30-015-37029

HEADER INFORMATION
Company: Chesapeake Operating, Inc.
Field Eddy Co, NM NAD 83
Site Name PLU Pierce Mag Dec.C +7.56 EAS TO GRID
Well Name 7 Federal 1H
Wellpath N OH AFE / OCS
Survey Nai Definitive Survey Dat 4/11/2011 Survey Typ 100 - 7379 Survey #1 : Gyro
7417 - 12193 Survey #2 : Ryan MWD
12250- 12250 Survey #3 · Projection
Depth Unit: ft

SURFACE LOCATION
Site Northi 450722
Site Eastin 666546 9

BOTTOM HOLE LOCATION
BHL MD 12250
BHL TVD 7955 56

WELL INFORMATION
Well Northi 450722
Well Eastir 666546.9
Rig K.B: 3184
Vsec Angle 179.73
Vsec North 0
Vsec East: 0

SURVEY LIST

MD	INC	AZI	TVD	NS	EW	VSEC	DLS	S/STVD
0	0	0	0	0	0	0	0	-3184
100	0.26	317.28	100	0 17	-0.15	-0.17	0 26	-3084
200	0.7	347 76	200	0.93	-0.44	-0 93	0.49	-2984
300	0 86	333 09	299.99	2 2	-0 91	-2.2	0 25	-2884 01
400	0.66	337 14	399.98	3 4	-1 47	-3.4	0 21	-2784 02
500	0.67	351.26	499 97	4 51	-1.78	-4 51	0 16	-2684 03
600	0.71	11.16	599.96	5 69	-1.75	-5.7	0.24	-2584 04
700	0.71	20 44	699.96	6.88	-1.42	-6.89	0.11	-2484 04
800	0.73	14.16	799.95	8 08	-1 04	-8.08	0 08	-2384.05
900	0.71	7.97	899.94	9.31	-0.8	-9.31	0.08	-2284.06
1000	0.62	353.41	999 93	10.46	-0.78	-10.46	0 19	-2184.07
1100	0.53	1.56	1099.93	11.46	-0.83	-11.46	0.12	-2084.07
1200	0 3	341.18	1199.93	12.17	-0.9	-12.17	0 27	-1984 07
1300	0.3	7.96	1299 93	12.68	-0.95	-12 68	0.14	-1884.07
1400	0 24	25.31	1399.92	13 13	-0 82	-13.13	0.1	-1784.08
1500	0 21	36.87	1499.92	13.46	-0.62	-13.46	0.05	-1684.08
1600	0 18	32.02	1599.92	13 74	-0 43	-13.74	0.03	-1584.08
1700	0.07	111 96	1699 92	13.85	-0.29	-13.85	0 18	-1484.08
1800	0 07	40.51	1799 92	13.88	-0 19	-13.88	0.08	-1384.08
1900	0.07	68.08	1899.92	13.94	-0.1	-13.94	0 03	-1284.08
2000	0 04	140.4	1999 92	13 94	-0 02	-13.94	0.07	-1184.08
2100	0.18	195 78	2099 92	13 76	-0.04	-13.76	0.16	-1084.08

