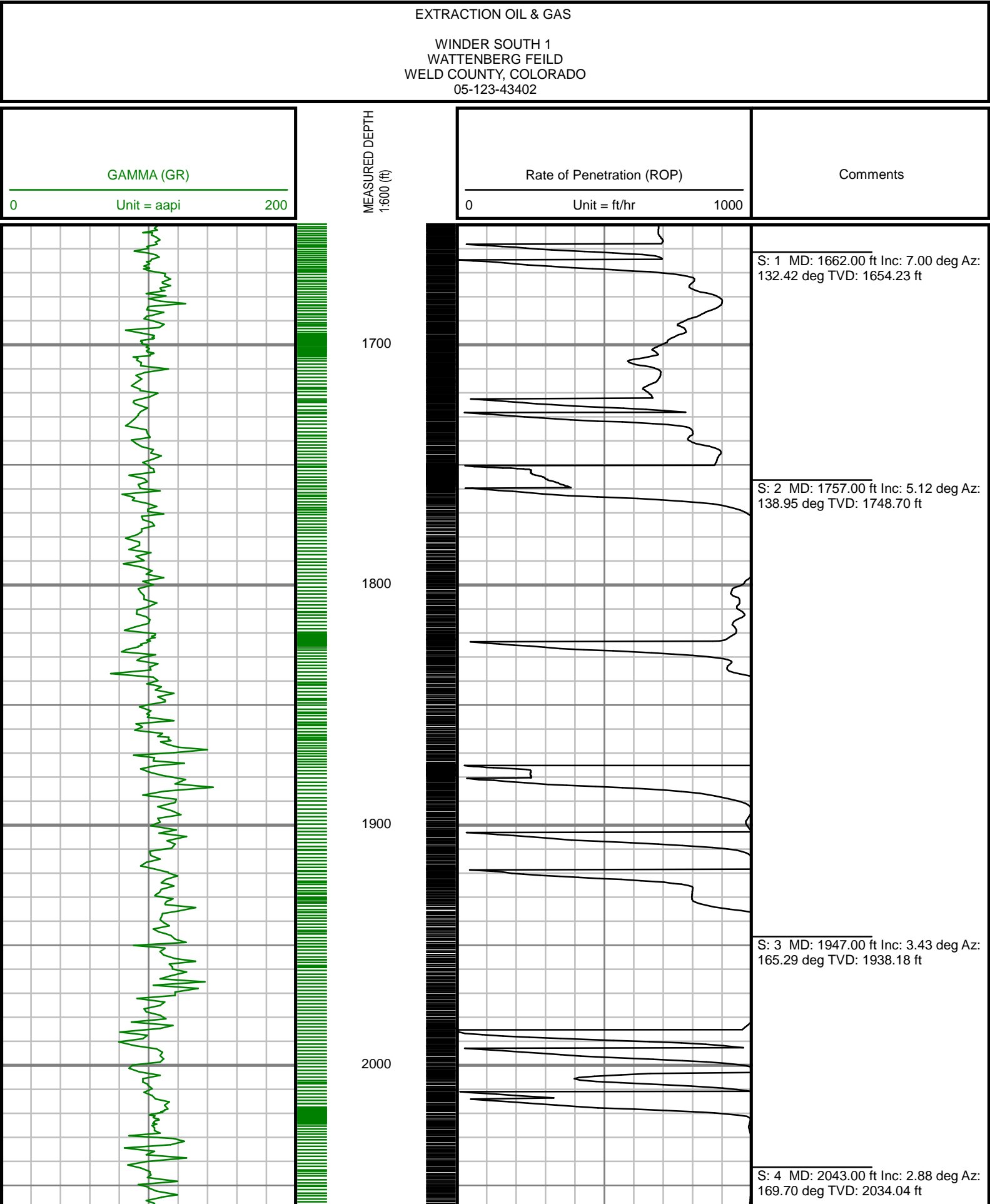


All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs,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





2100

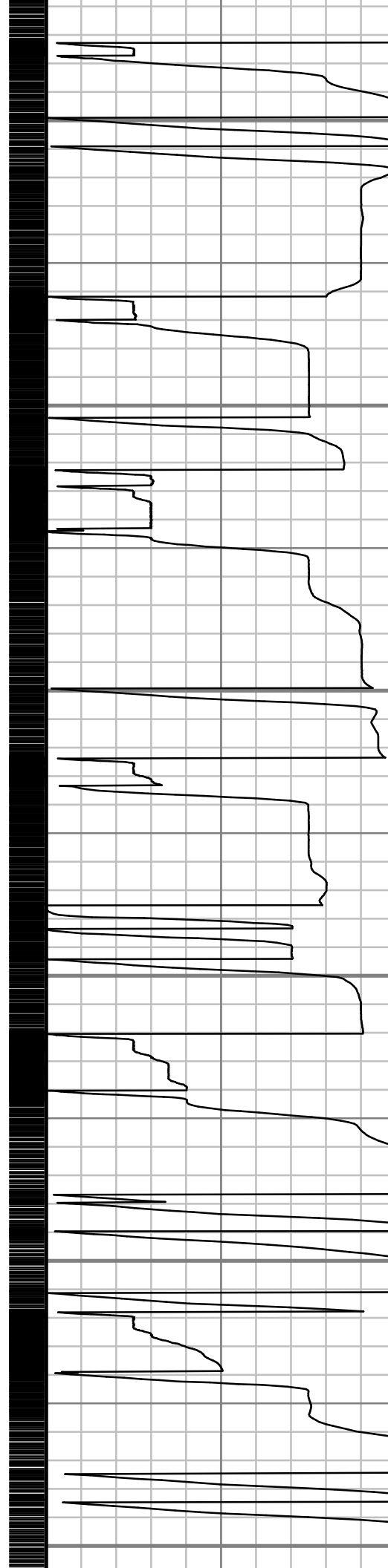
2200

2300

2400

2500

2600



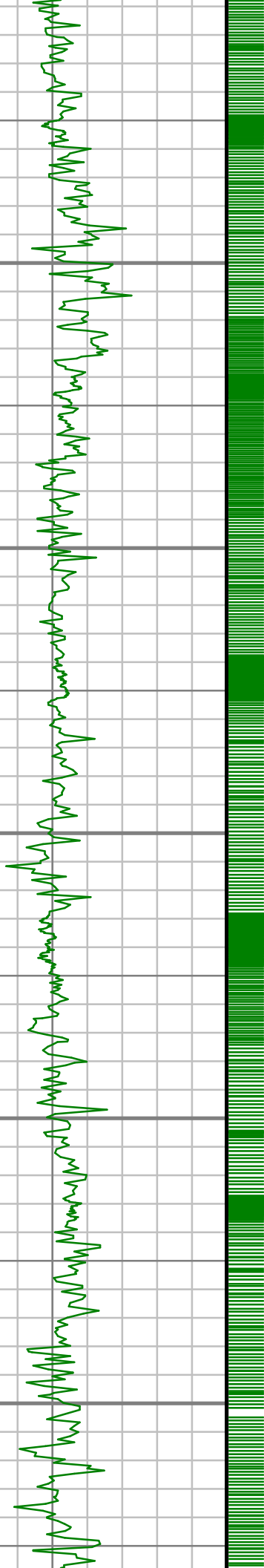
S: 5 MD: 2138.00 ft Inc: 1.78 deg Az: 183.25 deg TVD: 2128.96 ft

S: 6 MD: 2234.00 ft Inc: 3.09 deg Az: 163.37 deg TVD: 2224.87 ft

S: 7 MD: 2329.00 ft Inc: 2.73 deg Az: 174.55 deg TVD: 2319.75 ft

S: 8 MD: 2424.00 ft Inc: 2.89 deg Az: 180.75 deg TVD: 2414.63 ft

S: 9 MD: 2519.00 ft Inc: 5.28 deg Az: 166.33 deg TVD: 2509.39 ft



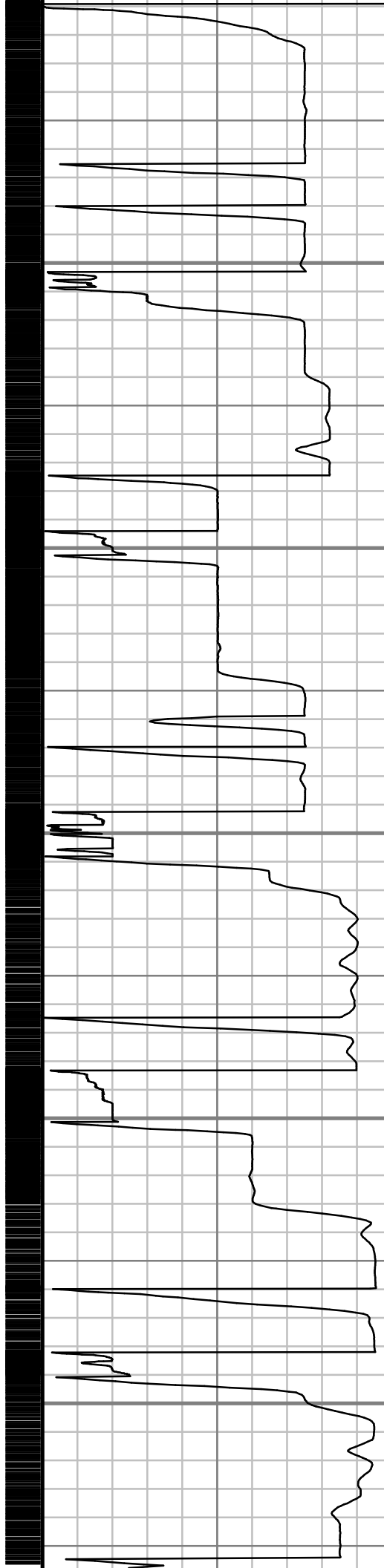
2700

2800

2900

3000

3100



S: 10 MD: 2614.00 ft Inc: 6.98 deg
Az: 166.94 deg TVD: 2603.84 ft

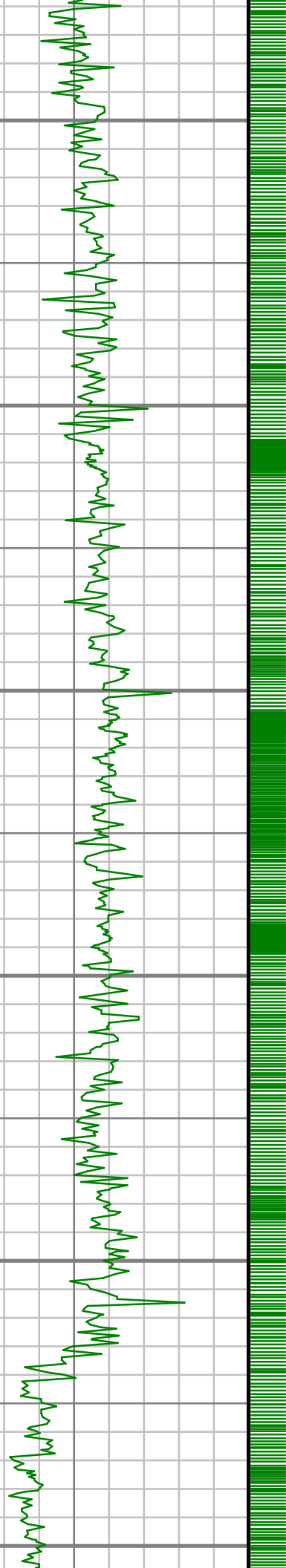
S: 11 MD: 2710.00 ft Inc: 6.83 deg
Az: 167.25 deg TVD: 2699.14 ft

