

# MINERAL RESOURCES, INC.

<b>Location</b>	Weld County, CO, USA(Imported)	<b>Slot</b>	Slot #23
<b>Field</b>	Wattenberg	<b>Well</b>	DT-Forbes #3-5-6
<b>Installation</b>	Downtown	<b>Wellbore</b>	DT-Forbes #3-5-6 (PWB)

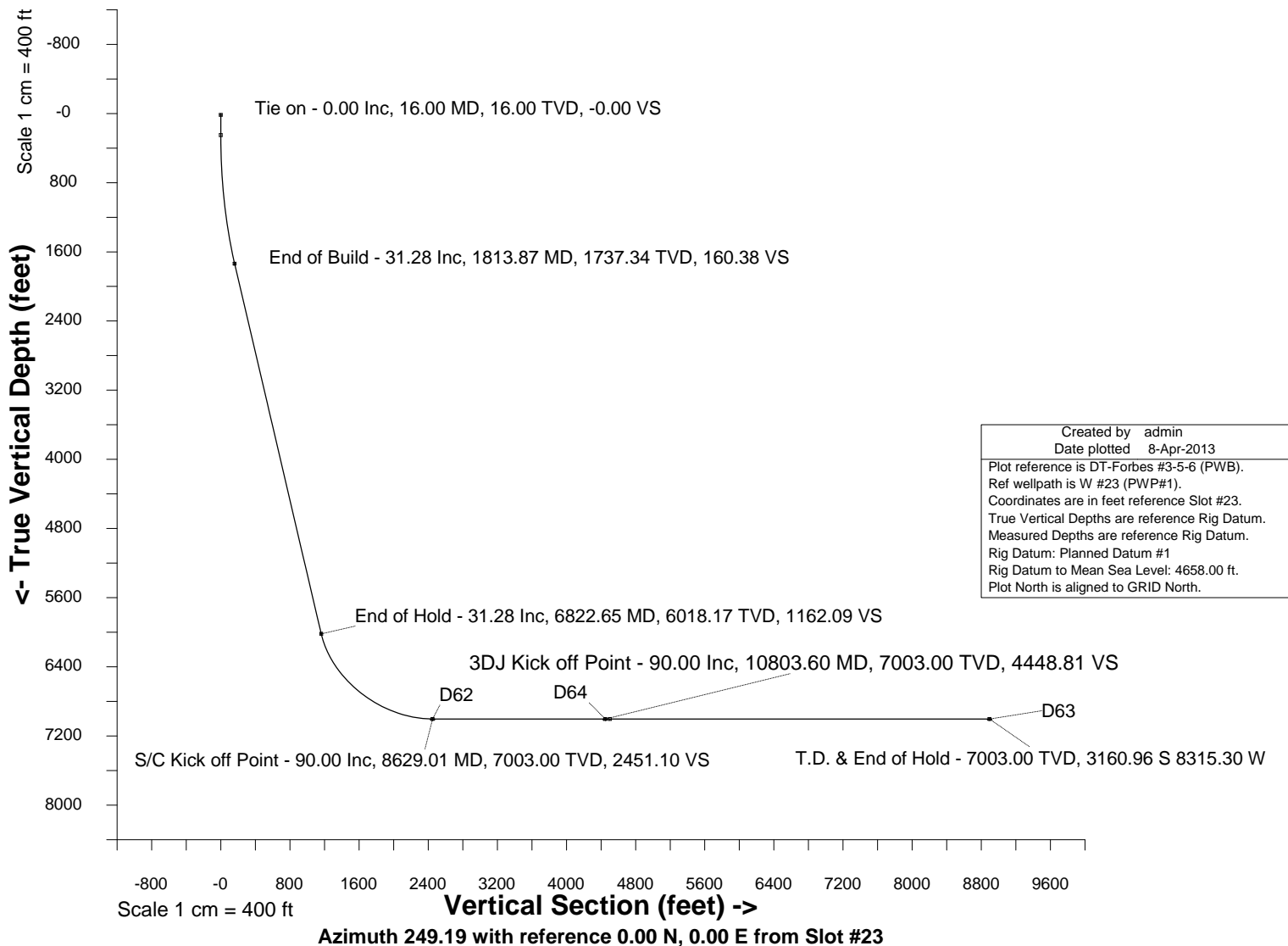
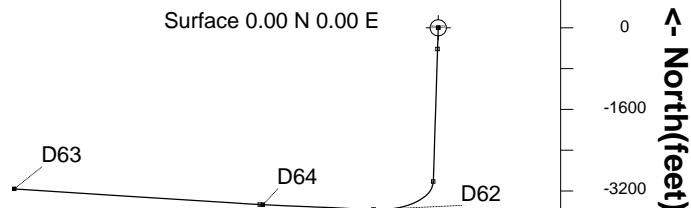
Scale 1 cm = 800 ft

