

WARD PETROLEUM

Location	ADAMS COUNTY, CO	Slot	Slot #12
Field	West Brighton	Well	Schaefer 25-1-4HC
Installation	Schaefer	Wellbore	Schaefer 25-1-4HC (PWB)

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

9 5/8in Surface Casing

3DS Kick off Point - 0.00 Inc, 1400.00 MD, 1400.00 TVD, 0.00 VS

End of Build - 6.67 Inc, 1733.74 MD, 1732.98 TVD, 11.38 VS

Scale 1 cm = 200 ft

East (feet) ->

-400 0 400 800 1200

400

0

-400

-800

-1200

-1600

-2000

-2400

-2800

-3200

-3600

-4000

-4400

-4800

-5200

-5600

<- North(feet)

Scale 1 cm = 200 ft

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	1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00
End of Build	1733.74	6.67	118.71	1732.98	-9.33	17.03	2.00	11.38
End of Hold	7262.46	6.67	118.71	7224.23	-317.99	580.67	0.00	387.92
Target Schaefer 25-1-4	8128.18	89.71	180.63	7763.00	-887.75	629.77	10.00	959.35
Target Schaefer 25-1-4	11740.57	89.71	180.63	7781.47	-4499.88	590.22	0.00	4538.35
End of Build/Turn	12146.40	89.84	172.51	7783.06	-4904.63	614.48	2.00	4942.98
T.D. & Target Schaefer	12489.21	89.84	172.51	7784.00	-5244.52	659.15	0.00	5285.78

Created by admin
Date plotted 13-Feb-2014

Plot reference is Schaefer 25-1-4HC (PWB).
Ref wellpath is Schaefer 25-1-4HC (PWP#1).
Coordinates are in feet reference Slot #12.
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 25-1-4HC - OFFSET

Schaefer 25-1-4HC-T2

E/2 Sec 25-T1S-R67W

End of Hold - 6.67 Inc, 7262.46 MD, 7224.23 TVD, 387.92 VS

7.0in Intermediate Casing

Schaefer 25-1-4HC-T1

Schaefer 25-1-4HC - OFFSET

4 1/2in Production Liner

Schaefer 25-1-4HC-T2

S/C Kick off Point - 89.71 Inc, 8128.18 MD, 7763.00 TVD, 959.35 VS

T.D. & End of Hold - 7784.00 TVD, 5244.52 S 659.15 E

Scale 1 cm = 200 ft

Vertical Section (feet) ->

Azimuth 172.84 with reference 0.00 N, 0.00 E from Slot #12



INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: Schaefer 25-1-4HC (PWB)

Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Slot #12	1223332.8991	3186510.8561	39.94451000	-104.83479000	14.30N	36.56W	-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	1223332.90	3186510.86
1400.00	0.00	0.000	1400.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
1733.74	6.67	118.710	1732.98	9.33S	17.03E	2.00	11.38	1223323.57	3186527.89
7262.46	6.67	118.710	7224.23	317.99S	580.67E	==>	387.92	1223014.92	3187091.50
8128.18	89.71	180.630	7763.00	887.75S	629.77E	10.00	959.35	1222445.18	3187140.61
11740.57	89.71	180.630	7781.47	4499.88S	590.22E	==>	4538.35	1218833.16	3187101.06
12146.40	89.84	172.510	7783.06	4904.63S	614.48E	2.00	4942.98	1218428.42	3187125.32
12489.21	89.84	172.510	7784.00	5244.52S	659.15E	==>	5285.78	1218088.55	3187169.99

