

WARD PETROLEUM

Location	ADAMS COUNTY, CO	Slot	Slot #3
Field	West Brighton	Well	Schaefer 24-3-3HC
Installation	Schaefer	Wellbore	Schaefer 24-3-3HC (PWB)

Tie on - 0.00 Inc, 15.00 MD, 15.00 TVD, 0.00 VS

Scale 1 cm = 200 ft East (feet) ->

-400 0 400 800 1200 1600

9 5/8in Surface Casing
3DS Kick off Point - 0.00 Inc, 1300.00 MD, 1300.00 TVD, 0.00 VS

Schaefer 24-3-3HC-T2

End of Build - 11.13 Inc, 1856.64 MD, 1853.15 TVD, -14.43 VS

WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	15.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00
KOP	1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00
End of Build	1856.64	11.13	118.75	1853.15	-25.93	47.26	2.00	-14.43
End of Hold	7241.28	11.13	118.75	7136.46	-526.06	958.76	0.00	-292.75
Target Schaefer 24-3-3	8198.22	90.31	359.68	7754.00	48.06	1062.35	10.00	289.84
T.D. & Target Schaefer	12566.06	90.31	359.68	7730.00	4415.76	1037.80	0.00	4536.08

Created by admin
Date plotted 13-Feb-2014
Plot reference is Schaefer 24-3-3HC (PWB).
Ref wellpath is Schaefer 24-3-3HC (PWP#1).
Coordinates are in feet reference Slot #3.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Rig Datum: Planned Datum #1
Rig Datum to Mean Sea Level: 5037.00 ft.
Plot North is aligned to GRID North.

Schaefer 24-3-3HC-T1

Surface 0.00 N 0.00 E

E/2 Sec 24-T1S-R67W

End of Hold - 11.13 Inc, 7241.28 MD, 7136.46 TVD, -292.75 VS

7.0in Intermediate Casing

Schaefer 24-3-3HC-T1

T.D. & End of Hold - 7730.00 TVD, 4415.76 N 1037.80 E

S/C Kick off Point - 90.31 Inc, 8198.22 MD, 7754.00 TVD, 289.84 VS

4 1/2in Production Liner

Schaefer 24-3-3HC-T2

Scale 1 cm = 200 ft

<- True Vertical Depth (feet)

<- North(feet)

Scale 1 cm = 200 ft

Vertical Section (feet) ->

Azimuth 13.23 with reference 0.00 N, 0.00 E from Slot #3



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: Schaefer 24-3HC (PWB)

Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #3	1223318.3918	3186519.3766	39.94447000	-104.83476000	0.21S	28.04W	-0.00

Declination			
Date	Source	Time	
10-Feb-2014	IGRF Model [1900.0-2015.0]		13:06

Site Details				
Name	Northing	Easting	Coord System Name	North Alignment
Schaefer	1223318.6021	3186547.4140	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
15.00	0.00	0.000	15.00	0.00N	0.00E		0.00	1223318.39	3186519.38
1300.00	0.00	0.000	1300.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
1856.64	11.13	118.750	1853.15	25.93S	47.26E	2.00	-14.43	1223292.46	3186566.64
7241.28	11.13	118.750	7136.46	526.06S	958.76E	==>	-292.75	1222792.35	3187478.11
8198.22	90.31	359.680	7754.00	48.06N	1062.35E	10.00	289.84	1223366.46	3187581.69
12566.06	90.31	359.680	7730.00	4415.76N	1037.80E	==>	4536.08	1227734.02	3187557.15

