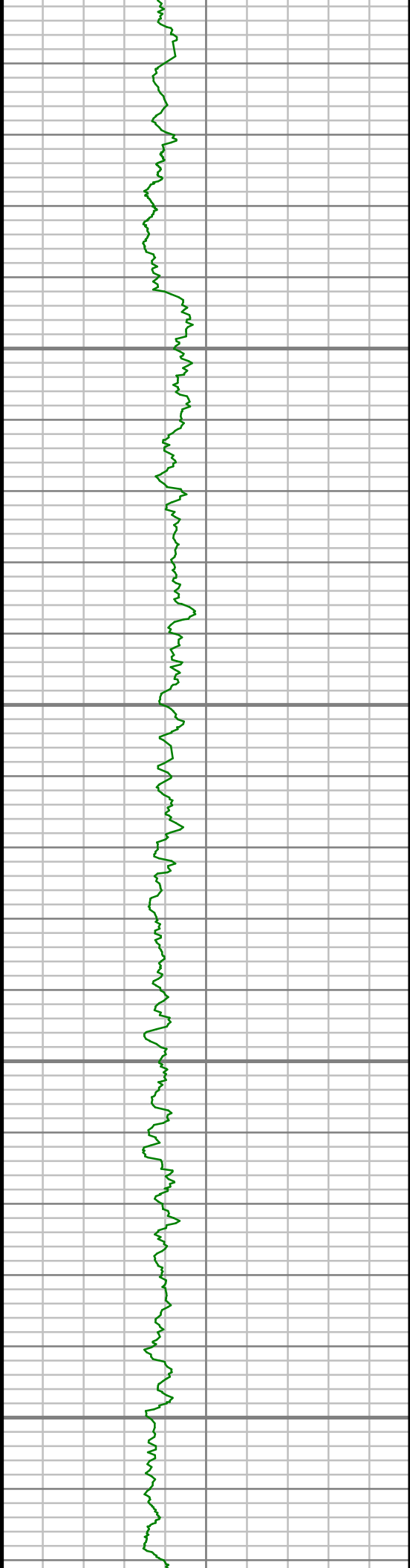
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5500



S: 31 MD: 5304.00 ft Inc: 3.05
deg Az: 131.77 deg TVD:
5287.48 ft

S: 32 MD: 5495.00 ft Inc: 4.63
deg Az: 128.13 deg TVD:
5478.05 ft

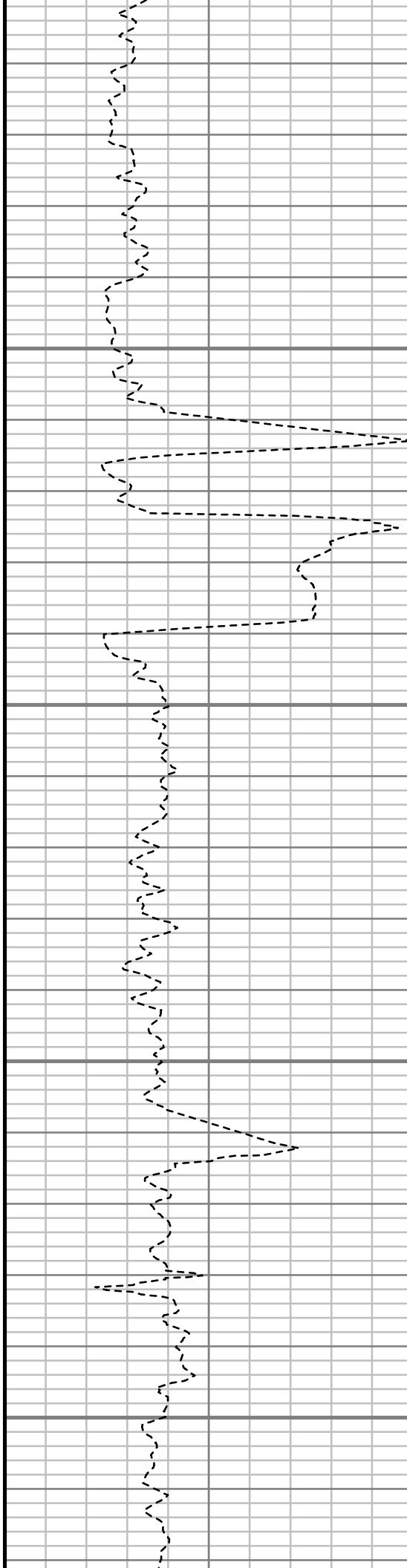


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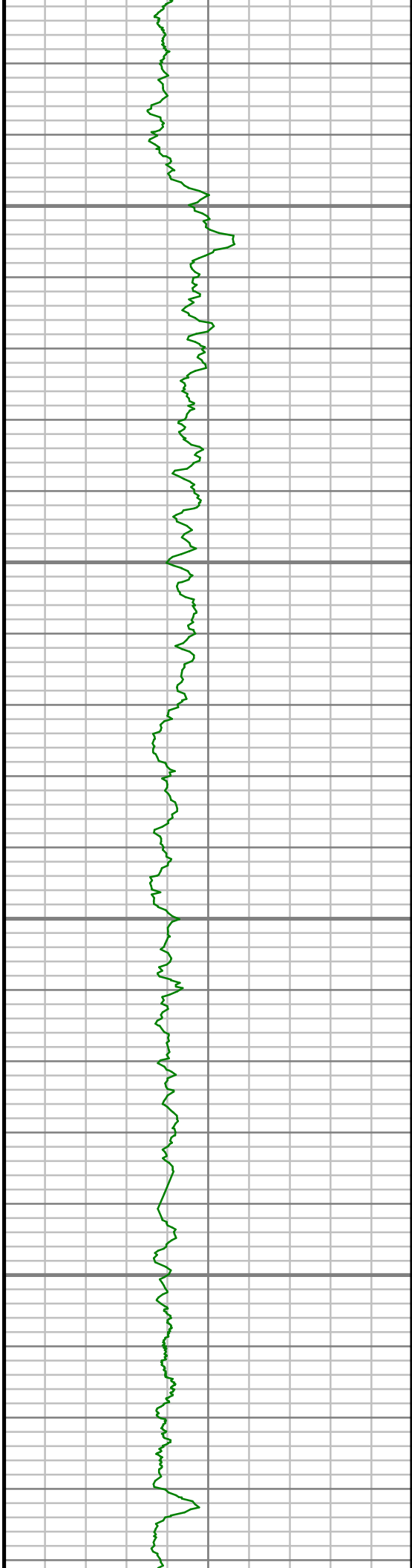
5600

5650

5700



S: 33 MD: 5685.00 ft Inc: 4.78
deg Az: 126.06 deg TVD:
5667.40 ft

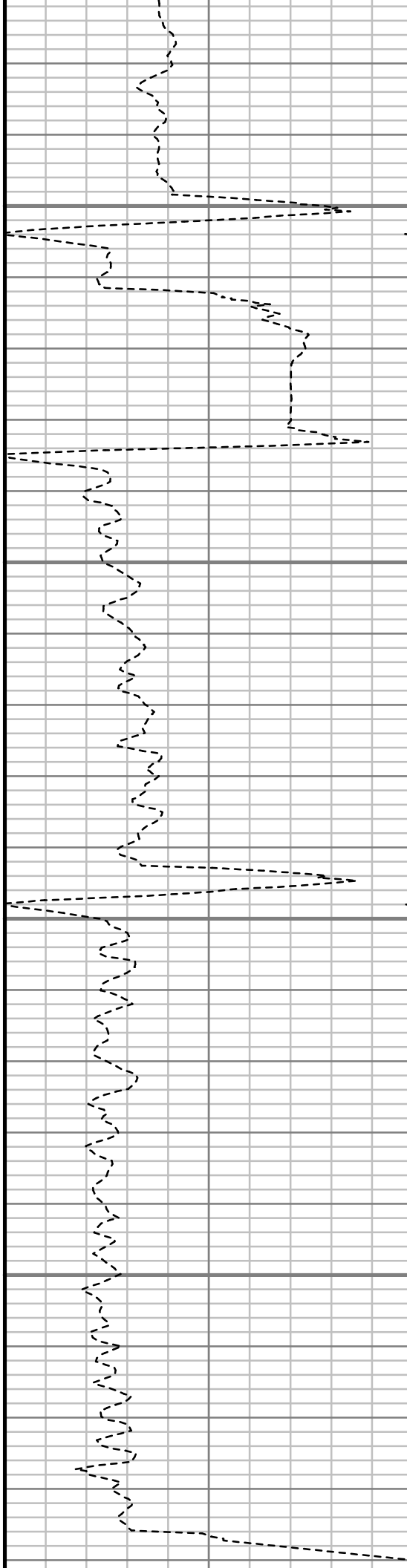


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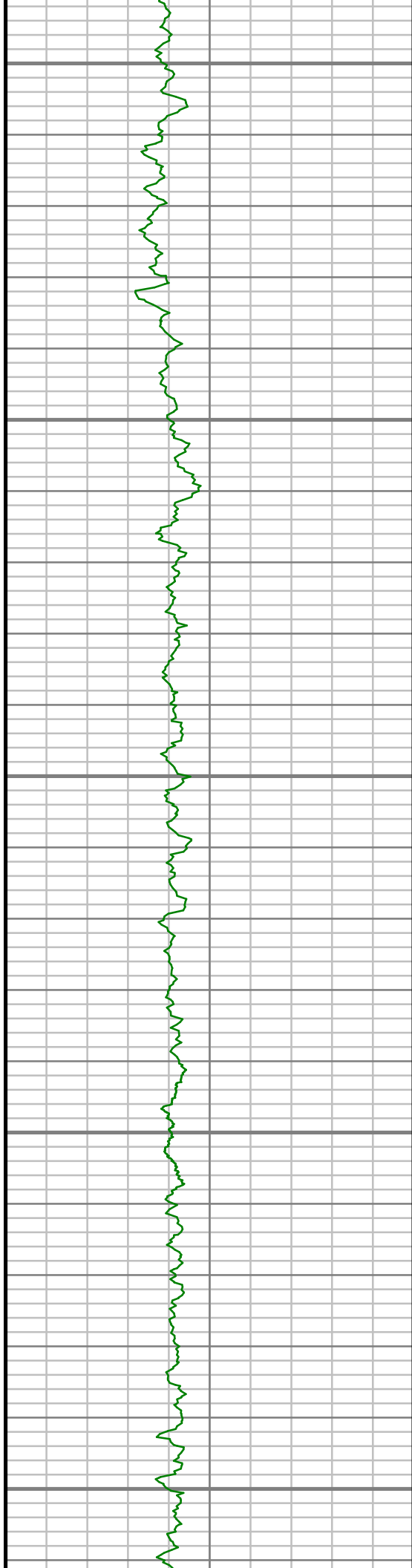
5800

5850

5900



S: 34 MD: 5876.00 ft Inc: 4.56
deg Az: 121.38 deg TVD:
5857.77 ft



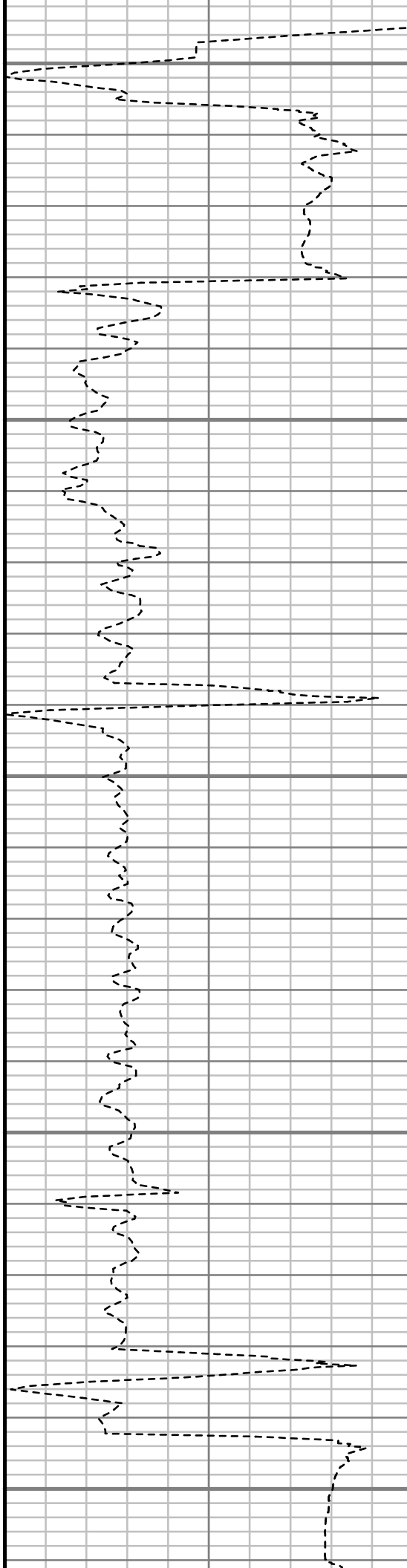
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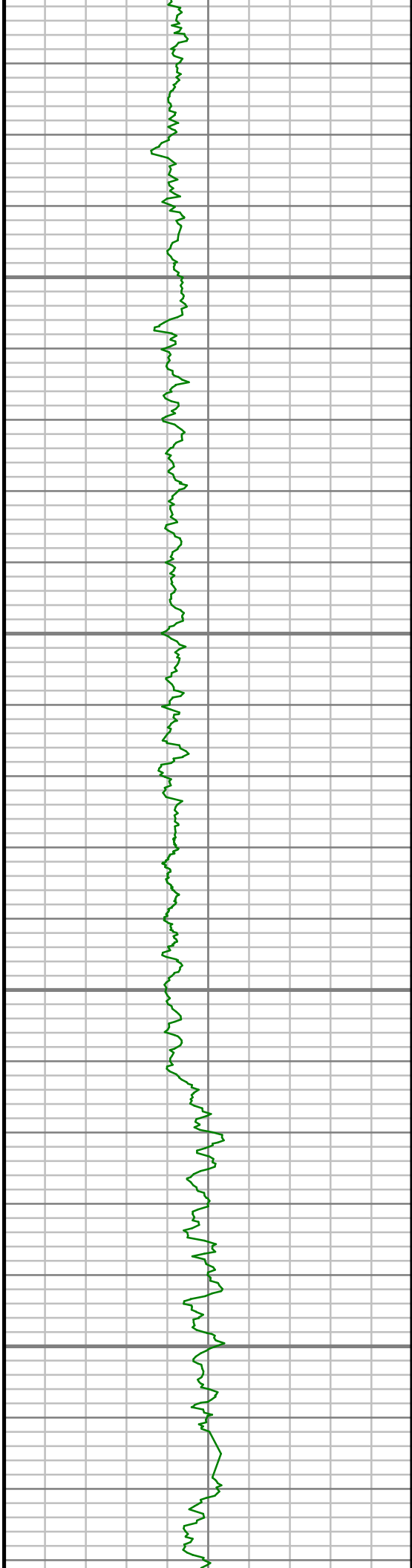
6050

6100

6150



S: 35 MD: 6066.00 ft Inc: 3.68
deg Az: 126.47 deg TVD:
6047.28 ft

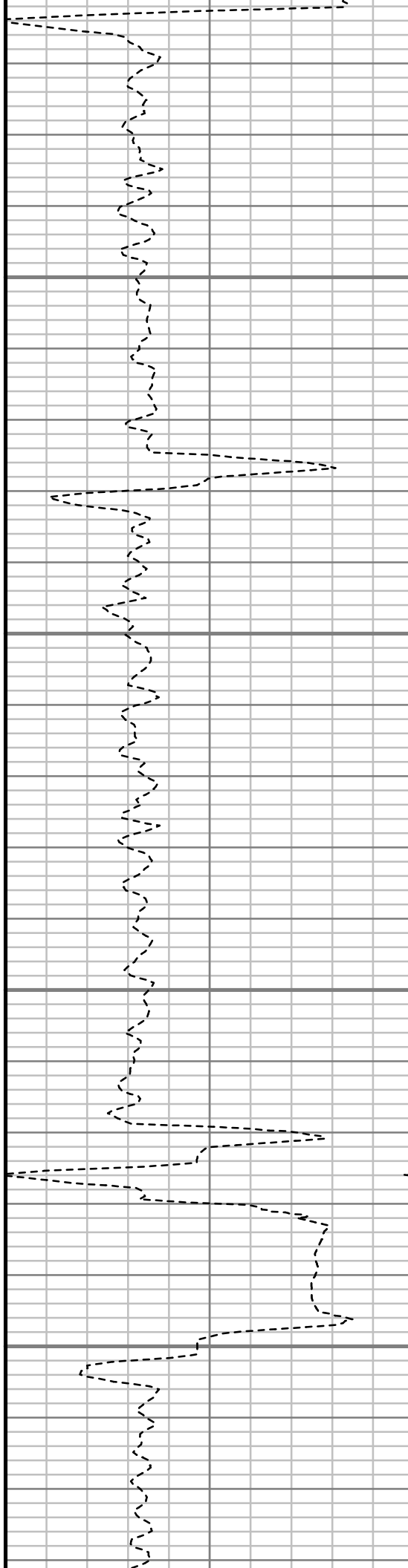


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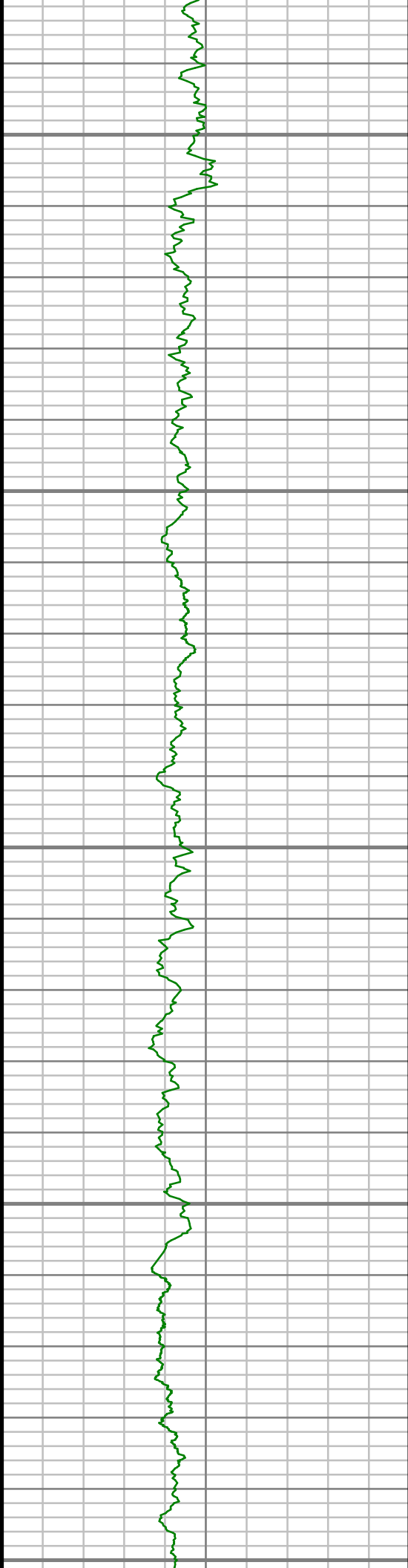
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6300

6350



S: 36 MD: 6257.00 ft Inc: 3.47
deg Az: 125.06 deg TVD:
6237.91 ft



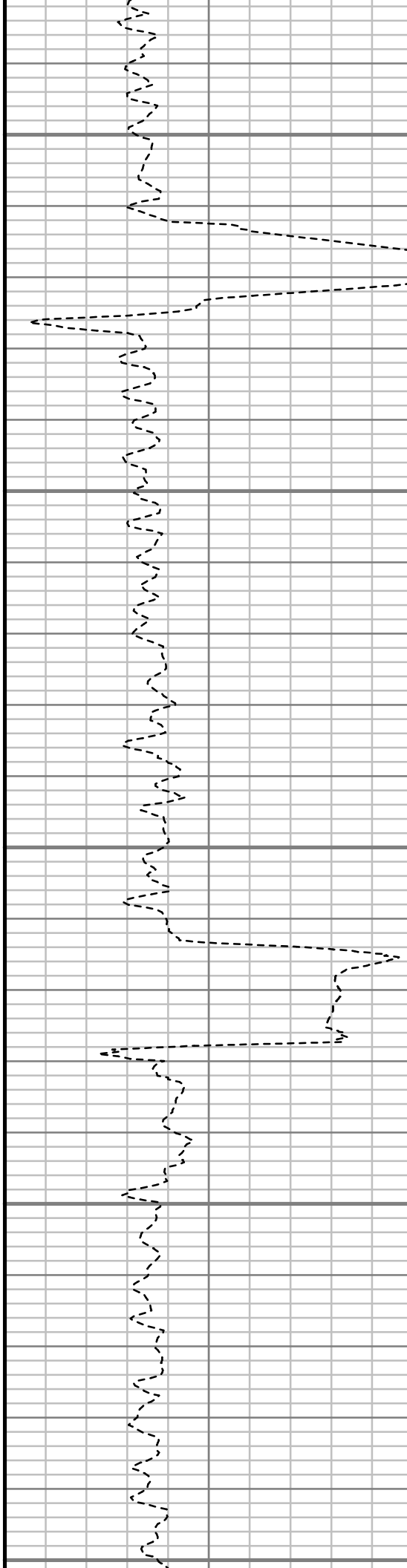
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6550

