



GAMMA RAY

5" = 100' FEET MD

COMPANY : ENCANA OIL AND GAS (USA) INC
WELL : NEWNAM 2A-32H-C264
FIELD : WATTENBERG
COUNTY : WELD
STATE : COLORADO
COUNTRY : U.S.A.
UWI : 05-123-39775

COMPANY : ENCANA OIL AND GAS (USA) INC
WELL : NEWNAM 2A-32H-C264
FIELD : WATTENBERG
COUNTY : WELD
STATE : COLORADO
COUNTRY : U.S.A.
UWI : 05-123-39775

WELL LOCATION
LAT:40°6'5.285"N LONG:104°34'43.352"W
N:1281147.90 ft E:3257714.33 ft

OTHER SERVICES

SEC:32 TWP:2N RANGE:64W DIRECTIONAL ROP

DEPTH REF. : RKB

REF. HEIGHT : 13.000 ft

RKB to Ground Level

GROUND LEVEL : 4952.000 ft

G.L. to MEAN SEA LEVEL

BOREHOLE RECORD

DEVIATION RECORD

HOLE SIZE in	FROM ft	TO ft	INCLINATION deg	FROM ft	TO ft
--------------	---------	-------	-----------------	---------	-------

12.25	133	1040	0 - 15	133	1040
-------	-----	------	--------	-----	------

8.75	1040	7615	15 - 83	1040	7615
------	------	------	---------	------	------

6.25	7615	11700	83 - 93	7615	11700
------	------	-------	---------	------	-------

--	--	--	--	--	--

--	--	--	--	--	--

--	--	--	--	--	--

--	--	--	--	--	--

--	--	--	--	--	--

--	--	--	--	--	--

--	--	--	--	--	--

--	--	--	--	--	--

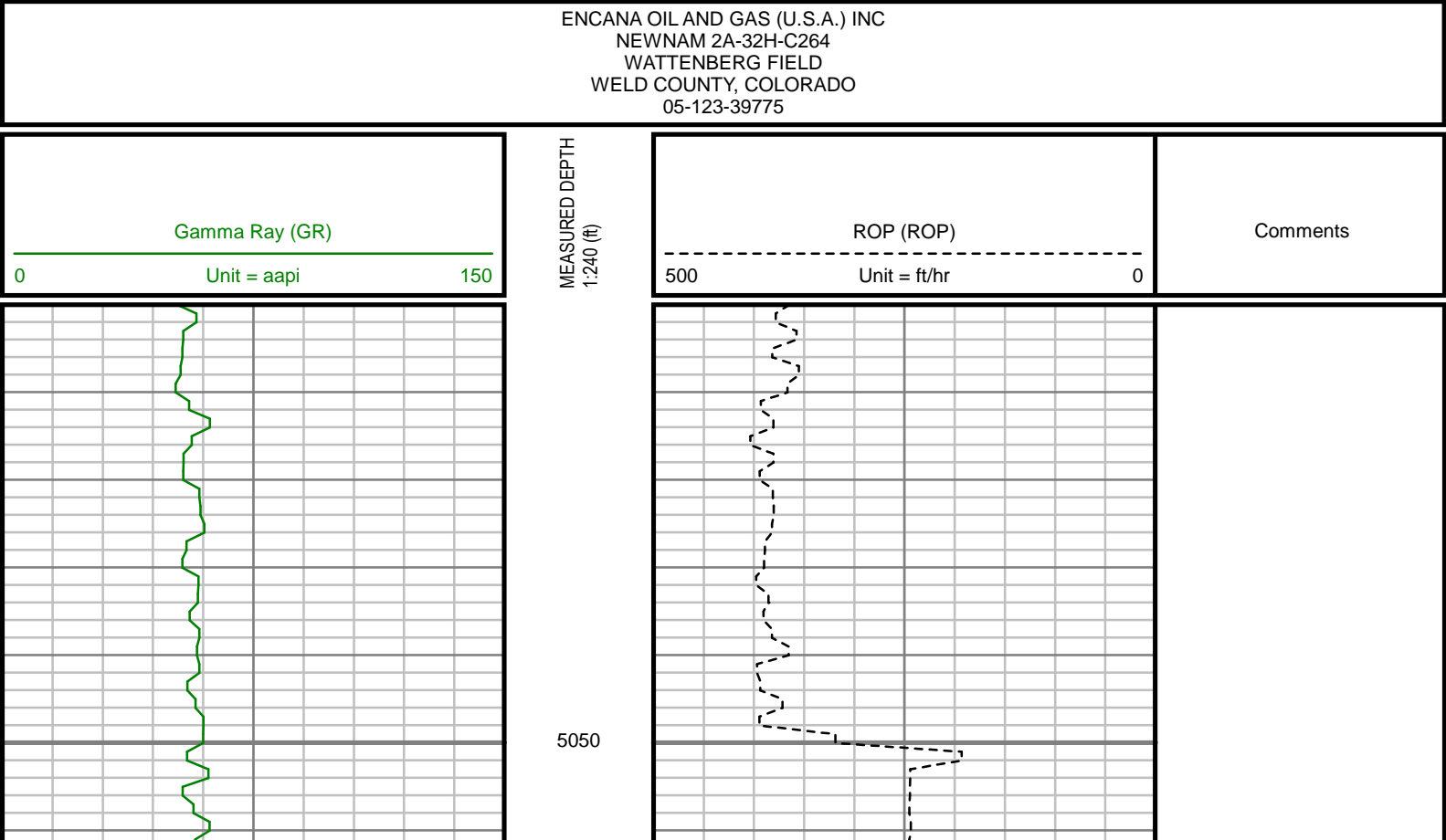
--	--	--	--	--	--

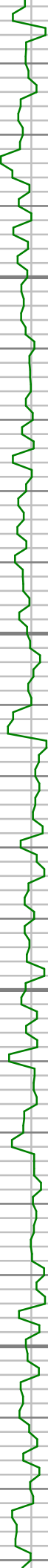
TOTAL DEPTH: 11700 ft

Run Data						
RUN NUMBER	1	2	3			
START DATE	10/17/2014	10/19/2014	10/23/2014			
START TIME	2230	1630	1430			
END DATE	10/18/2014	10/22/2014	10/26/2014			
END TIME	1400	0915	0730			
DEPTH IN (ft)	133	1040	7615			
DEPTH OUT (ft)	1040	7615	11700			
LOG TOP (ft)	-	5000	7558			
LOG BOTTOM (ft)	-	7558	11700			
HOLE SIZE (in)	12.25	8.75	6.25			
MUD DATA @ (ft)	1040	7615	11700			
MUD TYPE	WATER-BASED	WATER-BASED	WATER-BASED			
DENSITY (lb / gal)	8.5	10.4	10.45			
VISCOSITY (s / qt)	27	37	40			
pH	7.8	8.2	8.73			
FLUID LOSS (cm3 / 30)	-	-	-			
SALINITY (ppm)	-	-	-			
Rm (ohmm @ deg F)	-	-	-			
Rmf (ohmm @ deg F)	-	-	-			
MAX TEMP (deg F)	79	178	226			
Rm @ MAX TEMP (ohmm)	-	-	-			
LWD ENGINEER #1	M. SMITH	M. SMITH	M. SMITH			
LWD ENGINEER #2	J. SMITH	T. WHEELER	T. WHEELER			
LWD ENGINEER #3	-	-	-			
LOG WTINNESS #1	D. HILDRETH	D. HILDRETH	D. HILDRETH			
LOG WTINNESS #2	-	-	-			

Remarks
ENCANA OIL AND GAS (USA) INC PRODUCTION AFE# 13178940
SCIENTIFIC DRILLING INTERNATIONAL JOB# 210880
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 ROP CURVE
RUN #1: MWD / DIRECTIONAL RUN
SENSORS S/N: PULSER = 128-277 / CONT = 483 / MWD EYE = 1012
BIT TO SENSOR OFFSET: SURVEY = 61.65 FT.
RUN #2: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 128-008 / CONT = 831 / MWD EYE = 0809 / GAMMA RAY = 1194
BIT TO SENSOR OFFSETS: SURVEY = 61.65 FT. / GAMMA RAY = 57.02 FT.
RUN #3: MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 78-285 / CONT = 822 / MWD EYE = 1012 / GAMMA RAY = 1168
BIT TO SENSOR OFFSETS: SURVEY = 61.64 FT. / GAMMA RAY = 57.01 FT.
REMARK #1 : GAMMA RAY FROM 7506 FT. - 7607 FT. DATA WAS LOGGED BEHIND CASING.
MNEMONICS LIST:
GR = GAMMA RAY
ROP = ROP

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.



