

# MINERAL RESOURCES, INC.

<b>Location</b>	Weld County, CO, USA(Imported)	<b>Slot</b>	Slot #29
<b>Field</b>	Wattenberg	<b>Well</b>	CS-Scott #3-1-12
<b>Installation</b>	C Street Pad	<b>Wellbore</b>	CS-Scott #3-1-12 (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	1081.00	0.00	0.00	1081.00	0.00	0.00	0.00	-0.00
End of Build	2092.17	20.22	274.84	2071.30	14.91	-175.98	2.00	26.09
End of Hold	6306.09	20.22	274.84	6025.44	137.84	-1627.45	0.00	241.32
Target CS1	7836.08	90.00	179.63	6950.10	-818.79	-1960.48	6.00	1248.98
Target CS3	12678.00	90.00	179.63	6950.10	-5660.61	-1929.08	0.00	5952.95
End of Turn	12707.91	90.00	180.23	6950.10	-5690.52	-1929.04	2.00	5982.04
T.D. & Target CS2	15195.25	90.00	180.23	6950.10	-8177.84	-1938.88	0.00	8404.54

Surface 0.00 N 0.00 E

CS1

CS3

CS2

<- North(feet)

Scale 1 cm = 400 ft

<- True Vertical Depth (feet)

Scale 1 cm = 400 ft

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

3DS Kick off Point - 0.00 Inc, 1081.00 MD, 1081.00 TVD, -0.00 VS

End of Build - 20.22 Inc, 2092.17 MD, 2071.30 TVD, 26.09 VS

End of Hold - 20.22 Inc, 6306.09 MD, 6025.44 TVD, 241.32 VS

3DJ Kick off Point - 90.00 Inc, 12678.00 MD, 6950.10 TVD, 5952.95 VS

S/C Kick off Point - 90.00 Inc, 7836.08 MD, 6950.10 TVD, 1248.98 VS

T.D. & End of Hold - 6950.10 TVD, 8177.84 S 1938.88 W

Created by admin  
Date plotted 11-Apr-2013  
Plot reference is CS-Scott #3-1-12 (PWB).  
Ref wellpath is CS29 (PWP#1).  
Coordinates are in feet reference Slot #29.  
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 193.34 with reference 0.00 N, 0.00 E from Slot #29



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

Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #29	1403485.8081	3216246.6803	N40 26 18.1320	W104 43 23.1960	17.85S	41.91E	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	1403485.81	3216246.68
1081.00	0.00	0.000	1081.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
2092.17	20.22	274.840	2071.30	14.91N	175.98W	2.00	26.09	1403500.71	3216070.71
6306.09	20.22	274.840	6025.44	137.84N	1627.45W	==>	241.32	1403623.65	3214619.29
7836.08	90.00	179.630	6950.10	818.79S	1960.48W	6.00	1248.98	1402667.05	3214286.27
12678.00	90.00	179.630	6950.10	5660.61S	1929.08W	==>	5952.95	1397825.43	3214317.68
12707.91	90.00	180.230	6950.10	5690.52S	1929.04W	2.00	5982.04	1397795.52	3214317.71
15195.25	90.00	180.230	6950.10	8177.84S	1938.88W	==>	8404.54	1395308.29	3214307.88

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	1403485.81	3216246.68
16.00	0.00	0.000	16.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
1065.00	0.00	0.000	1065.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
1081.00	0.00	0.000	1081.00	0.00N	0.00E	==>	0.00	1403485.81	3216246.68
1165.00	1.68	274.840	1164.99	0.10N	1.23W	2.00	0.18	1403485.91	3216245.45
1265.00	3.68	274.840	1264.87	0.50N	5.89W	2.00	0.87	1403486.31	3216240.79
1365.00	5.68	274.840	1364.54	1.19N	14.02W	2.00	2.08	1403487.00	3216232.67
1465.00	7.68	274.840	1463.85	2.17N	25.61W	2.00	3.80	1403487.98	3216221.08
1565.00	9.68	274.840	1562.70	3.44N	40.64W	2.00	6.03	1403489.25	3216206.04
1665.00	11.68	274.840	1660.96	5.01N	59.11W	2.00	8.76	1403490.81	3216187.57
1765.00	13.68	274.840	1758.52	6.86N	80.98W	2.00	12.01	1403492.67	3216165.70
1865.00	15.68	274.840	1855.25	9.00N	106.23W	2.00	15.75	1403494.81	3216140.46
1965.00	17.68	274.840	1951.04	11.42N	134.83W	2.00	19.99	1403497.23	3216111.86
2065.00	19.68	274.840	2045.77	14.12N	166.74W	2.00	24.72	1403499.93	3216079.95
2092.17	20.22	274.840	2071.30	14.91N	175.98W	2.00	26.09	1403500.71	3216070.71
2100.00	20.22	274.840	2078.65	15.13N	178.68W	==>	26.49	1403500.94	3216068.01
2200.00	20.22	274.840	2172.49	18.05N	213.12W	==>	31.60	1403503.86	3216033.57
2300.00	20.22	274.840	2266.32	20.97N	247.57W	==>	36.71	1403506.78	3215999.12
2400.00	20.22	274.840	2360.16	23.89N	282.01W	==>	41.82	1403509.69	3215964.68
2500.00	20.22	274.840	2453.99	26.80N	316.45W	==>	46.92	1403512.61	3215930.24
2600.00	20.22	274.840	2547.83	29.72N	350.90W	==>	52.03	1403515.53	3215895.79
2700.00	20.22	274.840	2641.66	32.64N	385.34W	==>	57.14	1403518.45	3215861.35
2800.00	20.22	274.840	2735.50	35.56N	419.79W	==>	62.25	1403521.36	3215826.91
2900.00	20.22	274.840	2829.33	38.47N	454.23W	==>	67.35	1403524.28	3215792.46
3000.00	20.22	274.840	2923.17	41.39N	488.68W	==>	72.46	1403527.20	3215758.02

