PDC ENERGY INC

Location:	COLORADO	Slot:	SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)
Field:	WELD COUNTY (NAD83/GRID)	Well:	WINDOM 01N
Facility:	SEC.24-T05N-R67W	Wellbore:	WINDOM 01N PWB

Plot reference wellpath is WINDOM 01N (REV-A.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to (4997'GL+28.5'KB = 5026'RKB) (RKB)	North Reference: Grid north
Reference wellpath measured depths are referenced to (4997'GL+28.5'KB = 5026'RKB) (RKB)	Scale: True distance
(4997'GL+28.5'KB = 5026'RKB) (RKB) to Mean Sea Level: 5025.5 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)): 0 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: martsam01 on 2024-03-25; Database: WA_Denver

Location Information

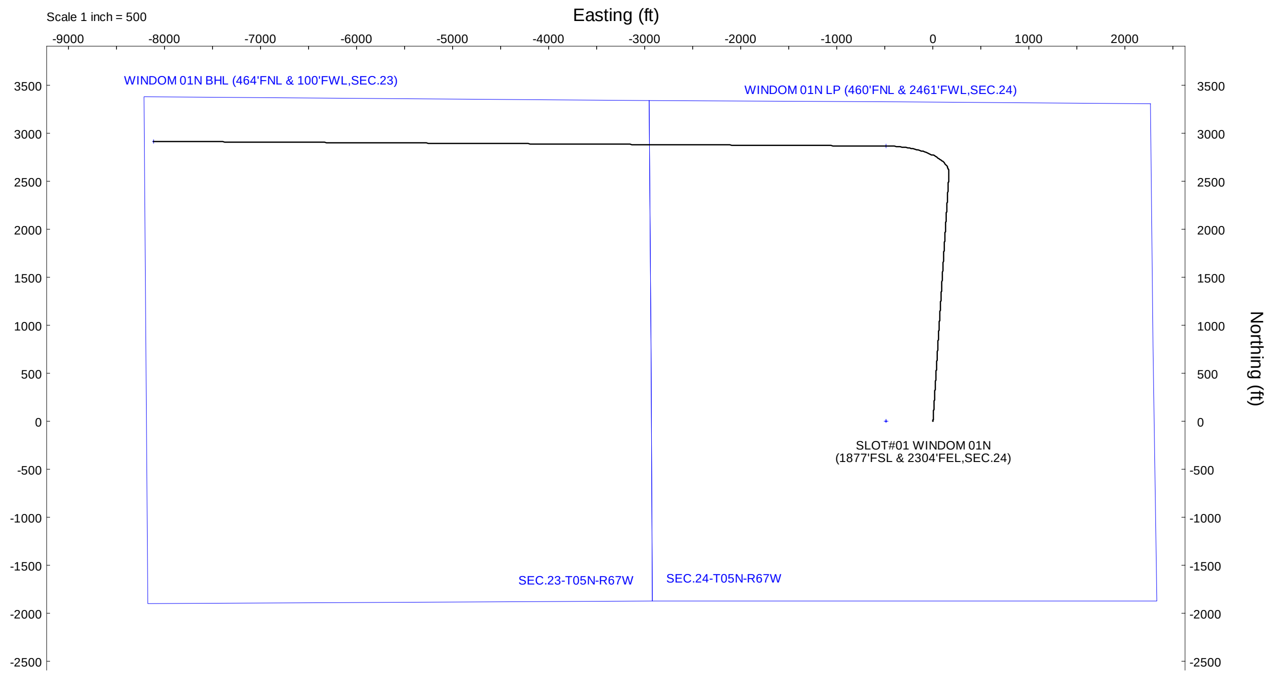
Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.24-T05N-R67W			3183745.419	1383040.892	40°22'58.7028"N	104°50'25.4976"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)	0.00	0.00	3183745.419	1383040.892	40°22'58.7028"N	104°50'25.4976"W
(4997'GL+28.5'KB = 5026'RKB) (RKB) to Ground level (At Slot: SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24))					5025.5ft	
Mean Sea Level to Ground level (At Slot: SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24))					0ft	
(4997'GL+28.5'KB = 5026'RKB) (RKB) to Mean Sea Level					5025.5ft	

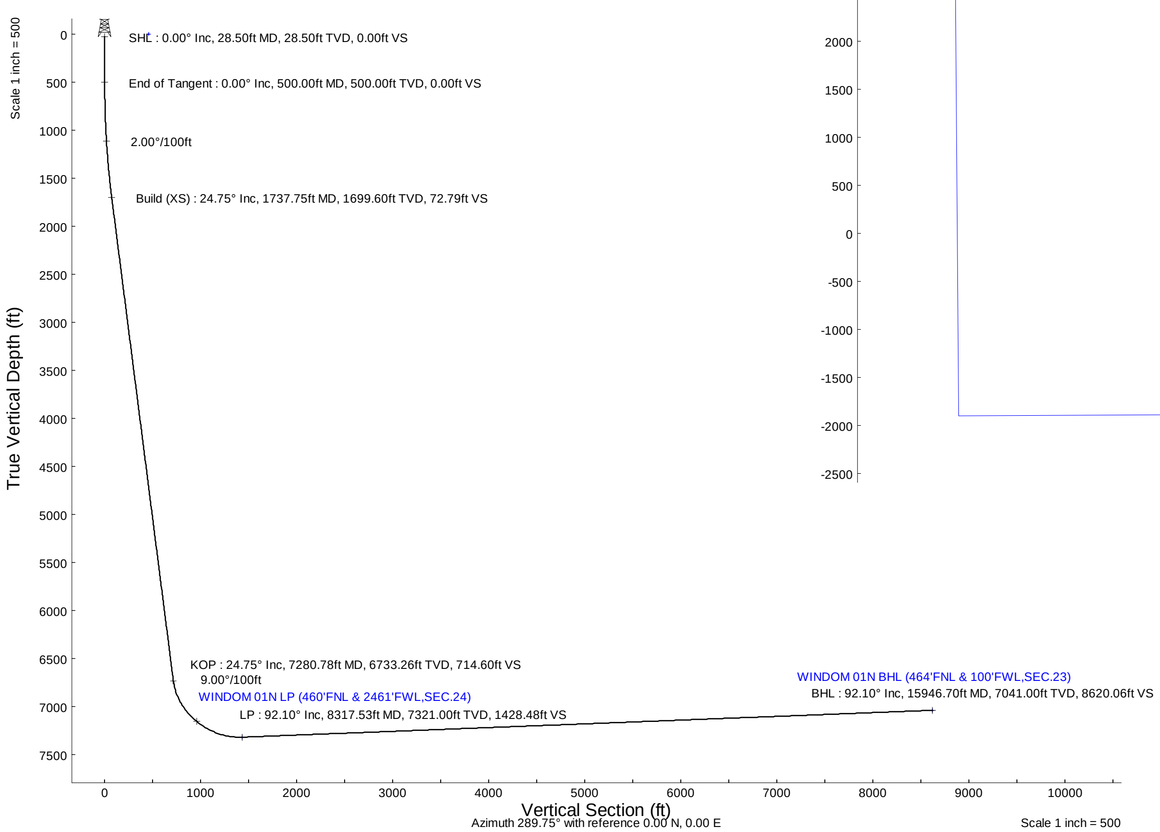
Well Profile Data

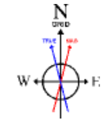
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
SHL	28.50	0.000	3.700	28.50	0.00	0.00	0.00	0.00
End of Tangent	500.00	0.000	3.700	500.00	0.00	0.00	0.00	0.00
Build (XS)	1737.75	24.755	3.700	1699.60	262.71	16.99	2.00	72.79
KOP	7280.78	24.755	3.700	6733.26	2578.94	166.76	0.00	714.60
LP	8317.53	92.103	270.361	7321.00	2865.03	-489.03	9.00	1428.48
BHL	15946.70	92.103	270.361	7041.00	2913.11	-8112.91	0.00	8620.06

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.23-T05N-R67W	N/A	0.00	0.00	-489.03	3183256.41	1383040.89	40°22'58.7387"N	104°50'31.8167"W
SEC.24-T05N-R67W	N/A	0.00	0.00	-489.03	3183256.41	1383040.89	40°22'58.7387"N	104°50'31.8167"W
SEC.19-T05N-R66W	N/A	4.00	0.13	-189.14	3183556.28	1383041.03	40°22'58.7180"N	104°50'27.9416"W
SEC.20-T05N-R66W	N/A	4.00	0.13	-189.14	3183556.28	1383041.03	40°22'58.7180"N	104°50'27.9416"W
WINDOM 01N BHL (464'FNL & 100'FWL,SEC.23)	15946.70	7041.00	2913.11	-8112.91	3175632.86	1385953.88	40°23'28.0716"N	104°52'10.0632"W
WINDOM 01N BPZ (464'FNL&150'FWL Sec.23)	N/A	7041.00	2912.74	-8062.76	3175683.00	1385953.51	40°23'28.0644"N	104°52'9.4152"W
WINDOM 01N LP (460'FNL & 2461'FWL,SEC.24)	8317.53	7321.00	2865.03	-489.03	3183256.41	1385905.80	40°23'27.0492"N	104°50'31.5420"W







