



GAMMA RAY

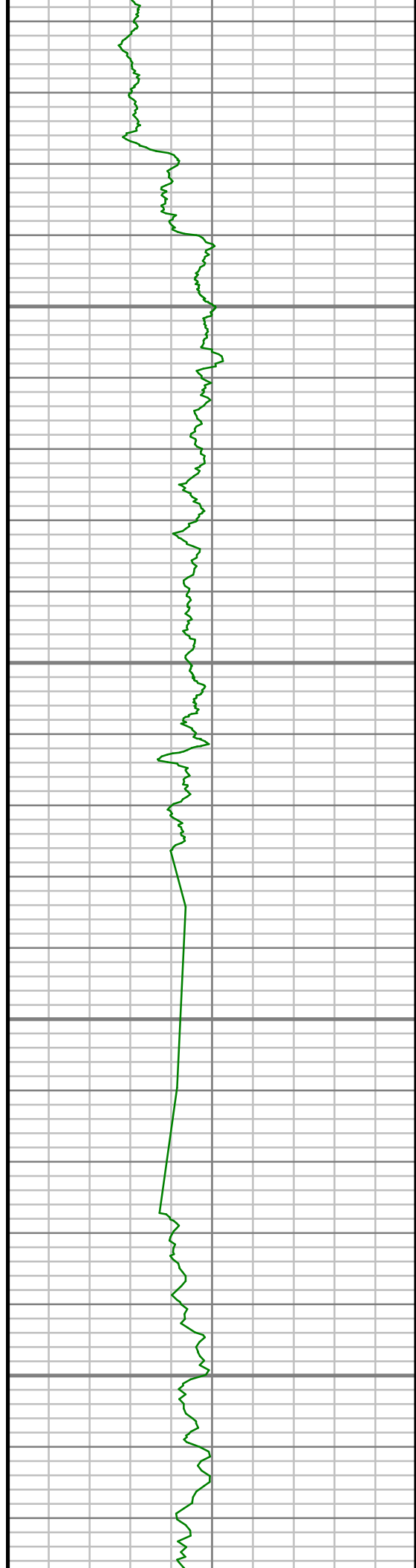
5" = 100' FEET TWD

COMPANY : ENCANA OIL AND GAS (U.S.A.) INC WELL : NEWNAM 2G-32H-C264 FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-39781						COMPANY : ENCANA OIL AND GAS (U.S.A.) INC WELL : NEWNAM 2G-32H-C264 FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-39781					
DEPTH REF. : RKB REF. HEIGHT : 13.000 ft GROUND LEVEL : 4954.000 ft			RKB to Ground Level G.L. to MEAN SEA LEVEL			WELL LOCATION LAT:40°6'5.278"N LONG:104°34'42.578"W N:1281147.80 ft E:3257774.47 ft SEC:32 TWP:2N RANGE:64W			OTHER SERVICES DIRECTIONAL ROP		
BOREHOLE RECORD						DEVIATION RECORD					
HOLE SIZE in	FROM ft	TO ft	INCLINATION deg	FROM ft	TO ft						
12.25	0	1045	0 - 10	0	1045						
8.75	1045	7485	10 - 83	1045	7485						
6.125	7485	11475	83 - 92	7485	11475						
CASING RECORD											
CASING SIZE in	FROM ft	TO ft									
9.625	0	1033									
7	0	7467									
DRILLING CO. : ENSIGN RLG: 124						LMD UNIT NO. : C70-EW4#83DISTRICT: CASPER SPUD DATE: 12/20/2014 LMD START DATE: 12/22/2014 DEPTH: 5000 ft LMD END DATE: 12/27/2014 DEPTH: 11475 ft TOTAL DEPTH: 11475 ft					

Remarks
ENCANA OIL AND GAS (U.S.A.) INC PRODUCTION AFE# 13179014
SCIENTIFIC DRILLING INTERNATIONAL JOB# 236059
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: PULSER = 128-115 / CONT = 218 / MWD EYE = 1065
BIT TO SENSOR OFFSET: SURVEY = 62.12 FT.
RUN #2: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 128-210 / CONT = 629 / MWD EYE = 0082 / GAMMA RAY = 1168
BIT TO SENSOR OFFSETS: SURVEY = 61.59 FT. / GAMMA RAY = 56.96 FT.
RUN #3: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 78-057 / CONT = 218 / MWD EYE = 1065 / GAMMA RAY = 1194
BIT TO SENSOR OFFSETS: SURVEY = 60.76 FT. / GAMMA RAY = 56.13 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.

ENCANA OIL AND GAS (U.S.A.) INC NEWNAM 2G-32H-C264 WATTENBERG FIELD WELD COUNTY, COLORADO 05-123-39781		
Gamma Ray (GR) Unit = aapi	TRUE VERTICAL DEPTH 1:240 (ft)	Rate of Penetration (ROP) Unit = ft/hr