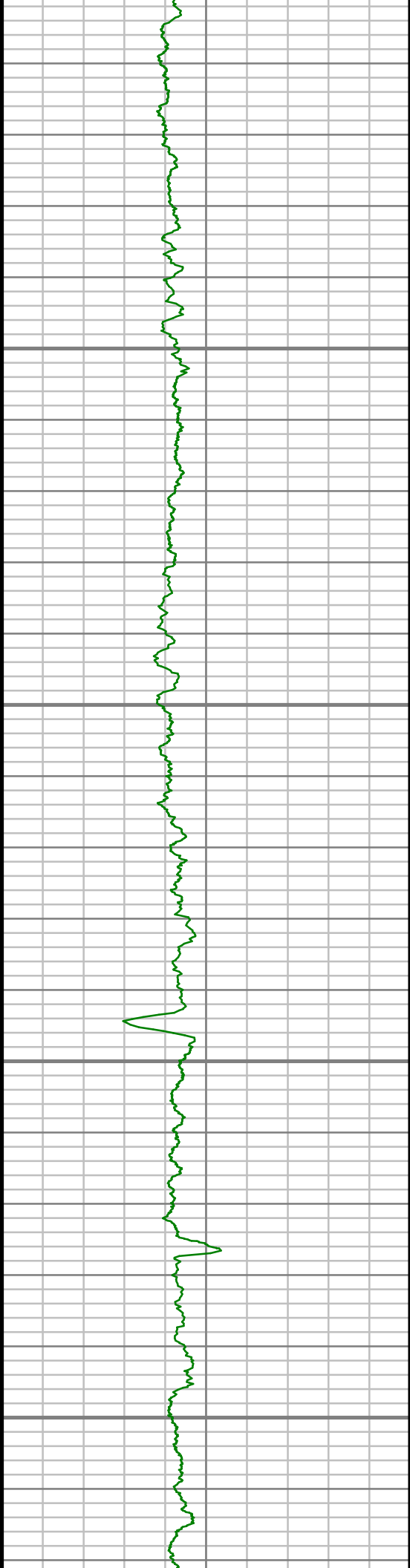
6600



S: 37 MD: 6447.00 ft Inc: 3.32
deg Az: 137.11 deg TVD:
6427.58 ft

S: 38 MD: 6542.00 ft Inc: 1.33
deg Az: 144.14 deg TVD:
6522.49 ft

S: 39 MD: 6589.00 ft Inc: 0.57
deg Az: 180.72 deg TVD:
6569.49 ft

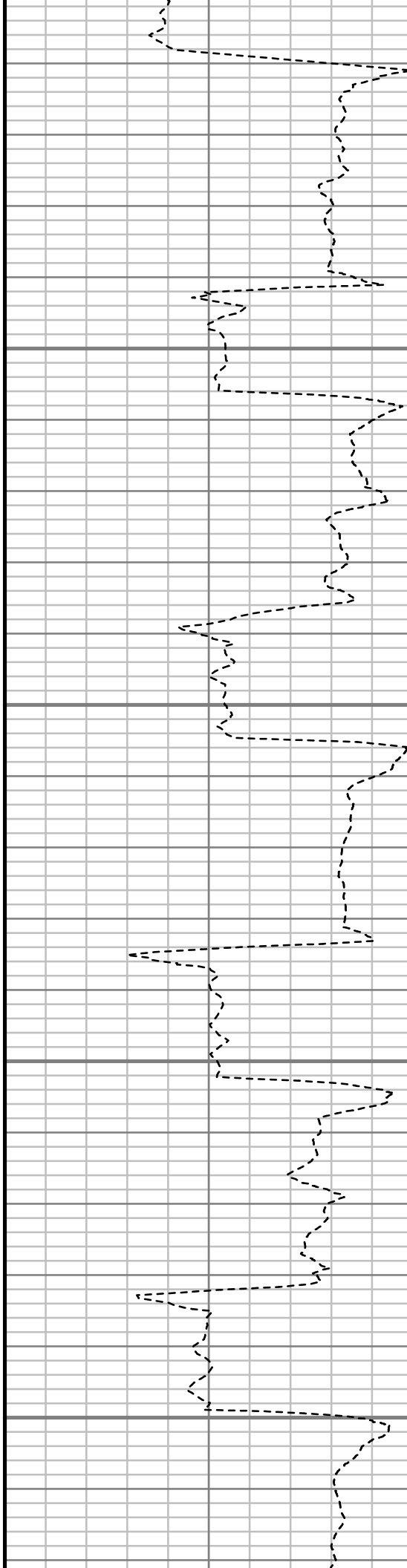


6650

6700

6750

6800

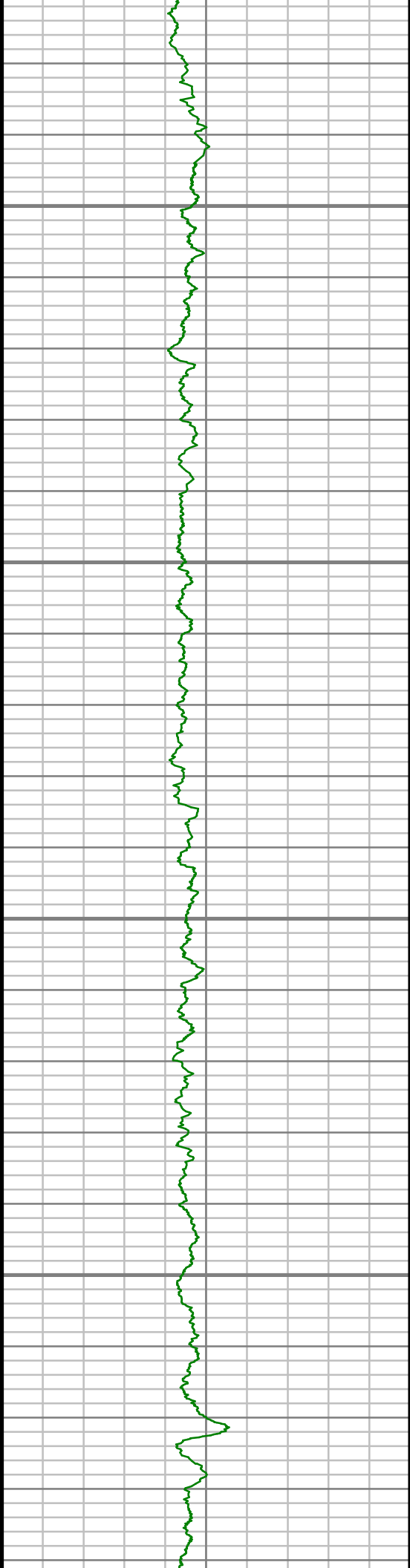


S: 40 MD: 6638.00 ft Inc: 2.24
deg Az: 2.65 deg TVD: 6618.48
ft

S: 41 MD: 6685.00 ft Inc: 5.08
deg Az: 12.25 deg TVD:
6665.38 ft

S: 42 MD: 6733.00 ft Inc: 8.05
deg Az: 15.43 deg TVD:
6713.06 ft

S: 43 MD: 6780.00 ft Inc: 10.57
deg Az: 13.76 deg TVD:
6759.43 ft

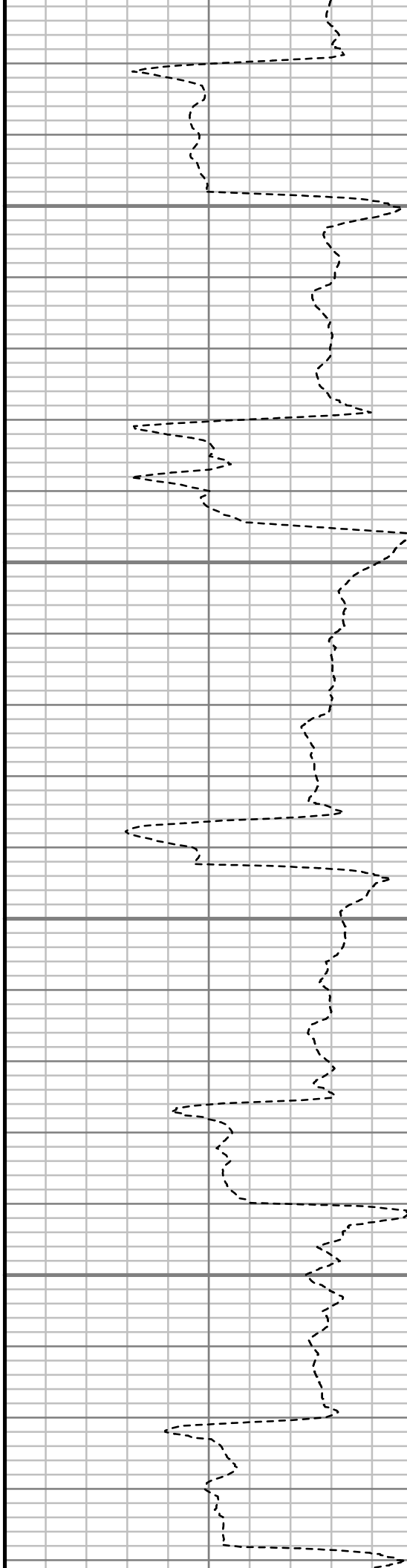


6850

6900

6950

7000



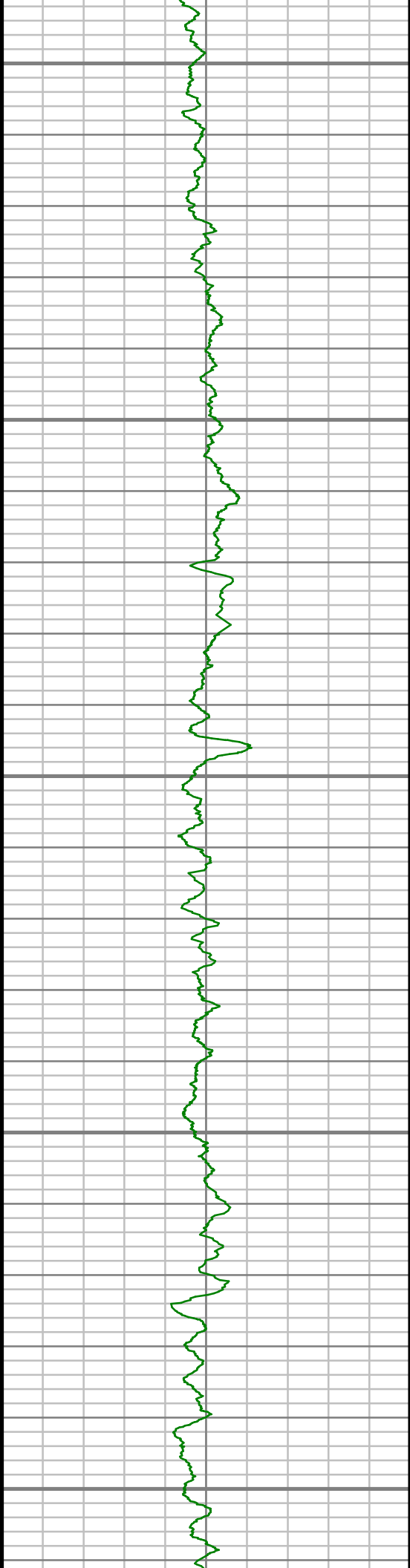
S: 44 MD: 6828.00 ft Inc: 13.11
deg Az: 9.10 deg TVD: 6806.41
ft

S: 45 MD: 6875.00 ft Inc: 16.13
deg Az: 4.74 deg TVD: 6851.88
ft

S: 46 MD: 6924.00 ft Inc: 19.92
deg Az: 1.65 deg TVD: 6898.47
ft

S: 47 MD: 6971.00 ft Inc: 23.87
deg Az: 1.00 deg TVD: 6942.07
ft

S: 48 MD: 7019.00 ft Inc: 26.33
deg Az: 0.38 deg TVD: 6985.54
ft



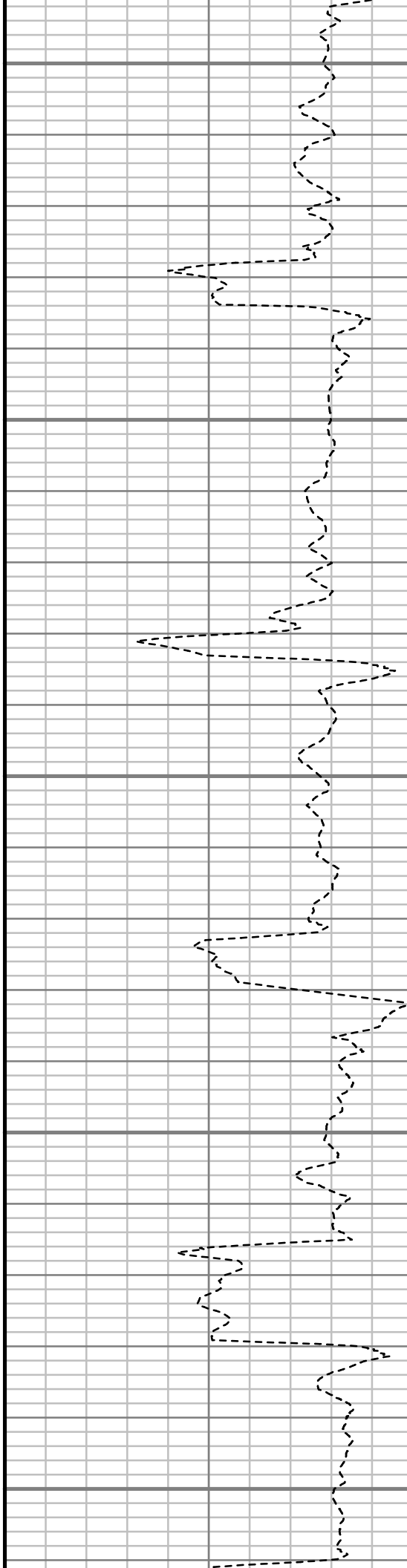
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7100

7150

7200

7250



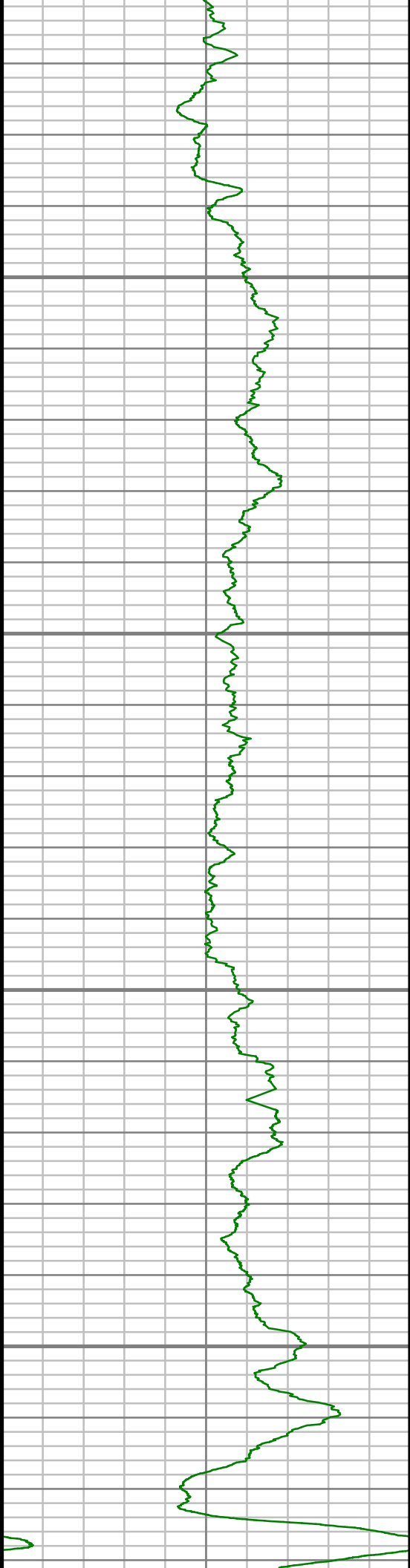
S: 49 MD: 7066.00 ft Inc: 29.94
deg Az: 359.28 deg TVD:
7026.98 ft

S: 50 MD: 7114.00 ft Inc: 34.54
deg Az: 359.22 deg TVD:
7067.57 ft

S: 51 MD: 7161.00 ft Inc: 39.87
deg Az: 359.98 deg TVD:
7104.99 ft

S: 52 MD: 7210.00 ft Inc: 44.07
deg Az: 359.34 deg TVD:
7141.41 ft

S: 53 MD: 7257.00 ft Inc: 47.43
deg Az: 358.79 deg TVD:

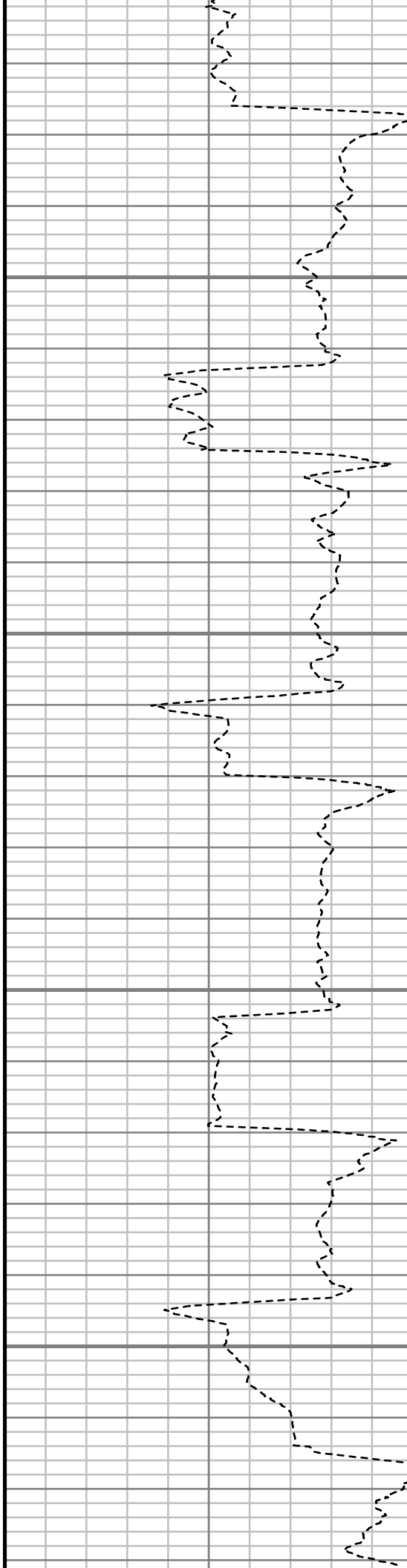


7300

7350

7400

7450



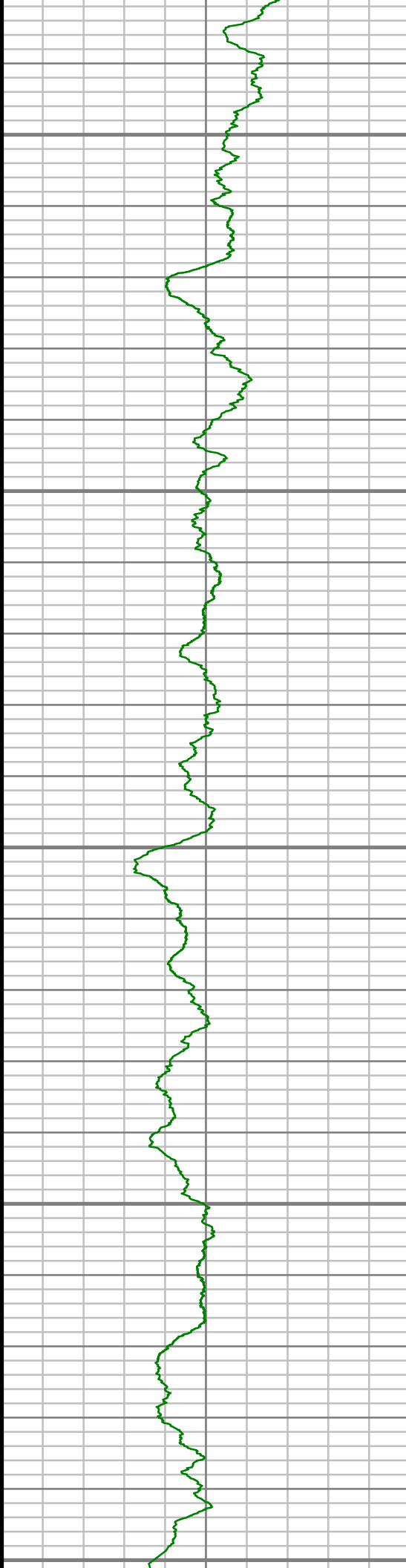
deg Az: 359.93 deg TVD: 7174.20 ft

S: 54 MD: 7305.00 ft Inc: 51.72
deg Az: 359.93 deg TVD: 7205.32 ft

S: 55 MD: 7352.00 ft Inc: 55.64
deg Az: 2.76 deg TVD: 7233.15 ft

S: 56 MD: 7400.00 ft Inc: 60.27
deg Az: 3.43 deg TVD: 7258.61 ft

S: 57 MD: 7447.00 ft Inc: 64.12
deg Az: 3.20 deg TVD: 7280.53 ft



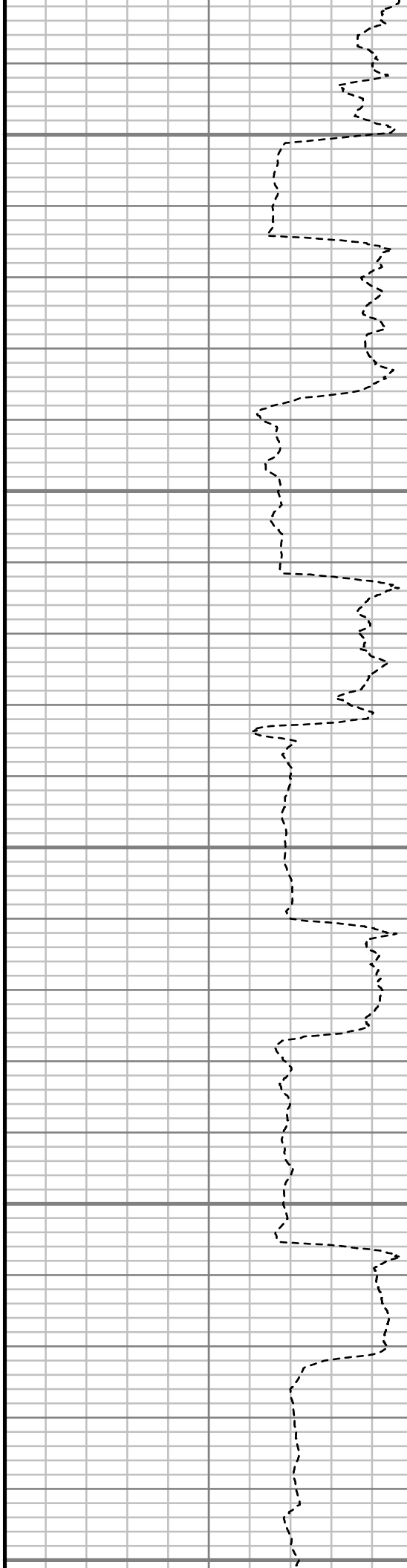
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7550

7600

7650

7700



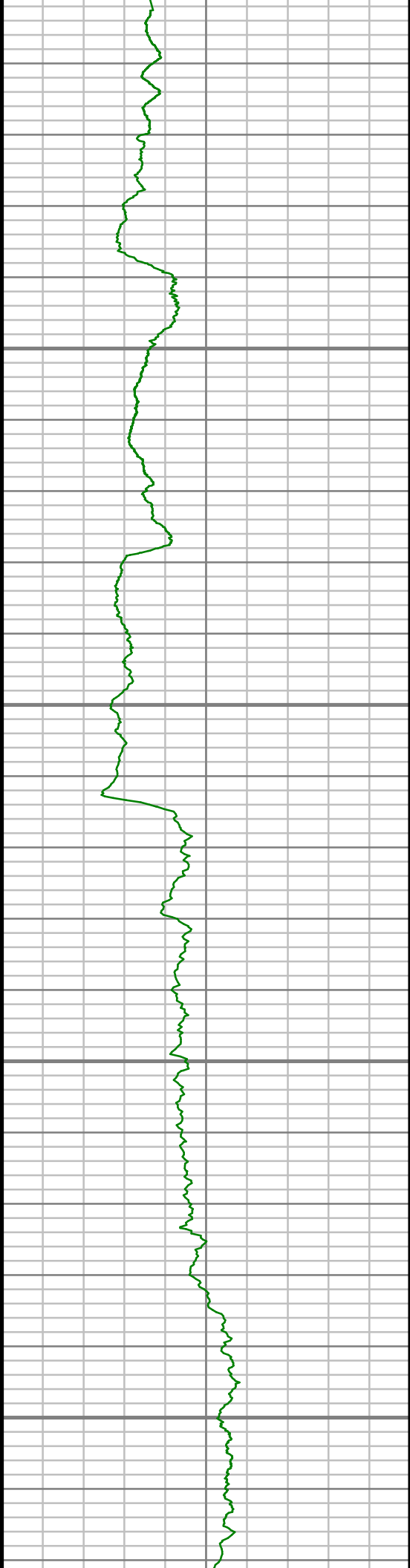
S: 58 MD: 7496.00 ft Inc: 67.61
deg Az: 2.11 deg TVD: 7300.56
ft

