

MINERAL RESOURCES, INC.

Location	Weld County, CO, USA(Imported)	Slot	Slot #25
Field	Wattenberg	Well	DT-Forbes #5-5-6
Installation	Downtown	Wellbore	DT-Forbes #5-5-6 (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	150.00	0.00	0.00	150.00	0.00	0.00	0.00	-0.00
End of Build	1941.96	35.84	181.54	1827.37	-542.21	-14.59	2.00	238.57
End of Hold	7169.54	35.84	181.54	6065.17	-3601.92	-96.90	0.00	1584.81
Target D68	8979.21	90.00	272.37	7002.00	-4230.58	-1269.74	5.00	2912.83
Target D70	11148.11	90.00	272.37	7002.00	-4141.01	-3436.79	0.00	4846.72
End of Turn	11233.82	90.00	274.08	7002.00	-4136.19	-3522.36	2.00	4922.55
T.D. & Target D69	16030.53	90.00	274.08	7002.00	-3794.81	-8306.91	0.00	9132.65

Surface 0.00 N 0.00 E

D69 D70 D68

<- North(feet)

Scale 1 cm = 800 ft

Scale 1 cm = 400 ft

<- True Vertical Depth (feet)

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

End of Build - 35.84 Inc, 1941.96 MD, 1827.37 TVD, 238.57 VS

End of Hold - 35.84 Inc, 7169.54 MD, 6065.17 TVD, 1584.81 VS

3DJ Kick off Point - 90.00 Inc, 11148.11 MD, 7002.00 TVD, 4846.72 VS

D68

S/C Kick off Point - 90.00 Inc, 8979.21 MD, 7002.00 TVD, 2912.83 VS

D70

T.D. & End of Hold - 7002.00 TVD, 3794.81 S 8306.91 W

Created by admin
Date plotted 8-Apr-2013

Plot reference is DT-Forbes #5-5-6 (PWB).
Ref wellpath is W #25 (PWP#1).
Coordinates are in feet reference Slot #25.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Rig Datum: Planned Datum #1
Rig Datum to Mean Sea Level: 4657.00 ft.
Plot North is aligned to GRID North.

-800 -0 800 1600 2400 3200 4000 4800 5600 6400 7200 8000 8800 9600 10400

Scale 1 cm = 400 ft

Vertical Section (feet) ->

Azimuth 245.45 with reference 0.00 N, 0.00 E from Slot #25



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

Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #25	1402307.8714	3227066.4097	N40 26 5.5320	W104 41 3.4080	386.21S	2.01W	-2.05

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	1402307.87	3227066.41
150.00	0.00	0.000	150.00	0.00N	0.00E	==>	0.00	1402307.87	3227066.41
1941.96	35.84	181.540	1827.37	542.21S	14.59W	2.00	238.57	1401765.68	3227051.82
7169.54	35.84	181.540	6065.17	3601.92S	96.90W	==>	1584.81	1398706.10	3226969.51
8979.21	90.00	272.370	7002.00	4230.58S	1269.74W	5.00	2912.83	1398077.46	3225796.72
11148.11	90.00	272.370	7002.00	4141.01S	3436.79W	==>	4846.72	1398167.03	3223629.76
11233.82	90.00	274.080	7002.00	4136.19S	3522.36W	2.00	4922.55	1398171.85	3223544.19
16030.53	90.00	274.080	7002.00	3794.81S	8306.91W	==>	9132.65	1398513.21	3218759.83