S: 12 MD: 2805.00 ft Inc: 7.58 deg
Az: 168.83 deg TVD: 2793.39 ft

S: 13 MD: 2900.00 ft Inc: 8.33 deg
Az: 169.24 deg TVD: 2887.48 ft

S: 14 MD: 2995.00 ft Inc: 7.74 deg
Az: 153.73 deg TVD: 2981.56 ft

S: 15 MD: 3091.00 ft Inc: 6.42 deg
Az: 135.79 deg TVD: 3076.83 ft



3200

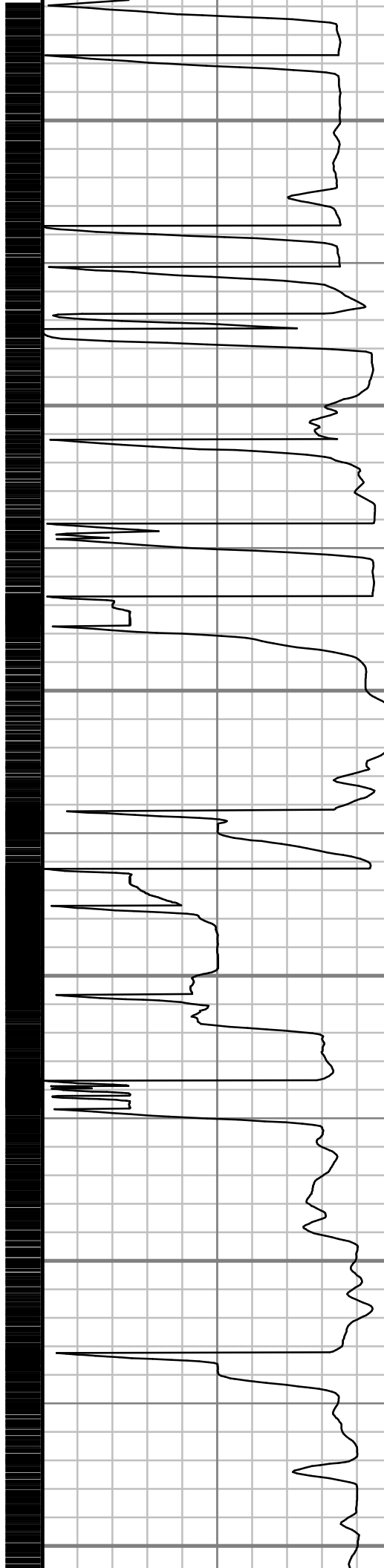
3300

3400

3500

3600

3700



S: 16 MD: 3186.00 ft Inc: 5.64 deg
Az: 131.45 deg TVD: 3171.31 ft

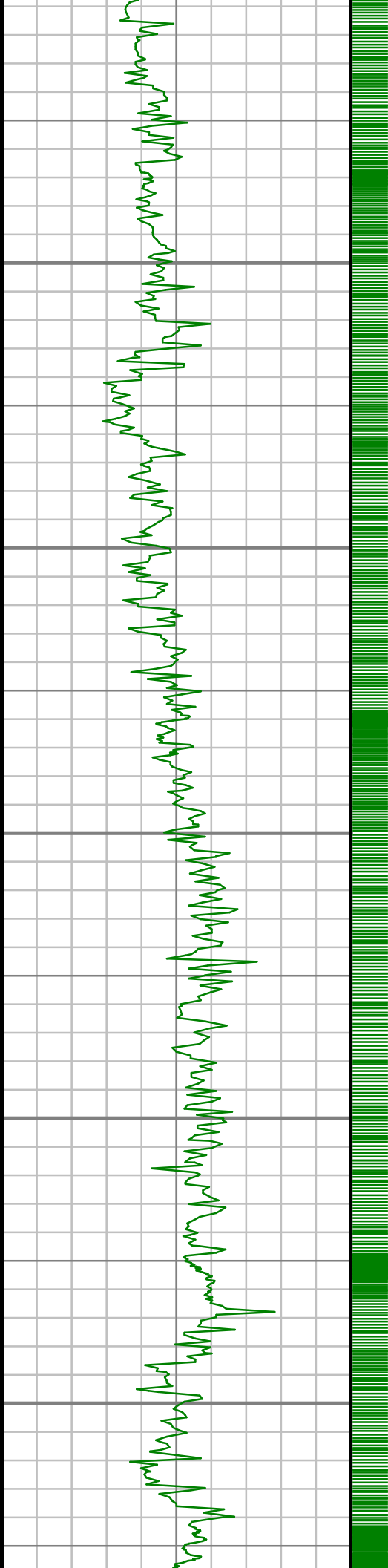
S: 17 MD: 3282.00 ft Inc: 4.89 deg
Az: 130.65 deg TVD: 3266.90 ft

S: 18 MD: 3377.00 ft Inc: 4.79 deg
Az: 143.41 deg TVD: 3361.56 ft

S: 19 MD: 3472.00 ft Inc: 5.35 deg
Az: 152.21 deg TVD: 3456.19 ft

S: 20 MD: 3567.00 ft Inc: 6.33 deg
Az: 143.91 deg TVD: 3550.70 ft

S: 21 MD: 3662.00 ft Inc: 5.86 deg
Az: 144.08 deg TVD: 3645.16 ft



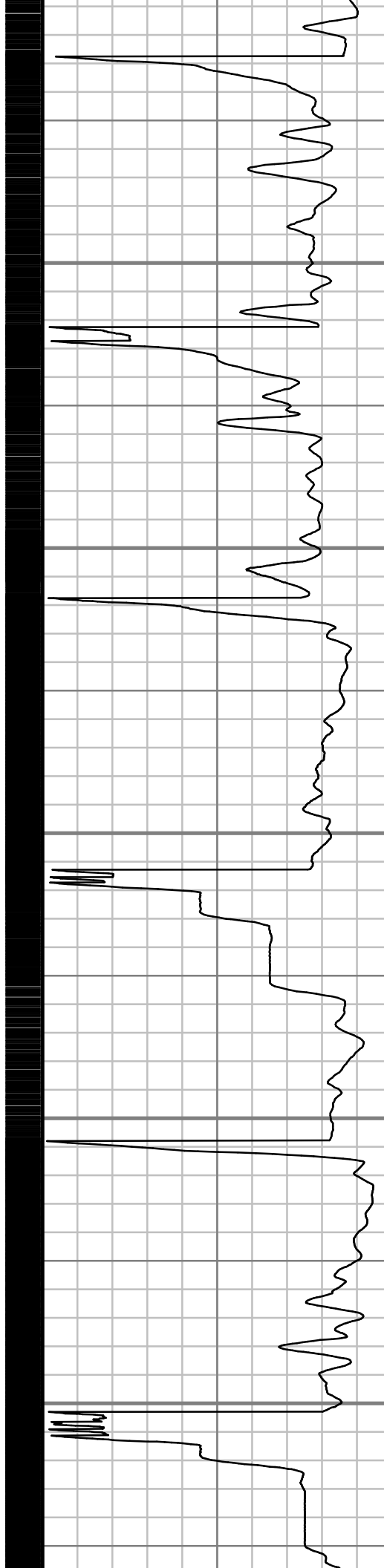
3800

3900

4000

4100

4200



S: 22 MD: 3758.00 ft Inc: 5.92 deg
Az: 143.84 deg TVD: 3740.66 ft

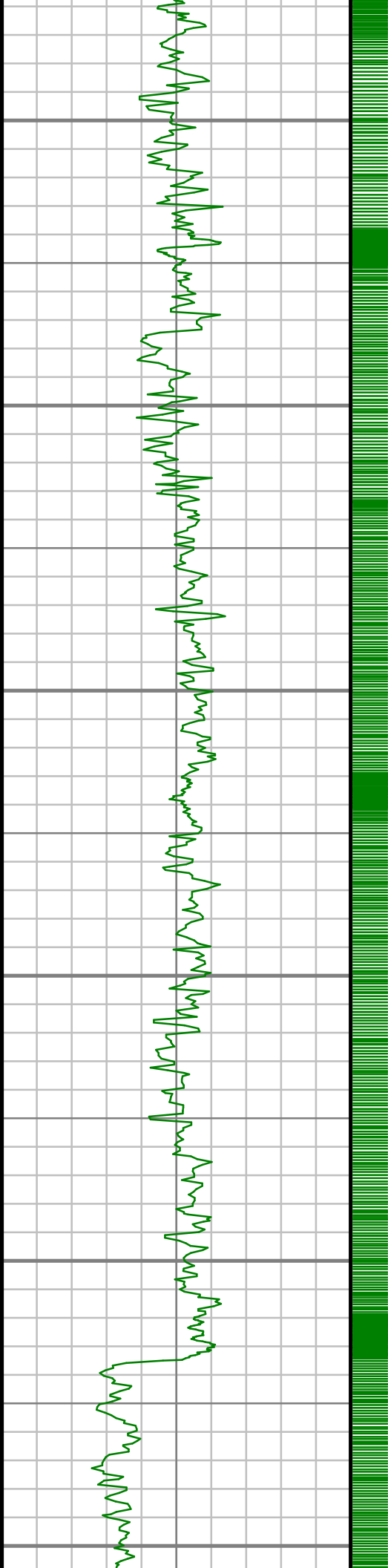
S: 23 MD: 3852.00 ft Inc: 5.30 deg
Az: 141.65 deg TVD: 3834.21 ft