S: 59 MD: 7543.00 ft Inc: 71.07
deg Az: 1.56 deg TVD: 7317.14
ft

S: 60 MD: 7591.00 ft Inc: 74.47
deg Az: 0.31 deg TVD: 7331.36
ft

S: 61 MD: 7638.00 ft Inc: 77.39
deg Az: 359.79 deg TVD:
7342.79 ft

S: 62 MD: 7686.00 ft Inc: 79.95
deg Az: 359.68 deg TVD:
7352.22 ft

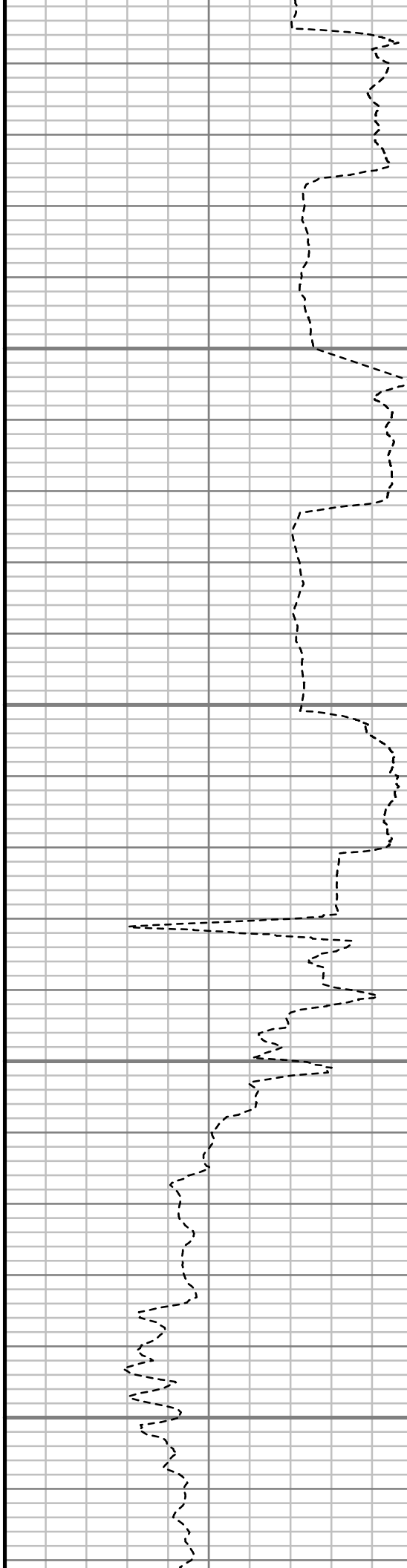


7750

7800

7850

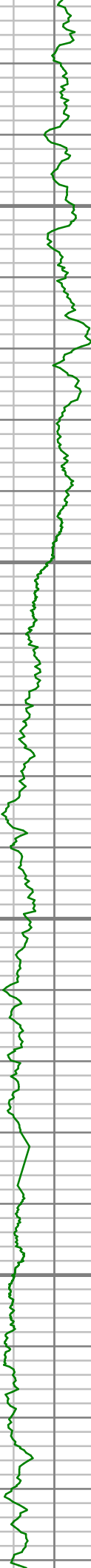
7900



S: 63 MD: 7733.00 ft Inc: 82.66
deg Az: 359.97 deg TVD:
7359.32 ft

S: 64 MD: 7762.00 ft Inc: 84.96
deg Az: 359.81 deg TVD:
7362.45 ft

S: 65 MD: 7882.00 ft Inc: 88.65
deg Az: 0.12 deg TVD: 7369.13
ft

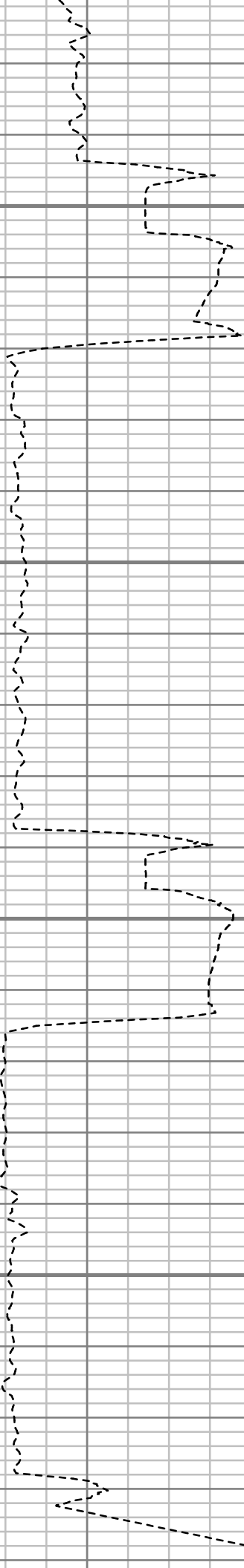


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8000

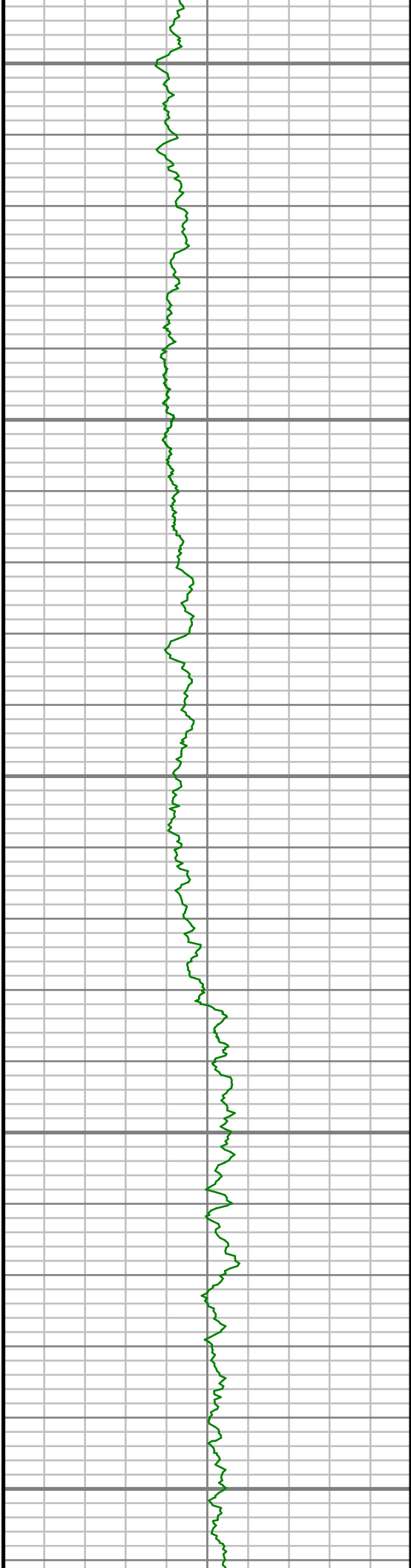
8050

8100



S: 66 MD: 7978.00 ft Inc: 88.79
deg Az: 1.26 deg TVD: 7371.27
ft

S: 67 MD: 8073.00 ft Inc: 90.47
deg Az: 1.35 deg TVD: 7371.89
ft



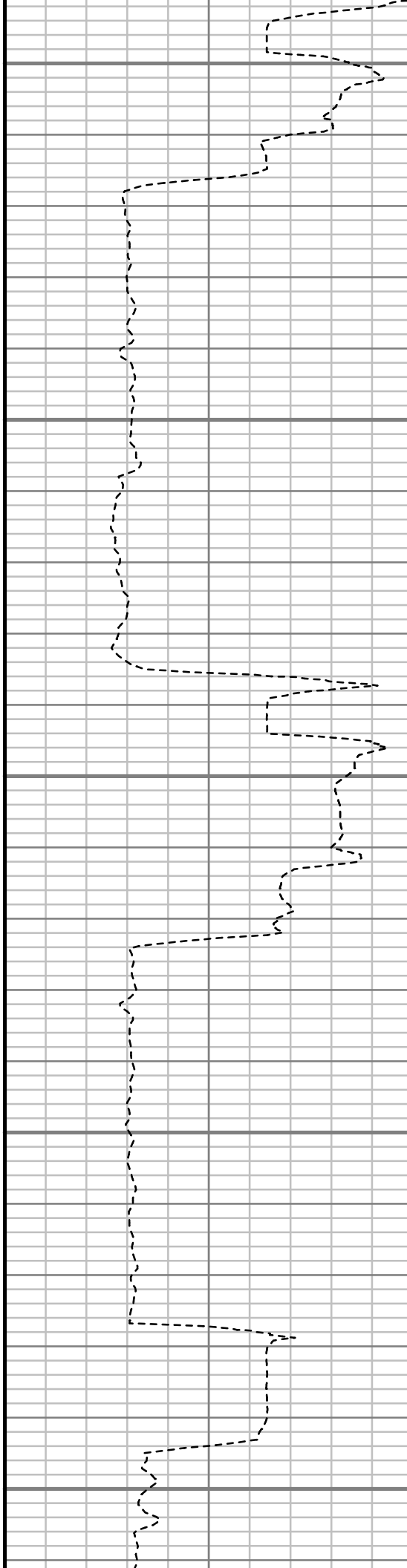
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8200

8250

8300

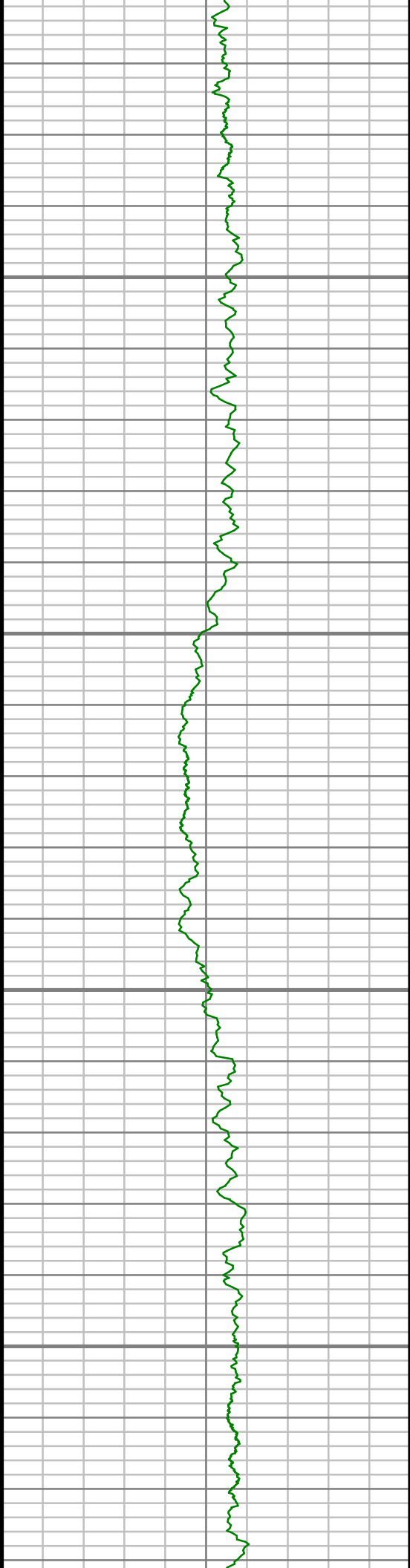
8350



S: 68 MD: 8168.00 ft Inc: 90.03
deg Az: 0.27 deg TVD: 7371.47
ft

S: 69 MD: 8261.00 ft Inc: 91.55
deg Az: 1.40 deg TVD: 7370.19
ft

S: 70 MD: 8354.00 ft Inc: 91.11
deg Az: 1.15 deg TVD: 7368.03
ft

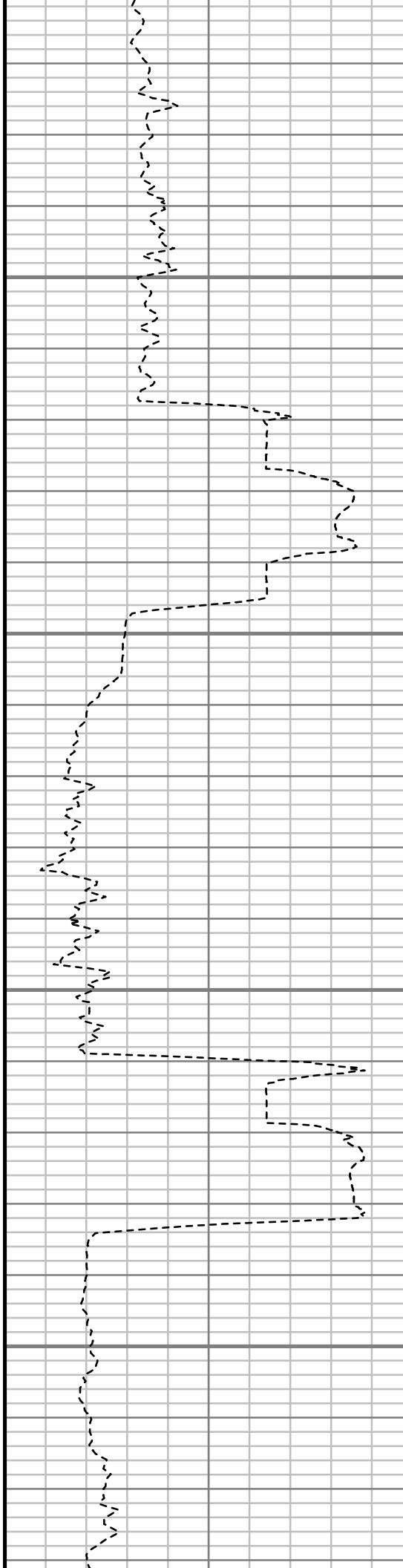


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8450

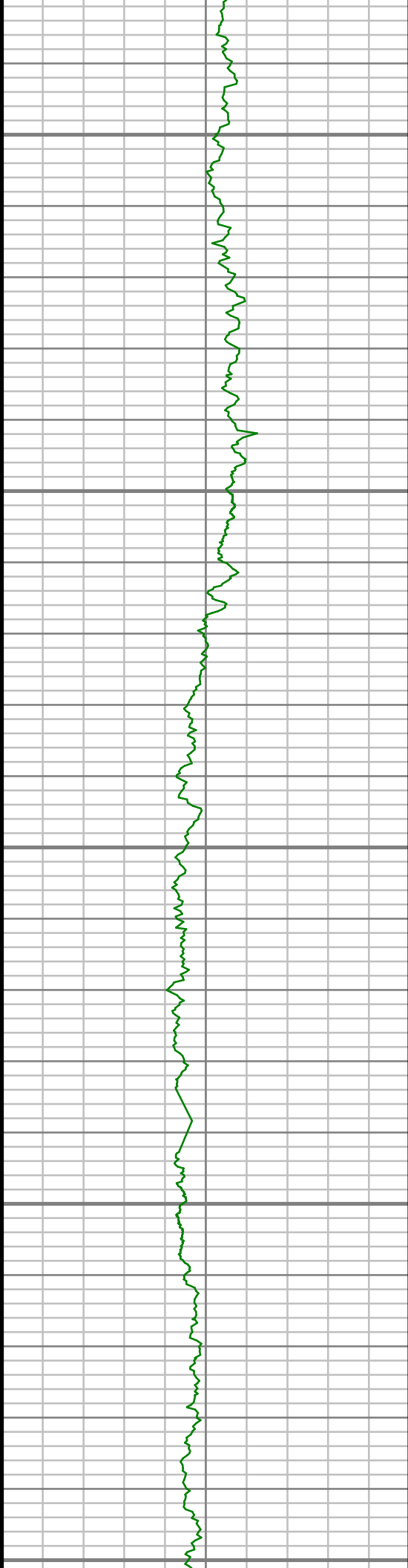
8500

8550



S: 71 MD: 8447.00 ft Inc: 91.14
deg Az: 0.74 deg TVD: 7366.20
ft

S: 72 MD: 8540.00 ft Inc: 89.73
deg Az: 0.90 deg TVD: 7365.50
ft



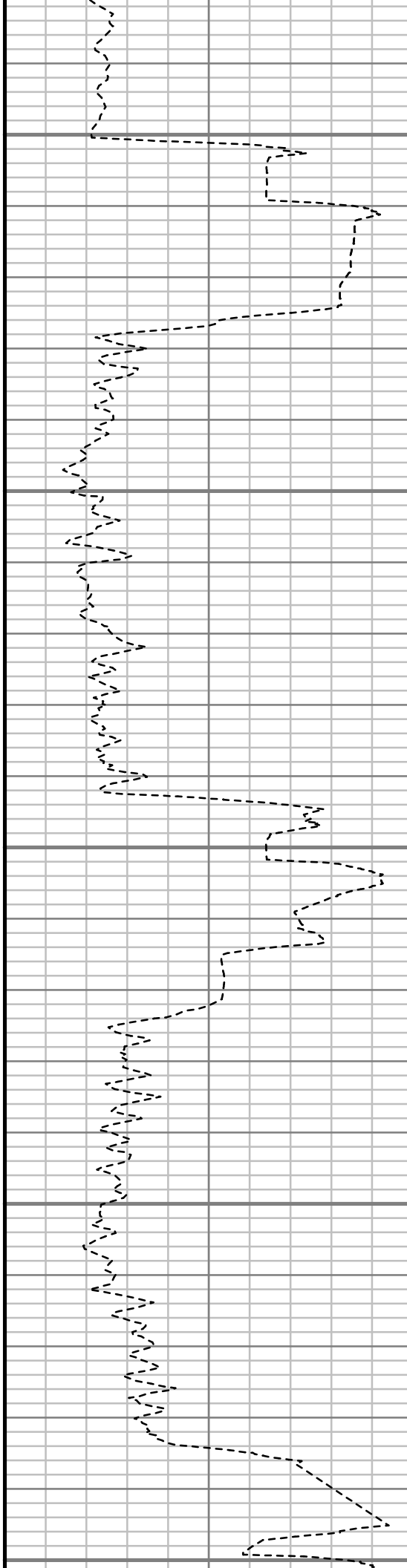
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8650

8700

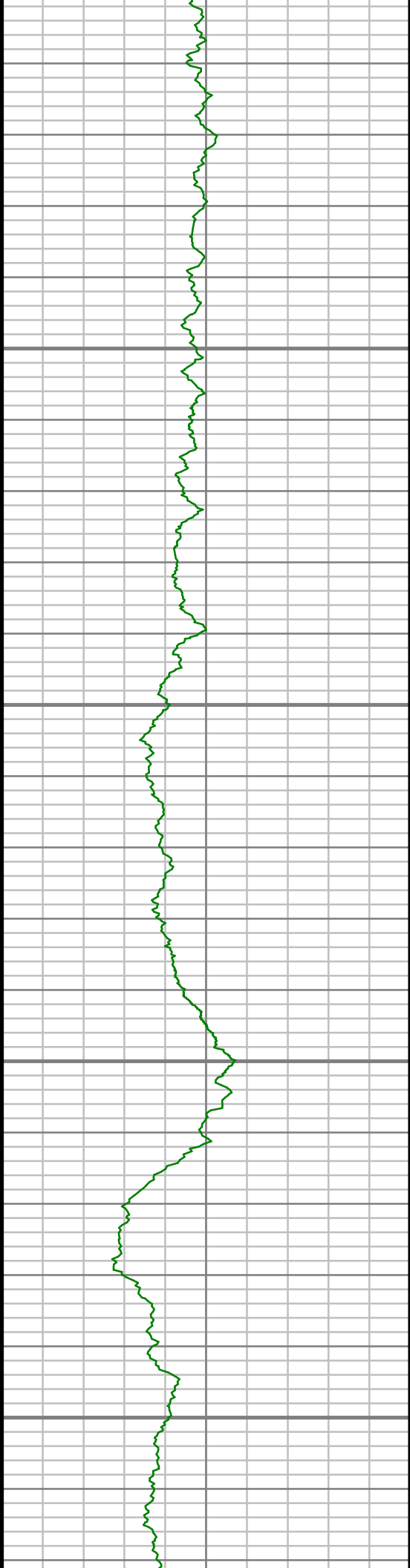
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8800



