

MENDELL ENERGY, LLC			
Location	DJ Basin	Slot	Afton 12-16H-7
Field	SPINDLE	Well	AFTON 12-16H-7
Installation	AFTON-Revised	Wellbore	AFTON 12-16H-7 (PWB)

Slot	Afton 12-16H-7
Well	AFTON 12-16H-7
Wellbore	AFTON 12-16H-7 (PWB)



INTEGRATED PETROLEUM TECHNOLOGIES, INC

SYSDRILL

Well Design Combined Report  
Wellbore: AFTON 12-16H-7 (PWB)



Wellhead Details							
Name	Northing	Easting	Latitude	Longitude	North	East	Elevation Above Inst.
Afton 12-16H-7	1233743.6143	3156340.1314	39.97365997	-104.94216028	24.93N	15.97E	-1.00

Declination			
Date	Source	Time	
8-Jul-2013	IGRF Model [1900.0-2020.0]		08:51

Site Details				
Name	Northing	Easting	Coord System Name	North Alignment
AFTON-Revised	1233718.6871	3156324.1575	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
13.00	0.00	0.000	13.00	0.00N	0.00E		0.00	1233743.61	3156340.13
12605.54	90.13	359.790	7861.00	4174.48N	51.40W	==>	4174.80	1237917.95	3156288.73

Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
0.00	0.00	0.000	0.00	0.00N	0.00E		0.00	Rig Datum
13.00	0.00	0.000	13.00	0.00N	0.00E	==>	0.00	Slot Datum
100.00	0.00	0.000	100.00	0.00N	0.00E	==>	0.00	
200.00	0.00	0.000	200.00	0.00N	0.00E	==>	0.00	
300.00	0.00	0.000	300.00	0.00N	0.00E	==>	0.00	
400.00	0.00	0.000	400.00	0.00N	0.00E	==>	0.00	
500.00	0.00	0.000	500.00	0.00N	0.00E	==>	0.00	
600.00	0.00	0.000	600.00	0.00N	0.00E	==>	0.00	
700.00	0.00	0.000	700.00	0.00N	0.00E	==>	0.00	
800.00	0.00	0.000	800.00	0.00N	0.00E	==>	0.00	
900.00	0.00	0.000	900.00	0.00N	0.00E	==>	0.00	
1000.00	0.00	0.000	1000.00	0.00N	0.00E	==>	0.00	
1100.00	0.00	0.000	1100.00	0.00N	0.00E	==>	0.00	
1200.00	0.00	0.000	1200.00	0.00N	0.00E	==>	0.00	
1300.00	1.00	182.200	1300.00	0.44S	0.02W	2.00	-0.44	
1400.00	3.00	182.200	1399.93	3.92S	0.15W	2.00	-3.92	
1500.00	5.00	182.200	1499.68	10.89S	0.42W	2.00	-10.89	
1600.00	7.00	182.200	1599.13	21.34S	0.82W	2.00	-21.33	
1700.00	7.57	182.200	1698.28	34.36S	1.32W	==>	-34.34	
1800.00	7.57	182.200	1797.41	47.52S	1.82W	==>	-47.50	
1900.00	7.57	182.200	1896.53	60.69S	2.33W	==>	-60.65	
2000.00	7.57	182.200	1995.66	73.85S	2.83W	==>	-73.81	
2100.00	7.57	182.200	2094.79	87.01S	3.34W	==>	-86.96	
2200.00	7.57	182.200	2193.92	100.17S	3.84W	==>	-100.12	
2300.00	7.57	182.200	2293.05	113.34S	4.35W	==>	-113.28	
2400.00	7.57	182.200	2392.18	126.50S	4.85W	==>	-126.43	
2500.00	7.57	182.200	2491.31	139.66S	5.36W	==>	-139.59	
2600.00	7.57	182.200	2590.43	152.83S	5.86W	==>	-152.74	
2700.00	7.57	182.200	2689.56	165.99S	6.37W	==>	-165.90	
2800.00	7.57	182.200	2788.69	179.15S	6.87W	==>	-179.05	
2900.00	7.57	182.200	2887.82	192.31S	7.38W	==>	-192.21	
3000.00	7.57	182.200	2986.95	205.48S	7.88W	==>	-205.36	
3100.00	7.57	182.200	3086.08	218.64S	8.39W	==>	-218.52	
3200.00	7.57	182.200	3185.21	231.80S	8.89W	==>	-231.68	
3300.00	7.57	182.200	3284.33	244.97S	9.40W	==>	-244.83	
3400.00	7.57	182.200	3383.46	258.13S	9.90W	==>	-257.99	
3500.00	7.57	182.200	3482.59	271.29S	10.41W	==>	-271.14	
3600.00	7.57	182.200	3581.72	284.45S	10.91W	==>	-284.30	
3700.00	7.57	182.200	3680.85	297.62S	11.42W	==>	-297.45	
3800.00	7.57	182.200	3779.98	310.78S	11.92W	==>	-310.61	
3900.00	7.57	182.200	3879.11	323.94S	12.43W	==>	-323.76	
4000.00	7.57	182.200	3978.24	337.10S	12.93W	==>	-336.92	
4100.00	7.57	182.200	4077.36	350.27S	13.44W	==>	-350.08	
4200.00	7.57	182.200	4176.49	363.43S	13.94W	==>	-363.23	