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 193.340 degrees  
Bottom hole distance is 8404.54 Feet on azimuth 193.34 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 #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	20.22	274.840	3017.00	44.31N	523.12W	==>	77.57	1403530.11	3215723.58
3200.00	20.22	274.840	3110.84	47.23N	557.57W	==>	82.68	1403533.03	3215689.13
3300.00	20.22	274.840	3204.67	50.14N	592.01W	==>	87.78	1403535.95	3215654.69
3400.00	20.22	274.840	3298.51	53.06N	626.46W	==>	92.89	1403538.87	3215620.25
3500.00	20.22	274.840	3392.34	55.98N	660.90W	==>	98.00	1403541.78	3215585.80
3600.00	20.22	274.840	3486.18	58.90N	695.35W	==>	103.11	1403544.70	3215551.36
3700.00	20.22	274.840	3580.01	61.81N	729.79W	==>	108.21	1403547.62	3215516.92
3800.00	20.22	274.840	3673.85	64.73N	764.24W	==>	113.32	1403550.54	3215482.47
3900.00	20.22	274.840	3767.69	67.65N	798.68W	==>	118.43	1403553.45	3215448.03
4000.00	20.22	274.840	3861.52	70.57N	833.13W	==>	123.54	1403556.37	3215413.59
4100.00	20.22	274.840	3955.36	73.48N	867.57W	==>	128.64	1403559.29	3215379.14
4200.00	20.22	274.840	4049.19	76.40N	902.02W	==>	133.75	1403562.21	3215344.70
4300.00	20.22	274.840	4143.03	79.32N	936.46W	==>	138.86	1403565.12	3215310.26
4400.00	20.22	274.840	4236.86	82.24N	970.91W	==>	143.97	1403568.04	3215275.81
4500.00	20.22	274.840	4330.70	85.15N	1005.35W	==>	149.07	1403570.96	3215241.37
4600.00	20.22	274.840	4424.53	88.07N	1039.80W	==>	154.18	1403573.87	3215206.93
4700.00	20.22	274.840	4518.37	90.99N	1074.24W	==>	159.29	1403576.79	3215172.48
4800.00	20.22	274.840	4612.20	93.90N	1108.69W	==>	164.40	1403579.71	3215138.04
4900.00	20.22	274.840	4706.04	96.82N	1143.13W	==>	169.50	1403582.63	3215103.60
5000.00	20.22	274.840	4799.87	99.74N	1177.58W	==>	174.61	1403585.54	3215069.15
5100.00	20.22	274.840	4893.71	102.66N	1212.02W	==>	179.72	1403588.46	3215034.71
5200.00	20.22	274.840	4987.54	105.57N	1246.46W	==>	184.83	1403591.38	3215000.27
5300.00	20.22	274.840	5081.38	108.49N	1280.91W	==>	189.93	1403594.30	3214965.82
5400.00	20.22	274.840	5175.21	111.41N	1315.35W	==>	195.04	1403597.21	3214931.38
5500.00	20.22	274.840	5269.05	114.33N	1349.80W	==>	200.15	1403600.13	3214896.93
5600.00	20.22	274.840	5362.88	117.24N	1384.24W	==>	205.25	1403603.05	3214862.49
5700.00	20.22	274.840	5456.72	120.16N	1418.69W	==>	210.36	1403605.97	3214828.05
5800.00	20.22	274.840	5550.55	123.08N	1453.13W	==>	215.47	1403608.88	3214793.60
5900.00	20.22	274.840	5644.39	126.00N	1487.58W	==>	220.58	1403611.80	3214759.16
6000.00	20.22	274.840	5738.22	128.91N	1522.02W	==>	225.68	1403614.72	3214724.72
6100.00	20.22	274.840	5832.06	131.83N	1556.47W	==>	230.79	1403617.63	3214690.27
6200.00	20.22	274.840	5925.89	134.75N	1590.91W	==>	235.90	1403620.55	3214655.83
6300.00	20.22	274.840	6019.73	137.67N	1625.36W	==>	241.01	1403623.47	3214621.39
6306.09	20.22	274.840	6025.44	137.84N	1627.45W	==>	241.32	1403623.65	3214619.29
6400.00	20.49	258.610	6113.56	135.97N	1659.77W	6.00	250.60	1403621.77	3214586.98
6500.00	22.33	242.910	6206.73	123.85N	1693.87W	6.00	270.26	1403609.65	3214552.87
6600.00	25.42	230.160	6298.22	101.43N	1727.30W	6.00	299.78	1403587.23	3214519.45
6700.00	29.37	220.310	6387.04	68.95N	1759.67W	6.00	338.86	1403554.75	3214487.08
6800.00	33.88	212.740	6472.20	26.77N	1790.64W	6.00	387.05	1403512.57	3214456.11
6900.00	38.76	206.820	6552.77	24.66S	1819.87W	6.00	443.83	1403461.15	3214426.89
7000.00	43.87	202.060	6627.88	84.76S	1847.03W	6.00	508.57	1403401.05	3214399.72
7100.00	49.15	198.120	6696.69	152.88S	1871.83W	6.00	580.58	1403332.93	3214374.92
7200.00	54.54	194.770	6758.46	228.27S	1894.01W	6.00	659.05	1403257.54	3214352.75
7300.00	60.01	191.850	6812.50	310.11S	1913.30W	6.00	743.14	1403175.71	3214333.45
7400.00	65.55	189.230	6858.23	397.50S	1929.51W	6.00	831.91	1403088.32	3214317.24
7500.00	71.12	186.840	6895.15	489.48S	1942.46W	6.00	924.39	1402996.34	3214304.30
7600.00	76.72	184.600	6922.84	585.05S	1952.00W	6.00	1019.58	1402900.78	3214294.76
7700.00	82.34	182.460	6941.01	683.15S	1958.03W	6.00	1116.43	1402802.68	3214288.73
7800.00	87.97	180.370	6949.46	782.72S	1960.48W	6.00	1213.88	1402703.12	3214286.27
7836.08	90.00	179.630	6950.10	818.79S	1960.48W	6.00	1248.98	1402667.05	3214286.27
7900.00	90.00	179.630	6950.10	882.71S	1960.07W	==>	1311.08	1402603.13	3214286.69
8000.00	90.00	179.630	6950.10	982.71S	1959.42W	==>	1408.23	1402503.14	3214287.34
8100.00	90.00	179.630	6950.10	1082.71S	1958.77W	==>	1505.38	1402403.15	3214287.99
8200.00	90.00	179.630	6950.10	1182.70S	1958.12W	==>	1602.53	1402303.15	3214288.63
8300.00	90.00	179.630	6950.10	1282.70S	1957.48W	==>	1699.68	1402203.16	3214289.28
8400.00	90.00	179.630	6950.10	1382.70S	1956.83W	==>	1796.83	1402103.16	3214289.93
8500.00	90.00	179.630	6950.10	1482.70S	1956.18W	==>	1893.98	1402003.17	3214290.58
8600.00	90.00	179.630	6950.10	1582.70S	1955.53W	==>	1991.13	1401903.18	3214291.23
8700.00	90.00	179.630	6950.10	1682.69S	1954.88W	==>	2088.28	1401803.18	3214291.88
8800.00	90.00	179.630	6950.10	1782.69S	1954.23W	==>	2185.44	1401703.19	3214292.53
8900.00	90.00	179.630	6950.10	1882.69S	1953.58W	==>	2282.59	1401603.19	3214293.17

