

# MINERAL RESOURCES, INC.

<b>Location</b>	Weld County, CO, USA(Imported)	<b>Slot</b>	Slot #30
<b>Field</b>	Wattenberg	<b>Well</b>	CS-Scott #2-1-12
<b>Installation</b>	C Street Pad	<b>Wellbore</b>	CS-Scott #2-1-12 (PWB)

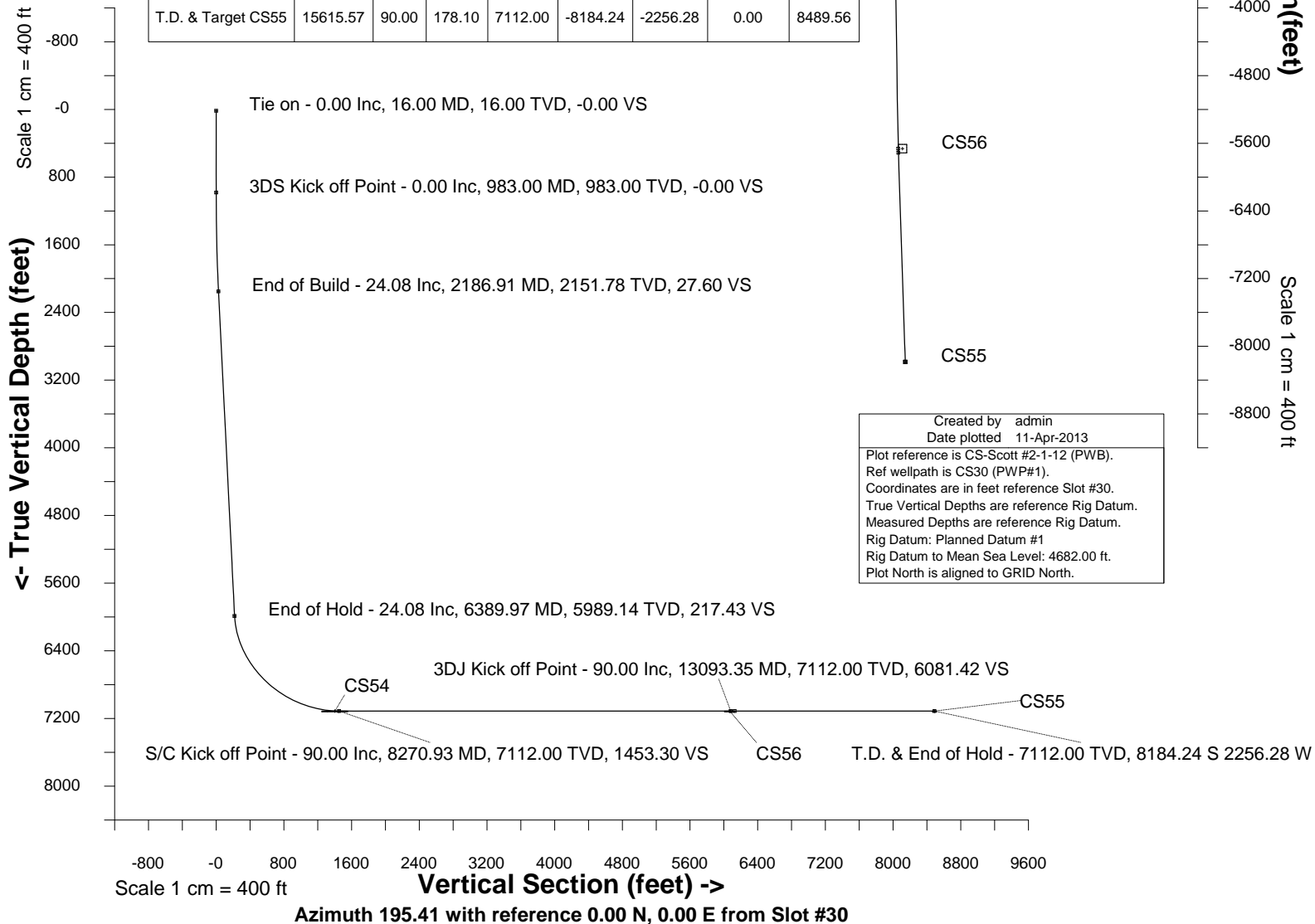
Scale 1 cm = 400 ft

East (feet) ->

-3200 -2400 -1600 -800 0 800

## 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	983.00	0.00	0.00	983.00	0.00	0.00	0.00	-0.00
End of Build	2186.91	24.08	279.06	2151.78	39.24	-246.16	2.00	27.60
End of Hold	6389.97	24.08	279.06	5989.14	309.17	-1939.56	0.00	217.43
Target CS54	8270.93	90.00	179.09	7112.00	-841.57	-2415.60	5.00	1453.30
Target CS56	13093.35	90.00	179.09	7112.00	-5663.38	-2339.27	0.00	6081.42
End of Turn	13142.75	90.00	178.10	7112.00	-5712.77	-2338.06	2.00	6128.71
T.D. & Target CS55	15615.57	90.00	178.10	7112.00	-8184.24	-2256.28	0.00	8489.56





INTEGRATED PETROLEUM TECHNOLOGIES, INC  
SYSDRILL  
Well Design Combined Report  
Wellbore: CS-Scott #2-1-12 (PWB)

Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #30	1403485.6617	3216229.9798	N40 26 18.1320	W104 43 23.4120	18.00S	25.21E	-0.00