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	1223332.90	3186510.86
15.00	0.00	0.000	15.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
1300.00	0.00	0.000	1300.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
1385.00	0.00	0.000	1385.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
1400.00	0.00	0.000	1400.00	0.00N	0.00E	==>	0.00	1223332.90	3186510.86
1485.00	1.70	118.710	1484.99	0.61S	1.11E	2.00	0.74	1223332.29	3186511.96
1585.00	3.70	118.710	1584.87	2.87S	5.24E	2.00	3.50	1223330.03	3186516.09
1685.00	5.70	118.710	1684.53	6.80S	12.42E	2.00	8.30	1223326.10	3186523.28
1733.74	6.67	118.710	1732.98	9.33S	17.03E	2.00	11.38	1223323.57	3186527.89
1800.00	6.67	118.710	1798.80	13.03S	23.79E	==>	15.89	1223319.87	3186534.64
1900.00	6.67	118.710	1898.12	18.61S	33.98E	==>	22.70	1223314.29	3186544.84
2000.00	6.67	118.710	1997.44	24.19S	44.18E	==>	29.51	1223308.71	3186555.03
2100.00	6.67	118.710	2096.76	29.77S	54.37E	==>	36.32	1223303.13	3186565.22
2200.00	6.67	118.710	2196.09	35.36S	64.56E	==>	43.13	1223297.54	3186575.42
2300.00	6.67	118.710	2295.41	40.94S	74.76E	==>	49.94	1223291.96	3186585.61
2400.00	6.67	118.710	2394.73	46.52S	84.95E	==>	56.75	1223286.38	3186595.81
2500.00	6.67	118.710	2494.05	52.11S	95.15E	==>	63.57	1223280.79	3186606.00
2600.00	6.67	118.710	2593.37	57.69S	105.34E	==>	70.38	1223275.21	3186616.20
2700.00	6.67	118.710	2692.70	63.27S	115.54E	==>	77.19	1223269.63	3186626.39
2800.00	6.67	118.710	2792.02	68.86S	125.73E	==>	84.00	1223264.05	3186636.59
2900.00	6.67	118.710	2891.34	74.44S	135.93E	==>	90.81	1223258.46	3186646.78
3000.00	6.67	118.710	2990.66	80.02S	146.12E	==>	97.62	1223252.88	3186656.97
3100.00	6.67	118.710	3089.99	85.60S	156.32E	==>	104.43	1223247.30	3186667.17
3200.00	6.67	118.710	3189.31	91.19S	166.51E	==>	111.24	1223241.71	3186677.36

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 172.840 degrees
Bottom hole distance is 5285.78 Feet on azimuth 172.84 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 25-1-4HC (PWB)

