

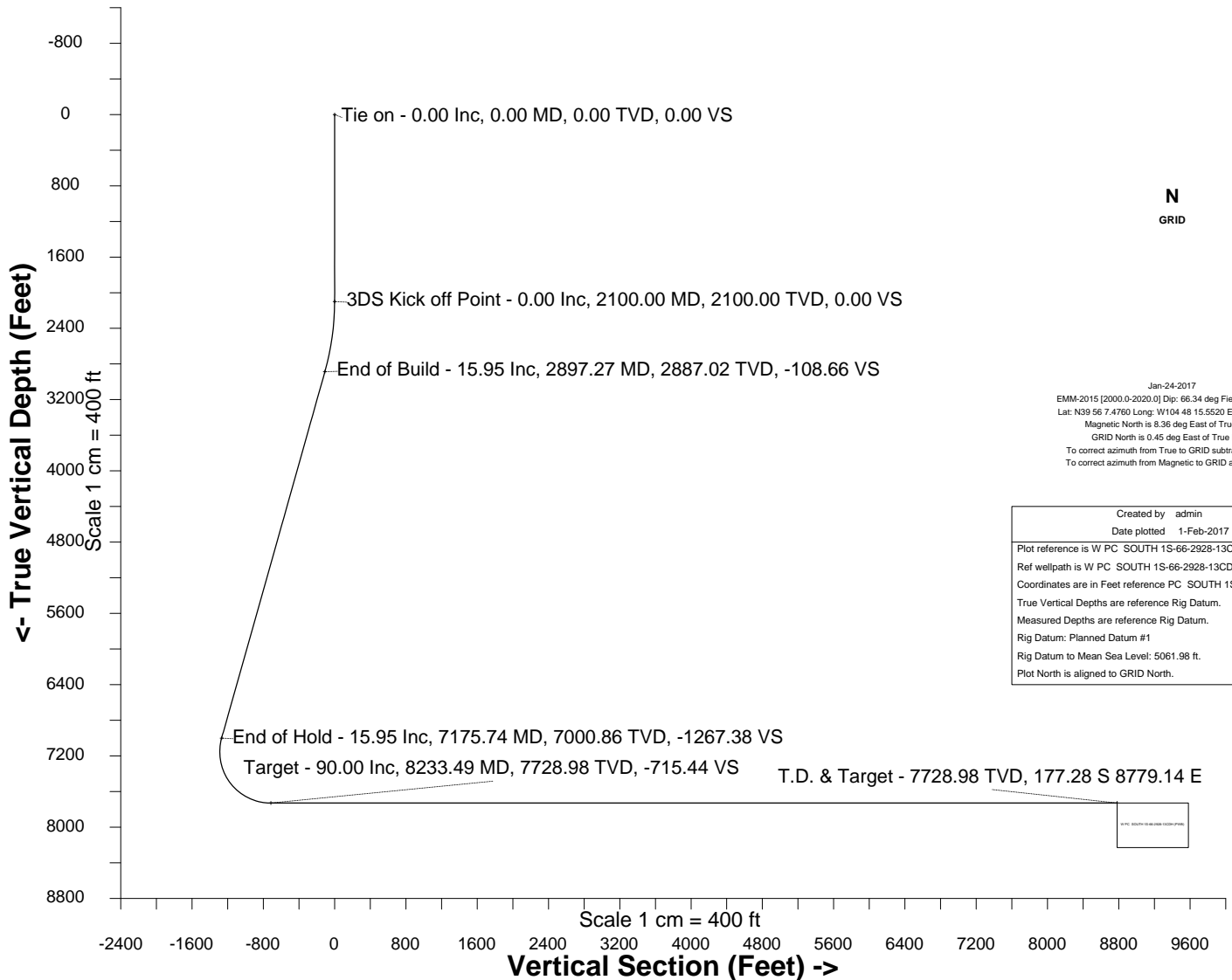
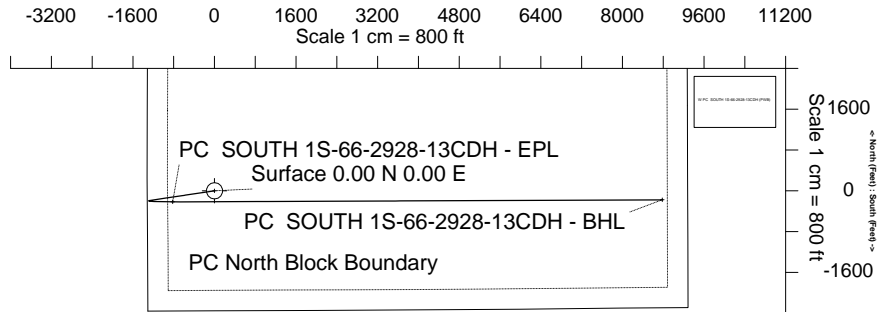
# HRM Resources