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	1402307.87	3227066.41
16.00	0.00	0.000	16.00	0.00N	0.00E	==>	0.00	1402307.87	3227066.41
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1402307.87	3227066.41
134.00	0.00	0.000	134.00	0.00N	0.00E	==>	0.00	1402307.87	3227066.41
150.00	0.00	0.000	150.00	0.00N	0.00E	==>	0.00	1402307.87	3227066.41
234.00	1.68	181.540	233.99	1.23S	0.03W	2.00	0.54	1402306.64	3227066.38
334.00	3.68	181.540	333.87	5.90S	0.16W	2.00	2.60	1402301.97	3227066.25
434.00	5.68	181.540	433.54	14.06S	0.38W	2.00	6.19	1402293.81	3227066.03
534.00	7.68	181.540	532.85	25.69S	0.69W	2.00	11.30	1402282.18	3227065.72
634.00	9.68	181.540	631.70	40.77S	1.10W	2.00	17.94	1402267.10	3227065.31
734.00	11.68	181.540	729.96	59.30S	1.60W	2.00	26.09	1402248.58	3227064.81
834.00	13.68	181.540	827.52	81.24S	2.19W	2.00	35.74	1402226.63	3227064.22
934.00	15.68	181.540	924.25	106.57S	2.87W	2.00	46.89	1402201.30	3227063.54
1034.00	17.68	181.540	1020.04	135.26S	3.64W	2.00	59.51	1402172.61	3227062.77
1134.00	19.68	181.540	1114.77	167.28S	4.50W	2.00	73.60	1402140.60	3227061.91
1234.00	21.68	181.540	1208.32	202.58S	5.45W	2.00	89.13	1402105.30	3227060.96
1334.00	23.68	181.540	1300.58	241.12S	6.49W	2.00	106.09	1402066.76	3227059.92
1434.00	25.68	181.540	1391.44	282.86S	7.61W	2.00	124.45	1402025.03	3227058.80
1534.00	27.68	181.540	1480.79	327.74S	8.82W	2.00	144.20	1401980.14	3227057.59
1634.00	29.68	181.540	1568.52	375.71S	10.11W	2.00	165.31	1401932.17	3227056.30
1734.00	31.68	181.540	1654.51	426.71S	11.48W	2.00	187.75	1401881.17	3227054.93
1834.00	33.68	181.540	1738.68	480.69S	12.93W	2.00	211.50	1401827.20	3227053.48
1934.00	35.68	181.540	1820.91	537.56S	14.46W	2.00	236.52	1401770.33	3227051.95
1941.96	35.84	181.540	1827.37	542.21S	14.59W	2.00	238.57	1401765.68	3227051.82
2000.00	35.84	181.540	1874.42	576.18S	15.50W	==>	253.52	1401731.71	3227050.91
2100.00	35.84	181.540	1955.49	634.71S	17.08W	==>	279.27	1401673.18	3227049.34
2200.00	35.84	181.540	2036.55	693.24S	18.65W	==>	305.02	1401614.66	3227047.76
2300.00	35.84	181.540	2117.62	751.77S	20.22W	==>	330.77	1401556.13	3227046.19
2400.00	35.84	181.540	2198.69	810.30S	21.80W	==>	356.53	1401497.60	3227044.61
2500.00	35.84	181.540	2279.75	868.83S	23.37W	==>	382.28	1401439.07	3227043.04
2600.00	35.84	181.540	2360.82	927.36S	24.95W	==>	408.03	1401380.54	3227041.46
2700.00	35.84	181.540	2441.89	985.89S	26.52W	==>	433.78	1401322.02	3227039.89
2800.00	35.84	181.540	2522.95	1044.42S	28.10W	==>	459.54	1401263.49	3227038.31
2900.00	35.84	181.540	2604.02	1102.95S	29.67W	==>	485.29	1401204.96	3227036.74
3000.00	35.84	181.540	2685.08	1161.48S	31.25W	==>	511.04	1401146.43	3227035.16