S: 24 MD: 3948.00 ft Inc: 5.13 deg
Az: 143.91 deg TVD: 3929.81 ft

S: 25 MD: 4043.00 ft Inc: 4.17 deg
Az: 148.01 deg TVD: 4024.50 ft

S: 26 MD: 4138.00 ft Inc: 3.84 deg
Az: 153.53 deg TVD: 4119.26 ft

S: 27 MD: 4233.00 ft Inc: 3.46 deg
Az: 150.82 deg TVD: 4214.07 ft



4300

S: 28 MD: 4329.00 ft Inc: 3.82 deg
Az: 148.72 deg TVD: 4309.88 ft

4400

S: 29 MD: 4424.00 ft Inc: 4.86 deg
Az: 150.17 deg TVD: 4404.60 ft

4500

S: 30 MD: 4519.00 ft Inc: 4.21 deg
Az: 152.25 deg TVD: 4499.31 ft

4600

S: 31 MD: 4615.00 ft Inc: 4.78 deg
Az: 147.06 deg TVD: 4595.01 ft

4700

S: 32 MD: 4710.00 ft Inc: 3.40 deg
Az: 150.34 deg TVD: 4689.77 ft

4800

S: 33 MD: 4805.00 ft Inc: 5.05 deg



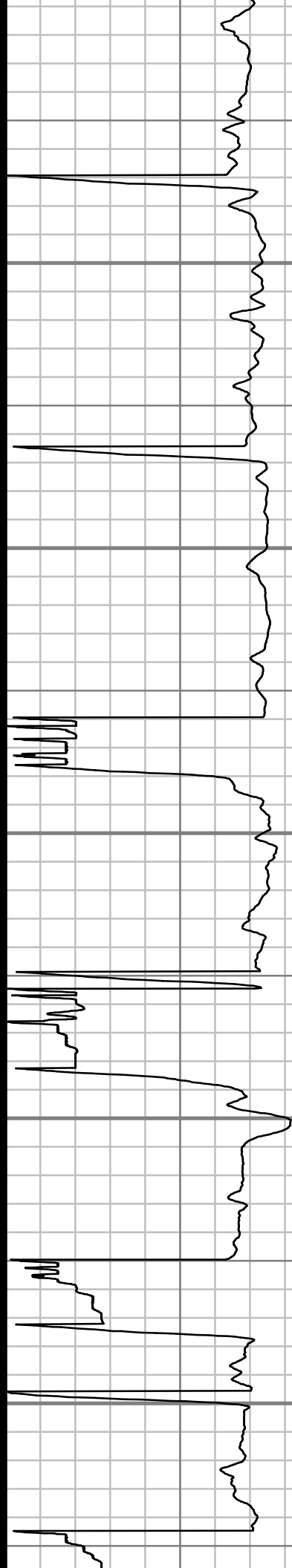
4900

5000

5100

5200

5300



S: 33 MD: 4803.00 ft Inc: 5.03 deg
Az: 140.70 deg TVD: 4784.51 ft

S: 34 MD: 4900.00 ft Inc: 4.38 deg
Az: 142.17 deg TVD: 4879.18 ft

S: 35 MD: 4996.00 ft Inc: 3.78 deg
Az: 141.33 deg TVD: 4974.94 ft

S: 36 MD: 5091.00 ft Inc: 2.15 deg
Az: 148.07 deg TVD: 5069.81 ft

S: 37 MD: 5187.00 ft Inc: 3.40 deg
Az: 145.45 deg TVD: 5165.70 ft

S: 38 MD: 5282.00 ft Inc: 3.93 deg
Az: 151.33 deg TVD: 5260.50 ft



5400

5500

5600

5700

5800

5900



S: 39 MD: 5377.00 ft Inc: 4.37 deg
Az: 154.91 deg TVD: 5355.25 ft

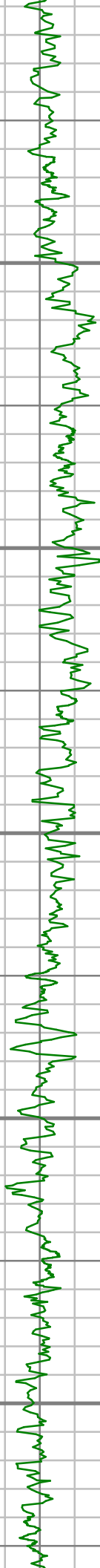
S: 40 MD: 5473.00 ft Inc: 4.47 deg
Az: 162.38 deg TVD: 5450.97 ft

S: 41 MD: 5569.00 ft Inc: 5.90 deg
Az: 145.46 deg TVD: 5546.58 ft

S: 42 MD: 5664.00 ft Inc: 7.06 deg
Az: 165.19 deg TVD: 5640.98 ft

S: 43 MD: 5760.00 ft Inc: 6.04 deg
Az: 167.28 deg TVD: 5736.35 ft

S: 44 MD: 5855.00 ft Inc: 6.91 deg
Az: 147.66 deg TVD: 5830.76 ft



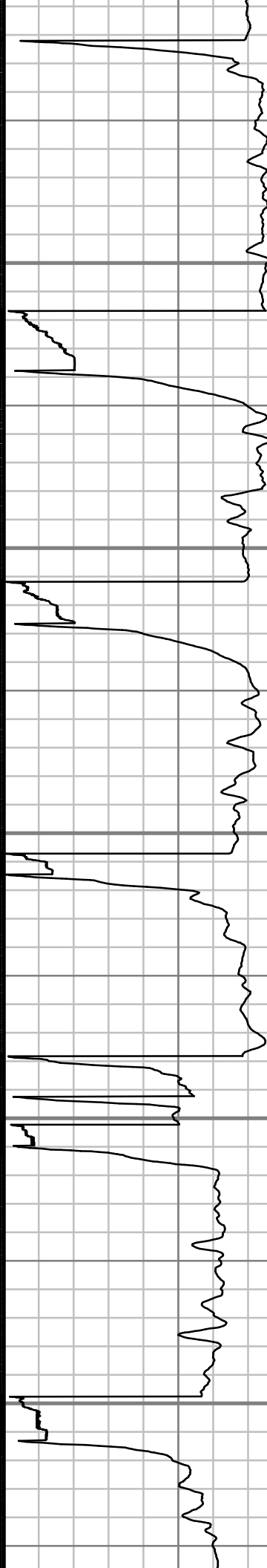
6000

6100

6200

6300

6400



S: 45 MD: 5950.00 ft Inc: 4.57 deg
Az: 152.25 deg TVD: 5925.28 ft

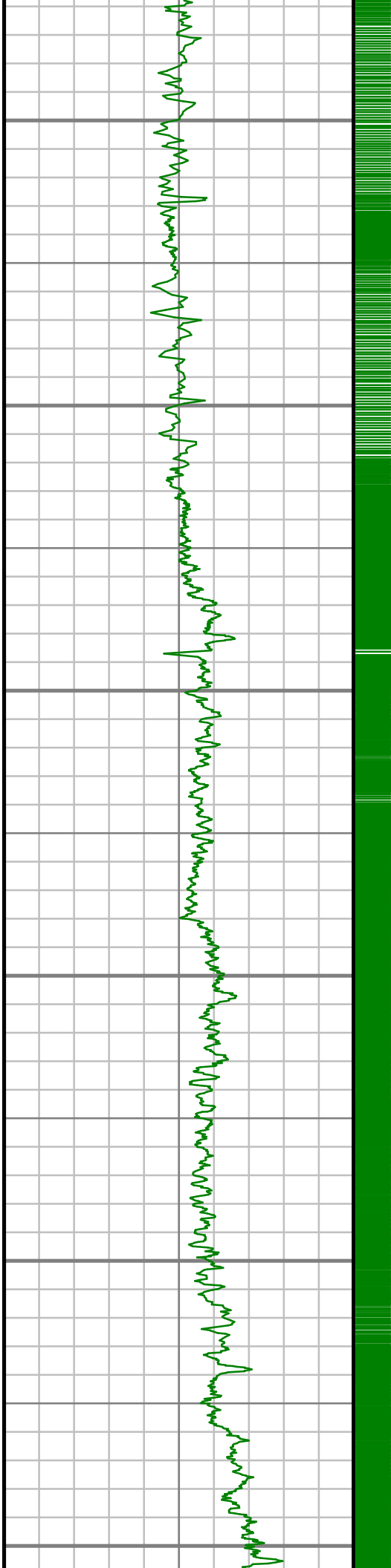
S: 46 MD: 6046.00 ft Inc: 6.18 deg
Az: 146.03 deg TVD: 6020.85 ft

S: 47 MD: 6141.00 ft Inc: 6.59 deg
Az: 152.04 deg TVD: 6115.26 ft

S: 48 MD: 6236.00 ft Inc: 5.67 deg
Az: 151.26 deg TVD: 6209.72 ft

S: 49 MD: 6331.00 ft Inc: 4.72 deg
Az: 152.82 deg TVD: 6304.33 ft

S: 50 MD: 6427.00 ft Inc: 4.87 deg
Az: 149.35 deg TVD: 6399.99 ft



6500

6600

6700

6800

6900

7000



S: 51 MD: 6522.00 ft Inc: 4.61 deg
Az: 143.73 deg TVD: 6494.67 ft

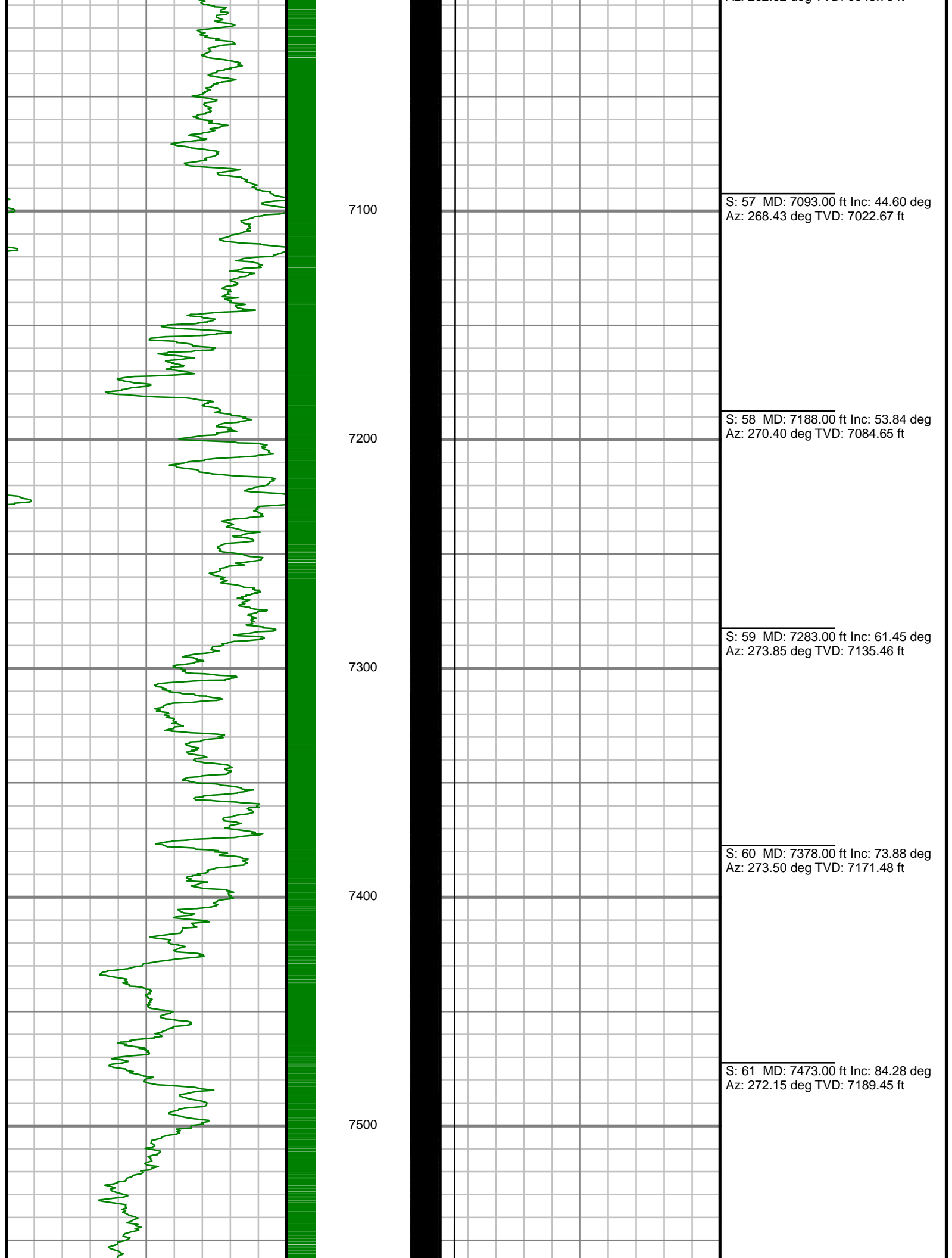
S: 52 MD: 6617.00 ft Inc: 4.84 deg
Az: 159.12 deg TVD: 6589.35 ft

