



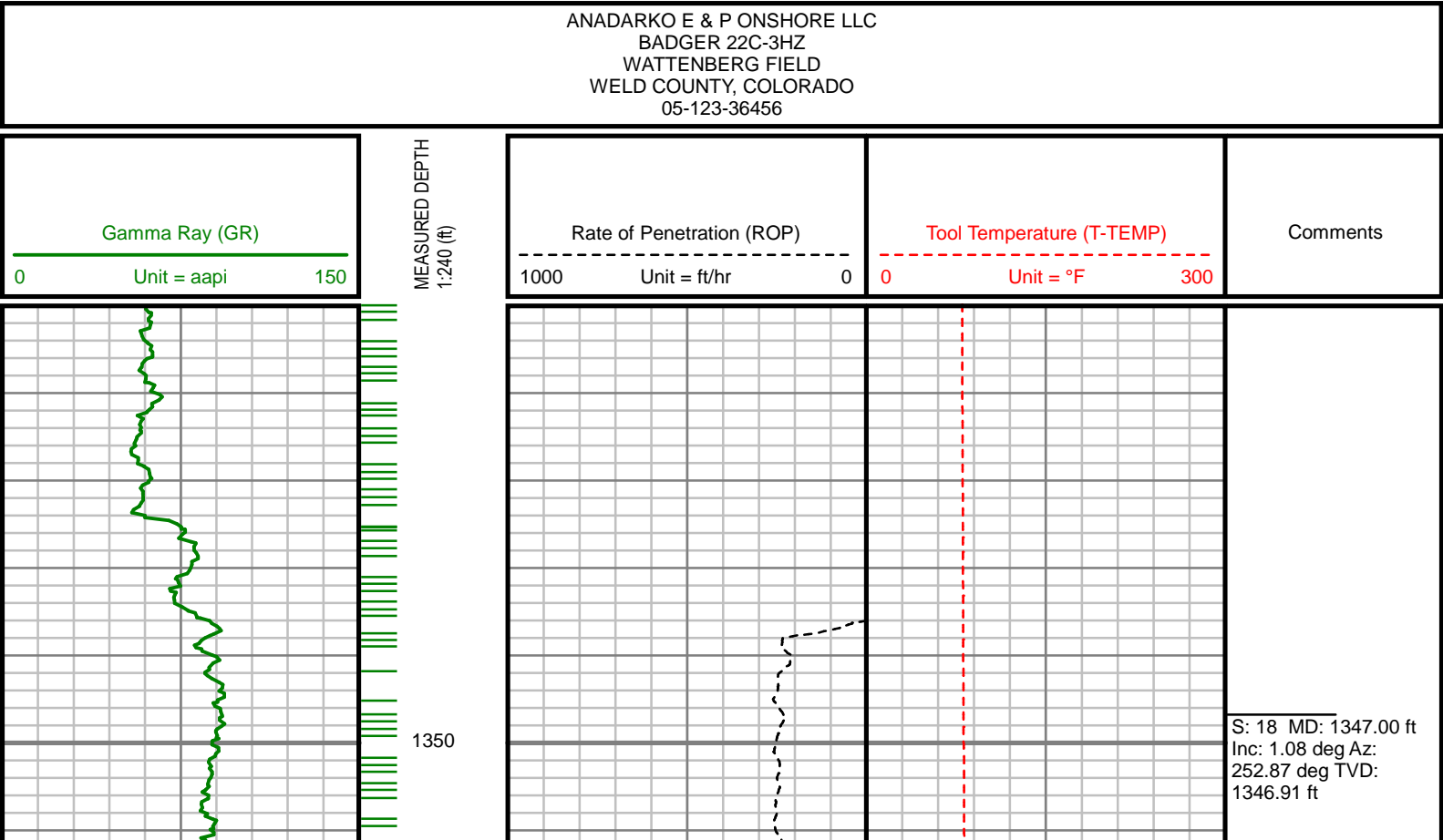
GAMMA RAY

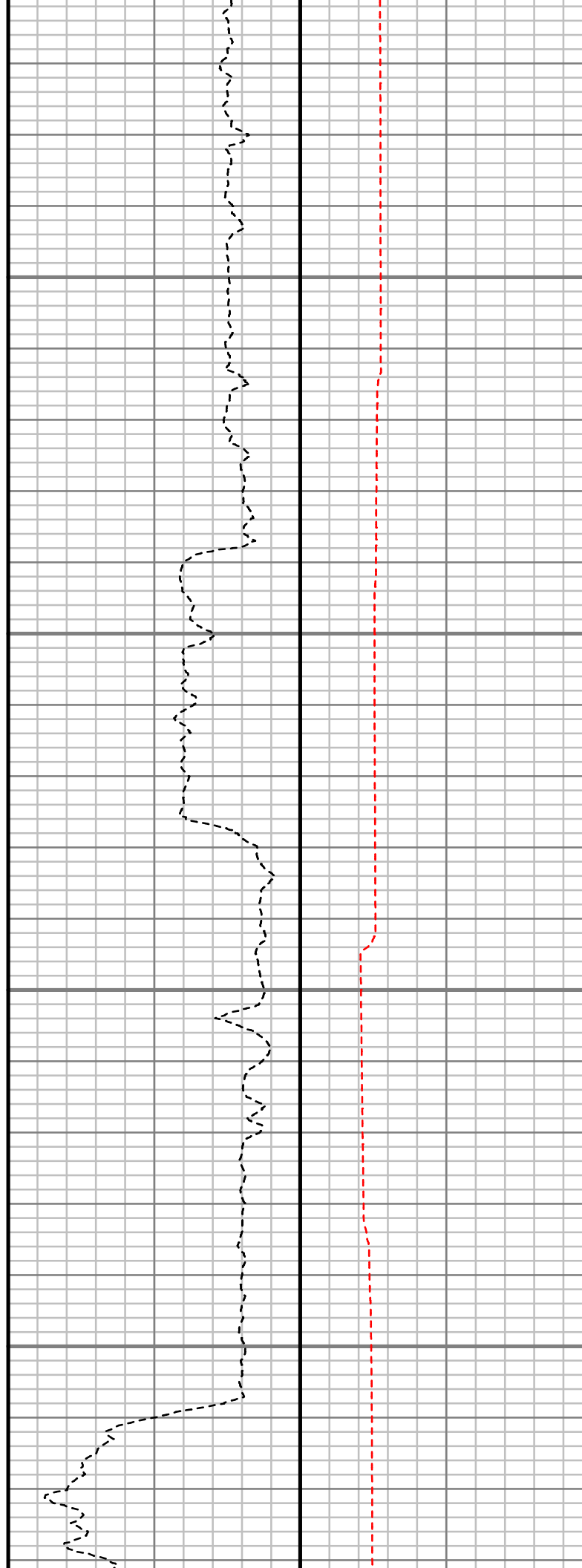
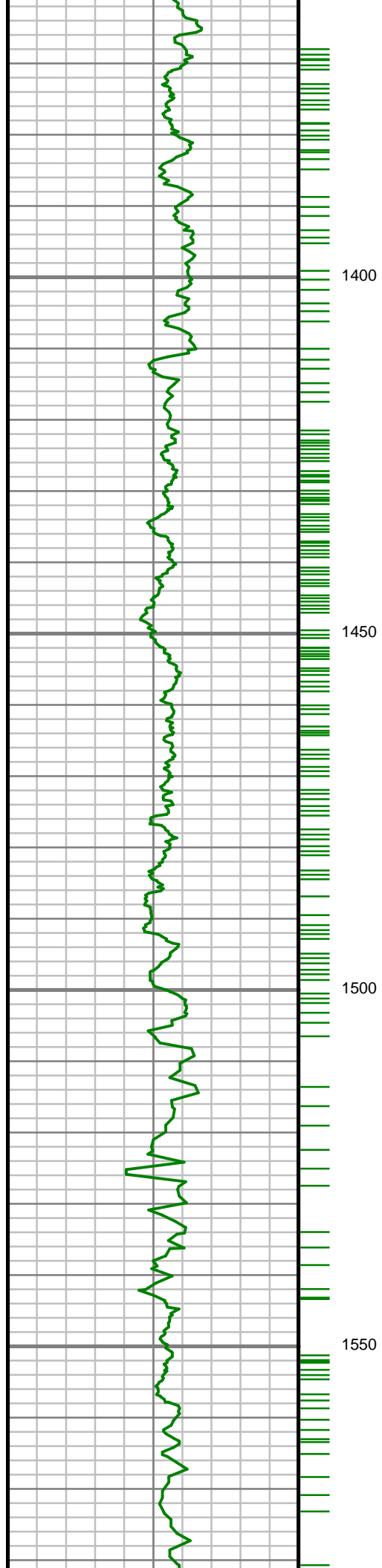
5" = 100' FEET MD

COMPANY : ANADARKO E&P ONSHORE LLC											
WELL : BADGER 22C-3HZ											
FIELD : WATTENBERG											
COUNTY : WELD											
STATE : COLORADO											
COUNTRY : U.S.A.											
UWI : 05-123-36456											
OTHER SERVICES											
WELL LOCATION											
LAT:40°3'26.474"N LONG:104°59'41.834"W											
N:126°142.36 ft E:314°1430.59 ft											
SEC:15 TWP:1N RANGE:68W											
DIRECTIONAL											
ROP											
DEPTH REF. : RKB											
REF. HEIGHT : 25.000 ft											
RKB to Ground Level											
GROUND LEVEL : 5132.000 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		1336		0-16		0		7414	
8.75		1336		8293		16-90		7414		8293	
6.125		8293		16288		90-92		8293		16288	
CASING RECORD											
CASING SIZE	in	FROM	ft	TO	ft						
9.625		0		8293							
7		0		16288							
DRILLING CO.:H&P											
RIG: 290											
LMD UNIT NO.: 280-C											
DISTRICT: CASPER											
SPUD DATE: 10/22/2014											
LMD START DATE: 02/03/2015											
DEPTH: 1336 ft											
LMD END DATE: 02/13/2015											
DEPTH: 16288 ft											
TOTAL DEPTH: 16288 ft											

Remarks
ANADARKO E&P ONSHORE LLC PRODUCTION AFE# 2074507
SCIENTIFIC DRILLING INTERNATIONAL JOB# 252239
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 = 128-212 / CONT = 863 / MWD EYE = 743 / GAMMA RAY = 1093
BIT TO SENSOR OFFSETS : SURVEY = 63.32 FT. / GAMMA RAY = 54.07 FT.
RUN # 2 : MWD / GAMMA LOGGING RUN
SENSORS S/N : PULSER = 78-210 / CONT = 117 / MWD EYE = 309 / GAMMA RAY = 1220
BIT TO SENSOR OFFSETS : SURVEY = 60.06 FT. / GAMMA RAY = 50.81 FT.
RUN # 3 : MWD / GAMMA LOGGING RUN
SENSORS S/N : PULSER = 78-097 / CONT = 221 / MWD EYE = 0538 / GAMMA RAY = 1434
BIT TO SENSOR OFFSETS : SURVEY = 60.06 FT. / GAMMA RAY = 50.81 FT.
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

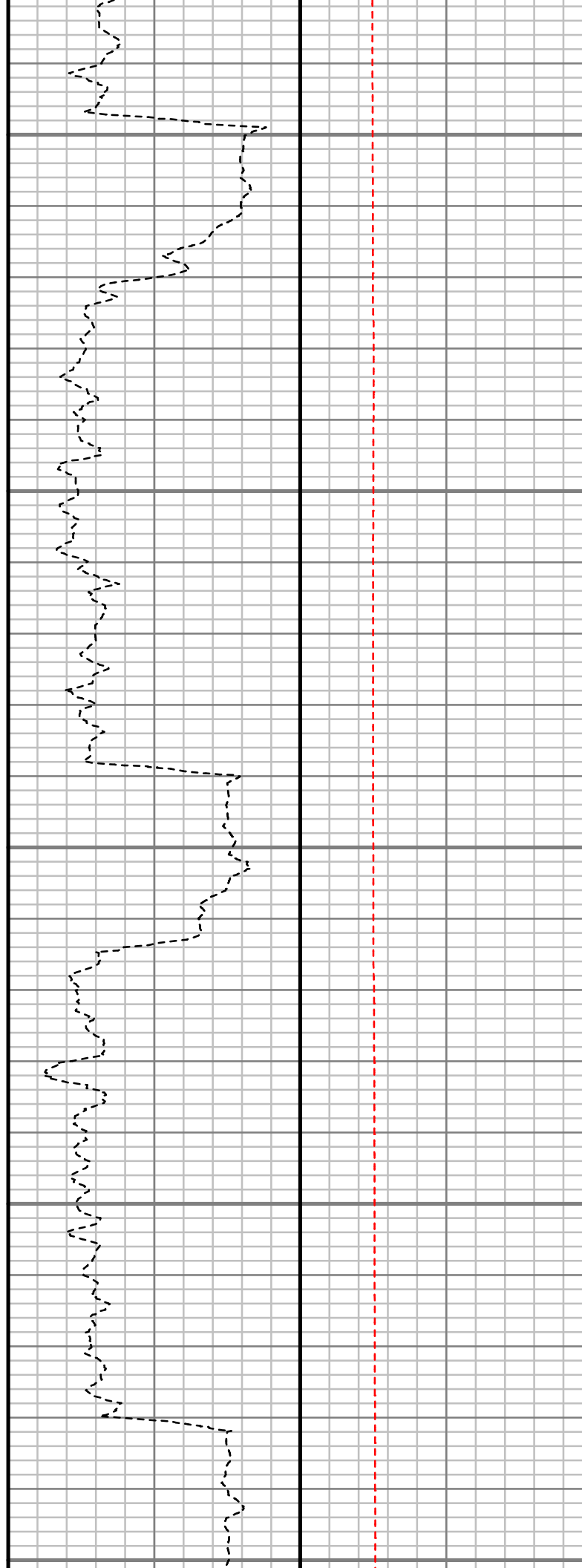
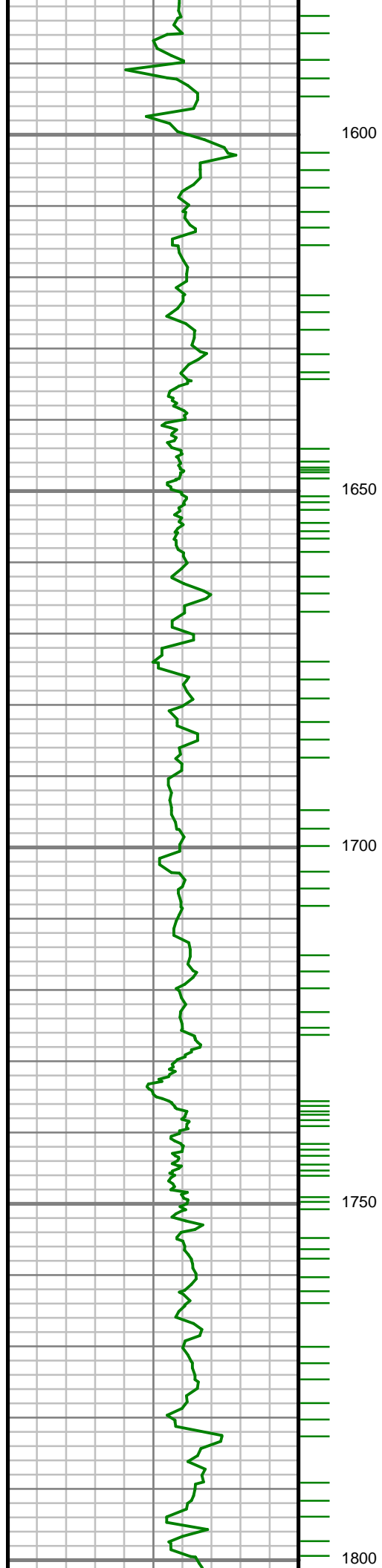
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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: 19 MD: 1437.00 ft
Inc: 2.23 deg Az:
212.63 deg TVD:
1436.87 ft

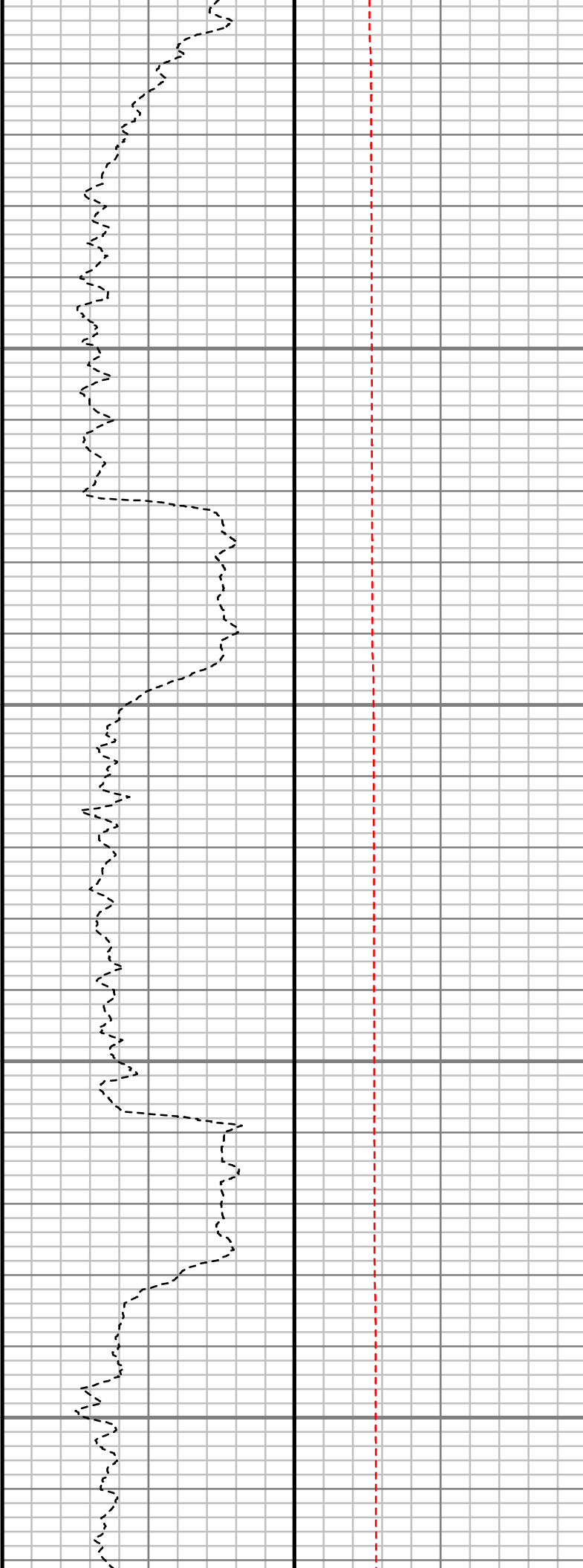
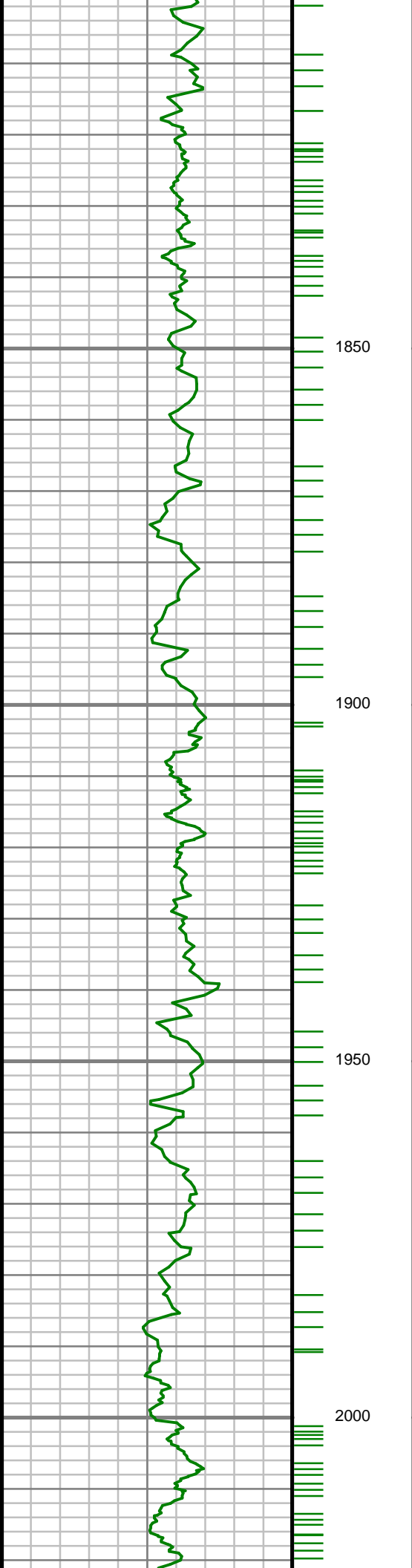
S: 20 MD: 1528.00 ft
Inc: 3.88 deg Az:
183.89 deg TVD:
1527.74 ft



S: 21 MD: 1619.00 ft
Inc: 5.78 deg Az:
181.68 deg TVD:
1618.42 ft

S: 22 MD: 1709.00 ft
Inc: 6.80 deg Az:
177.04 deg TVD:
1707.87 ft

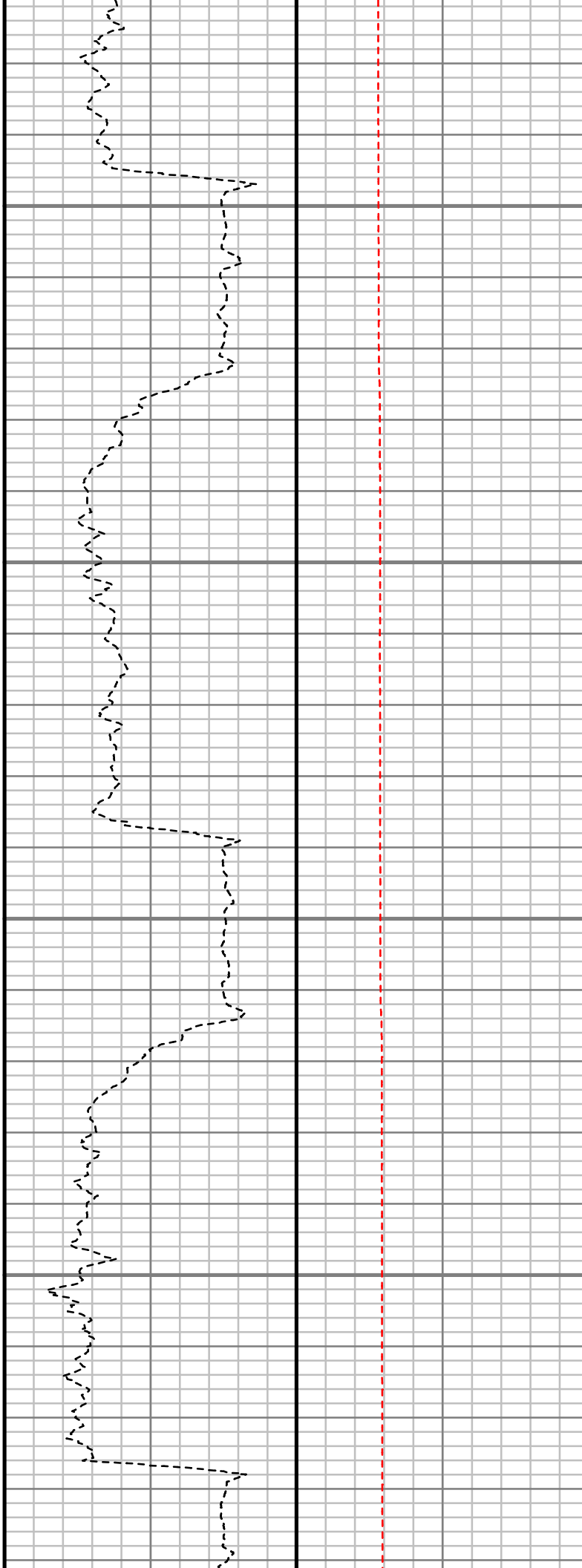
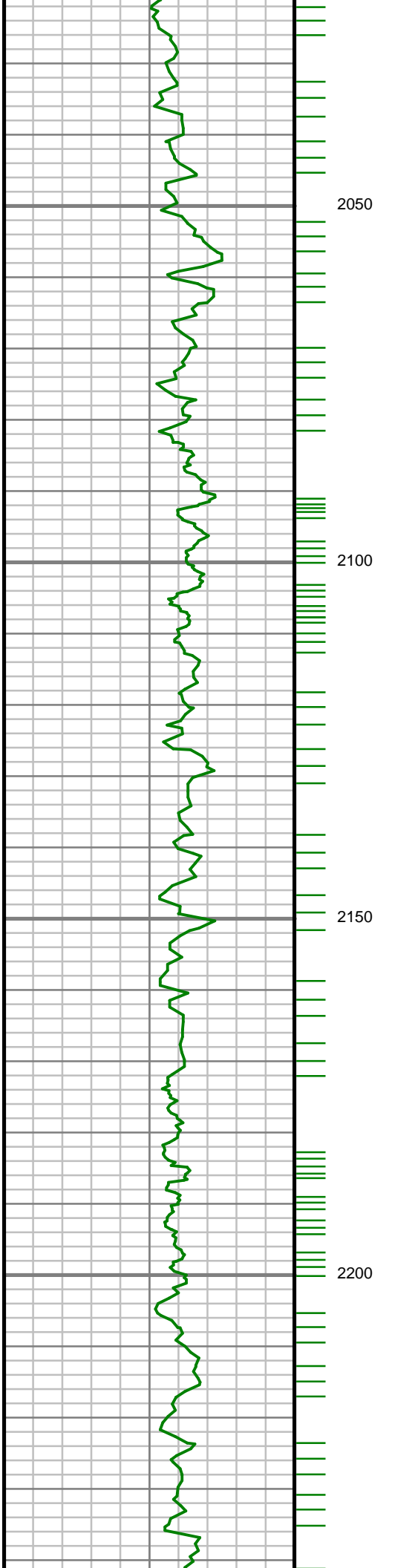
S: 23 MD: 1799.00 ft



Inc: 8.18 deg Az:
162.53 deg TVD:
1797.11 ft

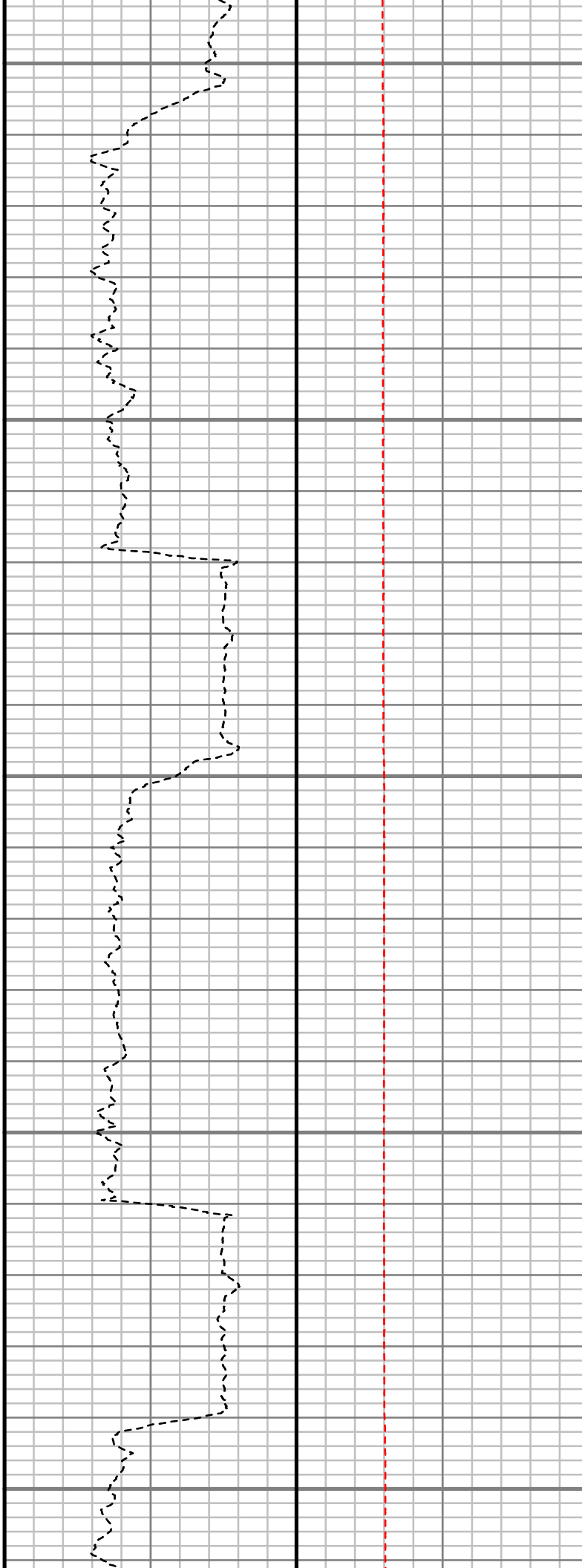
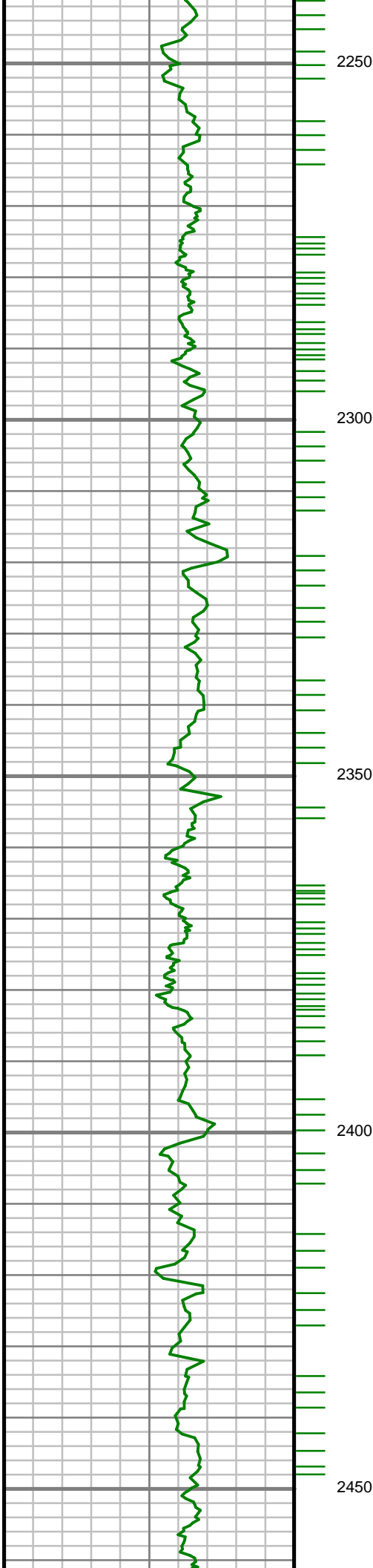
S: 24 MD: 1890.00 ft
Inc: 9.54 deg Az:
149.69 deg TVD:
1887.03 ft

S: 25 MD: 1980.00 ft
Inc: 10.12 deg Az:
149.79 deg TVD:
1975.71 ft



S: 26 MD: 2072.00 ft
Inc: 11.95 deg Az:
149.60 deg TVD:
2066.01 ft

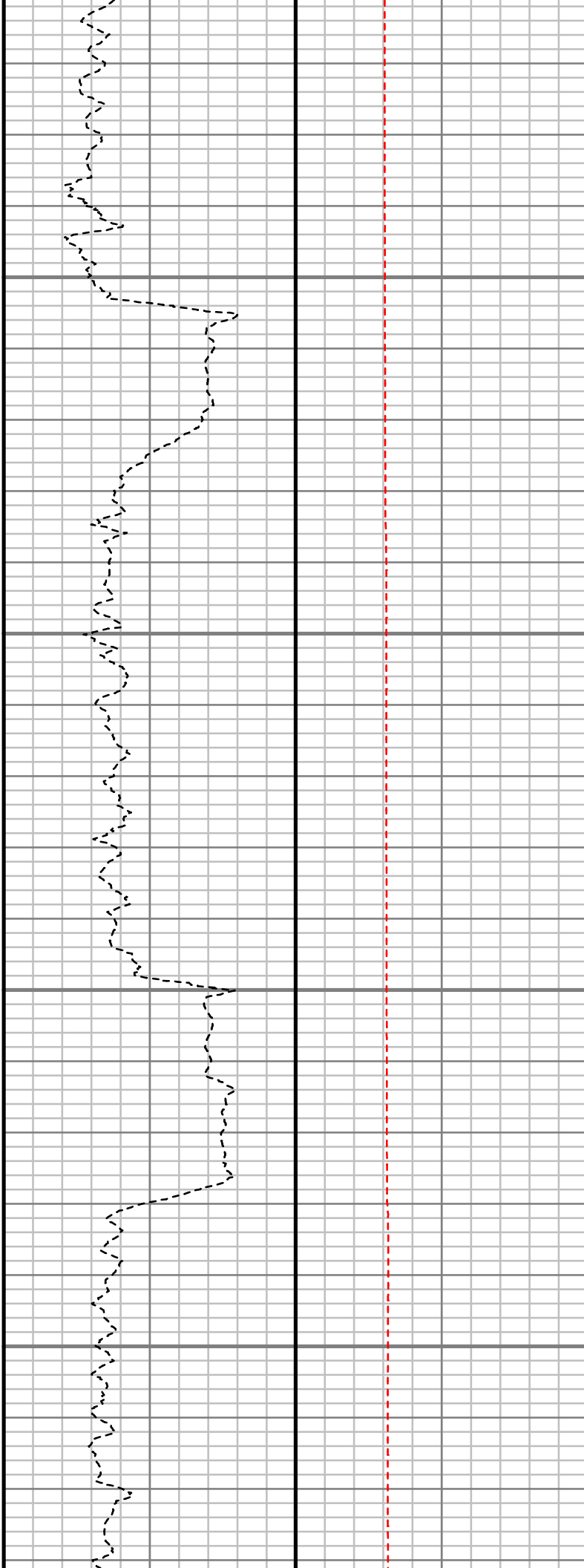
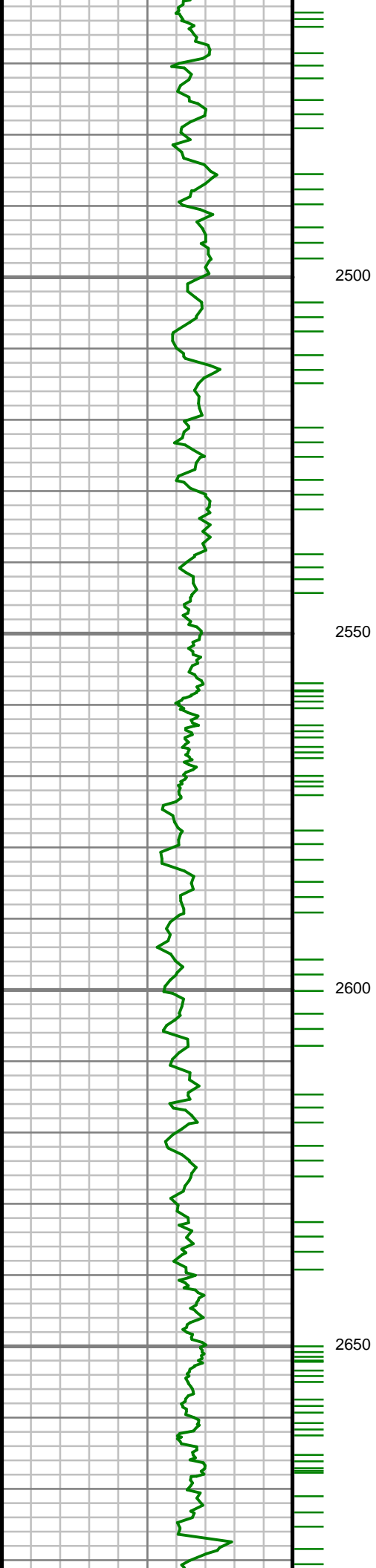
S: 27 MD: 2163.00 ft
Inc: 13.56 deg Az:
147.92 deg TVD:
2154.76 ft



S: 28 MD: 2253.00 ft
Inc: 14.40 deg Az:
147.61 deg TVD:
2242.09 ft

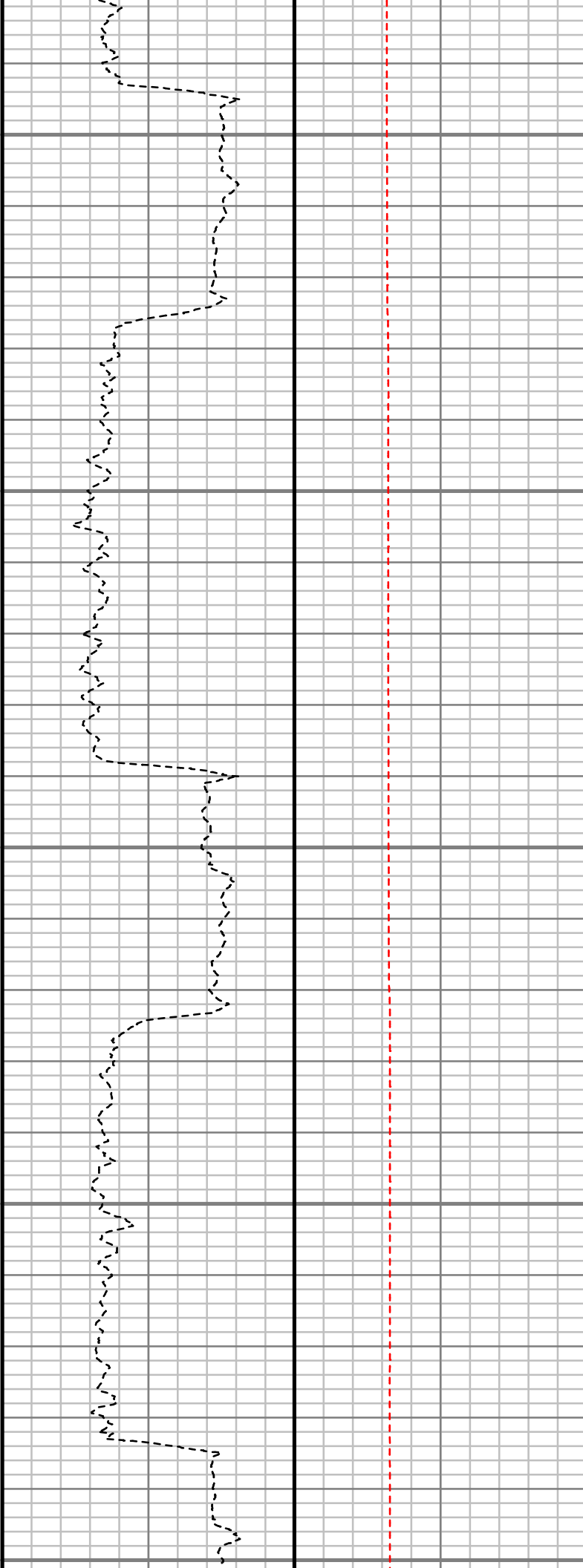
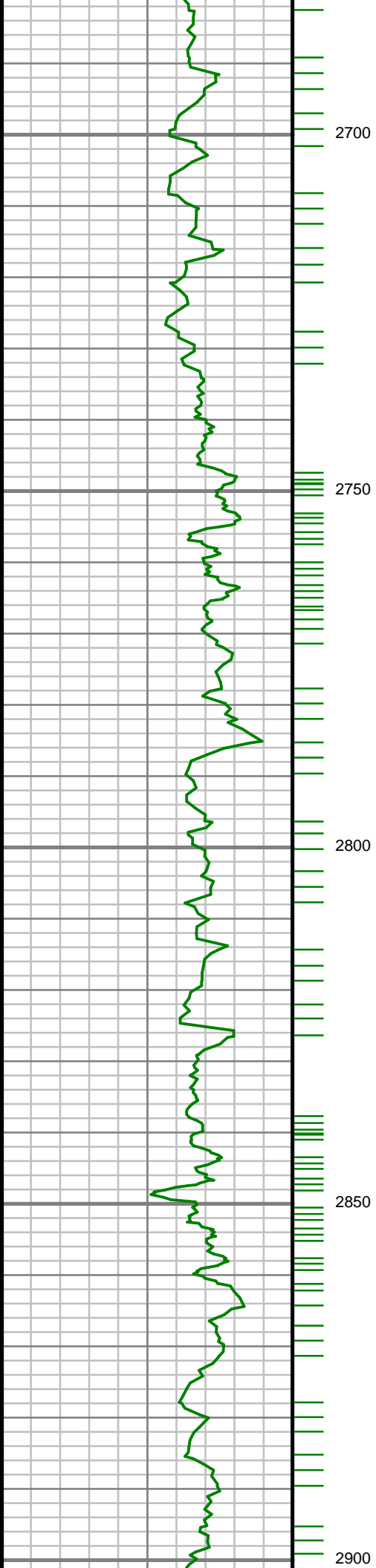
S: 29 MD: 2344.00 ft
Inc: 14.93 deg Az:
149.01 deg TVD:
2330.13 ft

S: 30 MD: 2438.00 ft
Inc: 17.74 deg Az:
148.91 deg TVD:
2420.32 ft



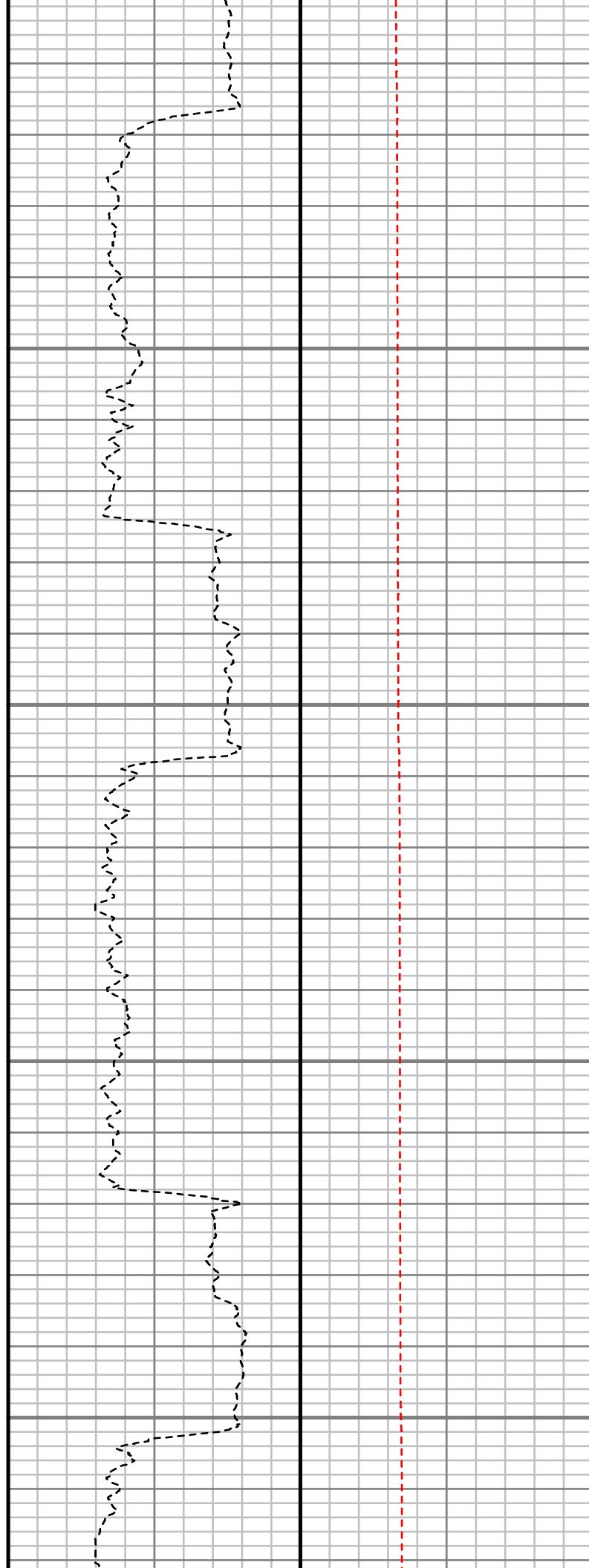
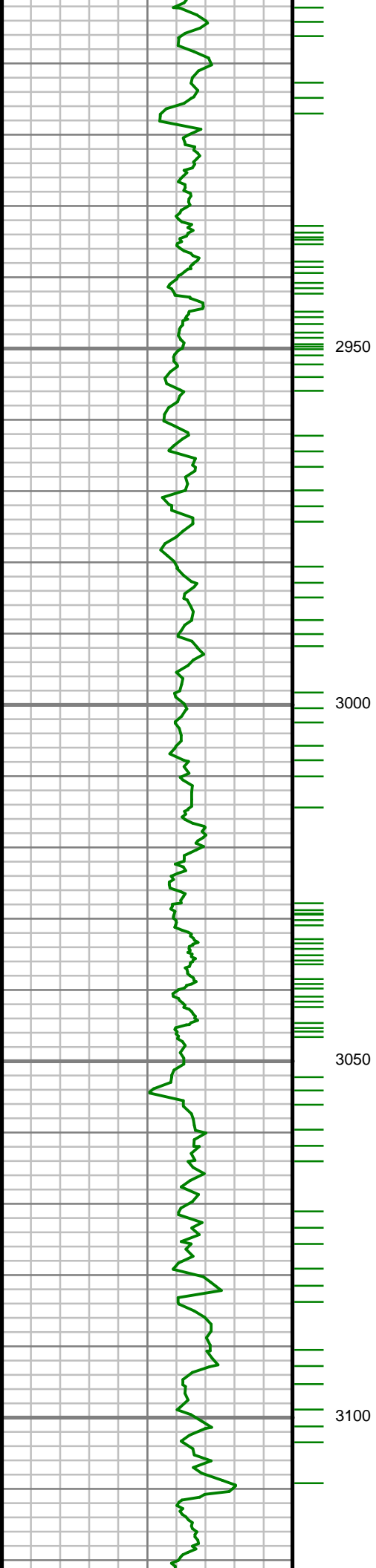
S: 31 MD: 2533.00 ft
Inc: 16.09 deg Az:
145.31 deg TVD:
2511.21 ft