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 4657.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 245.450 degrees
Bottom hole distance is 9132.65 Feet on azimuth 245.45 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 #5-5-6 (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	35.84	181.540	2766.15	1220.01S	32.82W	==>	536.80	1401087.91	3227033.59
3200.00	35.84	181.540	2847.22	1278.54S	34.40W	==>	562.55	1401029.38	3227032.02
3300.00	35.84	181.540	2928.28	1337.07S	35.97W	==>	588.30	1400970.85	3227030.44
3400.00	35.84	181.540	3009.35	1395.60S	37.55W	==>	614.05	1400912.32	3227028.87
3500.00	35.84	181.540	3090.42	1454.13S	39.12W	==>	639.81	1400853.79	3227027.29
3600.00	35.84	181.540	3171.48	1512.66S	40.69W	==>	665.56	1400795.27	3227025.72
3700.00	35.84	181.540	3252.55	1571.19S	42.27W	==>	691.31	1400736.74	3227024.14
3800.00	35.84	181.540	3333.61	1629.72S	43.84W	==>	717.06	1400678.21	3227022.57
3900.00	35.84	181.540	3414.68	1688.25S	45.42W	==>	742.82	1400619.68	3227020.99
4000.00	35.84	181.540	3495.75	1746.78S	46.99W	==>	768.57	1400561.16	3227019.42
4100.00	35.84	181.540	3576.81	1805.31S	48.57W	==>	794.32	1400502.63	3227017.84
4200.00	35.84	181.540	3657.88	1863.84S	50.14W	==>	820.08	1400444.10	3227016.27
4300.00	35.84	181.540	3738.95	1922.38S	51.72W	==>	845.83	1400385.57	3227014.70
4400.00	35.84	181.540	3820.01	1980.91S	53.29W	==>	871.58	1400327.05	3227013.12
4500.00	35.84	181.540	3901.08	2039.44S	54.87W	==>	897.33	1400268.52	3227011.55
4600.00	35.84	181.540	3982.15	2097.97S	56.44W	==>	923.09	1400209.99	3227009.97
4700.00	35.84	181.540	4063.21	2156.50S	58.01W	==>	948.84	1400151.46	3227008.40
4800.00	35.84	181.540	4144.28	2215.03S	59.59W	==>	974.59	1400092.93	3227006.82
4900.00	35.84	181.540	4225.34	2273.56S	61.16W	==>	1000.34	1400034.41	3227005.25
5000.00	35.84	181.540	4306.41	2332.09S	62.74W	==>	1026.10	1399975.88	3227003.67
5100.00	35.84	181.540	4387.48	2390.62S	64.31W	==>	1051.85	1399917.35	3227002.10
5200.00	35.84	181.540	4468.54	2449.15S	65.89W	==>	1077.60	1399858.82	3227000.52
5300.00	35.84	181.540	4549.61	2507.68S	67.46W	==>	1103.35	1399800.30	3226998.95
5400.00	35.84	181.540	4630.68	2566.21S	69.04W	==>	1129.11	1399741.77	3226997.38
5500.00	35.84	181.540	4711.74	2624.74S	70.61W	==>	1154.86	1399683.24	3226995.80
5600.00	35.84	181.540	4792.81	2683.27S	72.19W	==>	1180.61	1399624.71	3226994.23
5700.00	35.84	181.540	4873.88	2741.80S	73.76W	==>	1206.37	1399566.19	3226992.65
5800.00	35.84	181.540	4954.94	2800.33S	75.34W	==>	1232.12	1399507.66	3226991.08
5900.00	35.84	181.540	5036.01	2858.86S	76.91W	==>	1257.87	1399449.13	3226989.50
6000.00	35.84	181.540	5117.07	2917.39S	78.48W	==>	1283.62	1399390.60	3226987.93
6100.00	35.84	181.540	5198.14	2975.92S	80.06W	==>	1309.38	1399332.07	3226986.35
6200.00	35.84	181.540	5279.21	3034.45S	81.63W	==>	1335.13	1399273.55	3226984.78
6300.00	35.84	181.540	5360.27	3092.98S	83.21W	==>	1360.88	1399215.02	3226983.20
6400.00	35.84	181.540	5441.34	3151.51S	84.78W	==>	1386.63	1399156.49	3226981.63
6500.00	35.84	181.540	5522.41	3210.04S	86.36W	==>	1412.39	1399097.96	3226980.06
6600.00	35.84	181.540	5603.47	3268.57S	87.93W	==>	1438.14	1399039.44	3226978.48
6700.00	35.84	181.540	5684.54	3327.10S	89.51W	==>	1463.89	1398980.91	3226976.91
6800.00	35.84	181.540	5765.61	3385.63S	91.08W	==>	1489.65	1398922.38	3226975.33
6900.00	35.84	181.540	5846.67	3444.16S	92.66W	==>	1515.40	1398863.85	3226973.76
7000.00	35.84	181.540	5927.74	3502.69S	94.23W	==>	1541.15	1398805.33	3226972.18
7100.00	35.84	181.540	6008.80	3561.22S	95.81W	==>	1566.90	1398746.80	3226970.61
7169.54	35.84	181.540	6065.17	3601.92S	96.90W	==>	1584.81	1398706.10	3226969.51
7200.00	35.85	184.140	6089.87	3619.73S	97.78W	5.00	1593.02	1398688.29	3226968.63
7300.00	36.27	192.610	6170.76	3677.84S	106.36W	5.00	1624.97	1398630.18	3226960.05
7400.00	37.28	200.800	6250.91	3735.06S	123.59W	5.00	1664.41	1398572.96	3226942.83
7500.00	38.82	208.520	6329.70	3790.95S	149.32W	5.00	1711.04	1398517.08	3226917.10
7600.00	40.83	215.670	6406.53	3845.08S	183.37W	5.00	1764.50	1398462.95	3226883.05
7700.00	43.25	222.210	6480.83	3897.04S	225.48W	5.00	1824.39	1398410.99	3226840.94
7800.00	46.00	228.150	6552.03	3946.44S	275.32W	5.00	1890.26	1398361.59	3226791.10
7900.00	49.04	233.540	6619.58	3992.90S	332.52W	5.00	1961.59	1398315.13	3226733.90
8000.00	52.30	238.440	6682.97	4036.07S	396.65W	5.00	2037.86	1398271.96	3226669.78
8100.00	55.75	242.920	6741.72	4075.62S	467.21W	5.00	2118.47	1398232.42	3226599.22
8200.00	59.35	247.030	6795.38	4111.24S	543.66W	5.00	2202.81	1398196.79	3226522.77
8300.00	63.07	250.850	6843.54	4142.67S	625.43W	5.00	2290.25	1398165.36	3226441.01
8400.00	66.89	254.410	6885.84	4169.67S	711.89W	5.00	2380.11	1398138.37	3226354.55
8500.00	70.78	257.780	6921.95	4192.03S	802.39W	5.00	2471.72	1398116.01	3226264.05
8600.00	74.73	260.990	6951.60	4209.59S	896.23W	5.00	2564.37	1398098.45	3226170.22
8700.00	78.72	264.090	6974.56	4222.20S	992.70W	5.00	2657.36	1398085.84	3226073.75
8800.00	82.75	267.090	6990.66	4229.77S	1091.08W	5.00	2749.98	1398078.27	3225975.38
8900.00	86.79	270.050	6999.78	4232.25S	1190.60W	5.00	2841.53	1398075.79	3225875.86
8979.21	90.00	272.370	7002.00	4230.58S	1269.74W	5.00	2912.83	1398077.46	3225796.72

