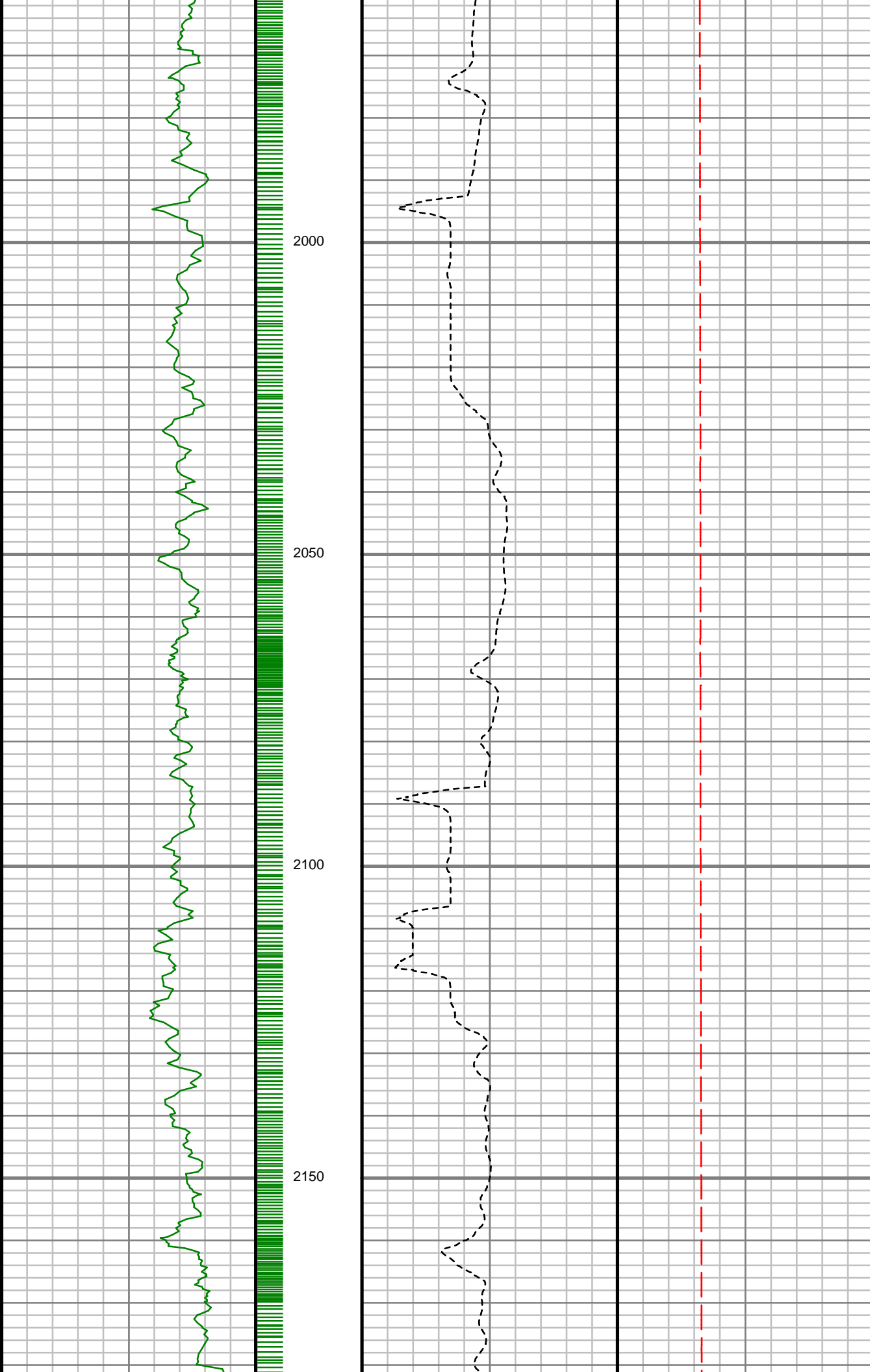


[illegible]

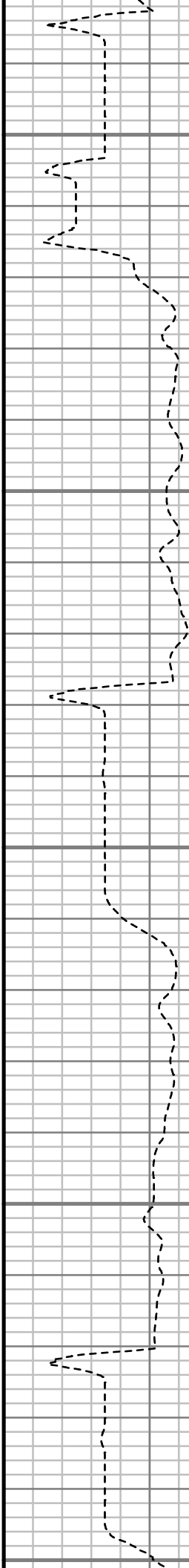
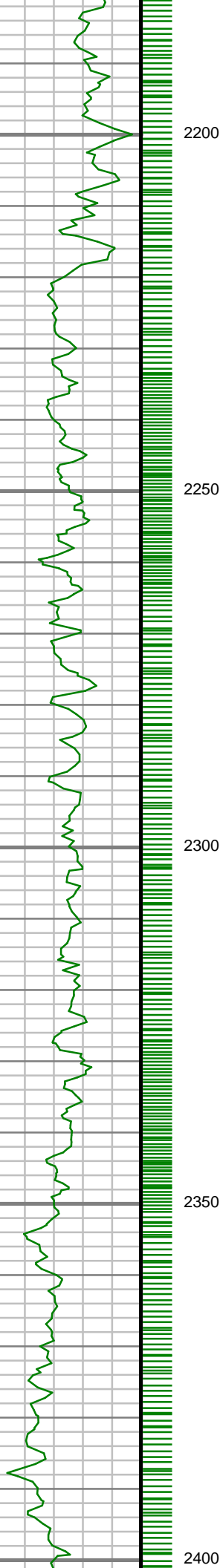
All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, 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 WILSON RANCH 4C-27HZ WATTENBERG FIELD WELD COUNTY, COLORADO API # 05123413220000			
Gamma Ray (GR) Unit = aapi	MEASURED DEPTH 1:240 (ft)	Rate of Penetration (ROP) Unit = ft/hr	Tool Temperature (T-TEMP) Unit = °F
<div>0 150</div>	<div>1950</div>	<div>0 1000</div>	<div>0 300</div>
<div> <div>S: 21 MD: 1943.00 ft</div> <div>Inc: 10.01 deg Az:</div> <div>172.01 deg TVD:</div> <div>1925.59 ft</div> </div>			



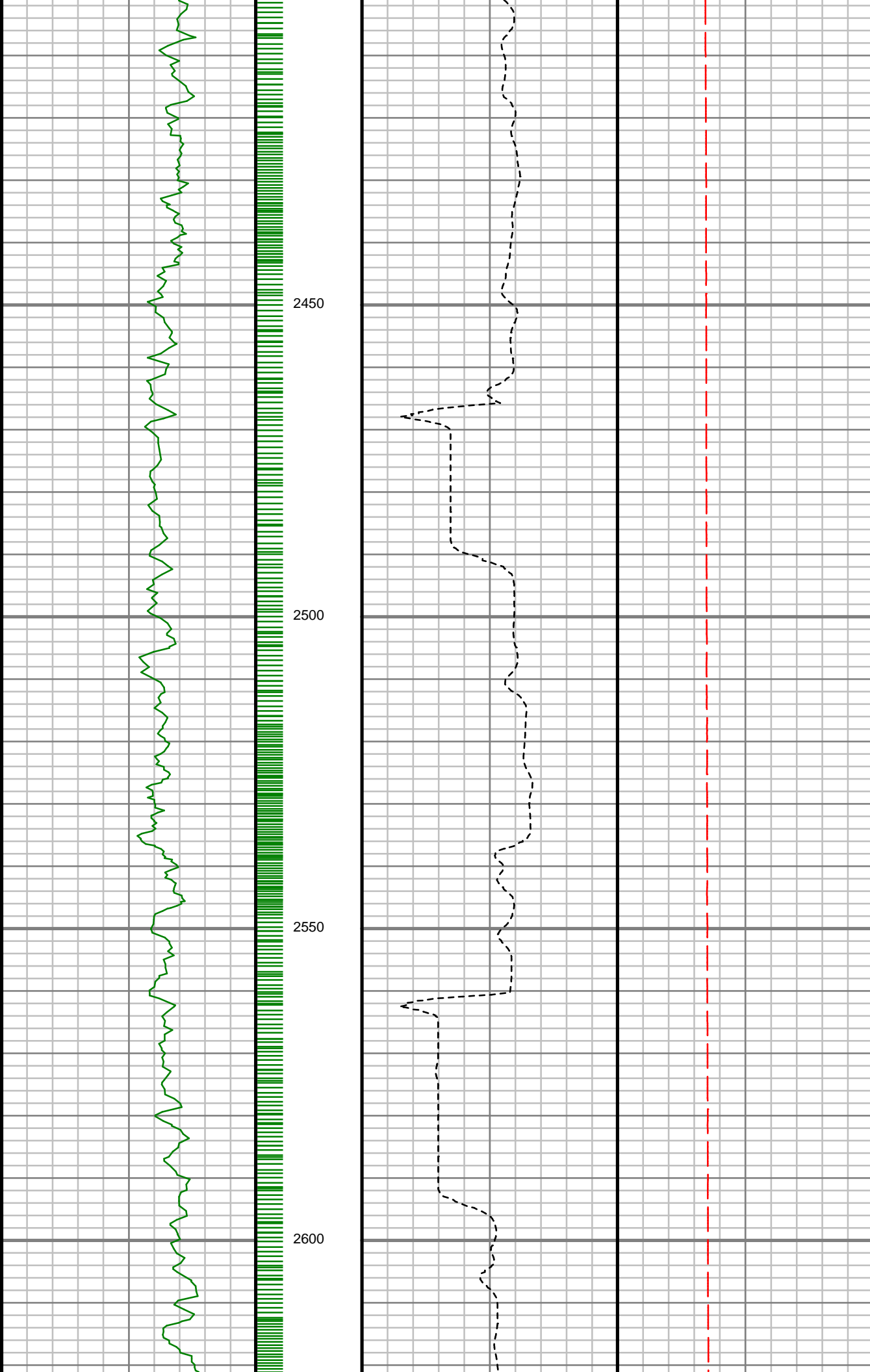
S: 22 MD: 2038.00 ft
Inc: 9.35 deg Az:
169.76 deg TVD:
2019.23 ft

S: 23 MD: 2133.00 ft
Inc: 8.59 deg Az:
171.98 deg TVD:
2113.07 ft



S: 24 MD: 2227.00 ft
Inc: 8.45 deg Az:
180.95 deg TVD:
2206.04 ft

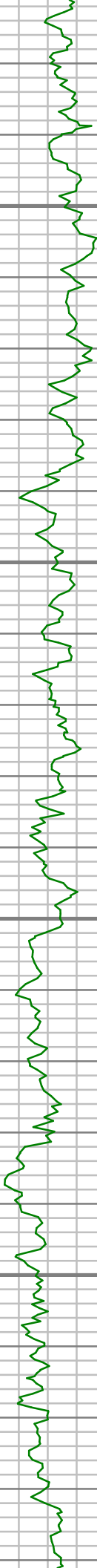
S: 25 MD: 2320.00 ft
Inc: 8.09 deg Az:
180.99 deg TVD:
2298.07 ft



S: 26 MD: 2415.00 ft
Inc: 8.26 deg Az:
179.46 deg TVD:
2392.10 ft

S: 27 MD: 2510.00 ft
Inc: 8.17 deg Az:
180.13 deg TVD:
2486.13 ft

S: 28 MD: 2605.00 ft
Inc: 8.29 deg Az:
180.83 deg TVD:
2580.15 ft

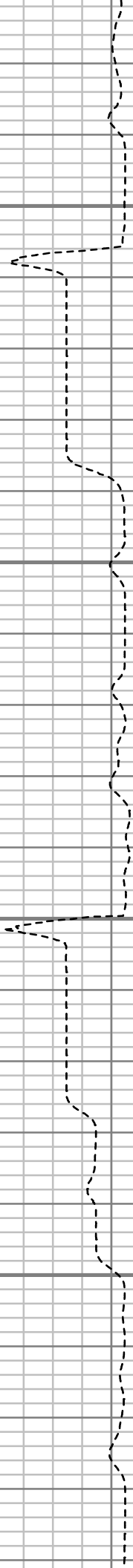


2650

2700

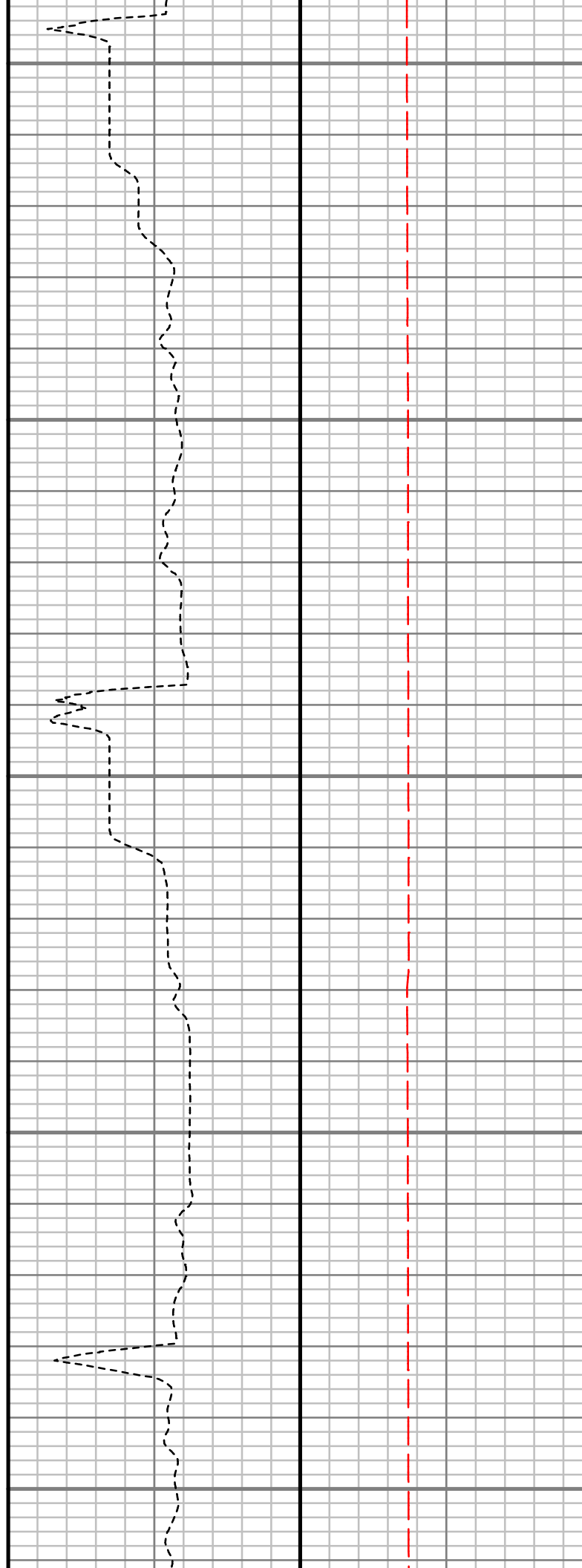
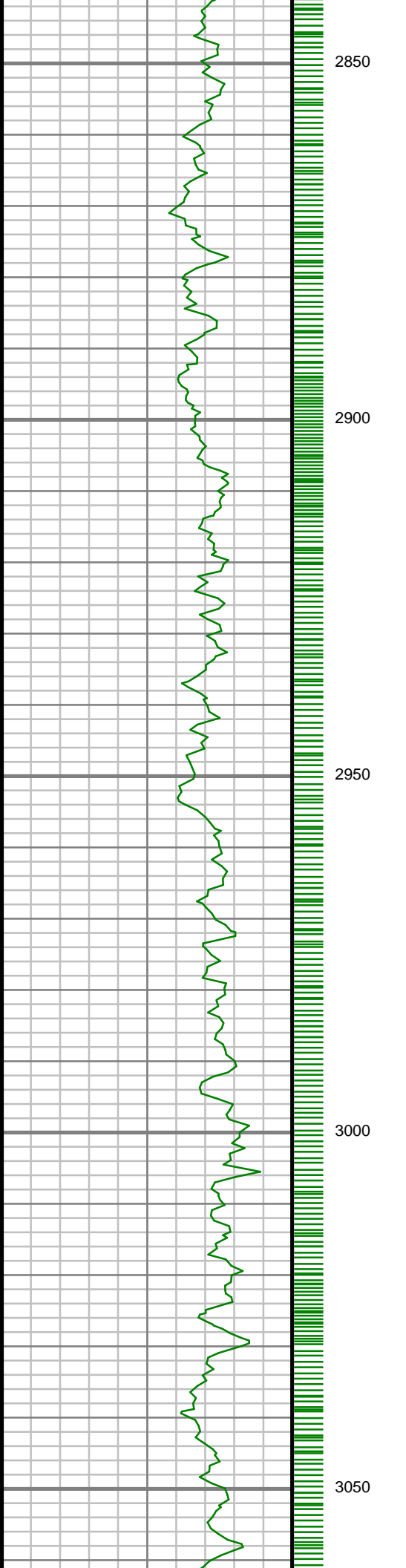
2750

2800



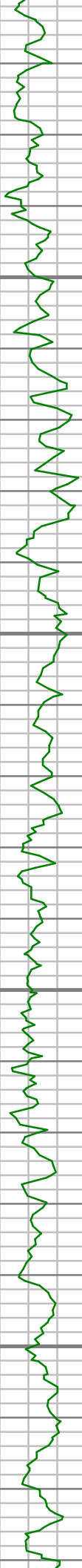
S: 29 MD: 2698.00 ft
Inc: 7.77 deg Az:
179.03 deg TVD:
2672.24 ft

S: 30 MD: 2792.00 ft
Inc: 7.38 deg Az:
179.06 deg TVD:
2765.42 ft



S: 31 MD: 2885.00 ft
Inc: 6.93 deg Az:
179.34 deg TVD:
2857.69 ft

S: 32 MD: 2979.00 ft
Inc: 6.47 deg Az:
178.68 deg TVD:
2951.05 ft

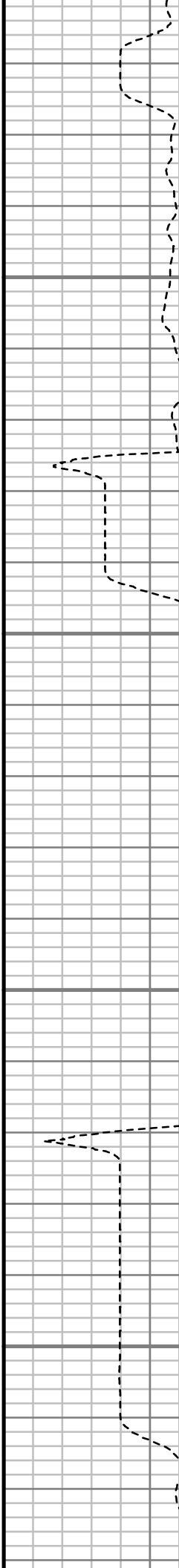


3100

3150

3200

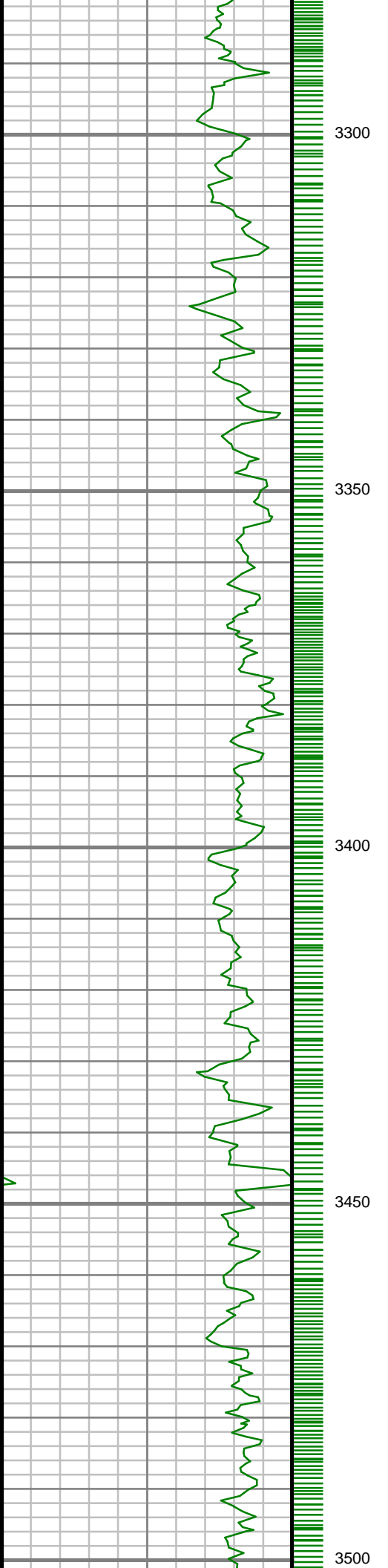
3250



S: 33 MD: 3073.00 ft
Inc: 5.97 deg Az:
179.30 deg TVD:
3044.50 ft

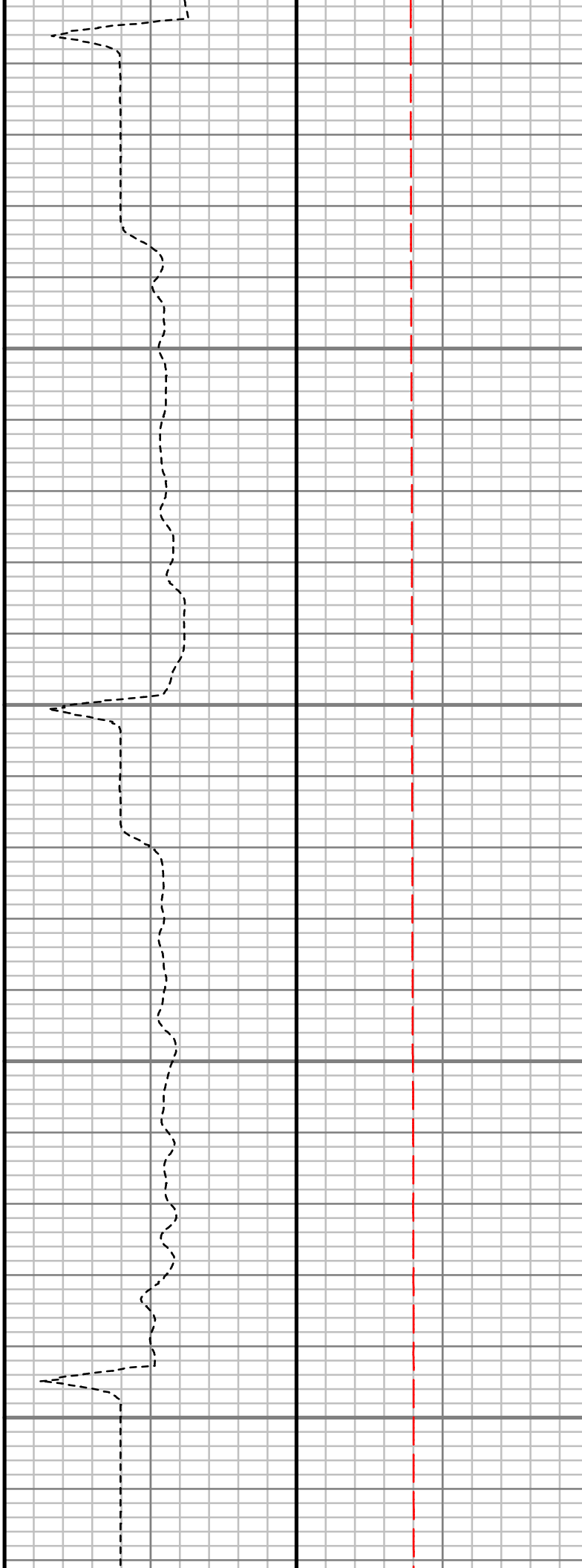
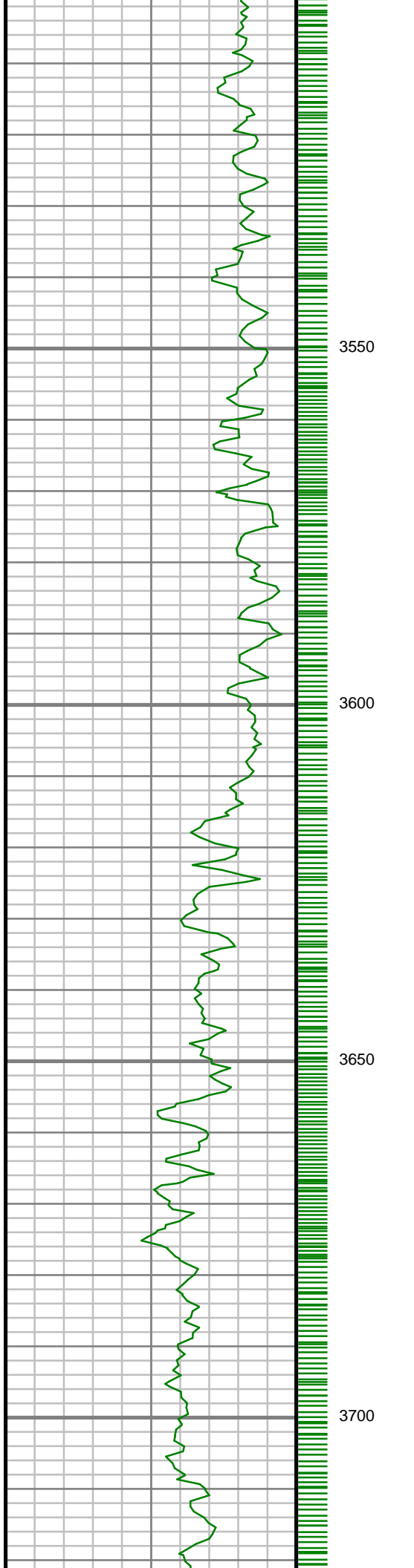
S: 34 MD: 3167.00 ft
Inc: 5.63 deg Az:
183.03 deg TVD:
3138.02 ft

S: 35 MD: 3263.00 ft
Inc: 4.97 deg Az:
183.88 deg TVD:
3233.60 ft



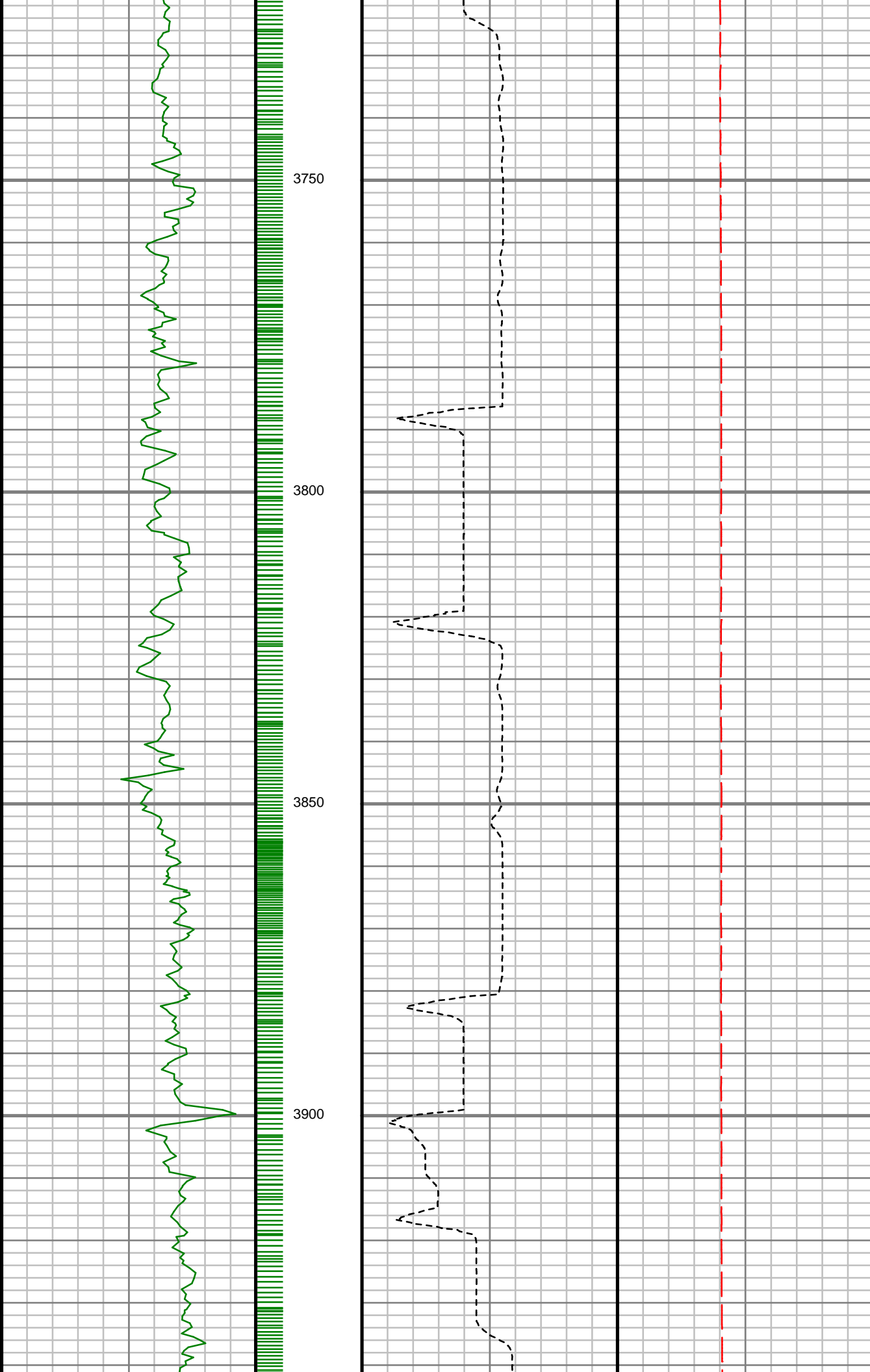
S: 36 MD: 3357.00 ft
Inc: 4.07 deg Az:
182.89 deg TVD:
3327.31 ft

S: 37 MD: 3452.00 ft
Inc: 3.37 deg Az:
181.32 deg TVD:
3422.11 ft



S: 38 MD: 3547.00 ft
Inc: 2.59 deg Az:
179.73 deg TVD:
3516.98 ft

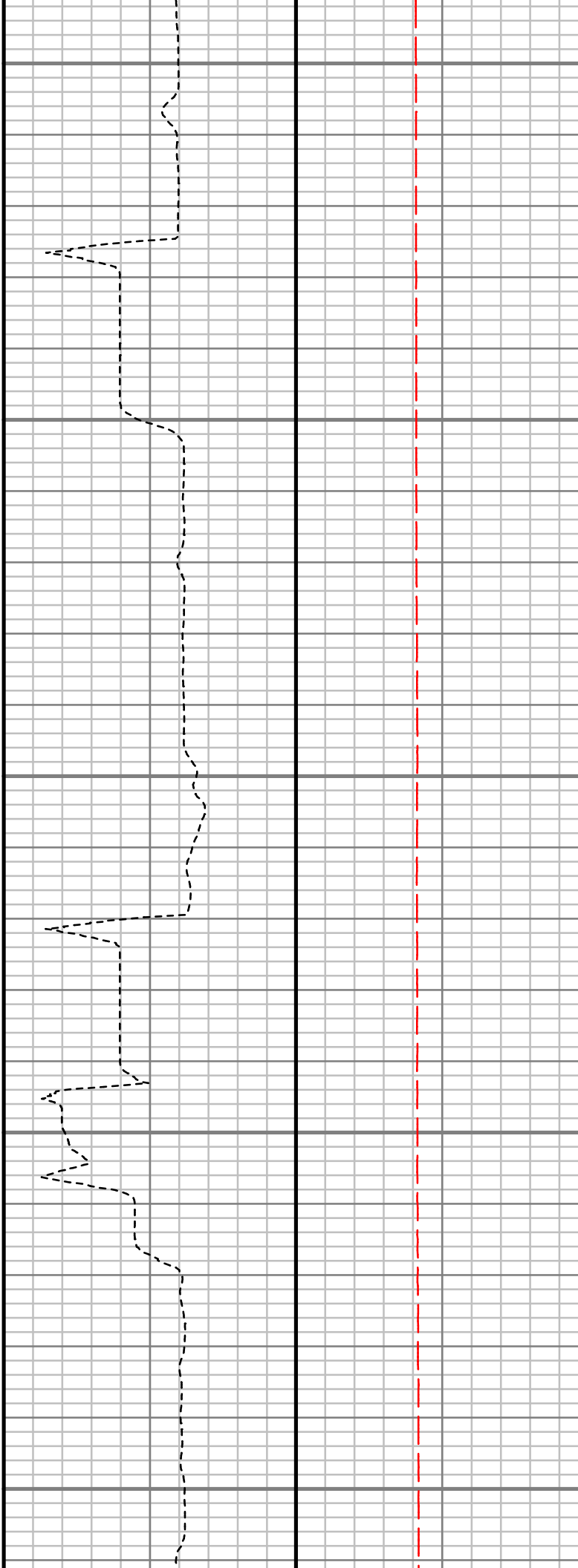
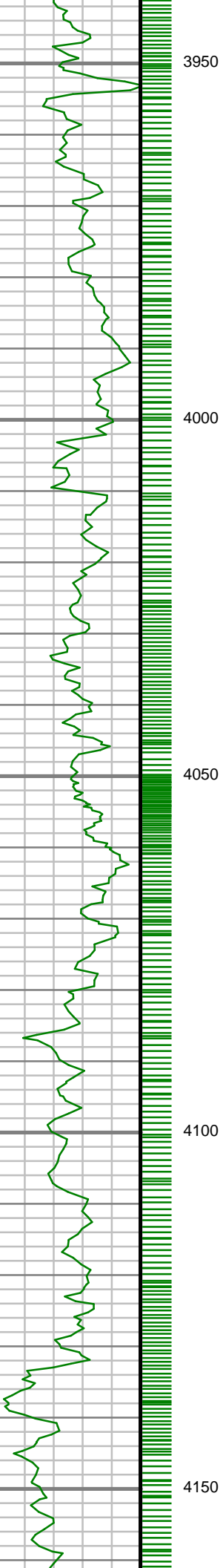
S: 39 MD: 3641.00 ft
Inc: 1.90 deg Az:
172.95 deg TVD:
3610.91 ft