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	1223318.39	3186519.38
15.00	0.00	0.000	15.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
1285.00	0.00	0.000	1285.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
1300.00	0.00	0.000	1300.00	0.00N	0.00E	==>	0.00	1223318.39	3186519.38
1385.00	1.70	118.750	1384.99	0.61S	1.11E	2.00	-0.34	1223317.79	3186520.48
1485.00	3.70	118.750	1484.87	2.87S	5.24E	2.00	-1.60	1223315.52	3186524.61
1585.00	5.70	118.750	1584.53	6.81S	12.42E	2.00	-3.79	1223311.58	3186531.79
1685.00	7.70	118.750	1683.84	12.43S	22.65E	2.00	-6.91	1223305.97	3186542.02
1785.00	9.70	118.750	1782.69	19.70S	35.91E	2.00	-10.96	1223298.69	3186555.28
1856.64	11.13	118.750	1853.15	25.93S	47.26E	2.00	-14.43	1223292.46	3186566.64
1900.00	11.13	118.750	1895.69	29.96S	54.60E	==>	-16.67	1223288.43	3186573.98
2000.00	11.13	118.750	1993.81	39.25S	71.53E	==>	-21.84	1223279.15	3186590.90
2100.00	11.13	118.750	2091.92	48.54S	88.46E	==>	-27.01	1223269.86	3186607.83
2200.00	11.13	118.750	2190.04	57.82S	105.39E	==>	-32.18	1223260.57	3186624.76
2300.00	11.13	118.750	2288.16	67.11S	122.31E	==>	-37.35	1223251.28	3186641.69
2400.00	11.13	118.750	2386.28	76.40S	139.24E	==>	-42.52	1223241.99	3186658.61
2500.00	11.13	118.750	2484.40	85.69S	156.17E	==>	-47.68	1223232.71	3186675.54
2600.00	11.13	118.750	2582.52	94.98S	173.10E	==>	-52.85	1223223.42	3186692.47
2700.00	11.13	118.750	2680.63	104.26S	190.02E	==>	-58.02	1223214.13	3186709.39
2800.00	11.13	118.750	2778.75	113.55S	206.95E	==>	-63.19	1223204.84	3186726.32
2900.00	11.13	118.750	2876.87	122.84S	223.88E	==>	-68.36	1223195.56	3186743.25
3000.00	11.13	118.750	2974.99	132.13S	240.81E	==>	-73.53	1223186.27	3186760.18
3100.00	11.13	118.750	3073.11	141.42S	257.74E	==>	-78.70	1223176.98	3186777.10
3200.00	11.13	118.750	3171.22	150.70S	274.66E	==>	-83.87	1223167.69	3186794.03
3300.00	11.13	118.750	3269.34	159.99S	291.59E	==>	-89.04	1223158.41	3186810.96
3400.00	11.13	118.750	3367.46	169.28S	308.52E	==>	-94.20	1223149.12	3186827.89

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 5037.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 13.230 degrees
Bottom hole distance is 4536.08 Feet on azimuth 13.23 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 13-Feb-2014