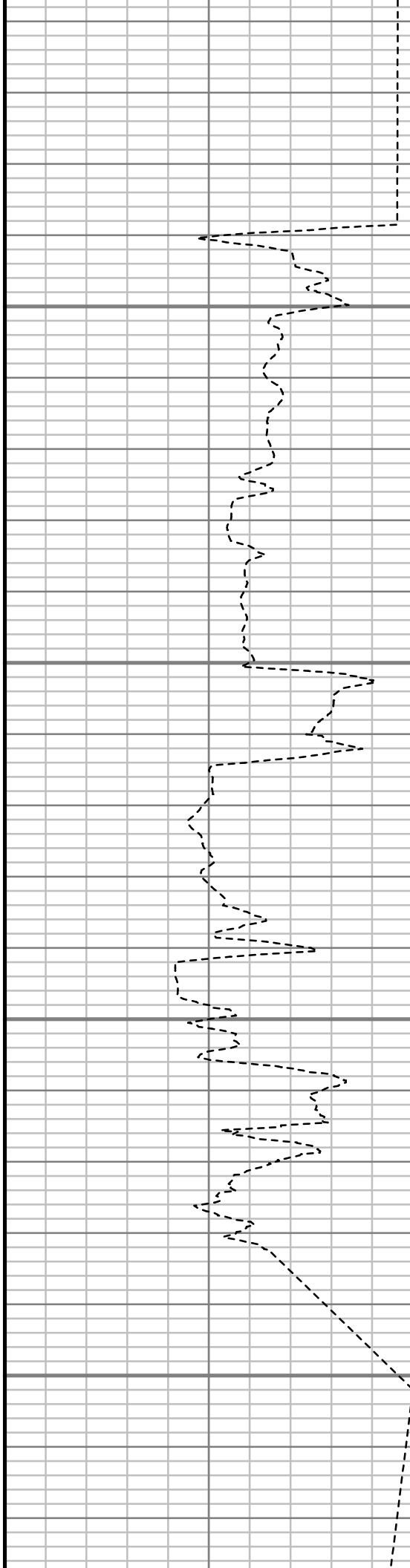


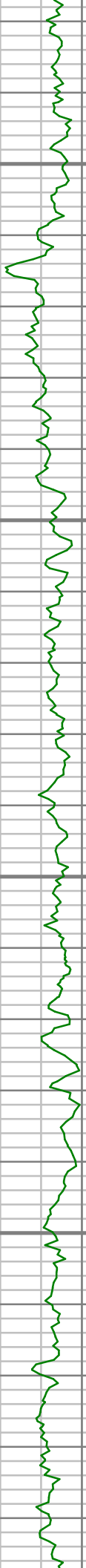
1050

1100

1150

1200



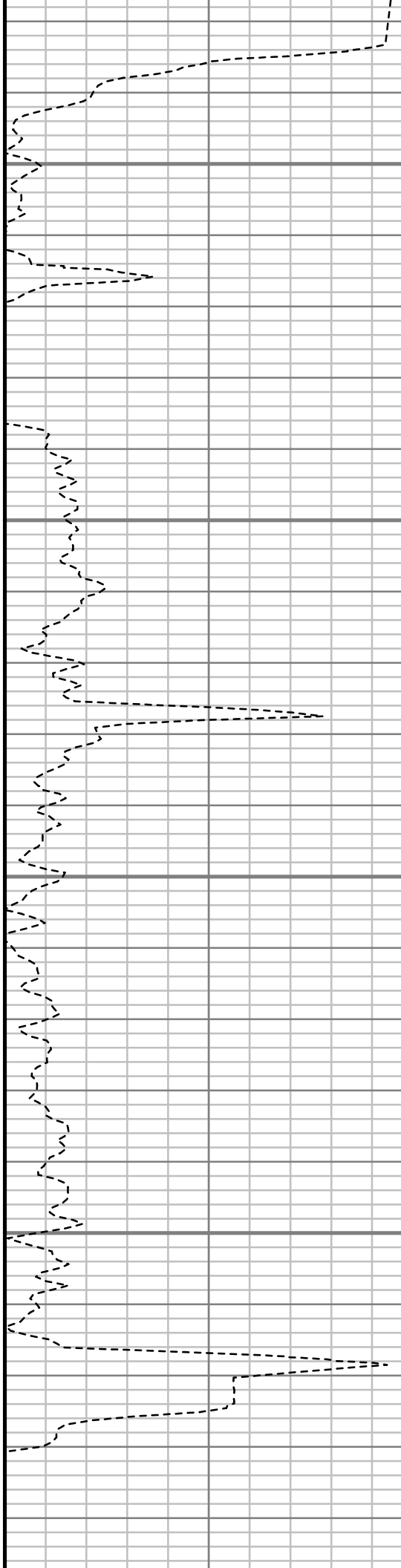


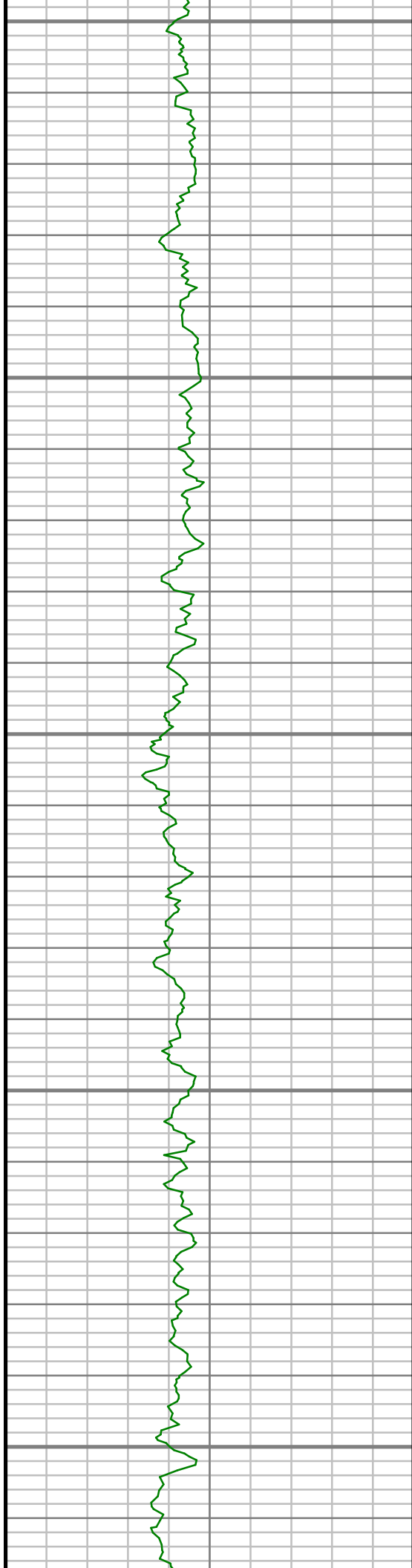
1250

1300

1350

1400





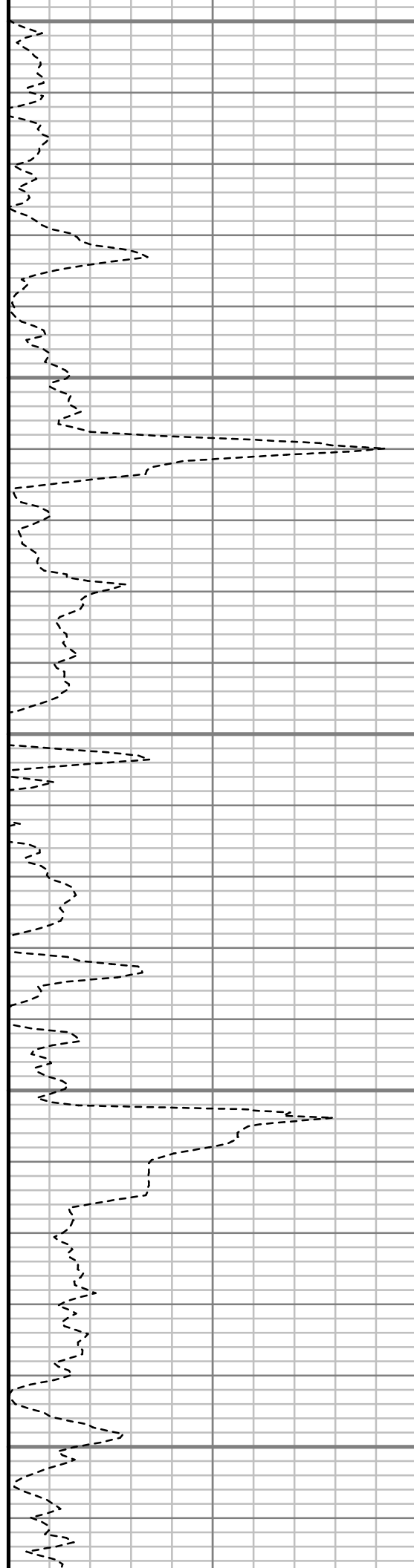
1450

1500

1550

1600

1650



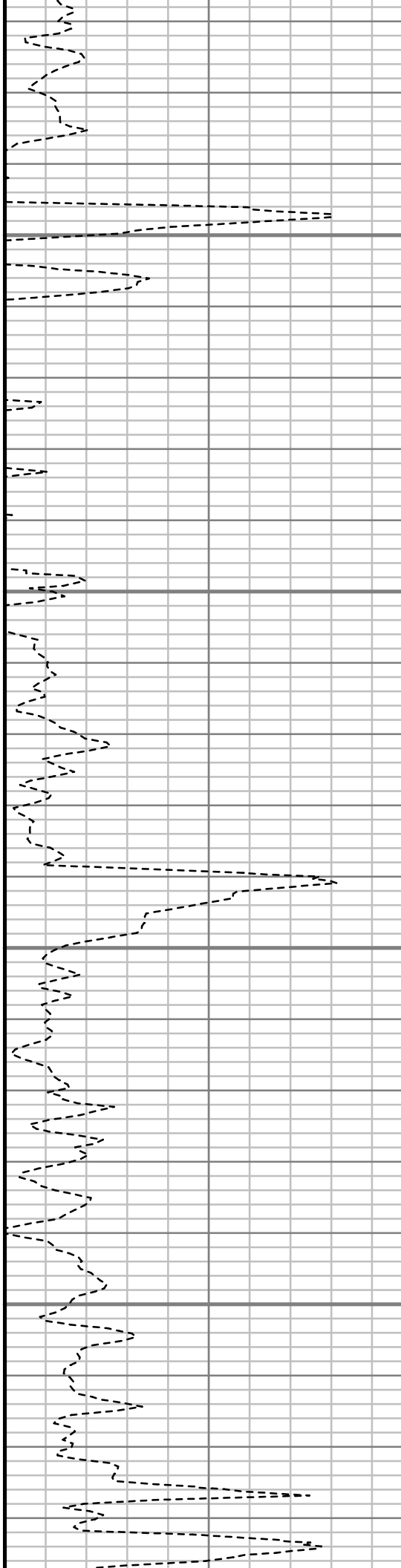


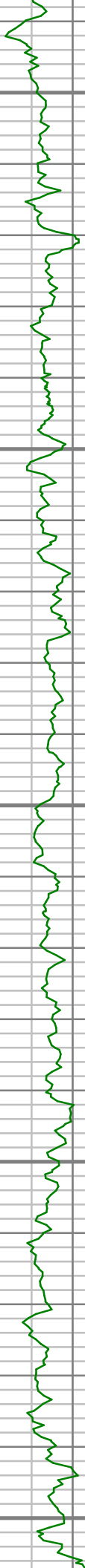
1700

1750

1800

1850





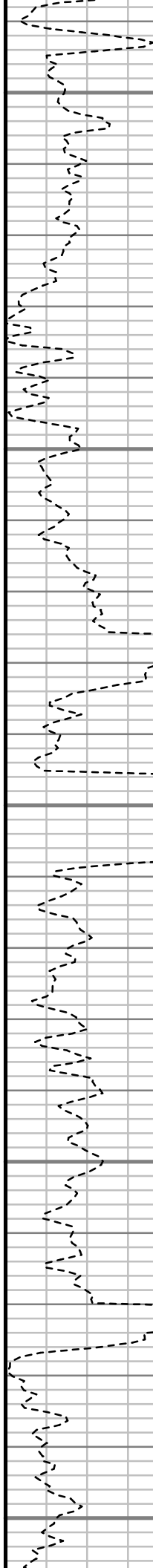
1900

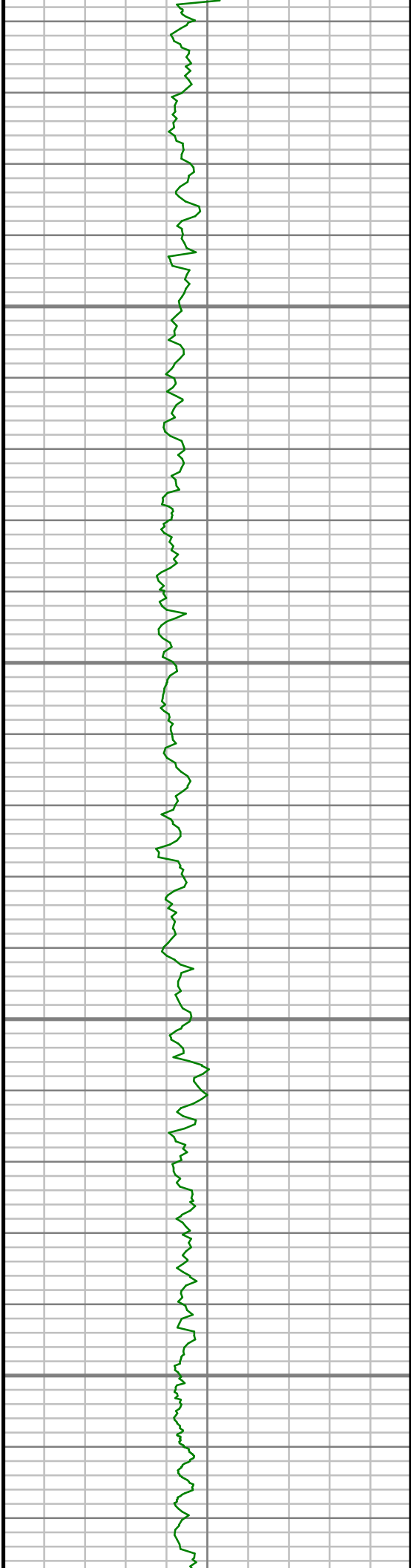
1950

2000

2050

2100



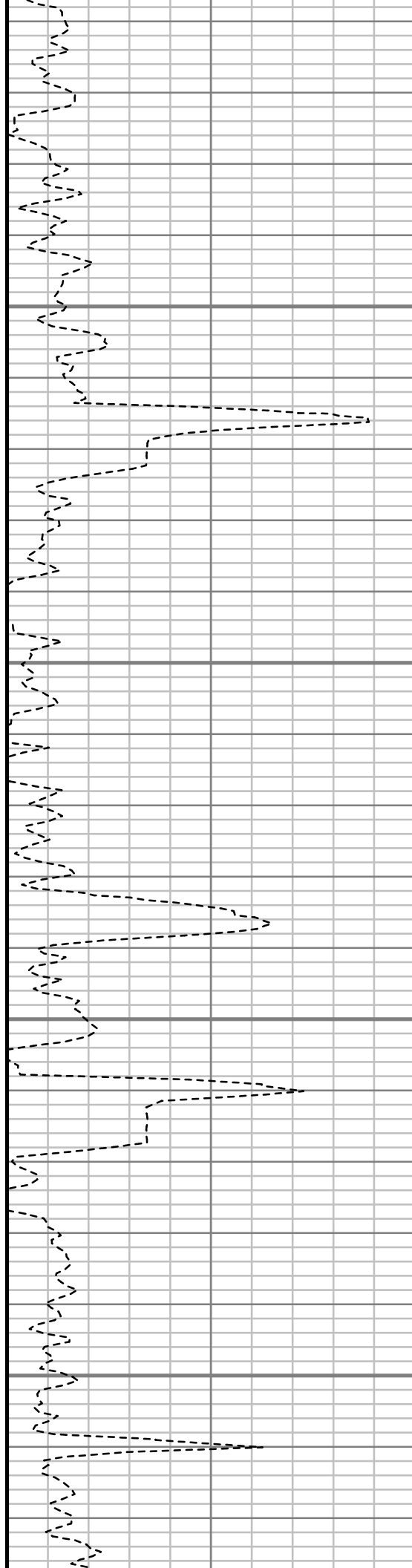


2150

2200

2250

2300



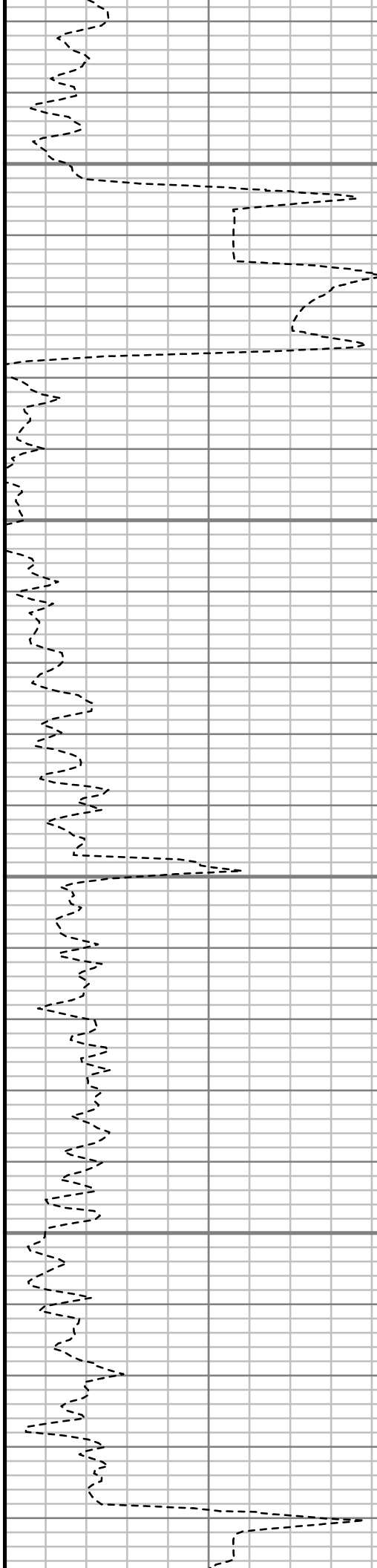


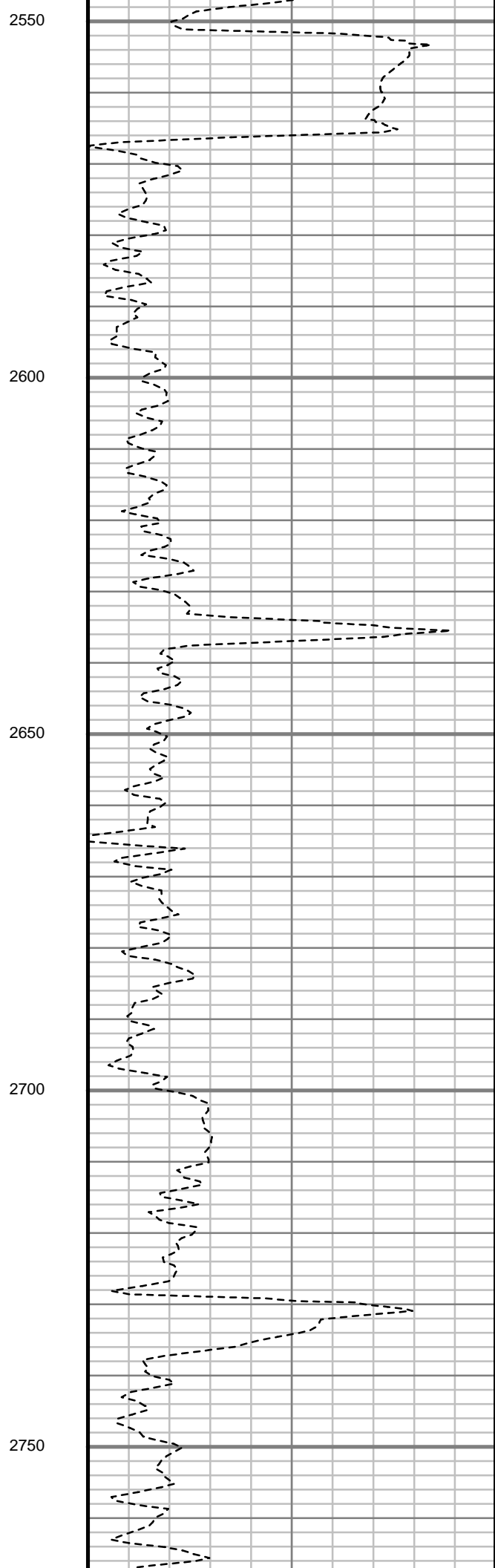
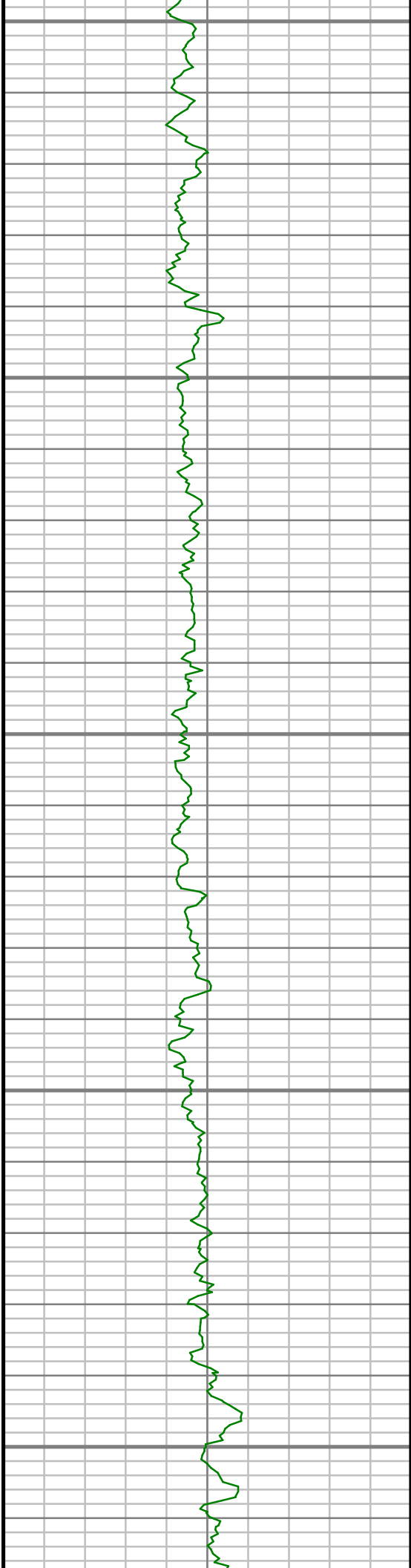
2350