S: 40 MD: 3735.00 ft
Inc: 1.89 deg Az:
175.78 deg TVD:
3704.86 ft

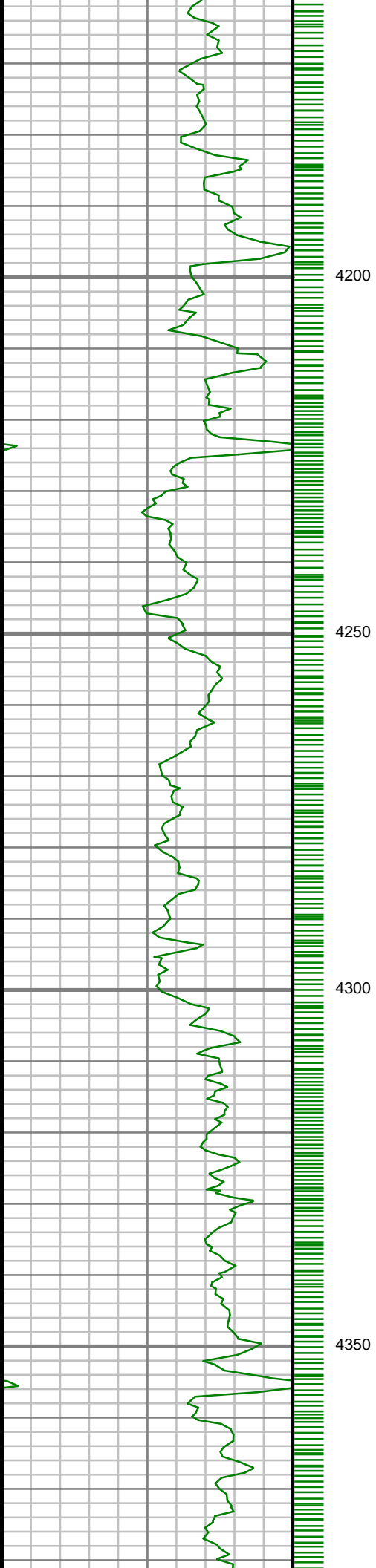
S: 41 MD: 3828.00 ft
Inc: 1.81 deg Az:
174.92 deg TVD:
3797.81 ft

S: 42 MD: 3922.00 ft
Inc: 1.55 deg Az: 96.26
deg TVD: 3891.78 ft



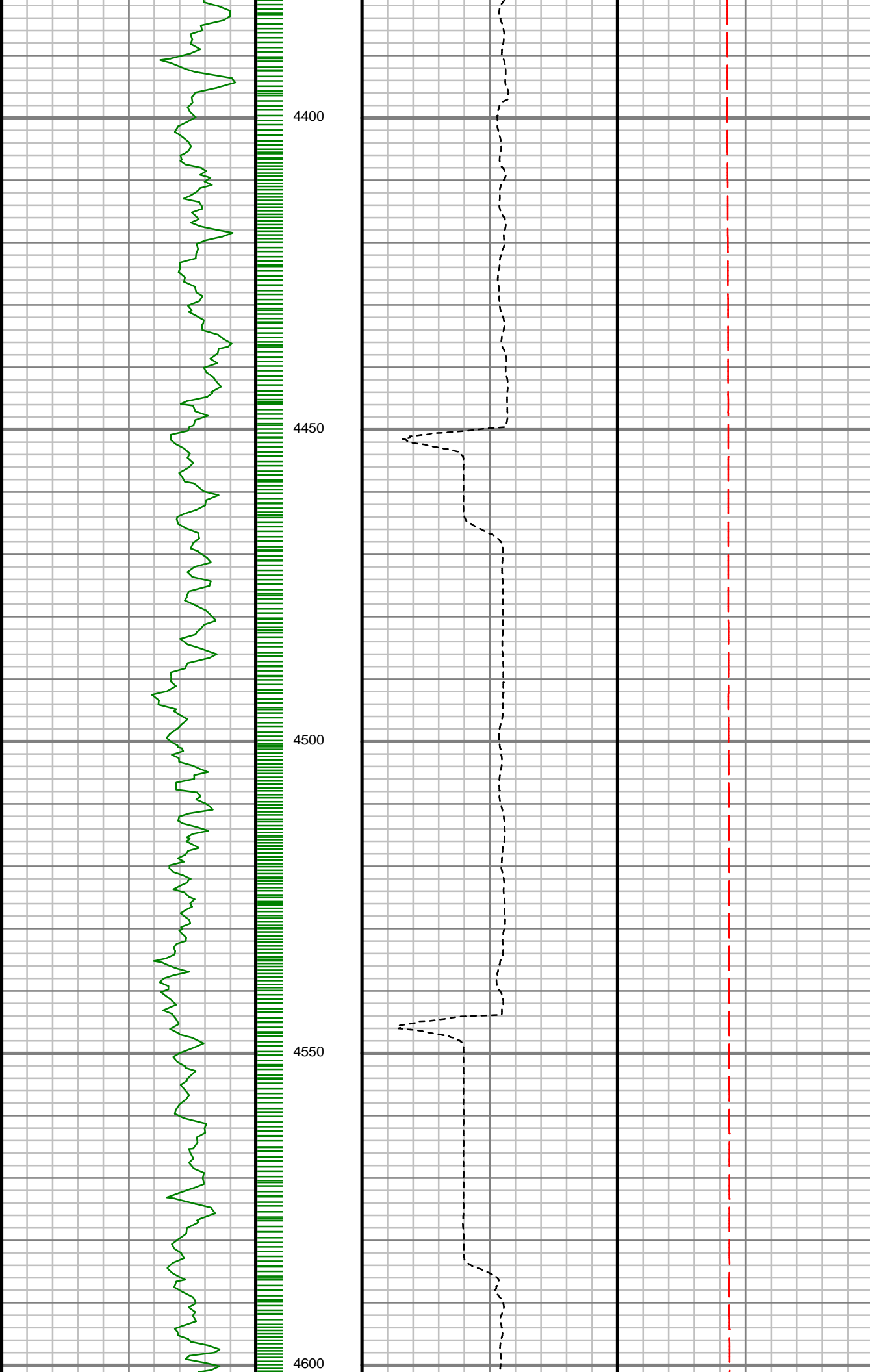
S: 43 MD: 4017.00 ft
Inc: 1.68 deg Az: 96.73
deg TVD: 3986.74 ft

S: 44 MD: 4112.00 ft
Inc: 0.95 deg Az: 16.05
deg TVD: 4081.72 ft



S: 45 MD: 4206.00 ft
Inc: 0.95 deg Az: 2.51
deg TVD: 4175.71 ft

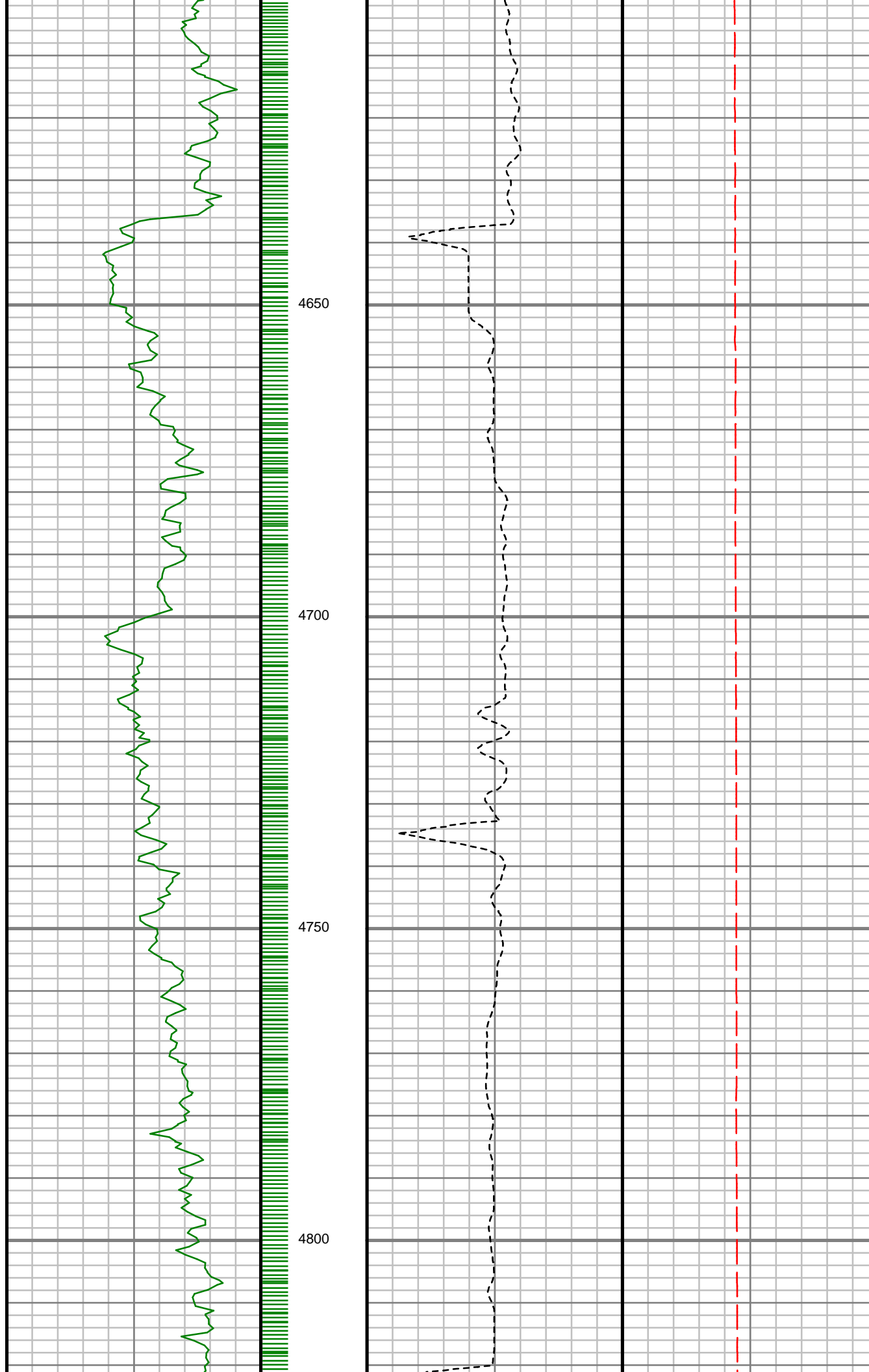
S: 46 MD: 4291.00 ft
Inc: 0.83 deg Az:
351.47 deg TVD:
4260.70 ft



S: 47 MD: 4395.00 ft
Inc: 0.84 deg Az:
346.44 deg TVD:
4364.69 ft

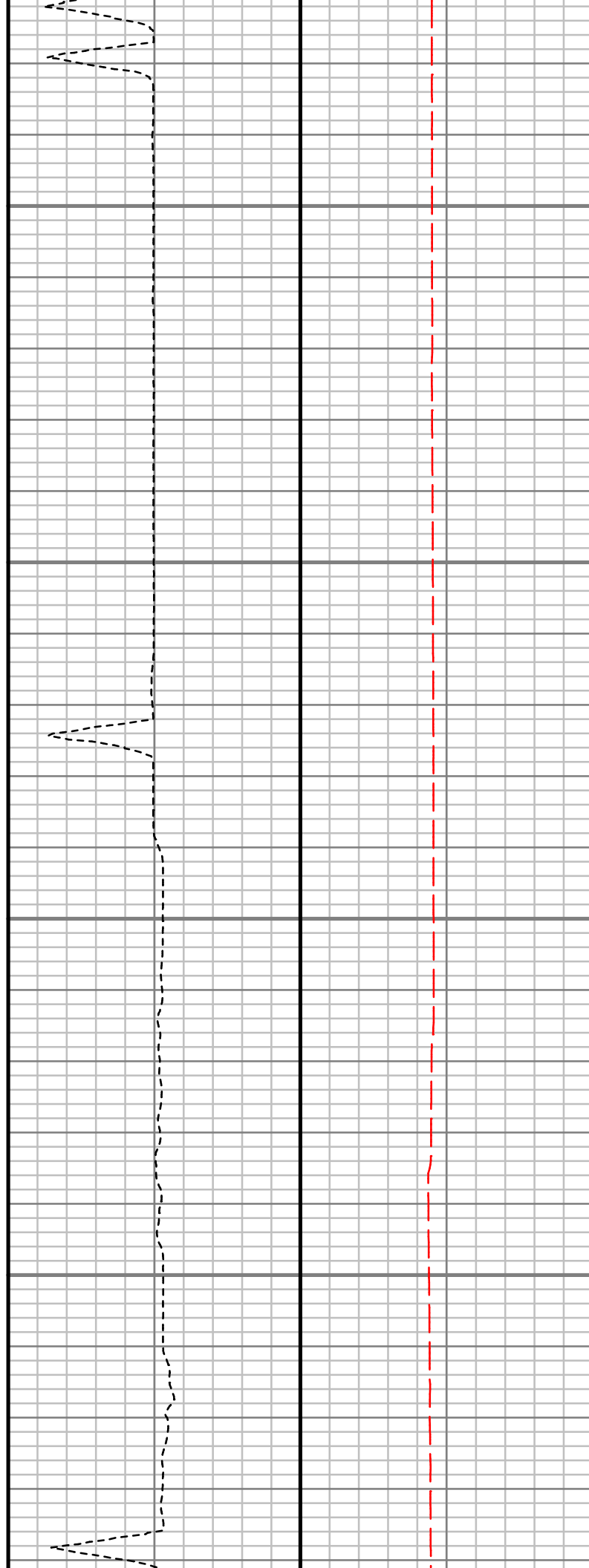
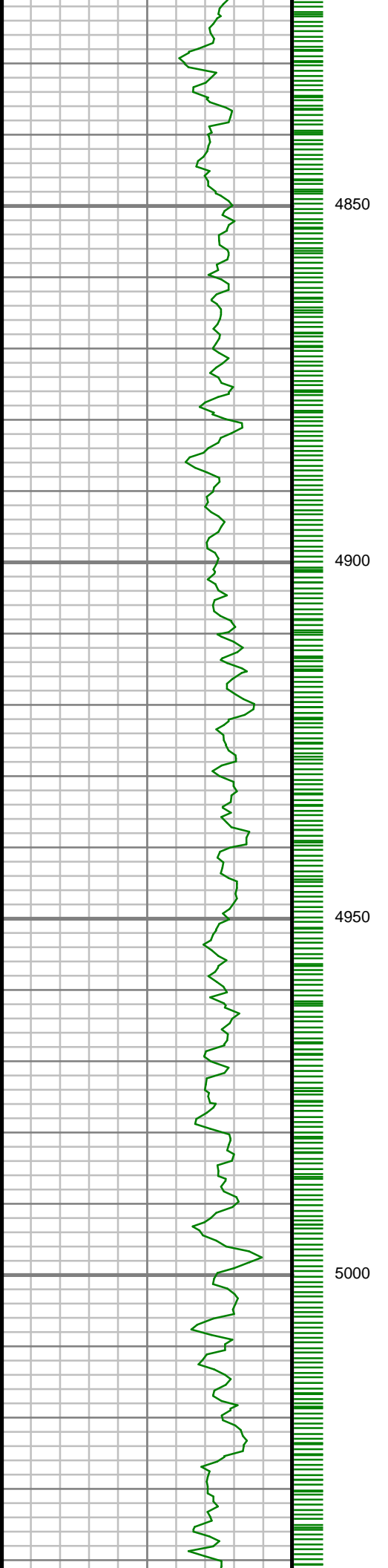
S: 48 MD: 4489.00 ft
Inc: 0.83 deg Az:
345.36 deg TVD:
4458.68 ft

S: 49 MD: 4583.00 ft
Inc: 1.20 deg Az:
354.06 deg TVD:
4552.66 ft

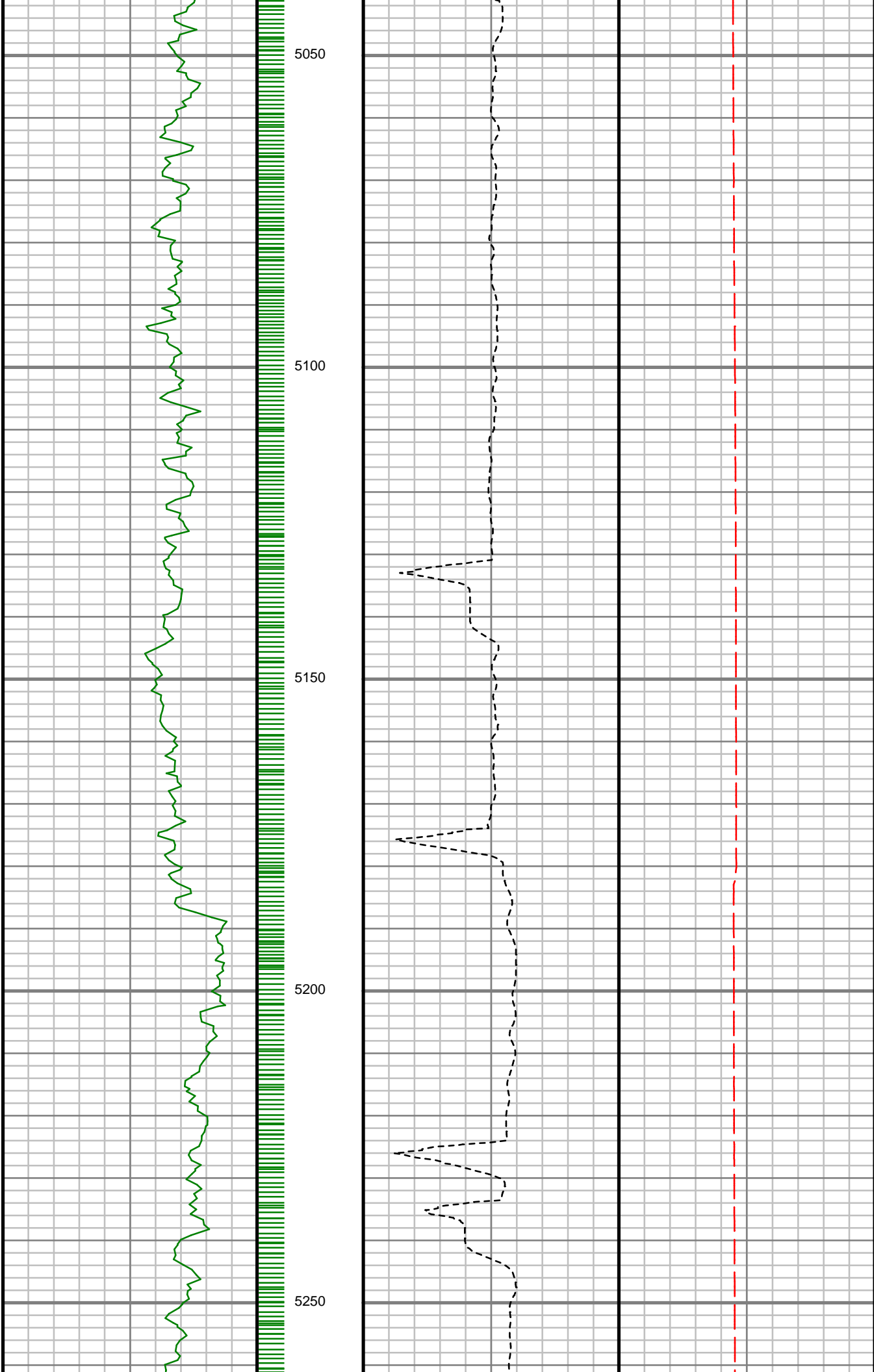


S: 50 MD: 4678.00 ft
Inc: 1.10 deg Az:
356.72 deg TVD:
4647.64 ft

S: 51 MD: 4772.00 ft
Inc: 1.06 deg Az:
342.59 deg TVD:
4741.63 ft

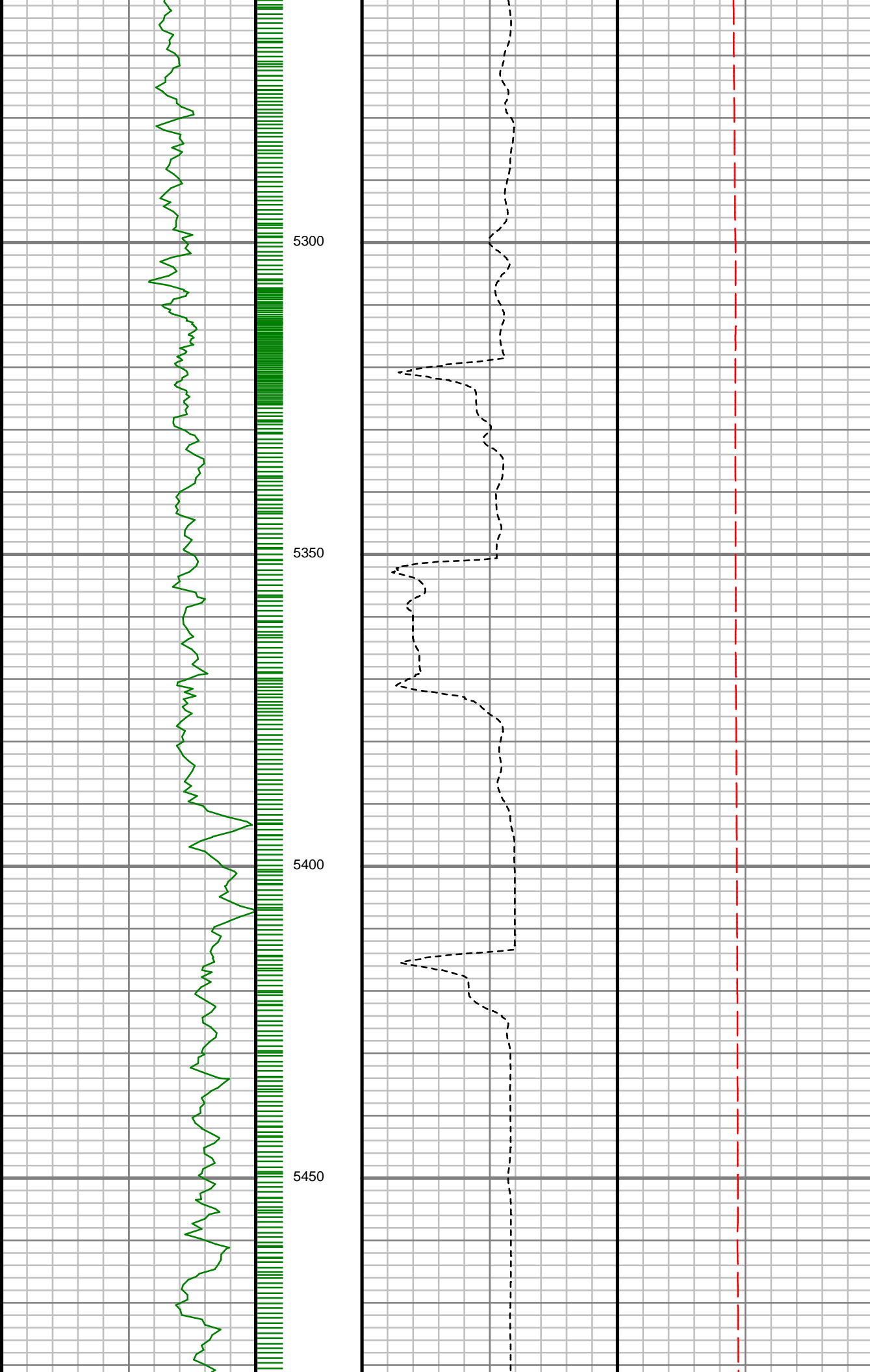


S: 52 MD: 4866.00 ft
Inc: 1.26 deg Az:
341.09 deg TVD:
4835.61 ft



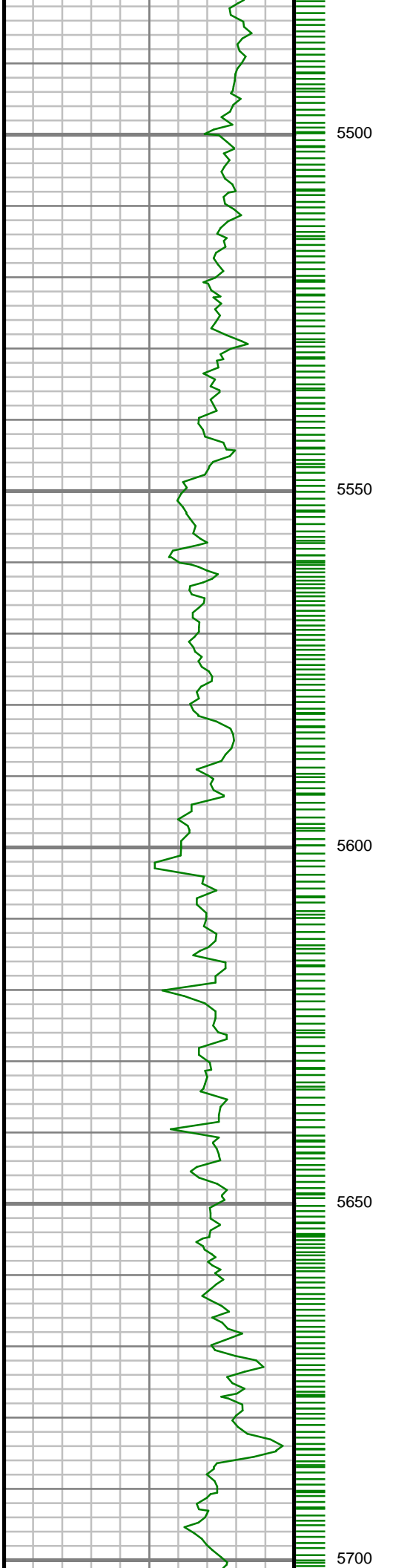
S: 53 MD: 5081.00 ft
Inc: 0.88 deg Az:
317.36 deg TVD:
5050.57 ft

S: 54 MD: 5175.00 ft
Inc: 0.99 deg Az:
315.86 deg TVD:
5144.56 ft



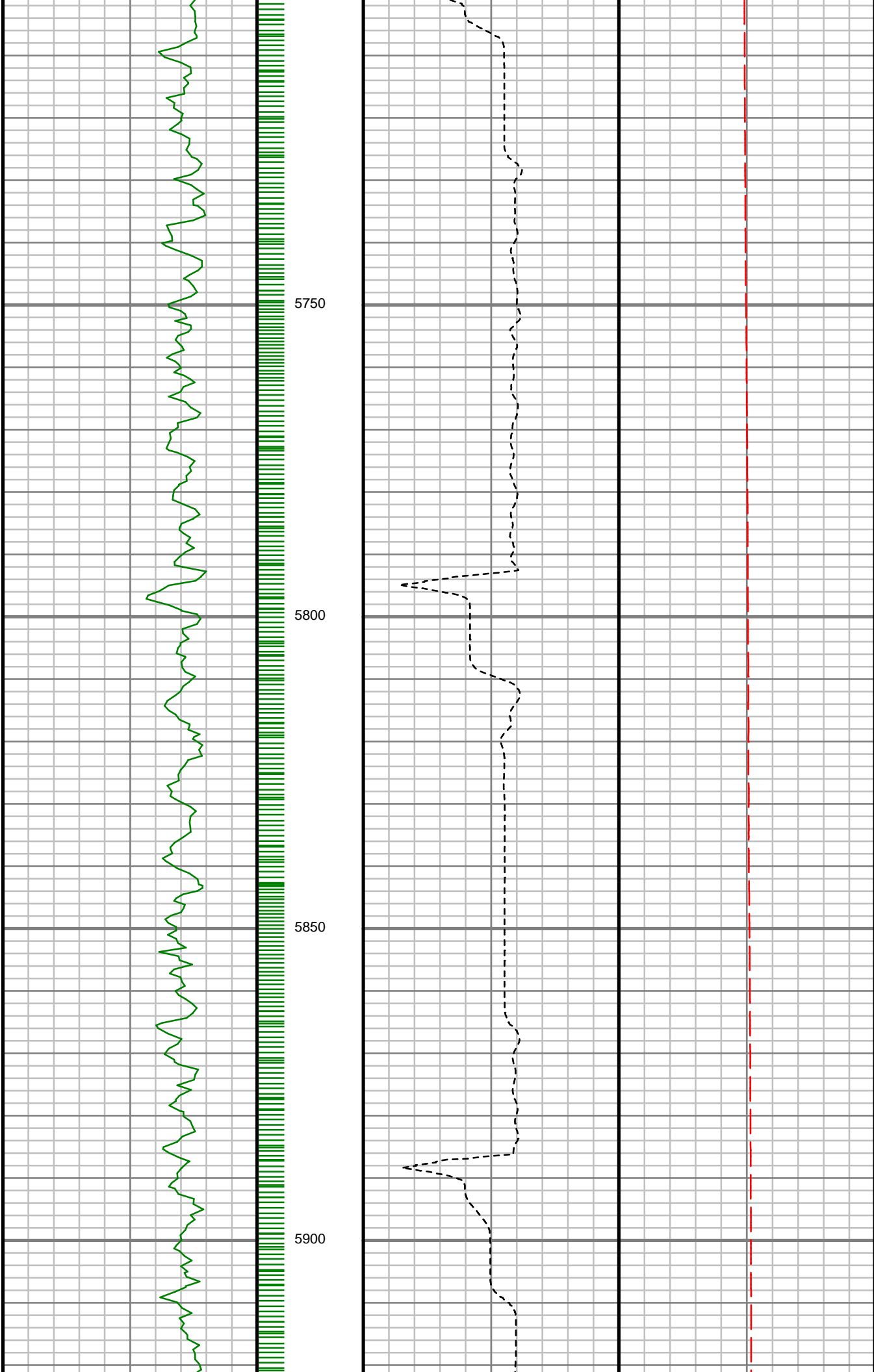
S: 55 MD: 5269.00 ft
Inc: 1.07 deg Az:
310.05 deg TVD:
5238.54 ft

