

HRM Resources

Location	DJ Basin	Slot	PC SOUTH 1S-66-2928-19CDH
Field	WATTENBERG	Well	W PC SOUTH 1S-66-2928-19CDH
Installation	PC 1S-66-2928 PAD	Wellbore	W PC SOUTH 1S-66-2928-19CDH (PWB)

East (Feet) ->

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

Created by	admin
Date plotted	25-Jan-2017
Plot reference is W PC SOUTH 1S-66-2928-19CDH (PWB).	
Ref wellpath is W PC SOUTH 1S-66-2928-19CDH (PWP#1).	
Coordinates are in Feet reference PC SOUTH 1S-66-2928-19CDH.	
True Vertical Depths are reference Rig Datum.	
Measured Depths are reference Rig Datum.	
Rig Datum: Planned Datum #1	
Rig Datum to Mean Sea Level: 5062.62 ft.	
Plot North is aligned to GRID North.	

PC North Block Boundary

Surface 0.00 N 0.00 E

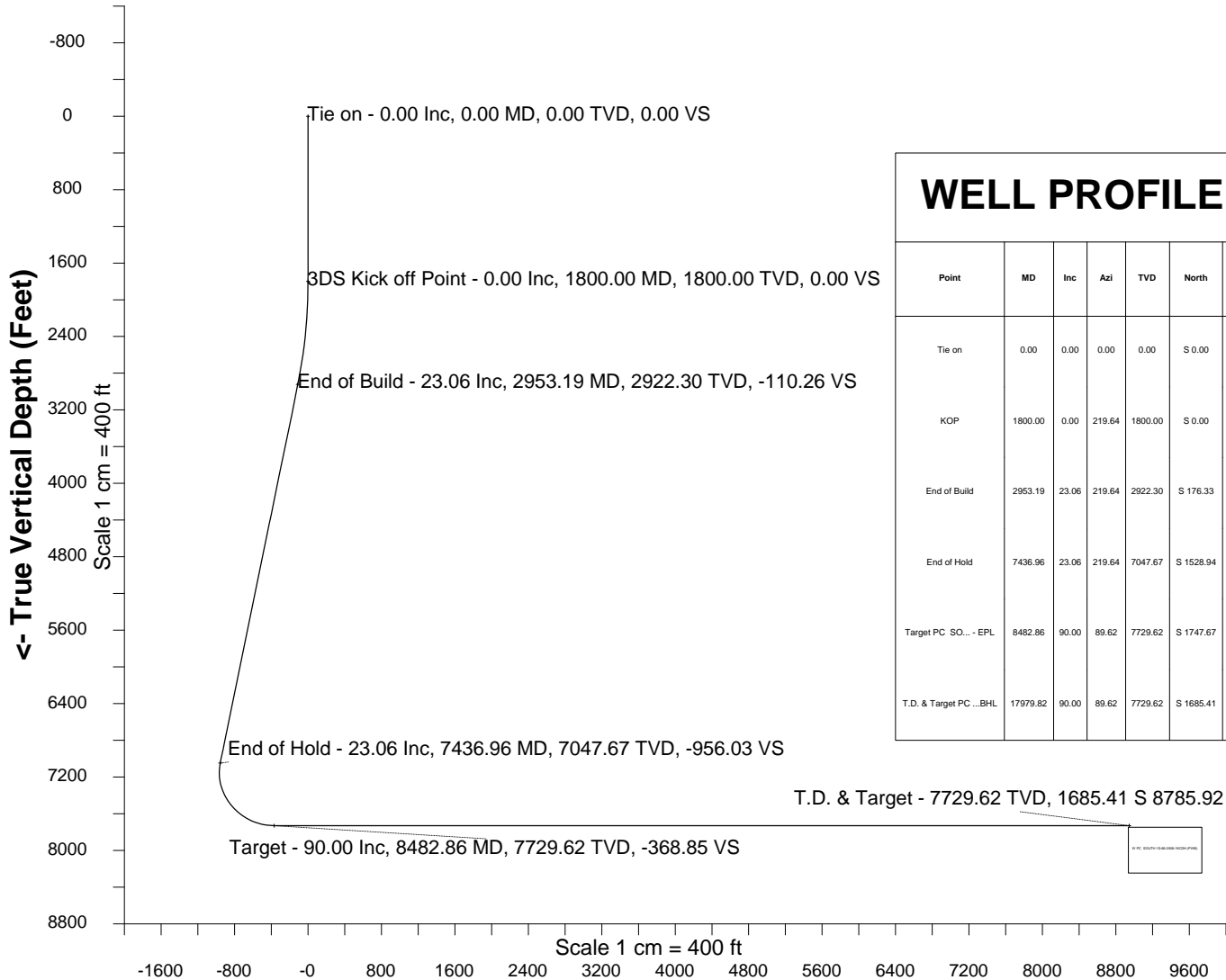
PC SOUTH 1S-66-2928-19CDH - EPL

PC SOUTH 1S-66-2928-19CDH - BHL

1600

Scale 1 cm = 800 ft

-3200



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	1800.00	0.00	219.64	1800.00	S 0.00	W 0.00	0.00	0.00
End of Build	2953.19	23.06	219.64	2922.30	S 176.33	W 146.09	2.00	-110.26
End of Hold	7436.96	23.06	219.64	7047.67	S 1528.94	W 1266.76	0.00	-956.03
Target PC SO... - EPL	8482.86	90.00	89.62	7729.62	S 1747.67	W 710.83	10.00	-368.85
T.D. & Target PC...BHL	17979.82	90.00	89.62	7729.62	S 1685.41	E 8785.92	0.00	8946.12

Azimuth 100.86 with reference 0.00 N, 0.00 E from PC SOUTH 1S-66-2928-19CDH



Wellhead Details

Name	Latitude	Longitude	Northing	Easting	North	East	Slot Elevation Above Ground