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Vertical Section is from 0.00N 0.00E on azimuth 193.340 degrees  
Bottom hole distance is 8404.54 Feet on azimuth 193.34 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 #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
9000.00	90.00	179.630	6950.10	1982.69S	1952.94W	==>	2379.74	1401503.20	3214293.82
9100.00	90.00	179.630	6950.10	2082.68S	1952.29W	==>	2476.89	1401403.21	3214294.47
9200.00	90.00	179.630	6950.10	2182.68S	1951.64W	==>	2574.04	1401303.21	3214295.12
9300.00	90.00	179.630	6950.10	2282.68S	1950.99W	==>	2671.19	1401203.22	3214295.77
9400.00	90.00	179.630	6950.10	2382.68S	1950.34W	==>	2768.34	1401103.22	3214296.42
9500.00	90.00	179.630	6950.10	2482.68S	1949.69W	==>	2865.49	1401003.23	3214297.06
9600.00	90.00	179.630	6950.10	2582.67S	1949.04W	==>	2962.64	1400903.24	3214297.71
9700.00	90.00	179.630	6950.10	2682.67S	1948.40W	==>	3059.79	1400803.24	3214298.36
9800.00	90.00	179.630	6950.10	2782.67S	1947.75W	==>	3156.95	1400703.25	3214299.01
9900.00	90.00	179.630	6950.10	2882.67S	1947.10W	==>	3254.10	1400603.25	3214299.66
10000.00	90.00	179.630	6950.10	2982.67S	1946.45W	==>	3351.25	1400503.26	3214300.31
10100.00	90.00	179.630	6950.10	3082.66S	1945.80W	==>	3448.40	1400403.27	3214300.96
10200.00	90.00	179.630	6950.10	3182.66S	1945.15W	==>	3545.55	1400303.27	3214301.60
10300.00	90.00	179.630	6950.10	3282.66S	1944.50W	==>	3642.70	1400203.28	3214302.25
10400.00	90.00	179.630	6950.10	3382.66S	1943.86W	==>	3739.85	1400103.29	3214302.90
10500.00	90.00	179.630	6950.10	3482.66S	1943.21W	==>	3837.00	1400003.29	3214303.55
10600.00	90.00	179.630	6950.10	3582.65S	1942.56W	==>	3934.15	1399903.30	3214304.20
10700.00	90.00	179.630	6950.10	3682.65S	1941.91W	==>	4031.30	1399803.30	3214304.85
10800.00	90.00	179.630	6950.10	3782.65S	1941.26W	==>	4128.45	1399703.31	3214305.50
10900.00	90.00	179.630	6950.10	3882.65S	1940.61W	==>	4225.61	1399603.32	3214306.14
11000.00	90.00	179.630	6950.10	3982.64S	1939.96W	==>	4322.76	1399503.32	3214306.79
11100.00	90.00	179.630	6950.10	4082.64S	1939.32W	==>	4419.91	1399403.33	3214307.44
11200.00	90.00	179.630	6950.10	4182.64S	1938.67W	==>	4517.06	1399303.33	3214308.09
11300.00	90.00	179.630	6950.10	4282.64S	1938.02W	==>	4614.21	1399203.34	3214308.74
11400.00	90.00	179.630	6950.10	4382.64S	1937.37W	==>	4711.36	1399103.35	3214309.39
11500.00	90.00	179.630	6950.10	4482.63S	1936.72W	==>	4808.51	1399003.35	3214310.04
11600.00	90.00	179.630	6950.10	4582.63S	1936.07W	==>	4905.66	1398903.36	3214310.68
11700.00	90.00	179.630	6950.10	4682.63S	1935.42W	==>	5002.81	1398803.36	3214311.33
11800.00	90.00	179.630	6950.10	4782.63S	1934.78W	==>	5099.96	1398703.37	3214311.98
