



GAMMA RAY

5" = 100' FEET MD

COMPANY : ANADARKO E&P ONSHORE LLC  
WELL : BARCLAY 16N-26HZ  
FIELD : WATTENBERG  
COUNTY : WELD  
STATE : COLORADO  
COUNTRY : U.S.A.  
UWI : 05-123-38906

COMPANY : ANADARKO E&P ONSHORE LLC  
WELL : BARCLAY 16N-26HZ  
FIELD : WATTENBERG  
COUNTY : WELD  
STATE : COLORADO  
COUNTRY : U.S.A.  
UWI : 05-123-38906

WELL LOCATION  
LAT:40°7'55.304"N LONG:104°51'2.362"W  
N:1291606.66 ft E:3181562.24 ft

OTHER SERVICES

SEC:14 TWP:2N RANGE:67W DIRECTIONAL ROP

DEPTH REF. : RKB

REF. HEIGHT : 25.000 ft

RKB to Ground Level

GROUND LEVEL : 4908.000 ft

G.L. to MEAN SEA LEVEL

BOREHOLE RECORD

DEVIATION RECORD

HOLE SIZE in	FROM ft	TO ft	INCLINATION deg	FROM ft	TO ft
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12.25	0	1384	0-10	0	6684
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8.75	1384	7657	10-90	6684	7657
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6.125	7657	17196	90-92	7657	17196
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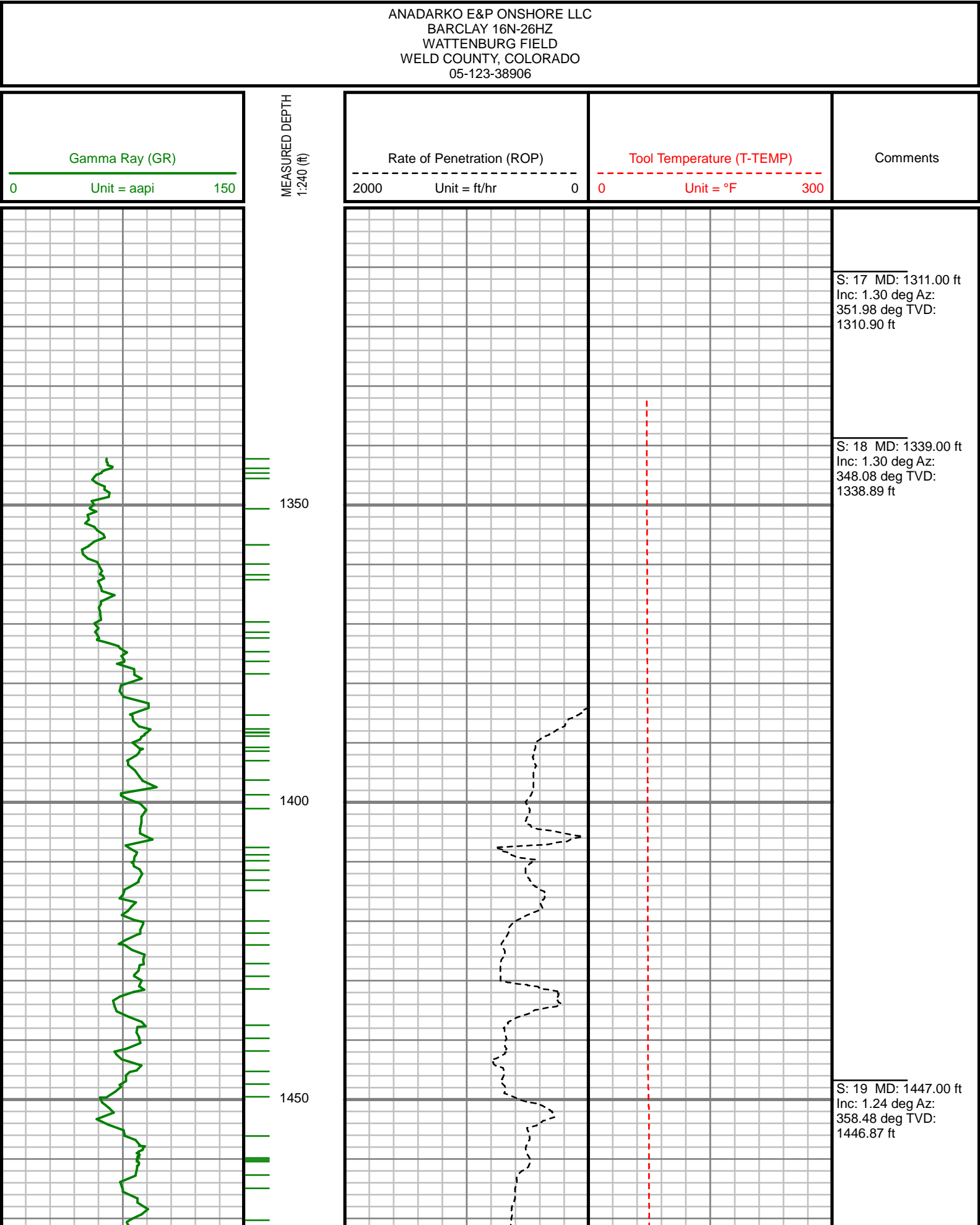
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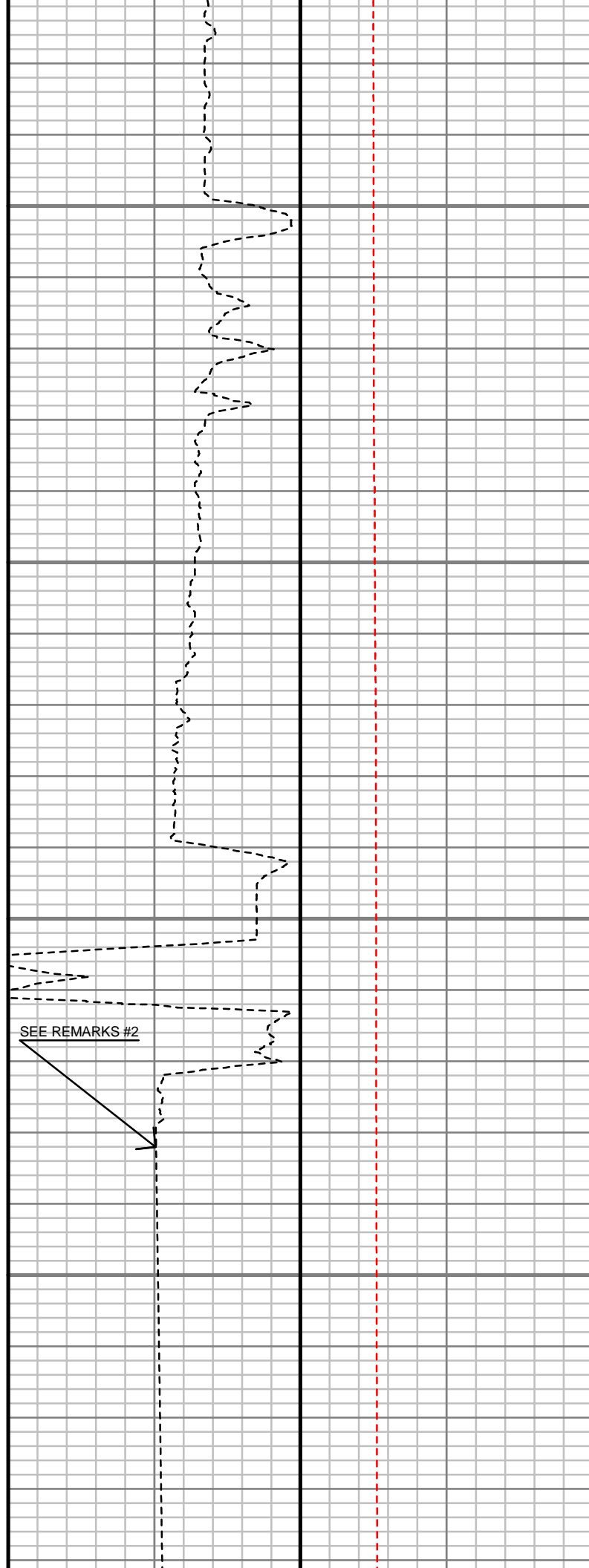
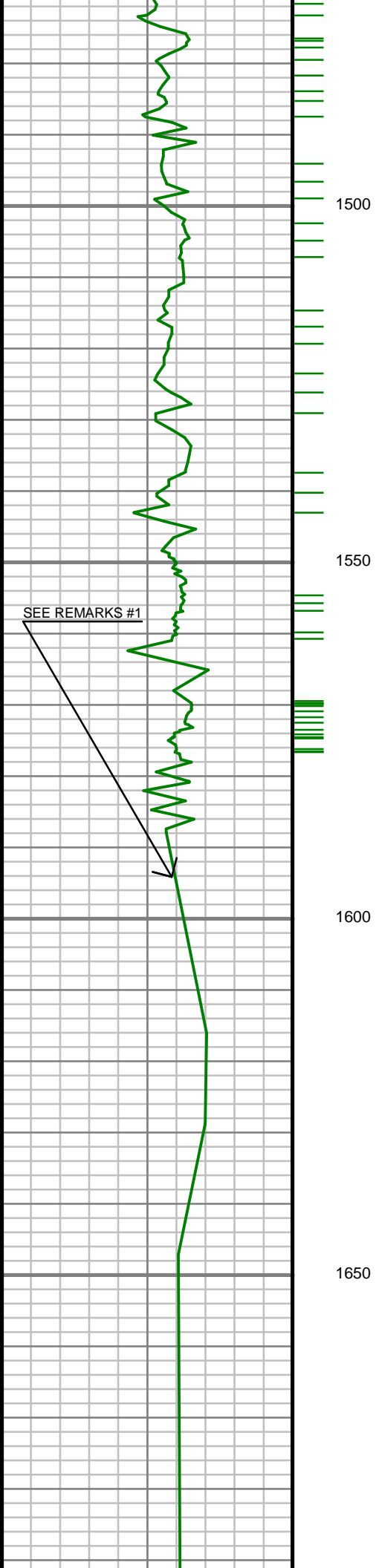
Run Data						
RUN NUMBER	1	2	3			
START DATE	03/20/2015	03/22/2015	03/26/2015			
START TIME	0630	1800	0410			
END DATE	03/21/2015	03/26/2015	03/29/2015			
END TIME	2330	0345	00:15			
DEPTH IN (ft)	1384	7657	14053			
DEPTH OUT (ft)	7657	14053	17196			
LOG TOP (ft)	1343	7616	14005			
LOG BOTTOM (ft)	7616	14005	17196			
HOLE SIZE (in)	8.75	6.125	6.125			
MUD DATA @ (ft)	3734	10775	14053			
MUD TYPE	WATER-BASED	WATER-BASED	WATER-BASED			
DENSITY (lb / gal)	8.9	9.5	9.5			
VISCOSITY (s / qt)	46	49	51			
pH	10	9.8	9.6			
FLUID LOSS (cm3 / 30)	4.8	13	4.6			
SALINITY (ppm)	2300	2300	2600			
Rm (ohmm @ deg F)	-	-	-			
Rmf (ohmm @ deg F)	-	-	-			
MAX TEMP (deg F)	173	226	245			
Rm @ MAX TEMP (ohmm)	-	-	-			
LWD ENGINEER #1	B. GREER	B. GREER	B. GREER			
LWD ENGINEER #2	M. SCHUSTER	M. SCHUSTER	M. SCHUSTER			
LWD ENGINEER #3	-	-	-			
LOG WTINNESS #1	I. HARRIS	I. HARRIS	I. HARRIS			
LOG WTINNESS #2	-	-	J. MORGAN			

Remarks
ANADARKO E&P ONSHORE LLC PRODUCTION AFE# 2087303
SCIENTIFIC DRILLING INTERNATIONAL JOB# 263434
ALL REFERENCES IN THE DEPTH TRACK ARE AT BIT DEPTH.
ALL DATA IS MEMORY DATA UNLESS STATED OTHERWISE.
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO GAMMA RAY CURVE
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO RATE OF PENETRATION CURVE
RUN #1 : MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 128-404 / CONT = 221 / MWD EYE = 245 / GAMMA RAY = 1264
BIT TO SENSOR OFFSETS: SURVEY = 51.15 FT. / GAMMA RAY = 41.90 FT.
RUN #2 : MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 78-039 / CONT = 863 / MWD EYE = 0882 / GAMMA RAY = 1344
BIT TO SENSOR OFFSETS: SURVEY = 57.44 FT. / GAMMA RAY = 48.19 FT.
RUN #3 : MWD / GAMMA RAY LOGGING RUN
SENSORS S/N: PULSER = 78-200 / CONT = 426 / MWD EYE = 937 / GAMMA RAY = 1434
BIT TO SENSOR OFFSETS: SURVEY = 58.29 FT. / GAMMA RAY = 49.04 FT.
REMARK #1 :GR FROM 1576 FT. - 1742 FT. NO DATA COLLECTED
REMARK #2 :ROP FROM 1629 FT. - 1783 FT. NO DATA COLLECTED
REMARK #3 :ROP FROM 2732 FT. - 2915 FT. NO DATA COLLECTED
REMARK #4 :GR FROM 2782 FT. - 2880 FT. NO DATA COLLECTED
REMARK #5 :GR FROM 3133 FT. - 3194 FT. NO DATA COLLECTED

[illegible]

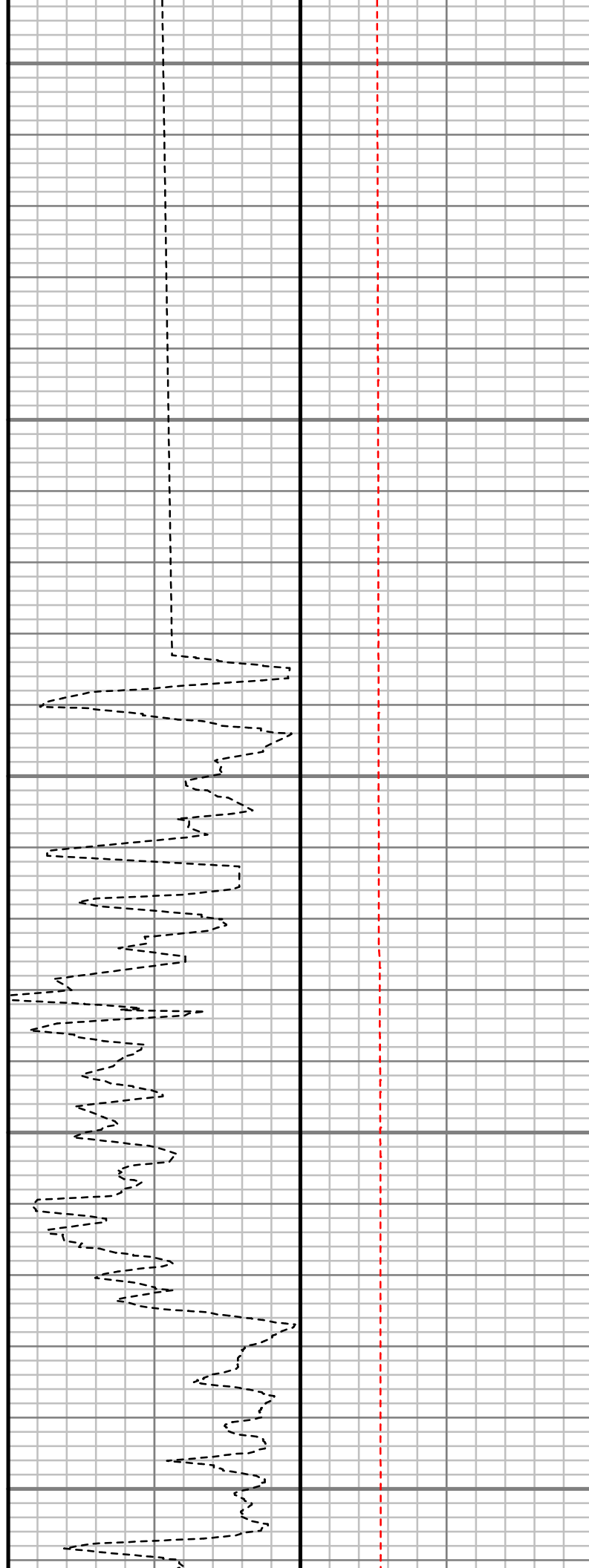
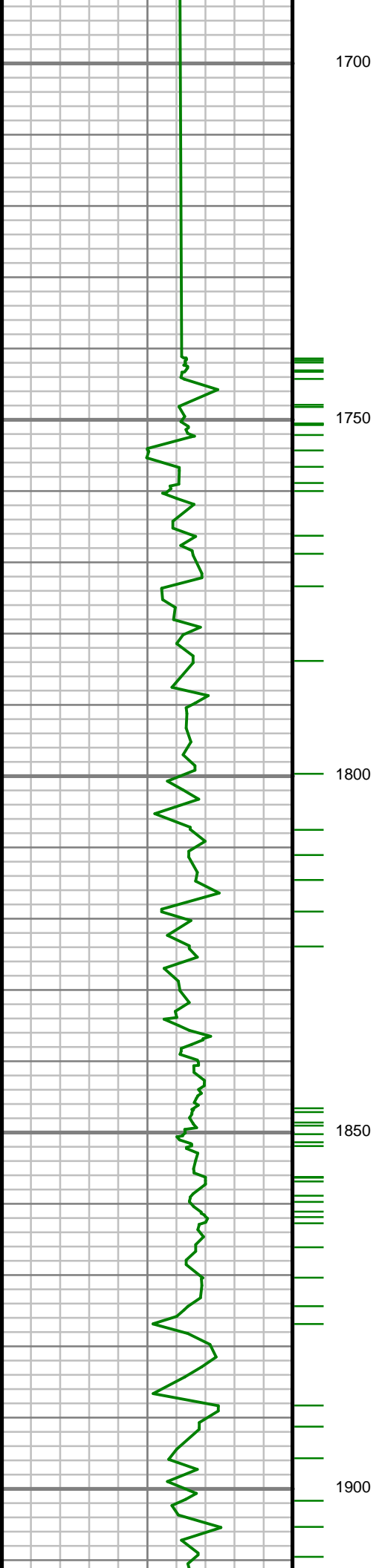
All interpretations are opinions based on electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or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





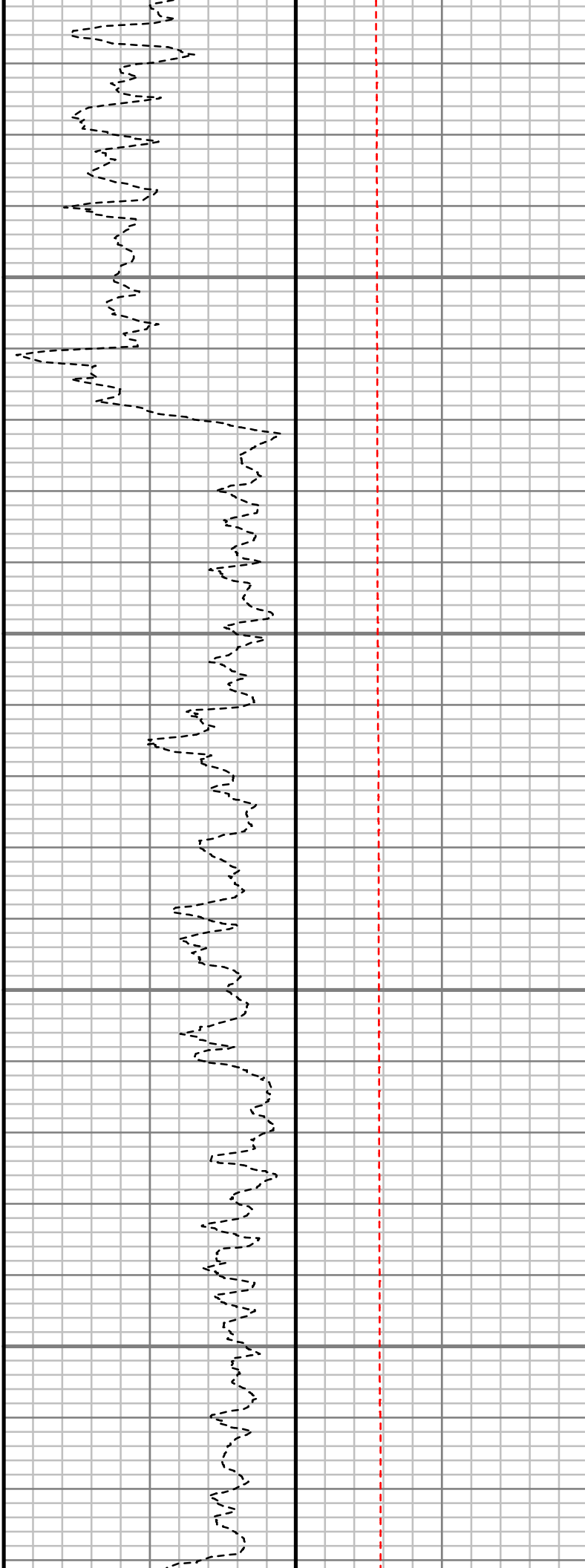
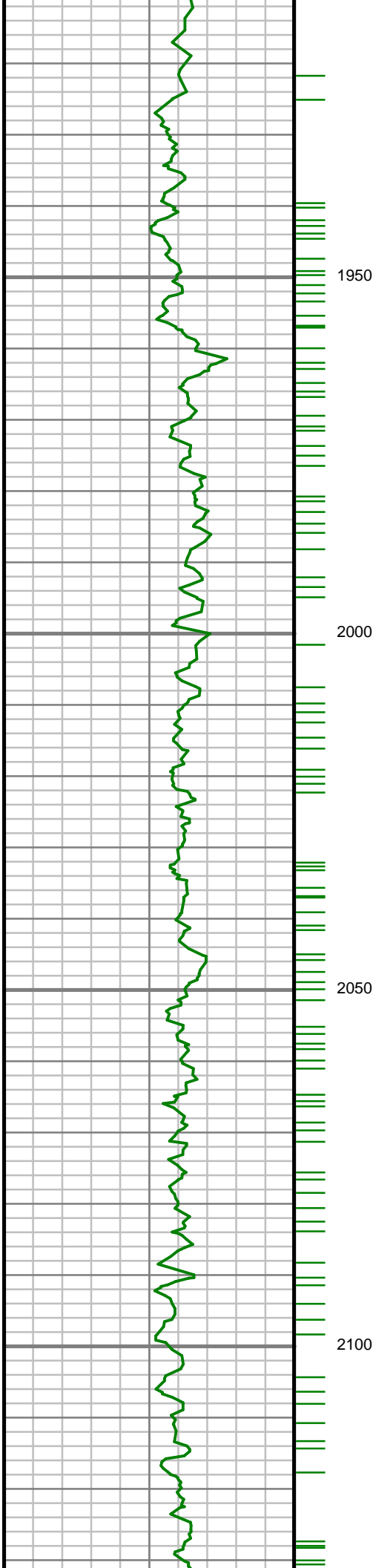
S: 20 MD: 1541.00 ft  
Inc: 0.93 deg Az:  
142.17 deg TVD:  
1540.86 ft

S: 21 MD: 1636.00 ft  
Inc: 3.11 deg Az:  
146.33 deg TVD:  
1635.79 ft



S: 22 MD: 1730.00 ft  
Inc: 5.61 deg Az:  
146.03 deg TVD:  
1729.51 ft

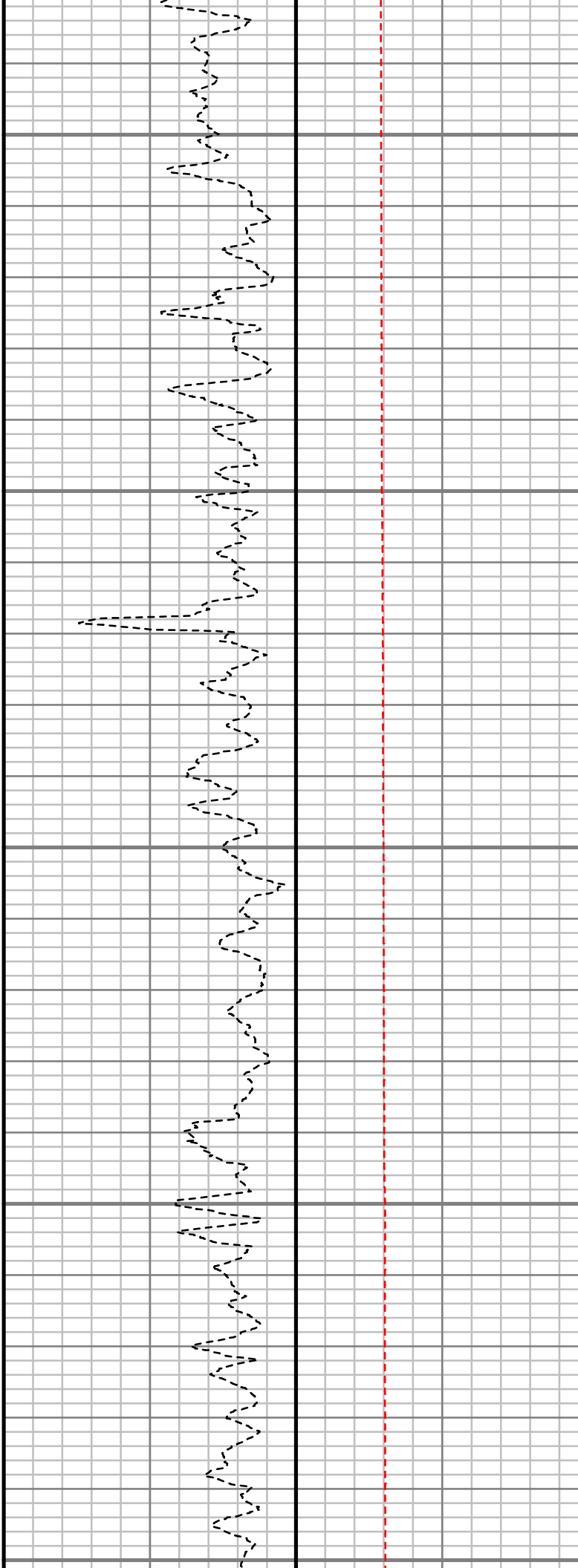
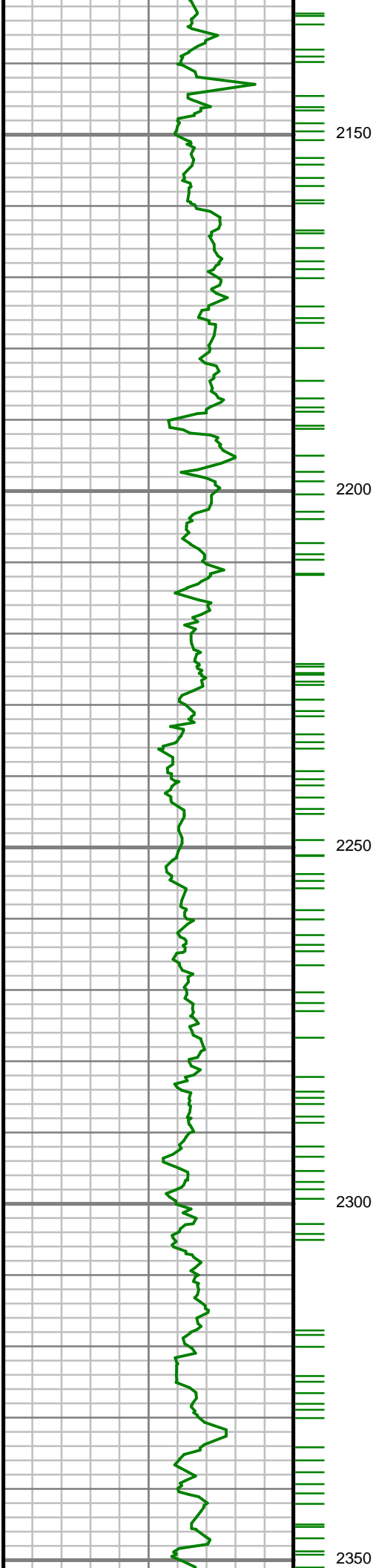
S: 23 MD: 1824.00 ft  
Inc: 7.65 deg Az:  
145.29 deg TVD:  
1822.88 ft



S: 24 MD: 1918.00 ft  
Inc: 9.20 deg Az:  
148.59 deg TVD:  
1915.86 ft

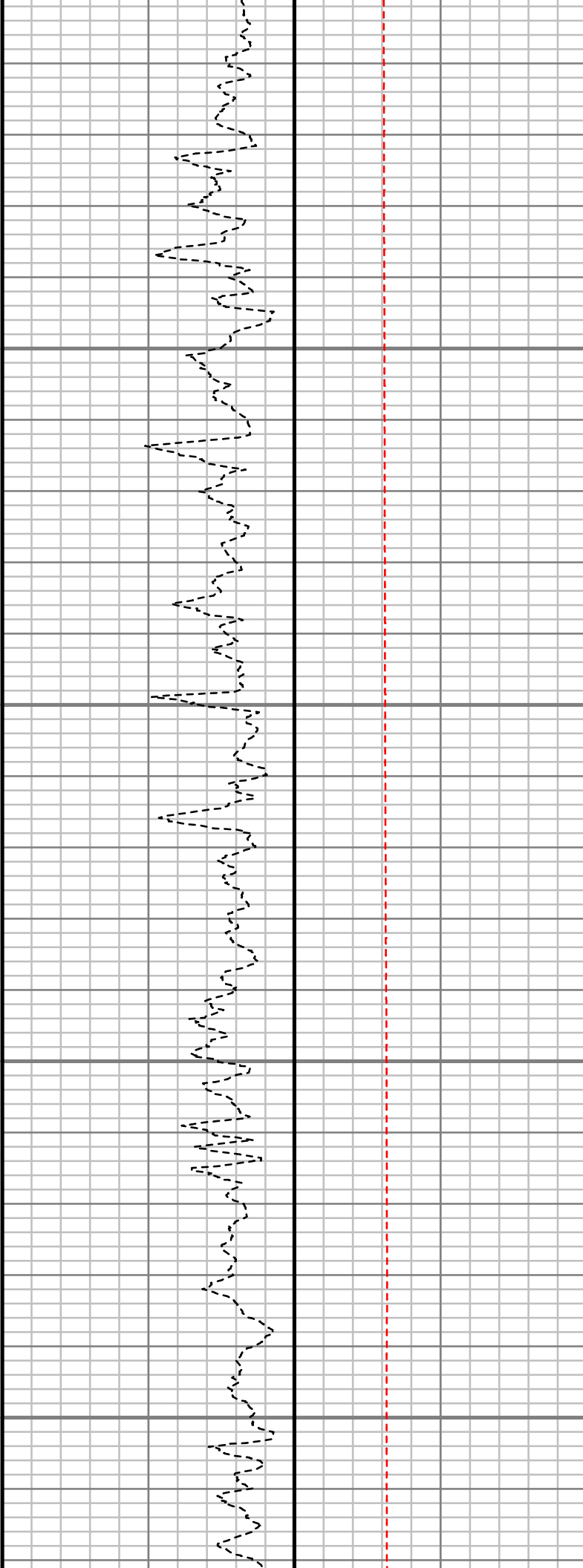
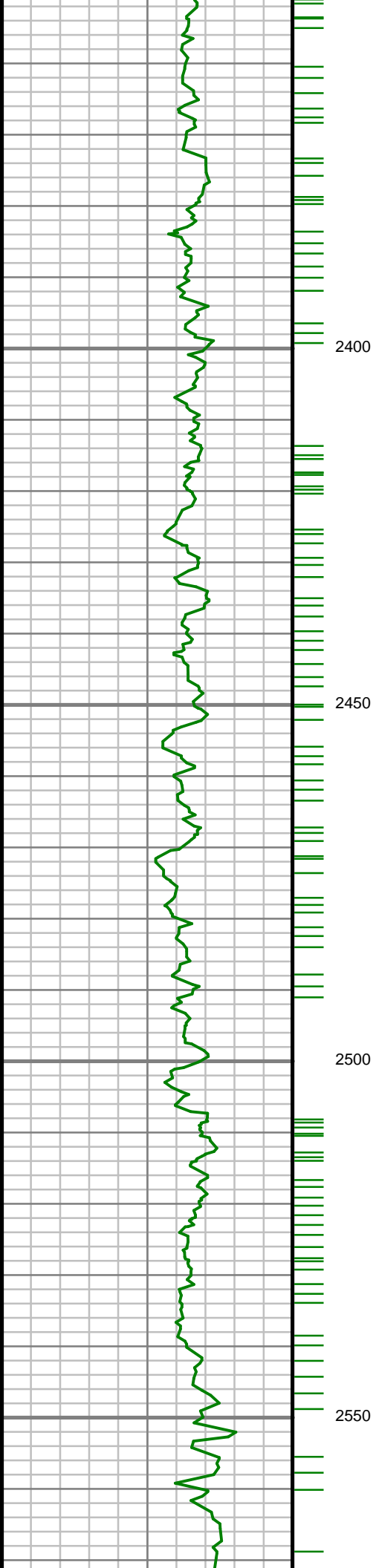
S: 25 MD: 2013.00 ft  
Inc: 10.32 deg Az:  
151.66 deg TVD:  
2009.49 ft

S: 26 MD: 2107.00 ft  
Inc: 9.46 deg Az:  
152.60 deg TVD:  
2102.09 ft



S: 27 MD: 2201.00 ft  
Inc: 9.91 deg Az:  
152.14 deg TVD:  
2194.75 ft

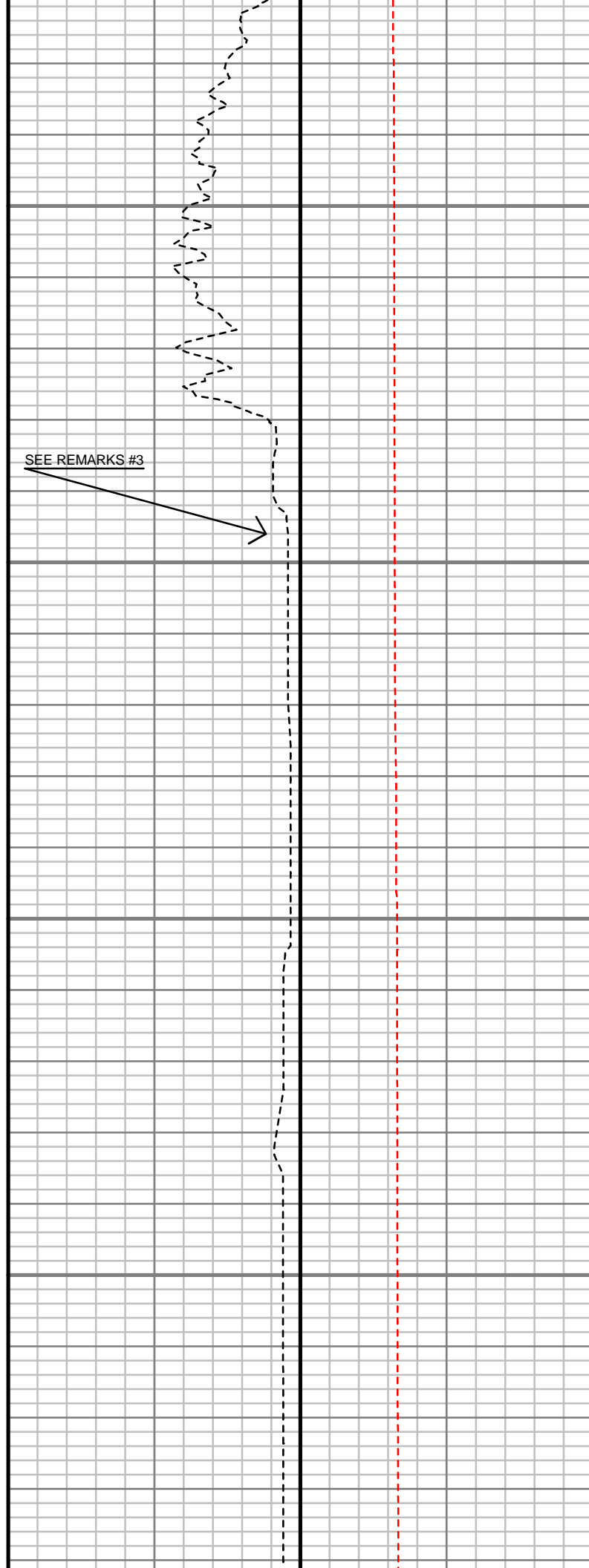
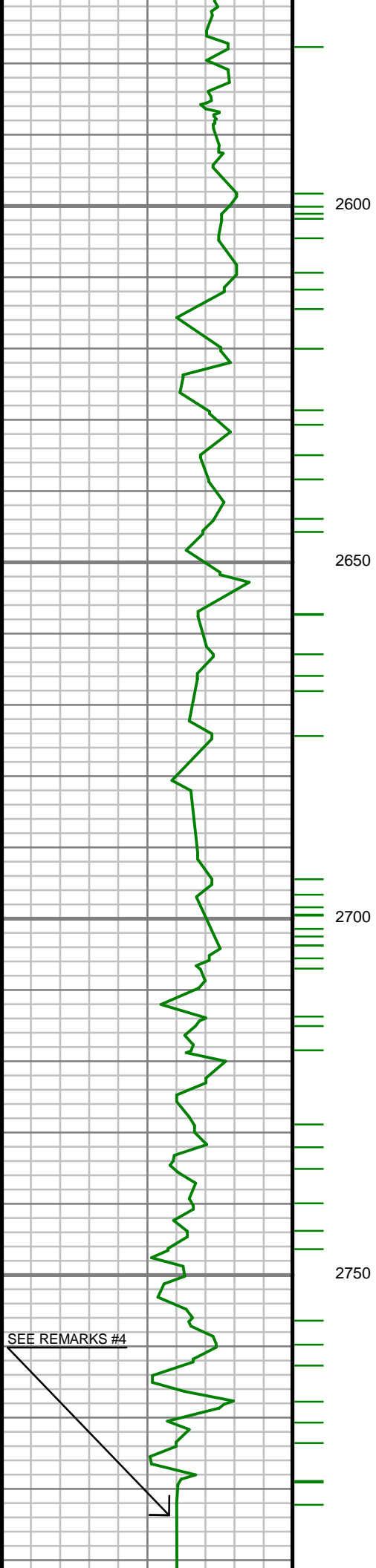
S: 28 MD: 2295.00 ft  
Inc: 11.97 deg Az:  
153.21 deg TVD:  
2287.04 ft



S: 29 MD: 2390.00 ft  
Inc: 11.33 deg Az:  
153.65 deg TVD:  
2380.08 ft

S: 30 MD: 2484.00 ft  
Inc: 10.13 deg Az:  
152.25 deg TVD:  
2472.43 ft

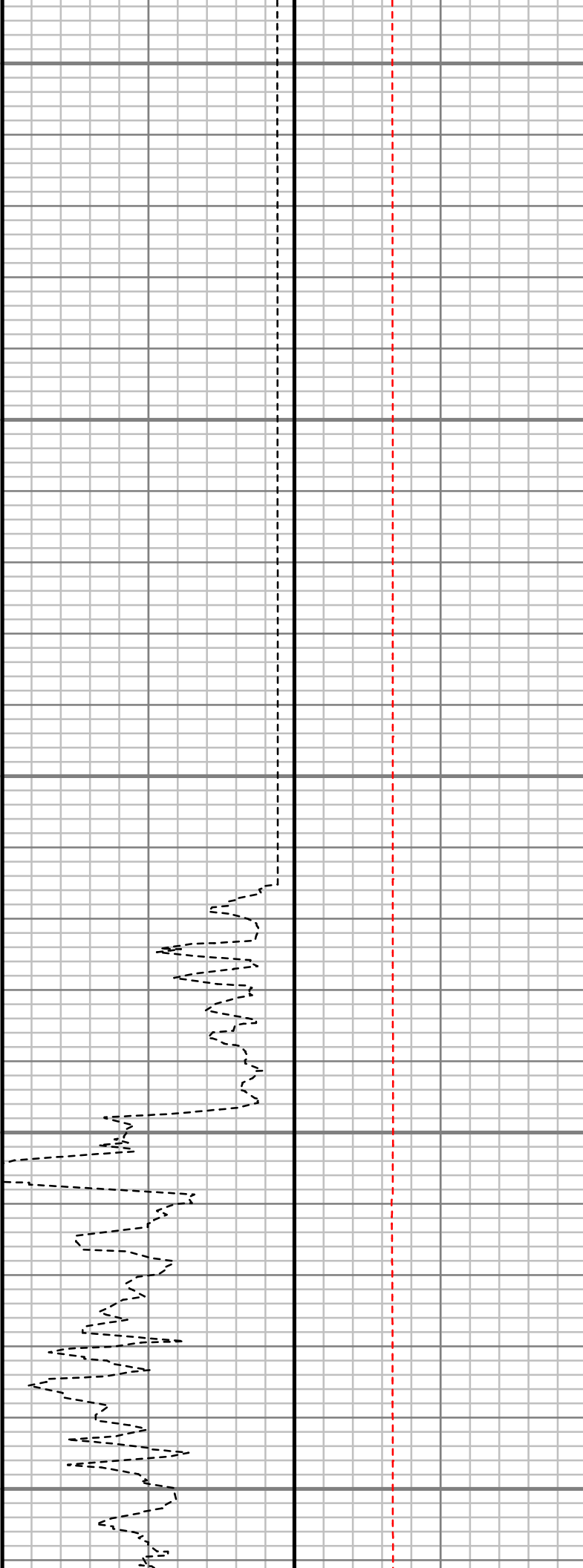
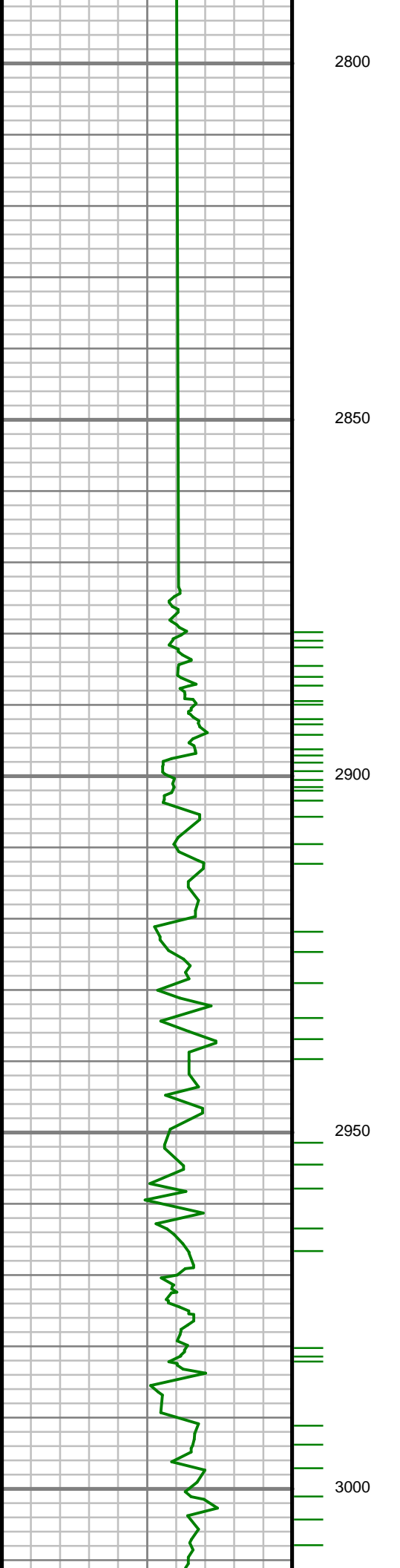




S: 31 MD: 2578.00 ft  
Inc: 10.16 deg Az:  
158.93 deg TVD:  
2564.97 ft

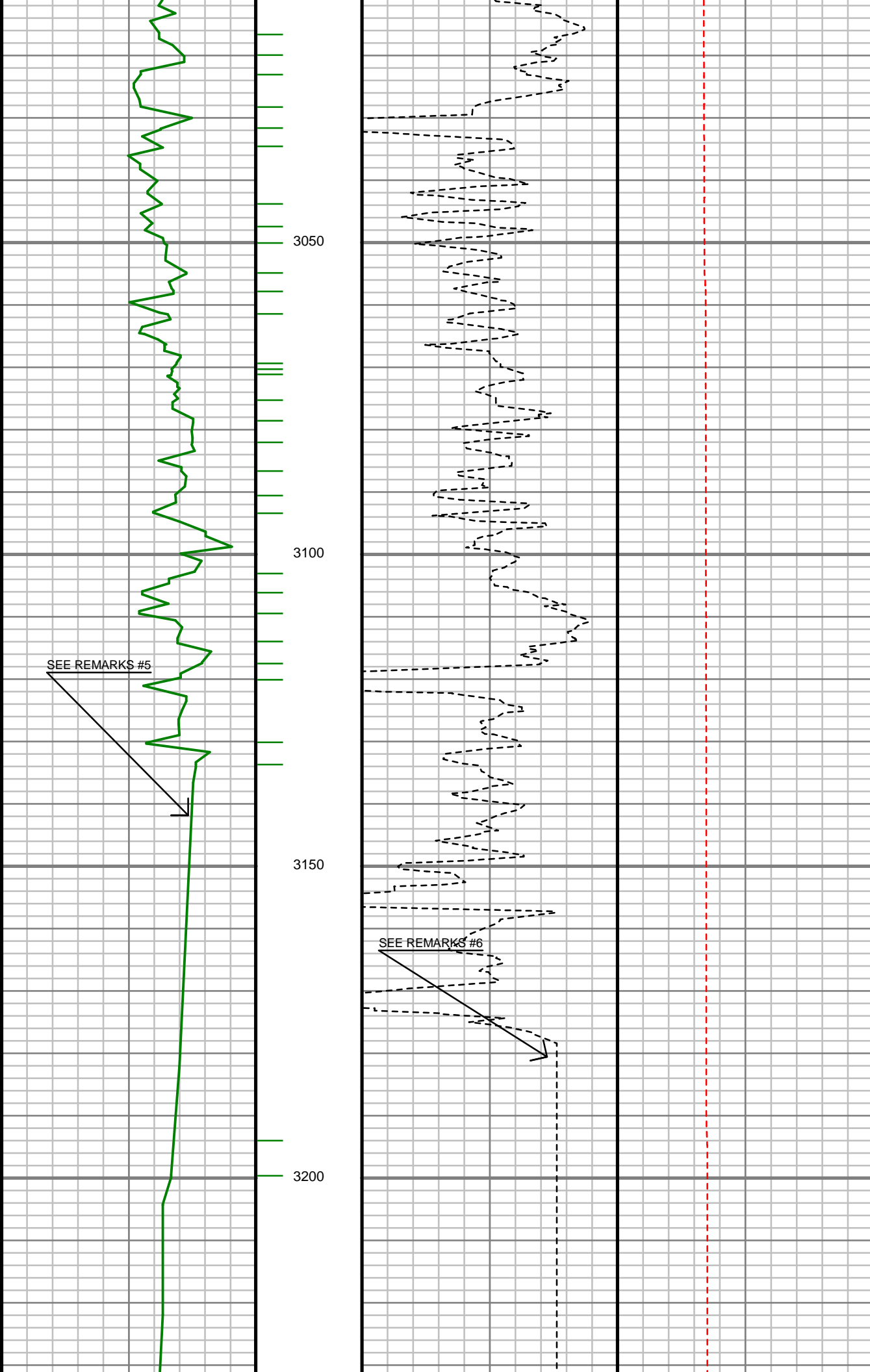
S: 32 MD: 2673.00 ft  
Inc: 9.37 deg Az:  
156.53 deg TVD:  
2658.59 ft