PC SOUTH 1S-66-2928-19CDH	N39 56 6.2880	W104 48 15.1560	1219963.7181	3195111.6243	119.97S	31.79E	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	1219963.72	3195111.62
1800.00	0.00	219.640	1800.00	0.00N	0.00E	==>	0.00	1219963.72	3195111.62
2953.19	23.06	219.640	2922.30	176.33S	146.09W	2.00	-110.26	1219787.40	3194965.54
7436.96	23.06	219.640	7047.67	1528.94S	1266.76W	==>	-956.03	1218434.83	3193844.91
8482.86	90.00	89.620	7729.62	1747.67S	710.83W	10.00	-368.85	1218216.10	3194400.81
17979.82	90.00	89.620	7729.62	1685.41S	8785.92E	==>	8946.12	1218278.36	3203897.28

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	219.640	1800.00	0.00N	0.00E	==>	0.00	
1900.00	2.00	219.640	1899.98	1.34S	1.11W	2.00	-0.84	
2000.00	4.00	219.640	1999.84	5.37S	4.45W	2.00	-3.36	
2100.00	6.00	219.640	2099.45	12.08S	10.01W	2.00	-7.56	
2200.00	8.00	219.640	2198.70	21.47S	17.79W	2.00	-13.42	
2300.00	10.00	219.640	2297.47	33.51S	27.77W	2.00	-20.96	
2400.00	12.00	219.640	2395.62	48.21S	39.94W	2.00	-30.14	
2500.00	14.00	219.640	2493.06	65.53S	54.29W	2.00	-40.97	
2600.00	16.00	219.640	2589.64	85.46S	70.80W	2.00	-53.44	
2700.00	18.00	219.640	2685.27	107.97S	89.46W	2.00	-67.51	
2800.00	20.00	219.640	2779.82	133.04S	110.23W	2.00	-83.19	
2900.00	22.00	219.640	2873.17	160.63S	133.09W	2.00	-100.44	
3000.00	23.06	219.640	2965.37	190.45S	157.79W	==>	-119.09	
3100.00	23.06	219.640	3057.37	220.62S	182.78W	==>	-137.95	