East (feet) ->

-9600 -8000 -6400 -4800 -3200 -1600 0 1600

## WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	16.00	0.00	0.00	16.00	0.00	0.00	0.00	-0.00
KOP	250.00	0.00	0.00	250.00	0.00	0.00	0.00	-0.00
End of Build	1813.87	31.28	181.84	1737.34	-416.14	-13.39	2.00	160.38
End of Hold	6822.65	31.28	181.84	6018.17	-3015.26	-97.01	0.00	1162.09
Target D62	8629.01	90.00	272.46	7003.00	-3563.84	-1267.48	5.00	2451.10
Target D64	10803.60	90.00	272.46	7003.00	-3470.67	-3440.07	0.00	4448.81
End of Turn	10862.94	90.00	273.64	7003.00	-3467.52	-3499.33	2.00	4503.08
T.D. & Target D63	15688.66	90.00	273.64	7003.00	-3160.96	-8315.30	0.00	8895.83





INTEGRATED PETROLEUM TECHNOLOGIES, INC  
SYSDRILL  
Well Design Combined Report  
Wellbore: DT-Forbes #3-5-6 (PWB)

Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #23	1402340.6826	3227068.8916	N40 26 5.8560	W104 41 3.3720	353.40S	0.47E	-1.05

Declination			
Date	Source	Time	
30-Jan-2013	IGRF Model [1900.0-2015.0]	10:11	

Site Details				
Name	Northing	Easting	Coord System Name	North Alignment
Downtown	1402694.0641	3227068.4245	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	1402340.68	3227068.89
250.00	0.00	0.000	250.00	0.00N	0.00E	==>	0.00	1402340.68	3227068.89
1813.87	31.28	181.840	1737.34	416.14S	13.39W	2.00	160.38	1401924.56	3227055.50
6822.65	31.28	181.840	6018.17	3015.26S	97.01W	==>	1162.09	1399325.54	3226971.89
8629.01	90.00	272.460	7003.00	3563.84S	1267.48W	5.00	2451.10	1398776.99	3225801.46
10803.60	90.00	272.460	7003.00	3470.67S	3440.07W	==>	4448.81	1398870.15	3223628.95
10862.94	90.00	273.640	7003.00	3467.52S	3499.33W	2.00	4503.08	1398873.31	3223569.70
15688.66	90.00	273.640	7003.00	3160.96S	8315.30W	==>	8895.83	1399179.85	3218753.92