S: 73 MD: 8633.00 ft Inc: 91.65
deg Az: 1.83 deg TVD: 7364.38
ft

S: 74 MD: 8726.00 ft Inc: 90.94
deg Az: 0.92 deg TVD: 7362.28
ft

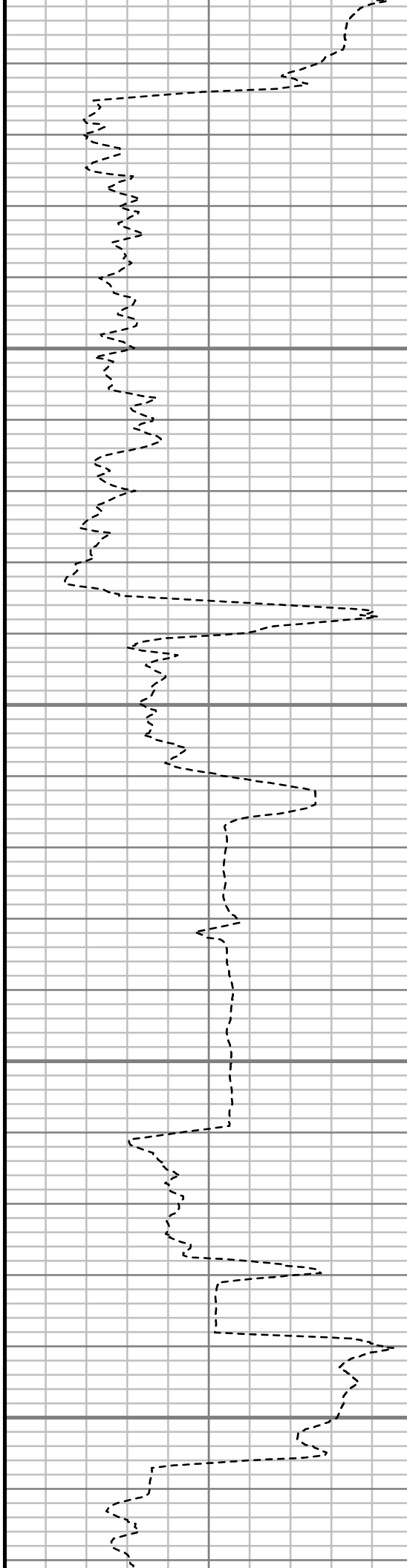


8850

8900

8950

9000



S: 75 MD: 8819.00 ft Inc: 92.45
deg Az: 1.77 deg TVD: 7359.52
ft

S: 76 MD: 8911.00 ft Inc: 92.55
deg Az: 0.15 deg TVD: 7355.51
ft

S: 77 MD: 9005.00 ft Inc: 91.64
deg Az: 0.70 deg TVD: 7352.07
ft

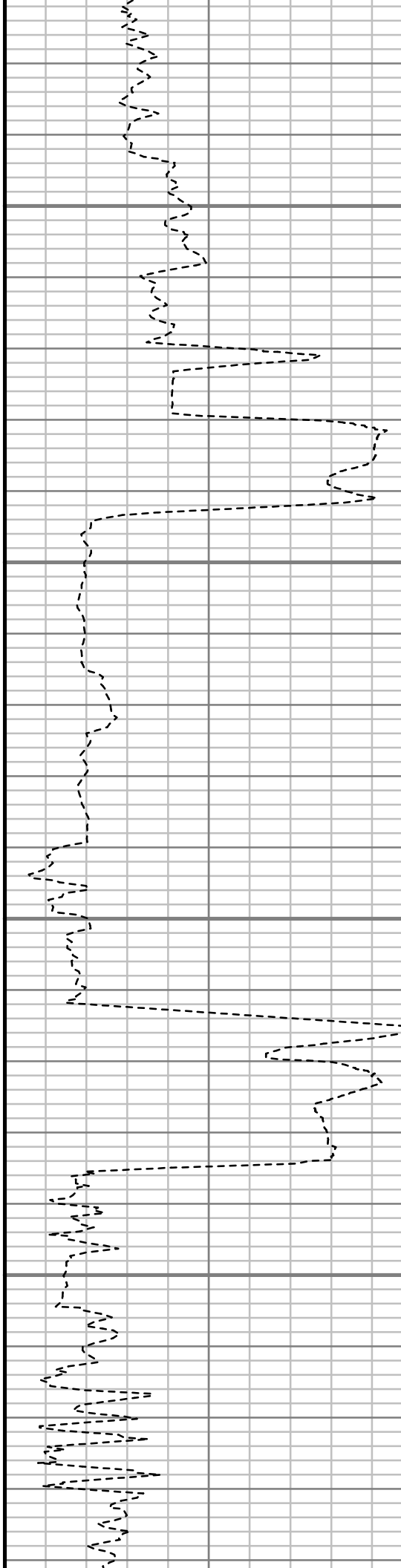


9050

9100

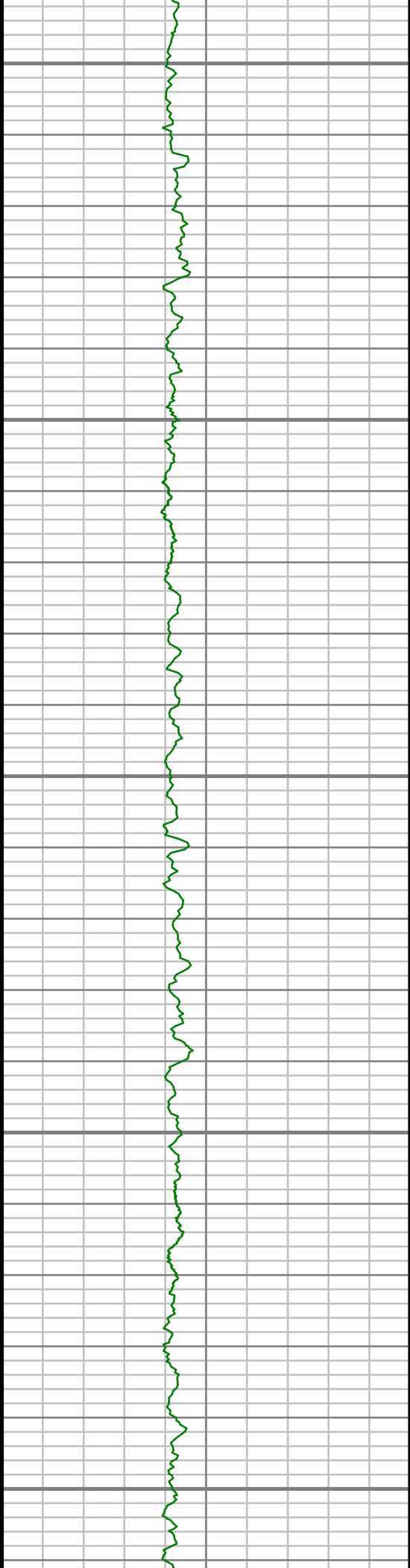
9150

9200



S: 78 MD: 9097.00 ft Inc: 91.88
deg Az: 1.32 deg TVD: 7349.24
ft

S: 79 MD: 9190.00 ft Inc: 90.13
deg Az: 1.17 deg TVD: 7347.60
ft



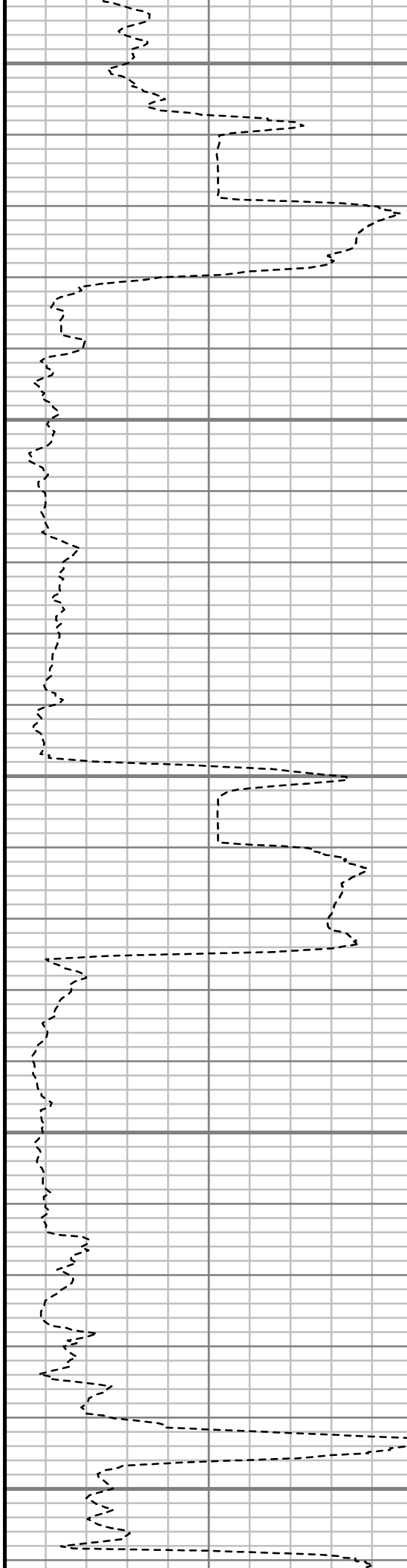
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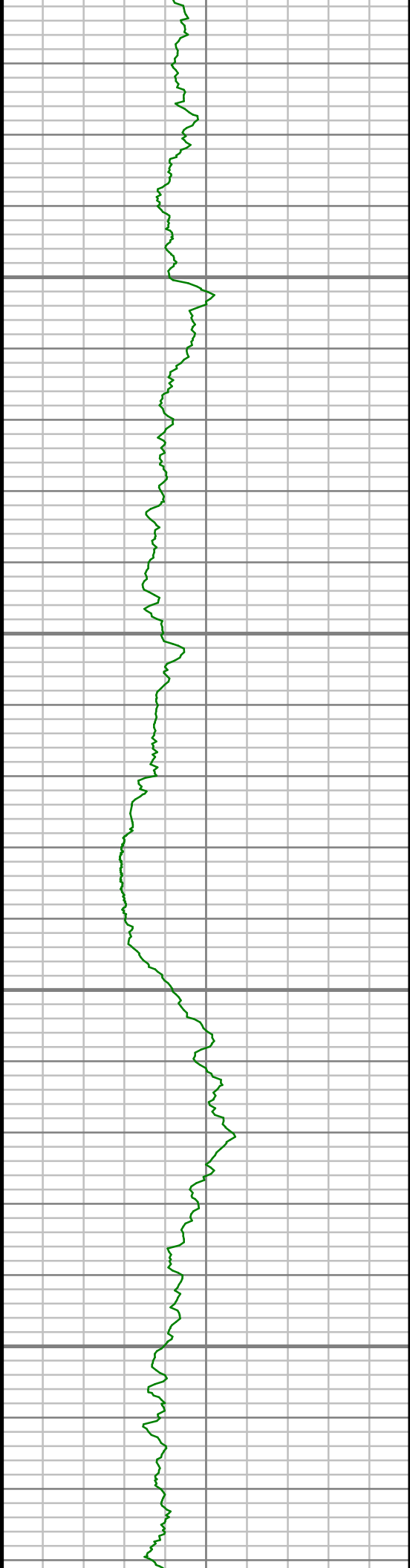
9400

9450



S: 80 MD: 9283.00 ft Inc: 90.40
deg Az: 1.89 deg TVD: 7347.17
ft

S: 81 MD: 9376.00 ft Inc: 90.44
deg Az: 2.85 deg TVD: 7346.49
ft

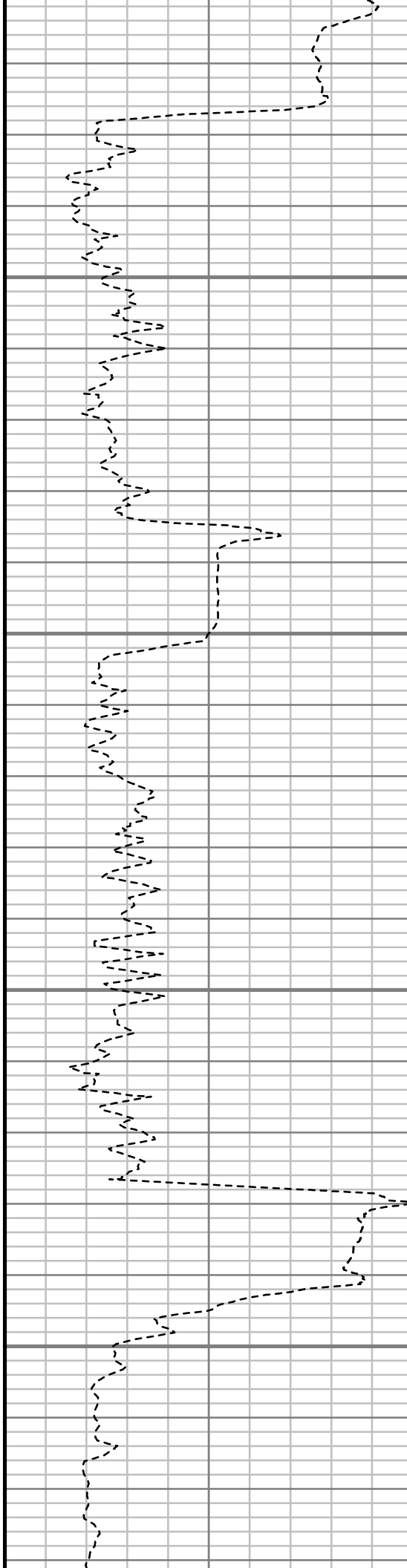


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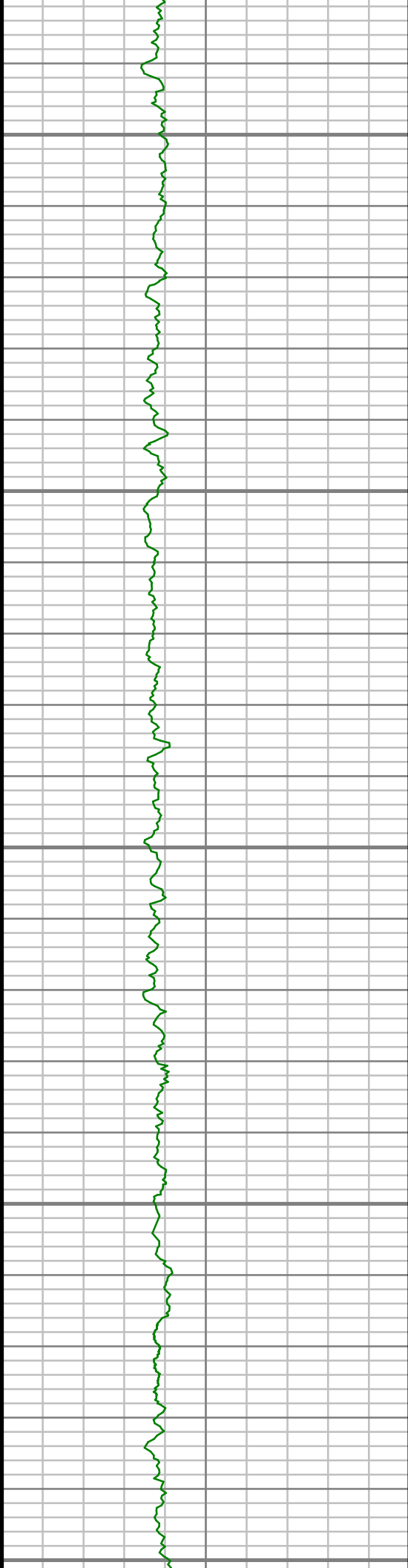
9650



S: 82 MD: 9469.00 ft Inc: 89.36
deg Az: 0.13 deg TVD: 7346.65
ft

S: 83 MD: 9561.00 ft Inc: 88.89
deg Az: 359.98 deg TVD:
7348.05 ft

S: 84 MD: 9654.00 ft Inc: 89.46
deg Az: 358.72 deg TVD:
7349.39 ft



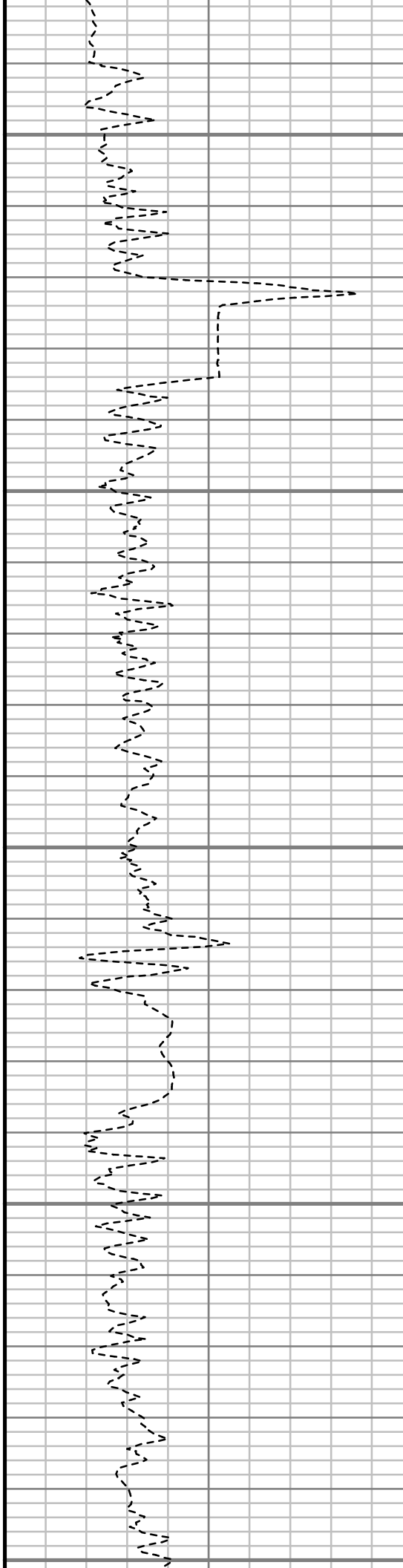
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9750

9800

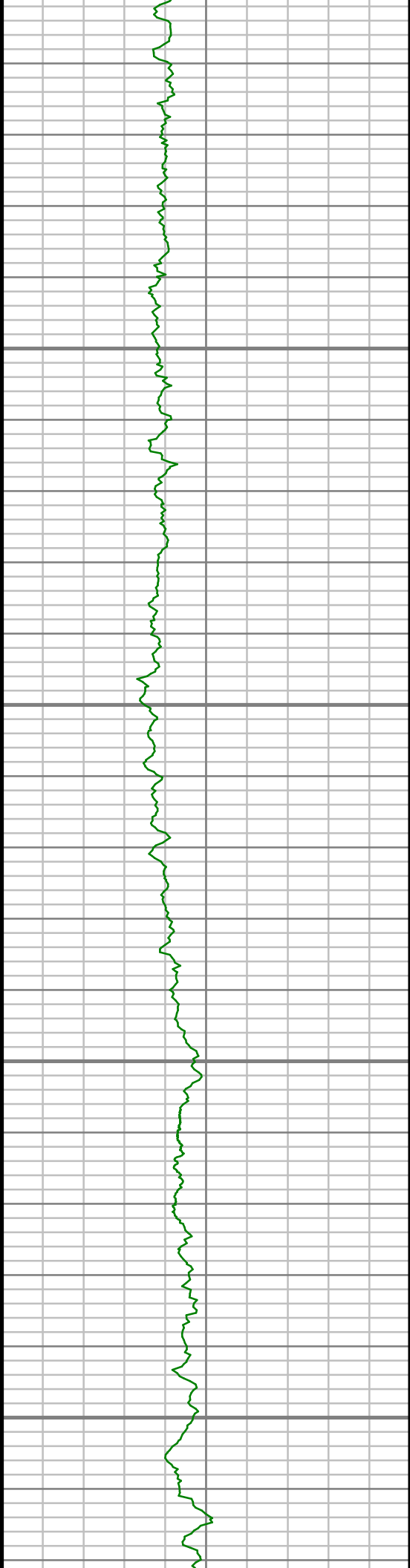
9850

9900



S: 85 MD: 9747.00 ft Inc: 89.90
deg Az: 358.22 deg TVD:
7349.91 ft

S: 86 MD: 9840.00 ft Inc: 91.18
deg Az: 358.02 deg TVD:
7349.03 ft

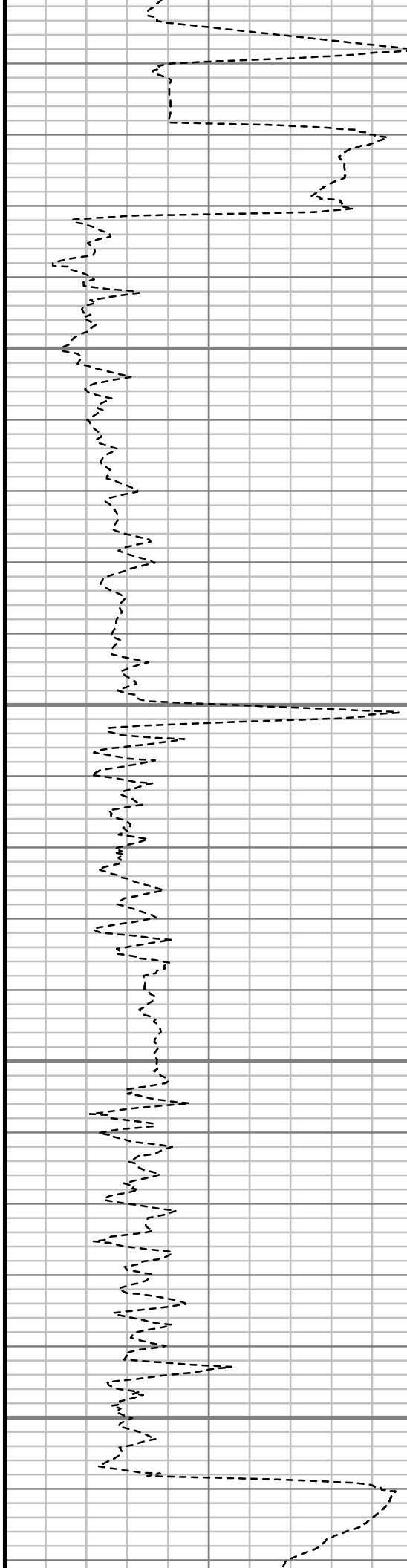


9950

10000

10050

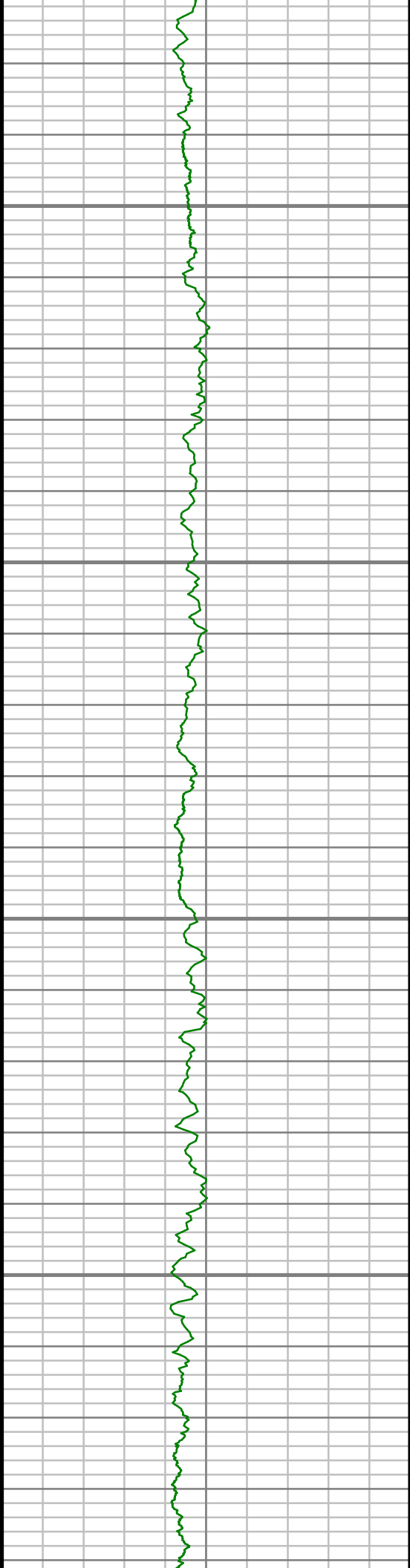
10100



S: 87 MD: 9933.00 ft Inc: 89.80
deg Az: 357.97 deg TVD:
7348.24 ft

S: 88 MD: 10026.00 ft Inc:
89.66 deg Az: 357.11 deg TVD:
7348.68 ft

S: 89 MD: 10119.00 ft Inc:

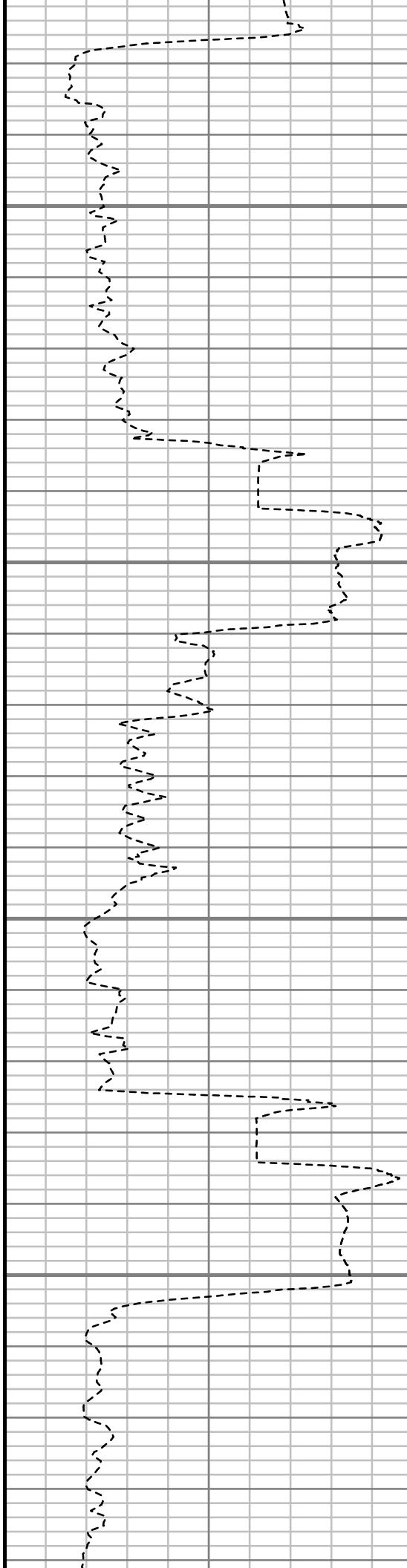


10150

10200

10250

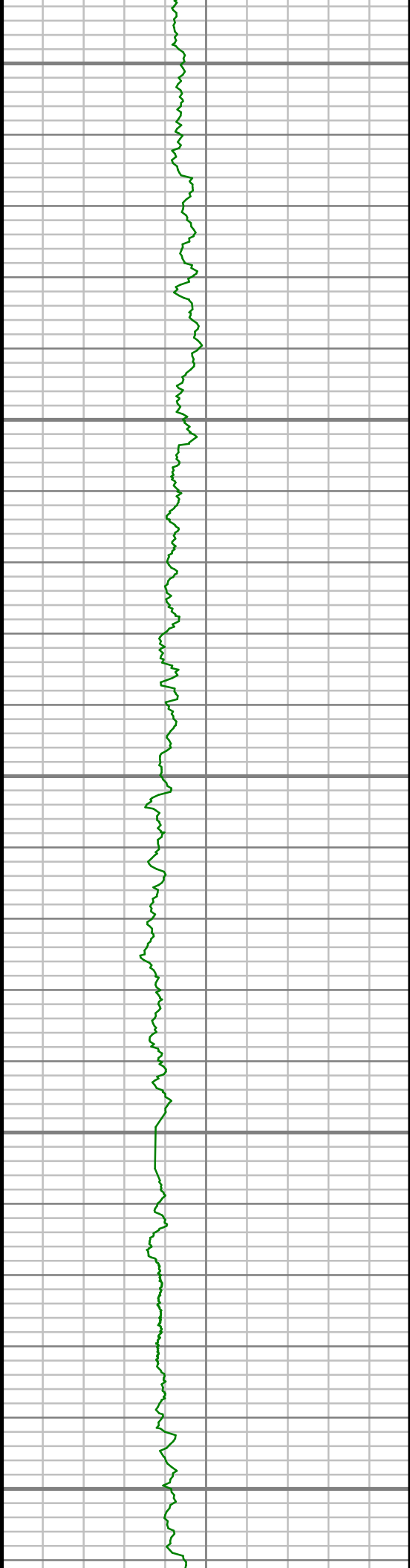
10300



90.30 deg Az: 358.36 deg TVD:
7348.70 ft

S: 90 MD: 10211.00 ft Inc:
90.91 deg Az: 358.57 deg TVD:
7347.73 ft

S: 91 MD: 10304.00 ft Inc:
89.80 deg Az: 359.35 deg TVD:
7347.16 ft



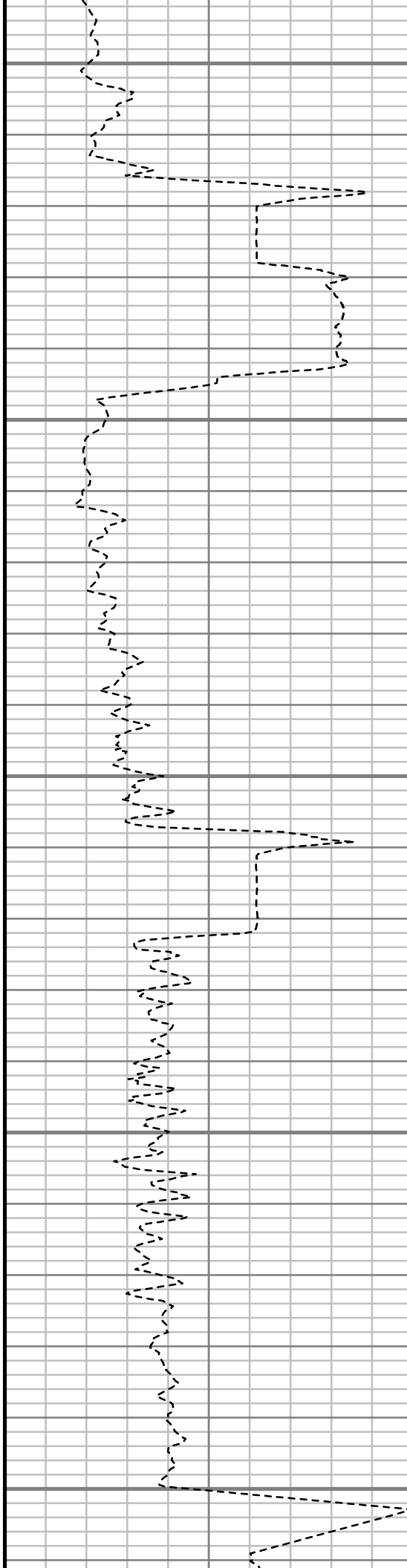
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10400