S: 32 MD: 2627.00 ft
Inc: 15.50 deg Az:
147.96 deg TVD:
2601.66 ft



S: 33 MD: 2722.00 ft
Inc: 15.61 deg Az:
147.54 deg TVD:
2693.19 ft

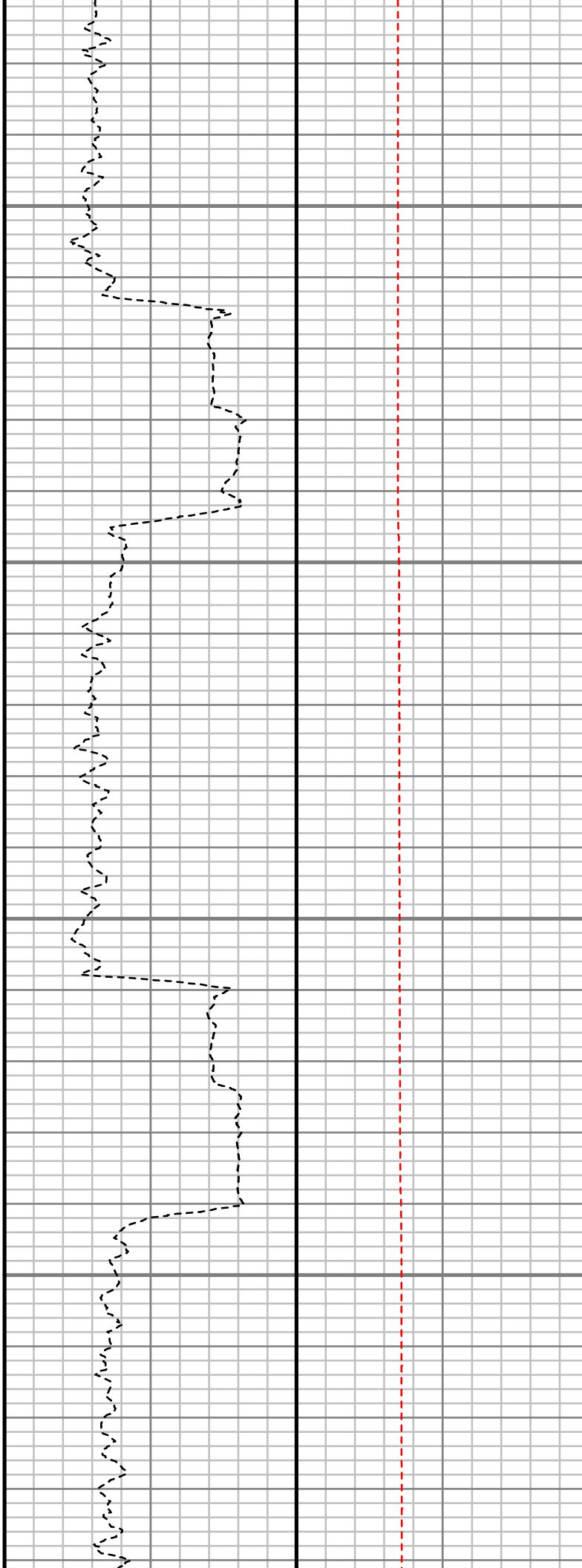
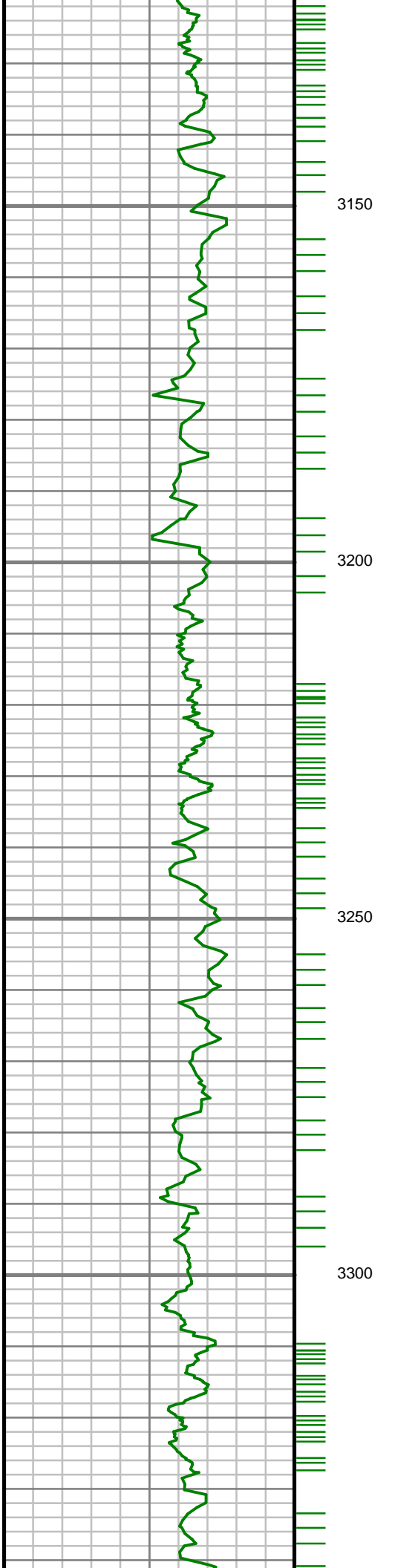
S: 34 MD: 2816.00 ft
Inc: 15.12 deg Az:
144.83 deg TVD:
2783.83 ft



S: 35 MD: 2910.00 ft
Inc: 15.72 deg Az:
144.26 deg TVD:
2874.44 ft

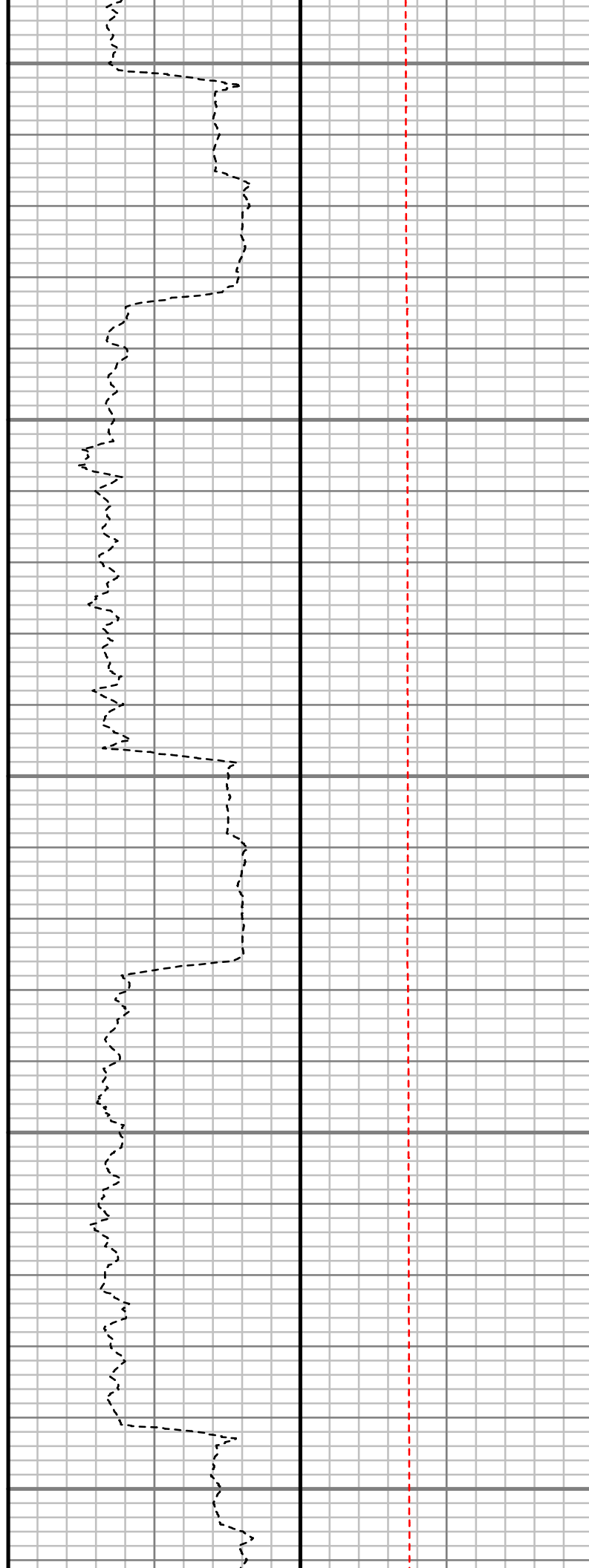
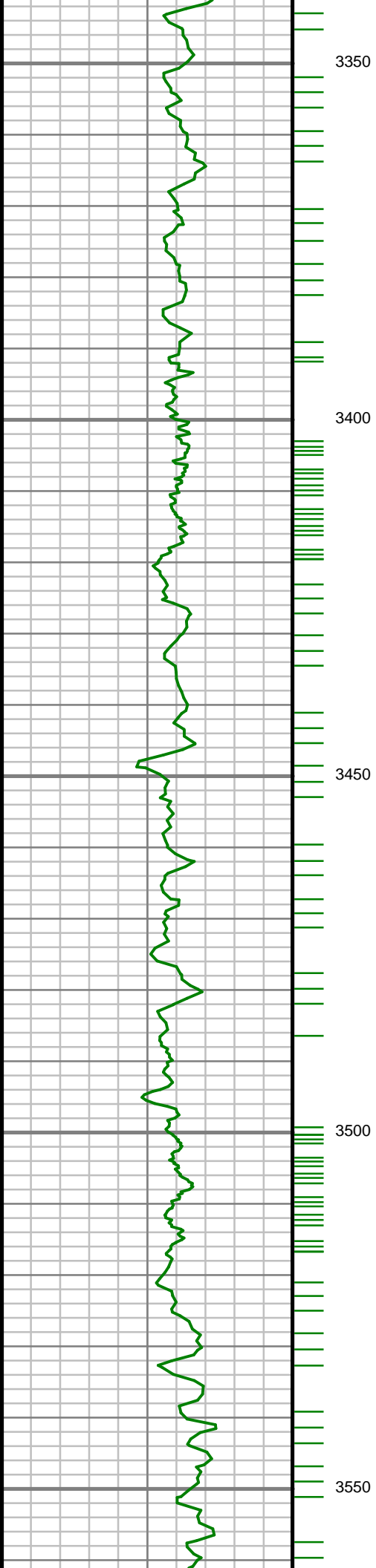
S: 36 MD: 3005.00 ft
Inc: 16.65 deg Az:
141.50 deg TVD:
2965.67 ft

S: 37 MD: 3099.00 ft
Inc: 17.15 deg Az:
145.86 deg TVD:
3055.62 ft



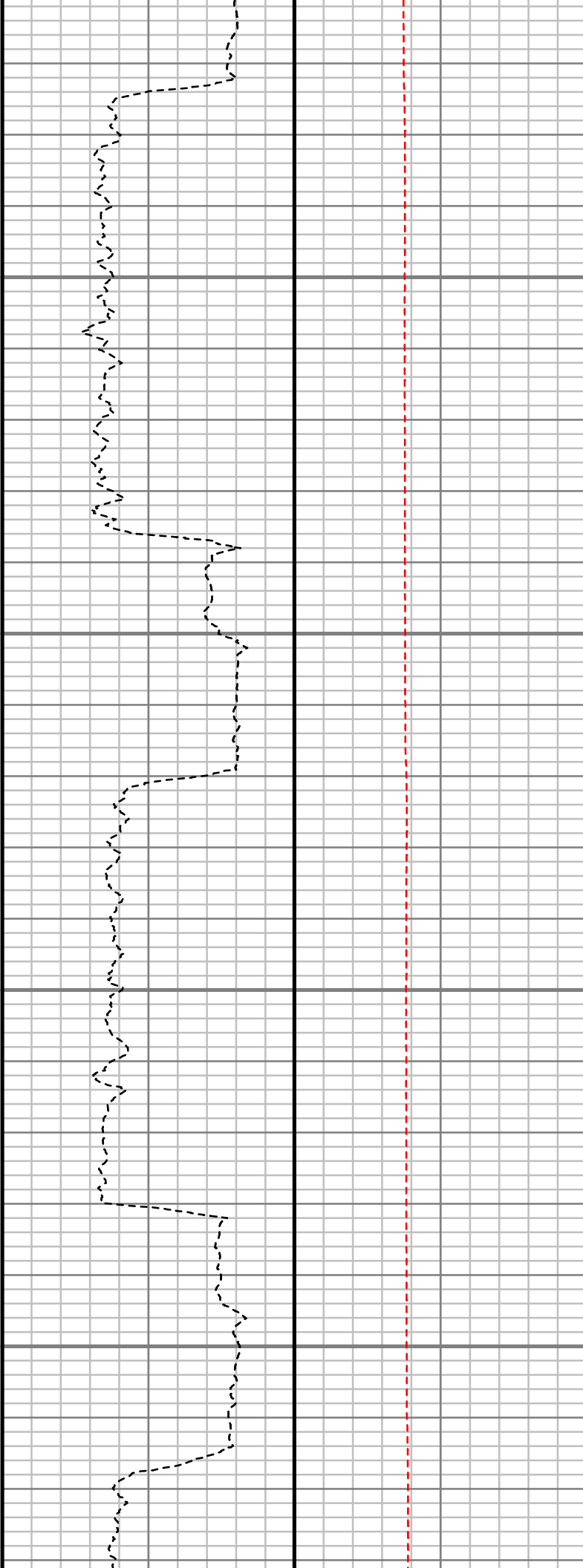
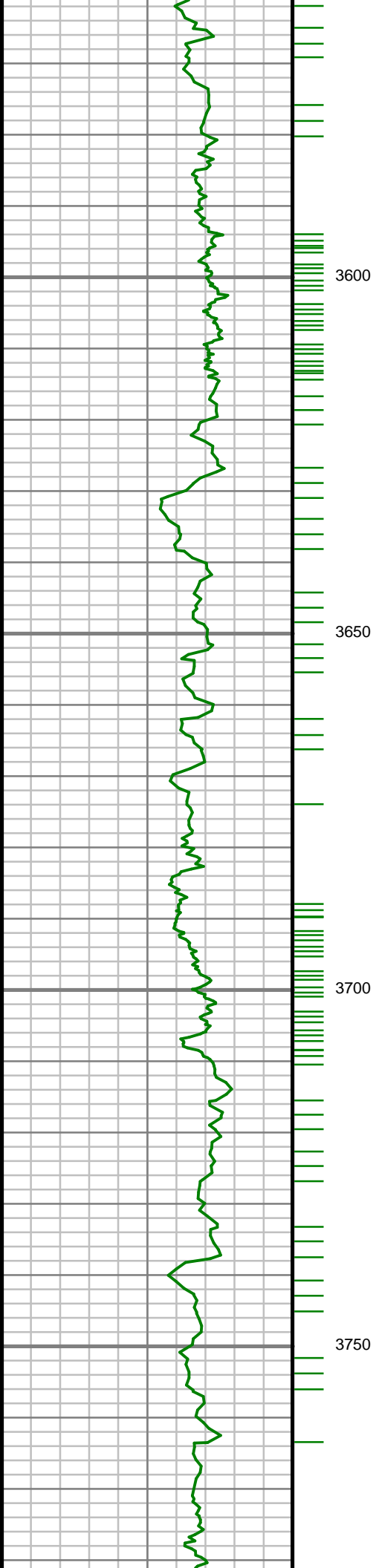
S: 38 MD: 3194.00 ft
Inc: 16.48 deg Az:
150.30 deg TVD:
3146.56 ft

S: 39 MD: 3288.00 ft
Inc: 16.58 deg Az:
150.31 deg TVD:
3236.68 ft



S: 40 MD: 3383.00 ft
Inc: 16.15 deg Az:
148.06 deg TVD:
3327.83 ft

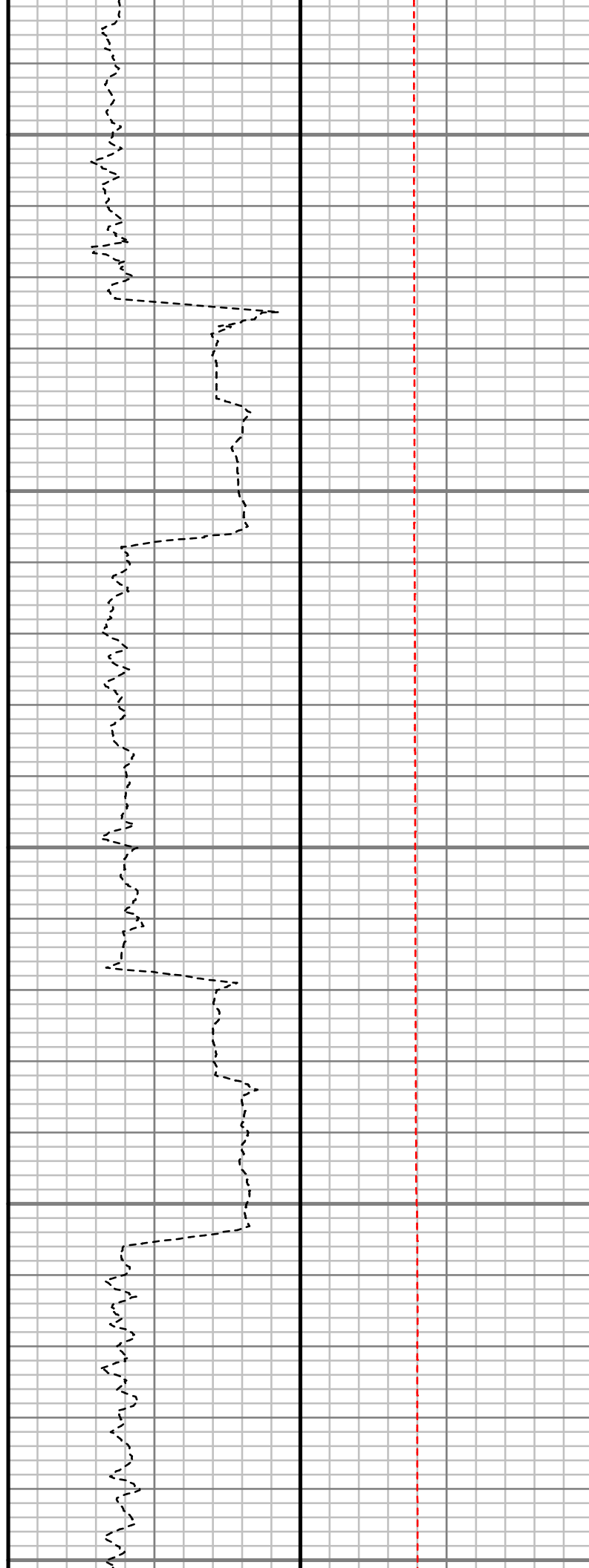
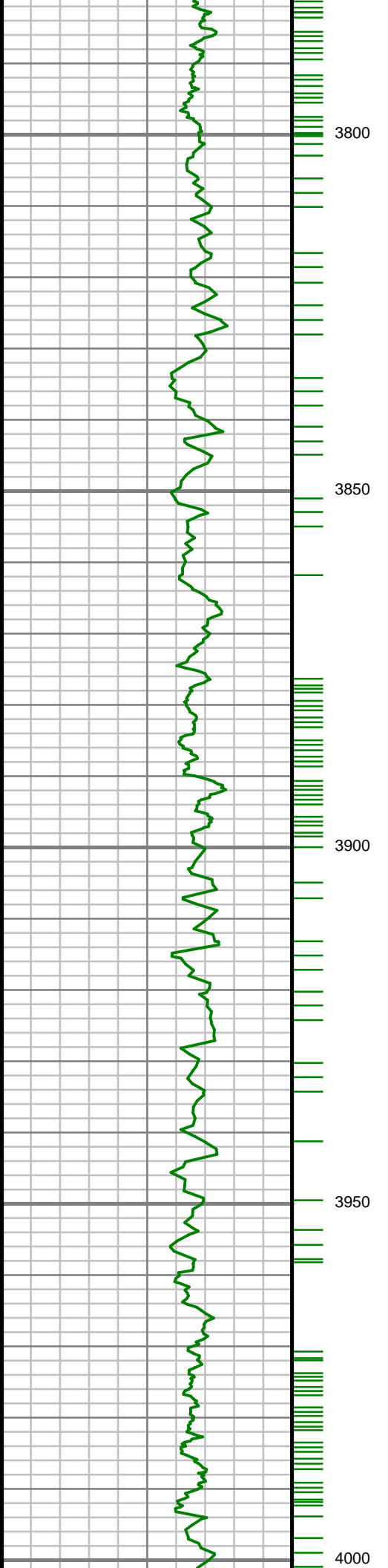
S: 41 MD: 3477.00 ft
Inc: 16.27 deg Az:
147.54 deg TVD:
3418.09 ft



S: 42 MD: 3571.00 ft
Inc: 15.53 deg Az:
150.84 deg TVD:
3508.50 ft

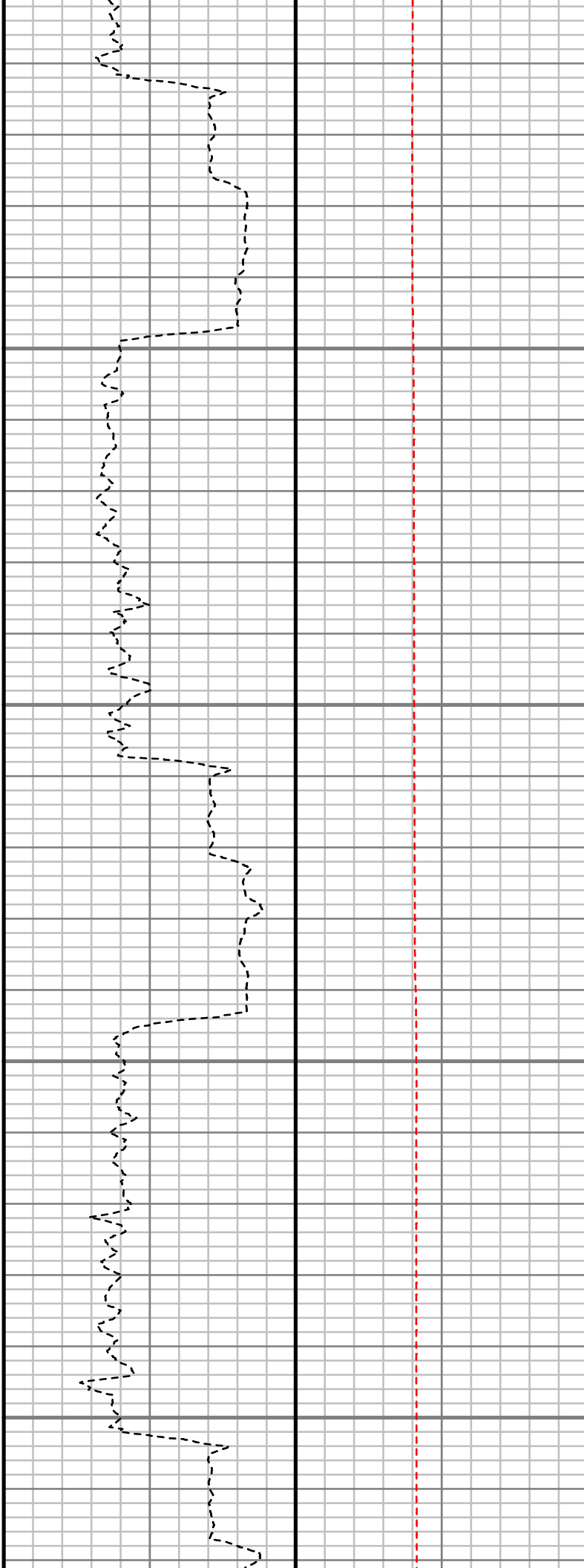
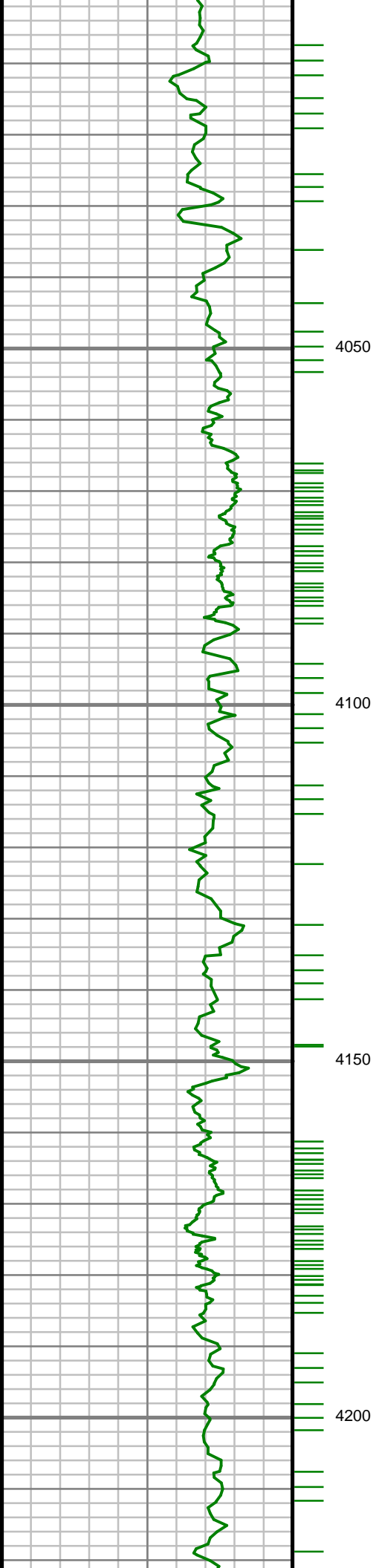
S: 43 MD: 3666.00 ft
Inc: 15.43 deg Az:
149.89 deg TVD:
3600.05 ft

S: 44 MD: 3760.00 ft
Inc: 15.74 deg Az:
153.27 deg TVD:
3690.60 ft



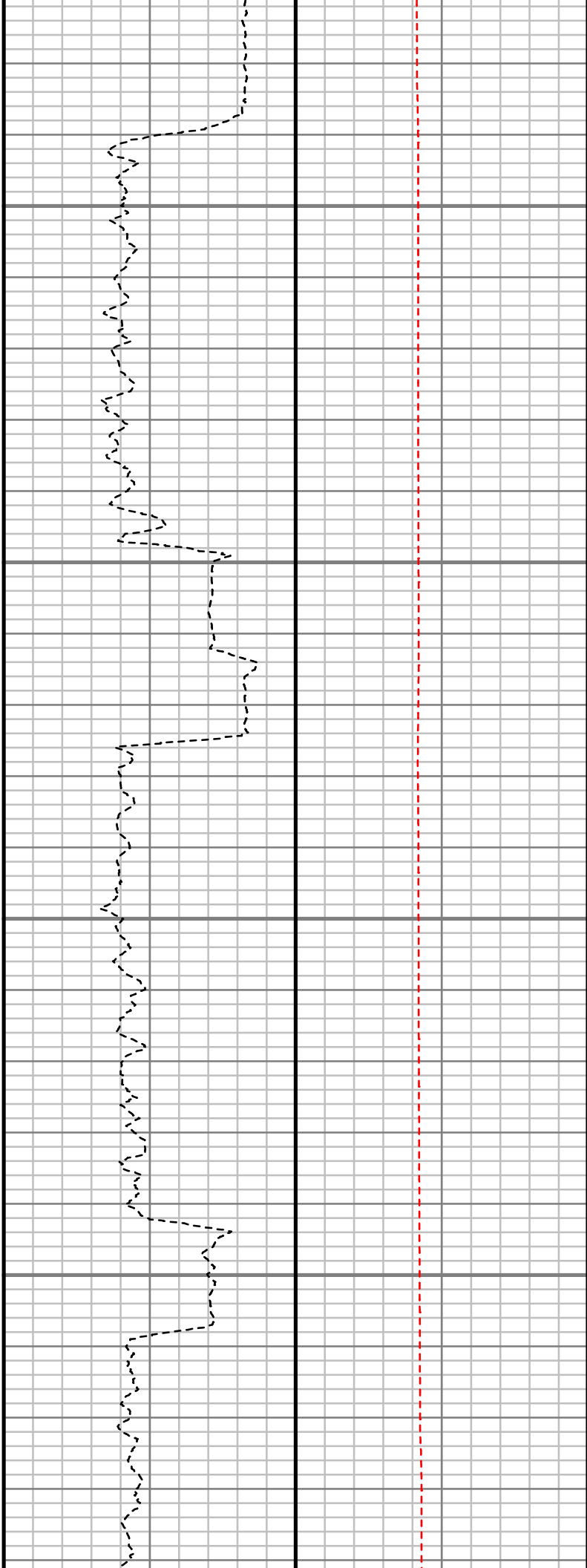
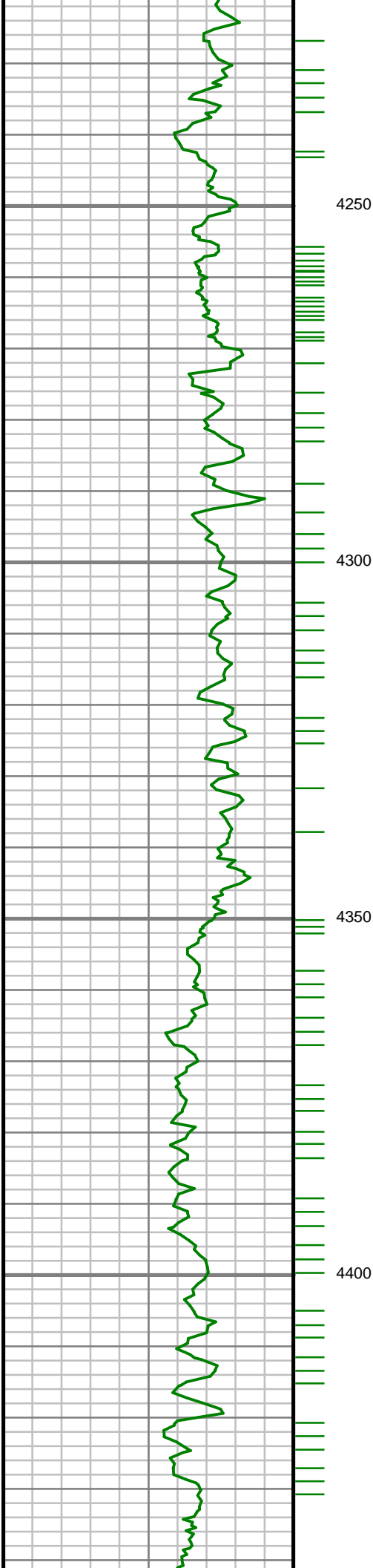
S: 45 MD: 3855.00 ft
Inc: 14.52 deg Az:
151.26 deg TVD:
3782.30 ft

S: 46 MD: 3949.00 ft
Inc: 14.64 deg Az:
148.11 deg TVD:
3873.28 ft



S: 47 MD: 4044.00 ft
Inc: 14.84 deg Az:
150.91 deg TVD:
3965.15 ft

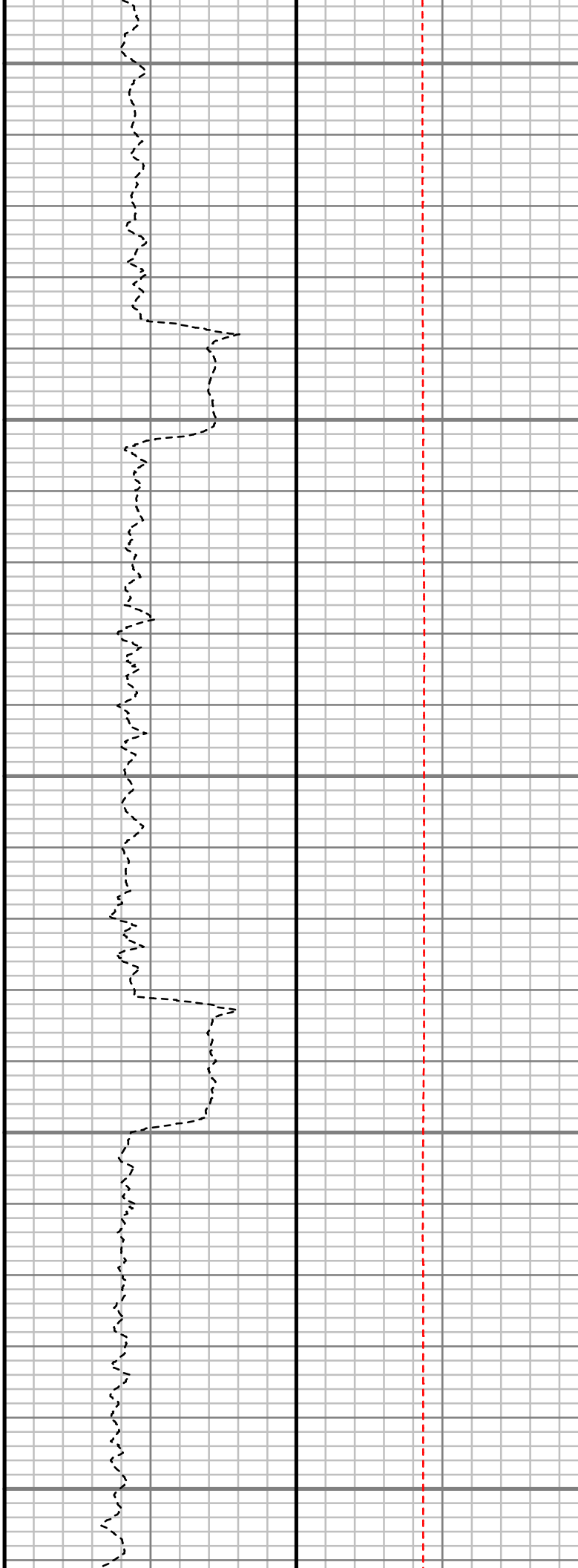
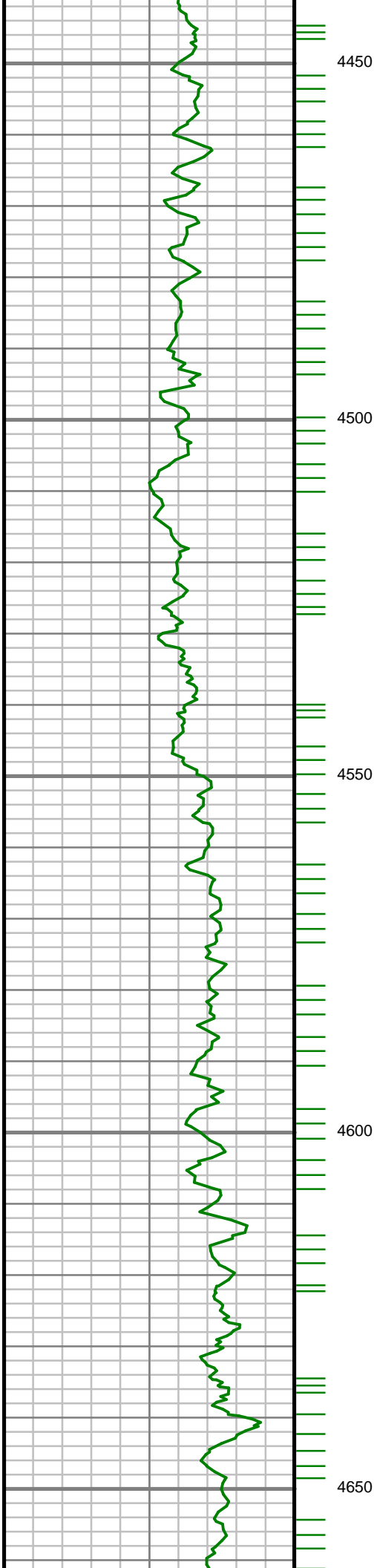
S: 48 MD: 4138.00 ft
Inc: 14.17 deg Az:
151.18 deg TVD:
4056.16 ft



S: 49 MD: 4233.00 ft
Inc: 14.51 deg Az:
153.58 deg TVD:
4148.20 ft

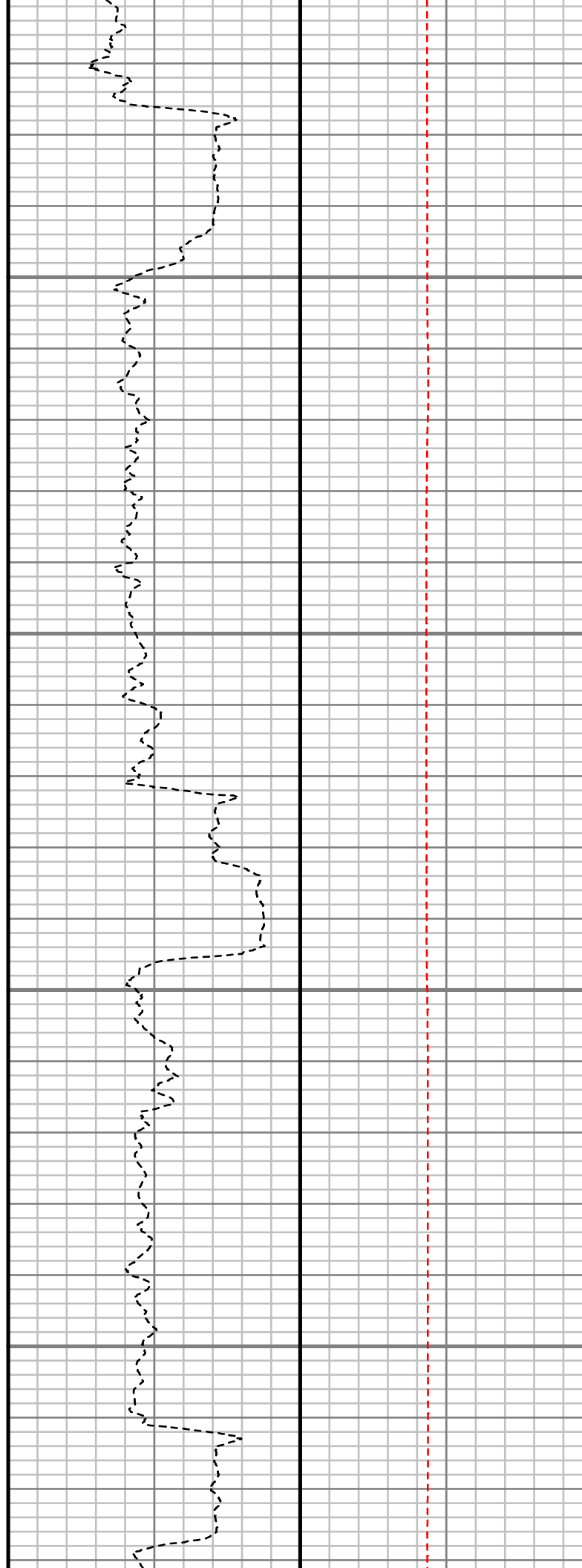
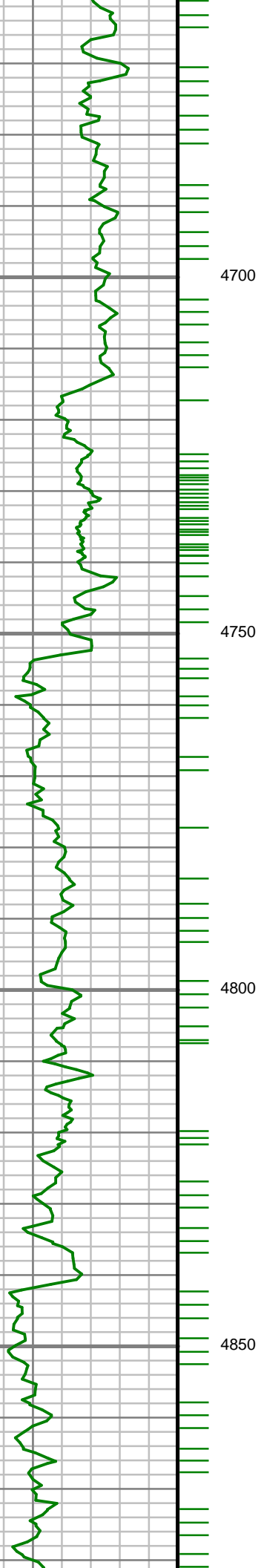
S: 50 MD: 4327.00 ft
Inc: 14.11 deg Az:
154.21 deg TVD:
4239.28 ft

S: 51 MD: 4421.00 ft
Inc: 12.01 deg Az:
154.91 deg TVD:
4330.84 ft



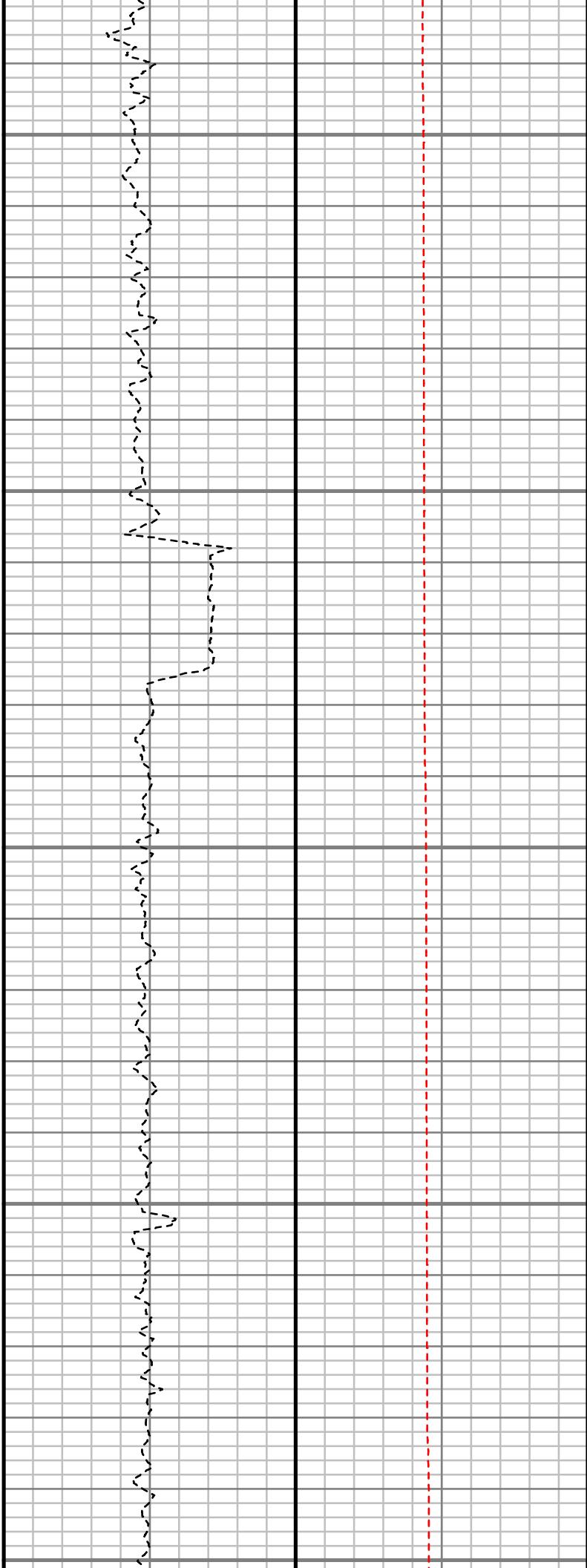
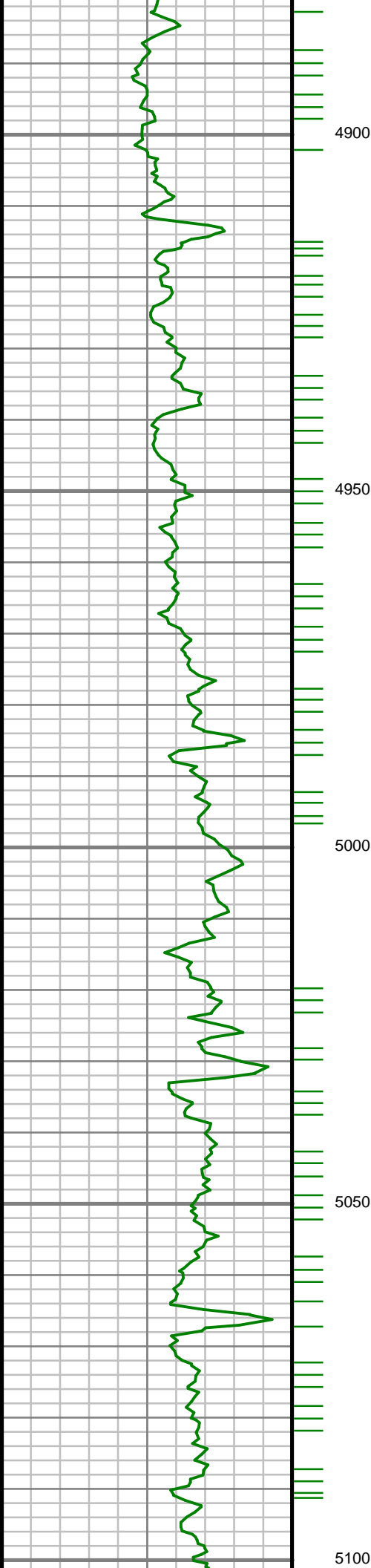
S: 52 MD: 4516.00 ft
Inc: 10.87 deg Az:
156.72 deg TVD:
4423.95 ft

