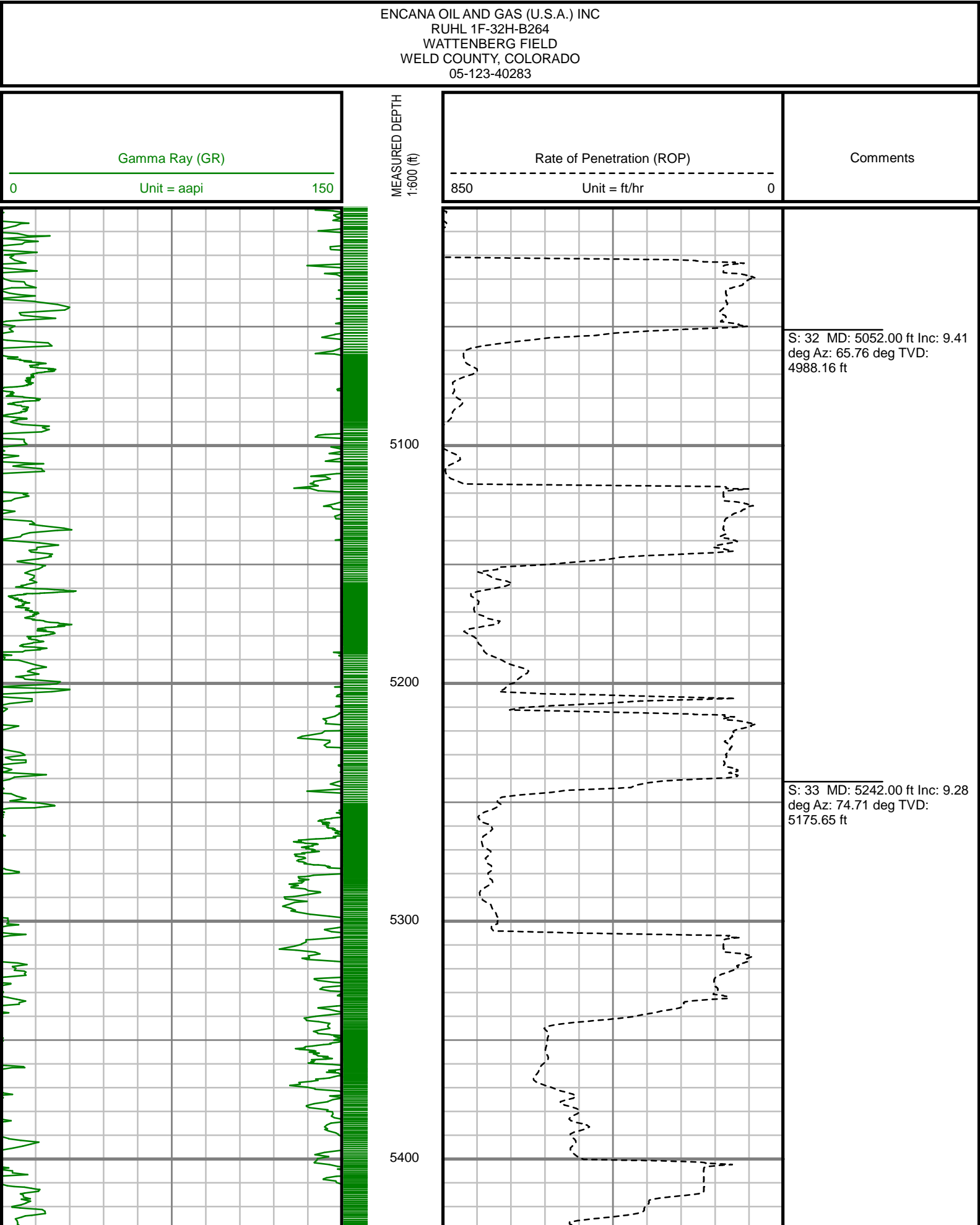
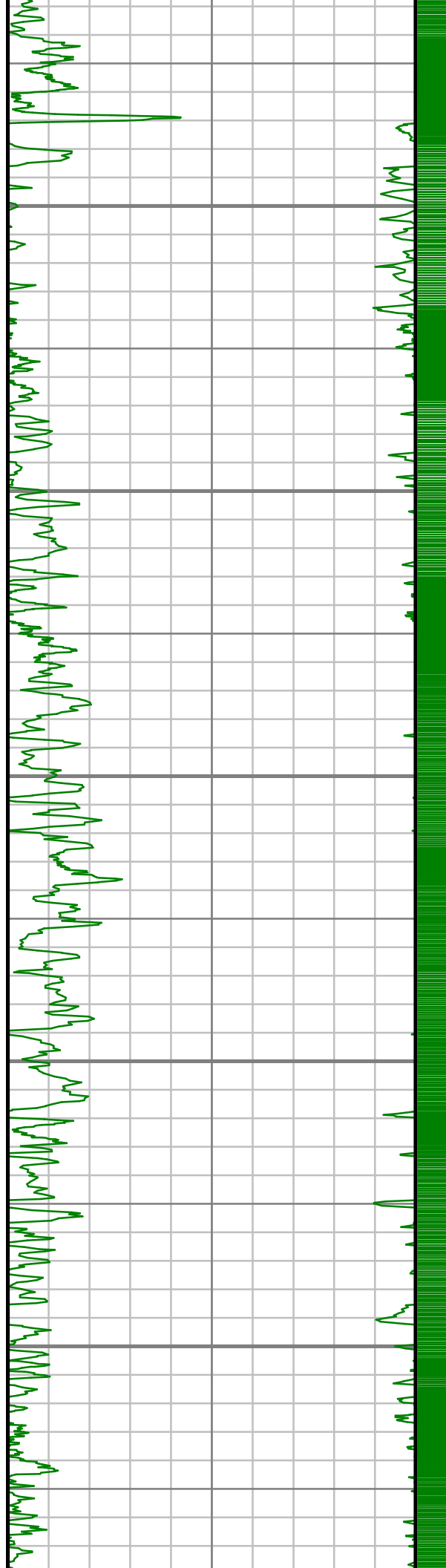


2" = 100' FEET MD

COMPANY : ENCANA OIL AND GAS (U.S.A.) INC WELL : RUHL 1F-32H-B264 FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-40283										COMPANY : ENCANA OIL AND GAS (U.S.A.) INC WELL : RUHL 1F-32H-B264 FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-40283									
DEPTH REF. : RKB REF. HEIGHT : 25.000 ft GROUND LEVEL : 4979.000 ft										RKB to Ground Level G.L. to MEAN SEA LEVEL									
BOREHOLE RECORD										DEVIATION RECORD									
HOLE SIZE in		FROM ft		TO ft		INCLINATION deg		FROM ft		TO ft									
12.25		0		1225		0 - 11		0		4928									
8.75		1225		7512		11 - 0		4928		6634									
6.125		7512		11835		0 - 85		6634		7512									
						85 - 92		7512		11835									
CASING RECORD																			
CASING SIZE in		FROM ft		TO ft															
16		0		140															
9.625		0		1212															
7		0		7494															
DRILLING CO.: H&P RIG: 278 LWD UNIT NO.: MWD-00046-DISTRICT: CASPER SPUD DATE: 12/13/2014 LWD START DATE: 12/16/2014 LWD END DATE: 12/25/2014										DEPTH: 5000 ft DEPTH: 11835 ft TOTAL DEPTH: 11835 ft									

All interpretations are opinions based on inferences from electrical and 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.





