

HRM Resources

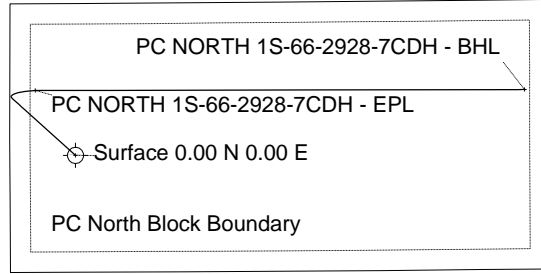
Location	DJ Basin	Slot	PC NORTH 1S-66-2928-7CDH
Field	WATTENBERG	Well	W PC NORTH 1S-66-2928-7CDH
Installation	PC 1S-66-2928 PAD	Wellbore	W PC NORTH 1S-66-2928-7CDH (PWB)

WELL PROFILE DATA

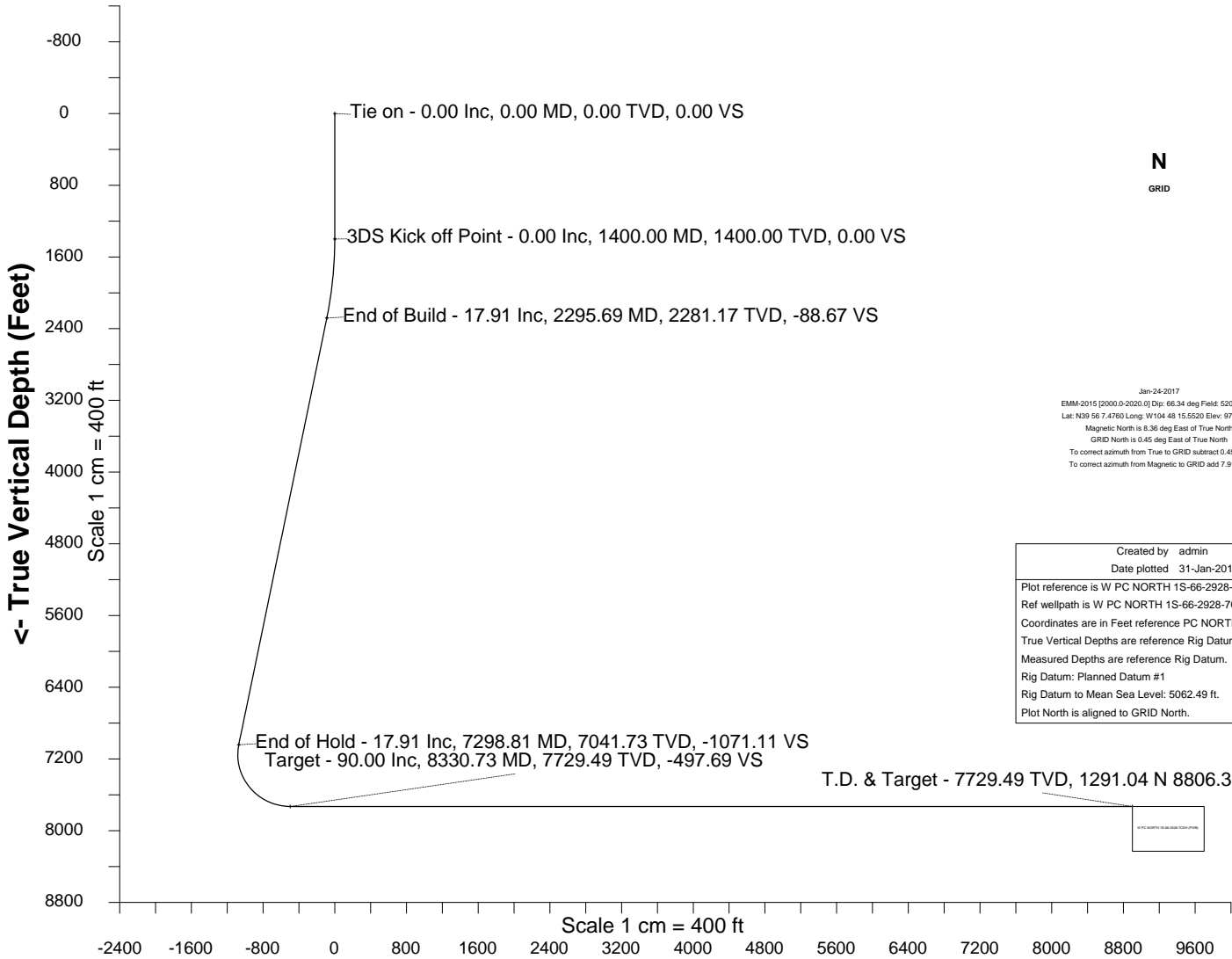
Point	MD	Inc	Azi	TVD	North	East	deg/100ft	V. Sect
Tie on	0.00	0.00	0.00	0.00	S 0.00	W 0.00		0.00
KOP	1400.00	0.00	311.99	1400.00	S 0.00	W 0.00	0.00	0.00
End of Build	2295.69	17.91	311.99	2281.17	N 92.91	W 103.23	2.00	-88.67
End of Hold	7298.81	17.91	311.99	7041.73	N 1122.35	W 1247.10	0.00	-1071.11
Target PC NOR... - EPL	8330.73	90.00	89.89	7729.49	N 1272.49	W 689.56	10.00	-497.69
T.D. & Target PC ...BHL	17826.69	90.00	89.89	7729.49	N 1291.04	E 8806.38	0.00	8900.51

