



GAMMA RAY

5" = 100' FEET MD

COMPANY : ANADARKO E & P ONSHORE LLC
WELL : BADGER 11C-3HZ
FIELD : WATTENBERG
COUNTY : WELD
STATE : COLORADO
COUNTRY : U.S.A.
UWI : 05-123-36464

COMPANY : ANADARKO E & P ONSHORE LLC
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UWI : 05-123-36464

WELL LOCATION

LAT:40°3'26.517"N LONG:104°59'37.975"W
N:1264148.10 ft E:3141670.74 ft

SEC:15 TWP:1N RANGE:68W

OTHER SERVICES

DIRECTIONAL
ROP

DEPTH REF. : RKB

REF. HEIGHT : 25.000 ft

RKB to Ground Level

GROUND LEVEL : 5125.000 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	0	1270	0-10	0	7207
8.75	1270	8341	10-90	7207	8307
6.125	8341	16279	90-92.08	8307	16279

CASING RECORD

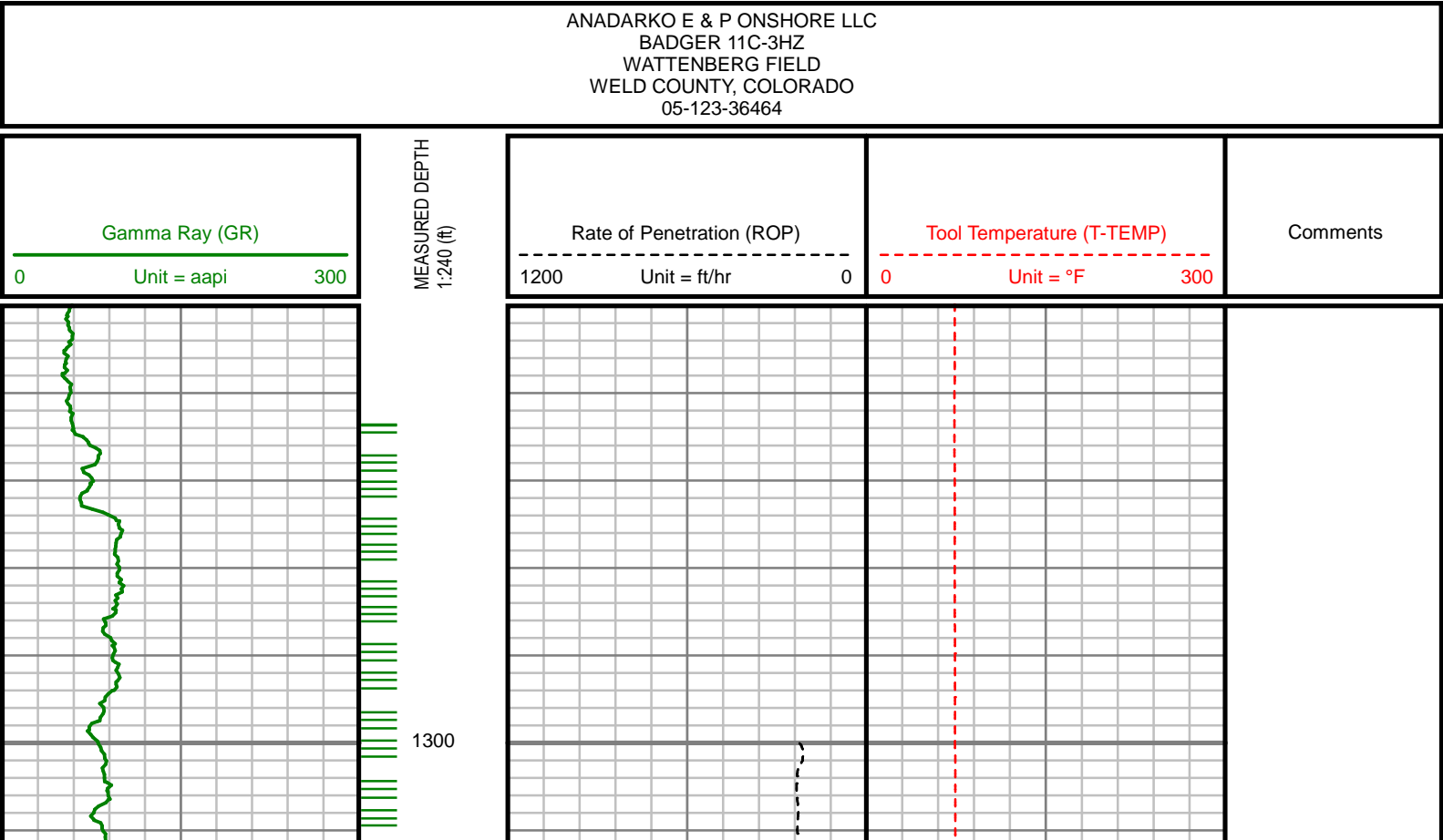
CASING SIZE in	FROM ft	TO ft
9.625	0	1270
7	0	8331
DRILLING CO. : H & P		
RIG : 290		
LWD UNIT NO. : 280-C DISTRICT : CASPER		
SPUD DATE : 10/17/2014		
LWD START DATE : 01/6/2015 DEPTH : 1270 ft		
LWD END DATE : 01/16/2015 DEPTH : 16279 ft		
TOTAL DEPTH : 16279 ft		

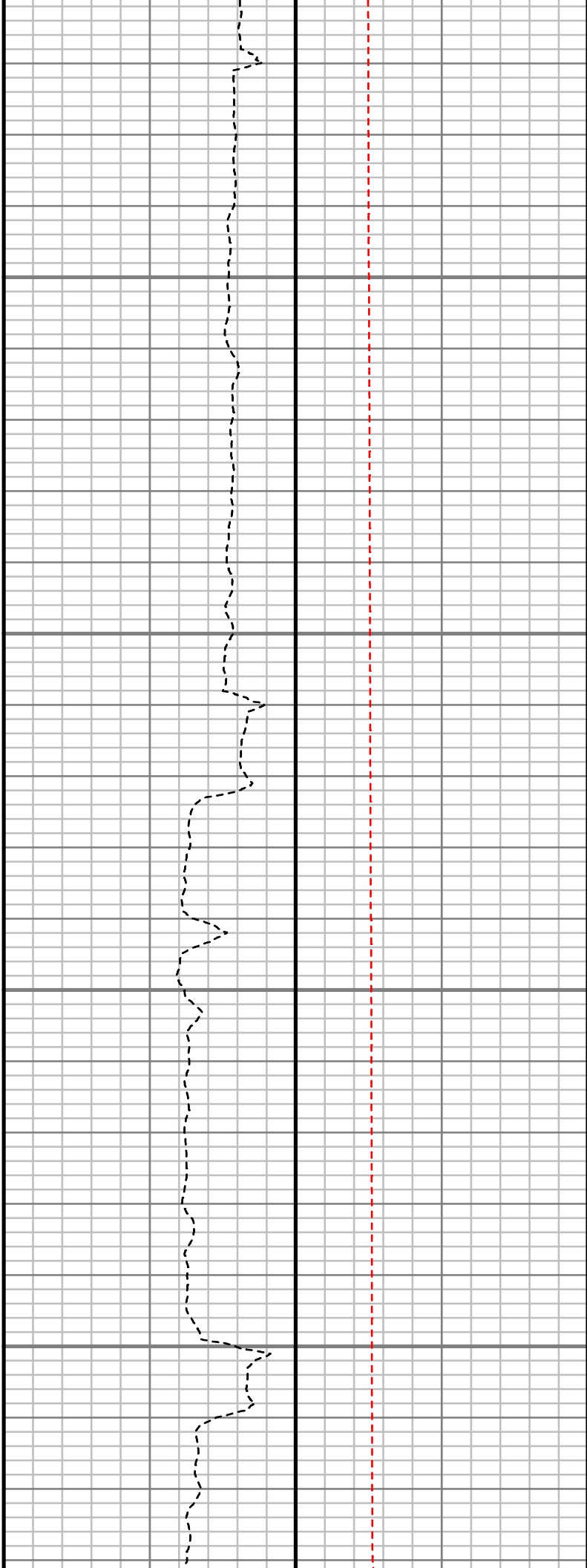
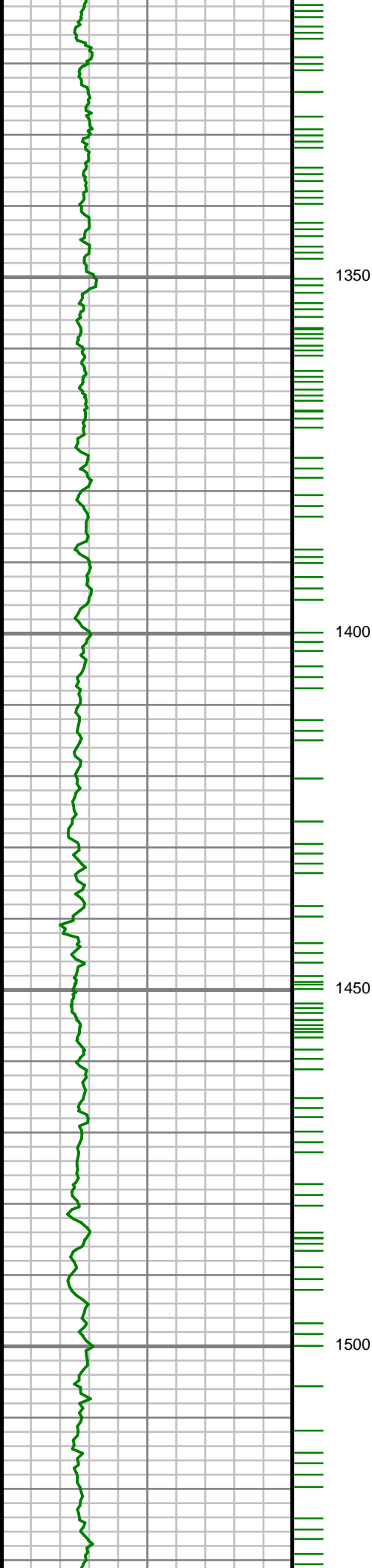
Run Data

RUN NUMBER	1	2
START DATE	01/06/2015	01/11/2015
START TIME	2345	1645
END DATE	01/11/2015	01/16/2015
END TIME	1645	0750
DEPTH IN (ft)	1270	8341
DEPTH OUT (ft)	8341	16279
LOG TOP (ft)	1270	8341
LOG BOTTOM (ft)	8341	16279
HOLE SIZE (in)	8.75	6
MUD DATA @ (ft)	4870	8341
MUD TYPE	WATER - BASED	WATER - BASED
DENSITY (lb / gal)	8.7	10.1
VISCOSITY (s / qt)	30	40
pH	8.2	9.4
FLUID LOSS (cm ³ / 30)	45	5.4
SALINITY (mg/L)	3400	3200
Rm (ohmm @ deg F)	-	-
Rmf (ohmm @ deg F)	-	-
MAX TEMP (deg F)	92	110
Rm @ MAX TEMP (ohmm)	-	-
LWD ENGINEER #1	M. SHARKER	M. SHARKER
LWD ENGINEER #2	J. MEYERS	J. MEYERS
LWD ENGINEER #3	-	-
LOG WITNESS #1	J. MORGAN	J. MORGAN
LOG WITNESS #2	-	-

Remarks
ANADARKO E & P ONSHORE LLC PRODUCTION AFE# 2074505
SCIENTIFIC DRILLING INTERNATIONAL JOB# 240754
ALL REFERENCES IN THE DEPTH TRACK ARE AT BIT DEPTH.
ALL DATA IS MEMORY DATA UNLESS STATED OTHERWISE.
RUN # 1 : MWD / GAMMA LOGGING RUN
SENSORS S/N : PULSER = 128-214 / CONT = 117 / MWD EYE = 309 / GAMMA RAY = 1220
BIT TO SENSOR OFFSETS : SURVEY = 60.51 FT. / GAMMA RAY = 51.26
RUN # 2 : MWD / GAMMA LOGGING RUN
SENSORS S/N : PULSER = 78-288 / CONT = 277 / MWD EYE = 595 / GAMMA RAY = 1031
BIT TO SENSOR OFFSETS : SURVEY = 59.397 FT. / GAMMA RAY = 50.72
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
MNEMONICS LIST:
GR = GAMMA RAY
ROP = RATE OF PENETRATION
T-TEMP = TOOL TEMPERATURE

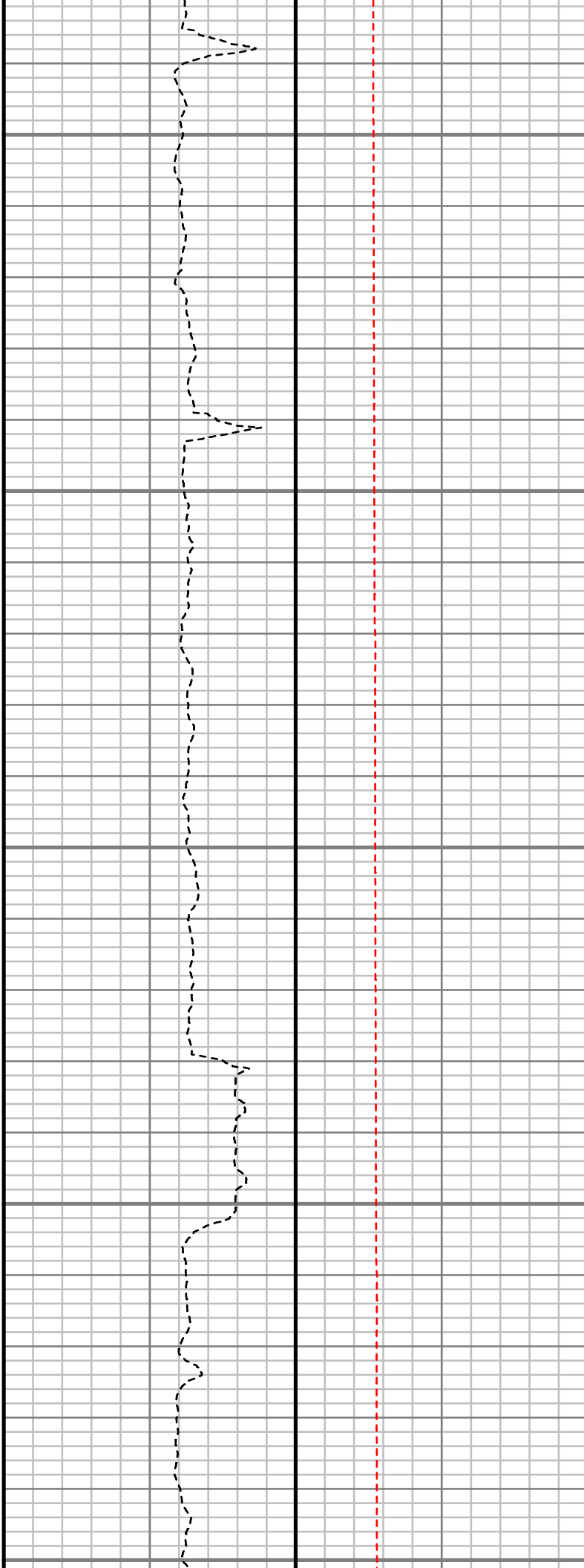
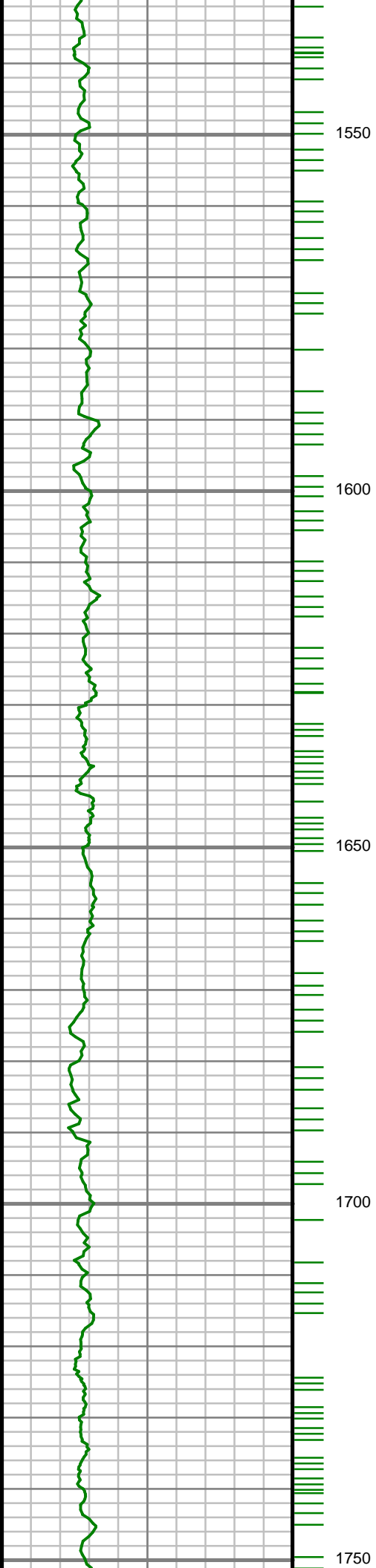
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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.





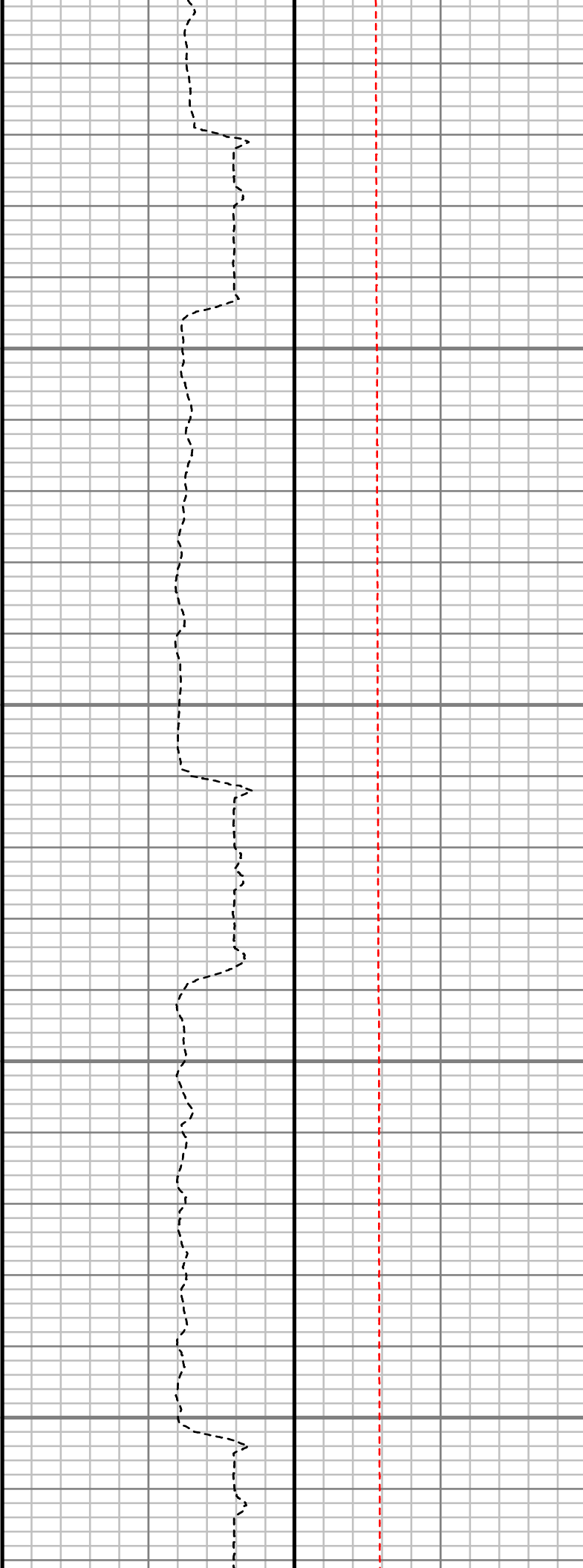
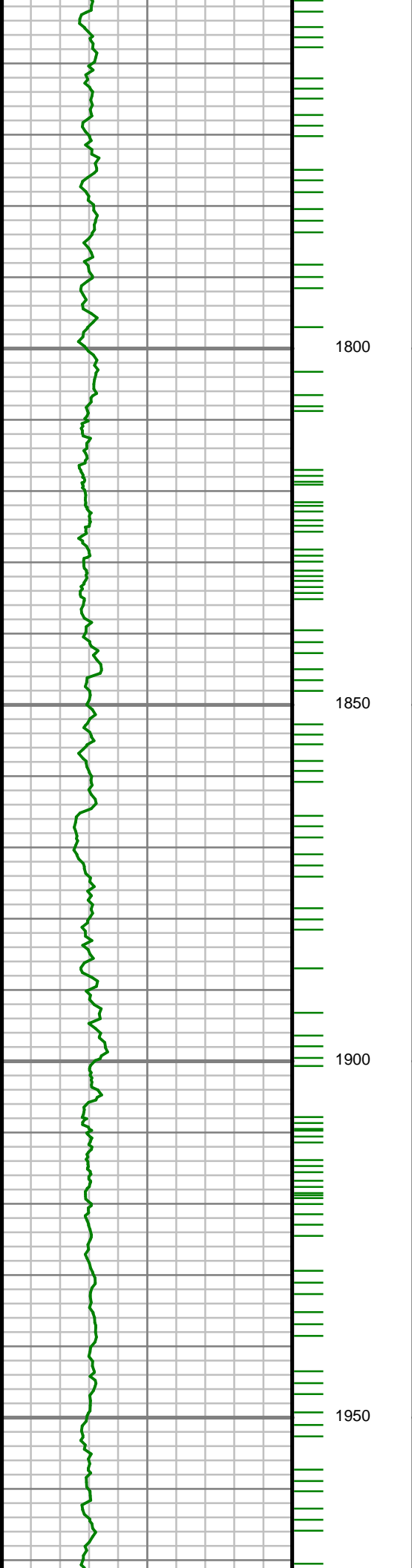
S: 17 MD: 1348.00 ft
Inc: 0.05 deg Az: 10.23
deg TVD: 1347.97 ft

S: 18 MD: 1438.00 ft
Inc: 2.43 deg Az:
141.07 deg TVD:
1437.94 ft



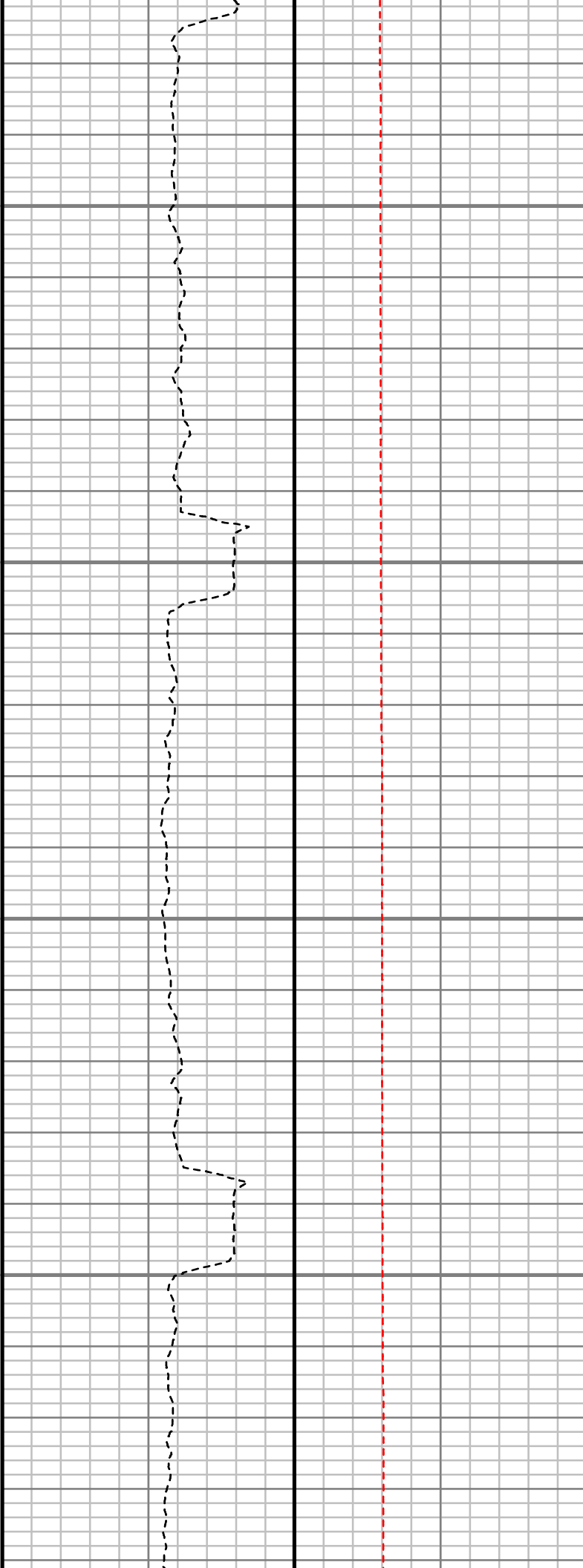
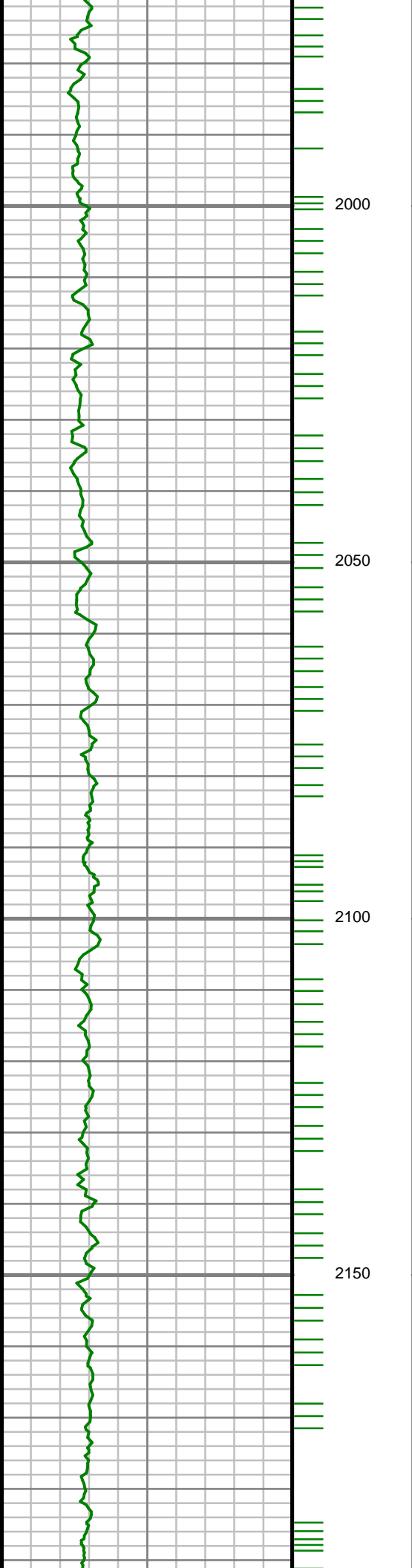
S: 19 MD: 1620.00 ft
Inc: 5.18 deg Az:
139.01 deg TVD:
1619.53 ft

S: 20 MD: 1710.00 ft
Inc: 6.32 deg Az:
145.42 deg TVD:
1709.07 ft



S: 21 MD: 1800.00 ft
Inc: 8.21 deg Az:
133.82 deg TVD:
1798.35 ft

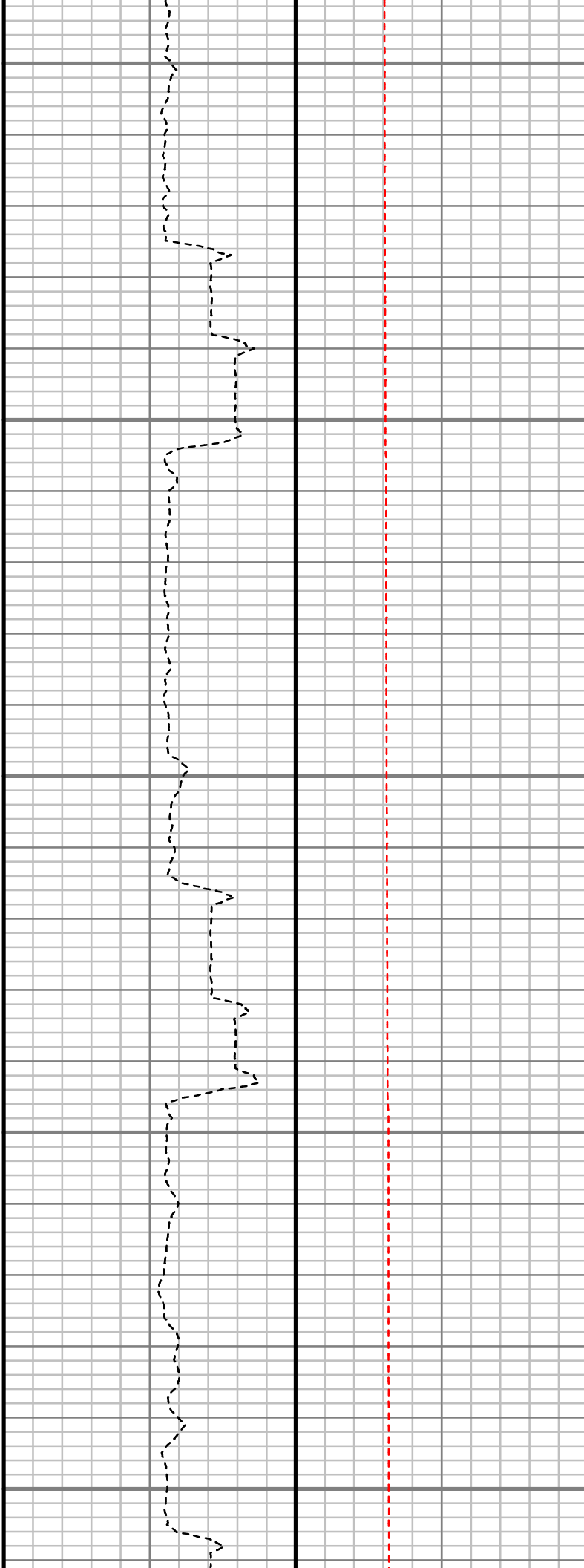
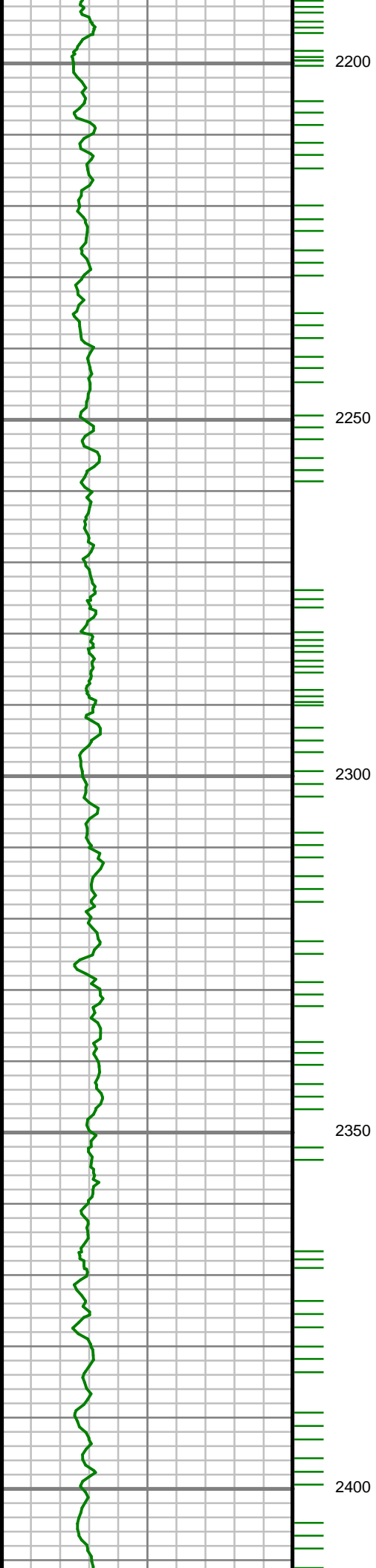
S: 22 MD: 1891.00 ft
Inc: 10.32 deg Az:
130.54 deg TVD:
1888.16 ft



S: 23 MD: 1981.00 ft
Inc: 11.99 deg Az:
129.90 deg TVD:
1976.46 ft

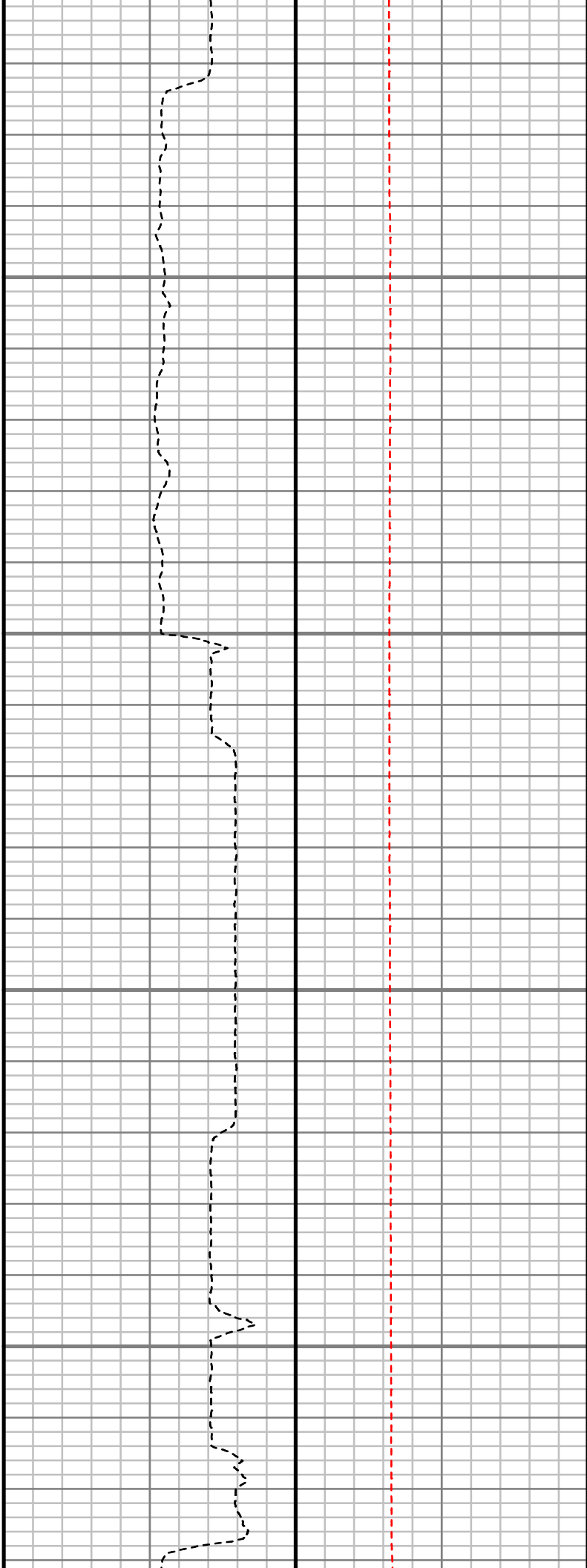
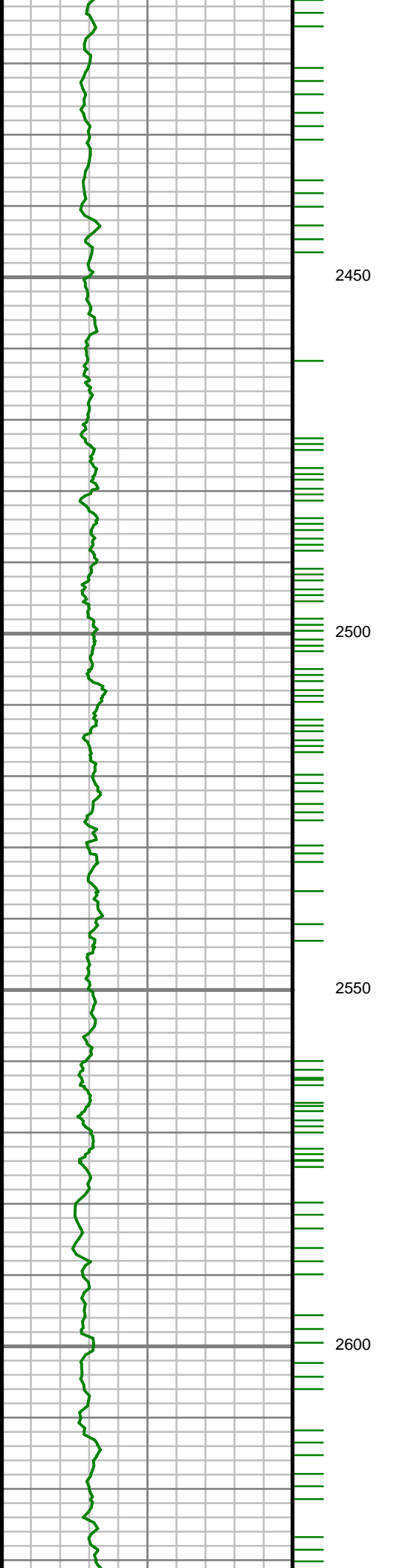
S: 24 MD: 2073.00 ft
Inc: 11.84 deg Az:
129.48 deg TVD:
2066.47 ft

S: 25 MD: 2164.00 ft
Inc: 10.94 deg Az:
128.63 deg TVD:
2155.68 ft



S: 26 MD: 2254.00 ft
Inc: 11.79 deg Az:
132.29 deg TVD:
2243.92 ft

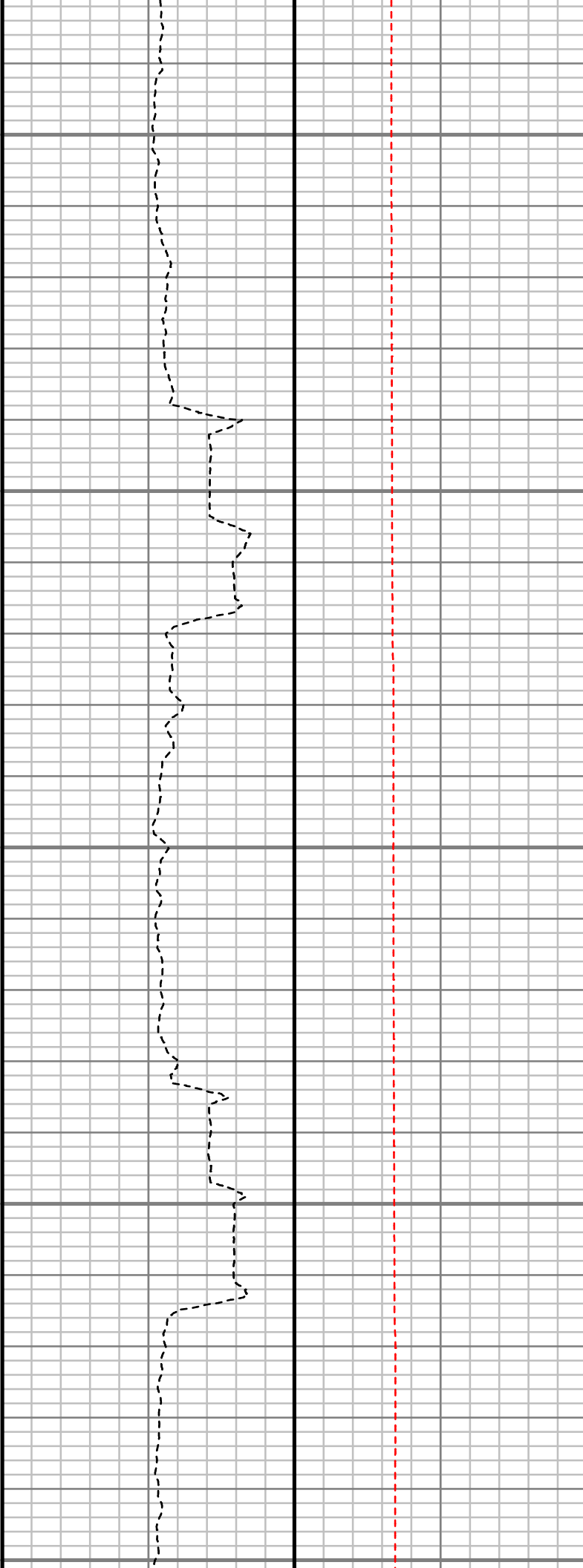
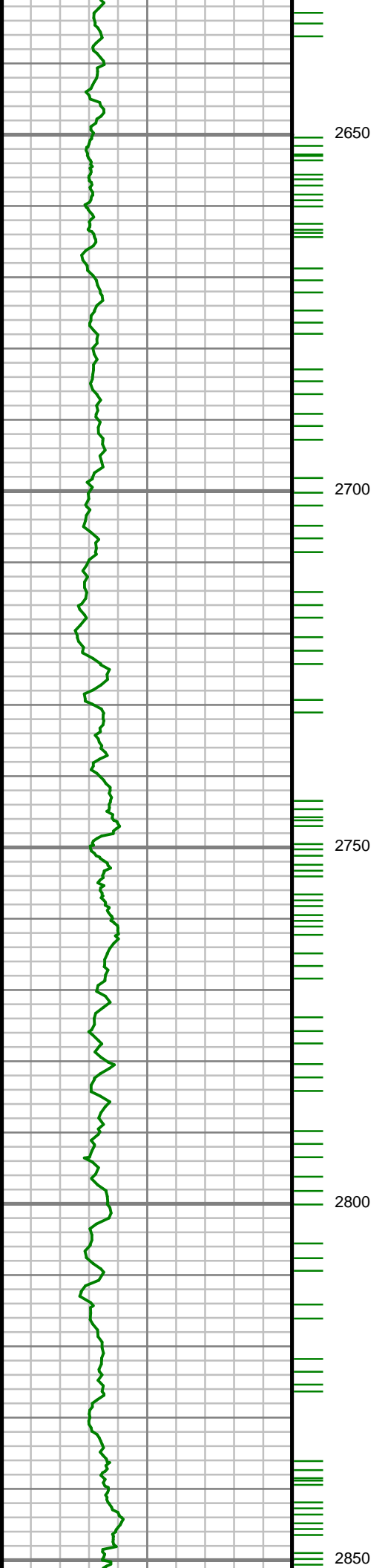
S: 27 MD: 2345.00 ft
Inc: 12.69 deg Az:
127.68 deg TVD:
2332.85 ft



S: 28 MD: 2439.00 ft
Inc: 13.44 deg Az:
128.33 deg TVD:
2424.41 ft

S: 29 MD: 2534.00 ft
Inc: 12.58 deg Az:
128.15 deg TVD:
2516.98 ft

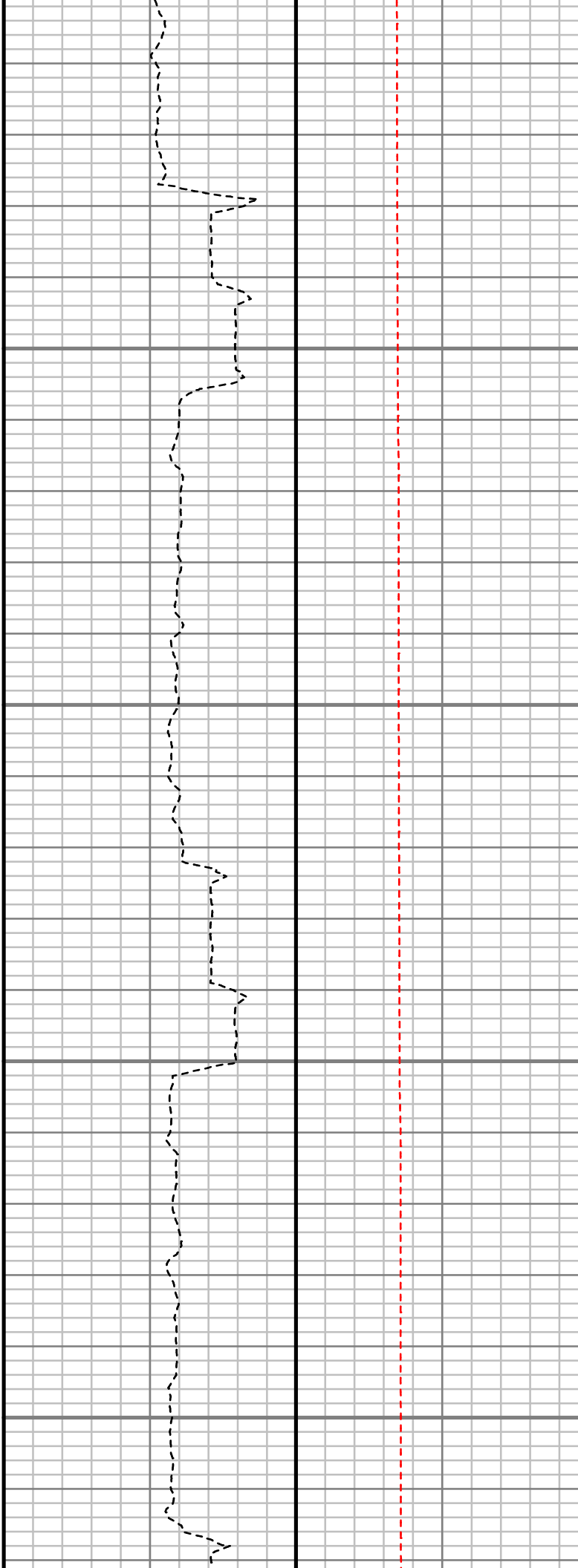
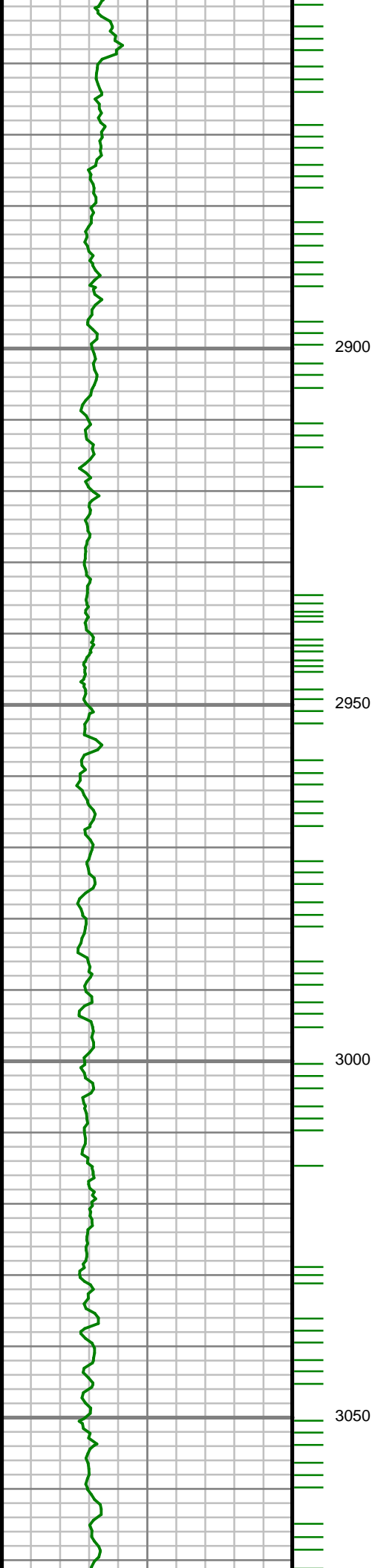
S: 30 MD: 2628.00 ft



