

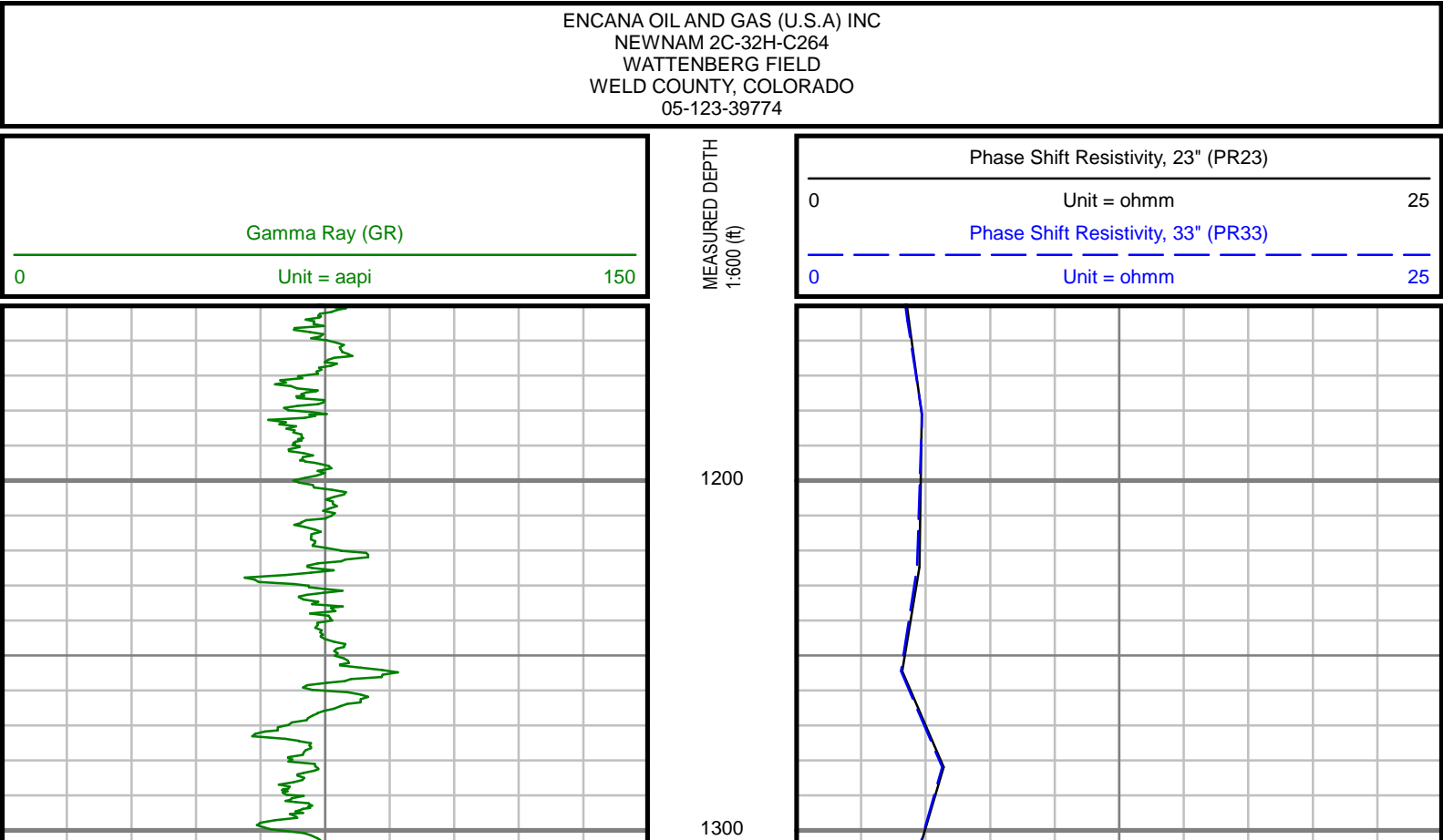


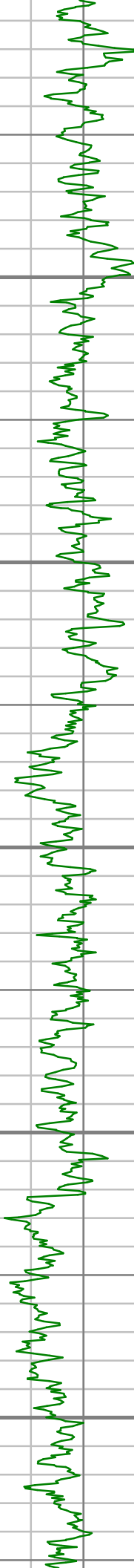
2" = 100' FEET MD

COMPANY : ENCANA OIL AND GAS (USA) INC WELL : NEWNAM 2C-32H-C264 FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-39774										COMPANY : ENCANA OIL AND GAS (USA) INC WELL : NEWNAM 2C-32H-C264 FIELD : WATTENBERG COUNTY : WELD STATE : COLORADO COUNTRY : U.S.A. UWI : 05-123-39774									
WELL LOCATION LAT:40°6'5.285"N LONG:104°34'43.093"W N:1281148.14 ft E:3257734.47 ft SEC:32 TWP:2N RANGE:64W										OTHER SERVICES									
DEPTH REF. : RKB REF. HEIGHT : 13.000 ft GROUND LEVEL : 4953.000 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	132	1032	0 - 11		132	1032													
8.75	1032	7771	11 - 87		1032	7771													
CASING RECORD																			
CASING SIZE in	FROM ft	TO ft																	
9.625	0	1022																	
7	0	7756																	
DRILLING CO. : ENSIGN RLG:124 LMD UNIT NO. : C70-EM4#83DISTRICT: CASPER SPUD DATE: 11/06/2014 LMD START DATE: 11/07/2014 LMD END DATE: 11/10/2014										DEPTH: 132 ft DEPTH: 7771 ft TOTAL DEPTH: 7771 ft									

Remarks
ENCANA OIL AND GAS (USA) INC PRODUCTION AFE# 13179811
SCIENTIFIC DRILLING INTERNATIONAL JOB# 219238
ALL REFERENCES IN THE DEPTH TRACK ARE AT BIT DEPTH.
ALL DATA IS MEMORY DATA UNLESS STATED OTHERWISE.
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO GAMMA RAY CURVE
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO PHASE SHIFT RESISTIVITY, 23" CURVE
FLAT AVERAGE FILTER OF 1.00 FT APPLIED TO PHASE SHIFT RESISTIVITY, 33" CURVE
RUN #1: MWD / DIRECTIONAL RUN
SENSORS S/N: PULSER = 128-063 / CONT = 865 / MWD EYE = 1012 / GMWD = 012
BIT TO SENSOR OFFSETS: SURVEY = 62.22 FT. / GYRO = 49.24 FT.
RUN #2: MWD / GAMMA RAY / PROPAGATION RESISTIVITY LOGGING RUN
SENSORS S/N: PULSER = 128-003 / CONT = 218 / MWD EYE = 0809 / PRT = 323 / GAMMA RAY = 1194
BIT TO SENSOR OFFSETS: SURVEY = 57.27 FT. / RESISTIVITY = 46.04 FT. / GAMMA RAY = 40.30 FT.
MNEMONICS LIST:
GR = GAMMA RAY
PR23 = PHASE SHIFT RESISTIVITY, 23"
PR33 = PHASE SHIFT RESISTIVITY, 33"

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.