HDGM2024v1.0 (1900.0 to 2025.0) Dip: 66.52° Field: 51651.2 nT
Magnetic North is 7.77 degrees East of True North (at 3/12/2024)
Grid North is 0.43 degrees East of True North
To correct azimuth from True to Grid subtract 0.43 degrees
To correct azimuth from Magnetic to Grid add 7.34 degrees

REFERENCE WELLPATH IDENTIFICATION

Operator	**PDC ENERGY INC**	Well	**WINDOM 01N**
Field	**WELD COUNTY (NAD83/GRID)**	API/Legal	
Facility	**SEC.24-T05N-R67W**	Wellbore	**WINDOM 01N PWB**
Slot	**SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)**		

REPORT SETUP INFORMATION

Projection System	**NAD83 / Lambert Colorado SP, Northern Zone (501), US feet**	Software System	**WellArchitect® 6.0**
North Reference	**Grid**	User	**Martsam01**
Scale	**0.999960**	Report Generated	**6/4/2024** at **3:33:00 PM**
Convergence at slot	**0.43° East**	Database	**WA_Denver**

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[US ft]**	**Northing[US ft]**	**Latitude**	**Longitude**
Slot Location	0.00	0.00	3183745.42	1383040.89	**40.3829730°**	**-104.8404160°**
Facility Reference Pt			3183745.42	1383040.89	**40.3829730°**	**-104.8404160°**
Field Reference Pt			3296400.32	1413291.61	**40.4630000°**	**-104.4347500°**

WELLPATH DATUM

Calculation method	**Minimum curvature**	(4997'GL+28.5'KB = 5026'RKB) (RKB) to Facility Vertical Datum	**5025.50ft**
Horizontal Reference Pt	**Slot**	(4997'GL+28.5'KB = 5026'RKB) (RKB) to Mean Sea Level	**5025.50ft**
Vertical Reference Pt	**(4997'GL+28.5'KB = 5026'RKB) (RKB)**	(4997'GL+28.5'KB = 5026'RKB) (RKB) to Ground Level at Slot (SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24))	**5025.50ft**
MD Reference Pt	**(4997'GL+28.5'KB = 5026'RKB) (RKB)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**289.75°**

Planned Wellpath Report

WINDOM 01N (REV-A.0) PWP

REFERENCE WELLPATH IDENTIFICATION			
Operator	**PDC ENERGY INC**	Well	**WINDOM 01N**
Field	**WELD COUNTY (NAD83/GRID)**	API/Legal	
Facility	**SEC.24-T05N-R67W**	Wellbore	**WINDOM 01N PWB**
Slot	**SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)**		

WELLPATH DATA (166 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	3.703	0.00	0.00	0.00	0.00	40.3829730	-104.8404160	0.00	
28.50	0.000	3.703	28.50	0.00	0.00	0.00	40.3829730	-104.8404160	0.00	SHL
100.00†	0.000	3.703	100.00	0.00	0.00	0.00	40.3829730	-104.8404160	0.00	
200.00†	0.000	3.703	200.00	0.00	0.00	0.00	40.3829730	-104.8404160	0.00	
300.00†	0.000	3.703	300.00	0.00	0.00	0.00	40.3829730	-104.8404160	0.00	
400.00†	0.000	3.703	400.00	0.00	0.00	0.00	40.3829730	-104.8404160	0.00	
500.00	0.000	3.703	500.00	0.00	0.00	0.00	40.3829730	-104.8404160	0.00	End of Tangent
600.00†	2.000	3.703	599.98	0.48	1.74	0.11	40.3829778	-104.8404155	2.00	
700.00†	4.000	3.703	699.84	1.93	6.96	0.45	40.3829921	-104.8404142	2.00	
800.00†	6.000	3.703	799.45	4.34	15.66	1.01	40.3830160	-104.8404119	2.00	
900.00†	8.000	3.703	898.70	7.71	27.82	1.80	40.3830493	-104.8404088	2.00	
1000.00†	10.000	3.703	997.47	12.03	43.43	2.81	40.3830922	-104.8404048	2.00	
1100.00†	12.000	3.703	1095.62	17.31	62.47	4.04	40.3831444	-104.8403998	2.00	
1200.00†	14.000	3.703	1193.06	23.53	84.92	5.50	40.3832060	-104.8403940	2.00	
1300.00†	16.000	3.703	1289.64	30.68	110.75	7.17	40.3832768	-104.8403873	2.00	
1400.00†	18.000	3.703	1385.27	38.76	139.92	9.06	40.3833569	-104.8403798	2.00	
1500.00†	20.000	3.703	1479.82	47.76	172.41	11.16	40.3834460	-104.8403713	2.00	
1600.00†	22.000	3.703	1573.17	57.67	208.17	13.47	40.3835441	-104.8403621	2.00	
1700.00†	24.000	3.703	1665.21	68.47	247.16	16.00	40.3836511	-104.8403520	2.00	
1737.72	24.754	3.703	1699.57	72.78	262.69	17.00	40.3836937	-104.8403480	2.00	Build (XS)
1800.00†	24.754	3.703	1756.13	79.99	288.72	18.68	40.3837651	-104.8403412	0.00	
1900.00†	24.754	3.703	1846.94	91.56	330.50	21.39	40.3838797	-104.8403304	0.00	
2000.00†	24.754	3.703	1937.75	103.14	372.29	24.09	40.3839944	-104.8403196	0.00	
2100.00†	24.754	3.703	2028.56	114.71	414.07	26.80	40.3841090	-104.8403088	0.00	
2200.00†	24.754	3.703	2119.37	126.29	455.86	29.50	40.3842237	-104.8402979	0.00	
2300.00†	24.754	3.703	2210.18	137.87	497.64	32.21	40.3843383	-104.8402871	0.00	
2400.00†	24.754	3.703	2301.00	149.44	539.43	34.91	40.3844529	-104.8402763	0.00	
2500.00†	24.754	3.703	2391.81	161.02	581.22	37.61	40.3845676	-104.8402655	0.00	
2600.00†	24.754	3.703	2482.62	172.59	623.00	40.32	40.3846822	-104.8402546	0.00	
2700.00†	24.754	3.703	2573.43	184.17	664.79	43.02	40.3847968	-104.8402438	0.00	
2800.00†	24.754	3.703	2664.24	195.75	706.57	45.73	40.3849115	-104.8402330	0.00	
2900.00†	24.754	3.703	2755.05	207.32	748.36	48.43	40.3850261	-104.8402222	0.00	
3000.00†	24.754	3.703	2845.86	218.90	790.14	51.14	40.3851408	-104.8402114	0.00	
3100.00†	24.754	3.703	2936.67	230.48	831.93	53.84	40.3852554	-104.8402005	0.00	
3200.00†	24.754	3.703	3027.48	242.05	873.71	56.54	40.3853700	-104.8401897	0.00	
3300.00†	24.754	3.703	3118.30	253.63	915.50	59.25	40.3854847	-104.8401789	0.00	
3400.00†	24.754	3.703	3209.11	265.20	957.29	61.95	40.3855993	-104.8401681	0.00	
3500.00†	24.754	3.703	3299.92	276.78	999.07	64.66	40.3857140	-104.8401572	0.00	
3600.00†	24.754	3.703	3390.73	288.36	1040.86	67.36	40.3858286	-104.8401464	0.00	
3700.00†	24.754	3.703	3481.54	299.93	1082.64	70.06	40.3859432	-104.8401356	0.00	
3800.00†	24.754	3.703	3572.35	311.51	1124.43	72.77	40.3860579	-104.8401248	0.00	
3900.00†	24.754	3.703	3663.16	323.08	1166.21	75.47	40.3861725	-104.8401139	0.00	
4000.00†	24.754	3.703	3753.97	334.66	1208.00	78.18	40.3862872	-104.8401031	0.00	
4100.00†	24.754	3.703	3844.78	346.24	1249.78	80.88	40.3864018	-104.8400923	0.00	
4200.00†	24.754	3.703	3935.60	357.81	1291.57	83.59	40.3865164	-104.8400815	0.00	

PDC ENERGY

Planned Wellpath Report

WINDOM 01N (REV-A.0) PWP

Baker Hughes

REFERENCE WELLPATH IDENTIFICATION			
Operator	**PDC ENERGY INC**	Well	**WINDOM 01N**
Field	**WELD COUNTY (NAD83/GRID)**	API/Legal	
Facility	**SEC.24-T05N-R67W**	Wellbore	**WINDOM 01N PWB**
Slot	**SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)**		

