


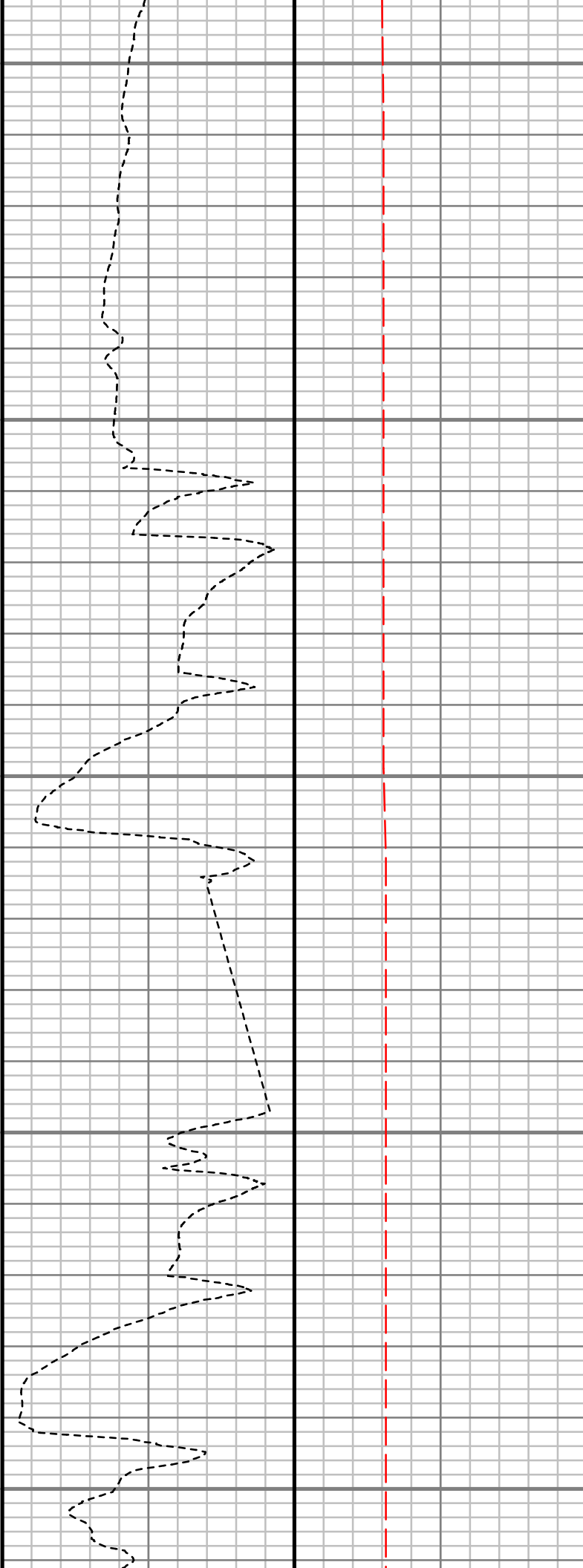
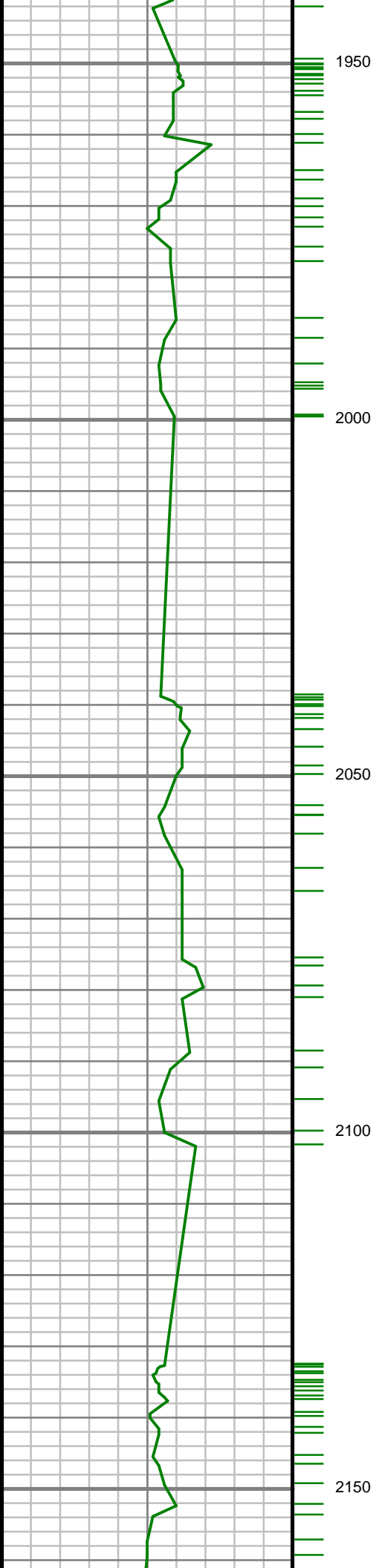


[illegible]

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.

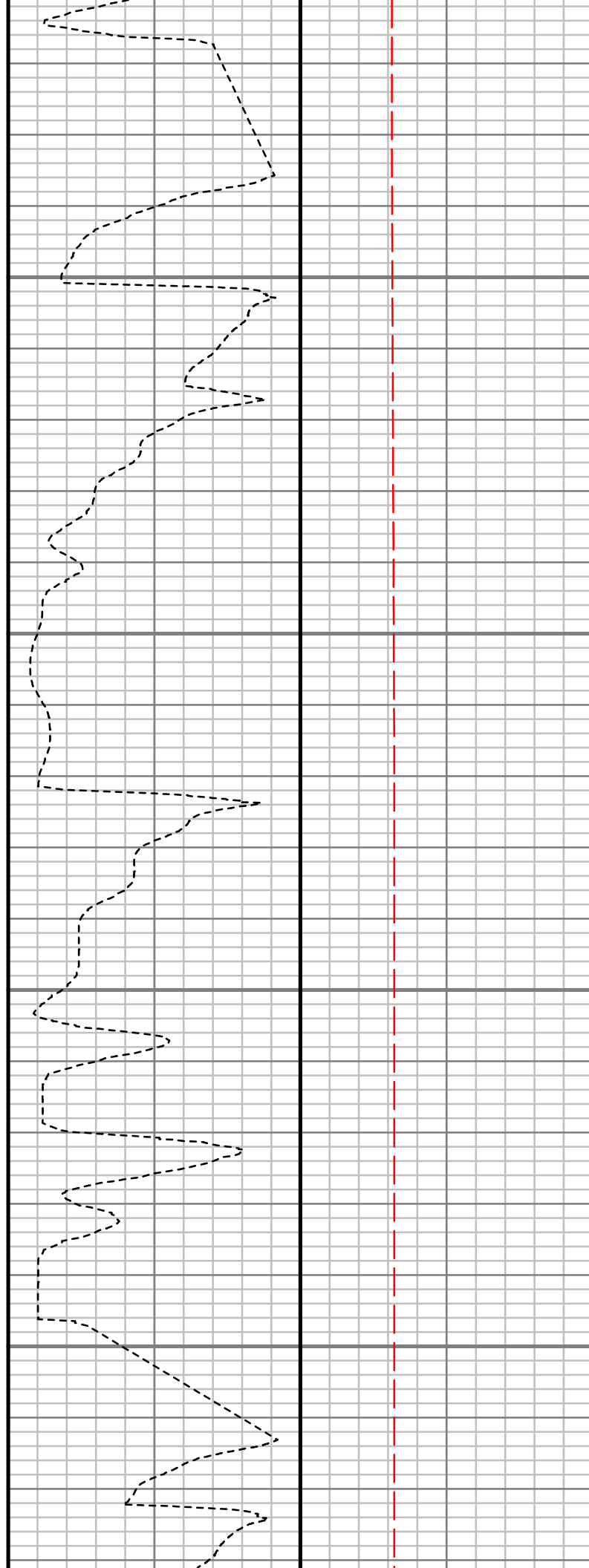
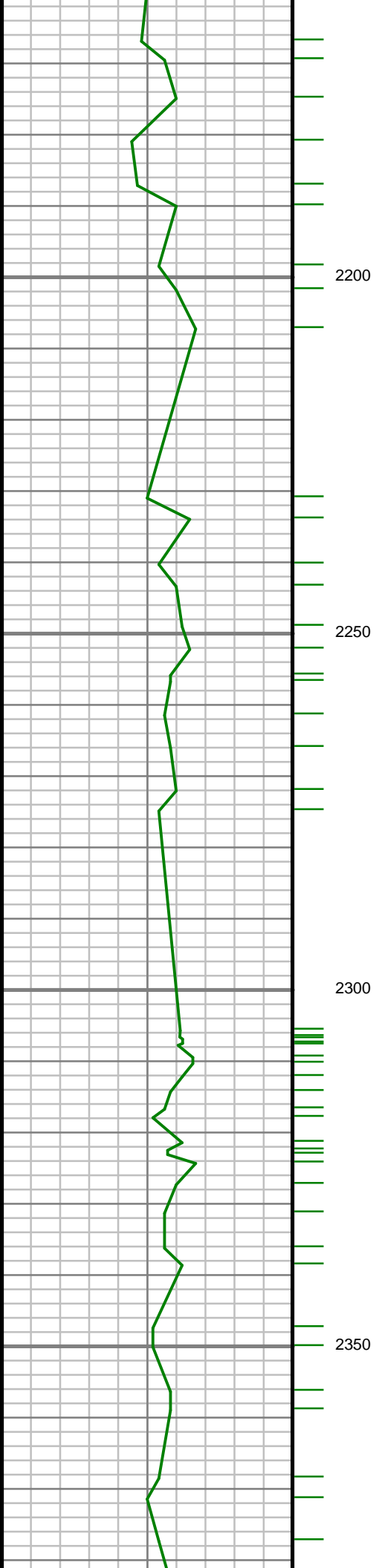
ANADARKO E&P ONSHORE LLC MARRS 28C-10HZ WATTENBERG FIELD WELD COUNTY, COLORADO API # 05123432730000				
Gamma Ray (GR) 0 Unit = aapi 150	MEASURED DEPTH 1:240 (ft)	Rate of Penetration (ROP) 1000 Unit = ft/hr 0	Tool Temperature (TEMP) 0 Unit = °F 300	Comments
				



S: 55 MD: 1945.00 ft
Inc: 10.28 deg Az:
154.29 deg TVD:
1908.45 ft

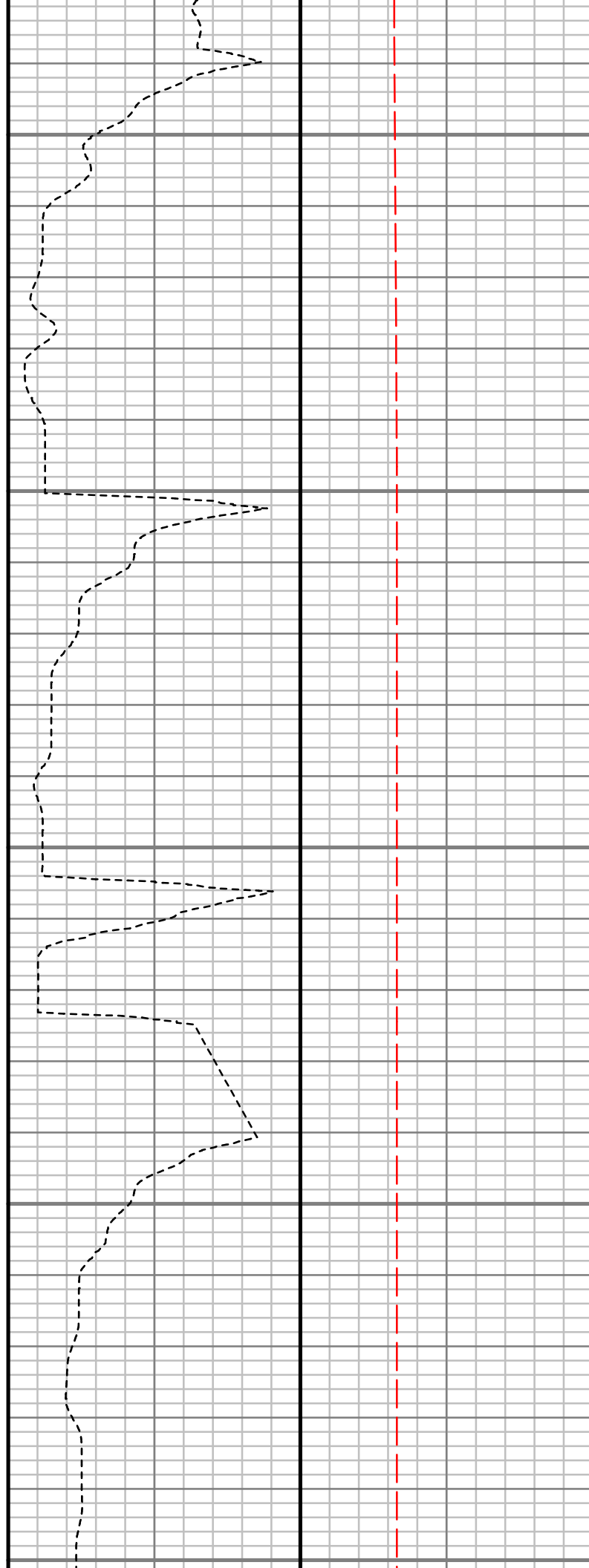
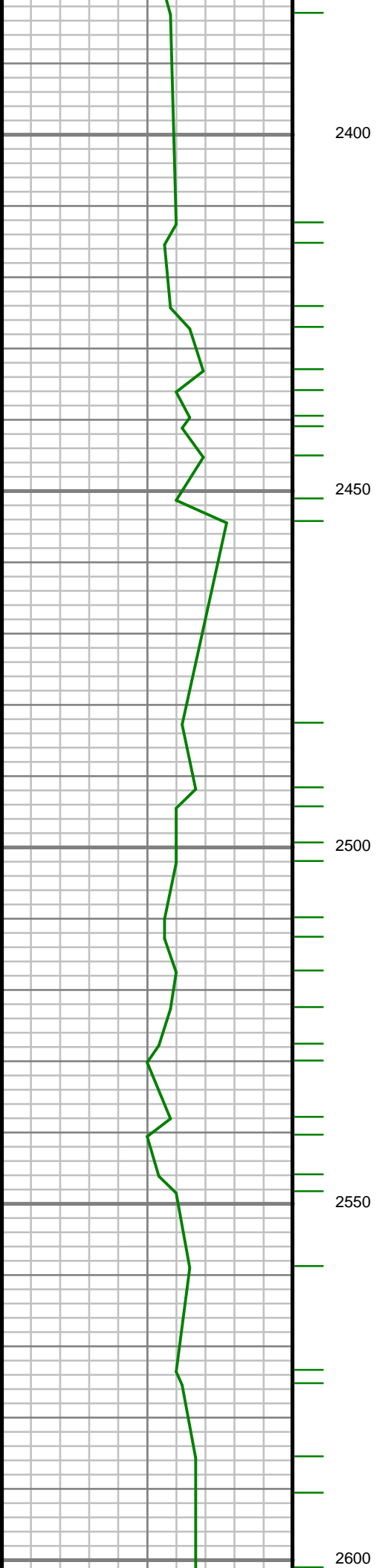
S: 56 MD: 2034.00 ft
Inc: 9.07 deg Az:
169.99 deg TVD:
1996.19 ft

S: 57 MD: 2123.00 ft
Inc: 9.78 deg Az:
180.85 deg TVD:
2084.00 ft



S: 58 MD: 2212.00 ft
Inc: 11.26 deg Az:
183.66 deg TVD:
2171.50 ft

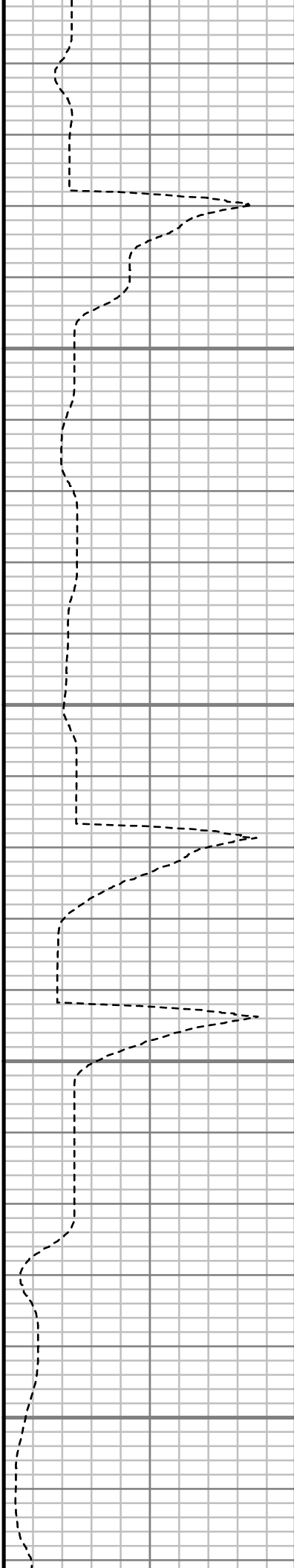
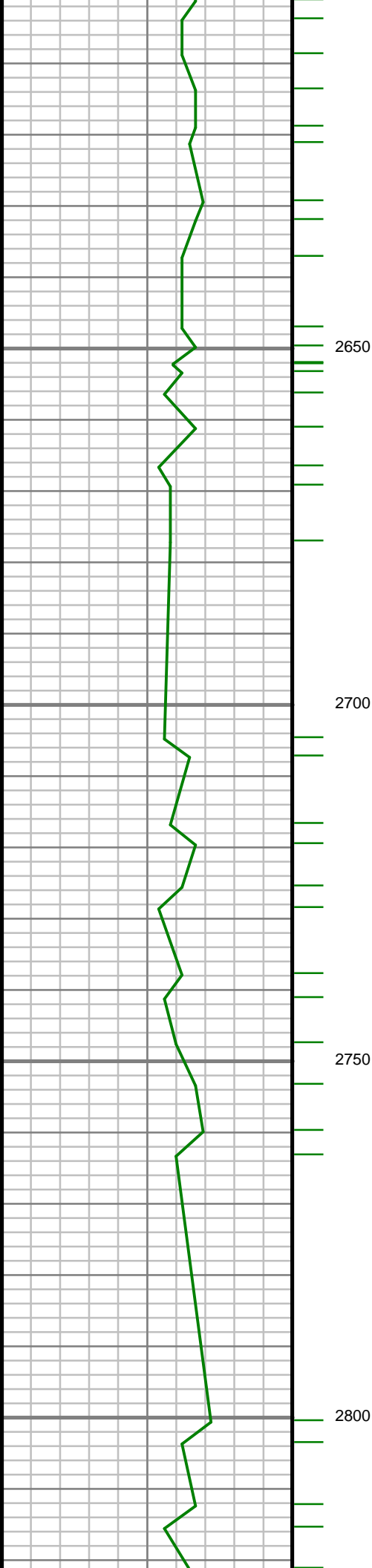
S: 59 MD: 2301.00 ft
Inc: 11.06 deg Az:
182.83 deg TVD:
2258.82 ft



S: 60 MD: 2390.00 ft
Inc: 12.57 deg Az:
180.25 deg TVD:
2345.93 ft

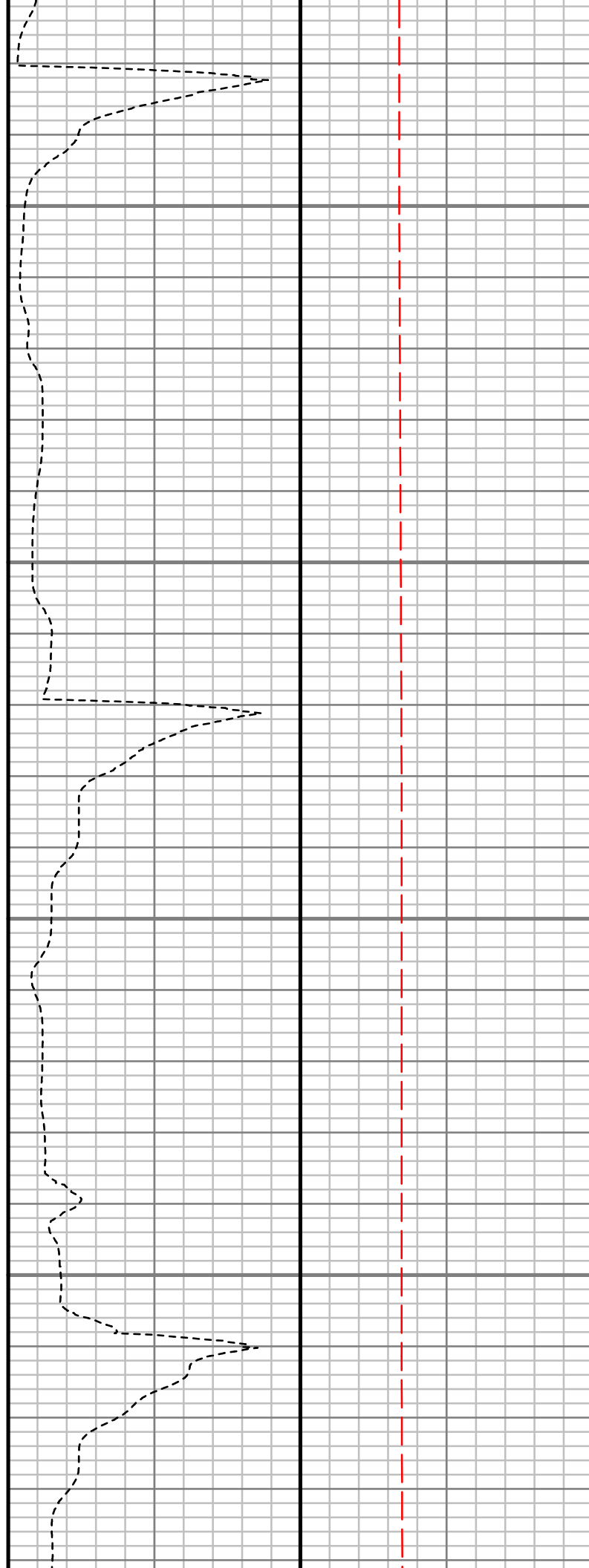
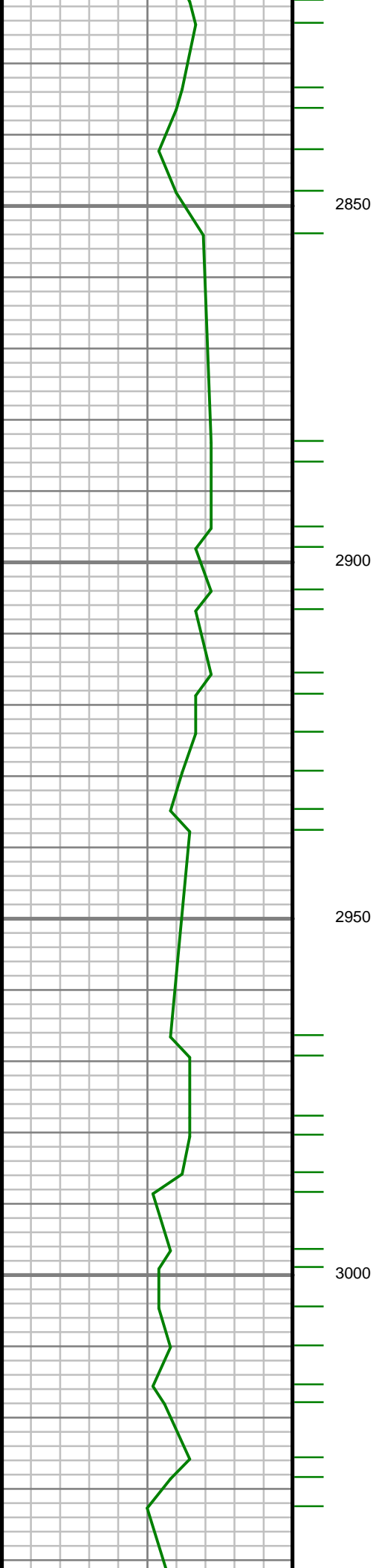
S: 61 MD: 2478.00 ft
Inc: 11.93 deg Az:
176.88 deg TVD:
2431.93 ft

S: 62 MD: 2567.00 ft
Inc: 11.40 deg Az:
176.39 deg TVD:
2519.09 ft



S: 63 MD: 2655.00 ft
Inc: 10.53 deg Az:
173.90 deg TVD:
2605.48 ft

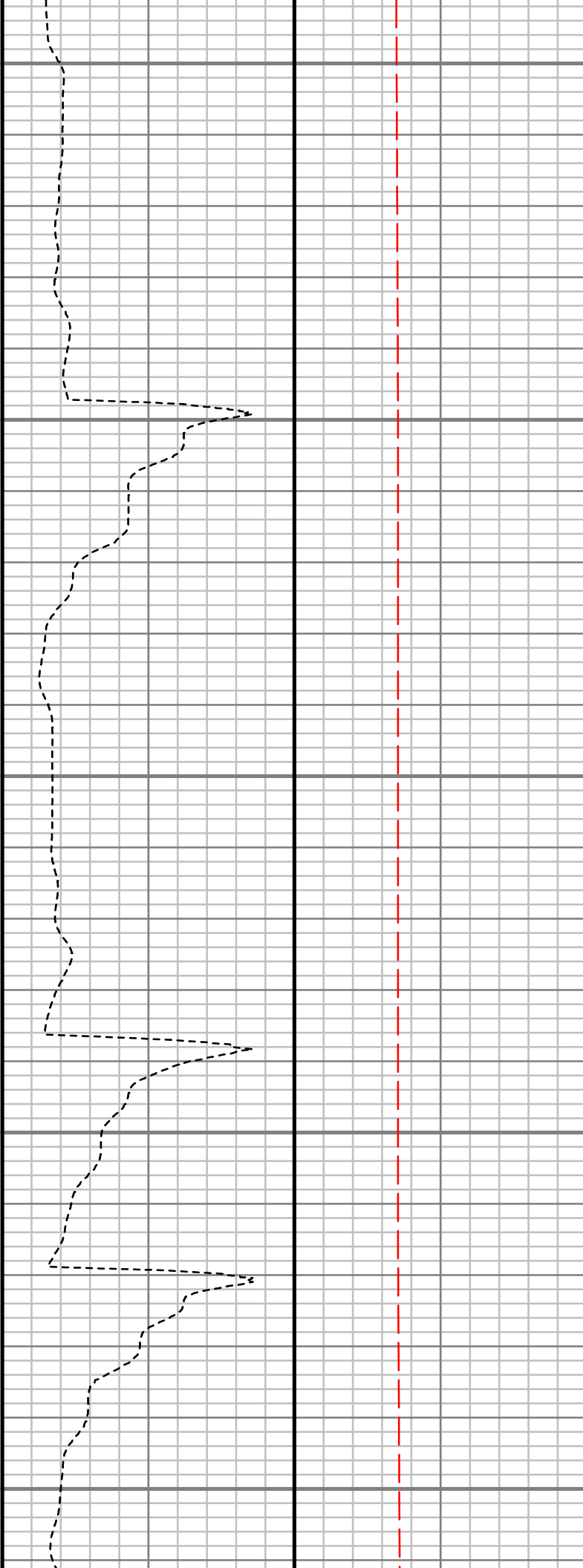
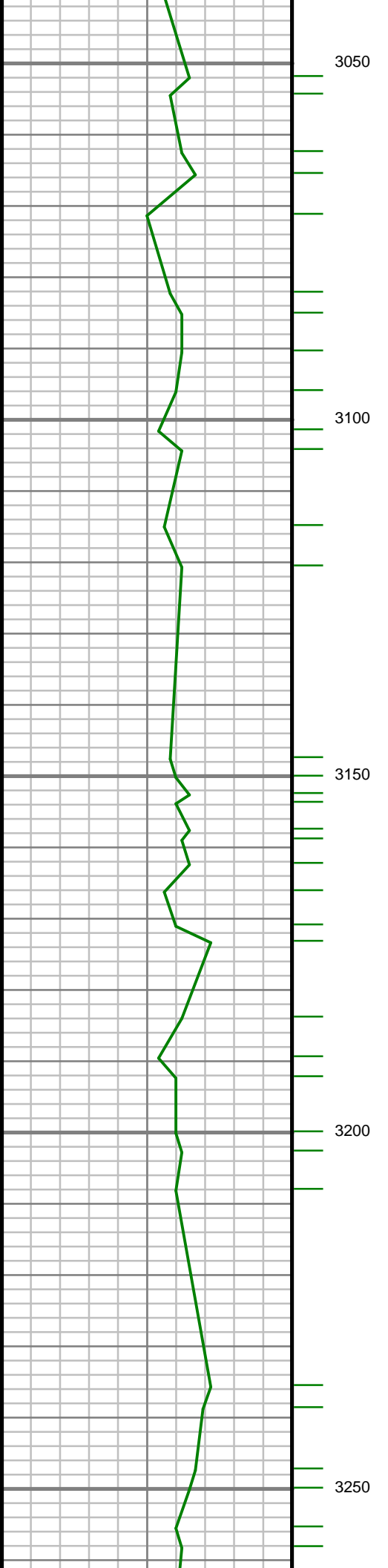
S: 64 MD: 2770.00 ft
Inc: 9.18 deg Az:
173.43 deg TVD:
2718.78 ft



S: 65 MD: 2858.00 ft
Inc: 8.39 deg Az:
169.55 deg TVD:
2805.75 ft

S: 66 MD: 2947.00 ft
Inc: 7.52 deg Az:
166.00 deg TVD:
2893.89 ft

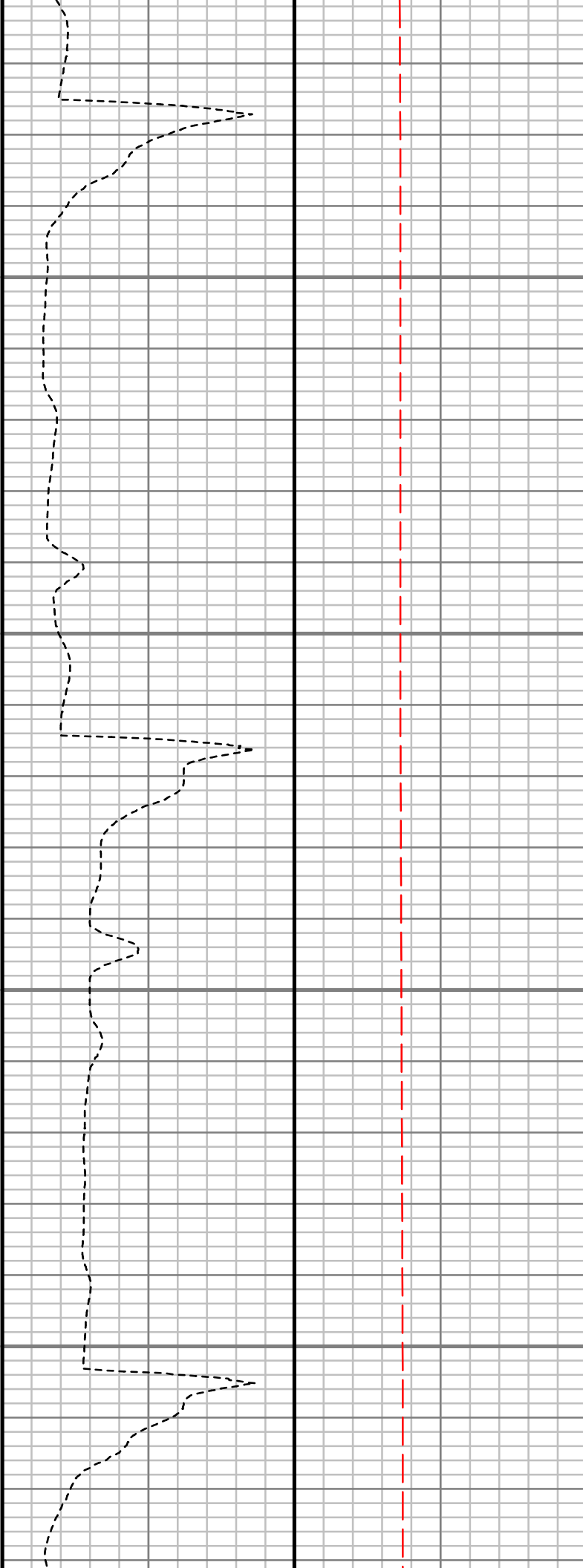
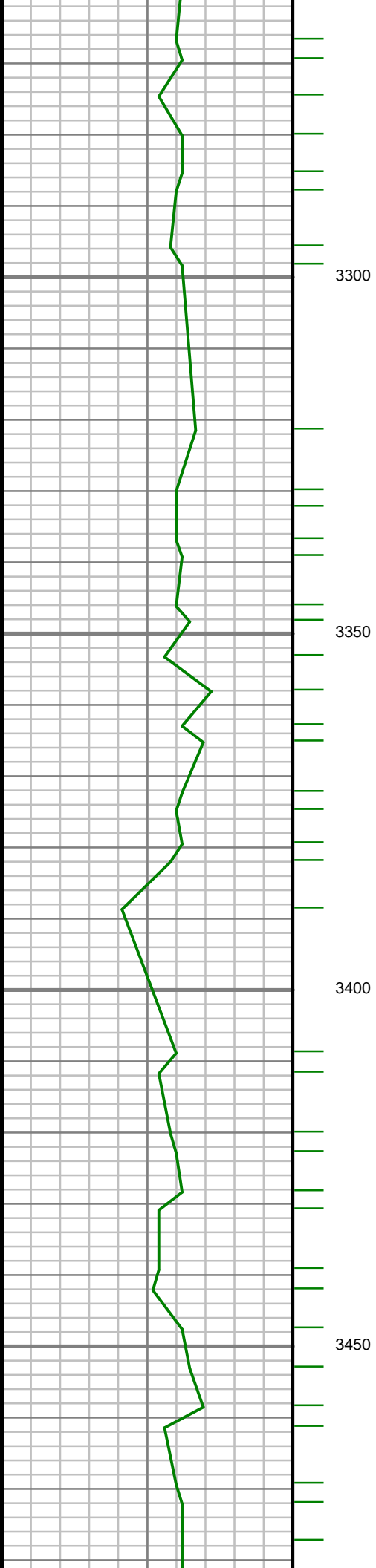
S: 67 MD: 3036.00 ft
Inc: 6.59 deg Az:



164.37 deg TVD:
2982.22 ft

S: 68 MD: 3125.00 ft
Inc: 6.04 deg Az:
168.70 deg TVD:
3070.68 ft

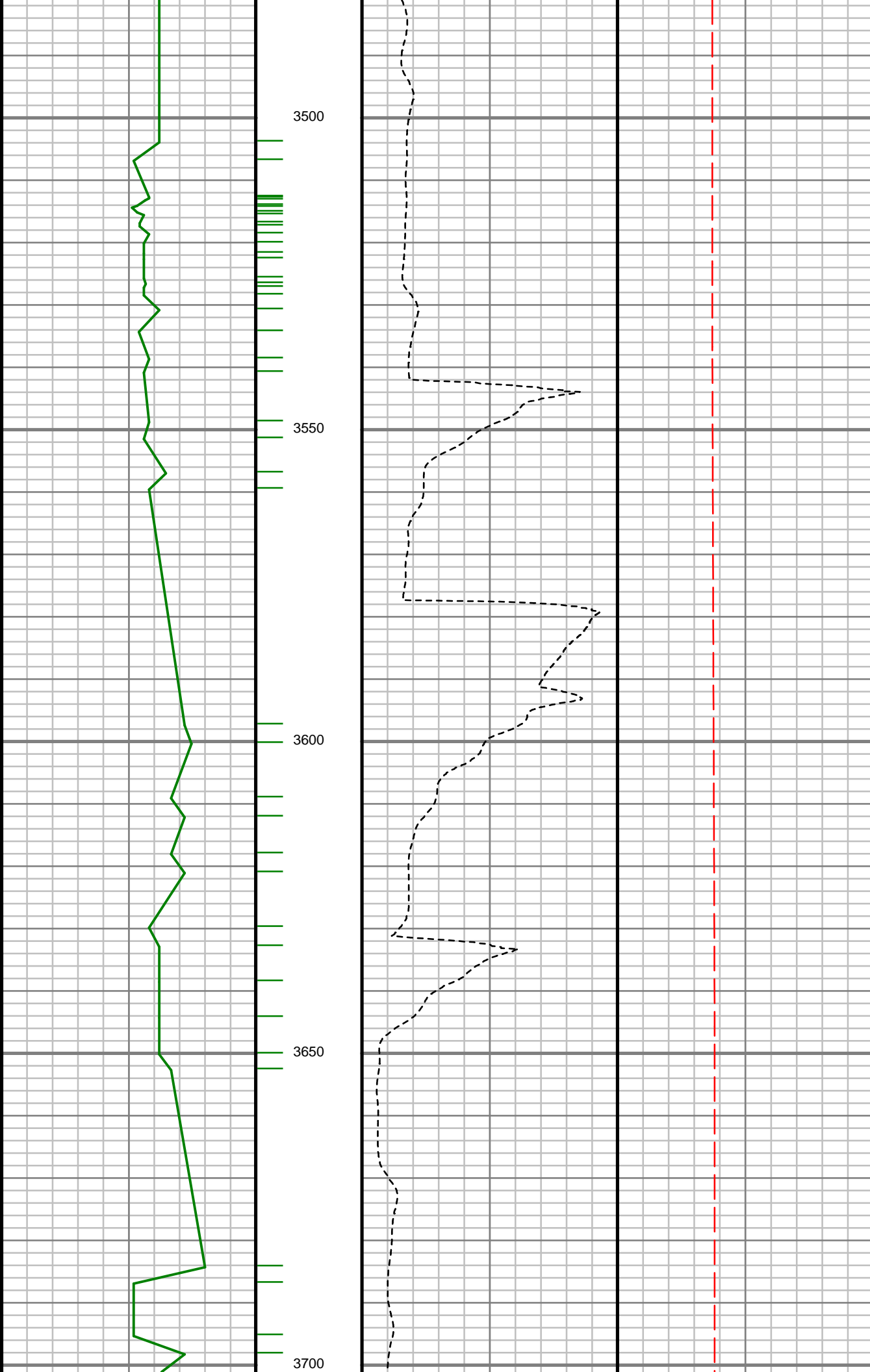
S: 69 MD: 3213.00 ft
Inc: 5.22 deg Az:
171.53 deg TVD:
3158.25 ft