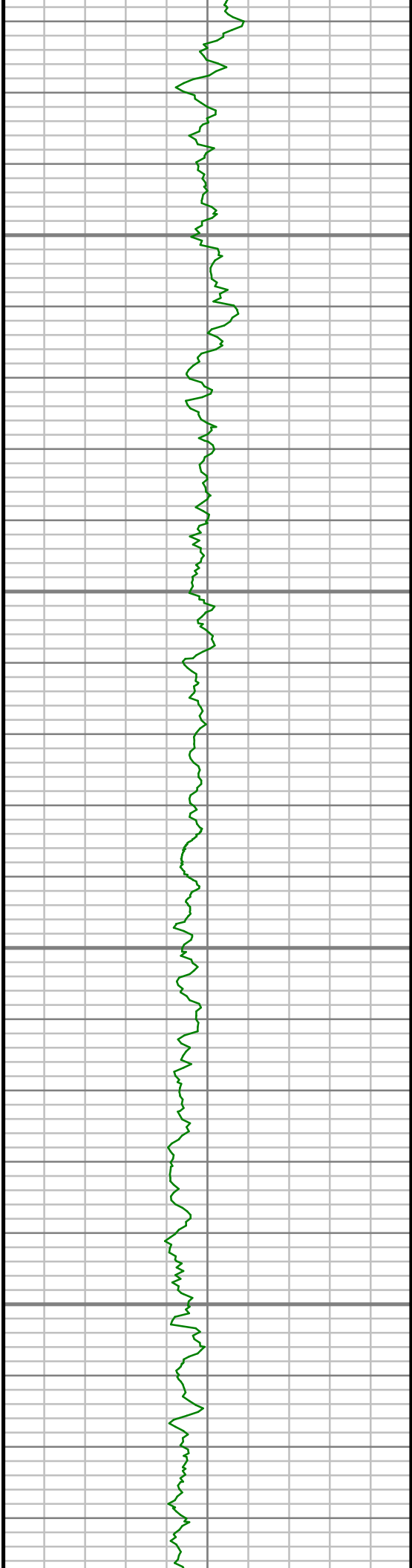
2400

2450

2500





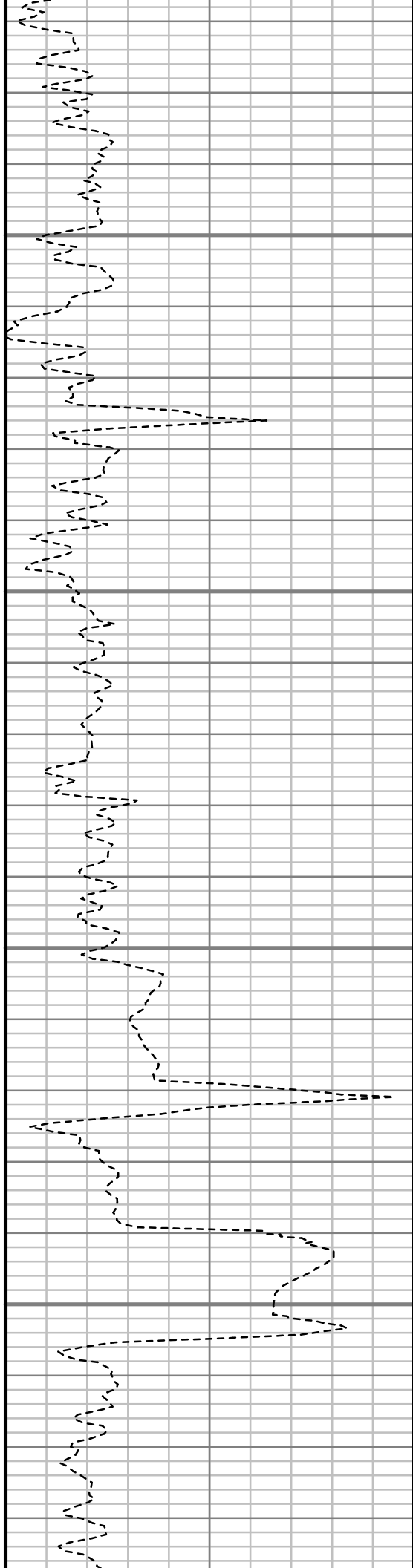


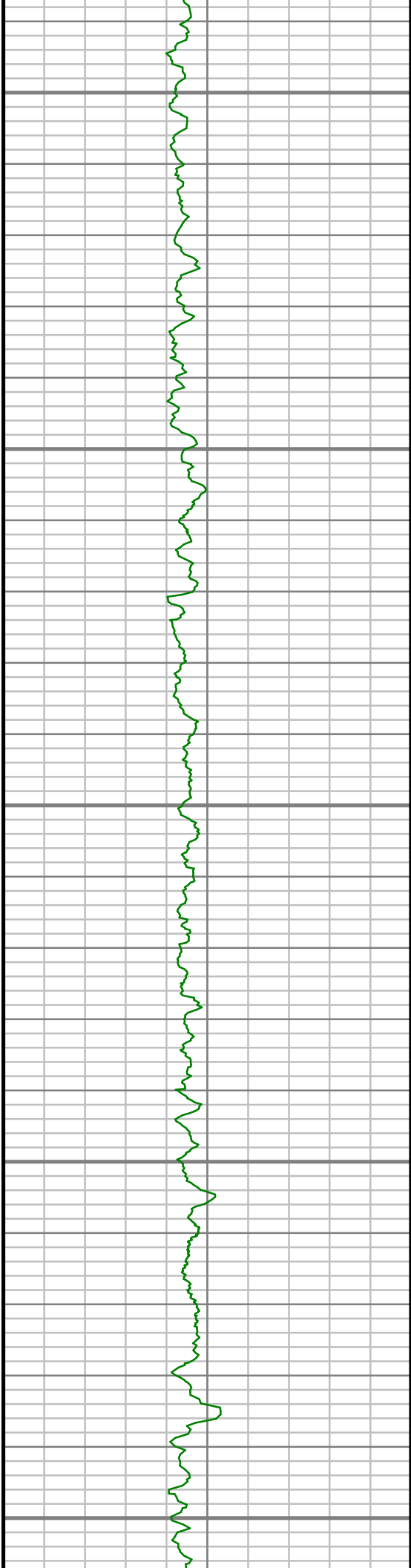
2800

2850

2900

2950





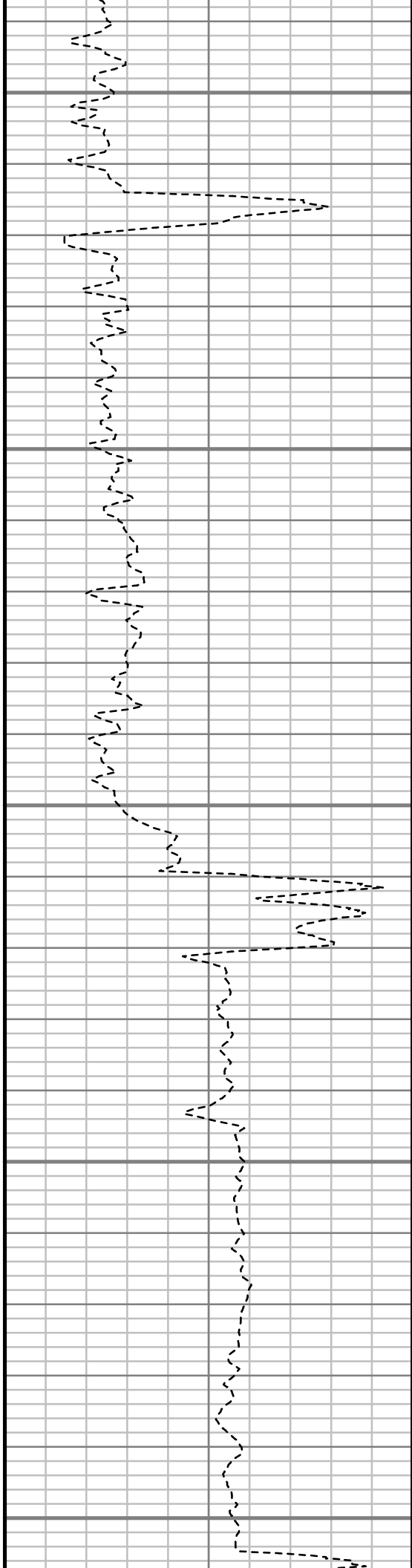
3000

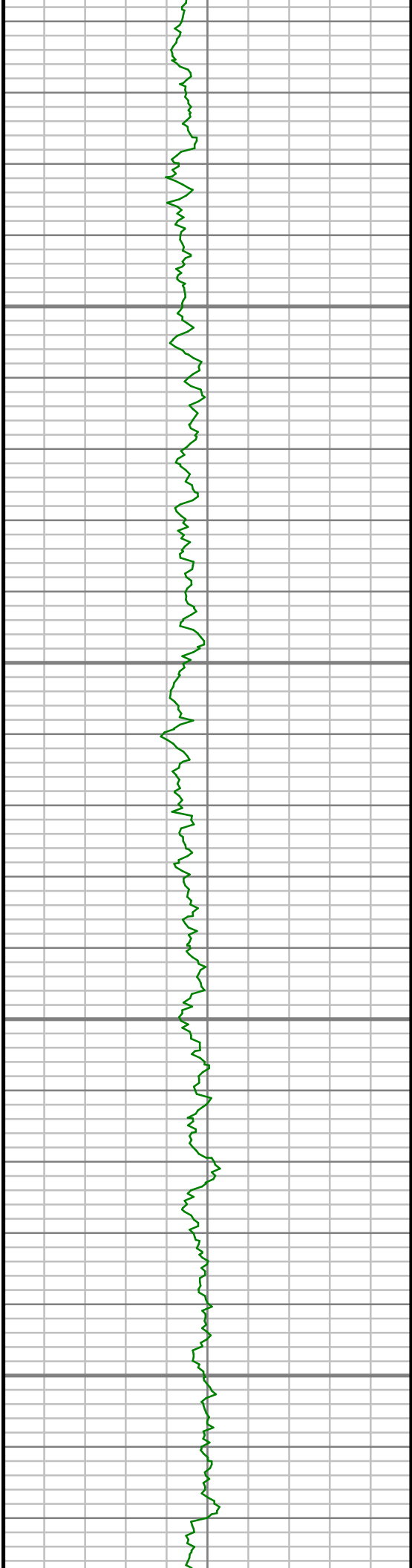
3050

3100

3150

3200



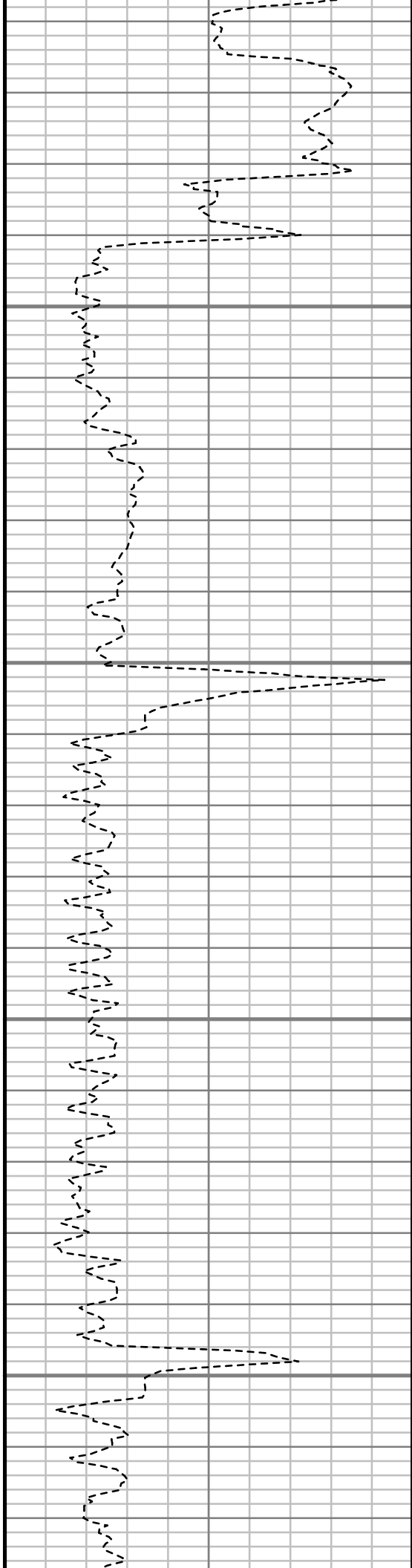


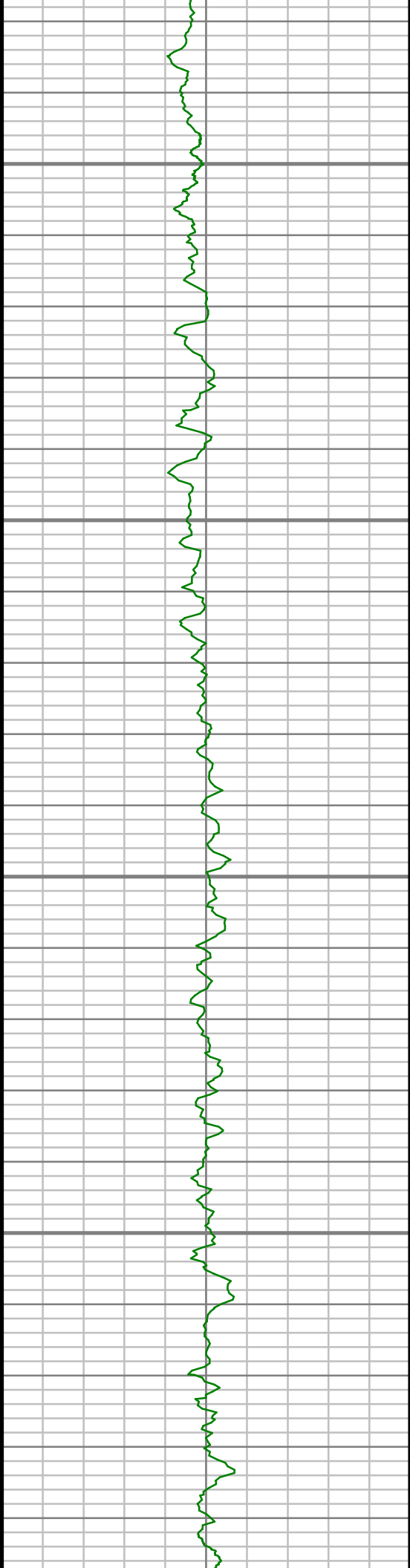
3250

3300

3350

3400



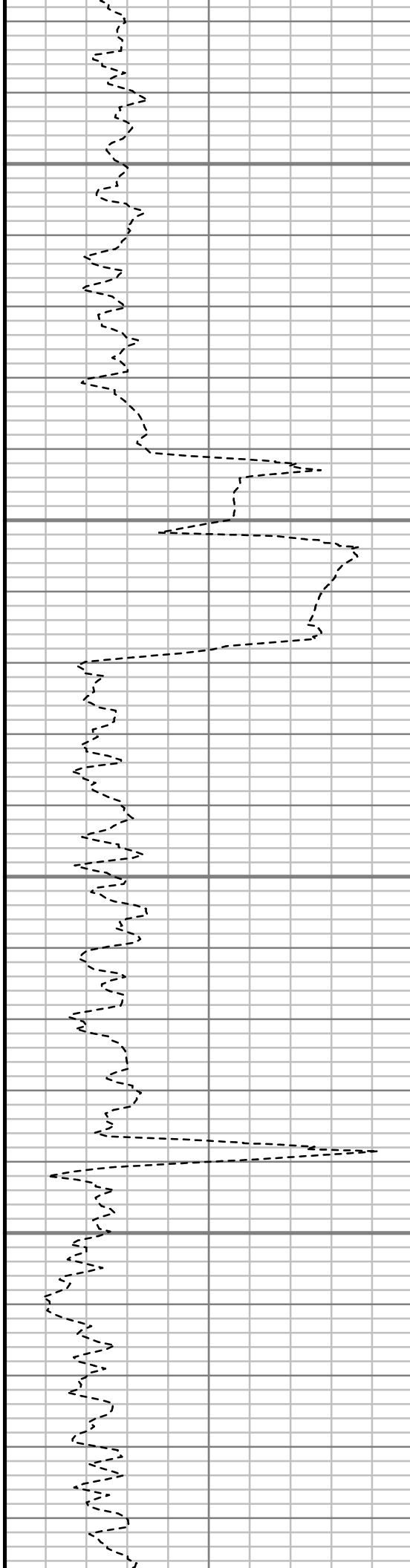


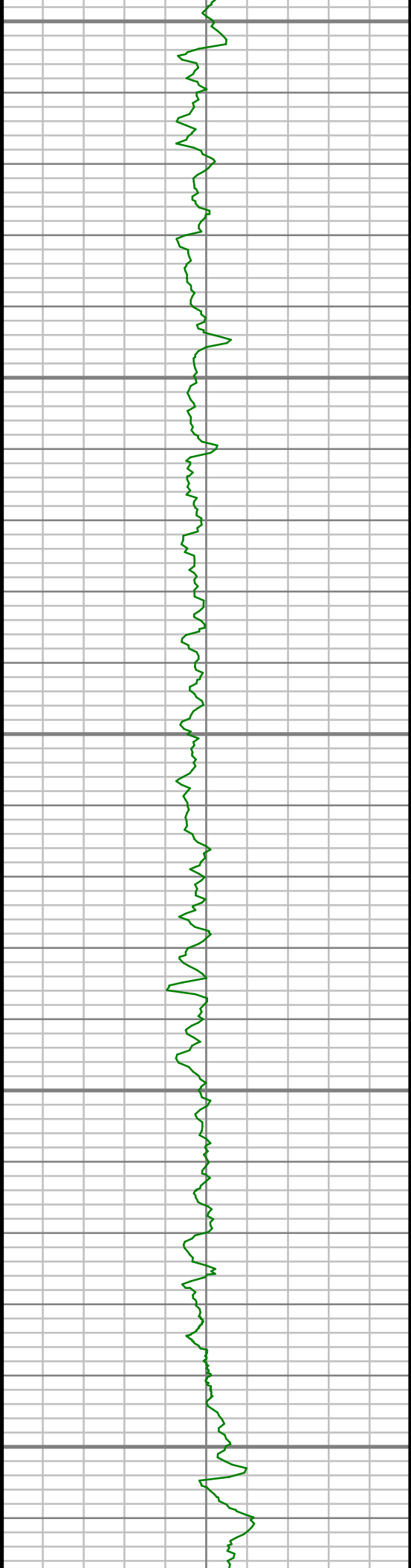
3450

3500

3550

3600





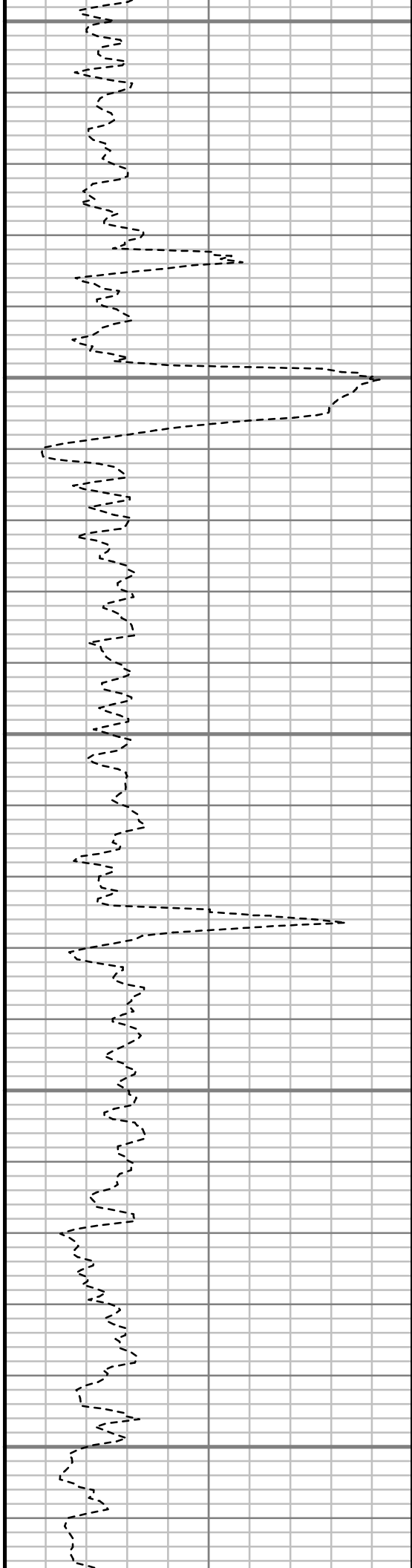
3650

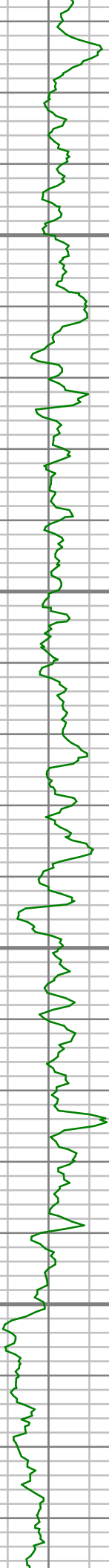
3700

3750

3800

3850



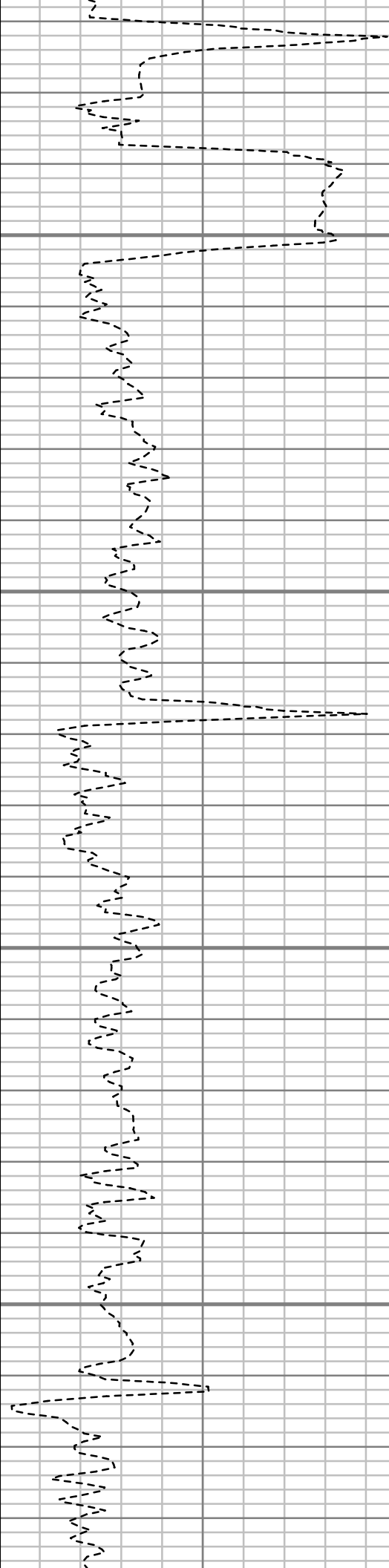


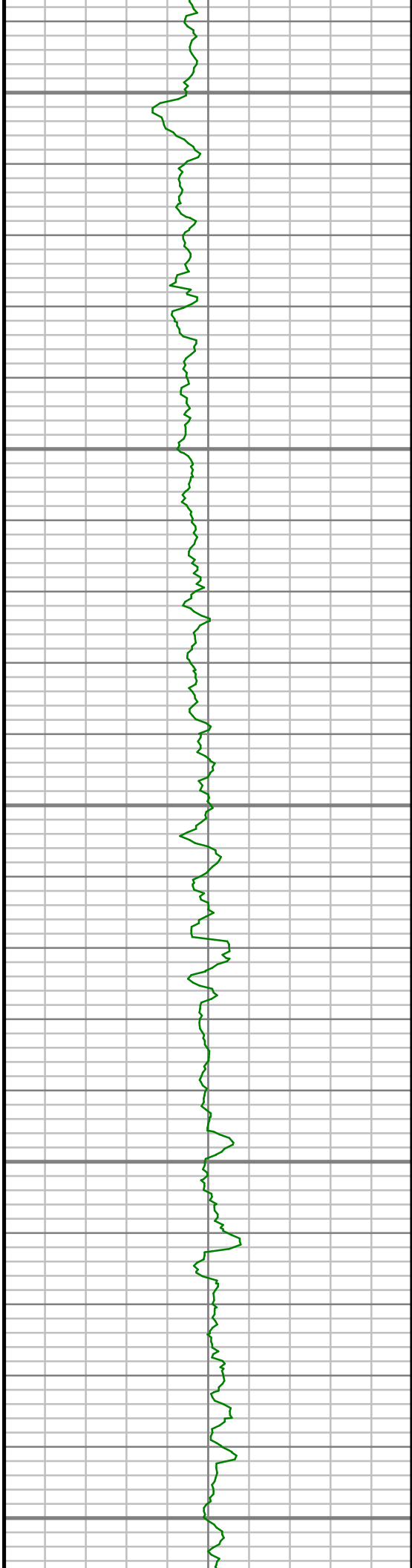
3900

3950

4000

4050





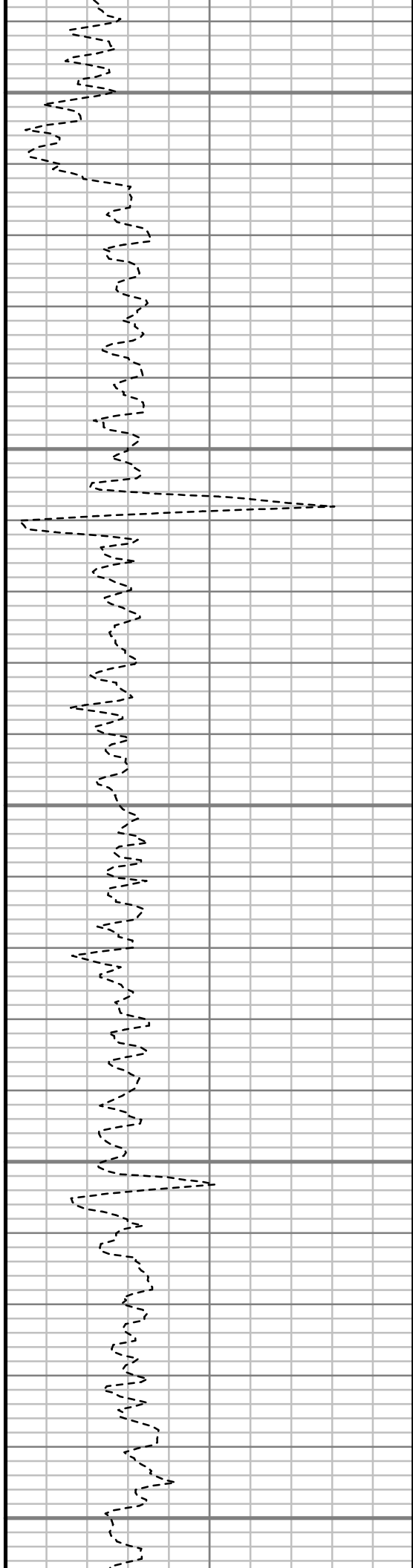
4100

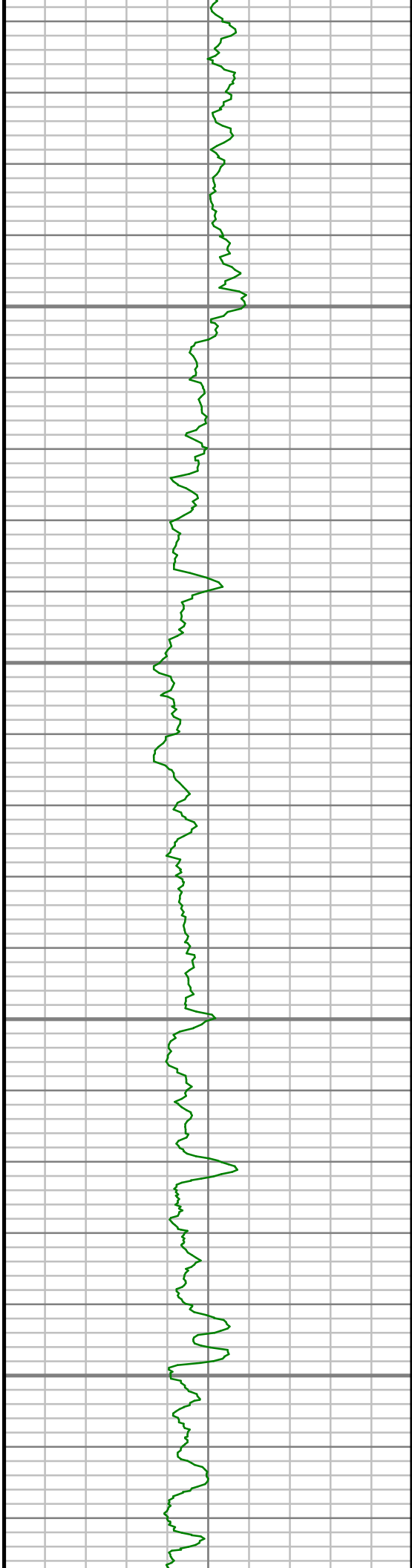
4150

4200

4250

4300



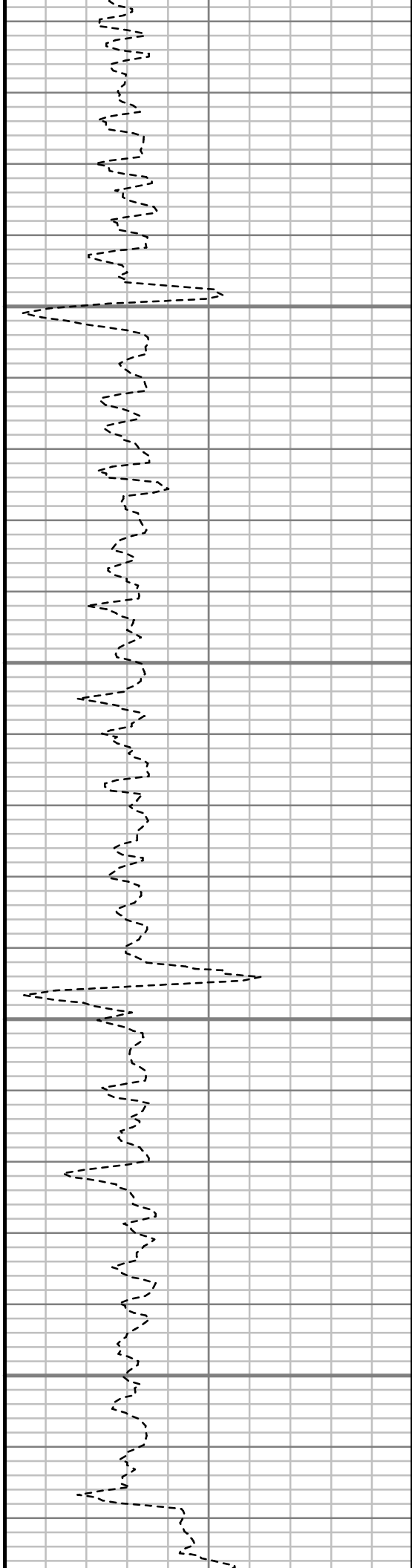


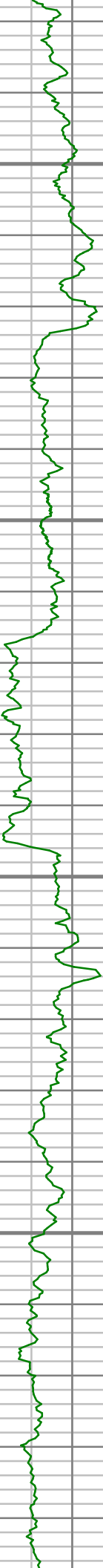
4350

4400

4450

4500



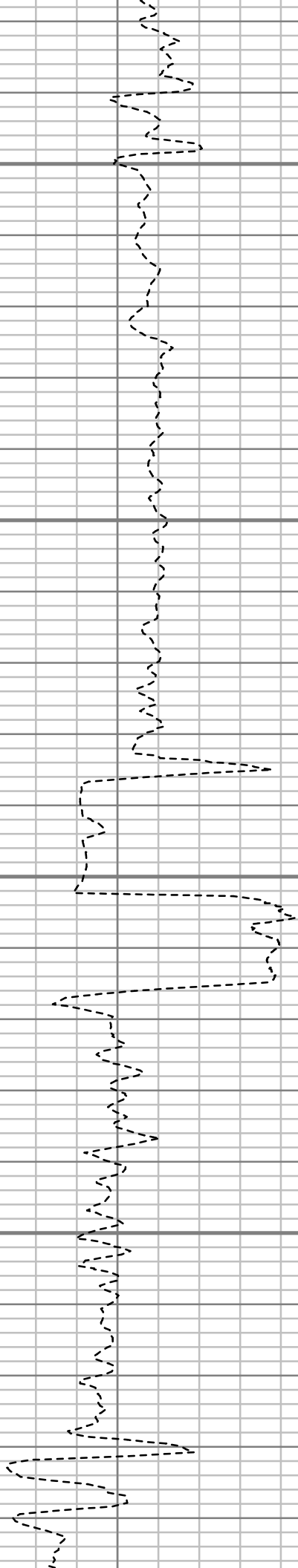


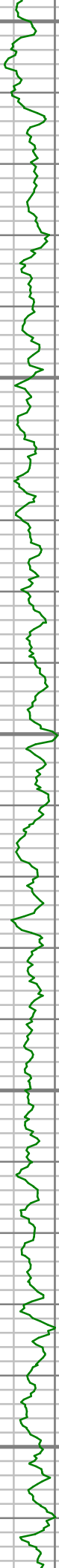
4550

4600

4650

4700





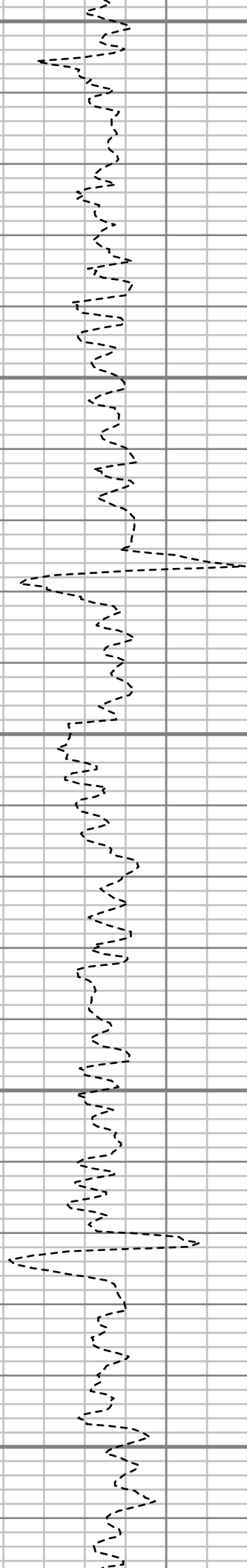
4750

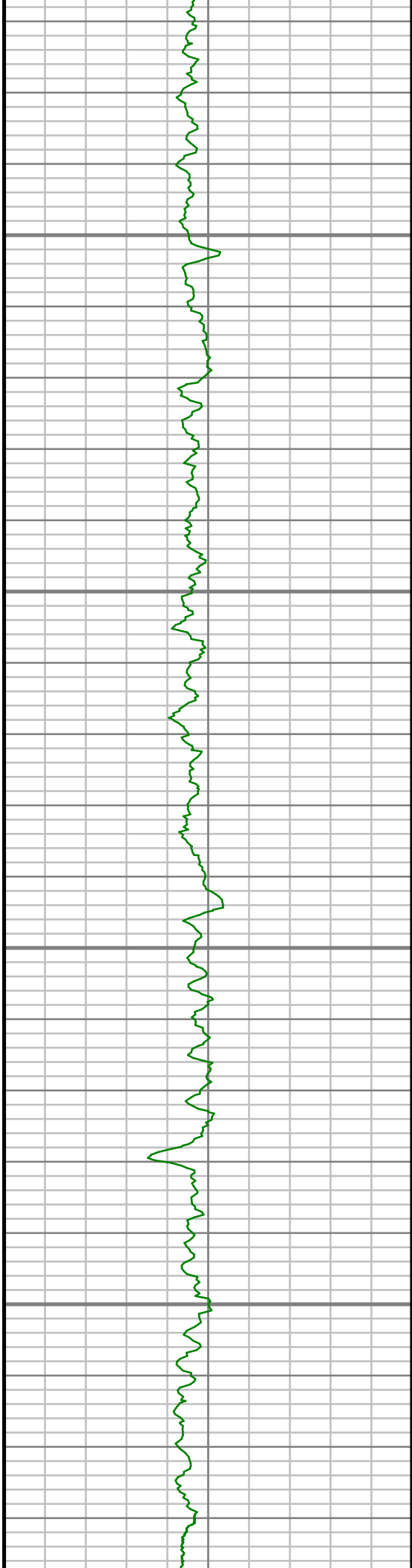
4800

4850

4900

4950



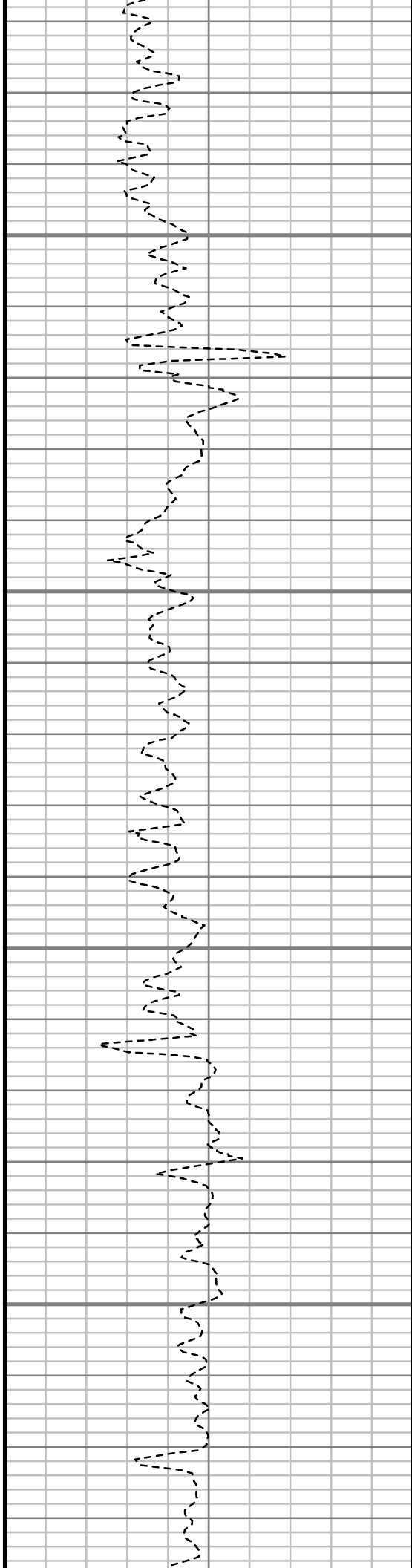


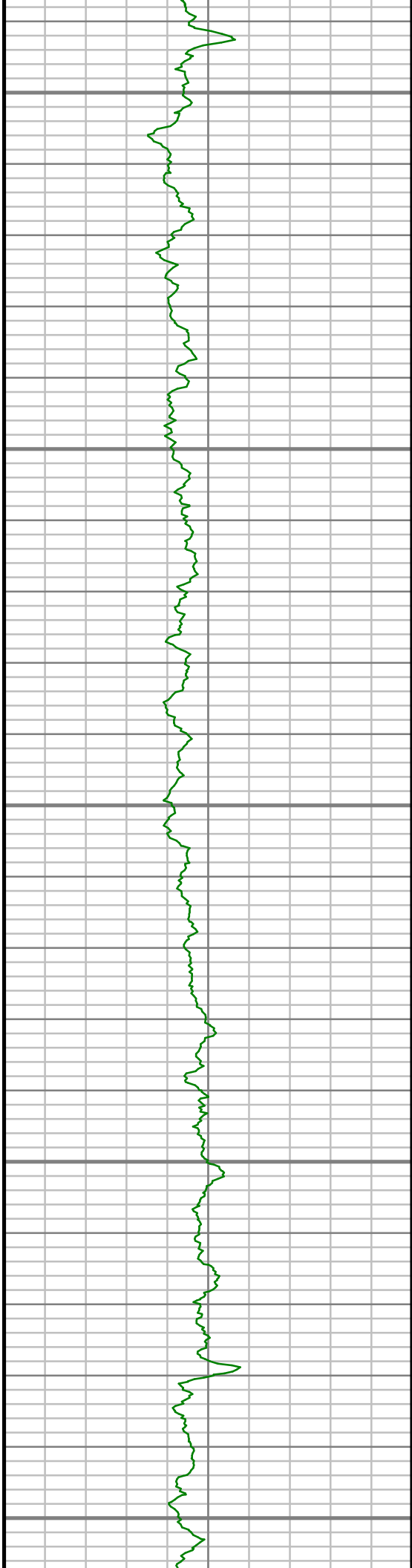
5000

5050

5100

5150





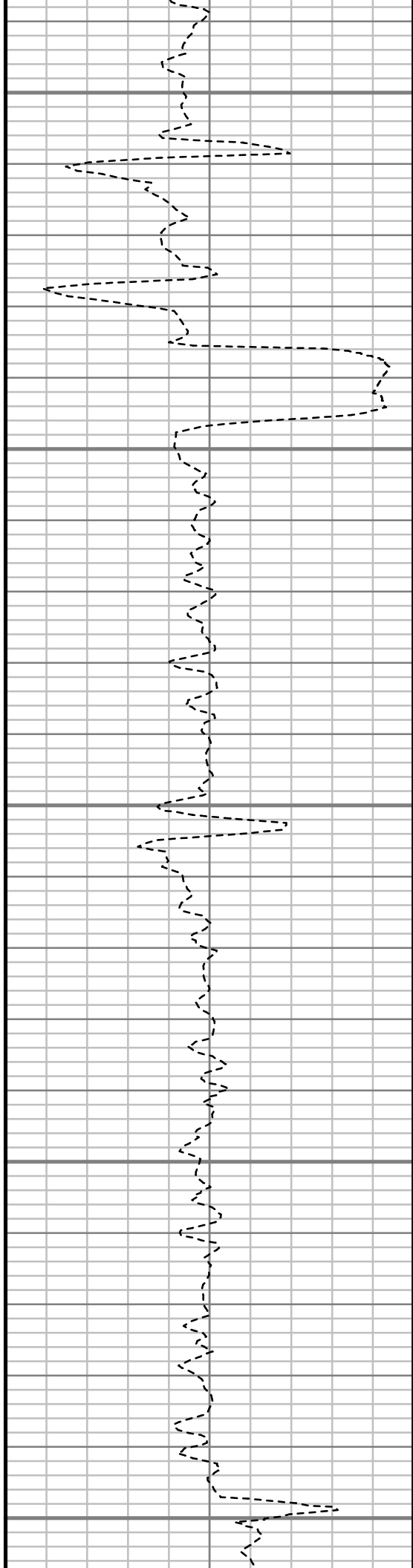
5200

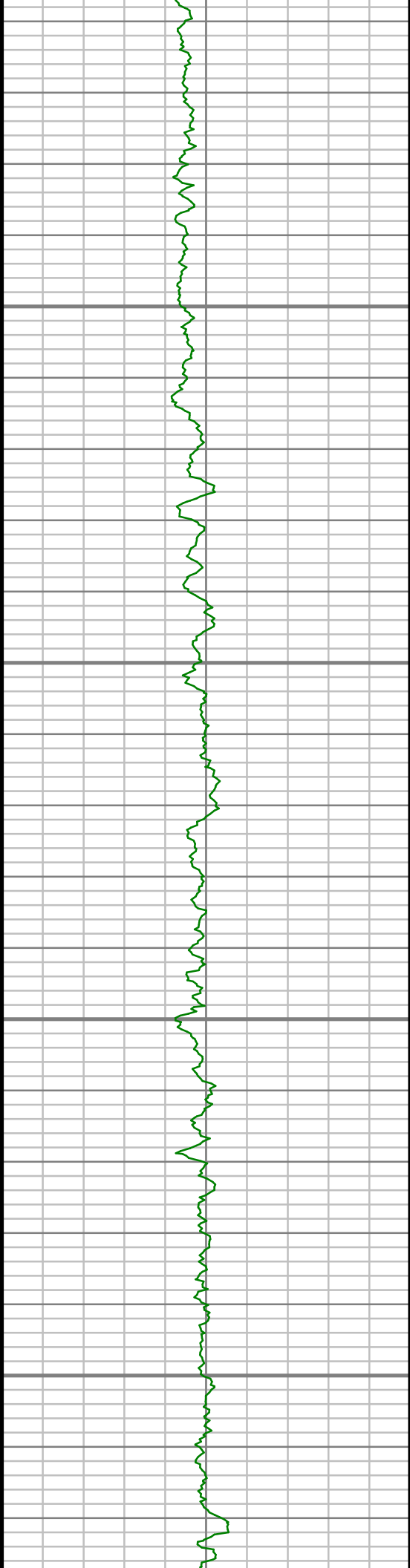
5250

5300

5350

5400



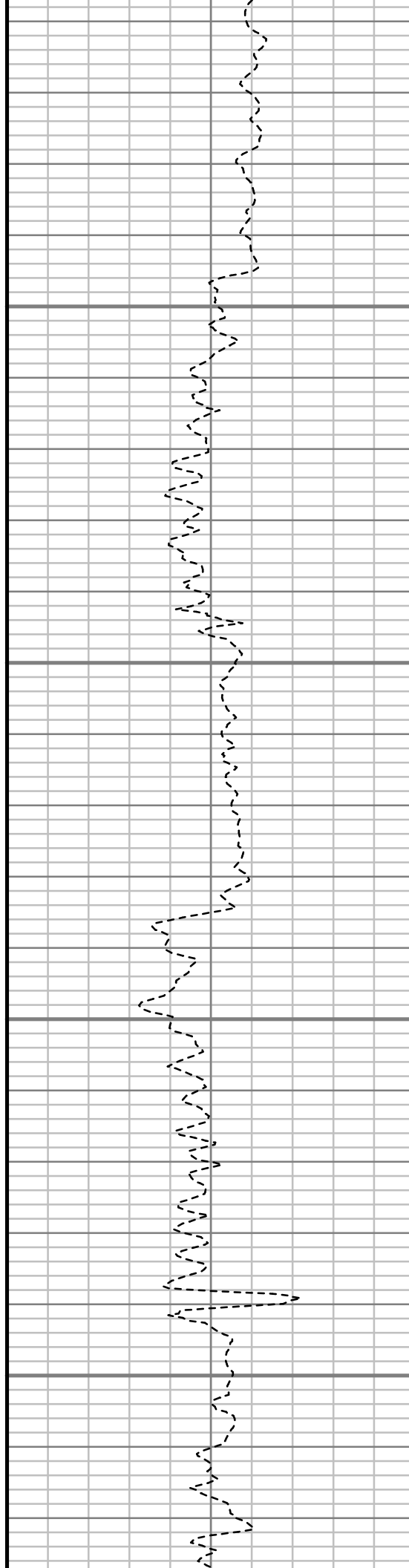


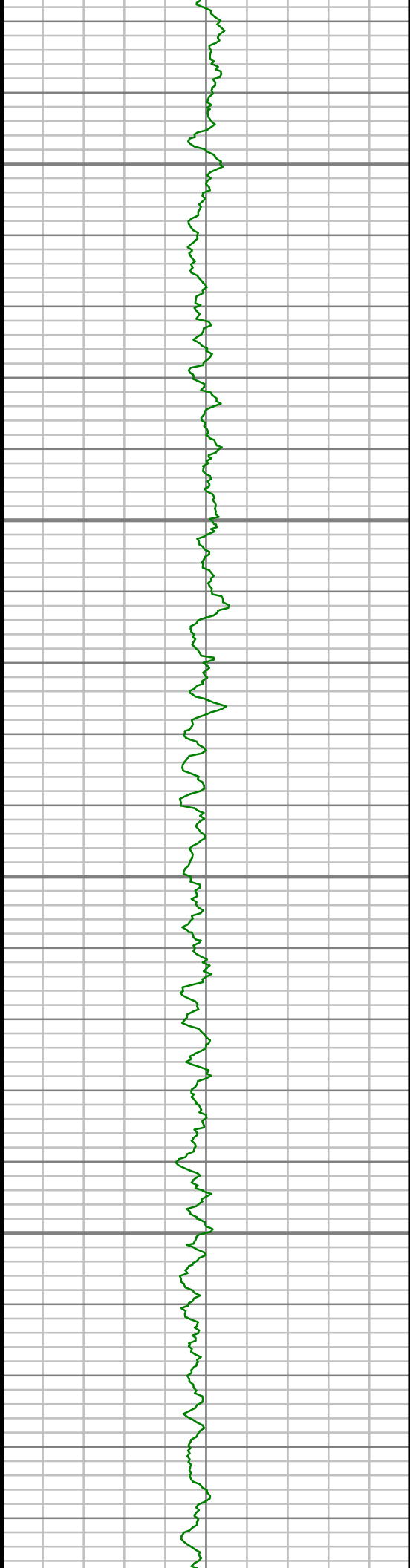
5450

5500

5550

5600



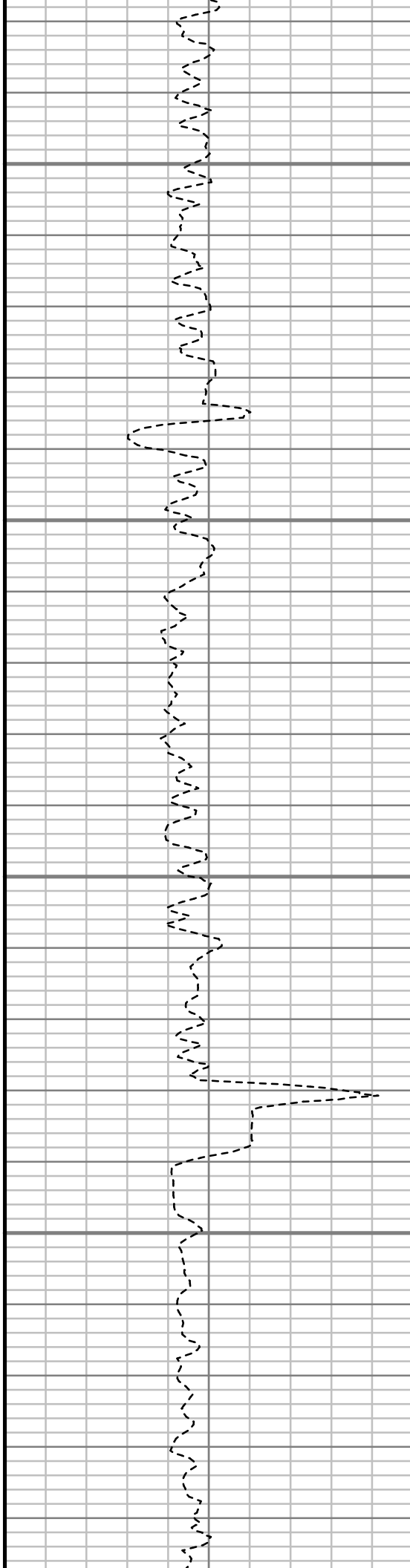


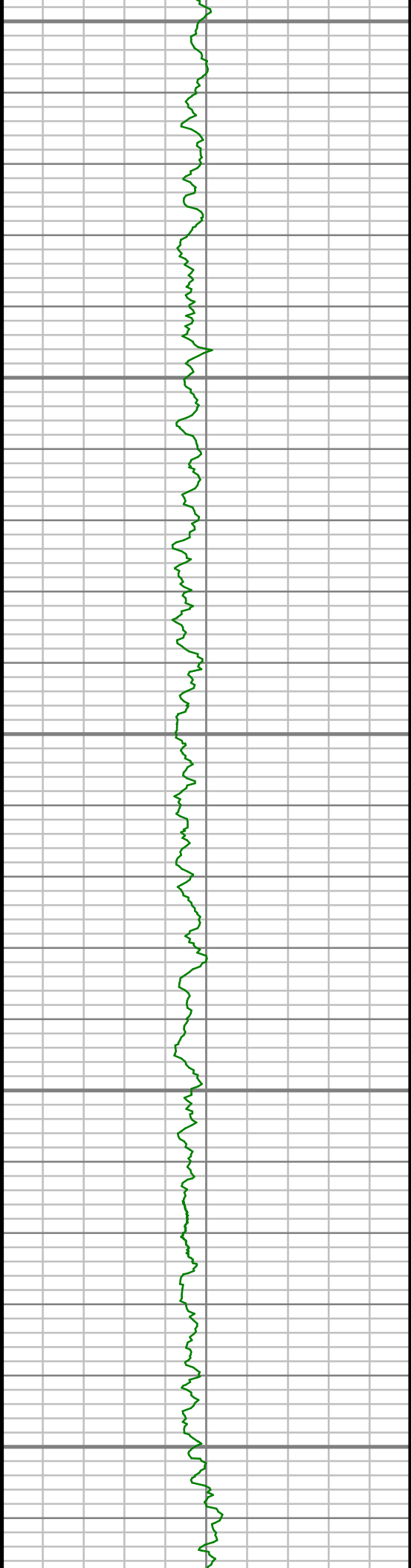