S: 53 MD: 4610.00 ft
Inc: 8.98 deg Az:
162.10 deg TVD:
4516.55 ft



S: 54 MD: 4705.00 ft
Inc: 6.73 deg Az:
164.72 deg TVD:
4610.65 ft

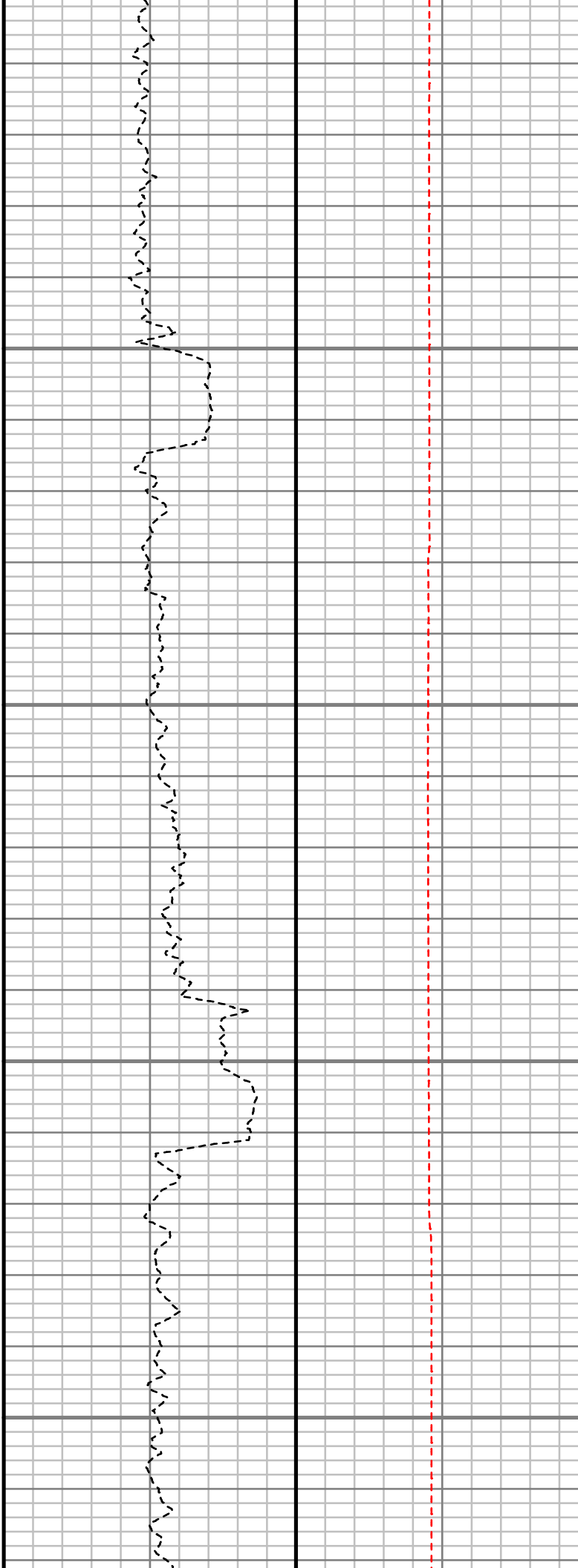
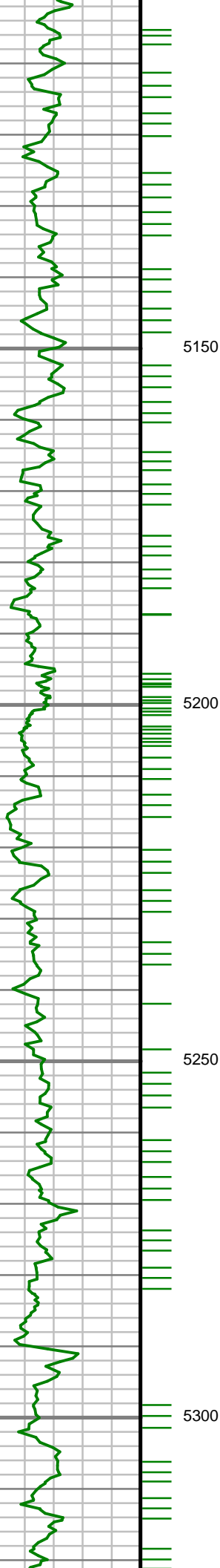
S: 55 MD: 4799.00 ft
Inc: 4.88 deg Az:
156.08 deg TVD:
4704.16 ft



S: 56 MD: 4894.00 ft
Inc: 3.98 deg Az:
157.58 deg TVD:
4798.88 ft

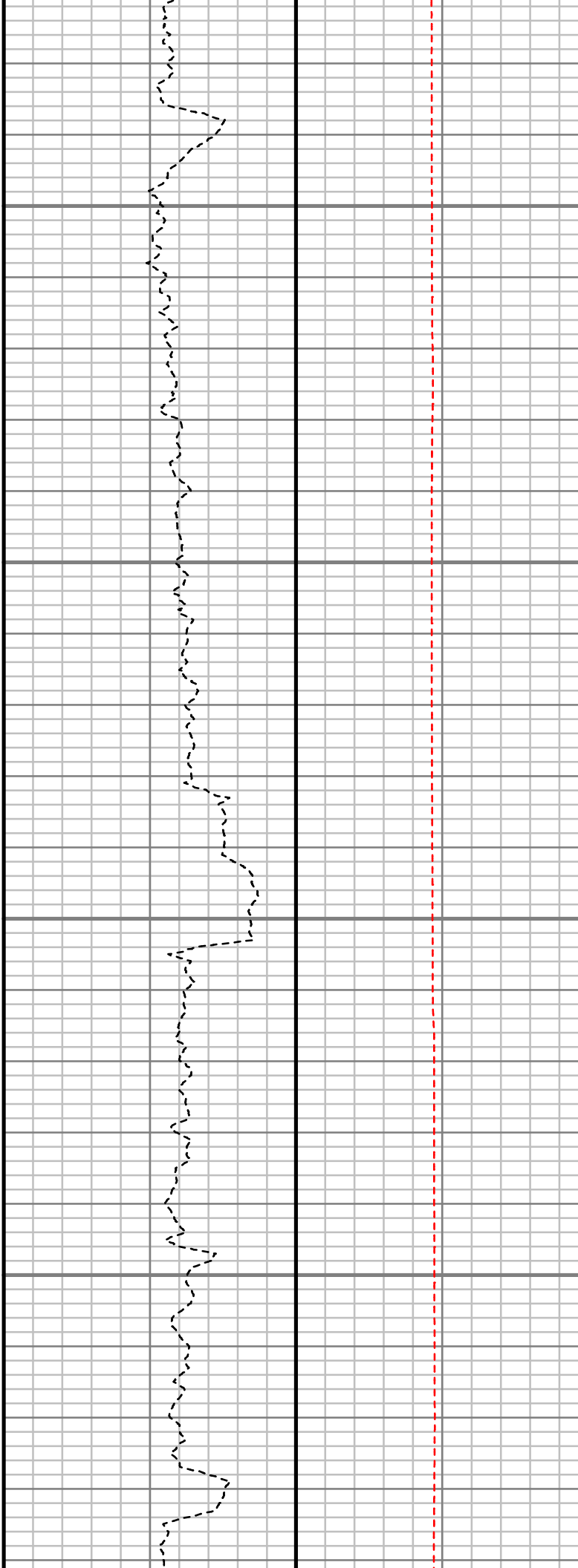
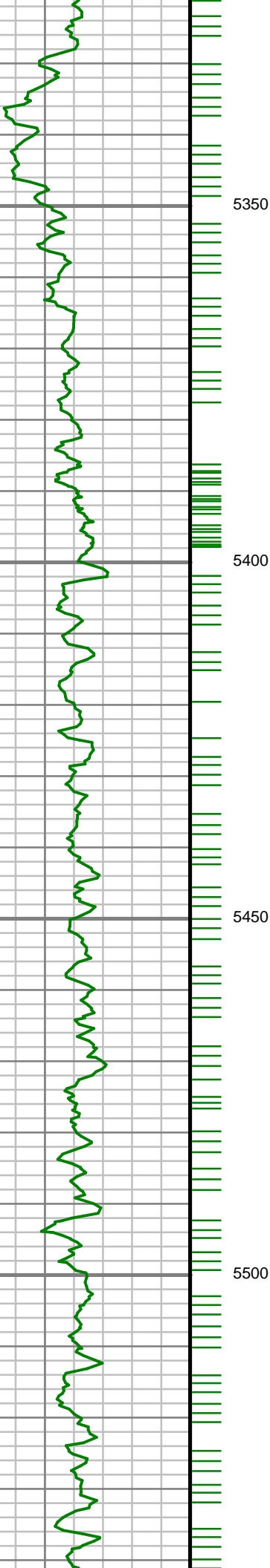
S: 57 MD: 4988.00 ft
Inc: 3.37 deg Az:
155.43 deg TVD:
4892.69 ft

S: 58 MD: 5082.00 ft
Inc: 2.84 deg Az:
167.55 deg TVD:
4986.55 ft



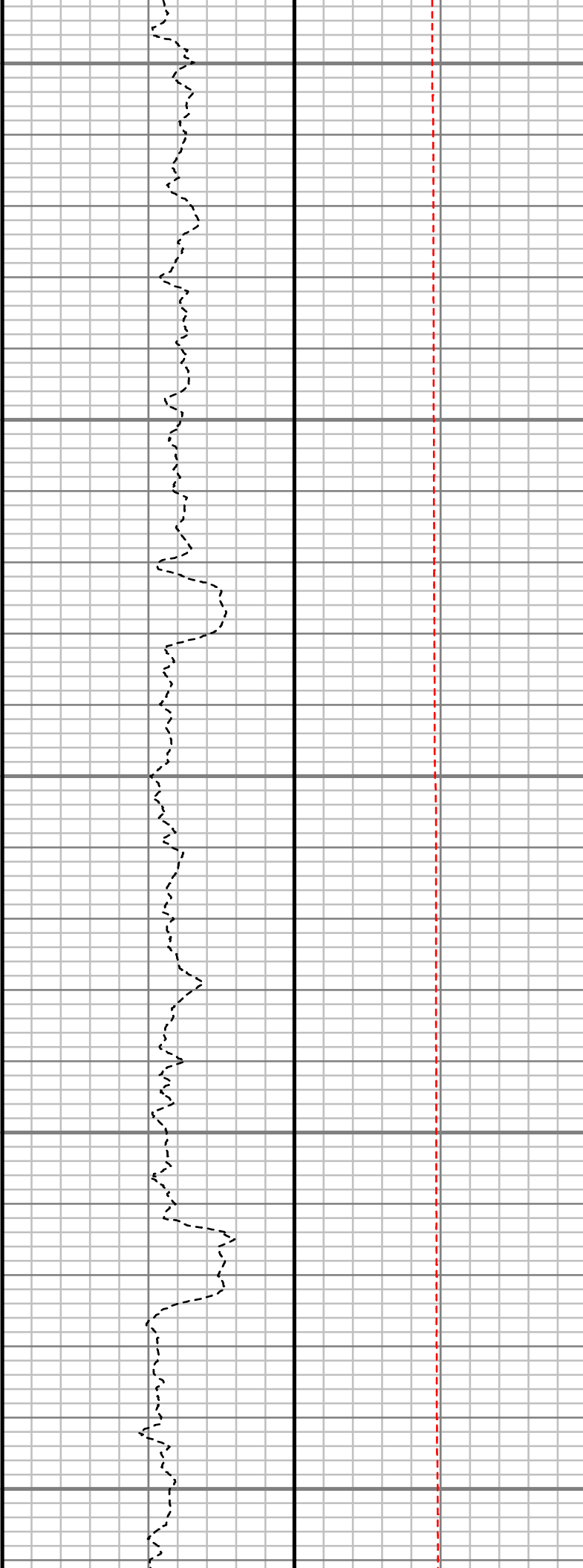
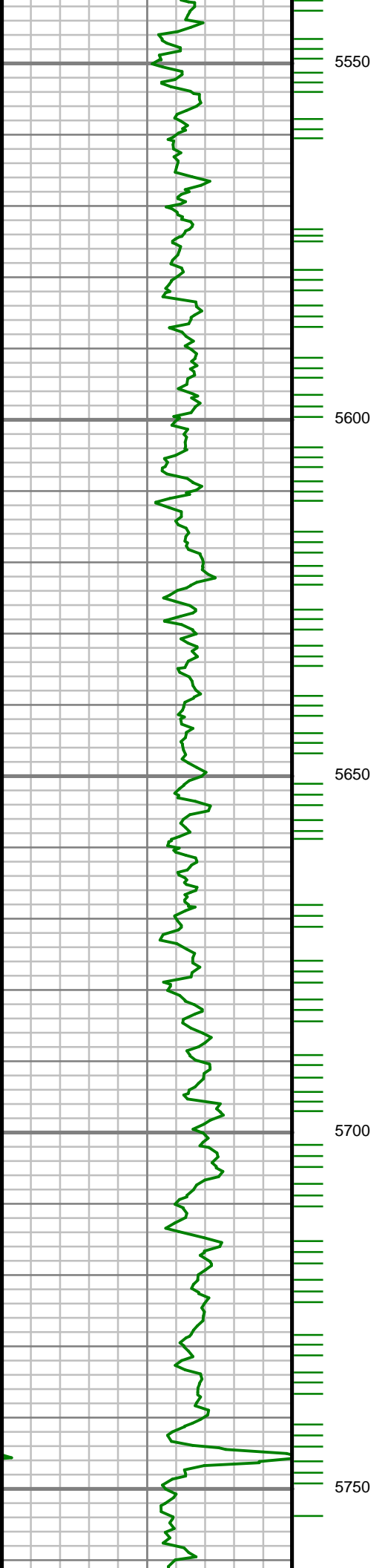
S: 59 MD: 5177.00 ft
Inc: 2.25 deg Az:
174.67 deg TVD:
5081.45 ft

S: 60 MD: 5271.00 ft
Inc: 2.54 deg Az:
147.20 deg TVD:
5175.37 ft



S: 61 MD: 5366.00 ft
Inc: 2.84 deg Az:
133.64 deg TVD:
5270.27 ft

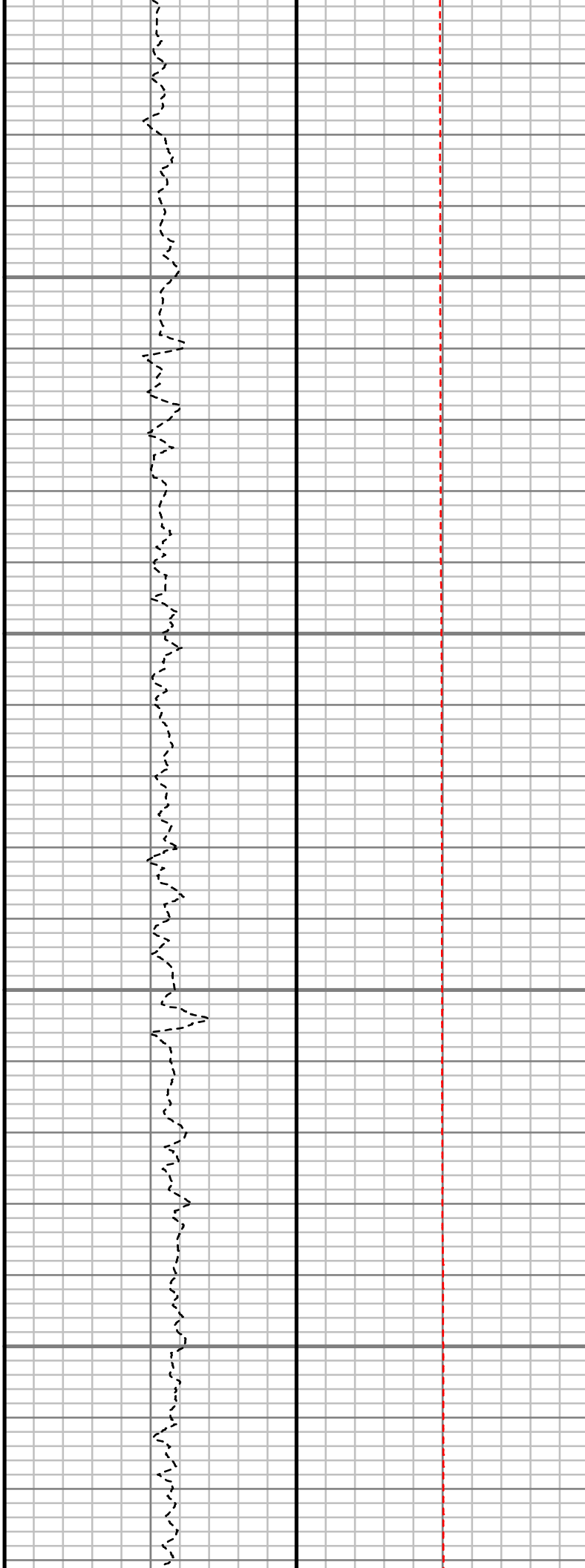
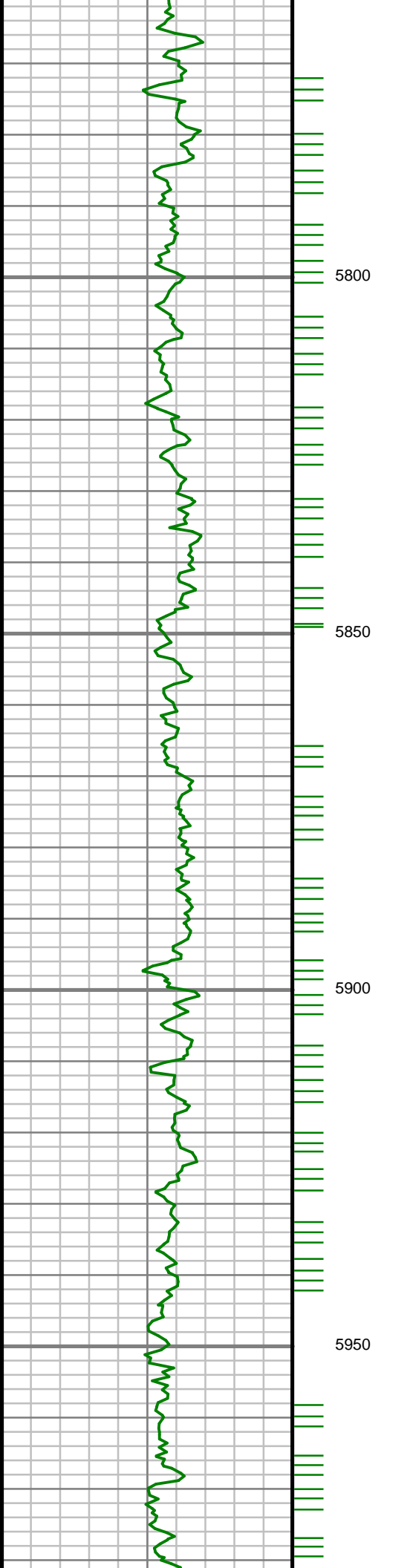
S: 62 MD: 5460.00 ft
Inc: 2.22 deg Az:
101.94 deg TVD:
5364.18 ft



S: 63 MD: 5555.00 ft
Inc: 1.95 deg Az: 86.75
deg TVD: 5459.12 ft

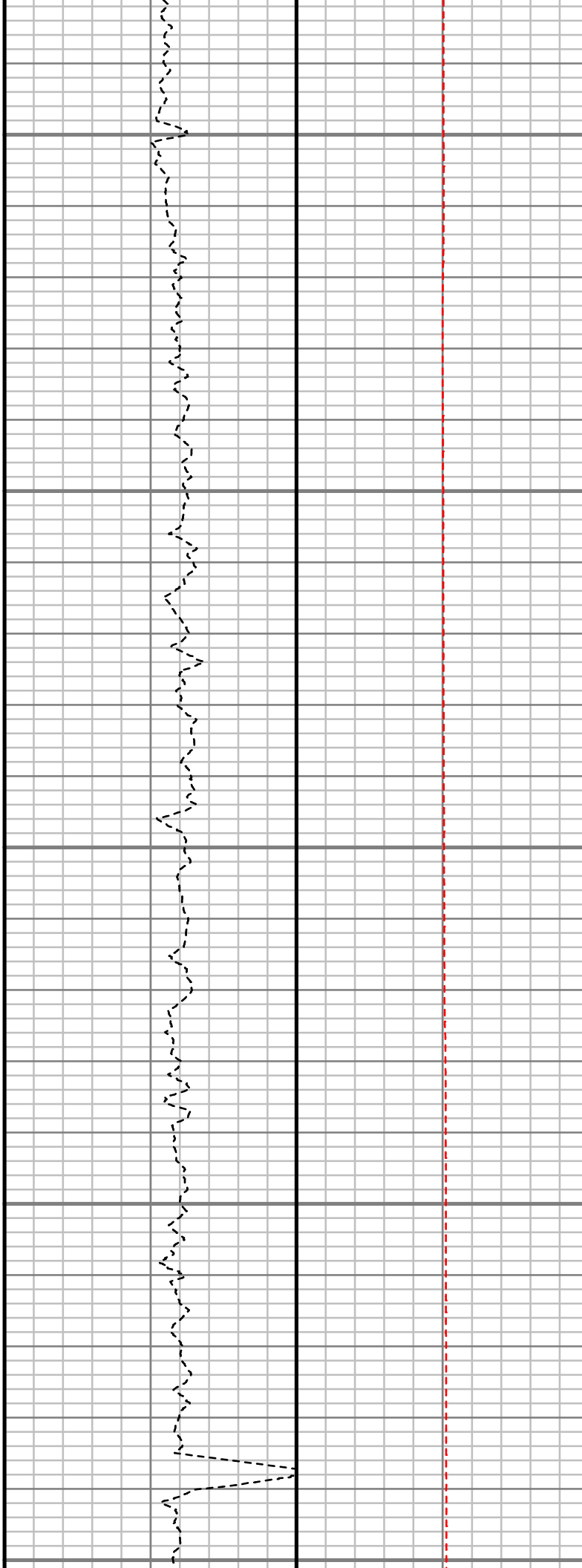
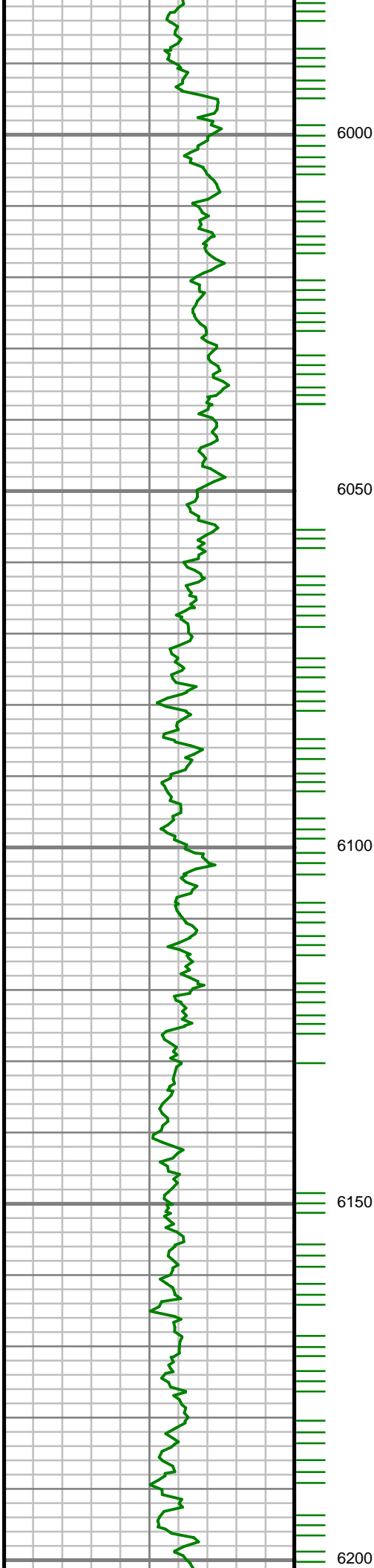
S: 64 MD: 5649.00 ft
Inc: 1.26 deg Az: 69.61
deg TVD: 5553.08 ft

S: 65 MD: 5744.00 ft
Inc: 0.99 deg Az: 54.03
deg TVD: 5648.07 ft



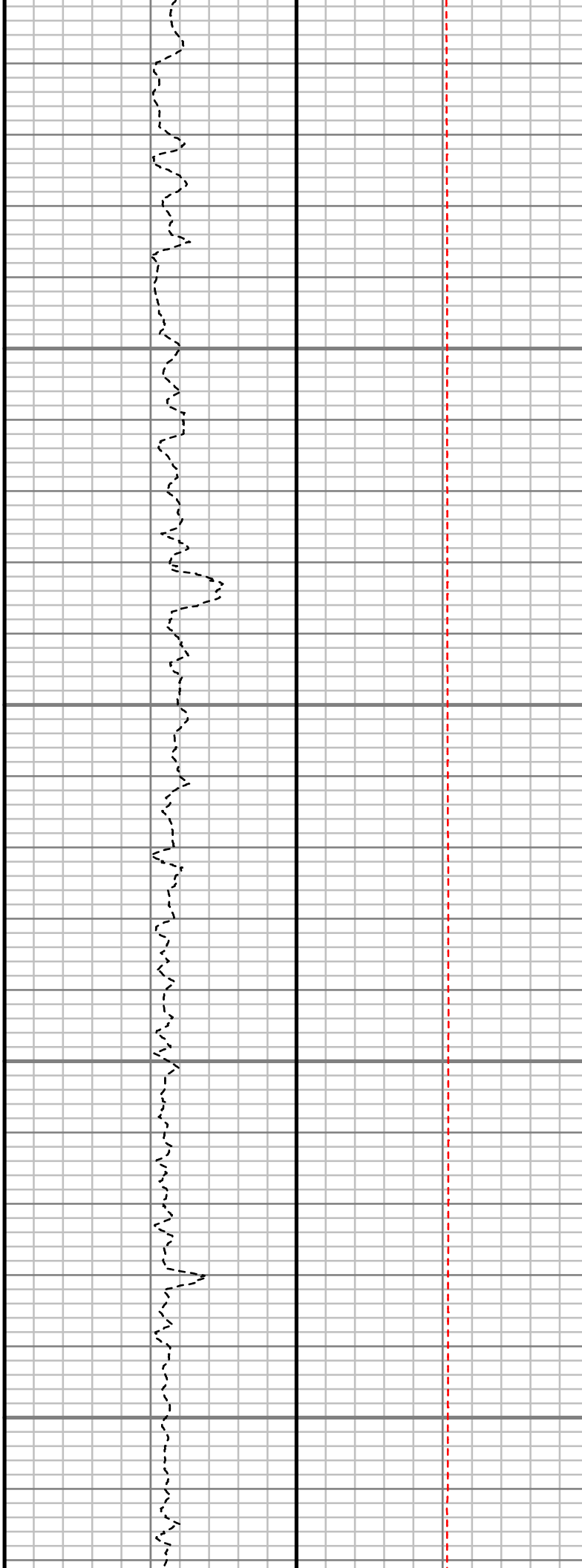
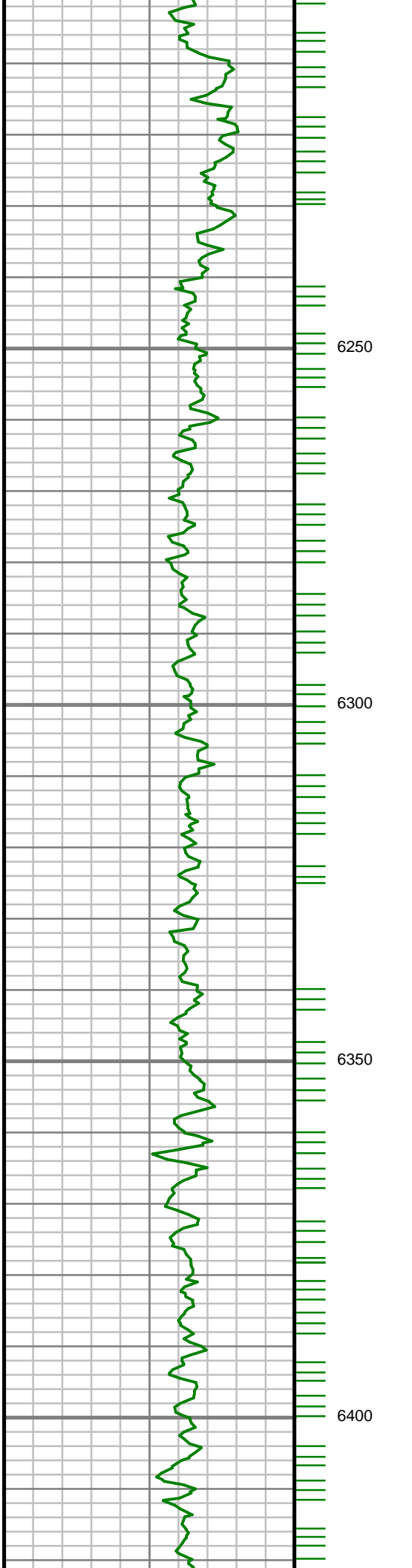
S: 66 MD: 5838.00 ft
Inc: 0.89 deg Az: 38.66
deg TVD: 5742.05 ft

S: 67 MD: 5932.00 ft
Inc: 0.71 deg Az: 13.21
deg TVD: 5836.05 ft



S: 68 MD: 6027.00 ft
Inc: 0.67 deg Az: 16.06
deg TVD: 5931.04 ft

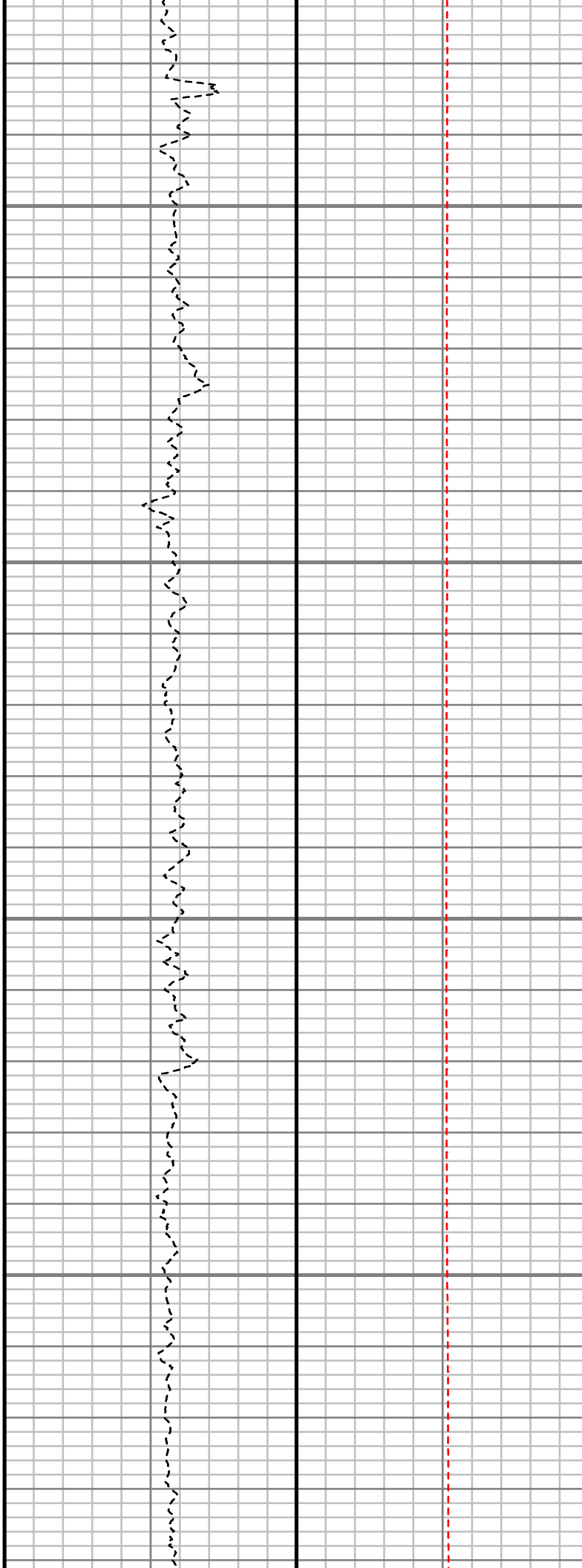
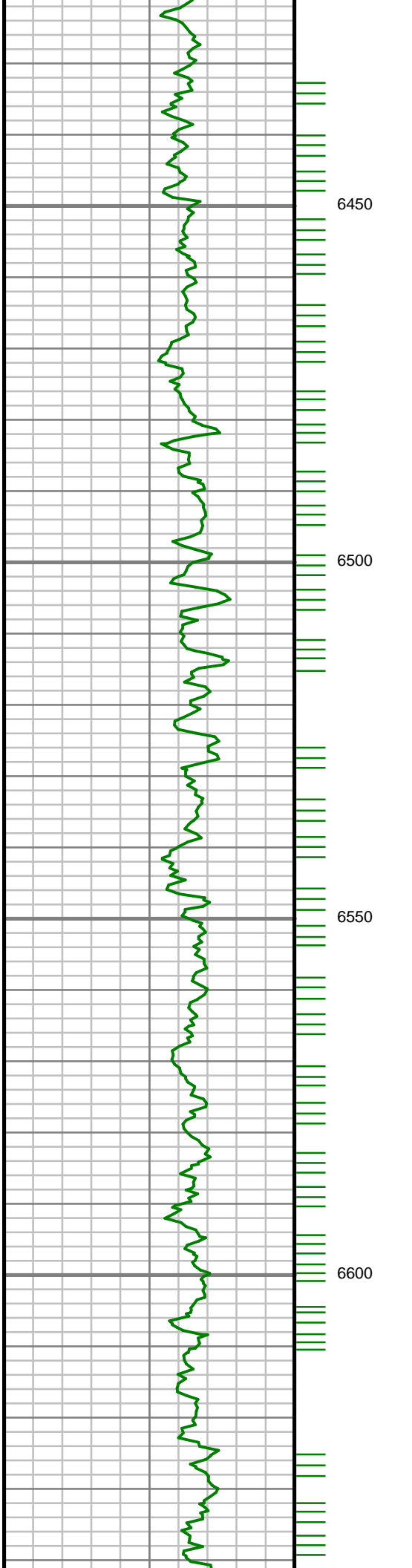
S: 69 MD: 6122.00 ft
Inc: 1.12 deg Az: 1.77
deg TVD: 6026.03 ft



S: 70 MD: 6216.00 ft
Inc: 0.98 deg Az:
353.66 deg TVD:
6120.01 ft

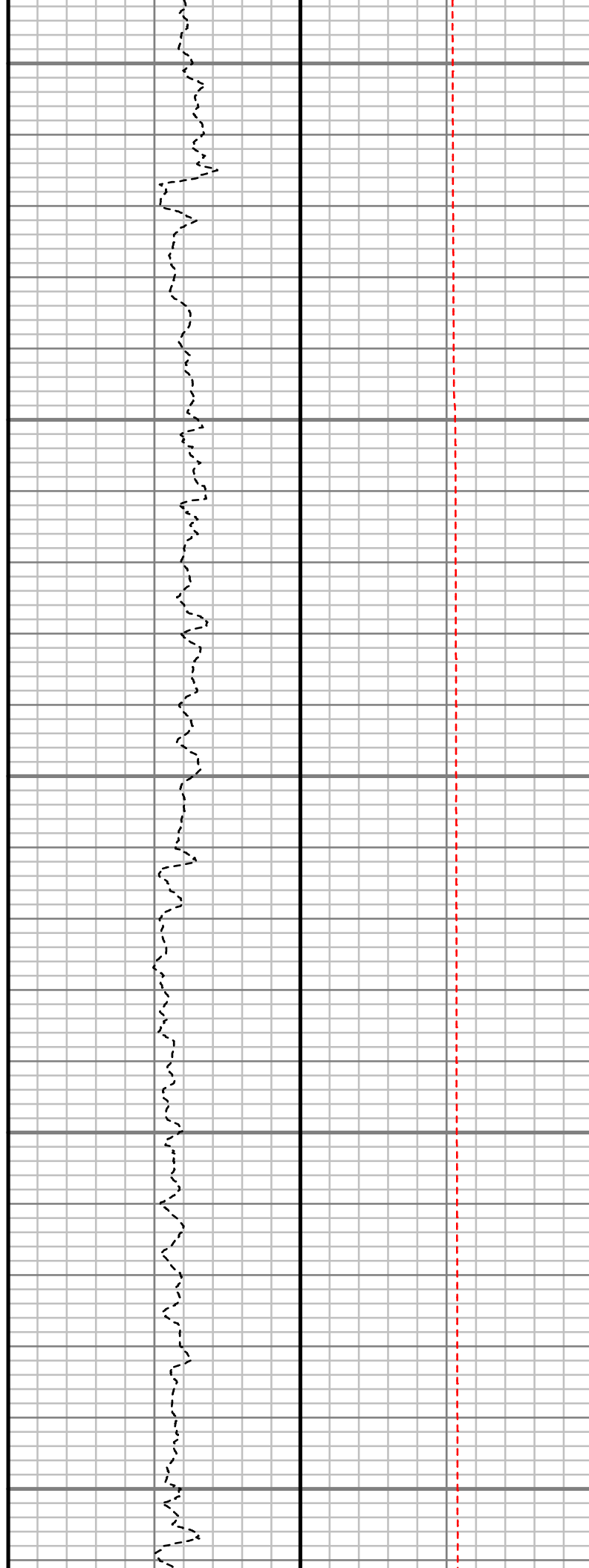
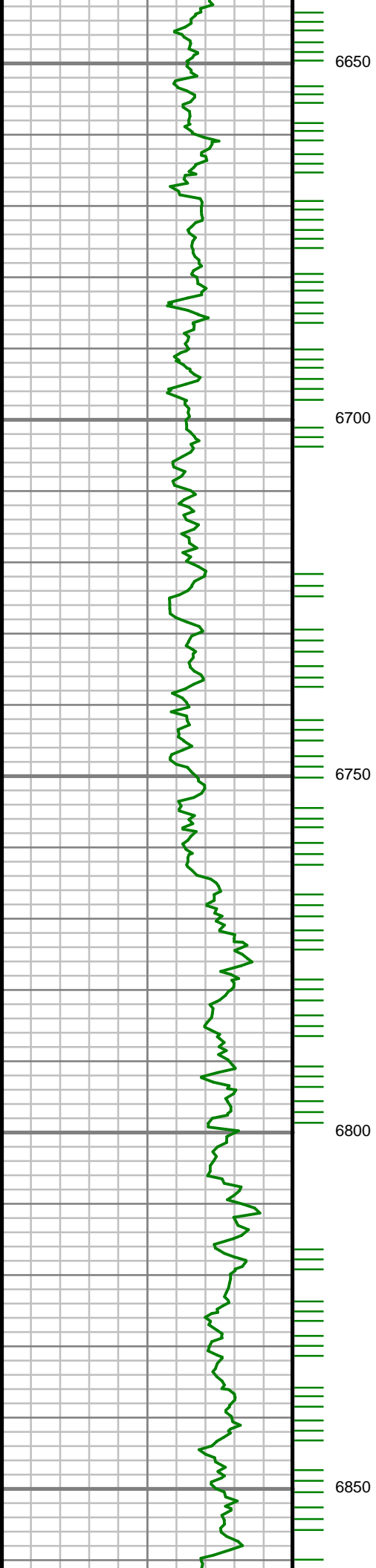
S: 71 MD: 6311.00 ft
Inc: 0.17 deg Az: 7.56
deg TVD: 6215.01 ft

S: 72 MD: 6405.00 ft
Inc: 0.18 deg Az:
358.37 deg TVD:
6309.00 ft



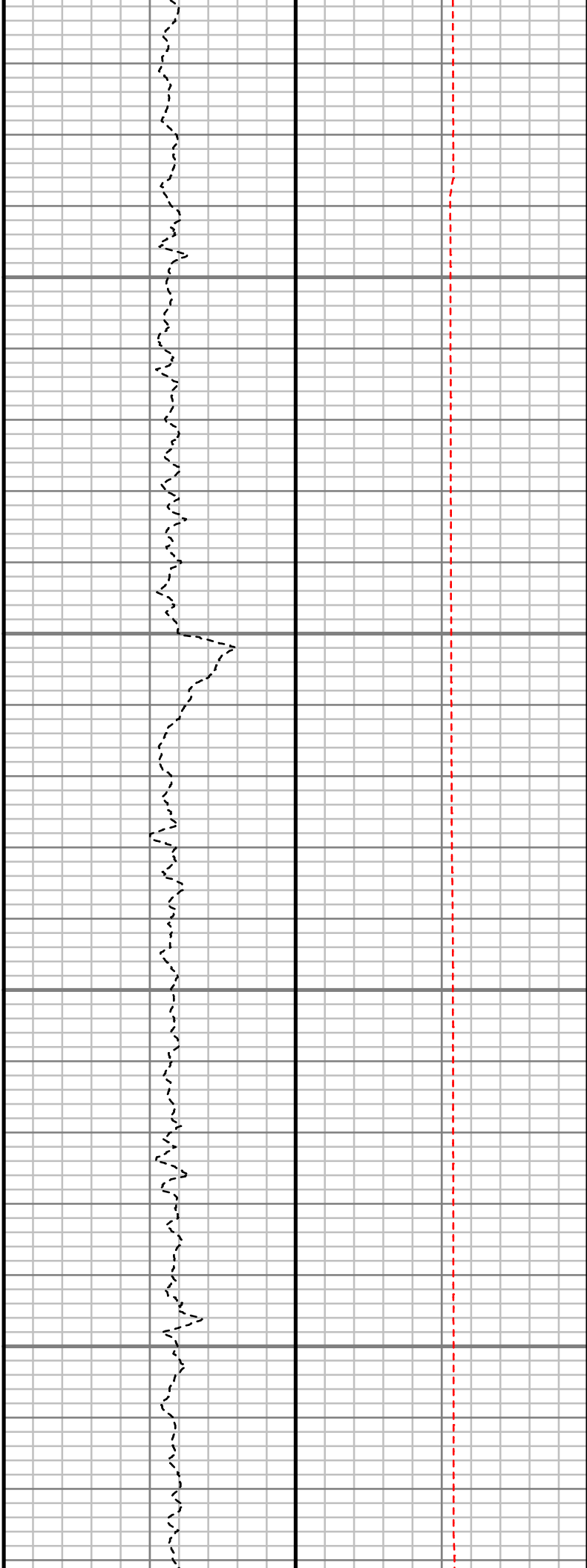
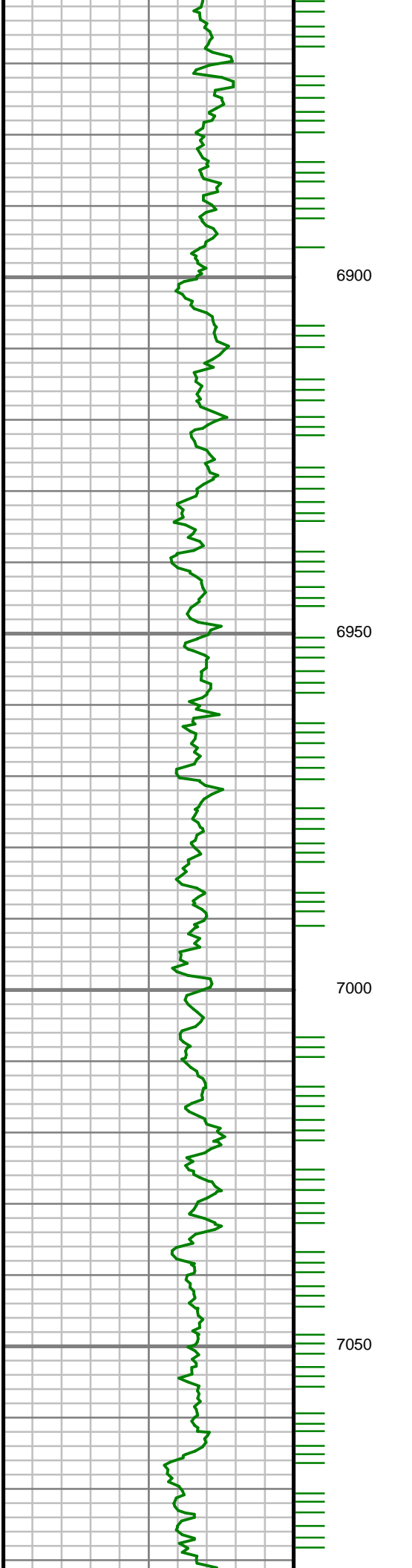
S: 73 MD: 6499.00 ft
Inc: 0.47 deg Az:
328.50 deg TVD:
6403.00 ft