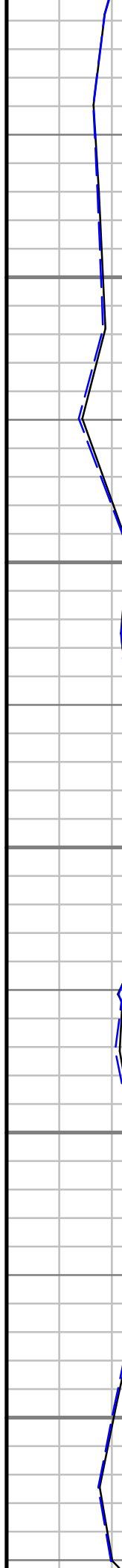
1400

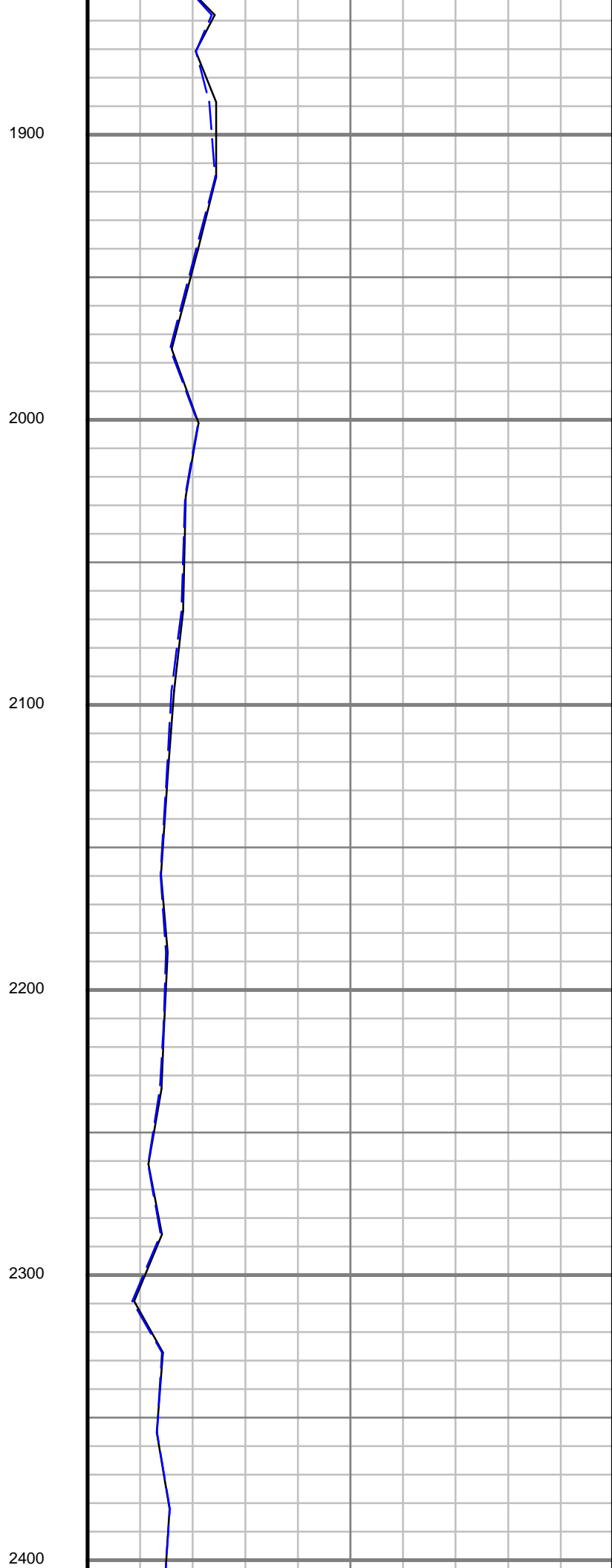
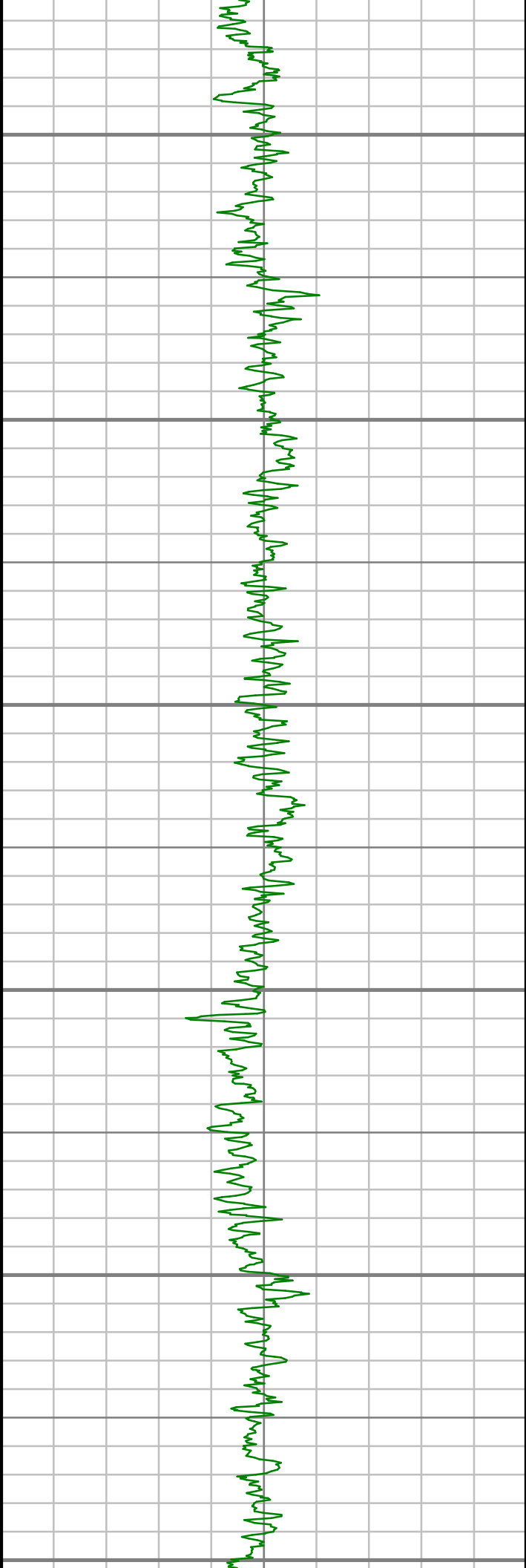
1500

