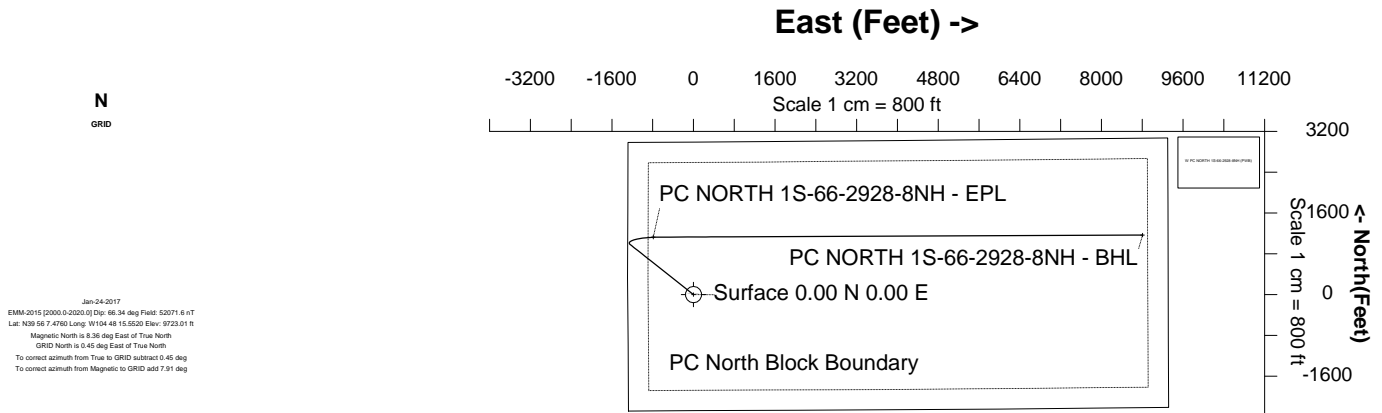


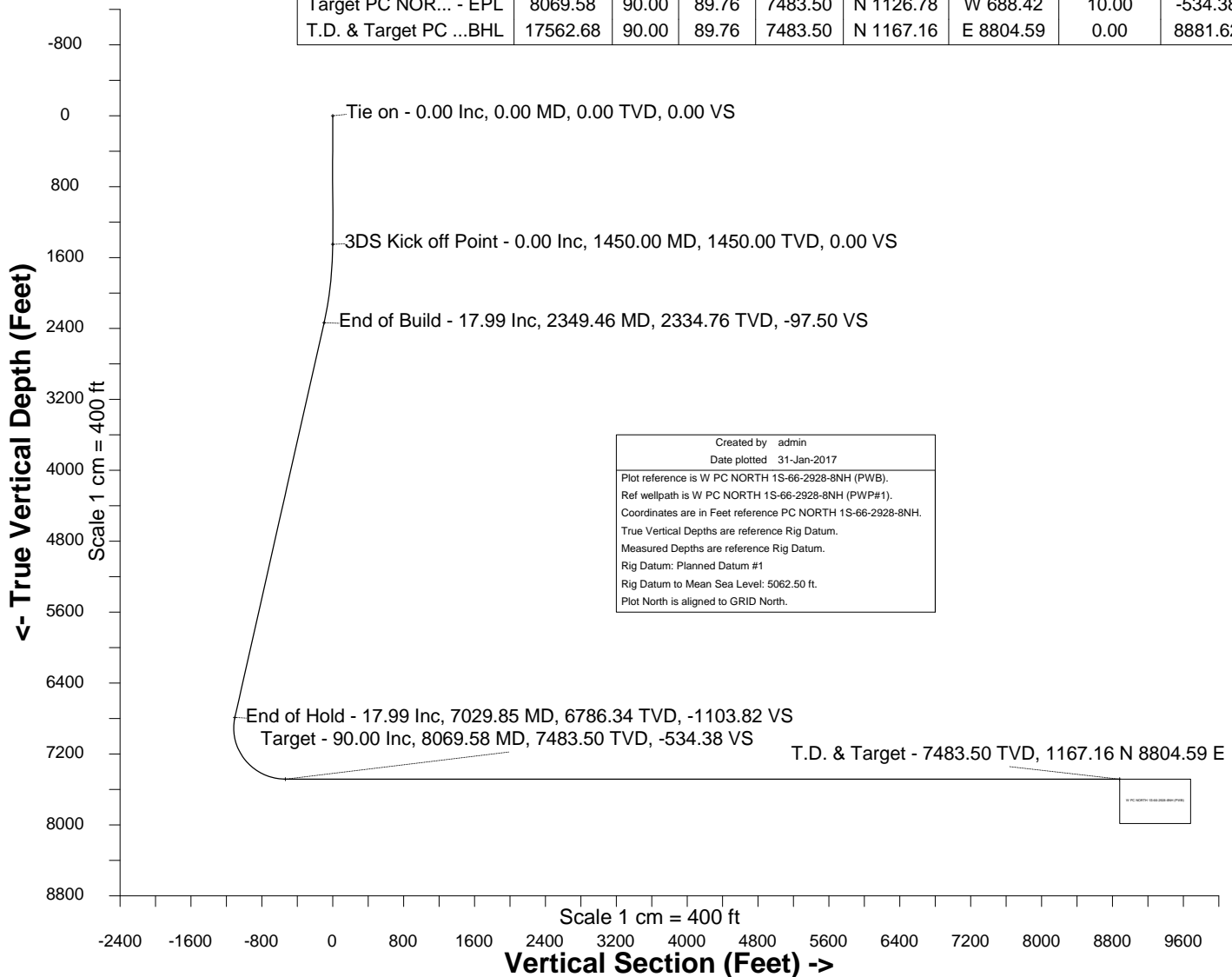
HRM Resources

Location	DJ Basin	Slot	PC NORTH 1S-66-2928-8NH
Field	WATTENBERG	Well	W PC NORTH 1S-66-2928-8NH
Installation	PC 1S-66-2928 PAD	Wellbore	W PC NORTH 1S-66-2928-8NH (PWB)



WELL PROFILE DATA

Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	0.00	0.00	0.00	0.00	S 0.00	W 0.00		0.00
KOP	1450.00	0.00	308.33	1450.00	S 0.00	W 0.00	0.00	0.00
End of Build	2349.46	17.99	308.33	2334.76	N 86.85	W 109.86	2.00	-97.50
End of Hold	7029.85	17.99	308.33	6786.34	N 983.27	W 1243.82	0.00	-1103.82
Target PC NOR... - EPL	8069.58	90.00	89.76	7483.50	N 1126.78	W 688.42	10.00	-534.38
T.D. & Target PC ...BHL	17562.68	90.00	89.76	7483.50	N 1167.16	E 8804.59	0.00	8881.62





SYSDRILL
Well Design Combined Report
Wellbore: W PC NORTH 1S-66-2928-8NH (PWB)



Wellhead Details

Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
PC NORTH 1S-66-2928-8NH	N39 56 6.4320	W104 48 15.5520	1219978.0465	3195080.6647	105.64S	0.83E	0.00

Declination

Date	Source	Time
Jan-24-2017	EMM-2015 [2000.0-2020.0]	09:32

Installation Details

Name	Installation Position (Latitude)	Installation Position (Longitude)	Northing	Easting	Coord System Name	North Alignment
PC 1S-66-2928 PAD	N39 56 7.4760	W104 48 15.5520	1220083.6821	3195079.8360	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
0.00	0.00	0.000	0.00	0.00N			0.00	1219978.05	3195080.66
1450.00	0.00	308.330	1450.00	0.00N	0.00E	==>	0.00	1219978.05	3195080.66
2349.46	17.99	308.330	2334.76	86.85N	109.86W	2.00	-97.50	1220064.89	3194970.80
7029.85	17.99	308.330	6786.34	983.27N	1243.82W	==>	-1103.82	1220961.29	3193836.88
8069.58	90.00	89.760	7483.50	1126.78N	688.42W	10.00	-534.38	1221104.79	3194392.26
17562.68	90.00	89.760	7483.50	1167.16N	8804.59E	==>	8881.62	1221145.17	3203884.99