S: 74 MD: 6594.00 ft
Inc: 0.52 deg Az:
323.32 deg TVD:
6498.00 ft



S: 75 MD: 6688.00 ft
Inc: 0.88 deg Az: 25.04
deg TVD: 6591.99 ft

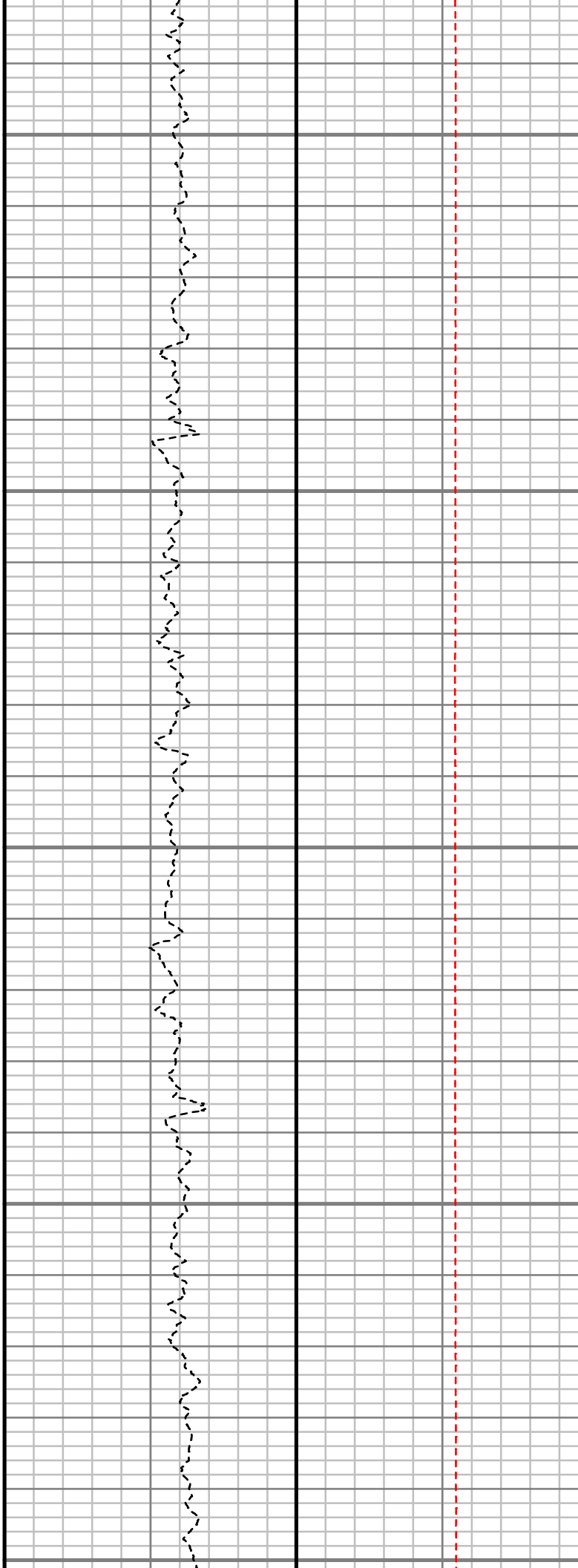
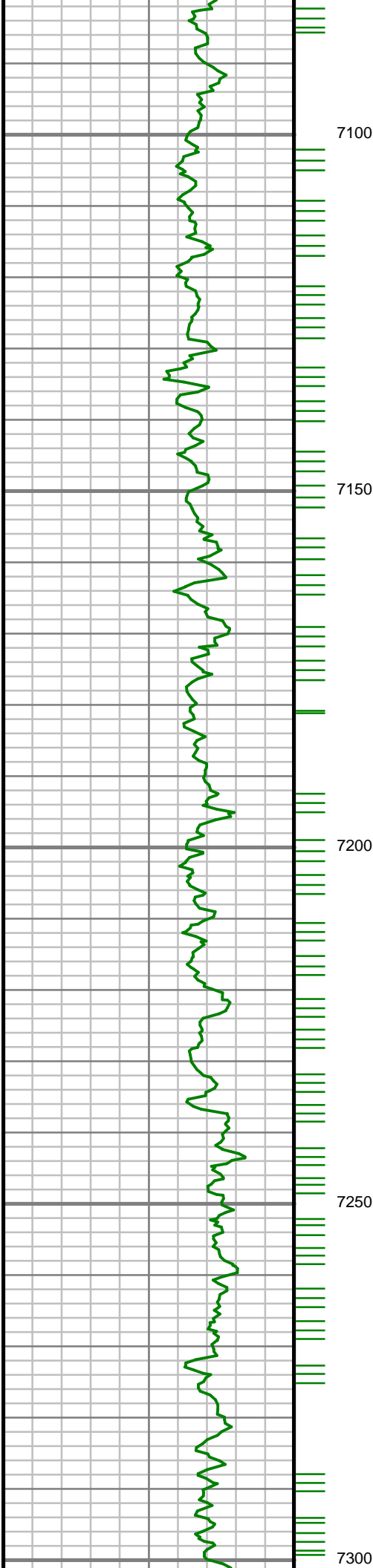
S: 76 MD: 6783.00 ft
Inc: 0.74 deg Az: 23.86
deg TVD: 6686.98 ft



S: 77 MD: 6877.00 ft
Inc: 0.61 deg Az: 36.21
deg TVD: 6780.98 ft

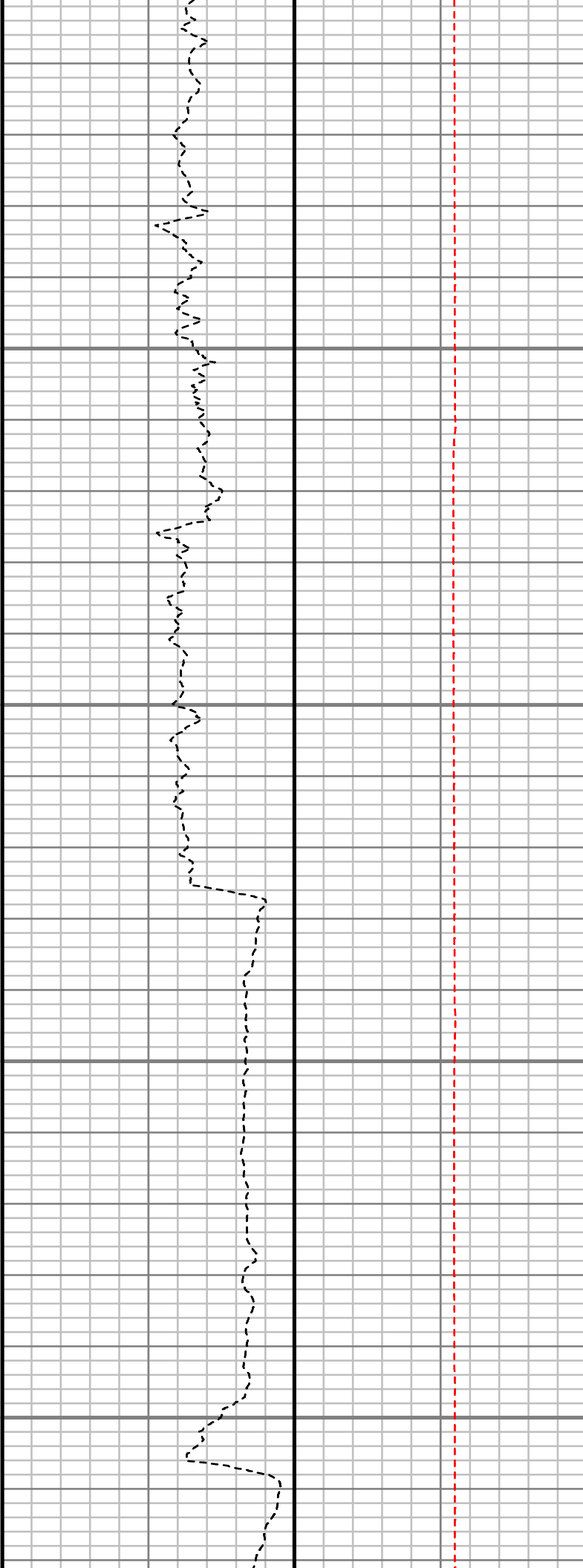
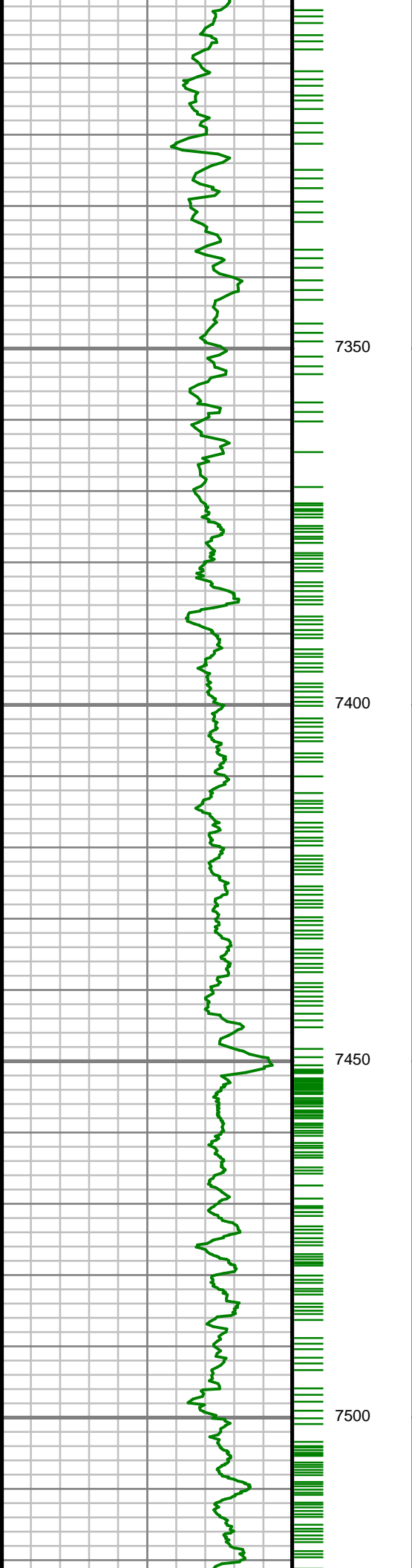
S: 78 MD: 6972.00 ft
Inc: 0.73 deg Az: 38.36
deg TVD: 6875.97 ft

S: 79 MD: 7066.00 ft
Inc: 0.34 deg Az: 31.25
deg TVD: 6969.97 ft



S: 80 MD: 7161.00 ft
Inc: 0.87 deg Az: 83.36
deg TVD: 7064.96 ft

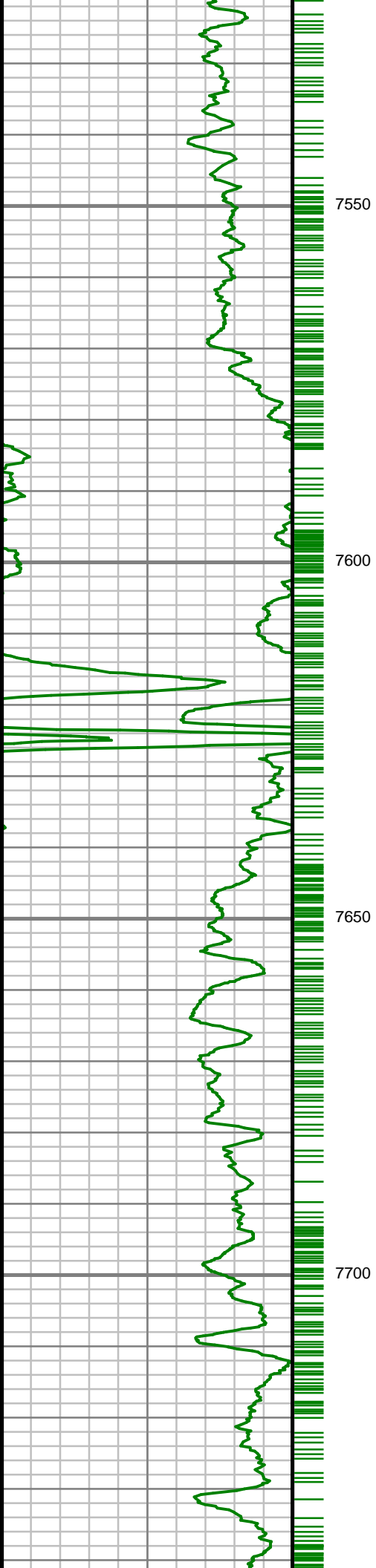
S: 81 MD: 7255.00 ft
Inc: 0.83 deg Az: 50.30
deg TVD: 7158.95 ft



S: 82 MD: 7349.00 ft
Inc: 1.08 deg Az: 60.57
deg TVD: 7252.94 ft

S: 83 MD: 7444.00 ft
Inc: 4.85 deg Az:
358.05 deg TVD:
7347.81 ft

S: 84 MD: 7491.00 ft
Inc: 11.32 deg Az:
359.54 deg TVD:
7394.32 ft



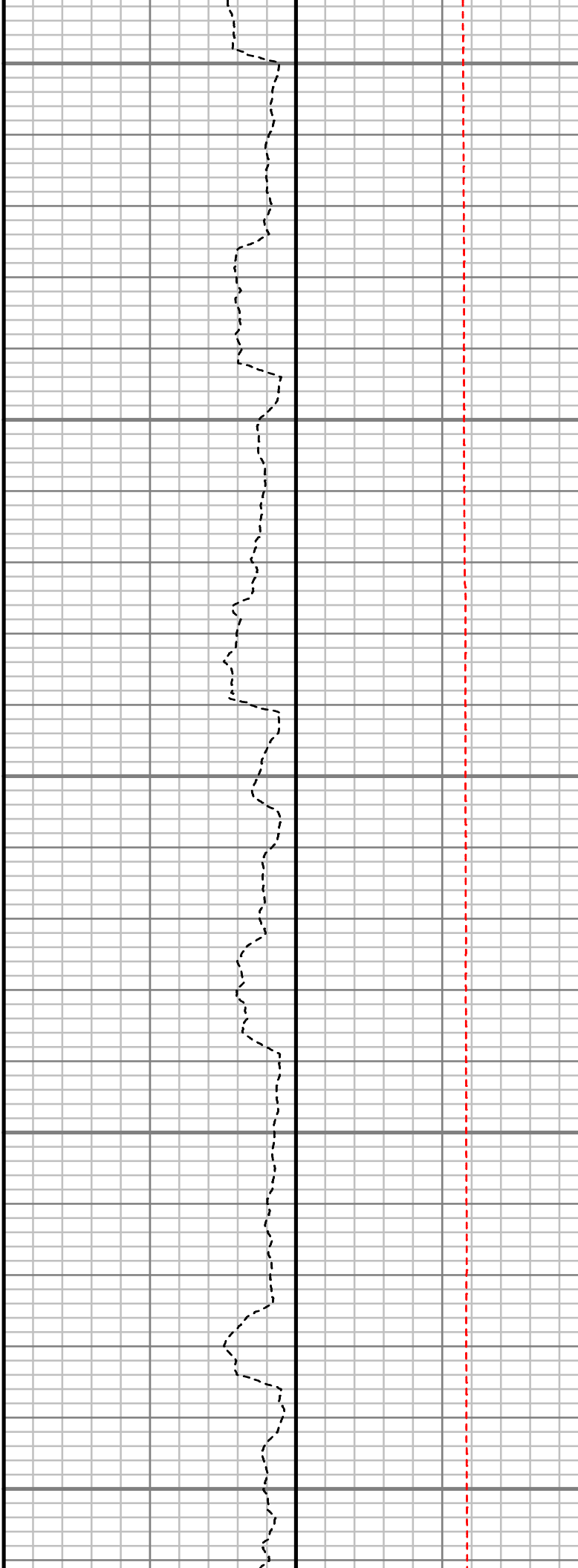
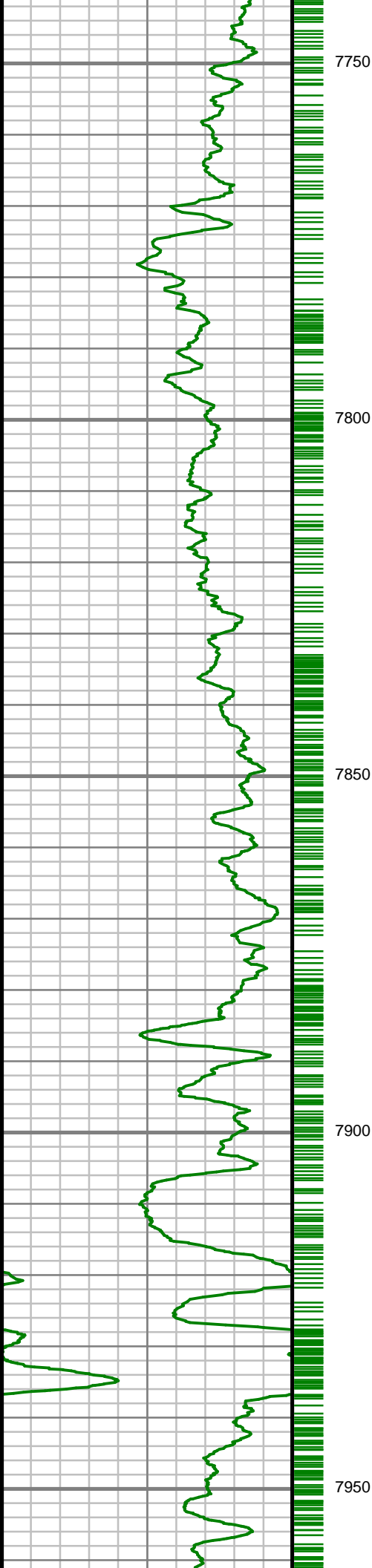
S: 85 MD: 7538.00 ft
Inc: 15.93 deg Az:
358.06 deg TVD:
7439.98 ft

S: 86 MD: 7585.00 ft
Inc: 20.10 deg Az: 0.08
deg TVD: 7484.67 ft

S: 87 MD: 7633.00 ft
Inc: 24.60 deg Az: 0.30
deg TVD: 7529.05 ft

S: 88 MD: 7680.00 ft
Inc: 29.37 deg Az:
356.05 deg TVD:
7570.93 ft

S: 89 MD: 7727.00 ft
Inc: 34.53 deg Az:
351.26 deg TVD:
7610.80 ft

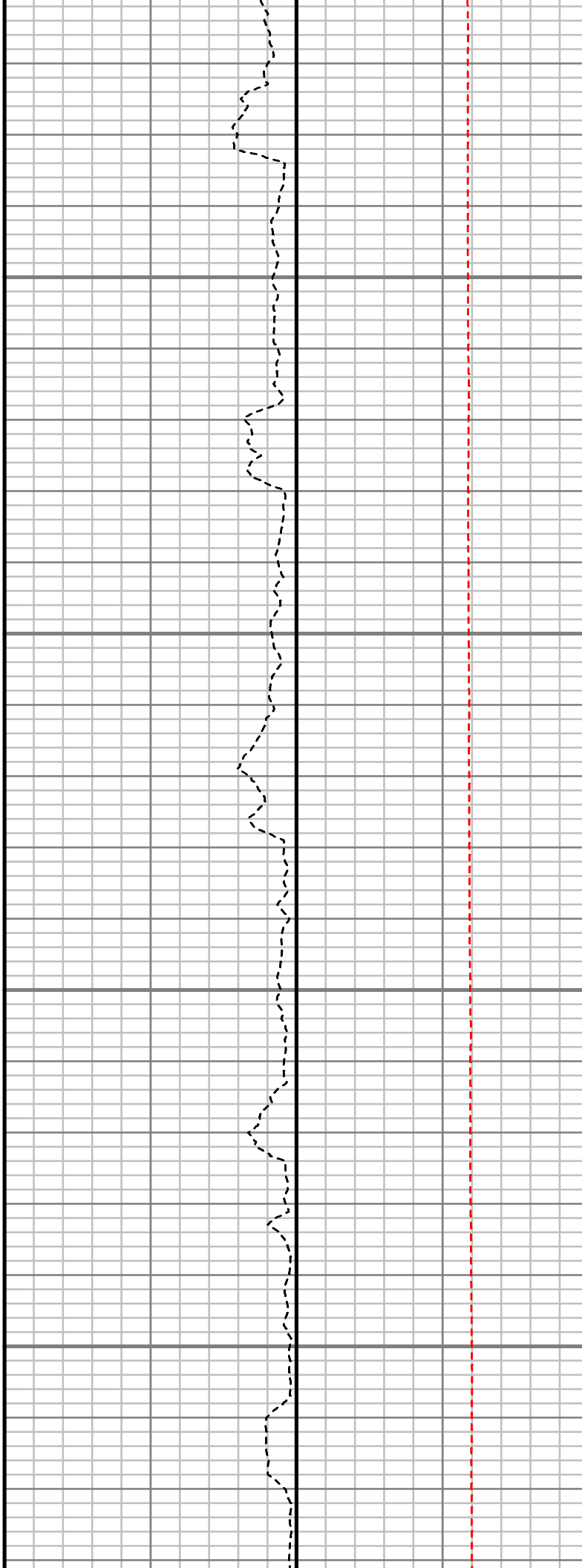
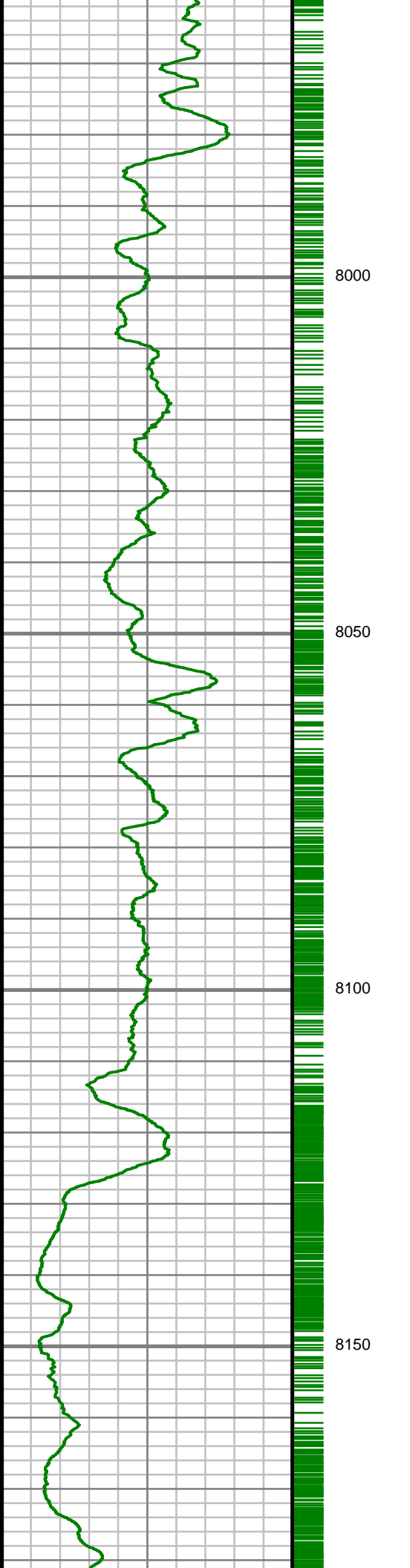


S: 90 MD: 7774.00 ft
Inc: 38.30 deg Az:
353.11 deg TVD:
7648.62 ft

S: 91 MD: 7822.00 ft
Inc: 41.08 deg Az:
357.42 deg TVD:
7685.56 ft

S: 92 MD: 7869.00 ft
Inc: 43.22 deg Az: 1.15
deg TVD: 7720.41 ft

S: 93 MD: 7916.00 ft
Inc: 48.65 deg Az: 0.27
deg TVD: 7753.08 ft



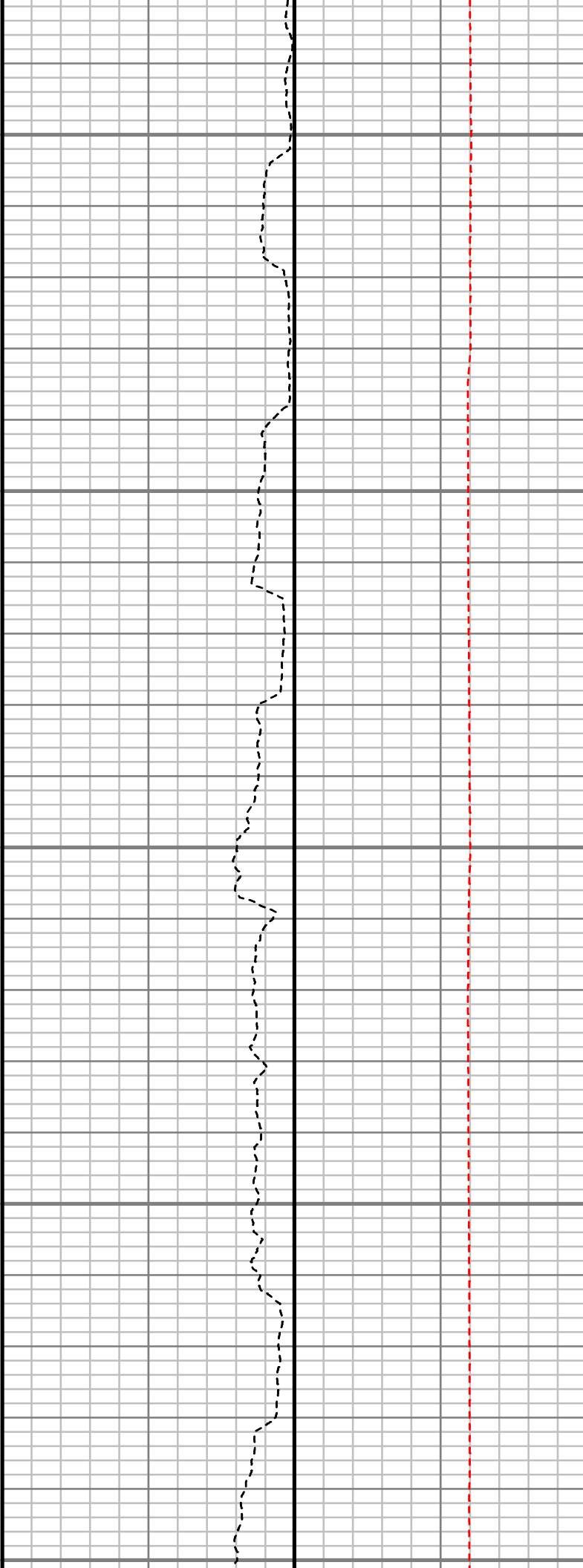
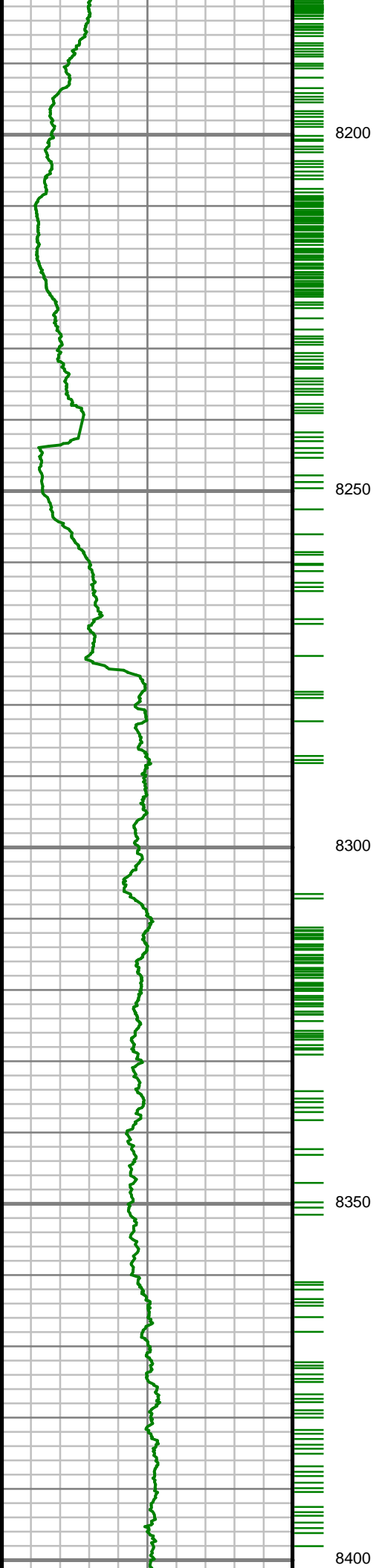
S: 94 MD: 7963.00 ft
Inc: 53.81 deg Az:
359.07 deg TVD:
7782.51 ft

S: 95 MD: 8010.00 ft
Inc: 60.20 deg Az:
356.97 deg TVD:
7808.09 ft

S: 96 MD: 8057.00 ft
Inc: 66.05 deg Az:
358.86 deg TVD:
7829.33 ft

S: 97 MD: 8105.00 ft
Inc: 70.64 deg Az:
359.50 deg TVD:
7847.04 ft

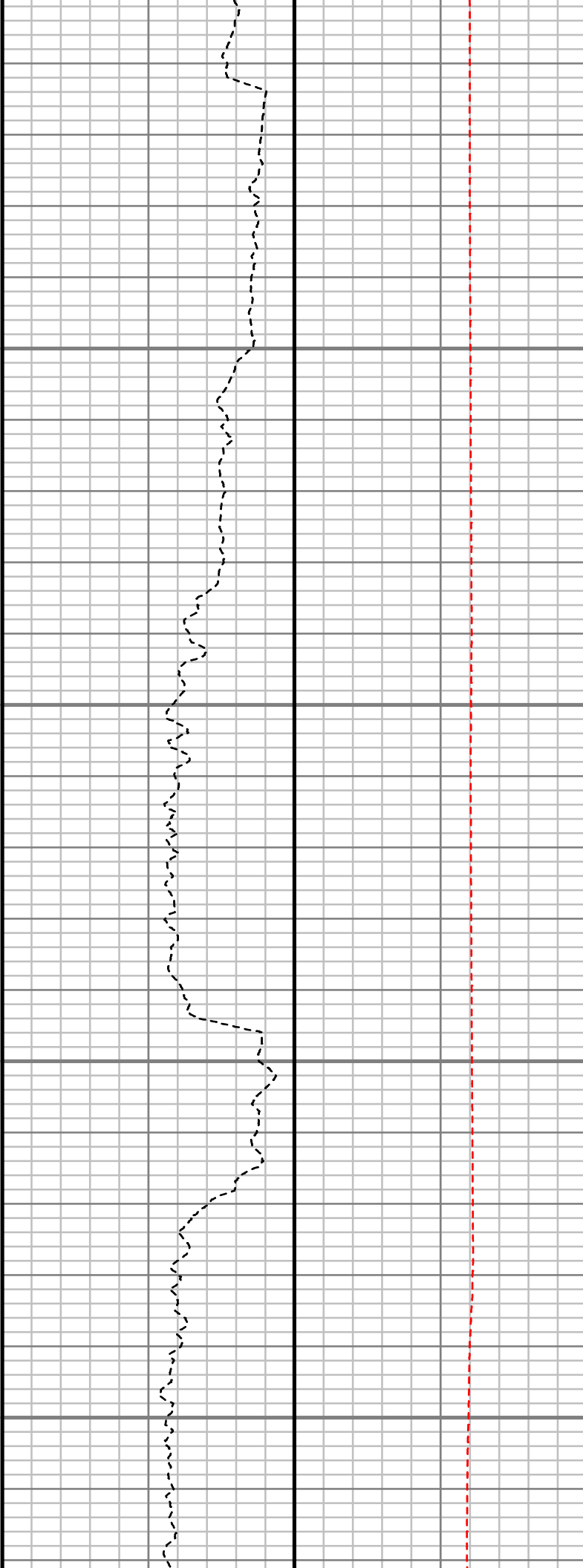
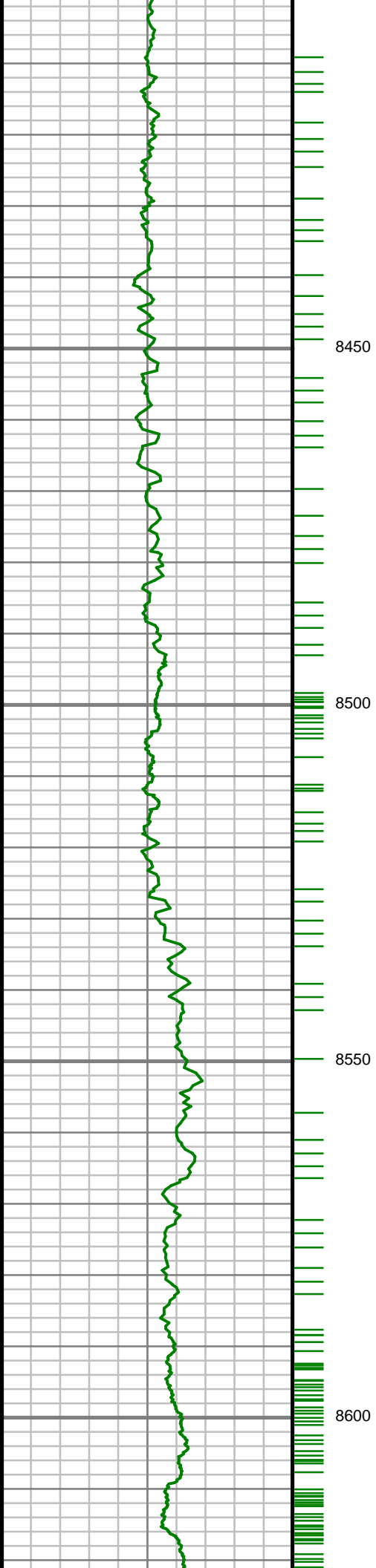
S: 98 MD: 8152.00 ft
Inc: 76.04 deg Az: 0.22
deg TVD: 7860.51 ft



S: 99 MD: 8199.00 ft
Inc: 81.88 deg Az: 0.60
deg TVD: 7869.51 ft

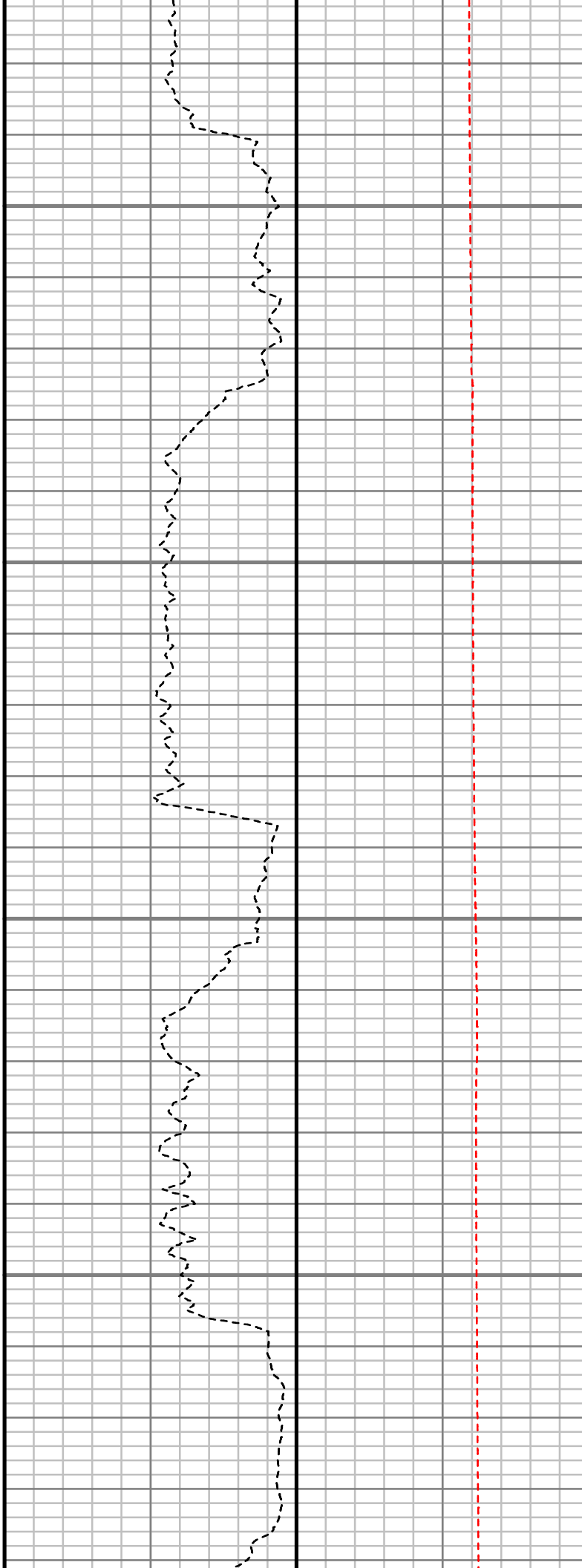
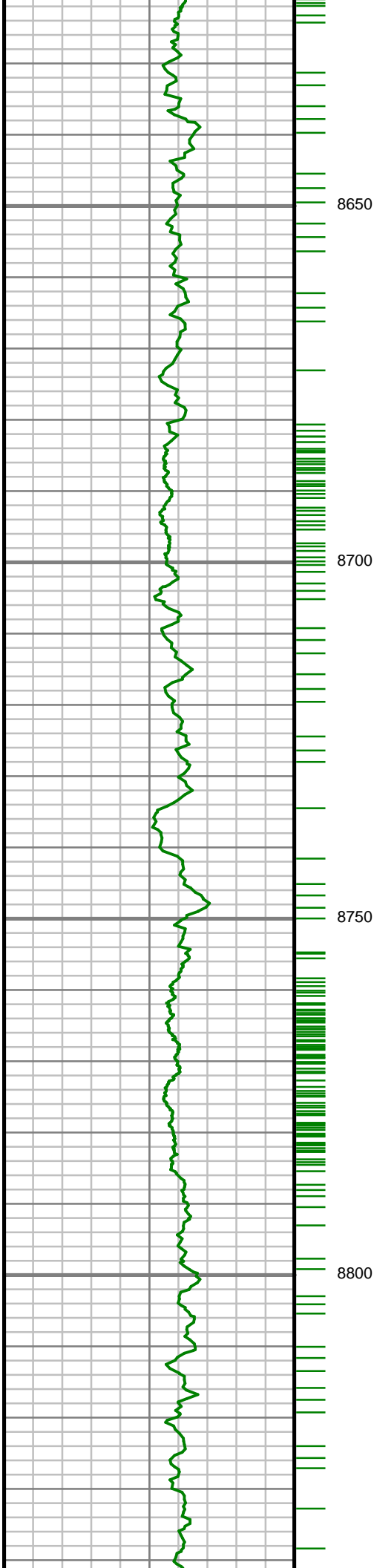
S: 100 MD: 8228.00 ft
Inc: 85.56 deg Az: 0.48
deg TVD: 7872.68 ft

S: 101 MD: 8388.00 ft
Inc: 88.02 deg Az: 0.29
deg TVD: 7881.64 ft



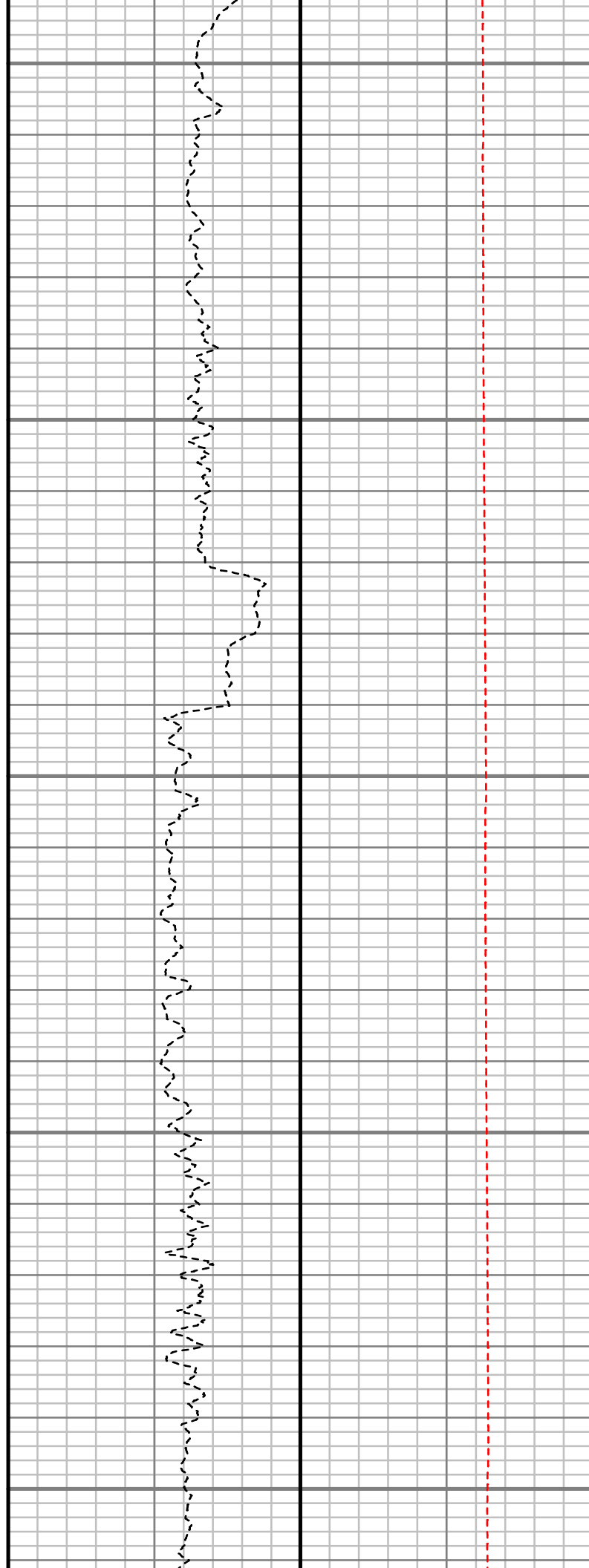
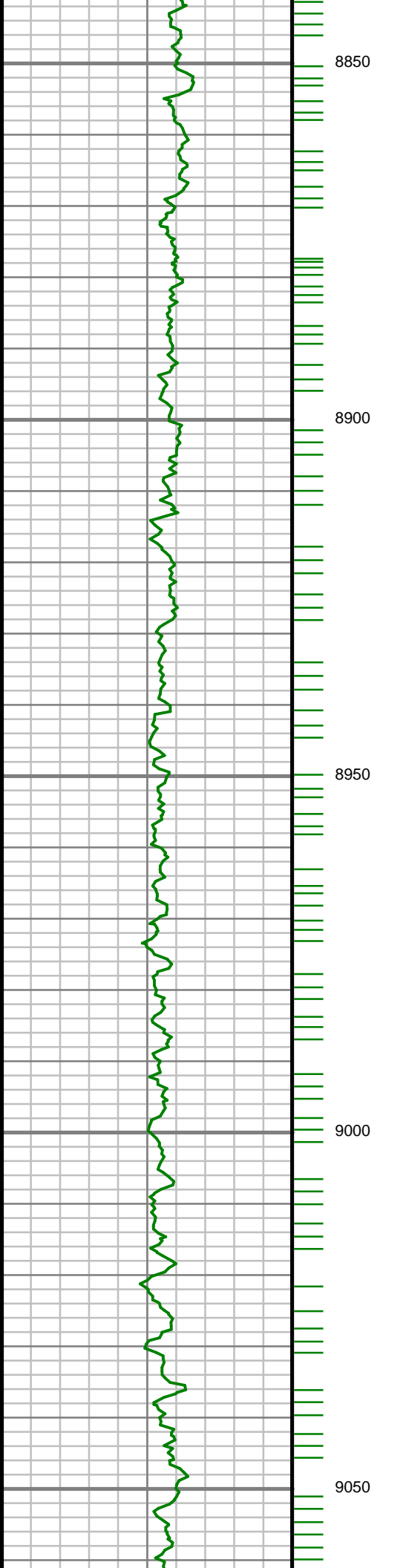
S: 102 MD: 8482.00 ft
Inc: 87.35 deg Az:
359.19 deg TVD:
7885.44 ft