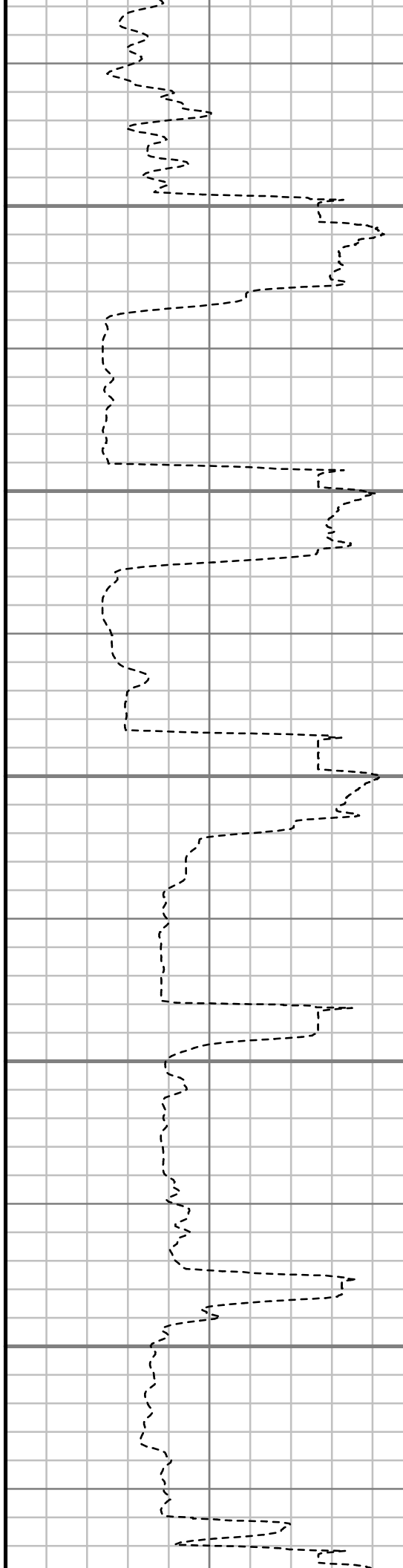
5500

5600

5700

5800

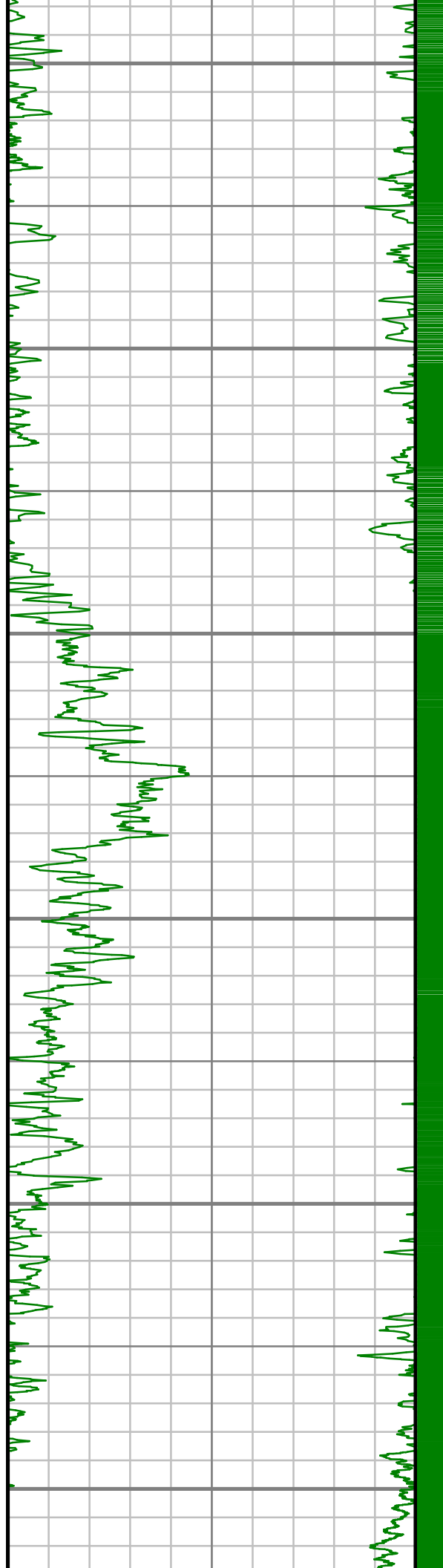
5900



S: 34 MD: 5432.00 ft Inc: 8.99
deg Az: 66.50 deg TVD:
5363.25 ft

S: 35 MD: 5621.00 ft Inc: 8.64
deg Az: 70.87 deg TVD:
5550.02 ft

S: 36 MD: 5811.00 ft Inc: 6.68
deg Az: 71.03 deg TVD:
5738.31 ft



6000

6100

6200

6300

6400

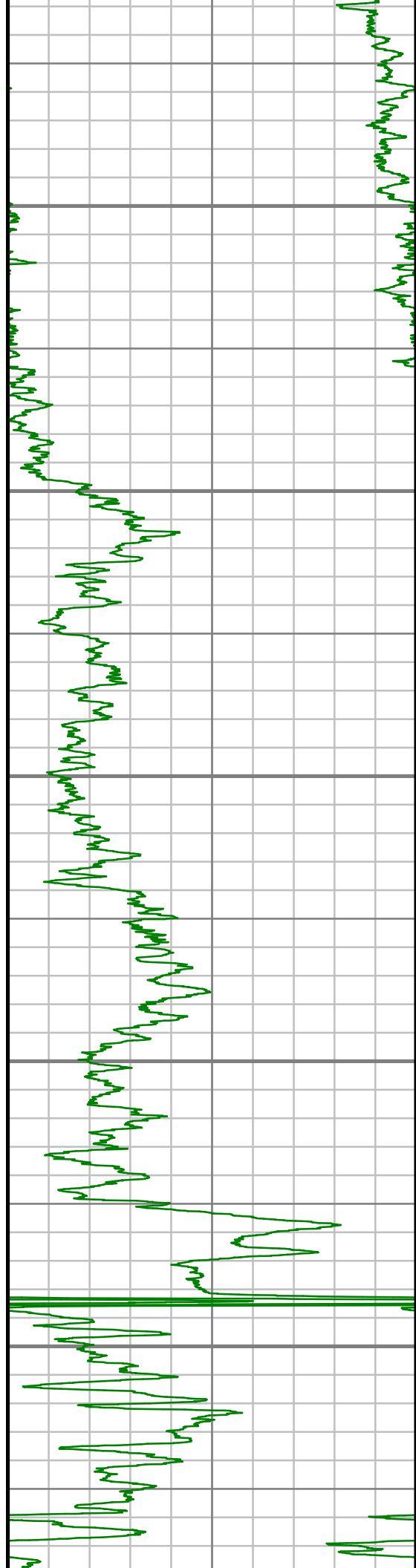
6500

S: 37 MD: 6000.00 ft Inc: 3.90
deg Az: 72.40 deg TVD:
5926.49 ft

S: 38 MD: 6190.00 ft Inc: 0.71
deg Az: 206.48 deg TVD:
6116.36 ft

S: 39 MD: 6379.00 ft Inc: 0.76
deg Az: 125.03 deg TVD:
6305.35 ft

S: 40 MD: 6474.00 ft Inc: 0.54
deg Az: 43.23 deg TVD:
6400.34 ft



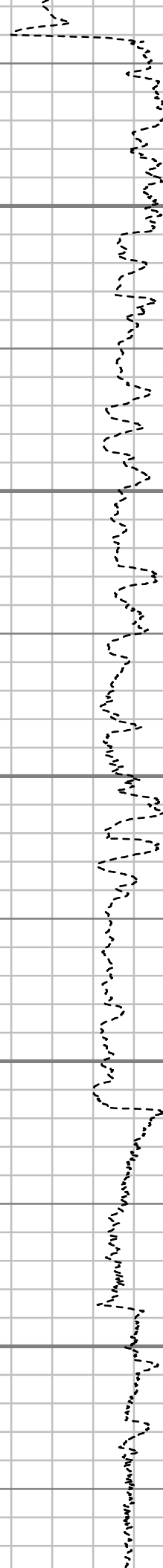
6600

6700

6800

6900

7000



S: 41 MD: 6569.00 ft Inc: 0.58
deg Az: 27.05 deg TVD:
6495.34 ft

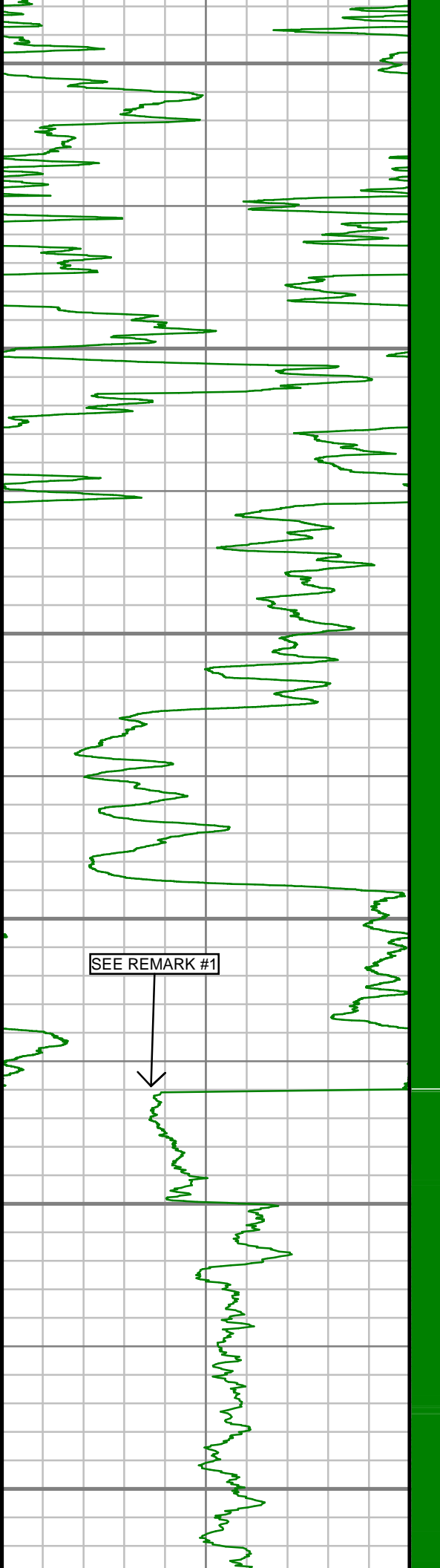
S: 42 MD: 6663.00 ft Inc: 3.39
deg Az: 147.48 deg TVD:
6589.29 ft