Location	DJ Basin	Slot	PC SOUTH 1S-66-2928-13CDH
Field	WATTENBERG	Well	W PC SOUTH 1S-66-2928-13CDH
Installation	PC 1S-66-2928 PAD	Wellbore	W PC SOUTH 1S-66-2928-13CDH (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	2100.00	0.00	261.49	2100.00	S 0.00	W 0.00	0.00	0.00
End of Build	2897.27	15.95	261.49	2887.02	S 16.30	W 109.01	2.00	-108.66
End of Hold	7175.74	15.95	261.49	7000.86	S 190.16	W 1271.48	0.00	-1267.38
Target PC SO... - EPL	8233.49	90.00	89.76	7728.98	S 217.71	W 719.98	10.00	-715.44
T.D. & Target PC ...BHL	17732.69	90.00	89.76	7728.98	S 177.28	E 8779.14	0.00	8780.93

East (Feet) ->



N  
GRID

Jan-24-2017  
EMMA-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	1-Feb-2017
Plot reference is W PC SOUTH 1S-66-2928-13CDH (PWB).	
Ref wellpath is W PC SOUTH 1S-66-2928-13CDH (PWP#1).	
Coordinates are in Feet reference PC SOUTH 1S-66-2928-13CDH.	
True Vertical Depths are reference Rig Datum.	
Measured Depths are reference Rig Datum.	
Rig Datum: Planned Datum #1	
Rig Datum to Mean Sea Level: 5061.98 ft.	
Plot North is aligned to GRID North.	

Azimuth 91.16 with reference 0.00 N, 0.00 E from PC SOUTH 1S-66-2928-13CDH



SYSDRILL  
Well Design Combined Report  
Wellbore: W PC SOUTH 1S-66-2928-13CDH (PWB)



### Wellhead Details

Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
PC SOUTH 1S-66-2928-13CDH	N39 56 7.1880	W104 48 15.1560	1220054.7832	3195110.9098	28.90S	31.07E	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	1220054.78	3195110.91
2100.00	0.00	261.490	2100.00	0.00N	0.00E	==>	0.00	1220054.78	3195110.91
2897.27	15.95	261.490	2887.02	16.30S	109.01W	2.00	-108.66	1220038.48	3195001.90
7175.74	15.95	261.490	7000.86	190.16S	1271.48W	==>	-1267.38	1219864.63	3193839.47
8233.49	90.00	89.760	7728.98	217.71S	719.98W	10.00	-715.44	1219837.08	3194390.95
17732.69	90.00	89.760	7728.98	177.28S	8779.14E	==>	8780.93	1219877.51	3203889.78