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	1403485.66	3216229.98
983.00	0.00	0.000	983.00	0.00N	0.00E	==>	0.00	1403485.66	3216229.98
2186.91	24.08	279.060	2151.78	39.24N	246.16W	2.00	27.60	1403524.90	3215983.83
6389.97	24.08	279.060	5989.14	309.17N	1939.56W	==>	217.43	1403794.82	3214290.50
8270.93	90.00	179.090	7112.00	841.57S	2415.60W	5.00	1453.30	1402644.13	3213814.47
13093.35	90.00	179.090	7112.00	5663.38S	2339.27W	==>	6081.42	1397822.50	3213890.81
13142.75	90.00	178.100	7112.00	5712.77S	2338.06W	2.00	6128.71	1397773.12	3213892.02
15615.57	90.00	178.100	7112.00	8184.24S	2256.28W	==>	8489.56	1395301.75	3213973.79

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	1403485.66	3216229.98
16.00	0.00	0.000	16.00	0.00N	0.00E	==>	0.00	1403485.66	3216229.98
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1403485.66	3216229.98
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1403485.66	3216229.98
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1403485.66	3216229.98
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1403485.66	3216229.98
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1403485.66	3216229.98
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1403485.66	3216229.98
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1403485.66	3216229.98
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	1403485.66	3216229.98
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	1403485.66	3216229.98
967.00	0.00	0.000	967.00	0.00N	0.00E	==>	0.00	1403485.66	3216229.98
983.00	0.00	0.000	983.00	0.00N	0.00E	==>	0.00	1403485.66	3216229.98
1067.00	1.68	279.060	1066.99	0.19N	1.22W	2.00	0.14	1403485.86	3216228.76
1167.00	3.68	279.060	1166.87	0.93N	5.83W	2.00	0.65	1403486.59	3216224.15
1267.00	5.68	279.060	1266.54	2.21N	13.89W	2.00	1.56	1403487.88	3216216.09
1367.00	7.68	279.060	1365.85	4.05N	25.38W	2.00	2.84	1403489.71	3216204.60
1467.00	9.68	279.060	1464.70	6.42N	40.28W	2.00	4.52	1403492.08	3216189.70
1567.00	11.68	279.060	1562.96	9.34N	58.58W	2.00	6.57	1403495.00	3216171.40
1667.00	13.68	279.060	1660.52	12.79N	80.26W	2.00	9.00	1403498.45	3216149.73
1767.00	15.68	279.060	1757.25	16.78N	105.28W	2.00	11.80	1403502.44	3216124.70
1867.00	17.68	279.060	1853.04	21.30N	133.62W	2.00	14.98	1403506.96	3216096.36
1967.00	19.68	279.060	1947.77	26.34N	165.25W	2.00	18.53	1403512.00	3216064.74
2067.00	21.68	279.060	2041.32	31.90N	200.12W	2.00	22.43	1403517.56	3216029.86
2167.00	23.68	279.060	2133.58	37.97N	238.20W	2.00	26.70	1403523.63	3215991.79
2186.91	24.08	279.060	2151.78	39.24N	246.16W	2.00	27.60	1403524.90	3215983.83
2200.00	24.08	279.060	2163.74	40.08N	251.43W	==>	28.19	1403525.74	3215978.56
2300.00	24.08	279.060	2255.04	46.50N	291.72W	==>	32.70	1403532.16	3215938.27
2400.00	24.08	279.060	2346.33	52.92N	332.01W	==>	37.22	1403538.58	3215897.98
2500.00	24.08	279.060	2437.63	59.35N	372.30W	==>	41.74	1403545.00	3215857.69
2600.00	24.08	279.060	2528.93	65.77N	412.59W	==>	46.25	1403551.43	3215817.40
2700.00	24.08	279.060	2620.23	72.19N	452.88W	==>	50.77	1403557.85	3215777.12
2800.00	24.08	279.060	2711.53	78.61N	493.17W	==>	55.29	1403564.27	3215736.83
2900.00	24.08	279.060	2802.83	85.03N	533.46W	==>	59.80	1403570.69	3215696.54
3000.00	24.08	279.060	2894.13	91.46N	573.75W	==>	64.32	1403577.11	3215656.25

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 4682.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 195.410 degrees  
Bottom hole distance is 8489.56 Feet on azimuth 195.41 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Peterson Energy  
Date Printed: 21-May-2013