East (Feet) ->

-3200 -1600 0 1600 3200 4800 6400 8000 9600 11200
Scale 1 cm = 800 ft



3200
1600
0
-1600
Scale 1 cm = 800 ft
North (Feet)



N
GRID

Jan-24-2017
EMM-2015 [2000.0-2020.0] Dip: 66.34 deg Field: 52071.6 nT
Lat: N39 56 7.4760 Long: W104 48 15.5520 Elev: 9723.01 ft
Magnetic North is 8.36 deg East of True North
GRID North is 0.45 deg East of True North
To correct azimuth from True to GRID subtract 0.45 deg
To correct azimuth from Magnetic to GRID add 7.91 deg

Created by admin
Date plotted 31-Jan-2017
Plot reference is W PC NORTH 1S-66-2928-7CDH (PWB).
Ref wellpath is W PC NORTH 1S-66-2928-7CDH (PWP#1).
Coordinates are in Feet reference PC NORTH 1S-66-2928-7CDH.
True Vertical Depths are reference Rig Datum.
Measured Depths are reference Rig Datum.
Rig Datum: Planned Datum #1
Rig Datum to Mean Sea Level: 5062.49 ft.
Plot North is aligned to GRID North.

Azimuth 81.66 with reference 0.00 N, 0.00 E from PC NORTH 1S-66-2928-7CDH



SYSDRILL
Well Design Combined Report
Wellbore: W PC NORTH 1S-66-2928-7CDH (PWB)



Wellhead Details

Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
PC NORTH 1S-66-2928-7CDH	N39 56 6.5760	W104 48 15.5520	1219992.6169	3195080.5504	91.07S	0.71E	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	0.00E		0.00	1219992.62	3195080.55
1400.00	0.00	311.990	1400.00	0.00N	0.00E	==>	0.00	1219992.62	3195080.55
2295.69	17.91	311.990	2281.17	92.91N	103.23W	2.00	-88.67	1220085.52	3194977.32
7298.81	17.91	311.990	7041.73	1122.35N	1247.10W	==>	-1071.11	1221114.94	3193833.49
8330.73	90.00	89.890	7729.49	1272.49N	689.56W	10.00	-497.69	1221265.07	3194391.01
17826.69	90.00	89.890	7729.49	1291.04N	8806.38E	==>	8900.51	1221283.62	3203886.66