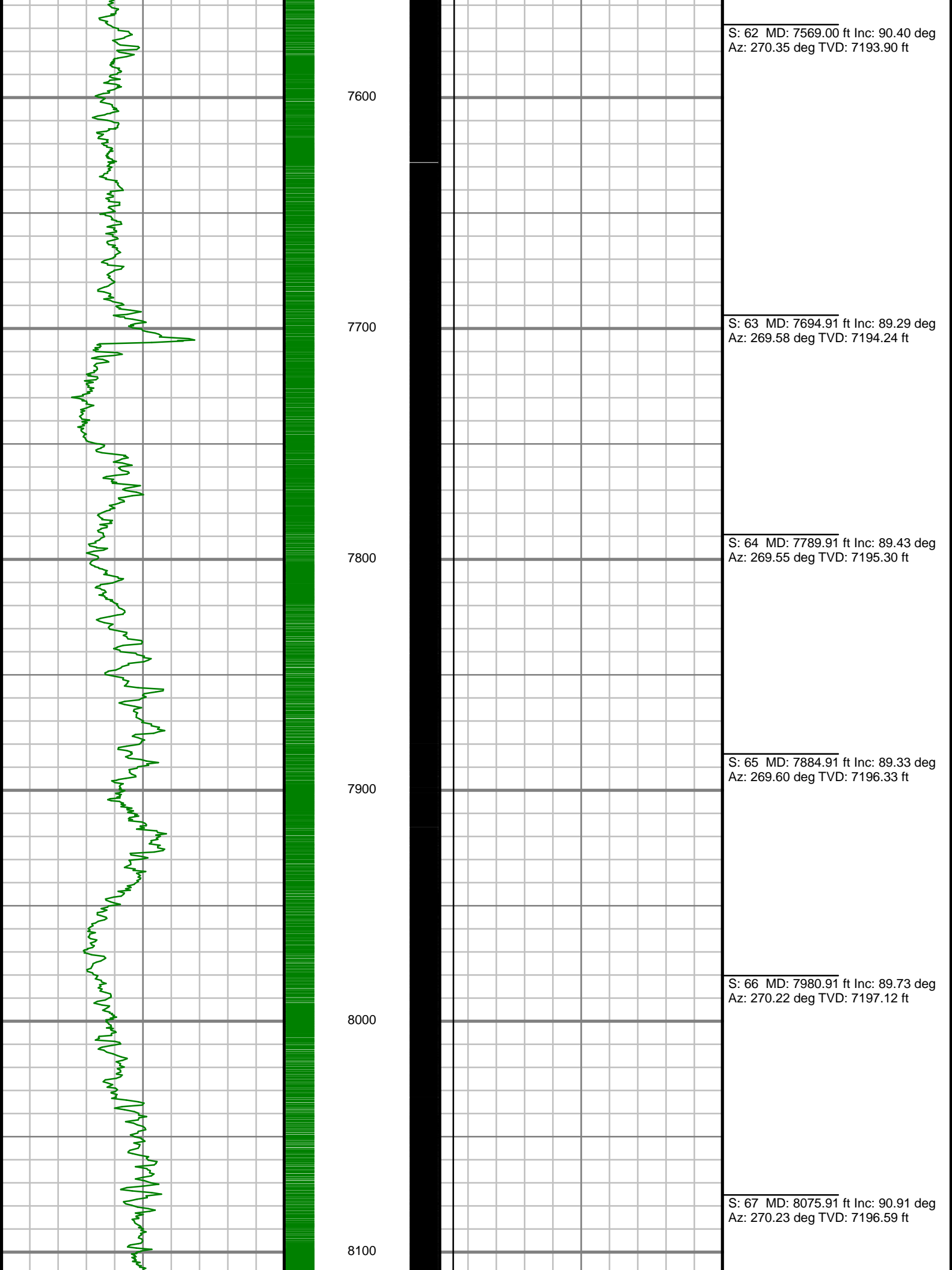
S: 53 MD: 6711.00 ft Inc: 6.13 deg
Az: 195.15 deg TVD: 6682.94 ft

S: 54 MD: 6806.00 ft Inc: 14.05 deg
Az: 231.16 deg TVD: 6776.48 ft

S: 55 MD: 6902.00 ft Inc: 25.90 deg
Az: 249.24 deg TVD: 6866.62 ft

S: 56 MD: 6997.00 ft Inc: 34.53 deg
Az: 262.62 deg TVD: 6948.73 ft







8200

8300

8400

8500

8600

S: 68 MD: 8170.91 ft Inc: 89.70 deg
Az: 269.91 deg TVD: 7196.09 ft

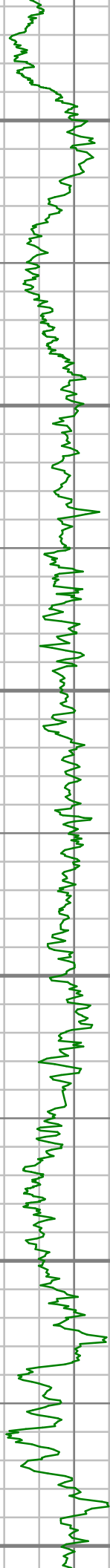
S: 69 MD: 8266.91 ft Inc: 90.50 deg
Az: 269.28 deg TVD: 7195.92 ft

S: 70 MD: 8361.91 ft Inc: 90.10 deg
Az: 268.77 deg TVD: 7195.42 ft

S: 71 MD: 8457.91 ft Inc: 90.40 deg
Az: 270.12 deg TVD: 7195.00 ft

S: 72 MD: 8552.91 ft Inc: 90.57 deg
Az: 270.17 deg TVD: 7194.19 ft

S: 73 MD: 8647.91 ft Inc: 90.87 deg
Az: 269.97 deg TVD: 7192.99 ft



8700

8800

8900

9000

9100

9200

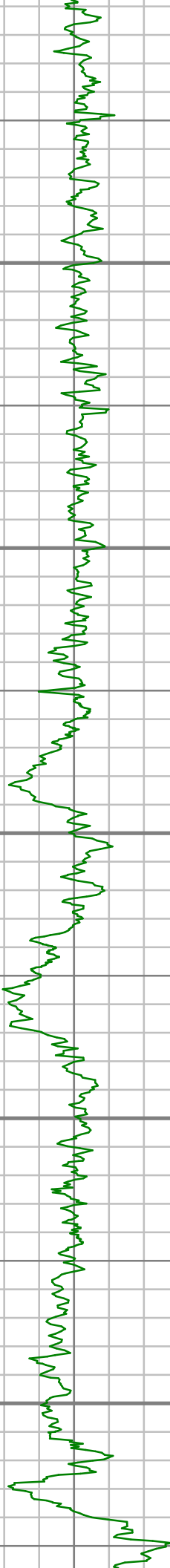
S: 74 MD: 8743.91 ft Inc: 90.77 deg
Az: 270.75 deg TVD: 7191.61 ft

S: 75 MD: 8838.91 ft Inc: 89.19 deg
Az: 271.96 deg TVD: 7191.64 ft

S: 76 MD: 8933.91 ft Inc: 88.99 deg
Az: 271.01 deg TVD: 7193.14 ft

S: 77 MD: 9029.91 ft Inc: 88.22 deg
Az: 270.40 deg TVD: 7195.48 ft

S: 78 MD: 9124.91 ft Inc: 89.80 deg
Az: 270.86 deg TVD: 7197.13 ft



9300

9400

9500

9600

9700

S: 79 MD: 9220.91 ft Inc: 90.03 deg
Az: 270.51 deg TVD: 7197.27 ft

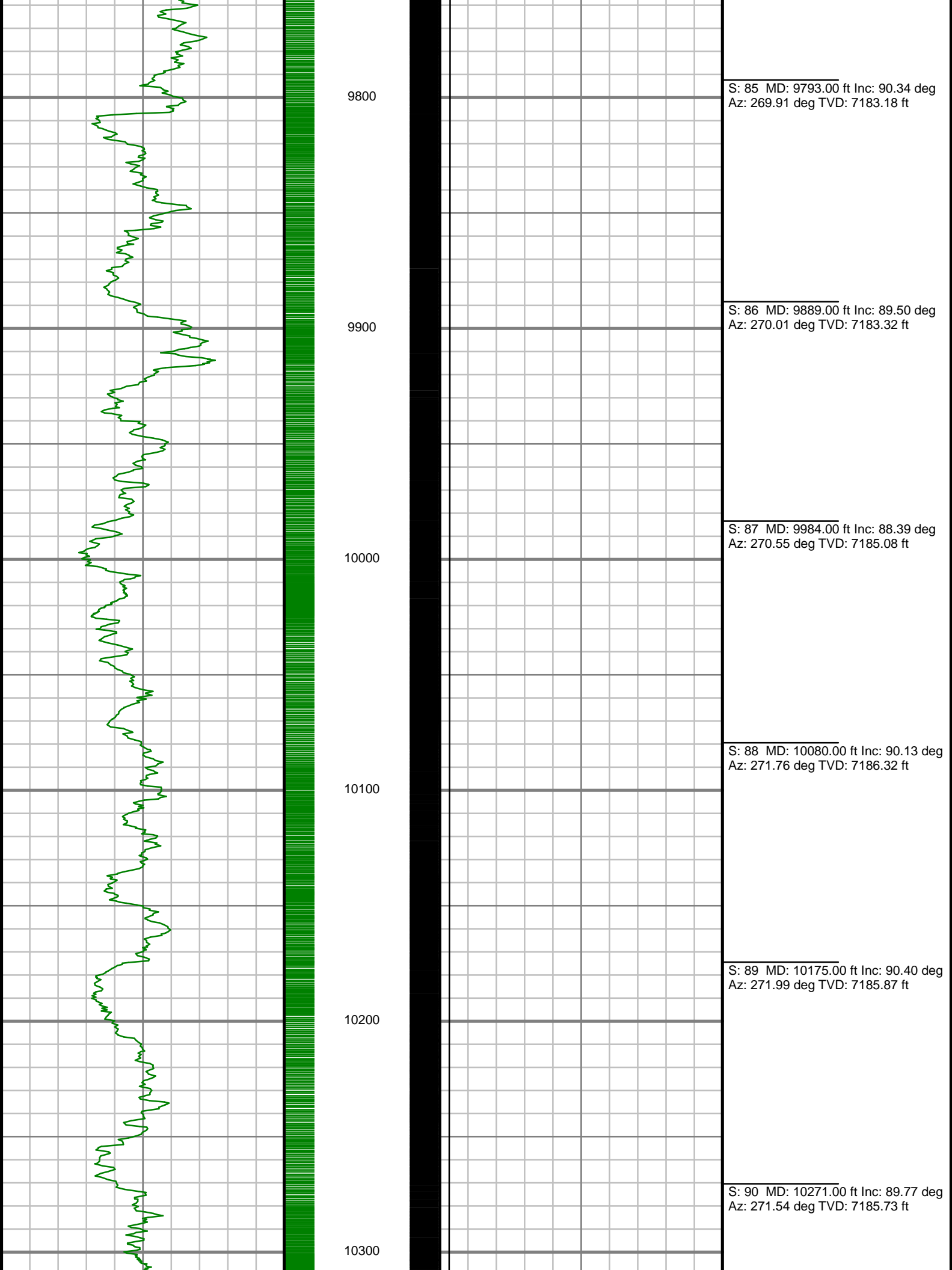
S: 80 MD: 9315.91 ft Inc: 90.54 deg
Az: 270.82 deg TVD: 7196.79 ft

