

PDC ENERGY INC

Location: COLORADO Slot: SLOT#15 WINDOM 15N (1847FSL & 2384FEL, SEC.24)
 Field: WELD COUNTY (NAD83/GRID) Well: WINDOM 15N
 Facility: SEC.24-T05N-R67W Wellbore: WINDOM 15N PWB

Plot reference wellpath is WINDOM 15N (REV-A.0) PWP
 True vertical depths are referenced to (4999'GL+28.5KB@5028'RKB) (RKB)
 Reference wellpath measured depths are referenced to (4999'GL+28.5KB@5028'RKB) (RKB)
 (4999'GL+28.5KB@5028'RKB) (RKB) to Mean Sea Level: 5027.5 feet
 Mean Sea Level to Ground level (At Slot: SLOT#15 WINDOM 15N (1847FSL & 2384FEL, SEC.24)): 0 feet
 Offset wellpath MDs are referenced to each path's default MD datum
 Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
 North Reference: Grid north
 Scale: True distance
 Coordinates are in feet referenced to Slot
 Depths are in feet
 Created by: martsam01 on 2024-03-26; Database: WA_Darver

Location Information

Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SEC.24-T05N-R67W		3183745.419	1383040.862	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#15 WINDOM 15N (1847FSL & 2384FEL, SEC.24)	-30.11	-80.01	3183665.409	1383010.789	40°22'58.4112"N	104°50'26.5344"W
(4999'GL+28.5KB@5028'RKB) (RKB) to Ground level (At Slot: SLOT#15 WINDOM 15N (1847FSL & 2384FEL, SEC.24))				5027.5ft		
Mean Sea Level to Ground level (At Slot: SLOT#15 WINDOM 15N (1847FSL & 2384FEL, SEC.24))				0ft		
(4999'GL+28.5KB@5028'RKB) (RKB) to Mean Sea Level				5027.5ft		

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	338.408	28.50	0.00	0.00	0.00	0.00
End of Tangent	900.00	0.000	338.408	900.00	0.00	0.00	0.00	0.00
Build (XS)	1925.09	20.502	338.408	1903.36	168.72	-66.77	2.00	-29.41
KOP	7074.99	20.502	338.408	6727.06	1845.84	-730.52	0.00	-321.71
LP	8154.92	90.028	89.277	7403.00	2090.08	-101.62	9.00	344.72
BHL	18469.88	90.028	89.277	7398.00	2220.26	10212.52	0.00	10451.09

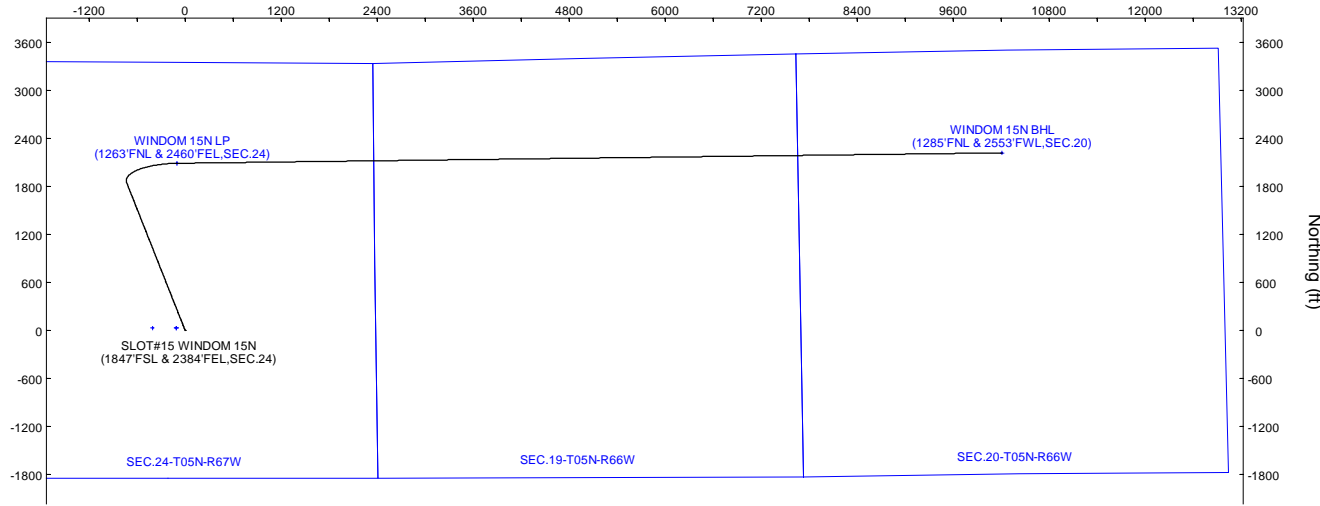
Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SEC.24-T05N-R67W	N/A	2.00	30.11	-409.01	3183256.41	1383040.88	40°22'58.7387"N	104°50'31.8167"W
SEC.19-T05N-R66W	N/A	6.00	30.24	-109.13	3183556.28	1383041.03	40°22'58.7180"N	104°50'27.9416"W
SEC.20-T05N-R66W	N/A	6.00	30.24	-109.13	3183556.28	1383041.03	40°22'58.7180"N	104°50'27.9416"W
WINDOM 15N BHL (1285'FNL & 2553'FWL, SEC.20)	18469.88	7398.00	2220.26	10212.52	3193877.50	1385230.95	40°23'19.5792"N	104°48'14.3460"W
WINDOM 15N BPZ (1284'FNL&2503'FWL, SEC.20)	N/A	7398.00	2219.87	10162.66	3193827.64	1385230.56	40°23'19.5792"N	104°48'14.9904"W
WINDOM 15N LP (1263'FNL & 2460'FEL, SEC.24)	8154.92	7403.00	2090.08	-101.62	3183563.79	1385100.78	40°23'19.0716"N	104°50'27.6468"W



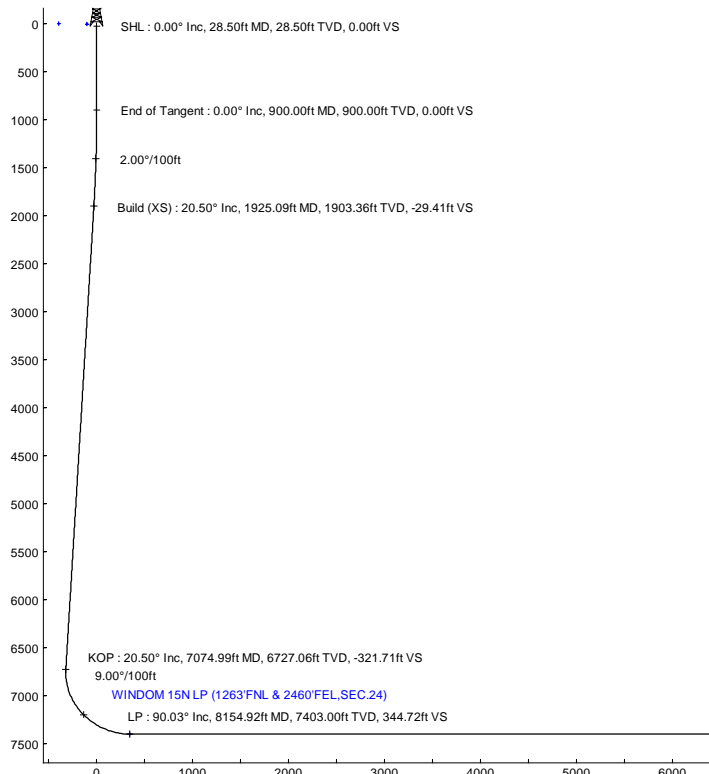
Scale 1 inch = 600

Easting (ft)