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	1402340.68	3227068.89
16.00	0.00	0.000	16.00	0.00N	0.00E	==>	0.00	1402340.68	3227068.89
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1402340.68	3227068.89
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1402340.68	3227068.89
234.00	0.00	0.000	234.00	0.00N	0.00E	==>	0.00	1402340.68	3227068.89
250.00	0.00	0.000	250.00	0.00N	0.00E	==>	0.00	1402340.68	3227068.89
334.00	1.68	181.840	333.99	1.23S	0.04W	2.00	0.47	1402339.45	3227068.85
434.00	3.68	181.840	433.87	5.90S	0.19W	2.00	2.28	1402334.78	3227068.70
534.00	5.68	181.840	533.54	14.06S	0.45W	2.00	5.42	1402326.62	3227068.44
634.00	7.68	181.840	632.85	25.68S	0.83W	2.00	9.90	1402315.00	3227068.07
734.00	9.68	181.840	731.70	40.77S	1.31W	2.00	15.71	1402299.92	3227067.58
834.00	11.68	181.840	829.96	59.29S	1.91W	2.00	22.85	1402281.40	3227066.98
934.00	13.68	181.840	927.52	81.23S	2.61W	2.00	31.31	1402259.46	3227066.28
1034.00	15.68	181.840	1024.25	106.55S	3.43W	2.00	41.07	1402234.13	3227065.46
1134.00	17.68	181.840	1120.04	135.24S	4.35W	2.00	52.12	1402205.45	3227064.54
1234.00	19.68	181.840	1214.77	167.25S	5.38W	2.00	64.46	1402173.44	3227063.51
1334.00	21.68	181.840	1308.32	202.55S	6.52W	2.00	78.06	1402138.14	3227062.38
1434.00	23.68	181.840	1400.58	241.08S	7.76W	2.00	92.91	1402099.61	3227061.14
1534.00	25.68	181.840	1491.44	282.81S	9.10W	2.00	109.00	1402057.88	3227059.79
1634.00	27.68	181.840	1580.79	327.69S	10.54W	2.00	126.29	1402013.01	3227058.35
1734.00	29.68	181.840	1668.52	375.65S	12.09W	2.00	144.78	1401965.04	3227056.81
1800.00	31.00	181.840	1725.48	408.97S	13.16W	2.00	157.62	1401931.73	3227055.73
1813.87	31.28	181.840	1737.34	416.14S	13.39W	2.00	160.38	1401924.56	3227055.50
1900.00	31.28	181.840	1810.96	460.84S	14.83W	==>	177.61	1401879.86	3227054.07
2000.00	31.28	181.840	1896.43	512.73S	16.50W	==>	197.61	1401827.98	3227052.40
2100.00	31.28	181.840	1981.89	564.62S	18.16W	==>	217.61	1401776.09	3227050.73
2200.00	31.28	181.840	2067.36	616.51S	19.83W	==>	237.60	1401724.20	3227049.06
2300.00	31.28	181.840	2152.82	668.40S	21.50W	==>	257.60	1401672.31	3227047.39
2400.00	31.28	181.840	2238.29	720.29S	23.17W	==>	277.60	1401620.42	3227045.72
2500.00	31.28	181.840	2323.76	772.18S	24.84W	==>	297.60	1401568.53	3227044.05
2600.00	31.28	181.840	2409.22	824.08S	26.51W	==>	317.60	1401516.64	3227042.38
2700.00	31.28	181.840	2494.69	875.97S	28.18W	==>	337.60	1401464.75	3227040.71
2800.00	31.28	181.840	2580.16	927.86S	29.85W	==>	357.60	1401412.86	3227039.04
2900.00	31.28	181.840	2665.62	979.75S	31.52W	==>	377.60	1401360.97	3227037.37
3000.00	31.28	181.840	2751.09	1031.64S	33.19W	==>	397.60	1401309.08	3227035.70

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 4658.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 249.190 degrees  
Bottom hole distance is 8895.83 Feet on azimuth 249.19 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Peterson Energy  
Date Printed: 22-May-2013