INTEGRATED PETROLEUM TECHNOLOGIES, INC  
SYSDRILL  
Well Design Combined Report  
Wellbore: CS-Scott #2-1-12 (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	24.08	279.060	2985.43	97.88N	614.04W	==>	68.84	1403583.54	3215615.96
3200.00	24.08	279.060	3076.73	104.30N	654.33W	==>	73.35	1403589.96	3215575.68
3300.00	24.08	279.060	3168.03	110.72N	694.62W	==>	77.87	1403596.38	3215535.39
3400.00	24.08	279.060	3259.32	117.15N	734.91W	==>	82.39	1403602.80	3215495.10
3500.00	24.08	279.060	3350.62	123.57N	775.20W	==>	86.90	1403609.22	3215454.81
3600.00	24.08	279.060	3441.92	129.99N	815.49W	==>	91.42	1403615.65	3215414.52
3700.00	24.08	279.060	3533.22	136.41N	855.78W	==>	95.94	1403622.07	3215374.24
3800.00	24.08	279.060	3624.52	142.83N	896.07W	==>	100.45	1403628.49	3215333.95
3900.00	24.08	279.060	3715.82	149.26N	936.36W	==>	104.97	1403634.91	3215293.66
4000.00	24.08	279.060	3807.12	155.68N	976.65W	==>	109.49	1403641.33	3215253.37
4100.00	24.08	279.060	3898.42	162.10N	1016.94W	==>	114.00	1403647.76	3215213.08
4200.00	24.08	279.060	3989.72	168.52N	1057.23W	==>	118.52	1403654.18	3215172.80
4300.00	24.08	279.060	4081.01	174.94N	1097.52W	==>	123.04	1403660.60	3215132.51
4400.00	24.08	279.060	4172.31	181.37N	1137.81W	==>	127.55	1403667.02	3215092.22
4500.00	24.08	279.060	4263.61	187.79N	1178.09W	==>	132.07	1403673.44	3215051.93
4600.00	24.08	279.060	4354.91	194.21N	1218.38W	==>	136.58	1403679.87	3215011.64
4700.00	24.08	279.060	4446.21	200.63N	1258.67W	==>	141.10	1403686.29	3214971.36
4800.00	24.08	279.060	4537.51	207.06N	1298.96W	==>	145.62	1403692.71	3214931.07
4900.00	24.08	279.060	4628.81	213.48N	1339.25W	==>	150.13	1403699.13	3214890.78
5000.00	24.08	279.060	4720.11	219.90N	1379.54W	==>	154.65	1403705.55	3214850.49
5100.00	24.08	279.060	4811.41	226.32N	1419.83W	==>	159.17	1403711.98	3214810.20
5200.00	24.08	279.060	4902.71	232.74N	1460.12W	==>	163.68	1403718.40	3214769.92
5300.00	24.08	279.060	4994.00	239.17N	1500.41W	==>	168.20	1403724.82	3214729.63
5400.00	24.08	279.060	5085.30	245.59N	1540.70W	==>	172.72	1403731.24	3214689.34
5500.00	24.08	279.060	5176.60	252.01N	1580.99W	==>	177.23	1403737.66	3214649.05
5600.00	24.08	279.060	5267.90	258.43N	1621.28W	==>	181.75	1403744.09	3214608.76
5700.00	24.08	279.060	5359.20	264.86N	1661.57W	==>	186.27	1403750.51	3214568.48
5800.00	24.08	279.060	5450.50	271.28N	1701.86W	==>	190.78	1403756.93	3214528.19
5900.00	24.08	279.060	5541.80	277.70N	1742.15W	==>	195.30	1403763.35	3214487.90
6000.00	24.08	279.060	5633.10	284.12N	1782.44W	==>	199.82	1403769.77	3214447.61
6100.00	24.08	279.060	5724.40	290.54N	1822.73W	==>	204.33	1403776.19	3214407.32
6200.00	24.08	279.060	5815.69	296.97N	1863.02W	==>	208.85	1403782.62	3214367.03
6300.00	24.08	279.060	5906.99	303.39N	1903.31W	==>	213.37	1403789.04	3214326.75
6389.97	24.08	279.060	5989.14	309.17N	1939.56W	==>	217.43	1403794.82	3214290.50
6400.00	24.00	277.840	5998.30	309.77N	1943.60W	5.00	217.93	1403795.42	3214286.46
6500.00	23.80	265.490	6089.78	310.96N	1983.89W	5.00	227.49	1403796.61	3214246.17
6600.00	24.57	253.410	6181.06	303.43N	2023.95W	5.00	245.39	1403789.08	3214206.11
6700.00	26.23	242.390	6271.44	287.24N	2063.48W	5.00	271.50	1403772.89	3214166.59
6800.00	28.62	232.850	6360.24	262.52N	2102.17W	5.00	305.62	1403748.17	3214127.89
6900.00	31.59	224.800	6446.78	229.45N	2139.74W	5.00	347.48	1403715.10	3214090.32
7000.00	34.97	218.090	6530.40	188.29N	2175.90W	5.00	396.77	1403673.94	3214054.17
7100.00	38.67	212.460	6610.46	139.34N	2210.36W	5.00	453.12	1403625.00	3214019.71
7200.00	42.59	207.700	6686.36	82.99N	2242.88W	5.00	516.09	1403568.64	3213987.19
7300.00	46.69	203.610	6757.51	19.65N	2273.20W	5.00	585.21	1403505.31	3213956.87
7400.00	50.91	200.040	6823.38	50.19S	2301.09W	5.00	659.94	1403435.48	3213928.99
7500.00	55.23	196.890	6883.46	125.99S	2326.33W	5.00	739.73	1403359.68	3213903.74
7600.00	59.62	194.050	6937.31	207.18S	2348.75W	5.00	823.96	1403278.49	3213881.33
7700.00	64.06	191.450	6984.49	293.15S	2368.16W	5.00	911.99	1403192.52	3213861.92
7800.00	68.55	189.050	7024.67	383.23S	2384.42W	5.00	1003.16	1403102.44	3213845.66
7900.00	73.07	186.790	7057.53	476.75S	2397.40W	5.00	1096.76	1403008.93	3213832.67
8000.00	77.62	184.640	7082.82	572.99S	2407.01W	5.00	1192.09	1402912.70	3213823.07
8100.00	82.18	182.560	7100.35	671.21S	2413.17W	5.00	1288.43	1402814.48	3213816.90
8200.00	86.75	180.520	7109.99	770.68S	2415.84W	5.00	1385.02	1402715.01	3213814.24
8270.93	90.00	179.090	7112.00	841.57S	2415.60W	5.00	1453.30	1402644.13	3213814.47
8300.00	90.00	179.090	7112.00	870.64S	2415.14W	==>	1481.20	1402615.06	3213814.93
8400.00	90.00	179.090	7112.00	970.62S	2413.56W	==>	1577.17	1402515.08	3213816.52
8500.00	90.00	179.090	7112.00	1070.61S	2411.98W	==>	1673.14	1402415.09	3213818.10
8600.00	90.00	179.090	7112.00	1170.60S	2410.39W	==>	1769.11	1402315.11	3213819.68
8700.00	90.00	179.090	7112.00	1270.59S	2408.81W	==>	1865.08	1402215.13	3213821.27
8800.00	90.00	179.090	7112.00	1370.57S	2407.23W	==>	1961.05	1402115.14	3213822.85
8900.00	90.00	179.090	7112.00	1470.56S	2405.64W	==>	2057.02	1402015.16	3213824.43

