

PDC ENERGY

**WELD COUNTY, COLORADO
SW NW SEC. 10 T5N R64W 6th P.M.
WACKER 10F-304**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

04 February, 2016



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 98.4usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 us	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	04/02/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	15,082.8	PROPOSAL #1 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SW NW SEC. 10 T5N R64W 6th P.M.						
ABDN VERT BLOSKAS #13-9 - Wellbore #1 - Design #1	11,679.7	6,673.4	1,827.9	1,553.1	6.652	CC
ABDN VERT BLOSKAS #13-9 - Wellbore #1 - Design #1	11,712.6	6,673.3	1,828.2	1,552.5	6.631	ES
ABDN VERT BLOSKAS #13-9 - Wellbore #1 - Design #1	12,007.8	6,672.7	1,857.2	1,573.2	6.541	SF
ABDN VERT HEINRICH #1 - Wellbore #1 - Design #1	8,019.1	6,692.4	504.1	330.6	2.906	CC, ES
ABDN VERT HEINRICH #1 - Wellbore #1 - Design #1	8,070.8	6,692.3	506.8	331.9	2.898	SF
ABDN VERT OGRADY #3 - Wellbore #1 - Design #1	9,149.5	6,716.2	807.5	603.5	3.957	CC
ABDN VERT OGRADY #3 - Wellbore #1 - Design #1	9,153.5	6,716.2	807.5	603.4	3.955	ES
ABDN VERT OGRADY #3 - Wellbore #1 - Design #1	9,251.9	6,716.0	814.0	607.1	3.935	SF
ABDN VERT PLUMB #2 - Wellbore #1 - Design #1	15,082.8	6,675.0	1,014.0	644.0	2.740	CC, ES, SF
EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellb	13,620.2	6,850.0	1,261.2	1,048.6	5.932	CC
EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellb	13,681.1	6,850.3	1,262.6	1,048.3	5.891	ES
EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellb	13,800.0	6,850.9	1,273.9	1,056.3	5.853	SF
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	14,910.1	6,830.8	2,482.7	2,226.4	9.688	CC
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	14,960.6	6,830.8	2,483.2	2,225.5	9.637	ES
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	15,082.8	6,830.7	2,488.7	2,227.6	9.531	SF
EXIST DD JURGENS STATE #B16-30D - Wellbore #1 -	12,479.4	6,968.2	3,694.1	3,499.6	18.991	CC
EXIST DD JURGENS STATE #B16-30D - Wellbore #1 -	12,598.4	6,964.3	3,696.0	3,498.2	18.682	ES
EXIST DD JURGENS STATE #B16-30D - Wellbore #1 -	14,468.5	6,923.9	4,195.3	3,945.2	16.773	SF
EXIST DD PETERSON B #10-24D - Wellbore #1 - Wellb	825.9	819.0	2,336.9	2,334.3	882.005	CC, ES
EXIST DD PETERSON B #10-24D - Wellbore #1 - Wellb	14,300.0	6,669.0	9,976.9	9,747.9	43.570	SF
EXIST DD PJ #8I - Wellbore #1 - Wellbore #1	15,082.8	6,764.3	1,757.2	1,502.0	6.885	CC, ES, SF
EXIST DD WACKER B #10-20D - Wellbore #1 - Wellbore	5,961.6	6,070.0	1,367.1	1,330.1	36.973	CC, ES
EXIST DD WACKER B #10-20D - Wellbore #1 - Wellbore	13,500.0	6,741.5	7,774.2	7,558.4	36.019	SF
EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore	933.0	925.0	4,124.1	4,120.9	1,320.801	CC
EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore	993.2	956.8	4,124.2	4,120.9	1,241.942	ES
EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore	12,401.5	5,938.0	9,950.1	9,782.6	59.390	SF
EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #	2,166.5	2,048.0	4,096.9	4,087.9	455.038	CC
EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #	2,263.8	2,116.3	4,097.3	4,087.7	429.570	ES
EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #	12,600.0	5,937.0	9,992.9	9,824.0	59.155	SF
EXIST HZ SEYLLOR #B10-64-1HN - Wellbore #1 - Wellbc	540.6	526.6	1,026.7	1,025.0	576.992	CC
EXIST HZ SEYLLOR #B10-64-1HN - Wellbore #1 - Wellbc	600.0	584.6	1,026.8	1,024.7	504.912	ES
EXIST HZ SEYLLOR #B10-64-1HN - Wellbore #1 - Wellbc	12,204.7	6,041.0	5,614.4	5,451.9	34.547	SF
EXIST HZ SEYLLOR STATE #B15-79HNM - Wellbore #1	1,360.0	1,423.1	990.4	985.1	187.698	CC, ES
EXIST HZ SEYLLOR STATE #B15-79HNM - Wellbore #1	9,448.8	6,236.0	2,765.4	2,673.9	30.234	SF
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	9,306.4	6,675.0	2,008.6	1,930.5	25.732	CC
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	9,350.4	6,675.1	2,009.1	1,929.8	25.346	ES
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	10,728.3	6,676.8	2,460.9	2,343.5	20.956	SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

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Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 10 T5N R64W 6th P.M.						
EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1	11,768.5	6,684.2	758.7	482.3	2.745	CC
EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1	11,800.0	6,684.1	759.4	482.1	2.739	ES
EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1	11,811.0	6,684.1	759.9	482.3	2.738	SF
EXIST VERT BLOSKAS #12-9 - Wellbore #1 - Design #1	11,748.7	6,674.2	326.6	49.9	1.180	Level 2, CC, ES, SF
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore	10,591.9	6,665.6	1,687.2	1,574.0	14.907	CC
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore	10,629.9	6,666.1	1,687.6	1,573.4	14.772	ES
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore	11,300.0	6,676.0	1,829.7	1,696.8	13.766	SF
EXIST VERT BLOSKAS BOND #9D - Wellbore #1 - Wel	11,146.4	6,678.3	128.4	-0.2	0.999	Level 1, CC, ES, SF
EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1	10,528.8	6,653.5	528.7	417.4	4.752	CC
EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1	10,531.5	6,653.4	528.7	417.4	4.749	ES
EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1	10,600.0	6,649.5	533.4	420.3	4.713	SF
EXIST VERT BOND #21-9 - Wellbore #1 - Design #1	10,454.0	6,694.7	786.5	546.7	3.279	CC, ES
EXIST VERT BOND #21-9 - Wellbore #1 - Design #1	10,531.5	6,694.5	790.3	548.3	3.266	SF
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	9,139.9	6,600.0	534.4	462.3	7.408	CC
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	9,153.5	6,600.0	534.6	462.1	7.373	ES
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	9,251.9	6,600.0	546.0	470.9	7.263	SF
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	98.4	68.0	1,075.2	1,075.1	10,000.000	CC
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	600.0	569.8	1,075.8	1,074.2	683.441	ES
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	15,082.8	6,533.8	8,677.2	8,439.4	36.490	SF
EXIST VERT HECKENDORF #1 - Wellbore #1 - Design	13,138.1	6,682.6	963.4	648.8	3.062	CC
EXIST VERT HECKENDORF #1 - Wellbore #1 - Design	13,188.9	6,682.5	964.7	648.7	3.052	ES
EXIST VERT HECKENDORF #1 - Wellbore #1 - Design	13,200.0	6,682.5	965.4	649.0	3.051	SF
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	7,753.6	6,717.9	828.5	661.5	4.961	CC
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	7,775.6	6,717.9	828.8	661.3	4.946	ES
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	7,874.0	6,717.7	837.2	667.2	4.924	SF
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #	13,035.3	6,630.7	1,890.1	1,708.8	10.429	CC
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #	13,090.5	6,629.7	1,890.9	1,708.1	10.345	ES
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #	13,582.6	6,621.4	1,967.7	1,771.2	10.012	SF
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore	14,378.6	6,674.7	481.7	262.7	2.200	CC
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore	14,400.0	6,674.8	482.2	262.6	2.196	ES, SF
EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore	13,327.8	6,600.0	720.3	531.2	3.808	CC, ES
EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore	13,400.0	6,600.0	723.9	532.8	3.787	SF
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Well	13,883.2	6,655.1	2,549.1	2,343.7	12.410	CC
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Well	13,976.3	6,656.4	2,550.8	2,342.8	12.263	ES
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Well	14,763.7	6,667.3	2,696.9	2,466.8	11.721	SF
EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - D	14,212.3	6,690.6	1,751.9	1,407.1	5.081	CC
EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - D	14,271.6	6,690.5	1,752.9	1,406.4	5.060	ES
EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - D	14,468.5	6,690.1	1,770.5	1,418.6	5.030	SF
EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - W	13,767.2	6,674.0	191.6	-10.4	0.948	Level 1, CC, ES, SF
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	6,495.3	6,403.5	1,163.7	1,020.3	8.117	CC
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	6,550.0	6,447.1	1,164.2	1,019.9	8.070	ES
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	6,750.0	6,582.4	1,177.4	1,030.1	7.993	SF
EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1	8,949.3	6,707.6	1,017.0	818.5	5.123	CC
EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1	8,956.7	6,707.6	1,017.0	818.3	5.118	ES
EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1	9,100.0	6,707.3	1,028.1	825.5	5.074	SF
EXIST VERT PAULINE #5 - Wellbore #1 - Design #1	15,082.8	6,675.0	1,075.6	705.6	2.907	CC, ES, SF
EXIST VERT PJ #2 - Wellbore #1 - Wellbore #1	15,082.8	6,400.0	1,686.8	1,451.0	7.154	CC, ES, SF
EXIST VERT PJ #5 - Wellbore #1 - Design #1	15,082.8	6,683.0	1,356.7	988.3	3.683	CC, ES, SF
EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbo	6,075.4	6,086.4	3,985.4	3,966.7	213.429	CC, ES
EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbo	12,600.0	6,700.0	9,954.8	9,785.7	58.866	SF
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore	162.3	140.3	2,073.4	2,073.1	7,418.340	CC
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore	295.3	261.1	2,073.7	2,072.9	2,890.238	ES
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore	14,862.2	6,229.8	9,974.4	9,747.9	44.046	SF

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Anticollision Report



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Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 10 T5N R64W 6th P.M.						
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbor	2,361.5	2,300.0	3,043.1	3,035.9	419.310	CC
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbor	2,854.3	2,789.7	3,044.0	3,034.5	322.434	ES
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbor	13,779.5	6,643.1	9,997.1	9,795.0	49.478	SF
EXIST VERT WACKER #1 - Wellbore #1 - Wellbore #1	2,694.1	2,656.1	61.0	52.3	7.030	CC
EXIST VERT WACKER #1 - Wellbore #1 - Wellbore #1	2,700.0	2,661.9	61.0	52.3	7.014	ES, SF
EXIST VERT WACKER #10D - Wellbore #1 - Wellbore #	6,066.8	6,000.0	567.0	549.2	31.895	CC, ES
EXIST VERT WACKER #10D - Wellbore #1 - Wellbore #	6,100.0	6,033.8	567.7	549.9	31.878	SF
EXIST VERT WACKER #2 - Wellbore #1 - Design #1	6,059.2	5,990.8	1,582.3	1,446.2	11.620	CC, ES, SF
EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore	4,548.7	4,474.4	1,538.0	1,521.8	94.911	CC
EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore	4,600.0	4,523.7	1,538.1	1,521.8	94.362	ES
EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore	14,960.6	6,331.0	9,964.6	9,759.2	48.511	SF
EXIST VERT WACKER #31-10 - Wellbore #1 - Design #	6,059.2	5,954.8	2,536.9	2,402.3	18.853	CC, ES, SF
EXIST VERT WACKER #32-10 - Wellbore #1 - Design #	6,059.2	5,994.8	2,370.8	2,238.5	17.916	CC
EXIST VERT WACKER #32-10 - Wellbore #1 - Design #	6,100.0	6,035.6	2,372.0	2,236.6	17.517	ES
EXIST VERT WACKER #32-10 - Wellbore #1 - Design #	6,102.3	6,038.0	2,372.1	2,236.7	17.515	SF
EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore	6,098.5	6,240.3	4,111.3	4,094.1	238.869	CC
EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore	6,100.0	6,241.8	4,111.3	4,094.1	238.843	ES
EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore	12,401.5	6,730.0	9,954.0	9,790.3	60.815	SF
EXIST VERT WACKER #42-10 - Wellbore #1 - Wellbore	5,777.5	5,700.0	3,877.7	3,862.3	251.402	CC
EXIST VERT WACKER #42-10 - Wellbore #1 - Wellbore	6,062.0	6,000.0	3,878.4	3,860.3	213.341	ES
EXIST VERT WACKER #42-10 - Wellbore #1 - Wellbore	12,500.0	6,500.0	9,903.3	9,753.2	65.990	SF
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	1,118.4	1,088.0	1,511.8	1,508.8	500.410	CC, ES
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	10,400.0	6,600.0	3,269.2	3,161.5	30.368	SF
WACKER 10F-204 - ORIGINAL WELLBORE - PROPOS	1,000.0	1,000.0	14.9	10.7	3.521	CC
WACKER 10F-204 - ORIGINAL WELLBORE - PROPOS	15,082.8	15,031.1	238.9	-219.6	0.521	Level 1, ES, SF
WACKER 10F-232 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	44.8	40.1	9.557	CC, ES
WACKER 10F-232 - ORIGINAL WELLBORE - PROPOS	6,791.3	7,549.1	292.5	244.5	6.092	SF
WACKER 10F-234 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	29.9	25.2	6.370	CC
WACKER 10F-234 - ORIGINAL WELLBORE - PROPOS	15,082.8	14,995.1	238.8	-218.2	0.523	Level 1, ES, SF
WACKER 10F-302 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	14.9	10.2	3.185	CC
WACKER 10F-302 - ORIGINAL WELLBORE - PROPOS	7,278.1	7,184.9	49.5	0.3	1.005	Level 2, ES, SF
WACKER 10G-212 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	104.9	100.2	22.369	CC, ES
WACKER 10G-212 - ORIGINAL WELLBORE - PROPOS	7,800.0	6,700.0	807.5	751.0	14.282	SF
WACKER 10G-214 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	90.0	85.3	19.185	CC, ES
WACKER 10G-214 - ORIGINAL WELLBORE - PROPOS	15,082.8	14,982.9	798.0	325.0	1.687	SF
WACKER 10G-302 - ORIGINAL WELLBORE - PROPOS	1,000.0	1,000.0	134.8	130.6	31.784	CC, ES
WACKER 10G-302 - ORIGINAL WELLBORE - PROPOS	8,169.3	6,600.0	1,177.0	1,109.9	17.560	SF
WACKER 10G-304 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	119.9	115.2	25.553	CC, ES
WACKER 10G-304 - ORIGINAL WELLBORE - PROPOS	15,082.8	15,065.7	1,010.3	536.5	2.133	SF
WACKER 10G-312 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	75.1	70.4	16.000	CC, ES
WACKER 10G-312 - ORIGINAL WELLBORE - PROPOS	7,600.0	6,888.7	508.6	454.9	9.474	SF
WACKER 10G-314 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	60.1	55.4	12.816	CC, ES
WACKER 10G-314 - ORIGINAL WELLBORE - PROPOS	15,082.8	15,049.3	558.1	83.6	1.176	Level 2, SF

Offset Design	SW NW SEC. 10 T5N R64W 6th P.M. - ABDN VERT BLOSKAS #13-9 - Wellbore #1 - Design #1										Offset Site Error:	0.0 usft
Survey Program:	0-INC										Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-104.68	-1,287.7	-4,915.6	5,081.6			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
98.4	98.4	65.4	65.4	0.1	0.1	-104.68	-1,287.7	-4,915.6	5,081.5	5,081.3	0.17	N/A	
100.0	100.0	67.0	67.0	0.1	0.1	-104.68	-1,287.7	-4,915.6	5,081.5	5,081.3	0.18	N/A	
196.8	196.8	163.8	163.8	0.3	1.8	-104.68	-1,287.7	-4,915.6	5,081.5	5,079.4	2.10	2,415.505	
200.0	200.0	167.0	167.0	0.3	1.9	-104.68	-1,287.7	-4,915.6	5,081.5	5,079.3	2.19	2,317.049	
295.3	295.3	262.3	262.3	0.5	4.0	-104.68	-1,287.7	-4,915.6	5,081.5	5,076.9	4.55	1,115.603	
300.0	300.0	267.0	267.0	0.5	4.1	-104.68	-1,287.7	-4,915.6	5,081.5	5,076.8	4.66	1,089.730	
393.7	393.7	360.7	360.7	0.8	6.0	-104.68	-1,287.7	-4,915.6	5,081.5	5,074.7	6.79	748.543	
400.0	400.0	367.0	367.0	0.8	6.2	-104.68	-1,287.7	-4,915.6	5,081.5	5,074.5	6.93	733.184	
492.1	492.1	459.1	459.1	1.0	8.0	-104.68	-1,287.7	-4,915.6	5,081.5	5,072.5	9.00	564.336	
500.0	500.0	467.0	467.0	1.0	8.2	-104.68	-1,287.7	-4,915.6	5,081.5	5,072.3	9.18	553.458	
590.5	590.5	557.5	557.5	1.2	10.0	-104.68	-1,287.7	-4,915.6	5,081.5	5,070.3	11.21	453.143	
600.0	600.0	567.0	567.0	1.2	10.2	-104.68	-1,287.7	-4,915.6	5,081.5	5,070.0	11.43	444.737	
689.0	689.0	656.0	656.0	1.4	12.0	-104.68	-1,287.7	-4,915.6	5,081.5	5,068.0	13.42	378.641	
700.0	700.0	667.0	667.0	1.4	12.2	-104.68	-1,287.7	-4,915.6	5,081.5	5,067.8	13.67	371.797	
787.4	787.4	754.4	754.4	1.6	14.0	-104.68	-1,287.7	-4,915.6	5,081.5	5,065.8	15.62	325.214	
800.0	800.0	767.0	767.0	1.7	14.2	-104.68	-1,287.7	-4,915.6	5,081.5	5,065.6	15.91	319.446	
885.8	885.8	852.8	852.8	1.9	16.0	-104.68	-1,287.7	-4,915.6	5,081.5	5,063.6	17.83	285.017	
900.0	900.0	867.0	867.0	1.9	16.3	-104.68	-1,287.7	-4,915.6	5,081.5	5,063.3	18.15	280.033	
984.2	984.2	951.2	951.2	2.1	17.9	-104.68	-1,287.7	-4,915.6	5,081.5	5,061.4	20.03	253.673	
1,000.0	1,000.0	967.0	967.0	2.1	18.3	-104.68	-1,287.7	-4,915.6	5,081.5	5,061.1	20.38	249.286	
1,082.7	1,082.7	1,049.7	1,049.7	2.3	19.9	-104.68	-1,287.7	-4,915.6	5,081.5	5,059.2	22.23	228.544	
1,100.0	1,100.0	1,067.0	1,067.0	2.3	20.3	-104.68	-1,287.7	-4,915.6	5,081.5	5,058.8	22.62	224.628	
1,181.1	1,181.1	1,148.1	1,148.1	2.5	21.9	-133.41	-1,287.7	-4,915.6	5,082.3	5,057.8	24.43	208.037	
1,200.0	1,200.0	1,167.0	1,167.0	2.6	22.3	-133.41	-1,287.7	-4,915.6	5,082.7	5,057.8	24.85	204.540	
1,279.5	1,279.4	1,246.4	1,246.4	2.7	23.9	-133.40	-1,287.7	-4,915.6	5,085.3	5,058.7	26.61	191.132	
1,300.0	1,299.8	1,266.8	1,266.8	2.8	24.3	-133.40	-1,287.7	-4,915.6	5,086.3	5,059.2	27.06	187.988	
1,377.9	1,377.5	1,344.5	1,344.5	3.0	25.9	-133.38	-1,287.7	-4,915.6	5,090.7	5,062.0	28.76	176.992	
1,400.0	1,399.5	1,366.5	1,366.5	3.0	26.3	-133.38	-1,287.7	-4,915.6	5,092.3	5,063.0	29.24	174.144	
1,476.4	1,475.3	1,442.3	1,442.3	3.2	27.8	-133.36	-1,287.7	-4,915.6	5,098.5	5,067.6	30.90	165.015	
1,500.0	1,498.7	1,465.7	1,465.7	3.3	28.3	-133.36	-1,287.7	-4,915.6	5,100.7	5,069.3	31.40	162.418	
1,574.8	1,572.6	1,539.6	1,539.6	3.5	29.8	-133.33	-1,287.7	-4,915.6	5,108.5	5,075.5	33.01	154.758	
1,600.0	1,597.5	1,564.5	1,564.5	3.5	30.3	-133.32	-1,287.7	-4,915.6	5,111.5	5,077.9	33.54	152.377	
1,673.2	1,669.4	1,636.4	1,636.4	3.7	31.7	-133.30	-1,287.7	-4,915.6	5,120.9	5,085.8	35.10	145.890	
1,700.1	1,695.8	1,662.8	1,662.8	3.8	32.3	-133.28	-1,287.7	-4,915.6	5,124.7	5,089.0	35.67	143.683	
1,771.6	1,765.7	1,732.7	1,732.7	4.1	33.7	-133.40	-1,287.7	-4,915.6	5,135.0	5,097.8	37.26	137.810	
1,800.0	1,793.4	1,760.4	1,760.4	4.2	34.2	-133.45	-1,287.7	-4,915.6	5,139.1	5,101.2	37.89	135.622	
1,870.1	1,862.0	1,829.0	1,829.0	4.4	35.6	-133.57	-1,287.7	-4,915.6	5,149.3	5,109.8	39.46	130.477	
1,900.0	1,891.3	1,858.3	1,858.3	4.5	36.2	-133.62	-1,287.7	-4,915.6	5,153.6	5,113.5	40.14	128.407	
1,968.5	1,958.3	1,925.3	1,925.3	4.8	37.5	-133.73	-1,287.7	-4,915.6	5,163.6	5,121.9	41.68	123.893	
2,000.0	1,989.1	1,956.1	1,956.1	4.9	38.2	-133.78	-1,287.7	-4,915.6	5,168.2	5,125.8	42.39	121.929	
2,066.9	2,054.5	2,021.5	2,021.5	5.1	39.5	-133.89	-1,287.7	-4,915.6	5,177.9	5,134.0	43.90	117.951	
2,100.0	2,086.9	2,053.9	2,053.9	5.3	40.1	-133.95	-1,287.7	-4,915.6	5,182.7	5,138.1	44.65	116.085	
2,165.3	2,150.8	2,117.8	2,117.8	5.5	41.4	-134.05	-1,287.7	-4,915.6	5,192.3	5,146.2	46.13	112.566	
2,200.0	2,184.7	2,151.7	2,151.7	5.6	42.1	-134.11	-1,287.7	-4,915.6	5,197.3	5,150.4	46.91	110.791	
2,263.8	2,247.1	2,214.1	2,214.1	5.9	43.4	-134.21	-1,287.7	-4,915.6	5,206.7	5,158.3	48.36	107.667	
2,300.0	2,282.5	2,249.5	2,249.5	6.0	44.1	-134.27	-1,287.7	-4,915.6	5,212.0	5,162.8	49.18	105.975	
2,362.2	2,343.3	2,310.3	2,310.3	6.3	45.3	-134.37	-1,287.7	-4,915.6	5,221.1	5,170.6	50.60	103.193	
2,400.0	2,380.3	2,347.3	2,347.3	6.5	46.0	-134.43	-1,287.7	-4,915.6	5,226.7	5,175.3	51.46	101.577	
2,460.6	2,439.6	2,406.6	2,406.6	6.7	47.2	-134.53	-1,287.7	-4,915.6	5,235.6	5,182.8	52.84	99.092	
2,500.0	2,478.1	2,445.1	2,445.1	6.9	48.0	-134.59	-1,287.7	-4,915.6	5,241.5	5,187.7	53.73	97.547	
2,559.0	2,535.9	2,502.9	2,502.9	7.1	49.2	-134.69	-1,287.7	-4,915.6	5,250.2	5,195.1	55.08	95.322	
2,600.0	2,575.9	2,542.9	2,542.9	7.3	50.0	-134.75	-1,287.7	-4,915.6	5,256.2	5,200.2	56.01	93.842	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,657.5	2,632.2	2,599.2	2,599.2	7.5	51.1	-134.84	-1,287.7	-4,915.6	5,264.8	5,207.4	57.32	91.844	
2,700.0	2,673.8	2,640.8	2,640.8	7.7	51.9	-134.91	-1,287.7	-4,915.6	5,271.1	5,212.8	58.29	90.424	
2,755.9	2,728.4	2,695.4	2,695.4	7.9	53.0	-135.00	-1,287.7	-4,915.6	5,279.4	5,219.8	59.57	88.627	
2,800.0	2,771.6	2,738.6	2,738.6	8.1	53.9	-135.07	-1,287.7	-4,915.6	5,285.9	5,225.4	60.57	87.263	
2,854.3	2,824.7	2,791.7	2,791.7	8.3	55.0	-135.16	-1,287.7	-4,915.6	5,294.0	5,232.2	61.82	85.642	
2,900.0	2,869.4	2,836.4	2,836.4	8.5	55.9	-135.23	-1,287.7	-4,915.6	5,300.8	5,238.0	62.86	84.330	
2,952.7	2,921.0	2,888.0	2,888.0	8.8	56.9	-135.31	-1,287.7	-4,915.6	5,308.7	5,244.6	64.06	82.866	
3,000.0	2,967.2	2,934.2	2,934.2	9.0	57.8	-135.38	-1,287.7	-4,915.6	5,315.8	5,250.6	65.14	81.602	
3,051.2	3,017.3	2,984.3	2,984.3	9.2	58.8	-135.46	-1,287.7	-4,915.6	5,323.4	5,257.1	66.31	80.279	
3,100.0	3,065.0	3,032.0	3,032.0	9.4	59.8	-135.54	-1,287.7	-4,915.6	5,330.8	5,263.3	67.43	79.059	
3,149.6	3,113.5	3,080.5	3,080.5	9.6	60.8	-135.62	-1,287.7	-4,915.6	5,338.2	5,269.6	68.56	77.861	
3,200.0	3,162.8	3,129.8	3,129.8	9.8	61.8	-135.69	-1,287.7	-4,915.6	5,345.8	5,276.1	69.71	76.683	
3,248.0	3,209.8	3,176.8	3,176.8	10.0	62.7	-135.77	-1,287.7	-4,915.6	5,353.0	5,282.2	70.81	75.597	
3,300.0	3,260.6	3,227.6	3,227.6	10.2	63.7	-135.85	-1,287.7	-4,915.6	5,360.8	5,288.8	72.00	74.458	
3,346.4	3,306.1	3,273.1	3,273.1	10.5	64.7	-135.92	-1,287.7	-4,915.6	5,367.8	5,294.8	73.06	73.472	
3,400.0	3,358.5	3,325.5	3,325.5	10.7	65.7	-136.00	-1,287.7	-4,915.6	5,375.9	5,301.7	74.28	72.371	
3,444.9	3,402.3	3,369.3	3,369.3	10.9	66.6	-136.07	-1,287.7	-4,915.6	5,382.7	5,307.4	75.31	71.475	
3,500.0	3,456.3	3,423.3	3,423.3	11.1	67.7	-136.15	-1,287.7	-4,915.6	5,391.1	5,314.5	76.57	70.409	
3,543.3	3,498.6	3,465.6	3,465.6	11.3	68.5	-136.22	-1,287.7	-4,915.6	5,397.6	5,320.1	77.56	69.595	
3,600.0	3,554.1	3,521.1	3,521.1	11.5	69.6	-136.30	-1,287.7	-4,915.6	5,406.3	5,327.4	78.85	68.561	
3,641.7	3,594.9	3,561.9	3,561.9	11.7	70.5	-136.37	-1,287.7	-4,915.6	5,412.6	5,332.8	79.81	67.821	
3,700.0	3,651.9	3,618.9	3,618.9	12.0	71.6	-136.45	-1,287.7	-4,915.6	5,421.5	5,340.3	81.14	66.818	
3,740.1	3,691.2	3,658.2	3,658.2	12.2	72.4	-136.51	-1,287.7	-4,915.6	5,427.6	5,345.5	82.06	66.145	
3,800.0	3,749.7	3,716.7	3,716.7	12.4	73.6	-136.60	-1,287.7	-4,915.6	5,436.7	5,353.3	83.42	65.171	
3,838.6	3,787.4	3,754.4	3,754.4	12.6	74.3	-136.66	-1,287.7	-4,915.6	5,442.6	5,358.3	84.30	64.559	
3,900.0	3,847.5	3,814.5	3,814.5	12.9	75.5	-136.75	-1,287.7	-4,915.6	5,452.0	5,366.3	85.71	63.612	
3,937.0	3,883.7	3,850.7	3,850.7	13.0	76.3	-136.81	-1,287.7	-4,915.6	5,457.7	5,371.1	86.55	63.057	
4,000.0	3,945.3	3,912.3	3,912.3	13.3	77.5	-136.90	-1,287.7	-4,915.6	5,467.3	5,379.3	87.99	62.135	
4,035.4	3,980.0	3,947.0	3,947.0	13.5	78.2	-136.95	-1,287.7	-4,915.6	5,472.8	5,384.0	88.80	61.631	
4,060.0	4,004.0	3,971.0	3,971.0	13.6	78.7	-136.99	-1,287.7	-4,915.6	5,476.5	5,387.2	89.36	61.286	
4,100.0	4,043.2	4,010.2	4,010.2	13.7	79.5	-137.13	-1,287.7	-4,915.6	5,482.5	5,392.1	90.37	60.665	
4,133.8	4,076.5	4,043.5	4,043.5	13.8	80.1	-137.24	-1,287.7	-4,915.6	5,487.2	5,396.0	91.21	60.159	
4,200.0	4,141.6	4,108.6	4,108.6	14.0	81.5	-137.43	-1,287.7	-4,915.6	5,495.6	5,402.7	92.84	59.192	
4,232.3	4,173.5	4,140.5	4,140.5	14.1	82.1	-137.51	-1,287.7	-4,915.6	5,499.3	5,405.6	93.63	58.735	
4,300.0	4,240.6	4,207.6	4,207.6	14.3	83.4	-137.67	-1,287.7	-4,915.6	5,506.2	5,410.9	95.27	57.798	
4,330.7	4,271.1	4,238.1	4,238.1	14.4	84.1	-137.74	-1,287.7	-4,915.6	5,508.9	5,412.9	96.00	57.387	
4,400.0	4,340.0	4,307.0	4,307.0	14.5	85.4	-137.86	-1,287.7	-4,915.6	5,514.2	5,416.6	97.63	56.481	
4,429.1	4,369.0	4,336.0	4,336.0	14.6	86.0	-137.90	-1,287.7	-4,915.6	5,516.0	5,417.7	98.30	56.112	
4,500.0	4,439.7	4,406.7	4,406.7	14.8	87.4	-137.98	-1,287.7	-4,915.6	5,519.6	5,419.7	99.93	55.237	
4,527.5	4,467.2	4,434.2	4,434.2	14.8	88.0	-138.00	-1,287.7	-4,915.6	5,520.7	5,420.1	100.54	54.908	
4,600.0	4,539.7	4,506.7	4,506.7	14.9	89.5	-138.05	-1,287.7	-4,915.6	5,522.5	5,420.3	102.15	54.064	
4,626.0	4,565.6	4,532.6	4,532.6	15.0	90.0	-138.05	-1,287.7	-4,915.6	5,522.8	5,420.1	102.71	53.771	
4,660.2	4,599.8	4,566.8	4,566.8	15.0	90.7	-109.33	-1,287.7	-4,915.6	5,523.0	5,419.0	103.99	53.109	
4,700.0	4,639.6	4,606.6	4,606.6	15.0	91.5	-109.33	-1,287.7	-4,915.6	5,523.0	5,418.1	104.85	52.673	
4,724.4	4,664.0	4,631.0	4,631.0	15.1	92.0	-109.33	-1,287.7	-4,915.6	5,523.0	5,417.6	105.39	52.407	
4,800.0	4,739.6	4,706.6	4,706.6	15.2	93.5	-109.33	-1,287.7	-4,915.6	5,523.0	5,415.9	107.03	51.602	
4,822.8	4,762.5	4,729.5	4,729.5	15.2	93.9	-109.33	-1,287.7	-4,915.6	5,523.0	5,415.4	107.53	51.363	
4,900.0	4,839.6	4,806.6	4,806.6	15.3	95.5	-109.33	-1,287.7	-4,915.6	5,523.0	5,413.7	109.21	50.572	
4,921.2	4,860.9	4,827.9	4,827.9	15.4	95.9	-109.33	-1,287.7	-4,915.6	5,523.0	5,413.3	109.67	50.359	
5,000.0	4,939.6	4,906.6	4,906.6	15.5	97.5	-109.33	-1,287.7	-4,915.6	5,523.0	5,411.6	111.39	49.583	
5,019.7	4,959.3	4,926.3	4,926.3	15.5	97.9	-109.33	-1,287.7	-4,915.6	5,523.0	5,411.1	111.82	49.392	
5,100.0	5,039.6	5,006.6	5,006.6	15.6	99.5	-109.33	-1,287.7	-4,915.6	5,523.0	5,409.4	113.57	48.630	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	5,057.7	5,024.7	5,024.7	15.7	99.9	-109.33	-1,287.7	-4,915.6	5,523.0	5,409.0	113.97	48.462	
5,200.0	5,139.6	5,106.6	5,106.6	15.8	101.5	-109.33	-1,287.7	-4,915.6	5,523.0	5,407.2	115.75	47.713	
5,216.5	5,156.2	5,123.2	5,123.2	15.8	101.9	-109.33	-1,287.7	-4,915.6	5,523.0	5,406.8	116.11	47.565	
5,300.0	5,239.6	5,206.6	5,206.6	15.9	103.5	-109.33	-1,287.7	-4,915.6	5,523.0	5,405.0	117.94	46.829	
5,314.9	5,254.6	5,221.6	5,221.6	16.0	103.8	-109.33	-1,287.7	-4,915.6	5,523.0	5,404.7	118.26	46.700	
5,400.0	5,339.6	5,306.6	5,306.6	16.1	105.5	-109.33	-1,287.7	-4,915.6	5,523.0	5,402.8	120.12	45.977	
5,413.4	5,353.0	5,320.0	5,320.0	16.1	105.8	-109.33	-1,287.7	-4,915.6	5,523.0	5,402.5	120.42	45.866	
5,500.0	5,439.6	5,406.6	5,406.6	16.3	107.6	-109.33	-1,287.7	-4,915.6	5,523.0	5,400.6	122.31	45.155	
5,511.8	5,451.4	5,418.4	5,418.4	16.3	107.8	-109.33	-1,287.7	-4,915.6	5,523.0	5,400.4	122.57	45.060	
5,600.0	5,539.6	5,506.6	5,506.6	16.4	109.6	-109.33	-1,287.7	-4,915.6	5,523.0	5,398.5	124.50	44.361	
5,610.2	5,549.9	5,516.9	5,516.9	16.4	109.8	-109.33	-1,287.7	-4,915.6	5,523.0	5,398.2	124.72	44.282	
5,700.0	5,639.6	5,606.6	5,606.6	16.6	111.6	-109.33	-1,287.7	-4,915.6	5,523.0	5,396.3	126.69	43.595	
5,708.6	5,648.3	5,615.3	5,615.3	16.6	111.8	-109.33	-1,287.7	-4,915.6	5,523.0	5,396.1	126.88	43.530	
5,800.0	5,739.6	5,706.6	5,706.6	16.7	113.6	-109.33	-1,287.7	-4,915.6	5,523.0	5,394.1	128.88	42.854	
5,807.1	5,746.7	5,713.7	5,713.7	16.8	113.7	-109.33	-1,287.7	-4,915.6	5,523.0	5,393.9	129.03	42.802	
5,900.0	5,839.6	5,806.6	5,806.6	16.9	115.6	-109.33	-1,287.7	-4,915.6	5,523.0	5,391.9	131.07	42.137	
5,905.5	5,845.1	5,812.1	5,812.1	16.9	115.7	-109.33	-1,287.7	-4,915.6	5,523.0	5,391.8	131.19	42.098	
6,000.0	5,939.6	5,906.6	5,906.6	17.1	117.6	-109.33	-1,287.7	-4,915.6	5,523.0	5,389.7	133.26	41.443	
6,003.9	5,943.6	5,910.6	5,910.6	17.1	117.7	-109.33	-1,287.7	-4,915.6	5,523.0	5,389.6	133.35	41.417	
6,059.2	5,998.8	5,965.8	5,965.8	17.2	118.8	-109.33	-1,287.7	-4,915.6	5,523.0	5,388.4	134.56	41.044	
6,100.0	6,039.6	6,006.6	6,006.6	17.2	119.6	-19.36	-1,287.7	-4,915.6	5,521.9	5,387.2	134.71	40.992	
6,102.3	6,042.0	6,009.0	6,009.0	17.2	119.7	-19.36	-1,287.7	-4,915.6	5,521.7	5,387.0	134.73	40.983	
6,150.0	6,089.4	6,056.4	6,056.4	17.3	120.6	-19.49	-1,287.7	-4,915.6	5,517.5	5,382.6	134.96	40.881	
6,200.0	6,138.7	6,105.7	6,105.7	17.3	121.6	-19.73	-1,287.7	-4,915.6	5,509.9	5,375.3	134.63	40.927	
6,200.8	6,139.5	6,106.5	6,106.5	17.3	121.6	-19.73	-1,287.7	-4,915.6	5,509.8	5,375.2	134.62	40.929	
6,250.0	6,187.4	6,154.4	6,154.4	17.3	122.6	-20.07	-1,287.7	-4,915.6	5,499.1	5,365.4	133.70	41.131	
6,299.2	6,234.4	6,201.4	6,201.4	17.4	123.5	-20.52	-1,287.7	-4,915.6	5,485.4	5,353.1	132.22	41.488	
6,300.0	6,235.1	6,202.1	6,202.1	17.4	123.6	-20.53	-1,287.7	-4,915.6	5,485.1	5,352.9	132.19	41.495	
6,350.0	6,281.7	6,248.7	6,248.7	17.4	124.5	-21.11	-1,287.7	-4,915.6	5,468.0	5,337.9	130.13	42.019	
6,397.6	6,324.8	6,291.8	6,291.8	17.3	125.4	-21.80	-1,287.7	-4,915.6	5,448.9	5,321.2	127.71	42.668	
6,400.0	6,326.9	6,293.9	6,293.9	17.3	125.4	-21.84	-1,287.7	-4,915.6	5,447.9	5,320.3	127.57	42.704	
6,450.0	6,370.5	6,337.5	6,337.5	17.3	126.3	-22.72	-1,287.7	-4,915.6	5,424.9	5,300.3	124.59	43.543	
6,496.0	6,409.1	6,376.1	6,376.1	17.3	127.1	-23.69	-1,287.7	-4,915.6	5,401.2	5,279.7	121.54	44.439	
6,500.0	6,412.3	6,379.3	6,379.3	17.3	127.1	-23.78	-1,287.7	-4,915.6	5,399.1	5,277.8	121.27	44.521	
6,550.0	6,452.1	6,419.1	6,419.1	17.3	127.9	-25.06	-1,287.7	-4,915.6	5,370.6	5,252.9	117.77	45.604	
6,594.5	6,485.6	6,452.6	6,452.6	17.3	128.6	-26.40	-1,287.7	-4,915.6	5,343.2	5,228.5	114.65	46.606	
6,600.0	6,489.7	6,456.7	6,456.7	17.3	128.7	-26.58	-1,287.7	-4,915.6	5,339.6	5,225.4	114.27	46.730	
6,650.0	6,524.9	6,491.9	6,491.9	17.2	129.4	-28.40	-1,287.7	-4,915.6	5,306.3	5,195.2	111.03	47.791	
6,692.9	6,553.0	6,520.0	6,520.0	17.2	129.9	-30.25	-1,287.7	-4,915.6	5,275.9	5,167.2	108.73	48.525	
6,700.0	6,557.5	6,524.5	6,524.5	17.2	130.0	-30.58	-1,287.7	-4,915.6	5,270.7	5,162.3	108.40	48.622	
6,750.0	6,587.4	6,554.4	6,554.4	17.2	130.6	-33.20	-1,287.7	-4,915.6	5,233.2	5,126.4	106.80	48.999	
6,791.3	6,609.9	6,576.9	6,576.9	17.2	131.1	-35.75	-1,287.7	-4,915.6	5,200.7	5,094.1	106.61	48.784	
6,800.0	6,614.4	6,581.4	6,581.4	17.2	131.2	-36.34	-1,287.7	-4,915.6	5,193.8	5,087.1	106.72	48.669	
6,850.0	6,638.4	6,605.4	6,605.4	17.2	131.7	-40.15	-1,287.7	-4,915.6	5,152.8	5,044.1	108.63	47.433	
6,889.7	6,655.3	6,622.3	6,622.3	17.4	132.0	-43.73	-1,287.7	-4,915.6	5,119.2	5,007.3	111.83	45.775	
6,900.0	6,659.4	6,626.4	6,626.4	17.5	132.1	-44.75	-1,287.7	-4,915.6	5,110.4	4,997.4	112.91	45.260	
6,950.0	6,677.1	6,644.1	6,644.1	18.0	132.4	-50.30	-1,287.7	-4,915.6	5,066.7	4,947.1	119.62	42.358	
6,988.2	6,688.4	6,655.4	6,655.4	18.5	132.7	-55.27	-1,287.7	-4,915.6	5,032.7	4,906.6	126.13	39.901	
7,000.0	6,691.5	6,658.5	6,658.5	18.7	132.7	-56.94	-1,287.7	-4,915.6	5,022.1	4,893.8	128.32	39.138	
7,050.0	6,702.5	6,669.5	6,669.5	19.5	133.0	-64.75	-1,287.7	-4,915.6	4,976.7	4,838.8	137.95	36.077	
7,086.6	6,708.4	6,675.4	6,675.4	20.1	133.1	-71.16	-1,287.7	-4,915.6	4,943.1	4,798.5	144.62	34.179	