5650

5700

5750

5800





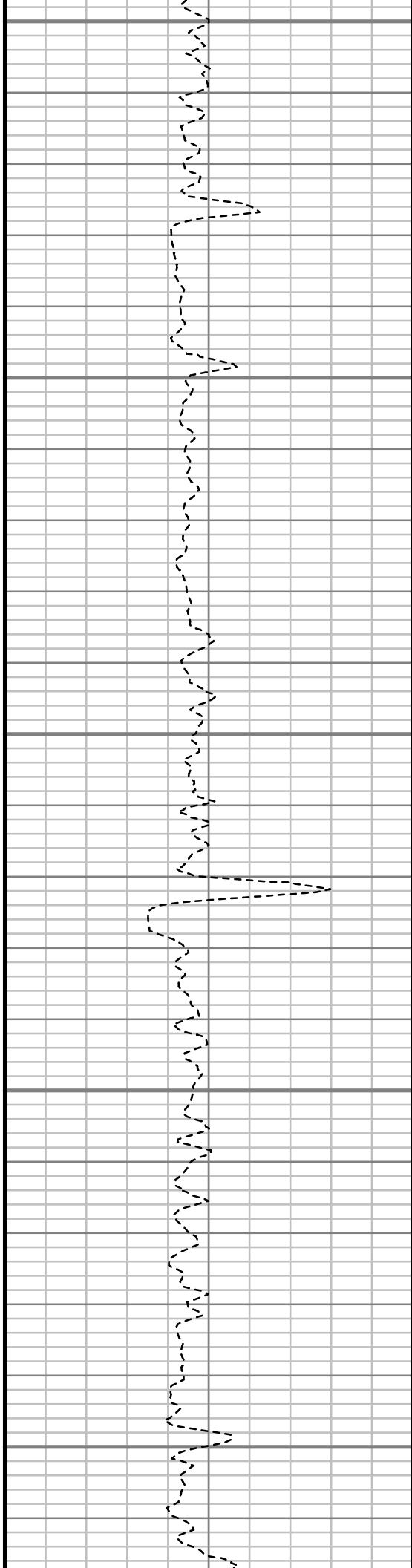
5850

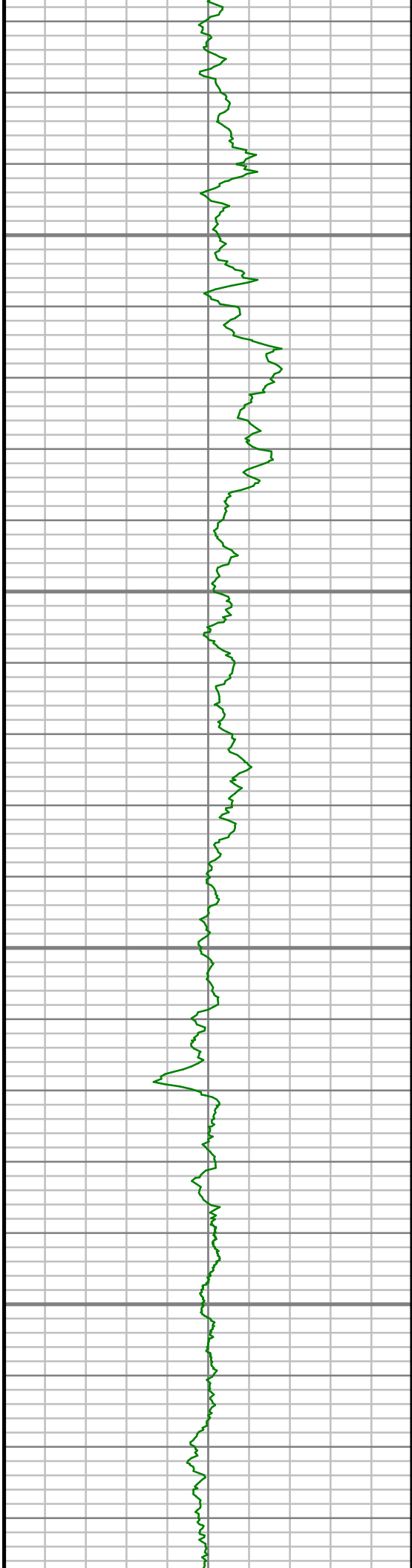
5900

5950

6000

6050



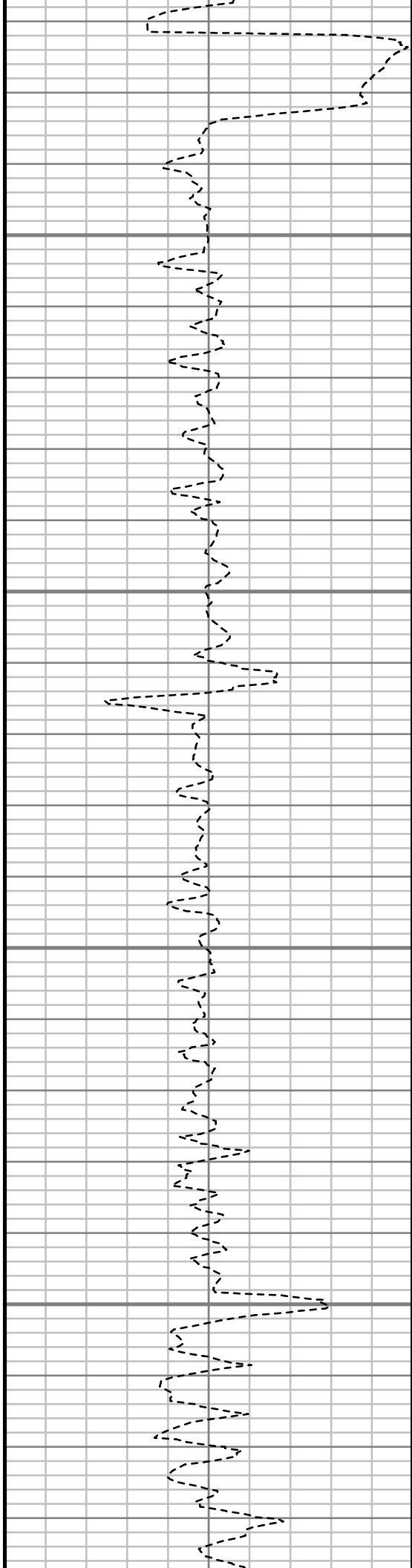


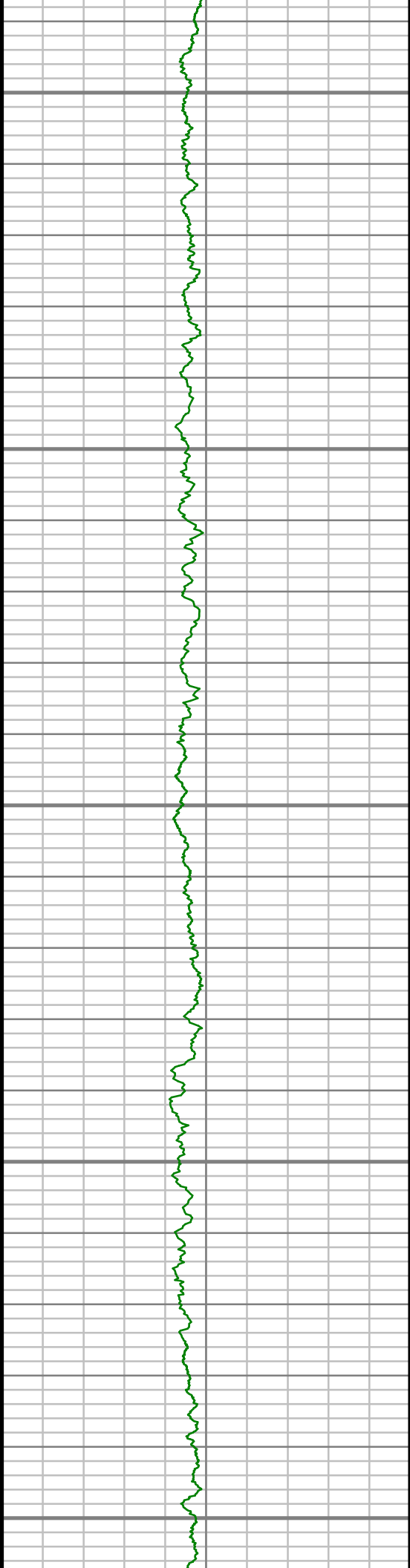
6100

6150

6200

6250





6300

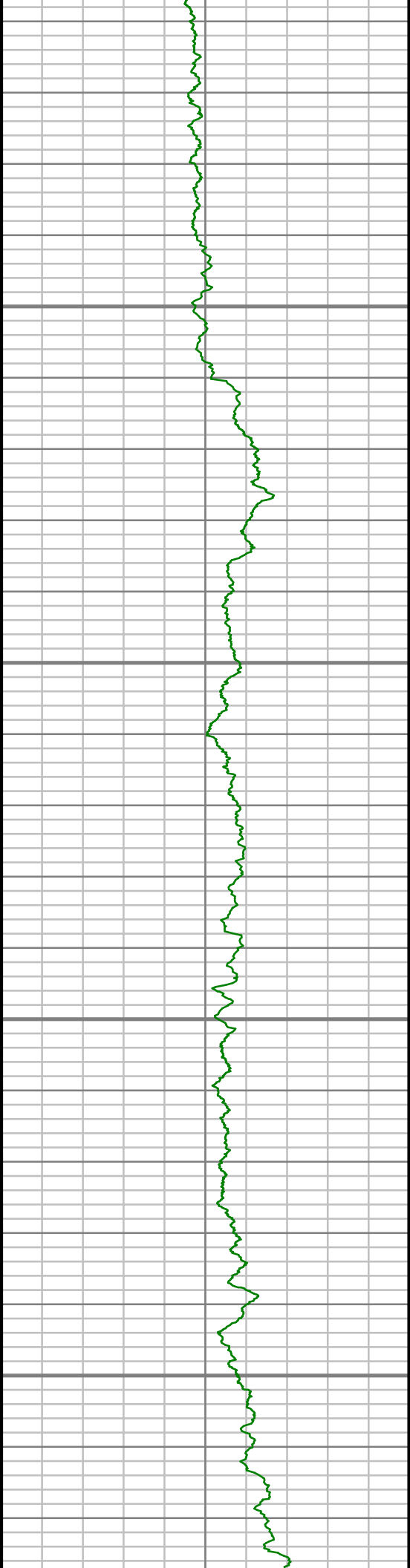
6350

6400

6450

6500



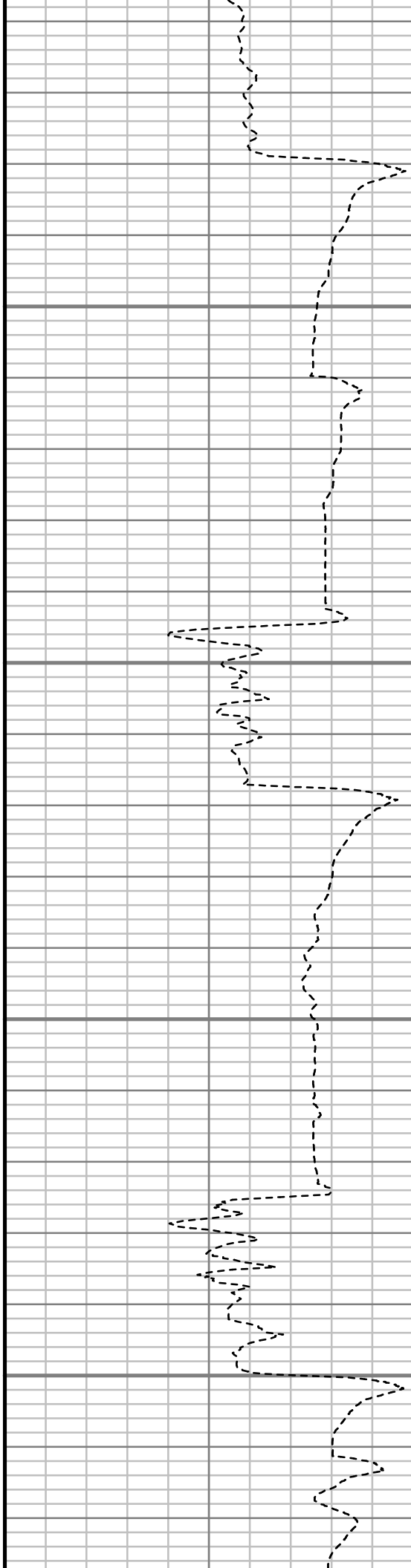


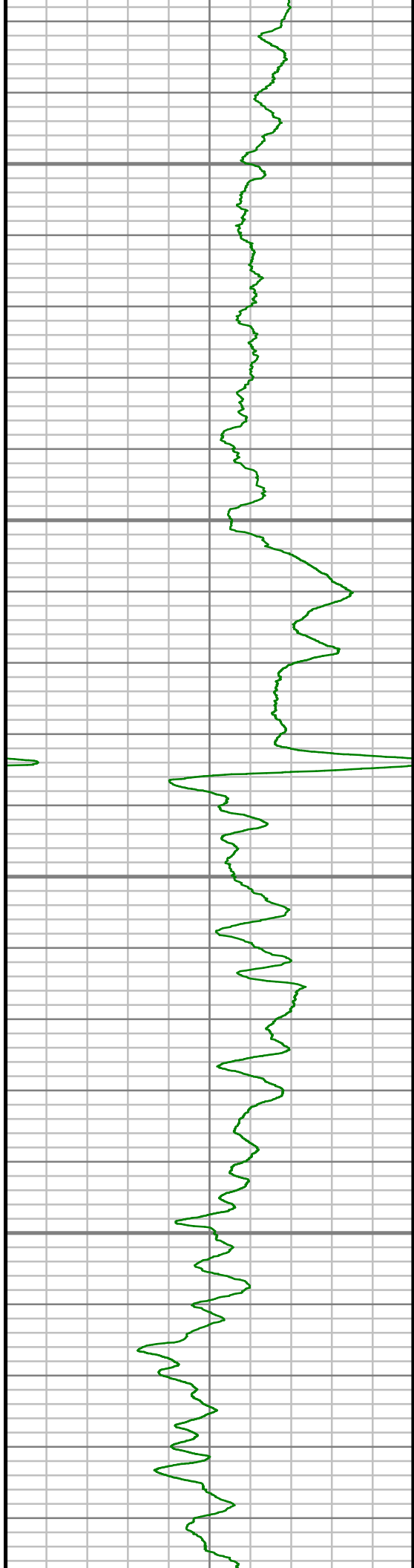
6550

6600

6650

6700



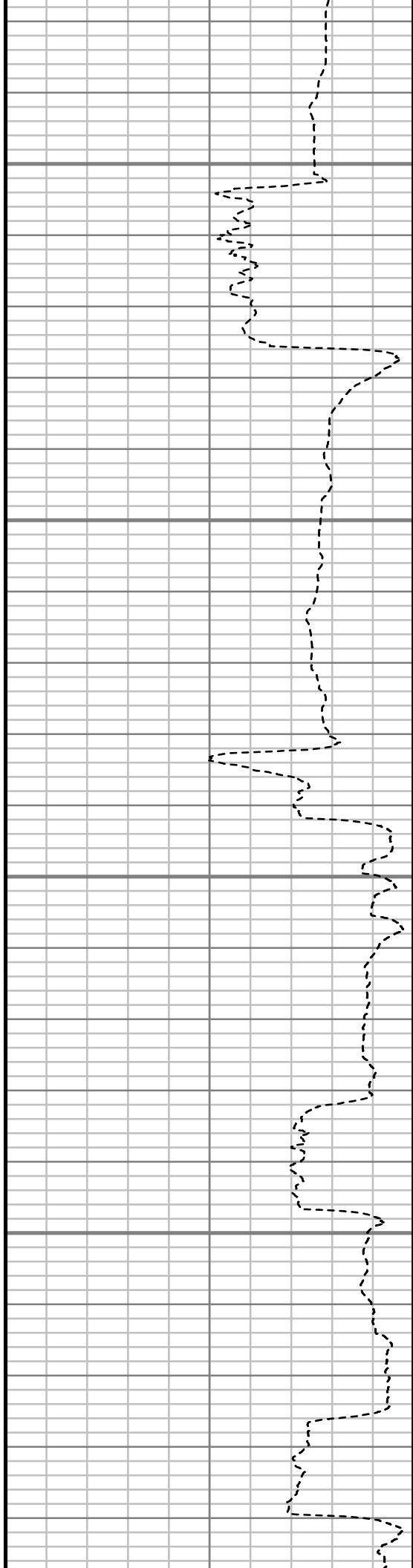


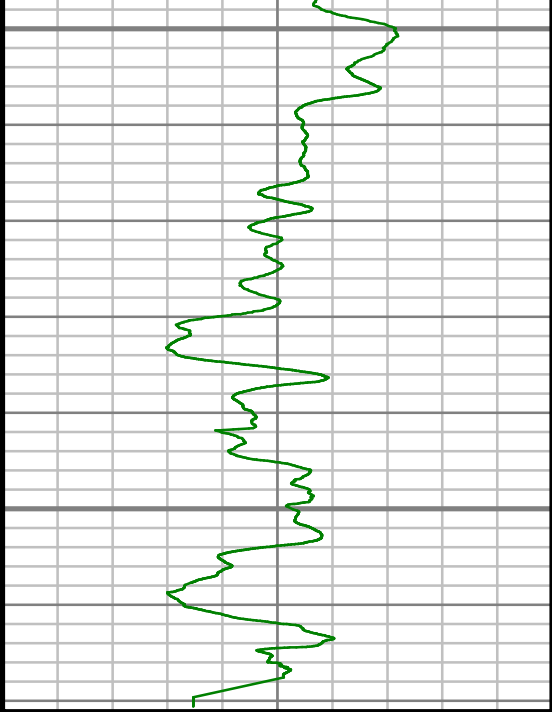
6750

6800

6850

6900





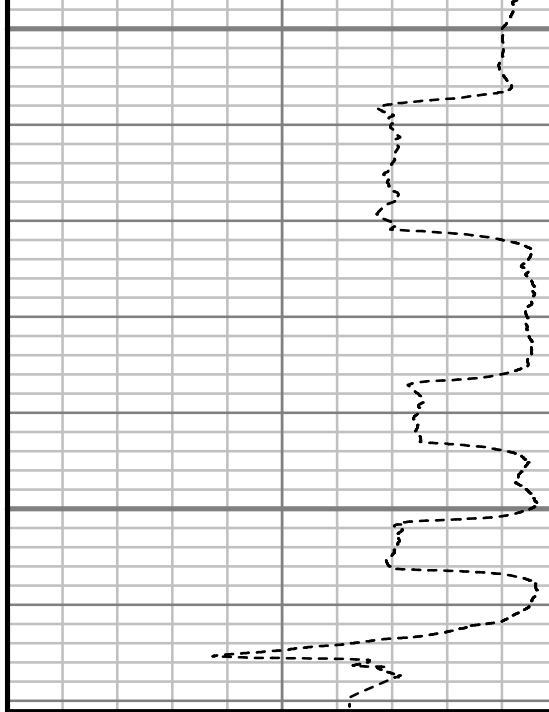
Gamma Ray (GR)

0 Unit = aapi 150

6950

7000

TRUE VERTICAL DEPTH
1:240 (ft)



Rate of Penetration (ROP)

500 Unit = ft/hr 0

Comments

MWD Survey Report

Well Location	NEWNAM
Well Name	NEWNAM 2G-32H-C264
Survey Date	12/20/2014
Latitude	40°6'5.278"N
Longitude	104°34'42.578"W
Btotal	52509 nT
Dip	66.71 deg
Magnetic Declination	8.37 deg
North Reference	True North
Grid Correction	None
Depth Reference	RKB (13.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 180.00Azim (deg)
Operator(s)	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
332.00	1.99	326.24	331.93	-4.78	4.78	-3.20	326.24	5.75	0.60
424.00	4.26	336.94	423.79	-9.25	9.25	-5.42	329.63	10.72	2.54
517.00	5.37	335.02	516.46	-16.37	16.37	-8.61	332.26	18.50	1.21
609.00	6.89	339.64	607.93	-25.45	25.45	-12.35	334.12	28.29	1.74
702.00	9.21	347.17	700.01	-37.94	37.94	-15.94	337.21	41.15	2.73
795.00	10.25	331.98	791.69	-52.50	52.50	-21.48	337.74	56.73	2.97
888.00	8.97	322.23	883.39	-65.54	65.54	-29.81	335.54	72.00	2.22