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 4682.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 195.410 degrees  
Bottom hole distance is 8489.56 Feet on azimuth 195.41 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Peterson Energy  
Date Printed: 21-May-2013



# INTEGRATED PETROLEUM TECHNOLOGIES, INC

## SYSDRILL

Well Design Combined Report  
Wellbore: CS-Scott #2-1-12 (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
9000.00	90.00	179.090	7112.00	1570.55S	2404.06W	==>	2153.00	1401915.18	3213826.01
9100.00	90.00	179.090	7112.00	1670.54S	2402.48W	==>	2248.97	1401815.19	3213827.60
9200.00	90.00	179.090	7112.00	1770.52S	2400.90W	==>	2344.94	1401715.21	3213829.18
9300.00	90.00	179.090	7112.00	1870.51S	2399.31W	==>	2440.91	1401615.23	3213830.76
9400.00	90.00	179.090	7112.00	1970.50S	2397.73W	==>	2536.88	1401515.24	3213832.35
9500.00	90.00	179.090	7112.00	2070.49S	2396.15W	==>	2632.85	1401415.26	3213833.93
9600.00	90.00	179.090	7112.00	2170.47S	2394.56W	==>	2728.82	1401315.28	3213835.51
9700.00	90.00	179.090	7112.00	2270.46S	2392.98W	==>	2824.79	1401215.29	3213837.09
9800.00	90.00	179.090	7112.00	2370.45S	2391.40W	==>	2920.76	1401115.31	3213838.68
9900.00	90.00	179.090	7112.00	2470.44S	2389.81W	==>	3016.73	1401015.32	3213840.26
10000.00	90.00	179.090	7112.00	2570.42S	2388.23W	==>	3112.70	1400915.34	3213841.84
10100.00	90.00	179.090	7112.00	2670.41S	2386.65W	==>	3208.67	1400815.36	3213843.43
10200.00	90.00	179.090	7112.00	2770.40S	2385.07W	==>	3304.65	1400715.37	3213845.01
10300.00	90.00	179.090	7112.00	2870.39S	2383.48W	==>	3400.62	1400615.39	3213846.59
10400.00	90.00	179.090	7112.00	2970.37S	2381.90W	==>	3496.59	1400515.41	3213848.17
10500.00	90.00	179.090	7112.00	3070.36S	2380.32W	==>	3592.56	1400415.42	3213849.76
10600.00	90.00	179.090	7112.00	3170.35S	2378.73W	==>	3688.53	1400315.44	3213851.34
10700.00	90.00	179.090	7112.00	3270.33S	2377.15W	==>	3784.50	1400215.46	3213852.92
10800.00	90.00	179.090	7112.00	3370.32S	2375.57W	==>	3880.47	1400115.47	3213854.51
10900.00	90.00	179.090	7112.00	3470.31S	2373.98W	==>	3976.44	1400015.49	3213856.09
11000.00	90.00	179.090	7112.00	3570.30S	2372.40W	==>	4072.41	1399915.51	3213857.67
11100.00	90.00	179.090	7112.00	3670.28S	2370.82W	==>	4168.38	1399815.52	3213859.26
11200.00	90.00	179.090	7112.00	3770.27S	2369.24W	==>	4264.35	1399715.54	3213860.84
11300.00	90.00	179.090	7112.00	3870.26S	2367.65W	==>	4360.32	1399615.56	3213862.42
11400.00	90.00	179.090	7112.00	3970.25S	2366.07W	==>	4456.30	1399515.57	3213864.00
11500.00	90.00	179.090	7112.00	4070.23S	2364.49W	==>	4552.27	1399415.59	3213865.59
11600.00	90.00	179.090	7112.00	4170.22S	2362.90W	==>	4648.24	1399315.61	3213867.17
11700.00	90.00	179.090	7112.00	4270.21S	2361.32W	==>	4744.21	1399215.62	3213868.75
11800.00	90.00	179.090	7112.00	4370.20S	2359.74W	==>	4840.18	1399115.64	3213870.34
11900.00	90.00	179.090	7112.00	4470.18S	2358.16W	==>	4936.15	1399015.66	3213871.92
12000.00	90.00	179.090	7112.00	4570.17S	2356.57W	==>	5032.12	1398915.67	3213873.50
12100.00	90.00	179.090	7112.00	4670.16S	2354.99W	==>	5128.09	1398815.69	3213875.08
12200.00	90.00	179.090	7112.00	4770.15S	2353.41W	==>	5224.06	1398715.70	3213876.67
12300.00	90.00	179.090	7112.00	4870.13S	2351.82W	==>	5320.03	1398615.72	3213878.25
12400.00	90.00	179.090	7112.00	4970.12S	2350.24W	==>	5416.00	1398515.74	3213879.83
12500.00	90.00	179.090	7112.00	5070.11S	2348.66W	==>	5511.97	1398415.75	3213881.42
12600.00	90.00	179.090	7112.00	5170.10S	2347.07W	==>	5607.95	1398315.77	3213883.00
12700.00	90.00	179.090	7112.00	5270.08S	2345.49W	==>	5703.92	1398215.79	3213884.58
12800.00	90.00	179.090	7112.00	5370.07S	2343.91W	==>	5799.89	1398115.80	3213886.16
12900.00	90.00	179.090	7112.00	5470.06S	2342.33W	==>	5895.86	1398015.82	3213887.75
13000.00	90.00	179.090	7112.00	5570.05S	2340.74W	==>	5991.83	1397915.84	3213889.33
13093.35	90.00	179.090	7112.00	5663.38S	2339.27W	==>	6081.42	1397822.50	3213890.81
13100.00	90.00	178.960	7112.00	5670.03S	2339.15W	2.00	6087.80	1397815.85	3213890.92
13142.75	90.00	178.100	7112.00	5712.77S	2338.06W	2.00	6128.71	1397773.12	3213892.02
13200.00	90.00	178.100	7112.00	5769.99S	2336.16W	==>	6183.36	1397715.90	3213893.91
13300.00	90.00	178.100	7112.00	5869.93S	2332.86W	==>	6278.83	1397615.96	3213897.22
13400.00	90.00	178.100	7112.00	5969.88S	2329.55W	==>	6374.31	1397516.02	3213900.52
13500.00	90.00	178.100	7112.00	6069.82S	2326.24W	==>	6469.78	1397416.08	3213903.83
13600.00	90.00	178.100	7112.00	6169.77S	2322.94W	==>	6565.25	1397316.14	3213907.14
13700.00	90.00	178.100	7112.00	6269.71S	2319.63W	==>	6660.72	1397216.20	3213910.44
13800.00	90.00	178.100	7112.00	6369.66S	2316.32W	==>	6756.19	1397116.26	3213913.75
13900.00	90.00	178.100	7112.00	6469.61S	2313.02W	==>	6851.67	1397016.31	3213917.06
14000.00	90.00	178.100	7112.00	6569.55S	2309.71W	==>	6947.14	1396916.37	3213920.36
14100.00	90.00	178.100	7112.00	6669.50S	2306.40W	==>	7042.61	1396816.43	3213923.67
14200.00	90.00	178.100	7112.00	6769.44S	2303.09W	==>	7138.08	1396716.49	3213926.98
14300.00	90.00	178.100	7112.00	6869.39S	2299.79W	==>	7233.55	1396616.55	3213930.28
14400.00	90.00	178.100	7112.00	6969.33S	2296.48W	==>	7329.03	1396516.61	3213933.59
14500.00	90.00	178.100	7112.00	7069.28S	2293.17W	==>	7424.50	1396416.67	3213936.90
14600.00	90.00	178.100	7112.00	7169.22S	2289.87W	==>	7519.97	1396316.72	3213940.20
14700.00	90.00	178.100	7112.00	7269.17S	2286.56W	==>	7615.44	1396216.78	3213943.51
14800.00	90.00	178.100	7112.00	7369.11S	2283.25W	==>	7710.91	1396116.84	3213946.82