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 4657.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 245.450 degrees
Bottom hole distance is 9132.65 Feet on azimuth 245.45 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 #5-5-6 (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	272.370	7002.00	4229.72S	1290.51W	==>	2931.37	1398078.32	3225775.95
9100.00	90.00	272.370	7002.00	4225.59S	1390.43W	==>	3020.53	1398082.45	3225676.04
9200.00	90.00	272.370	7002.00	4221.46S	1490.34W	==>	3109.70	1398086.58	3225576.13
9300.00	90.00	272.370	7002.00	4217.33S	1590.26W	==>	3198.86	1398090.71	3225476.21
9400.00	90.00	272.370	7002.00	4213.20S	1690.17W	==>	3288.03	1398094.84	3225376.30
9500.00	90.00	272.370	7002.00	4209.07S	1790.09W	==>	3377.19	1398098.97	3225276.39
9600.00	90.00	272.370	7002.00	4204.94S	1890.00W	==>	3466.36	1398103.10	3225176.48
9700.00	90.00	272.370	7002.00	4200.81S	1989.92W	==>	3555.52	1398107.23	3225076.57
9800.00	90.00	272.370	7002.00	4196.68S	2089.83W	==>	3644.69	1398111.36	3224976.66
9900.00	90.00	272.370	7002.00	4192.55S	2189.75W	==>	3733.85	1398115.49	3224876.75
10000.00	90.00	272.370	7002.00	4188.42S	2289.66W	==>	3823.02	1398119.62	3224776.84
10100.00	90.00	272.370	7002.00	4184.29S	2389.58W	==>	3912.18	1398123.75	3224676.93
10200.00	90.00	272.370	7002.00	4180.16S	2489.49W	==>	4001.34	1398127.88	3224577.02
10300.00	90.00	272.370	7002.00	4176.03S	2589.41W	==>	4090.51	1398132.01	3224477.11
10400.00	90.00	272.370	7002.00	4171.90S	2689.32W	==>	4179.67	1398136.14	3224377.20
10500.00	90.00	272.370	7002.00	4167.77S	2789.23W	==>	4268.84	1398140.27	3224277.29
10600.00	90.00	272.370	7002.00	4163.64S	2889.15W	==>	4358.00	1398144.40	3224177.38
10700.00	90.00	272.370	7002.00	4159.51S	2989.06W	==>	4447.17	1398148.53	3224077.47
10800.00	90.00	272.370	7002.00	4155.38S	3088.98W	==>	4536.33	1398152.66	3223977.55
10900.00	90.00	272.370	7002.00	4151.25S	3188.89W	==>	4625.50	1398156.79	3223877.64
11000.00	90.00	272.370	7002.00	4147.12S	3288.81W	==>	4714.66	1398160.92	3223777.73
11100.00	90.00	272.370	7002.00	4142.99S	3388.72W	==>	4803.83	1398165.04	3223677.82
11148.11	90.00	272.370	7002.00	4141.01S	3436.79W	==>	4846.72	1398167.03	3223629.76
11200.00	90.00	273.400	7002.00	4138.39S	3488.62W	2.00	4892.78	1398169.64	3223577.93
11233.82	90.00	274.080	7002.00	4136.19S	3522.36W	2.00	4922.55	1398171.85	3223544.19
11300.00	90.00	274.080	7002.00	4131.48S	3588.37W	==>	4980.64	1398176.56	3223478.18
11400.00	90.00	274.080	7002.00	4124.36S	3688.12W	==>	5068.41	1398183.68	3223378.44
11500.00	90.00	274.080	7002.00	4117.24S	3787.87W	==>	5156.18	1398190.79	3223278.69
11600.00	90.00	274.080	7002.00	4110.12S	3887.61W	==>	5243.95	1398197.91	3223178.95