S: 43 MD: 6758.00 ft Inc: 8.79
deg Az: 159.19 deg TVD:
6683.72 ft

S: 44 MD: 6852.00 ft Inc: 13.44
deg Az: 162.88 deg TVD:
6775.93 ft

S: 45 MD: 6947.00 ft Inc: 21.41
deg Az: 166.88 deg TVD:
6866.50 ft

S: 46 MD: 7042.00 ft Inc: 30.40
deg Az: 169.17 deg TVD:
6951.87 ft



7100

7200

7300

7400

SEE REMARK #1

7500

7600

S: 47 MD: 7136.00 ft Inc: 39.21
deg Az: 170.57 deg TVD:
7028.98 ft

S: 48 MD: 7230.00 ft Inc: 49.70
deg Az: 172.26 deg TVD:
7095.98 ft

S: 49 MD: 7273.00 ft Inc: 58.05
deg Az: 172.36 deg TVD:
7121.31 ft

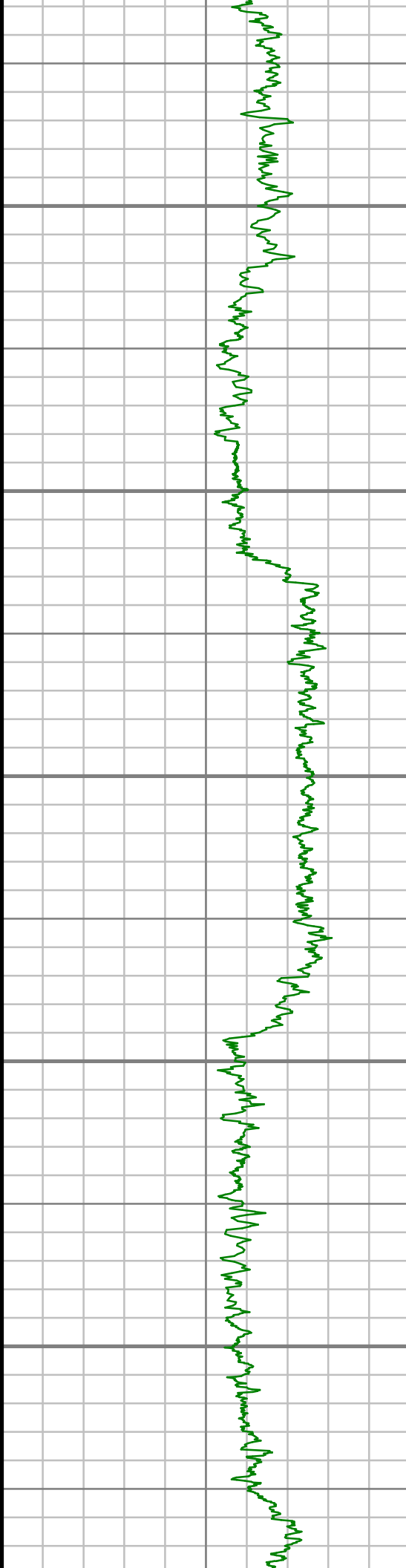
S: 50 MD: 7325.00 ft Inc: 66.44
deg Az: 173.19 deg TVD:
7145.51 ft

S: 51 MD: 7372.00 ft Inc: 74.62
deg Az: 176.31 deg TVD:
7161.16 ft

S: 52 MD: 7419.00 ft Inc: 82.02
deg Az: 180.01 deg TVD:
7170.68 ft

S: 53 MD: 7449.00 ft Inc: 85.32
deg Az: 180.89 deg TVD:
7173.99 ft

S: 54 MD: 7541.00 ft Inc: 89.80
deg Az: 182.56 deg TVD:
7177.90 ft



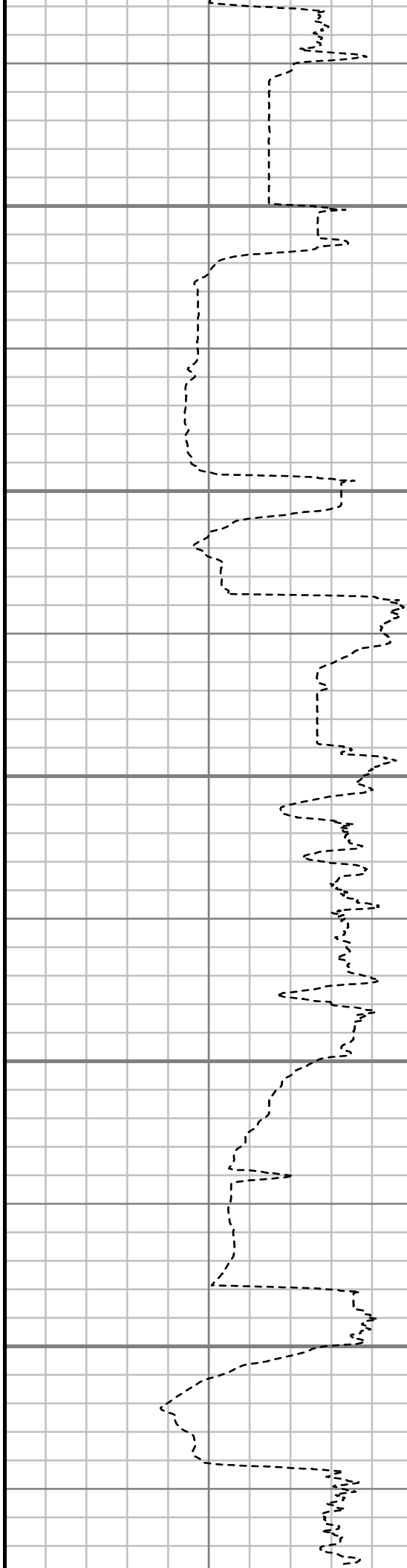
7700

7800

7900

8000

8100



S: 55 MD: 7635.00 ft Inc: 90.40
deg Az: 183.15 deg TVD:
7177.74 ft

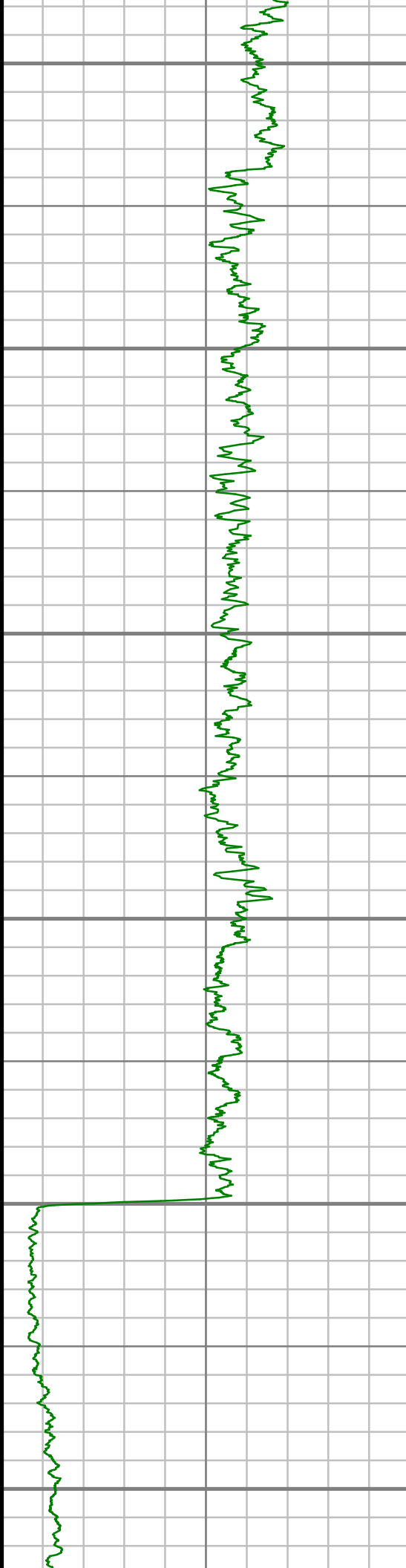
S: 56 MD: 7730.00 ft Inc: 90.20
deg Az: 182.87 deg TVD:
7177.24 ft