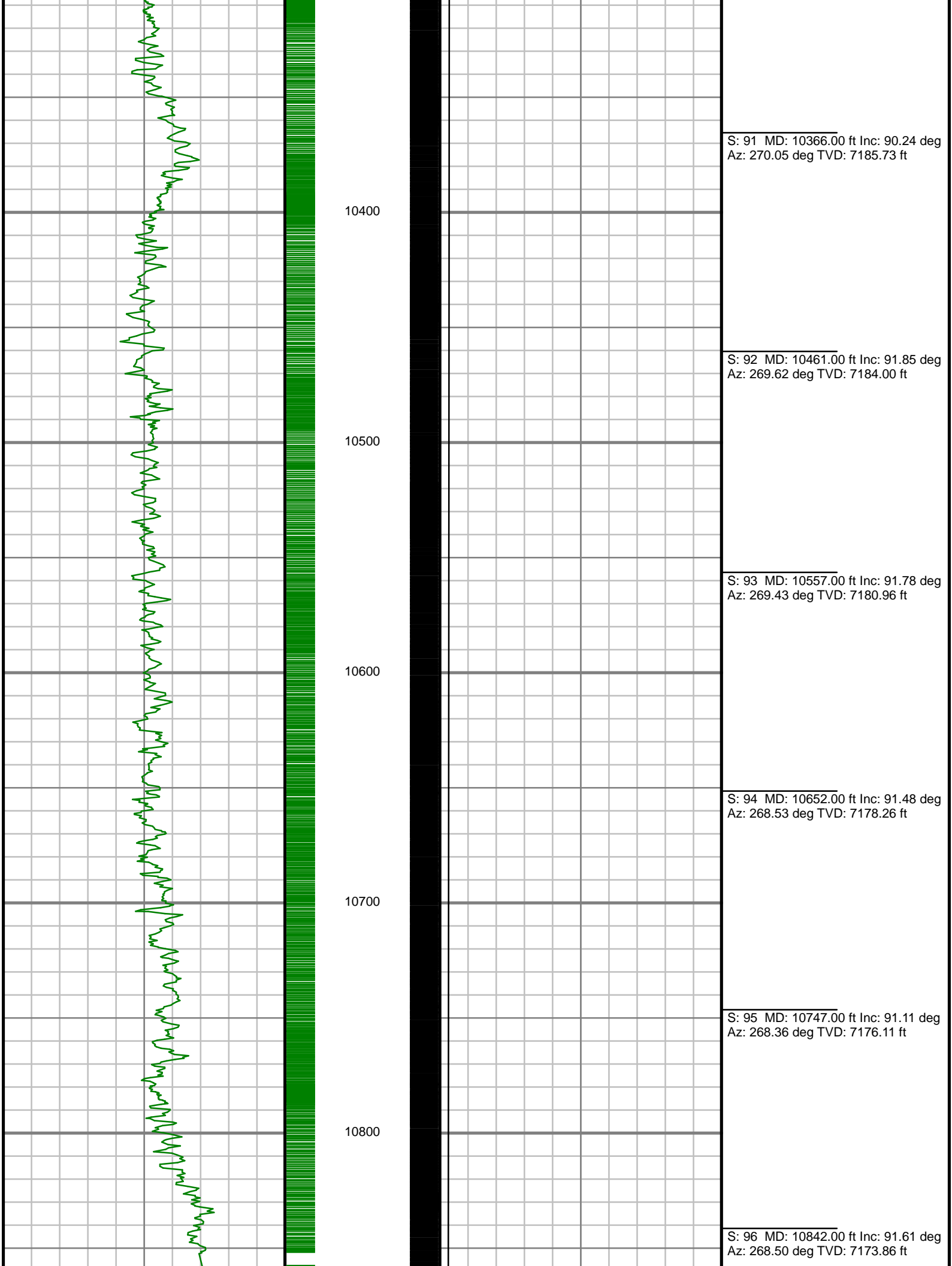
S: 81 MD: 9410.91 ft Inc: 92.42 deg
Az: 271.27 deg TVD: 7194.34 ft

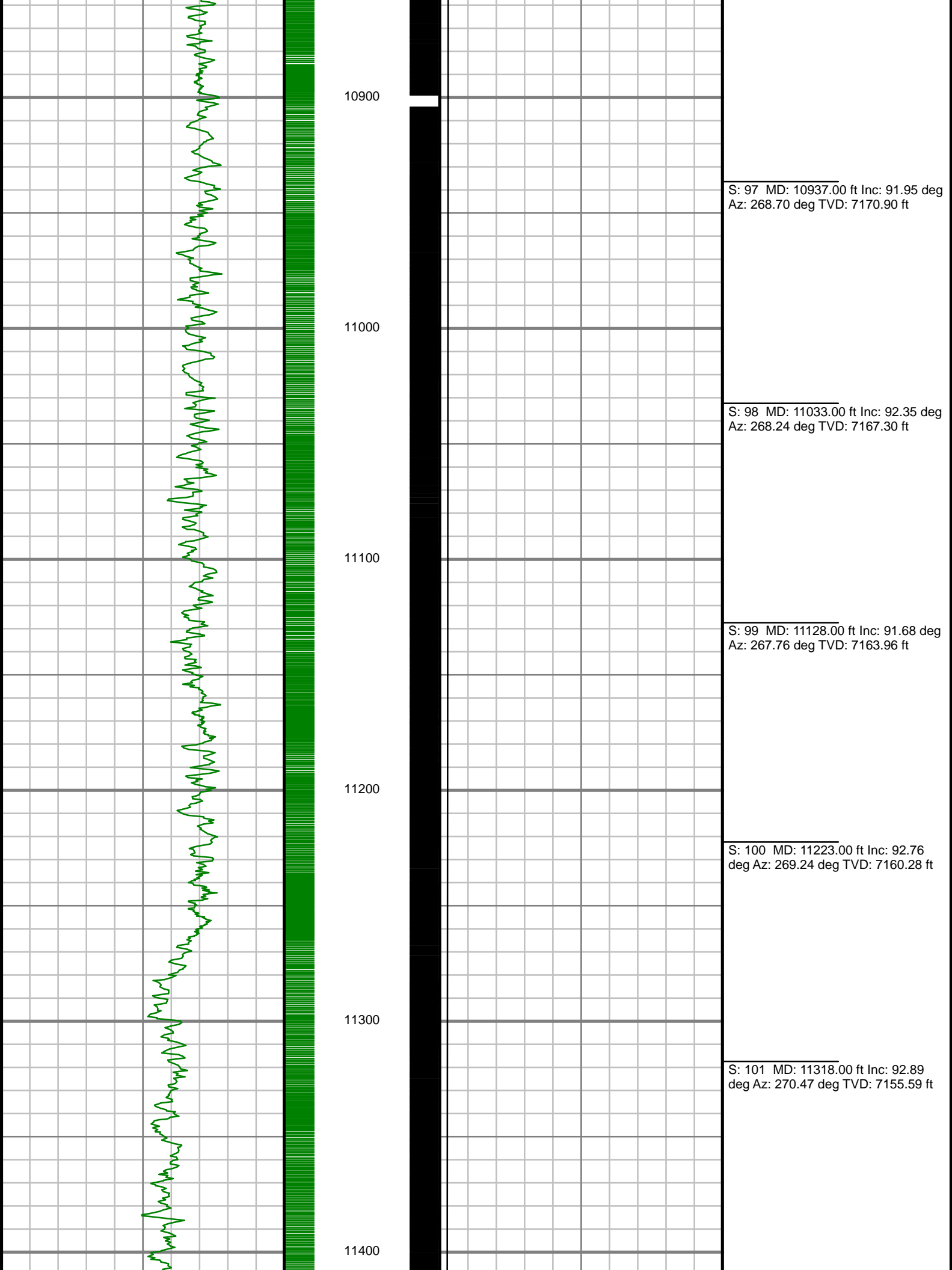
S: 82 MD: 9506.91 ft Inc: 92.96 deg
Az: 271.04 deg TVD: 7189.84 ft