7,100.0	6,710.1	6,677.1	6,677.1	20.4	133.1	-73.63	-1,287.7	-4,915.6	4,930.8	4,784.0	146.80	33.587	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,150.0	6,714.2	6,681.2	6,681.2	21.3	133.2	-83.26	-1,287.7	-4,915.6	4,884.6	4,731.6	152.95	31.936	
7,185.0	6,715.0	6,682.0	6,682.0	21.9	133.2	-90.17	-1,287.7	-4,915.6	4,852.1	4,697.3	154.85	31.335	
7,185.6	6,715.0	6,682.0	6,682.0	21.9	133.2	-90.28	-1,287.7	-4,915.6	4,851.6	4,696.8	154.86	31.329	
7,200.0	6,715.0	6,682.0	6,682.0	22.2	133.2	-90.27	-1,287.7	-4,915.6	4,838.2	4,683.1	155.14	31.187	
7,283.4	6,714.8	6,681.8	6,681.8	23.9	133.2	-90.27	-1,287.7	-4,915.6	4,761.1	4,604.3	156.81	30.362	
7,300.0	6,714.8	6,681.8	6,681.8	24.2	133.2	-90.27	-1,287.7	-4,915.6	4,745.8	4,588.7	157.14	30.201	
7,381.9	6,714.6	6,681.6	6,681.6	26.0	133.2	-90.26	-1,287.7	-4,915.6	4,670.4	4,511.5	158.90	29.392	
7,400.0	6,714.6	6,681.6	6,681.6	26.4	133.2	-90.26	-1,287.7	-4,915.6	4,653.7	4,494.4	159.29	29.215	
7,480.3	6,714.4	6,681.4	6,681.4	28.2	133.2	-90.26	-1,287.7	-4,915.6	4,579.9	4,418.8	161.11	28.428	
7,500.0	6,714.4	6,681.4	6,681.4	28.7	133.2	-90.26	-1,287.7	-4,915.6	4,561.9	4,400.3	161.55	28.238	
7,578.7	6,714.2	6,681.2	6,681.2	30.5	133.2	-90.25	-1,287.7	-4,915.6	4,489.9	4,326.5	163.40	27.477	
7,600.0	6,714.2	6,681.2	6,681.2	31.0	133.2	-90.25	-1,287.7	-4,915.6	4,470.4	4,306.5	163.90	27.275	
7,677.1	6,714.0	6,681.0	6,681.0	32.9	133.2	-90.24	-1,287.7	-4,915.6	4,400.2	4,234.4	165.77	26.543	
7,700.0	6,714.0	6,681.0	6,681.0	33.4	133.2	-90.24	-1,287.7	-4,915.6	4,379.4	4,213.0	166.33	26.330	
7,775.6	6,713.9	6,680.9	6,680.9	35.3	133.2	-90.24	-1,287.7	-4,915.6	4,310.8	4,142.6	168.20	25.629	
7,800.0	6,713.8	6,680.8	6,680.8	35.9	133.2	-90.24	-1,287.7	-4,915.6	4,288.7	4,119.9	168.81	25.406	
7,874.0	6,713.7	6,680.7	6,680.7	37.8	133.2	-90.23	-1,287.7	-4,915.6	4,221.9	4,051.2	170.68	24.736	
7,900.0	6,713.6	6,680.6	6,680.6	38.4	133.2	-90.23	-1,287.7	-4,915.6	4,198.5	4,027.1	171.33	24.505	
7,972.4	6,713.5	6,680.5	6,680.5	40.3	133.2	-90.23	-1,287.7	-4,915.6	4,133.4	3,960.2	173.19	23.866	
8,000.0	6,713.4	6,680.4	6,680.4	41.0	133.2	-90.22	-1,287.7	-4,915.6	4,108.7	3,934.8	173.89	23.627	
8,070.8	6,713.3	6,680.3	6,680.3	42.8	133.2	-90.22	-1,287.7	-4,915.6	4,045.3	3,869.6	175.73	23.020	
8,100.0	6,713.2	6,680.2	6,680.2	43.6	133.2	-90.22	-1,287.7	-4,915.6	4,019.4	3,842.9	176.49	22.774	
8,169.3	6,713.1	6,680.1	6,680.1	45.4	133.2	-90.21	-1,287.7	-4,915.6	3,957.8	3,779.5	178.30	22.197	
8,200.0	6,713.0	6,680.0	6,680.0	46.2	133.2	-90.21	-1,287.7	-4,915.6	3,930.6	3,751.5	179.11	21.946	
8,267.7	6,712.9	6,679.9	6,679.9	48.0	133.2	-90.21	-1,287.7	-4,915.6	3,870.8	3,689.9	180.89	21.398	
8,300.0	6,712.8	6,679.8	6,679.8	48.8	133.2	-90.21	-1,287.7	-4,915.6	3,842.3	3,660.6	181.74	21.141	
8,366.1	6,712.7	6,679.7	6,679.7	50.6	133.2	-90.20	-1,287.7	-4,915.6	3,784.3	3,600.8	183.50	20.623	
8,400.0	6,712.6	6,679.6	6,679.6	51.5	133.2	-90.20	-1,287.7	-4,915.6	3,754.7	3,570.3	184.40	20.361	
8,464.5	6,712.5	6,679.5	6,679.5	53.2	133.2	-90.20	-1,287.7	-4,915.6	3,698.4	3,512.3	186.13	19.870	
8,500.0	6,712.4	6,679.4	6,679.4	54.1	133.2	-90.19	-1,287.7	-4,915.6	3,667.6	3,480.6	187.07	19.605	
8,563.0	6,712.3	6,679.3	6,679.3	55.8	133.2	-90.19	-1,287.7	-4,915.6	3,613.2	3,424.4	188.76	19.141	
8,600.0	6,712.3	6,679.3	6,679.3	56.8	133.1	-90.19	-1,287.7	-4,915.6	3,581.3	3,391.5	189.76	18.873	
8,661.4	6,712.1	6,679.1	6,679.1	58.5	133.1	-90.18	-1,287.7	-4,915.6	3,528.6	3,337.2	191.41	18.434	
8,700.0	6,712.1	6,679.1	6,679.1	59.5	133.1	-90.18	-1,287.7	-4,915.6	3,495.7	3,303.2	192.45	18.164	
8,759.8	6,711.9	6,678.9	6,678.9	61.1	133.1	-90.18	-1,287.7	-4,915.6	3,444.8	3,250.7	194.07	17.750	
8,800.0	6,711.9	6,678.9	6,678.9	62.2	133.1	-90.17	-1,287.7	-4,915.6	3,410.8	3,215.7	195.16	17.477	
8,858.2	6,711.8	6,678.8	6,678.8	63.8	133.1	-90.17	-1,287.7	-4,915.6	3,361.8	3,165.0	196.74	17.087	
8,900.0	6,711.7	6,678.7	6,678.7	64.9	133.1	-90.17	-1,287.7	-4,915.6	3,326.8	3,129.0	197.88	16.813	
8,956.7	6,711.6	6,678.6	6,678.6	66.5	133.1	-90.16	-1,287.7	-4,915.6	3,279.6	3,080.2	199.42	16.446	
9,000.0	6,711.5	6,678.5	6,678.5	67.6	133.1	-90.16	-1,287.7	-4,915.6	3,243.7	3,043.1	200.60	16.170	
9,055.1	6,711.4	6,678.4	6,678.4	69.1	133.1	-90.16	-1,287.7	-4,915.6	3,198.4	2,996.3	202.10	15.826	
9,100.0	6,711.3	6,678.3	6,678.3	70.4	133.1	-90.16	-1,287.7	-4,915.6	3,161.6	2,958.3	203.33	15.549	
9,153.5	6,711.2	6,678.2	6,678.2	71.8	133.1	-90.15	-1,287.7	-4,915.6	3,118.1	2,913.3	204.79	15.226	
9,200.0	6,711.1	6,678.1	6,678.1	73.1	133.1	-90.15	-1,287.7	-4,915.6	3,080.6	2,874.5	206.06	14.950	
9,251.9	6,711.0	6,678.0	6,678.0	74.5	133.1	-90.15	-1,287.7	-4,915.6	3,038.9	2,831.4	207.49	14.646	
9,300.0	6,710.9	6,677.9	6,677.9	75.8	133.1	-90.14	-1,287.7	-4,915.6	3,000.7	2,791.9	208.80	14.371	
9,350.4	6,710.8	6,677.8	6,677.8	77.2	133.1	-90.14	-1,287.7	-4,915.6	2,960.9	2,750.7	210.19	14.087	
9,400.0	6,710.7	6,677.7	6,677.7	78.6	133.1	-90.14	-1,287.7	-4,915.6	2,922.0	2,710.5	211.55	13.812	
9,448.8	6,710.6	6,677.6	6,677.6	79.9	133.1	-90.13	-1,287.7	-4,915.6	2,884.1	2,671.2	212.89	13.547	
9,500.0	6,710.5	6,677.5	6,677.5	81.3	133.1	-90.13	-1,287.7	-4,915.6	2,844.7	2,630.4	214.30	13.274	
9,547.2	6,710.4	6,677.4	6,677.4	82.6	133.1	-90.13	-1,287.7	-4,915.6	2,808.7	2,593.1	215.60	13.027	
9,600.0	6,710.3	6,677.3	6,677.3	84.1	133.1	-90.13	-1,287.7	-4,915.6	2,768.8	2,551.8	217.05	12.756	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,645.6	6,710.2	6,677.2	6,677.2	85.3	133.1	-90.12	-1,287.7	-4,915.6	2,734.7	2,516.4	218.31	12.527	
9,700.0	6,710.1	6,677.1	6,677.1	86.8	133.1	-90.12	-1,287.7	-4,915.6	2,694.5	2,474.7	219.81	12.258	
9,744.1	6,710.0	6,677.0	6,677.0	88.1	133.1	-90.12	-1,287.7	-4,915.6	2,662.3	2,441.3	221.02	12.045	
9,800.0	6,709.9	6,676.9	6,676.9	89.6	133.1	-90.11	-1,287.7	-4,915.6	2,621.9	2,399.3	222.57	11.780	
9,842.5	6,709.9	6,676.9	6,676.9	90.8	133.1	-90.11	-1,287.7	-4,915.6	2,591.6	2,367.9	223.74	11.583	
9,900.0	6,709.7	6,676.7	6,676.7	92.4	133.1	-90.11	-1,287.7	-4,915.6	2,551.2	2,325.8	225.33	11.322	
9,940.9	6,709.7	6,676.7	6,676.7	93.5	133.1	-90.10	-1,287.7	-4,915.6	2,522.8	2,296.3	226.46	11.140	
10,000.0	6,709.6	6,676.6	6,676.6	95.1	133.1	-90.10	-1,287.7	-4,915.6	2,482.4	2,254.4	228.10	10.883	
10,039.3	6,709.5	6,676.5	6,676.5	96.2	133.1	-90.10	-1,287.7	-4,915.6	2,456.0	2,226.8	229.18	10.716	
10,100.0	6,709.4	6,676.4	6,676.4	97.9	133.1	-90.09	-1,287.7	-4,915.6	2,415.9	2,185.0	230.86	10.465	
10,137.8	6,709.3	6,676.3	6,676.3	98.9	133.1	-90.09	-1,287.7	-4,915.6	2,391.4	2,159.5	231.91	10.312	
10,200.0	6,709.2	6,676.2	6,676.2	100.7	133.1	-90.09	-1,287.7	-4,915.6	2,351.7	2,118.1	233.63	10.066	
10,236.2	6,709.1	6,676.1	6,676.1	101.7	133.1	-90.09	-1,287.7	-4,915.6	2,329.1	2,094.5	234.64	9.927	
10,300.0	6,709.0	6,676.0	6,676.0	103.4	133.1	-90.08	-1,287.7	-4,915.6	2,290.1	2,053.7	236.40	9.687	
10,334.6	6,708.9	6,675.9	6,675.9	104.4	133.1	-90.08	-1,287.7	-4,915.6	2,269.5	2,032.1	237.36	9.561	
10,400.0	6,708.8	6,675.8	6,675.8	106.2	133.1	-90.08	-1,287.7	-4,915.6	2,231.3	1,992.2	239.18	9.329	
10,433.0	6,708.7	6,675.7	6,675.7	107.1	133.1	-90.07	-1,287.7	-4,915.6	2,212.5	1,972.4	240.10	9.215	
10,500.0	6,708.6	6,675.6	6,675.6	109.0	133.1	-90.07	-1,287.7	-4,915.6	2,175.5	1,933.6	241.95	8.991	
10,531.5	6,708.5	6,675.5	6,675.5	109.9	133.1	-90.07	-1,287.7	-4,915.6	2,158.6	1,915.8	242.83	8.890	
10,600.0	6,708.4	6,675.4	6,675.4	111.8	133.1	-90.06	-1,287.7	-4,915.6	2,123.0	1,878.2	244.73	8.675	
10,629.9	6,708.4	6,675.4	6,675.4	112.6	133.1	-90.06	-1,287.7	-4,915.6	2,107.9	1,862.4	245.56	8.584	
10,700.0	6,708.2	6,675.2	6,675.2	114.6	133.1	-90.06	-1,287.7	-4,915.6	2,073.9	1,826.4	247.51	8.379	
10,728.3	6,708.2	6,675.2	6,675.2	115.3	133.1	-90.06	-1,287.7	-4,915.6	2,060.7	1,812.4	248.30	8.299	
10,800.0	6,708.0	6,675.0	6,675.0	117.3	133.1	-90.05	-1,287.7	-4,915.6	2,028.6	1,778.3	250.29	8.105	
10,826.7	6,708.0	6,675.0	6,675.0	118.1	133.1	-90.05	-1,287.7	-4,915.6	2,017.1	1,766.1	251.03	8.035	
10,900.0	6,707.8	6,674.8	6,674.8	120.1	133.1	-90.05	-1,287.7	-4,915.6	1,987.3	1,734.2	253.07	7.853	
10,925.2	6,707.8	6,674.8	6,674.8	120.8	133.1	-90.04	-1,287.7	-4,915.6	1,977.5	1,723.7	253.77	7.793	
11,000.0	6,707.6	6,674.6	6,674.6	122.9	133.1	-90.04	-1,287.7	-4,915.6	1,950.2	1,694.3	255.85	7.622	
11,023.6	6,707.6	6,674.6	6,674.6	123.6	133.1	-90.04	-1,287.7	-4,915.6	1,942.1	1,685.6	256.51	7.571	
11,100.0	6,707.5	6,674.5	6,674.5	125.7	133.1	-90.03	-1,287.7	-4,915.6	1,917.6	1,659.0	258.64	7.414	
11,122.0	6,707.4	6,674.4	6,674.4	126.3	133.1	-90.03	-1,287.7	-4,915.6	1,911.1	1,651.8	259.25	7.372	
11,200.0	6,707.3	6,674.3	6,674.3	128.5	133.0	-90.03	-1,287.7	-4,915.6	1,889.8	1,628.4	261.42	7.229	
11,220.4	6,707.2	6,674.2	6,674.2	129.0	133.0	-90.03	-1,287.7	-4,915.6	1,884.7	1,622.7	261.99	7.194	
11,300.0	6,707.1	6,674.1	6,674.1	131.3	133.0	-90.02	-1,287.7	-4,915.6	1,866.9	1,602.7	264.21	7.066	
11,318.9	6,707.0	6,674.0	6,674.0	131.8	133.0	-90.02	-1,287.7	-4,915.6	1,863.2	1,598.5	264.73	7.038	
11,400.0	6,706.9	6,673.9	6,673.9	134.0	133.0	-90.02	-1,287.7	-4,915.6	1,849.2	1,582.2	266.99	6.926	
11,417.3	6,706.9	6,673.9	6,673.9	134.5	133.0	-90.02	-1,287.7	-4,915.6	1,846.7	1,579.2	267.47	6.904	
11,500.0	6,706.7	6,673.7	6,673.7	136.8	133.0	-90.01	-1,287.7	-4,915.6	1,836.7	1,567.0	269.78	6.808	
11,515.7	6,706.7	6,673.7	6,673.7	137.3	133.0	-90.01	-1,287.7	-4,915.6	1,835.3	1,565.0	270.22	6.792	
11,600.0	6,706.5	6,673.5	6,673.5	139.6	133.0	-90.00	-1,287.7	-4,915.6	1,829.7	1,557.1	272.57	6.713	
11,614.1	6,706.5	6,673.5	6,673.5	140.0	133.0	-90.00	-1,287.7	-4,915.6	1,829.1	1,556.1	272.96	6.701	
11,679.7	6,706.4	6,673.4	6,673.4	141.9	133.0	-90.00	-1,287.7	-4,915.6	1,827.9	1,553.1	274.79	6.652 CC	
11,700.0	6,706.3	6,673.3	6,673.3	142.4	133.0	-90.00	-1,287.7	-4,915.6	1,828.0	1,552.7	275.35	6.639	
11,712.6	6,706.3	6,673.3	6,673.3	142.8	133.0	-90.00	-1,287.7	-4,915.6	1,828.2	1,552.5	275.71	6.631 ES	
11,800.0	6,706.1	6,673.1	6,673.1	145.2	133.0	-89.99	-1,287.7	-4,915.6	1,831.9	1,553.7	278.14	6.586	
11,811.0	6,706.1	6,673.1	6,673.1	145.5	133.0	-89.99	-1,287.7	-4,915.6	1,832.6	1,554.2	278.45	6.582	
11,900.0	6,705.9	6,672.9	6,672.9	148.0	133.0	-89.99	-1,287.7	-4,915.6	1,841.2	1,560.2	280.93	6.554	
11,909.4	6,705.9	6,672.9	6,672.9	148.3	133.0	-89.99	-1,287.7	-4,915.6	1,842.3	1,561.1	281.20	6.552	
12,000.0	6,705.8	6,672.8	6,672.8	150.8	133.0	-89.98	-1,287.7	-4,915.6	1,855.8	1,572.1	283.73	6.541	
12,007.8	6,705.7	6,672.7	6,672.7	151.0	133.0	-89.98	-1,287.7	-4,915.6	1,857.2	1,573.2	283.94	6.541 SF	
12,100.0	6,705.6	6,672.6	6,672.6	153.6	133.0	-89.98	-1,287.7	-4,915.6	1,875.6	1,589.1	286.52	6.546	
12,106.3	6,705.6	6,672.6	6,672.6	153.8	133.0	-89.97	-1,287.7	-4,915.6	1,877.1	1,590.4	286.69	6.547	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,200.0	6,705.4	6,672.4	6,672.4	156.4	133.0	-89.97	-1,287.7	-4,915.6	1,900.5	1,611.2	289.31	6.569	
12,204.7	6,705.4	6,672.4	6,672.4	156.5	133.0	-89.97	-1,287.7	-4,915.6	1,901.8	1,612.4	289.44	6.571	
12,300.0	6,705.2	6,672.2	6,672.2	159.2	133.0	-89.96	-1,287.7	-4,915.6	1,930.3	1,638.2	292.10	6.608	
12,303.1	6,705.2	6,672.2	6,672.2	159.3	133.0	-89.96	-1,287.7	-4,915.6	1,931.3	1,639.1	292.19	6.610	
12,400.0	6,705.0	6,672.0	6,672.0	162.0	133.0	-89.96	-1,287.7	-4,915.6	1,964.7	1,669.8	294.89	6.663	
12,401.5	6,705.0	6,672.0	6,672.0	162.0	133.0	-89.96	-1,287.7	-4,915.6	1,965.3	1,670.4	294.94	6.664	
12,500.0	6,704.8	6,671.8	6,671.8	164.8	133.0	-89.95	-1,287.7	-4,915.6	2,003.6	1,705.9	297.69	6.730	
12,598.4	6,704.6	6,671.6	6,671.6	167.5	133.0	-89.95	-1,287.7	-4,915.6	2,045.8	1,745.4	300.44	6.810	
12,600.0	6,704.6	6,671.6	6,671.6	167.6	133.0	-89.95	-1,287.7	-4,915.6	2,046.5	1,746.1	300.48	6.811	
12,696.8	6,704.4	6,671.4	6,671.4	170.3	133.0	-89.94	-1,287.7	-4,915.6	2,091.9	1,788.7	303.19	6.900	
12,700.0	6,704.4	6,671.4	6,671.4	170.4	133.0	-89.94	-1,287.7	-4,915.6	2,093.4	1,790.1	303.27	6.903	
12,795.2	6,704.3	6,671.3	6,671.3	173.0	133.0	-89.93	-1,287.7	-4,915.6	2,141.5	1,835.5	305.94	7.000	
12,800.0	6,704.2	6,671.2	6,671.2	173.2	133.0	-89.93	-1,287.7	-4,915.6	2,143.9	1,837.9	306.07	7.005	
12,893.7	6,704.1	6,671.1	6,671.1	175.8	133.0	-89.93	-1,287.7	-4,915.6	2,194.3	1,885.7	308.69	7.109	
12,900.0	6,704.1	6,671.1	6,671.1	176.0	133.0	-89.93	-1,287.7	-4,915.6	2,197.9	1,889.0	308.86	7.116	
12,992.1	6,703.9	6,670.9	6,670.9	178.5	133.0	-89.92	-1,287.7	-4,915.6	2,250.3	1,938.9	311.44	7.225	
13,000.0	6,703.9	6,670.9	6,670.9	178.8	133.0	-89.92	-1,287.7	-4,915.6	2,254.9	1,943.3	311.66	7.235	
13,090.5	6,703.7	6,670.7	6,670.7	181.3	133.0	-89.92	-1,287.7	-4,915.6	2,309.1	1,994.9	314.19	7.349	
13,100.0	6,703.7	6,670.7	6,670.7	181.6	133.0	-89.92	-1,287.7	-4,915.6	2,314.9	2,000.4	314.46	7.362	
13,188.9	6,703.5	6,670.5	6,670.5	184.0	133.0	-89.91	-1,287.7	-4,915.6	2,370.5	2,053.6	316.94	7.479	
13,200.0	6,703.5	6,670.5	6,670.5	184.4	133.0	-89.91	-1,287.7	-4,915.6	2,377.6	2,060.3	317.25	7.494	
13,287.4	6,703.3	6,670.3	6,670.3	186.8	133.0	-89.91	-1,287.7	-4,915.6	2,434.4	2,114.7	319.70	7.615	
13,300.0	6,703.3	6,670.3	6,670.3	187.2	133.0	-89.91	-1,287.7	-4,915.6	2,442.7	2,122.7	320.05	7.632	
13,385.8	6,703.2	6,670.2	6,670.2	189.6	133.0	-89.90	-1,287.7	-4,915.6	2,500.4	2,178.0	322.45	7.755	
13,400.0	6,703.1	6,670.1	6,670.1	190.0	133.0	-89.90	-1,287.7	-4,915.6	2,510.2	2,187.3	322.85	7.775	
13,484.2	6,703.0	6,670.0	6,670.0	192.3	133.0	-89.89	-1,287.7	-4,915.6	2,568.6	2,243.4	325.20	7.899	
13,500.0	6,702.9	6,669.9	6,669.9	192.8	133.0	-89.89	-1,287.7	-4,915.6	2,579.7	2,254.1	325.64	7.922	
13,582.6	6,702.8	6,669.8	6,669.8	195.1	133.0	-89.89	-1,287.7	-4,915.6	2,638.7	2,310.7	327.95	8.046	
13,600.0	6,702.8	6,669.8	6,669.8	195.6	133.0	-89.89	-1,287.7	-4,915.6	2,651.2	2,322.8	328.44	8.072	
13,681.1	6,702.6	6,669.6	6,669.6	197.8	133.0	-89.88	-1,287.7	-4,915.6	2,710.5	2,379.8	330.71	8.196	
13,700.0	6,702.6	6,669.6	6,669.6	198.4	133.0	-89.88	-1,287.7	-4,915.6	2,724.5	2,393.3	331.24	8.225	
13,779.5	6,702.4	6,669.4	6,669.4	200.6	133.0	-89.88	-1,287.7	-4,915.6	2,784.0	2,450.5	333.46	8.349	
13,800.0	6,702.4	6,669.4	6,669.4	201.2	133.0	-89.88	-1,287.7	-4,915.6	2,799.5	2,465.5	334.03	8.381	
13,877.9	6,702.2	6,669.2	6,669.2	203.3	132.9	-89.87	-1,287.7	-4,915.6	2,859.0	2,522.8	336.22	8.503	
13,900.0	6,702.2	6,669.2	6,669.2	204.0	132.9	-89.87	-1,287.7	-4,915.6	2,876.0	2,539.1	336.83	8.538	
13,976.3	6,702.1	6,669.1	6,669.1	206.1	132.9	-89.87	-1,287.7	-4,915.6	2,935.3	2,596.4	338.97	8.660	
14,000.0	6,702.0	6,669.0	6,669.0	206.8	132.9	-89.86	-1,287.7	-4,915.6	2,953.9	2,614.2	339.63	8.697	
14,074.8	6,701.9	6,668.9	6,668.9	208.9	132.9	-89.86	-1,287.7	-4,915.6	3,013.0	2,671.2	341.72	8.817	
14,100.0	6,701.8	6,668.8	6,668.8	209.6	132.9	-89.86	-1,287.7	-4,915.6	3,033.0	2,690.6	342.43	8.857	
14,173.2	6,701.7	6,668.7	6,668.7	211.6	132.9	-89.85	-1,287.7	-4,915.6	3,091.8	2,747.3	344.48	8.975	
14,200.0	6,701.6	6,668.6	6,668.6	212.4	132.9	-89.85	-1,287.7	-4,915.6	3,113.4	2,768.2	345.23	9.018	
14,271.6	6,701.5	6,668.5	6,668.5	214.4	132.9	-89.85	-1,287.7	-4,915.6	3,171.7	2,824.5	347.23	9.134	
14,300.0	6,701.4	6,668.4	6,668.4	215.2	132.9	-89.85	-1,287.7	-4,915.6	3,194.9	2,846.9	348.03	9.180	
14,370.0	6,701.3	6,668.3	6,668.3	217.1	132.9	-89.84	-1,287.7	-4,915.6	3,252.6	2,902.6	349.99	9.293	
14,400.0	6,701.3	6,668.3	6,668.3	218.0	132.9	-89.84	-1,287.7	-4,915.6	3,277.4	2,926.6	350.83	9.342	
14,468.5	6,701.1	6,668.1	6,668.1	219.9	132.9	-89.84	-1,287.7	-4,915.6	3,334.5	2,981.7	352.74	9.453	
14,500.0	6,701.1	6,668.1	6,668.1	220.8	132.9	-89.84	-1,287.7	-4,915.6	3,360.9	3,007.3	353.63	9.504	
14,566.9	6,701.0	6,668.0	6,668.0	222.6	132.9	-89.83	-1,287.7	-4,915.6	3,417.2	3,061.7	355.50	9.612	
14,600.0	6,700.9	6,667.9	6,667.9	223.6	132.9	-89.83	-1,287.7	-4,915.6	3,445.2	3,088.8	356.43	9.666	
14,665.3	6,700.8	6,667.8	6,667.8	225.4	132.9	-89.83	-1,287.7	-4,915.6	3,500.8	3,142.5	358.26	9.772	
14,700.0	6,700.7	6,667.7	6,667.7	226.4	132.9	-89.82	-1,287.7	-4,915.6	3,530.4	3,171.2	359.23	9.828	
14,763.7	6,700.6	6,667.6	6,667.6	228.2	132.9	-89.82	-1,287.7	-4,915.6	3,585.1	3,224.1	361.01	9.931	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - ABDN VERT BLOSKAS #13-9 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,800.0	6,700.5	6,667.5	6,667.5	229.2	132.9	-89.82	-1,287.7	-4,915.6	3,616.3	3,254.3	362.03	9.989	
14,862.2	6,700.4	6,667.4	6,667.4	230.9	132.9	-89.82	-1,287.7	-4,915.6	3,670.1	3,306.3	363.77	10.089	
14,900.0	6,700.3	6,667.3	6,667.3	232.0	132.9	-89.81	-1,287.7	-4,915.6	3,703.0	3,338.1	364.83	10.150	
14,960.6	6,700.2	6,667.2	6,667.2	233.7	132.9	-89.81	-1,287.7	-4,915.6	3,755.8	3,389.3	366.52	10.247	
15,000.0	6,700.2	6,667.2	6,667.2	234.8	132.9	-89.81	-1,287.7	-4,915.6	3,790.2	3,422.6	367.63	10.310	
15,059.0	6,700.0	6,667.0	6,667.0	236.4	132.9	-89.80	-1,287.7	-4,915.6	3,842.1	3,472.8	369.28	10.404	
15,082.8	6,700.0	6,667.0	6,667.0	237.1	132.9	-89.80	-1,287.7	-4,915.6	3,863.0	3,493.1	369.95	10.442	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-88.35	36.1	-1,255.0	1,255.7				
98.4	98.4	77.4	77.4	0.1	0.0	-88.35	36.1	-1,255.0	1,255.5	1,255.4	0.10	N/A	
100.0	100.0	79.0	79.0	0.1	0.0	-88.35	36.1	-1,255.0	1,255.5	1,255.4	0.10	N/A	
196.8	196.8	175.8	175.8	0.3	1.0	-88.35	36.1	-1,255.0	1,255.5	1,254.2	1.29	969.519	
200.0	200.0	179.0	179.0	0.3	1.0	-88.35	36.1	-1,255.0	1,255.5	1,254.2	1.34	935.035	
295.3	295.3	274.3	274.3	0.5	3.0	-88.35	36.1	-1,255.0	1,255.5	1,252.0	3.51	357.313	
300.0	300.0	279.0	279.0	0.5	3.1	-88.35	36.1	-1,255.0	1,255.5	1,251.9	3.63	345.718	
393.7	393.7	372.7	372.7	0.8	5.1	-88.35	36.1	-1,255.0	1,255.5	1,249.7	5.83	215.413	
400.0	400.0	379.0	379.0	0.8	5.2	-88.35	36.1	-1,255.0	1,255.5	1,249.6	5.97	210.185	
492.1	492.1	471.1	471.1	1.0	7.1	-88.35	36.1	-1,255.0	1,255.5	1,247.5	8.07	155.604	
500.0	500.0	479.0	479.0	1.0	7.3	-88.35	36.1	-1,255.0	1,255.5	1,247.3	8.25	152.237	
590.5	590.5	569.5	569.5	1.2	9.1	-88.35	36.1	-1,255.0	1,255.5	1,245.2	10.29	122.008	
600.0	600.0	579.0	579.0	1.2	9.3	-88.35	36.1	-1,255.0	1,255.5	1,245.0	10.50	119.534	
689.0	689.0	668.0	668.0	1.4	11.1	-88.35	36.1	-1,255.0	1,255.5	1,243.0	12.50	100.406	
700.0	700.0	679.0	679.0	1.4	11.3	-88.35	36.1	-1,255.0	1,255.5	1,242.8	12.75	98.455	
787.4	787.4	766.4	766.4	1.6	13.1	-88.35	36.1	-1,255.0	1,255.5	1,240.8	14.71	85.327	
800.0	800.0	779.0	779.0	1.7	13.3	-88.35	36.1	-1,255.0	1,255.5	1,240.5	15.00	83.719	
885.8	885.8	864.8	864.8	1.9	15.1	-88.35	36.1	-1,255.0	1,255.5	1,238.6	16.92	74.197	
900.0	900.0	879.0	879.0	1.9	15.3	-88.35	36.1	-1,255.0	1,255.5	1,238.3	17.24	72.829	
984.2	984.2	963.2	963.2	2.1	17.0	-88.35	36.1	-1,255.0	1,255.5	1,236.4	19.13	65.641	
1,000.0	1,000.0	979.0	979.0	2.1	17.4	-88.35	36.1	-1,255.0	1,255.5	1,236.0	19.48	64.452	
1,082.7	1,082.7	1,061.7	1,061.7	2.3	19.0	-88.35	36.1	-1,255.0	1,255.5	1,234.2	21.33	58.857	
1,100.0	1,100.0	1,079.0	1,079.0	2.3	19.4	-88.35	36.1	-1,255.0	1,255.5	1,233.8	21.72	57.806	
1,181.1	1,181.1	1,160.1	1,160.1	2.5	21.0	-117.12	36.1	-1,255.0	1,256.0	1,232.5	23.53	53.377	
1,200.0	1,200.0	1,179.0	1,179.0	2.6	21.4	-117.14	36.1	-1,255.0	1,256.3	1,232.4	23.95	52.450	
1,279.5	1,279.4	1,258.4	1,258.4	2.7	23.0	-117.26	36.1	-1,255.0	1,258.1	1,232.4	25.72	48.914	
1,300.0	1,299.8	1,278.8	1,278.8	2.8	23.4	-117.31	36.1	-1,255.0	1,258.7	1,232.5	26.17	48.090	
1,377.9	1,377.5	1,356.5	1,356.5	3.0	25.0	-117.51	36.1	-1,255.0	1,261.7	1,233.8	27.90	45.222	
1,400.0	1,399.5	1,378.5	1,378.5	3.0	25.4	-117.59	36.1	-1,255.0	1,262.7	1,234.4	28.39	44.484	
1,476.4	1,475.3	1,454.3	1,454.3	3.2	26.9	-117.87	36.1	-1,255.0	1,267.0	1,236.9	30.07	42.131	
1,500.0	1,498.7	1,477.7	1,477.7	3.3	27.4	-117.97	36.1	-1,255.0	1,268.5	1,237.9	30.59	41.466	
1,574.8	1,572.6	1,551.6	1,551.6	3.5	28.9	-118.32	36.1	-1,255.0	1,273.9	1,241.6	32.24	39.516	
1,600.0	1,597.5	1,576.5	1,576.5	3.5	29.4	-118.45	36.1	-1,255.0	1,275.9	1,243.1	32.79	38.914	
1,673.2	1,669.4	1,648.4	1,648.4	3.7	30.8	-118.86	36.1	-1,255.0	1,282.6	1,248.2	34.40	37.286	
1,700.1	1,695.8	1,674.8	1,674.8	3.8	31.4	-119.03	36.1	-1,255.0	1,285.3	1,250.3	34.98	36.738	
1,771.6	1,765.7	1,744.7	1,744.7	4.1	32.8	-119.59	36.1	-1,255.0	1,292.7	1,256.1	36.60	35.322	
1,800.0	1,793.4	1,772.4	1,772.4	4.2	33.3	-119.82	36.1	-1,255.0	1,295.6	1,258.4	37.23	34.796	
1,870.1	1,862.0	1,841.0	1,841.0	4.4	34.7	-120.36	36.1	-1,255.0	1,303.1	1,264.2	38.82	33.563	
1,900.0	1,891.3	1,870.3	1,870.3	4.5	35.3	-120.60	36.1	-1,255.0	1,306.3	1,266.8	39.50	33.069	
1,968.5	1,958.3	1,937.3	1,937.3	4.8	36.6	-121.12	36.1	-1,255.0	1,313.7	1,272.6	41.06	31.993	
2,000.0	1,989.1	1,968.1	1,968.1	4.9	37.3	-121.36	36.1	-1,255.0	1,317.1	1,275.4	41.78	31.527	
2,066.9	2,054.5	2,033.5	2,033.5	5.1	38.6	-121.87	36.1	-1,255.0	1,324.6	1,281.2	43.31	30.586	
2,100.0	2,086.9	2,065.9	2,065.9	5.3	39.2	-122.12	36.1	-1,255.0	1,328.3	1,284.2	44.06	30.146	
2,165.3	2,150.8	2,129.8	2,129.8	5.5	40.5	-122.60	36.1	-1,255.0	1,335.6	1,290.1	45.56	29.319	
2,200.0	2,184.7	2,163.7	2,163.7	5.6	41.2	-122.86	36.1	-1,255.0	1,339.6	1,293.3	46.35	28.904	
2,263.8	2,247.1	2,226.1	2,226.1	5.9	42.5	-123.32	36.1	-1,255.0	1,347.0	1,299.1	47.81	28.174	
2,300.0	2,282.5	2,261.5	2,261.5	6.0	43.2	-123.59	36.1	-1,255.0	1,351.2	1,302.5	48.64	27.781	
2,362.2	2,343.3	2,322.3	2,322.3	6.3	44.4	-124.04	36.1	-1,255.0	1,358.5	1,308.4	50.06	27.136	
2,400.0	2,380.3	2,359.3	2,359.3	6.5	45.1	-124.30	36.1	-1,255.0	1,363.0	1,312.0	50.93	26.763	
2,460.6	2,439.6	2,418.6	2,418.6	6.7	46.3	-124.73	36.1	-1,255.0	1,370.2	1,317.9	52.32	26.191	
2,500.0	2,478.1	2,457.1	2,457.1	6.9	47.1	-125.01	36.1	-1,255.0	1,375.0	1,321.7	53.22	25.836	
2,559.0	2,535.9	2,514.9	2,514.9	7.1	48.3	-125.42	36.1	-1,255.0	1,382.2	1,327.6	54.57	25.327	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,554.9	2,554.9	7.3	49.1	-125.70	36.1	-1,255.0	1,387.2	1,331.7	55.51	24.990	
2,657.5	2,632.2	2,611.2	2,611.2	7.5	50.2	-126.10	36.1	-1,255.0	1,394.3	1,337.5	56.83	24.536	
2,700.0	2,673.8	2,652.8	2,652.8	7.7	51.0	-126.39	36.1	-1,255.0	1,399.6	1,341.8	57.80	24.215	
2,755.9	2,728.4	2,707.4	2,707.4	7.9	52.1	-126.76	36.1	-1,255.0	1,406.6	1,347.5	59.08	23.809	
2,800.0	2,771.6	2,750.6	2,750.6	8.1	53.0	-127.06	36.1	-1,255.0	1,412.2	1,352.1	60.09	23.503	
2,854.3	2,824.7	2,803.7	2,803.7	8.3	54.1	-127.41	36.1	-1,255.0	1,419.1	1,357.8	61.33	23.139	
2,900.0	2,869.4	2,848.4	2,848.4	8.5	55.0	-127.71	36.1	-1,255.0	1,425.0	1,362.6	62.37	22.846	
2,952.7	2,921.0	2,900.0	2,900.0	8.8	56.0	-128.06	36.1	-1,255.0	1,431.8	1,368.3	63.58	22.520	
3,000.0	2,967.2	2,946.2	2,946.2	9.0	56.9	-128.36	36.1	-1,255.0	1,438.0	1,373.3	64.66	22.240	
3,051.2	3,017.3	2,996.3	2,996.3	9.2	58.0	-128.69	36.1	-1,255.0	1,444.7	1,378.9	65.83	21.947	
3,100.0	3,065.0	3,044.0	3,044.0	9.4	58.9	-129.00	36.1	-1,255.0	1,451.2	1,384.2	66.94	21.678	
3,149.6	3,113.5	3,092.5	3,092.5	9.6	59.9	-129.31	36.1	-1,255.0	1,457.8	1,389.7	68.07	21.415	
3,200.0	3,162.8	3,141.8	3,141.8	9.8	60.9	-129.62	36.1	-1,255.0	1,464.5	1,395.3	69.22	21.157	
3,248.0	3,209.8	3,188.8	3,188.8	10.0	61.8	-129.92	36.1	-1,255.0	1,471.0	1,400.7	70.31	20.920	
3,300.0	3,260.6	3,239.6	3,239.6	10.2	62.8	-130.23	36.1	-1,255.0	1,478.0	1,406.5	71.50	20.673	
3,346.4	3,306.1	3,285.1	3,285.1	10.5	63.8	-130.51	36.1	-1,255.0	1,484.4	1,411.8	72.55	20.459	
3,400.0	3,358.5	3,337.5	3,337.5	10.7	64.8	-130.84	36.1	-1,255.0	1,491.7	1,417.9	73.77	20.221	
3,444.9	3,402.3	3,381.3	3,381.3	10.9	65.7	-131.10	36.1	-1,255.0	1,497.9	1,423.1	74.79	20.028	
3,500.0	3,456.3	3,435.3	3,435.3	11.1	66.8	-131.43	36.1	-1,255.0	1,505.6	1,429.5	76.04	19.799	
3,543.3	3,498.6	3,477.6	3,477.6	11.3	67.6	-131.68	36.1	-1,255.0	1,511.6	1,434.6	77.03	19.625	
3,600.0	3,554.1	3,533.1	3,533.1	11.5	68.7	-132.01	36.1	-1,255.0	1,519.6	1,441.3	78.31	19.404	
3,641.7	3,594.9	3,573.9	3,573.9	11.7	69.6	-132.25	36.1	-1,255.0	1,525.5	1,446.2	79.26	19.247	
3,700.0	3,651.9	3,630.9	3,630.9	12.0	70.7	-132.58	36.1	-1,255.0	1,533.7	1,453.2	80.58	19.034	
3,740.1	3,691.2	3,670.2	3,670.2	12.2	71.5	-132.80	36.1	-1,255.0	1,539.5	1,458.0	81.49	18.892	
3,800.0	3,749.7	3,728.7	3,728.7	12.4	72.7	-133.14	36.1	-1,255.0	1,548.1	1,465.2	82.84	18.687	
3,838.6	3,787.4	3,766.4	3,766.4	12.6	73.4	-133.35	36.1	-1,255.0	1,553.6	1,469.9	83.72	18.558	
3,900.0	3,847.5	3,826.5	3,826.5	12.9	74.7	-133.69	36.1	-1,255.0	1,562.5	1,477.4	85.10	18.360	
3,937.0	3,883.7	3,862.7	3,862.7	13.0	75.4	-133.89	36.1	-1,255.0	1,567.9	1,482.0	85.94	18.244	
4,000.0	3,945.3	3,924.3	3,924.3	13.3	76.6	-134.23	36.1	-1,255.0	1,577.1	1,489.8	87.36	18.052	
4,035.4	3,980.0	3,959.0	3,959.0	13.5	77.3	-134.42	36.1	-1,255.0	1,582.3	1,494.2	88.16	17.948	
4,060.0	4,004.0	3,983.0	3,983.0	13.6	77.8	-134.55	36.1	-1,255.0	1,585.9	1,497.2	88.72	17.876	
4,100.0	4,043.2	4,022.2	4,022.2	13.7	78.6	-134.83	36.1	-1,255.0	1,591.7	1,501.9	89.71	17.743	
4,133.8	4,076.5	4,055.5	4,055.5	13.8	79.3	-135.06	36.1	-1,255.0	1,596.2	1,505.7	90.53	17.632	
4,200.0	4,141.6	4,120.6	4,120.6	14.0	80.6	-135.46	36.1	-1,255.0	1,604.3	1,512.2	92.13	17.413	
4,232.3	4,173.5	4,152.5	4,152.5	14.1	81.2	-135.63	36.1	-1,255.0	1,607.9	1,515.0	92.91	17.306	
4,300.0	4,240.6	4,219.6	4,219.6	14.3	82.6	-135.96	36.1	-1,255.0	1,614.6	1,520.1	94.52	17.081	
4,330.7	4,271.1	4,250.1	4,250.1	14.4	83.2	-136.08	36.1	-1,255.0	1,617.2	1,522.0	95.24	16.980	
4,400.0	4,340.0	4,319.0	4,319.0	14.5	84.6	-136.33	36.1	-1,255.0	1,622.4	1,525.5	96.86	16.749	
4,429.1	4,369.0	4,348.0	4,348.0	14.6	85.1	-136.41	36.1	-1,255.0	1,624.2	1,526.7	97.53	16.653	
4,500.0	4,439.7	4,418.7	4,418.7	14.8	86.6	-136.58	36.1	-1,255.0	1,627.7	1,528.6	99.14	16.418	
4,527.5	4,467.2	4,446.2	4,446.2	14.8	87.1	-136.63	36.1	-1,255.0	1,628.7	1,529.0	99.76	16.327	
4,600.0	4,539.7	4,518.7	4,518.7	14.9	88.6	-136.71	36.1	-1,255.0	1,630.5	1,529.1	101.36	16.087	
4,626.0	4,565.6	4,544.6	4,544.6	15.0	89.1	-136.73	36.1	-1,255.0	1,630.8	1,528.9	101.92	16.001	
4,660.2	4,599.8	4,578.8	4,578.8	15.0	89.8	-108.00	36.1	-1,255.0	1,631.0	1,528.0	103.01	15.833	
4,700.0	4,639.6	4,618.6	4,618.6	15.0	90.6	-108.00	36.1	-1,255.0	1,631.0	1,527.1	103.87	15.702	
4,724.4	4,664.0	4,643.0	4,643.0	15.1	91.1	-108.00	36.1	-1,255.0	1,631.0	1,526.6	104.40	15.622	
4,800.0	4,739.6	4,718.6	4,718.6	15.2	92.6	-108.00	36.1	-1,255.0	1,631.0	1,524.9	106.05	15.379	
4,822.8	4,762.5	4,741.5	4,741.5	15.2	93.1	-108.00	36.1	-1,255.0	1,631.0	1,524.4	106.55	15.307	
4,900.0	4,839.6	4,818.6	4,818.6	15.3	94.6	-108.00	36.1	-1,255.0	1,631.0	1,522.7	108.23	15.070	
4,921.2	4,860.9	4,839.9	4,839.9	15.4	95.0	-108.00	36.1	-1,255.0	1,631.0	1,522.3	108.69	15.005	
5,000.0	4,939.6	4,918.6	4,918.6	15.5	96.6	-108.00	36.1	-1,255.0	1,631.0	1,520.6	110.41	14.772	
5,019.7	4,959.3	4,938.3	4,938.3	15.5	97.0	-108.00	36.1	-1,255.0	1,631.0	1,520.1	110.84	14.715	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-INC													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.0	5,039.6	5,018.6	5,018.6	15.6	98.6	-108.00	36.1	-1,255.0	1,631.0	1,518.4	112.59	14.485		
5,118.1	5,057.7	5,036.7	5,036.7	15.7	99.0	-108.00	36.1	-1,255.0	1,631.0	1,518.0	112.99	14.435		
5,200.0	5,139.6	5,118.6	5,118.6	15.8	100.6	-108.00	36.1	-1,255.0	1,631.0	1,516.2	114.78	14.210		
5,216.5	5,156.2	5,135.2	5,135.2	15.8	101.0	-108.00	36.1	-1,255.0	1,631.0	1,515.8	115.14	14.165		
5,300.0	5,239.6	5,218.6	5,218.6	15.9	102.6	-108.00	36.1	-1,255.0	1,631.0	1,514.0	116.96	13.944		
5,314.9	5,254.6	5,233.6	5,233.6	16.0	102.9	-108.00	36.1	-1,255.0	1,631.0	1,513.7	117.29	13.905		
5,400.0	5,339.6	5,318.6	5,318.6	16.1	104.7	-108.00	36.1	-1,255.0	1,631.0	1,511.8	119.15	13.688		
5,413.4	5,353.0	5,332.0	5,332.0	16.1	104.9	-108.00	36.1	-1,255.0	1,631.0	1,511.5	119.44	13.655		
5,500.0	5,439.6	5,418.6	5,418.6	16.3	106.7	-108.00	36.1	-1,255.0	1,631.0	1,509.6	121.34	13.442		
5,511.8	5,451.4	5,430.4	5,430.4	16.3	106.9	-108.00	36.1	-1,255.0	1,631.0	1,509.4	121.60	13.413		
5,600.0	5,539.6	5,518.6	5,518.6	16.4	108.7	-108.00	36.1	-1,255.0	1,631.0	1,507.4	123.53	13.203		
5,610.2	5,549.9	5,528.9	5,528.9	16.4	108.9	-108.00	36.1	-1,255.0	1,631.0	1,507.2	123.75	13.179		
5,700.0	5,639.6	5,618.6	5,618.6	16.6	110.7	-108.00	36.1	-1,255.0	1,631.0	1,505.2	125.72	12.973		
5,708.6	5,648.3	5,627.3	5,627.3	16.6	110.9	-108.00	36.1	-1,255.0	1,631.0	1,505.1	125.91	12.954		
5,800.0	5,739.6	5,718.6	5,718.6	16.7	112.7	-108.00	36.1	-1,255.0	1,631.0	1,503.1	127.91	12.751		
5,807.1	5,746.7	5,725.7	5,725.7	16.8	112.8	-108.00	36.1	-1,255.0	1,631.0	1,502.9	128.07	12.735		
5,900.0	5,839.6	5,818.6	5,818.6	16.9	114.7	-108.00	36.1	-1,255.0	1,631.0	1,500.9	130.10	12.536		
5,905.5	5,845.1	5,824.1	5,824.1	16.9	114.8	-108.00	36.1	-1,255.0	1,631.0	1,500.7	130.22	12.524		
6,000.0	5,939.6	5,918.6	5,918.6	17.1	116.7	-108.00	36.1	-1,255.0	1,631.0	1,498.7	132.30	12.328		
6,003.9	5,943.6	5,922.6	5,922.6	17.1	116.8	-108.00	36.1	-1,255.0	1,631.0	1,498.6	132.38	12.320		
6,059.2	5,998.8	5,977.8	5,977.8	17.2	117.9	-108.00	36.1	-1,255.0	1,631.0	1,497.4	133.60	12.208		
6,100.0	6,039.6	6,018.6	6,018.6	17.2	118.7	-18.04	36.1	-1,255.0	1,629.9	1,496.0	133.90	12.172		
6,102.3	6,042.0	6,021.0	6,021.0	17.2	118.8	-18.05	36.1	-1,255.0	1,629.7	1,495.8	133.92	12.169		
6,150.0	6,089.4	6,068.4	6,068.4	17.3	119.7	-18.20	36.1	-1,255.0	1,625.5	1,491.3	134.15	12.117		
6,200.0	6,138.7	6,117.7	6,117.7	17.3	120.7	-18.49	36.1	-1,255.0	1,617.8	1,484.0	133.80	12.092		
6,200.8	6,139.5	6,118.5	6,118.5	17.3	120.7	-18.49	36.1	-1,255.0	1,617.7	1,483.9	133.79	12.092		
6,250.0	6,187.4	6,166.4	6,166.4	17.3	121.7	-18.90	36.1	-1,255.0	1,606.9	1,474.1	132.85	12.096		
6,299.2	6,234.4	6,213.4	6,213.4	17.4	122.7	-19.45	36.1	-1,255.0	1,593.1	1,461.8	131.35	12.129		
6,300.0	6,235.1	6,214.1	6,214.1	17.4	122.7	-19.46	36.1	-1,255.0	1,592.9	1,461.5	131.32	12.130		
6,350.0	6,281.7	6,260.7	6,260.7	17.4	123.6	-20.18	36.1	-1,255.0	1,575.7	1,446.4	129.24	12.192		