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL

Well Design Combined Report
Wellbore: Schaefer 24-3-3HC (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
3500.00	11.13	118.750	3465.58	178.57S	325.45E	==>	-99.37	1223139.83	3186844.81
3600.00	11.13	118.750	3563.70	187.86S	342.37E	==>	-104.54	1223130.54	3186861.74
3700.00	11.13	118.750	3661.82	197.14S	359.30E	==>	-109.71	1223121.25	3186878.67
3800.00	11.13	118.750	3759.93	206.43S	376.23E	==>	-114.88	1223111.97	3186895.59
3900.00	11.13	118.750	3858.05	215.72S	393.16E	==>	-120.05	1223102.68	3186912.52
4000.00	11.13	118.750	3956.17	225.01S	410.09E	==>	-125.22	1223093.39	3186929.45
4100.00	11.13	118.750	4054.29	234.30S	427.01E	==>	-130.39	1223084.10	3186946.38
4200.00	11.13	118.750	4152.41	243.58S	443.94E	==>	-135.55	1223074.82	3186963.30
4300.00	11.13	118.750	4250.53	252.87S	460.87E	==>	-140.72	1223065.53	3186980.23
4400.00	11.13	118.750	4348.64	262.16S	477.80E	==>	-145.89	1223056.24	3186997.16
4500.00	11.13	118.750	4446.76	271.45S	494.72E	==>	-151.06	1223046.95	3187014.09
4600.00	11.13	118.750	4544.88	280.74S	511.65E	==>	-156.23	1223037.66	3187031.01
4700.00	11.13	118.750	4643.00	290.02S	528.58E	==>	-161.40	1223028.38	3187047.94
4800.00	11.13	118.750	4741.12	299.31S	545.51E	==>	-166.57	1223019.09	3187064.87
4900.00	11.13	118.750	4839.23	308.60S	562.44E	==>	-171.74	1223009.80	3187081.79
5000.00	11.13	118.750	4937.35	317.89S	579.36E	==>	-176.90	1223000.51	3187098.72
5100.00	11.13	118.750	5035.47	327.18S	596.29E	==>	-182.07	1222991.23	3187115.65
5200.00	11.13	118.750	5133.59	336.46S	613.22E	==>	-187.24	1222981.94	3187132.58
5300.00	11.13	118.750	5231.71	345.75S	630.15E	==>	-192.41	1222972.65	3187149.50
5400.00	11.13	118.750	5329.83	355.04S	647.07E	==>	-197.58	1222963.36	3187166.43
5500.00	11.13	118.750	5427.94	364.33S	664.00E	==>	-202.75	1222954.08	3187183.36
5600.00	11.13	118.750	5526.06	373.62S	680.93E	==>	-207.92	1222944.79	3187200.29
5700.00	11.13	118.750	5624.18	382.90S	697.86E	==>	-213.09	1222935.50	3187217.21
5800.00	11.13	118.750	5722.30	392.19S	714.79E	==>	-218.25	1222926.21	3187234.14
5900.00	11.13	118.750	5820.42	401.48S	731.71E	==>	-223.42	1222916.92	3187251.07
6000.00	11.13	118.750	5918.53	410.77S	748.64E	==>	-228.59	1222907.64	3187267.99
6100.00	11.13	118.750	6016.65	420.06S	765.57E	==>	-233.76	1222898.35	3187284.92
6200.00	11.13	118.750	6114.77	429.34S	782.50E	==>	-238.93	1222889.06	3187301.85
6300.00	11.13	118.750	6212.89	438.63S	799.42E	==>	-244.10	1222879.77	3187318.78
6400.00	11.13	118.750	6311.01	447.92S	816.35E	==>	-249.27	1222870.49	3187335.70
6500.00	11.13	118.750	6409.13	457.21S	833.28E	==>	-254.44	1222861.20	3187352.63
6600.00	11.13	118.750	6507.24	466.50S	850.21E	==>	-259.60	1222851.91	3187369.56
6700.00	11.13	118.750	6605.36	475.78S	867.14E	==>	-264.77	1222842.62	3187386.49
6800.00	11.13	118.750	6703.48	485.07S	884.06E	==>	-269.94	1222833.33	3187403.41
6900.00	11.13	118.750	6801.60	494.36S	900.99E	==>	-275.11	1222824.05	3187420.34
7000.00	11.13	118.750	6899.72	503.65S	917.92E	==>	-280.28	1222814.76	3187437.27
7100.00	11.13	118.750	6997.83	512.94S	934.85E	==>	-285.45	1222805.47	3187454.19
7200.00	11.13	118.750	7095.95	522.22S	951.77E	==>	-290.62	1222796.18	3187471.12
7241.28	11.13	118.750	7136.46	526.06S	958.76E	==>	-292.75	1222792.35	3187478.11
7300.00	9.78	86.800	7194.25	528.51S	968.72E	10.00	-292.86	1222789.90	3187488.07
7400.00	14.30	42.200	7292.22	518.86S	985.53E	10.00	-279.62	1222799.54	3187504.88
7500.00	22.61	24.130	7387.07	492.10S	1001.73E	10.00	-249.87	1222826.30	3187521.08
7600.00	31.88	15.800	7475.91	449.04S	1016.82E	10.00	-204.49	1222869.37	3187536.16
7700.00	41.46	10.960	7556.04	390.98S	1030.33E	10.00	-144.88	1222927.42	3187549.68
7800.00	51.18	7.690	7625.04	319.70S	1041.87E	10.00	-72.85	1222998.70	3187561.22
7900.00	60.97	5.210	7680.79	237.35S	1051.08E	10.00	9.42	1223081.05	3187570.43
8000.00	70.79	3.170	7721.61	146.44S	1057.68E	10.00	99.43	1223171.96	3187577.03
8100.00	80.64	1.360	7746.26	49.73S	1061.47E	10.00	194.44	1223268.66	3187580.82
8198.22	90.31	359.680	7754.00	48.06N	1062.35E	10.00	289.84	1223366.46	3187581.69
8200.00	90.31	359.680	7753.99	49.84N	1062.34E	==>	291.57	1223368.23	3187581.68
8300.00	90.31	359.680	7753.44	149.84N	1061.78E	==>	388.79	1223468.22	3187581.12
8400.00	90.31	359.680	7752.89	249.83N	1061.21E	==>	486.00	1223568.22	3187580.56
8500.00	90.31	359.680	7752.34	349.83N	1060.65E	==>	583.22	1223668.21	3187580.00
8600.00	90.31	359.680	7751.79	449.83N	1060.09E	==>	680.43	1223768.21	3187579.43
8700.00	90.31	359.680	7751.24	549.82N	1059.53E	==>	777.65	1223868.20	3187578.87
8800.00	90.31	359.680	7750.69	649.82N	1058.97E	==>	874.87	1223968.19	3187578.31
8900.00	90.31	359.680	7750.14	749.82N	1058.40E	==>	972.08	1224068.19	3187577.75
9000.00	90.31	359.680	7749.59	849.82N	1057.84E	==>	1069.30	1224168.18	3187577.19
9100.00	90.31	359.680	7749.05	949.81N	1057.28E	==>	1166.51	1224268.17	3187576.62
9200.00	90.31	359.680	7748.50	1049.81N	1056.72E	==>	1263.73	1224368.17	3187576.06
9300.00	90.31	359.680	7747.95	1149.81N	1056.16E	==>	1360.95	1224468.16	3187575.50

