

MINERAL RESOURCES, INC.

Location Weld County, CO, USA(Imported)

Slot Slot #21

Field Wattenberg

Well CS-Kinkade #3-1-12

Installation C Street Pad

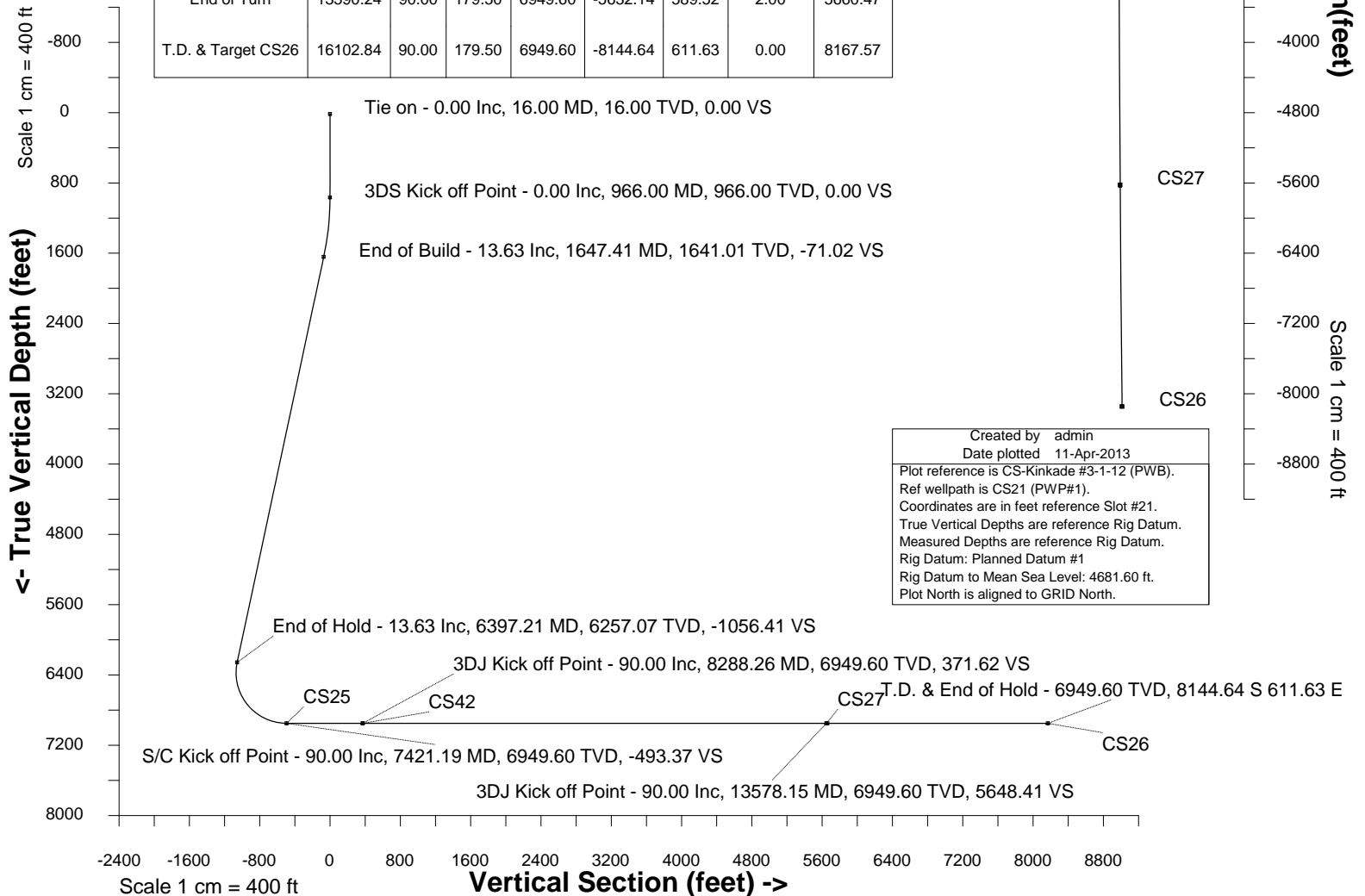
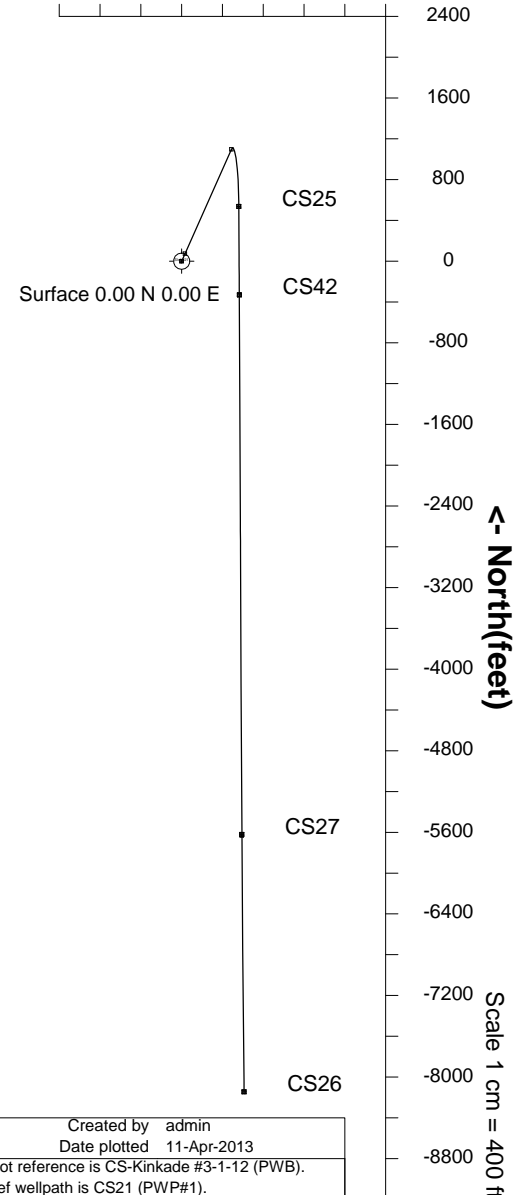
Wellbore CS-Kinkade #3-1-12 (PWB)