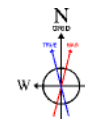
Scale 1 inch = 500

True Vertical Depth (ft)



Vertical Section (ft)
Azimuth 77.73° with reference 0.00° N, 0.00° E

Scale 1 inch = 500



HDM2024v1.0 (1900.0 to 2025.0) Dip: 66.52° Field: 51651.1 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



Planned Wellpath Report

WINDOM 15N (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	PDC ENERGY INC	Well	WINDOM 15N
Field	WELD COUNTY (NAD83/GRID)	API/Legal	
Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'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 11:28:58 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	-30.11	-80.01	3183665.41	1383010.79	40.3828920°	-104.8407040°
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	(4999'GL+28.5'KB@5028'RKB) (RKB) to Facility Vertical Datum	5027.50ft
Horizontal Reference Pt	Slot	(4999'GL+28.5'KB@5028'RKB) (RKB) to Mean Sea Level	5027.50ft
Vertical Reference Pt	(4999'GL+28.5'KB@5028'RKB) (RKB)	(4999'GL+28.5'KB@5028'RKB) (RKB) to Ground Level at Slot (SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24))	5027.50ft
MD Reference Pt	(4999'GL+28.5'KB@5028'RKB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	77.73°

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Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24)		

WELLPATH DATA (191 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	338.408	0.00	0.00	0.00	0.00	40.3828920	-104.8407040	0.00	
28.50	0.000	338.408	28.50	0.00	0.00	0.00	40.3828920	-104.8407040	0.00	SHL
100.00†	0.000	338.408	100.00	0.00	0.00	0.00	40.3828920	-104.8407040	0.00	
200.00†	0.000	338.408	200.00	0.00	0.00	0.00	40.3828920	-104.8407040	0.00	
300.00†	0.000	338.408	300.00	0.00	0.00	0.00	40.3828920	-104.8407040	0.00	
400.00†	0.000	338.408	400.00	0.00	0.00	0.00	40.3828920	-104.8407040	0.00	
500.00†	0.000	338.408	500.00	0.00	0.00	0.00	40.3828920	-104.8407040	0.00	
600.00†	0.000	338.408	600.00	0.00	0.00	0.00	40.3828920	-104.8407040	0.00	
700.00†	0.000	338.408	700.00	0.00	0.00	0.00	40.3828920	-104.8407040	0.00	
800.00†	0.000	338.408	800.00	0.00	0.00	0.00	40.3828920	-104.8407040	0.00	
900.00	0.000	338.408	900.00	0.00	0.00	0.00	40.3828920	-104.8407040	0.00	End of Tangent
1000.00†	2.000	338.408	999.98	-0.28	1.62	-0.64	40.3828965	-104.8407063	2.00	
1100.00†	4.000	338.408	1099.84	-1.13	6.49	-2.57	40.3829099	-104.8407130	2.00	
1200.00†	6.000	338.408	1199.45	-2.54	14.59	-5.78	40.3829322	-104.8407243	2.00	
1300.00†	8.000	338.408	1298.70	-4.52	25.92	-10.26	40.3829634	-104.8407401	2.00	
1400.00†	10.000	338.408	1397.47	-7.05	40.47	-16.02	40.3830034	-104.8407604	2.00	
1500.00†	12.000	338.408	1495.62	-10.14	58.21	-23.04	40.3830522	-104.8407851	2.00	
1600.00†	14.000	338.408	1593.06	-13.79	79.13	-31.32	40.3831098	-104.8408143	2.00	
1700.00†	16.000	338.408	1689.64	-17.98	103.19	-40.84	40.3831761	-104.8408478	2.00	
1800.00†	18.000	338.408	1785.27	-22.72	130.37	-51.60	40.3832509	-104.8408857	2.00	
1900.00†	20.000	338.408	1879.82	-28.00	160.64	-63.58	40.3833342	-104.8409279	2.00	
1925.09	20.502	338.408	1903.35	-29.40	168.72	-66.77	40.3833565	-104.8409392	2.00	Build (XS)
2000.00†	20.502	338.408	1973.52	-33.65	193.11	-76.43	40.3834236	-104.8409732	0.00	
2100.00†	20.502	338.408	2067.19	-39.33	225.68	-89.32	40.3835133	-104.8410186	0.00	
2200.00†	20.502	338.408	2160.85	-45.00	258.25	-102.21	40.3836029	-104.8410640	0.00	
2300.00†	20.502	338.408	2254.52	-50.68	290.81	-115.09	40.3836926	-104.8411094	0.00	
2400.00†	20.502	338.408	2348.18	-56.36	323.38	-127.98	40.3837822	-104.8411548	0.00	
2500.00†	20.502	338.408	2441.85	-62.03	355.94	-140.87	40.3838719	-104.8412001	0.00	
2600.00†	20.502	338.408	2535.52	-67.71	388.51	-153.76	40.3839615	-104.8412455	0.00	
2700.00†	20.502	338.408	2629.18	-73.38	421.08	-166.65	40.3840512	-104.8412909	0.00	
2800.00†	20.502	338.408	2722.85	-79.06	453.64	-179.54	40.3841408	-104.8413363	0.00	
2900.00†	20.502	338.408	2816.52	-84.73	486.21	-192.43	40.3842305	-104.8413817	0.00	
3000.00†	20.502	338.408	2910.18	-90.41	518.77	-205.31	40.3843201	-104.8414271	0.00	
3100.00†	20.502	338.408	3003.85	-96.08	551.34	-218.20	40.3844098	-104.8414725	0.00	
3200.00†	20.502	338.408	3097.51	-101.76	583.90	-231.09	40.3844994	-104.8415179	0.00	
3300.00†	20.502	338.408	3191.18	-107.43	616.47	-243.98	40.3845891	-104.8415633	0.00	
3400.00†	20.502	338.408	3284.85	-113.11	649.04	-256.87	40.3846787	-104.8416087	0.00	
3500.00†	20.502	338.408	3378.51	-118.78	681.60	-269.76	40.3847684	-104.8416541	0.00	
3600.00†	20.502	338.408	3472.18	-124.46	714.17	-282.65	40.3848580	-104.8416995	0.00	
3700.00†	20.502	338.408	3565.84	-130.13	746.73	-295.53	40.3849477	-104.8417449	0.00	
3800.00†	20.502	338.408	3659.51	-135.81	779.30	-308.42	40.3850373	-104.8417903	0.00	
3900.00†	20.502	338.408	3753.18	-141.48	811.86	-321.31	40.3851270	-104.8418357	0.00	
4000.00†	20.502	338.408	3846.84	-147.16	844.43	-334.20	40.3852166	-104.8418811	0.00	
4100.00†	20.502	338.408	3940.51	-152.84	877.00	-347.09	40.3853063	-104.8419265	0.00	
4200.00†	20.502	338.408	4034.18	-158.51	909.56	-359.98	40.3853959	-104.8419719	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	PDC ENERGY INC	Well	WINDOM 15N
Field	WELD COUNTY (NAD83/GRID)	API/Legal	
Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24)		