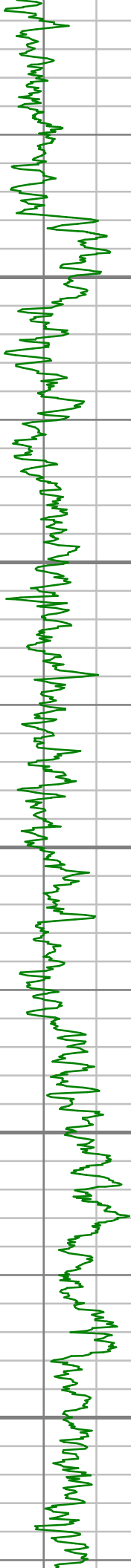
1600

1700

1800







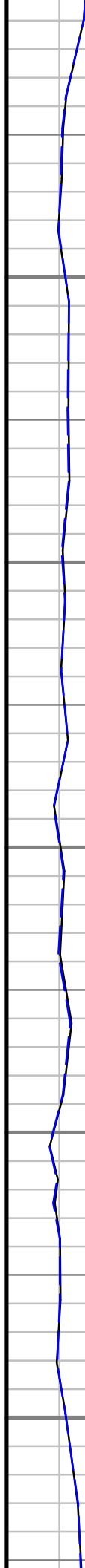
2500

2600

2700

2800

2900





3000

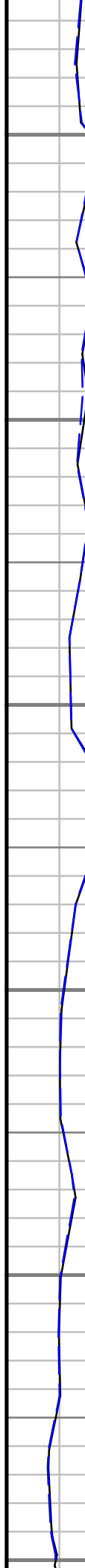
3100

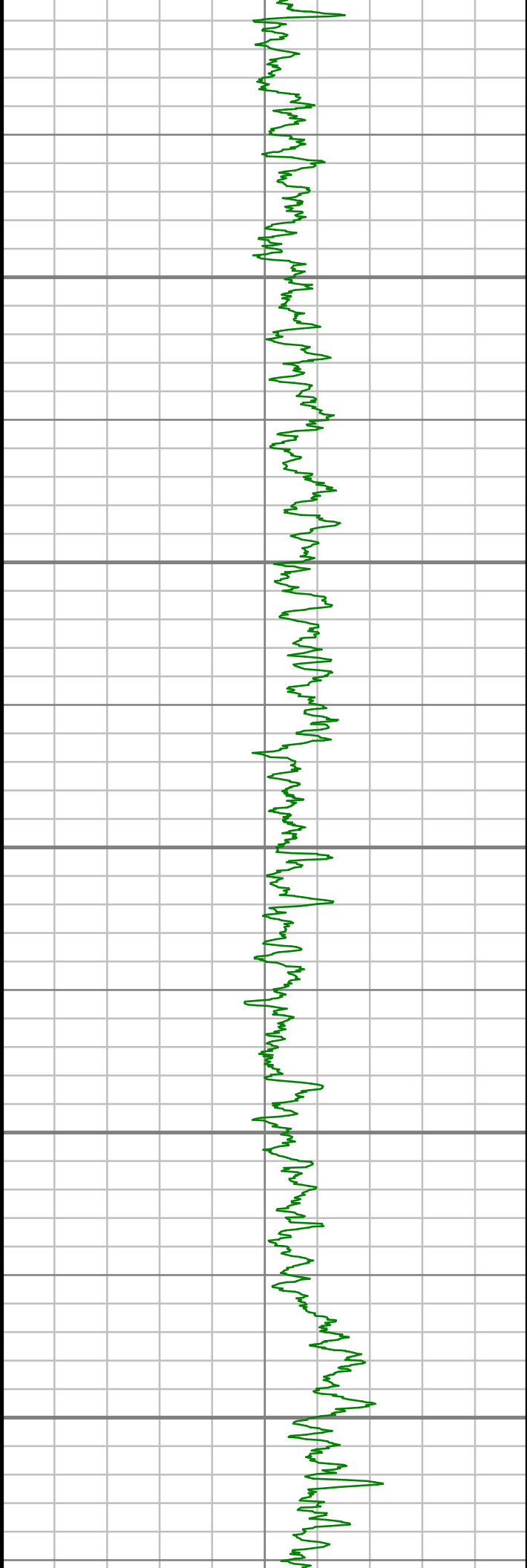
3200

3300

3400

3500





