

# WARD PETROLEUM

Location	ADAMS COUNTY, CO	Slot	Slot #13
Field	West Brighton	Well	Schaefer 25-1-5HN
Installation	Schaefer	Wellbore	Schaefer 25-1-5HN (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

9 5/8in Surface Casing

3DS Kick off Point - 0.00 Inc, 1350.00 MD, 1350.00 TVD, 0.00 VS

End of Build - 3.87 Inc, 1543.66 MD, 1543.51 TVD, 5.73 VS

Surface 0.00 N 0.00 E

Schaefer 25-1-5HN-T1

## 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	1350.00	0.00	0.00	1350.00	0.00	0.00	0.00	0.00
End of Build	1543.66	3.87	148.63	1543.51	-5.59	3.41	2.00	5.73
End of Hold	7033.19	3.87	148.63	7020.51	-322.19	196.43	0.00	330.69
Target Schaefer 25-1-5	7896.89	89.68	179.76	7560.00	-890.95	217.58	10.00	899.82
T.D. & Target Schaefer	12250.09	89.68	179.76	7584.00	-5244.06	235.66	0.00	5249.35

Created by admin  
Date plotted 13-Feb-2014

Plot reference is Schaefer 25-1-5HN (PWB).  
Ref wellpath is Schaefer 25-1-5HN (PWP#1).  
Coordinates are in feet reference Slot #13.  
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 25-1-5HN-T2

E/2 Sec 25-T1S-R67W

End of Hold - 3.87 Inc, 7033.19 MD, 7020.51 TVD, 330.69 VS

7.0in Intermediate Casing

Schaefer 25-1-5HN-T1

T.D. & End of Hold - 7584.00 TVD, 5244.06 S 235.66 E

Schaefer 25-1-5HN-T2

S/C Kick off Point - 89.68 Inc, 7896.89 MD, 7560.00 TVD, 899.82 VS

4 1/2in Production Liner

Scale 1 cm = 200 ft

Vertical Section (feet) ->

Azimuth 177.43 with reference 0.00 N, 0.00 E from Slot #13

<- North(feet)

Scale 1 cm = 200 ft



INTEGRATED PETROLEUM TECHNOLOGIES, INC  
SYSDRILL  
Well Design Combined Report  
Wellbore: Schaefer 25-1-5HN (PWB)

Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #13	1223332.7940	3186496.8374	39.94451000	-104.83484000	14.19N	50.58W	-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	1223332.79	3186496.84
1350.00	0.00	0.000	1350.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
1543.66	3.87	148.630	1543.51	5.59S	3.41E	2.00	5.73	1223327.21	3186500.24
7033.19	3.87	148.630	7020.51	322.19S	196.43E	==>	330.69	1223010.61	3186693.27
7896.89	89.68	179.760	7560.00	890.95S	217.58E	10.00	899.82	1222441.87	3186714.41
12250.09	89.68	179.760	7584.00	5244.06S	235.66E	==>	5249.35	1218088.90	3186732.49

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	1223332.79	3186496.84
15.00	0.00	0.000	15.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
1300.00	0.00	0.000	1300.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
1335.00	0.00	0.000	1335.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
1350.00	0.00	0.000	1350.00	0.00N	0.00E	==>	0.00	1223332.79	3186496.84
1435.00	1.70	148.630	1434.99	1.08S	0.66E	2.00	1.10	1223331.72	3186497.49
1535.00	3.70	148.630	1534.87	5.10S	3.11E	2.00	5.23	1223327.70	3186499.95
1543.66	3.87	148.630	1543.51	5.59S	3.41E	2.00	5.73	1223327.21	3186500.24
1600.00	3.87	148.630	1599.72	8.84S	5.39E	==>	9.07	1223323.96	3186502.22
1700.00	3.87	148.630	1699.50	14.60S	8.90E	==>	14.99	1223318.19	3186505.74
1800.00	3.87	148.630	1799.27	20.37S	12.42E	==>	20.91	1223312.42	3186509.26
1900.00	3.87	148.630	1899.04	26.14S	15.94E	==>	26.83	1223306.66	3186512.77
2000.00	3.87	148.630	1998.81	31.91S	19.45E	==>	32.75	1223300.89	3186516.29
2100.00	3.87	148.630	2098.58	37.67S	22.97E	==>	38.67	1223295.12	3186519.81
2200.00	3.87	148.630	2198.35	43.44S	26.49E	==>	44.59	1223289.35	3186523.32
2300.00	3.87	148.630	2298.13	49.21S	30.00E	==>	50.51	1223283.59	3186526.84
2400.00	3.87	148.630	2397.90	54.98S	33.52E	==>	56.43	1223277.82	3186530.35
2500.00	3.87	148.630	2497.67	60.74S	37.03E	==>	62.34	1223272.05	3186533.87
2600.00	3.87	148.630	2597.44	66.51S	40.55E	==>	68.26	1223266.29	3186537.39
2700.00	3.87	148.630	2697.21	72.28S	44.07E	==>	74.18	1223260.52	3186540.90
2800.00	3.87	148.630	2796.98	78.05S	47.58E	==>	80.10	1223254.75	3186544.42
2900.00	3.87	148.630	2896.75	83.81S	51.10E	==>	86.02	1223248.98	3186547.93
3000.00	3.87	148.630	2996.53	89.58S	54.62E	==>	91.94	1223243.22	3186551.45
3100.00	3.87	148.630	3096.30	95.35S	58.13E	==>	97.86	1223237.45	3186554.97
3200.00	3.87	148.630	3196.07	101.12S	61.65E	==>	103.78	1223231.68	3186558.48
3300.00	3.87	148.630	3295.84	106.88S	65.16E	==>	109.70	1223225.91	3186562.00