INTEGRATED PETROLEUM TECHNOLOGIES, INC  
SYSDRILL

Well Design Combined Report  
Wellbore: DT-Forbes #3-5-6 (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	31.28	181.840	2836.56	1083.53S	34.86W	==>	417.60	1401257.19	3227034.03
3200.00	31.28	181.840	2922.02	1135.42S	36.53W	==>	437.59	1401205.31	3227032.36
3300.00	31.28	181.840	3007.49	1187.31S	38.20W	==>	457.59	1401153.42	3227030.70
3400.00	31.28	181.840	3092.96	1239.21S	39.87W	==>	477.59	1401101.53	3227029.03
3500.00	31.28	181.840	3178.42	1291.10S	41.54W	==>	497.59	1401049.64	3227027.36
3600.00	31.28	181.840	3263.89	1342.99S	43.21W	==>	517.59	1400997.75	3227025.69
3700.00	31.28	181.840	3349.35	1394.88S	44.88W	==>	537.59	1400945.86	3227024.02
3800.00	31.28	181.840	3434.82	1446.77S	46.55W	==>	557.59	1400893.97	3227022.35
3900.00	31.28	181.840	3520.29	1498.66S	48.21W	==>	577.59	1400842.08	3227020.68
4000.00	31.28	181.840	3605.75	1550.55S	49.88W	==>	597.59	1400790.19	3227019.01
4100.00	31.28	181.840	3691.22	1602.44S	51.55W	==>	617.59	1400738.30	3227017.34
4200.00	31.28	181.840	3776.69	1654.34S	53.22W	==>	637.58	1400686.41	3227015.67
4300.00	31.28	181.840	3862.15	1706.23S	54.89W	==>	657.58	1400634.52	3227014.00
4400.00	31.28	181.840	3947.62	1758.12S	56.56W	==>	677.58	1400582.63	3227012.33
4500.00	31.28	181.840	4033.09	1810.01S	58.23W	==>	697.58	1400530.75	3227010.66
4600.00	31.28	181.840	4118.55	1861.90S	59.90W	==>	717.58	1400478.86	3227008.99
4700.00	31.28	181.840	4204.02	1913.79S	61.57W	==>	737.58	1400426.97	3227007.32
4800.00	31.28	181.840	4289.49	1965.68S	63.24W	==>	757.58	1400375.08	3227005.65
4900.00	31.28	181.840	4374.95	2017.57S	64.91W	==>	777.58	1400323.19	3227003.99
5000.00	31.28	181.840	4460.42	2069.47S	66.58W	==>	797.58	1400271.30	3227002.32
5100.00	31.28	181.840	4545.88	2121.36S	68.25W	==>	817.58	1400219.41	3227000.65
5200.00	31.28	181.840	4631.35	2173.25S	69.92W	==>	837.57	1400167.52	3226998.98
5300.00	31.28	181.840	4716.82	2225.14S	71.59W	==>	857.57	1400115.63	3226997.31
5400.00	31.28	181.840	4802.28	2277.03S	73.26W	==>	877.57	1400063.74	3226995.64
5500.00	31.28	181.840	4887.75	2328.92S	74.93W	==>	897.57	1400011.85	3226993.97
5600.00	31.28	181.840	4973.22	2380.81S	76.60W	==>	917.57	1399959.96	3226992.30
5700.00	31.28	181.840	5058.68	2432.70S	78.26W	==>	937.57	1399908.08	3226990.63
5800.00	31.28	181.840	5144.15	2484.60S	79.93W	==>	957.57	1399856.19	3226988.96
5900.00	31.28	181.840	5229.62	2536.49S	81.60W	==>	977.57	1399804.30	3226987.29
6000.00	31.28	181.840	5315.08	2588.38S	83.27W	==>	997.57	1399752.41	3226985.62
6100.00	31.28	181.840	5400.55	2640.27S	84.94W	==>	1017.57	1399700.52	3226983.95
6200.00	31.28	181.840	5486.02	2692.16S	86.61W	==>	1037.56	1399648.63	3226982.28
6300.00	31.28	181.840	5571.48	2744.05S	88.28W	==>	1057.56	1399596.74	3226980.61
6400.00	31.28	181.840	5656.95	2795.94S	89.95W	==>	1077.56	1399544.85	3226978.94
6500.00	31.28	181.840	5742.41	2847.83S	91.62W	==>	1097.56	1399492.96	3226977.28
6600.00	31.28	181.840	5827.88	2899.73S	93.29W	==>	1117.56	1399441.07	3226975.61
6700.00	31.28	181.840	5913.35	2951.62S	94.96W	==>	1137.56	1399389.18	3226973.94
6800.00	31.28	181.840	5998.81	3003.51S	96.63W	==>	1157.56	1399337.29	3226972.27
6822.65	31.28	181.840	6018.17	3015.26S	97.01W	==>	1162.09	1399325.54	3226971.89
6900.00	31.46	189.270	6084.24	3055.27S	100.90W	5.00	1179.95	1399285.54	3226967.99
7000.00	32.31	198.600	6169.21	3106.38S	113.64W	5.00	1210.01	1399234.43	3226955.26
7100.00	33.81	207.360	6253.06	3156.45S	134.96W	5.00	1247.74	1399184.36	3226933.93
7200.00	35.88	215.330	6335.17	3205.09S	164.71W	5.00	1292.83	1399135.72	3226904.18
7300.00	38.42	222.470	6414.91	3251.95S	202.66W	5.00	1344.95	1399088.87	3226866.24
7400.00	41.34	228.800	6491.68	3296.65S	248.52W	5.00	1403.70	1399044.16	3226820.38
7500.00	44.58	234.400	6564.87	3338.86S	301.94W	5.00	1468.63	1399001.95	3226766.97
7600.00	48.05	239.370	6633.95	3378.27S	362.51W	5.00	1539.25	1398962.55	3226706.39
7700.00	51.72	243.810	6698.39	3414.56S	429.78W	5.00	1615.03	1398926.26	3226639.13
7800.00	55.54	247.820	6757.69	3447.46S	503.23W	5.00	1695.37	1398893.36	3226565.69
7900.00	59.48	251.480	6811.40	3476.73S	582.30W	5.00	1779.68	1398864.09	3226486.62
8000.00	63.52	254.840	6859.12	3502.13S	666.39W	5.00	1867.31	1398838.69	3226402.53
8100.00	67.62	257.970	6900.48	3523.48S	754.86W	5.00	1957.60	1398817.34	3226314.06
8200.00	71.79	260.930	6935.16	3540.62S	847.04W	5.00	2049.85	1398800.20	3226221.89
8300.00	75.99	263.740	6962.91	3553.41S	942.22W	5.00	2143.37	1398787.42	3226126.71
8400.00	80.23	266.450	6983.51	3561.75S	1039.69W	5.00	2237.44	1398779.07	3226029.24
8500.00	84.49	269.100	6996.80	3565.59S	1138.70W	5.00	2331.35	1398775.24	3225930.24
8600.00	88.76	271.700	7002.69	3564.89S	1238.49W	5.00	2424.38	1398775.94	3225830.45
8629.01	90.00	272.460	7003.00	3563.84S	1267.48W	5.00	2451.10	1398776.99	3225801.46
8700.00	90.00	272.460	7003.00	3560.80S	1338.40W	==>	2516.32	1398780.03	3225730.54
8800.00	90.00	272.460	7003.00	3556.51S	1438.31W	==>	2608.18	1398784.31	3225630.64
8900.00	90.00	272.460	7003.00	3552.23S	1538.22W	==>	2700.05	1398788.60	3225530.74