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig ( Planned Datum #1 5165.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 359.290 degrees  
Bottom hole distance is 4174.80 Feet on azimuth 359.29 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Integrated Petroleum Technologies, Inc.  
Date Printed: 28-Jul-2015

INTEGRATED PETROLEUM TECHNOLOGIES, INC

SYSDRILL

Well Design Combined Report  
Wellbore: AFTON 12-16H-7 (PWB)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
4300.00	7.57	182.200	4275.62	376.59S	14.45W	==>	-376.39	
4400.00	7.57	182.200	4374.75	389.76S	14.95W	==>	-389.54	
4500.00	7.57	182.200	4473.88	402.92S	15.46W	==>	-402.70	
4600.00	7.57	182.200	4573.01	416.08S	15.96W	==>	-415.85	
4700.00	7.57	182.200	4672.14	429.24S	16.47W	==>	-429.01	
4800.00	7.57	182.200	4771.26	442.41S	16.97W	==>	-442.16	
4900.00	7.57	182.200	4870.39	455.57S	17.48W	==>	-455.32	
5000.00	7.57	182.200	4969.52	468.73S	17.98W	==>	-468.48	
5100.00	7.57	182.200	5068.65	481.90S	18.49W	==>	-481.63	
5200.00	7.57	182.200	5167.78	495.06S	18.99W	==>	-494.79	
5300.00	7.57	182.200	5266.91	508.22S	19.50W	==>	-507.94	
5400.00	7.57	182.200	5366.04	521.38S	20.00W	==>	-521.10	
5500.00	7.57	182.200	5465.16	534.55S	20.51W	==>	-534.25	
5600.00	7.57	182.200	5564.29	547.71S	21.01W	==>	-547.41	
5700.00	7.57	182.200	5663.42	560.87S	21.52W	==>	-560.56	
5800.00	7.57	182.200	5762.55	574.03S	22.02W	==>	-573.72	
5900.00	7.57	182.200	5861.68	587.20S	22.53W	==>	-586.88	
6000.00	7.57	182.200	5960.81	600.36S	23.03W	==>	-600.03	
6100.00	7.57	182.200	6059.94	613.52S	23.54W	==>	-613.19	
6200.00	7.57	182.200	6159.07	626.69S	24.04W	==>	-626.34	
6300.00	7.57	182.200	6258.19	639.85S	24.55W	==>	-639.50	
6400.00	7.57	182.200	6357.32	653.01S	25.05W	==>	-652.65	
6500.00	7.57	182.200	6456.45	666.17S	25.56W	==>	-665.81	
6600.00	7.57	182.200	6555.58	679.34S	26.06W	==>	-678.96	
6700.00	7.57	182.200	6654.71	692.50S	26.57W	==>	-692.12	
6800.00	7.57	182.200	6753.84	705.66S	27.07W	==>	-705.28	
6900.00	7.57	182.200	6852.97	718.83S	27.58W	==>	-718.43	
7000.00	7.57	182.200	6952.09	731.99S	28.08W	==>	-731.59	