### 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	0.00	0.000	1500.00	0.00N	0.00E	==>	0.00	
1600.00	0.00	0.000	1600.00	0.00N	0.00E	==>	0.00	
1700.00	0.00	0.000	1700.00	0.00N	0.00E	==>	0.00	
1800.00	0.00	0.000	1800.00	0.00N	0.00E	==>	0.00	
1900.00	0.00	0.000	1900.00	0.00N	0.00E	==>	0.00	
2000.00	0.00	0.000	2000.00	0.00N	0.00E	==>	0.00	
2100.00	0.00	261.490	2100.00	0.00N	0.00E	==>	0.00	
2200.00	2.00	261.490	2199.98	0.26S	1.73W	2.00	-1.72	
2300.00	4.00	261.490	2299.84	1.03S	6.90W	2.00	-6.88	
2400.00	6.00	261.490	2399.45	2.32S	15.52W	2.00	-15.47	
2500.00	8.00	261.490	2498.70	4.12S	27.57W	2.00	-27.48	
2600.00	10.00	261.490	2597.47	6.44S	43.04W	2.00	-42.91	
2700.00	12.00	261.490	2695.62	9.26S	61.91W	2.00	-61.71	
2800.00	14.00	261.490	2793.06	12.59S	84.16W	2.00	-83.89	
2900.00	15.95	261.490	2889.64	16.42S	109.76W	==>	-109.40	
3000.00	15.95	261.490	2985.80	20.48S	136.93W	==>	-136.48	
3100.00	15.95	261.490	3081.95	24.54S	164.10W	==>	-163.57	

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 5062.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 91.160 degrees  
Bottom hole distance is 8780.93 Feet on azimuth 91.16 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by IPT  
Date Printed: 1-Feb-2017