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig ( Planned Datum #1 4658.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 249.190 degrees  
Bottom hole distance is 8895.83 Feet on azimuth 249.19 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Peterson Energy  
Date Printed: 22-May-2013



INTEGRATED PETROLEUM TECHNOLOGIES, INC  
SYSDRILL  
Well Design Combined Report  
Wellbore: DT-Forbes #3-5-6 (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	272.460	7003.00	3547.94S	1638.13W	==>	2791.91	1398792.88	3225430.83
9100.00	90.00	272.460	7003.00	3543.66S	1738.03W	==>	2883.78	1398797.17	3225330.93
9200.00	90.00	272.460	7003.00	3539.37S	1837.94W	==>	2975.65	1398801.45	3225231.02
9300.00	90.00	272.460	7003.00	3535.09S	1937.85W	==>	3067.51	1398805.73	3225131.12
9400.00	90.00	272.460	7003.00	3530.81S	2037.76W	==>	3159.38	1398810.02	3225031.21
9500.00	90.00	272.460	7003.00	3526.52S	2137.67W	==>	3251.24	1398814.30	3224931.31
9600.00	90.00	272.460	7003.00	3522.24S	2237.58W	==>	3343.11	1398818.59	3224831.41
9700.00	90.00	272.460	7003.00	3517.95S	2337.48W	==>	3434.98	1398822.87	3224731.50
9800.00	90.00	272.460	7003.00	3513.67S	2437.39W	==>	3526.84	1398827.15	3224631.60
9900.00	90.00	272.460	7003.00	3509.38S	2537.30W	==>	3618.71	1398831.44	3224531.69
10000.00	90.00	272.460	7003.00	3505.10S	2637.21W	==>	3710.57	1398835.72	3224431.79
10100.00	90.00	272.460	7003.00	3500.82S	2737.12W	==>	3802.44	1398840.01	3224331.88
10200.00	90.00	272.460	7003.00	3496.53S	2837.02W	==>	3894.30	1398844.29	3224231.98
10300.00	90.00	272.460	7003.00	3492.25S	2936.93W	==>	3986.17	1398848.58	3224132.08
10400.00	90.00	272.460	7003.00	3487.96S	3036.84W	==>	4078.04	1398852.86	3224032.17
10500.00	90.00	272.460	7003.00	3483.68S	3136.75W	==>	4169.90	1398857.14	3223932.27
10600.00	90.00	272.460	7003.00	3479.39S	3236.66W	==>	4261.77	1398861.43	3223832.36
10700.00	90.00	272.460	7003.00	3475.11S	3336.57W	==>	4353.63	1398865.71	3223732.46
10800.00	90.00	272.460	7003.00	3470.83S	3436.47W	==>	4445.50	1398870.00	3223632.56
10803.60	90.00	272.460	7003.00	3470.67S	3440.07W	==>	4448.81	1398870.15	3223628.95
10862.94	90.00	273.640	7003.00	3467.52S	3499.33W	2.00	4503.08	1398873.31	3223569.70
10900.00	90.00	273.640	7003.00	3465.16S	3536.31W	==>	4536.81	1398875.66	3223532.72
11000.00	90.00	273.640	7003.00	3458.81S	3636.11W	==>	4627.84	1398882.01	3223432.93
11100.00	90.00	273.640	7003.00	3452.46S	3735.91W	==>	4718.87	1398888.36	3223333.13
11200.00	90.00	273.640	7003.00	3446.10S	3835.70W	==>	4809.89	1398894.72	3223233.34
11300.00	90.00	273.640	7003.00	3439.75S	3935.50W	==>	4900.92	1398901.07	3223133.55
11400.00	90.00	273.640	7003.00	3433.40S	4035.30W	==>	4991.95	1398907.42	3223033.75
11500.00	90.00	273.640	7003.00	3427.05S	4135.10W	==>	5082.98	1398913.77	3222933.96