Scale 1 cm = 400 ft **East (feet) ->**

-800 0 800 1600

WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	16.00	0.00	0.00	16.00	0.00	0.00	0.00	0.00
KOP	966.00	0.00	0.00	966.00	0.00	0.00	0.00	0.00
End of Build	1647.41	13.63	24.00	1641.01	73.68	32.81	2.00	-71.02
End of Hold	6397.21	13.63	24.00	6257.07	1096.04	488.10	0.00	-1056.41
Target CS25	7421.19	90.00	179.68	6949.60	536.84	560.38	10.00	-493.37
Target CS42	8288.26	90.00	179.68	6949.60	-330.22	565.22	0.00	371.62
End of Turn	8291.13	90.00	179.74	6949.60	-333.09	565.23	2.00	374.48
Target CS27	13578.15	90.00	179.74	6949.60	-5620.05	589.44	0.00	5648.41
End of Turn	13590.24	90.00	179.50	6949.60	-5632.14	589.52	2.00	5660.47
T.D. & Target CS26	16102.84	90.00	179.50	6949.60	-8144.64	611.63	0.00	8167.57



Created by admin
Date plotted 11-Apr-2013
Plot reference is CS-Kinkade #3-1-12 (PWB).
Ref wellpath is CS21 (PWP#1).
Coordinates are in feet reference Slot #21.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Rig Datum: Planned Datum #1
Rig Datum to Mean Sea Level: 4681.60 ft.
Plot North is aligned to GRID North.

Azimuth 175.71 with reference 0.00 N, 0.00 E from Slot #21



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: CS-Kinkade #3-1-12 (PWB)

Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #21	1403486.9302	3216374.7177	N40 26 18.1320	W104 43 21.5400	16.73S	169.95E	-0.40

Declination			
Date	Source	Time	
17-Jan-2013	IGRF Model [1900.0-2015.0]		11:43

Site Details				
Name	Northing	Easting	Coord System Name	North Alignment
C Street Pad	1403503.6566	3216204.7695	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Summary Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
16.00	0.00	0.000	16.00	0.00N	0.00E		0.00	1403486.93	3216374.72
966.00	0.00	0.000	966.00	0.00N	0.00E	==>	0.00	1403486.93	3216374.72
1647.41	13.63	24.000	1641.01	73.68N	32.81E	2.00	-71.02	1403560.61	3216407.53
6397.21	13.63	24.000	6257.07	1096.04N	488.10E	==>	-1056.41	1404582.93	3216862.80
7421.19	90.00	179.680	6949.60	536.84N	560.38E	10.00	-493.37	1404023.75	3216935.08
8288.26	90.00	179.680	6949.60	330.22S	565.22E	==>	371.62	1403156.72	3216939.91
8291.13	90.00	179.740	6949.60	333.09S	565.23E	2.00	374.48	1403153.86	3216939.93
13578.15	90.00	179.740	6949.60	5620.05S	589.44E	==>	5648.41	1397867.10	3216964.13
13590.24	90.00	179.500	6949.60	5632.14S	589.52E	2.00	5660.47	1397855.02	3216964.21
16102.84	90.00	179.500	6949.60	8144.64S	611.63E	==>	8167.57	1395342.61	3216986.32

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
0.00	0.00	0.000	0.00	0.00N	0.00E		0.00	1403486.93	3216374.72
16.00	0.00	0.000	16.00	0.00N	0.00E	==>	0.00	1403486.93	3216374.72
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1403486.93	3216374.72
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1403486.93	3216374.72
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1403486.93	3216374.72
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1403486.93	3216374.72
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1403486.93	3216374.72
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1403486.93	3216374.72
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1403486.93	3216374.72
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	1403486.93	3216374.72
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	1403486.93	3216374.72
950.00	0.00	0.000	950.00	0.00N	0.00E	==>	0.00	1403486.93	3216374.72
966.00	0.00	0.000	966.00	0.00N	0.00E	==>	0.00	1403486.93	3216374.72
1050.00	1.68	24.000	1049.99	1.12N	0.50E	2.00	-1.08	1403488.06	3216375.22
1150.00	3.68	24.000	1149.87	5.40N	2.40E	2.00	-5.20	1403492.33	3216377.12
1250.00	5.68	24.000	1249.54	12.85N	5.72E	2.00	-12.38	1403499.78	3216380.44
1350.00	7.68	24.000	1348.85	23.47N	10.45E	2.00	-22.63	1403510.40	3216385.17
1450.00	9.68	24.000	1447.70	37.26N	16.59E	2.00	-35.91	1403524.19	3216391.31
1550.00	11.68	24.000	1545.96	54.19N	24.13E	2.00	-52.23	1403541.12	3216398.85
1647.41	13.63	24.000	1641.01	73.68N	32.81E	2.00	-71.02	1403560.61	3216407.53
1700.00	13.63	24.000	1692.11	85.00N	37.85E	==>	-81.93	1403571.93	3216412.57
1800.00	13.63	24.000	1789.30	106.53N	47.44E	==>	-102.67	1403593.45	3216422.15
1900.00	13.63	24.000	1886.48	128.05N	57.02E	==>	-123.42	1403614.97	3216431.74
2000.00	13.63	24.000	1983.67	149.57N	66.61E	==>	-144.17	1403636.50	3216441.33
2100.00	13.63	24.000	2080.85	171.10N	76.20E	==>	-164.91	1403658.02	3216450.91
2200.00	13.63	24.000	2178.03	192.62N	85.78E	==>	-185.66	1403679.55	3216460.50
2300.00	13.63	24.000	2275.22	214.15N	95.37E	==>	-206.40	1403701.07	3216470.08
2400.00	13.63	24.000	2372.40	235.67N	104.95E	==>	-227.15	1403722.59	3216479.67
2500.00	13.63	24.000	2469.59	257.20N	114.54E	==>	-247.90	1403744.12	3216489.25
2600.00	13.63	24.000	2566.77	278.72N	124.12E	==>	-268.64	1403765.64	3216498.84
2700.00	13.63	24.000	2663.96	300.24N	133.71E	==>	-289.39	1403787.16	3216508.42
2800.00	13.63	24.000	2761.14	321.77N	143.29E	==>	-310.13	1403808.69	3216518.01
2900.00	13.63	24.000	2858.33	343.29N	152.88E	==>	-330.88	1403830.21	3216527.59
3000.00	13.63	24.000	2955.51	364.82N	162.46E	==>	-351.63	1403851.73	3216537.18