11700.00	90.00	274.080	7002.00	4103.01S	3987.36W	==>	5331.72	1398205.03	3223079.21
11800.00	90.00	274.080	7002.00	4095.89S	4087.11W	==>	5419.49	1398212.14	3222979.47
11900.00	90.00	274.080	7002.00	4088.77S	4186.85W	==>	5507.26	1398219.26	3222879.72
12000.00	90.00	274.080	7002.00	4081.66S	4286.60W	==>	5595.04	1398226.38	3222779.98
12100.00	90.00	274.080	7002.00	4074.54S	4386.35W	==>	5682.81	1398233.49	3222680.24
12200.00	90.00	274.080	7002.00	4067.42S	4486.09W	==>	5770.58	1398240.61	3222580.50
12300.00	90.00	274.080	7002.00	4060.31S	4585.84W	==>	5858.35	1398247.73	3222480.75
12400.00	90.00	274.080	7002.00	4053.19S	4685.59W	==>	5946.12	1398254.84	3222381.01
12500.00	90.00	274.080	7002.00	4046.07S	4785.33W	==>	6033.89	1398261.96	3222281.27
12600.00	90.00	274.080	7002.00	4038.96S	4885.08W	==>	6121.66	1398269.08	3222181.53
12700.00	90.00	274.080	7002.00	4031.84S	4984.82W	==>	6209.43	1398276.19	3222081.78
12800.00	90.00	274.080	7002.00	4024.72S	5084.57W	==>	6297.20	1398283.31	3221982.04
12900.00	90.00	274.080	7002.00	4017.61S	5184.32W	==>	6384.97	1398290.43	3221882.30
13000.00	90.00	274.080	7002.00	4010.49S	5284.06W	==>	6472.74	1398297.54	3221782.56
13100.00	90.00	274.080	7002.00	4003.37S	5383.81W	==>	6560.51	1398304.66	3221682.81
13200.00	90.00	274.080	7002.00	3996.26S	5483.56W	==>	6648.28	1398311.78	3221583.07
13300.00	90.00	274.080	7002.00	3989.14S	5583.30W	==>	6736.05	1398318.89	3221483.33
13400.00	90.00	274.080	7002.00	3982.02S	5683.05W	==>	6823.82	1398326.01	3221383.59
13500.00	90.00	274.080	7002.00	3974.90S	5782.80W	==>	6911.59	1398333.13	3221283.84
13600.00	90.00	274.080	7002.00	3967.79S	5882.54W	==>	6999.36	1398340.24	3221184.10
13700.00	90.00	274.080	7002.00	3960.67S	5982.29W	==>	7087.13	1398347.36	3221084.36
13800.00	90.00	274.080	7002.00	3953.55S	6082.04W	==>	7174.90	1398354.48	3220984.62
13900.00	90.00	274.080	7002.00	3946.44S	6181.78W	==>	7262.68	1398361.59	3220884.87
14000.00	90.00	274.080	7002.00	3939.32S	6281.53W	==>	7350.45	1398368.71	3220785.13
14100.00	90.00	274.080	7002.00	3932.20S	6381.28W	==>	7438.22	1398375.83	3220685.39
14200.00	90.00	274.080	7002.00	3925.09S	6481.02W	==>	7525.99	1398382.94	3220585.65
14300.00	90.00	274.080	7002.00	3917.97S	6580.77W	==>	7613.76	1398390.06	3220485.91
14400.00	90.00	274.080	7002.00	3910.85S	6680.51W	==>	7701.53	1398397.17	3220386.16
14500.00	90.00	274.080	7002.00	3903.74S	6780.26W	==>	7789.30	1398404.29	3220286.42
14600.00	90.00	274.080	7002.00	3896.62S	6880.01W	==>	7877.07	1398411.41	3220186.68
14700.00	90.00	274.080	7002.00	3889.50S	6979.75W	==>	7964.84	1398418.52	3220086.94
14800.00	90.00	274.080	7002.00	3882.39S	7079.50W	==>	8052.61	1398425.64	3219987.19