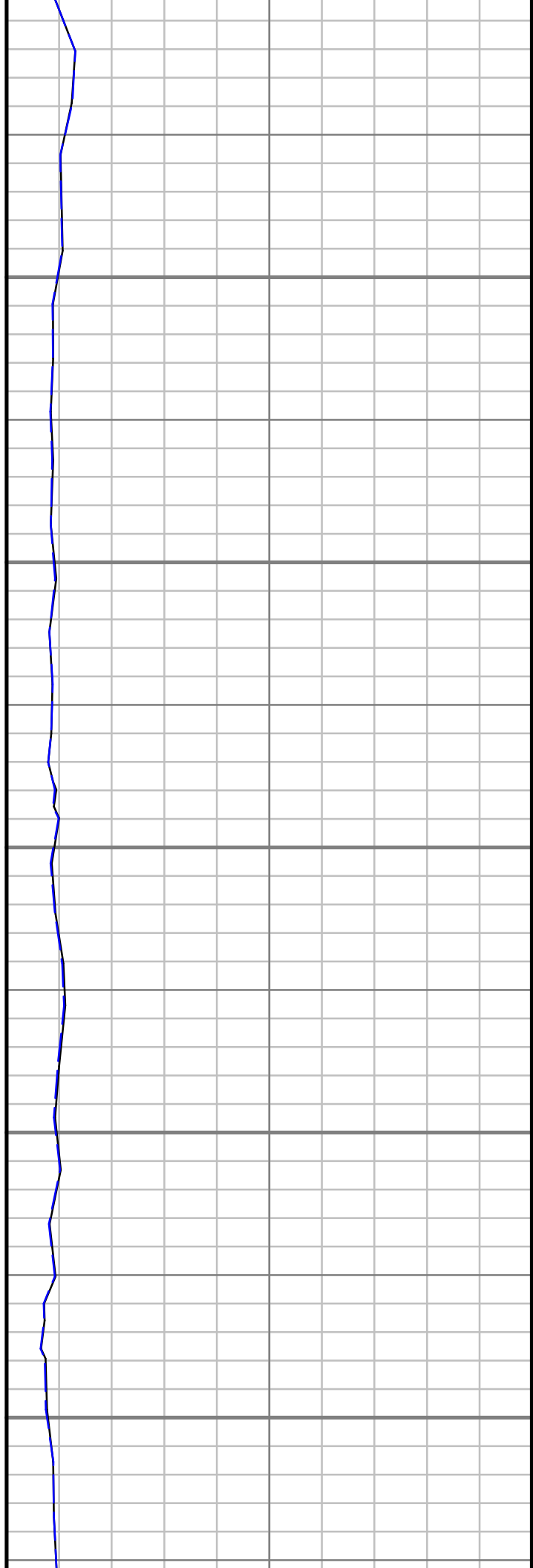
3600

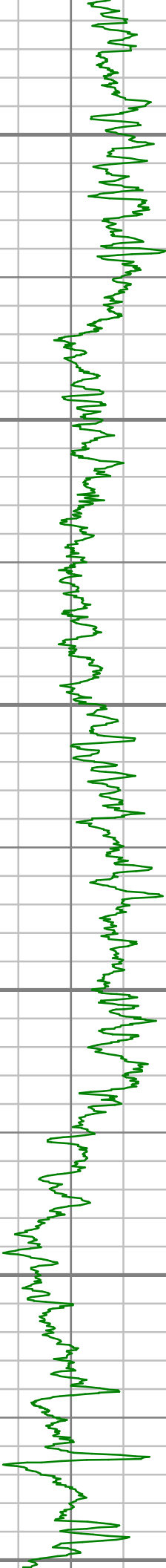
3700

3800

3900

4000





4100

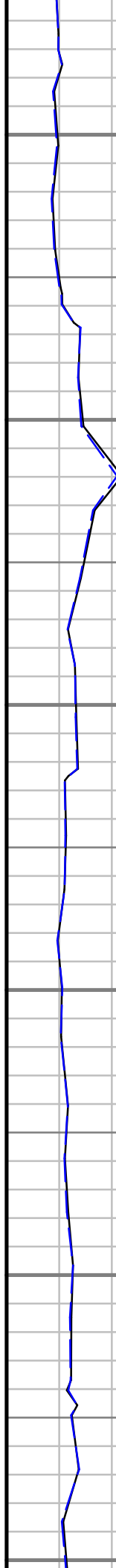
4200

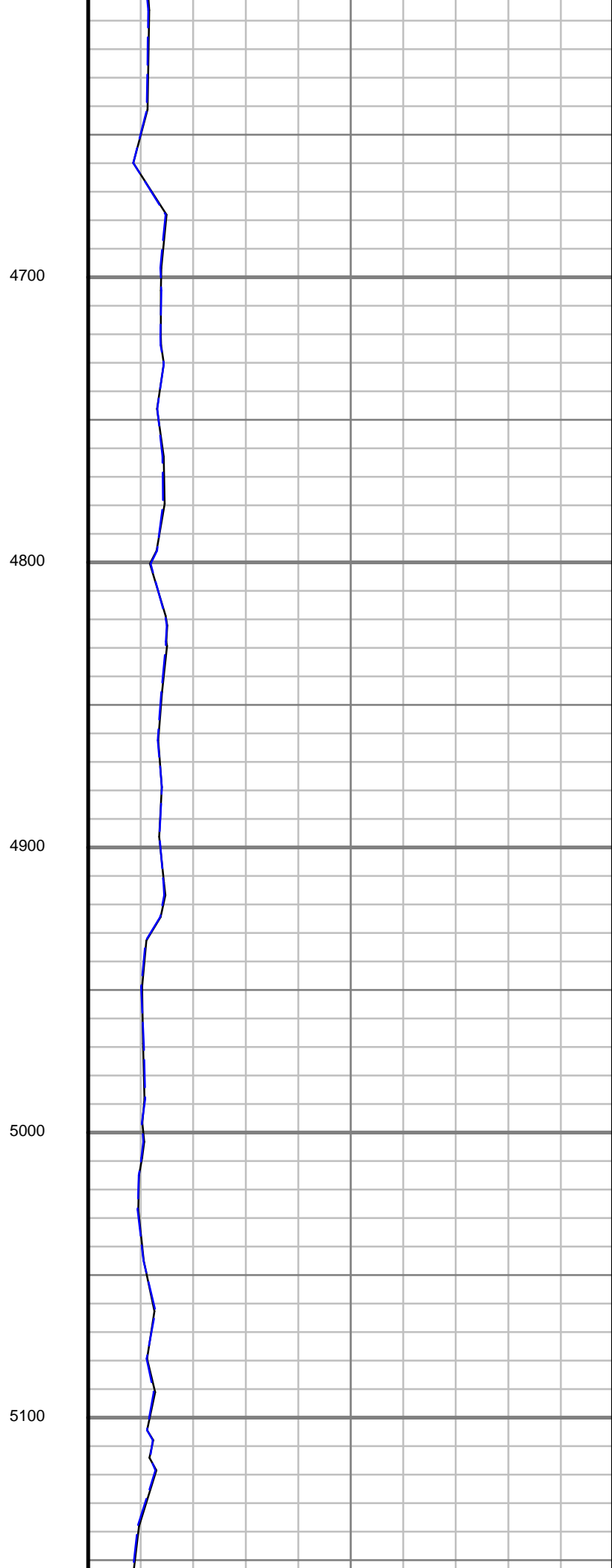
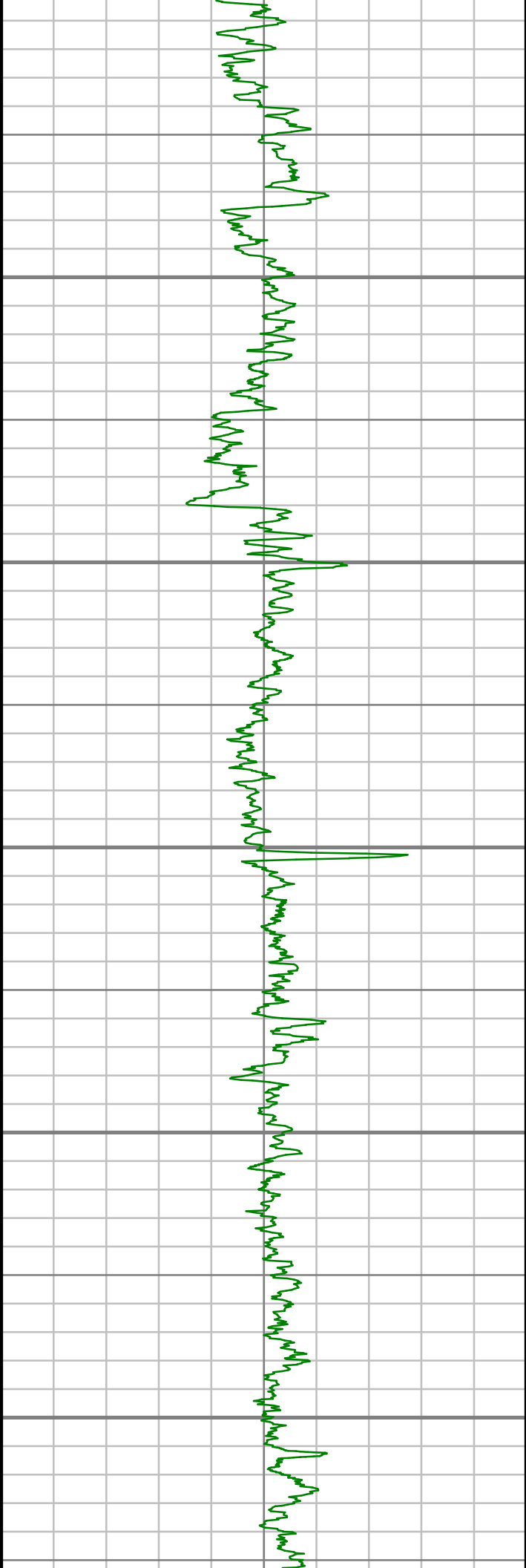
4300