2200	0.21	200.17	2199.92	13 44	-0.14	-13.44	0 03	-984.08
2300	0.3	198.52	2299.92	13.02	-0.29	-13 02	0 09	-884.08
2400	0.22	202.2	2399.92	12.59	-0.45	-12.59	0 08	-784.08
2500	0.4	122 02	2499.92	12.23	-0.22	-12.23	0.42	-684.08
2600	1.04	106.54	2599.91	11.79	0.94	-11 78	0.66	-584.09
2700	2 25	106.88	2699.87	10.96	3.69	-10.94	1.21	-484.13
2800	2.42	105.34	2799.78	9.83	7.61	-9.79	0.18	-384.22
2900	2 55	106.43	2899.69	8.64	11.78	-8 59	0.14	-284.31
3000	3 51	112.5	2999 55	6.84	16.74	-6 76	1 01	-184.45
3100	3 95	116.84	3099 34	4.11	22.64	-4.01	0.52	-84 66
3200	4 02	120.05	3199.1	0.8	28 75	-0 67	0.23	15.1
3300	3 39	120.41	3298 89	-2 45	34.33	2.61	0 63	114.89
3400	2.72	122.16	3398 74	-5.21	38 89	5 39	0 68	214.74
3500	2 43	125.87	3498.64	-7.71	42 62	7 91	0 33	314.64
3600	2.14	125.06	3598 56	-10 03	45 86	10 24	0.29	414.56
3700	2.03	125.57	3698.5	-12.13	48.83	12 36	0 11	514.5
3800	1 91	134.01	3798.44	-14 32	51.47	14.56	0 31	614.44
3900	1.83	138.9	3898.38	-16.68	53.72	16.93	0.18	714.38
4000	1 87	136.37	3998.33	-19.06	55 89	19 33	0.09	814.33
4100	1.85	135.32	4098.28	-21 39	58.16	21.67	0 04	914.28
4200	1.72	134.66	4198.23	-23.59	60.36	23.88	0 13	1014 23
4300	1.48	140.76	4298.19	-25.65	62.24	25.94	0.29	1114 19
4400	1.24	149.03	4398.16	-27.58	63.62	27.88	0.31	1214.16
4500	1.24	149.97	4498.14	-29.44	64.71	29.75	0.02	1314.14
4600	1.17	154.65	4598.12	-31.3	65.69	31 61	0.12	1414 12
4700	1.16	149.76	4698 1	-33.1	66.64	33.41	0 1	1514.1
4800	1.25	149.01	4798.08	-34 91	67.71	35.23	0.09	1614.08
4900	0.98	162.82	4898.06	-36.66	68.53	36.98	0.38	1714.06
5000	0.96	169.98	4998.04	-38.3	68.92	38.63	0.12	1814.04
5100	1	170.27	5098.03	-39 99	69.22	40.31	0.04	1914.03
5200	1 23	173 38	5198 01	-41 91	69.49	42.24	0.24	2014.01
5300	1.18	171.31	5297 99	-44	69 77	44 33	0.07	2113.99
5400	1 2	170 83	5397.97	-46.05	70.09	46 38	0 02	2213.97
5500	1 16	173.15	5497 94	-48.09	70.38	48.42	0 06	2313.94
5600	1.39	170.9	5597.92	-50 29	70.69	50.62	0 24	2413.92
5700	1 4	172.21	5697.89	-52 7	71.05	53.03	0.03	2513.89
5800	1 47	174.26	5797 86	-55.18	71.34	55.52	0 09	2613 86
5900	1 48	171 64	5897 83	-57 74	71.66	58.08	0 07	2713.83
6000	1 35	168.61	5997 79	-60 17	72.08	60.51	0 15	2813 79
6100	1 23	165 81	6097 77	-62.37	72.57	62.71	0 14	2913.77
6200	1.23	160.23	6197.75	-64.42	73.2	64 76	0.12	3013.75
6300	1 07	345 53	6297 74	-64.52	73.33	64 87	2 3	3113 74
6400	1 18	150.82	6397.73	-64.52	73.6	64.86	2 23	3213.73
6500	1.43	149.12	6497.71	-66.49	74.74	66 84	0.25	3313.71
6600	1.57	113.49	6597.67	-68 1	76.64	68.47	0 93	3413.67
6700	1.6	76.33	6697.64	-68.32	79.25	68.69	1.01	3513.64
6800	1.63	56.48	6797.6	-67.21	81.79	67 59	0.56	3613.6
6900	1.74	331.73	6897 57	-65 08	82.26	65.47	2.27	3713.57
7000	1.68	256.81	6997.54	-64 08	80.11	64 46	2.08	3813.54
7100	1 54	196.86	7097.5	-65 7	78.3	66.07	1 61	3913 5
7200	1.65	173.45	7197 47	-68 42	78.07	68.78	0.66	4013.47
7300	1.67	160.46	7297.42	-71.22	78.72	71.59	0.38	4113.42