11900.00	90.00	179.630	6950.10	4882.63S	1934.13W	==>	5197.12	1398603.38	3214312.63
12000.00	90.00	179.630	6950.10	4982.62S	1933.48W	==>	5294.27	1398503.38	3214313.28
12100.00	90.00	179.630	6950.10	5082.62S	1932.83W	==>	5391.42	1398403.39	3214313.93
12200.00	90.00	179.630	6950.10	5182.62S	1932.18W	==>	5488.57	1398303.39	3214314.58
12300.00	90.00	179.630	6950.10	5282.62S	1931.53W	==>	5585.72	1398203.40	3214315.22
12400.00	90.00	179.630	6950.10	5382.62S	1930.88W	==>	5682.87	1398103.41	3214315.87
12500.00	90.00	179.630	6950.10	5482.61S	1930.24W	==>	5780.02	1398003.41	3214316.52
12600.00	90.00	179.630	6950.10	5582.61S	1929.59W	==>	5877.17	1397903.42	3214317.17
12678.00	90.00	179.630	6950.10	5660.61S	1929.08W	==>	5952.95	1397825.43	3214317.68
12700.00	90.00	180.070	6950.10	5682.61S	1929.02W	2.00	5974.34	1397803.42	3214317.73
12707.91	90.00	180.230	6950.10	5690.52S	1929.04W	2.00	5982.04	1397795.52	3214317.71
12800.00	90.00	180.230	6950.10	5782.61S	1929.41W	==>	6071.73	1397703.43	3214317.35
12900.00	90.00	180.230	6950.10	5882.61S	1929.80W	==>	6169.13	1397603.43	3214316.95
13000.00	90.00	180.230	6950.10	5982.61S	1930.20W	==>	6266.52	1397503.44	3214316.56
13100.00	90.00	180.230	6950.10	6082.61S	1930.59W	==>	6363.91	1397403.44	3214316.16
13200.00	90.00	180.230	6950.10	6182.61S	1930.99W	==>	6461.31	1397303.45	3214315.77
13300.00	90.00	180.230	6950.10	6282.60S	1931.39W	==>	6558.70	1397203.45	3214315.37
13400.00	90.00	180.230	6950.10	6382.60S	1931.78W	==>	6656.09	1397103.46	3214314.98
13500.00	90.00	180.230	6950.10	6482.60S	1932.18W	==>	6753.49	1397003.46	3214314.58
13600.00	90.00	180.230	6950.10	6582.60S	1932.57W	==>	6850.88	1396903.47	3214314.19
13700.00	90.00	180.230	6950.10	6682.60S	1932.97W	==>	6948.27	1396803.47	3214313.79
13800.00	90.00	180.230	6950.10	6782.60S	1933.36W	==>	7045.66	1396703.48	3214313.39
13900.00	90.00	180.230	6950.10	6882.60S	1933.76W	==>	7143.06	1396603.48	3214313.00
14000.00	90.00	180.230	6950.10	6982.60S	1934.15W	==>	7240.45	1396503.49	3214312.60
14100.00	90.00	180.230	6950.10	7082.60S	1934.55W	==>	7337.84	1396403.49	3214312.21
14200.00	90.00	180.230	6950.10	7182.60S	1934.94W	==>	7435.24	1396303.50	3214311.81
14300.00	90.00	180.230	6950.10	7282.60S	1935.34W	==>	7532.63	1396203.50	3214311.42
14400.00	90.00	180.230	6950.10	7382.60S	1935.73W	==>	7630.02	1396103.51	3214311.02
14500.00	90.00	180.230	6950.10	7482.60S	1936.13W	==>	7727.42	1396003.51	3214310.63
14600.00	90.00	180.230	6950.10	7582.59S	1936.53W	==>	7824.81	1395903.52	3214310.23
14700.00	90.00	180.230	6950.10	7682.59S	1936.92W	==>	7922.20	1395803.52	3214309.84
14800.00	90.00	180.230	6950.10	7782.59S	1937.32W	==>	8019.60	1395703.52	3214309.44