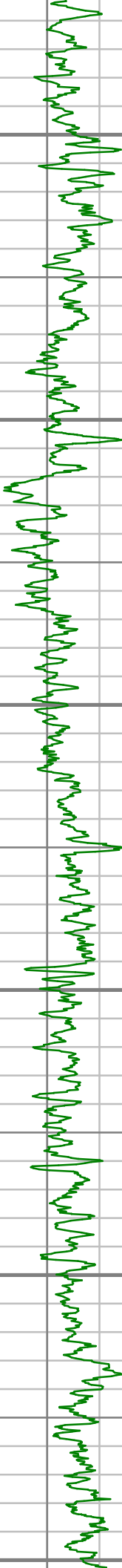
4400

4500

4600







5200

5300

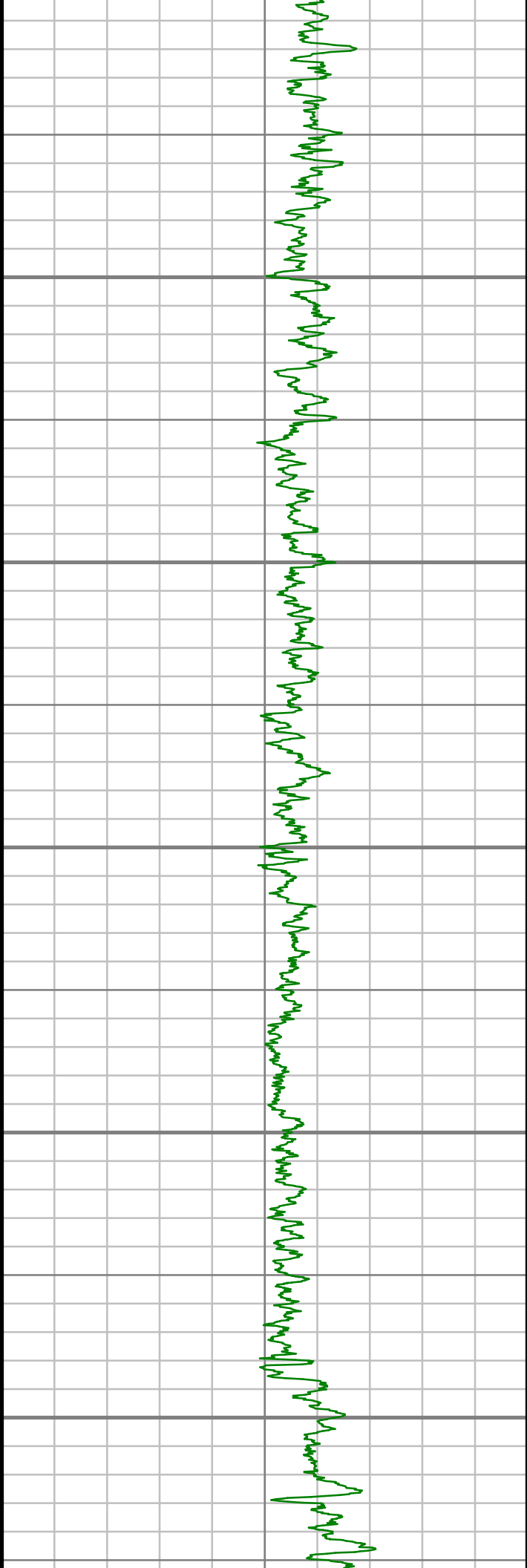
5400

5500

5600

5700





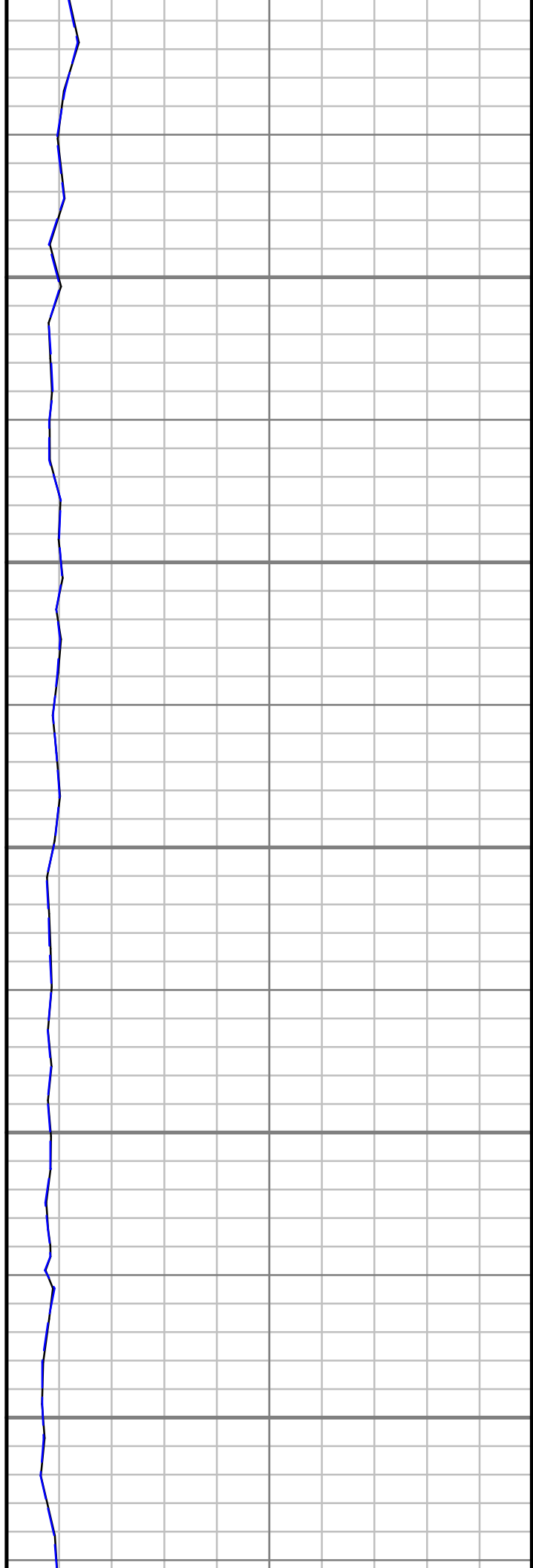
5800

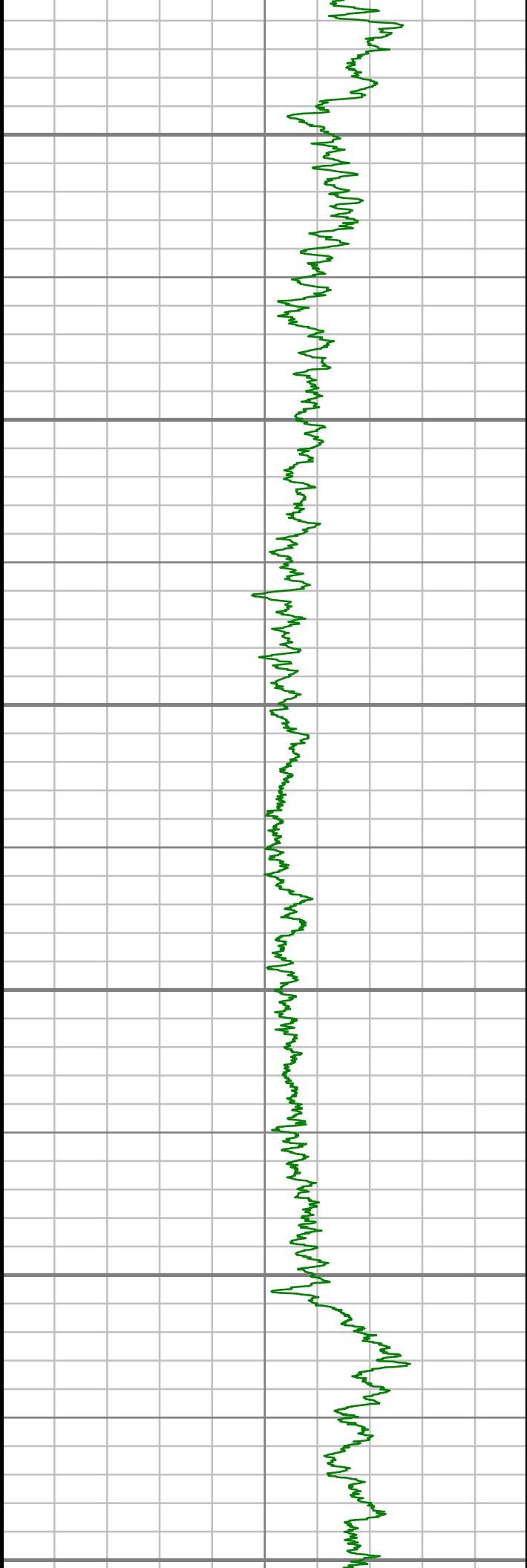
5900

6000

6100

6200