981.00	9.07	312.36	975.24	-76.21	76.21	-39.68	332.50	85.92	1.67
1178.00	9.90	306.98	1169.55	-96.87	96.87	-64.69	326.26	116.48	0.62
1364.00	10.98	307.40	1352.47	-117.25	117.25	-91.54	322.02	148.75	0.58
1552.00	10.94	307.36	1537.04	-138.95	138.95	-119.94	319.20	183.56	0.02
1743.00	11.43	307.17	1724.41	-161.39	161.39	-149.44	317.20	219.95	0.26
1933.00	11.25	308.10	1910.70	-184.20	184.20	-179.02	315.82	256.86	0.14
2124.00	9.89	298.49	2098.47	-203.52	203.52	-208.10	314.36	291.08	1.16
2314.00	8.44	297.26	2286.04	-217.69	217.69	-234.84	312.83	320.22	0.77
2505.00	7.14	300.07	2475.27	-230.06	230.06	-257.58	311.77	345.37	0.71
2696.00	4.96	318.84	2665.21	-242.23	242.23	-273.29	311.55	365.19	1.53
2886.00	4.28	305.22	2854.60	-252.49	252.49	-284.48	311.59	380.37	0.68

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
3077.00	2.98	326.89	3045.22	-260.76	260.76	-293.01	311.67	392.24	0.98
3267.00	1.48	333.37	3235.07	-267.09	267.09	-296.81	311.98	399.29	0.80
3458.00	1.68	329.85	3426.00	-271.71	271.71	-299.32	312.23	404.25	0.12
3648.00	0.91	261.06	3615.96	-273.88	273.88	-302.20	312.19	407.84	0.84
3838.00	0.87	230.12	3805.94	-272.72	272.72	-304.79	311.82	408.99	0.25
4029.00	1.05	163.99	3996.92	-270.11	270.11	-305.42	311.49	407.73	0.55
4219.00	1.52	177.28	4186.87	-265.92	265.92	-304.82	311.10	404.52	0.29
4410.00	1.62	181.03	4377.80	-260.70	260.70	-304.75	310.55	401.05	0.08
4600.00	1.72	158.56	4567.72	-255.37	255.37	-303.76	310.05	396.84	0.35
4791.00	0.72	105.56	4758.68	-252.39	252.39	-301.55	309.93	393.23	0.74
4981.00	0.65	90.61	4948.67	-252.05	252.05	-299.32	310.10	391.31	0.10
5172.00	1.72	38.64	5139.63	-254.28	254.28	-296.45	310.62	390.57	0.74