S: 56 MD: 5363.00 ft
Inc: 0.54 deg Az:
321.74 deg TVD:
5332.53 ft



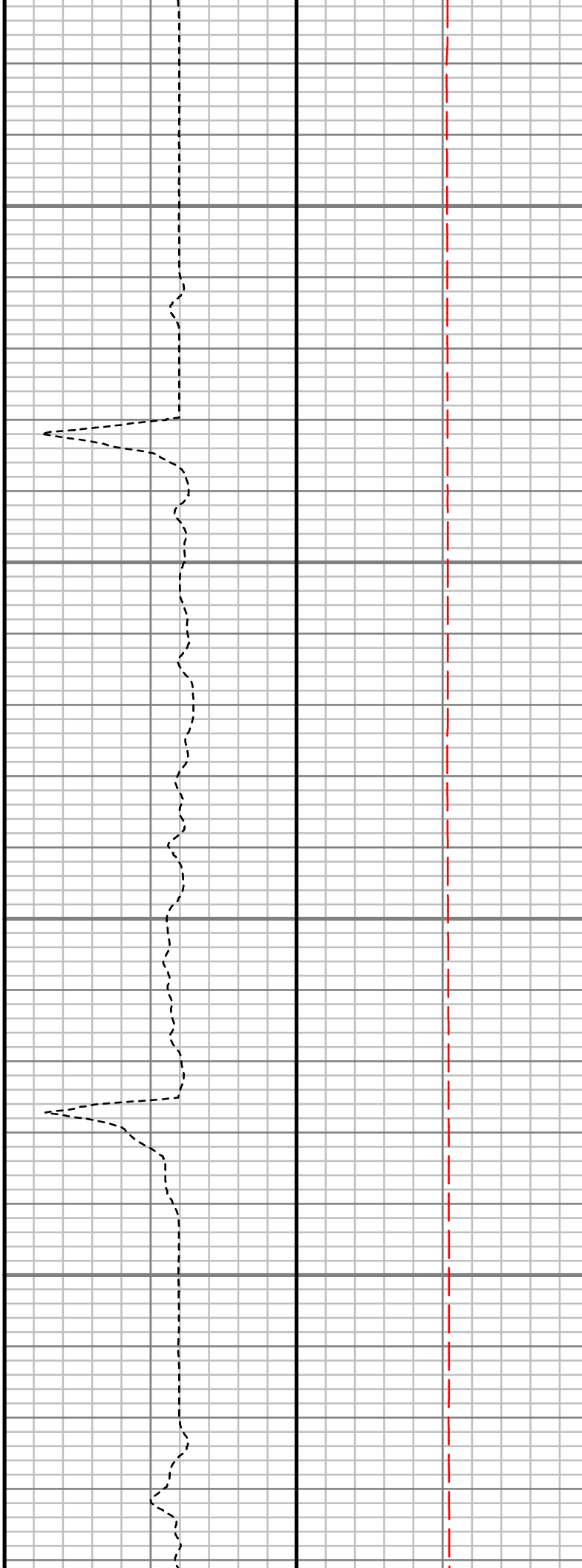
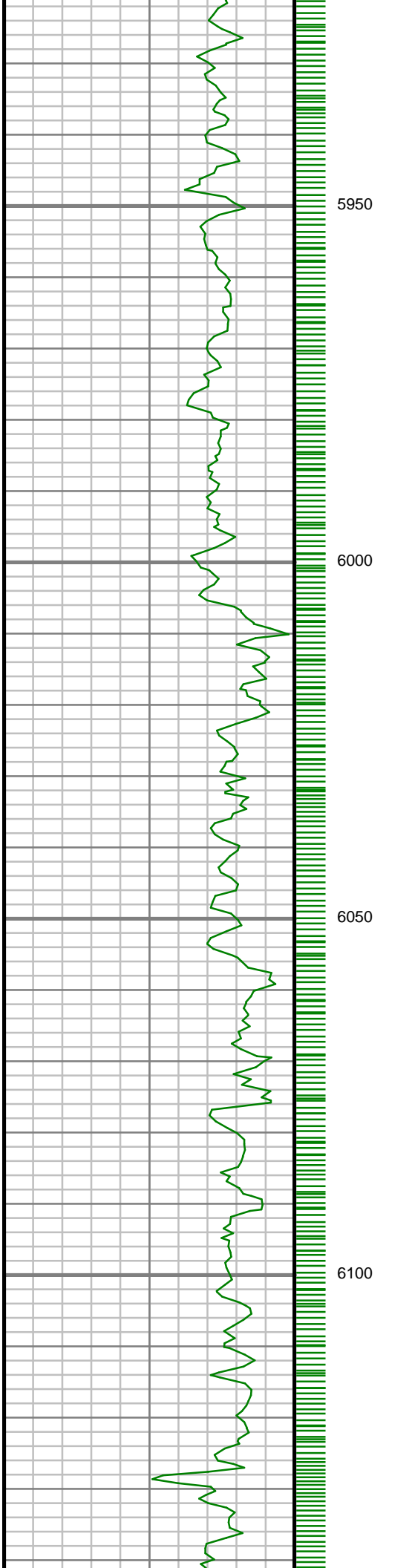
S: 57 MD: 5552.00 ft
Inc: 0.31 deg Az:
159.52 deg TVD:
5521.53 ft

S: 58 MD: 5647.00 ft
Inc: 0.14 deg Az:
258.72 deg TVD:
5616.53 ft



S: 59 MD: 5741.00 ft
Inc: 0.24 deg Az:
289.57 deg TVD:
5710.53 ft

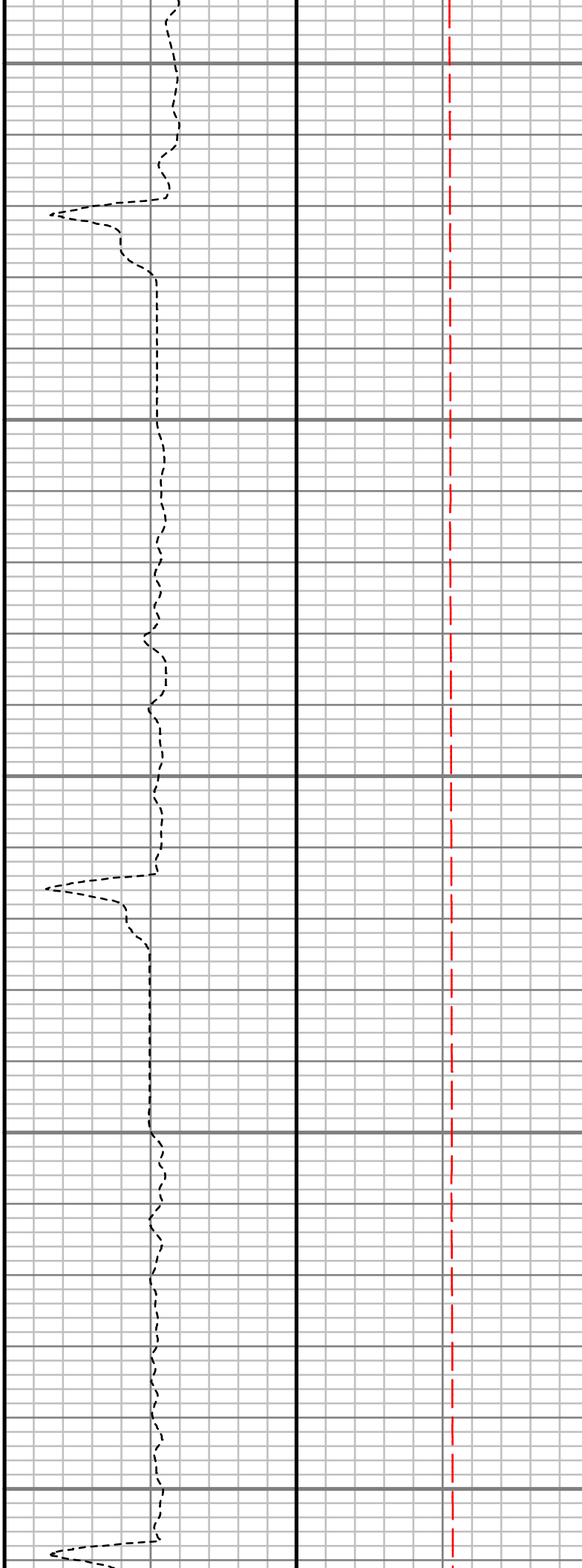
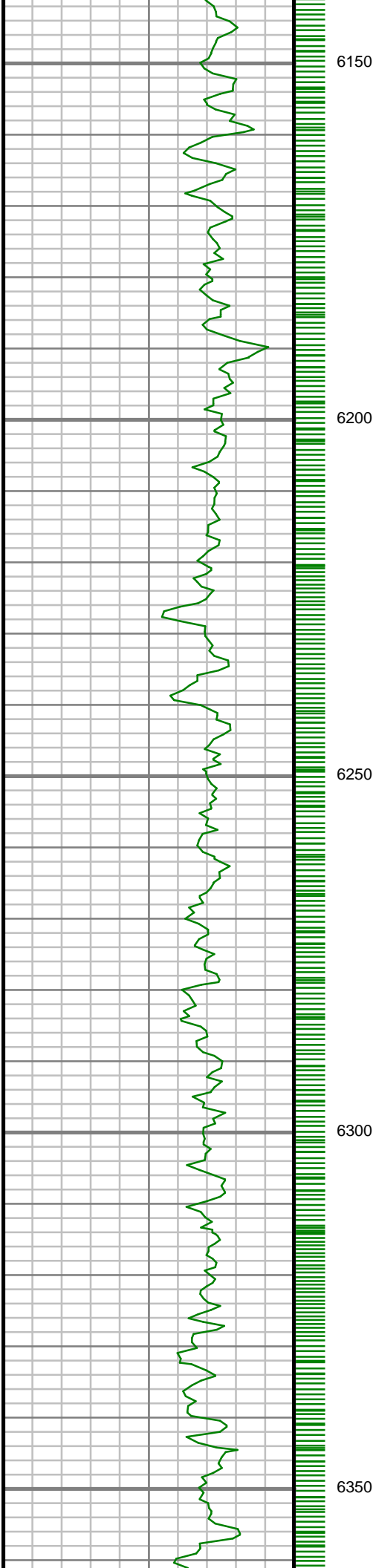
S: 60 MD: 5836.00 ft
Inc: 0.10 deg Az:
281.34 deg TVD:
5805.53 ft



S: 61 MD: 5928.00 ft
Inc: 0.29 deg Az:
252.83 deg TVD:
5897.53 ft

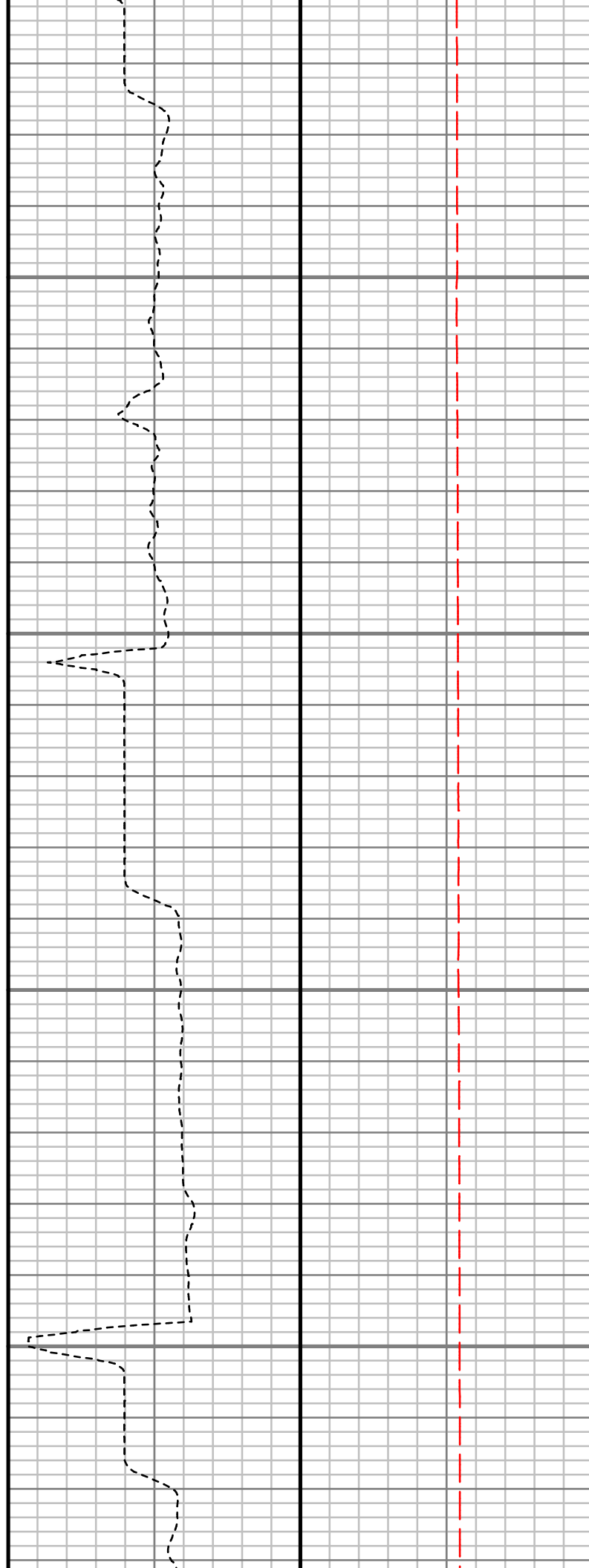
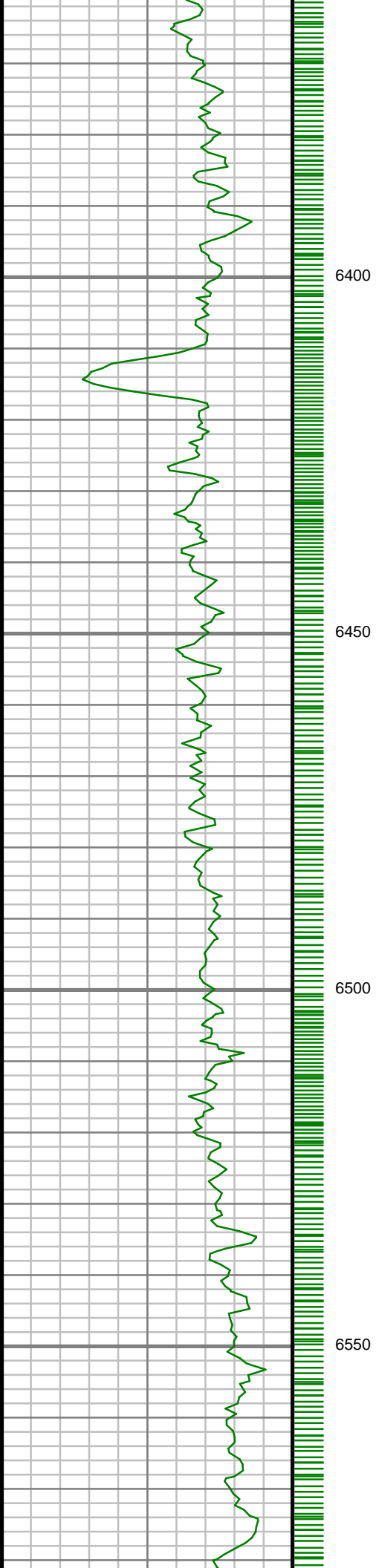
S: 62 MD: 6023.00 ft
Inc: 0.41 deg Az:
206.34 deg TVD:
5992.53 ft

S: 63 MD: 6117.00 ft
Inc: 0.59 deg Az:
186.73 deg TVD:
6086.52 ft



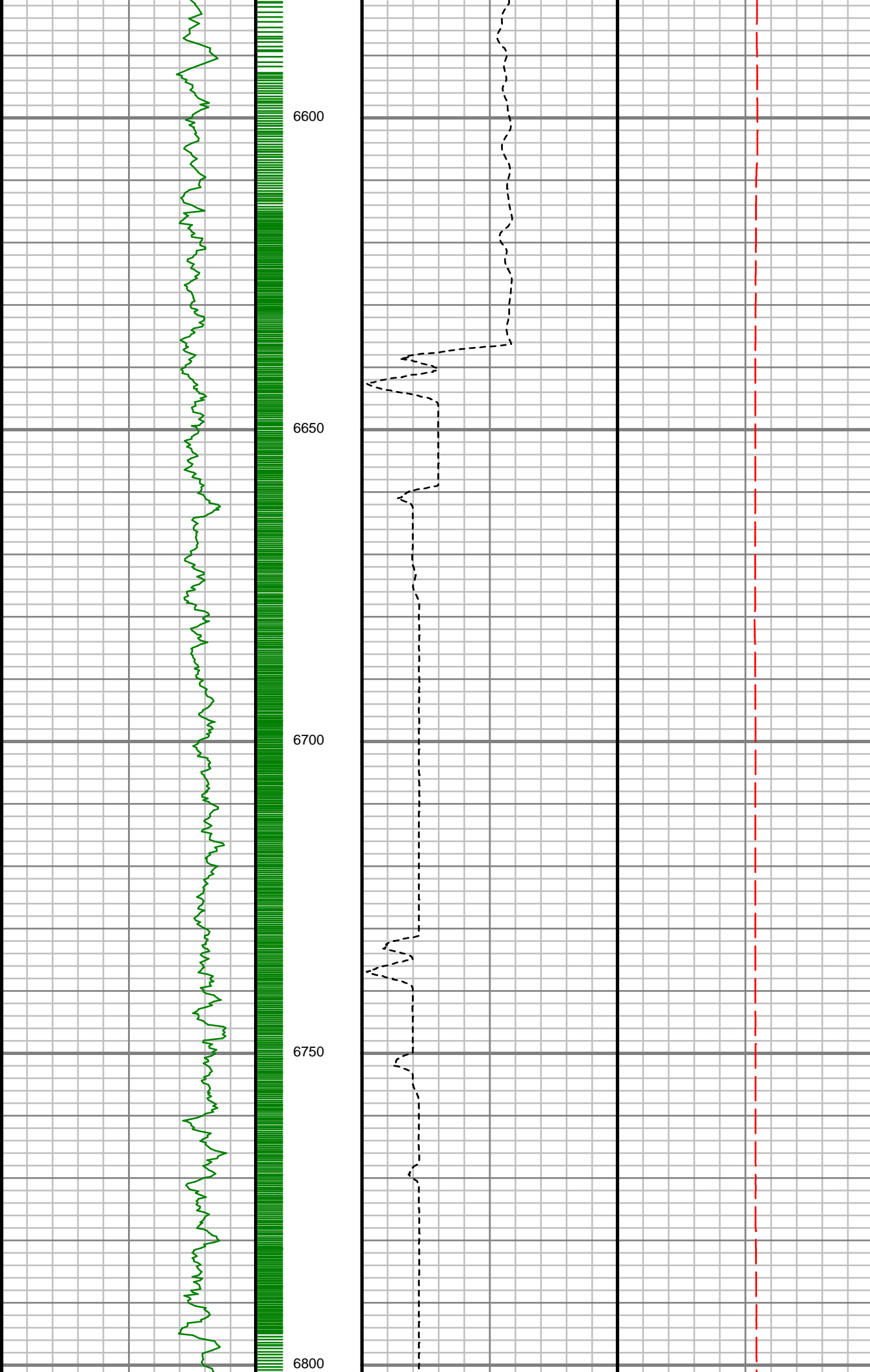
S: 64 MD: 6211.00 ft
Inc: 0.62 deg Az:
193.61 deg TVD:
6180.52 ft

S: 65 MD: 6305.00 ft
Inc: 0.70 deg Az:
186.99 deg TVD:
6274.51 ft



S: 66 MD: 6399.00 ft
Inc: 0.15 deg Az:
215.52 deg TVD:
6368.51 ft

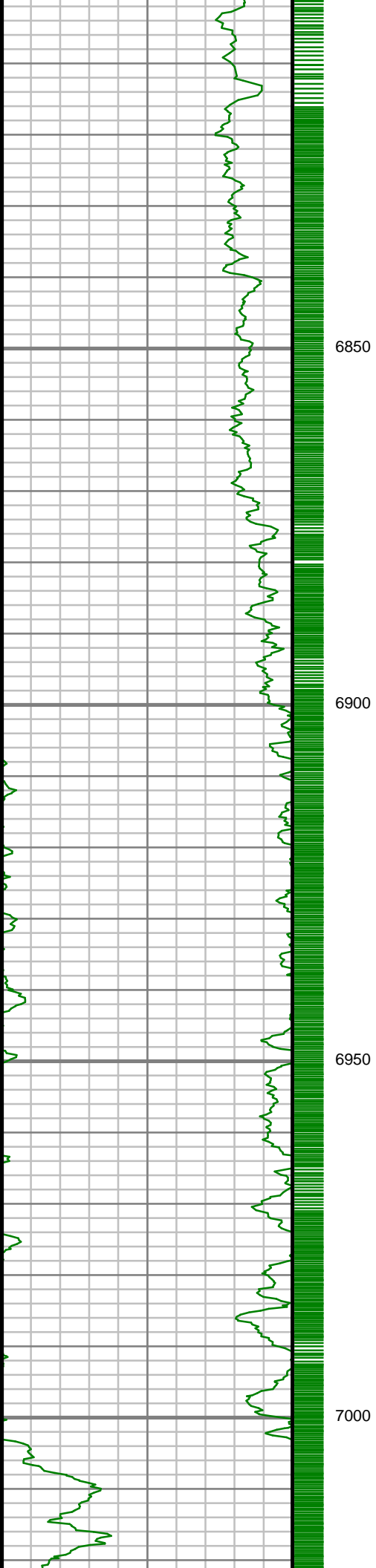
S: 67 MD: 6493.00 ft
Inc: 0.20 deg Az:
321.06 deg TVD:
6462.51 ft



S: 68 MD: 6588.00 ft
Inc: 0.28 deg Az:
331.41 deg TVD:
6557.51 ft

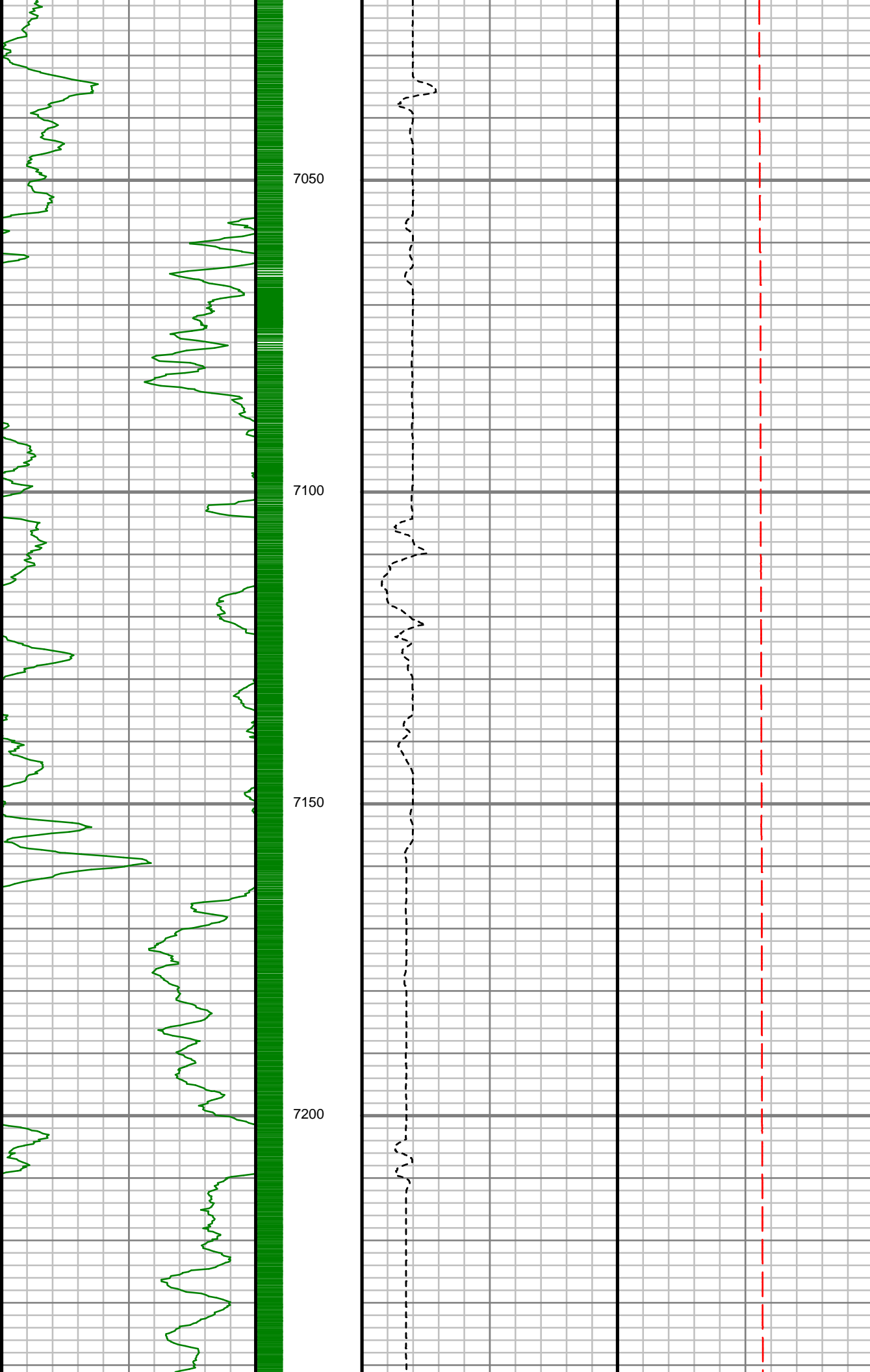
S: 69 MD: 6683.00 ft
Inc: 3.71 deg Az:
263.72 deg TVD:
6652.44 ft

S: 70 MD: 6775.00 ft
Inc: 14.35 deg Az:
261.05 deg TVD:
6743.17 ft



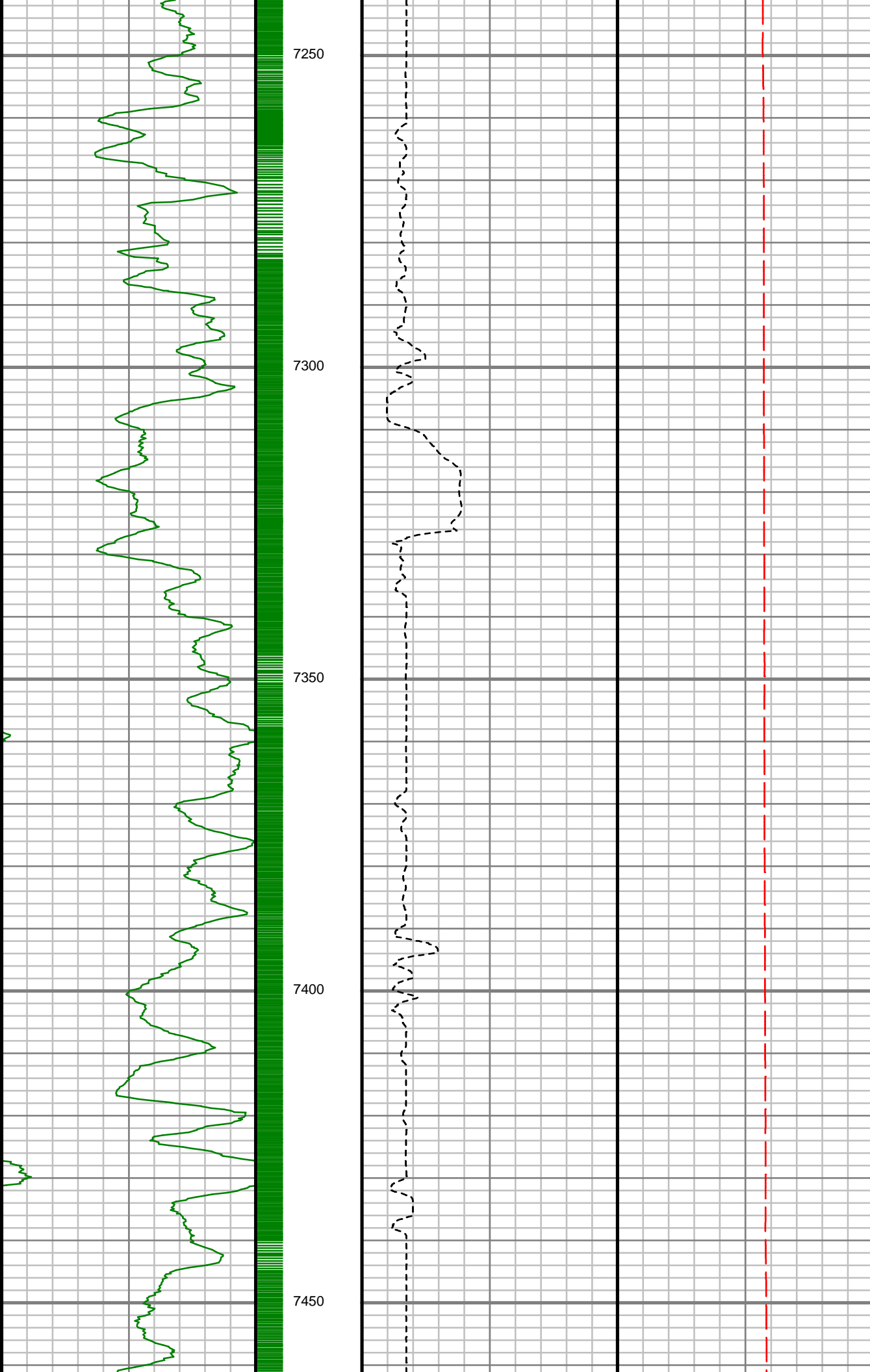
S: 71 MD: 6870.00 ft
Inc: 20.73 deg Az:
261.97 deg TVD:
6833.71 ft

S: 72 MD: 6963.00 ft
Inc: 27.39 deg Az:
266.62 deg TVD:
6918.59 ft



S: 73 MD: 7059.00 ft
Inc: 33.89 deg Az:
262.98 deg TVD:
7001.15 ft

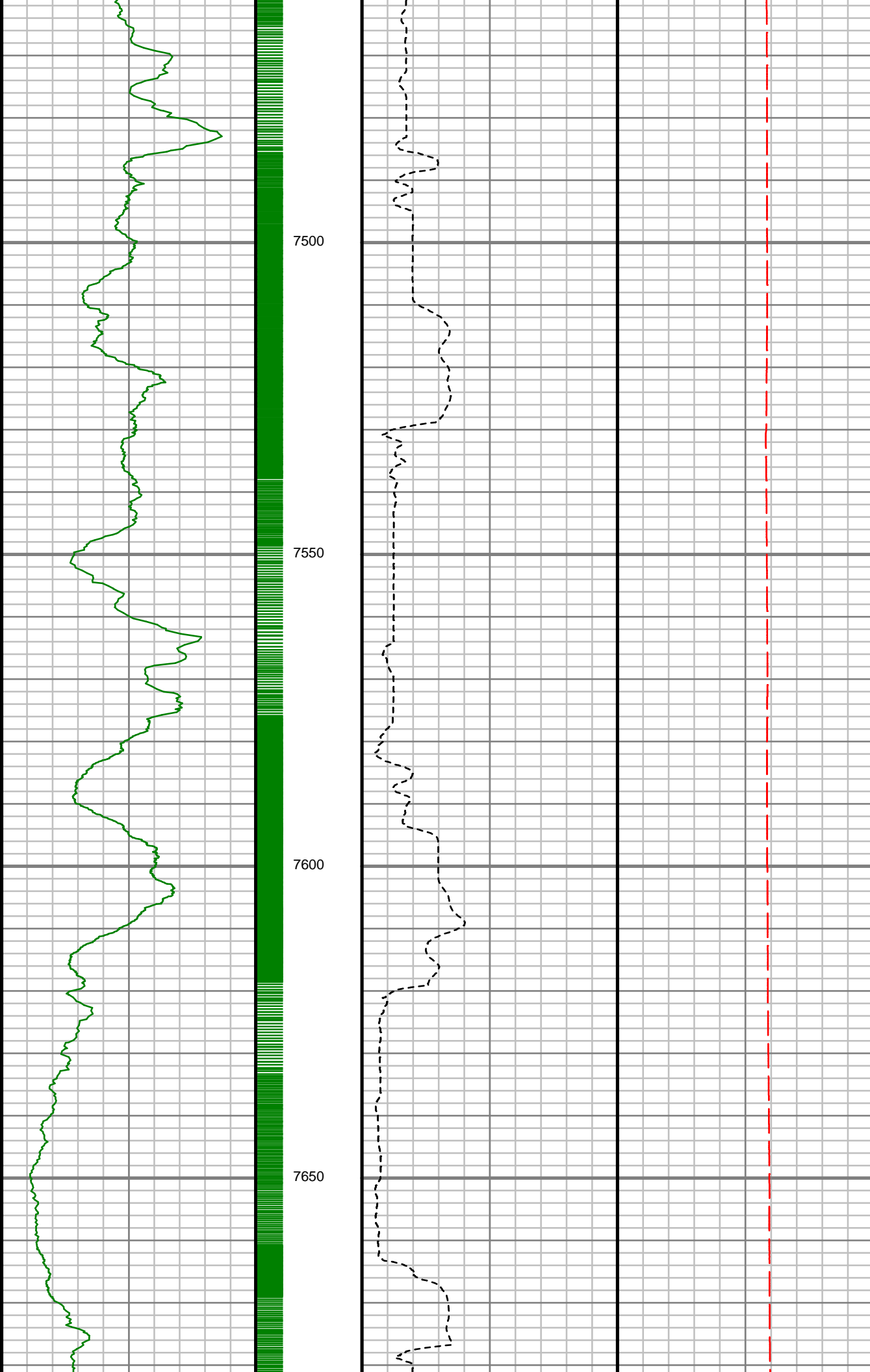
S: 74 MD: 7153.00 ft
Inc: 39.45 deg Az:
263.65 deg TVD:
7076.51 ft



