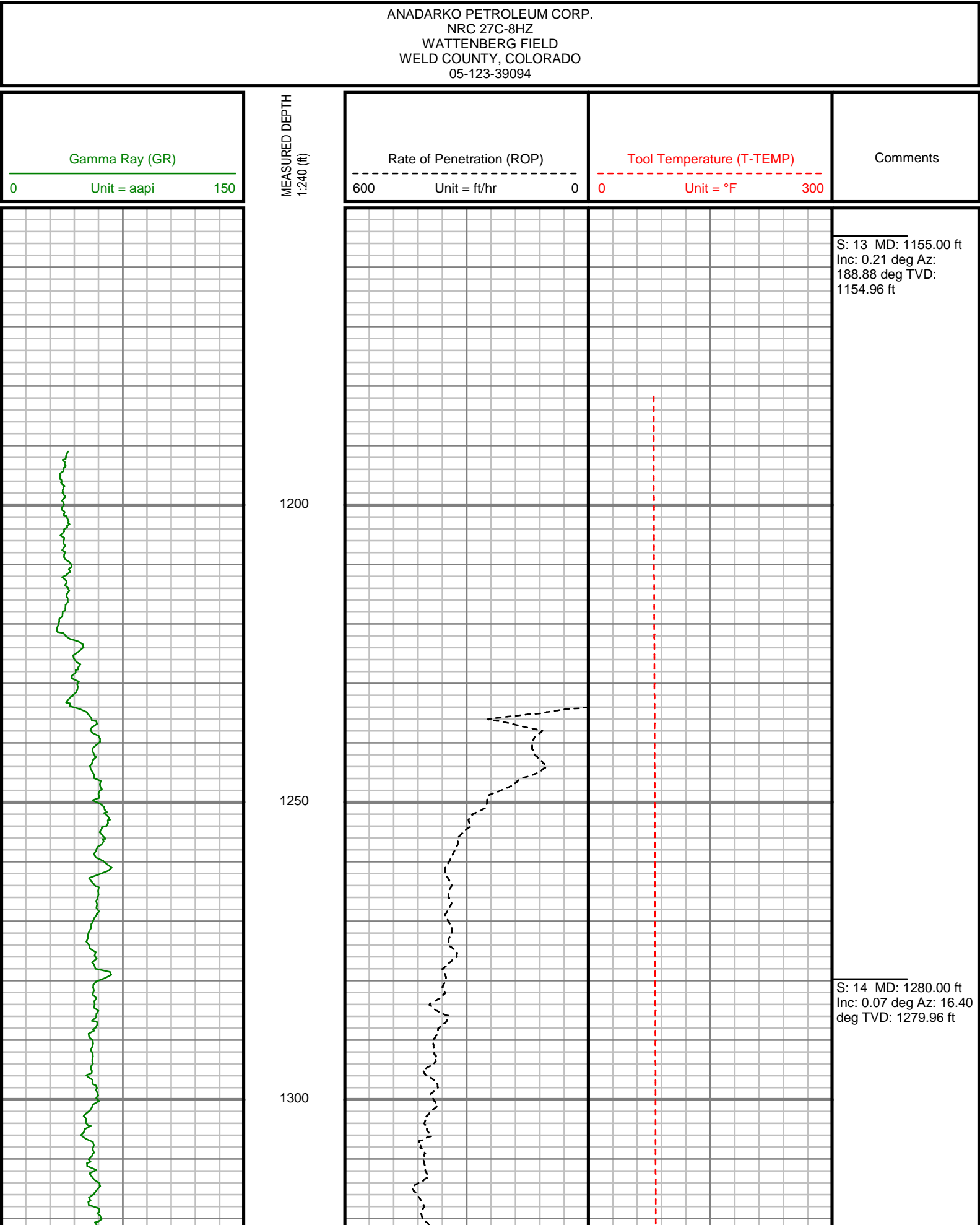


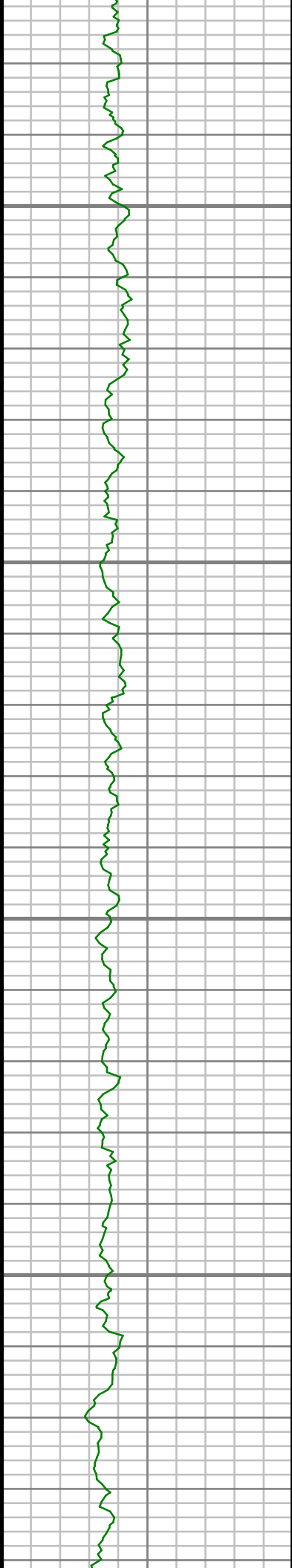


Remarks
ANADARKO PETROLEUM CORP PRODUCTION AFE# 2085768
SCIENTIFIC DRILLING INTERNATIONAL JOB# 156067
ALL REFERENCES IN THE DEPTH TRACK ARE AT BIT DEPTH.
ALL DATA IS MEMORY DATA UNLESS STATED OTHERWISE.
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO GAMMA RAY CURVE
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO RATE OF PENETRATION CURVE
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO TOOL TEMPERATURE CURVE
RUN #1: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSAR = 128-328 / CONT = 590 / EYE = 826 / GAMMA RAY = 1101
BIT TO SENSOR OFFSETS: SURVEY = 52.43 FT. / GAMMA RAY = 43.18 FT.
RUN #2: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSAR = 78-274 / CONT = 219 / EYE = 1001 / GAMMA RAY = 1154
BIT TO SENSOR OFFSETS: SURVEY = 60.19 FT. / GAMMA RAY = 50.94 FT.
RUN #3: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSAR = 78-276 / CONT = 603 / EYE = 0298 / GAMMA RAY = 1031
BIT TO SENSOR OFFSETS: SURVEY = 58.57 FT. / GAMMA RAY = 49.32 FT.
RUN #4: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSAR = 78-274 / CONT = 219 / EYE = 1001 / GAMMA RAY = 1154
BIT TO SENSOR OFFSETS: SURVEY = 57.77 FT. / GAMMA RAY = 48.52FT.

[illegible]

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.



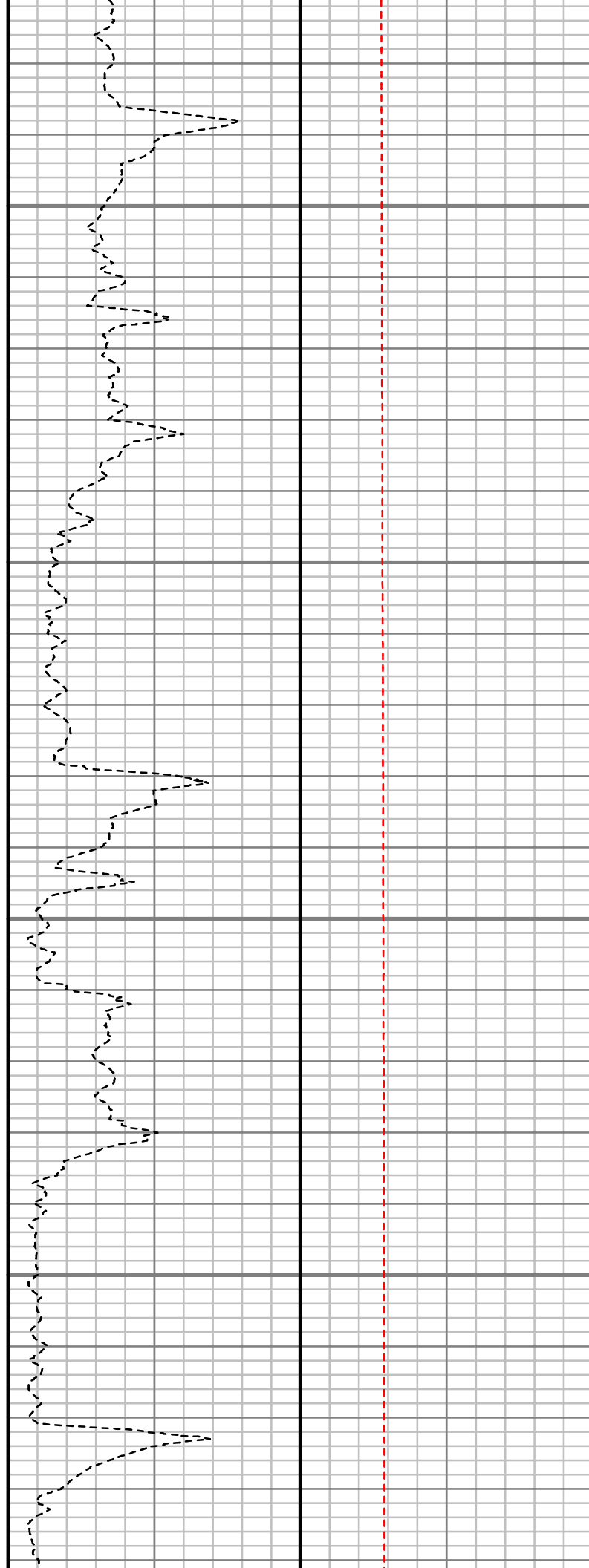


1350

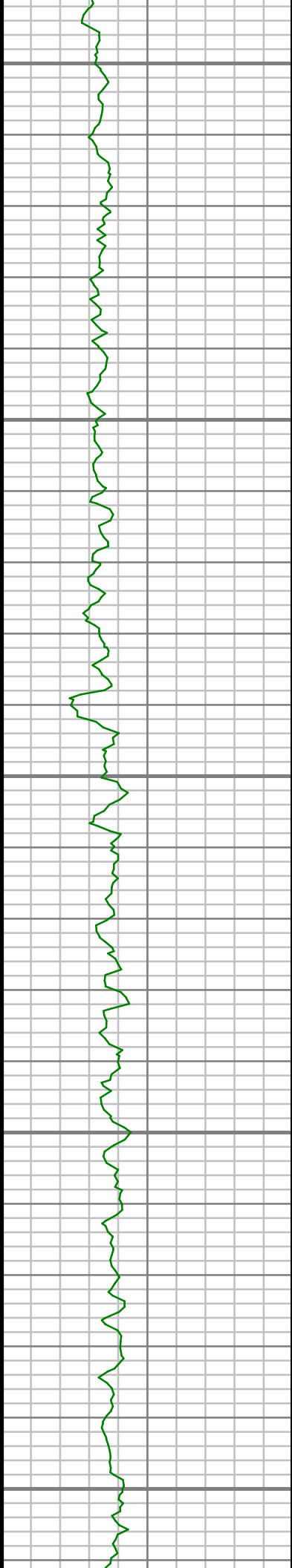
1400

1450

1500



S: 15 MD: 1372.00 ft  
Inc: 2.37 deg Az:  
175.02 deg TVD:  
1371.94 ft



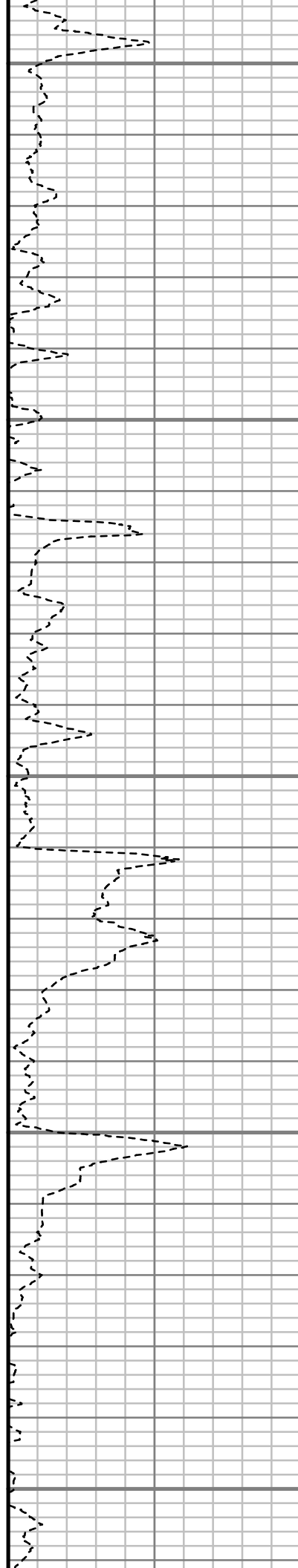
1550

1600

1650

1700

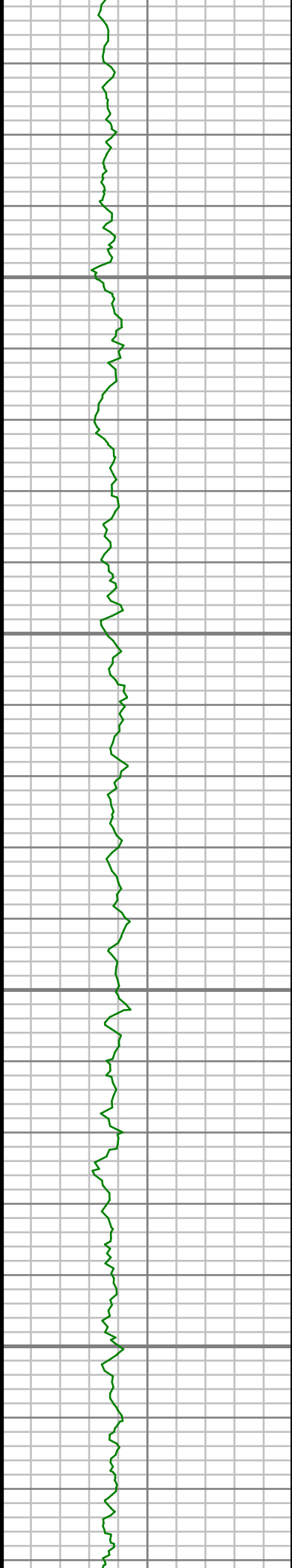
1750



S: 16 MD: 1555.00 ft  
Inc: 9.92 deg Az:  
186.64 deg TVD:  
1553.76 ft

S: 17 MD: 1646.00 ft  
Inc: 10.01 deg Az:  
182.20 deg TVD:  
1643.39 ft

S: 18 MD: 1738.00 ft  
Inc: 11.96 deg Az:  
175.86 deg TVD:  
1733.70 ft

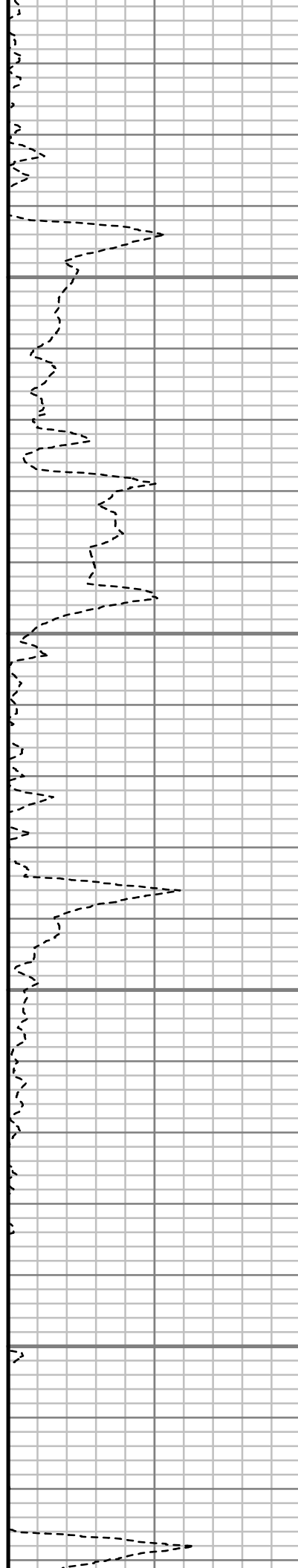


1800

1850

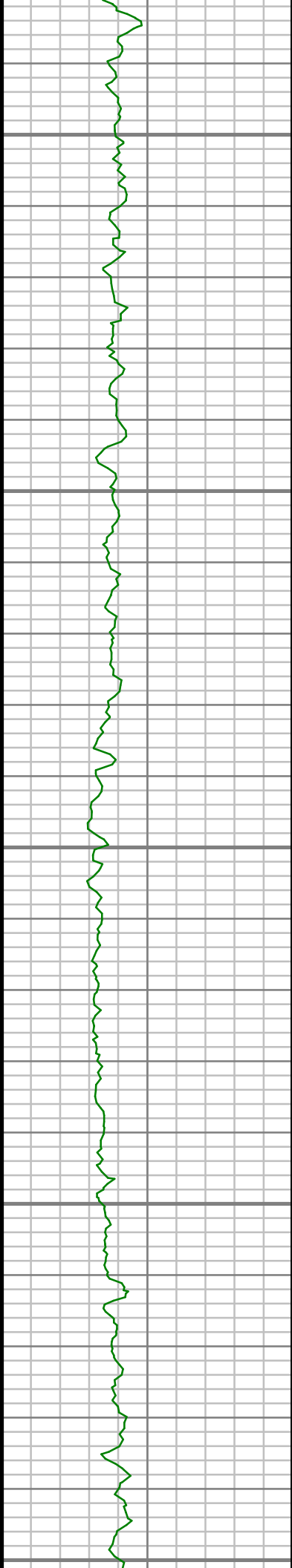
1900

1950



S: 19 MD: 1829.00 ft  
Inc: 13.04 deg Az:  
177.56 deg TVD:  
1822.54 ft

S: 20 MD: 1920.00 ft  
Inc: 14.11 deg Az:  
175.34 deg TVD:  
1911.00 ft



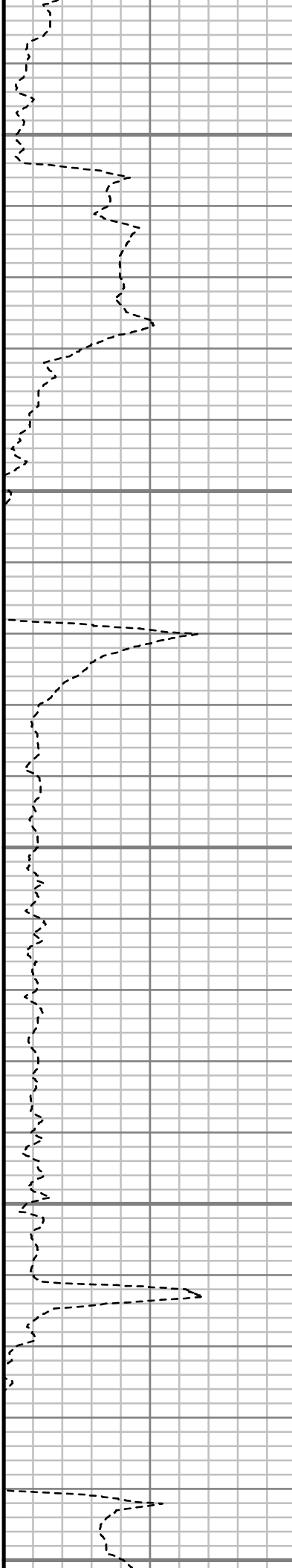
2000

2050

2100

2150

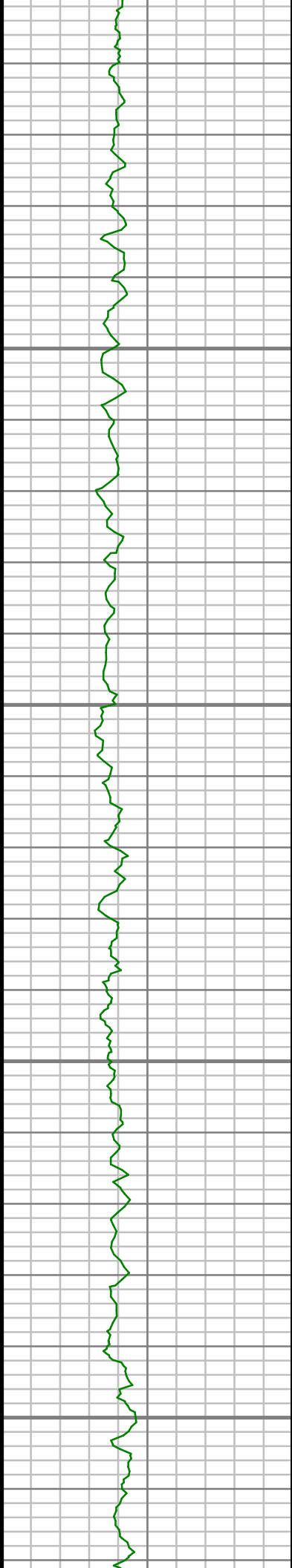
2200



S: 21 MD: 2011.00 ft  
Inc: 14.27 deg Az:  
166.55 deg TVD:  
1999.23 ft

S: 22 MD: 2103.00 ft  
Inc: 14.72 deg Az:  
164.21 deg TVD:  
2088.31 ft

S: 23 MD: 2194.00 ft  
Inc: 15.39 deg Az:  
161.50 deg TVD:

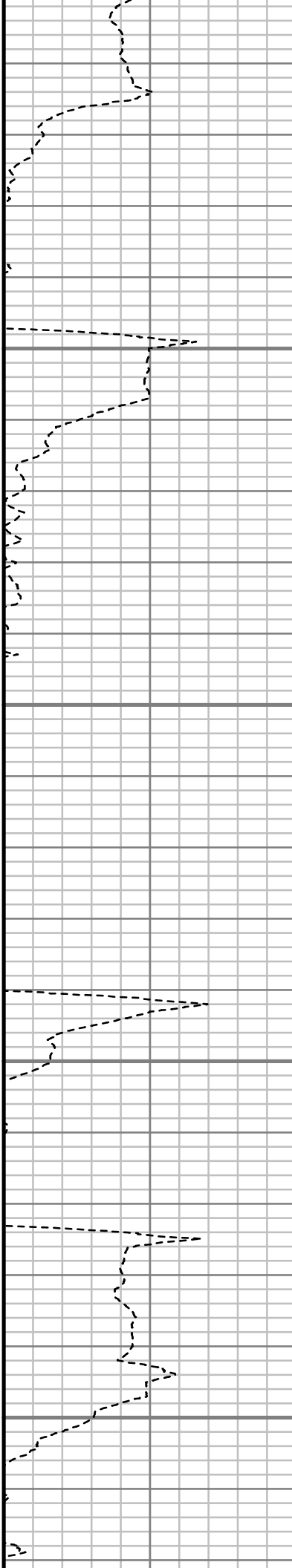


2250

2300

2350

2400

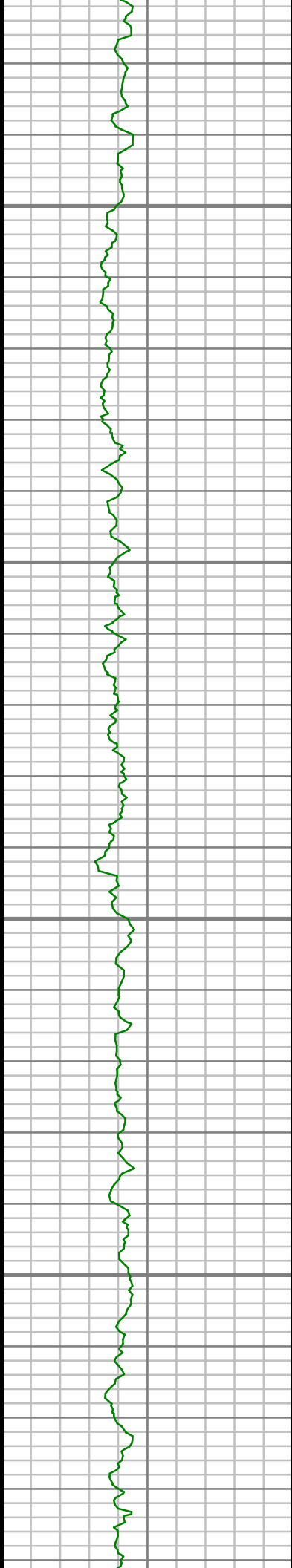


2176.18 ft

S: 24 MD: 2286.00 ft  
Inc: 17.82 deg Az:  
162.86 deg TVD:  
2264.34 ft

S: 25 MD: 2377.00 ft  
Inc: 17.35 deg Az:  
161.12 deg TVD:  
2351.09 ft



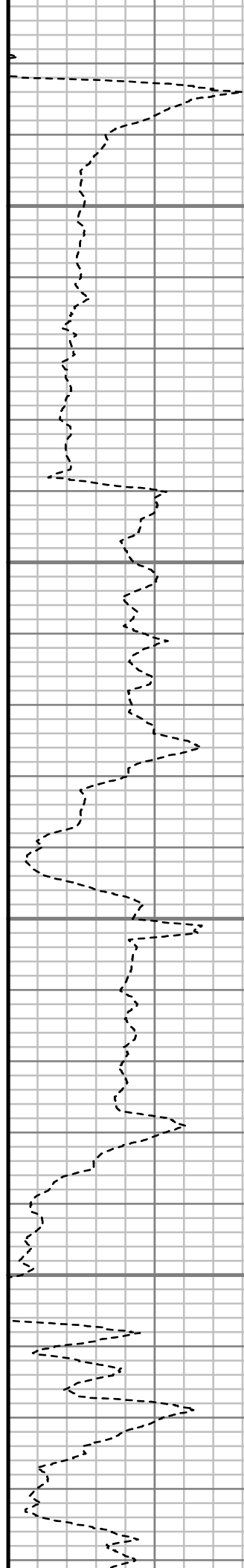


2450

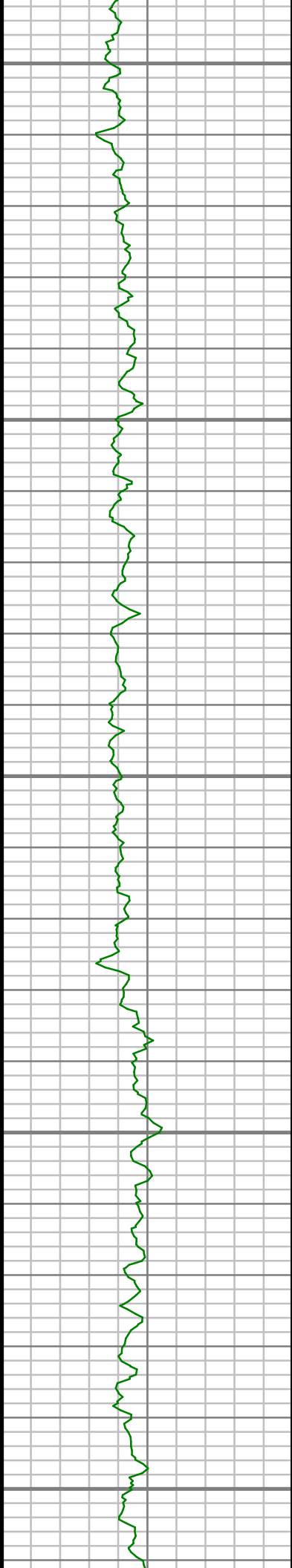
2500

2550

2600



S: 26 MD: 2469.00 ft  
Inc: 15.88 deg Az:  
164.64 deg TVD:  
2439.25 ft



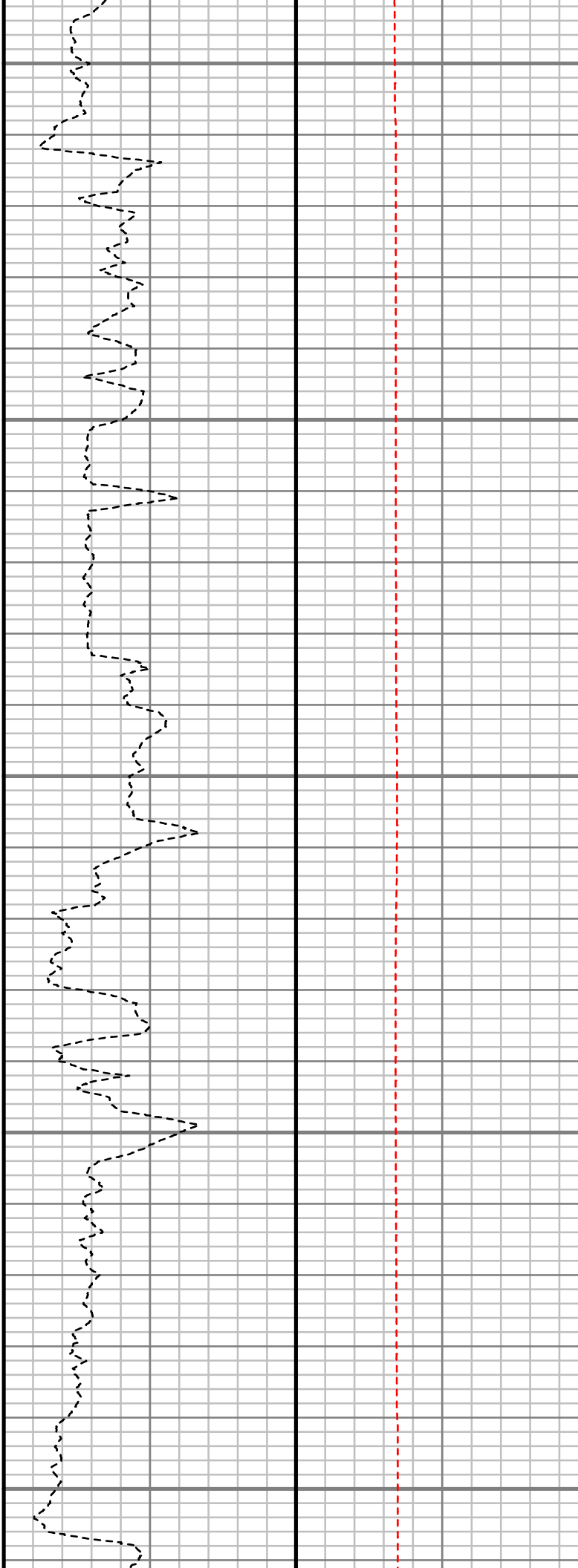
2650

2700

2750

2800

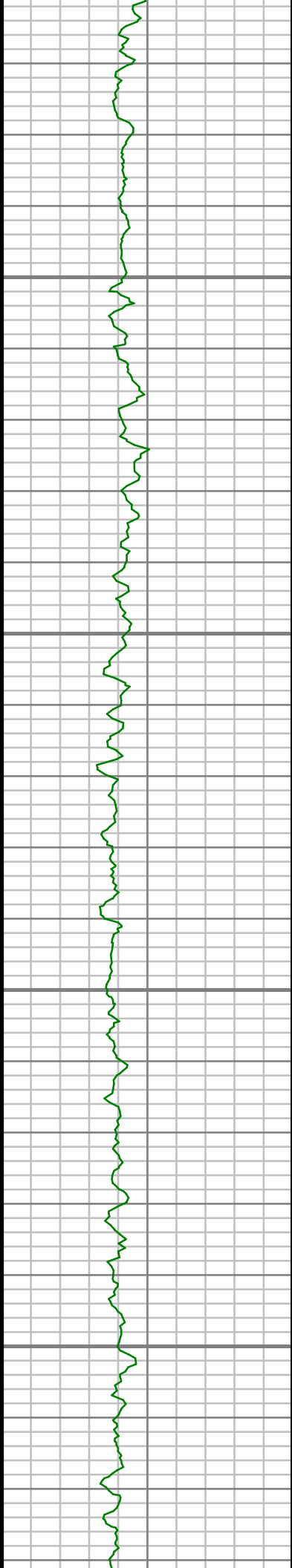
2850



S: 27 MD: 2652.00 ft  
Inc: 14.50 deg Az:  
186.42 deg TVD:  
2616.00 ft

S: 28 MD: 2743.00 ft  
Inc: 15.05 deg Az:  
175.88 deg TVD:  
2704.00 ft

S: 29 MD: 2838.00 ft  
Inc: 14.32 deg Az:  
175.84 deg TVD:  
2795.90 ft

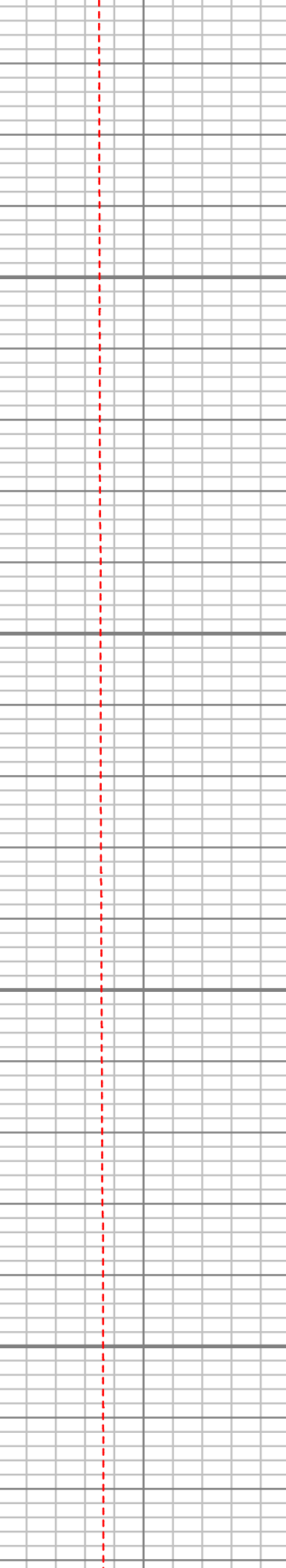
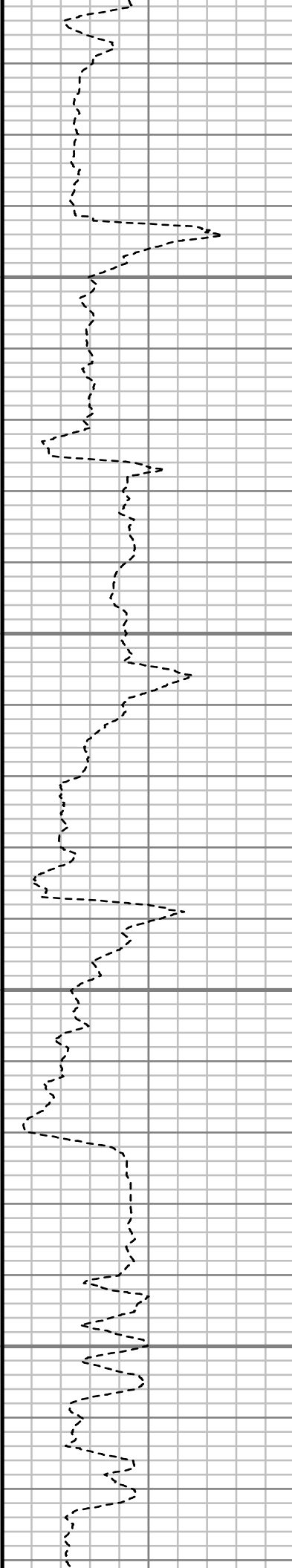


2900

2950

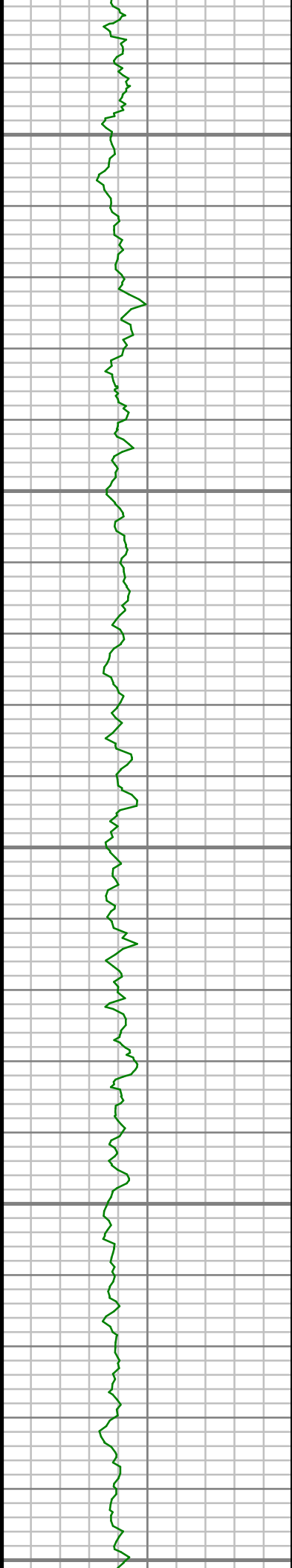
3000

3050



S: 30 MD: 2932.00 ft  
Inc: 15.32 deg Az:  
168.09 deg TVD:  
2886.78 ft

S: 31 MD: 3026.00 ft  
Inc: 18.08 deg Az:  
166.40 deg TVD:  
2976.80 ft



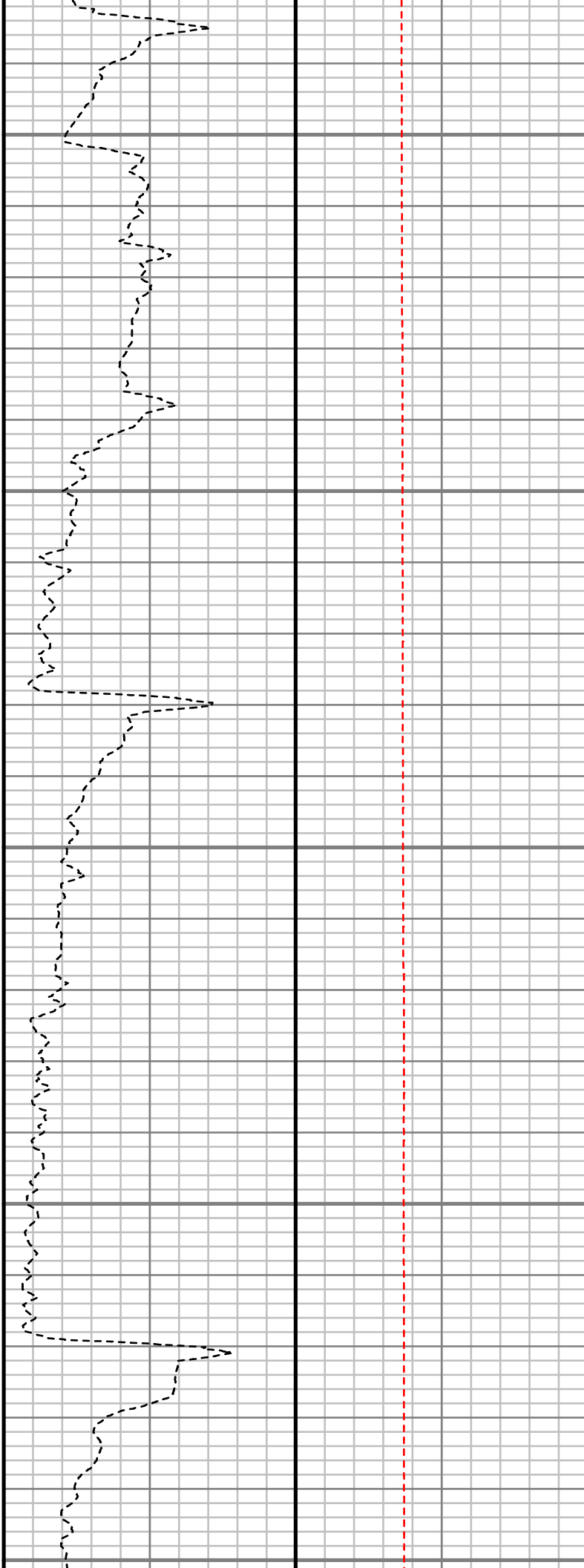
3100

3150

3200

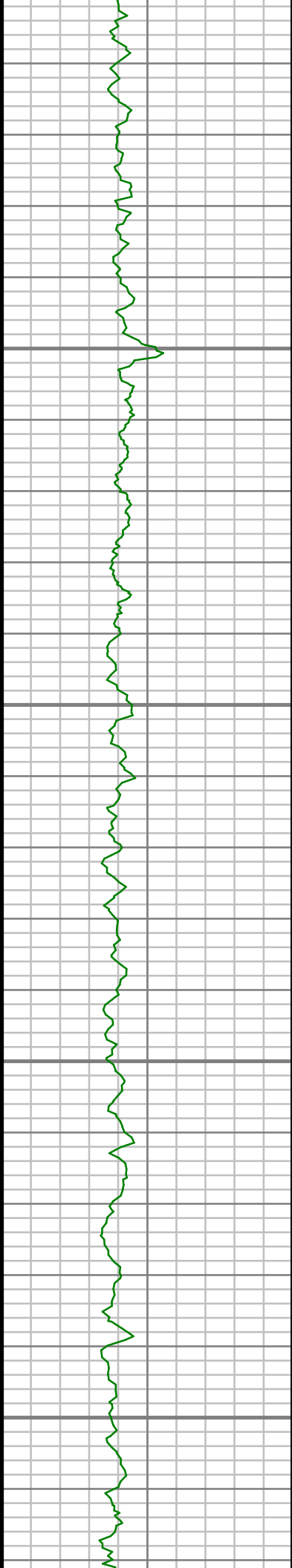
3250

3300



S: 32 MD: 3121.00 ft  
Inc: 17.71 deg Az:  
168.49 deg TVD:  
3067.21 ft

S: 33 MD: 3215.00 ft  
Inc: 18.09 deg Az:  
172.27 deg TVD:  
3156.66 ft

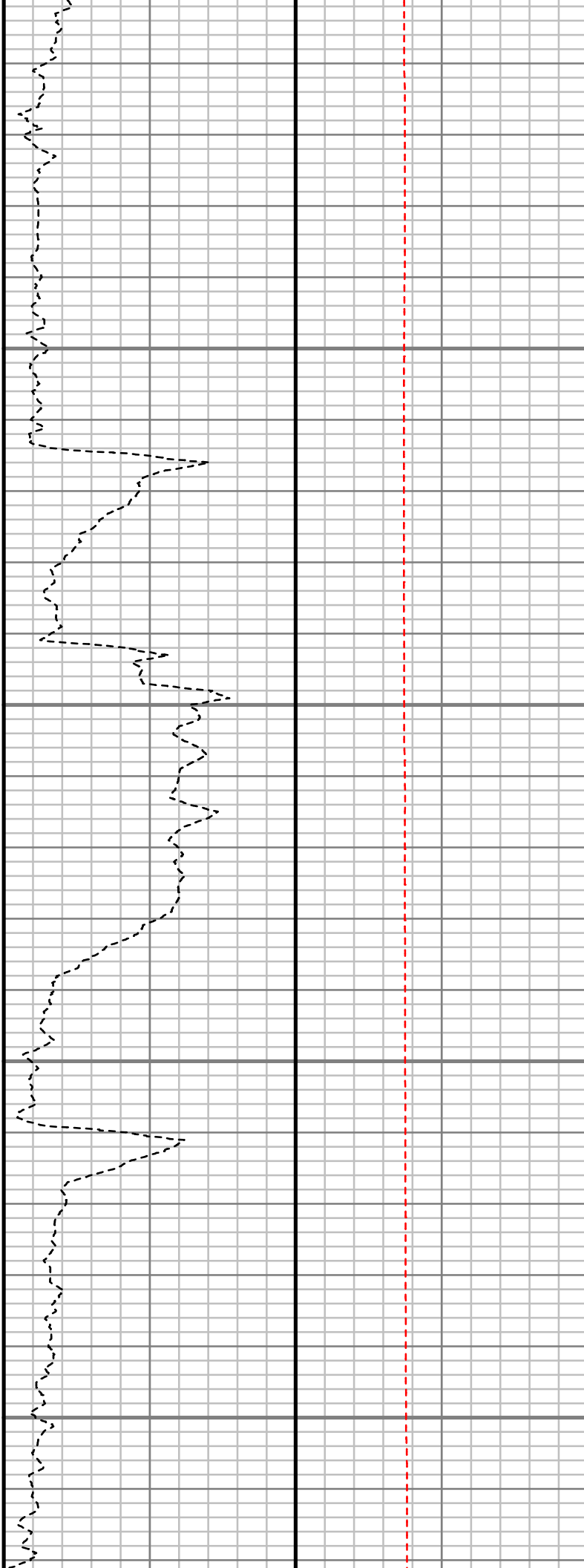


3350

3400

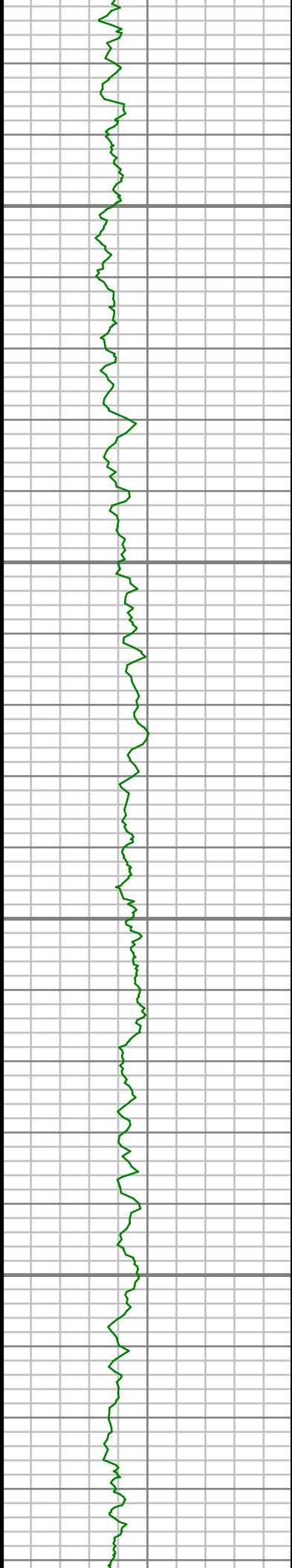
3450

3500



S: 34 MD: 3404.00 ft  
Inc: 13.03 deg Az:  
171.16 deg TVD:  
3338.68 ft

S: 35 MD: 3498.00 ft  
Inc: 13.61 deg Az:  
170.02 deg TVD:  
3430.15 ft

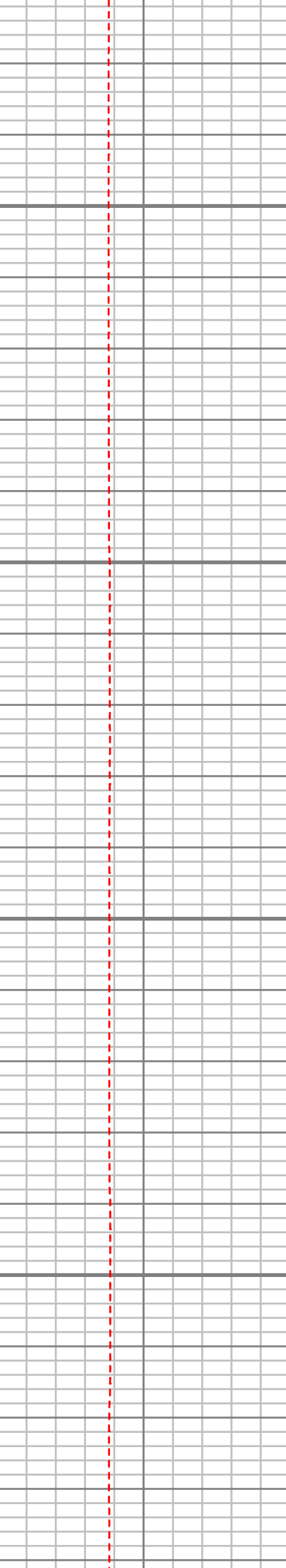
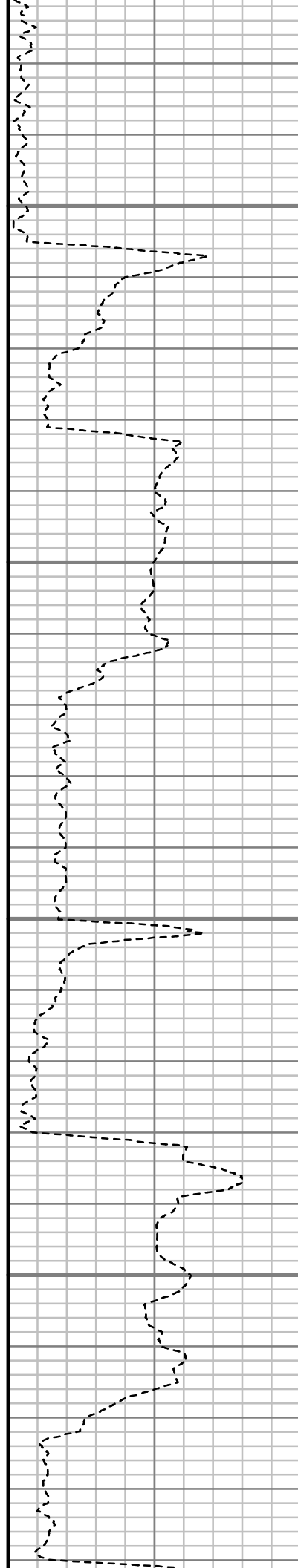


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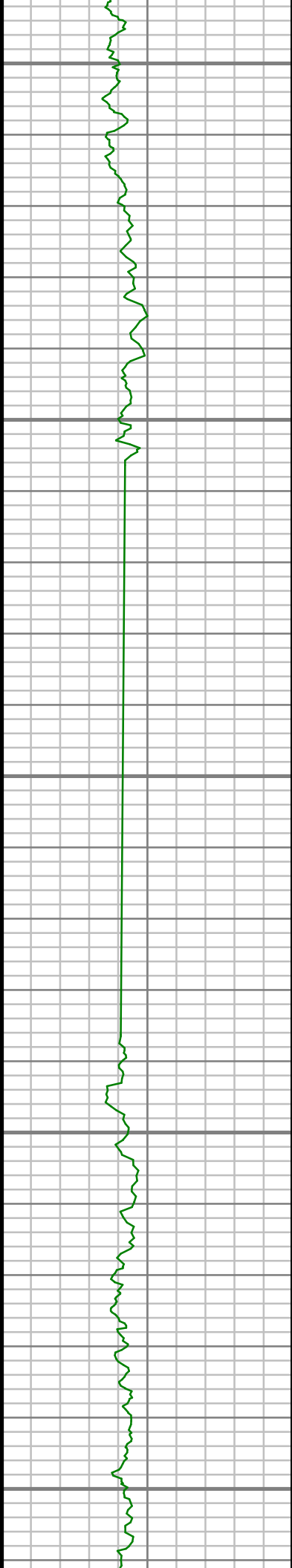
3600

