

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 NOH

AFE / OCS

Survey Nar 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

30-05-38357

SURFACE LOCATION

Site Northir 450722

Site Eastir 666546.9

BOTTOM HOLE LOCATION

BHL MD 12250

BHL TVD 7955.56

WELL INFORMATION

Well Northir 450722

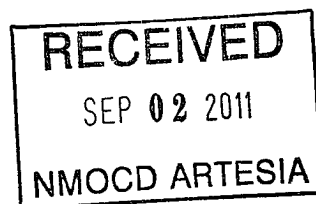
Well Eastir 666546.9

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

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