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5037.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 13.230 degrees
Bottom hole distance is 4536.08 Feet on azimuth 13.23 degrees from Wellhead
Calculation method uses Minimum Curvature method
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Wellbore: Schaefer 24-3-3HC (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
9400.00	90.31	359.680	7747.40	1249.80N	1055.59E	==>	1458.16	1224568.16	3187574.94
9500.00	90.31	359.680	7746.85	1349.80N	1055.03E	==>	1555.38	1224668.15	3187574.38
9600.00	90.31	359.680	7746.30	1449.80N	1054.47E	==>	1652.59	1224768.14	3187573.81
9700.00	90.31	359.680	7745.75	1549.79N	1053.91E	==>	1749.81	1224868.14	3187573.25
9800.00	90.31	359.680	7745.20	1649.79N	1053.35E	==>	1847.03	1224968.13	3187572.69
9900.00	90.31	359.680	7744.65	1749.79N	1052.78E	==>	1944.24	1225068.13	3187572.13
10000.00	90.31	359.680	7744.10	1849.78N	1052.22E	==>	2041.46	1225168.12	3187571.57
10100.00	90.31	359.680	7743.55	1949.78N	1051.66E	==>	2138.67	1225268.11	3187571.00
10200.00	90.31	359.680	7743.00	2049.78N	1051.10E	==>	2235.89	1225368.11	3187570.44
10300.00	90.31	359.680	7742.45	2149.78N	1050.54E	==>	2333.11	1225468.10	3187569.88
10400.00	90.31	359.680	7741.90	2249.77N	1049.98E	==>	2430.32	1225568.09	3187569.32
10500.00	90.31	359.680	7741.35	2349.77N	1049.41E	==>	2527.54	1225668.09	3187568.76
10600.00	90.31	359.680	7740.80	2449.77N	1048.85E	==>	2624.75	1225768.08	3187568.20
10700.00	90.31	359.680	7740.25	2549.76N	1048.29E	==>	2721.97	1225868.08	3187567.63
10800.00	90.31	359.680	7739.70	2649.76N	1047.73E	==>	2819.19	1225968.07	3187567.07
10900.00	90.31	359.680	7739.15	2749.76N	1047.17E	==>	2916.40	1226068.06	3187566.51
11000.00	90.31	359.680	7738.61	2849.75N	1046.60E	==>	3013.62	1226168.06	3187565.95
11100.00	90.31	359.680	7738.06	2949.75N	1046.04E	==>	3110.83	1226268.05	3187565.39
11200.00	90.31	359.680	7737.51	3049.75N	1045.48E	==>	3208.05	1226368.04	3187564.82
11300.00	90.31	359.680	7736.96	3149.74N	1044.92E	==>	3305.27	1226468.04	3187564.26
11400.00	90.31	359.680	7736.41	3249.74N	1044.36E	==>	3402.48	1226568.03	3187563.70
11500.00	90.31	359.680	7735.86	3349.74N	1043.79E	==>	3499.70	1226668.03	3187563.14
11600.00	90.31	359.680	7735.31	3449.74N	1043.23E	==>	3596.91	1226768.02	3187562.58
11700.00	90.31	359.680	7734.76	3549.73N	1042.67E	==>	3694.13	1226868.01	3187562.01
11800.00	90.31	359.680	7734.21	3649.73N	1042.11E	==>	3791.35	1226968.01	3187561.45
11900.00	90.31	359.680	7733.66	3749.73N	1041.55E	==>	3888.56	1227068.00	3187560.89
12000.00	90.31	359.680	7733.11	3849.72N	1040.98E	==>	3985.78	1227168.00	3187560.33
12100.00	90.31	359.680	7732.56	3949.72N	1040.42E	==>	4082.99	1227267.99	3187559.77
12200.00	90.31	359.680	7732.01	4049.72N	1039.86E	==>	4180.21	1227367.98	3187559.21
12300.00	90.31	359.680	7731.46	4149.71N	1039.30E	==>	4277.43	1227467.98	3187558.64
12400.00	90.31	359.680	7730.91	4249.71N	1038.74E	==>	4374.64	1227567.97	3187558.08
12500.00	90.31	359.680	7730.36	4349.71N	1038.17E	==>	4471.86	1227667.96	3187557.52
12566.06	90.31	359.680	7730.00	4415.76N	1037.80E	==>	4536.08	1227734.02	3187557.15