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5062.6ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 100.860 degrees
Bottom hole distance is 8946.12 Feet on azimuth 100.86 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by IPT
Date Printed: 25-Jan-2017



SYS DRILL
Well Design Combined Report
Wellbore: W PC SOUTH 1S-66-2928-19CDH (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	23.06	219.640	3149.38	250.78S	207.78W	==>	-156.81	
3300.00	23.06	219.640	3241.39	280.95S	232.77W	==>	-175.67	
3400.00	23.06	219.640	3333.39	311.12S	257.77W	==>	-194.54	
3500.00	23.06	219.640	3425.40	341.28S	282.76W	==>	-213.40	
3600.00	23.06	219.640	3517.41	371.45S	307.75W	==>	-232.26	
3700.00	23.06	219.640	3609.41	401.62S	332.75W	==>	-251.13	
3800.00	23.06	219.640	3701.42	431.78S	357.74W	==>	-269.99	
3900.00	23.06	219.640	3793.43	461.95S	382.74W	==>	-288.85	
4000.00	23.06	219.640	3885.44	492.12S	407.73W	==>	-307.72	
4100.00	23.06	219.640	3977.44	522.28S	432.72W	==>	-326.58	
4200.00	23.06	219.640	4069.45	552.45S	457.72W	==>	-345.44	
4300.00	23.06	219.640	4161.46	582.62S	482.71W	==>	-364.30	
4400.00	23.06	219.640	4253.46	612.78S	507.70W	==>	-383.17	
4500.00	23.06	219.640	4345.47	642.95S	532.70W	==>	-402.03	
4600.00	23.06	219.640	4437.48	673.12S	557.69W	==>	-420.89	
4700.00	23.06	219.640	4529.48	703.28S	582.69W	==>	-439.76	
4800.00	23.06	219.640	4621.49	733.45S	607.68W	==>	-458.62	
4900.00	23.06	219.640	4713.50	763.62S	632.67W	==>	-477.48	
5000.00	23.06	219.640	4805.50	793.79S	657.67W	==>	-496.35	
5100.00	23.06	219.640	4897.51	823.95S	682.66W	==>	-515.21	
5200.00	23.06	219.640	4989.52	854.12S	707.66W	==>	-534.07	
5300.00	23.06	219.640	5081.53	884.29S	732.65W	==>	-552.93	
5400.00	23.06	219.640	5173.53	914.45S	757.64W	==>	-571.80	
5500.00	23.06	219.640	5265.54	944.62S	782.64W	==>	-590.66	
5600.00	23.06	219.640	5357.55	974.79S	807.63W	==>	-609.52	
5700.00	23.06	219.640	5449.55	1004.95S	832.62W	==>	-628.39	
5800.00	23.06	219.640	5541.56	1035.12S	857.62W	==>	-647.25	
5900.00	23.06	219.640	5633.57	1065.29S	882.61W	==>	-666.11	
6000.00	23.06	219.640	5725.57	1095.45S	907.61W	==>	-684.98	
6100.00	23.06	219.640	5817.58	1125.62S	932.60W	==>	-703.84	
6200.00	23.06	219.640	5909.59	1155.79S	957.59W	==>	-722.70	
6300.00	23.06	219.640	6001.59	1185.95S	982.59W	==>	-741.56	
6400.00	23.06	219.640	6093.60	1216.12S	1007.58W	==>	-760.43	
6500.00	23.06	219.640	6185.61	1246.29S	1032.58W	==>	-779.29	
6600.00	23.06	219.640	6277.61	1276.45S	1057.57W	==>	-798.15	
6700.00	23.06	219.640	6369.62	1306.62S	1082.56W	==>	-817.02	
6800.00	23.06	219.640	6461.63	1336.79S	1107.56W	==>	-835.88	
6900.00	23.06	219.640	6553.64	1366.96S	1132.55W	==>	-854.74	
7000.00	23.06	219.640	6645.64	1397.12S	1157.54W	==>	-873.61	
7100.00	23.06	219.640	6737.65	1427.29S	1182.54W	==>	-892.47	
7200.00	23.06	219.640	6829.66	1457.46S	1207.53W	==>	-911.33	
7300.00	23.06	219.640	6921.66	1487.62S	1232.53W	==>	-930.19	
7400.00	23.06	219.640	7013.67	1517.79S	1257.52W	==>	-949.06	
7500.00	19.81	204.790	7106.39	1548.17S	1279.13W	10.00	-964.55	
7600.00	18.14	174.110	7201.19	1579.12S	1284.65W	10.00	-964.15	
7700.00	21.42	145.850	7295.49	1609.79S	1272.77W	10.00	-946.70	
7800.00	27.96	127.530	7386.43	1639.25S	1243.86W	10.00	-912.75	
7900.00	36.02	116.270	7471.25	1666.62S	1198.78W	10.00	-863.33	
8000.00	44.79	108.800	7547.36	1691.05S	1138.91W	10.00	-799.93	
8100.00	53.91	103.380	7612.47	1711.80S	1066.07W	10.00	-724.49	
8200.00	63.22	99.100	7664.58	1728.24S	982.48W	10.00	-639.29	
8300.00	72.64	95.470	7702.11	1739.88S	890.66W	10.00	-546.92	
8400.00	82.12	92.210	7723.94	1746.36S	793.42W	10.00	-450.20	
8500.00	90.00	89.620	7729.62	1747.56S	693.69W	==>	-352.04	
8600.00	90.00	89.620	7729.62	1746.91S	593.70W	==>	-253.96	
8700.00	90.00	89.620	7729.62	1746.25S	493.70W	==>	-155.87	
8800.00	90.00	89.620	7729.62	1745.59S	393.70W	==>	-57.79	
8900.00	90.00	89.620	7729.62	1744.94S	293.70W	==>	40.30	
9000.00	90.00	89.620	7729.62	1744.28S	193.70W	==>	138.38	