WELLPATH DATA (166 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4300.00†	24.754	3.703	4026.41	369.39	1333.36	86.29	40.3866311	-104.8400707	0.00	
4400.00†	24.754	3.703	4117.22	380.97	1375.14	88.99	40.3867457	-104.8400598	0.00	
4500.00†	24.754	3.703	4208.03	392.54	1416.93	91.70	40.3868603	-104.8400490	0.00	
4600.00†	24.754	3.703	4298.84	404.12	1458.71	94.40	40.3869750	-104.8400382	0.00	
4700.00†	24.754	3.703	4389.65	415.69	1500.50	97.11	40.3870896	-104.8400274	0.00	
4800.00†	24.754	3.703	4480.46	427.27	1542.28	99.81	40.3872043	-104.8400165	0.00	
4900.00†	24.754	3.703	4571.27	438.85	1584.07	102.52	40.3873189	-104.8400057	0.00	
5000.00†	24.754	3.703	4662.08	450.42	1625.85	105.22	40.3874335	-104.8399949	0.00	
5100.00†	24.754	3.703	4752.90	462.00	1667.64	107.92	40.3875482	-104.8399841	0.00	
5200.00†	24.754	3.703	4843.71	473.57	1709.42	110.63	40.3876628	-104.8399732	0.00	
5300.00†	24.754	3.703	4934.52	485.15	1751.21	113.33	40.3877775	-104.8399624	0.00	
5400.00†	24.754	3.703	5025.33	496.73	1793.00	116.04	40.3878921	-104.8399516	0.00	
5500.00†	24.754	3.703	5116.14	508.30	1834.78	118.74	40.3880067	-104.8399408	0.00	
5600.00†	24.754	3.703	5206.95	519.88	1876.57	121.45	40.3881214	-104.8399299	0.00	
5700.00†	24.754	3.703	5297.76	531.46	1918.35	124.15	40.3882360	-104.8399191	0.00	
5800.00†	24.754	3.703	5388.57	543.03	1960.14	126.85	40.3883507	-104.8399083	0.00	
5900.00†	24.754	3.703	5479.38	554.61	2001.92	129.56	40.3884653	-104.8398975	0.00	
6000.00†	24.754	3.703	5570.20	566.18	2043.71	132.26	40.3885799	-104.8398867	0.00	
6100.00†	24.754	3.703	5661.01	577.76	2085.49	134.97	40.3886946	-104.8398758	0.00	
6200.00†	24.754	3.703	5751.82	589.34	2127.28	137.67	40.3888092	-104.8398650	0.00	
6300.00†	24.754	3.703	5842.63	600.91	2169.07	140.37	40.3889238	-104.8398542	0.00	
6400.00†	24.754	3.703	5933.44	612.49	2210.85	143.08	40.3890385	-104.8398434	0.00	
6500.00†	24.754	3.703	6024.25	624.06	2252.64	145.78	40.3891531	-104.8398325	0.00	
6600.00†	24.754	3.703	6115.06	635.64	2294.42	148.49	40.3892678	-104.8398217	0.00	
6700.00†	24.754	3.703	6205.87	647.22	2336.21	151.19	40.3893824	-104.8398109	0.00	
6800.00†	24.754	3.703	6296.68	658.79	2377.99	153.90	40.3894970	-104.8398001	0.00	
6900.00†	24.754	3.703	6387.50	670.37	2419.78	156.60	40.3896117	-104.8397892	0.00	
7000.00†	24.754	3.703	6478.31	681.95	2461.56	159.30	40.3897263	-104.8397784	0.00	
7100.00†	24.754	3.703	6569.12	693.52	2503.35	162.01	40.3898410	-104.8397676	0.00	
7200.00†	24.754	3.703	6659.93	705.10	2545.14	164.71	40.3899556	-104.8397568	0.00	
7280.77	24.754	3.703	6733.28	714.45	2578.89	166.90	40.3900482	-104.8397480	0.00	KOP
7300.00†	24.746	359.568	6750.74	716.95	2586.93	167.13	40.3900703	-104.8397470	9.00	
7400.00†	26.472	339.032	6841.09	738.76	2628.76	158.98	40.3901852	-104.8397751	9.00	
7500.00†	30.673	322.302	6929.04	774.87	2669.83	135.35	40.3902985	-104.8398588	9.00	
7600.00†	36.500	309.844	7012.41	824.40	2709.15	96.84	40.3904072	-104.8399960	9.00	
7700.00†	43.295	300.610	7089.15	886.14	2745.74	44.39	40.3905087	-104.8401833	9.00	
7800.00†	50.663	293.520	7157.37	958.55	2778.70	-20.71	40.3906005	-104.8404162	9.00	
7900.00†	58.378	287.816	7215.40	1039.85	2807.22	-96.86	40.3906803	-104.8406888	9.00	
8000.00†	66.306	283.001	7261.81	1128.06	2830.59	-182.18	40.3907462	-104.8409944	9.00	
8100.00†	74.367	278.744	7295.44	1220.98	2848.25	-274.58	40.3907966	-104.8413256	9.00	
8200.00†	82.503	274.813	7315.48	1316.34	2859.75	-371.77	40.3908301	-104.8416742	9.00	
8300.00†	90.672	271.027	7321.43	1411.78	2864.82	-471.36	40.3908461	-104.8420316	9.00	
8317.68	92.117	270.361	7321.00[1]	1428.48	2865.03	-489.03	40.3908470	-104.8420950	9.00	LP
8400.00†	92.117	270.361	7317.96	1506.08	2865.55	-571.29	40.3908501	-104.8423903	0.00	
8500.00†	92.117	270.361	7314.26	1600.35	2866.18	-671.22	40.3908539	-104.8427490	0.00	

REFERENCE WELLPATH IDENTIFICATION

Operator	**PDC ENERGY INC**	Well	**WINDOM 01N**
Field	**WELD COUNTY (NAD83/GRID)**	API/Legal	
Facility	**SEC.24-T05N-R67W**	Wellbore	**WINDOM 01N PWB**
Slot	**SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)**		

WELLPATH DATA (166 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8600.00†	92.117	270.361	7310.57	1694.61	2866.81	-771.15	40.3908576	-104.8431077	0.00	
8700.00†	92.117	270.361	7306.88	1788.87	2867.44	-871.08	40.3908614	-104.8434664	0.00	
8800.00†	92.117	270.361	7303.18	1883.14	2868.07	-971.01	40.3908651	-104.8438251	0.00	
8900.00†	92.117	270.361	7299.49	1977.40	2868.70	-1070.94	40.3908689	-104.8441839	0.00	
9000.00†	92.117	270.361	7295.79	2071.66	2869.33	-1170.87	40.3908726	-104.8445426	0.00	
9100.00†	92.117	270.361	7292.10	2165.92	2869.96	-1270.80	40.3908764	-104.8449013	0.00	
9200.00†	92.117	270.361	7288.40	2260.19	2870.59	-1370.73	40.3908802	-104.8452600	0.00	
9300.00†	92.117	270.361	7284.71	2354.45	2871.22	-1470.66	40.3908839	-104.8456187	0.00	
9400.00†	92.117	270.361	7281.01	2448.71	2871.85	-1570.59	40.3908877	-104.8459774	0.00	
9500.00†	92.117	270.361	7277.32	2542.98	2872.48	-1670.52	40.3908914	-104.8463361	0.00	
9600.00†	92.117	270.361	7273.63	2637.24	2873.11	-1770.45	40.3908952	-104.8466948	0.00	
9700.00†	92.117	270.361	7269.93	2731.50	2873.73	-1870.38	40.3908989	-104.8470535	0.00	
9800.00†	92.117	270.361	7266.24	2825.77	2874.36	-1970.31	40.3909027	-104.8474123	0.00	
9900.00†	92.117	270.361	7262.54	2920.03	2874.99	-2070.24	40.3909064	-104.8477710	0.00	
10000.00†	92.117	270.361	7258.85	3014.29	2875.62	-2170.17	40.3909101	-104.8481297	0.00	
10100.00†	92.117	270.361	7255.15	3108.56	2876.25	-2270.10	40.3909139	-104.8484884	0.00	
10200.00†	92.117	270.361	7251.46	3202.82	2876.88	-2370.03	40.3909176	-104.8488471	0.00	
10300.00†	92.117	270.361	7247.77	3297.08	2877.51	-2469.96	40.3909214	-104.8492058	0.00	
10400.00†	92.117	270.361	7244.07	3391.35	2878.14	-2569.89	40.3909251	-104.8495645	0.00	
10500.00†	92.117	270.361	7240.38	3485.61	2878.77	-2669.82	40.3909289	-104.8499232	0.00	
10600.00†	92.117	270.361	7236.68	3579.87	2879.40	-2769.75	40.3909326	-104.8502819	0.00	
10700.00†	92.117	270.361	7232.99	3674.14	2880.03	-2869.68	40.3909363	-104.8506407	0.00	
10800.00†	92.117	270.361	7229.29	3768.40	2880.66	-2969.61	40.3909401	-104.8509994	0.00	
10900.00†	92.117	270.361	7225.60	3862.66	2881.29	-3069.54	40.3909438	-104.8513581	0.00	
11000.00†	92.117	270.361	7221.90	3956.92	2881.92	-3169.47	40.3909475	-104.8517168	0.00	
11100.00†	92.117	270.361	7218.21	4051.19	2882.55	-3269.39	40.3909513	-104.8520755	0.00	
11200.00†	92.117	270.361	7214.52	4145.45	2883.18	-3369.32	40.3909550	-104.8524342	0.00	
11300.00†	92.117	270.361	7210.82	4239.71	2883.81	-3469.25	40.3909587	-104.8527929	0.00	
11400.00†	92.117	270.361	7207.13	4333.98	2884.44	-3569.18	40.3909625	-104.8531516	0.00	
11500.00†	92.117	270.361	7203.43	4428.24	2885.06	-3669.11	40.3909662	-104.8535103	0.00	
11600.00†	92.117	270.361	7199.74	4522.50	2885.69	-3769.04	40.3909699	-104.8538691	0.00	
11700.00†	92.117	270.361	7196.04	4616.77	2886.32	-3868.97	40.3909736	-104.8542278	0.00	
11800.00†	92.117	270.361	7192.35	4711.03	2886.95	-3968.90	40.3909774	-104.8545865	0.00	
11900.00†	92.117	270.361	7188.66	4805.29	2887.58	-4068.83	40.3909811	-104.8549452	0.00	
12000.00†	92.117	270.361	7184.96	4899.56	2888.21	-4168.76	40.3909848	-104.8553039	0.00	
12100.00†	92.117	270.361	7181.27	4993.82	2888.84	-4268.69	40.3909885	-104.8556626	0.00	
12200.00†	92.117	270.361	7177.57	5088.08	2889.47	-4368.62	40.3909922	-104.8560213	0.00	
12300.00†	92.117	270.361	7173.88	5182.35	2890.10	-4468.55	40.3909960	-104.8563800	0.00	
12400.00†	92.117	270.361	7170.18	5276.61	2890.73	-4568.48	40.3909997	-104.8567388	0.00	
12500.00†	92.117	270.361	7166.49	5370.87	2891.36	-4668.41	40.3910034	-104.8570975	0.00	
12600.00†	92.117	270.361	7162.79	5465.13	2891.99	-4768.34	40.3910071	-104.8574562	0.00	
12700.00†	92.117	270.361	7159.10	5559.40	2892.62	-4868.27	40.3910108	-104.8578149	0.00	
12800.00†	92.117	270.361	7155.41	5653.66	2893.25	-4968.20	40.3910145	-104.8581736	0.00	
12900.00†	92.117	270.361	7151.71	5747.92	2893.88	-5068.13	40.3910183	-104.8585323	0.00	
13000.00†	92.117	270.361	7148.02	5842.19	2894.51	-5168.06	40.3910220	-104.8588910	0.00	