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5037.0ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 13.230 degrees
Bottom hole distance is 4536.08 Feet on azimuth 13.23 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by Integrated Petroleum Technologies, Inc.
Date Printed: 13-Feb-2014



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: Schaefer 24-3-3HC (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]
13 1/2	15.00	15.00	0.00N	0.00E	1200.00	1200.00	0.00N	0.00E
8 3/4	1200.00	1200.00	0.00N	0.00E	8198.00	7754.00	47.84N	1062.35E
6 1/8	8198.00	7754.00	47.84N	1062.35E	12566.06	7730.00	4415.76N	1037.80E

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	15.00	15.00	0.00N	0.00E	1200.00	1200.00	0.00N	0.00E
7.0in Intermediate Casing	15.00	15.00	0.00N	0.00E	8198.00	7754.00	47.84N	1062.35E
4 1/2in Production Liner	7998.00	7720.95	148.32S	1057.58E	12566.06	7730.00	4415.76N	1037.80E

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
Schaefer 24-3-3HC-T1	48.06N	1062.35E	7754.00	39.94458000	-104.83097000	1223366.46	3187581.69	11-Feb-2014
Schaefer 24-3-3HC-T2	4415.76N	1037.80E	7730.00	39.95657000	-104.83094000	1227734.02	3187557.15	11-Feb-2014

