

# MINERAL RESOURCES, INC.

<b>Location</b>	Weld County, CO, USA(Imported)	<b>Slot</b>	Slot #27
<b>Field</b>	Wattenberg	<b>Well</b>	CS-Scott #5-1-12
<b>Installation</b>	C Street Pad	<b>Wellbore</b>	CS-Scott #5-1-12 (PWB)

East (feet) ->

Scale 1 cm = 400 ft

-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	1266.00	0.00	0.00	1266.00	0.00	0.00	0.00	-0.00
End of Build	1979.06	14.26	277.33	1971.72	11.27	-87.56	2.00	2.55
End of Hold	6129.72	14.26	277.33	5994.47	141.78	-1101.68	0.00	32.11
Target CS7	7660.31	90.00	179.86	6950.10	-813.23	-1340.25	6.00	1012.67
Target CS9	12494.85	90.00	179.86	6950.10	-5647.76	-1328.78	0.00	5786.02
End of Turn	12529.02	90.00	179.18	6950.10	-5681.93	-1328.49	2.00	5819.72
T.D. & Target CS8	15019.58	90.00	179.18	6950.10	-8172.23	-1292.88	0.00	8273.87

Surface 0.00 N 0.00 E

CS7

CS9

CS8

<- North(feet)

Scale 1 cm = 400 ft

Scale 1 cm = 400 ft

<- True Vertical Depth (feet)

Tie on - 0.00 Inc, 16.00 MD, 16.00 TVD, -0.00 VS

3DS Kick off Point - 0.00 Inc, 1266.00 MD, 1266.00 TVD, -0.00 VS

End of Build - 14.26 Inc, 1979.06 MD, 1971.72 TVD, 2.55 VS

End of Hold - 14.26 Inc, 6129.72 MD, 5994.47 TVD, 32.11 VS

CS7

3DJ Kick off Point - 90.00 Inc, 12494.85 MD, 6950.10 TVD, 5786.02 VS

CS8

S/C Kick off Point - 90.00 Inc, 7660.31 MD, 6950.10 TVD, 1012.67 VS

CS9

T.D. & End of Hold - 6950.10 TVD, 8172.23 S 1292.88 W

Created by admin  
Date plotted 11-Apr-2013

Plot reference is CS-Scott #5-1-12 (PWB).  
Ref wellpath is CS27 (PWP#1).  
Coordinates are in feet reference Slot #27.  
True Vertical Depths are reference Rig Datum.  
Measured Depths are reference Rig Datum.  
Rig Datum: Planned Datum #1  
Rig Datum to Mean Sea Level: 4682.10 ft.  
Plot North is aligned to GRID North.

Scale 1 cm = 400 ft

Vertical Section (feet) ->

Azimuth 188.99 with reference 0.00 N, 0.00 E from Slot #27



INTEGRATED PETROLEUM TECHNOLOGIES, INC  
SYSDRILL  
Well Design Combined Report  
Wellbore: CS-Scott #5-1-12 (PWB)

Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #27	1403486.0763	3216277.2979	N40 26 18.1320	W104 43 22.8000	17.58S	72.53E	0.10

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	1403486.08	3216277.30
1266.00	0.00	0.000	1266.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
1979.06	14.26	277.330	1971.72	11.27N	87.56W	2.00	2.55	1403497.34	3216189.74
6129.72	14.26	277.330	5994.47	141.78N	1101.68W	==>	32.11	1403627.85	3215175.66
7660.31	90.00	179.860	6950.10	813.23S	1340.25W	6.00	1012.67	1402672.88	3214937.10
12494.85	90.00	179.860	6950.10	5647.76S	1328.78W	==>	5786.02	1397838.54	3214948.57
12529.02	90.00	179.180	6950.10	5681.93S	1328.49W	2.00	5819.72	1397804.37	3214948.86
15019.58	90.00	179.180	6950.10	8172.23S	1292.88W	==>	8273.87	1395314.17	3214984.47