S: 33 MD: 2767.00 ft  
Inc: 10.47 deg Az:  
157.53 deg TVD:  
2751.19 ft



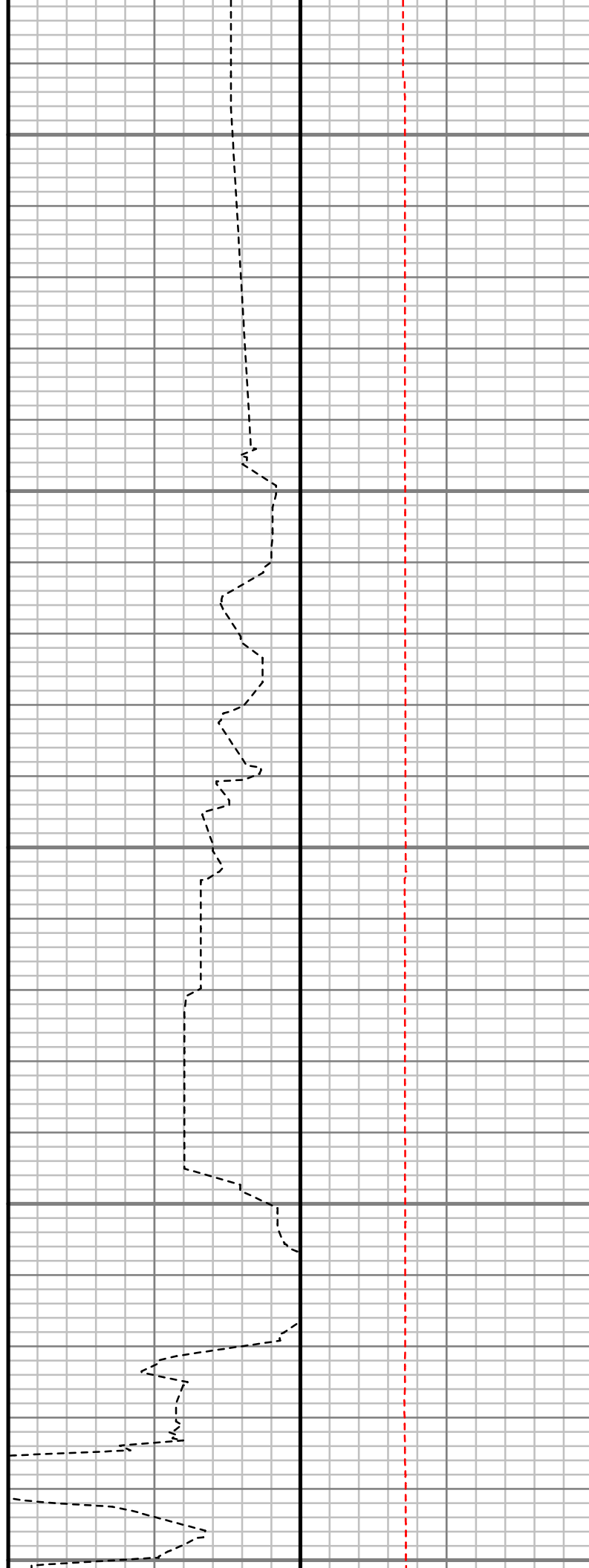
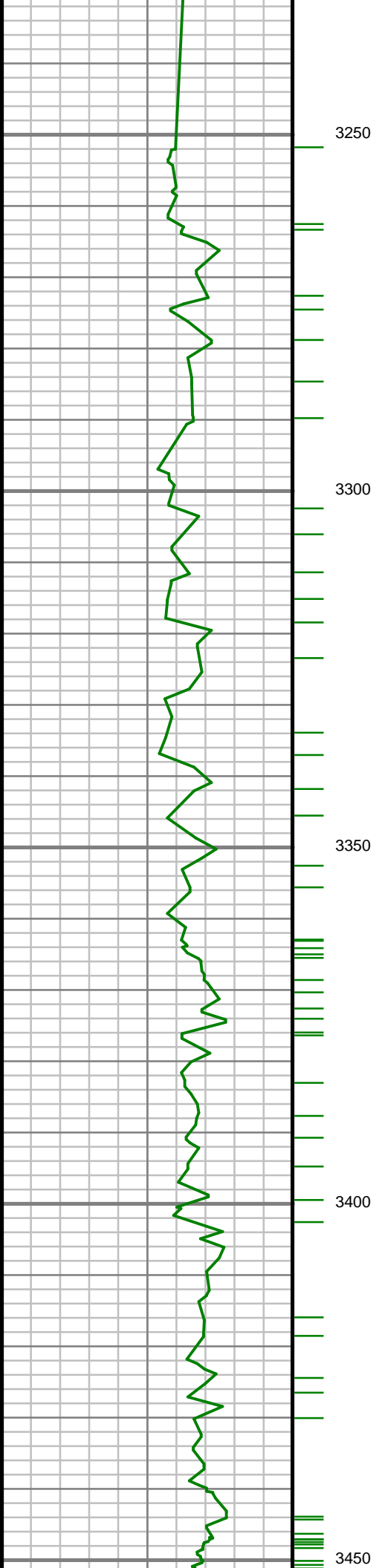
S: 34 MD: 2862.00 ft  
Inc: 10.00 deg Az:  
156.30 deg TVD:  
2844.67 ft

S: 35 MD: 2956.00 ft  
Inc: 11.22 deg Az:  
157.98 deg TVD:  
2937.06 ft



S: 36 MD: 3050.00 ft  
Inc: 10.56 deg Az:  
159.15 deg TVD:  
3029.37 ft

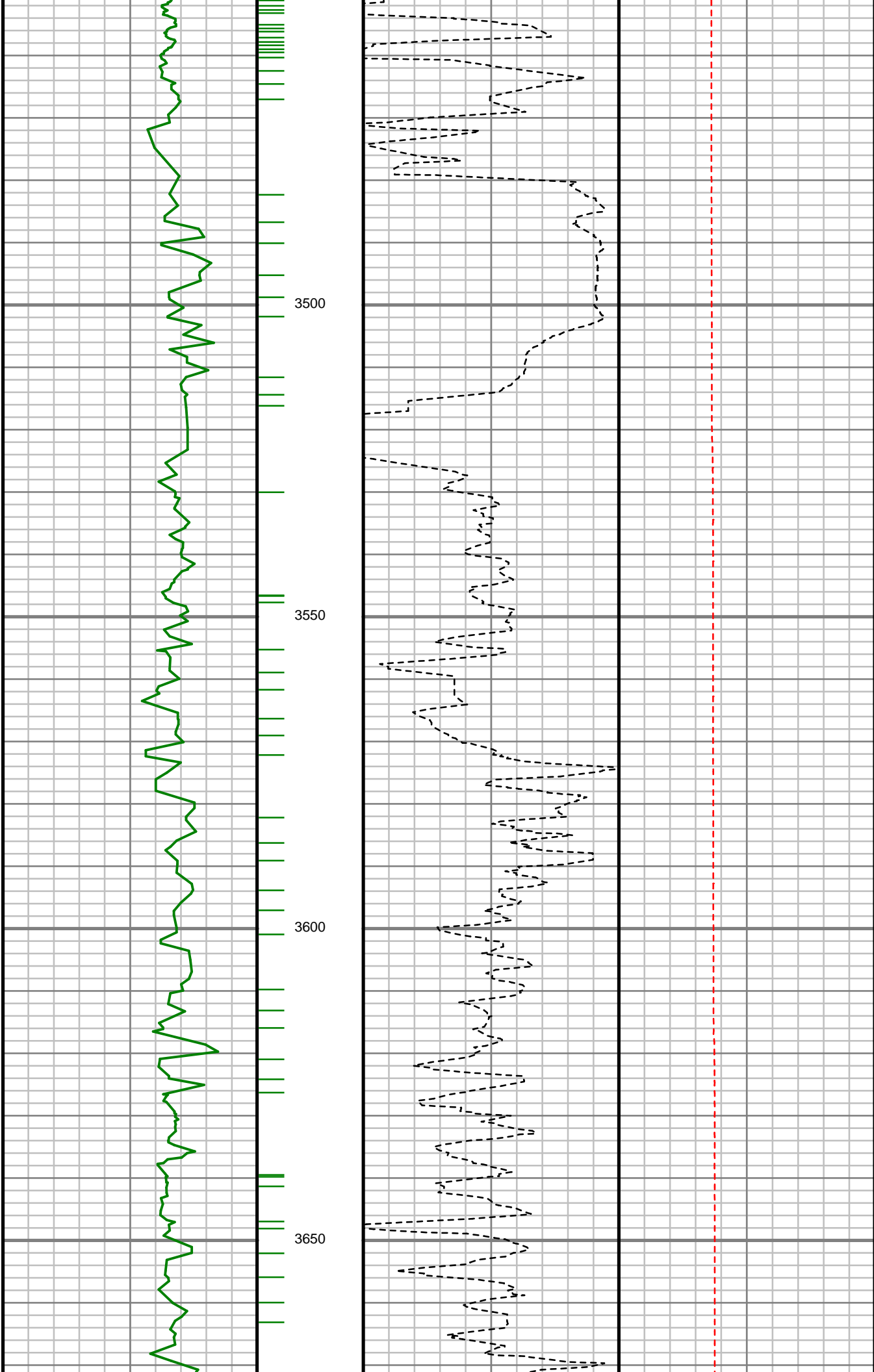
S: 37 MD: 3144.00 ft  
Inc: 9.65 deg Az:  
160.07 deg TVD:  
3121.91 ft

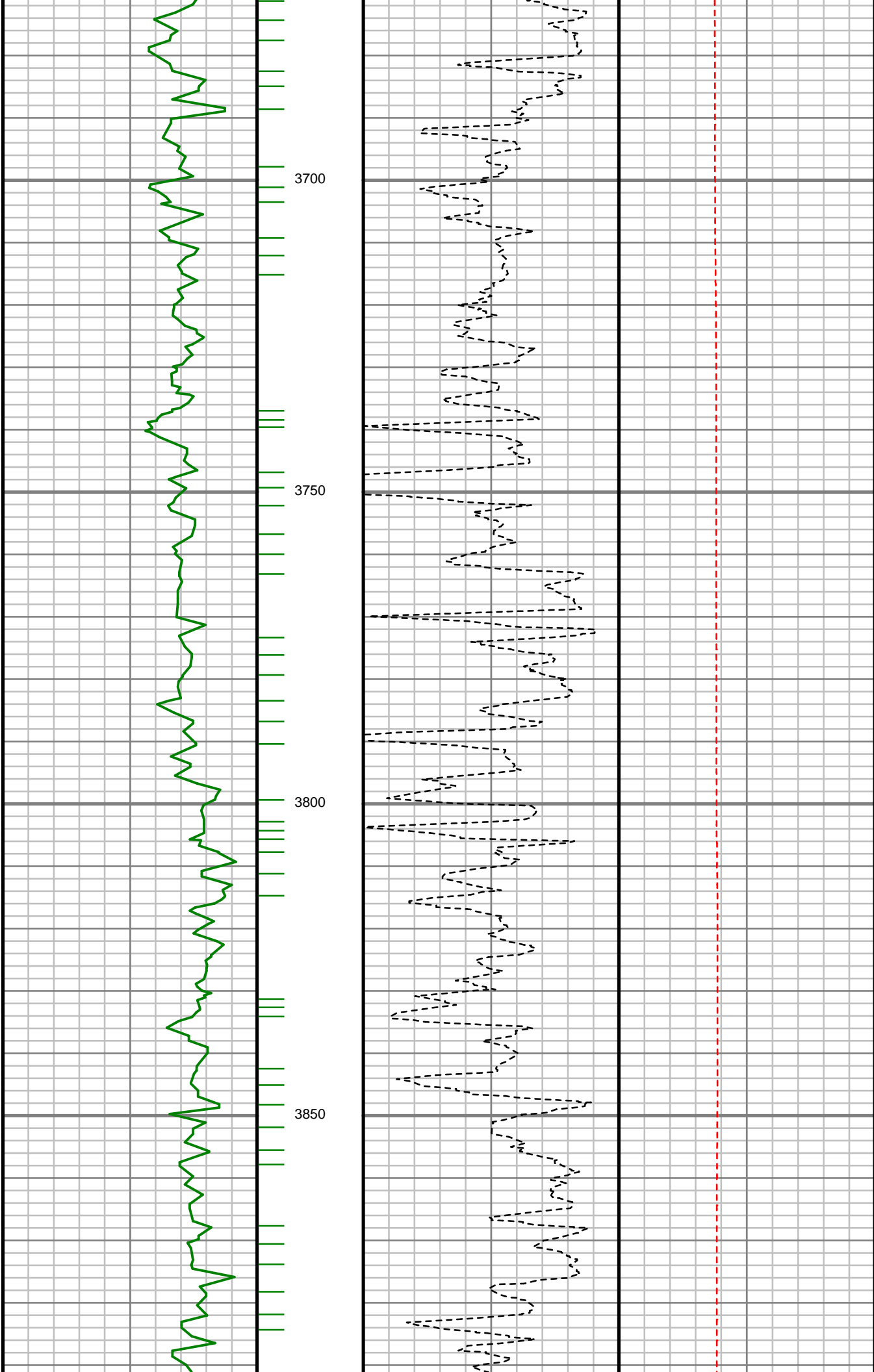


S: 38 MD: 3239.00 ft  
Inc: 10.24 deg Az:  
154.11 deg TVD:  
3215.48 ft

S: 39 MD: 3333.00 ft  
Inc: 8.83 deg Az:  
153.27 deg TVD:  
3308.18 ft

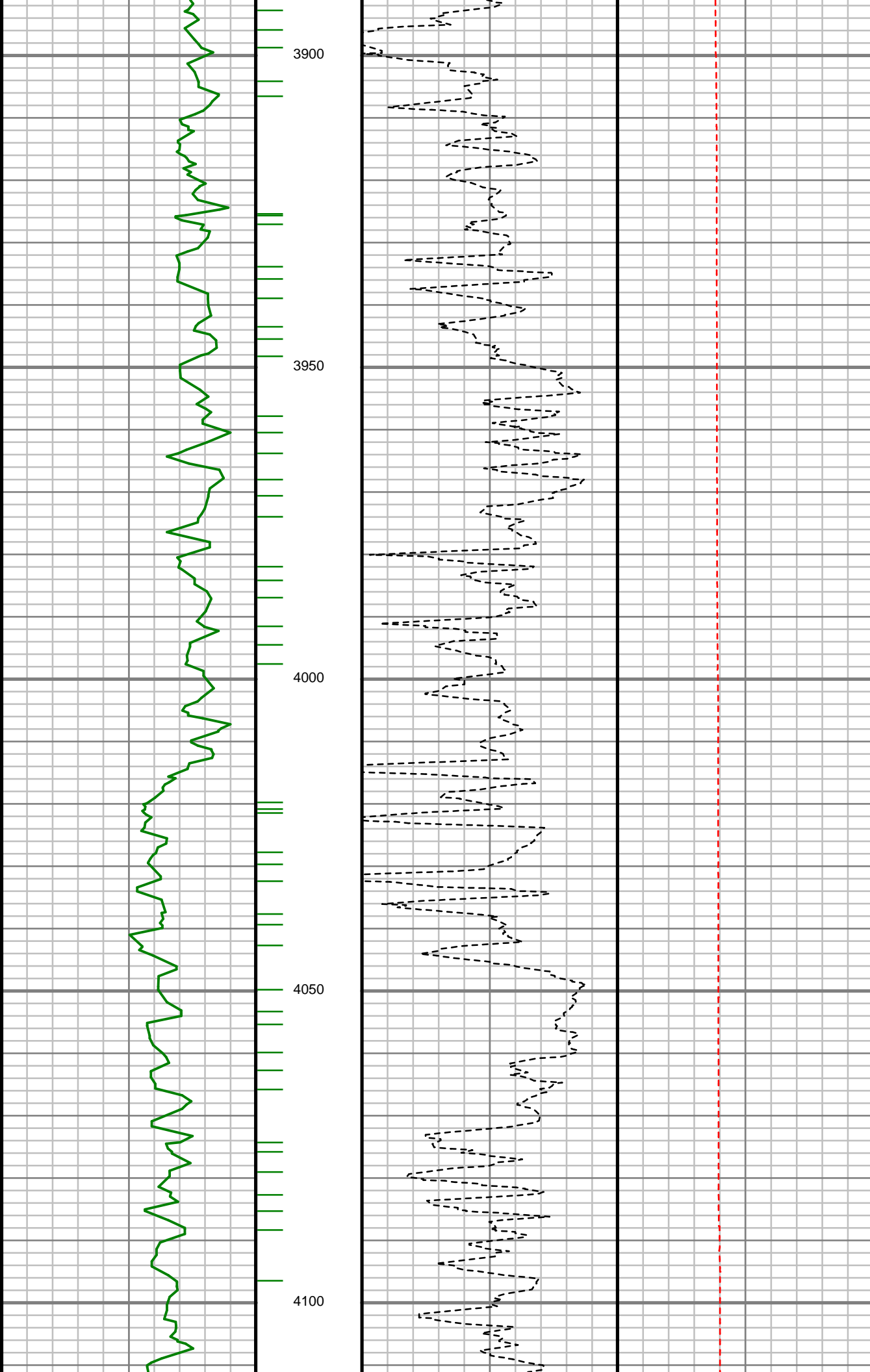
S: 40 MD: 3427.00 ft  
Inc: 8.03 deg Az:  
151.22 deg TVD:  
3401.17 ft





S: 43 MD: 3710.00 ft  
Inc: 7.00 deg Az:  
156.36 deg TVD:  
3681.14 ft

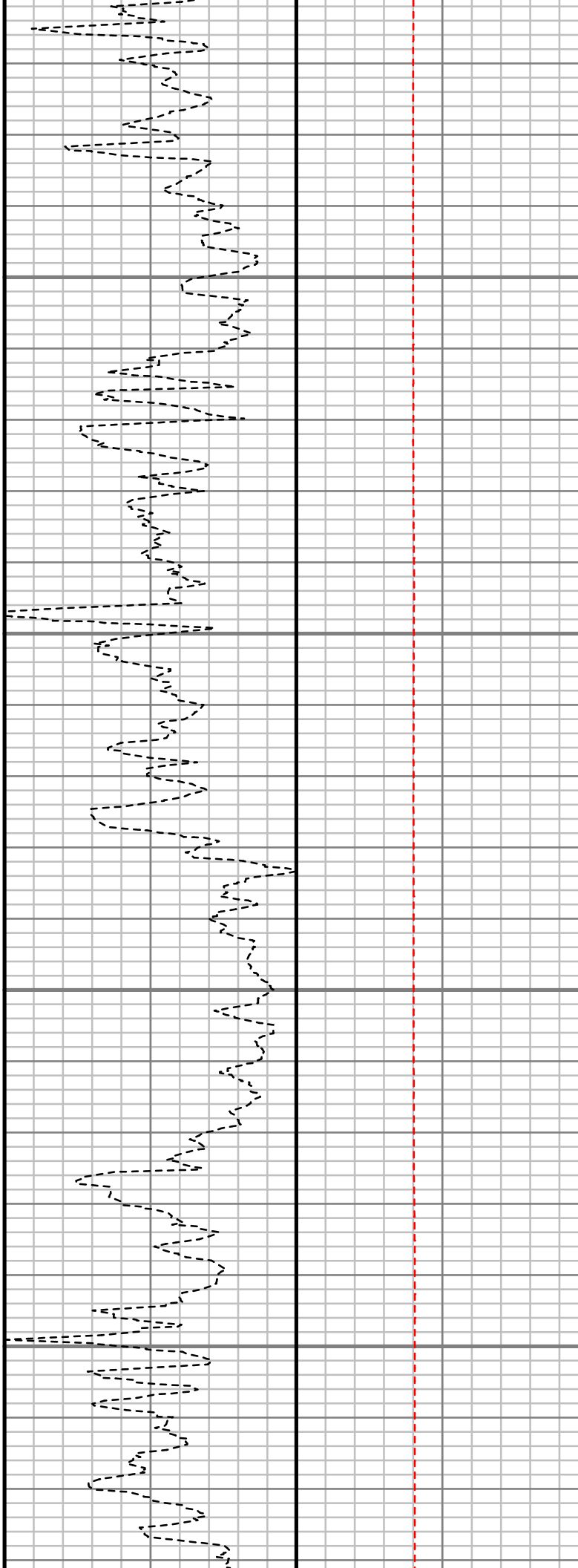
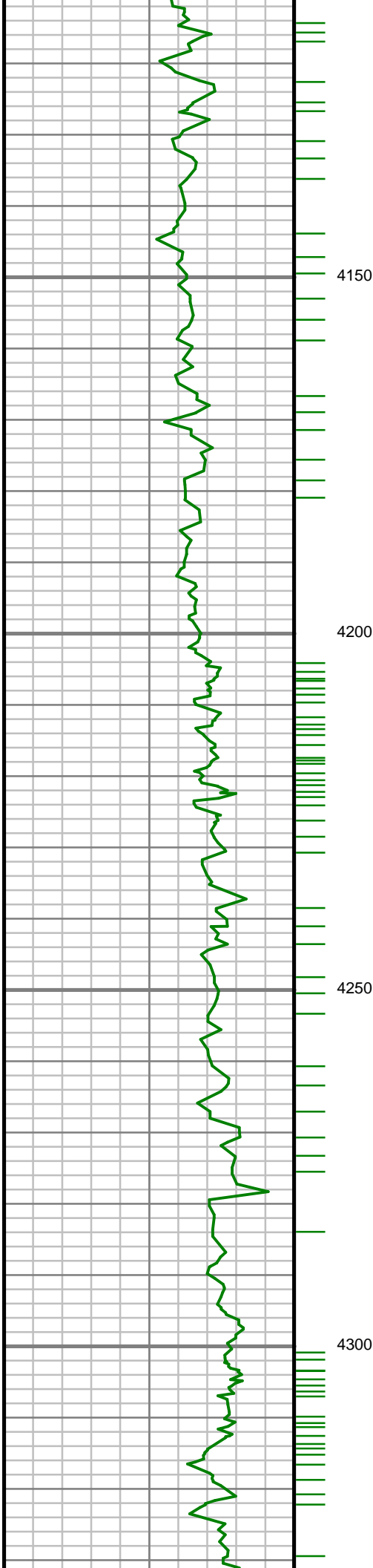
S: 44 MD: 3804.00 ft  
Inc: 5.77 deg Az:  
157.83 deg TVD:  
3774.56 ft



S: 45 MD: 3898.00 ft  
Inc: 5.32 deg Az:  
160.12 deg TVD:  
3868.12 ft

S: 46 MD: 3992.00 ft  
Inc: 4.06 deg Az:  
154.00 deg TVD:  
3961.80 ft

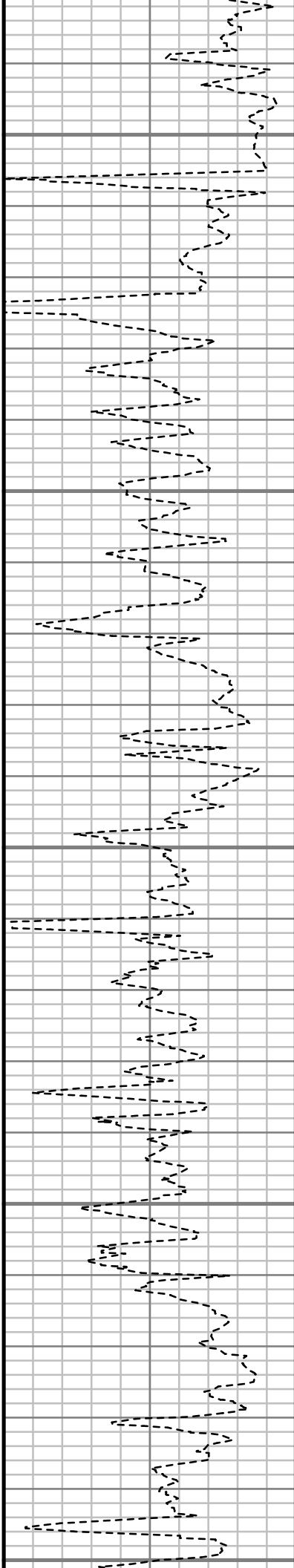
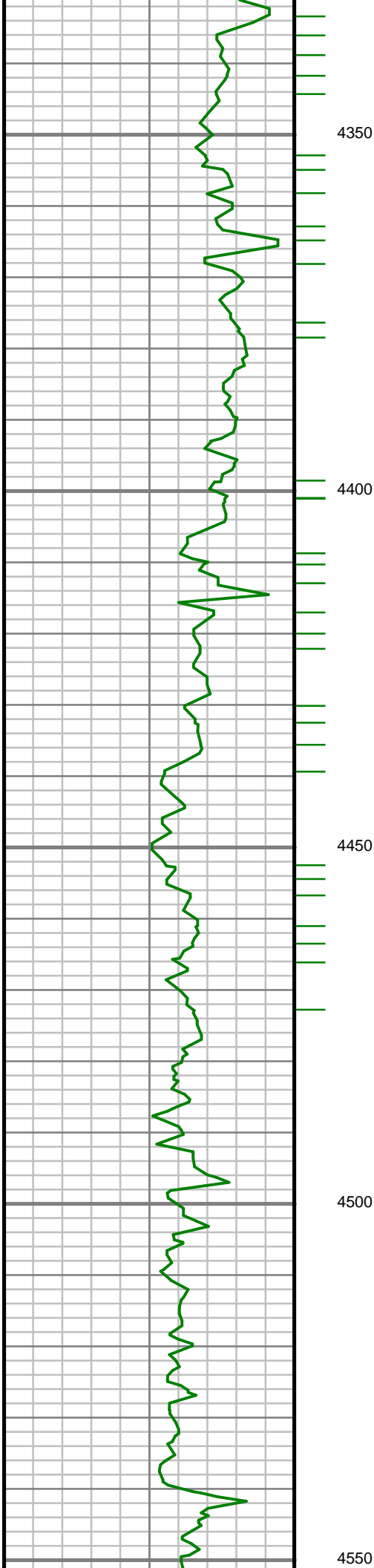
S: 47 MD: 4086.00 ft  
Inc: 3.55 deg Az:  
153.51 deg TVD:  
4055.59 ft



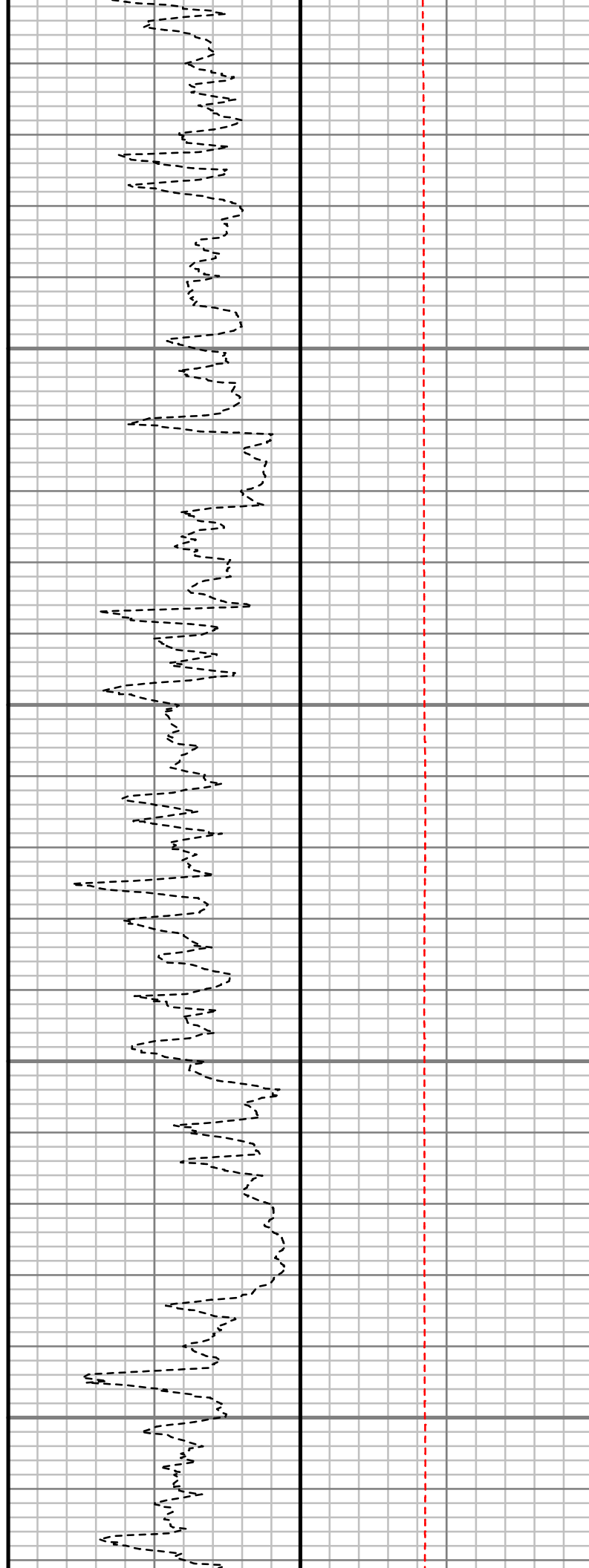
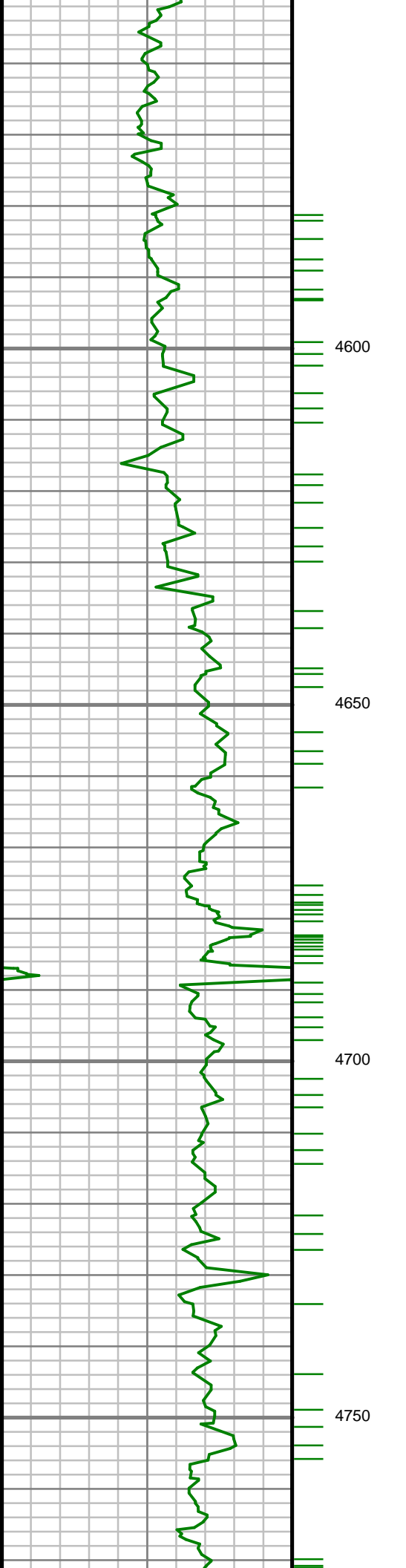
S: 48 MD: 4181.00 ft  
Inc: 3.18 deg Az:  
151.38 deg TVD:  
4150.43 ft

S: 49 MD: 4275.00 ft  
Inc: 1.49 deg Az:  
176.13 deg TVD:  
4244.35 ft





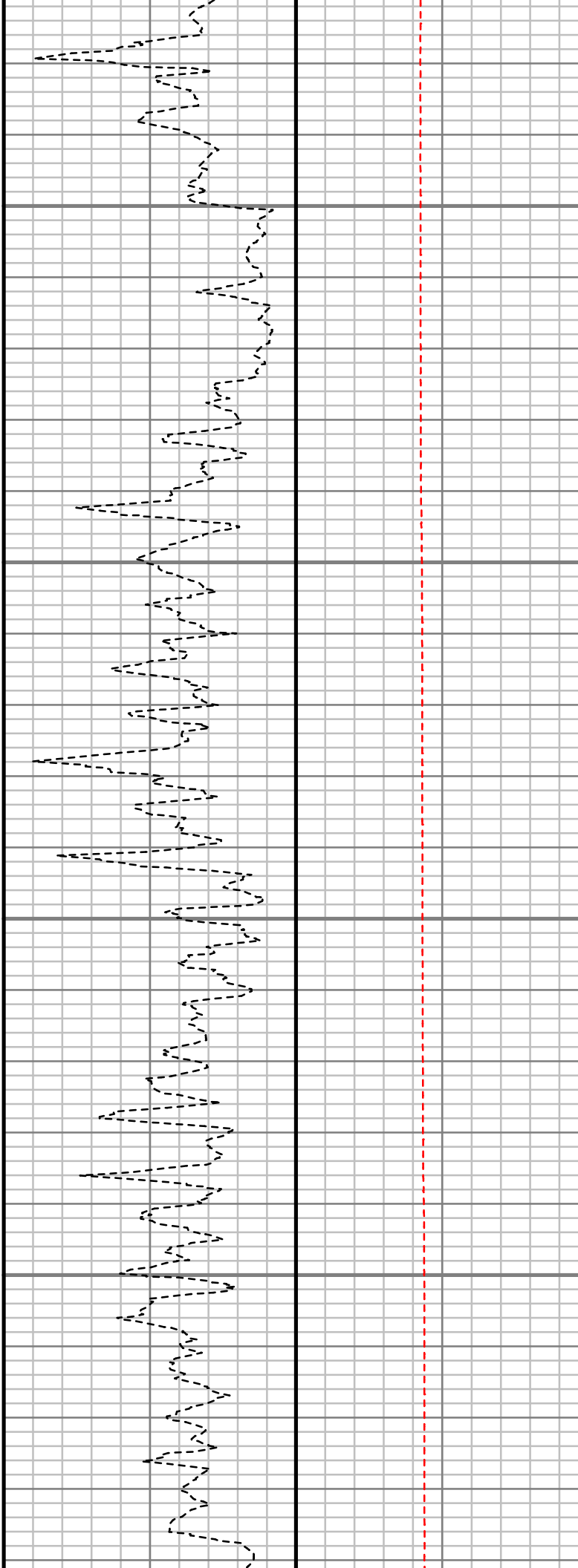
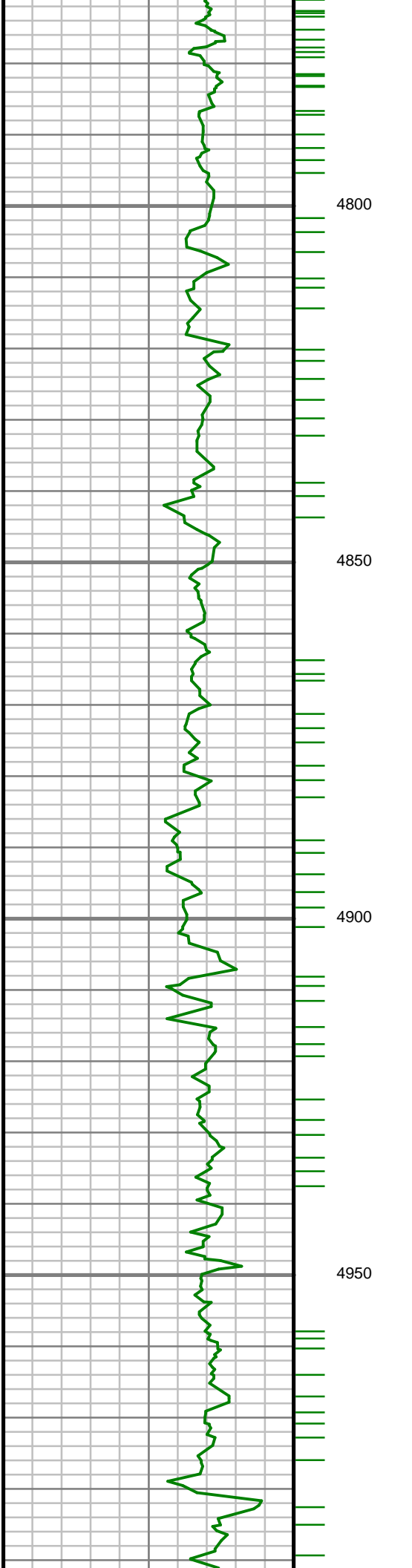
S: 50 MD: 4369.00 ft  
Inc: 1.41 deg Az: 17.51  
deg TVD: 4338.34 ft



S: 51 MD: 4557.00 ft  
Inc: 1.51 deg Az: 4.85  
deg TVD: 4526.28 ft

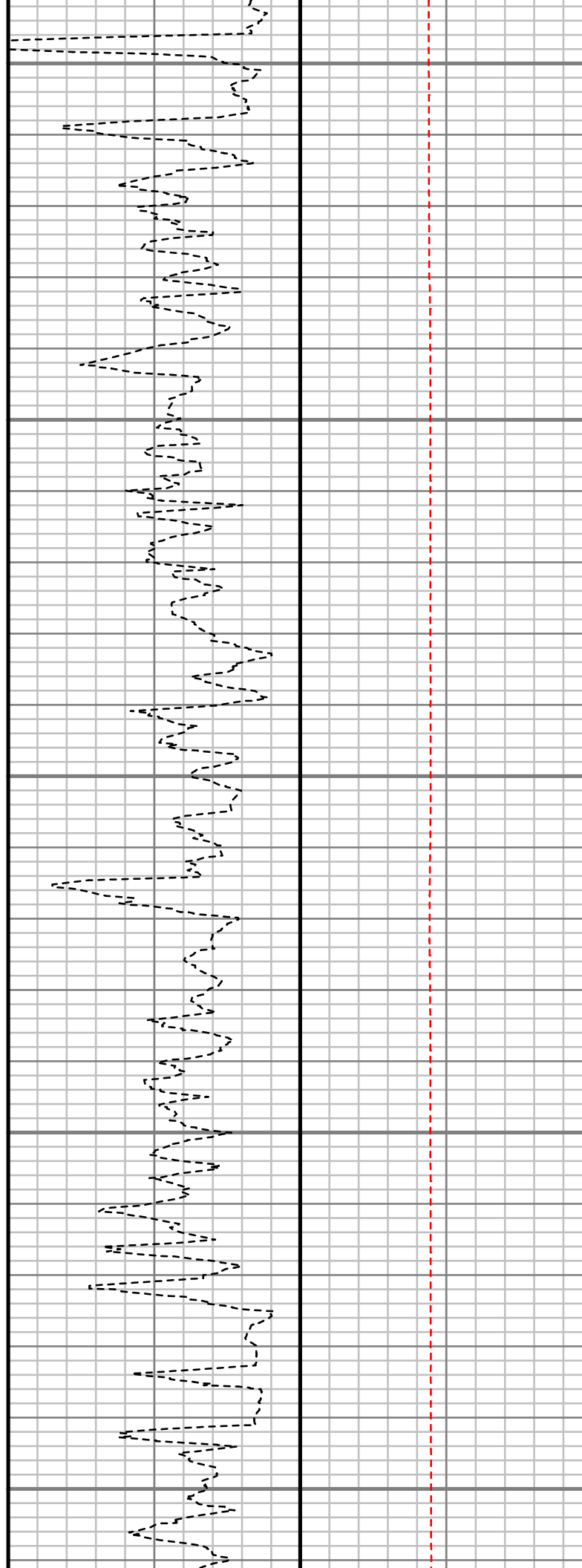
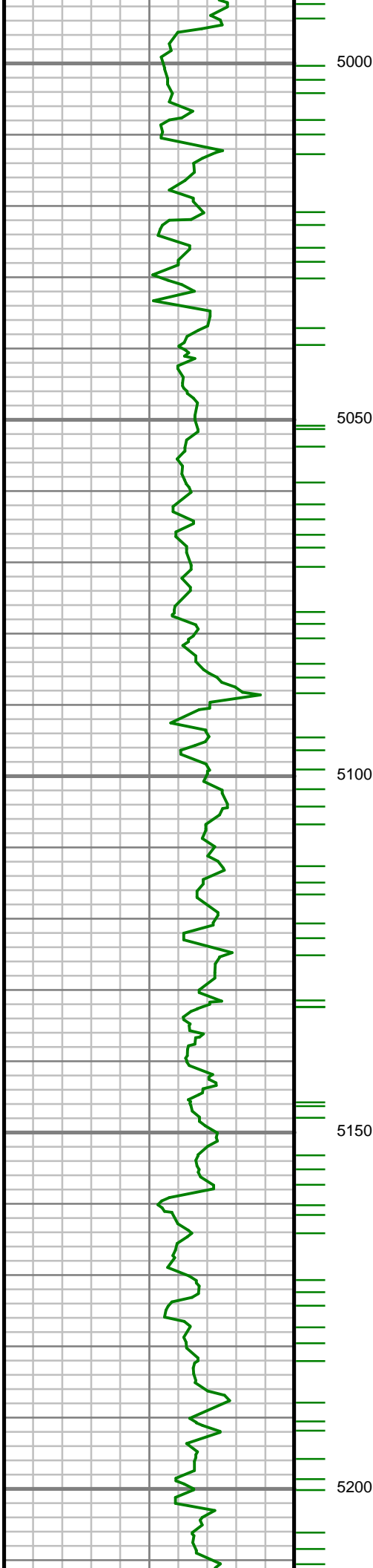
S: 52 MD: 4651.00 ft  
Inc: 1.74 deg Az: 6.50  
deg TVD: 4620.24 ft