SYSDRILL  
Well Design Combined Report  
Wellbore: W PC SOUTH 1S-66-2928-13CDH (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	15.95	261.490	3178.10	28.61S	191.27W	==>	-190.65	
3300.00	15.95	261.490	3274.25	32.67S	218.44W	==>	-217.73	
3400.00	15.95	261.490	3370.40	36.73S	245.61W	==>	-244.81	
3500.00	15.95	261.490	3466.56	40.80S	272.78W	==>	-271.90	
3600.00	15.95	261.490	3562.71	44.86S	299.95W	==>	-298.98	
3700.00	15.95	261.490	3658.86	48.92S	327.12W	==>	-326.06	
3800.00	15.95	261.490	3755.01	52.99S	354.29W	==>	-353.14	
3900.00	15.95	261.490	3851.17	57.05S	381.46W	==>	-380.23	
4000.00	15.95	261.490	3947.32	61.11S	408.63W	==>	-407.31	
4100.00	15.95	261.490	4043.47	65.18S	435.80W	==>	-434.39	
4200.00	15.95	261.490	4139.62	69.24S	462.97W	==>	-461.47	
4300.00	15.95	261.490	4235.78	73.30S	490.14W	==>	-488.56	
4400.00	15.95	261.490	4331.93	77.37S	517.31W	==>	-515.64	
4500.00	15.95	261.490	4428.08	81.43S	544.48W	==>	-542.72	
4600.00	15.95	261.490	4524.23	85.50S	571.65W	==>	-569.80	
4700.00	15.95	261.490	4620.39	89.56S	598.82W	==>	-596.89	
4800.00	15.95	261.490	4716.54	93.62S	625.99W	==>	-623.97	
4900.00	15.95	261.490	4812.69	97.69S	653.16W	==>	-651.05	
5000.00	15.95	261.490	4908.84	101.75S	680.33W	==>	-678.13	
5100.00	15.95	261.490	5004.99	105.81S	707.50W	==>	-705.22	
5200.00	15.95	261.490	5101.15	109.88S	734.67W	==>	-732.30	
5300.00	15.95	261.490	5197.30	113.94S	761.84W	==>	-759.38	
5400.00	15.95	261.490	5293.45	118.00S	789.01W	==>	-786.46	
5500.00	15.95	261.490	5389.60	122.07S	816.18W	==>	-813.55	
5600.00	15.95	261.490	5485.76	126.13S	843.35W	==>	-840.63	
5700.00	15.95	261.490	5581.91	130.19S	870.52W	==>	-867.71	
5800.00	15.95	261.490	5678.06	134.26S	897.69W	==>	-894.79	
5900.00	15.95	261.490	5774.21	138.32S	924.86W	==>	-921.88	
6000.00	15.95	261.490	5870.37	142.39S	952.03W	==>	-948.96	
6100.00	15.95	261.490	5966.52	146.45S	979.20W	==>	-976.04	
6200.00	15.95	261.490	6062.67	150.51S	1006.37W	==>	-1003.12	
6300.00	15.95	261.490	6158.82	154.58S	1033.54W	==>	-1030.21	
6400.00	15.95	261.490	6254.98	158.64S	1060.71W	==>	-1057.29	
6500.00	15.95	261.490	6351.13	162.70S	1087.88W	==>	-1084.37	
6600.00	15.95	261.490	6447.28	166.77S	1115.05W	==>	-1111.45	
6700.00	15.95	261.490	6543.43	170.83S	1142.22W	==>	-1138.54	
6800.00	15.95	261.490	6639.58	174.89S	1169.39W	==>	-1165.62	
6900.00	15.95	261.490	6735.74	178.96S	1196.56W	==>	-1192.70	
7000.00	15.95	261.490	6831.89	183.02S	1223.73W	==>	-1219.78	
7100.00	15.95	261.490	6928.04	187.08S	1250.90W	==>	-1246.87	
7200.00	13.55	259.950	7024.33	191.15S	1277.57W	10.00	-1273.45	
7300.00	4.09	234.730	7123.06	195.27S	1292.06W	10.00	-1287.85	
7400.00	7.05	109.140	7222.81	199.35S	1289.16W	10.00	-1284.88	
7500.00	16.81	97.570	7320.54	203.28S	1268.98W	10.00	-1264.62	
7600.00	26.75	94.430	7413.29	206.93S	1232.11W	10.00	-1227.69	
7700.00	36.72	92.910	7498.23	210.19S	1179.69W	10.00	-1175.21	
7800.00	46.70	91.970	7572.80	212.97S	1113.31W	10.00	-1108.78	
7900.00	56.68	91.300	7634.71	215.18S	1034.97W	10.00	-1030.42	
8000.00	66.67	90.770	7682.10	216.75S	947.07W	10.00	-942.50	
8100.00	76.66	90.310	7713.51	217.64S	852.27W	10.00	-847.70	
8200.00	86.65	89.890	7728.00	217.81S	753.45W	10.00	-748.90	
8300.00	90.00	89.760	7728.98	217.43S	653.47W	==>	-648.95	
8400.00	90.00	89.760	7728.98	217.00S	553.47W	==>	-548.98	
8500.00	90.00	89.760	7728.98	216.58S	453.47W	==>	-449.01	
8600.00	90.00	89.760	7728.98	216.15S	353.48W	==>	-349.04	
8700.00	90.00	89.760	7728.98	215.73S	253.48W	==>	-249.07	
8800.00	90.00	89.760	7728.98	215.30S	153.48W	==>	-149.10	
8900.00	90.00	89.760	7728.98	214.87S	53.48W	==>	-49.13	
9000.00	90.00	89.760	7728.98	214.45S	46.52E	==>	50.84	

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 5062.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 91.160 degrees  
Bottom hole distance is 8780.93 Feet on azimuth 91.16 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by IPT  
Date Printed: 1-Feb-2017