S: 103 MD: 8577.00 ft
Inc: 88.12 deg Az:
359.77 deg TVD:
7889.19 ft



S: 104 MD: 8671.00 ft
Inc: 89.03 deg Az: 1.01
deg TVD: 7891.53 ft

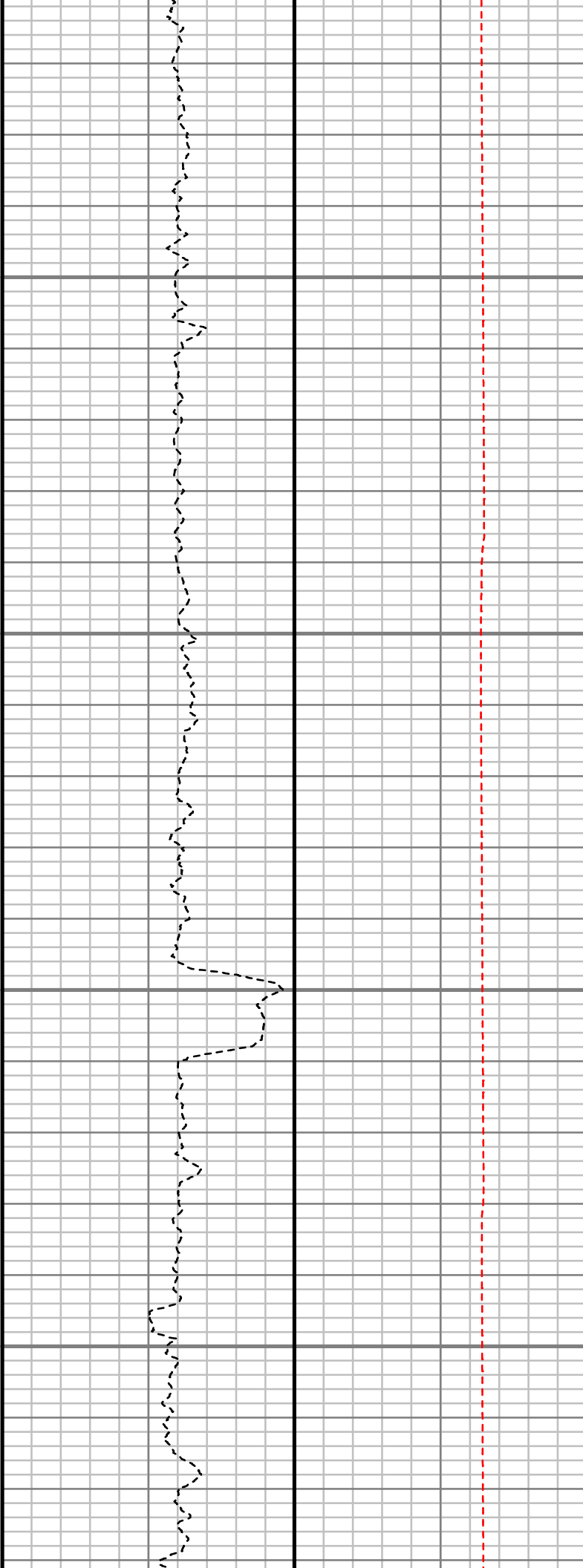
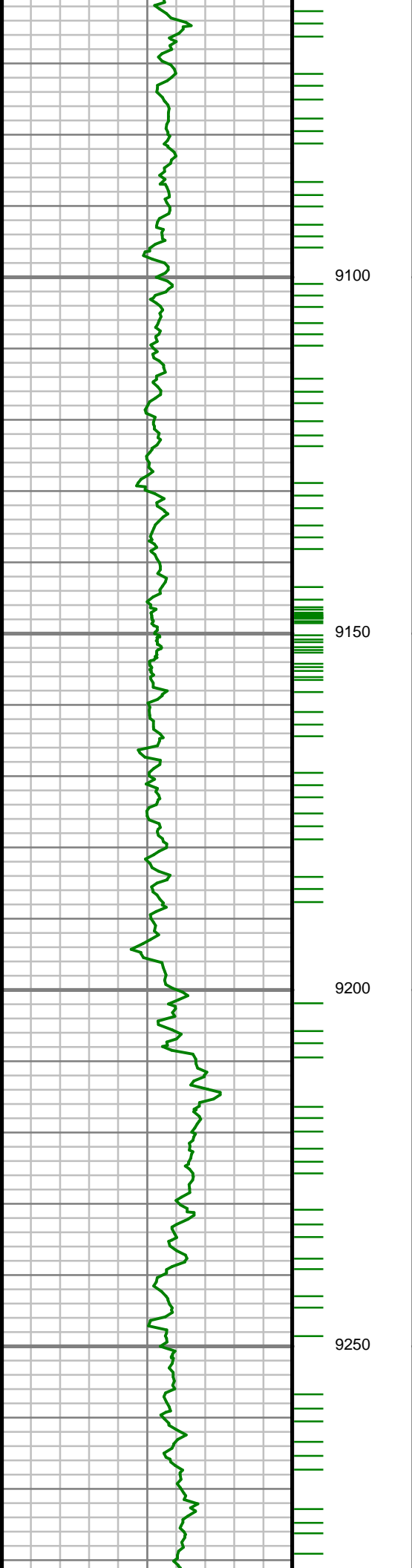
S: 105 MD: 8766.00 ft
Inc: 91.14 deg Az: 2.22
deg TVD: 7891.39 ft



S: 106 MD: 8858.00 ft
Inc: 90.57 deg Az: 1.00
deg TVD: 7890.02 ft

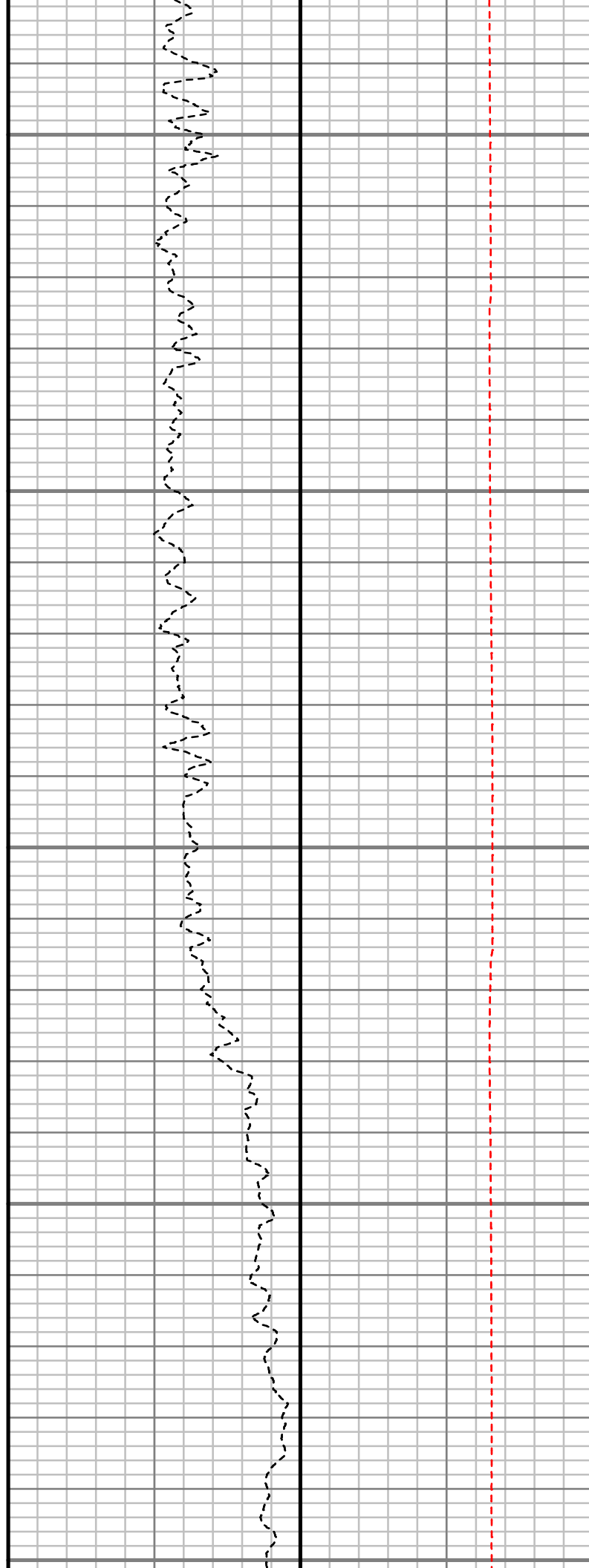
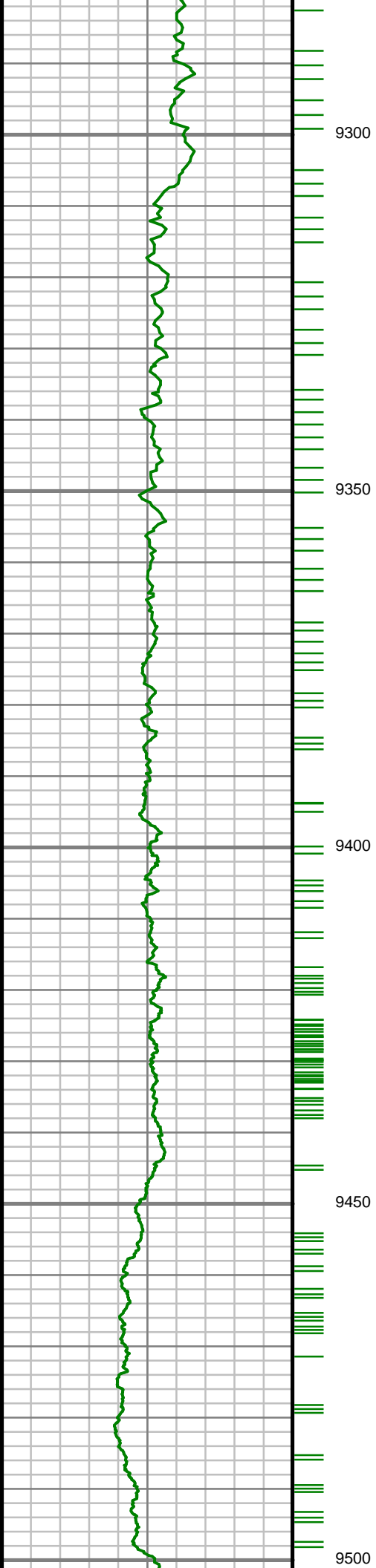
S: 107 MD: 8949.00 ft
Inc: 90.37 deg Az: 1.00
deg TVD: 7889.27 ft

S: 108 MD: 9041.00 ft
Inc: 90.20 deg Az: 0.41
deg TVD: 7888.82 ft



S: 109 MD: 9132.00 ft
Inc: 89.87 deg Az: 0.50
deg TVD: 7888.76 ft

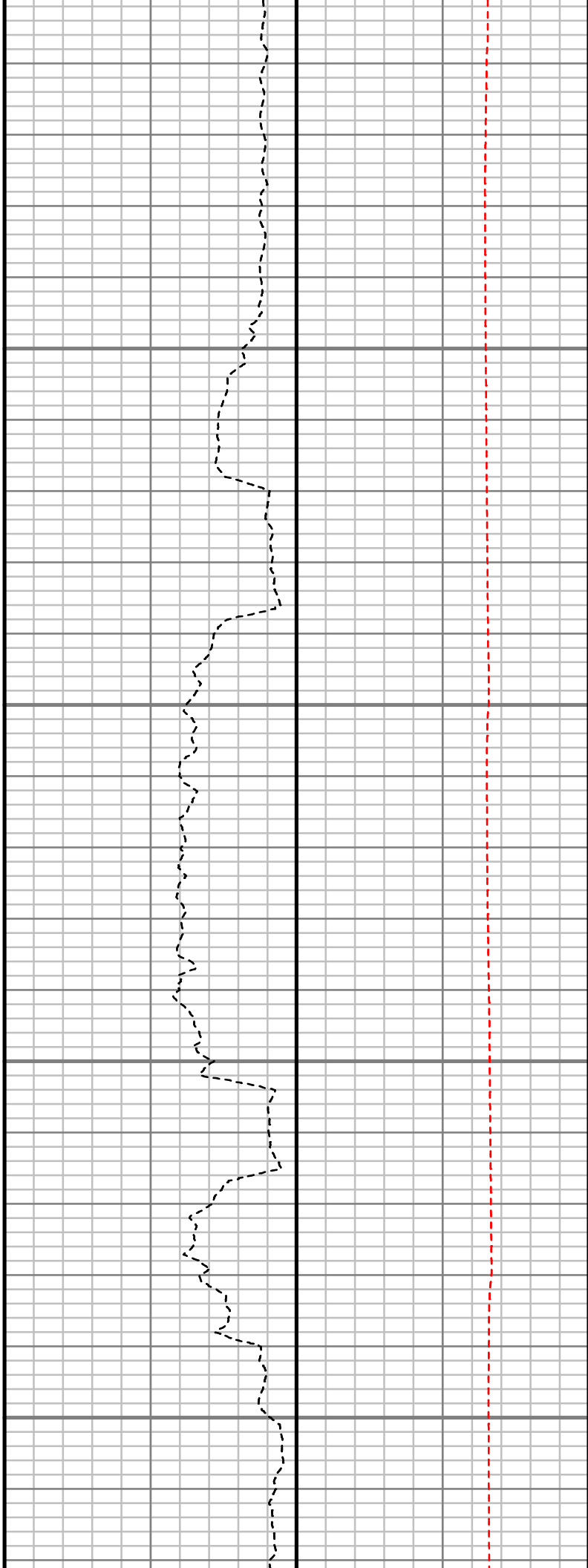
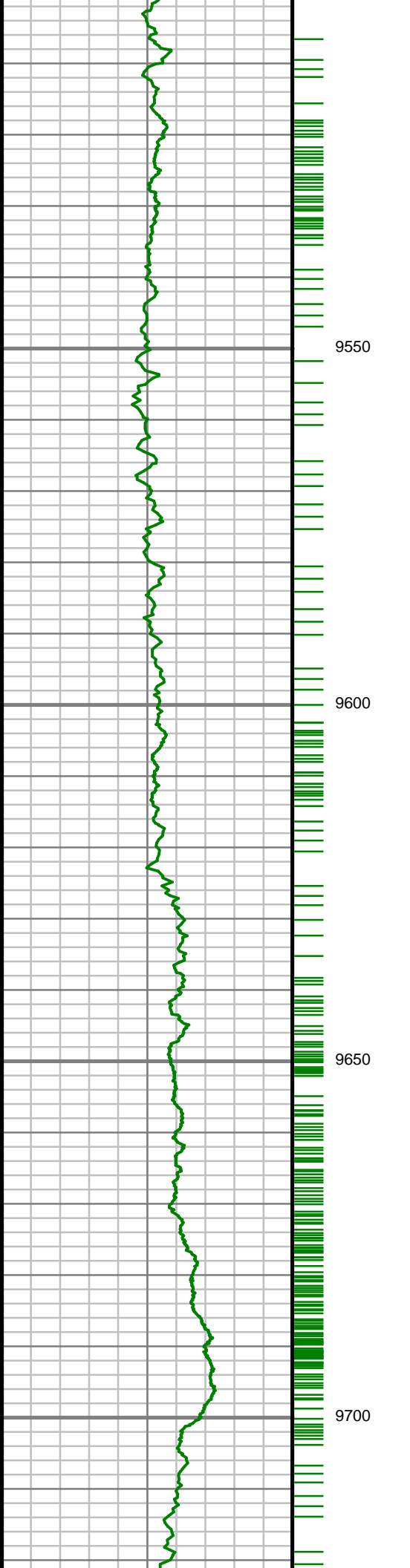
S: 110 MD: 9224.00 ft
Inc: 90.67 deg Az: 0.59
deg TVD: 7888.33 ft



S: 111 MD: 9315.00 ft
Inc: 90.94 deg Az: 0.69
deg TVD: 7887.05 ft

S: 112 MD: 9406.00 ft
Inc: 90.91 deg Az: 0.93
deg TVD: 7885.59 ft

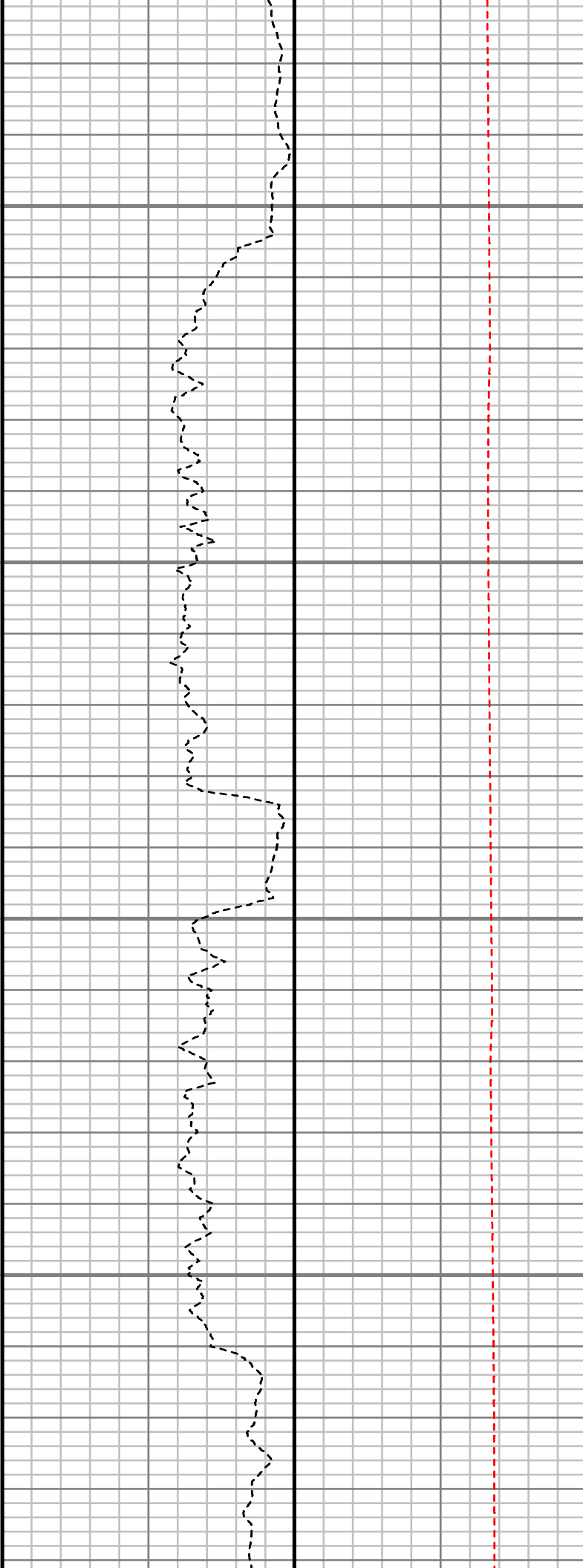
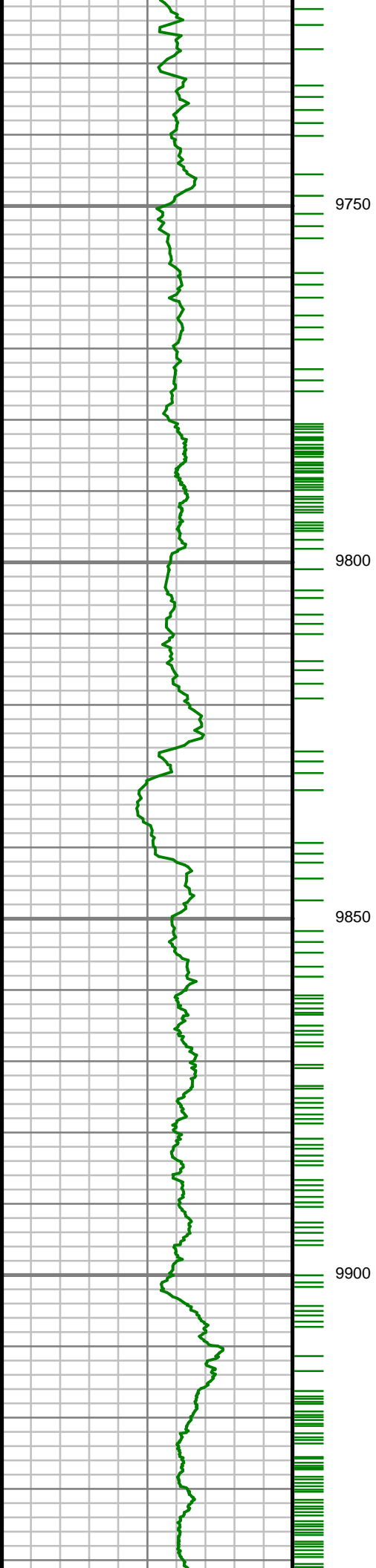
S: 113 MD: 9497.00 ft
Inc: 87.95 deg Az: 0.10



Inc: 87.35 deg Az: 359.94 deg TVD: 7886.49 ft

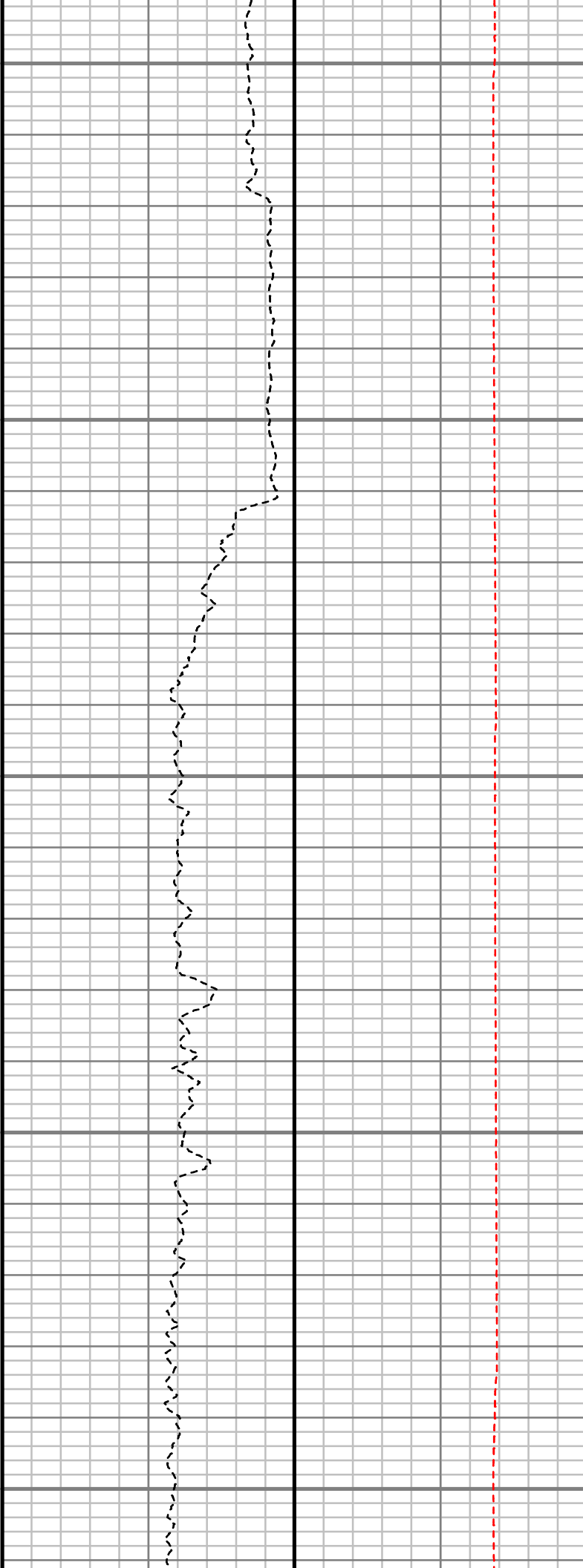
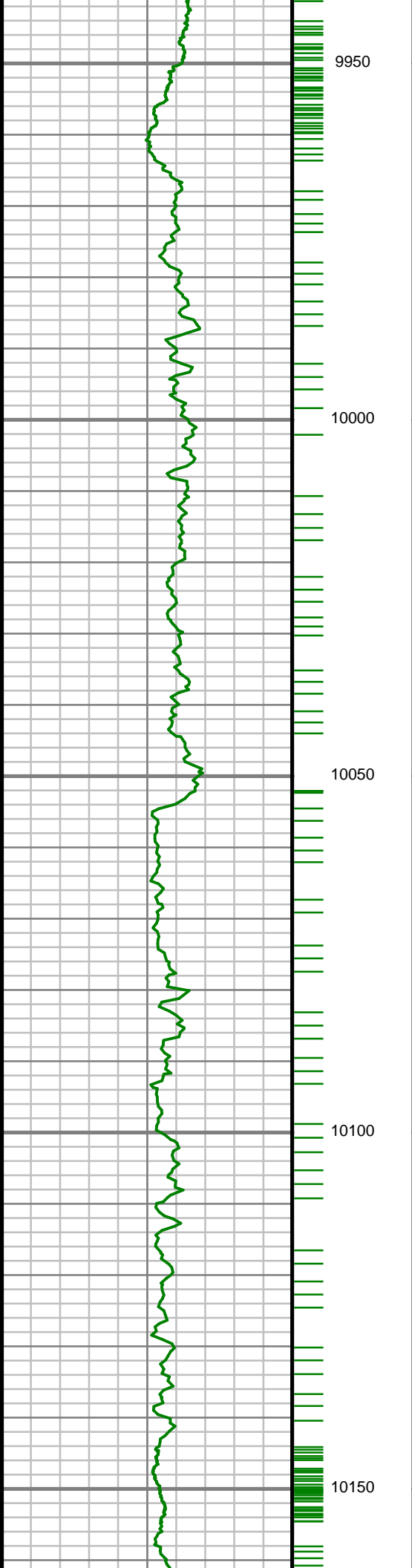
S: 114 MD: 9588.00 ft
Inc: 87.35 deg Az: 359.94 deg TVD: 7890.22 ft

S: 115 MD: 9677.00 ft
Inc: 88.39 deg Az: 0.46 deg TVD: 7893.53 ft



S: 116 MD: 9768.00 ft
Inc: 88.96 deg Az:
359.64 deg TVD:
7895.64 ft

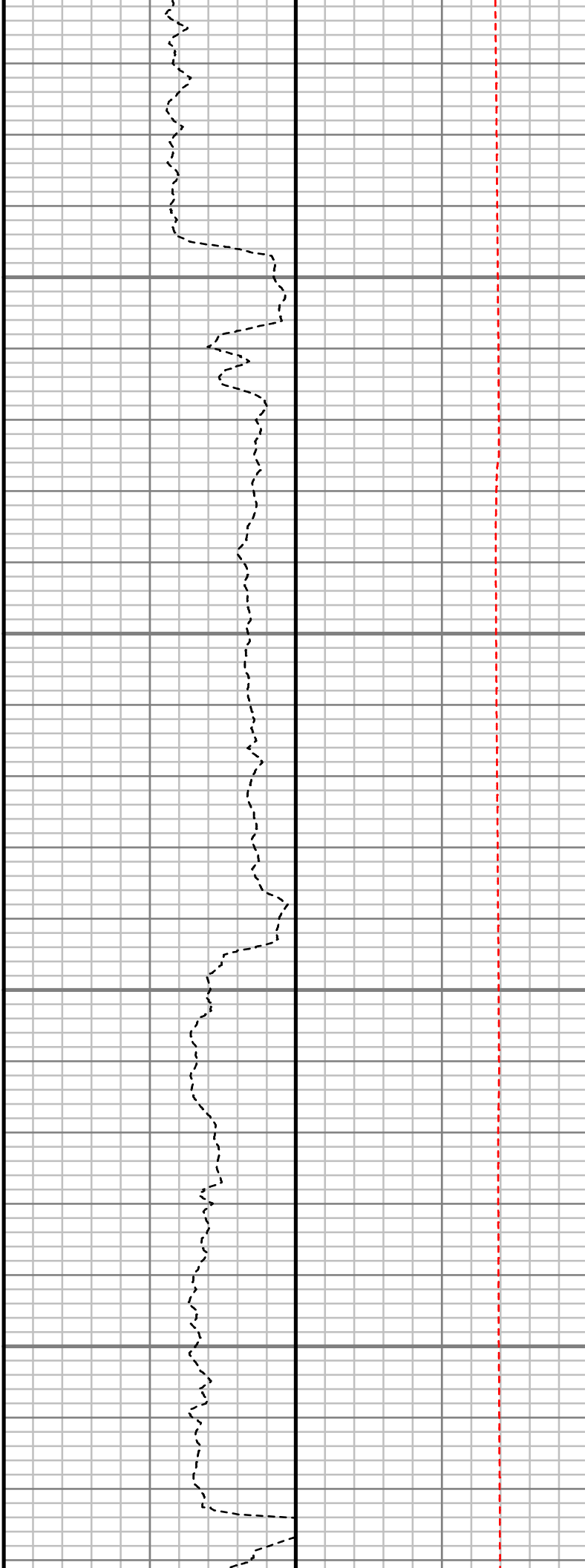
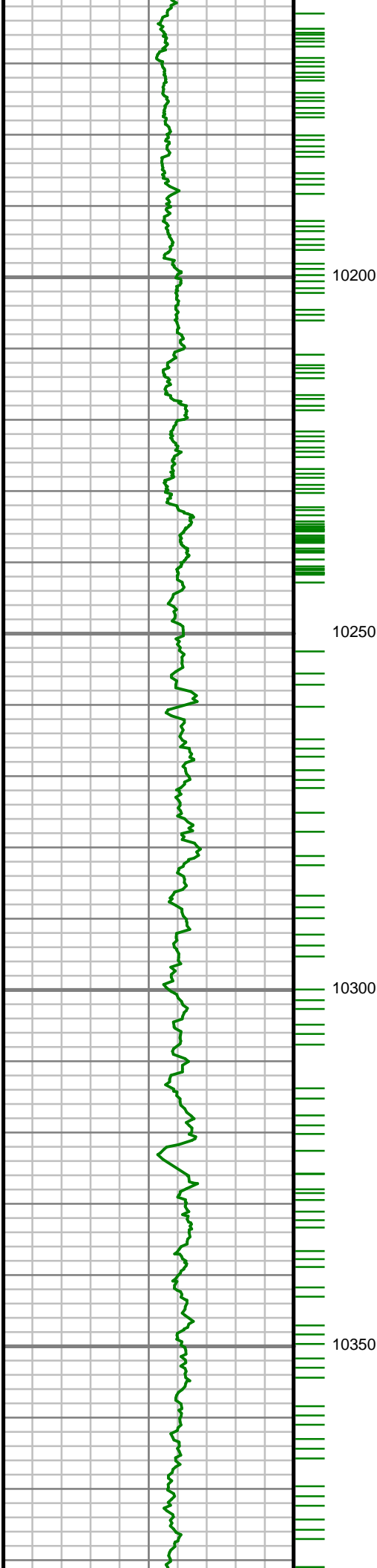
S: 117 MD: 9859.00 ft
Inc: 90.50 deg Az: 0.31
deg TVD: 7896.06 ft



S: 118 MD: 9949.00 ft
Inc: 90.37 deg Az: 1.22
deg TVD: 7895.38 ft

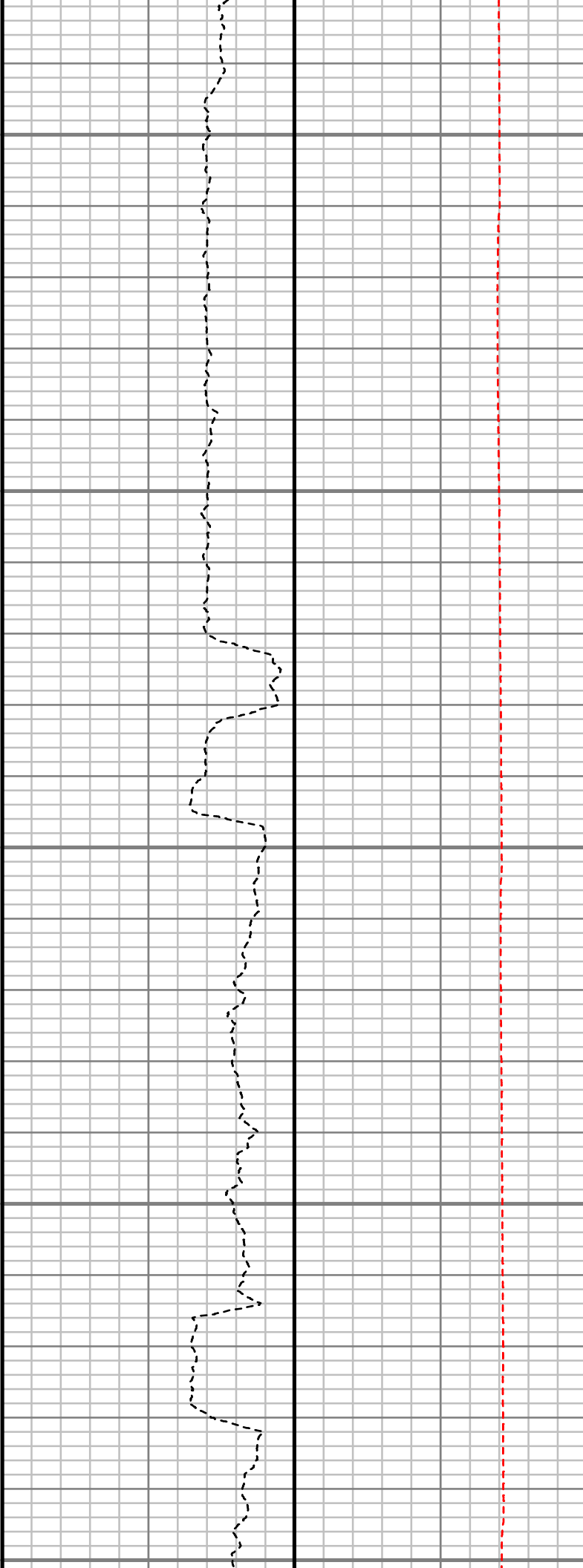
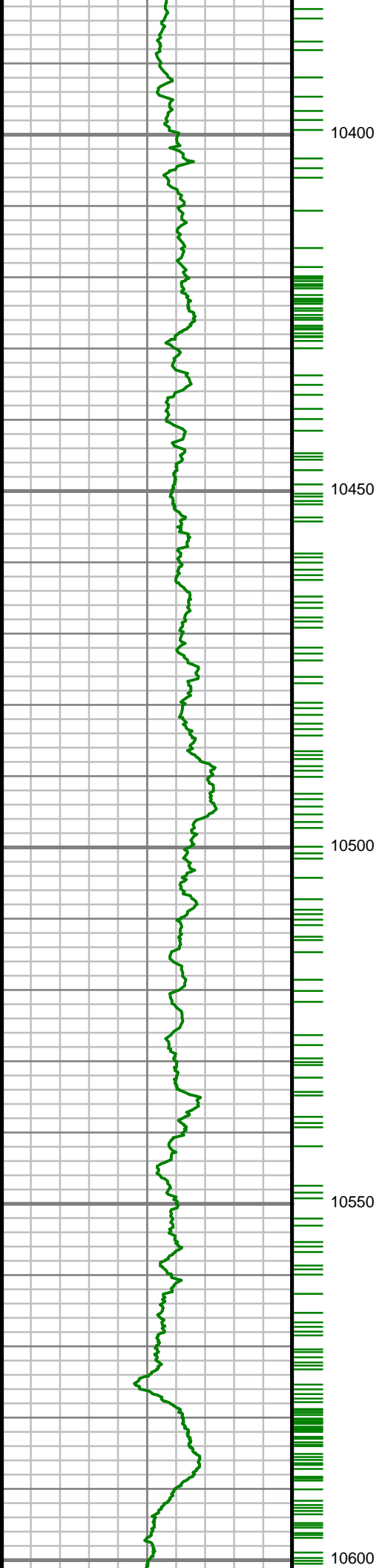
S: 119 MD: 10039.00 ft
Inc: 89.87 deg Az: 0.72
deg TVD: 7895.19 ft

S: 120 MD: 10130.00 ft
Inc: 90.67 deg Az: 1.80
deg TVD: 7894.77 ft



S: 121 MD: 10220.00 ft
Inc: 90.10 deg Az: 0.30
deg TVD: 7894.16 ft

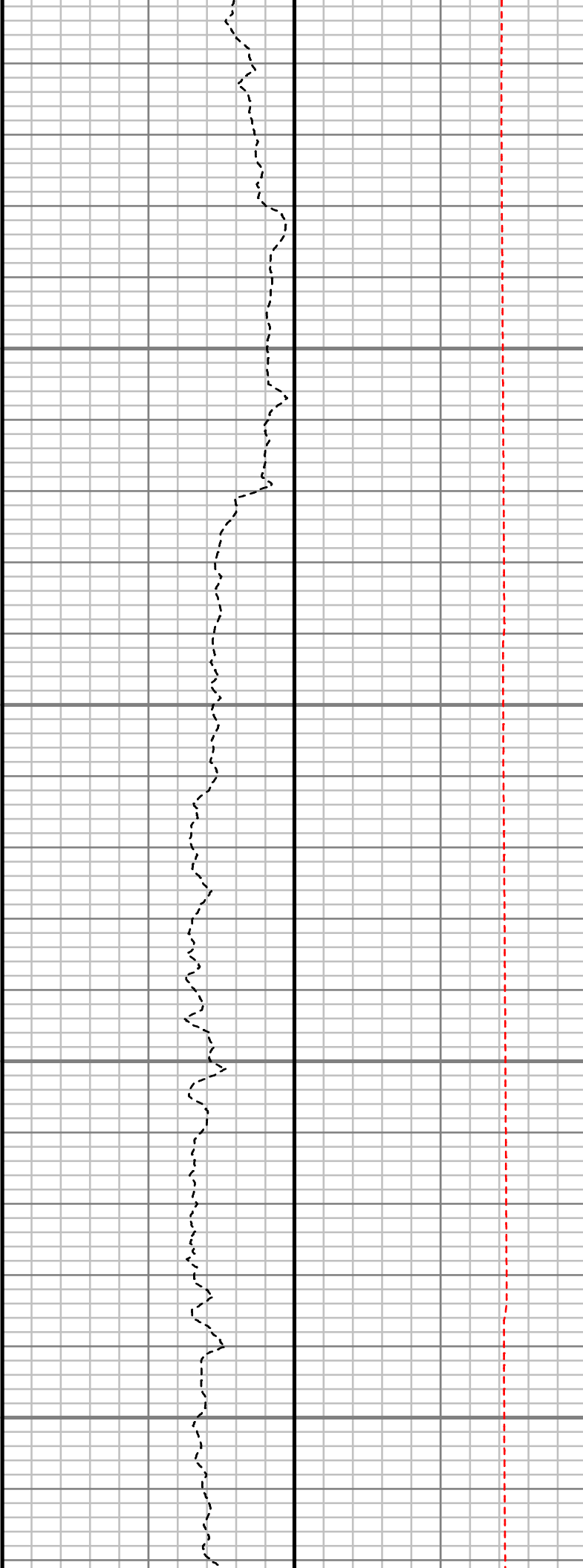
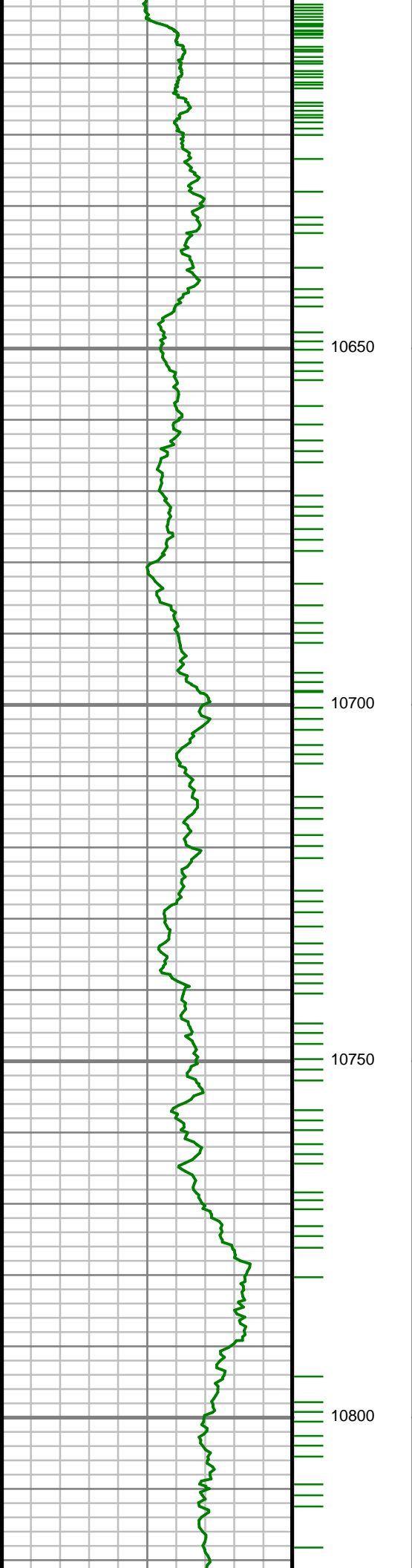
S: 122 MD: 10313.00 ft
Inc: 89.53 deg Az: 0.18
deg TVD: 7894.46 ft



S: 123 MD: 10403.00 ft
Inc: 89.80 deg Az: 1.55
deg TVD: 7894.99 ft

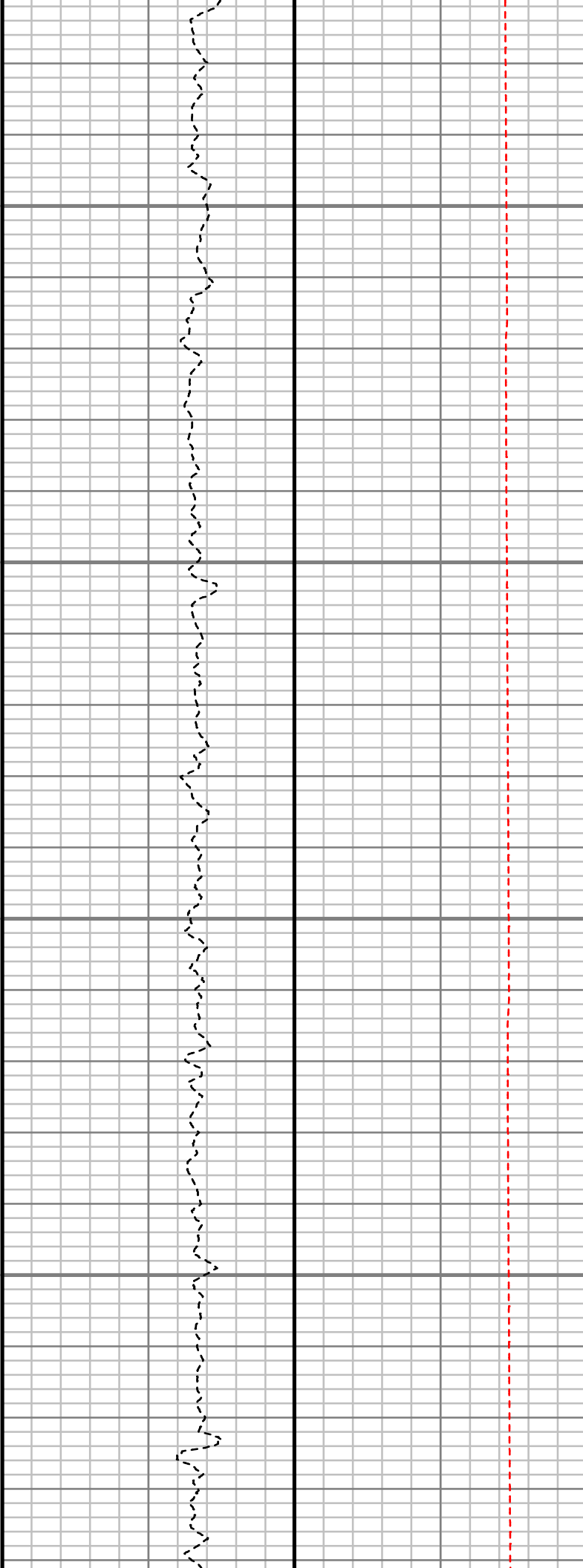
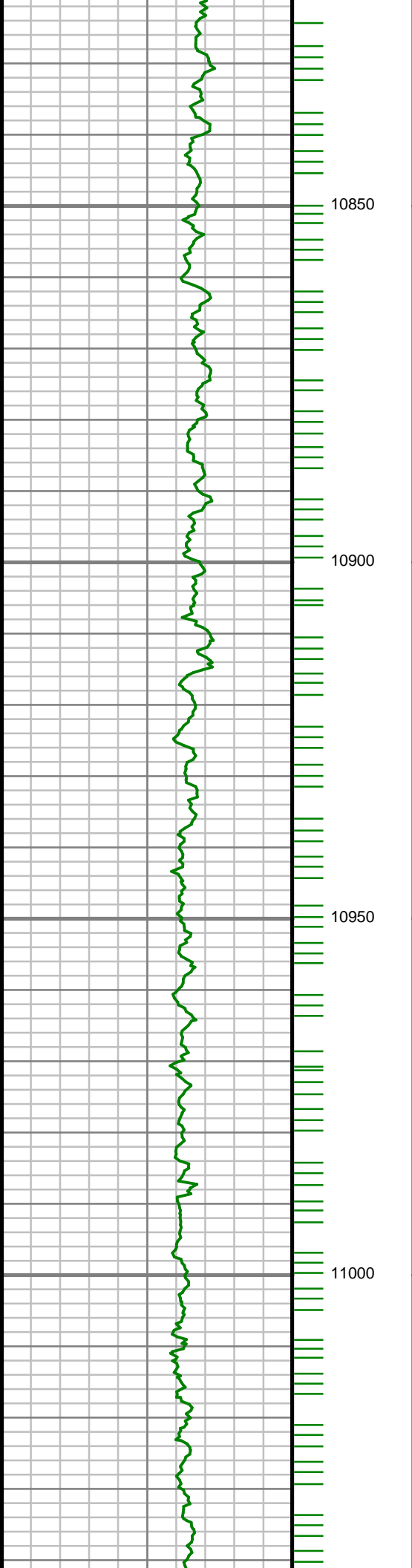
S: 124 MD: 10493.00 ft
Inc: 89.03 deg Az: 1.32
deg TVD: 7895.91 ft