6,397.6	6,324.8	6,303.8	6,303.8	17.3	124.5	-21.03	36.1	-1,255.0	1,556.5	1,429.7	126.80	12.275		
6,400.0	6,326.9	6,305.9	6,305.9	17.3	124.5	-21.08	36.1	-1,255.0	1,555.5	1,428.8	126.67	12.280		
6,450.0	6,370.5	6,349.5	6,349.5	17.3	125.4	-22.17	36.1	-1,255.0	1,532.4	1,408.7	123.70	12.388		
6,496.0	6,409.1	6,388.1	6,388.1	17.3	126.2	-23.39	36.1	-1,255.0	1,508.6	1,387.9	120.70	12.499		
6,500.0	6,412.3	6,391.3	6,391.3	17.3	126.2	-23.50	36.1	-1,255.0	1,506.5	1,386.1	120.44	12.509		
6,550.0	6,452.1	6,431.1	6,431.1	17.3	127.0	-25.11	36.1	-1,255.0	1,478.0	1,361.0	117.06	12.626		
6,594.5	6,485.6	6,464.6	6,464.6	17.3	127.7	-26.81	36.1	-1,255.0	1,450.6	1,336.4	114.16	12.707		
6,600.0	6,489.7	6,468.7	6,468.7	17.3	127.8	-27.04	36.1	-1,255.0	1,447.1	1,333.2	113.81	12.714		
6,650.0	6,524.9	6,503.9	6,503.9	17.2	128.5	-29.35	36.1	-1,255.0	1,413.8	1,302.8	111.01	12.736		
6,692.9	6,553.0	6,532.0	6,532.0	17.2	129.1	-31.70	36.1	-1,255.0	1,383.6	1,274.4	109.29	12.661		
6,700.0	6,557.5	6,536.5	6,536.5	17.2	129.2	-32.13	36.1	-1,255.0	1,378.5	1,269.4	109.08	12.638		
6,750.0	6,587.4	6,566.4	6,566.4	17.2	129.8	-35.44	36.1	-1,255.0	1,341.3	1,232.8	108.49	12.363		
6,791.3	6,609.9	6,588.9	6,588.9	17.2	130.2	-38.66	36.1	-1,255.0	1,309.3	1,199.9	109.38	11.970		
6,800.0	6,614.4	6,593.4	6,593.4	17.2	130.3	-39.40	36.1	-1,255.0	1,302.4	1,192.7	109.74	11.868		
6,850.0	6,638.4	6,617.4	6,617.4	17.2	130.8	-44.08	36.1	-1,255.0	1,262.1	1,148.9	113.19	11.150		
6,889.7	6,655.3	6,634.3	6,634.3	17.4	131.1	-48.37	36.1	-1,255.0	1,229.2	1,111.7	117.54	10.458		
6,900.0	6,659.4	6,638.4	6,638.4	17.5	131.2	-49.56	36.1	-1,255.0	1,220.6	1,101.8	118.87	10.269		
6,950.0	6,677.1	6,656.1	6,656.1	18.0	131.6	-55.85	36.1	-1,255.0	1,178.2	1,051.9	126.34	9.325		
6,988.2	6,688.4	6,667.4	6,667.4	18.5	131.8	-61.13	36.1	-1,255.0	1,145.4	1,012.7	132.68	8.632		
7,000.0	6,691.5	6,670.5	6,670.5	18.7	131.8	-62.84	36.1	-1,255.0	1,135.1	1,000.5	134.65	8.430		
7,050.0	6,702.5	6,681.5	6,681.5	19.5	132.1	-70.32	36.1	-1,255.0	1,091.6	949.1	142.53	7.659		
7,086.6	6,708.4	6,687.4	6,687.4	20.1	132.2	-75.90	36.1	-1,255.0	1,059.7	912.4	147.31	7.194		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	6,689.1	6,689.1	20.4	132.2	-77.94	36.1	-1,255.0	1,048.1	899.3	148.76	7.045	
7,150.0	6,714.2	6,693.2	6,693.2	21.3	132.3	-85.30	36.1	-1,255.0	1,004.7	852.0	152.65	6.581	
7,185.0	6,715.0	6,694.0	6,694.0	21.9	132.3	-90.11	36.1	-1,255.0	974.5	820.6	153.96	6.330	
7,185.6	6,715.0	6,694.0	6,694.0	21.9	132.3	-90.19	36.1	-1,255.0	974.1	820.1	153.97	6.326	
7,200.0	6,715.0	6,694.0	6,694.0	22.2	132.3	-90.18	36.1	-1,255.0	961.8	807.5	154.25	6.235	
7,283.4	6,714.8	6,693.8	6,693.8	23.9	132.3	-90.16	36.1	-1,255.0	891.8	735.8	155.92	5.719	
7,300.0	6,714.8	6,693.8	6,693.8	24.2	132.3	-90.16	36.1	-1,255.0	878.2	721.9	156.25	5.620	
7,381.9	6,714.6	6,693.6	6,693.6	26.0	132.3	-90.14	36.1	-1,255.0	812.5	654.5	158.01	5.142	
7,400.0	6,714.6	6,693.6	6,693.6	26.4	132.3	-90.14	36.1	-1,255.0	798.3	640.0	158.40	5.040	
7,480.3	6,714.4	6,693.4	6,693.4	28.2	132.3	-90.12	36.1	-1,255.0	737.8	577.6	160.22	4.605	
7,500.0	6,714.4	6,693.4	6,693.4	28.7	132.3	-90.11	36.1	-1,255.0	723.6	562.9	160.66	4.504	
7,578.7	6,714.2	6,693.2	6,693.2	30.5	132.3	-90.10	36.1	-1,255.0	669.3	506.8	162.51	4.119	
7,600.0	6,714.2	6,693.2	6,693.2	31.0	132.3	-90.09	36.1	-1,255.0	655.5	492.5	163.01	4.021	
7,677.1	6,714.0	6,693.0	6,693.0	32.9	132.3	-90.08	36.1	-1,255.0	609.1	444.2	164.88	3.694	
7,700.0	6,714.0	6,693.0	6,693.0	33.4	132.3	-90.07	36.1	-1,255.0	596.6	431.2	165.44	3.606	
7,775.6	6,713.9	6,692.9	6,692.9	35.3	132.3	-90.05	36.1	-1,255.0	559.8	392.5	167.31	3.346	
7,800.0	6,713.8	6,692.8	6,692.8	35.9	132.3	-90.05	36.1	-1,255.0	549.6	381.7	167.92	3.273	
7,874.0	6,713.7	6,692.7	6,692.7	37.8	132.3	-90.03	36.1	-1,255.0	524.6	354.8	169.78	3.090	
7,900.0	6,713.6	6,692.6	6,692.6	38.4	132.3	-90.03	36.1	-1,255.0	518.0	347.5	170.44	3.039	
7,972.4	6,713.5	6,692.5	6,692.5	40.3	132.3	-90.01	36.1	-1,255.0	506.3	334.0	172.30	2.938	
8,000.0	6,713.4	6,692.4	6,692.4	41.0	132.3	-90.00	36.1	-1,255.0	504.5	331.5	173.00	2.916	
8,019.1	6,713.4	6,692.4	6,692.4	41.5	132.3	-90.00	36.1	-1,255.0	504.1	330.6	173.50	2.906 CC, ES	
8,070.8	6,713.3	6,692.3	6,692.3	42.8	132.3	-89.99	36.1	-1,255.0	506.8	331.9	174.84	2.898 SF	
8,100.0	6,713.2	6,692.2	6,692.2	43.6	132.3	-89.98	36.1	-1,255.0	510.6	335.0	175.59	2.908	
8,169.3	6,713.1	6,692.1	6,692.1	45.4	132.3	-89.97	36.1	-1,255.0	526.0	348.6	177.41	2.965	
8,200.0	6,713.0	6,692.0	6,692.0	46.2	132.3	-89.96	36.1	-1,255.0	535.6	357.4	178.21	3.005	
8,267.7	6,712.9	6,691.9	6,691.9	48.0	132.3	-89.95	36.1	-1,255.0	562.1	382.1	180.00	3.123	
8,300.0	6,712.8	6,691.8	6,691.8	48.8	132.3	-89.94	36.1	-1,255.0	577.1	396.2	180.85	3.191	
8,366.1	6,712.7	6,691.7	6,691.7	50.6	132.3	-89.92	36.1	-1,255.0	612.0	429.4	182.61	3.352	
8,400.0	6,712.6	6,691.6	6,691.6	51.5	132.3	-89.92	36.1	-1,255.0	631.8	448.3	183.51	3.443	
8,464.5	6,712.5	6,691.5	6,691.5	53.2	132.3	-89.90	36.1	-1,255.0	672.7	487.5	185.23	3.632	
8,500.0	6,712.4	6,691.4	6,691.4	54.1	132.3	-89.89	36.1	-1,255.0	696.7	510.5	186.18	3.742	
8,563.0	6,712.3	6,691.3	6,691.3	55.8	132.3	-89.88	36.1	-1,255.0	741.6	553.7	187.87	3.947	
8,600.0	6,712.3	6,691.3	6,691.3	56.8	132.3	-89.87	36.1	-1,255.0	769.2	580.3	188.86	4.073	
8,661.4	6,712.1	6,691.1	6,691.1	58.5	132.3	-89.86	36.1	-1,255.0	816.5	626.0	190.52	4.286	
8,700.0	6,712.1	6,691.1	6,691.1	59.5	132.3	-89.85	36.1	-1,255.0	847.2	655.7	191.56	4.423	
8,759.8	6,711.9	6,690.9	6,690.9	61.1	132.3	-89.84	36.1	-1,255.0	896.0	702.8	193.18	4.638	
8,800.0	6,711.9	6,690.9	6,690.9	62.2	132.3	-89.83	36.1	-1,255.0	929.5	735.2	194.27	4.785	
8,858.2	6,711.8	6,690.8	6,690.8	63.8	132.3	-89.82	36.1	-1,255.0	978.9	783.1	195.85	4.999	
8,900.0	6,711.7	6,690.7	6,690.7	64.9	132.3	-89.81	36.1	-1,255.0	1,015.0	818.0	196.98	5.153	
8,956.7	6,711.6	6,690.6	6,690.6	66.5	132.2	-89.79	36.1	-1,255.0	1,064.5	866.0	198.52	5.362	
9,000.0	6,711.5	6,690.5	6,690.5	67.6	132.2	-89.79	36.1	-1,255.0	1,102.9	903.2	199.70	5.523	
9,055.1	6,711.4	6,690.4	6,690.4	69.1	132.2	-89.77	36.1	-1,255.0	1,152.2	951.0	201.20	5.726	
9,100.0	6,711.3	6,690.3	6,690.3	70.4	132.2	-89.76	36.1	-1,255.0	1,192.7	990.3	202.43	5.892	
9,153.5	6,711.2	6,690.2	6,690.2	71.8	132.2	-89.75	36.1	-1,255.0	1,241.4	1,037.5	203.89	6.089	
9,200.0	6,711.1	6,690.1	6,690.1	73.1	132.2	-89.74	36.1	-1,255.0	1,284.0	1,078.9	205.16	6.259	
9,251.9	6,711.0	6,690.0	6,690.0	74.5	132.2	-89.73	36.1	-1,255.0	1,332.0	1,125.4	206.59	6.447	
9,300.0	6,710.9	6,689.9	6,689.9	75.8	132.2	-89.72	36.1	-1,255.0	1,376.6	1,168.6	207.90	6.621	
9,350.4	6,710.8	6,689.8	6,689.8	77.2	132.2	-89.71	36.1	-1,255.0	1,423.5	1,214.3	209.29	6.802	
9,400.0	6,710.7	6,689.7	6,689.7	78.6	132.2	-89.70	36.1	-1,255.0	1,470.1	1,259.4	210.65	6.979	
9,448.8	6,710.6	6,689.6	6,689.6	79.9	132.2	-89.69	36.1	-1,255.0	1,516.0	1,304.0	211.99	7.151	
9,500.0	6,710.5	6,689.5	6,689.5	81.3	132.2	-89.68	36.1	-1,255.0	1,564.4	1,351.0	213.40	7.331	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	6,689.4	6,689.4	82.6	132.2	-89.67	36.1	-1,255.0	1,609.2	1,394.5	214.70	7.495	
9,600.0	6,710.3	6,689.3	6,689.3	84.1	132.2	-89.65	36.1	-1,255.0	1,659.4	1,443.2	216.15	7.677	
9,645.6	6,710.2	6,689.2	6,689.2	85.3	132.2	-89.65	36.1	-1,255.0	1,702.9	1,485.5	217.41	7.833	
9,700.0	6,710.1	6,689.1	6,689.1	86.8	132.2	-89.63	36.1	-1,255.0	1,754.9	1,536.0	218.90	8.017	
9,744.1	6,710.0	6,689.0	6,689.0	88.1	132.2	-89.62	36.1	-1,255.0	1,797.2	1,577.0	220.12	8.164	
9,800.0	6,709.9	6,688.9	6,688.9	89.6	132.2	-89.61	36.1	-1,255.0	1,850.9	1,629.2	221.66	8.350	
9,842.5	6,709.9	6,688.9	6,688.9	90.8	132.2	-89.60	36.1	-1,255.0	1,891.8	1,669.0	222.84	8.490	
9,900.0	6,709.7	6,688.7	6,688.7	92.4	132.2	-89.59	36.1	-1,255.0	1,947.3	1,722.9	224.42	8.677	
9,940.9	6,709.7	6,688.7	6,688.7	93.5	132.2	-89.58	36.1	-1,255.0	1,986.9	1,761.3	225.56	8.809	
10,000.0	6,709.6	6,688.6	6,688.6	95.1	132.2	-89.57	36.1	-1,255.0	2,044.1	1,816.9	227.19	8.997	
10,039.3	6,709.5	6,688.5	6,688.5	96.2	132.2	-89.56	36.1	-1,255.0	2,082.2	1,853.9	228.28	9.121	
10,100.0	6,709.4	6,688.4	6,688.4	97.9	132.2	-89.55	36.1	-1,255.0	2,141.1	1,911.2	229.96	9.311	
10,137.8	6,709.3	6,688.3	6,688.3	98.9	132.2	-89.54	36.1	-1,255.0	2,177.8	1,946.8	231.00	9.428	
10,200.0	6,709.2	6,688.2	6,688.2	100.7	132.2	-89.53	36.1	-1,255.0	2,238.4	2,005.7	232.72	9.618	
10,236.2	6,709.1	6,688.1	6,688.1	101.7	132.2	-89.52	36.1	-1,255.0	2,273.7	2,040.0	233.73	9.728	
10,300.0	6,709.0	6,688.0	6,688.0	103.4	132.2	-89.50	36.1	-1,255.0	2,336.0	2,100.5	235.49	9.919	
10,334.6	6,708.9	6,687.9	6,687.9	104.4	132.2	-89.50	36.1	-1,255.0	2,369.8	2,133.3	236.45	10.022	
10,400.0	6,708.8	6,687.8	6,687.8	106.2	132.2	-89.48	36.1	-1,255.0	2,433.7	2,195.4	238.27	10.214	
10,433.0	6,708.7	6,687.7	6,687.7	107.1	132.2	-89.48	36.1	-1,255.0	2,466.1	2,226.9	239.18	10.310	
10,500.0	6,708.6	6,687.6	6,687.6	109.0	132.2	-89.46	36.1	-1,255.0	2,531.6	2,290.6	241.04	10.503	
10,531.5	6,708.5	6,687.5	6,687.5	109.9	132.2	-89.46	36.1	-1,255.0	2,562.5	2,320.6	241.91	10.592	
10,600.0	6,708.4	6,687.4	6,687.4	111.8	132.2	-89.44	36.1	-1,255.0	2,629.7	2,385.9	243.82	10.786	
10,629.9	6,708.4	6,687.4	6,687.4	112.6	132.2	-89.43	36.1	-1,255.0	2,659.0	2,414.4	244.65	10.869	
10,700.0	6,708.2	6,687.2	6,687.2	114.6	132.2	-89.42	36.1	-1,255.0	2,727.9	2,481.3	246.59	11.062	
10,728.3	6,708.2	6,687.2	6,687.2	115.3	132.2	-89.41	36.1	-1,255.0	2,755.8	2,508.4	247.38	11.140	
10,800.0	6,708.0	6,687.0	6,687.0	117.3	132.2	-89.40	36.1	-1,255.0	2,826.2	2,576.9	249.37	11.333	
10,826.7	6,708.0	6,687.0	6,687.0	118.1	132.2	-89.39	36.1	-1,255.0	2,852.6	2,602.5	250.12	11.405	
10,900.0	6,707.8	6,686.8	6,686.8	120.1	132.2	-89.38	36.1	-1,255.0	2,924.7	2,672.5	252.15	11.599	
10,925.2	6,707.8	6,686.8	6,686.8	120.8	132.2	-89.37	36.1	-1,255.0	2,949.5	2,696.6	252.85	11.665	
11,000.0	6,707.6	6,686.6	6,686.6	122.9	132.2	-89.36	36.1	-1,255.0	3,023.3	2,768.3	254.93	11.859	
11,023.6	6,707.6	6,686.6	6,686.6	123.6	132.2	-89.35	36.1	-1,255.0	3,046.5	2,790.9	255.59	11.920	
11,100.0	6,707.5	6,686.5	6,686.5	125.7	132.2	-89.33	36.1	-1,255.0	3,121.9	2,864.2	257.71	12.114	
11,122.0	6,707.4	6,686.4	6,686.4	126.3	132.2	-89.33	36.1	-1,255.0	3,143.6	2,885.3	258.33	12.169	
11,200.0	6,707.3	6,686.3	6,686.3	128.5	132.2	-89.31	36.1	-1,255.0	3,220.6	2,960.1	260.50	12.363	
11,220.4	6,707.2	6,686.2	6,686.2	129.0	132.2	-89.31	36.1	-1,255.0	3,240.8	2,979.8	261.07	12.414	
11,300.0	6,707.1	6,686.1	6,686.1	131.3	132.2	-89.29	36.1	-1,255.0	3,319.4	3,056.1	263.28	12.608	
11,318.9	6,707.0	6,686.0	6,686.0	131.8	132.2	-89.29	36.1	-1,255.0	3,338.1	3,074.3	263.81	12.654	
11,400.0	6,706.9	6,685.9	6,685.9	134.0	132.2	-89.27	36.1	-1,255.0	3,418.3	3,152.2	266.06	12.848	
11,417.3	6,706.9	6,685.9	6,685.9	134.5	132.2	-89.27	36.1	-1,255.0	3,435.4	3,168.9	266.55	12.889	
11,500.0	6,706.7	6,685.7	6,685.7	136.8	132.2	-89.25	36.1	-1,255.0	3,517.2	3,248.4	268.85	13.083	
11,515.7	6,706.7	6,685.7	6,685.7	137.3	132.2	-89.25	36.1	-1,255.0	3,532.8	3,263.5	269.29	13.119	
11,600.0	6,706.5	6,685.5	6,685.5	139.6	132.1	-89.23	36.1	-1,255.0	3,616.2	3,344.6	271.64	13.313	
11,614.1	6,706.5	6,685.5	6,685.5	140.0	132.1	-89.23	36.1	-1,255.0	3,630.2	3,358.2	272.03	13.345	
11,700.0	6,706.3	6,685.3	6,685.3	142.4	132.1	-89.21	36.1	-1,255.0	3,715.3	3,440.9	274.42	13.539	
11,712.6	6,706.3	6,685.3	6,685.3	142.8	132.1	-89.21	36.1	-1,255.0	3,727.7	3,453.0	274.77	13.567	
11,800.0	6,706.1	6,685.1	6,685.1	145.2	132.1	-89.19	36.1	-1,255.0	3,814.4	3,537.2	277.21	13.760	
11,811.0	6,706.1	6,685.1	6,685.1	145.5	132.1	-89.19	36.1	-1,255.0	3,825.3	3,547.8	277.52	13.784	
11,900.0	6,705.9	6,684.9	6,684.9	148.0	132.1	-89.17	36.1	-1,255.0	3,913.5	3,633.5	280.00	13.977	
11,909.4	6,705.9	6,684.9	6,684.9	148.3	132.1	-89.16	36.1	-1,255.0	3,922.9	3,642.6	280.26	13.997	
12,000.0	6,705.8	6,684.8	6,684.8	150.8	132.1	-89.15	36.1	-1,255.0	4,012.7	3,729.9	282.79	14.190	
12,007.8	6,705.7	6,684.7	6,684.7	151.0	132.1	-89.14	36.1	-1,255.0	4,020.5	3,737.5	283.01	14.206	
12,100.0	6,705.6	6,684.6	6,684.6	153.6	132.1	-89.13	36.1	-1,255.0	4,111.9	3,826.4	285.58	14.399	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-INC													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,106.3	6,705.6	6,684.6	6,684.6	153.8	132.1	-89.12	36.1	-1,255.0	4,118.2	3,832.4	285.75	14.412		
12,200.0	6,705.4	6,684.4	6,684.4	156.4	132.1	-89.10	36.1	-1,255.0	4,211.2	3,922.8	288.37	14.604		
12,204.7	6,705.4	6,684.4	6,684.4	156.5	132.1	-89.10	36.1	-1,255.0	4,215.9	3,927.4	288.50	14.613		
12,300.0	6,705.2	6,684.2	6,684.2	159.2	132.1	-89.08	36.1	-1,255.0	4,310.5	4,019.3	291.16	14.805		
12,303.1	6,705.2	6,684.2	6,684.2	159.3	132.1	-89.08	36.1	-1,255.0	4,313.6	4,022.4	291.24	14.811		
12,400.0	6,705.0	6,684.0	6,684.0	162.0	132.1	-89.06	36.1	-1,255.0	4,409.8	4,115.9	293.95	15.002		
12,401.5	6,705.0	6,684.0	6,684.0	162.0	132.1	-89.06	36.1	-1,255.0	4,411.4	4,117.4	293.99	15.005		
12,500.0	6,704.8	6,683.8	6,683.8	164.8	132.1	-89.04	36.1	-1,255.0	4,509.2	4,212.5	296.74	15.196		
12,598.4	6,704.6	6,683.6	6,683.6	167.5	132.1	-89.02	36.1	-1,255.0	4,607.0	4,307.5	299.48	15.383		
12,600.0	6,704.6	6,683.6	6,683.6	167.6	132.1	-89.02	36.1	-1,255.0	4,608.6	4,309.0	299.53	15.386		
12,696.8	6,704.4	6,683.4	6,683.4	170.3	132.1	-89.00	36.1	-1,255.0	4,704.8	4,402.6	302.23	15.567		
12,700.0	6,704.4	6,683.4	6,683.4	170.4	132.1	-89.00	36.1	-1,255.0	4,708.0	4,405.7	302.32	15.573		
12,795.2	6,704.3	6,683.3	6,683.3	173.0	132.1	-88.98	36.1	-1,255.0	4,802.7	4,497.7	304.98	15.748		
12,800.0	6,704.2	6,683.2	6,683.2	173.2	132.1	-88.98	36.1	-1,255.0	4,807.4	4,502.3	305.11	15.756		
12,893.7	6,704.1	6,683.1	6,683.1	175.8	132.1	-88.96	36.1	-1,255.0	4,900.6	4,592.9	307.73	15.925		
12,900.0	6,704.1	6,683.1	6,683.1	176.0	132.1	-88.96	36.1	-1,255.0	4,906.9	4,599.0	307.90	15.936		
12,992.1	6,703.9	6,682.9	6,682.9	178.5	132.1	-88.94	36.1	-1,255.0	4,998.5	4,688.0	310.48	16.100		
13,000.0	6,703.9	6,682.9	6,682.9	178.8	132.1	-88.94	36.1	-1,255.0	5,006.4	4,695.7	310.70	16.113		
13,090.5	6,703.7	6,682.7	6,682.7	181.3	132.1	-88.92	36.1	-1,255.0	5,096.4	4,783.2	313.22	16.271		
13,100.0	6,703.7	6,682.7	6,682.7	181.6	132.1	-88.92	36.1	-1,255.0	5,105.9	4,792.4	313.49	16.287		
13,188.9	6,703.5	6,682.5	6,682.5	184.0	132.1	-88.90	36.1	-1,255.0	5,194.4	4,878.4	315.97	16.439		
13,200.0	6,703.5	6,682.5	6,682.5	184.4	132.1	-88.90	36.1	-1,255.0	5,205.4	4,889.1	316.28	16.458		
13,287.4	6,703.3	6,682.3	6,682.3	186.8	132.1	-88.88	36.1	-1,255.0	5,292.4	4,973.6	318.72	16.605		
13,300.0	6,703.3	6,682.3	6,682.3	187.2	132.1	-88.88	36.1	-1,255.0	5,304.9	4,985.9	319.08	16.626		
13,385.8	6,703.2	6,682.2	6,682.2	189.6	132.1	-88.86	36.1	-1,255.0	5,390.3	5,068.9	321.47	16.768		
13,400.0	6,703.1	6,682.1	6,682.1	190.0	132.1	-88.86	36.1	-1,255.0	5,404.5	5,082.6	321.87	16.791		
13,484.2	6,703.0	6,682.0	6,682.0	192.3	132.1	-88.84	36.1	-1,255.0	5,488.3	5,164.1	324.22	16.928		
13,500.0	6,702.9	6,681.9	6,681.9	192.8	132.1	-88.84	36.1	-1,255.0	5,504.1	5,179.4	324.66	16.953		
13,582.6	6,702.8	6,681.8	6,681.8	195.1	132.1	-88.82	36.1	-1,255.0	5,586.4	5,259.4	326.97	17.085		
13,600.0	6,702.8	6,681.8	6,681.8	195.6	132.1	-88.82	36.1	-1,255.0	5,603.6	5,276.2	327.46	17.113		
13,681.1	6,702.6	6,681.6	6,681.6	197.8	132.1	-88.80	36.1	-1,255.0	5,684.4	5,354.7	329.72	17.240		
13,700.0	6,702.6	6,681.6	6,681.6	198.4	132.1	-88.80	36.1	-1,255.0	5,703.2	5,373.0	330.25	17.269		
13,779.5	6,702.4	6,681.4	6,681.4	200.6	132.1	-88.78	36.1	-1,255.0	5,782.4	5,450.0	332.47	17.392		
13,800.0	6,702.4	6,681.4	6,681.4	201.2	132.1	-88.78	36.1	-1,255.0	5,802.9	5,469.8	333.05	17.424		
13,877.9	6,702.2	6,681.2	6,681.2	203.3	132.1	-88.76	36.1	-1,255.0	5,880.5	5,545.3	335.22	17.542		
13,900.0	6,702.2	6,681.2	6,681.2	204.0	132.1	-88.76	36.1	-1,255.0	5,902.5	5,566.6	335.84	17.575		
13,976.3	6,702.1	6,681.1	6,681.1	206.1	132.1	-88.74	36.1	-1,255.0	5,978.6	5,640.6	337.98	17.689		
14,000.0	6,702.0	6,681.0	6,681.0	206.8	132.1	-88.74	36.1	-1,255.0	6,002.1	5,663.5	338.64	17.724		
14,074.8	6,701.9	6,680.9	6,680.9	208.9	132.1	-88.72	36.1	-1,255.0	6,076.6	5,735.9	340.73	17.834		
14,100.0	6,701.8	6,680.8	6,680.8	209.6	132.1	-88.72	36.1	-1,255.0	6,101.8	5,760.3	341.43	17.871		
14,173.2	6,701.7	6,680.7	6,680.7	211.6	132.1	-88.70	36.1	-1,255.0	6,174.7	5,831.3	343.48	17.977		
14,200.0	6,701.6	6,680.6	6,680.6	212.4	132.0	-88.69	36.1	-1,255.0	6,201.4	5,857.2	344.23	18.016		
14,271.6	6,701.5	6,680.5	6,680.5	214.4	132.0	-88.68	36.1	-1,255.0	6,272.8	5,926.6	346.23	18.118		
14,300.0	6,701.4	6,680.4	6,680.4	215.2	132.0	-88.67	36.1	-1,255.0	6,301.1	5,954.1	347.02	18.158		
14,370.0	6,701.3	6,680.3	6,680.3	217.1	132.0	-88.66	36.1	-1,255.0	6,370.9	6,022.0	348.98	18.256		
14,400.0	6,701.3	6,680.3	6,680.3	218.0	132.0	-88.65	36.1	-1,255.0	6,400.8	6,051.0	349.82	18.298		
14,468.5	6,701.1	6,680.1	6,680.1	219.9	132.0	-88.64	36.1	-1,255.0	6,469.1	6,117.3	351.73	18.392		
14,500.0	6,701.1	6,680.1	6,680.1	220.8	132.0	-88.63	36.1	-1,255.0	6,500.5	6,147.9	352.61	18.435		
14,566.9	6,701.0	6,680.0	6,680.0	222.6	132.0	-88.62	36.1	-1,255.0	6,567.2	6,212.7	354.48	18.526		
14,600.0	6,700.9	6,679.9	6,679.9	223.6	132.0	-88.61	36.1	-1,255.0	6,600.2	6,244.8	355.41	18.571		
14,665.3	6,700.8	6,679.8	6,679.8	225.4	132.0	-88.60	36.1	-1,255.0	6,665.3	6,308.1	357.23	18.658		
14,700.0	6,700.7	6,679.7	6,679.7	226.4	132.0	-88.59	36.1	-1,255.0	6,699.9	6,341.7	358.20	18.704		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - ABDN VERT HEINRICH #1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	6,679.6	6,679.6	228.2	132.0	-88.58	36.1	-1,255.0	6,763.5	6,403.5	359.99	18.788	
14,800.0	6,700.5	6,679.5	6,679.5	229.2	132.0	-88.57	36.1	-1,255.0	6,799.6	6,438.6	361.00	18.836	
14,862.2	6,700.4	6,679.4	6,679.4	230.9	132.0	-88.56	36.1	-1,255.0	6,861.6	6,498.9	362.74	18.916	
14,900.0	6,700.3	6,679.3	6,679.3	232.0	132.0	-88.55	36.1	-1,255.0	6,899.4	6,535.6	363.80	18.965	
14,960.6	6,700.2	6,679.2	6,679.2	233.7	132.0	-88.54	36.1	-1,255.0	6,959.8	6,594.3	365.49	19.042	
15,000.0	6,700.2	6,679.2	6,679.2	234.8	132.0	-88.53	36.1	-1,255.0	6,999.1	6,632.5	366.59	19.092	
15,059.0	6,700.0	6,679.0	6,679.0	236.4	132.0	-88.52	36.1	-1,255.0	7,058.0	6,689.7	368.24	19.167	
15,082.8	6,700.0	6,679.0	6,679.0	237.1	132.0	-88.52	36.1	-1,255.0	7,081.7	6,712.8	368.91	19.196	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	5.0	5.0	0.0	0.0	-60.53	1,347.7	-2,385.4	2,739.8				
98.4	98.4	103.4	103.4	0.1	0.0	-60.53	1,347.7	-2,385.4	2,739.8	2,739.7	0.13	N/A	
100.0	100.0	105.0	105.0	0.1	0.0	-60.53	1,347.7	-2,385.4	2,739.8	2,739.7	0.15	N/A	
196.8	196.8	201.8	201.8	0.3	1.0	-60.53	1,347.7	-2,385.4	2,739.8	2,738.5	1.30	2,100.776	
200.0	200.0	205.0	205.0	0.3	1.1	-60.53	1,347.7	-2,385.4	2,739.8	2,738.4	1.39	1,977.809	
295.3	295.3	300.3	300.3	0.5	3.3	-60.53	1,347.7	-2,385.4	2,739.8	2,736.0	3.84	714.038	
300.0	300.0	305.0	305.0	0.5	3.4	-60.53	1,347.7	-2,385.4	2,739.8	2,735.9	3.95	694.319	
393.7	393.7	398.7	398.7	0.8	5.3	-60.53	1,347.7	-2,385.4	2,739.8	2,733.7	6.11	448.629	
400.0	400.0	405.0	405.0	0.8	5.5	-60.53	1,347.7	-2,385.4	2,739.8	2,733.6	6.25	438.340	
492.1	492.1	497.1	497.1	1.0	7.4	-60.53	1,347.7	-2,385.4	2,739.8	2,731.5	8.34	328.541	
500.0	500.0	505.0	505.0	1.0	7.5	-60.53	1,347.7	-2,385.4	2,739.8	2,731.3	8.52	321.679	
590.5	590.5	595.5	595.5	1.2	9.4	-60.53	1,347.7	-2,385.4	2,739.8	2,729.2	10.56	259.499	
600.0	600.0	605.0	605.0	1.2	9.5	-60.53	1,347.7	-2,385.4	2,739.8	2,729.0	10.77	254.375	
689.0	689.0	694.0	694.0	1.4	11.3	-60.53	1,347.7	-2,385.4	2,739.8	2,727.0	12.77	214.543	
700.0	700.0	705.0	705.0	1.4	11.6	-60.53	1,347.7	-2,385.4	2,739.8	2,726.8	13.02	210.463	
787.4	787.4	792.4	792.4	1.6	13.3	-60.53	1,347.7	-2,385.4	2,739.8	2,724.8	14.98	182.907	
800.0	800.0	805.0	805.0	1.7	13.6	-60.53	1,347.7	-2,385.4	2,739.8	2,724.5	15.26	179.520	
885.8	885.8	890.8	890.8	1.9	15.3	-60.53	1,347.7	-2,385.4	2,739.8	2,722.6	17.19	159.422	
900.0	900.0	905.0	905.0	1.9	15.6	-60.53	1,347.7	-2,385.4	2,739.8	2,722.3	17.50	156.528	
984.2	984.2	989.2	989.2	2.1	17.3	-60.53	1,347.7	-2,385.4	2,739.8	2,720.4	19.39	141.292	
1,000.0	1,000.0	1,005.0	1,005.0	2.1	17.6	-60.53	1,347.7	-2,385.4	2,739.8	2,720.1	19.74	138.767	
1,082.7	1,082.7	1,087.7	1,087.7	2.3	19.3	-60.53	1,347.7	-2,385.4	2,739.8	2,718.2	21.60	126.870	
1,100.0	1,100.0	1,105.0	1,105.0	2.3	19.6	-60.53	1,347.7	-2,385.4	2,739.8	2,717.8	21.98	124.631	
1,181.1	1,181.1	1,186.1	1,186.1	2.5	21.3	-89.29	1,347.7	-2,385.4	2,739.8	2,716.0	23.80	115.133	
1,200.0	1,200.0	1,205.0	1,205.0	2.6	21.7	-89.30	1,347.7	-2,385.4	2,739.8	2,715.6	24.22	113.124	
1,279.5	1,279.4	1,284.4	1,284.4	2.7	23.3	-89.38	1,347.7	-2,385.4	2,739.7	2,713.7	25.99	105.395	
1,300.0	1,299.8	1,304.8	1,304.8	2.8	23.7	-89.41	1,347.7	-2,385.4	2,739.7	2,713.3	26.45	103.575	
1,377.9	1,377.5	1,382.5	1,382.5	3.0	25.2	-89.55	1,347.7	-2,385.4	2,739.7	2,711.5	28.19	97.174	
1,400.0	1,399.5	1,404.5	1,404.5	3.0	25.7	-89.59	1,347.7	-2,385.4	2,739.6	2,711.0	28.69	95.507	
1,476.4	1,475.3	1,480.3	1,480.3	3.2	27.2	-89.78	1,347.7	-2,385.4	2,739.6	2,709.2	30.40	90.127	
1,500.0	1,498.7	1,503.7	1,503.7	3.3	27.7	-89.85	1,347.7	-2,385.4	2,739.6	2,708.7	30.93	88.585	
1,549.8	1,548.0	1,553.0	1,553.0	3.4	28.7	-90.00	1,347.7	-2,385.4	2,739.6	2,707.5	32.05	85.479	
1,574.8	1,572.6	1,577.6	1,577.6	3.5	29.2	-90.08	1,347.7	-2,385.4	2,739.6	2,707.0	32.61	84.003	
1,600.0	1,597.5	1,602.5	1,602.5	3.5	29.7	-90.17	1,347.7	-2,385.4	2,739.6	2,706.4	33.18	82.566	
1,673.2	1,669.4	1,674.4	1,674.4	3.7	31.1	-90.45	1,347.7	-2,385.4	2,739.7	2,704.8	34.85	78.619	
1,700.1	1,695.8	1,700.8	1,700.8	3.8	31.6	-90.56	1,347.7	-2,385.4	2,739.7	2,704.3	35.46	77.264	
1,771.6	1,765.7	1,770.7	1,770.7	4.1	33.0	-90.86	1,347.7	-2,385.4	2,739.9	2,702.8	37.10	73.847	
1,800.0	1,793.4	1,798.4	1,798.4	4.2	33.6	-90.99	1,347.7	-2,385.4	2,740.0	2,702.2	37.76	72.573	
1,870.1	1,862.0	1,867.0	1,867.0	4.4	35.0	-91.28	1,347.7	-2,385.4	2,740.3	2,700.9	39.38	69.587	
1,900.0	1,891.3	1,896.3	1,896.3	4.5	35.6	-91.41	1,347.7	-2,385.4	2,740.4	2,700.4	40.07	68.385	
1,968.5	1,958.3	1,963.3	1,963.3	4.8	36.9	-91.70	1,347.7	-2,385.4	2,740.8	2,699.2	41.67	65.771	
2,000.0	1,989.1	1,994.1	1,994.1	4.9	37.5	-91.84	1,347.7	-2,385.4	2,741.0	2,698.6	42.41	64.635	
2,066.9	2,054.5	2,059.5	2,059.5	5.1	38.8	-92.12	1,347.7	-2,385.4	2,741.5	2,697.6	43.98	62.339	
2,100.0	2,086.9	2,091.9	2,091.9	5.3	39.5	-92.26	1,347.7	-2,385.4	2,741.8	2,697.1	44.75	61.264	
2,165.3	2,150.8	2,155.8	2,155.8	5.5	40.8	-92.54	1,347.7	-2,385.4	2,742.4	2,696.1	46.29	59.239	
2,200.0	2,184.7	2,189.7	2,189.7	5.6	41.5	-92.68	1,347.7	-2,385.4	2,742.7	2,695.6	47.11	58.220	
2,263.8	2,247.1	2,252.1	2,252.1	5.9	42.7	-92.96	1,347.7	-2,385.4	2,743.4	2,694.8	48.62	56.429	
2,300.0	2,282.5	2,287.5	2,287.5	6.0	43.4	-93.11	1,347.7	-2,385.4	2,743.8	2,694.3	49.47	55.461	
2,362.2	2,343.3	2,348.3	2,348.3	6.3	44.7	-93.37	1,347.7	-2,385.4	2,744.5	2,693.6	50.95	53.872	
2,400.0	2,380.3	2,385.3	2,385.3	6.5	45.4	-93.53	1,347.7	-2,385.4	2,745.0	2,693.2	51.84	52.951	
2,460.6	2,439.6	2,444.6	2,444.6	6.7	46.6	-93.79	1,347.7	-2,385.4	2,745.9	2,692.6	53.28	51.536	
2,500.0	2,478.1	2,483.1	2,483.1	6.9	47.4	-93.96	1,347.7	-2,385.4	2,746.4	2,692.2	54.21	50.658	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,535.9	2,540.9	2,540.9	7.1	48.5	-94.21	1,347.7	-2,385.4	2,747.3	2,691.7	55.62	49.396	
2,600.0	2,575.9	2,580.9	2,580.9	7.3	49.3	-94.38	1,347.7	-2,385.4	2,748.0	2,691.4	56.59	48.558	
2,657.5	2,632.2	2,637.2	2,637.2	7.5	50.5	-94.62	1,347.7	-2,385.4	2,748.9	2,691.0	57.96	47.428	
2,700.0	2,673.8	2,678.8	2,678.8	7.7	51.3	-94.80	1,347.7	-2,385.4	2,749.7	2,690.7	58.97	46.627	
2,755.9	2,728.4	2,733.4	2,733.4	7.9	52.4	-95.04	1,347.7	-2,385.4	2,750.7	2,690.4	60.30	45.614	
2,800.0	2,771.6	2,776.6	2,776.6	8.1	53.3	-95.22	1,347.7	-2,385.4	2,751.5	2,690.2	61.35	44.846	
2,854.3	2,824.7	2,829.7	2,829.7	8.3	54.3	-95.45	1,347.7	-2,385.4	2,752.6	2,690.0	62.65	43.936	
2,900.0	2,869.4	2,874.4	2,874.4	8.5	55.2	-95.65	1,347.7	-2,385.4	2,753.5	2,689.8	63.74	43.200	
2,952.7	2,921.0	2,926.0	2,926.0	8.8	56.3	-95.87	1,347.7	-2,385.4	2,754.7	2,689.7	65.00	42.381	
3,000.0	2,967.2	2,972.2	2,972.2	9.0	57.2	-96.07	1,347.7	-2,385.4	2,755.7	2,689.6	66.12	41.675	
3,051.2	3,017.3	3,022.3	3,022.3	9.2	58.2	-96.28	1,347.7	-2,385.4	2,756.9	2,689.5	67.35	40.936	
3,100.0	3,065.0	3,070.0	3,070.0	9.4	59.2	-96.49	1,347.7	-2,385.4	2,758.0	2,689.5	68.51	40.257	
3,149.6	3,113.5	3,118.5	3,118.5	9.6	60.2	-96.70	1,347.7	-2,385.4	2,759.2	2,689.5	69.70	39.590	
3,200.0	3,162.8	3,167.8	3,167.8	9.8	61.1	-96.91	1,347.7	-2,385.4	2,760.5	2,689.6	70.90	38.936	
3,248.0	3,209.8	3,214.8	3,214.8	10.0	62.1	-97.11	1,347.7	-2,385.4	2,761.8	2,689.7	72.05	38.333	
3,300.0	3,260.6	3,265.6	3,265.6	10.2	63.1	-97.33	1,347.7	-2,385.4	2,763.1	2,689.9	73.29	37.703	
3,346.4	3,306.1	3,311.1	3,311.1	10.5	64.0	-97.52	1,347.7	-2,385.4	2,764.4	2,690.0	74.40	37.158	
3,400.0	3,358.5	3,363.5	3,363.5	10.7	65.1	-97.74	1,347.7	-2,385.4	2,765.9	2,690.3	75.67	36.550	
3,444.9	3,402.3	3,407.3	3,407.3	10.9	66.0	-97.93	1,347.7	-2,385.4	2,767.2	2,690.5	76.75	36.057	
3,500.0	3,456.3	3,461.3	3,461.3	11.1	67.0	-98.16	1,347.7	-2,385.4	2,768.9	2,690.8	78.06	35.470	
3,543.3	3,498.6	3,503.6	3,503.6	11.3	67.9	-98.34	1,347.7	-2,385.4	2,770.2	2,691.1	79.10	35.023	
3,600.0	3,554.1	3,559.1	3,559.1	11.5	69.0	-98.58	1,347.7	-2,385.4	2,772.0	2,691.5	80.45	34.455	
3,641.7	3,594.9	3,599.9	3,599.9	11.7	69.8	-98.75	1,347.7	-2,385.4	2,773.3	2,691.9	81.45	34.050	
3,700.0	3,651.9	3,656.9	3,656.9	12.0	71.0	-98.99	1,347.7	-2,385.4	2,775.2	2,692.4	82.84	33.501	
3,740.1	3,691.2	3,696.2	3,696.2	12.2	71.8	-99.16	1,347.7	-2,385.4	2,776.6	2,692.8	83.80	33.134	
3,800.0	3,749.7	3,754.7	3,754.7	12.4	72.9	-99.41	1,347.7	-2,385.4	2,778.6	2,693.4	85.23	32.603	
3,838.6	3,787.4	3,792.4	3,792.4	12.6	73.7	-99.57	1,347.7	-2,385.4	2,780.0	2,693.8	86.15	32.270	
3,900.0	3,847.5	3,852.5	3,852.5	12.9	74.9	-99.82	1,347.7	-2,385.4	2,782.2	2,694.5	87.61	31.755	
3,937.0	3,883.7	3,888.7	3,888.7	13.0	75.6	-99.97	1,347.7	-2,385.4	2,783.5	2,695.0	88.50	31.454	
4,000.0	3,945.3	3,950.3	3,950.3	13.3	76.9	-100.23	1,347.7	-2,385.4	2,785.9	2,695.9	90.00	30.954	
4,035.4	3,980.0	3,985.0	3,985.0	13.5	77.6	-100.38	1,347.7	-2,385.4	2,787.2	2,696.4	90.84	30.681	
4,060.0	4,004.0	4,009.0	4,009.0	13.6	78.1	-100.48	1,347.7	-2,385.4	2,788.1	2,696.7	91.43	30.495	
4,100.0	4,043.2	4,048.2	4,048.2	13.7	78.8	-100.67	1,347.7	-2,385.4	2,789.7	2,697.3	92.37	30.201	
4,133.8	4,076.5	4,081.5	4,081.5	13.8	79.5	-100.82	1,347.7	-2,385.4	2,790.9	2,697.7	93.15	29.962	
4,200.0	4,141.6	4,146.6	4,146.6	14.0	80.8	-101.09	1,347.7	-2,385.4	2,793.1	2,698.4	94.67	29.504	
4,232.3	4,173.5	4,178.5	4,178.5	14.1	81.5	-101.21	1,347.7	-2,385.4	2,794.0	2,698.6	95.40	29.288	
4,300.0	4,240.6	4,245.6	4,245.6	14.3	82.8	-101.43	1,347.7	-2,385.4	2,795.9	2,698.9	96.94	28.842	
4,330.7	4,271.1	4,276.1	4,276.1	14.4	83.4	-101.52	1,347.7	-2,385.4	2,796.6	2,699.0	97.63	28.646	
4,400.0	4,340.0	4,345.0	4,345.0	14.5	84.8	-101.69	1,347.7	-2,385.4	2,798.0	2,698.9	99.18	28.211	
4,429.1	4,369.0	4,374.0	4,374.0	14.6	85.4	-101.75	1,347.7	-2,385.4	2,798.5	2,698.7	99.83	28.034	
4,500.0	4,439.7	4,444.7	4,444.7	14.8	86.8	-101.86	1,347.7	-2,385.4	2,799.5	2,698.1	101.39	27.610	
4,527.5	4,467.2	4,472.2	4,472.2	14.8	87.4	-101.90	1,347.7	-2,385.4	2,799.8	2,697.8	101.99	27.451	
4,600.0	4,539.7	4,544.7	4,544.7	14.9	88.8	-101.95	1,347.7	-2,385.4	2,800.3	2,696.8	103.57	27.038	
4,626.0	4,565.6	4,570.6	4,570.6	15.0	89.4	-101.96	1,347.7	-2,385.4	2,800.4	2,696.3	104.13	26.894	
4,660.2	4,599.8	4,604.8	4,604.8	15.0	90.0	-73.24	1,347.7	-2,385.4	2,800.5	2,699.4	101.05	27.714	
4,700.0	4,639.6	4,644.6	4,644.6	15.0	90.8	-73.24	1,347.7	-2,385.4	2,800.5	2,698.5	101.92	27.477	
4,724.4	4,664.0	4,669.0	4,669.0	15.1	91.3	-73.24	1,347.7	-2,385.4	2,800.5	2,698.0	102.46	27.332	
4,800.0	4,739.6	4,744.6	4,744.6	15.2	92.9	-73.24	1,347.7	-2,385.4	2,800.5	2,696.3	104.13	26.894	
4,822.8	4,762.5	4,767.5	4,767.5	15.2	93.3	-73.24	1,347.7	-2,385.4	2,800.5	2,695.8	104.64	26.764	
4,900.0	4,839.6	4,844.6	4,844.6	15.3	94.9	-73.24	1,347.7	-2,385.4	2,800.5	2,694.1	106.34	26.334	
4,921.2	4,860.9	4,865.9	4,865.9	15.4	95.3	-73.24	1,347.7	-2,385.4	2,800.5	2,693.7	106.81	26.218	
5,000.0	4,939.6	4,944.6	4,944.6	15.5	96.9	-73.24	1,347.7	-2,385.4	2,800.5	2,691.9	108.55	25.798	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	4,964.3	4,964.3	15.5	97.3	-73.24	1,347.7	-2,385.4	2,800.5	2,691.5	108.99	25.695	
5,100.0	5,039.6	5,044.6	5,044.6	15.6	98.9	-73.24	1,347.7	-2,385.4	2,800.5	2,689.7	110.77	25.282	
5,118.1	5,057.7	5,062.7	5,062.7	15.7	99.3	-73.24	1,347.7	-2,385.4	2,800.5	2,689.3	111.17	25.191	
5,200.0	5,139.6	5,144.6	5,144.6	15.8	100.9	-73.24	1,347.7	-2,385.4	2,800.5	2,687.5	112.98	24.787	
5,216.5	5,156.2	5,161.2	5,161.2	15.8	101.2	-73.24	1,347.7	-2,385.4	2,800.5	2,687.1	113.35	24.707	
5,300.0	5,239.6	5,244.6	5,244.6	15.9	102.9	-73.24	1,347.7	-2,385.4	2,800.5	2,685.3	115.20	24.311	
5,314.9	5,254.6	5,259.6	5,259.6	16.0	103.2	-73.24	1,347.7	-2,385.4	2,800.5	2,684.9	115.53	24.241	
5,400.0	5,339.6	5,344.6	5,344.6	16.1	104.9	-73.24	1,347.7	-2,385.4	2,800.5	2,683.1	117.41	23.852	
5,413.4	5,353.0	5,358.0	5,358.0	16.1	105.2	-73.24	1,347.7	-2,385.4	2,800.5	2,682.8	117.71	23.792	
5,500.0	5,439.6	5,444.6	5,444.6	16.3	106.9	-73.24	1,347.7	-2,385.4	2,800.5	2,680.8	119.63	23.410	
5,511.8	5,451.4	5,456.4	5,456.4	16.3	107.2	-73.24	1,347.7	-2,385.4	2,800.5	2,680.6	119.89	23.359	