11600.00	90.00	273.640	7003.00	3420.69S	4234.90W	==>	5174.01	1398920.13	3222834.16
11700.00	90.00	273.640	7003.00	3414.34S	4334.69W	==>	5265.03	1398926.48	3222734.37
11800.00	90.00	273.640	7003.00	3407.99S	4434.49W	==>	5356.06	1398932.83	3222634.58
11900.00	90.00	273.640	7003.00	3401.63S	4534.29W	==>	5447.09	1398939.18	3222534.78
12000.00	90.00	273.640	7003.00	3395.28S	4634.09W	==>	5538.12	1398945.54	3222434.99
12100.00	90.00	273.640	7003.00	3388.93S	4733.89W	==>	5629.15	1398951.89	3222335.19
12200.00	90.00	273.640	7003.00	3382.58S	4833.68W	==>	5720.17	1398958.24	3222235.40
12300.00	90.00	273.640	7003.00	3376.22S	4933.48W	==>	5811.20	1398964.59	3222135.61
12400.00	90.00	273.640	7003.00	3369.87S	5033.28W	==>	5902.23	1398970.95	3222035.81
12500.00	90.00	273.640	7003.00	3363.52S	5133.08W	==>	5993.26	1398977.30	3221936.02
12600.00	90.00	273.640	7003.00	3357.17S	5232.88W	==>	6084.29	1398983.65	3221836.22
12700.00	90.00	273.640	7003.00	3350.81S	5332.67W	==>	6175.31	1398990.00	3221736.43
12800.00	90.00	273.640	7003.00	3344.46S	5432.47W	==>	6266.34	1398996.36	3221636.64
12900.00	90.00	273.640	7003.00	3338.11S	5532.27W	==>	6357.37	1399002.71	3221536.84
13000.00	90.00	273.640	7003.00	3331.76S	5632.07W	==>	6448.40	1399009.06	3221437.05
13100.00	90.00	273.640	7003.00	3325.40S	5731.87W	==>	6539.43	1399015.41	3221337.25
13200.00	90.00	273.640	7003.00	3319.05S	5831.66W	==>	6630.45	1399021.76	3221237.46
13300.00	90.00	273.640	7003.00	3312.70S	5931.46W	==>	6721.48	1399028.12	3221137.67
13400.00	90.00	273.640	7003.00	3306.35S	6031.26W	==>	6812.51	1399034.47	3221037.87
13500.00	90.00	273.640	7003.00	3299.99S	6131.06W	==>	6903.54	1399040.82	3220938.08
13600.00	90.00	273.640	7003.00	3293.64S	6230.86W	==>	6994.57	1399047.17	3220838.28
13700.00	90.00	273.640	7003.00	3287.29S	6330.65W	==>	7085.59	1399053.53	3220738.49
13800.00	90.00	273.640	7003.00	3280.94S	6430.45W	==>	7176.62	1399059.88	3220638.70
13900.00	90.00	273.640	7003.00	3274.58S	6530.25W	==>	7267.65	1399066.23	3220538.90
14000.00	90.00	273.640	7003.00	3268.23S	6630.05W	==>	7358.68	1399072.58	3220439.11
14100.00	90.00	273.640	7003.00	3261.88S	6729.85W	==>	7449.71	1399078.94	3220339.31
14200.00	90.00	273.640	7003.00	3255.52S	6829.64W	==>	7540.73	1399085.29	3220239.52
14300.00	90.00	273.640	7003.00	3249.17S	6929.44W	==>	7631.76	1399091.64	3220139.73
14400.00	90.00	273.640	7003.00	3242.82S	7029.24W	==>	7722.79	1399097.99	3220039.93
14500.00	90.00	273.640	7003.00	3236.47S	7129.04W	==>	7813.82	1399104.35	3219940.14
14600.00	90.00	273.640	7003.00	3230.11S	7228.84W	==>	7904.85	1399110.70	3219840.34
14700.00	90.00	273.640	7003.00	3223.76S	7328.63W	==>	7995.87	1399117.05	3219740.55
14800.00	90.00	273.640	7003.00	3217.41S	7428.43W	==>	8086.90	1399123.40	3219640.76