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Vertical Section is from 0.00N 0.00E on azimuth 193.340 degrees  
Bottom hole distance is 8404.54 Feet on azimuth 193.34 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 #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
14900.00	90.00	180.230	6950.10	7882.59S	1937.71W	==>	8116.99	1395603.53	3214309.05
15000.00	90.00	180.230	6950.10	7982.59S	1938.11W	==>	8214.38	1395503.53	3214308.65
15100.00	90.00	180.230	6950.10	8082.59S	1938.50W	==>	8311.77	1395403.54	3214308.25
15195.25	90.00	180.230	6950.10	8177.84S	1938.88W	==>	8404.54	1395308.29	3214307.88

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SYSDRILL  
Well Design Combined Report  
Wellbore: CS-Scott #3-1-12 (PWB)

Hole Sections								
Diameter [in]	Start MD[ft]	Start TVD[ft]	Start North[ft]	Start East[ft]	End MD[ft]	End TVD[ft]	End North[ft]	End 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	7836.00	6950.10	818.71S	1960.49W
6 1/8	7836.00	6950.10	818.71S	1960.49W	15195.25	6950.10	8177.84S	1938.88W

Casings								
Name	Top MD[ft]	Top TVD[ft]	Top North[ft]	Top East[ft]	Shoe MD[ft]	Shoe TVD[ft]	Shoe North[ft]	Shoe East[ft]
9 5/8in Surface Casing	0.00				500.00	500.00	0.00N	0.00E
7.0in Intermediate Casing	0.00				7836.00	6950.10	818.71S	1960.49W
4 1/2in Production Liner	6306.00	6025.36	137.84N	1627.42W	15195.25	6950.10	8177.84S	1938.88W

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
CS1	818.79S	1980.48W	6950.10	N40 26 10.2120	W104 43 48.9000	1402667.05	3214266.27	15-Mar-2013
CS2	8177.84S	1938.88W	6950.10	N40 24 57.4920	W104 43 49.1880	1395308.29	3214307.88	15-Mar-2013
CS3	5660.61S	1969.08W	6950.10	N40 25 22.3680	W104 43 49.2960	1397825.43	3214277.68	15-Mar-2013

Survey Tool Program						
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model	
33051	Planned	15195.25	6950.10	WdW Rate Gyro	Standard	

Notes

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: CS-Scott #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-Scott #3-1-12 (PWB)	8-Apr-2013	11-Apr-2013

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

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #29	1403485.8081	3216246.6803	N40 26 18.1320	W104 43 23.1960	17.85S	41.91E