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Vertical Section is from 0.00N 0.00E on azimuth 100.860 degrees
Bottom hole distance is 8946.12 Feet on azimuth 100.86 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by IPT
Date Printed: 25-Jan-2017



SYSDRILL
Well Design Combined Report
Wellbore: W PC SOUTH 1S-66-2928-19CDH (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	89.620	7729.62	1743.63S	93.71W	==>	236.46	
9200.00	90.00	89.620	7729.62	1742.97S	6.29E	==>	334.55	
9300.00	90.00	89.620	7729.62	1742.32S	106.29E	==>	432.63	
9400.00	90.00	89.620	7729.62	1741.66S	206.29E	==>	530.71	
9500.00	90.00	89.620	7729.62	1741.00S	306.28E	==>	628.80	
9600.00	90.00	89.620	7729.62	1740.35S	406.28E	==>	726.88	
9700.00	90.00	89.620	7729.62	1739.69S	506.28E	==>	824.97	
9800.00	90.00	89.620	7729.62	1739.04S	606.28E	==>	923.05	
9900.00	90.00	89.620	7729.62	1738.38S	706.28E	==>	1021.13	
10000.00	90.00	89.620	7729.62	1737.73S	806.27E	==>	1119.22	
10100.00	90.00	89.620	7729.62	1737.07S	906.27E	==>	1217.30	
10200.00	90.00	89.620	7729.62	1736.42S	1006.27E	==>	1315.38	
10300.00	90.00	89.620	7729.62	1735.76S	1106.27E	==>	1413.47	
10400.00	90.00	89.620	7729.62	1735.10S	1206.27E	==>	1511.55	
10500.00	90.00	89.620	7729.62	1734.45S	1306.26E	==>	1609.63	
10600.00	90.00	89.620	7729.62	1733.79S	1406.26E	==>	1707.72	
10700.00	90.00	89.620	7729.62	1733.14S	1506.26E	==>	1805.80	
10800.00	90.00	89.620	7729.62	1732.48S	1606.26E	==>	1903.89	
10900.00	90.00	89.620	7729.62	1731.83S	1706.25E	==>	2001.97	
11000.00	90.00	89.620	7729.62	1731.17S	1806.25E	==>	2100.05	
11100.00	90.00	89.620	7729.62	1730.51S	1906.25E	==>	2198.14	
11200.00	90.00	89.620	7729.62	1729.86S	2006.25E	==>	2296.22	
11300.00	90.00	89.620	7729.62	1729.20S	2106.25E	==>	2394.30	
11400.00	90.00	89.620	7729.62	1728.55S	2206.24E	==>	2492.39	
11500.00	90.00	89.620	7729.62	1727.89S	2306.24E	==>	2590.47	
11600.00	90.00	89.620	7729.62	1727.24S	2406.24E	==>	2688.56	
11700.00	90.00	89.620	7729.62	1726.58S	2506.24E	==>	2786.64	