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Vertical Section is from 0.00N 0.00E on azimuth 249.190 degrees  
Bottom hole distance is 8895.83 Feet on azimuth 249.19 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Peterson Energy  
Date Printed: 22-May-2013



INTEGRATED PETROLEUM TECHNOLOGIES, INC  
SYSDRILL  
Well Design Combined Report  
Wellbore: DT-Forbes #3-5-6 (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	273.640	7003.00	3211.06S	7528.23W	==>	8177.93	1399129.75	3219540.96
15000.00	90.00	273.640	7003.00	3204.70S	7628.03W	==>	8268.96	1399136.11	3219441.17
15100.00	90.00	273.640	7003.00	3198.35S	7727.83W	==>	8359.99	1399142.46	3219341.37
15200.00	90.00	273.640	7003.00	3192.00S	7827.62W	==>	8451.01	1399148.81	3219241.58
15300.00	90.00	273.640	7003.00	3185.65S	7927.42W	==>	8542.04	1399155.16	3219141.79
15400.00	90.00	273.640	7003.00	3179.29S	8027.22W	==>	8633.07	1399161.52	3219041.99
15500.00	90.00	273.640	7003.00	3172.94S	8127.02W	==>	8724.10	1399167.87	3218942.20
15600.00	90.00	273.640	7003.00	3166.59S	8226.82W	==>	8815.13	1399174.22	3218842.40
15688.66	90.00	273.640	7003.00	3160.96S	8315.30W	==>	8895.83	1399179.85	3218753.92

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INTEGRATED PETROLEUM TECHNOLOGIES, INC  
SYSDRILL  
Well Design Combined Report  
Wellbore: DT-Forbes #3-5-6 (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	561.00	560.39	16.86S	0.54W
8 3/4	561.00	560.39	16.86S	0.54W	8629.00	7003.00	3563.84S	1267.48W
6 1/8	8629.00	7003.00	3563.84S	1267.48W	15688.66	7003.00	3160.96S	8315.30W

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				561.00	560.39	16.86S	0.54W
7.0in Intermediate Casing	0.00				8629.00	7003.00	3563.84S	1267.48W
4 1/2in Production Liner	6823.00	6018.47	3015.44S	97.01W	15688.66	7003.00	3160.96S	8315.30W

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
D62	3563.84S	1267.48W	7003.00	N40 25 30.7560	W104 41 20.1840	1398776.99	3225801.46	15-Mar-2013
D63	3160.96S	8315.30W	7003.00	N40 25 35.3640	W104 42 51.2640	1399179.85	3218753.92	15-Mar-2013
D64	3470.67S	3440.07W	7003.00	N40 25 31.8720	W104 41 48.2640	1398870.15	3223628.95	15-Mar-2013

Survey Tool Program						
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model	
43239	Planned	15688.66	7003.00	WdW Rate Gyro	Standard	

Notes

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: DT-Forbes #3-5-6 (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
DT-Forbes #3-5-6 (PWB)	5-Apr-2013	12-Apr-2013

Well		
Name	Government ID	Last Revised
DT-Forbes #3-5-6		5-Apr-2013

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #23	1402340.6826	3227068.8916	N40 26 5.8560	W104 41 3.3720	353.40S	0.47E