SYSDRILL  
Well Design Combined Report  
Wellbore: W PC SOUTH 1S-66-2928-13CDH (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	7728.98	214.02S	146.52E	==>	150.81	
9200.00	90.00	89.760	7728.98	213.60S	246.52E	==>	250.78	
9300.00	90.00	89.760	7728.98	213.17S	346.52E	==>	350.75	
9400.00	90.00	89.760	7728.98	212.75S	446.52E	==>	450.72	
9500.00	90.00	89.760	7728.98	212.32S	546.52E	==>	550.69	
9600.00	90.00	89.760	7728.98	211.90S	646.52E	==>	650.66	
9700.00	90.00	89.760	7728.98	211.47S	746.51E	==>	750.63	
9800.00	90.00	89.760	7728.98	211.04S	846.51E	==>	850.60	
9900.00	90.00	89.760	7728.98	210.62S	946.51E	==>	950.57	
10000.00	90.00	89.760	7728.98	210.19S	1046.51E	==>	1050.54	
10100.00	90.00	89.760	7728.98	209.77S	1146.51E	==>	1150.51	
10200.00	90.00	89.760	7728.98	209.34S	1246.51E	==>	1250.48	
10300.00	90.00	89.760	7728.98	208.92S	1346.51E	==>	1350.45	
10400.00	90.00	89.760	7728.98	208.49S	1446.51E	==>	1450.42	
10500.00	90.00	89.760	7728.98	208.07S	1546.51E	==>	1550.39	
10600.00	90.00	89.760	7728.98	207.64S	1646.51E	==>	1650.36	
10700.00	90.00	89.760	7728.98	207.21S	1746.51E	==>	1750.33	
10800.00	90.00	89.760	7728.98	206.79S	1846.50E	==>	1850.30	
10900.00	90.00	89.760	7728.98	206.36S	1946.50E	==>	1950.27	
11000.00	90.00	89.760	7728.98	205.94S	2046.50E	==>	2050.24	
11100.00	90.00	89.760	7728.98	205.51S	2146.50E	==>	2150.21	
11200.00	90.00	89.760	7728.98	205.09S	2246.50E	==>	2250.18	
11300.00	90.00	89.760	7728.98	204.66S	2346.50E	==>	2350.15	
11400.00	90.00	89.760	7728.98	204.23S	2446.50E	==>	2450.12	
11500.00	90.00	89.760	7728.98	203.81S	2546.50E	==>	2550.09	
11600.00	90.00	89.760	7728.98	203.38S	2646.50E	==>	2650.06	
11700.00	90.00	89.760	7728.98	202.96S	2746.50E	==>	2750.03	
11800.00	90.00	89.760	7728.98	202.53S	2846.50E	==>	2850.00	
11900.00	90.00	89.760	7728.98	202.11S	2946.50E	==>	2949.97	
12000.00	90.00	89.760	7728.98	201.68S	3046.49E	==>	3049.95	
12100.00	90.00	89.760	7728.98	201.26S	3146.49E	==>	3149.92	
12200.00	90.00	89.760	7728.98	200.83S	3246.49E	==>	3249.89	
12300.00	90.00	89.760	7728.98	200.40S	3346.49E	==>	3349.86	
12400.00	90.00	89.760	7728.98	199.98S	3446.49E	==>	3449.83	
12500.00	90.00	89.760	7728.98	199.55S	3546.49E	==>	3549.80	
12600.00	90.00	89.760	7728.98	199.13S	3646.49E	==>	3649.77	
12700.00	90.00	89.760	7728.98	198.70S	3746.49E	==>	3749.74	
12800.00	90.00	89.760	7728.98	198.28S	3846.49E	==>	3849.71	
12900.00	90.00	89.760	7728.98	197.85S	3946.49E	==>	3949.68	
13000.00	90.00	89.760	7728.98	197.43S	4046.49E	==>	4049.65	
13100.00	90.00	89.760	7728.98	197.00S	4146.48E	==>	4149.62	
13200.00	90.00	89.760	7728.98	196.57S	4246.48E	==>	4249.59	
13300.00	90.00	89.760	7728.98	196.15S	4346.48E	==>	4349.56	
13400.00	90.00	89.760	7728.98	195.72S	4446.48E	==>	4449.53	
13500.00	90.00	89.760	7728.98	195.30S	4546.48E	==>	4549.50	
13600.00	90.00	89.760	7728.98	194.87S	4646.48E	==>	4649.47	
13700.00	90.00	89.760	7728.98	194.45S	4746.48E	==>	4749.44	
13800.00	90.00	89.760	7728.98	194.02S	4846.48E	==>	4849.41	
13900.00	90.00	89.760	7728.98	193.60S	4946.48E	==>	4949.38	
14000.00	90.00	89.760	7728.98	193.17S	5046.48E	==>	5049.35	
14100.00	90.00	89.760	7728.98	192.74S	5146.48E	==>	5149.32	
14200.00	90.00	89.760	7728.98	192.32S	5246.47E	==>	5249.29	
14300.00	90.00	89.760	7728.98	191.89S	5346.47E	==>	5349.26	
14400.00	90.00	89.760	7728.98	191.47S	5446.47E	==>	5449.23	
14500.00	90.00	89.760	7728.98	191.04S	5546.47E	==>	5549.20	
14600.00	90.00	89.760	7728.98	190.62S	5646.47E	==>	5649.17	
14700.00	90.00	89.760	7728.98	190.19S	5746.47E	==>	5749.14	
14800.00	90.00	89.760	7728.98	189.76S	5846.47E	==>	5849.11	
14900.00	90.00	89.760	7728.98	189.34S	5946.47E	==>	5949.08	