S: 75 MD: 7249.00 ft
Inc: 50.90 deg Az:
269.87 deg TVD:
7144.11 ft

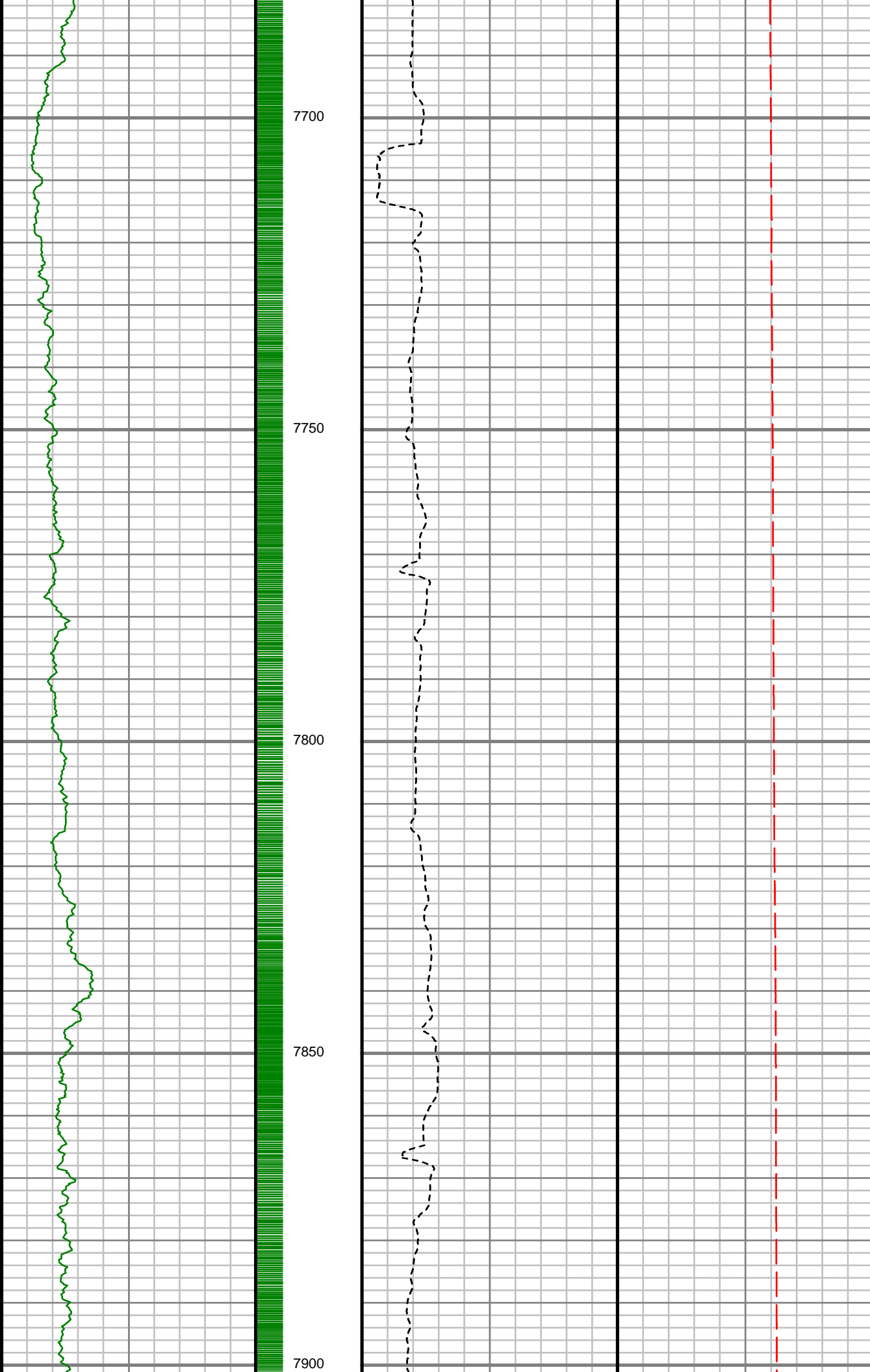
S: 76 MD: 7344.00 ft
Inc: 57.28 deg Az:
270.14 deg TVD:
7199.80 ft

S: 77 MD: 7437.00 ft
Inc: 68.56 deg Az:
269.57 deg TVD:
7242.07 ft



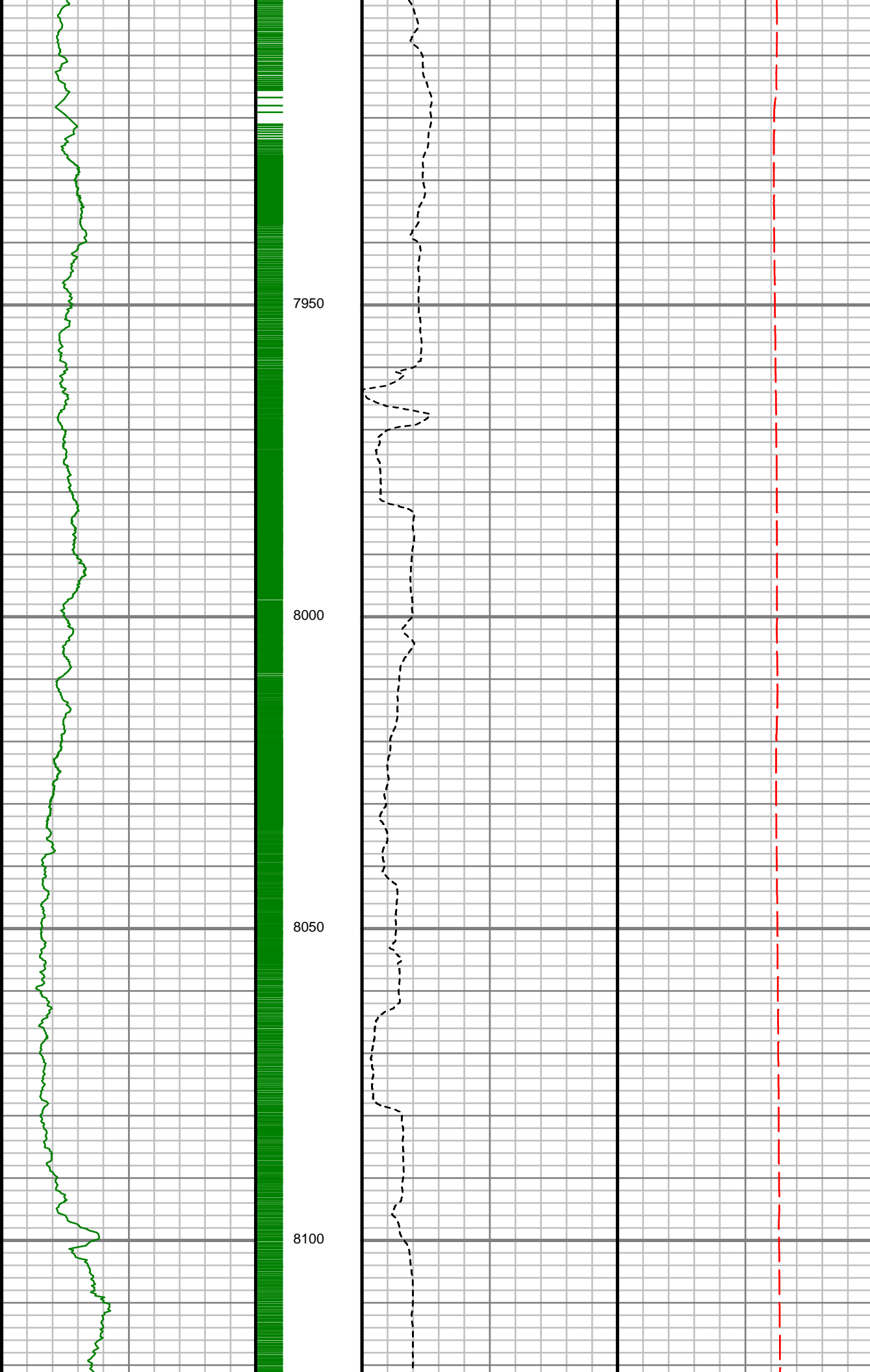
S: 78 MD: 7532.00 ft
Inc: 75.22 deg Az:
268.86 deg TVD:
7271.58 ft

S: 79 MD: 7627.00 ft
Inc: 82.03 deg Az:
268.16 deg TVD:
7290.31 ft



S: 80 MD: 7720.00 ft
Inc: 88.89 deg Az:
270.45 deg TVD:
7297.66 ft

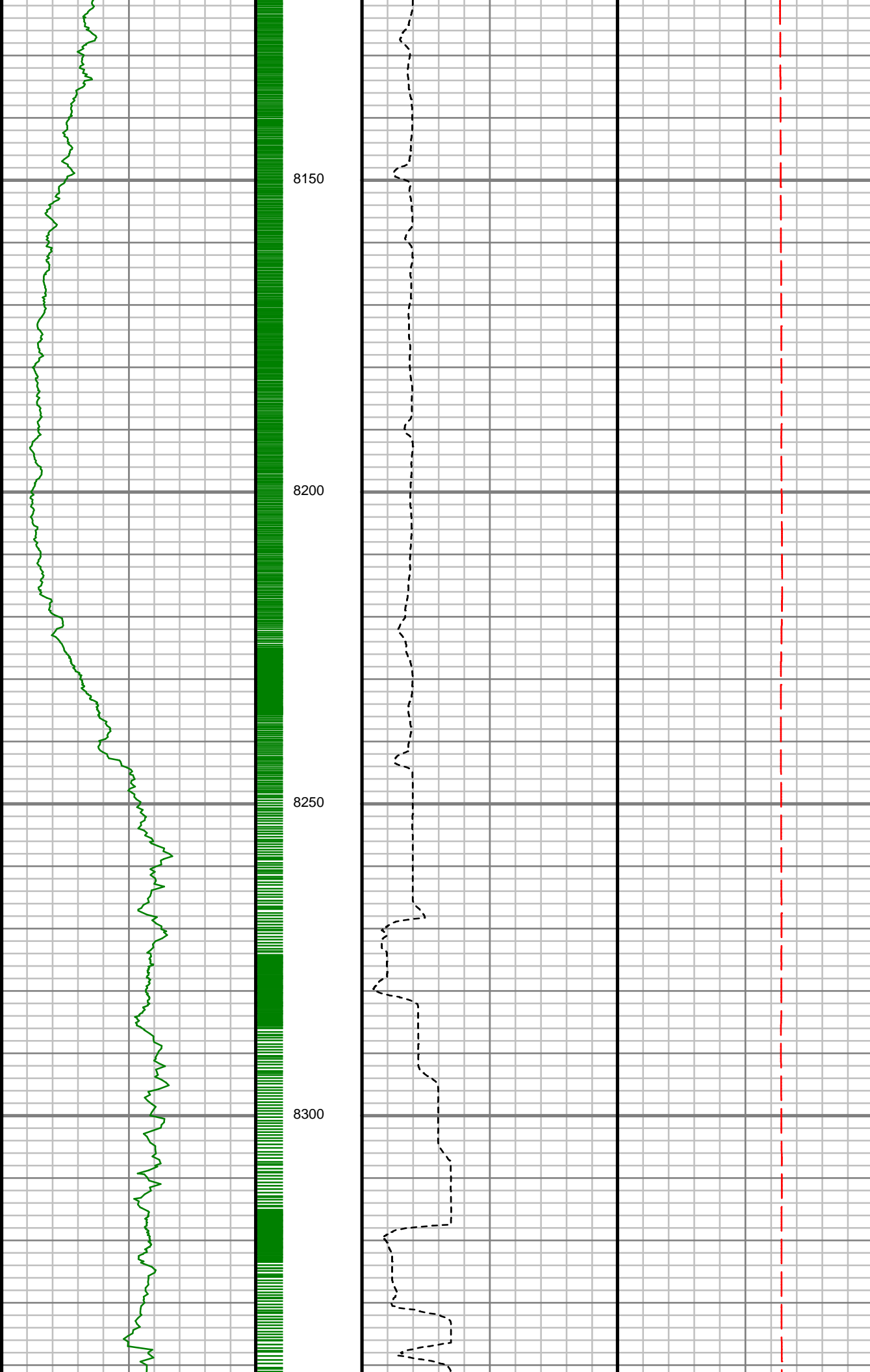
S: 81 MD: 7815.00 ft
Inc: 89.06 deg Az:
270.25 deg TVD:
7299.36 ft



S: 82 MD: 7908.00 ft
Inc: 91.14 deg Az:
270.62 deg TVD:
7299.20 ft

S: 83 MD: 8002.00 ft
Inc: 88.66 deg Az:
271.79 deg TVD:
7299.37 ft

S: 84 MD: 8097.00 ft
Inc: 87.38 deg Az:
271.94 deg TVD:
7302.65 ft



S: 85 MD: 8191.00 ft
Inc: 87.48 deg Az:
271.69 deg TVD:
7306.86 ft

S: 86 MD: 8286.00 ft
Inc: 87.31 deg Az:
270.03 deg TVD:
7311.18 ft



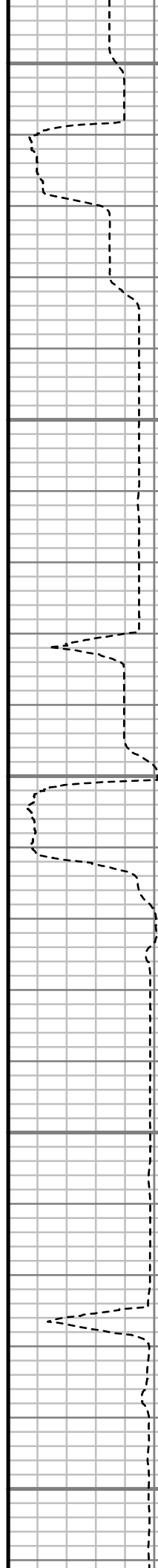
8350

8400

8450

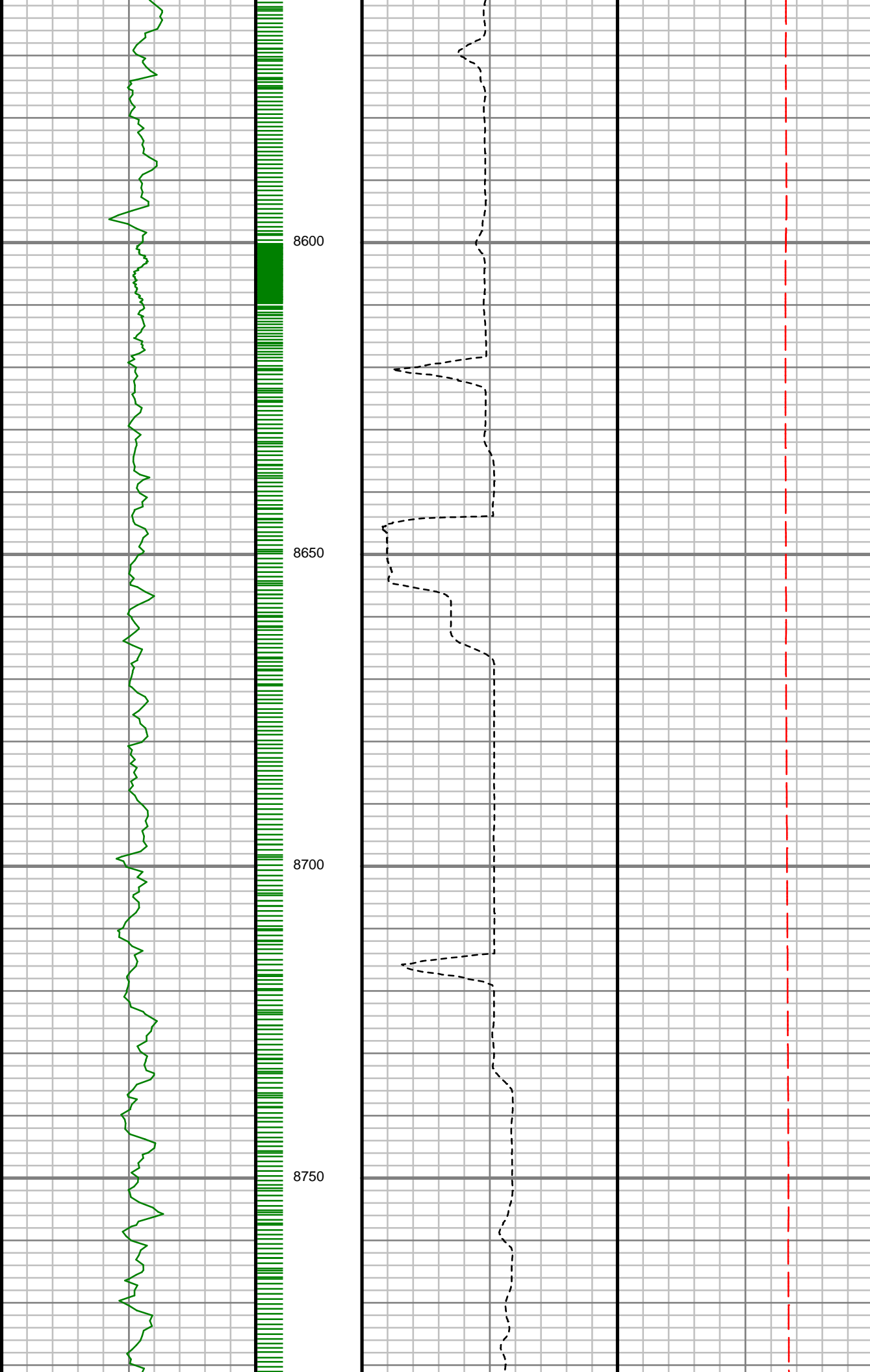
8500

8550



S: 87 MD: 8379.00 ft
Inc: 91.21 deg Az:
268.98 deg TVD:
7312.38 ft

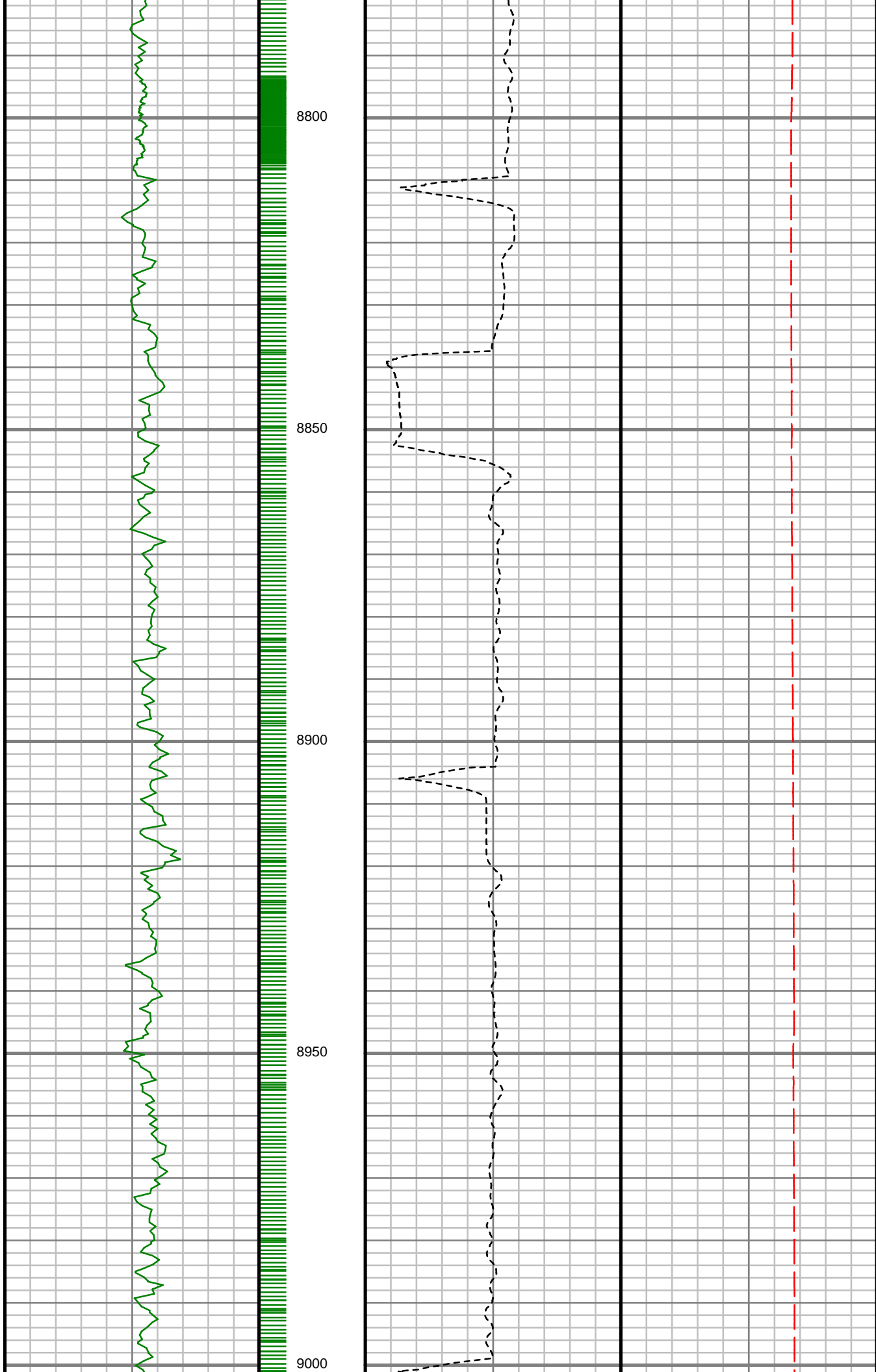
S: 88 MD: 8473.00 ft
Inc: 90.10 deg Az:
269.72 deg TVD:
7311.31 ft



S: 89 MD: 8567.00 ft
Inc: 88.99 deg Az:
269.53 deg TVD:
7312.05 ft

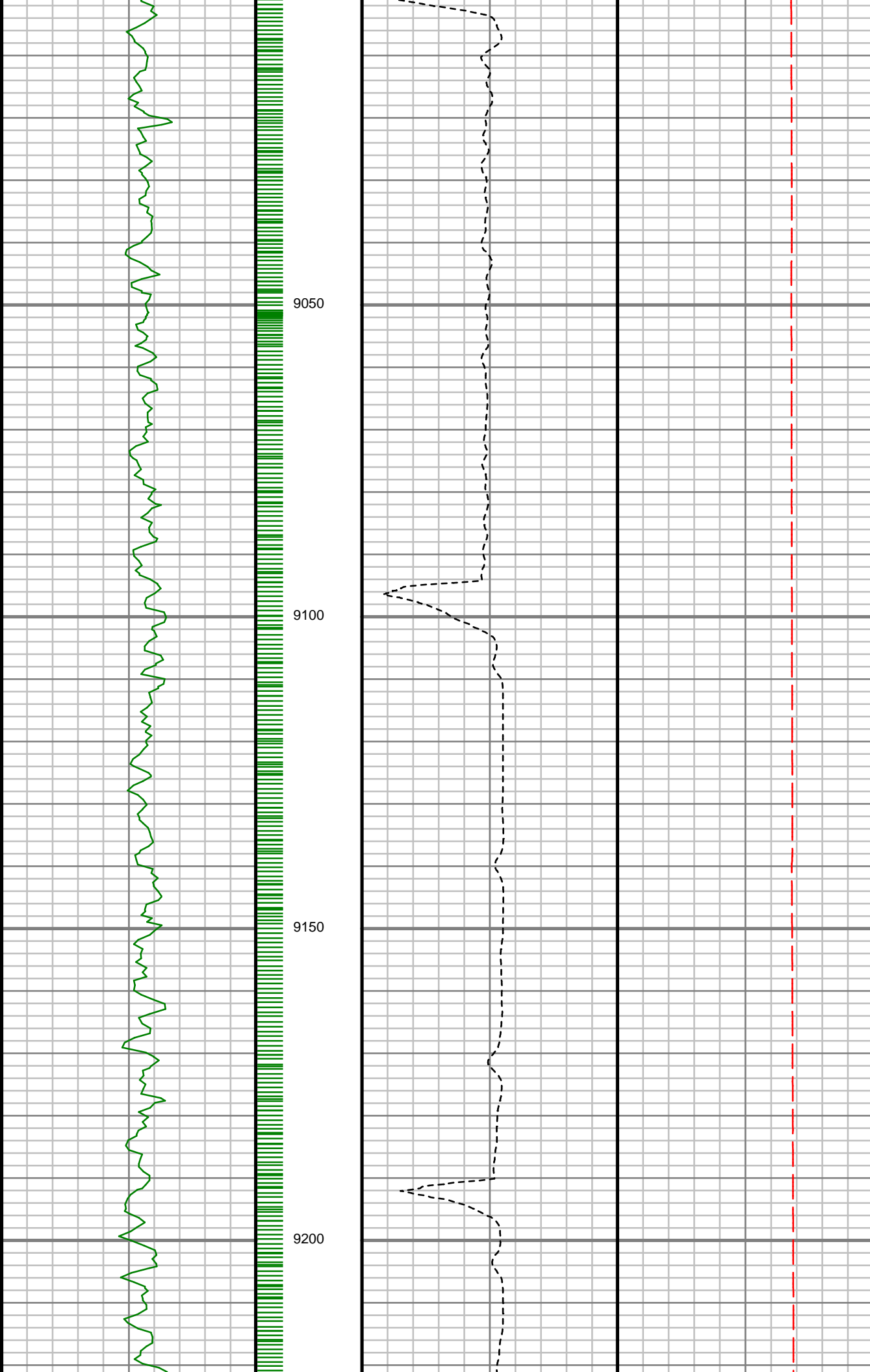
S: 90 MD: 8662.00 ft
Inc: 90.23 deg Az:
269.24 deg TVD:
7312.70 ft

S: 91 MD: 8757.00 ft
Inc: 90.37 deg Az:
269.28 deg TVD:
7312.20 ft



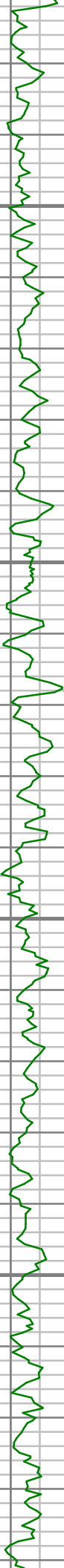
S: 92 MD: 8851.00 ft
Inc: 90.30 deg Az:
271.04 deg TVD:
7311.65 ft