Interpolated Wellpath									
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	Northing	Easting
3300.00	6.67	118.710	3288.63	96.77S	176.71E	==>	118.05	1223236.13	3186687.56
3400.00	6.67	118.710	3387.95	102.35S	186.90E	==>	124.86	1223230.55	3186697.75
3500.00	6.67	118.710	3487.27	107.94S	197.10E	==>	131.67	1223224.97	3186707.95
3600.00	6.67	118.710	3586.60	113.52S	207.29E	==>	138.48	1223219.38	3186718.14
3700.00	6.67	118.710	3685.92	119.10S	217.49E	==>	145.29	1223213.80	3186728.33
3800.00	6.67	118.710	3785.24	124.68S	227.68E	==>	152.10	1223208.22	3186738.53
3900.00	6.67	118.710	3884.56	130.27S	237.87E	==>	158.91	1223202.64	3186748.72
4000.00	6.67	118.710	3983.88	135.85S	248.07E	==>	165.73	1223197.05	3186758.92
4100.00	6.67	118.710	4083.21	141.43S	258.26E	==>	172.54	1223191.47	3186769.11
4200.00	6.67	118.710	4182.53	147.02S	268.46E	==>	179.35	1223185.89	3186779.31
4300.00	6.67	118.710	4281.85	152.60S	278.65E	==>	186.16	1223180.30	3186789.50
4400.00	6.67	118.710	4381.17	158.18S	288.85E	==>	192.97	1223174.72	3186799.69
4500.00	6.67	118.710	4480.50	163.77S	299.04E	==>	199.78	1223169.14	3186809.89
4600.00	6.67	118.710	4579.82	169.35S	309.24E	==>	206.59	1223163.56	3186820.08
4700.00	6.67	118.710	4679.14	174.93S	319.43E	==>	213.40	1223157.97	3186830.28
4800.00	6.67	118.710	4778.46	180.51S	329.63E	==>	220.21	1223152.39	3186840.47
4900.00	6.67	118.710	4877.78	186.10S	339.82E	==>	227.02	1223146.81	3186850.67
5000.00	6.67	118.710	4977.11	191.68S	350.02E	==>	233.83	1223141.22	3186860.86
5100.00	6.67	118.710	5076.43	197.26S	360.21E	==>	240.64	1223135.64	3186871.06
5200.00	6.67	118.710	5175.75	202.85S	370.41E	==>	247.45	1223130.06	3186881.25
5300.00	6.67	118.710	5275.07	208.43S	380.60E	==>	254.26	1223124.48	3186891.44
5400.00	6.67	118.710	5374.40	214.01S	390.79E	==>	261.07	1223118.89	3186901.64
5500.00	6.67	118.710	5473.72	219.59S	400.99E	==>	267.89	1223113.31	3186911.83
5600.00	6.67	118.710	5573.04	225.18S	411.18E	==>	274.70	1223107.73	3186922.03
5700.00	6.67	118.710	5672.36	230.76S	421.38E	==>	281.51	1223102.15	3186932.22
5800.00	6.67	118.710	5771.68	236.34S	431.57E	==>	288.32	1223096.56	3186942.42
5900.00	6.67	118.710	5871.01	241.93S	441.77E	==>	295.13	1223090.98	3186952.61
6000.00	6.67	118.710	5970.33	247.51S	451.96E	==>	301.94	1223085.40	3186962.80
6100.00	6.67	118.710	6069.65	253.09S	462.16E	==>	308.75	1223079.81	3186973.00
6200.00	6.67	118.710	6168.97	258.68S	472.35E	==>	315.56	1223074.23	3186983.19
6300.00	6.67	118.710	6268.30	264.26S	482.55E	==>	322.37	1223068.65	3186993.39
6400.00	6.67	118.710	6367.62	269.84S	492.74E	==>	329.18	1223063.07	3187003.58
6500.00	6.67	118.710	6466.94	275.42S	502.94E	==>	335.99	1223057.48	3187013.78
6600.00	6.67	118.710	6566.26	281.01S	513.13E	==>	342.80	1223051.90	3187023.97
6700.00	6.67	118.710	6665.58	286.59S	523.33E	==>	349.61	1223046.32	3187034.17
6800.00	6.67	118.710	6764.91	292.17S	533.52E	==>	356.42	1223040.74	3187044.36
6900.00	6.67	118.710	6864.23	297.76S	543.71E	==>	363.23	1223035.15	3187054.55
7000.00	6.67	118.710	6963.55	303.34S	553.91E	==>	370.05	1223029.57	3187064.75
7100.00	6.67	118.710	7062.87	308.92S	564.10E	==>	376.86	1223023.99	3187074.94
7200.00	6.67	118.710	7162.20	314.50S	574.30E	==>	383.67	1223018.40	3187085.14
7262.46	6.67	118.710	7224.23	317.99S	580.67E	==>	387.92	1223014.92	3187091.50
7300.00	9.06	140.270	7261.42	321.31S	584.47E	10.00	391.69	1223011.60	3187095.31
7400.00	17.86	161.960	7358.64	342.00S	594.27E	10.00	413.44	1222990.91	3187105.11
7500.00	27.48	169.200	7450.82	379.34S	603.37E	10.00	451.62	1222953.57	3187114.20
7600.00	37.29	172.860	7535.17	432.19S	611.47E	10.00	505.07	1222900.72	3187122.31
7700.00	47.17	175.160	7609.13	498.96S	618.34E	10.00	572.17	1222833.96	3187129.18
7800.00	57.08	176.820	7670.45	577.60S	623.77E	10.00	650.88	1222755.31	3187134.61
7900.00	67.02	178.150	7717.26	665.74S	627.60E	10.00	738.81	1222667.18	3187138.43
8000.00	76.96	179.290	7748.15	760.70S	629.70E	10.00	833.29	1222572.22	3187140.53
8100.00	86.90	180.340	7762.17	859.58S	630.01E	10.00	931.44	1222473.34	3187140.85
8128.18	89.71	180.630	7763.00	887.75S	629.77E	10.00	959.35	1222445.18	3187140.61
8200.00	89.71	180.630	7763.37	959.56S	628.99E	==>	1030.51	1222373.37	3187139.82
8300.00	89.71	180.630	7763.88	1059.55S	627.89E	==>	1129.58	1222273.38	3187138.73
8400.00	89.71	180.630	7764.39	1159.55S	626.80E	==>	1228.66	1222173.39	3187137.63
8500.00	89.71	180.630	7764.90	1259.54S	625.70E	==>	1327.73	1222073.40	3187136.54
8600.00	89.71	180.630	7765.41	1359.53S	624.61E	==>	1426.81	1221973.41	3187135.44
8700.00	89.71	180.630	7765.92	1459.52S	623.51E	==>	1525.89	1221873.42	3187134.35
8800.00	89.71	180.630	7766.43	1559.52S	622.42E	==>	1624.96	1221773.43	3187133.25
8900.00	89.71	180.630	7766.95	1659.51S	621.32E	==>	1724.04	1221673.44	3187132.16
9000.00	89.71	180.630	7767.46	1759.50S	620.23E	==>	1823.11	1221573.45	3187131.06
9100.00	89.71	180.630	7767.97	1859.50S	619.13E	==>	1922.19	1221473.46	3187129.97
9200.00	89.71	180.630	7768.48	1959.49S	618.04E	==>	2021.26	1221373.47	3187128.87