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Vertical Section is from 0.00N 0.00E on azimuth 195.410 degrees  
Bottom hole distance is 8489.56 Feet on azimuth 195.41 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Peterson Energy  
Date Printed: 21-May-2013



INTEGRATED PETROLEUM TECHNOLOGIES, INC  
SYSDRILL  
Well Design Combined Report  
Wellbore: CS-Scott #2-1-12 (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
14900.00	90.00	178.100	7112.00	7469.06S	2279.95W	==>	7806.39	1396016.90	3213950.13
15000.00	90.00	178.100	7112.00	7569.00S	2276.64W	==>	7901.86	1395916.96	3213953.43
15100.00	90.00	178.100	7112.00	7668.95S	2273.33W	==>	7997.33	1395817.02	3213956.74
15200.00	90.00	178.100	7112.00	7768.89S	2270.02W	==>	8092.80	1395717.08	3213960.05
15300.00	90.00	178.100	7112.00	7868.84S	2266.72W	==>	8188.27	1395617.14	3213963.35
15400.00	90.00	178.100	7112.00	7968.79S	2263.41W	==>	8283.75	1395517.19	3213966.66
15500.00	90.00	178.100	7112.00	8068.73S	2260.10W	==>	8379.22	1395417.25	3213969.97
15600.00	90.00	178.100	7112.00	8168.68S	2256.80W	==>	8474.69	1395317.31	3213973.27
15615.57	90.00	178.100	7112.00	8184.24S	2256.28W	==>	8489.56	1395301.75	3213973.79

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INTEGRATED PETROLEUM TECHNOLOGIES, INC  
SYSDRILL  
Well Design Combined Report  
Wellbore: CS-Scott #2-1-12 (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	8271.00	7112.00	841.64S	2415.60W
6 1/8	8271.00	7112.00	841.64S	2415.60W	15615.57	7112.00	8184.24S	2256.28W

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				8271.00	7112.00	841.64S	2415.60W
4 1/2in Production Liner	6500.00	6089.78	310.96N	1983.89W	15615.57	7112.00	8184.24S	2256.28W