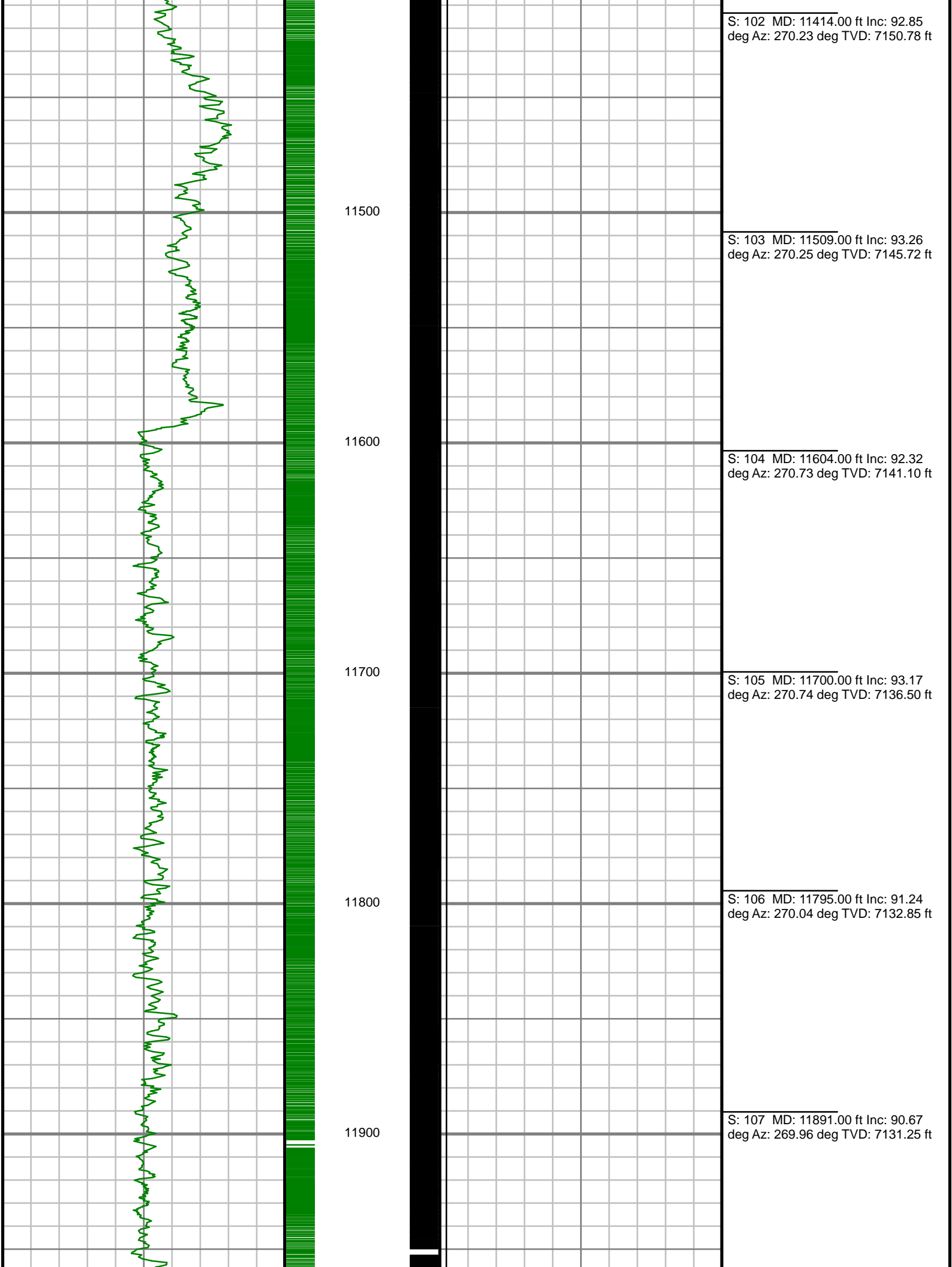
S: 83 MD: 9601.91 ft Inc: 91.24 deg
Az: 270.55 deg TVD: 7186.36 ft

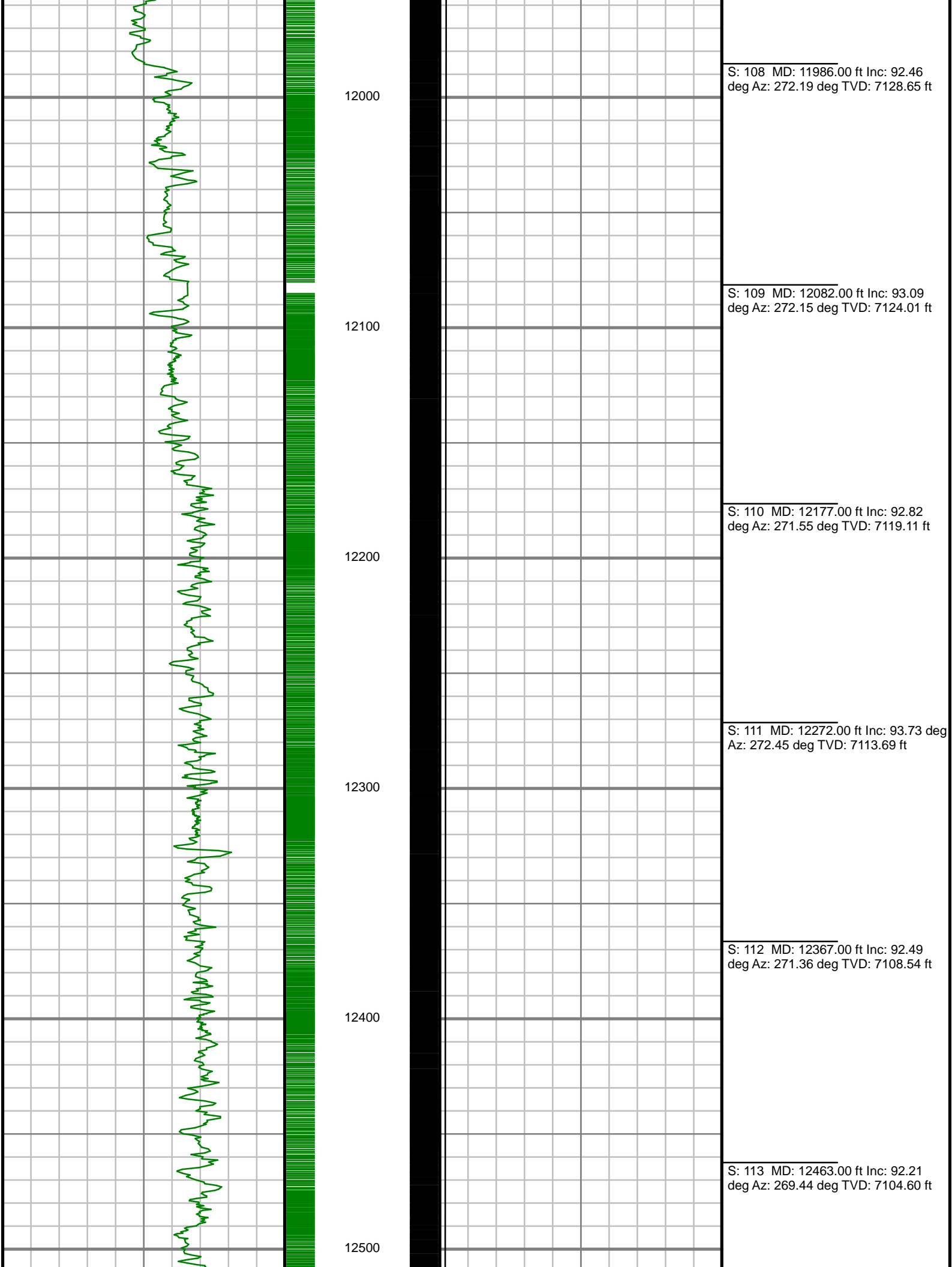
S: 84 MD: 9698.00 ft Inc: 91.11 deg
Az: 269.75 deg TVD: 7184.38 ft