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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)
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Bottom hole distance is 5285.78 Feet on azimuth 172.84 degrees from Wellhead
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INTEGRATED PETROLEUM TECHNOLOGIES, INC
SYSDRILL
Well Design Combined Report
Wellbore: Schaefer 25-1-4HC (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	89.71	180.630	7768.99	2059.48S	616.94E	==>	2120.34	1221273.48	3187127.78
9400.00	89.71	180.630	7769.50	2159.47S	615.85E	==>	2219.42	1221173.49	3187126.68
9500.00	89.71	180.630	7770.01	2259.47S	614.75E	==>	2318.49	1221073.50	3187125.59
9600.00	89.71	180.630	7770.53	2359.46S	613.66E	==>	2417.57	1220973.51	3187124.49
9700.00	89.71	180.630	7771.04	2459.45S	612.56E	==>	2516.64	1220873.52	3187123.40
9800.00	89.71	180.630	7771.55	2559.44S	611.47E	==>	2615.72	1220773.53	3187122.30
9900.00	89.71	180.630	7772.06	2659.44S	610.37E	==>	2714.79	1220673.54	3187121.21
10000.00	89.71	180.630	7772.57	2759.43S	609.28E	==>	2813.87	1220573.55	3187120.11
10100.00	89.71	180.630	7773.08	2859.42S	608.18E	==>	2912.94	1220473.57	3187119.02
10200.00	89.71	180.630	7773.59	2959.42S	607.09E	==>	3012.02	1220373.58	3187117.92
10300.00	89.71	180.630	7774.10	3059.41S	605.99E	==>	3111.10	1220273.59	3187116.83
10400.00	89.71	180.630	7774.62	3159.40S	604.90E	==>	3210.17	1220173.60	3187115.73
10500.00	89.71	180.630	7775.13	3259.39S	603.80E	==>	3309.25	1220073.61	3187114.64
10600.00	89.71	180.630	7775.64	3359.39S	602.71E	==>	3408.32	1219973.62	3187113.54
10700.00	89.71	180.630	7776.15	3459.38S	601.61E	==>	3507.40	1219873.63	3187112.45
10800.00	89.71	180.630	7776.66	3559.37S	600.52E	==>	3606.47	1219773.64	3187111.35
10900.00	89.71	180.630	7777.17	3659.36S	599.42E	==>	3705.55	1219673.65	3187110.26
11000.00	89.71	180.630	7777.68	3759.36S	598.33E	==>	3804.62	1219573.66	3187109.16
11100.00	89.71	180.630	7778.19	3859.35S	597.23E	==>	3903.70	1219473.67	3187108.07
11200.00	89.71	180.630	7778.71	3959.34S	596.14E	==>	4002.78	1219373.68	3187106.97
11300.00	89.71	180.630	7779.22	4059.33S	595.04E	==>	4101.85	1219273.69	3187105.88
11400.00	89.71	180.630	7779.73	4159.33S	593.95E	==>	4200.93	1219173.70	3187104.78
11500.00	89.71	180.630	7780.24	4259.32S	592.85E	==>	4300.00	1219073.71	3187103.69
11600.00	89.71	180.630	7780.75	4359.31S	591.76E	==>	4399.08	1218973.72	3187102.59
11700.00	89.71	180.630	7781.26	4459.31S	590.66E	==>	4498.15	1218873.73	3187101.50
11740.57	89.71	180.630	7781.47	4499.88S	590.22E	==>	4538.35	1218833.16	3187101.06
11800.00	89.73	179.440	7781.76	4559.30S	590.18E	2.00	4597.31	1218773.74	3187101.02
11900.00	89.76	177.440	7782.21	4659.26S	592.91E	2.00	4696.83	1218673.79	3187103.74
12000.00	89.79	175.440	7782.60	4759.06S	599.12E	2.00	4796.62	1218573.99	3187109.95
12100.00	89.83	173.440	7782.93	4858.58S	608.81E	2.00	4896.58	1218474.47	3187119.64
12146.40	89.84	172.510	7783.06	4904.63S	614.48E	2.00	4942.98	1218428.42	3187125.32
12200.00	89.84	172.510	7783.21	4957.78S	621.46E	==>	4996.58	1218375.28	3187132.30
12300.00	89.84	172.510	7783.48	5056.92S	634.50E	==>	5096.57	1218276.13	3187145.33
12400.00	89.84	172.510	7783.76	5156.07S	647.53E	==>	5196.57	1218176.99	3187158.36
12489.21	89.84	172.510	7784.00	5244.52S	659.15E	==>	5285.78	1218088.55	3187169.99