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	1403486.08	3216277.30
16.00	0.00	0.000	16.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
1250.00	0.00	0.000	1250.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
1266.00	0.00	0.000	1266.00	0.00N	0.00E	==>	0.00	1403486.08	3216277.30
1350.00	1.68	277.330	1349.99	0.16N	1.22W	2.00	0.04	1403486.23	3216276.08
1450.00	3.68	277.330	1449.87	0.75N	5.86W	2.00	0.17	1403486.83	3216271.44
1550.00	5.68	277.330	1549.54	1.80N	13.95W	2.00	0.41	1403487.87	3216263.35
1650.00	7.68	277.330	1648.85	3.28N	25.49W	2.00	0.74	1403489.36	3216251.81
1750.00	9.68	277.330	1747.70	5.21N	40.45W	2.00	1.18	1403491.28	3216236.84
1850.00	11.68	277.330	1845.96	7.57N	58.83W	2.00	1.71	1403493.65	3216218.47
1950.00	13.68	277.330	1943.52	10.37N	80.60W	2.00	2.35	1403496.45	3216196.70
1979.06	14.26	277.330	1971.72	11.27N	87.56W	2.00	2.55	1403497.34	3216189.74
2000.00	14.26	277.330	1992.01	11.93N	92.68W	==>	2.70	1403498.00	3216184.62
2100.00	14.26	277.330	2088.93	15.07N	117.11W	==>	3.41	1403501.15	3216160.19
2200.00	14.26	277.330	2185.85	18.22N	141.54W	==>	4.13	1403504.29	3216135.76
2300.00	14.26	277.330	2282.77	21.36N	165.98W	==>	4.84	1403507.44	3216111.33
2400.00	14.26	277.330	2379.69	24.50N	190.41W	==>	5.55	1403510.58	3216086.90
2500.00	14.26	277.330	2476.61	27.65N	214.84W	==>	6.26	1403513.72	3216062.46
2600.00	14.26	277.330	2573.52	30.79N	239.27W	==>	6.97	1403516.87	3216038.03
2700.00	14.26	277.330	2670.44	33.94N	263.71W	==>	7.69	1403520.01	3216013.60
2800.00	14.26	277.330	2767.36	37.08N	288.14W	==>	8.40	1403523.16	3215989.17
2900.00	14.26	277.330	2864.28	40.23N	312.57W	==>	9.11	1403526.30	3215964.74
3000.00	14.26	277.330	2961.20	43.37N	337.01W	==>	9.82	1403529.44	3215940.31