S: 53 MD: 4746.00 ft  
Inc: 1.76 deg Az: 34.44  
deg TVD: 4715.20 ft



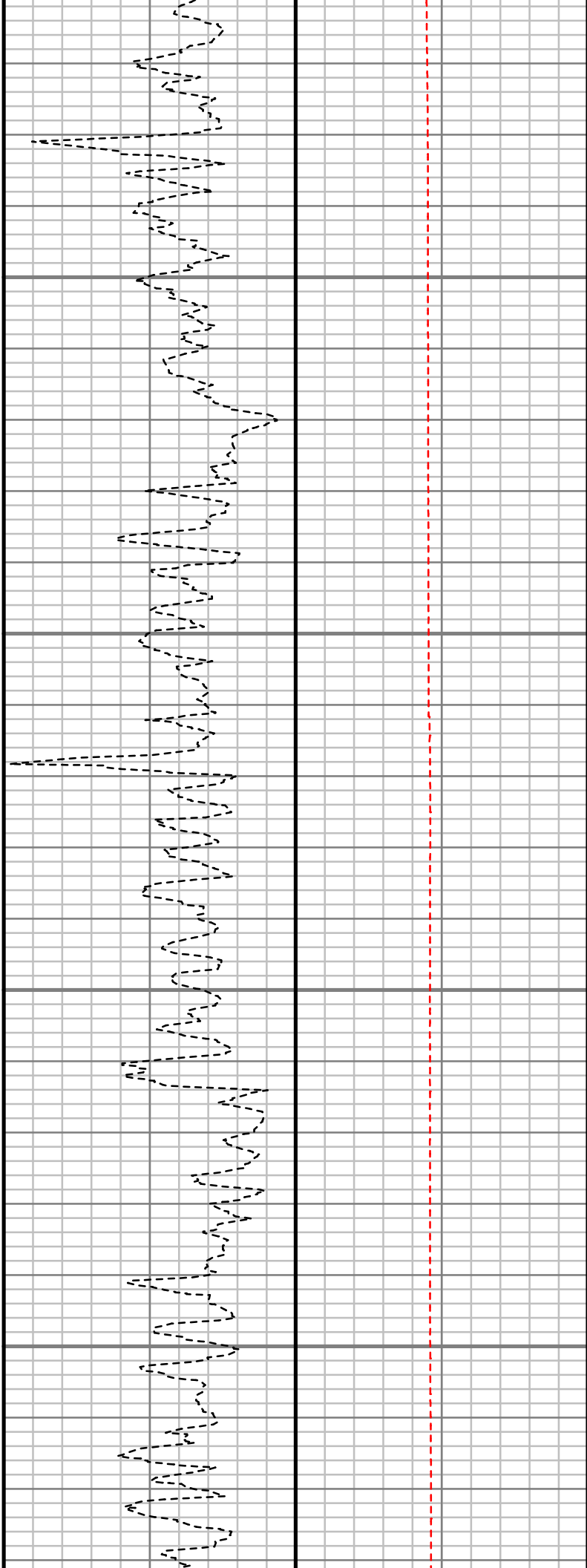
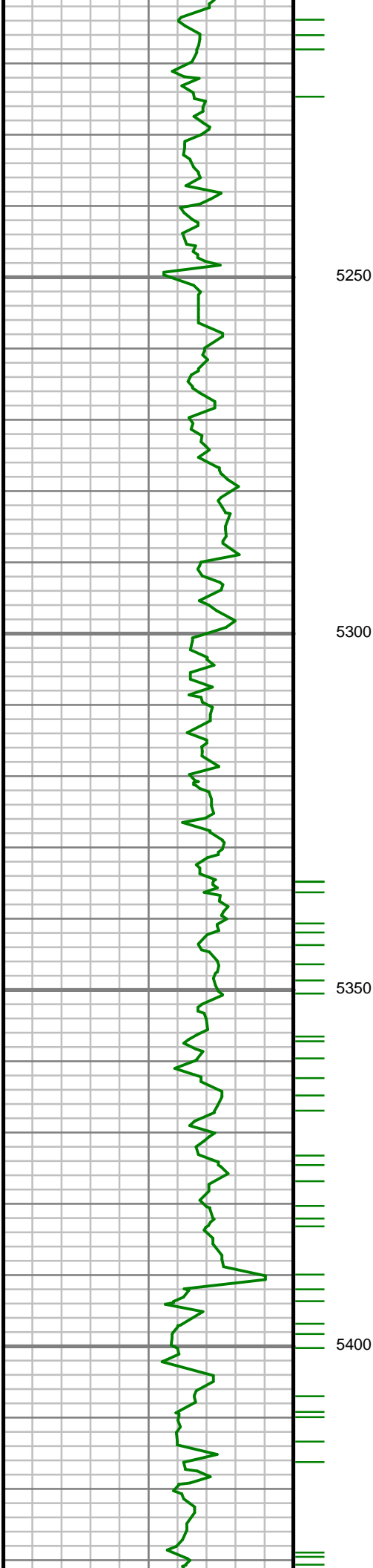
S: 54 MD: 4840.00 ft  
Inc: 0.15 deg Az:  
253.89 deg TVD:  
4809.19 ft

S: 55 MD: 4934.00 ft  
Inc: 0.24 deg Az:  
222.20 deg TVD:  
4903.18 ft



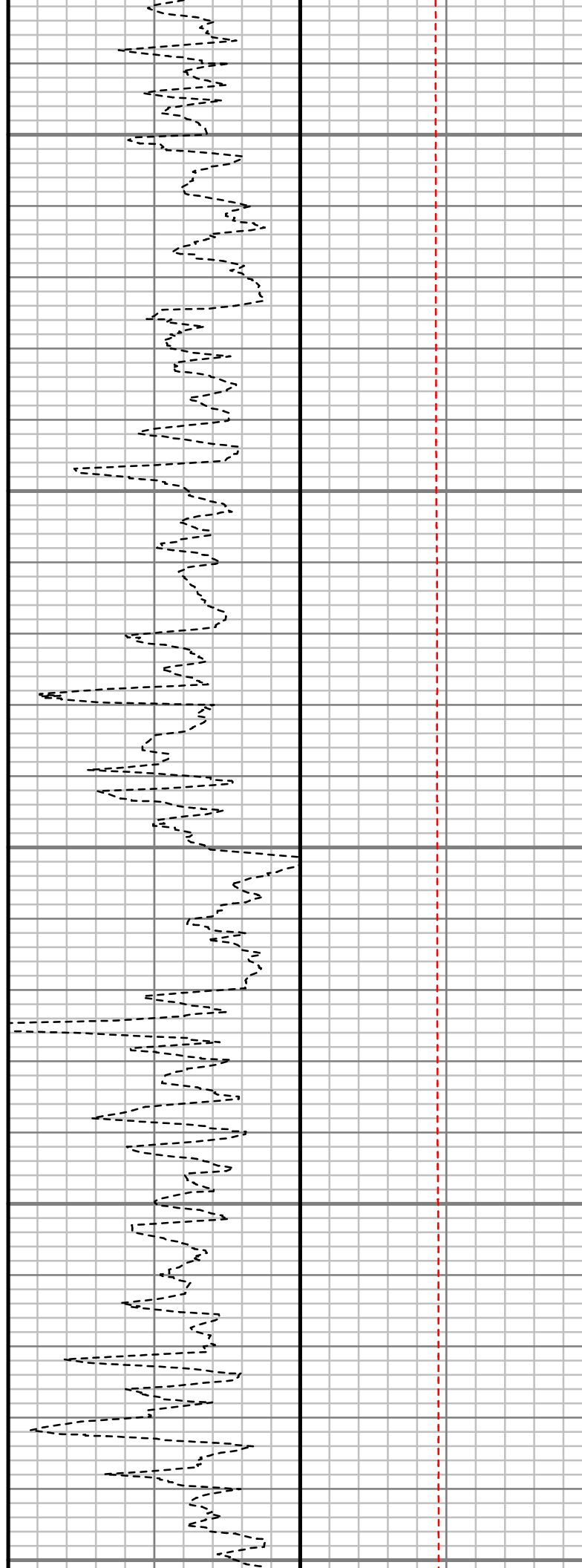
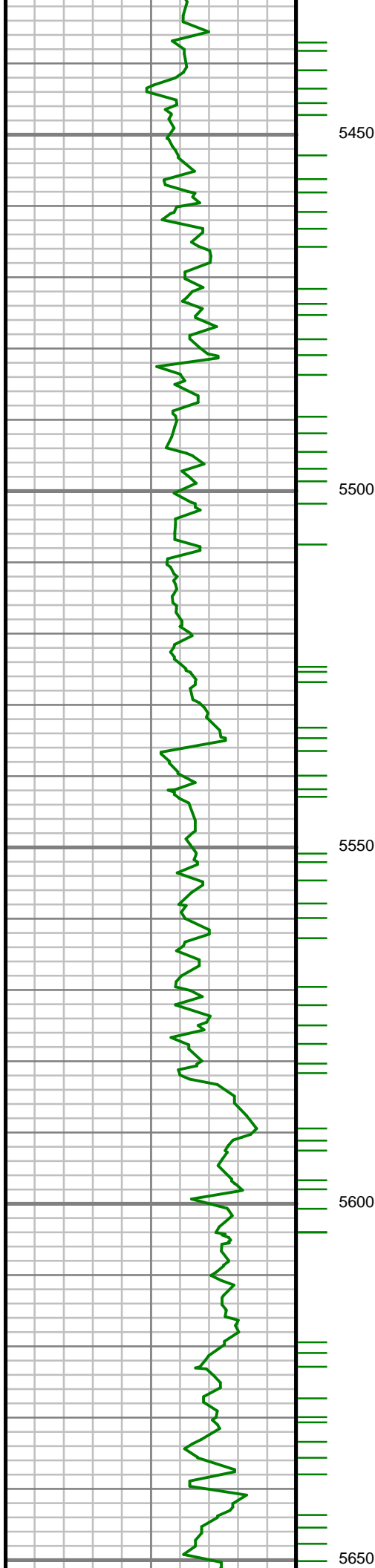
S: 56 MD: 5028.00 ft  
Inc: 0.17 deg Az:  
249.74 deg TVD:  
4997.18 ft

S: 57 MD: 5122.00 ft  
Inc: 0.20 deg Az:  
261.94 deg TVD:  
5091.18 ft



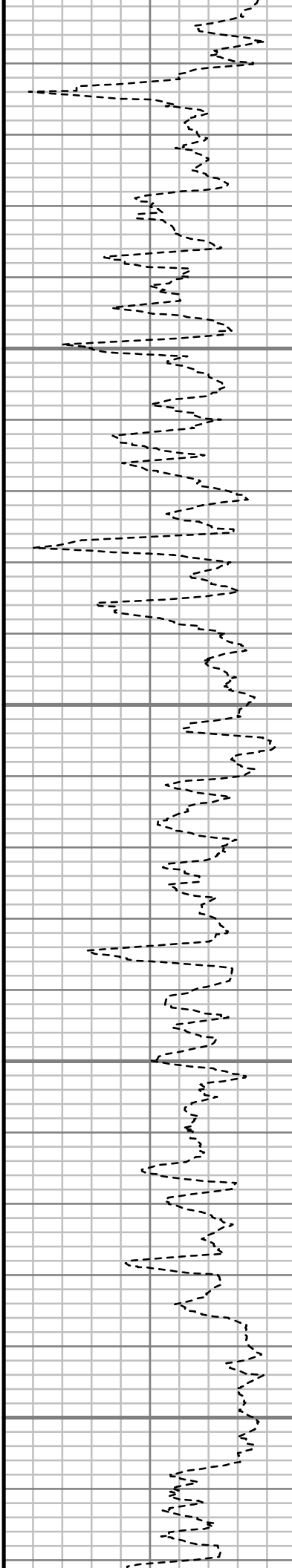
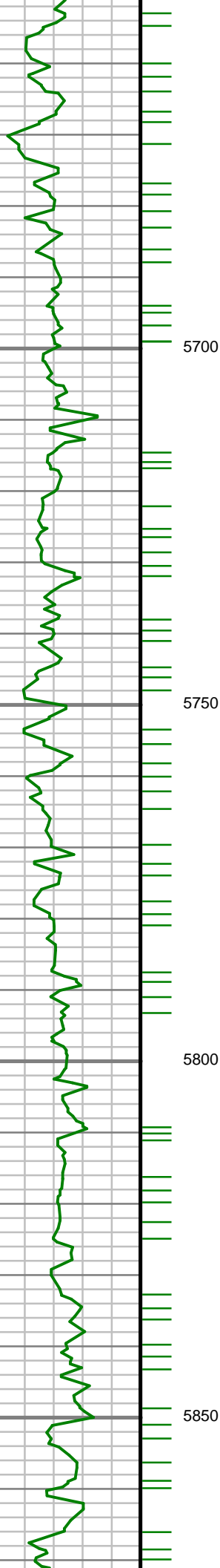
S: 58 MD: 5311.00 ft  
Inc: 0.20 deg Az: 19.96  
deg TVD: 5280.18 ft

S: 59 MD: 5405.00 ft  
Inc: 0.34 deg Az: 55.66  
deg TVD: 5374.18 ft



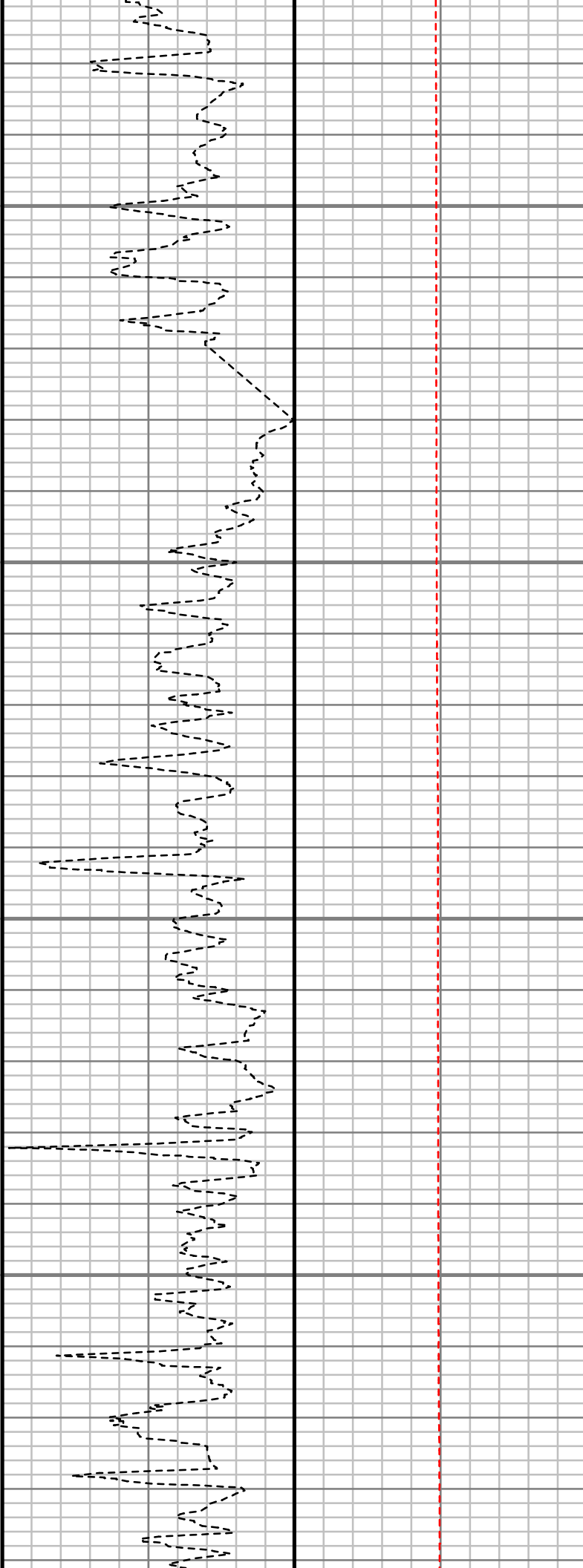
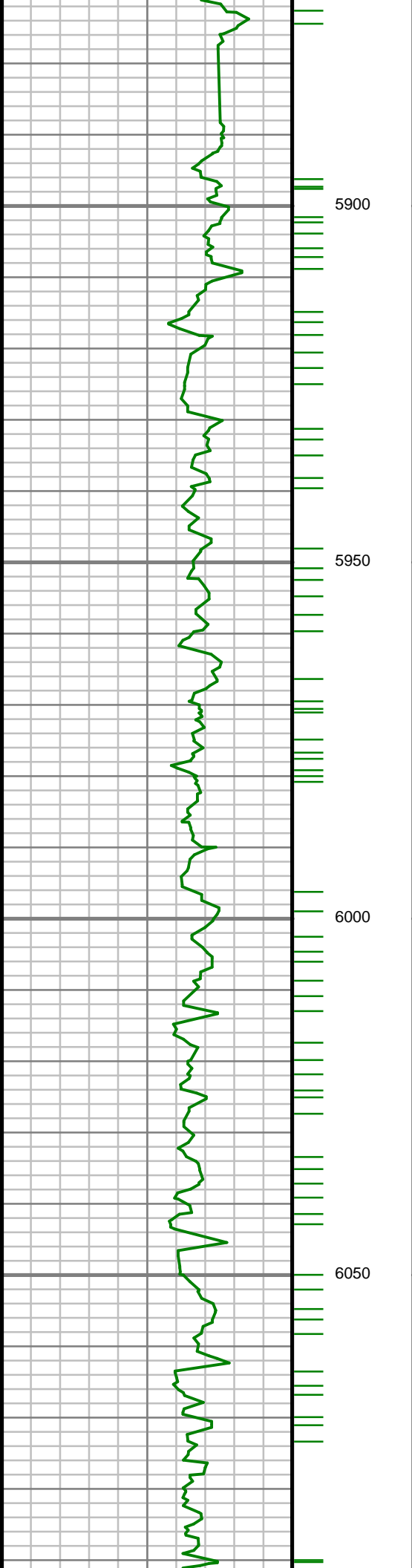
S: 60 MD: 5500.00 ft  
Inc: 0.41 deg Az: 53.68  
deg TVD: 5469.18 ft

S: 61 MD: 5594.00 ft  
Inc: 0.47 deg Az: 66.98  
deg TVD: 5563.18 ft



S: 62 MD: 5688.00 ft  
Inc: 0.75 deg Az: 18.29  
deg TVD: 5657.17 ft

S: 63 MD: 5782.00 ft  
Inc: 0.66 deg Az: 45.11  
deg TVD: 5751.17 ft

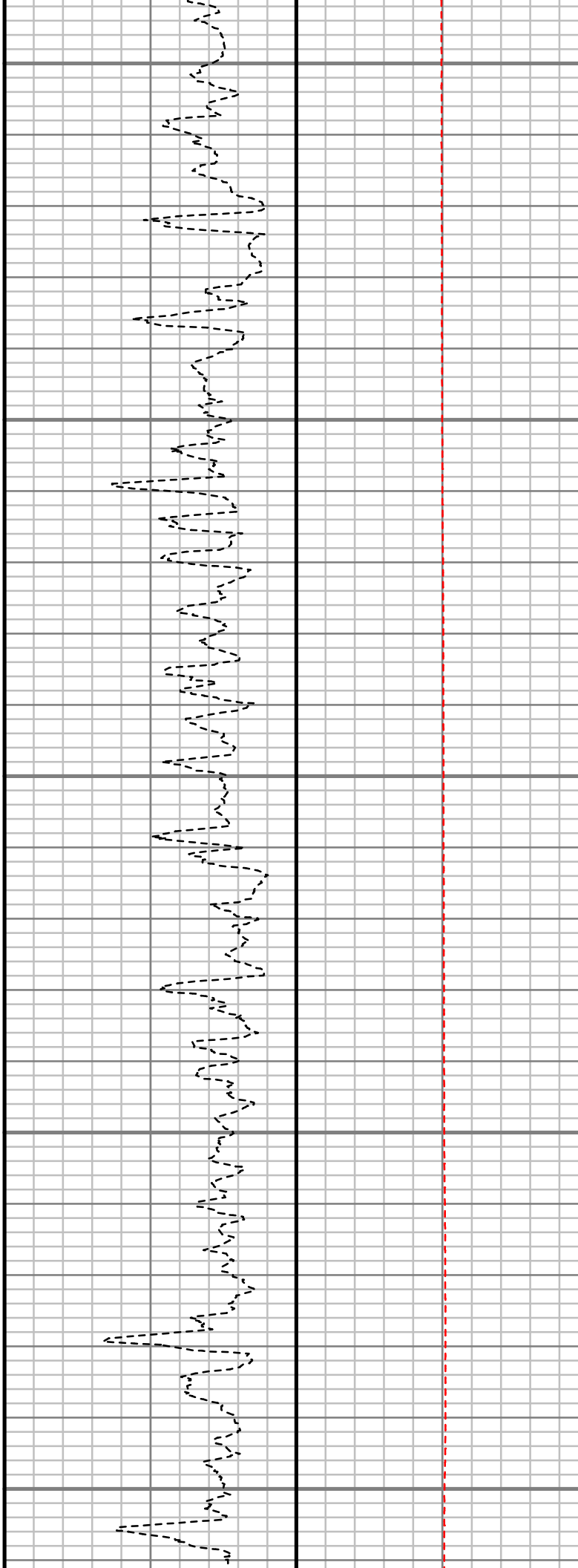
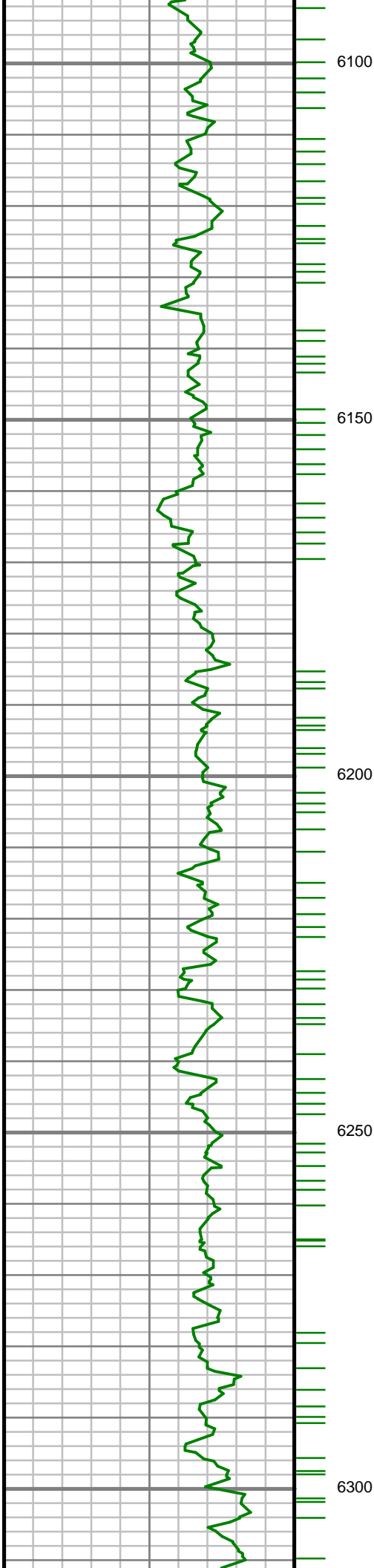


S: 64 MD: 5877.00 ft  
Inc: 0.64 deg Az: 37.99  
deg TVD: 5846.16 ft

S: 65 MD: 5971.00 ft  
Inc: 0.46 deg Az: 57.56  
deg TVD: 5940.15 ft

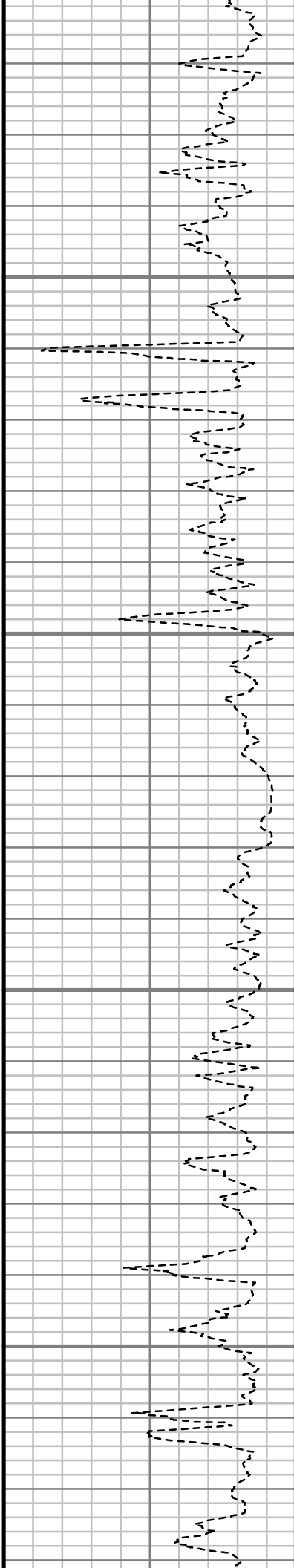
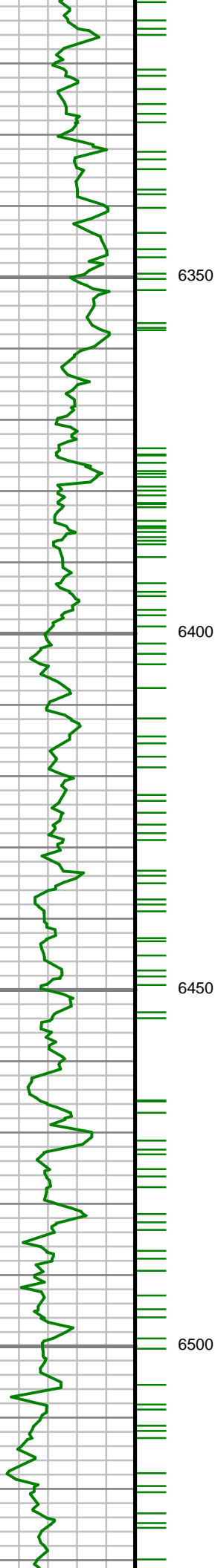
S: 66 MD: 6065.00 ft  
Inc: 0.50 deg Az: 51.57  
deg TVD: 6034.15 ft





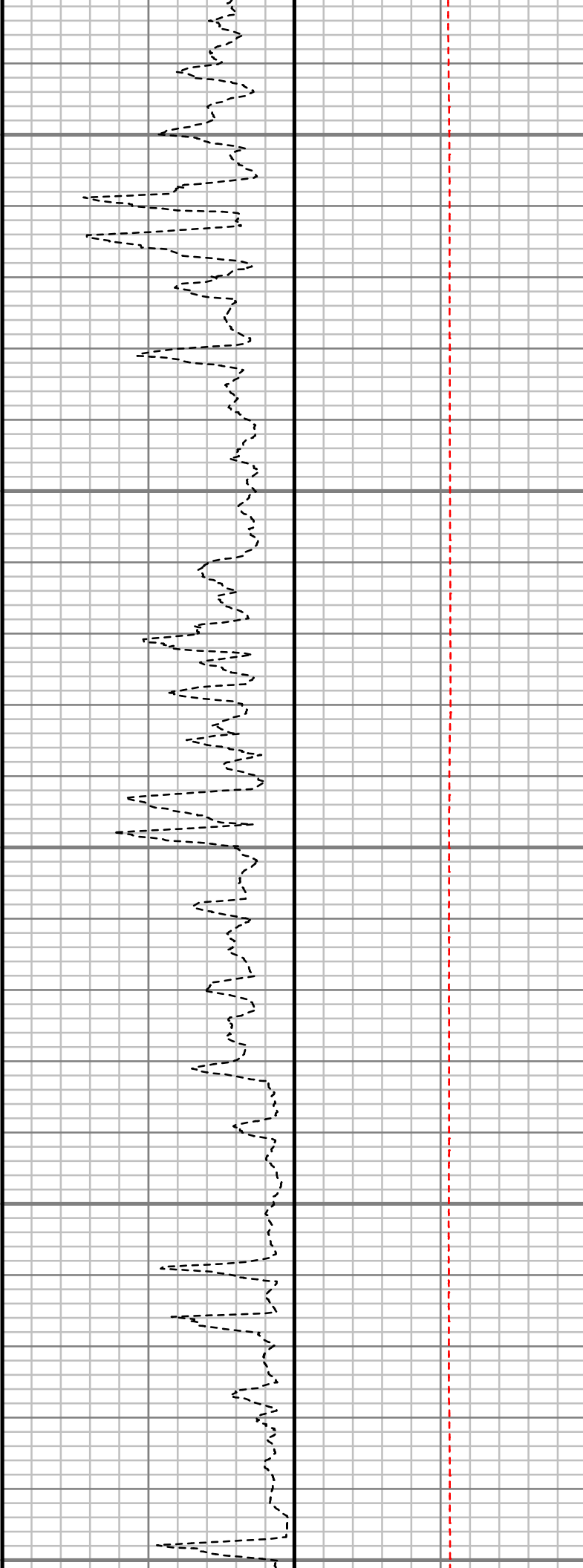
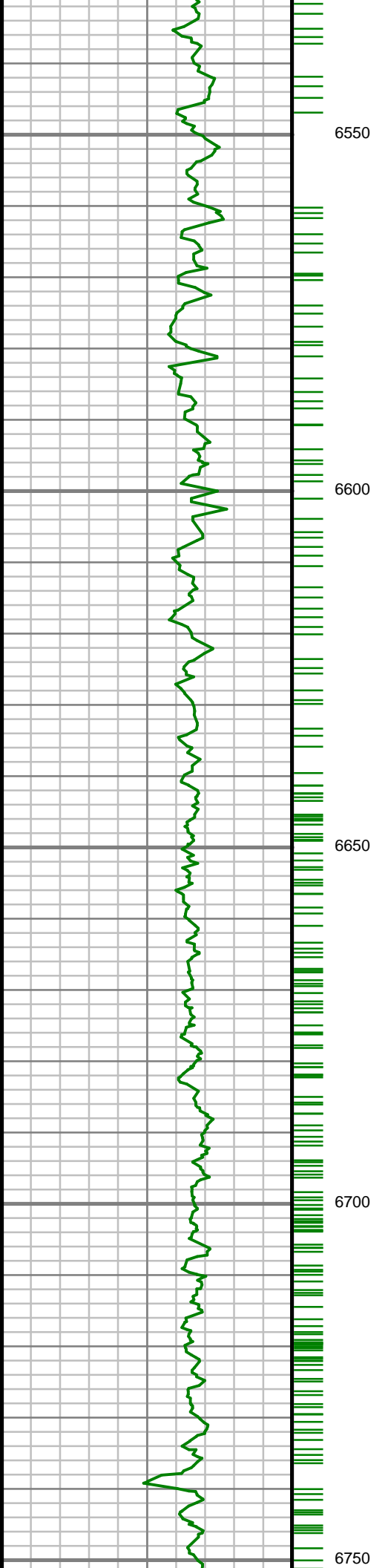
S: 67 MD: 6160.00 ft  
Inc: 0.75 deg Az: 49.31  
deg TVD: 6129.15 ft

S: 68 MD: 6254.00 ft  
Inc: 1.02 deg Az: 56.94  
deg TVD: 6223.13 ft



S: 69 MD: 6348.00 ft  
Inc: 1.10 deg Az: 71.42  
deg TVD: 6317.12 ft

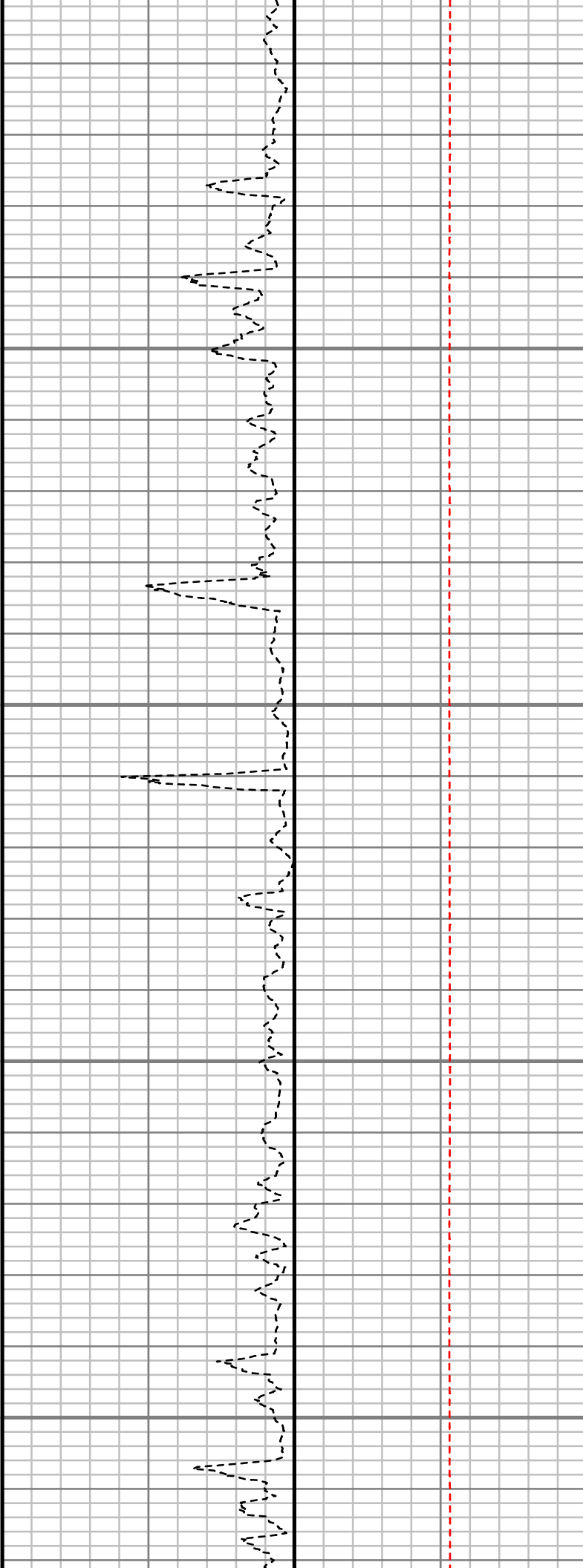
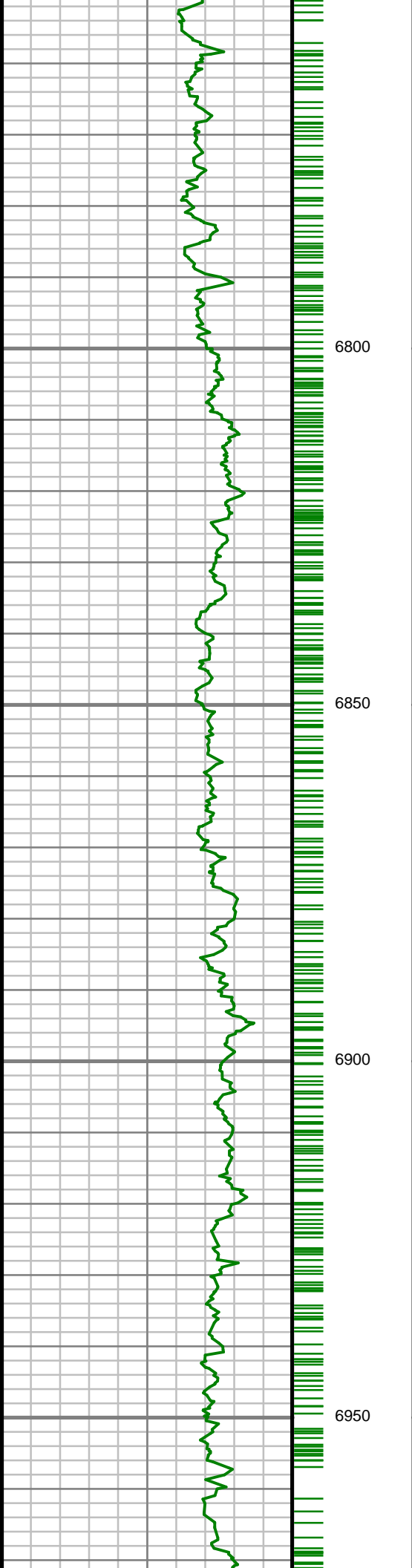
S: 70 MD: 6442.00 ft  
Inc: 0.53 deg Az: 69.02  
deg TVD: 6411.11 ft



S: 71 MD: 6537.00 ft  
Inc: 0.75 deg Az: 85.68  
deg TVD: 6506.10 ft

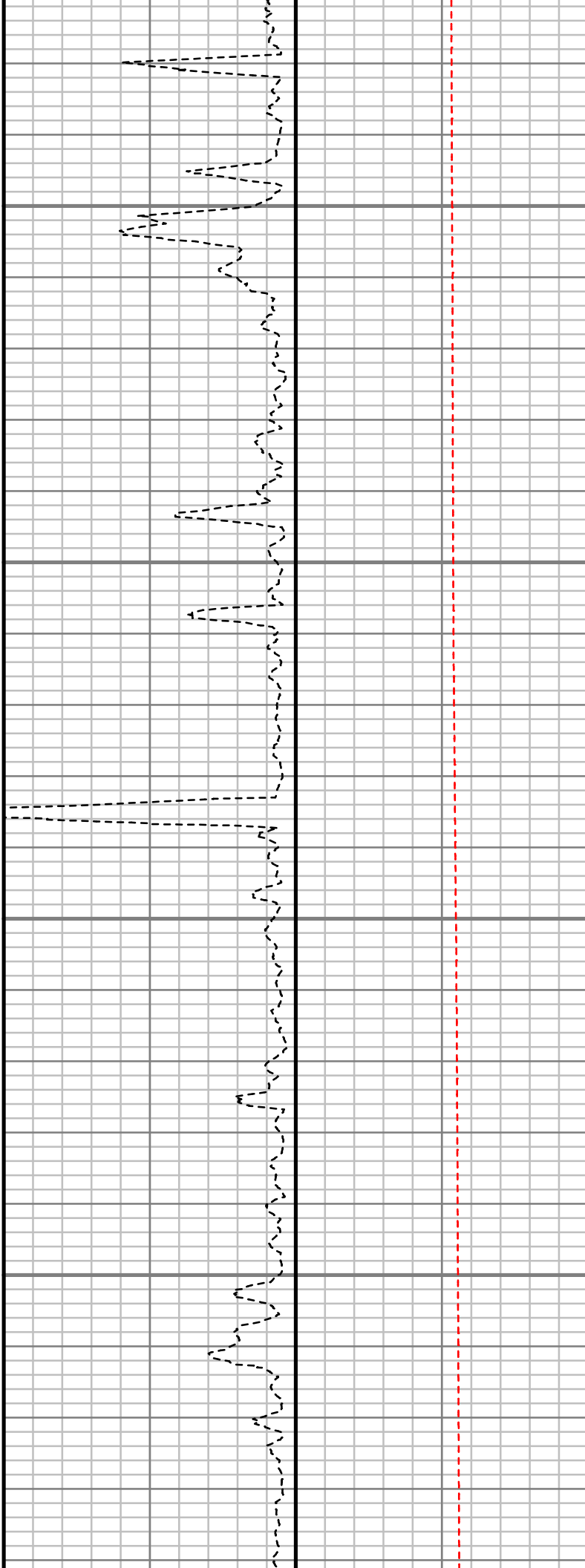
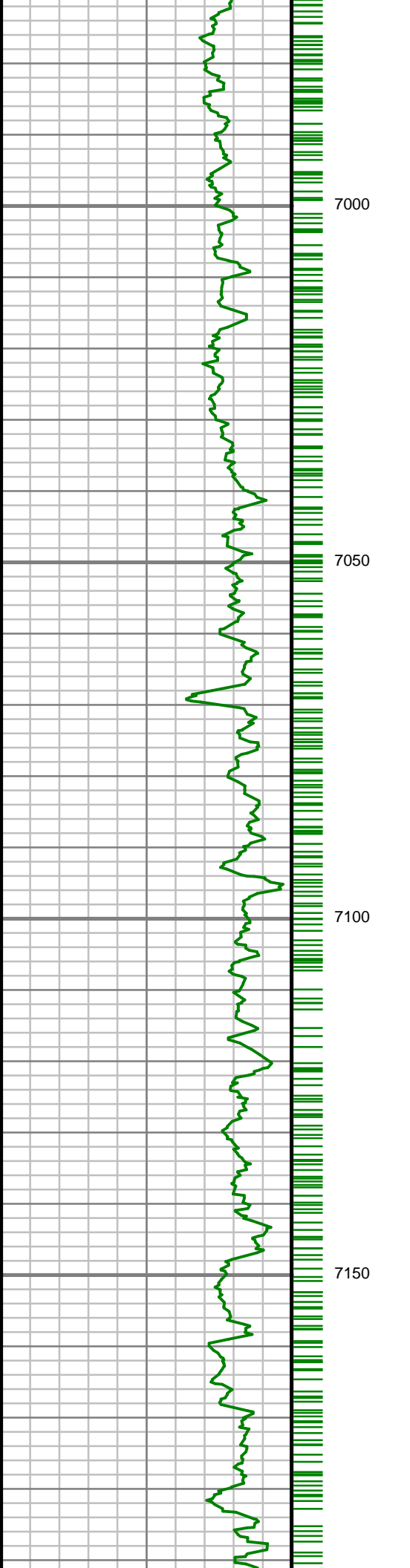
S: 72 MD: 6631.00 ft  
Inc: 1.11 deg Az: 74.30  
deg TVD: 6600.09 ft

S: 73 MD: 6725.00 ft  
Inc: 6.07 deg Az:  
150.78 deg TVD:  
6693.90 ft



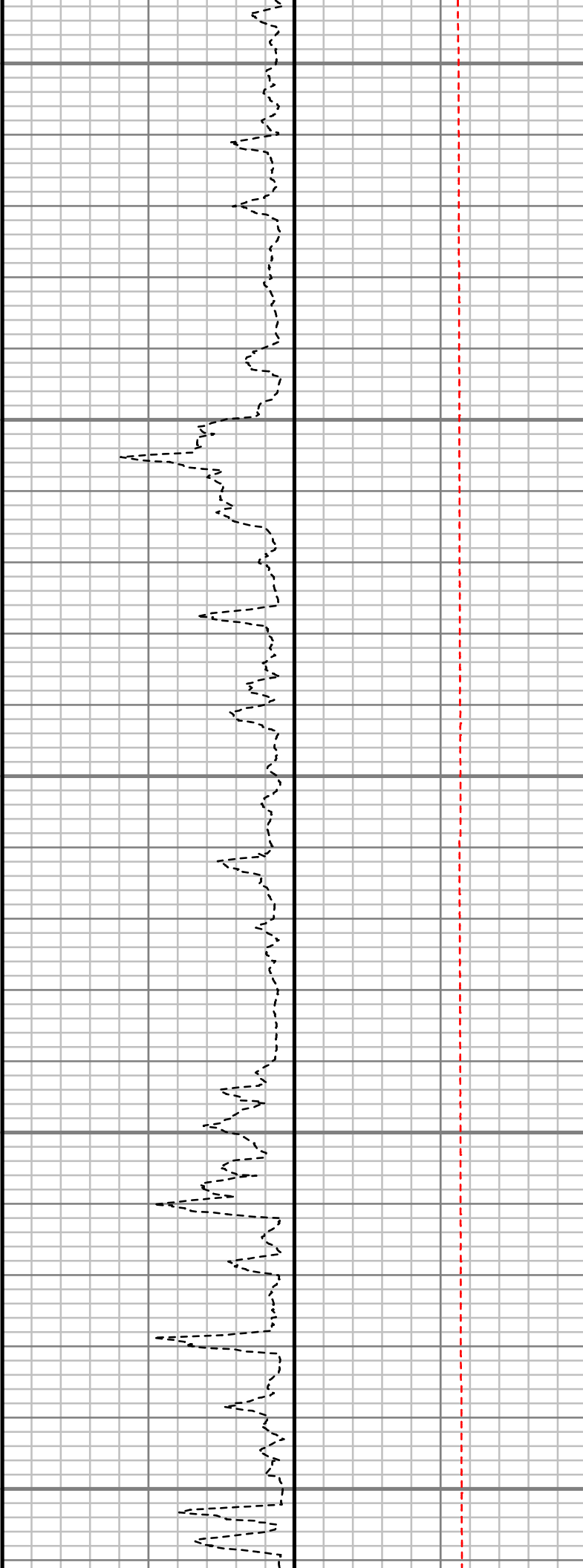
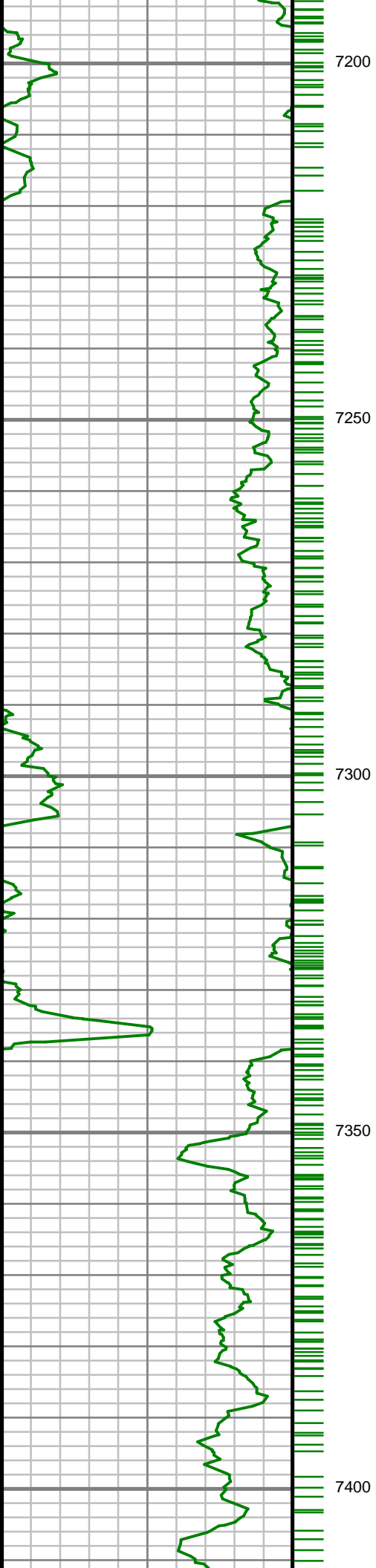
S: 74 MD: 6819.00 ft  
Inc: 10.37 deg Az:  
174.60 deg TVD:  
6786.94 ft