Inc: 12.34 deg Az:
126.43 deg TVD:
2608.76 ft

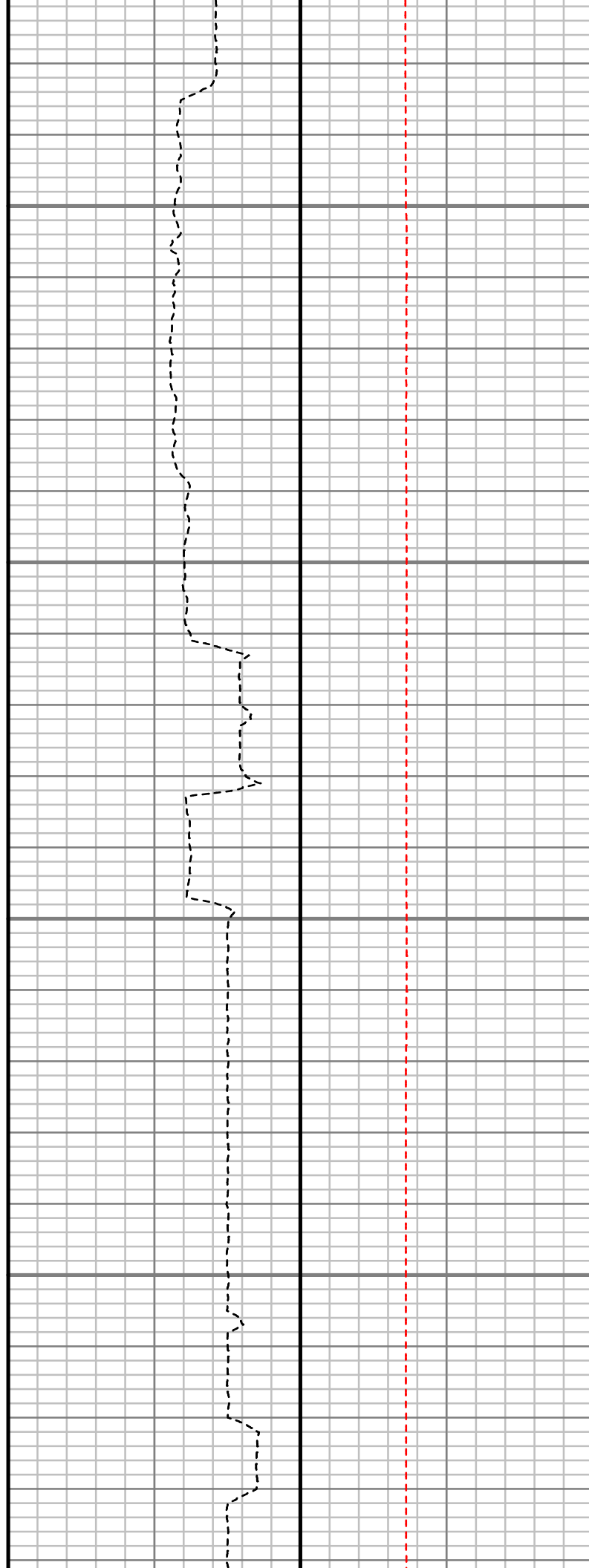
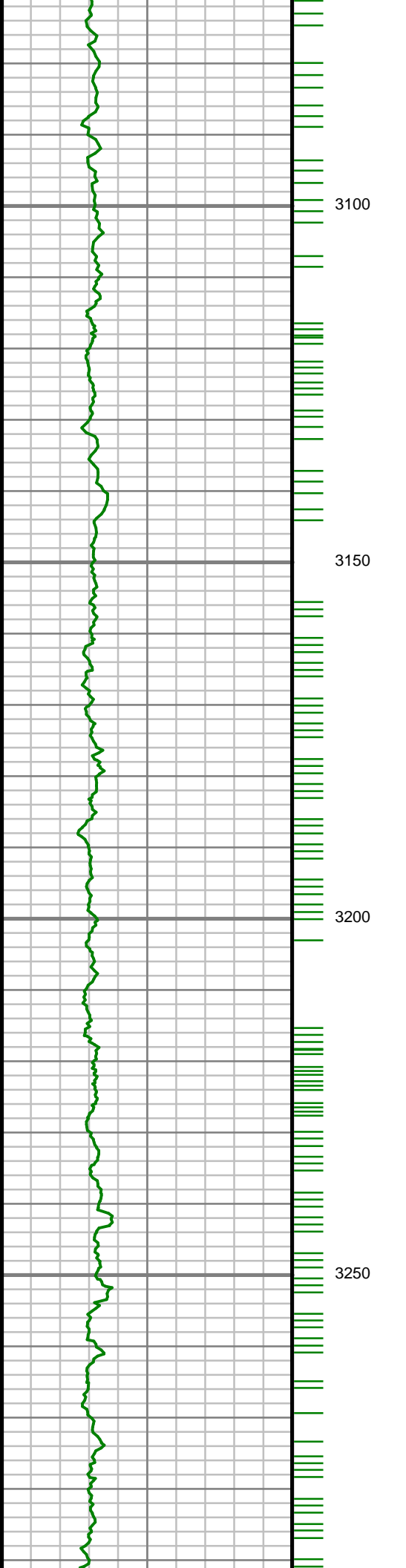
S: 31 MD: 2723.00 ft
Inc: 12.20 deg Az:
127.38 deg TVD:
2701.59 ft

S: 32 MD: 2817.00 ft
Inc: 12.42 deg Az:
128.46 deg TVD:
2793.43 ft



S: 33 MD: 2911.00 ft
Inc: 12.87 deg Az:
128.11 deg TVD:
2885.15 ft

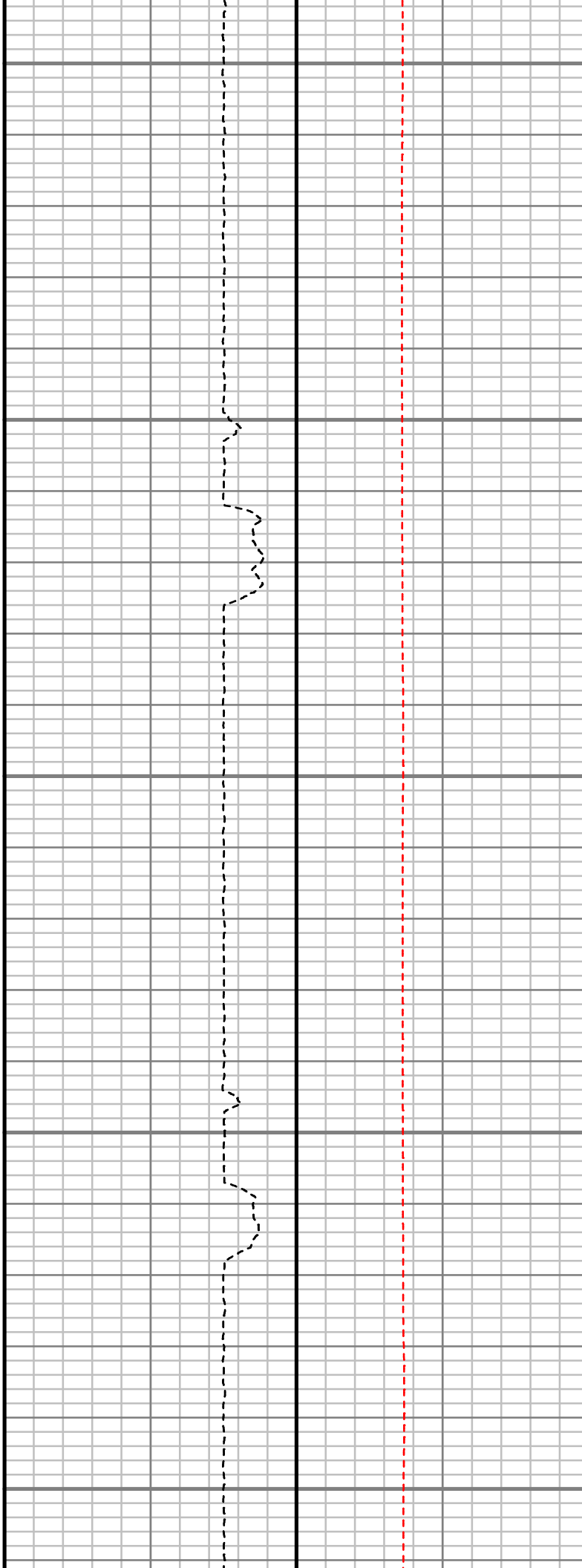
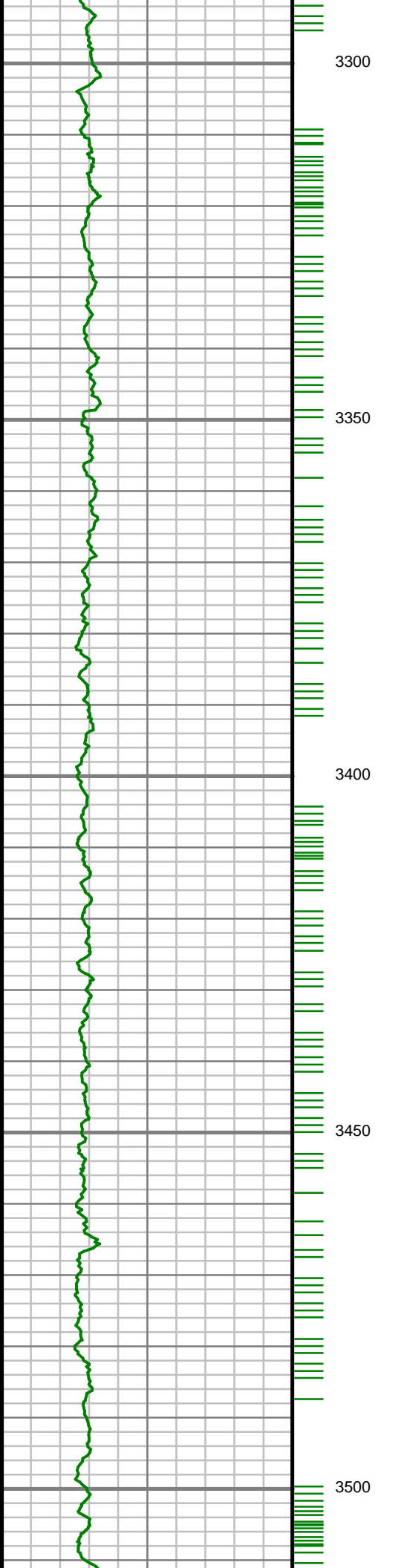
S: 34 MD: 3006.00 ft
Inc: 13.89 deg Az:
132.72 deg TVD:
2977.57 ft



S: 35 MD: 3100.00 ft
Inc: 12.79 deg Az:
136.06 deg TVD:
3069.04 ft

S: 36 MD: 3195.00 ft
Inc: 12.37 deg Az:
130.30 deg TVD:
3161.76 ft

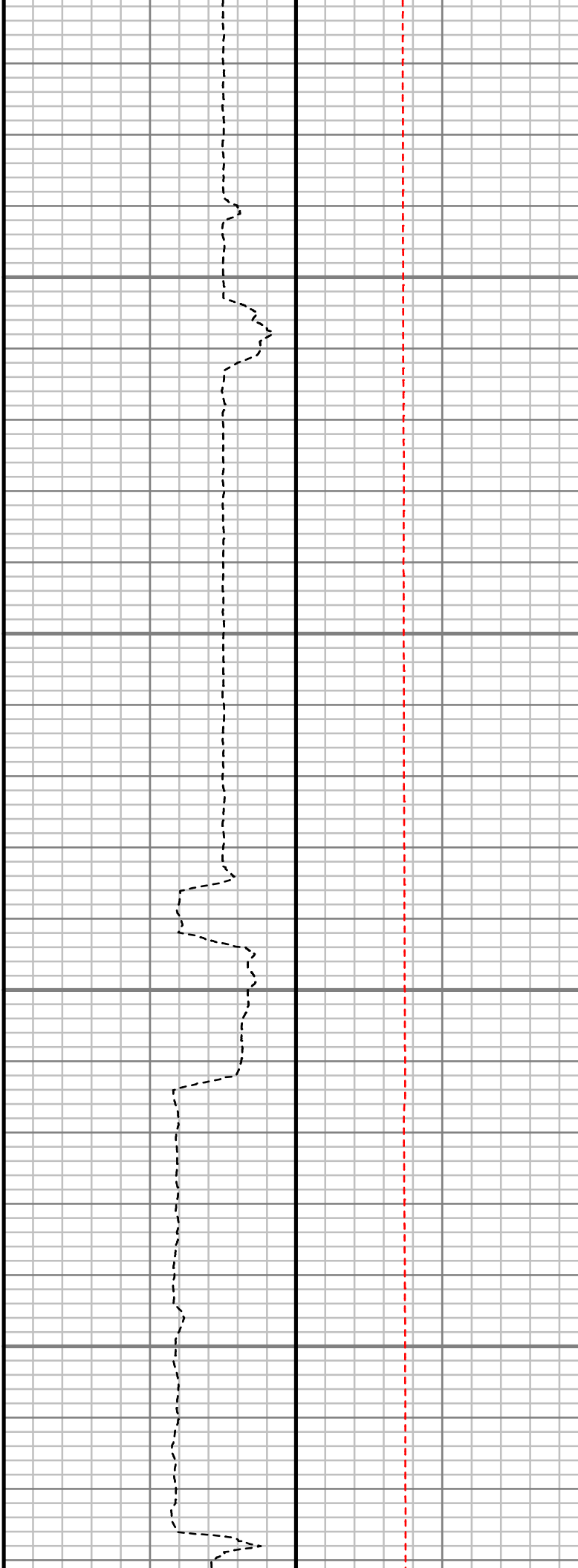
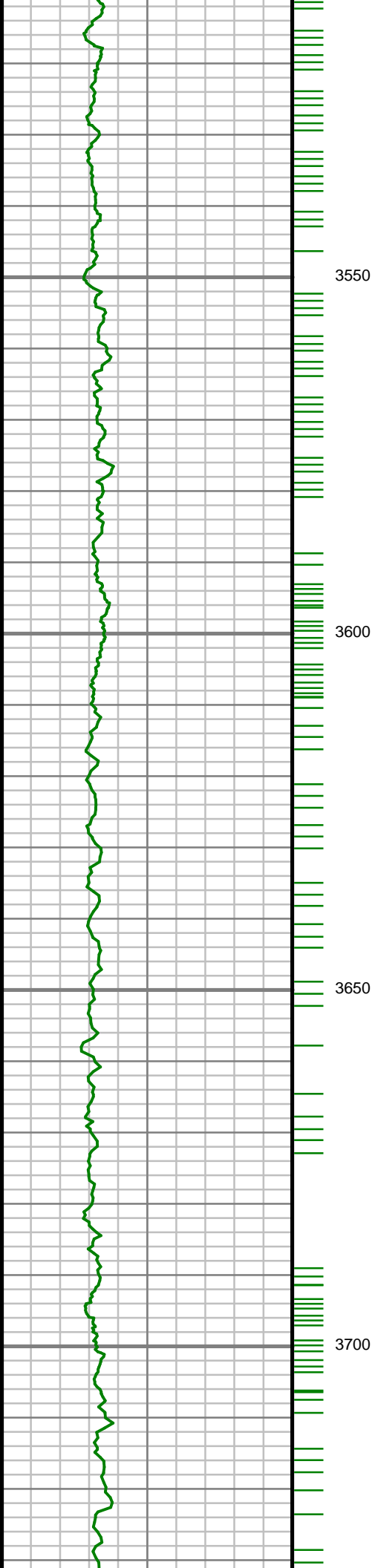
S: 37 MD: 3289.00 ft



Inc: 11.99 deg Az:
129.52 deg TVD:
3253.65 ft

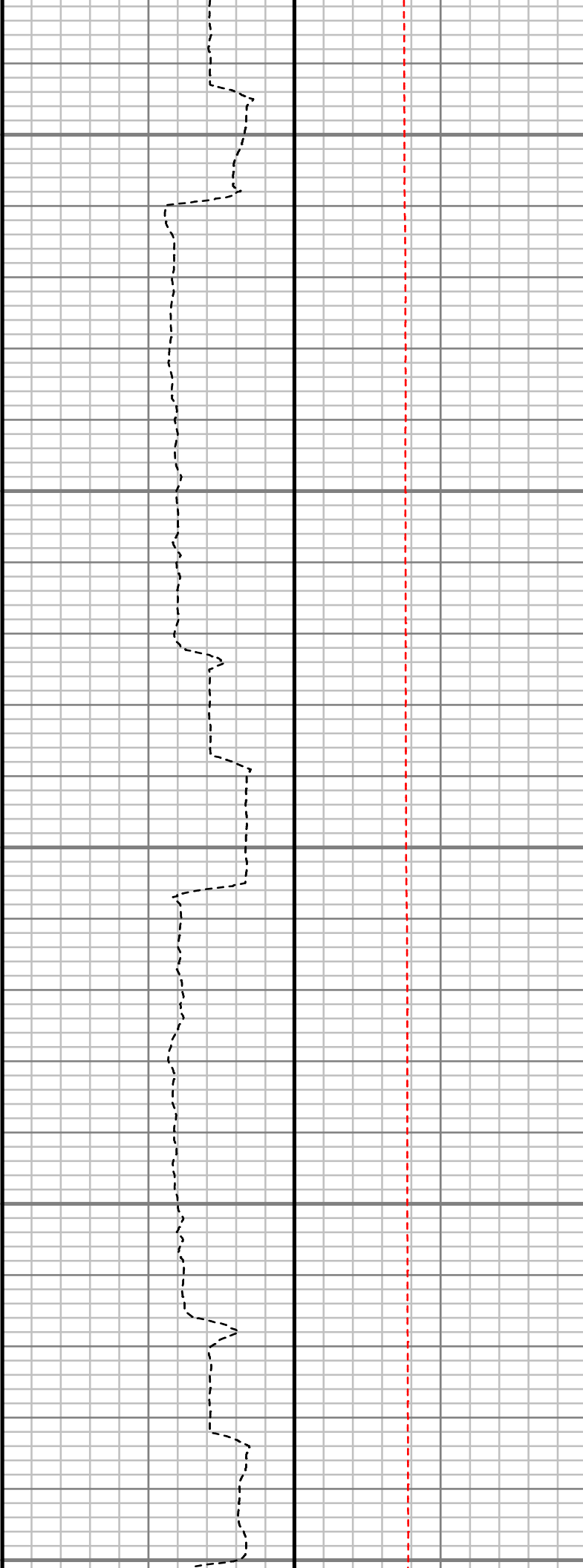
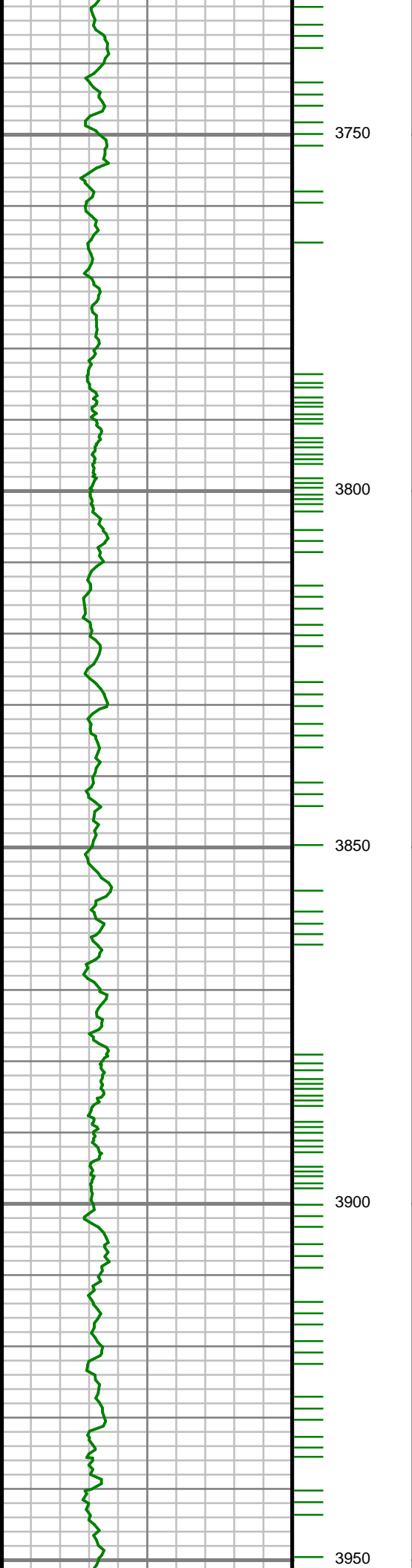
S: 38 MD: 3383.00 ft
Inc: 12.36 deg Az:
129.12 deg TVD:
3345.53 ft

S: 39 MD: 3478.00 ft
Inc: 12.27 deg Az:
129.14 deg TVD:
3438.35 ft



S: 40 MD: 3572.00 ft
Inc: 10.44 deg Az:
122.83 deg TVD:
3530.51 ft

S: 41 MD: 3667.00 ft
Inc: 10.34 deg Az:
130.55 deg TVD:
3623.95 ft



S: 42 MD: 3761.00 ft
Inc: 8.96 deg Az:
144.62 deg TVD:
3716.63 ft

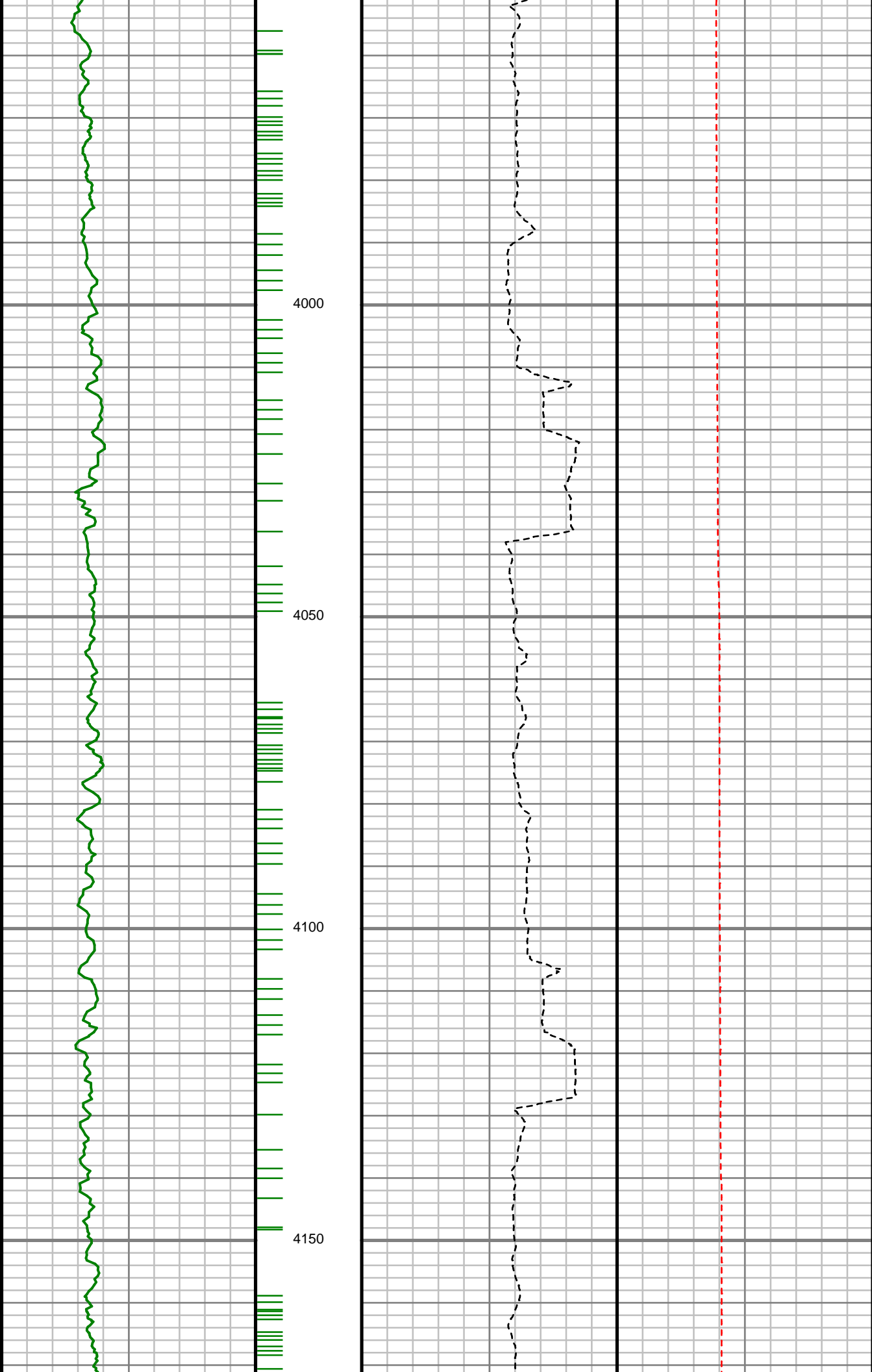
S: 43 MD: 3856.00 ft
Inc: 10.26 deg Az:
149.97 deg TVD:
3810.30 ft

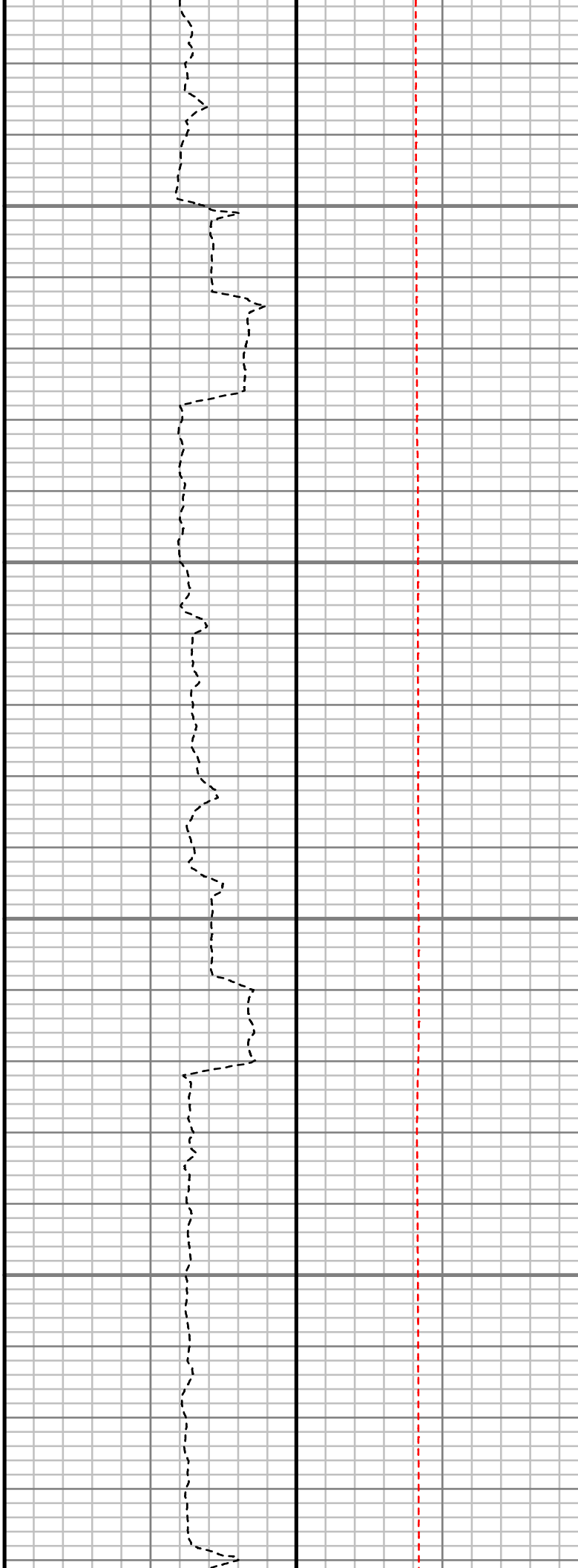
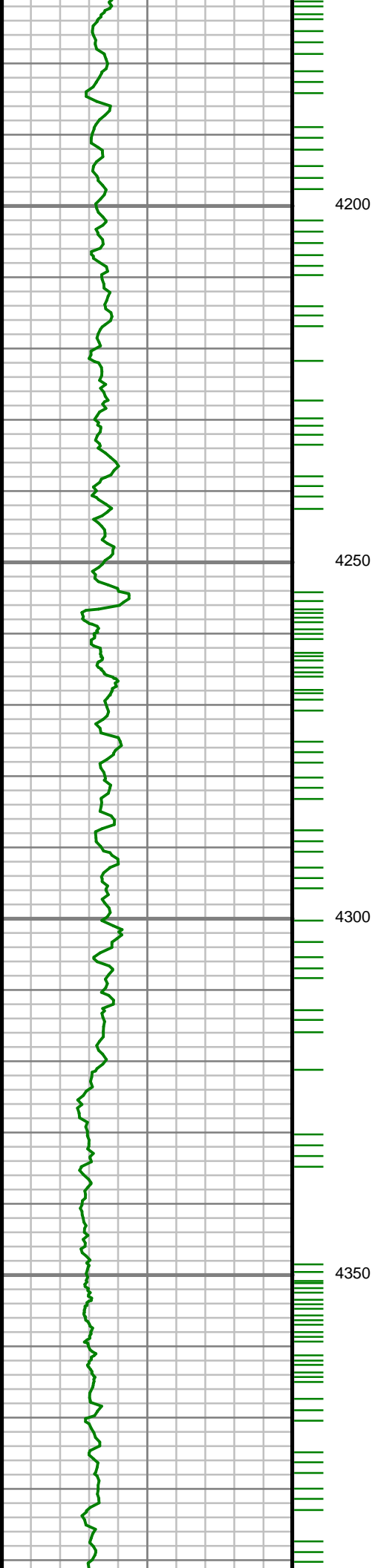
S: 44 MD: 3950.00 ft

S: 44 MD: 3930.00 ft
Inc: 11.99 deg Az:
144.02 deg TVD:
3902.53 ft

S: 45 MD: 4045.00 ft
Inc: 12.13 deg Az:
134.32 deg TVD:
3995.44 ft

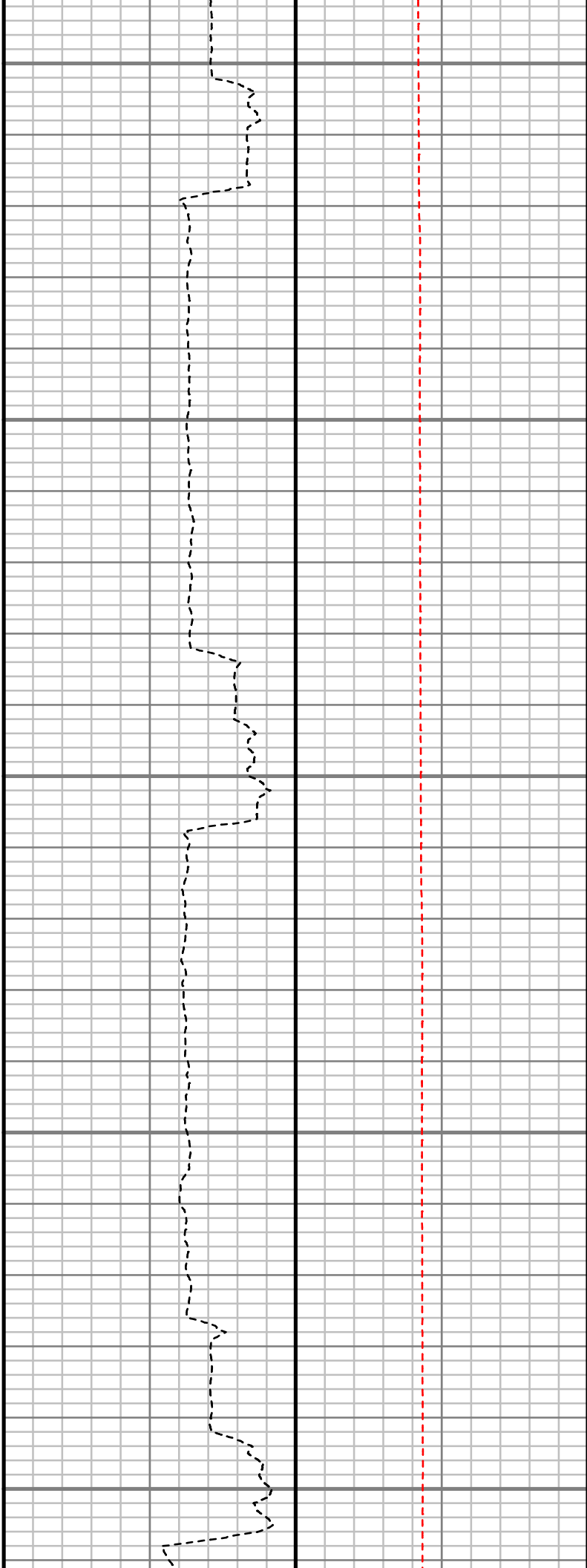
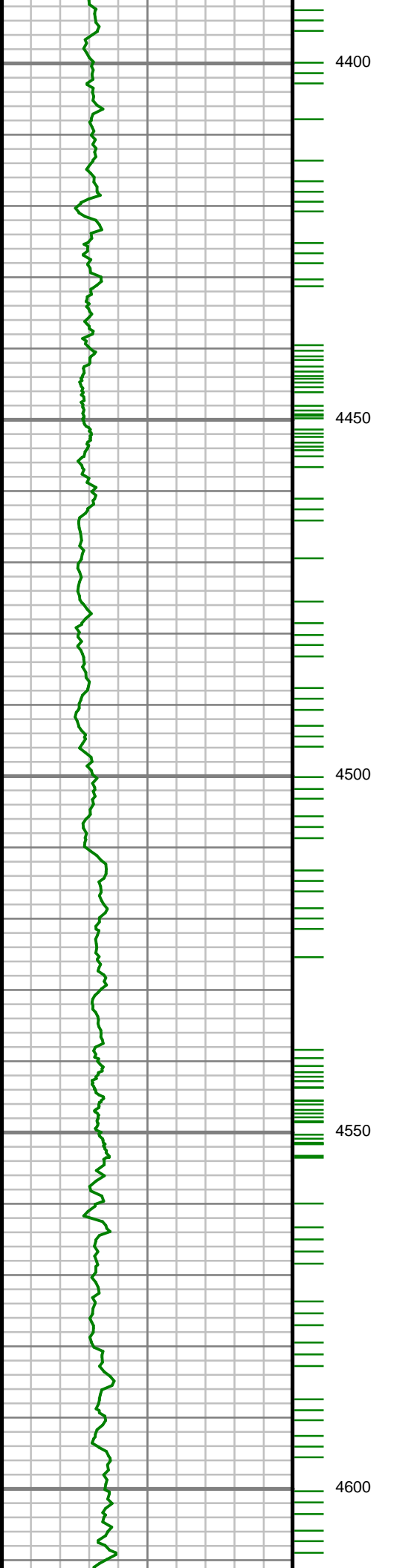
S: 46 MD: 4139.00 ft
Inc: 11.04 deg Az:
136.02 deg TVD:
4087.53 ft





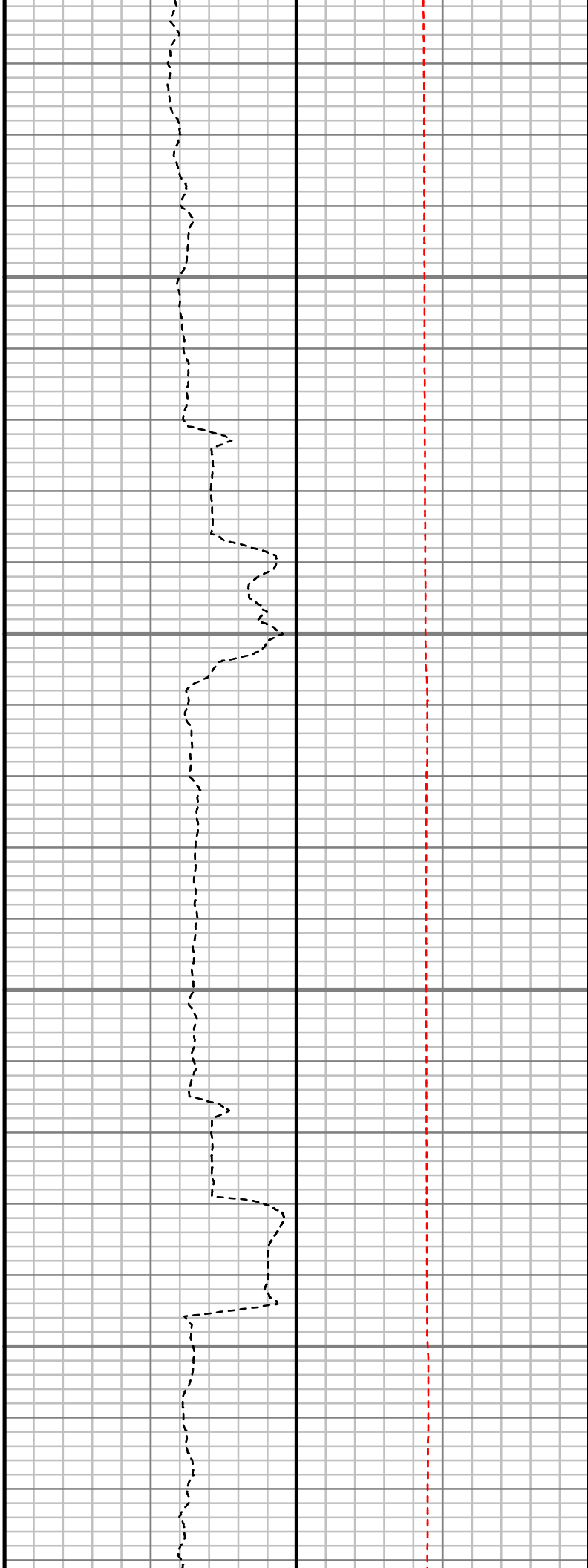
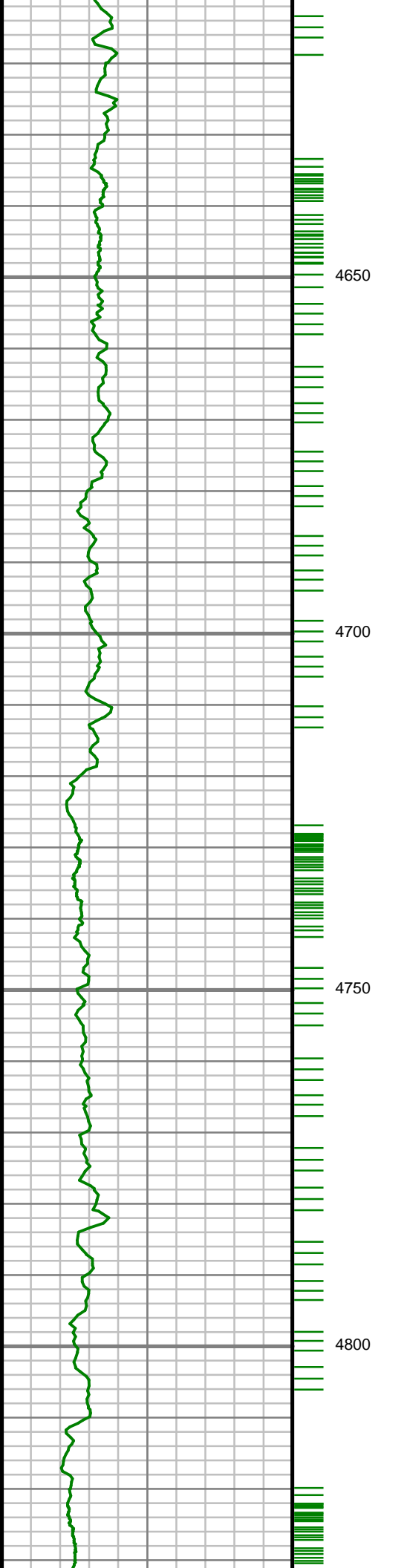
S: 47 MD: 4234.00 ft
Inc: 11.65 deg Az:
133.75 deg TVD:
4180.67 ft

S: 48 MD: 4328.00 ft
Inc: 10.33 deg Az:
127.82 deg TVD:
4272.95 ft



S: 49 MD: 4422.00 ft
Inc: 11.37 deg Az:
127.01 deg TVD:
4365.27 ft

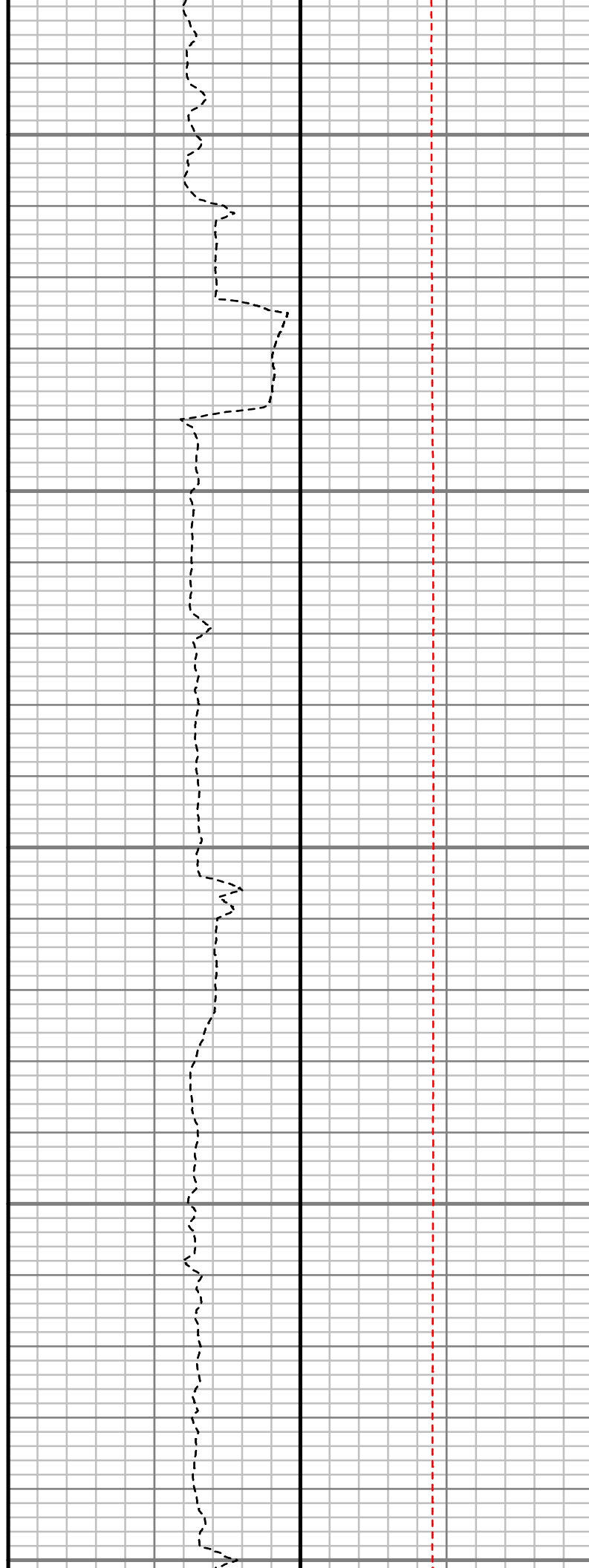
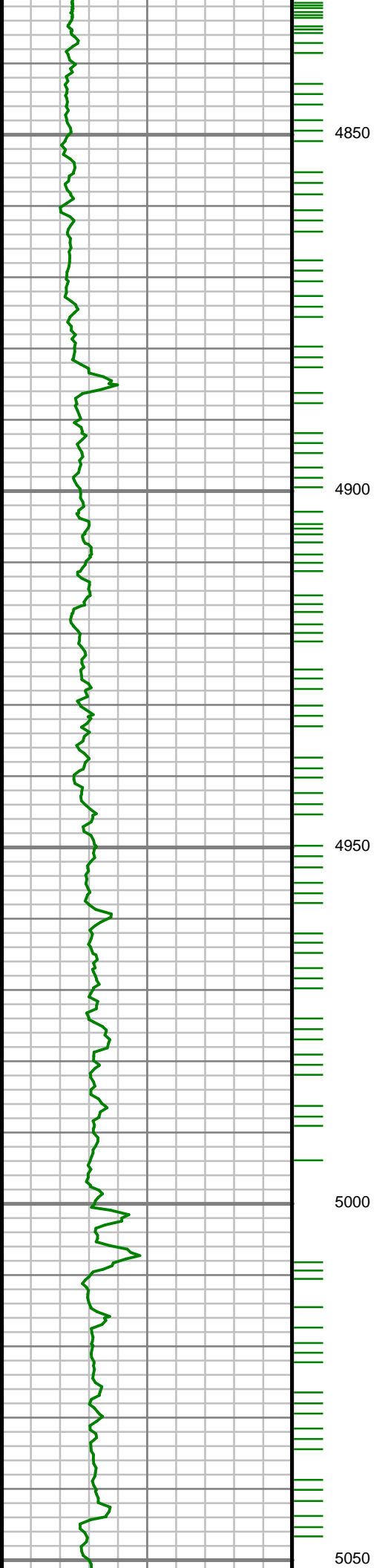
S: 50 MD: 4517.00 ft
Inc: 12.11 deg Az:
130.18 deg TVD:
4458.28 ft