Installation					
Name	Easting	Northing	Coord System Name	North Alignment	
Downtown	3227068.4245	1402694.0641	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]
DT-Forbes #2-5-6	DT-Forbes #2-5-6 (PWB)	Slot #22	Downtown	14.84	250.00	15688.66	13.55	250.00	2.68	15688.66
DT-Forbes #4-5-6	DT-Forbes #4-5-6 (PWB)	Slot #24	Downtown	14.84	196.45	15665.61	13.63	196.45	2.66	15688.66
DT-Forbes #5-5-6	DT-Forbes #5-5-6 (PWB)	Slot #25	Downtown	32.91	147.23	15640.42	31.78	147.23	4.44	15688.66
DT-Forbes #1-5-6	DT-Forbes #1-5-6 (PWB)	Slot #21	Downtown	32.91	250.00	15688.66	31.61	250.00	4.55	15688.66
DT-Luther #1-5-6	DT-Luther #1-5-6 (PWB)	Slot #26	Downtown	47.44	98.02	15616.43	46.39	98.02	6.82	15688.66
DT-Martinez #3-5-6	DT-Martinez #3-5-6 (PWB)	Slot #20	Downtown	47.44	250.00	15688.66	46.15	250.00	6.92	15688.66
DT-Martinez #2-5-6	DT-Martinez #2-5-6 (PWB)	Slot #19	Downtown	62.00	250.00	15688.66	60.70	250.00	8.97	15688.66
Erbes #5-2H5	Erbes #5-2H5 (AWB)	Erbes #5-2H5	Downtown Pad offsets	62.32	376.89	376.89	55.70	475.32	8.48	557.34
DT-Heath #1-5-8	DT-Heath #1-5-8 (PWB)	Slot #1	Downtown	78.01	8182.12	8182.12	35.94	8218.10	1.68	8234.50
DT-StarPak #1-5-17	DT-StarPak #1-5-17 (PWB)	Slot #18	Downtown	80.20	250.00	7676.76	78.91	250.00	7.85	7840.80
DT-StarPak #2-5-17	DT-StarPak #2-5-17 (PWB)	Slot #17	Downtown	94.76	250.00	7584.03	93.47	250.00	13.57	7824.40
DT-StarPak #3-5-17	DT-StarPak #3-5-17 (PWB)	Slot #16	Downtown	112.97	250.00	7381.49	111.68	250.00	15.73	7611.14

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: DT-Forbes #3-5-6 (PWB)

Clearance Summary										
Offset WellName	Offset Wellbore	Offset Slot	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
DT-StarPak #4-5-17	DT-StarPak #4-5-17 (PWB)	Slot #15	Downtown	127.54	250.00	7348.68	126.25	250.00	21.56	7627.55
DT-StarPak #5-5-17	DT-StarPak #5-5-17 (PWB)	Slot #14	Downtown	142.08	250.00	7216.00	140.79	250.00	24.78	7479.91
DT-Pioneer #1-5-17	DT-Pioneer #1-5-17 (PWB)	Slot #13	Downtown	160.30	250.00	7201.04	159.01	250.00	30.53	7529.12
DT-Pioneer #2-5-17	DT-Pioneer #2-5-17 (PWB)	Slot #12	Downtown	174.87	250.00	7102.61	173.58	250.00	34.46	7430.70
DT-Martinez #1-5-6	DT-Martinez #1-5-6 (PWB)	Slot #11	Downtown	193.09	250.00	13687.44	191.79	250.00	11.35	15688.66
DT-Habitat #5-5-6	DT-Habitat #5-5-6 (PWB)	Slot #10	Downtown	207.66	250.00	13682.23	206.37	250.00	13.64	15688.66
DT-Habitat #4-5-6	DT-Habitat #4-5-6 (PWB)	Slot #9	Downtown	222.23	250.00	13703.27	220.94	250.00	16.06	15688.66
DT-Habitat #3-5-6	DT-Habitat #3-5-6 (PWB)	Slot #8	Downtown	240.45	250.00	13733.90	239.15	250.00	18.49	15688.66
DT-Habitat #2-5-6	DT-Habitat #2-5-6 (PWB)	Slot #7	Downtown	255.04	250.00	13795.53	253.74	250.00	21.02	15688.66
DT-Habitat #1-5-6	DT-Habitat #1-5-6 (PWB)	Slot #6	Downtown	273.25	250.00	13828.34	271.96	250.00	23.60	15688.66
DT-Lopez #2-5-6	DT-Lopez #2-5-6 (PWB)	Slot #5	Downtown	287.82	250.00	13877.55	286.53	250.00	26.23	15688.66
DT-Lextron #1-32-32	DT-Lextron #1-32-32 (PWB)	Slot #4	Downtown	302.39	250.00	250.00	301.10	250.00	172.54	1311.93
DT-Lopez #1-5-6	DT-Lopez #1-5-6 (PWB)	Slot #3	Downtown	320.61	250.00	13877.72	319.32	250.00	28.78	15688.66
DT-Heath #2-5-8	DT-Heath #2-5-8 (PWB)	Slot #2	Downtown	335.18	250.00	7964.37	314.12	8004.85	7.15	8136.08
W Mcelroy #41-5	W Mcelroy #41-5 (AWB)	Mcelroy #41-5	Downtown Pad offsets	876.79	1366.74	1366.74	864.20	1410.36	53.26	2460.23
Arnold #1	Arnold #1 (AWB)	Arnold #1	Downtown Pad offsets	1206.67	4106.98	4106.98	1175.31	4133.45	35.90	4838.83