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 4681.6ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 175.710 degrees
Bottom hole distance is 8167.57 Feet on azimuth 175.71 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Peterson Energy
Date Printed: 20-May-2013



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: CS-Kinkade #3-1-12 (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
3100.00	13.63	24.000	3052.70	386.34N	172.05E	==>	-372.37	1403873.26	3216546.76
3200.00	13.63	24.000	3149.88	407.87N	181.64E	==>	-393.12	1403894.78	3216556.35
3300.00	13.63	24.000	3247.06	429.39N	191.22E	==>	-413.86	1403916.30	3216565.93
3400.00	13.63	24.000	3344.25	450.91N	200.81E	==>	-434.61	1403937.83	3216575.52
3500.00	13.63	24.000	3441.43	472.44N	210.39E	==>	-455.36	1403959.35	3216585.10
3600.00	13.63	24.000	3538.62	493.96N	219.98E	==>	-476.10	1403980.87	3216594.69
3700.00	13.63	24.000	3635.80	515.49N	229.56E	==>	-496.85	1404002.40	3216604.27
3800.00	13.63	24.000	3732.99	537.01N	239.15E	==>	-517.59	1404023.92	3216613.86
3900.00	13.63	24.000	3830.17	558.53N	248.73E	==>	-538.34	1404045.44	3216623.44
4000.00	13.63	24.000	3927.36	580.06N	258.32E	==>	-559.09	1404066.97	3216633.03
4100.00	13.63	24.000	4024.54	601.58N	267.90E	==>	-579.83	1404088.49	3216642.61
4200.00	13.63	24.000	4121.72	623.11N	277.49E	==>	-600.58	1404110.01	3216652.20
4300.00	13.63	24.000	4218.91	644.63N	287.07E	==>	-621.32	1404131.54	3216661.78
4400.00	13.63	24.000	4316.09	666.16N	296.66E	==>	-642.07	1404153.06	3216671.37
4500.00	13.63	24.000	4413.28	687.68N	306.25E	==>	-662.82	1404174.58	3216680.95
4600.00	13.63	24.000	4510.46	709.20N	315.83E	==>	-683.56	1404196.11	3216690.54
4700.00	13.63	24.000	4607.65	730.73N	325.42E	==>	-704.31	1404217.63	3216700.12
4800.00	13.63	24.000	4704.83	752.25N	335.00E	==>	-725.05	1404239.15	3216709.71
4900.00	13.63	24.000	4802.02	773.78N	344.59E	==>	-745.80	1404260.68	3216719.29
5000.00	13.63	24.000	4899.20	795.30N	354.17E	==>	-766.55	1404282.20	3216728.88
5100.00	13.63	24.000	4996.39	816.83N	363.76E	==>	-787.29	1404303.72	3216738.46
5200.00	13.63	24.000	5093.57	838.35N	373.34E	==>	-808.04	1404325.25	3216748.05
5300.00	13.63	24.000	5190.75	859.87N	382.93E	==>	-828.78	1404346.77	3216757.63
5400.00	13.63	24.000	5287.94	881.40N	392.51E	==>	-849.53	1404368.29	3216767.22
5500.00	13.63	24.000	5385.12	902.92N	402.10E	==>	-870.28	1404389.82	3216776.80
5600.00	13.63	24.000	5482.31	924.45N	411.69E	==>	-891.02	1404411.34	3216786.39
5700.00	13.63	24.000	5579.49	945.97N	421.27E	==>	-911.77	1404432.86	3216795.97
5800.00	13.63	24.000	5676.68	967.50N	430.86E	==>	-932.51	1404454.39	3216805.56
5900.00	13.63	24.000	5773.86	989.02N	440.44E	==>	-953.26	1404475.91	3216815.14
6000.00	13.63	24.000	5871.05	1010.54N	450.03E	==>	-974.01	1404497.43	3216824.73
6100.00	13.63	24.000	5968.23	1032.07N	459.61E	==>	-994.75	1404518.96	3216834.31
6200.00	13.63	24.000	6065.41	1053.59N	469.20E	==>	-1015.50	1404540.48	3216843.90
6300.00	13.63	24.000	6162.60	1075.12N	478.78E	==>	-1036.24	1404562.00	3216853.48
6397.21	13.63	24.000	6257.07	1096.04N	488.10E	==>	-1056.41	1404582.93	3216862.80
6400.00	13.38	24.510	6259.78	1096.63N	488.37E	10.00	-1056.98	1404583.52	3216863.07
6500.00	6.08	69.260	6358.40	1109.07N	498.15E	10.00	-1068.65	1404595.95	3216872.85
6600.00	9.72	144.010	6457.65	1104.10N	508.09E	10.00	-1062.95	1404590.99	3216882.79
6700.00	18.74	162.560	6554.53	1081.89N	517.89E	10.00	-1040.07	1404568.78	3216892.58
6800.00	28.41	169.040	6646.09	1043.11N	527.25E	10.00	-1000.70	1404530.00	3216901.94
6900.00	38.24	172.400	6729.55	988.94N	535.88E	10.00	-946.03	1404475.83	3216910.58
7000.00	48.14	174.550	6802.37	921.02N	543.53E	10.00	-877.73	1404407.91	3216918.23
7100.00	58.06	176.110	6862.34	841.42N	549.97E	10.00	-797.87	1404328.31	3216924.66
7200.00	68.00	177.370	6907.64	752.55N	554.99E	10.00	-708.88	1404239.45	3216929.68
7300.00	77.94	178.460	6936.89	657.12N	558.44E	10.00	-613.45	1404144.02	3216933.14
7400.00	87.89	179.470	6949.21	558.02N	560.22E	10.00	-514.50	1404044.93	3216934.92
7421.19	90.00	179.680	6949.60	536.84N	560.38E	10.00	-493.37	1404023.75	3216935.08
7500.00	90.00	179.680	6949.60	458.03N	560.82E	==>	-414.75	1403944.94	3216935.52
7600.00	90.00	179.680	6949.60	358.03N	561.38E	==>	-314.99	1403844.95	3216936.07
7700.00	90.00	179.680	6949.60	258.03N	561.94E	==>	-215.23	1403744.95	3216936.63
7800.00	90.00	179.680	6949.60	158.03N	562.50E	==>	-115.47	1403644.96	3216937.19
7900.00	90.00	179.680	6949.60	58.04N	563.05E	==>	-15.71	1403544.96	3216937.75
8000.00	90.00	179.680	6949.60	41.96S	563.61E	==>	84.05	1403444.97	3216938.31
8100.00	90.00	179.680	6949.60	141.96S	564.17E	==>	183.81	1403344.98	3216938.86
8200.00	90.00	179.680	6949.60	241.96S	564.73E	==>	283.57	1403244.98	3216939.42
8288.26	90.00	179.680	6949.60	330.22S	565.22E	==>	371.62	1403156.72	3216939.91
8291.13	90.00	179.740	6949.60	333.09S	565.23E	2.00	374.48	1403153.86	3216939.93
8300.00	90.00	179.740	6949.60	341.96S	565.27E	==>	383.33	1403144.99	3216939.97
8400.00	90.00	179.740	6949.60	441.96S	565.73E	==>	483.08	1403044.99	3216940.43
8500.00	90.00	179.740	6949.60	541.96S	566.19E	==>	582.83	1402945.00	3216940.88
8600.00	90.00	179.740	6949.60	641.95S	566.65E	==>	682.59	1402845.00	3216941.34
8700.00	90.00	179.740	6949.60	741.95S	567.11E	==>	782.34	1402745.01	3216941.80