S: 51 MD: 4611.00 ft
Inc: 11.38 deg Az:
135.64 deg TVD:
4550.31 ft

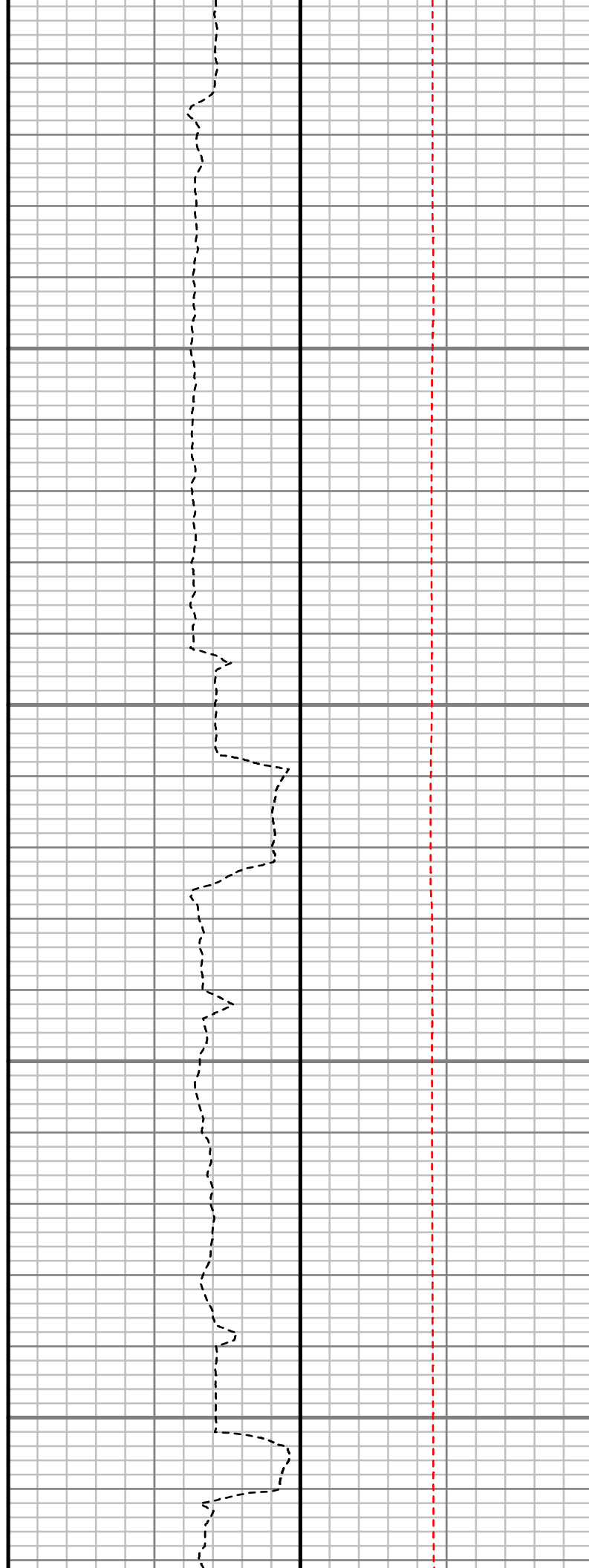
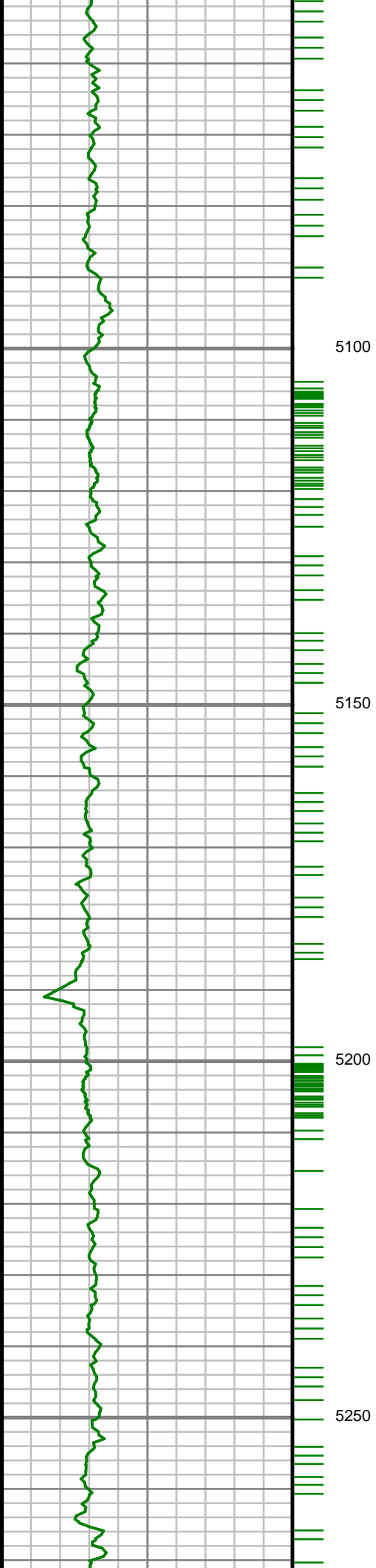
S: 52 MD: 4706.00 ft
Inc: 10.16 deg Az:
131.04 deg TVD:
4643.64 ft

S: 53 MD: 4800.00 ft
Inc: 10.99 deg Az:
129.11 deg TVD:
4736.04 ft



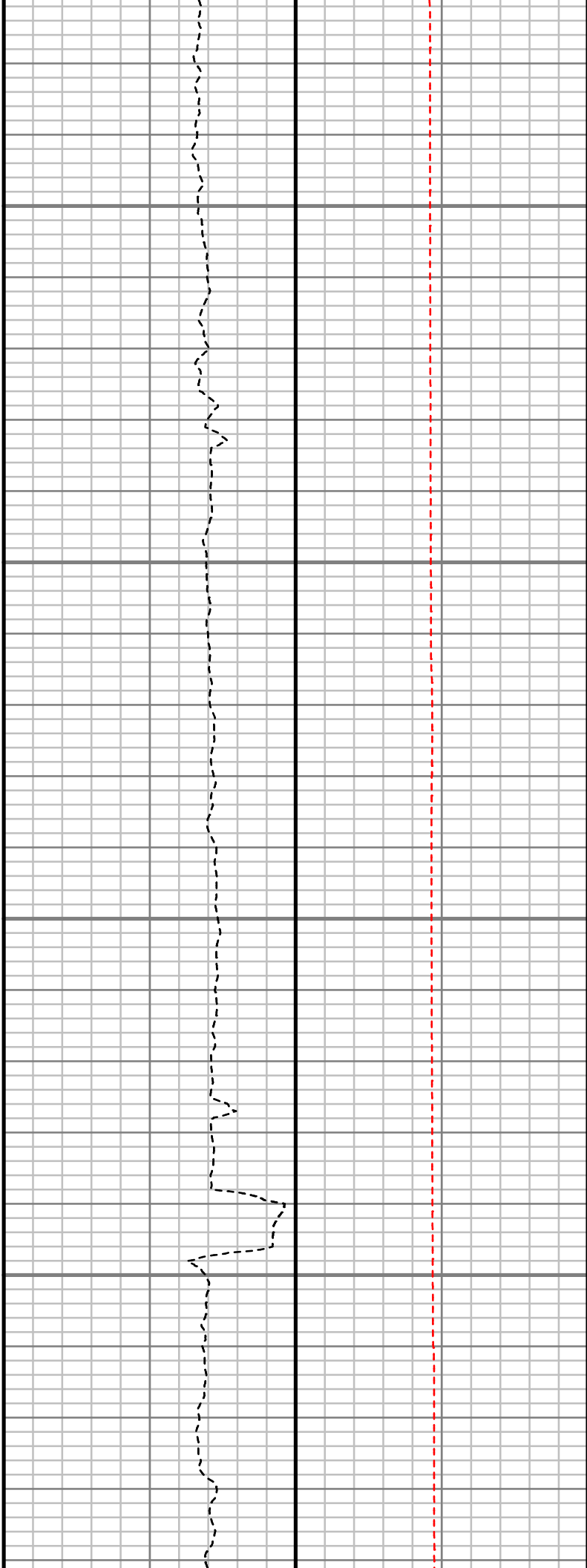
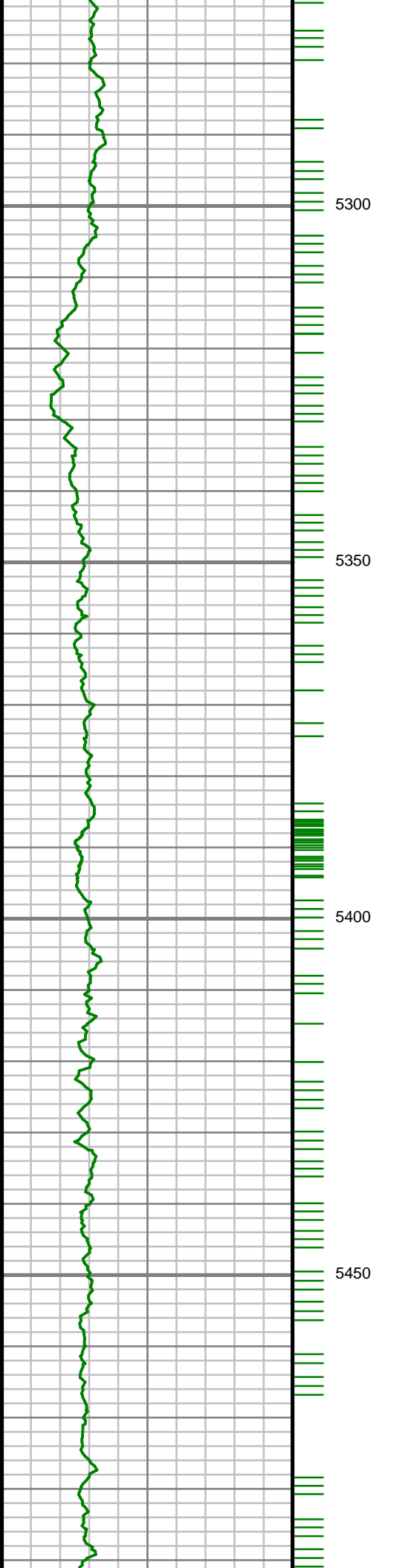
S: 54 MD: 4895.00 ft
Inc: 12.86 deg Az:
133.19 deg TVD:
4828.99 ft

S: 55 MD: 4989.00 ft
Inc: 12.96 deg Az:
136.48 deg TVD:
4920.62 ft



S: 56 MD: 5083.00 ft
Inc: 11.38 deg Az:
137.32 deg TVD:
5012.50 ft

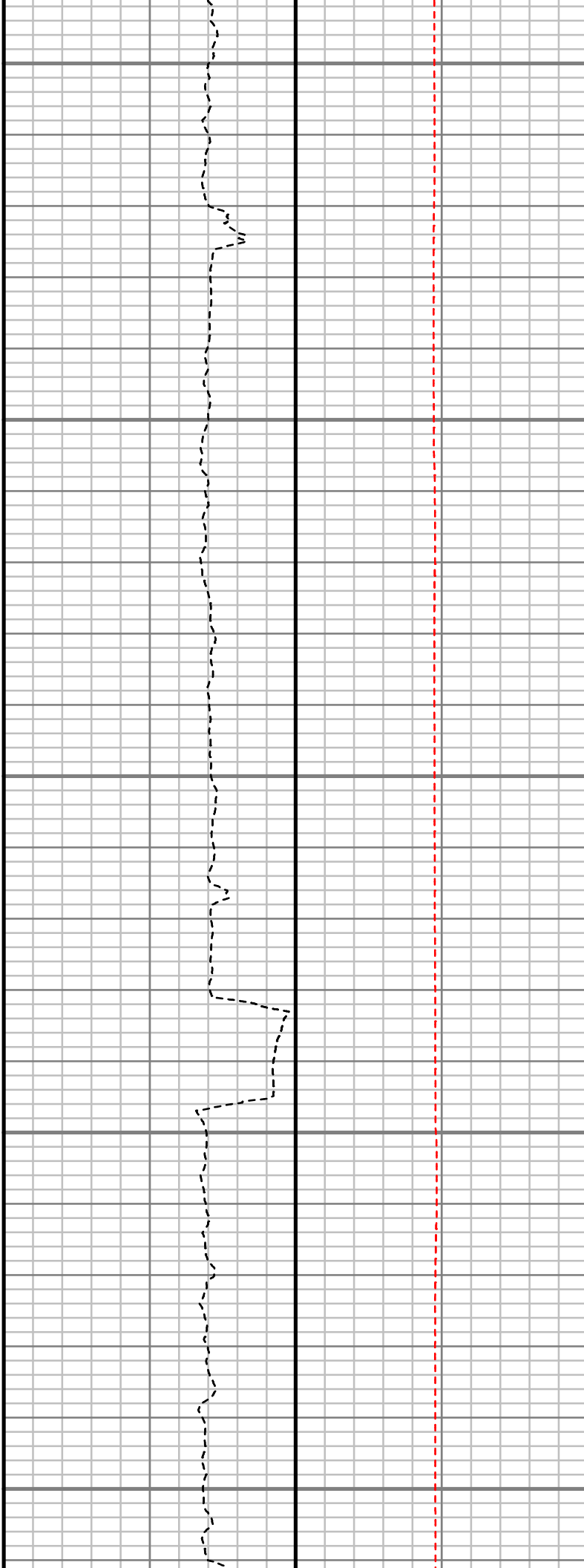
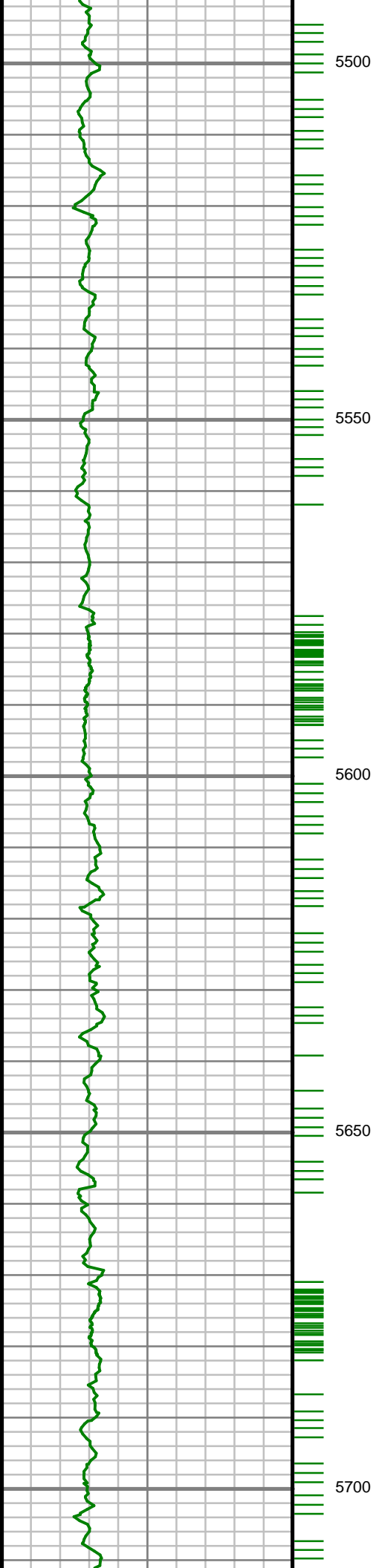
S: 57 MD: 5178.00 ft
Inc: 12.08 deg Az:
136.77 deg TVD:
5105.52 ft



S: 58 MD: 5272.00 ft
Inc: 12.30 deg Az:
131.39 deg TVD:
5197.40 ft

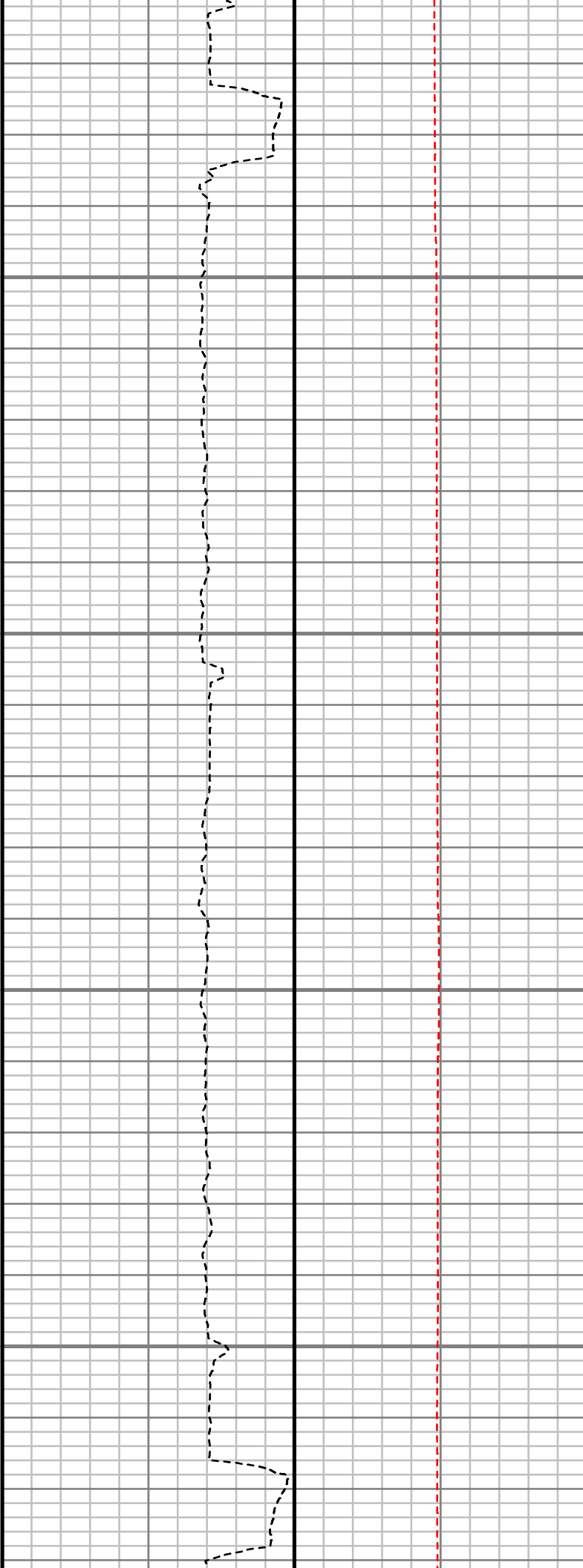
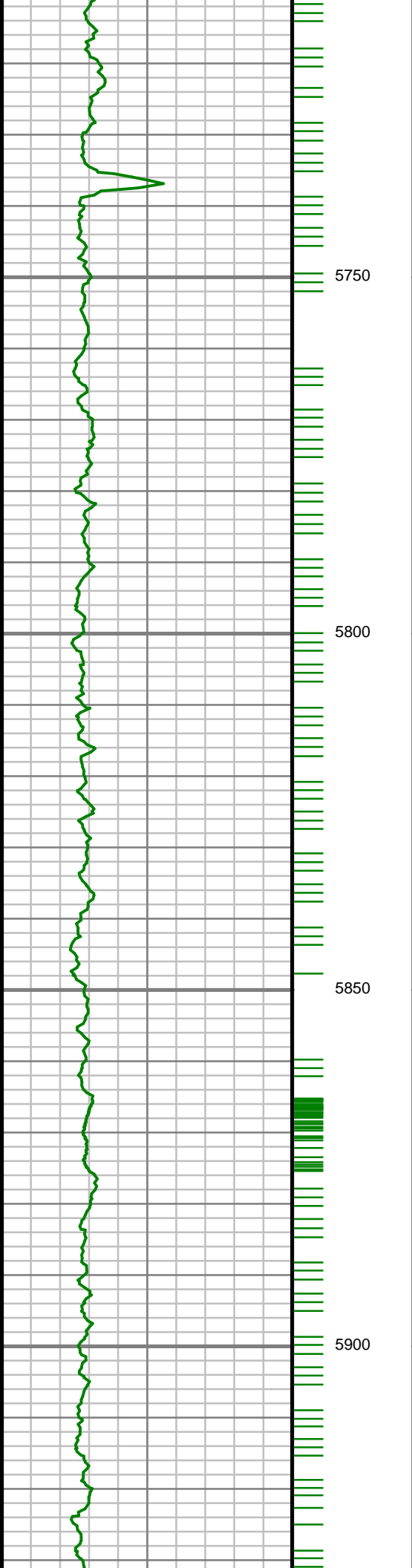
S: 59 MD: 5367.00 ft
Inc: 11.44 deg Az:
130.46 deg TVD:
5290.37 ft

S: 60 MD: 5461.00 ft
Inc: 11.96 deg Az:
128.62 deg TVD:
5382.41 ft



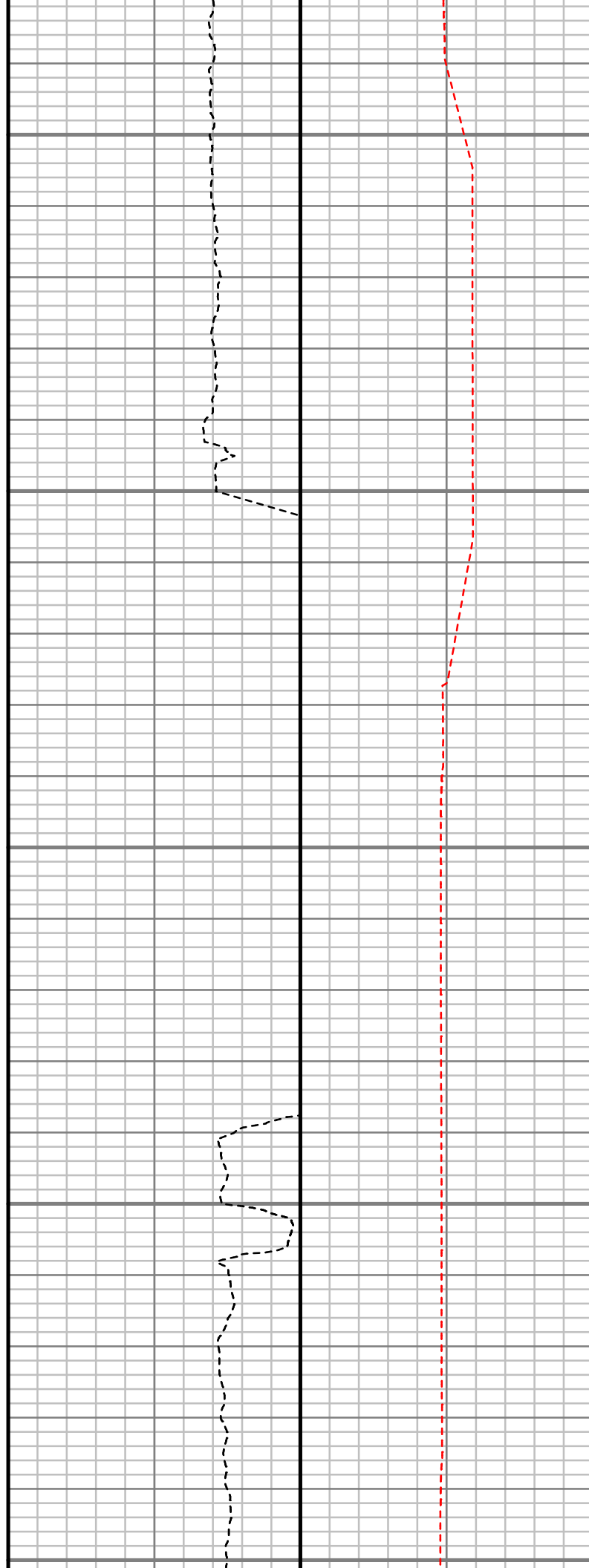
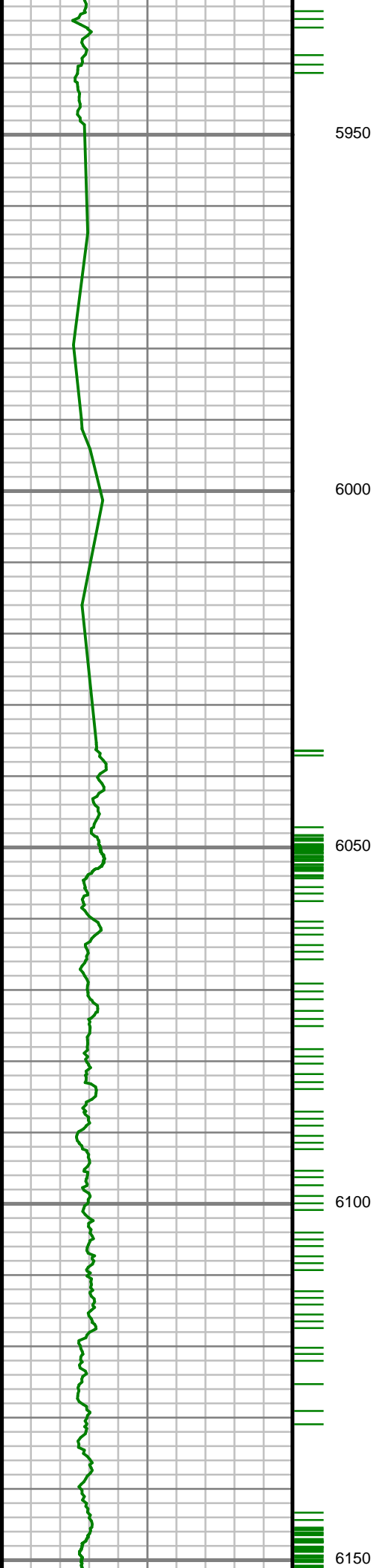
S: 61 MD: 5556.00 ft
Inc: 10.54 deg Az:
127.57 deg TVD:
5475.59 ft

S: 62 MD: 5650.00 ft
Inc: 10.64 deg Az:
130.96 deg TVD:
5567.99 ft



S: 63 MD: 5745.00 ft
Inc: 11.75 deg Az:
130.27 deg TVD:
5661.18 ft

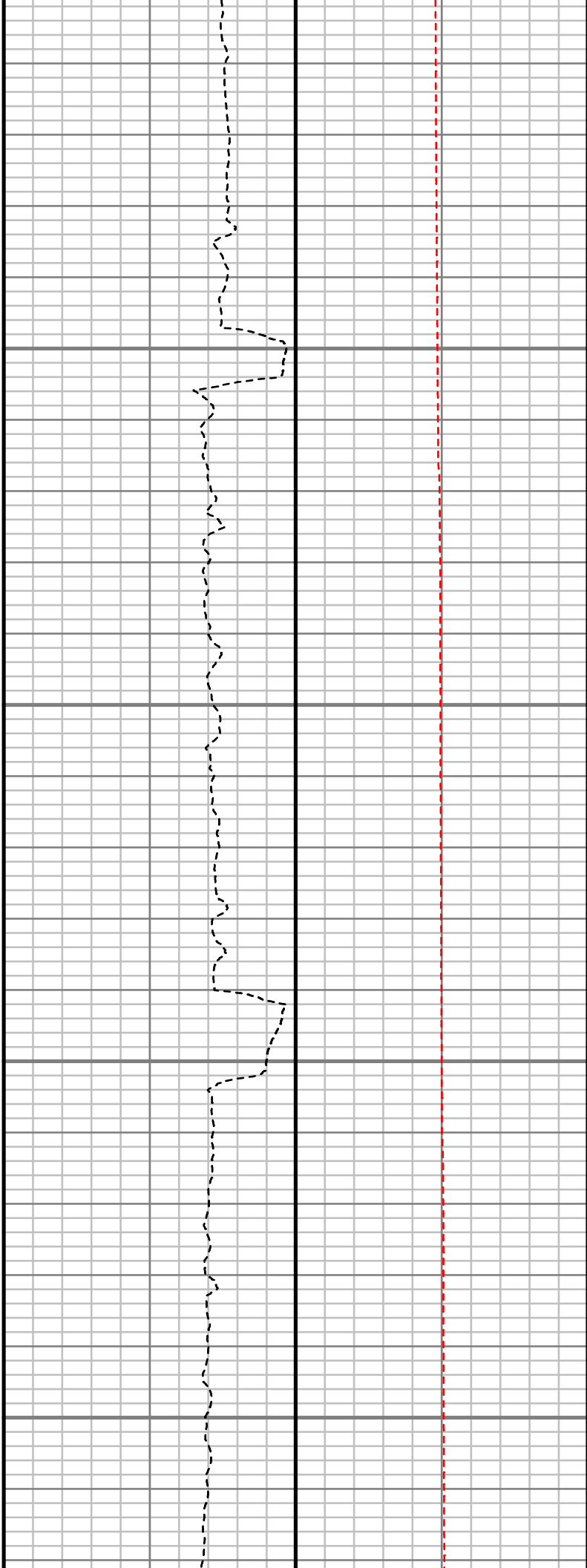
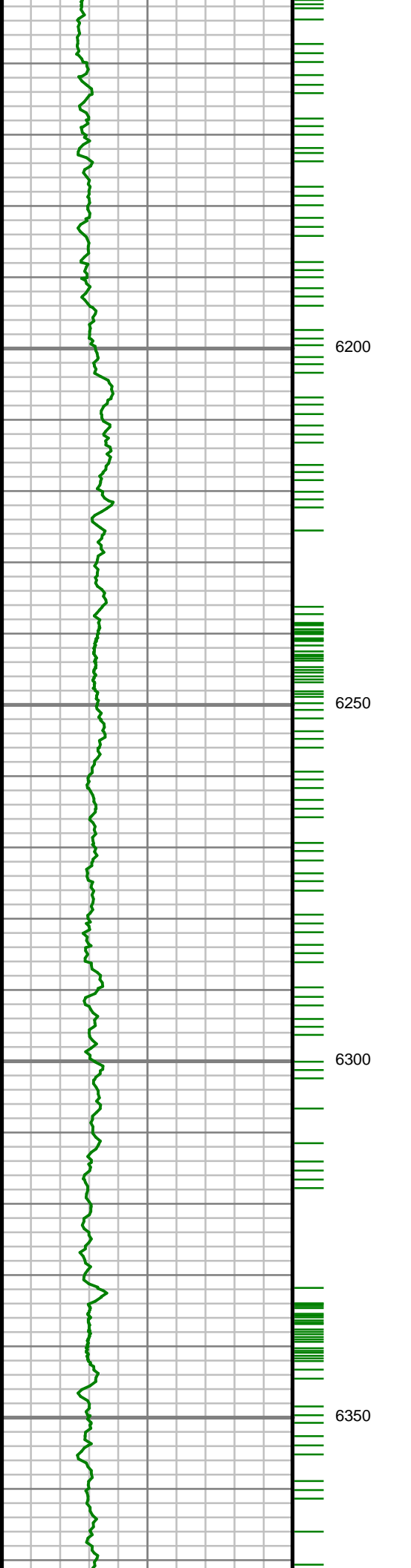
S: 64 MD: 5839.00 ft
Inc: 10.84 deg Az:
128.52 deg TVD:
5753.36 ft



S: 65 MD: 5933.00 ft
Inc: 10.88 deg Az:
129.53 deg TVD:
5845.67 ft

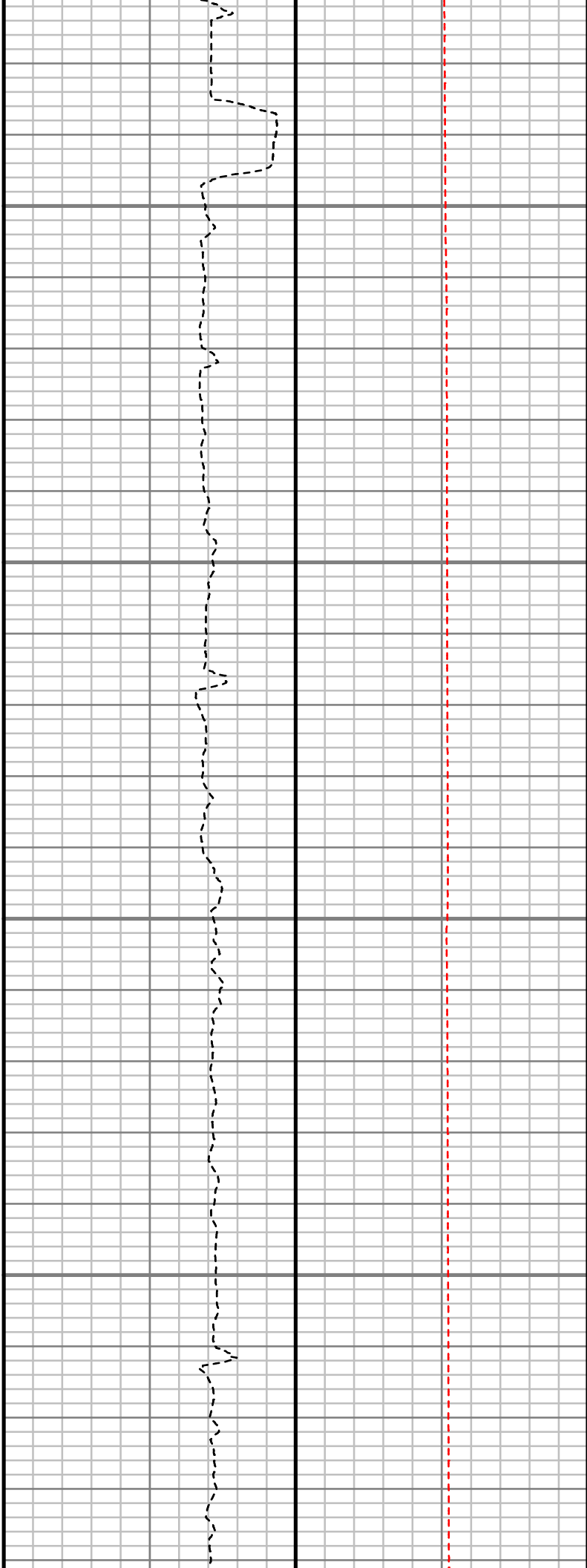
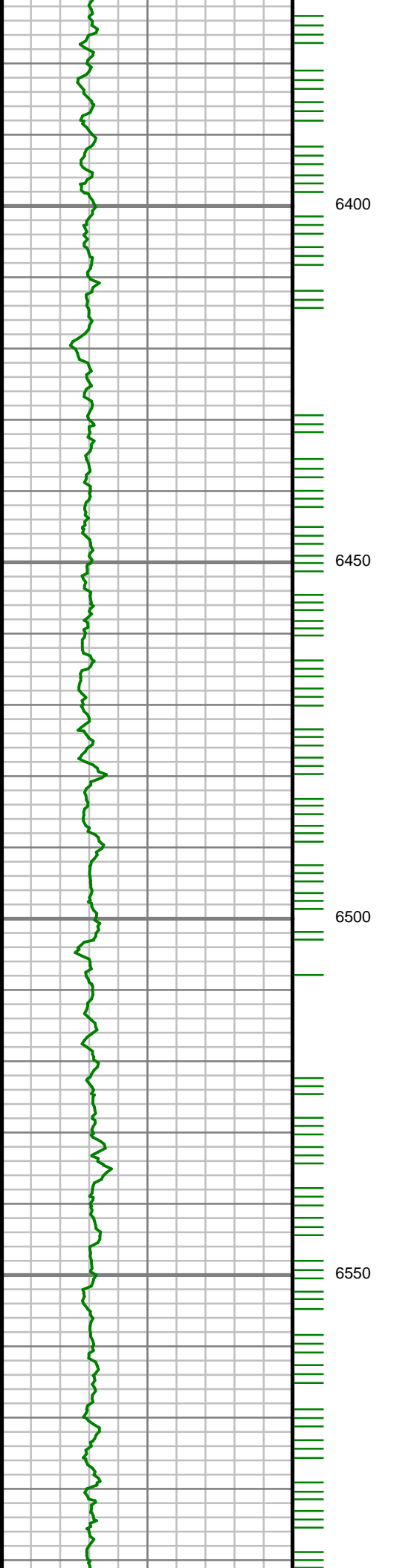
S: 66 MD: 6028.00 ft
Inc: 11.62 deg Az:
133.75 deg TVD:
5938.85 ft

S: 67 MD: 6122.00 ft
Inc: 11.76 deg Az:
130.35 deg TVD:
6030.90 ft



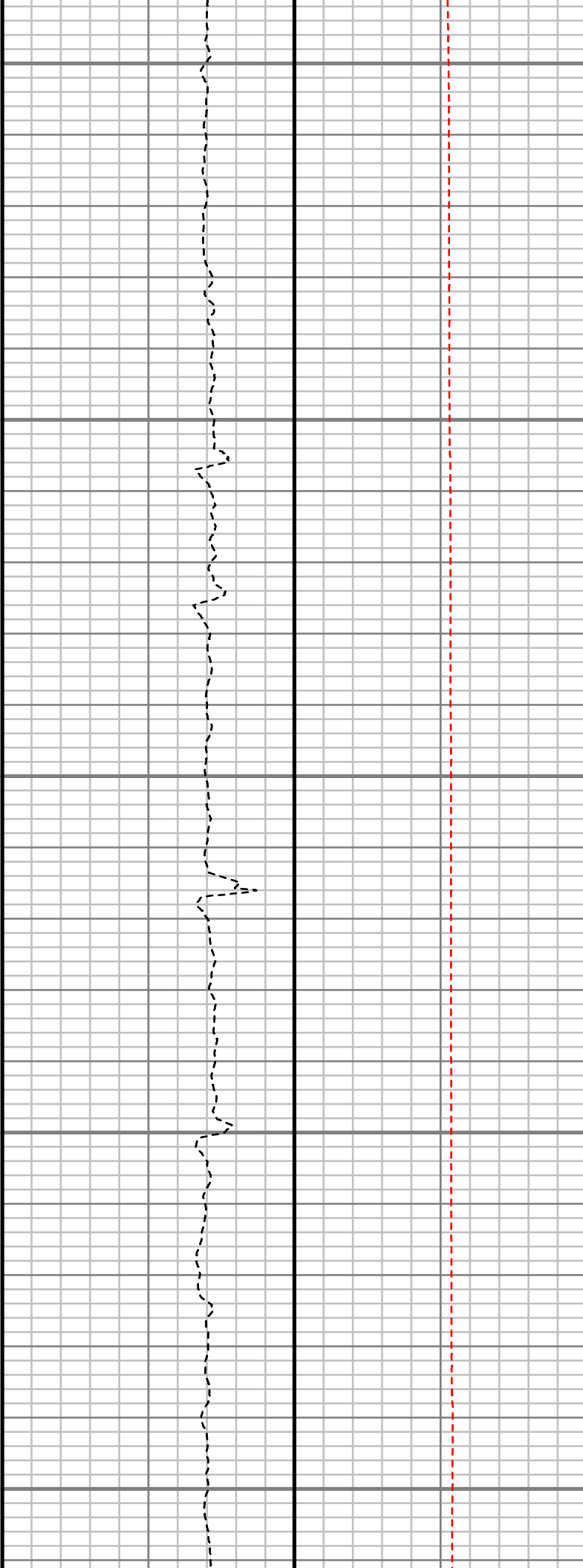
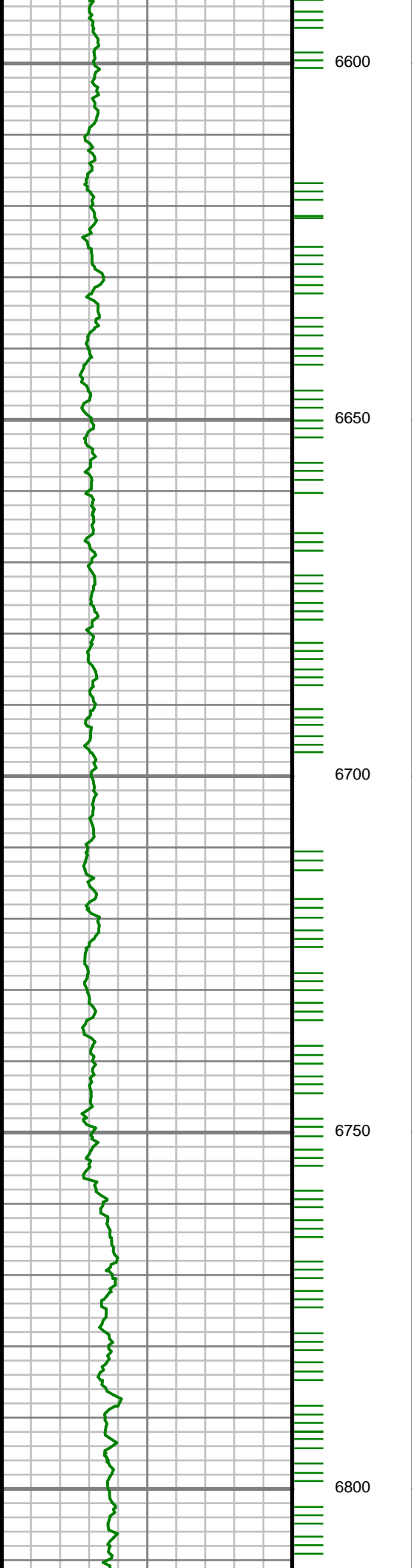
S: 68 MD: 6217.00 ft
Inc: 11.62 deg Az:
126.53 deg TVD:
6123.93 ft

S: 69 MD: 6312.00 ft
Inc: 12.01 deg Az:
126.84 deg TVD:
6216.92 ft



S: 70 MD: 6406.00 ft
Inc: 11.81 deg Az:
132.52 deg TVD:
6308.90 ft

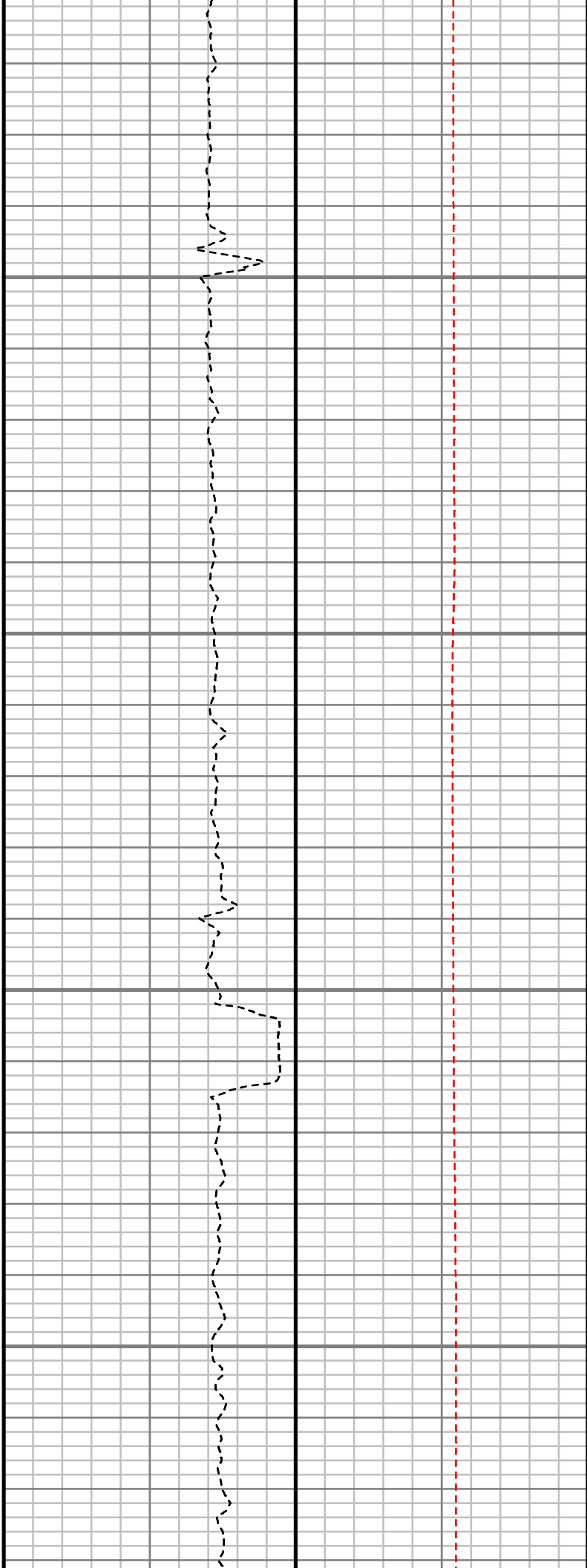
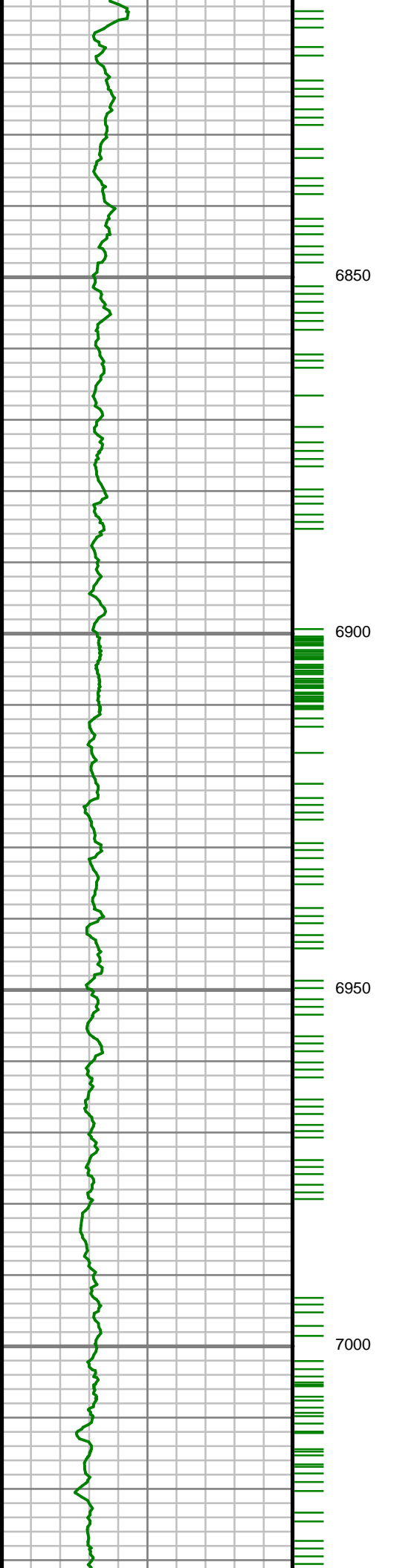
S: 71 MD: 6500.00 ft
Inc: 9.53 deg Az:
132.64 deg TVD:
6401.27 ft