7379	1.54	151.14	7376.39	-73.24	79 62	73.61	0.37	4192.39
7417	1 5	170.9	7414.38	-74.17	79 94	74.55	1 38	4230.38
7448	4.2	172 9	7445.34	-75.7	80.15	76.08	8 71	4261.34
7480	8 7	173 1	7477.13	-79.27	80 58	79.65	14.06	4293.13
7512	12 7	173.9	7508.57	-85.17	81.25	85.55	12.51	4324.57
7544	14 7	179.9	7539.65	-92 73	81 63	93.11	7 66	4355 65
7576	17.2	185 3	7570.42	-101.5	81 2	101.88	9 08	4386 42
7608	20.2	187 5	7600.73	-111 69	80 04	112.07	9.63	4416 73
7639	23 3	185.5	7629.52	-123.11	78 76	123.48	10.28	4445.52
7671	27 3	187.2	7658.45	-136.69	77 23	137.05	12 7	4474.45
7703	31 1	186 5	7686.37	-152.19	75.37	152.54	11.92	4502.37
7735	34 8	186 4	7713.22	-169 48	73.42	169.83	11 56	4529.22
7766	38.2	185.6	7738 14	-187 82	71.5	188.15	11 07	4554 14
7798	41	185.1	7762.79	-208.12	69.6	208.45	8.81	4578.79
7830	44.7	183 7	7786.25	-229 82	67.94	230.14	11 94	4602 25
7862	48.4	182 6	7808.25	-253.01	66 67	253.32	11 83	4624 25
7893	51 7	182	7828.16	-276.75	65.72	277.06	10 75	4644 16
7925	53.8	182.3	7847.52	-302.21	64.76	302.51	6.6	4663.52
7957	56.8	181.1	7865.74	-328.5	63.99	328.8	9.87	4681.74
7989	59.4	180	7882 65	-355.66	63.73	355 96	8.63	4698.65
8020	62.1	179.6	7897.79	-382 71	63.82	383	8 78	4713.79
8052	64.4	178.9	7912 2	-411.28	64.2	411.57	7.45	4728.2
8084	66.9	179.6	7925.39	-440.42	64.58	440.72	8.06	4741.39
8116	70	179.1	7937.14	-470.18	64.92	470.48	9.8	4753.14
8147	73.7	179.3	7946.8	-499 63	65.33	499.93	11.95	4762 8
8179	76.8	178.2	7954.94	-530 57	66.01	530.87	10.24	4770 94
8211	80.4	178 9	7961.27	-561 92	66.8	562.23	11 45	4777.27
8243	82.7	178 9	7965.97	-593.56	67 41	593 87	7.19	4781.97
8275	83 3	179 1	7969.87	-625 32	67 96	625 63	1.97	4785.87
8306	84.9	178 6	7973.06	-656.15	68.58	656 46	5 4	4789.06
8338	86.7	178	7975 4	-688 05	69.53	688 37	5 93	4791.4
8370	88 9	178.5	7976.63	-720 01	70.5	720.33	7 05	4792 63
8402	91 1	179.2	7976.63	-752	71.15	752.32	7 21	4792 63
8497	92.4	180 6	7973.73	-846.95	71.31	847.28	2 01	4789 73
8592	90.8	180.9	7971 07	-941.9	70.07	942.22	1 71	4787 07
8688	90 7	180.1	7969.82	-1037 89	69.23	1038.2	0.84	4785.82
8783	91.6	179 8	7967.91	-1132.87	69.31	1133.18	1	4783.91
8878	90.8	181	7965.92	-1227.84	68.65	1228.15	1.52	4781.92
8973	91.5	180 7	7964.01	-1322.81	67.24	1323 11	0.8	4780.01
9068	89.8	181 4	7962.94	-1417 79	65.5	1418 08	1.94	4778.94
9163	88 5	182.8	7964.35	-1512.71	62.02	1512.98	2.01	4780.35
9259	87.4	182.6	7967.78	-1608.54	57.5	1608.79	1.16	4783.78
9354	88.2	182 9	7971.43	-1703.36	52 95	1703.59	0.9	4787.43
9449	91	185	7972 09	-1798 11	46.4	1798.31	3.68	4788.09
9544	91 4	185.1	7970 1	-1892.73	38.04	1892.88	0 43	4786.1
9639	90 6	183 8	7968.44	-1987 42	30.67	1987.54	1.61	4784.44
9735	90.3	182.5	7967 69	-2083.27	25.4	2083.37	1.39	4783.69
9830	90.5	182 1	7967 03	-2178 19	21.59	2178.27	0.47	4783 03
9925	91 3	180 3	7965.53	-2273.15	19 6	2273 22	2.07	4781 53
10020	90.1	179.4	7964.37	-2368 14	19 84	2368 21	1.58	4780 37
10115	90.2	179 2	7964 12	-2463 14	21 01	2463 21	0.24	4780 12
10210	89 1	178.1	7964 7	-2558 11	23.24	2558 19	1.64	4780.7