3650

3700



S: 36 MD: 3687.00 ft  
Inc: 13.08 deg Az:  
184.41 deg TVD:  
3614.10 ft



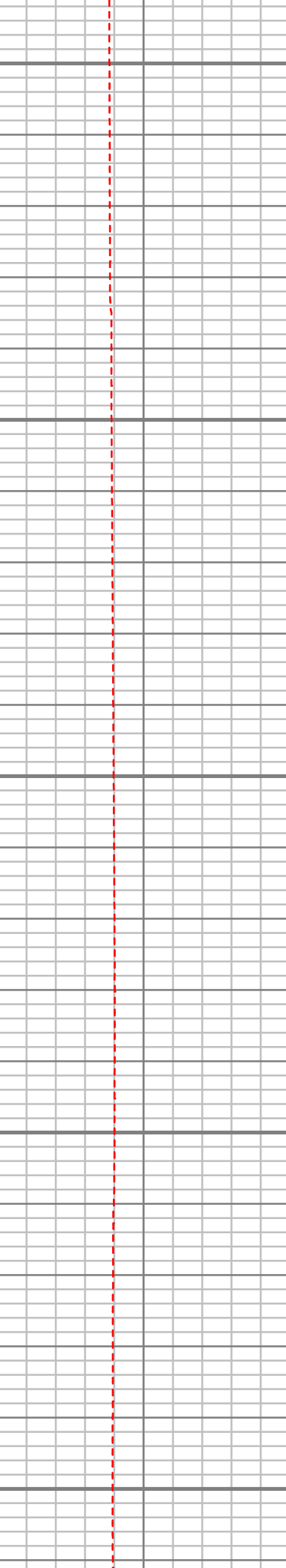
3750

3800

3850

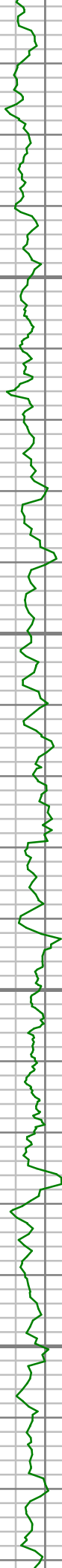
3900

3950



S: 37 MD: 3781.00 ft  
Inc: 14.49 deg Az:  
181.12 deg TVD:  
3705.39 ft

S: 38 MD: 3876.00 ft  
Inc: 16.09 deg Az:  
173.34 deg TVD:  
3797.03 ft

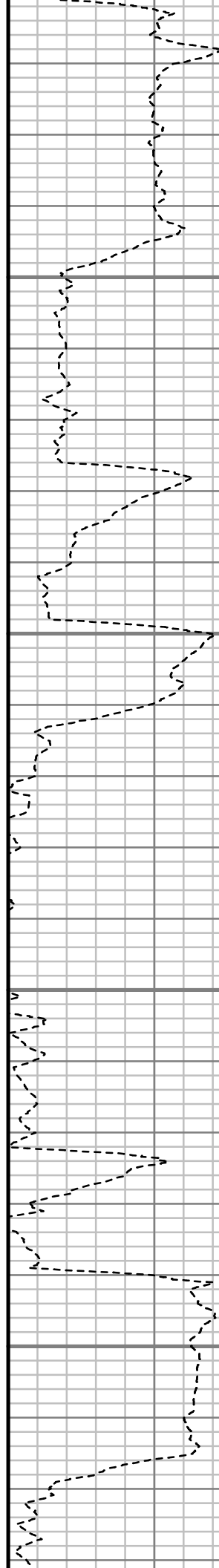


4000

4050

4100

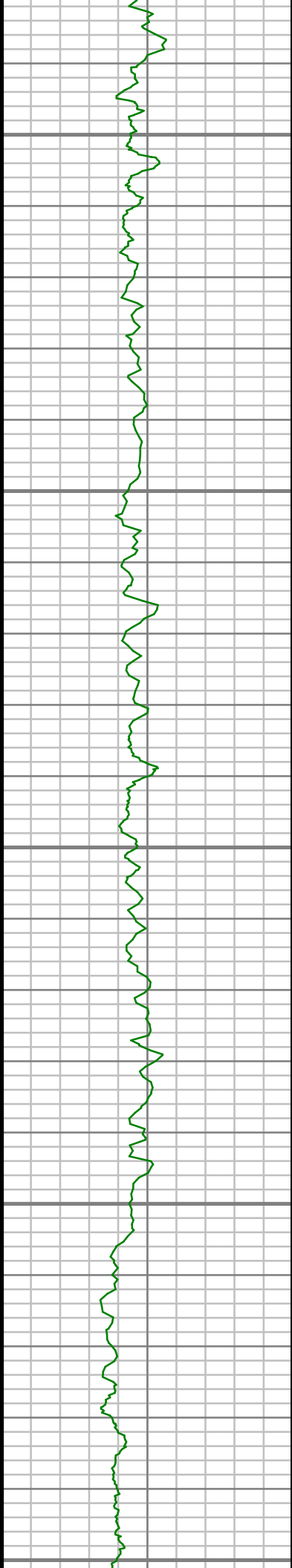
4150



S: 39 MD: 4065.00 ft  
Inc: 14.48 deg Az:  
158.65 deg TVD:  
3979.41 ft

S: 40 MD: 4159.00 ft  
Inc: 13.31 deg Az:  
164.83 deg TVD:  
4070.67 ft





4200

4250

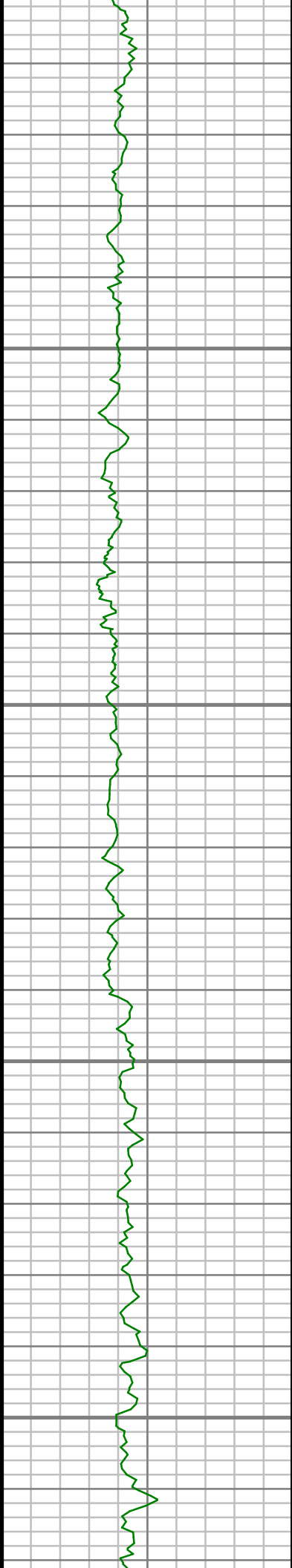
4300

4350

4400



S: 41 MD: 4347.00 ft  
Inc: 13.95 deg Az:  
174.05 deg TVD:  
4253.39 ft

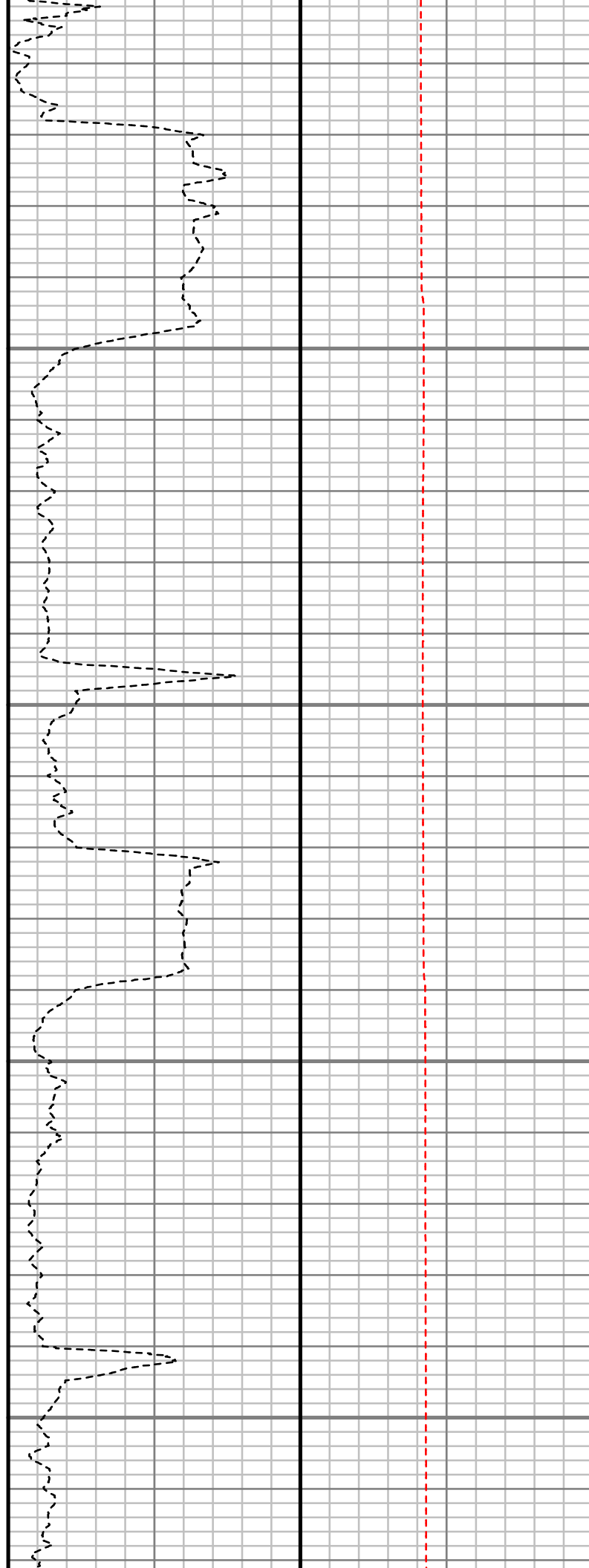


4450

4500

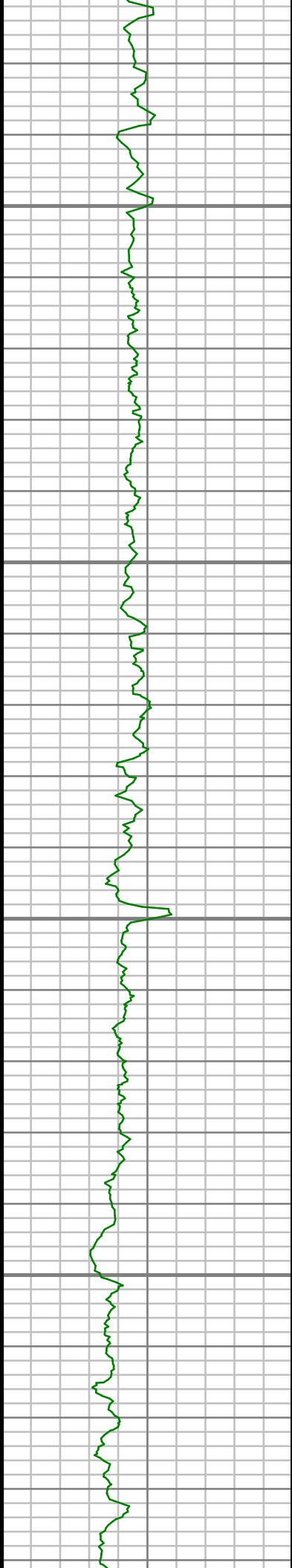
4550

4600



S: 42 MD: 4442.00 ft  
Inc: 15.40 deg Az:  
175.30 deg TVD:  
4345.29 ft

S: 43 MD: 4536.00 ft  
Inc: 16.65 deg Az:  
179.42 deg TVD:  
4435.64 ft

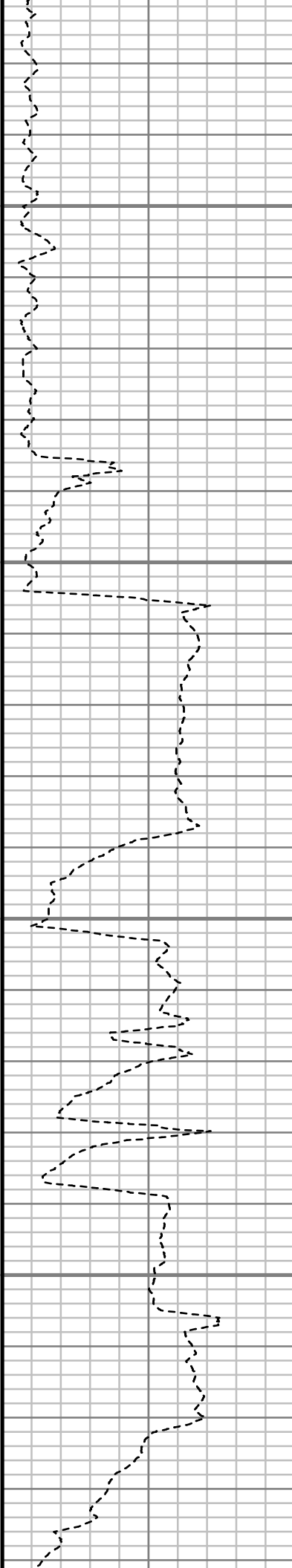


4650

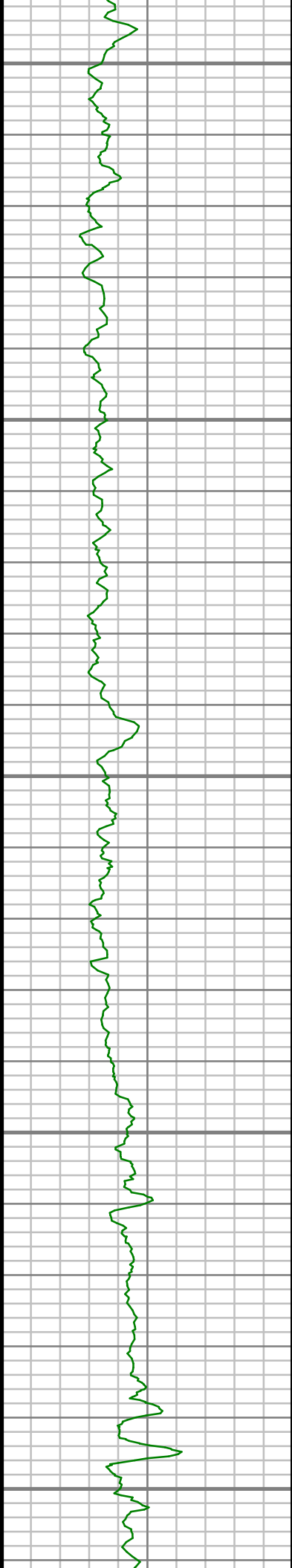
4700

4750

4800



S: 44 MD: 4725.00 ft  
Inc: 14.49 deg Az:  
180.43 deg TVD:  
4617.69 ft



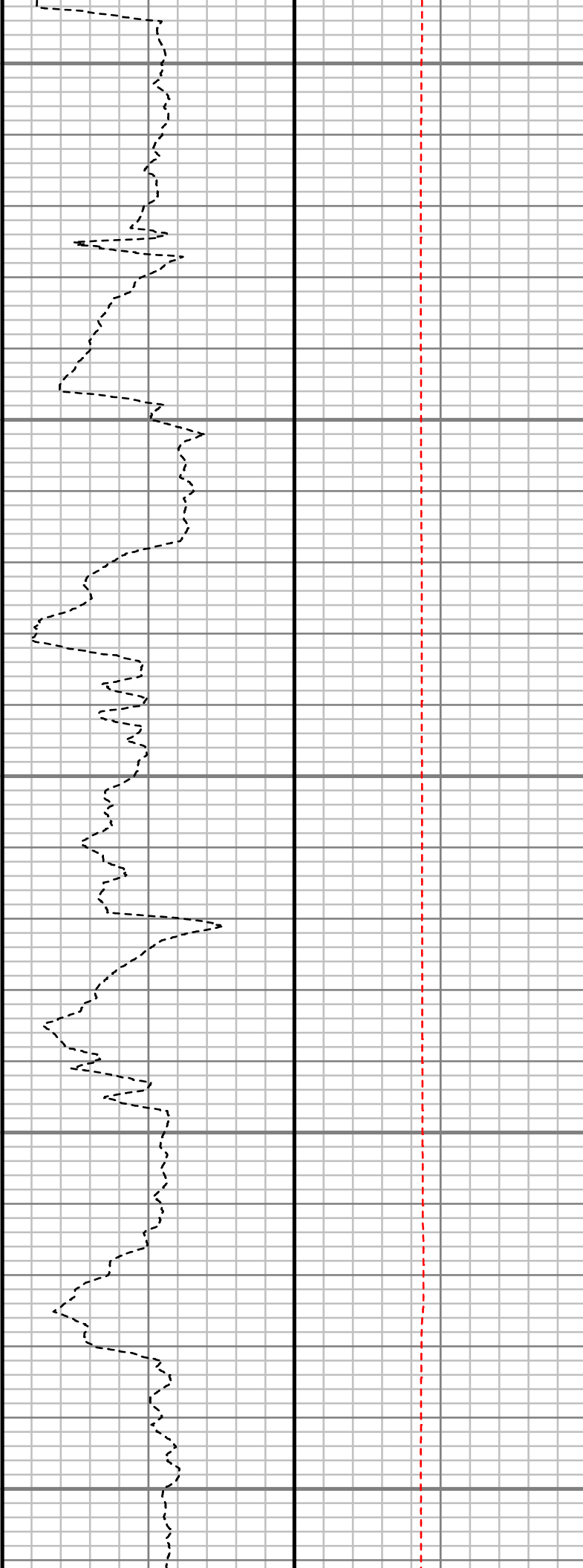
4850

4900

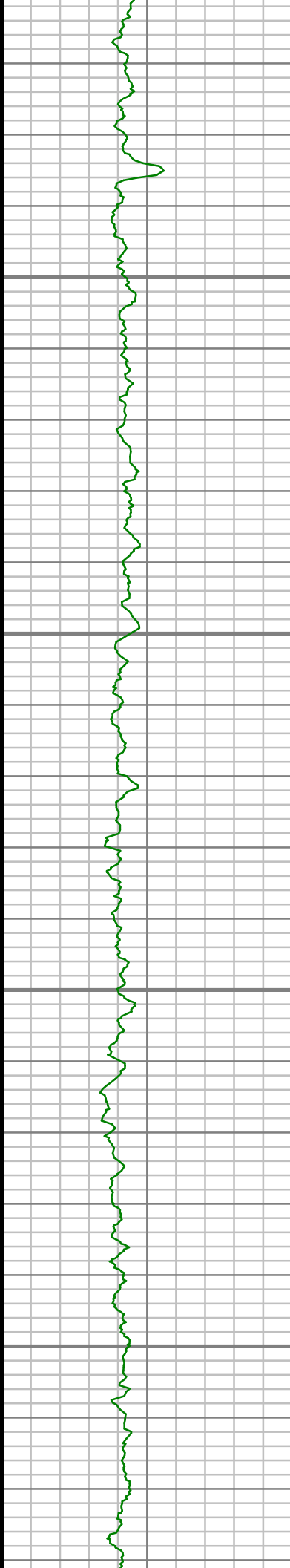
4950

5000

5050



S: 45 MD: 4914.00 ft  
Inc: 18.00 deg Az:  
175.70 deg TVD:  
4799.12 ft

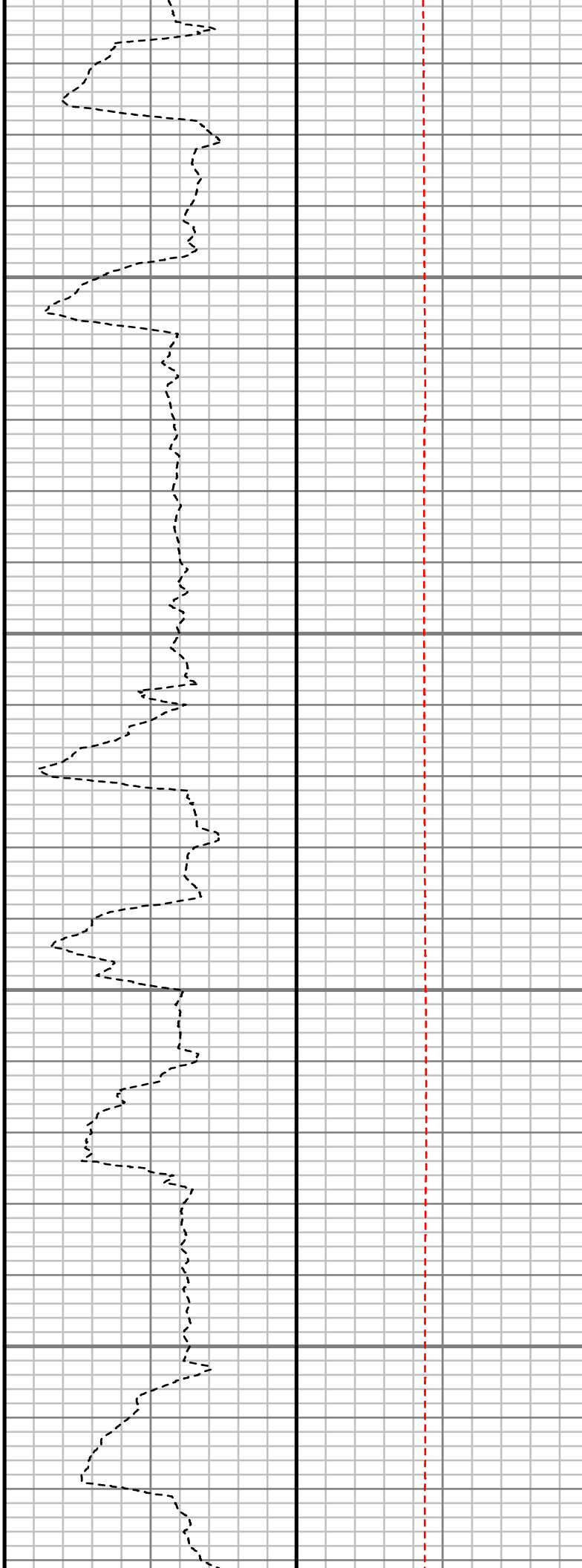


5100

5150

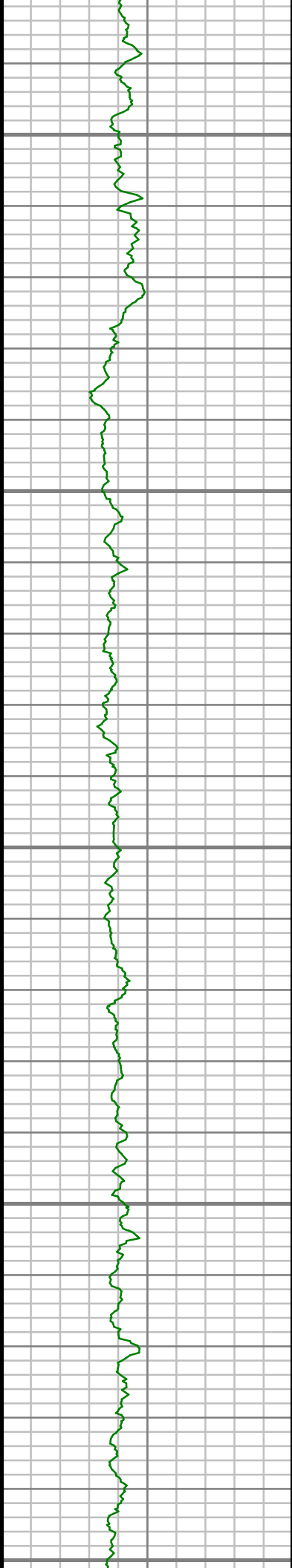
5200

5250



S: 46 MD: 5103.00 ft  
Inc: 13.18 deg Az:  
175.99 deg TVD:  
4981.12 ft

S: 47 MD: 5197.00 ft  
Inc: 9.03 deg Az:  
173.89 deg TVD:  
5073.34 ft



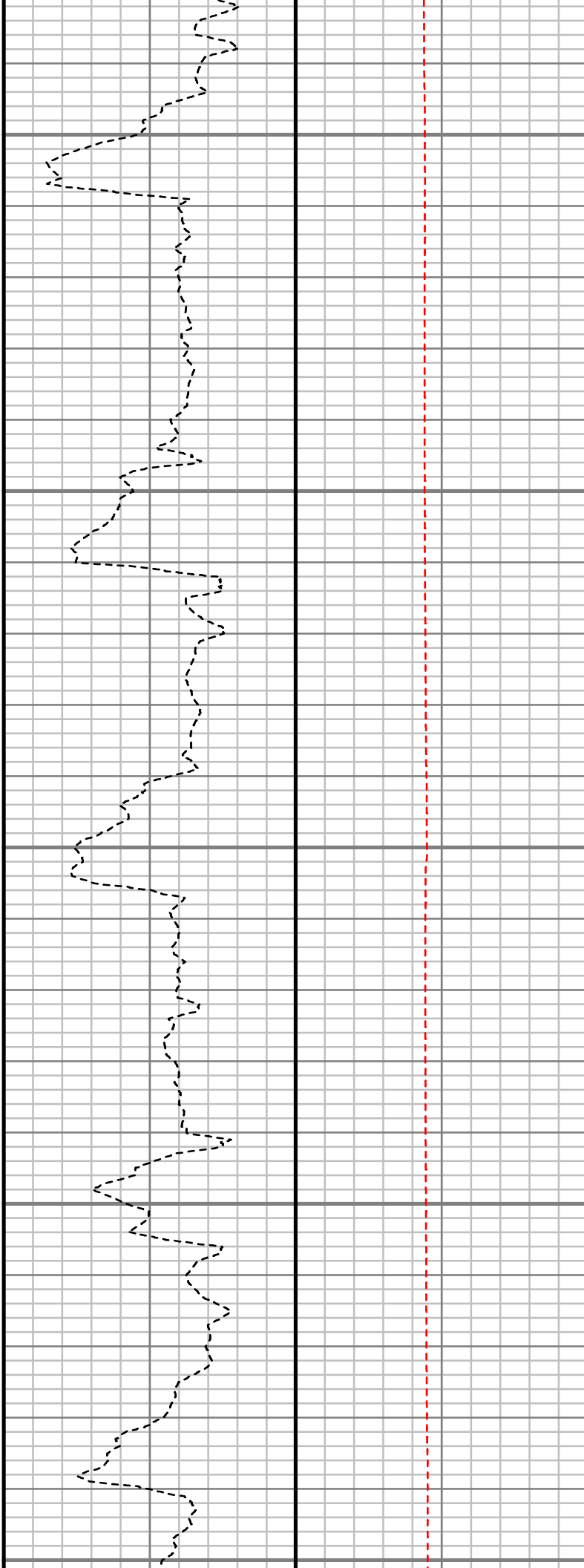
5300

5350

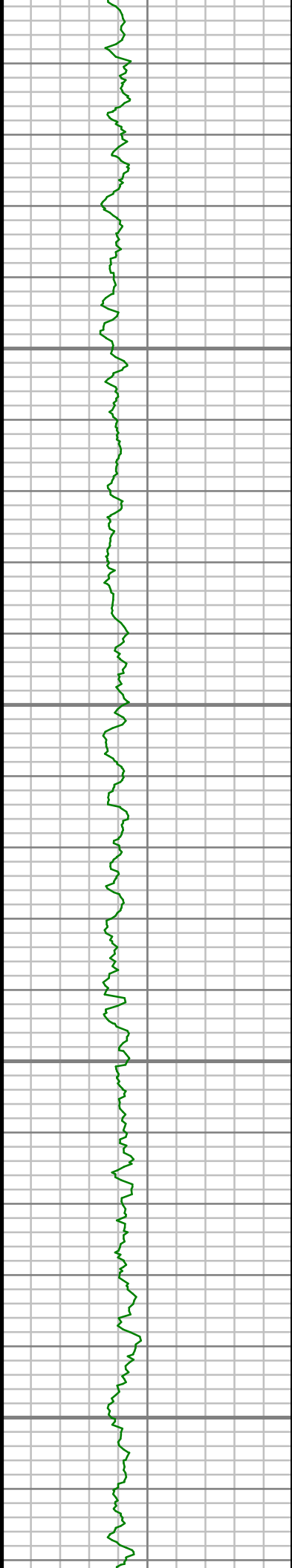
5400

5450

5500



S: 48 MD: 5386.00 ft  
Inc: 1.95 deg Az:  
145.31 deg TVD:  
5261.37 ft