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Vertical Section is from 0.00N 0.00E on azimuth 91.160 degrees  
Bottom hole distance is 8780.93 Feet on azimuth 91.16 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by IPT  
Date Printed: 1-Feb-2017



SYS DRILL  
Well Design Combined Report  
Wellbore: W PC SOUTH 1S-66-2928-13CDH (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	7728.98	188.91S	6046.47E	==>	6049.05	
15100.00	90.00	89.760	7728.98	188.49S	6146.47E	==>	6149.02	
15200.00	90.00	89.760	7728.98	188.06S	6246.47E	==>	6248.99	
15300.00	90.00	89.760	7728.98	187.64S	6346.46E	==>	6348.96	
15400.00	90.00	89.760	7728.98	187.21S	6446.46E	==>	6448.93	
15500.00	90.00	89.760	7728.98	186.79S	6546.46E	==>	6548.90	
15600.00	90.00	89.760	7728.98	186.36S	6646.46E	==>	6648.87	
15700.00	90.00	89.760	7728.98	185.93S	6746.46E	==>	6748.84	
15800.00	90.00	89.760	7728.98	185.51S	6846.46E	==>	6848.81	
15900.00	90.00	89.760	7728.98	185.08S	6946.46E	==>	6948.78	
16000.00	90.00	89.760	7728.98	184.66S	7046.46E	==>	7048.75	
16100.00	90.00	89.760	7728.98	184.23S	7146.46E	==>	7148.72	
16200.00	90.00	89.760	7728.98	183.81S	7246.46E	==>	7248.69	
16300.00	90.00	89.760	7728.98	183.38S	7346.46E	==>	7348.66	
16400.00	90.00	89.760	7728.98	182.96S	7446.45E	==>	7448.63	
16500.00	90.00	89.760	7728.98	182.53S	7546.45E	==>	7548.60	
16600.00	90.00	89.760	7728.98	182.10S	7646.45E	==>	7648.57	
16700.00	90.00	89.760	7728.98	181.68S	7746.45E	==>	7748.54	
16800.00	90.00	89.760	7728.98	181.25S	7846.45E	==>	7848.51	
16900.00	90.00	89.760	7728.98	180.83S	7946.45E	==>	7948.48	
17000.00	90.00	89.760	7728.98	180.40S	8046.45E	==>	8048.45	
17100.00	90.00	89.760	7728.98	179.98S	8146.45E	==>	8148.42	
17200.00	90.00	89.760	7728.98	179.55S	8246.45E	==>	8248.39	
17300.00	90.00	89.760	7728.98	179.13S	8346.45E	==>	8348.36	
17400.00	90.00	89.760	7728.98	178.70S	8446.45E	==>	8448.33	
17500.00	90.00	89.760	7728.98	178.27S	8546.44E	==>	8548.30	
17600.00	90.00	89.760	7728.98	177.85S	8646.44E	==>	8648.27	
17700.00	90.00	89.760	7728.98	177.42S	8746.44E	==>	8748.24	
17732.69	90.00	89.760	7728.98	177.28S	8779.14E	==>	8780.93	

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 5062.0ft above Mean Sea Level )  
Vertical Section is from 0.00N 0.00E on azimuth 91.160 degrees  
Bottom hole distance is 8780.93 Feet on azimuth 91.16 degrees from Wellhead  
Calculation method uses Minimum Curvature method  
Prepared by IPT  
Date Printed: 1-Feb-2017