10306	89.7	178.9	7965.71	-2654.07	25.76	2654.16	1 04	4781.71
10401	89.6	179.9	7966.29	-2749.06	26.75	2749.15	1 06	4782.29
10497	88 8	180.2	7967.63	-2845.05	26 67	2845.14	0.89	4783.63
10592	90.3	178.5	7968 38	-2940.03	27.75	2940.13	2.39	4784.38
10687	90 4	178.7	7967 8	-3035	30.07	3035.11	0 24	4783 8
10783	91	179 2	7966 62	-3130.98	31.83	3131 09	0 81	4782.62
10878	91.5	179 4	7964 55	-3225 95	32 99	3226 07	0.57	4780.55
10973	92.4	178.9	7961.32	-3320 88	34.39	3321 01	1 08	4777.32
11068	91	177.7	7958.5	-3415.79	37 21	3415.93	1 94	4774 5
11163	90 6	178 2	7957 17	-3510.72	40.61	3510.88	0.67	4773 17
11259	90 7	178.2	7956 08	-3606.67	43.62	3606.84	0.1	4772.08
11354	90 6	178.5	7955.01	-3701.62	46.36	3701.8	0 33	4771 01
11449	90.9	180	7953.76	-3796.61	47 6	3796.79	1 61	4769 76
11545	92.1	179.9	7951 25	-3892.57	47.69	3892.75	1.25	4767.25
11640	90 5	180.6	7949 09	-3987 54	47.27	3987.72	1.84	4765.09
11735	88.4	179 3	7950.01	-4082.53	47.36	4082.71	2.6	4766.01
11830	89.8	179.8	7951.5	-4177.51	48.1	4177.69	1 56	4767 5
11926	89.9	179.3	7951 75	-4273.51	48.85	4273.69	0.53	4767.75
12021	88.8	178.2	7952.83	-4368.48	50 93	4368.67	1.64	4768 83
12116	89.4	178.7	7954.32	-4463.43	53.5	4463 63	0 82	4770.32
12193	89.5	178.5	7955 06	-4540.4	55.38	4540.61	0.29	4771.06
12250	89 5	178.5	7955.56	-4597.38	56 87	4597.6	0	4771.56

LeaseN/S	LeaseE/W	Northing	Easting	Latitude	Longitude
0	0	450722	666546.9	32°14'18.4	103°55'42 135W
-0 17	0.15	450722.2	666546.7	32°14'18 4	103°55'42.137W
-0 93	0.44	450722 9	666546 4	32°14'18 4	103°55'42.140W
-2.2	0.91	450724 2	666546	32°14'18 4	103°55'42 145W
-3 4	1.47	450725 4	666545.4	32°14'18 4	103°55'42 152W
-4.51	1.78	450726.5	666545 1	32°14'18.4	103°55'42.155W
-5.69	1.75	450727.7	666545 1	32°14'18.5	103°55'42 155W
-6.88	1 42	450728 9	666545.4	32°14'18 5	103°55'42 151W
-8.08	1.04	450730 1	666545.8	32°14'18 5	103°55'42.147W
-9.31	0.8	450731.3	666546 1	32°14'18.5	103°55'42.144W
-10.46	0 78	450732 4	666546 1	32°14'18 5	103°55'42.143W
-11.46	0.83	450733.4	666546	32°14'18 5	103°55'42 144W
-12 17	0.9	450734 2	666546	32°14'18.5	103°55'42 145W
-12.68	0 95	450734.7	666545.9	32°14'18.5	103°55'42.145W
-13.13	0.82	450735.1	666546	32°14'18 5	103°55'42.144W
-13 46	0.62	450735.4	666546.2	32°14'18.5	103°55'42 142W
-13.74	0.43	450735 7	666546.4	32°14'18.5	103°55'42.139W
-13.85	0.29	450735.8	666546 6	32°14'18.5	103°55'42.138W
-13 88	0.19	450735.9	666546.7	32°14'18 5	103°55'42.136W
-13.94	0.1	450735 9	666546.8	32°14'18 5	103°55'42 135W
-13.94	0 02	450735.9	666546 8	32°14'18 5	103°55'42.134W
-13 76	0.04	450735.7	666546 8	32°14'18 5	103°55'42.135W