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Vertical Section is from 0.00N 0.00E on azimuth 175.710 degrees
Bottom hole distance is 8167.57 Feet on azimuth 175.71 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Peterson Energy
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SYSDRILL
Well Design Combined Report
Wellbore: CS-Kinkade #3-1-12 (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
8800.00	90.00	179.740	6949.60	841.95S	567.56E	==>	882.09	1402645.01	3216942.26
8900.00	90.00	179.740	6949.60	941.95S	568.02E	==>	981.84	1402545.02	3216942.72
9000.00	90.00	179.740	6949.60	1041.95S	568.48E	==>	1081.59	1402445.02	3216943.17
9100.00	90.00	179.740	6949.60	1141.95S	568.94E	==>	1181.35	1402345.03	3216943.63
9200.00	90.00	179.740	6949.60	1241.95S	569.39E	==>	1281.10	1402245.03	3216944.09
9300.00	90.00	179.740	6949.60	1341.95S	569.85E	==>	1380.85	1402145.04	3216944.55
9400.00	90.00	179.740	6949.60	1441.95S	570.31E	==>	1480.60	1402045.04	3216945.01
9500.00	90.00	179.740	6949.60	1541.94S	570.77E	==>	1580.36	1401945.05	3216945.46
9600.00	90.00	179.740	6949.60	1641.94S	571.23E	==>	1680.11	1401845.05	3216945.92
9700.00	90.00	179.740	6949.60	1741.94S	571.68E	==>	1779.86	1401745.06	3216946.38
9800.00	90.00	179.740	6949.60	1841.94S	572.14E	==>	1879.61	1401645.06	3216946.84
9900.00	90.00	179.740	6949.60	1941.94S	572.60E	==>	1979.37	1401545.07	3216947.29
10000.00	90.00	179.740	6949.60	2041.94S	573.06E	==>	2079.12	1401445.07	3216947.75
10100.00	90.00	179.740	6949.60	2141.94S	573.51E	==>	2178.87	1401345.08	3216948.21
10200.00	90.00	179.740	6949.60	2241.94S	573.97E	==>	2278.62	1401245.08	3216948.67
10300.00	90.00	179.740	6949.60	2341.94S	574.43E	==>	2378.38	1401145.09	3216949.13
10400.00	90.00	179.740	6949.60	2441.94S	574.89E	==>	2478.13	1401045.09	3216949.58
10500.00	90.00	179.740	6949.60	2541.93S	575.35E	==>	2577.88	1400945.10	3216950.04
10600.00	90.00	179.740	6949.60	2641.93S	575.80E	==>	2677.63	1400845.10	3216950.50
10700.00	90.00	179.740	6949.60	2741.93S	576.26E	==>	2777.39	1400745.11	3216950.96
10800.00	90.00	179.740	6949.60	2841.93S	576.72E	==>	2877.14	1400645.11	3216951.41
10900.00	90.00	179.740	6949.60	2941.93S	577.18E	==>	2976.89	1400545.12	3216951.87
11000.00	90.00	179.740	6949.60	3041.93S	577.63E	==>	3076.64	1400445.12	3216952.33
11100.00	90.00	179.740	6949.60	3141.93S	578.09E	==>	3176.40	1400345.13	3216952.79
11200.00	90.00	179.740	6949.60	3241.93S	578.55E	==>	3276.15	1400245.13	3216953.25
11300.00	90.00	179.740	6949.60	3341.93S	579.01E	==>	3375.90	1400145.14	3216953.70
11400.00	90.00	179.740	6949.60	3441.93S	579.47E	==>	3475.65	1400045.14	3216954.16
11500.00	90.00	179.740	6949.60	3541.92S	579.92E	==>	3575.41	1399945.15	3216954.62
11600.00	90.00	179.740	6949.60	3641.92S	580.38E	==>	3675.16	1399845.15	3216955.08
11700.00	90.00	179.740	6949.60	3741.92S	580.84E	==>	3774.91	1399745.16	3216955.53
11800.00	90.00	179.740	6949.60	3841.92S	581.30E	==>	3874.66	1399645.16	3216955.99
11900.00	90.00	179.740	6949.60	3941.92S	581.76E	==>	3974.42	1399545.17	3216956.45
12000.00	90.00	179.740	6949.60	4041.92S	582.21E	==>	4074.17	1399445.17	3216956.91
12100.00	90.00	179.740	6949.60	4141.92S	582.67E	==>	4173.92	1399345.18	3216957.37
12200.00	90.00	179.740	6949.60	4241.92S	583.13E	==>	4273.67	1399245.18	3216957.82
12300.00	90.00	179.740	6949.60	4341.92S	583.59E	==>	4373.43	1399145.19	3216958.28
12400.00	90.00	179.740	6949.60	4441.91S	584.04E	==>	4473.18	1399045.19	3216958.74
12500.00	90.00	179.740	6949.60	4541.91S	584.50E	==>	4572.93	1398945.20	3216959.20
12600.00	90.00	179.740	6949.60	4641.91S	584.96E	==>	4672.68	1398845.20	3216959.65
12700.00	90.00	179.740	6949.60	4741.91S	585.42E	==>	4772.44	1398745.21	3216960.11
12800.00	90.00	179.740	6949.60	4841.91S	585.88E	==>	4872.19	1398645.21	3216960.57
12900.00	90.00	179.740	6949.60	4941.91S	586.33E	==>	4971.94	1398545.22	3216961.03
13000.00	90.00	179.740	6949.60	5041.91S	586.79E	==>	5071.69	1398445.22	3216961.49
13100.00	90.00	179.740	6949.60	5141.91S	587.25E	==>	5171.45	1398345.23	3216961.94
13200.00	90.00	179.740	6949.60	5241.91S	587.71E	==>	5271.20	1398245.23	3216962.40
13300.00	90.00	179.740	6949.60	5341.91S	588.16E	==>	5370.95	1398145.24	3216962.86
13400.00	90.00	179.740	6949.60	5441.90S	588.62E	==>	5470.70	1398045.24	3216963.32
13500.00	90.00	179.740	6949.60	5541.90S	589.08E	==>	5570.46	1397945.25	3216963.77
13578.15	90.00	179.740	6949.60	5620.05S	589.44E	==>	5648.41	1397867.10	3216964.13
13590.24	90.00	179.500	6949.60	5632.14S	589.52E	2.00	5660.47	1397855.02	3216964.21
13600.00	90.00	179.500	6949.60	5641.90S	589.60E	==>	5670.21	1397845.25	3216964.30
13700.00	90.00	179.500	6949.60	5741.90S	590.48E	==>	5769.99	1397745.26	3216965.18
13800.00	90.00	179.500	6949.60	5841.89S	591.36E	==>	5869.78	1397645.27	3216966.06
13900.00	90.00	179.500	6949.60	5941.89S	592.24E	==>	5969.56	1397545.28	3216966.94
14000.00	90.00	179.500	6949.60	6041.89S	593.12E	==>	6069.34	1397445.28	3216967.82
14100.00	90.00	179.500	6949.60	6141.88S	594.00E	==>	6169.12	1397345.29	3216968.70
14200.00	90.00	179.500	6949.60	6241.88S	594.88E	==>	6268.90	1397245.30	3216969.58
14300.00	90.00	179.500	6949.60	6341.87S	595.76E	==>	6368.68	1397145.31	3216970.46
14400.00	90.00	179.500	6949.60	6441.87S	596.64E	==>	6468.46	1397045.32	3216971.34
14500.00	90.00	179.500	6949.60	6541.87S	597.52E	==>	6568.24	1396945.32	3216972.22
14600.00	90.00	179.500	6949.60	6641.86S	598.40E	==>	6668.02	1396845.33	3216973.10