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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 172.840 degrees
Bottom hole distance is 5285.78 Feet on azimuth 172.84 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 25-1-4HC (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	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	8128.00	7763.00	887.57S	629.78E
6 1/8	8128.00	7763.00	887.57S	629.78E	12489.04	7784.00	5244.35S	659.13E

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	8128.00	7763.00	887.57S	629.78E
4 1/2in Production Liner	7928.00	7727.56	691.77S	628.36E	12489.04	7784.00	5244.35S	659.13E

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
Schaefer 25-1-4HC - OFFSET	4719.87S	656.22E	7781.47	39.93154022	-104.83257639	1218613.17	3187167.05	11-Feb-2014
Schaefer 25-1-4HC-T1	887.75S	634.77E	7763.00	39.94206000	-104.83255000	1222445.18	3187145.61	11-Feb-2014
Schaefer 25-1-4HC-T2	5244.52S	659.15E	7784.00	39.93010000	-104.83258000	1218088.55	3187169.99	11-Feb-2014

Survey Tool Program					
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
153516	Planned	12489.21	7784.00	WdW Rate Gyro	Standard

Notes

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SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: Schaefer 25-1-4HC (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 25-1-4HC (PWB)	12-Feb-2014	12-Feb-2014

Well		
Name	Government ID	Last Revised
Schaefer 25-1-4HC		12-Feb-2014

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Slot #12	1223332.8991	3186510.8561	39.94451000	-104.83479000	14.30N	36.56W