5,600.0	5,539.6	5,544.6	5,544.6	16.4	108.9	-73.24	1,347.7	-2,385.4	2,800.5	2,678.6	121.84	22.984	
5,610.2	5,549.9	5,554.9	5,554.9	16.4	109.1	-73.24	1,347.7	-2,385.4	2,800.5	2,678.4	122.07	22.942	
5,700.0	5,639.6	5,644.6	5,644.6	16.6	111.0	-73.24	1,347.7	-2,385.4	2,800.5	2,676.4	124.06	22.574	
5,708.6	5,648.3	5,653.3	5,653.3	16.6	111.1	-73.24	1,347.7	-2,385.4	2,800.5	2,676.2	124.25	22.539	
5,800.0	5,739.6	5,744.6	5,744.6	16.7	113.0	-73.24	1,347.7	-2,385.4	2,800.5	2,674.2	126.28	22.177	
5,807.1	5,746.7	5,751.7	5,751.7	16.8	113.1	-73.24	1,347.7	-2,385.4	2,800.5	2,674.0	126.43	22.150	
5,900.0	5,839.6	5,844.6	5,844.6	16.9	115.0	-73.24	1,347.7	-2,385.4	2,800.5	2,672.0	128.50	21.794	
5,905.5	5,845.1	5,850.1	5,850.1	16.9	115.1	-73.24	1,347.7	-2,385.4	2,800.5	2,671.8	128.62	21.774	
6,000.0	5,939.6	5,944.6	5,944.6	17.1	117.0	-73.24	1,347.7	-2,385.4	2,800.5	2,669.8	130.71	21.424	
6,003.9	5,943.6	5,948.6	5,948.6	17.1	117.1	-73.24	1,347.7	-2,385.4	2,800.5	2,669.7	130.80	21.410	
6,059.2	5,998.8	6,003.8	6,003.8	17.2	118.2	-73.24	1,347.7	-2,385.4	2,800.5	2,668.4	132.03	21.211	
6,100.0	6,039.6	6,044.6	6,044.6	17.2	119.0	16.79	1,347.7	-2,385.4	2,799.4	2,663.5	135.86	20.605	
6,102.3	6,042.0	6,047.0	6,047.0	17.2	119.0	16.80	1,347.7	-2,385.4	2,799.2	2,663.3	135.88	20.600	
6,150.0	6,089.4	6,094.4	6,094.4	17.3	120.0	16.92	1,347.7	-2,385.4	2,795.0	2,658.8	136.12	20.533	
6,200.0	6,138.7	6,143.7	6,143.7	17.3	121.0	17.15	1,347.7	-2,385.4	2,787.3	2,651.5	135.77	20.530	
6,200.8	6,139.5	6,144.5	6,144.5	17.3	121.0	17.16	1,347.7	-2,385.4	2,787.1	2,651.3	135.76	20.530	
6,250.0	6,187.4	6,192.4	6,192.4	17.3	122.0	17.49	1,347.7	-2,385.4	2,776.3	2,641.5	134.80	20.596	
6,299.2	6,234.4	6,239.4	6,239.4	17.4	122.9	17.94	1,347.7	-2,385.4	2,762.3	2,629.1	133.25	20.730	
6,300.0	6,235.1	6,240.1	6,240.1	17.4	122.9	17.94	1,347.7	-2,385.4	2,762.1	2,628.9	133.22	20.733	
6,350.0	6,281.7	6,286.7	6,286.7	17.4	123.9	18.52	1,347.7	-2,385.4	2,744.7	2,613.7	131.07	20.941	
6,397.6	6,324.8	6,329.8	6,329.8	17.3	124.7	19.21	1,347.7	-2,385.4	2,725.4	2,596.9	128.52	21.205	
6,400.0	6,326.9	6,331.9	6,331.9	17.3	124.8	19.25	1,347.7	-2,385.4	2,724.4	2,596.0	128.38	21.220	
6,450.0	6,370.5	6,375.5	6,375.5	17.3	125.7	20.13	1,347.7	-2,385.4	2,701.0	2,575.8	125.23	21.568	
6,496.0	6,409.1	6,414.1	6,414.1	17.3	126.4	21.11	1,347.7	-2,385.4	2,677.0	2,555.0	121.99	21.944	
6,500.0	6,412.3	6,417.3	6,417.3	17.3	126.5	21.20	1,347.7	-2,385.4	2,674.9	2,553.2	121.70	21.978	
6,550.0	6,452.1	6,457.1	6,457.1	17.3	127.3	22.49	1,347.7	-2,385.4	2,646.0	2,528.1	117.94	22.435	
6,594.5	6,485.6	6,490.6	6,490.6	17.3	128.0	23.85	1,347.7	-2,385.4	2,618.2	2,503.7	114.56	22.855	
6,600.0	6,489.7	6,494.7	6,494.7	17.3	128.0	24.03	1,347.7	-2,385.4	2,614.6	2,500.5	114.14	22.907	
6,650.0	6,524.9	6,529.9	6,529.9	17.2	128.8	25.89	1,347.7	-2,385.4	2,580.9	2,470.3	110.56	23.343	
6,692.9	6,553.0	6,558.0	6,558.0	17.2	129.3	27.79	1,347.7	-2,385.4	2,550.2	2,442.2	107.94	23.626	
6,700.0	6,557.5	6,562.5	6,562.5	17.2	129.4	28.14	1,347.7	-2,385.4	2,544.9	2,437.4	107.57	23.659	
6,750.0	6,587.4	6,592.4	6,592.4	17.2	130.0	30.84	1,347.7	-2,385.4	2,507.0	2,401.4	105.62	23.736	
6,791.3	6,609.9	6,614.9	6,614.9	17.2	130.5	33.51	1,347.7	-2,385.4	2,474.2	2,369.0	105.19	23.522	
6,800.0	6,614.4	6,619.4	6,619.4	17.2	130.6	34.13	1,347.7	-2,385.4	2,467.2	2,361.9	105.27	23.437	
6,850.0	6,638.4	6,643.4	6,643.4	17.2	131.0	38.12	1,347.7	-2,385.4	2,425.8	2,318.7	107.09	22.653	
6,889.7	6,655.3	6,660.3	6,660.3	17.4	131.4	41.91	1,347.7	-2,385.4	2,391.9	2,281.6	110.38	21.670	
6,900.0	6,659.4	6,664.4	6,664.4	17.5	131.5	42.98	1,347.7	-2,385.4	2,383.1	2,271.6	111.50	21.372	
6,950.0	6,677.1	6,682.1	6,682.1	18.0	131.8	48.88	1,347.7	-2,385.4	2,339.1	2,220.5	118.59	19.725	
6,988.2	6,688.4	6,693.4	6,693.4	18.5	132.0	54.15	1,347.7	-2,385.4	2,304.9	2,179.4	125.50	18.366	
7,000.0	6,691.5	6,696.5	6,696.5	18.7	132.1	55.93	1,347.7	-2,385.4	2,294.3	2,166.4	127.82	17.949	
7,050.0	6,702.5	6,707.5	6,707.5	19.5	132.3	64.17	1,347.7	-2,385.4	2,248.7	2,110.8	137.90	16.307	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,708.4	6,713.4	6,713.4	20.1	132.4	70.87	1,347.7	-2,385.4	2,215.0	2,070.3	144.70	15.307	
7,100.0	6,710.1	6,715.1	6,715.1	20.4	132.5	73.43	1,347.7	-2,385.4	2,202.6	2,055.8	146.87	14.997	
7,150.0	6,714.2	6,719.2	6,719.2	21.3	132.6	83.27	1,347.7	-2,385.4	2,156.4	2,003.7	152.70	14.122	
7,185.0	6,715.0	6,720.0	6,720.0	21.9	132.6	90.17	1,347.7	-2,385.4	2,123.9	1,969.7	154.21	13.773	
7,185.6	6,715.0	6,720.0	6,720.0	21.9	132.6	90.27	1,347.7	-2,385.4	2,123.5	1,969.2	154.22	13.769	
7,200.0	6,715.0	6,720.0	6,720.0	22.2	132.6	90.27	1,347.7	-2,385.4	2,110.1	1,955.6	154.49	13.658	
7,283.4	6,714.8	6,719.8	6,719.8	23.9	132.6	90.26	1,347.7	-2,385.4	2,033.3	1,877.1	156.17	13.020	
7,300.0	6,714.8	6,719.8	6,719.8	24.2	132.6	90.26	1,347.7	-2,385.4	2,018.1	1,861.6	156.50	12.895	
7,381.9	6,714.6	6,719.6	6,719.6	26.0	132.6	90.24	1,347.7	-2,385.4	1,943.3	1,785.1	158.26	12.279	
7,400.0	6,714.6	6,719.6	6,719.6	26.4	132.6	90.24	1,347.7	-2,385.4	1,926.8	1,768.2	158.65	12.145	
7,480.3	6,714.4	6,719.4	6,719.4	28.2	132.6	90.23	1,347.7	-2,385.4	1,854.2	1,693.8	160.47	11.555	
7,500.0	6,714.4	6,719.4	6,719.4	28.7	132.6	90.23	1,347.7	-2,385.4	1,836.5	1,675.6	160.91	11.413	
7,578.7	6,714.2	6,719.2	6,719.2	30.5	132.6	90.22	1,347.7	-2,385.4	1,766.2	1,603.4	162.77	10.851	
7,600.0	6,714.2	6,719.2	6,719.2	31.0	132.6	90.21	1,347.7	-2,385.4	1,747.3	1,584.0	163.27	10.702	
7,677.1	6,714.0	6,719.0	6,719.0	32.9	132.6	90.20	1,347.7	-2,385.4	1,679.2	1,514.1	165.14	10.169	
7,700.0	6,714.0	6,719.0	6,719.0	33.4	132.6	90.20	1,347.7	-2,385.4	1,659.2	1,493.5	165.69	10.014	
7,775.6	6,713.9	6,718.9	6,718.9	35.3	132.6	90.19	1,347.7	-2,385.4	1,593.6	1,426.1	167.56	9.511	
7,800.0	6,713.8	6,718.8	6,718.8	35.9	132.6	90.19	1,347.7	-2,385.4	1,572.6	1,404.5	168.17	9.351	
7,874.0	6,713.7	6,718.7	6,718.7	37.8	132.6	90.18	1,347.7	-2,385.4	1,509.6	1,339.6	170.04	8.878	
7,900.0	6,713.6	6,718.6	6,718.6	38.4	132.6	90.17	1,347.7	-2,385.4	1,487.7	1,317.0	170.70	8.715	
7,972.4	6,713.5	6,718.5	6,718.5	40.3	132.5	90.16	1,347.7	-2,385.4	1,427.4	1,254.9	172.55	8.272	
8,000.0	6,713.4	6,718.4	6,718.4	41.0	132.5	90.16	1,347.7	-2,385.4	1,404.8	1,231.5	173.26	8.108	
8,070.8	6,713.3	6,718.3	6,718.3	42.8	132.5	90.15	1,347.7	-2,385.4	1,347.4	1,172.3	175.10	7.695	
8,100.0	6,713.2	6,718.2	6,718.2	43.6	132.5	90.14	1,347.7	-2,385.4	1,324.2	1,148.3	175.85	7.530	
8,169.3	6,713.1	6,718.1	6,718.1	45.4	132.5	90.13	1,347.7	-2,385.4	1,270.0	1,092.3	177.67	7.148	
8,200.0	6,713.0	6,718.0	6,718.0	46.2	132.5	90.13	1,347.7	-2,385.4	1,246.4	1,068.0	178.47	6.984	
8,267.7	6,712.9	6,717.9	6,717.9	48.0	132.5	90.12	1,347.7	-2,385.4	1,195.7	1,015.4	180.26	6.633	
8,300.0	6,712.8	6,717.8	6,717.8	48.8	132.5	90.12	1,347.7	-2,385.4	1,172.0	990.9	181.11	6.471	
8,366.1	6,712.7	6,717.7	6,717.7	50.6	132.5	90.11	1,347.7	-2,385.4	1,125.0	942.2	182.87	6.152	
8,400.0	6,712.6	6,717.6	6,717.6	51.5	132.5	90.10	1,347.7	-2,385.4	1,101.7	918.0	183.77	5.995	
8,464.5	6,712.5	6,717.5	6,717.5	53.2	132.5	90.09	1,347.7	-2,385.4	1,058.9	873.4	185.49	5.708	
8,500.0	6,712.4	6,717.4	6,717.4	54.1	132.5	90.09	1,347.7	-2,385.4	1,036.3	849.8	186.44	5.558	
8,563.0	6,712.3	6,717.3	6,717.3	55.8	132.5	90.08	1,347.7	-2,385.4	998.0	809.9	188.13	5.305	
8,600.0	6,712.3	6,717.3	6,717.3	56.8	132.5	90.08	1,347.7	-2,385.4	976.7	787.6	189.13	5.164	
8,661.4	6,712.1	6,717.1	6,717.1	58.5	132.5	90.07	1,347.7	-2,385.4	943.6	752.8	190.78	4.946	
8,700.0	6,712.1	6,717.1	6,717.1	59.5	132.5	90.06	1,347.7	-2,385.4	924.2	732.4	191.82	4.818	
8,759.8	6,711.9	6,716.9	6,716.9	61.1	132.5	90.05	1,347.7	-2,385.4	896.6	703.2	193.44	4.635	
8,800.0	6,711.9	6,716.9	6,716.9	62.2	132.5	90.05	1,347.7	-2,385.4	879.9	685.4	194.53	4.523	
8,858.2	6,711.8	6,716.8	6,716.8	63.8	132.5	90.04	1,347.7	-2,385.4	858.4	662.3	196.11	4.377	
8,900.0	6,711.7	6,716.7	6,716.7	64.9	132.5	90.03	1,347.7	-2,385.4	845.2	647.9	197.25	4.285	
8,956.7	6,711.6	6,716.6	6,716.6	66.5	132.5	90.03	1,347.7	-2,385.4	830.2	631.4	198.79	4.176	
9,000.0	6,711.5	6,716.5	6,716.5	67.6	132.5	90.02	1,347.7	-2,385.4	821.2	621.3	199.97	4.107	
9,055.1	6,711.4	6,716.4	6,716.4	69.1	132.5	90.01	1,347.7	-2,385.4	813.0	611.5	201.47	4.035	
9,100.0	6,711.3	6,716.3	6,716.3	70.4	132.5	90.01	1,347.7	-2,385.4	809.0	606.3	202.70	3.991	
9,149.5	6,711.2	6,716.2	6,716.2	71.7	132.5	90.00	1,347.7	-2,385.4	807.5	603.5	204.05	3.957 CC	
9,153.5	6,711.2	6,716.2	6,716.2	71.8	132.5	90.00	1,347.7	-2,385.4	807.5	603.4	204.16	3.955 ES	
9,200.0	6,711.1	6,716.1	6,716.1	73.1	132.5	89.99	1,347.7	-2,385.4	809.1	603.6	205.43	3.938	
9,251.9	6,711.0	6,716.0	6,716.0	74.5	132.5	89.99	1,347.7	-2,385.4	814.0	607.1	206.86	3.935 SF	
9,300.0	6,710.9	6,715.9	6,715.9	75.8	132.5	89.98	1,347.7	-2,385.4	821.4	613.2	208.18	3.946	
9,350.4	6,710.8	6,715.8	6,715.8	77.2	132.5	89.97	1,347.7	-2,385.4	832.1	622.6	209.56	3.971	
9,400.0	6,710.7	6,715.7	6,715.7	78.6	132.5	89.97	1,347.7	-2,385.4	845.5	634.6	210.92	4.008	
9,448.8	6,710.6	6,715.6	6,715.6	79.9	132.5	89.96	1,347.7	-2,385.4	861.2	648.9	212.26	4.057	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,710.5	6,715.5	6,715.5	81.3	132.5	89.95	1,347.7	-2,385.4	880.3	666.6	213.67	4.120	
9,547.2	6,710.4	6,715.4	6,715.4	82.6	132.5	89.95	1,347.7	-2,385.4	900.1	685.2	214.97	4.187	
9,600.0	6,710.3	6,715.3	6,715.3	84.1	132.5	89.94	1,347.7	-2,385.4	924.7	708.3	216.42	4.273	
9,645.6	6,710.2	6,715.2	6,715.2	85.3	132.5	89.93	1,347.7	-2,385.4	947.8	730.1	217.68	4.354	
9,700.0	6,710.1	6,715.1	6,715.1	86.8	132.5	89.93	1,347.7	-2,385.4	977.3	758.1	219.18	4.459	
9,744.1	6,710.0	6,715.0	6,715.0	88.1	132.5	89.92	1,347.7	-2,385.4	1,002.8	782.4	220.40	4.550	
9,800.0	6,709.9	6,714.9	6,714.9	89.6	132.5	89.91	1,347.7	-2,385.4	1,036.9	815.0	221.94	4.672	
9,842.5	6,709.9	6,714.9	6,714.9	90.8	132.5	89.91	1,347.7	-2,385.4	1,064.1	841.0	223.12	4.769	
9,900.0	6,709.7	6,714.7	6,714.7	92.4	132.5	89.90	1,347.7	-2,385.4	1,102.4	877.7	224.70	4.906	
9,940.9	6,709.7	6,714.7	6,714.7	93.5	132.5	89.89	1,347.7	-2,385.4	1,130.7	904.8	225.84	5.007	
10,000.0	6,709.6	6,714.6	6,714.6	95.1	132.5	89.88	1,347.7	-2,385.4	1,172.8	945.3	227.47	5.156	
10,039.3	6,709.5	6,714.5	6,714.5	96.2	132.5	89.88	1,347.7	-2,385.4	1,201.6	973.1	228.56	5.257	
10,100.0	6,709.4	6,714.4	6,714.4	97.9	132.5	89.87	1,347.7	-2,385.4	1,247.2	1,017.0	230.24	5.417	
10,137.8	6,709.3	6,714.3	6,714.3	98.9	132.5	89.87	1,347.7	-2,385.4	1,276.2	1,045.0	231.28	5.518	
10,200.0	6,709.2	6,714.2	6,714.2	100.7	132.5	89.86	1,347.7	-2,385.4	1,325.0	1,092.0	233.01	5.687	
10,236.2	6,709.1	6,714.1	6,714.1	101.7	132.5	89.85	1,347.7	-2,385.4	1,353.9	1,119.9	234.01	5.786	
10,300.0	6,709.0	6,714.0	6,714.0	103.4	132.5	89.84	1,347.7	-2,385.4	1,405.6	1,169.8	235.78	5.962	
10,334.6	6,708.9	6,713.9	6,713.9	104.4	132.5	89.84	1,347.7	-2,385.4	1,434.1	1,197.4	236.74	6.058	
10,400.0	6,708.8	6,713.8	6,713.8	106.2	132.5	89.83	1,347.7	-2,385.4	1,488.6	1,250.0	238.55	6.240	
10,433.0	6,708.7	6,713.7	6,713.7	107.1	132.5	89.83	1,347.7	-2,385.4	1,516.4	1,277.0	239.47	6.332	
10,500.0	6,708.6	6,713.6	6,713.6	109.0	132.5	89.82	1,347.7	-2,385.4	1,573.5	1,332.2	241.33	6.520	
10,531.5	6,708.5	6,713.5	6,713.5	109.9	132.4	89.81	1,347.7	-2,385.4	1,600.6	1,358.4	242.20	6.609	
10,600.0	6,708.4	6,713.4	6,713.4	111.8	132.4	89.80	1,347.7	-2,385.4	1,660.1	1,416.0	244.11	6.801	
10,629.9	6,708.4	6,713.4	6,713.4	112.6	132.4	89.80	1,347.7	-2,385.4	1,686.3	1,441.4	244.94	6.885	
10,700.0	6,708.2	6,713.2	6,713.2	114.6	132.4	89.79	1,347.7	-2,385.4	1,748.2	1,501.3	246.89	7.081	
10,728.3	6,708.2	6,713.2	6,713.2	115.3	132.4	89.79	1,347.7	-2,385.4	1,773.4	1,525.7	247.67	7.160	
10,800.0	6,708.0	6,713.0	6,713.0	117.3	132.4	89.78	1,347.7	-2,385.4	1,837.5	1,587.8	249.67	7.360	
10,826.7	6,708.0	6,713.0	6,713.0	118.1	132.4	89.77	1,347.7	-2,385.4	1,861.5	1,611.1	250.41	7.434	
10,900.0	6,707.8	6,712.8	6,712.8	120.1	132.4	89.76	1,347.7	-2,385.4	1,927.8	1,675.3	252.45	7.636	
10,925.2	6,707.8	6,712.8	6,712.8	120.8	132.4	89.76	1,347.7	-2,385.4	1,950.7	1,697.5	253.15	7.706	
11,000.0	6,707.6	6,712.6	6,712.6	122.9	132.4	89.75	1,347.7	-2,385.4	2,019.0	1,763.8	255.23	7.911	
11,023.6	6,707.6	6,712.6	6,712.6	123.6	132.4	89.75	1,347.7	-2,385.4	2,040.7	1,784.8	255.89	7.975	
11,100.0	6,707.5	6,712.5	6,712.5	125.7	132.4	89.74	1,347.7	-2,385.4	2,111.1	1,853.0	258.01	8.182	
11,122.0	6,707.4	6,712.4	6,712.4	126.3	132.4	89.73	1,347.7	-2,385.4	2,131.4	1,872.8	258.63	8.241	
11,200.0	6,707.3	6,712.3	6,712.3	128.5	132.4	89.72	1,347.7	-2,385.4	2,203.8	1,943.0	260.80	8.450	
11,220.4	6,707.2	6,712.2	6,712.2	129.0	132.4	89.72	1,347.7	-2,385.4	2,222.8	1,961.5	261.37	8.505	
11,300.0	6,707.1	6,712.1	6,712.1	131.3	132.4	89.71	1,347.7	-2,385.4	2,297.1	2,033.5	263.58	8.715	
11,318.9	6,707.0	6,712.0	6,712.0	131.8	132.4	89.71	1,347.7	-2,385.4	2,314.8	2,050.7	264.11	8.765	
11,400.0	6,706.9	6,711.9	6,711.9	134.0	132.4	89.70	1,347.7	-2,385.4	2,391.0	2,124.6	266.37	8.976	
11,417.3	6,706.9	6,711.9	6,711.9	134.5	132.4	89.69	1,347.7	-2,385.4	2,407.3	2,140.4	266.85	9.021	
11,500.0	6,706.7	6,711.7	6,711.7	136.8	132.4	89.68	1,347.7	-2,385.4	2,485.4	2,216.2	269.16	9.234	
11,515.7	6,706.7	6,711.7	6,711.7	137.3	132.4	89.68	1,347.7	-2,385.4	2,500.2	2,230.6	269.60	9.274	
11,600.0	6,706.5	6,711.5	6,711.5	139.6	132.4	89.67	1,347.7	-2,385.4	2,580.1	2,308.2	271.94	9.488	
11,614.1	6,706.5	6,711.5	6,711.5	140.0	132.4	89.67	1,347.7	-2,385.4	2,593.6	2,321.2	272.34	9.523	
11,700.0	6,706.3	6,711.3	6,711.3	142.4	132.4	89.66	1,347.7	-2,385.4	2,675.3	2,400.6	274.73	9.738	
11,712.6	6,706.3	6,711.3	6,711.3	142.8	132.4	89.66	1,347.7	-2,385.4	2,687.3	2,412.2	275.08	9.769	
11,800.0	6,706.1	6,711.1	6,711.1	145.2	132.4	89.64	1,347.7	-2,385.4	2,770.8	2,493.3	277.52	9.984	
11,811.0	6,706.1	6,711.1	6,711.1	145.5	132.4	89.64	1,347.7	-2,385.4	2,781.3	2,503.5	277.83	10.011	
11,900.0	6,705.9	6,710.9	6,710.9	148.0	132.4	89.63	1,347.7	-2,385.4	2,866.6	2,586.3	280.31	10.226	
11,909.4	6,705.9	6,710.9	6,710.9	148.3	132.4	89.63	1,347.7	-2,385.4	2,875.6	2,595.1	280.58	10.249	
12,000.0	6,705.8	6,710.8	6,710.8	150.8	132.4	89.62	1,347.7	-2,385.4	2,962.7	2,679.6	283.10	10.465	
12,007.8	6,705.7	6,710.7	6,710.7	151.0	132.4	89.62	1,347.7	-2,385.4	2,970.2	2,686.9	283.32	10.484	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,100.0	6,705.6	6,710.6	6,710.6	153.6	132.4	89.61	1,347.7	-2,385.4	3,059.0	2,773.1	285.90	10.700	
12,106.3	6,705.6	6,710.6	6,710.6	153.8	132.4	89.60	1,347.7	-2,385.4	3,065.1	2,779.0	286.07	10.714	
12,200.0	6,705.4	6,710.4	6,710.4	156.4	132.4	89.59	1,347.7	-2,385.4	3,155.6	2,866.9	288.69	10.931	
12,204.7	6,705.4	6,710.4	6,710.4	156.5	132.4	89.59	1,347.7	-2,385.4	3,160.1	2,871.3	288.82	10.942	
12,300.0	6,705.2	6,710.2	6,710.2	159.2	132.4	89.58	1,347.7	-2,385.4	3,252.4	2,960.9	291.48	11.158	
12,303.1	6,705.2	6,710.2	6,710.2	159.3	132.4	89.58	1,347.7	-2,385.4	3,255.4	2,963.8	291.57	11.165	
12,400.0	6,705.0	6,710.0	6,710.0	162.0	132.4	89.57	1,347.7	-2,385.4	3,349.3	3,055.0	294.27	11.382	
12,401.5	6,705.0	6,710.0	6,710.0	162.0	132.4	89.57	1,347.7	-2,385.4	3,350.8	3,056.5	294.32	11.385	
12,500.0	6,704.8	6,709.8	6,709.8	164.8	132.4	89.55	1,347.7	-2,385.4	3,446.4	3,149.4	297.07	11.602	
12,598.4	6,704.6	6,709.6	6,709.6	167.5	132.4	89.54	1,347.7	-2,385.4	3,542.2	3,242.4	299.81	11.815	
12,600.0	6,704.6	6,709.6	6,709.6	167.6	132.4	89.54	1,347.7	-2,385.4	3,543.7	3,243.9	299.86	11.818	
12,696.8	6,704.4	6,709.4	6,709.4	170.3	132.4	89.53	1,347.7	-2,385.4	3,638.1	3,335.5	302.56	12.024	
12,700.0	6,704.4	6,709.4	6,709.4	170.4	132.4	89.53	1,347.7	-2,385.4	3,641.2	3,338.5	302.65	12.031	
12,795.2	6,704.3	6,709.3	6,709.3	173.0	132.4	89.51	1,347.7	-2,385.4	3,734.1	3,428.8	305.32	12.230	
12,800.0	6,704.2	6,709.2	6,709.2	173.2	132.4	89.51	1,347.7	-2,385.4	3,738.8	3,433.3	305.45	12.240	
12,893.7	6,704.1	6,709.1	6,709.1	175.8	132.4	89.50	1,347.7	-2,385.4	3,830.3	3,522.2	308.07	12.433	
12,900.0	6,704.1	6,709.1	6,709.1	176.0	132.4	89.50	1,347.7	-2,385.4	3,836.5	3,528.2	308.24	12.446	
12,992.1	6,703.9	6,708.9	6,708.9	178.5	132.4	89.49	1,347.7	-2,385.4	3,926.5	3,615.7	310.82	12.633	
13,000.0	6,703.9	6,708.9	6,708.9	178.8	132.4	89.49	1,347.7	-2,385.4	3,934.3	3,623.2	311.04	12.649	
13,090.5	6,703.7	6,708.7	6,708.7	181.3	132.4	89.48	1,347.7	-2,385.4	4,022.9	3,709.3	313.57	12.829	
13,100.0	6,703.7	6,708.7	6,708.7	181.6	132.4	89.48	1,347.7	-2,385.4	4,032.2	3,718.4	313.83	12.848	
13,188.9	6,703.5	6,708.5	6,708.5	184.0	132.3	89.46	1,347.7	-2,385.4	4,119.4	3,803.1	316.32	13.023	
13,200.0	6,703.5	6,708.5	6,708.5	184.4	132.3	89.46	1,347.7	-2,385.4	4,130.2	3,813.6	316.63	13.044	
13,287.4	6,703.3	6,708.3	6,708.3	186.8	132.3	89.45	1,347.7	-2,385.4	4,215.9	3,896.9	319.07	13.213	
13,300.0	6,703.3	6,708.3	6,708.3	187.2	132.3	89.45	1,347.7	-2,385.4	4,228.3	3,908.9	319.43	13.237	
13,385.8	6,703.2	6,708.2	6,708.2	189.6	132.3	89.44	1,347.7	-2,385.4	4,312.6	3,990.8	321.83	13.400	
13,400.0	6,703.1	6,708.1	6,708.1	190.0	132.3	89.44	1,347.7	-2,385.4	4,326.5	4,004.3	322.22	13.427	
13,484.2	6,703.0	6,708.0	6,708.0	192.3	132.3	89.43	1,347.7	-2,385.4	4,409.3	4,084.7	324.58	13.585	
13,500.0	6,702.9	6,707.9	6,707.9	192.8	132.3	89.42	1,347.7	-2,385.4	4,424.8	4,099.8	325.02	13.614	
13,582.6	6,702.8	6,707.8	6,707.8	195.1	132.3	89.41	1,347.7	-2,385.4	4,506.1	4,178.8	327.33	13.766	
13,600.0	6,702.8	6,707.8	6,707.8	195.6	132.3	89.41	1,347.7	-2,385.4	4,523.2	4,195.4	327.82	13.798	
13,681.1	6,702.6	6,707.6	6,707.6	197.8	132.3	89.40	1,347.7	-2,385.4	4,603.0	4,272.9	330.08	13.945	
13,700.0	6,702.6	6,707.6	6,707.6	198.4	132.3	89.40	1,347.7	-2,385.4	4,621.6	4,291.0	330.61	13.979	
13,779.5	6,702.4	6,707.4	6,707.4	200.6	132.3	89.39	1,347.7	-2,385.4	4,699.9	4,367.1	332.84	14.121	
13,800.0	6,702.4	6,707.4	6,707.4	201.2	132.3	89.39	1,347.7	-2,385.4	4,720.1	4,386.7	333.41	14.157	
13,877.9	6,702.2	6,707.2	6,707.2	203.3	132.3	89.37	1,347.7	-2,385.4	4,796.9	4,461.3	335.59	14.294	
13,900.0	6,702.2	6,707.2	6,707.2	204.0	132.3	89.37	1,347.7	-2,385.4	4,818.6	4,482.4	336.21	14.332	
13,976.3	6,702.1	6,707.1	6,707.1	206.1	132.3	89.36	1,347.7	-2,385.4	4,893.9	4,555.6	338.35	14.464	
14,000.0	6,702.0	6,707.0	6,707.0	206.8	132.3	89.36	1,347.7	-2,385.4	4,917.3	4,578.3	339.01	14.505	
14,074.8	6,701.9	6,706.9	6,706.9	208.9	132.3	89.35	1,347.7	-2,385.4	4,991.0	4,649.9	341.10	14.632	
14,100.0	6,701.8	6,706.8	6,706.8	209.6	132.3	89.35	1,347.7	-2,385.4	5,015.9	4,674.1	341.81	14.675	
14,173.2	6,701.7	6,706.7	6,706.7	211.6	132.3	89.34	1,347.7	-2,385.4	5,088.2	4,744.3	343.85	14.798	
14,200.0	6,701.6	6,706.6	6,706.6	212.4	132.3	89.33	1,347.7	-2,385.4	5,114.7	4,770.0	344.60	14.842	
14,271.6	6,701.5	6,706.5	6,706.5	214.4	132.3	89.32	1,347.7	-2,385.4	5,185.4	4,838.8	346.61	14.960	
14,300.0	6,701.4	6,706.4	6,706.4	215.2	132.3	89.32	1,347.7	-2,385.4	5,213.4	4,866.0	347.40	15.007	
14,370.0	6,701.3	6,706.3	6,706.3	217.1	132.3	89.31	1,347.7	-2,385.4	5,282.6	4,933.3	349.36	15.121	
14,400.0	6,701.3	6,706.3	6,706.3	218.0	132.3	89.31	1,347.7	-2,385.4	5,312.2	4,962.0	350.20	15.169	
14,468.5	6,701.1	6,706.1	6,706.1	219.9	132.3	89.30	1,347.7	-2,385.4	5,379.9	5,027.8	352.12	15.279	
14,500.0	6,701.1	6,706.1	6,706.1	220.8	132.3	89.30	1,347.7	-2,385.4	5,411.1	5,058.1	353.00	15.329	
14,566.9	6,701.0	6,706.0	6,706.0	222.6	132.3	89.29	1,347.7	-2,385.4	5,477.3	5,122.4	354.87	15.434	
14,600.0	6,700.9	6,705.9	6,705.9	223.6	132.3	89.28	1,347.7	-2,385.4	5,510.0	5,154.2	355.80	15.486	
14,665.3	6,700.8	6,705.8	6,705.8	225.4	132.3	89.28	1,347.7	-2,385.4	5,574.6	5,217.0	357.63	15.588	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - ABDN VERT OGRADY #3 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,705.7	6,705.7	226.4	132.3	89.27	1,347.7	-2,385.4	5,608.9	5,250.3	358.60	15.641	
14,763.7	6,700.6	6,705.6	6,705.6	228.2	132.3	89.26	1,347.7	-2,385.4	5,672.0	5,311.6	360.38	15.739	
14,800.0	6,700.5	6,705.5	6,705.5	229.2	132.3	89.26	1,347.7	-2,385.4	5,707.9	5,346.5	361.40	15.794	
14,862.2	6,700.4	6,705.4	6,705.4	230.9	132.3	89.25	1,347.7	-2,385.4	5,769.5	5,406.3	363.14	15.888	
14,900.0	6,700.3	6,705.3	6,705.3	232.0	132.3	89.25	1,347.7	-2,385.4	5,806.9	5,442.7	364.20	15.944	
14,960.6	6,700.2	6,705.2	6,705.2	233.7	132.3	89.24	1,347.7	-2,385.4	5,866.9	5,501.0	365.89	16.035	
15,000.0	6,700.2	6,705.2	6,705.2	234.8	132.3	89.23	1,347.7	-2,385.4	5,906.0	5,539.0	367.00	16.093	
15,059.0	6,700.0	6,705.0	6,705.0	236.4	132.3	89.23	1,347.7	-2,385.4	5,964.4	5,595.8	368.65	16.179	
15,082.8	6,700.0	6,705.0	6,705.0	237.1	132.3	89.22	1,347.7	-2,385.4	5,988.0	5,618.7	369.32	16.214	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-82.04	1,263.3	-9,029.6	9,117.6				
98.4	98.4	73.4	73.4	0.1	0.0	-82.04	1,263.3	-9,029.6	9,117.6	9,117.5	0.11	N/A	
100.0	100.0	75.0	75.0	0.1	0.0	-82.04	1,263.3	-9,029.6	9,117.6	9,117.5	0.11	N/A	
196.8	196.8	171.8	171.8	0.3	1.9	-82.04	1,263.3	-9,029.6	9,117.6	9,115.3	2.24	4,074.281	
200.0	200.0	175.0	175.0	0.3	2.0	-82.04	1,263.3	-9,029.6	9,117.6	9,115.3	2.33	3,915.454	
295.3	295.3	270.3	270.3	0.5	4.1	-82.04	1,263.3	-9,029.6	9,117.6	9,112.9	4.65	1,959.649	
300.0	300.0	275.0	275.0	0.5	4.2	-82.04	1,263.3	-9,029.6	9,117.6	9,112.8	4.76	1,915.265	
393.7	393.7	368.7	368.7	0.8	6.1	-82.04	1,263.3	-9,029.6	9,117.6	9,110.7	6.88	1,325.317	
400.0	400.0	375.0	375.0	0.8	6.2	-82.04	1,263.3	-9,029.6	9,117.6	9,110.6	7.02	1,298.512	
492.1	492.1	467.1	467.1	1.0	8.1	-82.04	1,263.3	-9,029.6	9,117.6	9,108.5	9.09	1,002.760	
500.0	500.0	475.0	475.0	1.0	8.3	-82.04	1,263.3	-9,029.6	9,117.6	9,108.3	9.27	983.628	
590.5	590.5	565.5	565.5	1.2	10.1	-82.04	1,263.3	-9,029.6	9,117.6	9,106.3	11.30	806.841	
600.0	600.0	575.0	575.0	1.2	10.3	-82.04	1,263.3	-9,029.6	9,117.6	9,106.1	11.51	791.993	
689.0	689.0	664.0	664.0	1.4	12.1	-82.04	1,263.3	-9,029.6	9,117.6	9,104.1	13.51	675.091	
700.0	700.0	675.0	675.0	1.4	12.3	-82.04	1,263.3	-9,029.6	9,117.6	9,103.8	13.75	662.968	
787.4	787.4	762.4	762.4	1.6	14.1	-82.04	1,263.3	-9,029.6	9,117.6	9,101.9	15.71	580.380	
800.0	800.0	775.0	775.0	1.7	14.3	-82.04	1,263.3	-9,029.6	9,117.6	9,101.6	15.99	570.142	
885.8	885.8	860.8	860.8	1.9	16.0	-82.04	1,263.3	-9,029.6	9,117.6	9,099.7	17.91	508.998	
900.0	900.0	875.0	875.0	1.9	16.3	-82.04	1,263.3	-9,029.6	9,117.6	9,099.4	18.23	500.141	
984.2	984.2	959.2	959.2	2.1	18.0	-82.04	1,263.3	-9,029.6	9,117.6	9,097.5	20.12	453.266	
1,000.0	1,000.0	975.0	975.0	2.1	18.3	-82.04	1,263.3	-9,029.6	9,117.6	9,097.1	20.47	445.461	
1,082.7	1,082.7	1,057.7	1,057.7	2.3	20.0	-82.04	1,263.3	-9,029.6	9,117.6	9,095.3	22.32	408.541	
1,100.0	1,100.0	1,075.0	1,075.0	2.3	20.4	-82.04	1,263.3	-9,029.6	9,117.6	9,094.9	22.71	401.567	
1,181.1	1,181.1	1,156.1	1,156.1	2.5	22.0	-110.76	1,263.3	-9,029.6	9,118.0	9,093.5	24.52	371.923	
1,200.0	1,200.0	1,175.0	1,175.0	2.6	22.4	-110.76	1,263.3	-9,029.6	9,118.2	9,093.3	24.94	365.646	
1,279.5	1,279.4	1,254.4	1,254.4	2.7	24.0	-110.76	1,263.3	-9,029.6	9,119.6	9,092.9	26.71	341.473	
1,300.0	1,299.8	1,274.8	1,274.8	2.8	24.4	-110.76	1,263.3	-9,029.6	9,120.1	9,092.9	27.16	335.775	
1,377.9	1,377.5	1,352.5	1,352.5	3.0	25.9	-110.75	1,263.3	-9,029.6	9,122.4	9,093.5	28.89	315.739	
1,400.0	1,399.5	1,374.5	1,374.5	3.0	26.4	-110.75	1,263.3	-9,029.6	9,123.2	9,093.8	29.38	310.518	
1,476.4	1,475.3	1,450.3	1,450.3	3.2	27.9	-110.74	1,263.3	-9,029.6	9,126.4	9,095.3	31.08	293.681	
1,500.0	1,498.7	1,473.7	1,473.7	3.3	28.4	-110.74	1,263.3	-9,029.6	9,127.5	9,095.9	31.60	288.858	
1,574.8	1,572.6	1,547.6	1,547.6	3.5	29.9	-110.73	1,263.3	-9,029.6	9,131.6	9,098.3	33.26	274.531	
1,600.0	1,597.5	1,572.5	1,572.5	3.5	30.4	-110.73	1,263.3	-9,029.6	9,133.1	9,099.3	33.82	270.043	
1,673.2	1,669.4	1,644.4	1,644.4	3.7	31.8	-110.71	1,263.3	-9,029.6	9,138.0	9,102.5	35.46	257.719	
1,700.1	1,695.8	1,670.8	1,670.8	3.8	32.3	-110.71	1,263.3	-9,029.6	9,140.0	9,103.9	36.06	253.492	
1,771.6	1,765.7	1,740.7	1,740.7	4.1	33.8	-110.79	1,263.3	-9,029.6	9,145.4	9,107.7	37.69	242.676	
1,800.0	1,793.4	1,768.4	1,768.4	4.2	34.3	-110.83	1,263.3	-9,029.6	9,147.5	9,109.2	38.33	238.640	
1,870.1	1,862.0	1,837.0	1,837.0	4.4	35.7	-110.91	1,263.3	-9,029.6	9,152.8	9,112.8	39.94	229.157	
1,900.0	1,891.3	1,866.3	1,866.3	4.5	36.3	-110.95	1,263.3	-9,029.6	9,155.0	9,114.4	40.63	225.335	
1,968.5	1,958.3	1,933.3	1,933.3	4.8	37.6	-111.03	1,263.3	-9,029.6	9,160.2	9,118.0	42.21	217.008	
2,000.0	1,989.1	1,964.1	1,964.1	4.9	38.2	-111.07	1,263.3	-9,029.6	9,162.6	9,119.7	42.94	213.385	
2,066.9	2,054.5	2,029.5	2,029.5	5.1	39.6	-111.15	1,263.3	-9,029.6	9,167.8	9,123.3	44.49	206.049	
2,100.0	2,086.9	2,061.9	2,061.9	5.3	40.2	-111.19	1,263.3	-9,029.6	9,170.3	9,125.0	45.26	202.608	
2,165.3	2,150.8	2,125.8	2,125.8	5.5	41.5	-111.26	1,263.3	-9,029.6	9,175.3	9,128.5	46.78	196.119	
2,200.0	2,184.7	2,159.7	2,159.7	5.6	42.2	-111.30	1,263.3	-9,029.6	9,178.0	9,130.4	47.59	192.847	
2,263.8	2,247.1	2,222.1	2,222.1	5.9	43.4	-111.38	1,263.3	-9,029.6	9,182.9	9,133.8	49.08	187.090	
2,300.0	2,282.5	2,257.5	2,257.5	6.0	44.1	-111.42	1,263.3	-9,029.6	9,185.7	9,135.8	49.93	183.973	
2,362.2	2,343.3	2,318.3	2,318.3	6.3	45.4	-111.50	1,263.3	-9,029.6	9,190.5	9,139.1	51.39	178.849	
2,400.0	2,380.3	2,355.3	2,355.3	6.5	46.1	-111.54	1,263.3	-9,029.6	9,193.5	9,141.2	52.27	175.875	
2,460.6	2,439.6	2,414.6	2,414.6	6.7	47.3	-111.61	1,263.3	-9,029.6	9,198.2	9,144.5	53.70	171.301	
2,500.0	2,478.1	2,453.1	2,453.1	6.9	48.1	-111.66	1,263.3	-9,029.6	9,201.3	9,146.6	54.62	168.458	
2,559.0	2,535.9	2,510.9	2,510.9	7.1	49.2	-111.73	1,263.3	-9,029.6	9,205.9	9,149.9	56.01	164.364	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													SW NW SEC. 10 T5N R64W 6th P.M. - ABDN VERT PLUMB #2 - Wellbore #1 - Design #1		Offset Site Error:		0.0 usft
Survey Program: 0-INC													Offset Well Error:		0.0 usft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
2,600.0	2,575.9	2,550.9	2,550.9	7.3	50.0	-111.78	1,263.3	-9,029.6	9,209.1	9,152.1	56.97	161.642					
2,657.5	2,632.2	2,607.2	2,607.2	7.5	51.2	-111.85	1,263.3	-9,029.6	9,213.6	9,155.3	58.33	157.970					
2,700.0	2,673.8	2,648.8	2,648.8	7.7	52.0	-111.90	1,263.3	-9,029.6	9,217.0	9,157.7	59.33	155.360					
2,755.9	2,728.4	2,703.4	2,703.4	7.9	53.1	-111.96	1,263.3	-9,029.6	9,221.4	9,160.8	60.64	152.058					
2,800.0	2,771.6	2,746.6	2,746.6	8.1	54.0	-112.01	1,263.3	-9,029.6	9,224.9	9,163.2	61.68	149.552					
2,854.3	2,824.7	2,799.7	2,799.7	8.3	55.1	-112.08	1,263.3	-9,029.6	9,229.2	9,166.3	62.97	146.577					
2,900.0	2,869.4	2,844.4	2,844.4	8.5	56.0	-112.13	1,263.3	-9,029.6	9,232.9	9,168.8	64.04	144.168					
2,952.7	2,921.0	2,896.0	2,896.0	8.8	57.0	-112.19	1,263.3	-9,029.6	9,237.1	9,171.8	65.29	141.483					
3,000.0	2,967.2	2,942.2	2,942.2	9.0	57.9	-112.25	1,263.3	-9,029.6	9,240.9	9,174.5	66.40	139.163					
3,051.2	3,017.3	2,992.3	2,992.3	9.2	58.9	-112.31	1,263.3	-9,029.6	9,245.0	9,177.4	67.61	136.736					
3,100.0	3,065.0	3,040.0	3,040.0	9.4	59.9	-112.36	1,263.3	-9,029.6	9,248.9	9,180.2	68.77	134.500					
3,149.6	3,113.5	3,088.5	3,088.5	9.6	60.9	-112.42	1,263.3	-9,029.6	9,252.9	9,183.0	69.94	132.303					
3,200.0	3,162.8	3,137.8	3,137.8	9.8	61.9	-112.48	1,263.3	-9,029.6	9,257.0	9,185.9	71.13	130.145					
3,248.0	3,209.8	3,184.8	3,184.8	10.0	62.8	-112.54	1,263.3	-9,029.6	9,260.9	9,188.6	72.26	128.154					
3,300.0	3,260.6	3,235.6	3,235.6	10.2	63.8	-112.60	1,263.3	-9,029.6	9,265.1	9,191.6	73.49	126.069					
3,346.4	3,306.1	3,281.1	3,281.1	10.5	64.7	-112.65	1,263.3	-9,029.6	9,268.9	9,194.3	74.59	124.263					
3,400.0	3,358.5	3,333.5	3,333.5	10.7	65.8	-112.71	1,263.3	-9,029.6	9,273.3	9,197.4	75.86	122.247					
3,444.9	3,402.3	3,377.3	3,377.3	10.9	66.7	-112.77	1,263.3	-9,029.6	9,277.0	9,200.0	76.92	120.608					
3,500.0	3,456.3	3,431.3	3,431.3	11.1	67.8	-112.83	1,263.3	-9,029.6	9,281.5	9,203.3	78.22	118.655					
3,543.3	3,498.6	3,473.6	3,473.6	11.3	68.6	-112.88	1,263.3	-9,029.6	9,285.1	9,205.8	79.25	117.166					
3,600.0	3,554.1	3,529.1	3,529.1	11.5	69.7	-112.95	1,263.3	-9,029.6	9,289.7	9,209.1	80.59	115.274					
3,641.7	3,594.9	3,569.9	3,569.9	11.7	70.5	-113.00	1,263.3	-9,029.6	9,293.2	9,211.6	81.58	113.921					
3,700.0	3,651.9	3,626.9	3,626.9	12.0	71.7	-113.06	1,263.3	-9,029.6	9,298.0	9,215.1	82.95	112.086					
3,740.1	3,691.2	3,666.2	3,666.2	12.2	72.5	-113.11	1,263.3	-9,029.6	9,301.3	9,217.4	83.90	110.857					
3,800.0	3,749.7	3,724.7	3,724.7	12.4	73.7	-113.18	1,263.3	-9,029.6	9,306.3	9,221.0	85.32	109.075					
3,838.6	3,787.4	3,762.4	3,762.4	12.6	74.4	-113.22	1,263.3	-9,029.6	9,309.5	9,223.3	86.23	107.958					
3,900.0	3,847.5	3,822.5	3,822.5	12.9	75.6	-113.29	1,263.3	-9,029.6	9,314.7	9,227.0	87.69	106.227					
3,937.0	3,883.7	3,858.7	3,858.7	13.0	76.3	-113.34	1,263.3	-9,029.6	9,317.8	9,229.2	88.56	105.211					
4,000.0	3,945.3	3,920.3	3,920.3	13.3	77.6	-113.41	1,263.3	-9,029.6	9,323.1	9,233.0	90.05	103.528					
4,035.4	3,980.0	3,955.0	3,955.0	13.5	78.3	-113.45	1,263.3	-9,029.6	9,326.1	9,235.2	90.89	102.606					
4,060.0	4,004.0	3,979.0	3,979.0	13.6	78.8	-113.48	1,263.3	-9,029.6	9,328.1	9,236.7	91.47	101.976					
4,100.0	4,043.2	4,018.2	4,018.2	13.7	79.6	-113.58	1,263.3	-9,029.6	9,331.4	9,239.0	92.43	100.952					
4,133.8	4,076.5	4,051.5	4,051.5	13.8	80.2	-113.67	1,263.3	-9,029.6	9,334.0	9,240.8	93.23	100.122					
4,200.0	4,141.6	4,116.6	4,116.6	14.0	81.5	-113.81	1,263.3	-9,029.6	9,338.6	9,243.8	94.78	98.534					
4,232.3	4,173.5	4,148.5	4,148.5	14.1	82.2	-113.88	1,263.3	-9,029.6	9,340.7	9,245.1	95.52	97.785					
4,300.0	4,240.6	4,215.6	4,215.6	14.3	83.5	-114.00	1,263.3	-9,029.6	9,344.5	9,247.4	97.09	96.247					