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	13.92	1082.27	12673.36	11.54	1082.27	2.78	15195.25
CS-Scott #2-1-12	CS-Scott #2-1-12 (PWB)	Slot #30	C Street Pad	16.70	967.44	15195.25	14.49	983.85	2.81	15195.25
CS-Scott #5-1-12	CS-Scott #5-1-12 (PWB)	Slot #27	C Street Pad	30.62	1082.27	12680.04	28.25	1082.27	4.63	15195.25
CS-Scott #1-1-12	CS-Scott #1-1-12 (PWB)	Slot #31	C Street Pad	33.40	852.61	15195.25	31.39	869.02	4.58	15185.41
CS-Sherwood #1-1-12	CS-Sherwood #1-1-12 (PWB)	Slot #26	C Street Pad	47.32	1082.27	12668.22	44.95	1082.27	7.06	15195.25
CS-Bittersweet #3-1-12	CS-Bittersweet #3-1-12 (PWB)	Slot #32	C Street Pad	47.46	754.19	15195.25	45.61	770.59	7.08	15195.25
CS-Sherwood #2-1-12	CS-Sherwood #2-1-12 (PWB)	Slot #25	C Street Pad	64.02	1082.27	12663.83	61.65	1082.27	9.21	15195.25
CS-Bestway #1-1-2	CS-Bestway #1-1-2 (PWB)	Slot #8	C Street Pad	71.94	1082.27	7403.20	69.56	1082.27	3.66	7463.51
CS-Sherwood #3-1-12	CS-Sherwood #3-1-12 (PWB)	Slot #24	C Street Pad	77.94	1082.27	12679.05	75.57	1082.27	11.53	15189.88
CS-Kinkadee #1-1-12	CS-Kinkadee #1-1-12	Slot #23	C Street Pad	94.64	1082.27	12672.26	92.27	1082.27	13.73	15189.88

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: CS-Scott #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-Kinkade #2-1-12	CS-Kinkade #2-1-12 (PWB)	Slot #22	C Street Pad	111.35	1065.87	12671.50	108.99	1082.27	16.09	15195.25
CS-Kinkade #3-1-12	CS-Kinkade #3-1-12 (PWB)	Slot #21	C Street Pad	128.05	967.44	12663.64	125.86	967.44	18.33	15195.25
CS-Kinkade #4-1-12	CS-Kinkade #4-1-12 (PWB)	Slot #20	C Street Pad	141.97	852.61	12652.71	139.94	869.02	20.67	15195.25
Franklin Park 2-6-1	Franklin Park 2-6-1 (AWB)	Franklin Park 2-6-1	Bestway Pad Offsets	151.14	11469.17	11469.17	53.06	11449.73	1.53	11433.32
CS-Kinkade #5-1-12	CS-Kinkade #5-1-12 (PWB)	Slot #19	C Street Pad	158.67	754.19	12648.29	156.81	770.59	22.91	15195.25
CS-Longmeadow #1-1-12	CS-Longmeadow #1-1-12 (PWB)	Slot #18	C Street Pad	175.37	655.76	655.76	173.68	672.17	25.27	15195.25
CS-Longmeadow #2-1-12	CS-Longmeadow #2-1-12 (PWB)	Slot #17	C Street Pad	192.07	557.34	557.34	190.39	491.72	27.53	15195.25
Poudre Trail 5 2-2-1	Poudre Trail 5 2-2-1 (AWB)	Poudre Trail 5 2-2-1	Bestway Pad Offsets	360.08	8634.98	8634.98	301.32	8693.82	5.16	8825.06
GG-Centennial #3-13-12	GG-Centennial #3-13-12 (PWB)	Slot #52	Gallery Green	401.95	15195.25	15195.25	354.66	15195.25	8.50	15195.25
GG-Centennial #2-13-12	GG-Centennial #2-13-12 (PWB)	Slot #51	Gallery Green	463.25	15195.25	15195.25	348.82	15195.25	4.05	15195.25
GG-Centennial #4-13-12	GG-Centennial #4-13-12 (PWB)	Slot #53	Gallery Green	484.80	15195.25	15195.25	367.21	15195.25	4.12	15195.25
GG-Centennial #1-13-12	GG-Centennial #1-13-12 (PWB)	Slot #50	Gallery Green	759.30	15195.25	15195.25	617.78	15195.25	5.37	15195.25
GG-Centennial #5-13-12	GG-Centennial #5-13-12 (PWB)	Slot #54	Gallery Green	785.75	15195.25	15195.25	644.65	15195.25	5.57	15195.25
GG-Mariner #3-13-12	GG-Mariner #3-13-12 (PWB)	Slot #49	Gallery Green	1031.98	15195.25	15195.25	876.53	15195.25	6.64	15195.25
GG-Rangeview #1-13-12	GG-Rangeview #1-13-12 (PWB)	Slot #55	Gallery Green	1061.26	15195.25	15195.25	906.10	15195.25	6.84	15195.25
Bestway 12-2	Bestway 12-2 (AWB)	Bestway 12-2	Bestway Pad Offsets	1357.33	8716.68	8716.68	1308.75	8759.44	22.70	9382.80
GG-Mariner #2-13-12	GG-Mariner #2-13-12 (PWB)	Slot #48	Gallery Green	1403.63	15195.25	15195.25	1245.77	15195.25	8.89	15195.25
GG-Mariner #1-13-12	GG-Mariner #1-13-12 (PWB)	Slot #47	Gallery Green	1713.02	15195.25	15195.25	1552.09	15195.25	10.64	15195.25
LUNDVALL #5	LUNDVALL #5 (AWB)	LUNDVALL #5	Bestway Pad Offsets	1988.73	8062.43	8062.43	1953.78	8086.87	46.46	9103.93