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 4682.1ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 188.990 degrees  
Bottom hole distance is 8273.87 Feet on azimuth 188.99 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 #5-1-12 (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	14.26	277.330	3058.12	46.51N	361.44W	==>	10.54	1403532.59	3215915.87
3200.00	14.26	277.330	3155.03	49.66N	385.87W	==>	11.25	1403535.73	3215891.44
3300.00	14.26	277.330	3251.95	52.80N	410.30W	==>	11.96	1403538.88	3215867.01
3400.00	14.26	277.330	3348.87	55.95N	434.74W	==>	12.67	1403542.02	3215842.58
3500.00	14.26	277.330	3445.79	59.09N	459.17W	==>	13.38	1403545.17	3215818.15
3600.00	14.26	277.330	3542.71	62.24N	483.60W	==>	14.10	1403548.31	3215793.72
3700.00	14.26	277.330	3639.63	65.38N	508.03W	==>	14.81	1403551.45	3215769.28
3800.00	14.26	277.330	3736.54	68.52N	532.47W	==>	15.52	1403554.60	3215744.85
3900.00	14.26	277.330	3833.46	71.67N	556.90W	==>	16.23	1403557.74	3215720.42
4000.00	14.26	277.330	3930.38	74.81N	581.33W	==>	16.94	1403560.89	3215695.99
4100.00	14.26	277.330	4027.30	77.96N	605.76W	==>	17.66	1403564.03	3215671.56
4200.00	14.26	277.330	4124.22	81.10N	630.20W	==>	18.37	1403567.18	3215647.13
4300.00	14.26	277.330	4221.14	84.25N	654.63W	==>	19.08	1403570.32	3215622.69
4400.00	14.26	277.330	4318.05	87.39N	679.06W	==>	19.79	1403573.46	3215598.26
4500.00	14.26	277.330	4414.97	90.54N	703.50W	==>	20.51	1403576.61	3215573.83
4600.00	14.26	277.330	4511.89	93.68N	727.93W	==>	21.22	1403579.75	3215549.40
4700.00	14.26	277.330	4608.81	96.82N	752.36W	==>	21.93	1403582.90	3215524.97
4800.00	14.26	277.330	4705.73	99.97N	776.79W	==>	22.64	1403586.04	3215500.54
4900.00	14.26	277.330	4802.65	103.11N	801.23W	==>	23.35	1403589.18	3215476.10
5000.00	14.26	277.330	4899.56	106.26N	825.66W	==>	24.07	1403592.33	3215451.67
5100.00	14.26	277.330	4996.48	109.40N	850.09W	==>	24.78	1403595.47	3215427.24
5200.00	14.26	277.330	5093.40	112.55N	874.52W	==>	25.49	1403598.62	3215402.81
5300.00	14.26	277.330	5190.32	115.69N	898.96W	==>	26.20	1403601.76	3215378.38
5400.00	14.26	277.330	5287.24	118.83N	923.39W	==>	26.91	1403604.91	3215353.95
5500.00	14.26	277.330	5384.16	121.98N	947.82W	==>	27.63	1403608.05	3215329.51
5600.00	14.26	277.330	5481.07	125.12N	972.25W	==>	28.34	1403611.19	3215305.08
5700.00	14.26	277.330	5577.99	128.27N	996.69W	==>	29.05	1403614.34	3215280.65
5800.00	14.26	277.330	5674.91	131.41N	1021.12W	==>	29.76	1403617.48	3215256.22
5900.00	14.26	277.330	5771.83	134.56N	1045.55W	==>	30.48	1403620.63	3215231.79
6000.00	14.26	277.330	5868.75	137.70N	1069.99W	==>	31.19	1403623.77	3215207.35
6100.00	14.26	277.330	5965.67	140.84N	1094.42W	==>	31.90	1403626.91	3215182.92
6129.72	14.26	277.330	5994.47	141.78N	1101.68W	==>	32.11	1403627.85	3215175.66
6200.00	14.34	260.210	6062.60	141.40N	1118.85W	6.00	35.17	1403627.47	3215158.49
6300.00	16.40	238.780	6159.10	131.97N	1143.15W	6.00	48.28	1403618.04	3215134.20
6400.00	20.07	223.490	6254.12	112.19N	1167.05W	6.00	71.55	1403598.26	3215110.30
6500.00	24.64	213.200	6346.61	82.27N	1190.29W	6.00	104.73	1403568.35	3215087.06
6600.00	29.69	206.090	6435.58	42.55N	1212.61W	6.00	147.45	1403528.63	3215064.73
6700.00	35.03	200.940	6520.04	6.54S	1233.78W	6.00	199.25	1403479.54	3215043.57
6800.00	40.52	197.010	6599.06	64.46S	1253.56W	6.00	259.55	1403421.62	3215023.79
6900.00	46.13	193.880	6671.78	130.58S	1271.73W	6.00	327.70	1403355.50	3215005.62
7000.00	51.81	191.300	6737.41	204.17S	1288.09W	6.00	402.94	1403281.91	3214989.26
7100.00	57.53	189.090	6795.22	284.43S	1302.47W	6.00	484.46	1403201.65	3214974.88
7200.00	63.29	187.150	6844.59	370.48S	1314.71W	6.00	571.37	1403115.61	3214962.64
7300.00	69.07	185.400	6884.97	461.37S	1324.67W	6.00	662.70	1403024.72	3214952.68
7400.00	74.87	183.770	6915.91	556.12S	1332.24W	6.00	757.46	1402929.98	3214945.11
7500.00	80.68	182.240	6937.08	653.67S	1337.35W	6.00	854.61	1402832.43	3214940.00
7600.00	86.49	180.750	6948.25	752.96S	1339.93W	6.00	953.09	1402733.14	3214937.42
7660.31	90.00	179.860	6950.10	813.23S	1340.25W	6.00	1012.67	1402672.88	3214937.10
7700.00	90.00	179.860	6950.10	852.92S	1340.16W	==>	1051.86	1402633.19	3214937.20
7800.00	90.00	179.860	6950.10	952.92S	1339.92W	==>	1150.59	1402533.19	3214937.43
7900.00	90.00	179.860	6950.10	1052.92S	1339.68W	==>	1249.33	1402433.20	3214937.67
8000.00	90.00	179.860	6950.10	1152.92S	1339.44W	==>	1348.06	1402333.20	3214937.91
8100.00	90.00	179.860	6950.10	1252.92S	1339.21W	==>	1446.80	1402233.20	3214938.14
8200.00	90.00	179.860	6950.10	1352.92S	1338.97W	==>	1545.53	1402133.21	3214938.38
8300.00	90.00	179.860	6950.10	1452.92S	1338.73W	==>	1644.26	1402033.21	3214938.62
8400.00	90.00	179.860	6950.10	1552.92S	1338.50W	==>	1743.00	1401933.22	3214938.86
8500.00	90.00	179.860	6950.10	1652.92S	1338.26W	==>	1841.73	1401833.22	3214939.09
8600.00	90.00	179.860	6950.10	1752.92S	1338.02W	==>	1940.47	1401733.23	3214939.33
8700.00	90.00	179.860	6950.10	1852.92S	1337.78W	==>	2039.20	1401633.23	3214939.57
8800.00	90.00	179.860	6950.10	1952.92S	1337.55W	==>	2137.94	1401533.23	3214939.81
8900.00	90.00	179.860	6950.10	2052.92S	1337.31W	==>	2236.67	1401433.24	3214940.04