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 177.430 degrees  
Bottom hole distance is 5249.35 Feet on azimuth 177.43 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 25-1-5HN (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
3400.00	3.87	148.630	3395.61	112.65S	68.68E	==>	115.62	1223220.15	3186565.52
3500.00	3.87	148.630	3495.38	118.42S	72.20E	==>	121.54	1223214.38	3186569.03
3600.00	3.87	148.630	3595.16	124.19S	75.71E	==>	127.46	1223208.61	3186572.55
3700.00	3.87	148.630	3694.93	129.95S	79.23E	==>	133.38	1223202.84	3186576.06
3800.00	3.87	148.630	3794.70	135.72S	82.75E	==>	139.30	1223197.08	3186579.58
3900.00	3.87	148.630	3894.47	141.49S	86.26E	==>	145.22	1223191.31	3186583.10
4000.00	3.87	148.630	3994.24	147.26S	89.78E	==>	151.14	1223185.54	3186586.61
4100.00	3.87	148.630	4094.01	153.02S	93.29E	==>	157.06	1223179.78	3186590.13
4200.00	3.87	148.630	4193.79	158.79S	96.81E	==>	162.98	1223174.01	3186593.65
4300.00	3.87	148.630	4293.56	164.56S	100.33E	==>	168.90	1223168.24	3186597.16
4400.00	3.87	148.630	4393.33	170.33S	103.84E	==>	174.82	1223162.47	3186600.68
4500.00	3.87	148.630	4493.10	176.09S	107.36E	==>	180.74	1223156.71	3186604.19
4600.00	3.87	148.630	4592.87	181.86S	110.88E	==>	186.65	1223150.94	3186607.71
4700.00	3.87	148.630	4692.64	187.63S	114.39E	==>	192.57	1223145.17	3186611.23
4800.00	3.87	148.630	4792.41	193.40S	117.91E	==>	198.49	1223139.40	3186614.74
4900.00	3.87	148.630	4892.19	199.16S	121.43E	==>	204.41	1223133.64	3186618.26
5000.00	3.87	148.630	4991.96	204.93S	124.94E	==>	210.33	1223127.87	3186621.77
5100.00	3.87	148.630	5091.73	210.70S	128.46E	==>	216.25	1223122.10	3186625.29
5200.00	3.87	148.630	5191.50	216.47S	131.97E	==>	222.17	1223116.34	3186628.81
5300.00	3.87	148.630	5291.27	222.23S	135.49E	==>	228.09	1223110.57	3186632.32
5400.00	3.87	148.630	5391.04	228.00S	139.01E	==>	234.01	1223104.80	3186635.84
5500.00	3.87	148.630	5490.82	233.77S	142.52E	==>	239.93	1223099.03	3186639.36
5600.00	3.87	148.630	5590.59	239.54S	146.04E	==>	245.85	1223093.27	3186642.87
5700.00	3.87	148.630	5690.36	245.30S	149.56E	==>	251.77	1223087.50	3186646.39
5800.00	3.87	148.630	5790.13	251.07S	153.07E	==>	257.69	1223081.73	3186649.90
5900.00	3.87	148.630	5889.90	256.84S	156.59E	==>	263.61	1223075.96	3186653.42
6000.00	3.87	148.630	5989.67	262.61S	160.10E	==>	269.53	1223070.20	3186656.94
6100.00	3.87	148.630	6089.45	268.37S	163.62E	==>	275.45	1223064.43	3186660.45
6200.00	3.87	148.630	6189.22	274.14S	167.14E	==>	281.37	1223058.66	3186663.97