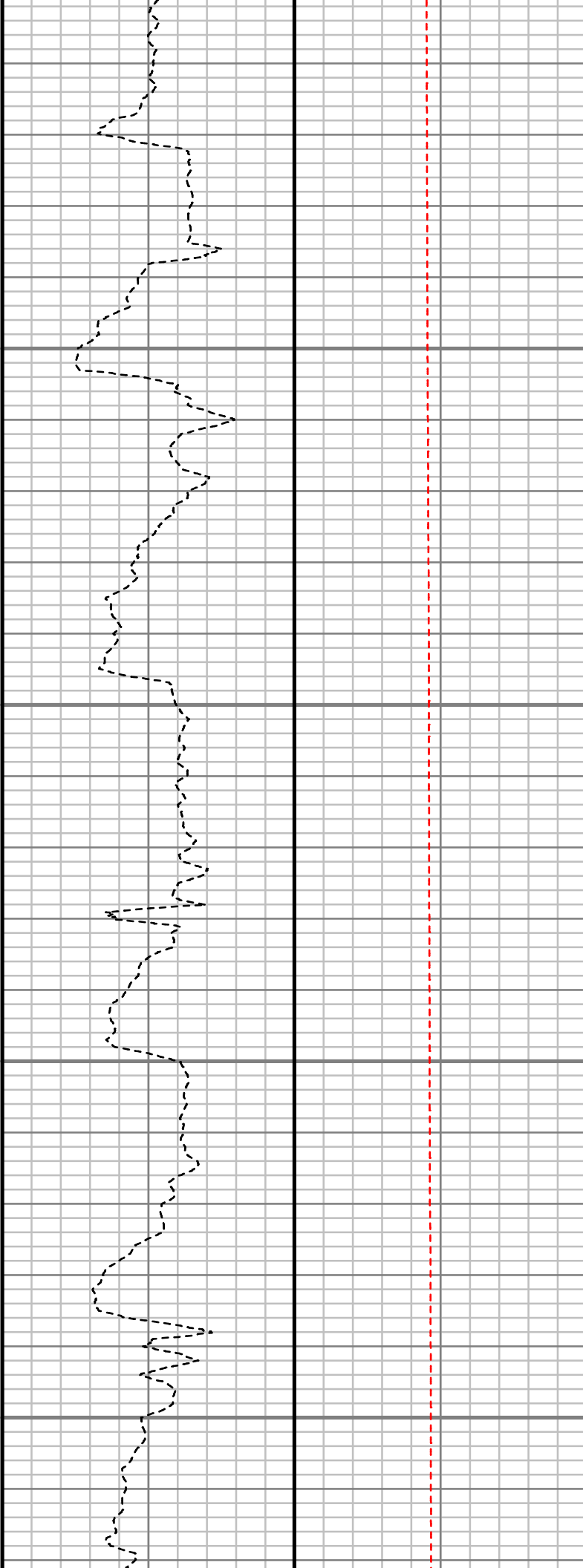


5550

5600

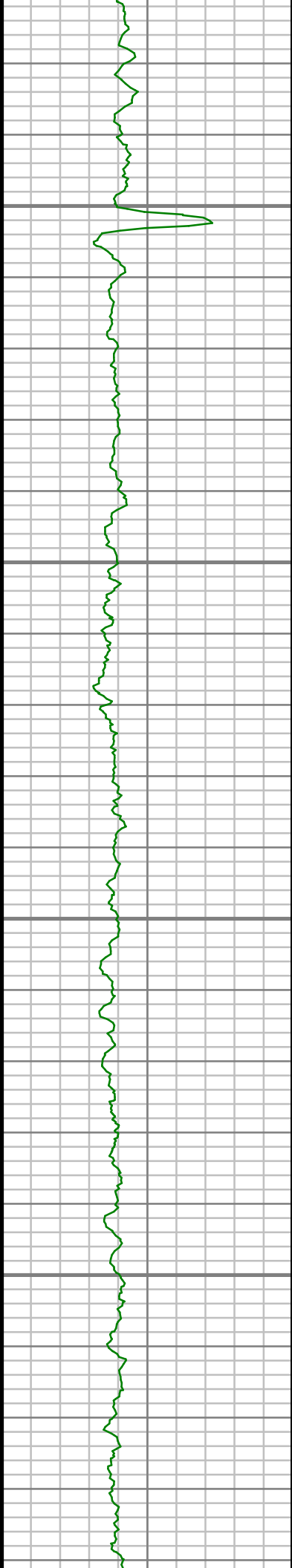
5650

5700



S: 49 MD: 5574.00 ft  
Inc: 2.80 deg Az: 22.94  
deg TVD: 5449.29 ft

S: 50 MD: 5669.00 ft  
Inc: 2.69 deg Az: 31.60  
deg TVD: 5544.18 ft

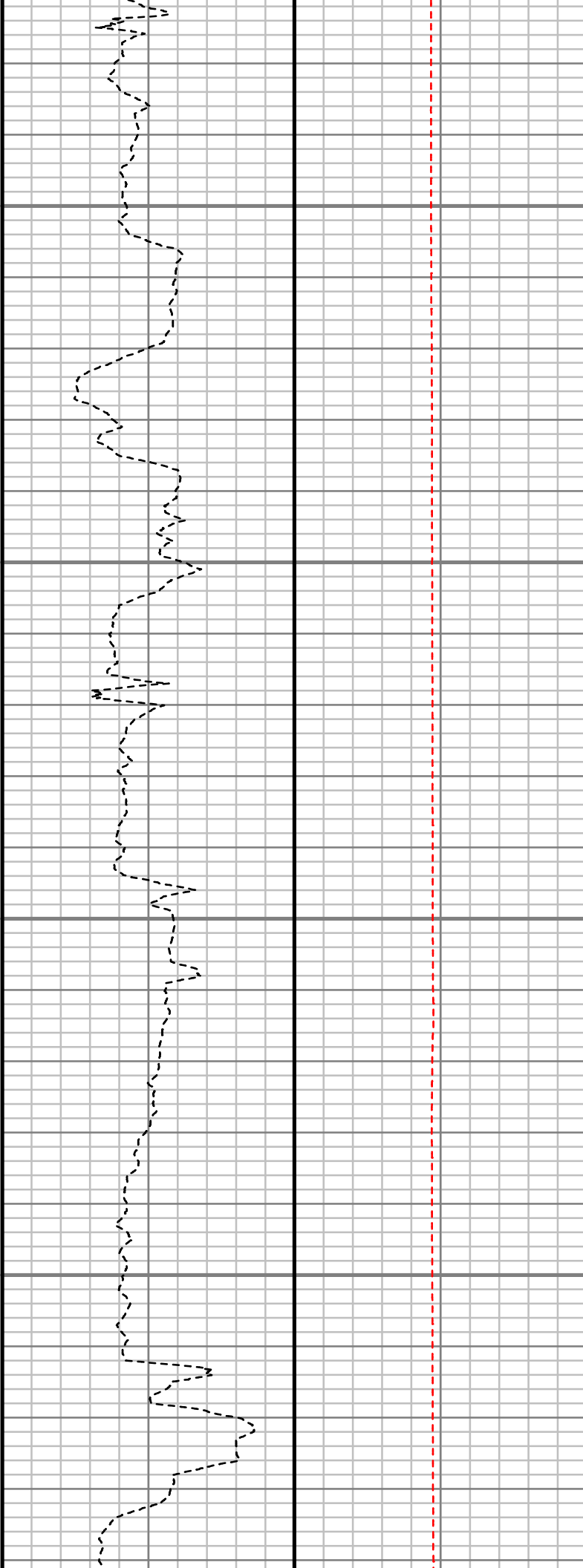


5750

5800

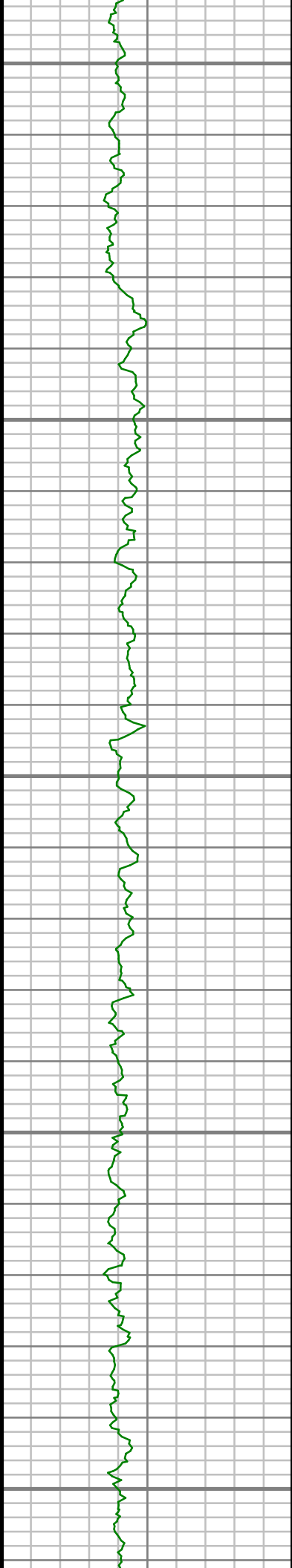
5850

5900



S: 51 MD: 5763.00 ft  
Inc: 2.21 deg Az: 27.42  
deg TVD: 5638.09 ft





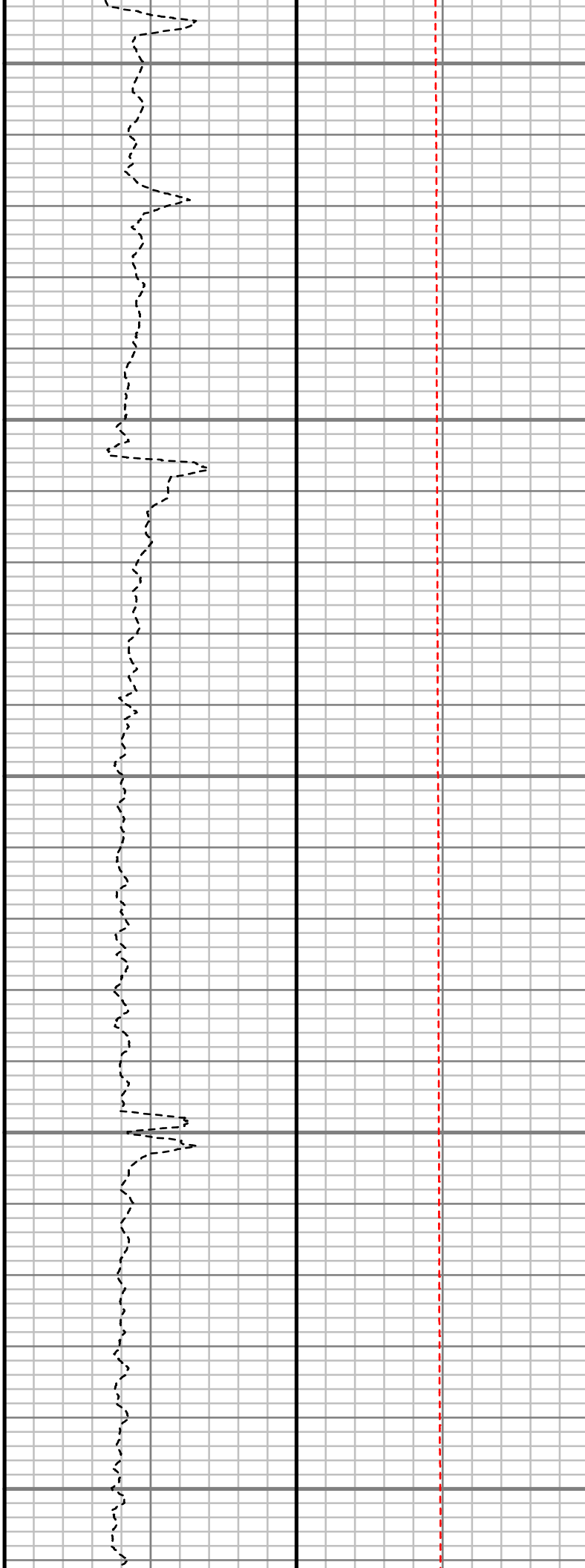
5950

6000

6050

6100

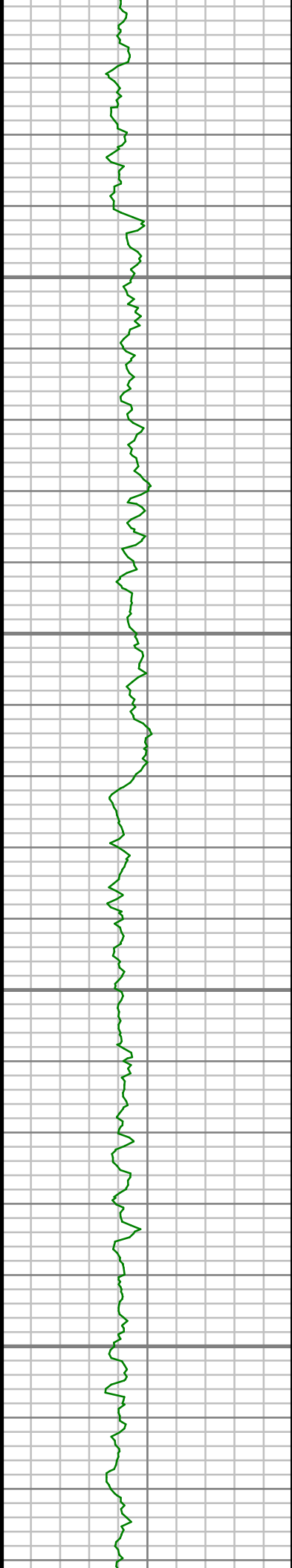
6150



S: 52 MD: 5952.00 ft  
Inc: 0.48 deg Az:  
298.82 deg TVD:  
5827.04 ft

S: 53 MD: 6046.00 ft  
Inc: 0.68 deg Az:  
342.68 deg TVD:  
5921.04 ft

S: 54 MD: 6140.00 ft  
Inc: 0.31 deg Az:  
288.14 deg TVD:  
6015.04 ft

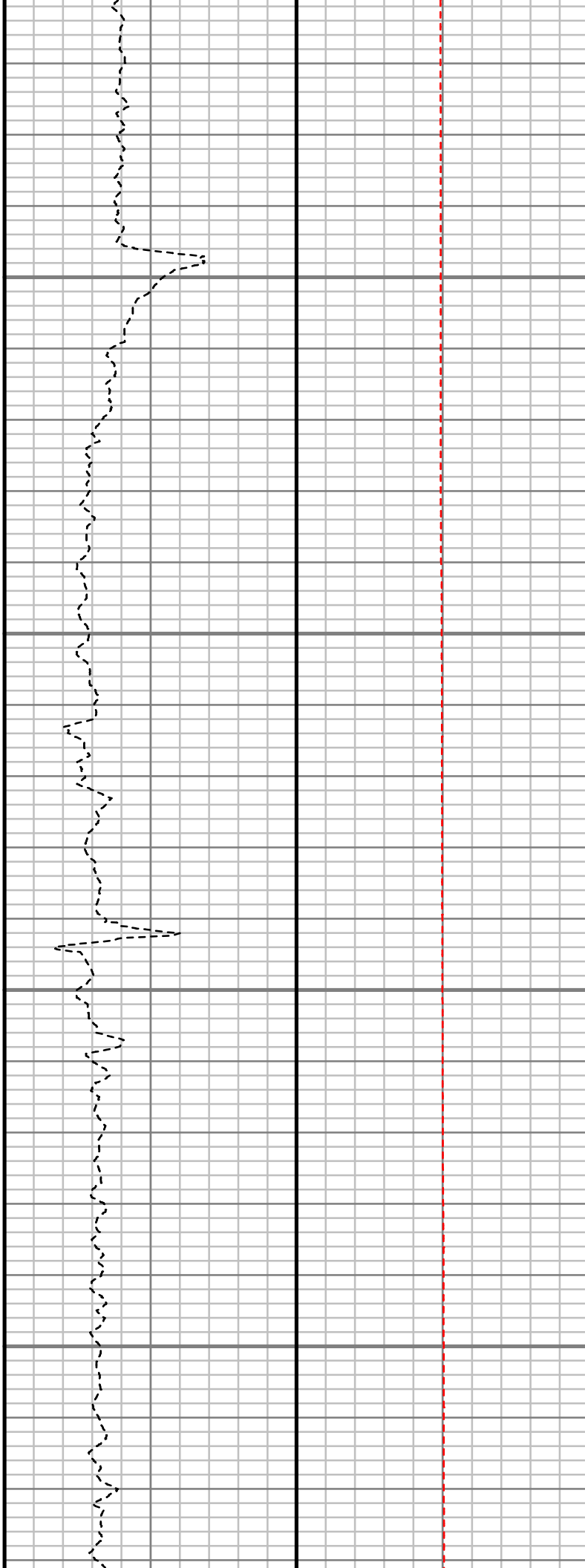


6200

6250

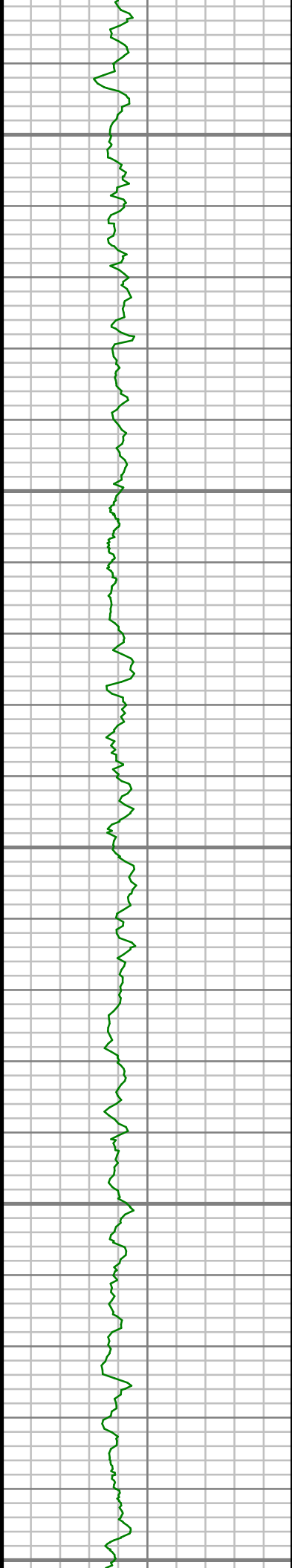
6300

6350



S: 55 MD: 6234.00 ft  
Inc: 0.71 deg Az:  
296.44 deg TVD:  
6109.03 ft

S: 56 MD: 6329.00 ft  
Inc: 0.58 deg Az:  
348.43 deg TVD:  
6204.03 ft



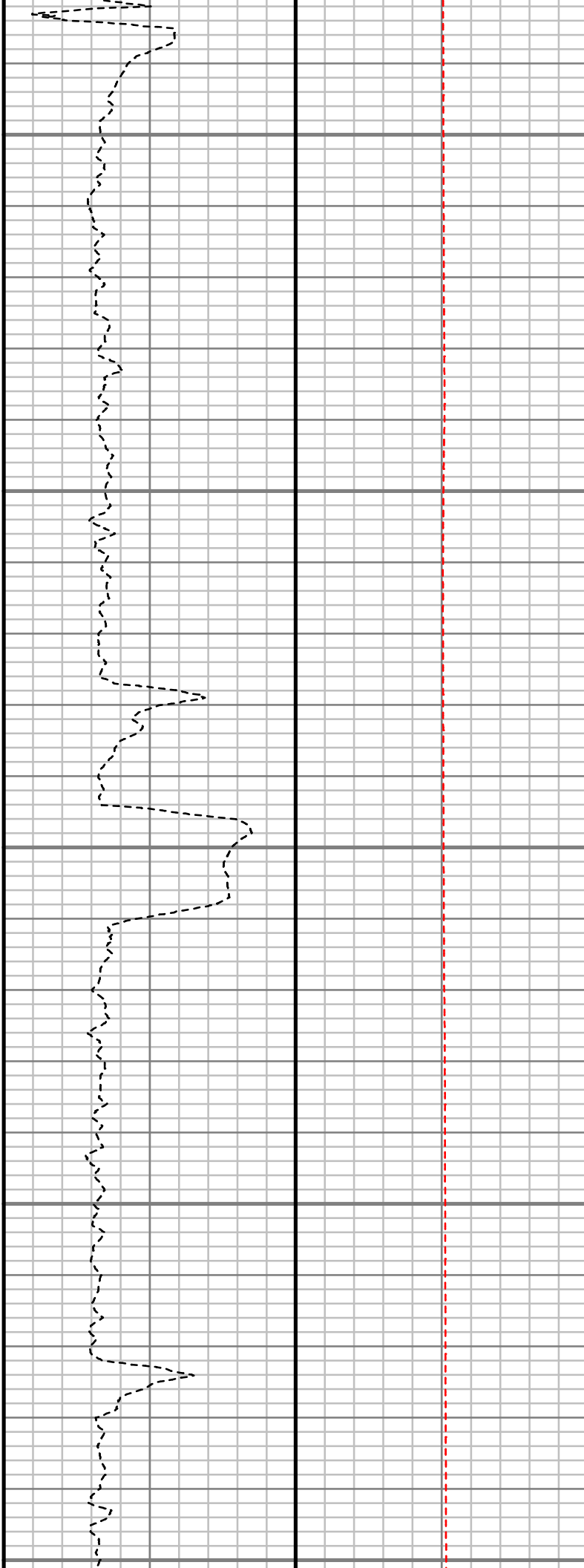
6400

6450

6500

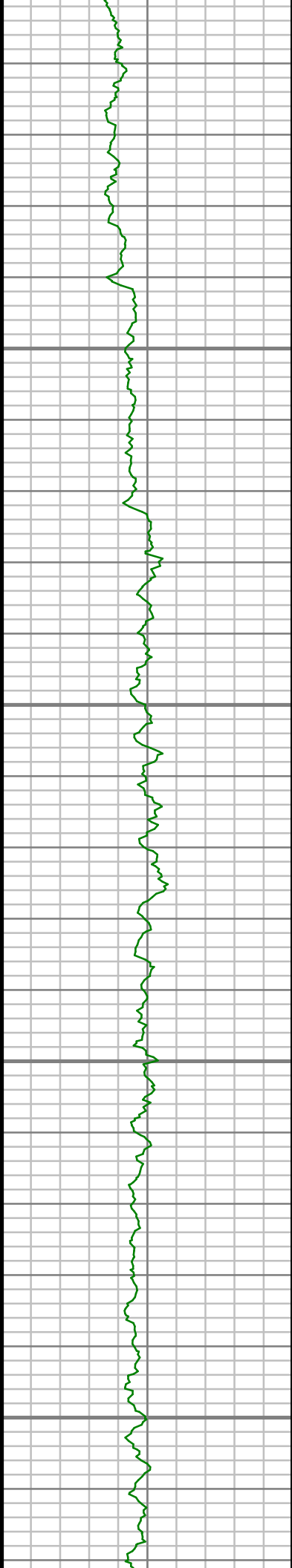
6550

6600



S: 57 MD: 6423.00 ft  
Inc: 1.00 deg Az:  
253.21 deg TVD:  
6298.02 ft

S: 58 MD: 6518.00 ft  
Inc: 1.74 deg Az:  
135.38 deg TVD:  
6393.01 ft

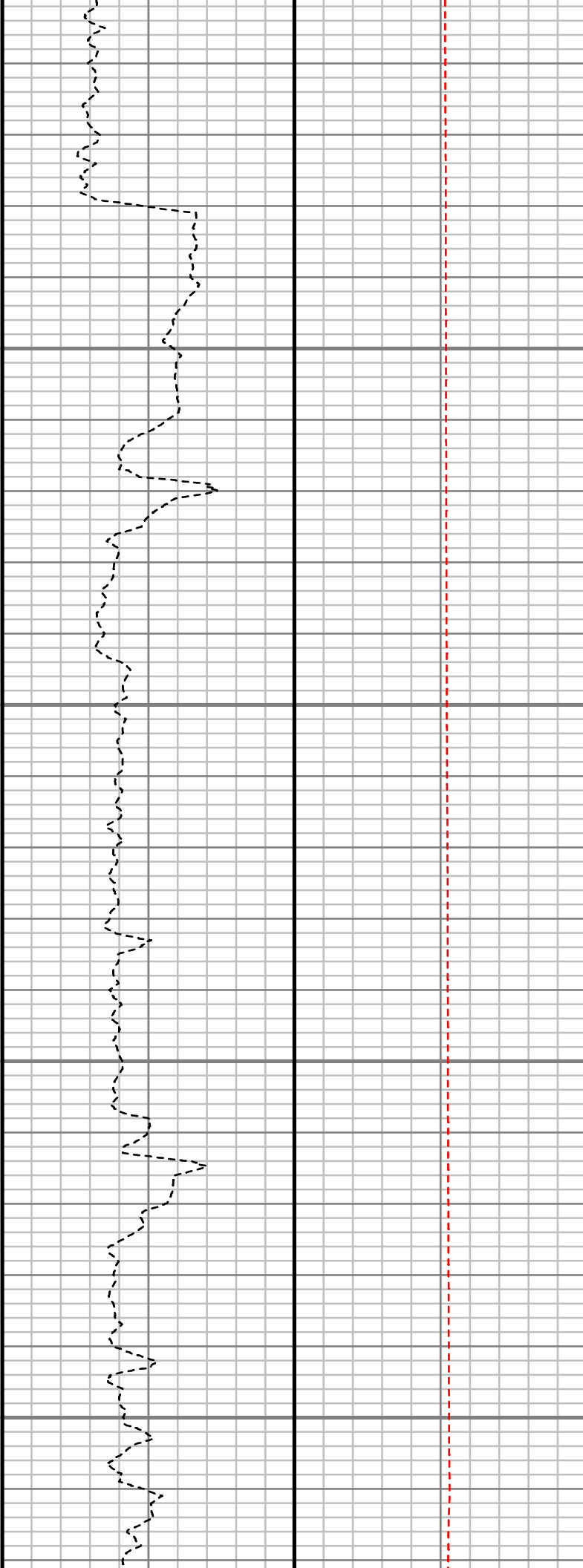


6650

6700

6750

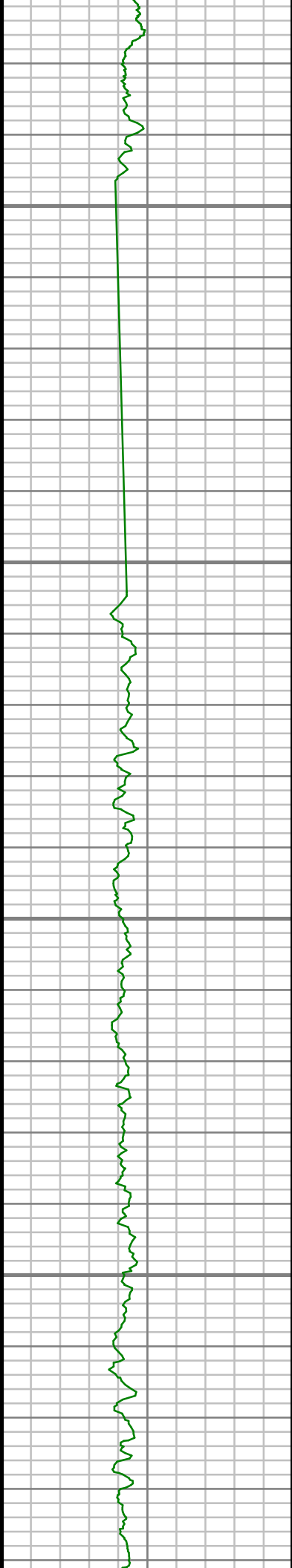
6800



S: 59 MD: 6612.00 ft  
Inc: 0.88 deg Az:  
141.23 deg TVD:  
6486.98 ft

S: 60 MD: 6706.00 ft  
Inc: 0.23 deg Az:  
262.30 deg TVD:  
6580.98 ft

S: 61 MD: 6801.00 ft  
Inc: 0.03 deg Az: 69.22  
deg TVD: 6675.98 ft

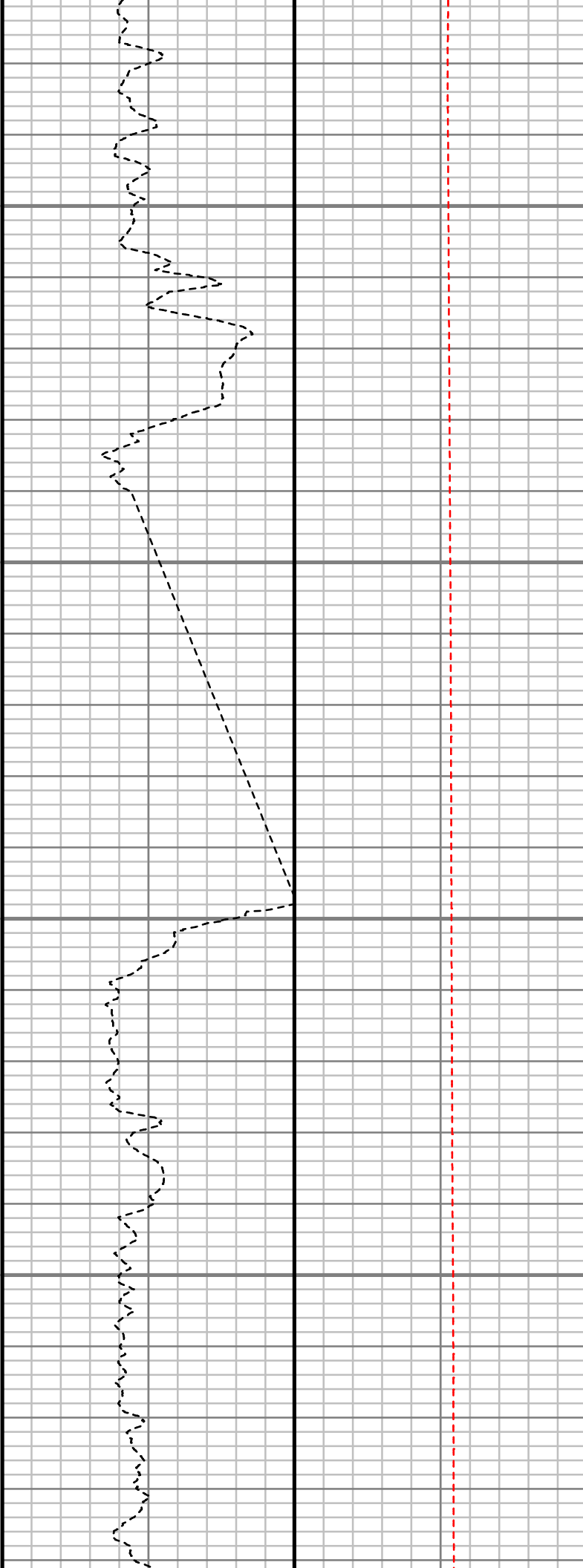


6850

6900

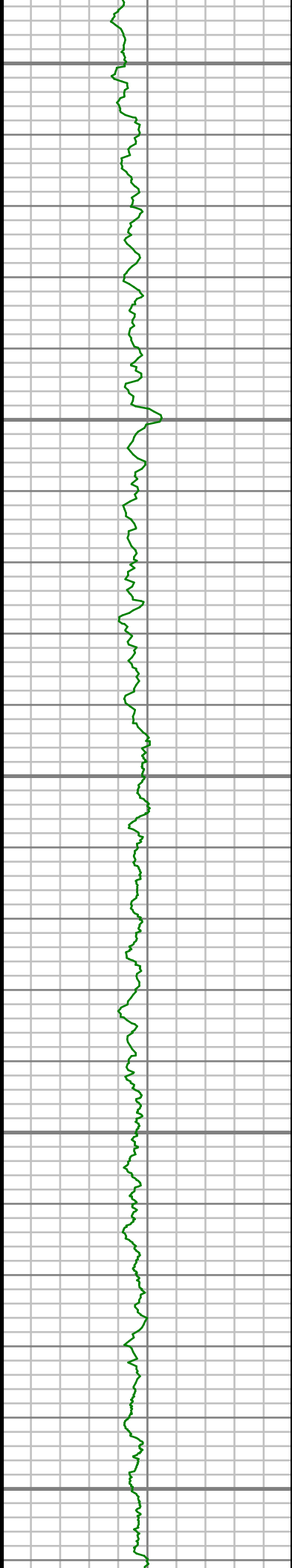
6950

7000



S: 62 MD: 6895.00 ft  
Inc: 2.02 deg Az:  
141.59 deg TVD:  
6769.96 ft

S: 63 MD: 6989.00 ft  
Inc: 1.80 deg Az:  
170.45 deg TVD:  
6863.91 ft