S: 75 MD: 6914.00 ft  
Inc: 18.09 deg Az:  
181.38 deg TVD:  
6878.96 ft



S: 76 MD: 7007.00 ft  
Inc: 26.71 deg Az:  
178.99 deg TVD:  
6964.87 ft

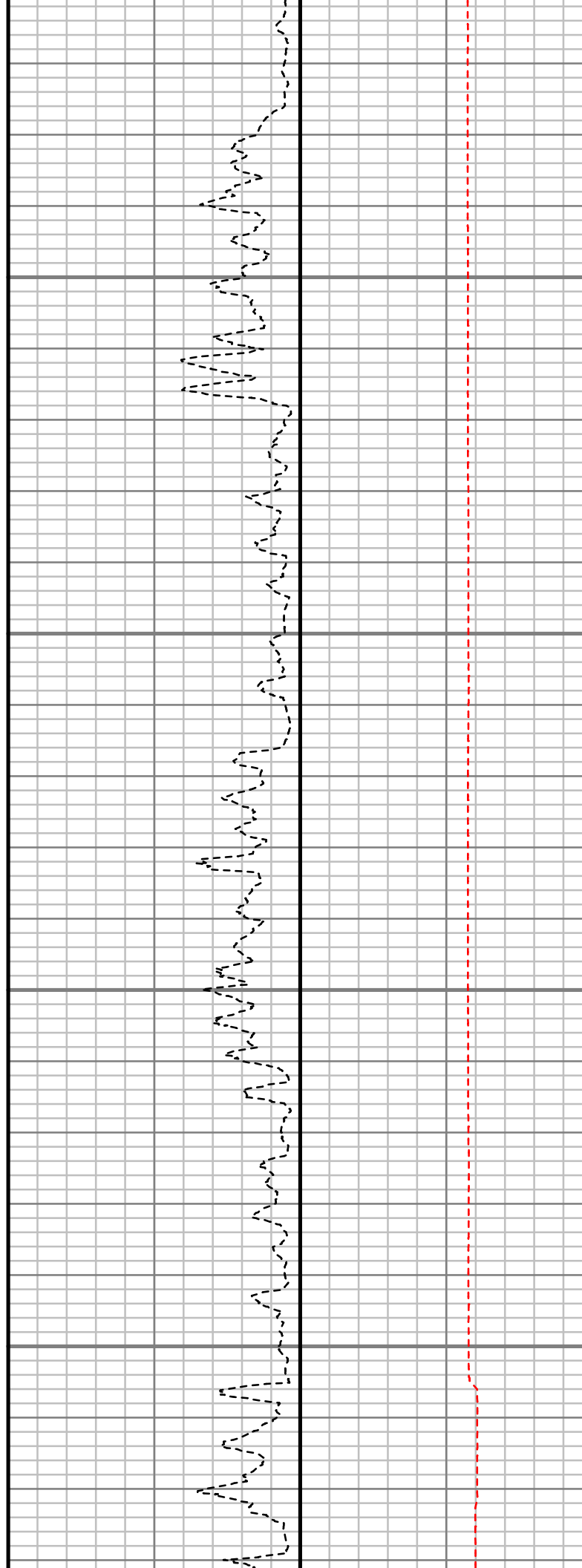
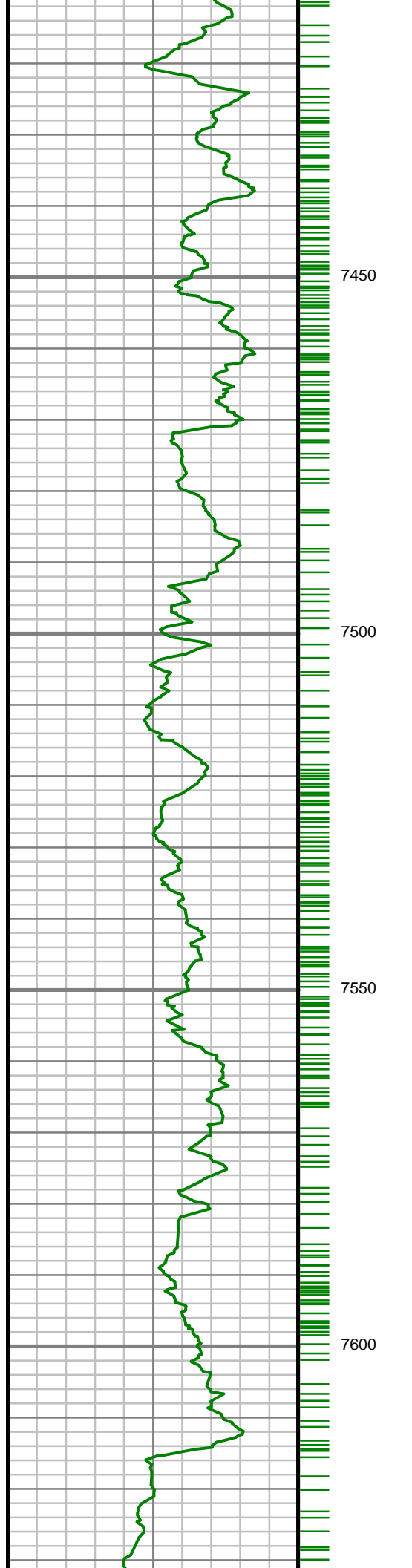
S: 77 MD: 7101.00 ft  
Inc: 35.99 deg Az:  
175.53 deg TVD:  
7045.06 ft



S: 78 MD: 7195.00 ft  
Inc: 45.16 deg Az:  
176.68 deg TVD:  
7116.39 ft

S: 79 MD: 7290.00 ft  
Inc: 55.15 deg Az:  
175.71 deg TVD:  
7177.18 ft

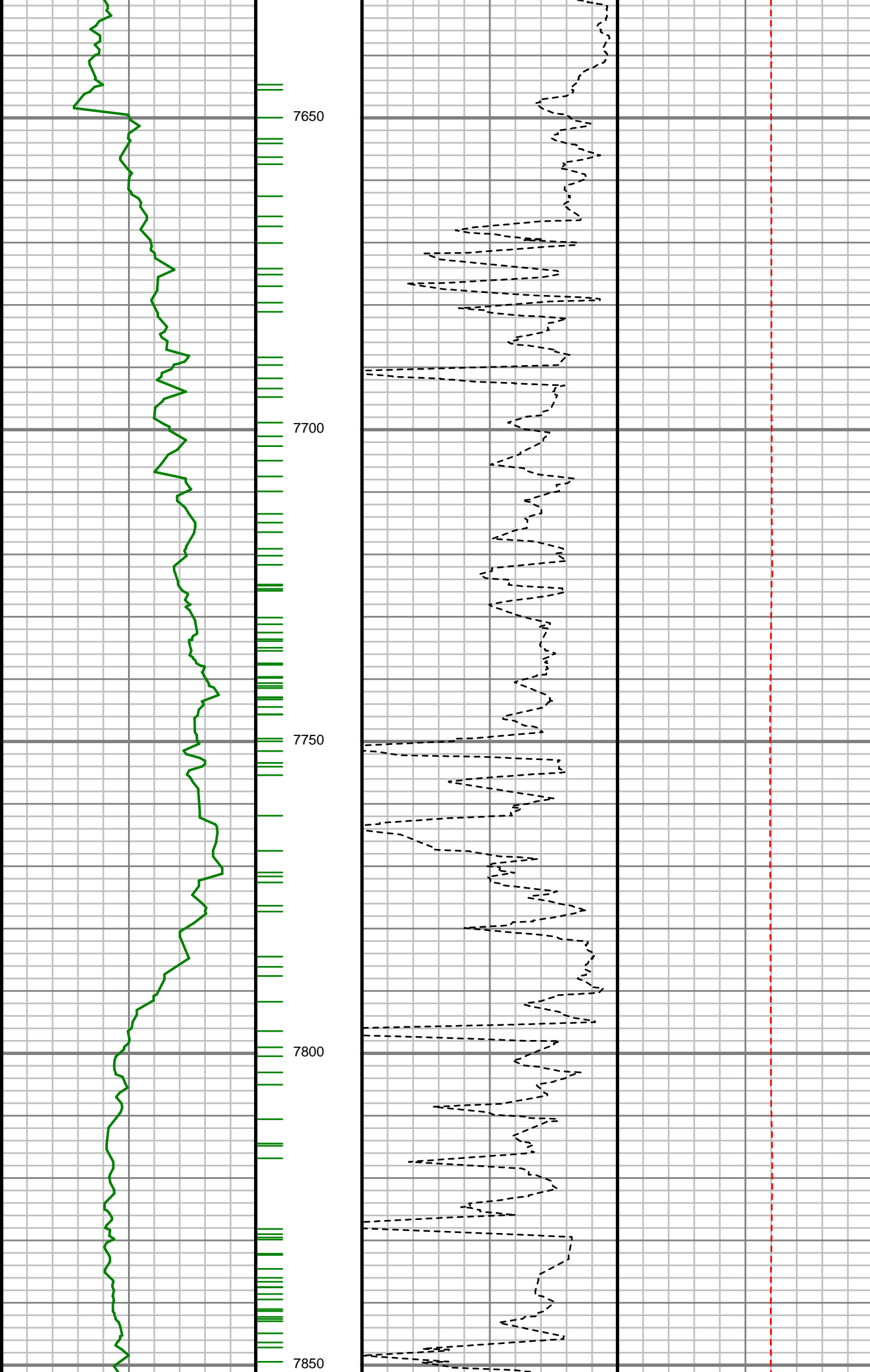
S: 80 MD: 7384.00 ft  
Inc: 65.21 deg Az:  
177.23 deg TVD:  
7223.86 ft



S: 81 MD: 7478.00 ft  
Inc: 73.02 deg Az:  
179.46 deg TVD:  
7257.34 ft

S: 82 MD: 7572.00 ft  
Inc: 81.11 deg Az:  
179.43 deg TVD:  
7278.36 ft

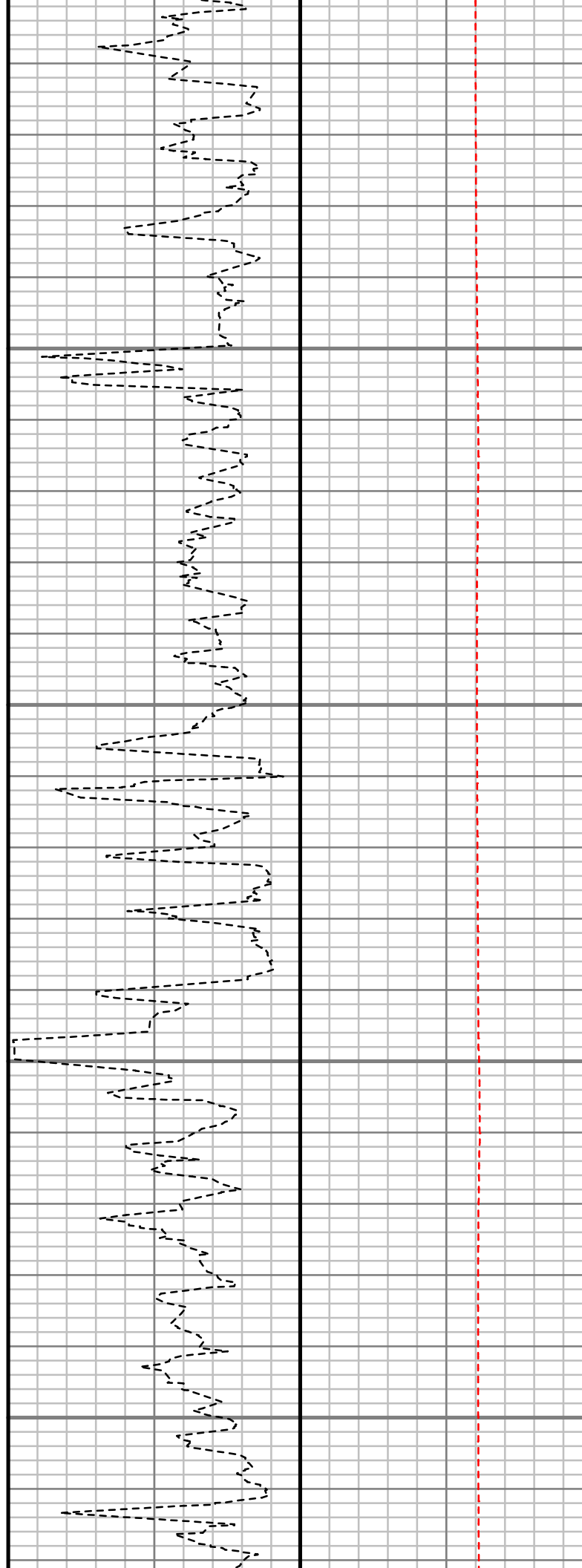
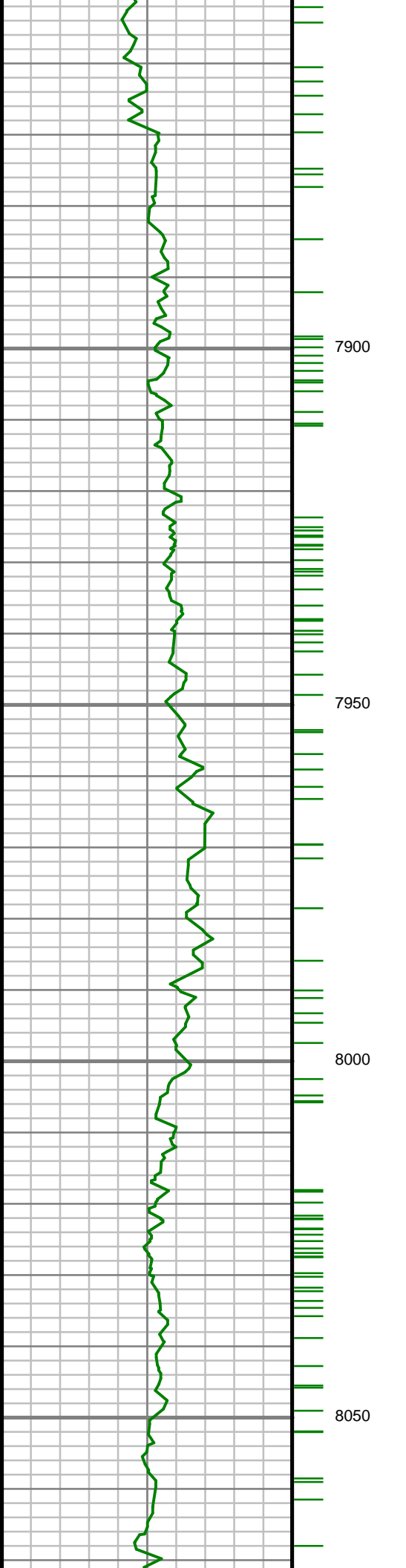
S: 83 MD: 7604.00 ft  
Inc: 84.79 deg Az:  
180.23 deg TVD:  
7282.29 ft



S: 84 MD: 7713.00 ft  
Inc: 87.88 deg Az:  
179.78 deg TVD:  
7289.25 ft

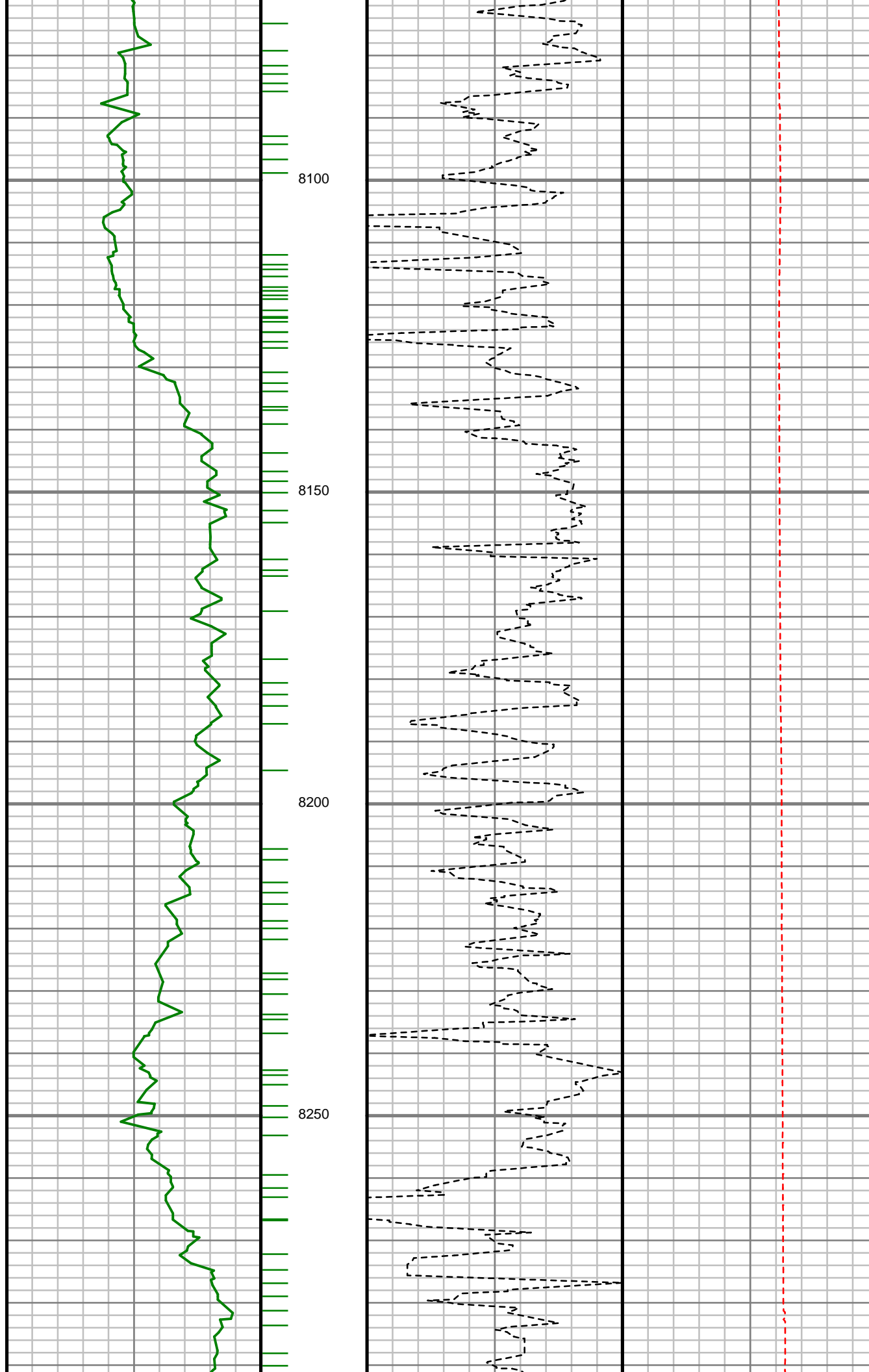
S: 85 MD: 7808.00 ft  
Inc: 88.59 deg Az:  
180.75 deg TVD:  
7292.18 ft





S: 86 MD: 7902.00 ft  
Inc: 89.09 deg Az:  
180.89 deg TVD:  
7294.08 ft

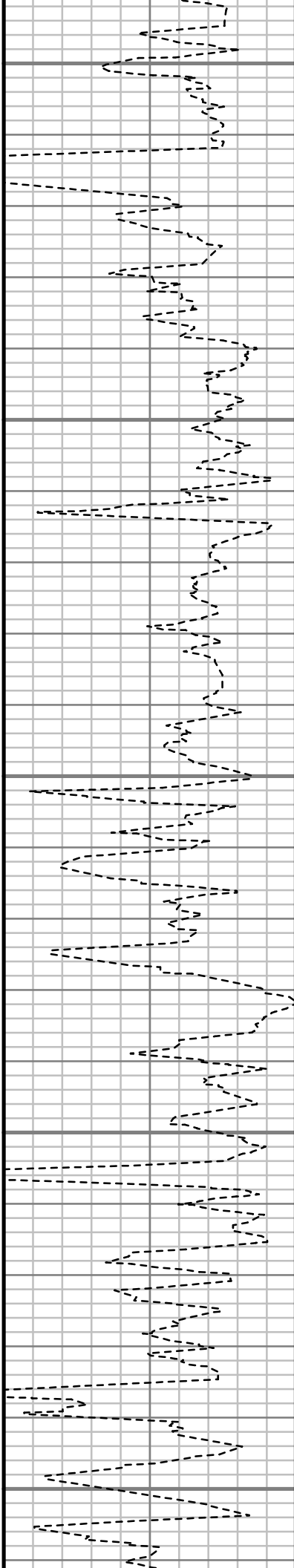
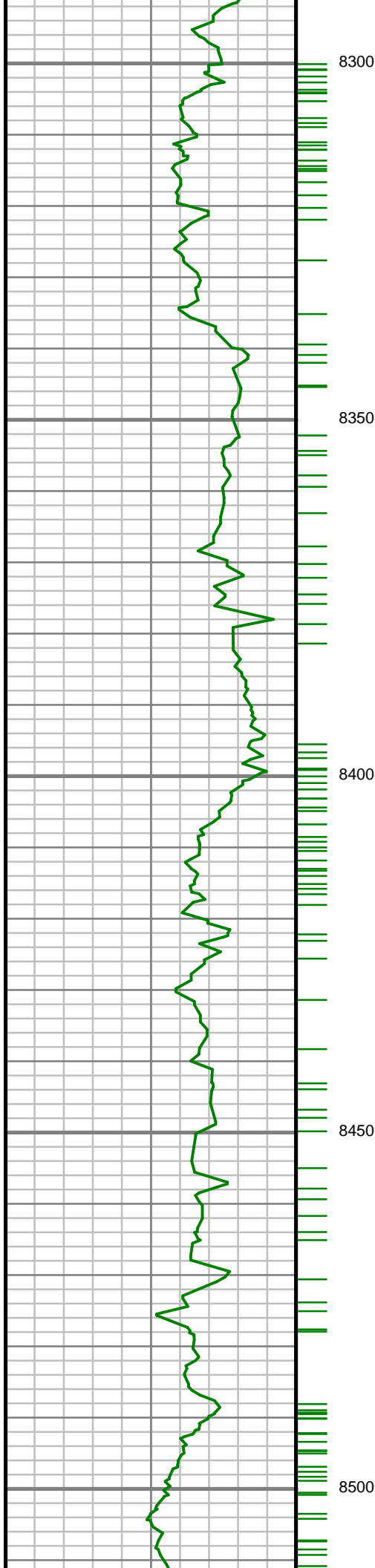
S: 87 MD: 7996.00 ft  
Inc: 89.83 deg Az:  
181.39 deg TVD:  
7294.96 ft



S: 88 MD: 8091.00 ft  
Inc: 90.17 deg Az:  
180.73 deg TVD:  
7294.96 ft

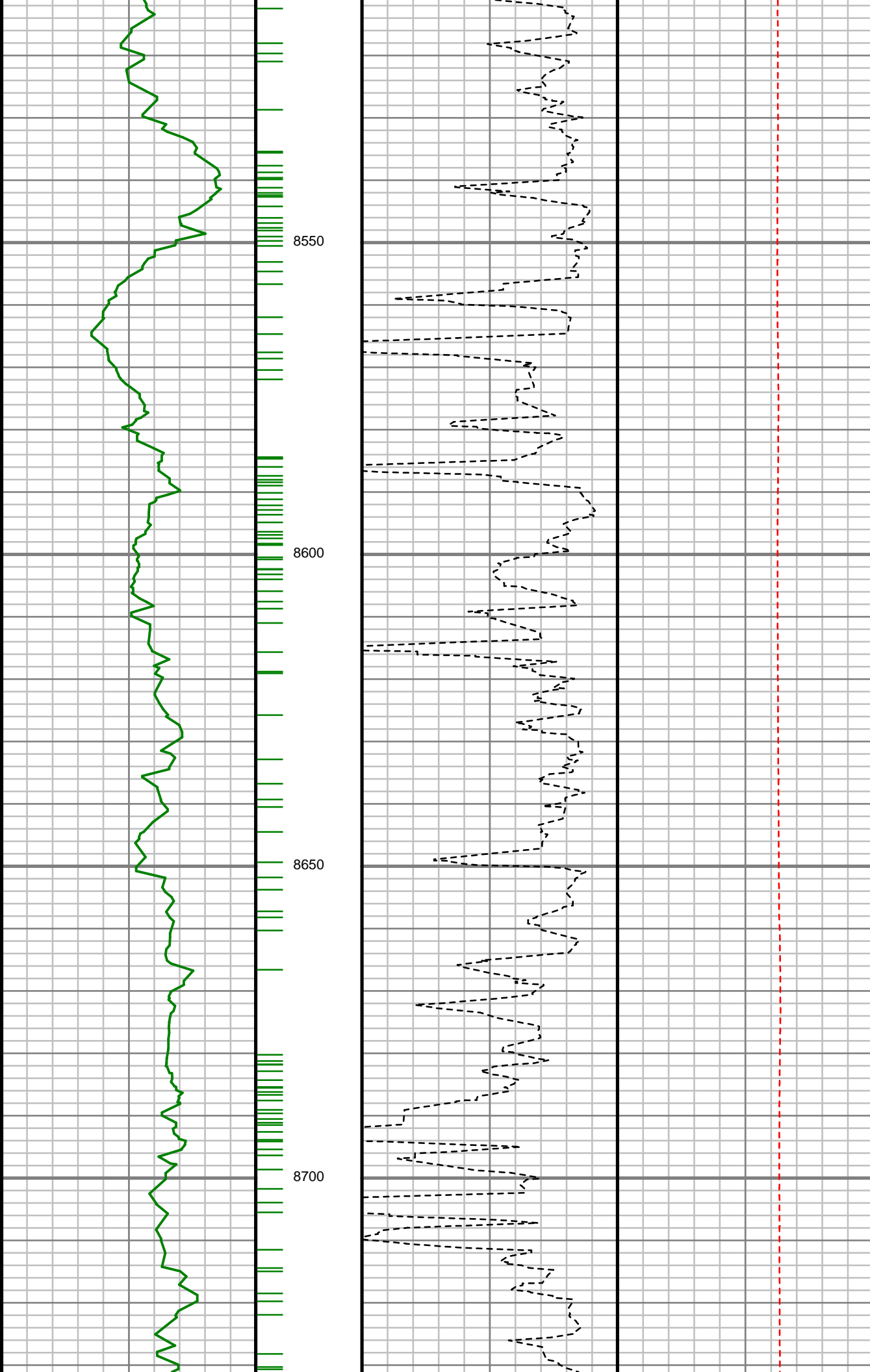
S: 89 MD: 8185.00 ft  
Inc: 91.48 deg Az:  
180.98 deg TVD:  
7293.60 ft

S: 90 MD: 8279.00 ft  
Inc: 92.22 deg Az:  
180.81 deg TVD:  
7290.57 ft



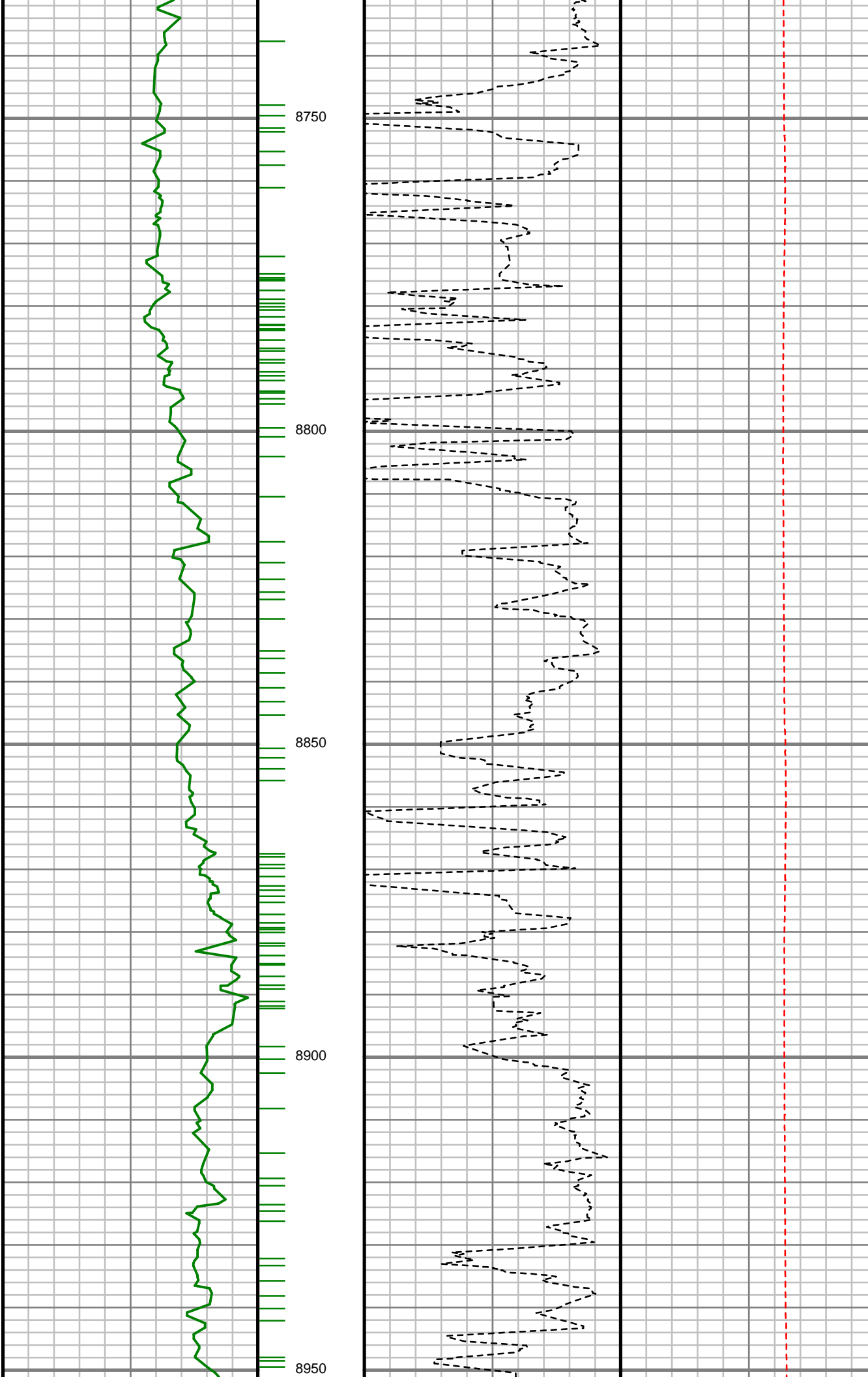
S: 91 MD: 8373.00 ft  
Inc: 91.92 deg Az:  
181.80 deg TVD:  
7287.18 ft

S: 92 MD: 8468.00 ft  
Inc: 91.75 deg Az:  
182.27 deg TVD:  
7284.15 ft



S: 93 MD: 8562.00 ft  
Inc: 91.68 deg Az:  
182.21 deg TVD:  
7281.34 ft

S: 94 MD: 8656.00 ft  
Inc: 89.56 deg Az:  
182.10 deg TVD:  
7280.32 ft



8750

8800

8850

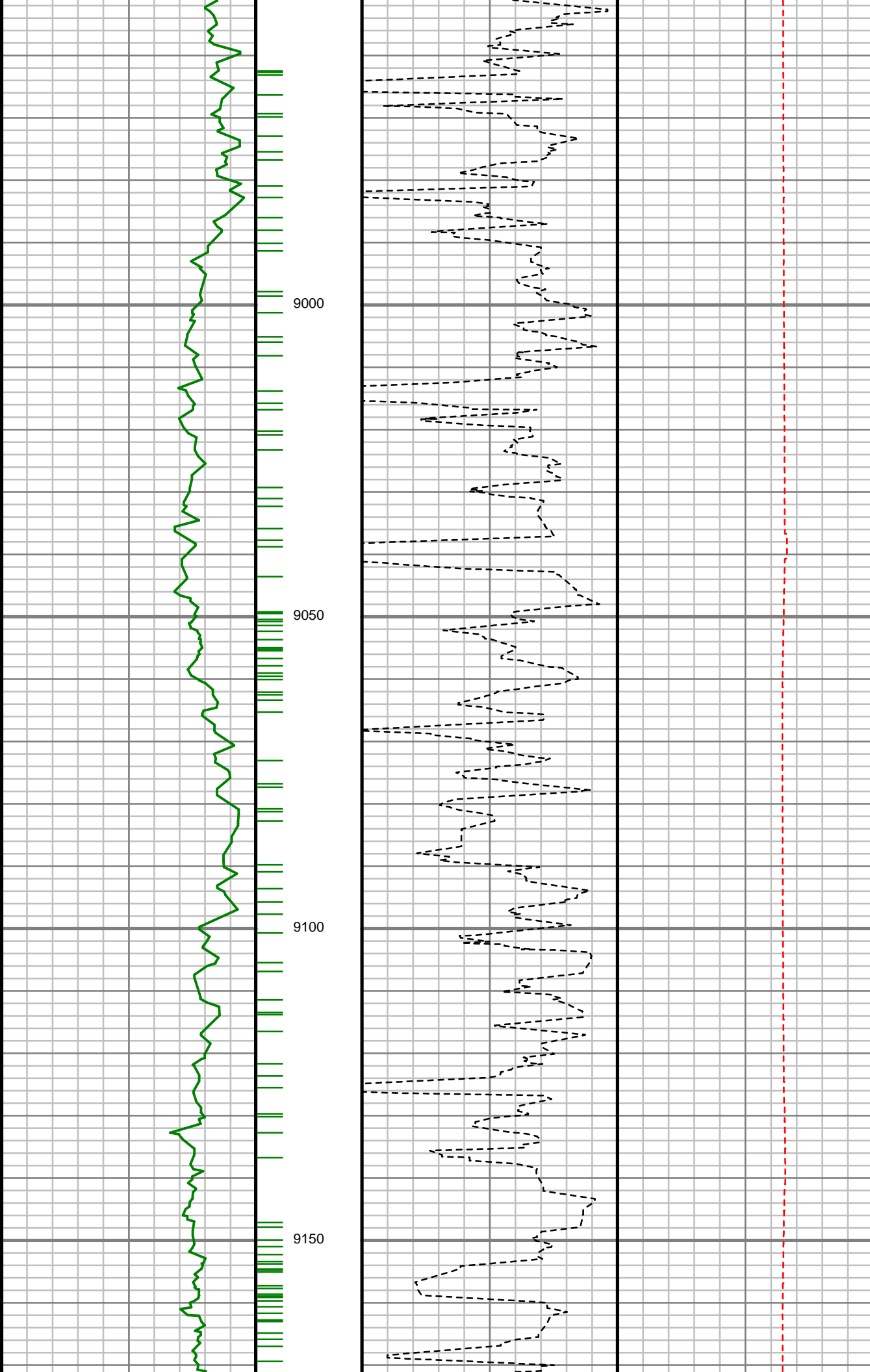
8900

8950

S: 95 MD: 8751.00 ft  
Inc: 89.60 deg Az:  
181.94 deg TVD:  
7281.01 ft

S: 96 MD: 8845.00 ft  
Inc: 89.60 deg Az:  
182.44 deg TVD:  
7281.68 ft

S: 97 MD: 8939.00 ft  
Inc: 88.08 deg Az:  
182.15 deg TVD:  
7283.58 ft



9000

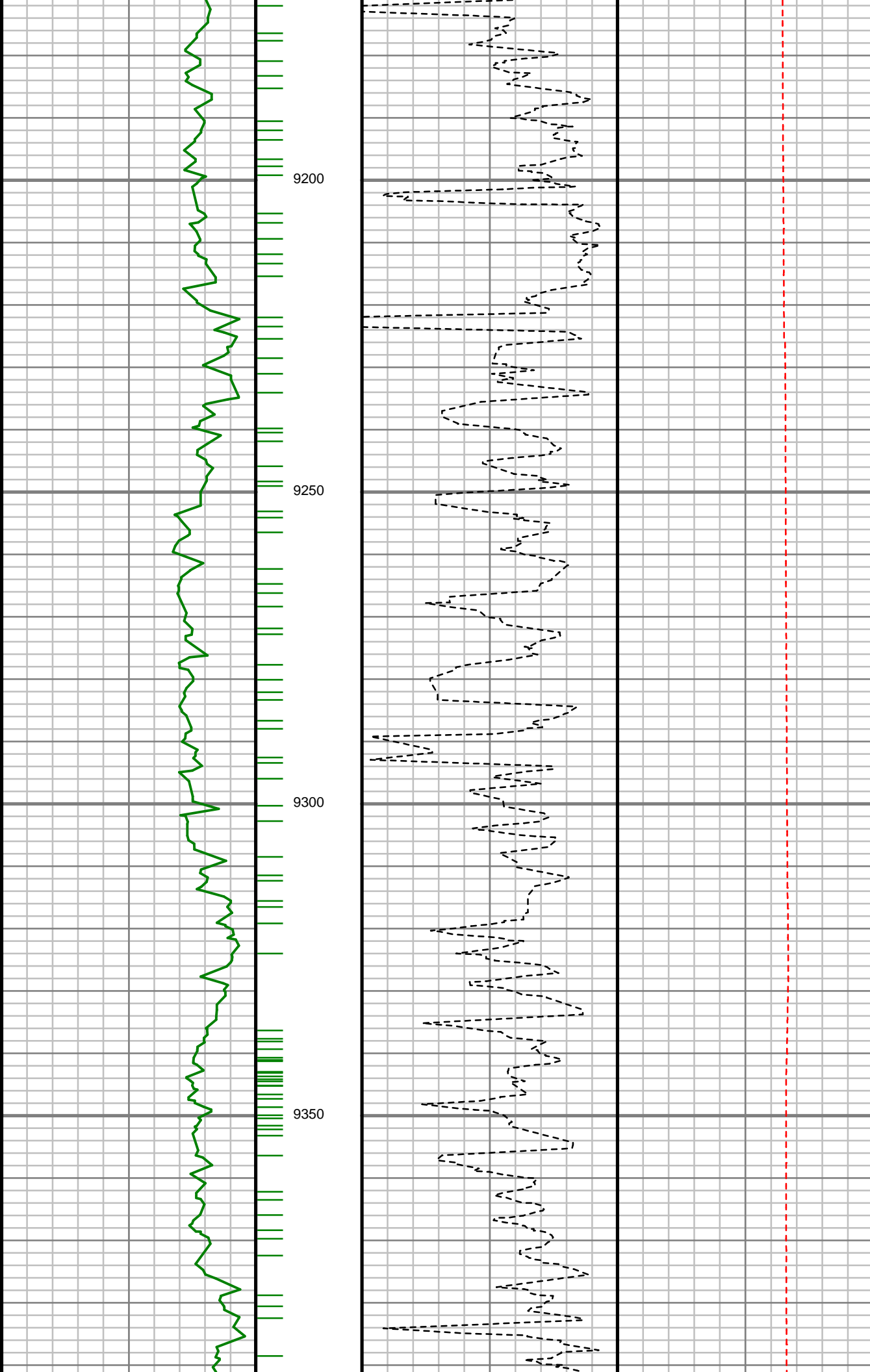
9050

9100

9150

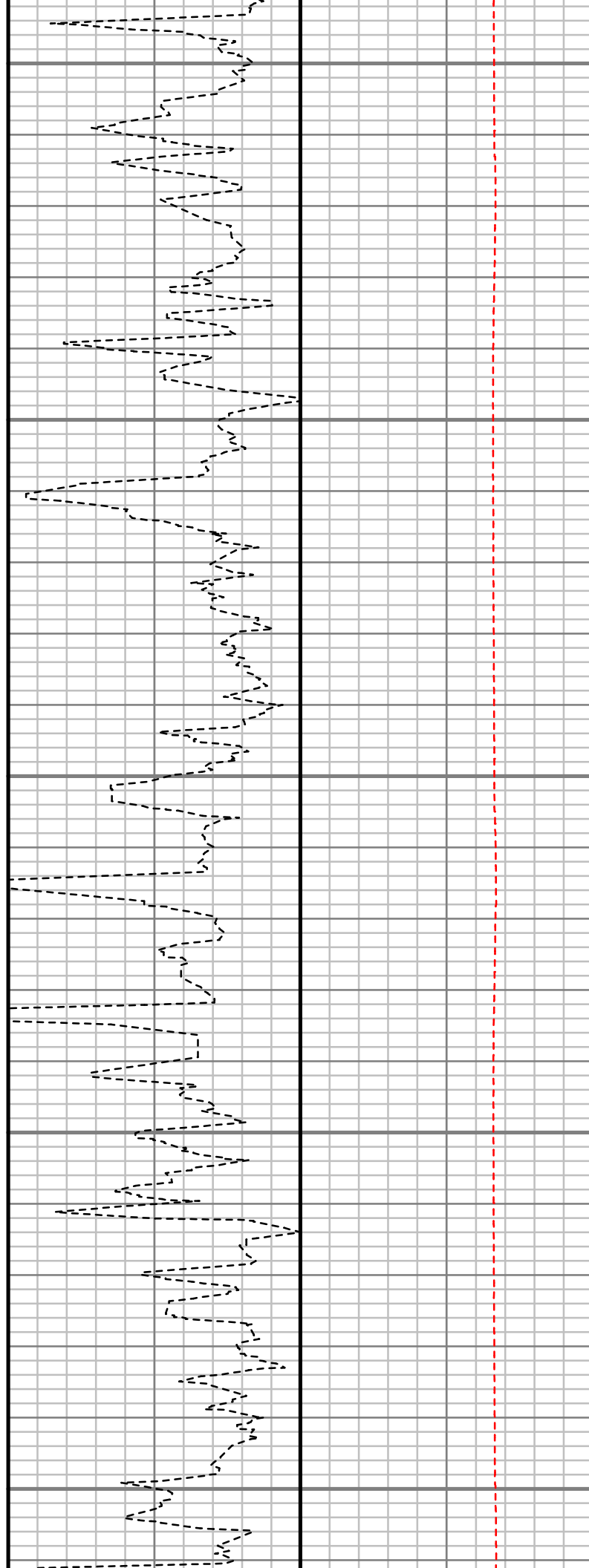
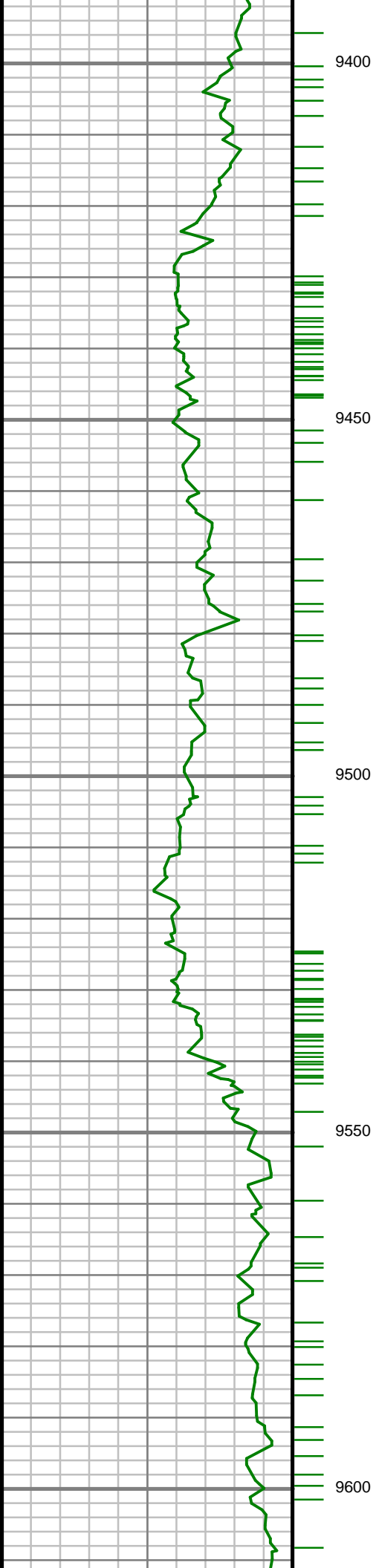
S: 98 MD: 9033.00 ft  
Inc: 89.36 deg Az:  
182.24 deg TVD:  
7285.67 ft

S: 99 MD: 9128.00 ft  
Inc: 89.23 deg Az:  
182.24 deg TVD:  
7286.84 ft



S: 100 MD: 9222.00 ft  
Inc: 88.05 deg Az:  
181.06 deg TVD:  
7289.08 ft

S: 101 MD: 9317.00 ft  
Inc: 90.20 deg Az:  
180.61 deg TVD:  
7290.52 ft

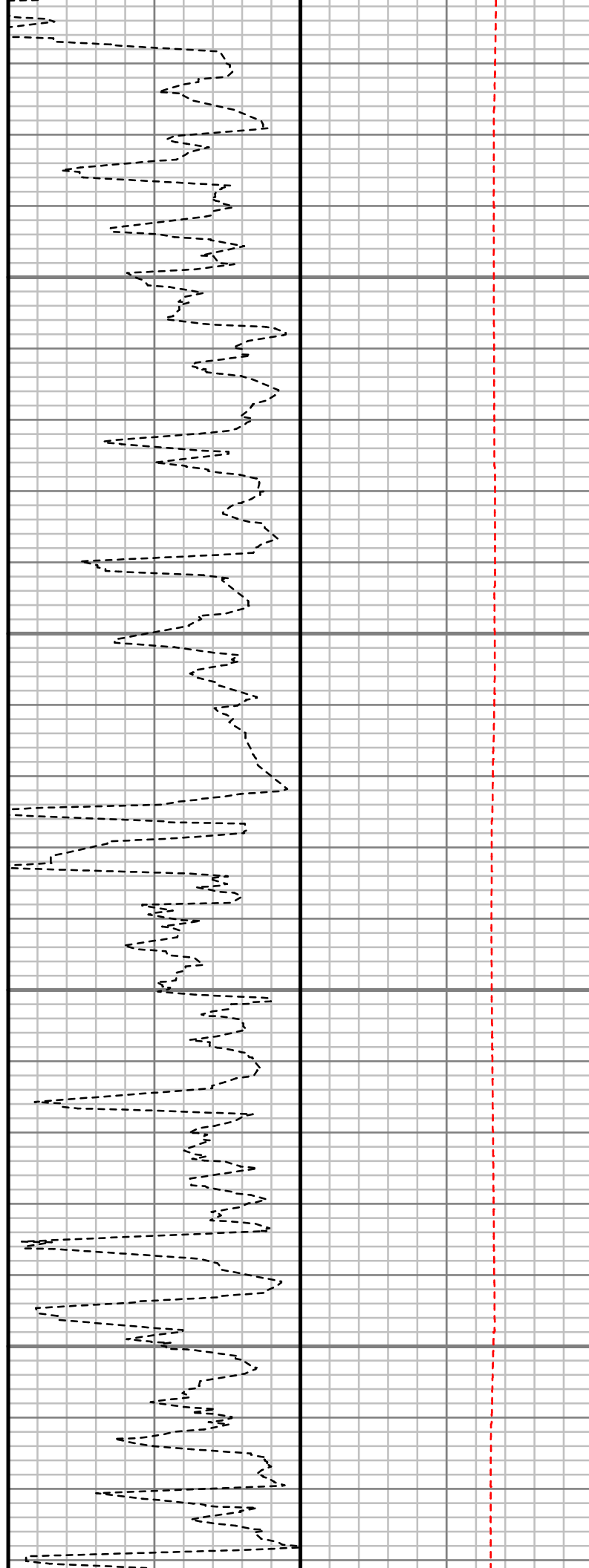
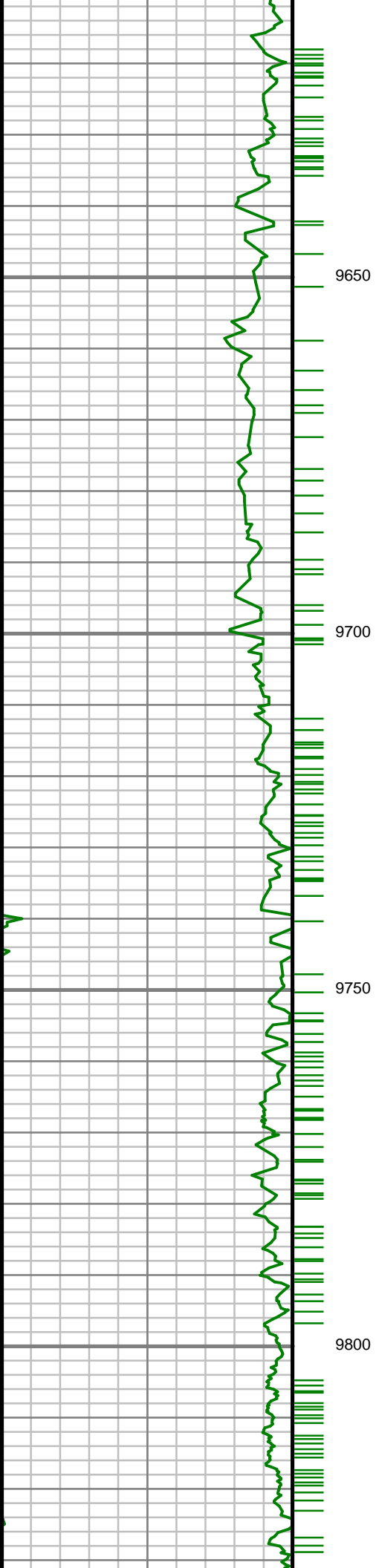