5362.00	0.89	67.92	5329.58	-257.06	257.06	-293.31	311.23	390.01	0.55
5552.00	0.38	177.88	5519.57	-257.00	257.00	-291.91	311.36	388.92	0.57
5742.00	0.24	109.20	5709.57	-256.24	256.24	-291.52	311.32	388.13	0.19
5932.00	0.87	150.46	5899.56	-254.86	254.86	-290.44	311.27	386.40	0.37
6122.00	1.68	199.94	6089.51	-250.98	250.98	-290.68	310.81	384.04	0.68
6264.00	1.39	176.48	6231.47	-247.31	247.31	-291.28	310.33	382.11	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
6312.00	1.51	169.92	6279.45	-246.11	246.11	-291.14	310.21	381.22	0.42
6407.00	9.81	175.14	6373.90	-236.79	236.79	-290.23	309.21	374.57	8.75
6502.00	15.01	174.33	6466.65	-216.47	216.47	-288.33	306.90	360.54	5.48
6597.00	20.51	176.48	6557.09	-187.59	187.59	-286.09	303.25	342.11	5.83
6692.00	28.72	179.31	6643.38	-148.08	148.08	-284.79	297.47	320.99	8.72
6787.00	35.43	180.56	6723.84	-97.66	97.66	-284.79	288.93	301.07	7.10
6883.00	44.19	181.35	6797.51	-36.27	36.27	-285.85	277.23	288.14	9.14
6978.00	53.14	182.23	6860.18	34.96	-34.96	-288.11	263.08	290.22	9.45
7073.00	61.98	182.52	6911.09	114.99	-114.99	-291.43	248.47	313.29	9.31
7168.00	68.86	183.05	6950.59	201.22	-201.22	-295.64	235.76	357.62	7.26
7264.00	75.12	182.62	6980.25	292.36	-292.36	-300.15	225.75	419.00	6.54
7359.00	81.95	182.64	6999.12	385.31	-385.31	-304.42	218.31	491.06	7.19
7421.00	83.61	181.76	7006.91	446.77	-446.77	-306.79	214.48	541.96	3.03
7536.00	88.36	180.27	7014.96	561.44	-561.44	-308.82	208.81	640.76	4.32
7629.00	89.40	180.87	7016.78	654.41	-654.41	-309.74	205.33	724.02	1.29
7722.00	89.77	180.49	7017.46	747.40	-747.40	-310.85	202.58	809.47	0.57