REFERENCE WELLPATH IDENTIFICATION			
Operator	**PDC ENERGY INC**	Well	**WINDOM 01N**
Field	**WELD COUNTY (NAD83/GRID)**	API/Legal	
Facility	**SEC.24-T05N-R67W**	Wellbore	**WINDOM 01N PWB**
Slot	**SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)**		

WELLPATH DATA (166 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13100.00†	92.117	270.361	7144.32	5936.45	2895.14	-5267.99	40.3910257	-104.8592497	0.00	
13200.00†	92.117	270.361	7140.63	6030.71	2895.77	-5367.92	40.3910294	-104.8596085	0.00	
13300.00†	92.117	270.361	7136.93	6124.98	2896.40	-5467.85	40.3910331	-104.8599672	0.00	
13400.00†	92.117	270.361	7133.24	6219.24	2897.02	-5567.78	40.3910368	-104.8603259	0.00	
13500.00†	92.117	270.361	7129.54	6313.50	2897.65	-5667.71	40.3910405	-104.8606846	0.00	
13600.00†	92.117	270.361	7125.85	6407.77	2898.28	-5767.64	40.3910442	-104.8610433	0.00	
13700.00†	92.117	270.361	7122.16	6502.03	2898.91	-5867.57	40.3910479	-104.8614020	0.00	
13800.00†	92.117	270.361	7118.46	6596.29	2899.54	-5967.50	40.3910516	-104.8617607	0.00	
13900.00†	92.117	270.361	7114.77	6690.56	2900.17	-6067.43	40.3910553	-104.8621194	0.00	
14000.00†	92.117	270.361	7111.07	6784.82	2900.80	-6167.36	40.3910590	-104.8624782	0.00	
14100.00†	92.117	270.361	7107.38	6879.08	2901.43	-6267.29	40.3910627	-104.8628369	0.00	
14200.00†	92.117	270.361	7103.68	6973.35	2902.06	-6367.22	40.3910664	-104.8631956	0.00	
14300.00†	92.117	270.361	7099.99	7067.61	2902.69	-6467.15	40.3910701	-104.8635543	0.00	
14400.00†	92.117	270.361	7096.30	7161.87	2903.32	-6567.08	40.3910738	-104.8639130	0.00	
14500.00†	92.117	270.361	7092.60	7256.13	2903.95	-6667.01	40.3910775	-104.8642717	0.00	
14600.00†	92.117	270.361	7088.91	7350.40	2904.58	-6766.94	40.3910812	-104.8646304	0.00	
14700.00†	92.117	270.361	7085.21	7444.66	2905.21	-6866.87	40.3910849	-104.8649891	0.00	
14800.00†	92.117	270.361	7081.52	7538.92	2905.84	-6966.80	40.3910886	-104.8653479	0.00	
14900.00†	92.117	270.361	7077.82	7633.19	2906.47	-7066.73	40.3910923	-104.8657066	0.00	
15000.00†	92.117	270.361	7074.13	7727.45	2907.10	-7166.66	40.3910960	-104.8660653	0.00	
15100.00†	92.117	270.361	7070.43	7821.71	2907.73	-7266.58	40.3910997	-104.8664240	0.00	
15200.00†	92.117	270.361	7066.74	7915.98	2908.35	-7366.51	40.3911033	-104.8667827	0.00	
15300.00†	92.117	270.361	7063.05	8010.24	2908.98	-7466.44	40.3911070	-104.8671414	0.00	
15400.00†	92.117	270.361	7059.35	8104.50	2909.61	-7566.37	40.3911107	-104.8675001	0.00	
15500.00†	92.117	270.361	7055.66	8198.77	2910.24	-7666.30	40.3911144	-104.8678589	0.00	
15600.00†	92.117	270.361	7051.96	8293.03	2910.87	-7766.23	40.3911181	-104.8682176	0.00	
15700.00†	92.117	270.361	7048.27	8387.29	2911.50	-7866.16	40.3911218	-104.8685763	0.00	
15800.00†	92.117	270.361	7044.57	8481.56	2912.13	-7966.09	40.3911254	-104.8689350	0.00	
15896.74	92.117	270.361	7041.00[2]	8572.74	2912.74	-8062.76	40.3911290	-104.8692820	0.00	BPZ
15900.00†	92.117	270.361	7040.88	8575.82	2912.76	-8066.02	40.3911291	-104.8692937	0.00	
15946.74	92.117	270.361	7039.15	8619.87	2913.06	-8112.73	40.3911308	-104.8694614	0.00	BHL (464'FNL & 100'FWL,SEC.23)

Planned Wellpath Report

WINDOM 01N (REV-A.0) PWP

REFERENCE WELLPATH IDENTIFICATION

Operator	**PDC ENERGY INC**	Well	**WINDOM 01N**
Field	**WELD COUNTY (NAD83/GRID)**	API/Legal	
Facility	**SEC.24-T05N-R67W**	Wellbore	**WINDOM 01N PWB**
Slot	**SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)**		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.23-T05N-R67W	N/A	0.00	0.00	-489.03	3183256.41	1383040.89	40.3829830	-104.8421713	polygon
	2D Polygon: dimensions not calculated								
SEC.24-T05N-R67W	N/A	0.00	0.00	-489.03	3183256.41	1383040.89	40.3829830	-104.8421713	polygon
	2D Polygon: dimensions not calculated								
SEC.19-T05N-R66W	N/A	4.00	0.13	-189.14	3183556.28	1383041.03	40.3829772	-104.8410949	polygon
	2D Polygon: dimensions not calculated								
SEC.20-T05N-R66W	N/A	4.00	0.13	-189.14	3183556.28	1383041.03	40.3829772	-104.8410949	polygon
	2D Polygon: dimensions not calculated								
WINDOM 01N BHL (464'FNL & 100'FWL,SEC.23)	N/A	7041.00	2913.11	-8112.91	3175632.86	1385953.88	**40.3911310**	**-104.8694620**	point
2) WINDOM 01N BPZ (464'FNL&150'FWL Sec.23)	15896.74	7041.00	2912.74	-8062.76	3175683.00	1385953.51	**40.3911290**	**-104.8692820**	point
1) WINDOM 01N LP (460'FNL & 2461'FWL,SEC.24)	8317.68	7321.00	2865.03	-489.03	3183256.41	1385905.80	**40.3908470**	**-104.8420950**	point

SURVEY PROGRAM - Ref Wellbore: WINDOM 01N PWB Ref Wellpath: WINDOM 01N (REV-A.0) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
28.50	1950.00	OWSG MWD rev2 - Standard		WINDOM 01N PWB
1950.00	15946.74	OWSG MWD rev2 (MS+IFR1)		WINDOM 01N PWB

REFERENCE WELLPATH IDENTIFICATION

Operator	**PDC ENERGY INC**	Well	**WINDOM 01N**
Field	**WELD COUNTY (NAD83/GRID)**	API/Legal	
Facility	**SEC.24-T05N-R67W**	Wellbore	**WINDOM 01N PWB**
Slot	**SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)**		

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
28.50	0.000	3.703	28.50	SHL
500.00	0.000	3.703	500.00	End of Tangent
1737.72	24.754	3.703	1699.57	Build (XS)
7280.77	24.754	3.703	6733.28	KOP
8317.68	92.117	270.361	7321.00	LP
15896.74	92.117	270.361	7041.00	BPZ
15946.74	92.117	270.361	7039.15	BHL (464'FNL & 100'FWL,SEC.23)

Closest Approach Clearance Summary Report

WINDOM 01N (REV-A.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)

REFERENCE WELLPATH IDENTIFICATION

Operator	**PDC ENERGY INC**	Well	**WINDOM 01N**
Field	**WELD COUNTY (NAD83/GRID)**	API/Legal	
Facility	**SEC.24-T05N-R67W**	Wellbore	**WINDOM 01N PWB**
Slot	**SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)**		