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Vertical Section is from 0.00N 0.00E on azimuth 245.450 degrees
Bottom hole distance is 9132.65 Feet on azimuth 245.45 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 #5-5-6 (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	274.080	7002.00	3875.27S	7179.25W	==>	8140.38	1398432.76	3219887.45
15000.00	90.00	274.080	7002.00	3868.15S	7278.99W	==>	8228.15	1398439.87	3219787.71
15100.00	90.00	274.080	7002.00	3861.03S	7378.74W	==>	8315.92	1398446.99	3219687.97
15200.00	90.00	274.080	7002.00	3853.92S	7478.49W	==>	8403.69	1398454.11	3219588.22
15300.00	90.00	274.080	7002.00	3846.80S	7578.23W	==>	8491.46	1398461.22	3219488.48
15400.00	90.00	274.080	7002.00	3839.68S	7677.98W	==>	8579.23	1398468.34	3219388.74
15500.00	90.00	274.080	7002.00	3832.57S	7777.73W	==>	8667.00	1398475.46	3219289.00
15600.00	90.00	274.080	7002.00	3825.45S	7877.47W	==>	8754.77	1398482.57	3219189.25
15700.00	90.00	274.080	7002.00	3818.33S	7977.22W	==>	8842.54	1398489.69	3219089.51
15800.00	90.00	274.080	7002.00	3811.22S	8076.96W	==>	8930.31	1398496.81	3218989.77
15900.00	90.00	274.080	7002.00	3804.10S	8176.71W	==>	9018.09	1398503.92	3218890.03
16000.00	90.00	274.080	7002.00	3796.98S	8276.46W	==>	9105.86	1398511.04	3218790.28
16030.53	90.00	274.080	7002.00	3794.81S	8306.91W	==>	9132.65	1398513.21	3218759.83