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Vertical Section is from 0.00N 0.00E on azimuth 175.710 degrees
Bottom hole distance is 8167.57 Feet on azimuth 175.71 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Peterson Energy
Date Printed: 20-May-2013



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: CS-Kinkade #3-1-12 (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
14700.00	90.00	179.500	6949.60	6741.86S	599.28E	==>	6767.81	1396745.34	3216973.98
14800.00	90.00	179.500	6949.60	6841.86S	600.16E	==>	6867.59	1396645.35	3216974.86
14900.00	90.00	179.500	6949.60	6941.85S	601.04E	==>	6967.37	1396545.36	3216975.74
15000.00	90.00	179.500	6949.60	7041.85S	601.92E	==>	7067.15	1396445.36	3216976.62
15100.00	90.00	179.500	6949.60	7141.84S	602.80E	==>	7166.93	1396345.37	3216977.50
15200.00	90.00	179.500	6949.60	7241.84S	603.68E	==>	7266.71	1396245.38	3216978.38
15300.00	90.00	179.500	6949.60	7341.84S	604.56E	==>	7366.49	1396145.39	3216979.26
15400.00	90.00	179.500	6949.60	7441.83S	605.44E	==>	7466.27	1396045.39	3216980.13
15500.00	90.00	179.500	6949.60	7541.83S	606.32E	==>	7566.06	1395945.40	3216981.01
15600.00	90.00	179.500	6949.60	7641.82S	607.20E	==>	7665.84	1395845.41	3216981.89
15700.00	90.00	179.500	6949.60	7741.82S	608.08E	==>	7765.62	1395745.42	3216982.77
15800.00	90.00	179.500	6949.60	7841.82S	608.96E	==>	7865.40	1395645.43	3216983.65
15900.00	90.00	179.500	6949.60	7941.81S	609.84E	==>	7965.18	1395545.43	3216984.53
16000.00	90.00	179.500	6949.60	8041.81S	610.72E	==>	8064.96	1395445.44	3216985.41
16100.00	90.00	179.500	6949.60	8141.80S	611.60E	==>	8164.74	1395345.45	3216986.29
16102.84	90.00	179.500	6949.60	8144.64S	611.63E	==>	8167.57	1395342.61	3216986.32

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INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: CS-Kinkade #3-1-12 (PWB)