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: CS-Scott #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]
Stoney 7-1-2	Stoney 7-1-2 (AWB)	Stoney 7-1-2	Bestway Pad Offsets	2008.95	7916.00	7916.00	1955.72	7955.63	33.09	8726.63
Ruyle 7-3-2	Ruyle 7-3-2 (AWB)	Ruyle 7-3-2	Bestway Pad Offsets	2031.34	9251.56	9251.56	1988.02	9284.37	39.55	10186.60
GG-Cottonwood 5-13-12	GG-Cottonwood #5-13-12 (PWB)	Slot #46	Gallery Green	2052.51	15195.25	15195.25	1891.37	15195.25	12.74	15195.25
GG-Cottonwood #4-13-12	GG-Cottonwood #4-13-12 (PWB)	Slot #45	Gallery Green	2371.28	15195.25	15195.25	2208.92	15195.25	14.60	15195.25
GG-Cottonwood #3-13-12	GG-Cottonwood #3-13-12 (PWB)	Slot #44	Gallery Green	2710.60	15195.25	15195.25	2548.25	15195.25	16.70	15195.25
Bestway 6-11	Bestway 6-11 (AWB)	Bestway 6-11	Bestway Pad Offsets	2803.43	10523.43	10523.43	2655.29	15195.25	13.80	15195.25
GG-Cottonwood #2-13-12	GG-Cottonwood #2-13-12 (PWB)	Slot #43	Gallery Green	3033.73	15195.25	15195.25	2870.74	15195.25	18.61	15195.25
Ditch 5-1-2	Ditch 5-1-2 (AWB)	Ditch 5-1-2	Bestway Pad Offsets	3364.60	7926.94	7926.94	3310.11	7955.63	58.00	8989.10
GG-Cottonwood #1-13-12	GG-Cottonwood #1-13-12 (PWB)	Slot #25	Gallery Green	3372.53	15195.25	15195.25	3209.71	15195.25	20.71	15195.25
Johnson 5-3-2	Johnson 5-3-2 (AWB)	Johnson 5-3-2	Bestway Pad Offsets	3456.90	9382.80	9382.80	3411.65	9432.01	59.23	11351.30
GG-Toddys #2-13-12	GG-Toddys #2-13-12 (PWB)	Slot #27	Gallery Green	3698.13	15195.25	15195.25	3534.92	15195.25	22.66	15195.25
GG-Toddys #1-13-12	GG-Toddys #1-13-12 (PWB)	Slot #28	Gallery Green	4042.71	15195.25	15195.25	3879.54	15195.25	24.78	15195.25
DT-Lopez #1-5-6	DT-Lopez #1-5-6 (PWB)	Slot #3	Downtown	4240.81	5816.00	5816.00	4218.76	5812.95	81.08	11384.11
DT-Lopez #2-5-6	DT-Lopez #2-5-6 (PWB)	Slot #5	Downtown	4345.06	5944.21	5944.21	4318.53	5944.21	80.88	11728.60
DT-Habitat #1-5-6	DT-Habitat #1-5-6 (PWB)	Slot #6	Downtown	4368.82	5794.09	8103.27	4336.49	5794.09	80.83	12040.28
DT-Martinez #2-5-6	DT-Martinez #2-5-6 (PWB)	Slot #19	Downtown	4439.88	10038.97	10038.97	4391.10	10006.16	76.22	8054.06
DT-Habitat #5-5-6	DT-Habitat #5-5-6 (PWB)	Slot #10	Downtown	4441.12	9388.67	9388.67	4401.35	9366.39	80.21	13237.78
DT-Forbes #1-5-6	DT-Forbes #1-5-6 (PWB)	Slot #21	Downtown	4441.42	10685.63	10685.63	4382.32	10645.92	65.84	8989.10
DT-Martinez #1-5-6	DT-Martinez #1-5-6 (PWB)	Slot #11	Downtown	4444.24	9716.00	9716.00	4399.42	9678.07	79.92	13549.46
DT-Habitat #3-5-6	DT-Habitat #3-5-6 (PWB)	Slot #8	Downtown	4445.15	8743.82	8743.82	4414.20	8726.63	80.59	12663.64
DT-Martinez #3-5-6	DT-Martinez #3-5-6 (PWB)	Slot #20	Downtown	4445.76	10354.11	10354.11	4391.85	10317.84	70.92	8546.18
DT-Forbes #3-5-6	DT-Forbes #3-5-6 (PWB)	Slot #23	Downtown	4445.78	11352.32	11352.32	4375.80	11302.09	57.46	9874.92
DT-Forbes	DT-Forbes	Slot #22	Downtown	4447.33	11017.16	11017.16	4382.76	10974.01	61.48	9448.41