11800.00	90.00	89.620	7729.62	1725.93S	2606.24E	==>	2884.72	
11900.00	90.00	89.620	7729.62	1725.27S	2706.23E	==>	2982.81	
12000.00	90.00	89.620	7729.62	1724.61S	2806.23E	==>	3080.89	
12100.00	90.00	89.620	7729.62	1723.96S	2906.23E	==>	3178.97	
12200.00	90.00	89.620	7729.62	1723.30S	3006.23E	==>	3277.06	
12300.00	90.00	89.620	7729.62	1722.65S	3106.22E	==>	3375.14	
12400.00	90.00	89.620	7729.62	1721.99S	3206.22E	==>	3473.22	
12500.00	90.00	89.620	7729.62	1721.34S	3306.22E	==>	3571.31	
12600.00	90.00	89.620	7729.62	1720.68S	3406.22E	==>	3669.39	
12700.00	90.00	89.620	7729.62	1720.02S	3506.22E	==>	3767.48	
12800.00	90.00	89.620	7729.62	1719.37S	3606.21E	==>	3865.56	
12900.00	90.00	89.620	7729.62	1718.71S	3706.21E	==>	3963.64	
13000.00	90.00	89.620	7729.62	1718.06S	3806.21E	==>	4061.73	
13100.00	90.00	89.620	7729.62	1717.40S	3906.21E	==>	4159.81	
13200.00	90.00	89.620	7729.62	1716.75S	4006.21E	==>	4257.89	
13300.00	90.00	89.620	7729.62	1716.09S	4106.20E	==>	4355.98	
13400.00	90.00	89.620	7729.62	1715.44S	4206.20E	==>	4454.06	
13500.00	90.00	89.620	7729.62	1714.78S	4306.20E	==>	4552.15	
13600.00	90.00	89.620	7729.62	1714.12S	4406.20E	==>	4650.23	
13700.00	90.00	89.620	7729.62	1713.47S	4506.19E	==>	4748.31	
13800.00	90.00	89.620	7729.62	1712.81S	4606.19E	==>	4846.40	
13900.00	90.00	89.620	7729.62	1712.16S	4706.19E	==>	4944.48	
14000.00	90.00	89.620	7729.62	1711.50S	4806.19E	==>	5042.56	
14100.00	90.00	89.620	7729.62	1710.85S	4906.19E	==>	5140.65	
14200.00	90.00	89.620	7729.62	1710.19S	5006.18E	==>	5238.73	
14300.00	90.00	89.620	7729.62	1709.53S	5106.18E	==>	5336.82	
14400.00	90.00	89.620	7729.62	1708.88S	5206.18E	==>	5434.90	
14500.00	90.00	89.620	7729.62	1708.22S	5306.18E	==>	5532.98	
14600.00	90.00	89.620	7729.62	1707.57S	5406.18E	==>	5631.07	
14700.00	90.00	89.620	7729.62	1706.91S	5506.17E	==>	5729.15	
14800.00	90.00	89.620	7729.62	1706.26S	5606.17E	==>	5827.23	
14900.00	90.00	89.620	7729.62	1705.60S	5706.17E	==>	5925.32	