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	311.990	1400.00	0.00N	0.00E	==>	0.00	
1500.00	2.00	311.990	1499.98	1.17N	1.30W	2.00	-1.11	
1600.00	4.00	311.990	1599.84	4.67N	5.19W	2.00	-4.46	
1700.00	6.00	311.990	1699.45	10.50N	11.67W	2.00	-10.02	
1800.00	8.00	311.990	1798.70	18.65N	20.72W	2.00	-17.80	
1900.00	10.00	311.990	1897.47	29.11N	32.35W	2.00	-27.79	
2000.00	12.00	311.990	1995.62	41.88N	46.53W	2.00	-39.97	
2100.00	14.00	311.990	2093.06	56.93N	63.25W	2.00	-54.33	
2200.00	16.00	311.990	2189.64	74.24N	82.49W	2.00	-70.85	
2300.00	17.91	311.990	2285.27	93.79N	104.22W	==>	-89.51	
2400.00	17.91	311.990	2380.42	114.37N	127.08W	==>	-109.15	
2500.00	17.91	311.990	2475.57	134.95N	149.94W	==>	-128.78	
2600.00	17.91	311.990	2570.73	155.52N	172.81W	==>	-148.42	
2700.00	17.91	311.990	2665.88	176.10N	195.67W	==>	-168.06	
2800.00	17.91	311.990	2761.03	196.67N	218.53W	==>	-187.70	
2900.00	17.91	311.990	2856.18	217.25N	241.40W	==>	-207.33	
3000.00	17.91	311.990	2951.33	237.83N	264.26W	==>	-226.97	
3100.00	17.91	311.990	3046.49	258.40N	287.12W	==>	-246.61	