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	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	0.00	0.000	1300.00	0.00N	0.00E	==>	0.00	
1400.00	0.00	0.000	1400.00	0.00N	0.00E	==>	0.00	
1500.00	1.00	308.330	1500.00	0.27N	0.34W	2.00	-0.30	
1600.00	3.00	308.330	1599.93	2.43N	3.08W	2.00	-2.73	
1700.00	5.00	308.330	1699.68	6.76N	8.55W	2.00	-7.59	
1800.00	7.00	308.330	1799.13	13.24N	16.75W	2.00	-14.87	
1900.00	9.00	308.330	1898.15	21.87N	27.67W	2.00	-24.55	
2000.00	11.00	308.330	1996.63	32.64N	41.29W	2.00	-36.64	
2100.00	13.00	308.330	2094.44	45.53N	57.60W	2.00	-51.12	
2200.00	15.00	308.330	2191.46	60.54N	76.58W	2.00	-67.96	
2300.00	17.00	308.330	2287.58	77.63N	98.20W	2.00	-87.15	
2400.00	17.99	308.330	2382.82	96.53N	122.11W	==>	-108.36	
2500.00	17.99	308.330	2477.94	115.68N	146.34W	==>	-129.86	
2600.00	17.99	308.330	2573.05	134.84N	170.56W	==>	-151.37	
2700.00	17.99	308.330	2668.16	153.99N	194.79W	==>	-172.87	
2800.00	17.99	308.330	2763.27	173.14N	219.02W	==>	-194.37	
2900.00	17.99	308.330	2858.38	192.29N	243.25W	==>	-215.87	
3000.00	17.99	308.330	2953.49	211.45N	267.47W	==>	-237.37	
3100.00	17.99	308.330	3048.60	230.60N	291.70W	==>	-258.87	

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 5062.5ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 82.450 degrees
Bottom hole distance is 8881.62 Feet on azimuth 82.45 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by IPT
Date Printed: 31-Jan-2017