4,330.7	4,271.1	4,246.1	4,246.1	14.4	84.1	-114.05	1,263.3	-9,029.6	9,346.0	9,248.2	97.79	95.574					
4,400.0	4,340.0	4,315.0	4,315.0	14.5	85.5	-114.14	1,263.3	-9,029.6	9,348.9	9,249.5	99.37	94.086					
4,429.1	4,369.0	4,344.0	4,344.0	14.6	86.1	-114.17	1,263.3	-9,029.6	9,349.9	9,249.9	100.02	93.483					
4,500.0	4,439.7	4,414.7	4,414.7	14.8	87.5	-114.24	1,263.3	-9,029.6	9,351.9	9,250.3	101.60	92.046					
4,527.5	4,467.2	4,442.2	4,442.2	14.8	88.1	-114.25	1,263.3	-9,029.6	9,352.5	9,250.3	102.20	91.508					
4,600.0	4,539.7	4,514.7	4,514.7	14.9	89.5	-114.29	1,263.3	-9,029.6	9,353.5	9,249.7	103.79	90.120					
4,626.0	4,565.6	4,540.6	4,540.6	15.0	90.1	-114.29	1,263.3	-9,029.6	9,353.7	9,249.3	104.35	89.639					
4,660.2	4,599.8	4,574.8	4,574.8	15.0	90.7	-85.57	1,263.3	-9,029.6	9,353.7	9,251.4	102.39	91.358					
4,700.0	4,639.6	4,614.6	4,614.6	15.0	91.6	-85.57	1,263.3	-9,029.6	9,353.7	9,250.5	103.25	90.590					
4,724.4	4,664.0	4,639.0	4,639.0	15.1	92.0	-85.57	1,263.3	-9,029.6	9,353.7	9,249.9	103.79	90.121					
4,800.0	4,739.6	4,714.6	4,714.6	15.2	93.6	-85.57	1,263.3	-9,029.6	9,353.7	9,248.3	105.45	88.700					
4,822.8	4,762.5	4,737.5	4,737.5	15.2	94.0	-85.57	1,263.3	-9,029.6	9,353.7	9,247.8	105.96	88.279					
4,900.0	4,839.6	4,814.6	4,814.6	15.3	95.6	-85.57	1,263.3	-9,029.6	9,353.7	9,246.1	107.66	86.886					
4,921.2	4,860.9	4,835.9	4,835.9	15.4	96.0	-85.57	1,263.3	-9,029.6	9,353.7	9,245.6	108.12	86.510					
5,000.0	4,939.6	4,914.6	4,914.6	15.5	97.6	-85.57	1,263.3	-9,029.6	9,353.7	9,243.9	109.86	85.144					
5,019.7	4,959.3	4,934.3	4,934.3	15.5	98.0	-85.57	1,263.3	-9,029.6	9,353.7	9,243.4	110.29	84.809					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,014.6	5,014.6	15.6	99.6	-85.57	1,263.3	-9,029.6	9,353.7	9,241.7	112.06	83.470	
5,118.1	5,057.7	5,032.7	5,032.7	15.7	100.0	-85.57	1,263.3	-9,029.6	9,353.7	9,241.3	112.46	83.174	
5,200.0	5,139.6	5,114.6	5,114.6	15.8	101.6	-85.57	1,263.3	-9,029.6	9,353.7	9,239.5	114.27	81.859	
5,216.5	5,156.2	5,131.2	5,131.2	15.8	101.9	-85.57	1,263.3	-9,029.6	9,353.7	9,239.1	114.63	81.599	
5,300.0	5,239.6	5,214.6	5,214.6	15.9	103.6	-85.57	1,263.3	-9,029.6	9,353.7	9,237.3	116.47	80.309	
5,314.9	5,254.6	5,229.6	5,229.6	16.0	103.9	-85.57	1,263.3	-9,029.6	9,353.7	9,236.9	116.80	80.082	
5,400.0	5,339.6	5,314.6	5,314.6	16.1	105.6	-85.57	1,263.3	-9,029.6	9,353.7	9,235.1	118.68	78.816	
5,413.4	5,353.0	5,328.0	5,328.0	16.1	105.9	-85.57	1,263.3	-9,029.6	9,353.7	9,234.8	118.97	78.620	
5,500.0	5,439.6	5,414.6	5,414.6	16.3	107.6	-85.57	1,263.3	-9,029.6	9,353.7	9,232.9	120.89	77.377	
5,511.8	5,451.4	5,426.4	5,426.4	16.3	107.9	-85.57	1,263.3	-9,029.6	9,353.7	9,232.6	121.15	77.210	
5,600.0	5,539.6	5,514.6	5,514.6	16.4	109.6	-85.57	1,263.3	-9,029.6	9,353.7	9,230.6	123.09	75.988	
5,610.2	5,549.9	5,524.9	5,524.9	16.4	109.9	-85.57	1,263.3	-9,029.6	9,353.7	9,230.4	123.32	75.849	
5,700.0	5,639.6	5,614.6	5,614.6	16.6	111.7	-85.57	1,263.3	-9,029.6	9,353.7	9,228.4	125.30	74.649	
5,708.6	5,648.3	5,623.3	5,623.3	16.6	111.8	-85.57	1,263.3	-9,029.6	9,353.7	9,228.2	125.49	74.535	
5,800.0	5,739.6	5,714.6	5,714.6	16.7	113.7	-85.57	1,263.3	-9,029.6	9,353.7	9,226.2	127.51	73.355	
5,807.1	5,746.7	5,721.7	5,721.7	16.8	113.8	-85.57	1,263.3	-9,029.6	9,353.7	9,226.1	127.67	73.265	
5,900.0	5,839.6	5,814.6	5,814.6	16.9	115.7	-85.57	1,263.3	-9,029.6	9,353.7	9,224.0	129.72	72.105	
5,905.5	5,845.1	5,820.1	5,820.1	16.9	115.8	-85.57	1,263.3	-9,029.6	9,353.7	9,223.9	129.85	72.037	
6,000.0	5,939.6	5,914.6	5,914.6	17.1	117.7	-85.57	1,263.3	-9,029.6	9,353.7	9,221.8	131.94	70.896	
6,003.9	5,943.6	5,918.6	5,918.6	17.1	117.8	-85.57	1,263.3	-9,029.6	9,353.7	9,221.7	132.02	70.849	
6,059.2	5,998.8	5,973.8	5,973.8	17.2	118.9	-85.57	1,263.3	-9,029.6	9,353.7	9,220.5	133.24	70.200	
6,100.0	6,039.6	6,014.6	6,014.6	17.2	119.7	4.44	1,263.3	-9,029.6	9,352.6	9,216.5	136.10	68.716	
6,102.3	6,042.0	6,017.0	6,017.0	17.2	119.8	4.44	1,263.3	-9,029.6	9,352.4	9,216.3	136.13	68.703	
6,150.0	6,089.4	6,064.4	6,064.4	17.3	120.7	4.47	1,263.3	-9,029.6	9,348.0	9,211.7	136.29	68.589	
6,200.0	6,138.7	6,113.7	6,113.7	17.3	121.7	4.53	1,263.3	-9,029.6	9,340.0	9,204.2	135.80	68.778	
6,200.8	6,139.5	6,114.5	6,114.5	17.3	121.7	4.53	1,263.3	-9,029.6	9,339.8	9,204.0	135.79	68.783	
6,250.0	6,187.4	6,162.4	6,162.4	17.3	122.7	4.61	1,263.3	-9,029.6	9,328.5	9,193.9	134.62	69.294	
6,299.2	6,234.4	6,209.4	6,209.4	17.4	123.6	4.71	1,263.3	-9,029.6	9,314.0	9,181.2	132.79	70.139	
6,300.0	6,235.1	6,210.1	6,210.1	17.4	123.6	4.72	1,263.3	-9,029.6	9,313.7	9,181.0	132.76	70.156	
6,350.0	6,281.7	6,256.7	6,256.7	17.4	124.6	4.85	1,263.3	-9,029.6	9,295.7	9,165.5	130.20	71.393	
6,397.6	6,324.8	6,299.8	6,299.8	17.3	125.4	5.02	1,263.3	-9,029.6	9,275.5	9,148.3	127.14	72.956	
6,400.0	6,326.9	6,301.9	6,301.9	17.3	125.5	5.03	1,263.3	-9,029.6	9,274.4	9,147.4	126.97	73.045	
6,450.0	6,370.5	6,345.5	6,345.5	17.3	126.4	5.24	1,263.3	-9,029.6	9,250.0	9,127.0	123.07	75.163	
6,496.0	6,409.1	6,384.1	6,384.1	17.3	127.1	5.48	1,263.3	-9,029.6	9,225.0	9,106.1	118.90	77.585	
6,500.0	6,412.3	6,387.3	6,387.3	17.3	127.2	5.50	1,263.3	-9,029.6	9,222.7	9,104.2	118.52	77.816	
6,550.0	6,452.1	6,427.1	6,427.1	17.3	128.0	5.82	1,263.3	-9,029.6	9,192.5	9,079.2	113.36	81.092	
6,594.5	6,485.6	6,460.6	6,460.6	17.3	128.7	6.16	1,263.3	-9,029.6	9,163.4	9,055.1	108.29	84.621	
6,600.0	6,489.7	6,464.7	6,464.7	17.3	128.8	6.21	1,263.3	-9,029.6	9,159.6	9,052.0	107.63	85.105	
6,650.0	6,524.9	6,499.9	6,499.9	17.2	129.5	6.68	1,263.3	-9,029.6	9,124.2	9,022.9	101.39	89.994	
6,692.9	6,553.0	6,528.0	6,528.0	17.2	130.0	7.18	1,263.3	-9,029.6	9,092.0	8,996.3	95.69	95.016	
6,700.0	6,557.5	6,532.5	6,532.5	17.2	130.1	7.27	1,263.3	-9,029.6	9,086.5	8,991.8	94.72	95.930	
6,750.0	6,587.4	6,562.4	6,562.4	17.2	130.7	8.01	1,263.3	-9,029.6	9,046.5	8,958.8	87.75	103.099	
6,791.3	6,609.9	6,584.9	6,584.9	17.2	131.2	8.78	1,263.3	-9,029.6	9,012.0	8,930.2	81.88	110.063	
6,800.0	6,614.4	6,589.4	6,589.4	17.2	131.3	8.96	1,263.3	-9,029.6	9,004.6	8,924.0	80.65	111.645	
6,850.0	6,638.4	6,613.4	6,613.4	17.2	131.7	10.20	1,263.3	-9,029.6	8,960.9	8,887.2	73.76	121.491	
6,889.7	6,655.3	6,630.3	6,630.3	17.4	132.1	11.50	1,263.3	-9,029.6	8,925.1	8,856.3	68.78	129.759	
6,900.0	6,659.4	6,634.4	6,634.4	17.5	132.2	11.89	1,263.3	-9,029.6	8,915.7	8,848.1	67.63	131.836	
6,950.0	6,677.1	6,652.1	6,652.1	18.0	132.5	14.29	1,263.3	-9,029.6	8,869.1	8,805.7	63.36	139.978	
6,988.2	6,688.4	6,663.4	6,663.4	18.5	132.8	16.91	1,263.3	-9,029.6	8,832.7	8,770.1	62.63	141.031	
7,000.0	6,691.5	6,666.5	6,666.5	18.7	132.8	17.92	1,263.3	-9,029.6	8,821.4	8,758.3	63.10	139.805	
7,050.0	6,702.5	6,677.5	6,677.5	19.5	133.0	23.95	1,263.3	-9,029.6	8,772.8	8,702.0	70.73	124.036	
7,086.6	6,708.4	6,683.4	6,683.4	20.1	133.2	31.45	1,263.3	-9,029.6	8,736.8	8,651.8	84.96	102.839	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	6,685.1	6,685.1	20.4	133.2	35.35	1,263.3	-9,029.6	8,723.5	8,630.8	92.77	94.029	
7,150.0	6,714.2	6,689.2	6,689.2	21.3	133.3	60.32	1,263.3	-9,029.6	8,673.9	8,538.6	135.32	64.099	
7,185.0	6,715.0	6,690.0	6,690.0	21.9	133.3	90.82	1,263.3	-9,029.6	8,639.0	8,484.1	154.88	55.777	
7,185.6	6,715.0	6,690.0	6,690.0	21.9	133.3	91.33	1,263.3	-9,029.6	8,638.5	8,483.6	154.85	55.784	
7,200.0	6,715.0	6,690.0	6,690.0	22.2	133.3	91.33	1,263.3	-9,029.6	8,624.1	8,468.9	155.13	55.592	
7,283.4	6,714.8	6,689.8	6,689.8	23.9	133.3	91.32	1,263.3	-9,029.6	8,540.9	8,384.1	156.81	54.468	
7,300.0	6,714.8	6,689.8	6,689.8	24.2	133.3	91.31	1,263.3	-9,029.6	8,524.4	8,367.3	157.14	54.248	
7,381.9	6,714.6	6,689.6	6,689.6	26.0	133.3	91.30	1,263.3	-9,029.6	8,442.9	8,284.0	158.90	53.134	
7,400.0	6,714.6	6,689.6	6,689.6	26.4	133.3	91.30	1,263.3	-9,029.6	8,424.8	8,265.5	159.29	52.891	
7,480.3	6,714.4	6,689.4	6,689.4	28.2	133.3	91.28	1,263.3	-9,029.6	8,344.8	8,183.7	161.11	51.797	
7,500.0	6,714.4	6,689.4	6,689.4	28.7	133.3	91.28	1,263.3	-9,029.6	8,325.2	8,163.6	161.55	51.533	
7,578.7	6,714.2	6,689.2	6,689.2	30.5	133.3	91.27	1,263.3	-9,029.6	8,246.7	8,083.3	163.40	50.468	
7,600.0	6,714.2	6,689.2	6,689.2	31.0	133.3	91.26	1,263.3	-9,029.6	8,225.6	8,061.6	163.91	50.185	
7,677.1	6,714.0	6,689.0	6,689.0	32.9	133.3	91.25	1,263.3	-9,029.6	8,148.7	7,982.9	165.78	49.155	
7,700.0	6,714.0	6,689.0	6,689.0	33.4	133.3	91.25	1,263.3	-9,029.6	8,125.9	7,959.6	166.33	48.854	
7,775.6	6,713.9	6,688.9	6,688.9	35.3	133.3	91.24	1,263.3	-9,029.6	8,050.7	7,882.5	168.21	47.862	
7,800.0	6,713.8	6,688.8	6,688.8	35.9	133.3	91.23	1,263.3	-9,029.6	8,026.3	7,857.5	168.81	47.546	
7,874.0	6,713.7	6,688.7	6,688.7	37.8	133.3	91.22	1,263.3	-9,029.6	7,952.6	7,782.0	170.68	46.594	
7,900.0	6,713.6	6,688.6	6,688.6	38.4	133.3	91.22	1,263.3	-9,029.6	7,926.8	7,755.4	171.34	46.264	
7,972.4	6,713.5	6,688.5	6,688.5	40.3	133.3	91.20	1,263.3	-9,029.6	7,854.6	7,681.4	173.19	45.351	
8,000.0	6,713.4	6,688.4	6,688.4	41.0	133.3	91.20	1,263.3	-9,029.6	7,827.2	7,653.3	173.90	45.009	
8,070.8	6,713.3	6,688.3	6,688.3	42.8	133.3	91.19	1,263.3	-9,029.6	7,756.6	7,580.9	175.74	44.137	
8,100.0	6,713.2	6,688.2	6,688.2	43.6	133.3	91.18	1,263.3	-9,029.6	7,727.6	7,551.1	176.50	43.784	
8,169.3	6,713.1	6,688.1	6,688.1	45.4	133.2	91.17	1,263.3	-9,029.6	7,658.6	7,480.3	178.31	42.951	
8,200.0	6,713.0	6,688.0	6,688.0	46.2	133.2	91.17	1,263.3	-9,029.6	7,628.1	7,448.9	179.11	42.588	
8,267.7	6,712.9	6,687.9	6,687.9	48.0	133.2	91.16	1,263.3	-9,029.6	7,560.7	7,379.8	180.90	41.794	
8,300.0	6,712.8	6,687.8	6,687.8	48.8	133.2	91.15	1,263.3	-9,029.6	7,528.5	7,346.8	181.76	41.421	
8,366.1	6,712.7	6,687.7	6,687.7	50.6	133.2	91.14	1,263.3	-9,029.6	7,462.7	7,279.2	183.51	40.666	
8,400.0	6,712.6	6,687.6	6,687.6	51.5	133.2	91.13	1,263.3	-9,029.6	7,429.0	7,244.6	184.41	40.284	
8,464.5	6,712.5	6,687.5	6,687.5	53.2	133.2	91.12	1,263.3	-9,029.6	7,364.7	7,178.6	186.14	39.566	
8,500.0	6,712.4	6,687.4	6,687.4	54.1	133.2	91.12	1,263.3	-9,029.6	7,329.5	7,142.4	187.09	39.177	
8,563.0	6,712.3	6,687.3	6,687.3	55.8	133.2	91.11	1,263.3	-9,029.6	7,266.8	7,078.0	188.78	38.494	
8,600.0	6,712.3	6,687.3	6,687.3	56.8	133.2	91.10	1,263.3	-9,029.6	7,230.0	7,040.2	189.77	38.098	
8,661.4	6,712.1	6,687.1	6,687.1	58.5	133.2	91.09	1,263.3	-9,029.6	7,168.9	6,977.4	191.43	37.449	
8,700.0	6,712.1	6,687.1	6,687.1	59.5	133.2	91.09	1,263.3	-9,029.6	7,130.5	6,938.0	192.47	37.047	
8,759.8	6,711.9	6,686.9	6,686.9	61.1	133.2	91.08	1,263.3	-9,029.6	7,071.0	6,876.9	194.09	36.431	
8,800.0	6,711.9	6,686.9	6,686.9	62.2	133.2	91.07	1,263.3	-9,029.6	7,031.0	6,835.8	195.18	36.023	
8,858.2	6,711.8	6,686.8	6,686.8	63.8	133.2	91.06	1,263.3	-9,029.6	6,973.1	6,776.3	196.76	35.439	
8,900.0	6,711.7	6,686.7	6,686.7	64.9	133.2	91.05	1,263.3	-9,029.6	6,931.5	6,733.6	197.89	35.026	
8,956.7	6,711.6	6,686.6	6,686.6	66.5	133.2	91.05	1,263.3	-9,029.6	6,875.2	6,675.7	199.44	34.473	
9,000.0	6,711.5	6,686.5	6,686.5	67.6	133.2	91.04	1,263.3	-9,029.6	6,832.1	6,631.5	200.62	34.055	
9,055.1	6,711.4	6,686.4	6,686.4	69.1	133.2	91.03	1,263.3	-9,029.6	6,777.3	6,575.2	202.12	33.531	
9,100.0	6,711.3	6,686.3	6,686.3	70.4	133.2	91.02	1,263.3	-9,029.6	6,732.7	6,529.3	203.35	33.109	
9,153.5	6,711.2	6,686.2	6,686.2	71.8	133.2	91.01	1,263.3	-9,029.6	6,679.4	6,474.6	204.81	32.612	
9,200.0	6,711.1	6,686.1	6,686.1	73.1	133.2	91.01	1,263.3	-9,029.6	6,633.2	6,427.2	206.08	32.187	
9,251.9	6,711.0	6,686.0	6,686.0	74.5	133.2	91.00	1,263.3	-9,029.6	6,581.6	6,374.1	207.51	31.717	
9,300.0	6,710.9	6,685.9	6,685.9	75.8	133.2	90.99	1,263.3	-9,029.6	6,533.8	6,325.0	208.83	31.288	
9,350.4	6,710.8	6,685.8	6,685.8	77.2	133.2	90.98	1,263.3	-9,029.6	6,483.8	6,273.6	210.21	30.844	
9,400.0	6,710.7	6,685.7	6,685.7	78.6	133.2	90.97	1,263.3	-9,029.6	6,434.5	6,222.9	211.57	30.413	
9,448.8	6,710.6	6,685.6	6,685.6	79.9	133.2	90.97	1,263.3	-9,029.6	6,386.0	6,173.1	212.91	29.993	
9,500.0	6,710.5	6,685.5	6,685.5	81.3	133.2	90.96	1,263.3	-9,029.6	6,335.1	6,120.8	214.32	29.559	
9,547.2	6,710.4	6,685.4	6,685.4	82.6	133.2	90.95	1,263.3	-9,029.6	6,288.2	6,072.6	215.62	29.163	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - ABDN VERT PLUMB #2 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,600.0	6,710.3	6,685.3	6,685.3	84.1	133.2	90.94	1,263.3	-9,029.6	6,235.8	6,018.7	217.08	28.726	
9,645.6	6,710.2	6,685.2	6,685.2	85.3	133.2	90.94	1,263.3	-9,029.6	6,190.4	5,972.1	218.34	28.353	
9,700.0	6,710.1	6,685.1	6,685.1	86.8	133.2	90.93	1,263.3	-9,029.6	6,136.5	5,916.6	219.84	27.914	
9,744.1	6,710.0	6,685.0	6,685.0	88.1	133.2	90.92	1,263.3	-9,029.6	6,092.7	5,871.6	221.05	27.562	
9,800.0	6,709.9	6,684.9	6,684.9	89.6	133.2	90.91	1,263.3	-9,029.6	6,037.2	5,814.6	222.60	27.122	
9,842.5	6,709.9	6,684.9	6,684.9	90.8	133.2	90.90	1,263.3	-9,029.6	5,995.0	5,771.2	223.77	26.791	
9,900.0	6,709.7	6,684.7	6,684.7	92.4	133.2	90.89	1,263.3	-9,029.6	5,937.9	5,712.5	225.36	26.349	
9,940.9	6,709.7	6,684.7	6,684.7	93.5	133.2	90.89	1,263.3	-9,029.6	5,897.3	5,670.8	226.49	26.038	
10,000.0	6,709.6	6,684.6	6,684.6	95.1	133.2	90.88	1,263.3	-9,029.6	5,838.7	5,610.5	228.13	25.594	
10,039.3	6,709.5	6,684.5	6,684.5	96.2	133.2	90.87	1,263.3	-9,029.6	5,799.6	5,570.4	229.22	25.302	
10,100.0	6,709.4	6,684.4	6,684.4	97.9	133.2	90.86	1,263.3	-9,029.6	5,739.4	5,508.5	230.89	24.857	
10,137.8	6,709.3	6,684.3	6,684.3	98.9	133.2	90.86	1,263.3	-9,029.6	5,702.0	5,470.0	231.94	24.584	
10,200.0	6,709.2	6,684.2	6,684.2	100.7	133.2	90.85	1,263.3	-9,029.6	5,640.3	5,406.6	233.67	24.138	
10,236.2	6,709.1	6,684.1	6,684.1	101.7	133.2	90.84	1,263.3	-9,029.6	5,604.4	5,369.7	234.67	23.882	
10,300.0	6,709.0	6,684.0	6,684.0	103.4	133.2	90.83	1,263.3	-9,029.6	5,541.1	5,304.7	236.44	23.436	
10,334.6	6,708.9	6,683.9	6,683.9	104.4	133.2	90.83	1,263.3	-9,029.6	5,506.8	5,269.4	237.40	23.196	
10,400.0	6,708.8	6,683.8	6,683.8	106.2	133.2	90.82	1,263.3	-9,029.6	5,442.0	5,202.7	239.21	22.749	
10,433.0	6,708.7	6,683.7	6,683.7	107.1	133.2	90.81	1,263.3	-9,029.6	5,409.2	5,169.1	240.13	22.526	
10,500.0	6,708.6	6,683.6	6,683.6	109.0	133.2	90.80	1,263.3	-9,029.6	5,342.9	5,100.9	241.99	22.079	
10,531.5	6,708.5	6,683.5	6,683.5	109.9	133.2	90.80	1,263.3	-9,029.6	5,311.7	5,068.8	242.86	21.871	
10,600.0	6,708.4	6,683.4	6,683.4	111.8	133.2	90.78	1,263.3	-9,029.6	5,243.8	4,999.0	244.77	21.424	
10,629.9	6,708.4	6,683.4	6,683.4	112.6	133.2	90.78	1,263.3	-9,029.6	5,214.2	4,968.6	245.60	21.230	
10,700.0	6,708.2	6,683.2	6,683.2	114.6	133.1	90.77	1,263.3	-9,029.6	5,144.8	4,897.2	247.55	20.783	
10,728.3	6,708.2	6,683.2	6,683.2	115.3	133.1	90.76	1,263.3	-9,029.6	5,116.7	4,868.4	248.34	20.604	
10,800.0	6,708.0	6,683.0	6,683.0	117.3	133.1	90.75	1,263.3	-9,029.6	5,045.8	4,795.5	250.33	20.157	
10,826.7	6,708.0	6,683.0	6,683.0	118.1	133.1	90.75	1,263.3	-9,029.6	5,019.3	4,768.2	251.07	19.991	
10,900.0	6,707.8	6,682.8	6,682.8	120.1	133.1	90.74	1,263.3	-9,029.6	4,946.8	4,693.7	253.11	19.544	
10,925.2	6,707.8	6,682.8	6,682.8	120.8	133.1	90.73	1,263.3	-9,029.6	4,921.9	4,668.1	253.81	19.392	
11,000.0	6,707.6	6,682.6	6,682.6	122.9	133.1	90.72	1,263.3	-9,029.6	4,847.9	4,592.0	255.89	18.945	
11,023.6	6,707.6	6,682.6	6,682.6	123.6	133.1	90.72	1,263.3	-9,029.6	4,824.6	4,568.1	256.55	18.806	
11,100.0	6,707.5	6,682.5	6,682.5	125.7	133.1	90.71	1,263.3	-9,029.6	4,749.1	4,490.4	258.68	18.359	
11,122.0	6,707.4	6,682.4	6,682.4	126.3	133.1	90.70	1,263.3	-9,029.6	4,727.3	4,468.0	259.29	18.232	
11,200.0	6,707.3	6,682.3	6,682.3	128.5	133.1	90.69	1,263.3	-9,029.6	4,650.3	4,388.8	261.46	17.786	
11,220.4	6,707.2	6,682.2	6,682.2	129.0	133.1	90.69	1,263.3	-9,029.6	4,630.1	4,368.0	262.03	17.670	
11,300.0	6,707.1	6,682.1	6,682.1	131.3	133.1	90.68	1,263.3	-9,029.6	4,551.5	4,287.3	264.25	17.224	
11,318.9	6,707.0	6,682.0	6,682.0	131.8	133.1	90.67	1,263.3	-9,029.6	4,532.9	4,268.1	264.78	17.120	
11,400.0	6,706.9	6,681.9	6,681.9	134.0	133.1	90.66	1,263.3	-9,029.6	4,452.8	4,185.8	267.04	16.675	
11,417.3	6,706.9	6,681.9	6,681.9	134.5	133.1	90.66	1,263.3	-9,029.6	4,435.7	4,168.2	267.52	16.581	
11,500.0	6,706.7	6,681.7	6,681.7	136.8	133.1	90.64	1,263.3	-9,029.6	4,354.2	4,084.3	269.83	16.137	
11,515.7	6,706.7	6,681.7	6,681.7	137.3	133.1	90.64	1,263.3	-9,029.6	4,338.7	4,068.4	270.26	16.053	
11,600.0	6,706.5	6,681.5	6,681.5	139.6	133.1	90.63	1,263.3	-9,029.6	4,255.6	3,983.0	272.62	15.610	
11,614.1	6,706.5	6,681.5	6,681.5	140.0	133.1	90.63	1,263.3	-9,029.6	4,241.6	3,968.6	273.01	15.537	
11,700.0	6,706.3	6,681.3	6,681.3	142.4	133.1	90.61	1,263.3	-9,029.6	4,157.1	3,881.7	275.41	15.094	
11,712.6	6,706.3	6,681.3	6,681.3	142.8	133.1	90.61	1,263.3	-9,029.6	4,144.7	3,868.9	275.76	15.030	
11,800.0	6,706.1	6,681.1	6,681.1	145.2	133.1	90.60	1,263.3	-9,029.6	4,058.6	3,780.4	278.20	14.589	
11,811.0	6,706.1	6,681.1	6,681.1	145.5	133.1	90.60	1,263.3	-9,029.6	4,047.8	3,769.3	278.50	14.534	
11,900.0	6,705.9	6,680.9	6,680.9	148.0	133.1	90.58	1,263.3	-9,029.6	3,960.3	3,679.3	280.99	14.094	
11,909.4	6,705.9	6,680.9	6,680.9	148.3	133.1	90.58	1,263.3	-9,029.6	3,951.0	3,669.8	281.25	14.048	
12,000.0	6,705.8	6,680.8	6,680.8	150.8	133.1	90.57	1,263.3	-9,029.6	3,862.0	3,578.2	283.78	13.609	
12,007.8	6,705.7	6,680.7	6,680.7	151.0	133.1	90.57	1,263.3	-9,029.6	3,854.3	3,570.3	284.00	13.572	
12,100.0	6,705.6	6,680.6	6,680.6	153.6	133.1	90.55	1,263.3	-9,029.6	3,763.8	3,477.3	286.57	13.134	
12,106.3	6,705.6	6,680.6	6,680.6	153.8	133.1	90.55	1,263.3	-9,029.6	3,757.7	3,470.9	286.75	13.104	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,200.0	6,705.4	6,680.4	6,680.4	156.4	133.1	90.54	1,263.3	-9,029.6	3,665.7	3,376.4	289.36	12.668	
12,204.7	6,705.4	6,680.4	6,680.4	156.5	133.1	90.54	1,263.3	-9,029.6	3,661.1	3,371.6	289.50	12.647	
12,300.0	6,705.2	6,680.2	6,680.2	159.2	133.1	90.52	1,263.3	-9,029.6	3,567.8	3,275.6	292.16	12.212	
12,303.1	6,705.2	6,680.2	6,680.2	159.3	133.1	90.52	1,263.3	-9,029.6	3,564.7	3,272.4	292.24	12.198	
12,400.0	6,705.0	6,680.0	6,680.0	162.0	133.1	90.51	1,263.3	-9,029.6	3,469.9	3,174.9	294.95	11.764	
12,401.5	6,705.0	6,680.0	6,680.0	162.0	133.1	90.51	1,263.3	-9,029.6	3,468.4	3,173.4	294.99	11.757	
12,500.0	6,704.8	6,679.8	6,679.8	164.8	133.1	90.49	1,263.3	-9,029.6	3,372.1	3,074.4	297.75	11.326	
12,598.4	6,704.6	6,679.6	6,679.6	167.5	133.1	90.48	1,263.3	-9,029.6	3,276.1	2,975.6	300.50	10.902	
12,600.0	6,704.6	6,679.6	6,679.6	167.6	133.1	90.48	1,263.3	-9,029.6	3,274.5	2,974.0	300.54	10.896	
12,696.8	6,704.4	6,679.4	6,679.4	170.3	133.1	90.46	1,263.3	-9,029.6	3,180.2	2,876.9	303.25	10.487	
12,700.0	6,704.4	6,679.4	6,679.4	170.4	133.1	90.46	1,263.3	-9,029.6	3,177.1	2,873.8	303.34	10.474	
12,795.2	6,704.3	6,679.3	6,679.3	173.0	133.1	90.45	1,263.3	-9,029.6	3,084.4	2,778.4	306.00	10.080	
12,800.0	6,704.2	6,679.2	6,679.2	173.2	133.1	90.45	1,263.3	-9,029.6	3,079.8	2,773.7	306.13	10.060	
12,893.7	6,704.1	6,679.1	6,679.1	175.8	133.1	90.43	1,263.3	-9,029.6	2,988.8	2,680.1	308.75	9.680	
12,900.0	6,704.1	6,679.1	6,679.1	176.0	133.1	90.43	1,263.3	-9,029.6	2,982.7	2,673.8	308.93	9.655	
12,992.1	6,703.9	6,678.9	6,678.9	178.5	133.1	90.42	1,263.3	-9,029.6	2,893.4	2,581.9	311.50	9.289	
13,000.0	6,703.9	6,678.9	6,678.9	178.8	133.1	90.41	1,263.3	-9,029.6	2,885.8	2,574.0	311.72	9.257	
13,090.5	6,703.7	6,678.7	6,678.7	181.3	133.1	90.40	1,263.3	-9,029.6	2,798.2	2,484.0	314.26	8.904	
13,100.0	6,703.7	6,678.7	6,678.7	181.6	133.1	90.40	1,263.3	-9,029.6	2,789.1	2,474.6	314.52	8.868	
13,188.9	6,703.5	6,678.5	6,678.5	184.0	133.1	90.39	1,263.3	-9,029.6	2,703.3	2,386.3	317.01	8.527	
13,200.0	6,703.5	6,678.5	6,678.5	184.4	133.1	90.38	1,263.3	-9,029.6	2,692.6	2,375.3	317.32	8.486	
13,287.4	6,703.3	6,678.3	6,678.3	186.8	133.1	90.37	1,263.3	-9,029.6	2,608.6	2,288.8	319.76	8.158	
13,300.0	6,703.3	6,678.3	6,678.3	187.2	133.1	90.37	1,263.3	-9,029.6	2,596.4	2,276.3	320.12	8.111	
13,385.8	6,703.2	6,678.2	6,678.2	189.6	133.0	90.36	1,263.3	-9,029.6	2,514.1	2,191.6	322.52	7.795	
13,400.0	6,703.1	6,678.1	6,678.1	190.0	133.0	90.35	1,263.3	-9,029.6	2,500.5	2,177.6	322.91	7.744	
13,484.2	6,703.0	6,678.0	6,678.0	192.3	133.0	90.34	1,263.3	-9,029.6	2,420.0	2,094.8	325.27	7.440	
13,500.0	6,702.9	6,677.9	6,677.9	192.8	133.0	90.34	1,263.3	-9,029.6	2,405.0	2,079.3	325.71	7.384	
13,582.6	6,702.8	6,677.8	6,677.8	195.1	133.0	90.33	1,263.3	-9,029.6	2,326.3	1,998.3	328.02	7.092	
13,600.0	6,702.8	6,677.8	6,677.8	195.6	133.0	90.32	1,263.3	-9,029.6	2,309.8	1,981.3	328.51	7.031	
13,681.1	6,702.6	6,677.6	6,677.6	197.8	133.0	90.31	1,263.3	-9,029.6	2,232.9	1,902.2	330.78	6.751	
13,700.0	6,702.6	6,677.6	6,677.6	198.4	133.0	90.31	1,263.3	-9,029.6	2,215.1	1,883.7	331.31	6.686	
13,779.5	6,702.4	6,677.4	6,677.4	200.6	133.0	90.30	1,263.3	-9,029.6	2,140.1	1,806.5	333.53	6.416	
13,800.0	6,702.4	6,677.4	6,677.4	201.2	133.0	90.29	1,263.3	-9,029.6	2,120.8	1,786.7	334.11	6.348	
13,877.9	6,702.2	6,677.2	6,677.2	203.3	133.0	90.28	1,263.3	-9,029.6	2,047.7	1,711.4	336.29	6.089	
13,900.0	6,702.2	6,677.2	6,677.2	204.0	133.0	90.28	1,263.3	-9,029.6	2,027.1	1,690.2	336.91	6.017	
13,976.3	6,702.1	6,677.1	6,677.1	206.1	133.0	90.27	1,263.3	-9,029.6	1,955.9	1,616.9	339.04	5.769	
14,000.0	6,702.0	6,677.0	6,677.0	206.8	133.0	90.26	1,263.3	-9,029.6	1,934.0	1,594.3	339.71	5.693	
14,074.8	6,701.9	6,676.9	6,676.9	208.9	133.0	90.25	1,263.3	-9,029.6	1,864.8	1,523.0	341.80	5.456	
14,100.0	6,701.8	6,676.8	6,676.8	209.6	133.0	90.25	1,263.3	-9,029.6	1,841.6	1,499.1	342.51	5.377	
14,173.2	6,701.7	6,676.7	6,676.7	211.6	133.0	90.24	1,263.3	-9,029.6	1,774.5	1,430.0	344.56	5.150	
14,200.0	6,701.6	6,676.6	6,676.6	212.4	133.0	90.23	1,263.3	-9,029.6	1,750.1	1,404.8	345.31	5.068	
14,271.6	6,701.5	6,676.5	6,676.5	214.4	133.0	90.22	1,263.3	-9,029.6	1,685.1	1,337.8	347.31	4.852	
14,300.0	6,701.4	6,676.4	6,676.4	215.2	133.0	90.22	1,263.3	-9,029.6	1,659.5	1,311.4	348.11	4.767	
14,370.0	6,701.3	6,676.3	6,676.3	217.1	133.0	90.21	1,263.3	-9,029.6	1,596.8	1,246.7	350.07	4.561	
14,400.0	6,701.3	6,676.3	6,676.3	218.0	133.0	90.20	1,263.3	-9,029.6	1,570.1	1,219.2	350.91	4.474	
14,468.5	6,701.1	6,676.1	6,676.1	219.9	133.0	90.19	1,263.3	-9,029.6	1,509.7	1,156.8	352.82	4.279	
14,500.0	6,701.1	6,676.1	6,676.1	220.8	133.0	90.19	1,263.3	-9,029.6	1,482.1	1,128.4	353.71	4.190	
14,566.9	6,701.0	6,676.0	6,676.0	222.6	133.0	90.18	1,263.3	-9,029.6	1,424.0	1,068.5	355.58	4.005	
14,600.0	6,700.9	6,675.9	6,675.9	223.6	133.0	90.18	1,263.3	-9,029.6	1,395.6	1,039.1	356.51	3.915	
14,665.3	6,700.8	6,675.8	6,675.8	225.4	133.0	90.17	1,263.3	-9,029.6	1,340.2	981.8	358.34	3.740	
14,700.0	6,700.7	6,675.7	6,675.7	226.4	133.0	90.16	1,263.3	-9,029.6	1,311.1	951.8	359.31	3.649	
14,763.7	6,700.6	6,675.6	6,675.6	228.2	133.0	90.15	1,263.3	-9,029.6	1,258.4	897.3	361.09	3.485	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - ABDN VERT PLUMB #2 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,800.0	6,700.5	6,675.5	6,675.5	229.2	133.0	90.15	1,263.3	-9,029.6	1,228.9	866.8	362.11	3.394	
14,862.2	6,700.4	6,675.4	6,675.4	230.9	133.0	90.14	1,263.3	-9,029.6	1,179.2	815.4	363.85	3.241	
14,900.0	6,700.3	6,675.3	6,675.3	232.0	133.0	90.13	1,263.3	-9,029.6	1,149.6	784.7	364.91	3.150	
14,960.6	6,700.2	6,675.2	6,675.2	233.7	133.0	90.12	1,263.3	-9,029.6	1,103.1	736.5	366.61	3.009	
15,000.0	6,700.2	6,675.2	6,675.2	234.8	133.0	90.12	1,263.3	-9,029.6	1,073.7	706.0	367.71	2.920	
15,059.0	6,700.0	6,675.0	6,675.0	236.4	133.0	90.11	1,263.3	-9,029.6	1,030.8	661.4	369.36	2.791	
15,082.8	6,700.0	6,675.0	6,675.0	237.1	133.0	90.10	1,263.3	-9,029.6	1,014.0	644.0	370.03	2.740 CC, ES, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 137-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-105.18	-1,924.4	-7,092.9	7,349.4				
98.4	98.4	46.2	46.2	0.1	0.0	-105.18	-1,924.4	-7,092.9	7,349.4	7,349.3	0.11	N/A	
100.0	100.0	47.3	47.3	0.1	0.0	-105.18	-1,924.4	-7,092.9	7,349.4	7,349.3	0.12	N/A	
196.8	196.8	115.7	115.7	0.3	0.0	-105.18	-1,924.3	-7,093.3	7,349.8	7,349.5	0.36	N/A	
200.0	200.0	137.0	137.0	0.3	0.1	-105.18	-1,924.2	-7,093.5	7,349.9	7,349.5	0.38	N/A	
295.3	295.3	340.5	340.5	0.5	0.5	-105.17	-1,923.0	-7,093.8	7,350.2	7,349.2	1.02	7,197.897	
300.0	300.0	344.4	344.4	0.5	0.5	-105.17	-1,923.0	-7,093.7	7,350.2	7,349.1	1.04	7,067.375	
393.7	393.7	424.8	424.7	0.8	0.7	-105.16	-1,922.0	-7,093.2	7,349.3	7,347.9	1.42	5,169.334	
400.0	400.0	432.7	432.6	0.8	0.7	-105.16	-1,921.9	-7,093.2	7,349.2	7,347.8	1.45	5,059.346	
492.1	492.1	591.5	591.4	1.0	1.0	-105.15	-1,919.6	-7,091.8	7,348.2	7,346.2	2.00	3,672.549	
500.0	500.0	607.0	607.0	1.0	1.1	-105.14	-1,919.4	-7,091.5	7,348.0	7,346.0	2.05	3,580.463	
590.5	590.5	1,429.5	1,418.6	1.2	3.5	-104.40	-1,813.9	-7,063.8	7,343.6	7,339.3	4.34	1,692.586	
600.0	600.0	1,433.3	1,422.2	1.2	3.5	-104.39	-1,812.9	-7,063.6	7,342.5	7,338.1	4.37	1,679.299	
689.0	689.0	1,482.0	1,468.9	1.4	3.7	-104.29	-1,799.1	-7,061.7	7,332.5	7,327.8	4.73	1,548.840	
700.0	700.0	1,482.0	1,468.9	1.4	3.7	-104.29	-1,799.1	-7,061.7	7,331.3	7,326.5	4.76	1,540.520	
787.4	787.4	1,578.7	1,561.5	1.6	4.2	-104.09	-1,771.5	-7,058.3	7,321.8	7,316.5	5.29	1,383.197	
800.0	800.0	1,592.3	1,574.5	1.7	4.3	-104.06	-1,767.6	-7,057.8	7,320.4	7,315.0	5.37	1,362.654	
885.8	885.8	1,668.5	1,647.4	1.9	4.7	-103.90	-1,745.4	-7,055.0	7,311.0	7,305.1	5.85	1,250.338	
900.0	900.0	1,677.5	1,656.0	1.9	4.7	-103.88	-1,742.8	-7,054.7	7,309.4	7,303.5	5.91	1,236.503	
984.2	984.2	1,733.8	1,709.9	2.1	5.0	-103.76	-1,726.6	-7,052.7	7,300.5	7,294.2	6.30	1,158.121	
1,000.0	1,000.0	1,754.0	1,729.2	2.1	5.1	-103.71	-1,720.9	-7,052.0	7,298.9	7,292.5	6.41	1,138.643	
1,082.7	1,082.7	1,838.1	1,809.9	2.3	5.5	-103.54	-1,697.1	-7,049.0	7,290.2	7,283.3	6.90	1,056.854	
1,100.0	1,100.0	1,850.9	1,822.1	2.3	5.6	-103.51	-1,693.5	-7,048.6	7,288.4	7,281.4	6.98	1,043.578	
1,181.1	1,181.1	1,913.1	1,881.7	2.5	5.9	-132.22	-1,675.9	-7,046.5	7,280.9	7,272.7	8.14	893.999	
1,200.0	1,200.0	1,928.7	1,896.7	2.6	5.9	-132.22	-1,671.6	-7,046.0	7,279.4	7,271.1	8.26	881.533	
1,279.5	1,279.5	2,218.0	2,174.5	2.7	7.4	-131.81	-1,592.4	-7,030.9	7,272.1	7,262.3	9.81	741.631	
1,300.0	1,299.8	2,218.0	2,174.5	2.8	7.4	-131.84	-1,592.4	-7,030.9	7,270.5	7,260.6	9.85	738.167	
1,377.9	1,377.5	2,268.3	2,222.9	3.0	7.6	-131.84	-1,578.8	-7,027.7	7,265.1	7,254.8	10.25	708.498	
1,400.0	1,399.5	2,300.0	2,253.3	3.0	7.8	-131.82	-1,570.3	-7,025.9	7,264.0	7,253.5	10.45	695.115	
1,476.4	1,475.3	2,335.1	2,287.1	3.2	8.0	-131.82	-1,560.8	-7,024.0	7,260.9	7,250.1	10.79	672.863	
1,500.0	1,498.7	2,366.6	2,317.4	3.3	8.2	-131.79	-1,552.2	-7,022.3	7,260.3	7,249.3	11.00	660.236	
1,574.8	1,572.6	2,422.5	2,370.9	3.5	8.5	-131.74	-1,536.7	-7,019.3	7,259.2	7,247.7	11.45	633.777	
1,591.6	1,589.2	2,433.2	2,381.2	3.5	8.5	-131.73	-1,533.7	-7,018.8	7,259.1	7,247.6	11.55	628.630	
1,600.0	1,597.5	2,438.6	2,386.3	3.5	8.5	-131.72	-1,532.2	-7,018.5	7,259.1	7,247.5	11.59	626.088	
1,673.2	1,669.4	2,484.1	2,429.9	3.7	8.8	-131.66	-1,519.1	-7,016.4	7,260.1	7,248.1	12.01	604.614	
1,700.1	1,695.8	2,500.3	2,445.5	3.8	8.9	-131.63	-1,514.6	-7,015.7	7,260.8	7,248.6	12.15	597.374	
1,771.6	1,765.7	2,772.1	2,705.7	4.1	10.3	-131.40	-1,437.6	-7,000.7	7,262.6	7,248.9	13.74	528.571	
1,800.0	1,793.4	2,791.0	2,723.7	4.2	10.4	-131.38	-1,432.1	-6,999.4	7,262.8	7,248.8	13.92	521.796	
1,870.1	1,862.0	2,825.1	2,756.3	4.4	10.6	-131.35	-1,422.4	-6,997.1	7,263.3	7,249.0	14.30	508.093	
1,900.0	1,891.3	2,839.4	2,770.0	4.5	10.7	-131.34	-1,418.4	-6,996.1	7,263.6	7,249.2	14.45	502.544	
1,968.5	1,958.3	2,954.0	2,879.7	4.8	11.3	-131.24	-1,386.3	-6,988.6	7,264.3	7,249.1	15.24	476.604	
2,000.0	1,989.1	2,987.6	2,911.7	4.9	11.5	-131.21	-1,376.1	-6,986.3	7,264.4	7,248.9	15.52	468.004	
2,066.9	2,054.5	3,035.0	2,956.7	5.1	11.8	-131.16	-1,361.7	-6,983.4	7,265.0	7,249.0	15.99	454.228	
2,100.0	2,086.9	3,035.0	2,956.7	5.3	11.8	-131.16	-1,361.7	-6,983.4	7,265.4	7,249.3	16.10	451.234	
2,165.3	2,150.8	3,058.8	2,979.5	5.5	11.9	-131.14	-1,354.6	-6,982.1	7,266.4	7,250.0	16.44	442.035	
2,200.0	2,184.7	3,073.8	2,993.7	5.6	12.0	-131.12	-1,350.3	-6,981.3	7,267.1	7,250.5	16.63	437.015	
2,263.8	2,247.1	3,117.0	3,035.2	5.9	12.2	-131.09	-1,338.2	-6,979.1	7,268.7	7,251.6	17.06	425.966	
2,300.0	2,282.5	3,117.0	3,035.2	6.0	12.2	-131.09	-1,338.2	-6,979.1	7,269.6	7,252.5	17.19	423.002	
2,362.2	2,343.3	3,210.6	3,125.2	6.3	12.7	-131.02	-1,313.0	-6,974.2	7,271.3	7,253.5	17.85	407.336	
2,400.0	2,380.3	3,281.0	3,192.9	6.5	13.0	-130.97	-1,294.3	-6,970.1	7,272.1	7,253.8	18.32	396.895	
2,460.6	2,439.6	3,320.7	3,231.1	6.7	13.2	-130.94	-1,283.6	-6,967.8	7,273.4	7,254.7	18.73	388.295	
2,500.0	2,478.1	3,341.6	3,251.1	6.9	13.4	-130.92	-1,277.9	-6,966.7	7,274.4	7,255.4	18.97	383.409	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 usft
Survey Program: 137-MWD													Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
2,559.0	2,535.9	3,403.3	3,310.4	7.1	13.7	-130.87	-1,260.8	-6,963.6	7,276.0	7,256.5	19.49	373.332			
2,600.0	2,575.9	3,467.7	3,372.3	7.3	14.0	-130.82	-1,243.3	-6,960.0	7,277.0	7,257.0	19.95	364.672			
2,657.5	2,632.2	3,672.7	3,568.6	7.5	15.1	-130.65	-1,185.9	-6,946.7	7,277.6	7,256.4	21.22	343.005			
2,700.0	2,673.8	3,710.2	3,604.3	7.7	15.4	-130.61	-1,174.9	-6,944.0	7,277.7	7,256.2	21.57	337.399			
2,755.9	2,728.4	3,751.8	3,644.0	7.9	15.6	-130.57	-1,162.5	-6,941.1	7,278.0	7,256.0	22.00	330.865			
2,800.0	2,771.6	3,793.6	3,683.7	8.1	15.8	-130.53	-1,149.9	-6,938.4	7,278.2	7,255.8	22.39	325.137			
2,854.3	2,824.7	3,858.9	3,745.7	8.3	16.2	-130.47	-1,130.0	-6,934.0	7,278.4	7,255.5	22.95	317.193			
2,900.0	2,869.4	3,903.1	3,787.6	8.5	16.5	-130.42	-1,116.2	-6,931.0	7,278.6	7,255.3	23.37	311.496			
2,952.7	2,921.0	3,935.0	3,817.8	8.8	16.7	-130.38	-1,106.0	-6,929.0	7,278.9	7,255.2	23.74	306.573			
3,000.0	2,967.2	3,961.1	3,842.4	9.0	16.8	-130.35	-1,097.7	-6,927.4	7,279.3	7,255.2	24.06	302.568			