S: 102 MD: 9411.00 ft  
Inc: 90.10 deg Az:  
180.84 deg TVD:  
7290.28 ft

S: 103 MD: 9504.00 ft  
Inc: 90.20 deg Az:  
179.75 deg TVD:  
7290.03 ft

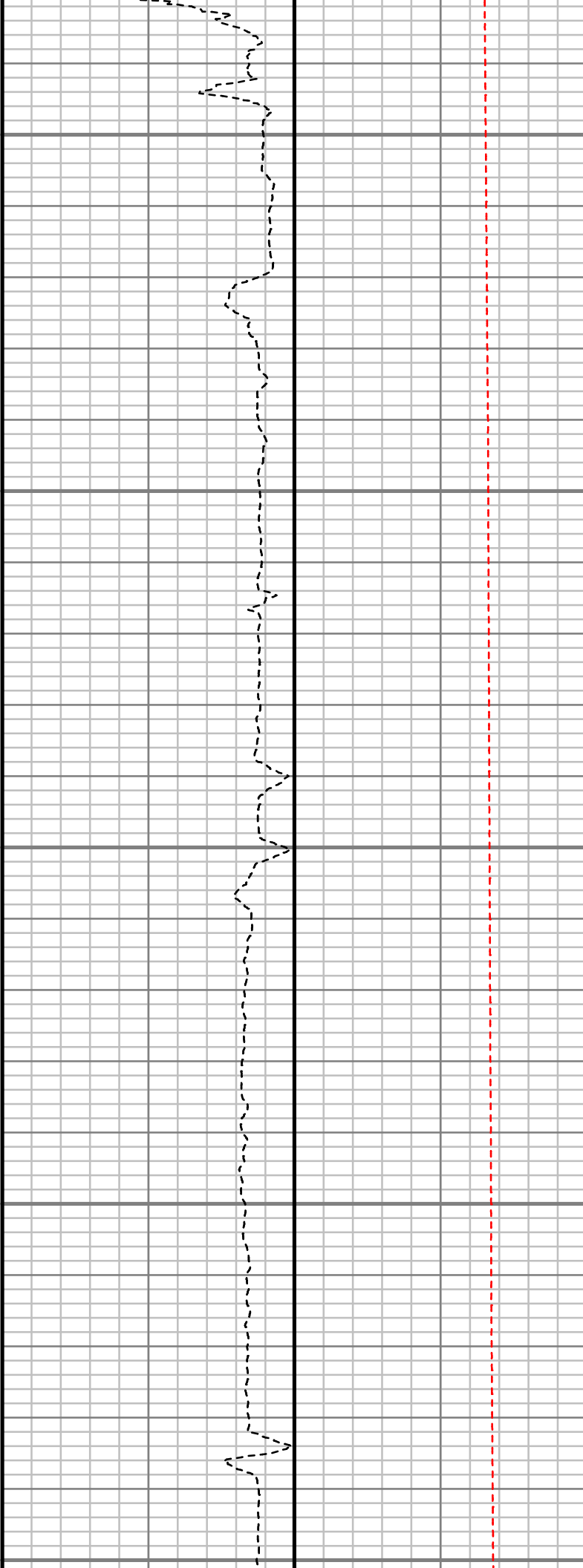
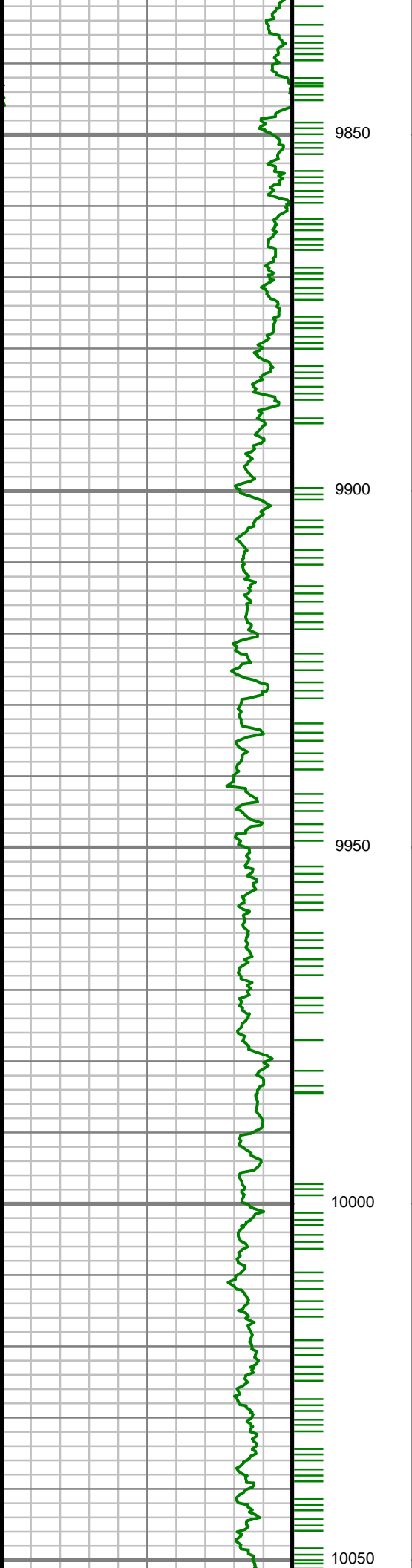
S: 104 MD: 9599.00 ft  
Inc: 90.17 deg Az:  
179.05 deg TVD:  
7289.72 ft





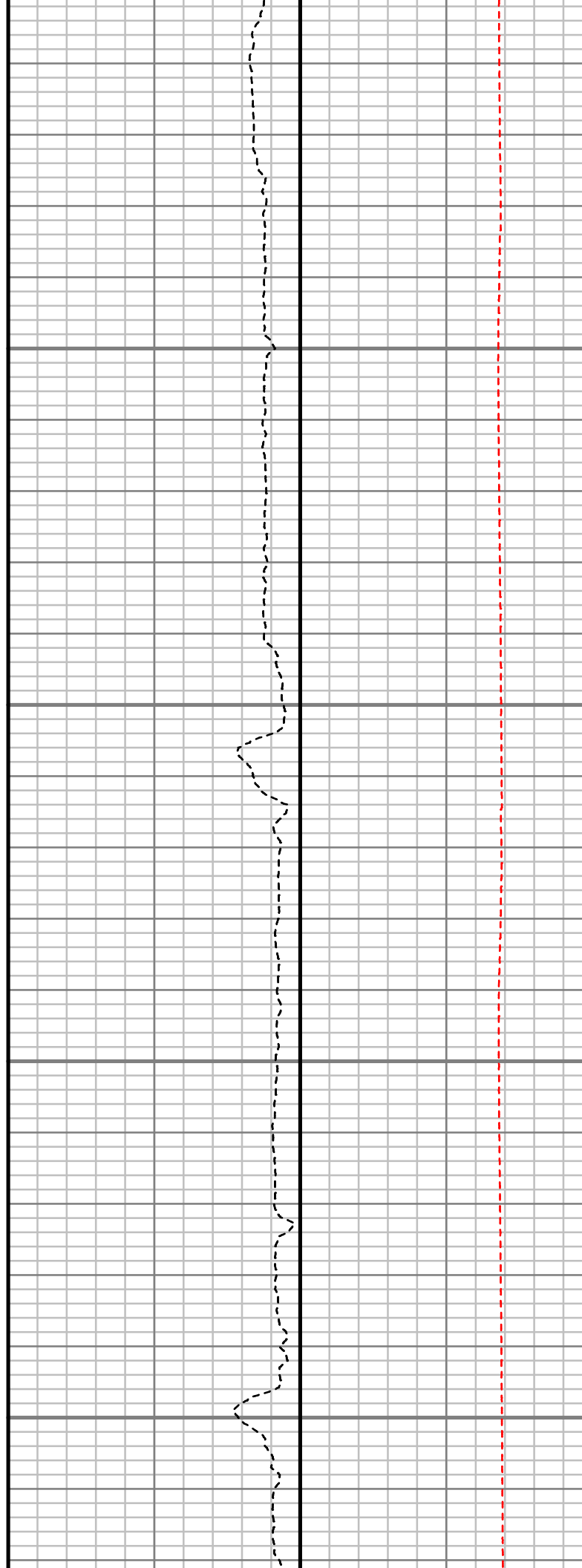
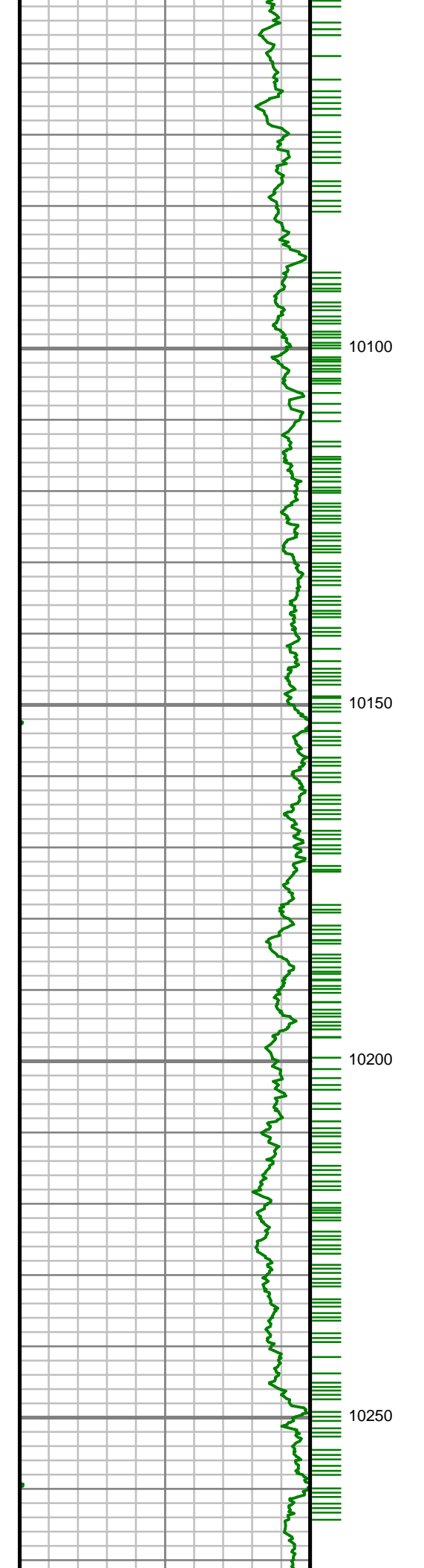
S: 105 MD: 9693.00 ft  
Inc: 89.60 deg Az:  
179.39 deg TVD:  
7289.92 ft

S: 106 MD: 9787.00 ft  
Inc: 89.36 deg Az:  
179.09 deg TVD:  
7290.77 ft



S: 107 MD: 9881.00 ft  
Inc: 88.89 deg Az:  
179.19 deg TVD:  
7292.21 ft

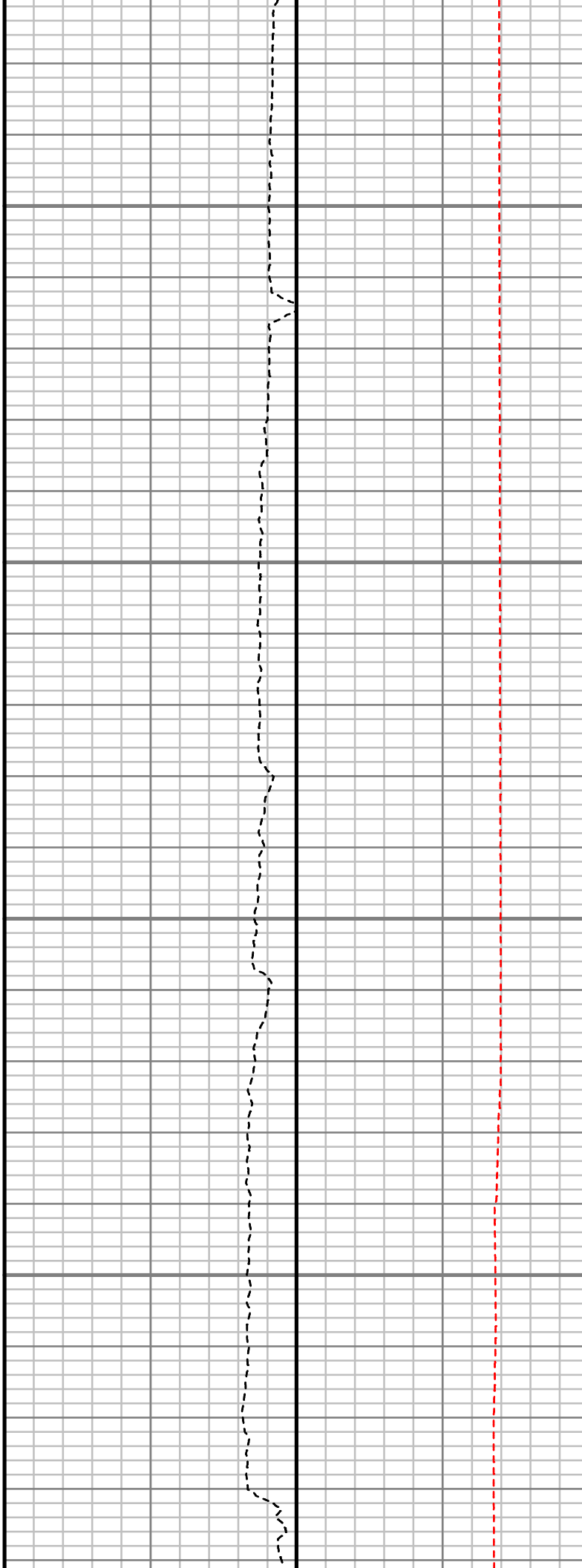
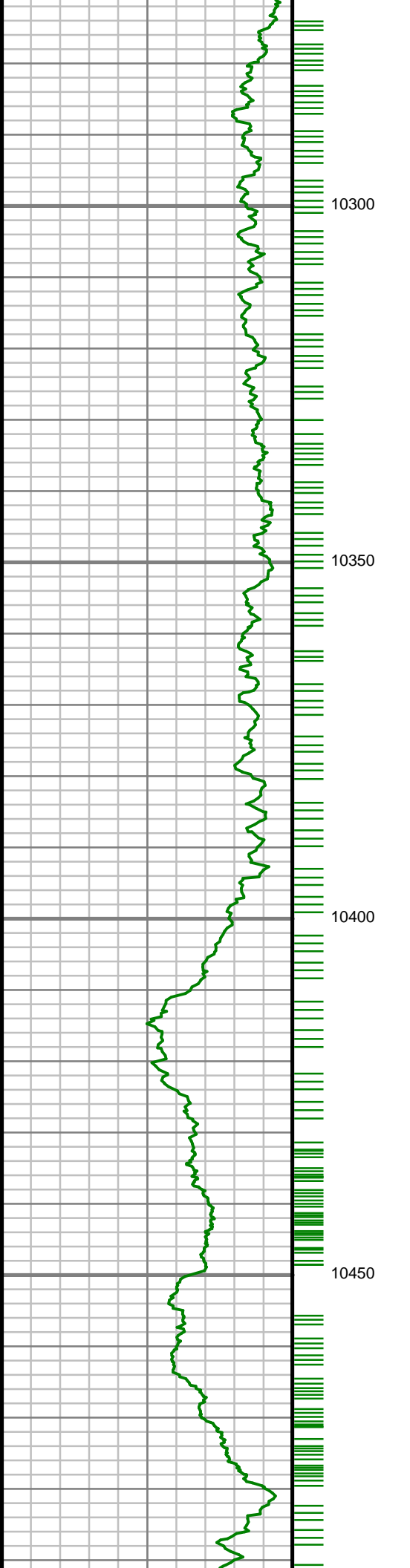
S: 108 MD: 9975.00 ft  
Inc: 89.36 deg Az:  
178.87 deg TVD:  
7293.64 ft



S: 109 MD: 10070.00 ft  
Inc: 89.66 deg Az:  
178.12 deg TVD:  
7294.45 ft

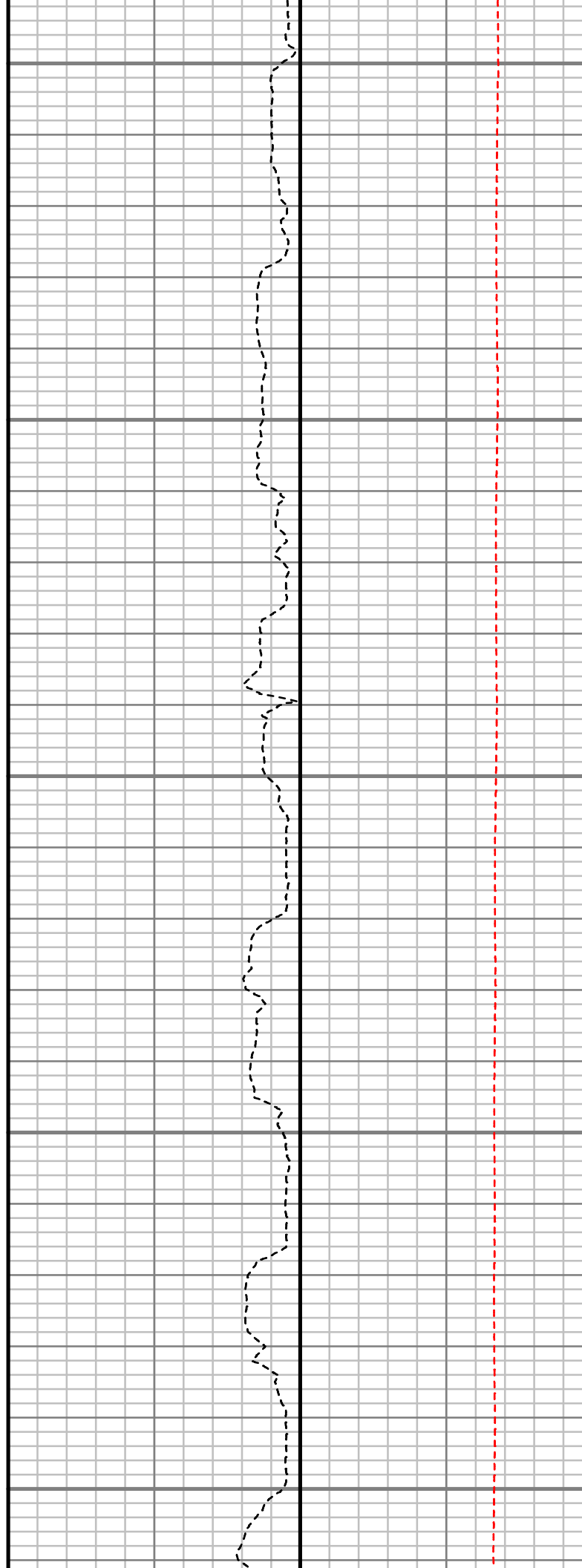
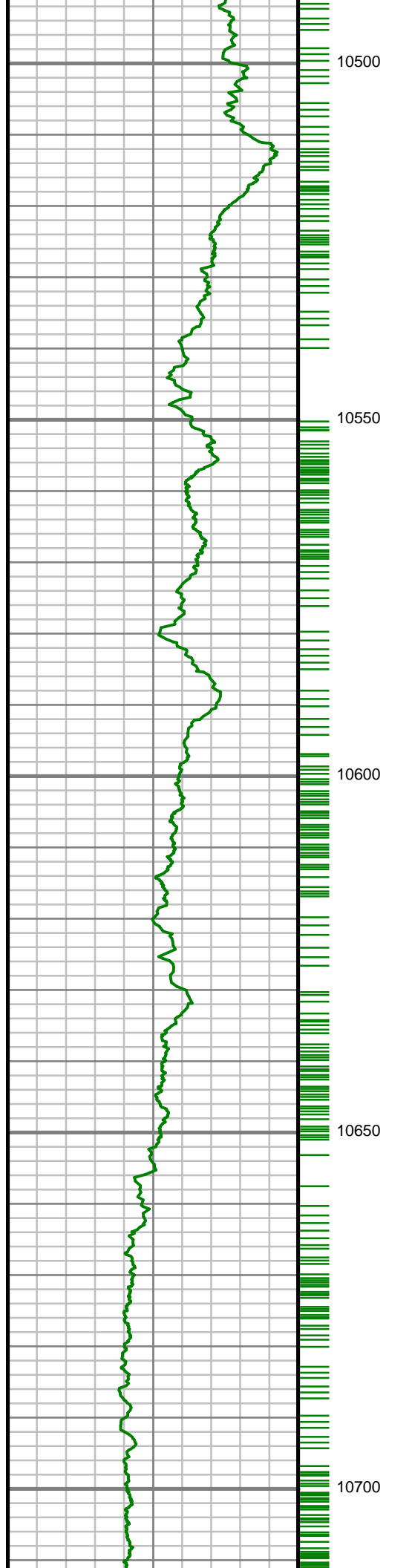
S: 110 MD: 10164.00 ft  
Inc: 89.87 deg Az:  
179.44 deg TVD:  
7294.83 ft

S: 111 MD: 10256.00 ft  
Inc: 87.98 deg Az:  
179.08 deg TVD:  
7296.56 ft



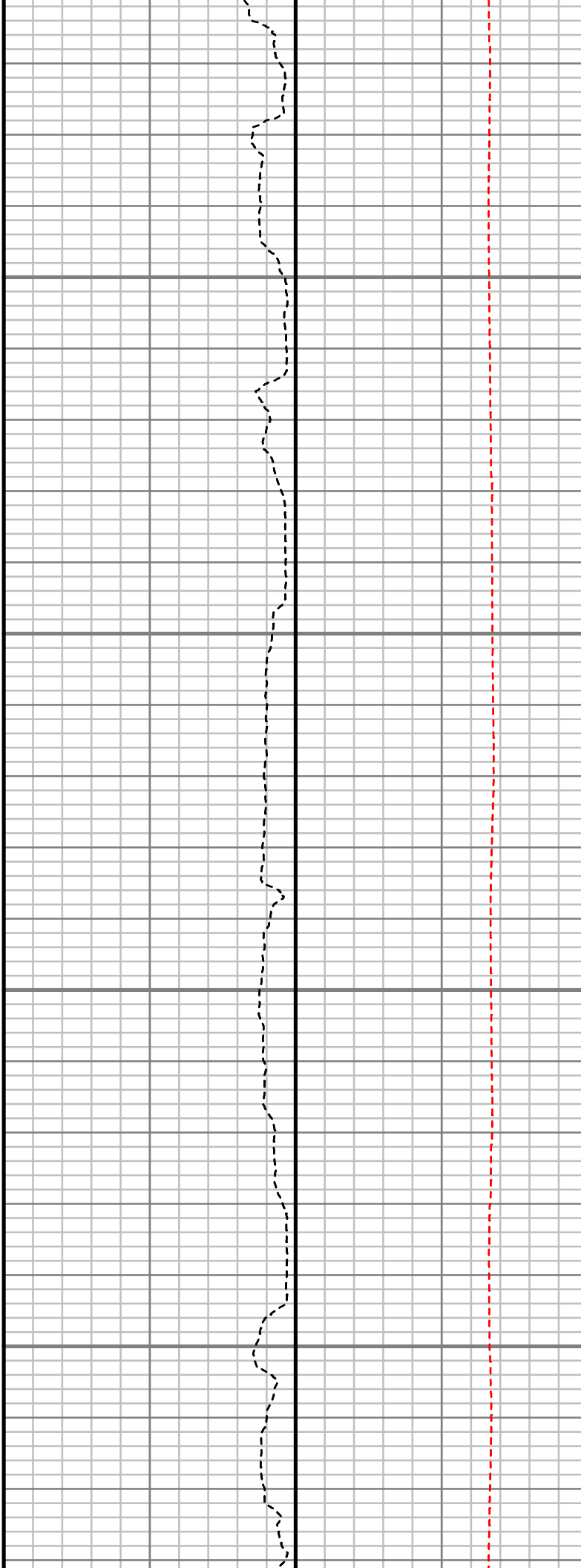
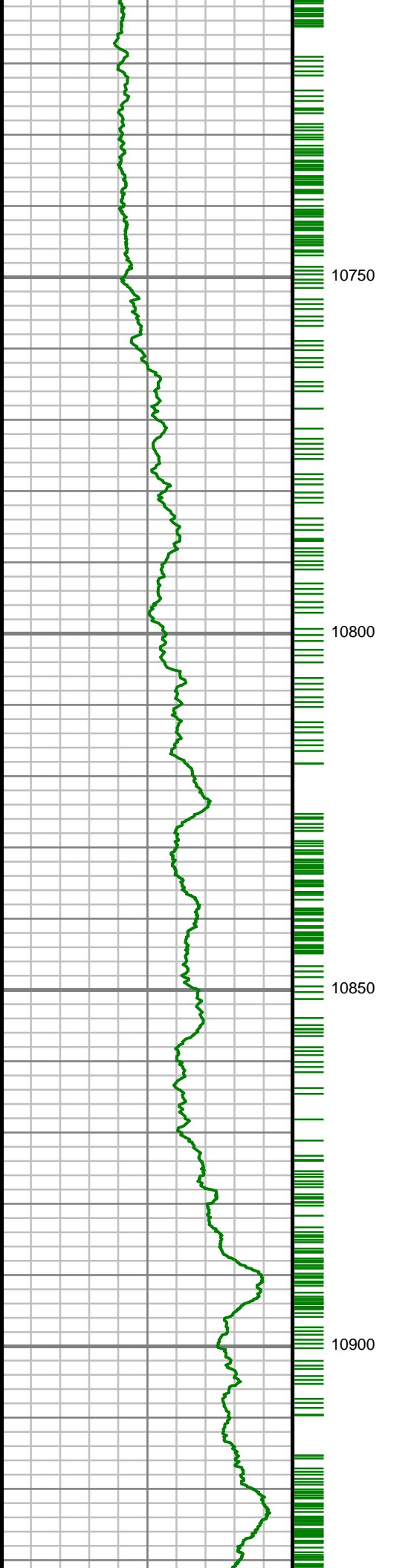
S: 112 MD: 10348.00 ft  
Inc: 87.95 deg Az:  
178.79 deg TVD:  
7299.83 ft

S: 113 MD: 10439.00 ft  
Inc: 86.77 deg Az:  
177.96 deg TVD:  
7304.02 ft



S: 114 MD: 10531.00 ft  
Inc: 86.64 deg Az:  
176.85 deg TVD:  
7309.31 ft

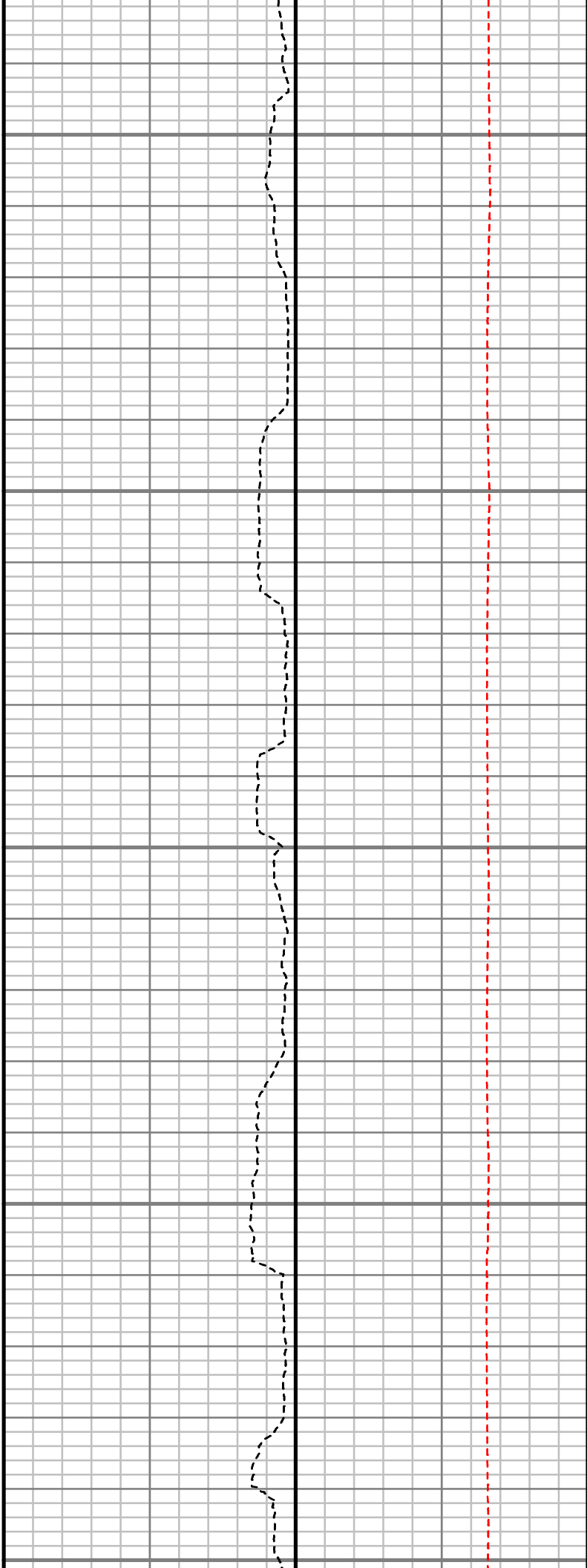
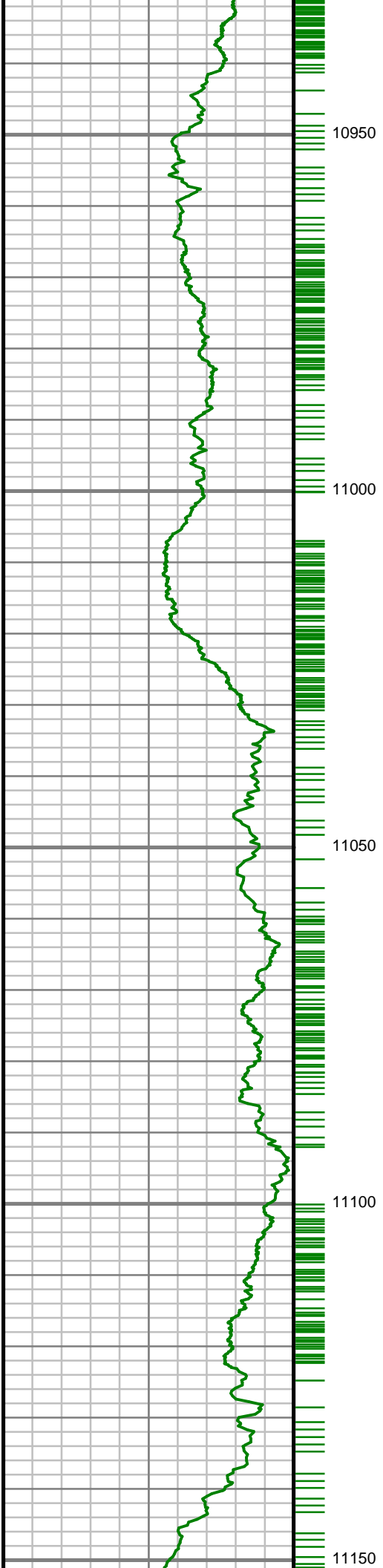
S: 115 MD: 10623.00 ft  
Inc: 87.61 deg Az:  
175.82 deg TVD:  
7313.93 ft



S: 116 MD: 10715.00 ft  
Inc: 89.50 deg Az:  
175.38 deg TVD:  
7316.25 ft

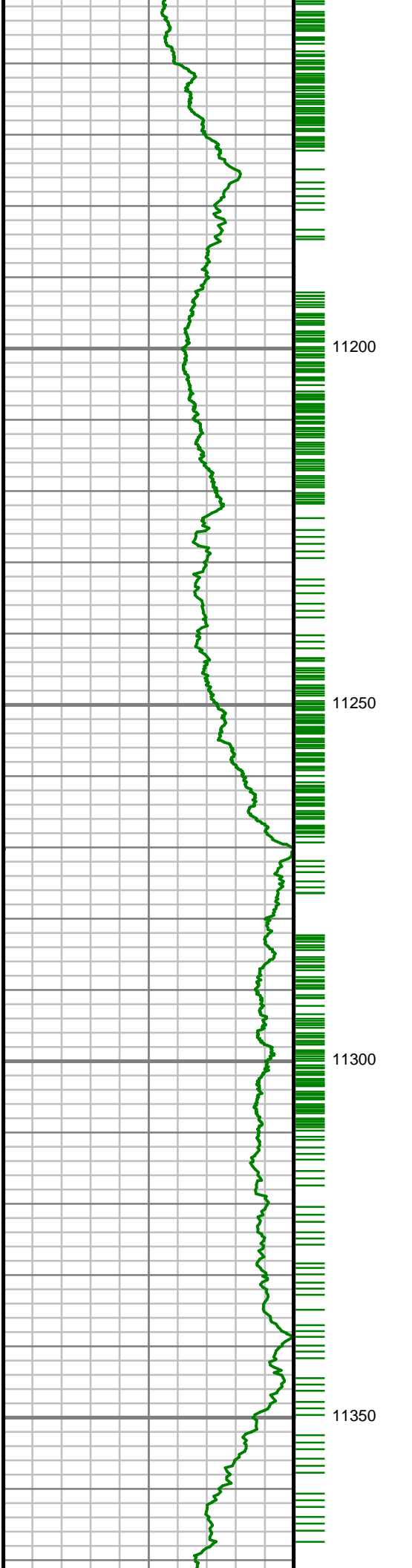
S: 117 MD: 10807.00 ft  
Inc: 91.98 deg Az:  
177.72 deg TVD:  
7315.06 ft

S: 118 MD: 10898.00 ft  
Inc: 91.65 deg Az:  
177.67 deg TVD:  
7312.18 ft

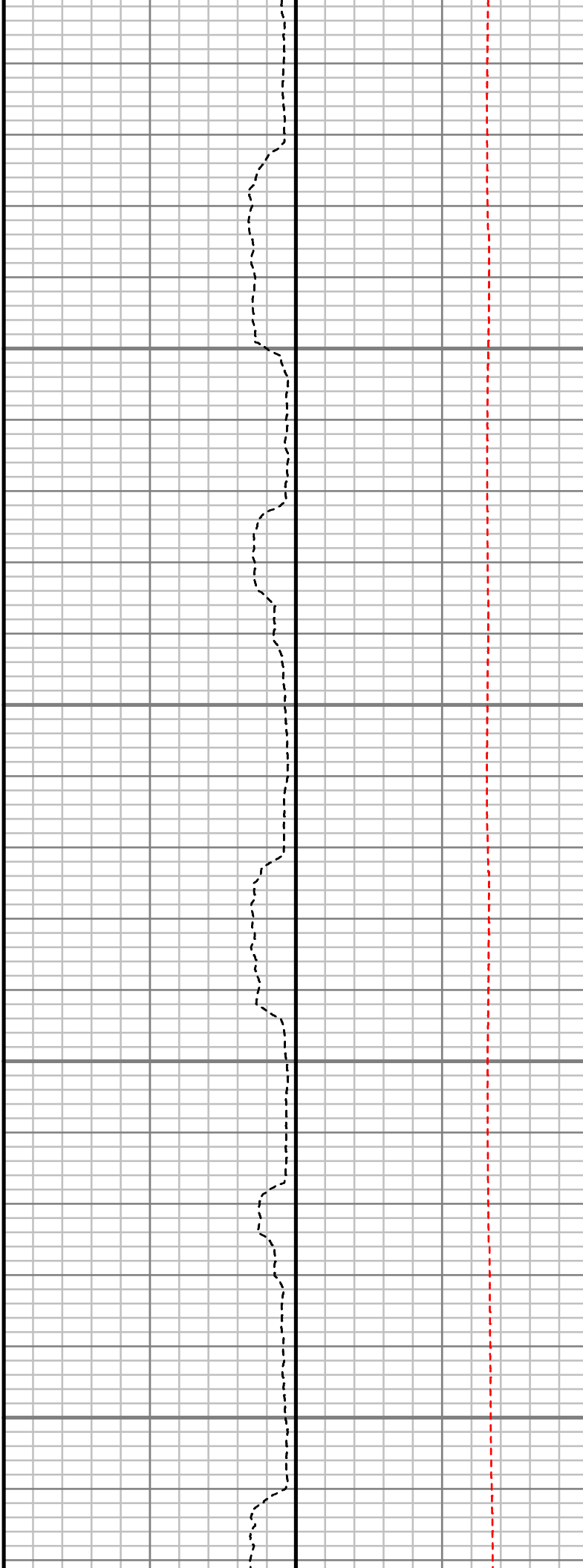


S: 119 MD: 10990.00 ft  
Inc: 91.24 deg Az:  
178.85 deg TVD:  
7309.86 ft

S: 120 MD: 11082.00 ft  
Inc: 91.95 deg Az:  
181.13 deg TVD:  
7307.30 ft



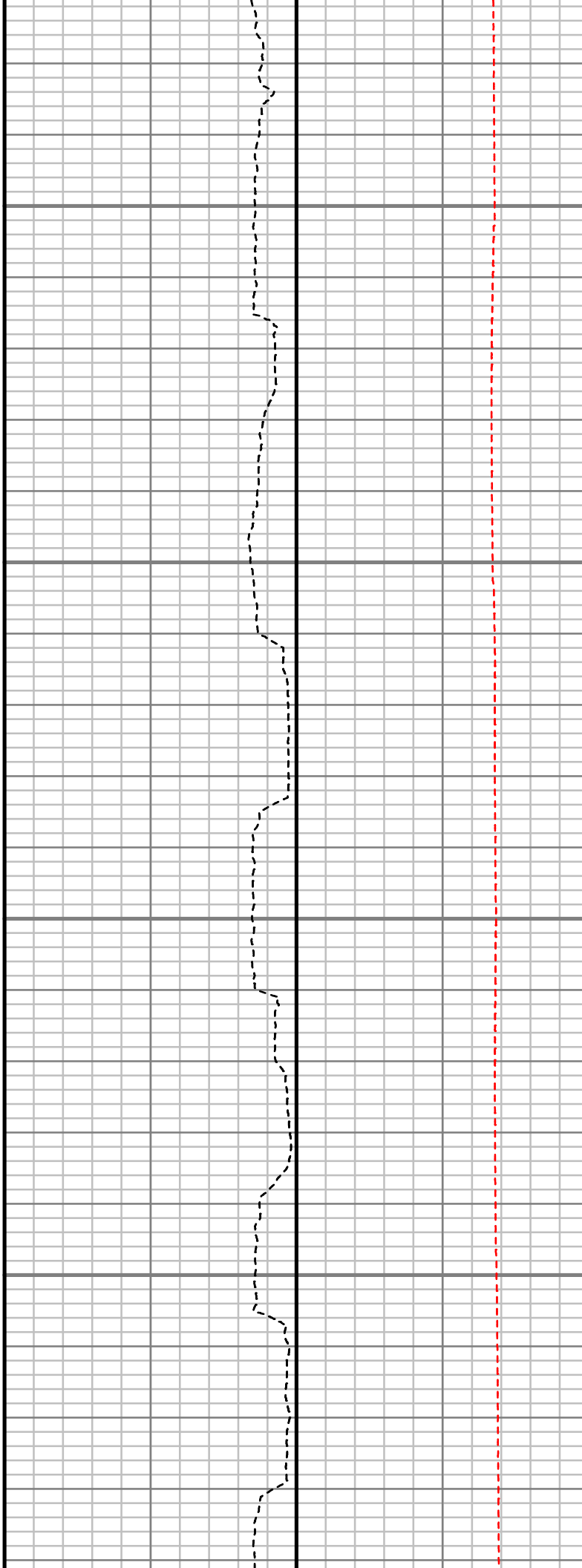
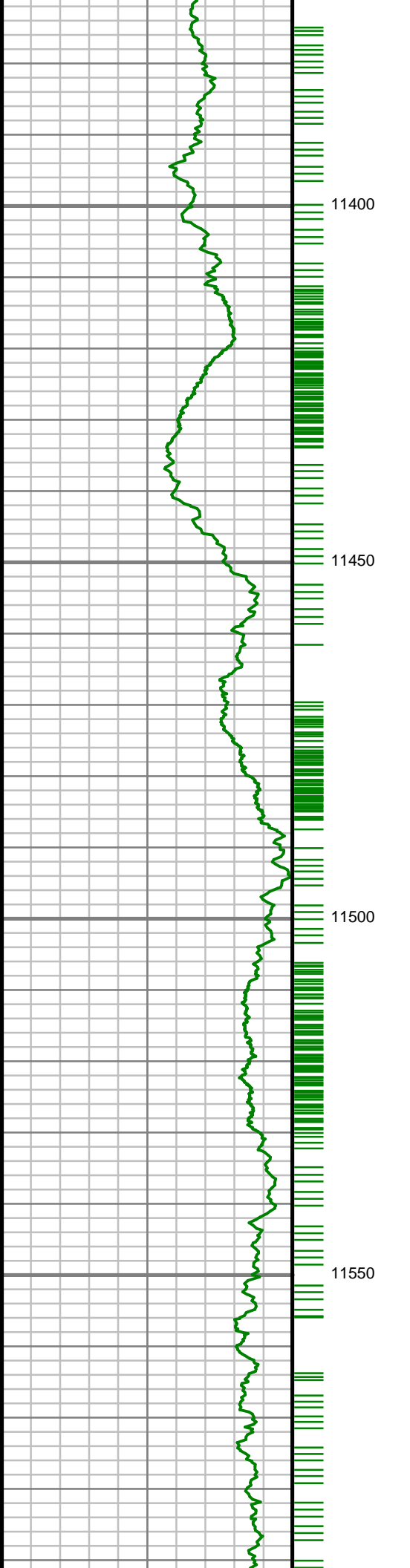
S: 121 MD: 11173.00 ft  
Inc: 91.58 deg Az:  
182.43 deg TVD:  
7304.49 ft