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Vertical Section is from 0.00N 0.00E on azimuth 188.990 degrees  
Bottom hole distance is 8273.87 Feet on azimuth 188.99 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 #5-1-12 (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	179.860	6950.10	2152.92S	1337.07W	==>	2335.40	1401333.24	3214940.28
9100.00	90.00	179.860	6950.10	2252.92S	1336.83W	==>	2434.14	1401233.25	3214940.52
9200.00	90.00	179.860	6950.10	2352.92S	1336.60W	==>	2532.87	1401133.25	3214940.75
9300.00	90.00	179.860	6950.10	2452.92S	1336.36W	==>	2631.61	1401033.26	3214940.99
9400.00	90.00	179.860	6950.10	2552.92S	1336.12W	==>	2730.34	1400933.26	3214941.23
9500.00	90.00	179.860	6950.10	2652.92S	1335.89W	==>	2829.08	1400833.26	3214941.47
9600.00	90.00	179.860	6950.10	2752.92S	1335.65W	==>	2927.81	1400733.27	3214941.70
9700.00	90.00	179.860	6950.10	2852.92S	1335.41W	==>	3026.54	1400633.27	3214941.94
9800.00	90.00	179.860	6950.10	2952.92S	1335.17W	==>	3125.28	1400533.28	3214942.18
9900.00	90.00	179.860	6950.10	3052.92S	1334.94W	==>	3224.01	1400433.28	3214942.41
10000.00	90.00	179.860	6950.10	3152.92S	1334.70W	==>	3322.75	1400333.29	3214942.65
10100.00	90.00	179.860	6950.10	3252.92S	1334.46W	==>	3421.48	1400233.29	3214942.89
10200.00	90.00	179.860	6950.10	3352.92S	1334.22W	==>	3520.21	1400133.29	3214943.13
10300.00	90.00	179.860	6950.10	3452.92S	1333.99W	==>	3618.95	1400033.30	3214943.36
10400.00	90.00	179.860	6950.10	3552.92S	1333.75W	==>	3717.68	1399933.30	3214943.60
10500.00	90.00	179.860	6950.10	3652.92S	1333.51W	==>	3816.42	1399833.31	3214943.84
10600.00	90.00	179.860	6950.10	3752.92S	1333.28W	==>	3915.15	1399733.31	3214944.08
10700.00	90.00	179.860	6950.10	3852.91S	1333.04W	==>	4013.89	1399633.31	3214944.31
10800.00	90.00	179.860	6950.10	3952.91S	1332.80W	==>	4112.62	1399533.32	3214944.55
10900.00	90.00	179.860	6950.10	4052.91S	1332.56W	==>	4211.35	1399433.32	3214944.79
11000.00	90.00	179.860	6950.10	4152.91S	1332.33W	==>	4310.09	1399333.33	3214945.02
11100.00	90.00	179.860	6950.10	4252.91S	1332.09W	==>	4408.82	1399233.33	3214945.26
11200.00	90.00	179.860	6950.10	4352.91S	1331.85W	==>	4507.56	1399133.34	3214945.50
11300.00	90.00	179.860	6950.10	4452.91S	1331.61W	==>	4606.29	1399033.34	3214945.74
11400.00	90.00	179.860	6950.10	4552.91S	1331.38W	==>	4705.03	1398933.34	3214945.97
11500.00	90.00	179.860	6950.10	4652.91S	1331.14W	==>	4803.76	1398833.35	3214946.21
11600.00	90.00	179.860	6950.10	4752.91S	1330.90W	==>	4902.49	1398733.35	3214946.45
11700.00	90.00	179.860	6950.10	4852.91S	1330.67W	==>	5001.23	1398633.36	3214946.69
11800.00	90.00	179.860	6950.10	4952.91S	1330.43W	==>	5099.96	1398533.36	3214946.92
11900.00	90.00	179.860	6950.10	5052.91S	1330.19W	==>	5198.70	1398433.37	3214947.16
12000.00	90.00	179.860	6950.10	5152.91S	1329.95W	==>	5297.43	1398333.37	3214947.40
12100.00	90.00	179.860	6950.10	5252.91S	1329.72W	==>	5396.17	1398233.37	3214947.63
12200.00	90.00	179.860	6950.10	5352.91S	1329.48W	==>	5494.90	1398133.38	3214947.87
12300.00	90.00	179.860	6950.10	5452.91S	1329.24W	==>	5593.63	1398033.38	3214948.11
12400.00	90.00	179.860	6950.10	5552.91S	1329.00W	==>	5692.37	1397933.39	3214948.35
12494.85	90.00	179.860	6950.10	5647.76S	1328.78W	==>	5786.02	1397838.54	3214948.57
12500.00	90.00	179.760	6950.10	5652.91S	1328.76W	2.00	5791.10	1397833.39	3214948.59
12529.02	90.00	179.180	6950.10	5681.93S	1328.49W	2.00	5819.72	1397804.37	3214948.86
12600.00	90.00	179.180	6950.10	5752.90S	1327.48W	==>	5889.66	1397733.40	3214949.87
12700.00	90.00	179.180	6950.10	5852.89S	1326.05W	==>	5988.20	1397633.42	3214951.30
12800.00	90.00	179.180	6950.10	5952.88S	1324.62W	==>	6086.74	1397533.43	3214952.73
12900.00	90.00	179.180	6950.10	6052.87S	1323.19W	==>	6185.28	1397433.45	3214954.16
13000.00	90.00	179.180	6950.10	6152.86S	1321.76W	==>	6283.82	1397333.46	3214955.59
13100.00	90.00	179.180	6950.10	6252.85S	1320.33W	==>	6382.35	1397233.48	3214957.02
13200.00	90.00	179.180	6950.10	6352.84S	1318.90W	==>	6480.89	1397133.49	3214958.45
13300.00	90.00	179.180	6950.10	6452.83S	1317.47W	==>	6579.43	1397033.50	3214959.88
13400.00	90.00	179.180	6950.10	6552.82S	1316.04W	==>	6677.97	1396933.52	3214961.31
13500.00	90.00	179.180	6950.10	6652.81S	1314.61W	==>	6776.51	1396833.53	3214962.74
13600.00	90.00	179.180	6950.10	6752.80S	1313.18W	==>	6875.04	1396733.55	3214964.17
13700.00	90.00	179.180	6950.10	6852.79S	1311.75W	==>	6973.58	1396633.56	3214965.60
13800.00	90.00	179.180	6950.10	6952.78S	1310.32W	==>	7072.12	1396533.57	3214967.03
13900.00	90.00	179.180	6950.10	7052.77S	1308.89W	==>	7170.66	1396433.59	3214968.46
14000.00	90.00	179.180	6950.10	7152.76S	1307.46W	==>	7269.20	1396333.60	3214969.89
14100.00	90.00	179.180	6950.10	7252.75S	1306.03W	==>	7367.73	1396233.62	3214971.32
14200.00	90.00	179.180	6950.10	7352.74S	1304.60W	==>	7466.27	1396133.63	3214972.75
14300.00	90.00	179.180	6950.10	7452.73S	1303.17W	==>	7564.81	1396033.65	3214974.18
14400.00	90.00	179.180	6950.10	7552.72S	1301.74W	==>	7663.35	1395933.66	3214975.61
14500.00	90.00	179.180	6950.10	7652.71S	1300.31W	==>	7761.89	1395833.67	3214977.04
14600.00	90.00	179.180	6950.10	7752.70S	1298.88W	==>	7860.42	1395733.69	3214978.47
14700.00	90.00	179.180	6950.10	7852.69S	1297.45W	==>	7958.96	1395633.70	3214979.90
14800.00	90.00	179.180	6950.10	7952.68S	1296.02W	==>	8057.50	1395533.72	3214981.33