WELLPATH DATA (191 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4300.00†	20.502	338.408	4127.84	-164.19	942.13	-372.87	40.3854856	-104.8420173	0.00	
4400.00†	20.502	338.408	4221.51	-169.86	974.69	-385.75	40.3855752	-104.8420627	0.00	
4500.00†	20.502	338.408	4315.17	-175.54	1007.26	-398.64	40.3856649	-104.8421081	0.00	
4600.00†	20.502	338.408	4408.84	-181.21	1039.83	-411.53	40.3857545	-104.8421534	0.00	
4700.00†	20.502	338.408	4502.51	-186.89	1072.39	-424.42	40.3858442	-104.8421988	0.00	
4800.00†	20.502	338.408	4596.17	-192.56	1104.96	-437.31	40.3859338	-104.8422442	0.00	
4900.00†	20.502	338.408	4689.84	-198.24	1137.52	-450.20	40.3860235	-104.8422896	0.00	
5000.00†	20.502	338.408	4783.51	-203.91	1170.09	-463.09	40.3861131	-104.8423350	0.00	
5100.00†	20.502	338.408	4877.17	-209.59	1202.65	-475.97	40.3862028	-104.8423804	0.00	
5200.00†	20.502	338.408	4970.84	-215.26	1235.22	-488.86	40.3862924	-104.8424258	0.00	
5300.00†	20.502	338.408	5064.50	-220.94	1267.79	-501.75	40.3863821	-104.8424712	0.00	
5400.00†	20.502	338.408	5158.17	-226.61	1300.35	-514.64	40.3864717	-104.8425166	0.00	
5500.00†	20.502	338.408	5251.84	-232.29	1332.92	-527.53	40.3865614	-104.8425620	0.00	
5600.00†	20.502	338.408	5345.50	-237.96	1365.48	-540.42	40.3866510	-104.8426074	0.00	
5700.00†	20.502	338.408	5439.17	-243.64	1398.05	-553.31	40.3867407	-104.8426528	0.00	
5800.00†	20.502	338.408	5532.83	-249.32	1430.62	-566.19	40.3868303	-104.8426982	0.00	
5900.00†	20.502	338.408	5626.50	-254.99	1463.18	-579.08	40.3869200	-104.8427436	0.00	
6000.00†	20.502	338.408	5720.17	-260.67	1495.75	-591.97	40.3870096	-104.8427890	0.00	
6100.00†	20.502	338.408	5813.83	-266.34	1528.31	-604.86	40.3870993	-104.8428344	0.00	
6200.00†	20.502	338.408	5907.50	-272.02	1560.88	-617.75	40.3871889	-104.8428798	0.00	
6300.00†	20.502	338.408	6001.17	-277.69	1593.44	-630.64	40.3872786	-104.8429252	0.00	
6400.00†	20.502	338.408	6094.83	-283.37	1626.01	-643.52	40.3873682	-104.8429706	0.00	
6500.00†	20.502	338.408	6188.50	-289.04	1658.58	-656.41	40.3874579	-104.8430160	0.00	
6600.00†	20.502	338.408	6282.16	-294.72	1691.14	-669.30	40.3875475	-104.8430614	0.00	
6700.00†	20.502	338.408	6375.83	-300.39	1723.71	-682.19	40.3876372	-104.8431068	0.00	
6800.00†	20.502	338.408	6469.50	-306.07	1756.27	-695.08	40.3877268	-104.8431522	0.00	
6900.00†	20.502	338.408	6563.16	-311.74	1788.84	-707.97	40.3878165	-104.8431976	0.00	
7000.00†	20.502	338.408	6656.83	-317.42	1821.41	-720.86	40.3879061	-104.8432430	0.00	
7074.99	20.502	338.408	6727.07	-321.67	1845.83	-730.52	40.3879734	-104.8432770	0.00	KOP
7100.00†	19.854	344.661	6750.55	-322.61	1854.00	-733.26	40.3879958	-104.8432866	9.00	
7200.00†	19.673	11.490	6844.85	-316.73	1886.93	-734.40	40.3880863	-104.8432899	9.00	
7300.00†	23.145	34.441	6938.10	-295.60	1919.71	-719.90	40.3881759	-104.8432370	9.00	
7400.00†	28.985	50.160	7028.00	-259.74	1951.50	-690.12	40.3882626	-104.8431292	9.00	
7500.00†	36.055	60.584	7112.33	-210.04	1981.54	-645.79	40.3883441	-104.8429693	9.00	
7600.00†	43.760	67.866	7189.02	-147.73	2009.08	-588.00	40.3884186	-104.8427611	9.00	
7700.00†	51.812	73.313	7256.19	-74.32	2033.44	-518.18	40.3884840	-104.8425098	9.00	
7800.00†	60.064	77.658	7312.16	8.36	2054.03	-438.05	40.3885389	-104.8422216	9.00	
7900.00†	68.436	81.329	7355.58	98.28	2070.34	-349.57	40.3885819	-104.8419036	9.00	
8000.00†	76.881	84.595	7385.37	193.23	2081.96	-254.93	40.3886118	-104.8415635	9.00	
8100.00†	85.363	87.642	7400.79	290.87	2088.61	-156.45	40.3886281	-104.8412099	9.00	
8154.91	90.028	89.276	7403.00†	344.76	2090.08	-101.62	40.3886310	-104.8410130	9.00	LP
8200.00†	90.028	89.276	7402.98	388.94	2090.65	-56.54	40.3886316	-104.8408511	0.00	
8300.00†	90.028	89.276	7402.93	486.92	2091.92	43.46	40.3886331	-104.8404922	0.00	
8400.00†	90.028	89.276	7402.88	584.90	2093.18	143.45	40.3886345	-104.8401332	0.00	
8500.00†	90.028	89.276	7402.83	682.87	2094.45	243.44	40.3886359	-104.8397742	0.00	



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REFERENCE WELLPATH IDENTIFICATION

Operator	PDC ENERGY INC	Well	WINDOM 15N
Field	WELD COUNTY (NAD83/GRID)	API/Legal	
Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24)		