S: 122 MD: 11265.00 ft  
Inc: 90.67 deg Az:  
184.52 deg TVD:  
7302.68 ft

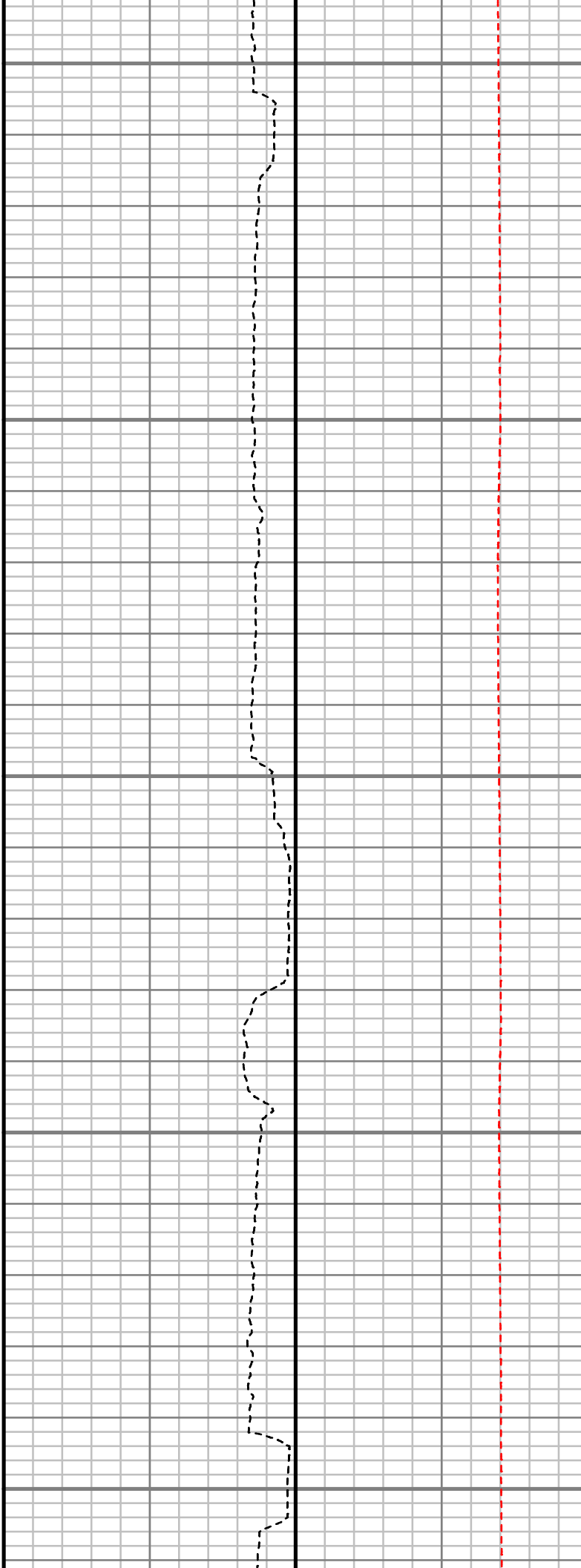
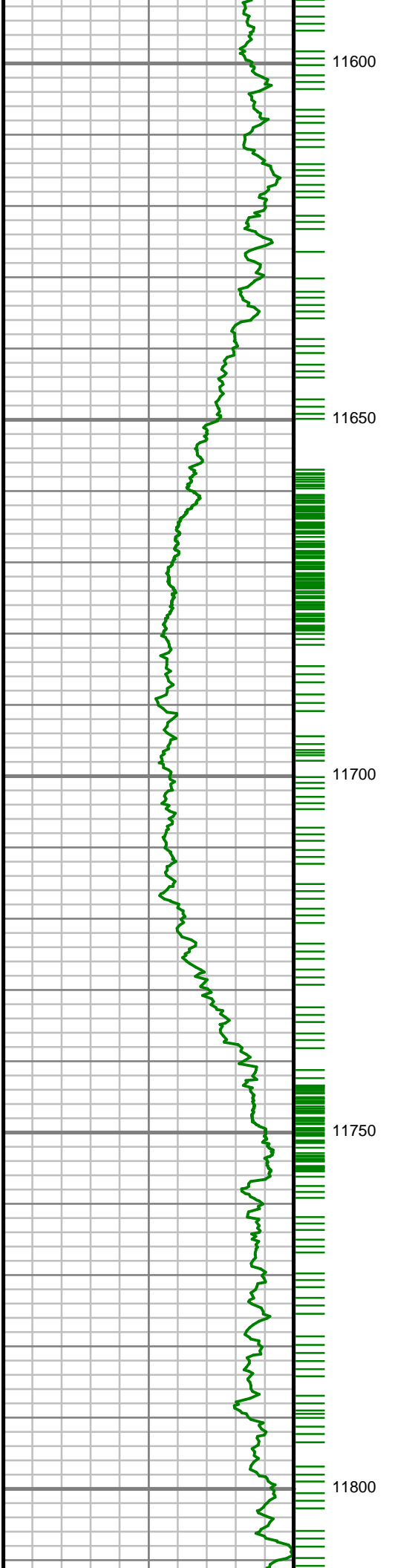
S: 123 MD: 11356.00 ft  
Inc: 86.84 deg Az:  
184.44 deg TVD:  
7304.66 ft





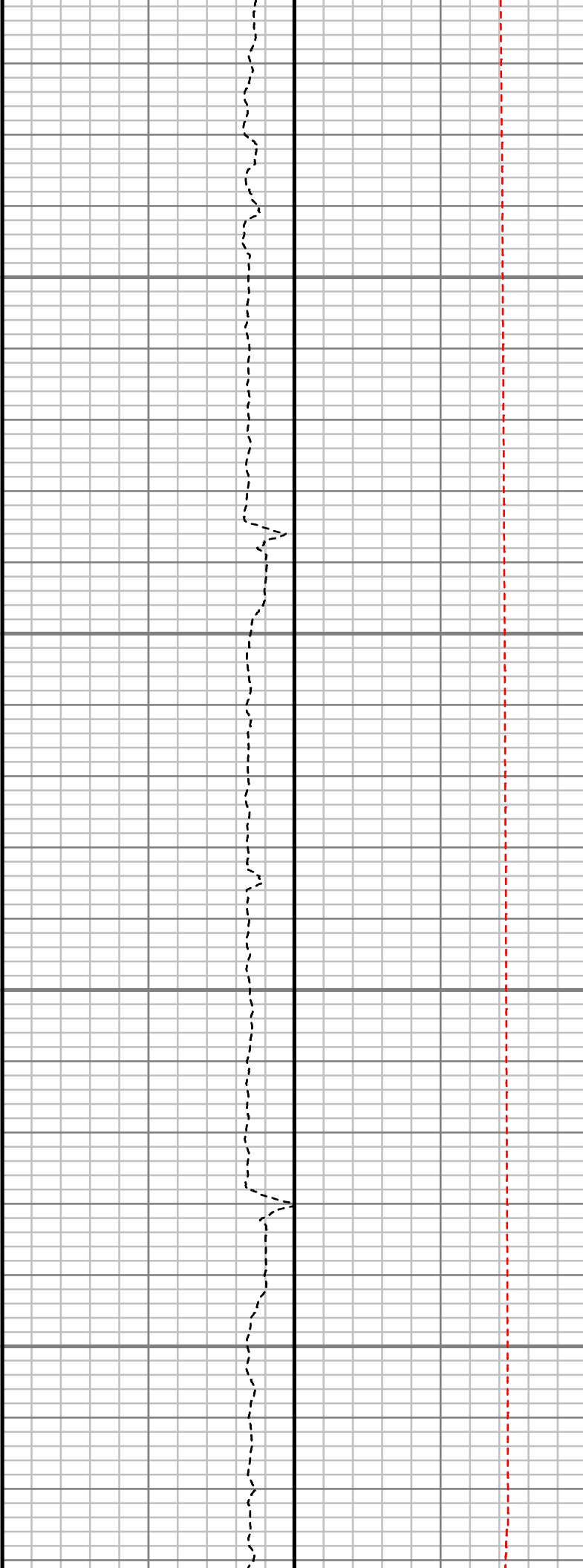
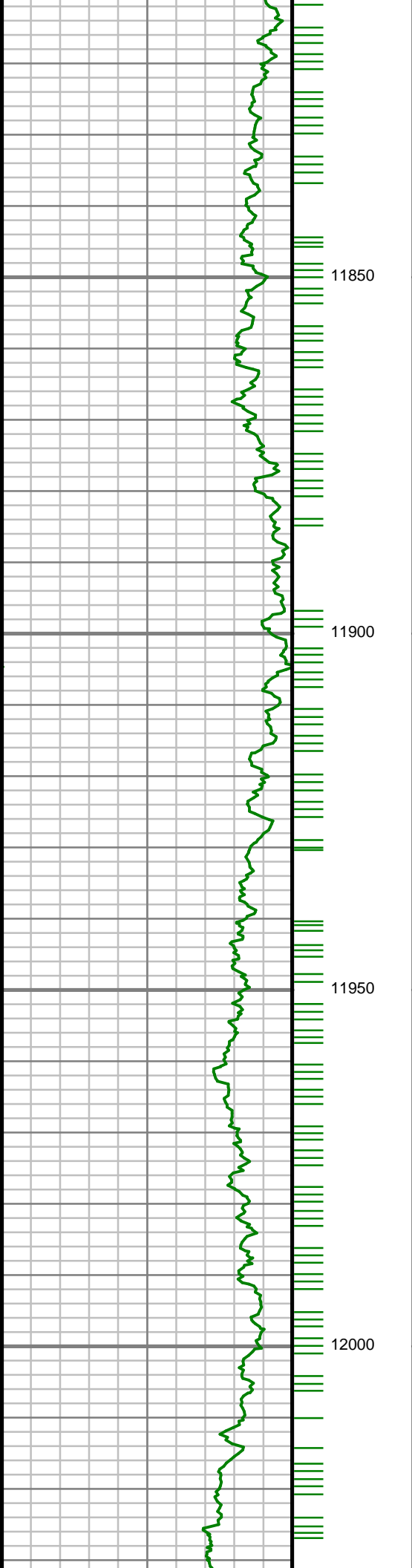
S: 124 MD: 11451.00 ft  
Inc: 86.37 deg Az:  
183.98 deg TVD:  
7310.29 ft

S: 125 MD: 11545.00 ft  
Inc: 88.02 deg Az:  
181.86 deg TVD:  
7314.89 ft



S: 126 MD: 11639.00 ft  
Inc: 88.59 deg Az:  
180.73 deg TVD:  
7317.67 ft

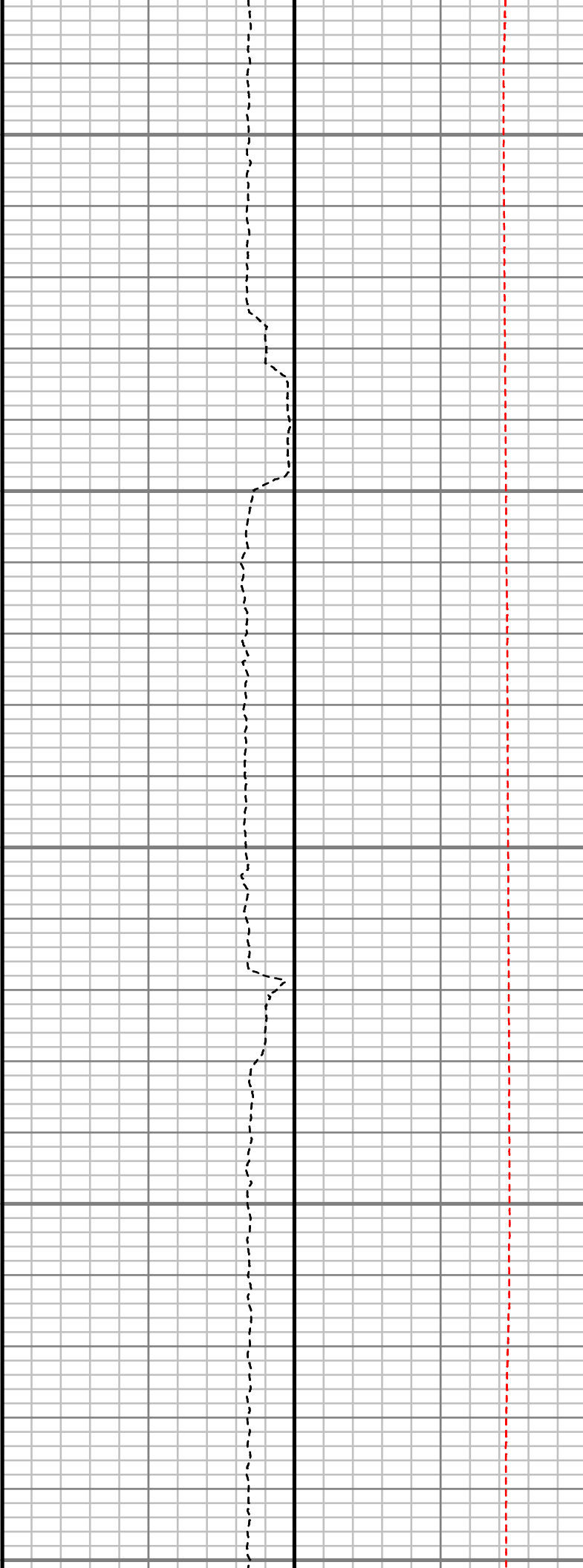
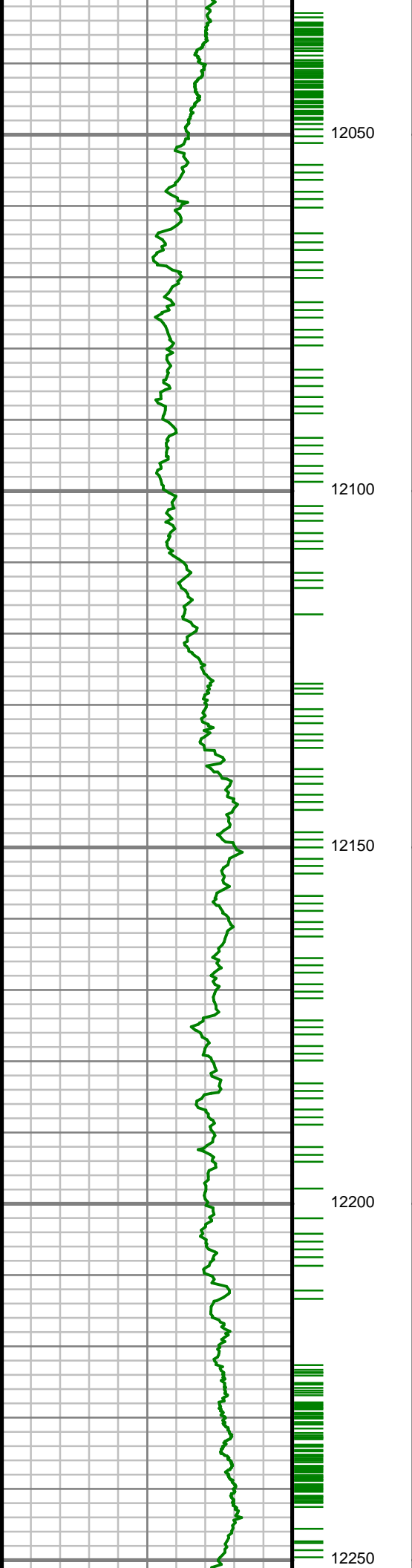
S: 127 MD: 11733.00 ft  
Inc: 91.34 deg Az:  
180.13 deg TVD:  
7317.73 ft



S: 128 MD: 11827.00 ft  
Inc: 90.54 deg Az:  
180.38 deg TVD:  
7316.18 ft

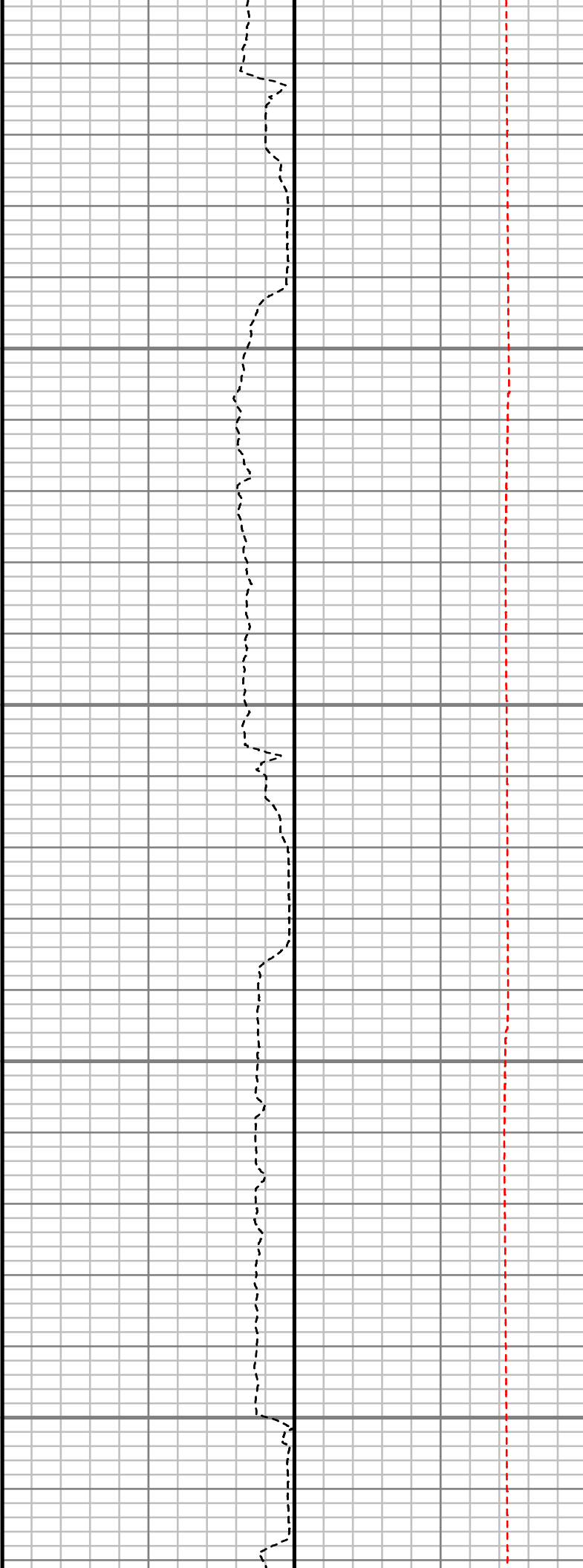
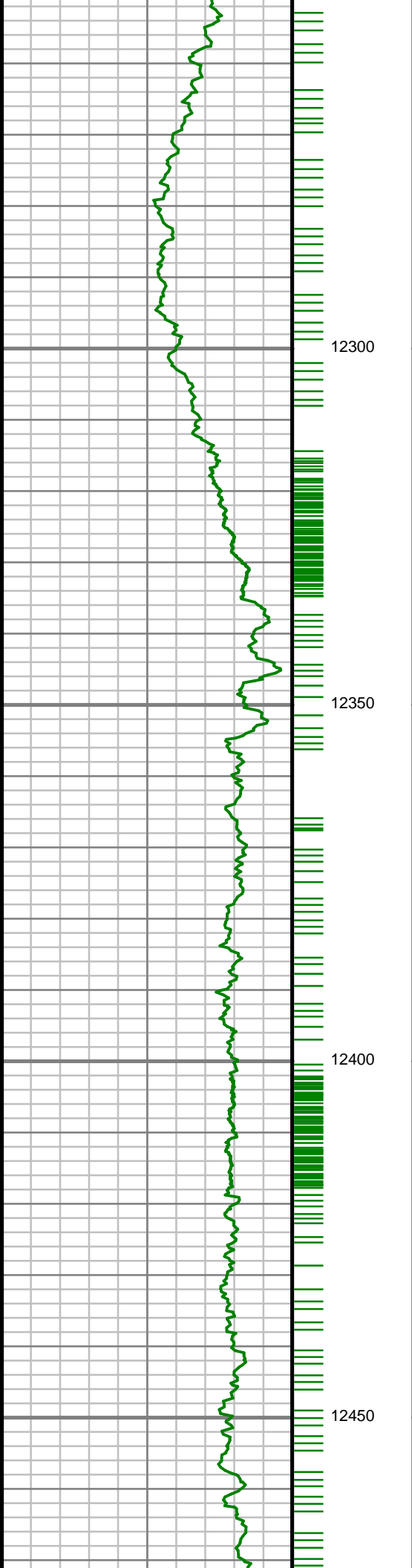
S: 129 MD: 11922.00 ft  
Inc: 90.10 deg Az:  
180.18 deg TVD:  
7315.65 ft

S: 130 MD: 12016.00 ft  
Inc: 89.70 deg Az:  
180.07 deg TVD:  
7315.82 ft



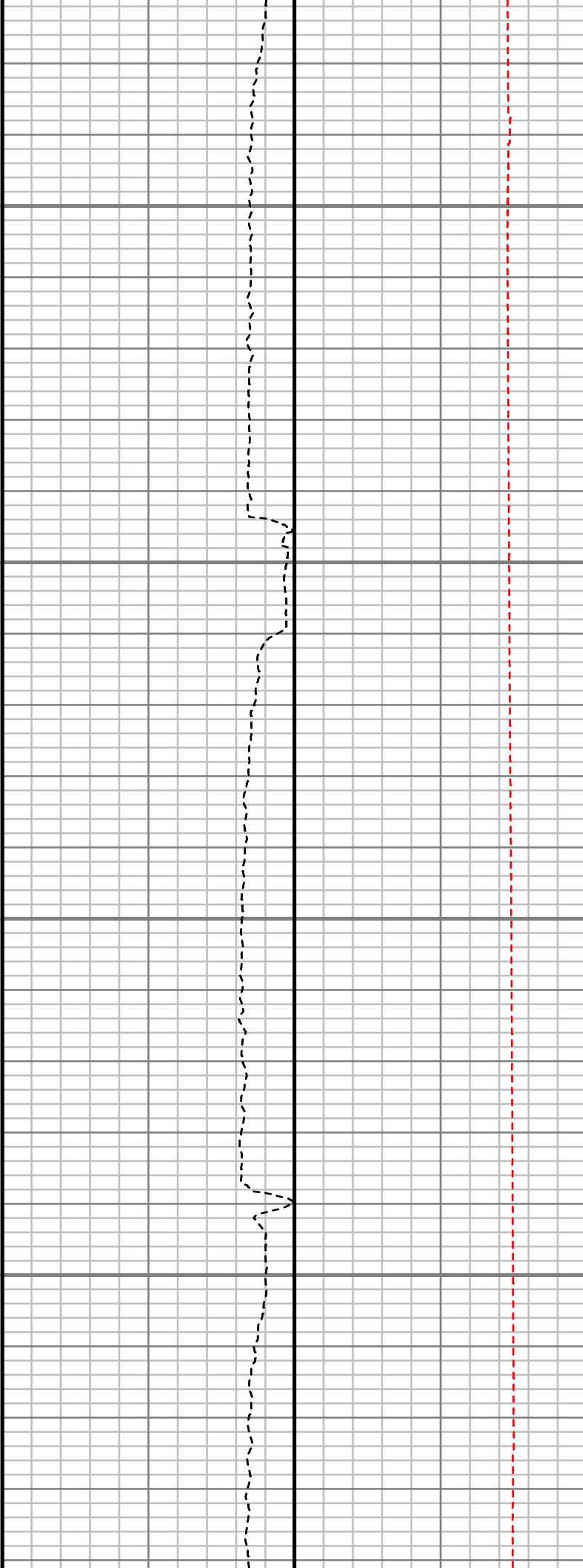
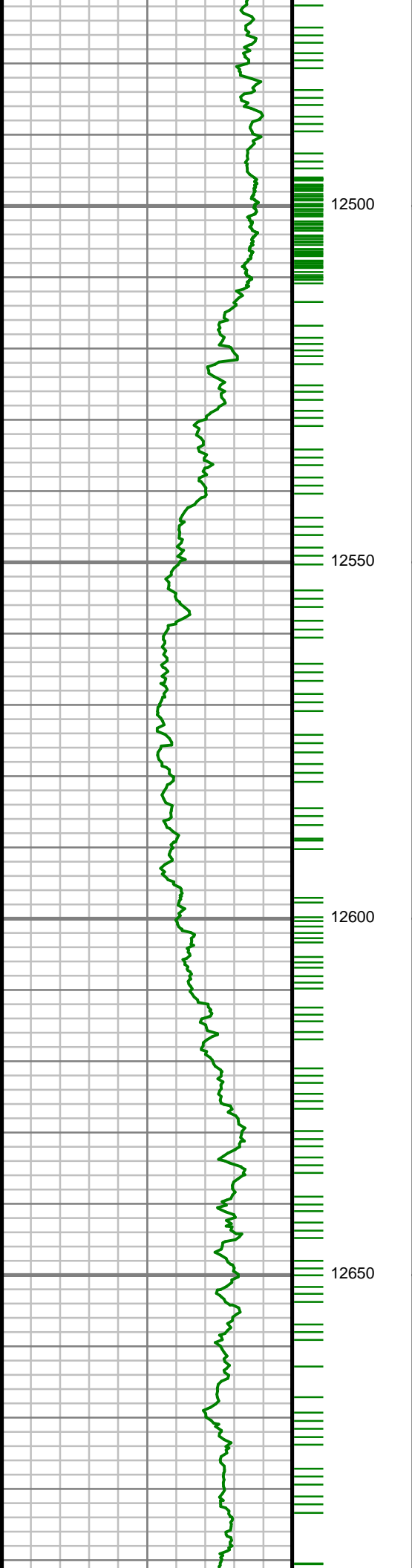
S: 131 MD: 12110.00 ft  
Inc: 90.54 deg Az:  
179.25 deg TVD:  
7315.63 ft

S: 132 MD: 12204.00 ft  
Inc: 89.26 deg Az:  
177.86 deg TVD:  
7315.79 ft



S: 133 MD: 12299.00 ft  
Inc: 89.66 deg Az:  
177.72 deg TVD:  
7316.68 ft

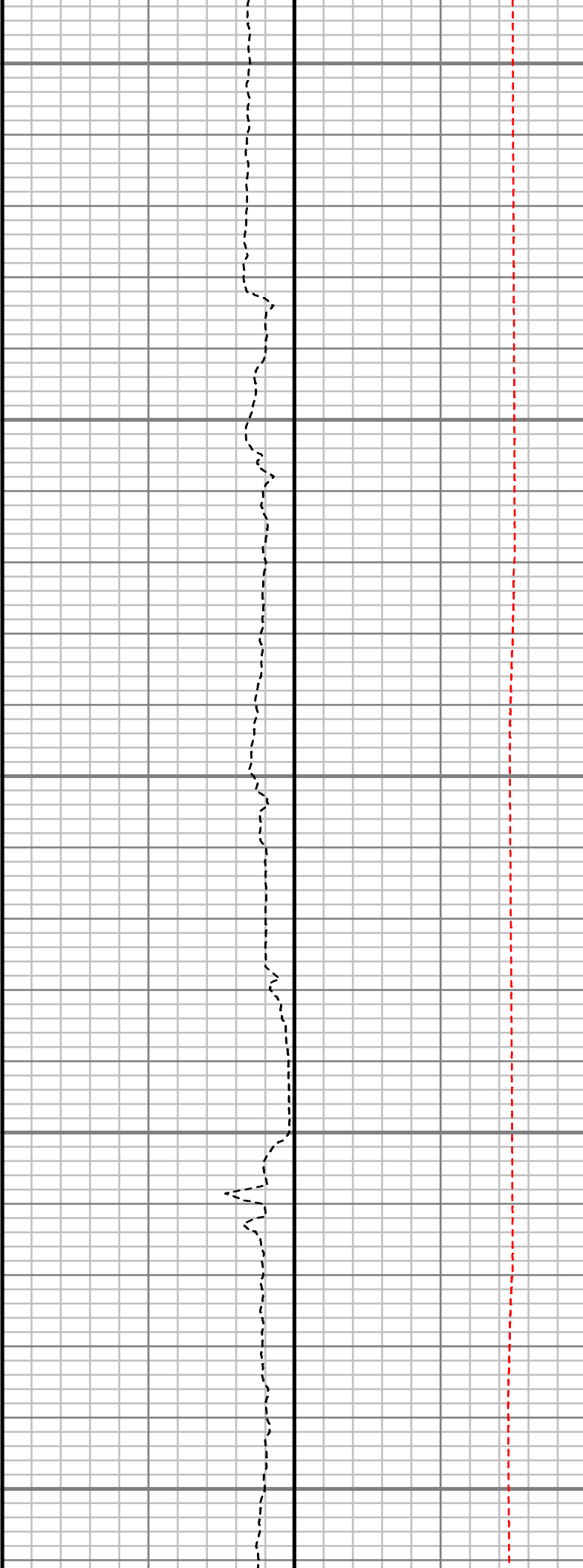
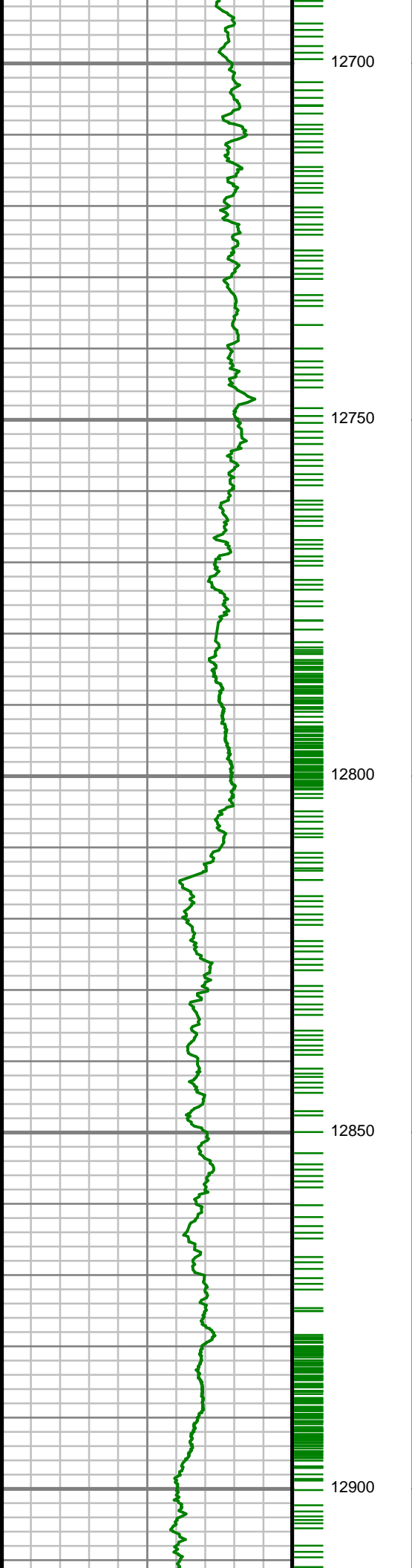
S: 134 MD: 12393.00 ft  
Inc: 89.90 deg Az:  
178.95 deg TVD:  
7317.04 ft



S: 135 MD: 12487.00 ft  
Inc: 90.70 deg Az:  
179.94 deg TVD:  
7316.55 ft

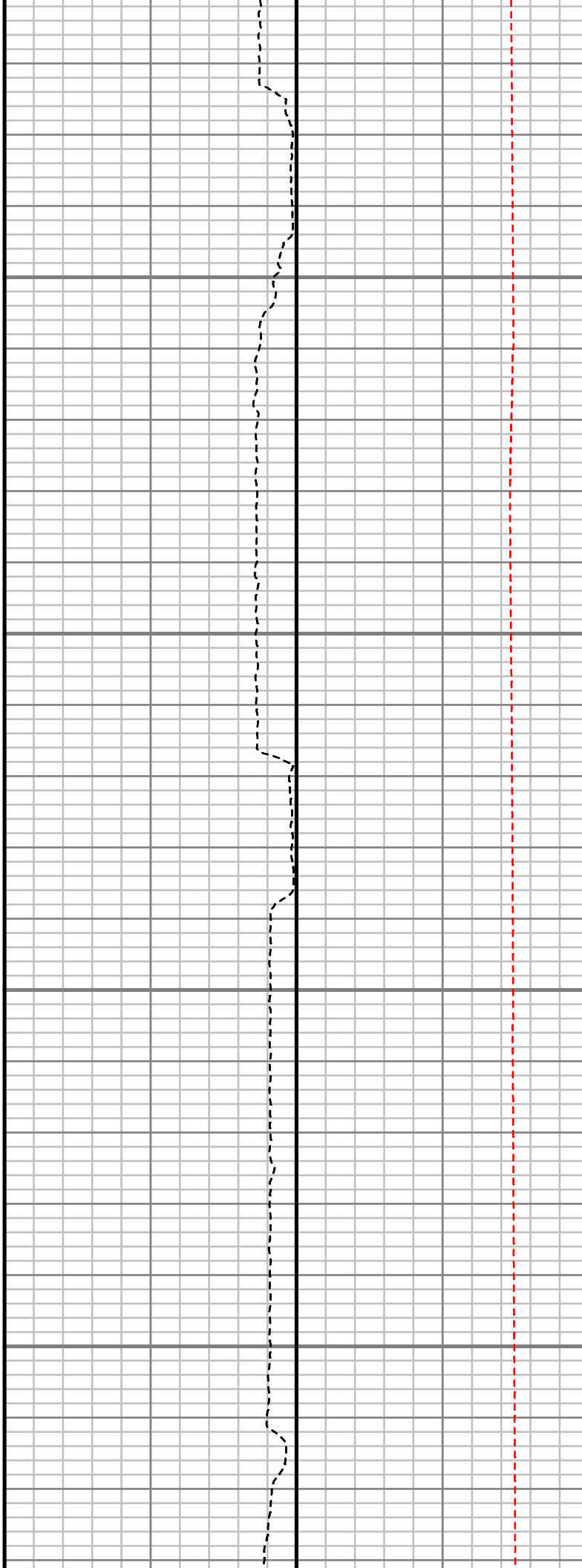
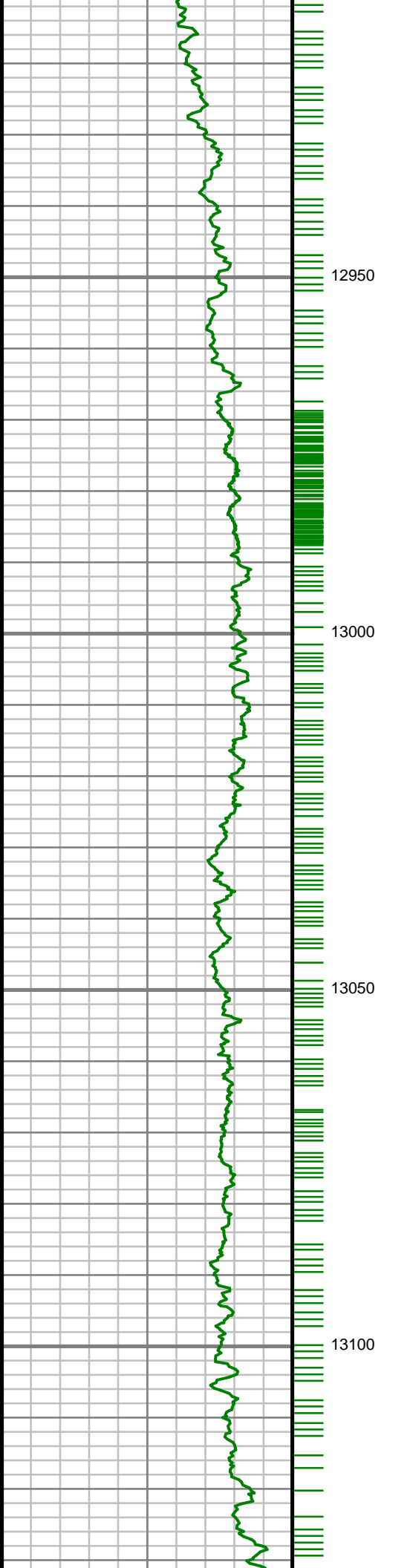
S: 136 MD: 12581.00 ft  
Inc: 89.73 deg Az:  
180.63 deg TVD:  
7316.19 ft

S: 137 MD: 12675.00 ft  
Inc: 90.10 deg Az:  
180.53 deg TVD:  
7316.33 ft



S: 138 MD: 12769.00 ft  
Inc: 90.40 deg Az:  
179.30 deg TVD:  
7315.91 ft

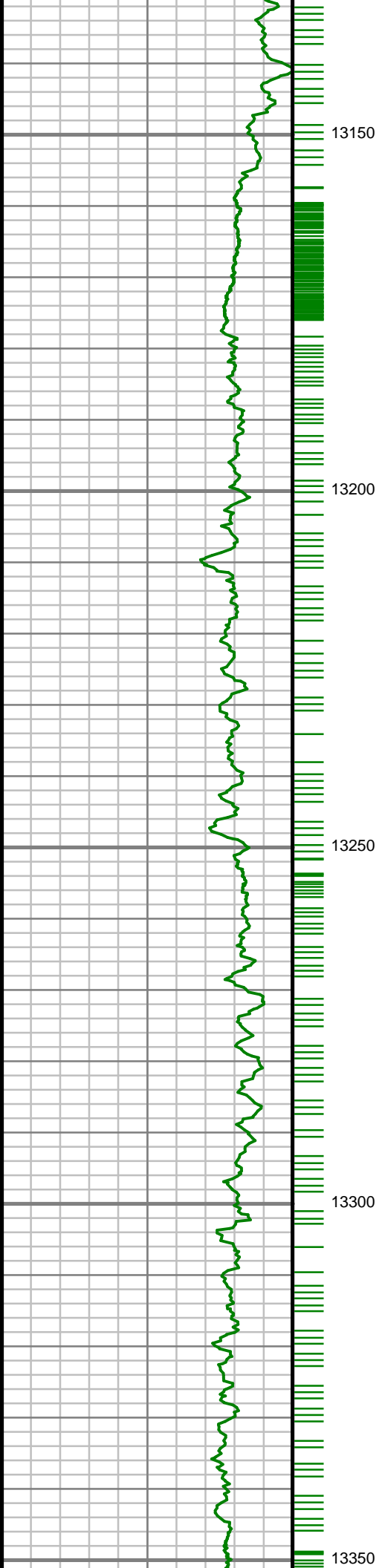
S: 139 MD: 12863.00 ft  
Inc: 90.24 deg Az:  
179.68 deg TVD:  
7315.39 ft



S: 140 MD: 12958.00 ft  
Inc: 90.44 deg Az:  
180.53 deg TVD:  
7314.83 ft

S: 141 MD: 13052.00 ft  
Inc: 89.40 deg Az:  
181.41 deg TVD:  
7314.97 ft

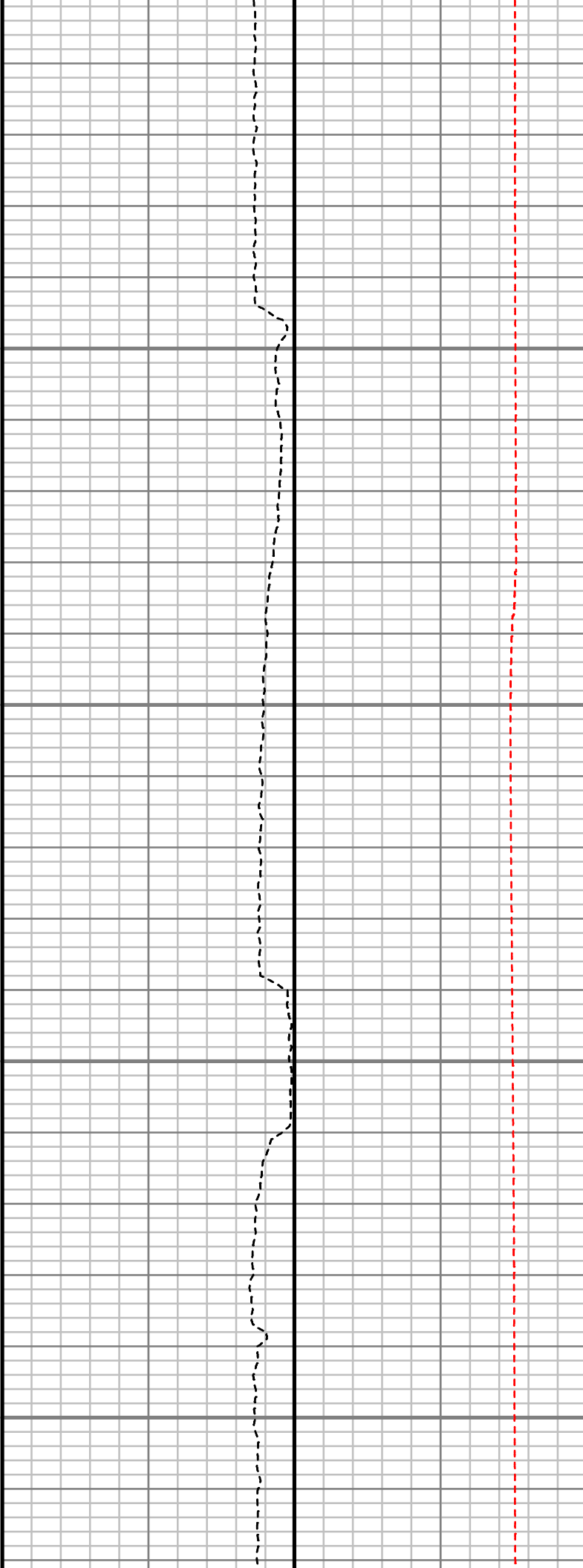
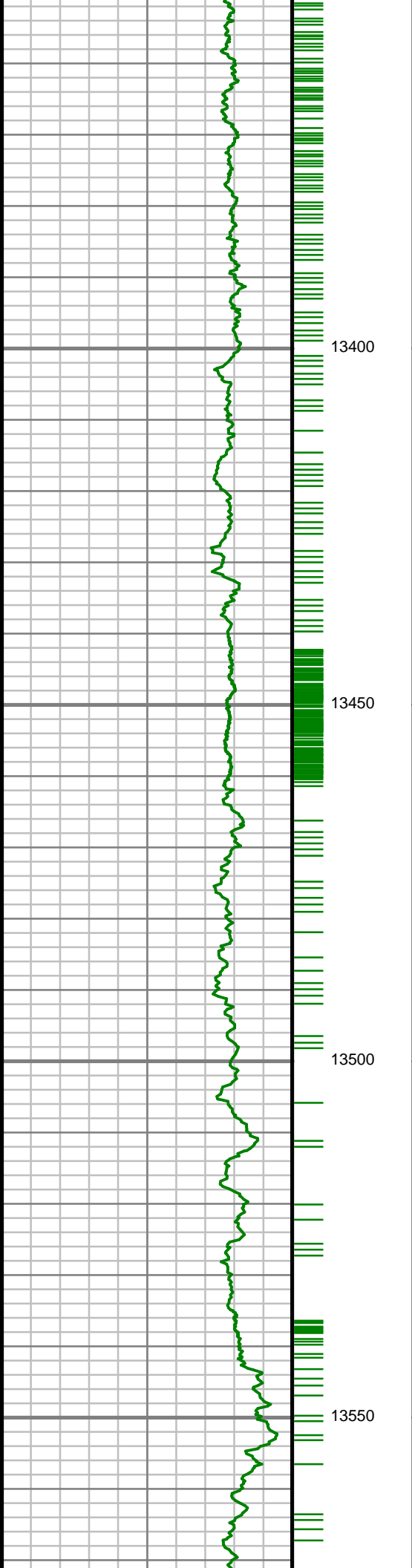




S: 142 MD: 13146.00 ft  
Inc: 88.62 deg Az:  
180.44 deg TVD:  
7316.60 ft

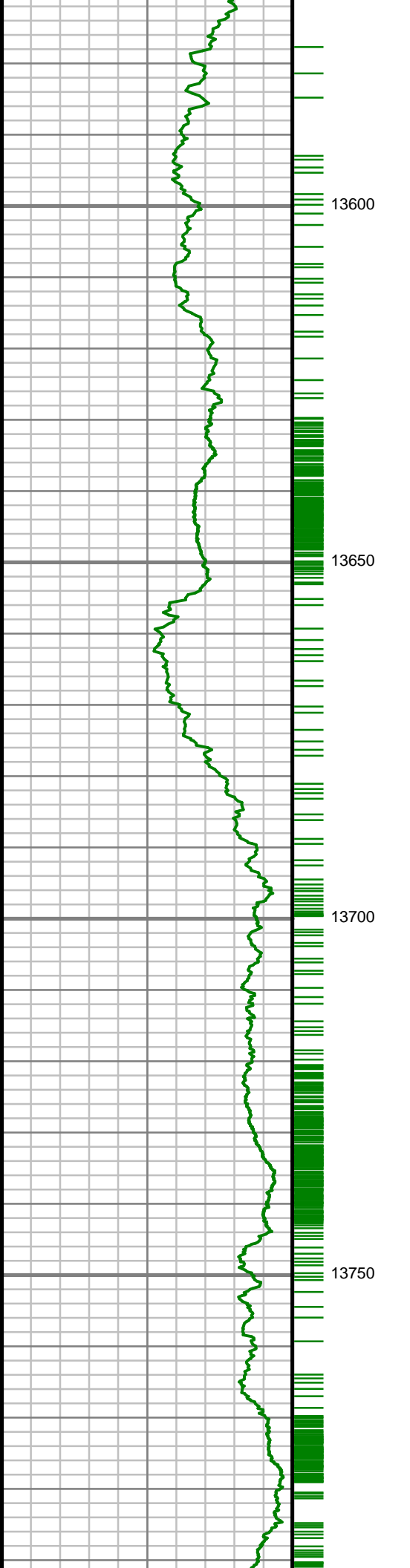
S: 143 MD: 13240.00 ft  
Inc: 89.60 deg Az:  
180.04 deg TVD:  
7318.06 ft