Hole Sections								
Diameter	Start	Start	Start	Start	End	End	End	End
[in]	MD[ft]	TVD[ft]	North[ft]	East[ft]	MD[ft]	TVD[ft]	North[ft]	East[ft]
12 1/4	16.00	16.00	0.00N	0.00E	500.00	500.00	0.00N	0.00E
8 3/4	500.00	500.00	0.00N	0.00E	7421.00	6949.60	537.03N	560.38E
6 1/8	7421.00	6949.60	537.03N	560.38E	16102.84	6949.60	8144.64S	611.63E

Casings								
Name	Top	Top	Top	Top	Shoe	Shoe	Shoe	Shoe
	MD[ft]	TVD[ft]	North[ft]	East[ft]	MD[ft]	TVD[ft]	North[ft]	East[ft]
9 5/8in Surface Casing		0.00			500.00	500.00	0.00N	0.00E
7.0in Intermediate Casing	0.00				7421.00	6949.60	537.03N	560.38E
4 1/2in Production Liner	6500.00	6358.40	1109.07N	498.15E	16102.84	6949.60	8144.64S	611.63E

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
CS25	536.84N	560.38E	6949.60	N40 26 23.3880	W104 43 14.2320	1404023.75	3216935.08	15-Mar-2013
CS26	8144.64S	611.63E	6949.60	N40 24 57.6000	W104 43 14.5560	1395342.61	3216986.32	15-Mar-2013
CS27	5620.05S	589.44E	6949.60	N40 25 22.5480	W104 43 14.5560	1397867.10	3216964.13	15-Mar-2013
CS42	330.22S	565.22E	6949.60	N40 26 14.8200	W104 43 14.2680	1403156.72	3216939.91	15-Mar-2013

Survey Tool Program						
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model	
33083	Planned	16102.84	6949.60	WdW Rate Gyro	Standard	

Notes

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SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: CS-Kinkade #3-1-12 (PWB)

Ellipse separations are reported ONLY if BOTH wells have uncertainty data
Only Depth and Magnetic Reference Field error terms are correlated across tie points
Cutoff is calculated on CENTRE to CENTRE distance

Summary data uses Closest Approach clearance calculation for all minima
Hole size/Casings ARE included
Hole size/Casings are NOT subtracted from Centre-Centre distance
Confidence limit of 95.00% / 2.80 SD.

Wellbore		
Name	Created	Last Revised
CS-Kinkade #3-1-12 (PWB)	8-Apr-2013	11-Apr-2013

Well		
Name	Government ID	Last Revised
CS-Kinkade #3-1-12		8-Apr-2013

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #21	1403486.9302	3216374.7177	N40 26 18.1320	W104 43 21.5400	16.73S	169.95E

Installation					
Name	Easting	Northing	Coord System Name	North Alignment	
C Street Pad	3216204.7695	1403503.6566	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid	

Field					
Name	Easting	Northing	Coord System Name	North Alignment	
Wattenberg	3211772.6087	1400656.3763	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid	

Clearance Summary										
Offset WellName	Offset Wellbore	Offset Slot	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
CS-Kinkade #4-1-12	CS-Kinkade #4-1-12 (PWB)	Slot #20	C Street Pad	13.92	852.61	8283.72	11.90	869.02	2.80	16102.84
CS-Kinkade #2-1-12	CS-Kinkade #2-1-12 (PWB)	Slot #22	C Street Pad	16.70	967.44	8294.03	14.51	983.85	2.79	16102.84
CS-Kinkade #5-1-12	CS-Kinkade #5-1-12 (PWB)	Slot #19	C Street Pad	30.62	754.19	754.19	28.77	770.59	4.59	16102.84
CS-Kinkade #1-1-12	CS-Kinkade #1-1-12 (PWB)	Slot #23	C Street Pad	33.40	967.44	967.44	31.21	983.85	4.59	16102.84
CS-Longmeadow #1-1-12	CS-Longmeadow #1-1-12 (PWB)	Slot #18	C Street Pad	47.32	655.76	7868.08	45.63	655.76	7.08	16102.84
CS-Sherwood #3-1-12	CS-Sherwood #3-1-12 (PWB)	Slot #24	C Street Pad	50.11	967.44	8267.31	47.91	983.85	7.07	16102.84
CS-Bestway #1-1-2	CS-Bestway #1-1-2 (PWB)	Slot #8	C Street Pad	61.23	967.44	8257.75	59.01	1000.25	24.29	1279.12
CS-Longmeadow #2-1-12	CS-Longmeadow #2-1-12 (PWB)	Slot #17	C Street Pad	64.02	557.34	7873.61	62.34	491.72	9.20	16102.84
CS-Sherwood #2-1-12	CS-Sherwood #2-1-12 (PWB)	Slot #25	C Street Pad	64.02	967.44	16102.84	61.83	983.85	9.14	16102.84
CS-Sherwood #1-1-12	CS-Sherwood #1-1-12	Slot #26	C Street Pad	80.73	967.44	16102.84	78.53	983.85	11.55	16102.84

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SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: CS-Kinkade #3-1-12 (PWB)