7815.00	90.54	181.66	7017.22	840.38	-840.38	-312.59	200.40	896.64	1.51
7908.00	90.91	181.01	7016.05	933.35	-933.35	-314.75	198.64	984.99	0.80

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
8003.00	90.70	179.59	7014.71	1028.34	-1028.34	-315.24	197.04	1075.57	1.51
8098.00	90.91	180.03	7013.38	1123.33	-1123.33	-314.92	195.66	1166.64	0.51
8194.00	91.61	179.45	7011.27	1219.30	-1219.30	-314.48	194.46	1259.20	0.95
8289.00	90.94	180.01	7009.16	1314.28	-1314.28	-314.03	193.44	1351.27	0.92
8384.00	91.04	180.30	7007.52	1409.26	-1409.26	-314.28	192.57	1443.88	0.32
8480.00	91.78	179.17	7005.16	1505.23	-1505.23	-313.84	191.78	1537.60	1.40
8575.00	90.60	179.56	7003.19	1600.20	-1600.20	-312.79	191.06	1630.49	1.30
8670.00	91.21	181.79	7001.69	1695.18	-1695.18	-313.92	190.49	1724.00	2.43
8765.00	90.10	181.73	7000.60	1790.12	-1790.12	-316.84	190.04	1817.95	1.17
8861.00	88.32	180.63	7001.92	1886.09	-1886.09	-318.82	189.59	1912.85	2.18
8956.00	86.99	180.36	7005.81	1981.00	-1981.00	-319.64	189.17	2006.63	1.44
9051.00	88.59	180.18	7009.48	2075.93	-2075.93	-320.09	188.77	2100.46	1.70
9147.00	87.99	180.36	7012.34	2171.89	-2171.89	-320.54	188.40	2195.41	0.66
9242.00	89.87	180.02	7014.12	2266.86	-2266.86	-320.86	188.06	2289.46	2.01
9337.00	90.60	180.30	7013.73	2361.86	-2361.86	-321.13	187.74	2383.59	0.83
9433.00	90.74	179.39	7012.60	2457.85	-2457.85	-320.86	187.44	2478.71	0.95
9528.00	90.30	179.65	7011.74	2552.85	-2552.85	-320.07	187.15	2572.83	0.53
9623.00	90.57	179.68	7011.02	2647.84	-2647.84	-319.51	186.88	2667.05	0.28

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