6300

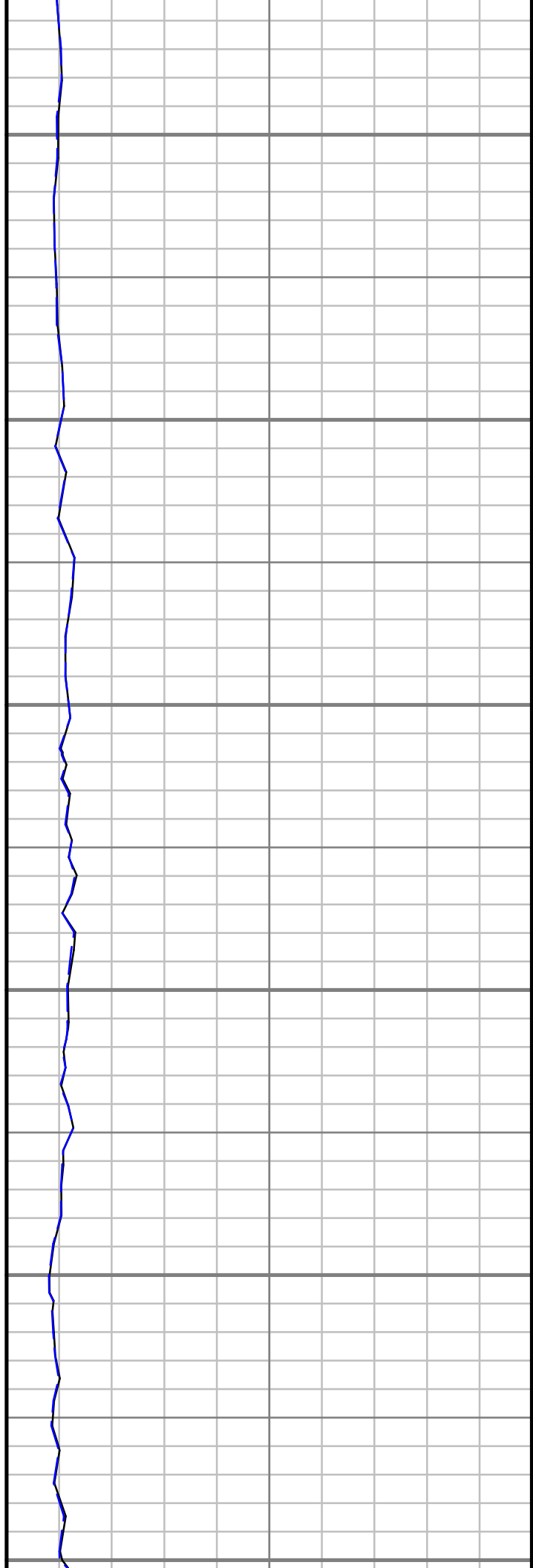
6400

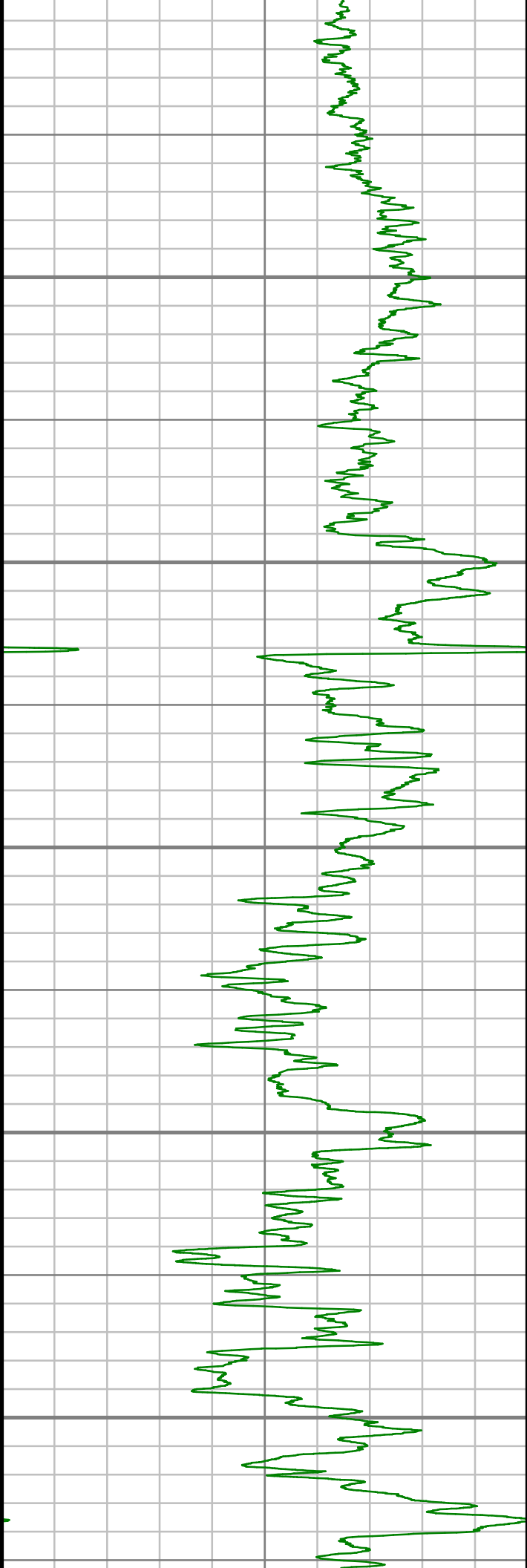
6500

6600

6700

6800





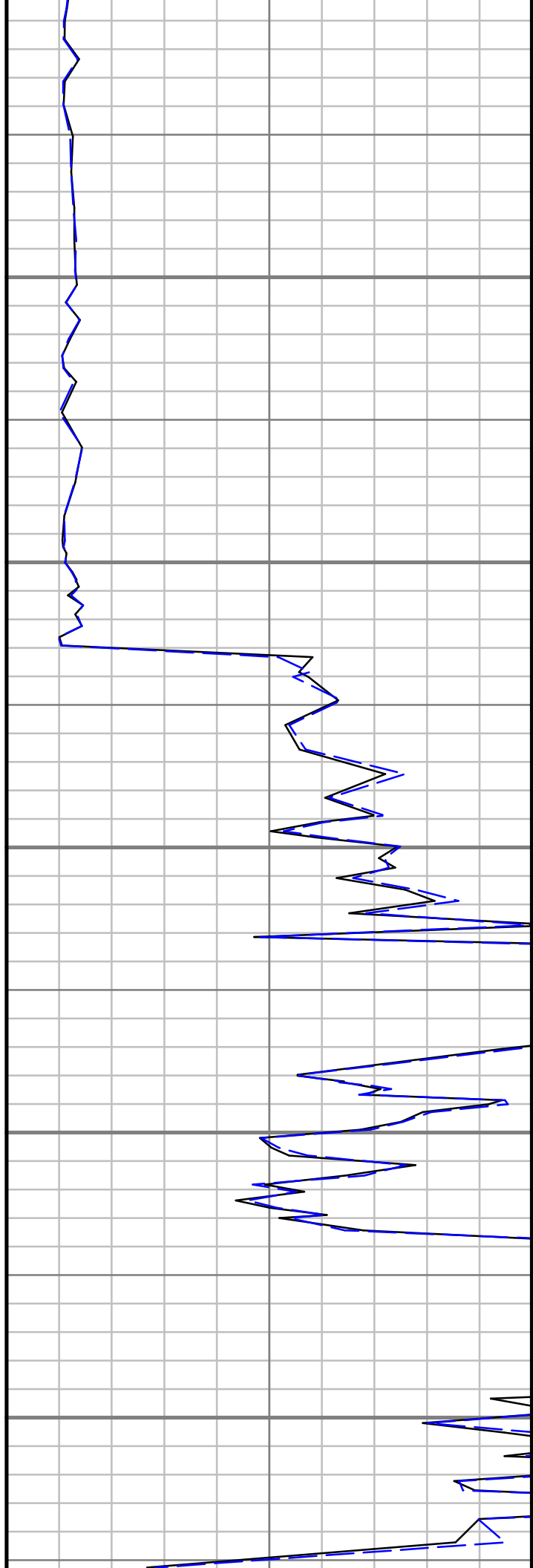
6900

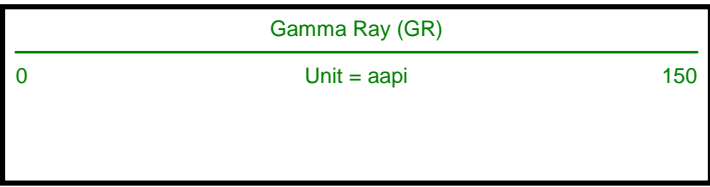
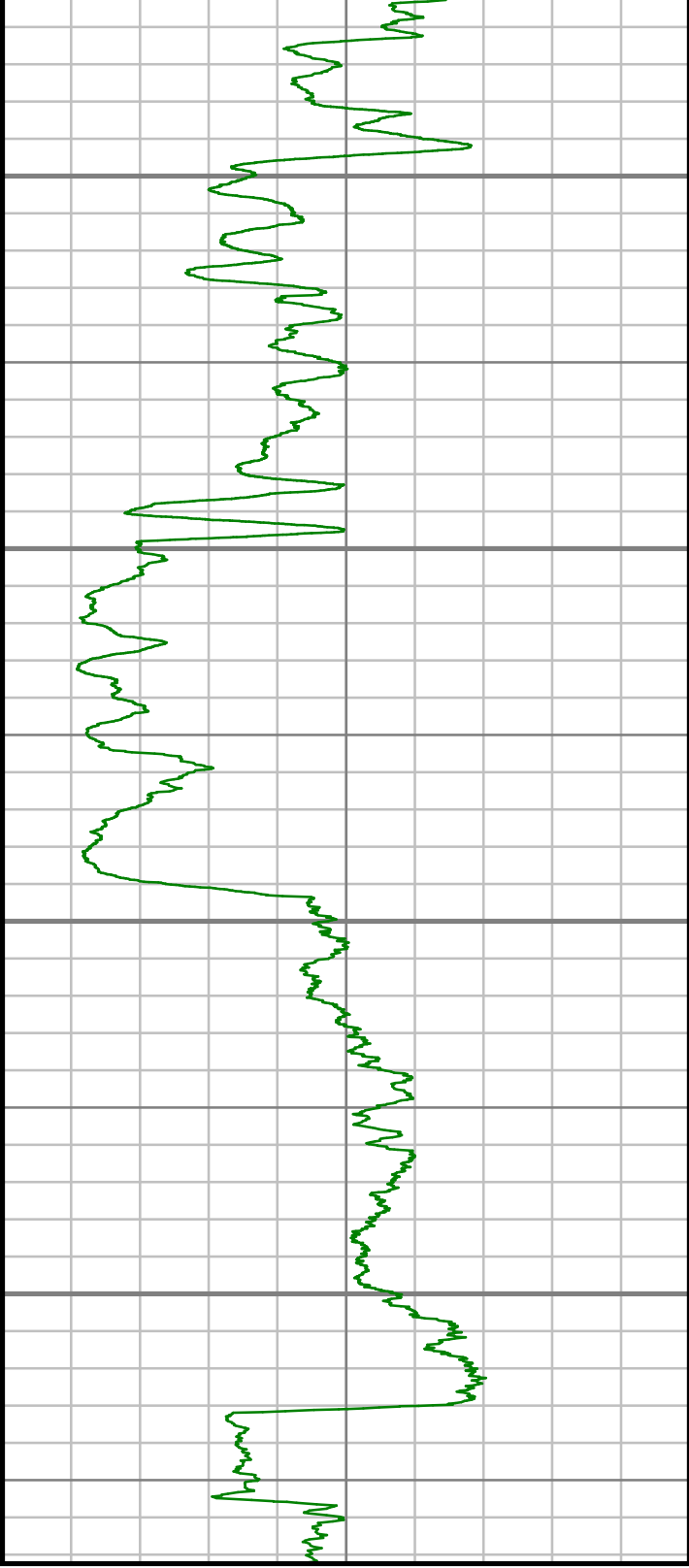
7000