S: 72 MD: 6595.00 ft
Inc: 8.22 deg Az:
124.63 deg TVD:
6495.13 ft

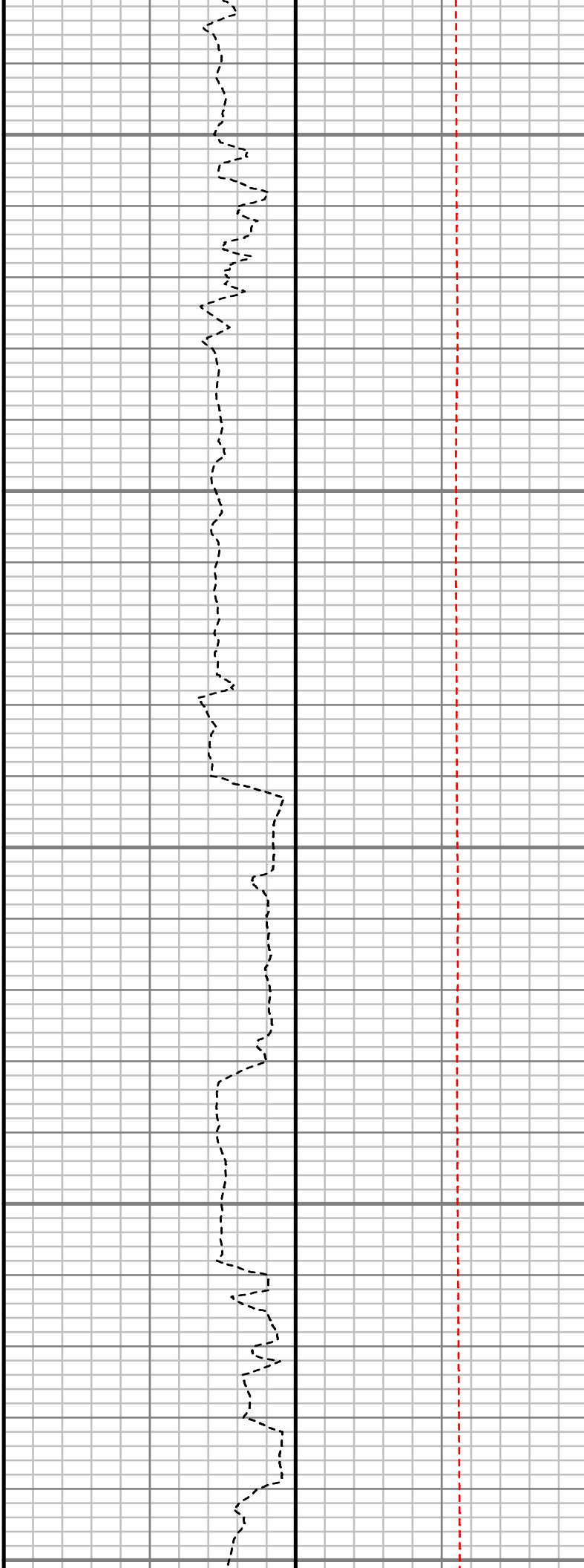
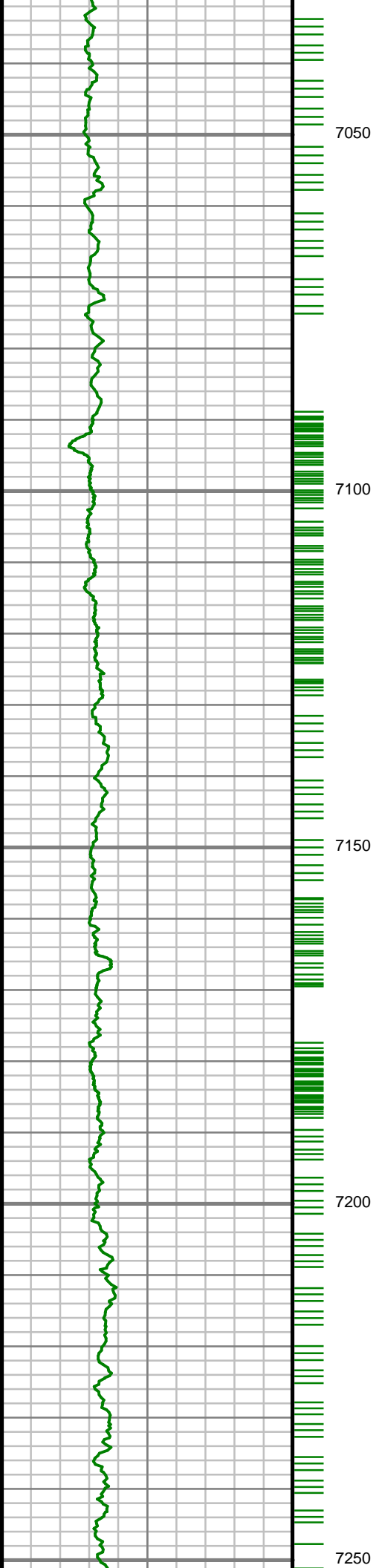
S: 73 MD: 6689.00 ft
Inc: 6.56 deg Az:
119.18 deg TVD:
6588.35 ft

S: 74 MD: 6784.00 ft
Inc: 5.37 deg Az:
119.73 deg TVD:
6682.83 ft



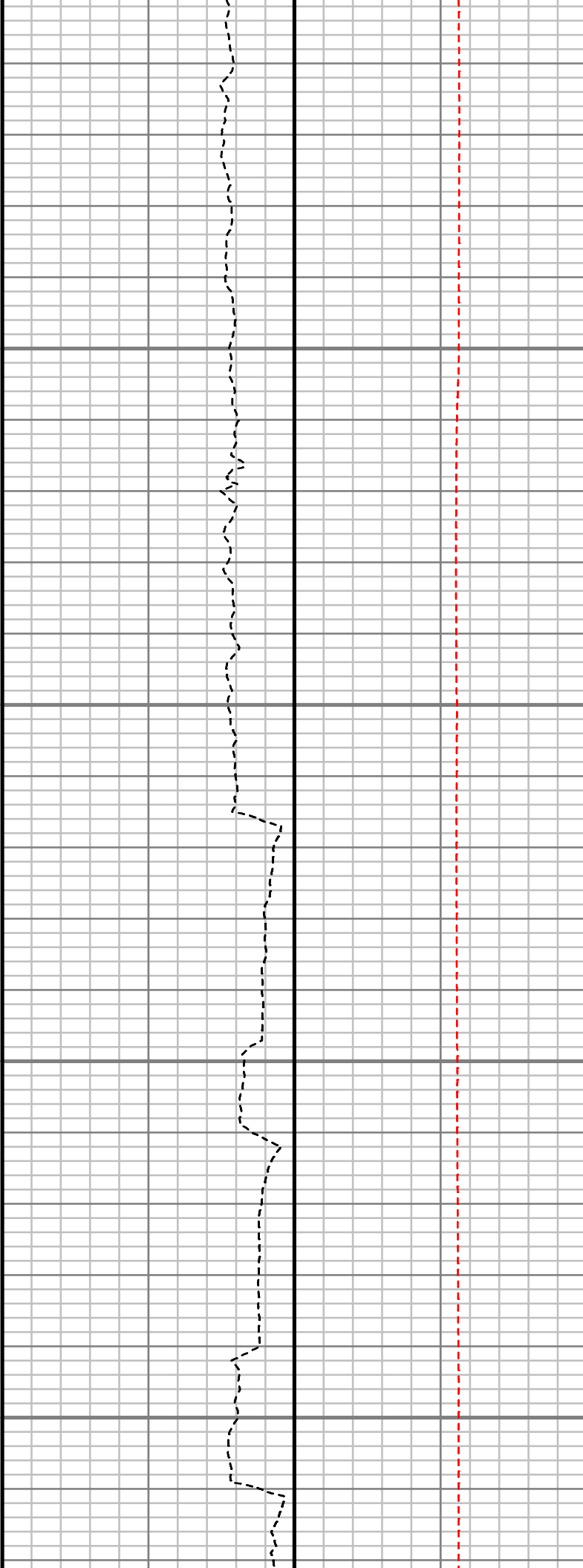
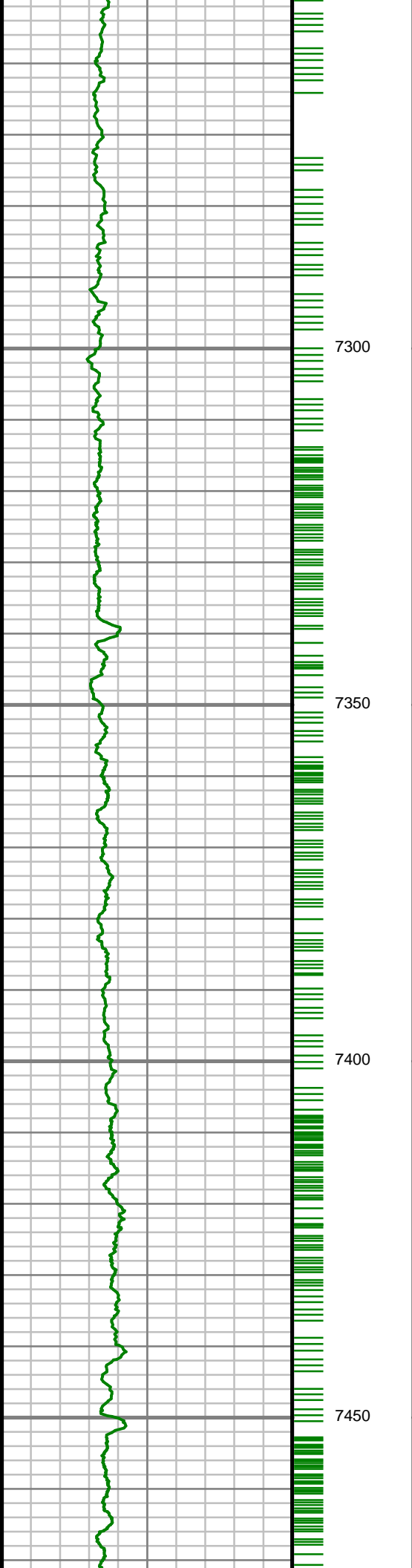
S: 75 MD: 6878.00 ft
Inc: 4.89 deg Az:
118.15 deg TVD:
6776.46 ft

S: 76 MD: 6973.00 ft
Inc: 4.23 deg Az:
137.09 deg TVD:
6871.16 ft



S: 77 MD: 7067.00 ft
Inc: 4.11 deg Az:
140.88 deg TVD:
6964.91 ft

S: 78 MD: 7162.00 ft
Inc: 1.29 deg Az:
148.85 deg TVD:
7059.80 ft

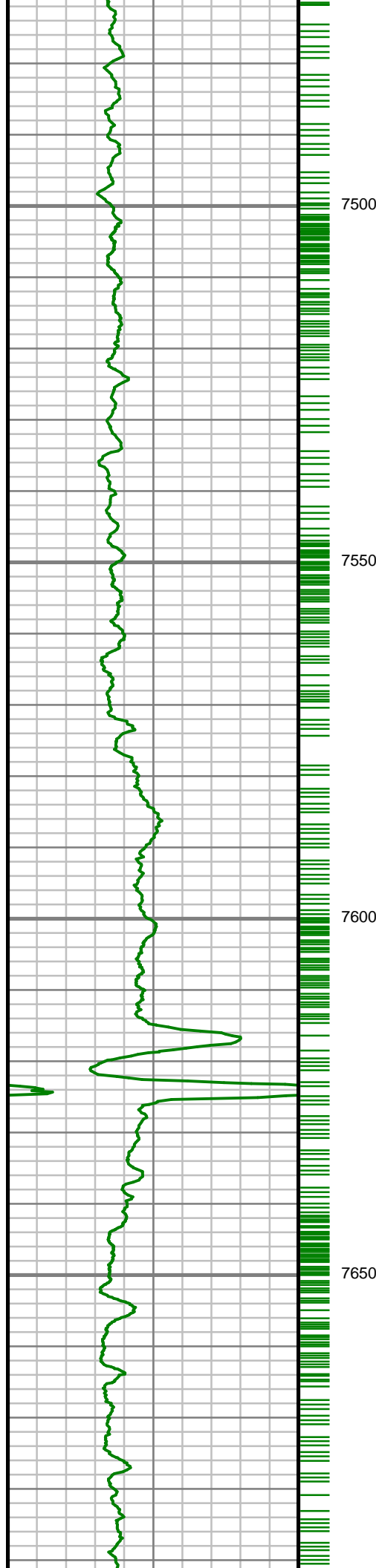


S: 79 MD: 7256.00 ft
Inc: 0.69 deg Az:
271.78 deg TVD:
7153.79 ft

S: 80 MD: 7350.00 ft
Inc: 0.48 deg Az:
281.37 deg TVD:
7247.78 ft

S: 81 MD: 7397.00 ft
Inc: 5.57 deg Az:
346.78 deg TVD:
7294.71 ft

S: 82 MD: 7445.00 ft
Inc: 11.21 deg Az:
354.64 deg TVD:
7342.17 ft



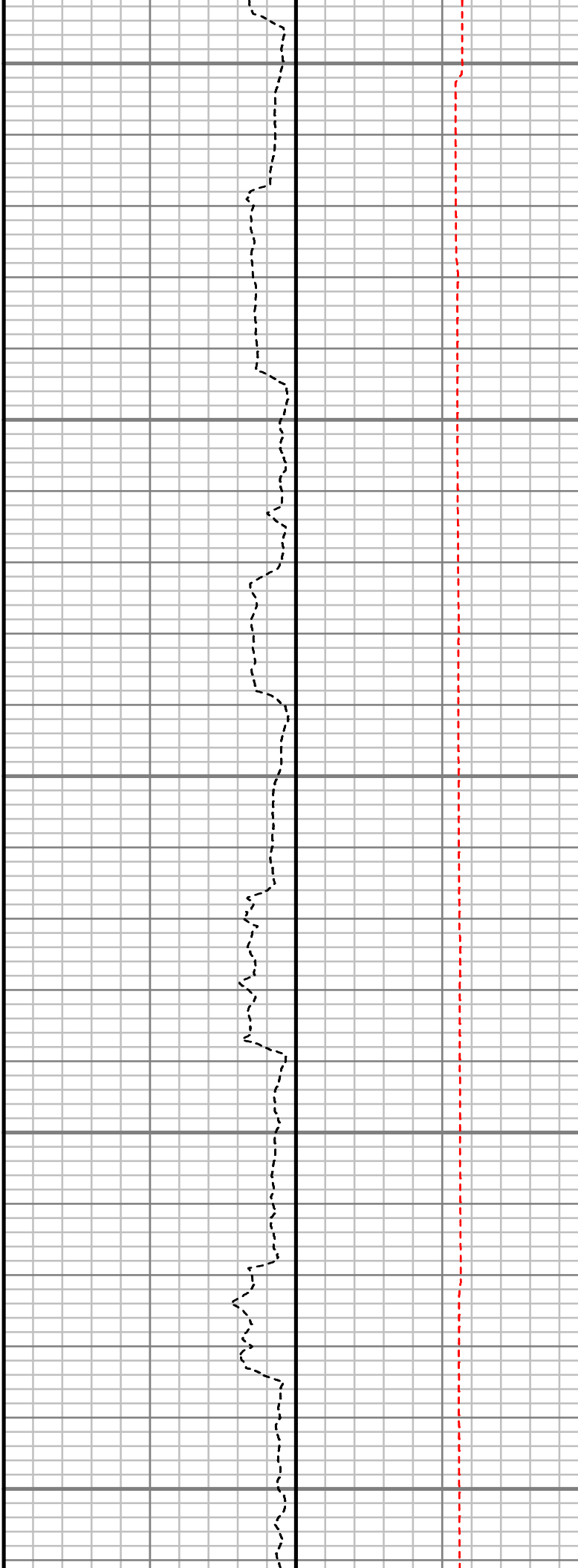
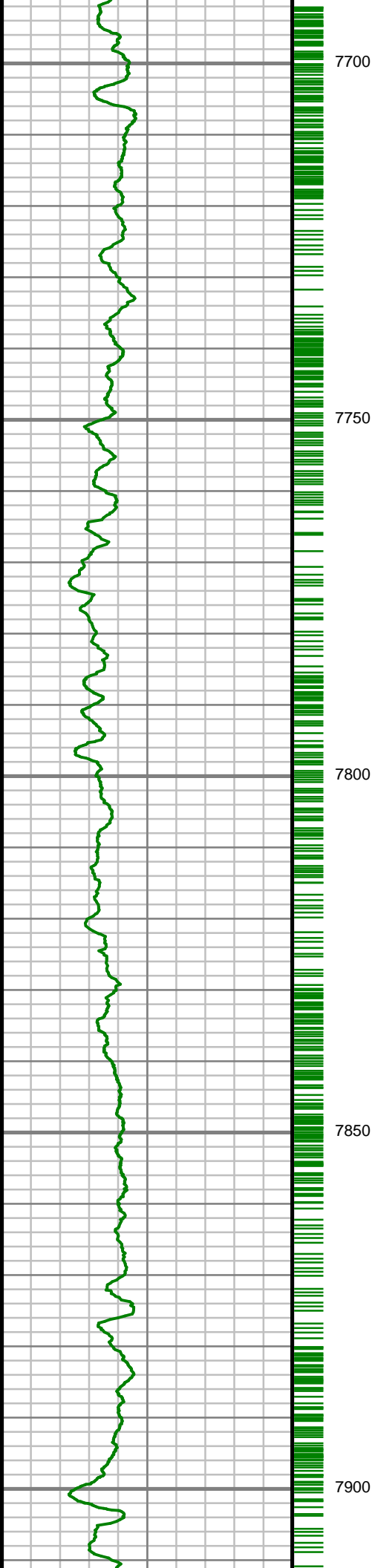
S: 83 MD: 7492.00 ft
Inc: 15.60 deg Az:
356.89 deg TVD:
7387.88 ft

S: 84 MD: 7539.00 ft
Inc: 18.28 deg Az:
358.83 deg TVD:
7432.84 ft

S: 85 MD: 7586.00 ft
Inc: 22.18 deg Az:
359.20 deg TVD:
7476.93 ft

S: 86 MD: 7634.00 ft
Inc: 25.39 deg Az: 1.82
deg TVD: 7520.85 ft

S: 87 MD: 7681.00 ft
Inc: 28.30 deg Az: 0.23
deg TVD: 7562.78 ft

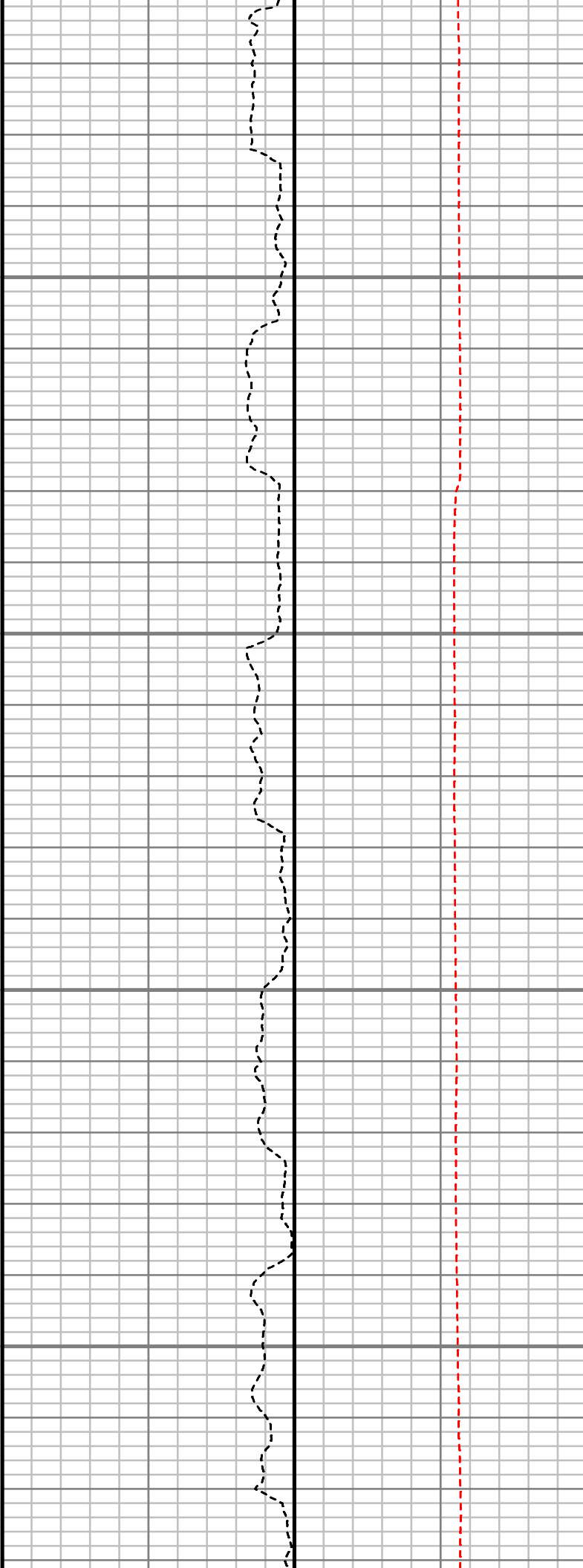
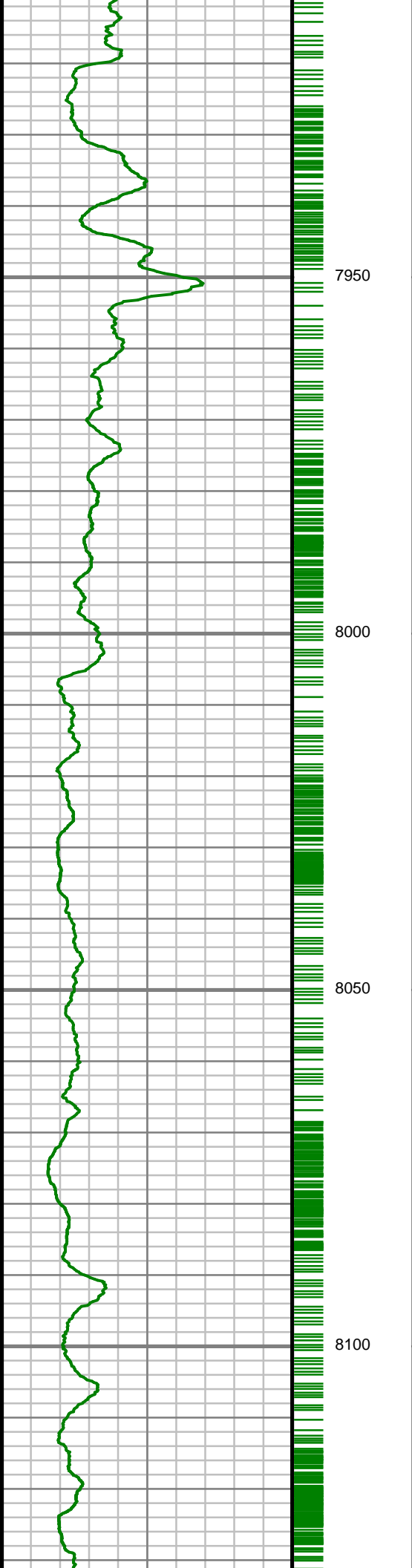


S: 88 MD: 7728.00 ft
Inc: 31.58 deg Az: 359.97 deg TVD: 7603.50 ft

S: 89 MD: 7775.00 ft
Inc: 35.50 deg Az: 0.70 deg TVD: 7642.67 ft

S: 90 MD: 7823.00 ft
Inc: 39.91 deg Az: 0.91 deg TVD: 7680.64 ft

S: 91 MD: 7870.00 ft
Inc: 46.12 deg Az: 2.13 deg TVD: 7714.98 ft



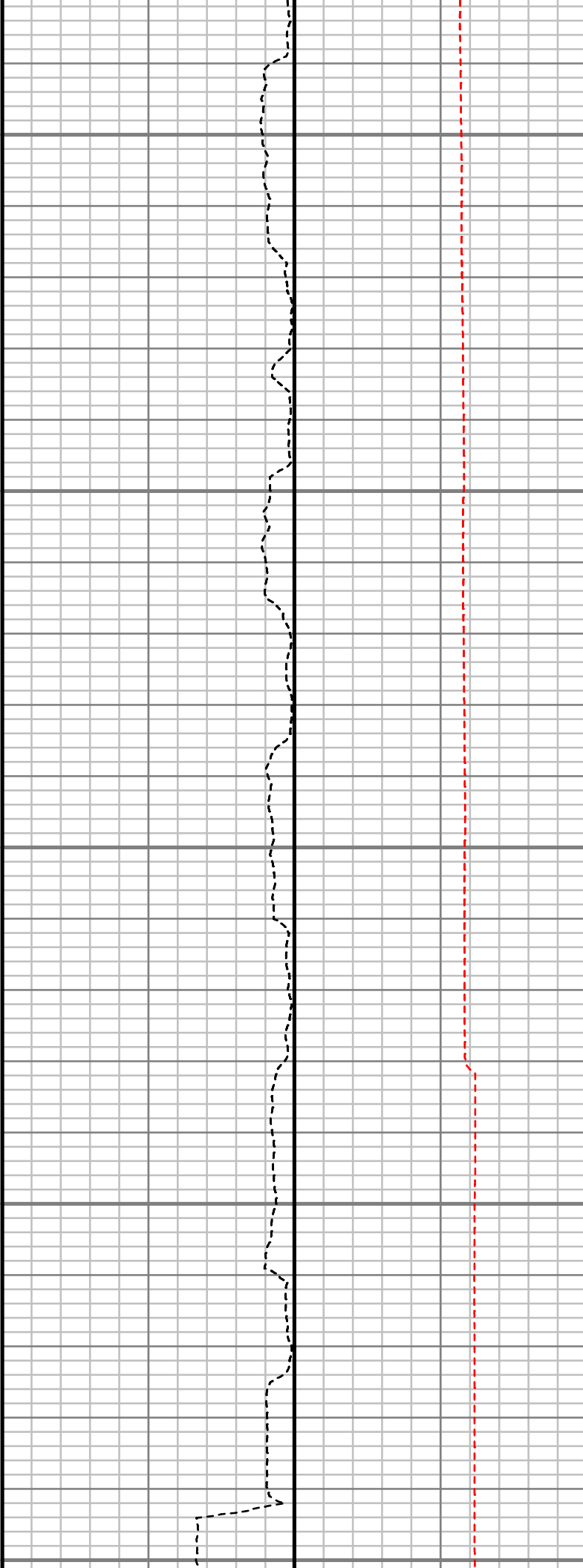
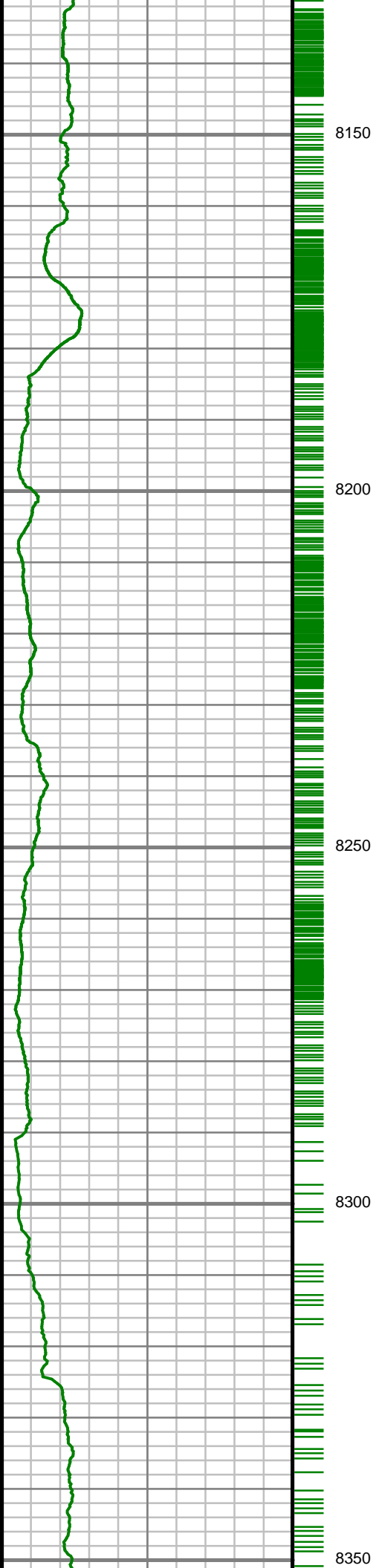
S: 92 MD: 7917.00 ft
Inc: 52.19 deg Az: 2.90
deg TVD: 7745.71 ft

S: 93 MD: 7964.00 ft
Inc: 57.60 deg Az: 2.37
deg TVD: 7772.73 ft

S: 94 MD: 8011.00 ft
Inc: 62.99 deg Az: 2.75
deg TVD: 7796.02 ft

S: 95 MD: 8058.00 ft
Inc: 67.54 deg Az: 3.12
deg TVD: 7815.68 ft

S: 96 MD: 8106.00 ft
Inc: 71.31 deg Az: 2.55
deg TVD: 7832.55 ft

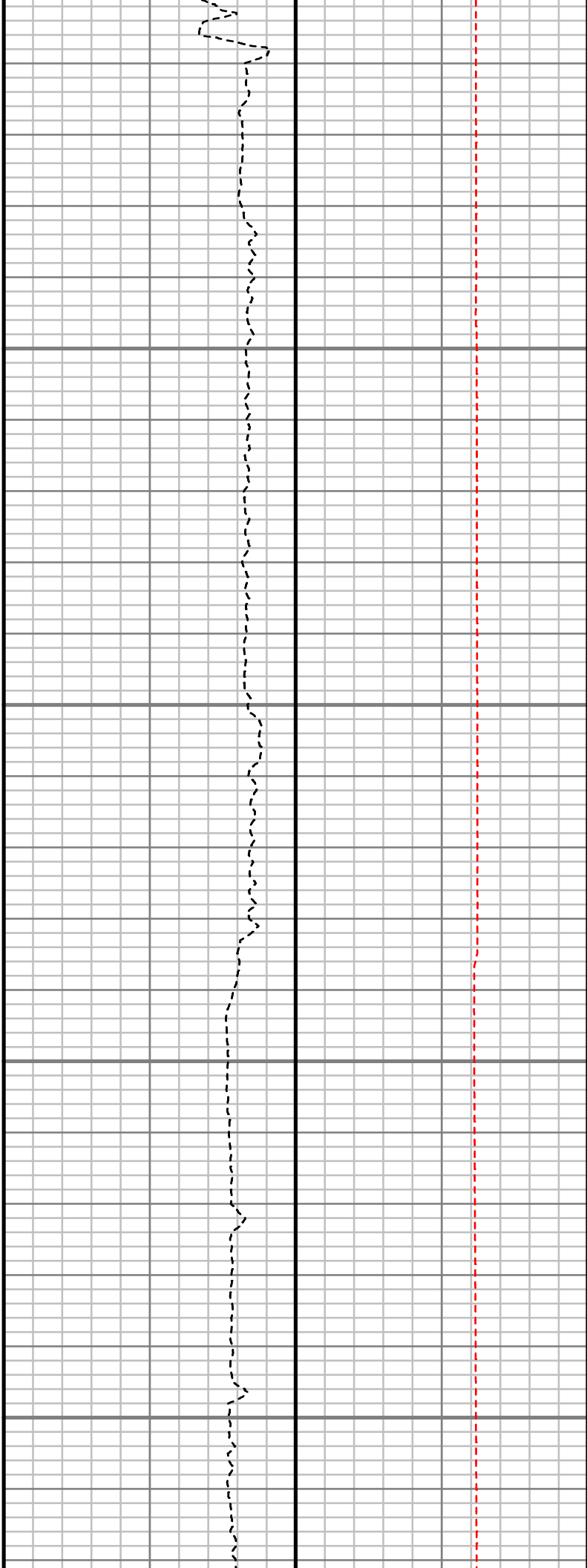
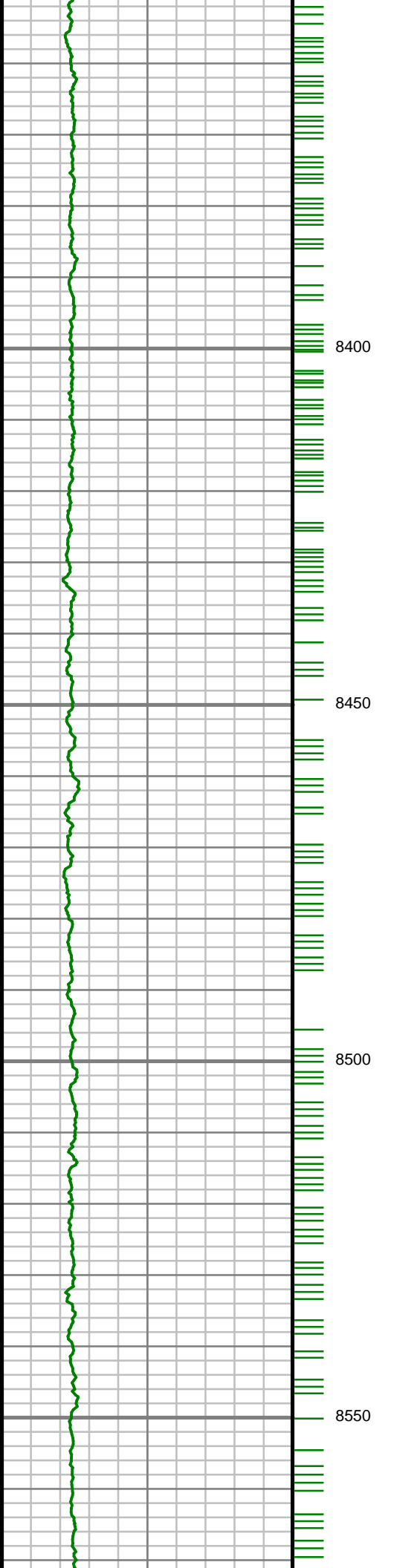


S: 97 MD: 8153.00 ft
Inc: 74.72 deg Az: 2.76
deg TVD: 7846.27 ft

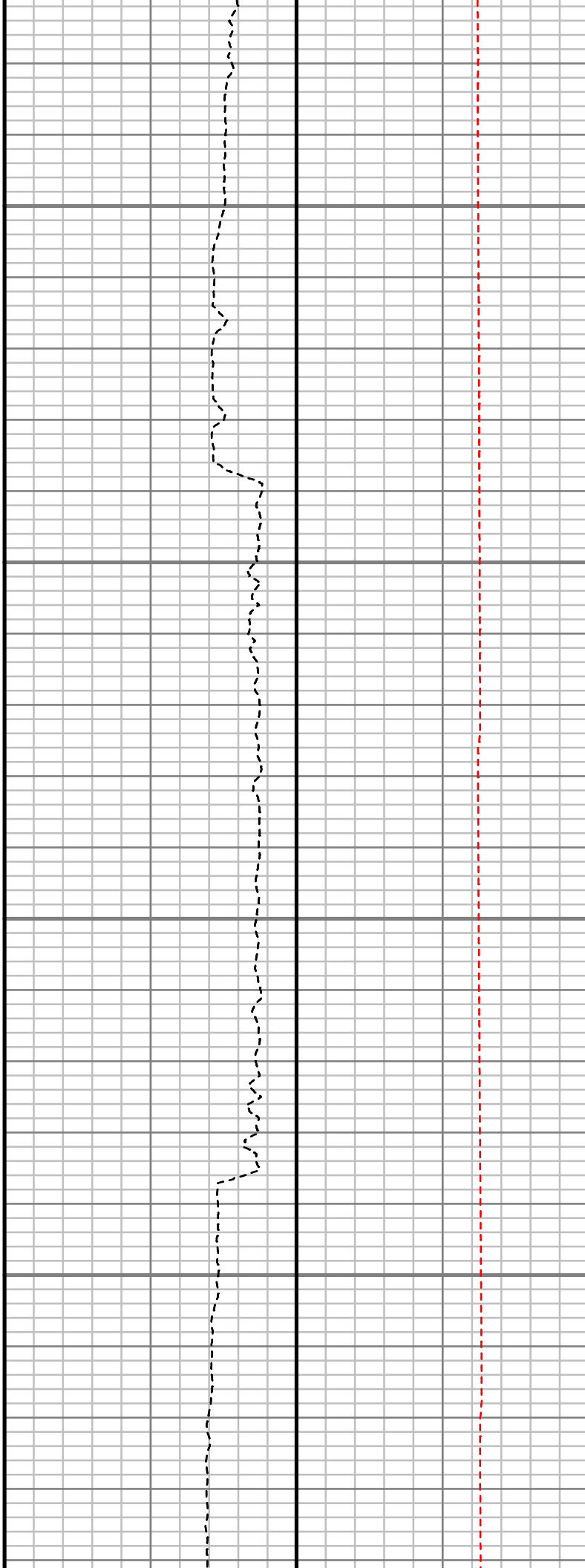
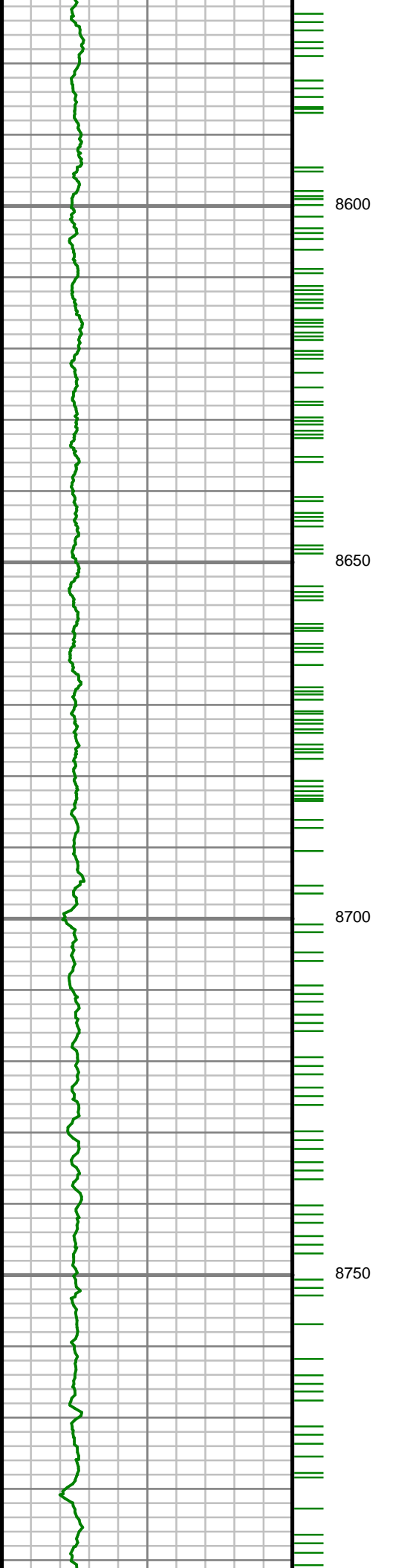
S: 98 MD: 8200.00 ft
Inc: 77.13 deg Az: 1.27
deg TVD: 7857.70 ft

S: 99 MD: 8247.00 ft
Inc: 81.00 deg Az:
359.98 deg TVD:
7866.62 ft

S: 100 MD: 8279.00 ft
Inc: 84.32 deg Az:
359.41 deg TVD:
7870.70 ft



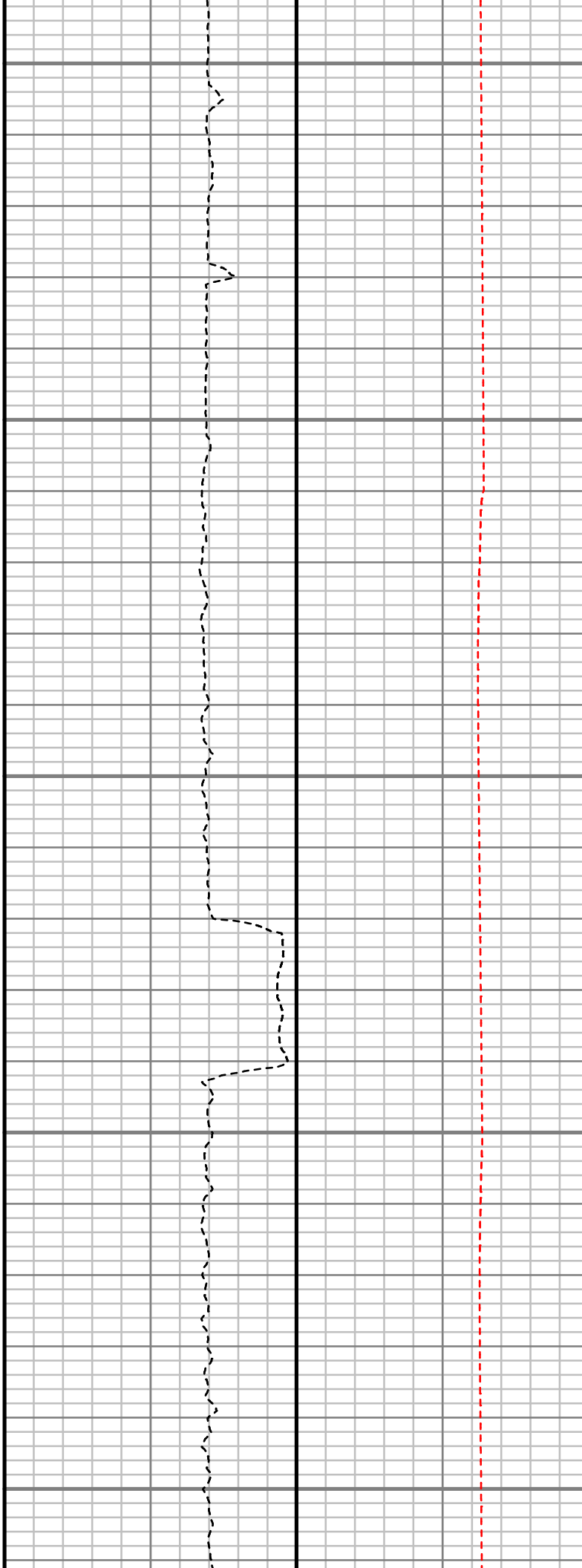
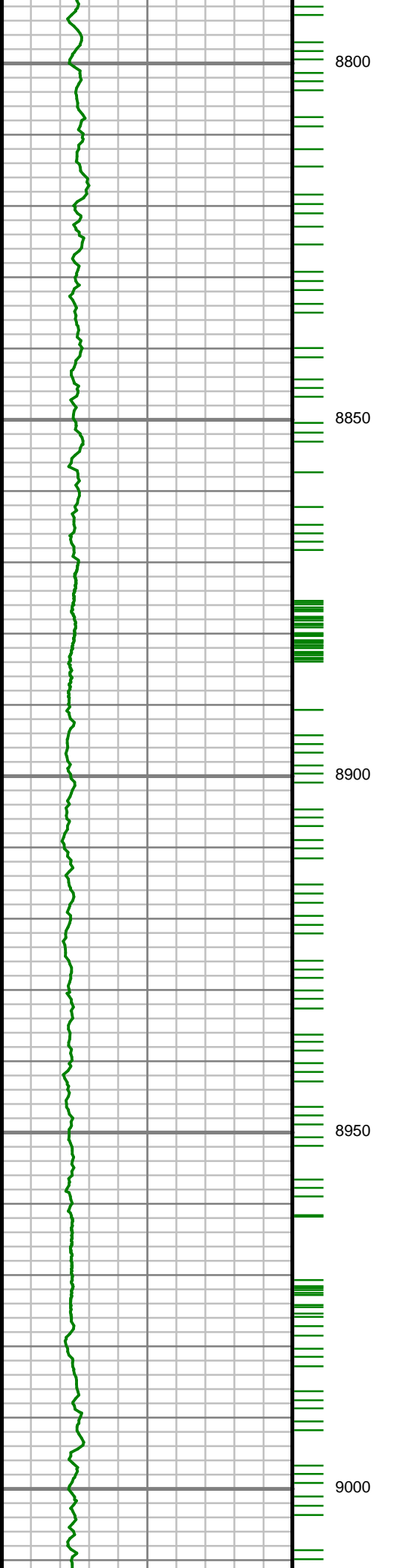
S: 101 MD: 8485.00 ft
Inc: 88.92 deg Az:
359.56 deg TVD:
7882.84 ft