REPORT SETUP INFORMATION

Projection System	**NAD83 / Lambert Colorado SP, Northern Zone (501), US feet**	Software System	**WellArchitect® 6.0**
North Reference	**Grid**	User	**Guenaler**
Scale	**0.999960**	Report Generated	**5/2/2024** at **9:16:30 AM**
Convergence at slot	**0.43° East**	Database	**WA_Denver**

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	3183745.42	1383040.89	**40°22'58.7028"N**	**104°50'25.4976"W**
Facility Reference Pt			3183745.42	1383040.89	**40°22'58.7028"N**	**104°50'25.4976"W**
Field Reference Pt			3296400.32	1413291.61	**40°27'46.8000"N**	**104°26'5.1000"W**

WELLPATH DATUM

Calculation method	**Minimum Curvature**	(4997'GL+28.5'KB = 5026'RKB) (RKB) to Facility Vertical Datum	**5025.50ft**
Horizontal Reference Pt	**Slot**	(4997'GL+28.5'KB = 5026'RKB) (RKB) to Mean Sea Level	**5025.50ft**
Vertical Reference Pt	**(4997'GL+28.5'KB = 5026'RKB) (RKB)**	(4997'GL+28.5'KB = 5026'RKB) (RKB) to Ground Level at Slot (SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24))	**5025.50ft**
MD Reference Pt	**(4997'GL+28.5'KB = 5026'RKB) (RKB)**		
Field Vertical Reference	**Mean Sea Level**		

POSITIONAL UNCERTAINTY CALCULATION SETTINGS

Ellipse Confidence Limit	**3.50 Std Dev**	Ellipse Start MD	**28.50ft**	Surface Position Uncertainty	**included**
Declination	**7.77° East of TN**	Dip Angle	**66.52°**	Mag Field Strength	**51651 nT**
Slot Surface Uncertainty @1SD		Horizontal	**0.100ft**	Vertical	**1.000ft**
Facility Surface Uncertainty @1SD		Horizontal	**8.200ft**	Vertical	**3.000ft**

Positional Uncertainty values in the WELLPATH DATA table are the projection of the ellipsoid of uncertainty onto the vertical and horizontal planes

Closest Approach Clearance Summary Report

WINDOM 01N (REV-A.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)

REFERENCE WELLPATH IDENTIFICATION			
Operator	**PDC ENERGY INC**	Well	**WINDOM 01N**
Field	**WELD COUNTY (NAD83/GRID)**	API/Legal	
Facility	**SEC.24-T05N-R67W**	Wellbore	**WINDOM 01N PWB**
Slot	**SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)**		

PROXIMITY-SCAN RULE			
Rule Name	**SPE WPTS Stop Drilling HSE Risk (2017)**	Rule Based On	**Ratio**
Plane of Rule	**Closest Approach**	Threshold Value	**1.00**
Include Casing & Hole Size	**yes**	Apply Cone of Safety	**no**

SURVEY PROGRAM - Ref Wellbore: WINDOM 01N PWB Ref Wellpath: WINDOM 01N (REV-A.0) PWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
28.50	1950.00	OWSG MWD rev2 - Standard		WINDOM 01N PWB
1950.00	15946.70	OWSG MWD rev2 (MS+IFR1)		WINDOM 01N PWB

Closest Approach Clearance Summary Report

WINDOM 01N (REV-A.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)

REFERENCE WELLPATH IDENTIFICATION

Operator	**PDC ENERGY INC**	Well	**WINDOM 01N**
Field	**WELD COUNTY (NAD83/GRID)**	API/Legal	
Facility	**SEC.24-T05N-R67W**	Wellbore	**WINDOM 01N PWB**
Slot	**SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)**		

CALCULATION RANGE & CUTOFF

From: **28.50ft MD**	To: **15946.70ft MD**	C-C Cutoff: **(none)**

OFFSET WELL CLEARANCE SUMMARY (95 Offset Wellpaths selected) Ratios are calculated in Closest Approach plane

Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	Wellbore Status	C-C Clearance Distance: Ref MD [ft]	C-C Clearance Distance: Min C-C Clear Dist [ft]	C-C Clearance Distance: Diverging from MD [ft]	Rule Separation Ratio: Ref MD of Min Ratio [ft]	Rule Separation Ratio: Min Ratio	Rule Separation Ratio: Min Ratio Dvrg from [ft]	Rule Separation Ratio: Rule Status
Sec.23-T5N-R67W	D.L. PHILLIPS #24-22 (05-123-18369)	D.L. PHILLIPS 24-22 (Vert)	D.L. PHILLIPS 24-22	D.L. PHILLIPS 24-22\D.L. PHILLIPS 24-22	Drilling	10138.16	22.73	10138.16	10138.16	0.00	10138.16	FAIL
Sec.23-T5N-R67W	D.L. PHILLIPS #24-21 (05-123-18368)	D.L. PHILLIPS 24-21 (Vert)	D.L. PHILLIPS 24-21	D.L. PHILLIPS 24-21\D.L. PHILLIPS 24-21	Drilling	8928.22	53.56	8928.22	8928.20	0.01	8928.20	FAIL
Sec.23-T5N-R67W	GOLDBERG #N 24-2 (05-123-18983)	GOLDBERG N 24-2 (Vert)	GOLDBERG N 24-2	GOLDBERG N 24-2\GOLDBERG N 24-2	Drilling	7345.19	171.56	7345.19	7353.81	0.02	7353.81	FAIL
Sec.23-T5N-R67W	HSR-KINZER #4-23 (05-123-19498)	HSR-KINZER 4-23 (Vert)	HSR-KINZER 4-23	HSR-KINZER 4-23\HSR-KINZER 4-23	Drilling	15382.28	200.11	15382.28	15382.07	0.02	15382.07	FAIL
Sec.23-T5N-R67W	PHILLIPS PC #N24-19 (05-123-25878)	PHILLIPS PC N24-19 (Vert)	PHILLIPS PC N24-19	PHILLIPS PC N24-19 AWP	Drilling	9678.04	502.12	9678.04	9676.76	0.06	9676.76	FAIL
SEC.22-T05N-R67W	SLOT#02 BLUE CHIP #22-2HZ (05-123-51929) PR	BLUE CHIP #22-2HZ	BLUE CHIP #22-2HZ PR AWB	BLUE CHIP #22-2HZ PR AWP	Drilling	15724.83	18.15	15724.83	15724.67	0.07	15724.67	FAIL
Sec.23-T5N-R67W	PHILLIPS #23-11 (05-123-17267) PR	PHILLIPS #23-11	PHILLIPS #23-11 AWB	PHILLIPS #23-11 AWP	Drilling	11442.44	194.24	11442.44	11441.78	0.07	11441.78	FAIL
Sec.23-T5N-R67W	PHILLIPS #23-12 (05-123-17203) PA	PHILLIPS #23-12	PHILLIPS #23-12 AWB	PHILLIPS #23-12 AWP	Drilling	12352.95	192.38	12352.95	12352.27	0.07	12352.27	FAIL
Sec.23-T5N-R67W	KINZER #18-23 (05-123-24000)	KINZER 18-23 (Vert)	KINZER 18-23	KINZER 18-23\KINZER 18-23	Drilling	14801.29	761.05	14801.29	14798.26	0.09	14798.26	FAIL
Sec.23-T5N-R67W	PHILLIPS PC #N23-17 (05-123-25876)	PHILLIPS PC N23-17 (Vert)	PHILLIPS PC N23-17	PHILLIPS PC N23-17\PHILLIPS PC N23-17	Drilling	12349.91	827.04	12349.91	12346.38	0.09	12346.38	FAIL
Phillips 24-2-20 (Dir) Pad Sec.24-T5N-R67W	DL PHILLIPS #24-23 (05-123-17231)	DL PHILLIPS #24-23 (Exist.)	DL PHILLIPS #24-23 AWB	DL PHILLIPS #24-23 AWP	Drilling	10520.27	1084.77	10520.27	10514.25	0.12	10514.25	FAIL
Sec.23-T5N-R67W	GOLDBERG #1-24 (05-123-13117)	GOLDBERG 1-24 (Vert)	GOLDBERG 1-24	GOLDBERG 1-24\GOLDBERG 1-24	Drilling	7309.88	1494.89	7309.88	7426.76	0.18	7426.76	FAIL
Phillips 24-3-23 (Dir) Pad Sec.24-T5N-R67W	D. L. PHILLIPS #24-31 (05-123-21347)	D. L. PHILLIPS #24-31	D. L. PHILLIPS #24-31 AWB	D. L. PHILLIPS #24-31 AWP	Drilling	1619.19	774.21	8528.50	3645.37	0.28	8528.50	FAIL
SEC.24-T05N-R67W	SLOT#13 WINDOM 13N (1877'FSL & 2384'FEL,SEC.24)	WINDOM 13N	WINDOM 13N PWB	WINDOM 13N (REV-A.0) PWP	Planned	8336.09	25.82	8336.09	8335.87	0.29	8335.87	FAIL
Phillips 24-2-20 (Dir) Pad Sec.24-T5N-R67W	GOLDBERG N #24-7 (05-123-18984) TA	GOLDBERG N #24-7	GOLDBERG N #24-7 AWB	GOLDBERG N #24-7 AWP	Drilling	4996.61	403.75	4996.61	7545.62	0.49	7545.62	FAIL
Sec.23-T5N-R67W	HSR-KINZER #6-23 (05-123-19500) TA	HSR-KINZER #6-23	HSR-KINZER #6-23 AWB	HSR-KINZER #6-23 AWP	Drilling	14150.72	1310.81	14150.72	14120.57	0.52	14120.57	FAIL
Phillips 24-2-20 (Dir) Pad Sec.24-T5N-R67W	D.L. PHILLIPS #24-24 (05-123-19879) TA	D.L. PHILLIPS #24-24	D.L. PHILLIPS 24-24 AWB	D.L. PHILLIPS 24-24 AWP	Drilling	4342.21	883.61	8628.50	8579.62	0.52	8579.62	FAIL
Sec.23-T5N-R67W	PHILLIPS #23-13 (05-123-17204) PR	PHILLIPS #23-13	PHILLIPS #23-13 AWB	PHILLIPS #23-13 AWP	Drilling	12357.94	1467.66	12357.94	12321.19	0.56	12321.19	FAIL
Sec.23-T5N-R67W	HSR-KINZER #5-23 (05-123-19499) PA	HSR-KINZER #5-23	HSR-KINZER #5-23 AWB	HSR-KINZER #5-23 AWP	Drilling	15366.57	1554.89	15366.57	15323.70	0.62	15323.70	FAIL
SEC.22-T05N-R67W	SLOT#01 BLUE CHIP #22-1HZ (05-123-51932) PR	BLUE CHIP #22-1HZ	BLUE CHIP #22-1HZ PR AWB	BLUE CHIP #22-1HZ PR AWP	Drilling	15946.70	164.61	15946.70	15946.70	0.78	15946.70	FAIL
Phillips 24-2-20 (Dir) Pad Sec.24-T5N-R67W	GOLDBERG N #24-8 (05-123-21109) TA	GOLDBERG N #24-8	GOLDBERG N #24-8 AWB	GOLDBERG N #24-8 AWP	Drilling	4297.11	1740.12	4297.11	7788.87	0.93	7788.87	FAIL
Phillips 24-2-20 (Dir) Pad Sec.24-T5N-R67W	D.L. PHILLIPS #24-32 (05-123-19878) SI	D.L. PHILLIPS #24-32	D.L. PHILLIPS #24-32 AWB	D.L. PHILLIPS #24-32 AWP	Drilling	28.50	2285.01	10128.50	9965.98	1.04	9965.98	WARN
Phillips 24-2-20 (Dir) Pad Sec.24-T5N-R67W	PHILLIPS PC #N24-25 (05-123-25877) SI	PHILLIPS PC #N24-25	PHILLIPS PC #N24-25 AWB	PHILLIPS PC #N24-25 AWP	Drilling	28.50	1257.74	9028.50	8898.99	1.12	8898.99	PASS
Sec.23-T5N-R67W	PHILLIPS #23-41 (05-123-19267) PA	PHILLIPS #23-41	PHILLIPS #23-41 AWB	PHILLIPS #23-41 AWP	Drilling	11683.68	123.87	11683.68	11672.39	1.16	11672.39	PASS
Sec.23-T5N-R67W	HSR-KINZER #3-23 (05-123-19497)	HSR-KINZER 3-23	HSR-KINZER 3-23	HSR-KINZER 3-23\HSR-KINZER 3-23	Drilling	14332.27	197.20	14332.27	14322.88	1.21	14322.88	PASS