S: 144 MD: 13335.00 ft  
Inc: 90.00 deg Az:  
180.16 deg TVD:  
7318.39 ft



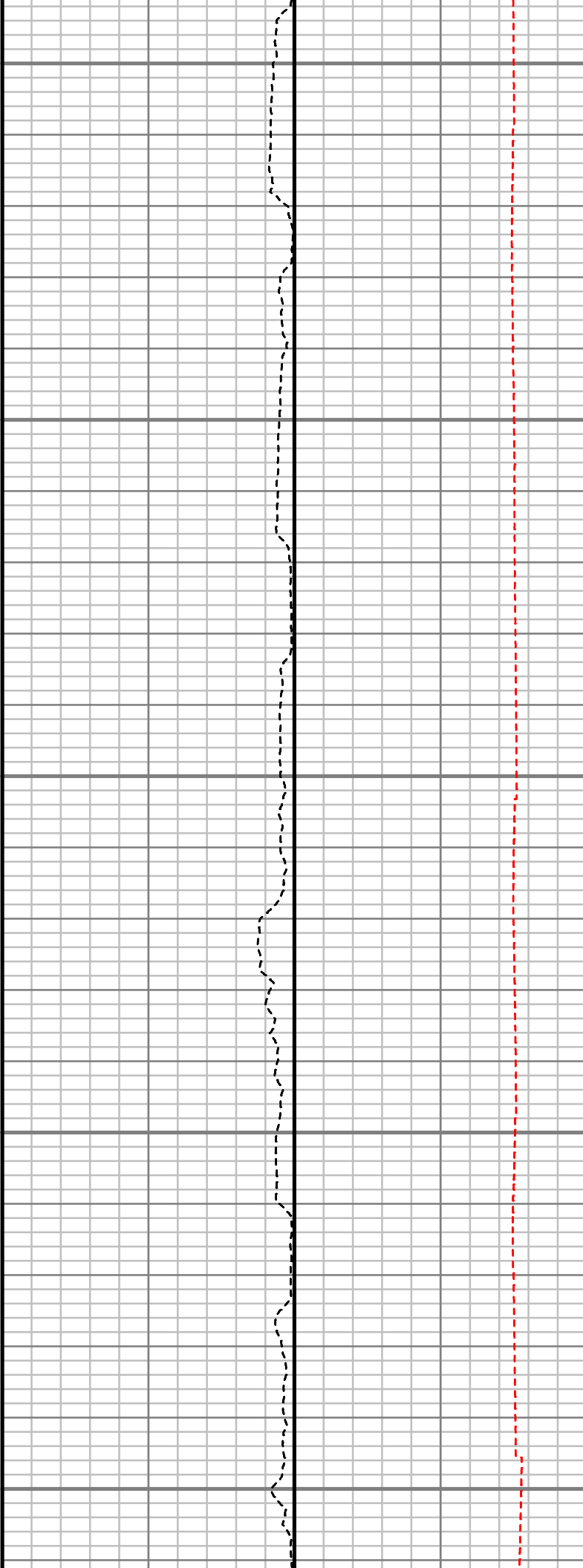
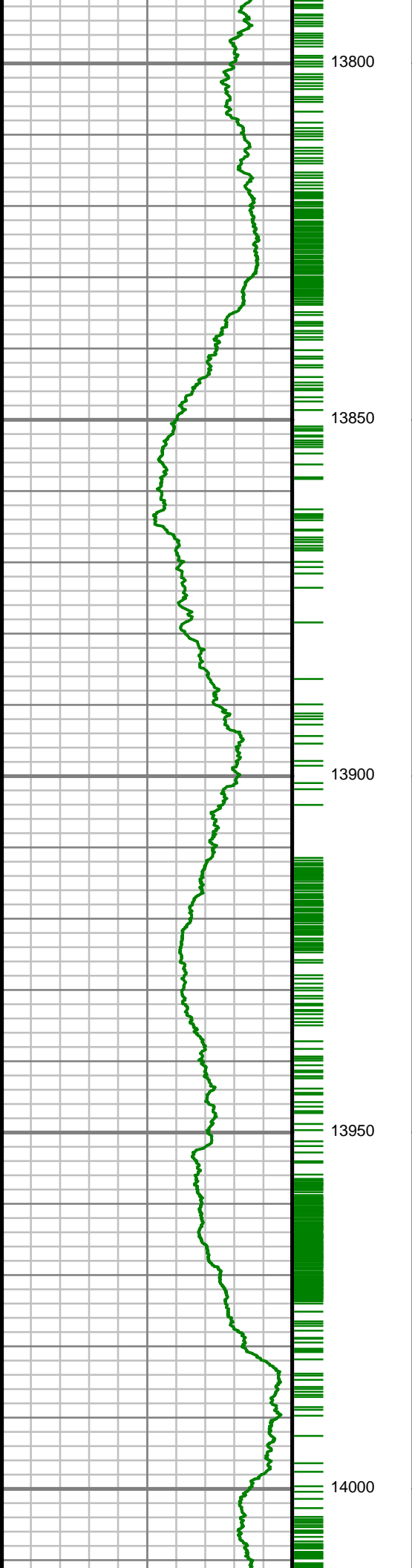
S: 145 MD: 13429.00 ft  
Inc: 89.53 deg Az:  
179.69 deg TVD:  
7318.78 ft

S: 146 MD: 13523.00 ft  
Inc: 90.54 deg Az:  
179.75 deg TVD:  
7318.72 ft



S: 147 MD: 13617.00 ft  
Inc: 91.01 deg Az:  
179.38 deg TVD:  
7317.45 ft

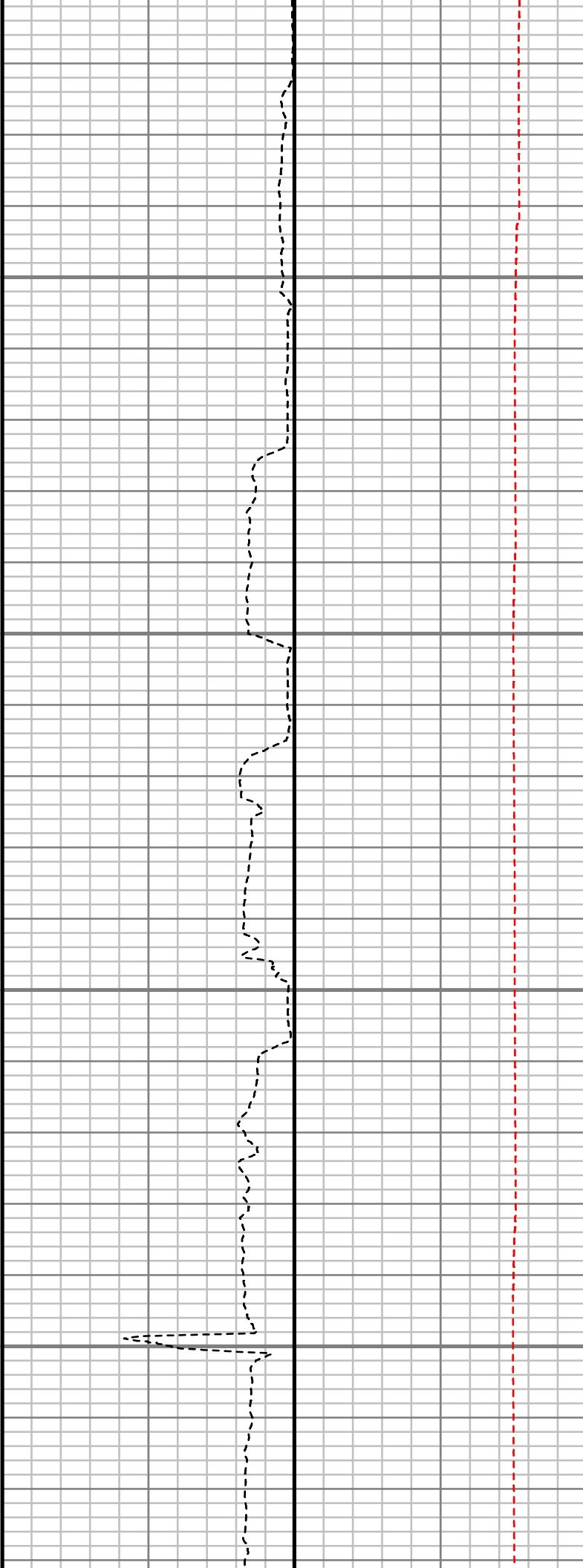
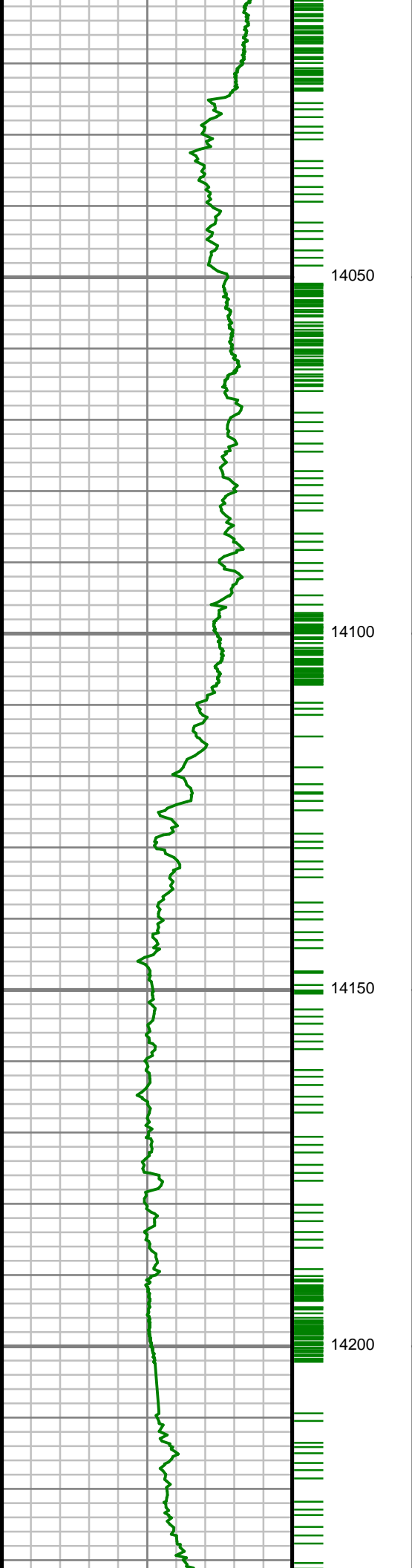
S: 148 MD: 13711.00 ft  
Inc: 91.64 deg Az:  
179.99 deg TVD:  
7315.28 ft



S: 149 MD: 13805.00 ft  
Inc: 91.85 deg Az:  
180.64 deg TVD:  
7312.41 ft

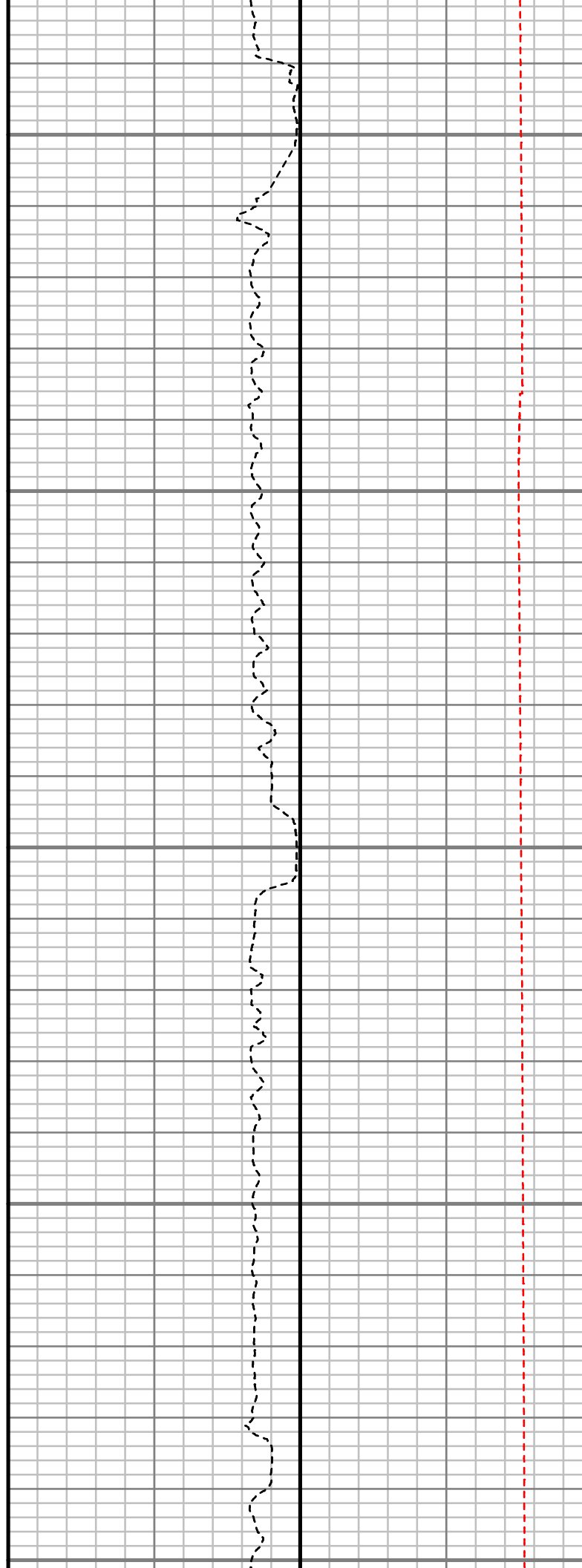
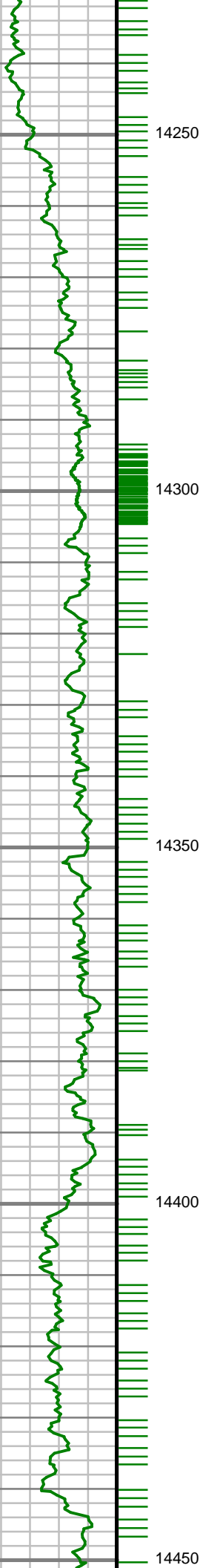
S: 150 MD: 13899.00 ft  
Inc: 91.34 deg Az:  
182.57 deg TVD:  
7309.79 ft

S: 151 MD: 13993.00 ft  
Inc: 92.22 deg Az:  
183.81 deg TVD:  
7306.87 ft



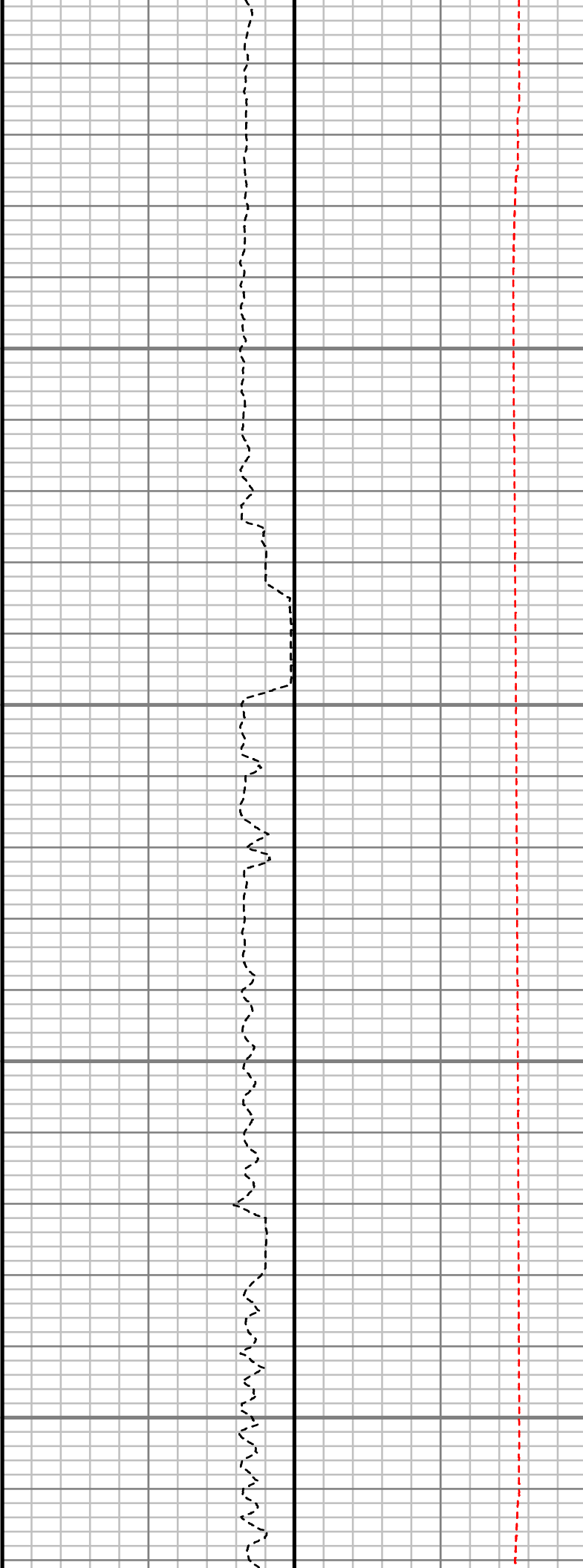
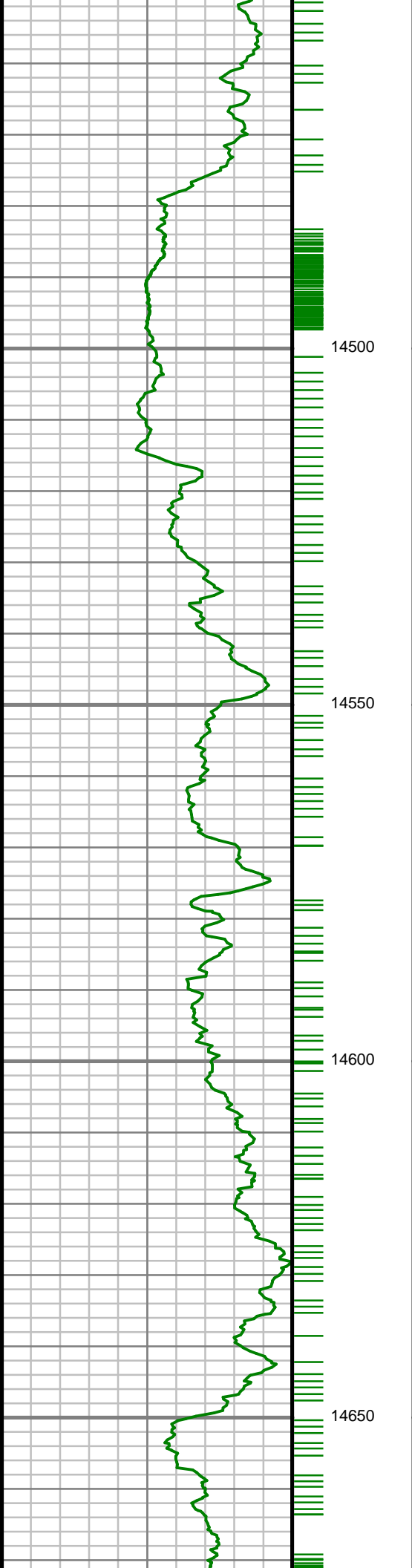
S: 152 MD: 14087.00 ft  
Inc: 91.44 deg Az:  
183.52 deg TVD:  
7303.87 ft

S: 153 MD: 14181.00 ft  
Inc: 89.80 deg Az:  
181.25 deg TVD:  
7302.85 ft



S: 154 MD: 14275.00 ft  
Inc: 90.17 deg Az:  
180.32 deg TVD:  
7302.88 ft

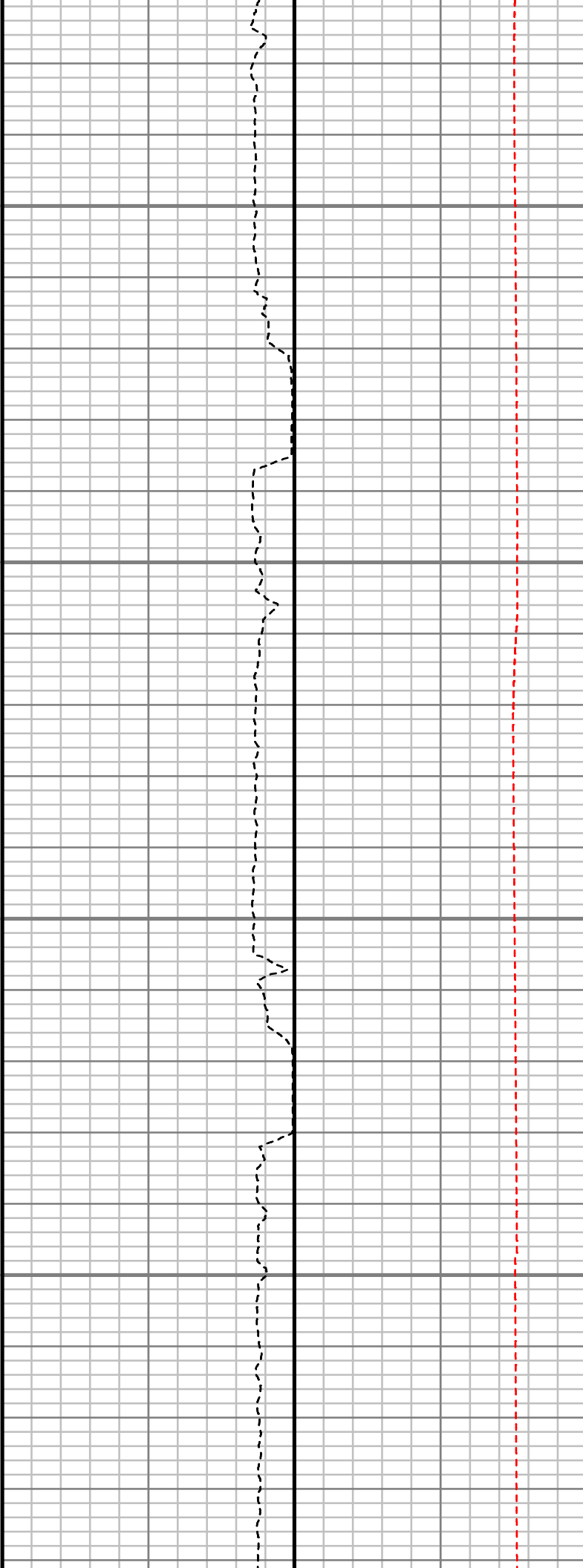
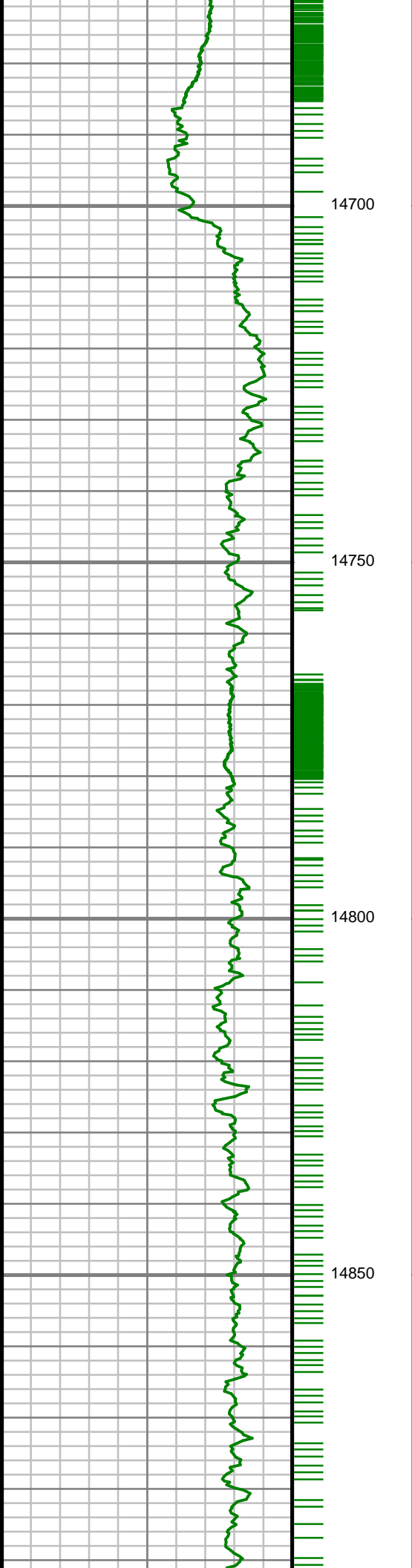
S: 155 MD: 14370.00 ft  
Inc: 88.42 deg Az:  
179.34 deg TVD:  
7304.04 ft



S: 156 MD: 14464.00 ft  
Inc: 87.69 deg Az:  
180.09 deg TVD:  
7307.23 ft

S: 157 MD: 14558.00 ft  
Inc: 88.56 deg Az:  
179.79 deg TVD:  
7310.31 ft

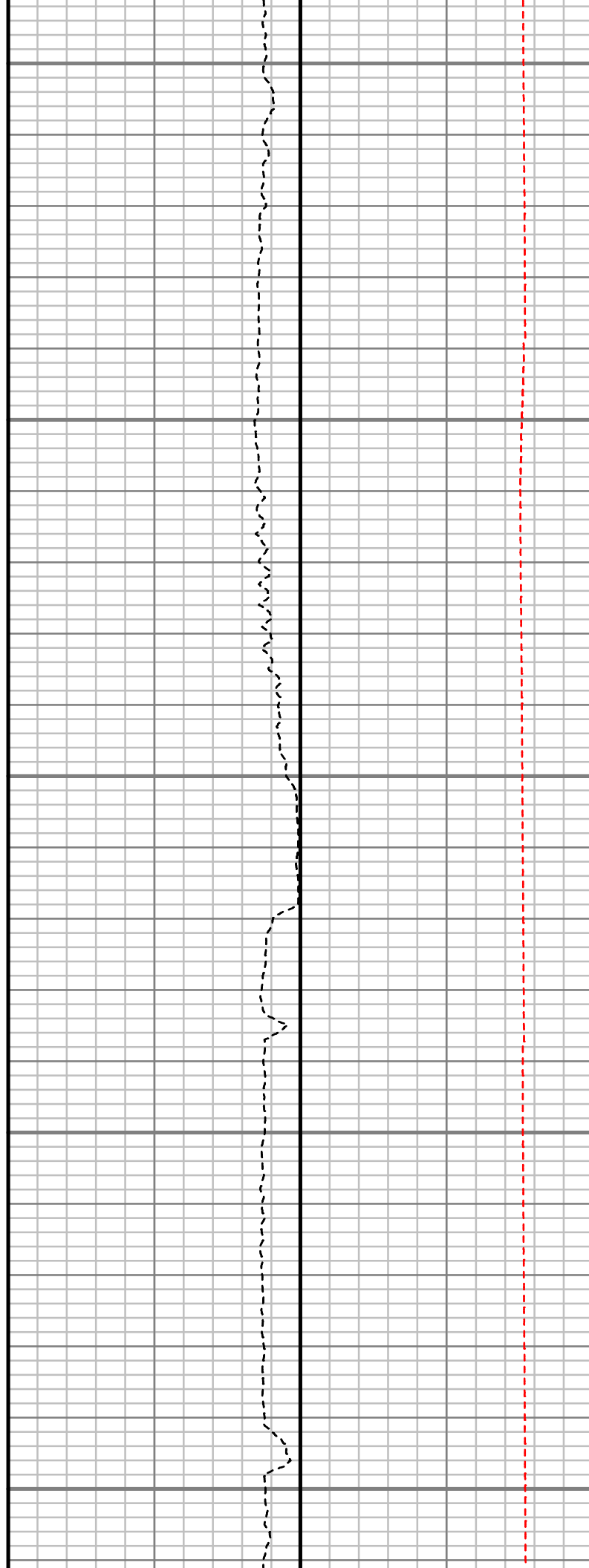
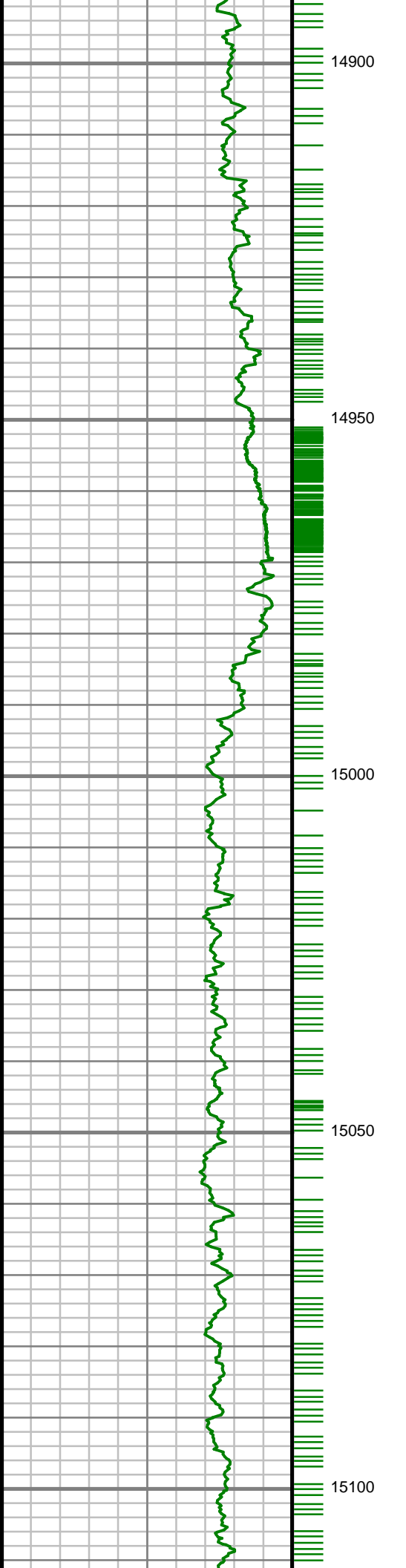
S: 158 MD: 14653.00 ft  
Inc: 87.51 deg Az:  
179.71 deg TVD:  
7313.57 ft



S: 159 MD: 14747.00 ft  
Inc: 88.02 deg Az:  
179.81 deg TVD:  
7317.23 ft

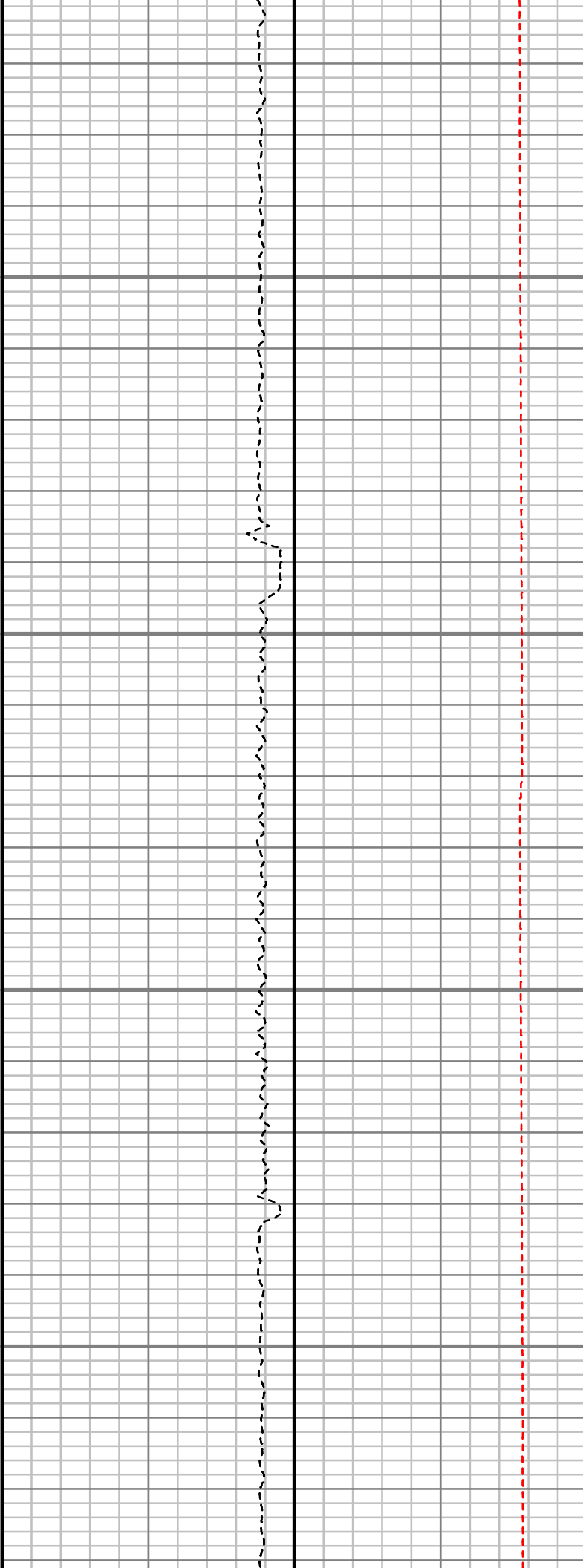
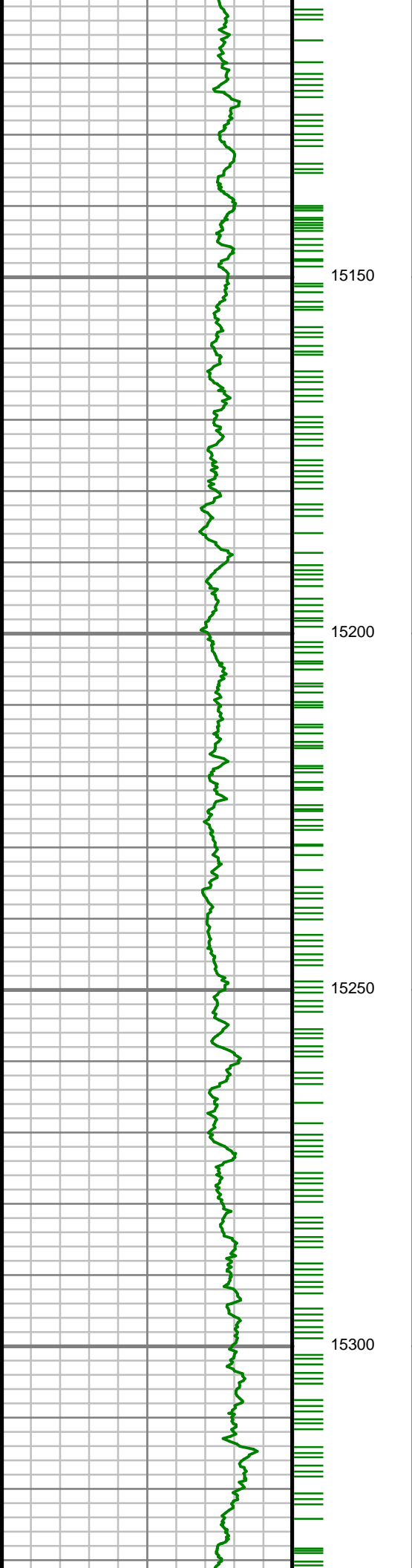
S: 160 MD: 14842.00 ft  
Inc: 88.83 deg Az:  
180.13 deg TVD:  
7319.85 ft





S: 161 MD: 14936.00 ft  
Inc: 88.52 deg Az:  
180.91 deg TVD:  
7322.02 ft

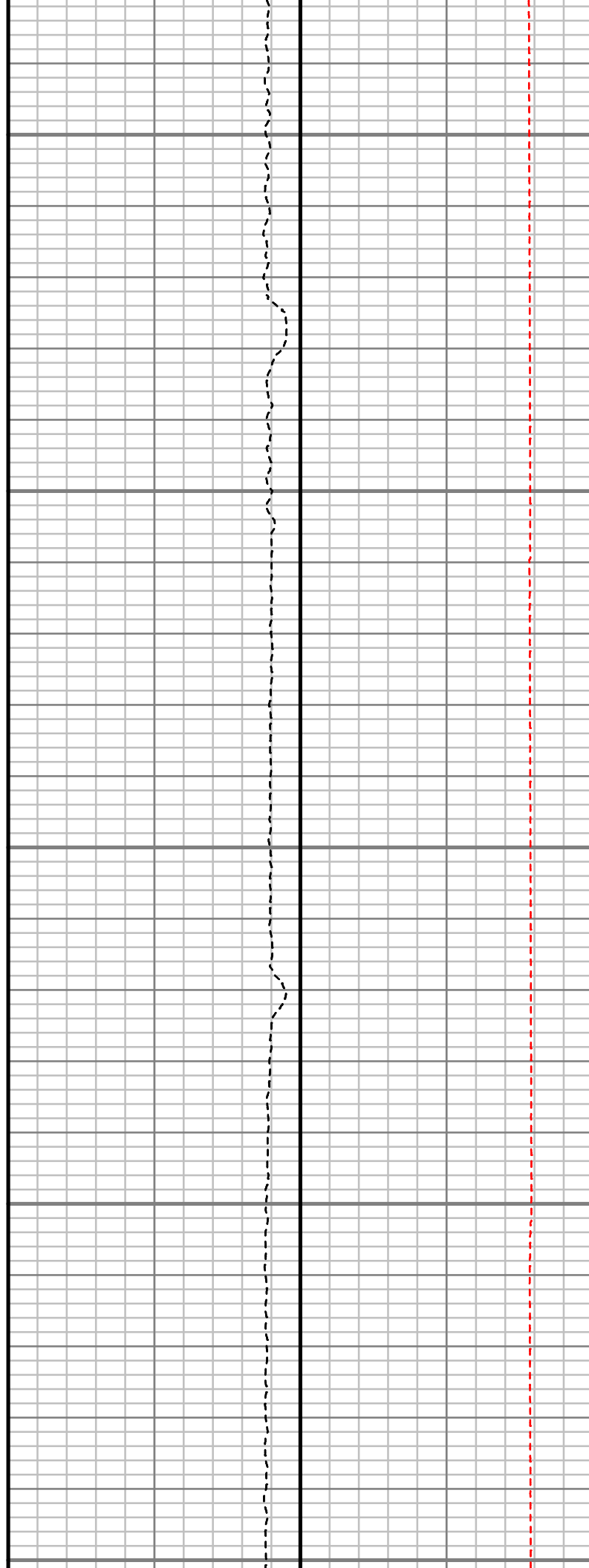
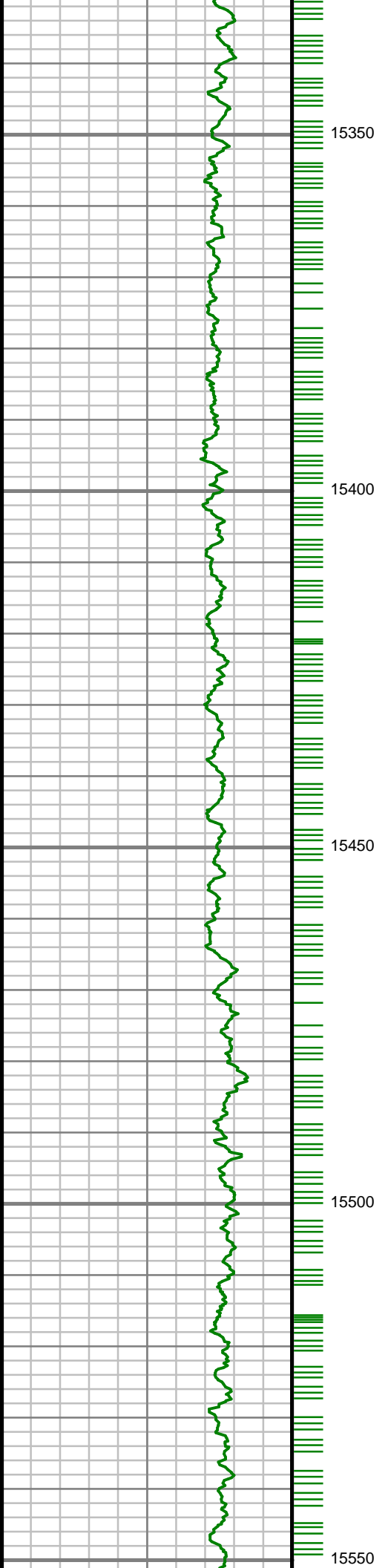
S: 162 MD: 15030.00 ft  
Inc: 89.33 deg Az:  
180.41 deg TVD:  
7323.79 ft



S: 163 MD: 15124.00 ft  
Inc: 89.67 deg Az:  
180.88 deg TVD:  
7324.61 ft

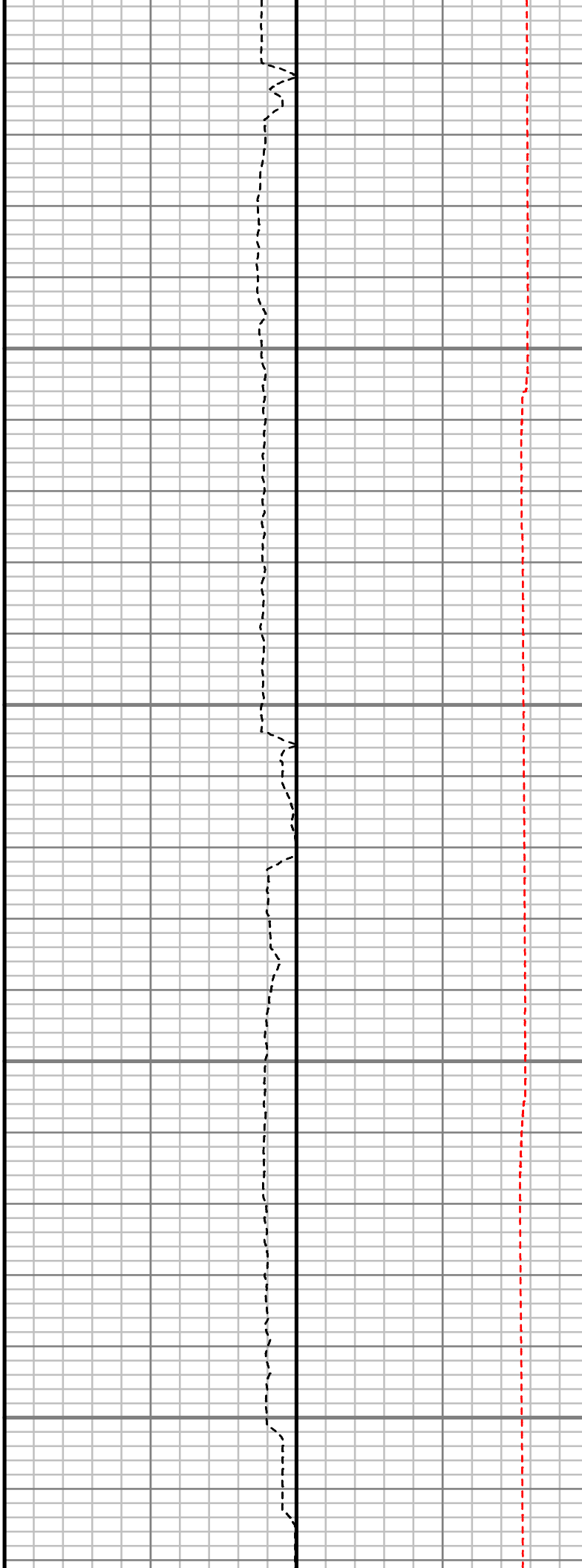
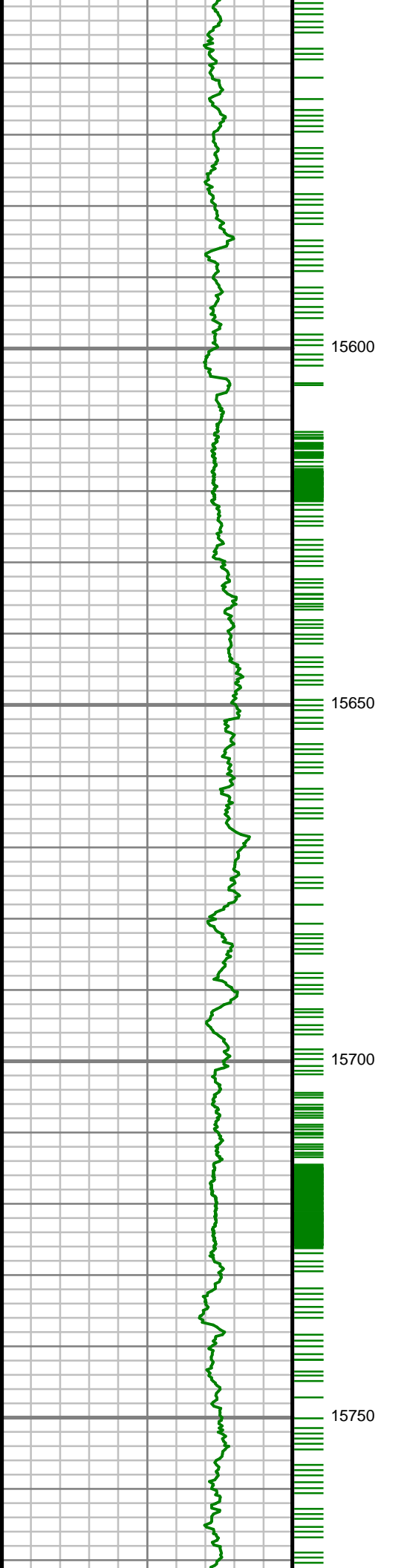
S: 164 MD: 15219.00 ft  
Inc: 89.87 deg Az:  
180.73 deg TVD:  
7325.00 ft