6300.00	3.87	148.630	6288.99	279.91S	170.65E	==>	287.29	1223052.89	3186667.49
6400.00	3.87	148.630	6388.76	285.68S	174.17E	==>	293.21	1223047.13	3186671.00
6500.00	3.87	148.630	6488.53	291.44S	177.69E	==>	299.13	1223041.36	3186674.52
6600.00	3.87	148.630	6588.30	297.21S	181.20E	==>	305.05	1223035.59	3186678.03
6700.00	3.87	148.630	6688.08	302.98S	184.72E	==>	310.96	1223029.83	3186681.55
6800.00	3.87	148.630	6787.85	308.75S	188.23E	==>	316.88	1223024.06	3186685.07
6900.00	3.87	148.630	6887.62	314.51S	191.75E	==>	322.80	1223018.29	3186688.58
7000.00	3.87	148.630	6987.39	320.28S	195.27E	==>	328.72	1223012.52	3186692.10
7033.19	3.87	148.630	7020.51	322.19S	196.43E	==>	330.69	1223010.61	3186693.27
7100.00	10.19	168.540	7086.79	329.92S	198.79E	10.00	338.51	1223002.88	3186695.62
7200.00	20.09	174.280	7183.20	355.75S	202.26E	10.00	364.47	1222977.05	3186699.10
7300.00	30.06	176.300	7273.66	397.94S	205.60E	10.00	406.77	1222934.87	3186702.43
7400.00	40.04	177.380	7355.43	455.20S	208.69E	10.00	464.11	1222877.60	3186705.52
7500.00	50.02	178.090	7426.01	525.81S	211.44E	10.00	534.77	1222807.00	3186708.27
7600.00	60.02	178.620	7483.27	607.61S	213.77E	10.00	616.59	1222725.21	3186710.60
7700.00	70.01	179.040	7525.46	698.11S	215.60E	10.00	707.09	1222634.70	3186712.43
7800.00	80.00	179.420	7551.30	794.58S	216.89E	10.00	803.51	1222538.24	3186713.72
7896.89	89.68	179.760	7560.00	890.95S	217.58E	10.00	899.82	1222441.87	3186714.41
7900.00	89.68	179.760	7560.02	894.07S	217.59E	==>	902.93	1222438.76	3186714.42
8000.00	89.68	179.760	7560.57	994.06S	218.01E	==>	1002.85	1222338.76	3186714.84
8100.00	89.68	179.760	7561.12	1094.06S	218.42E	==>	1102.76	1222238.77	3186715.25
8200.00	89.68	179.760	7561.67	1194.06S	218.84E	==>	1202.68	1222138.77	3186715.67
8300.00	89.68	179.760	7562.22	1294.06S	219.25E	==>	1302.59	1222038.78	3186716.08
8400.00	89.68	179.760	7562.77	1394.05S	219.67E	==>	1402.51	1221938.78	3186716.50
8500.00	89.68	179.760	7563.33	1494.05S	220.08E	==>	1502.43	1221838.79	3186716.91
8600.00	89.68	179.760	7563.88	1594.05S	220.50E	==>	1602.34	1221738.79	3186717.33
8700.00	89.68	179.760	7564.43	1694.05S	220.91E	==>	1702.26	1221638.80	3186717.74
8800.00	89.68	179.760	7564.98	1794.04S	221.33E	==>	1802.17	1221538.81	3186718.16
8900.00	89.68	179.760	7565.53	1894.04S	221.74E	==>	1902.09	1221438.81	3186718.57
9000.00	89.68	179.760	7566.08	1994.04S	222.16E	==>	2002.00	1221338.82	3186718.99
9100.00	89.68	179.760	7566.63	2094.04S	222.57E	==>	2101.92	1221238.82	3186719.40
9200.00	89.68	179.760	7567.18	2194.03S	222.99E	==>	2201.83	1221138.83	3186719.82