Closest Approach Clearance Summary Report

WINDOM 01N (REV-A.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)

REFERENCE WELLPATH IDENTIFICATION

Operator	**PDC ENERGY INC**	Well	**WINDOM 01N**
Field	**WELD COUNTY (NAD83/GRID)**	API/Legal	
Facility	**SEC.24-T05N-R67W**	Wellbore	**WINDOM 01N PWB**
Slot	**SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)**		

CALCULATION RANGE & CUTOFF

From: **28.50ft MD**	To: **15946.70ft MD**	C-C Cutoff: **(none)**

OFFSET WELL CLEARANCE SUMMARY (95 Offset Wellpaths selected) Ratios are calculated in Closest Approach plane

Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	Wellbore Status	C-C Clearance Distance: Ref MD [ft]	Min C-C Clear Dist [ft]	Diverging from MD [ft]	Rule Separation Ratio: Ref MD of Min Ratio [ft]	Min Ratio	Min Ratio Dvrg from [ft]	Rule Status
Phillips 24-2-20 (Dir) Pad Sec.24-T5N-R67W	PHILLIPS # #1 (05-123-11720) SI	PHILLIPS # #1	PHILLIPS # #1 AWB	PHILLIPS # #1 AWP	Drilling	28.50	2573.70	10128.50	9804.22	1.51	9804.22	PASS
SEC.24-T05N-R67W	SLOT#02 WINDOM 02C (1862'FSL & 2304'FEL,SEC.24)	WINDOM 02C	WINDOM 02C PWB	WINDOM 02C (REV-A.0) PWP	Planned	28.50	14.94	15928.50	523.55	1.52	15928.50	PASS
SEC.22-T05N-R67W	SLOT#03 BLUE CHIP #22-3HZ (05-123-51938) PR	BLUE CHIP #22-3HZ	BLUE CHIP #22-3HZ PR AWB	BLUE CHIP #22-3HZ PR AWP	Drilling	15938.77	387.85	15938.77	15946.70	1.89	15946.70	PASS
SEC.24-T05N-R67W	SLOT#03 WINDOM 03NA (1847'FSL & 2304'FEL,SEC.24)	WINDOM 03NA	WINDOM 03NA PWB	WINDOM 03NA (REV-A.1) PWP	Planned	28.50	29.87	500.00	15943.82	3.38	15943.82	PASS
Sec.23-T5N-R67W	Phillips #23-1-17 (05-123-29702) PR	Phillips #23-1-17	Phillips #23-1-17 AWB	Phillips #23-1-17 AWP	Drilling	12131.02	432.85	12131.02	12190.47	3.80	12190.47	PASS
Phillips PC N24-29 Pad Sec.24-T5N-R67W	PHILLIPS PC #N24-31D (05-123-29077)	Phillips PC N24-31D	Wellbore #1	Wellbore #1\Wellbore #1	Drilling	10756.98	429.03	10756.98	10739.24	4.37	10739.24	PASS
SEC.22-T05N-R67W	SLOT#04 BLUE CHIP #22-4HZ (05-123-51935) PR	BLUE CHIP #22-4HZ	BLUE CHIP #22-4HZ PR AWB	BLUE CHIP #22-4HZ AWP	Drilling	15662.82	894.89	15662.82	15814.66	4.53	15946.70	PASS
SEC.24-T05N-R67W	SLOT#04 WINDOM 04N (1832'FSL & 2304'FEL,SEC.24)	WINDOM 04N	WINDOM 04N PWB	WINDOM 04N (REV-A.0) PWP	Planned	28.50	45.18	15927.34	15927.34	4.78	15927.34	PASS
Phillips PC N24-29 Pad Sec.24-T5N-R67W	PHILLIPS PC #N24-29D (05-123-29345)	Phillips PC N24-29D	Wellbore #1	Wellbore #1\Wellbore #1	Drilling	9515.81	402.44	9515.81	9561.90	4.82	9561.90	PASS
SEC.24-T05N-R67W	SLOT#14 WINDOM 14N (1862'FSL & 2384'FEL,SEC.24)	WINDOM 14N	WINDOM 14N PWB	WINDOM 14N (REV-A.0) PWP	Planned	28.50	81.55	7827.30	7827.30	4.84	7827.30	PASS
Sec.23-T5N-R67W	PHILLIPS #23-43 (05-123-19269) PA	PHILLIPS #23-43	PHILLIPS #23-43 AWB	PHILLIPS #23-43 AWP	Drilling	12803.79	4322.51	12803.79	12275.18	5.30	12275.18	PASS
SEC.24-T05N-R67W	SLOT#05 WINDOM 05N (1817'FSL & 2305'FEL,SEC.24)	WINDOM 05N	WINDOM 05N PWB	WINDOM 05N (REV-A.0) PWP	Planned	28.50	60.11	500.00	15938.69	6.42	15938.69	PASS
SEC.22-T05N-R67W	SLOT#05 BLUE CHIP #22-5HZ (05-123-51936) PR	BLUE CHIP #22-5HZ	BLUE CHIP #22-5HZ PR AWB	BLUE CHIP #22-5HZ PR AWP	Drilling	15946.70	1515.30	15946.70	15946.70	7.53	15946.70	PASS
SEC.24-T05N-R67W	SLOT#06 WINDOM 06N (1802'FSL & 2305'FEL,SEC.24)	WINDOM 06N	WINDOM 06N PWB	WINDOM 06N (REV-A.0) PWP	Planned	28.50	75.05	15828.50	15946.70	8.01	15946.70	PASS
Sec.23-T5N-R67W	PHILLIPS #23-14 (05-123-16960) PR	PHILLIPS #23-14	PHILLIPS #23-14 AWB	PHILLIPS #23-14 AWP	Drilling	11424.25	1510.73	11424.25	11443.46	9.14	11443.46	PASS
SEC.24-T05N-R67W	SLOT#07 WINDOM 07N (1787'FSL & 2305'FEL,SEC.24)	WINDOM 07N	WINDOM 07N PWB	WINDOM 07N (REV-A.0) PWP	Planned	28.50	89.99	500.00	15946.70	9.65	15946.70	PASS
SEC.24-T05N-R67W	SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24)	WINDOM 15N	WINDOM 15N PWB	WINDOM 15N (REV-A.0) PWP	Planned	28.50	85.49	7628.50	852.02	9.91	7728.50	PASS
SEC.22-T05N-R67W	SLOT#06 BLUE CHIP #22-6HZ (05-123-51937) PR	BLUE CHIP #22-6HZ	BLUE CHIP #22-6HZ PR AWB	BLUE CHIP #22-6HZ AWP	Drilling	15476.21	1994.75	15476.21	15946.70	10.12	15946.70	PASS
SEC.24-T05N-R67W	SLOT#16 WINDOM 16C (1832'FSL & 2384'FEL,SEC.24)	WINDOM 16C	WINDOM 16C PWB	WINDOM 16C (REV-A.0) PWP	Planned	28.50	91.72	7628.50	874.74	10.81	7628.50	PASS
SEC.24-T05N-R67W	SLOT#08 WINDOM 08C (1772'FSL & 2305'FEL,SEC.24)	WINDOM 08C	WINDOM 08C PWB	WINDOM 08C (REV-A.0) PWP	Planned	28.50	104.92	15828.50	15946.70	11.23	15946.70	PASS
SEC.24-T05N-R67W	SLOT#17 WINDOM 17NA (1817'FSL & 2385'FEL,SEC.24)	WINDOM 17NA	WINDOM 17NA PWB	WINDOM 17NA (REV-A.0) PWP	Planned	28.50	100.04	7128.50	826.20	11.92	7280.78	PASS
SEC.24-T05N-R67W	SLOT#09 WINDOM 09NA (1757'FSL & 2306'FEL,SEC.24)	WINDOM 09NA	WINDOM 09NA PWB	WINDOM 09NA (REV-A.0) PWP	Planned	28.50	119.86	500.00	15946.70	12.92	15946.70	PASS
SEC.24-T05N-R67W	SLOT#18 WINDOM 18N (1802'FSL & 2385'FEL,SEC.24)	WINDOM 18N	WINDOM 18N PWB	WINDOM 18N (REV-A.0) PWP	Planned	28.50	109.57	6828.50	877.44	13.05	7128.50	PASS
SEC.22-T05N-R67W	SLOT#07 BLUE CHIP #22-7HZ (05-123-51933) PR	BLUE CHIP #22-7HZ	BLUE CHIP #22-7HZ PR AWB	BLUE CHIP #22-7HZ AWP	Drilling	15946.70	2575.30	15946.70	15946.70	13.55	15946.70	PASS
SEC.24-T05N-R67W	SLOT#19 WINDOM 19N (1787'FSL & 2385'FEL,SEC.24)	WINDOM 19N	WINDOM 19N PWB	WINDOM 19N (REV-A.0) PWP	Planned	28.50	120.39	6928.50	879.65	14.36	7280.78	PASS