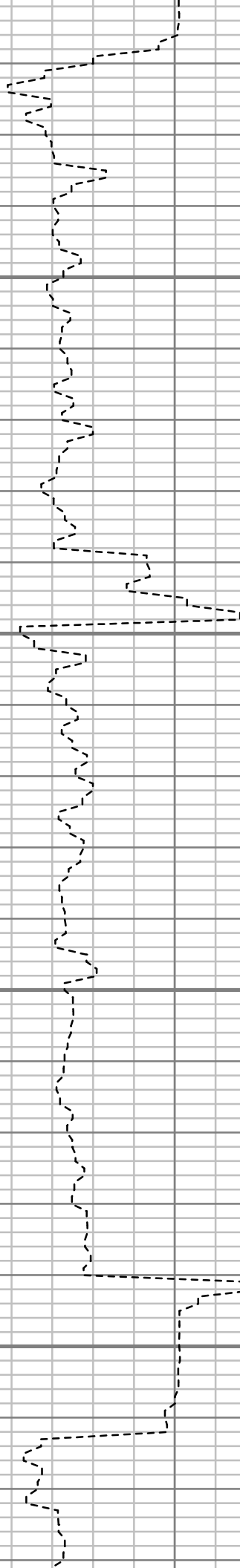


5100

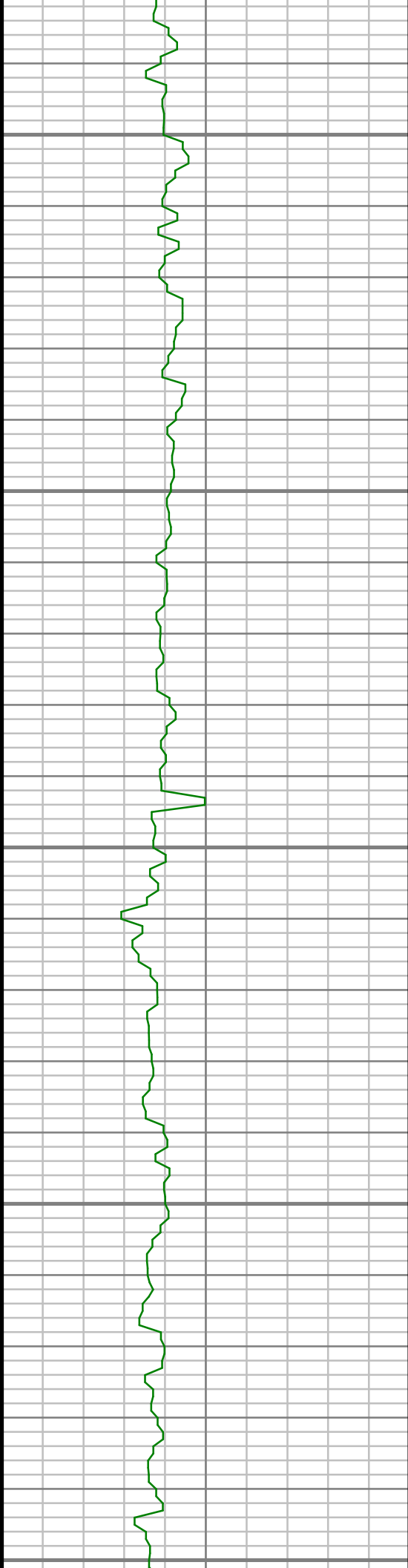
5150

5200

5250



S: 32 MD: 5171.00 ft Inc: 15.35
deg Az: 280.33 deg TVD:
4954.25 ft



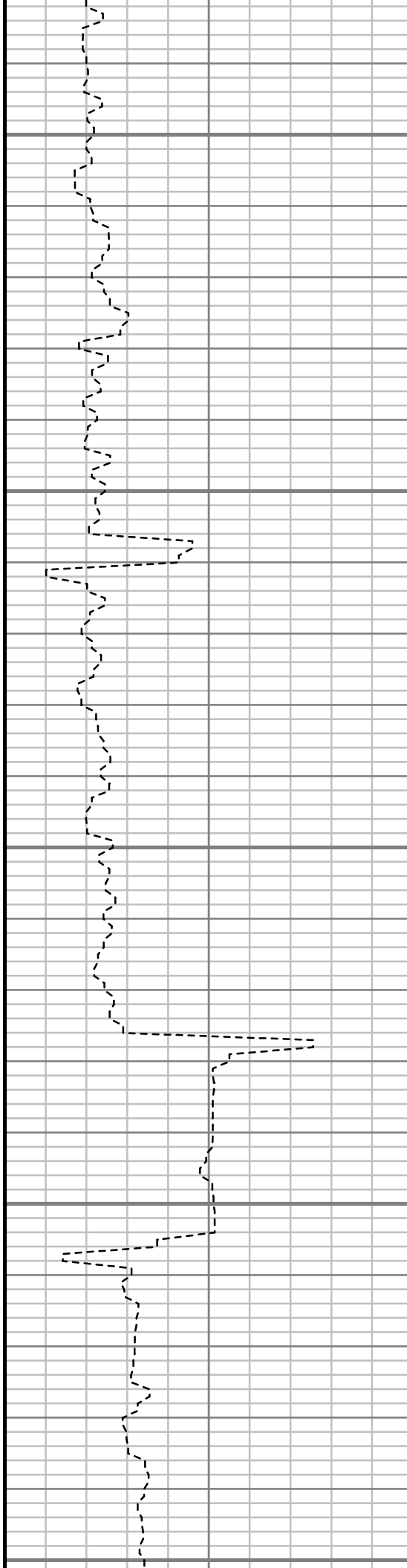
5300

5350

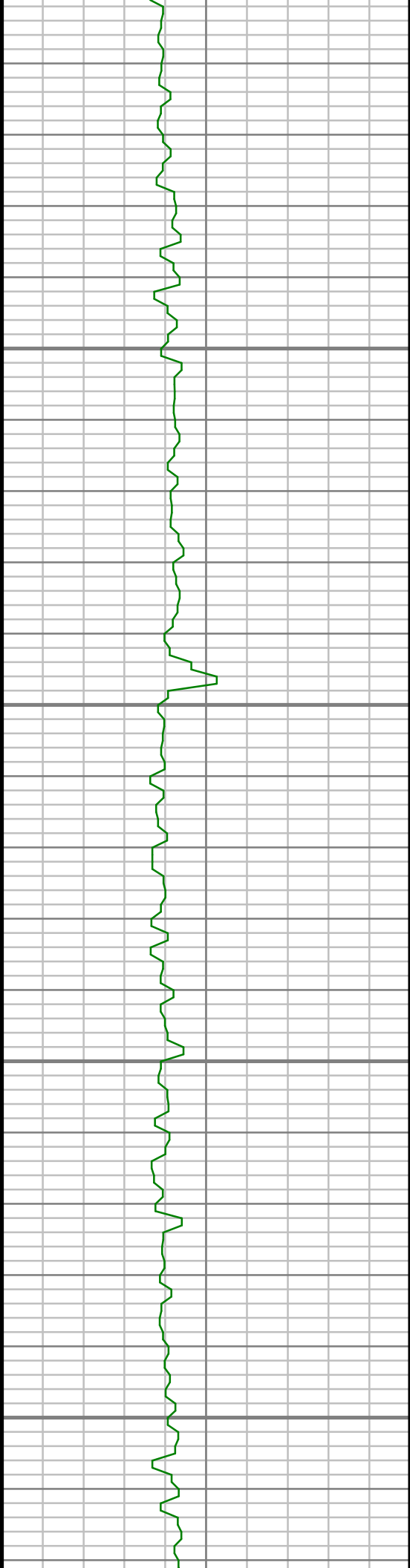
5400

5450

5500



S: 33 MD: 5361.00 ft Inc: 13.78
deg Az: 279.39 deg TVD:
5138.14 ft

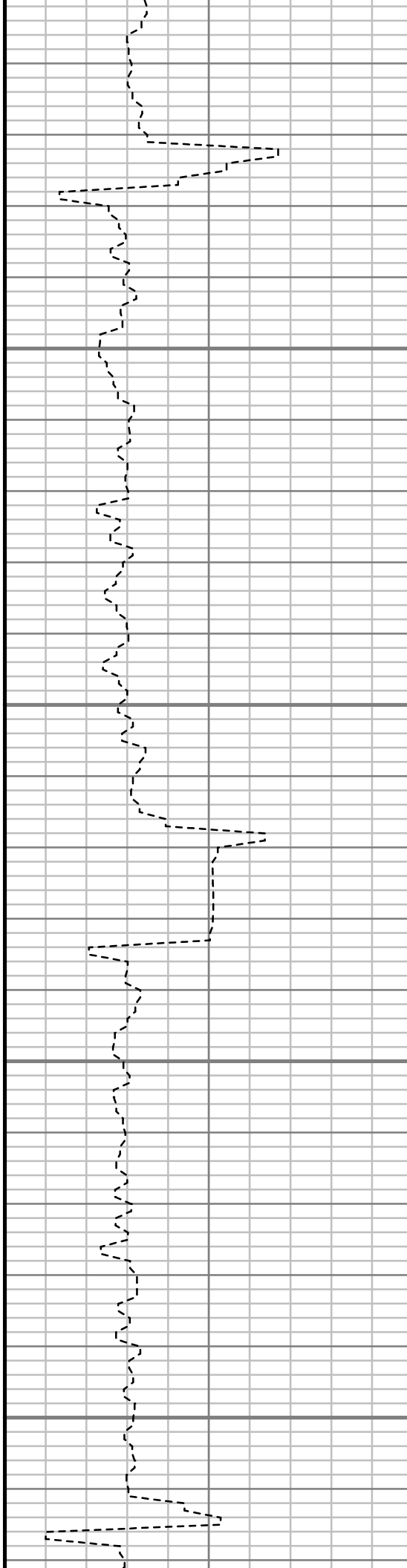


5550

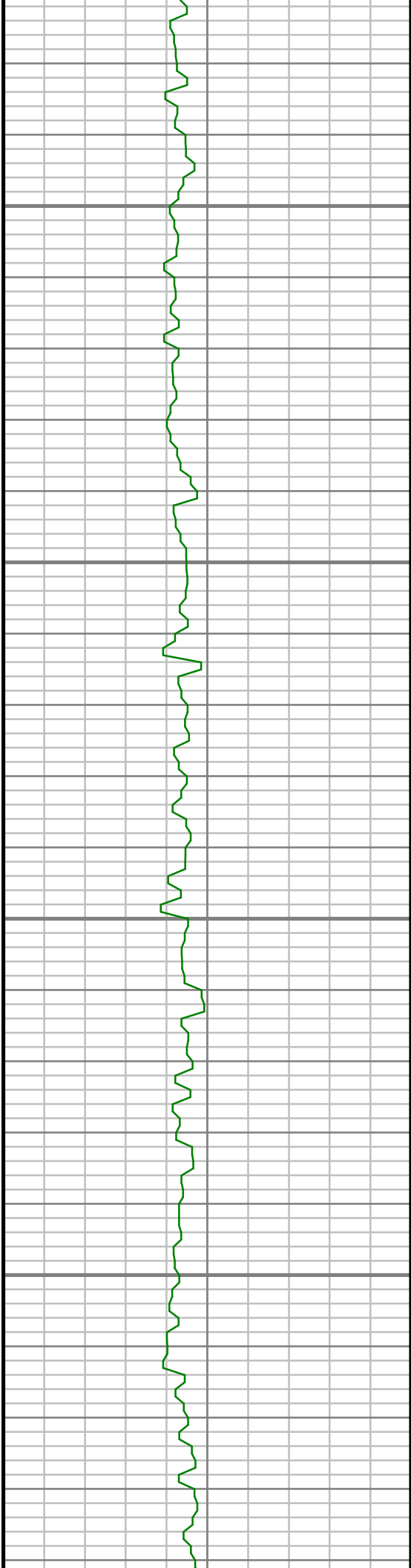
5600

5650

5700



S: 34 MD: 5551.00 ft Inc: 12.37
deg Az: 275.76 deg TVD:
5323.21 ft

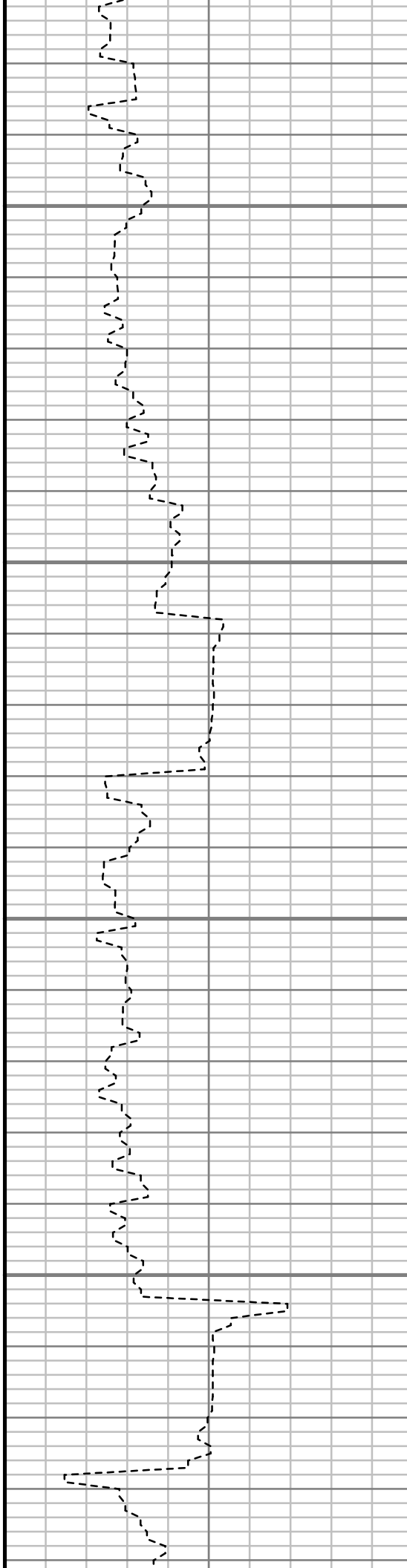


5750

5800

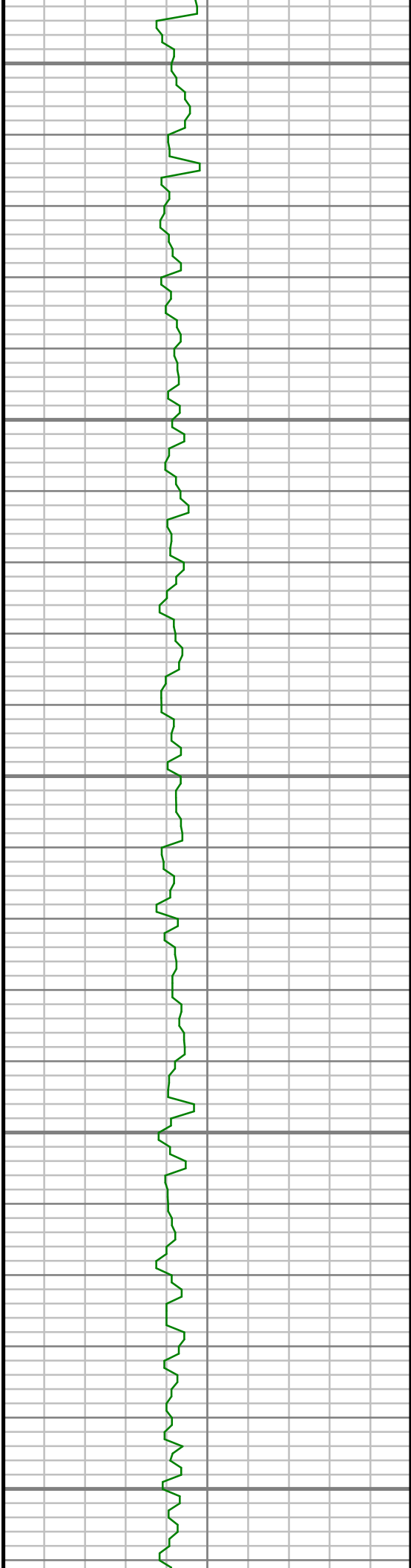
5850

5900



S: 35 MD: 5741.00 ft Inc: 9.70
deg Az: 270.66 deg TVD:
5509.69 ft

S: 36 MD: 5931.00 ft Inc: 7.00
deg Az: 268.97 deg TVD:
5697.66 ft



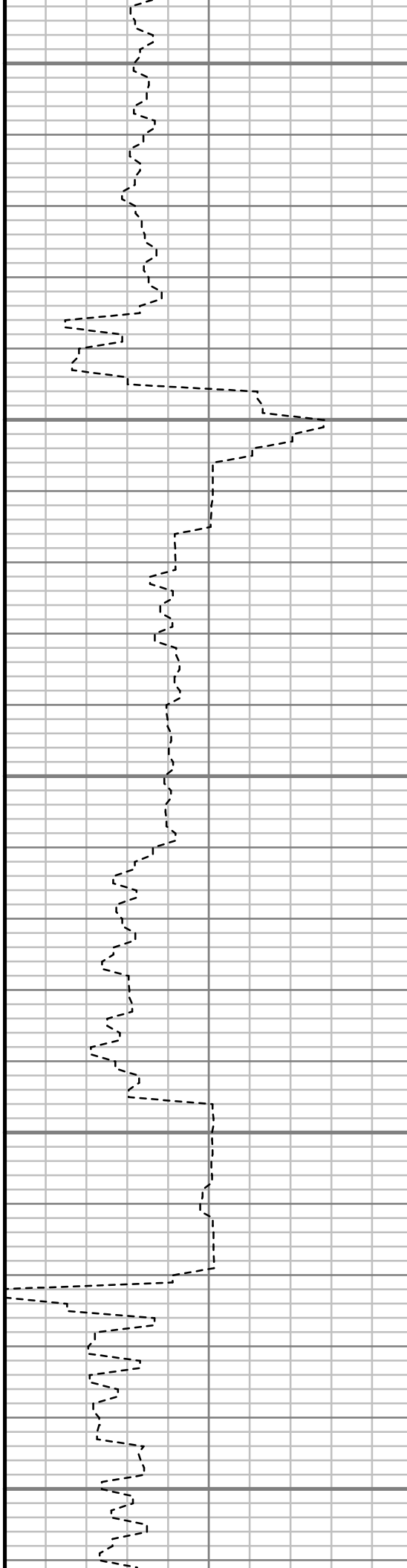
5950

6000

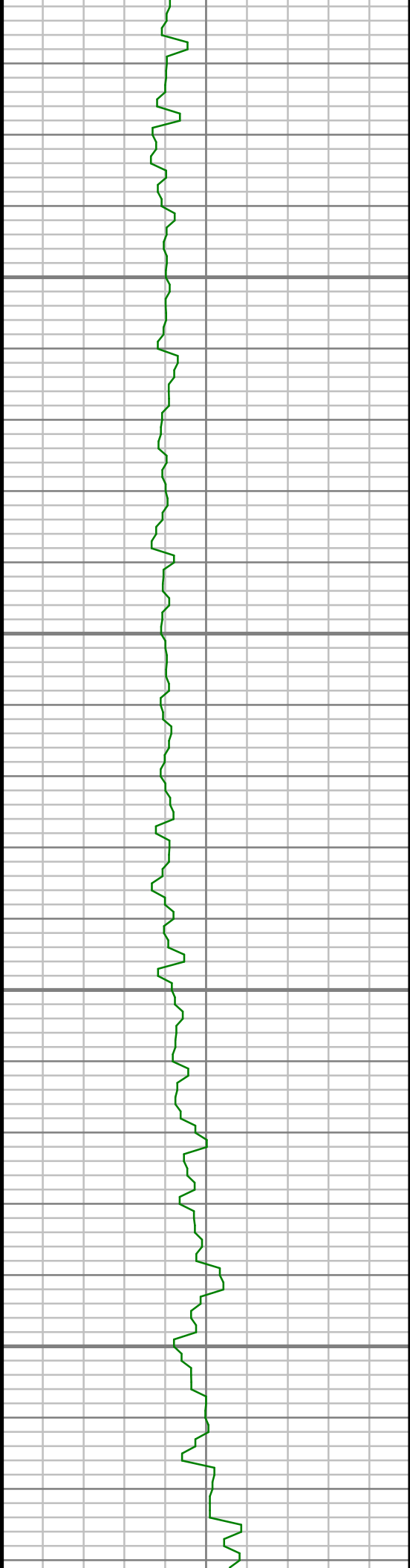
6050

6100

6150



S: 37 MD: 6122.00 ft Inc: 4.99
deg Az: 262.74 deg TVD:
5887.60 ft

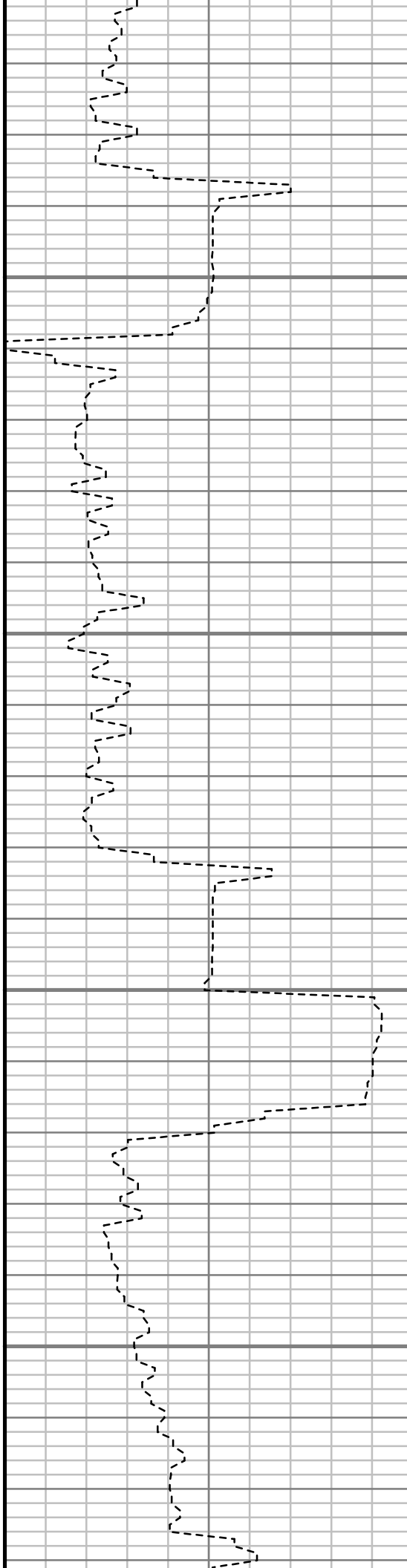


6200

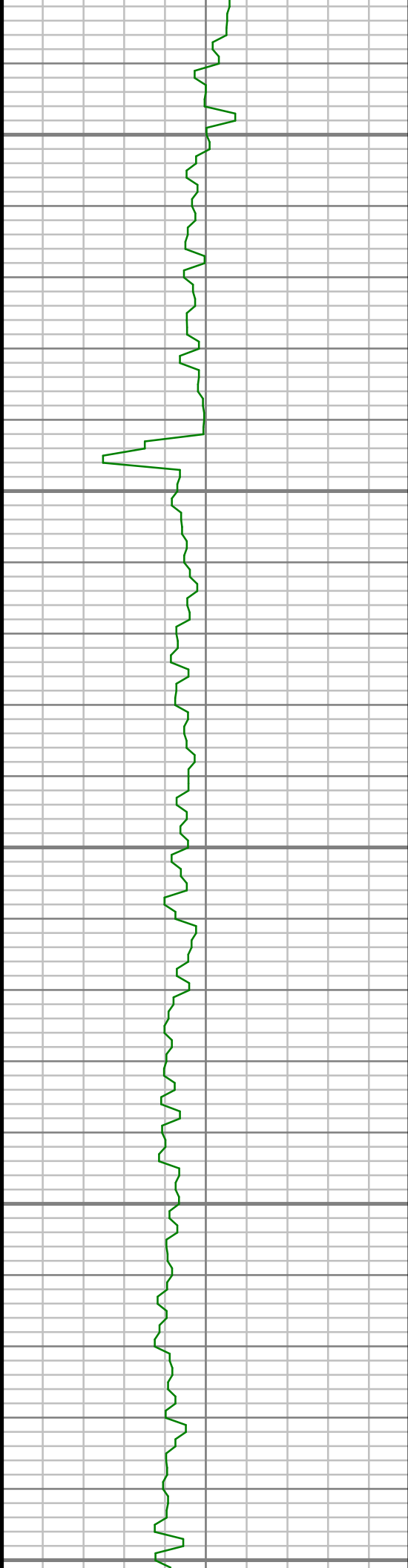
6250

6300

6350



S: 38 MD: 6312.00 ft Inc: 2.12
deg Az: 255.69 deg TVD:
6077.22 ft



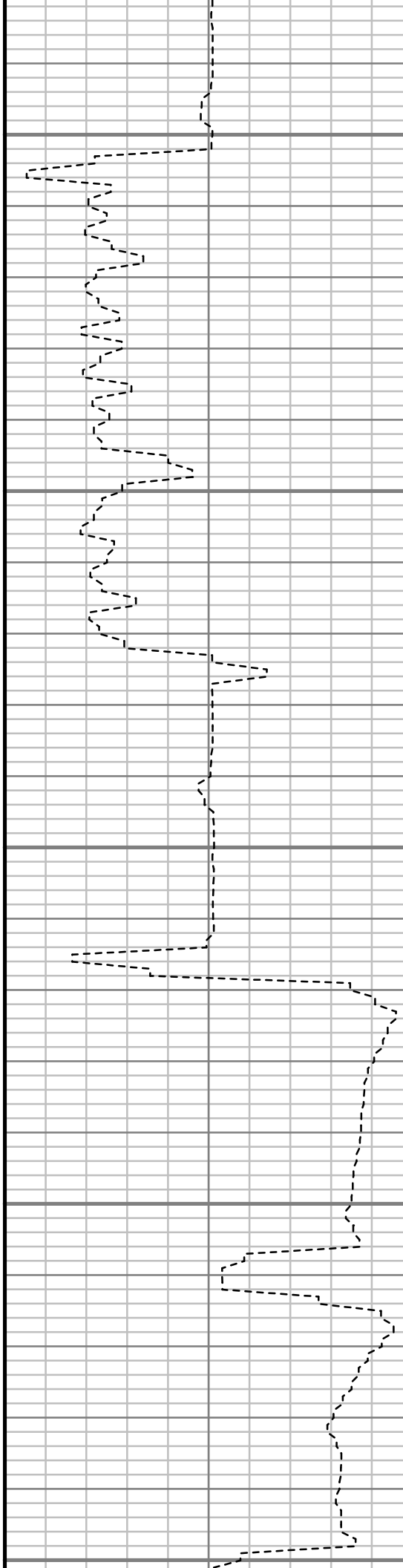
6400

6450

6500

6550

6600

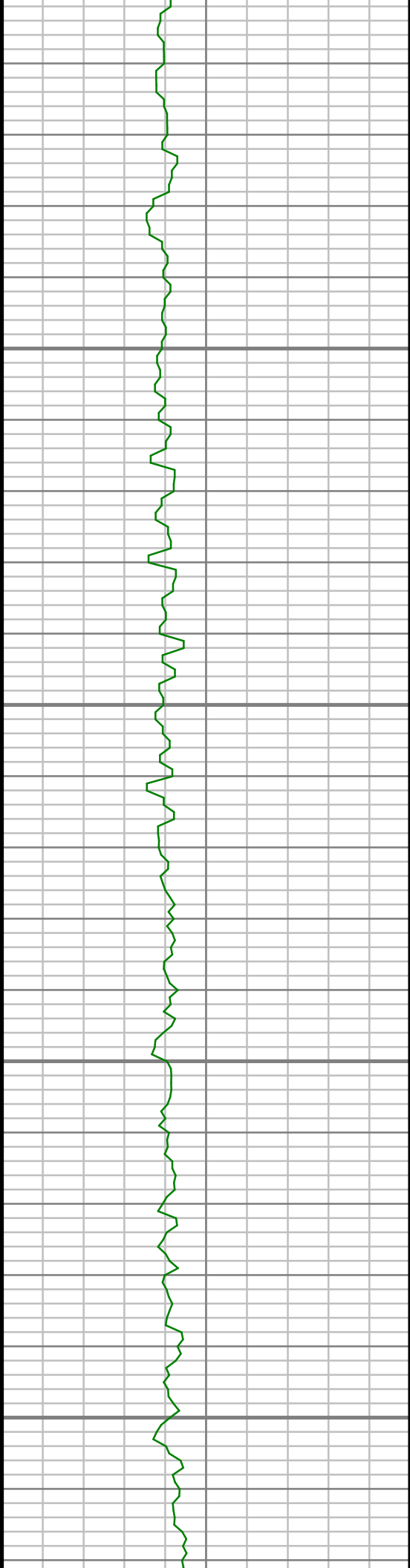


S: 39 MD: 6454.00 ft Inc: 1.84
deg Az: 254.25 deg TVD:
6219.13 ft

S: 40 MD: 6502.00 ft Inc: 1.79
deg Az: 258.12 deg TVD:
6267.11 ft

S: 41 MD: 6549.00 ft Inc: 5.66
deg Az: 186.94 deg TVD:
6314.02 ft

S: 42 MD: 6597.00 ft Inc: 10.36
deg Az: 179.44 deg TVD:

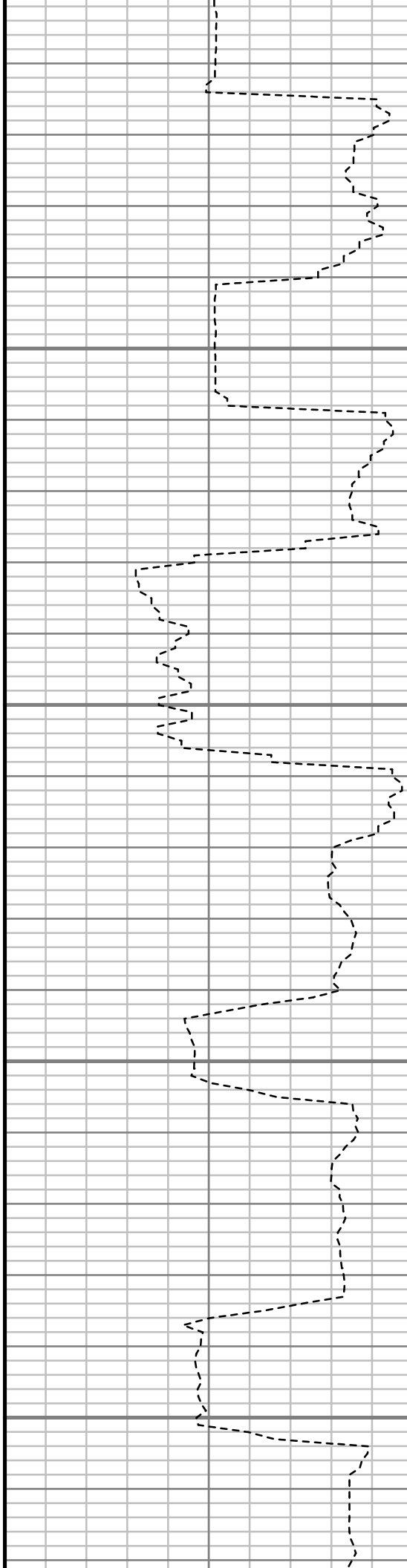


6650

6700

6750

6800



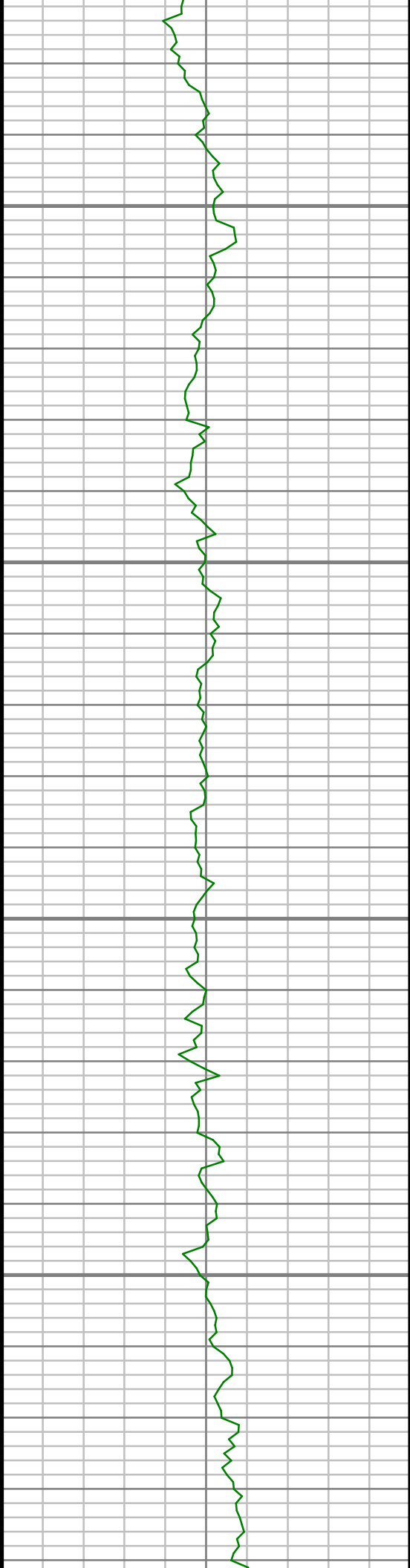
deg Az: 176.71 deg TVD:
6361.54 ft

S: 43 MD: 6644.00 ft Inc: 13.12
deg Az: 181.59 deg TVD:
6407.55 ft

S: 44 MD: 6692.00 ft Inc: 14.52
deg Az: 177.65 deg TVD:
6454.16 ft

S: 45 MD: 6739.00 ft Inc: 15.93
deg Az: 177.61 deg TVD:
6499.51 ft

S: 46 MD: 6787.00 ft Inc: 19.83
deg Az: 178.01 deg TVD:
6545.18 ft

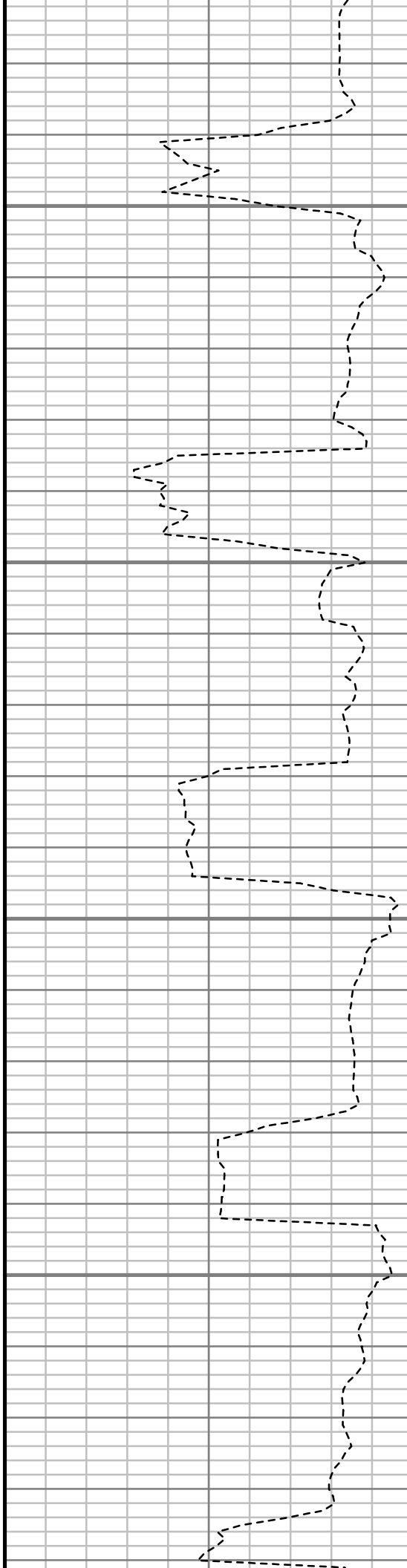


6850

6900

6950

7000



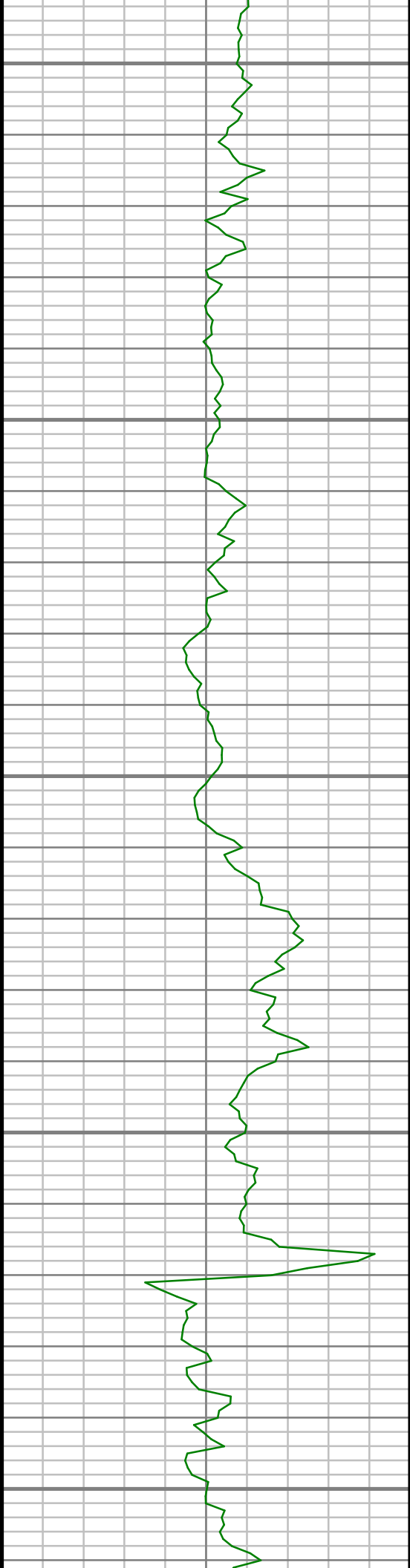
S: 47 MD: 6834.00 ft Inc: 24.34
deg Az: 177.23 deg TVD:
6588.72 ft

S: 48 MD: 6882.00 ft Inc: 27.86
deg Az: 178.43 deg TVD:
6631.82 ft

S: 49 MD: 6929.00 ft Inc: 30.37
deg Az: 176.81 deg TVD:
6672.88 ft

S: 50 MD: 6977.00 ft Inc: 33.60
deg Az: 174.86 deg TVD:
6713.59 ft

S: 51 MD: 7024.00 ft Inc: 38.37
deg Az: 175.17 deg TVD:
6751.61 ft



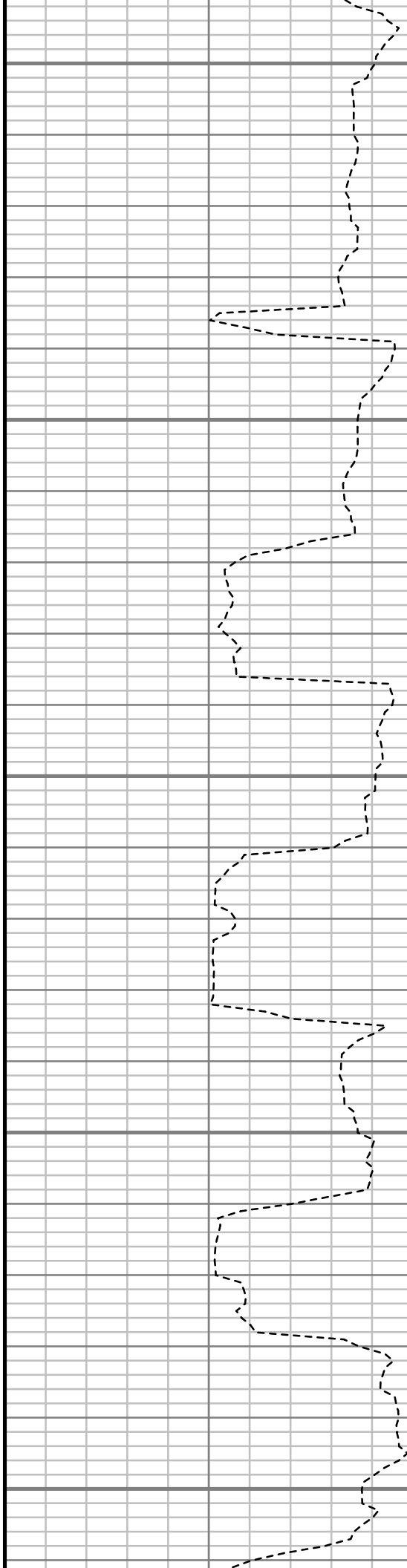
7050

7100

7150

7200

7250

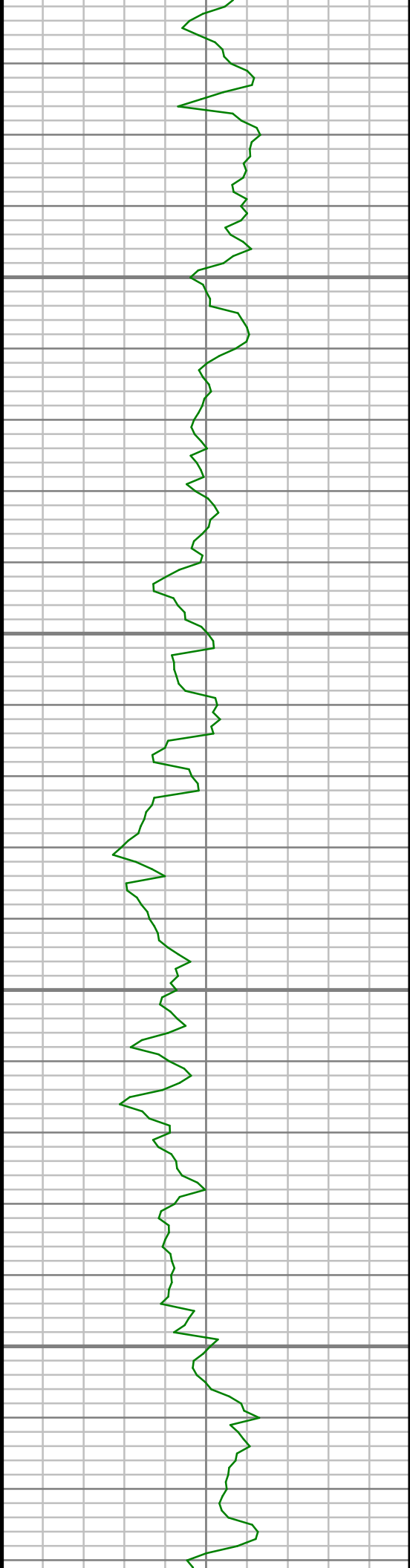


S: 52 MD: 7073.00 ft Inc: 45.06
deg Az: 177.10 deg TVD:
6788.17 ft

S: 53 MD: 7120.00 ft Inc: 50.45
deg Az: 180.51 deg TVD:
6819.76 ft

S: 54 MD: 7168.00 ft Inc: 53.87
deg Az: 181.32 deg TVD:
6849.20 ft

S: 55 MD: 7215.00 ft Inc: 57.74
deg Az: 181.94 deg TVD:
6875.61 ft

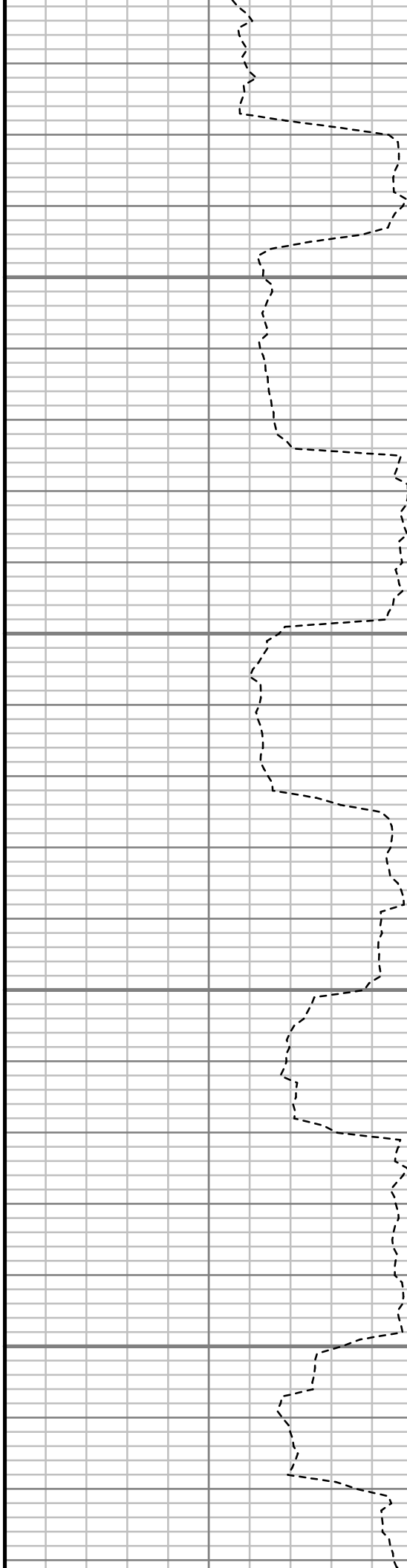


7300

7350

7400

7450



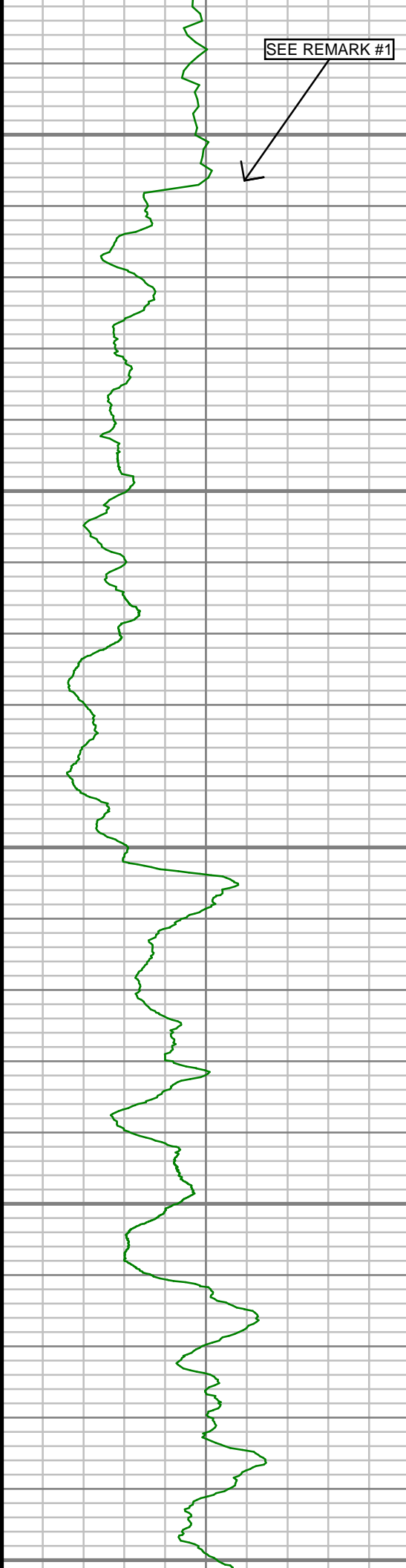
S: 56 MD: 7263.00 ft Inc: 59.47
deg Az: 182.92 deg TVD:
6900.62 ft