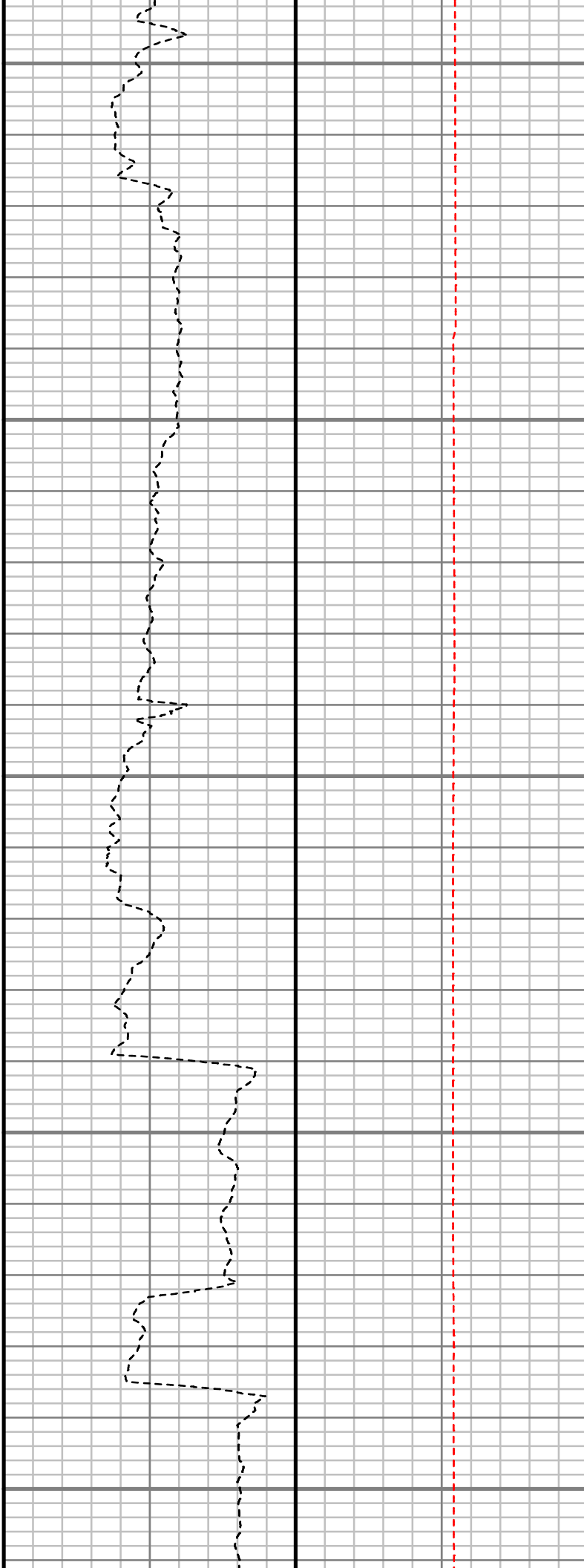
7050

7100

7150

7200

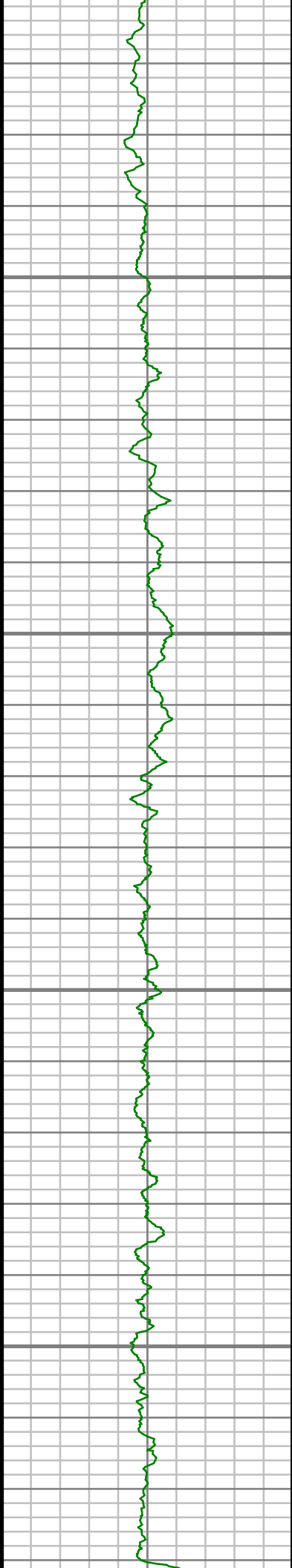
7250



S: 64 MD: 7084.00 ft  
Inc: 0.69 deg Az:  
107.84 deg TVD:  
6958.89 ft

S: 65 MD: 7178.00 ft  
Inc: 0.34 deg Az:  
305.23 deg TVD:  
7052.88 ft

S: 66 MD: 7225.00 ft  
Inc: 4.57 deg Az:  
358.18 deg TVD:  
7099.83 ft

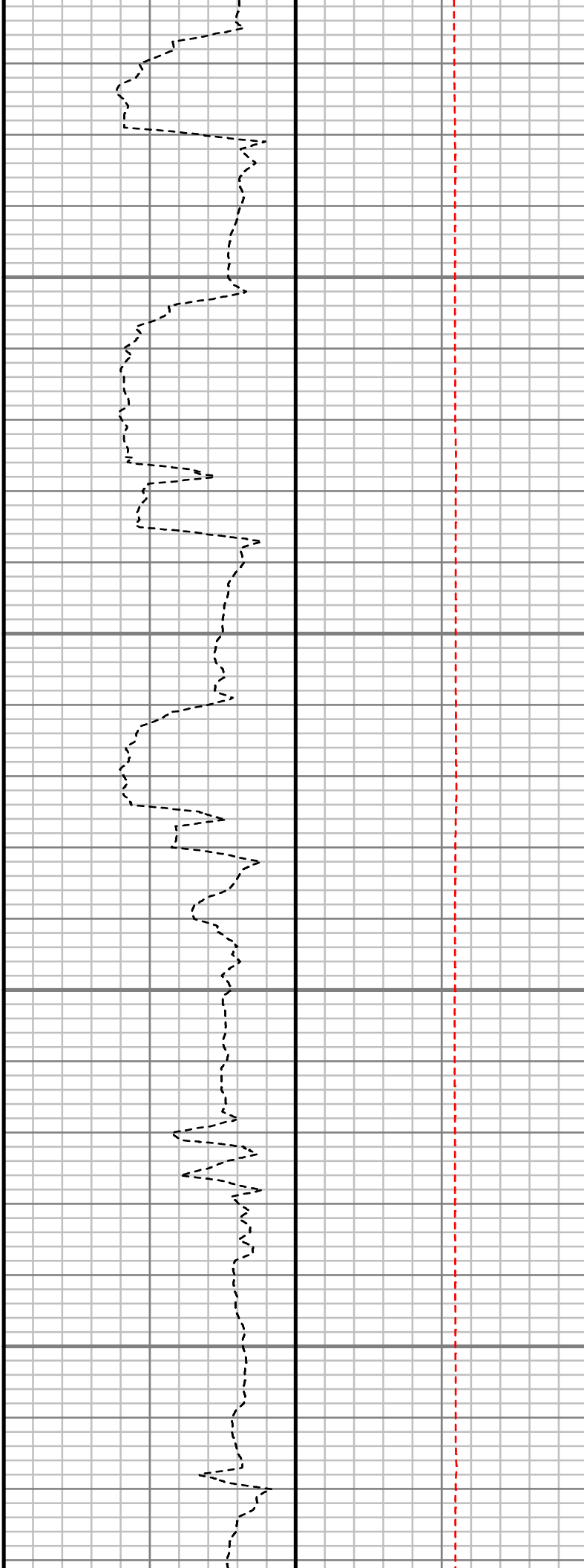


7300

7350

7400

7450



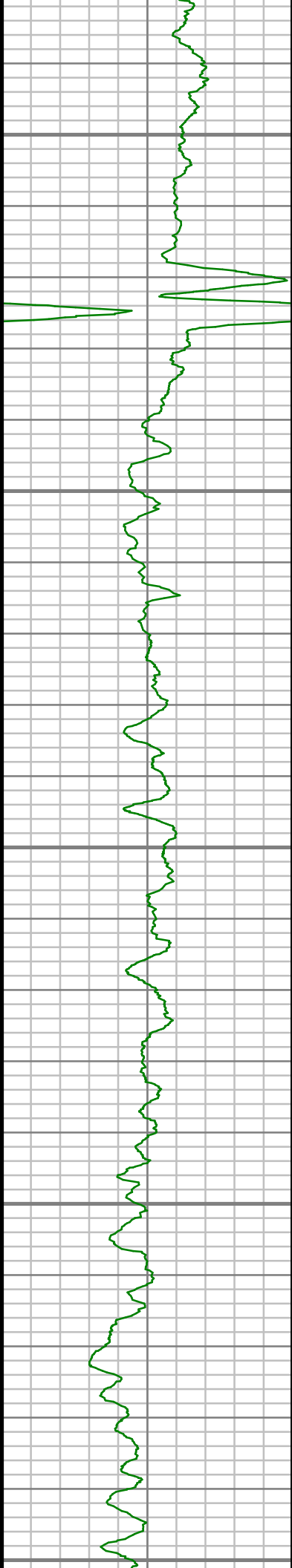
S: 67 MD: 7273.00 ft  
Inc: 8.98 deg Az: 0.43  
deg TVD: 7147.49 ft

S: 68 MD: 7320.00 ft  
Inc: 10.80 deg Az: 2.45  
deg TVD: 7193.79 ft

S: 69 MD: 7367.00 ft  
Inc: 13.55 deg Az:  
358.49 deg TVD:  
7239.72 ft

S: 70 MD: 7414.00 ft  
Inc: 17.58 deg Az:  
352.26 deg TVD:  
7284.99 ft

S: 71 MD: 7461.00 ft  
Inc: 23.37 deg Az:  
349.87 deg TVD:  
7329.01 ft



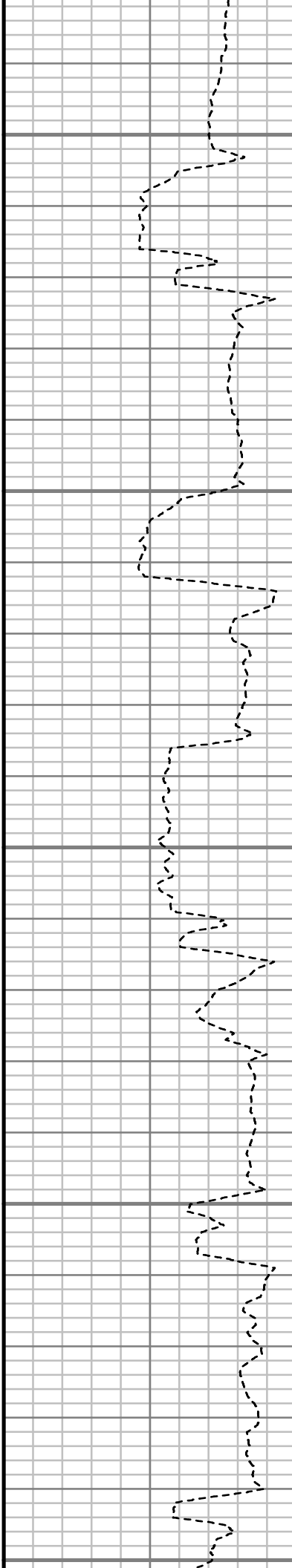
7500

7550

7600

7650

7700



S: 72 MD: 7508.00 ft  
Inc: 28.19 deg Az:  
352.13 deg TVD:  
7371.31 ft

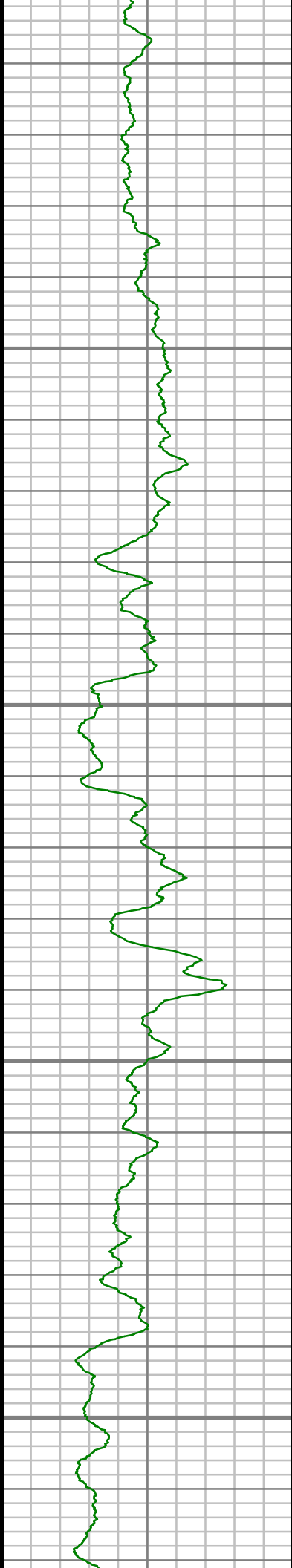
S: 73 MD: 7556.00 ft  
Inc: 32.20 deg Az:  
355.63 deg TVD:  
7412.80 ft

S: 74 MD: 7603.00 ft  
Inc: 34.36 deg Az:  
356.57 deg TVD:  
7452.09 ft

S: 75 MD: 7650.00 ft  
Inc: 38.26 deg Az:  
358.07 deg TVD:  
7489.96 ft

S: 76 MD: 7697.00 ft  
Inc: 43.32 deg Az:



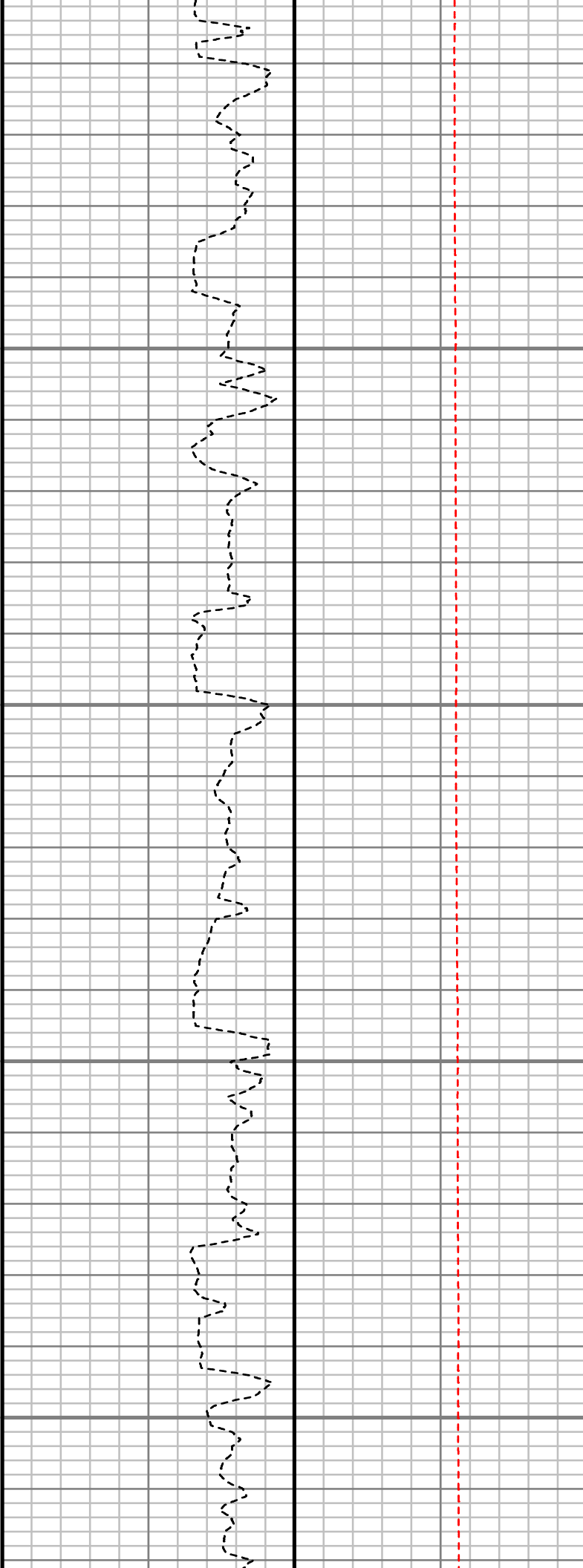


7750

7800

7850

7900



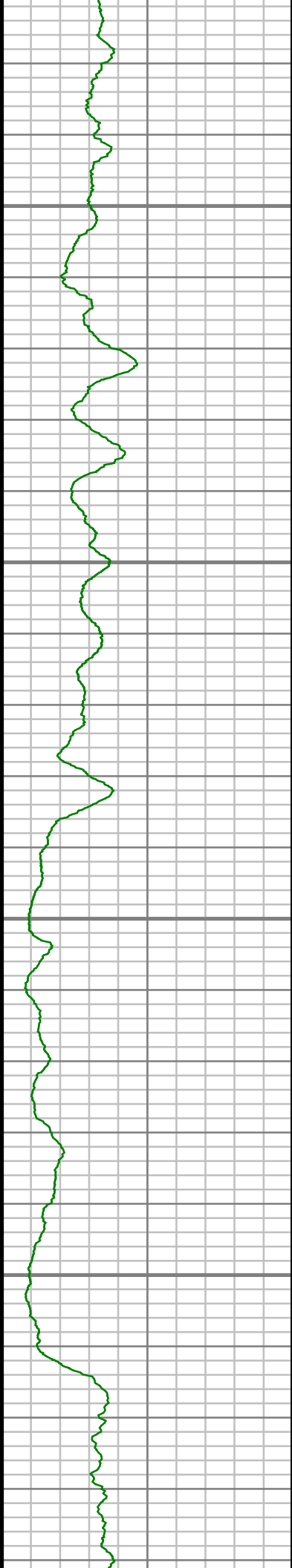
359.00 deg Az: 7525.53 ft

S: 77 MD: 7744.00 ft  
Inc: 45.13 deg Az: 358.86 deg TVD: 7559.21 ft

S: 78 MD: 7791.00 ft  
Inc: 49.00 deg Az: 1.38 deg TVD: 7591.22 ft

S: 79 MD: 7839.00 ft  
Inc: 53.81 deg Az: 1.96 deg TVD: 7621.15 ft

S: 80 MD: 7886.00 ft  
Inc: 58.29 deg Az: 1.69 deg TVD: 7647.39 ft

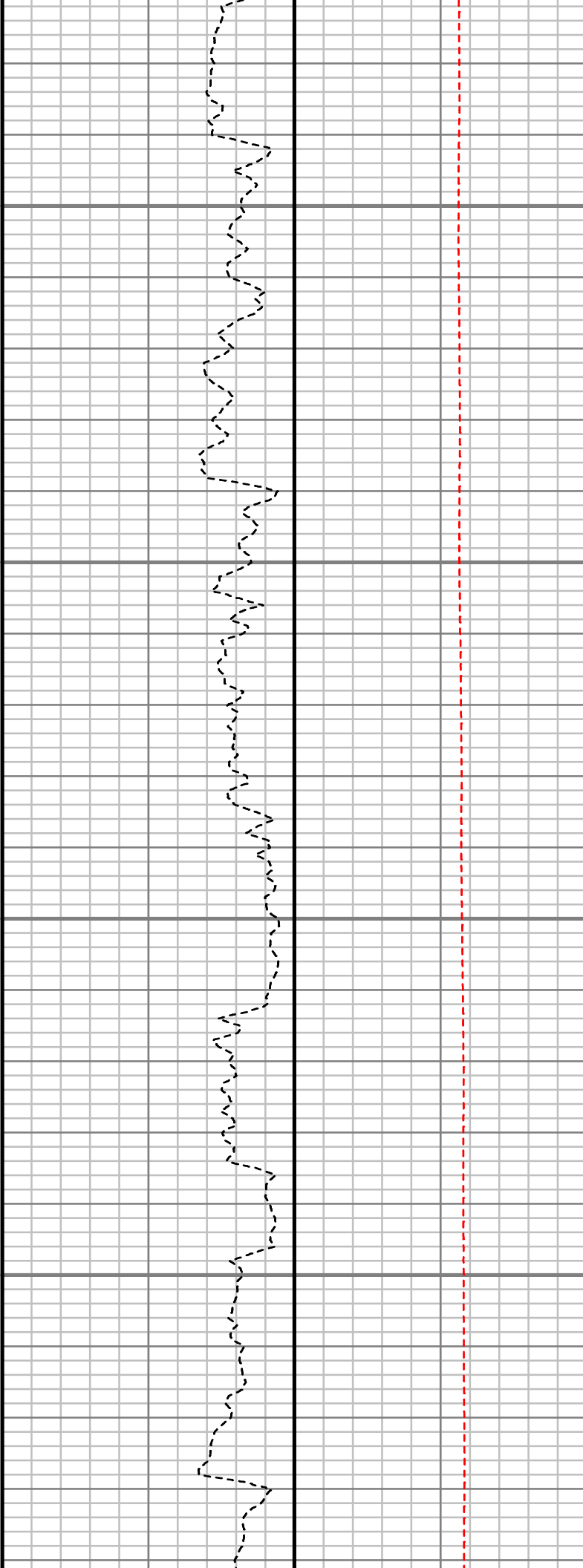


7950

8000

8050

8100



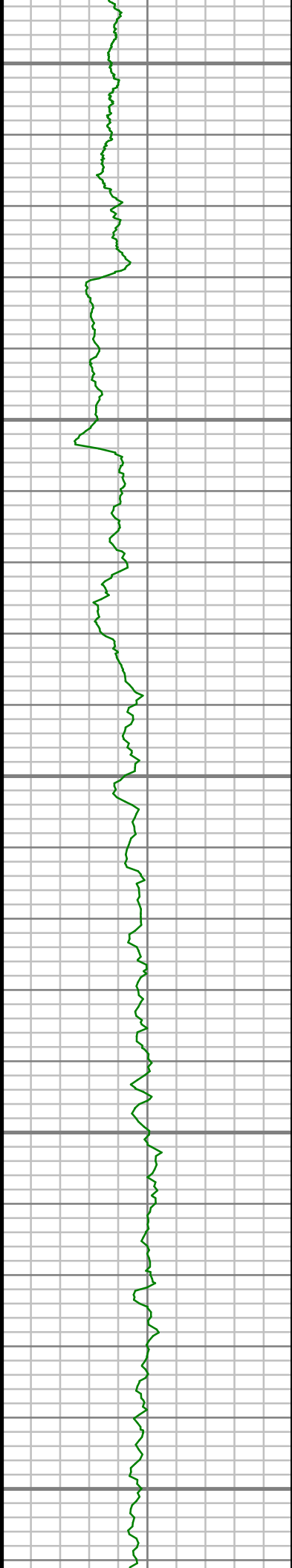
S: 81 MD: 7933.00 ft  
Inc: 63.14 deg Az: 1.52  
deg TVD: 7670.38 ft