S: 93 MD: 8946.00 ft
Inc: 90.17 deg Az:
271.09 deg TVD:
7311.26 ft



S: 94 MD: 9041.00 ft
Inc: 89.87 deg Az:
270.67 deg TVD:
7311.23 ft

S: 95 MD: 9136.00 ft
Inc: 89.80 deg Az:
270.36 deg TVD:
7311.50 ft

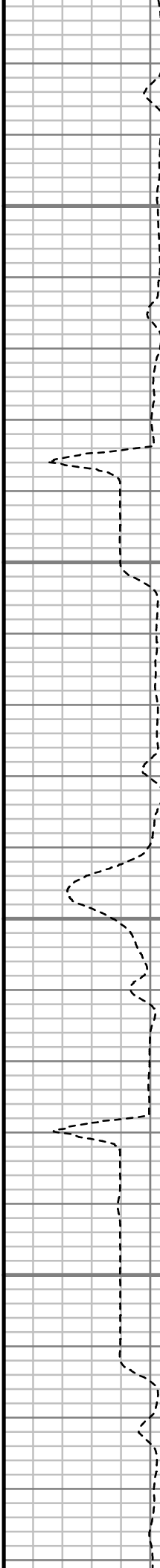


9250

9300

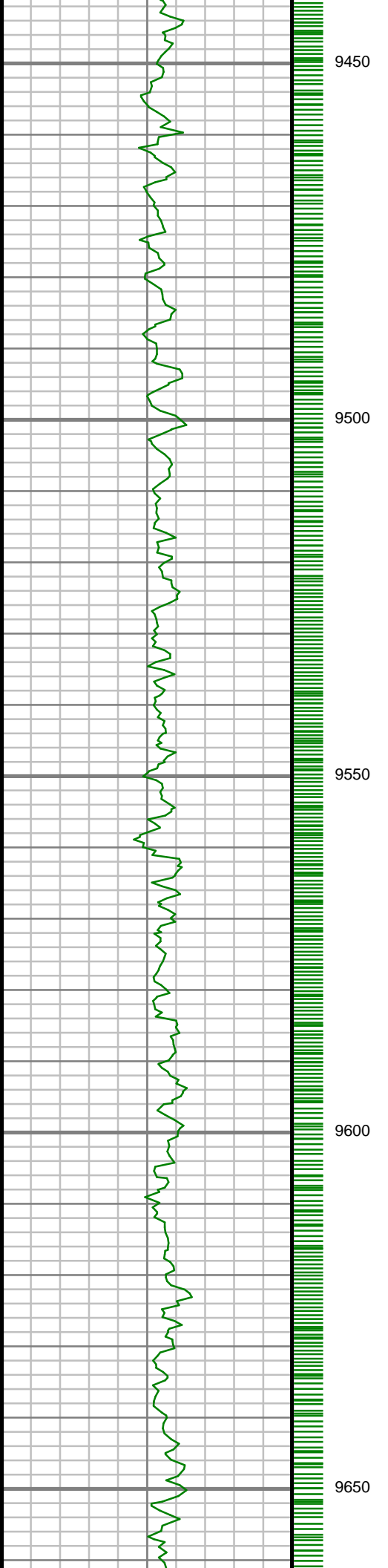
9350

9400



S: 96 MD: 9323.00 ft
Inc: 90.27 deg Az:
270.65 deg TVD:
7311.39 ft

S: 97 MD: 9417.00 ft
Inc: 89.43 deg Az:
270.64 deg TVD:
7311.64 ft



S: 98 MD: 9510.00 ft
Inc: 89.20 deg Az:
270.78 deg TVD:
7312.75 ft

S: 99 MD: 9604.00 ft
Inc: 89.20 deg Az:
271.37 deg TVD:
7314.06 ft

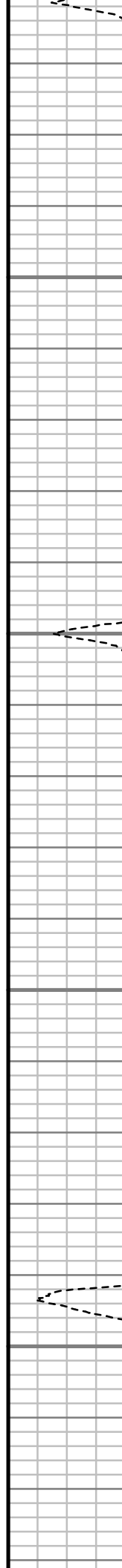


9700

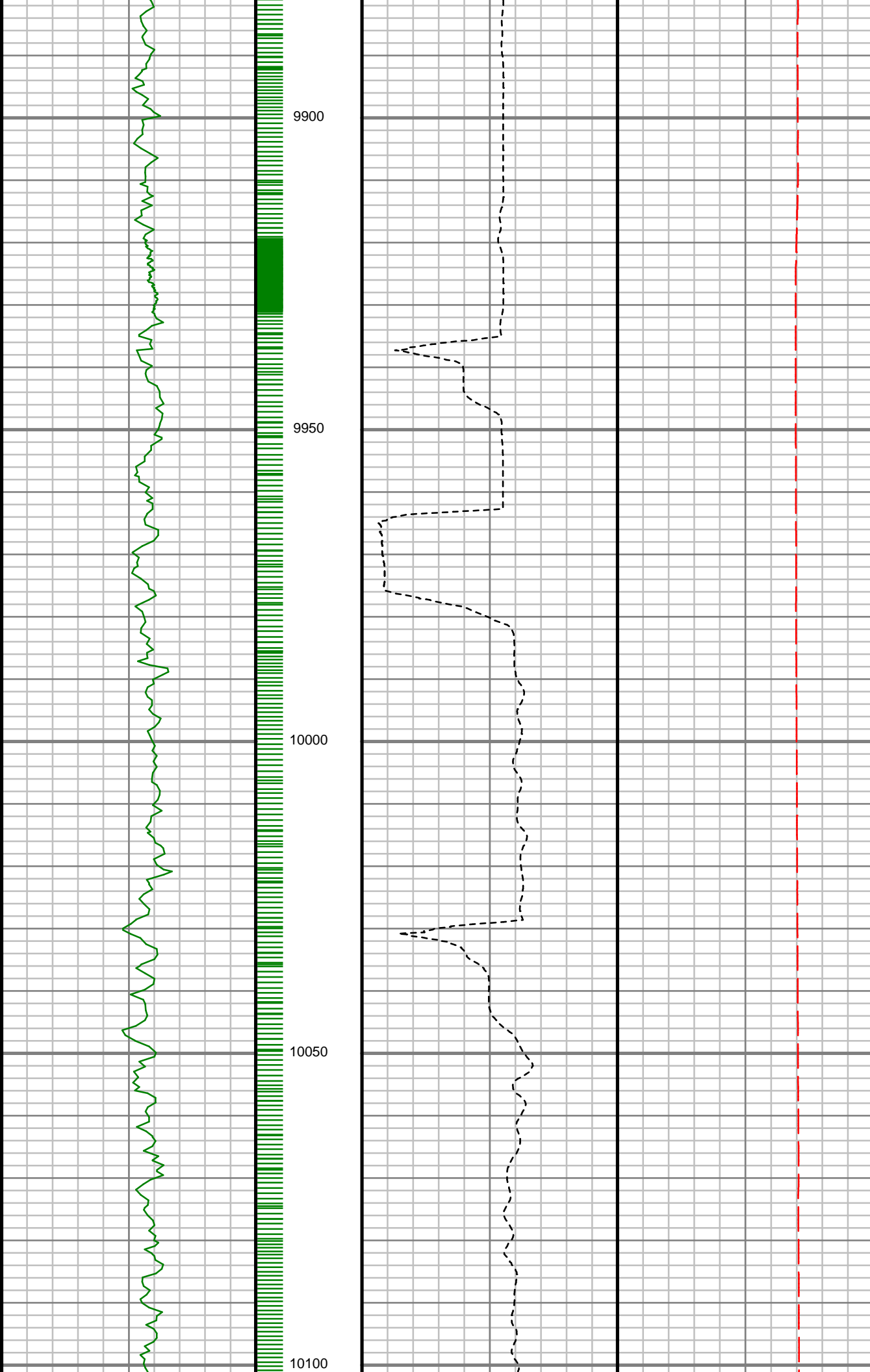
9750

9800

9850



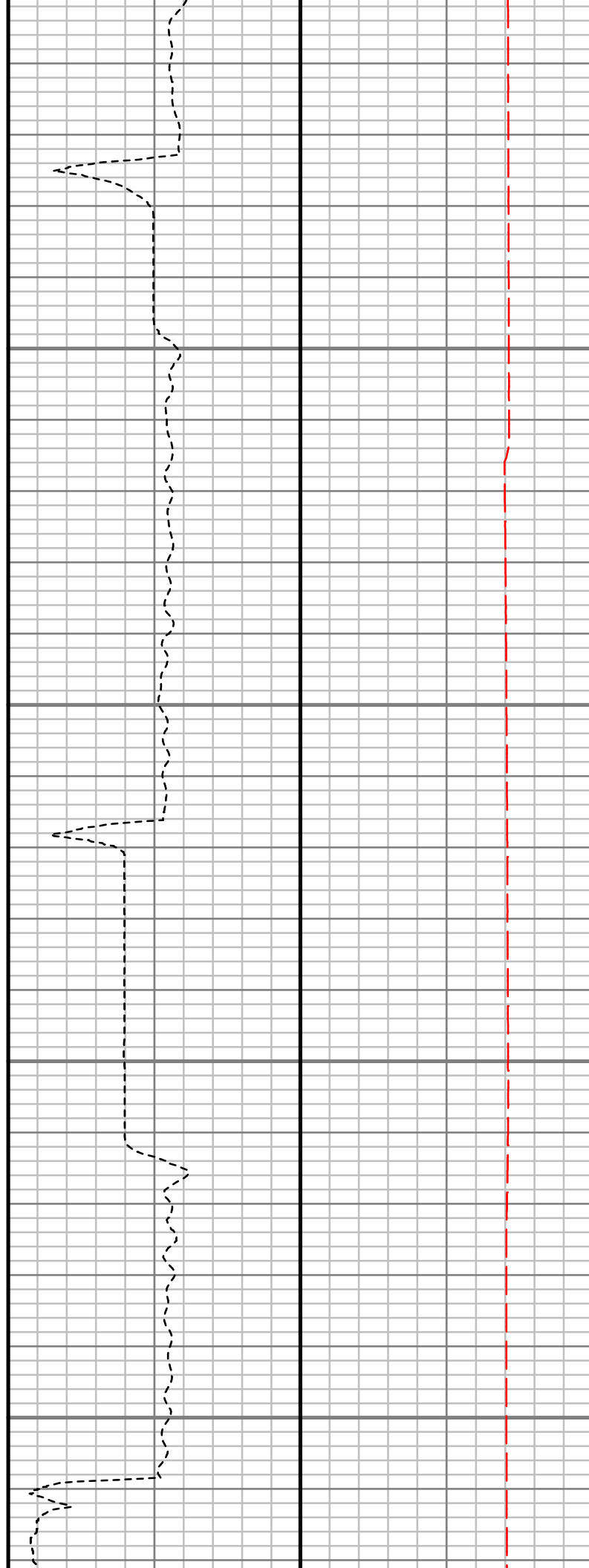
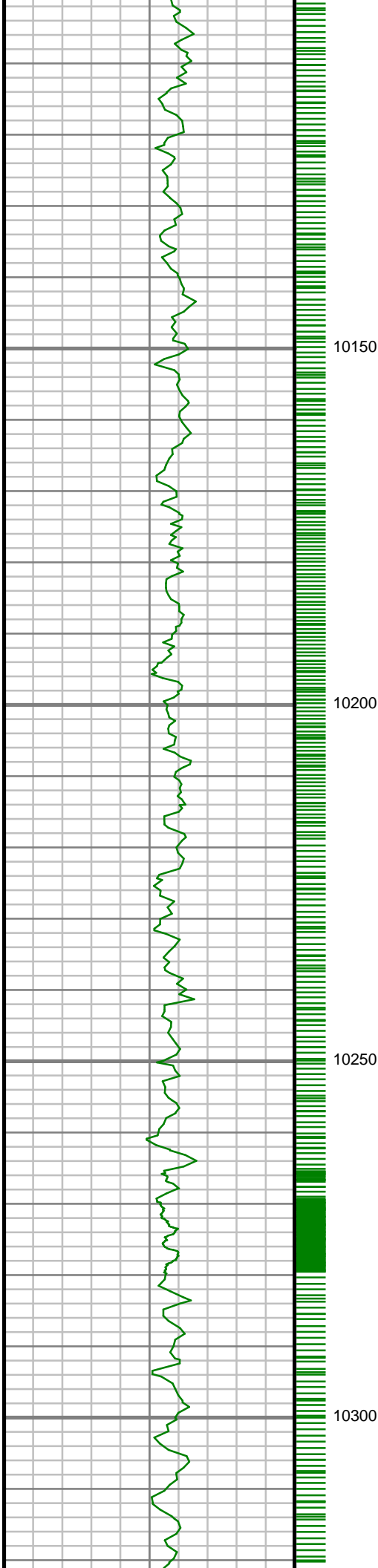
S: 100 MD: 9698.00 ft
Inc: 89.36 deg Az:
271.00 deg TVD:
7315.24 ft



S: 101 MD: 9884.00 ft
Inc: 91.04 deg Az:
271.96 deg TVD:
7314.59 ft

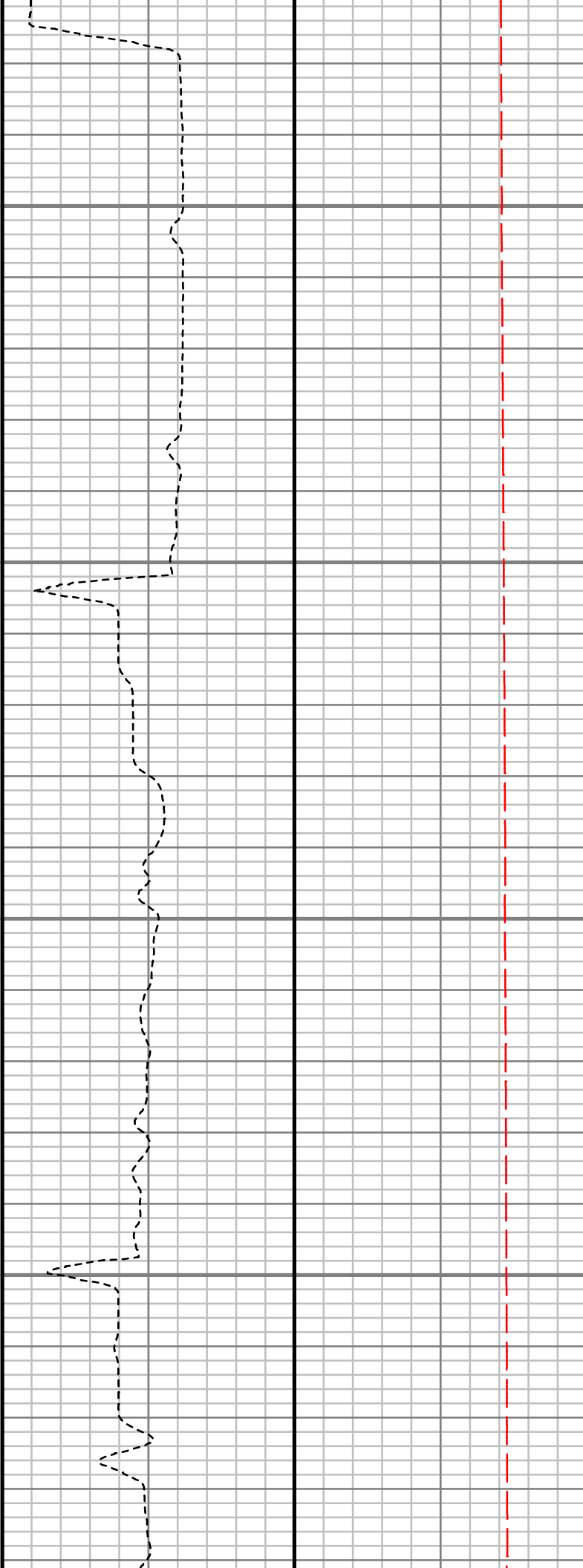
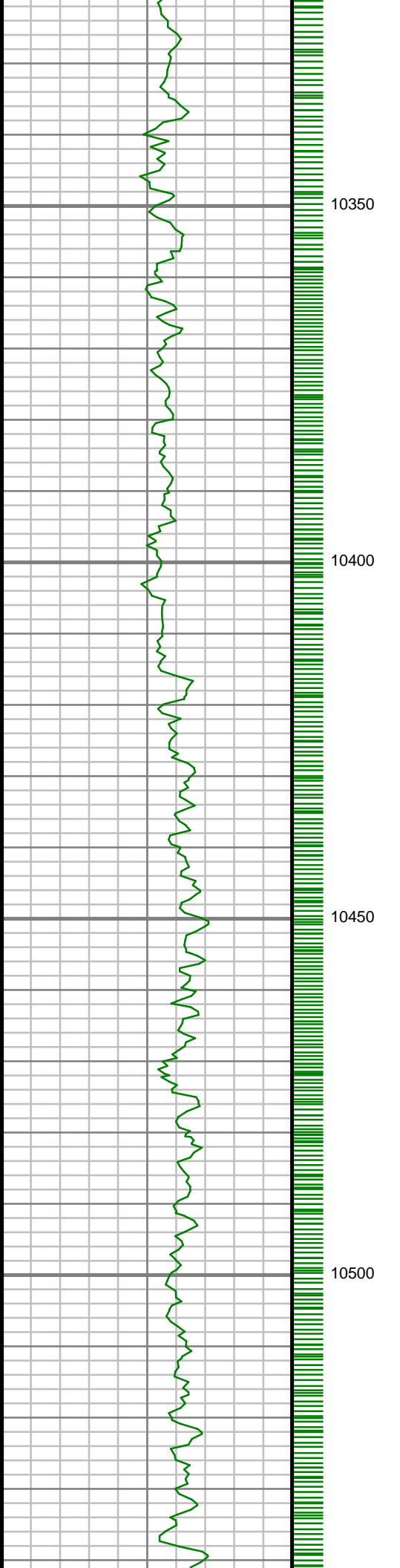
S: 102 MD: 9977.00 ft
Inc: 90.60 deg Az:
270.11 deg TVD:
7313.26 ft

S: 103 MD: 10071.00 ft
Inc: 90.44 deg Az:
269.97 deg TVD:
7312.41 ft



S: 104 MD: 10164.00 ft
Inc: 90.94 deg Az:
269.80 deg TVD:
7311.29 ft

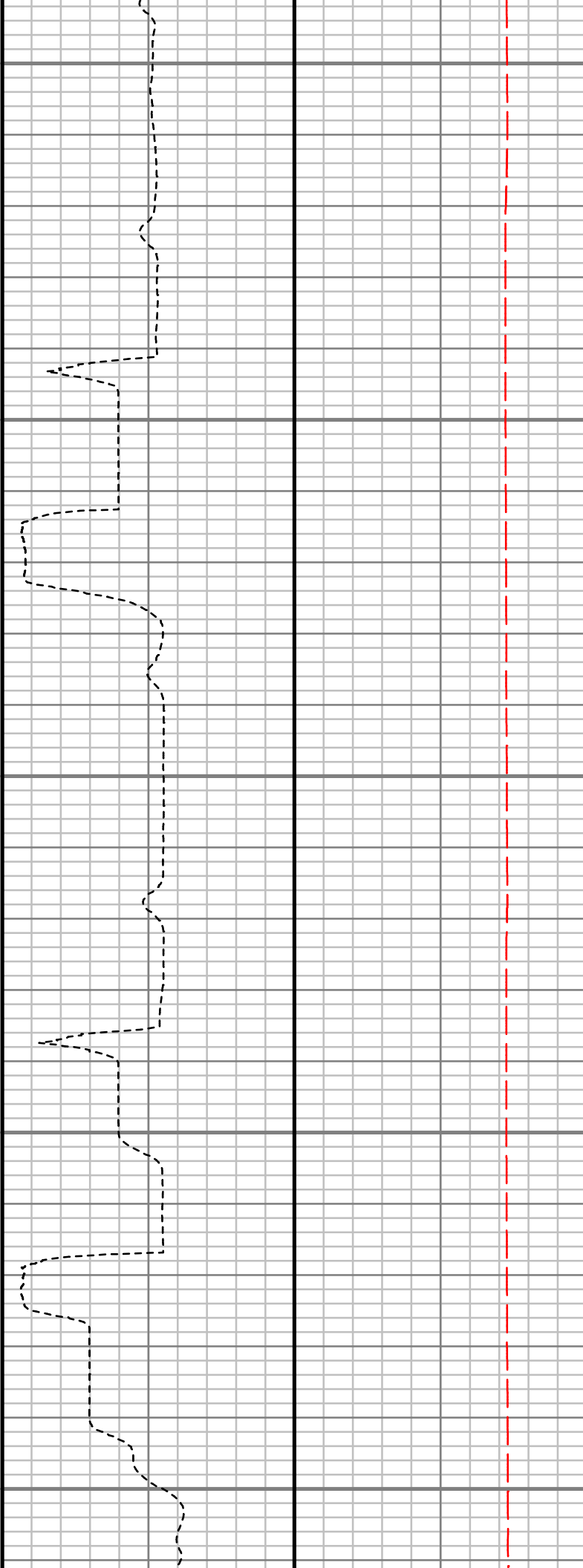
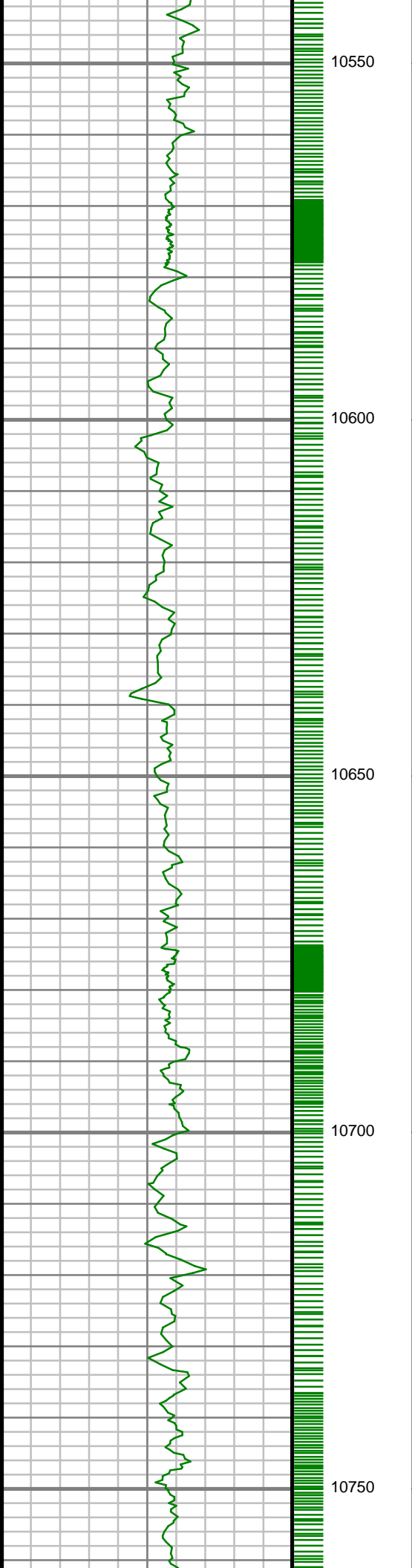
S: 105 MD: 10258.00 ft
Inc: 91.31 deg Az:
269.95 deg TVD:
7309.44 ft



S: 106 MD: 10352.00 ft
Inc: 90.03 deg Az:
270.87 deg TVD:
7308.34 ft

S: 107 MD: 10447.00 ft
Inc: 89.23 deg Az:
270.31 deg TVD:
7308.96 ft

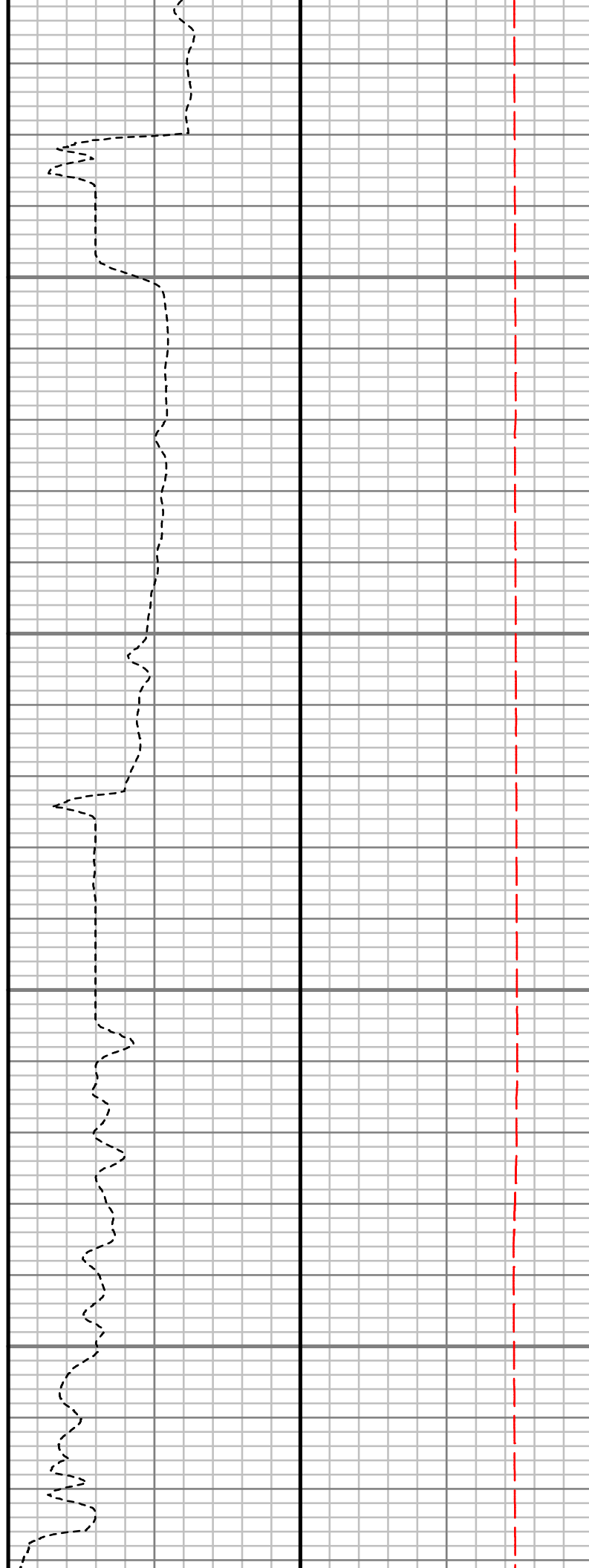
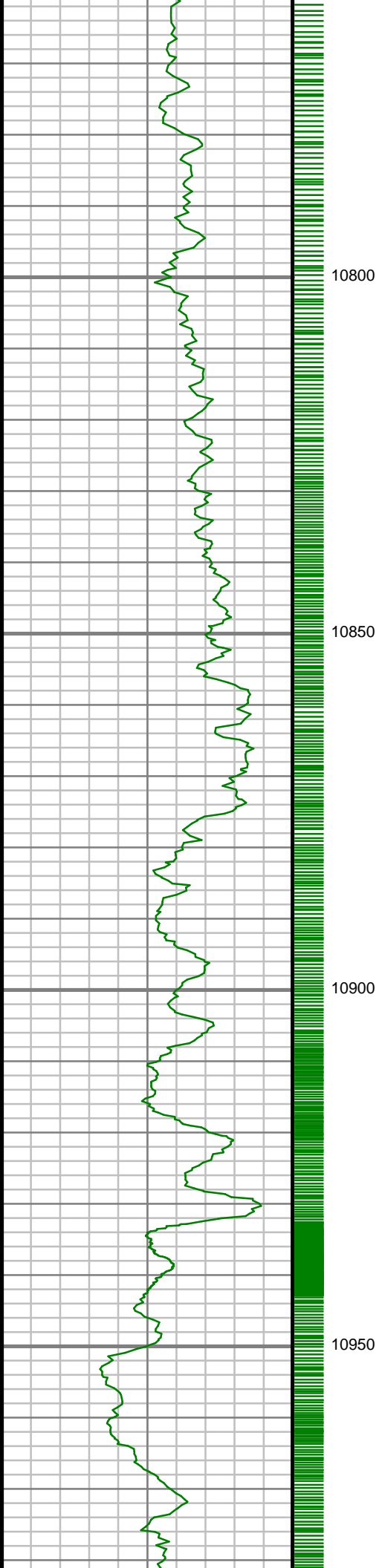
S: 108 MD: 10540.00 ft



S: 108 MD: 10540.00 ft
Inc: 88.49 deg Az:
269.97 deg TVD:
7310.81 ft

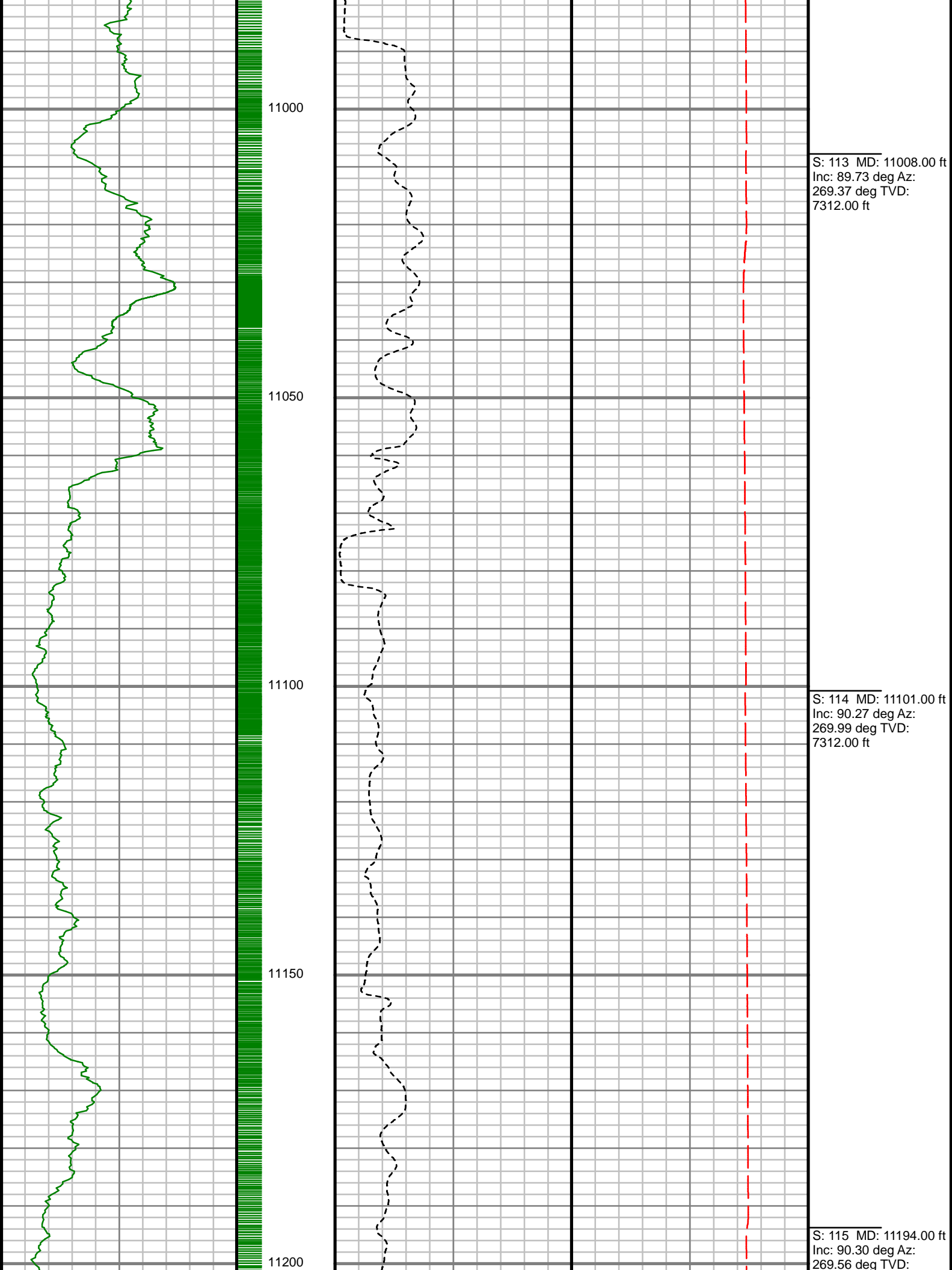
S: 109 MD: 10634.00 ft
Inc: 89.03 deg Az:
269.43 deg TVD:
7312.84 ft

S: 110 MD: 10728.00 ft
Inc: 90.20 deg Az:
269.20 deg TVD:
7313.47 ft



S: 111 MD: 10820.00 ft
Inc: 90.47 deg Az:
268.52 deg TVD:
7312.93 ft

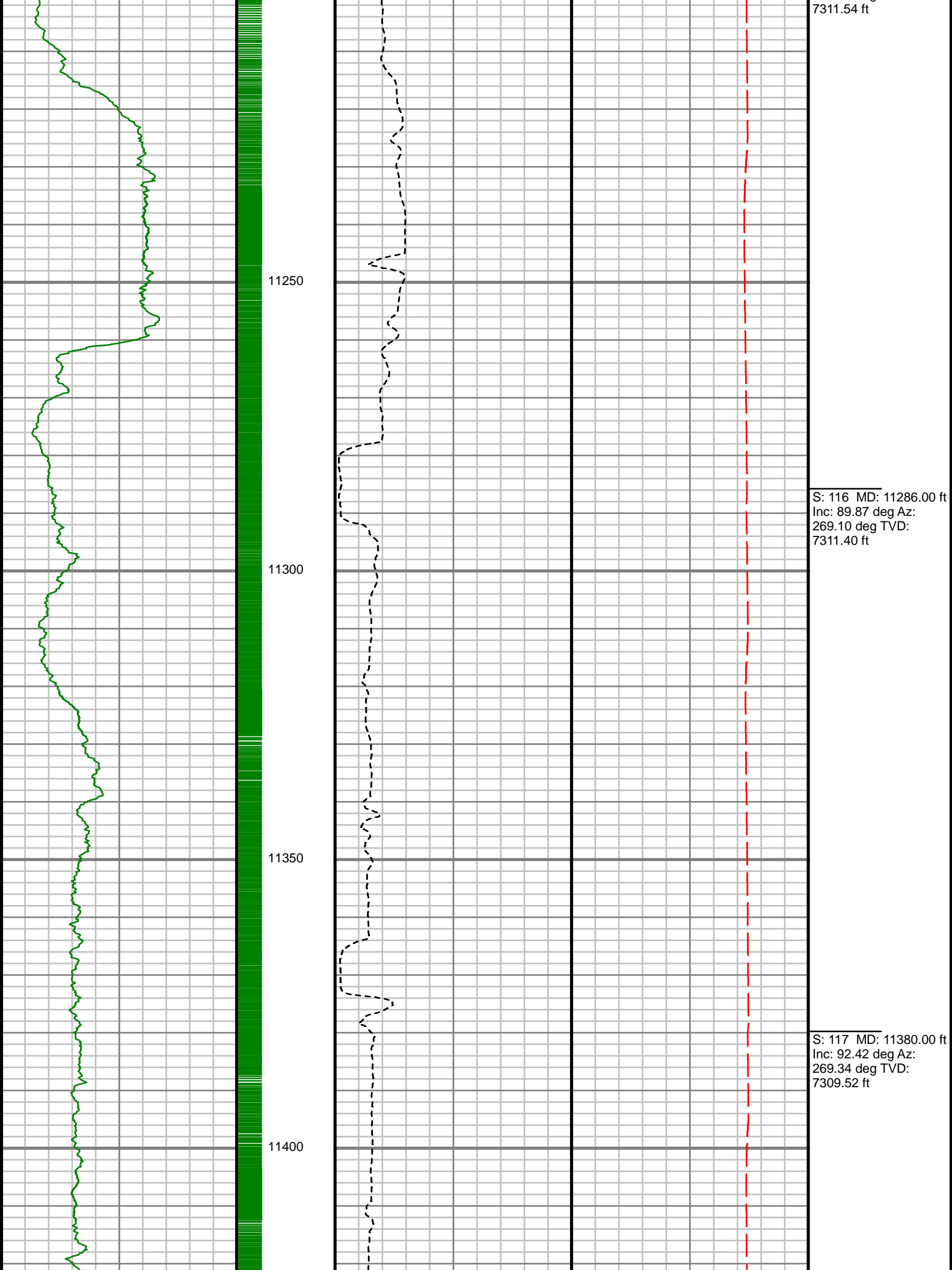
S: 112 MD: 10914.00 ft
Inc: 90.47 deg Az:
268.31 deg TVD:
7312.16 ft



S: 113 MD: 11008.00 ft
Inc: 89.73 deg Az:
269.37 deg TVD:
7312.00 ft

S: 114 MD: 11101.00 ft
Inc: 90.27 deg Az:
269.99 deg TVD:
7312.00 ft

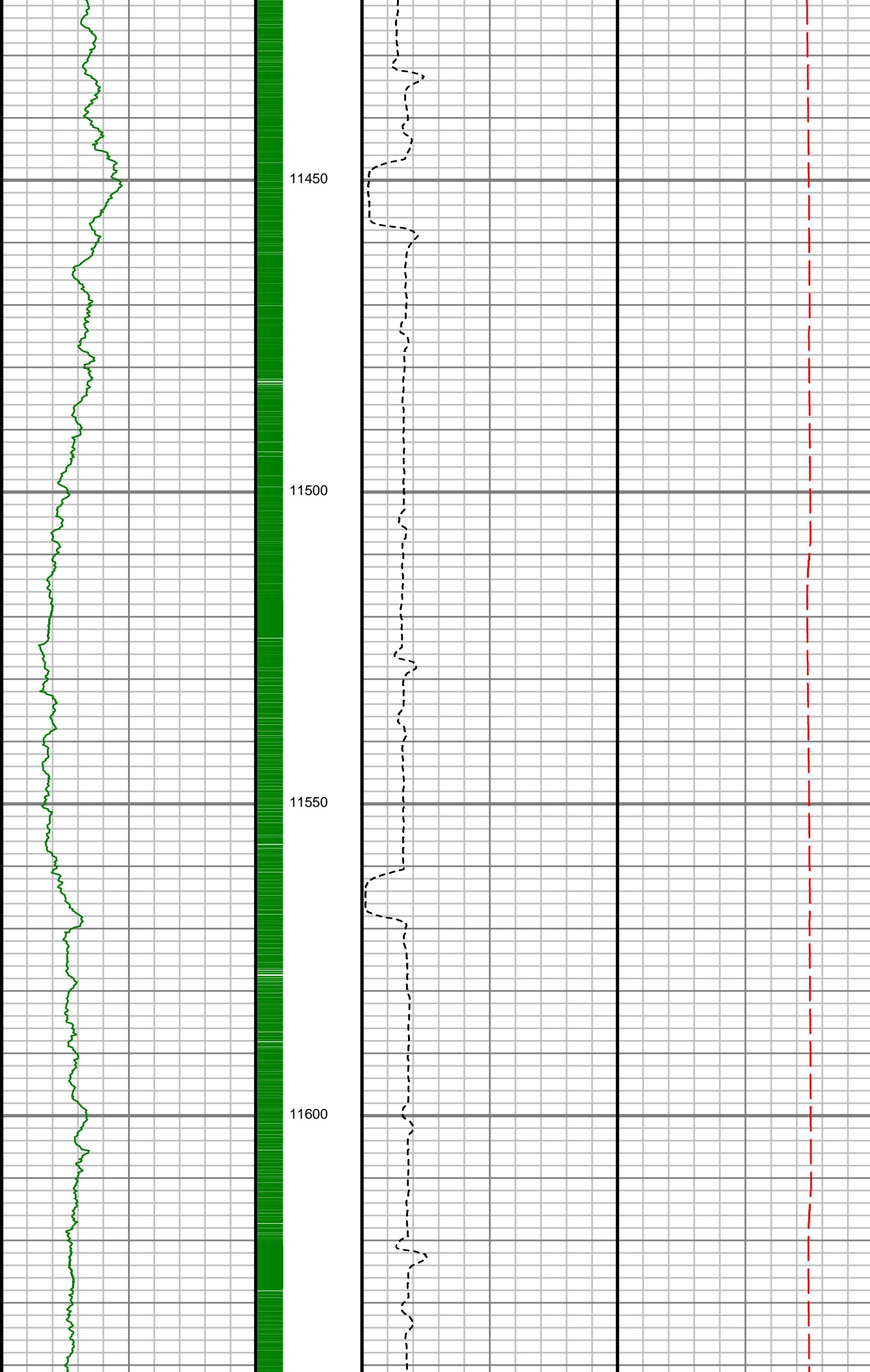
S: 115 MD: 11194.00 ft
Inc: 90.30 deg Az:
269.56 deg TVD:



7311.54 ft

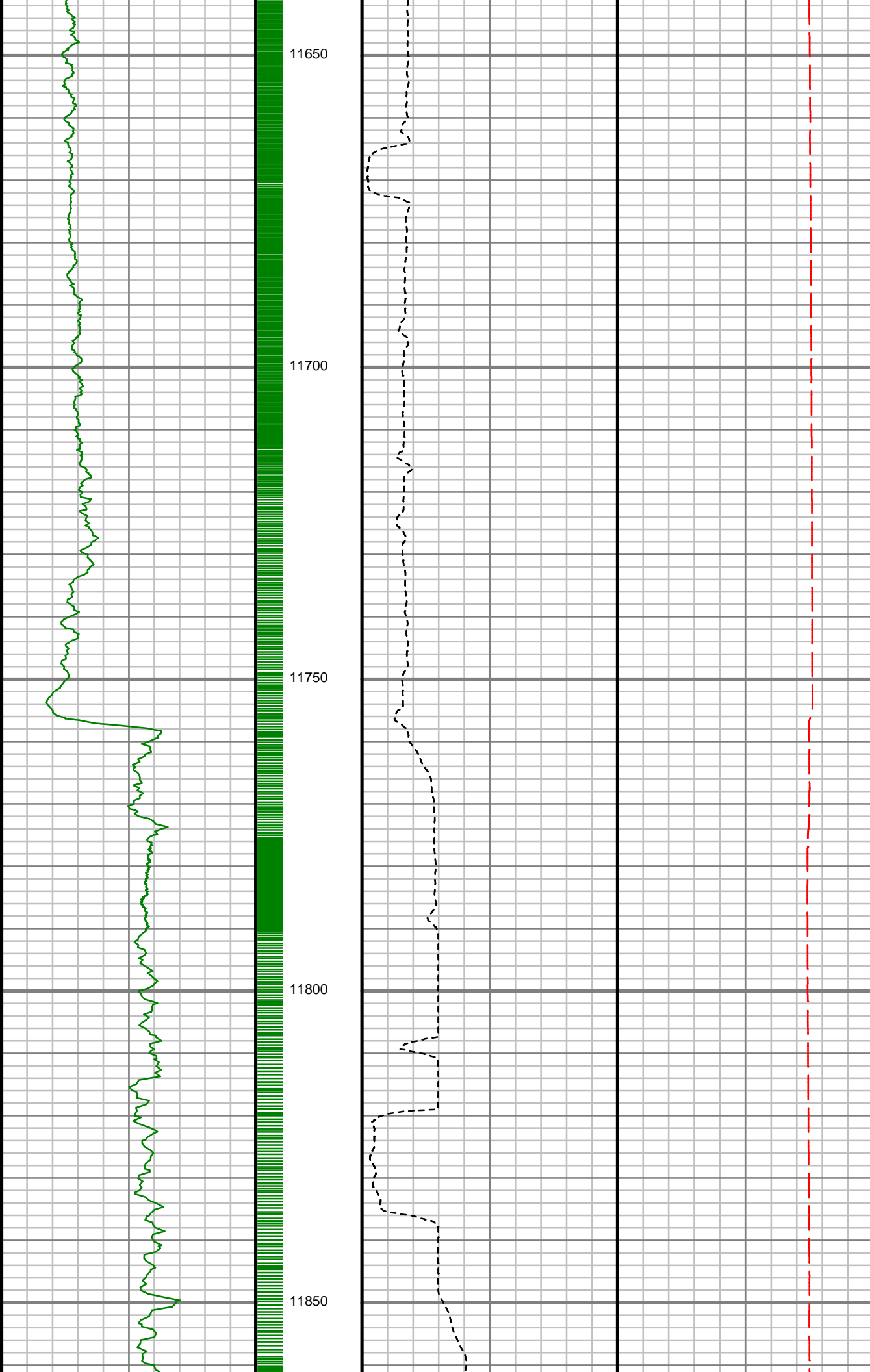
S: 116 MD: 11286.00 ft
Inc: 89.87 deg Az:
269.10 deg TVD:
7311.40 ft

S: 117 MD: 11380.00 ft
Inc: 92.42 deg Az:
269.34 deg TVD:
7309.52 ft



S: 118 MD: 11474.00 ft
Inc: 91.75 deg Az:
270.58 deg TVD:
7306.10 ft

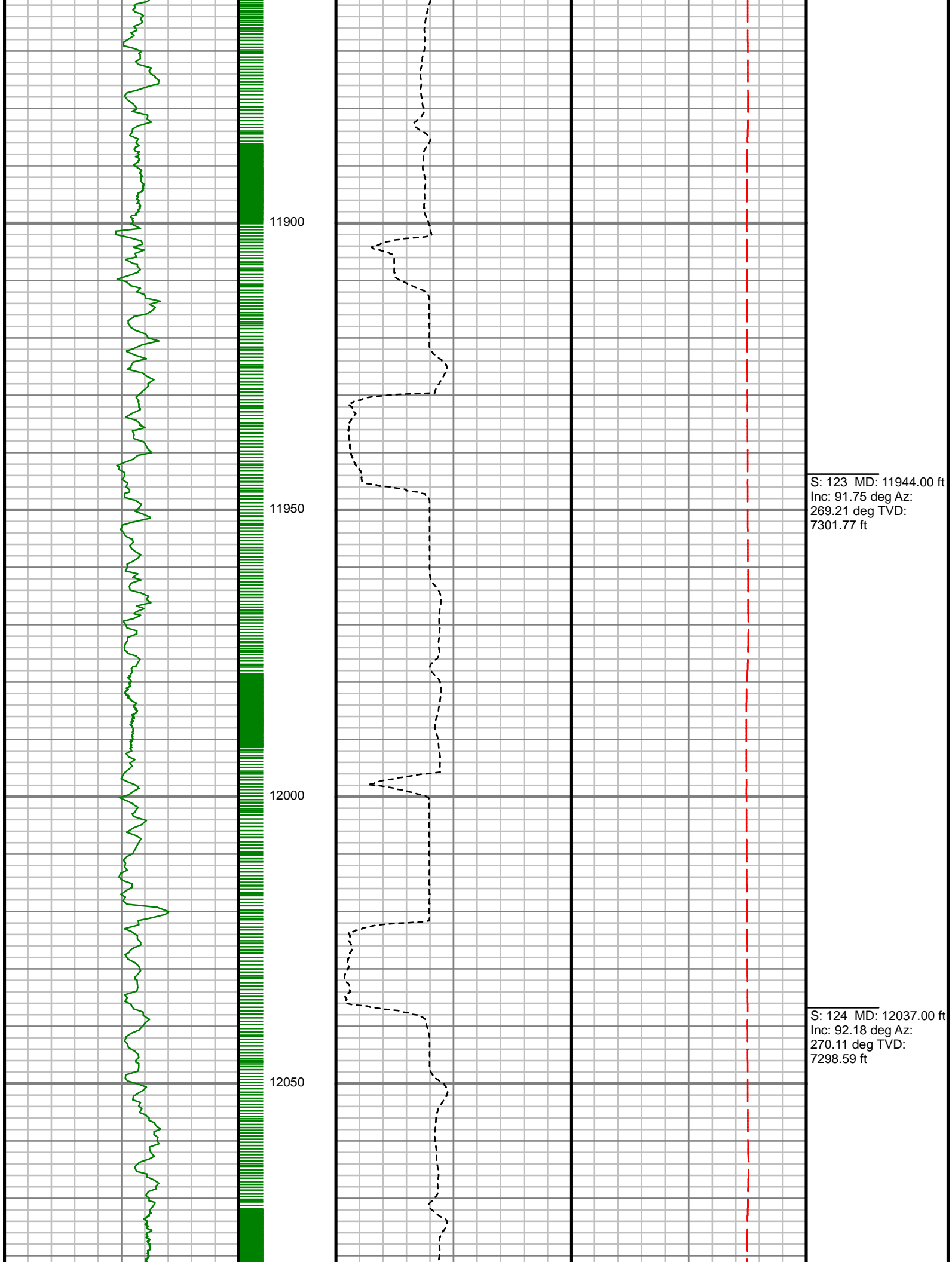
S: 119 MD: 11569.00 ft
Inc: 91.31 deg Az:
270.38 deg TVD:
7303.57 ft

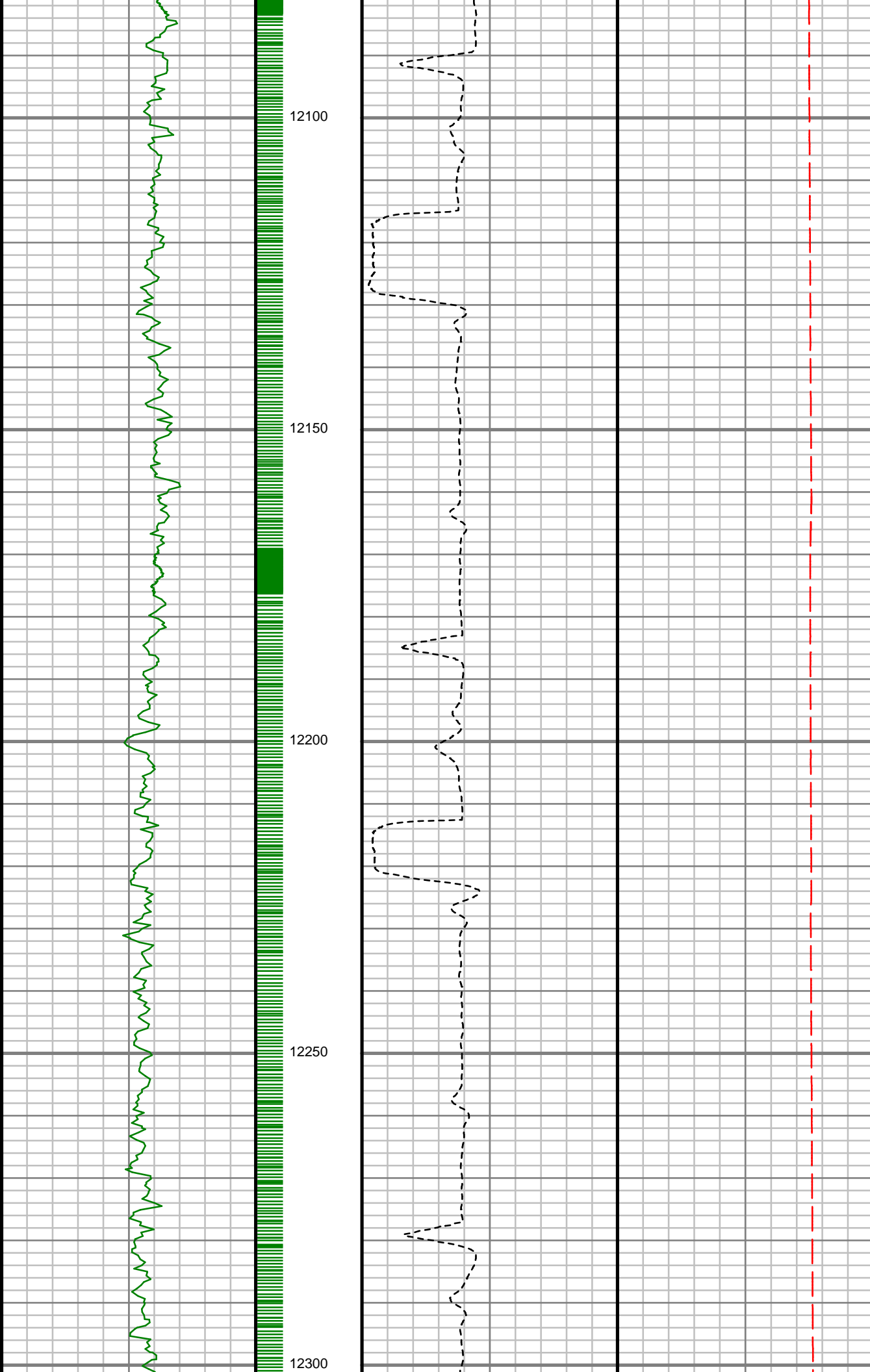


S: 120 MD: 11662.00 ft
Inc: 90.57 deg Az:
269.03 deg TVD:
7302.04 ft

S: 121 MD: 11756.00 ft
Inc: 88.32 deg Az:
267.18 deg TVD:
7302.95 ft

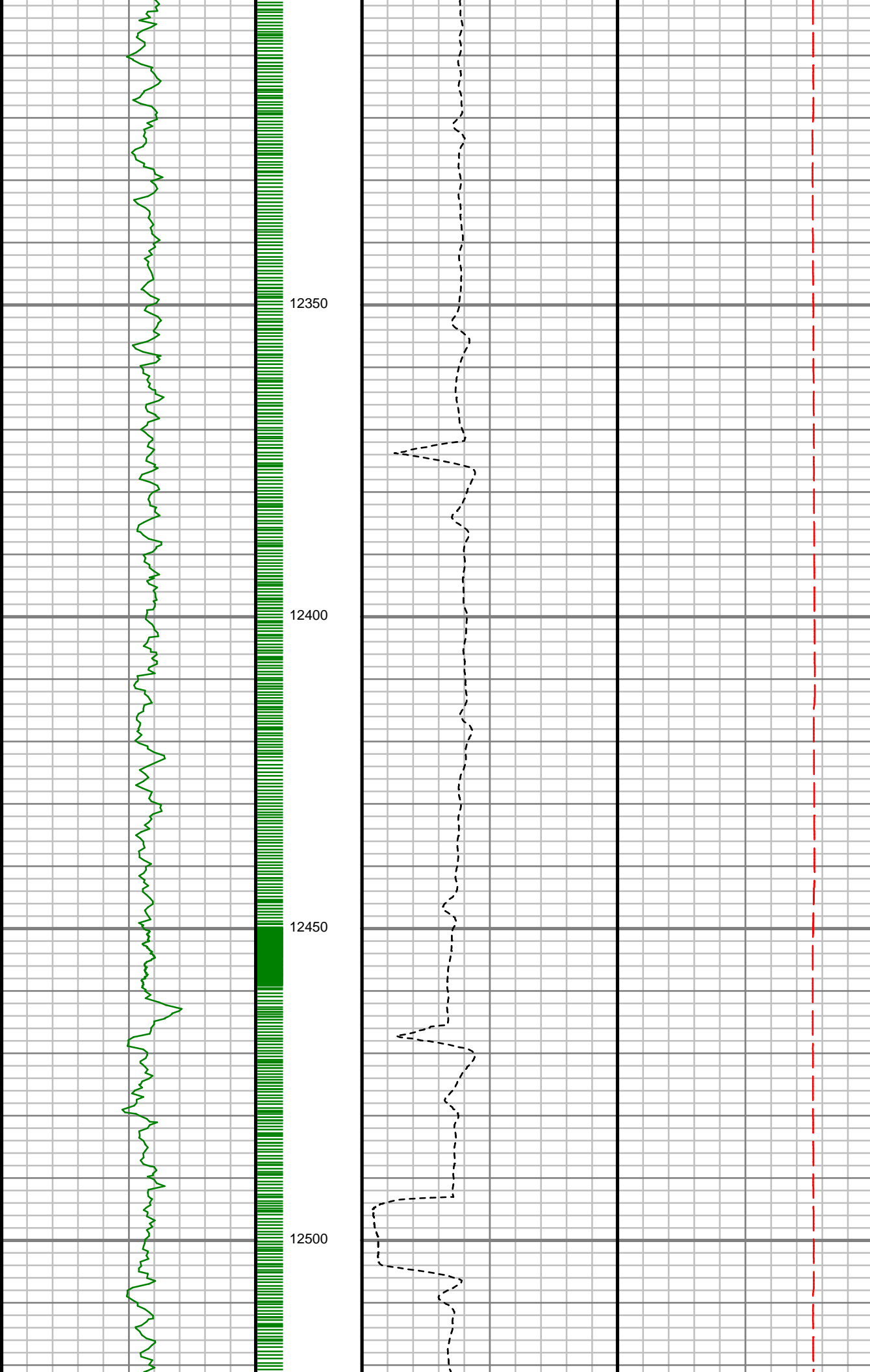
S: 122 MD: 11851.00 ft
Inc: 90.70 deg Az:
268.01 deg TVD:
7303.76 ft





S: 125 MD: 12130.00 ft
Inc: 89.60 deg Az:
270.30 deg TVD:
7297.14 ft

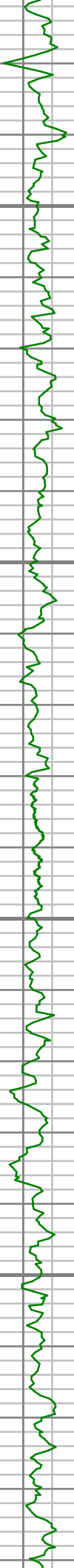
S: 126 MD: 12224.00 ft
Inc: 89.16 deg Az:
270.94 deg TVD:
7298.16 ft



S: 127 MD: 12319.00 ft
Inc: 89.70 deg Az:
271.21 deg TVD:
7299.10 ft

S: 128 MD: 12412.00 ft
Inc: 90.67 deg Az:
271.41 deg TVD:
7298.80 ft

S: 129 MD: 12506.00 ft
Inc: 90.30 deg Az:
271.30 deg TVD:
7298.01 ft

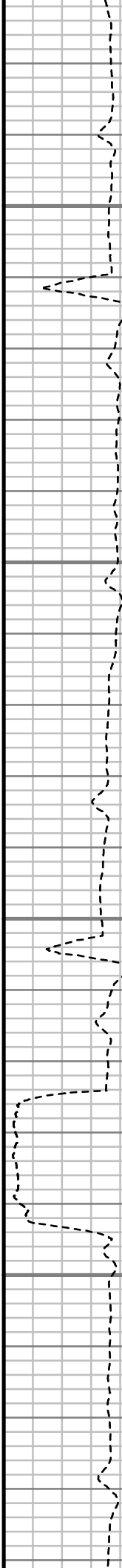


12550

12600

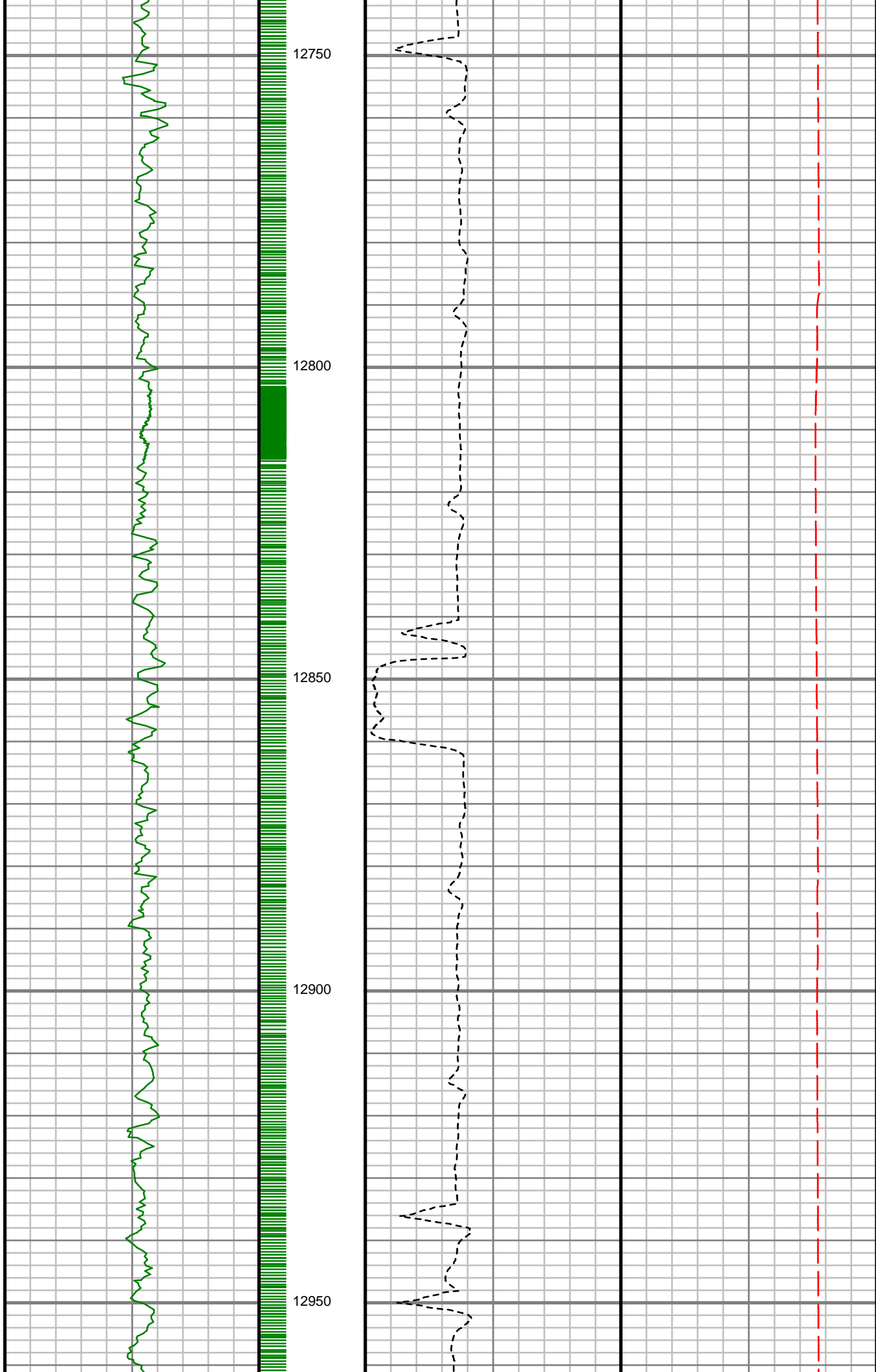
12650

12700

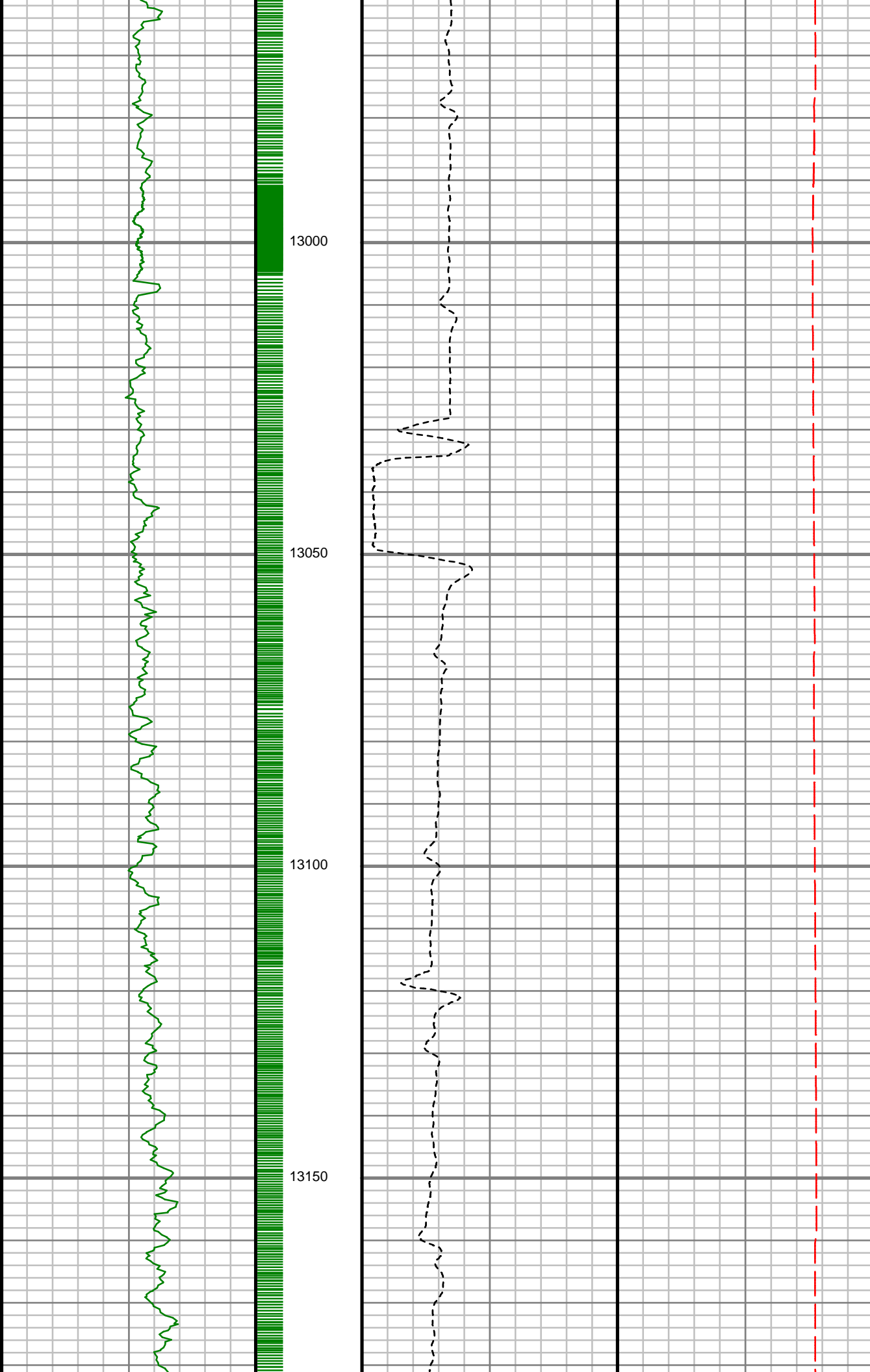


S: 130 MD: 12598.00 ft
Inc: 90.91 deg Az:
271.01 deg TVD:
7297.04 ft

S: 131 MD: 12693.00 ft
Inc: 90.03 deg Az:
271.40 deg TVD:
7296.26 ft



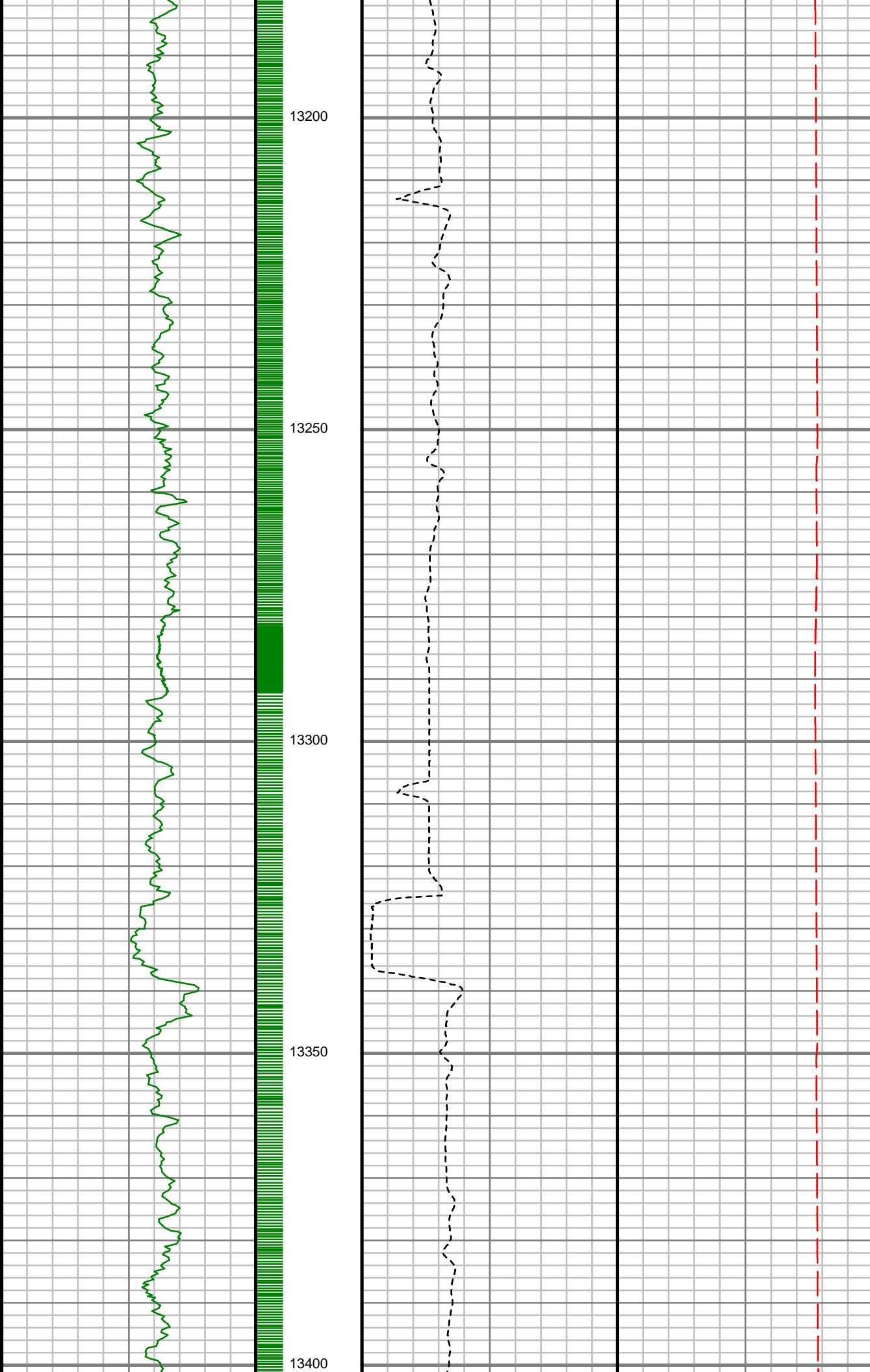
S: 132 MD: 12786.00 ft
Inc: 90.57 deg Az:
271.41 deg TVD:
7295.77 ft