7100.00	7.57	182.200	7051.22	745.15S	28.59W	==>	-744.74	
7200.00	7.57	182.200	7150.35	758.31S	29.09W	==>	-757.90	
7300.00	1.75	190.320	7249.79	768.36S	29.61W	9.50	-767.93	
7400.00	7.79	357.440	7349.53	763.08S	30.19W	9.50	-762.65	
7500.00	17.28	358.760	7447.04	741.41S	30.81W	9.50	-740.98	
7600.00	26.78	359.150	7539.63	703.95S	31.47W	9.50	-703.51	
7700.00	36.28	359.350	7624.77	651.72S	32.14W	9.50	-651.28	
7800.00	45.78	359.480	7700.12	586.15S	32.80W	9.50	-585.70	
7900.00	55.28	359.570	7763.61	509.05S	33.44W	9.50	-508.60	
8000.00	64.78	359.640	7813.51	422.52S	34.04W	9.50	-422.07	
8100.00	74.28	359.700	7848.44	328.94S	34.59W	9.50	-328.49	
8200.00	83.78	359.750	7867.45	230.89S	35.06W	9.50	-230.44	
8300.00	90.13	359.790	7870.92	131.02S	35.45W	==>	-130.57	
8400.00	90.13	359.790	7870.69	31.02S	35.82W	==>	-30.57	
8500.00	90.13	359.790	7870.46	68.98N	36.19W	==>	69.42	
8600.00	90.13	359.790	7870.23	168.98N	36.56W	==>	169.42	
8700.00	90.13	359.790	7870.00	268.98N	36.93W	==>	269.42	
8800.00	90.13	359.790	7869.77	368.98N	37.30W	==>	369.41	
8900.00	90.13	359.790	7869.54	468.98N	37.67W	==>	469.41	
9000.00	90.13	359.790	7869.31	568.98N	38.04W	==>	569.40	
9100.00	90.13	359.790	7869.08	668.98N	38.41W	==>	669.40	
9200.00	90.13	359.790	7868.85	768.98N	38.78W	==>	769.40	
9300.00	90.13	359.790	7868.62	868.98N	39.16W	==>	869.39	
9400.00	90.13	359.790	7868.39	968.97N	39.53W	==>	969.39	
9500.00	90.13	359.790	7868.16	1068.97N	39.90W	==>	1069.38	
9600.00	90.13	359.790	7867.93	1168.97N	40.27W	==>	1169.38	
9700.00	90.13	359.790	7867.70	1268.97N	40.64W	==>	1269.38	
9800.00	90.13	359.790	7867.47	1368.97N	41.01W	==>	1369.37	
9900.00	90.13	359.790	7867.24	1468.97N	41.38W	==>	1469.37	
10000.00	90.13	359.790	7867.01	1568.97N	41.75W	==>	1569.36	
10100.00	90.13	359.790	7866.77	1668.97N	42.12W	==>	1669.36	
10200.00	90.13	359.790	7866.54	1768.97N	42.49W	==>	1769.36	
10300.00	90.13	359.790	7866.31	1868.97N	42.86W	==>	1869.35	
10400.00	90.13	359.790	7866.08	1968.96N	43.23W	==>	1969.35	
10500.00	90.13	359.790	7865.85	2068.96N	43.60W	==>	2069.34	