S: 82 MD: 7980.00 ft  
Inc: 66.86 deg Az: 1.35  
deg TVD: 7690.24 ft

S: 83 MD: 8027.00 ft  
Inc: 70.58 deg Az: 1.98  
deg TVD: 7707.29 ft

S: 84 MD: 8074.00 ft  
Inc: 74.35 deg Az: 0.74  
deg TVD: 7721.45 ft

S: 85 MD: 8122.00 ft  
Inc: 77.95 deg Az: 1.08  
deg TVD: 7732.94 ft



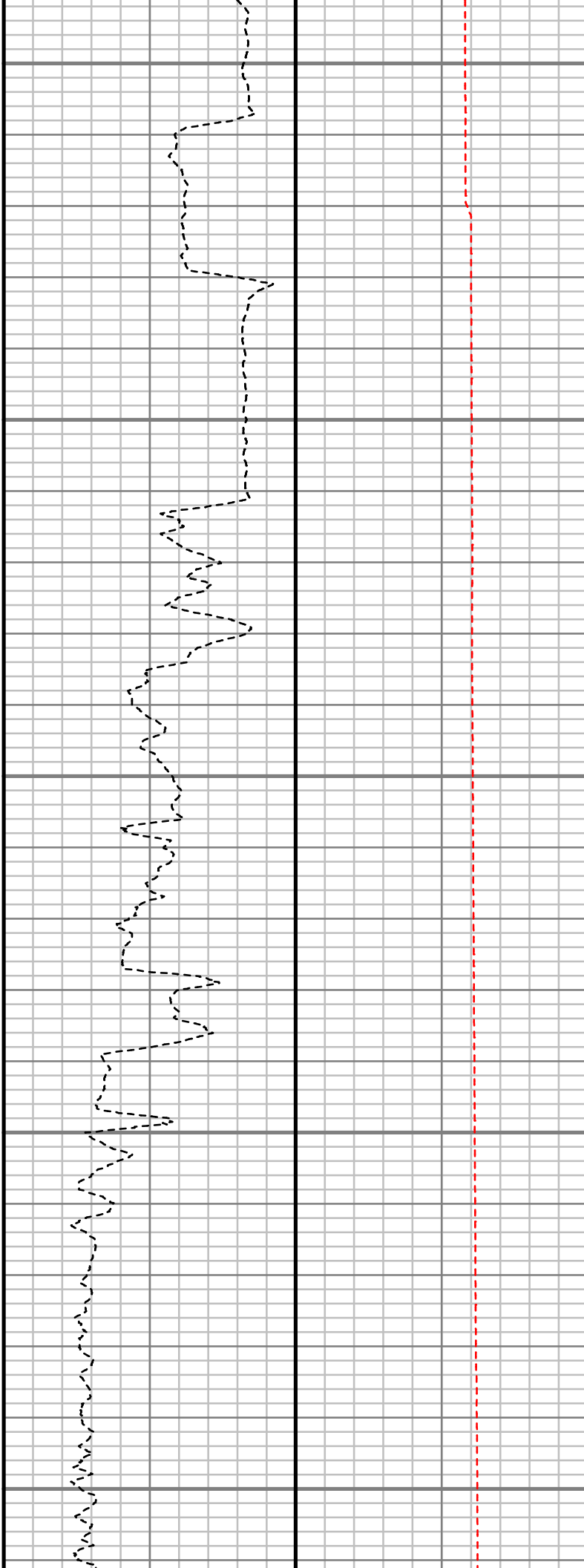
8150

8200

8250

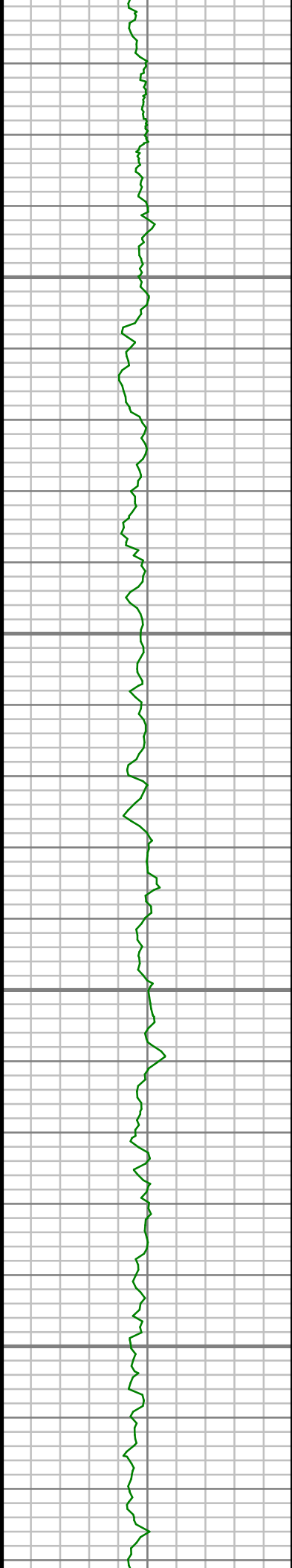
8300

8350



S: 86 MD: 8169.00 ft  
Inc: 82.43 deg Az: 0.30  
deg TVD: 7740.94 ft

S: 87 MD: 8328.00 ft  
Inc: 88.92 deg Az:  
359.41 deg TVD:  
7752.92 ft

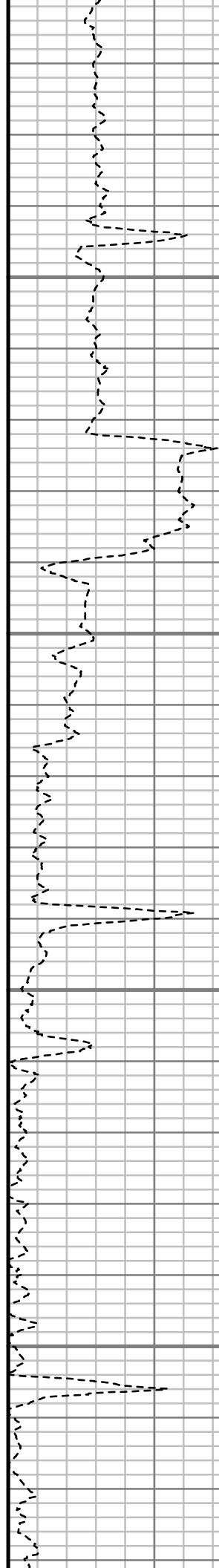


8400

8450

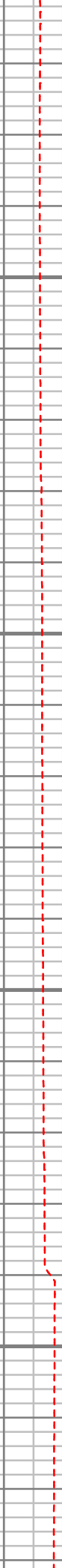
8500

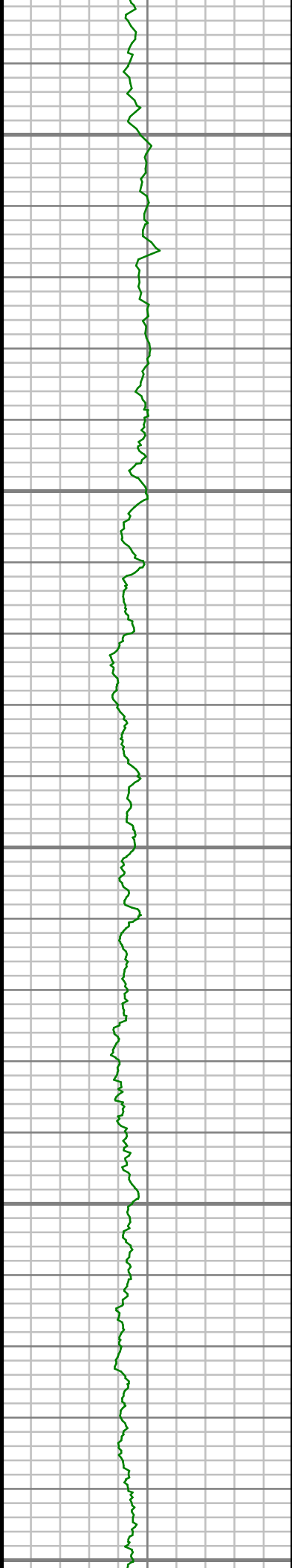
8550



S: 88 MD: 8422.00 ft  
Inc: 89.63 deg Az: 0.54  
deg TVD: 7754.10 ft

S: 89 MD: 8516.00 ft  
Inc: 90.47 deg Az: 0.63  
deg TVD: 7754.02 ft





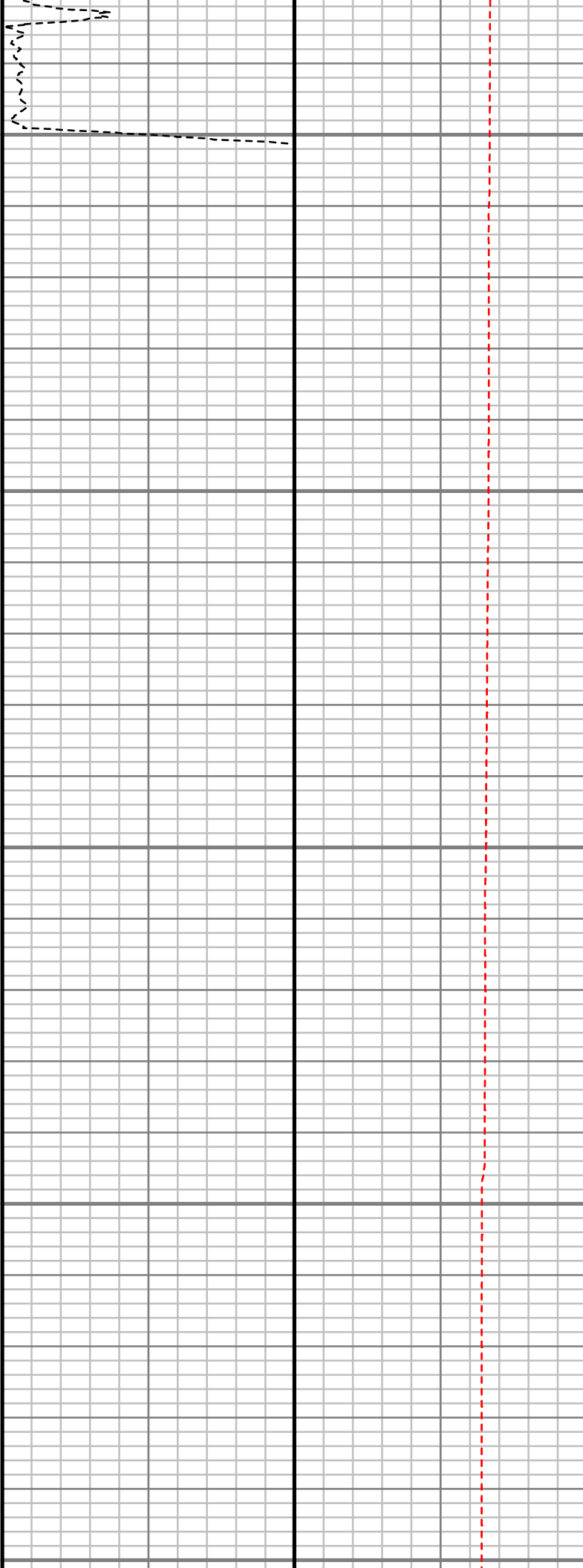
8600

8650

8700

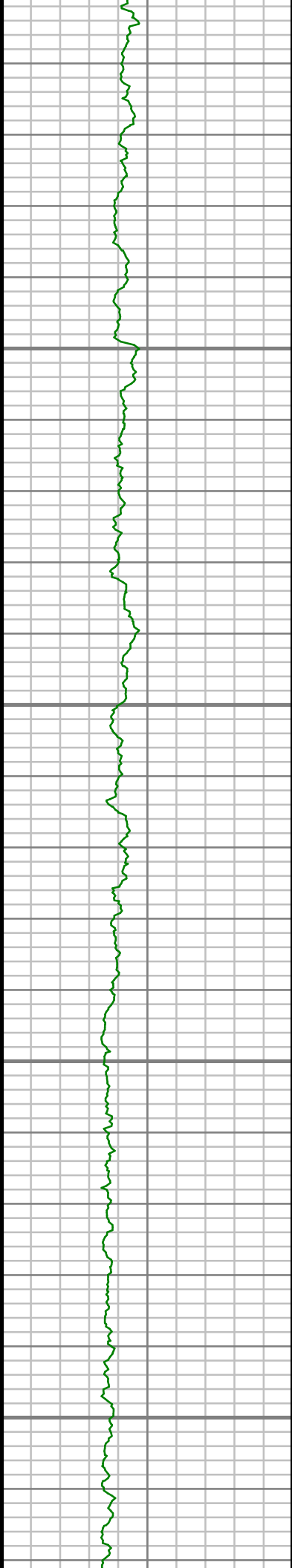
8750

8800



S: 90 MD: 8697.00 ft  
Inc: 91.27 deg Az: 1.43  
deg TVD: 7751.27 ft

S: 91 MD: 8791.00 ft  
Inc: 90.91 deg Az: 0.76  
deg TVD: 7749.48 ft



8850

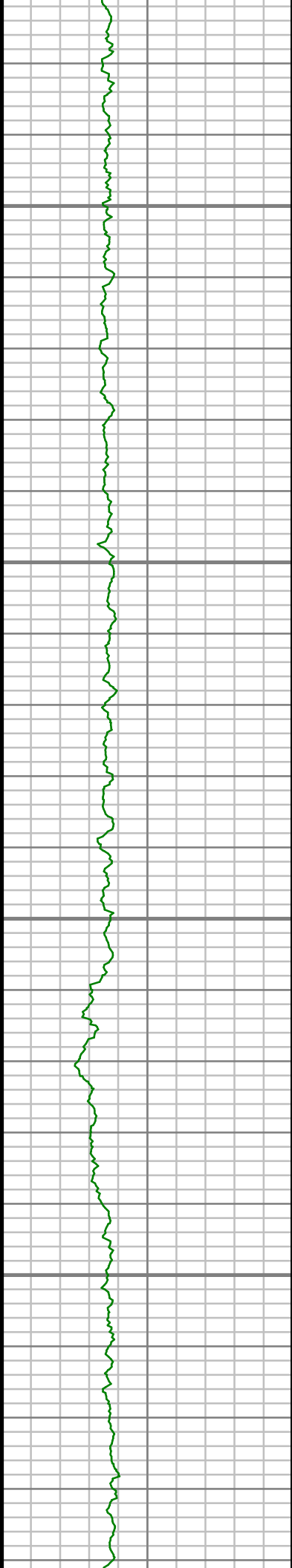
8900

8950

9000

S: 92 MD: 8886.00 ft  
Inc: 91.95 deg Az: 0.23  
deg TVD: 7747.11 ft

S: 93 MD: 8980.00 ft  
Inc: 91.75 deg Az:  
359.75 deg TVD:  
7744.08 ft



9050

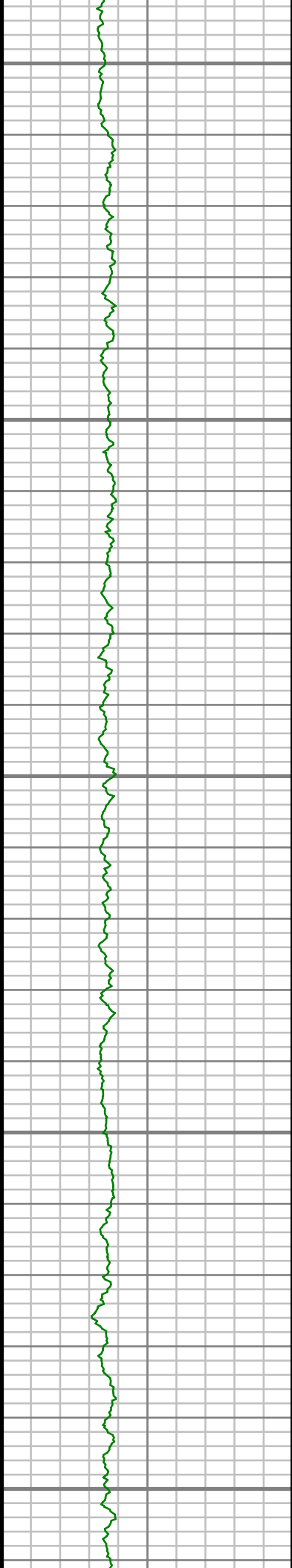
9100

9150

9200

S: 94 MD: 9075.00 ft  
Inc: 90.61 deg Az:  
358.90 deg TVD:  
7742.13 ft

S: 95 MD: 9169.00 ft  
Inc: 87.25 deg Az:  
356.86 deg TVD:  
7743.89 ft



9250

9300

9350

9400

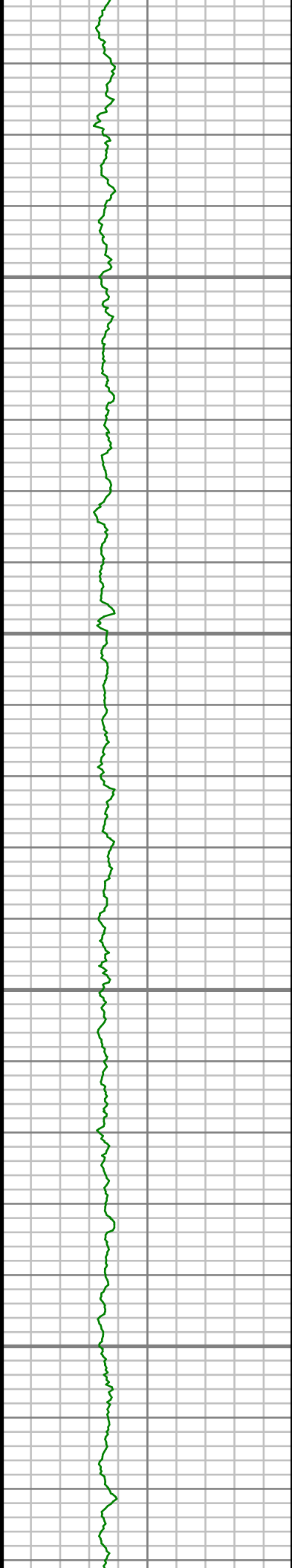
9450

S: 96 MD: 9263.00 ft  
Inc: 88.86 deg Az:  
357.79 deg TVD:  
7747.09 ft

S: 97 MD: 9357.00 ft  
Inc: 90.84 deg Az:  
357.64 deg TVD:  
7747.34 ft

S: 98 MD: 9452.00 ft  
Inc: 87.62 deg Az:  