-13.44	0.14	450735.4	666546.7	32°14'18 5	103°55'42 136W
-13 02	0.29	450735	666546.6	32°14'18 5	103°55'42 138W
-12 59	0 45	450734 6	666546.4	32°14'18.5	103°55'42.139W
-12.23	0 22	450734.2	666546.6	32°14'18.5	103°55'42.137W
-11.79	-0.94	450733.8	666547.8	32°14'18 5	103°55'42.123W
-10.96	-3 69	450732.9	666550.6	32°14'18.5	103°55'42.091W
-9.83	-7.61	450731.8	666554.5	32°14'18.5	103°55'42.046W
-8.64	-11.78	450730.6	666558.6	32°14'18.5	103°55'41.997W
-6.84	-16 74	450728 8	666563.6	32°14'18.5	103°55'41.940W
-4.11	-22 64	450726 1	666569.5	32°14'18.4	103°55'41.871W
-0 8	-28.75	450722 8	666575.6	32°14'18.4	103°55'41.800W
2.45	-34.33	450719.5	666581.2	32°14'18.4	103°55'41.735W
5.21	-38.89	450716.8	666585.8	32°14'18.4	103°55'41.682W
7.71	-42.62	450714.3	666589 5	32°14'18.3	103°55'41.639W
10.03	-45.86	450712	666592.7	32°14'18 3	103°55'41.601W
12.13	-48 83	450709 9	666595 7	32°14'18.3	103°55'41 567W
14.32	-51.47	450707.7	666598.3	32°14'18.3	103°55'41.536W
16.68	-53.72	450705 3	666600 6	32°14'18.2	103°55'41.510W
19 06	-55 89	450702 9	666602 8	32°14'18 2	103°55'41.485W
21 39	-58 16	450700 6	666605	32°14'18 2	103°55'41.459W
23 59	-60 36	450698 4	666607.2	32°14'18 2	103°55'41.433W
25 65	-62 24	450696 3	666609.1	32°14'18.1	103°55'41.411W
27.58	-63 62	450694 4	666610 5	32°14'18.1	103°55'41.395W
29.44	-64.71	450692.5	666611 6	32°14'18.1	103°55'41.383W
31.3	-65.69	450690.7	666612.6	32°14'18.1	103°55'41.371W
33 1	-66.64	450688.9	666613.5	32°14'18.1	103°55'41.360W
34.91	-67.71	450687.1	666614 6	32°14'18.1	103°55'41.348W
36.66	-68.53	450685.3	666615.4	32°14'18.0	103°55'41.339W
38.3	-68.92	450683.7	666615.8	32°14'18.0	103°55'41.334W
39.99	-69.22	450682	666616.1	32°14'18 0	103°55'41.331W
41.91	-69.49	450680.1	666616.4	32°14'18.0	103°55'41.328W
44	-69.77	450678	666616.6	32°14'18.0	103°55'41.324W
46.05	-70.09	450675.9	666617	32°14'17.9	103°55'41.321W
48.09	-70.38	450673.9	666617.2	32°14'17.9	103°55'41.318W
50.29	-70.69	450671.7	666617.6	32°14'17 9	103°55'41.314W
52.7	-71 05	450669.3	666617.9	32°14'17.9	103°55'41 310W
55.18	-71.34	450666.8	666618.2	32°14'17 9	103°55'41.307W
57 74	-71 66	450664 2	666618 5	32°14'17.8	103°55'41.303W
60 17	-72 08	450661.8	666618 9	32°14'17 8	103°55'41 298W
62 37	-72.57	450659 6	666619.4	32°14'17 8	103°55'41 293W
64 42	-73.2	450657.6	666620.1	32°14'17.8	103°55'41 285W
64.52	-73.33	450657 5	666620 2	32°14'17.8	103°55'41.284W
64.52	-73 6	450657 5	666620.5	32°14'17.8	103°55'41.281W
66 49	-74.74	450655.5	666621.6	32°14'17.7	103°55'41 268W
68 1	-76.64	450653.9	666623 5	32°14'17.7	103°55'41 246W
68.32	-79 25	450653.7	666626.1	32°14'17.7	103°55'41 215W
67.21	-81.79	450654.8	666628.7	32°14'17.7	103°55'41.185W
65.08	-82.26	450656.9	666629.1	32°14'17.8	103°55'41.180W
64.08	-80.11	450657.9	666627	32°14'17.8	103°55'41.205W
65 7	-78.3	450656.3	666625.2	32°14'17.8	103°55'41.226W
68.42	-78.07	450653.6	666624.9	32°14'17.7	103°55'41.229W
71.22	-78.72	450650 8	666625.6	32°14'17 7	103°55'41.221W