S: 125 MD: 10584.00 ft
Inc: 89.09 deg Az: 1.46
deg TVD: 7897.40 ft



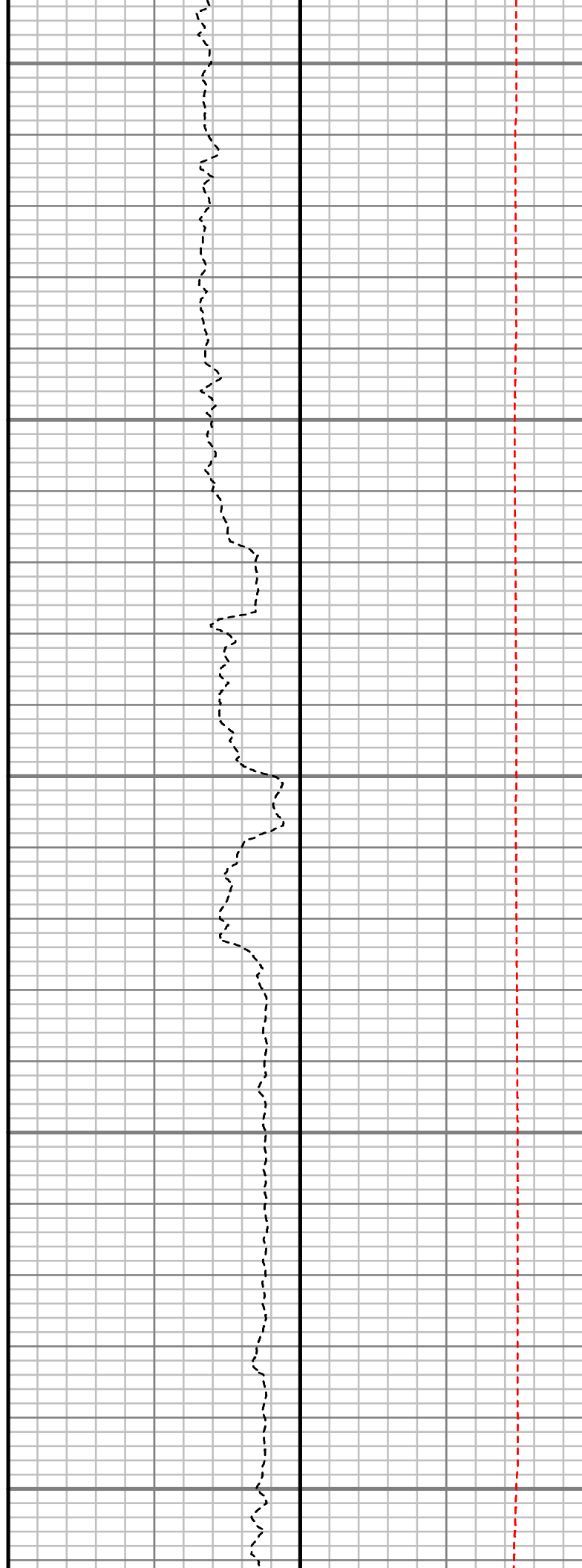
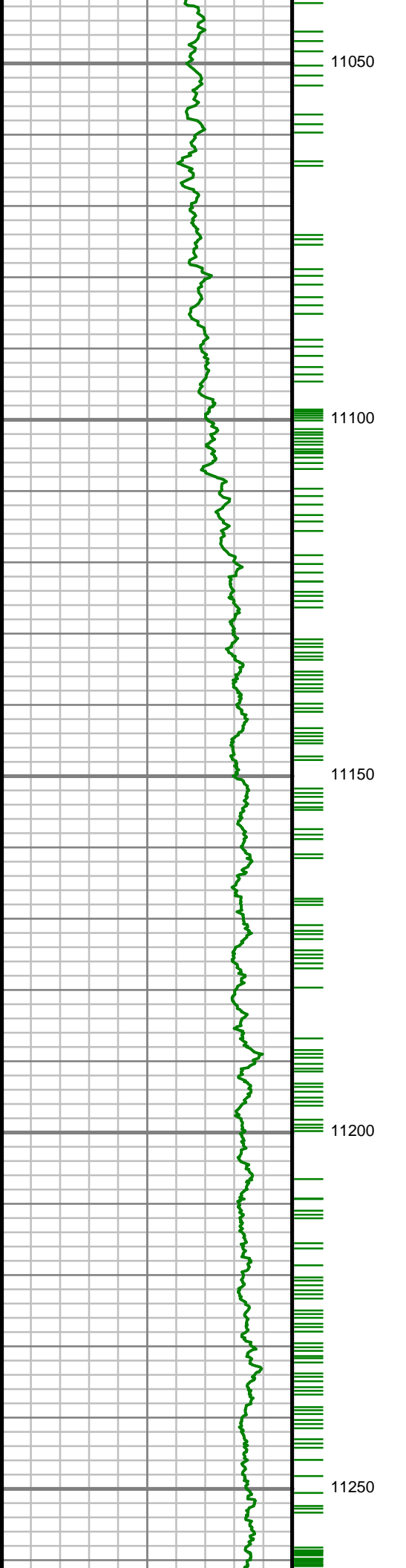
S: 126 MD: 10678.00 ft
Inc: 89.06 deg Az: 0.24
deg TVD: 7898.92 ft

S: 127 MD: 10772.00 ft
Inc: 88.76 deg Az:
359.84 deg TVD:
7900.71 ft



S: 128 MD: 10867.00 ft
Inc: 89.46 deg Az:
359.51 deg TVD:
7902.18 ft

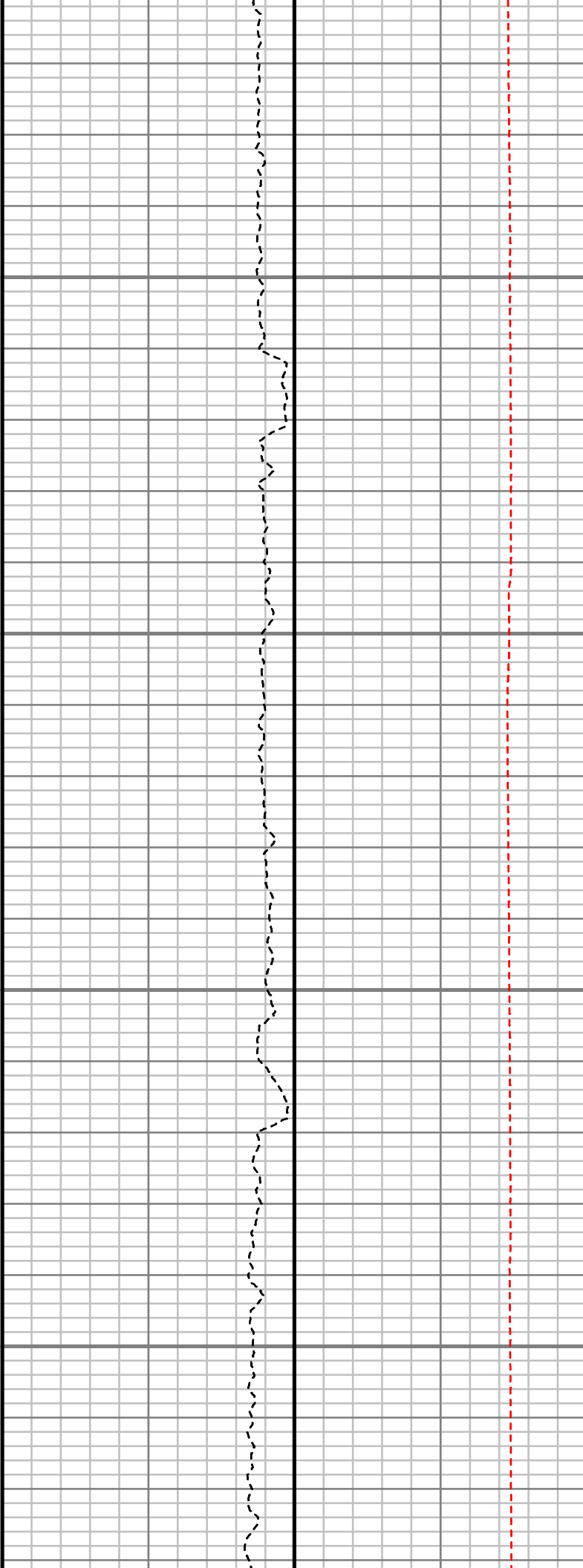
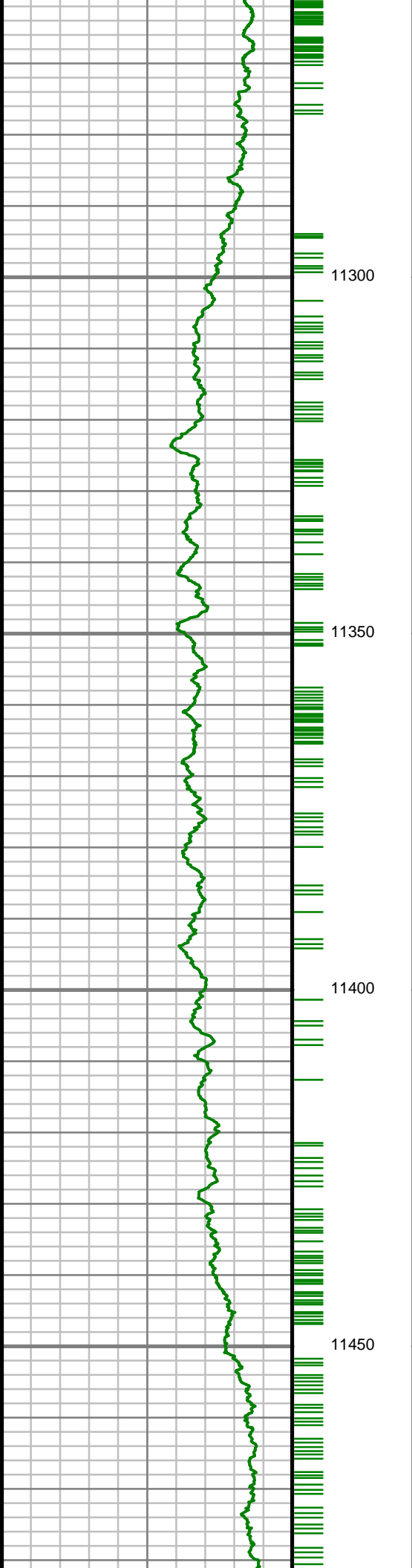
S: 129 MD: 10961.00 ft
Inc: 89.66 deg Az: 0.05
deg TVD: 7902.90 ft



S: 130 MD: 11056.00 ft
Inc: 89.30 deg Az:
359.08 deg TVD:
7903.76 ft

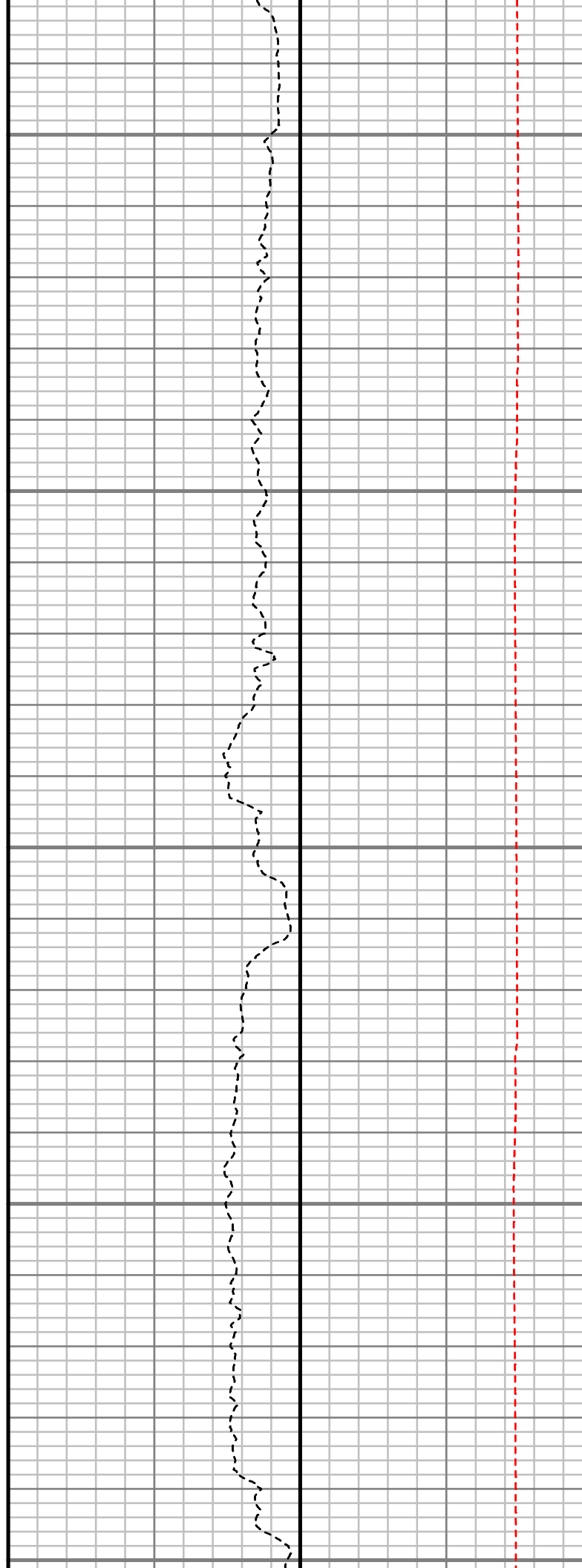
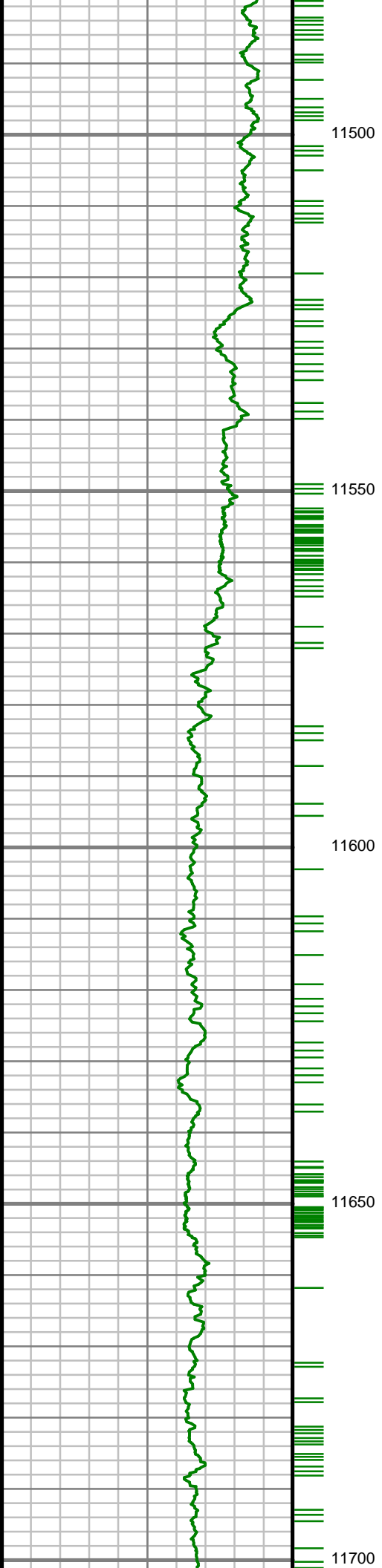
S: 131 MD: 11150.00 ft
Inc: 89.83 deg Az:
359.91 deg TVD:
7904.48 ft

S: 132 MD: 11244.00 ft
Inc: 89.60 deg Az: 0.46
deg TVD: 7904.94 ft



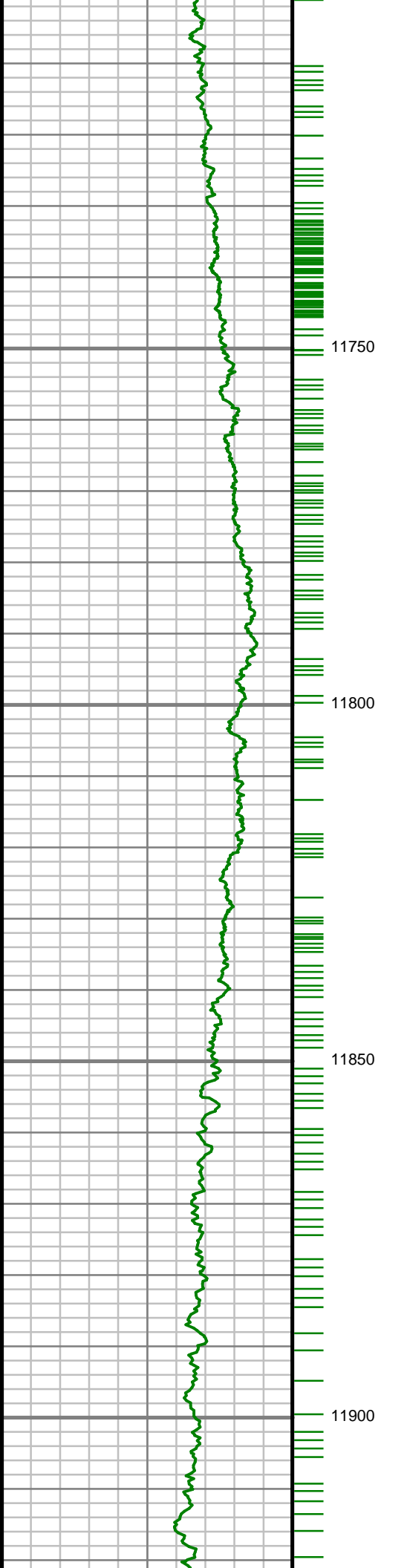
S: 133 MD: 11339.00 ft
Inc: 90.17 deg Az: 0.31
deg TVD: 7905.14 ft

S: 134 MD: 11433.00 ft
Inc: 91.18 deg Az: 1.88
deg TVD: 7904.04 ft



S: 135 MD: 11527.00 ft
Inc: 91.14 deg Az: 1.73
deg TVD: 7902.13 ft

S: 136 MD: 11622.00 ft
Inc: 90.50 deg Az: 0.87
deg TVD: 7900.77 ft

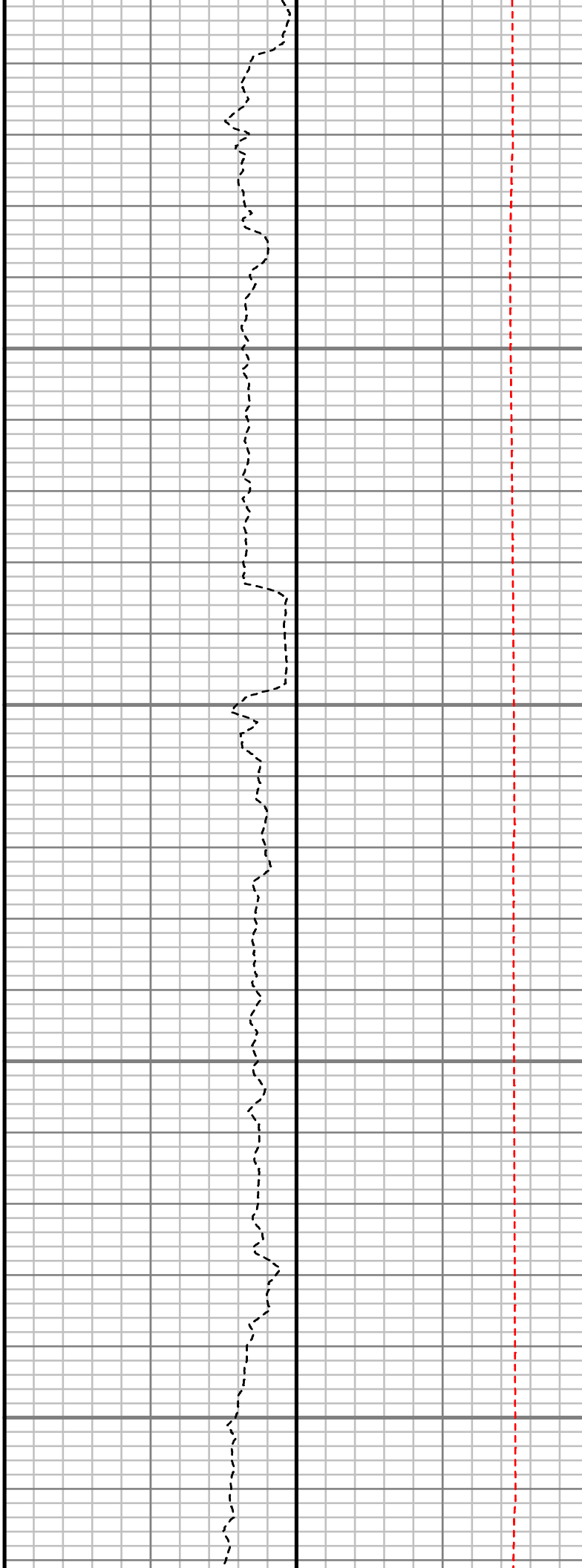


11750

11800

11850

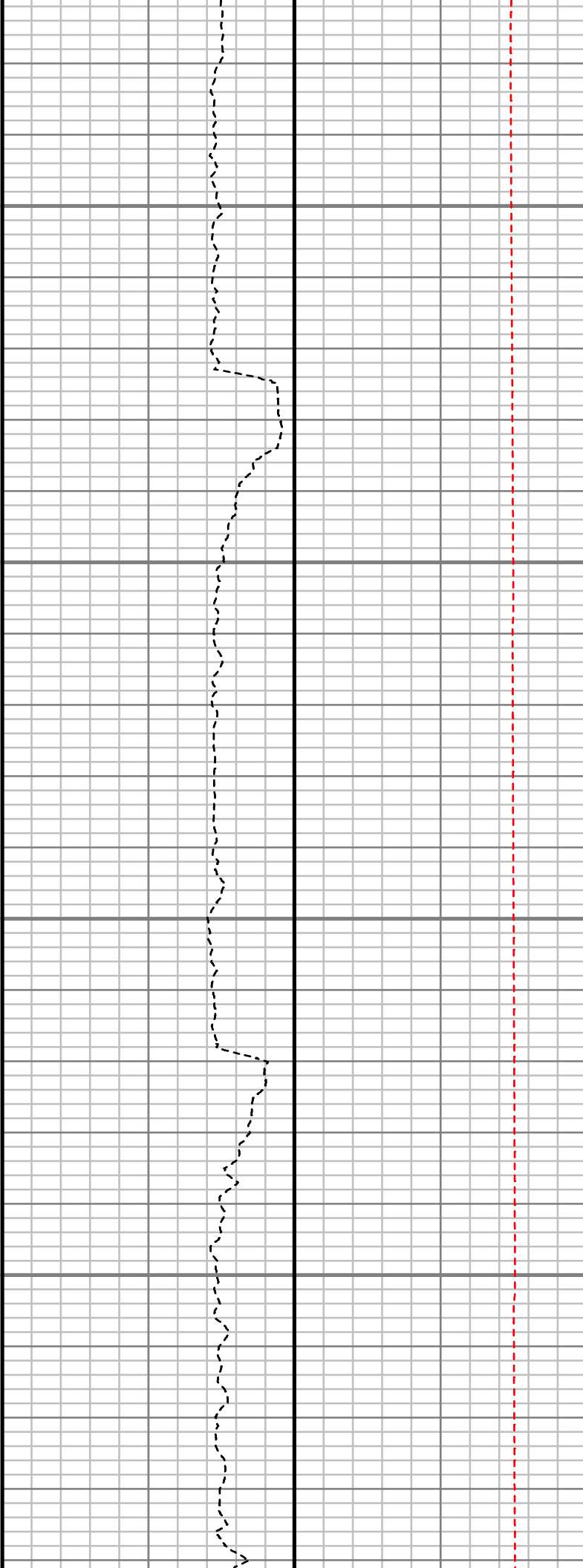
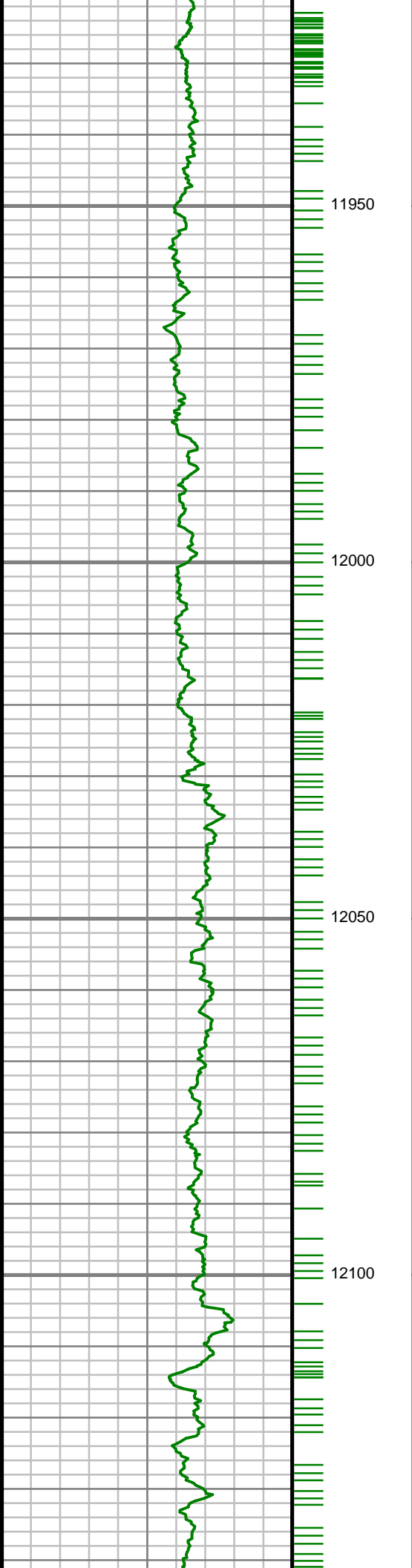
11900



S: 137 MD: 11716.00 ft
Inc: 89.80 deg Az: 1.25
deg TVD: 7900.52 ft

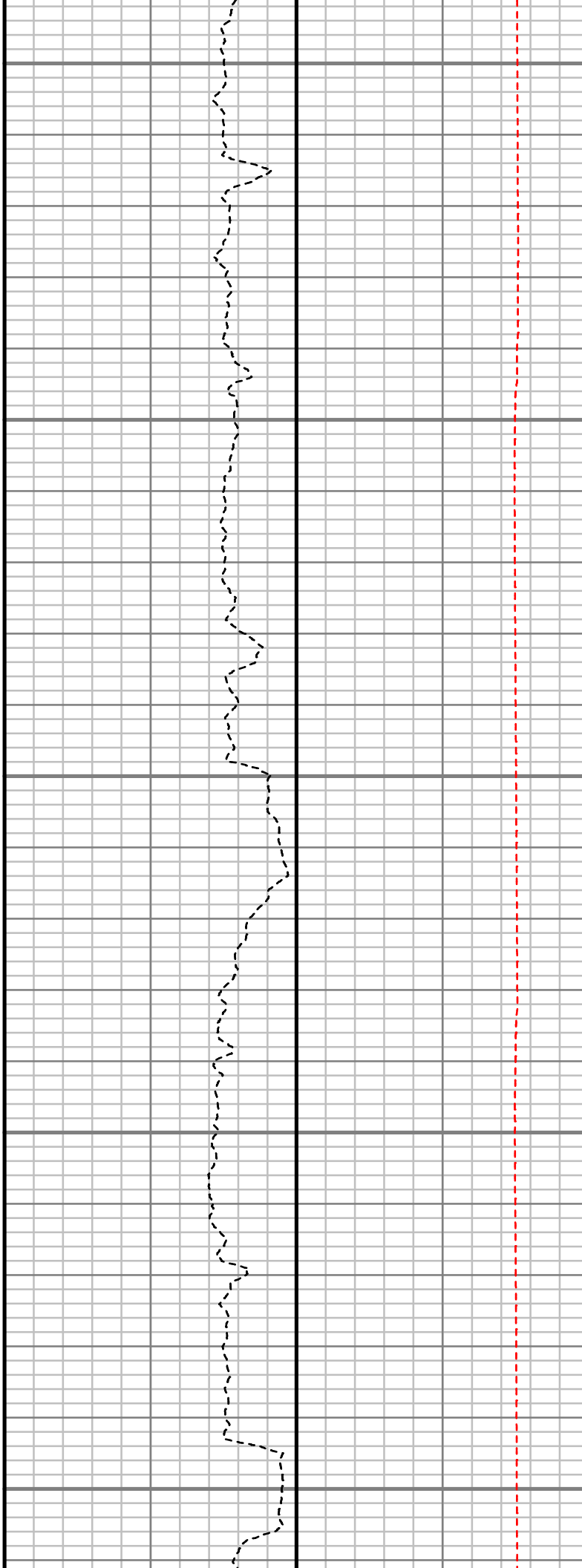
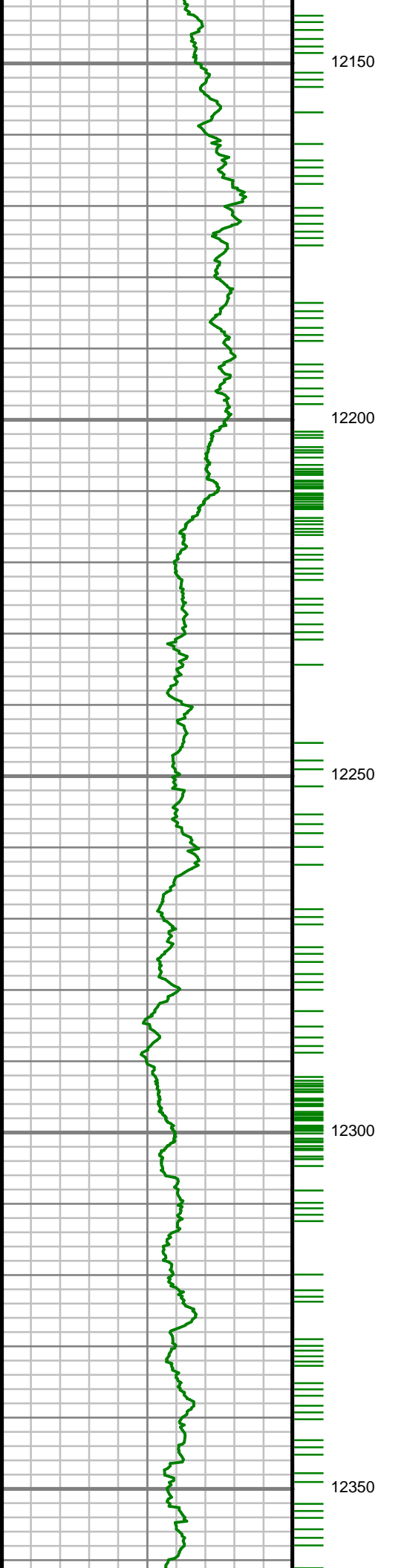
S: 138 MD: 11811.00 ft
Inc: 90.91 deg Az: 0.92
deg TVD: 7899.94 ft

S: 139 MD: 11905.00 ft
Inc: 91.11 deg Az:
360.00 deg TVD:
7898.28 ft



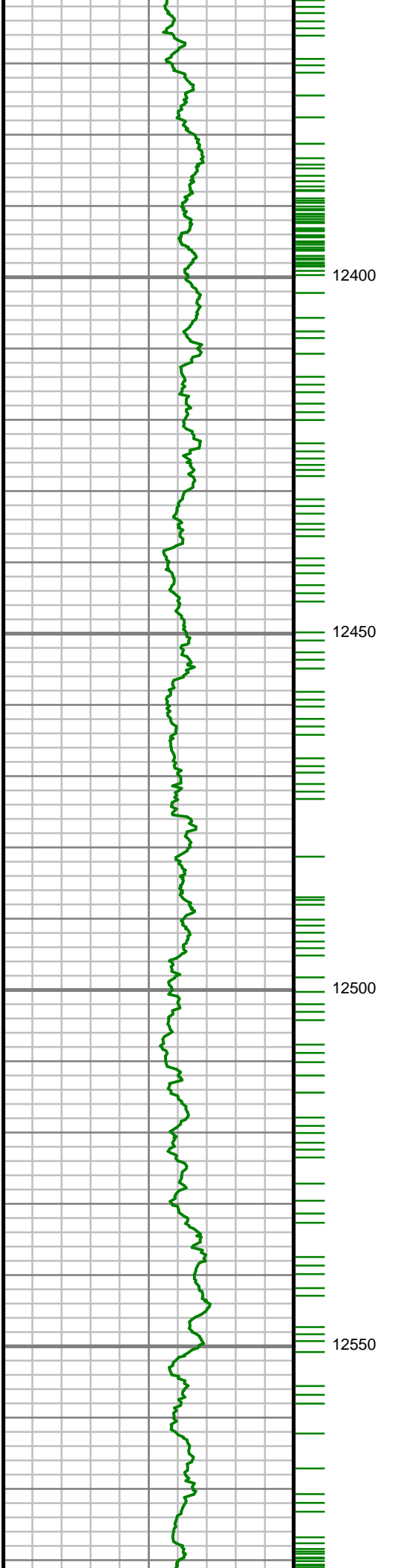
S: 140 MD: 11999.00 ft
Inc: 90.74 deg Az:
358.41 deg TVD:
7896.77 ft

S: 141 MD: 12094.00 ft
Inc: 90.50 deg Az:
359.03 deg TVD:
7895.74 ft



S: 142 MD: 12188.00 ft
Inc: 90.77 deg Az:
358.72 deg TVD:
7894.69 ft

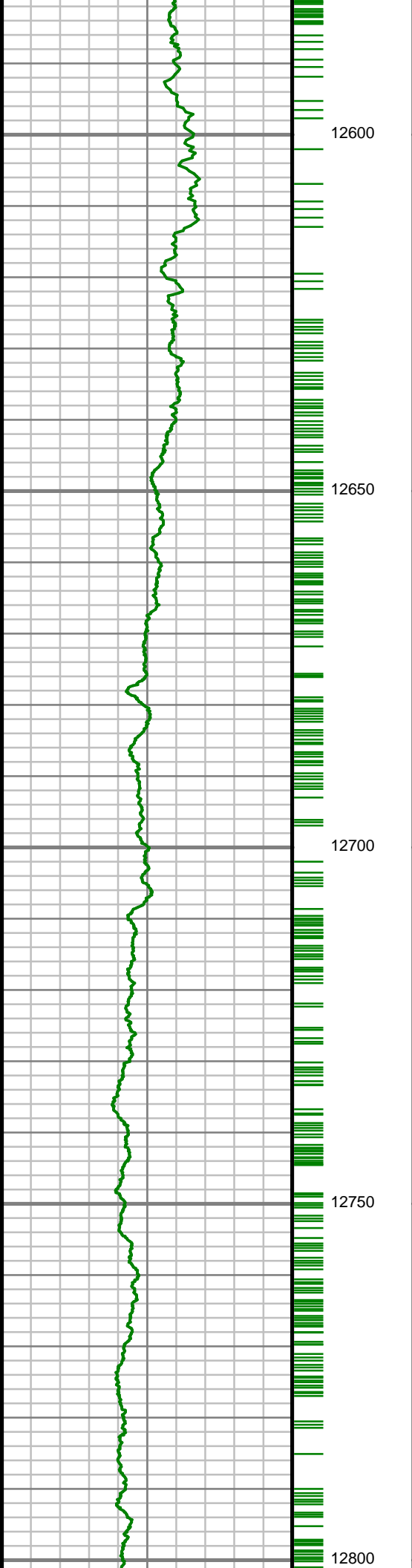
S: 143 MD: 12283.00 ft
Inc: 89.56 deg Az:
358.74 deg TVD:
7894.41 ft



S: 144 MD: 12377.00 ft
Inc: 89.60 deg Az:
359.58 deg TVD:
7895.10 ft

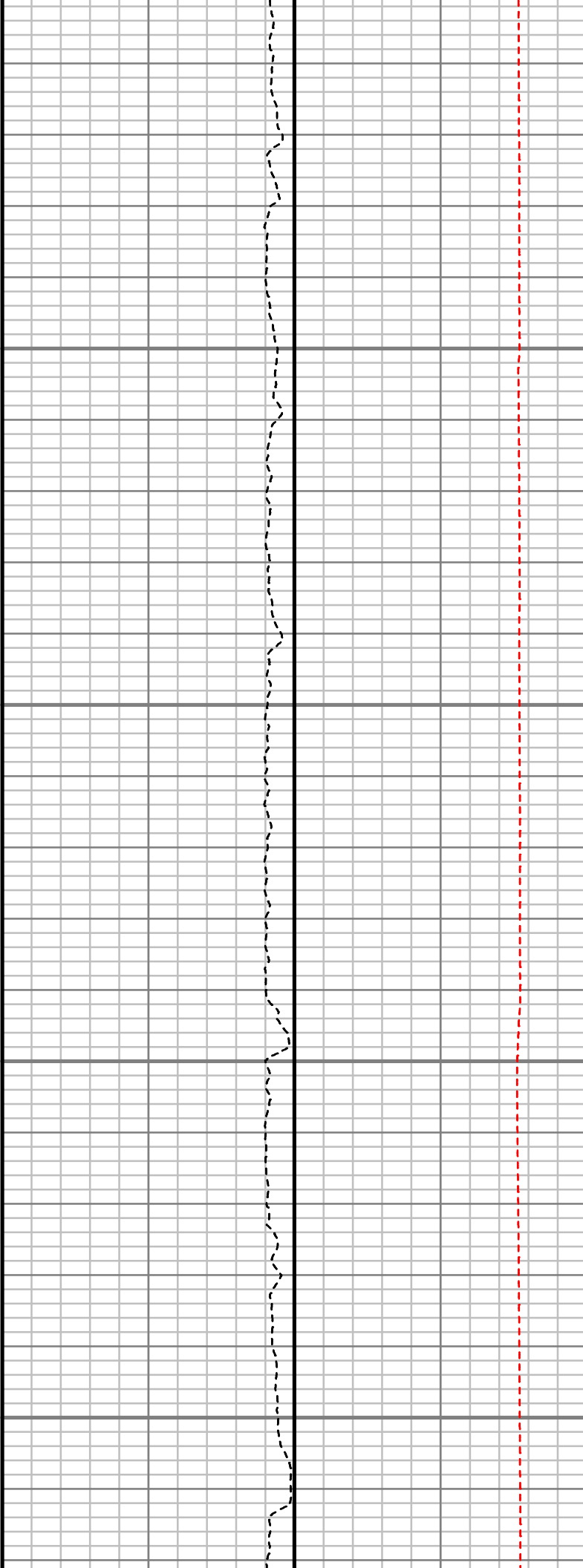
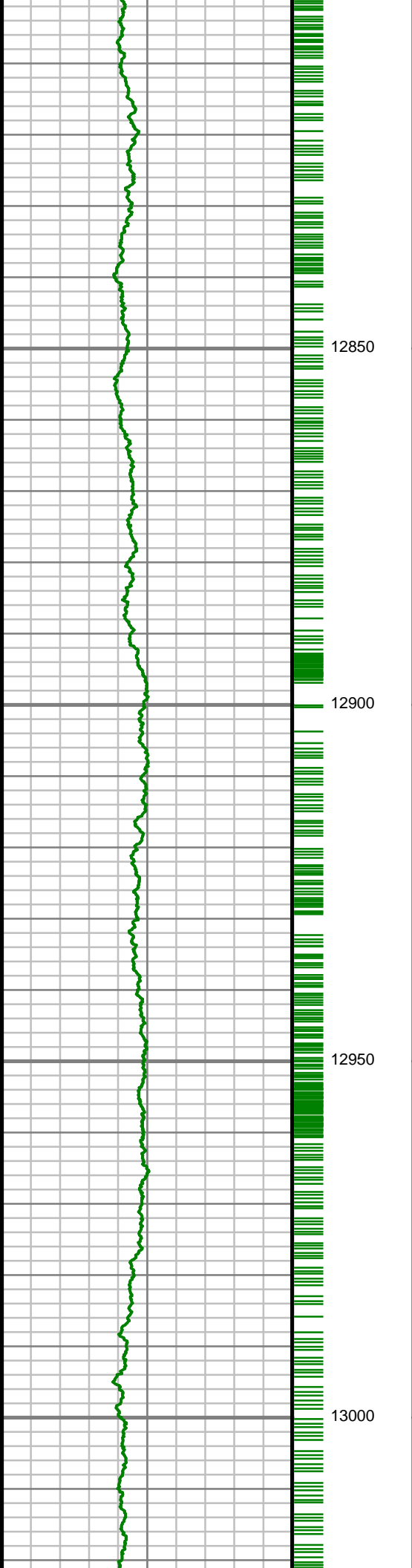
S: 145 MD: 12472.00 ft
Inc: 90.47 deg Az: 0.06
deg TVD: 7895.05 ft

S: 146 MD: 12566.00 ft
Inc: 90.23 deg Az:
360.00 deg TVD:
7894.47 ft



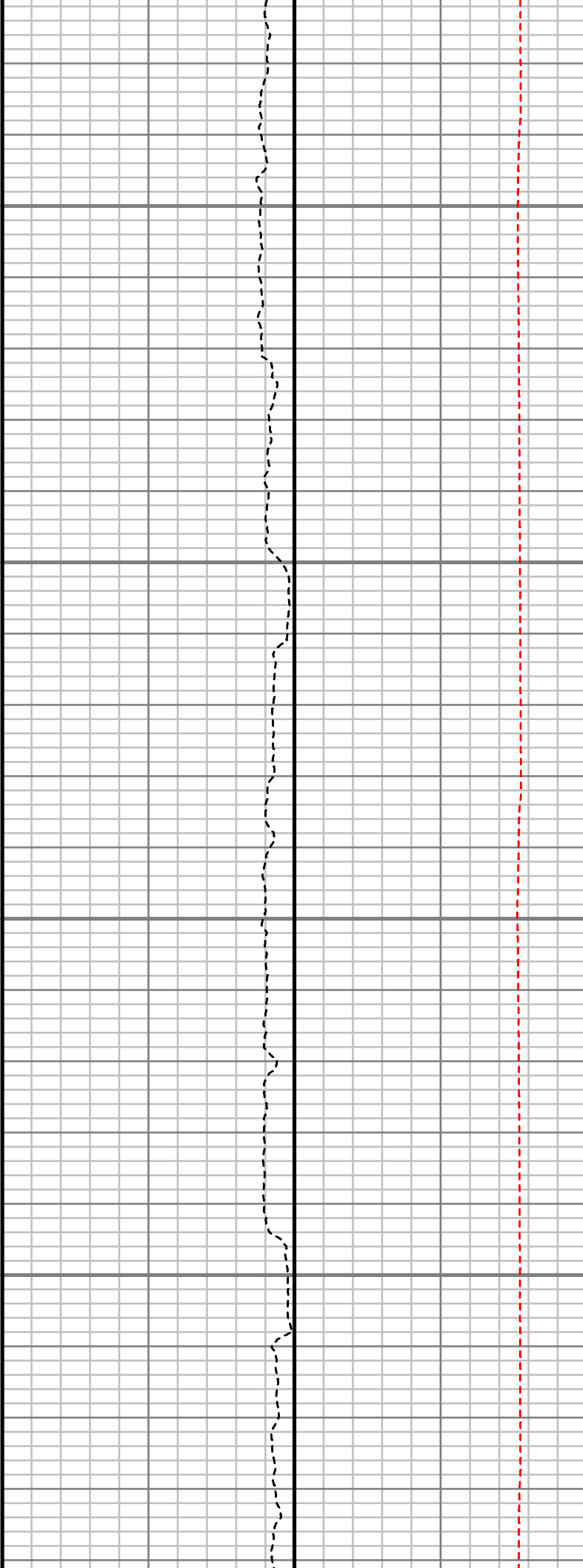
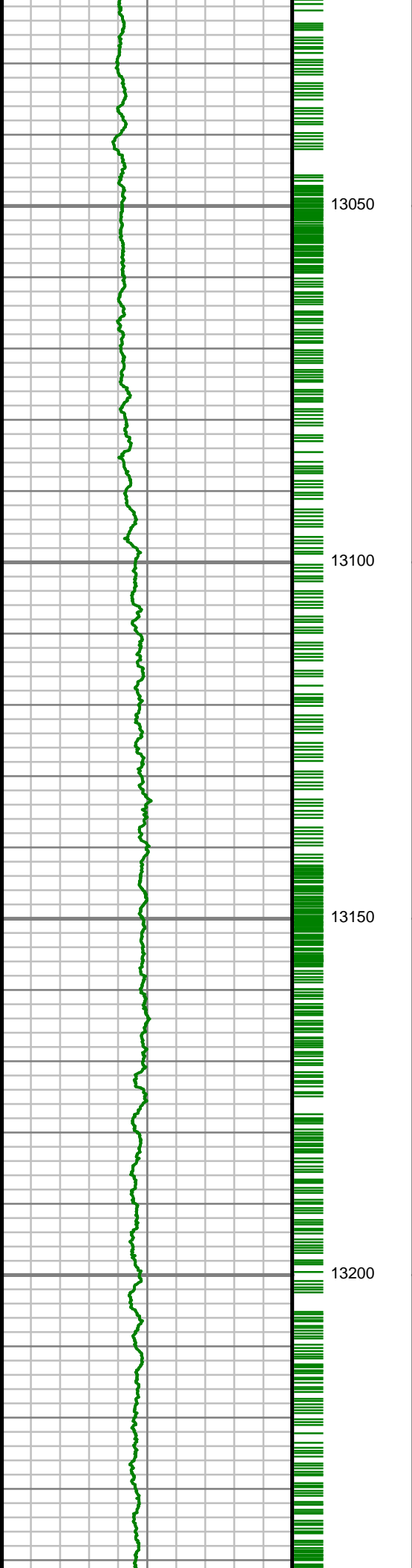
S: 147 MD: 12661.00 ft
Inc: 90.44 deg Az: 0.83
deg TVD: 7893.91 ft