Clearance Summary										
Offset WellName	Offset Wellbore	Offset Slot	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
	(PWB)									
CS-Scott #5-1-12	CS-Scott #5-1-12 (PWB)	Slot #27	C Street Pad	97.43	967.44	16102.84	95.23	983.85	13.70	16102.84
CS-Scott #4-1-12	CS-Scott #4-1-12 (PWB)	Slot #28	C Street Pad	114.13	967.44	16102.84	111.94	983.85	16.10	16102.84
CS-Scott #3-1-12	CS-Scott #3-1-12 (PWB)	Slot #29	C Street Pad	128.05	967.44	13582.27	125.85	983.85	18.35	16102.84
CS-Scott #2-1-12	CS-Scott #2-1-12 (PWB)	Slot #30	C Street Pad	144.75	967.44	16102.84	142.56	983.85	20.66	16102.84
CS-Scott #1-1-12	CS-Scott #1-1-12 (PWB)	Slot #31	C Street Pad	161.45	852.61	16102.84	159.44	869.02	22.90	16102.84
CS-Bittersweet #3-1-12	CS-Bittersweet #3-1-12 (PWB)	Slot #32	C Street Pad	175.41	754.19	16102.84	173.56	770.59	25.24	16102.84
GG-Cottonwood #3-13-12	GG-Cottonwood #3-13-12 (PWB)	Slot #44	Gallery Green	400.61	16102.84	16102.84	360.40	16102.84	9.96	16102.84
GG-Cottonwood #4-13-12	GG-Cottonwood #4-13-12 (PWB)	Slot #45	Gallery Green	474.47	16102.84	16102.84	358.36	16102.84	4.09	16102.84
GG-Cottonwood #2-13-12	GG-Cottonwood #2-13-12 (PWB)	Slot #43	Gallery Green	477.15	16102.84	16102.84	359.30	16102.84	4.05	16102.84
GG-Cottonwood #5-13-12	GG-Cottonwood #5-13-12 (PWB)	Slot #46	Gallery Green	777.15	16102.84	16102.84	635.53	16102.84	5.49	16102.84
GG-Cottonwood #1-13-12	GG-Cottonwood #1-13-12 (PWB)	Slot #25	Gallery Green	780.42	16102.84	16102.84	638.26	16102.84	5.49	16102.84
GG-Mariner #1-13-12	GG-Mariner #1-13-12 (PWB)	Slot #47	Gallery Green	1055.75	16102.84	16102.84	900.56	16102.84	6.80	16102.84
GG-Toddys #2-13-12	GG-Toddys #2-13-12 (PWB)	Slot #27	Gallery Green	1059.37	16102.84	16102.84	903.70	16102.84	6.81	16102.84
GG-Mariner #2-13-12	GG-Mariner #2-13-12 (PWB)	Slot #48	Gallery Green	1392.69	16102.84	16102.84	1235.57	16102.84	8.86	16102.84
GG-Toddys #1-13-12	GG-Toddys #1-13-12 (PWB)	Slot #28	Gallery Green	1402.38	16102.84	16102.84	1244.97	16102.84	8.91	16102.84
GG-Mariner #3-13-12	GG-Mariner #3-13-12 (PWB)	Slot #49	Gallery Green	1737.85	16102.84	16102.84	1577.21	16102.84	10.82	16102.84
DT-Martinez #2-5-6	DT-Martinez #2-5-6 (PWB)	Slot #19	Downtown	1789.09	10958.41	10958.41	1740.05	10916.00	30.35	10120.99
DT-Habitat #5-5-6	DT-Habitat #5-5-6 (PWB)	Slot #10	Downtown	1789.10	10309.92	10309.92	1749.17	10268.62	32.84	11876.24
DT-Forbes #1-5-6	DT-Forbes #1-5-6 (PWB)	Slot #21	Downtown	1791.87	11606.88	11606.88	1732.44	11564.56	26.35	10891.98

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SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: CS-Kinkade #3-1-12 (PWB)

Clearance Summary										
Offset WellName	Offset Wellbore	Offset Slot	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
DT-Habitat #3-5-6	DT-Habitat #3-5-6 (PWB)	Slot #8	Downtown	1791.90	9665.07	9665.07	1760.97	9645.27	33.09	11236.47
DT-Habitat #1-5-6	DT-Habitat #1-5-6 (PWB)	Slot #6	Downtown	1791.93	9021.91	9021.91	1767.78	9038.31	33.22	10596.71
DT-Lopez #1-5-6	DT-Lopez #1-5-6 (PWB)	Slot #3	Downtown	1794.73	8375.37	8375.37	1773.65	8416.00	33.38	9973.35
DT-Forbes #3-5-6	DT-Forbes #3-5-6 (PWB)	Slot #23	Downtown	1797.50	12273.55	12273.55	1727.17	12237.13	23.09	11662.98
DT-Forbes #5-5-6	DT-Forbes #5-5-6 (PWB)	Slot #25	Downtown	1800.36	12942.51	12942.51	1718.91	12893.30	20.45	12401.17
DT-Martinez #1-5-6	DT-Martinez #1-5-6 (PWB)	Slot #11	Downtown	1800.42	10634.17	10634.17	1755.42	10596.71	32.50	9727.29
DT-Martinez #3-5-6	DT-Martinez #3-5-6 (PWB)	Slot #20	Downtown	1803.14	11275.36	11275.36	1749.06	11236.47	28.58	10498.28
DT-Habitat #4-5-6	DT-Habitat #4-5-6 (PWB)	Slot #9	Downtown	1803.20	9989.75	9989.75	1767.60	9956.94	33.15	11564.56
DT-Habitat #2-5-6	DT-Habitat #2-5-6 (PWB)	Slot #7	Downtown	1803.22	9344.47	9344.47	1775.55	9344.47	33.33	10941.20
MT-Luther #2-8-7	MT-Luther #2-8-7 (PWB)	Slot #37	Midtown	1805.17	13616.00	13616.00	1717.85	13697.10	17.03	14435.29
MT-Maplewood #1-8-7	MT-Maplewood #1-8-7 (PWB)	Slot #2	Midtown	1805.74	14338.66	14338.66	1718.01	14418.89	17.03	15157.08
DT-Forbes #2-5-6	DT-Forbes #2-5-6 (PWB)	Slot #22	Downtown	1805.96	11938.40	11938.40	1741.25	11892.64	24.89	11285.69
DT-Lopez #2-5-6	DT-Lopez #2-5-6 (PWB)	Slot #5	Downtown	1806.00	8699.62	8699.62	1783.35	8726.63	33.51	10301.43
MT-Maplewood #3-8-7	MT-Maplewood #3-8-7 (PWB)	Slot #4	Midtown	1806.35	15085.37	15085.37	1717.79	15173.48	16.97	15895.27
MT-Maplewood #5-8-7	MT-Maplewood #5-8-7 (PWB)	Slot #6	Midtown	1806.95	15832.08	15832.08	1717.21	15911.67	18.36	16102.84
DT-Forbes #4-5-6	DT-Forbes #4-5-6 (PWB)	Slot #24	Downtown	1811.55	12605.08	12605.08	1735.91	12565.21	21.95	12023.87
DT-Luther #1-5-6	DT-Luther #1-5-6 (PWB)	Slot #26	Downtown	1814.38	13271.76	13271.76	1727.70	13221.38	19.55	12762.06
MT-Luther #3-8-7	MT-Luther #3-8-7 (PWB)	Slot #1	Midtown	1818.03	13965.31	13965.31	1730.93	14057.99	17.23	14796.18
MT-Maplewood #2-8-7	MT-Maplewood #2-8-7 (PWB)	Slot #3	Midtown	1818.63	14716.00	14716.00	1730.78	14796.18	17.18	15534.37
MT-Maplewood #4-8-7	MT-Maplewood #4-8-7 (PWB)	Slot #5	Midtown	1819.22	15458.72	15458.72	1730.33	15534.37	17.25	16102.84
MT-Heath #1-8-7	MT-Heath #1-8-7 (PWB)	Slot #7	Midtown	1822.71	16102.84	16102.84	1736.80	16102.84	21.22	16102.84
MT-Heath #2-8-7	MT-Heath #2-8-7 (PWB)	Slot #8	Midtown	1869.16	16102.84	16102.84	1781.80	16102.84	21.40	16102.84
MT-Heath #3-8-7	MT-Heath #3-8-7 (PWB)	Slot #9	Midtown	2003.57	16102.84	16102.84	1908.13	16102.84	20.99	16102.84