S: 57 MD: 7310.00 ft Inc: 61.86
deg Az: 183.16 deg TVD:
6923.64 ft

S: 58 MD: 7359.00 ft Inc: 64.74
deg Az: 182.57 deg TVD:
6945.65 ft

S: 59 MD: 7406.00 ft Inc: 68.30
deg Az: 182.52 deg TVD:
6964.38 ft

S: 60 MD: 7454.00 ft Inc: 71.63
deg Az: 182.10 deg TVD:
6980.82 ft



SEE REMARK #1

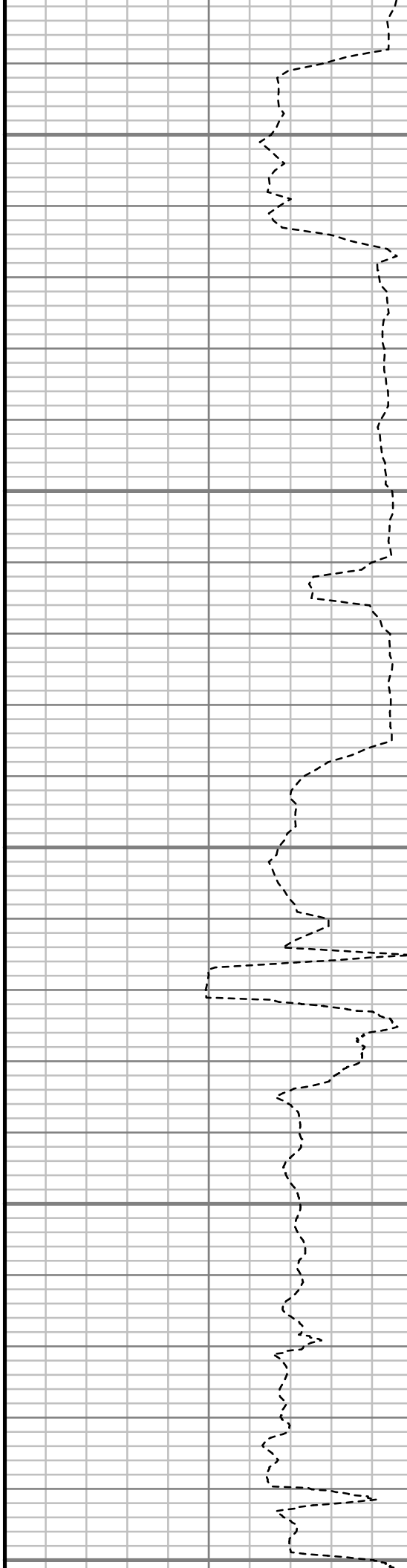
7500

7550

7600

7650

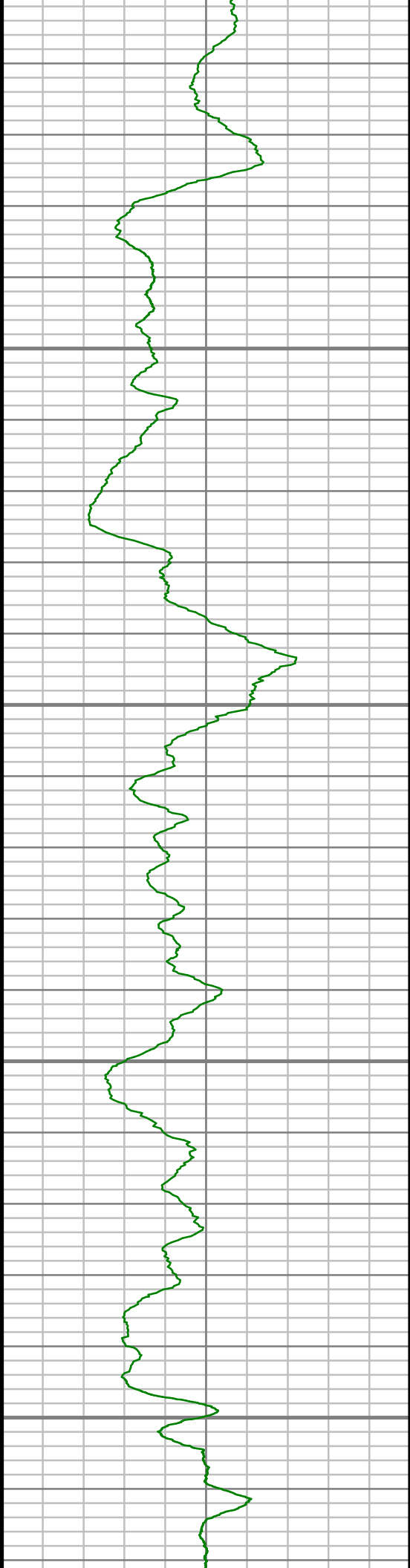
7700



S: 61 MD: 7501.00 ft Inc: 75.42
deg Az: 181.51 deg TVD:
6994.15 ft

S: 62 MD: 7549.00 ft Inc: 82.50
deg Az: 180.62 deg TVD:
7003.33 ft

S: 63 MD: 7628.00 ft Inc: 87.25
deg Az: 179.75 deg TVD:
7010.39 ft

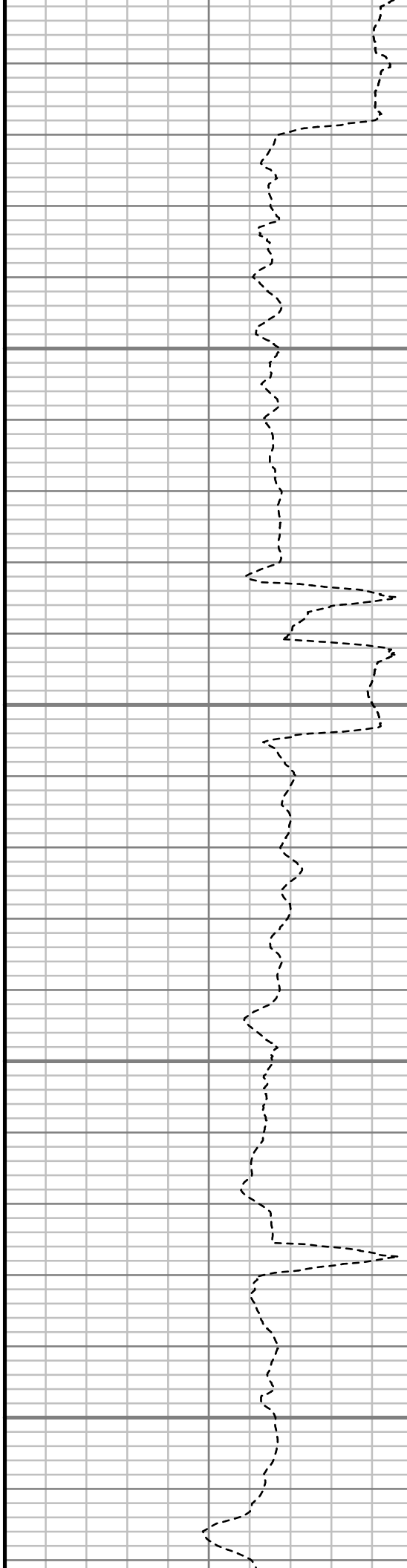


7750

7800

7850

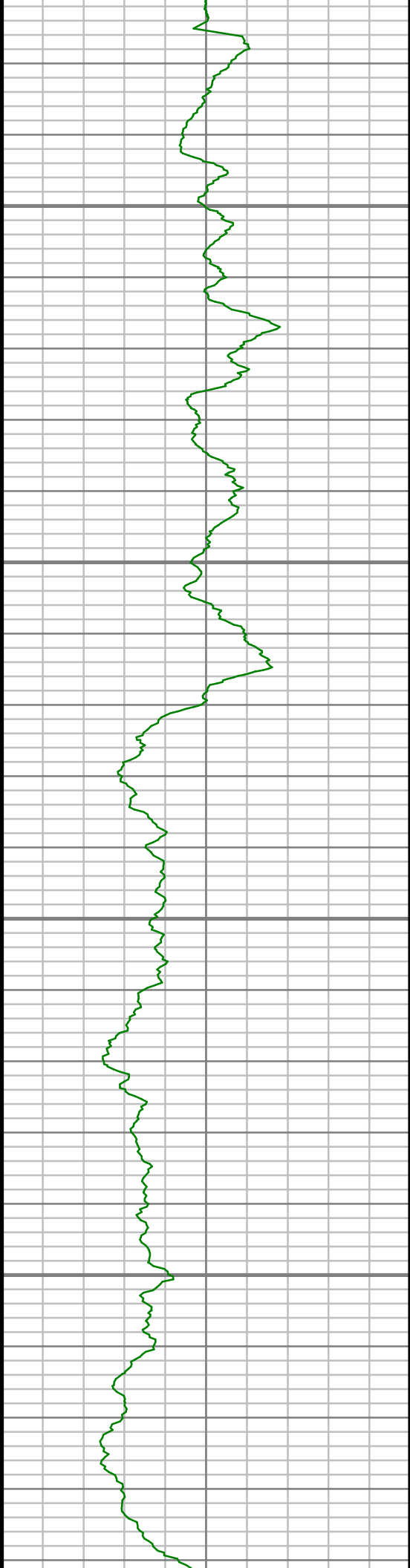
7900



S: 64 MD: 7721.00 ft Inc: 88.82
deg Az: 180.76 deg TVD:
7013.57 ft

S: 65 MD: 7814.00 ft Inc: 90.07
deg Az: 180.62 deg TVD:
7014.47 ft

S: 66 MD: 7909.00 ft Inc: 89.93
deg Az: 180.49 deg TVD:
7014.47 ft

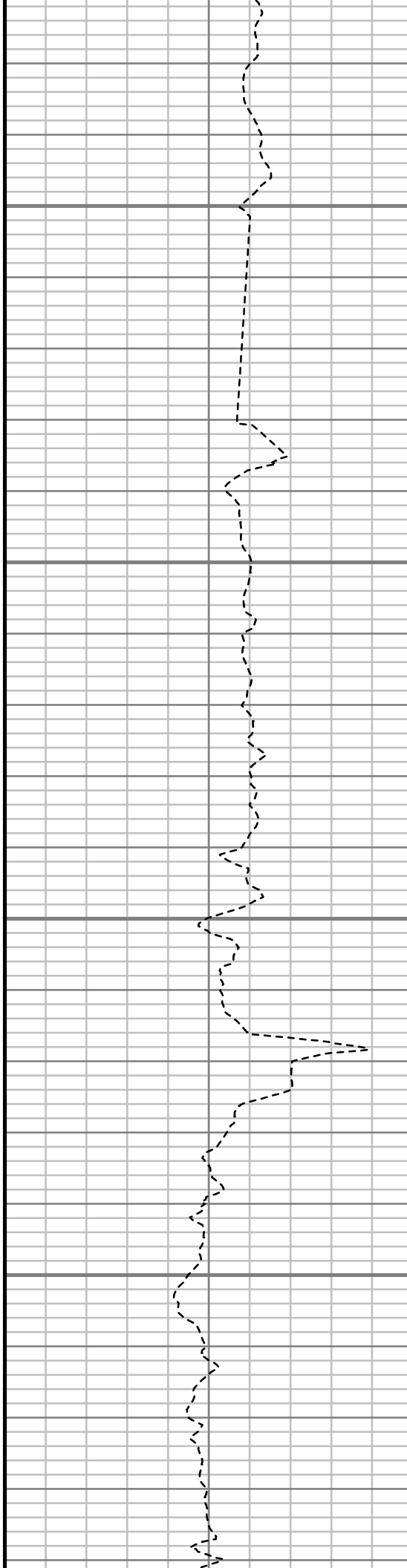


7950

8000

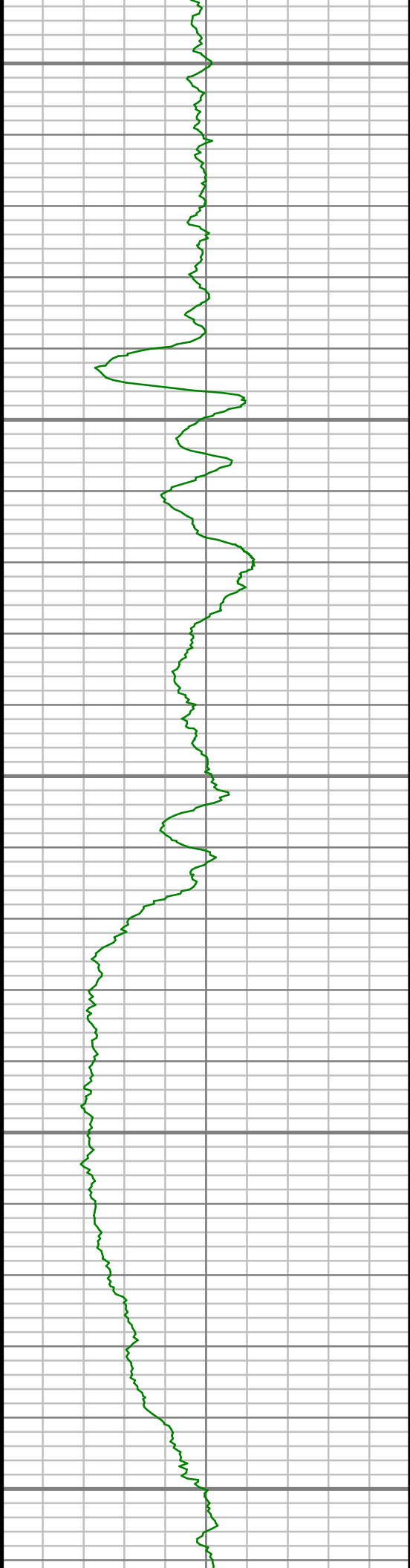
8050

8100



S: 67 MD: 8004.00 ft Inc: 90.00
deg Az: 180.51 deg TVD:
7014.53 ft

S: 68 MD: 8099.00 ft Inc: 89.56
deg Az: 180.60 deg TVD:
7014.89 ft



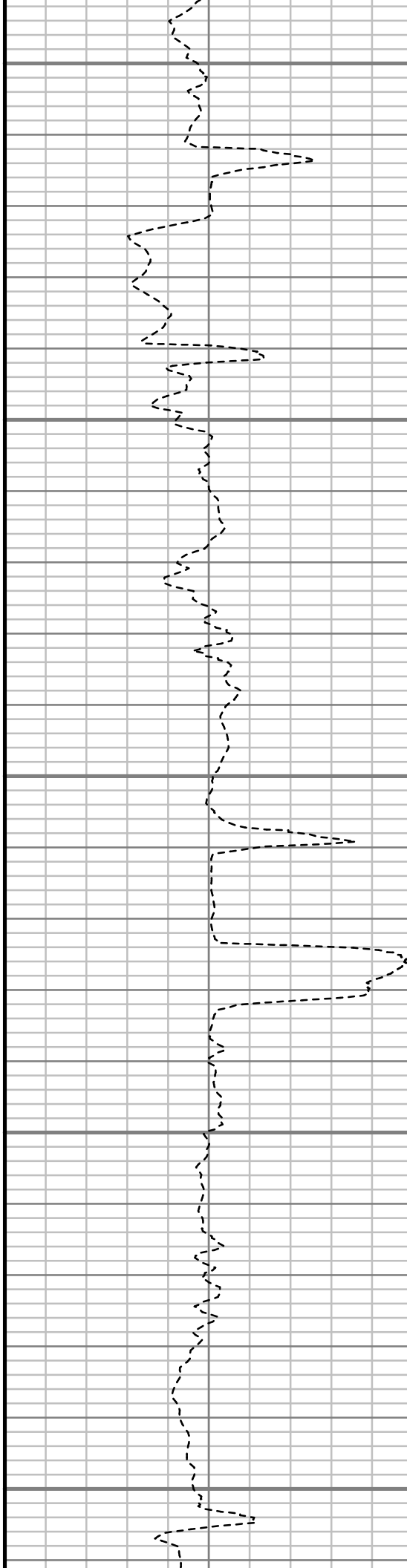
8150

8200

8250

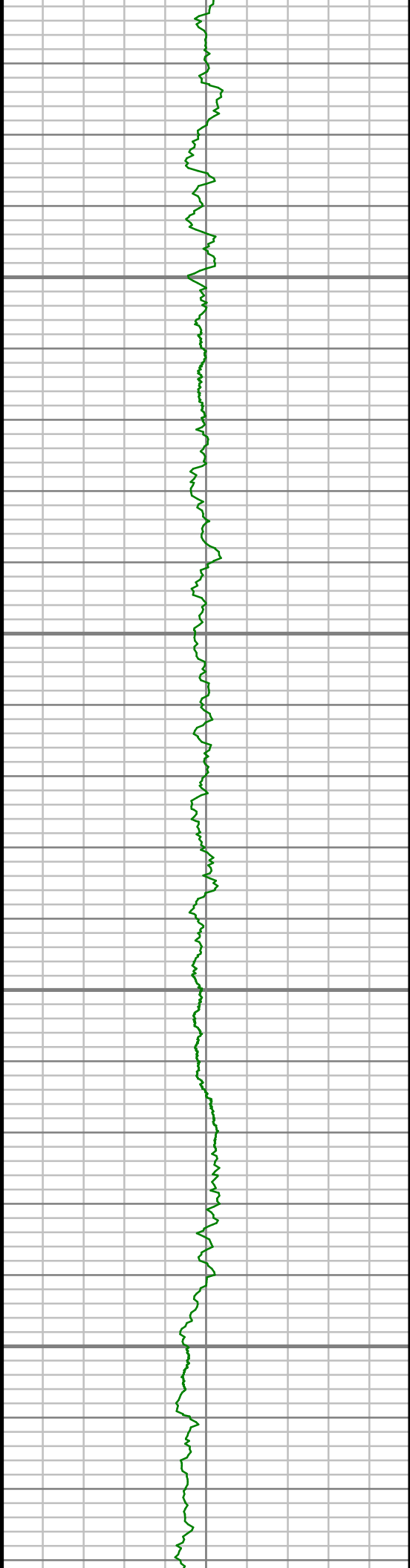
8300

8350



S: 69 MD: 8194.00 ft Inc: 89.90
deg Az: 180.36 deg TVD:
7015.34 ft

S: 70 MD: 8289.00 ft Inc: 90.60
deg Az: 179.86 deg TVD:
7014.92 ft

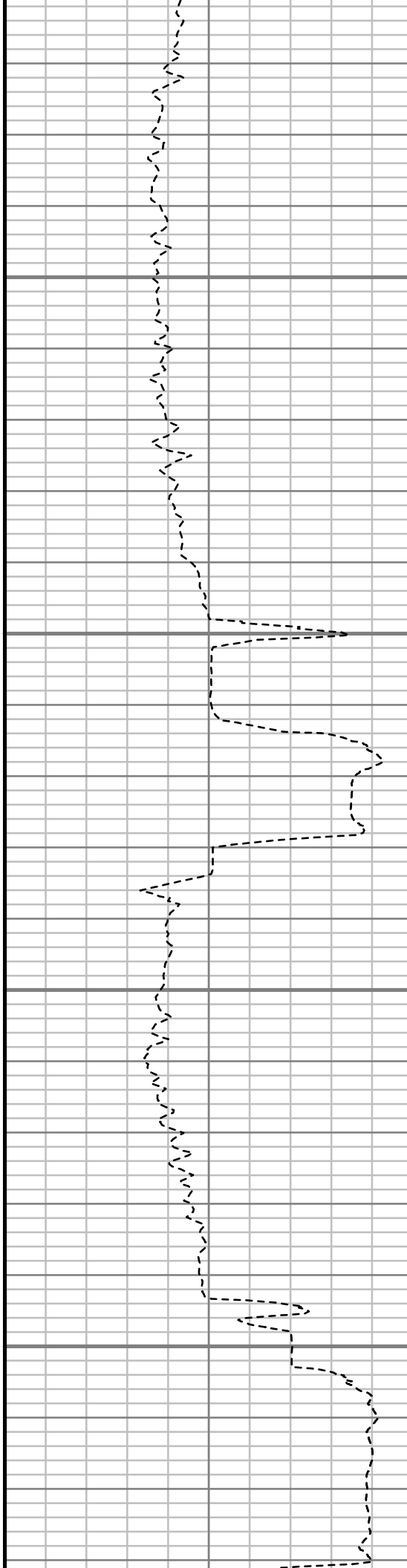


8400

8450

8500

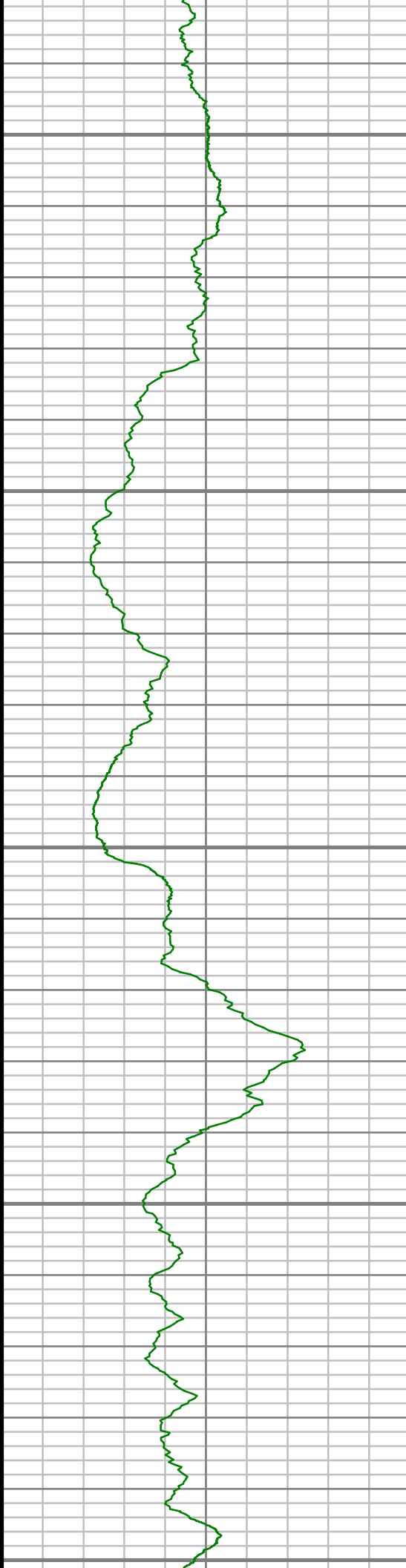
8550



S: 71 MD: 8384.00 ft Inc: 92.62
deg Az: 180.19 deg TVD:
7012.25 ft

S: 72 MD: 8479.00 ft Inc: 93.53
deg Az: 182.51 deg TVD:
7007.15 ft

S: 73 MD: 8574.00 ft Inc: 91.38
deg Az: 184.03 deg TVD:
7003.08 ft



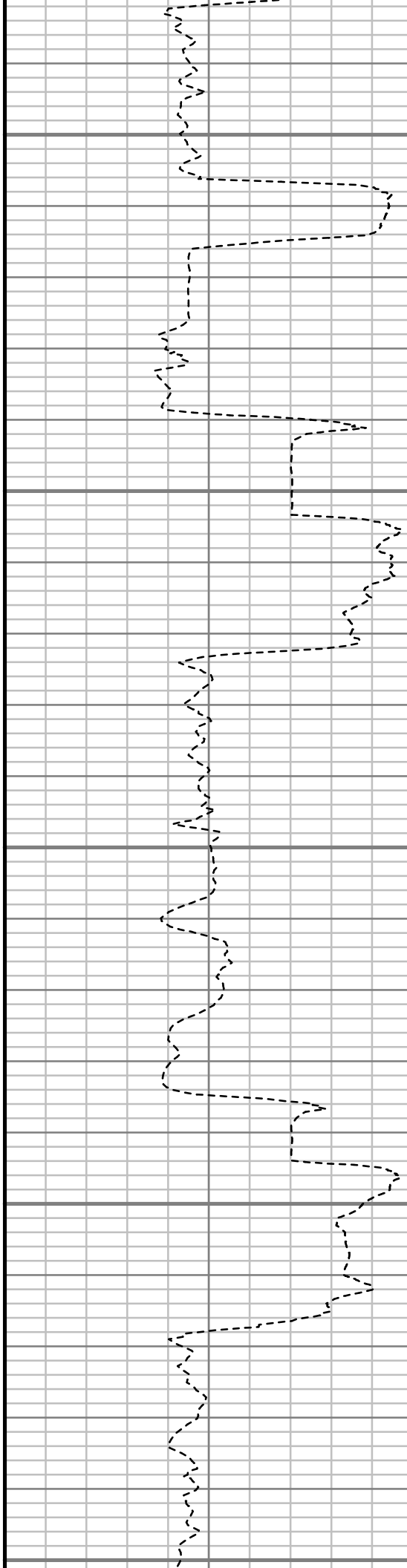
8600

8650

8700

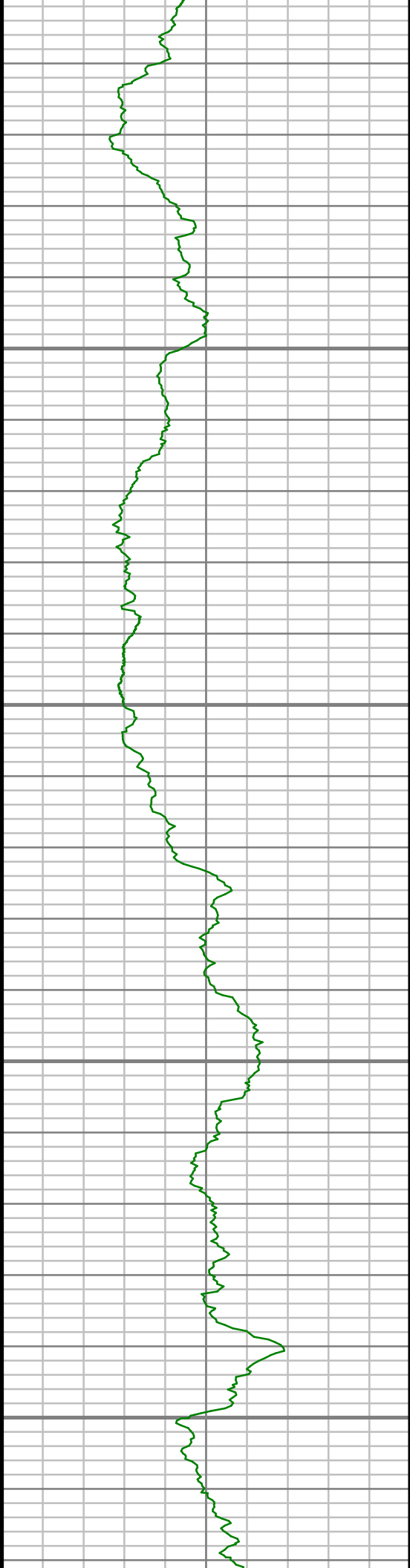
8750

8800



S: 74 MD: 8670.00 ft Inc: 88.76
deg Az: 184.26 deg TVD:
7002.97 ft

S: 75 MD: 8765.00 ft Inc: 88.79
deg Az: 181.92 deg TVD:
7005.01 ft

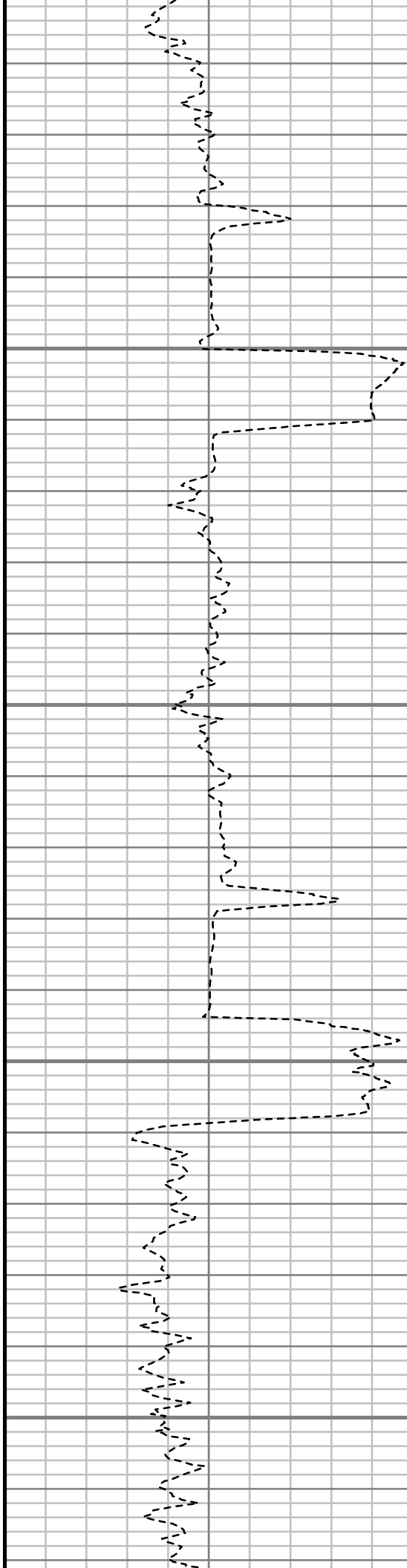


8850

8900

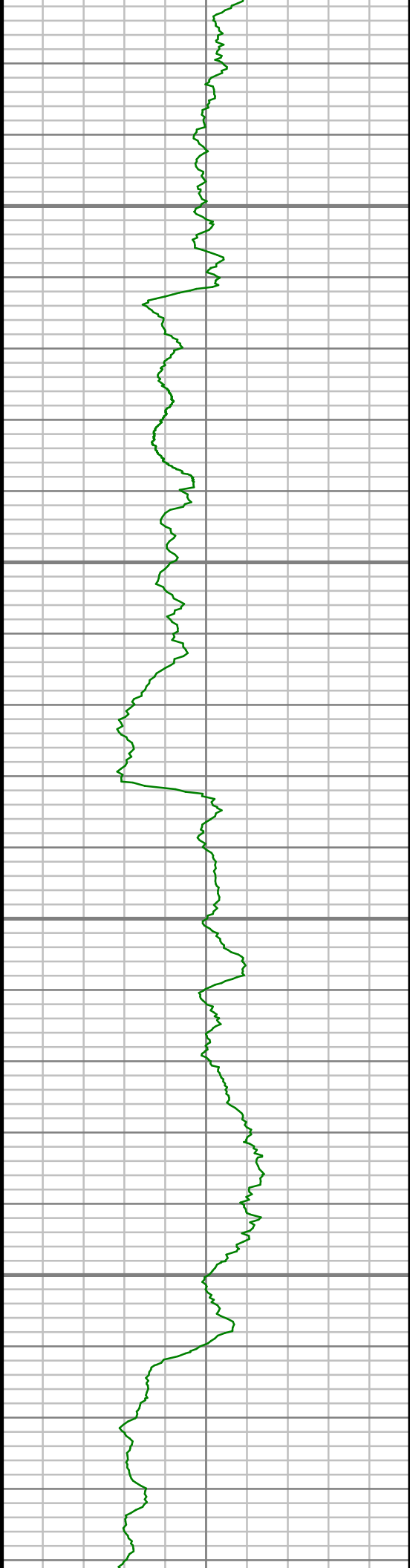
8950

9000



S: 76 MD: 8860.00 ft Inc: 89.80
deg Az: 181.14 deg TVD:
7006.18 ft

S: 77 MD: 8955.00 ft Inc: 89.06
deg Az: 179.58 deg TVD:
7007.12 ft

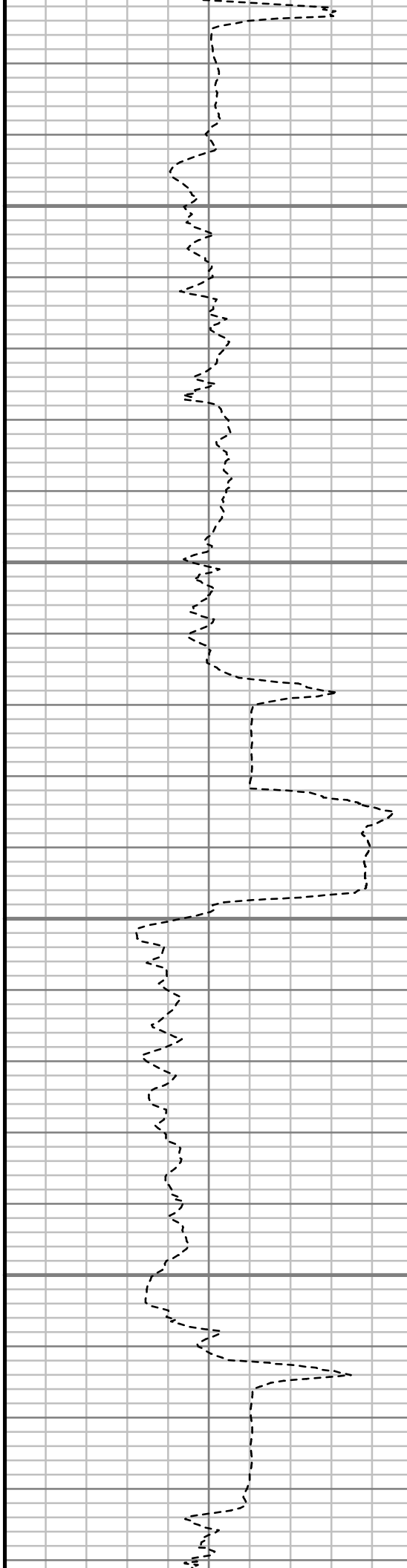


9050

9100

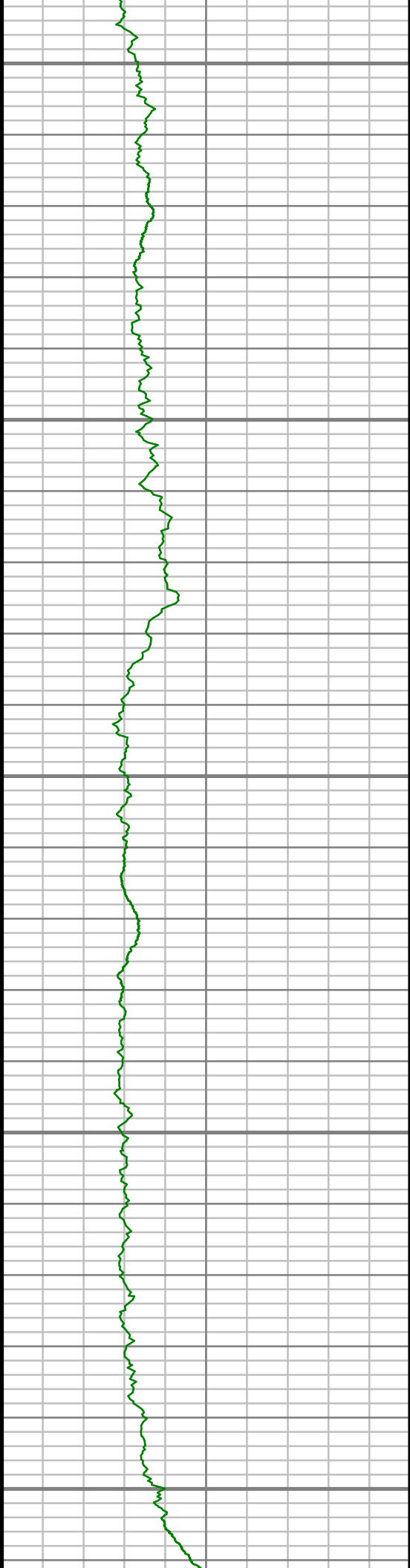
9150

9200



S: 78 MD: 9051.00 ft Inc: 88.66
deg Az: 180.04 deg TVD:
7009.04 ft

S: 79 MD: 9146.00 ft Inc: 90.61
deg Az: 178.61 deg TVD:
7009.65 ft



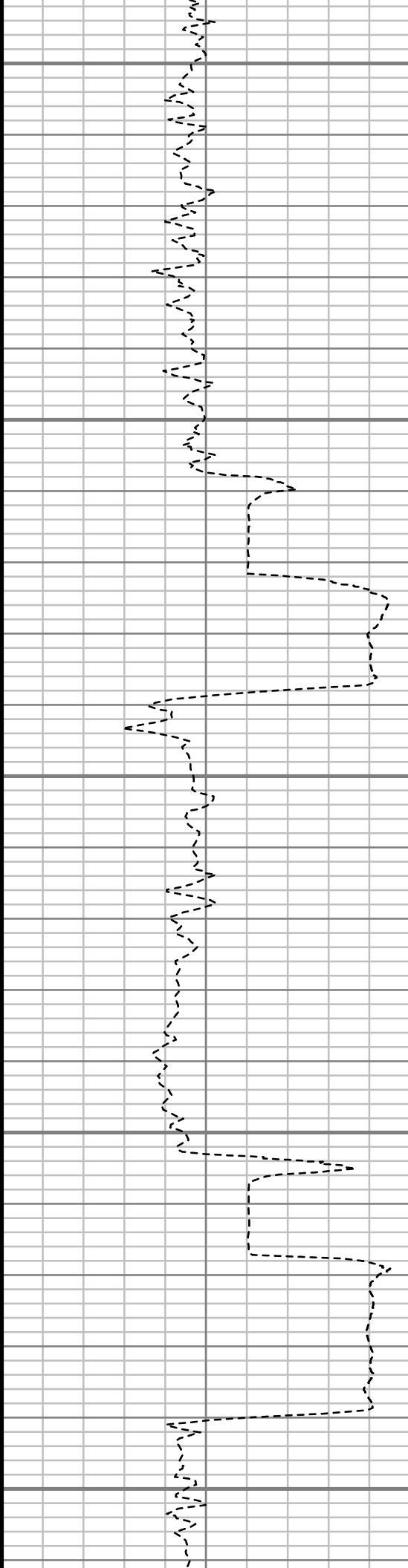
9250

9300

9350

9400

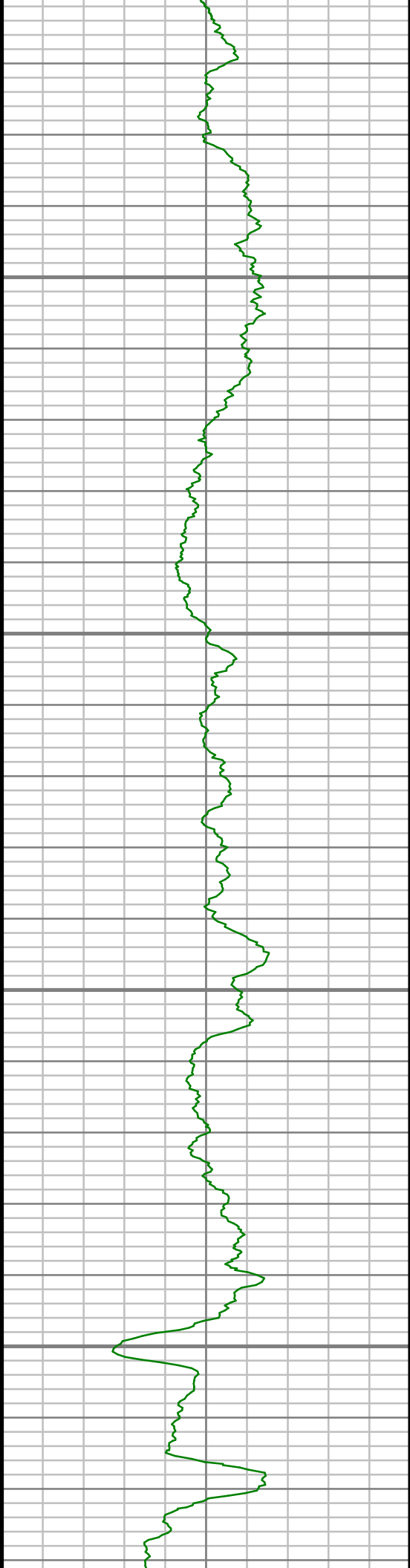
9450



S: 80 MD: 9241.00 ft Inc: 91.28
deg Az: 178.45 deg TVD:
7008.09 ft

S: 81 MD: 9337.00 ft Inc: 91.41
deg Az: 177.68 deg TVD:
7005.84 ft

S: 82 MD: 9432.00 ft Inc: 90.23
deg Az: 179.89 deg TVD:
7004.47 ft

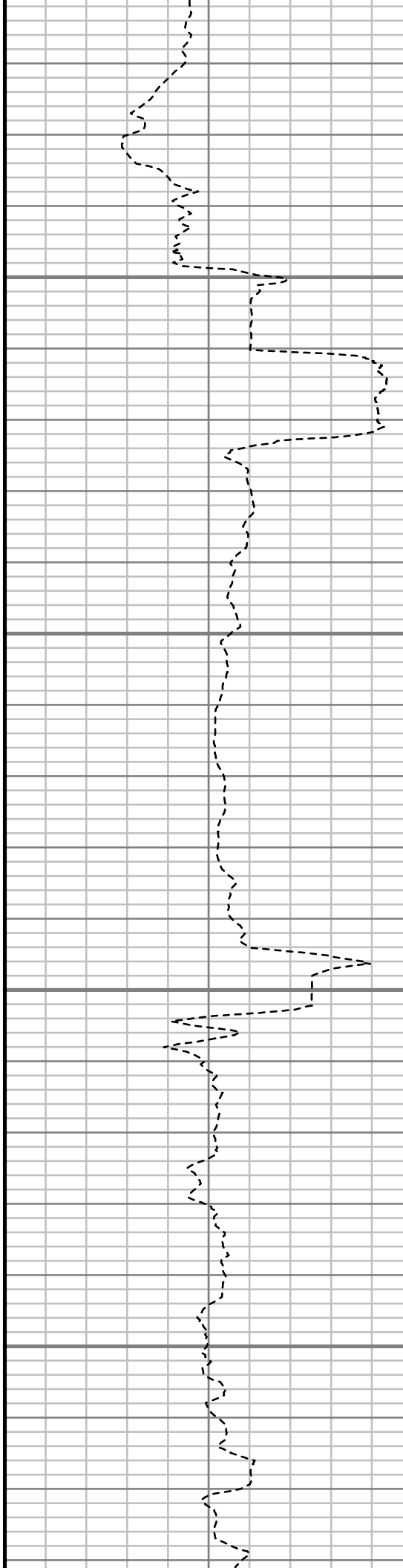


9500

9550

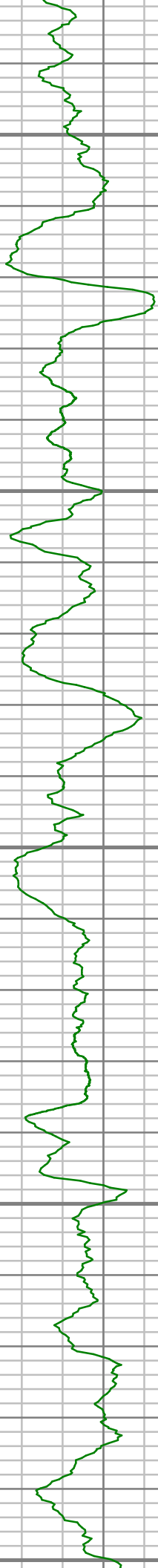