SYSDRILL
Well Design Combined Report
Wellbore: W PC NORTH 1S-66-2928-8NH (PWB)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
3200.00	17.99	308.330	3143.72	249.75N	315.93W	==>	-280.37	
3300.00	17.99	308.330	3238.83	268.90N	340.16W	==>	-301.87	
3400.00	17.99	308.330	3333.94	288.06N	364.39W	==>	-323.37	
3500.00	17.99	308.330	3429.05	307.21N	388.61W	==>	-344.87	
3600.00	17.99	308.330	3524.16	326.36N	412.84W	==>	-366.37	
3700.00	17.99	308.330	3619.27	345.52N	437.07W	==>	-387.87	
3800.00	17.99	308.330	3714.38	364.67N	461.30W	==>	-409.37	
3900.00	17.99	308.330	3809.50	383.82N	485.53W	==>	-430.88	
4000.00	17.99	308.330	3904.61	402.97N	509.75W	==>	-452.38	
4100.00	17.99	308.330	3999.72	422.13N	533.98W	==>	-473.88	
4200.00	17.99	308.330	4094.83	441.28N	558.21W	==>	-495.38	
4300.00	17.99	308.330	4189.94	460.43N	582.44W	==>	-516.88	
4400.00	17.99	308.330	4285.05	479.59N	606.66W	==>	-538.38	
4500.00	17.99	308.330	4380.16	498.74N	630.89W	==>	-559.88	
4600.00	17.99	308.330	4475.28	517.89N	655.12W	==>	-581.38	
4700.00	17.99	308.330	4570.39	537.04N	679.35W	==>	-602.88	
4800.00	17.99	308.330	4665.50	556.20N	703.58W	==>	-624.38	
4900.00	17.99	308.330	4760.61	575.35N	727.80W	==>	-645.88	
5000.00	17.99	308.330	4855.72	594.50N	752.03W	==>	-667.38	
5100.00	17.99	308.330	4950.83	613.65N	776.26W	==>	-688.88	
5200.00	17.99	308.330	5045.94	632.81N	800.49W	==>	-710.39	
5300.00	17.99	308.330	5141.06	651.96N	824.71W	==>	-731.89	
5400.00	17.99	308.330	5236.17	671.11N	848.94W	==>	-753.39	
5500.00	17.99	308.330	5331.28	690.27N	873.17W	==>	-774.89	
5600.00	17.99	308.330	5426.39	709.42N	897.40W	==>	-796.39	
5700.00	17.99	308.330	5521.50	728.57N	921.63W	==>	-817.89	
5800.00	17.99	308.330	5616.61	747.72N	945.85W	==>	-839.39	
5900.00	17.99	308.330	5711.72	766.88N	970.08W	==>	-860.89	
6000.00	17.99	308.330	5806.84	786.03N	994.31W	==>	-882.39	
6100.00	17.99	308.330	5901.95	805.18N	1018.54W	==>	-903.89	
6200.00	17.99	308.330	5997.06	824.33N	1042.76W	==>	-925.39	
6300.00	17.99	308.330	6092.17	843.49N	1066.99W	==>	-946.89	
6400.00	17.99	308.330	6187.28	862.64N	1091.22W	==>	-968.39	
6500.00	17.99	308.330	6282.39	881.79N	1115.45W	==>	-989.90	
6600.00	17.99	308.330	6377.50	900.95N	1139.68W	==>	-1011.40	
6700.00	17.99	308.330	6472.62	920.10N	1163.90W	==>	-1032.90	
6800.00	17.99	308.330	6567.73	939.25N	1188.13W	==>	-1054.40	
6900.00	17.99	308.330	6662.84	958.40N	1212.36W	==>	-1075.90	
7000.00	17.99	308.330	6757.95	977.56N	1236.59W	==>	-1097.40	
7100.00	13.37	328.160	6853.91	996.90N	1256.61W	10.00	-1114.71	
7200.00	11.84	14.750	6951.74	1016.69N	1260.11W	10.00	-1115.57	
7300.00	17.29	49.170	7048.66	1036.37N	1246.22W	10.00	-1099.22	
7400.00	25.59	64.750	7141.74	1055.35N	1215.37W	10.00	-1066.14	
7500.00	34.75	72.790	7228.13	1073.04N	1168.49W	10.00	-1017.35	
7600.00	44.25	77.760	7305.23	1088.91N	1107.01W	10.00	-954.31	
7700.00	53.89	81.260	7370.67	1102.47N	1032.80W	10.00	-878.96	
7800.00	63.62	83.990	7422.48	1113.32N	948.11W	10.00	-793.58	
7900.00	73.39	86.290	7459.09	1121.13N	855.51W	10.00	-700.76	
8000.00	83.18	88.370	7479.37	1125.65N	757.83W	10.00	-603.33	
8100.00	90.00	89.760	7483.50	1126.91N	658.00W	==>	-504.20	
8200.00	90.00	89.760	7483.50	1127.34N	558.00W	==>	-405.02	
8300.00	90.00	89.760	7483.50	1127.76N	458.00W	==>	-305.83	
8400.00	90.00	89.760	7483.50	1128.19N	358.00W	==>	-206.64	
8500.00	90.00	89.760	7483.50	1128.61N	258.00W	==>	-107.45	
8600.00	90.00	89.760	7483.50	1129.04N	158.01W	==>	-8.27	
8700.00	90.00	89.760	7483.50	1129.46N	58.01W	==>	90.92	
8800.00	90.00	89.760	7483.50	1129.89N	41.99E	==>	190.11	
8900.00	90.00	89.760	7483.50	1130.31N	141.99E	==>	289.30	
9000.00	90.00	89.760	7483.50	1130.74N	241.99E	==>	388.49	

All data is in Feet unless otherwise stated
Coordinates are from Slot MD's are from Rig (Planned Datum #1 5062.5ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 82.450 degrees
Bottom hole distance is 8881.62 Feet on azimuth 82.45 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by IPT
Date Printed: 31-Jan-2017