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 5165.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 359.290 degrees  
Bottom hole distance is 4174.80 Feet on azimuth 359.29 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Integrated Petroleum Technologies, Inc.  
Date Printed: 28-Jul-2015

INTEGRATED PETROLEUM TECHNOLOGIES, INC

SYSDRILL

Well Design Combined Report  
Wellbore: AFTON 12-16H-7 (PWB)



Interpolated Wellpath								All Station Comments
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	
10600.00	90.13	359.790	7865.62	2168.96N	43.97W	==>	2169.34	
10700.00	90.13	359.790	7865.39	2268.96N	44.34W	==>	2269.34	
10800.00	90.13	359.790	7865.16	2368.96N	44.71W	==>	2369.33	
10900.00	90.13	359.790	7864.93	2468.96N	45.08W	==>	2469.33	
11000.00	90.13	359.790	7864.70	2568.96N	45.45W	==>	2569.32	
11100.00	90.13	359.790	7864.47	2668.96N	45.83W	==>	2669.32	
11200.00	90.13	359.790	7864.24	2768.96N	46.20W	==>	2769.32	
11300.00	90.13	359.790	7864.01	2868.96N	46.57W	==>	2869.31	
11400.00	90.13	359.790	7863.78	2968.96N	46.94W	==>	2969.31	
11500.00	90.13	359.790	7863.55	3068.95N	47.31W	==>	3069.30	
11600.00	90.13	359.790	7863.32	3168.95N	47.68W	==>	3169.30	
11700.00	90.13	359.790	7863.09	3268.95N	48.05W	==>	3269.30	
11800.00	90.13	359.790	7862.86	3368.95N	48.42W	==>	3369.29	
11900.00	90.13	359.790	7862.63	3468.95N	48.79W	==>	3469.29	
12000.00	90.13	359.790	7862.40	3568.95N	49.16W	==>	3569.28	
12100.00	90.13	359.790	7862.17	3668.95N	49.53W	==>	3669.28	
12200.00	90.13	359.790	7861.93	3768.95N	49.90W	==>	3769.28	
12300.00	90.13	359.790	7861.70	3868.95N	50.27W	==>	3869.27	
12400.00	90.13	359.790	7861.47	3968.95N	50.64W	==>	3969.27	
12500.00	90.13	359.790	7861.24	4068.94N	51.01W	==>	4069.26	
12600.00	90.13	359.790	7861.01	4168.94N	51.38W	==>	4169.26	
12605.54	90.13	359.790	7861.00	4174.48N	51.40W	==>	4174.80	

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 5165.0ft above Mean Sea Level )

Vertical Section is from 0.00N 0.00E on azimuth 359.290 degrees

Bottom hole distance is 4174.80 Feet on azimuth 359.29 degrees from Wellhead

Calculation method uses Minimum Curvature method

Prepared by Integrated Petroleum Technologies, Inc.

Date Printed: 28-Jul-2015

INTEGRATED PETROLEUM TECHNOLOGIES, INC  
SYSDRILL  
Well Design Combined Report  
Wellbore: AFTON 12-16H-7 (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	13.00	13.00	0.00N	0.00E	1250.00	1250.00	0.00N	0.00E
8 3/4	1250.00	1250.00	0.00N	0.00E	8267.00	7871.00	164.01S	35.33W
6 1/8	8267.00	7871.00	164.01S	35.33W	12605.54	7861.00	4174.48N	51.40W

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	13.00	13.00	0.00N	0.00E	1250.00	1250.00	0.00N	0.00E
7.0in Intermediate Casing	13.00	13.00	0.00N	0.00E	8267.00	7871.00	164.01S	35.33W
4 1/2in Intermediate Casing	7240.00	7190.00	763.58S	29.29W	12605.54	7861.00	4174.48N	51.40W