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
153294	Planned	12566.06	7730.00	WdW Rate Gyro	Standard

Notes

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SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: Schaefer 24-3-3HC (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
Proximities beyond 2500.00ft with expansion rate of 0.00ft/1000ft are not reported
Scan limit 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
Schaefer 24-3-3HC (PWB)	11-Feb-2014	12-Feb-2014

Well		
Name	Government ID	Last Revised
Schaefer 24-3-3HC		11-Feb-2014

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #3	1223318.3918	3186519.3766	39.94447000	-104.83476000	0.21S	28.04W

Installation				
Name	Easting	Northing	Coord System Name	North Alignment
Schaefer	3186547.4140	1223318.6021	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Field				
Name	Easting	Northing	Coord System Name	North Alignment
West Brighton	3178196.4983	1231661.3262	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]
Schaefer 24-3-2HN	Schaefer 24-3-2HN (PWB)	Slot #2	Schaefer	14.02	1250.00	12566.06	11.15	1196.10	4.89	1196.10
Schaefer 25-1-3HN	Schaefer 25-1-3HN (PWB)	Slot #11	Schaefer	15.62	1310.93	7519.45	12.75	1196.10	1.91	7511.72
Schaefer 24-3-4HN	Schaefer 24-3-4HN (PWB)	Slot #4	Schaefer	16.82	1300.00	1300.00	13.96	1196.10	5.87	1196.10
Schaefer 25-1-4HC	Schaefer 25-1-4HC (PWB)	Slot #12	Schaefer	16.83	1300.00	7610.14	13.96	1196.10	5.87	1196.10
Schaefer 25-1-2HC	Schaefer 25-1-2HC (PWB)	Slot #10	Schaefer	26.75	1300.02	7695.49	23.88	1196.10	9.28	1500.00
Schaefer 25-1-5HN	Schaefer 25-1-5HN (PWB)	Slot #13	Schaefer	26.75	1300.00	1300.00	23.88	1196.10	9.33	1196.10
Schaefer 24-3-1HC	Schaefer 24-3-1HC (PWB)	Slot #1	Schaefer	28.04	1200.00	12566.06	25.17	1200.00	9.76	1200.00
Schaefer 24-3-5HC	Schaefer 24-3-5HC (PWB)	Slot #5	Schaefer	30.84	1300.00	12560.71	27.98	1196.10	10.76	1196.10
Schaefer 25-1-1HN	Schaefer 25-1-1HN (PWB)	Slot #9	Schaefer	39.26	1250.00	1250.00	36.39	1196.10	13.70	1196.10
Schaefer	Schaefer	Slot #14	Schaefer	41.87	1300.00	1300.00	39.01	1196.10	14.61	1196.10

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SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: Schaefer 24-3-3HC (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]
25-1-6HC	25-1-6HC (PWB)									
Schaefer 24-3-6HN	Schaefer 24-3-6HN (PWB)	Slot #6	Schaefer	44.86	1300.00	12561.00	42.00	1196.10	15.65	1196.10
Schaefer 25-1-7HN	Schaefer 25-1-7HN (PWB)	Slot #15	Schaefer	55.23	1265.00	1265.00	52.36	1196.10	19.27	1196.10
Schaefer 24-3-7HC	Schaefer 24-3-7HC (PWB)	Slot #7	Schaefer	61.69	1300.00	1300.00	58.82	1196.10	21.52	1196.10
Shaefer 25-1-8HC	Shaefer 25-1-8HC (PWB)	Slot #16	Schaefer	68.85	1215.00	1215.00	65.99	1196.10	24.02	1196.10
Schaefer 24-3-8HN	Schaefer 24-3-8HN (PWB)	Slot #8	Schaefer	75.71	1250.00	1250.00	72.84	1196.10	26.41	1196.10
W Letterly-Scott 1	W Letterly-Scott 1 (AWB)	Letterly-Scott 1	Offsets	279.40	11487.59	11487.59	222.99	11481.54	4.94	11465.13