REFERENCE WELLPATH IDENTIFICATION

Operator	**PDC ENERGY INC**	Well	**WINDOM 01N**
Field	**WELD COUNTY (NAD83/GRID)**	API/Legal	
Facility	**SEC.24-T05N-R67W**	Wellbore	**WINDOM 01N PWB**
Slot	**SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)**		

CALCULATION RANGE & CUTOFF

From: **28.50ft MD**	To: **15946.70ft MD**	C-C Cutoff: **(none)**

OFFSET WELL CLEARANCE SUMMARY (95 Offset Wellpaths selected) Ratios are calculated in Closest Approach plane

						C-C Clearance Distance			Rule Separation Ratio			
Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	Wellbore Status	Ref MD [ft]	Min C-C Clear Dist [ft]	Diverging from MD [ft]	Ref MD of Min Ratio [ft]	Min Ratio	Min Ratio Dvrg from [ft]	Rule Status
SEC.24-T05N-R67W	SLOT#10 WINDOM 10N (1742'FSL & 2306'FEL,SEC.24)	WINDOM 10N	WINDOM 10N PWB	WINDOM 10N (REV-A.0) PWP	Planned	28.50	135.16	15828.50	15946.70	14.47	15946.70	PASS
Sec.23-T5N-R67W	Phillips #23-1-20 (05-123-29703) PR	Phillips #23-1-20	Phillips #23-1-20 AWB	Phillips #23-1-20 AWP	Drilling	13341.93	2067.06	13341.93	13521.44	15.26	13521.44	PASS
SEC.24-T05N-R67W	SLOT#20 WINDOM 20C (1772'FSL & 2385'FEL,SEC.24)	WINDOM 20C	WINDOM 20C PWB	WINDOM 20C (REV-A.0) PWP	Planned	28.50	132.13	500.00	825.28	15.74	8928.50	PASS
SEC.22-T05N-R67W	SLOT#08 BLUE CHIP #22-8HZ (05-123-51930) PR	BLUE CHIP #22-8HZ	BLUE CHIP #22-8HZ PR AWB	BLUE CHIP #22-8HZ AWP	Drilling	15946.70	3003.37	15946.70	15928.50	15.77	15928.50	PASS
SEC.24-T05N-R67W	SLOT#11 WINDOM 11N (1727'FSL & 2306'FEL,SEC.24)	WINDOM 11N	WINDOM 11N PWB	WINDOM 11N (REV-A.0) PWP	Planned	28.50	150.10	500.00	15946.70	16.09	15946.70	PASS
SEC.24-T05N-R67W	SLOT#21 WINDOM 21N (1757'FSL & 2386'FEL,SEC.24)	WINDOM 21N	WINDOM 21N PWB	WINDOM 21N (REV-A.0) PWP	Planned	28.50	144.24	8328.50	922.95	17.07	9528.50	PASS
SEC.24-T05N-R67W	SLOT#12 WINDOM 12N (1712'FSL & 2306'FEL,SEC.24)	WINDOM 12N	WINDOM 12N PWB	WINDOM 12N (REV-A.0) PWP	Planned	28.50	165.04	428.50	15946.70	17.73	15946.70	PASS
SEC.24-T05N-R67W	SLOT#22 WINDOM 22N (1742'FSL & 2386'FEL,SEC.24)	WINDOM 22N	WINDOM 22N PWB	WINDOM 22N (REV-A.0) PWP	Planned	28.50	156.98	8628.50	922.49	18.41	10128.50	PASS
Sec.23-T5N-R67W	Phillips #23-1-21 (05-123-29704) PR	Phillips #23-1-21	Phillips #23-1-21 AWB	Phillips #23-1-21 AWP	Drilling	12116.75	2065.86	12116.75	12335.87	18.47	12335.87	PASS
SEC.22-T05N-R67W	SLOT#09 BLUE CHIP #22-9HZ (05-123-51939) PR	BLUE CHIP #22-9HZ	BLUE CHIP #22-9HZ PR AWB	BLUE CHIP #22-9HZ AWP	Drilling	15946.70	3499.60	15946.70	15946.70	18.75	15946.70	PASS
Sec.23-T5N-R67W	KINZER #23-3D (05-123-19424) PA	KINZER #23-3D	KINZER #23-3D AWB	KINZER #23-3D AWP	Drilling	15628.61	3485.62	15628.61	15946.70	18.97	15946.70	PASS
Sec.23-T5N-R67W	KINZER #23-3C (05-123-19423) PA	KINZER #23-3C	KINZER #23-3C AWB	KINZER #23-3C AWP	Drilling	15090.57	3425.57	15090.57	15614.76	19.72	15614.76	PASS
SEC.24-T05N-R67W	SLOT#23 WINDOM 23N (1727'FSL & 2386'FEL,SEC.24)	WINDOM 23N	WINDOM 23N PWB	WINDOM 23N (REV-A.0) PWP	Planned	28.50	169.95	8628.50	881.27	19.93	10628.50	PASS
Sec.23-T5N-R67W	PHILLIPS #23-42 (05-123-19268) PA	PHILLIPS #23-42	PHILLIPS #23-42 AWB	PHILLIPS #23-42 AWP	Drilling	13046.69	2711.61	13046.69	13458.85	20.54	13458.85	PASS
Sec.23-T5N-R67W	KINZER #23-3B (05-123-19415) PA	KINZER #23-3B	KINZER #23-3B AWB	KINZER #23-3B AWP	Drilling	14587.01	3406.52	14587.01	15149.46	20.77	15149.46	PASS
SEC.22-T05N-R67W	SLOT#10 BLUE CHIP #22-10HZ (05-123-51931) PR	BLUE CHIP #22-10HZ	BLUE CHIP #22-10HZ PR AWB	BLUE CHIP #22-10HZ PR AWP	Drilling	15946.70	3887.15	15946.70	15946.70	21.37	15946.70	PASS
Phillips 24-2-20 (Dir) Pad Sec.24-T5N-R67W	PHILLIPS #24-2-20 (05-123-29908)	Phillips 24-2-20 (Dir)	Wellbore #1	Wellbore #1\Wellbore #1	Drilling	10696.16	2090.93	10696.16	10977.35	21.58	10977.35	PASS
SEC.22-T05N-R67W	SLOT#11 BLUE CHIP #22-11HZ (05-123-51934) PR	BLUE CHIP #22-11HZ	BLUE CHIP #22-11HZ PR AWB	BLUE CHIP #22-11HZ AWP	Drilling	15946.70	3937.66	15946.70	15946.70	21.67	15946.70	PASS
Phillips 24-3-23 (Dir) Pad Sec.24-T5N-R67W	PHILLIPS #24-3-23 (05-123-29446)	Phillips 24-3-23 (Dir)	Wellbore #1	Wellbore #1\Wellbore #1	Drilling	1628.74	736.90	1628.74	1888.11	21.78	8628.50	PASS
Sec.23-T5N-R67W	KINZER #23-3A (05-123-19414) PA	KINZER #23-3A	KINZER #23-3A AWB	KINZER #23-3A AWP	Drilling	14063.90	3463.02	14063.90	14704.72	22.59	14704.72	PASS
SEC.24-T05N-R67W	SLOT#24 WINDOM 24N (1712'FSL & 2386'FEL,SEC.24)	WINDOM 24N	WINDOM 24N PWB	WINDOM 24N (REV-A.0) PWP	Planned	28.50	183.34	8528.50	722.98	23.27	11228.50	PASS
SEC.19-T05N-R66W	SLOT#05 UPRR 61 PAN AM C #1 (05-123-09638)	UPRR 61 PAN AM C #1	UPRR 61 PAN AM C #1 AWB	UPRR 61 PAN AM C #1 AWP	Drilling	28.50	3237.77	500.00	5462.97	25.61	5462.97	PASS
Phillips 24-3-23 (Dir) Pad Sec.24-T5N-R67W	PHILLIPS #24-3-17 (05-123-29447)	Phillips 24-3-17 (Dir)	Wellbore #1	Wellbore #1\Wellbore #1	Drilling	816.02	827.93	9428.50	9644.28	26.19	9644.28	PASS
SEC.19-T05N-R66W	SLOT#03 KORI #J 19-15 (05-123-16363)	KORI #J 19-15	KORI #J 19-15 AWB	KORI #J 19-15 AWP	Drilling	28.50	5807.08	500.00	7648.97	30.27	7648.97	PASS
Sec.23-T5N-R67W	SHEEP DRAW #23-44 (05-123-11290) PA	SHEEP DRAW #23-44	SHEEP DRAW #23-44 AWB	SHEEP DRAW #23-44 AWP	Drilling	11956.39	3733.66	11956.39	12932.82	32.60	12932.82	PASS