10450

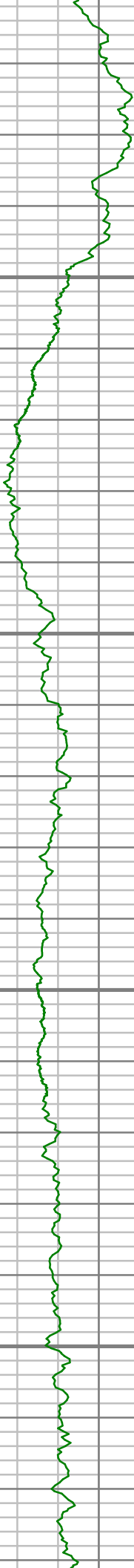
10500

10550



S: 92 MD: 10397.00 ft Inc:
91.11 deg Az: 0.47 deg TVD:
7346.42 ft

S: 93 MD: 10490.00 ft Inc:
91.38 deg Az: 359.14 deg TVD:
7344.41 ft

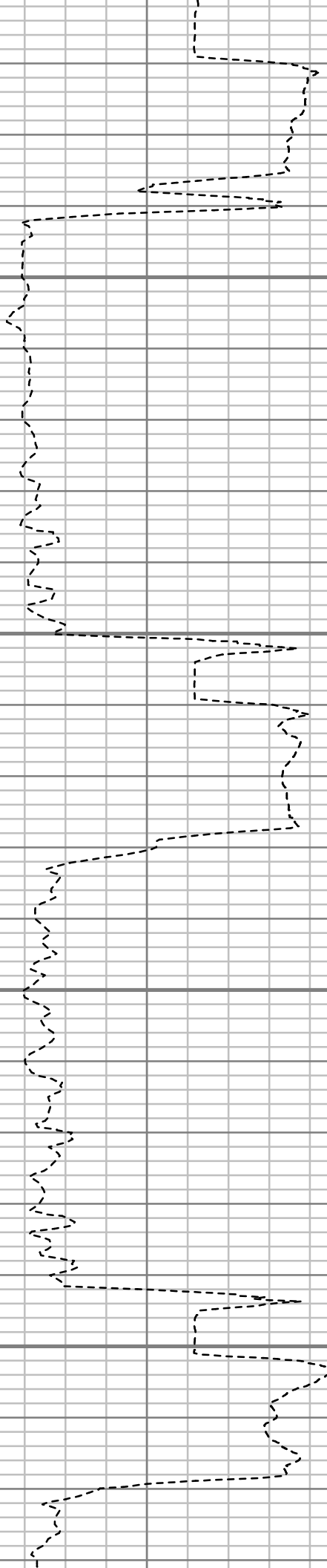


10600

10650

10700

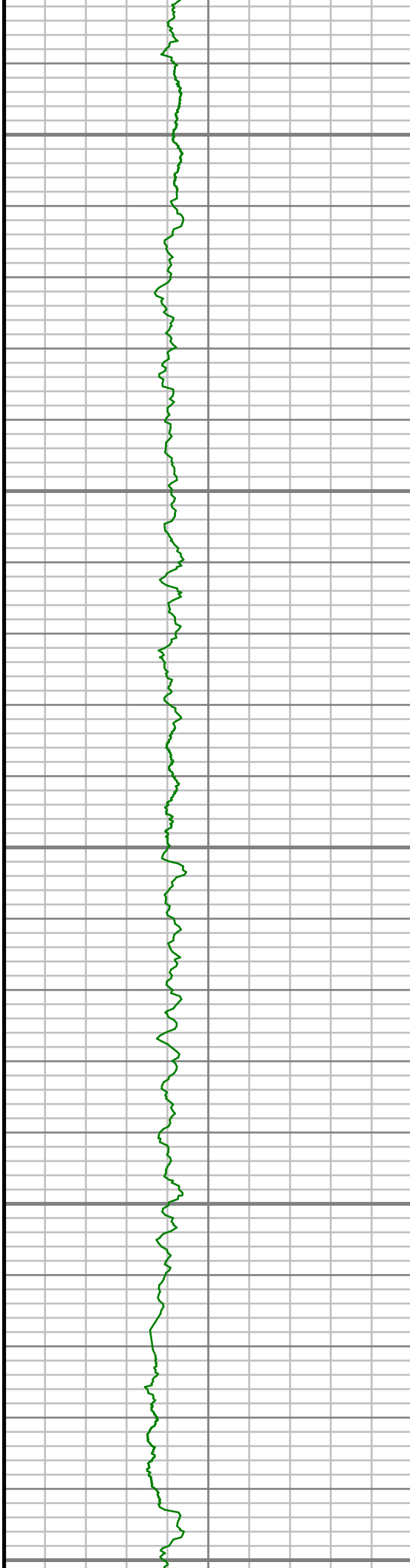
10750



S: 94 MD: 10583.00 ft Inc:
91.75 deg Az: 359.79 deg TVD:
7341.87 ft

S: 95 MD: 10676.00 ft Inc:
90.70 deg Az: 0.42 deg TVD:
7339.88 ft

S: 96 MD: 10769.00 ft Inc:
91.01 deg Az: 0.40 deg TVD:
7338.49 ft



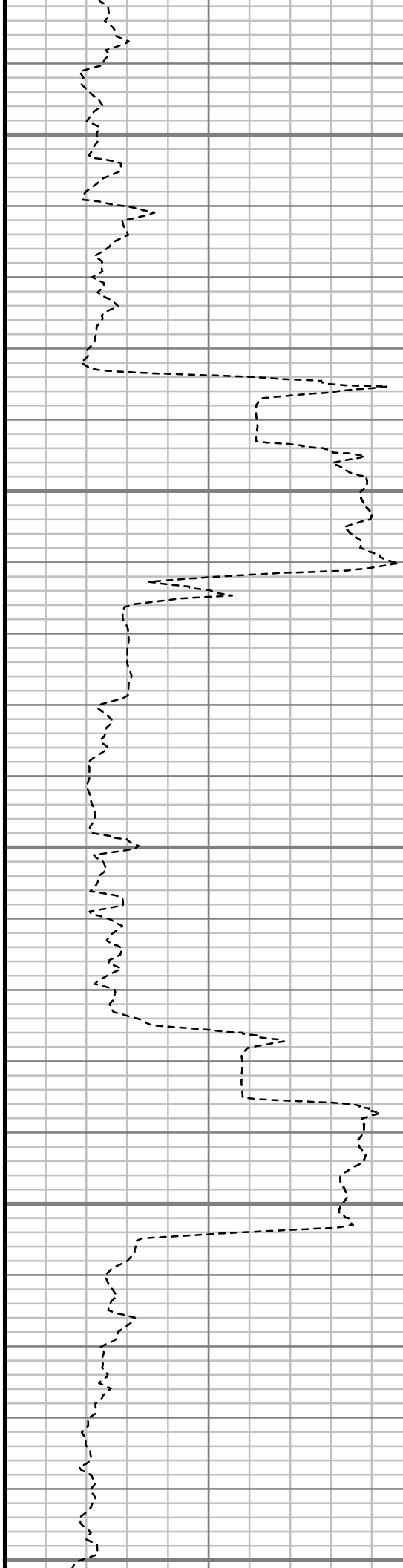
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10850