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73.24	-79.62	450648.7	666626.5	32°14'17 7	103°55'41.211W
74.17	-79.94	450647.8	666626.8	32°14'17.7	103°55'41 207W
75.7	-80.15	450646 3	666627	32°14'17.7	103°55'41.205W
79.27	-80.58	450642.7	666627.4	32°14'17.6	103°55'41.200W
85.17	-81.25	450636.8	666628.1	32°14'17.6	103°55'41 193W
92 73	-81.63	450629.3	666628.5	32°14'17.5	103°55'41.188W
101 5	-81.2	450620.5	666628 1	32°14'17 4	103°55'41.194W
111 69	-80.04	450610.3	666626 9	32°14'17 3	103°55'41 208W
123 11	-78.76	450598.9	666625 6	32°14'17.2	103°55'41.223W
136.69	-77.23	450585.3	666624.1	32°14'17.0	103°55'41.242W
152 19	-75.37	450569 8	666622.2	32°14'16 9	103°55'41.264W
169 48	-73 42	450552.5	666620.3	32°14'16 7	103°55'41.287W
187 82	-71 5	450534.2	666618.4	32°14'16.5	103°55'41.311W
208 12	-69.6	450513.9	666616.5	32°14'16.3	103°55'41.334W
229.82	-67 94	450492 2	666614 8	32°14'16.1	103°55'41.354W
253 01	-66.67	450469	666613.5	32°14'15 9	103°55'41 370W
276.75	-65.72	450445.2	666612.6	32°14'15.7	103°55'41.382W
302.21	-64.76	450419.8	666611.6	32°14'15.4	103°55'41.394W
328 5	-63.99	450393.5	666610 9	32°14'15.2	103°55'41 404W
355.66	-63 73	450366 3	666610.6	32°14'14.9	103°55'41.408W
382.71	-63.82	450339.3	666610.7	32°14'14 6	103°55'41.409W
411.28	-64.2	450310.7	666611 1	32°14'14.3	103°55'41.405W
440.42	-64.58	450281 6	666611.4	32°14'14.0	103°55'41.402W
470.18	-64.92	450251.8	666611.8	32°14'13 7	103°55'41.400W
499.63	-65.33	450222.4	666612.2	32°14'13.5	103°55'41.396W
530 57	-66.01	450191.4	666612 9	32°14'13 2	103°55'41.390W
561.92	-66 8	450160.1	666613 7	32°14'12 8	103°55'41.382W
593 56	-67.41	450128 4	666614 3	32°14'12.5	103°55'41.376W
625 32	-67.96	450096.7	666614 8	32°14'12 2	103°55'41.371W
656.15	-68.58	450065 8	666615.4	32°14'11.9	103°55'41 365W
688 05	-69.53	450033.9	666616.4	32°14'11.6	103°55'41.356W
720.01	-70.5	450002	666617.4	32°14'11.3	103°55'41.346W
752	-71 15	449970	666618	32°14'11 0	103°55'41 340W
846.95	-71 31	449875	666618 2	32°14'10.0	103°55'41.342W
941 9	-70 07	449780 1	666616.9	32°14'09.1	103°55'41.360W
1037.89	-69 23	449684.1	666616.1	32°14'08 1	103°55'41.374W
1132.87	-69.31	449589.1	666616 2	32°14'07.2	103°55'41.378W
1227 84	-68.65	449494.1	666615.5	32°14'06.3	103°55'41.389W
1322.81	-67.24	449399.2	666614 1	32°14'05.3	103°55'41.410W
1417.79	-65 5	449304.2	666612 4	32°14'04.4	103°55'41.434W
1512.71	-62.02	449209.3	666608.9	32°14'03 4	103°55'41.479W
1608.54	-57 5	449113.4	666604 4	32°14'02.5	103°55'41 536W
1703 36	-52.95	449018.6	666599.8	32°14'01.5	103°55'41.593W
1798.11	-46.4	448923.9	666593.3	32°14'00 6	103°55'41.674W
1892.73	-38.04	448829.3	666584.9	32°13'59.7	103°55'41.775W
1987.42	-30.67	448734.6	666577 5	32°13'58.7	103°55'41.865W
2083 27	-25.4	448638.7	666572.3	32°13'57 8	103°55'41 931W
2178.19	-21.59	448543.8	666568.5	32°13'56.8	103°55'41.979W
2273 15	-19.6	448448.8	666566.5	32°13'55.9	103°55'42.006W
2368 14	-19 84	448353.8	666566.7	32°13'55.0	103°55'42 008W
2463.14	-21.01	448258.8	666567.9	32°13'54.0	103°55'41.998W
2558.11	-23.24	448163.9	666570 1	32°13'53 1	103°55'41.977W