S: 165 MD: 15313.00 ft  
Inc: 89.63 deg Az:  
180.44 deg TVD:  
7325.41 ft



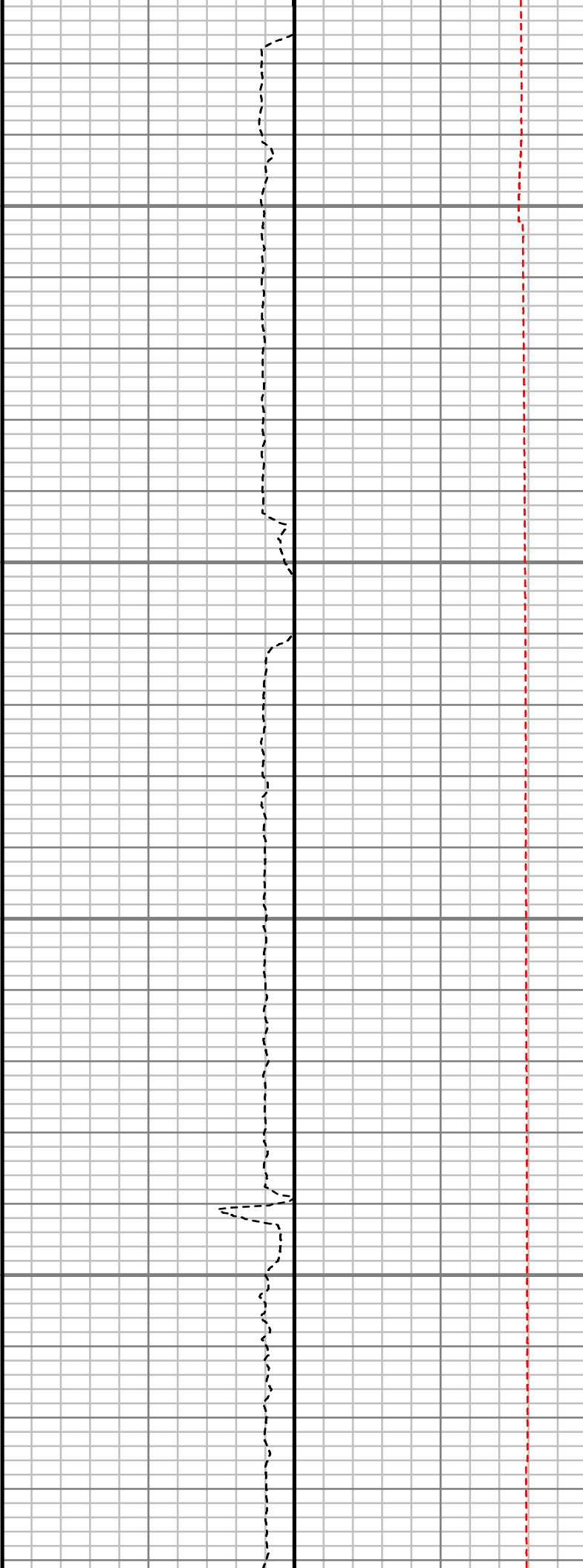
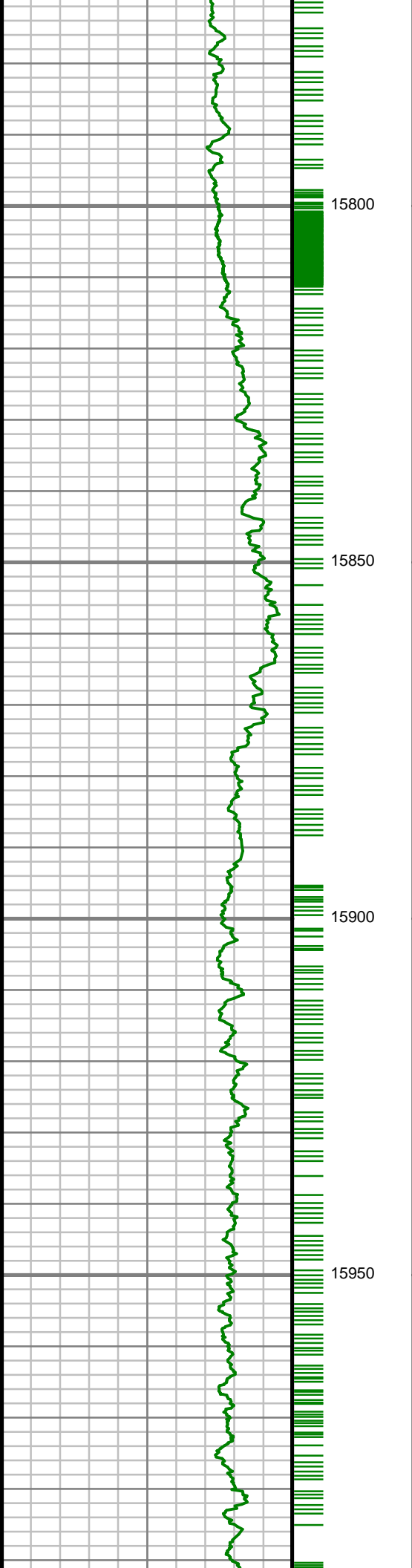
S: 166 MD: 15408.00 ft  
Inc: 89.73 deg Az:  
180.58 deg TVD:  
7325.94 ft

S: 167 MD: 15502.00 ft  
Inc: 89.60 deg Az:  
180.66 deg TVD:  
7326.49 ft



S: 168 MD: 15596.00 ft  
Inc: 89.80 deg Az:  
181.32 deg TVD:  
7326.99 ft

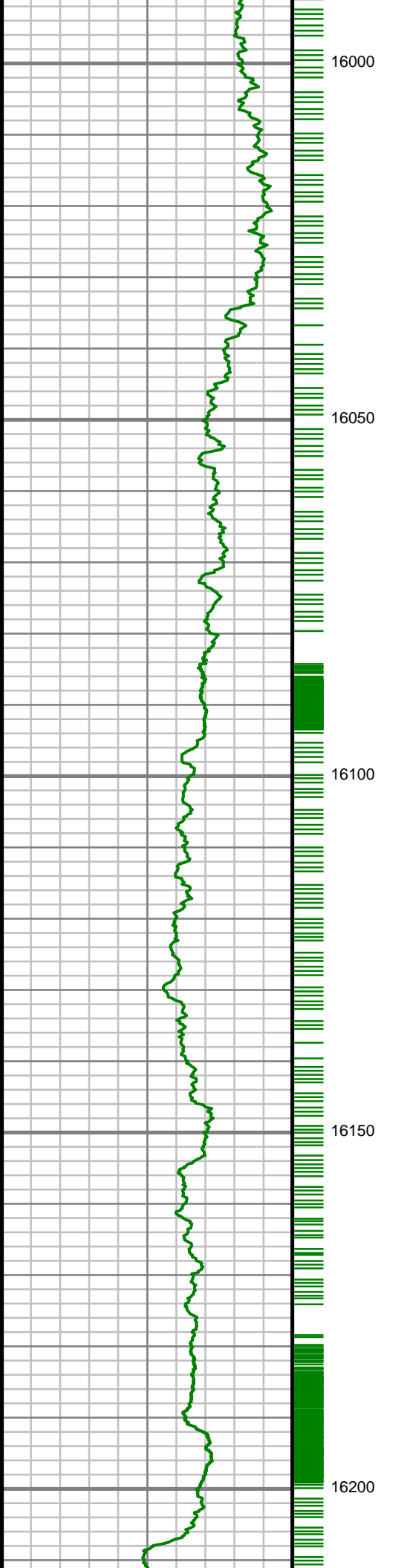
S: 169 MD: 15691.00 ft  
Inc: 89.43 deg Az:  
181.11 deg TVD:  
7327.63 ft



S: 170 MD: 15785.00 ft  
Inc: 90.17 deg Az:  
181.75 deg TVD:  
7327.96 ft

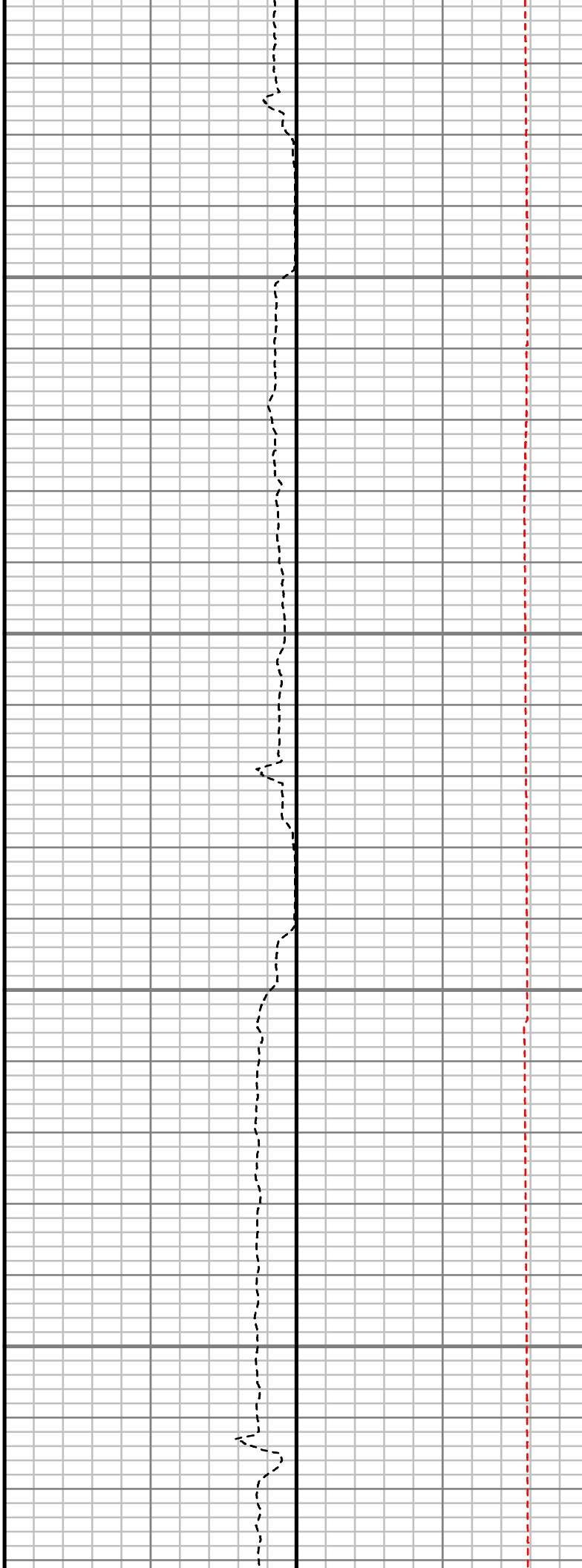
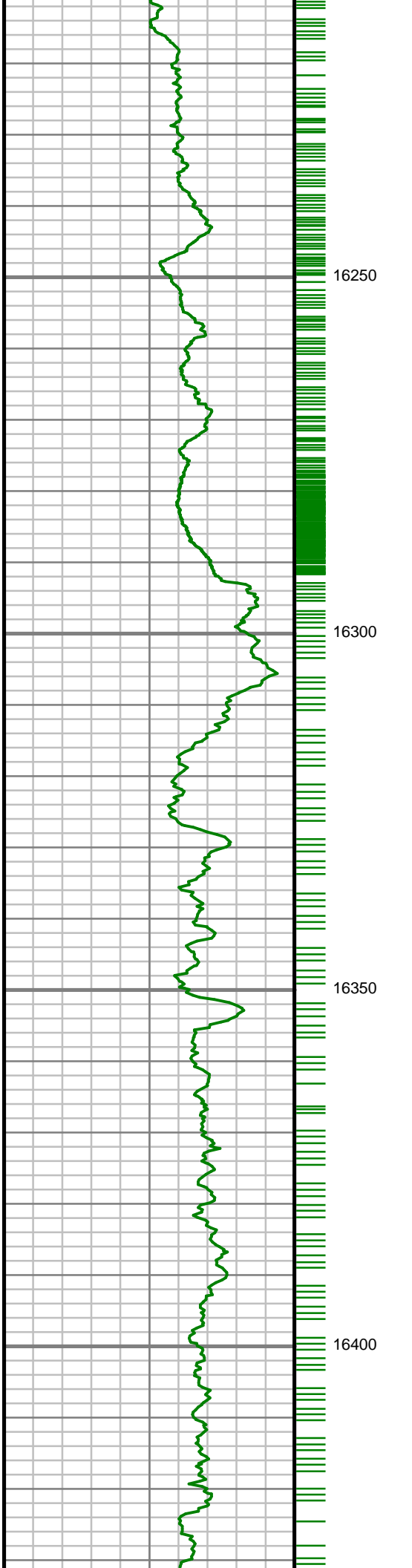
S: 171 MD: 15880.00 ft  
Inc: 90.23 deg Az:  
180.31 deg TVD:  
7327.62 ft

S: 172 MD: 15974.00 ft  
Inc: 89.33 deg Az:  
179.56 deg TVD:  
7327.98 ft



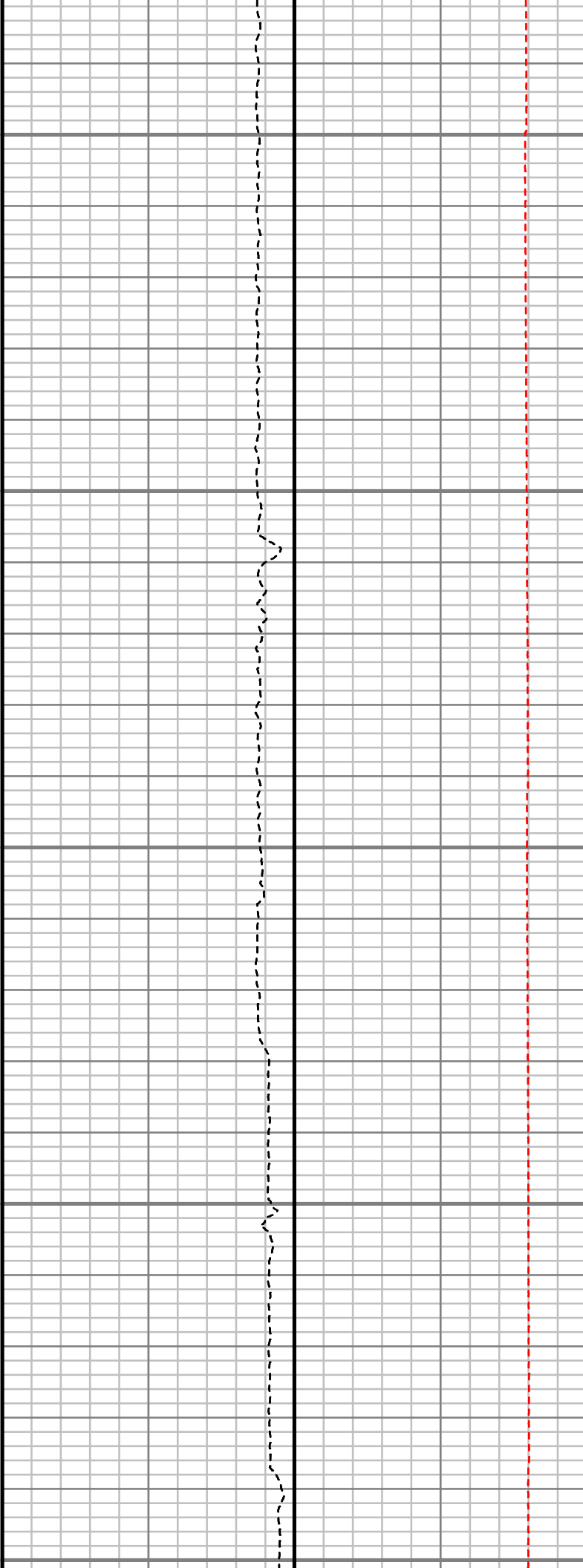
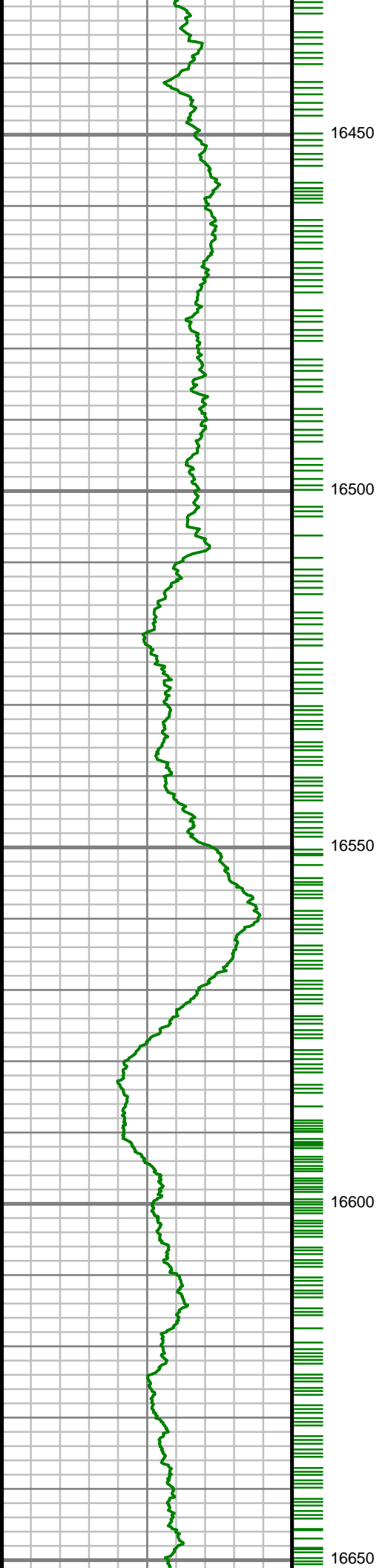
S: 173 MD: 16069.00 ft  
Inc: 88.99 deg Az:  
180.81 deg TVD:  
7329.37 ft

S: 174 MD: 16163.00 ft  
Inc: 88.76 deg Az:  
181.14 deg TVD:  
7331.22 ft



S: 175 MD: 16257.00 ft  
Inc: 89.56 deg Az:  
180.27 deg TVD:  
7332.59 ft

S: 176 MD: 16352.00 ft  
Inc: 90.54 deg Az:  
179.33 deg TVD:  
7332.51 ft

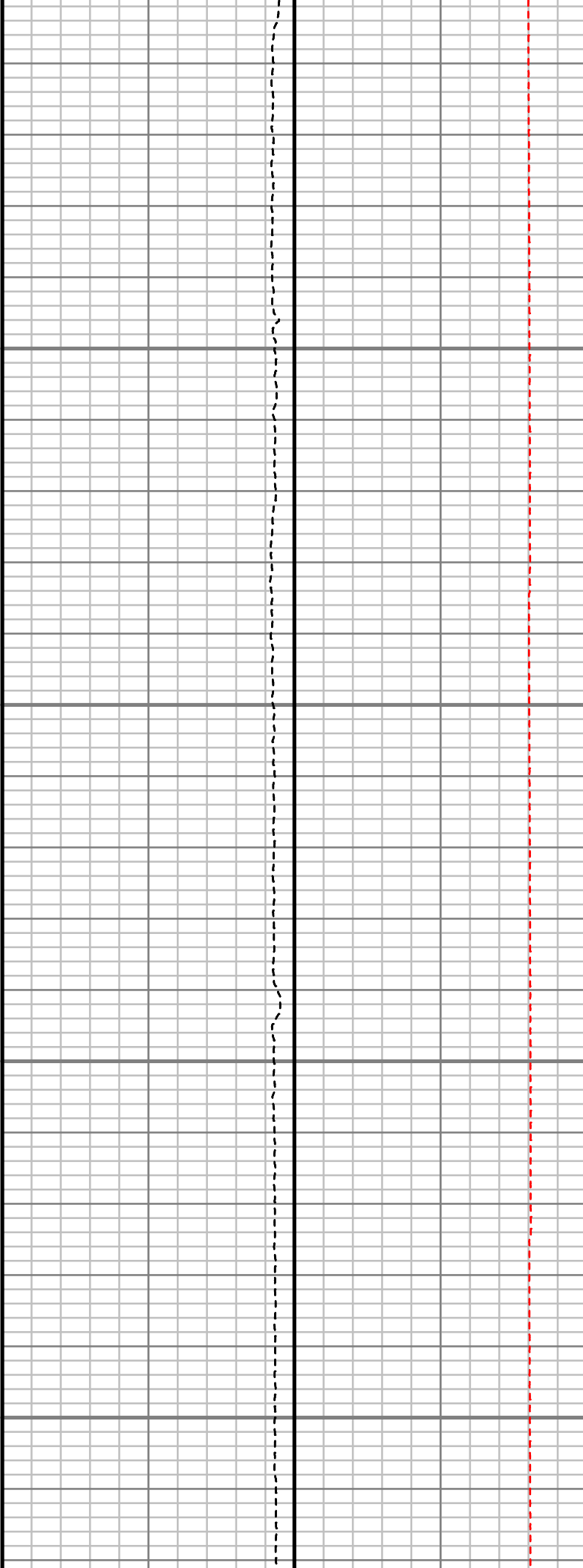
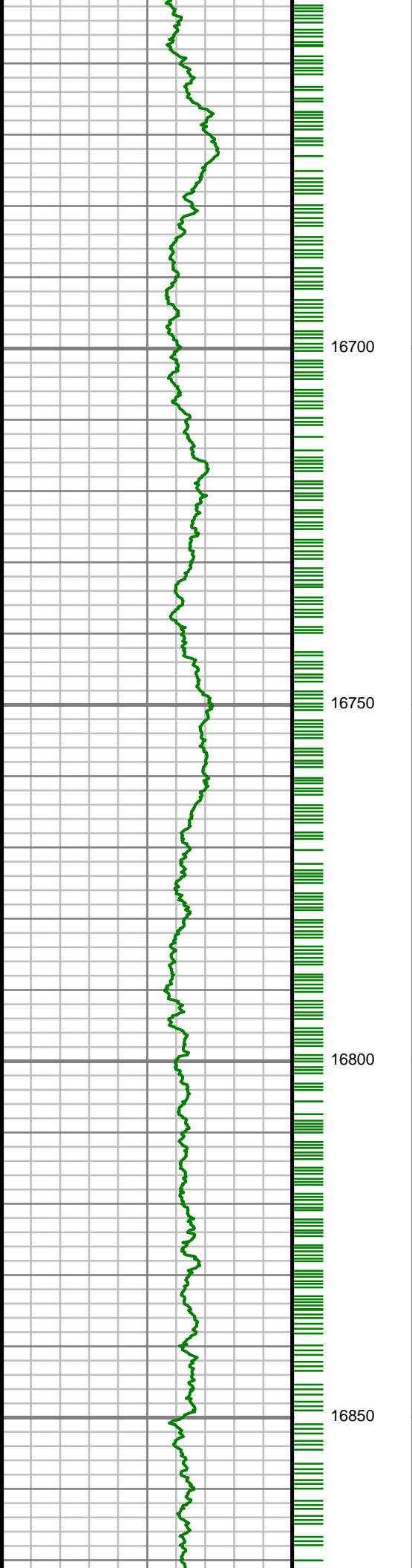


S: 177 MD: 16446.00 ft  
Inc: 90.74 deg Az:  
179.74 deg TVD:  
7331.46 ft

S: 178 MD: 16540.00 ft  
Inc: 90.97 deg Az:  
179.52 deg TVD:  
7330.06 ft

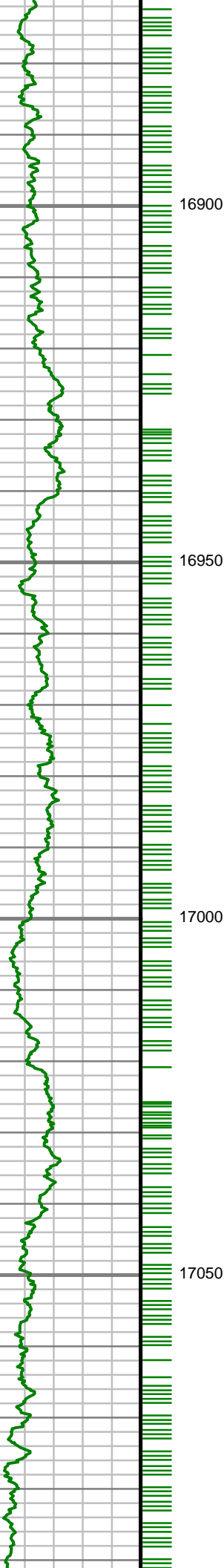
S: 179 MD: 16635.00 ft  
Inc: 90.97 deg Az:  
180.12 deg TVD:  
7328.44 ft





S: 180 MD: 16729.00 ft  
Inc: 90.74 deg Az:  
180.29 deg TVD:  
7327.04 ft

S: 181 MD: 16823.00 ft  
Inc: 89.93 deg Az:  
179.91 deg TVD:  
7326.49 ft

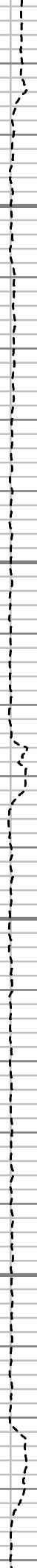


16900

16950

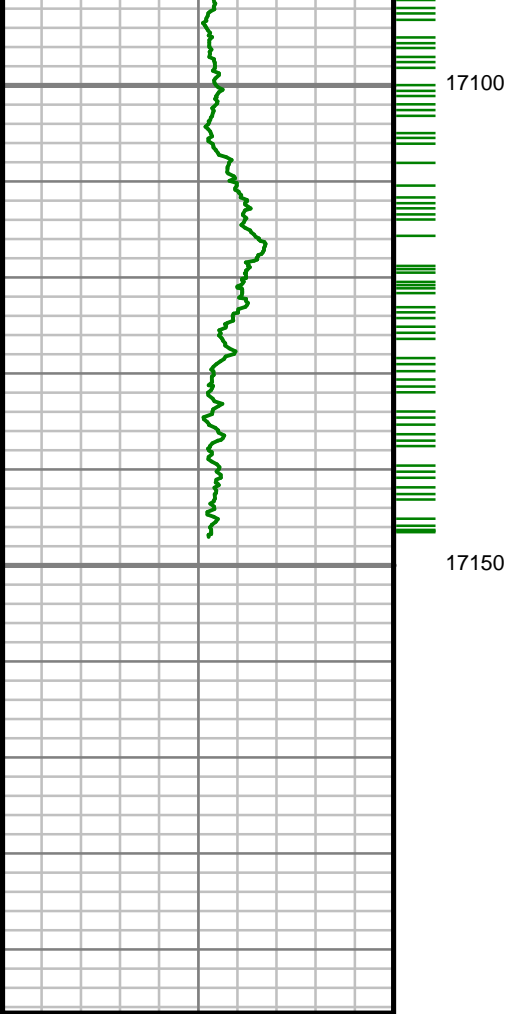
17000

17050



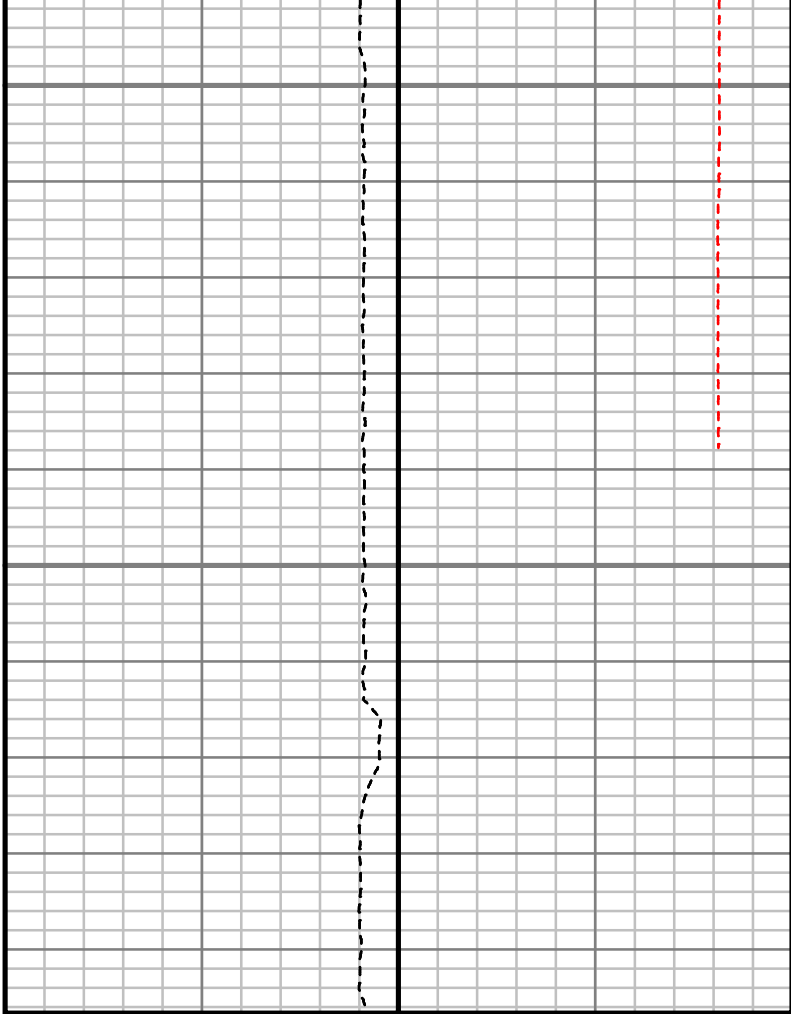
S: 182 MD: 16917.00 ft  
Inc: 89.13 deg Az:  
180.15 deg TVD:  
7327.26 ft

S: 183 MD: 17010.00 ft  
Inc: 88.89 deg Az:  
180.55 deg TVD:  
7328.87 ft



Gamma Ray (GR)		
0	Unit = aapi	150

MEASURED DEPTH  
1:240 (ft)



Rate of Penetration (ROP)		
2000	Unit = ft/hr	0

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

S: 184 MD: 17104.00 ft  
Inc: 88.39 deg Az:  
180.43 deg TVD:  
7331.09 ft

S: 185 MD: 17136.00 ft  
Inc: 88.32 deg Az:  
180.50 deg TVD:  
7332.01 ft

Comments

## MWD Survey Report

Well Location	BARCLAY 26N-11HZ
Well Name	BARCLAY 16N-26HZ
Survey Date	3/20/2015
Latitude	40°7'55.304"N
Longitude	104°51'2.362"W
Btotal	52669, 52756 nT
Dip	66.78, 66.82 deg
Magnetic Declination	8.52, 8.54 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), 179.10Azim (deg)
Operator(s)	B. GREER, M. SCHUSTER

### Well Notes

SURVEYS FROM 0 FT. TO 1384 FT. WERE ACQUIRED BY CATHEDRAL MWD.

SURVEYS FROM 1384 FT. TO 17196 FT. WERE ACQUIRED BY SCIENTIFIC DRILLING INTERNATIONAL MWD.

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
19.00	0.00	0.00	19.00	0.00	0.00	0.00	0.00
102.00	0.20	221.78	102.00	0.11	-0.11	-0.10	0.24
181.00	0.40	224.88	181.00	0.40	-0.41	-0.38	0.25
271.00	0.30	226.18	271.00	0.78	-0.79	-0.77	0.11
351.00	0.40	248.98	350.99	1.02	-1.04	-1.19	0.21
431.00	0.50	239.38	430.99	1.29	-1.32	-1.75	0.16
511.00	0.70	174.48	510.99	1.95	-1.98	-2.00	0.83
591.00	1.00	148.18	590.98	3.03	-3.06	-1.59	0.61
671.00	1.00	132.88	670.97	4.12	-4.13	-0.71	0.33
751.00	0.90	109.48	750.96	4.82	-4.81	0.40	0.50
831.00	1.00	130.18	830.95	5.49	-5.47	1.52	0.44
911.00	0.50	46.88	910.94	5.72	-5.68	2.31	1.33
991.00	0.90	334.58	990.94	4.91	-4.88	2.30	1.11
1071.00	0.70	329.18	1070.93	3.92	-3.89	1.78	0.27
1151.00	0.80	339.08	1150.92	2.97	-2.95	1.33	0.20
1231.00	0.90	343.98	1230.91	1.84	-1.82	0.95	0.15
1311.00	1.30	351.98	1310.90	0.33	-0.32	0.65	0.53
1339.00	1.30	348.08	1338.89	-0.30	0.30	0.54	0.32
1447.00	1.24	358.48	1446.87	-2.67	2.67	0.26	0.22

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
1541.00	0.93	142.17	1540.86	-3.08	3.09	0.70	2.20
1636.00	3.11	146.33	1635.79	-0.29	0.33	2.61	2.30
1730.00	5.61	146.03	1729.51	5.71	-5.60	6.59	2.65
1824.00	7.65	145.29	1822.88	14.75	-14.56	12.72	2.18
1918.00	9.20	148.59	1915.86	26.43	-26.12	20.20	1.73
2013.00	10.32	151.66	2009.49	40.52	-40.08	28.19	1.29
2107.00	9.46	152.60	2102.09	54.91	-54.35	35.75	0.92
2201.00	9.91	152.14	2194.75	69.03	-68.36	43.08	0.48
2295.00	11.97	153.21	2287.04	85.01	-84.21	51.26	2.21
2390.00	11.33	153.65	2380.08	102.30	-101.37	59.84	0.68
2484.00	10.13	152.25	2472.43	118.02	-116.97	67.79	1.31
2578.00	10.16	158.93	2564.97	133.17	-132.01	74.62	1.25
2673.00	9.37	156.53	2658.59	148.17	-146.92	80.71	0.93
2767.00	10.47	157.53	2751.19	163.18	-161.84	87.02	1.18
2862.00	10.00	156.30	2844.67	178.81	-177.37	93.64	0.54
2956.00	11.22	157.98	2937.06	194.88	-193.32	100.35	1.34
3050.00	10.56	159.15	3029.37	211.51	-209.86	106.85	0.74
3144.00	9.65	160.07	3121.91	227.05	-225.31	112.60	0.99
3239.00	10.24	154.11	3215.48	242.24	-240.40	119.00	1.25
3333.00	8.83	153.27	3308.18	256.31	-254.36	125.90	1.51

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
3427.00	8.03	151.22	3401.17	268.61	-266.56	132.31	0.91
3521.00	9.31	156.94	3494.09	281.45	-279.31	138.45	1.64
3615.00	8.26	154.99	3586.99	294.66	-292.43	144.28	1.16
3710.00	7.00	156.36	3681.14	306.23	-303.92	149.49	1.34
3804.00	5.77	157.83	3774.56	315.92	-313.55	153.57	1.32
3898.00	5.32	160.12	3868.12	324.45	-322.03	156.84	0.53
3992.00	4.06	154.00	3961.80	331.59	-329.12	159.78	1.44
4086.00	3.55	153.51	4055.59	337.23	-334.72	162.54	0.54
4181.00	3.18	151.38	4150.43	342.22	-339.67	165.11	0.42
4275.00	1.49	176.13	4244.35	345.74	-343.17	166.44	2.05
4369.00	1.41	17.51	4338.34	345.86	-343.28	166.87	3.03
4557.00	1.51	4.85	4526.28	341.20	-338.61	167.78	0.18
4651.00	1.74	6.50	4620.24	338.55	-335.96	168.05	0.25
4746.00	1.76	34.44	4715.20	335.93	-333.31	169.04	0.89
4840.00	0.15	253.89	4809.19	334.78	-332.15	169.74	2.00
4934.00	0.24	222.20	4903.18	334.95	-332.33	169.49	0.14
5028.00	0.17	249.74	4997.18	335.14	-332.52	169.23	0.13
5122.00	0.20	261.94	5091.18	335.21	-332.59	168.94	0.05
5311.00	0.20	19.96	5280.18	334.95	-332.34	168.73	0.18
5405.00	0.34	55.66	5374.18	334.64	-332.03	169.01	0.22

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
5500.00	0.41	53.68	5469.18	334.29	-331.67	169.52	0.08
5594.00	0.47	66.98	5563.18	333.96	-331.32	170.14	0.12
5688.00	0.75	18.29	5657.17	333.23	-330.59	170.69	0.60
5782.00	0.66	45.11	5751.17	332.27	-329.62	171.26	0.36
5877.00	0.64	37.99	5846.16	331.47	-328.81	171.98	0.09
5971.00	0.46	57.56	5940.15	330.86	-328.19	172.62	0.28
6065.00	0.50	51.57	6034.15	330.42	-327.74	173.26	0.07
6160.00	0.75	49.31	6129.15	329.77	-327.07	174.05	0.27
6254.00	1.02	56.94	6223.13	328.93	-326.22	175.22	0.31
6348.00	1.10	71.42	6317.12	328.21	-325.47	176.78	0.30
6442.00	0.53	69.02	6411.11	327.78	-325.03	178.04	0.61
6537.00	0.75	85.68	6506.10	327.60	-324.82	179.08	0.30
6631.00	1.11	74.30	6600.09	327.33	-324.53	180.57	0.43
6725.00	6.07	150.78	6693.90	331.47	-328.62	183.88	6.28
6819.00	10.37	174.60	6786.94	344.28	-341.38	187.10	5.74
6914.00	18.09	181.38	6878.96	367.57	-364.67	187.55	8.30
7007.00	26.71	178.99	6964.87	402.97	-400.07	187.57	9.32
7101.00	35.99	175.53	7045.06	451.77	-448.84	190.10	10.05
7195.00	45.16	176.68	7116.39	512.76	-509.77	194.20	9.79
7290.00	55.15	175.71	7177.18	585.51	-582.45	199.08	10.55

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
7384.00	65.21	177.23	7223.86	666.87	-663.75	204.03	10.80
7478.00	73.02	179.46	7257.34	754.62	-751.46	206.52	8.60
7572.00	81.11	179.43	7278.36	846.15	-843.00	207.40	8.61
7604.00	84.79	180.23	7282.29	877.90	-874.75	207.50	11.75
7713.00	87.88	179.78	7289.25	986.65	-983.52	207.49	2.87
7808.00	88.59	180.75	7292.18	1081.59	-1078.47	207.04	1.27
7902.00	89.09	180.89	7294.08	1175.53	-1172.44	205.69	0.56
7996.00	89.83	181.39	7294.96	1269.46	-1266.42	203.81	0.95
8091.00	90.17	180.73	7294.96	1364.40	-1361.40	202.05	0.78
8185.00	91.48	180.98	7293.60	1458.35	-1455.38	200.64	1.42
8279.00	92.22	180.81	7290.57	1552.25	-1549.32	199.17	0.81
8373.00	91.92	181.80	7287.18	1646.12	-1643.23	197.03	1.11
8468.00	91.75	182.27	7284.15	1740.95	-1738.12	193.66	0.52
8562.00	91.68	182.21	7281.34	1834.76	-1832.01	189.99	0.10
8656.00	89.56	182.10	7280.32	1928.62	-1925.93	186.46	2.25
8751.00	89.60	181.94	7281.01	2023.49	-2020.87	183.11	0.18
8845.00	89.60	182.44	7281.68	2117.36	-2114.80	179.52	0.54
8939.00	88.08	182.15	7283.58	2211.19	-2208.70	175.76	1.64
9033.00	89.36	182.24	7285.67	2305.02	-2302.60	172.16	1.36
9128.00	89.23	182.24	7286.84	2399.87	-2397.52	168.45	0.14

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
9222.00	88.05	181.06	7289.08	2493.75	-2491.46	165.74	1.77
9317.00	90.20	180.61	7290.52	2588.69	-2586.43	164.35	2.31
9411.00	90.10	180.84	7290.28	2682.65	-2680.42	163.15	0.27
9504.00	90.20	179.75	7290.03	2775.63	-2773.42	162.67	1.18
9599.00	90.17	179.05	7289.72	2870.63	-2868.41	163.66	0.74
9693.00	89.60	179.39	7289.92	2964.63	-2962.40	164.93	0.70
9787.00	89.36	179.09	7290.77	3058.62	-3056.39	166.18	0.40
9881.00	88.89	179.19	7292.21	3152.61	-3150.37	167.60	0.51
9975.00	89.36	178.87	7293.64	3246.60	-3244.34	169.19	0.60
10070.00	89.66	178.12	7294.45	3341.59	-3339.31	171.68	0.85
10164.00	89.87	179.44	7294.83	3435.59	-3433.28	173.69	1.42
10256.00	87.98	179.08	7296.56	3527.57	-3525.25	174.87	2.08
10348.00	87.95	178.79	7299.83	3619.51	-3617.18	176.58	0.31
10439.00	86.77	177.96	7304.02	3710.40	-3708.04	179.15	1.59
10531.00	86.64	176.85	7309.31	3802.21	-3799.80	183.31	1.22
10623.00	87.61	175.82	7313.93	3893.98	-3891.49	189.19	1.54
10715.00	89.50	175.38	7316.25	3985.78	-3983.19	196.24	2.10
10807.00	91.98	177.72	7315.06	4077.66	-4075.00	201.77	3.71
10898.00	91.65	177.67	7312.18	4168.59	-4165.88	205.43	0.37
10990.00	91.24	178.85	7309.86	4260.55	-4257.80	208.22	1.35

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
11082.00	91.95	181.13	7307.30	4352.50	-4349.76	208.24	2.59
11173.00	91.58	182.43	7304.49	4443.35	-4440.67	205.42	1.49
11265.00	90.67	184.52	7302.68	4535.06	-4532.48	199.84	2.48
11356.00	86.84	184.44	7304.66	4625.62	-4623.16	192.73	4.21
11451.00	86.37	183.98	7310.29	4720.08	-4717.74	185.76	0.69
11545.00	88.02	181.86	7314.89	4813.75	-4811.50	180.98	2.86
11639.00	88.59	180.73	7317.67	4907.63	-4905.43	178.86	1.34
11733.00	91.34	180.13	7317.73	5001.60	-4999.42	178.16	3.00
11827.00	90.54	180.38	7316.18	5095.57	-5093.40	177.74	0.90
11922.00	90.10	180.18	7315.65	5190.54	-5188.40	177.27	0.50
12016.00	89.70	180.07	7315.82	5284.53	-5282.40	177.06	0.45
12110.00	90.54	179.25	7315.63	5378.52	-5376.40	177.62	1.25
12204.00	89.26	177.86	7315.79	5472.51	-5470.36	179.99	2.01
12299.00	89.66	177.72	7316.68	5567.48	-5565.29	183.65	0.45
12393.00	89.90	178.95	7317.04	5661.47	-5659.24	186.38	1.33
12487.00	90.70	179.94	7316.55	5755.47	-5753.24	187.29	1.35
12581.00	89.73	180.63	7316.19	5849.45	-5847.23	186.82	1.27
12675.00	90.10	180.53	7316.33	5943.41	-5941.23	185.86	0.41
12769.00	90.40	179.30	7315.91	6037.40	-6035.23	186.00	1.35
12863.00	90.24	179.68	7315.39	6131.40	-6129.22	186.84	0.44

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
12958.00	90.44	180.53	7314.83	6226.38	-6224.22	186.66	0.92
13052.00	89.40	181.41	7314.97	6320.33	-6318.20	185.07	1.45
13146.00	88.62	180.44	7316.60	6414.26	-6412.17	183.54	1.32
13240.00	89.60	180.04	7318.06	6508.23	-6506.16	183.14	1.12
13335.00	90.00	180.16	7318.39	6603.22	-6601.16	182.97	0.44
13429.00	89.53	179.69	7318.78	6697.21	-6695.16	183.09	0.71
13523.00	90.54	179.75	7318.72	6791.20	-6789.15	183.55	1.07
13617.00	91.01	179.38	7317.45	6885.19	-6883.14	184.27	0.64
13711.00	91.64	179.99	7315.28	6979.16	-6977.12	184.78	0.94
13805.00	91.85	180.64	7312.41	7073.09	-7071.07	184.27	0.72
13899.00	91.34	182.57	7309.79	7166.96	-7164.99	181.64	2.12
13993.00	92.22	183.81	7306.87	7260.67	-7258.80	176.41	1.62
14087.00	91.44	183.52	7303.87	7354.33	-7352.56	170.40	0.88
14181.00	89.80	181.25	7302.85	7448.16	-7446.46	166.48	2.98
14275.00	90.17	180.32	7302.88	7542.11	-7540.45	165.19	1.07
14370.00	88.42	179.34	7304.04	7637.09	-7635.44	165.48	2.10
14464.00	87.69	180.09	7307.23	7731.03	-7729.38	165.95	1.11
14558.00	88.56	179.79	7310.31	7824.97	-7823.33	166.05	0.98
14653.00	87.51	179.71	7313.57	7919.91	-7918.27	166.46	1.10
14747.00	88.02	179.81	7317.23	8013.83	-8012.20	166.85	0.55

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
14842.00	88.83	180.13	7319.85	8108.78	-8107.16	166.89	0.91
14936.00	88.52	180.91	7322.02	8202.73	-8201.13	166.04	0.88
15030.00	89.33	180.41	7323.79	8296.68	-8295.11	164.96	1.01
15124.00	89.67	180.88	7324.61	8390.64	-8389.10	163.90	0.61
15219.00	89.87	180.73	7325.00	8485.59	-8484.09	162.57	0.26
15313.00	89.63	180.44	7325.41	8579.56	-8578.08	161.60	0.39
15408.00	89.73	180.58	7325.94	8674.53	-8673.08	160.76	0.17
15502.00	89.60	180.66	7326.49	8768.50	-8767.07	159.74	0.17
15596.00	89.80	181.32	7326.99	8862.44	-8861.05	158.12	0.73
15691.00	89.43	181.11	7327.63	8957.38	-8956.03	156.11	0.45
15785.00	90.17	181.75	7327.96	9051.30	-9050.00	153.77	1.04
15880.00	90.23	180.31	7327.62	9146.24	-9144.98	152.07	1.52
15974.00	89.33	179.56	7327.98	9240.23	-9238.98	152.18	1.25
16069.00	88.99	180.81	7329.37	9335.20	-9333.97	151.87	1.37
16163.00	88.76	181.14	7331.22	9429.13	-9427.93	150.26	0.43
16257.00	89.56	180.27	7332.59	9523.08	-9521.92	149.11	1.27
16352.00	90.54	179.33	7332.51	9618.07	-9616.91	149.44	1.42
16446.00	90.74	179.74	7331.46	9712.06	-9710.90	150.21	0.48
16540.00	90.97	179.52	7330.06	9806.05	-9804.89	150.82	0.34
16635.00	90.97	180.12	7328.44	9901.03	-9899.88	151.12	0.63



MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
16729.00	90.74	180.29	7327.04	9995.00	-9993.86	150.79	0.31
16823.00	89.93	179.91	7326.49	10088.98	-10087.86	150.62	0.95
16917.00	89.13	180.15	7327.26	10182.97	-10181.86	150.57	0.89
17010.00	88.89	180.55	7328.87	10275.93	-10274.84	150.01	0.50
17104.00	88.39	180.43	7331.09	10369.88	-10368.81	149.21	0.55
17136.00	88.32	180.50	7332.01	10401.85	-10400.80	148.95	0.30

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

5" = 100' FEET MD