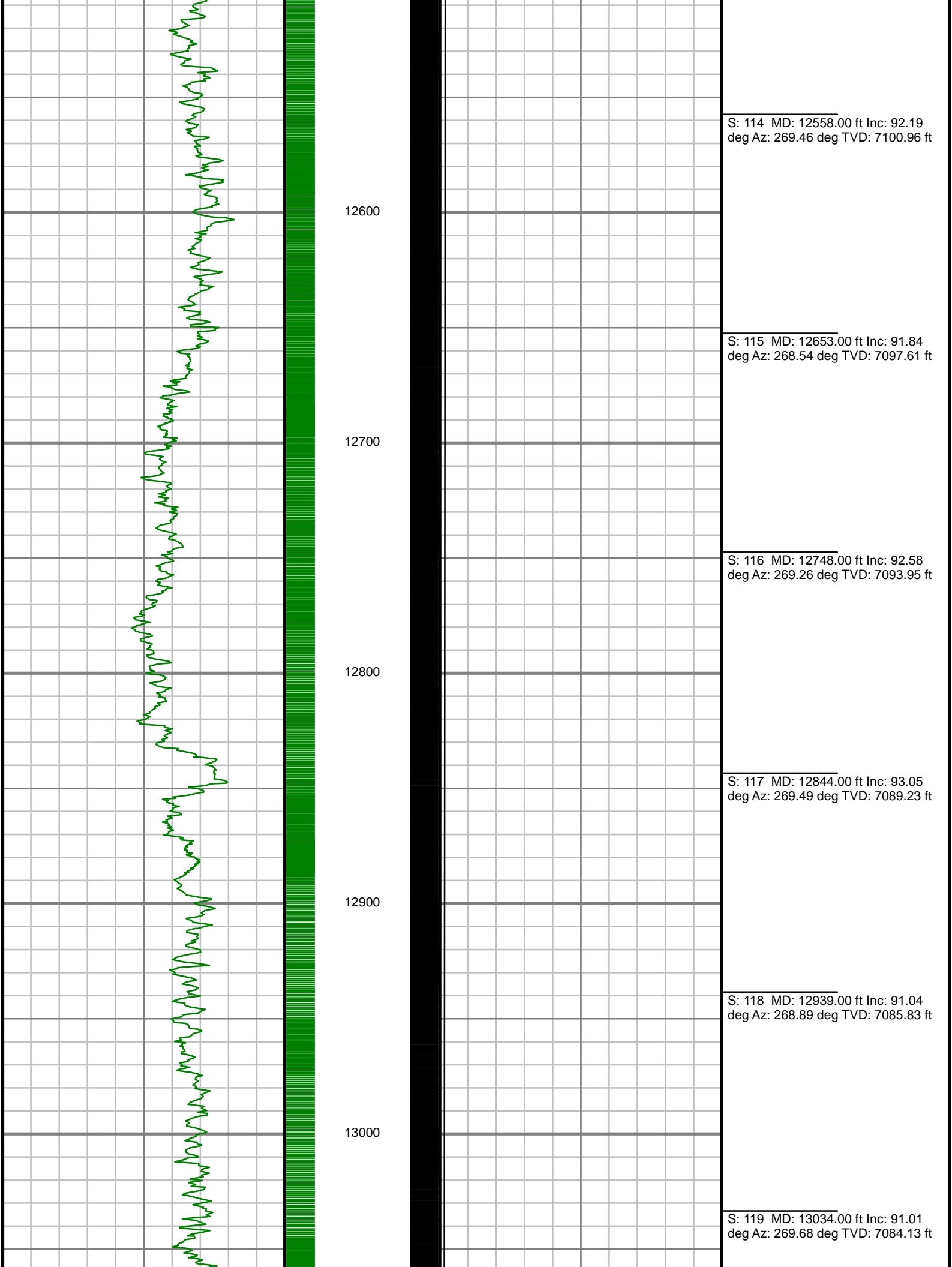


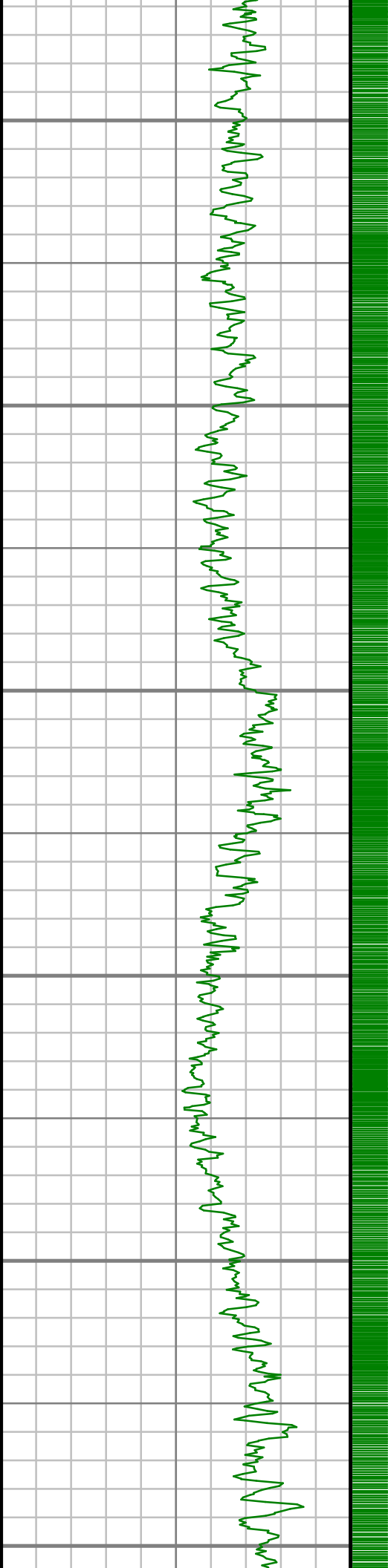












13100

S: 120 MD: 13129.00 ft Inc: 91.01
deg Az: 270.21 deg TVD: 7082.47 ft

13200

S: 121 MD: 13224.00 ft Inc: 90.70
deg Az: 269.81 deg TVD: 7081.05 ft

13300

S: 122 MD: 13320.00 ft Inc: 90.50
deg Az: 269.92 deg TVD: 7080.04 ft

13400

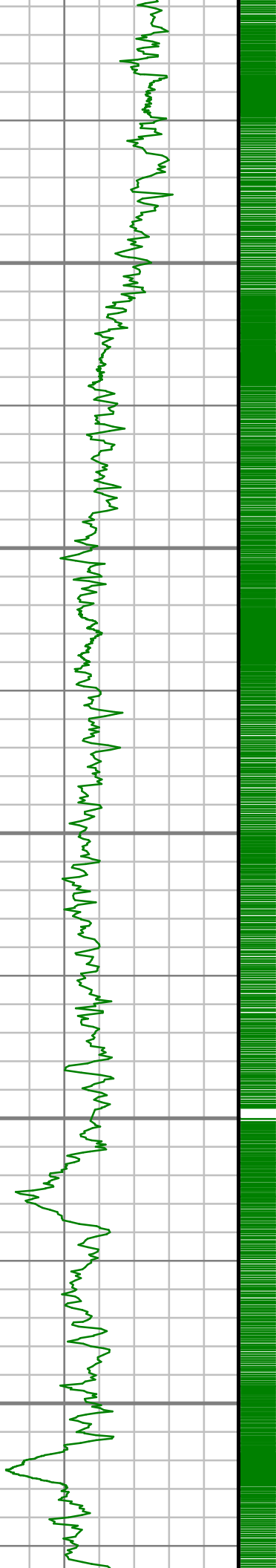
S: 123 MD: 13415.00 ft Inc: 91.04
deg Az: 270.62 deg TVD: 7078.76 ft

13500

S: 124 MD: 13510.00 ft Inc: 91.88
deg Az: 271.60 deg TVD: 7076.34 ft

13600

S: 125 MD: 13605.00 ft Inc: 92.18



13700

13800

13900

14000

14100

S: 125 MD: 13605.00 ft Inc: 92.16
deg Az: 272.15 deg TVD: 7072.97 ft

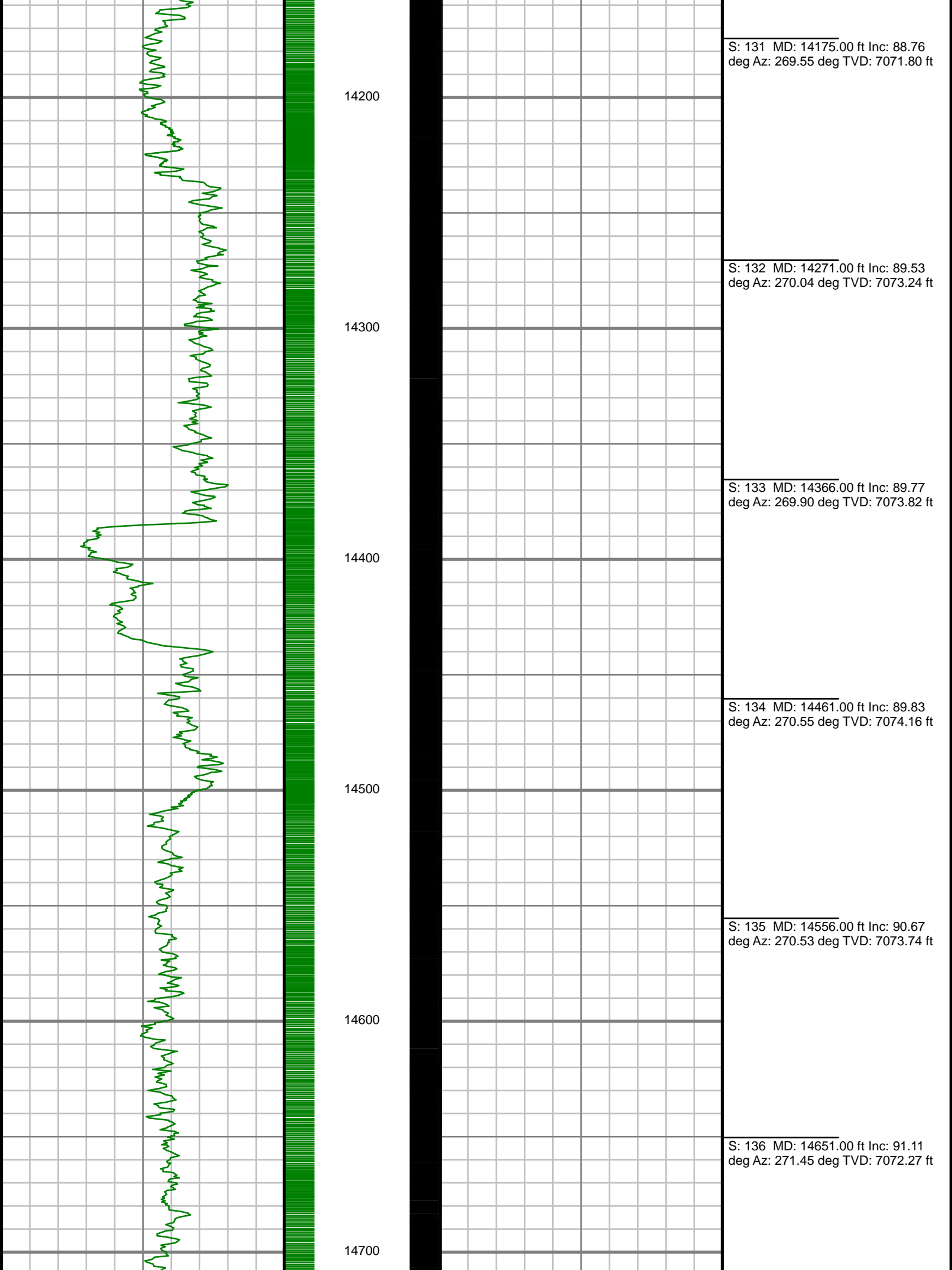
S: 126 MD: 13700.00 ft Inc: 91.44
deg Az: 271.86 deg TVD: 7069.97 ft

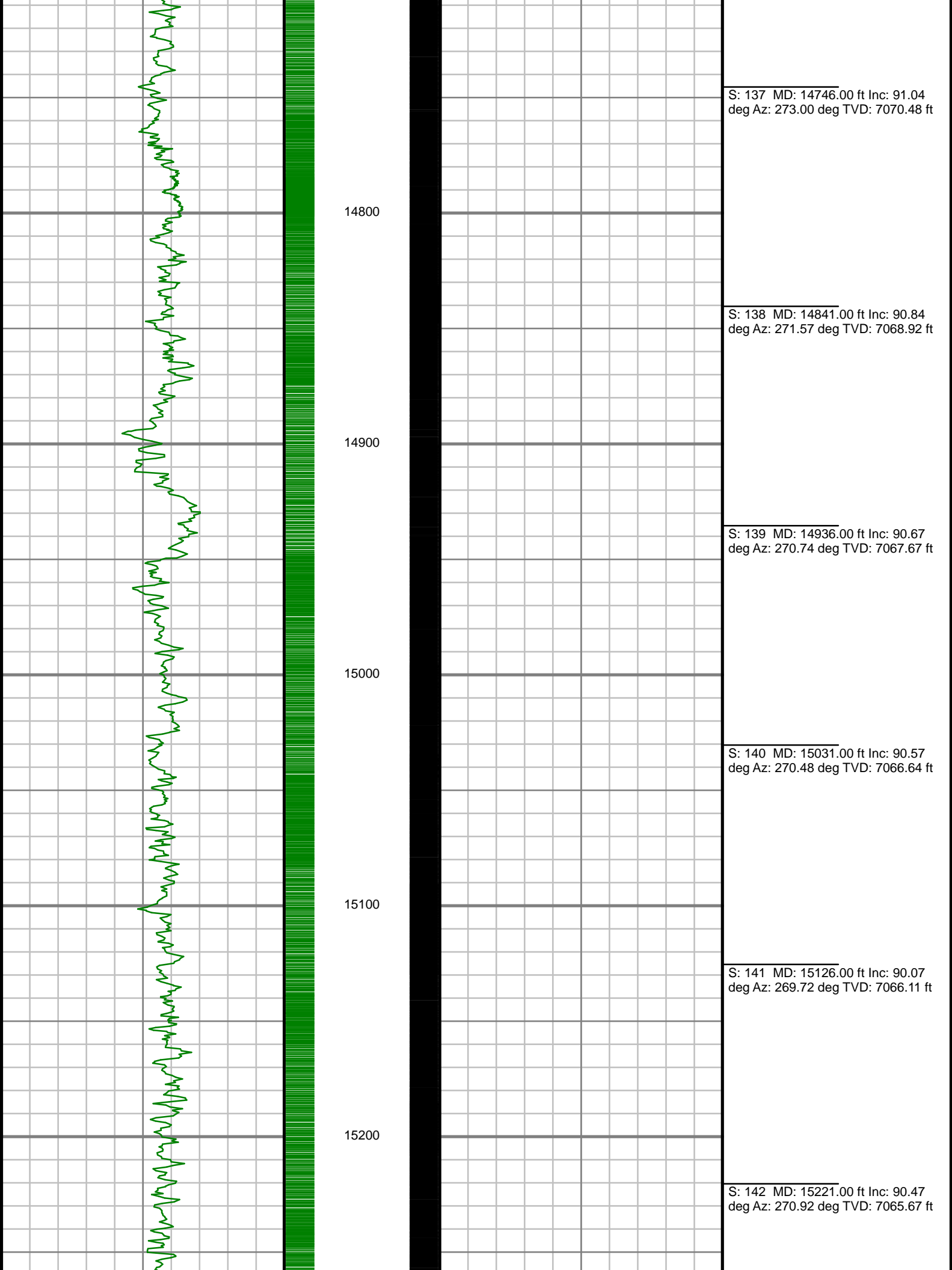
S: 127 MD: 13795.00 ft Inc: 91.38
deg Az: 271.15 deg TVD: 7067.63 ft