S: 57 MD: 7825.00 ft Inc: 89.83
deg Az: 183.07 deg TVD:
7177.21 ft

S: 58 MD: 7920.00 ft Inc: 91.71
deg Az: 183.12 deg TVD:
7175.93 ft

S: 59 MD: 8014.00 ft Inc: 91.17
deg Az: 183.12 deg TVD:
7173.56 ft

S: 60 MD: 8109.00 ft Inc: 92.08
deg Az: 183.41 deg TVD:
7170.86 ft



8200

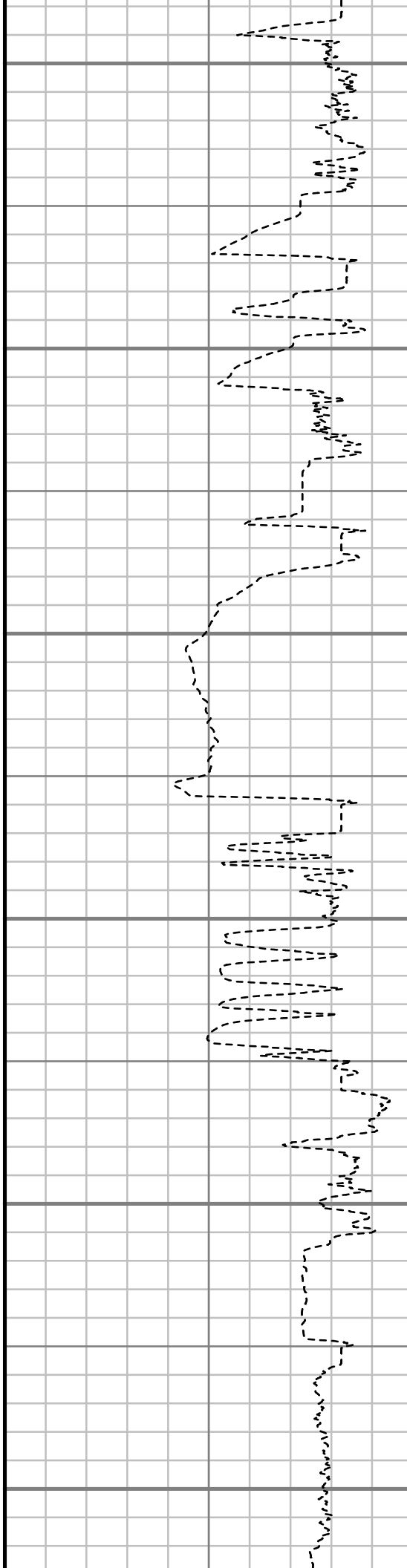
8300

8400

8500

8600

8700



S: 61 MD: 8204.00 ft Inc: 91.55
deg Az: 183.16 deg TVD:
7167.85 ft

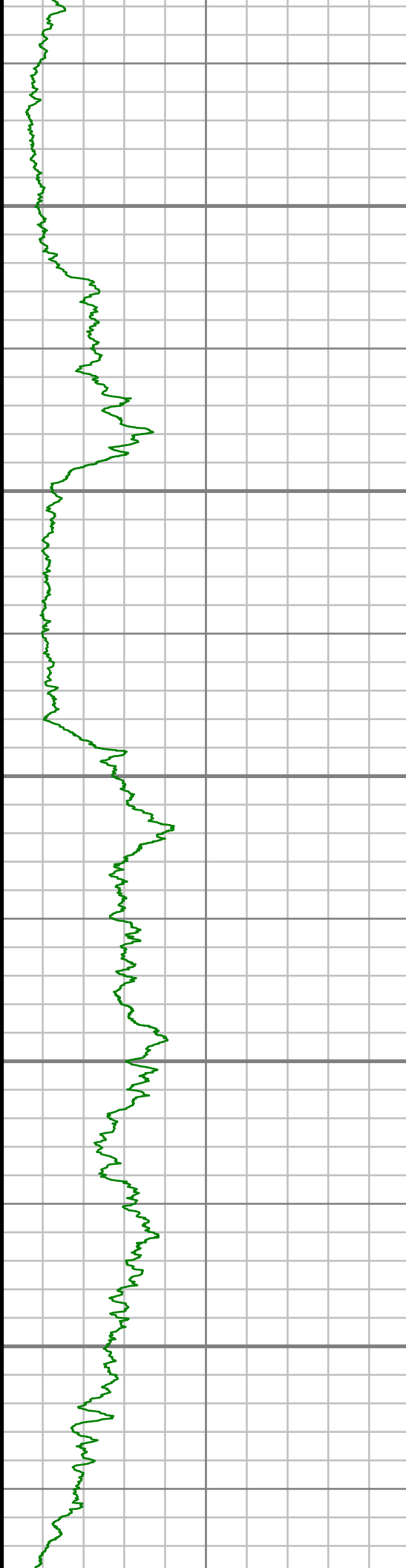
S: 62 MD: 8299.00 ft Inc: 90.74
deg Az: 182.88 deg TVD:
7165.96 ft