S: 70 MD: 3302.00 ft
Inc: 4.75 deg Az:
170.96 deg TVD:
3246.92 ft

S: 71 MD: 3390.00 ft
Inc: 4.13 deg Az:
177.92 deg TVD:
3334.65 ft

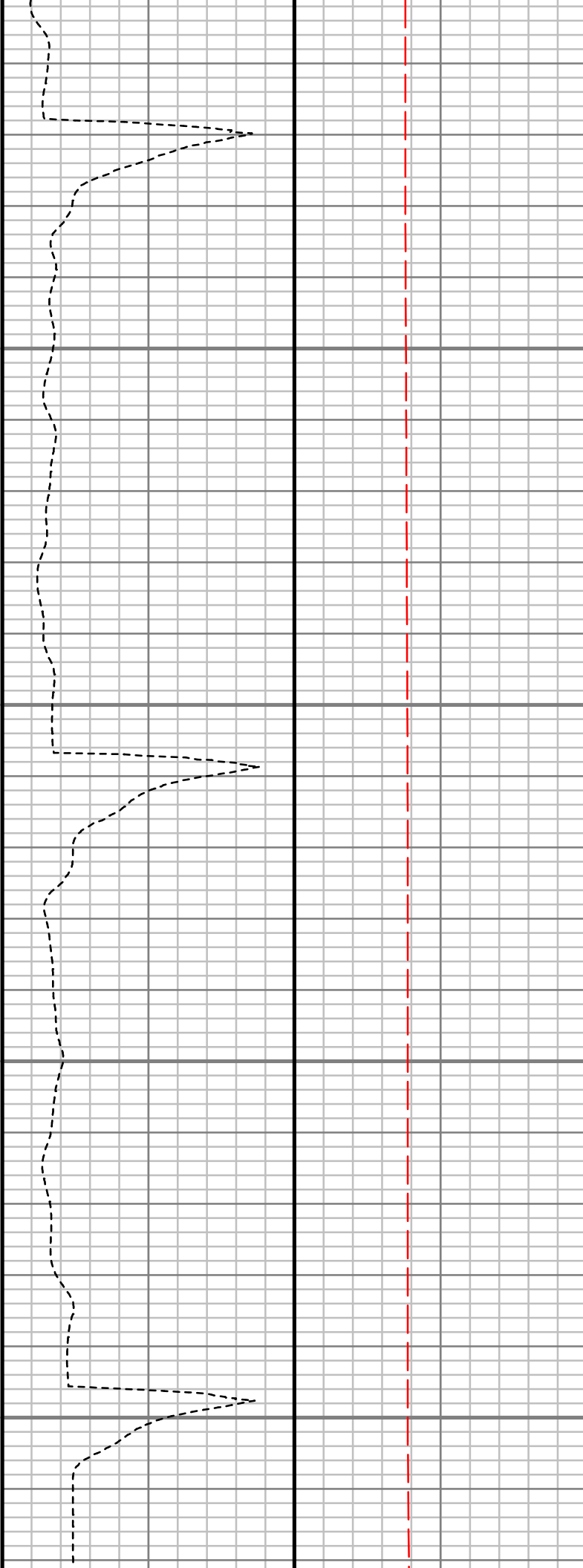
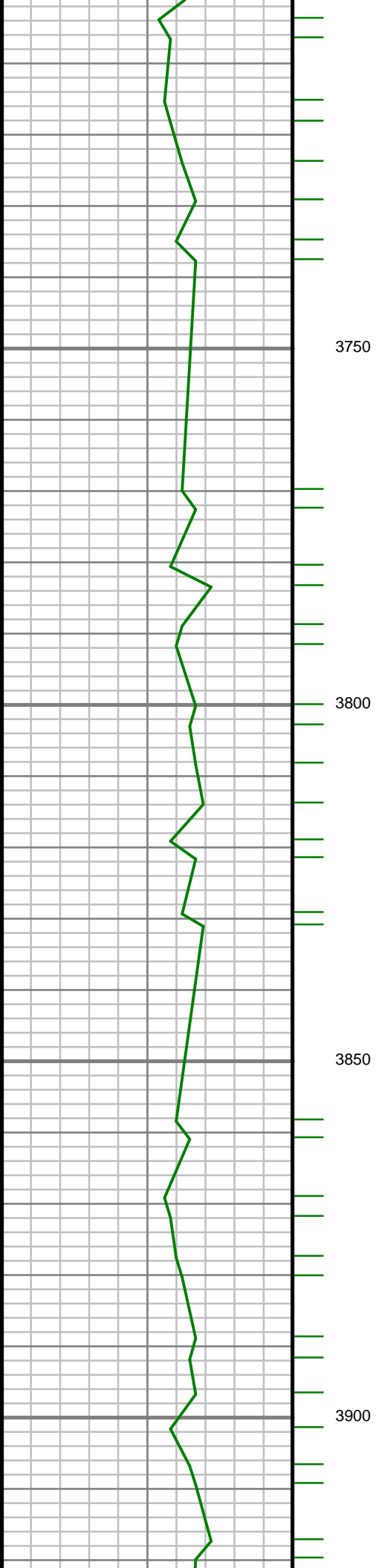
S: 72 MD: 3479.00 ft



Inc: 3.93 deg Az:
179.61 deg TVD:
3423.43 ft

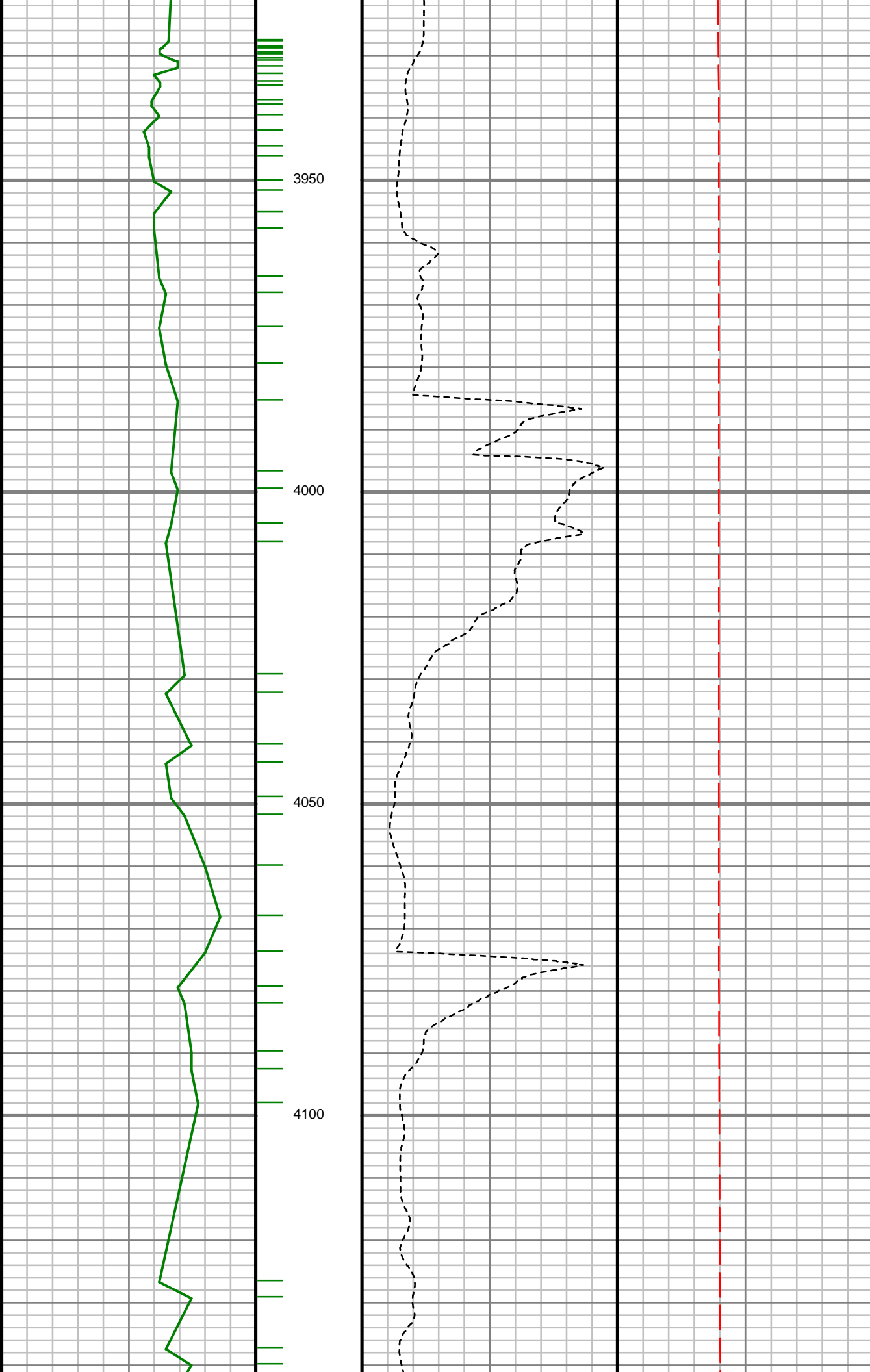
S: 73 MD: 3568.00 ft
Inc: 2.57 deg Az:
189.35 deg TVD:
3512.29 ft

S: 74 MD: 3657.00 ft
Inc: 0.84 deg Az:
240.39 deg TVD:
3601.25 ft



S: 75 MD: 3745.00 ft
Inc: 0.93 deg Az:
248.75 deg TVD:
3689.24 ft

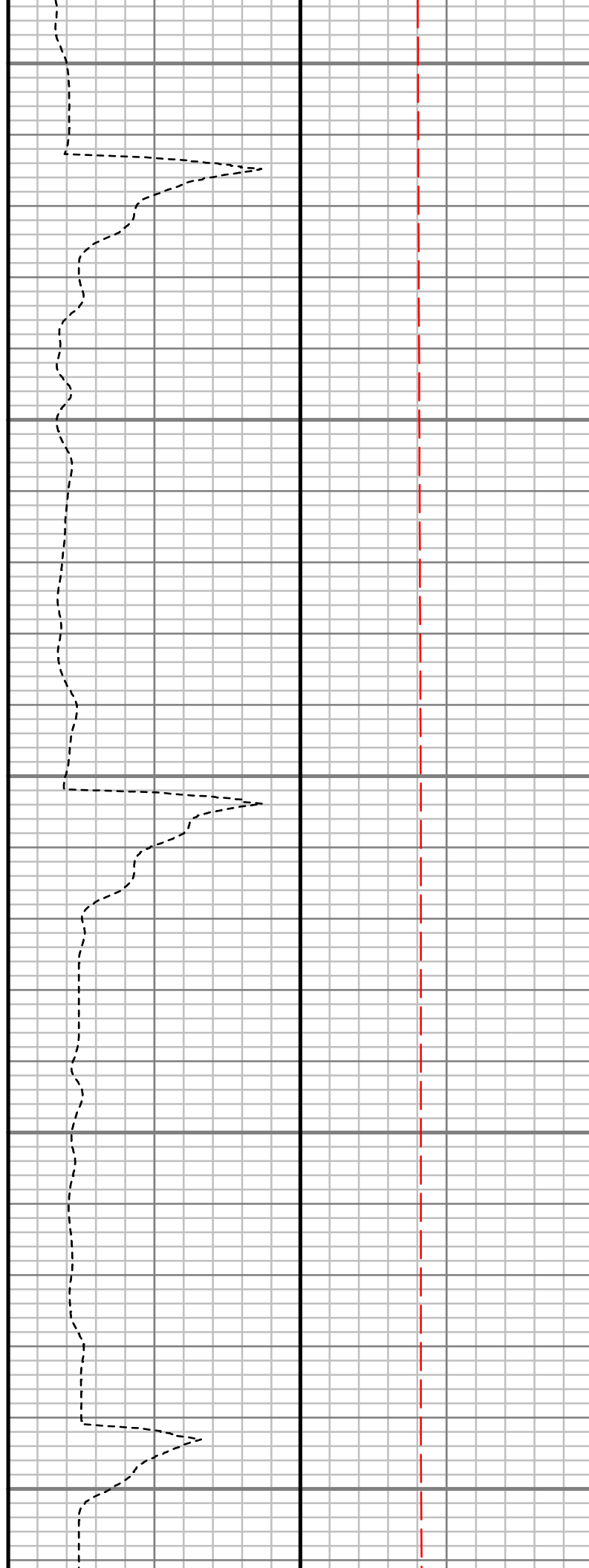
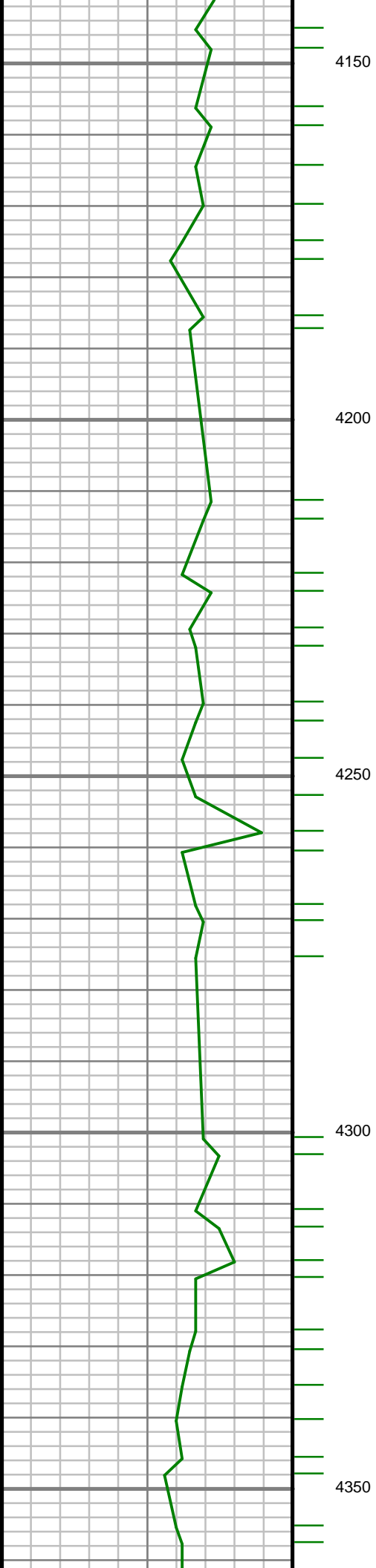
S: 76 MD: 3834.00 ft
Inc: 0.66 deg Az:
230.61 deg TVD:
3778.23 ft



S: 77 MD: 3923.00 ft
Inc: 0.77 deg Az:
248.47 deg TVD:
3867.22 ft

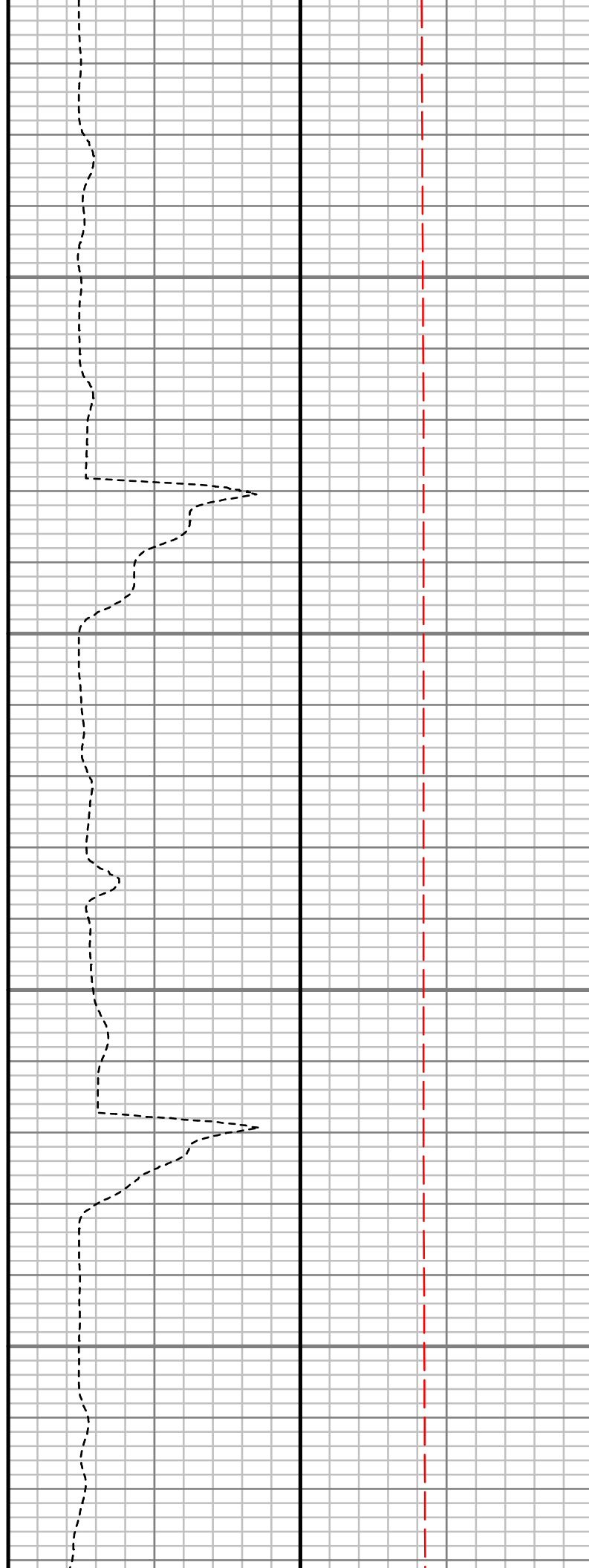
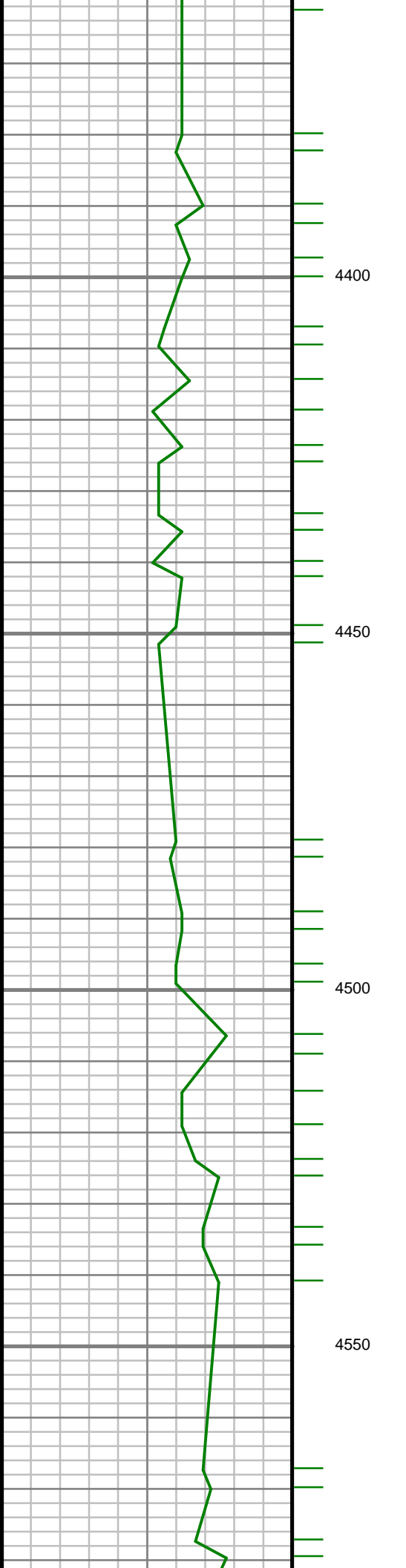
S: 78 MD: 4012.00 ft
Inc: 1.56 deg Az:
316.86 deg TVD:
3956.21 ft

S: 79 MD: 4101.00 ft
Inc: 1.74 deg Az:
305.58 deg TVD:
4045.17 ft



S: 80 MD: 4189.00 ft
Inc: 1.67 deg Az:
304.73 deg TVD:
4133.13 ft

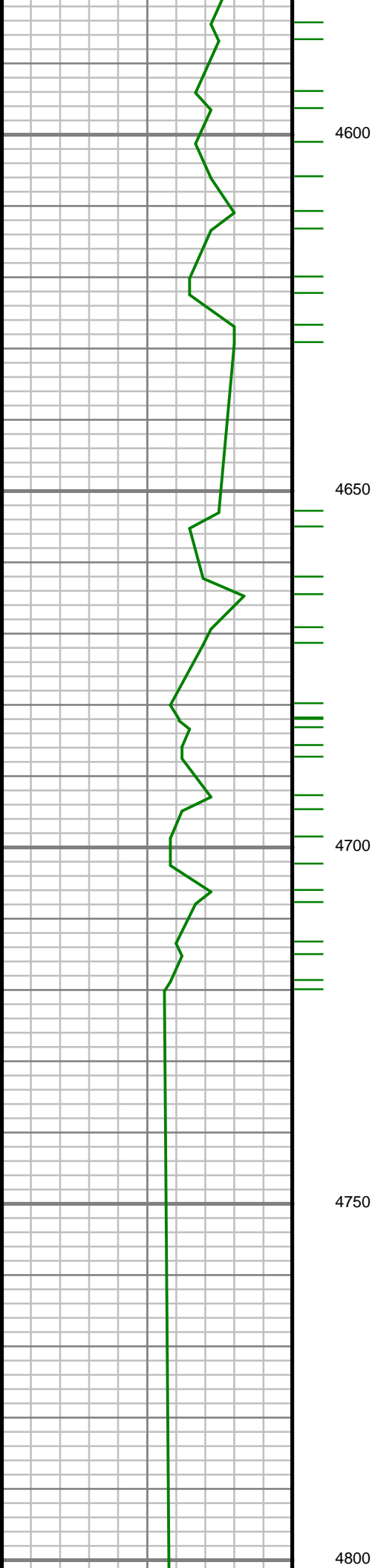
S: 81 MD: 4278.00 ft
Inc: 1.93 deg Az:
295.48 deg TVD:
4222.09 ft



S: 82 MD: 4367.00 ft
Inc: 1.99 deg Az:
304.57 deg TVD:
4311.04 ft

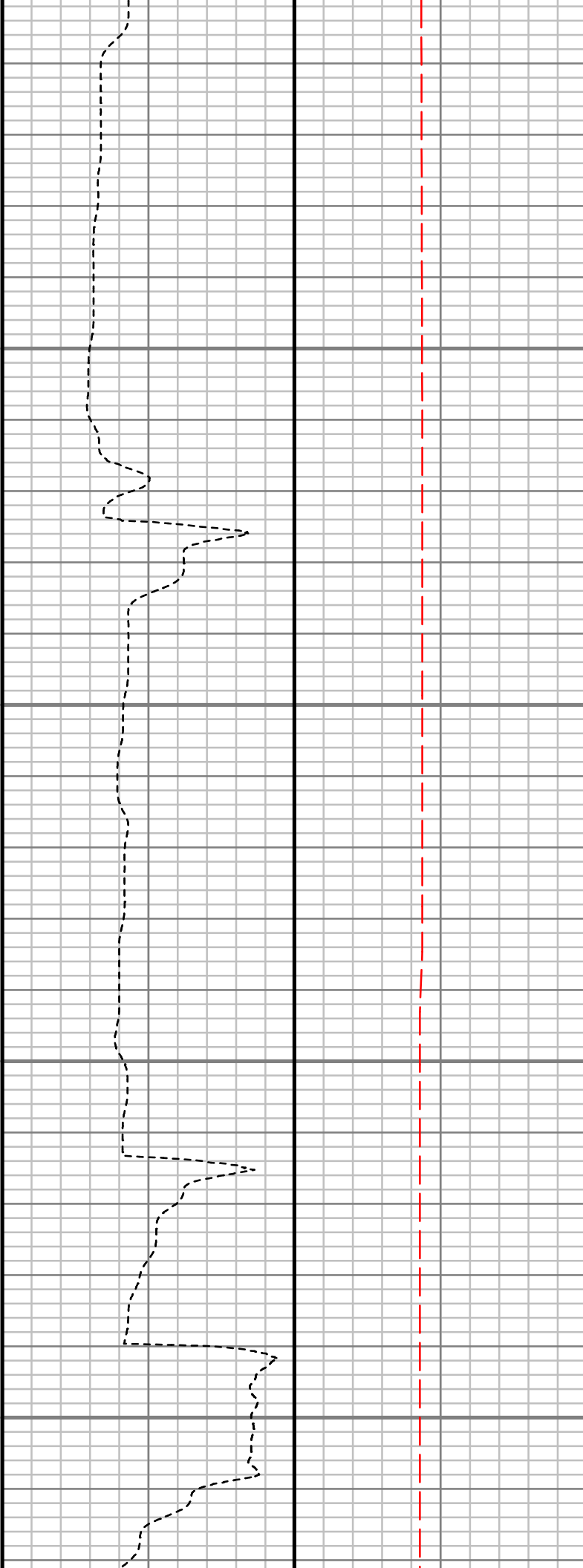
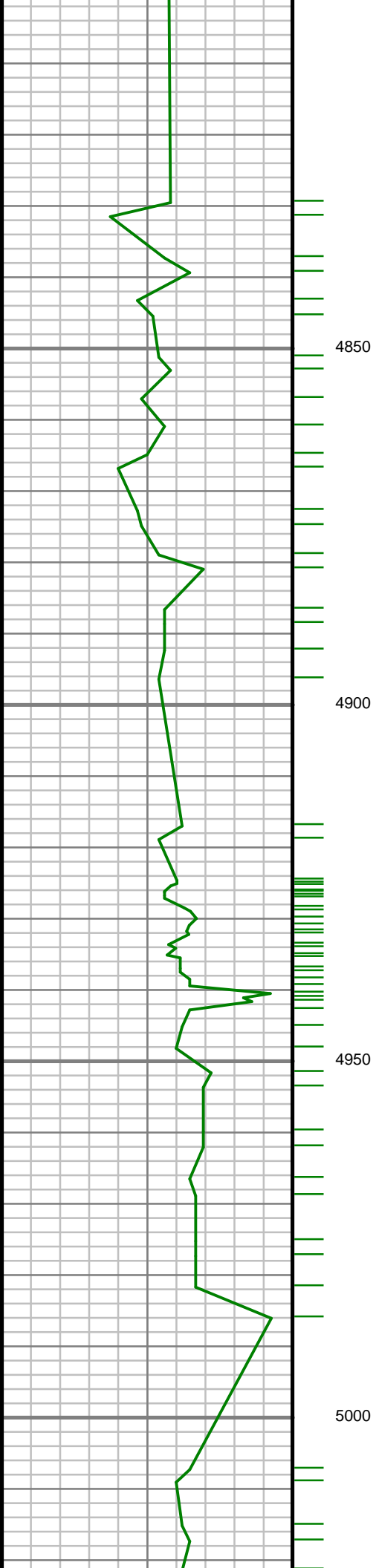
S: 83 MD: 4456.00 ft
Inc: 2.27 deg Az:
297.40 deg TVD:
4399.97 ft

S: 84 MD: 4544.00 ft
Inc: 2.05 deg Az:
303.42 deg TVD:
4487.91 ft



S: 85 MD: 4633.00 ft
Inc: 1.73 deg Az:
307.62 deg TVD:
4576.86 ft

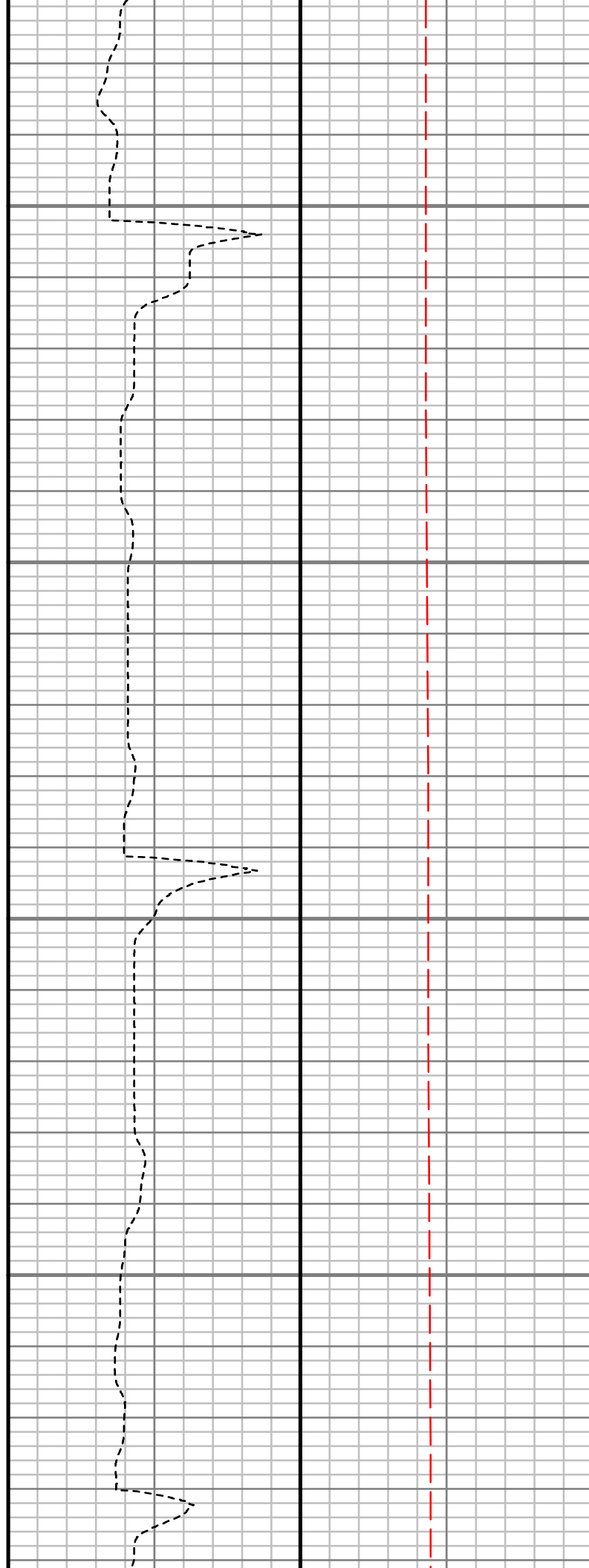
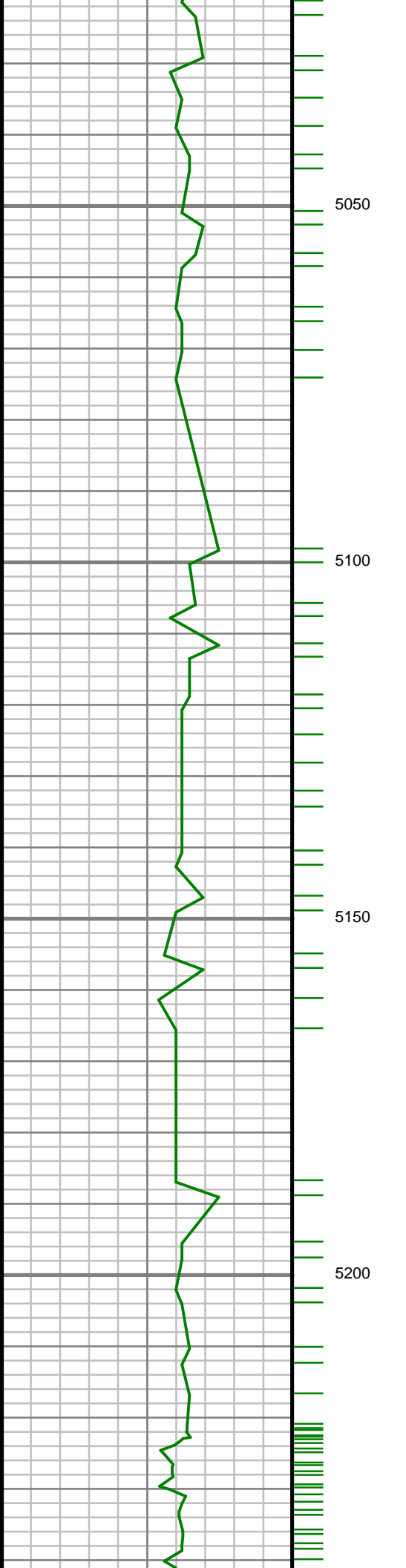
S: 86 MD: 4722.00 ft
Inc: 1.45 deg Az:
303.21 deg TVD:
4665.83 ft



S: 87 MD: 4811.00 ft
Inc: 1.51 deg Az:
304.52 deg TVD:
4754.80 ft

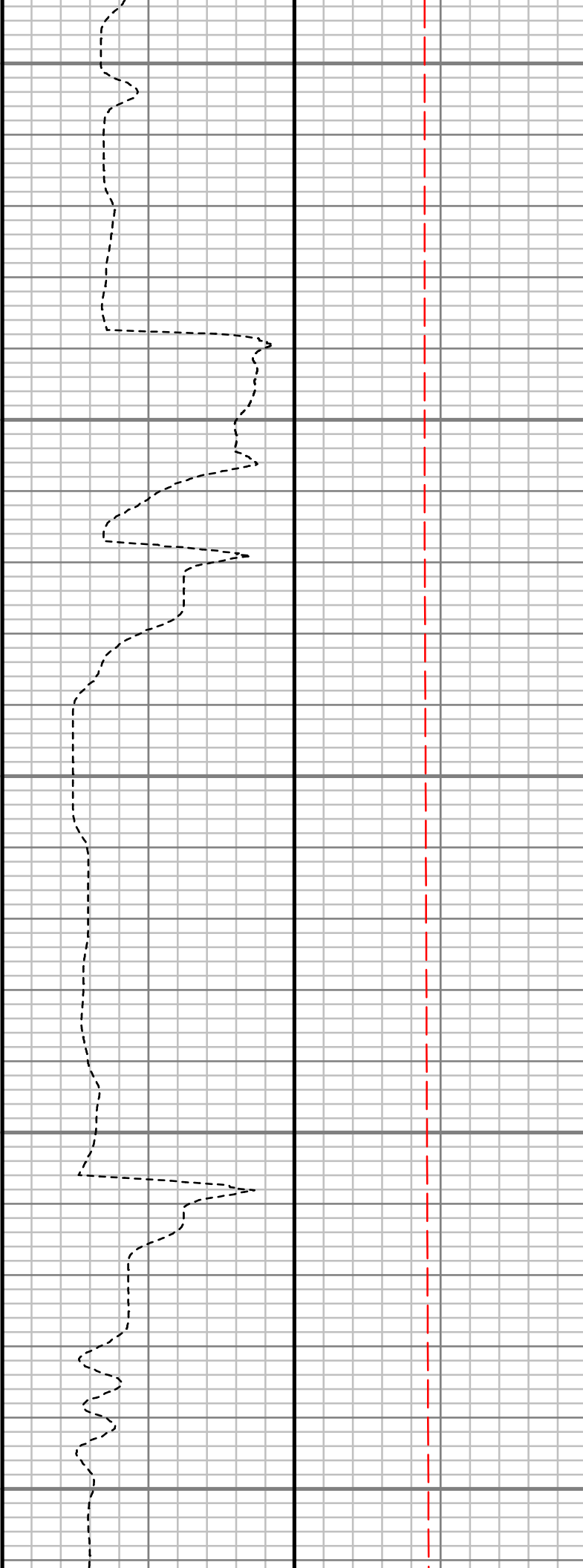
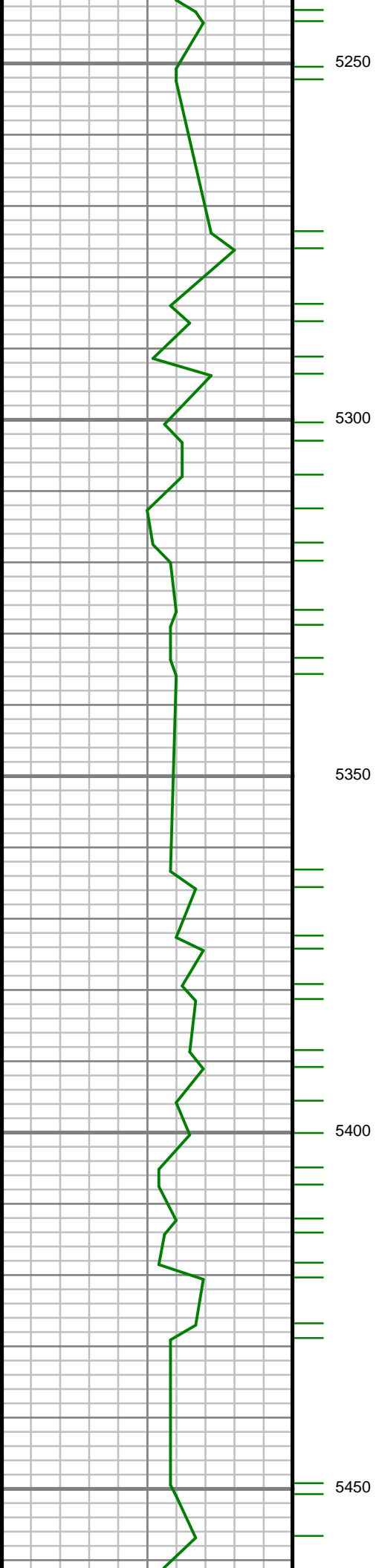
S: 88 MD: 4900.00 ft
Inc: 1.76 deg Az:
291.81 deg TVD:
4843.76 ft