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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8600.00†	90.028	89.276	7402.78	780.85	2095.71	343.43	40.3886374	-104.8394153	0.00	
8700.00†	90.028	89.276	7402.73	878.83	2096.98	443.42	40.3886388	-104.8390563	0.00	
8800.00†	90.028	89.276	7402.69	976.81	2098.24	543.42	40.3886402	-104.8386973	0.00	
8900.00†	90.028	89.276	7402.64	1074.78	2099.50	643.41	40.3886416	-104.8383383	0.00	
9000.00†	90.028	89.276	7402.59	1172.76	2100.77	743.40	40.3886431	-104.8379794	0.00	
9100.00†	90.028	89.276	7402.54	1270.74	2102.03	843.39	40.3886445	-104.8376204	0.00	
9200.00†	90.028	89.276	7402.49	1368.72	2103.30	943.38	40.3886459	-104.8372614	0.00	
9300.00†	90.028	89.276	7402.44	1466.70	2104.56	1043.38	40.3886473	-104.8369024	0.00	
9400.00†	90.028	89.276	7402.39	1564.67	2105.83	1143.37	40.3886487	-104.8365435	0.00	
9500.00†	90.028	89.276	7402.34	1662.65	2107.09	1243.36	40.3886501	-104.8361845	0.00	
9600.00†	90.028	89.276	7402.30	1760.63	2108.35	1343.35	40.3886516	-104.8358255	0.00	
9700.00†	90.028	89.276	7402.25	1858.61	2109.62	1443.34	40.3886530	-104.8354666	0.00	
9800.00†	90.028	89.276	7402.20	1956.58	2110.88	1543.34	40.3886544	-104.8351076	0.00	
9900.00†	90.028	89.276	7402.15	2054.56	2112.15	1643.33	40.3886558	-104.8347486	0.00	
10000.00†	90.028	89.276	7402.10	2152.54	2113.41	1743.32	40.3886572	-104.8343896	0.00	
10100.00†	90.028	89.276	7402.05	2250.52	2114.68	1843.31	40.3886586	-104.8340307	0.00	
10200.00†	90.028	89.276	7402.00	2348.50	2115.94	1943.30	40.3886600	-104.8336717	0.00	
10300.00†	90.028	89.276	7401.96	2446.47	2117.21	2043.30	40.3886614	-104.8333127	0.00	
10400.00†	90.028	89.276	7401.91	2544.45	2118.47	2143.29	40.3886628	-104.8329537	0.00	
10500.00†	90.028	89.276	7401.86	2642.43	2119.73	2243.28	40.3886642	-104.8325948	0.00	
10600.00†	90.028	89.276	7401.81	2740.41	2121.00	2343.27	40.3886656	-104.8322358	0.00	
10700.00†	90.028	89.276	7401.76	2838.38	2122.26	2443.26	40.3886671	-104.8318768	0.00	
10800.00†	90.028	89.276	7401.71	2936.36	2123.53	2543.26	40.3886685	-104.8315178	0.00	
10900.00†	90.028	89.276	7401.66	3034.34	2124.79	2643.25	40.3886699	-104.8311589	0.00	
11000.00†	90.028	89.276	7401.61	3132.32	2126.06	2743.24	40.3886713	-104.8307999	0.00	
11100.00†	90.028	89.276	7401.57	3230.29	2127.32	2843.23	40.3886727	-104.8304409	0.00	
11200.00†	90.028	89.276	7401.52	3328.27	2128.58	2943.22	40.3886740	-104.8300820	0.00	
11300.00†	90.028	89.276	7401.47	3426.25	2129.85	3043.22	40.3886754	-104.8297230	0.00	
11400.00†	90.028	89.276	7401.42	3524.23	2131.11	3143.21	40.3886768	-104.8293640	0.00	
11500.00†	90.028	89.276	7401.37	3622.21	2132.38	3243.20	40.3886782	-104.8290050	0.00	
11600.00†	90.028	89.276	7401.32	3720.18	2133.64	3343.19	40.3886796	-104.8286461	0.00	
11700.00†	90.028	89.276	7401.27	3818.16	2134.91	3443.18	40.3886810	-104.8282871	0.00	
11800.00†	90.028	89.276	7401.22	3916.14	2136.17	3543.18	40.3886824	-104.8279281	0.00	
11900.00†	90.028	89.276	7401.18	4014.12	2137.43	3643.17	40.3886838	-104.8275691	0.00	
12000.00†	90.028	89.276	7401.13	4112.09	2138.70	3743.16	40.3886852	-104.8272102	0.00	
12100.00†	90.028	89.276	7401.08	4210.07	2139.96	3843.15	40.3886866	-104.8268512	0.00	
12200.00†	90.028	89.276	7401.03	4308.05	2141.23	3943.14	40.3886880	-104.8264922	0.00	
12300.00†	90.028	89.276	7400.98	4406.03	2142.49	4043.14	40.3886893	-104.8261333	0.00	
12400.00†	90.028	89.276	7400.93	4504.01	2143.76	4143.13	40.3886907	-104.8257743	0.00	
12500.00†	90.028	89.276	7400.88	4601.98	2145.02	4243.12	40.3886921	-104.8254153	0.00	
12600.00†	90.028	89.276	7400.83	4699.96	2146.28	4343.11	40.3886935	-104.8250563	0.00	
12700.00†	90.028	89.276	7400.79	4797.94	2147.55	4443.10	40.3886949	-104.8246974	0.00	
12800.00†	90.028	89.276	7400.74	4895.92	2148.81	4543.10	40.3886963	-104.8243384	0.00	
12900.00†	90.028	89.276	7400.69	4993.89	2150.08	4643.09	40.3886976	-104.8239794	0.00	
13000.00†	90.028	89.276	7400.64	5091.87	2151.34	4743.08	40.3886990	-104.8236204	0.00	



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WINDOM 15N (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	PDC ENERGY INC	Well	WINDOM 15N
Field	WELD COUNTY (NAD83/GRID)	API/Legal	
Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24)		