S: 63 MD: 8393.00 ft Inc: 90.70
deg Az: 183.00 deg TVD:
7164.77 ft

S: 64 MD: 8488.00 ft Inc: 90.30
deg Az: 182.60 deg TVD:
7163.94 ft

S: 65 MD: 8582.00 ft Inc: 90.74
deg Az: 181.71 deg TVD:
7163.09 ft

S: 66 MD: 8676.00 ft Inc: 90.97
deg Az: 181.19 deg TVD:
7161.68 ft



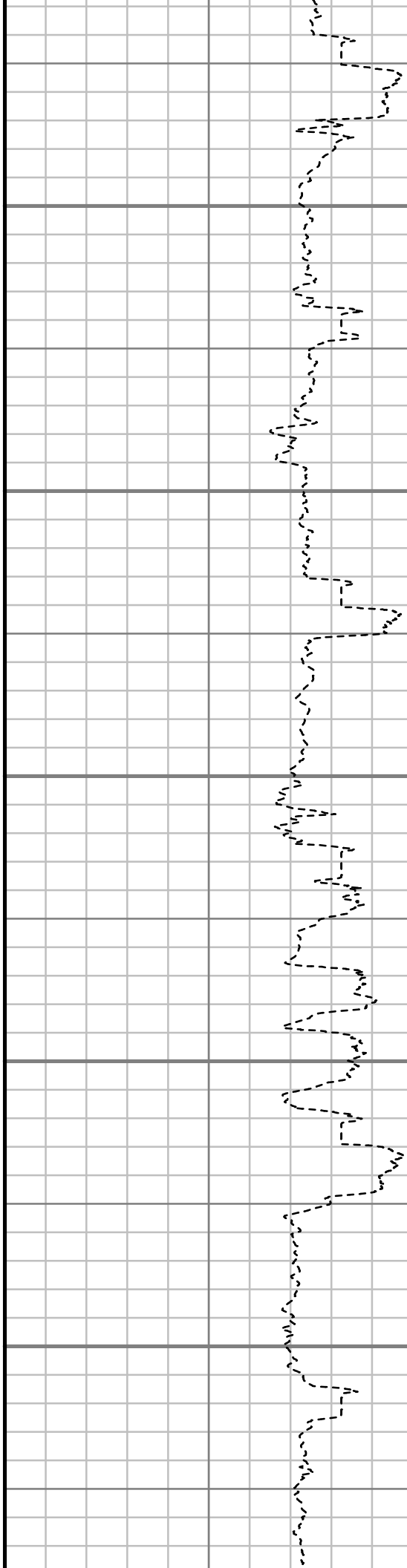
8800

8900

9000

9100

9200



S: 67 MD: 8771.00 ft Inc: 89.60
deg Az: 179.78 deg TVD:
7161.21 ft

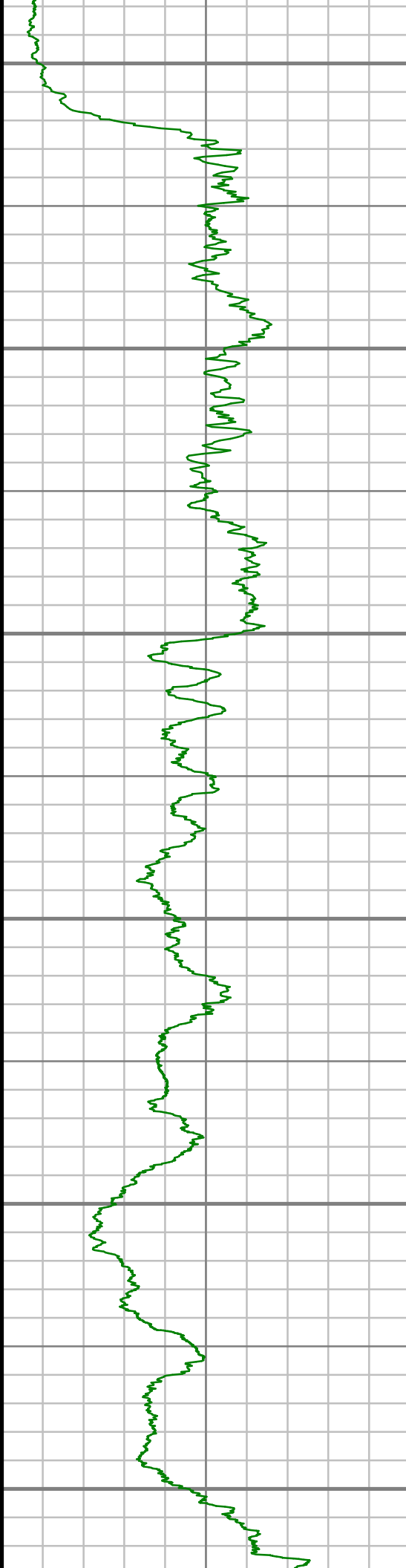
S: 68 MD: 8866.00 ft Inc: 90.07
deg Az: 179.57 deg TVD:
7161.49 ft

S: 69 MD: 8960.00 ft Inc: 89.56
deg Az: 179.65 deg TVD:
7161.79 ft

S: 70 MD: 9055.00 ft Inc: 90.64
deg Az: 180.33 deg TVD:
7161.62 ft

S: 71 MD: 9150.00 ft Inc: 90.10
deg Az: 180.66 deg TVD:
7161.01 ft

S: 72 MD: 9245.00 ft Inc: 91.34
deg Az: 180.94 deg TVD:
7159.82 ft



9300

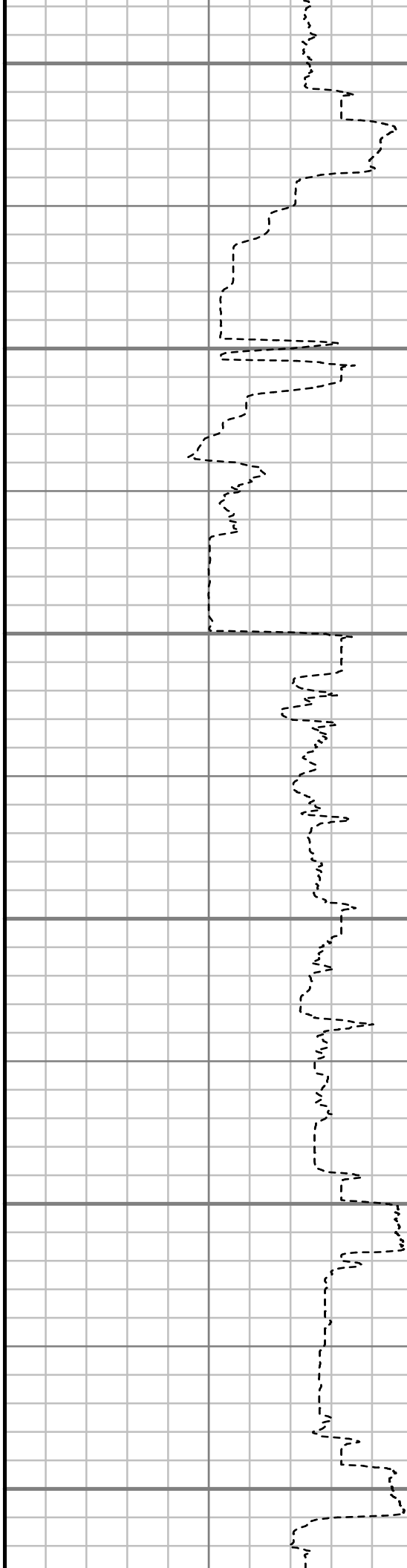
9400

9500

9600

9700

9800



S: 73 MD: 9339.00 ft Inc: 89.60
deg Az: 180.53 deg TVD:
7159.05 ft

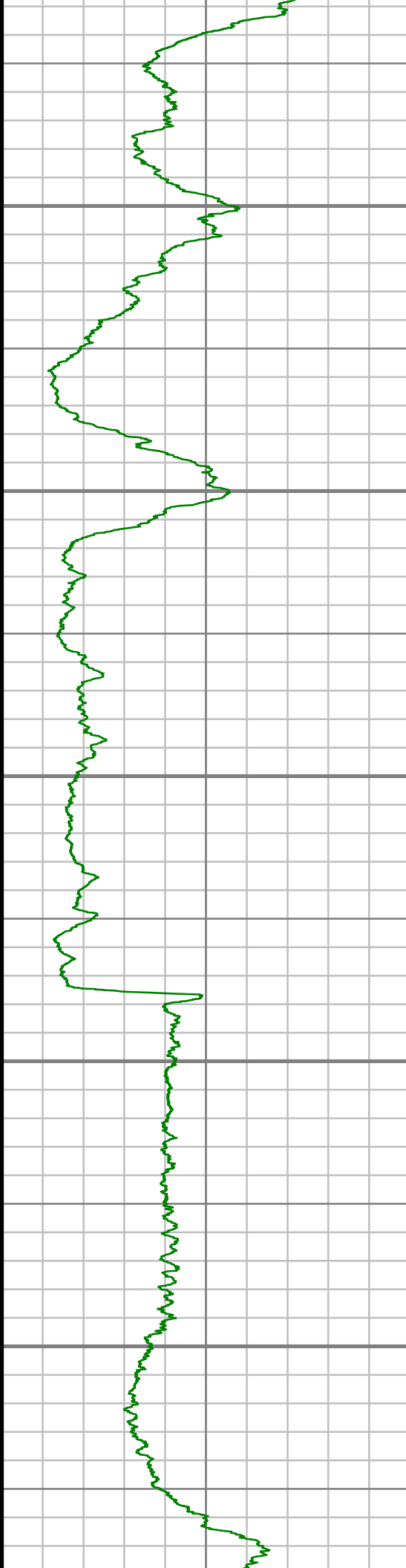
S: 74 MD: 9434.00 ft Inc: 89.73
deg Az: 180.44 deg TVD:
7159.60 ft