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Vertical Section is from 0.00N 0.00E on azimuth 188.990 degrees  
Bottom hole distance is 8273.87 Feet on azimuth 188.99 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 #5-1-12 (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	179.180	6950.10	8052.67S	1294.59W	==>	8156.04	1395433.73	3214982.76
15000.00	90.00	179.180	6950.10	8152.66S	1293.16W	==>	8254.58	1395333.75	3214984.19
15019.58	90.00	179.180	6950.10	8172.23S	1292.88W	==>	8273.87	1395314.17	3214984.47

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SYSDRILL  
Well Design Combined Report  
Wellbore: CS-Scott #5-1-12 (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	7660.00	6950.10	812.92S	1340.25W
6 1/8	7660.00	6950.10	812.92S	1340.25W	15019.58	6950.10	8172.23S	1292.88W

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				7660.00	6950.10	812.92S	1340.25W
4 1/2in Production Liner	6200.00	6062.60	141.40N	1118.85W	15019.58	6950.10	8172.23S	1292.88W

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
CS7	813.23S	1340.25W	6950.10	N40 26 10.2120	W104 43 40.2240	1402672.88	3214937.10	15-Mar-2013
CS8	8172.23S	1292.88W	6950.10	N40 24 57.4920	W104 43 40.4400	1395314.17	3214984.47	15-Mar-2013
CS9	5647.76S	1328.78W	6950.10	N40 25 22.4400	W104 43 40.6200	1397838.54	3214948.57	15-Mar-2013

Survey Tool Program						
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model	
33059	Planned	15019.58	6950.10	WdW Rate Gyro	Standard	

Notes

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: CS-Scott #5-1-12 (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 #5-1-12 (PWB)	8-Apr-2013	11-Apr-2013

Well		
Name	Government ID	Last Revised
CS-Scott #5-1-12		8-Apr-2013

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #27	1403486.0763	3216277.2979	N40 26 18.1320	W104 43 22.8000	17.58S	72.53E