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INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: DT-Forbes #5-5-6 (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	559.59	29.42S	0.79W
8 3/4	561.00	559.59	29.42S	0.79W	8979.00	7002.00	4230.59S	1269.53W
6 1/8	8979.00	7002.00	4230.59S	1269.53W	16030.53	7002.00	3794.81S	8306.91W

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	559.59	29.42S	0.79W
7.0in Intermediate Casing	0.00				8979.00	7002.00	4230.59S	1269.53W
4 1/2in Production Liner	7170.00	6065.55	3602.19S	96.91W	16030.53	7002.00	3794.81S	8306.91W

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
D68	4230.58S	1269.74W	7002.00	N40 25 23.8440	W104 41 20.3280	1398077.46	3225796.72	15-Mar-2013
D69	3794.81S	8306.91W	7002.00	N40 25 28.7760	W104 42 51.2640	1398513.21	3218759.83	15-Mar-2013
D70	4141.01S	3436.79W	7002.00	N40 25 24.9240	W104 41 48.3360	1398167.03	3223629.76	15-Mar-2013

Survey Tool Program						
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model	
43247	Planned	16030.53	7002.00	WdW Rate Gyro	Standard	

Notes

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

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

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #25	1402307.8714	3227066.4097	N40 26 5.5320	W104 41 3.4080	386.21S	2.01W

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-Luther #1-5-6	DT-Luther #1-5-6 (PWB)	Slot #26	Downtown	14.57	98.02	15993.69	13.52	98.02	2.66	16030.53
DT-Forbes #4-5-6	DT-Forbes #4-5-6 (PWB)	Slot #24	Downtown	18.22	150.00	16030.53	17.08	150.00	2.68	16030.53
DT-Forbes #3-5-6	DT-Forbes #3-5-6 (PWB)	Slot #23	Downtown	32.91	150.00	16030.53	31.77	150.00	4.58	16030.53
DT-Forbes #2-5-6	DT-Forbes #2-5-6 (PWB)	Slot #22	Downtown	47.69	150.00	16030.53	46.55	150.00	6.98	16030.53
DT-Forbes #1-5-6	DT-Forbes #1-5-6 (PWB)	Slot #21	Downtown	65.81	150.00	16030.53	64.68	150.00	9.14	16030.53
Erbes #5-2H5	Erbes #5-2H5 (AWB)	Erbes #5-2H5	Downtown Pad offsets	68.18	150.00	150.00	63.70	212.85	11.19	491.72
DT-Heath #1-5-8	DT-Heath #1-5-8 (PWB)	Slot #1	Downtown	73.86	8530.82	8530.82	24.00	8578.99	1.37	8578.99
DT-Martinez #3-5-6	DT-Martinez #3-5-6 (PWB)	Slot #20	Downtown	80.34	150.00	16030.53	79.21	150.00	11.46	16030.53
DT-Martinez #2-5-6	DT-Martinez #2-5-6 (PWB)	Slot #19	Downtown	94.89	150.00	16030.53	93.75	150.00	13.58	16030.53
DT-StarPak #1-5-17	DT-StarPak #1-5-17 (PWB)	Slot #18	Downtown	113.07	150.00	8004.85	111.94	150.00	6.49	8168.89
DT-StarPak #2-5-17	DT-StarPak #2-5-17 (PWB)	Slot #17	Downtown	127.63	150.00	7913.31	126.50	150.00	11.34	8152.48
DT-StarPak #3-5-17	DT-StarPak #3-5-17 (PWB)	Slot #16	Downtown	145.83	150.00	7703.46	144.70	150.00	13.13	7922.82