9600

9650



S: 83 MD: 9527.00 ft Inc: 89.40
deg Az: 180.59 deg TVD:
7004.78 ft

S: 84 MD: 9622.00 ft Inc: 88.96
deg Az: 180.72 deg TVD:
7006.14 ft



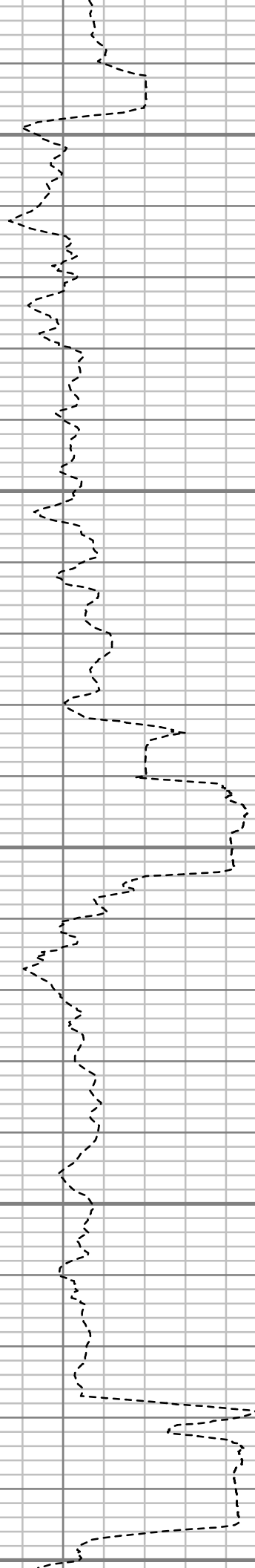
9700

9750

9800

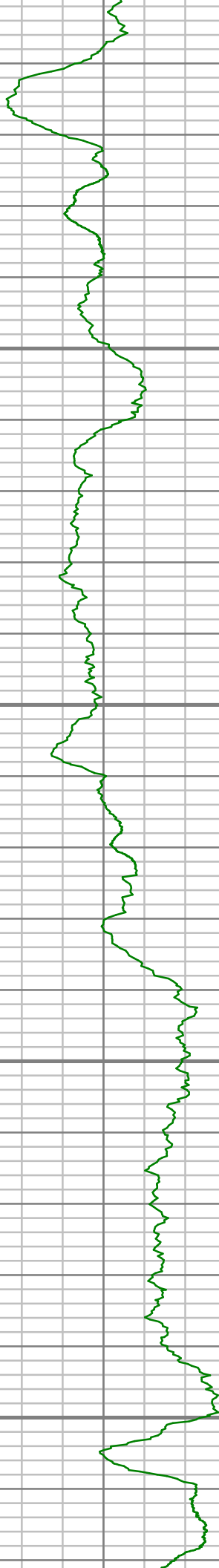
9850

9900



S: 85 MD: 9718.00 ft Inc: 89.33
deg Az: 180.96 deg TVD:
7007.58 ft

S: 86 MD: 9813.00 ft Inc: 88.02
deg Az: 179.39 deg TVD:
7009.77 ft

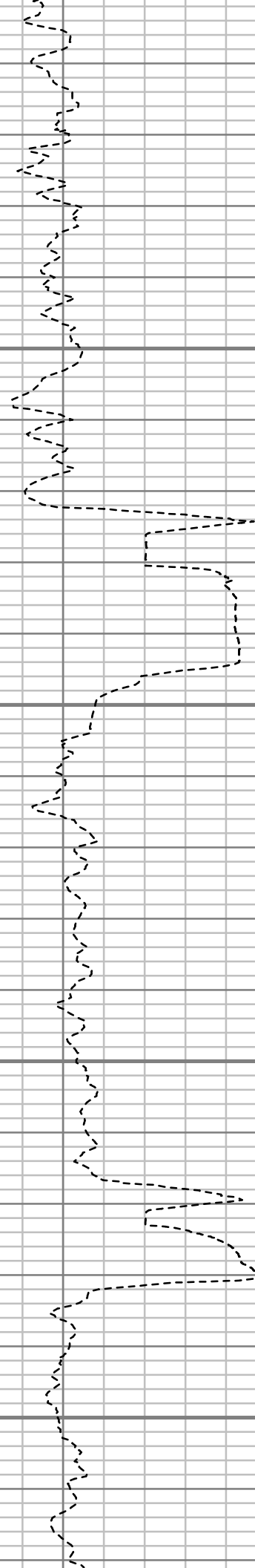


9950

10000

10050

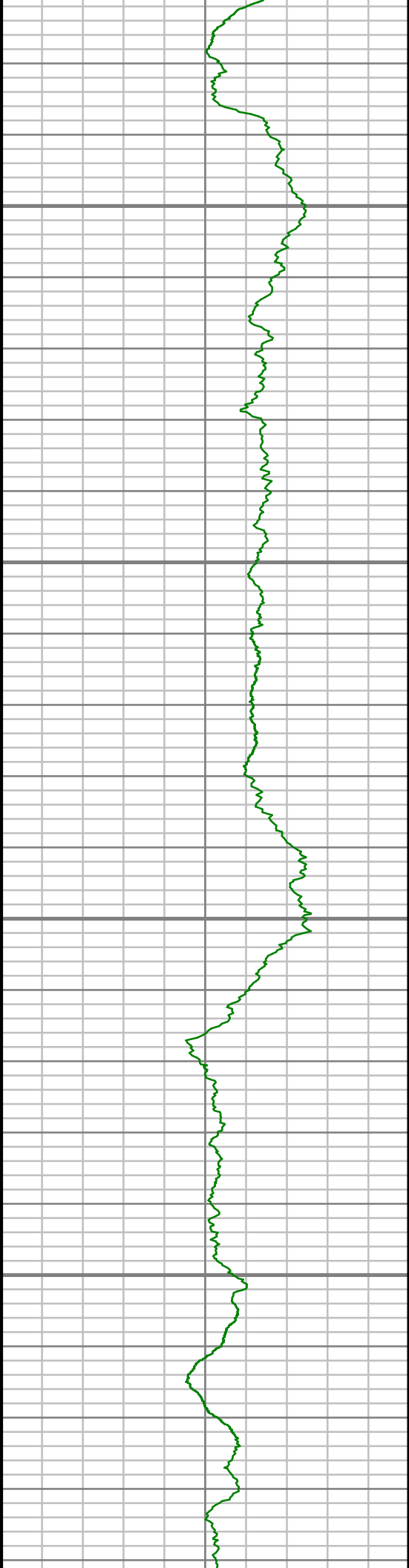
10100



S: 87 MD: 9908.00 ft Inc: 88.99
deg Az: 178.65 deg TVD:
7012.25 ft

S: 88 MD: 10003.00 ft Inc:
89.70 deg Az: 178.02 deg TVD:
7013.34 ft

S: 89 MD: 10098.00 ft Inc:
89.16 deg Az: 178.74 deg TVD:
7014.28 ft

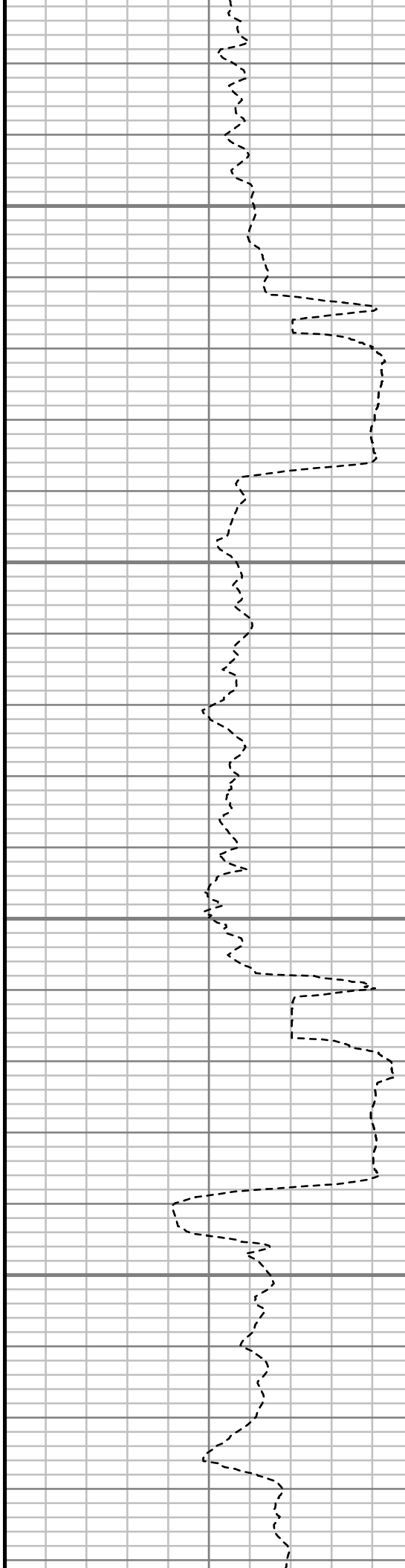


10150

10200

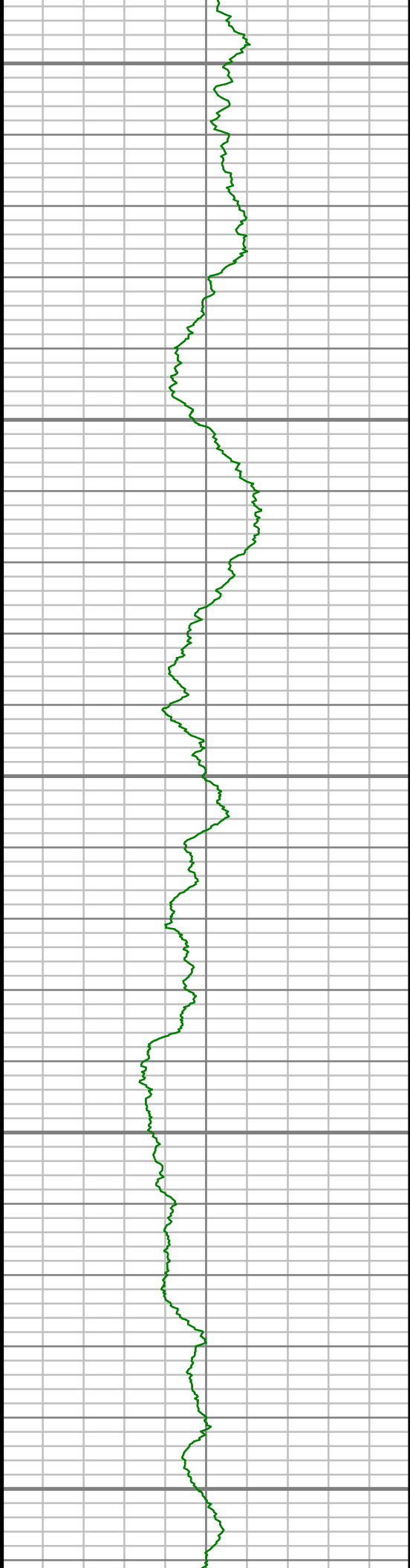
10250

10300



S: 90 MD: 10194.00 ft Inc:
90.27 deg Az: 177.44 deg TVD:
7014.76 ft

S: 91 MD: 10289.00 ft Inc:
91.92 deg Az: 178.20 deg TVD:
7012.95 ft



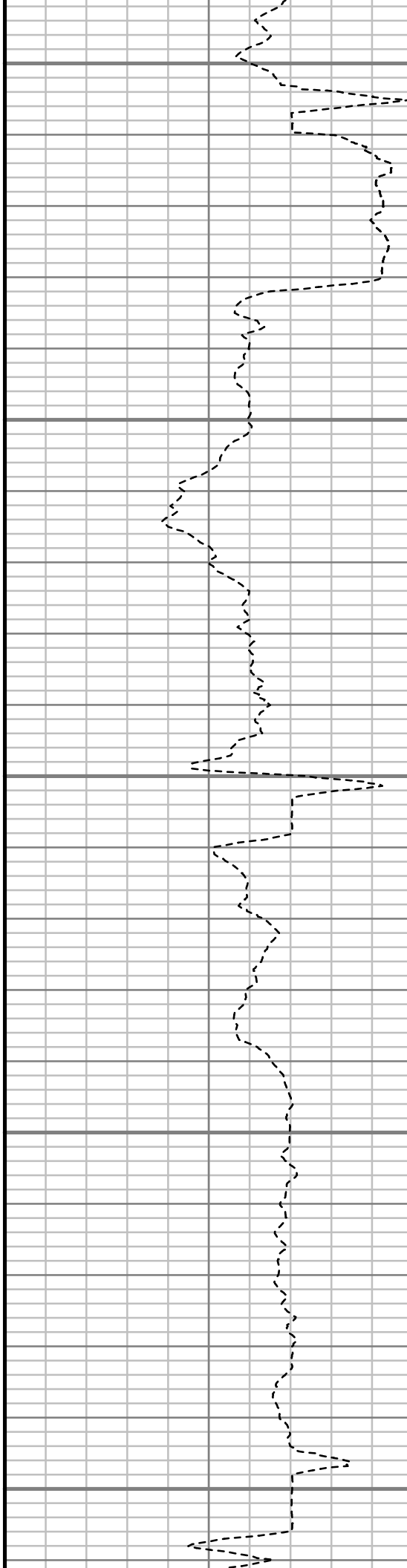
10350

10400

10450

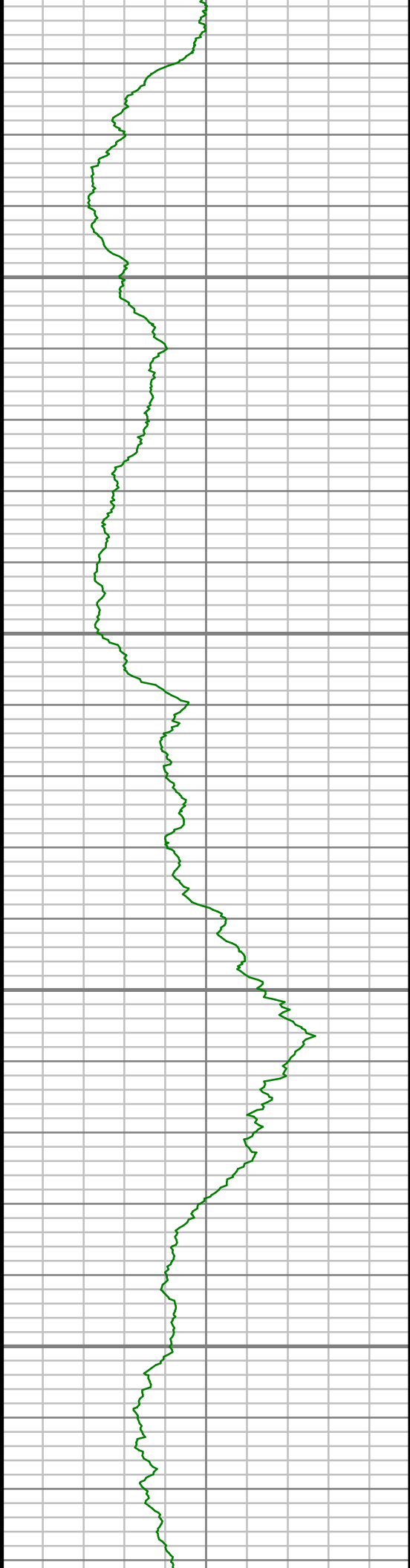
10500

10550



S: 92 MD: 10384.00 ft Inc:
90.87 deg Az: 179.91 deg TVD:
7010.63 ft

S: 93 MD: 10479.00 ft Inc:
90.47 deg Az: 179.50 deg TVD:
7009.52 ft

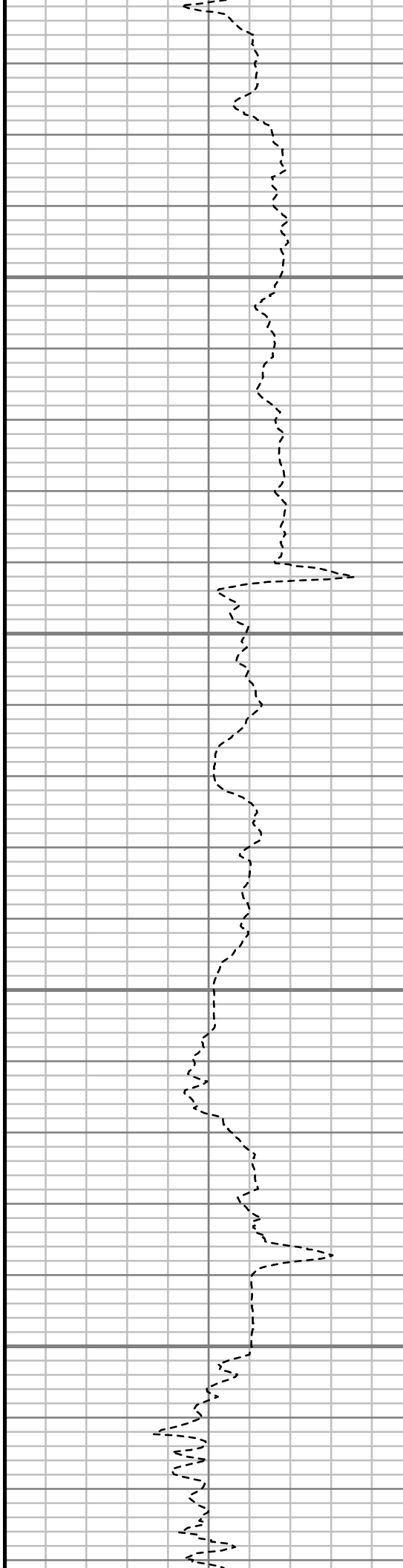


10600

10650

10700

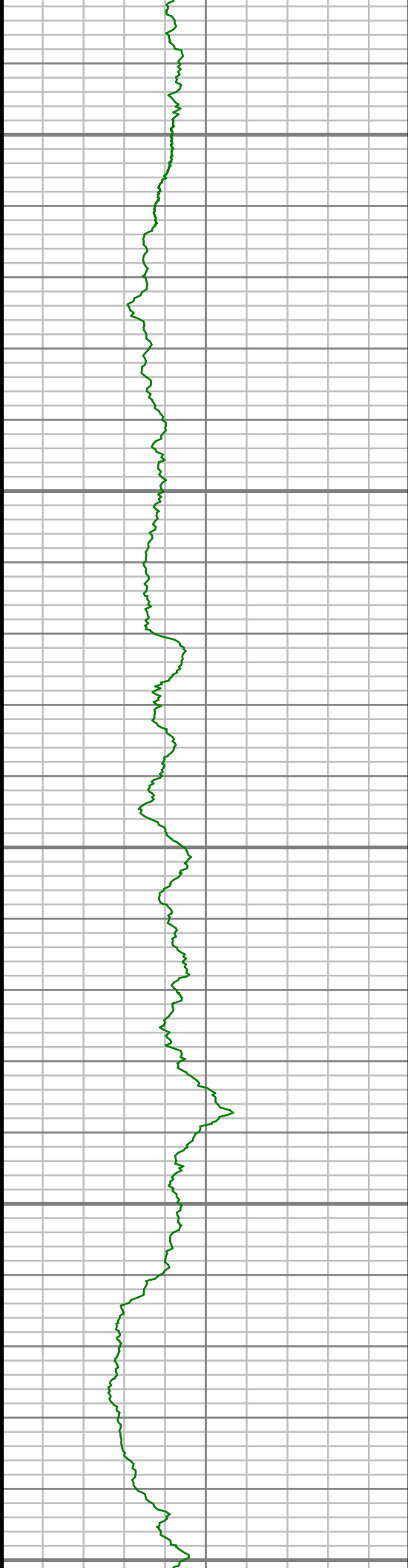
10750



S: 94 MD: 10575.00 ft Inc:
90.10 deg Az: 178.91 deg TVD:
7009.04 ft

S: 95 MD: 10670.00 ft Inc:
90.27 deg Az: 178.94 deg TVD:
7008.74 ft

S: 96 MD: 10765.00 ft Inc:
90.47 deg Az: 179.18 deg TVD:
7008.12 ft



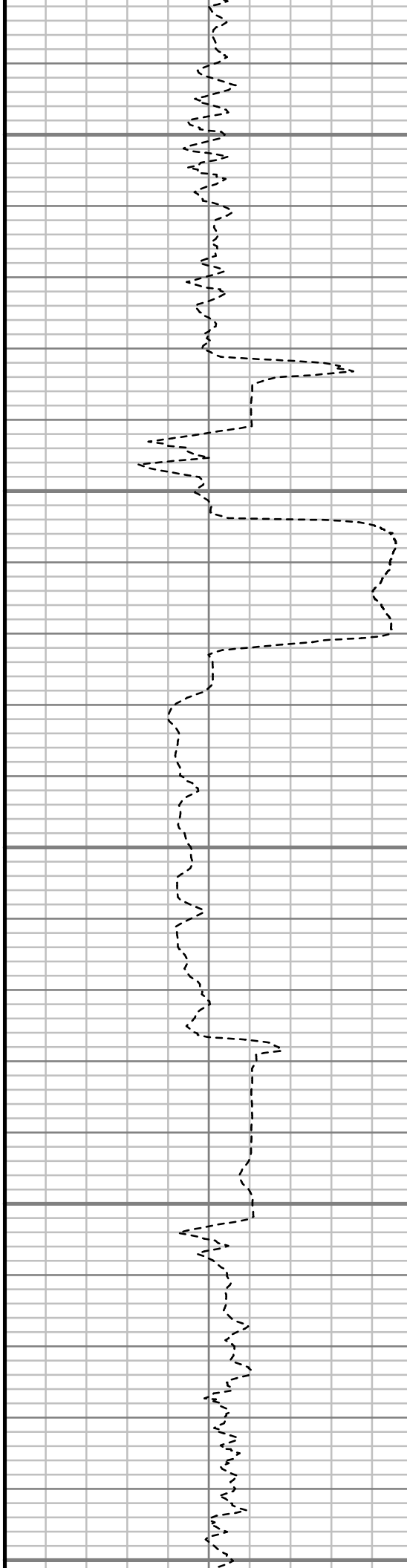
10800

10850

10900

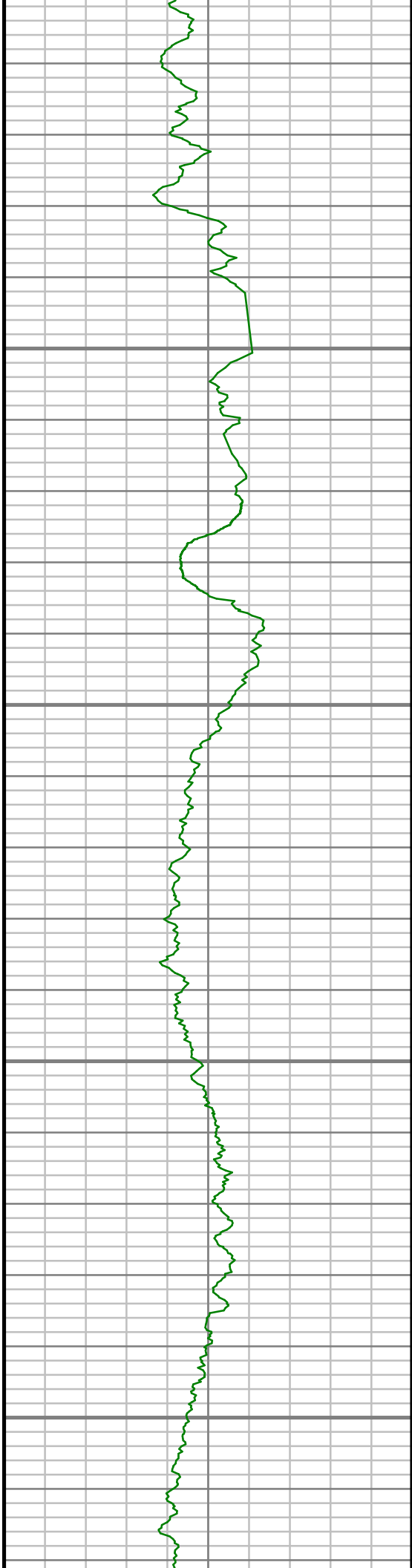
10950

11000



S: 97 MD: 10860.00 ft Inc:
89.33 deg Az: 179.61 deg TVD:
7008.29 ft

S: 98 MD: 10956.00 ft Inc:
89.66 deg Az: 179.83 deg TVD:
7009.13 ft

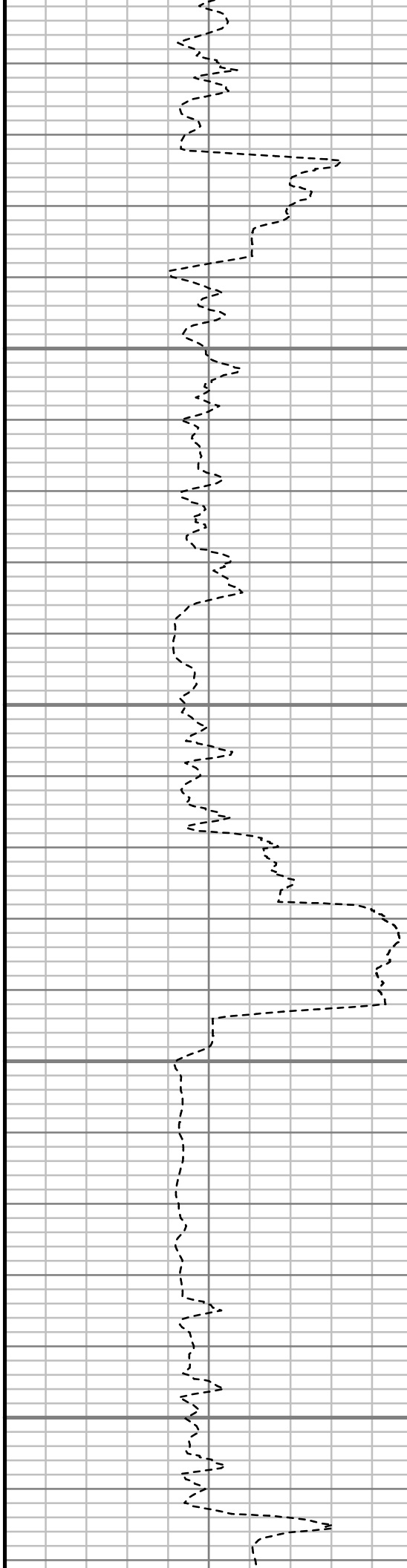


11050

11100

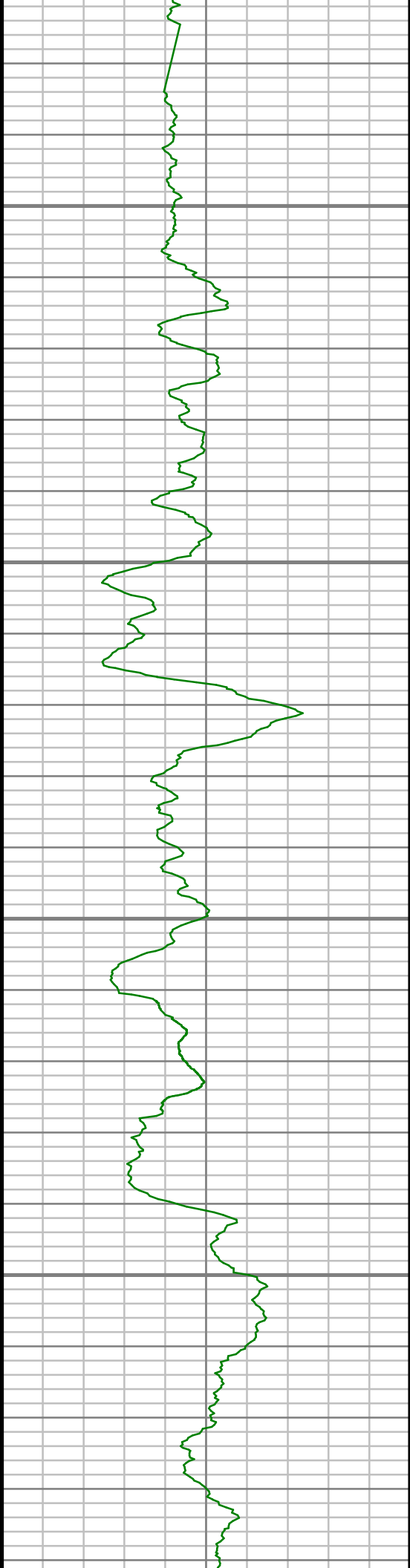
11150

11200



S: 99 MD: 11051.00 ft Inc:
88.82 deg Az: 179.24 deg TVD:
7010.39 ft

S: 100 MD: 11146.00 ft Inc:
90.27 deg Az: 179.75 deg TVD:
7011.14 ft

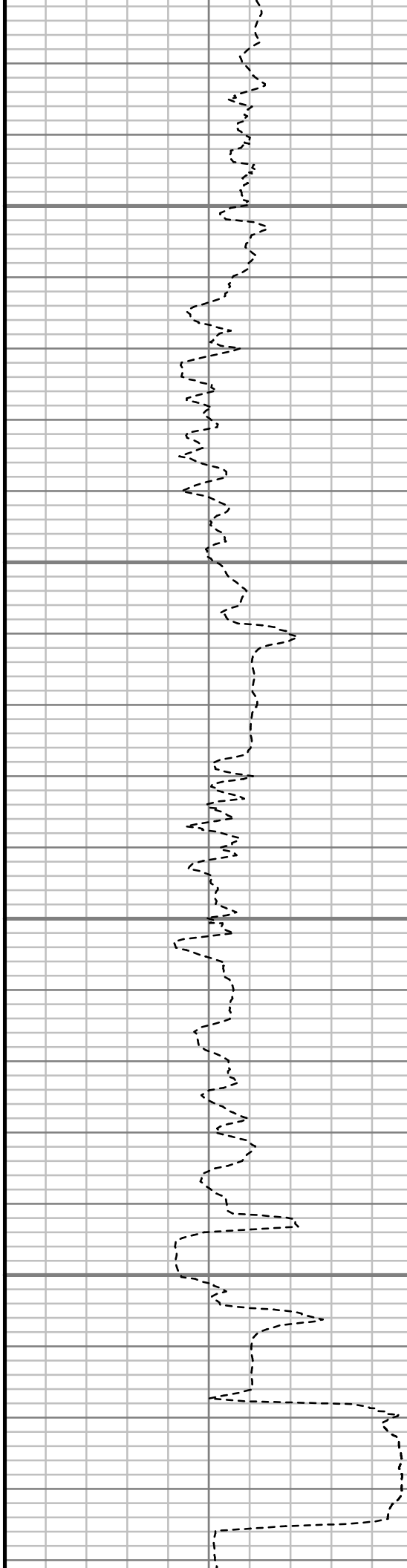


11250

11300

11350

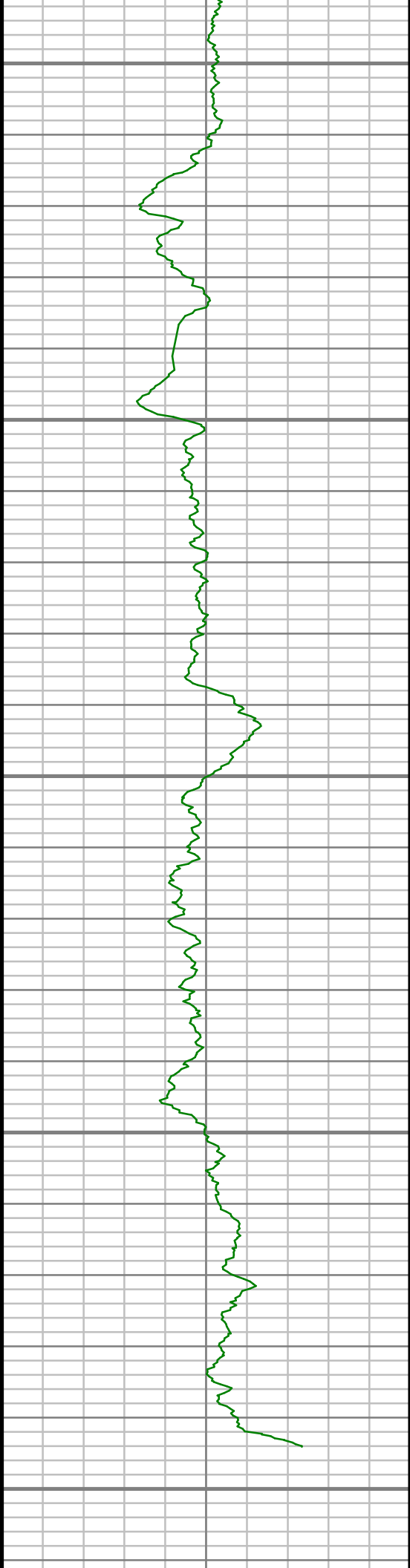
11400



S: 101 MD: 11242.00 ft Inc:
90.74 deg Az: 179.98 deg TVD:
7010.30 ft

S: 102 MD: 11337.00 ft Inc:
89.06 deg Az: 180.13 deg TVD:
7010.46 ft

S: 103 MD: 11432.00 ft Inc:
90.10 deg Az: 179.08 deg TVD:
7011.16 ft



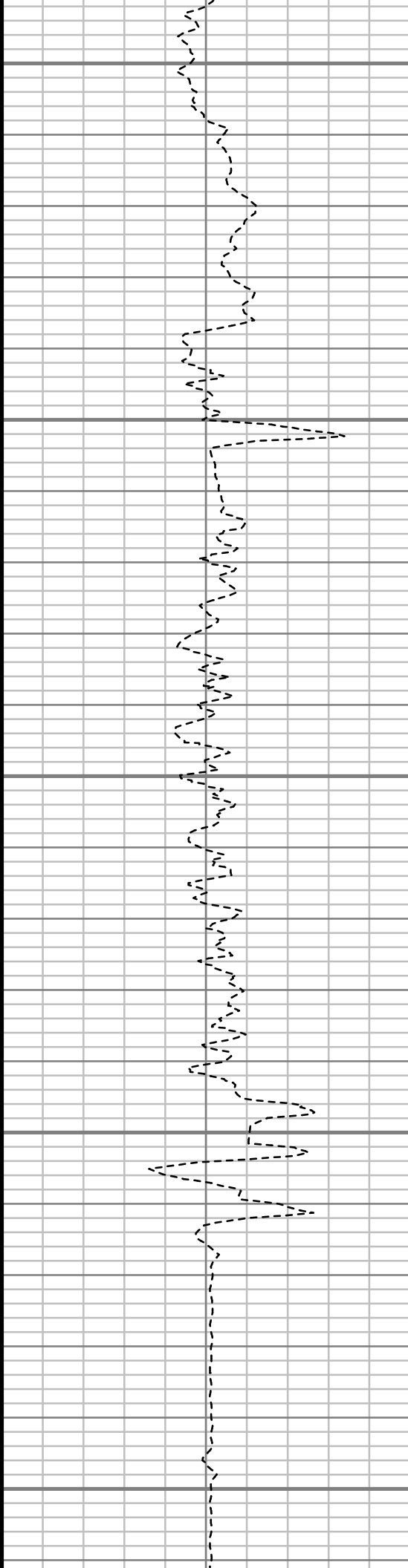
11450

11500

11550

11600

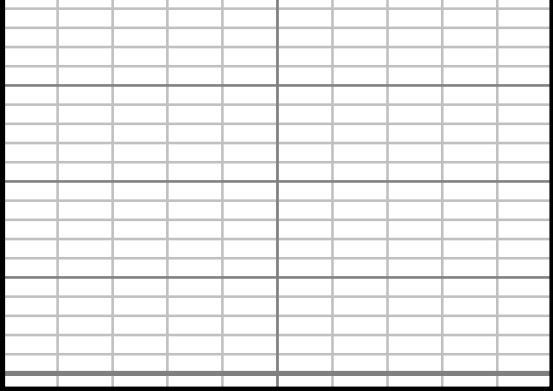
11650



S: 104 MD: 11527.00 ft Inc:
90.23 deg Az: 177.27 deg TVD:
7010.88 ft

S: 105 MD: 11622.00 ft Inc:
89.46 deg Az: 177.69 deg TVD:
7011.13 ft

S: 106 MD: 11636.00 ft Inc:
89.33 deg Az: 177.62 deg TVD:
7011.28 ft

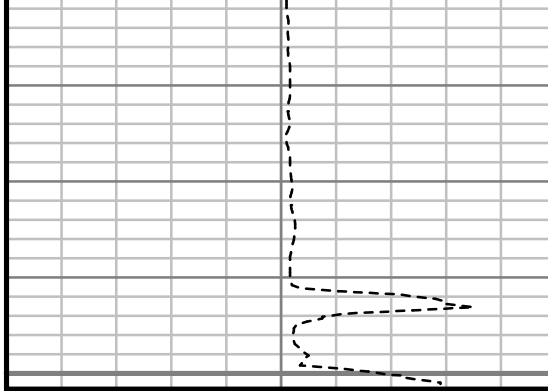


Gamma Ray (GR)

0 Unit = aapi 150

11700

MEASURED DEPTH
1:240 (ft)



ROP (ROP)