WELLPATH DATA (191 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13100.00†	90.028	89.276	7400.59	5189.85	2152.61	4843.07	40.3887004	-104.8232615	0.00	
13200.00†	90.028	89.276	7400.54	5287.83	2153.87	4943.06	40.3887018	-104.8229025	0.00	
13300.00†	90.028	89.276	7400.49	5385.80	2155.13	5043.06	40.3887031	-104.8225435	0.00	
13400.00†	90.028	89.276	7400.45	5483.78	2156.40	5143.05	40.3887045	-104.8221845	0.00	
13500.00†	90.028	89.276	7400.40	5581.76	2157.66	5243.04	40.3887059	-104.8218256	0.00	
13600.00†	90.028	89.276	7400.35	5679.74	2158.93	5343.03	40.3887073	-104.8214666	0.00	
13700.00†	90.028	89.276	7400.30	5777.72	2160.19	5443.02	40.3887086	-104.8211076	0.00	
13800.00†	90.028	89.276	7400.25	5875.69	2161.46	5543.02	40.3887100	-104.8207486	0.00	
13900.00†	90.028	89.276	7400.20	5973.67	2162.72	5643.01	40.3887114	-104.8203897	0.00	
14000.00†	90.028	89.276	7400.15	6071.65	2163.98	5743.00	40.3887127	-104.8200307	0.00	
14100.00†	90.028	89.276	7400.10	6169.63	2165.25	5842.99	40.3887141	-104.8196717	0.00	
14200.00†	90.028	89.276	7400.06	6267.60	2166.51	5942.98	40.3887155	-104.8193128	0.00	
14300.00†	90.028	89.276	7400.01	6365.58	2167.78	6042.98	40.3887168	-104.8189538	0.00	
14400.00†	90.028	89.276	7399.96	6463.56	2169.04	6142.97	40.3887182	-104.8185948	0.00	
14500.00†	90.028	89.276	7399.91	6561.54	2170.31	6242.96	40.3887195	-104.8182358	0.00	
14600.00†	90.028	89.276	7399.86	6659.52	2171.57	6342.95	40.3887209	-104.8178769	0.00	
14700.00†	90.028	89.276	7399.81	6757.49	2172.83	6442.94	40.3887223	-104.8175179	0.00	
14800.00†	90.028	89.276	7399.76	6855.47	2174.10	6542.94	40.3887236	-104.8171589	0.00	
14900.00†	90.028	89.276	7399.71	6953.45	2175.36	6642.93	40.3887250	-104.8167999	0.00	
15000.00†	90.028	89.276	7399.67	7051.43	2176.63	6742.92	40.3887263	-104.8164410	0.00	
15100.00†	90.028	89.276	7399.62	7149.40	2177.89	6842.91	40.3887277	-104.8160820	0.00	
15200.00†	90.028	89.276	7399.57	7247.38	2179.16	6942.90	40.3887290	-104.8157230	0.00	
15300.00†	90.028	89.276	7399.52	7345.36	2180.42	7042.90	40.3887304	-104.8153640	0.00	
15400.00†	90.028	89.276	7399.47	7443.34	2181.68	7142.89	40.3887317	-104.8150051	0.00	
15500.00†	90.028	89.276	7399.42	7541.31	2182.95	7242.88	40.3887331	-104.8146461	0.00	
15600.00†	90.028	89.276	7399.37	7639.29	2184.21	7342.87	40.3887344	-104.8142871	0.00	
15700.00†	90.028	89.276	7399.32	7737.27	2185.48	7442.86	40.3887358	-104.8139281	0.00	
15800.00†	90.028	89.276	7399.28	7835.25	2186.74	7542.86	40.3887371	-104.8135692	0.00	
15900.00†	90.028	89.276	7399.23	7933.23	2188.01	7642.85	40.3887385	-104.8132102	0.00	
16000.00†	90.028	89.276	7399.18	8031.20	2189.27	7742.84	40.3887398	-104.8128512	0.00	
16100.00†	90.028	89.276	7399.13	8129.18	2190.54	7842.83	40.3887412	-104.8124923	0.00	
16200.00†	90.028	89.276	7399.08	8227.16	2191.80	7942.82	40.3887425	-104.8121333	0.00	
16300.00†	90.028	89.276	7399.03	8325.14	2193.06	8042.82	40.3887438	-104.8117743	0.00	
16400.00†	90.028	89.276	7398.98	8423.11	2194.33	8142.81	40.3887452	-104.8114153	0.00	
16500.00†	90.028	89.276	7398.94	8521.09	2195.59	8242.80	40.3887465	-104.8110564	0.00	
16600.00†	90.028	89.276	7398.89	8619.07	2196.86	8342.79	40.3887479	-104.8106974	0.00	
16700.00†	90.028	89.276	7398.84	8717.05	2198.12	8442.78	40.3887492	-104.8103384	0.00	
16800.00†	90.028	89.276	7398.79	8815.03	2199.39	8542.78	40.3887505	-104.8099794	0.00	
16900.00†	90.028	89.276	7398.74	8913.00	2200.65	8642.77	40.3887519	-104.8096205	0.00	
17000.00†	90.028	89.276	7398.69	9010.98	2201.91	8742.76	40.3887532	-104.8092615	0.00	
17100.00†	90.028	89.276	7398.64	9108.96	2203.18	8842.75	40.3887545	-104.8089025	0.00	
17200.00†	90.028	89.276	7398.59	9206.94	2204.44	8942.74	40.3887559	-104.8085435	0.00	
17300.00†	90.028	89.276	7398.55	9304.91	2205.71	9042.74	40.3887572	-104.8081846	0.00	
17400.00†	90.028	89.276	7398.50	9402.89	2206.97	9142.73	40.3887585	-104.8078256	0.00	
17500.00†	90.028	89.276	7398.45	9500.87	2208.24	9242.72	40.3887598	-104.8074666	0.00	



Planned Wellpath Report

WINDOM 15N (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	PDC ENERGY INC	Well	WINDOM 15N
Field	WELD COUNTY (NAD83/GRID)	API/Legal	
Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24)		

WELLPATH DATA (191 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS ["/100ft]	Comments
17600.00†	90.028	89.276	7398.40	9598.85	2209.50	9342.71	40.3887612	-104.8071076	0.00	
17700.00†	90.028	89.276	7398.35	9696.82	2210.76	9442.70	40.3887625	-104.8067487	0.00	
17800.00†	90.028	89.276	7398.30	9794.80	2212.03	9542.70	40.3887638	-104.8063897	0.00	
17900.00†	90.028	89.276	7398.25	9892.78	2213.29	9642.69	40.3887651	-104.8060307	0.00	
18000.00†	90.028	89.276	7398.20	9990.76	2214.56	9742.68	40.3887665	-104.8056717	0.00	
18100.00†	90.028	89.276	7398.16	10088.74	2215.82	9842.67	40.3887678	-104.8053128	0.00	
18200.00†	90.028	89.276	7398.11	10186.71	2217.09	9942.66	40.3887691	-104.8049538	0.00	
18300.00†	90.028	89.276	7398.06	10284.69	2218.35	10042.66	40.3887704	-104.8045948	0.00	
18400.00†	90.028	89.276	7398.01	10382.67	2219.61	10142.65	40.3887717	-104.8042359	0.00	
18420.02	90.028	89.276	7398.00 [‡]	10402.28	2219.87	10162.66	40.3887720	-104.8041640	0.00	BPZ
18470.02	90.028	89.276	7397.98	10451.27	2220.50	10212.66	40.3887727	-104.8039845	0.00	BHL (1285'FNL & 2553'FWL,SEC.20)

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.24-T05N-R67W	N/A	2.00	30.11	-409.01	3183256.41	1383040.89	40.3829830	-104.8421713	polygon
	2D Polygon: dimensions not calculated								
SEC.19-T05N-R66W	N/A	6.00	30.24	-109.13	3183556.28	1383041.03	40.3829772	-104.8410949	polygon
	2D Polygon: dimensions not calculated								
SEC.20-T05N-R66W	N/A	6.00	30.24	-109.13	3183556.28	1383041.03	40.3829772	-104.8410949	polygon
	2D Polygon: dimensions not calculated								
WINDOM 15N BHL (1285'FNL & 2553'FWL,SEC.20)	N/A	7398.00	2220.26	10212.52	3193877.50	1385230.95	40.3887720	-104.8039850	point
2) WINDOM 15N BPZ (1284'FNL&2503'FWL Sec.20)	18420.02	7398.00	2219.87	10162.66	3193827.64	1385230.56	40.3887720	-104.8041640	point
1) WINDOM 15N LP (1263'FNL & 2460'FEL,SEC.24)	8154.91	7403.00	2090.08	-101.62	3183563.79	1385100.78	40.3886310	-104.8410130	point

SURVEY PROGRAM - Ref Wellbore: WINDOM 15N PWB Ref Wellpath: WINDOM 15N (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 15N PWB
1950.00	18470.02	OWSG MWD rev2 (MS+IFR1)		WINDOM 15N PWB



Planned Wellpath Report

WINDOM 15N (REV-A.0) PWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	PDC ENERGY INC	Well	WINDOM 15N
Field	WELD COUNTY (NAD83/GRID)	API/Legal	
Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24)		

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
28.50	0.000	338.408	28.50	SHL
900.00	0.000	338.408	900.00	End of Tangent
1925.09	20.502	338.408	1903.35	Build (XS)
7074.99	20.502	338.408	6727.07	KOP
8154.91	90.028	89.276	7403.00	LP
18420.02	90.028	89.276	7398.00	BPZ
18470.02	90.028	89.276	7397.98	BHL (1285'FNL & 2553'FWL,SEC.20)