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Prepared by Peterson Energy
Date Printed: 20-May-2013



SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: CS-Kinkade #3-1-12 (PWB)

Clearance Summary										
Offset WellName	Offset Wellbore	Offset Slot	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
GG-Centennial #1-13-12	GG-Centennial #1-13-12 (PWB)	Slot #50	Gallery Green	2073.47	16102.84	16102.84	1912.67	16102.84	12.89	16102.84
MT-Glenfair #1-8-7	MT-Glenfair #1-8-7 (PWB)	Slot #10	Midtown	2175.36	16102.84	16102.84	2073.29	16102.84	21.31	16102.84
GG-Centennial #2-13-12	GG-Centennial #2-13-12 (PWB)	Slot #51	Gallery Green	2388.50	16102.84	16102.84	2226.33	16102.84	14.73	16102.84
MT-Glenfair #2-8-7	MT-Glenfair #2-8-7 (PWB)	Slot #11	Midtown	2412.09	16102.84	16102.84	2306.45	16102.84	22.83	16102.84
MT-Glenfair #3-8-7	MT-Glenfair #3-8-7 (PWB)	Slot #12	Midtown	2662.67	16102.84	16102.84	2554.77	16102.84	24.68	16102.84
GG-Centennial #3-13-12	GG-Centennial #3-13-12 (PWB)	Slot #52	Gallery Green	2723.87	16102.84	16102.84	2561.76	16102.84	16.80	16102.84
Franklin Park 2-6-1	Franklin Park 2-6-1 (AWB)	Franklin Park 2-6-1	Bestway Pad Offsets	2772.96	12437.08	12437.08	2675.06	12416.00	27.62	11941.85
Poudre Trail 5 2-2-1	Poudre Trail 5 2-2-1 (AWB)	Poudre Trail 5 2-2-1	Bestway Pad Offsets	2937.76	9516.00	9516.00	2879.31	9563.24	40.16	11056.03
MT-Glenfair #4-8-7	MT-Glenfair #4-8-7 (PWB)	Slot #13	Midtown	2954.56	16102.84	16102.84	2845.89	16102.84	27.19	16102.84
GG-Centennial #4-13-12	GG-Centennial #4-13-12 (PWB)	Slot #53	Gallery Green	3043.11	16102.84	16102.84	2880.24	16102.84	18.68	16102.84
MT-Glenfair #5-8-7	MT-Glenfair #5-8-7 (PWB)	Slot #14	Midtown	3248.76	16102.84	16102.84	3139.70	16102.84	29.79	16102.84
GG-Centennial #5-13-12	GG-Centennial #5-13-12 (PWB)	Slot #54	Gallery Green	3377.94	16102.84	16102.84	3215.15	16102.84	20.75	16102.84
MT-Glenmere #1-8-7	MT-Glenmere #1-8-7 (PWB)	Slot #15	Midtown	3570.33	16102.84	16102.84	3461.48	16102.84	32.80	16102.84
GG-Rangeview #1-13-12	GG-Rangeview #1-13-12 (PWB)	Slot #55	Gallery Green	3699.59	16102.84	16102.84	3536.30	16102.84	22.66	16102.84
MT-Glenmere #2-8-7	MT-Glenmere #2-8-7 (PWB)	Slot #16	Midtown	3889.13	16102.84	16102.84	3780.48	16102.84	35.79	16102.84
Bestway 12-2	Bestway 12-2 (AWB)	Bestway 12-2	Bestway Pad Offsets	3962.12	9651.67	9651.67	3912.91	9694.48	64.32	11646.58
MT-Glenmere #3-17-18	MT-Glenmere #3-17-18 (PWB)	Slot #17	Midtown	4189.67	16102.84	16102.84	4081.37	16102.84	38.69	16102.84
LUNDVALL #5	LUNDVALL #5 (AWB)	LUNDVALL #5	Bestway Pad Offsets	4211.12	967.44	8995.94	4201.29	983.85	106.51	11548.15
MT-LDS #1-17-18	MT-LDS #1-17-18 (PWB)	Slot #18	Midtown	4484.18	16102.84	16102.84	4376.22	16102.84	41.54	16102.84
4H 5-7-31	4H 5-7-31 (AWB)	4H 5-7-31	Island Grove Offsets	4647.68	7956.59	7956.59	4596.07	7922.82	72.76	6626.89
Stoney 7-1-2	Stoney 7-1-2 (AWB)	Stoney 7-1-2	Bestway Pad Offsets	4664.76	8847.46	8847.46	4611.91	8890.67	76.01	10793.56
Ruyle 7-3-2	Ruyle 7-3-2 (AWB)	Ruyle 7-3-2	Bestway Pad Offsets	4684.60	10186.60	10186.60	4641.48	10219.41	89.97	12450.38

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