500 Unit = ft/hr 0

Comments



MWD Survey Report

Well Location	NEWNAM
Well Name	NEWNAM 2A-32H-C264
Survey Date	10/23/2014
Latitude	40°6'5.285"N
Longitude	104°34'43.352"W
Btotal	52533 nT
Dip	66.72 deg
Magnetic Declination	8.39 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), 199.13Azim (deg)
Operator(s)	M. SMITH, T. WHEELER

Well Notes

MD	Inc	Azim	TVD	VS	+N-S	+E-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	"/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
145.00	0.84	269.92	144.99	0.35	0.00	-1.06	1.06	269.92	0.58
238.00	2.75	257.26	237.95	1.75	-0.49	-3.92	3.95	262.81	2.09
331.00	2.94	255.30	330.83	4.26	-1.59	-8.40	8.55	259.28	0.23
424.00	4.27	266.20	423.65	6.93	-2.43	-14.17	14.37	260.28	1.60
517.00	6.15	275.14	516.26	9.49	-2.21	-22.58	22.69	264.41	2.20
609.00	7.44	277.33	607.61	11.90	-1.01	-33.40	33.41	268.27	1.43
702.00	8.90	281.90	699.67	14.03	1.24	-46.41	46.43	271.54	1.72
795.00	11.68	279.64	791.16	16.49	4.30	-62.74	62.88	273.92	3.02
888.00	14.50	276.33	881.74	20.62	7.16	-83.59	83.90	274.90	3.14
976.00	15.32	278.57	966.77	25.20	10.11	-106.04	106.52	275.45	1.14
1178.00	17.72	279.38	1160.42	35.29	19.10	-162.76	163.88	276.69	1.19
1366.00	18.84	278.08	1338.93	45.96	28.03	-221.05	222.82	277.23	0.63
1551.00	19.71	283.32	1513.57	54.84	39.42	-280.98	283.74	277.99	1.05
1742.00	19.83	282.05	1693.32	62.10	53.60	-344.01	348.16	278.86	0.23
1933.00	20.04	278.49	1872.88	72.13	65.20	-408.06	413.24	279.08	0.64
2123.00	18.64	278.40	2052.15	83.80	74.44	-470.30	476.15	278.99	0.74
2314.00	17.59	277.43	2233.68	95.33	82.63	-529.12	535.53	278.88	0.57
2505.00	17.30	280.48	2415.90	105.46	91.53	-585.66	592.77	278.88	0.50

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	Closure Distance ft	Closure Direction deg	DLS °/100ft
2695.00	17.29	278.57	2597.31	114.88	100.87	-641.36	649.24	278.94	0.30
2886.00	16.92	281.24	2779.87	123.90	110.52	-696.69	705.40	279.01	0.45
3076.00	17.27	282.15	2961.47	131.12	121.85	-751.38	761.19	279.21	0.23
3267.00	20.40	281.92	3142.22	138.74	134.69	-811.68	822.78	279.42	1.64
3457.00	18.60	280.33	3321.32	147.54	146.97	-873.90	886.17	279.55	0.99
3647.00	18.63	281.66	3501.38	156.12	158.53	-933.43	946.80	279.64	0.22
3837.00	16.21	277.05	3682.66	165.61	167.92	-989.48	1003.63	279.63	1.47
4028.00	16.43	282.42	3865.97	174.35	177.01	-1042.32	1057.24	279.64	0.80
4219.00	18.72	283.86	4048.05	180.32	190.16	-1098.47	1114.81	279.82	1.22
4409.00	18.93	284.62	4227.88	185.55	205.24	-1157.89	1175.94	280.05	0.17
4600.00	18.18	282.84	4408.96	191.25	219.68	-1216.92	1236.59	280.23	0.49
4790.00	17.60	281.06	4589.77	198.53	231.78	-1274.01	1294.93	280.31	0.42
4981.00	17.36	280.75	4771.95	206.73	242.64	-1330.35	1352.29	280.34	0.13
5171.00	15.35	280.33	4954.25	214.71	252.43	-1382.94	1405.79	280.34	1.06
5361.00	13.78	279.39	5138.14	222.39	260.64	-1430.01	1453.57	280.33	0.84
5551.00	12.37	275.76	5323.21	230.92	266.37	-1472.59	1496.48	280.25	0.86