S: 148 MD: 12755.00 ft
Inc: 90.30 deg Az: 0.50
deg TVD: 7893.31 ft



S: 149 MD: 12849.00 ft
Inc: 90.50 deg Az: 1.20
deg TVD: 7892.64 ft

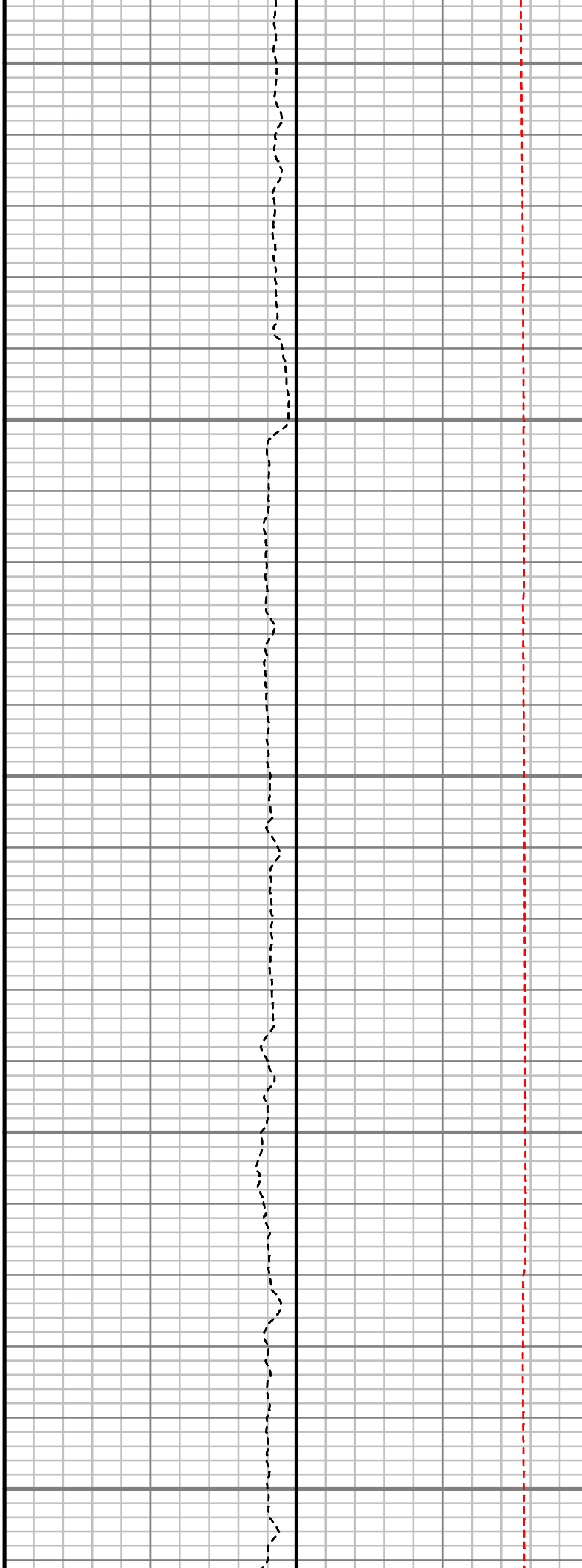
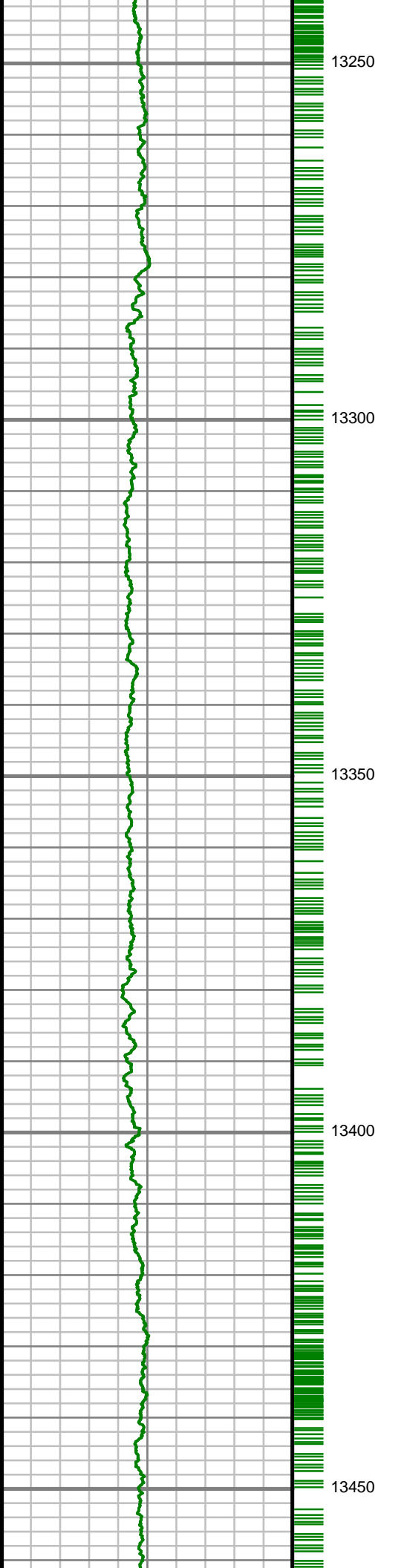
S: 150 MD: 12943.00 ft
Inc: 90.87 deg Az: 0.92
deg TVD: 7891.52 ft



S: 151 MD: 13038.00 ft
Inc: 89.06 deg Az: 1.15
deg TVD: 7891.57 ft

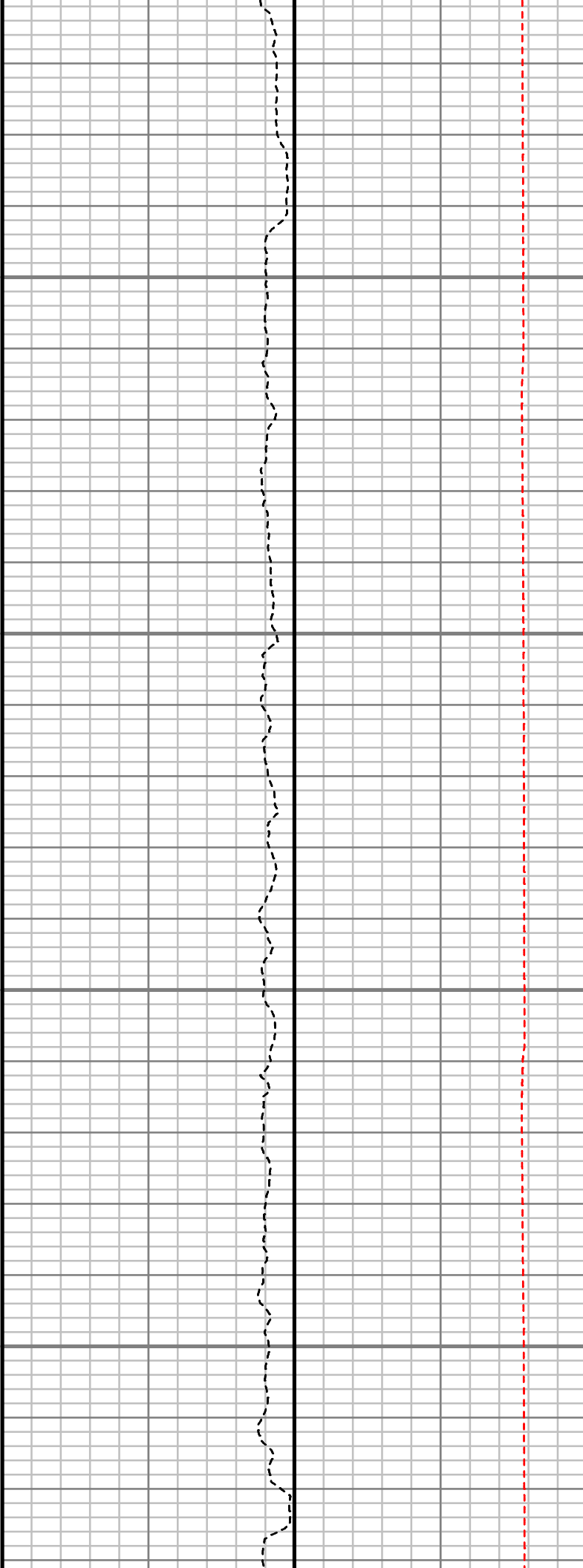
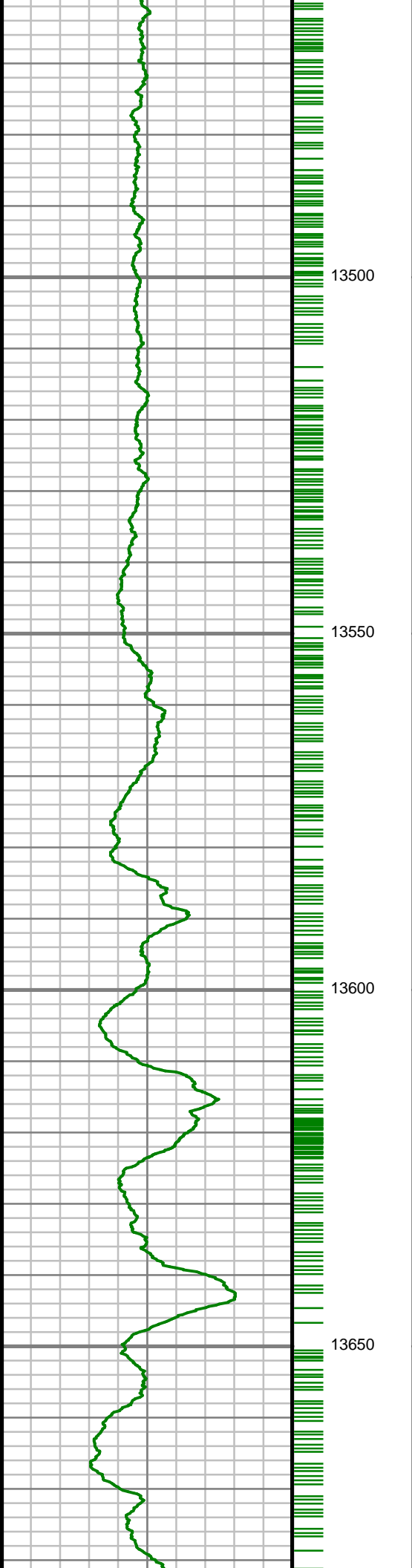
S: 152 MD: 13132.00 ft
Inc: 88.42 deg Az: 0.55
deg TVD: 7893.64 ft

S: 153 MD: 13226.00 ft
Inc: 89.43 deg Az: 0.60
deg TVD: 7895.40 ft



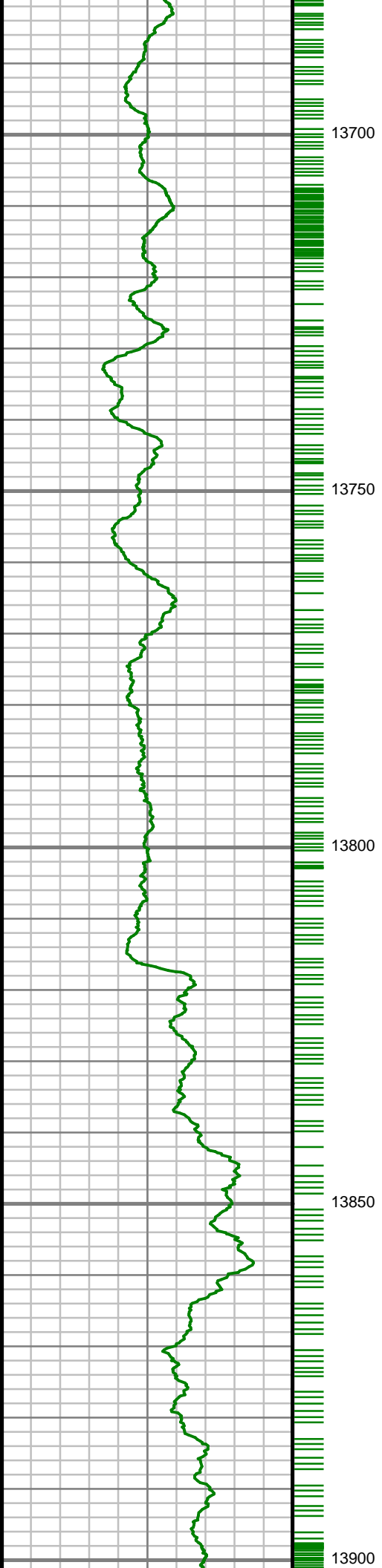
S: 154 MD: 13321.00 ft
Inc: 90.74 deg Az: 0.68
deg TVD: 7895.26 ft

S: 155 MD: 13415.00 ft
Inc: 91.51 deg Az: 0.43
deg TVD: 7893.42 ft



S: 156 MD: 13510.00 ft
Inc: 90.50 deg Az:
359.91 deg TVD:
7891.75 ft

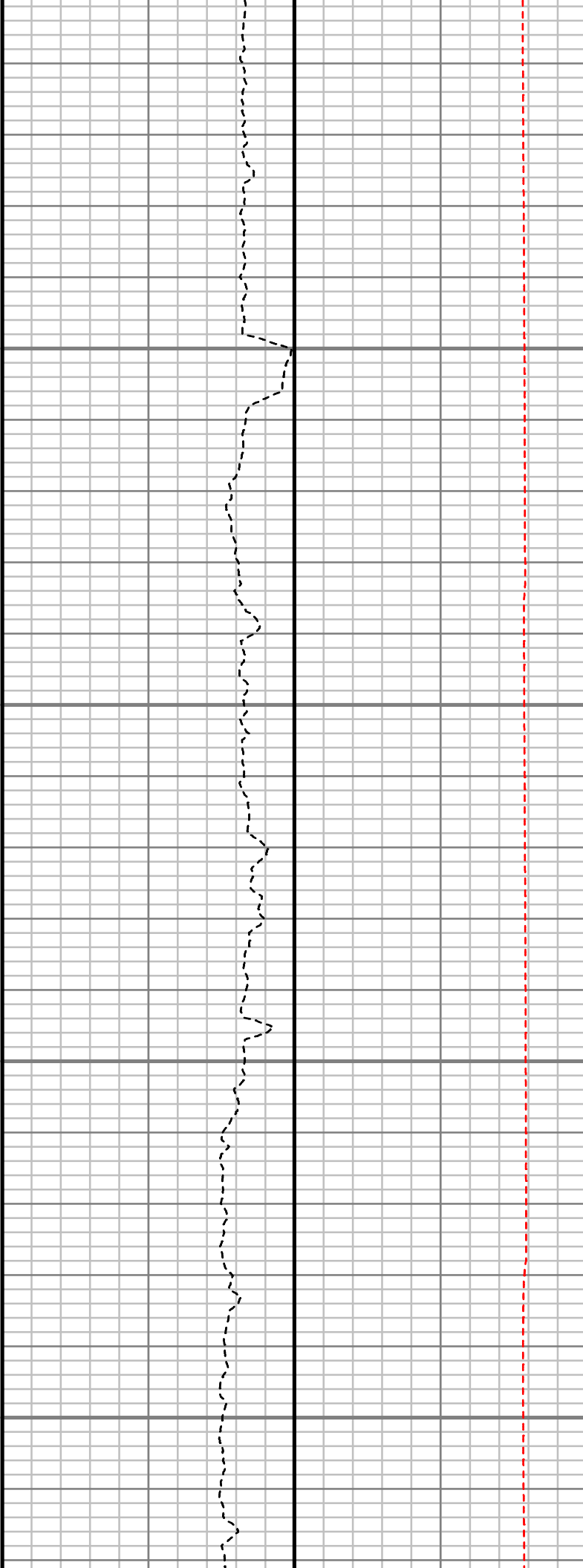
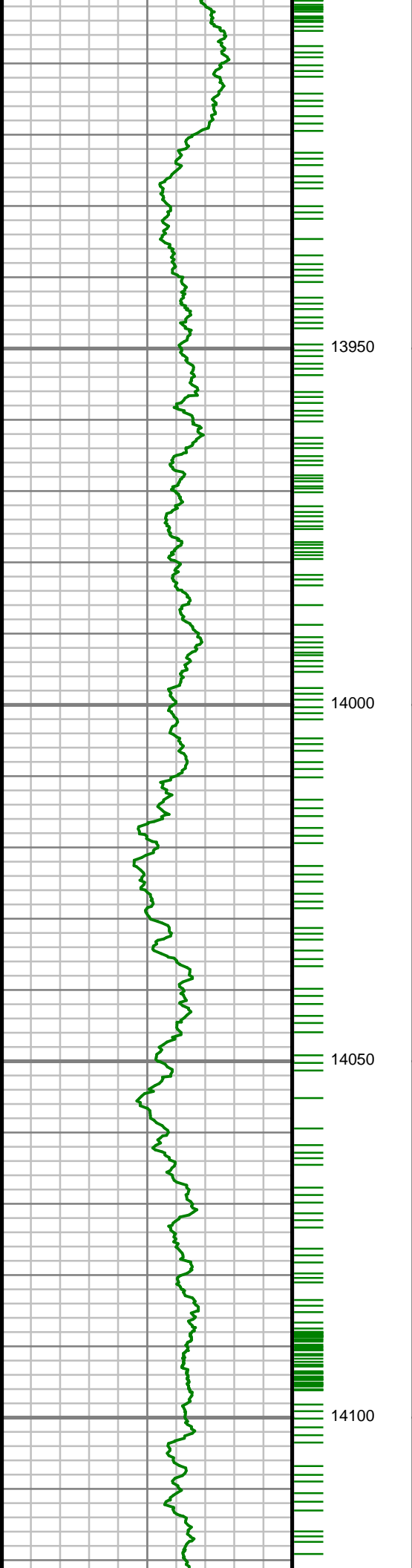
S: 157 MD: 13604.00 ft
Inc: 90.81 deg Az:
359.52 deg TVD:
7890.67 ft



S: 158 MD: 13698.00 ft
Inc: 90.87 deg Az:
359.59 deg TVD:
7889.30 ft

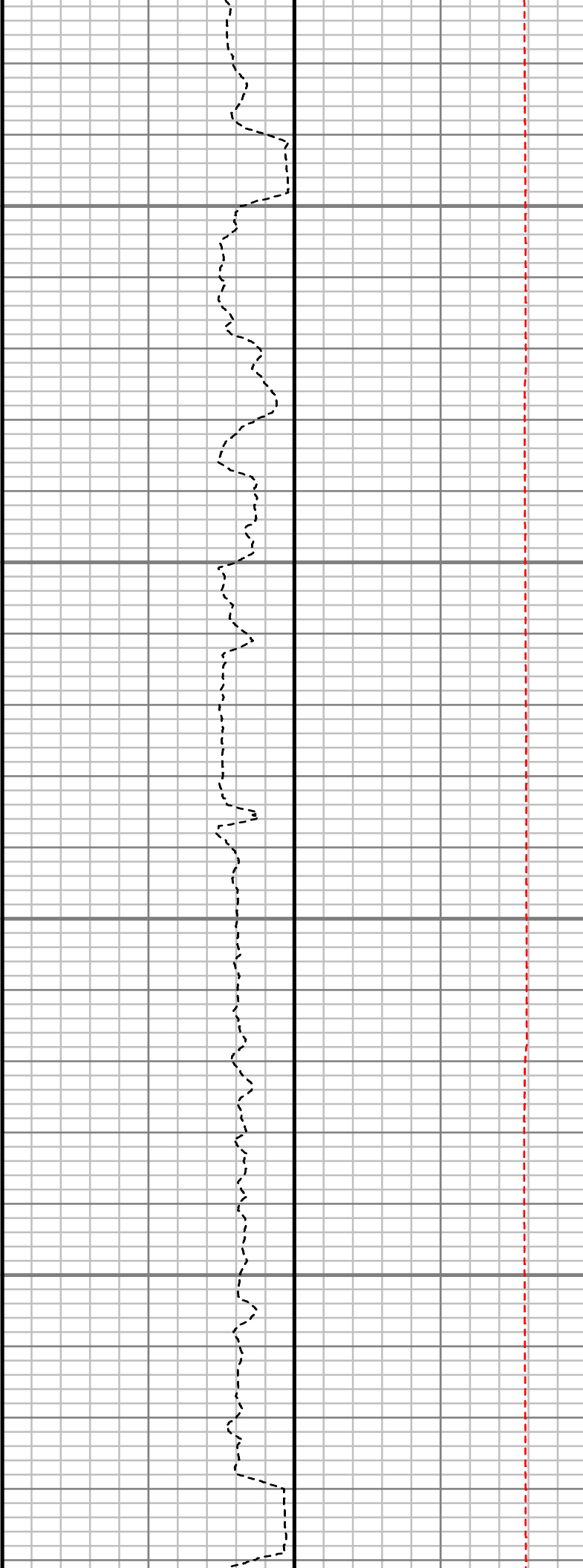
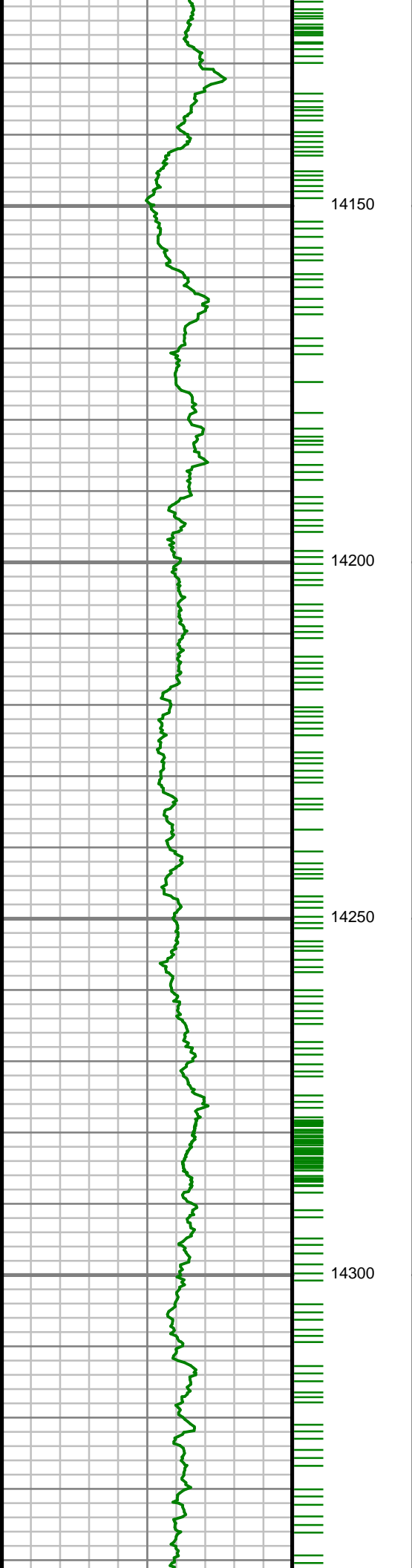
S: 159 MD: 13793.00 ft
Inc: 90.27 deg Az: 0.71
deg TVD: 7888.35 ft

S: 160 MD: 13887.00 ft
Inc: 90.30 deg Az: 0.44
deg TVD: 7887.88 ft



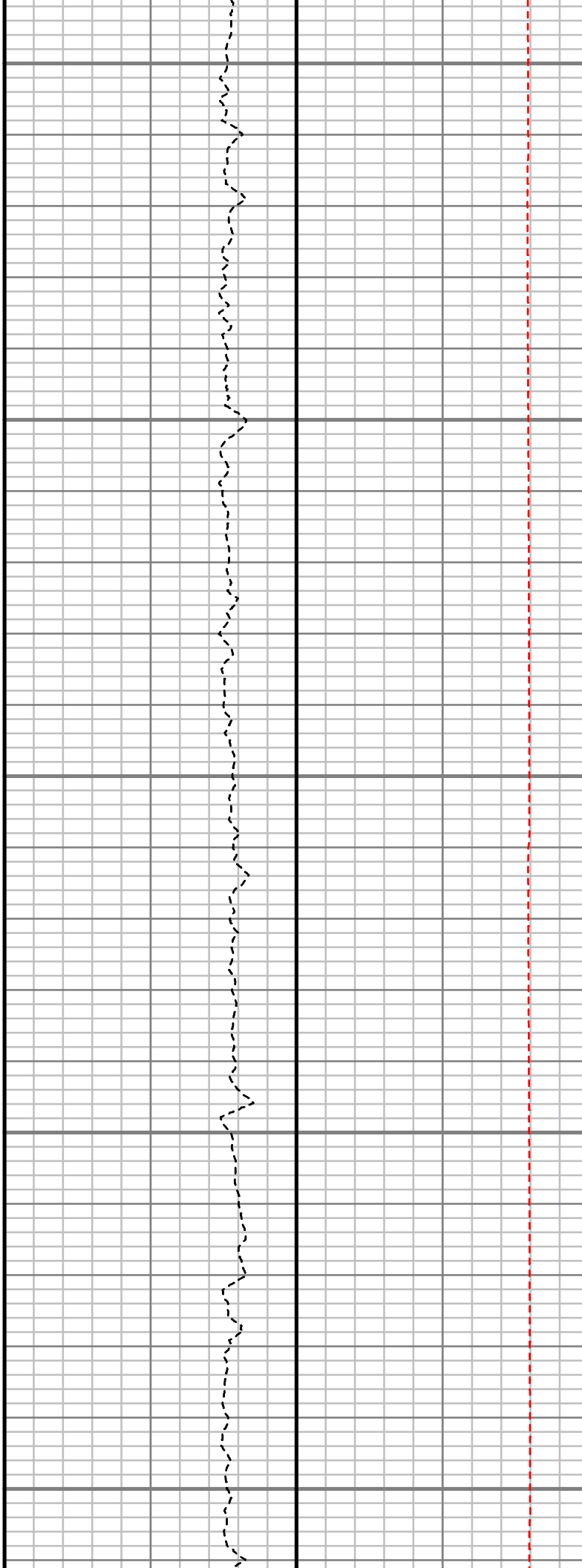
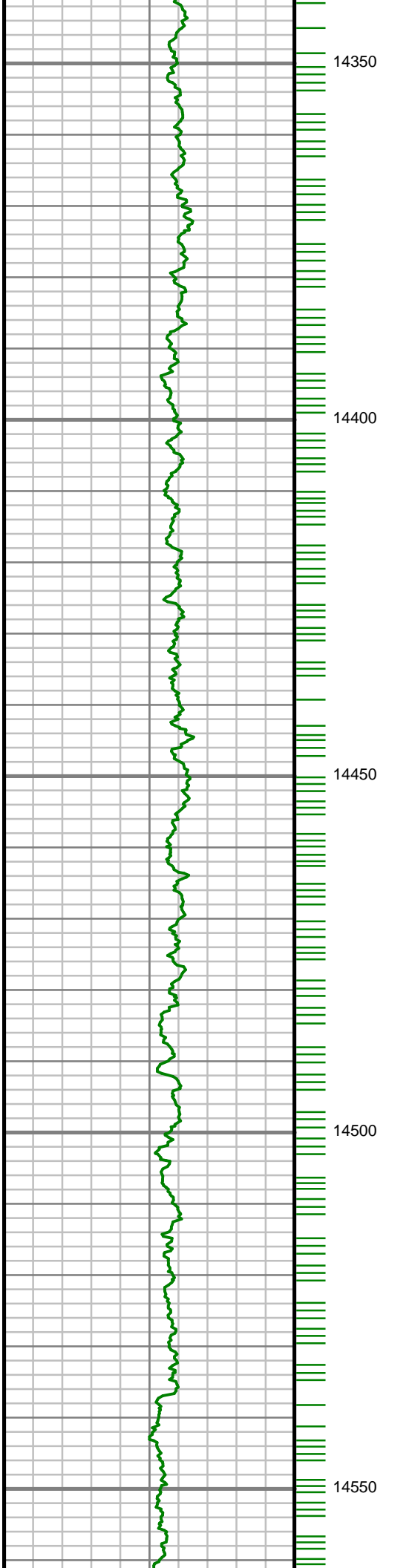
S: 161 MD: 13982.00 ft
Inc: 89.83 deg Az: 0.28
deg TVD: 7887.77 ft

S: 162 MD: 14076.00 ft
Inc: 90.37 deg Az: 1.06
deg TVD: 7887.61 ft



S: 163 MD: 14171.00 ft
Inc: 89.50 deg Az: 0.42
deg TVD: 7887.72 ft

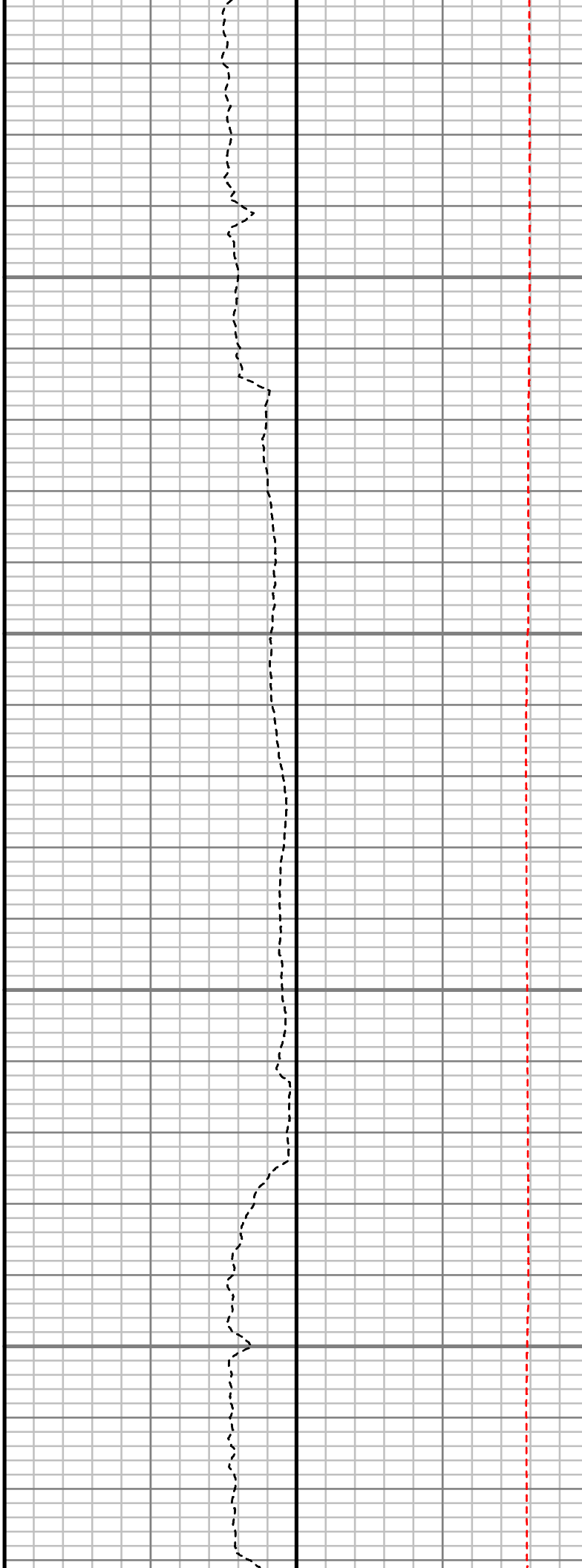
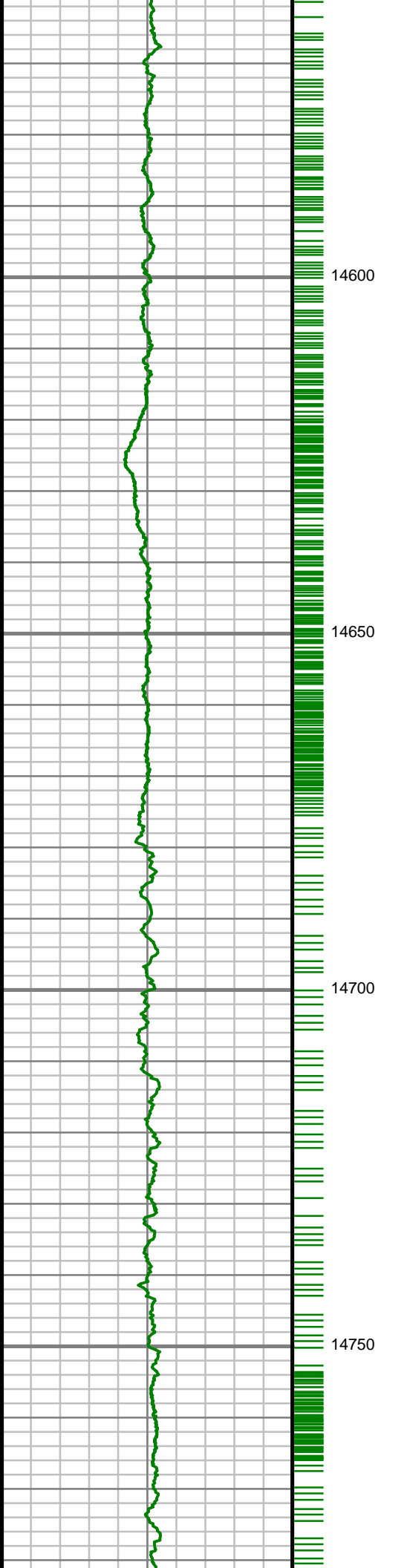
S: 164 MD: 14265.00 ft
Inc: 89.39 deg Az: 0.27
deg TVD: 7888.63 ft



S: 165 MD: 14359.00 ft
Inc: 90.34 deg Az: 0.98
deg TVD: 7888.85 ft

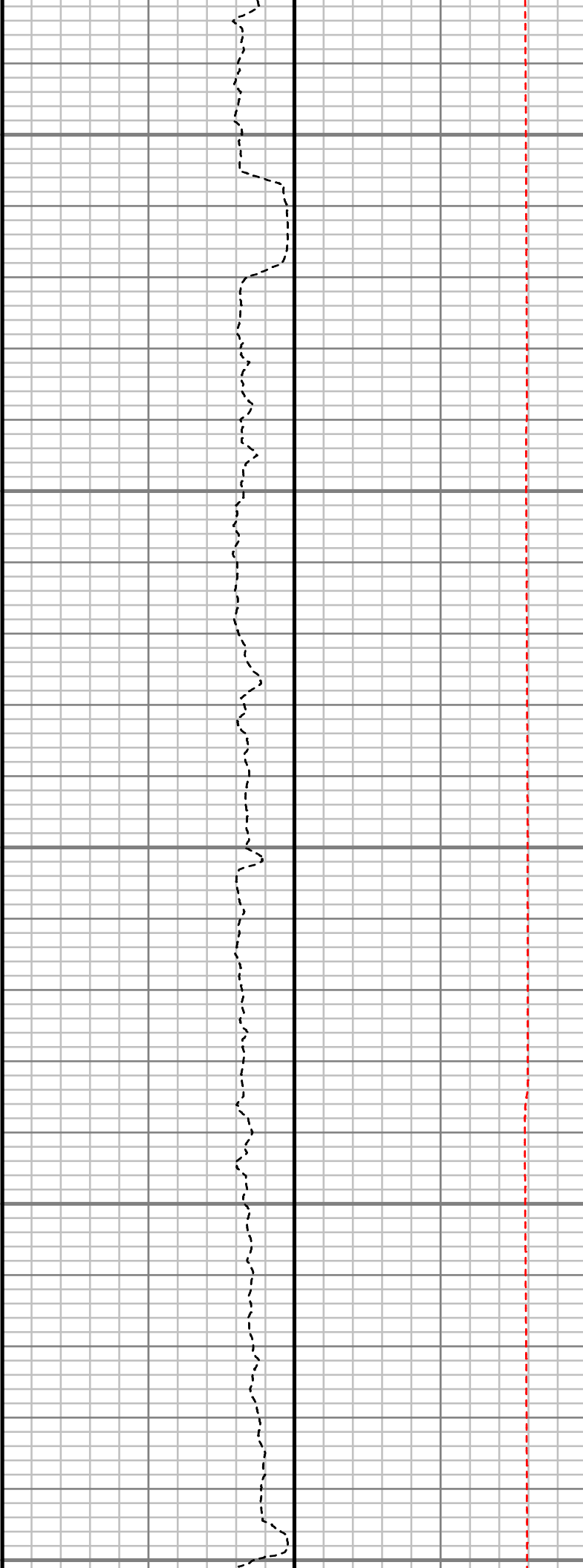
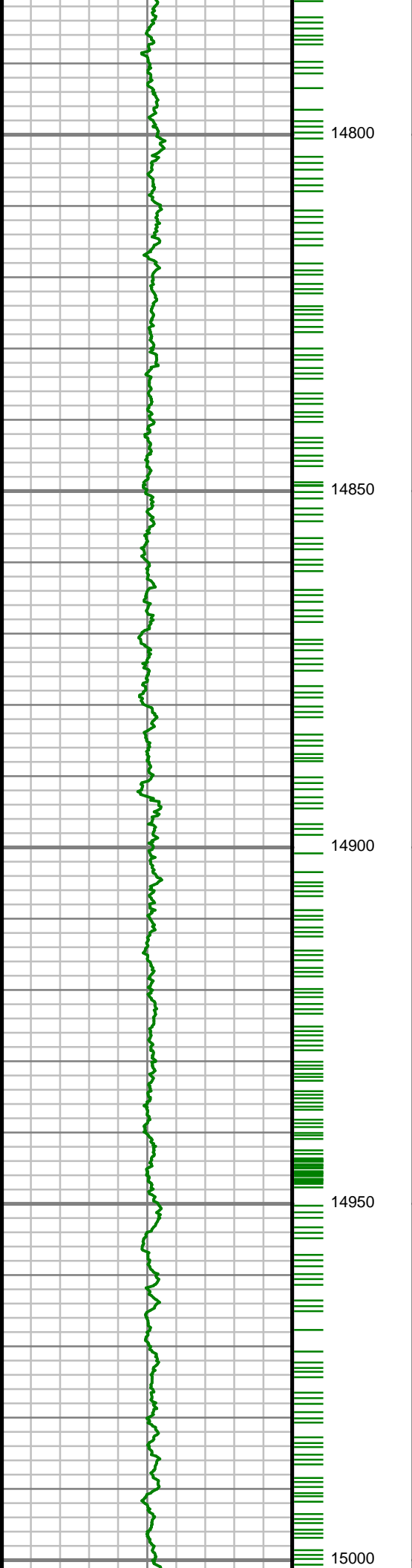
S: 166 MD: 14453.00 ft
Inc: 90.24 deg Az: 0.89
deg TVD: 7888.38 ft

S: 167 MD: 14548.00 ft
Inc: 90.34 deg Az: 0.63
deg TVD: 7887.91 ft



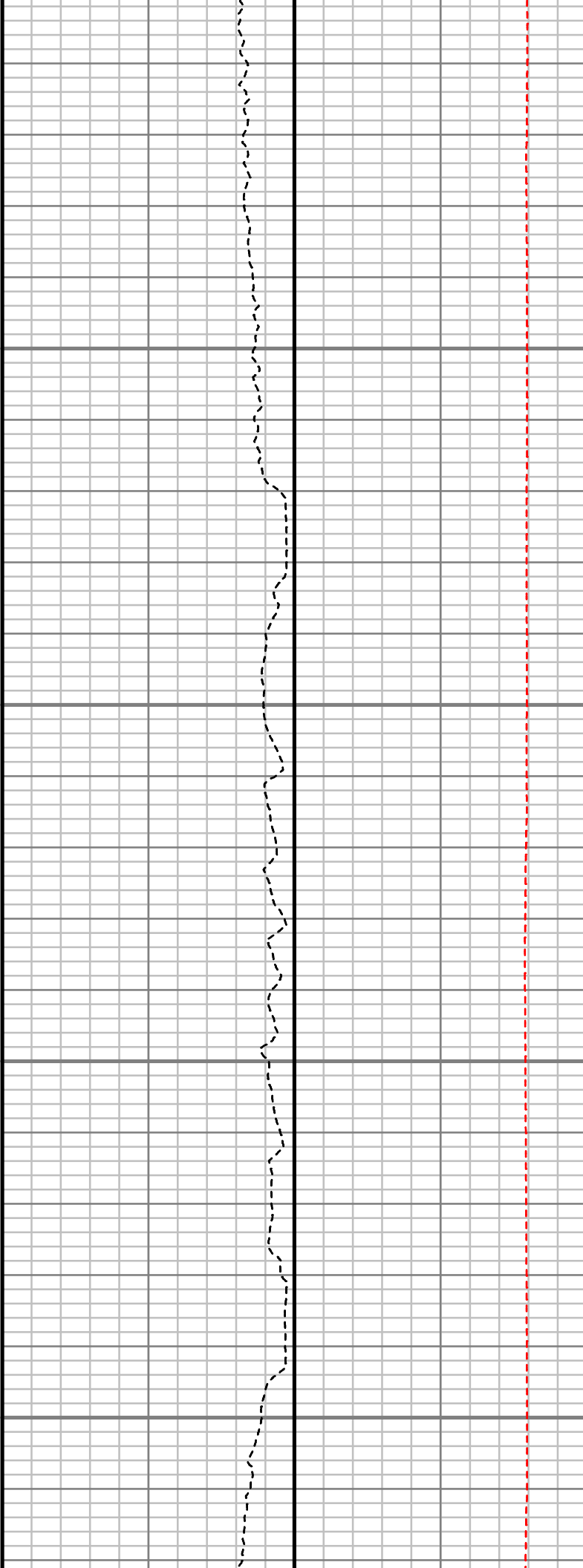
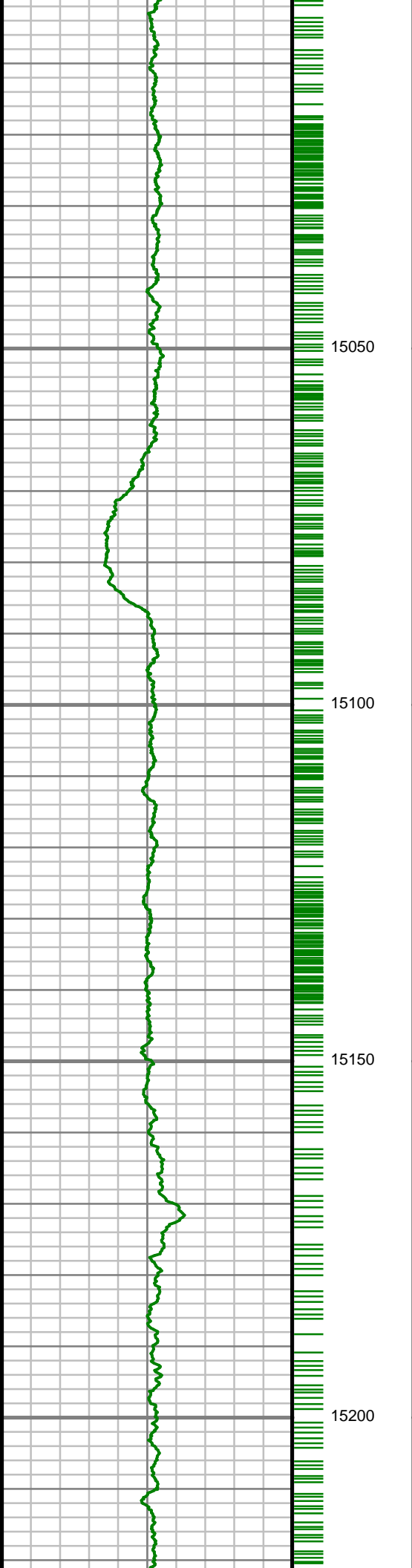
S: 168 MD: 14642.00 ft
Inc: 89.46 deg Az: 0.34
deg TVD: 7888.07 ft