S: 89 MD: 4989.00 ft
Inc: 1.19 deg Az:
316.53 deg TVD:
4932.73 ft



S: 90 MD: 5078.00 ft
Inc: 0.83 deg Az:
357.97 deg TVD:
5021.72 ft

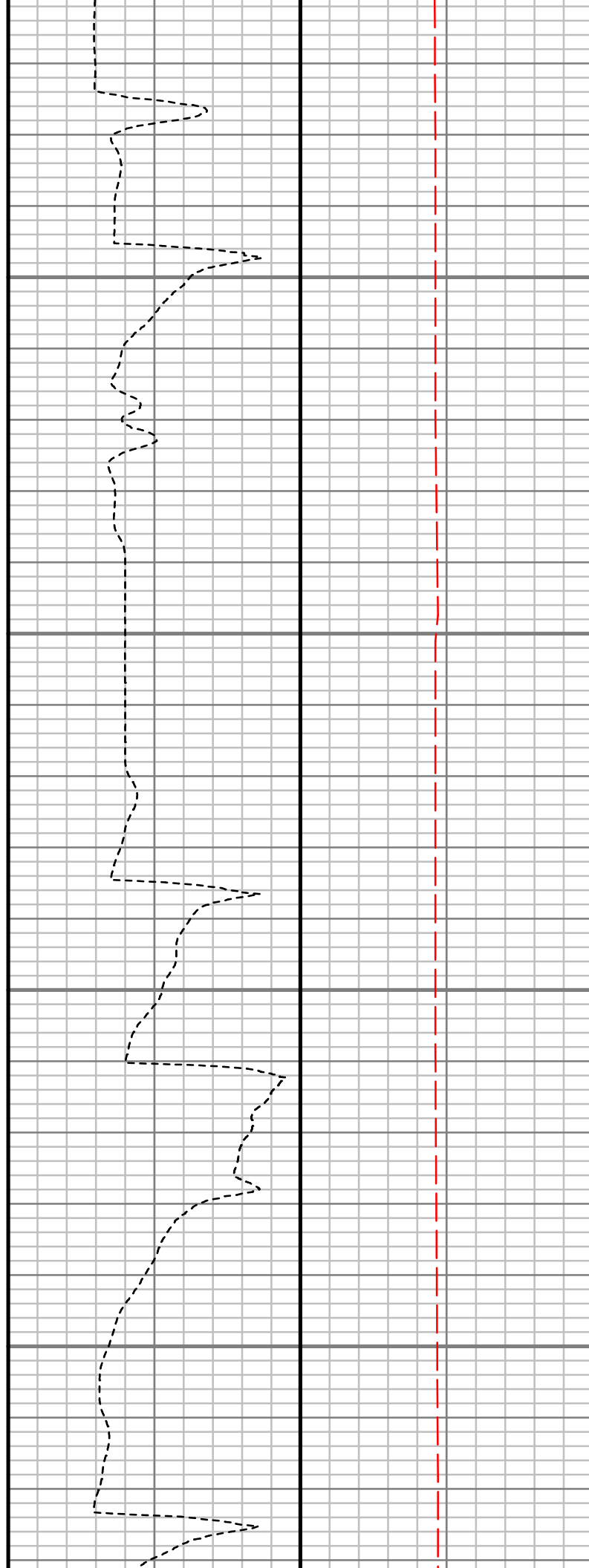
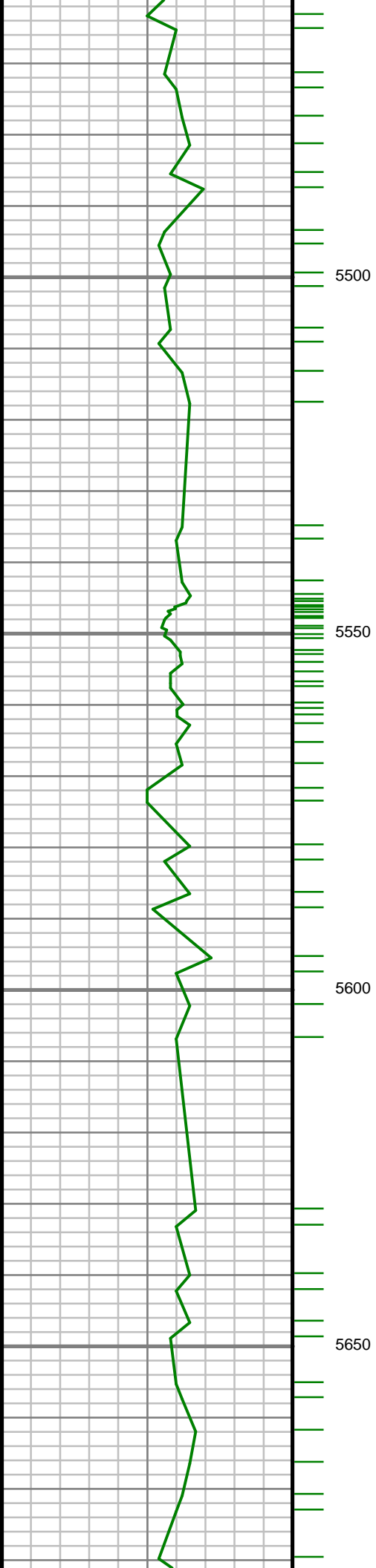
S: 91 MD: 5167.00 ft
Inc: 0.53 deg Az:
292.01 deg TVD:
5110.72 ft



S: 92 MD: 5255.00 ft
Inc: 0.95 deg Az:
283.13 deg TVD:
5198.71 ft

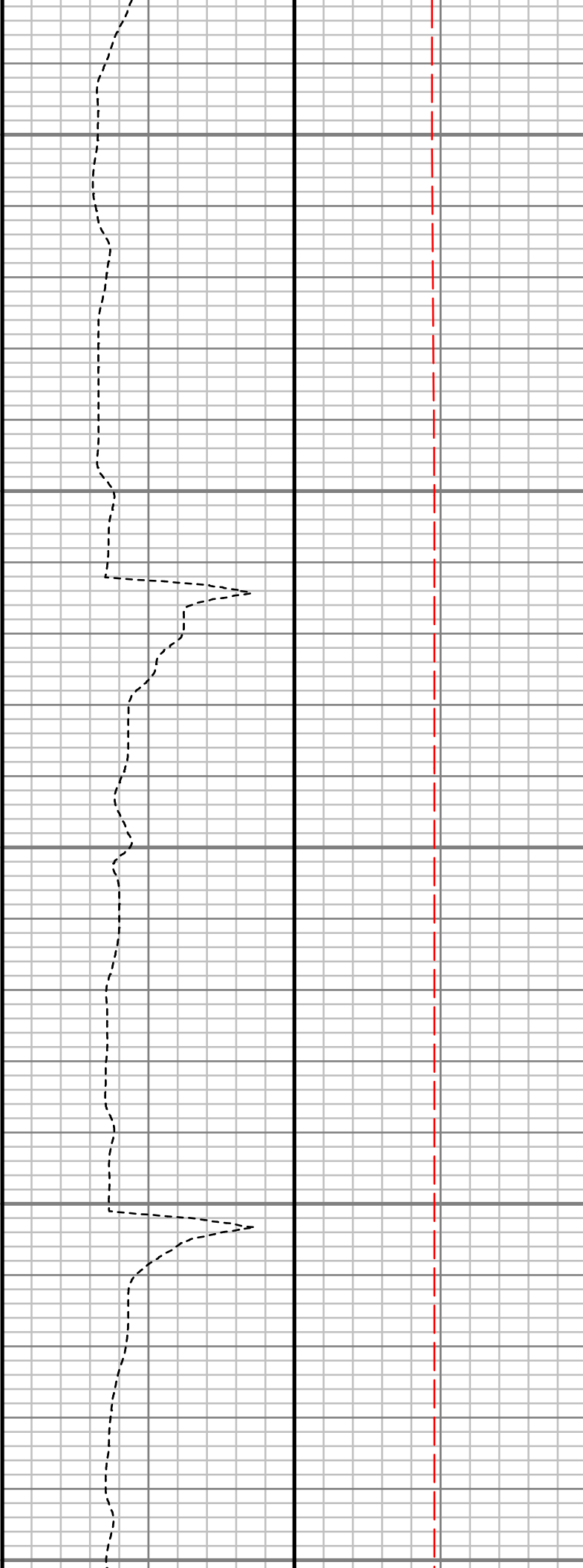
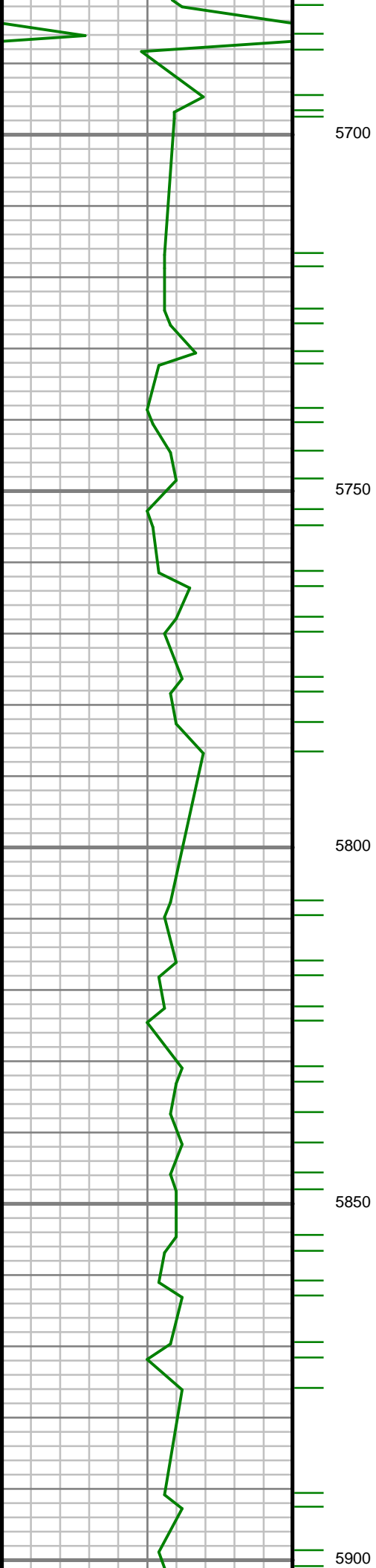
S: 93 MD: 5344.00 ft
Inc: 0.77 deg Az:
121.65 deg TVD:
5287.71 ft

S: 94 MD: 5433.00 ft
Inc: 0.71 deg Az:
217.49 deg TVD:
5376.70 ft



S: 95 MD: 5522.00 ft
Inc: 1.17 deg Az:
262.79 deg TVD:
5465.69 ft

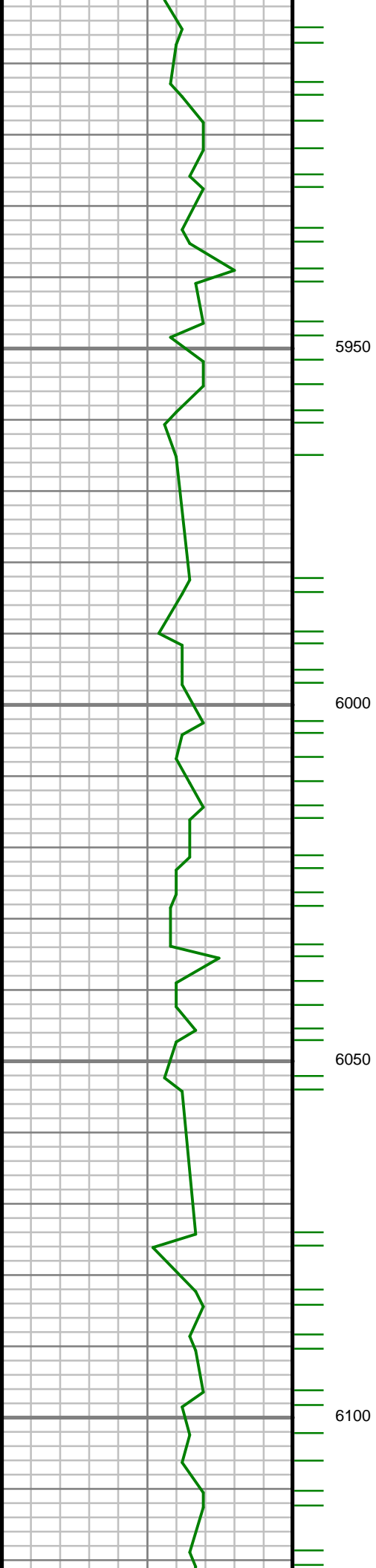
S: 96 MD: 5611.00 ft
Inc: 0.82 deg Az:
203.20 deg TVD:
5554.68 ft



S: 97 MD: 5700.00 ft
Inc: 1.85 deg Az:
137.76 deg TVD:
5643.66 ft

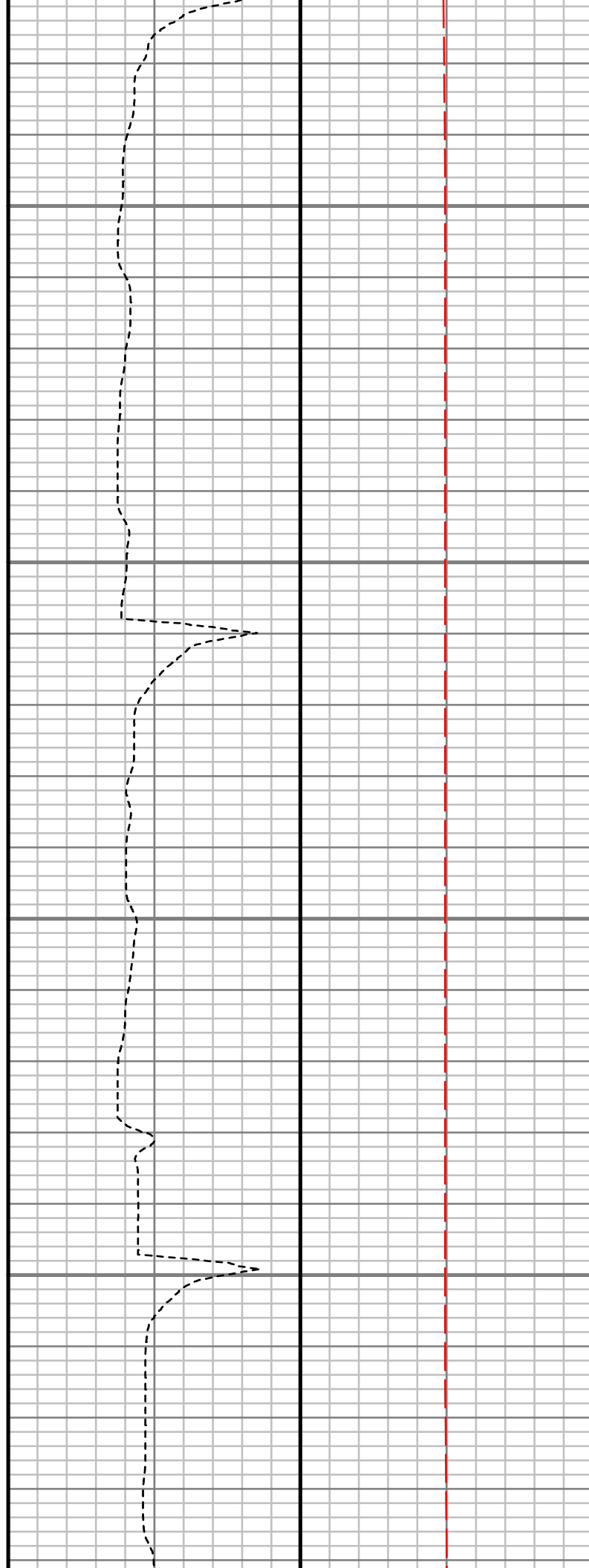
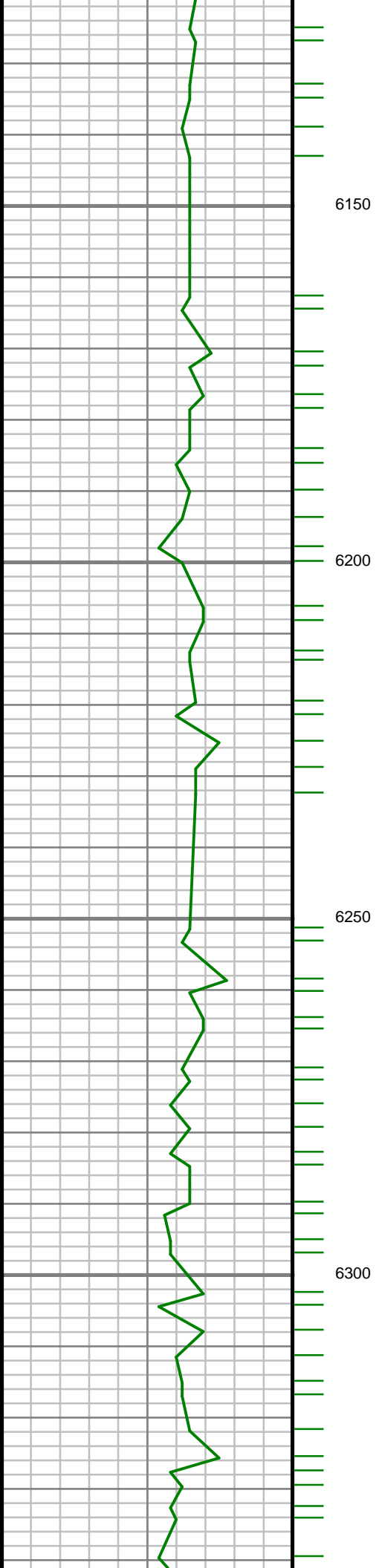
S: 98 MD: 5788.00 ft
Inc: 1.40 deg Az:
124.46 deg TVD:
5731.62 ft

S: 99 MD: 5877.00 ft
Inc: 1.24 deg Az:
120.17 deg TVD:
5820.60 ft



S: 100 MD: 5966.00 ft
Inc: 0.76 deg Az:
113.63 deg TVD:
5909.58 ft

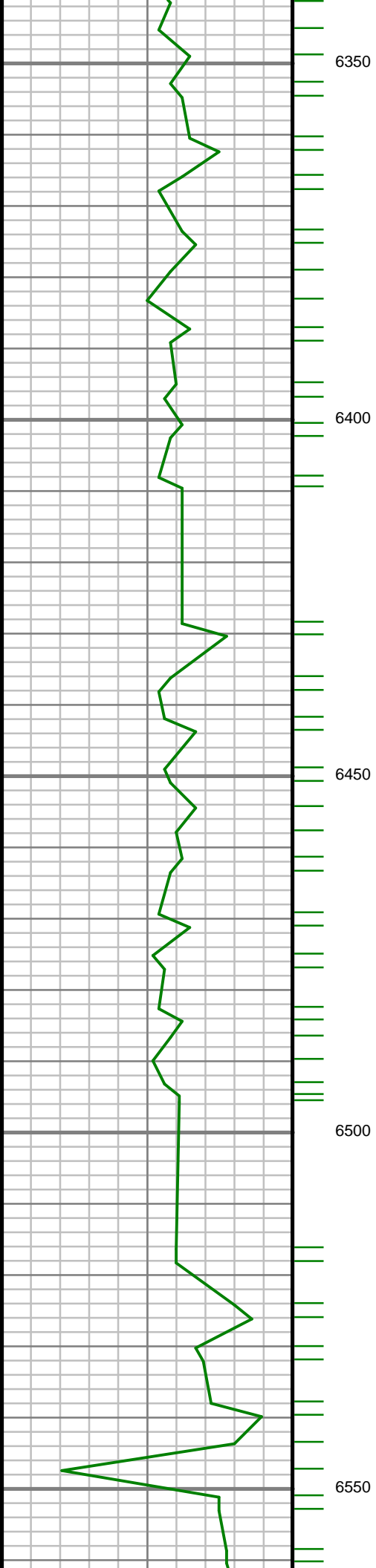
S: 101 MD: 6055.00 ft
Inc: 0.78 deg Az:
124.50 deg TVD:
5998.58 ft



S: 102 MD: 6144.00 ft
Inc: 0.90 deg Az: 95.64
deg TVD: 6087.57 ft

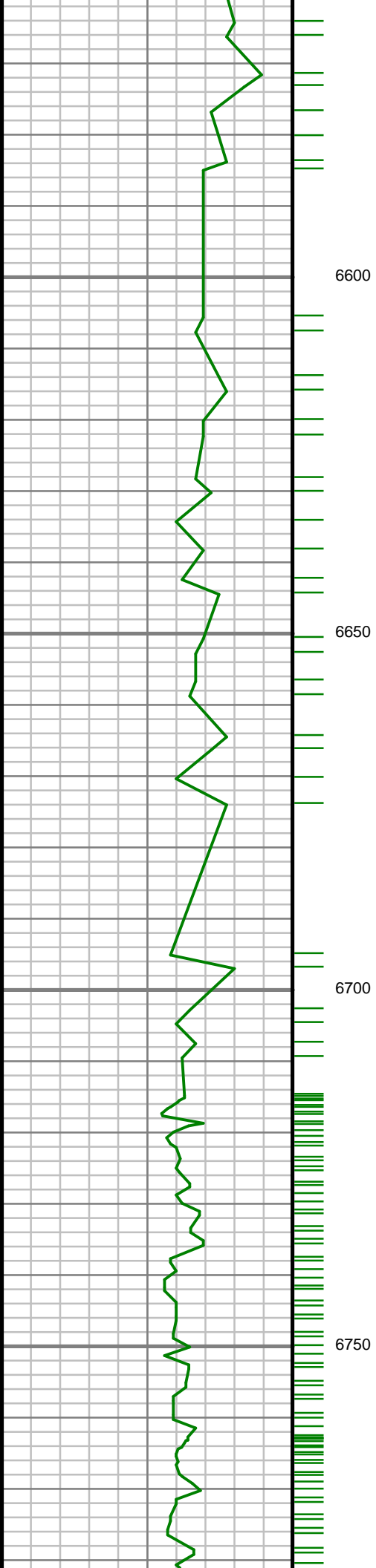
S: 103 MD: 6232.00 ft
Inc: 1.11 deg Az: 99.98
deg TVD: 6175.55 ft

S: 104 MD: 6321.00 ft
Inc: 0.84 deg Az: 90.35
deg TVD: 6264.54 ft



S: 105 MD: 6410.00 ft
Inc: 0.50 deg Az: 96.55
deg TVD: 6353.53 ft

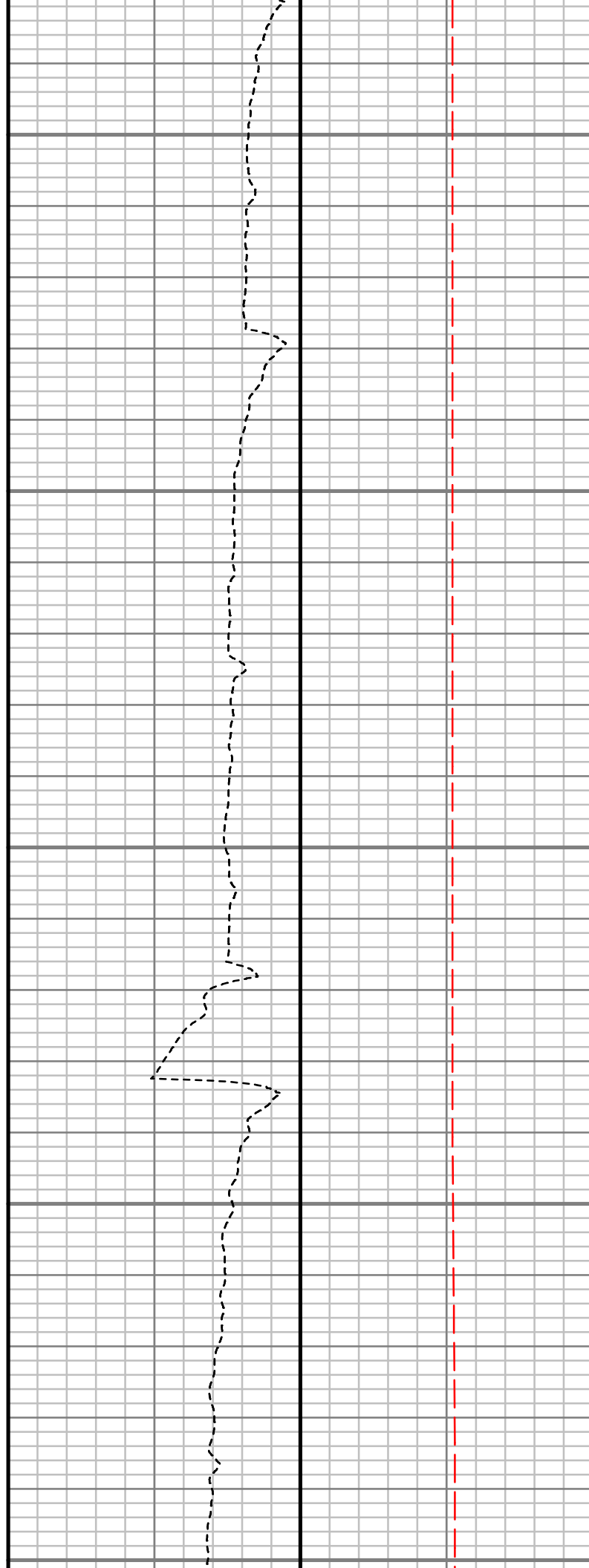
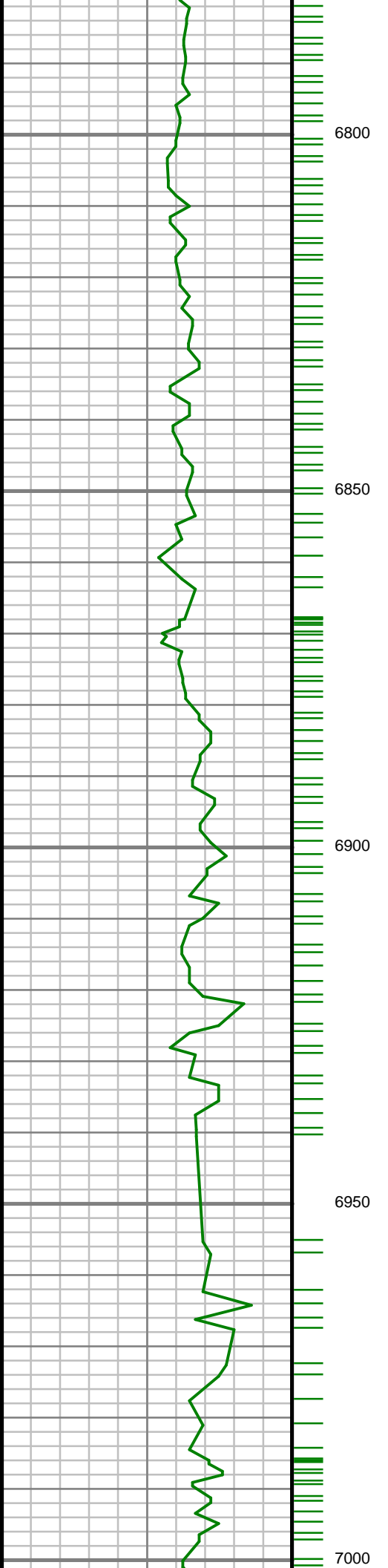
S: 106 MD: 6499.00 ft
Inc: 0.81 deg Az: 72.15
deg TVD: 6442.53 ft



S: 107 MD: 6588.00 ft
Inc: 0.61 deg Az: 50.63
deg TVD: 6531.52 ft

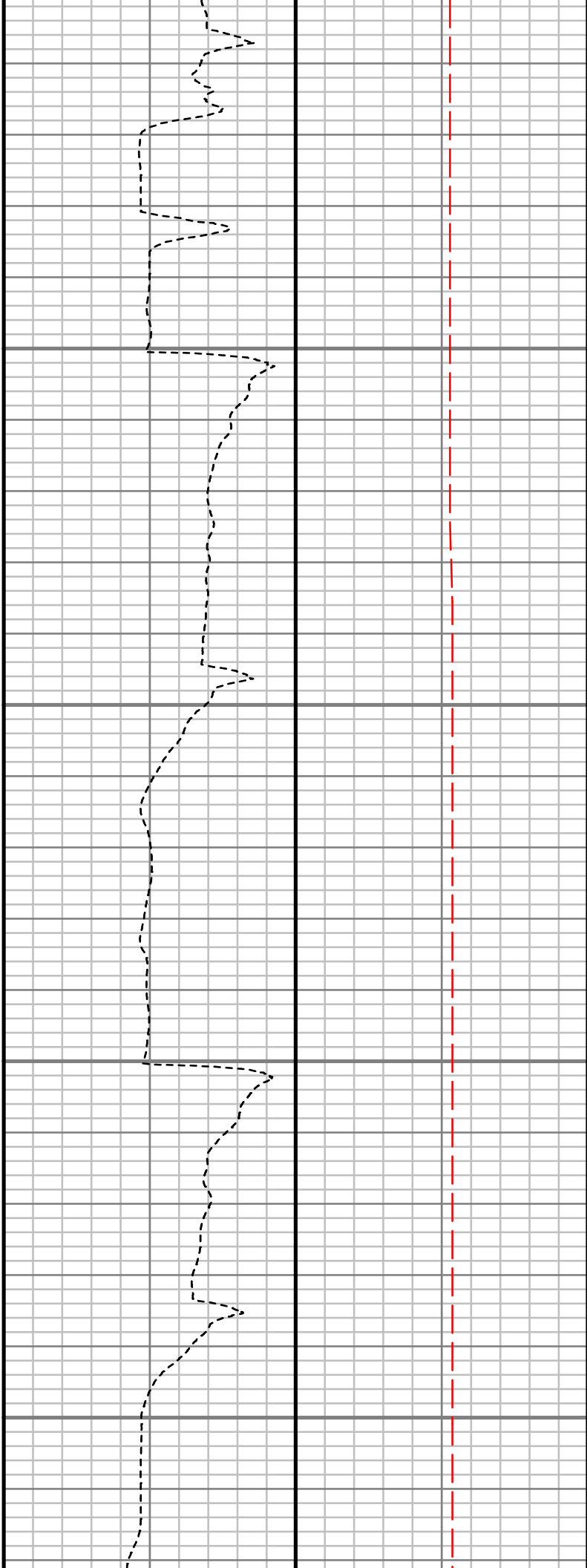
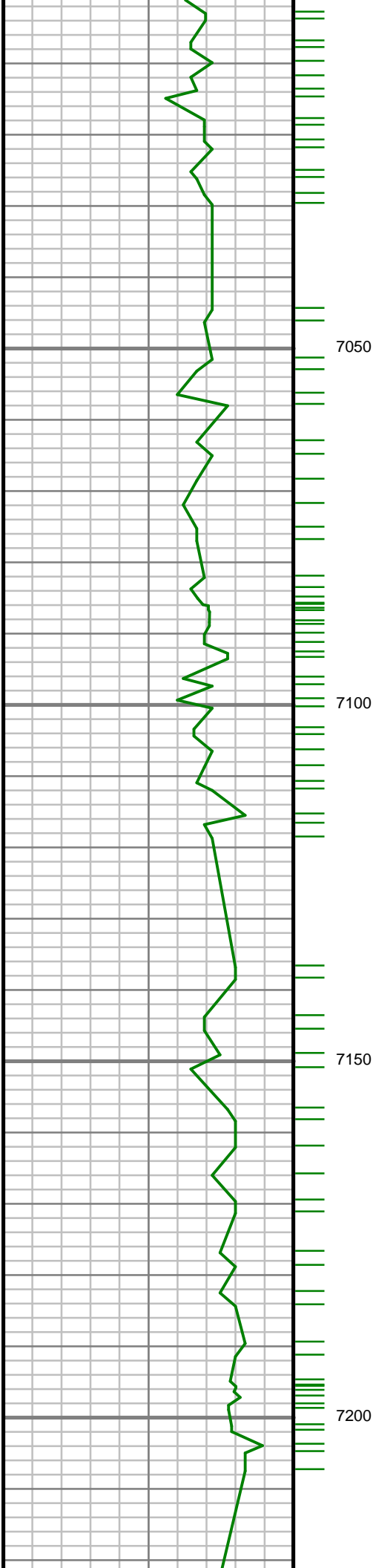
S: 108 MD: 6677.00 ft
Inc: 1.13 deg Az: 47.43
deg TVD: 6620.51 ft

S: 109 MD: 6765.00 ft
Inc: 0.89 deg Az: 33.03
deg TVD: 6708.50 ft



S: 110 MD: 6854.00 ft
Inc: 11.93 deg Az:
359.99 deg TVD:
6796.81 ft

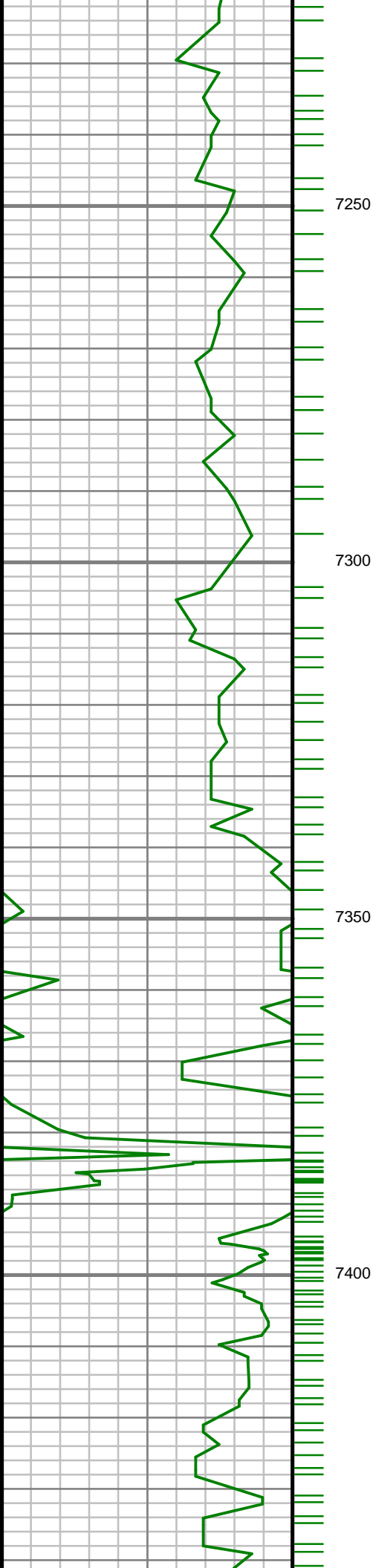
S: 111 MD: 6942.00 ft
Inc: 22.84 deg Az: 9.09
deg TVD: 6880.68 ft



S: 112 MD: 7031.00 ft
Inc: 30.92 deg Az: 5.49
deg TVD: 6960.00 ft

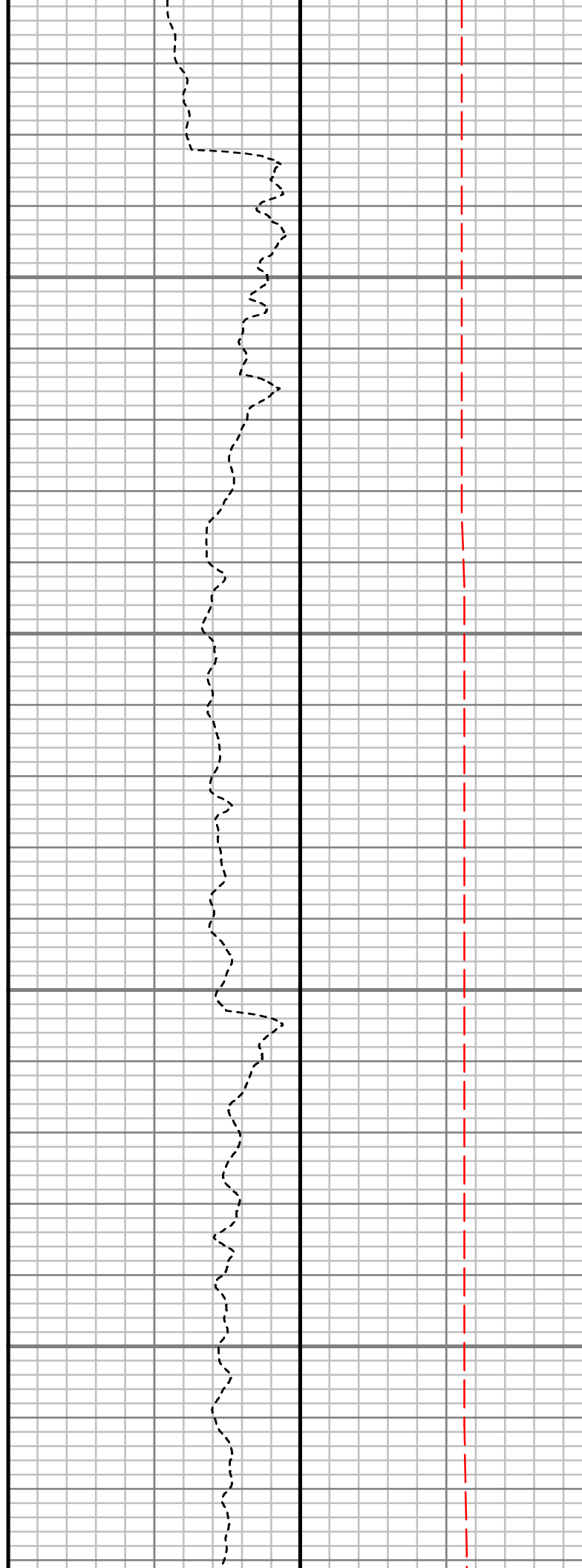
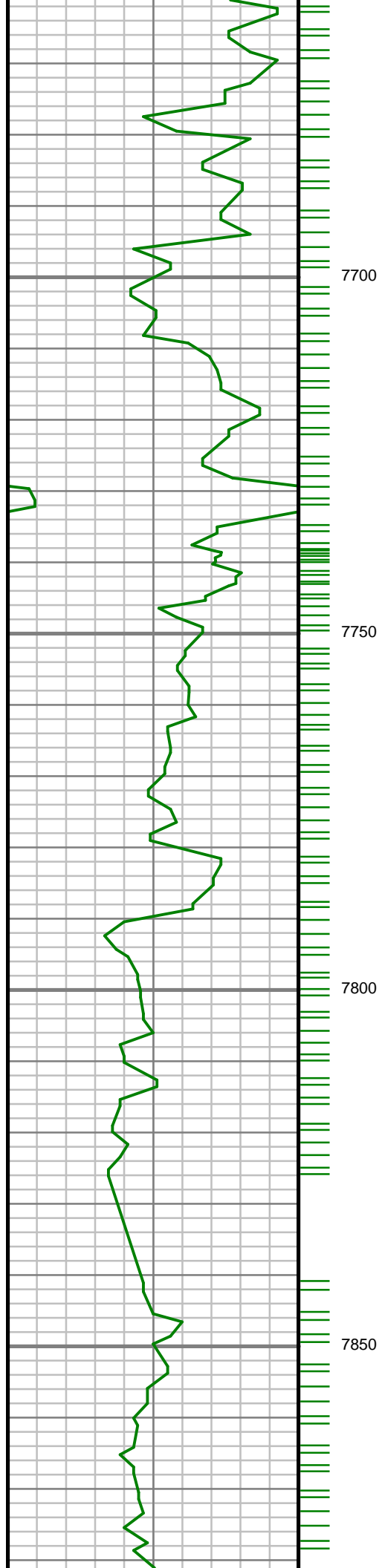
S: 113 MD: 7120.00 ft
Inc: 36.67 deg Az: 2.73
deg TVD: 7033.94 ft