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Prepared by Peterson Energy
Date Printed: 22-May-2013



SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: DT-Forbes #5-5-6 (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	160.39	150.00	7676.76	159.26	150.00	18.08	7955.63
DT-StarPak #5-5-17	DT-StarPak #5-5-17 (PWB)	Slot #14	Downtown	174.89	150.00	7529.12	173.76	150.00	20.80	7807.99
DT-Pioneer #1-5-17	DT-Pioneer #1-5-17 (PWB)	Slot #13	Downtown	193.11	150.00	7523.33	191.97	150.00	25.71	7840.80
DT-Pioneer #2-5-17	DT-Pioneer #2-5-17 (PWB)	Slot #12	Downtown	207.68	150.00	7430.70	206.54	150.00	29.06	7742.38
DT-Martinez #1-5-6	DT-Martinez #1-5-6 (PWB)	Slot #11	Downtown	225.89	150.00	14134.54	224.76	150.00	16.01	16030.53
DT-Habitat #5-5-6	DT-Habitat #5-5-6 (PWB)	Slot #10	Downtown	240.46	150.00	14091.99	239.33	150.00	18.41	16030.53
DT-Habitat #4-5-6	DT-Habitat #4-5-6 (PWB)	Slot #9	Downtown	255.04	150.00	14148.44	253.90	150.00	20.92	16030.53
DT-Habitat #3-5-6	DT-Habitat #3-5-6 (PWB)	Slot #8	Downtown	273.25	150.00	14181.19	272.11	150.00	23.49	16030.53
DT-Habitat #2-5-6	DT-Habitat #2-5-6 (PWB)	Slot #7	Downtown	287.86	150.00	14205.63	286.73	150.00	26.14	16030.53
DT-Habitat #1-5-6	DT-Habitat #1-5-6 (PWB)	Slot #6	Downtown	306.07	150.00	14242.86	304.94	150.00	28.90	16030.53
DT-Lopez #2-5-6	DT-Lopez #2-5-6 (PWB)	Slot #5	Downtown	320.64	150.00	14307.01	319.51	150.00	31.70	16030.53
DT-Lextron #1-32-32	DT-Lextron #1-32-32 (PWB)	Slot #4	Downtown	335.22	150.00	150.00	334.08	150.00	194.14	1426.76
DT-Heath #2-5-8	DT-Heath #2-5-8 (PWB)	Slot #2	Downtown	348.16	8301.94	8301.94	301.32	8349.33	6.04	8480.57
DT-Lopez #1-5-6	DT-Lopez #1-5-6 (PWB)	Slot #3	Downtown	353.43	150.00	14336.87	352.29	150.00	34.38	16030.53
W Mcelroy #41-5	W Mcelroy #41-5 (AWB)	Mcelroy #41-5	Downtown Pad offsets	877.25	1189.86	1189.86	865.57	1229.91	55.75	2246.97
Arnold #1	Arnold #1 (AWB)	Arnold #1	Downtown Pad offsets	1199.79	3716.00	3716.00	1169.71	3739.75	37.22	4346.71