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
CS54	821.57S	2300.60W	7112.00	N40 26 10.2120	W104 43 53.2560	1402664.12	3213929.47	15-Mar-2013
CS55	8184.24S	2256.28W	7112.00	N40 24 57.4560	W104 43 53.5080	1395301.75	3213973.79	15-Mar-2013
CS56	5663.38S	2289.27W	7112.00	N40 25 22.3680	W104 43 53.6520	1397822.50	3213940.81	15-Mar-2013

Survey Tool Program						
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model	
33047	Planned	15615.57	7112.00	WdW Rate Gyro	Standard	

Notes

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: CS-Scott #2-1-12 (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-Scott #2-1-12 (PWB)	8-Apr-2013	11-Apr-2013

Well		
Name	Government ID	Last Revised
CS-Scott #2-1-12		8-Apr-2013

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #30	1403485.6617	3216229.9798	N40 26 18.1320	W104 43 23.4120	18.00S	25.21E

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-Scott #1-1-12	CS-Scott #1-1-12 (PWB)	Slot #31	C Street Pad	16.70	852.61	7337.20	14.69	869.02	2.76	15615.57
CS-Scott #3-1-12	CS-Scott #3-1-12 (PWB)	Slot #29	C Street Pad	16.70	983.85	15615.57	14.49	983.85	2.80	15599.99
CS-Scott #4-1-12	CS-Scott #4-1-12 (PWB)	Slot #28	C Street Pad	30.62	983.85	15615.57	28.40	983.85	4.59	15615.57
CS-Bittersweet #3-1-12	CS-Bittersweet #3-1-12 (PWB)	Slot #32	C Street Pad	30.84	754.19	754.19	28.99	770.59	4.60	15615.57
CS-Scott #5-1-12	CS-Scott #5-1-12 (PWB)	Slot #27	C Street Pad	47.32	983.85	15615.57	45.11	983.85	7.10	15615.57
CS-Bestway #1-1-2	CS-Bestway #1-1-2 (PWB)	Slot #8	C Street Pad	61.00	7750.62	7750.62	31.03	7725.97	1.85	7716.00
CS-Sherwood #1-1-12	CS-Sherwood #1-1-12 (PWB)	Slot #26	C Street Pad	64.02	983.85	15615.57	61.81	983.85	9.19	15615.57
CS-Sherwood #2-1-12	CS-Sherwood #2-1-12 (PWB)	Slot #25	C Street Pad	80.73	983.85	15615.57	78.51	983.85	11.61	15615.57
CS-Sherwood #3-1-12	CS-Sherwood #3-1-12 (PWB)	Slot #24	C Street Pad	94.64	983.85	15615.57	92.43	983.85	13.72	15615.57
CS-Kinkadee #1-1-12	CS-Kinkadee #1-1-12	Slot #23	C Street Pad	111.35	983.85	15615.57	109.13	983.85	16.09	15615.57

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: CS-Scott #2-1-12 (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-Kinkade #2-1-12	CS-Kinkade #2-1-12 (PWB)	Slot #22	C Street Pad	128.05	983.85	15615.57	125.83	983.85	18.29	15615.57
Poudre Trail 5 2-2-1	Poudre Trail 5 2-2-1 (AWB)	Poudre Trail 5 2-2-1	Bestway Pad Offsets	132.01	9050.31	9050.31	67.82	9005.50	1.90	8972.69
CS-Kinkade #3-1-12	CS-Kinkade #3-1-12 (PWB)	Slot #21	C Street Pad	144.75	967.44	15615.57	142.56	967.44	20.66	15615.57
CS-Kinkade #4-1-12	CS-Kinkade #4-1-12 (PWB)	Slot #20	C Street Pad	158.67	852.61	15615.57	156.64	869.02	22.89	15615.57
CS-Kinkade #5-1-12	CS-Kinkade #5-1-12 (PWB)	Slot #19	C Street Pad	175.37	754.19	15615.57	173.51	770.59	25.23	15615.57
CS-Longmeadow #1-1-12	CS-Longmeadow #1-1-12 (PWB)	Slot #18	C Street Pad	192.07	655.76	15615.57	190.39	672.17	27.49	15615.57
CS-Longmeadow #2-1-12	CS-Longmeadow #2-1-12 (PWB)	Slot #17	C Street Pad	208.77	557.34	15615.57	207.09	491.72	29.83	15615.57
Franklin Park 2-6-1	Franklin Park 2-6-1 (AWB)	Franklin Park 2-6-1	Bestway Pad Offsets	305.59	11896.98	11896.98	207.57	11925.45	3.06	11958.26
GG-Centennial #4-13-12	GG-Centennial #4-13-12 (PWB)	Slot #53	Gallery Green	340.23	15615.57	15615.57	291.82	15615.57	7.03	15615.57
GG-Centennial #3-13-12	GG-Centennial #3-13-12 (PWB)	Slot #52	Gallery Green	462.80	15615.57	15615.57	346.68	15615.57	3.99	15615.57
GG-Centennial #5-13-12	GG-Centennial #5-13-12 (PWB)	Slot #54	Gallery Green	478.57	15615.57	15615.57	360.73	15615.57	4.06	15615.57
GG-Centennial #2-13-12	GG-Centennial #2-13-12 (PWB)	Slot #51	Gallery Green	732.34	15615.57	15615.57	586.32	15615.57	5.02	15615.57
GG-Rangeview #1-13-12	GG-Rangeview #1-13-12 (PWB)	Slot #55	Gallery Green	752.33	15615.57	15615.57	605.32	15615.57	5.12	15615.57
Bestway 12-2	Bestway 12-2 (AWB)	Bestway 12-2	Bestway Pad Offsets	988.47	9121.46	9121.46	941.90	9169.54	17.15	9628.86
GG-Centennial #1-13-12	GG-Centennial #1-13-12 (PWB)	Slot #50	Gallery Green	1034.48	15615.57	15615.57	878.61	15615.57	6.64	15615.57
GG-Mariner #3-13-12	GG-Mariner #3-13-12 (PWB)	Slot #49	Gallery Green	1351.92	15615.57	15615.57	1192.96	15615.57	8.51	15615.57
LUNDVALL #5	LUNDVALL #5 (AWB)	LUNDVALL #5	Bestway Pad Offsets	1518.64	8464.16	8464.16	1483.15	8496.97	35.38	9251.56
Stoney 7-1-2	Stoney 7-1-2 (AWB)	Stoney 7-1-2	Bestway Pad Offsets	1537.47	8316.52	8316.52	1483.70	8349.33	25.27	8939.88
Ruyle 7-3-2	Ruyle 7-3-2 (AWB)	Ruyle 7-3-2	Bestway Pad Offsets	1572.35	9651.24	9651.24	1528.53	9678.07	30.47	10383.45
GG-Mariner #2-13-12	GG-Mariner #2-13-12	Slot #48	Gallery	1712.30	15615.57	15615.57	1551.16	15615.57	10.63	15615.57