S: 102 MD: 8580.00 ft
Inc: 89.20 deg Az:
359.02 deg TVD:
7884.40 ft

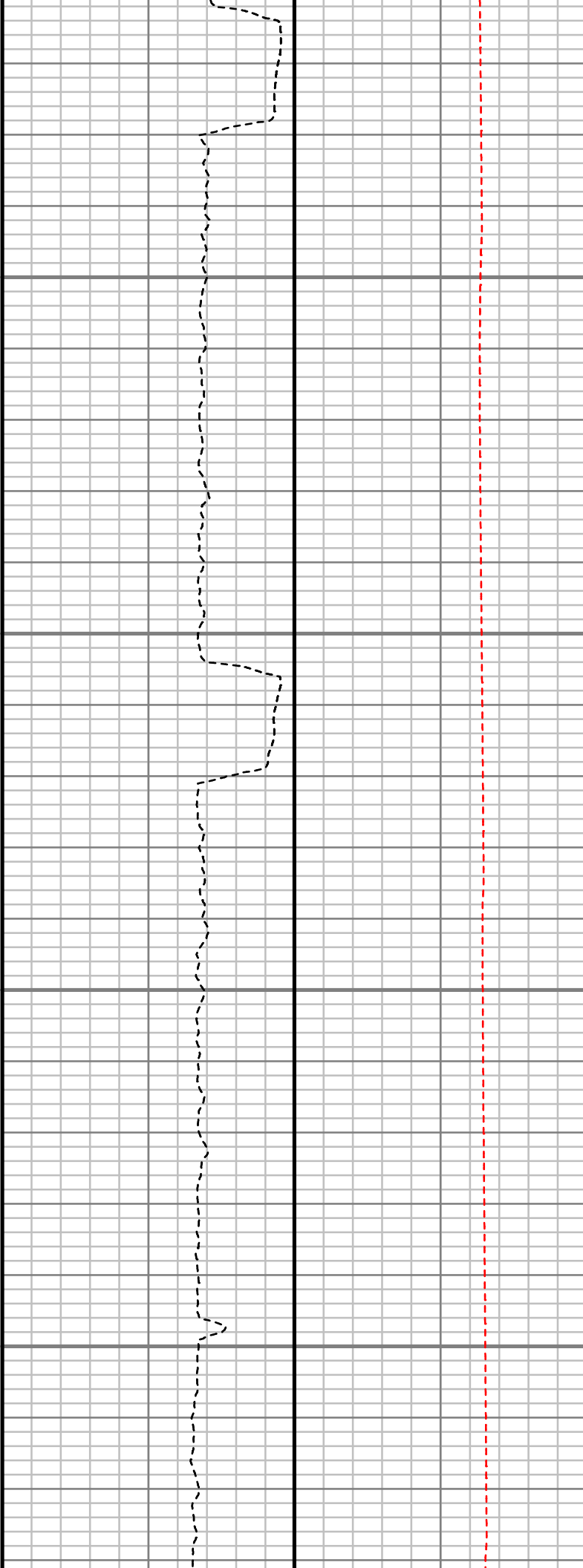
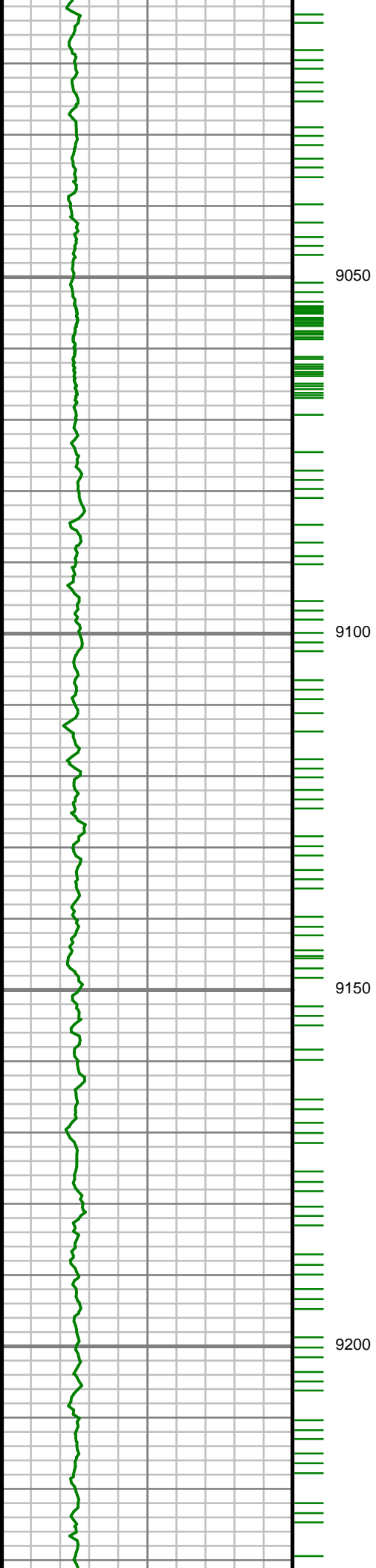
S: 103 MD: 8674.00 ft
Inc: 89.73 deg Az:
359.19 deg TVD:
7885.28 ft

S: 104 MD: 8769.00 ft
Inc: 89.93 deg Az:
359.17 deg TVD:
7885.56 ft



S: 105 MD: 8860.00 ft
Inc: 90.94 deg Az:
358.50 deg TVD:
7884.86 ft

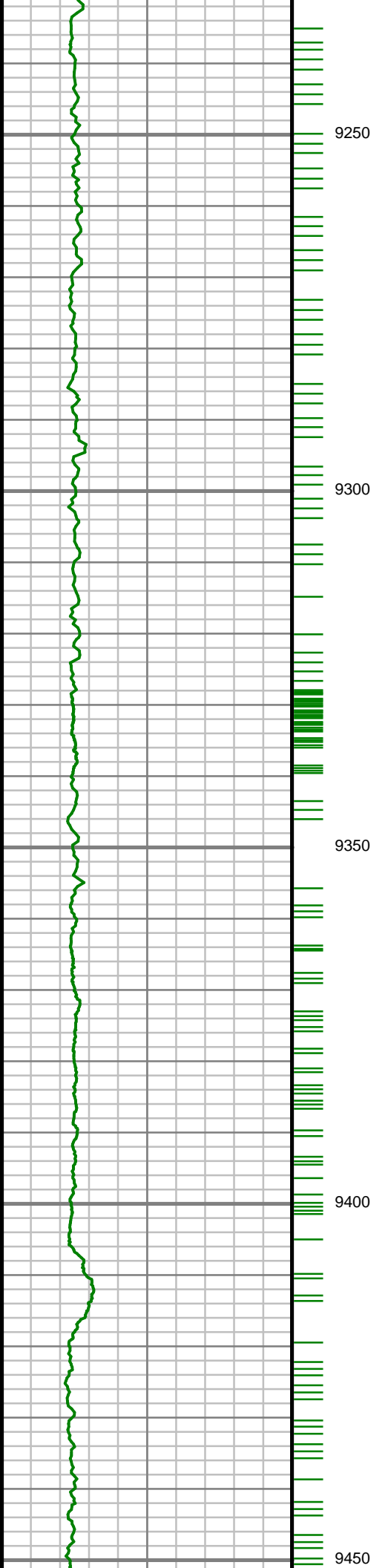
S: 106 MD: 8952.00 ft
Inc: 89.56 deg Az:
359.66 deg TVD:
7884.46 ft



S: 107 MD: 9043.00 ft
Inc: 89.12 deg Az: 0.48
deg TVD: 7885.50 ft

S: 108 MD: 9134.00 ft
Inc: 90.57 deg Az: 1.40
deg TVD: 7885.75 ft

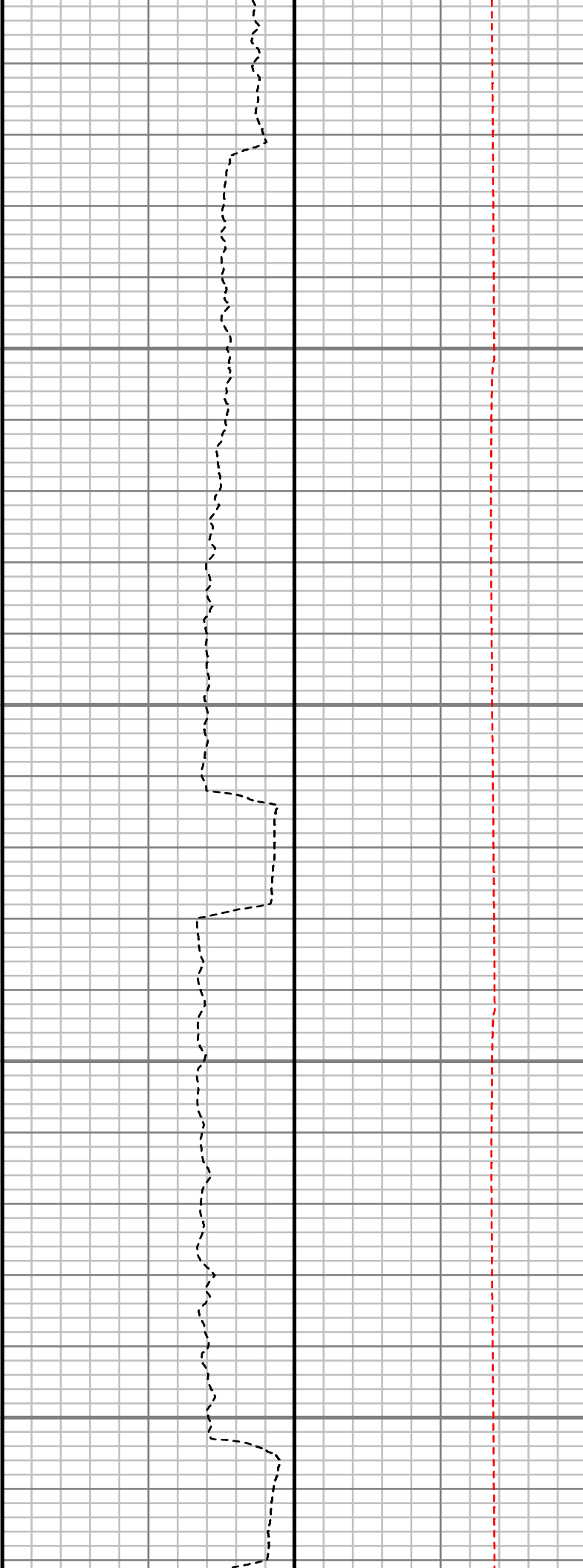
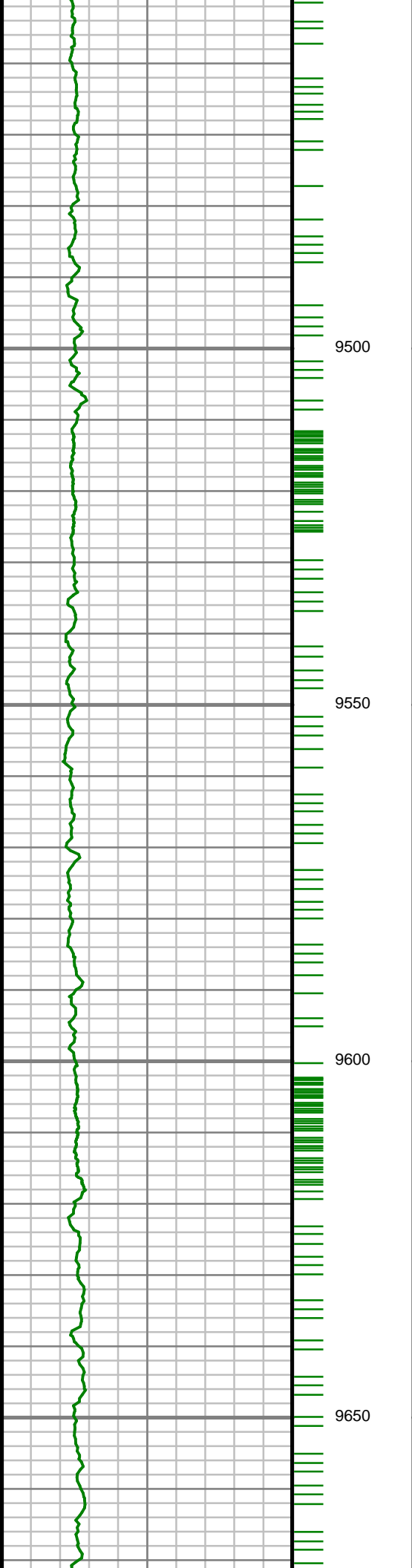
S: 109 MD: 9225.00 ft
Inc: 91.18 deg Az: 1.99
deg TVD: 7884.26 ft



deg TVD: 7884.36 ft

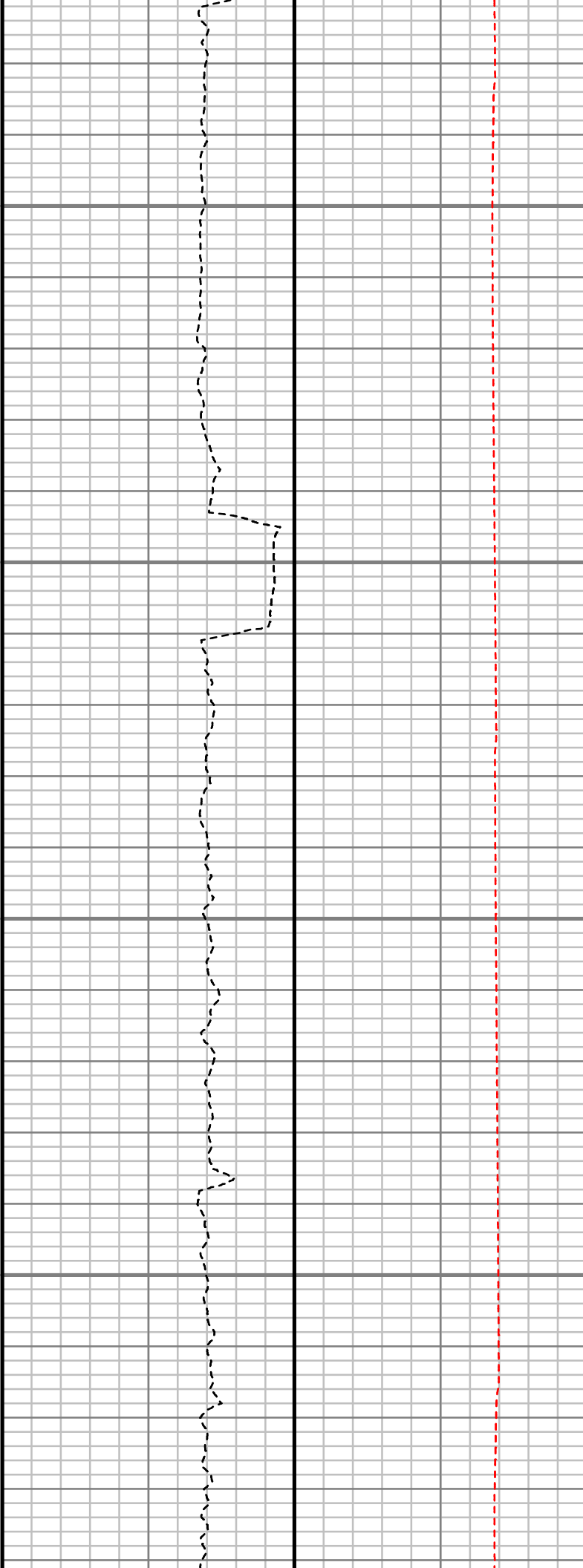
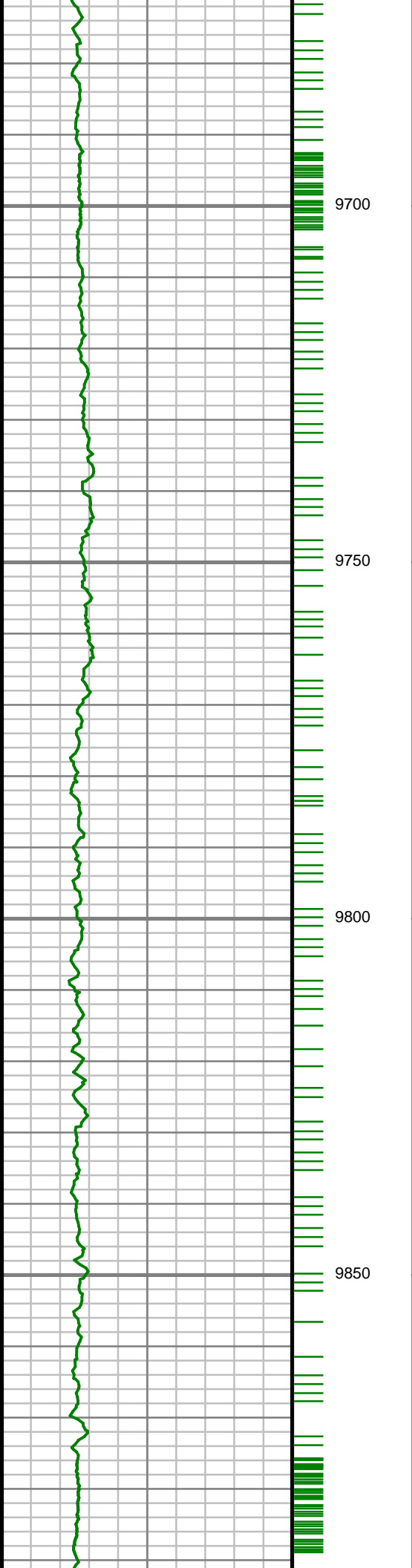
S: 110 MD: 9317.00 ft
Inc: 91.18 deg Az: 1.87
deg TVD: 7882.47 ft

S: 111 MD: 9407.00 ft
Inc: 90.30 deg Az:
359.70 deg TVD:
7881.31 ft



S: 112 MD: 9498.00 ft
Inc: 88.72 deg Az:
357.50 deg TVD:
7882.08 ft

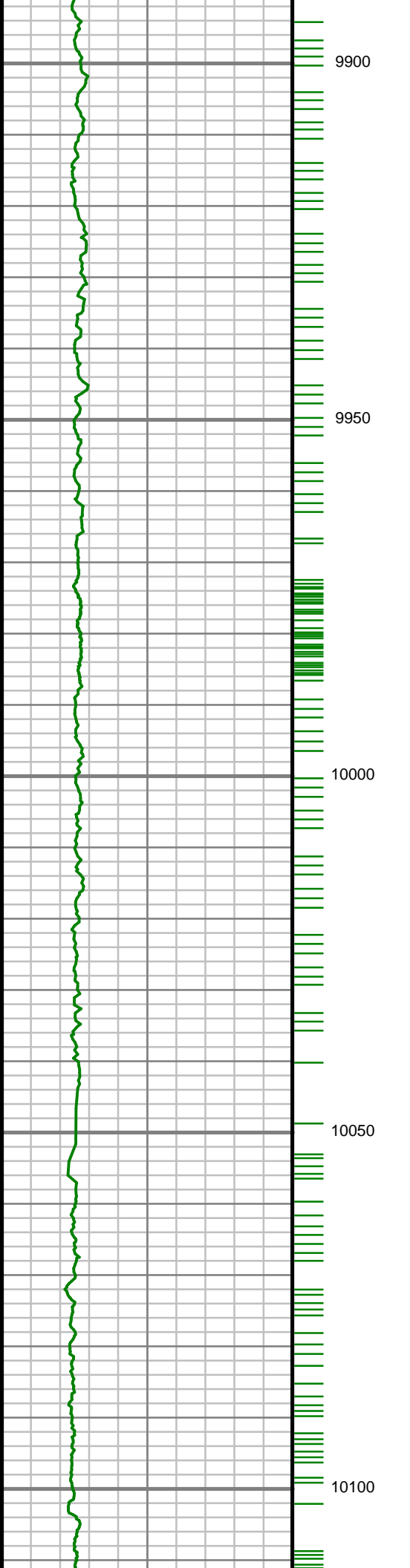
S: 113 MD: 9588.00 ft
Inc: 87.85 deg Az:
358.17 deg TVD:
7884.78 ft



S: 114 MD: 9679.00 ft
Inc: 88.48 deg Az: 0.37
deg TVD: 7887.69 ft

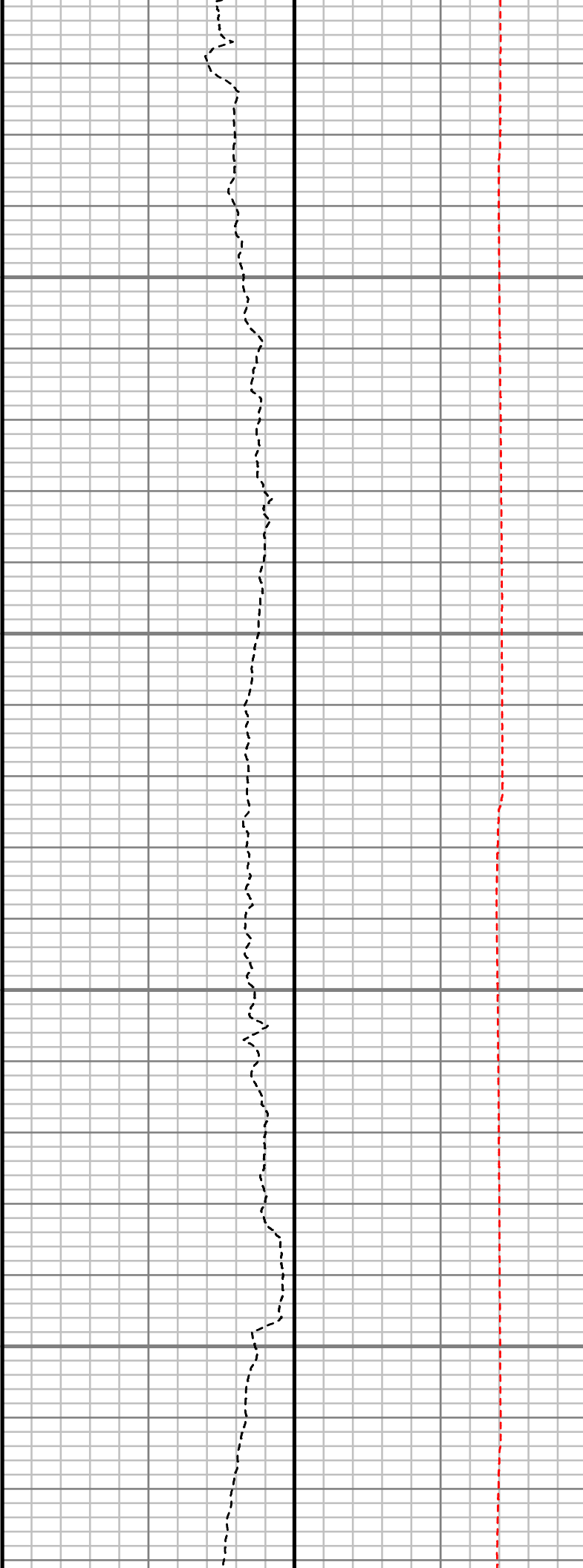
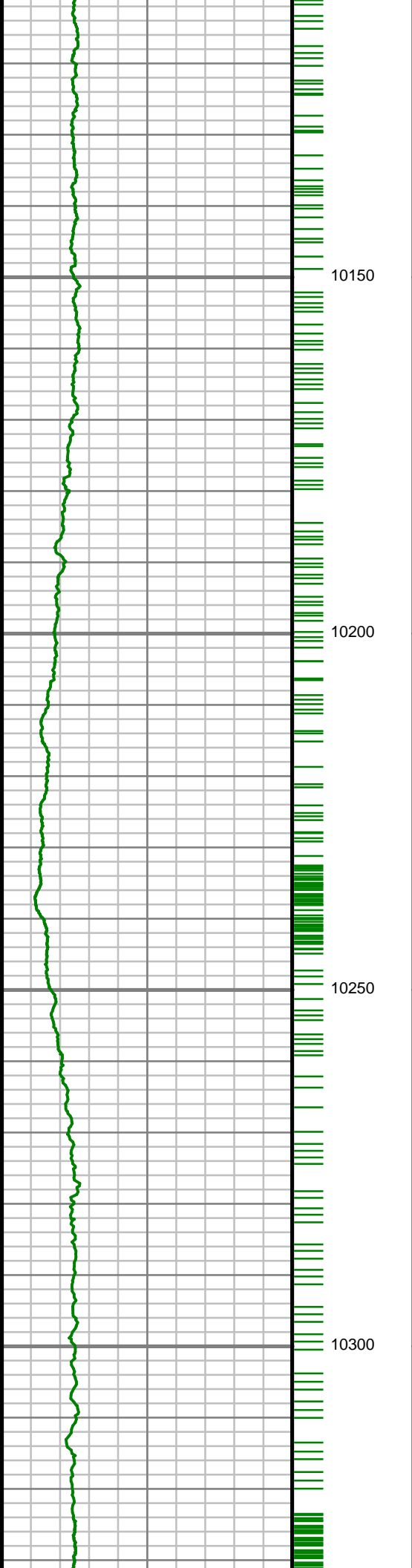
S: 115 MD: 9770.00 ft
Inc: 89.93 deg Az: 1.68
deg TVD: 7888.95 ft

S: 116 MD: 9860.00 ft
Inc: 89.39 deg Az: 1.19
deg TVD: 7889.48 ft



S: 117 MD: 9950.00 ft
Inc: 89.90 deg Az: 1.23
deg TVD: 7890.03 ft

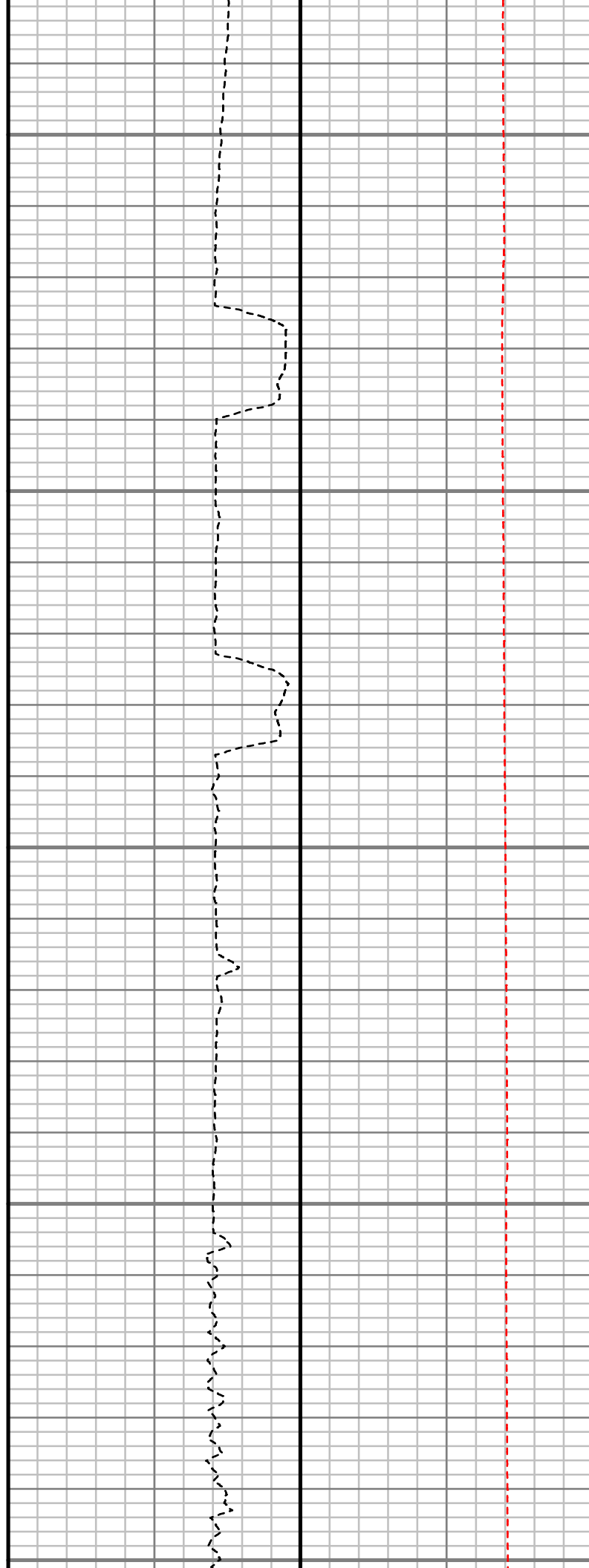
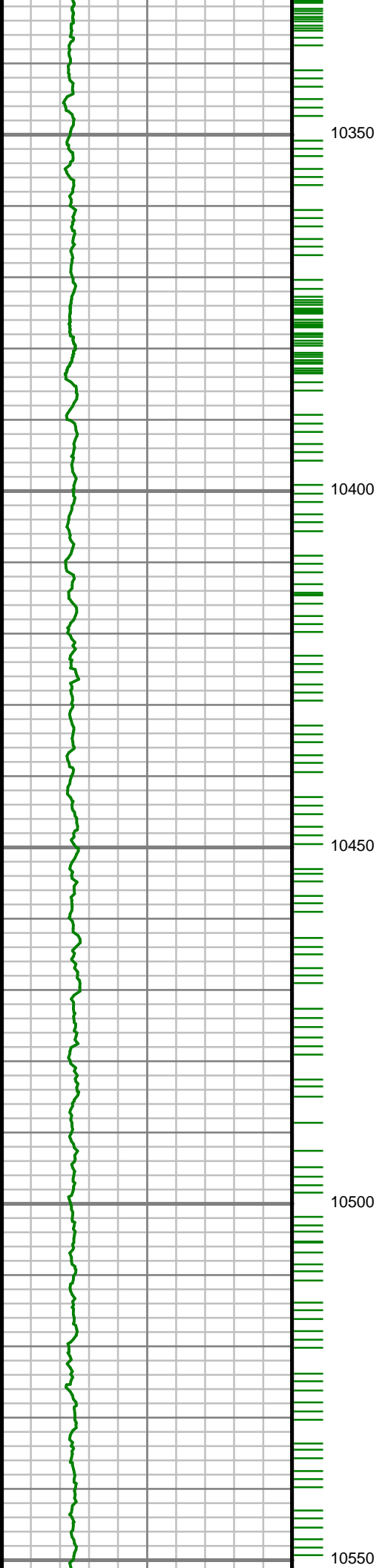
S: 118 MD: 10041.00 ft
Inc: 91.51 deg Az: 2.32
deg TVD: 7888.91 ft



S: 119 MD: 10131.00 ft
Inc: 90.77 deg Az: 1.33
deg TVD: 7887.11 ft

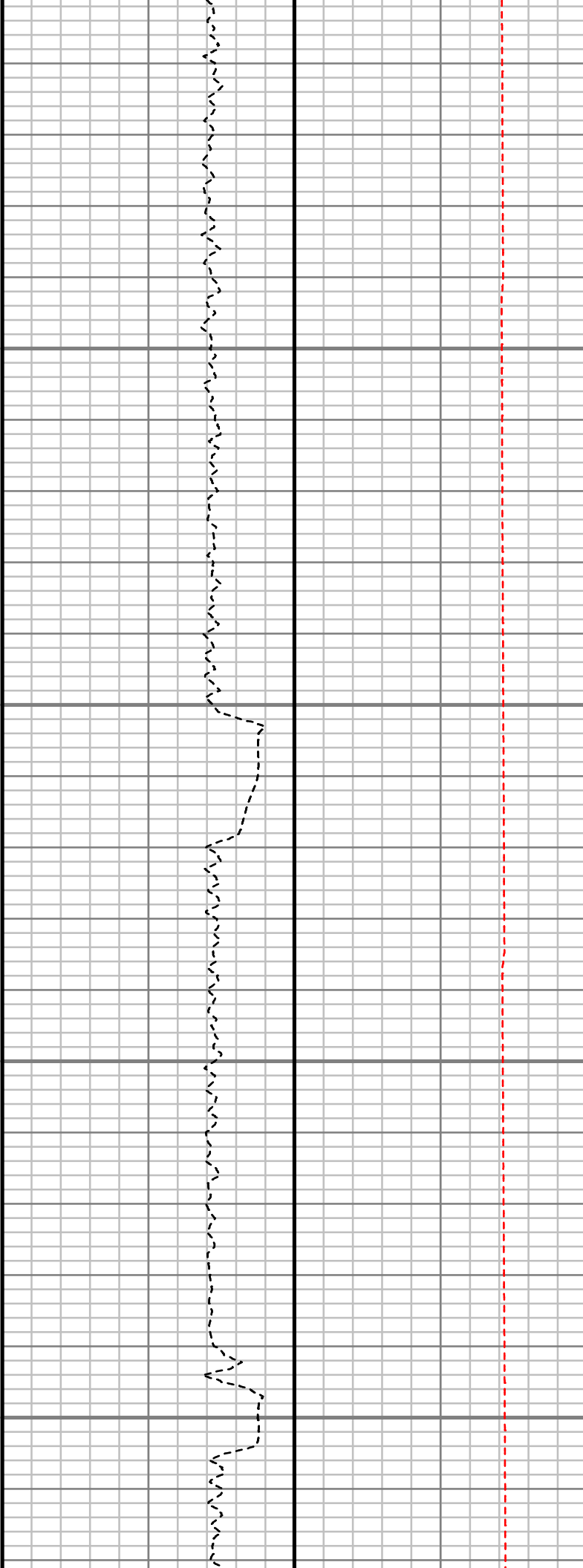
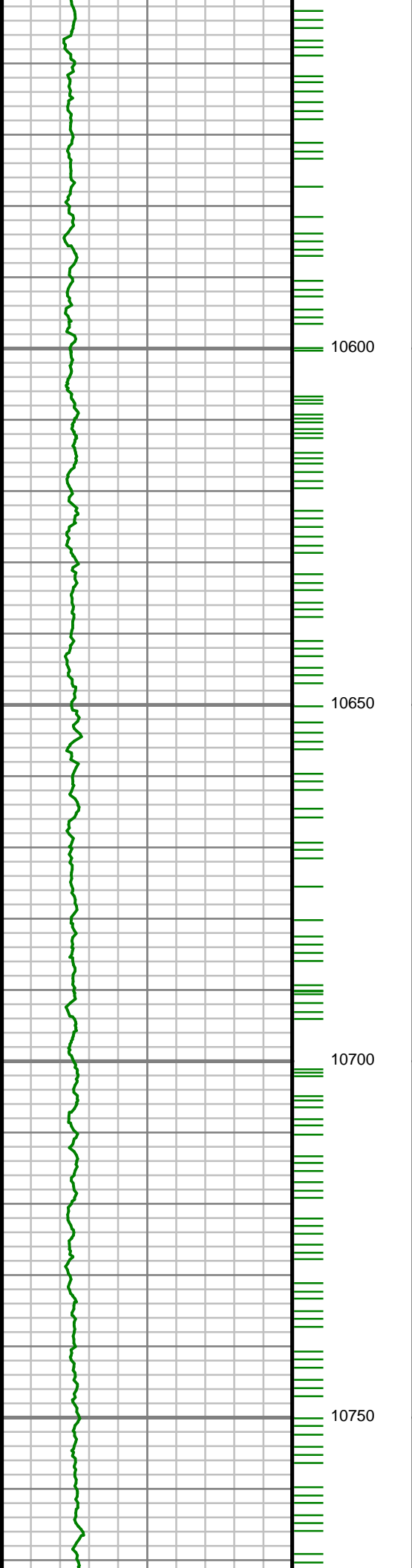
S: 120 MD: 10223.00 ft
Inc: 89.36 deg Az: 1.10
deg TVD: 7887.01 ft

S: 121 MD: 10314.00 ft
Inc: 88.49 deg Az: 0.49
deg TVD: 7888.71 ft



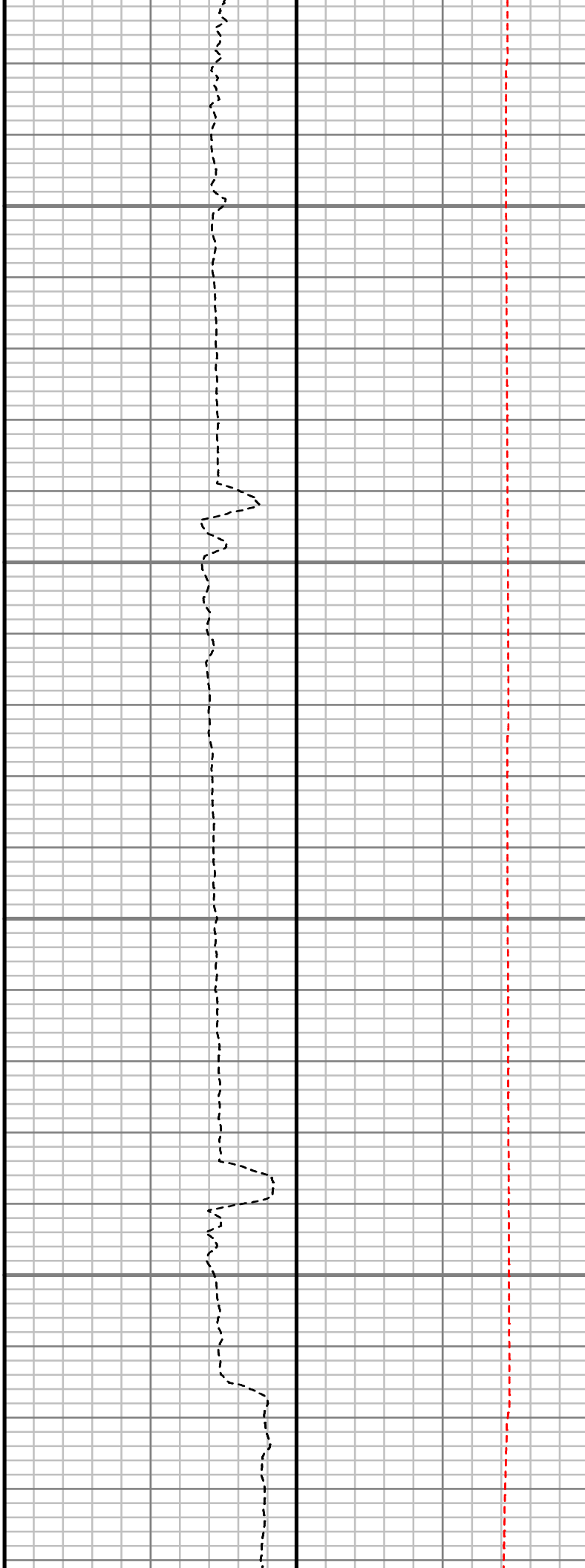
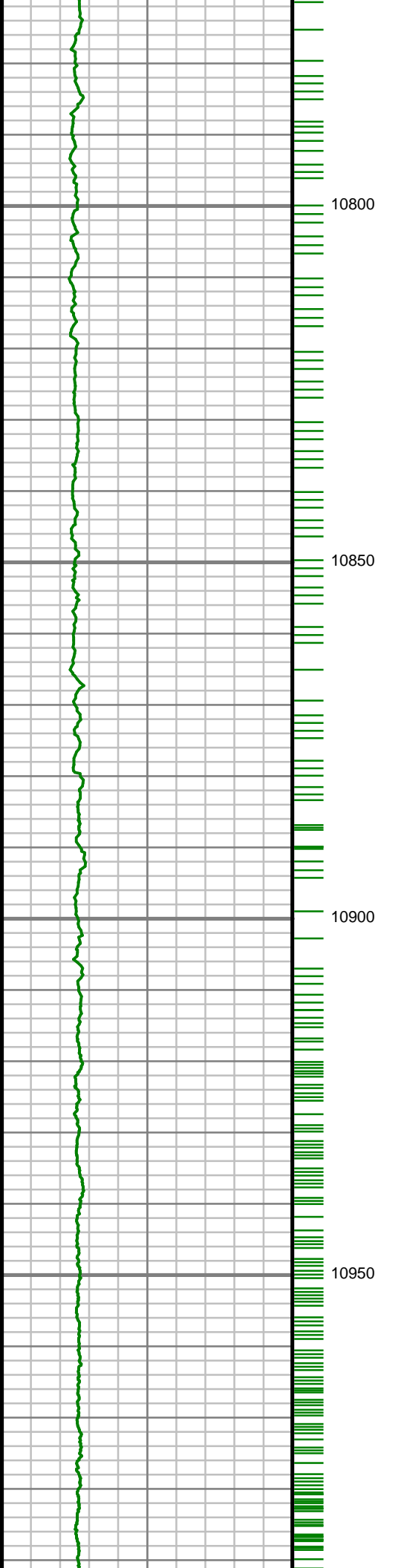
S: 122 MD: 10404.00 ft
Inc: 89.39 deg Az: 1.28
deg TVD: 7890.38 ft

S: 123 MD: 10495.00 ft
Inc: 89.80 deg Az: 2.09
deg TVD: 7891.02 ft



S: 124 MD: 10589.00 ft
Inc: 89.97 deg Az: 1.21
deg TVD: 7891.21 ft

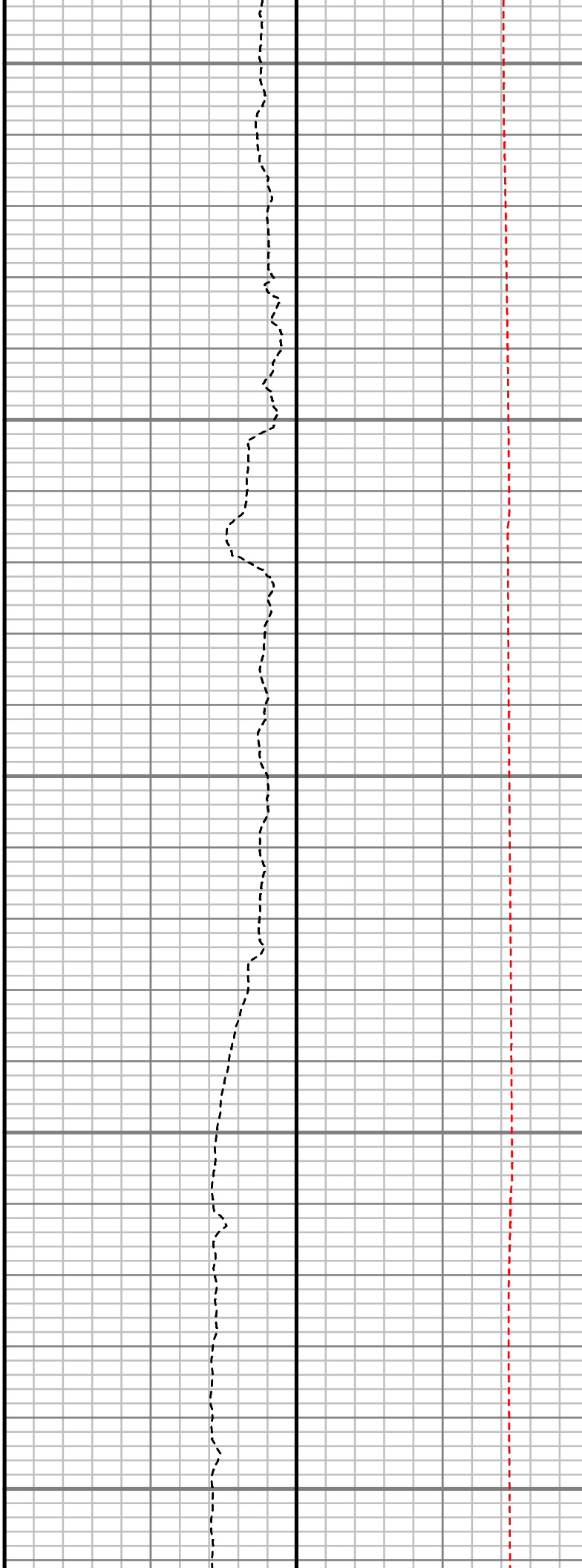
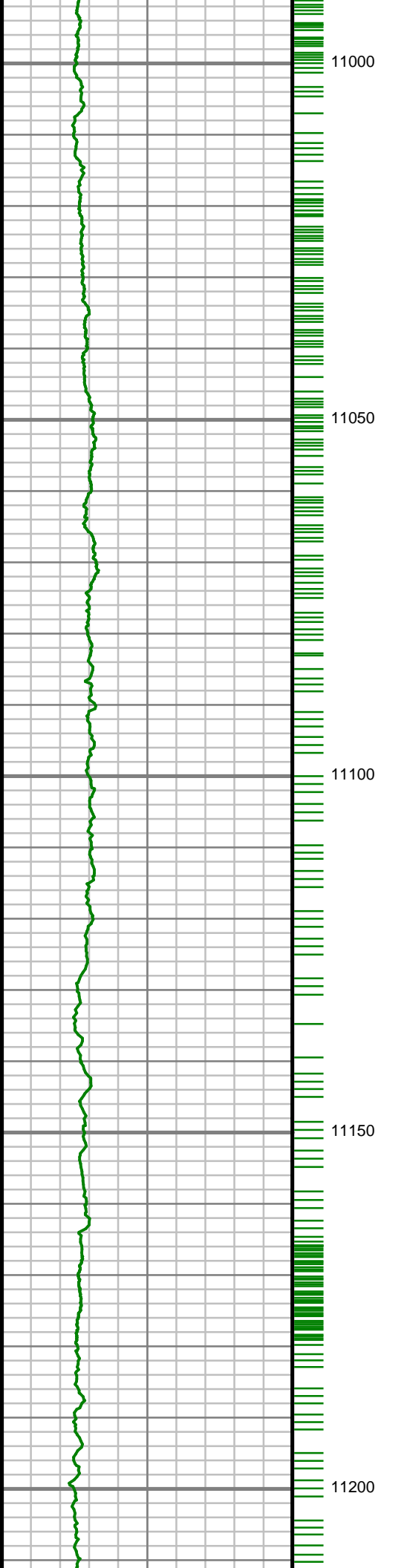
S: 125 MD: 10683.00 ft
Inc: 89.80 deg Az: 1.33
deg TVD: 7891.40 ft