5741.00	9.70	270.66	5509.69	240.70	268.60	-1508.85	1532.57	280.09	1.49
5931.00	7.00	268.97	5697.66	249.77	268.57	-1536.43	1559.73	279.92	1.43

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	Closure Distance ft	Closure Direction deg	DLS °/100ft
6122.00	4.99	262.74	5887.60	257.47	267.32	-1556.31	1579.10	279.75	1.10
6312.00	2.12	255.69	6077.22	263.08	265.40	-1567.92	1590.22	279.61	1.53
6454.00	1.84	254.25	6219.13	265.83	264.13	-1572.66	1594.68	279.53	0.20
6502.00	1.79	258.12	6267.11	266.66	263.77	-1574.13	1596.08	279.51	0.28
6549.00	5.66	186.94	6314.02	269.30	261.32	-1575.13	1596.66	279.42	11.40
6597.00	10.36	179.44	6361.54	275.69	254.65	-1575.38	1595.82	279.18	10.01
6644.00	13.12	181.59	6407.55	284.75	245.09	-1575.48	1594.43	278.84	5.94
6692.00	14.52	177.65	6454.16	295.55	233.63	-1575.39	1592.62	278.44	3.51
6739.00	15.93	177.61	6499.51	307.03	221.30	-1574.88	1590.35	278.00	3.00
6787.00	19.83	178.01	6545.18	320.76	206.57	-1574.32	1587.81	277.48	8.13
6834.00	24.34	177.23	6588.72	337.19	188.92	-1573.57	1584.87	276.85	9.62
6882.00	27.86	178.43	6631.82	356.87	167.82	-1572.79	1581.72	276.09	7.42
6929.00	30.37	176.81	6672.88	378.13	144.98	-1571.83	1578.50	275.27	5.60
6977.00	33.60	174.86	6713.59	401.47	119.63	-1569.96	1574.51	274.36	7.06
7024.00	38.37	175.17	6751.61	426.67	92.13	-1567.57	1570.27	273.36	10.16
7073.00	45.06	177.10	6788.17	456.68	59.61	-1565.40	1566.54	272.18	13.90
7120.00	50.45	180.51	6819.76	489.30	24.85	-1564.72	1564.92	270.91	12.66
7168.00	53.87	181.32	6849.20	525.31	-13.05	-1565.34	1565.39	269.52	7.25

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
7215.00	57.74	181.94	6875.61	562.38	-51.90	-1566.45	1567.31	268.10	8.31
7263.00	59.47	182.92	6900.62	601.62	-92.83	-1568.19	1570.93	266.61	4.00
7310.00	61.86	183.16	6923.64	640.98	-133.74	-1570.36	1576.04	265.13	5.10
7359.00	64.74	182.57	6945.65	683.00	-177.46	-1572.54	1582.53	263.56	5.98
7406.00	68.30	182.52	6964.38	724.31	-220.52	-1574.46	1589.83	262.03	7.58
7454.00	71.63	182.10	6980.82	767.47	-265.57	-1576.27	1598.49	260.44	6.99
7501.00	75.42	181.51	6994.15	810.49	-310.61	-1577.69	1607.98	258.86	8.15
7549.00	82.50	180.62	7003.33	855.25	-357.68	-1578.56	1618.58	257.23	14.86
7628.00	87.25	179.75	7010.39	929.65	-436.34	-1578.81	1638.00	254.55	6.11
7721.00	88.82	180.76	7013.57	1017.59	-529.28	-1579.23	1665.56	251.47	2.01
7814.00	90.07	180.62	7014.47	1105.81	-622.27	-1580.34	1698.44	248.51	1.34
7909.00	89.93	180.49	7014.47	1195.86	-717.27	-1581.26	1736.33	245.60	0.20
8004.00	90.00	180.51	7014.53	1285.88	-812.26	-1582.09	1778.42	242.82	0.07
8099.00	89.56	180.60	7014.89	1375.93	-907.26	-1583.00	1824.56	240.18	0.47
8194.00	89.90	180.36	7015.34	1465.93	-1002.25	-1583.79	1874.28	237.67	0.43
8289.00	90.60	179.86	7014.92	1555.75	-1097.25	-1583.97	1926.89	235.29	0.91
8384.00	92.62	180.19	7012.25	1645.47	-1192.21	-1584.01	1982.53	233.03	2.15