2654.07	-25.76	448067.9	666572.6	32°13'52.1	103°55'41.951W
2749.06	-26.75	447972.9	666573 6	32°13'51 2	103°55'41 944W
2845.05	-26.67	447876.9	666573.5	32°13'50.2	103°55'41 949W
2940.03	-27.75	447782	666574 6	32°13'49.3	103°55'41.941W
3035	-30.07	447687	666576 9	32°13'48.4	103°55'41 918W
3130.98	-31.83	447591	666578.7	32°13'47 4	103°55'41.902W
3225 95	-32.99	447496	666579 9	32°13'46 5	103°55'41 892W
3320.88	-34.39	447401.1	666581 3	32°13'45.5	103°55'41 880W
3415.79	-37.21	447306.2	666584 1	32°13'44.6	103°55'41.852W
3510.72	-40.61	447211.3	666587 5	32°13'43 7	103°55'41 816W
3606 67	-43.62	447115.3	666590.5	32°13'42 7	103°55'41.785W
3701.62	-46.36	447020 4	666593 2	32°13'41 8	103°55'41.758W
3796.61	-47.6	446925 4	666594.5	32°13'40.8	103°55'41 747W
3892.57	-47 69	446829.4	666594.6	32°13'39 9	103°55'41 751W
3987 54	-47 27	446734.4	666594.1	32°13'38 9	103°55'41 760W
4082 53	-47.36	446639 5	666594 2	32°13'38 0	103°55'41.763W
4177 51	-48 1	446544.5	666595	32°13'37.1	103°55'41.758W
4273.51	-48.85	446448.5	666595.7	32°13'36.1	103°55'41 754W
4368.48	-50.93	446353 5	666597 8	32°13'35.2	103°55'41.734W
4463 43	-53.5	446258 6	666600.4	32°13'34.2	103°55'41.708W
4540.4	-55.38	446181.6	666602 2	32°13'33 5	103°55'41 689W
4597.38	-56.87	446124.6	666603.7	32°13'32.9	103°55'41.675W