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 81.660 degrees
Bottom hole distance is 8900.51 Feet on azimuth 81.66 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-66-2928-7CDH (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	17.91	311.990	3141.64	278.98N	309.99W	==>	-266.24	
3300.00	17.91	311.990	3236.79	299.55N	332.85W	==>	-285.88	
3400.00	17.91	311.990	3331.94	320.13N	355.71W	==>	-305.52	
3500.00	17.91	311.990	3427.09	340.71N	378.58W	==>	-325.15	
3600.00	17.91	311.990	3522.25	361.28N	401.44W	==>	-344.79	
3700.00	17.91	311.990	3617.40	381.86N	424.30W	==>	-364.43	
3800.00	17.91	311.990	3712.55	402.44N	447.17W	==>	-384.06	
3900.00	17.91	311.990	3807.70	423.01N	470.03W	==>	-403.70	
4000.00	17.91	311.990	3902.85	443.59N	492.89W	==>	-423.34	
4100.00	17.91	311.990	3998.01	464.16N	515.76W	==>	-442.97	
4200.00	17.91	311.990	4093.16	484.74N	538.62W	==>	-462.61	
4300.00	17.91	311.990	4188.31	505.32N	561.48W	==>	-482.25	
4400.00	17.91	311.990	4283.46	525.89N	584.34W	==>	-501.88	
4500.00	17.91	311.990	4378.61	546.47N	607.21W	==>	-521.52	
4600.00	17.91	311.990	4473.77	567.04N	630.07W	==>	-541.16	
4700.00	17.91	311.990	4568.92	587.62N	652.93W	==>	-560.79	
4800.00	17.91	311.990	4664.07	608.20N	675.80W	==>	-580.43	
4900.00	17.91	311.990	4759.22	628.77N	698.66W	==>	-600.07	
5000.00	17.91	311.990	4854.37	649.35N	721.52W	==>	-619.70	
5100.00	17.91	311.990	4949.53	669.92N	744.39W	==>	-639.34	
5200.00	17.91	311.990	5044.68	690.50N	767.25W	==>	-658.98	
5300.00	17.91	311.990	5139.83	711.08N	790.11W	==>	-678.61	
5400.00	17.91	311.990	5234.98	731.65N	812.98W	==>	-698.25	
5500.00	17.91	311.990	5330.13	752.23N	835.84W	==>	-717.89	
5600.00	17.91	311.990	5425.28	772.81N	858.70W	==>	-737.52	
5700.00	17.91	311.990	5520.44	793.38N	881.57W	==>	-757.16	
5800.00	17.91	311.990	5615.59	813.96N	904.43W	==>	-776.80	
5900.00	17.91	311.990	5710.74	834.53N	927.29W	==>	-796.43	
6000.00	17.91	311.990	5805.89	855.11N	950.15W	==>	-816.07	
6100.00	17.91	311.990	5901.04	875.69N	973.02W	==>	-835.71	
6200.00	17.91	311.990	5996.20	896.26N	995.88W	==>	-855.34	
6300.00	17.91	311.990	6091.35	916.84N	1018.74W	==>	-874.98	
6400.00	17.91	311.990	6186.50	937.41N	1041.61W	==>	-894.62	
6500.00	17.91	311.990	6281.65	957.99N	1064.47W	==>	-914.25	
6600.00	17.91	311.990	6376.80	978.57N	1087.33W	==>	-933.89	
6700.00	17.91	311.990	6471.96	999.14N	1110.20W	==>	-953.53	
6800.00	17.91	311.990	6567.11	1019.72N	1133.06W	==>	-973.16	
6900.00	17.91	311.990	6662.26	1040.30N	1155.92W	==>	-992.80	
7000.00	17.91	311.990	6757.41	1060.87N	1178.79W	==>	-1012.44	
7100.00	17.91	311.990	6852.56	1081.45N	1201.65W	==>	-1032.07	
7200.00	17.91	311.990	6947.72	1102.02N	1224.51W	==>	-1051.71	
7300.00	17.83	312.250	7042.87	1122.60N	1247.37W	10.00	-1071.35	
7400.00	12.60	345.660	7139.51	1143.52N	1261.44W	10.00	-1082.23	
7500.00	14.03	29.730	7237.06	1164.66N	1258.13W	10.00	-1075.88	
7600.00	20.78	55.050	7332.56	1185.40N	1237.53W	10.00	-1052.49	
7700.00	29.38	67.250	7423.11	1205.09N	1200.27W	10.00	-1012.77	
7800.00	38.62	74.150	7505.95	1223.15N	1147.49W	10.00	-957.93	
7900.00	48.13	78.690	7578.57	1239.02N	1080.79W	10.00	-889.63	
8000.00	57.77	82.030	7638.76	1252.22N	1002.19W	10.00	-809.95	
8100.00	67.48	84.730	7684.70	1262.34N	914.09W	10.00	-721.31	
8200.00	77.23	87.070	7714.98	1269.09N	819.16W	10.00	-626.41	
8300.00	87.00	89.240	7728.69	1272.26N	720.28W	10.00	-528.12	
8400.00	90.00	89.890	7729.49	1272.63N	620.29W	==>	-429.14	
8500.00	90.00	89.890	7729.49	1272.82N	520.29W	==>	-330.17	
8600.00	90.00	89.890	7729.49	1273.02N	420.29W	==>	-231.20	
8700.00	90.00	89.890	7729.49	1273.21N	320.29W	==>	-132.22	
8800.00	90.00	89.890	7729.49	1273.41N	220.29W	==>	-33.25	
8900.00	90.00	89.890	7729.49	1273.60N	120.29W	==>	65.72	
9000.00	90.00	89.890	7729.49	1273.80N	20.29W	==>	164.69	