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 #4-1-12	CS-Scott #4-1-12 (PWB)	Slot #28	C Street Pad	16.70	1164.29	12516.00	14.20	1164.29	2.83	15019.58
CS-Sherwood #1-1-12	CS-Sherwood #1-1-12 (PWB)	Slot #26	C Street Pad	16.70	1266.00	15016.00	14.03	1266.00	2.77	15016.00
CS-Scott #3-1-12	CS-Scott #3-1-12 (PWB)	Slot #29	C Street Pad	30.62	1065.87	12499.60	28.25	1082.27	4.62	15019.58
CS-Sherwood #2-1-12	CS-Sherwood #2-1-12 (PWB)	Slot #25	C Street Pad	33.40	1266.00	15019.58	30.73	1266.00	4.58	15019.58
CS-Bestway #1-1-2	CS-Bestway #1-1-2 (PWB)	Slot #8	C Street Pad	43.02	1266.00	7230.52	40.35	1266.00	5.05	7283.06
CS-Scott #2-1-12	CS-Scott #2-1-12 (PWB)	Slot #30	C Street Pad	47.32	967.44	15017.54	45.11	983.85	7.10	15019.58
CS-Sherwood #3-1-12	CS-Sherwood #3-1-12 (PWB)	Slot #24	C Street Pad	47.32	1266.00	15017.83	44.65	1266.00	6.98	15016.00
CS-Kinkadee #1-1-12	CS-Kinkadee #1-1-12 (PWB)	Slot #23	C Street Pad	63.96	1266.00	15019.58	61.29	1279.12	9.11	15016.00
CS-Scott #1-1-12	CS-Scott #1-1-12 (PWB)	Slot #31	C Street Pad	64.02	852.61	852.61	62.01	869.02	9.21	15019.58
CS-Bittersweet	CS-Bittersweet #3-1-12	Slot #32	C Street Pad	78.03	754.19	754.19	76.18	770.59	11.63	15019.58

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: CS-Scott #5-1-12 (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]
#3-1-12	(PWB)									
CS-Kinkade #2-1-12	CS-Kinkade #2-1-12 (PWB)	Slot #22	C Street Pad	80.73	1065.87	15017.91	78.36	1098.68	11.50	15019.58
CS-Kinkade #3-1-12	CS-Kinkade #3-1-12 (PWB)	Slot #21	C Street Pad	97.43	967.44	15019.58	95.24	967.44	13.70	15019.58
CS-Kinkade #4-1-12	CS-Kinkade #4-1-12 (PWB)	Slot #20	C Street Pad	111.35	852.61	15019.58	109.32	869.02	16.07	15019.58
CS-Kinkade #5-1-12	CS-Kinkade #5-1-12 (PWB)	Slot #19	C Street Pad	128.05	754.19	15019.58	126.19	770.59	18.29	15019.58
CS-Longmeadow #1-1-12	CS-Longmeadow #1-1-12 (PWB)	Slot #18	C Street Pad	144.75	655.76	15019.58	143.06	672.17	20.67	15019.58
CS-Longmeadow #2-1-12	CS-Longmeadow #2-1-12 (PWB)	Slot #17	C Street Pad	161.45	557.34	15019.58	159.77	491.72	22.91	15019.58
GG-Centennial #1-13-12	GG-Centennial #1-13-12 (PWB)	Slot #50	Gallery Green	400.39	15019.58	15019.58	357.89	15019.58	9.42	15019.58
GG-Mariner #3-13-12	GG-Mariner #3-13-12 (PWB)	Slot #49	Gallery Green	449.75	15019.58	15019.58	338.31	15019.58	4.04	15019.58
GG-Centennial #2-13-12	GG-Centennial #2-13-12 (PWB)	Slot #51	Gallery Green	494.83	15019.58	15019.58	374.26	15019.58	4.10	15019.58
GG-Mariner #2-13-12	GG-Mariner #2-13-12 (PWB)	Slot #48	Gallery Green	778.39	15019.58	15019.58	635.75	15019.58	5.46	15019.58
Franklin Park 2-6-1	Franklin Park 2-6-1 (AWB)	Franklin Park 2-6-1	Bestway Pad Offsets	780.51	11307.35	11307.35	683.93	11285.69	7.88	11154.45
GG-Centennial #3-13-12	GG-Centennial #3-13-12 (PWB)	Slot #52	Gallery Green	798.94	15019.58	15019.58	656.74	15019.58	5.62	15019.58
Poudre Trail 5 2-2-1	Poudre Trail 5 2-2-1 (AWB)	Poudre Trail 5 2-2-1	Bestway Pad Offsets	976.09	8432.30	8432.30	918.33	8480.57	13.79	8939.88
GG-Mariner #1-13-12	GG-Mariner #1-13-12 (PWB)	Slot #47	Gallery Green	1057.45	15019.58	15019.58	901.60	15019.58	6.79	15019.58
GG-Centennial #4-13-12	GG-Centennial #4-13-12 (PWB)	Slot #53	Gallery Green	1076.22	15019.58	15019.58	920.78	15019.58	6.92	15019.58
GG-Cottonwood 5-13-12	GG-Cottonwood #5-13-12 (PWB)	Slot #46	Gallery Green	1394.51	15019.58	15019.58	1236.88	15019.58	8.85	15019.58
GG-Centennial #5-13-12	GG-Centennial #5-13-12 (PWB)	Slot #54	Gallery Green	1409.65	15019.58	15019.58	1252.66	15019.58	8.98	15019.58
GG-Cottonwood #4-13-12	GG-Cottonwood #4-13-12 (PWB)	Slot #45	Gallery Green	1703.80	15019.58	15019.58	1542.98	15019.58	10.59	15019.58
GG-Rangeview	GG-Rangeview #1-13-12	Slot #55	Gallery	1715.36	15019.58	15019.58	1554.79	15019.58	10.68	15019.58