9718.00	90.20	179.48	7010.38	2742.84	-2742.84	-318.81	186.63	2761.30	0.44
9813.00	90.50	179.83	7009.80	2837.83	-2837.83	-318.23	186.40	2855.62	0.49
9908.00	90.13	178.48	7009.27	2932.82	-2932.82	-316.82	186.17	2949.88	1.47
10004.00	90.34	177.69	7008.87	3028.76	-3028.76	-313.61	185.91	3044.96	0.85
10099.00	91.17	180.05	7007.62	3123.73	-3123.73	-311.73	185.70	3139.25	2.64
10194.00	89.13	179.30	7007.37	3218.72	-3218.72	-311.20	185.52	3233.73	2.29
10289.00	88.76	178.54	7009.12	3313.69	-3313.69	-309.40	185.33	3328.10	0.89
10385.00	88.96	177.86	7011.03	3409.62	-3409.62	-306.39	185.13	3423.36	0.73
10480.00	89.19	177.91	7012.56	3504.54	-3504.54	-302.89	184.94	3517.61	0.25
10575.00	91.58	179.04	7011.92	3599.50	-3599.50	-300.36	184.77	3612.01	2.78
10670.00	89.56	179.24	7010.98	3694.48	-3694.48	-298.94	184.63	3706.55	2.13
10766.00	88.16	179.12	7012.89	3790.45	-3790.45	-297.57	184.49	3802.11	1.47
10861.00	87.72	179.72	7016.31	3885.38	-3885.38	-296.61	184.37	3896.69	0.78
10956.00	88.32	179.69	7019.59	3980.32	-3980.32	-296.12	184.25	3991.32	0.63
11051.00	90.70	178.93	7020.39	4075.31	-4075.31	-294.98	184.14	4085.97	2.63
11147.00	90.60	177.19	7019.30	4171.24	-4171.24	-291.74	184.00	4181.43	1.82
11242.00	89.16	174.93	7019.49	4266.01	-4266.01	-285.21	183.82	4275.53	2.82
11337.00	91.44	175.69	7018.99	4360.68	-4360.68	-277.44	183.64	4369.50	2.53

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Direction	Closure Distance	DLS
ft	deg	deg	ft	ft	ft	ft	deg	ft	°/100ft
11412.00	92.15	175.04	7016.64	4435.40	-4435.40	-271.39	183.50	4443.69	1.28

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 TVD