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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 81.660 degrees
Bottom hole distance is 8900.51 Feet on azimuth 81.66 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-66-2928-7CDH (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	89.890	7729.49	1273.99N	79.71E	==>	263.66	
9200.00	90.00	89.890	7729.49	1274.19N	179.71E	==>	362.63	
9300.00	90.00	89.890	7729.49	1274.38N	279.70E	==>	461.60	
9400.00	90.00	89.890	7729.49	1274.58N	379.70E	==>	560.57	
9500.00	90.00	89.890	7729.49	1274.77N	479.70E	==>	659.54	
9600.00	90.00	89.890	7729.49	1274.97N	579.70E	==>	758.51	
9700.00	90.00	89.890	7729.49	1275.16N	679.70E	==>	857.48	
9800.00	90.00	89.890	7729.49	1275.36N	779.70E	==>	956.45	
9900.00	90.00	89.890	7729.49	1275.56N	879.70E	==>	1055.42	
10000.00	90.00	89.890	7729.49	1275.75N	979.70E	==>	1154.39	
10100.00	90.00	89.890	7729.49	1275.95N	1079.70E	==>	1253.36	
10200.00	90.00	89.890	7729.49	1276.14N	1179.70E	==>	1352.33	
10300.00	90.00	89.890	7729.49	1276.34N	1279.70E	==>	1451.30	
10400.00	90.00	89.890	7729.49	1276.53N	1379.70E	==>	1550.27	
10500.00	90.00	89.890	7729.49	1276.73N	1479.70E	==>	1649.25	
10600.00	90.00	89.890	7729.49	1276.92N	1579.70E	==>	1748.22	
10700.00	90.00	89.890	7729.49	1277.12N	1679.70E	==>	1847.19	
10800.00	90.00	89.890	7729.49	1277.31N	1779.70E	==>	1946.16	
10900.00	90.00	89.890	7729.49	1277.51N	1879.70E	==>	2045.13	
11000.00	90.00	89.890	7729.49	1277.70N	1979.70E	==>	2144.10	
11100.00	90.00	89.890	7729.49	1277.90N	2079.70E	==>	2243.07	
11200.00	90.00	89.890	7729.49	1278.09N	2179.70E	==>	2342.04	
11300.00	90.00	89.890	7729.49	1278.29N	2279.70E	==>	2441.01	
11400.00	90.00	89.890	7729.49	1278.48N	2379.70E	==>	2539.98	
11500.00	90.00	89.890	7729.49	1278.68N	2479.70E	==>	2638.95	
11600.00	90.00	89.890	7729.49	1278.88N	2579.70E	==>	2737.92	
11700.00	90.00	89.890	7729.49	1279.07N	2679.70E	==>	2836.89	
11800.00	90.00	89.890	7729.49	1279.27N	2779.70E	==>	2935.86	
11900.00	90.00	89.890	7729.49	1279.46N	2879.70E	==>	3034.83	
12000.00	90.00	89.890	7729.49	1279.66N	2979.70E	==>	3133.80	
12100.00	90.00	89.890	7729.49	1279.85N	3079.70E	==>	3232.77	
12200.00	90.00	89.890	7729.49	1280.05N	3179.70E	==>	3331.74	
12300.00	90.00	89.890	7729.49	1280.24N	3279.70E	==>	3430.72	
12400.00	90.00	89.890	7729.49	1280.44N	3379.70E	==>	3529.69	
12500.00	90.00	89.890	7729.49	1280.63N	3479.70E	==>	3628.66	
12600.00	90.00	89.890	7729.49	1280.83N	3579.70E	==>	3727.63	
12700.00	90.00	89.890	7729.49	1281.02N	3679.70E	==>	3826.60	
12800.00	90.00	89.890	7729.49	1281.22N	3779.70E	==>	3925.57	
12900.00	90.00	89.890	7729.49	1281.41N	3879.70E	==>	4024.54	
13000.00	90.00	89.890	7729.49	1281.61N	3979.70E	==>	4123.51	
13100.00	90.00	89.890	7729.49	1281.81N	4079.70E	==>	4222.48	
13200.00	90.00	89.890	7729.49	1282.00N	4179.70E	==>	4321.45	
13300.00	90.00	89.890	7729.49	1282.20N	4279.70E	==>	4420.42	
13400.00	90.00	89.890	7729.49	1282.39N	4379.70E	==>	4519.39	
13500.00	90.00	89.890	7729.49	1282.59N	4479.70E	==>	4618.36	
13600.00	90.00	89.890	7729.49	1282.78N	4579.70E	==>	4717.33	
13700.00	90.00	89.890	7729.49	1282.98N	4679.70E	==>	4816.30	
13800.00	90.00	89.890	7729.49	1283.17N	4779.70E	==>	4915.27	
13900.00	90.00	89.890	7729.49	1283.37N	4879.70E	==>	5014.24	
14000.00	90.00	89.890	7729.49	1283.56N	4979.70E	==>	5113.21	
14100.00	90.00	89.890	7729.49	1283.76N	5079.70E	==>	5212.18	
14200.00	90.00	89.890	7729.49	1283.95N	5179.70E	==>	5311.16	
14300.00	90.00	89.890	7729.49	1284.15N	5279.70E	==>	5410.13	
14400.00	90.00	89.890	7729.49	1284.34N	5379.70E	==>	5509.10	
14500.00	90.00	89.890	7729.49	1284.54N	5479.69E	==>	5608.07	
14600.00	90.00	89.890	7729.49	1284.74N	5579.69E	==>	5707.04	
14700.00	90.00	89.890	7729.49	1284.93N	5679.69E	==>	5806.01	
14800.00	90.00	89.890	7729.49	1285.13N	5779.69E	==>	5904.98	
14900.00	90.00	89.890	7729.49	1285.32N	5879.69E	==>	6003.95	