S: 114 MD: 7208.00 ft
Inc: 40.38 deg Az: 0.22
deg TVD: 7102.78 ft



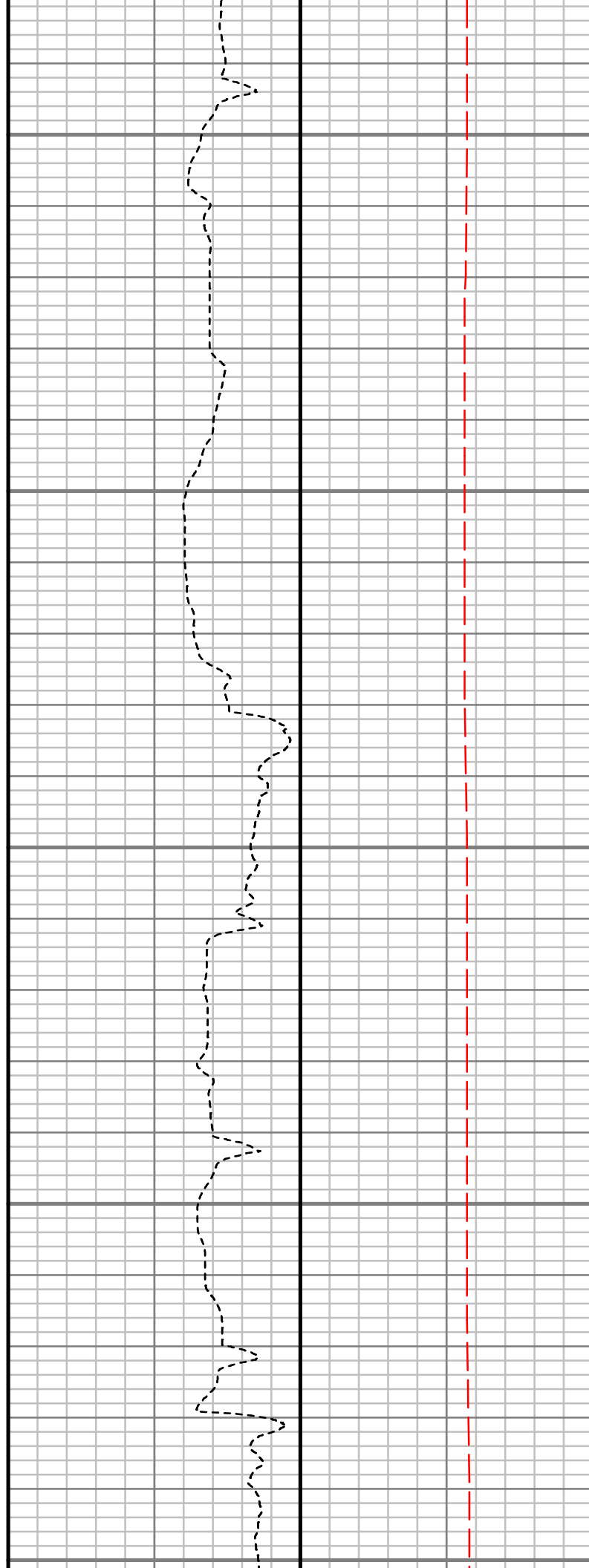
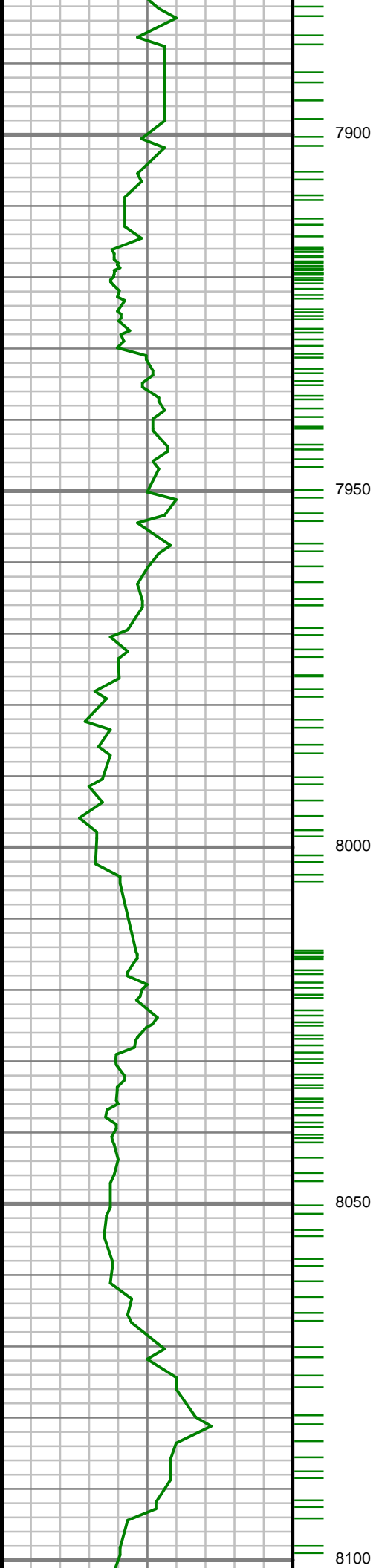
S: 115 MD: 7297.00 ft
Inc: 41.15 deg Az:
357.99 deg TVD:
7170.19 ft

S: 116 MD: 7386.00 ft
Inc: 39.67 deg Az:
355.73 deg TVD:
7237.96 ft



S: 120 MD: 7740.00 ft
Inc: 54.54 deg Az:
358.89 deg TVD:
7483.02 ft

S: 121 MD: 7829.00 ft
Inc: 71.22 deg Az: 8.89
deg TVD: 7523.53 ft

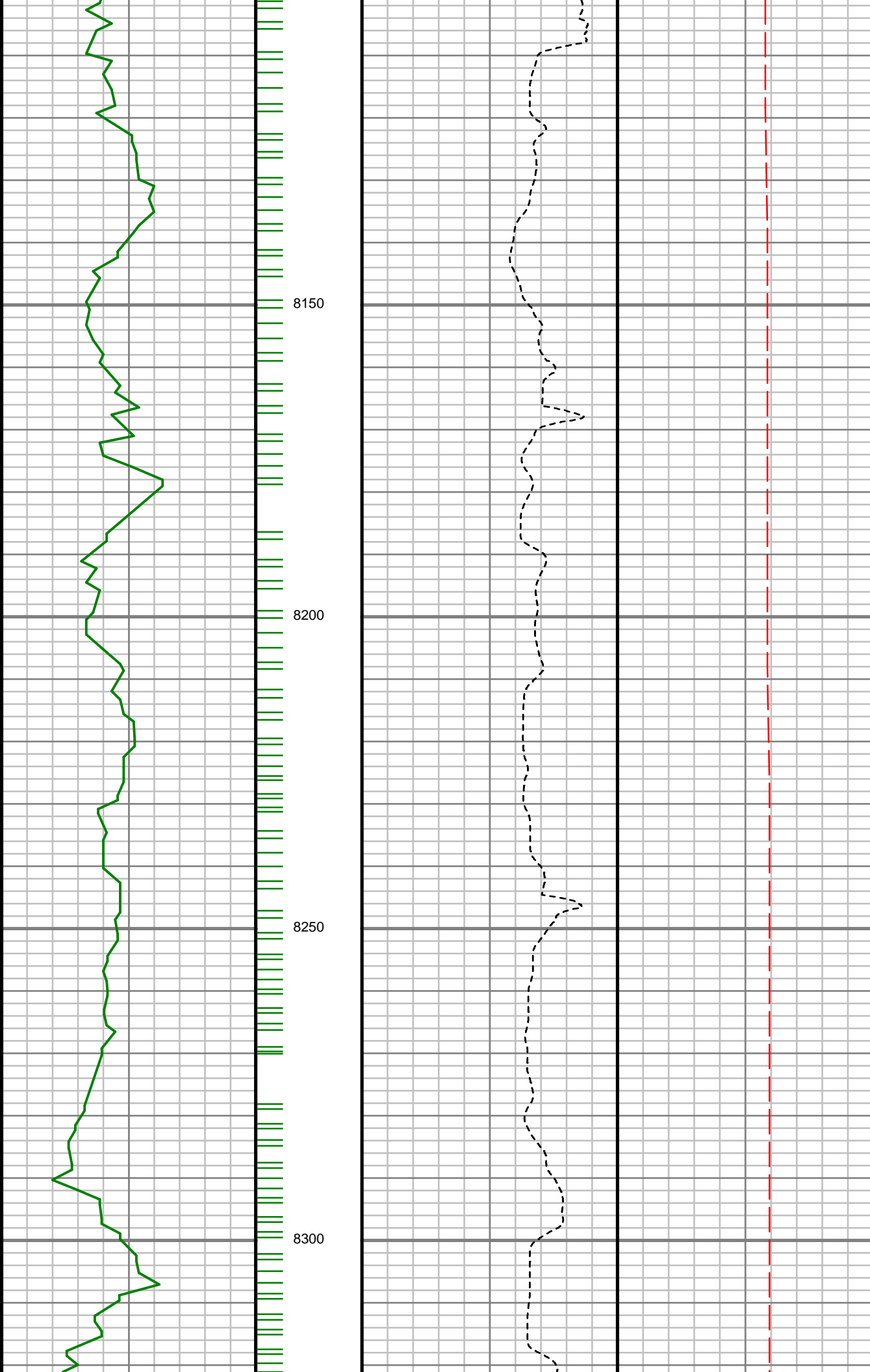


S: 122 MD: 7918.00 ft
Inc: 87.45 deg Az: 7.71
deg TVD: 7539.95 ft

S: 123 MD: 8007.00 ft
Inc: 86.31 deg Az: 4.64
deg TVD: 7544.79 ft

S: 124 MD: 8095.00 ft
Inc: 84.73 deg Az: 1.56
deg TVD: 7551.67 ft

deg TVD: 7551.87 ft



8150

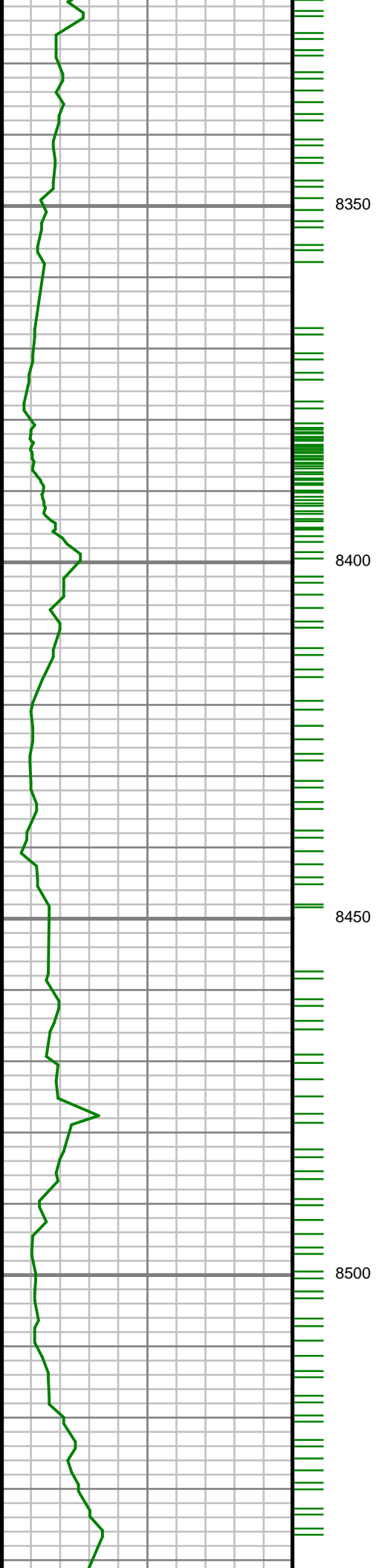
8200

8250

8300

S: 125 MD: 8184.00 ft
Inc: 84.56 deg Az:
359.53 deg TVD:
7559.98 ft

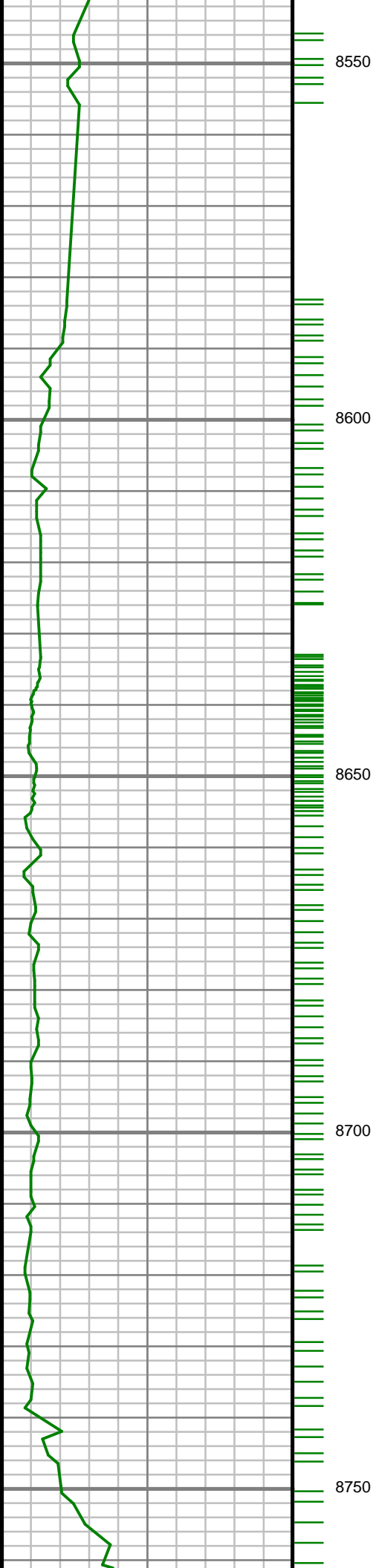
S: 126 MD: 8273.00 ft
Inc: 85.54 deg Az:
359.23 deg TVD:
7567.65 ft



S: 127 MD: 8365.00 ft
Inc: 86.61 deg Az:
359.27 deg TVD:
7573.95 ft

S: 128 MD: 8451.00 ft
Inc: 86.94 deg Az:
358.12 deg TVD:
7578.79 ft

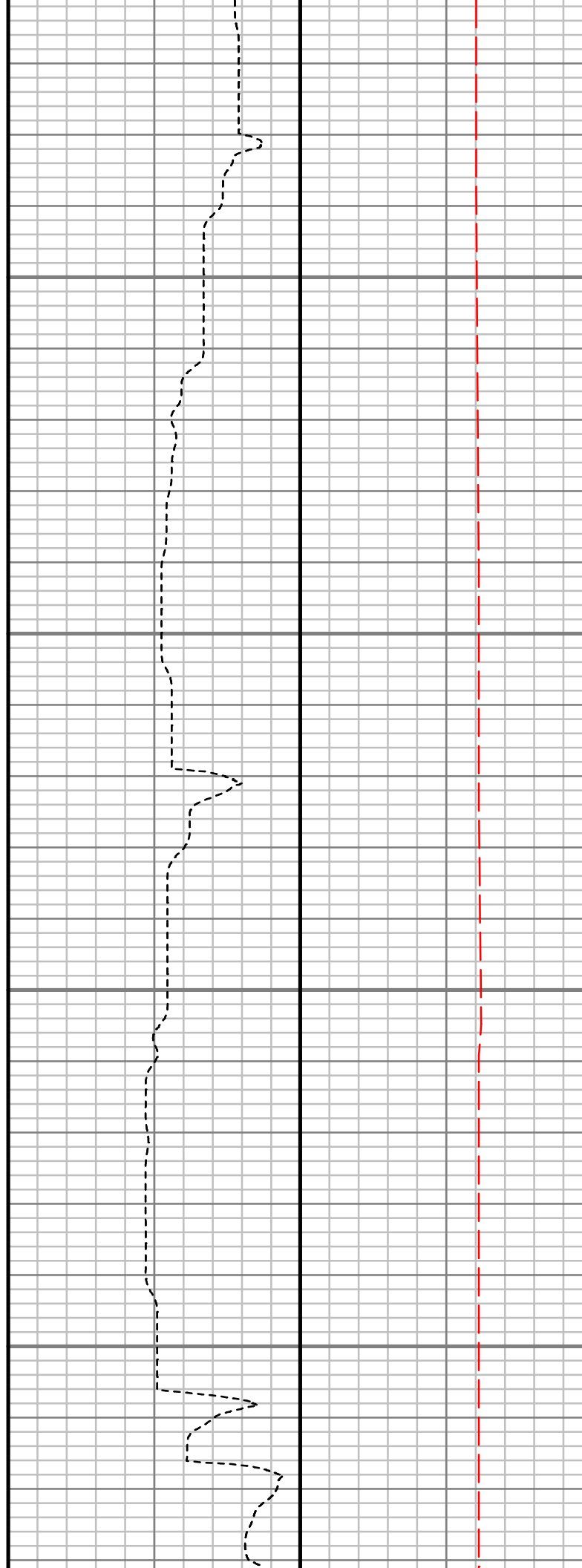
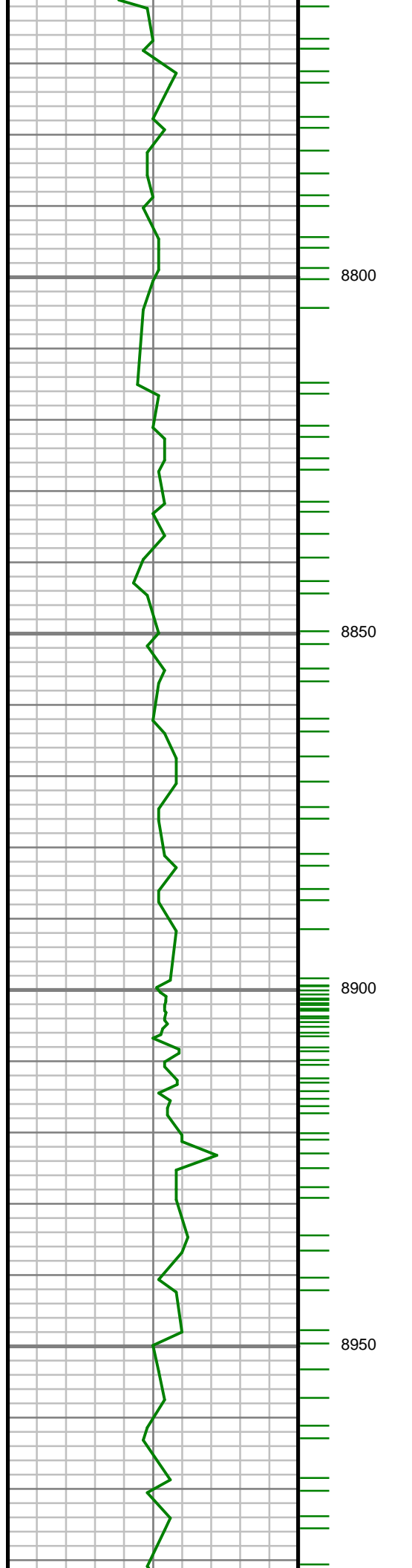
S: 129 MD: 8540.00 ft



S: 129 MD: 8540.00 ft
Inc: 87.51 deg Az:
357.39 deg TVD:
7583.10 ft

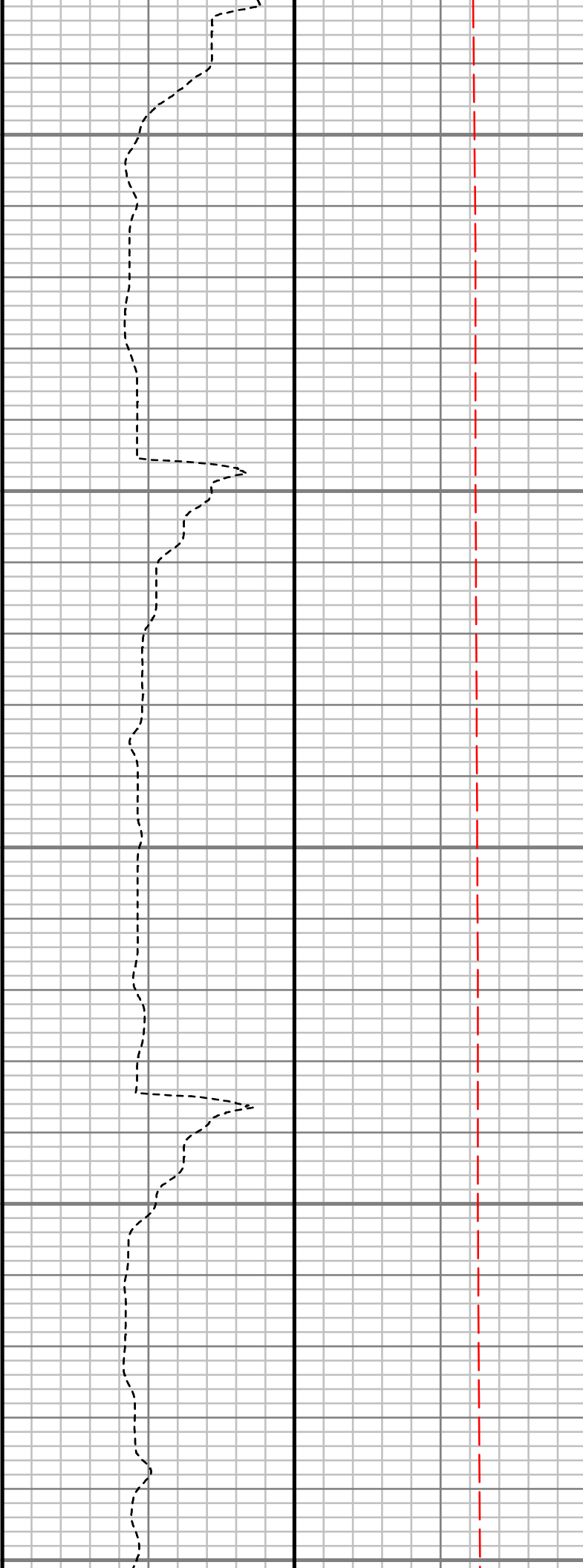
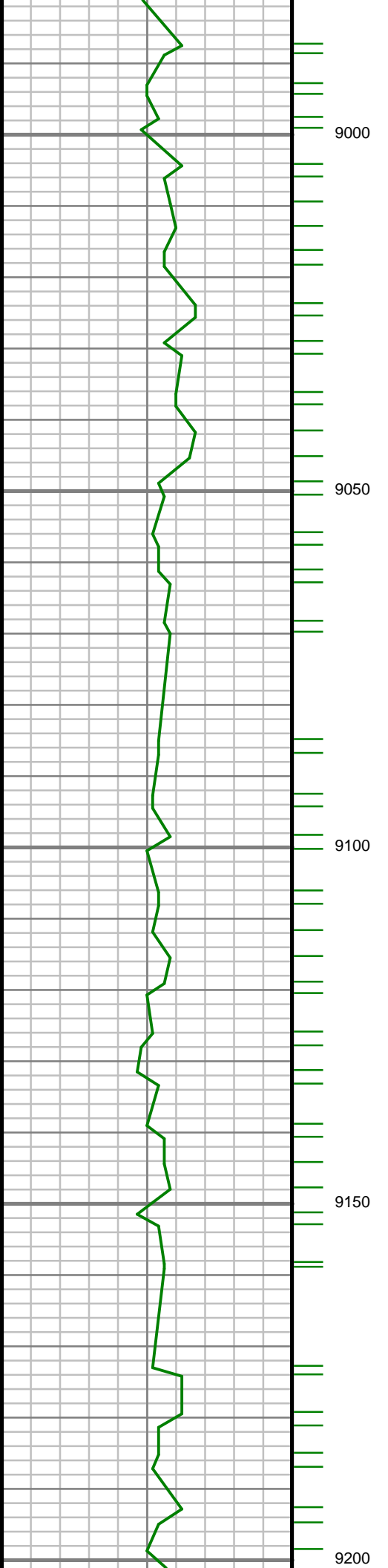
S: 130 MD: 8628.00 ft
Inc: 88.92 deg Az:
356.89 deg TVD:
7585.84 ft

S: 131 MD: 8717.00 ft
Inc: 86.98 deg Az:
357.34 deg TVD:
7589.02 ft



S: 132 MD: 8806.00 ft
Inc: 86.57 deg Az:
356.99 deg TVD:
7594.03 ft

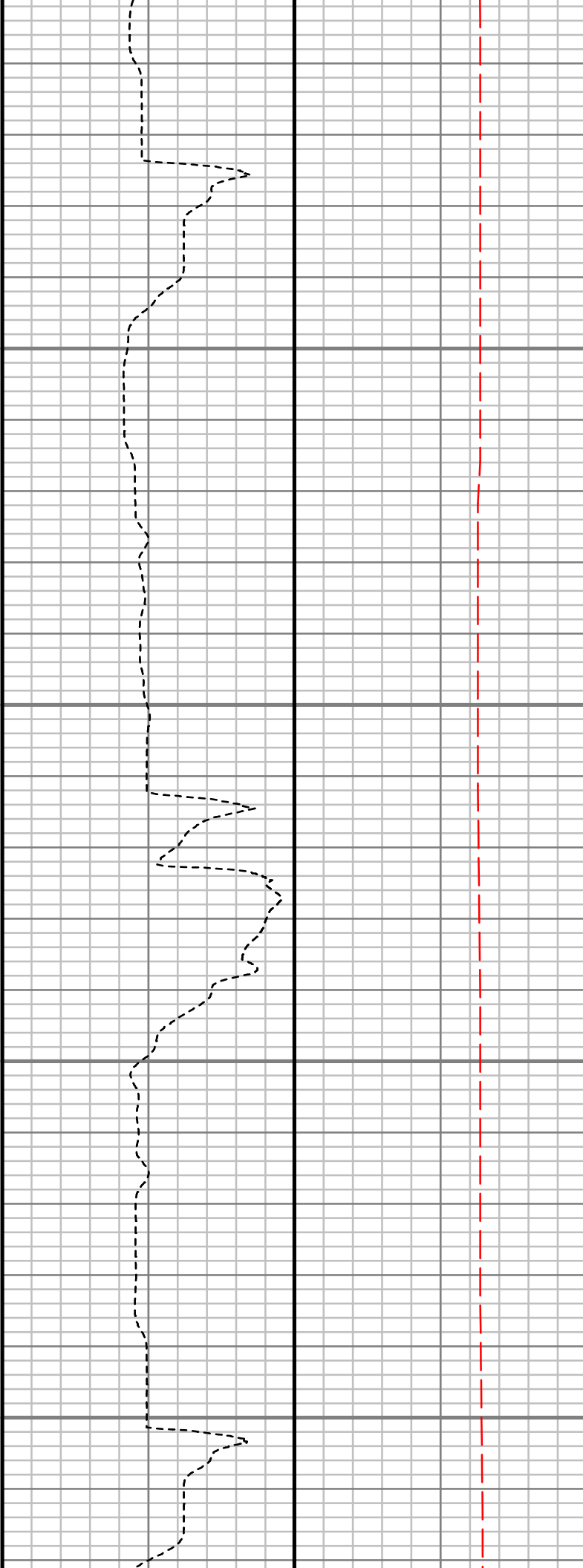
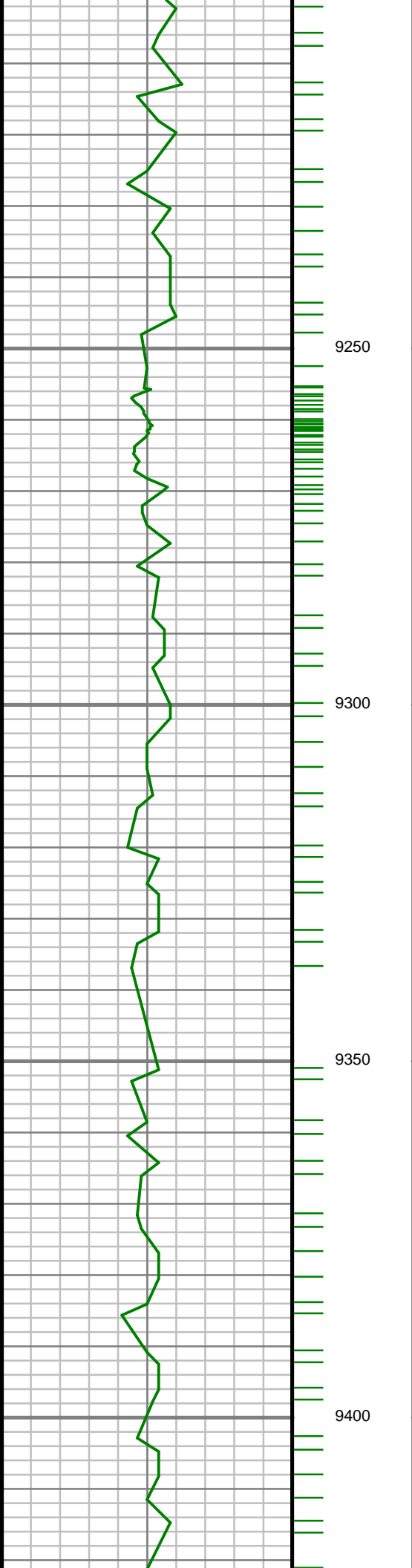
S: 133 MD: 8895.00 ft
Inc: 87.25 deg Az:
356.89 deg TVD:
7598.83 ft



S: 134 MD: 8984.00 ft
Inc: 88.56 deg Az:
358.79 deg TVD:
7602.08 ft

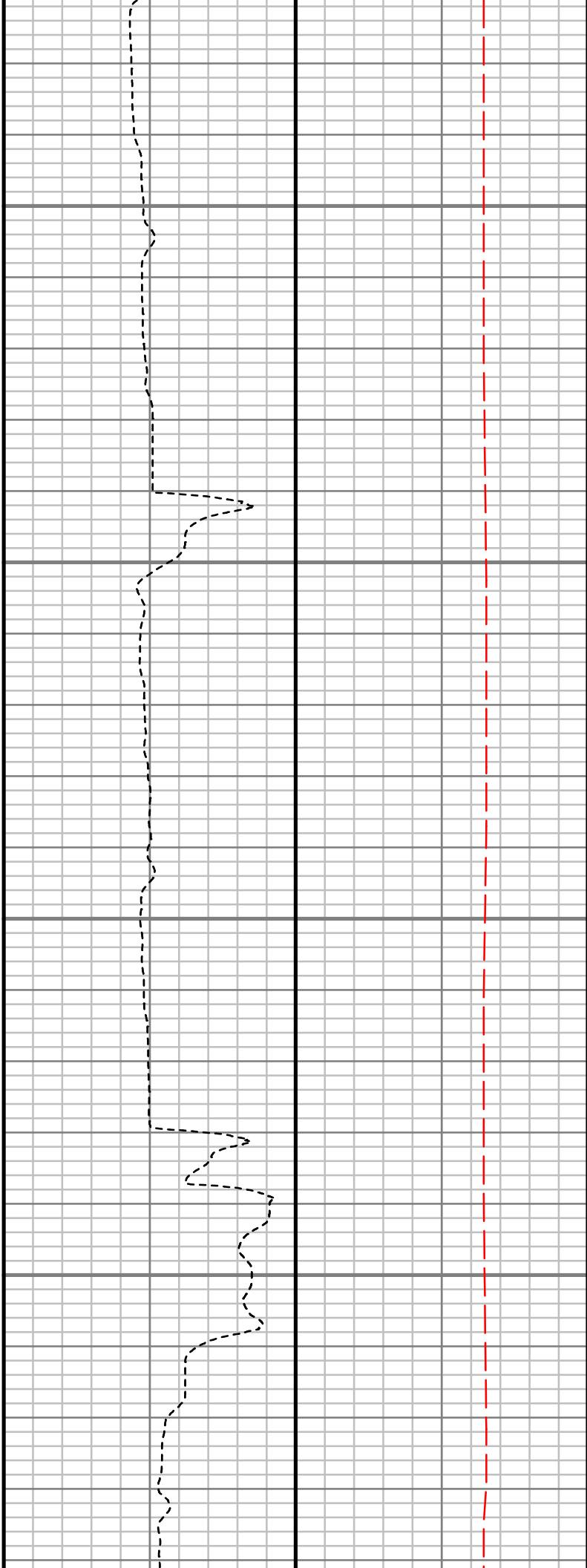
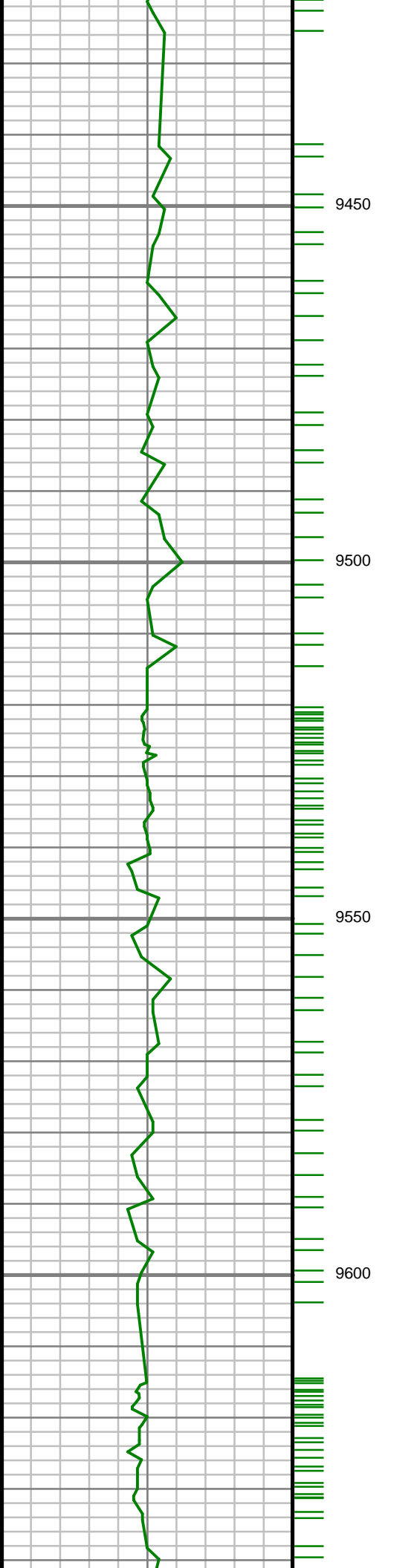
S: 135 MD: 9073.00 ft
Inc: 89.70 deg Az:
358.98 deg TVD:
7603.43 ft

S: 136 MD: 9161.00 ft
Inc: 90.60 deg Az:
358.67 deg TVD:
7603.20 ft



S: 137 MD: 9250.00 ft
Inc: 91.51 deg Az:
358.63 deg TVD:
7601.56 ft

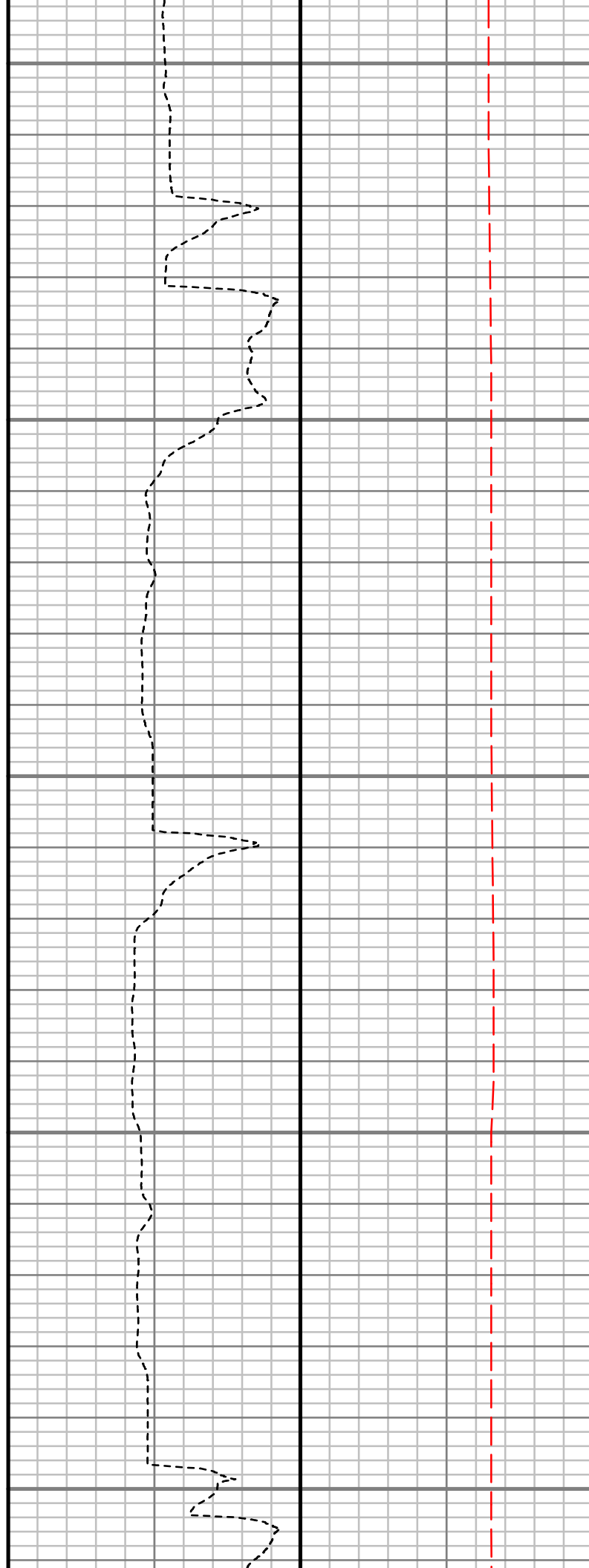
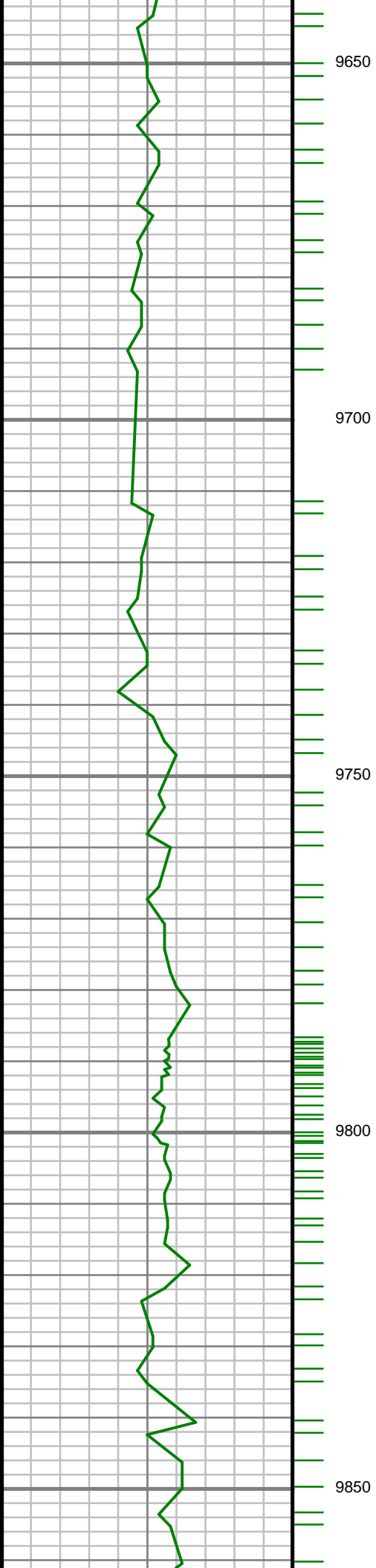
S: 138 MD: 9339.00 ft
Inc: 89.93 deg Az:
358.18 deg TVD:
7600.45 ft