SYSDRILL
Well Design Combined Report
Wellbore: W PC NORTH 1S-66-2928-8NH (PWB)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
9100.00	90.00	89.760	7483.50	1131.16N	341.99E	==>	487.67	
9200.00	90.00	89.760	7483.50	1131.59N	441.99E	==>	586.86	
9300.00	90.00	89.760	7483.50	1132.02N	541.99E	==>	686.05	
9400.00	90.00	89.760	7483.50	1132.44N	641.99E	==>	785.24	
9500.00	90.00	89.760	7483.50	1132.87N	741.99E	==>	884.42	
9600.00	90.00	89.760	7483.50	1133.29N	841.99E	==>	983.61	
9700.00	90.00	89.760	7483.50	1133.72N	941.98E	==>	1082.80	
9800.00	90.00	89.760	7483.50	1134.14N	1041.98E	==>	1181.99	
9900.00	90.00	89.760	7483.50	1134.57N	1141.98E	==>	1281.18	
10000.00	90.00	89.760	7483.50	1134.99N	1241.98E	==>	1380.36	
10100.00	90.00	89.760	7483.50	1135.42N	1341.98E	==>	1479.55	
10200.00	90.00	89.760	7483.50	1135.84N	1441.98E	==>	1578.74	
10300.00	90.00	89.760	7483.50	1136.27N	1541.98E	==>	1677.93	
10400.00	90.00	89.760	7483.50	1136.69N	1641.98E	==>	1777.11	
10500.00	90.00	89.760	7483.50	1137.12N	1741.98E	==>	1876.30	
10600.00	90.00	89.760	7483.50	1137.55N	1841.98E	==>	1975.49	
10700.00	90.00	89.760	7483.50	1137.97N	1941.98E	==>	2074.68	
10800.00	90.00	89.760	7483.50	1138.40N	2041.97E	==>	2173.87	
10900.00	90.00	89.760	7483.50	1138.82N	2141.97E	==>	2273.05	
11000.00	90.00	89.760	7483.50	1139.25N	2241.97E	==>	2372.24	
11100.00	90.00	89.760	7483.50	1139.67N	2341.97E	==>	2471.43	
11200.00	90.00	89.760	7483.50	1140.10N	2441.97E	==>	2570.62	
11300.00	90.00	89.760	7483.50	1140.52N	2541.97E	==>	2669.80	
11400.00	90.00	89.760	7483.50	1140.95N	2641.97E	==>	2768.99	
11500.00	90.00	89.760	7483.50	1141.37N	2741.97E	==>	2868.18	
11600.00	90.00	89.760	7483.50	1141.80N	2841.97E	==>	2967.37	
11700.00	90.00	89.760	7483.50	1142.22N	2941.97E	==>	3066.56	
11800.00	90.00	89.760	7483.50	1142.65N	3041.97E	==>	3165.74	
11900.00	90.00	89.760	7483.50	1143.07N	3141.96E	==>	3264.93	
12000.00	90.00	89.760	7483.50	1143.50N	3241.96E	==>	3364.12	
12100.00	90.00	89.760	7483.50	1143.93N	3341.96E	==>	3463.31	
12200.00	90.00	89.760	7483.50	1144.35N	3441.96E	==>	3562.49	
12300.00	90.00	89.760	7483.50	1144.78N	3541.96E	==>	3661.68	
12400.00	90.00	89.760	7483.50	1145.20N	3641.96E	==>	3760.87	
12500.00	90.00	89.760	7483.50	1145.63N	3741.96E	==>	3860.06	
12600.00	90.00	89.760	7483.50	1146.05N	3841.96E	==>	3959.25	
12700.00	90.00	89.760	7483.50	1146.48N	3941.96E	==>	4058.43	
12800.00	90.00	89.760	7483.50	1146.90N	4041.96E	==>	4157.62	
12900.00	90.00	89.760	7483.50	1147.33N	4141.96E	==>	4256.81	
13000.00	90.00	89.760	7483.50	1147.75N	4241.95E	==>	4356.00	
13100.00	90.00	89.760	7483.50	1148.18N	4341.95E	==>	4455.18	
13200.00	90.00	89.760	7483.50	1148.60N	4441.95E	==>	4554.37	
13300.00	90.00	89.760	7483.50	1149.03N	4541.95E	==>	4653.56	
13400.00	90.00	89.760	7483.50	1149.46N	4641.95E	==>	4752.75	
13500.00	90.00	89.760	7483.50	1149.88N	4741.95E	==>	4851.94	
13600.00	90.00	89.760	7483.50	1150.31N	4841.95E	==>	4951.12	
13700.00	90.00	89.760	7483.50	1150.73N	4941.95E	==>	5050.31	
13800.00	90.00	89.760	7483.50	1151.16N	5041.95E	==>	5149.50	
13900.00	90.00	89.760	7483.50	1151.58N	5141.95E	==>	5248.69	
14000.00	90.00	89.760	7483.50	1152.01N	5241.95E	==>	5347.87	
14100.00	90.00	89.760	7483.50	1152.43N	5341.94E	==>	5447.06	
14200.00	90.00	89.760	7483.50	1152.86N	5441.94E	==>	5546.25	
14300.00	90.00	89.760	7483.50	1153.28N	5541.94E	==>	5645.44	
14400.00	90.00	89.760	7483.50	1153.71N	5641.94E	==>	5744.63	
14500.00	90.00	89.760	7483.50	1154.13N	5741.94E	==>	5843.81	
14600.00	90.00	89.760	7483.50	1154.56N	5841.94E	==>	5943.00	
14700.00	90.00	89.760	7483.50	1154.99N	5941.94E	==>	6042.19	
14800.00	90.00	89.760	7483.50	1155.41N	6041.94E	==>	6141.38	
14900.00	90.00	89.760	7483.50	1155.84N	6141.94E	==>	6240.56	