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: CS-Scott #5-1-12 (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]
#1-13-12	(PWB)		Green							
Bestway 12-2	Bestway 12-2 (AWB)	Bestway 12-2	Bestway Pad Offsets	1983.30	8552.10	8552.10	1934.47	8595.40	32.78	9530.44
GG-Cottonwood #3-13-12	GG-Cottonwood #3-13-12 (PWB)	Slot #44	Gallery Green	2043.39	15019.58	15019.58	1882.39	15019.58	12.69	15019.58
GG-Cottonwood #2-13-12	GG-Cottonwood #2-13-12 (PWB)	Slot #43	Gallery Green	2362.14	15019.58	15019.58	2199.84	15019.58	14.55	15019.58
LUNDVALL #5	LUNDVALL #5 (AWB)	LUNDVALL #5	Bestway Pad Offsets	2638.65	7899.12	7899.12	2604.09	7922.82	61.47	9300.78
Stoney 7-1-2	Stoney 7-1-2 (AWB)	Stoney 7-1-2	Bestway Pad Offsets	2659.48	7750.69	7750.69	2606.66	7791.59	43.76	8841.46
Ruyle 7-3-2	Ruyle 7-3-2 (AWB)	Ruyle 7-3-2	Bestway Pad Offsets	2676.37	9087.74	9087.74	2633.23	9120.33	51.98	10350.65
GG-Cottonwood #1-13-12	GG-Cottonwood #1-13-12 (PWB)	Slot #25	Gallery Green	2701.53	15019.58	15019.58	2539.39	15019.58	16.66	15019.58
GG-Toddys #2-13-12	GG-Toddys #2-13-12 (PWB)	Slot #27	Gallery Green	3024.66	15019.58	15019.58	2861.84	15019.58	18.58	15019.58
GG-Toddys #1-13-12	GG-Toddys #1-13-12 (PWB)	Slot #28	Gallery Green	3369.79	15019.58	15019.58	3207.04	15019.58	20.71	15019.58
Bestway 6-11	Bestway 6-11 (AWB)	Bestway 6-11	Bestway Pad Offsets	3442.49	10367.05	10367.05	3331.85	15019.58	17.10	15019.58
DT-Lopez #1-5-6	DT-Lopez #1-5-6 (PWB)	Slot #3	Downtown	3741.06	6403.20	6403.20	3719.95	6380.83	69.98	10662.33
DT-Habitat #1-5-6	DT-Habitat #1-5-6 (PWB)	Slot #6	Downtown	3796.70	7909.21	7909.21	3772.85	7922.82	69.76	11285.69
DT-Habitat #5-5-6	DT-Habitat #5-5-6 (PWB)	Slot #10	Downtown	3796.72	9202.35	9202.35	3757.03	9169.54	69.13	12581.62
DT-Habitat #3-5-6	DT-Habitat #3-5-6 (PWB)	Slot #8	Downtown	3798.10	8554.05	8554.05	3767.40	8546.18	69.55	11925.45
DT-Martinez #2-5-6	DT-Martinez #2-5-6 (PWB)	Slot #19	Downtown	3798.14	9847.39	9847.39	3749.38	9809.31	65.16	8152.48
DT-Lopez #2-5-6	DT-Lopez #2-5-6 (PWB)	Slot #5	Downtown	3801.51	7389.97	7389.97	3780.09	7389.97	69.85	10974.01
DT-Habitat #2-5-6	DT-Habitat #2-5-6 (PWB)	Slot #7	Downtown	3802.02	8234.50	8234.50	3774.75	8234.50	69.62	11597.36
DT-Martinez #1-5-6	DT-Martinez #1-5-6 (PWB)	Slot #11	Downtown	3802.04	9523.16	9523.16	3757.28	9481.22	68.80	12876.89
DT-Forbes #1-5-6	DT-Forbes #1-5-6 (PWB)	Slot #21	Downtown	3802.35	10498.28	10498.28	3743.22	10449.07	56.33	9054.71
DT-Habitat #4-5-6	DT-Habitat #4-5-6 (PWB)	Slot #9	Downtown	3803.42	8878.30	8878.30	3768.11	8857.86	69.32	12237.13
DT-Martinez #3-5-6	DT-Martinez #3-5-6 (PWB)	Slot #20	Downtown	3806.19	10164.34	10164.34	3752.28	10120.99	60.69	8578.99
DT-Forbes #3-5-6	DT-Forbes #3-5-6 (PWB)	Slot #23	Downtown	3809.45	11162.52	11162.52	3739.40	11121.64	49.20	9891.33
MT-Maplewood	MT-Maplewood #5-8-7	Slot #6	Midtown	3809.68	14763.38	14763.38	3720.43	14845.40	40.71	15019.58