S: 169 MD: 14737.00 ft
Inc: 90.03 deg Az: 0.49
deg TVD: 7888.49 ft



S: 170 MD: 14831.00 ft
Inc: 90.67 deg Az: 0.83
deg TVD: 7887.91 ft

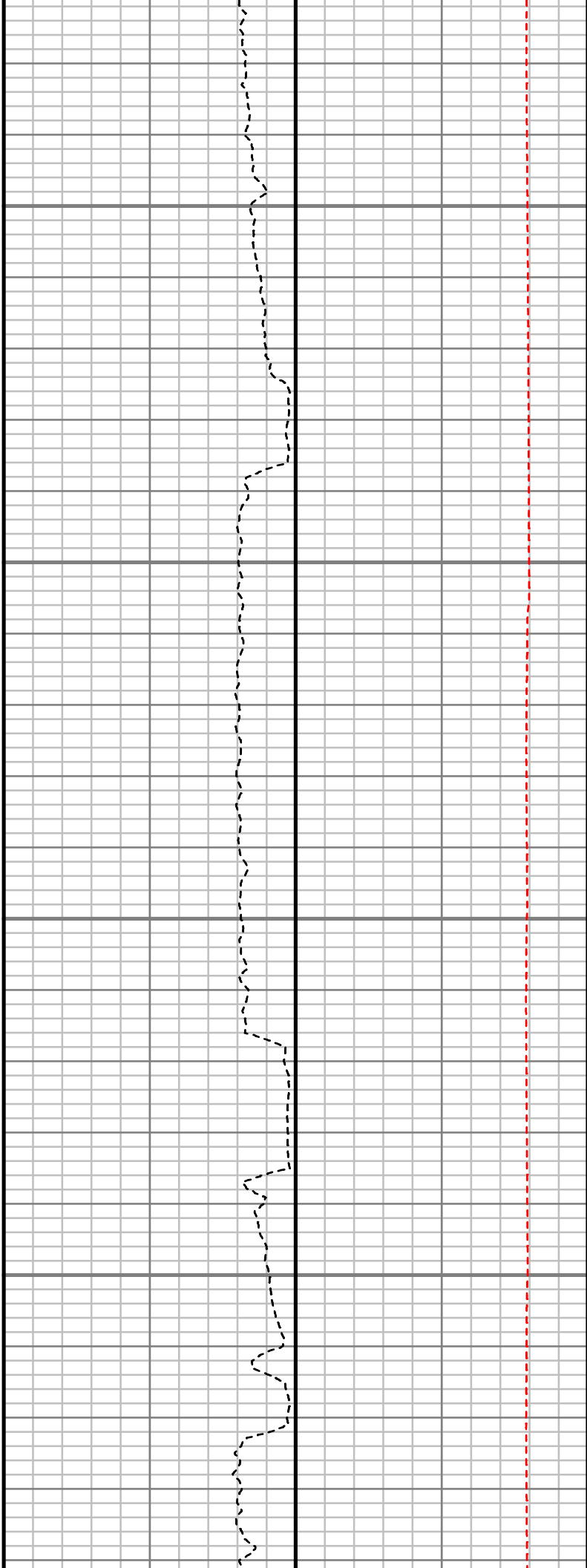
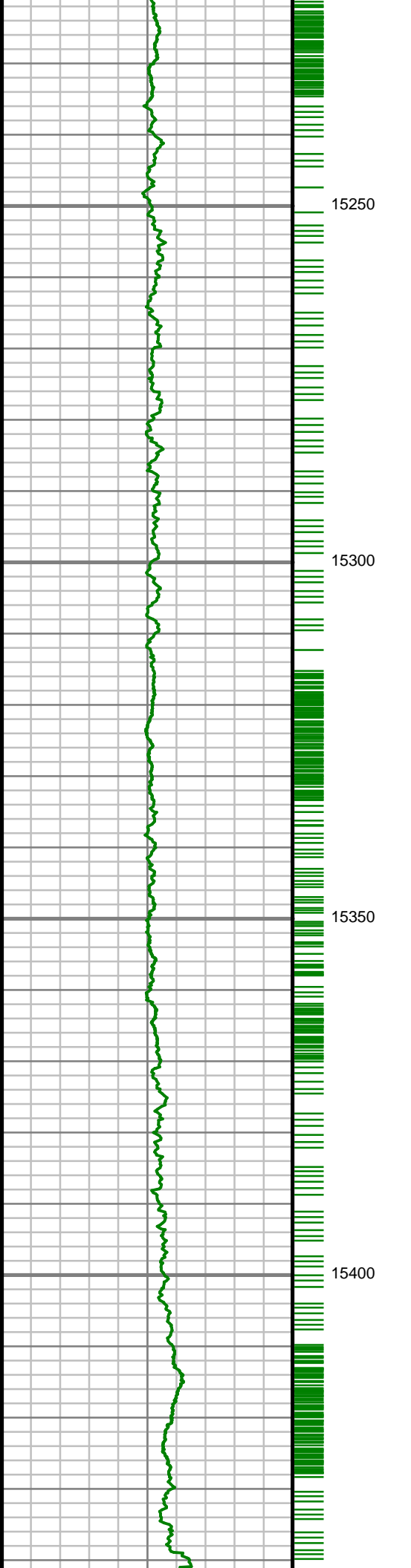
S: 171 MD: 14926.00 ft
Inc: 90.37 deg Az: 0.77
deg TVD: 7887.05 ft



S: 172 MD: 15020.00 ft
Inc: 90.60 deg Az: 0.17
deg TVD: 7886.25 ft

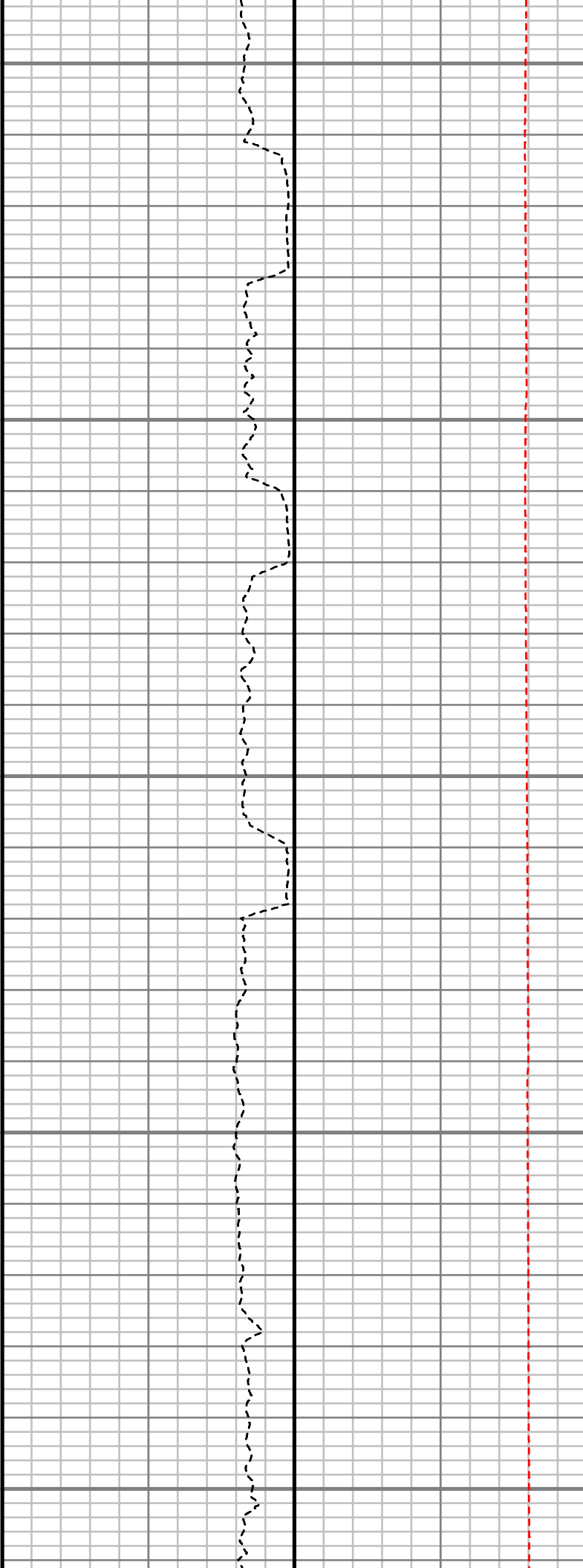
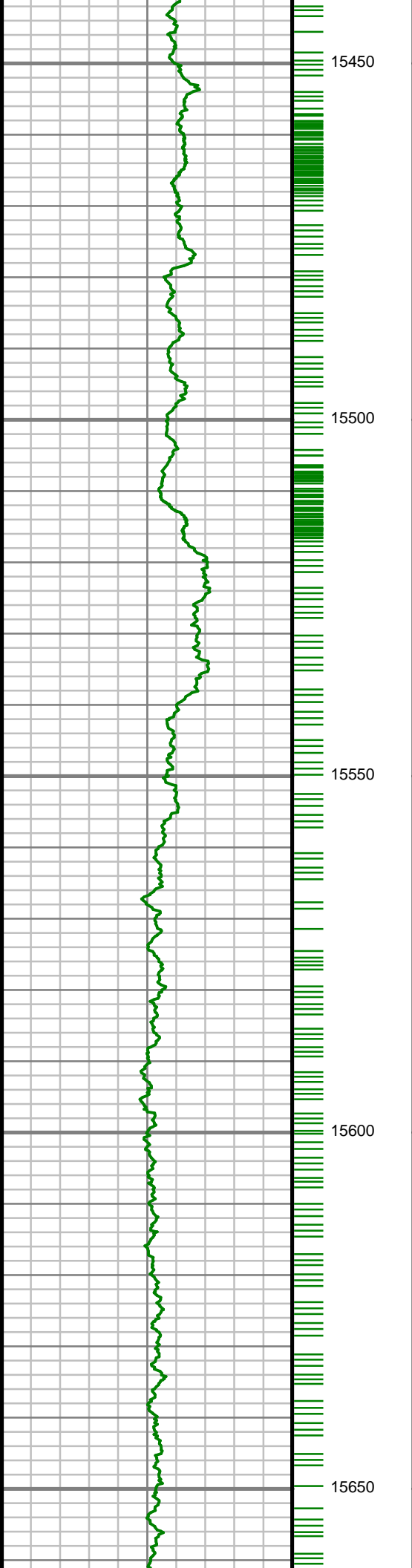
S: 173 MD: 15115.00 ft
Inc: 89.09 deg Az:
359.13 deg TVD:
7886.50 ft

S: 174 MD: 15209.00 ft
Inc: 89.80 deg Az:
359.09 deg TVD:
7887.41 ft



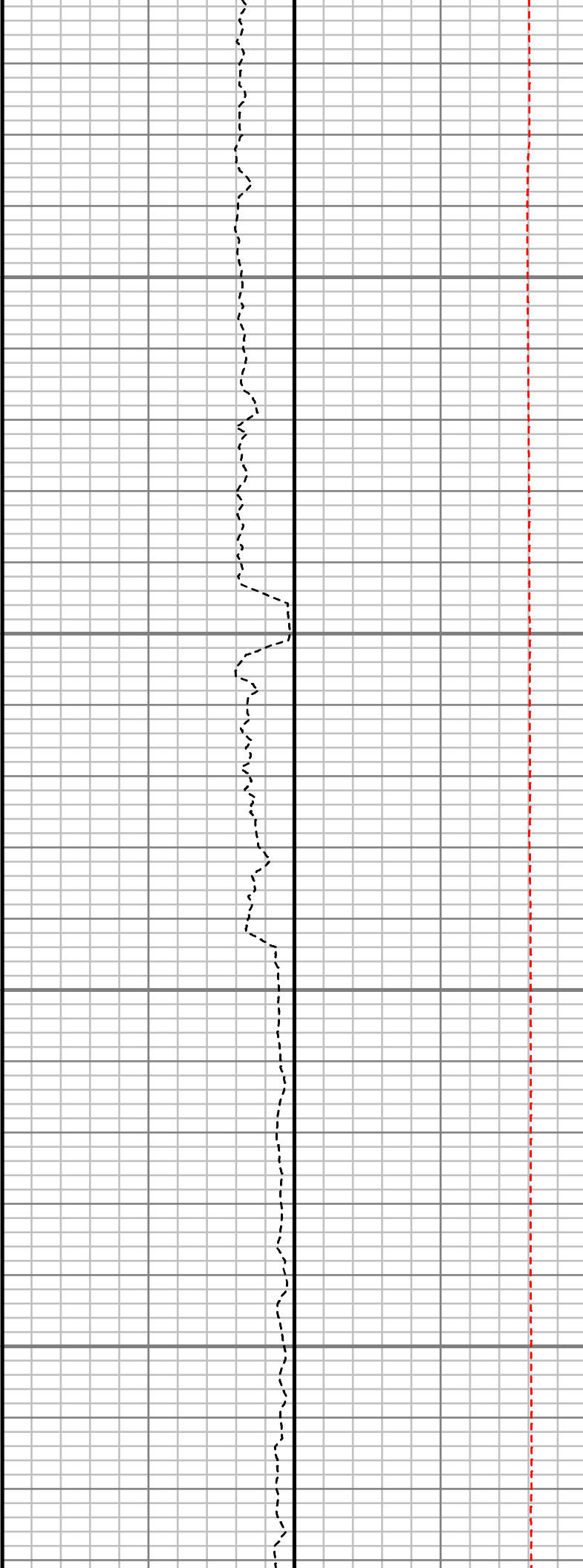
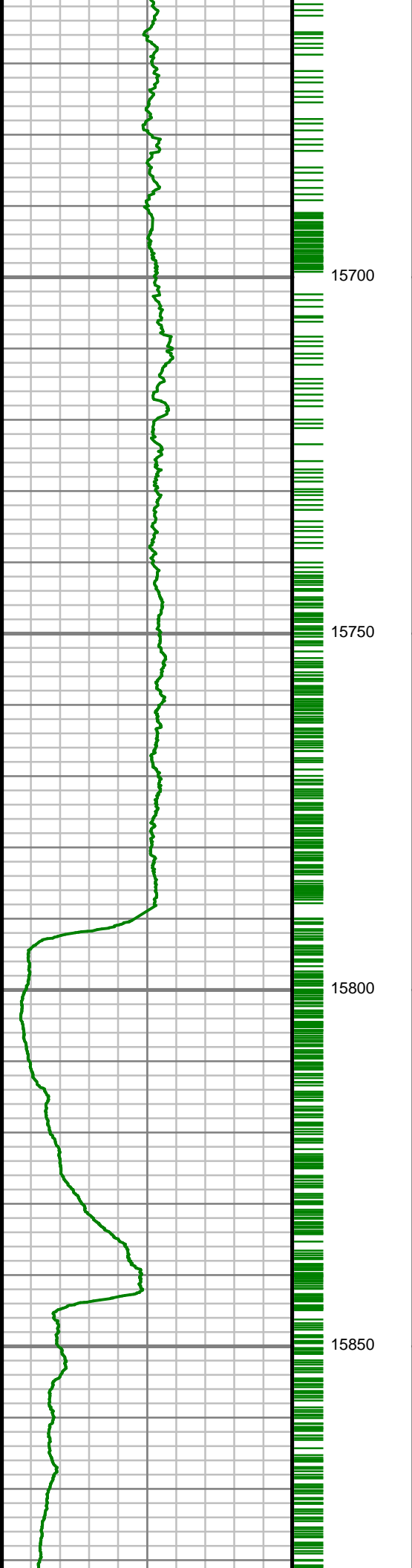
S: 175 MD: 15304.00 ft
Inc: 88.52 deg Az:
357.80 deg TVD:
7888.80 ft

S: 176 MD: 15398.00 ft
Inc: 89.06 deg Az:
358.50 deg TVD:
7890.78 ft



S: 177 MD: 15492.00 ft
Inc: 90.57 deg Az:
359.67 deg TVD:
7891.08 ft

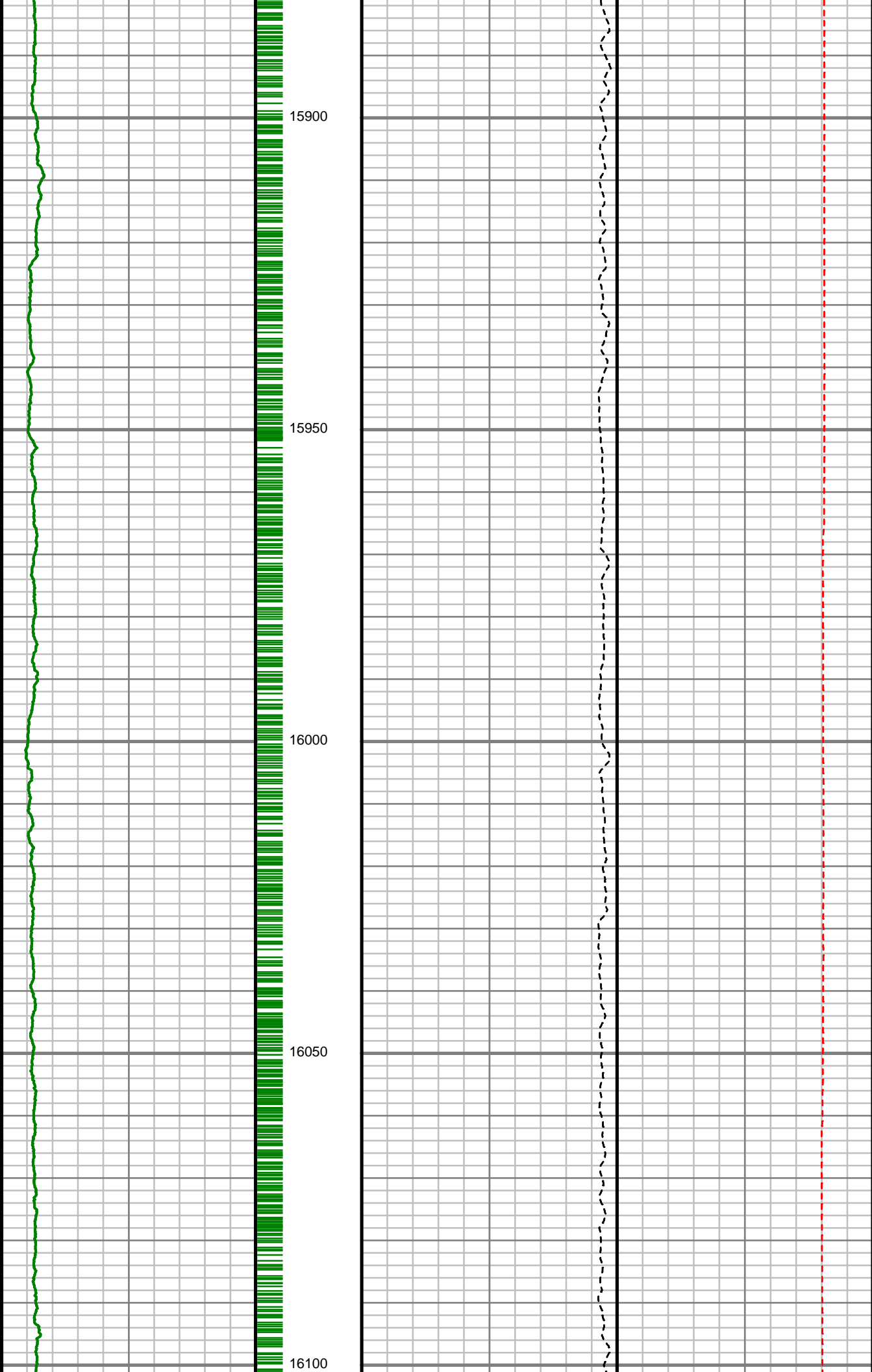
S: 178 MD: 15587.00 ft
Inc: 91.88 deg Az:
360.00 deg TVD:
7889.05 ft



S: 179 MD: 15681.00 ft
Inc: 91.61 deg Az:
359.29 deg TVD:
7886.19 ft

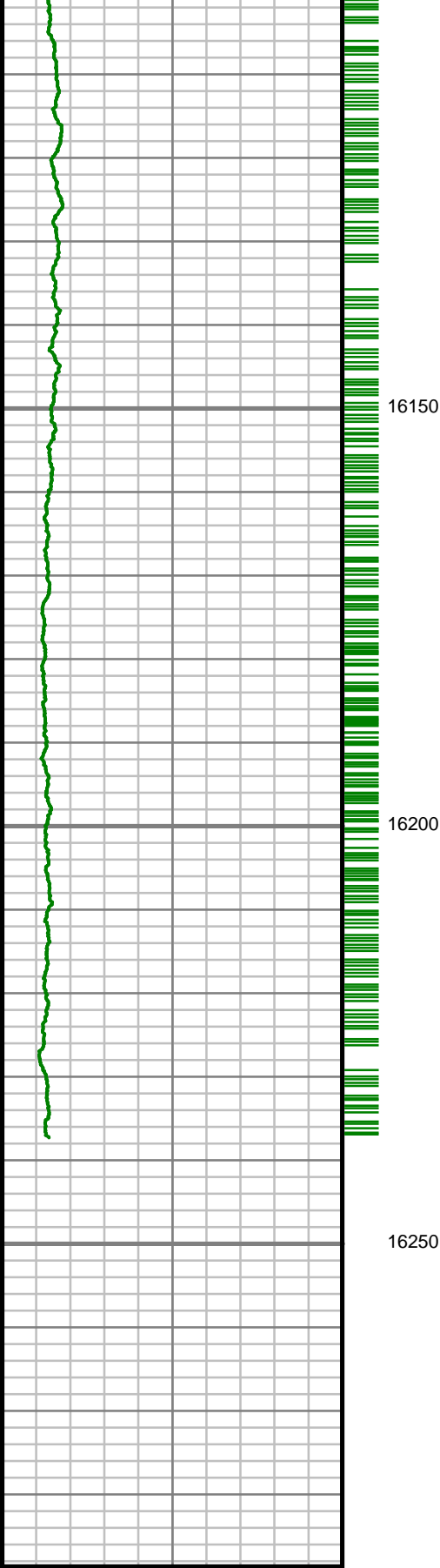
S: 180 MD: 15776.00 ft
Inc: 92.08 deg Az:
359.94 deg TVD:
7883.14 ft

S: 181 MD: 15870.00 ft
Inc: 91.82 deg Az:
359.29 deg TVD:
7879.94 ft

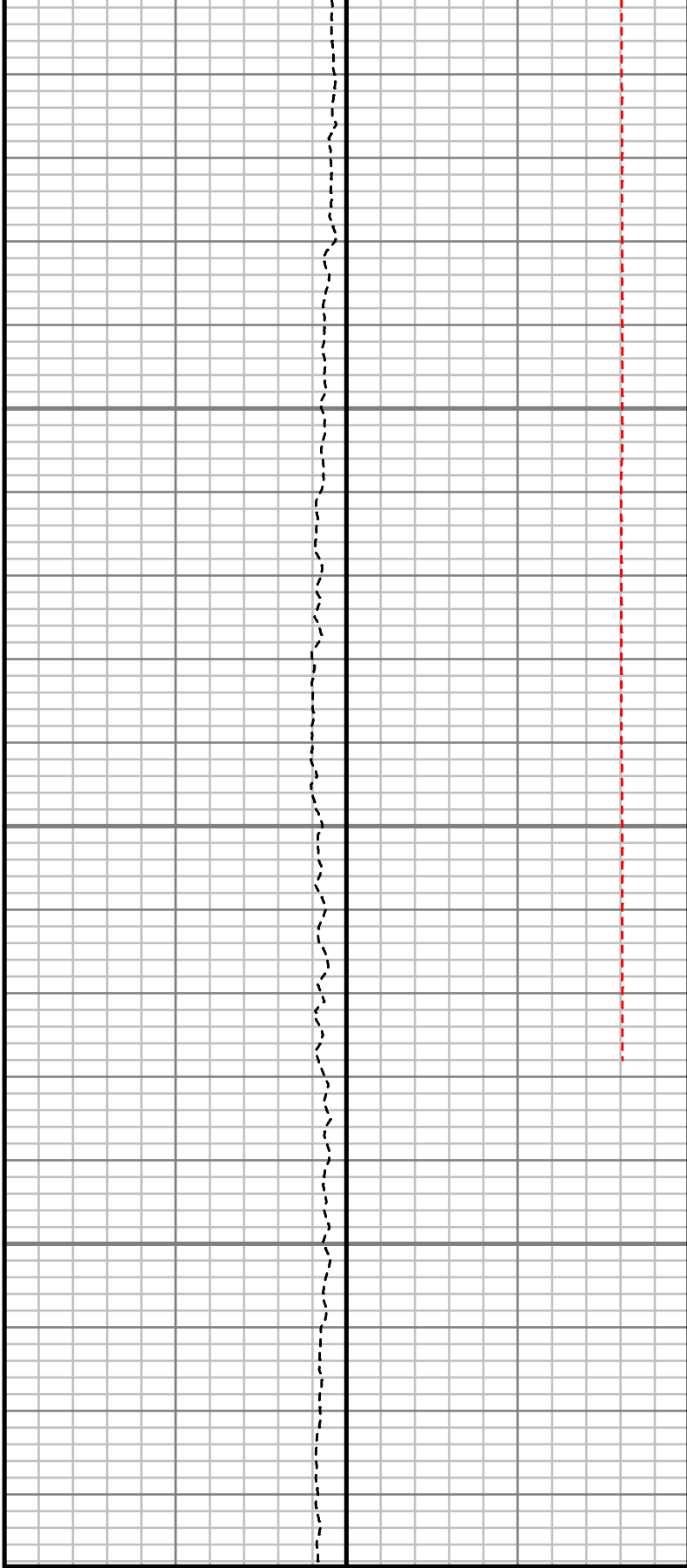


S: 182 MD: 15964.00 ft
Inc: 91.14 deg Az: 0.11
deg TVD: 7877.51 ft

S: 183 MD: 16059.00 ft
Inc: 90.84 deg Az: 0.23
deg TVD: 7875.86 ft



Gamma Ray (GR)		
0	Unit = aapi	150



Rate of Penetration (ROP)		
1000	Unit = ft/hr	0

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

S: 184 MD: 16153.00 ft
Inc: 89.56 deg Az:
359.64 deg TVD:
7875.53 ft

S: 185 MD: 16226.00 ft
Inc: 89.46 deg Az:
358.50 deg TVD:
7876.15 ft

Comments

MWD Survey Report

Well Location	BADGER 22C-3HZ
Well Name	BADGER 22C-3HZ
Survey Date	2/2/2015
Latitude	40°3'26.474"N
Longitude	104°59'41.834"W
Btotal	52619, 52662, 52713, 52729 nT
Dip	66.53, 66.54, 66.60 deg
Magnetic Declination	8.62, 8.63, 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), 0.33Azim (deg)
Operator(s)	B. MILBURN, J. MEYERS, M. SHARKER

Well Notes

SURVEYS FROM 0 FT. TO 1291 FT. WERE ACQUIRED BY CATHEDRAL INTERNATIONAL MWD.

SURVEYS FROM 1291 FT. TO 16288 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	0.30	121.00	71.00	-0.07	-0.07	0.12	0.58	52.00
161.00	0.40	66.30	161.00	-0.06	-0.07	0.61	0.37	90.00
258.00	0.60	61.20	257.99	0.32	0.32	1.36	0.21	97.00
337.00	0.40	63.60	336.99	0.65	0.64	1.97	0.25	79.00
417.00	0.90	59.40	416.99	1.10	1.08	2.76	0.63	80.00
497.00	0.80	57.30	496.98	1.72	1.70	3.77	0.13	80.00
577.00	0.60	142.70	576.97	1.70	1.67	4.50	1.20	80.00
657.00	0.70	160.00	656.97	0.91	0.88	4.92	0.27	80.00
737.00	1.00	199.90	736.96	-0.21	-0.24	4.85	0.81	80.00
817.00	1.10	225.80	816.95	-1.40	-1.43	4.06	0.60	80.00
897.00	1.30	242.80	896.93	-2.36	-2.38	2.70	0.51	80.00
977.00	0.70	251.80	976.92	-2.94	-2.95	1.43	0.77	80.00
1057.00	0.30	297.20	1056.91	-3.00	-3.00	0.78	0.67	80.00
1137.00	0.30	298.60	1136.91	-2.80	-2.81	0.41	0.01	80.00
1217.00	0.30	317.50	1216.91	-2.55	-2.55	0.08	0.12	80.00
1291.00	0.10	250.10	1290.91	-2.43	-2.43	-0.11	0.37	74.00
1347.00	1.08	252.87	1346.91	-2.61	-2.60	-0.66	1.75	56.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
1437.00	2.23	212.63	1436.87	-4.34	-4.33	-2.42	1.74	90.00
1528.00	3.88	183.89	1527.74	-8.92	-8.90	-3.58	2.42	91.00
1619.00	5.78	181.68	1618.42	-16.57	-16.55	-3.92	2.09	91.00
1709.00	6.80	177.04	1707.87	-26.42	-26.39	-3.78	1.26	90.00
1799.00	8.18	162.53	1797.11	-37.83	-37.82	-1.58	2.59	90.00
1890.00	9.54	149.69	1887.03	-50.48	-50.50	4.17	2.63	91.00
1980.00	10.12	149.79	1975.71	-63.71	-63.78	11.91	0.65	90.00
2072.00	11.95	149.60	2066.01	-78.86	-78.98	20.80	1.99	92.00
2163.00	13.56	147.92	2154.76	-95.97	-96.15	31.24	1.81	91.00
2253.00	14.40	147.61	2242.09	-114.29	-114.54	42.83	0.93	90.00
2344.00	14.93	149.01	2330.13	-133.83	-134.15	54.93	0.71	91.00
2438.00	17.74	148.91	2420.32	-156.40	-156.80	68.56	2.99	94.00
2533.00	16.09	145.31	2511.21	-179.53	-180.02	83.53	2.06	95.00
2627.00	15.50	147.96	2601.66	-200.81	-201.37	97.60	0.99	94.00
2722.00	15.61	147.54	2693.19	-222.27	-222.92	111.20	0.17	95.00
2816.00	15.12	144.83	2783.83	-242.89	-243.61	125.05	0.92	94.00
2910.00	15.72	144.26	2874.44	-263.17	-263.98	139.56	0.66	94.00
3005.00	16.65	141.50	2965.67	-284.18	-285.08	155.55	1.27	95.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
3099.00	17.15	145.86	3055.62	-306.09	-307.09	171.71	1.45	94.00
3194.00	16.48	150.30	3146.56	-329.31	-330.38	186.24	1.52	95.00
3288.00	16.58	150.31	3236.68	-352.46	-353.61	199.49	0.10	94.00
3383.00	16.15	148.06	3327.83	-375.36	-376.59	213.19	0.80	95.00
3477.00	16.27	147.54	3418.09	-397.48	-398.80	227.17	0.20	94.00
3571.00	15.53	150.84	3508.50	-419.51	-420.90	240.37	1.24	94.00
3666.00	15.43	149.89	3600.05	-441.48	-442.94	252.91	0.29	95.00
3760.00	15.74	153.27	3690.60	-463.62	-465.15	264.92	1.02	94.00
3855.00	14.52	151.26	3782.30	-485.50	-487.10	276.44	1.40	95.00
3949.00	14.64	148.11	3873.28	-505.85	-507.52	288.38	0.86	94.00
4044.00	14.84	150.91	3965.15	-526.60	-528.34	300.64	0.78	95.00
4138.00	14.17	151.18	4056.16	-547.13	-548.93	312.04	0.71	94.00
4233.00	14.51	153.58	4148.20	-567.91	-569.78	322.94	0.72	95.00
4327.00	14.11	154.21	4239.28	-588.72	-590.65	333.17	0.46	94.00
4421.00	12.01	154.91	4330.84	-607.84	-609.82	342.30	2.25	94.00
4516.00	10.87	156.72	4423.95	-624.98	-627.00	350.03	1.26	95.00
4610.00	8.98	162.10	4516.55	-640.07	-642.13	355.79	2.24	94.00
4705.00	6.73	164.72	4610.65	-652.48	-654.56	359.54	2.40	95.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
4799.00	4.88	156.08	4704.16	-661.43	-663.53	362.61	2.18	94.00
4894.00	3.98	157.58	4798.88	-668.15	-670.27	365.51	0.95	95.00
4988.00	3.37	155.43	4892.69	-673.67	-675.80	367.90	0.66	94.00
5082.00	2.84	167.55	4986.55	-678.45	-680.59	369.55	0.90	94.00
5177.00	2.25	174.67	5081.45	-682.60	-684.74	370.23	0.70	95.00
5271.00	2.54	147.20	5175.37	-686.17	-688.32	371.53	1.24	94.00
5366.00	2.84	133.64	5270.27	-689.55	-691.71	374.37	0.74	95.00
5460.00	2.22	101.94	5364.18	-691.51	-693.70	377.84	1.60	94.00
5555.00	1.95	86.75	5459.12	-691.78	-693.99	381.25	0.64	95.00
5649.00	1.26	69.61	5553.08	-691.31	-693.54	383.81	0.89	94.00
5744.00	0.99	54.03	5648.07	-690.46	-692.69	385.45	0.43	95.00
5838.00	0.89	38.66	5742.05	-689.41	-691.65	386.56	0.29	94.00
5932.00	0.71	13.21	5836.05	-688.27	-690.51	387.15	0.42	94.00
6027.00	0.67	16.06	5931.04	-687.16	-689.40	387.44	0.06	95.00
6122.00	1.12	1.77	6026.03	-685.69	-687.94	387.62	0.53	95.00
6216.00	0.98	353.66	6120.01	-683.97	-686.22	387.56	0.22	94.00
6311.00	0.17	7.56	6215.01	-683.02	-685.27	387.49	0.86	95.00
6405.00	0.18	358.37	6309.00	-682.74	-684.98	387.50	0.03	94.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
6499.00	0.47	328.50	6403.00	-682.26	-684.50	387.29	0.35	94.00
6594.00	0.52	323.32	6498.00	-681.58	-683.82	386.83	0.07	95.00
6688.00	0.88	25.04	6591.99	-680.58	-682.82	386.88	0.83	94.00
6783.00	0.74	23.86	6686.98	-679.36	-681.60	387.44	0.15	95.00
6877.00	0.61	36.21	6780.98	-678.40	-680.64	387.98	0.20	94.00
6972.00	0.73	38.36	6875.97	-677.51	-679.76	388.65	0.12	95.00
7066.00	0.34	31.25	6969.97	-676.80	-679.05	389.17	0.41	94.00
7161.00	0.87	83.36	7064.96	-676.47	-678.73	390.03	0.75	95.00
7255.00	0.83	50.30	7158.95	-675.94	-678.21	391.26	0.52	94.00
7349.00	1.08	60.57	7252.94	-675.06	-677.34	392.56	0.32	94.00
7444.00	4.85	358.05	7347.81	-670.61	-672.88	393.20	4.69	95.00
7491.00	11.32	359.54	7394.32	-664.00	-666.28	393.09	13.77	47.00
7538.00	15.93	358.06	7439.98	-652.94	-655.22	392.84	9.85	47.00
7585.00	20.10	0.08	7484.67	-638.42	-640.69	392.63	8.97	47.00
7633.00	24.60	0.30	7529.05	-620.17	-622.44	392.69	9.38	48.00
7680.00	29.37	356.05	7570.93	-598.88	-601.14	391.95	10.93	47.00
7727.00	34.53	351.26	7610.80	-574.21	-576.46	389.13	12.22	47.00
7774.00	38.30	353.11	7648.62	-546.60	-548.83	385.36	8.36	47.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
7822.00	41.08	357.42	7685.56	-516.08	-518.29	382.87	8.15	48.00
7869.00	43.22	1.15	7720.41	-484.56	-486.77	382.49	7.00	47.00
7916.00	48.65	0.27	7753.08	-450.80	-453.01	382.90	11.63	47.00
7963.00	53.81	359.07	7782.51	-414.17	-416.38	382.67	11.17	47.00
8010.00	60.20	356.97	7808.09	-374.81	-377.01	381.28	14.09	47.00
8057.00	66.05	358.86	7829.33	-332.94	-335.14	379.78	12.95	47.00
8105.00	70.64	359.50	7847.04	-288.35	-290.54	379.14	9.64	48.00
8152.00	76.04	0.22	7860.51	-243.35	-245.53	379.03	11.60	47.00
8199.00	81.88	0.60	7869.51	-197.24	-199.42	379.36	12.45	47.00
8228.00	85.56	0.48	7872.68	-168.42	-170.60	379.63	12.69	29.00
8388.00	88.02	0.29	7881.64	-8.68	-10.87	380.71	1.54	160.00
8482.00	87.35	359.19	7885.44	85.24	83.05	380.29	1.37	94.00
8577.00	88.12	359.77	7889.19	180.15	177.97	379.43	1.02	95.00
8671.00	89.03	1.01	7891.53	274.12	271.94	380.07	1.63	94.00
8766.00	91.14	2.22	7891.39	369.09	366.89	382.76	2.56	95.00
8858.00	90.57	1.00	7890.02	461.05	458.84	385.34	1.47	92.00
8949.00	90.37	1.00	7889.27	552.04	549.82	386.93	0.22	91.00
9041.00	90.20	0.41	7888.82	644.04	641.82	388.06	0.67	92.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
9132.00	89.87	0.50	7888.76	735.04	732.81	388.78	0.38	91.00
9224.00	90.67	0.59	7888.33	827.04	824.81	389.65	0.88	92.00
9315.00	90.94	0.69	7887.05	918.03	915.79	390.66	0.32	91.00
9406.00	90.91	0.93	7885.59	1009.01	1006.77	391.95	0.26	91.00
9497.00	87.95	0.10	7886.49	1100.00	1097.75	392.76	3.37	91.00
9588.00	87.35	359.94	7890.22	1190.92	1188.68	392.79	0.69	91.00
9677.00	88.39	0.46	7893.53	1279.85	1277.61	393.10	1.31	89.00
9768.00	88.96	359.64	7895.64	1370.83	1368.59	393.18	1.10	91.00
9859.00	90.50	0.31	7896.06	1461.82	1459.58	393.13	1.85	91.00
9949.00	90.37	1.22	7895.38	1551.82	1549.57	394.33	1.02	90.00
10039.00	89.87	0.72	7895.19	1641.81	1639.56	395.85	0.79	90.00
10130.00	90.67	1.80	7894.77	1732.79	1730.53	397.84	1.48	91.00
10220.00	90.10	0.30	7894.16	1822.78	1820.51	399.49	1.77	90.00
10313.00	89.53	0.18	7894.46	1915.78	1913.51	399.88	0.63	93.00
10403.00	89.80	1.55	7894.99	2005.77	2003.50	401.24	1.55	90.00
10493.00	89.03	1.32	7895.91	2095.75	2093.46	403.49	0.89	90.00
10584.00	89.09	1.46	7897.40	2186.72	2184.42	405.69	0.17	91.00
10678.00	89.06	0.24	7898.92	2280.71	2278.40	407.09	1.30	94.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
10772.00	88.76	359.84	7900.71	2374.69	2372.38	407.16	0.53	94.00
10867.00	89.46	359.51	7902.18	2469.67	2467.37	406.62	0.82	95.00
10961.00	89.66	0.05	7902.90	2563.66	2561.36	406.25	0.61	94.00
11056.00	89.30	359.08	7903.76	2658.65	2656.36	405.53	1.09	95.00
11150.00	89.83	359.91	7904.48	2752.63	2750.35	404.70	1.05	94.00
11244.00	89.60	0.46	7904.94	2846.63	2844.35	405.00	0.63	94.00
11339.00	90.17	0.31	7905.14	2941.63	2939.34	405.64	0.62	95.00
11433.00	91.18	1.88	7904.04	3035.61	3033.32	407.44	1.99	94.00
11527.00	91.14	1.73	7902.13	3129.56	3127.25	410.40	0.17	94.00
11622.00	90.50	0.87	7900.77	3224.54	3222.21	412.55	1.12	95.00
11716.00	89.80	1.25	7900.52	3318.53	3316.20	414.30	0.85	94.00
11811.00	90.91	0.92	7899.94	3413.52	3411.18	416.10	1.22	95.00
11905.00	91.11	0.00	7898.28	3507.50	3505.16	416.86	1.01	94.00
11999.00	90.74	358.41	7896.77	3601.47	3599.13	415.55	1.74	94.00
12094.00	90.50	359.03	7895.74	3696.42	3694.10	413.42	0.70	95.00
12188.00	90.77	358.72	7894.69	3790.39	3788.08	411.57	0.43	94.00
12283.00	89.56	358.74	7894.41	3885.35	3883.05	409.47	1.27	95.00
12377.00	89.60	359.58	7895.10	3979.33	3977.04	408.09	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
12472.00	90.47	0.06	7895.05	4074.32	4072.04	407.80	1.05	95.00
12566.00	90.23	0.00	7894.47	4168.32	4166.04	407.84	0.26	94.00
12661.00	90.44	0.83	7893.91	4263.31	4261.03	408.52	0.90	95.00
12755.00	90.30	0.50	7893.31	4357.31	4355.02	409.61	0.38	94.00
12849.00	90.50	1.20	7892.64	4451.30	4449.01	411.01	0.78	94.00
12943.00	90.87	0.92	7891.52	4545.29	4542.99	412.75	0.49	94.00
13038.00	89.06	1.15	7891.57	4640.28	4637.97	414.47	1.92	95.00
13132.00	88.42	0.55	7893.64	4734.25	4731.93	415.86	0.93	94.00
13226.00	89.43	0.60	7895.40	4828.23	4825.91	416.80	1.07	94.00
13321.00	90.74	0.68	7895.26	4923.23	4920.90	417.86	1.38	95.00
13415.00	91.51	0.43	7893.42	5017.21	5014.88	418.77	0.86	94.00
13510.00	90.50	359.91	7891.75	5112.19	5109.86	419.05	1.19	95.00
13604.00	90.81	359.52	7890.67	5206.18	5203.86	418.58	0.52	94.00
13698.00	90.87	359.59	7889.30	5300.16	5297.84	417.86	0.10	94.00
13793.00	90.27	0.71	7888.35	5395.15	5392.84	418.11	1.34	95.00
13887.00	90.30	0.44	7887.88	5489.15	5486.83	419.06	0.29	94.00
13982.00	89.83	0.28	7887.77	5584.15	5581.83	419.66	0.53	95.00
14076.00	90.37	1.06	7887.61	5678.15	5675.82	420.75	1.01	94.00
14171.00	89.50	0.42	7887.72	5773.15	5770.81	421.98	1.13	95.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
14265.00	89.39	0.27	7888.63	5867.14	5864.80	422.54	0.20	94.00
14359.00	90.34	0.98	7888.85	5961.14	5958.80	423.56	1.25	94.00
14453.00	90.24	0.89	7888.38	6055.13	6052.78	425.09	0.14	94.00
14548.00	90.34	0.63	7887.91	6150.13	6147.77	426.35	0.29	95.00
14642.00	89.46	0.34	7888.07	6244.13	6241.77	427.15	0.98	94.00
14737.00	90.03	0.49	7888.49	6339.12	6336.77	427.83	0.62	95.00
14831.00	90.67	0.83	7887.91	6433.12	6430.76	428.91	0.77	94.00
14926.00	90.37	0.77	7887.05	6528.11	6525.74	430.24	0.32	95.00
15020.00	90.60	0.17	7886.25	6622.11	6619.74	431.00	0.69	94.00
15115.00	89.09	359.13	7886.50	6717.10	6714.73	430.42	1.93	95.00
15209.00	89.80	359.09	7887.41	6811.07	6808.71	428.97	0.75	94.00
15304.00	88.52	357.80	7888.80	6906.01	6903.67	426.39	1.91	95.00
15398.00	89.06	358.50	7890.78	6999.92	6997.59	423.35	0.94	94.00
15492.00	90.57	359.67	7891.08	7093.89	7091.58	421.85	2.03	94.00
15587.00	91.88	0.00	7889.05	7188.86	7186.55	421.57	1.42	95.00
15681.00	91.61	359.29	7886.19	7282.81	7280.51	420.98	0.80	94.00
15776.00	92.08	359.94	7883.14	7377.75	7375.45	420.35	0.84	95.00
15870.00	91.82	359.29	7879.94	7471.69	7469.40	419.71	0.74	94.00

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS	Course Length
ft	deg	deg	ft	ft	ft	ft	°/100ft	ft
15964.00	91.14	0.11	7877.51	7565.65	7563.36	419.22	1.13	94.00
16059.00	90.84	0.23	7875.86	7660.64	7658.35	419.50	0.35	95.00
16153.00	89.56	359.64	7875.53	7754.63	7752.35	419.39	1.50	94.00
16226.00	89.46	358.50	7876.15	7827.61	7825.33	418.21	1.56	73.00

5" = 100' FEET MD