S: 126 MD: 10778.00 ft
Inc: 89.63 deg Az: 0.97
deg TVD: 7891.88 ft

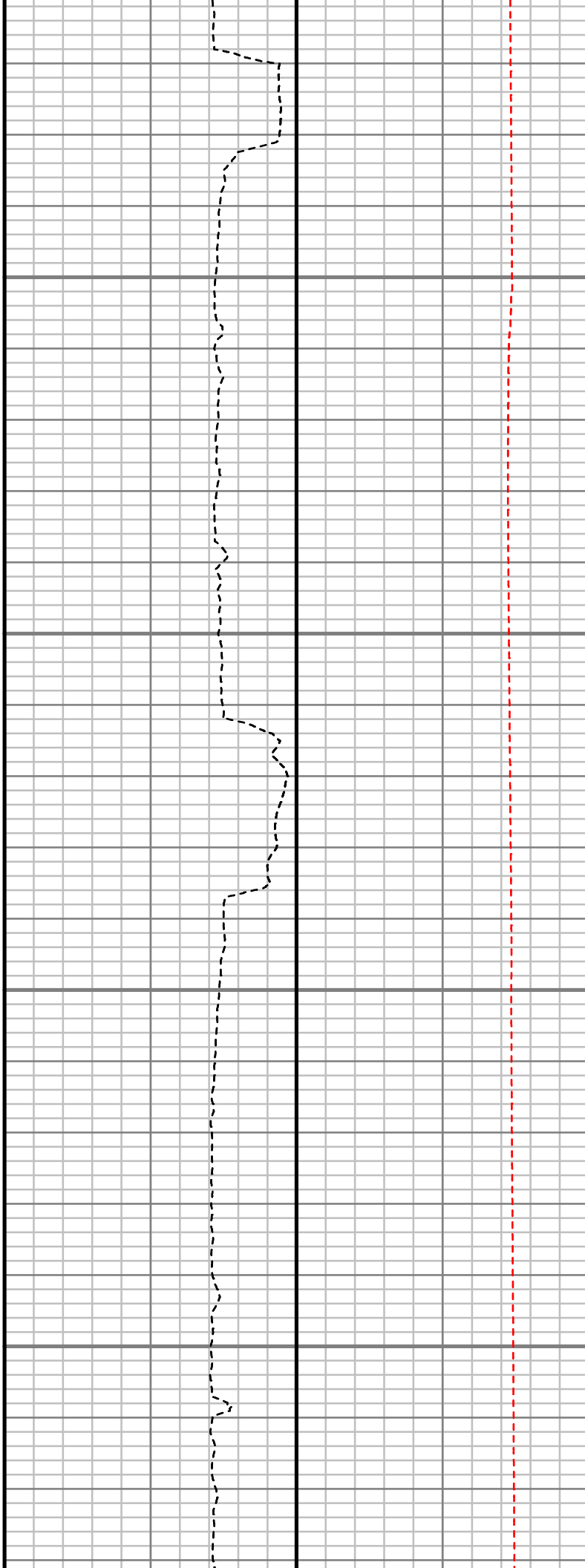
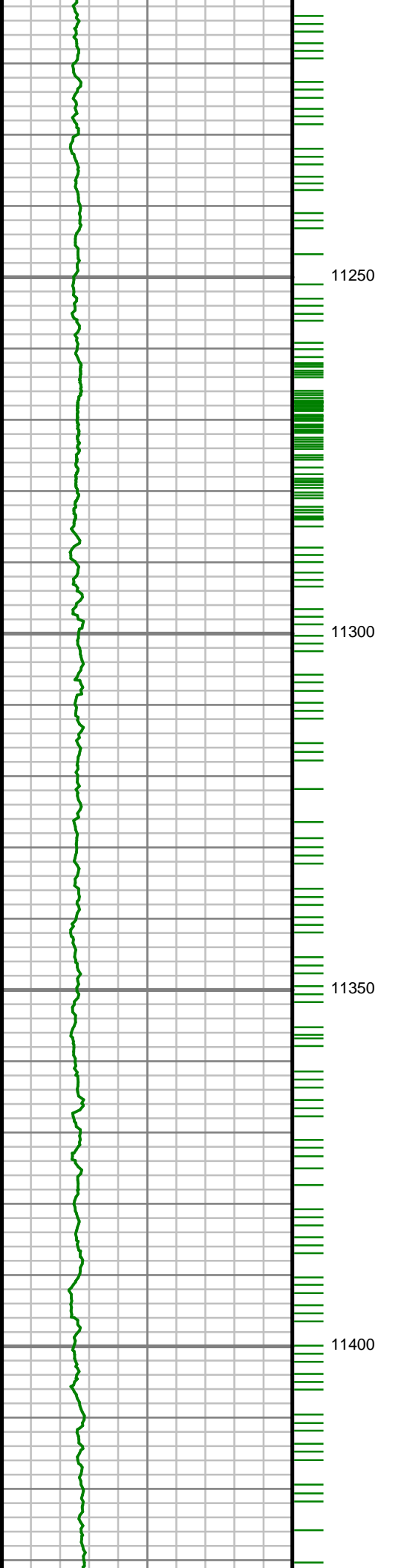
S: 127 MD: 10872.00 ft
Inc: 89.50 deg Az: 0.68
deg TVD: 7892.59 ft

S: 128 MD: 10966.00 ft
Inc: 89.29 deg Az: 0.80
deg TVD: 7893.59 ft



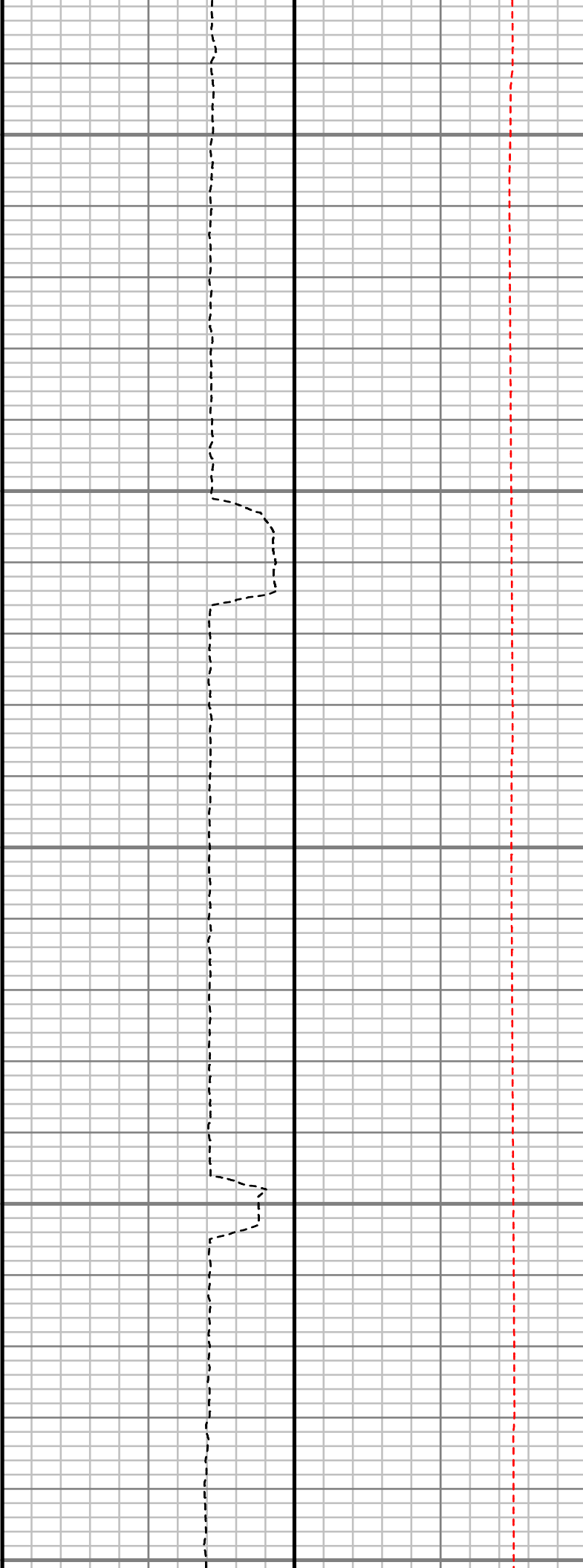
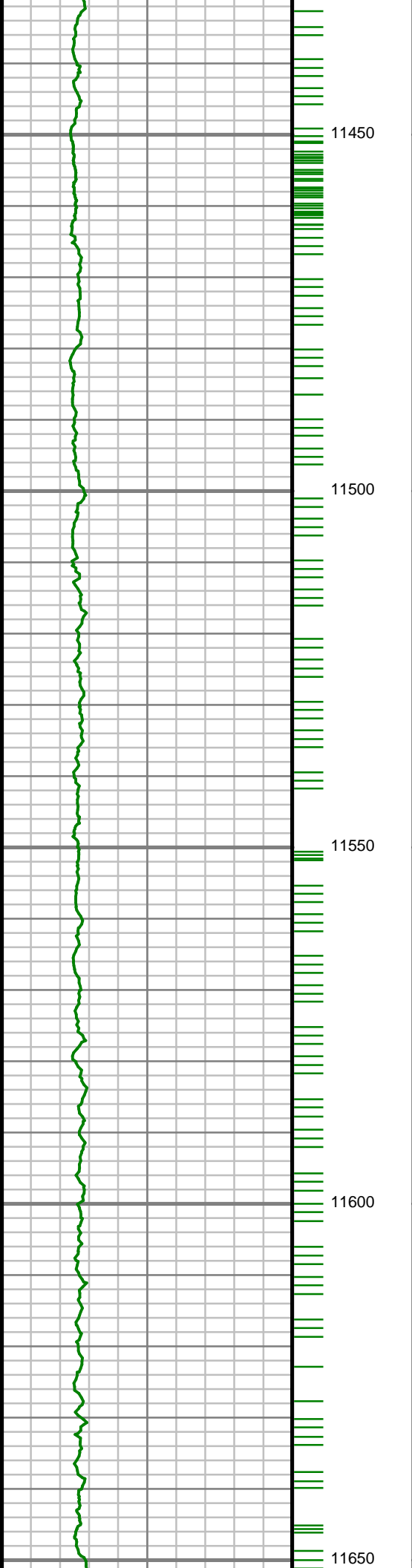
S: 129 MD: 11061.00 ft
Inc: 89.83 deg Az: 1.26
deg TVD: 7894.31 ft

S: 130 MD: 11155.00 ft
Inc: 91.04 deg Az: 1.80
deg TVD: 7893.59 ft



S: 131 MD: 11250.00 ft
Inc: 90.47 deg Az: 0.76
deg TVD: 7892.34 ft

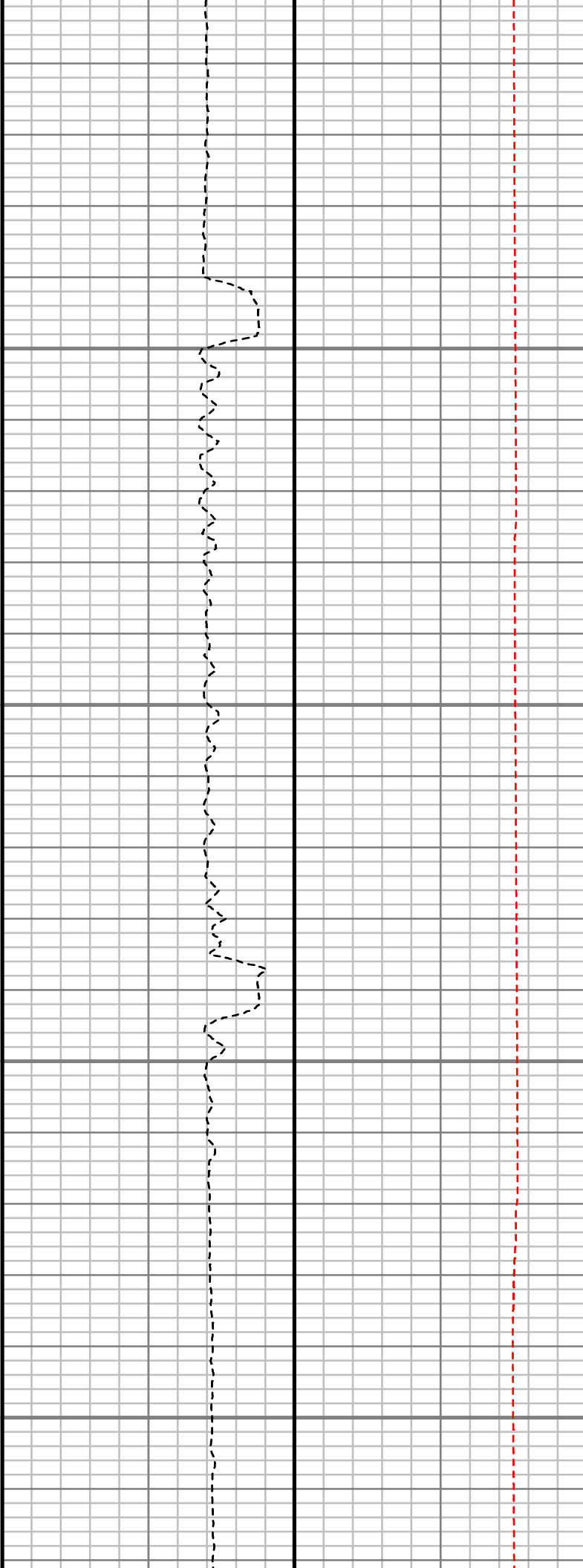
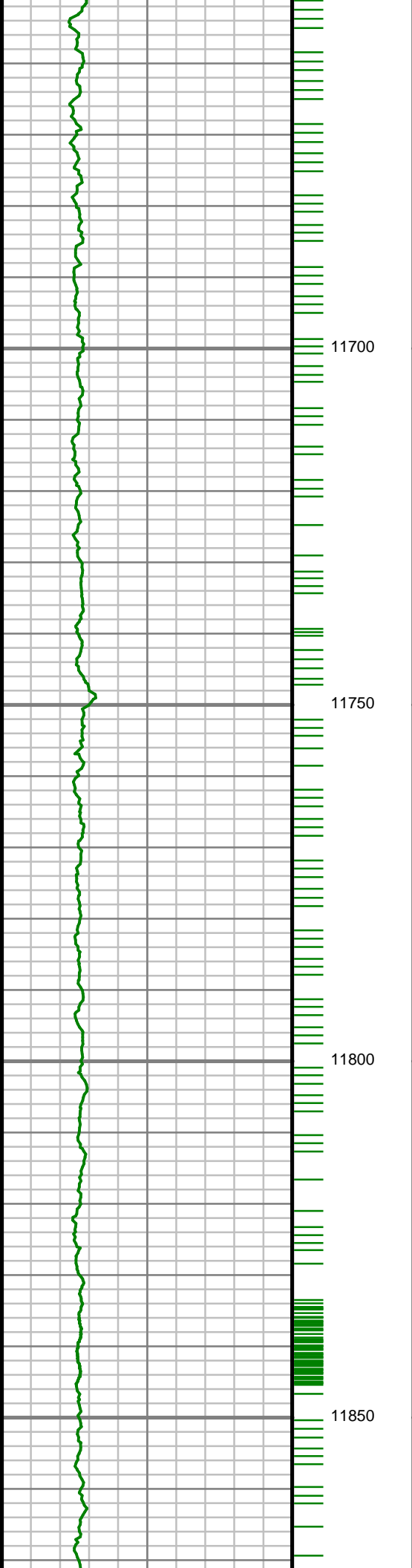
S: 132 MD: 11344.00 ft
Inc: 90.07 deg Az:
359.58 deg TVD:
7891.90 ft



S: 133 MD: 11438.00 ft
Inc: 90.30 deg Az: 0.36
deg TVD: 7891.59 ft

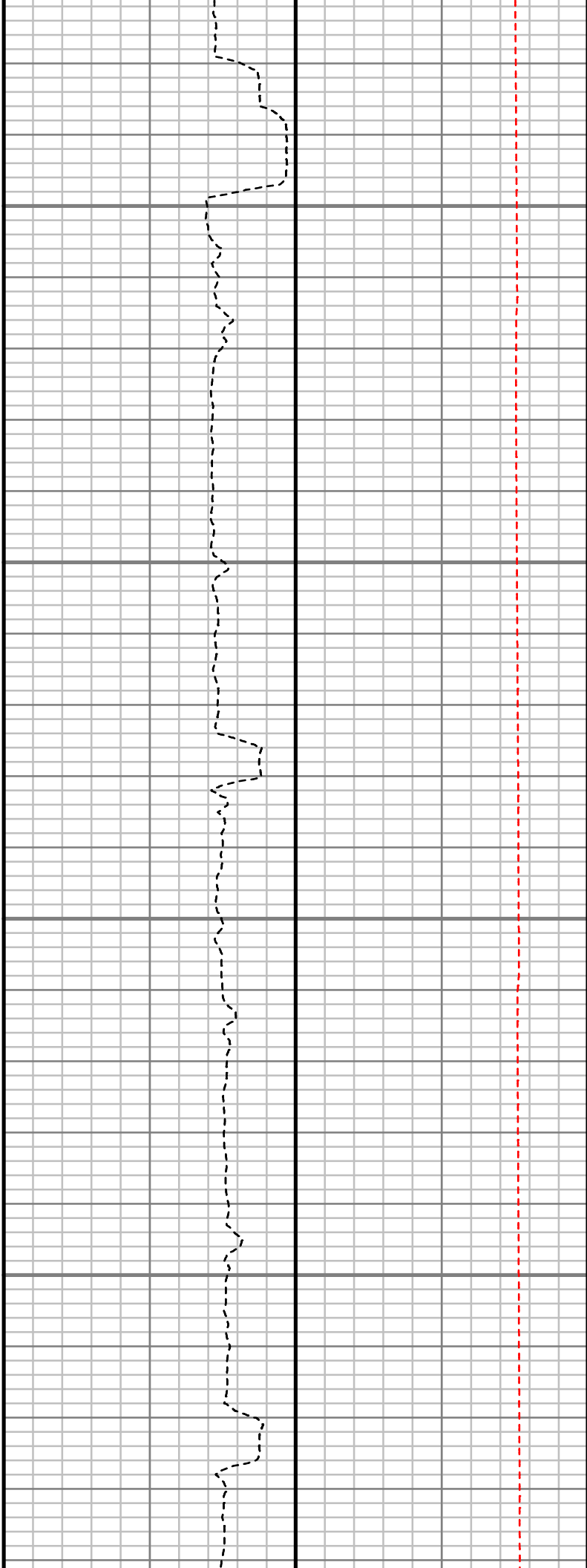
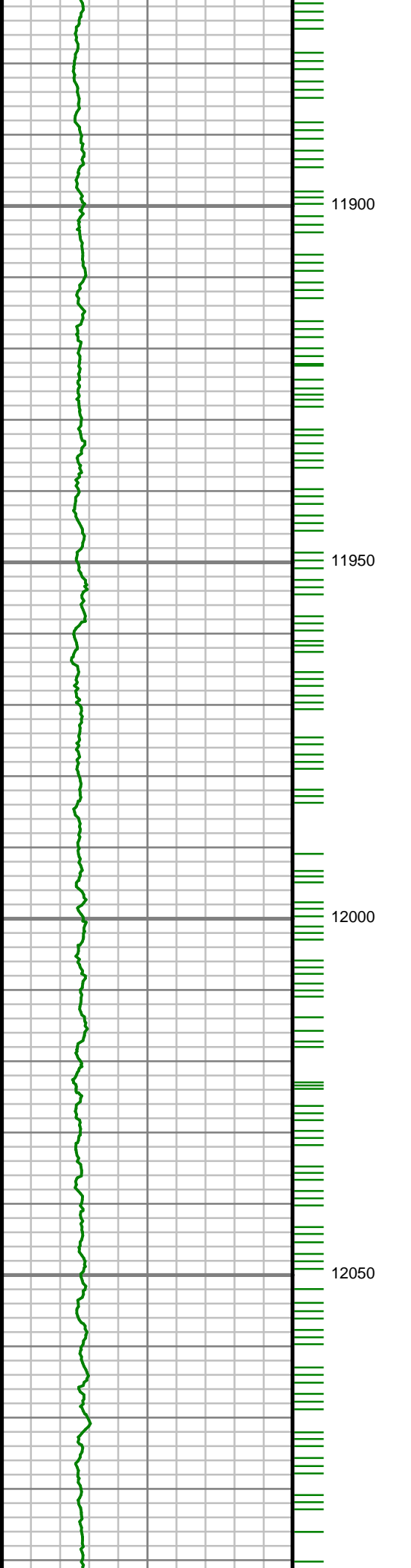
S: 134 MD: 11533.00 ft
Inc: 89.83 deg Az:
358.78 deg TVD:
7891.48 ft

S: 135 MD: 11627.00 ft
Inc: 89.73 deg Az:
359.15 deg TVD:
7891.84 ft



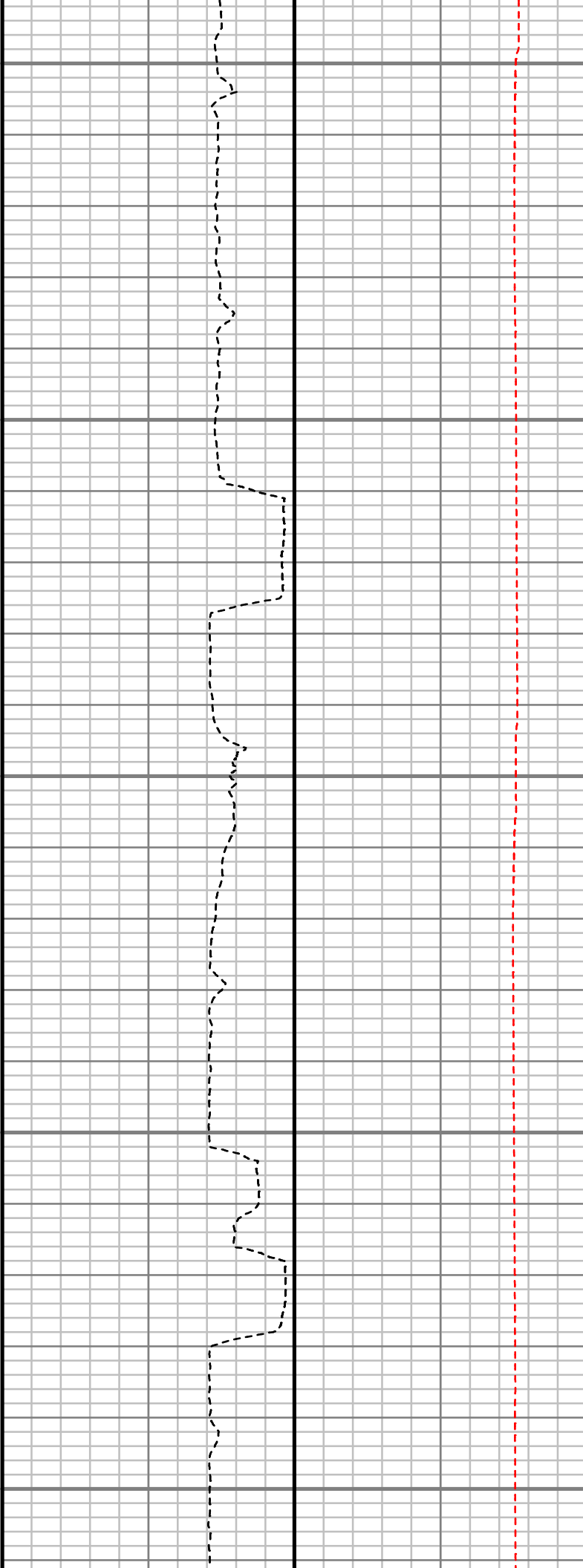
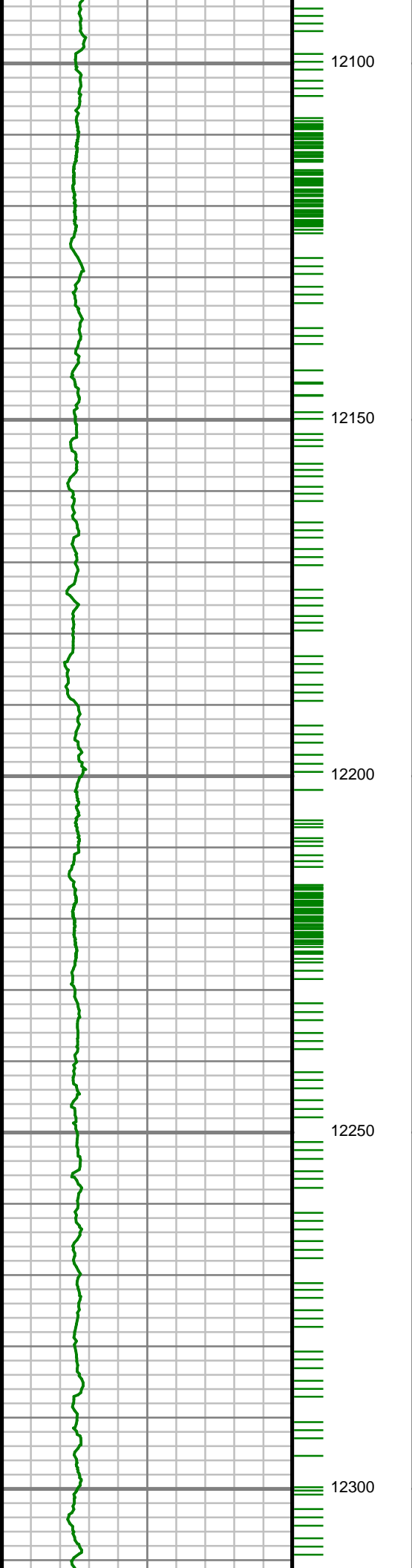
S: 136 MD: 11722.00 ft
Inc: 89.90 deg Az:
359.44 deg TVD:
7892.15 ft

S: 137 MD: 11816.00 ft
Inc: 90.44 deg Az:
359.23 deg TVD:
7891.87 ft



S: 138 MD: 11910.00 ft
Inc: 89.66 deg Az: 0.21
deg TVD: 7891.79 ft

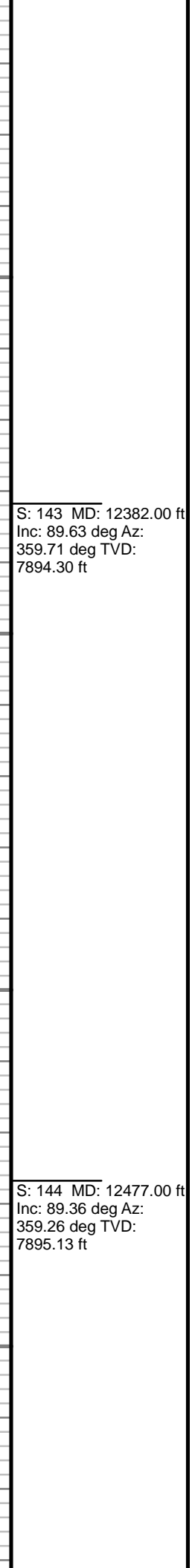
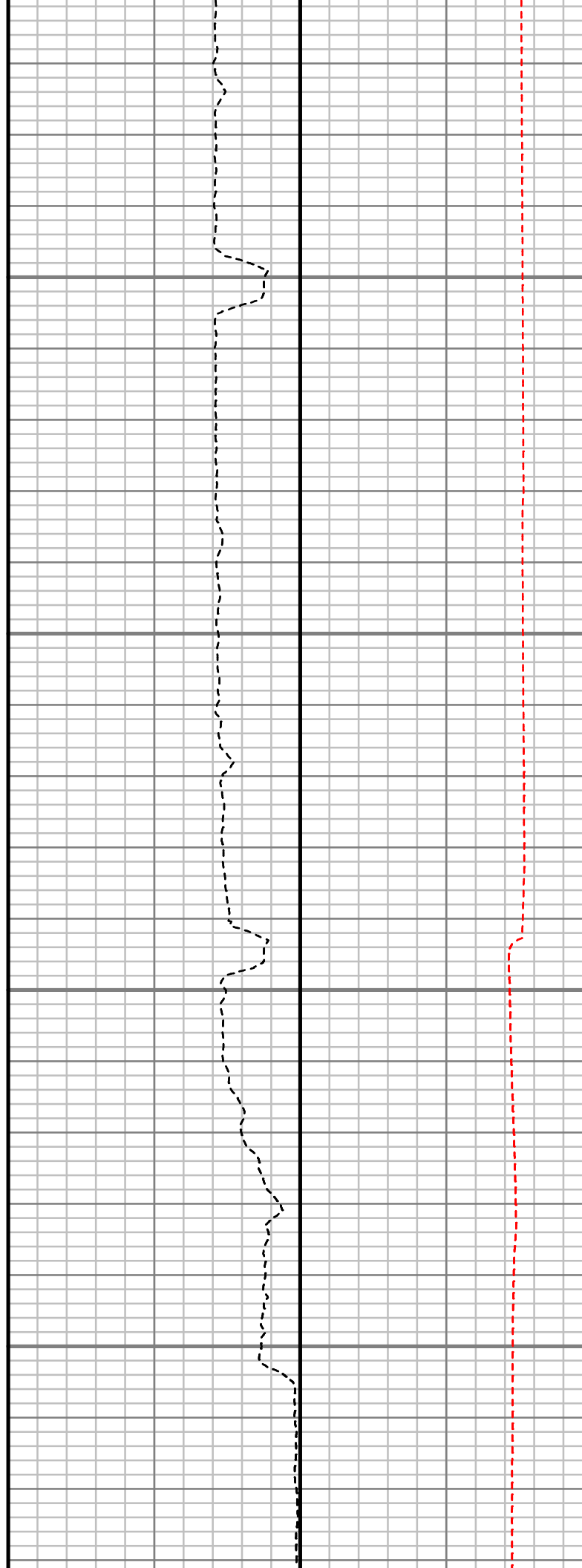
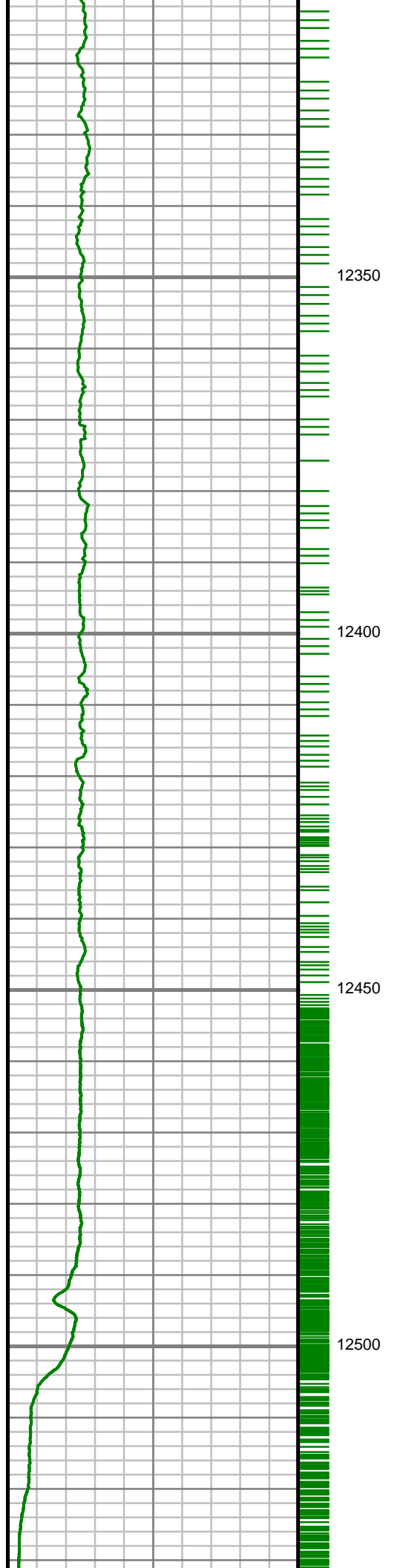
S: 139 MD: 12004.00 ft
Inc: 89.93 deg Az: 0.70
deg TVD: 7892.12 ft



S: 140 MD: 12099.00 ft
Inc: 90.81 deg Az: 0.32
deg TVD: 7891.51 ft

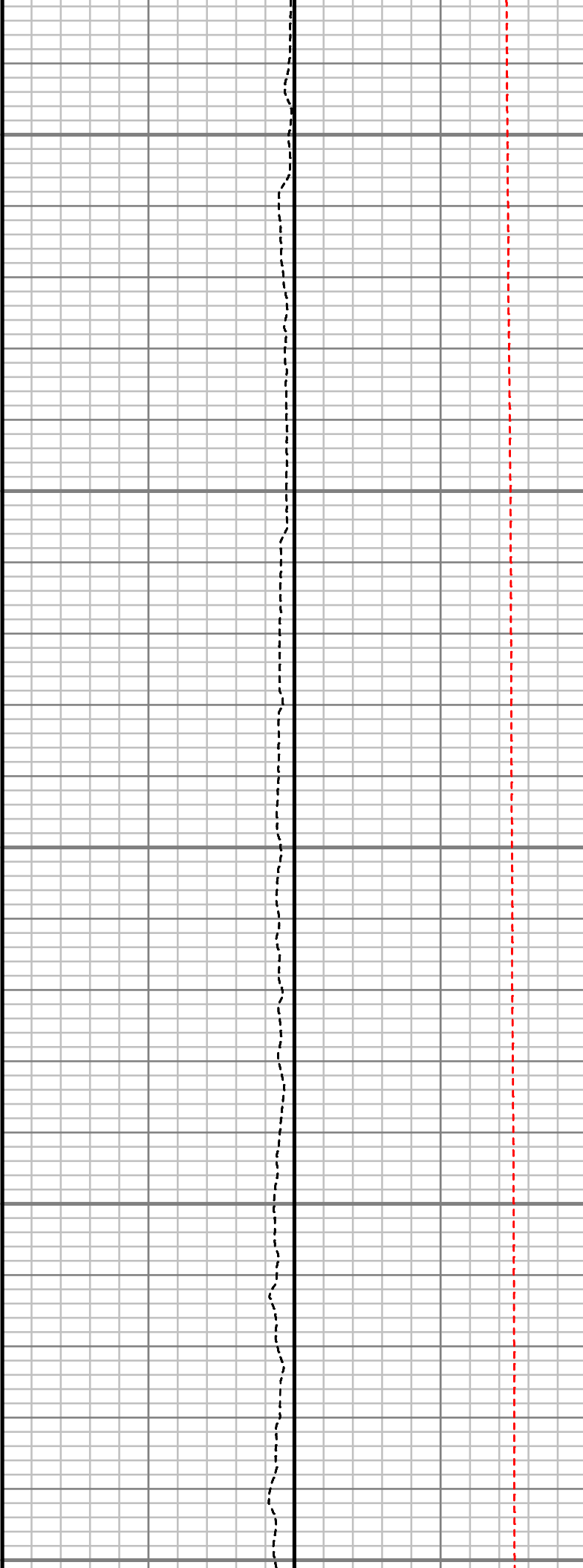
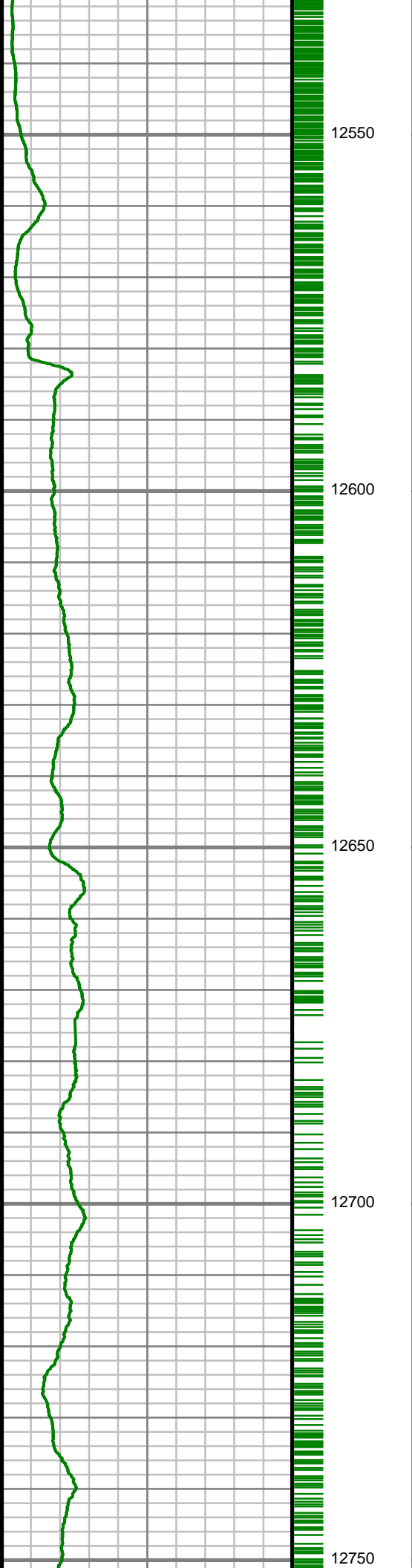
S: 141 MD: 12194.00 ft
Inc: 88.52 deg Az: 0.12
deg TVD: 7892.07 ft

S: 142 MD: 12288.00 ft
Inc: 89.56 deg Az:
359.76 deg TVD:
7893.64 ft



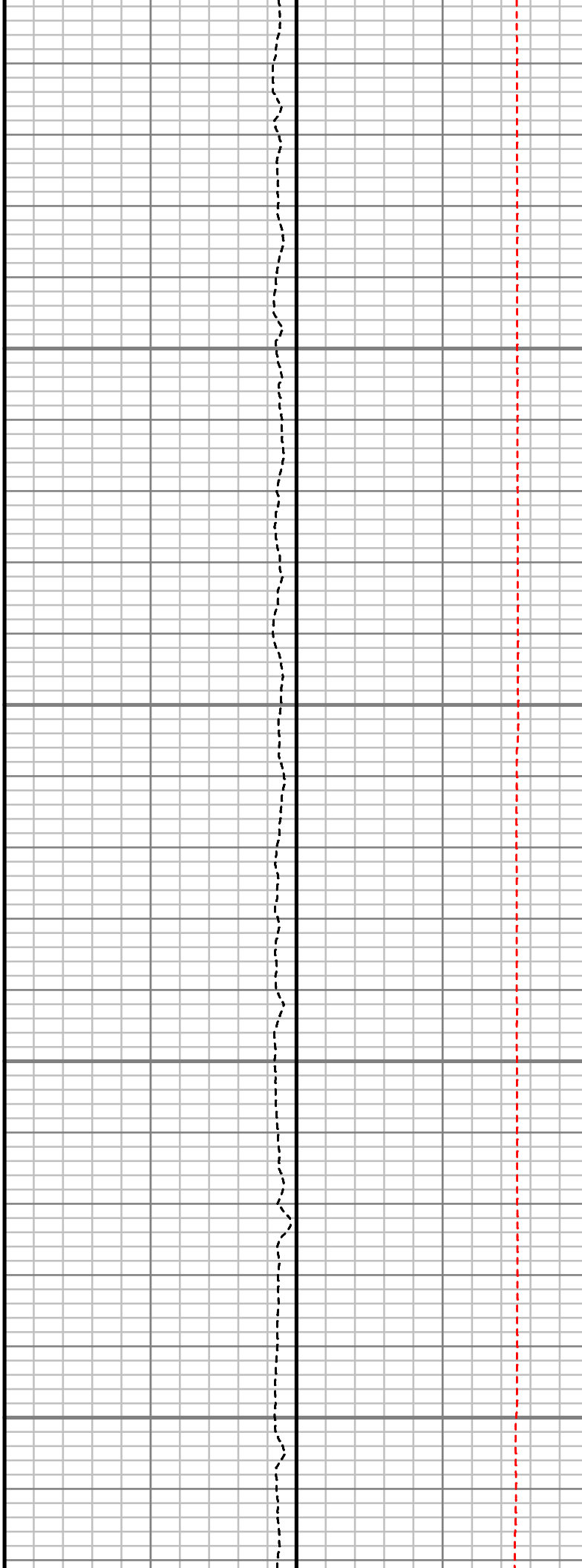
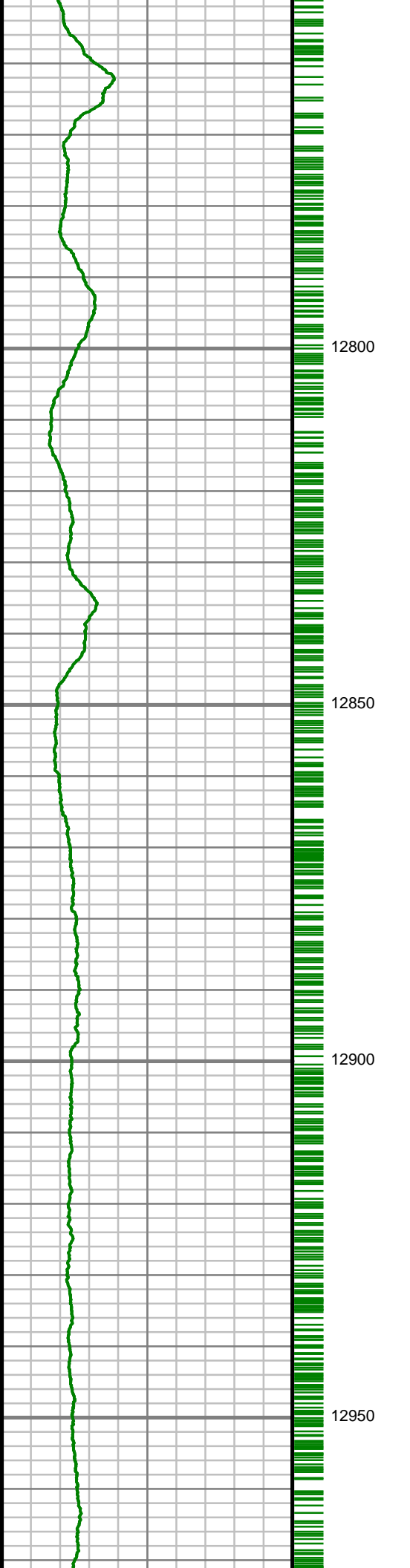
S: 143 MD: 12382.00 ft
Inc: 89.63 deg Az:
359.71 deg TVD:
7894.30 ft

S: 144 MD: 12477.00 ft
Inc: 89.36 deg Az:
359.26 deg TVD:
7895.13 ft



S: 145 MD: 12571.00 ft
Inc: 90.13 deg Az:
359.75 deg TVD:
7895.54 ft

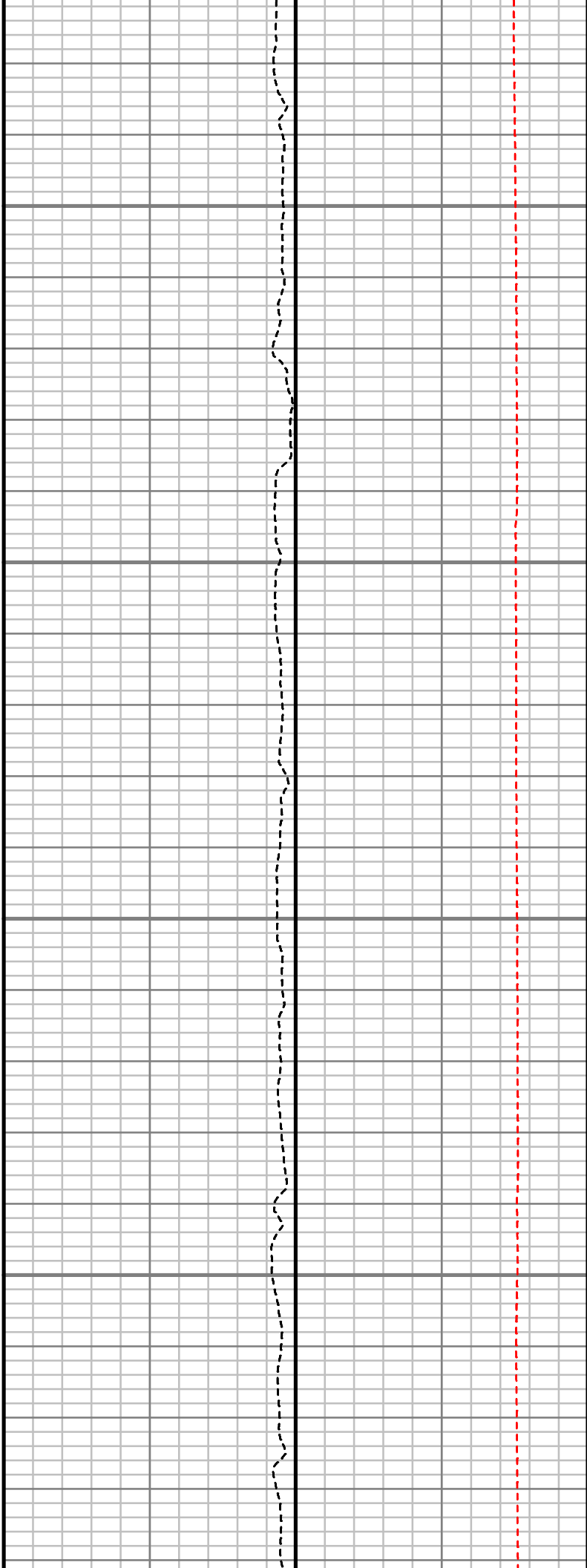
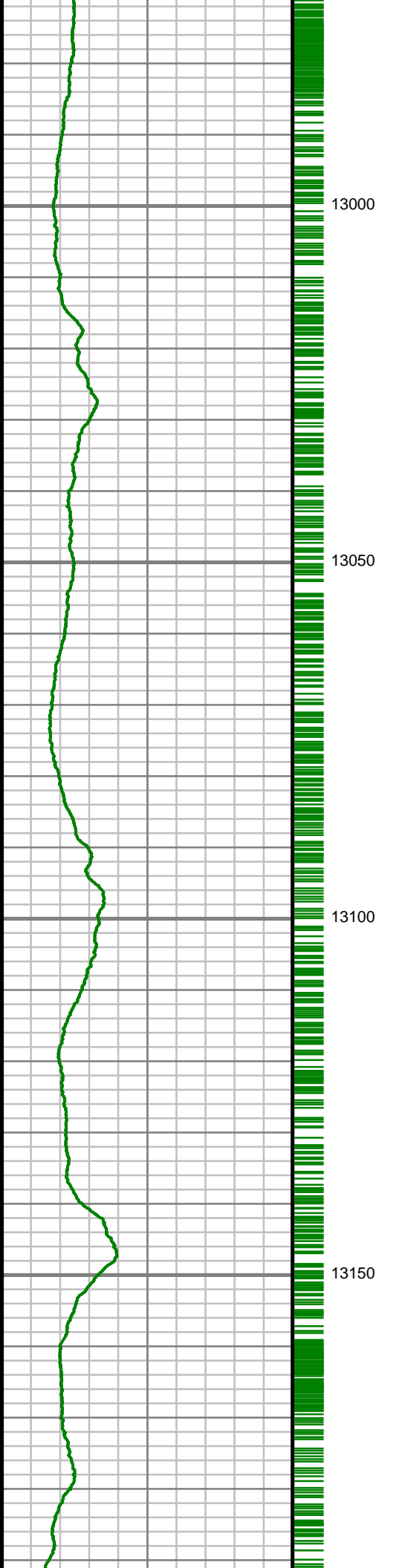
S: 146 MD: 12666.00 ft
Inc: 90.13 deg Az: 0.43
deg TVD: 7895.32 ft