7100

7200

7300





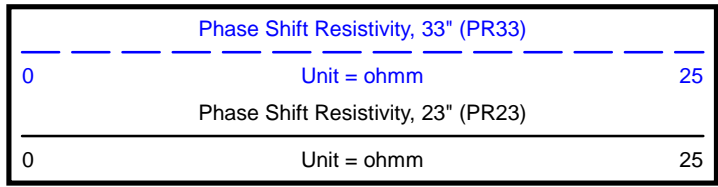
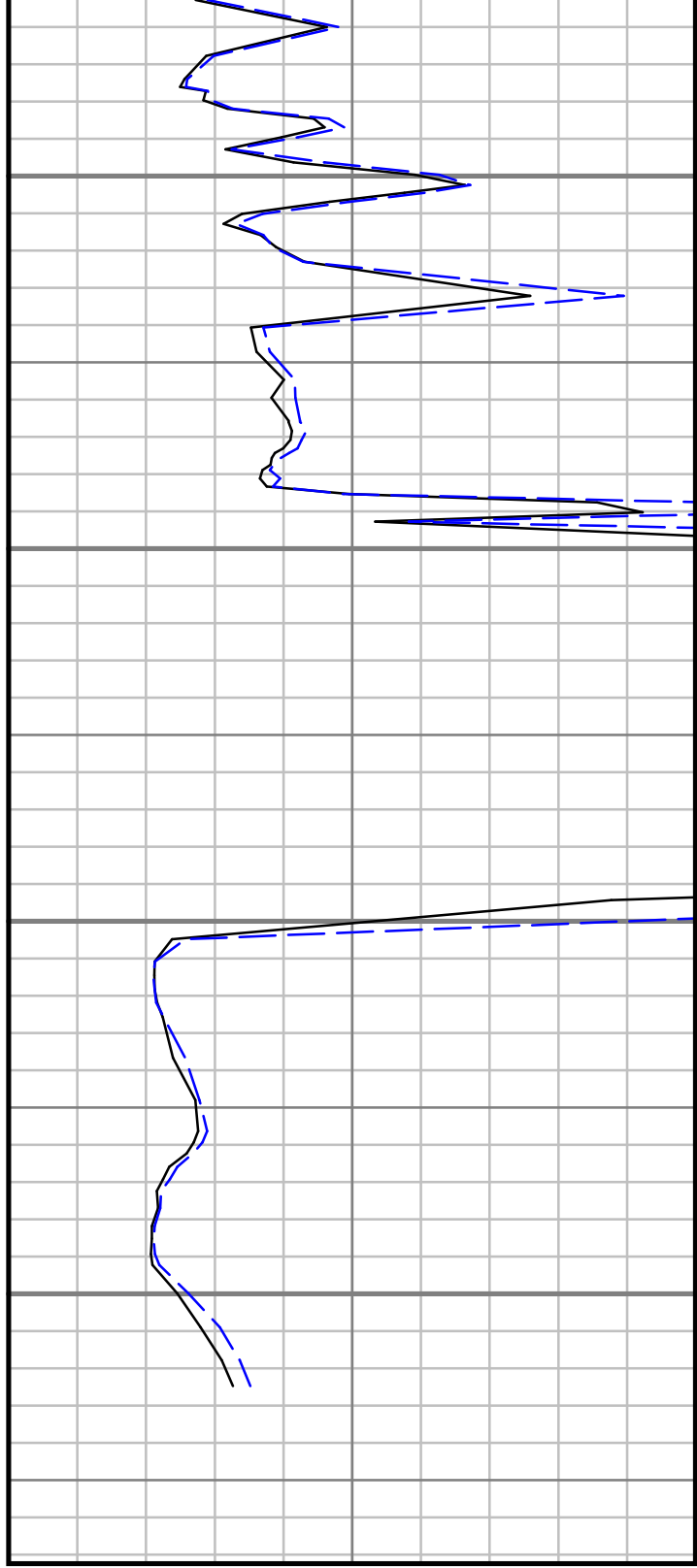
MEASURED DEPTH
1:600 (ft)

7400

7500

7600

7700





MWD Survey Report

Well Location	NEWNAM
Well Name	NEWNAM 2C-32H-C264
Survey Date	11/6/2014
Latitude	40°6'5.285"N
Longitude	104°34'43.093"W
Btotal	52524 nT
Dip	66.72 deg
Magnetic Declination	8.38 deg
North Reference	True North
Grid Correction	None
Depth Reference	RKB (13.00 ft)
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 194.03Azim (deg)
Operator(s)	J. SMITH, M. SMITH, T. WHEELER

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
159.00	0.35	266.75	159.00	0.15	-0.03	-0.49	0.49	266.75	0.22
251.00	1.06	272.81	250.99	0.39	0.00	-1.62	1.62	269.92	0.77
344.00	2.20	284.50	343.95	0.55	0.49	-4.20	4.23	276.61	1.27
424.00	3.71	293.80	423.84	0.09	1.92	-8.05	8.28	283.38	1.97
517.00	5.58	289.83	516.54	-0.87	4.66	-15.06	15.76	287.21	2.04
795.00	9.77	282.41	791.99	-1.57	14.32	-50.82	52.80	285.74	1.55
888.00	11.29	277.02	883.42	-0.24	17.13	-67.57	69.71	284.23	1.95
968.00	11.49	275.58	961.85	1.89	18.86	-83.27	85.38	282.76	0.44
1271.00	14.54	286.67	1257.08	4.57	32.71	-149.77	153.30	282.32	1.30
1457.00	14.64	285.46	1437.08	2.91	45.68	-194.79	200.07	283.20	0.17
1648.00	14.89	282.39	1621.77	3.01	57.38	-242.02	248.73	283.34	0.43
1838.00	15.01	278.24	1805.35	6.19	66.14	-290.22	297.66	282.84	0.57
2029.00	14.97	286.78	1989.87	7.51	76.80	-338.32	346.93	282.79	1.15
2220.00	15.20	283.26	2174.29	6.66	89.67	-386.32	396.59	283.07	0.49
2410.00	14.11	279.78	2358.11	8.71	99.32	-433.40	444.63	282.91	0.74
2601.00	13.97	285.92	2543.41	9.68	109.60	-478.52	490.91	282.90	0.78
2791.00	12.66	282.09	2728.30	9.63	120.25	-520.93	534.63	283.00	0.83
2982.00	13.28	285.41	2914.43	9.81	130.46	-562.54	577.47	283.06	0.51

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	Closure Distance ft	Closure Direction deg	DLS °/100ft
3173.00	15.31	287.87	3099.51	7.59	144.03	-607.69	624.53	283.33	1.11
3363.00	14.42	287.02	3283.15	4.68	158.65	-654.18	673.15	283.63	0.48
3553.00	14.59	285.20	3467.10	2.95	171.85	-699.90	720.69	283.80	0.26
3743.00	12.08	282.70	3651.96	2.92	182.50	-742.40	764.50	283.81	1.36
3934.00	12.48	284.38	3838.59	3.26	192.02	-781.89	805.12	283.80	0.28
4124.00	13.84	284.12	4023.60	3.10	202.66	-823.82	848.38	283.82	0.72
4315.00	16.16	280.35	4208.08	4.77	213.01	-872.12	897.76	283.73	1.32
4505.00	15.54	278.86	4390.86	8.76	221.69	-923.28	949.52	283.50	0.39
4696.00	13.97	284.09	4575.56	11.04	231.24	-970.93	998.08	283.40	1.08
4886.00	10.67	279.52	4761.17	12.40	239.73	-1010.52	1038.57	283.35	1.81
5077.00	6.59	279.51	4949.96	14.65	244.47	-1038.79	1067.17	283.24	2.14
5267.00	4.06	287.57	5139.13	15.10	248.31	-1055.96	1084.77	283.23	1.38
5457.00	2.48	284.06	5328.81	14.68	251.34	-1066.37	1095.59	283.26	0.84
5647.00	1.95	266.90	5518.67	15.63	252.16	-1073.60	1102.82	283.22	0.44
5837.00	1.17	177.64	5708.62	18.44	250.06	-1076.76	1105.41	283.07	1.19
6027.00	1.50	149.22	5898.57	22.06	245.99	-1075.40	1103.18	282.88	0.38
6218.00	1.22	99.69	6089.53	23.69	243.49	-1072.13	1099.43	282.80	0.61
6408.00	1.46	112.90	6279.47	23.91	242.21	-1067.91	1095.04	282.78	0.21