S: 139 MD: 9427.00 ft
Inc: 90.60 deg Az:
357.95 deg TVD:
7600.04 ft

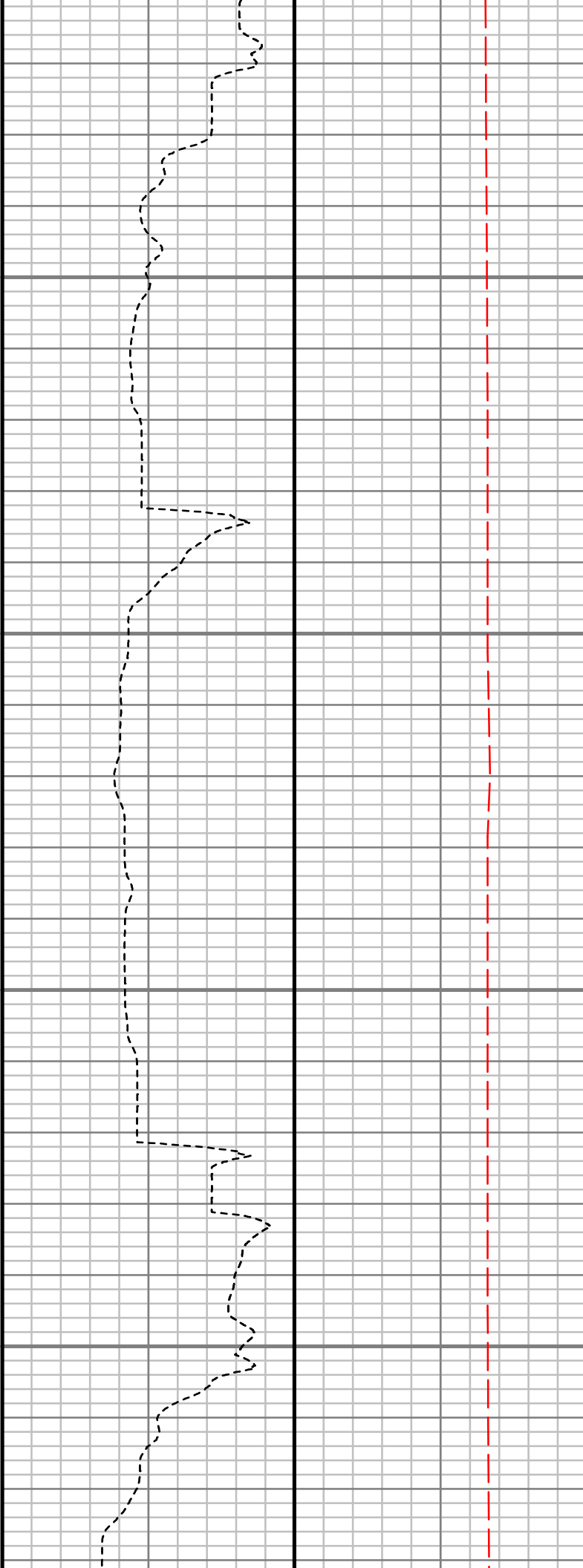
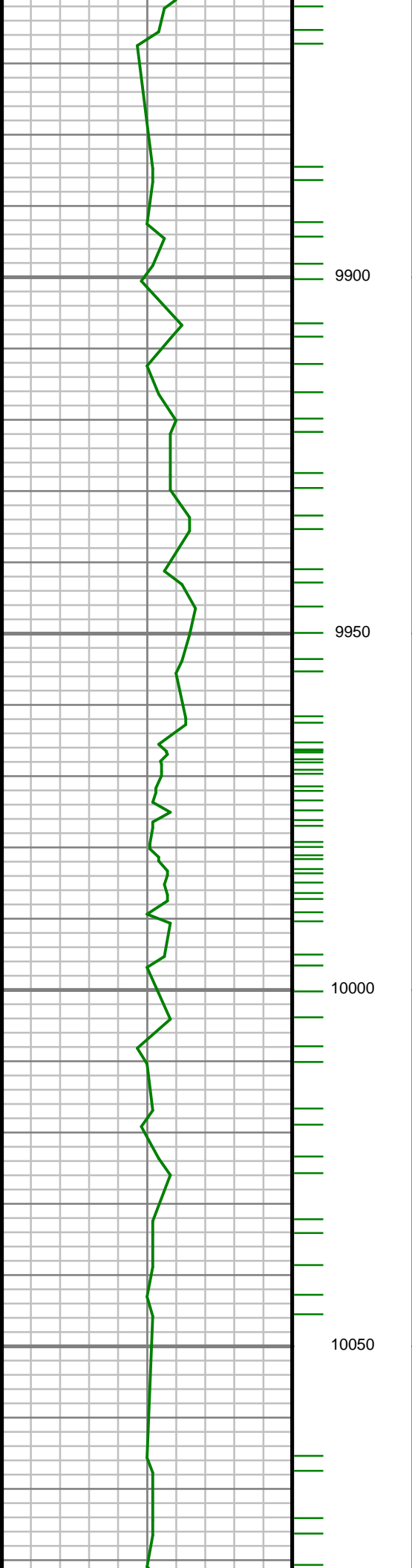
S: 140 MD: 9516.00 ft
Inc: 91.44 deg Az:
357.35 deg TVD:
7598.45 ft

S: 141 MD: 9605.00 ft
Inc: 90.87 deg Az:
359.38 deg TVD:
7596.66 ft



S: 142 MD: 9694.00 ft
Inc: 88.89 deg Az:
359.23 deg TVD:
7596.85 ft

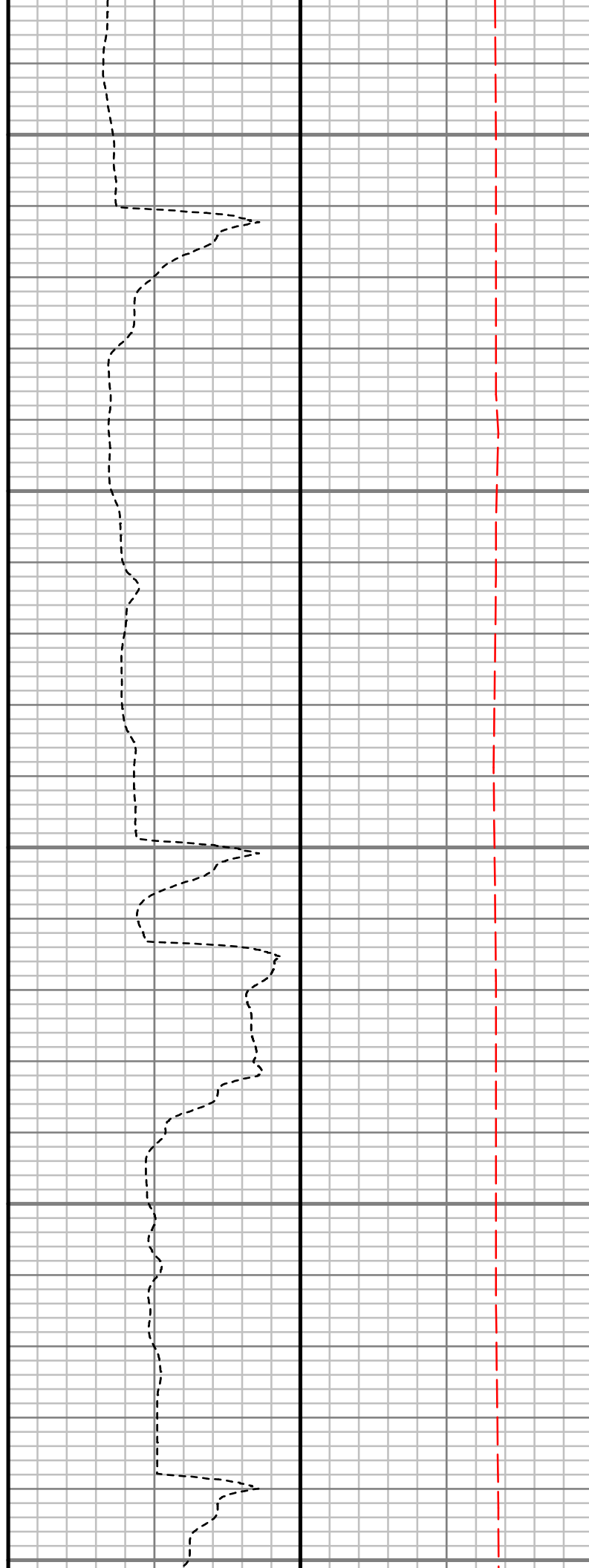
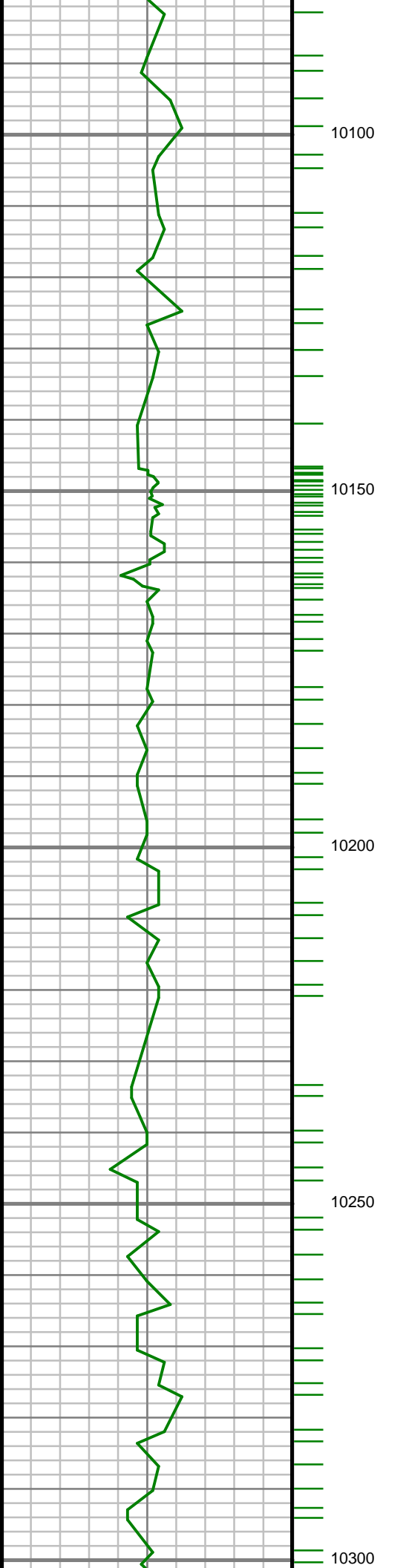
S: 143 MD: 9782.00 ft
Inc: 89.73 deg Az:
359.09 deg TVD:
7597.91 ft



S: 144 MD: 9871.00 ft
Inc: 90.40 deg Az: 0.65
deg TVD: 7597.81 ft

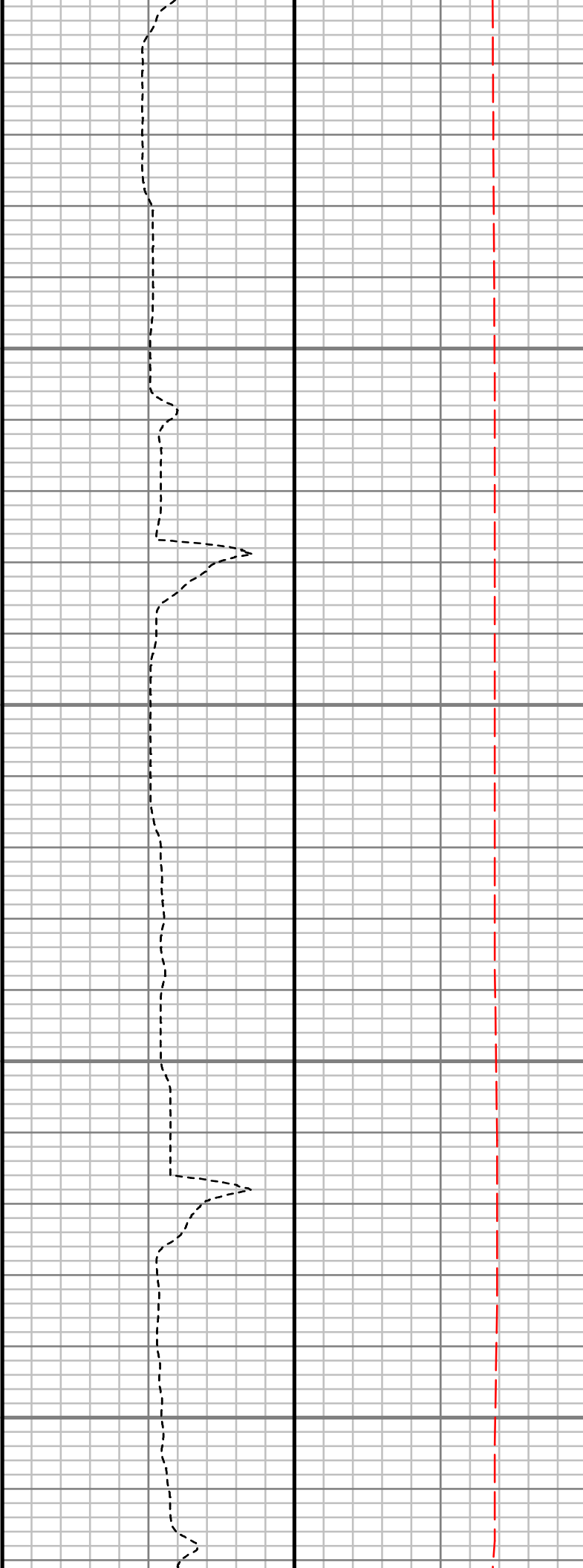
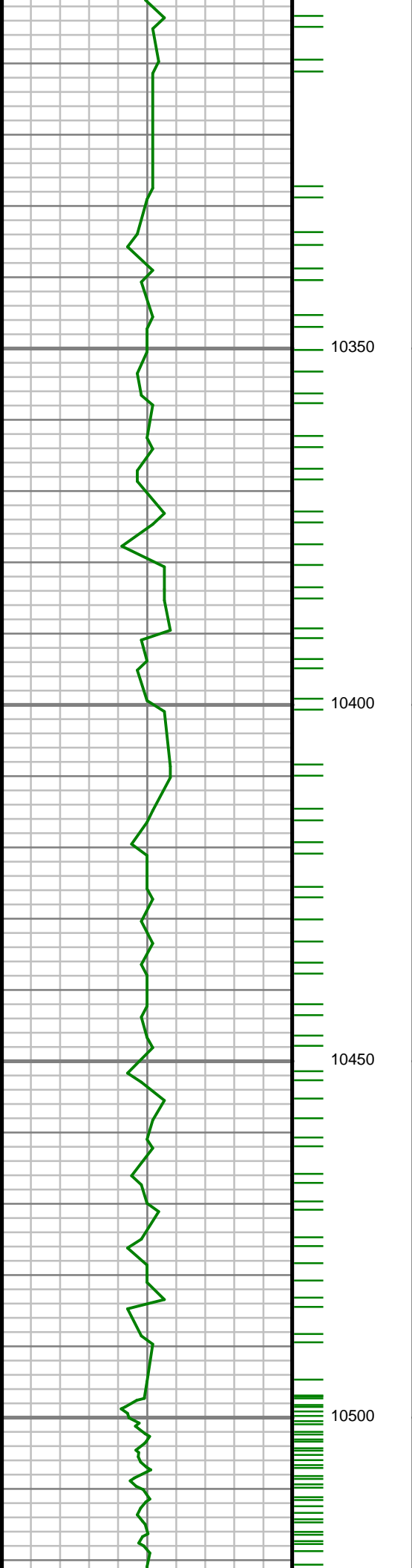
S: 145 MD: 9960.00 ft
Inc: 91.14 deg Az: 0.35
deg TVD: 7596.61 ft

S: 146 MD: 10049.00 ft
Inc: 89.87 deg Az: 0.22
deg TVD: 7595.83 ft



S: 147 MD: 10137.00 ft
Inc: 90.34 deg Az:
359.91 deg TVD:
7595.66 ft

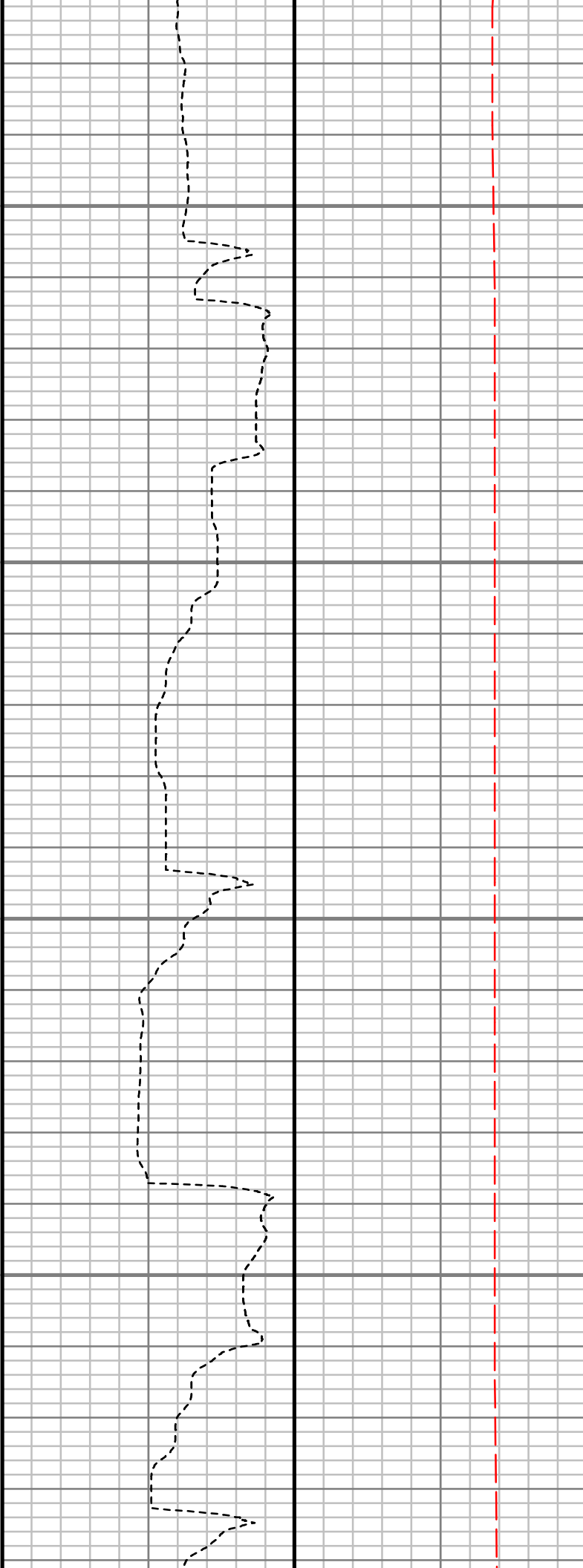
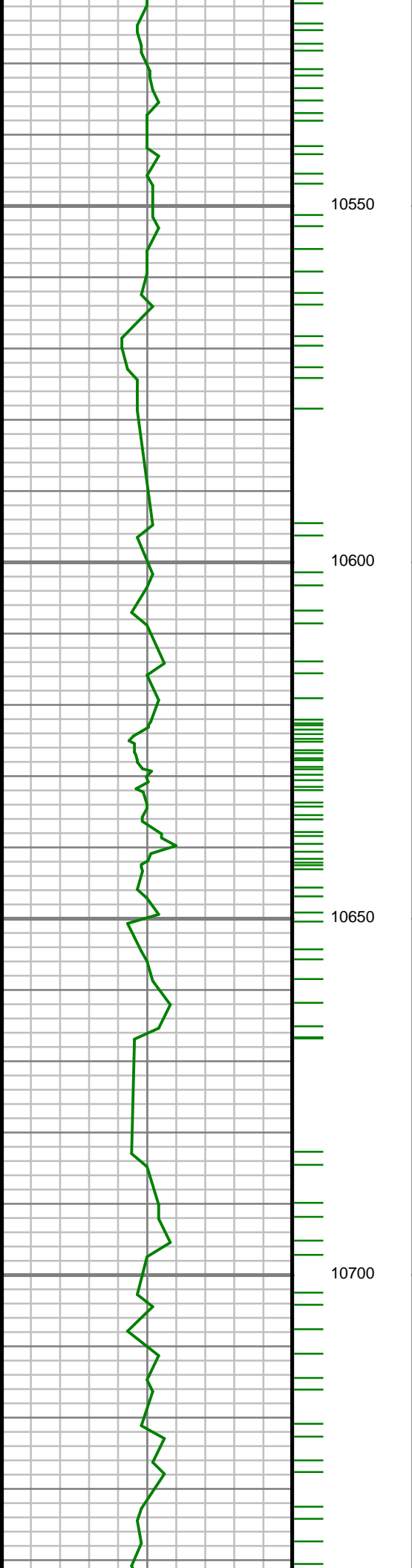
S: 148 MD: 10226.00 ft
Inc: 88.89 deg Az: 0.35
deg TVD: 7596.26 ft



S: 149 MD: 10315.00 ft
Inc: 88.79 deg Az:
359.50 deg TVD:
7598.06 ft

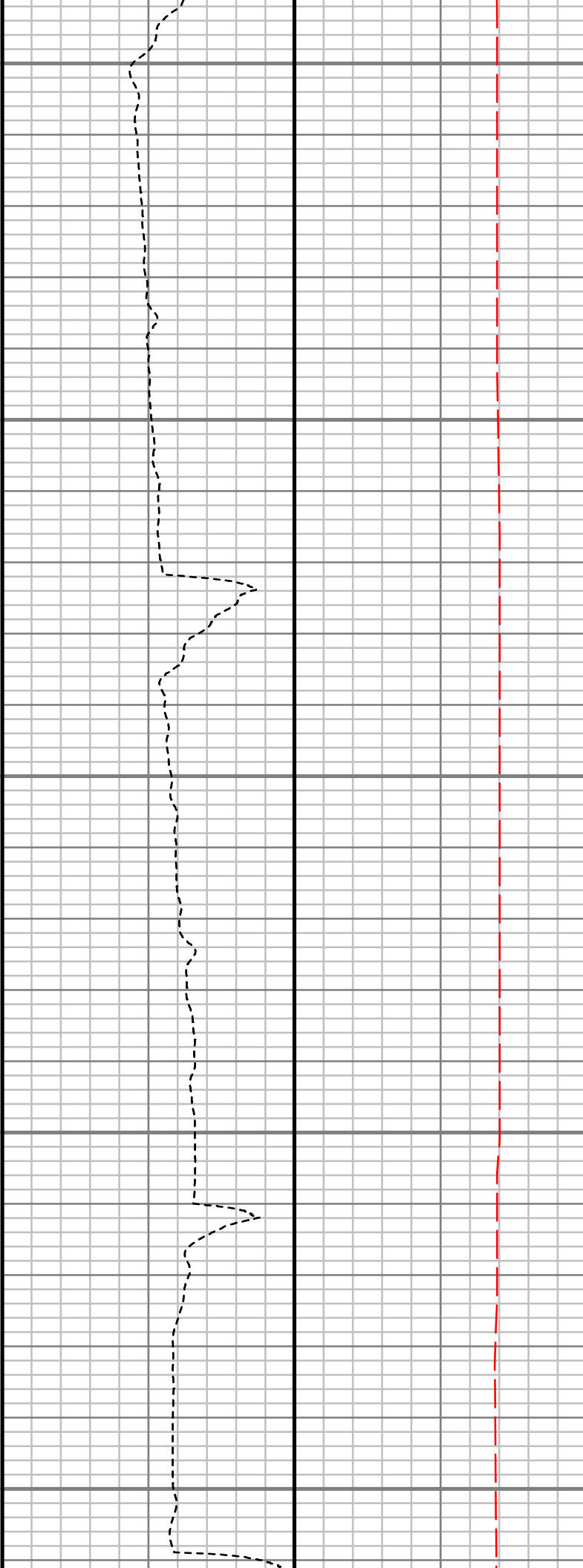
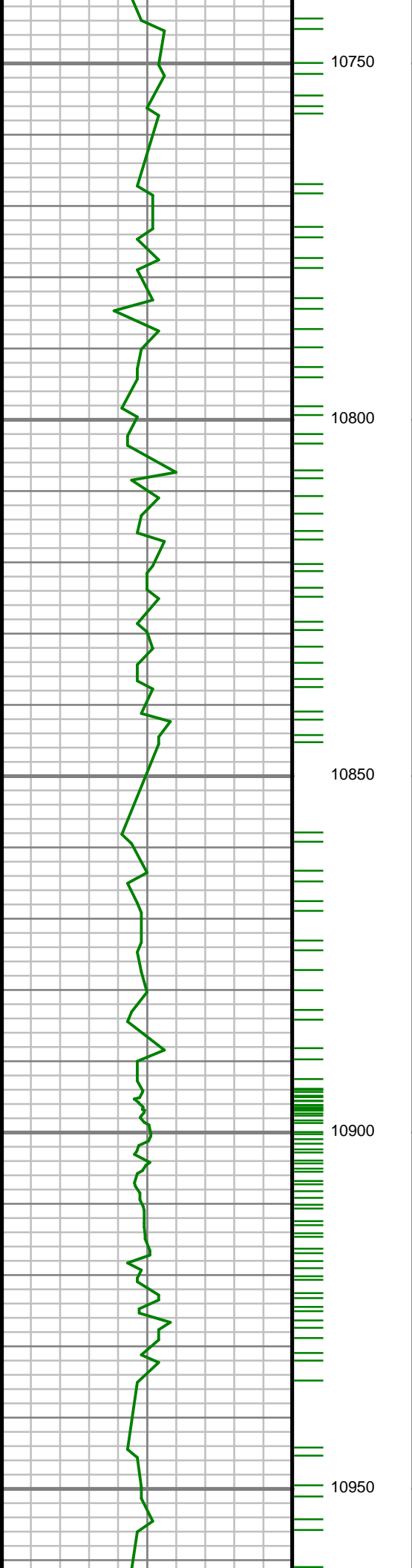
S: 150 MD: 10404.00 ft
Inc: 89.09 deg Az:
358.74 deg TVD:
7599.71 ft

S: 151 MD: 10492.00 ft
Inc: 89.73 deg Az:
358.13 deg TVD:
7600.62 ft



S: 152 MD: 10581.00 ft
Inc: 88.72 deg Az:
358.69 deg TVD:
7601.82 ft

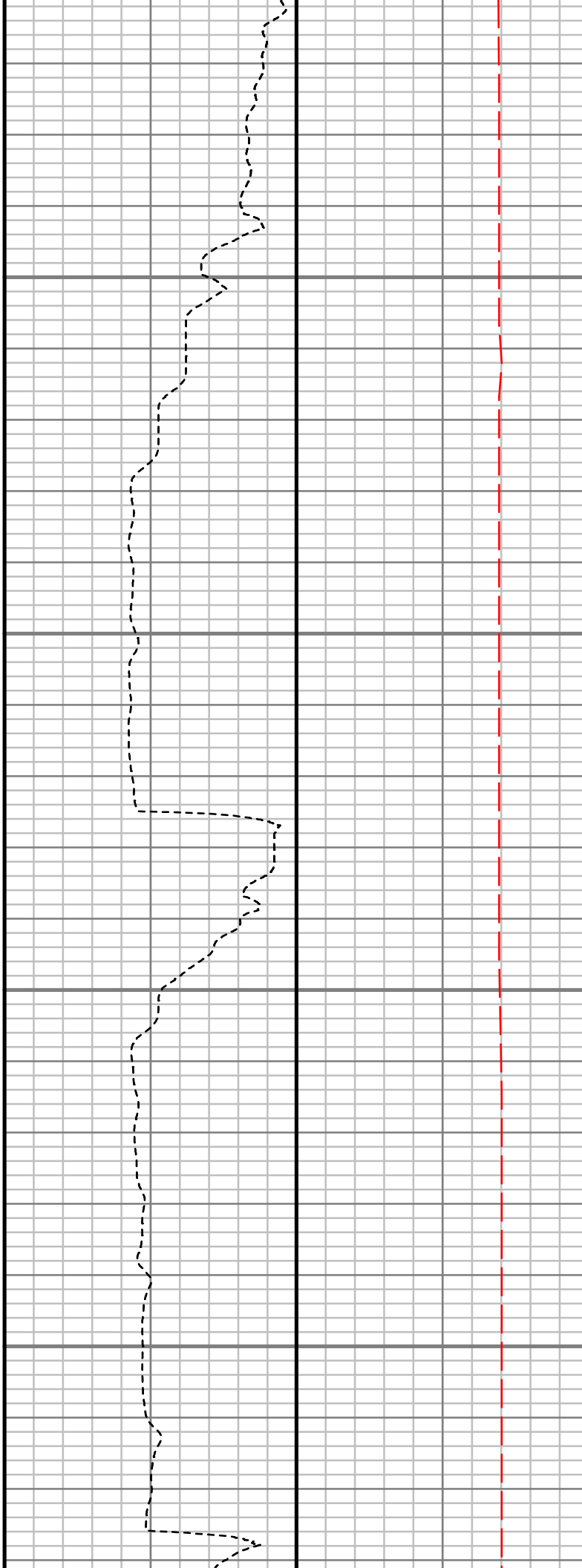
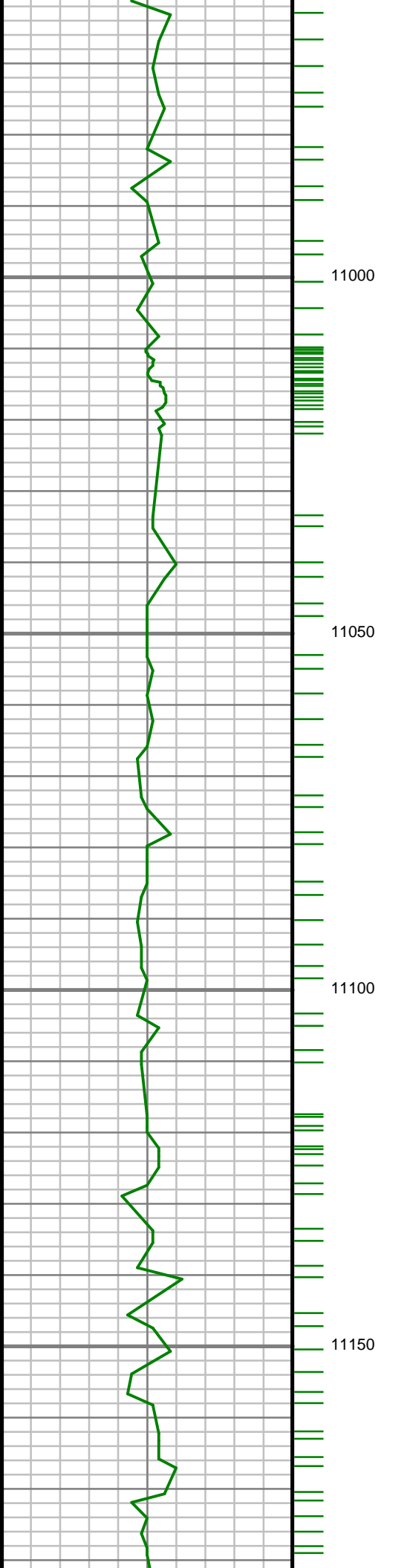
S: 153 MD: 10670.00 ft
Inc: 89.33 deg Az:
358.35 deg TVD:
7603.33 ft



S: 154 MD: 10759.00 ft
Inc: 91.58 deg Az: 0.34
deg TVD: 7602.63 ft

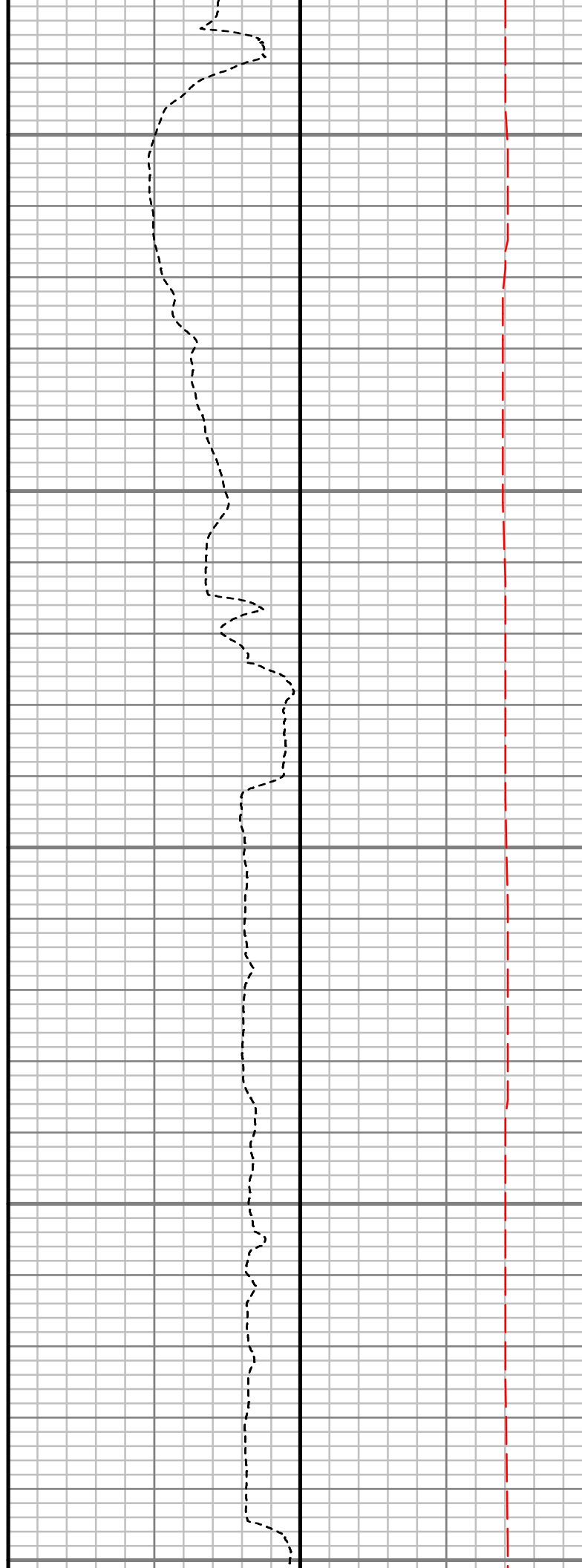
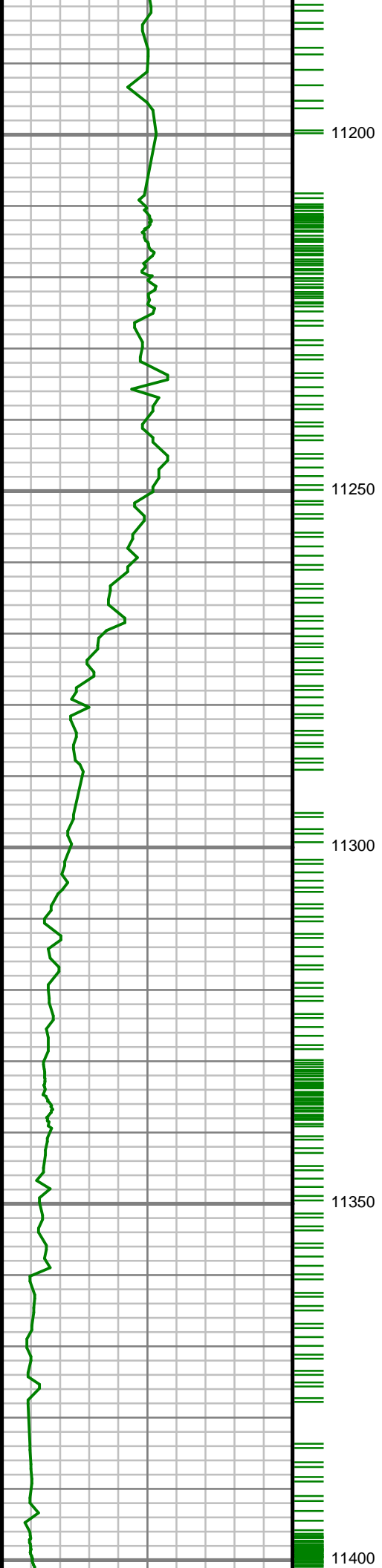
S: 155 MD: 10848.00 ft
Inc: 91.71 deg Az:
359.32 deg TVD:
7600.07 ft