Targets								
Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting	Last Revised
AFTON 12-16H-7 Rev - T1	164.14S	35.33W	7871.00	39.97321000	-104.94229000	1233579.48	3156304.81	3-Mar-2014
AFTON 12-16H-7 Rev - T2	4174.48N	51.40W	7861.00	39.98512000	-104.94225000	1237917.95	3156288.73	3-Mar-2014

Survey Tool Program						
Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model	
398418	Planned	12605.54	7861.00	ISCWSA MWD	Rev 3 + Fixed Rig + Rotating	

Notes

All data is in Feet unless otherwise stated  
Coordinates are from Slot MD's are from Rig ( Planned Datum #1 5165.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 359.290 degrees  
Bottom hole distance is 4174.80 Feet on azimuth 359.29 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by Integrated Petroleum Technologies, Inc.  
Date Printed: 28-Jul-2015

SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: AFTON 12-16H-7 (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  
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
AFTON 12-16H-7 (PWB)	9-Jul-2015	28-Jul-2015

Well		
Name	Government ID	Last Revised
AFTON 12-16H-7		21-Jul-2015

Slot						
Name	Grid Northing	Grid Easting	Latitude	Longitude	North	East
Afton 12-16H-7	1233743.6143	3156340.1314	39.97365997	-104.94216028	24.93N	15.97E

Installation				
Name	Easting	Northing	Coord System Name	North Alignment
AFTON-Revised	3156324.1575	1233718.6871	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Field				
Name	Easting	Northing	Coord System Name	North Alignment
SPINDLE	3156324.1590	1233718.6871	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Clearance Summary								
Offset Wellbore	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
AFTON 12-16H-8 (PWB)	AFTON-Revised	15.97	1300.01	12605.54	7.56	1358.14	1.19	12605.54
AFTON 12-16H-6 (PWB)	AFTON-Revised	16.04	1259.72	8388.23	10.44	1250.00	2.84	1374.55
AFTON 12-16H-2 (PWB)	AFTON-Revised	18.35	1645.09	12605.54	8.12	1645.09	1.79	1653.42
AFTON #12-16H-4 Sidetrack	AFTON-Revised	25.11	1942.80	12414.75	12.77	1965.10	1.47	12413.00
AFTON #12-16H-4 Original	AFTON-Revised	25.11	1942.80	8113.31	12.77	1965.10	1.50	5754.47
AFTON 12-16H-1 (PWB)	AFTON-Revised	29.61	1249.00	12605.54	21.34	1346.21	2.84	12605.54
AFTON #12-16H-3 (PWB)	AFTON-Revised	29.66	499.00	12602.68	25.76	513.00	1.19	12605.54
AFTON 12-16H-5 (PWB)	AFTON-Revised	32.02	1259.72	12599.36	26.46	1358.14	4.11	12605.54
PULIS #12-8 (AWB)	Offsets	89.79	1413.00	8436.47	82.72	1472.97	11.74	1735.44
DARLOW UNIT #12-16B (AWB)	Offsets	184.12	8475.13	8475.13	134.09	8475.13	3.68	8477.57
ELMS #2 (AWB)	Offsets	224.08	11368.20	11368.20	119.80	11368.20	2.15	11381.11
BARKER #12-9 (AWB)	Offsets	349.42	9762.83	9762.83	281.39	9773.50	5.12	9789.90
N COLORADO	Offsets	781.03	7313.00	7313.00	732.05	7329.27	15.92	7362.08

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 5165.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 359.290 degrees  
Prepared by Integrated Petroleum Technologies, Inc.  
Date Printed: 28-Jul-2015

SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: AFTON 12-16H-7 (PWB)