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 25-1-5HN	Schaefer 25-1-5HN (PWB)	Slot #13	Schaefer	13.55	1458.57	11793.22	10.57	1458.57	4.51	1491.38
Schaefer 25-1-3HN	Schaefer 25-1-3HN (PWB)	Slot #11	Schaefer	14.02	1350.00	12489.21	11.21	1196.10	4.97	1376.55
Schaefer 24-3-3HC	Schaefer 24-3-3HC (PWB)	Slot #3	Schaefer	16.83	1300.00	7606.41	14.01	1196.10	5.98	1196.10
Schaefer 24-3-4HN	Schaefer 24-3-4HN (PWB)	Slot #4	Schaefer	16.83	1350.00	7452.02	8.54	7452.02	1.59	7452.02
Schaefer 24-3-2HN	Schaefer 24-3-2HN (PWB)	Slot #2	Schaefer	26.75	1250.00	1250.00	23.93	1196.10	9.50	1196.10
Schaefer 24-3-5HC	Schaefer 24-3-5HC (PWB)	Slot #5	Schaefer	26.75	1400.00	7565.76	23.86	1400.00	9.12	1458.57
Schaefer 25-1-2HC	Schaefer 25-1-2HC (PWB)	Slot #10	Schaefer	30.84	1300.00	12489.21	28.03	1196.10	9.28	12482.19
Schaefer 25-1-6HC	Schaefer 25-1-6HC (PWB)	Slot #14	Schaefer	30.84	1300.00	11776.81	28.03	1196.10	9.25	12482.19
Schaefer 24-3-6HN	Schaefer 24-3-6HN (PWB)	Slot #6	Schaefer	39.26	1350.00	1350.00	36.44	1196.10	13.67	1425.76
Schaefer	Schaefer	Slot #1	Schaefer	39.26	1200.00	1200.00	36.44	1200.00	13.92	1200.00

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SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: Schaefer 25-1-4HC (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]
24-3-1HC	24-3-1HC (PWB)									
Schaefer 25-1-1HN	Schaefer 25-1-1HN (PWB)	Slot #9	Schaefer	44.86	1250.00	12489.21	42.05	1196.10	14.23	12482.19
Schaefer 25-1-7HN	Schaefer 25-1-7HN (PWB)	Slot #15	Schaefer	44.86	1265.00	11793.22	42.05	1196.10	14.19	12482.19
Schaefer 24-3-7HC	Schaefer 24-3-7HC (PWB)	Slot #7	Schaefer	55.23	1300.00	1300.00	52.42	1196.10	19.63	1196.10
Shaefer 25-1-8HC	Shaefer 25-1-8HC (PWB)	Slot #16	Schaefer	58.88	1215.00	11793.22	56.07	1196.10	18.46	12482.19
Schaefer 24-3-8HN	Schaefer 24-3-8HN (PWB)	Slot #8	Schaefer	68.85	1250.00	1250.00	66.04	1196.10	24.47	1196.10
W Huebner 25-44	W Huebner 25-44 (AWB)	Huebner 25-44	Offsets	103.59	11967.47	11967.47	34.88	11967.47	1.51	11967.47
W LEWIS #1	W LEWIS #1 (AWB)	LEWIS #1	Offsets	1489.43	12489.21	12489.21	1453.23	12489.21	40.85	12482.19
Sharp #25-1-9HN	Sharp #25-1-9HN (PWB)	Slot #4	Sharp Pad	2137.22	11793.22	11793.22	2055.39	11858.83	23.61	12482.19
Sharp #24-3-9HC	Sharp #24-3-9HC (PWB)	Slot #10	Sharp Pad	2224.22	7489.90	7489.90	2209.29	7495.31	123.26	8774.84
SHARP #24-3-9HC	SHARP #24-3-9HC (PWB)	Slot #7	Sharp Pad	2224.91	7490.31	7490.31	2209.91	7495.31	122.72	8758.44
W AMEND #1	W AMEND #1 (AWB)	AMEND #1	Offsets	2333.04	12252.53	12252.53	2261.76	12268.94	32.13	12482.19