S: 156 MD: 10936.00 ft
Inc: 90.20 deg Az:
356.47 deg TVD:
7598.61 ft



S: 157 MD: 11025.00 ft
Inc: 90.03 deg Az: 0.69
deg TVD: 7598.43 ft

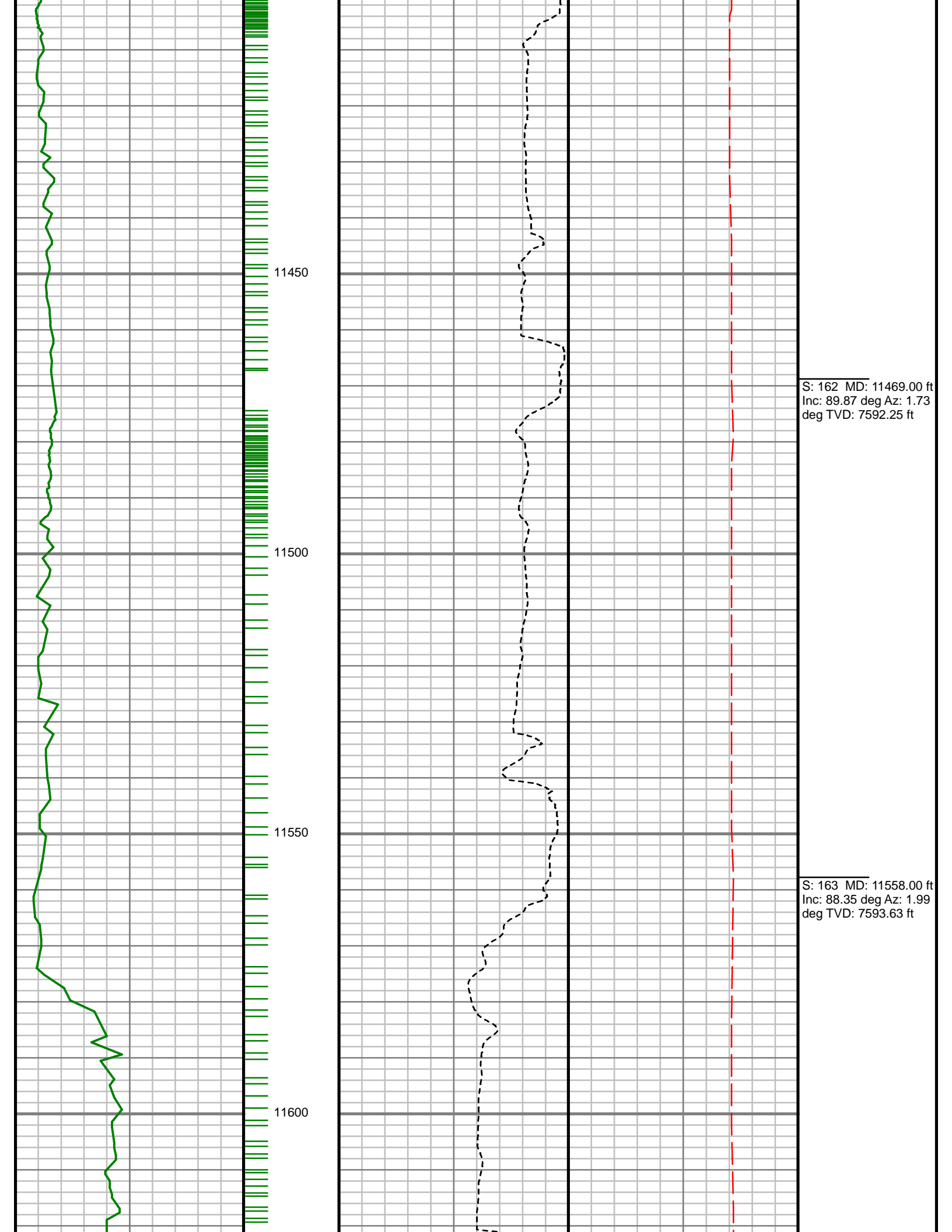
S: 158 MD: 11114.00 ft
Inc: 91.14 deg Az: 1.77
deg TVD: 7597.52 ft

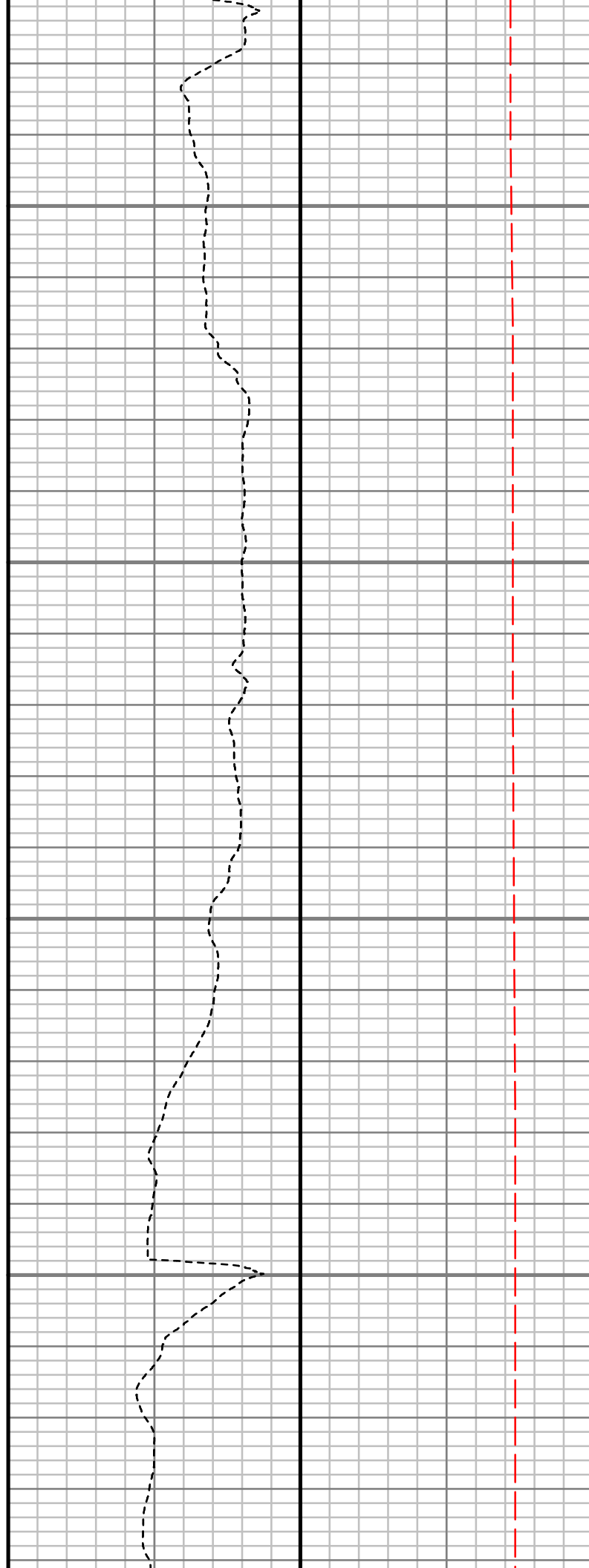
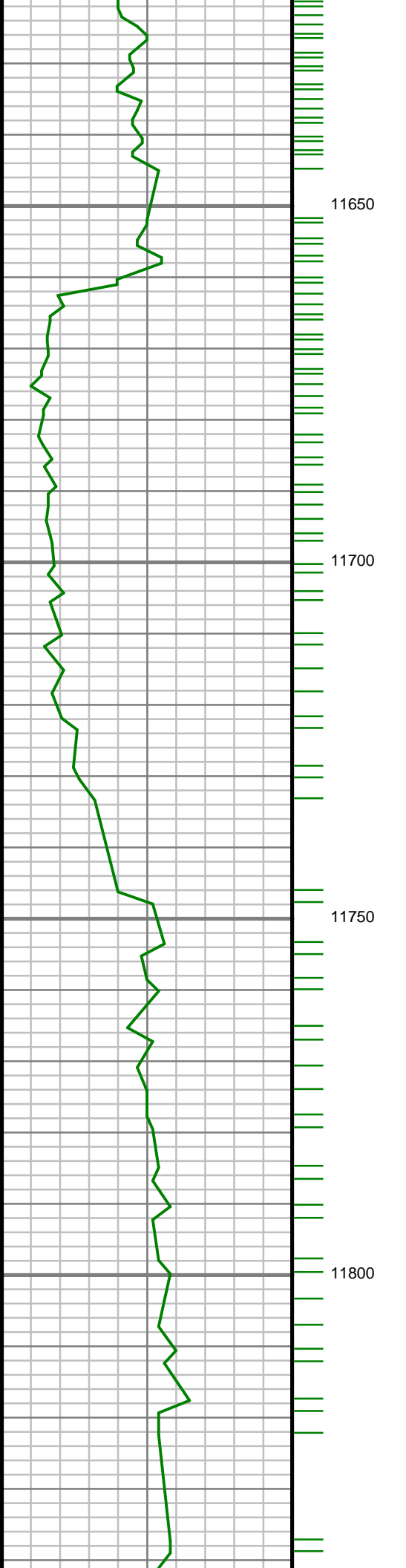


S: 159 MD: 11203.00 ft
Inc: 92.25 deg Az: 1.17
deg TVD: 7594.89 ft

S: 160 MD: 11292.00 ft
Inc: 89.80 deg Az: 0.59
deg TVD: 7593.29 ft

S: 161 MD: 11381.00 ft
Inc: 90.84 deg Az: 1.16
deg TVD: 7592.80 ft

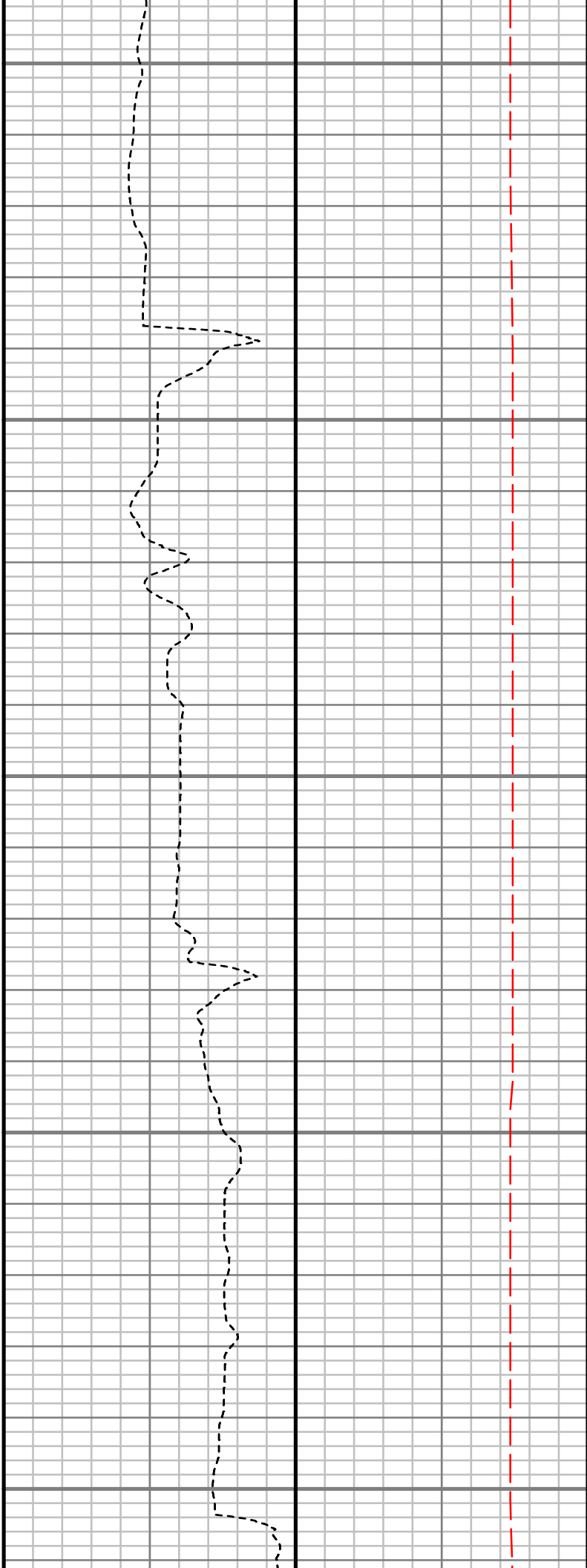
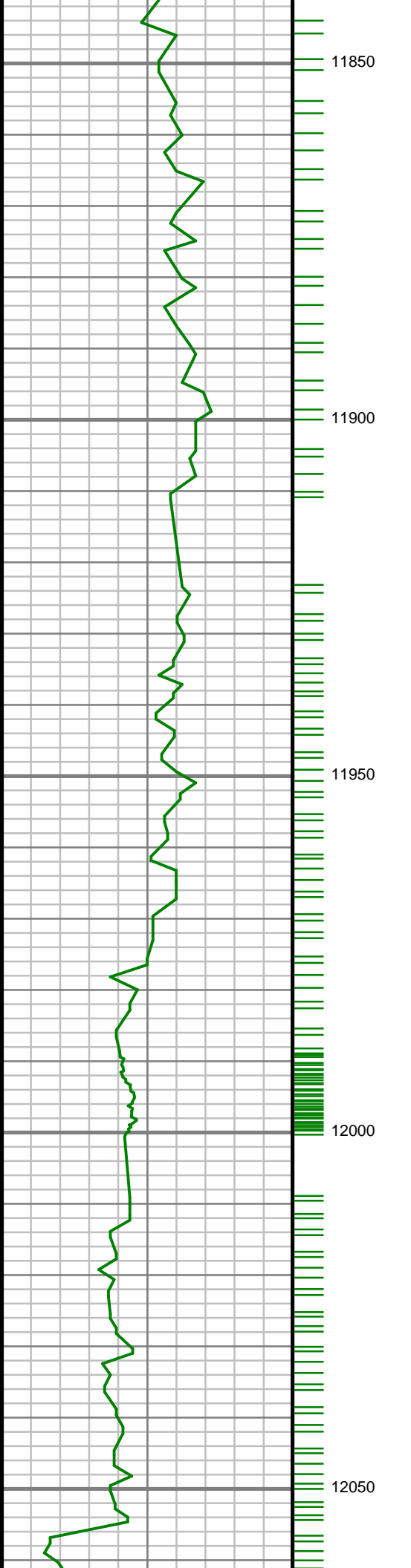




S: 164 MD: 11647.00 ft
Inc: 87.65 deg Az: 1.88
deg TVD: 7596.74 ft

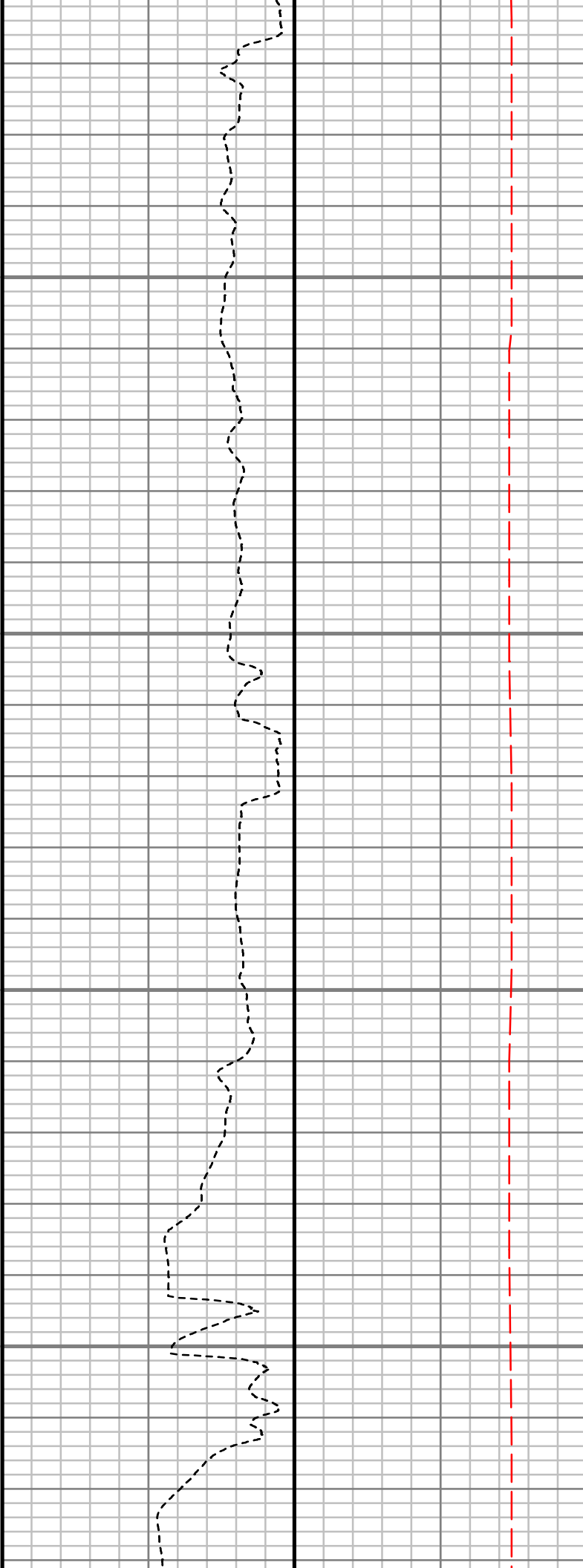
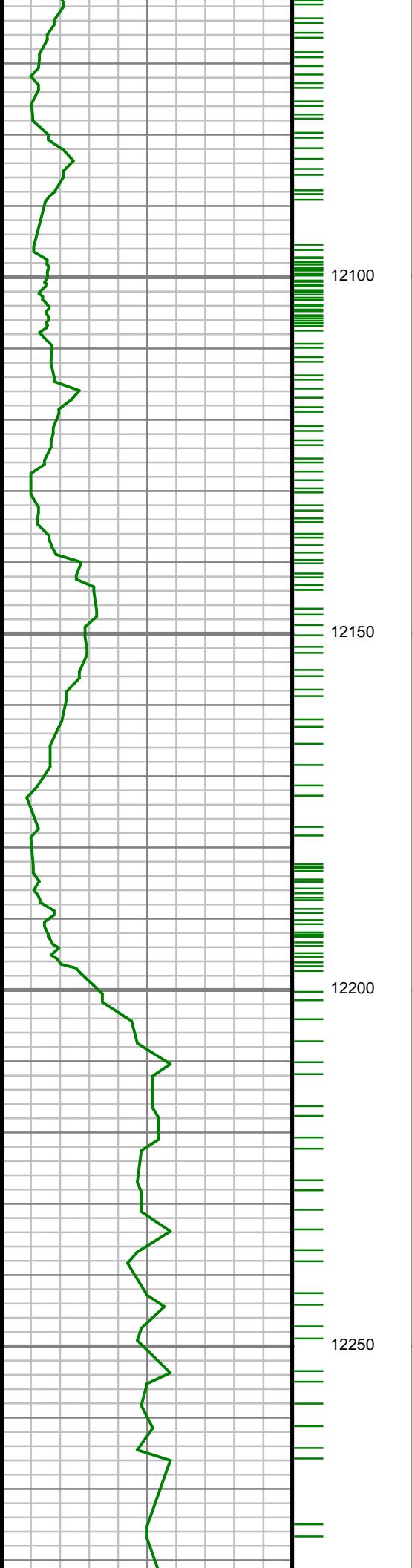
S: 165 MD: 11736.00 ft
Inc: 88.72 deg Az: 1.75
deg TVD: 7599.56 ft

S: 166 MD: 11825.00 ft
Inc: 88.42 deg Az: 1.16
deg TVD: 7601.78 ft



S: 167 MD: 11914.00 ft
Inc: 89.50 deg Az: 1.12
deg TVD: 7603.40 ft

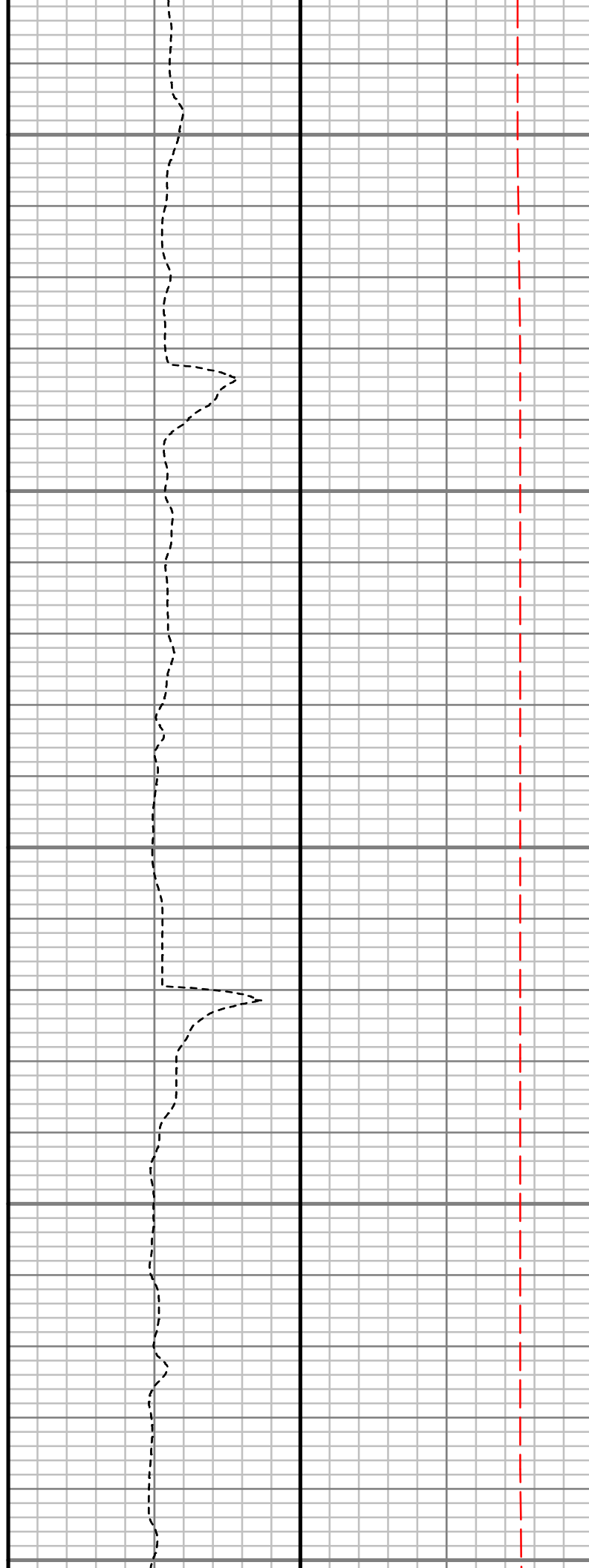
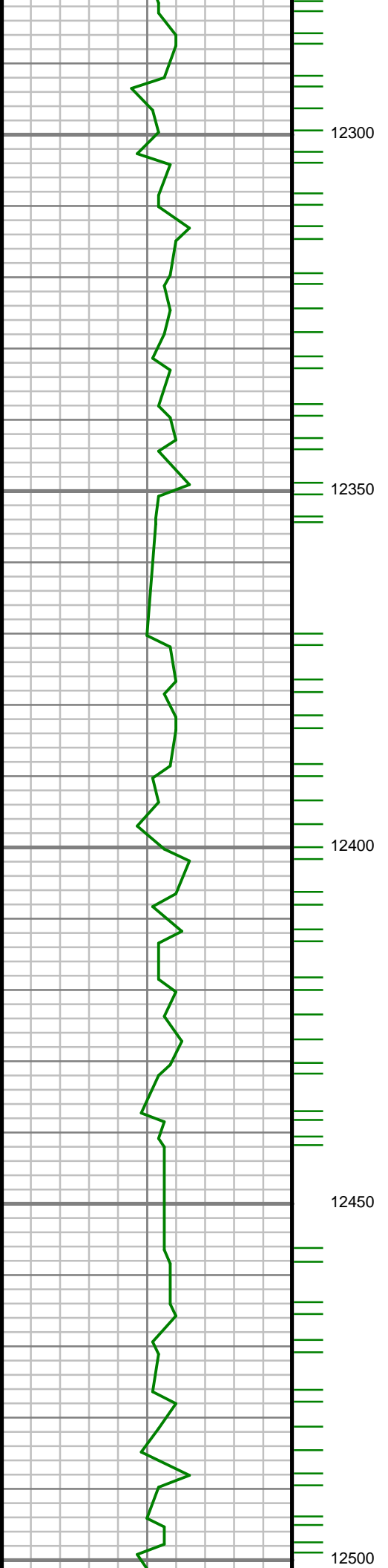
S: 168 MD: 12003.00 ft
Inc: 90.47 deg Az: 1.16
deg TVD: 7603.42 ft



S: 169 MD: 12091.00 ft
Inc: 89.16 deg Az:
359.49 deg TVD:
7603.70 ft

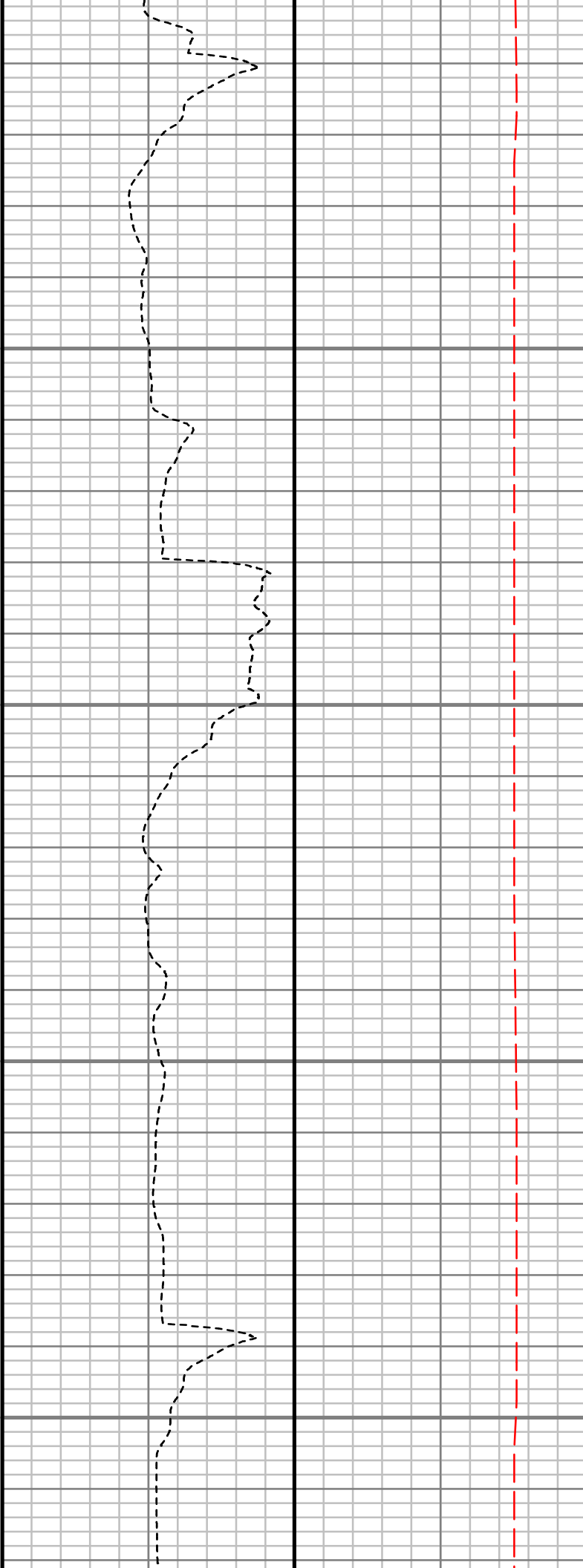
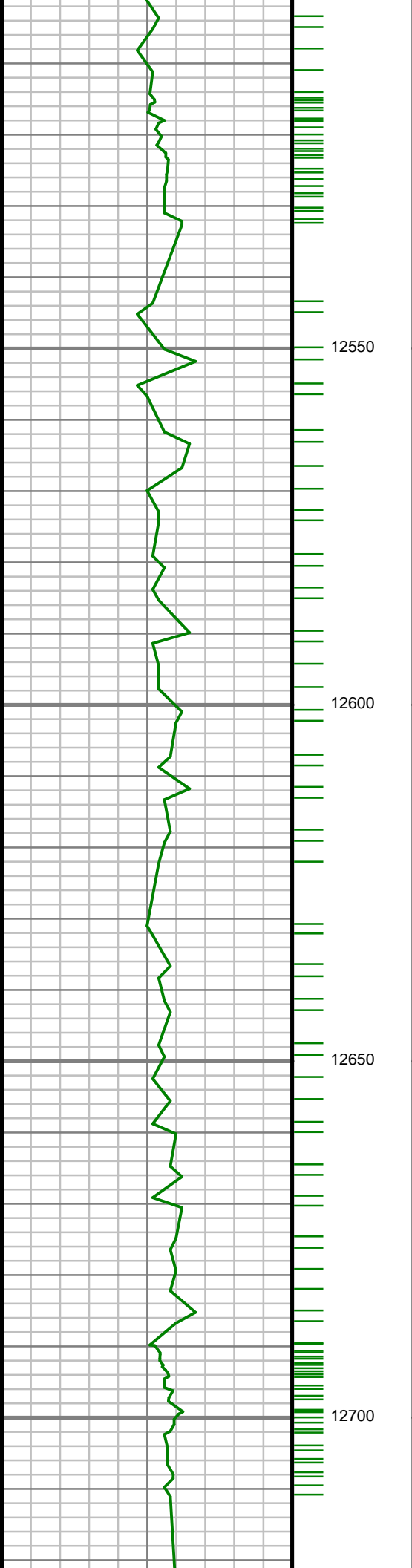
S: 170 MD: 12180.00 ft
Inc: 88.69 deg Az:
359.93 deg TVD:
7605.37 ft

S: 171 MD: 12269.00 ft
Inc: 87.82 deg Az:
359.45 deg TVD:
7608.08 ft



S: 172 MD: 12357.00 ft
Inc: 88.69 deg Az:
359.38 deg TVD:
7610.76 ft

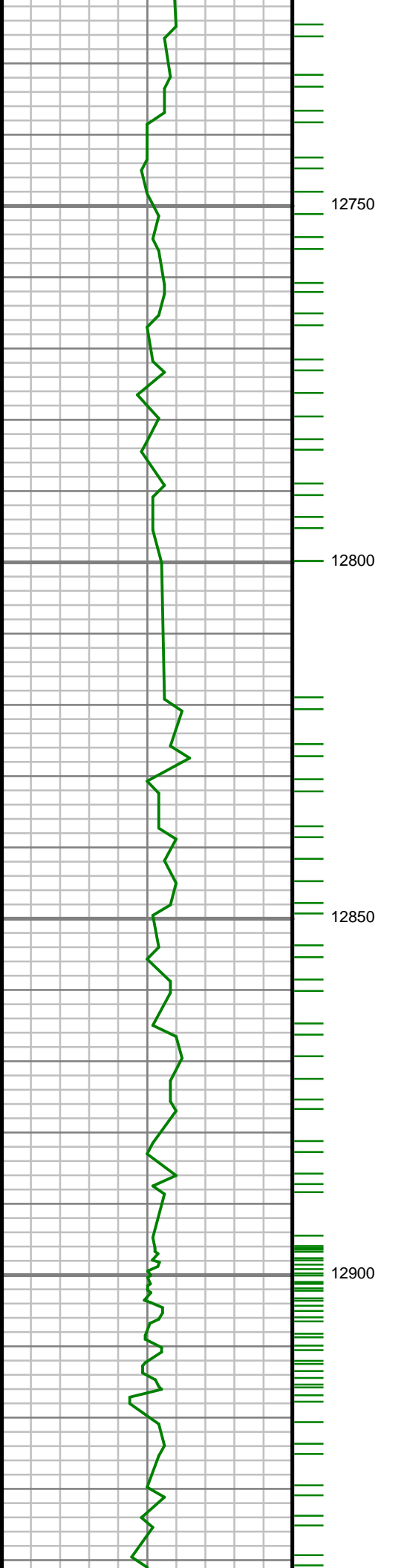
S: 173 MD: 12446.00 ft
Inc: 90.13 deg Az:
359.40 deg TVD:
7611.68 ft



S: 174 MD: 12535.00 ft
Inc: 91.34 deg Az:
359.66 deg TVD:
7610.54 ft

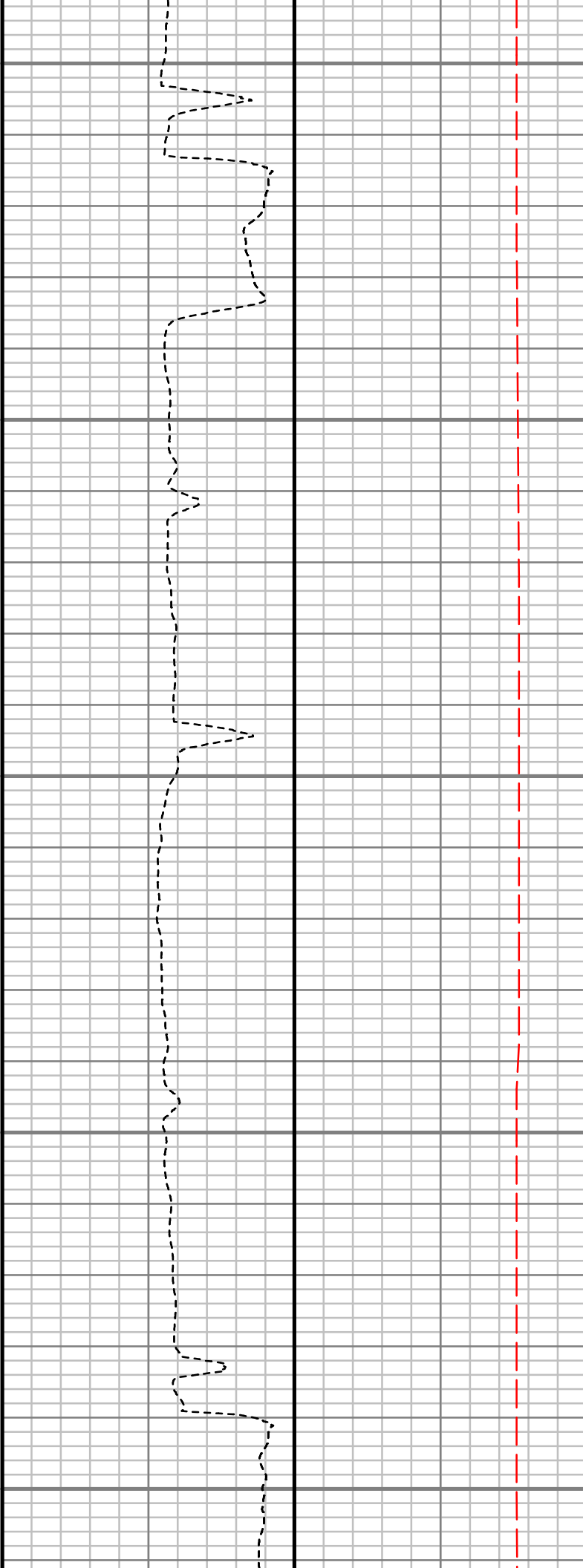
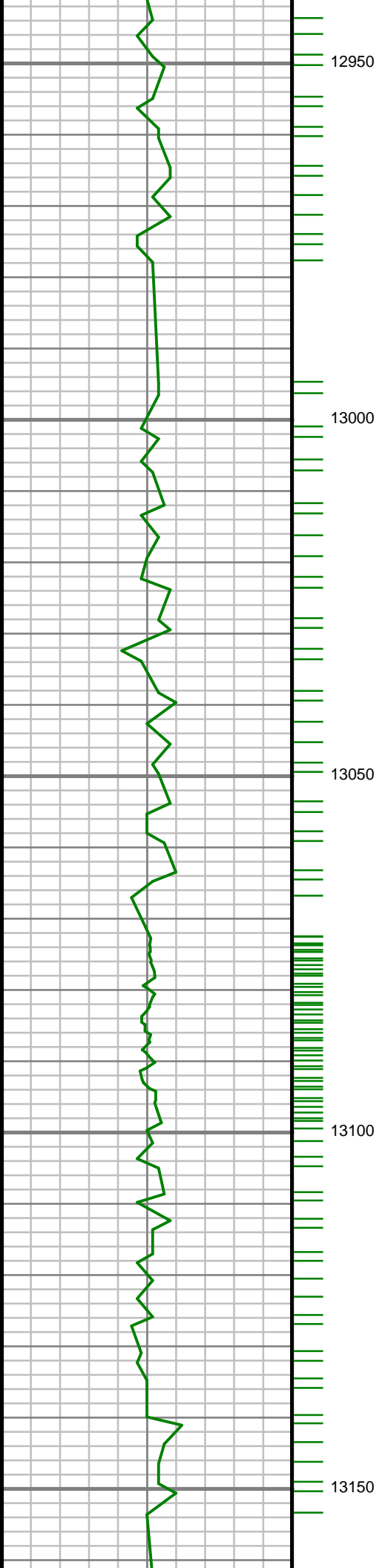
S: 175 MD: 12624.00 ft
Inc: 89.97 deg Az: 0.33
deg TVD: 7609.52 ft

S: 176 MD: 12713.00 ft
Inc: 90.84 deg Az:
359.59 deg TVD:



S: 177 MD: 12802.00 ft
Inc: 89.03 deg Az: 0.72
deg TVD: 7608.99 ft

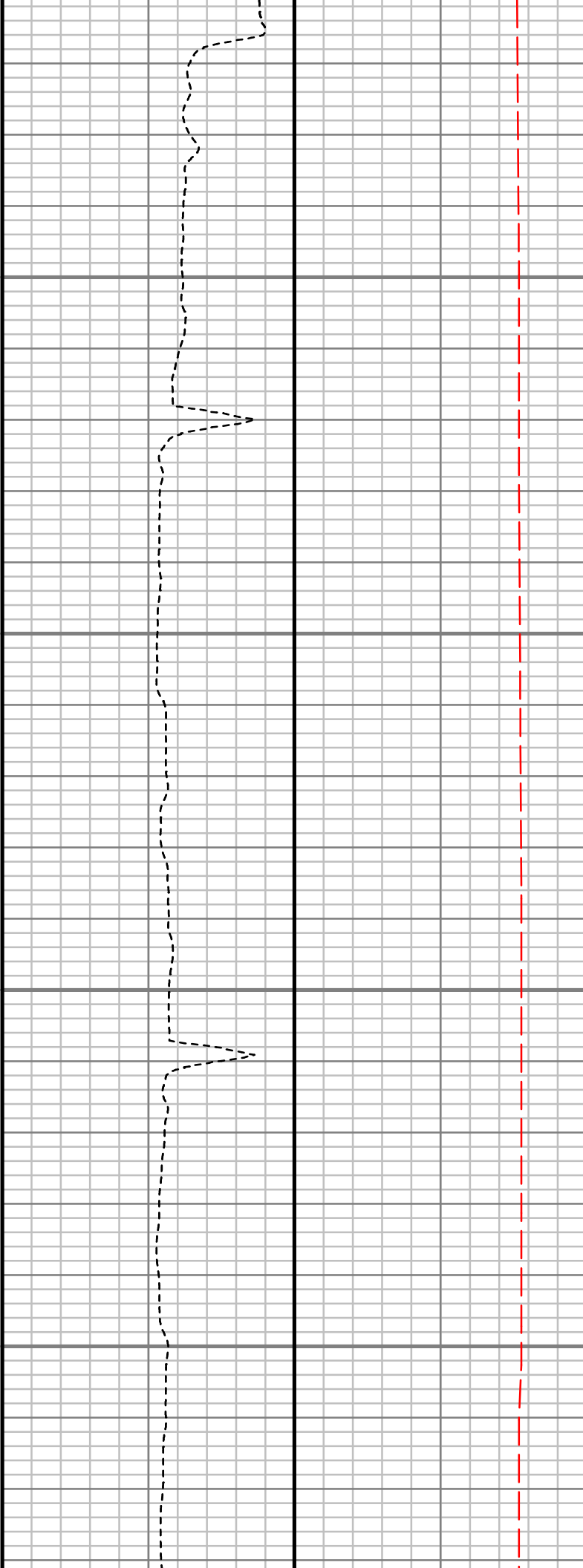
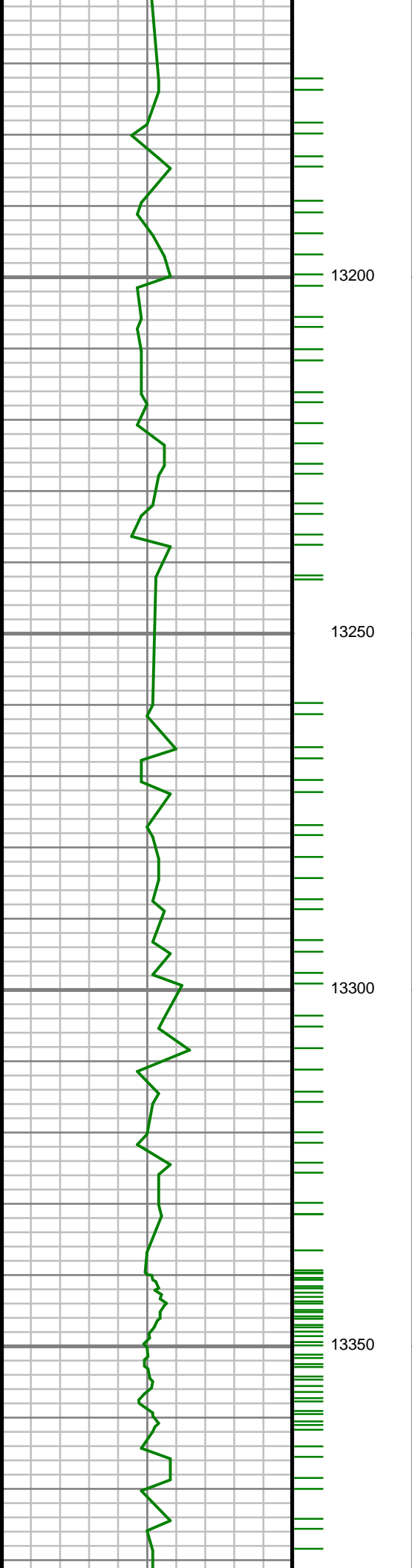
S: 178 MD: 12891.00 ft
Inc: 90.23 deg Az: 0.38
deg TVD: 7609.57 ft



S: 179 MD: 12980.00 ft
Inc: 89.36 deg Az: 0.67
deg TVD: 7609.88 ft

S: 180 MD: 13068.00 ft
Inc: 90.44 deg Az: 0.76
deg TVD: 7610.04 ft

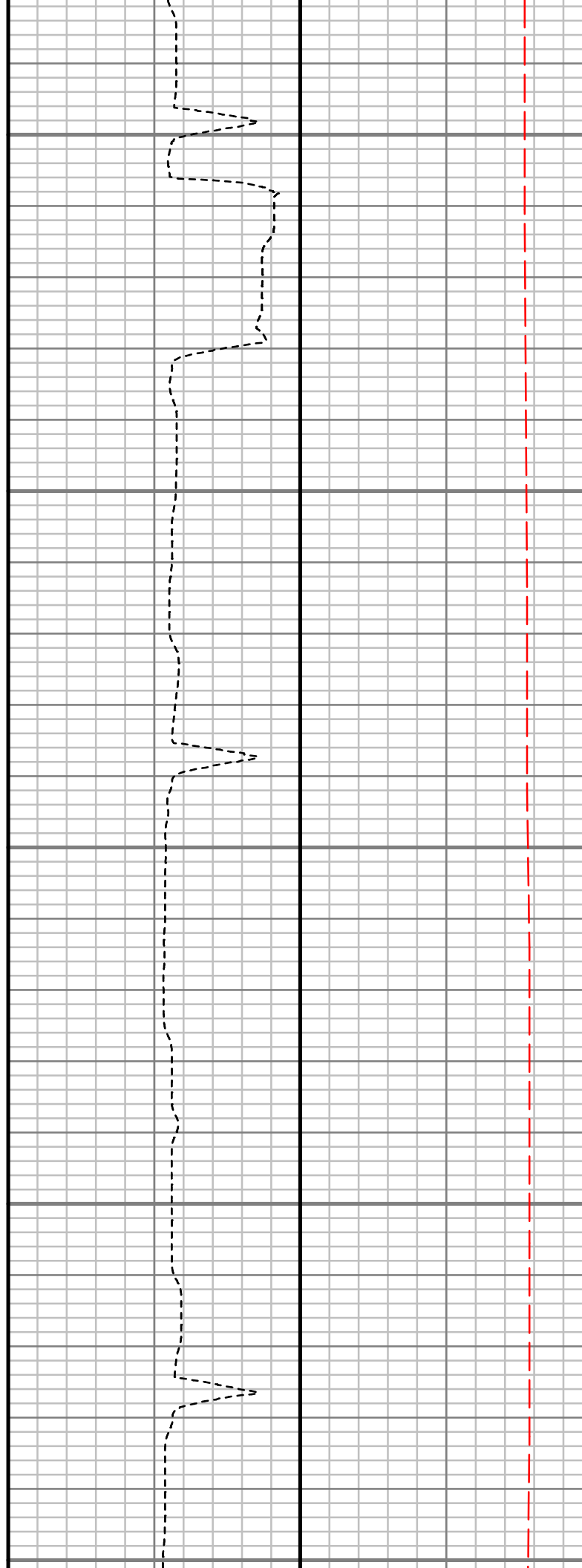
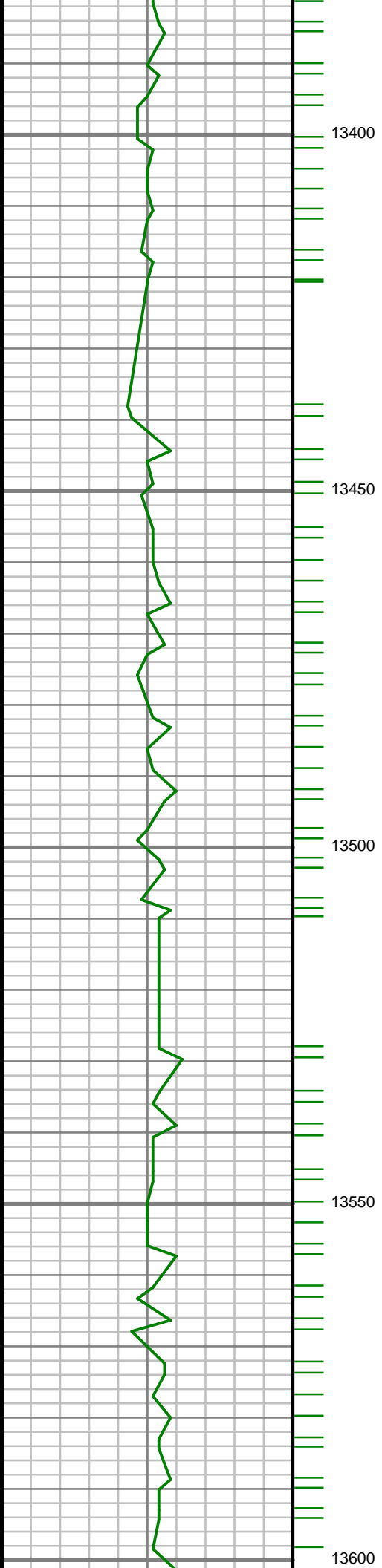
S: 181 MD: 13157.00 ft
Inc: 88.42 deg Az: 0.38



Inc: 88.12 deg Az: 0.00
deg TVD: 7610.92 ft

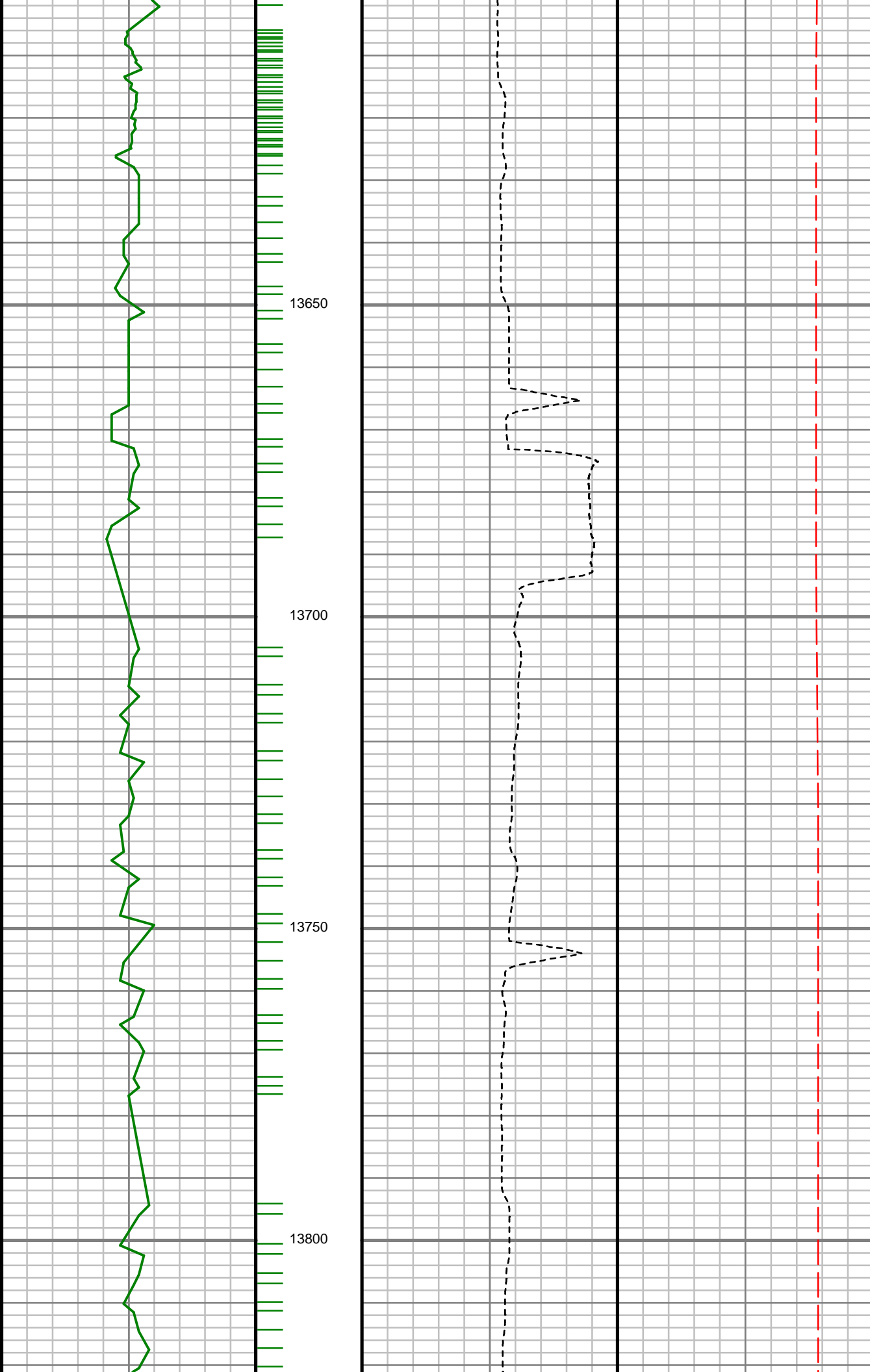
S: 182 MD: 13246.00 ft
Inc: 88.52 deg Az: 0.05
deg TVD: 7613.30 ft

S: 183 MD: 13335.00 ft
Inc: 89.87 deg Az: 0.29
deg TVD: 7614.55 ft



S: 184 MD: 13424.00 ft
Inc: 88.32 deg Az:
359.11 deg TVD:
7615.96 ft

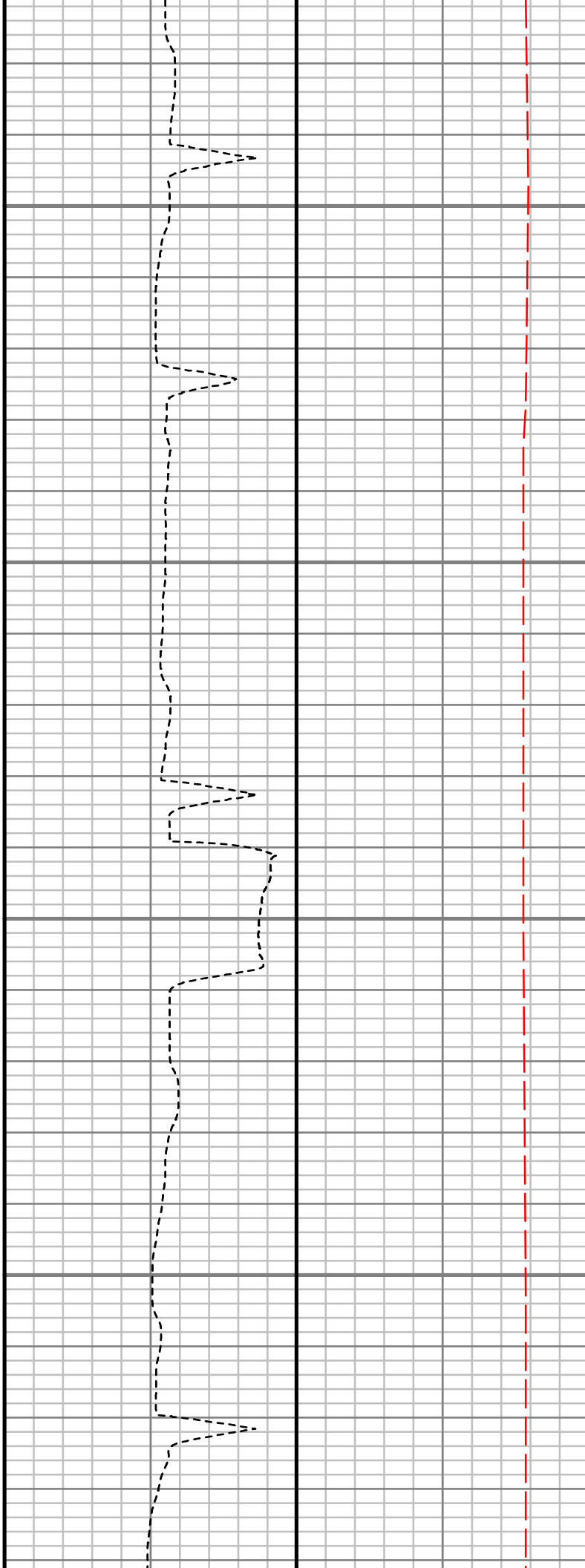
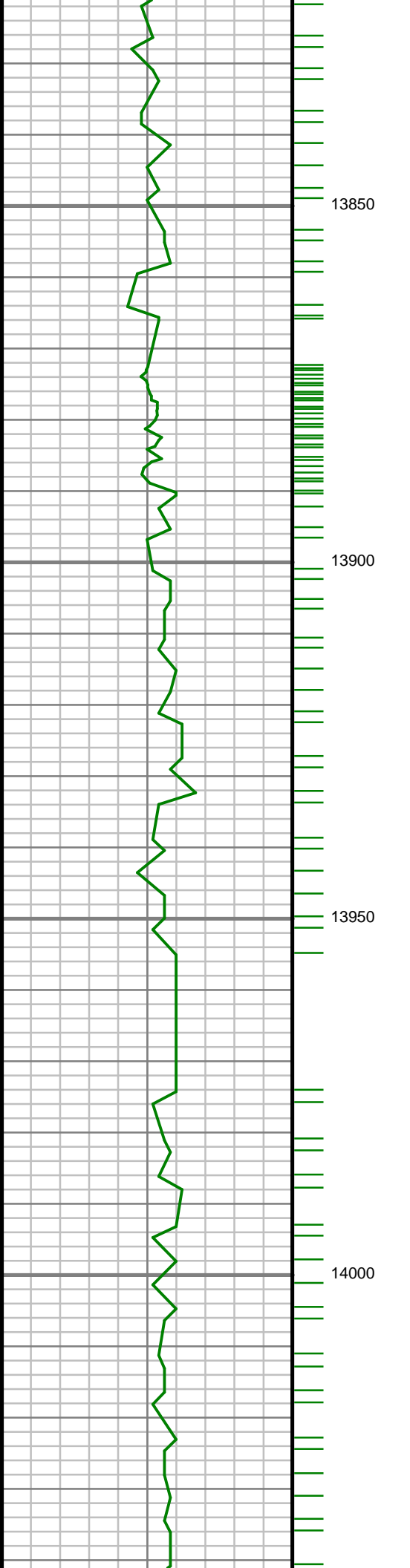
S: 185 MD: 13513.00 ft
Inc: 88.66 deg Az:
358.84 deg TVD:
7618.30 ft



S: 186 MD: 13602.00 ft
Inc: 89.60 deg Az:
358.83 deg TVD:
7619.65 ft

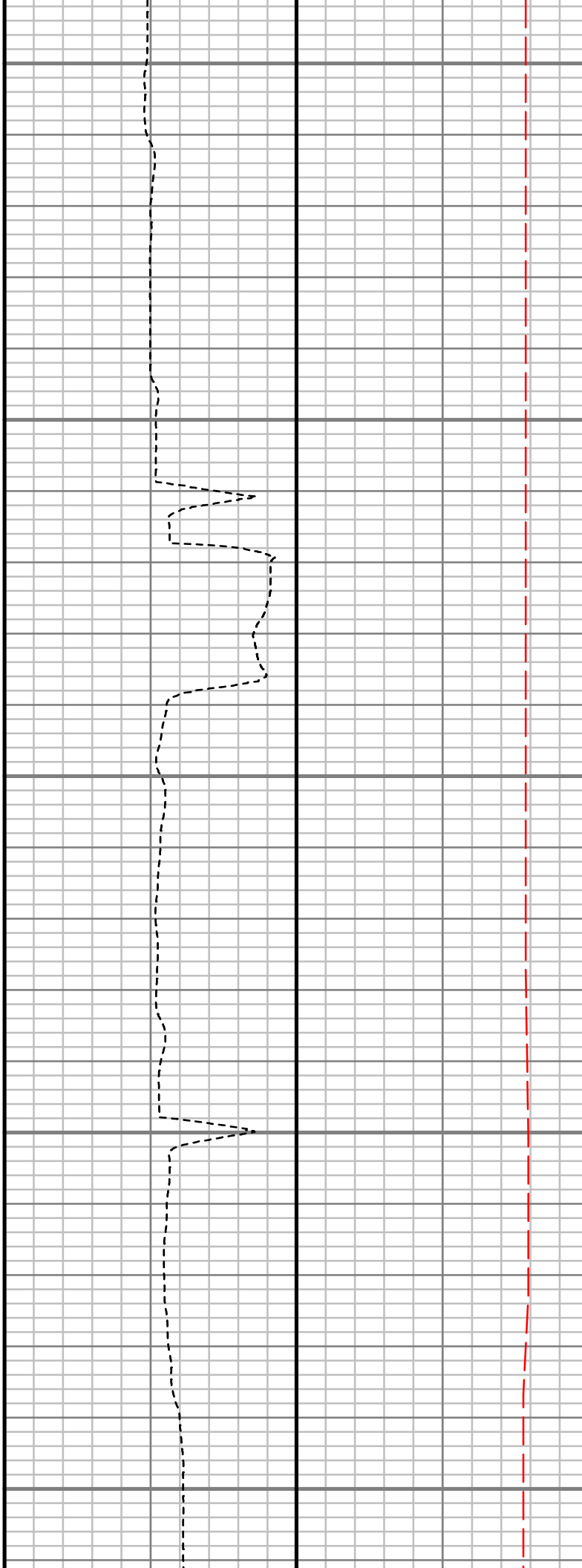
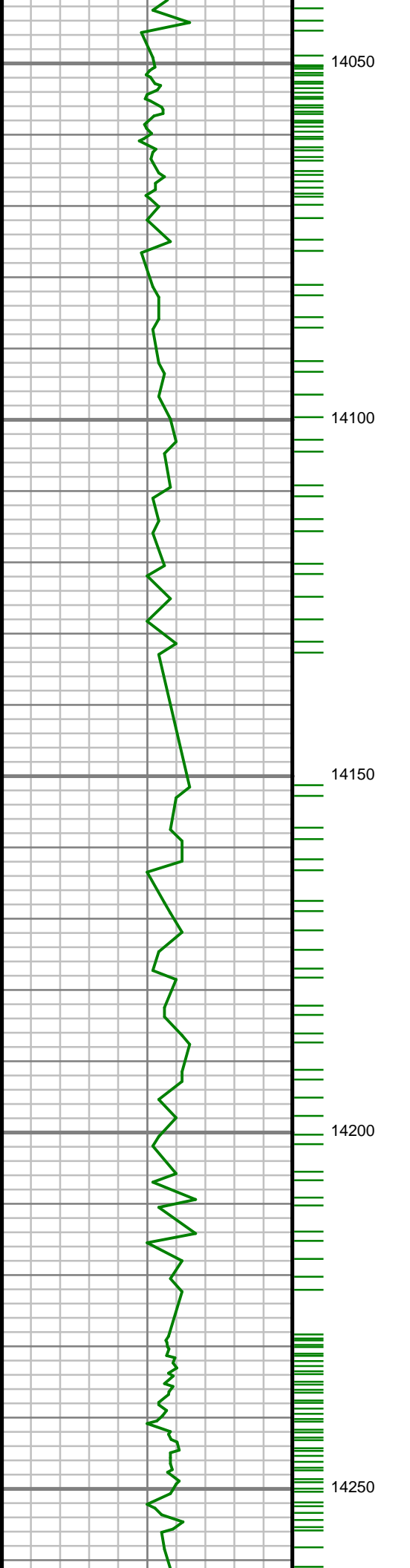
S: 187 MD: 13691.00 ft
Inc: 88.29 deg Az:
359.04 deg TVD:
7621.29 ft

S: 188 MD: 13779.00 ft
Inc: 88.46 deg Az:
358.26 deg TVD:
7623.79 ft



S: 189 MD: 13868.00 ft
Inc: 89.77 deg Az:
358.34 deg TVD:
7625.16 ft

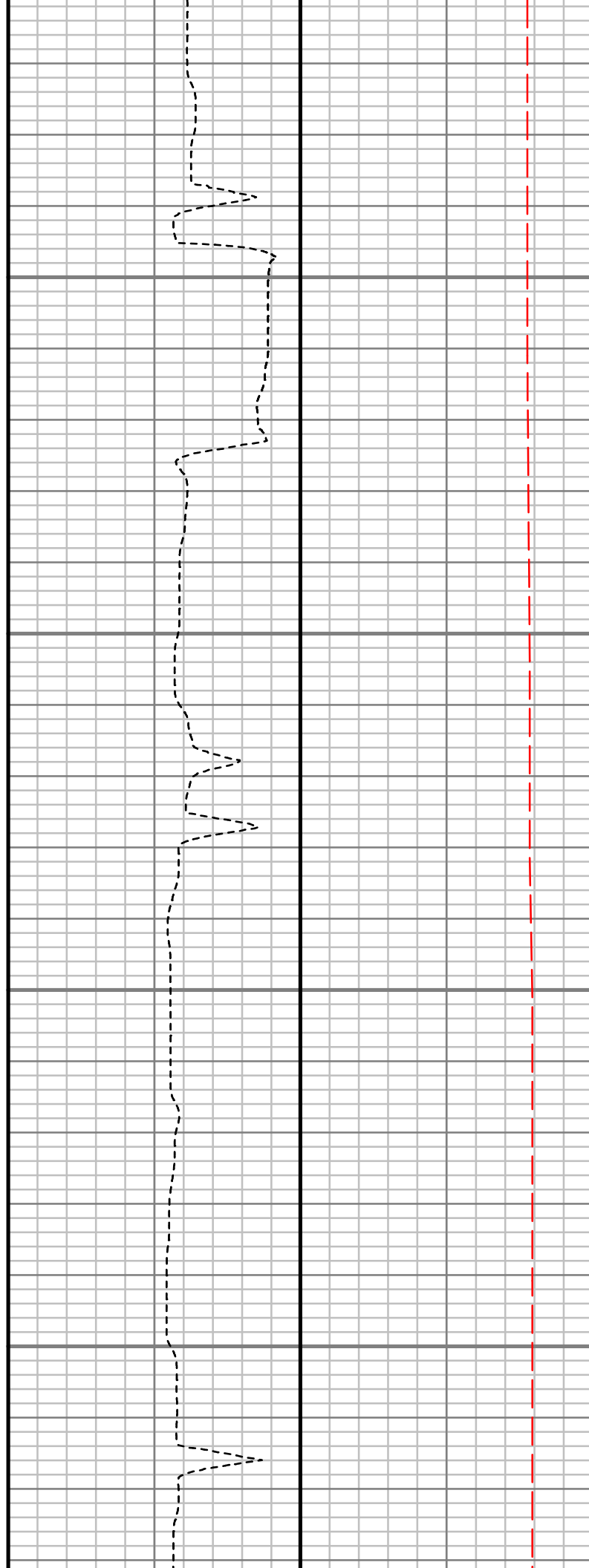
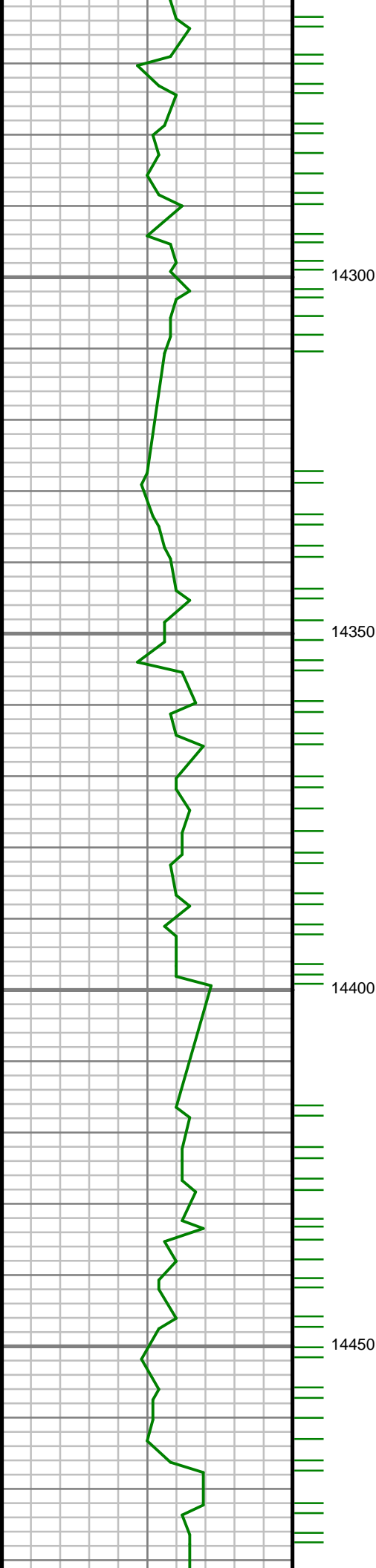
S: 190 MD: 13957.00 ft
Inc: 89.13 deg Az:
359.49 deg TVD:
7626.02 ft



S: 191 MD: 14046.00 ft
Inc: 90.50 deg Az: 0.02
deg TVD: 7626.30 ft

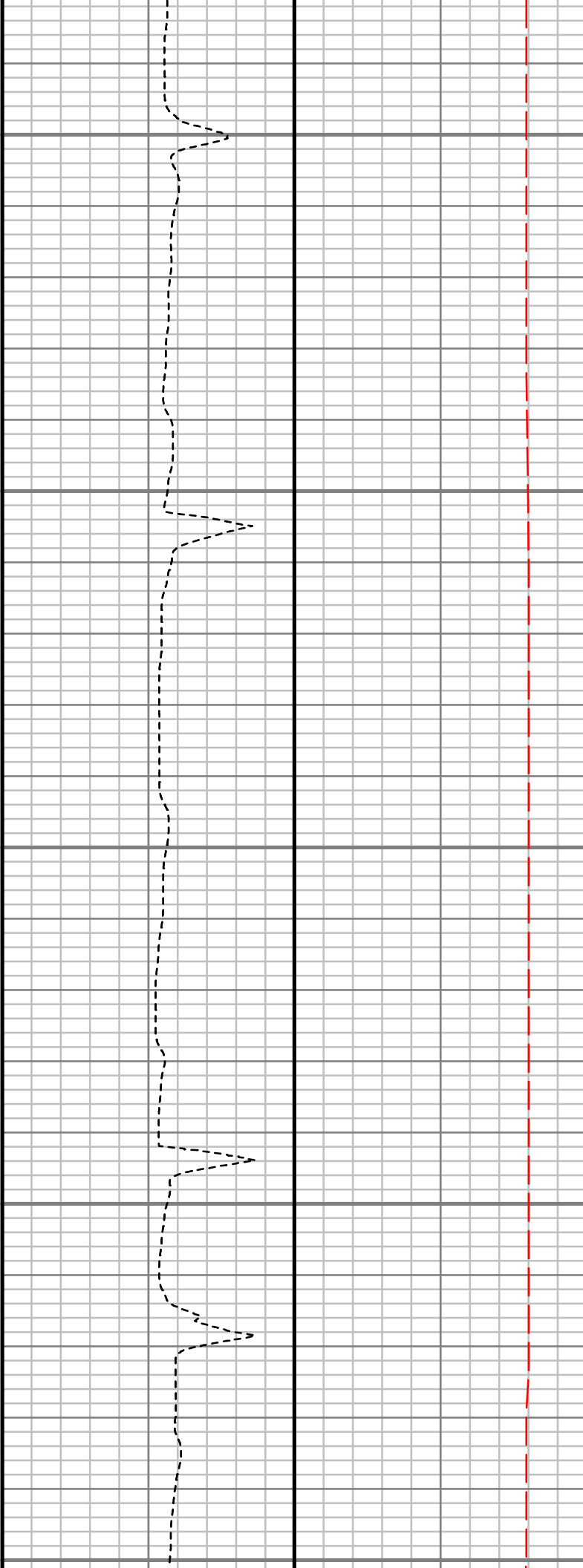
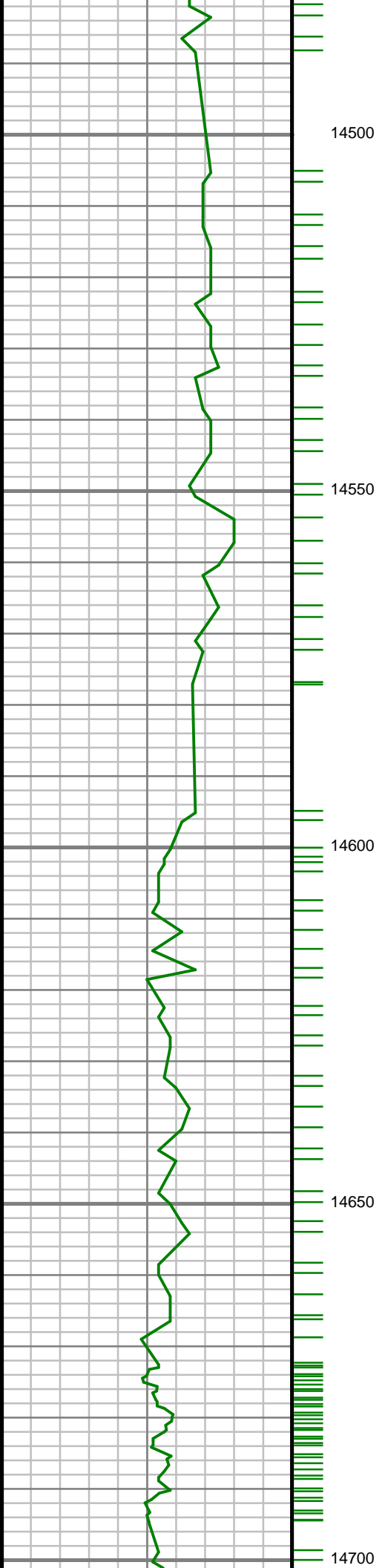
S: 192 MD: 14134.00 ft
Inc: 88.86 deg Az:
359.36 deg TVD:
7626.79 ft

S: 193 MD: 14223.00 ft
Inc: 89.87 deg Az:
359.10 deg TVD:
7627.78 ft



S: 194 MD: 14312.00 ft
Inc: 87.88 deg Az: 0.66
deg TVD: 7629.53 ft

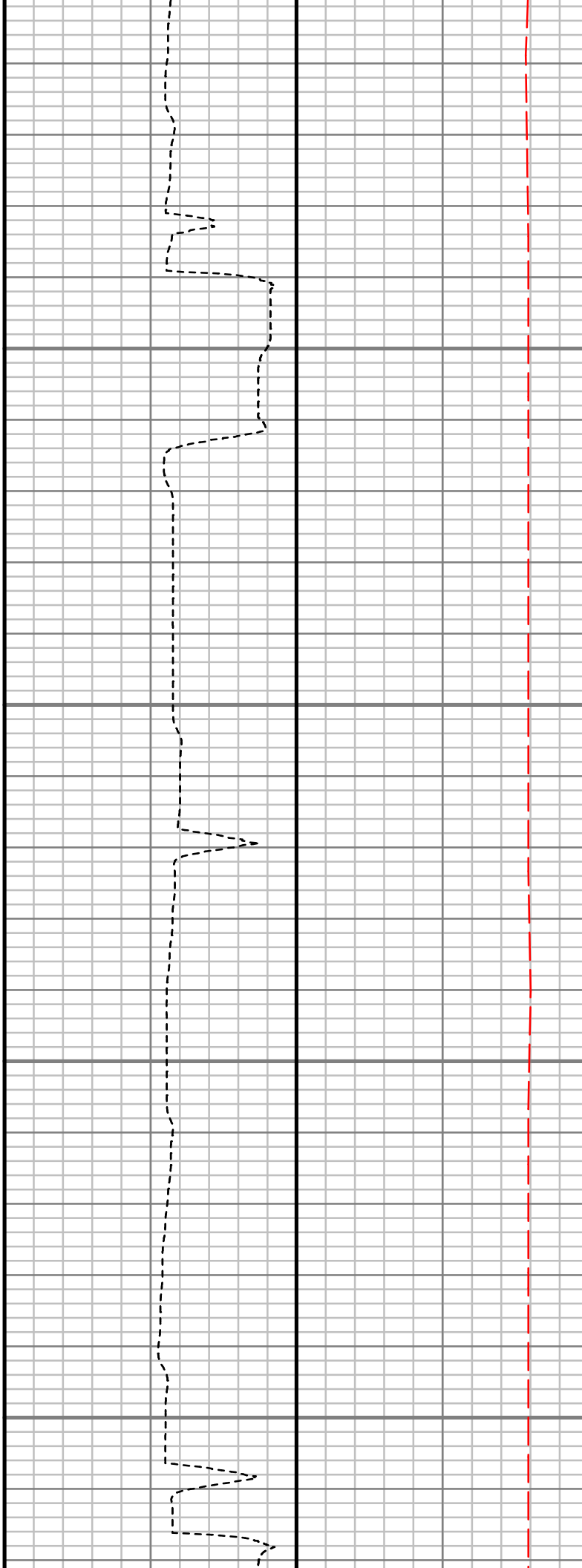
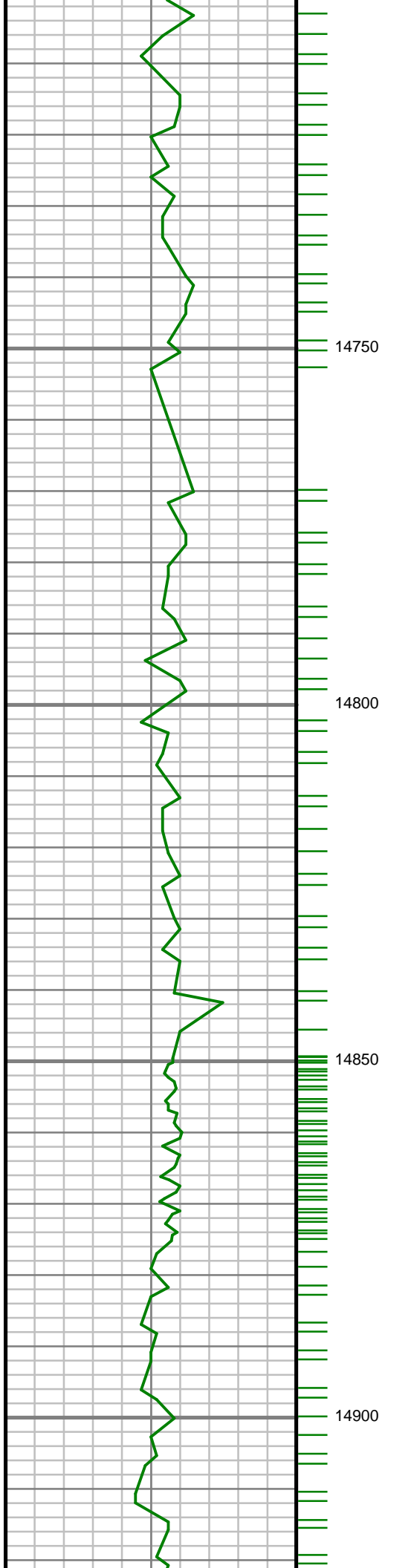
S: 195 MD: 14401.00 ft
Inc: 88.15 deg Az: 0.54
deg TVD: 7632.61 ft