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: CS-Scott #2-1-12 (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]
r #2-13-12	(PWB)		Green							
GG-Mariner #1-13-12	GG-Mariner #1-13-12 (PWB)	Slot #47	Gallery Green	2041.58	15615.57	15615.57	1879.77	15615.57	12.62	15615.57
GG-Cottonwood 5-13-12	GG-Cottonwood #5-13-12 (PWB)	Slot #46	Gallery Green	2370.86	15615.57	15615.57	2208.32	15615.57	14.59	15615.57
Bestway 6-11	Bestway 6-11 (AWB)	Bestway 6-11	Bestway Pad Offsets	2372.26	10980.65	10980.65	2304.71	13106.55	12.27	15615.57
GG-Cottonwood #4-13-12	GG-Cottonwood #4-13-12 (PWB)	Slot #45	Gallery Green	2702.39	15615.57	15615.57	2539.64	15615.57	16.60	15615.57
Ditch 5-1-2	Ditch 5-1-2 (AWB)	Ditch 5-1-2	Bestway Pad Offsets	2893.18	8316.52	8316.52	2838.07	8332.93	49.65	9202.35
Johnson 5-3-2	Johnson 5-3-2 (AWB)	Johnson 5-3-2	Bestway Pad Offsets	2999.06	9767.47	9767.47	2953.45	9809.31	51.32	11466.13
GG-Cottonwood #3-13-12	GG-Cottonwood #3-13-12 (PWB)	Slot #44	Gallery Green	3033.46	15615.57	15615.57	2870.32	15615.57	18.59	15615.57
GG-Cottonwood #2-13-12	GG-Cottonwood #2-13-12 (PWB)	Slot #43	Gallery Green	3365.98	15615.57	15615.57	3202.74	15615.57	20.62	15615.57
GG-Cottonwood #1-13-12	GG-Cottonwood #1-13-12 (PWB)	Slot #25	Gallery Green	3697.95	15615.57	15615.57	3534.59	15615.57	22.64	15615.57
GG-Toddys #2-13-12	GG-Toddys #2-13-12 (PWB)	Slot #27	Gallery Green	4030.98	15615.57	15615.57	3867.58	15615.57	24.67	15615.57
GG-Toddys #1-13-12	GG-Toddys #1-13-12 (PWB)	Slot #28	Gallery Green	4369.78	15615.57	15615.57	4206.21	15615.57	26.71	15615.57
DT-Lopez #1-5-6	DT-Lopez #1-5-6 (PWB)	Slot #3	Downtown	4532.31	5501.42	5501.42	4508.91	5501.42	88.54	12253.53
DT-Lopez #2-5-6	DT-Lopez #2-5-6 (PWB)	Slot #5	Downtown	4651.82	5617.51	5617.51	4624.03	5617.51	88.20	12565.21
DT-Habitat #1-5-6	DT-Habitat #1-5-6 (PWB)	Slot #6	Downtown	4669.93	5462.19	8562.59	4636.82	5462.19	88.24	12876.89
MT-Heath #1-8-7	MT-Heath #1-8-7 (PWB)	Slot #7	Midtown	4819.75	15615.57	15615.57	4731.59	15615.57	54.67	15615.57
MT-Maplewood #5-8-7	MT-Maplewood #5-8-7 (PWB)	Slot #6	Midtown	4824.45	15452.35	15452.35	4733.81	15534.37	52.05	15615.57
DT-Habitat #2-5-6	DT-Habitat #2-5-6 (PWB)	Slot #7	Downtown	4830.50	5577.02	8884.12	4791.30	5577.02	87.87	13254.19
MT-Maplewood #4-8-7	MT-Maplewood #4-8-7 (PWB)	Slot #5	Midtown	4832.90	15075.06	15075.06	4742.71	15157.08	49.36	15615.57
MT-Heath #2-8-7	MT-Heath #2-8-7 (PWB)	Slot #8	Midtown	4841.61	15615.57	15615.57	4754.79	15615.57	55.77	15615.57
MT-Maplewood #3-8-7	MT-Maplewood #3-8-7 (PWB)	Slot #4	Midtown	4841.97	14701.00	14701.00	4752.48	14779.78	47.46	15615.57
MT-Maplewood	MT-Maplewood #2-8-7	Slot #3	Midtown	4850.42	14327.75	14327.75	4761.22	14418.89	46.10	15615.57