3,051.2	3,017.3	3,981.0	3,861.4	9.2	17.0	-130.33	-1,091.6	-6,926.2	7,279.9	7,255.5	24.35	298.908			
3,100.0	3,065.0	4,098.0	3,972.8	9.4	17.6	-130.22	-1,056.6	-6,919.1	7,280.7	7,255.6	25.17	289.239			
3,149.6	3,113.5	4,098.0	3,972.8	9.6	17.6	-130.22	-1,056.6	-6,919.1	7,281.2	7,255.8	25.35	287.191			
3,200.0	3,162.8	4,138.5	4,011.2	9.8	17.9	-130.17	-1,044.0	-6,916.5	7,281.6	7,255.8	25.77	282.567			
3,248.0	3,209.8	4,180.0	4,050.5	10.0	18.1	-130.13	-1,030.9	-6,914.4	7,282.5	7,256.3	26.18	278.135			
3,300.0	3,260.6	4,180.0	4,050.5	10.2	18.1	-130.13	-1,030.9	-6,914.4	7,283.4	7,257.0	26.37	276.162			
3,346.4	3,306.1	4,183.4	4,053.7	10.5	18.1	-130.12	-1,029.9	-6,914.3	7,284.6	7,258.0	26.56	274.231			
3,400.0	3,358.5	4,275.9	4,141.7	10.7	18.7	-130.02	-1,001.3	-6,909.9	7,285.9	7,258.6	27.28	267.124			
3,444.9	3,402.3	4,343.0	4,205.6	10.9	19.0	-129.96	-981.4	-6,906.3	7,286.8	7,259.0	27.80	262.116			
3,500.0	3,456.3	4,376.3	4,237.5	11.1	19.2	-129.93	-971.8	-6,904.4	7,288.0	7,259.8	28.18	258.643			
3,543.3	3,498.6	4,402.1	4,262.0	11.3	19.3	-129.90	-964.4	-6,903.1	7,289.0	7,260.5	28.47	256.002			
3,600.0	3,554.1	4,507.0	4,362.5	11.5	19.9	-129.81	-934.5	-6,897.2	7,290.2	7,261.0	29.23	249.406			
3,641.7	3,594.9	4,507.0	4,362.5	11.7	19.9	-129.81	-934.5	-6,897.2	7,291.1	7,261.7	29.39	248.120			
3,700.0	3,651.9	4,549.6	4,403.3	12.0	20.1	-129.78	-922.4	-6,894.8	7,292.4	7,262.6	29.82	244.511			
3,740.1	3,691.2	4,589.0	4,441.0	12.2	20.4	-129.74	-911.4	-6,892.9	7,293.6	7,263.4	30.18	241.676			
3,800.0	3,749.7	4,589.0	4,441.0	12.4	20.4	-129.74	-911.4	-6,892.9	7,295.4	7,265.0	30.40	239.964			
3,838.6	3,787.4	4,619.6	4,470.5	12.6	20.5	-129.72	-902.9	-6,891.5	7,296.8	7,266.1	30.70	237.672			
3,900.0	3,847.5	4,670.0	4,518.9	12.9	20.8	-129.68	-889.3	-6,889.2	7,299.0	7,267.8	31.18	234.054			
3,937.0	3,883.7	4,696.8	4,544.7	13.0	20.9	-129.66	-882.2	-6,888.0	7,300.3	7,268.9	31.46	232.070			
4,000.0	3,945.3	4,726.6	4,573.4	13.3	21.1	-129.64	-874.2	-6,886.8	7,302.9	7,271.0	31.84	229.348			
4,035.4	3,980.0	4,752.0	4,597.8	13.5	21.2	-129.62	-867.4	-6,885.9	7,304.5	7,272.4	32.10	227.539			
4,060.0	4,004.0	4,752.0	4,597.8	13.6	21.2	-129.62	-867.4	-6,885.9	7,305.6	7,273.4	32.19	226.924			
4,100.0	4,043.2	4,790.6	4,635.0	13.7	21.4	-129.61	-857.3	-6,884.5	7,307.3	7,274.8	32.52	224.686			
4,133.8	4,076.5	4,818.9	4,662.4	13.8	21.5	-129.61	-850.1	-6,883.5	7,308.5	7,275.8	32.76	223.089			
4,200.0	4,141.6	4,881.2	4,722.9	14.0	21.8	-129.59	-835.4	-6,881.0	7,310.2	7,277.0	33.23	219.959			
4,232.3	4,173.5	4,912.9	4,753.8	14.1	21.9	-129.58	-828.6	-6,879.7	7,310.7	7,277.2	33.46	218.504			
4,300.0	4,240.6	5,021.1	4,859.5	14.3	22.4	-129.50	-806.2	-6,874.5	7,310.7	7,276.6	34.09	214.477			
4,330.7	4,271.1	5,055.8	4,893.5	14.4	22.6	-129.47	-799.0	-6,872.7	7,310.3	7,276.0	34.30	213.100			
4,400.0	4,340.0	5,102.1	4,938.7	14.5	22.8	-129.40	-789.4	-6,870.4	7,308.6	7,274.0	34.66	210.891			
4,429.1	4,369.0	5,115.8	4,952.1	14.6	22.8	-129.37	-786.6	-6,869.7	7,307.7	7,273.0	34.77	210.175			
4,500.0	4,439.7	5,161.0	4,996.4	14.8	23.0	-129.28	-778.0	-6,867.6	7,305.0	7,269.9	35.09	208.167			
4,527.5	4,467.2	5,161.0	4,996.4	14.8	23.0	-129.26	-778.0	-6,867.6	7,303.7	7,268.6	35.14	207.860			
4,600.0	4,539.7	5,190.4	5,025.3	14.9	23.1	-129.17	-772.7	-6,866.4	7,299.9	7,264.5	35.36	206.446			
4,626.0	4,565.6	5,200.6	5,035.3	15.0	23.1	-129.14	-771.0	-6,866.0	7,298.3	7,262.9	35.43	205.985			
4,660.2	4,599.8	5,214.0	5,048.5	15.0	23.2	-100.36	-768.9	-6,865.5	7,296.2	7,268.6	27.56	264.779			
4,700.0	4,639.6	5,242.0	5,076.2	15.0	23.3	-100.33	-764.6	-6,864.5	7,293.6	7,266.0	27.68	263.477			
4,724.4	4,664.0	5,242.0	5,076.2	15.1	23.3	-100.33	-764.6	-6,864.5	7,292.1	7,264.4	27.72	263.018			
4,800.0	4,739.6	5,273.9	5,107.8	15.2	23.4	-100.29	-760.2	-6,863.5	7,287.7	7,259.8	27.92	260.993			
4,822.8	4,762.5	5,284.6	5,118.4	15.2	23.4	-100.28	-758.7	-6,863.1	7,286.5	7,258.5	27.99	260.366			
4,900.0	4,839.6	5,324.0	5,157.5	15.3	23.5	-100.25	-753.7	-6,862.0	7,282.6	7,254.4	28.20	258.206			
4,921.2	4,860.9	5,324.0	5,157.5	15.4	23.5	-100.25	-753.7	-6,862.0	7,281.6	7,253.4	28.24	257.827			
5,000.0	4,939.6	5,359.6	5,192.8	15.5	23.6	-100.21	-749.5	-6,861.2	7,278.2	7,249.8	28.45	255.821			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 137-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,019.7	4,959.3	5,367.2	5,200.3	15.5	23.6	-100.21	-748.7	-6,861.1	7,277.5	7,249.0	28.50	255.347	
5,100.0	5,039.6	5,406.0	5,239.0	15.6	23.8	-100.18	-744.8	-6,860.5	7,274.7	7,246.0	28.72	253.301	
5,118.1	5,057.7	5,406.0	5,239.0	15.7	23.8	-100.18	-744.8	-6,860.5	7,274.2	7,245.4	28.75	252.994	
5,200.0	5,139.6	5,439.9	5,272.7	15.8	23.8	-100.16	-741.9	-6,860.1	7,272.1	7,243.1	28.96	251.125	
5,216.5	5,156.2	5,446.9	5,279.7	15.8	23.8	-100.15	-741.4	-6,860.0	7,271.7	7,242.7	29.00	250.746	
5,300.0	5,239.6	5,488.0	5,320.7	15.9	23.9	-100.13	-738.9	-6,859.7	7,270.2	7,240.9	29.22	248.775	
5,314.9	5,254.6	5,488.0	5,320.7	16.0	23.9	-100.13	-738.9	-6,859.7	7,269.9	7,240.7	29.25	248.535	
5,400.0	5,339.6	5,534.6	5,367.3	16.1	24.0	-100.12	-737.1	-6,859.6	7,269.0	7,239.5	29.48	246.576	
5,413.4	5,353.0	5,541.7	5,374.4	16.1	24.0	-100.12	-736.8	-6,859.5	7,268.9	7,239.4	29.52	246.273	
5,500.0	5,439.6	5,686.4	5,519.0	16.3	24.2	-100.10	-734.5	-6,858.3	7,268.0	7,238.1	29.90	243.046	
5,511.8	5,451.4	5,695.7	5,528.4	16.3	24.2	-100.10	-734.4	-6,858.2	7,267.8	7,237.9	29.94	242.742	
5,600.0	5,539.6	5,755.7	5,588.3	16.4	24.3	-100.10	-734.1	-6,857.4	7,266.6	7,236.4	30.20	240.627	
5,610.2	5,549.9	5,761.3	5,593.9	16.4	24.3	-100.10	-734.1	-6,857.4	7,266.5	7,236.3	30.23	240.402	
5,700.0	5,639.6	5,815.0	5,647.7	16.6	24.3	-100.10	-733.8	-6,857.0	7,265.8	7,235.3	30.48	238.402	
5,708.6	5,648.3	5,815.7	5,648.3	16.6	24.3	-100.10	-733.8	-6,857.0	7,265.7	7,235.3	30.49	238.266	
5,800.0	5,739.6	5,921.7	5,754.3	16.7	24.4	-100.10	-733.4	-6,856.4	7,265.2	7,234.4	30.83	235.660	
5,807.1	5,746.7	5,928.1	5,760.8	16.8	24.4	-100.10	-733.4	-6,856.4	7,265.2	7,234.3	30.85	235.480	
5,900.0	5,839.6	6,001.7	5,834.3	16.9	24.5	-100.09	-733.0	-6,856.0	7,264.6	7,233.5	31.14	233.274	
5,905.5	5,845.1	6,005.1	5,837.8	16.9	24.5	-100.09	-733.0	-6,856.0	7,264.6	7,233.5	31.16	233.155	
6,000.0	5,939.6	6,074.9	5,907.6	17.1	24.6	-100.09	-732.3	-6,856.1	7,264.5	7,233.1	31.44	231.024	
6,003.9	5,943.6	6,082.7	5,915.4	17.1	24.6	-100.09	-732.2	-6,856.1	7,264.5	7,233.0	31.46	230.881	
6,059.2	5,998.8	6,160.8	5,993.4	17.2	24.7	-100.08	-731.6	-6,856.0	7,264.3	7,232.6	31.69	229.222	
6,100.0	6,039.6	6,191.0	6,023.6	17.2	24.7	-10.10	-731.4	-6,855.9	7,263.0	7,223.6	39.43	184.220	
6,102.3	6,042.0	6,192.7	6,025.4	17.2	24.8	-10.10	-731.4	-6,855.9	7,262.9	7,223.5	39.42	184.242	
6,150.0	6,089.4	6,223.0	6,055.6	17.3	24.8	-10.17	-731.0	-6,855.9	7,258.5	7,219.2	39.21	185.098	
6,200.0	6,138.7	6,258.8	6,091.5	17.3	24.8	-10.28	-730.6	-6,856.0	7,250.6	7,211.7	38.83	186.727	
6,200.8	6,139.5	6,259.3	6,092.0	17.3	24.8	-10.29	-730.6	-6,856.0	7,250.4	7,211.6	38.82	186.759	
6,250.0	6,187.4	6,290.1	6,122.7	17.3	24.9	-10.46	-730.2	-6,856.2	7,239.4	7,201.2	38.26	189.205	
6,299.2	6,234.4	6,329.2	6,161.8	17.4	24.9	-10.69	-729.6	-6,856.5	7,225.3	7,187.8	37.55	192.433	
6,300.0	6,235.1	6,330.0	6,162.6	17.4	24.9	-10.69	-729.6	-6,856.5	7,225.1	7,187.5	37.53	192.492	
6,350.0	6,281.7	6,377.4	6,210.0	17.4	25.0	-10.99	-728.8	-6,856.9	7,207.5	7,170.8	36.65	196.662	
6,397.6	6,324.8	6,450.7	6,283.3	17.3	25.1	-11.37	-727.5	-6,857.4	7,187.7	7,152.0	35.69	201.396	
6,400.0	6,326.9	6,454.7	6,287.3	17.3	25.1	-11.39	-727.5	-6,857.4	7,186.6	7,151.0	35.64	201.656	
6,450.0	6,370.5	6,551.3	6,383.8	17.3	25.2	-11.92	-726.2	-6,857.4	7,162.5	7,128.0	34.49	207.648	
6,496.0	6,409.1	6,614.6	6,447.2	17.3	25.3	-12.48	-725.0	-6,857.1	7,137.4	7,104.1	33.29	214.418	
6,500.0	6,412.3	6,619.9	6,452.5	17.3	25.3	-12.53	-724.9	-6,857.0	7,135.1	7,101.9	33.18	215.055	
6,550.0	6,452.1	6,679.3	6,511.9	17.3	25.4	-13.28	-723.8	-6,856.5	7,104.9	7,073.1	31.73	223.940	
6,594.5	6,485.6	6,714.0	6,546.6	17.3	25.4	-14.07	-723.2	-6,856.2	7,075.7	7,045.3	30.33	233.318	
6,600.0	6,489.7	6,714.0	6,546.6	17.3	25.4	-14.17	-723.2	-6,856.2	7,071.9	7,041.8	30.14	234.620	
6,650.0	6,524.9	6,714.0	6,546.6	17.2	25.4	-15.18	-723.2	-6,856.2	7,036.6	7,008.2	28.44	247.390	
6,692.9	6,553.0	6,747.5	6,580.1	17.2	25.5	-16.30	-722.6	-6,855.9	7,004.4	6,977.4	26.99	259.500	
6,700.0	6,557.5	6,749.5	6,582.0	17.2	25.5	-16.50	-722.5	-6,855.9	6,999.0	6,972.2	26.75	261.689	
6,750.0	6,587.4	6,762.7	6,595.3	17.2	25.5	-18.09	-722.3	-6,855.8	6,959.4	6,934.3	25.04	277.953	
6,791.3	6,609.9	6,795.0	6,627.5	17.2	25.5	-19.79	-721.7	-6,855.8	6,925.3	6,901.5	23.73	291.857	
6,800.0	6,614.4	6,795.0	6,627.5	17.2	25.5	-20.16	-721.7	-6,855.8	6,917.9	6,894.5	23.45	294.969	
6,850.0	6,638.4	6,795.0	6,627.5	17.2	25.5	-22.68	-721.7	-6,855.8	6,874.7	6,852.7	22.05	311.733	
6,889.7	6,655.3	6,795.0	6,627.5	17.4	25.5	-25.20	-721.7	-6,855.8	6,839.3	6,818.1	21.23	322.121	
6,900.0	6,659.4	6,795.0	6,627.5	17.5	25.5	-25.95	-721.7	-6,855.8	6,830.1	6,809.0	21.08	323.963	
6,950.0	6,677.1	6,795.0	6,627.5	18.0	25.5	-30.34	-721.7	-6,855.8	6,784.1	6,763.3	20.87	325.021	
6,988.2	6,688.4	6,795.0	6,627.5	18.5	25.5	-34.76	-721.7	-6,855.8	6,748.4	6,726.8	21.52	313.547	
7,000.0	6,691.5	6,795.0	6,627.5	18.7	25.5	-36.38	-721.7	-6,855.8	6,737.2	6,715.3	21.91	307.561	
7,050.0	6,702.5	6,819.4	6,651.9	19.5	25.6	-45.48	-721.3	-6,855.9	6,689.3	6,664.3	24.93	268.329	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 137-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,708.4	6,822.8	6,655.3	20.1	25.6	-54.28	-721.2	-6,855.9	6,653.8	6,625.5	28.32	234.944	
7,100.0	6,710.1	6,823.8	6,656.3	20.4	25.6	-58.11	-721.2	-6,856.0	6,640.8	6,611.0	29.77	223.086	
7,150.0	6,714.2	6,826.3	6,658.8	21.3	25.6	-75.30	-721.2	-6,856.0	6,591.9	6,556.5	35.32	186.636	
7,185.0	6,715.0	6,826.8	6,659.4	21.9	25.6	-89.33	-721.2	-6,856.0	6,557.5	6,519.4	38.08	172.216	
7,185.6	6,715.0	6,826.8	6,659.4	21.9	25.6	-89.54	-721.2	-6,856.0	6,557.0	6,518.9	38.11	172.075	
7,200.0	6,715.0	6,826.9	6,659.4	22.2	25.6	-89.55	-721.2	-6,856.0	6,542.8	6,504.4	38.38	170.462	
7,283.4	6,714.8	6,827.1	6,659.6	23.9	25.6	-89.55	-721.2	-6,856.0	6,460.9	6,420.9	40.06	161.274	
7,300.0	6,714.8	6,827.1	6,659.7	24.2	25.6	-89.56	-721.2	-6,856.0	6,444.7	6,404.3	40.39	159.542	
7,381.9	6,714.6	6,827.3	6,659.9	26.0	25.6	-89.56	-721.2	-6,856.0	6,364.4	6,322.3	42.16	150.970	
7,400.0	6,714.6	6,827.4	6,659.9	26.4	25.6	-89.57	-721.2	-6,856.0	6,346.7	6,304.1	42.55	149.169	
7,480.3	6,714.4	6,827.6	6,660.1	28.2	25.6	-89.58	-721.2	-6,856.0	6,268.0	6,223.6	44.37	141.273	
7,500.0	6,714.4	6,827.6	6,660.2	28.7	25.6	-89.58	-721.2	-6,856.0	6,248.7	6,203.9	44.81	139.434	
7,578.7	6,714.2	6,827.8	6,660.3	30.5	25.6	-89.59	-721.2	-6,856.0	6,171.6	6,125.0	46.67	132.237	
7,600.0	6,714.2	6,827.9	6,660.4	31.0	25.6	-89.59	-721.2	-6,856.0	6,150.8	6,103.6	47.17	130.389	
7,677.1	6,714.0	6,828.1	6,660.6	32.9	25.6	-89.60	-721.2	-6,856.0	6,075.3	6,026.3	49.05	123.868	
7,700.0	6,714.0	6,828.1	6,660.7	33.4	25.6	-89.60	-721.2	-6,856.0	6,053.0	6,003.4	49.60	122.032	
7,775.6	6,713.9	6,828.3	6,660.8	35.3	25.6	-89.61	-721.2	-6,856.0	5,979.1	5,927.6	51.48	116.144	
7,800.0	6,713.8	6,828.4	6,660.9	35.9	25.6	-89.61	-721.1	-6,856.0	5,955.2	5,903.1	52.09	114.332	
7,874.0	6,713.7	6,828.6	6,661.1	37.8	25.6	-89.62	-721.1	-6,856.0	5,882.9	5,828.9	53.96	109.024	
7,900.0	6,713.6	6,828.6	6,661.2	38.4	25.6	-89.62	-721.1	-6,856.0	5,857.5	5,802.9	54.62	107.246	
7,972.4	6,713.5	6,828.8	6,661.4	40.3	25.6	-89.63	-721.1	-6,856.0	5,786.8	5,730.3	56.48	102.462	
8,000.0	6,713.4	6,828.9	6,661.4	41.0	25.6	-89.63	-721.1	-6,856.0	5,759.9	5,702.7	57.19	100.723	
8,070.8	6,713.3	6,829.1	6,661.6	42.8	25.6	-89.64	-721.1	-6,856.0	5,690.8	5,631.7	59.03	96.411	
8,100.0	6,713.2	6,829.1	6,661.7	43.6	25.6	-89.64	-721.1	-6,856.0	5,662.4	5,602.6	59.78	94.714	
8,169.3	6,713.1	6,829.3	6,661.9	45.4	25.6	-89.65	-721.1	-6,856.0	5,594.8	5,533.2	61.60	90.824	
8,200.0	6,713.0	6,829.4	6,662.0	46.2	25.6	-89.66	-721.1	-6,856.0	5,564.9	5,502.5	62.41	89.172	
8,267.7	6,712.9	6,829.6	6,662.1	48.0	25.6	-89.66	-721.1	-6,856.0	5,499.0	5,434.8	64.20	85.658	
8,300.0	6,712.8	6,829.7	6,662.2	48.8	25.6	-89.67	-721.1	-6,856.0	5,467.6	5,402.5	65.05	84.050	
8,366.1	6,712.7	6,829.9	6,662.4	50.6	25.6	-89.68	-721.1	-6,856.0	5,403.2	5,336.4	66.81	80.872	
8,400.0	6,712.6	6,830.0	6,662.5	51.5	25.6	-89.68	-721.1	-6,856.0	5,370.3	5,302.6	67.71	79.309	
8,464.5	6,712.5	6,830.1	6,662.7	53.2	25.6	-89.69	-721.1	-6,856.0	5,307.6	5,238.1	69.44	76.432	
8,500.0	6,712.4	6,830.2	6,662.8	54.1	25.6	-89.69	-721.1	-6,856.0	5,273.2	5,202.8	70.39	74.912	
8,563.0	6,712.3	6,830.4	6,662.9	55.8	25.6	-89.70	-721.1	-6,856.0	5,212.0	5,139.9	72.09	72.303	
8,600.0	6,712.3	6,830.5	6,663.0	56.8	25.6	-89.70	-721.1	-6,856.0	5,176.1	5,103.0	73.08	70.826	
8,661.4	6,712.1	6,830.7	6,663.2	58.5	25.6	-89.71	-721.1	-6,856.0	5,116.6	5,041.8	74.74	68.457	
8,700.0	6,712.1	6,830.8	6,663.3	59.5	25.6	-89.72	-721.1	-6,856.0	5,079.2	5,003.4	75.78	67.022	
8,759.8	6,711.9	6,831.0	6,663.5	61.1	25.6	-89.73	-721.1	-6,856.0	5,021.3	4,943.9	77.41	64.869	
8,800.0	6,711.9	6,831.1	6,663.6	62.2	25.6	-89.73	-721.1	-6,856.0	4,982.4	4,903.9	78.50	63.473	
8,858.2	6,711.8	6,831.2	6,663.8	63.8	25.6	-89.74	-721.1	-6,856.0	4,926.1	4,846.0	80.08	61.514	
8,900.0	6,711.7	6,831.4	6,663.9	64.9	25.6	-89.74	-721.1	-6,856.0	4,885.7	4,804.5	81.22	60.157	
8,956.7	6,711.6	6,831.5	6,664.1	66.5	25.6	-89.75	-721.1	-6,856.0	4,831.0	4,748.2	82.76	58.372	
9,000.0	6,711.5	6,831.7	6,664.2	67.6	25.6	-89.76	-721.1	-6,856.0	4,789.2	4,705.2	83.94	57.052	
9,055.1	6,711.4	6,831.8	6,664.4	69.1	25.6	-89.76	-721.1	-6,856.0	4,736.0	4,650.6	85.45	55.424	
9,100.0	6,711.3	6,831.9	6,664.5	70.4	25.6	-89.77	-721.1	-6,856.0	4,692.8	4,606.1	86.68	54.140	
9,153.5	6,711.2	6,832.1	6,664.6	71.8	25.6	-89.78	-721.1	-6,856.0	4,641.2	4,553.1	88.15	52.654	
9,200.0	6,711.1	6,832.2	6,664.8	73.1	25.6	-89.78	-721.1	-6,856.0	4,596.5	4,507.1	89.42	51.404	
9,251.9	6,711.0	6,832.4	6,664.9	74.5	25.6	-89.79	-721.1	-6,856.0	4,546.6	4,455.7	90.85	50.047	
9,300.0	6,710.9	6,832.5	6,665.1	75.8	25.6	-89.80	-721.1	-6,856.0	4,500.5	4,408.3	92.17	48.830	
9,350.4	6,710.8	6,832.7	6,665.2	77.2	25.6	-89.80	-721.1	-6,856.0	4,452.1	4,358.6	93.55	47.590	
9,400.0	6,710.7	6,832.8	6,665.4	78.6	25.6	-89.81	-721.1	-6,856.0	4,404.5	4,309.6	94.92	46.405	
9,448.8	6,710.6	6,833.0	6,665.5	79.9	25.6	-89.82	-721.1	-6,856.0	4,357.8	4,261.6	96.26	45.271	
9,500.0	6,710.5	6,833.2	6,665.7	81.3	25.6	-89.82	-721.1	-6,856.0	4,308.8	4,211.2	97.67	44.116	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 137-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	6,833.3	6,665.8	82.6	25.6	-89.83	-721.1	-6,856.0	4,263.7	4,164.7	98.97	43.079	
9,600.0	6,710.3	6,833.5	6,666.0	84.1	25.6	-89.84	-721.1	-6,856.0	4,213.3	4,112.9	100.43	41.953	
9,645.6	6,710.2	6,833.6	6,666.2	85.3	25.6	-89.84	-721.1	-6,856.0	4,169.8	4,068.1	101.69	41.004	
9,700.0	6,710.1	6,833.8	6,666.3	86.8	25.6	-89.85	-721.1	-6,856.0	4,118.0	4,014.8	103.19	39.906	
9,744.1	6,710.0	6,833.9	6,666.5	88.1	25.6	-89.86	-721.1	-6,856.0	4,076.1	3,971.7	104.41	39.039	
9,800.0	6,709.9	6,834.1	6,666.6	89.6	25.6	-89.87	-721.1	-6,856.0	4,022.9	3,917.0	105.96	37.967	
9,842.5	6,709.9	6,834.2	6,666.8	90.8	25.6	-89.87	-721.1	-6,856.0	3,982.6	3,875.5	107.13	37.174	
9,900.0	6,709.7	6,834.4	6,667.0	92.4	25.6	-89.88	-721.1	-6,856.0	3,928.1	3,819.4	108.73	36.129	
9,940.9	6,709.7	6,834.6	6,667.1	93.5	25.6	-89.89	-721.1	-6,856.0	3,889.4	3,779.5	109.86	35.403	
10,000.0	6,709.6	6,834.8	6,667.3	95.1	25.6	-89.89	-721.1	-6,856.0	3,833.5	3,722.0	111.50	34.382	
10,039.3	6,709.5	6,834.9	6,667.4	96.2	25.6	-89.90	-721.1	-6,856.0	3,796.4	3,683.8	112.59	33.719	
10,100.0	6,709.4	6,835.1	6,667.6	97.9	25.6	-89.91	-721.1	-6,856.0	3,739.2	3,625.0	114.27	32.723	
10,137.8	6,709.3	6,835.2	6,667.8	98.9	25.6	-89.91	-721.1	-6,856.0	3,703.7	3,588.4	115.32	32.117	
10,200.0	6,709.2	6,835.4	6,668.0	100.7	25.6	-89.92	-721.1	-6,856.0	3,645.3	3,528.2	117.05	31.144	
10,236.2	6,709.1	6,835.5	6,668.1	101.7	25.6	-89.93	-721.1	-6,856.0	3,611.3	3,493.3	118.05	30.591	
10,300.0	6,709.0	6,835.8	6,668.3	103.4	25.6	-89.94	-721.1	-6,856.0	3,551.6	3,431.8	119.82	29.640	
10,334.6	6,708.9	6,835.9	6,668.4	104.4	25.6	-89.94	-721.1	-6,856.0	3,519.3	3,398.5	120.79	29.137	
10,400.0	6,708.8	6,836.1	6,668.6	106.2	25.6	-89.95	-721.0	-6,856.0	3,458.3	3,335.7	122.60	28.208	
10,433.0	6,708.7	6,836.2	6,668.8	107.1	25.6	-89.96	-721.0	-6,856.0	3,427.5	3,304.0	123.52	27.749	
10,500.0	6,708.6	6,836.5	6,669.0	109.0	25.6	-89.97	-721.0	-6,856.0	3,365.4	3,240.0	125.38	26.841	
10,531.5	6,708.5	6,836.6	6,669.1	109.9	25.6	-89.98	-721.0	-6,856.0	3,336.2	3,210.0	126.26	26.424	
10,600.0	6,708.4	6,836.8	6,669.3	111.8	25.6	-89.99	-721.0	-6,856.0	3,272.9	3,144.7	128.17	25.536	
10,629.9	6,708.4	6,836.9	6,669.4	112.6	25.6	-89.99	-721.0	-6,856.0	3,245.3	3,116.3	129.00	25.158	
10,700.0	6,708.2	6,837.2	6,669.7	114.6	25.6	-90.00	-721.0	-6,856.0	3,180.8	3,049.9	130.95	24.291	
10,728.3	6,708.2	6,837.3	6,669.8	115.3	25.6	-90.01	-721.0	-6,856.0	3,154.9	3,023.1	131.74	23.948	
10,800.0	6,708.0	6,837.5	6,670.1	117.3	25.6	-90.02	-721.0	-6,856.0	3,089.3	2,955.6	133.74	23.100	
10,826.7	6,708.0	6,837.6	6,670.2	118.1	25.6	-90.02	-721.0	-6,856.0	3,064.9	2,930.4	134.48	22.791	
10,900.0	6,707.8	6,837.9	6,670.4	120.1	25.6	-90.03	-721.0	-6,856.0	2,998.3	2,861.8	136.52	21.962	
10,925.2	6,707.8	6,838.0	6,670.5	120.8	25.6	-90.04	-721.0	-6,856.0	2,975.5	2,838.2	137.22	21.683	
11,000.0	6,707.6	6,838.3	6,670.8	122.9	25.6	-90.05	-721.0	-6,856.0	2,907.9	2,768.6	139.31	20.873	
11,023.6	6,707.6	6,838.3	6,670.9	123.6	25.6	-90.06	-721.0	-6,856.0	2,886.6	2,746.7	139.97	20.623	
11,100.0	6,707.5	6,838.6	6,671.2	125.7	25.6	-90.07	-721.0	-6,856.1	2,818.1	2,676.0	142.10	19.832	
11,122.0	6,707.4	6,838.7	6,671.3	126.3	25.6	-90.07	-721.0	-6,856.1	2,798.4	2,655.7	142.71	19.609	
11,200.0	6,707.3	6,839.0	6,671.5	128.5	25.6	-90.09	-721.0	-6,856.1	2,729.0	2,584.2	144.89	18.835	
11,220.4	6,707.2	6,839.1	6,671.6	129.0	25.6	-90.09	-721.0	-6,856.1	2,710.9	2,565.5	145.46	18.637	
11,300.0	6,707.1	6,839.4	6,671.9	131.3	25.6	-90.10	-721.0	-6,856.1	2,640.8	2,493.1	147.68	17.882	
11,318.9	6,707.0	6,839.5	6,672.0	131.8	25.6	-90.11	-721.0	-6,856.1	2,624.2	2,476.0	148.21	17.706	
11,400.0	6,706.9	6,839.8	6,672.3	134.0	25.6	-90.12	-721.0	-6,856.1	2,553.4	2,402.9	150.47	16.969	
11,417.3	6,706.9	6,839.9	6,672.4	134.5	25.6	-90.12	-721.0	-6,856.1	2,538.3	2,387.4	150.96	16.815	
11,500.0	6,706.7	6,840.2	6,672.7	136.8	25.6	-90.14	-721.0	-6,856.1	2,466.9	2,313.6	153.27	16.096	
11,515.7	6,706.7	6,840.2	6,672.8	137.3	25.6	-90.14	-721.0	-6,856.1	2,453.4	2,299.7	153.71	15.962	
11,600.0	6,706.5	6,840.6	6,673.1	139.6	25.6	-90.16	-721.0	-6,856.1	2,381.5	2,225.4	156.06	15.260	
11,614.1	6,706.5	6,840.6	6,673.2	140.0	25.6	-90.16	-721.0	-6,856.1	2,369.5	2,213.1	156.46	15.145	
11,700.0	6,706.3	6,841.0	6,673.5	142.4	25.6	-90.17	-721.0	-6,856.1	2,297.3	2,138.4	158.85	14.462	
11,712.6	6,706.3	6,841.0	6,673.6	142.8	25.6	-90.18	-721.0	-6,856.1	2,286.8	2,127.6	159.21	14.364	
11,800.0	6,706.1	6,841.4	6,673.9	145.2	25.6	-90.19	-721.0	-6,856.1	2,214.4	2,052.7	161.65	13.699	
11,811.0	6,706.1	6,841.4	6,674.0	145.5	25.6	-90.19	-721.0	-6,856.1	2,205.4	2,043.4	161.96	13.617	
11,900.0	6,705.9	6,841.8	6,674.4	148.0	25.6	-90.21	-721.0	-6,856.1	2,133.0	1,968.5	164.45	12.971	
11,909.4	6,705.9	6,841.9	6,674.4	148.3	25.6	-90.21	-721.0	-6,856.1	2,125.4	1,960.7	164.71	12.904	
12,000.0	6,705.8	6,842.2	6,674.8	150.8	25.6	-90.23	-721.0	-6,856.1	2,053.2	1,885.9	167.24	12.277	
12,007.8	6,705.7	6,842.3	6,674.8	151.0	25.6	-90.23	-721.0	-6,856.1	2,047.0	1,879.5	167.46	12.224	
12,100.0	6,705.6	6,842.7	6,675.2	153.6	25.6	-90.25	-721.0	-6,856.1	1,975.2	1,805.2	170.04	11.616	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 137-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,106.3	6,705.6	6,842.7	6,675.2	153.8	25.6	-90.25	-721.0	-6,856.1	1,970.4	1,800.2	170.21	11.576		
12,200.0	6,705.4	6,843.1	6,675.6	156.4	25.6	-90.27	-721.0	-6,856.1	1,899.3	1,726.5	172.84	10.989		
12,204.7	6,705.4	6,843.1	6,675.7	156.5	25.6	-90.27	-721.0	-6,856.1	1,895.8	1,722.8	172.97	10.960		
12,300.0	6,705.2	6,843.5	6,676.1	159.2	25.6	-90.29	-721.0	-6,856.1	1,825.8	1,650.1	175.64	10.395		
12,303.1	6,705.2	6,843.5	6,676.1	159.3	25.6	-90.29	-721.0	-6,856.1	1,823.5	1,647.8	175.72	10.377		
12,400.0	6,705.0	6,844.0	6,676.5	162.0	25.6	-90.31	-721.0	-6,856.1	1,754.8	1,576.4	178.43	9.835		
12,401.5	6,705.0	6,844.0	6,676.5	162.0	25.6	-90.31	-721.0	-6,856.1	1,753.7	1,575.3	178.48	9.826		
12,500.0	6,704.8	6,844.4	6,677.0	164.8	25.6	-90.33	-721.0	-6,856.1	1,686.8	1,505.6	181.23	9.307		
12,598.4	6,704.6	6,844.9	6,677.4	167.5	25.6	-90.35	-720.9	-6,856.1	1,623.1	1,439.1	183.99	8.822		
12,600.0	6,704.6	6,844.9	6,677.4	167.6	25.6	-90.35	-720.9	-6,856.1	1,622.1	1,438.1	184.03	8.814		
12,696.8	6,704.4	6,845.3	6,677.9	170.3	25.6	-90.37	-720.9	-6,856.1	1,563.0	1,376.3	186.74	8.370		
12,700.0	6,704.4	6,845.4	6,677.9	170.4	25.6	-90.37	-720.9	-6,856.1	1,561.2	1,374.3	186.83	8.356		
12,795.2	6,704.3	6,845.8	6,678.3	173.0	25.6	-90.39	-720.9	-6,856.1	1,507.0	1,317.5	189.50	7.952		
12,800.0	6,704.2	6,845.8	6,678.4	173.2	25.6	-90.39	-720.9	-6,856.1	1,504.4	1,314.8	189.63	7.933		
12,893.7	6,704.1	6,846.3	6,678.8	175.8	25.6	-90.41	-720.9	-6,856.1	1,455.5	1,263.2	192.26	7.570		
12,900.0	6,704.1	6,846.3	6,678.8	176.0	25.6	-90.41	-720.9	-6,856.1	1,452.3	1,259.9	192.43	7.547		
12,992.1	6,703.9	6,846.8	6,679.3	178.5	25.6	-90.44	-720.9	-6,856.1	1,408.9	1,213.9	195.01	7.225		
13,000.0	6,703.9	6,846.8	6,679.3	178.8	25.6	-90.44	-720.9	-6,856.1	1,405.4	1,210.2	195.24	7.199		
13,090.5	6,703.7	6,847.2	6,679.8	181.3	25.6	-90.46	-720.9	-6,856.1	1,367.9	1,170.1	197.77	6.916		
13,100.0	6,703.7	6,847.3	6,679.8	181.6	25.6	-90.46	-720.9	-6,856.1	1,364.2	1,166.2	198.04	6.889		
13,188.9	6,703.5	6,847.7	6,680.3	184.0	25.6	-90.48	-720.9	-6,856.1	1,332.9	1,132.3	200.53	6.647		
13,200.0	6,703.5	6,847.8	6,680.3	184.4	25.6	-90.48	-720.9	-6,856.1	1,329.3	1,128.5	200.84	6.619		
13,287.4	6,703.3	6,848.2	6,680.8	186.8	25.6	-90.50	-720.9	-6,856.1	1,304.3	1,101.1	203.29	6.416		
13,300.0	6,703.3	6,848.3	6,680.8	187.2	25.6	-90.50	-720.9	-6,856.1	1,301.2	1,097.5	203.64	6.390		
13,385.8	6,703.2	6,848.7	6,681.3	189.6	25.6	-90.53	-720.9	-6,856.1	1,282.8	1,076.7	206.05	6.226		
13,400.0	6,703.1	6,848.8	6,681.3	190.0	25.6	-90.53	-720.9	-6,856.1	1,280.3	1,073.8	206.44	6.201		
13,484.2	6,703.0	6,849.2	6,681.8	192.3	25.6	-90.55	-720.9	-6,856.1	1,268.5	1,059.7	208.81	6.075		
13,500.0	6,702.9	6,849.3	6,681.9	192.8	25.6	-90.55	-720.9	-6,856.1	1,266.9	1,057.6	209.25	6.055		
13,582.6	6,702.8	6,849.8	6,682.3	195.1	25.6	-90.57	-720.9	-6,856.1	1,261.7	1,050.2	211.56	5.964		
13,600.0	6,702.8	6,849.9	6,682.4	195.6	25.6	-90.58	-720.9	-6,856.1	1,261.3	1,049.3	212.05	5.948		
13,620.2	6,702.7	6,850.0	6,682.5	196.1	25.6	-90.58	-720.9	-6,856.1	1,261.2	1,048.6	212.62	5.932 CC		
13,681.1	6,702.6	6,850.3	6,682.8	197.8	25.6	-90.60	-720.9	-6,856.1	1,262.6	1,048.3	214.32	5.891 ES		
13,700.0	6,702.6	6,850.4	6,682.9	198.4	25.6	-90.60	-720.9	-6,856.1	1,263.7	1,048.8	214.85	5.882		
13,779.5	6,702.4	6,850.8	6,683.4	200.6	25.6	-90.62	-720.9	-6,856.1	1,271.2	1,054.1	217.08	5.856		
13,800.0	6,702.4	6,850.9	6,683.5	201.2	25.6	-90.63	-720.9	-6,856.1	1,273.9	1,056.3	217.66	5.853 SF		
13,877.9	6,702.2	6,851.4	6,683.9	203.3	25.6	-90.65	-720.9	-6,856.2	1,287.2	1,067.4	219.84	5.855		
13,900.0	6,702.2	6,851.5	6,684.0	204.0	25.6	-90.65	-720.9	-6,856.2	1,291.8	1,071.4	220.46	5.860		
13,976.3	6,702.1	6,851.9	6,684.5	206.1	25.6	-90.67	-720.9	-6,856.2	1,310.5	1,087.9	222.60	5.887		
14,000.0	6,702.0	6,852.1	6,684.6	206.8	25.6	-90.68	-720.9	-6,856.2	1,317.1	1,093.9	223.27	5.899		
14,074.8	6,701.9	6,852.5	6,685.0	208.9	25.6	-90.70	-720.9	-6,856.2	1,340.6	1,115.2	225.36	5.949		
14,100.0	6,701.8	6,852.6	6,685.2	209.6	25.6	-90.70	-720.9	-6,856.2	1,349.4	1,123.3	226.07	5.969		
14,173.2	6,701.7	6,853.1	6,685.6	211.6	25.6	-90.72	-720.9	-6,856.2	1,377.1	1,149.0	228.12	6.037		
14,200.0	6,701.6	6,853.2	6,685.8	212.4	25.6	-90.73	-720.9	-6,856.2	1,388.1	1,159.2	228.87	6.065		
14,271.6	6,701.5	6,853.6	6,686.2	214.4	25.6	-90.75	-720.9	-6,856.2	1,419.5	1,188.6	230.88	6.148		
14,300.0	6,701.4	6,853.8	6,686.3	215.2	25.6	-90.76	-720.9	-6,856.2	1,432.7	1,201.0	231.68	6.184		
14,370.0	6,701.3	6,854.2	6,686.8	217.1	25.6	-90.77	-720.9	-6,856.2	1,467.3	1,233.6	233.64	6.280		
14,400.0	6,701.3	6,854.4	6,686.9	218.0	25.6	-90.78	-720.8	-6,856.2	1,482.8	1,248.3	234.48	6.324		
14,468.5	6,701.1	6,854.8	6,687.4	219.9	25.6	-90.80	-720.8	-6,856.2	1,519.9	1,283.5	236.40	6.429		
14,500.0	6,701.1	6,855.0	6,687.6	220.8	25.6	-90.81	-720.8	-6,856.2	1,537.7	1,300.4	237.29	6.480		
14,566.9	6,701.0	6,855.4	6,688.0	222.6	25.6	-90.83	-720.8	-6,856.2	1,577.0	1,337.8	239.16	6.594		
14,600.0	6,700.9	6,855.6	6,688.2	223.6	25.6	-90.84	-720.8	-6,856.2	1,597.1	1,357.0	240.09	6.652		
14,665.3	6,700.8	6,856.1	6,688.6	225.4	25.6	-90.86	-720.8	-6,856.2	1,637.9	1,396.0	241.93	6.770		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 137-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,856.3	6,688.8	226.4	25.6	-90.87	-720.8	-6,856.2	1,660.3	1,417.4	242.90	6.835	
14,763.7	6,700.6	6,856.7	6,689.2	228.2	25.6	-90.89	-720.8	-6,856.2	1,702.4	1,457.7	244.69	6.958	
14,800.0	6,700.5	6,856.9	6,689.5	229.2	25.6	-90.90	-720.8	-6,856.2	1,727.0	1,481.3	245.70	7.029	
14,862.2	6,700.4	6,857.3	6,689.9	230.9	25.6	-90.92	-720.8	-6,856.2	1,770.0	1,522.6	247.45	7.153	
14,900.0	6,700.3	6,857.6	6,690.1	232.0	25.6	-90.93	-720.8	-6,856.2	1,796.8	1,548.3	248.51	7.230	
14,960.6	6,700.2	6,858.0	6,690.5	233.7	25.6	-90.94	-720.8	-6,856.2	1,840.4	1,590.2	250.21	7.356	
15,000.0	6,700.2	6,858.2	6,690.8	234.8	25.6	-90.96	-720.8	-6,856.2	1,869.3	1,618.0	251.31	7.438	
15,059.0	6,700.0	6,858.6	6,691.2	236.4	25.6	-90.97	-720.8	-6,856.2	1,913.3	1,660.3	252.97	7.563	
15,082.8	6,700.0	6,858.8	6,691.3	237.1	25.6	-90.98	-720.8	-6,856.2	1,931.3	1,677.6	253.64	7.614	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 75-MWDD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-105.53	-1,970.6	-7,092.6	7,361.3				
98.4	98.4	39.1	39.1	0.1	0.0	-105.53	-1,970.7	-7,092.7	7,361.5	7,361.4	0.10	N/A	
100.0	100.0	39.8	39.8	0.1	0.0	-105.53	-1,970.7	-7,092.7	7,361.5	7,361.4	0.10	N/A	
196.8	196.8	94.4	94.4	0.3	0.0	-105.53	-1,971.0	-7,093.1	7,362.3	7,362.0	0.33	N/A	
200.0	200.0	96.6	96.6	0.3	0.0	-105.53	-1,971.0	-7,093.1	7,362.4	7,362.0	0.34	N/A	
295.3	295.3	168.0	168.0	0.5	0.1	-105.53	-1,972.0	-7,093.8	7,363.6	7,363.0	0.62	N/A	
300.0	300.0	168.0	168.0	0.5	0.1	-105.53	-1,972.0	-7,093.8	7,363.7	7,363.0	0.63	N/A	
393.7	393.7	283.7	283.7	0.8	0.3	-105.55	-1,974.2	-7,094.7	7,364.8	7,363.7	1.08	6,804.534	
400.0	400.0	288.1	288.0	0.8	0.3	-105.55	-1,974.3	-7,094.8	7,364.9	7,363.8	1.11	6,661.467	
492.1	492.1	352.0	351.9	1.0	0.5	-105.56	-1,975.7	-7,095.3	7,366.2	7,364.8	1.45	5,091.183	
500.0	500.0	365.9	365.9	1.0	0.5	-105.56	-1,976.0	-7,095.5	7,366.3	7,364.8	1.49	4,931.730	
590.5	590.5	468.9	468.8	1.2	0.7	-105.58	-1,978.2	-7,096.2	7,367.4	7,365.5	1.91	3,853.664	
600.0	600.0	473.4	473.3	1.2	0.7	-105.58	-1,978.3	-7,096.2	7,367.6	7,365.6	1.94	3,793.000	
689.0	689.0	535.0	534.9	1.4	0.9	-105.58	-1,979.5	-7,097.1	7,369.2	7,366.9	2.27	3,246.933	
700.0	700.0	535.0	534.9	1.4	0.9	-105.58	-1,979.5	-7,097.1	7,369.4	7,367.1	2.29	3,211.954	
787.4	787.4	578.9	578.7	1.6	1.0	-105.59	-1,980.3	-7,098.0	7,371.4	7,368.9	2.58	2,854.082	
800.0	800.0	588.2	588.1	1.7	1.0	-105.59	-1,980.4	-7,098.2	7,371.8	7,369.1	2.63	2,802.230	
885.8	885.8	653.6	653.5	1.9	1.1	-105.59	-1,981.5	-7,099.7	7,374.1	7,371.1	2.96	2,490.443	
900.0	900.0	665.3	665.1	1.9	1.1	-105.59	-1,981.7	-7,100.0	7,374.5	7,371.5	3.02	2,443.912	
984.2	984.2	734.6	734.5	2.1	1.3	-105.60	-1,982.4	-7,102.0	7,377.0	7,373.7	3.35	2,199.798	
1,000.0	1,000.0	747.0	746.8	2.1	1.3	-105.60	-1,982.5	-7,102.4	7,377.5	7,374.1	3.42	2,160.319	
1,082.7	1,082.7	820.0	819.8	2.3	1.5	-105.59	-1,983.0	-7,104.7	7,380.2	7,376.4	3.76	1,964.500	
1,100.0	1,100.0	828.0	827.8	2.3	1.5	-105.59	-1,983.0	-7,104.9	7,380.8	7,376.9	3.81	1,935.813	
1,181.1	1,181.1	881.0	880.7	2.5	1.6	-134.27	-1,982.9	-7,106.9	7,384.4	7,380.3	4.12	1,794.355	
1,200.0	1,200.0	892.2	891.9	2.6	1.6	-134.25	-1,982.8	-7,107.4	7,385.6	7,381.4	4.18	1,766.197	
1,279.5	1,279.4	936.3	935.9	2.7	1.7	-134.17	-1,982.0	-7,109.5	7,391.6	7,387.1	4.45	1,659.767	
1,300.0	1,299.8	947.1	946.7	2.8	1.8	-134.14	-1,981.7	-7,110.1	7,393.4	7,388.9	4.52	1,634.942	
1,377.9	1,377.5	992.0	991.6	3.0	1.9	-134.03	-1,980.7	-7,112.6	7,401.6	7,396.8	4.79	1,543.857	
1,400.0	1,399.5	992.0	991.6	3.0	1.9	-133.99	-1,980.7	-7,112.6	7,404.3	7,399.5	4.84	1,528.705	
1,476.4	1,475.3	1,025.2	1,024.7	3.2	1.9	-133.85	-1,979.8	-7,114.7	7,414.7	7,409.6	5.09	1,455.498	
1,500.0	1,498.7	1,033.7	1,033.2	3.3	2.0	-133.80	-1,979.6	-7,115.3	7,418.3	7,413.2	5.17	1,435.624	
1,574.8	1,572.6	1,073.0	1,072.3	3.5	2.1	-133.64	-1,978.7	-7,118.2	7,431.0	7,425.5	5.44	1,366.791	
1,600.0	1,597.5	1,073.0	1,072.3	3.5	2.1	-133.57	-1,978.7	-7,118.2	7,435.6	7,430.1	5.50	1,352.492	
1,673.2	1,669.4	1,073.0	1,072.3	3.7	2.1	-133.35	-1,978.7	-7,118.2	7,450.4	7,444.7	5.69	1,309.247	
1,700.1	1,695.8	1,103.3	1,102.5	3.8	2.1	-133.29	-1,977.9	-7,120.7	7,456.1	7,450.3	5.83	1,279.100	
1,771.6	1,765.7	1,127.1	1,126.2	4.1	2.2	-133.31	-1,977.2	-7,122.8	7,472.1	7,466.0	6.09	1,227.519	