S: 196 MD: 14490.00 ft
Inc: 88.62 deg Az: 0.08
deg TVD: 7635.12 ft

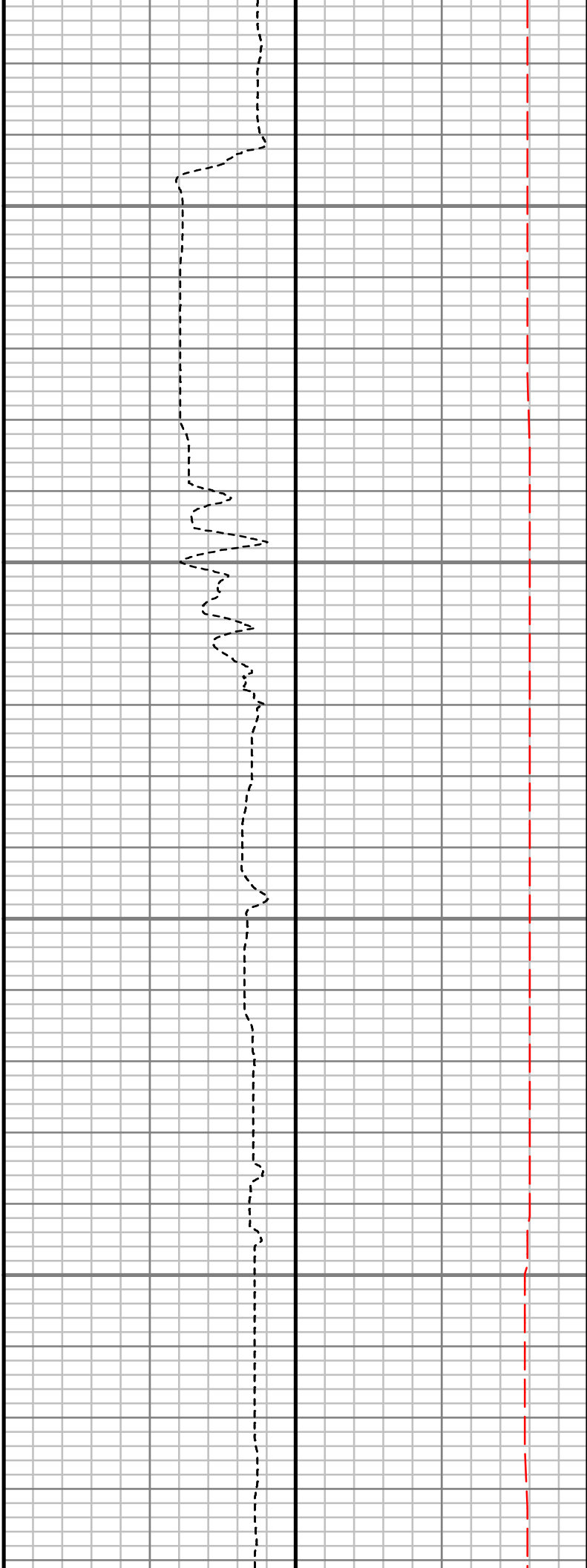
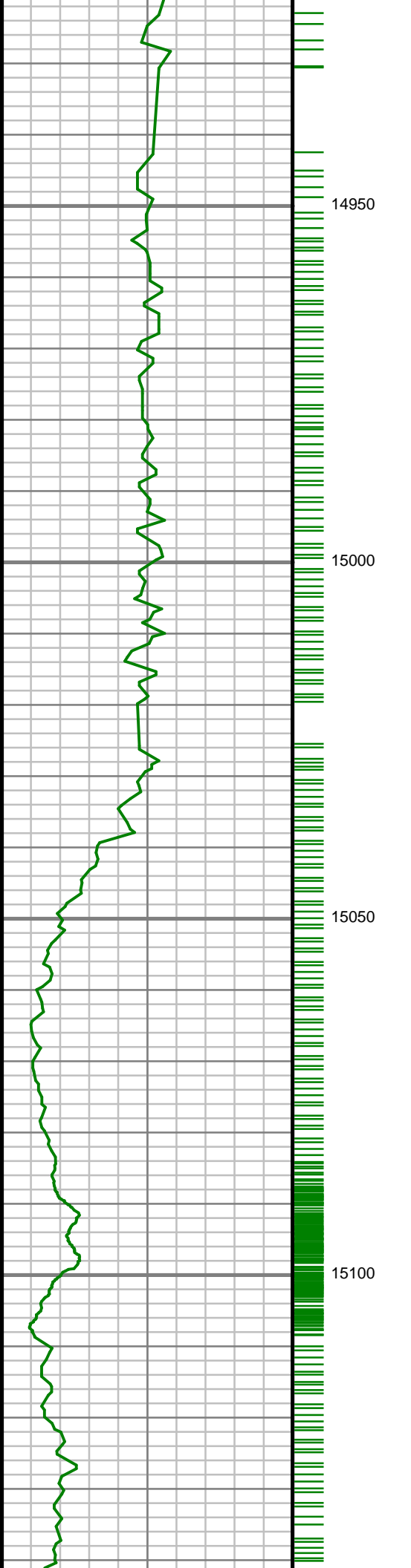
S: 197 MD: 14579.00 ft
Inc: 89.77 deg Az: 0.08
deg TVD: 7636.37 ft

S: 198 MD: 14667.00 ft
Inc: 91.11 deg Az: 0.16
deg TVD: 7635.69 ft



S: 199 MD: 14756.00 ft
Inc: 89.90 deg Az: 0.00
deg TVD: 7634.91 ft

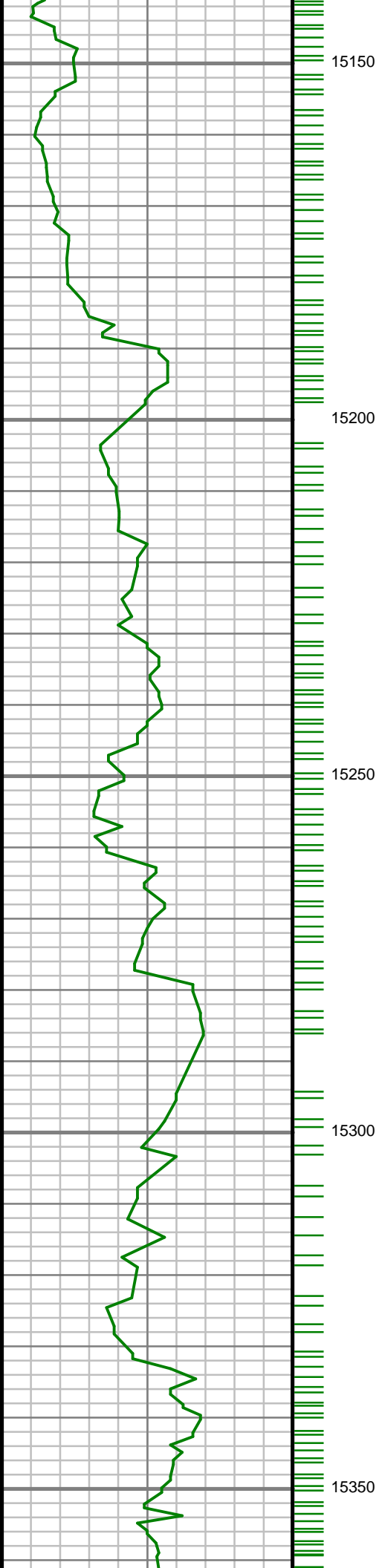
S: 200 MD: 14845.00 ft
Inc: 90.37 deg Az:
359.68 deg TVD:
7634.70 ft



S: 201 MD: 14934.00 ft
Inc: 89.09 deg Az:
358.96 deg TVD:
7635.12 ft

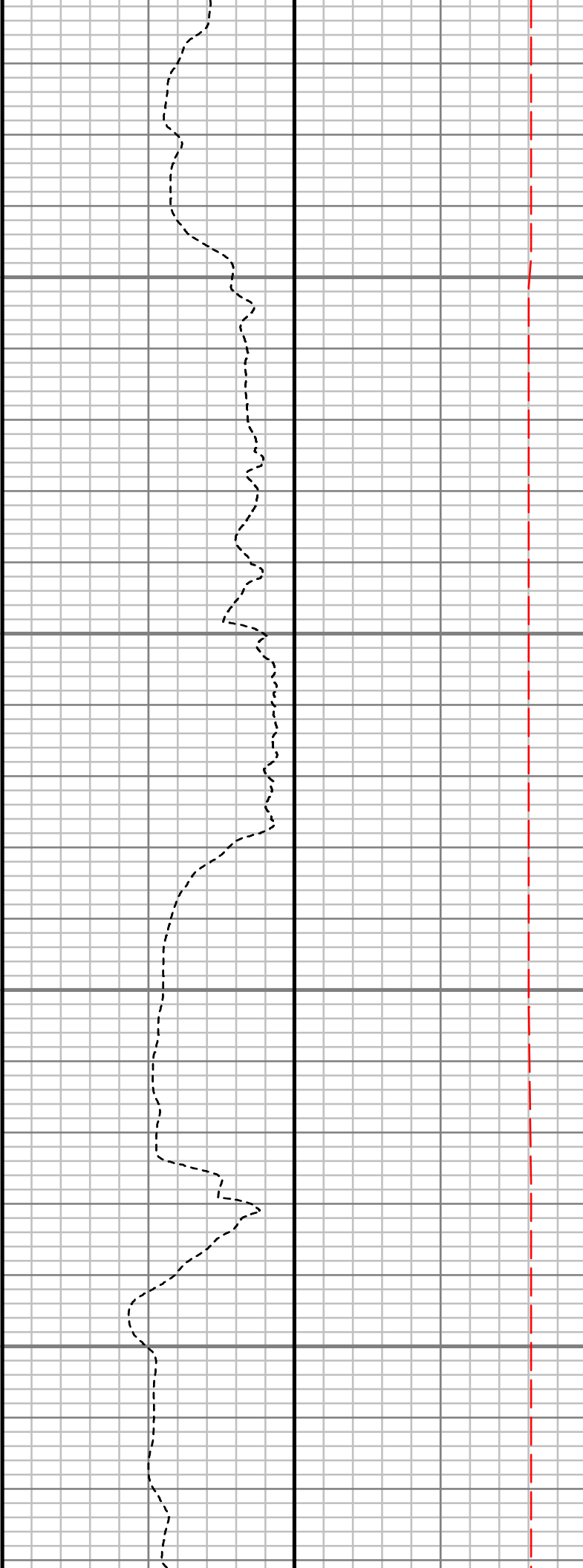
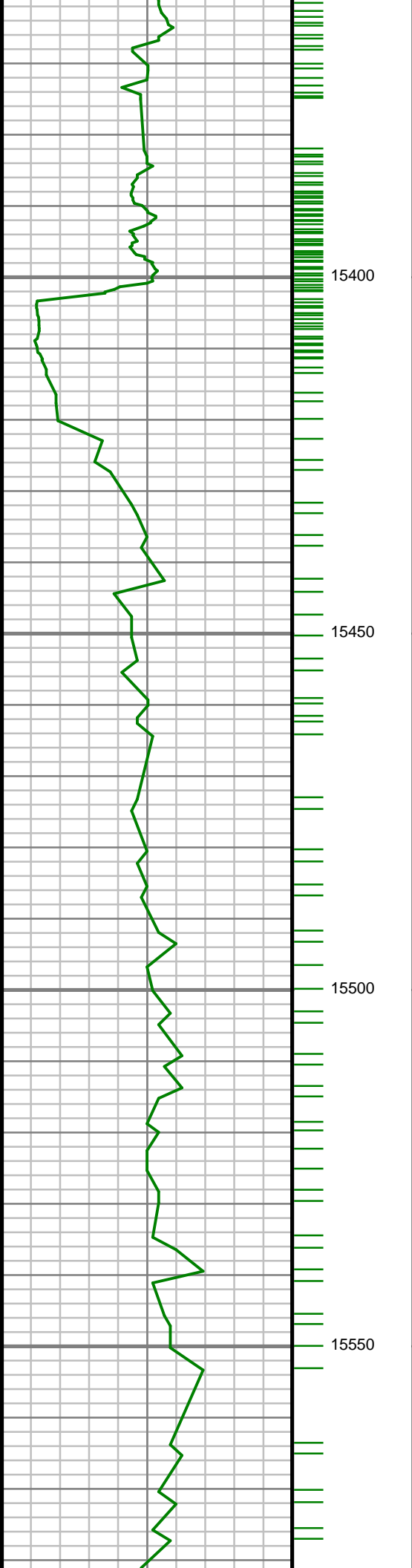
S: 202 MD: 15023.00 ft
Inc: 87.89 deg Az:
357.43 deg TVD:
7637.46 ft

S: 203 MD: 15112.00 ft
Inc: 88.25 deg Az:
356.98 deg TVD:
7640.46 ft



S: 204 MD: 15201.00 ft
Inc: 88.93 deg Az:
359.45 deg TVD:
7642.65 ft

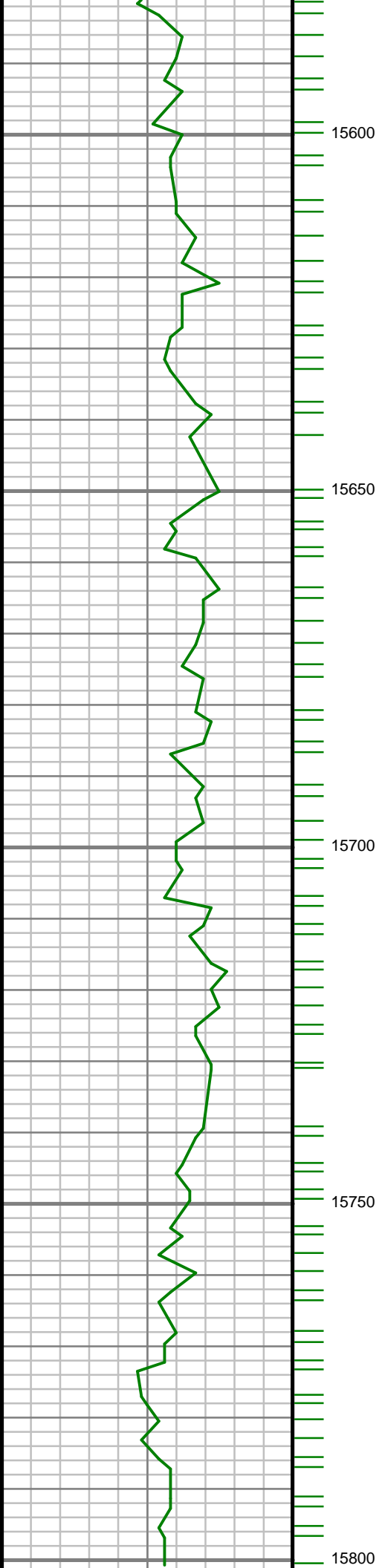
S: 205 MD: 15290.00 ft
Inc: 89.73 deg Az:
358.37 deg TVD:
7643.69 ft



S: 206 MD: 15379.00 ft
Inc: 89.66 deg Az:
357.02 deg TVD:
7644.17 ft

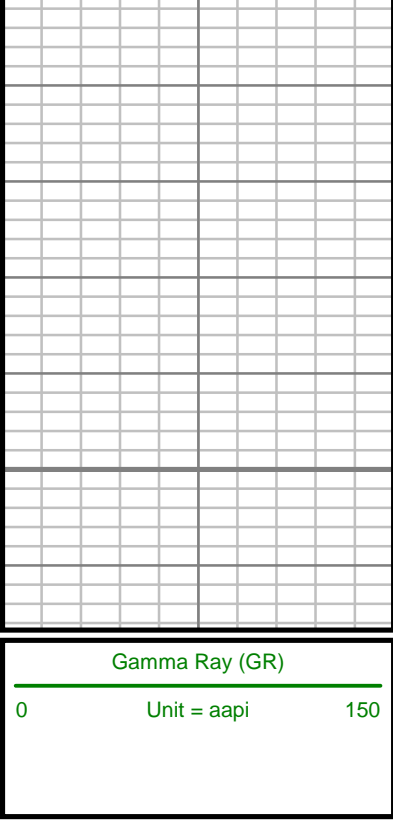
S: 207 MD: 15468.00 ft
Inc: 87.78 deg Az:
359.05 deg TVD:
7646.16 ft

S: 208 MD: 15556.00 ft
Inc: 88.72 deg Az:
359.48 deg TVD:
7648.84 ft



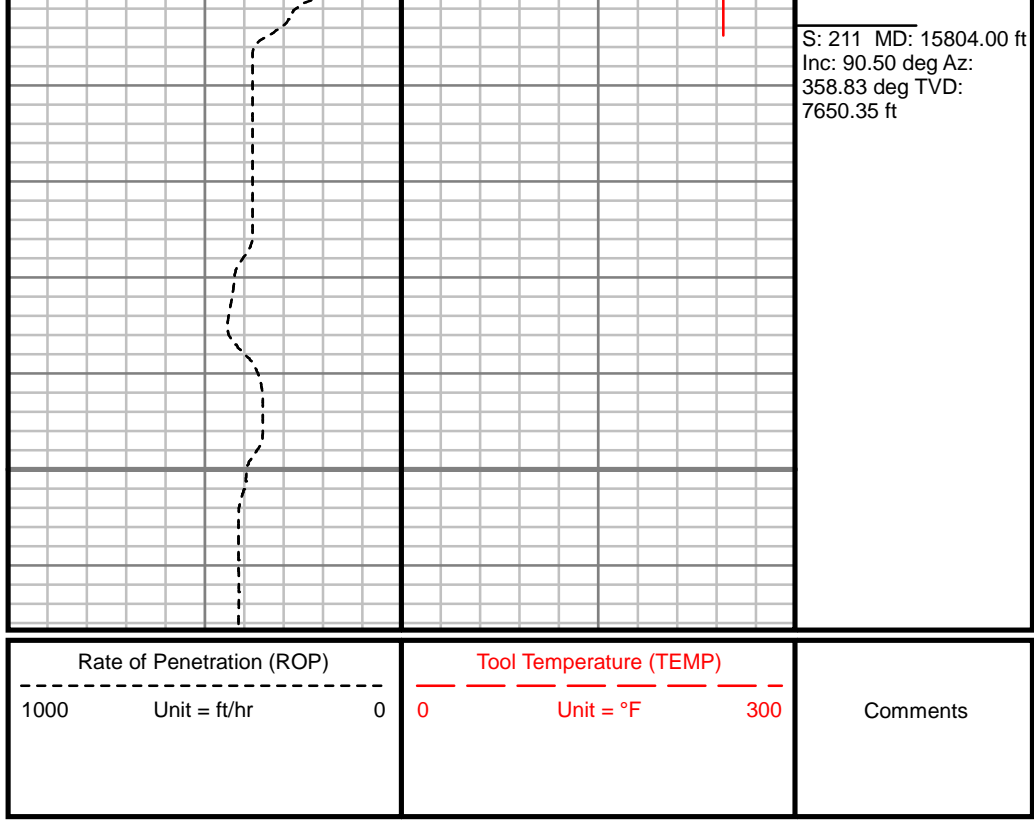
S: 209 MD: 15645.00 ft
Inc: 89.23 deg Az:
359.20 deg TVD:
7650.43 ft

S: 210 MD: 15734.00 ft
Inc: 90.27 deg Az:
359.02 deg TVD:
7650.82 ft



15850

MEASURED DEPTH
1:240 (ft)

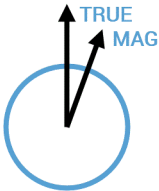


CUSTOMERANADARKO
PROJECTMARRS 28C-10HZ
FIELDWATTENBERG

WELL INFORMATION
Lat/Long40.03807° N, 104.879028° W
Northing14,540,619.34 ft
Easting1,674,276.17 ft
UWI05123432730000

MAP INFORMATION
North ReferenceTrue North
Grid Correction
SystemUniversal Transverse Mercator (US Survey Feet)
DatumNorth American Datum 1983 (GRS 1980)
Map ZoneZone 13N (108 W to 102 W)

VERTICAL SECTION REFERENCE
+N/-S0 ft
+E/-W0 ft
Proposal Direction359.77°
Calculation MethodMinimum Curvature



GEOMAGNETIC REFERENCE INFORMATION
Local Gravity: 999.033 mG [computed]

MD	MODEL	DATE	DECLINATION	MAG TO TRUE
0-15804 ft			8.35°	add 8.35°

WELL NOTESOPERATORS

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	°/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
126.00	0.53	220.96	126.00	-0.44	-0.44	-0.38	0.42
158.00	0.62	201.89	158.00	-0.71	-0.71	-0.54	0.66
190.00	1.05	214.55	189.99	-1.11	-1.11	-0.77	1.45
222.00	0.53	209.89	221.99	-1.48	-1.48	-1.01	1.64
253.00	0.48	144.94	252.99	-1.71	-1.72	-1.01	1.75
285.00	0.31	116.55	284.99	-1.86	-1.86	-0.86	0.79
316.00	0.83	92.03	315.99	-1.91	-1.91	-0.56	1.82
348.00	0.70	108.29	347.98	-1.98	-1.98	-0.14	0.79
379.00	0.79	64.25	378.98	-1.95	-1.95	0.23	1.82
411.00	0.92	61.97	410.98	-1.73	-1.73	0.66	0.42
442.00	0.88	90.36	441.98	-1.62	-1.61	1.12	1.43
474.00	1.19	107.41	473.97	-1.72	-1.71	1.68	1.36
505.00	1.67	138.43	504.96	-2.16	-2.15	2.28	2.88
537.00	2.11	131.75	536.94	-2.90	-2.89	3.03	1.54
569.00	2.37	130.35	568.92	-3.73	-3.71	3.98	0.83
601.00	3.08	143.44	600.88	-4.85	-4.83	4.99	2.94
633.00	3.96	150.47	632.82	-6.51	-6.48	6.05	3.06
664.00	4.48	148.72	663.74	-8.48	-8.45	7.21	1.73
696.00	5.23	154.69	695.62	-10.87	-10.83	8.48	2.82

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
728.00	5.63	155.13	727.48	-13.62	-13.58	9.76	1.26
760.00	5.84	157.77	759.32	-16.55	-16.51	11.04	1.05
791.00	6.59	156.72	790.14	-19.65	-19.60	12.34	2.45
823.00	7.56	158.47	821.89	-23.30	-23.25	13.84	3.10
855.00	7.82	157.68	853.61	-27.28	-27.22	15.44	0.88
887.00	8.39	160.06	885.29	-31.50	-31.43	17.06	2.07
918.00	9.23	160.14	915.92	-35.97	-35.89	18.68	2.71
950.00	9.71	161.11	947.48	-40.94	-40.86	20.42	1.58
982.00	10.15	160.32	979.00	-46.16	-46.07	22.24	1.44
1014.00	10.68	161.20	1010.48	-51.63	-51.53	24.15	1.73
1045.00	11.56	159.53	1040.90	-57.26	-57.16	26.16	3.02
1077.00	12.17	161.20	1072.21	-63.47	-63.35	28.37	2.19
1109.00	12.57	160.06	1103.47	-69.94	-69.82	30.64	1.46
1140.00	13.18	160.49	1133.69	-76.46	-76.32	32.97	1.99
1172.00	14.63	159.09	1164.75	-83.68	-83.54	35.64	4.65
1204.00	15.69	157.77	1195.64	-91.47	-91.32	38.72	3.48
1236.00	15.95	156.28	1226.43	-99.52	-99.35	42.12	1.51
1268.00	16.52	156.72	1257.15	-107.74	-107.55	45.69	1.82
1299.00	17.05	156.54	1286.83	-115.97	-115.77	49.24	1.72
1331.00	17.71	156.19	1317.37	-124.74	-124.53	53.07	2.09

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
1363.00	18.28	154.08	1347.80	-133.72	-133.50	57.23	2.71
1394.00	17.40	156.54	1377.31	-142.36	-142.12	61.20	3.74
1426.00	17.53	157.42	1407.84	-151.22	-150.96	64.96	0.92
1458.00	17.53	157.51	1438.35	-160.14	-159.86	68.65	0.08
1490.00	16.79	157.68	1468.93	-168.88	-168.59	72.25	2.32
1521.00	16.39	158.56	1498.64	-177.11	-176.80	75.55	1.52
1553.00	16.74	159.53	1529.31	-185.64	-185.32	78.81	1.39
1584.00	17.45	158.56	1558.94	-194.16	-193.83	82.07	2.47
1616.00	17.58	160.76	1589.45	-203.20	-202.86	85.42	2.11
1648.00	17.58	160.93	1619.96	-212.34	-211.99	88.59	0.16
1680.00	16.70	158.03	1650.54	-221.19	-220.82	91.89	3.83
1743.00	15.21	158.12	1711.11	-237.28	-236.89	98.35	2.37
1775.00	14.28	157.95	1742.06	-244.85	-244.44	101.40	2.91
1807.00	13.05	155.13	1773.15	-251.79	-251.38	104.40	4.37
1831.00	11.91	154.78	1796.58	-256.50	-256.08	106.60	4.76
1945.00	10.28	154.29	1908.45	-276.35	-275.88	116.02	1.43
2034.00	9.07	169.99	1996.19	-290.43	-289.95	120.69	3.25
2123.00	9.78	180.85	2084.00	-304.90	-304.42	121.79	2.15
2212.00	11.26	183.66	2171.50	-321.13	-320.65	121.13	1.76
2301.00	11.06	182.83	2258.82	-338.33	-337.85	120.15	0.29

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
2390.00	12.57	180.25	2345.93	-356.54	-356.06	119.69	1.80
2478.00	11.93	176.88	2431.93	-375.20	-374.72	120.14	1.09
2567.00	11.40	176.39	2519.09	-393.16	-392.68	121.20	0.61
2655.00	10.53	173.90	2605.48	-409.84	-409.36	122.60	1.13
2770.00	9.18	173.43	2718.78	-429.42	-428.92	124.76	1.18
2858.00	8.39	169.55	2805.75	-442.71	-442.21	126.73	1.12
2947.00	7.52	166.00	2893.89	-454.76	-454.24	129.32	1.12
3036.00	6.59	164.37	2982.22	-465.34	-464.81	132.10	1.07
3125.00	6.04	168.70	3070.68	-474.86	-474.32	134.40	0.82
3213.00	5.22	171.53	3158.25	-483.36	-482.82	135.89	0.98
3302.00	4.75	170.96	3246.92	-491.01	-490.46	137.07	0.53
3390.00	4.13	177.92	3334.65	-497.78	-497.23	137.76	0.93
3479.00	3.93	179.61	3423.43	-504.03	-503.48	137.89	0.26
3568.00	2.57	189.35	3512.29	-509.05	-508.50	137.59	1.64
3657.00	0.84	240.39	3601.25	-511.34	-510.79	136.70	2.41
3745.00	0.93	248.75	3689.24	-511.91	-511.37	135.47	0.18
3834.00	0.66	230.61	3778.23	-512.49	-511.96	134.40	0.41
3923.00	0.77	248.47	3867.22	-513.03	-512.50	133.45	0.28
4012.00	1.56	316.86	3956.21	-512.36	-511.84	132.07	1.64
4101.00	1.74	305.58	4045.17	-510.69	-510.17	130.14	0.42

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
4189.00	1.67	304.73	4133.13	-509.17	-508.66	128.00	0.08
4278.00	1.93	295.48	4222.09	-507.78	-507.28	125.58	0.44
4367.00	1.99	304.57	4311.04	-506.24	-505.75	122.95	0.36
4456.00	2.27	297.40	4399.97	-504.54	-504.07	120.12	0.43
4544.00	2.05	303.42	4487.91	-502.86	-502.40	117.26	0.36
4633.00	1.73	307.62	4576.86	-501.16	-500.70	114.86	0.39
4722.00	1.45	303.21	4665.83	-499.71	-499.26	112.86	0.34
4811.00	1.51	304.52	4754.80	-498.42	-497.98	110.95	0.08
4900.00	1.76	291.81	4843.76	-497.24	-496.81	108.71	0.49
4989.00	1.19	316.53	4932.73	-496.06	-495.63	106.81	0.95
5078.00	0.83	357.97	5021.72	-494.74	-494.32	106.15	0.89
5167.00	0.53	292.01	5110.72	-493.94	-493.52	105.74	0.88
5255.00	0.95	283.13	5198.71	-493.62	-493.20	104.66	0.49
5344.00	0.77	121.65	5287.71	-493.76	-493.35	104.45	1.91
5433.00	0.71	217.49	5376.70	-494.51	-494.10	104.62	1.24
5522.00	1.17	262.79	5465.69	-495.06	-494.65	103.38	0.94
5611.00	0.82	203.20	5554.68	-495.76	-495.35	102.23	1.16
5700.00	1.85	137.76	5643.66	-497.41	-497.00	102.95	1.89
5788.00	1.40	124.46	5731.62	-499.07	-498.66	104.79	0.66
5877.00	1.24	120.17	5820.60	-500.18	-499.76	106.52	0.21

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
5966.00	0.76	113.63	5909.58	-500.91	-500.48	107.89	0.55
6055.00	0.78	124.50	5998.58	-501.49	-501.06	108.93	0.17
6144.00	0.90	95.64	6087.57	-501.91	-501.47	110.12	0.49
6232.00	1.11	99.98	6175.55	-502.13	-501.68	111.65	0.25
6321.00	0.84	90.35	6264.54	-502.29	-501.84	113.15	0.35
6410.00	0.50	96.55	6353.53	-502.34	-501.89	114.19	0.39
6499.00	0.81	72.15	6442.53	-502.20	-501.74	115.18	0.46
6588.00	0.61	50.63	6531.52	-501.71	-501.24	116.14	0.37
6677.00	1.13	47.43	6620.51	-500.82	-500.35	117.15	0.59
6765.00	0.89	33.03	6708.50	-499.66	-499.19	118.17	0.39
6854.00	11.93	359.99	6796.81	-489.85	-489.38	118.54	12.58
6942.00	22.84	9.09	6880.68	-463.82	-463.34	121.25	12.74
7031.00	30.92	5.49	6960.00	-423.95	-423.45	126.17	9.26
7120.00	36.67	2.73	7033.94	-374.62	-374.10	129.63	6.69
7208.00	40.38	0.22	7102.78	-319.85	-319.33	130.99	4.57
7297.00	41.15	357.99	7170.19	-261.75	-261.23	130.07	1.85
7386.00	39.67	355.73	7237.96	-204.14	-203.63	126.93	2.34
7474.00	42.27	353.50	7304.40	-146.69	-146.20	121.49	3.39
7563.00	46.70	354.88	7367.88	-84.63	-84.17	115.21	5.09
7651.00	48.12	355.81	7427.43	-20.04	-19.60	109.96	1.79

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
7740.00	54.54	358.89	7483.02	49.34	49.76	106.83	7.70
7829.00	71.22	8.89	7523.53	127.89	128.34	112.69	21.21
7918.00	87.45	7.71	7539.95	214.10	214.60	125.25	18.28
8007.00	86.31	4.64	7544.79	302.40	302.94	134.81	3.67
8095.00	84.73	1.56	7551.67	389.97	390.53	139.55	3.92
8184.00	84.56	359.53	7559.98	478.57	479.13	140.40	2.28
8273.00	85.54	359.23	7567.65	567.23	567.79	139.44	1.15
8365.00	86.61	359.27	7573.95	659.01	659.57	138.24	1.16
8451.00	86.94	358.12	7578.79	744.86	745.41	136.28	1.39
8540.00	87.51	357.39	7583.10	833.70	834.24	132.80	1.04
8628.00	88.92	356.89	7585.84	921.56	922.08	128.41	1.70
8717.00	86.98	357.34	7589.02	1010.40	1010.91	123.93	2.24
8806.00	86.57	356.99	7594.03	1099.17	1099.66	119.54	0.61
8895.00	87.25	356.89	7598.83	1187.93	1188.40	114.79	0.77
8984.00	88.56	358.79	7602.08	1276.81	1277.27	111.44	2.59
9073.00	89.70	358.98	7603.43	1365.79	1366.24	109.71	1.30
9161.00	90.60	358.67	7603.20	1453.78	1454.22	107.91	1.08
9250.00	91.51	358.63	7601.56	1542.75	1543.18	105.81	1.02
9339.00	89.93	358.18	7600.45	1631.71	1632.14	103.33	1.85
9427.00	90.60	357.95	7600.04	1719.67	1720.09	100.36	0.80

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
9516.00	91.44	357.35	7598.45	1808.59	1809.00	96.71	1.16
9605.00	90.87	359.38	7596.66	1897.54	1897.94	94.18	2.37
9694.00	88.89	359.23	7596.85	1986.54	1986.93	93.10	2.23
9782.00	89.73	359.09	7597.91	2074.52	2074.91	91.81	0.97
9871.00	90.40	0.65	7597.81	2163.52	2163.91	91.60	1.91
9960.00	91.14	0.35	7596.61	2252.50	2252.89	92.38	0.90
10049.00	89.87	0.22	7595.83	2341.50	2341.89	92.82	1.43
10137.00	90.34	359.91	7595.66	2429.49	2429.89	92.92	0.64
10226.00	88.89	0.35	7596.26	2518.49	2518.88	93.12	1.70
10315.00	88.79	359.50	7598.06	2607.47	2607.86	93.01	0.96
10404.00	89.09	358.74	7599.71	2696.45	2696.84	91.64	0.92
10492.00	89.73	358.13	7600.62	2784.42	2784.80	89.24	1.00
10581.00	88.72	358.69	7601.82	2873.38	2873.75	86.77	1.30
10670.00	89.33	358.35	7603.33	2962.35	2962.71	84.47	0.78
10759.00	91.58	0.34	7602.63	3051.33	3051.69	83.45	3.37
10848.00	91.71	359.32	7600.07	3140.29	3140.65	83.19	1.15
10936.00	90.20	356.47	7598.61	3228.22	3228.57	79.96	3.66
11025.00	90.03	0.69	7598.43	3317.18	3317.52	77.75	4.75
11114.00	91.14	1.77	7597.52	3406.15	3406.49	79.66	1.74
11203.00	92.25	1.17	7594.89	3495.07	3495.42	81.94	1.42

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
11292.00	89.80	0.59	7593.29	3584.03	3584.39	83.31	2.83
11381.00	90.84	1.16	7592.80	3673.01	3673.38	84.67	1.33
11469.00	89.87	1.73	7592.25	3760.97	3761.35	86.89	1.28
11558.00	88.35	1.99	7593.63	3849.90	3850.29	89.78	1.73
11647.00	87.65	1.88	7596.74	3938.78	3939.18	92.78	0.80
11736.00	88.72	1.75	7599.56	4027.68	4028.09	95.60	1.21
11825.00	88.42	1.16	7601.78	4116.61	4117.03	97.86	0.74
11914.00	89.50	1.12	7603.40	4205.57	4206.00	99.63	1.21
12003.00	90.47	1.16	7603.42	4294.54	4294.98	101.40	1.09
12091.00	89.16	359.49	7603.70	4382.53	4382.98	101.90	2.41
12180.00	88.69	359.93	7605.37	4471.51	4471.96	101.45	0.72
12269.00	87.82	359.45	7608.08	4560.47	4560.91	100.97	1.12
12357.00	88.69	359.38	7610.76	4648.43	4648.87	100.07	0.99
12446.00	90.13	359.40	7611.68	4737.42	4737.86	99.12	1.62
12535.00	91.34	359.66	7610.54	4826.41	4826.84	98.39	1.39
12624.00	89.97	0.33	7609.52	4915.40	4915.84	98.38	1.71
12713.00	90.84	359.59	7608.89	5004.40	5004.83	98.32	1.28
12802.00	89.03	0.72	7608.99	5093.39	5093.83	98.56	2.40
12891.00	90.23	0.38	7609.57	5182.38	5182.82	99.42	1.40
12980.00	89.36	0.67	7609.88	5271.37	5271.81	100.23	1.03

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
13068.00	90.44	0.76	7610.04	5359.36	5359.81	101.33	1.23
13157.00	88.42	0.38	7610.92	5448.34	5448.79	102.21	2.31
13246.00	88.52	0.05	7613.30	5537.30	5537.76	102.55	0.39
13335.00	89.87	0.29	7614.55	5626.29	5626.75	102.81	1.54
13424.00	88.32	359.11	7615.96	5715.27	5715.73	102.35	2.19
13513.00	88.66	358.84	7618.30	5804.23	5804.69	100.76	0.49
13602.00	89.60	358.83	7619.65	5893.21	5893.66	98.95	1.06
13691.00	88.29	359.04	7621.29	5982.18	5982.62	97.29	1.49
13779.00	88.46	358.26	7623.79	6070.13	6070.56	95.22	0.91
13868.00	89.77	358.34	7625.16	6159.09	6159.51	92.58	1.47
13957.00	89.13	359.49	7626.02	6248.07	6248.49	90.89	1.48
14046.00	90.50	0.02	7626.30	6337.07	6337.49	90.51	1.65
14134.00	88.86	359.36	7626.79	6425.07	6425.48	90.04	2.01
14223.00	89.87	359.10	7627.78	6514.06	6514.46	88.84	1.17
14312.00	87.88	0.66	7629.53	6603.03	6603.44	88.66	2.84
14401.00	88.15	0.54	7632.61	6691.97	6692.38	89.59	0.33
14490.00	88.62	0.08	7635.12	6780.93	6781.34	90.07	0.74
14579.00	89.77	0.08	7636.37	6869.92	6870.33	90.19	1.29
14667.00	91.11	0.16	7635.69	6957.91	6958.33	90.38	1.53
14756.00	89.90	0.00	7634.91	7046.90	7047.32	90.50	1.37

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
14845.00	90.37	359.68	7634.70	7135.90	7136.32	90.25	0.64
14934.00	89.09	358.96	7635.12	7224.90	7225.31	89.20	1.65
15023.00	87.89	357.43	7637.46	7313.83	7314.23	86.39	2.18
15112.00	88.25	356.98	7640.46	7402.69	7403.08	82.06	0.65
15201.00	88.93	359.45	7642.65	7491.62	7492.00	79.29	2.88
15290.00	89.73	358.37	7643.69	7580.60	7580.98	77.59	1.51
15379.00	89.66	357.02	7644.17	7669.54	7669.90	74.01	1.52
15468.00	87.78	359.05	7646.16	7758.47	7758.82	70.96	3.11
15556.00	88.72	359.48	7648.84	7846.42	7846.77	69.83	1.17
15645.00	89.23	359.20	7650.43	7935.41	7935.75	68.81	0.65
15734.00	90.27	359.02	7650.82	8024.40	8024.73	67.43	1.19
15804.00	90.50	358.83	7650.35	8094.39	8094.72	66.11	0.43

5" = 100' MD