S: 133 MD: 12973.00 ft
Inc: 90.07 deg Az:
271.76 deg TVD:
7294.73 ft

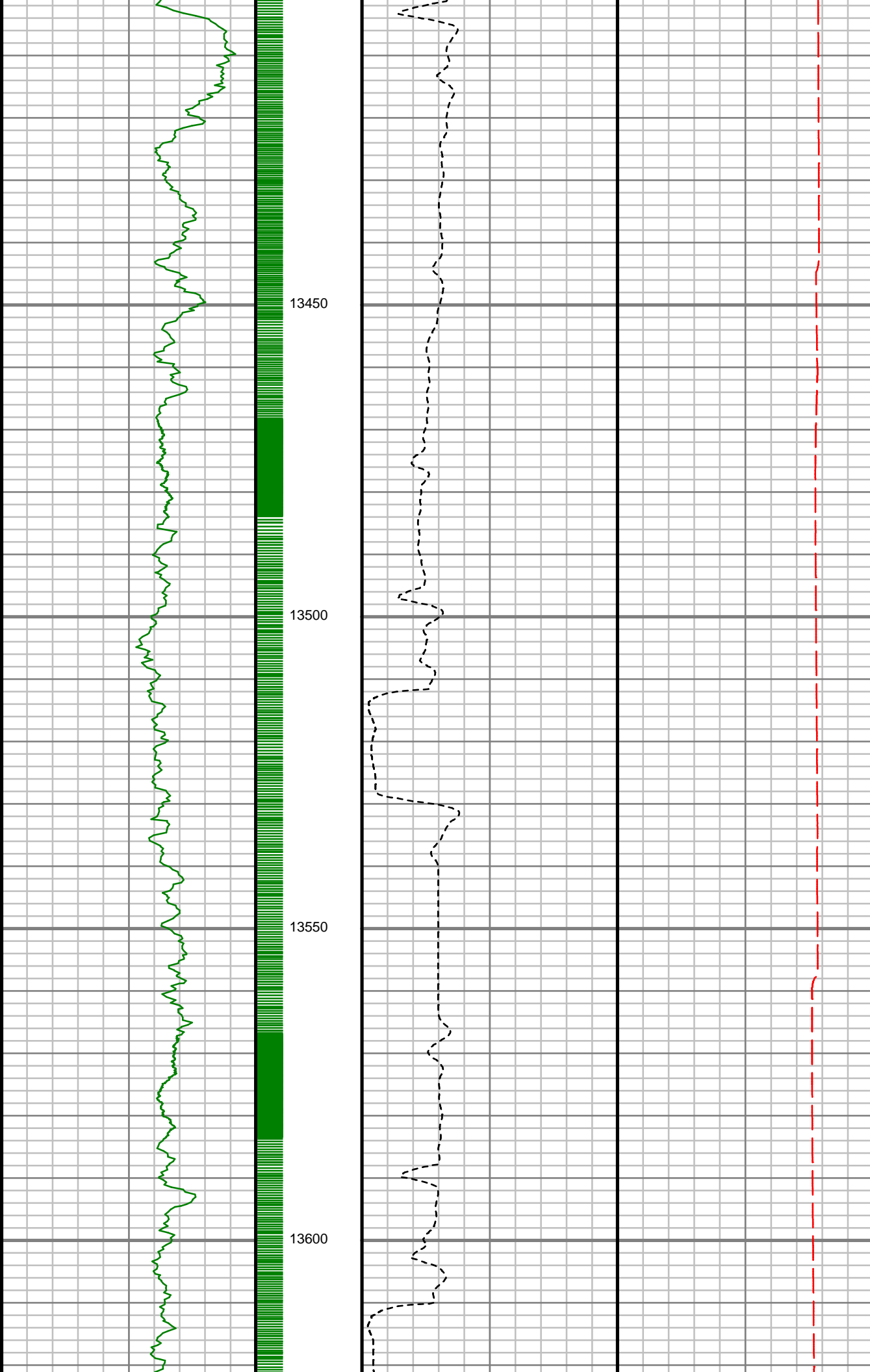
S: 134 MD: 13067.00 ft
Inc: 89.33 deg Az:
269.33 deg TVD:
7295.22 ft

S: 135 MD: 13161.00 ft
Inc: 90.47 deg Az:
268.64 deg TVD:
7295.38 ft



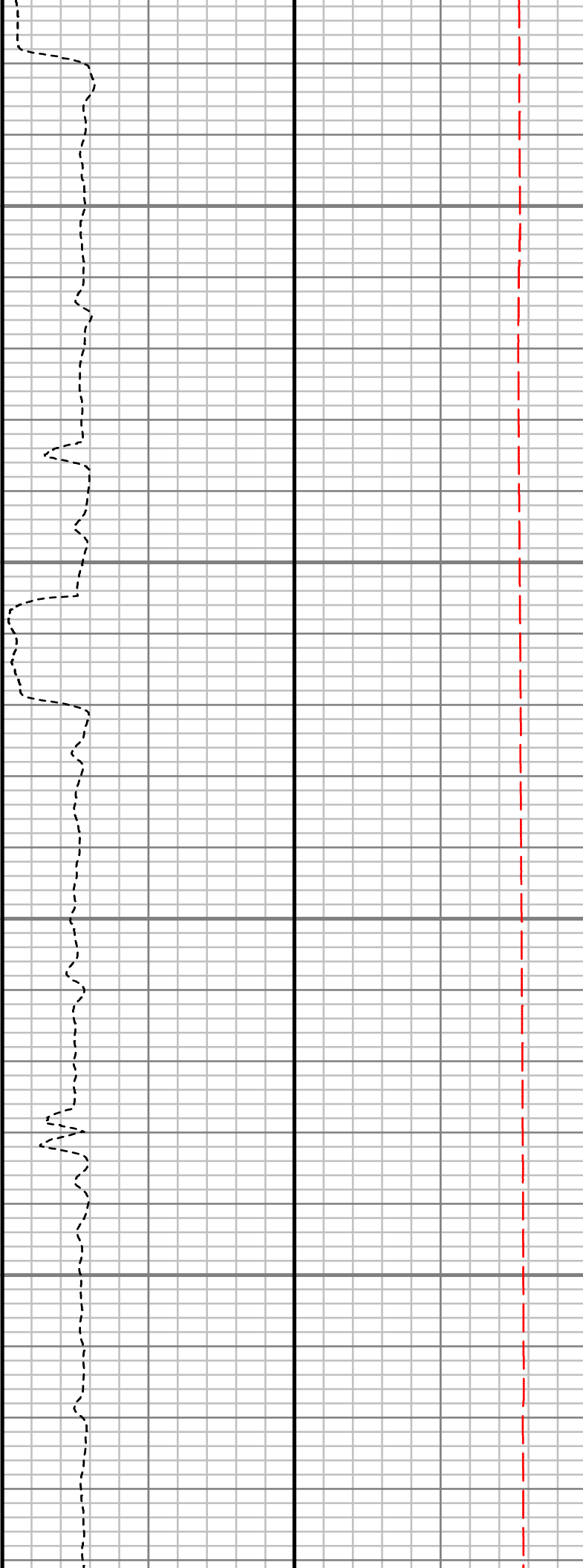
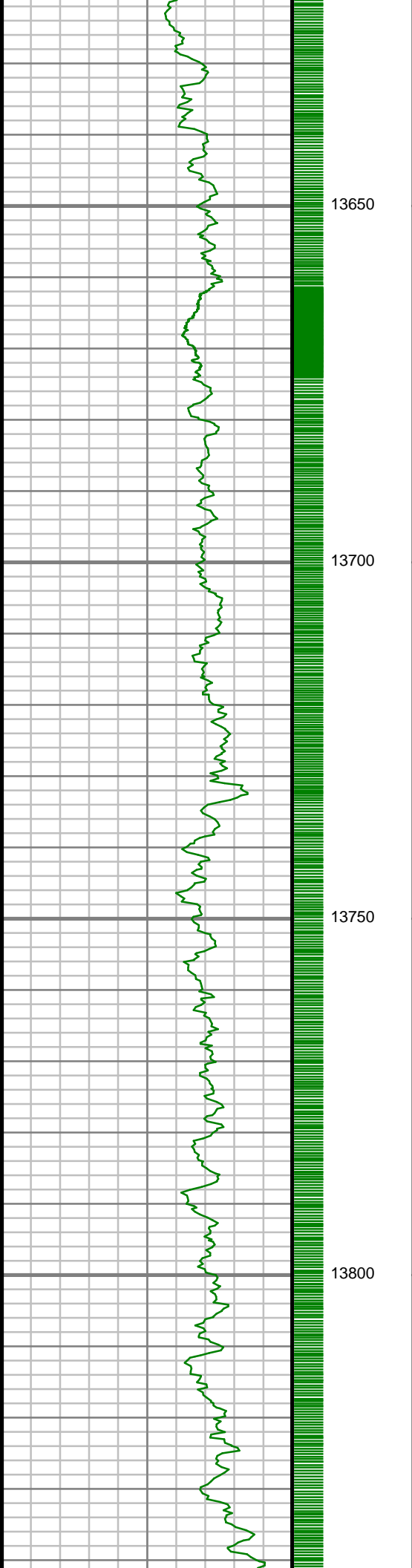
S: 136 MD: 13255.00 ft
Inc: 90.03 deg Az:
267.36 deg TVD:
7294.97 ft

S: 137 MD: 13350.00 ft
Inc: 89.80 deg Az:
268.45 deg TVD:
7295.11 ft



S: 138 MD: 13444.00 ft
Inc: 88.66 deg Az:
267.02 deg TVD:
7296.38 ft

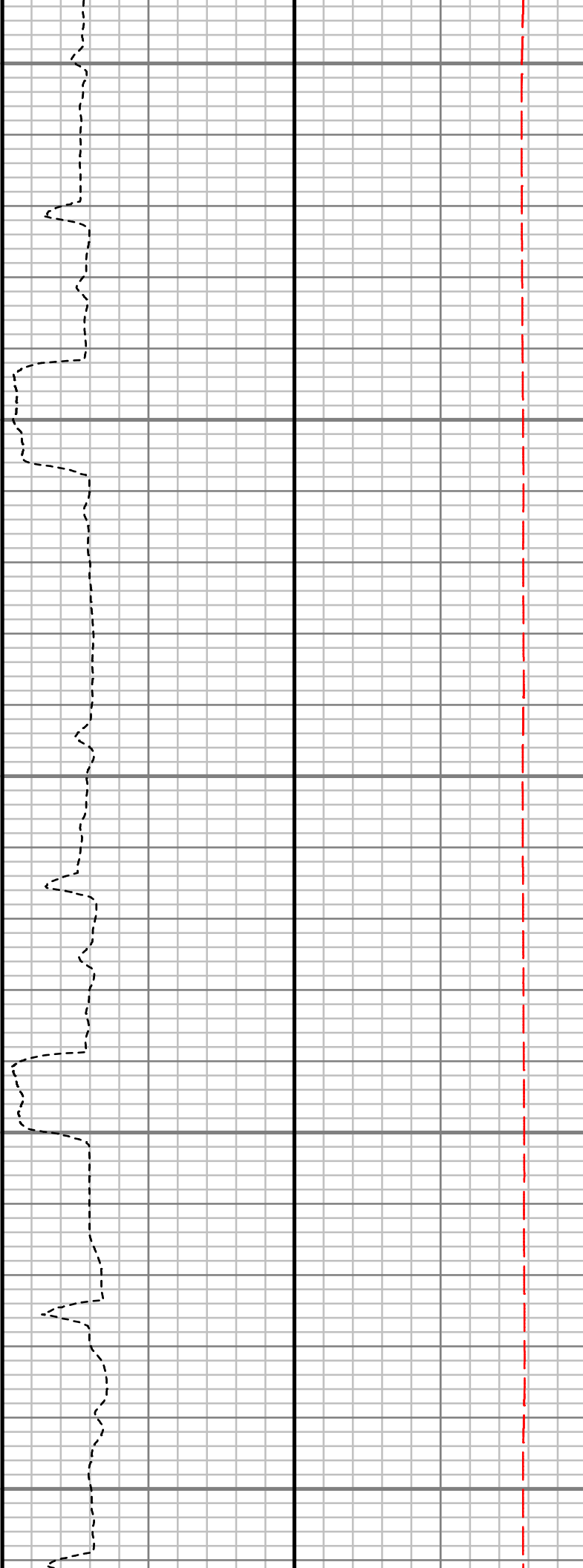
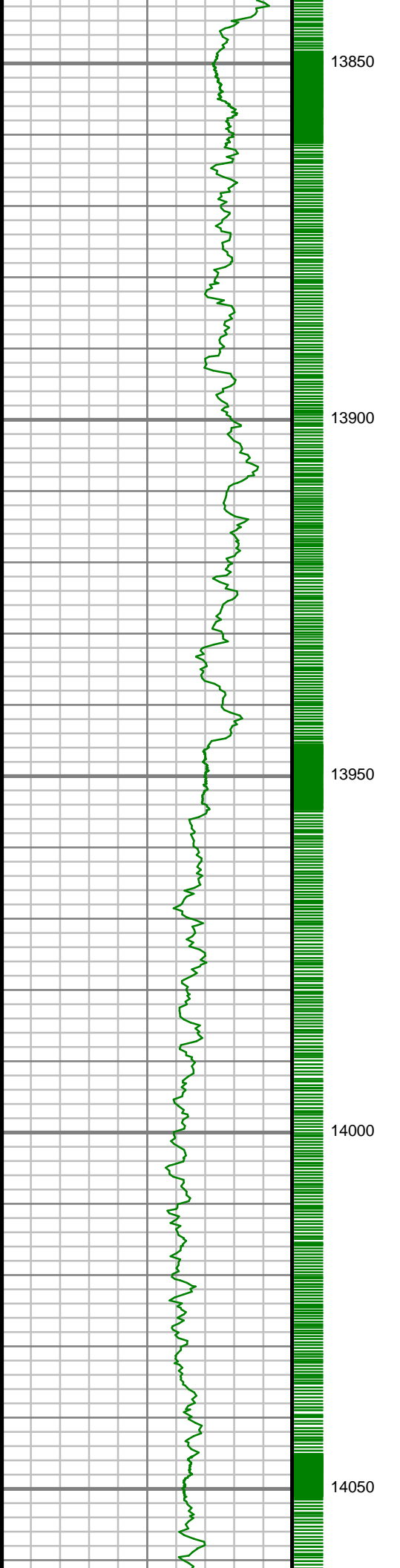
S: 139 MD: 13537.00 ft
Inc: 91.07 deg Az:
267.16 deg TVD:
7296.60 ft



S: 140 MD: 13632.00 ft
Inc: 88.49 deg Az:
267.86 deg TVD:
7296.96 ft

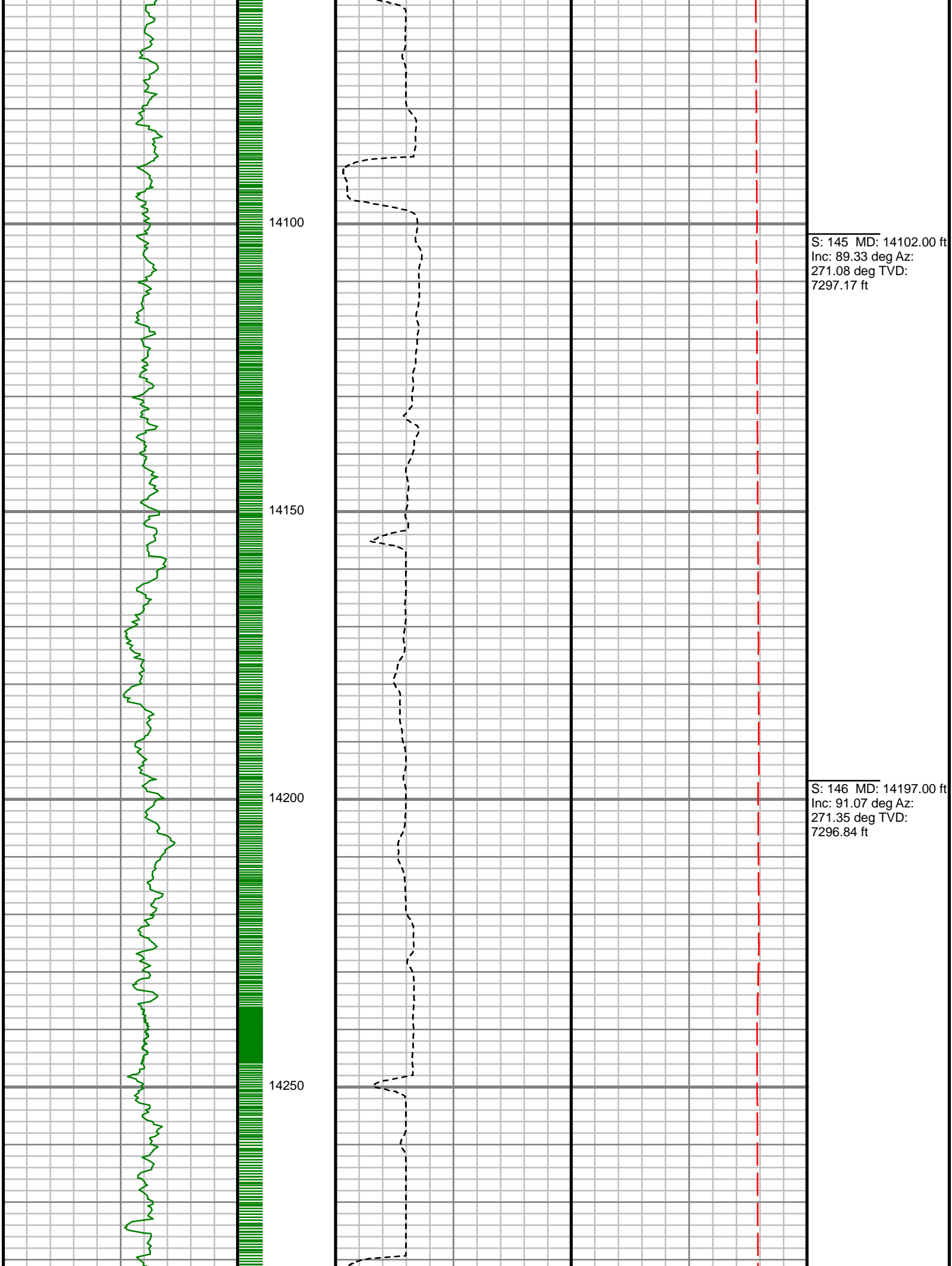
S: 141 MD: 13725.00 ft
Inc: 89.26 deg Az:
270.02 deg TVD:
7298.79 ft

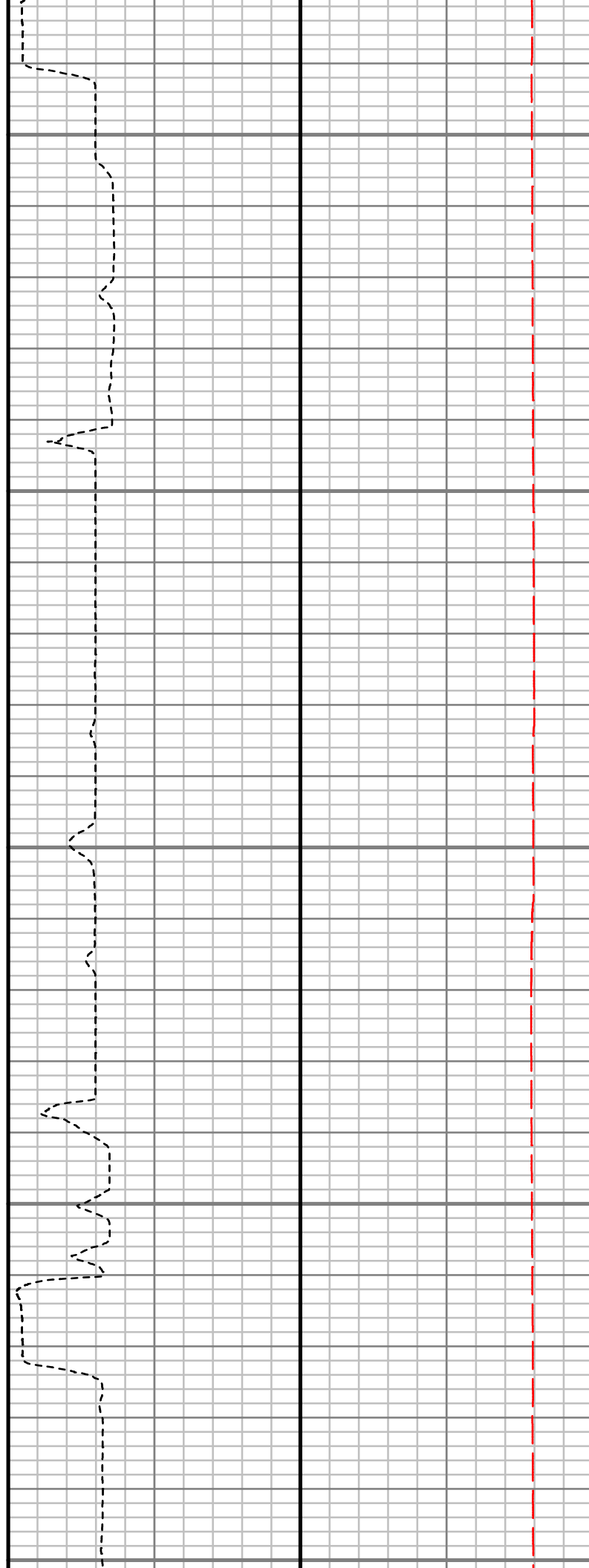
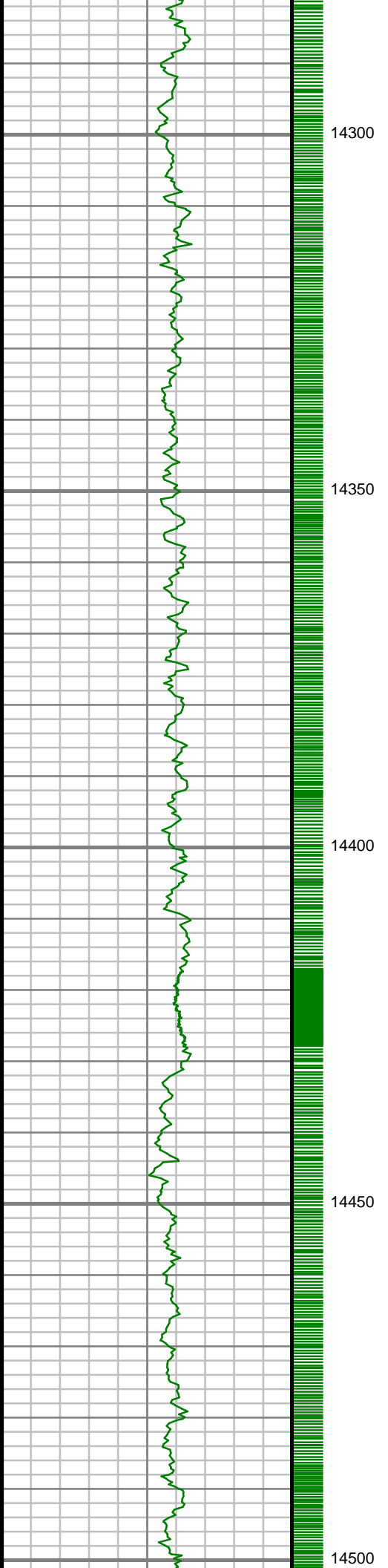
S: 142 MD: 13819.00 ft
Inc: 89.97 deg Az:
269.14 deg TVD:
7299.42 ft



S: 143 MD: 13913.00 ft
Inc: 90.77 deg Az:
270.10 deg TVD:
7298.81 ft

S: 144 MD: 14008.00 ft
Inc: 90.94 deg Az:
270.73 deg TVD:
7297.39 ft





S: 147 MD: 14289.00 ft
Inc: 90.44 deg Az:
270.57 deg TVD:
7295.63 ft

S: 148 MD: 14384.00 ft
Inc: 90.84 deg Az:
270.08 deg TVD:
7294.57 ft

S: 149 MD: 14477.00 ft
Inc: 91.11 deg Az:
270.53 deg TVD:
7292.98 ft

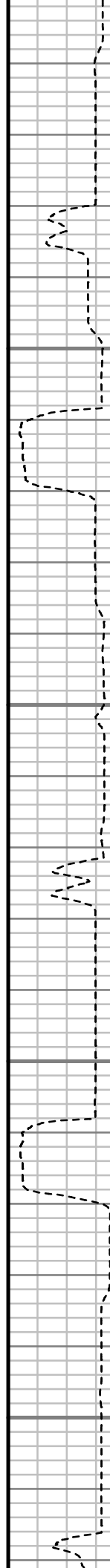


14550

14600

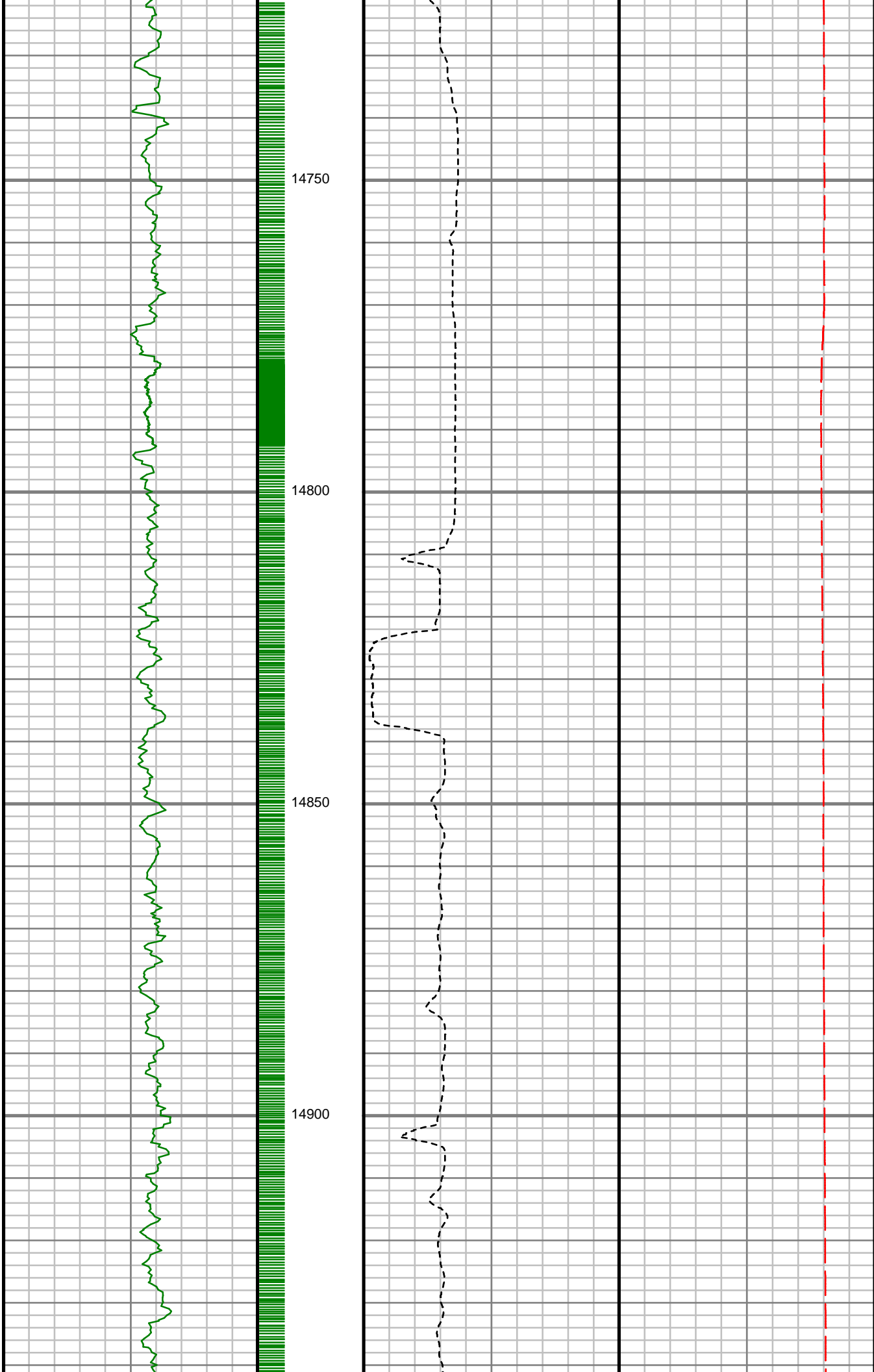
14650

14700



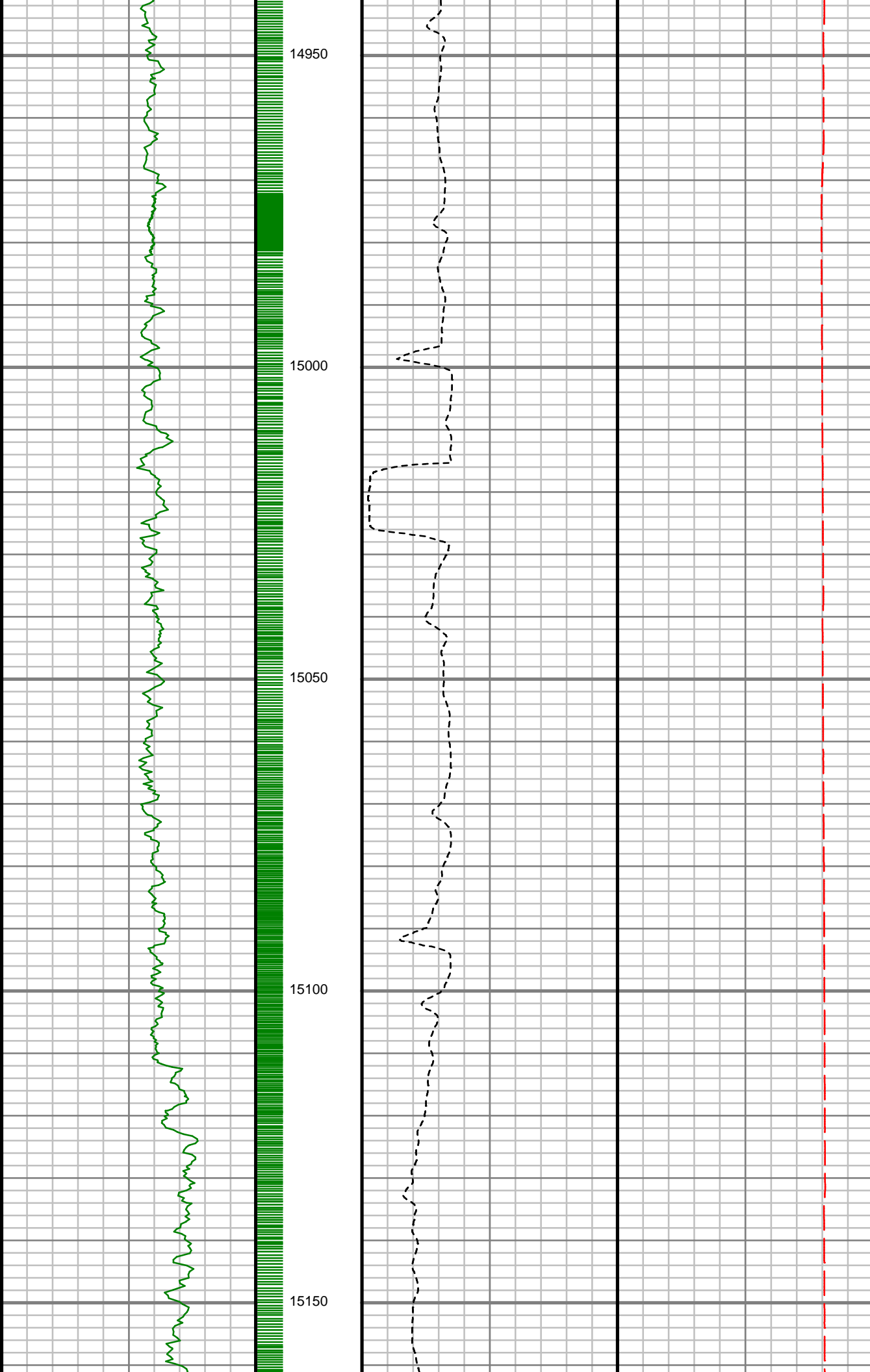
S: 150 MD: 14571.00 ft
Inc: 90.47 deg Az:
270.54 deg TVD:
7291.69 ft