Closest Approach Clearance Summary Report

WINDOM 15N (REV-A.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PDC ENERGY INC	Well	WINDOM 15N
Field	WELD COUNTY (NAD83/GRID)	API/Legal	
Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'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 10:17:06 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	-30.11	-80.01	3183665.41	1383010.79	40°22'58.4112"N	104°50'26.5344"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	(4999'GL+28.5'KB@5028'RKB) (RKB) to Facility Vertical Datum	5027.50ft
Horizontal Reference Pt	Slot	(4999'GL+28.5'KB@5028'RKB) (RKB) to Mean Sea Level	5027.50ft
Vertical Reference Pt	(4999'GL+28.5'KB@5028'RKB) (RKB)	(4999'GL+28.5'KB@5028'RKB) (RKB) to Ground Level at Slot (SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24))	5027.50ft
MD Reference Pt	(4999'GL+28.5'KB@5028'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 15N (REV-A.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PDC ENERGY INC	Well	WINDOM 15N
Field	WELD COUNTY (NAD83/GRID)	API/Legal	
Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'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 15N PWB Ref Wellpath: WINDOM 15N (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 15N PWB
1950.00	18469.88	OWSG MWD rev2 (MS+IFR1)		WINDOM 15N PWB



Closest Approach Clearance Summary Report

WINDOM 15N (REV-A.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PDC ENERGY INC	Well	WINDOM 15N
Field	WELD COUNTY (NAD83/GRID)	API/Legal	
Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24)		

CALCULATION RANGE & CUTOFF		
From: 28.50ft MD	To: 18469.88ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (114 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.20-T5N-R66W (EXIST)	STUGART #3-20 (05-123-22663)	STUGART 3-20	STUGART 3-20	STUGART 3-20\STUGART 3-20 (Vert)	Drilling	18097.21	420.00	18097.21	18097.23	0.05	18097.23	FAIL
SEC.20-T5N-R66W (EXIST)	STUGART #6-20 (05-123-22661)	Stugart 6-20	Stugart 6-20	Stugart 6-20\Stugart 6-20 (Vert)	Drilling	17811.41	507.62	17811.41	17811.41	0.06	17811.41	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	8677.95	569.26	8677.95	8677.93	0.06	8677.93	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	10004.23	574.46	10004.23	10004.22	0.06	10004.22	FAIL
SEC.20-T5N-R66W (EXIST)	BARNETT #5-20 (05-123-22662)	Barnett 5-20	Barnett 5-20	Barnett 5-20\Barnett 5-20 (Vert)	Drilling	16645.45	818.96	16645.45	16645.42	0.09	16645.42	FAIL
SEC.20-T5N-R66W (EXIST)	SW GREELEY #18-20 (05-123-26603)	SW GREELEY #18-20	SW GREELEY #18-20 AWB	SW GREELEY #18-20 AWP	Drilling	17189.26	26.92	17189.26	17189.86	0.11	17189.86	FAIL
SEC.20-T5N-R66W (EXIST)	HAYES #2-20 (05-123-13227)	HAYES 2-20 (Vert)	HAYES 2-20	HAYES 2-20\HAYES 2-20	Drilling	18469.88	1051.42	18469.88	18469.88	0.12	18469.88	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	7576.27	1036.87	7576.27	7652.55	0.12	7652.55	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	7256.80	1155.53	7256.80	7353.14	0.14	7353.14	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	2904.48	522.31	2904.48	3656.49	0.14	3656.49	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	5975.66	135.03	5975.66	6180.35	0.14	6180.35	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	8838.61	470.23	8838.61	8838.58	0.16	8838.58	FAIL
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	7291.07	1790.35	7291.07	7442.61	0.21	7442.61	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	7158.70	1882.00	7158.70	7309.58	0.23	7309.58	FAIL
SEC.20-T5N-R66W (EXIST)	HAYES #1 (05-123-05178)	HAYES 1	HAYES 1	HAYES 1\HAYES 1 (VERT)	Drilling	18469.88	2196.09	18469.88	18469.88	0.25	18469.88	FAIL
SEC.20-T5N-R66W (EXIST)	HAYES #1-20 (05-123-13218)	HAYES 1-20	HAYES 1-20	HAYES 1-20\HAYES 1-20 (Vert)	Drilling	18469.88	2262.51	18469.88	18469.88	0.25	18469.88	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	10148.42	865.31	10148.42	10148.32	0.30	10148.32	FAIL
SEC.20-T5N-R66W (EXIST)	WIEDEMAN R J #20-13 (05-123-10815)	Wiedeman R J 20-13	Wiedeman R J 20-13	Wiedeman R J 20-13\Wiedeman R J 20-13 (Vert)	Drilling	16944.26	2973.51	16944.26	16944.08	0.33	16944.08	FAIL
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	7669.38	41.93	7669.38	7669.59	0.58	7669.59	FAIL
Stugart State 6-20	Stugart #06N (05-123-51269) PR	Stugart 06N	Stugart 06N	Stugart 06N\Stugart 06N Final Surveys	Drilling	18469.88	150.72	18469.88	18469.88	0.80	18469.88	FAIL
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	2200.91	1140.81	2200.91	7854.70	0.85	7854.70	FAIL
SEC.20-T5N-R66W (EXIST)	SW GREELEY #31-20 (05-123-28090)	SW Greeley 31-20	SW Greeley 31-20	SW Greeley 31-20\SW Greeley 31-20	Drilling	16074.47	176.09	16074.47	16072.18	0.89	16072.18	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	4025.21	2006.82	4025.21	7729.68	0.95	7729.68	FAIL
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	14.94	18469.88	928.50	1.13	18469.88	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	14.94	628.50	18469.88	1.26	18469.88	PASS



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WINDOM 15N (REV-A.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PDC ENERGY INC	Well	WINDOM 15N
Field	WELD COUNTY (NAD83/GRID)	API/Legal	
Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24)		