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 177.430 degrees  
Bottom hole distance is 5249.35 Feet on azimuth 177.43 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 25-1-5HN (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
9300.00	89.68	179.760	7567.74	2294.03S	223.40E	==>	2301.75	1221038.83	3186720.24
9400.00	89.68	179.760	7568.29	2394.03S	223.82E	==>	2401.66	1220938.84	3186720.65
9500.00	89.68	179.760	7568.84	2494.03S	224.24E	==>	2501.58	1220838.84	3186721.07
9600.00	89.68	179.760	7569.39	2594.03S	224.65E	==>	2601.50	1220738.85	3186721.48
9700.00	89.68	179.760	7569.94	2694.02S	225.07E	==>	2701.41	1220638.85	3186721.90
9800.00	89.68	179.760	7570.49	2794.02S	225.48E	==>	2801.33	1220538.86	3186722.31
9900.00	89.68	179.760	7571.04	2894.02S	225.90E	==>	2901.24	1220438.87	3186722.73
10000.00	89.68	179.760	7571.59	2994.02S	226.31E	==>	3001.16	1220338.87	3186723.14
10100.00	89.68	179.760	7572.15	3094.01S	226.73E	==>	3101.07	1220238.88	3186723.56
10200.00	89.68	179.760	7572.70	3194.01S	227.14E	==>	3200.99	1220138.88	3186723.97
10300.00	89.68	179.760	7573.25	3294.01S	227.56E	==>	3300.90	1220038.89	3186724.39
10400.00	89.68	179.760	7573.80	3394.01S	227.97E	==>	3400.82	1219938.89	3186724.80
10500.00	89.68	179.760	7574.35	3494.00S	228.39E	==>	3500.73	1219838.90	3186725.22
10600.00	89.68	179.760	7574.90	3594.00S	228.80E	==>	3600.65	1219738.90	3186725.63
10700.00	89.68	179.760	7575.45	3694.00S	229.22E	==>	3700.57	1219638.91	3186726.05
10800.00	89.68	179.760	7576.01	3794.00S	229.63E	==>	3800.48	1219538.91	3186726.46
10900.00	89.68	179.760	7576.56	3893.99S	230.05E	==>	3900.40	1219438.92	3186726.88
11000.00	89.68	179.760	7577.11	3993.99S	230.47E	==>	4000.31	1219338.93	3186727.30
11100.00	89.68	179.760	7577.66	4093.99S	230.88E	==>	4100.23	1219238.93	3186727.71
11200.00	89.68	179.760	7578.21	4193.99S	231.30E	==>	4200.14	1219138.94	3186728.13
11300.00	89.68	179.760	7578.76	4293.98S	231.71E	==>	4300.06	1219038.94	3186728.54
11400.00	89.68	179.760	7579.31	4393.98S	232.13E	==>	4399.97	1218938.95	3186728.96
11500.00	89.68	179.760	7579.86	4493.98S	232.54E	==>	4499.89	1218838.95	3186729.37
11600.00	89.68	179.760	7580.42	4593.98S	232.96E	==>	4599.80	1218738.96	3186729.79
11700.00	89.68	179.760	7580.97	4693.98S	233.37E	==>	4699.72	1218638.96	3186730.20
11800.00	89.68	179.760	7581.52	4793.97S	233.79E	==>	4799.64	1218538.97	3186730.62
11900.00	89.68	179.760	7582.07	4893.97S	234.20E	==>	4899.55	1218438.97	3186731.03
12000.00	89.68	179.760	7582.62	4993.97S	234.62E	==>	4999.47	1218338.98	3186731.45
12100.00	89.68	179.760	7583.17	5093.97S	235.03E	==>	5099.38	1218238.99	3186731.86
12200.00	89.68	179.760	7583.72	5193.96S	235.45E	==>	5199.30	1218138.99	3186732.28
12250.09	89.68	179.760	7584.00	5244.06S	235.66E	==>	5249.35	1218088.90	3186732.49