10900

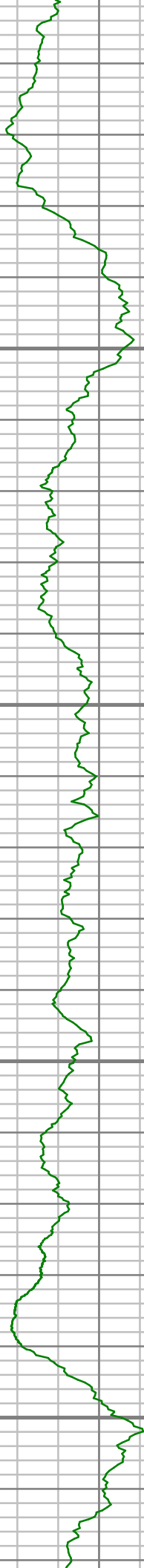
10950

11000



S: 97 MD: 10862.00 ft Inc:
90.67 deg Az: 359.89 deg TVD:
7337.13 ft

S: 98 MD: 10955.00 ft Inc:
90.13 deg Az: 0.47 deg TVD:
7336.48 ft

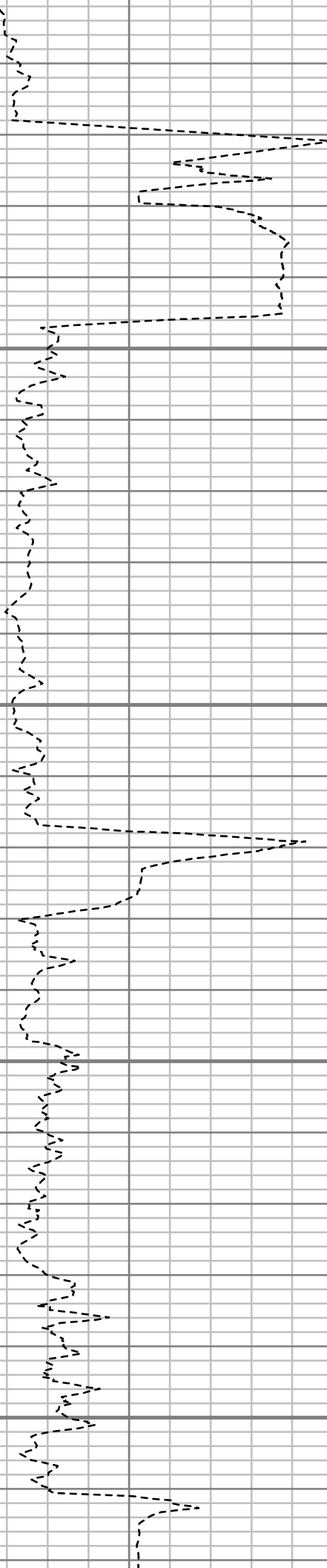


11050

11100

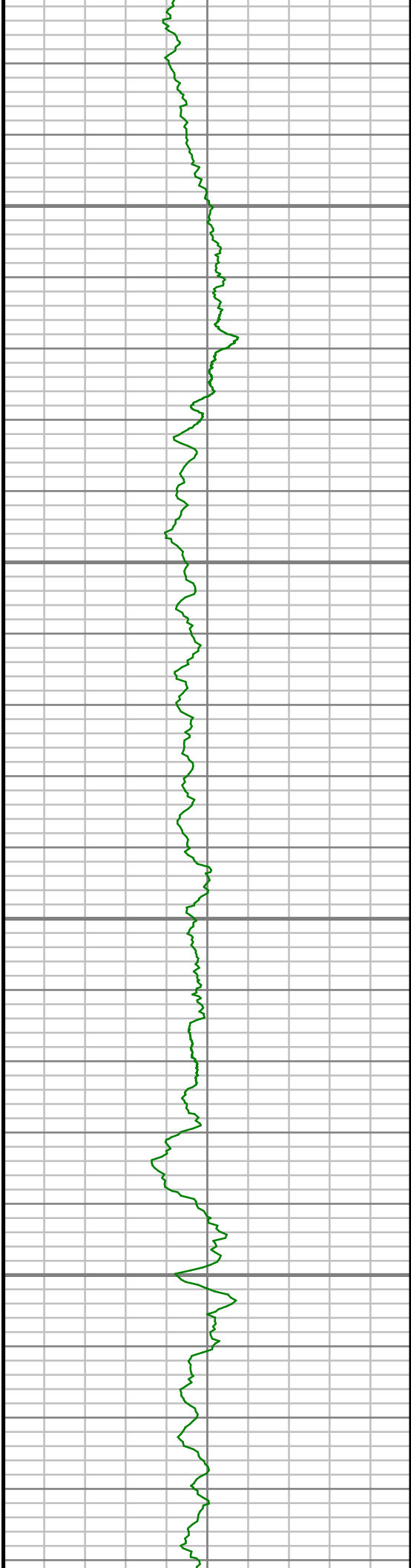
11150

11200



S: 99 MD: 11050.00 ft Inc:
89.36 deg Az: 1.21 deg TVD:
7336.90 ft

S: 100 MD: 11146.00 ft Inc:
88.42 deg Az: 0.09 deg TVD:
7338.75 ft

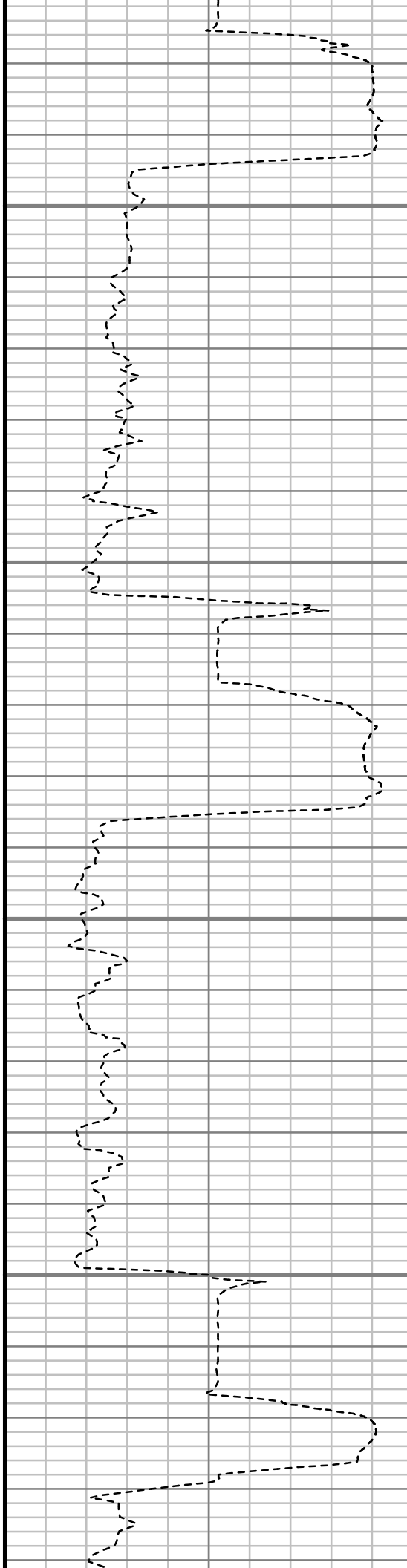


11250

11300

11350

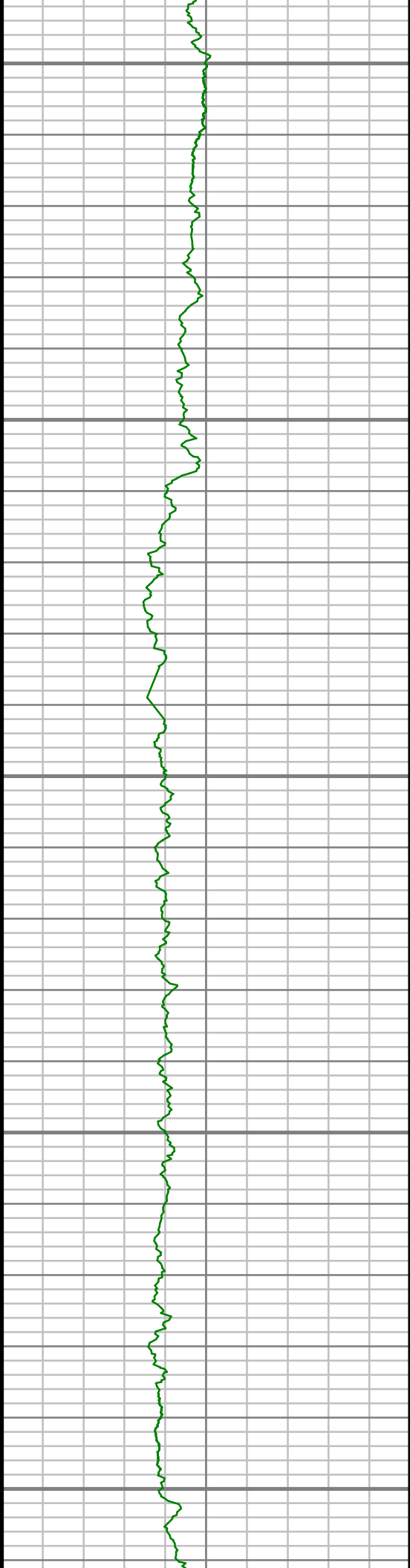
11400



S: 101 MD: 11241.00 ft Inc:
89.43 deg Az: 359.39 deg TVD:
7340.53 ft

S: 102 MD: 11336.00 ft Inc:
90.13 deg Az: 0.59 deg TVD:
7340.89 ft

S: 103 MD: 11431.00 ft Inc:
91.21 deg Az: 359.46 deg TVD:
7339.78 ft



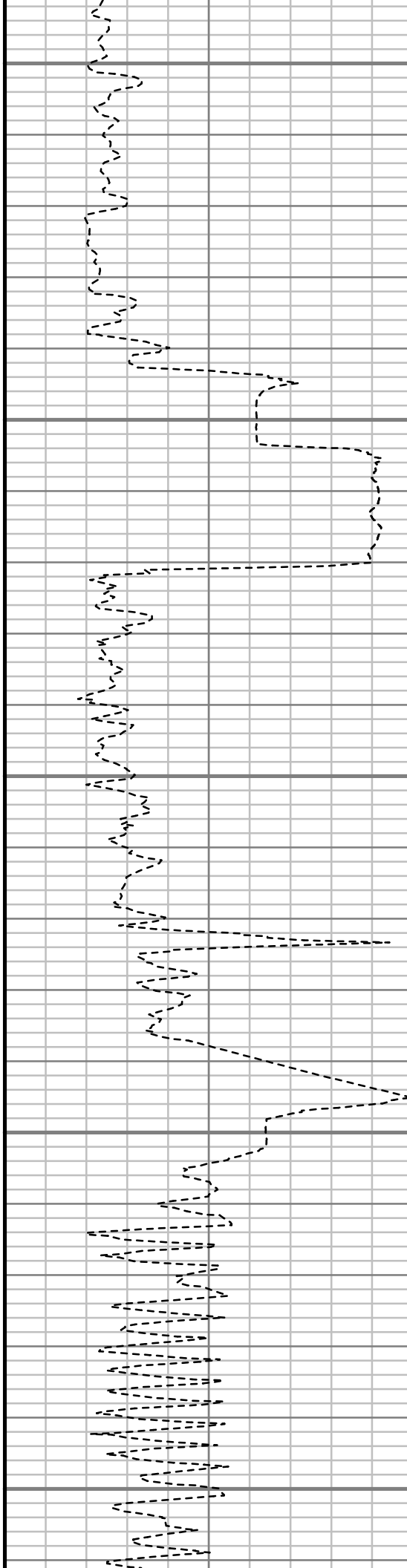
11450

11500

11550

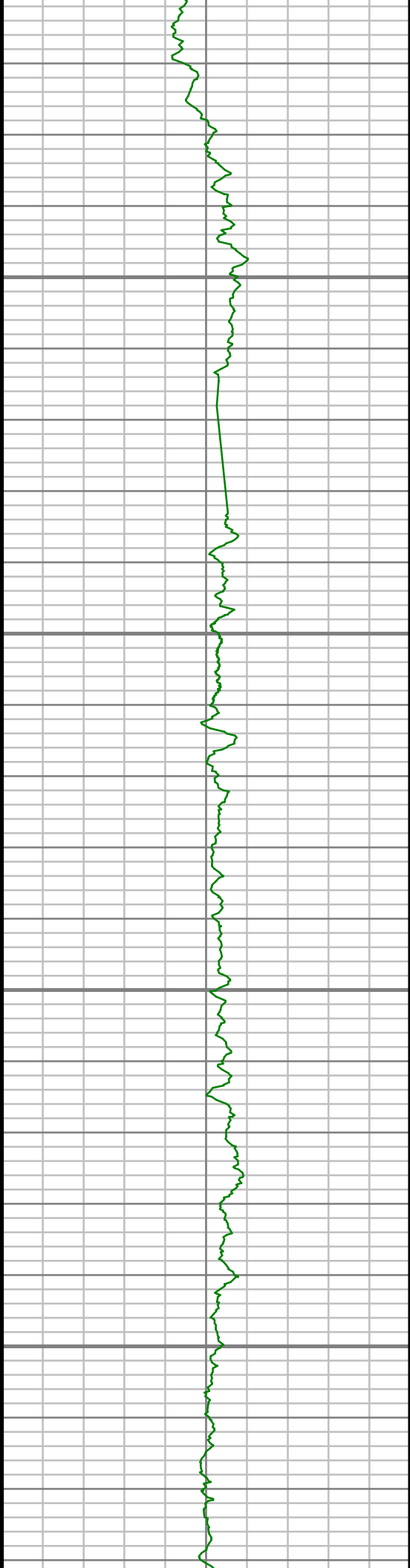
11600

11650



S: 104 MD: 11527.00 ft Inc:
91.11 deg Az: 0.41 deg TVD:
7337.84 ft

S: 105 MD: 11622.00 ft Inc:
91.71 deg Az: 359.07 deg TVD:
7335.50 ft

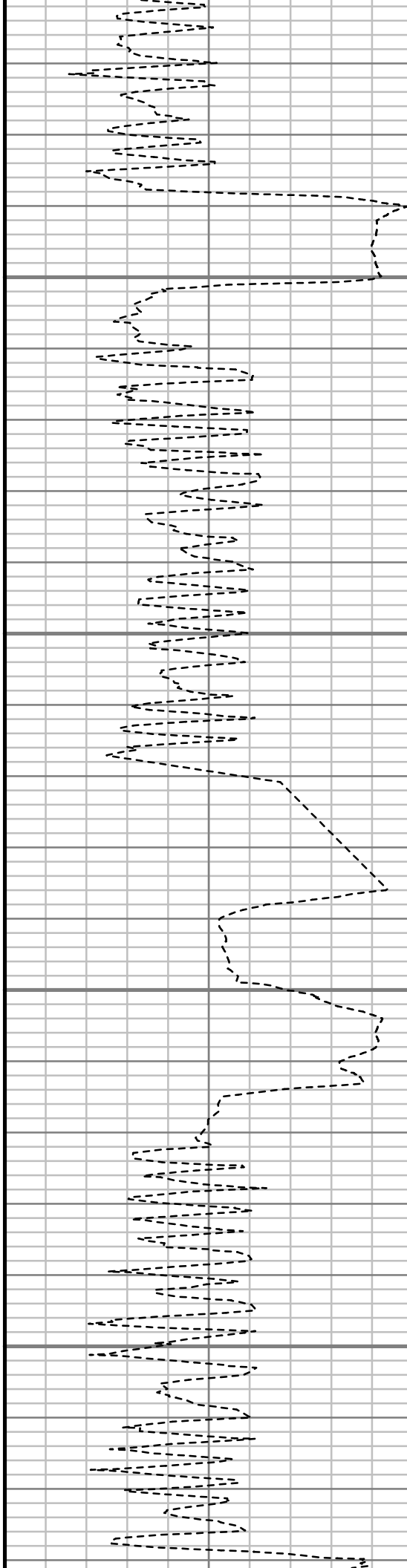


11700

11750

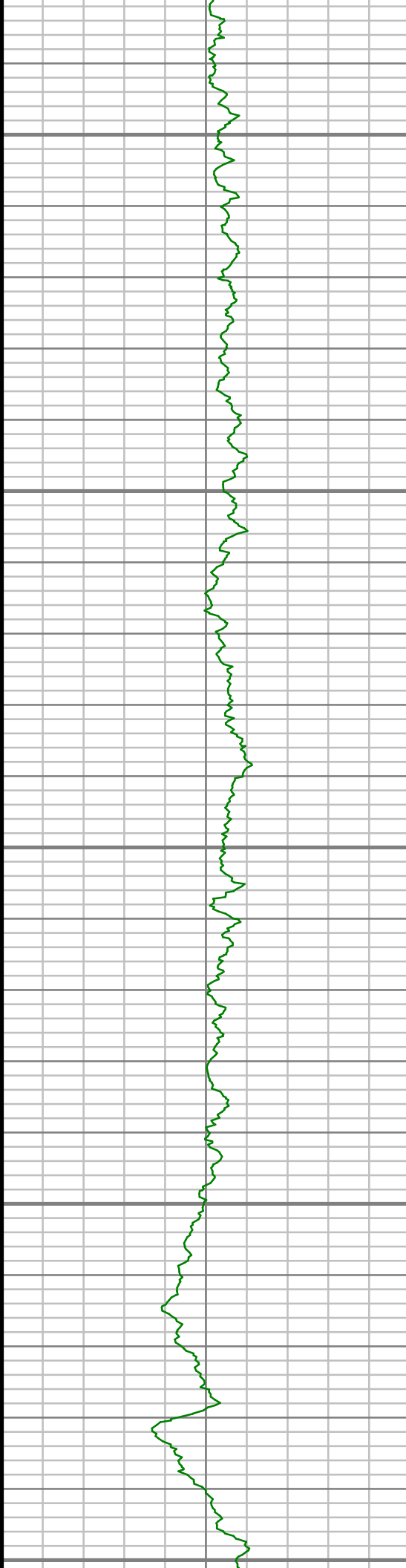
11800

11850



S: 106 MD: 11717.00 ft Inc:
91.78 deg Az: 0.60 deg TVD:
7332.60 ft

S: 107 MD: 11813.00 ft Inc:
90.94 deg Az: 1.10 deg TVD:
7330.32 ft



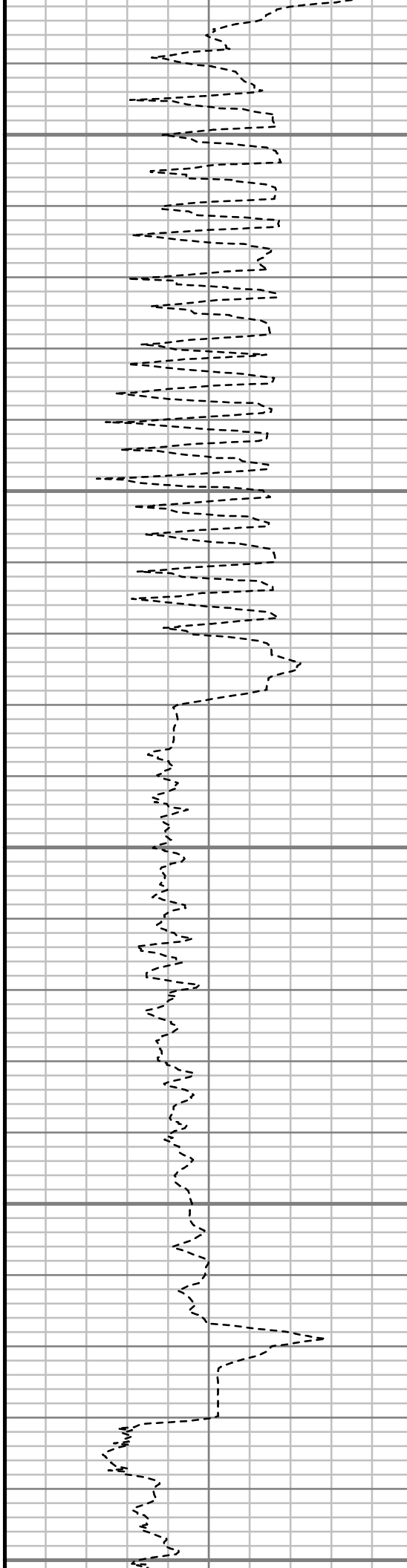
11900

11950

12000

12050

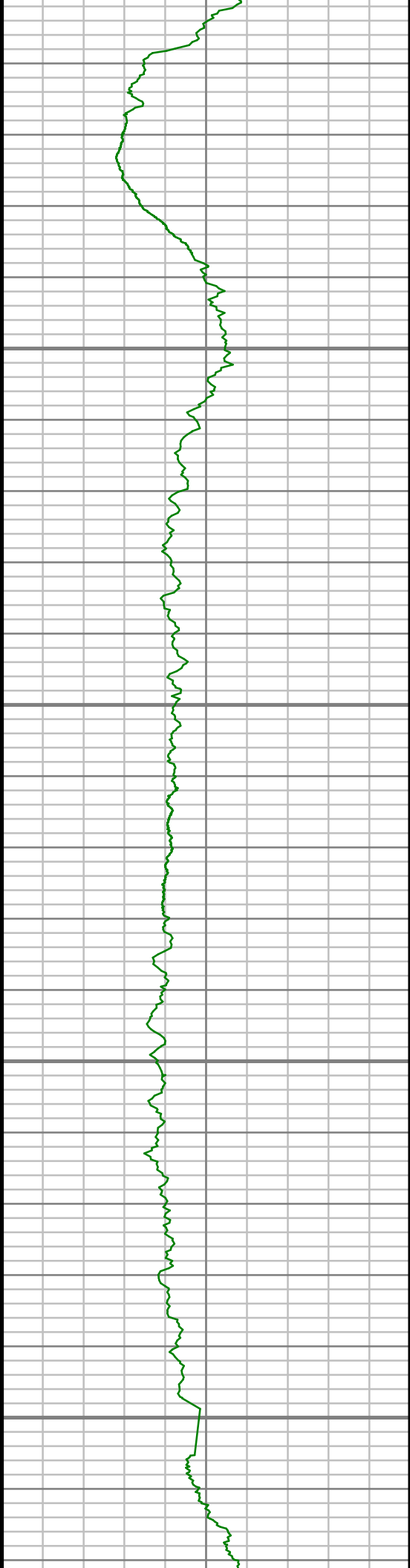
12100



S: 108 MD: 11908.00 ft Inc:
91.04 deg Az: 0.60 deg TVD:
7328.68 ft

S: 109 MD: 12003.00 ft Inc:
90.74 deg Az: 0.99 deg TVD:
7327.20 ft

S: 110 MD: 12099.00 ft Inc:

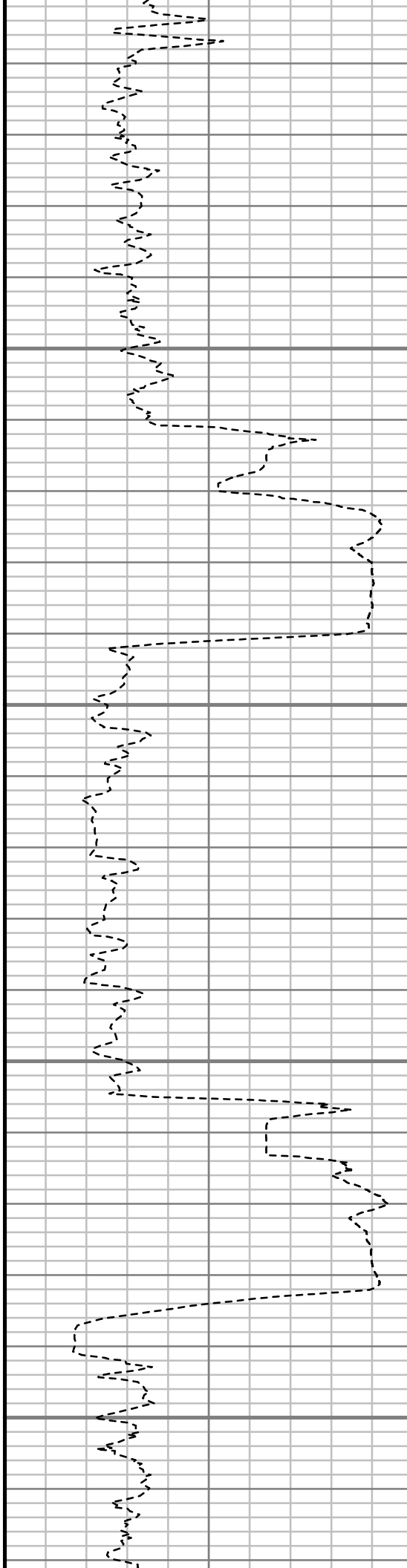


12150

12200

12250

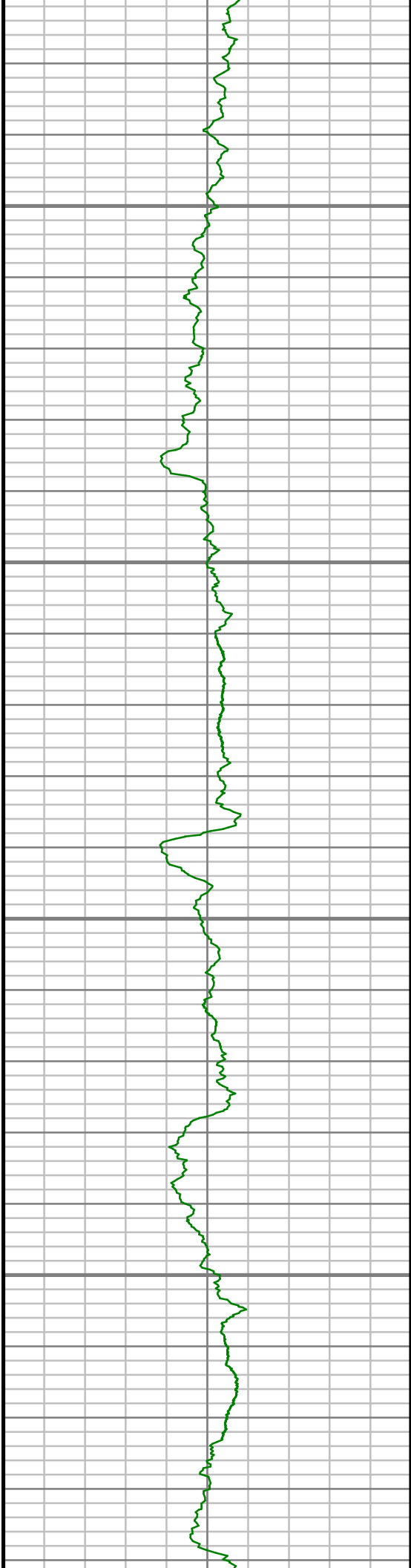
12300



89.09 deg Az: 359.50 deg TVD:
7327.34 ft

S: 111 MD: 12194.00 ft Inc:
89.80 deg Az: 359.80 deg TVD:
7328.26 ft

S: 112 MD: 12289.00 ft Inc:
91.28 deg Az: 359.70 deg TVD:
7327.37 ft

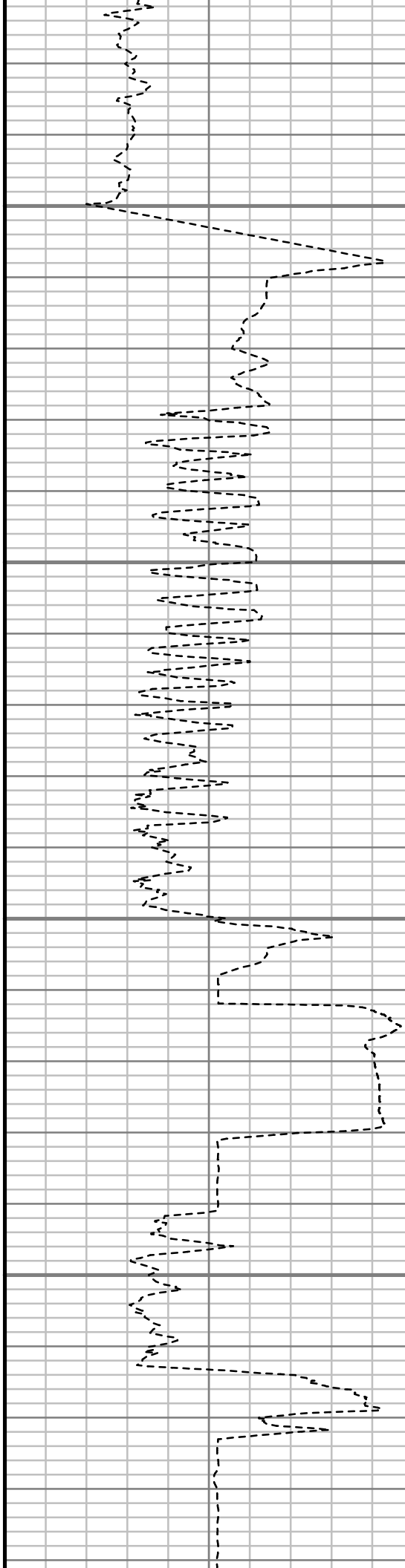


12350

12400

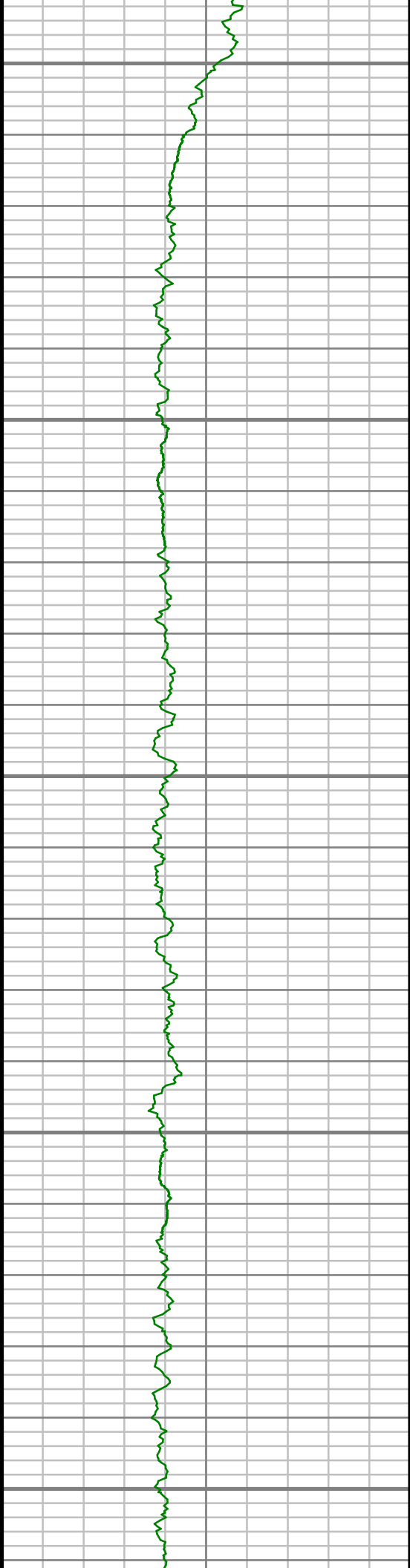
12450

12500



S: 113 MD: 12384.00 ft Inc:
90.00 deg Az: 358.43 deg TVD:
7326.31 ft

S: 114 MD: 12480.00 ft Inc:
90.40 deg Az: 359.20 deg TVD:
7325.98 ft



12550

12600

12650

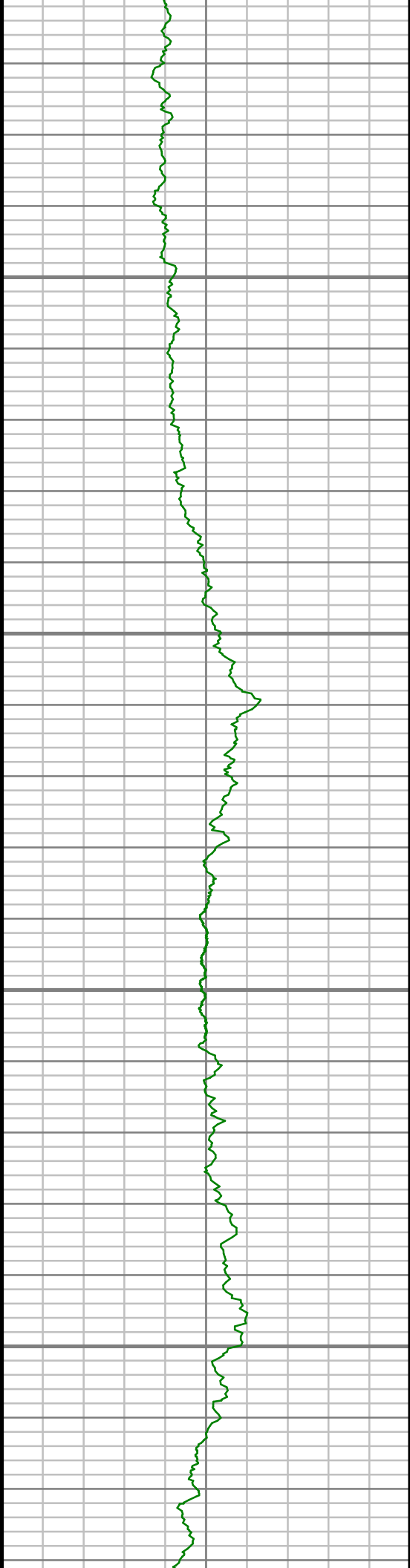
12700

12750



S: 115 MD: 12575.00 ft Inc:
89.90 deg Az: 359.26 deg TVD:
7325.73 ft

S: 116 MD: 12670.00 ft Inc:
90.54 deg Az: 2.31 deg TVD:
7325.36 ft

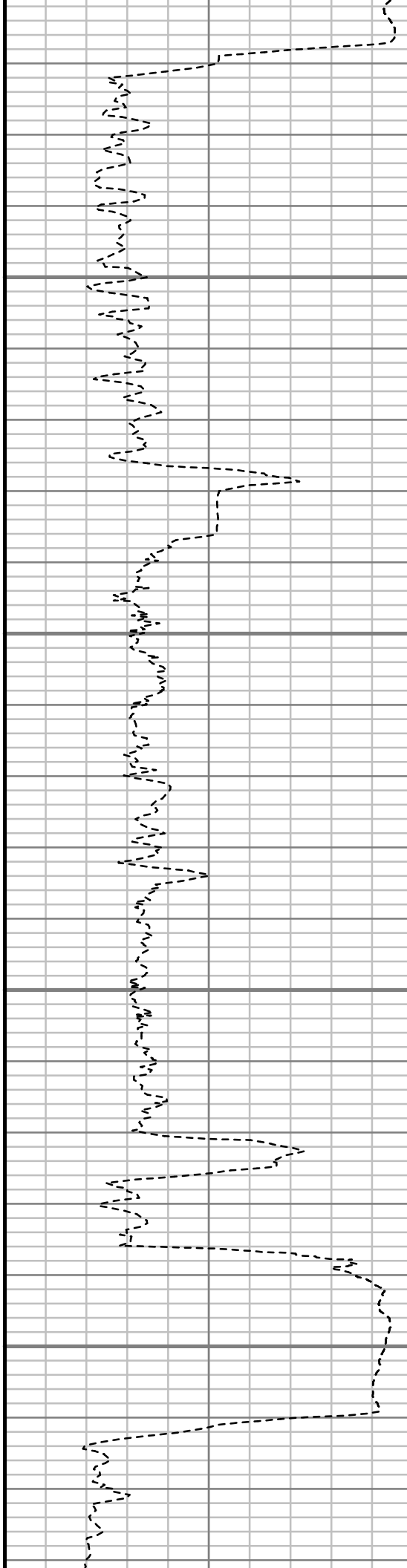


12800

12850

12900

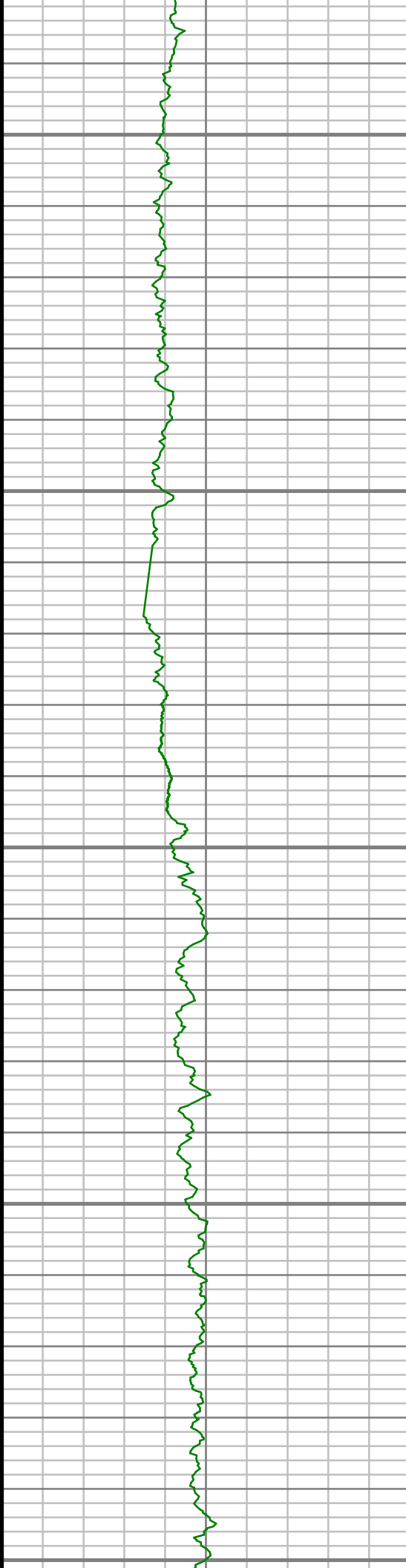
12950



S: 117 MD: 12766.00 ft Inc:
90.94 deg Az: 2.84 deg TVD:
7324.13 ft

S: 118 MD: 12861.00 ft Inc:
91.85 deg Az: 1.08 deg TVD:
7321.81 ft

S: 119 MD: 12956.00 ft Inc:
89.60 deg Az: 2.97 deg TVD:
7320.62 ft



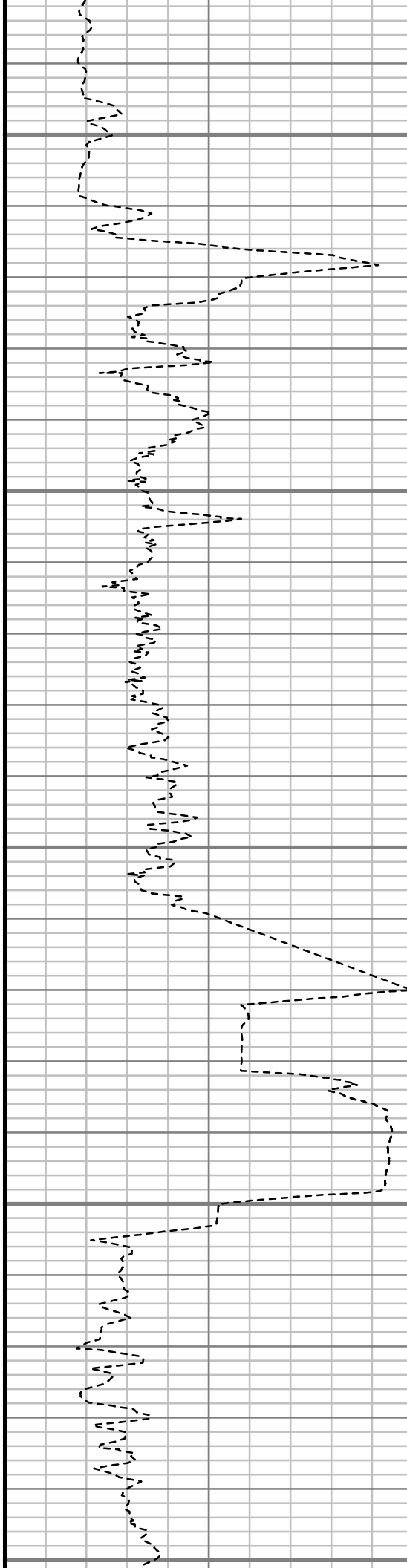
13000

13050

13100

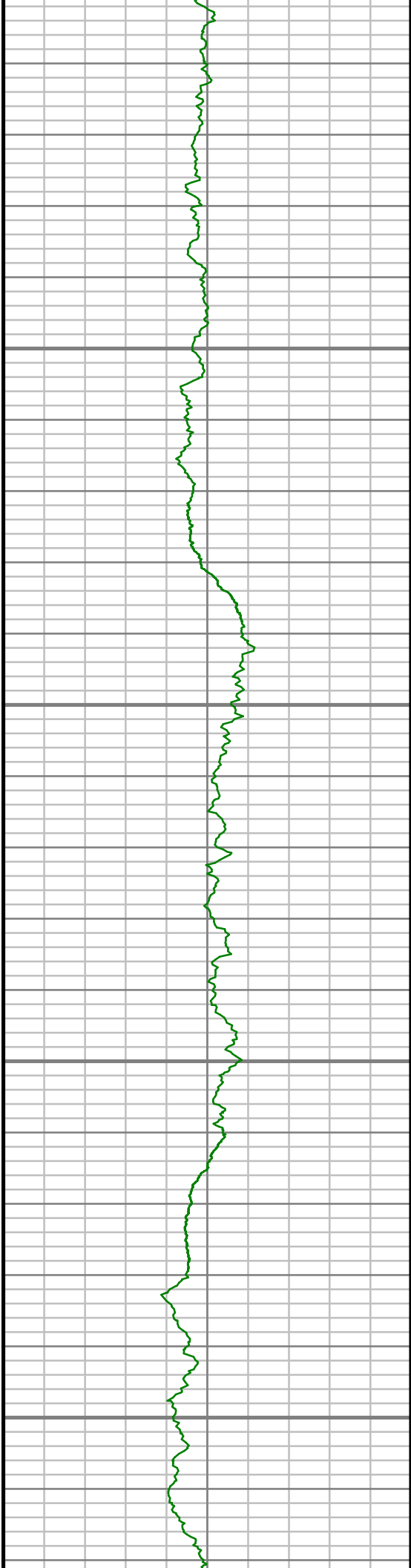
13150

13200



S: 120 MD: 13051.00 ft Inc:
89.63 deg Az: 2.16 deg TVD:
7321.26 ft

S: 121 MD: 13147.00 ft Inc:
89.16 deg Az: 2.31 deg TVD:
7322.27 ft

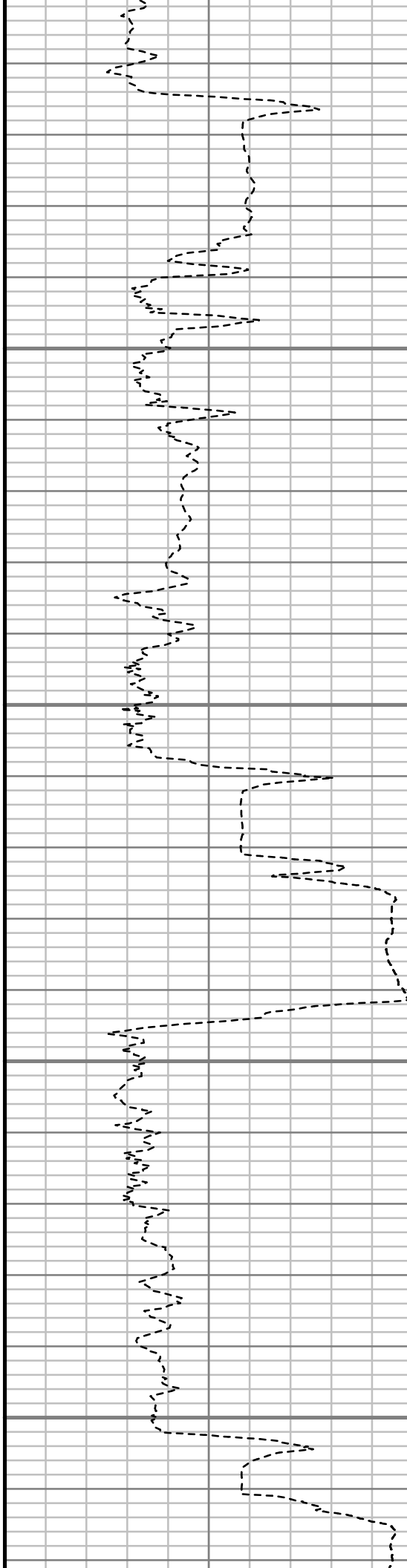


13250

13300

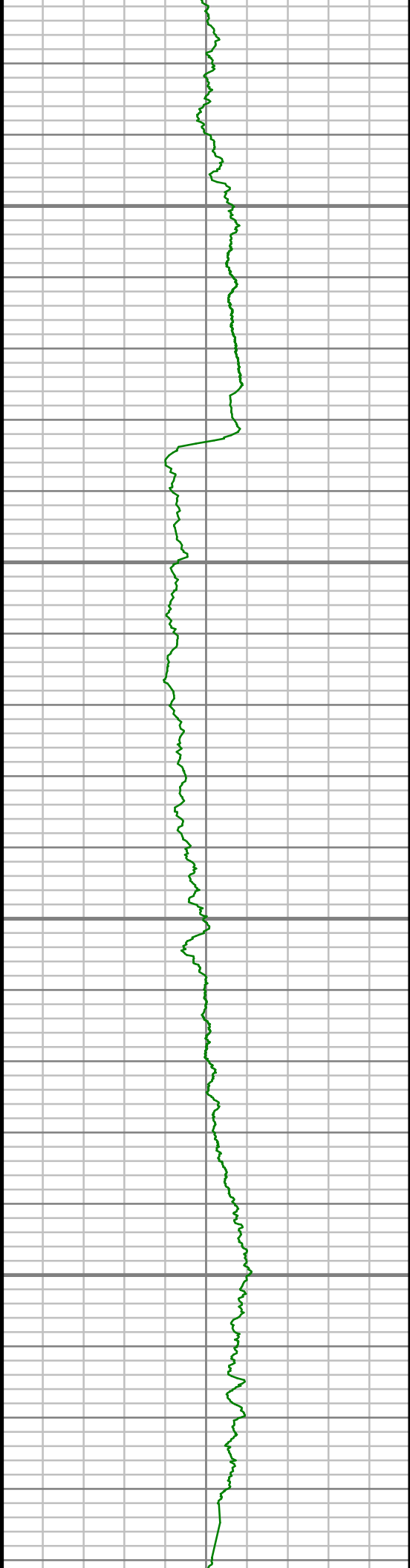
13350

13400



S: 122 MD: 13242.00 ft Inc:
88.55 deg Az: 2.10 deg TVD:
7324.16 ft

S: 123 MD: 13338.00 ft Inc:
88.49 deg Az: 1.91 deg TVD:
7326.64 ft

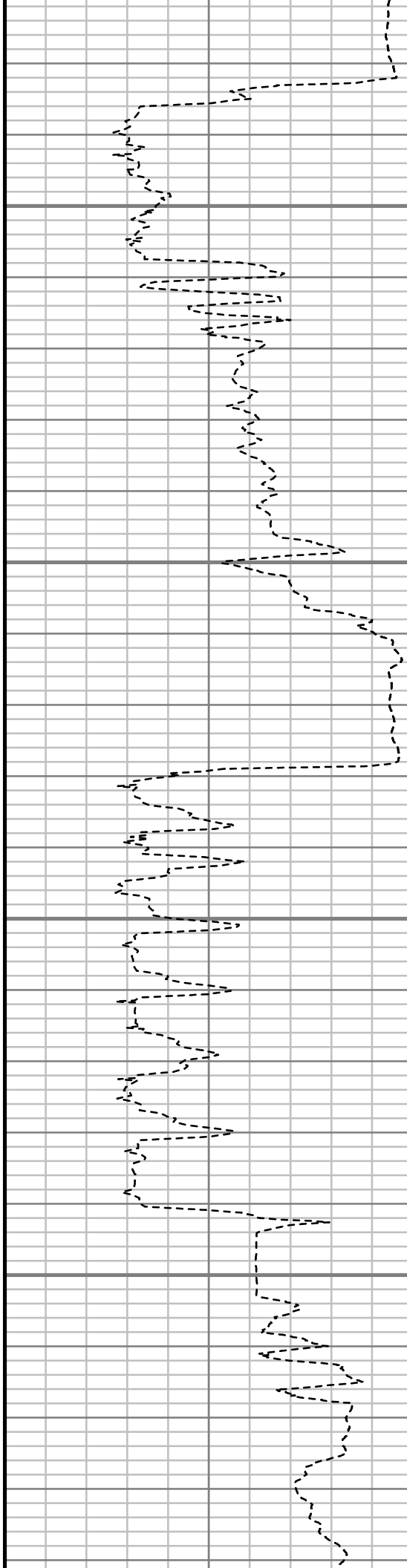


13450

13500

13550

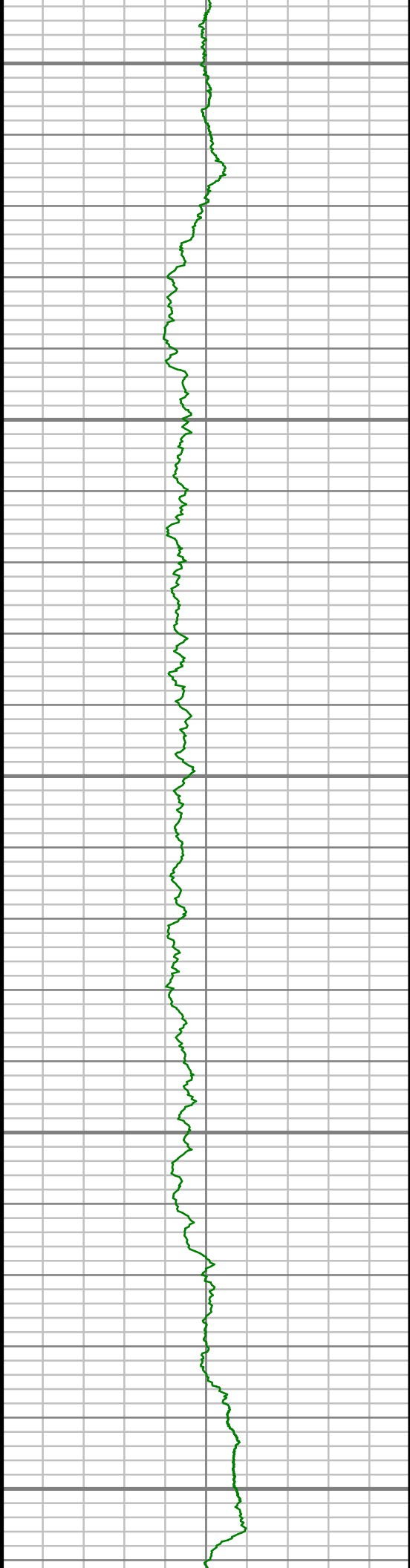
13600



S: 124 MD: 13433.00 ft Inc:
89.19 deg Az: 2.23 deg TVD:
7328.56 ft

S: 125 MD: 13528.00 ft Inc:
90.91 deg Az: 1.74 deg TVD:
7328.48 ft

S: 126 MD: 13624.00 ft Inc:
91.21 deg Az: 2.73 deg TVD:
7326.71 ft



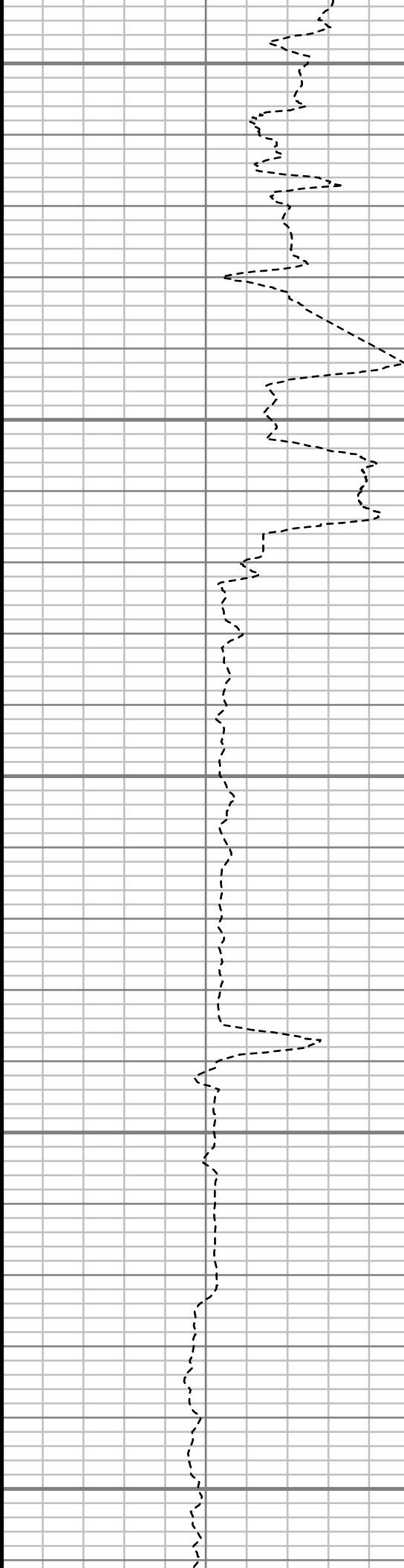
13650

13700

13750

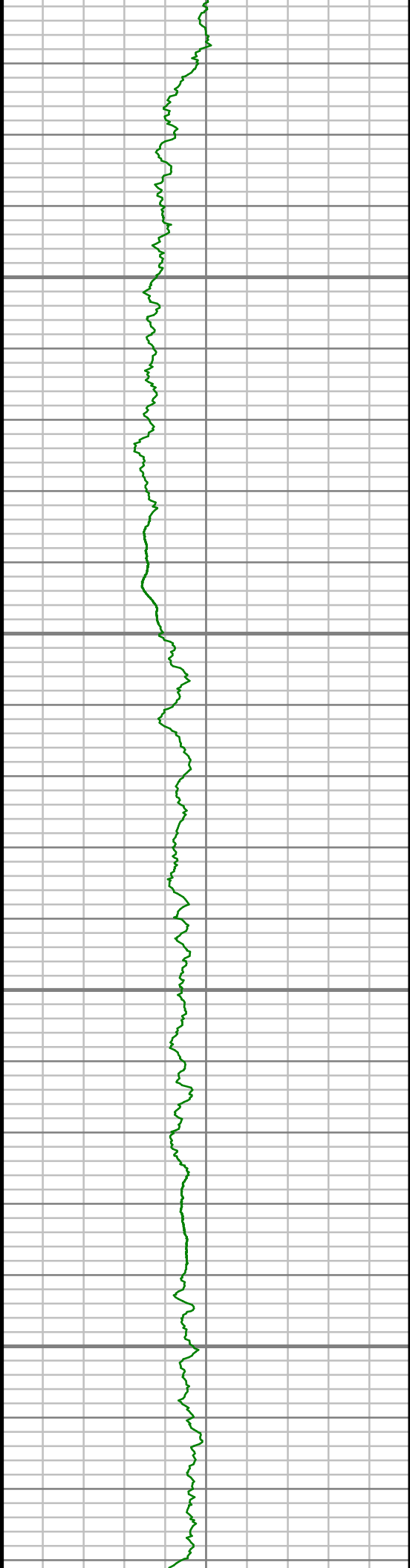
13800

13850



S: 127 MD: 13719.00 ft Inc:
90.87 deg Az: 1.85 deg TVD:
7324.98 ft

S: 128 MD: 13814.00 ft Inc:
89.36 deg Az: 0.85 deg TVD:
7324.79 ft

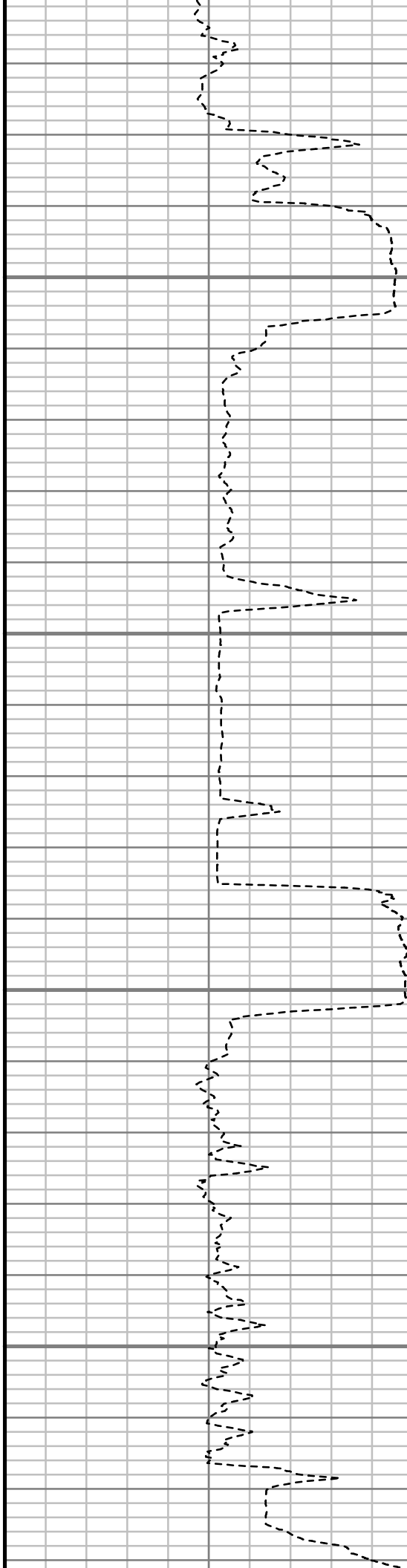


13900

13950

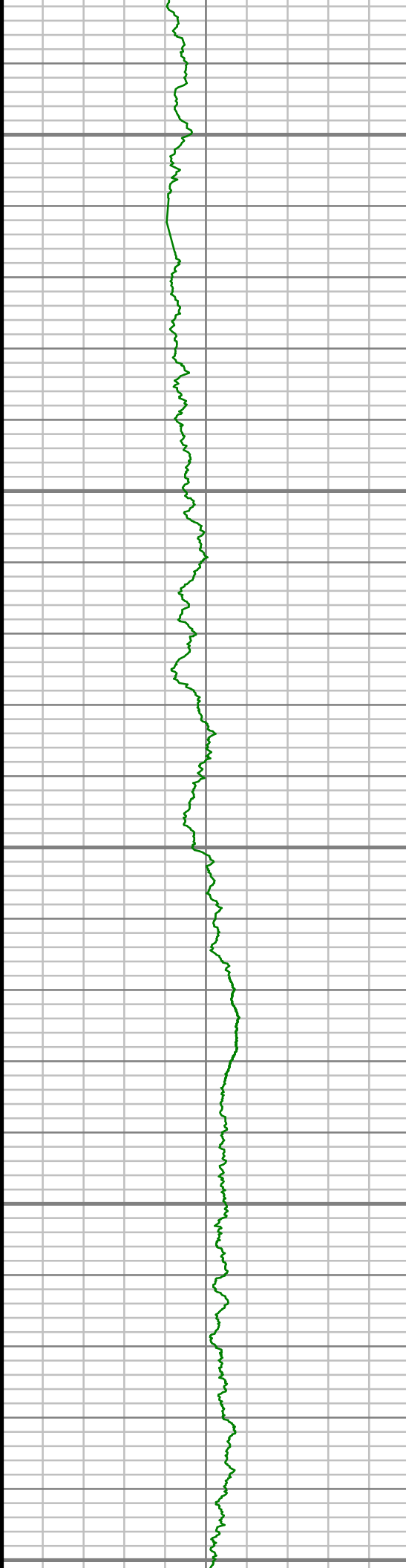
14000

14050



S: 129 MD: 13910.00 ft Inc:
89.76 deg Az: 0.73 deg TVD:
7325.52 ft

S: 130 MD: 14005.00 ft Inc:
90.30 deg Az: 359.92 deg TVD:
7325.46 ft



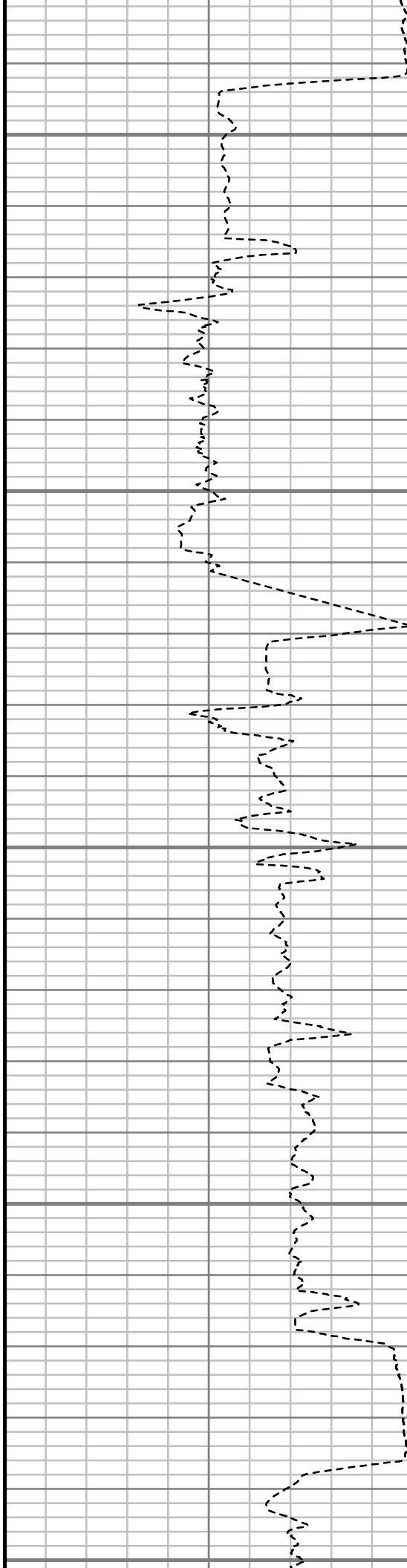
14100

14150

14200

14250

14300



S: 131 MD: 14100.00 ft Inc:
90.00 deg Az: 1.98 deg TVD:
7325.21 ft

S: 132 MD: 14195.00 ft Inc:
89.03 deg Az: 1.23 deg TVD:
7326.02 ft

S: 133 MD: 14291.00 ft Inc:
90.10 deg Az: 2.38 deg TVD:
7326.75 ft



14350

14400

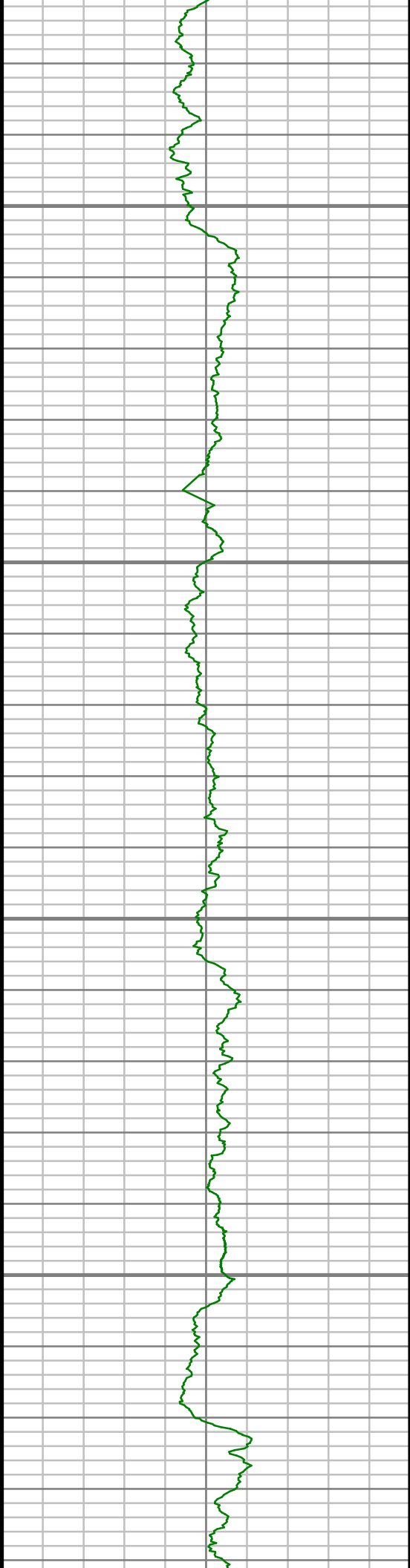
14450

14500



S: 134 MD: 14386.00 ft Inc:
90.87 deg Az: 1.10 deg TVD:
7325.95 ft

S: 135 MD: 14481.00 ft Inc:
91.14 deg Az: 0.02 deg TVD:
7324.28 ft

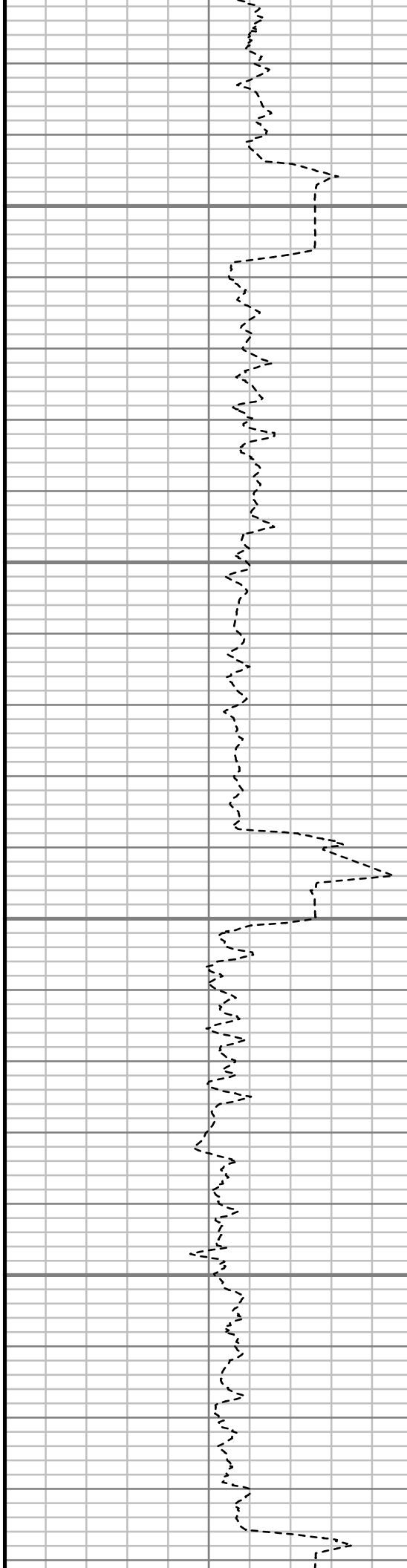


14550

14600

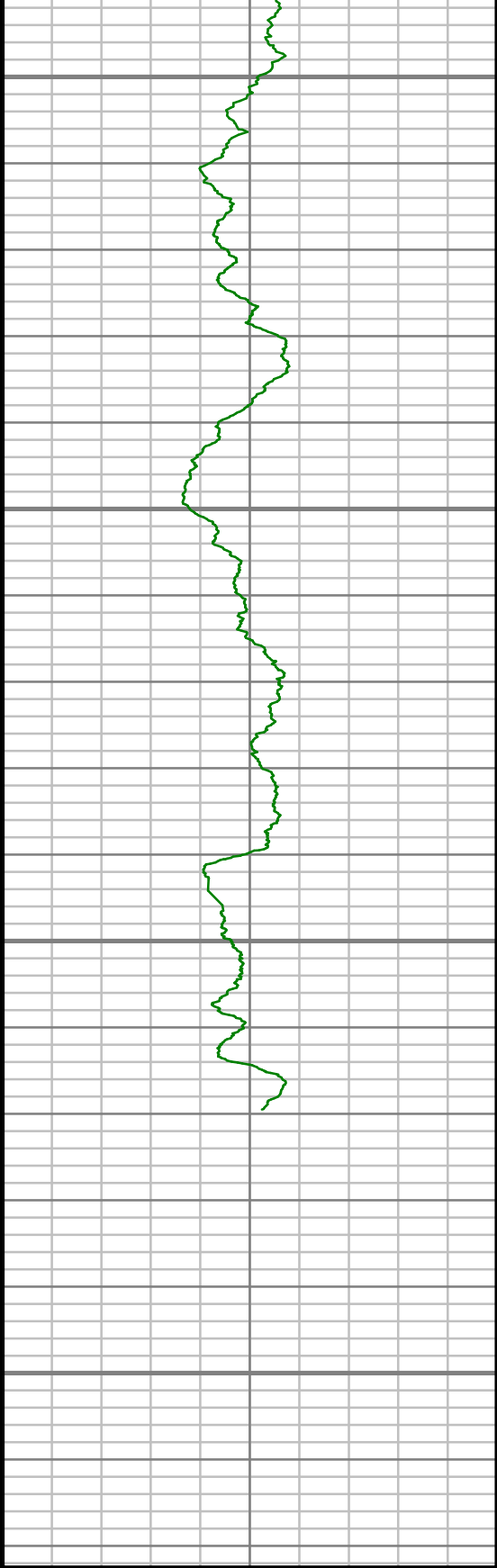
14650

14700



S: 136 MD: 14576.00 ft Inc:
91.58 deg Az: 0.18 deg TVD:
7322.02 ft

S: 137 MD: 14672.00 ft Inc:
91.72 deg Az: 359.91 deg TVD:
7319.26 ft



Gamma Ray (GR)

0 Unit = aapi 150

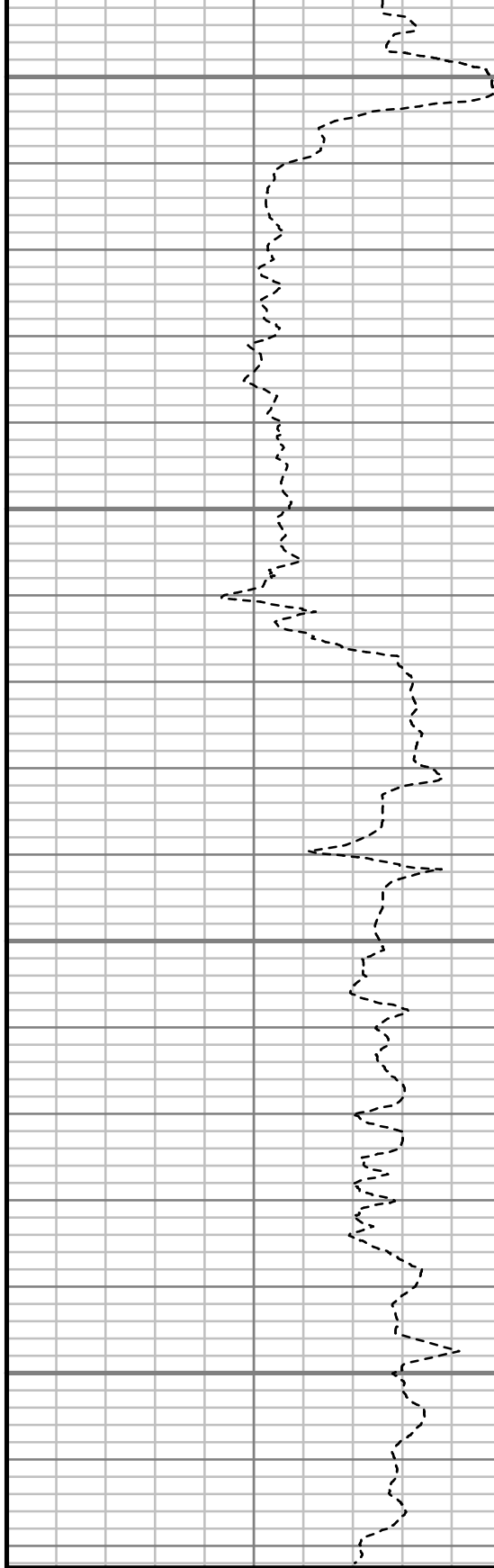
14750

14800

14850

14900

MEASURED DEPTH
1:240 (ft)



Rate of Penetration (ROP)

400 Unit = ft/hr 0

S: 138 MD: 14767.00 ft Inc:
89.97 deg Az: 359.52 deg TVD:
7317.87 ft

S: 139 MD: 14854.00 ft Inc:
88.92 deg Az: 359.45 deg TVD:
7318.71 ft

Comments



MWD Survey Report

Well Location	JILLSON-EAST RINN
Well Name	JILLSON-EAST RINN 3F-22H-M268
Survey Date	07/15/14
Latitude	40°7'4.465"N
Longitude	104°59'46.342"W
Btotal	52534 nT
Dip	66.67 deg
Magnetic Declination	8.63 deg
North Reference	True North
Grid Correction	None
Depth Reference	R.K.B. (13.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 0.00Azim (deg)
Operator(s)	J. SMITH, M. SMITH, T. WHEELER

Well Notes

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
336.00	0.56	256.82	335.99	-0.37	-0.37	-1.59	256.82	1.63	0.17
429.00	0.69	141.14	428.99	-0.91	-0.91	-1.67	241.50	1.91	1.13
522.00	1.69	121.42	521.97	-2.06	-2.06	-0.15	184.26	2.07	1.15
614.00	3.71	123.09	613.86	-4.39	-4.39	3.50	141.46	5.62	2.20
707.00	4.87	121.46	706.60	-8.10	-8.10	9.39	130.77	12.40	1.26
800.00	4.52	121.96	799.29	-12.10	-12.10	15.87	127.32	19.95	0.38
814.00	4.69	122.33	813.24	-12.70	-12.70	16.82	127.05	21.07	1.22
970.00	4.54	140.96	968.75	-20.90	-20.90	26.10	128.70	33.44	0.96
1156.00	5.23	149.87	1154.07	-33.96	-33.96	34.99	134.14	48.76	0.55
1342.00	4.38	138.82	1339.42	-46.63	-46.63	43.92	136.71	64.06	0.67
1527.00	4.15	124.52	1523.91	-55.74	-55.74	54.09	135.86	77.67	0.59
1713.00	5.55	121.58	1709.24	-64.27	-64.27	67.30	133.68	93.06	0.76
1899.00	4.38	121.65	1894.54	-72.71	-72.71	81.01	131.91	108.85	0.63
2084.00	4.83	133.65	2078.95	-81.79	-81.79	92.67	131.43	123.60	0.57
2270.00	4.98	142.56	2264.27	-93.61	-93.61	103.25	132.20	139.37	0.42
2456.00	2.81	138.75	2449.83	-103.46	-103.46	111.17	132.94	151.86	1.17
2642.00	3.92	148.44	2635.51	-112.31	-112.31	117.50	133.71	162.54	0.67
2827.00	4.71	142.89	2819.98	-123.76	-123.76	125.40	134.62	176.19	0.48

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
3018.00	5.02	135.25	3010.29	-135.95	-135.95	136.01	134.99	192.30	0.37
3209.00	4.41	123.43	3200.65	-145.93	-145.93	148.02	134.59	207.86	0.60
3399.00	4.17	142.36	3390.13	-155.42	-155.42	158.34	134.47	221.87	0.75
3590.00	4.70	149.62	3580.56	-167.67	-167.67	166.53	135.19	236.32	0.40
3780.00	3.98	145.63	3770.01	-179.82	-179.82	174.19	135.91	250.35	0.41
3970.00	3.68	132.00	3959.59	-189.33	-189.33	182.44	136.06	262.93	0.50
4161.00	5.25	113.03	4150.02	-196.85	-196.85	195.03	135.27	277.10	1.12
4352.00	4.87	124.53	4340.28	-204.86	-204.86	209.74	134.33	293.19	0.57
4542.00	5.55	120.96	4529.49	-214.16	-214.16	224.27	133.68	310.10	0.40
4733.00	7.63	128.13	4719.22	-226.74	-226.74	242.16	133.12	331.74	1.17
4923.00	5.75	131.64	4907.92	-240.86	-240.86	259.20	132.90	353.83	1.01
5114.00	5.44	135.40	5098.01	-253.66	-253.66	272.71	132.93	372.45	0.25
5304.00	3.05	131.77	5287.48	-263.44	-263.44	282.80	132.97	386.49	1.27
5495.00	4.63	128.13	5478.05	-271.58	-271.58	292.65	132.86	399.25	0.84
5685.00	4.78	126.06	5667.40	-280.97	-280.97	305.08	132.64	414.75	0.12
5876.00	4.56	121.38	5857.77	-289.61	-289.61	317.99	132.33	430.11	0.23
6066.00	3.68	126.47	6047.28	-297.17	-297.17	329.35	132.06	443.60	0.50
6257.00	3.47	125.06	6237.91	-304.13	-304.13	339.00	131.90	455.43	0.12

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
6447.00	3.32	137.11	6427.58	-311.47	-311.47	347.45	131.87	466.62	0.38
6542.00	1.33	144.14	6522.49	-314.38	-314.38	349.98	131.93	470.45	2.11
6589.00	0.57	180.72	6569.49	-315.06	-315.06	350.29	131.97	471.14	2.00
6638.00	2.24	2.65	6618.48	-314.35	-314.35	350.34	131.90	470.69	5.75
6685.00	5.08	12.25	6665.38	-311.39	-311.39	350.82	131.59	469.08	6.15
6733.00	8.05	15.43	6713.06	-306.08	-306.08	352.16	130.99	466.59	6.22
6780.00	10.57	13.76	6759.43	-298.72	-298.72	354.07	130.15	463.24	5.40