1,800.0	1,793.4	1,155.0	1,154.0	4.2	2.3	-133.33	-1,976.4	-7,125.6	7,478.6	7,472.4	6.23	1,200.315	
1,870.1	1,862.0	1,155.0	1,154.0	4.4	2.3	-133.33	-1,976.4	-7,125.6	7,494.8	7,488.4	6.44	1,163.729	
1,900.0	1,891.3	1,155.0	1,154.0	4.5	2.3	-133.33	-1,976.4	-7,125.6	7,501.9	7,495.4	6.53	1,149.030	
1,968.5	1,958.3	1,155.0	1,154.0	4.8	2.3	-133.33	-1,976.4	-7,125.6	7,518.6	7,511.9	6.74	1,115.419	
2,000.0	1,989.1	1,155.0	1,154.0	4.9	2.3	-133.33	-1,976.4	-7,125.6	7,526.5	7,519.6	6.84	1,100.681	
2,066.9	2,054.5	1,197.0	1,195.7	5.1	2.4	-133.36	-1,975.0	-7,130.4	7,543.0	7,535.9	7.15	1,054.840	
2,100.0	2,086.9	1,203.6	1,202.2	5.3	2.4	-133.36	-1,974.7	-7,131.2	7,551.5	7,544.2	7.27	1,038.473	
2,165.3	2,150.8	1,236.0	1,234.3	5.5	2.5	-133.38	-1,973.7	-7,135.7	7,568.7	7,561.1	7.56	1,000.947	
2,200.0	2,184.7	1,236.0	1,234.3	5.6	2.5	-133.38	-1,973.7	-7,135.7	7,577.8	7,570.2	7.67	987.464	
2,263.8	2,247.1	1,236.0	1,234.3	5.9	2.5	-133.38	-1,973.7	-7,135.7	7,595.1	7,587.2	7.89	963.228	
2,300.0	2,282.5	1,236.0	1,234.3	6.0	2.5	-133.38	-1,973.7	-7,135.7	7,605.1	7,597.1	8.00	950.069	
2,362.2	2,343.3	1,236.0	1,234.3	6.3	2.5	-133.38	-1,973.7	-7,135.7	7,622.6	7,614.4	8.21	928.051	
2,400.0	2,380.3	1,267.8	1,265.7	6.5	2.6	-133.40	-1,972.7	-7,140.5	7,633.2	7,624.8	8.42	906.686	
2,460.6	2,439.6	1,281.9	1,279.6	6.7	2.6	-133.41	-1,972.3	-7,142.7	7,650.8	7,642.1	8.66	883.492	
2,500.0	2,478.1	1,318.0	1,315.2	6.9	2.7	-133.44	-1,971.5	-7,148.8	7,662.5	7,653.7	8.88	862.668	
2,559.0	2,535.9	1,318.0	1,315.2	7.1	2.7	-133.44	-1,971.5	-7,148.8	7,680.0	7,670.9	9.09	845.349	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 75-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,600.0	2,575.9	1,318.0	1,315.2	7.3	2.7	-133.44	-1,971.5	-7,148.8	7,692.3	7,683.1	9.23	833.818		
2,657.5	2,632.2	1,318.0	1,315.2	7.5	2.7	-133.44	-1,971.5	-7,148.8	7,710.0	7,700.6	9.42	818.093		
2,700.0	2,673.8	1,318.0	1,315.2	7.7	2.7	-133.44	-1,971.5	-7,148.8	7,723.3	7,713.8	9.57	806.910		
2,755.9	2,728.4	1,358.2	1,354.7	7.9	2.9	-133.46	-1,970.9	-7,156.1	7,740.8	7,731.0	9.86	784.808		
2,800.0	2,771.6	1,370.8	1,367.1	8.1	2.9	-133.47	-1,970.7	-7,158.5	7,754.9	7,744.9	10.05	771.832		
2,854.3	2,824.7	1,400.0	1,395.7	8.3	3.0	-133.49	-1,970.6	-7,164.1	7,772.5	7,762.2	10.31	754.019		
2,900.0	2,869.4	1,400.0	1,395.7	8.5	3.0	-133.49	-1,970.6	-7,164.1	7,787.4	7,776.9	10.47	743.910		
2,952.7	2,921.0	1,400.0	1,395.7	8.8	3.0	-133.49	-1,970.6	-7,164.1	7,804.9	7,794.3	10.65	732.566		
3,000.0	2,967.2	1,433.2	1,428.2	9.0	3.1	-133.52	-1,970.5	-7,170.7	7,820.7	7,809.8	10.90	717.459		
3,051.2	3,017.3	1,450.5	1,445.2	9.2	3.2	-133.53	-1,970.4	-7,174.3	7,838.0	7,826.8	11.12	704.642		
3,100.0	3,065.0	1,481.0	1,475.0	9.4	3.3	-133.55	-1,970.3	-7,180.7	7,854.7	7,843.3	11.37	690.851		
3,149.6	3,113.5	1,481.0	1,475.0	9.6	3.3	-133.55	-1,970.3	-7,180.7	7,871.8	7,860.2	11.55	681.780		
3,200.0	3,162.8	1,481.0	1,475.0	9.8	3.3	-133.55	-1,970.3	-7,180.7	7,889.4	7,877.7	11.73	672.869		
3,248.0	3,209.8	1,519.2	1,512.3	10.0	3.5	-133.58	-1,970.2	-7,189.1	7,906.3	7,894.3	11.99	659.407		
3,300.0	3,260.6	1,563.0	1,554.9	10.2	3.7	-133.60	-1,970.1	-7,199.0	7,924.9	7,912.6	12.28	645.185		
3,346.4	3,306.1	1,563.0	1,554.9	10.5	3.7	-133.60	-1,970.1	-7,199.0	7,941.5	7,929.0	12.45	637.903		
3,400.0	3,358.5	1,563.0	1,554.9	10.7	3.7	-133.60	-1,970.1	-7,199.0	7,960.9	7,948.2	12.64	629.771		
3,444.9	3,402.3	1,563.0	1,554.9	10.9	3.7	-133.60	-1,970.1	-7,199.0	7,977.4	7,964.6	12.80	623.139		
3,500.0	3,456.3	1,596.5	1,587.5	11.1	3.8	-133.63	-1,969.9	-7,207.0	7,997.7	7,984.6	13.09	611.208		
3,543.3	3,498.6	1,607.6	1,598.3	11.3	3.9	-133.63	-1,969.8	-7,209.7	8,013.9	8,000.6	13.27	603.941		
3,600.0	3,554.1	1,645.0	1,634.4	11.5	4.0	-133.65	-1,969.5	-7,219.2	8,035.4	8,021.9	13.57	592.190		
3,641.7	3,594.9	1,645.0	1,634.4	11.7	4.0	-133.65	-1,969.5	-7,219.2	8,051.3	8,037.6	13.72	586.854		
3,700.0	3,651.9	1,645.0	1,634.4	12.0	4.0	-133.65	-1,969.5	-7,219.2	8,073.7	8,059.8	13.93	579.617		
3,740.1	3,691.2	1,645.0	1,634.4	12.2	4.0	-133.65	-1,969.5	-7,219.2	8,089.4	8,075.3	14.07	574.758		
3,800.0	3,749.7	1,645.0	1,634.4	12.4	4.0	-133.65	-1,969.5	-7,219.2	8,113.0	8,098.8	14.29	567.722		
3,838.6	3,787.4	1,680.6	1,668.7	12.6	4.2	-133.67	-1,969.3	-7,228.7	8,128.2	8,113.7	14.52	559.604		
3,900.0	3,847.5	1,695.0	1,682.6	12.9	4.3	-133.68	-1,969.2	-7,232.7	8,152.8	8,138.0	14.79	551.391		
3,937.0	3,883.7	1,726.0	1,712.3	13.0	4.5	-133.69	-1,969.0	-7,241.4	8,167.9	8,152.9	15.00	544.412		
4,000.0	3,945.3	1,726.0	1,712.3	13.3	4.5	-133.69	-1,969.0	-7,241.4	8,193.5	8,178.3	15.23	537.937		
4,035.4	3,980.0	1,726.0	1,712.3	13.5	4.5	-133.69	-1,969.0	-7,241.4	8,208.1	8,192.8	15.36	534.387		
4,060.0	4,004.0	1,726.0	1,712.3	13.6	4.5	-133.69	-1,969.0	-7,241.4	8,218.3	8,202.9	15.45	531.963		
4,100.0	4,043.2	1,726.0	1,712.3	13.7	4.5	-133.96	-1,969.0	-7,241.4	8,234.9	8,219.3	15.57	528.953		
4,133.8	4,076.5	1,756.0	1,741.0	13.8	4.6	-134.18	-1,968.9	-7,250.1	8,248.5	8,232.8	15.73	524.288		
4,200.0	4,141.6	1,775.6	1,759.7	14.0	4.7	-134.60	-1,968.8	-7,256.0	8,274.9	8,259.0	15.95	518.784		
4,232.3	4,173.5	1,808.0	1,790.6	14.1	4.9	-134.79	-1,968.5	-7,265.9	8,287.6	8,271.5	16.11	514.289		
4,300.0	4,240.6	1,808.0	1,790.6	14.3	4.9	-135.19	-1,968.5	-7,265.9	8,313.5	8,297.2	16.26	511.228		
4,330.7	4,271.1	1,885.1	1,863.9	14.4	5.3	-135.35	-1,967.6	-7,289.6	8,324.9	8,308.4	16.53	503.579		
4,400.0	4,340.0	1,971.0	1,945.8	14.5	5.7	-135.70	-1,966.7	-7,315.5	8,349.5	8,332.6	16.89	494.323		
4,429.1	4,369.0	1,971.0	1,945.8	14.6	5.7	-135.85	-1,966.7	-7,315.5	8,359.6	8,342.6	16.94	493.494		
4,500.0	4,439.7	2,011.0	1,983.9	14.8	6.0	-136.19	-1,966.2	-7,327.6	8,383.3	8,366.1	17.17	488.110		
4,527.5	4,467.2	2,020.9	1,993.3	14.8	6.0	-136.31	-1,966.1	-7,330.7	8,392.3	8,375.0	17.24	486.716		
4,600.0	4,539.7	2,053.0	2,023.8	14.9	6.2	-136.63	-1,965.5	-7,340.8	8,415.3	8,397.9	17.44	482.578		
4,626.0	4,565.6	2,064.5	2,034.7	15.0	6.3	-136.73	-1,965.3	-7,344.4	8,423.4	8,405.8	17.50	481.234		
4,660.2	4,599.8	2,107.8	2,075.8	15.0	6.5	-108.12	-1,964.7	-7,358.1	8,433.7	8,414.1	19.57	430.941		
4,700.0	4,639.6	2,169.5	2,134.5	15.0	6.9	-108.08	-1,964.6	-7,377.3	8,445.4	8,425.5	19.96	423.117		
4,724.4	4,664.0	2,215.3	2,178.1	15.1	7.1	-108.05	-1,964.9	-7,391.2	8,452.6	8,432.3	20.24	417.609		
4,800.0	4,739.6	2,255.3	2,216.1	15.2	7.3	-108.03	-1,965.3	-7,403.4	8,474.8	8,454.2	20.59	411.623		
4,822.8	4,762.5	2,267.1	2,227.4	15.2	7.4	-108.02	-1,965.3	-7,407.0	8,481.5	8,460.8	20.69	409.869		
4,900.0	4,839.6	2,311.3	2,269.4	15.3	7.7	-107.99	-1,965.5	-7,420.8	8,504.5	8,483.5	21.07	403.566		
4,921.2	4,860.9	2,327.2	2,284.5	15.4	7.8	-107.98	-1,965.6	-7,425.7	8,510.9	8,489.7	21.20	401.398		
5,000.0	4,939.6	2,379.0	2,333.7	15.5	8.1	-107.95	-1,965.9	-7,442.0	8,534.6	8,513.0	21.64	394.334		
5,019.7	4,959.3	2,379.0	2,333.7	15.5	8.1	-107.95	-1,965.9	-7,442.0	8,540.6	8,518.9	21.68	393.996		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 75-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.0	5,039.6	2,413.3	2,366.3	15.6	8.3	-107.92	-1,966.2	-7,452.9	8,565.3	8,543.2	22.03	388.846		
5,118.1	5,057.7	2,419.0	2,371.6	15.7	8.3	-107.92	-1,966.2	-7,454.7	8,570.9	8,548.8	22.09	387.932		
5,200.0	5,139.6	2,461.0	2,411.3	15.8	8.6	-107.89	-1,966.8	-7,468.4	8,596.6	8,574.1	22.50	382.155		
5,216.5	5,156.2	2,461.0	2,411.3	15.8	8.6	-107.89	-1,966.8	-7,468.4	8,601.8	8,579.3	22.52	381.897		
5,300.0	5,239.6	2,663.7	2,603.0	15.9	9.9	-107.74	-1,964.5	-7,534.1	8,627.1	8,603.3	23.86	361.648		
5,314.9	5,254.6	2,671.9	2,610.8	16.0	9.9	-107.73	-1,964.3	-7,536.8	8,631.7	8,607.7	23.93	360.708		
5,400.0	5,339.6	2,869.0	2,797.5	16.1	11.1	-107.57	-1,960.2	-7,599.7	8,657.4	8,632.2	25.22	343.333		
5,413.4	5,353.0	2,895.0	2,822.2	16.1	11.3	-107.55	-1,959.5	-7,607.7	8,661.2	8,635.9	25.39	341.139		
5,500.0	5,439.6	2,951.0	2,875.3	16.3	11.6	-107.50	-1,957.2	-7,625.6	8,686.7	8,660.8	25.87	335.843		
5,511.8	5,451.4	2,951.0	2,875.3	16.3	11.6	-107.50	-1,957.2	-7,625.6	8,690.2	8,664.3	25.89	335.703		
5,600.0	5,539.6	3,489.1	3,390.9	16.4	14.6	-107.11	-1,945.2	-7,778.7	8,712.5	8,683.6	28.88	301.712		
5,610.2	5,549.9	3,494.1	3,395.6	16.4	14.7	-107.10	-1,945.1	-7,780.0	8,715.0	8,686.0	28.92	301.350		
5,700.0	5,639.6	3,543.4	3,443.2	16.6	14.9	-107.07	-1,944.0	-7,793.0	8,737.1	8,707.8	29.33	297.868		
5,708.6	5,648.3	3,549.2	3,448.8	16.6	14.9	-107.07	-1,943.9	-7,794.5	8,739.3	8,709.9	29.38	297.475		
5,800.0	5,739.6	3,604.0	3,501.6	16.7	15.2	-107.03	-1,942.8	-7,809.2	8,762.2	8,732.4	29.83	293.738		
5,807.1	5,746.7	3,604.0	3,501.6	16.8	15.2	-107.03	-1,942.8	-7,809.2	8,764.0	8,734.2	29.84	293.671		
5,900.0	5,839.6	3,647.3	3,543.2	16.9	15.5	-107.00	-1,942.0	-7,820.9	8,787.8	8,757.5	30.25	290.546		
5,905.5	5,845.1	3,649.4	3,545.3	16.9	15.5	-107.00	-1,942.0	-7,821.5	8,789.2	8,758.9	30.27	290.384		
6,000.0	5,939.6	6,022.1	5,874.3	17.1	23.1	-106.38	-1,939.5	-8,140.3	8,793.4	8,755.5	37.83	232.444		
6,003.9	5,943.6	6,025.5	5,877.7	17.1	23.1	-106.38	-1,939.6	-8,140.3	8,793.4	8,755.6	37.84	232.376		
6,059.2	5,998.8	6,053.0	5,905.2	17.2	23.1	-106.38	-1,940.2	-8,140.3	8,793.7	8,755.8	37.98	231.561		
6,100.0	6,039.6	6,087.5	5,939.7	17.2	23.1	-16.41	-1,940.8	-8,140.3	8,792.9	8,762.2	30.70	286.458		
6,102.3	6,042.0	6,088.8	5,940.9	17.2	23.1	-16.41	-1,940.8	-8,140.3	8,792.8	8,762.1	30.70	286.395		
6,150.0	6,089.4	6,114.5	5,966.6	17.3	23.2	-16.50	-1,941.1	-8,140.5	8,789.0	8,758.3	30.78	285.557		
6,200.0	6,138.7	6,151.8	6,003.9	17.3	23.2	-16.68	-1,941.2	-8,141.0	8,781.9	8,751.2	30.77	285.367		
6,200.8	6,139.5	6,152.9	6,005.0	17.3	23.2	-16.68	-1,941.2	-8,141.0	8,781.8	8,751.0	30.77	285.362		
6,250.0	6,187.4	6,222.6	6,074.7	17.3	23.3	-16.95	-1,941.1	-8,141.9	8,771.5	8,740.8	30.72	285.490		
6,299.2	6,234.4	6,287.5	6,139.6	17.4	23.4	-17.32	-1,941.1	-8,142.5	8,758.0	8,727.4	30.57	286.505		
6,300.0	6,235.1	6,288.5	6,140.6	17.4	23.4	-17.33	-1,941.1	-8,142.5	8,757.7	8,727.2	30.56	286.529		
6,350.0	6,281.7	6,321.0	6,173.2	17.4	23.4	-17.79	-1,941.3	-8,142.8	8,740.7	8,710.5	30.26	288.893		
6,397.6	6,324.8	6,346.1	6,198.2	17.3	23.5	-18.33	-1,941.5	-8,143.0	8,721.8	8,691.9	29.88	291.942		
6,400.0	6,326.9	6,347.3	6,199.5	17.3	23.5	-18.36	-1,941.5	-8,143.0	8,720.8	8,690.9	29.85	292.113		
6,450.0	6,370.5	6,380.0	6,232.1	17.3	23.5	-19.06	-1,941.8	-8,143.4	8,698.0	8,668.6	29.39	295.905		
6,496.0	6,409.1	6,497.4	6,349.5	17.3	23.7	-19.96	-1,942.4	-8,144.2	8,674.1	8,645.0	29.07	298.351		
6,500.0	6,412.3	6,500.3	6,352.4	17.3	23.7	-20.04	-1,942.4	-8,144.2	8,671.9	8,642.9	29.03	298.699		
6,550.0	6,452.1	6,536.4	6,388.5	17.3	23.7	-21.09	-1,942.4	-8,144.4	8,643.1	8,614.6	28.51	303.160		
6,594.5	6,485.6	6,560.0	6,412.1	17.3	23.7	-22.19	-1,942.3	-8,144.5	8,615.3	8,587.3	28.04	307.222		
6,600.0	6,489.7	6,562.6	6,414.7	17.3	23.7	-22.34	-1,942.3	-8,144.6	8,611.7	8,583.7	27.99	307.726		
6,650.0	6,524.9	6,585.3	6,437.4	17.2	23.8	-23.83	-1,942.3	-8,144.7	8,578.0	8,550.5	27.51	311.759		
6,692.9	6,553.0	6,603.5	6,455.6	17.2	23.8	-25.35	-1,942.3	-8,144.9	8,547.2	8,520.0	27.21	314.161		
6,700.0	6,557.5	6,606.4	6,458.5	17.2	23.8	-25.63	-1,942.3	-8,144.9	8,542.0	8,514.8	27.16	314.455		
6,750.0	6,587.4	6,626.6	6,478.7	17.2	23.8	-27.81	-1,942.4	-8,145.1	8,504.0	8,476.9	27.02	314.761		
6,791.3	6,609.9	6,654.0	6,506.1	17.2	23.8	-30.04	-1,942.5	-8,145.3	8,471.1	8,443.9	27.16	311.877		
6,800.0	6,614.4	6,659.6	6,511.7	17.2	23.9	-30.56	-1,942.5	-8,145.4	8,464.0	8,436.8	27.22	310.976		
6,850.0	6,638.4	6,689.7	6,541.8	17.2	23.9	-33.95	-1,942.6	-8,145.7	8,422.4	8,394.5	27.87	302.237		
6,889.7	6,655.3	6,788.0	6,640.1	17.4	24.0	-37.84	-1,942.6	-8,146.1	8,388.0	8,358.9	29.11	288.132		
6,900.0	6,659.4	6,788.0	6,640.1	17.5	24.0	-38.77	-1,942.6	-8,146.1	8,379.0	8,349.6	29.41	284.868		
6,950.0	6,677.1	6,812.0	6,664.1	18.0	24.0	-44.26	-1,942.5	-8,146.0	8,334.3	8,302.9	31.46	264.906		
6,988.2	6,688.4	6,819.0	6,671.1	18.5	24.1	-49.29	-1,942.5	-8,146.0	8,299.5	8,266.0	33.52	247.635		
7,000.0	6,691.5	6,821.0	6,673.1	18.7	24.1	-51.03	-1,942.5	-8,146.0	8,288.6	8,254.4	34.23	242.116		
7,050.0	6,702.5	6,827.8	6,679.9	19.5	24.1	-59.45	-1,942.5	-8,146.1	8,242.1	8,204.5	37.66	218.848		
7,086.6	6,708.4	6,831.5	6,683.6	20.1	24.1	-66.76	-1,942.5	-8,146.1	8,207.7	8,167.4	40.35	203.405		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 75-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	6,832.6	6,684.7	20.4	24.1	-69.67	-1,942.5	-8,146.1	8,195.0	8,153.7	41.30	198.411	
7,150.0	6,714.2	6,835.2	6,687.3	21.3	24.1	-81.39	-1,942.5	-8,146.1	8,147.6	8,103.2	44.37	183.631	
7,185.0	6,715.0	6,835.7	6,687.8	21.9	24.1	-90.07	-1,942.5	-8,146.1	8,114.2	8,068.5	45.71	177.514	
7,185.6	6,715.0	6,835.7	6,687.8	21.9	24.1	-90.21	-1,942.5	-8,146.1	8,113.7	8,068.0	45.72	177.450	
7,200.0	6,715.0	6,835.7	6,687.8	22.2	24.1	-90.21	-1,942.5	-8,146.1	8,100.0	8,054.0	46.00	176.082	
7,283.4	6,714.8	6,835.7	6,687.8	23.9	24.1	-90.20	-1,942.5	-8,146.1	8,020.6	7,972.9	47.68	168.220	
7,300.0	6,714.8	6,835.7	6,687.8	24.2	24.1	-90.20	-1,942.5	-8,146.1	8,004.9	7,956.8	48.01	166.726	
7,381.9	6,714.6	6,835.6	6,687.8	26.0	24.1	-90.20	-1,942.5	-8,146.1	7,927.1	7,877.3	49.77	159.265	
7,400.0	6,714.6	6,835.6	6,687.7	26.4	24.1	-90.20	-1,942.5	-8,146.1	7,909.8	7,859.7	50.16	157.685	
7,480.3	6,714.4	6,835.6	6,687.7	28.2	24.1	-90.20	-1,942.5	-8,146.1	7,833.6	7,781.7	51.98	150.699	
7,500.0	6,714.4	6,835.6	6,687.7	28.7	24.1	-90.20	-1,942.5	-8,146.1	7,815.0	7,762.5	52.43	149.059	
7,578.7	6,714.2	6,835.5	6,687.7	30.5	24.1	-90.20	-1,942.5	-8,146.1	7,740.4	7,686.1	54.28	142.591	
7,600.0	6,714.2	6,835.5	6,687.6	31.0	24.1	-90.20	-1,942.5	-8,146.1	7,720.2	7,665.4	54.79	140.918	
7,677.1	6,714.0	6,835.5	6,687.6	32.9	24.1	-90.20	-1,942.5	-8,146.1	7,647.2	7,590.5	56.66	134.972	
7,700.0	6,714.0	6,835.5	6,687.6	33.4	24.1	-90.20	-1,942.5	-8,146.1	7,625.6	7,568.4	57.21	133.286	
7,775.6	6,713.9	6,835.5	6,687.6	35.3	24.1	-90.20	-1,942.5	-8,146.1	7,554.2	7,495.1	59.09	127.843	
7,800.0	6,713.8	6,835.4	6,687.6	35.9	24.1	-90.20	-1,942.5	-8,146.1	7,531.1	7,471.4	59.70	126.157	
7,874.0	6,713.7	6,835.4	6,687.5	37.8	24.1	-90.20	-1,942.5	-8,146.1	7,461.3	7,399.7	61.57	121.188	
7,900.0	6,713.6	6,835.4	6,687.5	38.4	24.1	-90.20	-1,942.5	-8,146.1	7,436.8	7,374.5	62.23	119.514	
7,972.4	6,713.5	6,835.4	6,687.5	40.3	24.1	-90.20	-1,942.5	-8,146.1	7,368.5	7,304.5	64.08	114.983	
8,000.0	6,713.4	6,835.3	6,687.5	41.0	24.1	-90.20	-1,942.5	-8,146.1	7,342.6	7,277.8	64.79	113.326	
8,070.8	6,713.3	6,835.3	6,687.4	42.8	24.1	-90.19	-1,942.5	-8,146.1	7,275.9	7,209.3	66.63	109.197	
8,100.0	6,713.2	6,835.3	6,687.4	43.6	24.1	-90.19	-1,942.5	-8,146.1	7,248.5	7,181.2	67.39	107.564	
8,169.3	6,713.1	6,835.3	6,687.4	45.4	24.1	-90.19	-1,942.5	-8,146.1	7,183.5	7,114.3	69.20	103.802	
8,200.0	6,713.0	6,835.2	6,687.4	46.2	24.1	-90.19	-1,942.5	-8,146.1	7,154.7	7,084.7	70.01	102.196	
8,267.7	6,712.9	6,835.2	6,687.3	48.0	24.1	-90.19	-1,942.5	-8,146.1	7,091.2	7,019.4	71.80	98.765	
8,300.0	6,712.8	6,835.2	6,687.3	48.8	24.1	-90.19	-1,942.5	-8,146.1	7,061.0	6,988.3	72.65	97.188	
8,366.1	6,712.7	6,835.2	6,687.3	50.6	24.1	-90.19	-1,942.5	-8,146.1	6,999.1	6,924.7	74.41	94.059	
8,400.0	6,712.6	6,835.1	6,687.3	51.5	24.1	-90.19	-1,942.5	-8,146.1	6,967.5	6,892.1	75.31	92.513	
8,464.5	6,712.5	6,835.1	6,687.2	53.2	24.1	-90.19	-1,942.5	-8,146.1	6,907.2	6,830.1	77.04	89.656	
8,500.0	6,712.4	6,835.1	6,687.2	54.1	24.1	-90.19	-1,942.5	-8,146.1	6,874.1	6,796.1	77.99	88.141	
8,563.0	6,712.3	6,835.1	6,687.2	55.8	24.1	-90.19	-1,942.5	-8,146.1	6,815.4	6,735.7	79.68	85.532	
8,600.0	6,712.3	6,835.0	6,687.2	56.8	24.1	-90.19	-1,942.5	-8,146.1	6,781.0	6,700.3	80.68	84.049	
8,661.4	6,712.1	6,835.0	6,687.1	58.5	24.1	-90.19	-1,942.5	-8,146.1	6,723.9	6,641.5	82.34	81.663	
8,700.0	6,712.1	6,835.0	6,687.1	59.5	24.1	-90.19	-1,942.5	-8,146.1	6,688.0	6,604.6	83.38	80.212	
8,759.8	6,711.9	6,835.0	6,687.1	61.1	24.1	-90.18	-1,942.5	-8,146.1	6,632.5	6,547.5	85.00	78.029	
8,800.0	6,711.9	6,834.9	6,687.0	62.2	24.1	-90.18	-1,942.5	-8,146.1	6,595.2	6,509.2	86.09	76.609	
8,858.2	6,711.8	6,834.9	6,687.0	63.8	24.1	-90.18	-1,942.5	-8,146.1	6,541.3	6,453.6	87.67	74.610	
8,900.0	6,711.7	6,834.9	6,687.0	64.9	24.1	-90.18	-1,942.5	-8,146.1	6,502.7	6,413.9	88.81	73.222	
8,956.7	6,711.6	6,834.9	6,687.0	66.5	24.1	-90.18	-1,942.5	-8,146.1	6,450.4	6,360.0	90.35	71.391	
9,000.0	6,711.5	6,834.8	6,686.9	67.6	24.1	-90.18	-1,942.5	-8,146.1	6,410.4	6,318.9	91.53	70.033	
9,055.1	6,711.4	6,834.8	6,686.9	69.1	24.1	-90.18	-1,942.5	-8,146.1	6,359.6	6,266.6	93.04	68.354	
9,100.0	6,711.3	6,834.8	6,686.9	70.4	24.1	-90.18	-1,942.5	-8,146.1	6,318.3	6,224.1	94.27	67.026	
9,153.5	6,711.2	6,834.8	6,686.9	71.8	24.1	-90.18	-1,942.5	-8,146.1	6,269.1	6,173.4	95.73	65.485	
9,200.0	6,711.1	6,834.7	6,686.8	73.1	24.1	-90.18	-1,942.5	-8,146.1	6,226.5	6,129.5	97.01	64.186	
9,251.9	6,711.0	6,834.7	6,686.8	74.5	24.1	-90.18	-1,942.5	-8,146.1	6,178.9	6,080.5	98.43	62.773	
9,300.0	6,710.9	6,834.7	6,686.8	75.8	24.1	-90.18	-1,942.5	-8,146.1	6,134.9	6,035.2	99.75	61.503	
9,350.4	6,710.8	6,834.6	6,686.8	77.2	24.1	-90.18	-1,942.5	-8,146.1	6,088.9	5,987.7	101.14	60.205	
9,400.0	6,710.7	6,834.6	6,686.7	78.6	24.1	-90.18	-1,942.5	-8,146.1	6,043.6	5,941.1	102.50	58.962	
9,448.8	6,710.6	6,834.6	6,686.7	79.9	24.1	-90.18	-1,942.5	-8,146.1	5,999.1	5,895.3	103.84	57.771	
9,500.0	6,710.5	6,834.6	6,686.7	81.3	24.1	-90.17	-1,942.5	-8,146.1	5,952.6	5,847.3	105.25	56.555	
9,547.2	6,710.4	6,834.5	6,686.7	82.6	24.1	-90.17	-1,942.5	-8,146.1	5,909.7	5,803.1	106.55	55.461	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 75-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,600.0	6,710.3	6,834.5	6,686.6	84.1	24.1	-90.17	-1,942.5	-8,146.1	5,861.8	5,753.8	108.01	54.271		
9,645.6	6,710.2	6,834.5	6,686.6	85.3	24.1	-90.17	-1,942.5	-8,146.1	5,820.5	5,711.2	109.27	53.267		
9,700.0	6,710.1	6,834.5	6,686.6	86.8	24.1	-90.17	-1,942.5	-8,146.1	5,771.4	5,660.6	110.77	52.102		
9,744.1	6,710.0	6,834.4	6,686.5	88.1	24.1	-90.17	-1,942.5	-8,146.1	5,731.6	5,619.7	111.99	51.181		
9,800.0	6,709.9	6,834.4	6,686.5	89.6	24.1	-90.17	-1,942.5	-8,146.1	5,681.3	5,567.8	113.53	50.040		
9,842.5	6,709.9	6,834.4	6,686.5	90.8	24.1	-90.17	-1,942.5	-8,146.1	5,643.1	5,528.4	114.71	49.195		
9,900.0	6,709.7	6,834.3	6,686.5	92.4	24.1	-90.17	-1,942.5	-8,146.1	5,591.5	5,475.2	116.30	48.078		
9,940.9	6,709.7	6,834.3	6,686.4	93.5	24.1	-90.17	-1,942.5	-8,146.1	5,554.9	5,437.4	117.43	47.302		
10,000.0	6,709.6	6,834.3	6,686.4	95.1	24.1	-90.17	-1,942.5	-8,146.1	5,502.1	5,383.0	119.07	46.209		
10,039.3	6,709.5	6,834.3	6,686.4	96.2	24.1	-90.17	-1,942.5	-8,146.1	5,467.0	5,346.8	120.16	45.498		
10,100.0	6,709.4	6,834.2	6,686.3	97.9	24.1	-90.17	-1,942.5	-8,146.1	5,413.0	5,291.2	121.84	44.427		
10,137.8	6,709.3	6,834.2	6,686.3	98.9	24.1	-90.17	-1,942.5	-8,146.1	5,379.5	5,256.6	122.89	43.775		
10,200.0	6,709.2	6,834.2	6,686.3	100.7	24.1	-90.16	-1,942.5	-8,146.1	5,324.4	5,199.8	124.61	42.727		
10,236.2	6,709.1	6,834.2	6,686.3	101.7	24.1	-90.16	-1,942.5	-8,146.1	5,292.4	5,166.8	125.62	42.130		
10,300.0	6,709.0	6,834.1	6,686.2	103.4	24.1	-90.16	-1,942.5	-8,146.1	5,236.1	5,108.7	127.39	41.103		
10,334.6	6,708.9	6,834.1	6,686.2	104.4	24.1	-90.16	-1,942.5	-8,146.1	5,205.7	5,077.3	128.35	40.558		
10,400.0	6,708.8	6,834.1	6,686.2	106.2	24.1	-90.16	-1,942.5	-8,146.1	5,148.3	5,018.1	130.17	39.551		
10,433.0	6,708.7	6,834.0	6,686.1	107.1	24.1	-90.16	-1,942.5	-8,146.1	5,119.4	4,988.3	131.09	39.053		
10,500.0	6,708.6	6,834.0	6,686.1	109.0	24.1	-90.16	-1,942.5	-8,146.1	5,060.9	4,928.0	132.95	38.067		
10,531.5	6,708.5	6,834.0	6,686.1	109.9	24.1	-90.16	-1,942.5	-8,146.1	5,033.5	4,899.7	133.82	37.613		
10,600.0	6,708.4	6,833.9	6,686.0	111.8	24.1	-90.16	-1,942.5	-8,146.1	4,974.0	4,838.3	135.73	36.647		
10,629.9	6,708.4	6,833.9	6,686.0	112.6	24.1	-90.16	-1,942.5	-8,146.1	4,948.1	4,811.6	136.56	36.234		
10,700.0	6,708.2	6,833.9	6,686.0	114.6	24.1	-90.16	-1,942.5	-8,146.1	4,887.6	4,749.1	138.51	35.287		
10,728.3	6,708.2	6,833.9	6,686.0	115.3	24.1	-90.16	-1,942.5	-8,146.1	4,863.2	4,724.0	139.30	34.912		
10,800.0	6,708.0	6,833.8	6,685.9	117.3	24.1	-90.16	-1,942.5	-8,146.1	4,801.8	4,660.5	141.29	33.984		
10,826.7	6,708.0	6,833.8	6,685.9	118.1	24.1	-90.15	-1,942.5	-8,146.1	4,778.9	4,636.8	142.04	33.645		
10,900.0	6,707.8	6,833.8	6,685.9	120.1	24.1	-90.15	-1,942.5	-8,146.1	4,716.4	4,572.4	144.08	32.735		
10,925.2	6,707.8	6,833.7	6,685.9	120.8	24.1	-90.15	-1,942.5	-8,146.1	4,695.1	4,550.3	144.78	32.429		
11,000.0	6,707.6	6,833.7	6,685.8	122.9	24.1	-90.15	-1,942.5	-8,146.1	4,631.7	4,484.9	146.86	31.537		
11,023.6	6,707.6	6,833.7	6,685.8	123.6	24.1	-90.15	-1,942.5	-8,146.1	4,611.8	4,464.3	147.52	31.262		
11,100.0	6,707.5	6,833.6	6,685.7	125.7	24.1	-90.15	-1,942.5	-8,146.1	4,547.6	4,398.0	149.65	30.388		
11,122.0	6,707.4	6,833.6	6,685.7	126.3	24.1	-90.15	-1,942.5	-8,146.1	4,529.2	4,378.9	150.27	30.141		
11,200.0	6,707.3	6,833.6	6,685.7	128.5	24.1	-90.15	-1,942.5	-8,146.1	4,464.2	4,311.7	152.44	29.285		
11,220.4	6,707.2	6,833.6	6,685.7	129.0	24.1	-90.15	-1,942.5	-8,146.1	4,447.2	4,294.2	153.01	29.065		
11,300.0	6,707.1	6,833.5	6,685.6	131.3	24.1	-90.15	-1,942.5	-8,146.1	4,381.4	4,226.2	155.23	28.225		
11,318.9	6,707.0	6,833.5	6,685.6	131.8	24.1	-90.15	-1,942.5	-8,146.1	4,365.9	4,210.1	155.76	28.030		
11,400.0	6,706.9	6,833.4	6,685.6	134.0	24.1	-90.15	-1,942.5	-8,146.1	4,299.4	4,141.4	158.02	27.208		
11,417.3	6,706.9	6,833.4	6,685.5	134.5	24.1	-90.15	-1,942.5	-8,146.1	4,285.3	4,126.8	158.50	27.036		
11,500.0	6,706.7	6,833.4	6,685.5	136.8	24.1	-90.14	-1,942.5	-8,146.1	4,218.1	4,057.3	160.81	26.230		
11,515.7	6,706.7	6,833.4	6,685.5	137.3	24.1	-90.14	-1,942.5	-8,146.1	4,205.4	4,044.2	161.25	26.080		
11,600.0	6,706.5	6,833.3	6,685.4	139.6	24.1	-90.14	-1,942.5	-8,146.1	4,137.7	3,974.1	163.60	25.291		
11,614.1	6,706.5	6,833.3	6,685.4	140.0	24.1	-90.14	-1,942.5	-8,146.1	4,126.4	3,962.4	164.00	25.161		
11,700.0	6,706.3	6,833.3	6,685.4	142.4	24.1	-90.14	-1,942.5	-8,146.1	4,058.2	3,891.8	166.39	24.389		
11,712.6	6,706.3	6,833.2	6,685.4	142.8	24.1	-90.14	-1,942.5	-8,146.1	4,048.2	3,881.5	166.75	24.278		
11,800.0	6,706.1	6,833.2	6,685.3	145.2	24.1	-90.14	-1,942.5	-8,146.1	3,979.5	3,810.3	169.19	23.521		
11,811.0	6,706.1	6,833.2	6,685.3	145.5	24.1	-90.14	-1,942.5	-8,146.1	3,970.9	3,801.4	169.50	23.428		
11,900.0	6,705.9	6,833.1	6,685.2	148.0	24.1	-90.14	-1,942.5	-8,146.1	3,901.9	3,729.9	171.98	22.688		
11,909.4	6,705.9	6,833.1	6,685.2	148.3	24.1	-90.14	-1,942.5	-8,146.1	3,894.6	3,722.4	172.25	22.611		
12,000.0	6,705.8	6,833.1	6,685.2	150.8	24.1	-90.14	-1,942.5	-8,146.1	3,825.3	3,650.5	174.78	21.887		
12,007.8	6,705.7	6,833.0	6,685.2	151.0	24.1	-90.14	-1,942.5	-8,146.1	3,819.3	3,644.3	175.00	21.825		
12,100.0	6,705.6	6,833.0	6,685.1	153.6	24.1	-90.13	-1,942.5	-8,146.1	3,749.7	3,572.2	177.57	21.117		
12,106.3	6,705.6	6,833.0	6,685.1	153.8	24.1	-90.13	-1,942.5	-8,146.1	3,745.0	3,567.3	177.75	21.070		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 75-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,200.0	6,705.4	6,832.9	6,685.0	156.4	24.1	-90.13	-1,942.5	-8,146.1	3,675.4	3,495.0	180.37	20.377		
12,204.7	6,705.4	6,832.9	6,685.0	156.5	24.1	-90.13	-1,942.5	-8,146.1	3,671.9	3,491.4	180.50	20.343		
12,300.0	6,705.2	6,832.9	6,685.0	159.2	24.1	-90.13	-1,942.5	-8,146.1	3,602.3	3,419.1	183.16	19.667		
12,303.1	6,705.2	6,832.8	6,685.0	159.3	24.1	-90.13	-1,942.5	-8,146.1	3,600.0	3,416.8	183.25	19.645		
12,400.0	6,705.0	6,832.8	6,684.9	162.0	24.1	-90.13	-1,942.5	-8,146.1	3,530.5	3,344.6	185.96	18.985		
12,401.5	6,705.0	6,832.8	6,684.9	162.0	24.1	-90.13	-1,942.5	-8,146.1	3,529.4	3,343.4	186.00	18.975		
12,500.0	6,704.8	6,832.7	6,684.8	164.8	24.1	-90.13	-1,942.5	-8,146.1	3,460.1	3,271.4	188.76	18.331		
12,598.4	6,704.6	6,832.6	6,684.8	167.5	24.1	-90.13	-1,942.5	-8,146.1	3,392.3	3,200.8	191.51	17.714		
12,600.0	6,704.6	6,832.6	6,684.8	167.6	24.1	-90.13	-1,942.5	-8,146.1	3,391.2	3,199.7	191.56	17.704		
12,696.8	6,704.4	6,832.6	6,684.7	170.3	24.1	-90.12	-1,942.5	-8,146.1	3,326.0	3,131.8	194.26	17.121		
12,700.0	6,704.4	6,832.6	6,684.7	170.4	24.1	-90.12	-1,942.5	-8,146.1	3,323.9	3,129.6	194.35	17.102		
12,795.2	6,704.3	6,832.5	6,684.6	173.0	24.1	-90.12	-1,942.5	-8,146.1	3,261.4	3,064.3	197.02	16.554		
12,800.0	6,704.2	6,832.5	6,684.6	173.2	24.1	-90.12	-1,942.5	-8,146.1	3,258.3	3,061.1	197.15	16.527		
12,893.7	6,704.1	6,832.4	6,684.5	175.8	24.1	-90.12	-1,942.5	-8,146.1	3,198.4	2,998.6	199.77	16.010		
12,900.0	6,704.1	6,832.4	6,684.5	176.0	24.1	-90.12	-1,942.5	-8,146.1	3,194.4	2,994.5	199.95	15.976		
12,992.1	6,703.9	6,832.4	6,684.5	178.5	24.1	-90.12	-1,942.5	-8,146.1	3,137.3	2,934.8	202.53	15.491		
13,000.0	6,703.9	6,832.4	6,684.5	178.8	24.1	-90.12	-1,942.5	-8,146.1	3,132.5	2,929.7	202.75	15.450		
13,090.5	6,703.7	6,832.3	6,684.4	181.3	24.1	-90.12	-1,942.5	-8,146.1	3,078.1	2,872.8	205.28	14.994		
13,100.0	6,703.7	6,832.3	6,684.4	181.6	24.1	-90.12	-1,942.5	-8,146.1	3,072.5	2,867.0	205.55	14.948		
13,188.9	6,703.5	6,832.2	6,684.3	184.0	24.1	-90.12	-1,942.5	-8,146.1	3,021.0	2,812.9	208.04	14.521		
13,200.0	6,703.5	6,832.2	6,684.3	184.4	24.1	-90.12	-1,942.5	-8,146.1	3,014.7	2,806.3	208.35	14.469		
13,287.4	6,703.3	6,832.1	6,684.2	186.8	24.1	-90.11	-1,942.5	-8,146.1	2,966.0	2,755.2	210.80	14.070		
13,300.0	6,703.3	6,832.1	6,684.2	187.2	24.1	-90.11	-1,942.5	-8,146.1	2,959.1	2,748.0	211.15	14.014		
13,385.8	6,703.2	6,832.1	6,684.2	189.6	24.1	-90.11	-1,942.5	-8,146.1	2,913.3	2,699.8	213.55	13.642		
13,400.0	6,703.1	6,832.1	6,684.2	190.0	24.1	-90.11	-1,942.5	-8,146.1	2,905.9	2,692.0	213.95	13.582		
13,484.2	6,703.0	6,832.0	6,684.1	192.3	24.1	-90.11	-1,942.5	-8,146.1	2,863.0	2,646.7	216.31	13.236		
13,500.0	6,702.9	6,832.0	6,684.1	192.8	24.1	-90.11	-1,942.5	-8,146.1	2,855.2	2,638.5	216.75	13.173		
13,582.6	6,702.8	6,831.9	6,684.0	195.1	24.1	-90.11	-1,942.5	-8,146.1	2,815.3	2,596.3	219.07	12.851		
13,600.0	6,702.8	6,831.9	6,684.0	195.6	24.1	-90.11	-1,942.5	-8,146.1	2,807.2	2,587.6	219.55	12.786		
13,681.1	6,702.6	6,831.8	6,683.9	197.8	24.1	-90.11	-1,942.5	-8,146.1	2,770.3	2,548.4	221.82	12.489		
13,700.0	6,702.6	6,831.8	6,683.9	198.4	24.1	-90.11	-1,942.5	-8,146.1	2,761.9	2,539.6	222.35	12.421		
13,779.5	6,702.4	6,831.8	6,683.9	200.6	24.1	-90.11	-1,942.5	-8,146.1	2,728.0	2,503.4	224.58	12.147		
13,800.0	6,702.4	6,831.7	6,683.9	201.2	24.1	-90.10	-1,942.5	-8,146.1	2,719.6	2,494.4	225.16	12.079		
13,877.9	6,702.2	6,831.7	6,683.8	203.3	24.1	-90.10	-1,942.5	-8,146.1	2,688.7	2,461.4	227.34	11.827		
13,900.0	6,702.2	6,831.7	6,683.8	204.0	24.1	-90.10	-1,942.5	-8,146.1	2,680.3	2,452.4	227.96	11.758		
13,976.3	6,702.1	6,831.6	6,683.7	206.1	24.1	-90.10	-1,942.5	-8,146.1	2,652.5	2,422.4	230.10	11.528		
14,000.0	6,702.0	6,831.6	6,683.7	206.8	24.1	-90.10	-1,942.5	-8,146.1	2,644.3	2,413.5	230.76	11.459		
14,074.8	6,701.9	6,831.5	6,683.6	208.9	24.1	-90.10	-1,942.5	-8,146.1	2,619.5	2,386.6	232.86	11.249		
14,100.0	6,701.8	6,831.5	6,683.6	209.6	24.1	-90.10	-1,942.5	-8,146.1	2,611.5	2,378.0	233.56	11.181		
14,173.2	6,701.7	6,831.4	6,683.6	211.6	24.1	-90.10	-1,942.5	-8,146.1	2,589.8	2,354.2	235.61	10.992		
14,200.0	6,701.6	6,831.4	6,683.5	212.4	24.1	-90.10	-1,942.5	-8,146.1	2,582.3	2,345.9	236.36	10.925		
14,271.6	6,701.5	6,831.4	6,683.5	214.4	24.1	-90.10	-1,942.5	-8,146.1	2,563.5	2,325.1	238.37	10.754		
14,300.0	6,701.4	6,831.3	6,683.4	215.2	24.1	-90.10	-1,942.5	-8,146.1	2,556.6	2,317.4	239.17	10.689		
14,370.0	6,701.3	6,831.3	6,683.4	217.1	24.1	-90.09	-1,942.5	-8,146.1	2,540.8	2,299.6	241.13	10.537		
14,400.0	6,701.3	6,831.3	6,683.4	218.0	24.1	-90.09	-1,942.5	-8,146.1	2,534.6	2,292.6	241.97	10.475		
14,468.5	6,701.1	6,831.2	6,683.3	219.9	24.1	-90.09	-1,942.5	-8,146.1	2,521.7	2,277.8	243.89	10.339		
14,500.0	6,701.1	6,831.2	6,683.3	220.8	24.1	-90.09	-1,942.5	-8,146.1	2,516.4	2,271.6	244.77	10.280		
14,566.9	6,701.0	6,831.1	6,683.2	222.6	24.1	-90.09	-1,942.5	-8,146.1	2,506.3	2,259.7	246.65	10.161		
14,600.0	6,700.9	6,831.1	6,683.2	223.6	24.1	-90.09	-1,942.5	-8,146.1	2,502.0	2,254.4	247.58	10.106		
14,665.3	6,700.8	6,831.0	6,683.1	225.4	24.1	-90.09	-1,942.5	-8,146.1	2,494.8	2,245.3	249.41	10.003		
14,700.0	6,700.7	6,831.0	6,683.1	226.4	24.1	-90.09	-1,942.5	-8,146.1	2,491.6	2,241.2	250.38	9.951		
14,763.7	6,700.6	6,830.9	6,683.0	228.2	24.1	-90.09	-1,942.5	-8,146.1	2,487.0	2,234.9	252.17	9.863		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 75-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis			Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,800.0	6,700.5	6,830.9	6,683.0	229.2	24.1	-90.09	-1,942.5	-8,146.1	2,485.2	2,232.0	253.19	9.816	
14,862.2	6,700.4	6,830.9	6,683.0	230.9	24.1	-90.08	-1,942.5	-8,146.1	2,483.2	2,228.3	254.93	9.741	
14,900.0	6,700.3	6,830.8	6,682.9	232.0	24.1	-90.08	-1,942.5	-8,146.1	2,482.7	2,226.7	255.99	9.699	
14,910.1	6,700.3	6,830.8	6,682.9	232.3	24.1	-90.08	-1,942.5	-8,146.1	2,482.7	2,226.4	256.27	9.688 CC	
14,960.6	6,700.2	6,830.8	6,682.9	233.7	24.1	-90.08	-1,942.5	-8,146.1	2,483.2	2,225.5	257.69	9.637 ES	
15,000.0	6,700.2	6,830.7	6,682.8	234.8	24.1	-90.08	-1,942.5	-8,146.1	2,484.3	2,225.6	258.79	9.600	
15,059.0	6,700.0	6,830.7	6,682.8	236.4	24.1	-90.08	-1,942.5	-8,146.1	2,487.2	2,226.7	260.45	9.550	
15,082.8	6,700.0	6,830.7	6,682.8	237.1	24.1	-90.08	-1,942.5	-8,146.1	2,488.7	2,227.6	261.12	9.531 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 75-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-105.69	-1,992.1	-7,092.1	7,366.6				