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: CS-Scott #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]
#2-5-6	#2-5-6 (PWB)									
DT-Forbes #5-5-6	DT-Forbes #5-5-6 (PWB)	Slot #25	Downtown	4447.37	12023.87	12023.87	4366.31	11974.66	50.74	10727.94
DT-Habitat #4-5-6	DT-Habitat #4-5-6 (PWB)	Slot #9	Downtown	4448.27	9071.12	9071.12	4412.79	9038.31	80.33	12942.51
DT-Habitat #2-5-6	DT-Habitat #2-5-6 (PWB)	Slot #7	Downtown	4449.52	8423.23	8423.23	4421.89	8423.23	80.63	12351.96
MT-Luther #2-8-7	MT-Luther #2-8-7 (PWB)	Slot #37	Midtown	4451.01	12680.04	12680.04	4365.68	12729.25	41.98	14714.16
DT-Forbes #4-5-6	DT-Forbes #4-5-6 (PWB)	Slot #24	Downtown	4451.69	11683.84	11683.84	4376.12	11646.58	53.99	10301.43
DT-Luther #1-5-6	DT-Luther #1-5-6 (PWB)	Slot #26	Downtown	4453.28	12351.96	12351.96	4366.59	12302.75	47.96	11138.05
MT-Maplewood #1-8-7	MT-Maplewood #1-8-7 (PWB)	Slot #2	Midtown	4460.51	13363.30	13363.30	4375.04	13451.04	42.15	15195.25
MT-Luther #3-8-7	MT-Luther #3-8-7 (PWB)	Slot #1	Midtown	4460.57	12991.72	12991.72	4375.37	13073.74	42.11	15058.65
MT-Maplewood #3-8-7	MT-Maplewood #3-8-7 (PWB)	Slot #4	Midtown	4470.64	14109.94	14109.94	4384.24	14189.23	43.89	15195.25
MT-Maplewood #2-8-7	MT-Maplewood #2-8-7 (PWB)	Slot #3	Midtown	4470.68	13736.62	13736.62	4384.70	13828.34	42.77	15195.25
MT-Maplewood #5-8-7	MT-Maplewood #5-8-7 (PWB)	Slot #6	Midtown	4480.76	14861.80	14861.80	4392.94	14927.42	48.30	15195.25
MT-Maplewood #4-8-7	MT-Maplewood #4-8-7 (PWB)	Slot #5	Midtown	4480.79	14484.50	14484.50	4393.63	14566.52	45.78	15195.25
MT-Heath #1-8-7	MT-Heath #1-8-7 (PWB)	Slot #7	Midtown	4491.03	15195.25	15195.25	4402.99	15195.25	51.01	15195.25
MT-Heath #2-8-7	MT-Heath #2-8-7 (PWB)	Slot #8	Midtown	4509.38	15195.25	15195.25	4422.67	15195.25	52.01	15195.25
MT-Heath #3-8-7	MT-Heath #3-8-7 (PWB)	Slot #9	Midtown	4566.32	15195.25	15195.25	4475.04	15195.25	50.02	15195.25
MT-Glenfair #1-8-7	MT-Glenfair #1-8-7 (PWB)	Slot #10	Midtown	4643.84	15195.25	15195.25	4545.80	15195.25	47.37	15195.25
MT-Glenfair #2-8-7	MT-Glenfair #2-8-7 (PWB)	Slot #11	Midtown	4758.91	15195.25	15195.25	4653.63	15195.25	45.20	15195.25
MT-Glenfair #3-8-7	MT-Glenfair #3-8-7 (PWB)	Slot #12	Midtown	4890.29	15195.25	15195.25	4778.44	15195.25	43.72	15195.25
MT-Glenfair #4-8-7	MT-Glenfair #4-8-7 (PWB)	Slot #13	Midtown	5054.75	15195.25	15195.25	4936.92	15195.25	42.90	15195.25
Westmoor 5 2-6-2	Westmoor 5 2-6-2 (AWB)	Westmoor 5 2-6-2	Bestway Pad Offsets	5182.97	10865.30	10865.30	5113.12	11056.03	41.49	14714.16
MT-Glenfair #5-8-7	MT-Glenfair #5-8-7 (PWB)	Slot #14	Midtown	5231.79	15195.25	15195.25	5108.83	15195.25	42.55	15195.25
MT-Glenmere #1-8-7	MT-Glenmere #1-8-7 (PWB)	Slot #15	Midtown	5436.95	15195.25	15195.25	5309.56	15195.25	42.68	15195.25
MT-Glenmere #2-8-7	MT-Glenmere #2-8-7 (PWB)	Slot #16	Midtown	5651.06	15195.25	15195.25	5519.93	15195.25	43.09	15195.25

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 4682.1ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 193.340 degrees  
Prepared by Peterson Energy  
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