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Vertical Section is from 0.00N 0.00E on azimuth 100.860 degrees
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Wellbore: W PC SOUTH 1S-66-2928-19CDH (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	89.620	7729.62	1704.95S	5806.17E	==>	6023.40	
15100.00	90.00	89.620	7729.62	1704.29S	5906.16E	==>	6121.48	
15200.00	90.00	89.620	7729.62	1703.63S	6006.16E	==>	6219.57	
15300.00	90.00	89.620	7729.62	1702.98S	6106.16E	==>	6317.65	
15400.00	90.00	89.620	7729.62	1702.32S	6206.16E	==>	6415.74	
15500.00	90.00	89.620	7729.62	1701.67S	6306.16E	==>	6513.82	
15600.00	90.00	89.620	7729.62	1701.01S	6406.15E	==>	6611.90	
15700.00	90.00	89.620	7729.62	1700.36S	6506.15E	==>	6709.99	
15800.00	90.00	89.620	7729.62	1699.70S	6606.15E	==>	6808.07	
15900.00	90.00	89.620	7729.62	1699.04S	6706.15E	==>	6906.15	
16000.00	90.00	89.620	7729.62	1698.39S	6806.15E	==>	7004.24	
16100.00	90.00	89.620	7729.62	1697.73S	6906.14E	==>	7102.32	
16200.00	90.00	89.620	7729.62	1697.08S	7006.14E	==>	7200.41	
16300.00	90.00	89.620	7729.62	1696.42S	7106.14E	==>	7298.49	
16400.00	90.00	89.620	7729.62	1695.77S	7206.14E	==>	7396.57	
16500.00	90.00	89.620	7729.62	1695.11S	7306.13E	==>	7494.66	
16600.00	90.00	89.620	7729.62	1694.46S	7406.13E	==>	7592.74	
16700.00	90.00	89.620	7729.62	1693.80S	7506.13E	==>	7690.82	
16800.00	90.00	89.620	7729.62	1693.14S	7606.13E	==>	7788.91	
16900.00	90.00	89.620	7729.62	1692.49S	7706.13E	==>	7886.99	
17000.00	90.00	89.620	7729.62	1691.83S	7806.12E	==>	7985.07	
17100.00	90.00	89.620	7729.62	1691.18S	7906.12E	==>	8083.16	
17200.00	90.00	89.620	7729.62	1690.52S	8006.12E	==>	8181.24	
17300.00	90.00	89.620	7729.62	1689.87S	8106.12E	==>	8279.33	
17400.00	90.00	89.620	7729.62	1689.21S	8206.12E	==>	8377.41	
17500.00	90.00	89.620	7729.62	1688.55S	8306.11E	==>	8475.49	
17600.00	90.00	89.620	7729.62	1687.90S	8406.11E	==>	8573.58	
17700.00	90.00	89.620	7729.62	1687.24S	8506.11E	==>	8671.66	
17800.00	90.00	89.620	7729.62	1686.59S	8606.11E	==>	8769.74	
17900.00	90.00	89.620	7729.62	1685.93S	8706.10E	==>	8867.83	
17979.82	90.00	89.620	7729.62	1685.41S	8785.92E	==>	8946.12	

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 5062.6ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 100.860 degrees
Bottom hole distance is 8946.12 Feet on azimuth 100.86 degrees from Wellhead
Calculation method uses Minimum Curvature method
Prepared by IPT
Date Printed: 25-Jan-2017



Targets

Name	North[ft]	East[ft]	TVD[ft]	Latitude	Longitude	Northing	Easting
PC SOUTH 1S-66-2928-19CDH - BHL	1685.41S	8785.92E	7729.62	N39 55 48.9360	W104 46 22.5480	1218278.36	3203897.28
PC SOUTH 1S-66-2928-19CDH - EPL	1747.67S	810.83W	7729.62	N39 55 49.0800	W104 48 25.7400	1218216.10	3194300.82