6828.00	13.11	9.10	6806.41	-289.07	-289.07	355.97	129.08	458.56	5.66
6875.00	16.13	4.74	6851.88	-277.29	-277.29	357.36	127.81	452.32	6.83
6924.00	19.92	1.65	6898.47	-262.16	-262.16	358.16	126.20	443.85	7.97
6971.00	23.87	1.00	6942.07	-244.64	-244.64	358.56	124.31	434.06	8.42
7019.00	26.33	0.38	6985.54	-224.28	-224.28	358.80	122.01	423.13	5.16
7066.00	29.94	359.28	7026.98	-202.13	-202.13	358.72	119.40	411.74	7.76
7114.00	34.54	359.22	7067.57	-176.53	-176.53	358.38	116.22	399.50	9.58
7161.00	39.87	359.98	7104.99	-148.12	-148.12	358.20	112.47	387.61	11.39
7210.00	44.07	359.34	7141.41	-115.36	-115.36	357.99	107.86	376.12	8.62
7257.00	47.43	358.79	7174.20	-81.70	-81.70	357.44	102.87	366.66	7.20
7305.00	51.72	359.93	7205.32	-45.17	-45.17	357.04	97.21	359.89	9.11

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
7352.00	55.64	2.76	7233.15	-7.32	-7.32	357.95	91.17	358.03	9.66
7400.00	60.27	3.43	7258.61	33.29	33.29	360.16	84.72	361.69	9.70
7447.00	64.12	3.20	7280.53	74.79	74.79	362.56	78.34	370.19	8.21
7496.00	67.61	2.11	7300.56	119.45	119.45	364.62	71.86	383.69	7.40
7543.00	71.07	1.56	7317.14	163.40	163.40	366.03	65.94	400.84	7.45
7591.00	74.47	0.31	7331.36	209.23	209.23	366.77	60.30	422.25	7.50
7638.00	77.39	359.79	7342.79	254.81	254.81	366.81	55.21	446.63	6.31
7686.00	79.95	359.68	7352.22	301.87	301.87	366.59	50.53	474.89	5.33
7733.00	82.66	359.97	7359.32	348.33	348.33	366.45	46.45	505.59	5.80
7762.00	84.96	359.81	7362.45	377.16	377.16	366.40	44.17	525.83	7.95
7882.00	88.65	0.12	7369.13	496.95	496.95	366.32	36.40	617.38	3.09
7978.00	88.79	1.26	7371.27	592.92	592.92	367.48	31.79	697.56	1.20
8073.00	90.47	1.35	7371.89	687.89	687.89	369.64	28.25	780.92	1.77
8168.00	90.03	0.27	7371.47	782.88	782.88	370.99	25.36	866.33	1.23
8261.00	91.55	1.40	7370.19	875.85	875.85	372.35	23.03	951.72	2.03
8354.00	91.11	1.15	7368.03	968.81	968.81	374.42	21.13	1038.64	0.54
8447.00	91.14	0.74	7366.20	1061.77	1061.77	375.96	19.50	1126.37	0.44
8540.00	89.73	0.90	7365.50	1154.76	1154.76	377.29	18.09	1214.83	1.53

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
8633.00	91.65	1.83	7364.38	1247.72	1247.72	379.51	16.92	1304.16	2.29
8726.00	90.94	0.92	7362.28	1340.67	1340.67	381.74	15.89	1393.96	1.24
8819.00	92.45	1.77	7359.52	1433.60	1433.60	383.92	14.99	1484.12	1.87
8911.00	92.55	0.15	7355.51	1525.50	1525.50	385.47	14.18	1573.44	1.76
9005.00	91.64	0.70	7352.07	1619.43	1619.43	386.17	13.41	1664.83	1.13
9097.00	91.88	1.32	7349.24	1711.37	1711.37	387.79	12.77	1754.76	0.72
9190.00	90.13	1.17	7347.60	1804.33	1804.33	389.82	12.19	1845.96	1.88
9283.00	90.40	1.89	7347.17	1897.30	1897.30	392.30	11.68	1937.43	0.82
9376.00	90.44	2.85	7346.49	1990.21	1990.21	396.14	11.26	2029.25	1.04
9469.00	89.36	0.13	7346.65	2083.17	2083.17	398.56	10.83	2120.95	3.14
9561.00	88.89	359.98	7348.05	2175.16	2175.16	398.65	10.39	2211.39	0.54
9654.00	89.46	358.72	7349.39	2268.14	2268.14	397.59	9.94	2302.73	1.48
9747.00	89.90	358.22	7349.91	2361.11	2361.11	395.11	9.50	2393.94	0.72
9840.00	91.18	358.02	7349.03	2454.05	2454.05	392.05	9.08	2485.17	1.39
9933.00	89.80	357.97	7348.24	2546.99	2546.99	388.79	8.68	2576.49	1.49
10026.00	89.66	357.11	7348.68	2639.90	2639.90	384.80	8.29	2667.80	0.93
10119.00	90.30	358.36	7348.70	2732.83	2732.83	381.13	7.94	2759.27	1.51
10211.00	90.91	358.57	7347.73	2824.79	2824.79	378.67	7.64	2850.05	0.69

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
10304.00	89.80	359.35	7347.16	2917.77	2917.77	376.98	7.36	2942.02	1.46
10397.00	91.11	0.47	7346.42	3010.76	3010.76	376.84	7.13	3034.25	1.85
10490.00	91.38	359.14	7344.41	3103.74	3103.74	376.53	6.92	3126.49	1.46
10583.00	91.75	359.79	7341.87	3196.70	3196.70	375.66	6.70	3218.69	0.81
10676.00	90.70	0.42	7339.88	3289.67	3289.67	375.83	6.52	3311.07	1.31
10769.00	91.01	0.40	7338.49	3382.66	3382.66	376.49	6.35	3403.55	0.33
10862.00	90.67	359.89	7337.13	3475.65	3475.65	376.73	6.19	3496.01	0.65
10955.00	90.13	0.47	7336.48	3568.65	3568.65	377.01	6.03	3588.51	0.85
11050.00	89.36	1.21	7336.90	3663.63	3663.63	378.40	5.90	3683.12	1.13
11146.00	88.42	0.09	7338.75	3759.61	3759.61	379.49	5.76	3778.71	1.52
11241.00	89.43	359.39	7340.53	3854.59	3854.59	379.06	5.62	3873.18	1.29
11336.00	90.13	0.59	7340.89	3949.59	3949.59	379.05	5.48	3967.73	1.47
11431.00	91.21	359.46	7339.78	4044.58	4044.58	379.09	5.35	4062.30	1.64
11527.00	91.11	0.41	7337.84	4140.55	4140.55	378.98	5.23	4157.86	0.99
11622.00	91.71	359.07	7335.50	4235.52	4235.52	378.55	5.11	4252.41	1.55
11717.00	91.78	0.60	7332.60	4330.48	4330.48	378.28	4.99	4346.97	1.62
11813.00	90.94	1.10	7330.32	4426.44	4426.44	379.71	4.90	4442.69	1.02
11908.00	91.04	0.60	7328.68	4521.41	4521.41	381.12	4.82	4537.45	0.53

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
12003.00	90.74	0.99	7327.20	4616.39	4616.39	382.44	4.74	4632.20	0.52
12099.00	89.09	359.50	7327.34	4712.38	4712.38	382.86	4.64	4727.91	2.32
12194.00	89.80	359.80	7328.26	4807.38	4807.38	382.28	4.55	4822.55	0.81
12289.00	91.28	359.70	7327.37	4902.37	4902.37	381.87	4.45	4917.22	1.56
12384.00	90.00	358.43	7326.31	4997.35	4997.35	380.33	4.35	5011.80	1.90
12480.00	90.40	359.20	7325.98	5093.32	5093.32	378.34	4.25	5107.36	0.91
12575.00	89.90	359.26	7325.73	5188.32	5188.32	377.07	4.16	5202.00	0.53
12670.00	90.54	2.31	7325.36	5283.29	5283.29	378.38	4.10	5296.83	3.28
12766.00	90.94	2.84	7324.13	5379.19	5379.19	382.69	4.07	5392.78	0.70
12861.00	91.85	1.08	7321.81	5474.10	5474.10	385.94	4.03	5487.69	2.09
12956.00	89.60	2.97	7320.62	5569.02	5569.02	389.29	4.00	5582.61	3.09
13051.00	89.63	2.16	7321.26	5663.92	5663.92	393.54	3.97	5677.58	0.85
13147.00	89.16	2.31	7322.27	5759.85	5759.85	397.28	3.95	5773.53	0.51
13242.00	88.55	2.10	7324.16	5854.76	5854.76	400.94	3.92	5868.47	0.68
13338.00	88.49	1.91	7326.64	5950.67	5950.67	404.30	3.89	5964.38	0.20
13433.00	89.19	2.23	7328.56	6045.58	6045.58	407.73	3.86	6059.32	0.81
13528.00	90.91	1.74	7328.48	6140.52	6140.52	411.03	3.83	6154.26	1.88
13624.00	91.21	2.73	7326.71	6236.43	6236.43	414.77	3.81	6250.21	1.08

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	"/100ft
13719.00	90.87	1.85	7324.98	6331.34	6331.34	418.57	3.78	6345.16	1.00
13814.00	89.36	0.85	7324.79	6426.31	6426.31	420.80	3.75	6440.07	1.90
13910.00	89.76	0.73	7325.52	6522.30	6522.30	422.13	3.70	6535.94	0.44
14005.00	90.30	359.92	7325.46	6617.29	6617.29	422.66	3.65	6630.78	1.02
14100.00	90.00	1.98	7325.21	6712.27	6712.27	424.23	3.62	6725.67	2.20
14195.00	89.03	1.23	7326.02	6807.23	6807.23	426.89	3.59	6820.60	1.30
14291.00	90.10	2.38	7326.75	6903.18	6903.18	429.91	3.56	6916.55	1.64
14386.00	90.87	1.10	7325.95	6998.13	6998.13	432.79	3.54	7011.50	1.57
14481.00	91.14	0.02	7324.28	7093.11	7093.11	433.72	3.50	7106.36	1.17
14576.00	91.58	0.18	7322.02	7188.08	7188.08	433.89	3.45	7201.17	0.49
14672.00	91.72	359.91	7319.26	7284.04	7284.04	433.97	3.41	7296.96	0.32
14767.00	89.97	359.52	7317.87	7379.03	7379.03	433.50	3.36	7391.75	1.88
14854.00	88.92	359.45	7318.71	7466.02	7466.02	432.72	3.32	7478.55	1.20

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft

5" = 100' FEET MD