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 5062.5ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 82.450 degrees
Bottom hole distance is 8881.62 Feet on azimuth 82.45 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by IPT
Date Printed: 31-Jan-2017



SYS DRILL
Well Design Combined Report
Wellbore: W PC NORTH 1S-66-2928-8NH (PWB)



Interpolated Wellpath								
MD[ft]	Inc[deg]	Azi[deg]	TVD[ft]	North[ft]	East[ft]	Dogleg [deg/100ft]	Vertical Section[ft]	All Station Comments
15000.00	90.00	89.760	7483.50	1156.26N	6241.94E	==>	6339.75	
15100.00	90.00	89.760	7483.50	1156.69N	6341.94E	==>	6438.94	
15200.00	90.00	89.760	7483.50	1157.11N	6441.93E	==>	6538.13	
15300.00	90.00	89.760	7483.50	1157.54N	6541.93E	==>	6637.32	
15400.00	90.00	89.760	7483.50	1157.96N	6641.93E	==>	6736.50	
15500.00	90.00	89.760	7483.50	1158.39N	6741.93E	==>	6835.69	
15600.00	90.00	89.760	7483.50	1158.81N	6841.93E	==>	6934.88	
15700.00	90.00	89.760	7483.50	1159.24N	6941.93E	==>	7034.07	
15800.00	90.00	89.760	7483.50	1159.66N	7041.93E	==>	7133.25	
15900.00	90.00	89.760	7483.50	1160.09N	7141.93E	==>	7232.44	
16000.00	90.00	89.760	7483.50	1160.52N	7241.93E	==>	7331.63	
16100.00	90.00	89.760	7483.50	1160.94N	7341.93E	==>	7430.82	
16200.00	90.00	89.760	7483.50	1161.37N	7441.93E	==>	7530.01	
16300.00	90.00	89.760	7483.50	1161.79N	7541.92E	==>	7629.19	
16400.00	90.00	89.760	7483.50	1162.22N	7641.92E	==>	7728.38	
16500.00	90.00	89.760	7483.50	1162.64N	7741.92E	==>	7827.57	
16600.00	90.00	89.760	7483.50	1163.07N	7841.92E	==>	7926.76	
16700.00	90.00	89.760	7483.50	1163.49N	7941.92E	==>	8025.94	
16800.00	90.00	89.760	7483.50	1163.92N	8041.92E	==>	8125.13	
16900.00	90.00	89.760	7483.50	1164.34N	8141.92E	==>	8224.32	
17000.00	90.00	89.760	7483.50	1164.77N	8241.92E	==>	8323.51	
17100.00	90.00	89.760	7483.50	1165.19N	8341.92E	==>	8422.70	
17200.00	90.00	89.760	7483.50	1165.62N	8441.92E	==>	8521.88	
17300.00	90.00	89.760	7483.50	1166.05N	8541.92E	==>	8621.07	
17400.00	90.00	89.760	7483.50	1166.47N	8641.91E	==>	8720.26	
17500.00	90.00	89.760	7483.50	1166.90N	8741.91E	==>	8819.45	
17562.68	90.00	89.760	7483.50	1167.16N	8804.59E	==>	8881.62	

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 5062.5ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 82.450 degrees
Bottom hole distance is 8881.62 Feet on azimuth 82.45 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by IPT
Date Printed: 31-Jan-2017



SYSDRILL
Well Design Combined Report
Wellbore: W PC NORTH 1S-66-2928-8NH (PWB)