S: 147 MD: 12760.00 ft
Inc: 90.17 deg Az: 0.07
deg TVD: 7895.07 ft

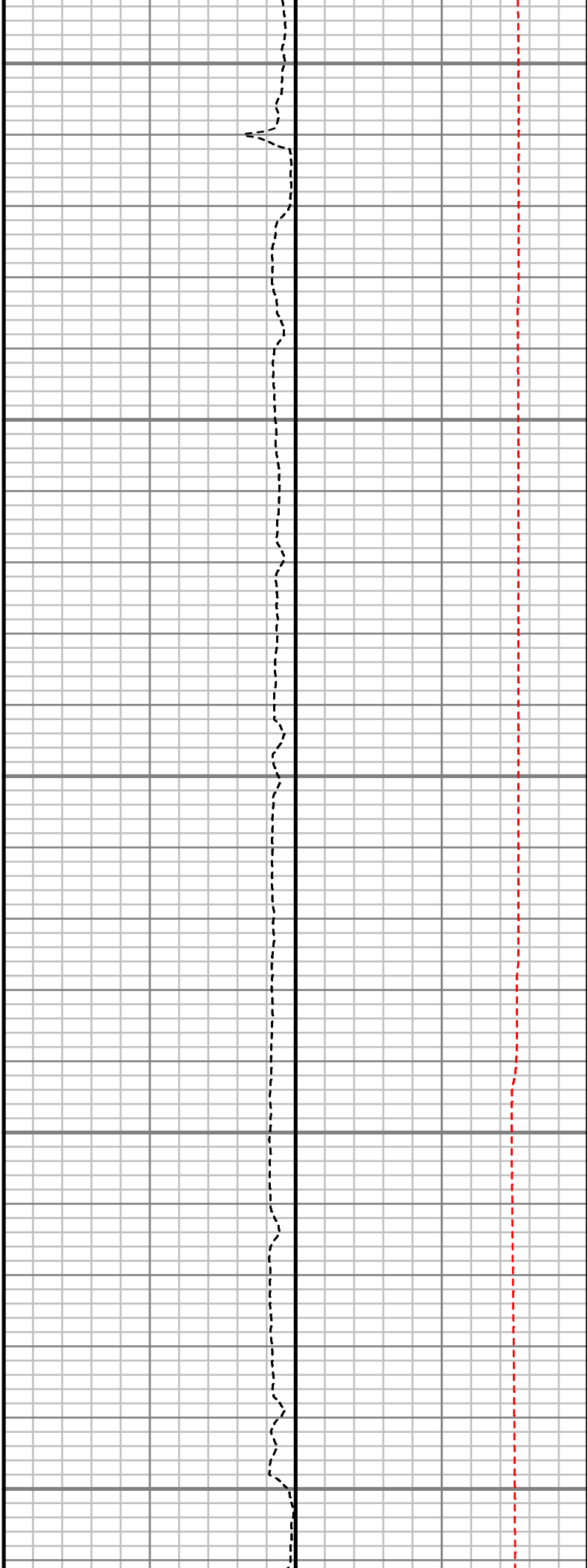
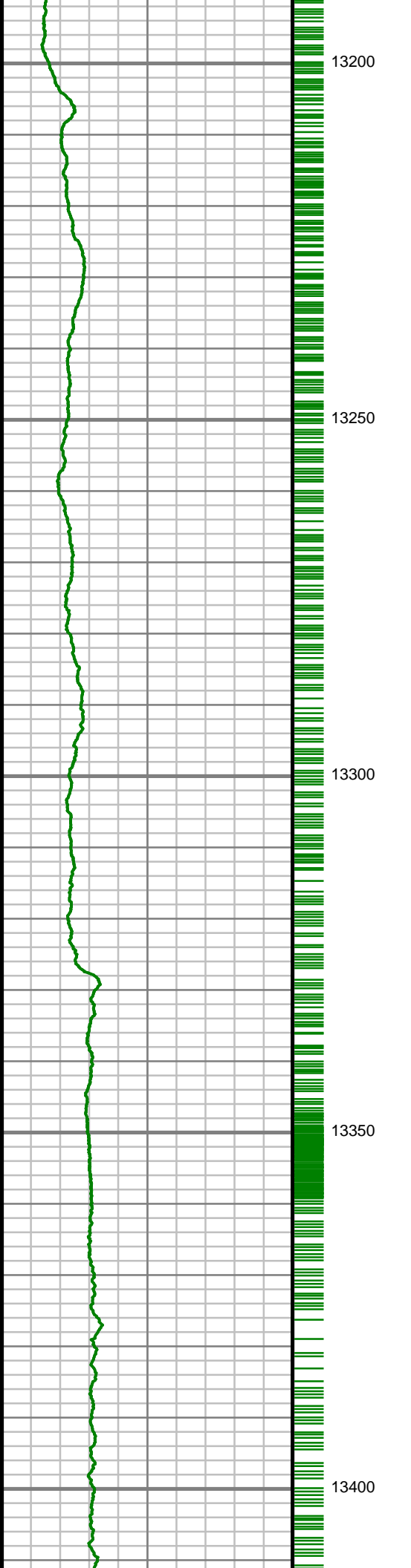
S: 148 MD: 12854.00 ft
Inc: 90.40 deg Az: 1.17
deg TVD: 7894.60 ft

S: 149 MD: 12949.00 ft
Inc: 91.14 deg Az: 0.84
deg TVD: 7893.32 ft



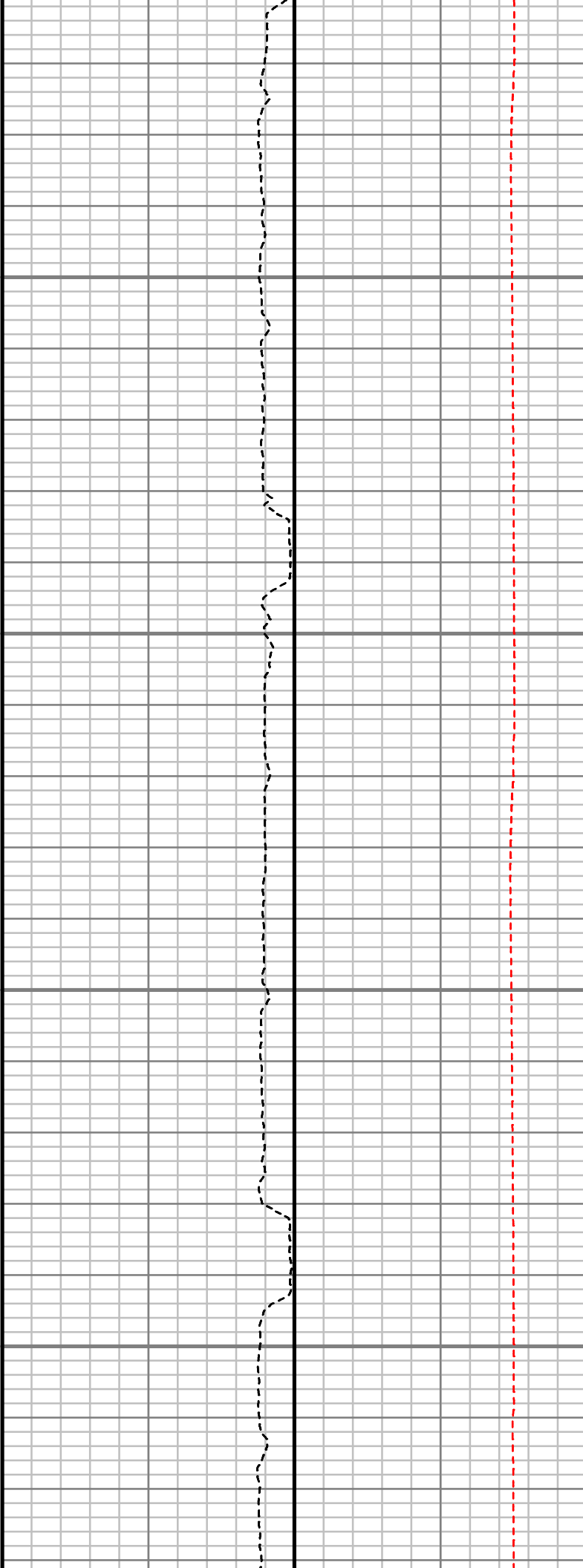
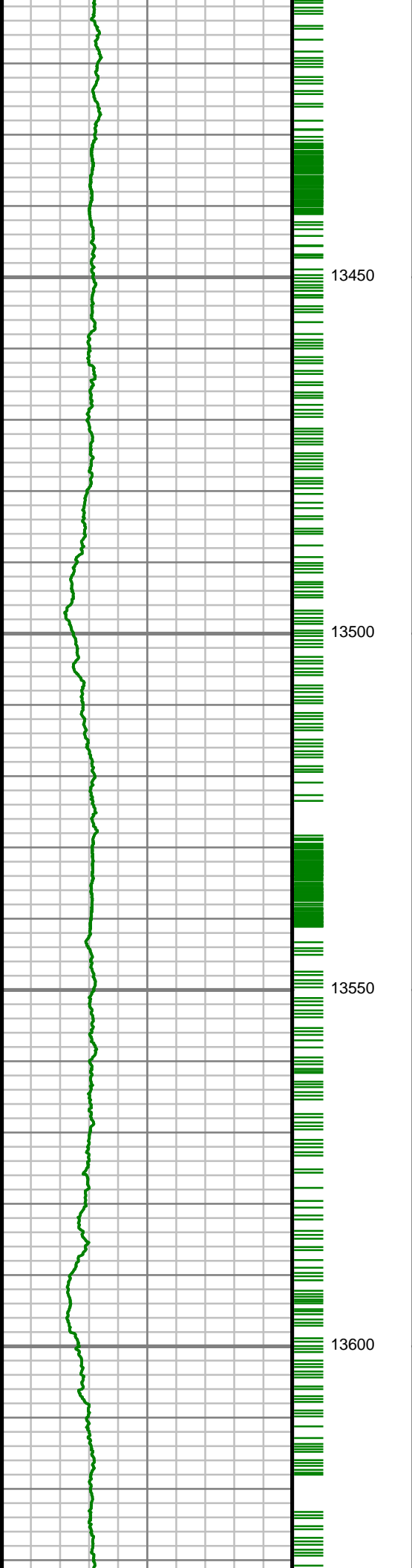
S: 150 MD: 13043.00 ft
Inc: 89.87 deg Az: 2.11
deg TVD: 7892.50 ft

S: 151 MD: 13137.00 ft
Inc: 90.40 deg Az: 1.59
deg TVD: 7892.28 ft



S: 152 MD: 13232.00 ft
Inc: 89.73 deg Az: 1.92
deg TVD: 7892.16 ft

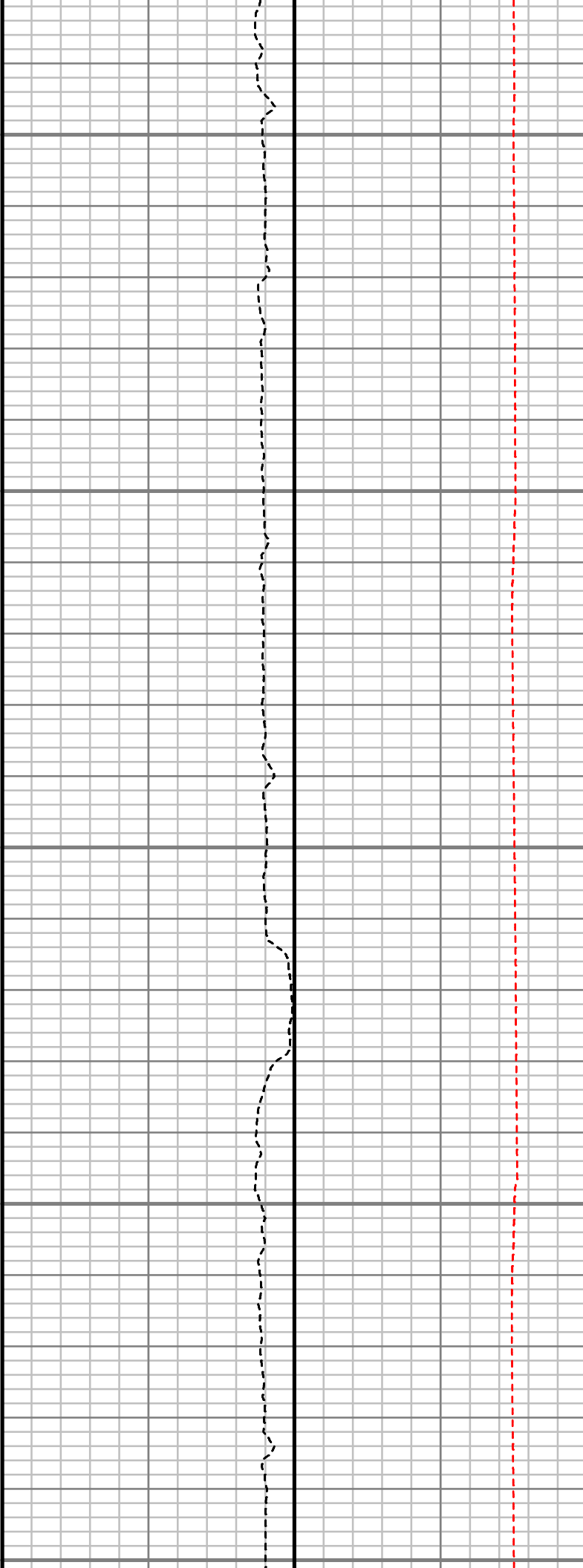
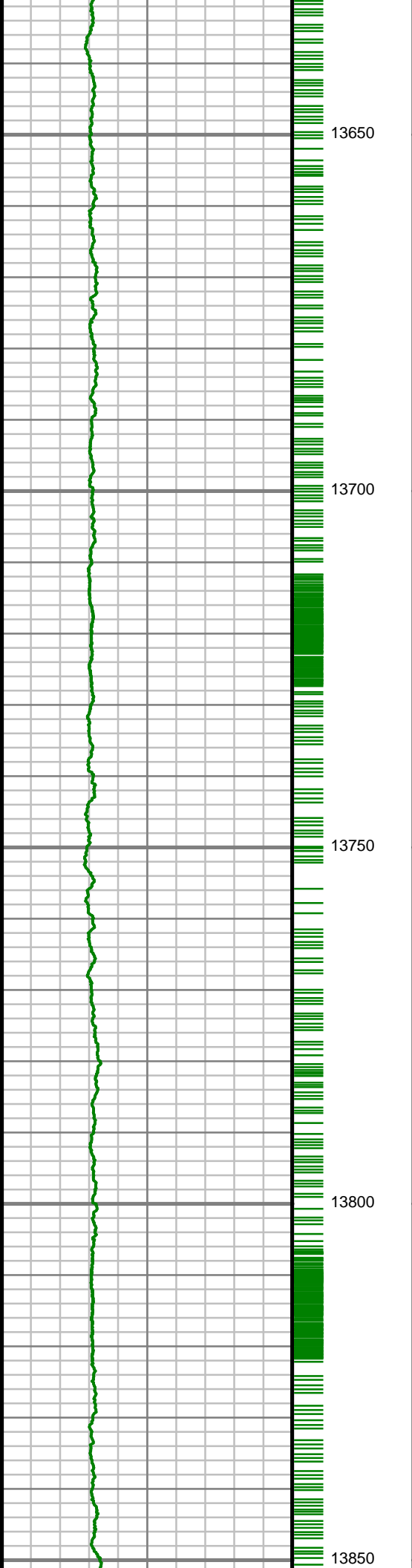
S: 153 MD: 13326.00 ft
Inc: 90.27 deg Az: 2.69
deg TVD: 7892.16 ft



S: 154 MD: 13421.00 ft
Inc: 88.72 deg Az: 1.86
deg TVD: 7893.00 ft

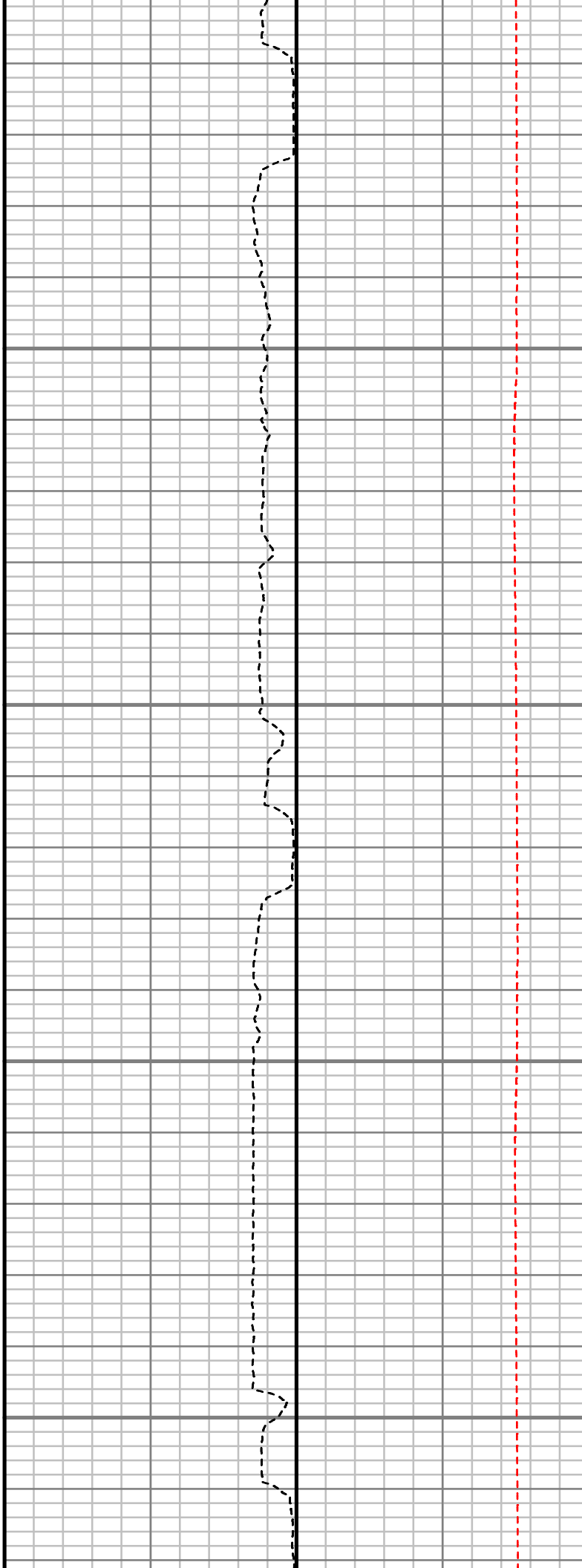
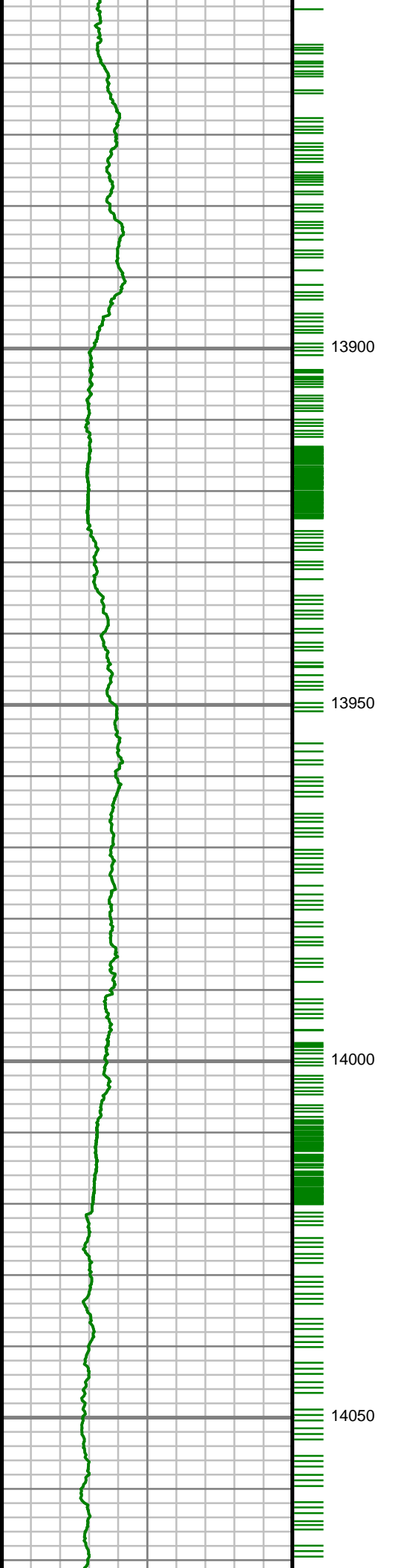
S: 155 MD: 13515.00 ft
Inc: 88.86 deg Az: 3.09
deg TVD: 7894.98 ft

S: 156 MD: 13609.00 ft
Inc: 89.87 deg Az: 2.23
deg TVD: 7896.03 ft



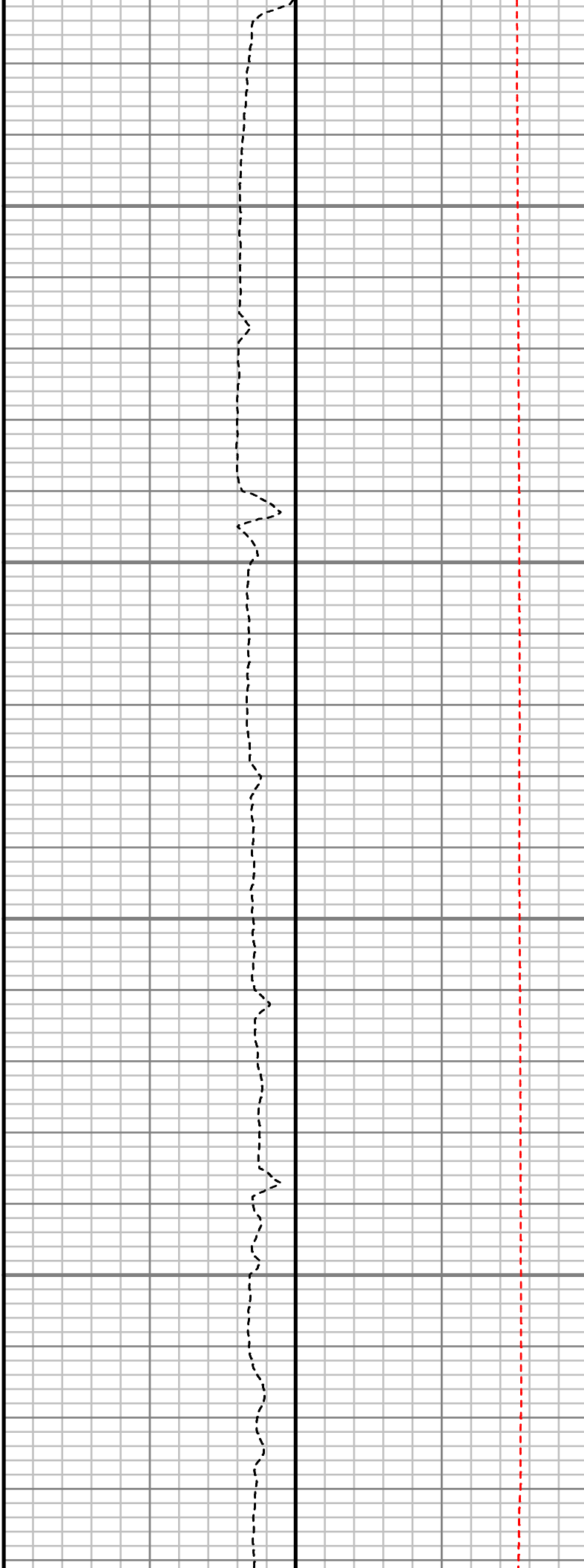
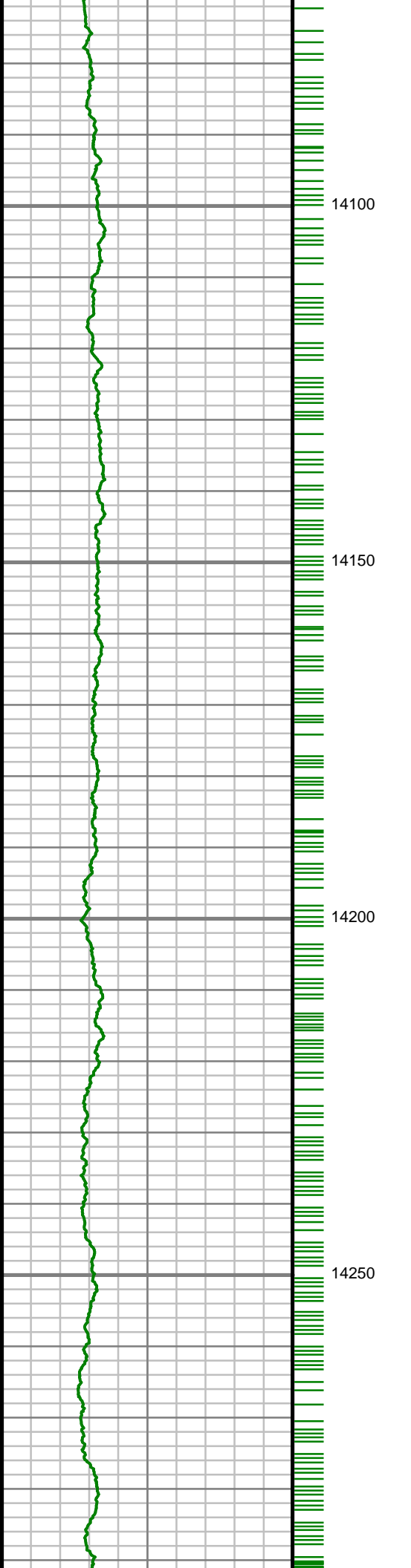
S: 157 MD: 13704.00 ft
Inc: 89.73 deg Az: 2.61
deg TVD: 7896.36 ft

S: 158 MD: 13798.00 ft
Inc: 90.17 deg Az: 2.78
deg TVD: 7896.44 ft



S: 159 MD: 13892.00 ft
Inc: 90.17 deg Az: 0.77
deg TVD: 7896.17 ft

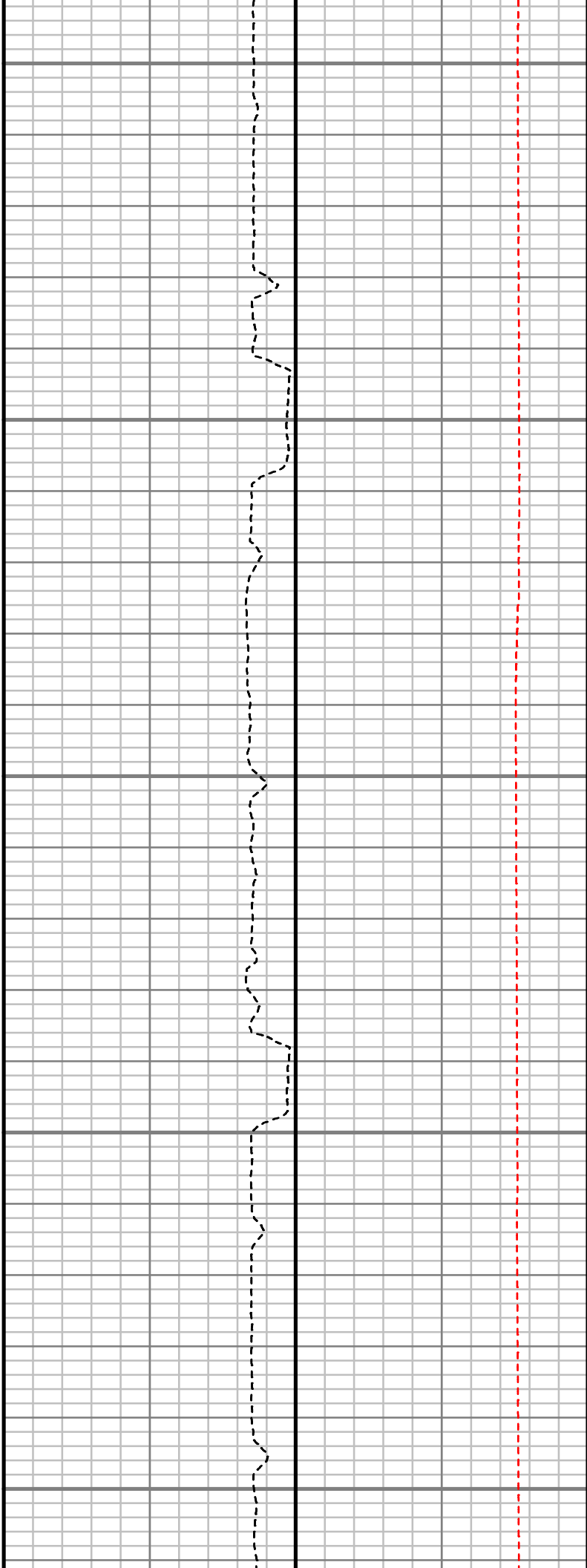
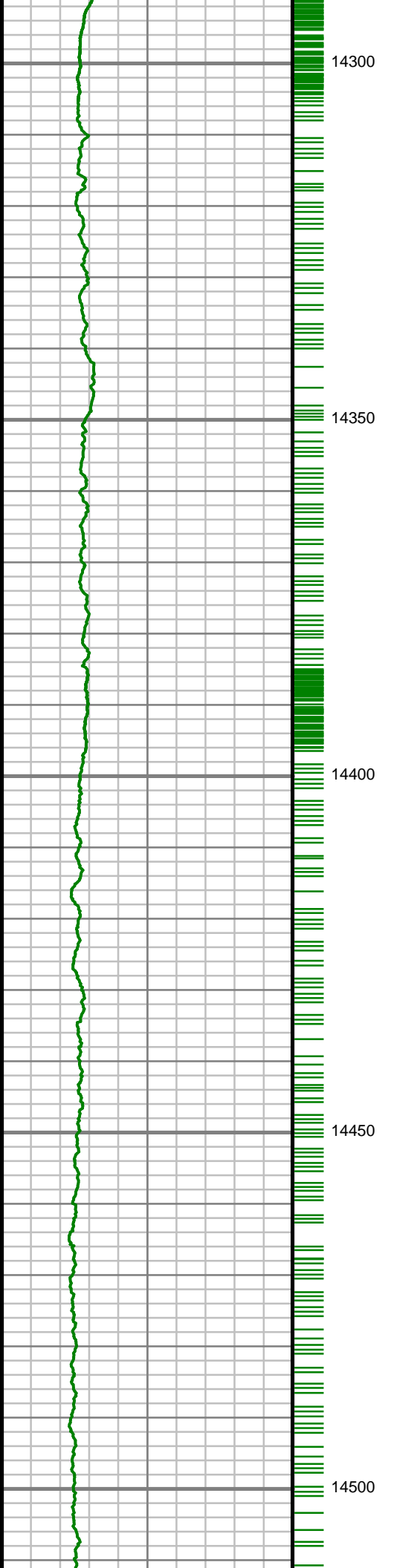
S: 160 MD: 13987.00 ft
Inc: 91.04 deg Az: 0.92
deg TVD: 7895.17 ft



S: 161 MD: 14081.00 ft
Inc: 91.41 deg Az:
359.70 deg TVD:
7893.15 ft

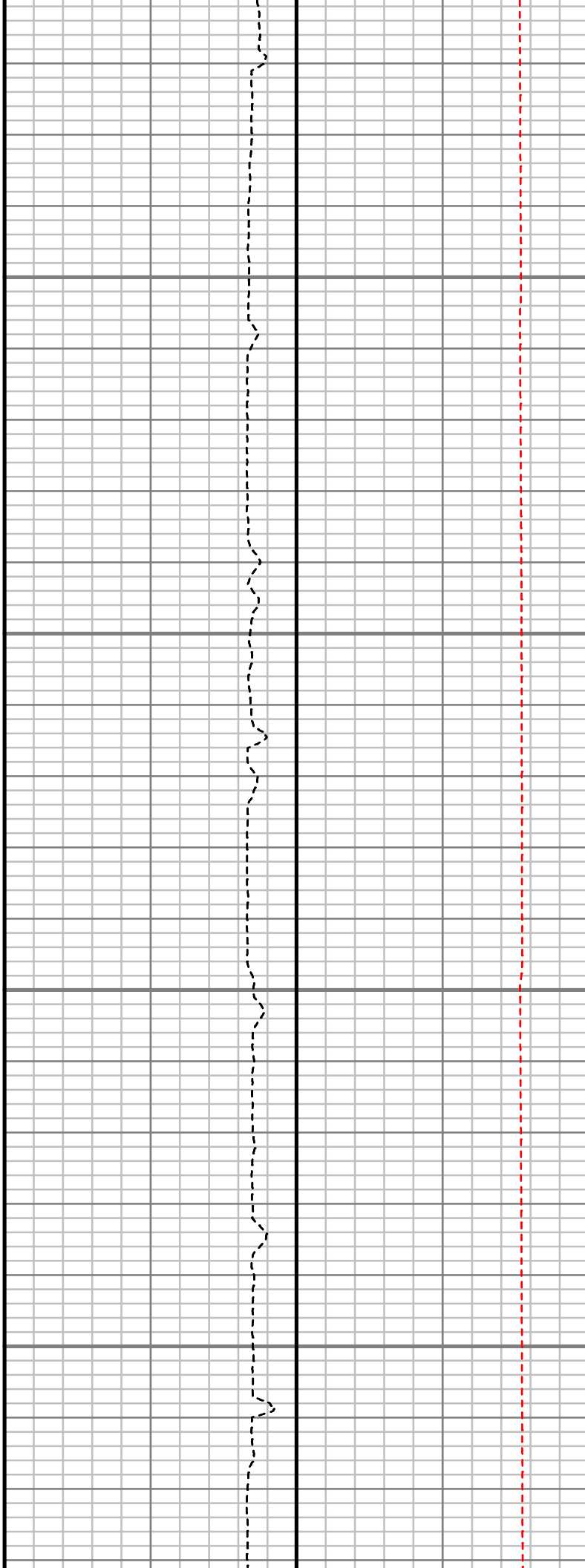
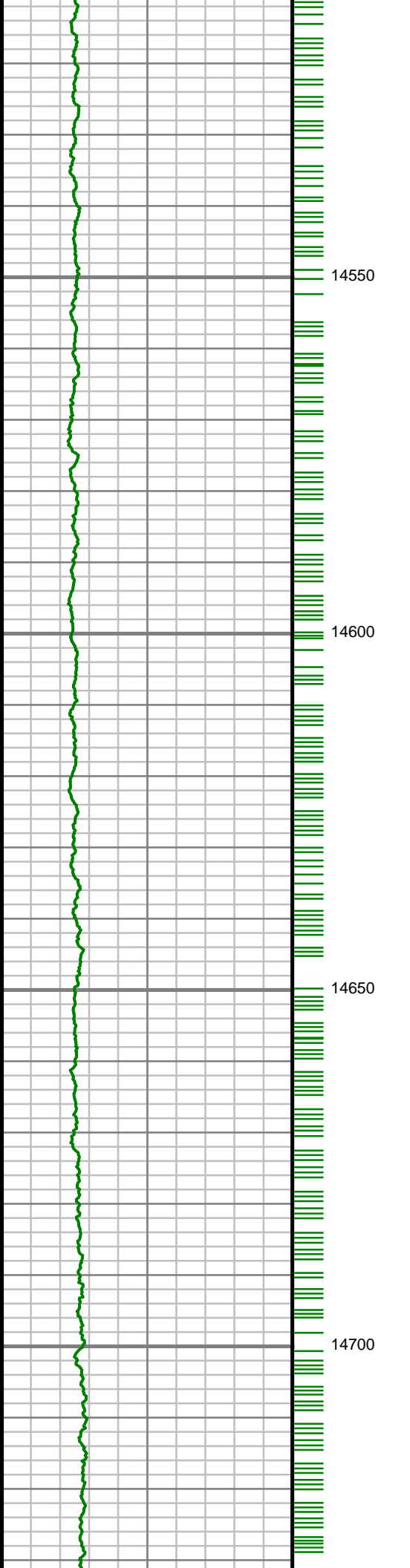
S: 162 MD: 14176.00 ft
Inc: 91.34 deg Az: 0.15
deg TVD: 7890.87 ft

S: 163 MD: 14270.00 ft
Inc: 92.08 deg Az: 0.56
deg TVD: 7888.06 ft



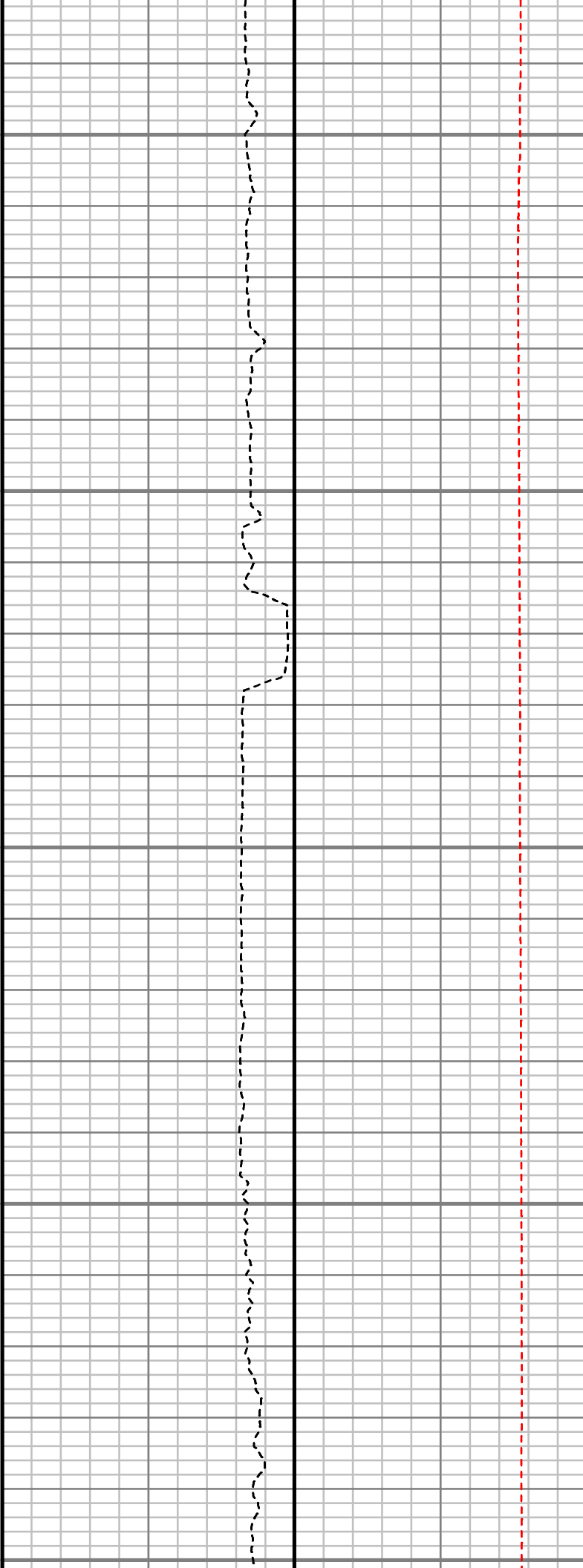
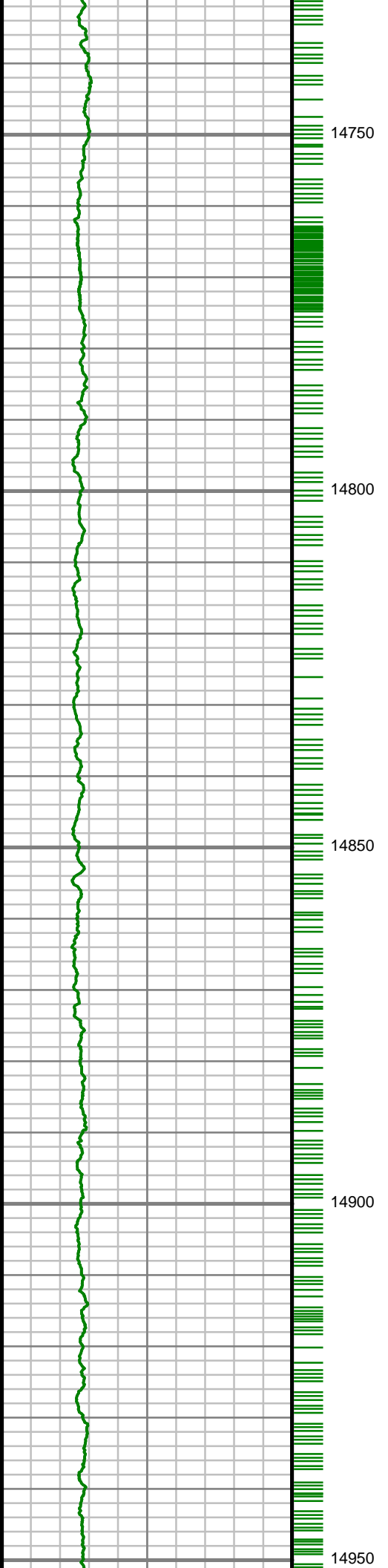
S: 164 MD: 14364.00 ft
Inc: 90.97 deg Az:
359.43 deg TVD:
7885.55 ft

S: 165 MD: 14459.00 ft
Inc: 90.07 deg Az:
358.66 deg TVD:
7884.69 ft



S: 166 MD: 14553.00 ft
Inc: 89.76 deg Az:
358.78 deg TVD:
7884.83 ft

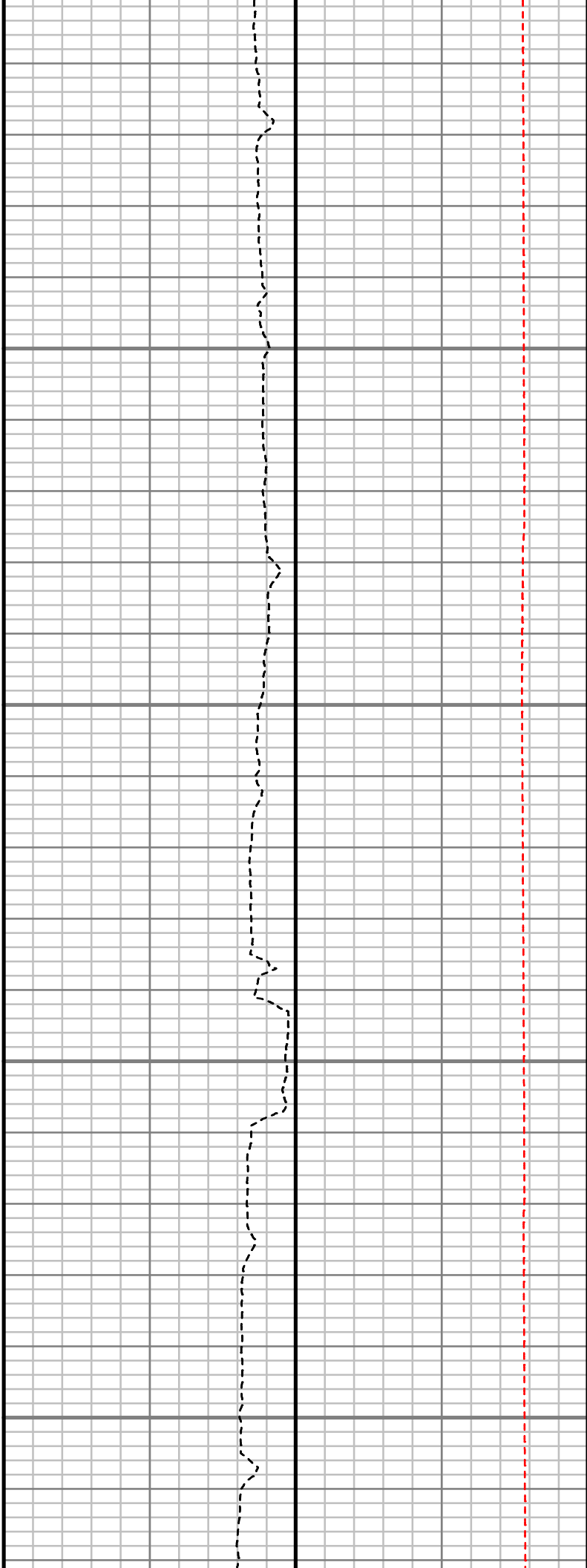
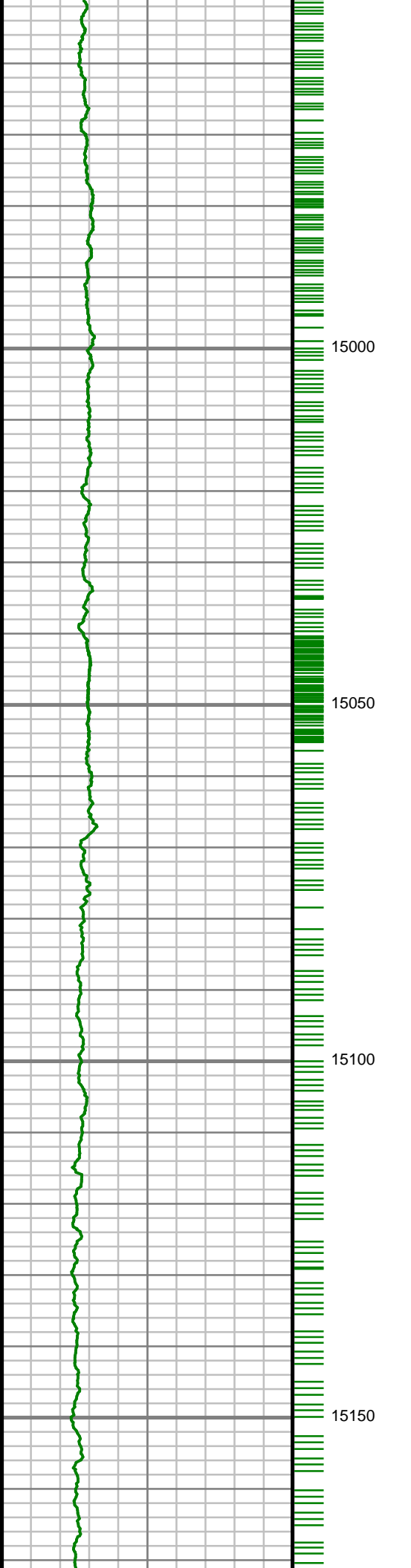
S: 167 MD: 14648.00 ft
Inc: 89.73 deg Az:
358.26 deg TVD:
7885.24 ft