S: 75 MD: 9529.00 ft Inc: 88.99
deg Az: 180.48 deg TVD:
7160.66 ft

S: 76 MD: 9624.00 ft Inc: 88.09
deg Az: 179.72 deg TVD:
7163.08 ft

S: 77 MD: 9719.00 ft Inc: 89.19
deg Az: 179.84 deg TVD:
7165.34 ft

S: 78 MD: 9813.00 ft Inc: 90.07
deg Az: 180.16 deg TVD:
7167.61 ft



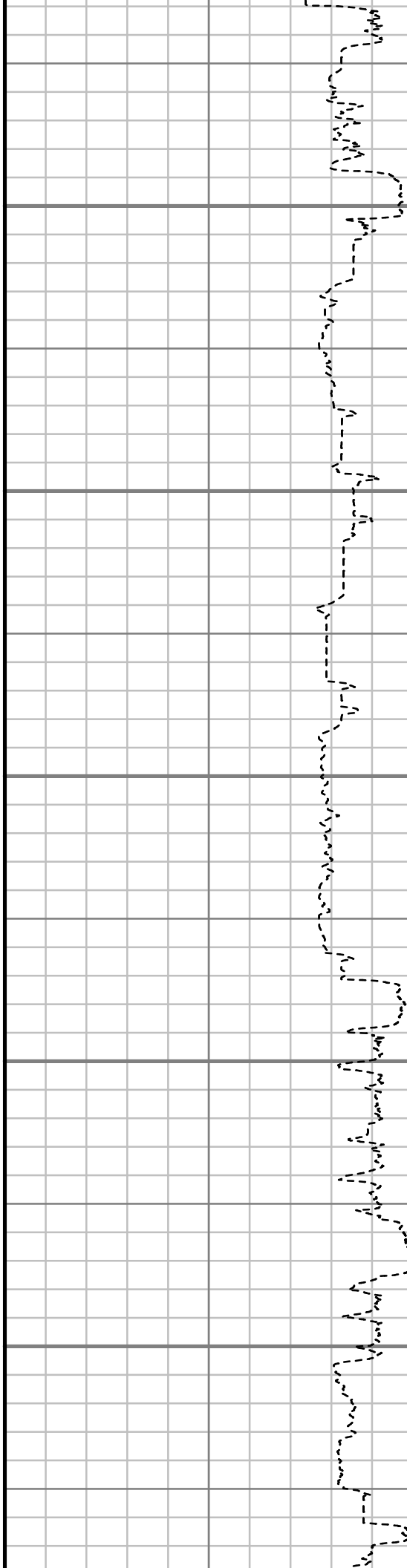
9900

10000

10100

10200

10300



7165.94 ft

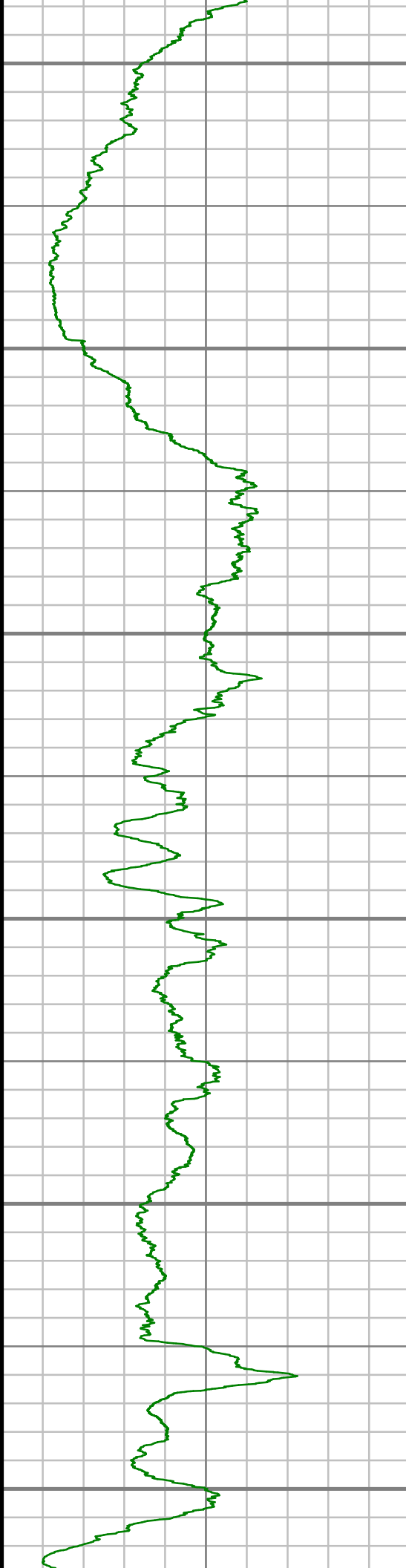
S: 79 MD: 9908.00 ft Inc: 90.91
deg Az: 180.46 deg TVD:
7165.14 ft

S: 80 MD: 10003.00 ft Inc:
90.77 deg Az: 180.98 deg TVD:
7163.74 ft

S: 81 MD: 10097.00 ft Inc:
92.02 deg Az: 181.39 deg TVD:
7161.46 ft

S: 82 MD: 10192.00 ft Inc:
91.04 deg Az: 181.01 deg TVD:
7158.92 ft

S: 83 MD: 10287.00 ft Inc:
89.23 deg Az: 180.59 deg TVD:
7158.70 ft



10400

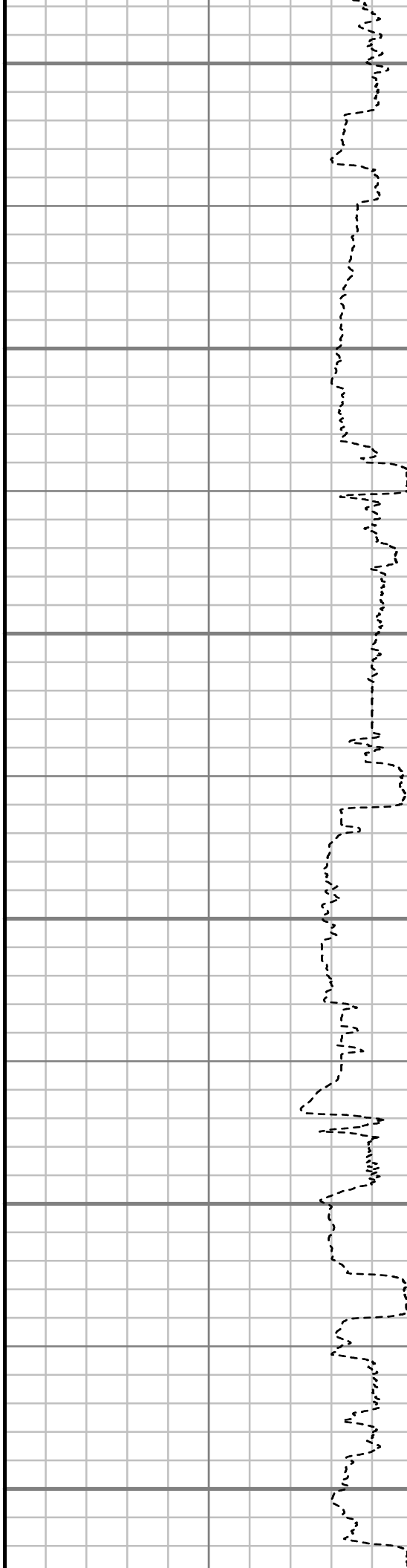
10500

10600

10700

10800

10900



S: 84 MD: 10382.00 ft Inc:
88.96 deg Az: 179.80 deg TVD:
7160.20 ft

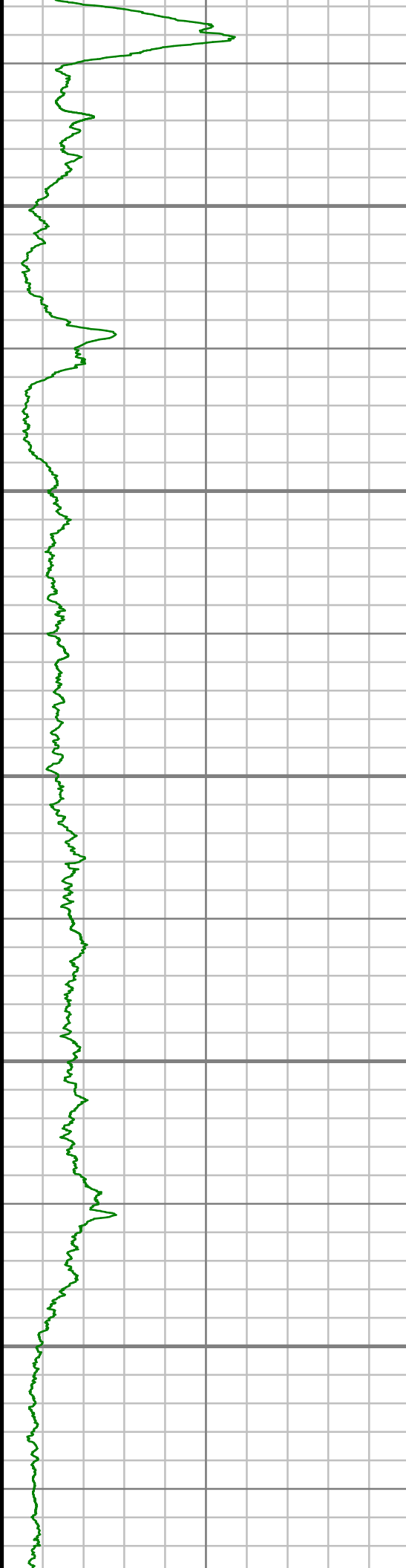
S: 85 MD: 10476.00 ft Inc:
89.97 deg Az: 179.72 deg TVD:
7161.08 ft