Offset Wellbore	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
41-13 #7 (AWB)								
W MORRISON #16-1 (AWB)	Offsets	1004.16	12605.54	12605.54	941.94	12605.54	16.14	12605.54
BROKEN BOW II #7-1 (AWB)	Offsets	1202.04	1259.72	8472.54	1195.37	1250.00	55.54	5377.17
SAUVAGE #11-7 (AWB)	Offsets	1275.86	12288.29	12288.29	1149.28	12316.15	9.95	12463.79
MALLO #1 (AWB)	Offsets	1308.27	1522.19	8482.54	1300.33	1850.27	57.77	5377.17
Ruby #2 (AWB)	Offsets	1348.20	20.00	9799.66	1346.97	62.21	16.56	10150.80
TUDEX REINHOLT #NC4 (AWB)	Offsets	1376.17	12154.67	12154.67	1252.69	12184.92	10.94	12365.36
DARLOW #12-2 (AWB)	Offsets	1413.85	1250.00	9798.28	1401.39	1250.00	57.67	5196.73
WIEMAN #7-3 (AWB)	Offsets	1639.98	8864.59	8864.59	1606.56	8887.67	41.71	9740.69
BELLINGER #12-7 (AWB)	Offsets	1901.96	1250.00	9806.31	1895.30	1250.00	63.71	11479.54
W MORRISON #15-1 (AWB)	Offsets	1965.38	12605.54	12605.54	1858.40	12605.54	18.37	12605.54
SAUVAGE #3 (AWB)	Offsets	2205.71	11431.04	11431.04	2099.34	11479.54	19.55	12037.28
W MORRISON #9-1 (AWB)	Offsets	2309.34	12605.54	12605.54	2258.58	12605.54	45.49	12605.54
MORRISON #9-1 (AWB)	Offsets	2309.34	12605.54	12605.54	2258.53	12605.54	45.45	12605.54
TUDEX BRINK #S-2 (AWB)	Offsets	2380.52	193.45	10472.33	2375.85	1250.00	58.18	11840.43
ELMS #12-4 (AWB)	Offsets	2628.43	1250.00	11022.27	2621.76	1250.00	53.23	12135.70
CUNDALL #6-12 (AWB)	Offsets	2684.27	11135.05	11135.05	2585.21	11200.66	24.49	12070.09
W MORRISON 33-1 #4 (AWB)	Offsets	2739.16	12605.54	12605.54	2652.73	12605.54	31.69	12605.54
NORTH YORK #11-12 (AWB)	Offsets	2749.38	9813.00	9813.00	2680.89	9871.92	33.24	11151.45
SEVENS #1 (AWB)	Offsets	2797.31	12425.65	12425.65	2741.33	12463.79	48.37	12605.54
LENART #S-1 (AWB)	Offsets	2919.27	11801.02	11801.02	2864.19	11840.43	47.36	12605.54
CROFF #12-5 (AWB)	Offsets	2967.34	1250.00	11085.89	2960.65	1250.00	50.38	12430.98
W MORRISON 24-1 #3 (AWB)	Offsets	2977.06	12605.54	12605.54	2851.19	12605.54	23.65	12605.54
W MORRISON INVESTMENT CO #2 (AWB)	Offsets	2988.88	12605.54	12605.54	2930.74	12605.54	51.41	12605.54
NORTH COLORADO #6 (AWB)	Offsets	3063.86	7329.27	7329.27	3010.09	7345.68	56.78	7413.00

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 5165.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 359.290 degrees  
Prepared by Integrated Petroleum Technologies, Inc.  
Date Printed: 28-Jul-2015

SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: AFTON 12-16H-7 (PWB)



Offset Wellbore	Offset Structure	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
REINHOLT #12-6 (AWB)	Offsets	3087.18	12189.79	12189.79	3022.07	12234.13	44.09	12605.54
NORTH YORK #13-12 (AWB)	Offsets	3516.36	1121.00	8649.95	3508.54	1213.00	53.47	11971.66
W MORRISON #11-1 (AWB)	Offsets	3713.35	12605.54	12605.54	3601.25	12605.54	33.12	12605.54
BEISEL UNIT #1 (AWB)	Offsets	4437.94	12605.54	12605.54	4375.41	12605.54	70.97	12605.54