Targets

Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
PC NORTH 1S-66-2928-8NH - BHL	1167.16N	8804.59E	7483.50	N39 56 17.2680	W104 46 22.4040	1221145.17	3203884.99
PC NORTH 1S-66-2928-8NH - EPL	1126.78N	788.42W	7483.50	N39 56 17.6280	W104 48 25.5600	1221104.79	3194292.27

Survey Tool Program

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
523129	Planned	1500.00	1500.00	WdW Rate Gyro	Standard
523128	Planned	17562.68	7483.50	ISCWSA MWD	Rev 4 + SAG + FLT

Notes



SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: W PC NORTH 1S-66-2928-8NH (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
W PC NORTH 1S-66-2928-8NH (PWB)	Jan-24-2017	Jan-24-2017

Well		
Name	Government ID	Last Revised
W PC NORTH 1S-66-2928-8NH		Jan-24-2017

Slot						
Name	Latitude	Longitude	Grid Northing	Grid Easting	North	East
PC NORTH 1S-66-2928-8NH	N39 56 6.4320	W104 48 15.5520	1219978.0465	3195080.6647	105.64S	0.83E

Installation						
Name	Installation Position (Latitude)	Installation Position (Longitude)	Easting	Northing	Coord System Name	North Alignment
PC 1S-66-2928 PAD	N39 56 7.4760	W104 48 15.5520	3195079.8360	1220083.6821	CO83-NF on NORTH AMERICAN DATUM 1983 datum	Grid

Clearance Summary							
Offset WellName	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
W PC NORTH 1S-66-2928-9NH	14.57	1450.00	17562.68	-390.82	17562.68	0.47	17562.68
W PC NORTH 1S-66-2928-7CDH	14.57	1400.01	17562.68	-113.39	17562.68	0.71	17562.68
W PC NORTH 1S-66-2928-10CDH	29.14	1450.00	17562.68	-112.09	17562.68	0.83	17562.68
W PC NORTH 1S-66-2928-6NH	29.14	1350.05	17562.68	-401.63	17562.68	0.46	17562.68
W PC SOUTH 1S-66-2928-18NH	30.85	1450.00	17562.68	28.51	1459.97	3.47	17562.68
W PC SOUTH 1S-66-2928-17NH	34.12	1450.00	17562.68	31.77	1459.97	2.97	17562.68
W PC SOUTH 1S-66-2928-19CDH	34.12	1450.00	17562.68	31.78	1459.97	3.91	17562.68
W PC SOUTH 1S-66-2928-20NH	42.44	1450.00	17562.68	40.10	1459.97	4.01	17562.68
W PC SOUTH 1S-66-2928-16CDH	42.44	1459.97	17562.68	40.08	1492.78	2.84	17562.68
W PC NORTH 1S-66-2928-5NH	43.71	1300.17	1300.17	-19.11	17562.68	0.97	17562.68
W PC SOUTH 1S-66-2928-15N	53.40	1600.00	17562.68	50.85	1640.42	2.46	17562.68

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 5062.5ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 82.450 degrees
Prepared by IPT
Date Printed: 31-Jan-2017



SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: W PC NORTH 1S-66-2928-8NH (PWB)



Clearance Summary							
Offset WellName	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
H							
W PC NORTH 1S-66-2928-4CD H	61.93	1250.41	17562.68	59.91	1250.41	1.29	17562.68
W PC SOUTH 1S-66-2928-14N H	67.60	1740.66	1740.66	64.32	1771.65	1.96	17562.68
W PC NORTH 1S-66-2928-3NH	76.50	1200.44	1200.44	74.57	1200.44	1.45	17562.68
W PC SOUTH 1S-66-2928-13C DH	78.96	1820.87	17519.69	75.07	1853.67	1.77	17562.68
W PC SOUTH 1S-66-2928-12N H	90.32	1886.48	17562.68	85.88	1919.29	1.44	17562.68
W PC NORTH 1S-66-2928-2NH	91.07	1150.57	17562.68	89.22	1150.57	1.85	17562.68
W PC NORTH 1S-66-2928-11N H	101.68	1941.76	1941.76	-31.43	17562.68	0.96	17562.68
W POLLARD #1	2733.48	13443.01	13443.01	2475.04	13533.46	10.27	13976.38