S: 86 MD: 10571.00 ft Inc:
90.10 deg Az: 179.40 deg TVD:
7161.03 ft

S: 87 MD: 10666.00 ft Inc:
88.05 deg Az: 178.98 deg TVD:
7162.56 ft

S: 88 MD: 10761.00 ft Inc:
87.48 deg Az: 179.12 deg TVD:
7166.26 ft

S: 89 MD: 10856.00 ft Inc:
87.95 deg Az: 179.30 deg TVD:
7170.05 ft



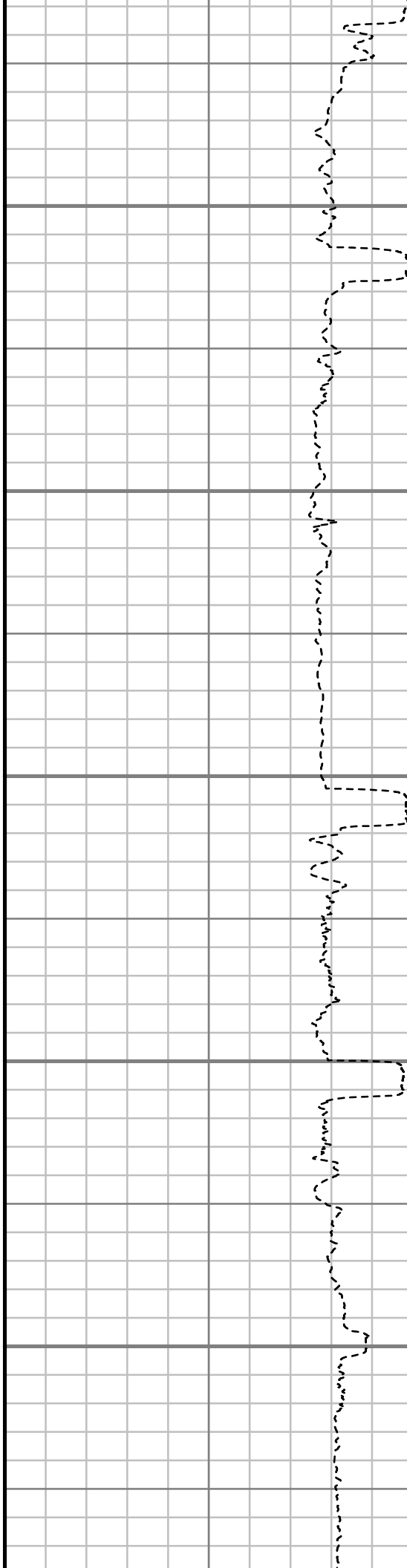
11000

11100

11200

11300

11400



S: 90 MD: 10951.00 ft Inc:
88.99 deg Az: 179.44 deg TVD:
7172.59 ft

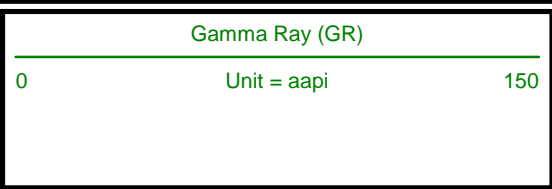
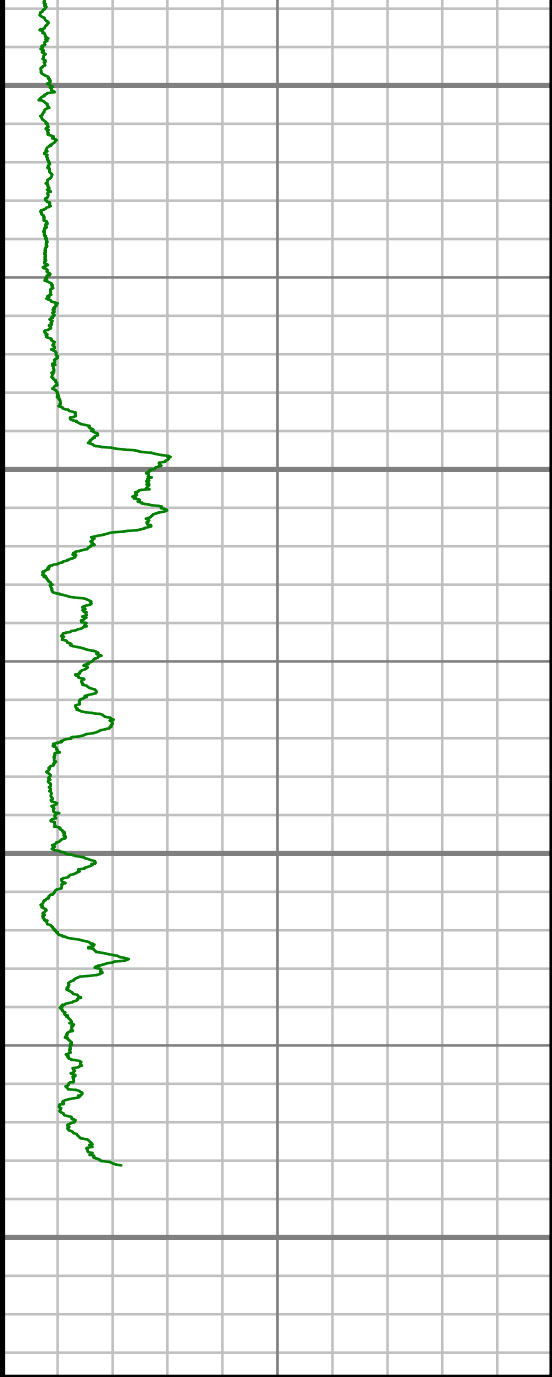
S: 91 MD: 11045.00 ft Inc:
90.84 deg Az: 178.77 deg TVD:
7172.72 ft

S: 92 MD: 11140.00 ft Inc:
92.48 deg Az: 179.18 deg TVD:
7169.97 ft

S: 93 MD: 11235.00 ft Inc:
91.31 deg Az: 179.06 deg TVD:
7166.83 ft

S: 94 MD: 11330.00 ft Inc:
89.90 deg Az: 178.77 deg TVD:
7165.83 ft

S: 95 MD: 11424.00 ft Inc:
91.21 deg Az: 179.26 deg TVD:
7164.92 ft



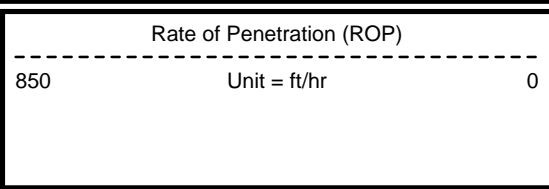
11500

11600

11700

11800

MEASURED DEPTH
1:600 (ft)



S: 96 MD: 11519.00 ft Inc:
89.87 deg Az: 178.90 deg TVD:
7164.03 ft

S: 97 MD: 11614.00 ft Inc:
88.12 deg Az: 178.79 deg TVD:
7165.70 ft

S: 98 MD: 11709.00 ft Inc:
88.45 deg Az: 178.18 deg TVD:
7168.53 ft

S: 99 MD: 11770.00 ft Inc:
88.49 deg Az: 177.55 deg TVD:
7170.16 ft

Comments



MWD Survey Report

Well Location	RUHL
Well Name	RUHL 1F-32H-B264
Survey Date	12/13/2014
Latitude	40°6'5.176"N
Longitude	104°34'24.823"W
Btotal	52511, 52514 nT
Dip	66.71 deg
Magnetic Declination	8.37 deg
North Reference	True North
Grid Correction	None
Depth Reference	RKB (25.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 180.00Azim (deg)
Operator(s)	C. WILSON, D. PADULA, S. WAXLER, T. LE

Well Notes

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	"/100ft
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Invalid
245.00	2.63	93.85	244.91	0.38	-0.38	5.61	5.62	93.85	1.07
336.00	3.21	83.75	335.80	0.24	-0.24	10.22	10.23	91.35	0.85
427.00	3.84	72.48	426.62	-0.95	0.95	15.66	15.69	86.52	1.03
519.00	5.02	68.79	518.35	-3.34	3.34	22.35	22.60	81.51	1.32
608.00	5.63	70.48	606.96	-6.20	6.20	30.09	30.72	78.35	0.70
698.00	6.16	73.42	696.49	-9.06	9.06	38.88	39.92	76.89	0.68
789.00	7.62	74.95	786.83	-12.02	12.02	49.38	50.82	76.32	1.61
879.00	7.35	77.73	876.06	-14.79	14.79	60.77	62.54	76.32	0.50
970.00	7.49	73.46	966.30	-17.71	17.71	72.14	74.28	76.20	0.63
1060.00	7.50	67.42	1055.53	-21.64	21.64	83.18	85.95	75.42	0.87
1162.00	7.33	64.36	1156.68	-27.01	27.01	95.20	98.95	74.16	0.42
1326.00	8.30	70.13	1319.16	-35.56	35.56	115.75	121.09	72.92	0.76
1510.00	8.99	72.46	1501.07	-44.40	44.40	141.95	148.73	72.63	0.42
1693.00	10.09	73.51	1681.54	-53.26	53.26	170.95	179.06	72.70	0.61
1873.00	10.37	70.07	1858.68	-63.26	63.26	201.29	211.00	72.55	0.37
2055.00	10.36	71.16	2037.71	-74.13	74.13	232.17	243.72	72.29	0.11
2236.00	9.99	70.72	2215.86	-84.57	84.57	262.39	275.68	72.14	0.21
2418.00	9.58	72.12	2395.22	-94.43	94.43	291.71	306.61	72.06	0.26