CALCULATION RANGE & CUTOFF		
From: 28.50ft MD	To: 18469.88ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (114 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
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	2488.91	900.00	7908.23	1.32	7908.23	PASS
Stugart State 6-20	Stugart #07N (05-123-51263) PR	Stugart 07N	Stugart 07N	Stugart 07N\Stugart 07N Final Surveys	Drilling	18469.88	249.98	18469.88	18469.88	1.37	18469.88	PASS
Stugart State 6-20	Stugart #05NA (05-123-51277) PR	Stugart 05NA	Stugart 05NA	Stugart 05NA\Stugart 05NA Final Surveys	Drilling	18469.88	332.55	18469.88	18469.88	1.47	18469.88	PASS
Stugart State 6-20	Stugart #08N (05-123-51256) PR	Stugart 08N	Stugart 08N	Stugart 08N\Stugart 08N Final Surveys	Drilling	18469.88	403.11	18469.88	18469.88	1.75	18469.88	PASS
SEC.20-T5N-R66W (EXIST)	BARNETT 1-20 (05-123-13311)	BARNETT 1-20	BARNETT 1-20 AWB	BARNETT 1-20 AWP	Drilling	16534.89	421.51	16534.89	16555.75	2.10	16555.75	PASS
SEC.20-T5N-R66W (EXIST)	GREELEY #21-20 (05-123-25782)	GREELEY 21-20	GREELEY 21-20	GREELEY 21-20\GREELEY 21-20	Drilling	18469.88	274.76	18469.88	18469.88	2.19	18469.88	PASS
Stugart State 6-20	Stugart #04N (05-123-51276) PR	Stugart 04N	Stugart 04N	Stugart 04N\Stugart 04N Final Surveys	Drilling	18469.88	537.30	18469.88	18469.88	2.23	18469.88	PASS
Stugart State 6-20	Stugart #09C (05-123-51266) PR	Stugart 09C	Stugart 09C	Stugart 09C\Stugart 09C Final Surveys	Drilling	18469.88	586.20	18469.88	18469.88	2.40	18469.88	PASS
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	28.50	30.24	428.50	18469.88	2.49	18469.88	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	29.87	900.00	18469.88	2.61	18469.88	PASS
Stugart State 6-20	Stugart #03N (05-123-51272) PR	Stugart 03N	Stugart 03N	Stugart 03N\Stugart 03N Final Surveys	Drilling	18469.88	714.09	18469.88	18469.88	2.91	18469.88	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	15410.26	617.83	15410.26	15415.09	3.37	15415.09	PASS
Stugart State 6-20	Stugart #10N (05-123-51275) PR	Stugart 10N	Stugart 10N	Stugart 10N\Stugart 10N Final Surveys	Drilling	18469.88	837.64	18469.88	18469.88	3.55	18469.88	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	14046.85	565.12	14046.85	14088.55	3.66	14088.55	PASS
Stugart State 6-20	Stugart State #02C (05-123-51273) PR	Stugart State 02C	Stugart State 02C	Stugart State 02C\Stugart State 02C Final Surveys	Drilling	18469.88	927.96	18469.88	18469.88	3.79	18469.88	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	44.81	900.00	18469.88	3.98	18469.88	PASS
Stugart State 6-20	Stugart #11N (05-123-51278) PR	Stugart 11N	Stugart 11N	Stugart 11N\Stugart 11N Final Surveys	Drilling	18469.88	1050.57	18469.88	18469.88	4.37	18469.88	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	81.55	8402.92	8402.92	4.41	8402.92	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	12385.86	595.11	12385.86	12440.12	4.80	12440.12	PASS
Stugart State 6-20	Stugart State #01N (05-123-51265) PR	Stugart State 01N	Stugart State 01N	Stugart State 01N\Stugart State 01N Final Surveys	Drilling	18469.88	1173.98	18469.88	18469.88	4.82	18469.88	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	59.75	900.00	18469.88	5.04	18469.88	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	13718.65	759.23	13718.65	13734.87	5.05	13734.87	PASS
Sec.19-T5N-R66W	CHISMAR #19-22 (05-123-19467) PA	CHISMAR 19-22	CHISMAR 19-22	CHISMAR 19-22\CHISMAR 19-22	Drilling	11107.73	527.61	11107.73	11159.54	5.17	11159.54	PASS
Stugart State 6-20	Stugart #12N (05-123-51271) PR	Stugart 12N	Stugart 12N	Stugart 12N\Stugart 12N Final Surveys	Drilling	18469.88	1267.75	18469.88	18469.88	5.30	18469.88	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	12754.10	756.99	12754.10	12772.94	5.70	12772.94	PASS



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REFERENCE WELLPATH IDENTIFICATION			
Operator	PDC ENERGY INC	Well	WINDOM 15N
Field	WELD COUNTY (NAD83/GRID)	API/Legal	
Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24)		

CALCULATION RANGE & CUTOFF		
From: 28.50ft MD	To: 18469.88ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (114 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.20-T5N-R66W (EXIST)	HURST #7-20 (05-123-24976)	HURST 7-20	HURST 7-20	HURST 7-20\HURST 7-20	Drilling	18469.88	1038.80	18469.88	18469.88	5.78	18469.88	PASS
SEC.20-T5N-R66W (EXIST)	WIEDEMAN #25-20 (05-123-27032)	WIEDEMAN 25-20	WIEDEMAN 25-20	WIEDEMAN 25-20\WIEDEMAN 25-20	Drilling	18469.88	1453.12	18469.88	18469.88	5.96	18469.88	PASS
Stugart State 6-20	Stugart #13NA (05-123-51261) PR	Stugart 13NA	Stugart 13NA	Stugart 13NA\Stugart 13NA Final Surveys	Drilling	18469.88	1486.57	18469.88	18469.88	6.19	18469.88	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	75.05	900.00	18469.88	6.25	18469.88	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	81.48	7693.00	7693.00	6.29	7693.00	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	11553.48	739.39	11553.48	11574.37	6.57	11574.37	PASS
SEC.20-T5N-R66W (EXIST)	STUGART #22-20 (05-123-28089)	Stugart 22-20	Stugart 22-20	Stugart 22-20\Stugart 22-20	Drilling	17265.56	1495.90	17265.56	17335.82	6.83	17335.82	PASS
Stugart State 6-20	Stugart #14N (05-123-51270) PR	Stugart 14N	Stugart 14N	Stugart 14N\Stugart 14N Final Surveys	Drilling	18469.88	1722.96	18469.88	18469.88	7.14	18469.88	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	89.99	900.00	18469.88	7.54	18469.88	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	85.35	7428.50	1133.99	7.74	7428.50	PASS
Stugart State 6-20	Stugart #15N (05-123-51255) PR	Stugart 15N	Stugart 15N	Stugart 15N\Stugart 15N Final Surveys	Drilling	18469.88	1944.52	18469.88	18469.88	8.05	18469.88	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	91.77	7328.50	1126.16	8.38	7428.50	PASS
SEC.20-T5N-R66W (EXIST)	LUNDVALL #11-20 (05-123-22759)	Ludvall 11-20	Ludvall 11-20	Ludvall 11-20\Ludvall 11-20	Drilling	17921.19	2038.13	17921.19	18055.16	8.68	18055.16	PASS
SEC.20-T5N-R66W (EXIST)	HSR-WIEDEMAN #10-20 (05-123-19138)	HSR-Wiedeman 10-20	HSR-Wiedeman 10-20	HSR-Wiedeman 10-20\HSR-Wiedeman 10-20	Drilling	18469.88	2084.96	18469.88	18469.88	8.76	18469.88	PASS
Stugart State 6-20	Stugart #16N (05-123-51264) PR	Stugart 16N	Stugart 16N	Stugart 16N\Stugart 16N Final Surveys	Drilling	18469.88	2133.31	18469.88	18469.88	8.77	18469.88	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	104.92	900.00	18469.88	8.79	18469.88	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	100.03	7128.50	1129.97	9.16	7328.50	PASS
SEC.20-T5N-R66W (EXIST)	LUNDVALL #12-20 (05-123-22760)	Lundvall 12-20	Lundvall 12-20	Lundvall 12-20\Lundvall 12-20	Drilling	16434.54	1903.50	16434.54	16591.07	9.34	16591.07	PASS
SEC.20-T5N-R66W (EXIST)	WIEDEMAN #24-20 (05-123-27033)	WIEDEMAN 24-20	WIEDEMAN 24-20	WIEDEMAN 24-20\WIEDEMAN 24-20	Drilling	18469.88	1875.66	18469.88	18469.88	9.40	18469.88	PASS
Stugart State 6-20	Stugart #17C (05-123-51268) PR	Stugart 17C	Stugart 17C	Stugart 17C\Stugart 17C Final Surveys	Drilling	18469.88	2352.82	18469.88	18469.88	9.65	18469.88	PASS
SEC.24-T05N-R67W	SLOT#01 WINDOM 01N (1877'FSL & 2304'FEL,SEC.24)	WINDOM 01N	WINDOM 01N PWB	WINDOM 01N (REV-A.0) PWP	Planned	28.50	85.49	8428.50	848.89	9.92	8428.50	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	109.50	7228.50	1140.07	10.03	7428.50	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	119.86	728.50	18469.88	10.07	18469.88	PASS
Stugart State 6-20	Stugart #18N (05-123-51274) PR	Stugart 18N	Stugart 18N	Stugart 18N\Stugart 18N Final Surveys	Drilling	18469.88	2580.81	18469.88	18469.88	10.64	18469.88	PASS
SEC.20-T5N-R66W (EXIST)	GREELEY #27-20 (05-123-26706)	Greeley 27-20 (Exist.)	Greeley 27-20	Greeley 27-20\Greeley 27-20	Drilling	18469.88	1873.58	18469.88	18469.88	10.78	18469.88	PASS