MD ft	Inc deg	Azim deg	TVD ft	VS ft	+N/-S ft	+E/-W ft	Closure Distance ft	Closure Direction deg	DLS °/100ft
6503.00	1.53	125.99	6374.44	24.57	241.00	-1065.77	1092.68	282.74	0.37
6597.00	7.37	161.04	6468.13	30.10	234.55	-1062.80	1088.37	282.45	6.57
6693.00	16.50	166.72	6561.96	47.41	215.43	-1057.65	1079.37	281.51	9.58
6788.00	23.48	171.05	6651.18	76.86	183.56	-1051.60	1067.50	279.90	7.51
6883.00	29.85	177.12	6736.05	116.95	141.20	-1047.47	1056.94	277.68	7.28
6978.00	35.79	179.51	6815.86	166.51	89.76	-1046.04	1049.88	274.90	6.39
7074.00	41.28	180.86	6890.93	224.56	29.99	-1046.27	1046.70	271.64	5.79
7169.00	47.33	181.95	6958.88	289.28	-36.32	-1047.93	1048.56	268.02	6.42
7264.00	54.01	182.90	7019.06	361.23	-109.69	-1051.07	1056.77	264.04	7.07
7360.00	62.27	181.71	7069.69	440.98	-191.09	-1054.30	1071.48	259.73	8.66
7455.00	70.01	181.12	7108.09	525.70	-277.87	-1056.43	1092.37	255.26	8.17
7502.00	72.56	181.25	7123.17	569.09	-322.38	-1057.35	1105.41	253.04	5.43
7550.00	76.14	180.95	7136.12	614.13	-368.58	-1058.24	1120.59	250.80	7.49
7597.00	79.52	181.44	7146.03	658.92	-414.51	-1059.20	1137.42	248.63	7.27
7645.00	82.90	182.12	7153.36	705.27	-461.91	-1060.67	1156.89	246.47	7.17
7712.00	87.61	183.40	7158.91	770.73	-528.58	-1063.89	1187.97	243.58	7.28
7817.00	90.90	183.02	7160.27	873.84	-633.40	-1069.77	1243.22	239.37	3.16
7910.00	90.47	182.43	7159.16	965.03	-726.28	-1074.18	1296.67	235.94	0.79

MD	Inc	Azim	TVD	VS	+N-S	+E-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
8005.00	91.04	182.02	7157.91	1058.01	-821.20	-1077.87	1355.06	232.70	0.73
8101.00	92.01	181.79	7155.35	1151.84	-917.11	-1081.07	1417.68	229.69	1.04
8196.00	91.95	181.41	7152.07	1244.56	-1012.02	-1083.72	1482.78	226.96	0.42
8291.00	92.12	180.96	7148.71	1337.12	-1106.94	-1085.68	1550.49	224.44	0.50
8387.00	90.50	180.49	7146.51	1430.51	-1202.90	-1086.89	1621.20	222.10	1.75
8482.00	91.41	180.58	7144.93	1522.88	-1297.89	-1087.77	1693.45	219.97	0.96
8577.00	86.38	176.87	7146.76	1614.45	-1392.80	-1085.66	1765.94	217.94	6.58
8673.00	88.49	177.54	7151.06	1706.24	-1488.58	-1080.99	1839.68	215.99	2.31
8768.00	89.97	180.59	7152.34	1798.00	-1583.55	-1079.45	1916.46	214.28	3.56
8863.00	90.97	180.56	7151.56	1890.39	-1678.54	-1080.40	1996.18	212.77	1.06
8959.00	92.31	181.98	7148.81	1983.97	-1774.47	-1082.52	2078.60	211.39	2.04
9054.00	92.61	181.37	7144.73	2076.69	-1869.34	-1085.30	2161.55	210.14	0.71
9149.00	88.06	179.04	7144.17	2168.90	-1964.31	-1085.64	2244.35	208.93	5.39
9245.00	89.80	180.15	7145.97	2261.85	-2060.28	-1084.96	2328.50	207.77	2.15
9340.00	91.61	182.16	7144.80	2354.45	-2155.25	-1086.88	2413.79	206.76	2.85
9435.00	91.84	181.43	7141.94	2447.25	-2250.16	-1089.86	2500.20	205.84	0.80
9530.00	91.04	181.56	7139.55	2539.95	-2345.09	-1092.34	2587.02	204.98	0.86
9626.00	91.14	180.88	7137.72	2633.55	-2441.05	-1094.39	2675.15	204.15	0.72

MD	Inc	Azim	TVD	VS	+N-S	+E-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
9721.00	91.61	181.07	7135.44	2726.07	-2536.01	-1096.01	2762.72	203.37	0.54
9816.00	91.24	180.36	7133.07	2818.48	-2630.98	-1097.20	2850.59	202.64	0.84
9911.00	91.24	181.12	7131.02	2910.92	-2725.94	-1098.43	2938.93	201.95	0.80
10006.00	90.10	180.04	7129.91	3003.30	-2820.93	-1099.39	3027.59	201.29	1.65
10101.00	89.06	180.12	7130.60	3095.50	-2915.93	-1099.52	3116.34	200.66	1.10
10196.00	89.66	180.89	7131.66	3187.86	-3010.92	-1100.36	3205.68	200.08	1.03
10292.00	88.76	180.24	7132.98	3281.21	-3106.90	-1101.30	3296.31	199.52	1.16
10387.00	89.70	180.18	7134.26	3373.45	-3201.89	-1101.65	3386.11	198.99	0.99
10482.00	90.87	181.75	7133.79	3465.98	-3296.87	-1103.25	3476.57	198.50	2.07
10577.00	90.77	181.40	7132.43	3558.74	-3391.82	-1105.87	3567.55	198.06	0.39
10673.00	92.68	181.66	7129.53	3652.41	-3487.74	-1108.43	3659.64	197.63	2.01
10768.00	91.11	180.26	7126.39	3744.90	-3582.67	-1110.01	3750.69	197.21	2.22
10863.00	89.09	180.44	7126.23	3837.20	-3677.66	-1110.60	3841.70	196.80	2.12
10959.00	89.23	181.16	7127.63	3930.64	-3773.64	-1111.94	3934.06	196.42	0.76
11054.00	89.09	181.84	7129.02	4023.37	-3868.60	-1114.43	4025.92	196.07	0.72
11149.00	88.02	181.21	7131.41	4116.08	-3963.54	-1116.95	4117.91	195.74	1.30
11244.00	87.52	181.62	7135.11	4208.72	-4058.43	-1119.30	4209.95	195.42	0.68
11340.00	90.87	182.59	7136.46	4302.62	-4154.34	-1122.82	4303.41	195.12	3.64

MD	Inc	Azim	TVD	VS	+N/-S	+E/-W	Closure Distance	Closure Direction	DLS
ft	deg	deg	ft	ft	ft	ft	ft	deg	°/100ft
11435.00	88.69	181.74	7136.82	4395.58	-4249.27	-1126.41	4396.03	194.85	2.46
11530.00	89.60	182.59	7138.24	4488.54	-4344.19	-1130.00	4488.75	194.58	1.30
11561.00	90.80	183.19	7138.13	4518.96	-4375.15	-1131.56	4519.11	194.50	4.36

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



PROPAGATION RESISTIVITY
GAMMA RAY

2" = 100' FEET MD