8479.00	93.53	182.51	7007.15	1735.79	-1287.04	-1586.23	2042.70	230.94	2.62

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
8574.00	91.38	184.03	7003.08	1827.09	-1381.79	-1591.65	2107.77	229.04	2.78
8670.00	88.76	184.26	7002.97	1919.82	-1477.53	-1598.60	2176.83	227.25	2.74
8765.00	88.79	181.92	7005.01	2011.09	-1572.36	-1603.72	2245.94	225.57	2.47
8860.00	89.80	181.14	7006.18	2101.63	-1667.32	-1606.25	2315.17	223.93	1.34
8955.00	89.06	179.58	7007.12	2191.57	-1762.31	-1606.85	2384.89	222.36	1.82
9051.00	88.66	180.04	7009.04	2282.15	-1858.29	-1606.53	2456.45	220.84	0.64
9146.00	90.61	178.61	7009.65	2371.52	-1953.27	-1605.41	2528.36	219.42	2.54
9241.00	91.28	178.45	7008.09	2460.43	-2048.23	-1602.98	2600.92	218.05	0.73
9337.00	91.41	177.68	7005.84	2549.99	-2144.15	-1599.73	2675.16	216.73	0.82
9432.00	90.23	179.89	7004.47	2639.05	-2239.11	-1597.72	2750.69	215.51	2.64
9527.00	89.40	180.59	7004.78	2728.93	-2334.10	-1598.11	2828.78	214.40	1.15
9622.00	88.96	180.72	7006.14	2819.02	-2429.09	-1599.20	2908.25	213.36	0.48
9718.00	89.33	180.96	7007.58	2910.16	-2525.07	-1600.60	2989.63	212.37	0.46
9813.00	88.02	179.39	7009.77	2999.98	-2620.04	-1600.89	3070.41	211.43	2.15
9908.00	88.99	178.65	7012.25	3089.16	-2714.99	-1599.26	3151.00	210.50	1.29
10003.00	89.70	178.02	7013.34	3177.96	-2809.94	-1596.50	3231.81	209.60	1.00
10098.00	89.16	178.74	7014.28	3266.80	-2904.90	-1593.82	3313.41	208.75	0.95
10194.00	90.27	177.44	7014.76	3356.39	-3000.84	-1590.63	3396.34	207.93	1.78

	MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
	ft	deg	deg	ft	ft	ft	ft	ft	deg	"/100ft
	10289.00	91.92	178.20	7012.95	3444.88	-3095.75	-1587.01	3478.83	207.14	1.91
	10384.00	90.87	179.91	7010.63	3534.07	-3190.70	-1585.44	3562.89	206.42	2.11
	10479.00	90.47	179.50	7009.52	3623.66	-3285.69	-1584.95	3647.99	205.75	0.60
	10575.00	90.10	178.91	7009.04	3713.91	-3381.68	-1583.62	3734.12	205.09	0.72
	10670.00	90.27	178.94	7008.74	3803.06	-3476.67	-1581.84	3819.61	204.46	0.18
	10765.00	90.47	179.18	7008.12	3892.29	-3571.65	-1580.28	3905.63	203.87	0.33
	10860.00	89.33	179.61	7008.29	3981.71	-3666.64	-1579.27	3992.29	203.30	1.28
	10956.00	89.66	179.83	7009.13	4072.25	-3762.64	-1578.81	4080.45	202.76	0.42
	11051.00	88.82	179.24	7010.39	4161.74	-3857.63	-1578.04	4167.91	202.25	1.08
	11146.00	90.27	179.75	7011.14	4251.21	-3952.62	-1577.21	4255.67	201.75	1.61
	11242.00	90.74	179.98	7010.30	4341.83	-4048.61	-1576.98	4344.90	201.28	0.55
	11337.00	89.06	180.13	7010.46	4431.62	-4143.61	-1577.08	4433.58	200.84	1.77
	11432.00	90.10	179.08	7011.16	4521.15	-4238.60	-1576.42	4522.26	200.40	1.56
	11527.00	90.23	177.27	7010.88	4609.86	-4333.55	-1573.39	4610.34	199.95	1.91
	11622.00	89.46	177.69	7011.13	4698.16	-4428.46	-1569.22	4698.26	199.51	0.92
	11636.00	89.33	177.62	7011.28	4711.19	-4442.44	-1568.64	4711.26	199.45	1.06

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

5" = 100' FEET MD