355.13 deg TVD:  
7748.61 ft





9500

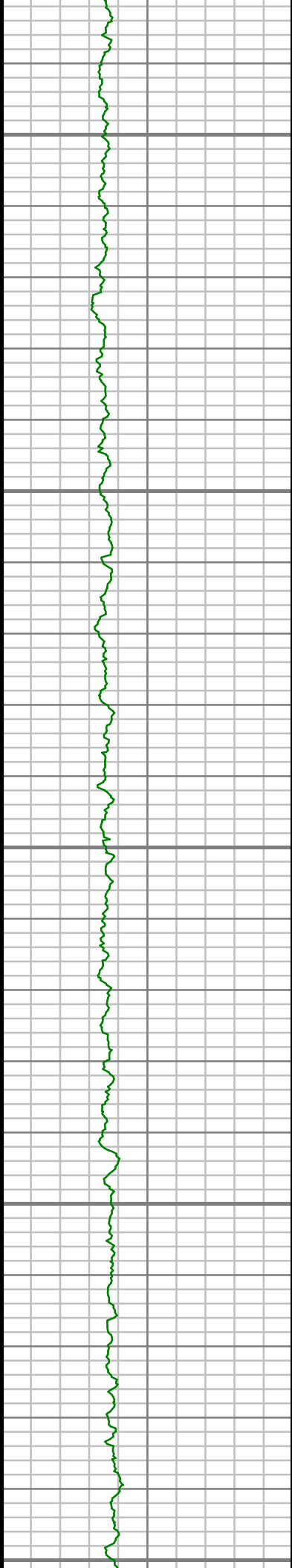
9550

9600

9650

S: 99 MD: 9546.00 ft  
Inc: 89.09 deg Az:  
356.12 deg TVD:  
7751.31 ft

S: 100 MD: 9641.00 ft  
Inc: 87.68 deg Az:  
356.32 deg TVD:  
7753.99 ft



9700

9750

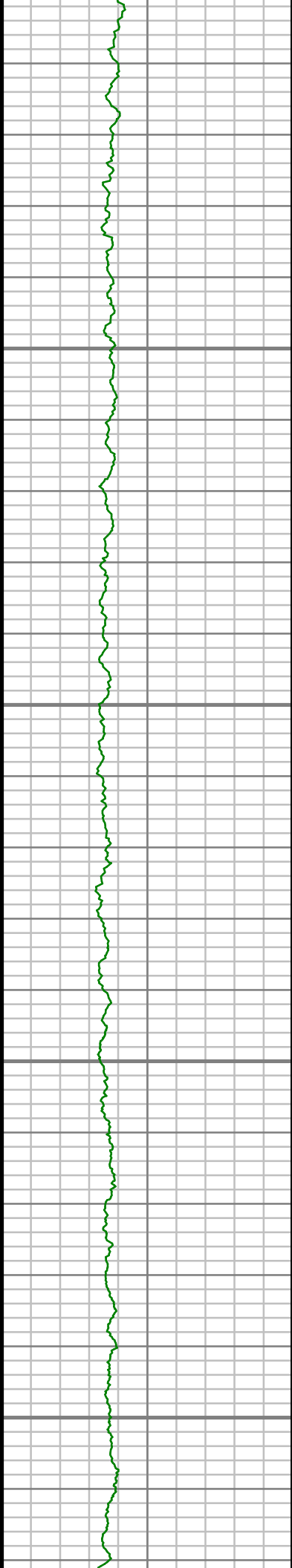
9800

9850

9900

S: 101 MD: 9735.00 ft  
Inc: 91.38 deg Az:  
358.48 deg TVD:  
7754.76 ft

S: 102 MD: 9829.00 ft  
Inc: 87.95 deg Az:  
356.61 deg TVD:  
7755.31 ft

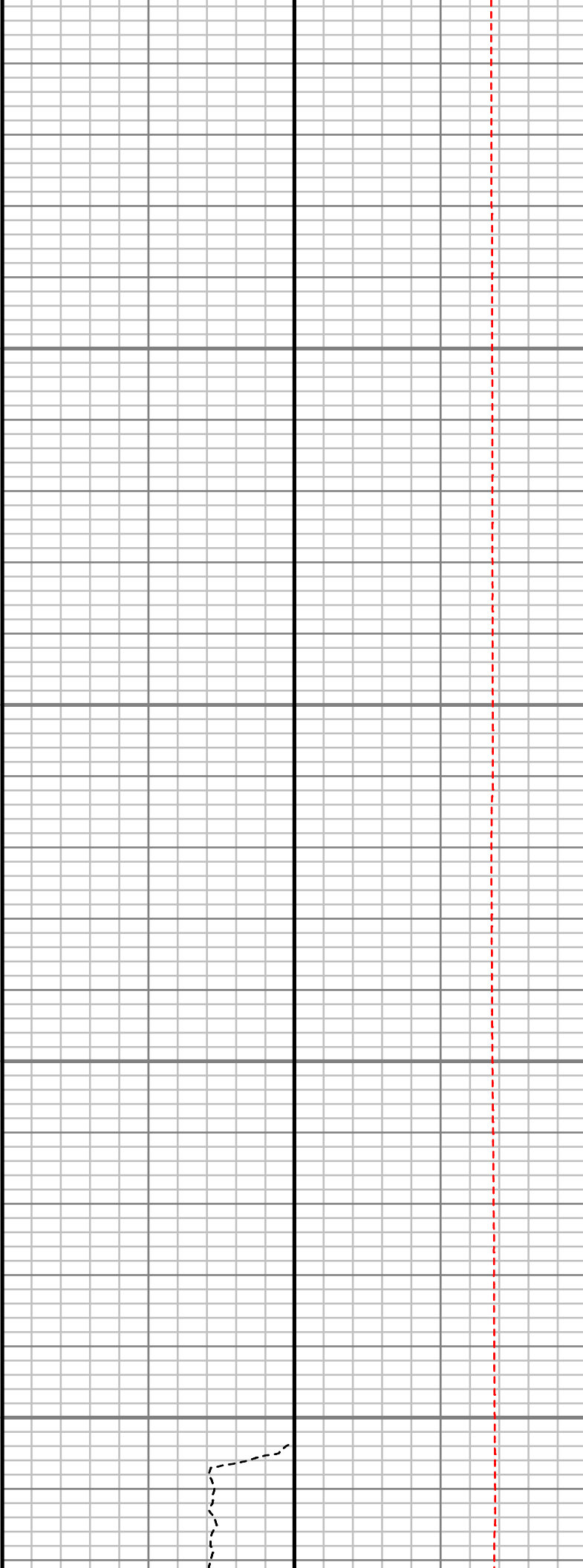


9950

10000

10050

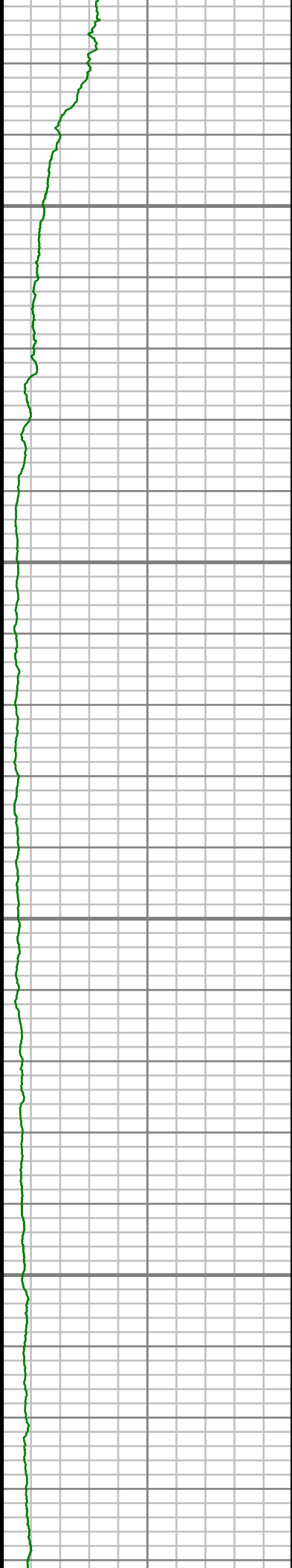
10100



S: 103 MD: 9923.00 ft  
Inc: 91.08 deg Az:  
359.47 deg TVD:  
7756.11 ft

S: 104 MD: 10017.00 ft  
Inc: 92.56 deg Az: 1.33  
deg TVD: 7753.13 ft

S: 105 MD: 10111.00 ft  
Inc: 92.32 deg Az:  
359.46 deg TVD:  
7749.13 ft

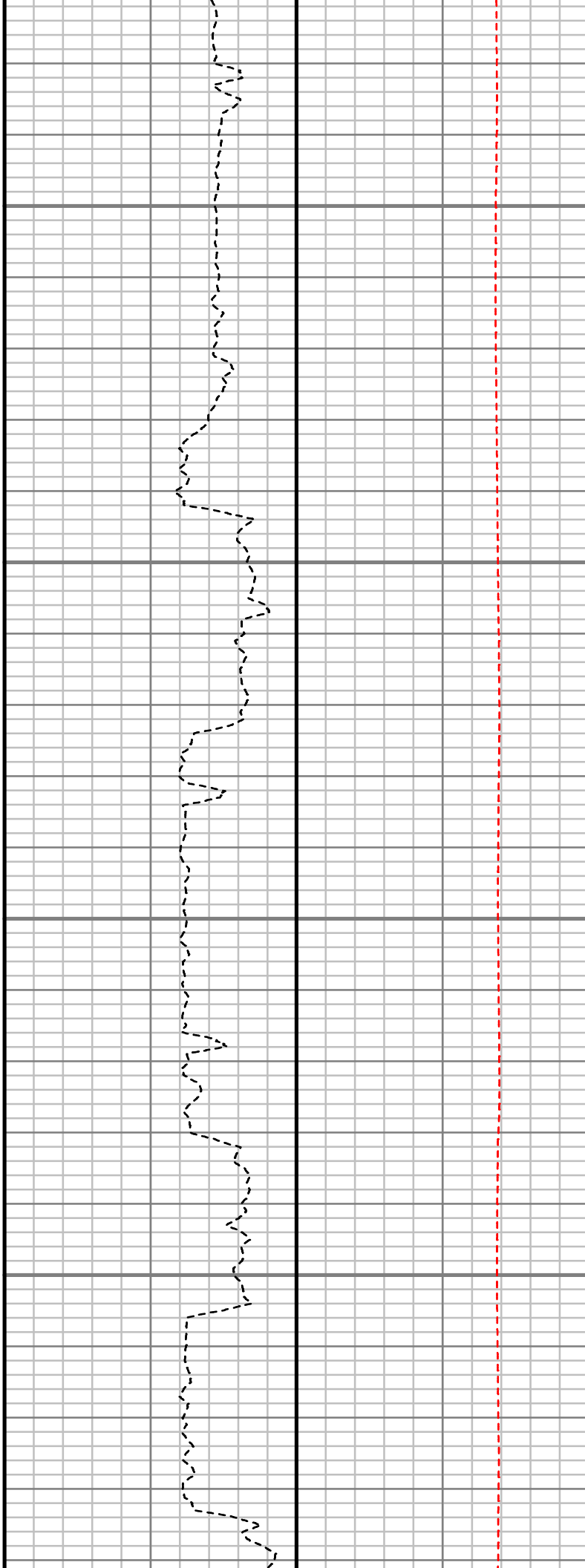


10150

10200

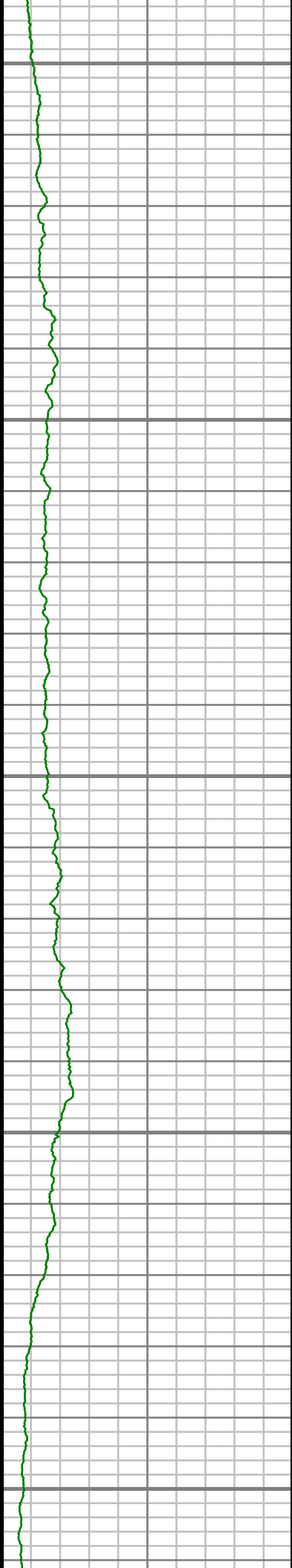
10250

10300



S: 106 MD: 10206.00 ft  
Inc: 91.72 deg Az:  
359.34 deg TVD:  
7745.78 ft

S: 107 MD: 10300.00 ft  
Inc: 91.44 deg Az: 0.33  
deg TVD: 7743.19 ft



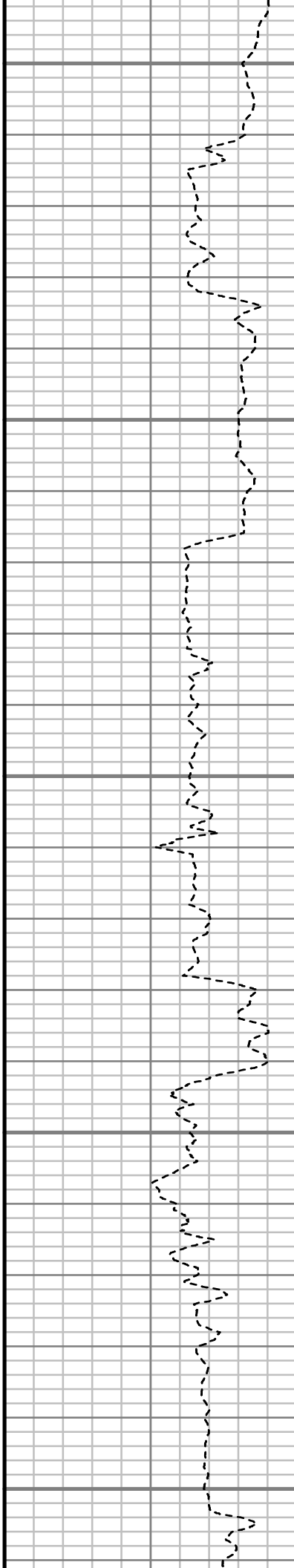
10350

10400

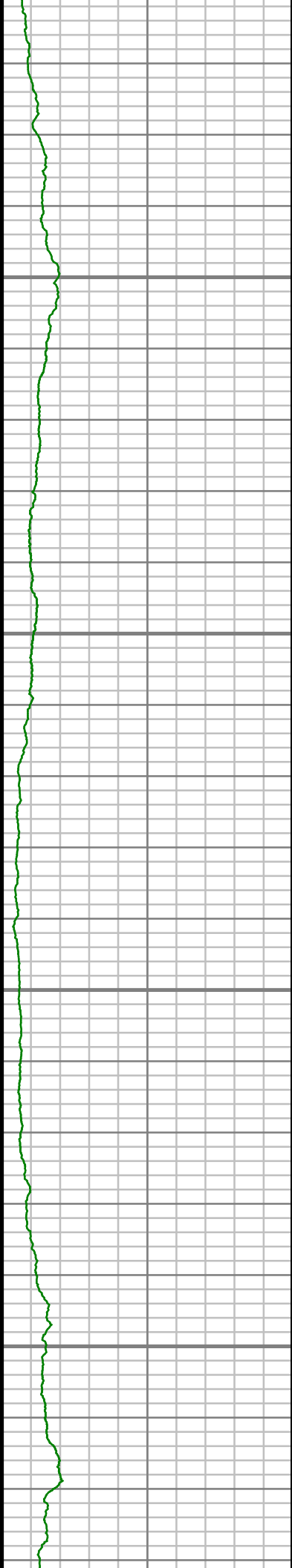
10450

10500

10550



S: 108 MD: 10394.00 ft  
Inc: 90.24 deg Az: 2.75  
deg TVD: 7741.81 ft

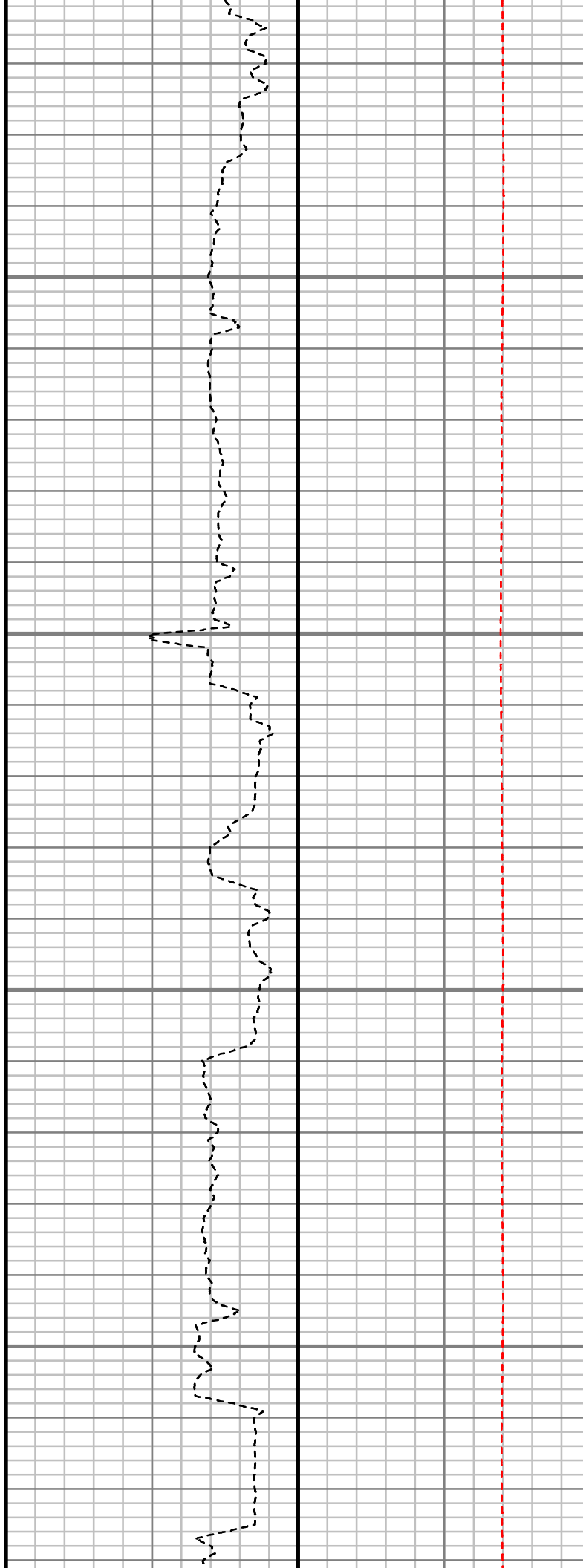


10600

10650

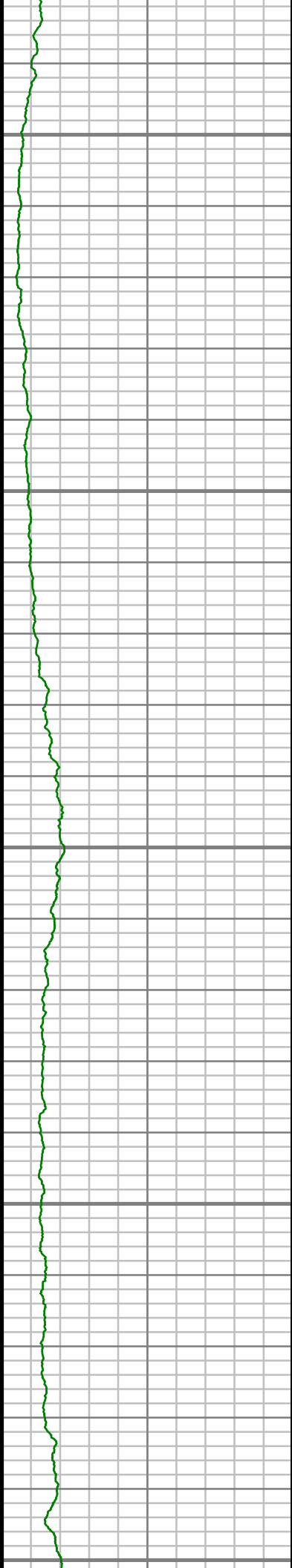
10700

10750



S: 109 MD: 10583.00 ft  
Inc: 91.65 deg Az: 3.32  
deg TVD: 7738.70 ft

S: 110 MD: 10772.00 ft  
Inc: 90.34 deg Az: 2.02  
deg TVD: 7735.43 ft



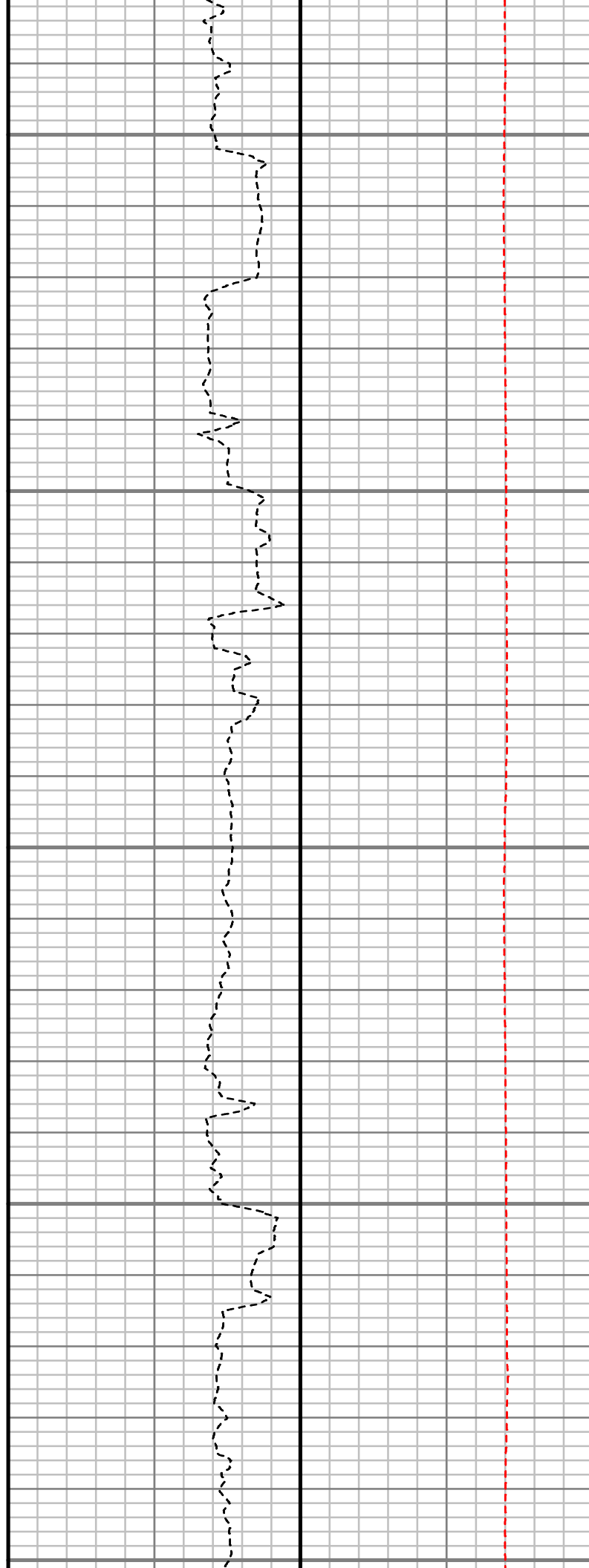
10800

10850

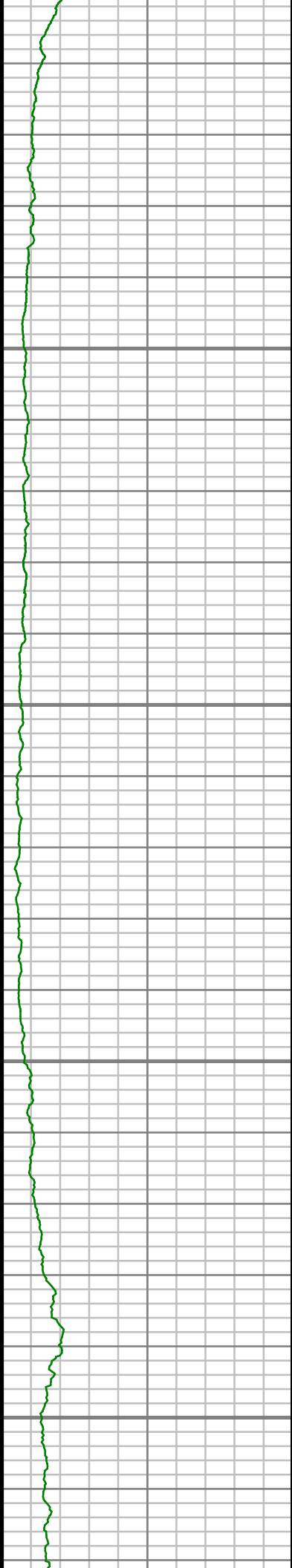
10900

10950

11000



S: 111 MD: 10866.00 ft  
Inc: 89.03 deg Az: 1.89  
deg TVD: 7735.95 ft

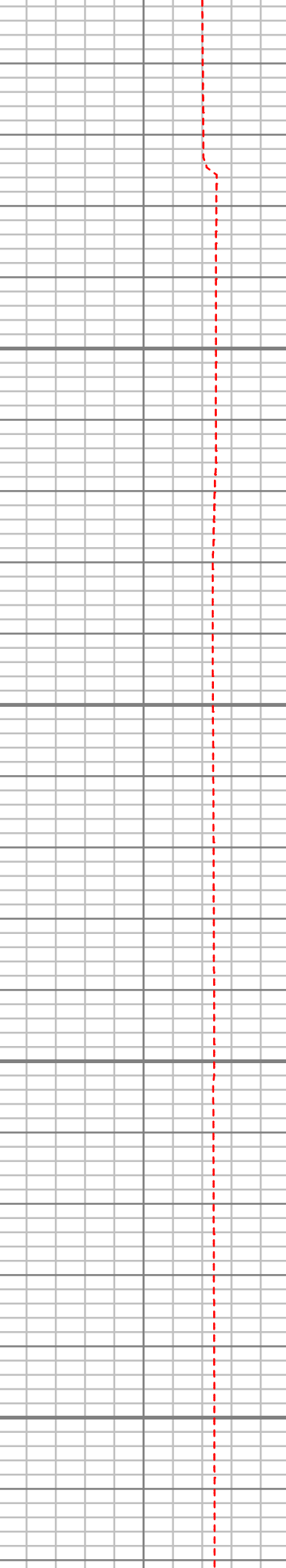
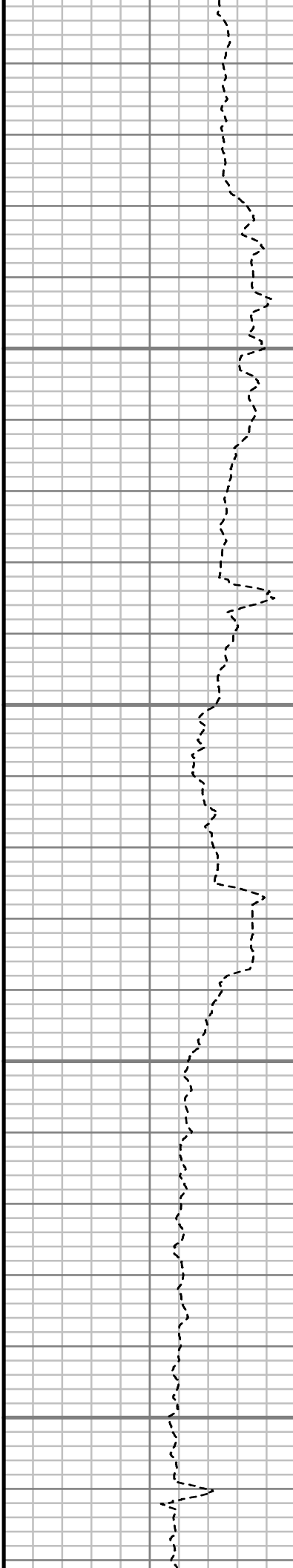