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
2599.00	10.07	76.21	2573.56	-102.83	102.83	321.42	337.47	72.26	0.47
2780.00	10.06	75.31	2751.77	-110.61	110.61	352.08	369.05	72.56	0.09
2969.00	11.22	71.45	2937.53	-120.64	120.64	385.47	403.91	72.62	0.72
3159.00	10.64	73.32	3124.08	-131.56	131.56	419.79	439.92	72.60	0.36
3348.00	9.70	78.11	3310.11	-139.84	139.84	452.09	473.23	72.81	0.67
3538.00	9.32	64.87	3497.52	-149.68	149.68	481.69	504.41	72.74	1.17
3727.00	10.31	76.40	3683.77	-160.15	160.15	511.98	536.44	72.63	1.16
3917.00	9.36	66.09	3870.99	-170.41	170.41	542.63	568.76	72.57	1.05
4106.00	11.03	72.64	4057.01	-182.04	182.04	573.95	602.13	72.40	1.08
4295.00	9.58	68.82	4242.96	-193.12	193.12	605.88	635.91	72.32	0.85
4484.00	11.40	71.97	4428.79	-204.58	204.58	638.31	670.29	72.23	1.01
4673.00	9.54	70.62	4614.64	-215.56	215.56	670.84	704.63	72.19	0.99
4863.00	10.05	61.93	4801.88	-228.58	228.58	700.32	736.68	71.92	0.82
5052.00	9.41	65.76	4988.16	-242.68	242.68	728.96	768.29	71.59	0.48
5242.00	9.28	74.71	5175.65	-253.10	253.10	757.90	799.05	71.53	0.77
5432.00	8.99	66.50	5363.25	-263.06	263.06	786.29	829.13	71.50	0.70
5621.00	8.64	70.87	5550.02	-273.60	273.60	813.25	858.04	71.41	0.40
5811.00	6.68	71.03	5738.31	-281.87	281.87	837.17	883.35	71.39	1.03

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
6000.00	3.90	72.40	5926.49	-287.38	287.38	853.69	900.76	71.39	1.47
6190.00	0.71	206.48	6116.36	-288.28	288.28	859.32	906.38	71.45	2.33
6379.00	0.76	125.03	6305.35	-286.50	286.50	859.82	906.30	71.57	0.51
6474.00	0.54	43.23	6400.34	-286.47	286.47	860.64	907.07	71.59	0.91
6569.00	0.58	27.05	6495.34	-287.22	287.22	861.17	907.80	71.56	0.17
6663.00	3.39	147.48	6589.29	-285.30	285.30	862.88	908.82	71.70	3.96
6758.00	8.79	159.19	6683.72	-276.13	276.13	866.97	909.89	72.33	5.80
6852.00	13.44	162.88	6775.93	-258.97	258.97	872.74	910.36	73.47	5.00
6947.00	21.41	166.88	6866.50	-231.49	231.49	879.94	909.88	75.26	8.48
7042.00	30.40	169.17	6951.87	-190.91	190.91	888.41	908.69	77.87	9.51
7136.00	39.21	170.57	7028.98	-138.13	138.13	897.77	908.33	81.25	9.41
7230.00	49.70	172.26	7095.98	-73.12	73.12	907.49	910.43	85.39	11.23
7273.00	58.05	172.36	7121.31	-38.73	38.73	912.13	912.96	87.57	19.43
7325.00	66.44	173.19	7145.51	6.88	-6.88	917.90	917.93	90.43	16.19
7372.00	74.62	176.31	7161.16	50.97	-50.97	921.92	923.33	93.16	18.49
7419.00	82.02	180.01	7170.68	96.93	-96.93	923.38	928.45	95.99	17.53
7449.00	85.32	180.89	7173.99	126.74	-126.74	923.14	931.80	97.82	11.41
7541.00	89.80	182.56	7177.90	218.59	-218.59	920.38	945.98	103.36	5.19

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
7635.00	90.40	183.15	7177.74	312.47	-312.47	915.70	967.54	108.84	0.89
7730.00	90.20	182.87	7177.24	407.34	-407.34	910.71	997.66	114.10	0.36
7825.00	89.83	183.07	7177.21	502.21	-502.21	905.79	1035.70	119.01	0.44
7920.00	91.71	183.12	7175.93	597.06	-597.06	900.65	1080.58	123.54	1.98
8014.00	91.17	183.12	7173.56	690.89	-690.89	895.54	1131.07	127.65	0.57
8109.00	92.08	183.41	7170.86	785.70	-785.70	890.13	1187.29	131.43	1.00
8204.00	91.55	183.16	7167.85	880.49	-880.49	884.69	1248.18	134.86	0.62
8299.00	90.74	182.88	7165.96	975.34	-975.34	879.69	1313.45	137.95	0.90
8393.00	90.70	183.00	7164.77	1069.21	-1069.21	874.86	1381.52	140.71	0.14
8488.00	90.30	182.60	7163.94	1164.09	-1164.09	870.22	1453.41	143.22	0.60
8582.00	90.74	181.71	7163.09	1258.02	-1258.02	866.68	1527.66	145.44	1.06
8676.00	90.97	181.19	7161.68	1351.98	-1351.98	864.31	1604.64	147.41	0.61
8771.00	89.60	179.78	7161.21	1446.97	-1446.97	863.50	1685.04	149.17	2.07
8866.00	90.07	179.57	7161.49	1541.97	-1541.97	864.04	1767.55	150.74	0.54
8960.00	89.56	179.65	7161.79	1635.97	-1635.97	864.67	1850.42	152.14	0.54
9055.00	90.64	180.33	7161.62	1730.97	-1730.97	864.69	1934.92	153.46	1.34
9150.00	90.10	180.66	7161.01	1825.96	-1825.96	863.87	2020.00	154.68	0.67
9245.00	91.34	180.94	7159.82	1920.94	-1920.94	862.54	2105.70	155.82	1.34

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
9339.00	89.60	180.53	7159.05	2014.93	-2014.93	861.33	2191.31	156.85	1.91
9434.00	89.73	180.44	7159.60	2109.92	-2109.92	860.53	2278.66	157.81	0.17
9529.00	88.99	180.48	7160.66	2204.91	-2204.91	859.77	2366.61	158.70	0.78
9624.00	88.09	179.72	7163.08	2299.88	-2299.88	859.60	2455.27	159.51	1.24
9719.00	89.19	179.84	7165.34	2394.85	-2394.85	859.97	2544.57	160.25	1.17
9813.00	90.07	180.16	7165.94	2488.85	-2488.85	859.97	2633.23	160.94	0.99
9908.00	90.91	180.46	7165.14	2583.84	-2583.84	859.45	2723.03	161.60	0.94
10003.00	90.77	180.98	7163.74	2678.82	-2678.82	858.26	2812.95	162.24	0.57
10097.00	92.02	181.39	7161.46	2772.77	-2772.77	856.31	2901.99	162.84	1.40
10192.00	91.04	181.01	7158.92	2867.72	-2867.72	854.32	2992.27	163.41	1.10
10287.00	89.23	180.59	7158.70	2962.70	-2962.70	852.99	3083.05	163.94	1.96
10382.00	88.96	179.80	7160.20	3057.69	-3057.69	852.66	3174.35	164.42	0.88
10476.00	89.97	179.72	7161.08	3151.68	-3151.68	853.06	3265.09	164.85	1.08
10571.00	90.10	179.40	7161.03	3246.68	-3246.68	853.79	3357.07	165.27	0.37
10666.00	88.05	178.98	7162.56	3341.65	-3341.65	855.14	3449.33	165.65	2.20
10761.00	87.48	179.12	7166.26	3436.57	-3436.57	856.72	3541.75	166.00	0.62
10856.00	87.95	179.30	7170.05	3531.48	-3531.48	858.02	3634.22	166.34	0.53
10951.00	88.99	179.44	7172.59	3626.44	-3626.44	859.07	3726.80	166.67	1.11

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
11045.00	90.84	178.77	7172.72	3720.43	-3720.43	860.54	3818.65	166.98	2.09
11140.00	92.48	179.18	7169.97	3815.37	-3815.37	862.24	3911.58	167.27	1.79
11235.00	91.31	179.06	7166.83	3910.30	-3910.30	863.70	4004.55	167.54	1.24
11330.00	89.90	178.77	7165.83	4005.28	-4005.28	865.50	4097.72	167.81	1.51
11424.00	91.21	179.26	7164.92	4099.26	-4099.26	867.11	4189.96	168.06	1.49
11519.00	89.87	178.90	7164.03	4194.24	-4194.24	868.63	4283.24	168.30	1.47
11614.00	88.12	178.79	7165.70	4289.20	-4289.20	870.55	4376.65	168.53	1.84
11709.00	88.45	178.18	7168.53	4384.12	-4384.12	873.06	4470.21	168.74	0.74
11770.00	88.49	177.55	7170.16	4445.06	-4445.06	875.33	4530.43	168.86	1.03

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

2" = 100' FEET MD