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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 81.660 degrees
Bottom hole distance is 8900.51 Feet on azimuth 81.66 degrees from Wellhead
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SYS DRILL
Well Design Combined Report
Wellbore: W PC NORTH 1S-66-2928-7CDH (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	89.890	7729.49	1285.52N	5979.69E	==>	6102.92	
15100.00	90.00	89.890	7729.49	1285.71N	6079.69E	==>	6201.89	
15200.00	90.00	89.890	7729.49	1285.91N	6179.69E	==>	6300.86	
15300.00	90.00	89.890	7729.49	1286.10N	6279.69E	==>	6399.83	
15400.00	90.00	89.890	7729.49	1286.30N	6379.69E	==>	6498.80	
15500.00	90.00	89.890	7729.49	1286.49N	6479.69E	==>	6597.77	
15600.00	90.00	89.890	7729.49	1286.69N	6579.69E	==>	6696.74	
15700.00	90.00	89.890	7729.49	1286.88N	6679.69E	==>	6795.71	
15800.00	90.00	89.890	7729.49	1287.08N	6779.69E	==>	6894.68	
15900.00	90.00	89.890	7729.49	1287.27N	6879.69E	==>	6993.65	
16000.00	90.00	89.890	7729.49	1287.47N	6979.69E	==>	7092.63	
16100.00	90.00	89.890	7729.49	1287.67N	7079.69E	==>	7191.60	
16200.00	90.00	89.890	7729.49	1287.86N	7179.69E	==>	7290.57	
16300.00	90.00	89.890	7729.49	1288.06N	7279.69E	==>	7389.54	
16400.00	90.00	89.890	7729.49	1288.25N	7379.69E	==>	7488.51	
16500.00	90.00	89.890	7729.49	1288.45N	7479.69E	==>	7587.48	
16600.00	90.00	89.890	7729.49	1288.64N	7579.69E	==>	7686.45	
16700.00	90.00	89.890	7729.49	1288.84N	7679.69E	==>	7785.42	
16800.00	90.00	89.890	7729.49	1289.03N	7779.69E	==>	7884.39	
16900.00	90.00	89.890	7729.49	1289.23N	7879.69E	==>	7983.36	
17000.00	90.00	89.890	7729.49	1289.42N	7979.69E	==>	8082.33	
17100.00	90.00	89.890	7729.49	1289.62N	8079.69E	==>	8181.30	
17200.00	90.00	89.890	7729.49	1289.81N	8179.69E	==>	8280.27	
17300.00	90.00	89.890	7729.49	1290.01N	8279.69E	==>	8379.24	
17400.00	90.00	89.890	7729.49	1290.20N	8379.69E	==>	8478.21	
17500.00	90.00	89.890	7729.49	1290.40N	8479.69E	==>	8577.18	
17600.00	90.00	89.890	7729.49	1290.60N	8579.69E	==>	8676.15	
17700.00	90.00	89.890	7729.49	1290.79N	8679.69E	==>	8775.12	
17800.00	90.00	89.890	7729.49	1290.99N	8779.69E	==>	8874.10	
17826.69	90.00	89.890	7729.49	1291.04N	8806.38E	==>	8900.51	

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 81.660 degrees
Bottom hole distance is 8900.51 Feet on azimuth 81.66 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-66-2928-7CDH (PWB)