Closest Approach Clearance Summary Report

WINDOM 01N (REV-A.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)

REFERENCE WELLPATH IDENTIFICATION

Operator	**PDC ENERGY INC**	Well	**WINDOM 01N**
Field	**WELD COUNTY (NAD83/GRID)**	API/Legal	
Facility	**SEC.24-T05N-R67W**	Wellbore	**WINDOM 01N PWB**
Slot	**SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)**		

CALCULATION RANGE & CUTOFF

From: **28.50ft MD**	To: **15946.70ft MD**	C-C Cutoff: **(none)**

OFFSET WELL CLEARANCE SUMMARY (95 Offset Wellpaths selected) Ratios are calculated in Closest Approach plane

Offset Facility	Offset Slot	Offset Well	Offset Wellbore	Offset Wellpath	Wellbore Status	C-C Clearance Distance			Rule Separation Ratio			
						Ref MD [ft]	Min C-C Clear Dist [ft]	Diverging from MD [ft]	Ref MD of Min Ratio [ft]	Min Ratio	Min Ratio Dvrg from [ft]	Rule Status
Sec.19-T5N-R66W	CHISMAR #19-22 (05-123-19467) PA	CHISMAR 19-22	CHISMAR 19-22	CHISMAR 19-22\CHISMAR 19-22	Drilling	7302.45	2600.66	7302.45	7493.73	36.40	7493.73	PASS
SEC.19-T05N-R66W	SLOT#13 SHEEP DRAW #19-23 (05-123-11521)	SHEEP DRAW #19-23	SHEEP DRAW #19-23 AWB	SHEEP DRAW #19-23 AWP	Drilling	4946.01	3143.16	4946.01	7408.70	43.07	7408.70	PASS
Phillips 24-2-20 (Dir) Pad Sec.24-T5N-R67W	BLEHM #7 (05-123-11217) PA	BLEHM #7	BLEHM #7 AWB	BLEHM #7 AWP	Drilling	511.07	1275.28	511.07	608.62	43.15	8728.50	PASS
SEC.19-T05N-R66W	SLOT#07 KORI J #19-12 (05-123-22721)	KORI J #19-12	KORI J #19-12 AWB	KORI J #19-12 AWB	Drilling	1984.84	2746.61	1984.84	7343.06	48.53	7343.06	PASS
Phillips 24-3-21 (Dir) Pad Sec.24-T5N-R67W	PHILLIPS #24-3-21 (05-123-29448)	Phillips 24-3-21 (Dir)	Wellbore #1	Wellbore #1\Wellbore #1	Drilling	28.50	1581.94	9428.50	11328.50	50.74	11328.50	PASS
Phillips 24-3-21 (Dir) Pad Sec.24-T5N-R67W	D.L. PHILLIPS #24-34 (05-123-21349)	Phillips 24-34 (Exist.)	Wellbore #1	Wellbore #1\Wellbore #1	Drilling	28.50	1608.09	8628.50	805.63	54.04	10328.50	PASS
Sec.19-T5N-R66W	CHISMAR #19-21 (05-123-19466) PA	CHISMAR 19-21	CHISMAR 19-21	CHISMAR 19-21\CHISMAR 19-21	Drilling	7308.73	3878.97	7308.73	7564.21	54.05	7564.21	PASS
SEC.19-T05N-R66W	SLOT#14 CHISMAR #19-24 (05-123-19468)	CHISMAR #19-24	CHISMAR #19-24 AWB	CHISMAR #19-24 AWP	Drilling	5356.79	4335.82	5356.79	7512.53	57.86	7512.53	PASS
SEC.19-T05N-R66W	SLOT#06 KORI J #19-11 (05-123-22718)	KORI J #19-11	KORI J #19-11 AWB	KORI J #19-11 AWP	Drilling	2380.98	4142.03	2380.98	7476.33	61.34	7476.33	PASS
SEC.19-T05N-R66W	SLOT#11 KORI J #19-25 (05-123-23230)	KORI J #19-25	KORI J #19-25 AWB	KORI J #19-25 AWP	Drilling	640.20	3744.22	928.50	7484.99	62.29	7484.99	PASS
SEC.19-T05N-R66W	SLOT#01 KORI #J 19-13 (05-123-22720)	KORI #J 19-13	KORI #J 19-13 AWB	KORI #J 19-13 AWP	Drilling	28.50	3390.60	628.50	7395.10	65.61	7395.10	PASS
SEC.19-T05N-R66W	SLOT#15 LUNDVALL UP #7-19 (05-123-13484)	LUNDVALL UP #7-19	LUNDVALL UP #7-19 AWB	LUNDVALL UP #7-19 AWP	Drilling	5415.25	5296.56	5415.25	7537.42	69.80	7537.42	PASS
Phillips 24-2-20 (Dir) Pad Sec.24-T5N-R67W	NYC N #24-16 (05-123-21127) PA	NYC N #24-16	NYC N #24-16 AWB	NYC N #24-16 AWP	Drilling	538.89	2167.12	538.89	1928.50	71.21	7528.50	PASS
SEC.19-T05N-R66W	SLOT#02 KORI #J 19-14 (05-123-22719)	KORI #J 19-14	KORI #J 19-14 AWB	KORI #J 19-14 AWP	Drilling	117.58	4622.95	428.50	7535.65	74.99	7535.65	PASS
Sec.19-T5N-R66W	LUNDVALL UP #2-19 (05-123-13483) SI	LUNDVALL UP 2-19	LUNDVALL UP 2-19	LUNDVALL UP 2-19\LUNDVALL UP 2-19	Drilling	7308.81	5546.88	7308.81	7661.29	76.24	7661.29	PASS
SEC.19-T05N-R66W	SLOT#09 KORI #J 19-10 (05-123-17994)	KORI #J 19-10	KORI #J 19-10 AWB	KORI #J 19-10 AWP	Drilling	2566.57	5571.63	2566.57	7528.50	77.62	7528.50	PASS
SEC.19-T05N-R66W	SLOT#16 HSR-LUNDVALL #8-19 (05-123-20564) TA	HSR-LUNDVALL #8-19	HSR-LUNDVALL #8-19 AWB	HSR-LUNDVALL #8-19 AWP	Drilling	6303.87	6978.07	6303.87	7695.60	89.89	7695.60	PASS
SEC.19-T05N-R66W	SLOT#10 KORI J #19-23 (05-123-22722)	KORI J #19-23	KORI J #19-23 AWB	KORI J #19-23 AWP	Drilling	844.61	6474.17	844.61	7692.93	92.31	7692.93	PASS
SEC.19-T05N-R66W	SLOT#12 KORI #J 19-9 (05-123-17993)	KORI #J 19-9	KORI #J 19-9 AWB	KORI #J 19-9 AWP	Drilling	2613.13	6879.30	2613.13	7612.27	93.07	7612.27	PASS
SEC.19-T05N-R66W	SLOT#04 KORI #J 19-16 (05-123-17999)	KORI #J 19-16	KORI #J 19-16 AWB	KORI #J 19-16 AWP	Drilling	192.45	7115.15	192.45	7591.44	102.32	7591.44	PASS