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: CS-Scott #5-1-12 (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]
#5-8-7	(PWB)									
DT-Forbes #2-5-6	DT-Forbes #2-5-6 (PWB)	Slot #22	Downtown	3810.48	10827.37	10827.37	3745.88	10777.15	52.66	9481.22
MT-Maplewood #3-8-7	MT-Maplewood #3-8-7 (PWB)	Slot #4	Midtown	3813.18	14016.00	14016.00	3725.20	14090.80	36.74	15019.58
DT-Forbes #5-5-6	DT-Forbes #5-5-6 (PWB)	Slot #25	Downtown	3813.78	11829.20	11829.20	3732.63	11777.81	43.48	10727.94
MT-Heath #1-8-7	MT-Heath #1-8-7 (PWB)	Slot #7	Midtown	3815.57	15019.58	15019.58	3727.83	15019.58	43.49	15019.58
MT-Maplewood #1-8-7	MT-Maplewood #1-8-7 (PWB)	Slot #2	Midtown	3816.69	13265.55	13265.55	3729.57	13352.61	35.76	14993.03
MT-Maplewood #4-8-7	MT-Maplewood #4-8-7 (PWB)	Slot #5	Midtown	3817.40	14386.08	14386.08	3728.76	14468.10	38.37	15019.58
DT-Forbes #4-5-6	DT-Forbes #4-5-6 (PWB)	Slot #24	Downtown	3817.58	11498.94	11498.94	3741.95	11449.73	46.28	10334.24
MT-Luther #2-8-7	MT-Luther #2-8-7 (PWB)	Slot #37	Midtown	3820.11	12538.79	12538.79	3733.45	12630.83	35.82	14271.25
MT-Maplewood #2-8-7	MT-Maplewood #2-8-7 (PWB)	Slot #3	Midtown	3820.91	13638.90	13638.90	3733.35	13729.91	36.00	15019.58
DT-Luther #1-5-6	DT-Luther #1-5-6 (PWB)	Slot #26	Downtown	3821.90	12160.72	12160.72	3735.15	12116.00	41.15	11121.64
MT-Luther #3-8-7	MT-Luther #3-8-7 (PWB)	Slot #1	Midtown	3824.41	12893.30	12893.30	3737.59	12975.32	35.89	14632.14
MT-Heath #2-8-7	MT-Heath #2-8-7 (PWB)	Slot #8	Midtown	3837.08	15019.58	15019.58	3750.72	15019.58	44.43	15019.58
MT-Heath #3-8-7	MT-Heath #3-8-7 (PWB)	Slot #9	Midtown	3903.71	15019.58	15019.58	3812.01	15019.58	42.57	15019.58
MT-Glenfair #1-8-7	MT-Glenfair #1-8-7 (PWB)	Slot #10	Midtown	3993.97	15019.58	15019.58	3895.09	15019.58	40.39	15019.58
Ditch 5-1-2	Ditch 5-1-2 (AWB)	Ditch 5-1-2	Bestway Pad Offsets	4015.06	7769.29	7769.29	3960.98	7791.59	69.21	9071.12
Johnson 5-3-2	Johnson 5-3-2 (AWB)	Johnson 5-3-2	Bestway Pad Offsets	4101.38	9223.16	9223.16	4056.23	9267.97	70.02	11564.56
MT-Glenfair #2-8-7	MT-Glenfair #2-8-7 (PWB)	Slot #11	Midtown	4127.07	15019.58	15019.58	4021.06	15019.58	38.93	15019.58
MT-Glenfair #3-8-7	MT-Glenfair #3-8-7 (PWB)	Slot #12	Midtown	4277.77	15019.58	15019.58	4165.53	15019.58	38.11	15019.58
MT-Glenfair #4-8-7	MT-Glenfair #4-8-7 (PWB)	Slot #13	Midtown	4464.74	15019.58	15019.58	4347.18	15019.58	37.98	15019.58
MT-Glenfair #5-8-7	MT-Glenfair #5-8-7 (PWB)	Slot #14	Midtown	4664.11	15019.58	15019.58	4542.15	15019.58	38.24	15019.58
MT-Glenmere #1-8-7	MT-Glenmere #1-8-7 (PWB)	Slot #15	Midtown	4893.02	15019.58	15019.58	4767.51	15019.58	38.98	15019.58
MT-Glenmere #2-8-7	MT-Glenmere #2-8-7 (PWB)	Slot #16	Midtown	5129.78	15019.58	15019.58	5001.36	15019.58	39.95	15019.58
Westmoor 5 2-6-2	Westmoor 5 2-6-2 (AWB)	Westmoor 5 2-6-2	Bestway Pad Offsets	5300.92	105.10	10620.25	5299.45	163.64	48.00	14730.57

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 4682.1ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 188.990 degrees  
Prepared by Peterson Energy  
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