S: 151 MD: 14666.00 ft
Inc: 90.17 deg Az:
270.75 deg TVD:
7291.16 ft



S: 152 MD: 14758.00 ft
Inc: 90.70 deg Az:
271.28 deg TVD:
7290.46 ft

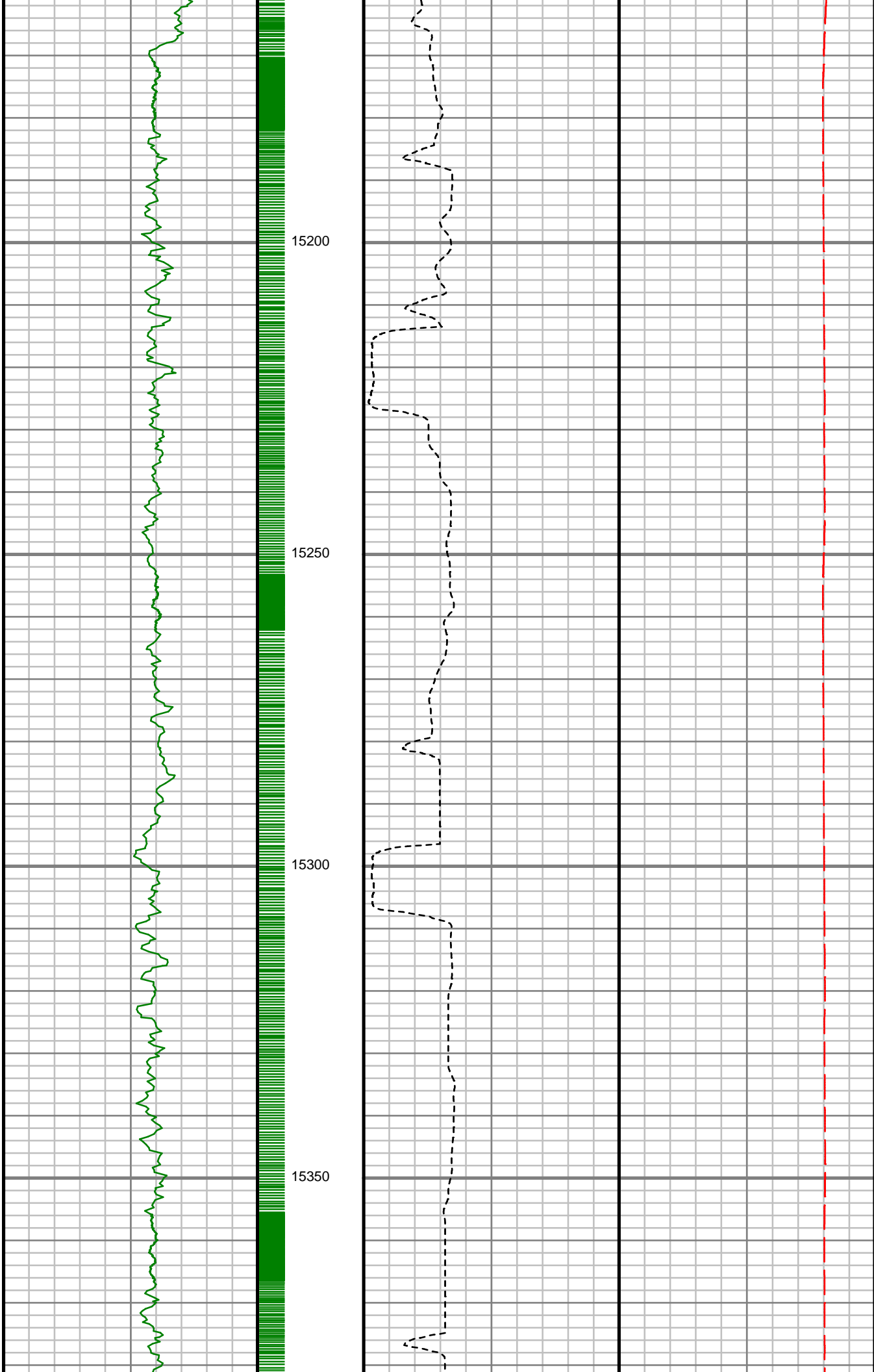
S: 153 MD: 14850.00 ft
Inc: 90.47 deg Az:
271.84 deg TVD:
7289.52 ft



S: 154 MD: 14945.00 ft
Inc: 90.94 deg Az:
271.67 deg TVD:
7288.35 ft

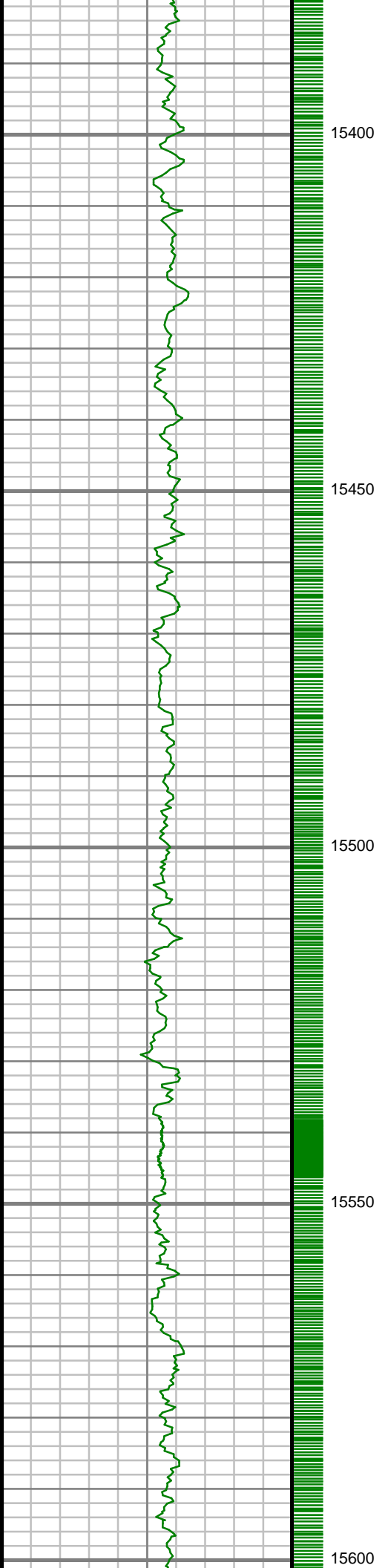
S: 155 MD: 15038.00 ft
Inc: 88.83 deg Az:
271.93 deg TVD:
7288.54 ft

S: 156 MD: 15133.00 ft
Inc: 90.64 deg Az:
271.73 deg TVD:
7288.98 ft



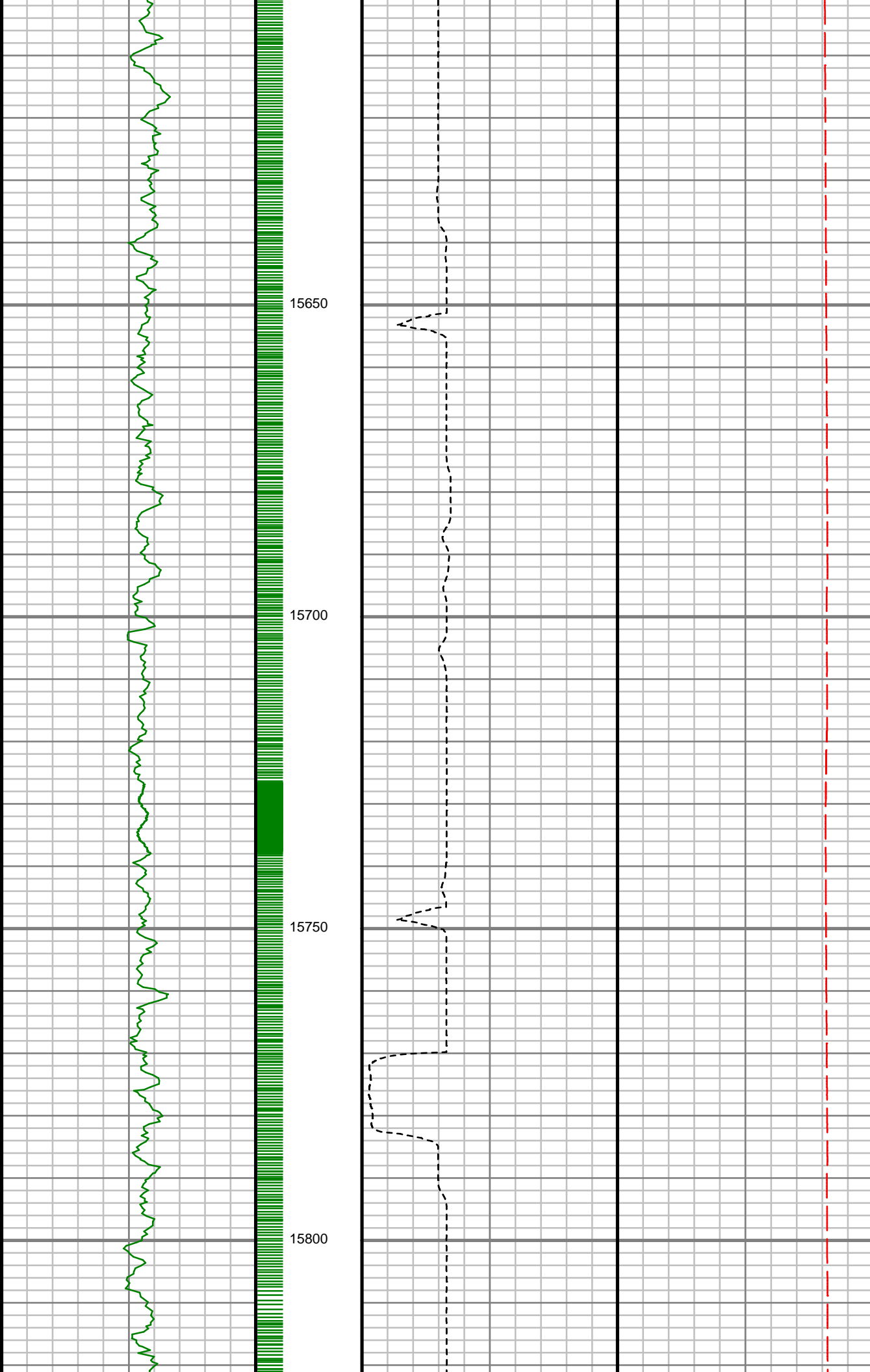
S: 157 MD: 15227.00 ft
Inc: 92.11 deg Az:
271.80 deg TVD:
7286.72 ft

S: 158 MD: 15322.00 ft
Inc: 91.78 deg Az:
270.47 deg TVD:
7283.50 ft



S: 159 MD: 15415.00 ft
Inc: 90.70 deg Az:
270.06 deg TVD:
7281.48 ft

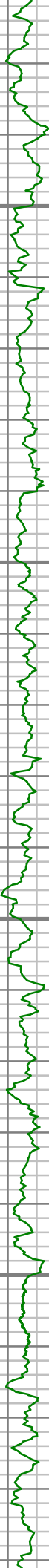
S: 160 MD: 15508.00 ft
Inc: 91.04 deg Az:
269.71 deg TVD:
7280.07 ft



S: 161 MD: 15602.00 ft
Inc: 90.17 deg Az:
269.46 deg TVD:
7279.08 ft

S: 162 MD: 15697.00 ft
Inc: 89.30 deg Az:
268.07 deg TVD:
7279.52 ft

S: 163 MD: 15790.00 ft
Inc: 89.60 deg Az:
268.78 deg TVD:
7280.41 ft

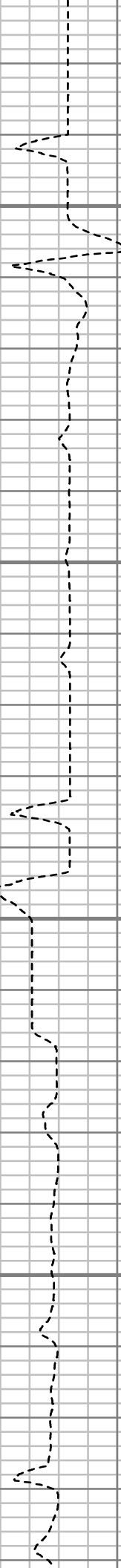


15850

15900

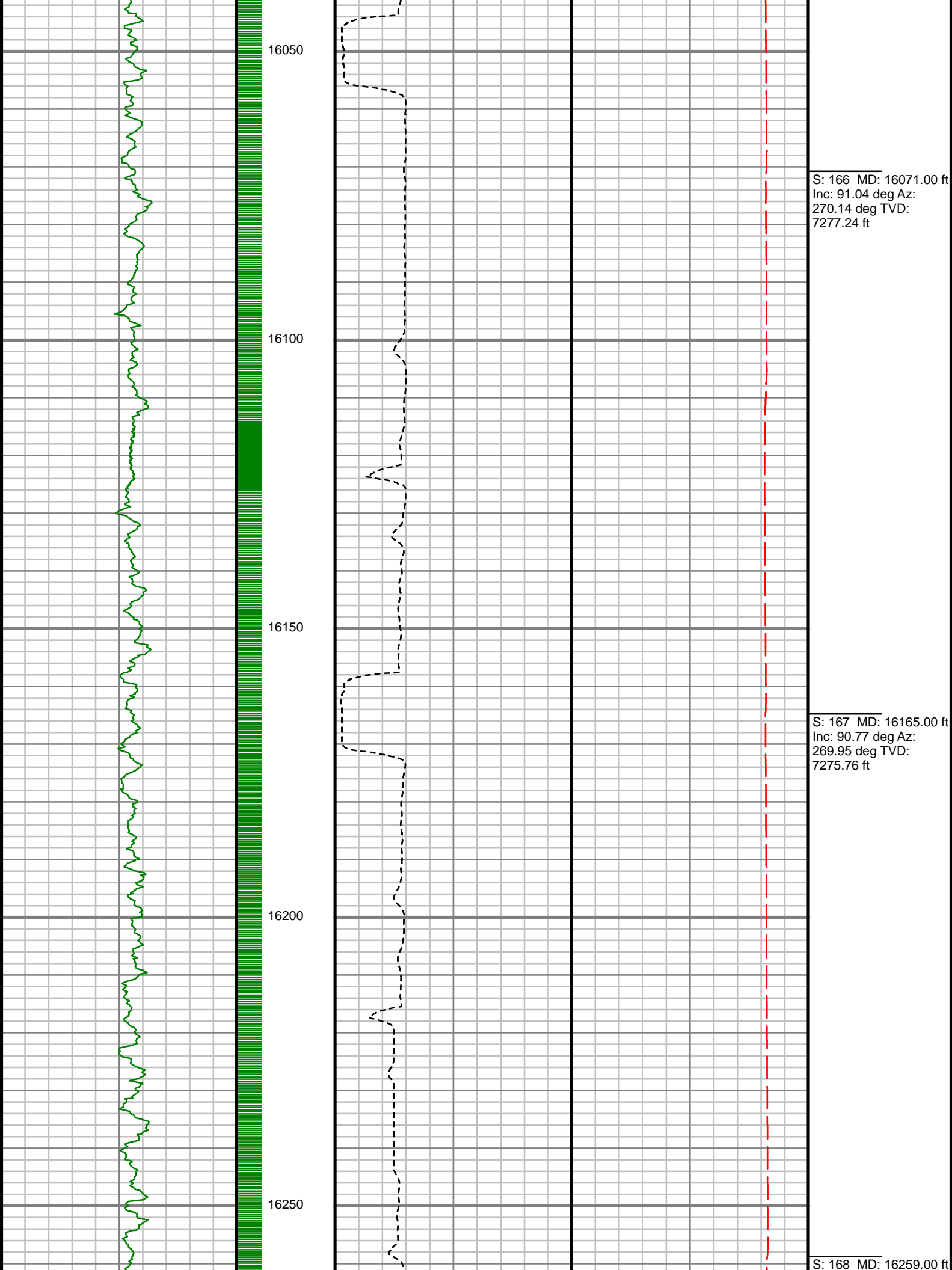
15950

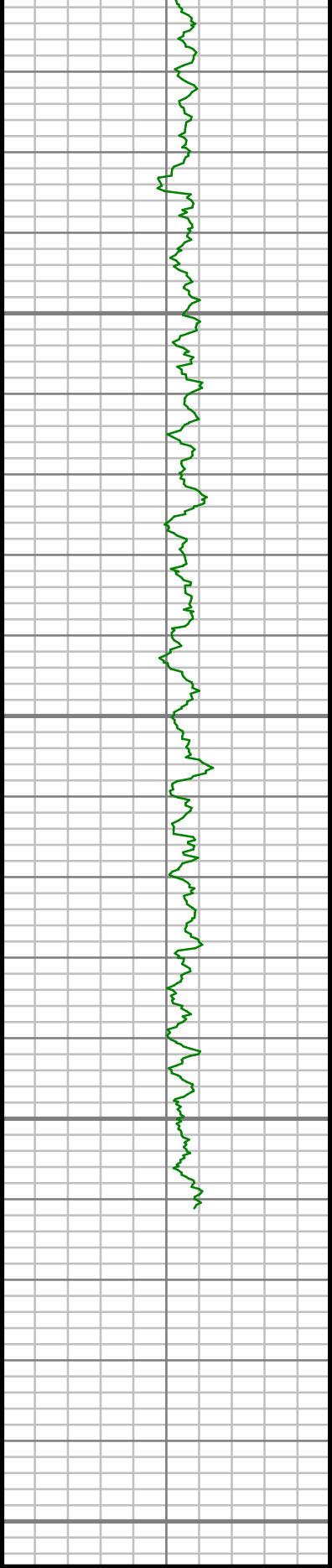
16000



S: 164 MD: 15883.00 ft
Inc: 90.40 deg Az:
269.39 deg TVD:
7280.41 ft

S: 165 MD: 15976.00 ft
Inc: 91.21 deg Az:
269.08 deg TVD:
7279.11 ft





Gamma Ray (GR)		
0	Unit = aapi	150

MEASURED DEPTH
1,240 (ft)



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

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

Comments

Inc: 90.81 deg Az:
270.01 deg TVD:
7274.46 ft

S: 169 MD: 16353.00 ft
Inc: 91.88 deg Az:
269.53 deg TVD:
7272.25 ft

S: 170 MD: 16401.00 ft
Inc: 92.48 deg Az:
269.19 deg TVD:
7270.43 ft

CUSTOMER
PROJECT
FIELD

ANADARKO E&P ONSHORE LLC.
WILSON RANCH
WATTENBERG

WELL INFORMATION

Lat/Long

40° 17' 23.68" N, 104° 57' 47.916" W

Northing

14,632,306.55 ft

Easting

1,650,648.15 ft

UWI

05123413220000

MAP INFORMATION

North Reference

True North

Grid Correction

System

Universal Transverse Mercator (US Survey Feet)

Datum

North American Datum 1983 (GRS 1980)

Map Zone

Zone 13N (108 W to 102 W)

VERTICAL SECTION REFERENCE

+N/-S

0 ft

+E/-W

0 ft

Proposal Direction

269.96°

Calculation Method

Minimum Curvature

TRUE

MAG

GEOMAGNETIC REFERENCE INFORMATION

Local Gravity: 999.058 mG [computed]

MD	MODEL	DATE	DECLINATION	MAG TO TRUE
0-16401 ft	SURCON	08 Sep 2016	8.37°	add 8.37°

WELL NOTES

OPERATORS

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
159.00	0.44	297.80	159.00	0.54	0.28	-0.54	0.28
250.00	0.91	229.87	249.99	1.40	-0.02	-1.40	0.93
342.00	1.29	210.53	341.98	2.49	-1.38	-2.49	0.57
432.00	2.32	175.99	431.93	2.88	-4.07	-2.87	1.62
522.00	3.58	177.48	521.81	2.63	-8.70	-2.62	1.40
612.00	3.46	168.65	611.64	1.97	-14.17	-1.96	0.62
702.00	4.86	179.59	701.40	1.42	-20.64	-1.40	1.78
792.00	5.62	178.86	791.03	1.31	-28.86	-1.29	0.85
882.00	7.10	177.59	880.47	0.99	-38.82	-0.97	1.65
972.00	7.69	176.25	969.72	0.37	-50.39	-0.34	0.68
1062.00	8.64	174.95	1058.81	-0.61	-63.13	0.65	1.08
1152.00	9.61	175.89	1147.67	-1.73	-77.36	1.78	1.09
1242.00	9.95	178.81	1236.36	-2.42	-92.63	2.48	0.67
1332.00	9.90	180.58	1325.02	-2.49	-108.14	2.57	0.34
1422.00	11.00	179.08	1413.52	-2.54	-124.46	2.63	1.26
1512.00	11.58	175.06	1501.78	-3.44	-142.04	3.54	1.09
1602.00	10.62	179.88	1590.10	-4.23	-159.34	4.34	1.48
1692.00	11.12	172.01	1678.49	-5.44	-176.23	5.56	1.74
1782.00	9.92	168.95	1766.97	-8.12	-192.43	8.25	1.47

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	°/100ft
1819.00	9.77	170.51	1803.43	-9.24	-198.65	9.38	0.83
1943.00	10.01	172.01	1925.59	-12.46	-219.70	12.61	0.28
2038.00	9.35	169.76	2019.23	-14.97	-235.47	15.13	0.80
2133.00	8.59	171.98	2113.07	-17.32	-250.10	17.50	0.88
2227.00	8.45	180.95	2206.04	-18.18	-263.96	18.36	1.42
2320.00	8.09	180.99	2298.07	-17.94	-277.33	18.14	0.38
2415.00	8.26	179.46	2392.10	-17.88	-290.84	18.08	0.29
2510.00	8.17	180.13	2486.13	-17.92	-304.42	18.13	0.13
2605.00	8.29	180.83	2580.15	-17.80	-318.02	18.02	0.16
2698.00	7.77	179.03	2672.24	-17.80	-331.01	18.03	0.63
2792.00	7.38	179.06	2765.42	-17.99	-343.40	18.23	0.41
2885.00	6.93	179.34	2857.69	-18.15	-354.98	18.40	0.48
2979.00	6.47	178.68	2951.05	-18.33	-365.95	18.59	0.49
3073.00	5.97	179.30	3044.50	-18.50	-376.14	18.77	0.54
3167.00	5.63	183.03	3138.02	-18.31	-385.64	18.58	0.54
3263.00	4.97	183.88	3233.60	-17.78	-394.49	18.05	0.69
3357.00	4.07	182.89	3327.31	-17.33	-401.89	17.61	0.96
3452.00	3.37	181.32	3422.11	-17.09	-408.05	17.37	0.74
3547.00	2.59	179.73	3516.98	-17.03	-412.99	17.32	0.83
3641.00	1.90	172.95	3610.91	-17.23	-416.66	17.52	0.78

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	DLS
ft	deg	deg	ft	ft	ft	ft	°/100ft
3735.00	1.89	175.78	3704.86	-17.54	-419.76	17.83	0.10
3828.00	1.81	174.92	3797.81	-17.78	-422.75	18.07	0.09
3922.00	1.55	96.26	3891.78	-19.17	-424.37	19.46	2.27
4017.00	1.68	96.73	3986.74	-21.82	-424.67	22.12	0.14
4112.00	0.95	16.05	4081.72	-23.43	-424.08	23.72	1.89
4206.00	0.95	2.51	4175.71	-23.68	-422.55	23.97	0.24
4291.00	0.83	351.47	4260.70	-23.62	-421.24	23.91	0.24
4395.00	0.84	346.44	4364.69	-23.33	-419.76	23.62	0.07
4489.00	0.83	345.36	4458.68	-22.99	-418.43	23.29	0.02
4583.00	1.20	354.06	4552.66	-22.72	-416.79	23.01	0.42
4678.00	1.10	356.72	4647.64	-22.57	-414.89	22.86	0.12
4772.00	1.06	342.59	4741.63	-22.26	-413.16	22.54	0.29
4866.00	1.26	341.09	4835.61	-21.66	-411.35	21.95	0.22
5081.00	0.88	317.36	5050.57	-19.78	-407.89	20.07	0.27
5175.00	0.99	315.86	5144.56	-18.73	-406.78	19.01	0.13
5269.00	1.07	310.05	5238.54	-17.49	-405.63	17.77	0.14
5363.00	0.54	321.74	5332.53	-16.55	-404.72	16.83	0.58
5552.00	0.31	159.52	5521.53	-16.17	-404.50	16.45	0.45
5647.00	0.14	258.72	5616.53	-16.15	-404.76	16.43	0.38
5741.00	0.24	289.57	5710.53	-15.85	-404.72	16.13	0.14

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
5836.00	0.10	281.34	5805.53	-15.58	-404.63	15.86	0.15
5928.00	0.29	252.83	5897.53	-15.28	-404.69	15.56	0.22
6023.00	0.41	206.34	5992.53	-14.90	-405.06	15.18	0.31
6117.00	0.59	186.73	6086.52	-14.70	-405.84	14.98	0.26
6211.00	0.62	193.61	6180.52	-14.52	-406.81	14.80	0.08
6305.00	0.70	186.99	6274.51	-14.33	-407.87	14.61	0.12
6399.00	0.15	215.52	6368.51	-14.19	-408.54	14.47	0.61
6493.00	0.20	321.06	6462.51	-14.01	-408.52	14.30	0.29
6588.00	0.28	331.41	6557.51	-13.80	-408.19	14.09	0.10
6683.00	3.71	263.72	6652.44	-10.64	-408.32	10.92	3.80
6775.00	14.35	261.05	6743.17	3.63	-410.43	-3.34	11.57
6870.00	20.73	261.97	6833.71	31.94	-414.61	-31.65	6.72
6963.00	27.39	266.62	6918.59	69.64	-418.18	-69.35	7.44
7059.00	33.89	262.98	7001.15	118.31	-422.76	-118.01	7.04
7153.00	39.45	263.65	7076.51	174.05	-429.27	-173.75	5.93
7249.00	50.90	269.87	7144.11	241.87	-432.74	-241.57	12.77
7344.00	57.28	270.14	7199.80	318.77	-432.73	-318.47	6.72
7437.00	68.56	269.57	7242.07	401.44	-432.96	-401.14	12.14
7532.00	75.22	268.86	7271.58	491.68	-434.20	-491.38	7.05
7627.00	82.03	268.16	7290.31	584.73	-436.63	-584.42	7.20

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
7720.00	88.89	270.45	7297.66	677.37	-437.74	-677.06	7.77
7815.00	89.06	270.25	7299.36	772.35	-437.16	-772.04	0.28
7908.00	91.14	270.62	7299.20	865.34	-436.46	-865.04	2.27
8002.00	88.66	271.79	7299.37	959.31	-434.48	-959.01	2.92
8097.00	87.38	271.94	7302.65	1054.20	-431.39	-1053.90	1.36
8191.00	87.48	271.69	7306.86	1148.06	-428.42	-1147.76	0.29
8286.00	87.31	270.03	7311.18	1242.94	-426.99	-1242.64	1.75
8379.00	91.21	268.98	7312.38	1335.91	-427.80	-1335.61	4.34
8473.00	90.10	269.72	7311.31	1429.90	-428.86	-1429.60	1.42
8567.00	88.99	269.53	7312.05	1523.89	-429.48	-1523.59	1.20
8662.00	90.23	269.24	7312.70	1618.88	-430.50	-1618.58	1.34
8757.00	90.37	269.28	7312.20	1713.87	-431.72	-1713.57	0.15
8851.00	90.30	271.04	7311.65	1807.87	-431.46	-1807.57	1.87
8946.00	90.17	271.09	7311.26	1902.85	-429.70	-1902.55	0.15
9041.00	89.87	270.67	7311.23	1997.84	-428.24	-1997.54	0.54
9136.00	89.80	270.36	7311.50	2092.83	-427.38	-2092.54	0.33
9323.00	90.27	270.65	7311.39	2279.82	-425.74	-2279.53	0.30
9417.00	89.43	270.64	7311.64	2373.82	-424.68	-2373.52	0.89
9510.00	89.20	270.78	7312.75	2466.80	-423.52	-2466.51	0.29
9604.00	89.20	271.37	7314.06	2560.77	-421.76	-2560.48	0.63

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
9698.00	89.36	271.00	7315.24	2654.74	-419.82	-2654.45	0.43
9884.00	91.04	271.96	7314.59	2840.67	-415.01	-2840.38	1.04
9977.00	90.60	270.11	7313.26	2933.64	-413.33	-2933.35	2.04
10071.00	90.44	269.97	7312.41	3027.64	-413.27	-3027.35	0.23
10164.00	90.94	269.80	7311.29	3120.63	-413.46	-3120.34	0.57
10258.00	91.31	269.95	7309.44	3214.61	-413.66	-3214.32	0.42
10352.00	90.03	270.87	7308.34	3308.60	-412.99	-3308.31	1.68
10447.00	89.23	270.31	7308.96	3403.59	-412.01	-3403.30	1.03
10540.00	88.49	269.97	7310.81	3496.57	-411.78	-3496.28	0.88
10634.00	89.03	269.43	7312.84	3590.54	-412.27	-3590.26	0.81
10728.00	90.20	269.20	7313.47	3684.54	-413.40	-3684.25	1.27
10820.00	90.47	268.52	7312.93	3776.52	-415.23	-3776.23	0.80
10914.00	90.47	268.31	7312.16	3870.48	-417.83	-3870.19	0.22
11008.00	89.73	269.37	7312.00	3964.46	-419.73	-3964.17	1.38
11101.00	90.27	269.99	7312.00	4057.46	-420.25	-4057.16	0.88
11194.00	90.30	269.56	7311.54	4150.45	-420.62	-4150.16	0.46
11286.00	89.87	269.10	7311.40	4242.45	-421.69	-4242.16	0.68
11380.00	92.42	269.34	7309.52	4336.41	-422.97	-4336.12	2.72
11474.00	91.75	270.58	7306.10	4430.35	-423.04	-4430.06	1.50
11569.00	91.31	270.38	7303.57	4525.31	-422.24	-4525.02	0.51

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
11662.00	90.57	269.03	7302.04	4618.30	-422.72	-4618.00	1.66
11756.00	88.32	267.18	7302.95	4712.23	-425.83	-4711.94	3.10
11851.00	90.70	268.01	7303.76	4807.14	-429.81	-4806.84	2.65
11944.00	91.75	269.21	7301.77	4900.09	-432.07	-4899.79	1.71
12037.00	92.18	270.11	7298.59	4993.03	-432.62	-4992.73	1.07
12130.00	89.60	270.30	7297.14	5086.01	-432.29	-5085.71	2.78
12224.00	89.16	270.94	7298.16	5180.00	-431.27	-5179.70	0.83
12319.00	89.70	271.21	7299.10	5274.98	-429.49	-5274.68	0.64
12412.00	90.67	271.41	7298.80	5367.95	-427.36	-5367.65	1.06
12506.00	90.30	271.30	7298.01	5461.92	-425.14	-5461.62	0.41
12598.00	90.91	271.01	7297.04	5553.89	-423.29	-5553.60	0.73
12693.00	90.03	271.40	7296.26	5648.87	-421.29	-5648.57	1.01
12786.00	90.57	271.41	7295.77	5741.83	-419.01	-5741.54	0.58
12973.00	90.07	271.76	7294.73	5928.76	-413.83	-5928.47	0.33
13067.00	89.33	269.33	7295.22	6022.74	-412.94	-6022.45	2.70
13161.00	90.47	268.64	7295.38	6116.73	-414.61	-6116.44	1.42
13255.00	90.03	267.36	7294.97	6210.67	-417.89	-6210.38	1.44
13350.00	89.80	268.45	7295.11	6305.60	-421.36	-6305.31	1.17
13444.00	88.66	267.02	7296.38	6399.52	-425.07	-6399.23	1.95
13537.00	91.07	267.16	7296.60	6492.40	-429.79	-6492.10	2.60

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
13632.00	88.49	267.86	7296.96	6587.30	-433.92	-6587.00	2.81
13725.00	89.26	270.02	7298.79	6680.26	-435.64	-6679.96	2.47
13819.00	89.97	269.14	7299.42	6774.26	-436.33	-6773.95	1.20
13913.00	90.77	270.10	7298.81	6868.25	-436.95	-6867.95	1.33
14008.00	90.94	270.73	7297.39	6963.24	-436.27	-6962.93	0.69
14102.00	89.33	271.08	7297.17	7057.22	-434.78	-7056.92	1.75
14197.00	91.07	271.35	7296.84	7152.19	-432.77	-7151.89	1.85
14289.00	90.44	270.57	7295.63	7244.17	-431.23	-7243.87	1.09
14384.00	90.84	270.08	7294.57	7339.16	-430.69	-7338.86	0.67
14477.00	91.11	270.53	7292.98	7432.15	-430.19	-7431.85	0.56
14571.00	90.47	270.54	7291.69	7526.13	-429.31	-7525.83	0.68
14666.00	90.17	270.75	7291.16	7621.12	-428.24	-7620.83	0.39
14758.00	90.70	271.28	7290.46	7713.11	-426.62	-7712.81	0.81
14850.00	90.47	271.84	7289.52	7805.06	-424.11	-7804.77	0.66
14945.00	90.94	271.67	7288.35	7900.01	-421.20	-7899.72	0.53
15038.00	88.83	271.93	7288.54	7992.96	-418.28	-7992.67	2.29
15133.00	90.64	271.73	7288.98	8087.90	-415.25	-8087.61	1.92
15227.00	92.11	271.80	7286.72	8181.82	-412.35	-8181.54	1.57
15322.00	91.78	270.47	7283.50	8276.75	-410.47	-8276.46	1.44
15415.00	90.70	270.06	7281.48	8369.72	-410.04	-8369.44	1.24

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	DLS °/100ft
15508.00	91.04	269.71	7280.07	8462.71	-410.23	-8462.43	0.52
15602.00	90.17	269.46	7279.08	8556.70	-410.91	-8556.42	0.96
15697.00	89.30	268.07	7279.52	8651.68	-412.96	-8651.39	1.73
15790.00	89.60	268.78	7280.41	8744.64	-415.51	-8744.35	0.83
15883.00	90.40	269.39	7280.41	8837.63	-417.00	-8837.34	1.08
15976.00	91.21	269.08	7279.11	8930.61	-418.24	-8930.32	0.93
16071.00	91.04	270.14	7277.24	9025.59	-418.89	-9025.30	1.13
16165.00	90.77	269.95	7275.76	9119.58	-418.81	-9119.29	0.35
16259.00	90.81	270.01	7274.46	9213.57	-418.84	-9213.28	0.08
16353.00	91.88	269.53	7272.25	9307.54	-419.22	-9307.25	1.25
16401.00	92.48	269.19	7270.43	9355.50	-419.76	-9355.21	1.44

5" = 100' MD