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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 177.430 degrees  
Bottom hole distance is 5249.35 Feet on azimuth 177.43 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 25-1-5HN (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	7896.00	7559.99	890.07S	217.57E
6 1/8	7896.00	7559.99	890.07S	217.57E	12250.04	7584.00	5244.00S	235.66E

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	7896.00	7559.99	890.07S	217.57E
4 1/2in Production Liner	7696.00	7524.08	694.36S	215.54E	12250.04	7584.00	5244.00S	235.66E

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
Schaefer 25-1-5HN-T1	890.95S	208.58E	7560.00	39.94206000	-104.83412000	1222441.87	3186705.41	11-Feb-2014
Schaefer 25-1-5HN-T2	5244.06S	235.66E	7584.00	39.93011000	-104.83414000	1218088.90	3186732.49	11-Feb-2014

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
153542	Planned	12250.09	7584.00	WdW Rate Gyro	Standard

Notes

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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: Schaefer 25-1-5HN (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 25-1-5HN (PWB)	12-Feb-2014	12-Feb-2014

Well		
Name	Government ID	Last Revised
Schaefer 25-1-5HN		12-Feb-2014

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #13	1223332.7940	3186496.8374	39.94451000	-104.83484000	14.19N	50.58W

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 25-1-4HC	Schaefer 25-1-4HC (PWB)	Slot #12	Schaefer	13.57	1466.92	11547.15	10.58	1466.92	4.52	1491.38
Schaefer 24-3-4HN	Schaefer 24-3-4HN (PWB)	Slot #4	Schaefer	15.09	1551.02	7364.14	11.96	1551.02	4.80	1573.40
Schaefer 24-3-5HC	Schaefer 24-3-5HC (PWB)	Slot #5	Schaefer	16.20	1500.36	7472.38	9.49	7472.38	1.61	7472.38
Schaefer 25-1-6HC	Schaefer 25-1-6HC (PWB)	Slot #14	Schaefer	16.82	1300.00	12249.07	13.96	1196.10	5.61	12249.07
Schaefer 24-3-6HN	Schaefer 24-3-6HN (PWB)	Slot #6	Schaefer	26.75	1350.00	7345.74	23.88	1196.10	9.33	1196.10
Schaefer 24-3-3HC	Schaefer 24-3-3HC (PWB)	Slot #3	Schaefer	26.75	1300.00	1300.00	23.88	1196.10	9.33	1196.10
Schaefer 25-1-3HN	Schaefer 25-1-3HN (PWB)	Slot #11	Schaefer	28.04	1350.03	1350.03	25.17	1196.10	9.28	12236.13
Schaefer 25-1-7HN	Schaefer 25-1-7HN (PWB)	Slot #15	Schaefer	30.84	1265.00	12245.78	27.98	1196.10	9.30	12245.78
Schaefer 24-3-2HN	Schaefer 24-3-2HN (PWB)	Slot #2	Schaefer	39.26	1250.00	1250.00	36.39	1196.10	13.70	1196.10
Schaefer	Schaefer	Slot #7	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 25-1-5HN (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]
24-3-7HC	24-3-7HC (PWB)									
Schaefer 25-1-2HC	Schaefer 25-1-2HC (PWB)	Slot #10	Schaefer	44.86	1300.00	1300.00	42.00	1196.10	14.22	12236.13
Schaefer 25-1-8HC	Schaefer 25-1-8HC (PWB)	Slot #16	Schaefer	44.86	1215.00	12250.09	42.00	1196.10	14.25	12236.13
Schaefer 24-3-1HC	Schaefer 24-3-1HC (PWB)	Slot #1	Schaefer	52.53	1200.00	1200.00	49.66	1200.00	18.29	1200.00
Schaefer 24-3-8HN	Schaefer 24-3-8HN (PWB)	Slot #8	Schaefer	55.23	1250.00	1250.00	52.36	1196.10	19.27	1196.10
Schaefer 25-1-1HN	Schaefer 25-1-1HN (PWB)	Slot #9	Schaefer	58.88	1250.00	1250.00	56.02	1196.10	18.55	12236.13
W Huebner 25-44	W Huebner 25-44 (AWB)	Huebner 25-44	Offsets	480.61	11727.60	11727.60	412.59	11727.60	7.05	11760.41
W LEWIS #1	W LEWIS #1 (AWB)	LEWIS #1	Offsets	1640.24	12250.09	12250.09	1593.44	12250.09	35.04	12250.09
Sharp #25-1-9HN	Sharp #25-1-9HN (PWB)	Slot #4	Sharp Pad	1752.82	12250.09	12250.09	1659.48	12236.13	18.77	12236.13
Sharp #24-3-9HC	Sharp #24-3-9HC (PWB)	Slot #10	Sharp Pad	1835.76	7478.91	7478.91	1820.41	7478.91	99.81	8758.44
SHARP #24-3-9HC	SHARP #24-3-9HC (PWB)	Slot #7	Sharp Pad	1837.15	7478.91	7478.91	1821.74	7478.91	99.19	8774.84
Sharp #25-1-10H C	Sharp #25-1-10HC (PWB)	Slot #3	Sharp Pad	2204.83	12250.09	12250.09	2111.91	12250.09	23.71	12236.13
Sharp #24-3-10H N	Sharp #24-3-10HN (PWB)	Slot #9	Sharp Pad	2243.80	7340.35	7340.35	2229.52	7347.68	124.20	8515.00