11050

11100

11150

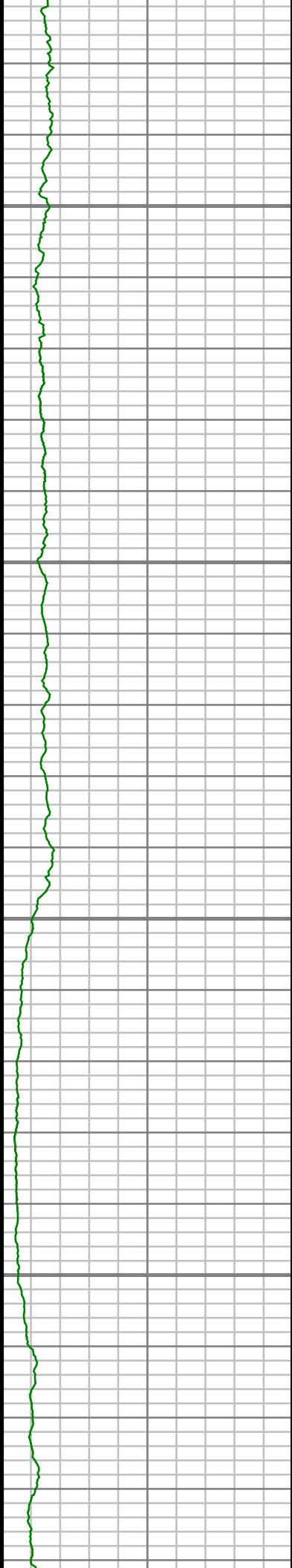
11200



S: 112 MD: 11054.00 ft  
Inc: 89.33 deg Az: 0.88  
deg TVD: 7738.65 ft

S: 113 MD: 11149.00 ft  
Inc: 89.29 deg Az:  
359.97 deg TVD:  
7739.79 ft



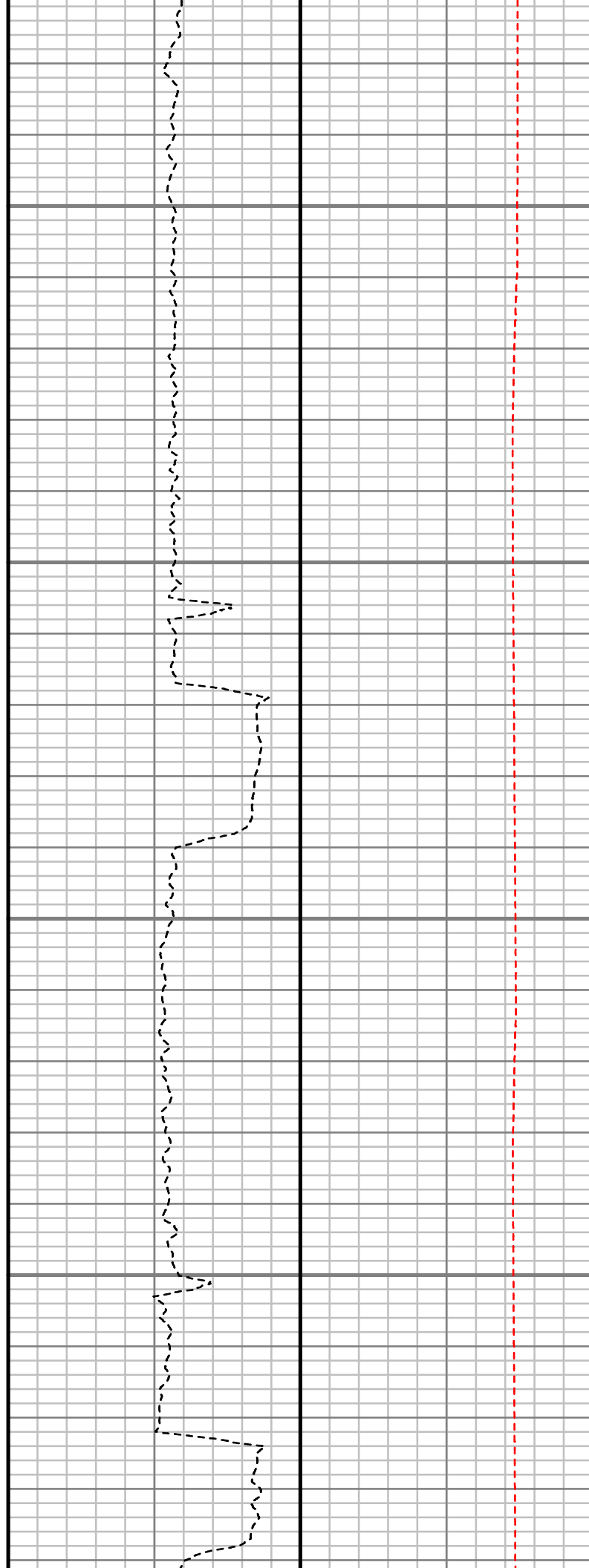


11250

11300

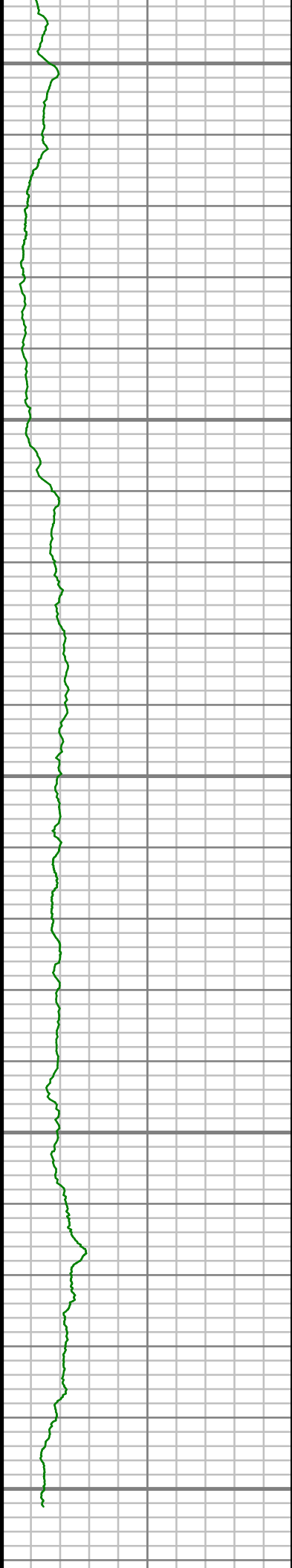
11350

11400



S: 114 MD: 11338.00 ft  
Inc: 89.50 deg Az:  
359.78 deg TVD:  
7741.79 ft

S: 115 MD: 11432.00 ft  
Inc: 88.35 deg Az: 0.66  
deg TVD: 7743.55 ft



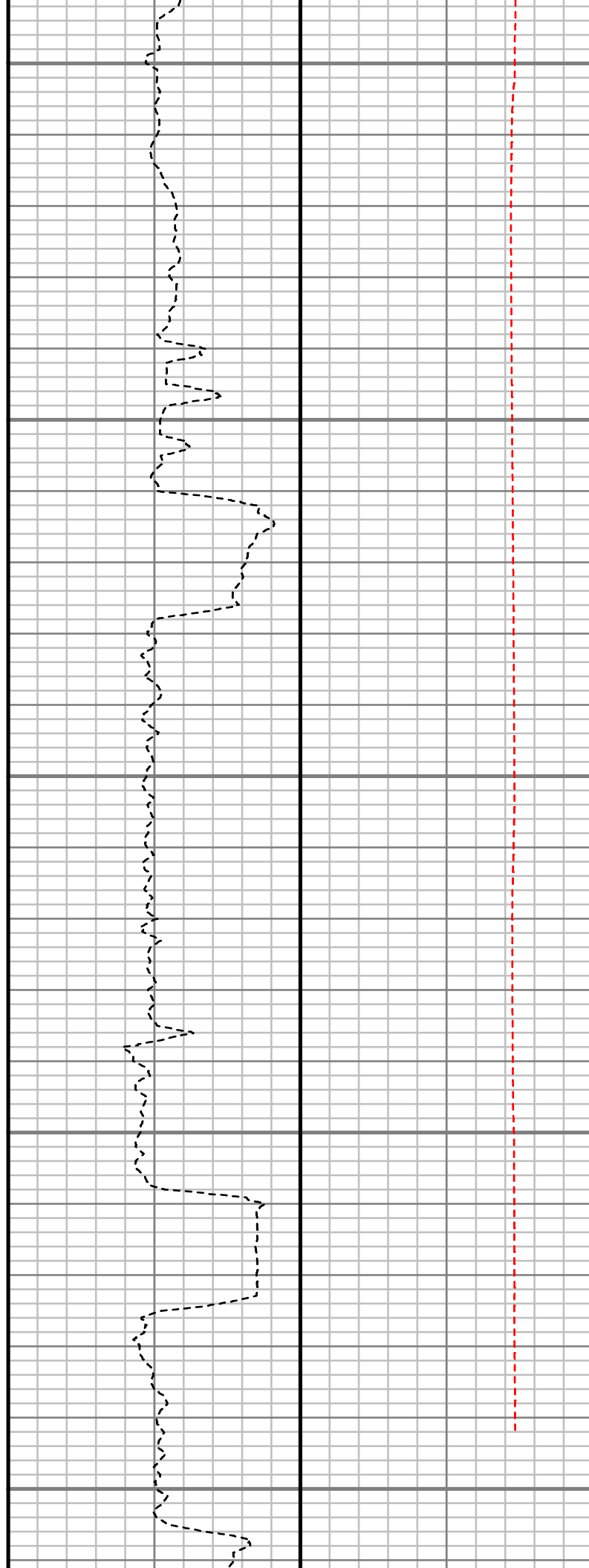
11450

11500

11550

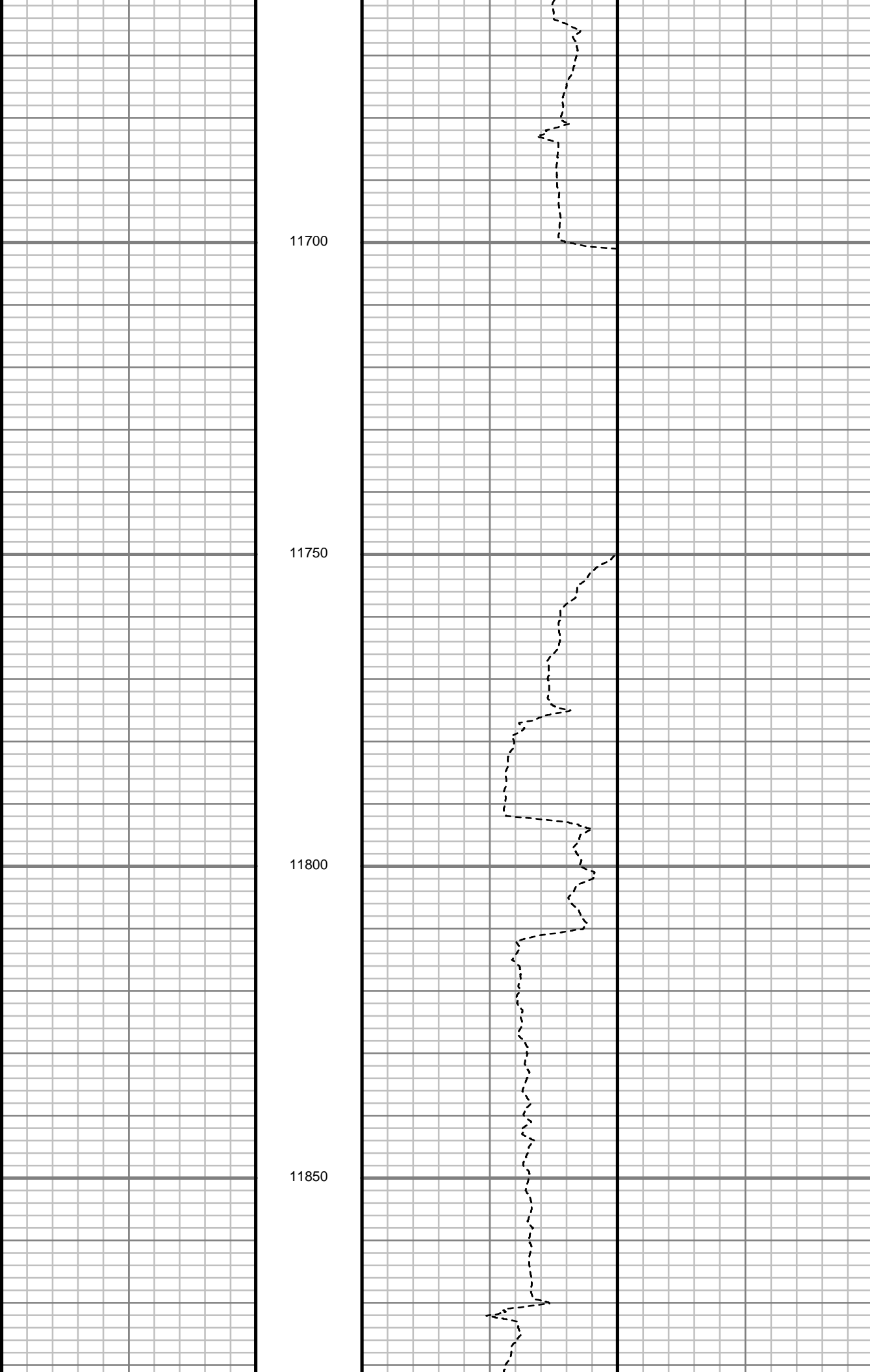
11600

11650



S: 116 MD: 11526.00 ft  
Inc: 89.93 deg Az: 1.29  
deg TVD: 7744.96 ft

S: 117 MD: 11620.00 ft  
Inc: 88.52 deg Az: 0.08  
deg TVD: 7746.22 ft



11700

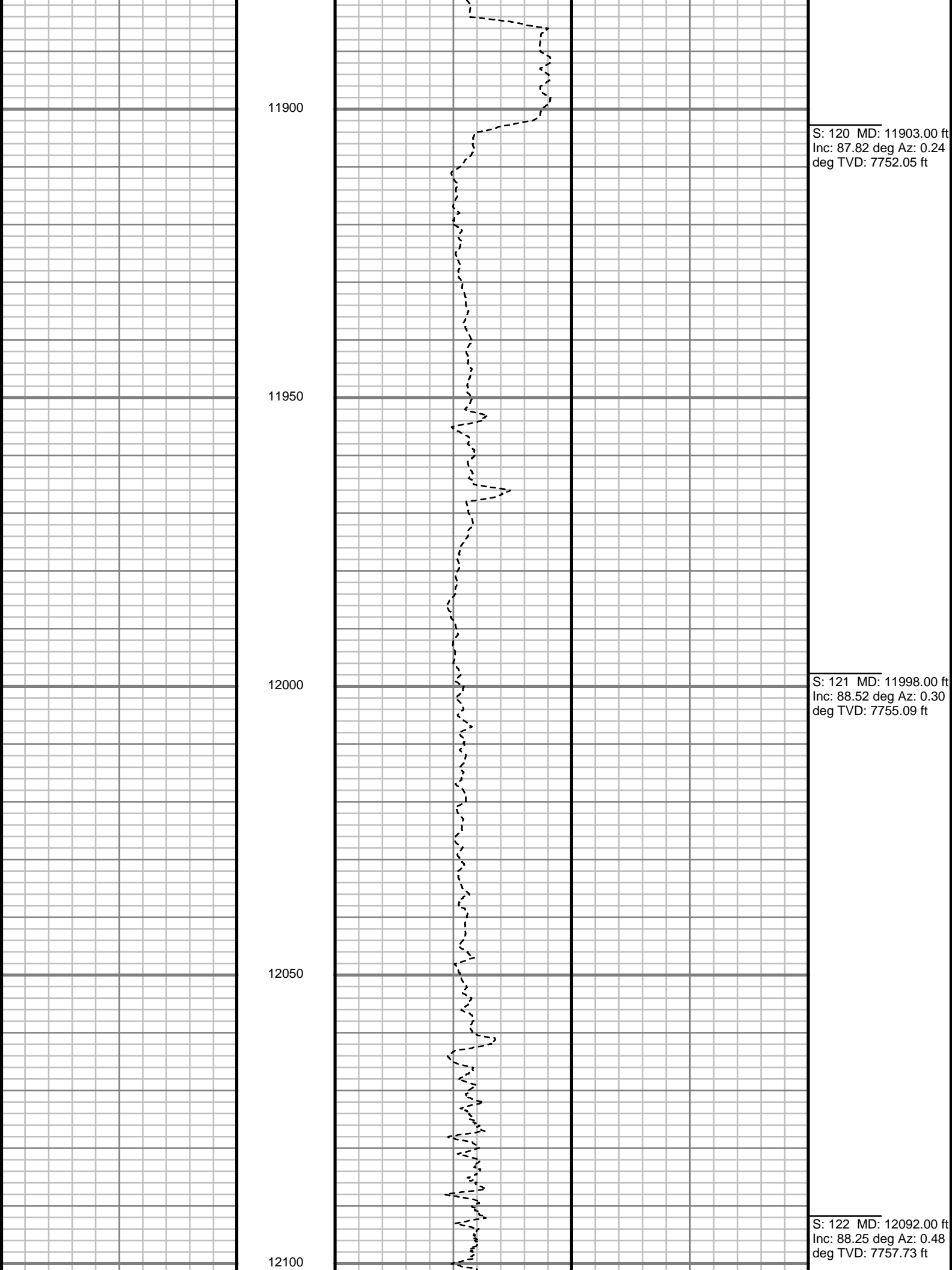
11750

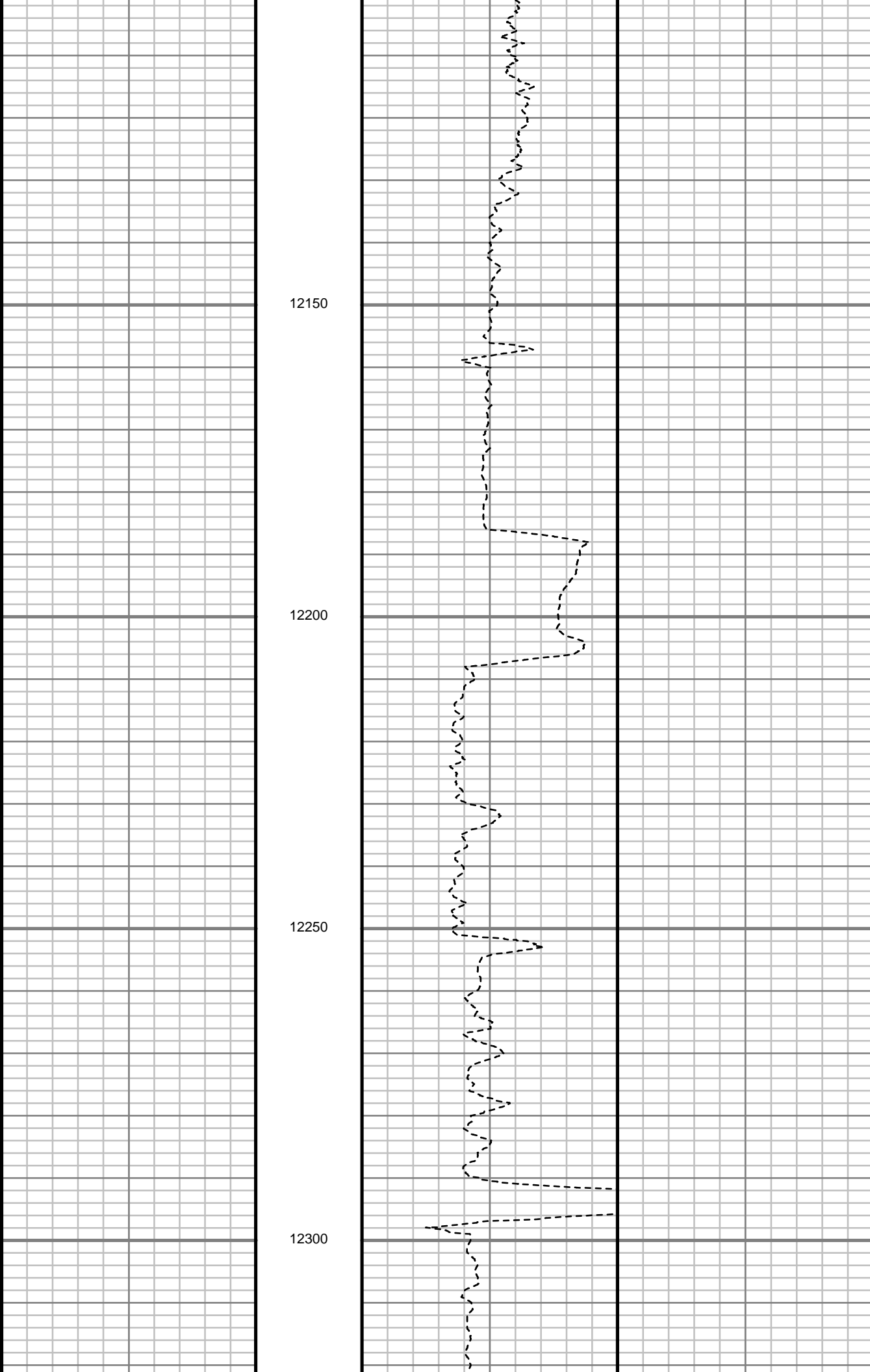
11800

11850

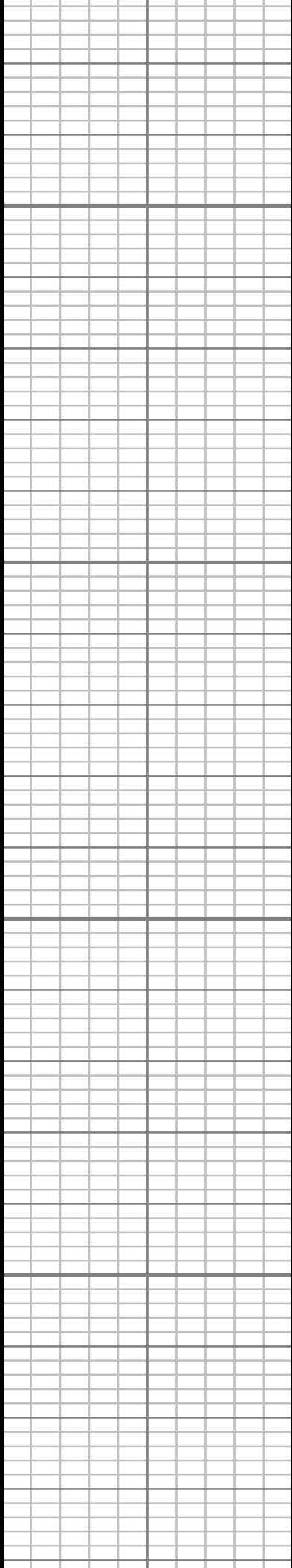
S: 118 MD: 11715.00 ft  
Inc: 88.92 deg Az:  
359.23 deg TVD:  
7748.34 ft

S: 119 MD: 11809.00 ft  
Inc: 89.36 deg Az:  
359.80 deg TVD:  
7749.74 ft





S: 123 MD: 12187.00 ft  
Inc: 88.05 deg Az: 0.43  
deg TVD: 7760.79 ft



12350

12400

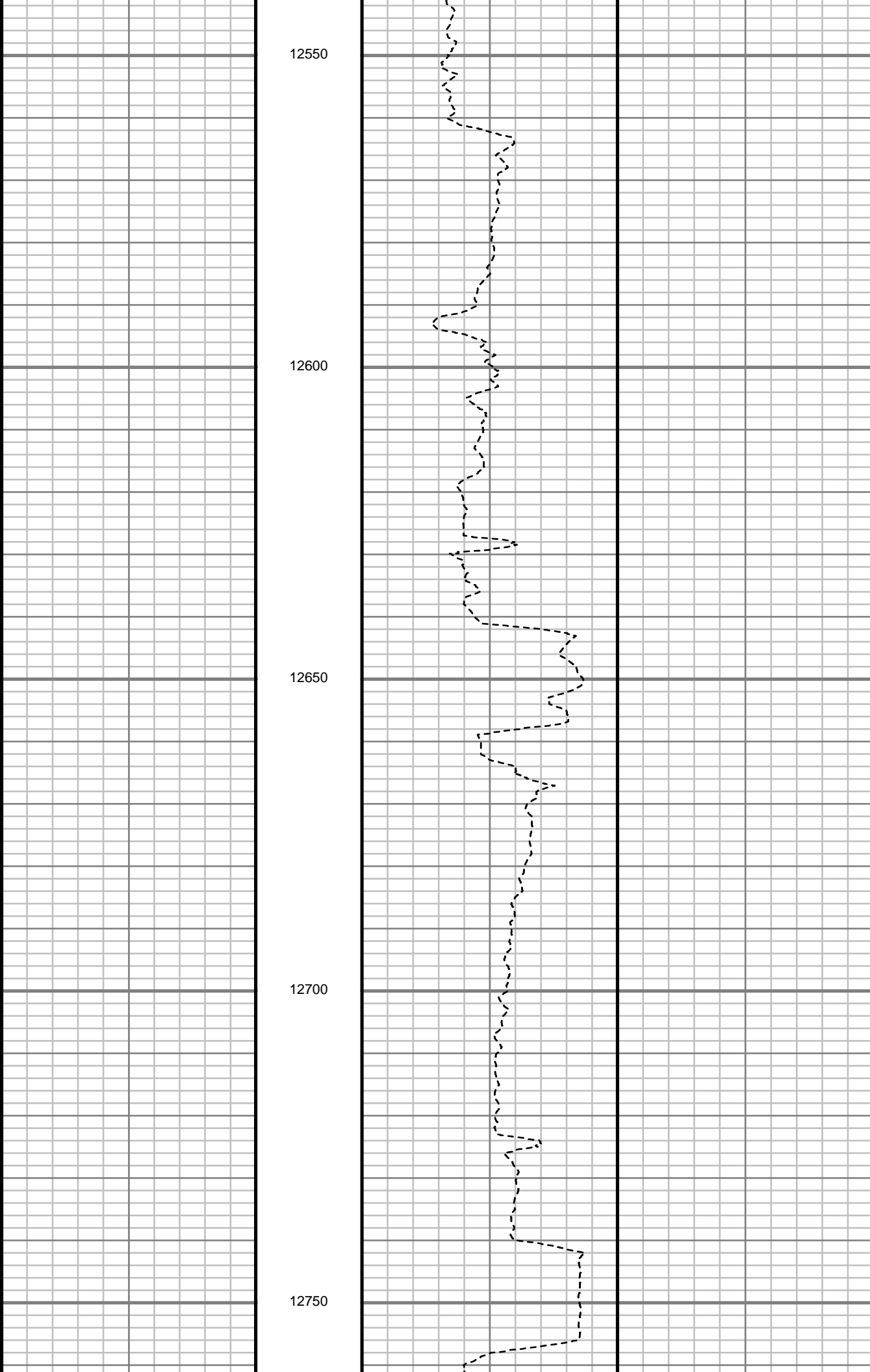
12450

12500



S: 124 MD: 12376.00 ft  
Inc: 89.66 deg Az: 0.88  
deg TVD: 7764.55 ft

S: 125 MD: 12470.00 ft  
Inc: 89.29 deg Az: 0.64  
deg TVD: 7765.41 ft



S: 126 MD: 12659.00 ft  
Inc: 90.77 deg Az: 2.55  
deg TVD: 7765.29 ft



S: 127 MD: 12848.00 ft  
Inc: 88.73 deg Az: 3.17  
deg TVD: 7766.12 ft



Gamma Ray (GR)		
0	Unit = aapi	150

MEASURED DEPTH

1:240 (ft)

Rate of Penetration (ROP)		Tool Temperature (T-TEMP)	Comments
600	Unit = ft/hr	0	
		Unit = °F	
		300	

# Survey Report

<b>Customer Name:</b>	ANADARKO PETROLEUM CORP						
<b>Site Name:</b>	NRC 15-8HZ PAD						
<b>Well Name:</b>	NRC 27C-8HZ						
<b>Survey:</b>	NRC 27N-8HZ						
<b>Survey Date:</b>	5/26/2014						
<b>Magnetic Declination:</b>	8.50 deg						
<b>North Reference:</b>	True North						
<b>Calculation Method:</b>	Minimum Curvature						
<b>Section (VS) Ref:</b>	0.00N (ft), 0.00E (ft), 0.00Azim (deg)						
<b>MD</b> ft	<b>Inc</b> deg	<b>Azim</b> deg	<b>TVD</b> ft	<b>VS</b> ft	<b>+N/-S</b> ft	<b>+E/-W</b> ft	<b>DLS</b> °/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00
125.00	0.68	210.49	125.00	-0.51	-0.51	-0.30	0.68
225.00	0.69	214.56	224.99	-1.52	-1.52	-0.94	0.05
325.00	0.60	204.66	324.98	-2.49	-2.49	-1.50	0.14
425.00	0.60	200.76	424.98	-3.46	-3.46	-1.91	0.04
525.00	0.60	209.23	524.97	-4.40	-4.40	-2.35	0.09
625.00	0.53	209.37	624.97	-5.26	-5.26	-2.83	0.07
725.00	0.30	200.60	724.97	-5.91	-5.91	-3.15	0.24

<b>MD</b> ft	<b>Inc</b> deg	<b>Azim</b> deg	<b>TVD</b> ft	<b>VS</b> ft	<b>+N/-S</b> ft	<b>+E/-W</b> ft	<b>DLS</b> °/100ft
825.00	0.27	172.93	824.96	-6.39	-6.39	-3.21	0.14
925.00	0.27	173.36	924.96	-6.86	-6.86	-3.16	0.00
1025.00	0.29	171.97	1024.96	-7.34	-7.34	-3.09	0.02
1125.00	0.16	180.73	1124.96	-7.73	-7.73	-3.06	0.13
1155.00	0.21	188.88	1154.96	-7.83	-7.83	-3.07	0.19
1280.00	0.07	16.40	1279.96	-7.98	-7.98	-3.08	0.22
1372.00	2.37	175.02	1371.94	-9.83	-9.83	-2.90	2.65
1555.00	9.92	186.64	1553.76	-29.29	-29.29	-4.40	4.16
1646.00	10.01	182.20	1643.39	-44.97	-44.97	-5.61	0.85
1738.00	11.96	175.86	1733.70	-62.47	-62.47	-5.23	2.49
1829.00	13.04	177.56	1822.54	-82.12	-82.12	-4.11	1.25
1920.00	14.11	175.34	1911.00	-103.43	-103.43	-2.77	1.32
2011.00	14.27	166.55	1999.23	-125.41	-125.41	0.74	2.37
2103.00	14.72	164.21	2088.31	-147.68	-147.68	6.56	0.80
2194.00	15.39	161.50	2176.18	-170.25	-170.25	13.53	1.07
2286.00	17.82	162.86	2264.34	-195.28	-195.28	21.55	2.67
2377.00	17.35	161.12	2351.09	-221.42	-221.42	30.05	0.77
2469.00	15.88	164.64	2439.25	-246.54	-246.54	37.82	1.94
2652.00	14.50	186.42	2616.00	-293.49	-293.49	41.89	3.19
2743.00	15.05	175.88	2704.00	-316.60	-316.60	41.47	3.01

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
2838.00	14.32	175.84	2795.90	-340.62	-340.62	43.21	0.77
2932.00	15.32	168.09	2886.78	-364.37	-364.37	46.62	2.36
3026.00	18.08	166.40	2976.80	-390.71	-390.71	52.61	2.98
3121.00	17.71	168.49	3067.21	-419.20	-419.20	58.96	0.78
3215.00	18.09	172.27	3156.66	-447.67	-447.67	63.78	1.30
3404.00	13.03	171.16	3338.68	-497.82	-497.82	71.00	2.68
3498.00	13.61	170.02	3430.15	-519.18	-519.18	74.55	0.68
3687.00	13.08	184.41	3614.10	-562.42	-562.42	76.76	1.77
3781.00	14.49	181.12	3705.39	-584.79	-584.79	75.71	1.71
3876.00	16.09	173.34	3797.03	-609.75	-609.75	77.00	2.73
4065.00	14.48	158.65	3979.41	-657.78	-657.78	88.65	2.21
4159.00	13.31	164.83	4070.67	-679.17	-679.17	95.76	2.00
4347.00	13.95	174.05	4253.39	-722.61	-722.61	103.77	1.20
4442.00	15.40	175.30	4345.29	-746.57	-746.57	105.99	1.57
4536.00	16.65	179.42	4435.64	-772.48	-772.48	107.15	1.80
4725.00	14.49	180.43	4617.69	-823.21	-823.21	107.25	1.15
4914.00	18.00	175.70	4799.12	-875.99	-875.99	109.26	1.98
5103.00	13.18	175.99	4981.12	-926.64	-926.64	112.96	2.55
5197.00	9.03	173.89	5073.34	-944.67	-944.67	114.50	4.43

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
5386.00	1.95	145.31	5261.37	-962.09	-962.09	117.91	3.90
5574.00	2.80	22.94	5449.29	-960.49	-960.49	121.52	2.22
5669.00	2.69	31.60	5544.18	-956.46	-956.46	123.59	0.45
5763.00	2.21	27.42	5638.09	-952.97	-952.97	125.58	0.55
5952.00	0.48	298.82	5827.04	-949.35	-949.35	126.56	1.19
6046.00	0.68	342.68	5921.04	-948.63	-948.63	126.05	0.50
6140.00	0.31	288.14	6015.04	-948.02	-948.02	125.64	0.60
6234.00	0.71	296.44	6109.03	-947.68	-947.68	124.88	0.43
6329.00	0.58	348.43	6204.03	-946.95	-946.95	124.25	0.61
6423.00	1.00	253.21	6298.02	-946.72	-946.72	123.37	1.27
6518.00	1.74	135.38	6393.01	-947.98	-947.98	123.59	2.50
6612.00	0.88	141.23	6486.98	-949.56	-949.56	125.05	0.92
6706.00	0.23	262.30	6580.98	-950.15	-950.15	125.32	1.08
6801.00	0.03	69.22	6675.98	-950.17	-950.17	125.16	0.27
6895.00	2.02	141.59	6769.96	-951.45	-951.45	126.21	2.13
6989.00	1.80	170.45	6863.91	-954.21	-954.21	127.49	1.04
7084.00	0.69	107.84	6958.89	-955.86	-955.86	128.28	1.69
7178.00	0.34	305.23	7052.88	-955.87	-955.87	128.59	1.08
7225.00	4.57	358.18	7099.83	-953.92	-953.92	128.42	9.31
7273.00	8.98	0.43	7147.49	-948.26	-948.26	128.39	9.19

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
7320.00	10.80	2.45	7193.79	-940.19	-940.19	128.60	3.95
7367.00	13.55	358.49	7239.72	-930.29	-930.29	128.65	6.11
7414.00	17.58	352.26	7284.99	-917.74	-917.74	127.55	9.28
7461.00	23.37	349.87	7329.01	-901.52	-901.52	124.95	12.45
7508.00	28.19	352.13	7371.31	-881.33	-881.33	121.79	10.46
7556.00	32.20	355.63	7412.80	-857.33	-857.33	119.26	9.11
7603.00	34.36	356.57	7452.09	-831.61	-831.61	117.51	4.72
7650.00	38.26	358.07	7489.96	-803.81	-803.81	116.22	8.51
7697.00	43.32	359.00	7525.53	-773.13	-773.13	115.45	10.84
7744.00	45.13	358.86	7559.21	-740.36	-740.36	114.84	3.86
7791.00	49.00	1.38	7591.22	-705.96	-705.96	114.94	9.12
7839.00	53.81	1.96	7621.15	-668.47	-668.47	116.04	10.06
7886.00	58.29	1.69	7647.39	-629.51	-629.51	117.28	9.54
7933.00	63.14	1.52	7670.38	-588.55	-588.55	118.42	10.32
7980.00	66.86	1.35	7690.24	-545.97	-545.97	119.49	7.93
8027.00	70.58	1.98	7707.29	-502.20	-502.20	120.76	8.00
8074.00	74.35	0.74	7721.45	-457.41	-457.41	121.82	8.42
8122.00	77.95	1.08	7732.94	-410.82	-410.82	122.57	7.53
8169.00	82.43	0.30	7740.94	-364.52	-364.52	123.12	9.67

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
8328.00	88.92	359.41	7752.92	-206.06	-206.06	122.71	4.12
8422.00	89.63	0.54	7754.10	-112.07	-112.07	122.67	1.42
8516.00	90.47	0.63	7754.02	-18.07	-18.07	123.63	0.90
8697.00	91.27	1.43	7751.27	162.87	162.87	126.89	0.63
8791.00	90.91	0.76	7749.48	256.84	256.84	128.69	0.82
8886.00	91.95	0.23	7747.11	351.80	351.80	129.51	1.23
8980.00	91.75	359.75	7744.08	445.75	445.75	129.49	0.55
9075.00	90.61	358.90	7742.13	540.73	540.73	128.37	1.50
9169.00	87.25	356.86	7743.89	634.63	634.63	124.90	4.18
9263.00	88.86	357.79	7747.09	728.47	728.47	120.52	1.98
9357.00	90.84	357.64	7747.34	822.39	822.39	116.78	2.11
9452.00	87.62	355.13	7748.61	917.17	917.17	110.80	4.30
9546.00	89.09	356.12	7751.31	1010.85	1010.85	103.63	1.89
9641.00	87.68	356.32	7753.99	1105.61	1105.61	97.37	1.50
9735.00	91.38	358.48	7754.76	1199.48	1199.48	93.12	4.55
9829.00	87.95	356.61	7755.31	1293.38	1293.38	89.09	4.16
9923.00	91.08	359.47	7756.11	1387.30	1387.30	85.88	4.51
10017.00	92.56	1.33	7753.13	1481.24	1481.24	86.54	2.53
10111.00	92.32	359.46	7749.13	1575.15	1575.15	87.19	2.00
10206.00	91.72	359.34	7745.78	1670.09	1670.09	86.19	0.65

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	%/100ft
10300.00	91.44	0.33	7743.19	1764.05	1764.05	85.92	1.09
10394.00	90.24	2.75	7741.81	1858.00	1858.00	88.44	2.88
10583.00	91.65	3.32	7738.70	2046.70	2046.70	98.43	0.81
10772.00	90.34	2.02	7735.43	2235.46	2235.46	107.23	0.98
10866.00	89.03	1.89	7735.95	2329.40	2329.40	110.45	1.40
11054.00	89.33	0.88	7738.65	2517.32	2517.32	114.99	0.56
11149.00	89.29	359.97	7739.79	2612.31	2612.31	115.69	0.96
11338.00	89.50	359.78	7741.79	2801.30	2801.30	115.28	0.15
11432.00	88.35	0.66	7743.55	2895.28	2895.28	115.64	1.53
11526.00	89.93	1.29	7744.96	2989.26	2989.26	117.24	1.81
11620.00	88.52	0.08	7746.22	3083.24	3083.24	118.36	1.97
11715.00	88.92	359.23	7748.34	3178.21	3178.21	117.80	0.99
11809.00	89.36	359.80	7749.74	3272.20	3272.20	117.00	0.76
11903.00	87.82	0.24	7752.05	3366.16	3366.16	117.03	1.71
11998.00	88.52	0.30	7755.09	3461.11	3461.11	117.48	0.74
12092.00	88.25	0.48	7757.73	3555.07	3555.07	118.12	0.35
12187.00	88.05	0.43	7760.79	3650.02	3650.02	118.88	0.22
12376.00	89.66	0.88	7764.55	3838.97	3838.97	121.04	0.88
12470.00	89.29	0.64	7765.41	3932.95	3932.95	122.28	0.47

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
12659.00	90.77	2.55	7765.29	4121.87	4121.87	127.54	1.28
12848.00	88.73	3.17	7766.12	4310.62	4310.62	136.98	1.13

5" = 100' FEET MD