Targets

Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
PC NORTH 1S-66-2928-7CDH - BHL	1291.04N	8806.38E	7729.49	N39 56 18.6360	W104 46 22.3680	1221283.62	3203886.66
PC NORTH 1S-66-2928-7CDH - EPL	1272.49N	789.56W	7729.49	N39 56 19.2120	W104 48 25.5600	1221265.07	3194291.02

Survey Tool Program

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
523107	Planned	1500.00	1499.98	WdW Rate Gyro	Standard
523106	Planned	17826.69	7729.49	ISCWSA MWD	Rev 3 + FLT + ROT

Notes



SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: W PC NORTH 1S-66-2928-7CDH (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-66-2928-7CDH (PWB)	Jan-24-2017	Jan-24-2017

Well		
Name	Government ID	Last Revised
W PC NORTH 1S-66-2928-7CDH		Jan-24-2017

Slot						
Name	Latitude	Longitude	Grid Northing	Grid Easting	North	East
PC NORTH 1S-66-2928-7CDH	N39 56 6.5760	W104 48 15.5520	1219992.6169	3195080.5504	91.07S	0.71E

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-66-2928-8NH	14.57	1400.00	17824.75	-113.39	17824.75	0.71	17824.75
W PC NORTH 1S-66-2928-6NH	14.57	1350.04	8307.87	-183.38	17826.69	0.63	17826.69
W PC NORTH 1S-66-2928-9NH	29.14	1400.00	17826.69	-126.95	17826.69	0.81	17826.69
W PC NORTH 1S-66-2928-5NH	29.14	1300.00	1300.00	-66.60	17826.69	0.90	17826.69
W PC SOUTH 1S-66-2928-17NH	30.85	1400.00	17826.69	28.59	1410.76	3.15	17826.69
W PC SOUTH 1S-66-2928-16CDH	34.12	1400.00	17826.69	31.85	1410.76	2.95	17826.69
W PC SOUTH 1S-66-2928-18NH	34.12	1400.00	17826.69	31.86	1410.76	3.63	17826.69
W PC SOUTH 1S-66-2928-19CDH	42.44	1400.00	17826.69	40.18	1410.76	4.00	17826.69
W PC SOUTH 1S-66-2928-15NH	42.44	1410.76	17826.69	40.13	1459.97	2.65	17826.69
W PC NORTH 1S-66-2928-10CDH	43.71	1400.00	17826.69	-113.99	17826.69	0.85	17826.69
W PC NORTH 1S-66-2928-4CDH	47.36	1250.39	1250.39	-1.12	17826.69	1.00	17826.69

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Vertical Section is from 0.00N 0.00E on azimuth 81.660 degrees
Prepared by IPT
Date Printed: 31-Jan-2017



SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: W PC NORTH 1S-66-2928-7CDH (PWB)



Clearance Summary							
Offset WellName	Separation [ft]	MD[ft]	Diverging From[ft]	Ellipse Separation [ft]	Ellipse MD[ft]	Clearance Factor	Clearance MD[ft]
W PC SOUTH 1S-66-2928-20N H	53.50	1400.00	17826.69	51.25	1410.76	4.16	17826.69
W PC SOUTH 1S-66-2928-14N H	55.77	1629.38	17826.69	53.19	1656.82	2.16	17826.69
W PC NORTH 1S-66-2928-3NH	61.93	1200.42	1200.42	60.00	1200.42	1.32	17826.69
W PC SOUTH 1S-66-2928-13C DH	66.52	1730.20	17826.69	63.53	1755.25	1.87	17826.69
W PC NORTH 1S-66-2928-2NH	76.50	1150.55	17814.96	74.65	1150.55	1.70	17826.69
W PC SOUTH 1S-66-2928-12N H	77.27	1806.89	17826.69	73.83	1837.27	1.67	17826.69
W PC NORTH 1S-66-2928-11N H	88.03	1871.31	17826.69	84.15	1902.89	1.22	17826.69
W POLLARD #1	2881.40	13713.91	13711.38	2617.85	13812.34	10.59	14288.06