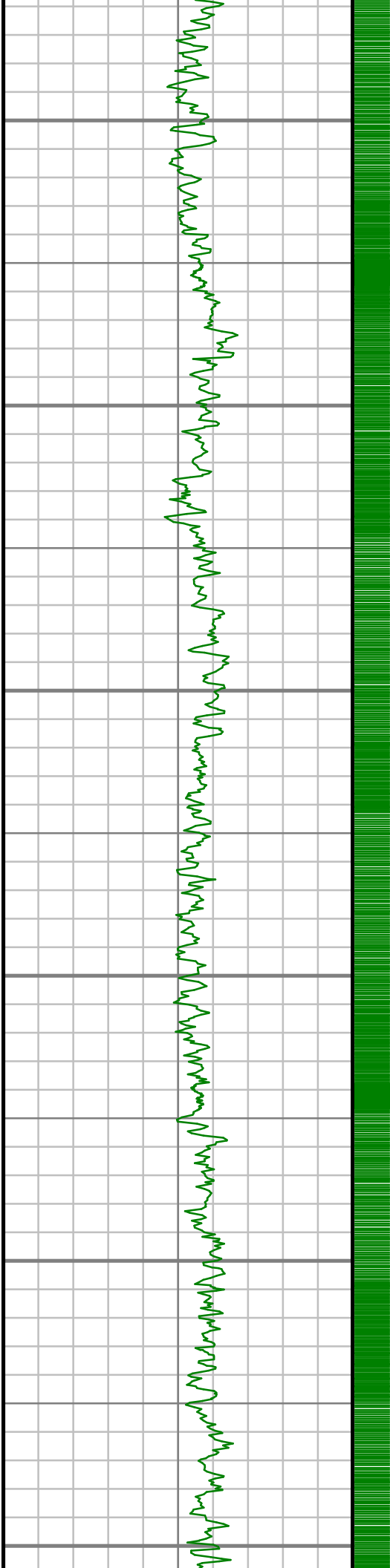
S: 128 MD: 13890.00 ft Inc: 89.30
deg Az: 269.06 deg TVD: 7067.08 ft

S: 129 MD: 13985.00 ft Inc: 89.36
deg Az: 269.51 deg TVD: 7068.19 ft

S: 130 MD: 14081.00 ft Inc: 88.76
deg Az: 269.13 deg TVD: 7069.76 ft







15300

S: 143 MD: 15317.00 ft Inc: 90.20
deg Az: 271.52 deg TVD: 7065.11 ft

15400

S: 144 MD: 15411.00 ft Inc: 90.84
deg Az: 270.92 deg TVD: 7064.25 ft

15500

S: 145 MD: 15506.00 ft Inc: 90.54
deg Az: 270.26 deg TVD: 7063.11 ft

15600

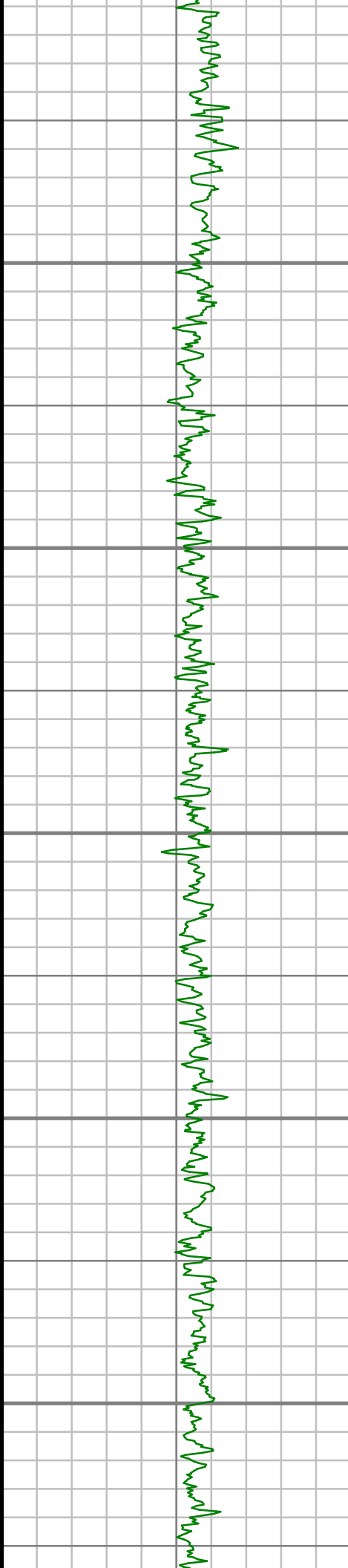
S: 146 MD: 15602.00 ft Inc: 91.21
deg Az: 271.09 deg TVD: 7061.65 ft

15700

S: 147 MD: 15697.00 ft Inc: 91.31
deg Az: 270.37 deg TVD: 7059.56 ft

15800

S: 148 MD: 15793.00 ft Inc: 90.47
deg Az: 268.83 deg TVD: 7058.07 ft



15900

16000

16100

16200

16300

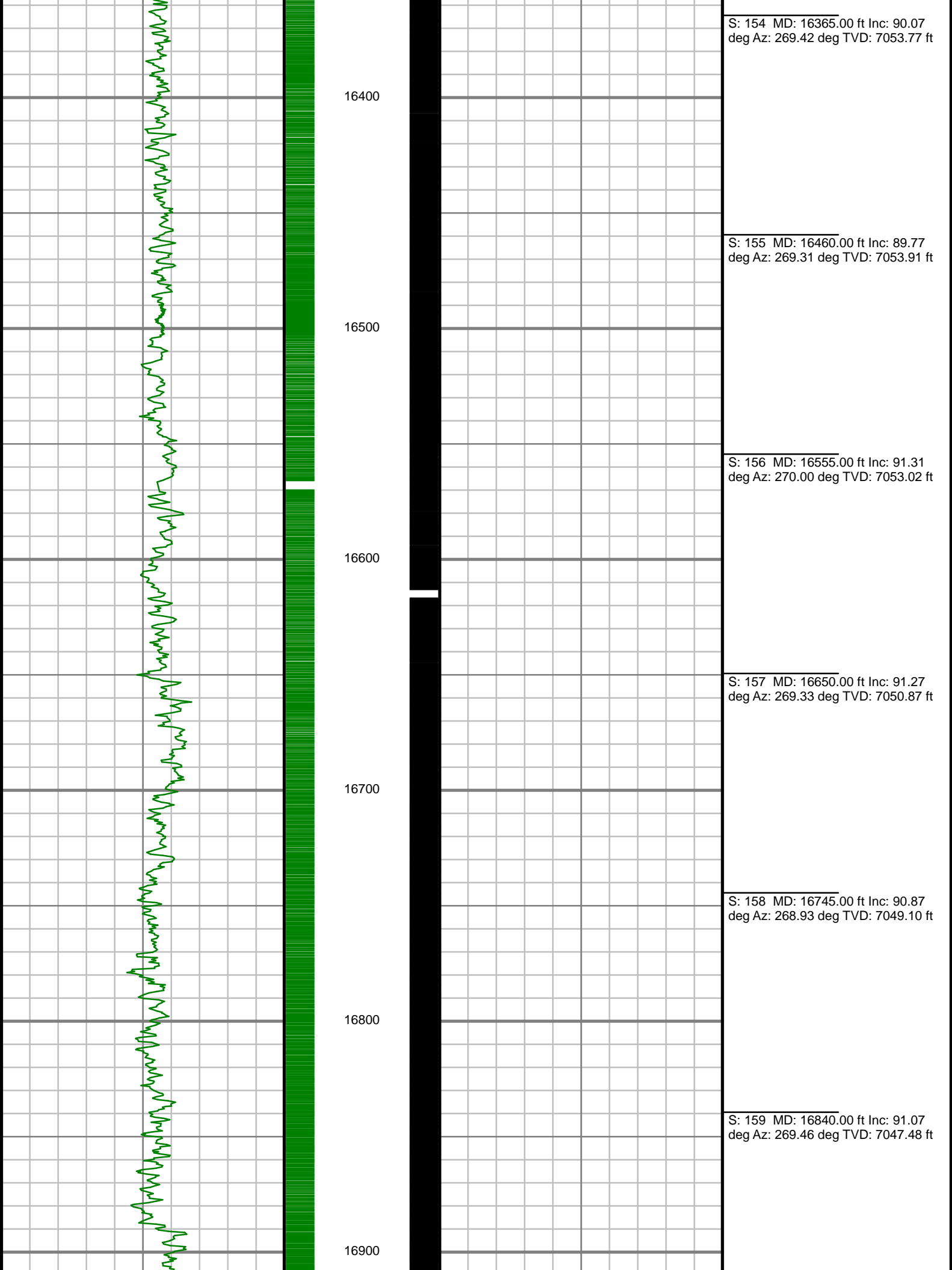
S: 149 MD: 15888.00 ft Inc: 90.40
deg Az: 268.89 deg TVD: 7057.35 ft

S: 150 MD: 15983.00 ft Inc: 90.84
deg Az: 269.32 deg TVD: 7056.32 ft

S: 151 MD: 16078.00 ft Inc: 90.40
deg Az: 269.12 deg TVD: 7055.29 ft

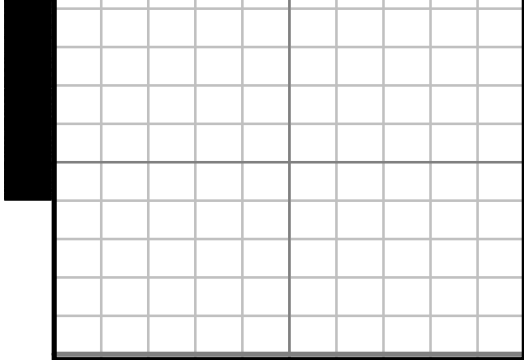
S: 152 MD: 16174.00 ft Inc: 90.50
deg Az: 269.48 deg TVD: 7054.53 ft

S: 153 MD: 16270.00 ft Inc: 90.17
deg Az: 269.61 deg TVD: 7053.96 ft





GAMMA (GR)		
0	Unit = aapi	200



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

S: 160 MD: 16960.00 ft Inc: 91.48 deg Az: 270.09 deg TVD: 7044.82 ft

17000
MEASURED DEPTH
1:600 (ft)

Comments