Closest Approach Clearance Summary Report

WINDOM 15N (REV-A.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PDC ENERGY INC	Well	WINDOM 15N
Field	WELD COUNTY (NAD83/GRID)	API/Legal	
Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24)		

CALCULATION RANGE & CUTOFF		
From: 28.50ft MD	To: 18469.88ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (114 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.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	120.28	6828.50	1155.84	11.00	8828.50	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	15223.93	2005.54	15223.93	15408.36	11.10	15408.36	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	134.80	428.50	18469.88	11.31	18469.88	PASS
Stugart State 6-20	Stugart #19N (05-123-51267) PR	Stugart 19N	Stugart 19N	Stugart 19N\Stugart 19N Final Surveys	Drilling	18469.88	2812.46	18469.88	18469.88	11.55	18469.88	PASS
SEC.20-T5N-R66W (EXIST)	WIEDEMAN #20-20 (05-123-22699)	WIEDEMAN 20-20	WIEDEMAN 20-20	WIEDEMAN 20-20\WIEDEMAN 20-20	Drilling	18469.88	2708.55	18469.88	18469.88	11.72	18469.88	PASS
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	131.99	8428.50	1174.97	12.02	9628.50	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	13972.45	3352.42	13972.45	14286.49	12.32	14286.49	PASS
Stugart State 6-20	Stugart #20N (05-123-51260) PR	Stugart 20N	Stugart 20N	Stugart 20N\Stugart 20N Final Surveys	Drilling	18469.88	3030.64	18469.88	18469.88	12.46	18469.88	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	13892.82	1996.65	13892.82	14104.93	12.85	14104.93	PASS
Stugart State 6-20	Stugart #21NA (05-123-51262) PR	Stugart 21NA	Stugart 21NA	Stugart 21NA\Stugart 21NA Final Surveys	Drilling	18469.88	3233.44	18469.88	18469.88	13.26	18469.88	PASS
Stugart State 6-20	Stugart #22N (05-123-51259) PR	Stugart 22N	Stugart 22N	Stugart 22N\Stugart 22N Final Surveys	Drilling	18469.88	3457.01	18469.88	18469.88	14.15	18469.88	PASS
SEC.20-T5N-R66W (EXIST)	HSR-WIEDEMAN #15-20 (05-123-19140)	HSR-Wiedeman 15-20	HSR-Wiedeman 15-20	HSR-Wiedeman 15-20\HSR-Wiedeman 15-20	Drilling	18469.88	3460.71	18469.88	18469.88	14.36	18469.88	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	144.23	8528.50	1034.96	14.36	10028.50	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	12505.59	1879.06	12505.59	12723.31	14.50	12723.31	PASS
SEC.20-T5N-R66W (EXIST)	HSR-WIEDEMAN #14-20 (05-123-19139)	HSR-Wiedeman 14-20	HSR-Wiedeman 14-20	HSR-Wiedeman 14-20\HSR-Wiedeman 14-20	Drilling	18027.17	3482.65	18027.17	18469.88	14.63	18469.88	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	2118.76	525.64	2118.76	2191.16	14.76	8428.50	PASS
Stugart State 6-20	Stugart #23N (05-123-51257) PR	Stugart 23N	Stugart 23N	Stugart 23N\Stugart 23N Final Surveys	Drilling	18469.88	3679.15	18469.88	18469.88	15.05	18469.88	PASS
SEC.20-T5N-R66W (EXIST)	HSR-WIEDEMAN #9-20 (05-123-19149)	HSR-Wiedeman 9-20	HSR-Wiedeman 9-20	HSR-Wiedeman 9-20\HSR-Wiedeman 9-20	Drilling	18469.88	3021.93	18469.88	18469.88	15.40	18469.88	PASS
Stugart State 6-20	Stugart #24N (05-123-51258) PR	Stugart 24N	Stugart 24N	Stugart 24N\Stugart 24N Final Surveys	Drilling	18469.88	3891.02	18469.88	18469.88	15.89	18469.88	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	14709.02	2837.35	14709.02	15131.97	16.47	15131.97	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	15306.26	3337.59	15306.26	15867.26	18.00	15867.26	PASS
SEC.20-T5N-R66W (EXIST)	WIEDEMAN #40-20 (05-123-27034)	WIEDEMAN 40-20	WIEDEMAN 40-20	WIEDEMAN 40-20\WIEDEMAN 40-20	Drilling	18469.88	3106.08	18469.88	18469.88	18.05	18469.88	PASS
SEC.20-T5N-R66W (EXIST)	HSR-WIEDEMAN #16-20 (05-123-19141)	HSR-Wiedeman 16-20	HSR-Wiedeman 16-20	HSR-Wiedeman 16-20\HSR-Wiedeman 16-20	Drilling	18469.88	3959.19	18469.88	18469.88	18.35	18469.88	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	156.93	8528.50	842.31	18.66	10428.50	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	11034.96	2063.51	11034.96	11363.26	19.49	11363.26	PASS



Closest Approach Clearance Summary Report

WINDOM 15N (REV-A.0) PWP - SPE WPTS Stop Drilling HSE Risk (2017)
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REFERENCE WELLPATH IDENTIFICATION			
Operator	PDC ENERGY INC	Well	WINDOM 15N
Field	WELD COUNTY (NAD83/GRID)	API/Legal	
Facility	SEC.24-T05N-R67W	Wellbore	WINDOM 15N PWB
Slot	SLOT#15 WINDOM 15N (1847'FSL & 2384'FEL,SEC.24)		

CALCULATION RANGE & CUTOFF		
From: 28.50ft MD	To: 18469.88ft MD	C-C Cutoff: (none)

OFFSET WELL CLEARANCE SUMMARY (114 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.20-T5N-R66W (EXIST)	HURST #8-20 (05-123-24996)	HURST 8-20	HURST 8-20	HURST 8-20\HURST 8-20	Drilling	18469.88	2051.83	18469.88	18469.88	19.50	18469.88	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	747.20	763.64	747.20	6523.27	19.61	6523.27	PASS
SEC.20-T5N-R66W (EXIST)	GREELEY #17-20 (05-123-26022)	GREELEY 17-20	GREELEY 17-20	GREELEY 17-20\GREELEY 17-20	Drilling	18469.88	1536.52	18469.88	18469.88	19.93	18469.88	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	11930.46	2690.32	11930.46	12445.79	22.03	12445.79	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	12761.41	3193.80	12761.41	13443.34	23.13	13443.34	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	7430.35	1627.46	7430.35	7536.55	23.28	7536.55	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	3300.43	11328.50	12343.56	26.33	12343.56	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	966.49	3447.91	11328.50	12316.36	29.79	12316.36	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	7190.75	2192.33	7190.75	7351.46	32.28	7351.46	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	6355.31	2293.85	6355.31	7197.06	32.66	7197.06	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	924.48	2218.83	10028.50	11238.85	39.24	11238.85	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	903.03	1268.52	8628.50	1074.26	42.32	10028.50	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	1544.79	28.50	1711.52	49.99	7728.50	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	1518.13	28.50	995.58	50.93	7328.50	PASS