## Targets

Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
PC SOUTH 1S-66-2928-13CDH - BHL	177.28S	8779.14E	7728.98	N39 56 4.7400	W104 46 22.4760	1219877.51	3203889.78
PC SOUTH 1S-66-2928-13CDH - EPL	217.71S	819.98W	7728.98	N39 56 5.1000	W104 48 25.7040	1219837.08	3194290.96

## Survey Tool Program

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
523613	Planned	1500.00	1500.00	WdW Rate Gyro	Standard
523612	Planned	17732.69	7728.98	ISCWSA MWD	Rev 4 + SAG + FLT

## Notes



SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: W PC SOUTH 1S-66-2928-13CDH (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 SOUTH 1S-66-2928-13CDH (PWB)	Jan-24-2017	Jan-25-2017

Well		
Name	Government ID	Last Revised
W PC SOUTH 1S-66-2928-13CDH		Jan-24-2017

Slot						
Name	Latitude	Longitude	Grid Northing	Grid Easting	North	East
PC SOUTH 1S-66-2928-13CDH	N39 56 7.1880	W104 48 15.1560	1220054.7832	3195110.9098	28.90S	31.07E

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 SOUTH 1S-66-2928-12NH	14.57	2100.00	7184.11	-164.02	17732.69	0.66	17732.69
W PC SOUTH 1S-66-2928-14NH	14.57	2050.52	7179.69	-147.80	17732.69	0.67	17732.69
W PC NORTH 1S-66-2928-11NH	29.14	2100.00	17732.69	-72.86	17732.69	0.89	17732.69
W PC NORTH 1S-66-2928-3NH	30.85	1200.00	1181.10	28.92	1200.00	3.19	17732.69
W PC SOUTH 1S-66-2928-15NH	32.79	2000.00	17732.69	-70.85	17732.69	0.90	17732.69
W PC NORTH 1S-66-2928-2NH	34.12	1150.04	17732.69	32.26	1150.04	3.59	17732.69
W PC NORTH 1S-66-2928-4CDH	34.12	1249.88	17732.69	32.08	1279.53	2.91	17732.69
W PC NORTH 1S-66-2928-5NH	44.45	1501.08	17732.69	42.03	1509.19	2.72	17732.69
W PC SOUTH 1S-66-2928-16CDH	47.36	1949.62	1949.62	42.49	2001.31	1.09	17732.69
W PC NORTH 1S-66-2928-6NH	55.09	1624.02	17732.69	52.47	1640.42	2.22	17732.69
W PC SOUTH 1S-66-2928-17NH	61.93	1900.00	17732.69	57.49	1935.70	1.35	17732.69

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Vertical Section is from 0.00N 0.00E on azimuth 91.160 degrees  
Prepared by IPT  
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SYSDRILL  
Closest Approach + Clearance Factor Summary Report  
Wellbore: W PC SOUTH 1S-66-2928-13CDH (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 NORTH 1S-66-2928-7CDH	66.52	1728.92	17732.69	63.53	1755.25	1.87	17732.69
W PC SOUTH 1S-66-2928-18NH	76.50	1849.38	17732.69	72.53	1886.48	1.81	17732.69
W PC NORTH 1S-66-2928-8NH	78.96	1820.87	17732.69	75.06	1853.67	1.77	17732.69
W PC SOUTH 1S-66-2928-19CDH	91.07	1800.00	17732.69	87.47	1837.27	2.16	17732.69
W PC NORTH 1S-66-2928-9NH	94.50	1820.87	8267.72	90.57	1870.08	1.33	17732.69
W PC SOUTH 1S-66-2928-20NH	105.64	1749.23	17732.69	102.42	1771.65	2.34	17732.69
W PC NORTH 1S-66-2928-10CDH	109.12	1837.27	3100.00	28.17	17732.69	1.04	17732.69
W POLLARD #1	1465.76	13615.49	13613.63	1206.69	13664.70	5.61	13779.53