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: CS-Scott #2-1-12 (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]
#2-8-7	(PWB)									
MT-Maplewood #1-8-7	MT-Maplewood #1-8-7 (PWB)	Slot #2	Midtown	4859.50	13959.57	13959.57	4770.79	14041.59	45.40	15615.57
MT-Luther #3-8-7	MT-Luther #3-8-7 (PWB)	Slot #1	Midtown	4867.95	13582.27	13582.27	4779.41	13664.29	45.12	15615.57
Westmoor 5 2-6-2	Westmoor 5 2-6-2 (AWB)	Westmoor 5 2-6-2	Bestway Pad Offsets	4873.38	11498.94	11498.94	4793.78	11616.00	38.48	14484.50
MT-Luther #2-8-7	MT-Luther #2-8-7 (PWB)	Slot #37	Midtown	4876.55	13227.94	13227.94	4788.25	13319.81	45.17	15403.14
DT-Luther #1-5-6	DT-Luther #1-5-6 (PWB)	Slot #26	Downtown	4877.67	12816.00	12816.00	4791.29	12762.06	52.58	11466.13
DT-Forbes #5-5-6	DT-Forbes #5-5-6 (PWB)	Slot #25	Downtown	4880.28	12483.19	12483.19	4799.61	12433.98	55.78	11039.62
DT-Forbes #4-5-6	DT-Forbes #4-5-6 (PWB)	Slot #24	Downtown	4882.31	12144.62	12144.62	4807.04	12105.90	59.27	10629.52
DT-Forbes #2-5-6	DT-Forbes #2-5-6 (PWB)	Slot #22	Downtown	4884.17	11482.54	11482.54	4819.89	11433.32	67.59	9743.69
DT-Forbes #3-5-6	DT-Forbes #3-5-6 (PWB)	Slot #23	Downtown	4884.93	11816.00	11816.00	4815.31	11761.41	63.25	10170.20
DT-Forbes #1-5-6	DT-Forbes #1-5-6 (PWB)	Slot #21	Downtown	4886.79	11146.40	11146.40	4828.02	11105.24	72.58	9267.97
DT-Martinez #3-5-6	DT-Martinez #3-5-6 (PWB)	Slot #20	Downtown	4888.79	10816.00	10816.00	4835.14	10777.15	78.06	8775.84
MT-Heath #3-8-7	MT-Heath #3-8-7 (PWB)	Slot #9	Midtown	4889.51	15615.57	15615.57	4798.35	15615.57	53.64	15615.57
DT-Martinez #2-5-6	DT-Martinez #2-5-6 (PWB)	Slot #19	Downtown	4891.31	10498.28	10498.28	4842.78	10465.48	82.48	6249.60
DT-Habitat #3-5-6	DT-Habitat #3-5-6 (PWB)	Slot #8	Downtown	4891.37	5417.35	9204.71	4846.31	5429.39	87.80	13565.87
DT-Martinez #1-5-6	DT-Martinez #1-5-6 (PWB)	Slot #11	Downtown	4893.26	10173.71	10173.71	4848.64	10137.39	85.89	6364.43
DT-Habitat #5-5-6	DT-Habitat #5-5-6 (PWB)	Slot #10	Downtown	4898.61	9849.49	9849.49	4858.99	9825.71	87.05	14172.82
DT-Habitat #4-5-6	DT-Habitat #4-5-6 (PWB)	Slot #9	Downtown	4903.32	9530.44	9530.44	4867.91	9514.03	87.25	13861.14
MT-Glenfair #1-8-7	MT-Glenfair #1-8-7 (PWB)	Slot #10	Midtown	4966.65	15615.57	15615.57	4869.01	15615.57	50.86	15615.57
MT-Glenfair #2-8-7	MT-Glenfair #2-8-7 (PWB)	Slot #11	Midtown	5069.41	15615.57	15615.57	4964.40	15615.57	48.28	15615.57
MT-Glenfair #3-8-7	MT-Glenfair #3-8-7 (PWB)	Slot #12	Midtown	5197.40	15615.57	15615.57	5085.81	15615.57	46.58	15615.57
MT-Glenfair #4-8-7	MT-Glenfair #4-8-7 (PWB)	Slot #13	Midtown	5347.69	15615.57	15615.57	5229.78	15615.57	45.35	15615.57
MT-Glenfair #5-8-7	MT-Glenfair #5-8-7 (PWB)	Slot #14	Midtown	5519.54	15615.57	15615.57	5396.32	15615.57	44.79	15615.57
MT-Glenmere #1-8-7	MT-Glenmere #1-8-7 (PWB)	Slot #15	Midtown	5709.94	15615.57	15615.57	5581.83	15615.57	44.57	15615.57
MT-Glenmere #2-8-7	MT-Glenmere #2-8-7 (PWB)	Slot #16	Midtown	5918.10	15615.57	15615.57	5785.98	15615.57	44.79	15615.57

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 4682.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 195.410 degrees  
Prepared by Peterson Energy  
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