S: 168 MD: 14742.00 ft
Inc: 89.76 deg Az:
358.08 deg TVD:
7885.66 ft

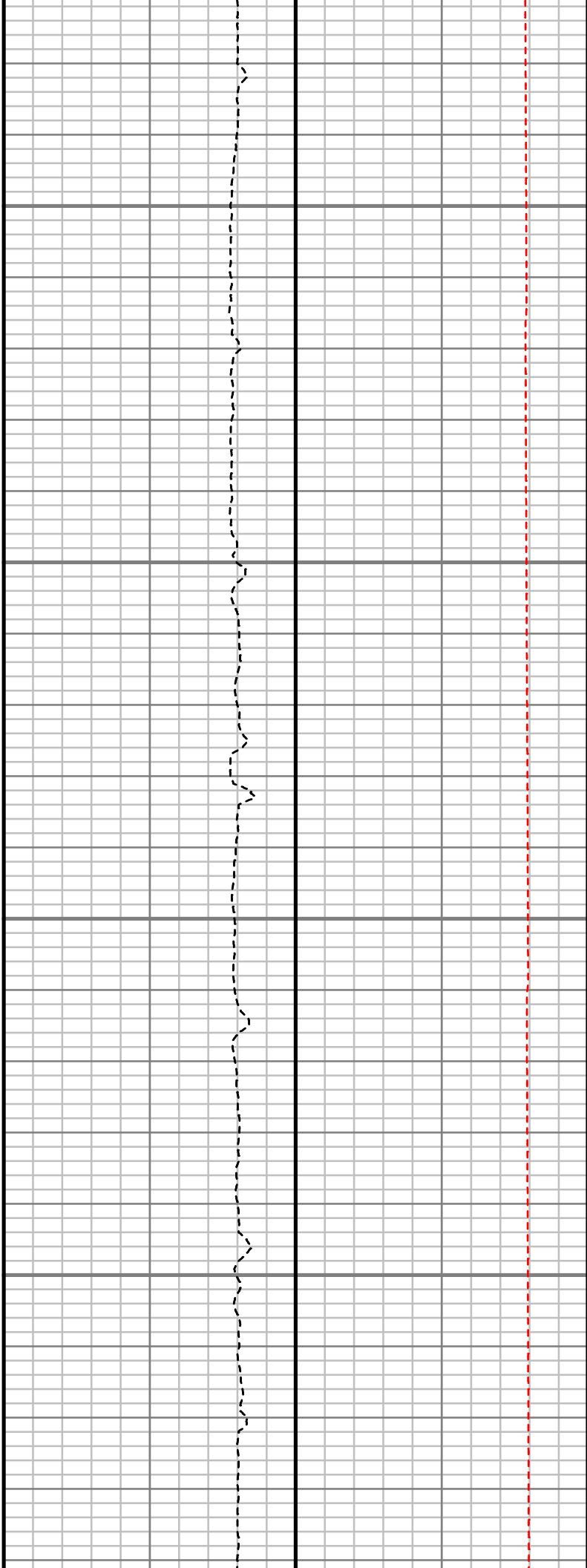
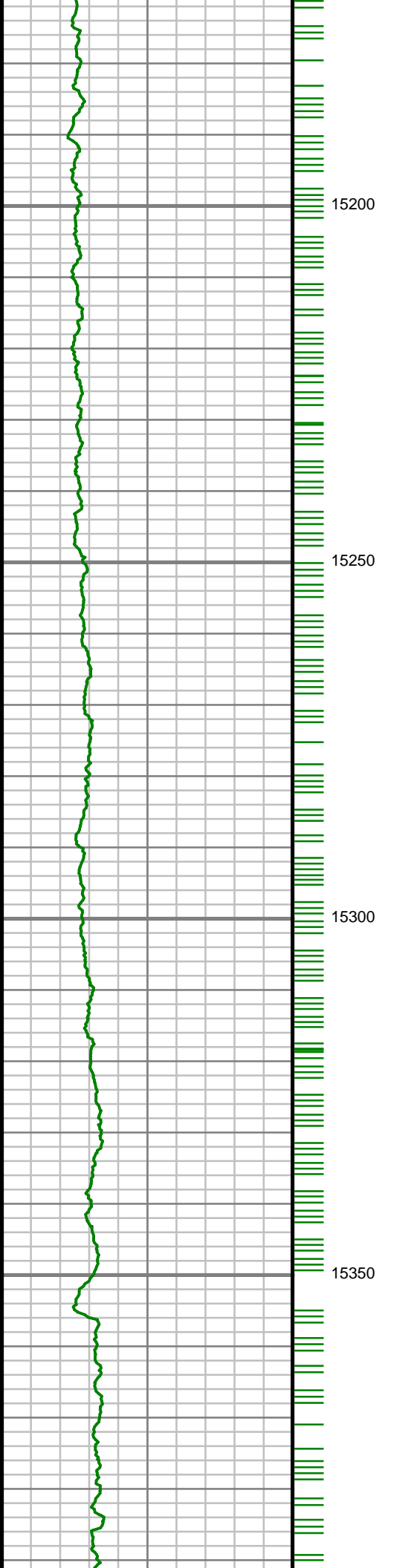
S: 169 MD: 14837.00 ft
Inc: 89.80 deg Az:
359.04 deg TVD:
7886.02 ft

S: 170 MD: 14931.00 ft
Inc: 89.73 deg Az:
359.13 deg TVD:
7886.40 ft



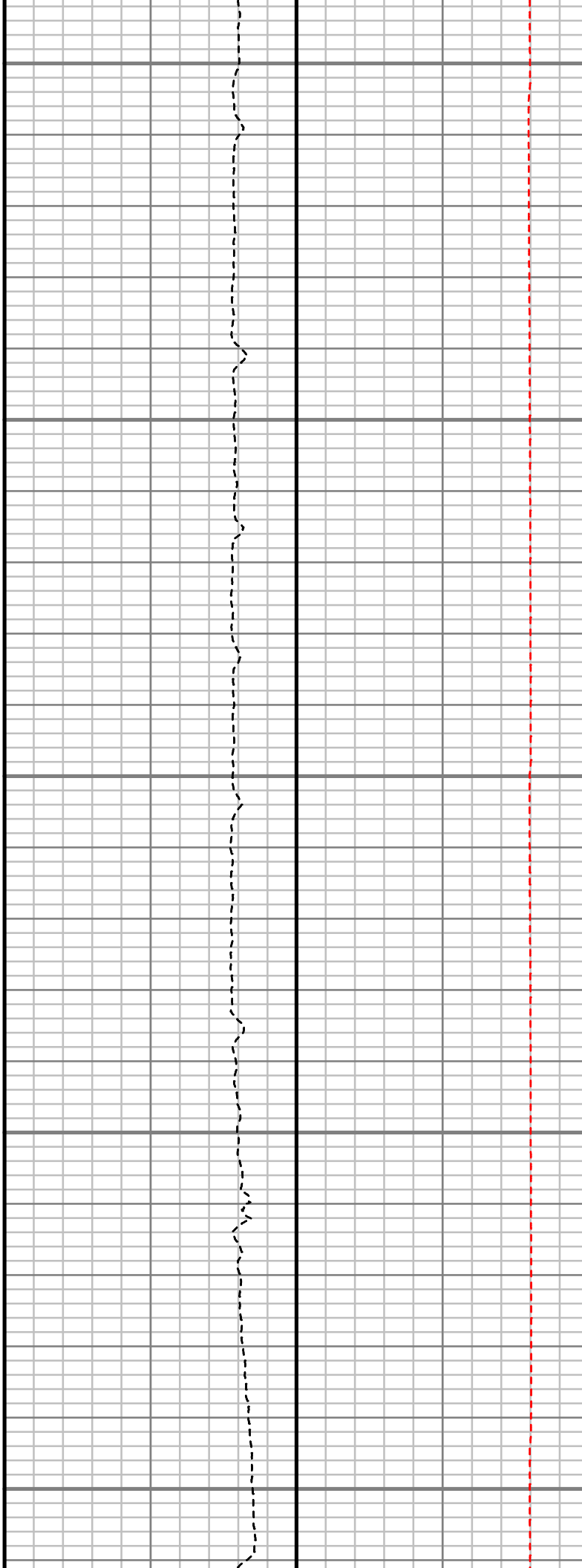
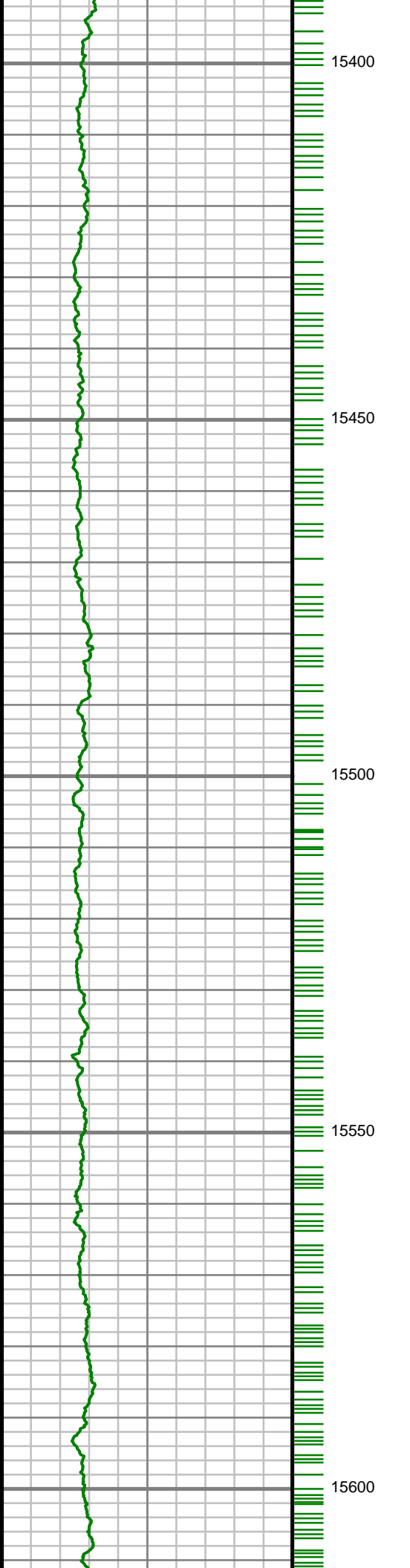
S: 171 MD: 15025.00 ft
Inc: 89.67 deg Az:
358.97 deg TVD:
7886.90 ft

S: 172 MD: 15120.00 ft
Inc: 89.93 deg Az:
359.97 deg TVD:
7887.23 ft



S: 173 MD: 15214.00 ft
Inc: 90.23 deg Az: 0.65
deg TVD: 7887.09 ft

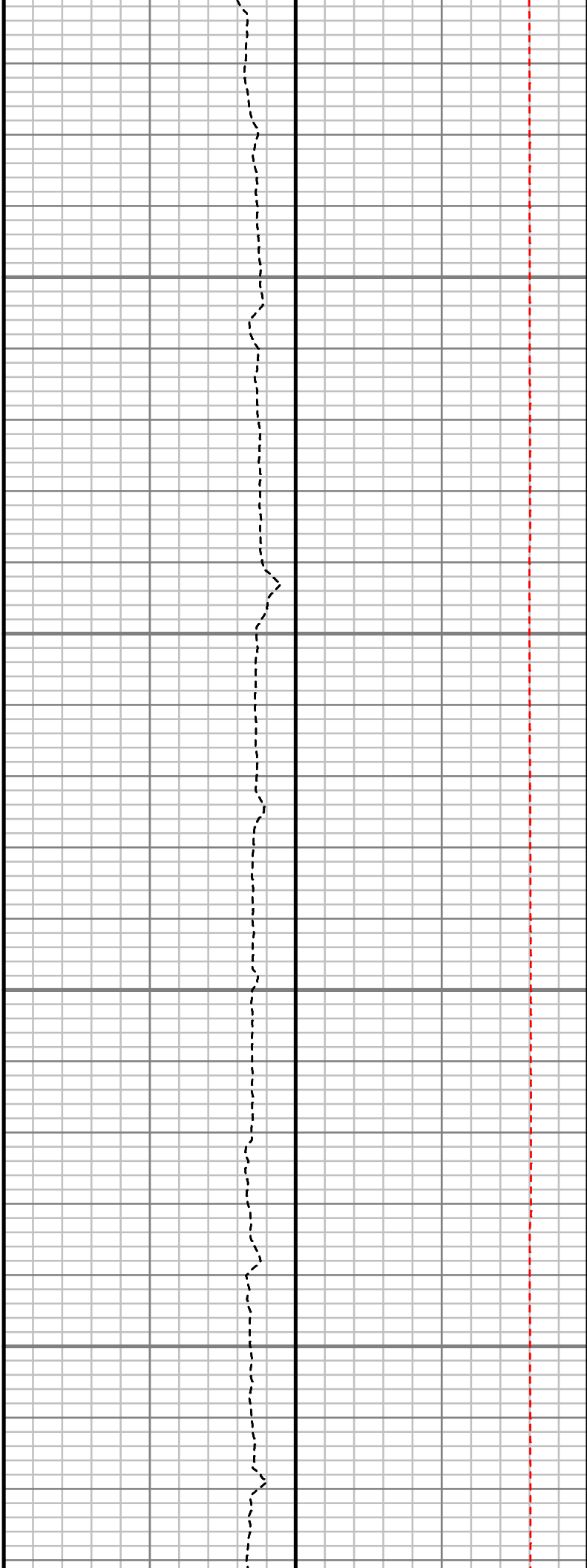
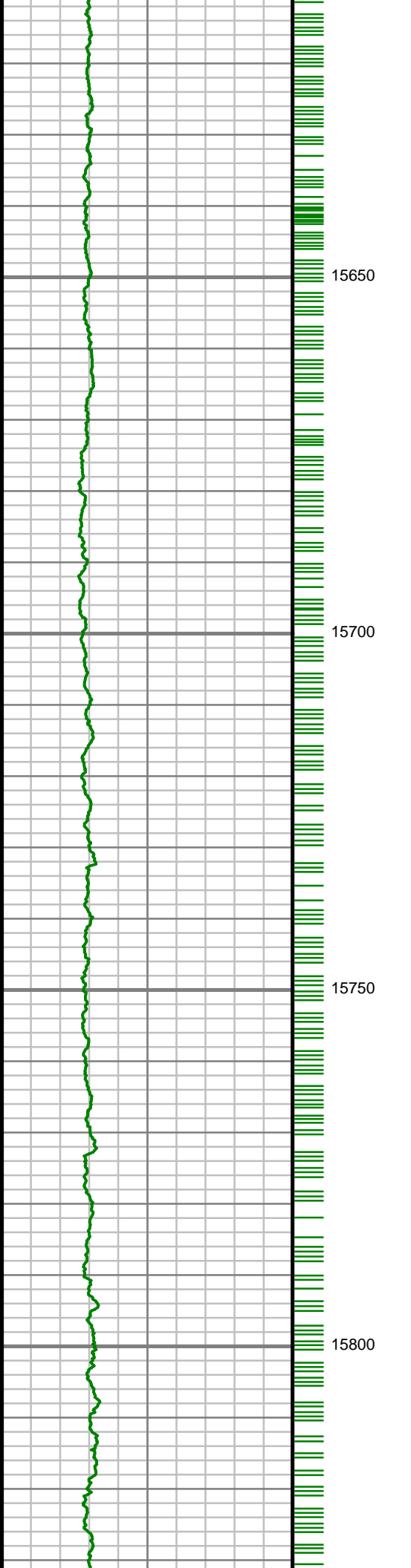
S: 174 MD: 15309.00 ft
Inc: 90.17 deg Az: 0.42
deg TVD: 7886.76 ft



S: 175 MD: 15403.00 ft
Inc: 90.10 deg Az: 0.76
deg TVD: 7886.54 ft

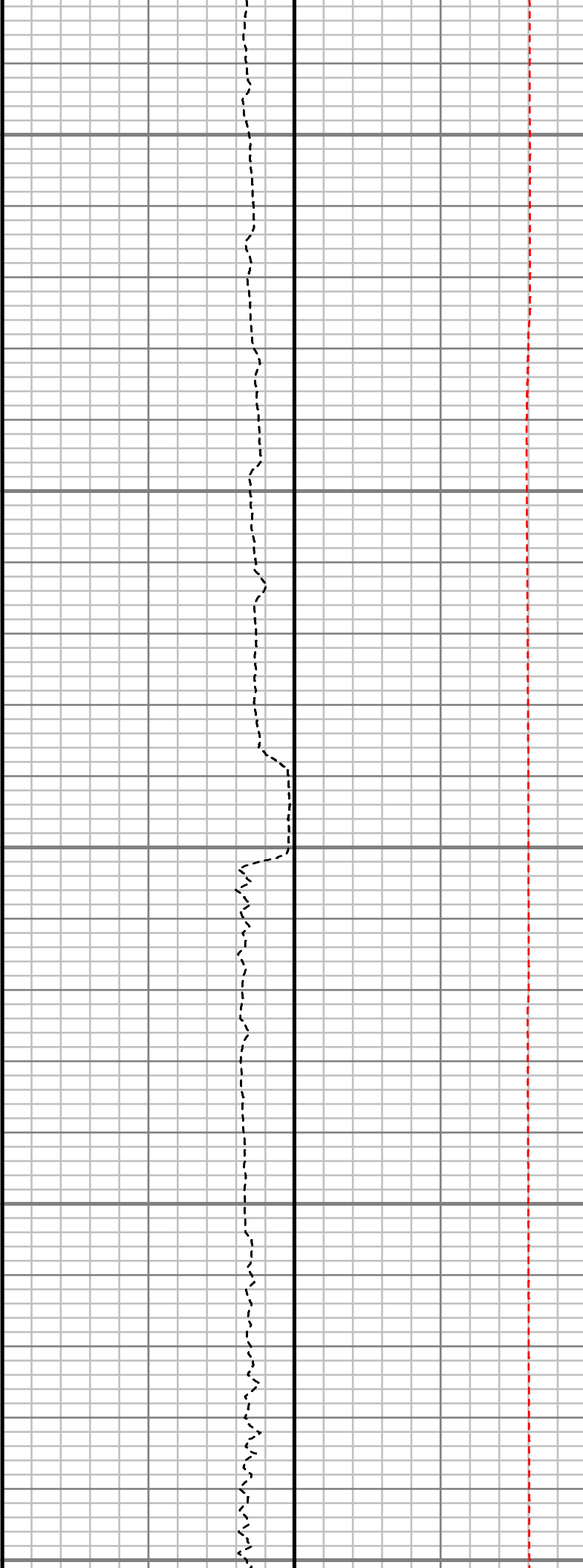
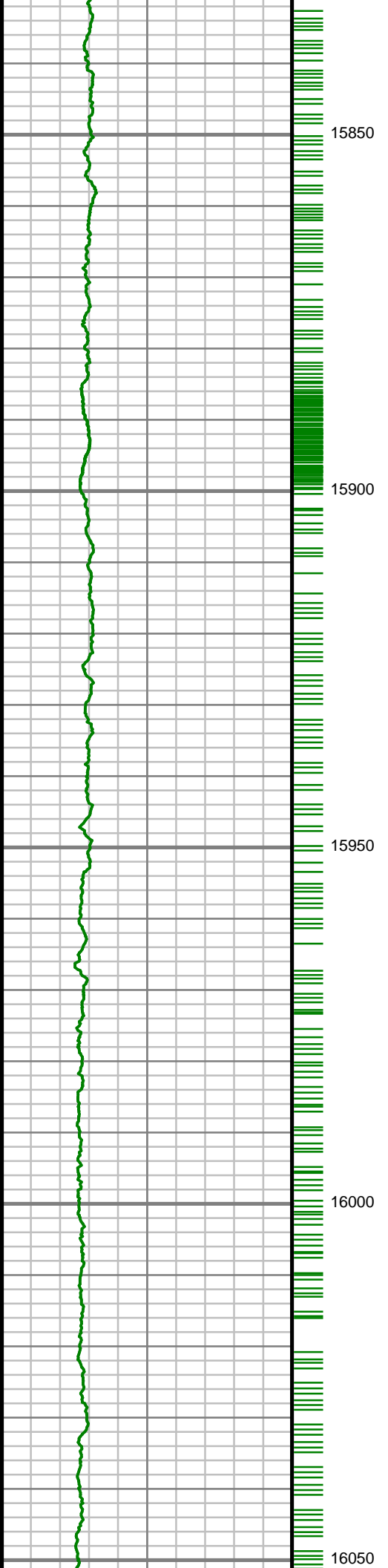
S: 176 MD: 15498.00 ft
Inc: 90.10 deg Az: 1.32
deg TVD: 7886.37 ft

S: 177 MD: 15592.00 ft
Inc: 89.93 deg Az: 0.67
deg TVD: 7886.35 ft



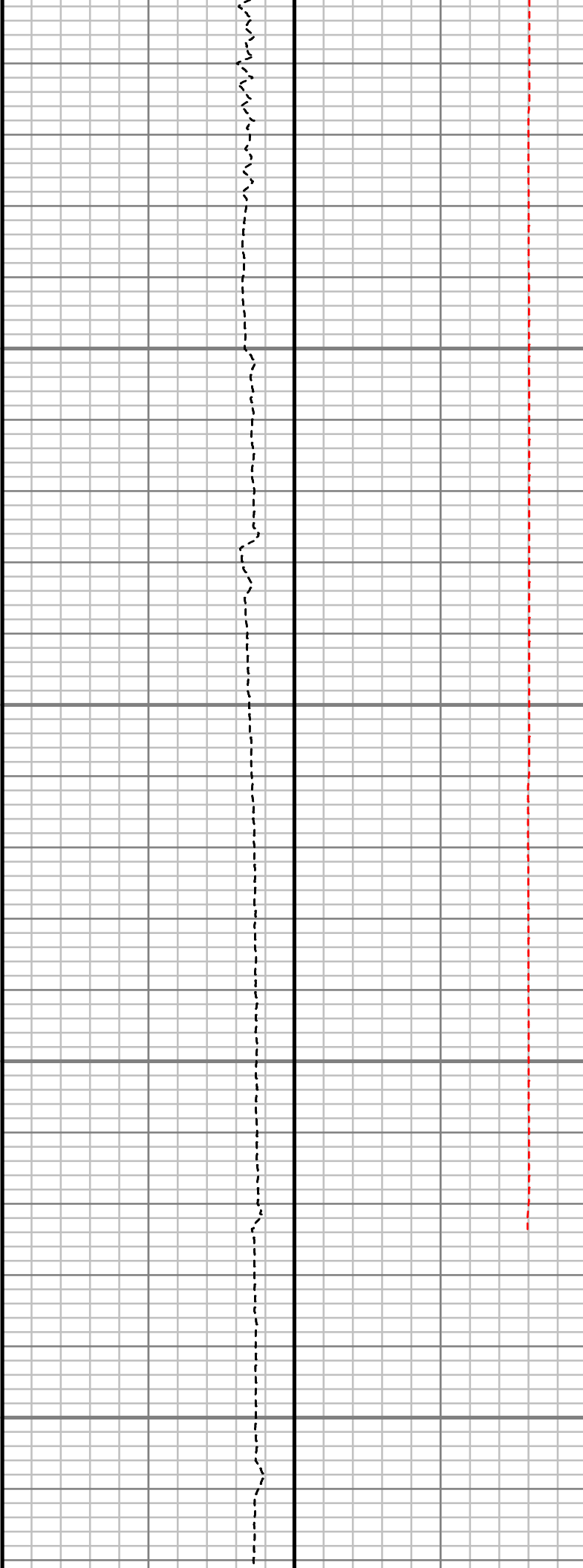
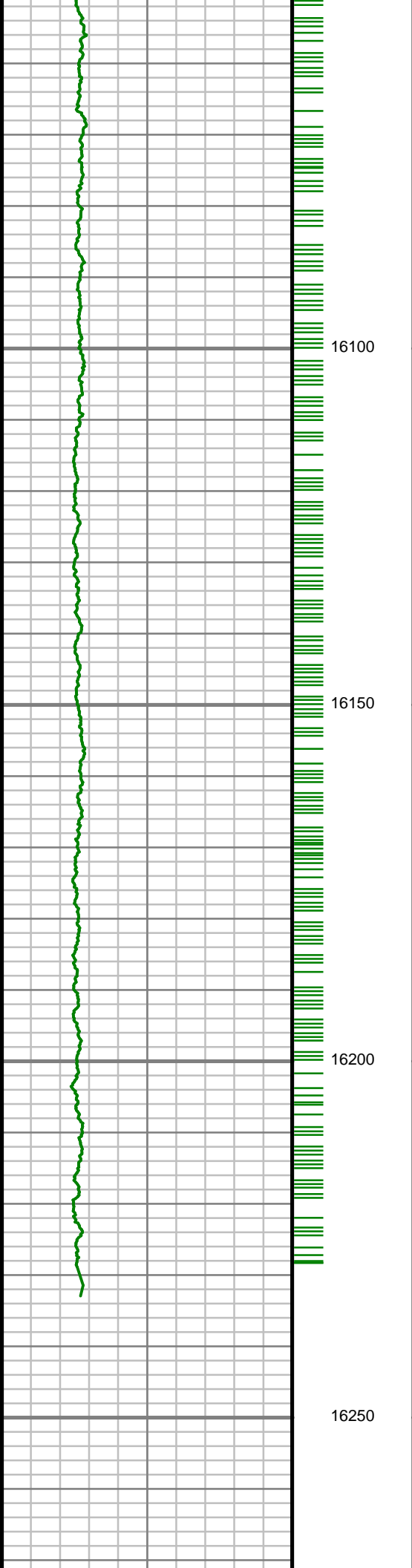
S: 178 MD: 15687.00 ft
Inc: 89.80 deg Az: 0.81
deg TVD: 7886.57 ft

S: 179 MD: 15781.00 ft
Inc: 89.70 deg Az: 0.63
deg TVD: 7886.98 ft



S: 180 MD: 15875.00 ft
Inc: 89.26 deg Az: 0.71
deg TVD: 7887.83 ft

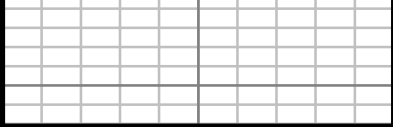
S: 181 MD: 15970.00 ft
Inc: 90.44 deg Az: 0.60
deg TVD: 7888.08 ft



S: 182 MD: 16064.00 ft
Inc: 90.47 deg Az: 0.23
deg TVD: 7887.34 ft

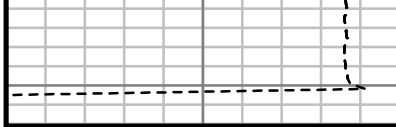
S: 183 MD: 16158.00 ft
Inc: 90.24 deg Az: 0.14
deg TVD: 7886.76 ft

S: 184 MD: 16217.00 ft
Inc: 90.10 deg Az: 0.51
deg TVD: 7886.59 ft

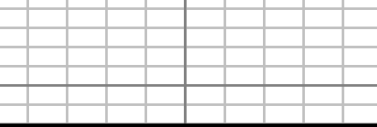


Gamma Ray (GR)		
0	Unit = aapi	300

MEASURED DEPTH
1:240 (ft)



Rate of Penetration (ROP)		
1200	Unit = ft/hr	0



Tool Temperature (T-TEMP)		
0	Unit = °F	300

Comments

MWD Survey Report

Well Location	BADGER 11C-3HZ
Well Name	BADGER 11C-3HZ
Survey Date	1/1/2015
Latitude	40°3'26.517"N
Longitude	104°59'37.975"W
Btotal	52630, 52676, 52725, 52741 nT
Dip	66.53, 66.54, 66.60 deg
Magnetic Declination	8.63, 8.64, 8.66, 8.69 deg
North Reference	True North
Grid Correction	None
Depth Reference	RKB (25.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 0.44Azim (deg)
Operator(s)	J. MEYERS, M. SHARKER

Well Notes

SURVEYS FROM 0 FT. TO 1270 FT. WERE ACQUIRED BY CATHEDRAL INTERNATIONAL MWD.

SURVEYS FROM 1270 FT. TO 16,217 FT. WERE ACQUIRED BY SCIENTIFIC DRILLING INTERNATIONAL MWD.

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid	Invalid
19.00	0.00	0.00	19.00	0.00	0.00	0.00	0.00	19.00
71.00	0.10	98.50	71.00	-0.01	-0.01	0.04	0.19	52.00
161.00	0.00	0.00	161.00	-0.02	-0.02	0.12	0.11	90.00
258.00	0.30	83.80	258.00	0.01	0.01	0.38	0.31	97.00
337.00	0.10	127.10	337.00	-0.01	-0.01	0.64	0.30	79.00
417.00	0.40	134.80	417.00	-0.24	-0.25	0.89	0.38	80.00
497.00	0.40	150.80	497.00	-0.68	-0.69	1.22	0.14	80.00
577.00	0.70	132.00	576.99	-1.25	-1.26	1.72	0.43	80.00
657.00	0.40	171.60	656.99	-1.85	-1.86	2.13	0.58	80.00
737.00	0.30	268.90	736.99	-2.13	-2.14	1.96	0.66	80.00
817.00	0.40	247.10	816.99	-2.24	-2.26	1.49	0.21	80.00
897.00	0.60	247.80	896.98	-2.52	-2.52	0.85	0.25	80.00
977.00	0.70	270.10	976.98	-2.68	-2.68	-0.03	0.34	80.00
1057.00	0.40	287.70	1056.97	-2.60	-2.60	-0.78	0.43	80.00
1137.00	0.30	303.00	1136.97	-2.41	-2.40	-1.23	0.17	80.00
1236.00	0.40	346.00	1235.97	-1.93	-1.92	-1.53	0.28	99.00
1348.00	0.05	10.23	1347.97	-1.51	-1.49	-1.61	0.32	112.00
1438.00	2.43	141.07	1437.94	-2.95	-2.94	-0.41	2.74	90.00

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Course Length ft
1620.00	5.18	139.01	1619.53	-12.09	-12.15	7.41	1.51	182.00
1710.00	6.32	145.42	1709.07	-19.19	-19.29	12.88	1.46	90.00
1800.00	8.21	133.82	1798.35	-27.66	-27.82	20.33	2.64	90.00
1891.00	10.32	130.54	1888.16	-37.37	-37.61	31.21	2.39	91.00
1981.00	11.99	129.90	1976.46	-48.51	-48.85	44.51	1.86	90.00
2073.00	11.84	129.48	2066.47	-60.52	-60.98	59.13	0.18	92.00
2164.00	10.94	128.63	2155.68	-71.75	-72.31	73.08	1.01	91.00
2254.00	11.79	132.29	2243.92	-83.16	-83.83	86.55	1.24	90.00
2345.00	12.69	127.68	2332.85	-95.42	-96.20	101.35	1.46	91.00
2439.00	13.44	128.33	2424.41	-108.38	-109.29	118.09	0.80	94.00
2534.00	12.58	128.15	2516.98	-121.48	-122.52	134.88	0.91	95.00
2628.00	12.34	126.43	2608.76	-133.64	-134.81	151.00	0.47	94.00
2723.00	12.20	127.38	2701.59	-145.64	-146.93	167.15	0.26	95.00
2817.00	12.42	128.46	2793.43	-157.84	-159.25	182.96	0.33	94.00
2911.00	12.87	128.11	2885.15	-170.46	-172.00	199.11	0.49	94.00
3006.00	13.89	132.72	2977.57	-184.61	-186.27	215.82	1.55	95.00
3100.00	12.79	136.06	3069.04	-199.63	-201.41	231.32	1.43	94.00
3195.00	12.37	130.30	3161.76	-213.67	-215.56	246.38	1.39	95.00

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft	Course Length ft
3289.00	11.99	129.52	3253.65	-226.27	-228.29	261.58	0.44	94.00
3383.00	12.36	129.12	3345.53	-238.71	-240.85	276.92	0.41	94.00
3478.00	12.27	129.14	3438.35	-251.38	-253.64	292.64	0.10	95.00
3572.00	10.44	122.83	3530.51	-262.19	-264.56	307.55	2.35	94.00
3667.00	10.34	130.55	3623.95	-272.29	-274.77	321.26	1.47	95.00
3761.00	8.96	144.62	3716.63	-283.67	-286.23	331.91	2.90	94.00
3856.00	10.26	149.97	3810.30	-296.96	-299.59	340.43	1.66	95.00
3950.00	11.99	144.02	3902.53	-312.04	-314.74	350.36	2.21	94.00
4045.00	12.13	134.32	3995.44	-326.90	-329.70	363.30	2.13	95.00
4139.00	11.04	136.02	4087.53	-340.18	-343.08	376.62	1.21	94.00
4234.00	11.65	133.75	4180.67	-353.26	-356.27	389.87	0.79	95.00
4328.00	10.33	127.82	4272.95	-364.89	-368.00	403.38	1.85	94.00
4422.00	11.37	127.01	4365.27	-375.52	-378.74	417.44	1.12	94.00
4517.00	12.11	130.18	4458.28	-387.48	-390.81	432.53	1.03	95.00
4611.00	11.38	135.64	4550.31	-400.36	-403.80	446.54	1.42	94.00
4706.00	10.16	131.04	4643.64	-412.46	-416.00	459.42	1.57	95.00
4800.00	10.99	129.11	4736.04	-423.45	-427.10	472.62	0.96	94.00
4895.00	12.86	133.19	4828.99	-436.29	-440.04	487.35	2.16	95.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
4989.00	12.96	136.48	4920.62	-450.98	-454.85	502.24	0.79	94.00
5083.00	11.38	137.32	5012.50	-465.34	-469.31	515.79	1.69	94.00
5178.00	12.08	136.77	5105.52	-479.37	-483.44	528.95	0.74	95.00
5272.00	12.30	131.39	5197.40	-493.05	-497.23	543.20	1.23	94.00
5367.00	11.44	130.46	5290.37	-505.74	-510.04	557.96	0.93	95.00
5461.00	11.96	128.62	5382.41	-517.75	-522.17	572.66	0.69	94.00
5556.00	10.54	127.57	5475.59	-529.08	-533.61	587.24	1.52	95.00
5650.00	10.64	130.96	5567.99	-539.91	-544.54	600.61	0.67	94.00
5745.00	11.75	130.27	5661.18	-551.81	-556.54	614.62	1.17	95.00
5839.00	10.84	128.52	5753.36	-563.38	-568.23	628.83	1.04	94.00
5933.00	10.88	129.53	5845.67	-574.43	-579.38	642.59	0.21	94.00
6028.00	11.62	133.75	5938.85	-586.65	-591.70	656.41	1.17	95.00
6122.00	11.76	130.35	6030.90	-599.29	-604.46	670.55	0.75	94.00
6217.00	11.62	126.53	6123.93	-611.13	-616.42	685.62	0.83	95.00
6312.00	12.01	126.84	6216.92	-622.63	-628.04	701.21	0.42	95.00
6406.00	11.81	132.52	6308.90	-634.89	-640.40	716.13	1.26	94.00
6500.00	9.53	132.64	6401.27	-646.56	-652.18	728.95	2.43	94.00
6595.00	8.22	124.63	6495.13	-655.66	-661.37	740.32	1.89	95.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
6689.00	6.56	119.18	6588.35	-662.02	-667.80	750.54	1.91	94.00
6784.00	5.37	119.73	6682.83	-666.80	-672.65	759.13	1.25	95.00
6878.00	4.89	118.15	6776.46	-670.82	-676.72	766.48	0.54	94.00
6973.00	4.23	137.09	6871.16	-675.25	-681.20	772.44	1.72	95.00
7067.00	4.11	140.88	6964.91	-680.36	-686.35	776.92	0.32	94.00
7162.00	1.29	148.85	7059.80	-683.90	-689.90	779.62	2.99	95.00
7256.00	0.69	271.78	7153.79	-684.78	-690.79	779.60	1.87	94.00
7350.00	0.48	281.37	7247.78	-684.69	-690.69	778.65	0.24	94.00
7397.00	5.57	346.78	7294.71	-682.44	-688.43	777.93	11.46	47.00
7445.00	11.21	354.64	7342.17	-675.53	-681.51	776.96	11.97	48.00
7492.00	15.60	356.89	7387.88	-664.67	-670.65	776.19	9.39	47.00
7539.00	18.28	358.83	7432.84	-650.99	-656.97	775.70	5.84	47.00
7586.00	22.18	359.20	7476.93	-634.75	-640.72	775.42	8.29	47.00
7634.00	25.39	1.82	7520.85	-615.39	-621.37	775.62	7.05	48.00
7681.00	28.30	0.23	7562.78	-594.17	-600.15	775.99	6.37	47.00
7728.00	31.58	359.97	7603.50	-570.72	-576.70	776.03	6.97	47.00
7775.00	35.50	0.70	7642.67	-544.76	-550.73	776.19	8.40	47.00
7823.00	39.91	0.91	7680.64	-515.41	-521.39	776.60	9.20	48.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
7870.00	46.12	2.13	7714.98	-483.37	-489.35	777.47	13.32	47.00
7917.00	52.19	2.90	7745.71	-447.85	-453.85	779.04	12.97	47.00
7964.00	57.60	2.37	7772.73	-409.45	-415.46	780.80	11.54	47.00
8011.00	62.99	2.75	7796.02	-368.67	-374.69	782.63	11.49	47.00
8058.00	67.54	3.12	7815.68	-326.03	-332.07	784.82	9.71	47.00
8106.00	71.31	2.55	7832.55	-281.14	-287.20	787.04	7.93	48.00
8153.00	74.72	2.76	7846.27	-236.23	-242.30	789.12	7.27	47.00
8200.00	77.13	1.27	7857.70	-190.67	-196.74	790.72	5.99	47.00
8247.00	81.00	359.98	7866.62	-144.53	-150.61	791.22	8.67	47.00
8279.00	84.32	359.41	7870.70	-112.80	-118.88	791.05	10.51	32.00
8485.00	88.92	359.56	7882.84	92.76	86.70	789.19	2.24	206.00
8580.00	89.20	359.02	7884.40	187.73	181.68	788.01	0.64	95.00
8674.00	89.73	359.19	7885.28	281.70	275.66	786.54	0.60	94.00
8769.00	89.93	359.17	7885.56	376.67	370.65	785.18	0.21	95.00
8860.00	90.94	358.50	7884.86	467.63	461.63	783.34	1.33	91.00
8952.00	89.56	359.66	7884.46	559.60	553.61	781.86	1.96	92.00
9043.00	89.12	0.48	7885.50	650.59	644.61	781.97	1.02	91.00
9134.00	90.57	1.40	7885.75	741.59	735.59	783.46	1.88	91.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
9225.00	91.18	1.99	7884.36	832.55	826.54	786.15	0.93	91.00
9317.00	91.18	1.87	7882.47	924.50	918.47	789.26	0.13	92.00
9407.00	90.30	359.70	7881.31	1014.49	1008.45	790.49	2.60	90.00
9498.00	88.72	357.50	7882.08	1105.43	1099.41	788.27	2.98	91.00
9588.00	87.85	358.17	7884.78	1195.29	1189.30	784.87	1.23	90.00
9679.00	88.48	0.37	7887.69	1286.22	1280.24	783.71	2.52	91.00
9770.00	89.93	1.68	7888.95	1377.20	1371.21	785.34	2.14	91.00
9860.00	89.39	1.19	7889.48	1467.19	1461.18	787.59	0.80	90.00
9950.00	89.90	1.23	7890.03	1557.18	1551.16	789.49	0.56	90.00
10041.00	91.51	2.32	7888.91	1648.14	1642.11	792.30	2.14	91.00
10131.00	90.77	1.33	7887.11	1738.10	1732.04	795.17	1.37	90.00
10223.00	89.36	1.10	7887.01	1830.09	1824.02	797.12	1.55	92.00
10314.00	88.49	0.49	7888.71	1921.07	1914.99	798.39	1.17	91.00
10404.00	89.39	1.28	7890.38	2011.05	2004.96	799.78	1.33	90.00
10495.00	89.80	2.09	7891.02	2102.02	2095.92	802.45	0.99	91.00
10589.00	89.97	1.21	7891.21	2196.00	2189.88	805.15	0.95	94.00
10683.00	89.80	1.33	7891.40	2289.99	2283.86	807.24	0.22	94.00
10778.00	89.63	0.97	7891.88	2384.98	2378.84	809.14	0.42	95.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
10872.00	89.50	0.68	7892.59	2478.98	2472.83	810.50	0.34	94.00
10966.00	89.29	0.80	7893.59	2572.97	2566.81	811.72	0.25	94.00
11061.00	89.83	1.26	7894.31	2667.96	2661.79	813.44	0.75	95.00
11155.00	91.04	1.80	7893.59	2761.94	2755.75	815.95	1.41	94.00
11250.00	90.47	0.76	7892.34	2856.92	2850.72	818.07	1.25	95.00
11344.00	90.07	359.58	7891.90	2950.92	2944.72	818.35	1.32	94.00
11438.00	90.30	0.36	7891.59	3044.91	3038.72	818.30	0.86	94.00
11533.00	89.83	358.78	7891.48	3139.90	3133.71	817.58	1.74	95.00
11627.00	89.73	359.15	7891.84	3233.86	3227.69	815.89	0.41	94.00
11722.00	89.90	359.44	7892.15	3328.85	3322.69	814.72	0.35	95.00
11816.00	90.44	359.23	7891.87	3422.83	3416.68	813.63	0.61	94.00
11910.00	89.66	0.21	7891.79	3516.82	3510.68	813.17	1.32	94.00
12004.00	89.93	0.70	7892.12	3610.82	3604.67	813.92	0.59	94.00
12099.00	90.81	0.32	7891.51	3705.81	3699.67	814.76	1.00	95.00
12194.00	88.52	0.12	7892.07	3800.80	3794.66	815.12	2.42	95.00
12288.00	89.56	359.76	7893.64	3894.79	3888.64	815.03	1.17	94.00
12382.00	89.63	359.71	7894.30	3988.78	3982.64	814.59	0.09	94.00
12477.00	89.36	359.26	7895.13	4083.76	4077.63	813.73	0.55	95.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
12571.00	90.13	359.75	7895.54	4177.75	4171.63	812.92	0.98	94.00
12666.00	90.13	0.43	7895.32	4272.74	4266.62	813.06	0.71	95.00
12760.00	90.17	0.07	7895.07	4366.74	4360.62	813.47	0.38	94.00
12854.00	90.40	1.17	7894.60	4460.74	4454.62	814.49	1.19	94.00
12949.00	91.14	0.84	7893.32	4555.72	4549.59	816.15	0.85	95.00
13043.00	89.87	2.11	7892.50	4649.70	4643.55	818.57	1.91	94.00
13137.00	90.40	1.59	7892.28	4743.67	4737.50	821.60	0.79	94.00
13232.00	89.73	1.92	7892.16	4838.65	4832.46	824.51	0.79	95.00
13326.00	90.27	2.69	7892.16	4932.60	4926.38	828.29	1.01	94.00
13421.00	88.72	1.86	7893.00	5027.54	5021.30	832.07	1.85	95.00
13515.00	88.86	3.09	7894.98	5121.46	5115.19	836.13	1.31	94.00
13609.00	89.87	2.23	7896.03	5215.38	5209.08	840.49	1.40	94.00
13704.00	89.73	2.61	7896.36	5310.32	5303.99	844.50	0.42	95.00
13798.00	90.17	2.78	7896.44	5404.25	5397.89	848.92	0.50	94.00
13892.00	90.17	0.77	7896.17	5498.22	5491.84	851.84	2.14	94.00
13987.00	91.04	0.92	7895.17	5593.21	5586.82	853.24	0.93	95.00
14081.00	91.41	359.70	7893.15	5687.19	5680.80	853.74	1.36	94.00
14176.00	91.34	0.15	7890.87	5782.15	5775.77	853.62	0.49	95.00
14270.00	92.08	0.56	7888.06	5876.11	5869.72	854.21	0.90	94.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
14364.00	90.97	359.43	7885.55	5970.07	5963.69	854.20	1.69	94.00
14459.00	90.07	358.66	7884.69	6065.04	6058.67	852.61	1.25	95.00
14553.00	89.76	358.78	7884.83	6159.00	6152.65	850.52	0.35	94.00
14648.00	89.73	358.26	7885.24	6253.94	6247.61	848.07	0.55	95.00
14742.00	89.76	358.08	7885.66	6347.87	6341.56	845.06	0.20	94.00
14837.00	89.80	359.04	7886.02	6442.81	6436.53	842.68	1.02	95.00
14931.00	89.73	359.13	7886.40	6536.79	6530.52	841.18	0.11	94.00
15025.00	89.67	358.97	7886.90	6630.76	6624.50	839.61	0.18	94.00
15120.00	89.93	359.97	7887.23	6725.74	6719.50	838.73	1.10	95.00
15214.00	90.23	0.65	7887.09	6819.74	6813.50	839.25	0.79	94.00
15309.00	90.17	0.42	7886.76	6914.74	6908.49	840.14	0.26	95.00
15403.00	90.10	0.76	7886.54	7008.74	7002.49	841.10	0.37	94.00
15498.00	90.10	1.32	7886.37	7103.73	7097.47	842.83	0.59	95.00
15592.00	89.93	0.67	7886.35	7197.73	7191.46	844.46	0.72	94.00
15687.00	89.80	0.81	7886.57	7292.73	7286.45	845.68	0.21	95.00
15781.00	89.70	0.63	7886.98	7386.72	7380.44	846.86	0.22	94.00
15875.00	89.26	0.71	7887.83	7480.72	7474.43	847.95	0.47	94.00
15970.00	90.44	0.60	7888.08	7575.72	7569.42	849.04	1.24	95.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
16064.00	90.47	0.23	7887.34	7669.71	7663.41	849.72	0.40	94.00
16158.00	90.24	0.14	7886.76	7763.71	7757.41	850.03	0.27	94.00
16217.00	90.10	0.51	7886.59	7822.71	7816.41	850.36	0.67	59.00

5" = 100' FEET MD