Survey Tool Program

Reference	Survey Name	MD[ft]	TVD[ft]	Survey Tool	Error Model
523389	Planned	1500.00	1500.00	WdW Rate Gyro	Standard
523388	Planned	17979.82	7729.62	ISCWSA MWD	Rev 4 + SAG + FLT

Notes



SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: W PC SOUTH 1S-66-2928-19CDH (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-66-2928-19CDH (PWB)	Jan-24-2017	Jan-24-2017

Well		
Name	Government ID	Last Revised
W PC SOUTH 1S-66-2928-19CDH		Jan-24-2017

Slot						
Name	Latitude	Longitude	Grid Northing	Grid Easting	North	East
PC SOUTH 1S-66-2928-19CDH	N39 56 6.2880	W104 48 15.1560	1219963.7181	3195111.6243	119.97S	31.79E

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-66-2928-20NH	14.57	1749.87	17979.82	-41.91	17979.82	0.86	17979.82
W PC SOUTH 1S-66-2928-18NH	14.57	1804.46	17979.82	-188.59	17979.82	0.67	17979.82
W PC SOUTH 1S-66-2928-17NH	29.15	1804.46	17979.82	16.25	17979.82	1.02	17979.82
W PC NORTH 1S-66-2928-9NH	30.85	1500.11	17979.82	28.43	1500.11	3.44	17979.82
W PC NORTH 1S-66-2928-8NH	34.12	1450.12	17979.82	31.78	1450.12	3.91	17979.82
W PC NORTH 1S-66-2928-10CDH	34.12	1550.00	1550.00	31.68	1550.00	1.14	17979.82
W PC NORTH 1S-66-2928-7CDH	42.44	1400.00	17979.82	40.18	1400.00	4.00	17979.82
W PC SOUTH 1S-66-2928-16CDH	43.72	1804.46	17979.82	40.13	1837.27	1.07	17979.82
W PC NORTH 1S-66-2928-6NH	53.50	1350.17	17979.82	51.33	1350.17	4.36	17979.82
W PC SOUTH 1S-66-2928-15NH	58.29	1804.46	17979.82	54.70	1837.27	1.49	17979.82
W PC NORTH 1S-66-2928-5NH	65.94	1300.00	17979.82	63.85	1300.00	4.88	17979.82

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Coordinates are from Slot MD's are from Rig and TVD's are from Rig (Planned Datum #1 5062.6ft above Mean Sea Level)
Vertical Section is from 0.00N 0.00E on azimuth 100.860 degrees
Prepared by IPT
Date Printed: 25-Jan-2017



SYSDRILL
Closest Approach + Clearance Factor Summary Report
Wellbore: W PC SOUTH 1S-66-2928-19CDH (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-66-2928-14NH	76.50	1804.46	17979.82	72.91	1837.27	1.97	17979.82
W PC NORTH 1S-66-2928-4CDH	82.48	1250.52	17979.82	80.47	1250.52	5.08	17979.82
W PC SOUTH 1S-66-2928-13CDH	91.07	1804.46	17979.82	87.48	1837.27	2.16	17979.82
W PC NORTH 1S-66-2928-3NH	96.15	1200.55	17979.82	94.22	1200.55	5.35	17979.82
W PC SOUTH 1S-66-2928-12NH	105.64	1804.46	1800.00	102.06	1837.27	2.48	17979.82
W PC NORTH 1S-66-2928-2NH	110.05	1150.69	17979.82	108.20	1150.69	5.75	17979.82
W PC NORTH 1S-66-2928-11NH	120.22	1804.46	17979.82	116.63	1837.27	2.95	17979.82
W PC NORTH 1S-66-2928-1NH	124.11	1100.62	17979.82	122.34	1100.62	6.24	17979.82
W POLLARD #1	142.93	13860.38	13860.38	-113.53	13860.38	0.56	13860.38