98.4	98.4	51.0	51.0	0.1	0.0	-105.69	-1,992.1	-7,092.2	7,366.7	7,366.6	0.10	N/A	
100.0	100.0	52.0	52.0	0.1	0.0	-105.69	-1,992.1	-7,092.2	7,366.7	7,366.6	0.10	N/A	
196.8	196.8	152.6	152.6	0.3	0.1	-105.69	-1,992.3	-7,092.6	7,367.1	7,366.7	0.38	N/A	
200.0	200.0	156.6	156.6	0.3	0.1	-105.69	-1,992.4	-7,092.6	7,367.1	7,366.7	0.39	N/A	
295.3	295.3	1,105.5	1,091.1	0.5	3.5	-106.72	-2,104.5	-7,004.8	7,359.5	7,355.5	4.00	1,840.228	
300.0	300.0	1,107.5	1,093.0	0.5	3.5	-106.73	-2,104.9	-7,004.4	7,358.9	7,354.9	4.02	1,830.094	
393.7	393.7	1,585.4	1,543.1	0.8	6.5	-107.89	-2,227.8	-6,901.8	7,346.1	7,338.9	7.20	1,020.213	
400.0	400.0	1,589.0	1,546.5	0.8	6.5	-107.90	-2,228.7	-6,900.9	7,345.1	7,337.8	7.24	1,014.428	
492.1	492.1	1,645.0	1,598.8	1.0	6.9	-108.04	-2,243.6	-6,887.4	7,330.7	7,322.8	7.85	934.284	
500.0	500.0	1,645.0	1,598.8	1.0	6.9	-108.04	-2,243.6	-6,887.4	7,329.5	7,321.6	7.86	932.028	
590.5	590.5	1,708.3	1,657.5	1.2	7.4	-108.21	-2,261.4	-6,872.1	7,315.8	7,307.3	8.53	857.774	
600.0	600.0	1,714.7	1,663.5	1.2	7.4	-108.23	-2,263.2	-6,870.6	7,314.4	7,305.8	8.60	850.836	
689.0	689.0	1,755.0	1,700.9	1.4	7.7	-108.34	-2,275.0	-6,860.9	7,301.5	7,292.4	9.09	803.414	
700.0	700.0	1,759.5	1,705.0	1.4	7.8	-108.36	-2,276.3	-6,859.9	7,300.0	7,290.8	9.14	798.270	
787.4	787.4	1,808.0	1,749.9	1.6	8.1	-108.49	-2,290.8	-6,848.6	7,288.0	7,278.4	9.69	752.130	
800.0	800.0	1,808.0	1,749.9	1.7	8.1	-108.49	-2,290.8	-6,848.6	7,286.4	7,276.6	9.72	749.764	
885.8	885.8	1,844.2	1,783.4	1.9	8.4	-108.60	-2,301.8	-6,840.3	7,275.3	7,265.1	10.18	714.990	
900.0	900.0	2,088.5	2,007.5	1.9	10.2	-109.33	-2,378.1	-6,780.4	7,273.3	7,261.3	12.03	604.518	
984.2	984.2	2,135.0	2,050.1	2.1	10.6	-109.47	-2,392.6	-6,768.4	7,260.5	7,248.0	12.57	577.507	
1,000.0	1,000.0	2,135.0	2,050.1	2.1	10.6	-109.47	-2,392.6	-6,768.4	7,258.2	7,245.6	12.61	575.700	
1,082.7	1,082.7	2,216.0	2,124.4	2.3	11.2	-109.71	-2,417.1	-6,747.6	7,245.7	7,232.4	13.36	542.221	
1,100.0	1,100.0	2,216.0	2,124.4	2.3	11.2	-109.71	-2,417.1	-6,747.6	7,243.2	7,229.8	13.40	540.457	
1,181.1	1,181.1	2,256.6	2,161.9	2.5	11.5	-138.70	-2,429.0	-6,737.4	7,232.4	7,218.8	13.53	534.394	
1,200.0	1,200.0	3,058.8	2,907.9	2.6	17.0	-140.90	-2,614.7	-6,513.1	7,229.3	7,210.5	18.77	385.222	
1,279.5	1,279.4	3,114.0	2,959.0	2.7	17.4	-141.26	-2,625.5	-6,495.3	7,213.3	7,194.0	19.31	373.509	
1,300.0	1,299.8	3,114.0	2,959.0	2.8	17.4	-141.30	-2,625.5	-6,495.3	7,209.6	7,190.2	19.36	372.445	
1,377.9	1,377.5	3,150.5	2,992.9	3.0	17.7	-141.57	-2,632.4	-6,483.8	7,196.5	7,176.8	19.74	364.489	
1,400.0	1,399.5	3,158.2	3,000.2	3.0	17.7	-141.63	-2,633.9	-6,481.4	7,193.2	7,173.4	19.84	362.647	
1,476.4	1,475.3	3,196.0	3,035.5	3.2	18.0	-141.87	-2,640.8	-6,469.9	7,183.3	7,163.0	20.22	355.314	
1,500.0	1,498.7	3,196.0	3,035.5	3.3	18.0	-141.90	-2,640.8	-6,469.9	7,180.6	7,160.3	20.26	354.412	
1,574.8	1,572.6	3,223.4	3,061.1	3.5	18.2	-142.07	-2,645.9	-6,461.8	7,173.4	7,152.9	20.57	348.729	
1,600.0	1,597.5	3,233.6	3,070.7	3.5	18.2	-142.13	-2,647.9	-6,458.7	7,171.5	7,150.8	20.68	346.831	
1,673.2	1,669.4	3,277.0	3,111.3	3.7	18.5	-142.32	-2,656.4	-6,446.0	7,167.2	7,146.1	21.08	340.029	
1,700.1	1,695.8	3,669.7	3,477.5	3.8	21.3	-143.62	-2,726.2	-6,323.1	7,165.5	7,141.9	23.61	303.519	
1,771.6	1,765.7	3,722.1	3,525.4	4.1	21.7	-143.81	-2,736.9	-6,304.8	7,159.4	7,135.2	24.18	296.028	
1,800.0	1,793.4	3,739.0	3,540.8	4.2	21.8	-143.87	-2,740.6	-6,298.9	7,157.1	7,132.7	24.39	293.472	
1,870.1	1,862.0	4,022.2	3,794.5	4.4	24.4	-144.98	-2,809.4	-6,193.5	7,151.2	7,124.3	26.95	265.317	
1,900.0	1,891.3	4,059.8	3,827.7	4.5	24.8	-145.13	-2,818.9	-6,178.6	7,148.0	7,120.7	27.36	261.227	
1,968.5	1,958.3	4,125.9	3,886.3	4.8	25.4	-145.40	-2,835.2	-6,152.6	7,140.8	7,112.7	28.11	253.997	
2,000.0	1,989.1	4,150.7	3,908.5	4.9	25.6	-145.50	-2,840.8	-6,143.0	7,137.5	7,109.1	28.40	251.297	
2,066.9	2,054.5	4,176.0	3,931.2	5.1	25.8	-145.59	-2,846.2	-6,133.3	7,130.7	7,101.9	28.80	247.601	
2,100.0	2,086.9	4,176.0	3,931.2	5.3	25.8	-145.59	-2,846.2	-6,133.3	7,127.6	7,098.7	28.90	246.670	
2,165.3	2,150.8	4,210.3	3,962.1	5.5	26.1	-145.72	-2,853.4	-6,120.4	7,121.5	7,092.2	29.35	242.653	
2,200.0	2,184.7	4,219.2	3,970.2	5.6	26.2	-145.75	-2,855.3	-6,117.2	7,118.5	7,089.0	29.52	241.159	
2,263.8	2,247.1	4,257.0	4,004.4	5.9	26.5	-145.90	-2,863.6	-6,103.4	7,113.5	7,083.5	30.00	237.143	
2,300.0	2,282.5	4,257.0	4,004.4	6.0	26.5	-145.90	-2,863.6	-6,103.4	7,110.7	7,080.6	30.10	236.197	
2,362.2	2,343.3	4,257.0	4,004.4	6.3	26.5	-145.90	-2,863.6	-6,103.4	7,106.3	7,076.0	30.29	234.582	
2,400.0	2,380.3	4,287.1	4,031.6	6.5	26.7	-146.01	-2,870.4	-6,092.7	7,103.8	7,073.2	30.64	231.841	
2,460.6	2,439.6	4,321.9	4,063.2	6.7	27.0	-146.14	-2,878.4	-6,080.3	7,100.0	7,068.9	31.10	228.320	
2,500.0	2,478.1	4,339.0	4,078.7	6.9	27.1	-146.21	-2,882.3	-6,074.2	7,097.7	7,066.3	31.35	226.404	
2,559.0	2,535.9	4,339.0	4,078.7	7.1	27.1	-146.21	-2,882.3	-6,074.2	7,094.6	7,063.0	31.53	224.997	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 75-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	4,371.6	4,108.3	7.3	27.4	-146.33	-2,890.0	-6,062.8	7,092.5	7,060.6	31.92	222.225	
2,657.5	2,632.2	4,388.6	4,123.7	7.5	27.6	-146.40	-2,894.1	-6,056.9	7,089.9	7,057.7	32.23	219.986	
2,700.0	2,673.8	4,420.0	4,152.2	7.7	27.8	-146.52	-2,901.8	-6,046.2	7,088.4	7,055.8	32.61	217.372	
2,755.9	2,728.4	4,420.0	4,152.2	7.9	27.8	-146.52	-2,901.8	-6,046.2	7,086.4	7,053.6	32.78	216.156	
2,800.0	2,771.6	4,420.0	4,152.2	8.1	27.8	-146.52	-2,901.8	-6,046.2	7,085.2	7,052.3	32.92	215.217	
2,854.3	2,824.7	4,449.8	4,179.2	8.3	28.1	-146.64	-2,909.3	-6,036.2	7,083.9	7,050.6	33.32	212.588	
2,900.0	2,869.4	4,464.9	4,193.0	8.5	28.2	-146.70	-2,913.0	-6,031.3	7,083.0	7,049.4	33.58	210.920	
2,952.7	2,921.0	4,502.0	4,226.9	8.8	28.5	-146.84	-2,922.2	-6,019.3	7,082.4	7,048.3	34.03	208.092	
3,000.0	2,967.2	4,502.0	4,226.9	9.0	28.5	-146.84	-2,922.2	-6,019.3	7,081.9	7,047.7	34.18	207.174	
3,051.2	3,017.3	4,584.0	4,302.0	9.2	29.1	-147.15	-2,942.3	-5,993.2	7,081.5	7,046.5	34.97	202.525	
3,100.0	3,065.0	4,584.0	4,302.0	9.4	29.1	-147.15	-2,942.3	-5,993.2	7,081.2	7,046.1	35.12	201.631	
3,149.6	3,113.5	4,621.9	4,336.7	9.6	29.4	-147.29	-2,951.4	-5,981.1	7,081.0	7,045.4	35.56	199.124	
3,155.7	3,119.5	4,624.1	4,338.7	9.6	29.4	-147.30	-2,951.9	-5,980.4	7,081.0	7,045.4	35.60	198.922	
3,200.0	3,162.8	4,640.1	4,353.4	9.8	29.6	-147.36	-2,955.8	-5,975.4	7,081.1	7,045.2	35.86	197.483	
3,248.0	3,209.8	4,665.0	4,376.4	10.0	29.8	-147.45	-2,961.9	-5,967.8	7,081.4	7,045.2	36.20	195.642	
3,300.0	3,260.6	4,665.0	4,376.4	10.2	29.8	-147.45	-2,961.9	-5,967.8	7,082.0	7,045.6	36.36	194.775	
3,346.4	3,306.1	4,693.9	4,403.1	10.5	30.0	-147.56	-2,968.9	-5,959.0	7,082.7	7,046.0	36.71	192.926	
3,400.0	3,358.5	4,714.1	4,421.7	10.7	30.1	-147.63	-2,973.6	-5,953.1	7,083.8	7,046.8	37.02	191.331	
3,444.9	3,402.3	4,747.0	4,452.3	10.9	30.4	-147.75	-2,981.2	-5,943.7	7,085.0	7,047.6	37.40	189.442	
3,500.0	3,456.3	4,781.4	4,484.4	11.1	30.6	-147.87	-2,989.1	-5,934.0	7,086.6	7,048.8	37.81	187.420	
3,543.3	3,498.6	4,850.6	4,548.8	11.3	31.1	-148.12	-3,004.5	-5,914.3	7,087.7	7,049.3	38.42	184.459	
3,600.0	3,554.1	4,899.0	4,594.0	11.5	31.4	-148.29	-3,015.2	-5,900.5	7,089.3	7,050.3	38.94	182.077	
3,641.7	3,594.9	4,910.0	4,604.3	11.7	31.5	-148.33	-3,017.6	-5,897.4	7,090.5	7,051.4	39.14	181.142	
3,700.0	3,651.9	4,910.0	4,604.3	12.0	31.5	-148.33	-3,017.6	-5,897.4	7,092.6	7,053.3	39.33	180.347	
3,740.1	3,691.2	4,945.4	4,637.5	12.2	31.7	-148.45	-3,025.1	-5,887.7	7,094.1	7,054.4	39.68	178.799	
3,800.0	3,749.7	4,962.3	4,653.4	12.4	31.8	-148.50	-3,028.5	-5,883.3	7,096.8	7,056.8	39.97	177.547	
3,838.6	3,787.4	4,992.0	4,681.7	12.6	32.0	-148.60	-3,034.3	-5,875.9	7,098.8	7,058.5	40.28	176.241	
3,900.0	3,847.5	5,155.0	4,836.6	12.9	33.0	-149.11	-3,063.9	-5,834.7	7,101.6	7,060.1	41.44	171.387	
3,937.0	3,883.7	5,155.0	4,836.6	13.0	33.0	-149.11	-3,063.9	-5,834.7	7,103.0	7,061.5	41.55	170.940	
4,000.0	3,945.3	5,199.5	4,879.1	13.3	33.3	-149.24	-3,071.1	-5,823.6	7,105.6	7,063.6	41.99	169.203	
4,035.4	3,980.0	5,237.0	4,915.0	13.5	33.5	-149.35	-3,077.1	-5,814.7	7,107.4	7,065.1	42.31	167.980	
4,060.0	4,004.0	5,237.0	4,915.0	13.6	33.5	-149.35	-3,077.1	-5,814.7	7,108.6	7,066.2	42.39	167.700	
4,100.0	4,043.2	5,237.0	4,915.0	13.7	33.5	-149.37	-3,077.1	-5,814.7	7,110.4	7,067.8	42.57	167.023	
4,133.8	4,076.5	5,237.0	4,915.0	13.8	33.5	-149.38	-3,077.1	-5,814.7	7,111.7	7,069.0	42.71	166.521	
4,200.0	4,141.6	5,273.3	4,949.9	14.0	33.7	-149.49	-3,082.4	-5,806.6	7,113.6	7,070.5	43.13	164.937	
4,232.3	4,173.5	5,285.3	4,961.6	14.1	33.7	-149.53	-3,084.0	-5,804.1	7,114.2	7,070.9	43.30	164.313	
4,300.0	4,240.6	5,318.0	4,993.4	14.3	33.9	-149.60	-3,087.8	-5,797.7	7,114.7	7,071.0	43.67	162.925	
4,330.7	4,271.1	5,318.0	4,993.4	14.4	33.9	-149.60	-3,087.8	-5,797.7	7,114.6	7,070.9	43.76	162.593	
4,400.0	4,340.0	5,318.0	4,993.4	14.5	33.9	-149.60	-3,087.8	-5,797.7	7,113.8	7,069.9	43.94	161.889	
4,429.1	4,369.0	5,318.0	4,993.4	14.6	33.9	-149.59	-3,087.8	-5,797.7	7,113.3	7,069.3	44.01	161.631	
4,500.0	4,439.7	5,356.9	5,031.5	14.8	34.0	-149.64	-3,092.0	-5,791.0	7,110.9	7,066.6	44.30	160.511	
4,527.5	4,467.2	5,362.9	5,037.4	14.8	34.1	-149.63	-3,092.6	-5,790.0	7,109.8	7,065.4	44.37	160.237	
4,600.0	4,539.7	5,400.0	5,073.9	14.9	34.2	-149.65	-3,096.5	-5,784.6	7,106.3	7,061.7	44.61	159.283	
4,626.0	4,565.6	5,400.0	5,073.9	15.0	34.2	-149.63	-3,096.5	-5,784.6	7,104.7	7,060.1	44.64	159.142	
4,660.2	4,599.8	5,400.0	5,073.9	15.0	34.2	-120.88	-3,096.5	-5,784.6	7,102.4	7,070.0	32.39	219.299	
4,700.0	4,639.6	5,400.0	5,073.9	15.0	34.2	-120.88	-3,096.5	-5,784.6	7,099.8	7,067.3	32.44	218.836	
4,724.4	4,664.0	5,400.0	5,073.9	15.1	34.2	-120.88	-3,096.5	-5,784.6	7,098.2	7,065.8	32.48	218.532	
4,800.0	4,739.6	5,452.4	5,125.6	15.2	34.4	-120.95	-3,101.8	-5,777.8	7,093.7	7,061.0	32.71	216.879	
4,822.8	4,762.5	5,482.0	5,154.8	15.2	34.5	-120.98	-3,104.6	-5,774.2	7,092.4	7,059.6	32.81	216.197	
4,900.0	4,839.6	5,482.0	5,154.8	15.3	34.5	-120.98	-3,104.6	-5,774.2	7,088.4	7,055.4	32.93	215.272	
4,921.2	4,860.9	5,509.7	5,182.2	15.4	34.6	-121.01	-3,107.2	-5,771.0	7,087.3	7,054.3	33.01	214.672	
5,000.0	4,939.6	5,563.0	5,235.0	15.5	34.7	-121.07	-3,112.1	-5,765.4	7,083.8	7,050.5	33.24	213.094	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 75-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	5,563.0	5,235.0	15.5	34.7	-121.07	-3,112.1	-5,765.4	7,082.9	7,049.7	33.27	212.865	
5,100.0	5,039.6	5,563.0	5,235.0	15.6	34.7	-121.07	-3,112.1	-5,765.4	7,080.0	7,046.6	33.40	211.952	
5,118.1	5,057.7	5,563.0	5,235.0	15.7	34.7	-121.07	-3,112.1	-5,765.4	7,079.5	7,046.1	33.43	211.749	
5,200.0	5,139.6	5,607.9	5,279.6	15.8	34.8	-121.11	-3,116.0	-5,761.4	7,077.2	7,043.6	33.64	210.375	
5,216.5	5,156.2	5,612.7	5,284.3	15.8	34.8	-121.12	-3,116.4	-5,761.1	7,076.9	7,043.2	33.68	210.145	
5,300.0	5,239.6	5,645.0	5,316.4	15.9	34.9	-121.15	-3,119.1	-5,758.9	7,075.5	7,041.6	33.87	208.916	
5,314.9	5,254.6	5,645.0	5,316.4	16.0	34.9	-121.15	-3,119.1	-5,758.9	7,075.3	7,041.4	33.89	208.758	
5,400.0	5,339.6	5,689.0	5,360.2	16.1	35.0	-121.18	-3,122.7	-5,756.3	7,074.6	7,040.5	34.10	207.473	
5,413.4	5,353.0	5,697.3	5,368.4	16.1	35.0	-121.19	-3,123.4	-5,755.8	7,074.5	7,040.4	34.13	207.260	
5,500.0	5,439.6	5,854.3	5,524.7	16.3	35.4	-121.31	-3,135.4	-5,746.6	7,073.5	7,039.0	34.52	204.933	
5,511.8	5,451.4	5,862.3	5,532.7	16.3	35.4	-121.32	-3,135.8	-5,746.1	7,073.4	7,038.8	34.55	204.738	
5,600.0	5,539.6	5,971.5	5,641.6	16.4	35.6	-121.37	-3,141.1	-5,741.1	7,072.1	7,037.2	34.86	202.869	
5,610.2	5,549.9	5,980.5	5,650.6	16.4	35.6	-121.38	-3,141.4	-5,740.7	7,071.9	7,037.0	34.89	202.686	
5,700.0	5,639.6	6,057.8	5,727.9	16.6	35.7	-121.41	-3,143.8	-5,737.8	7,070.5	7,035.3	35.16	201.111	
5,708.6	5,648.3	6,066.0	5,736.0	16.6	35.7	-121.41	-3,144.0	-5,737.6	7,070.3	7,035.2	35.18	200.956	
5,800.0	5,739.6	6,155.1	5,825.1	16.7	35.8	-121.43	-3,145.7	-5,735.0	7,069.0	7,033.5	35.47	199.306	
5,807.1	5,746.7	6,162.9	5,832.8	16.8	35.8	-121.43	-3,145.8	-5,734.8	7,068.9	7,033.4	35.49	199.173	
5,900.0	5,839.6	6,272.3	5,942.2	16.9	36.0	-121.45	-3,146.8	-5,732.1	7,067.4	7,031.6	35.81	197.369	
5,905.5	5,845.1	6,279.3	5,949.2	16.9	36.0	-121.45	-3,146.8	-5,731.9	7,067.3	7,031.5	35.83	197.258	
6,000.0	5,939.6	6,371.7	6,041.6	17.1	36.1	-121.47	-3,147.7	-5,729.5	7,065.6	7,029.5	36.13	195.578	
6,003.9	5,943.6	6,375.3	6,045.2	17.1	36.1	-121.47	-3,147.7	-5,729.4	7,065.6	7,029.4	36.14	195.511	
6,059.2	5,998.8	6,430.3	6,100.2	17.2	36.1	-121.48	-3,148.4	-5,727.9	7,064.6	7,028.3	36.32	194.530	
6,100.0	6,039.6	6,461.0	6,130.9	17.2	36.2	-31.56	-3,148.7	-5,727.1	7,062.9	7,013.7	49.24	143.441	
6,102.3	6,042.0	6,461.0	6,130.9	17.2	36.2	-31.57	-3,148.7	-5,727.1	7,062.8	7,013.5	49.23	143.455	
6,150.0	6,089.4	6,493.4	6,163.2	17.3	36.2	-31.77	-3,149.1	-5,726.3	7,058.3	7,009.2	49.09	143.790	
6,200.0	6,138.7	6,520.0	6,189.8	17.3	36.2	-32.11	-3,149.4	-5,725.7	7,050.8	7,002.0	48.81	144.455	
6,200.8	6,139.5	6,520.4	6,190.3	17.3	36.2	-32.12	-3,149.4	-5,725.7	7,050.7	7,001.9	48.80	144.467	
6,250.0	6,187.4	6,558.1	6,227.9	17.3	36.3	-32.61	-3,149.9	-5,725.0	7,040.6	6,992.2	48.44	145.356	
6,299.2	6,234.4	6,662.6	6,332.4	17.4	36.4	-33.35	-3,150.9	-5,722.8	7,027.6	6,979.6	48.06	146.222	
6,300.0	6,235.1	6,664.0	6,333.8	17.4	36.4	-33.37	-3,150.9	-5,722.8	7,027.4	6,979.3	48.05	146.239	
6,350.0	6,281.7	6,726.5	6,396.3	17.4	36.5	-34.25	-3,151.2	-5,721.2	7,011.1	6,963.5	47.55	147.458	
6,397.6	6,324.8	6,763.4	6,433.2	17.3	36.5	-35.22	-3,151.5	-5,720.2	6,993.1	6,946.1	46.98	148.836	
6,400.0	6,326.9	6,765.2	6,435.0	17.3	36.5	-35.28	-3,151.5	-5,720.2	6,992.1	6,945.1	46.96	148.908	
6,450.0	6,370.5	6,803.9	6,473.7	17.3	36.5	-36.50	-3,151.9	-5,719.1	6,970.6	6,924.2	46.34	150.423	
6,496.0	6,409.1	6,840.1	6,509.8	17.3	36.6	-37.83	-3,152.2	-5,718.2	6,948.6	6,902.8	45.78	151.781	
6,500.0	6,412.3	6,843.1	6,512.8	17.3	36.6	-37.96	-3,152.2	-5,718.1	6,946.6	6,900.9	45.73	151.897	
6,550.0	6,452.1	6,870.0	6,539.7	17.3	36.6	-39.61	-3,152.5	-5,717.4	6,920.3	6,875.2	45.15	153.277	
6,594.5	6,485.6	6,895.9	6,565.6	17.3	36.7	-41.31	-3,152.7	-5,716.8	6,895.1	6,850.4	44.71	154.228	
6,600.0	6,489.7	6,898.3	6,568.0	17.3	36.7	-41.53	-3,152.7	-5,716.7	6,891.9	6,847.2	44.65	154.336	
6,650.0	6,524.9	6,918.7	6,588.4	17.2	36.7	-43.72	-3,152.9	-5,716.3	6,861.5	6,817.2	44.28	154.962	
6,692.9	6,553.0	6,951.0	6,620.7	17.2	36.7	-45.95	-3,153.4	-5,715.6	6,833.9	6,789.8	44.14	154.822	
6,700.0	6,557.5	6,951.0	6,620.7	17.2	36.7	-46.31	-3,153.4	-5,715.6	6,829.2	6,785.1	44.11	154.808	
6,750.0	6,587.4	6,959.6	6,629.3	17.2	36.7	-49.11	-3,153.5	-5,715.4	6,795.3	6,751.2	44.11	154.043	
6,791.3	6,609.9	6,987.8	6,657.5	17.2	36.8	-51.89	-3,153.8	-5,714.9	6,766.0	6,721.6	44.38	152.461	
6,800.0	6,614.4	6,993.4	6,663.1	17.2	36.8	-52.51	-3,153.9	-5,714.8	6,759.7	6,715.3	44.45	152.086	
6,850.0	6,638.4	7,023.5	6,693.1	17.2	36.8	-56.34	-3,154.1	-5,714.2	6,722.8	6,677.8	45.05	149.227	
6,889.7	6,655.3	7,043.2	6,712.8	17.4	36.8	-59.70	-3,154.3	-5,713.9	6,692.6	6,646.9	45.71	146.409	
6,900.0	6,659.4	7,047.6	6,717.2	17.5	36.8	-60.61	-3,154.3	-5,713.8	6,684.7	6,638.8	45.90	145.635	
6,950.0	6,677.1	7,066.9	6,736.5	18.0	36.8	-65.31	-3,154.4	-5,713.4	6,645.6	6,598.6	46.95	141.542	
6,988.2	6,688.4	7,079.0	6,748.7	18.5	36.9	-69.17	-3,154.5	-5,713.2	6,615.2	6,567.3	47.85	138.240	
7,000.0	6,691.5	7,082.3	6,752.0	18.7	36.9	-70.42	-3,154.5	-5,713.2	6,605.7	6,557.5	48.13	137.237	
7,050.0	6,702.5	7,093.9	6,763.6	19.5	36.9	-75.86	-3,154.6	-5,712.9	6,565.2	6,515.8	49.35	133.022	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD JURGENS STATE #B16-30D - Wellbore #1 - Wellbo										Offset Site Error:		0.0 usft			
Survey Program: 75-MWD														Offset Well Error:		0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
7,086.6	6,708.4	7,099.9	6,769.5	20.1	36.9	-80.00	-3,154.6	-5,712.8	6,535.3	6,485.1	50.22	130.123					
7,100.0	6,710.1	7,101.5	6,771.2	20.4	36.9	-81.54	-3,154.6	-5,712.8	6,524.3	6,473.8	50.52	129.140					
7,150.0	6,714.2	7,105.2	6,774.8	21.3	36.9	-87.31	-3,154.6	-5,712.7	6,483.3	6,431.7	51.56	125.735					
7,185.0	6,715.0	7,105.4	6,775.0	21.9	36.9	-91.34	-3,154.6	-5,712.7	6,454.5	6,402.3	52.20	123.656					
7,185.6	6,715.0	7,105.4	6,775.0	21.9	36.9	-91.40	-3,154.6	-5,712.7	6,454.1	6,401.9	52.21	123.626					
7,200.0	6,715.0	7,105.0	6,774.7	22.2	36.9	-91.40	-3,154.6	-5,712.7	6,442.3	6,389.8	52.48	122.749					
7,283.4	6,714.8	7,103.1	6,772.7	23.9	36.9	-91.37	-3,154.6	-5,712.8	6,374.1	6,319.9	54.16	117.692					
7,300.0	6,714.8	7,102.7	6,772.3	24.2	36.9	-91.36	-3,154.6	-5,712.8	6,360.6	6,306.1	54.49	116.727					
7,381.9	6,714.6	7,100.8	6,770.4	26.0	36.9	-91.33	-3,154.6	-5,712.8	6,294.1	6,237.9	56.25	111.896					
7,400.0	6,714.6	7,100.3	6,770.0	26.4	36.9	-91.32	-3,154.6	-5,712.8	6,279.5	6,222.8	56.64	110.868					
7,480.3	6,714.4	7,098.5	6,768.1	28.2	36.9	-91.29	-3,154.6	-5,712.9	6,214.7	6,156.3	58.46	106.314					
7,500.0	6,714.4	7,098.0	6,767.7	28.7	36.9	-91.29	-3,154.6	-5,712.9	6,198.9	6,140.0	58.90	105.240					
7,578.7	6,714.2	7,096.2	6,765.8	30.5	36.9	-91.26	-3,154.6	-5,712.9	6,135.9	6,075.1	60.76	100.993					
7,600.0	6,714.2	7,095.7	6,765.4	31.0	36.9	-91.25	-3,154.6	-5,712.9	6,118.9	6,057.7	61.26	99.891					
7,677.1	6,714.0	7,093.9	6,763.6	32.9	36.9	-91.22	-3,154.6	-5,712.9	6,057.6	5,994.5	63.13	95.959					
7,700.0	6,714.0	7,093.4	6,763.0	33.4	36.9	-91.21	-3,154.6	-5,712.9	6,039.5	5,975.8	63.68	94.840					
7,775.6	6,713.9	7,091.6	6,761.3	35.3	36.9	-91.19	-3,154.6	-5,713.0	5,979.9	5,914.4	65.56	91.219					
7,800.0	6,713.8	7,091.0	6,760.7	35.9	36.9	-91.18	-3,154.6	-5,713.0	5,960.7	5,894.6	66.16	90.093					
7,874.0	6,713.7	7,089.3	6,759.0	37.8	36.9	-91.15	-3,154.5	-5,713.0	5,902.9	5,834.8	68.03	86.766					
7,900.0	6,713.6	7,088.7	6,758.4	38.4	36.9	-91.14	-3,154.5	-5,713.0	5,882.6	5,813.9	68.69	85.641					
7,972.4	6,713.5	7,087.0	6,756.7	40.3	36.9	-91.12	-3,154.5	-5,713.1	5,826.4	5,755.9	70.55	82.591					
8,000.0	6,713.4	7,086.4	6,756.1	41.0	36.9	-91.11	-3,154.5	-5,713.1	5,805.1	5,733.9	71.25	81.473					
8,070.8	6,713.3	7,084.8	6,754.4	42.8	36.9	-91.08	-3,154.5	-5,713.1	5,750.7	5,677.6	73.09	78.679					
8,100.0	6,713.2	7,084.1	6,753.8	43.6	36.9	-91.07	-3,154.5	-5,713.1	5,728.4	5,654.5	73.85	77.571					
8,169.3	6,713.1	7,082.5	6,752.2	45.4	36.9	-91.05	-3,154.5	-5,713.1	5,675.6	5,600.0	75.66	75.013					
8,200.0	6,713.0	7,081.8	6,751.5	46.2	36.9	-91.03	-3,154.5	-5,713.2	5,652.3	5,575.9	76.47	73.919					
8,267.7	6,712.9	7,080.2	6,749.9	48.0	36.9	-91.01	-3,154.5	-5,713.2	5,601.3	5,523.0	78.25	71.578					
8,300.0	6,712.8	7,079.5	6,749.2	48.8	36.9	-91.00	-3,154.5	-5,713.2	5,577.0	5,497.9	79.11	70.500					
8,366.1	6,712.7	7,078.0	6,747.7	50.6	36.9	-90.98	-3,154.5	-5,713.2	5,527.7	5,446.8	80.87	68.357					
8,400.0	6,712.6	7,077.2	6,746.9	51.5	36.9	-90.96	-3,154.5	-5,713.2	5,502.5	5,420.8	81.77	67.296					
8,464.5	6,712.5	7,075.7	6,745.4	53.2	36.9	-90.94	-3,154.5	-5,713.3	5,454.9	5,371.4	83.49	65.334					
8,500.0	6,712.4	7,074.9	6,744.6	54.1	36.9	-90.93	-3,154.5	-5,713.3	5,428.9	5,344.4	84.44	64.293					
8,563.0	6,712.3	7,073.5	6,743.1	55.8	36.8	-90.91	-3,154.5	-5,713.3	5,382.9	5,296.8	86.13	62.496					
8,600.0	6,712.3	7,072.6	6,742.3	56.8	36.8	-90.89	-3,154.5	-5,713.3	5,356.0	5,268.9	87.13	61.474					
8,661.4	6,712.1	7,071.2	6,740.9	58.5	36.8	-90.87	-3,154.4	-5,713.4	5,311.8	5,223.0	88.78	59.828					
8,700.0	6,712.1	7,070.3	6,740.0	59.5	36.8	-90.86	-3,154.4	-5,713.4	5,284.1	5,194.3	89.83	58.826					
8,759.8	6,711.9	7,069.0	6,738.6	61.1	36.8	-90.84	-3,154.4	-5,713.4	5,241.5	5,150.1	91.45	57.318					
8,800.0	6,711.9	7,068.1	6,737.7	62.2	36.8	-90.82	-3,154.4	-5,713.4	5,213.1	5,120.5	92.53	56.337					
8,858.2	6,711.8	7,066.7	6,736.4	63.8	36.8	-90.80	-3,154.4	-5,713.4	5,172.2	5,078.0	94.12	54.955					
8,900.0	6,711.7	7,065.8	6,735.5	64.9	36.8	-90.79	-3,154.4	-5,713.5	5,143.0	5,047.8	95.25	53.995					
8,956.7	6,711.6	7,064.5	6,734.2	66.5	36.8	-90.77	-3,154.4	-5,713.5	5,103.8	5,007.0	96.79	52.728					
9,000.0	6,711.5	7,063.5	6,733.2	67.6	36.8	-90.75	-3,154.4	-5,713.5	5,074.0	4,976.0	97.97	51.789					
9,055.1	6,711.4	7,062.3	6,731.9	69.1	36.8	-90.73	-3,154.4	-5,713.5	5,036.4	4,936.9	99.48	50.627					
9,100.0	6,711.3	7,061.2	6,730.9	70.4	36.8	-90.72	-3,154.4	-5,713.5	5,006.0	4,905.3	100.71	49.709					
9,153.5	6,711.2	7,060.0	6,729.7	71.8	36.8	-90.70	-3,154.4	-5,713.6	4,970.0	4,867.8	102.17	48.644					
9,200.0	6,711.1	7,059.0	6,728.7	73.1	36.8	-90.68	-3,154.4	-5,713.6	4,939.1	4,835.6	103.44	47.746					
9,251.9	6,711.0	7,057.8	6,727.5	74.5	36.8	-90.66	-3,154.4	-5,713.6	4,904.7	4,799.9	104.87	46.771					
9,300.0	6,710.9	7,056.7	6,726.4	75.8	36.8	-90.65	-3,154.4	-5,713.6	4,873.3	4,767.1	106.19	45.894					
9,350.4	6,710.8	7,055.6	6,725.3	77.2	36.8	-90.63	-3,154.4	-5,713.6	4,840.6	4,733.0	107.57	44.999					
9,400.0	6,710.7	7,054.5	6,724.1	78.6	36.8	-90.61	-3,154.3	-5,713.7	4,808.7	4,699.7	108.93	44.143					
9,448.8	6,710.6	7,053.4	6,723.0	79.9	36.8	-90.59	-3,154.3	-5,713.7	4,777.6	4,667.3	110.28	43.324					
9,500.0	6,710.5	7,052.2	6,721.9	81.3	36.8	-90.58	-3,154.3	-5,713.7	4,745.3	4,633.6	111.68	42.488					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 75-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	7,051.1	6,720.8	82.6	36.8	-90.56	-3,154.3	-5,713.7	4,715.8	4,602.8	112.99	41.738	
9,600.0	6,710.3	7,050.0	6,719.6	84.1	36.8	-90.54	-3,154.3	-5,713.7	4,683.2	4,568.7	114.44	40.923	
9,645.6	6,710.2	7,048.9	6,718.6	85.3	36.8	-90.52	-3,154.3	-5,713.8	4,655.3	4,539.6	115.70	40.236	
9,700.0	6,710.1	7,047.7	6,717.4	86.8	36.8	-90.51	-3,154.3	-5,713.8	4,622.4	4,505.2	117.20	39.441	
9,744.1	6,710.0	7,046.7	6,716.4	88.1	36.8	-90.49	-3,154.3	-5,713.8	4,596.0	4,477.6	118.42	38.813	
9,800.0	6,709.9	7,045.5	6,715.1	89.6	36.8	-90.47	-3,154.3	-5,713.8	4,563.0	4,443.0	119.96	38.038	
9,842.5	6,709.9	7,044.5	6,714.2	90.8	36.8	-90.46	-3,154.3	-5,713.8	4,538.2	4,417.1	121.13	37.464	
9,900.0	6,709.7	7,043.2	6,712.9	92.4	36.8	-90.44	-3,154.3	-5,713.9	4,505.0	4,382.3	122.72	36.709	
9,940.9	6,709.7	7,042.3	6,712.0	93.5	36.8	-90.42	-3,154.3	-5,713.9	4,481.8	4,357.9	123.86	36.185	
10,000.0	6,709.6	7,041.0	6,710.7	95.1	36.8	-90.40	-3,154.3	-5,713.9	4,448.6	4,323.1	125.49	35.449	
10,039.3	6,709.5	7,040.1	6,709.8	96.2	36.8	-90.39	-3,154.3	-5,713.9	4,426.8	4,300.2	126.58	34.972	
10,100.0	6,709.4	7,038.8	6,708.4	97.9	36.8	-90.37	-3,154.2	-5,713.9	4,393.7	4,265.4	128.26	34.256	
10,137.8	6,709.3	7,037.9	6,707.6	98.9	36.8	-90.35	-3,154.2	-5,714.0	4,373.3	4,244.0	129.31	33.821	
10,200.0	6,709.2	7,036.5	6,706.2	100.7	36.8	-90.33	-3,154.2	-5,714.0	4,340.4	4,209.3	131.03	33.124	
10,236.2	6,709.1	7,035.7	6,705.4	101.7	36.8	-90.32	-3,154.2	-5,714.0	4,321.5	4,189.4	132.04	32.729	
10,300.0	6,709.0	7,034.3	6,704.0	103.4	36.8	-90.30	-3,154.2	-5,714.0	4,288.7	4,154.9	133.81	32.052	
10,334.6	6,708.9	7,033.5	6,703.2	104.4	36.8	-90.29	-3,154.2	-5,714.0	4,271.2	4,136.5	134.77	31.693	
10,400.0	6,708.8	7,031.8	6,701.5	106.2	36.8	-90.26	-3,154.2	-5,714.1	4,238.8	4,102.2	136.58	31.035	
10,433.0	6,708.7	7,030.9	6,700.6	107.1	36.8	-90.24	-3,154.2	-5,714.1	4,222.7	4,085.2	137.50	30.711	
10,500.0	6,708.6	7,029.0	6,698.6	109.0	36.8	-90.21	-3,154.2	-5,714.1	4,190.7	4,051.3	139.36	30.071	
10,531.5	6,708.5	7,028.0	6,697.7	109.9	36.8	-90.20	-3,154.2	-5,714.1	4,175.9	4,035.7	140.23	29.778	
10,600.0	6,708.4	7,026.1	6,695.7	111.8	36.8	-90.17	-3,154.2	-5,714.2	4,144.4	4,002.3	142.14	29.158	
10,629.9	6,708.4	7,025.2	6,694.9	112.6	36.8	-90.16	-3,154.2	-5,714.2	4,131.0	3,988.0	142.97	28.894	
10,700.0	6,708.2	7,023.1	6,692.8	114.6	36.8	-90.12	-3,154.1	-5,714.2	4,100.1	3,955.1	144.92	28.293	
10,728.3	6,708.2	7,022.3	6,692.0	115.3	36.8	-90.11	-3,154.1	-5,714.2	4,087.9	3,942.2	145.70	28.056	
10,800.0	6,708.0	7,020.2	6,689.9	117.3	36.8	-90.08	-3,154.1	-5,714.3	4,057.7	3,910.0	147.70	27.473	
10,826.7	6,708.0	7,019.4	6,689.1	118.1	36.8	-90.07	-3,154.1	-5,714.3	4,046.7	3,898.3	148.44	27.261	
10,900.0	6,707.8	7,017.3	6,687.0	120.1	36.8	-90.03	-3,154.1	-5,714.3	4,017.4	3,866.9	150.48	26.697	
10,925.2	6,707.8	7,016.5	6,686.2	120.8	36.8	-90.02	-3,154.1	-5,714.3	4,007.5	3,856.4	151.18	26.508	
11,000.0	6,707.6	7,014.3	6,684.0	122.9	36.8	-89.99	-3,154.1	-5,714.4	3,979.1	3,825.9	153.26	25.963	
11,023.6	6,707.6	7,013.6	6,683.3	123.6	36.8	-89.98	-3,154.1	-5,714.4	3,970.4	3,816.5	153.92	25.796	
11,100.0	6,707.5	7,011.3	6,681.0	125.7	36.8	-89.94	-3,154.0	-5,714.4	3,943.1	3,787.0	156.05	25.269	
11,122.0	6,707.4	7,010.7	6,680.3	126.3	36.8	-89.93	-3,154.0	-5,714.5	3,935.4	3,778.8	156.66	25.121	
11,200.0	6,707.3	7,008.3	6,678.0	128.5	36.8	-89.89	-3,154.0	-5,714.5	3,909.2	3,750.4	158.83	24.613	
11,220.4	6,707.2	7,007.7	6,677.4	129.0	36.8	-89.88	-3,154.0	-5,714.5	3,902.6	3,743.2	159.40	24.483	
11,300.0	6,707.1	7,005.3	6,675.0	131.3	36.8	-89.85	-3,154.0	-5,714.6	3,877.7	3,716.1	161.62	23.993	
11,318.9	6,707.0	7,004.7	6,674.4	131.8	36.8	-89.84	-3,154.0	-5,714.6	3,872.0	3,709.8	162.14	23.880	
11,400.0	6,706.9	7,002.3	6,671.9	134.0	36.8	-89.80	-3,154.0	-5,714.6	3,848.5	3,684.1	164.40	23.409	
11,417.3	6,706.9	7,001.7	6,671.4	134.5	36.8	-89.79	-3,154.0	-5,714.6	3,843.6	3,678.8	164.89	23.311	
11,500.0	6,706.7	6,999.2	6,668.9	136.8	36.8	-89.75	-3,153.9	-5,714.7	3,821.6	3,654.4	167.19	22.858	
11,515.7	6,706.7	6,998.7	6,668.4	137.3	36.8	-89.75	-3,153.9	-5,714.7	3,817.6	3,650.0	167.63	22.774	
11,600.0	6,706.5	6,996.1	6,665.8	139.6	36.8	-89.70	-3,153.9	-5,714.7	3,797.3	3,627.3	169.98	22.340	
11,614.1	6,706.5	6,995.7	6,665.4	140.0	36.8	-89.70	-3,153.9	-5,714.7	3,794.0	3,623.6	170.37	22.269	
11,700.0	6,706.3	6,993.0	6,662.7	142.4	36.8	-89.66	-3,153.9	-5,714.8	3,775.4	3,602.6	172.77	21.852	
11,712.6	6,706.3	6,992.6	6,662.3	142.8	36.8	-89.65	-3,153.9	-5,714.8	3,772.8	3,599.7	173.12	21.793	
11,800.0	6,706.1	6,989.9	6,659.6	145.2	36.8	-89.61	-3,153.8	-5,714.8	3,756.0	3,580.5	175.56	21.395	
11,811.0	6,706.1	6,989.6	6,659.3	145.5	36.8	-89.60	-3,153.8	-5,714.9	3,754.0	3,578.2	175.86	21.346	
11,900.0	6,705.9	6,986.8	6,656.5	148.0	36.8	-89.56	-3,153.8	-5,714.9	3,739.2	3,560.9	178.35	20.966	
11,909.4	6,705.9	6,986.5	6,656.2	148.3	36.8	-89.56	-3,153.8	-5,714.9	3,737.8	3,559.2	178.61	20.927	
12,000.0	6,705.8	6,983.6	6,653.3	150.8	36.8	-89.51	-3,153.8	-5,715.0	3,725.1	3,543.9	181.14	20.565	
12,007.8	6,705.7	6,983.4	6,653.1	151.0	36.8	-89.51	-3,153.8	-5,715.0	3,724.0	3,542.7	181.35	20.535	
12,100.0	6,705.6	6,980.4	6,650.1	153.6	36.7	-89.46	-3,153.7	-5,715.0	3,713.5	3,529.6	183.93	20.190	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 75-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,980.2	6,649.9	153.8	36.7	-89.46	-3,153.7	-5,715.0	3,712.9	3,528.8	184.10	20.168	
12,200.0	6,705.4	6,977.2	6,646.9	156.4	36.7	-89.41	-3,153.7	-5,715.1	3,704.6	3,517.9	186.72	19.841	
12,204.7	6,705.4	6,977.1	6,646.8	156.5	36.7	-89.41	-3,153.7	-5,715.1	3,704.3	3,517.4	186.85	19.825	
12,300.0	6,705.2	6,974.0	6,643.7	159.2	36.7	-89.36	-3,153.7	-5,715.1	3,698.4	3,508.9	189.51	19.516	
12,303.1	6,705.2	6,973.9	6,643.6	159.3	36.7	-89.36	-3,153.7	-5,715.2	3,698.3	3,508.7	189.59	19.506	
12,400.0	6,705.0	6,970.8	6,640.5	162.0	36.7	-89.31	-3,153.6	-5,715.2	3,694.9	3,502.6	192.30	19.215	
12,401.5	6,705.0	6,970.7	6,640.4	162.0	36.7	-89.31	-3,153.6	-5,715.2	3,694.9	3,502.6	192.34	19.210	
12,479.4	6,704.9	6,968.2	6,637.9	164.2	36.7	-89.27	-3,153.6	-5,715.3	3,694.1	3,499.6	194.52	18.991 CC	
12,500.0	6,704.8	6,967.5	6,637.2	164.8	36.7	-89.26	-3,153.6	-5,715.3	3,694.2	3,499.1	195.09	18.936	
12,598.4	6,704.6	6,964.3	6,634.0	167.5	36.7	-89.21	-3,153.5	-5,715.3	3,696.0	3,498.2	197.84	18.682 ES	
12,600.0	6,704.6	6,964.2	6,633.9	167.6	36.7	-89.21	-3,153.5	-5,715.3	3,696.1	3,498.2	197.88	18.678	
12,696.8	6,704.4	6,961.0	6,630.7	170.3	36.7	-89.16	-3,153.5	-5,715.4	3,700.5	3,499.9	200.59	18.448	
12,700.0	6,704.4	6,960.9	6,630.6	170.4	36.7	-89.16	-3,153.5	-5,715.4	3,700.7	3,500.0	200.67	18.441	
12,795.2	6,704.3	6,957.8	6,627.5	173.0	36.7	-89.11	-3,153.4	-5,715.5	3,707.6	3,504.2	203.33	18.234	
12,800.0	6,704.2	6,957.6	6,627.3	173.2	36.7	-89.11	-3,153.4	-5,715.5	3,708.0	3,504.5	203.47	18.224	
12,893.7	6,704.1	6,954.5	6,624.2	175.8	36.7	-89.06	-3,153.4	-5,715.5	3,717.2	3,511.2	206.08	18.038	
12,900.0	6,704.1	6,954.3	6,623.9	176.0	36.7	-89.06	-3,153.4	-5,715.5	3,717.9	3,511.7	206.26	18.026	
12,992.1	6,703.9	6,951.1	6,620.8	178.5	36.7	-89.01	-3,153.4	-5,715.6	3,729.5	3,520.6	208.83	17.859	
13,000.0	6,703.9	6,951.0	6,620.7	178.8	36.7	-89.01	-3,153.4	-5,715.6	3,730.6	3,521.5	209.05	17.845	
13,090.5	6,703.7	6,951.0	6,620.7	181.3	36.7	-89.01	-3,153.4	-5,715.6	3,744.3	3,532.7	211.59	17.696	
13,100.0	6,703.7	6,951.0	6,620.7	181.6	36.7	-89.01	-3,153.4	-5,715.6	3,745.8	3,534.0	211.85	17.681	
13,188.9	6,703.5	6,951.0	6,620.7	184.0	36.7	-89.01	-3,153.4	-5,715.6	3,761.6	3,547.2	214.34	17.550	
13,200.0	6,703.5	6,951.0	6,620.7	184.4	36.7	-89.01	-3,153.4	-5,715.6	3,763.7	3,549.0	214.65	17.534	
13,287.4	6,703.3	6,951.0	6,620.7	186.8	36.7	-89.01	-3,153.4	-5,715.6	3,781.4	3,564.3	217.10	17.418	
13,300.0	6,703.3	6,951.0	6,620.7	187.2	36.7	-89.01	-3,153.4	-5,715.6	3,784.1	3,566.6	217.45	17.402	
13,385.8	6,703.2	6,951.0	6,620.7	189.6	36.7	-89.01	-3,153.4	-5,715.6	3,803.6	3,583.8	219.85	17.301	
13,400.0	6,703.1	6,951.0	6,620.7	190.0	36.7	-89.01	-3,153.4	-5,715.6	3,807.0	3,586.8	220.25	17.285	
13,484.2	6,703.0	6,942.5	6,612.2	192.3	36.7	-88.87	-3,153.2	-5,715.8	3,828.2	3,605.6	222.59	17.199	
13,500.0	6,702.9	6,942.2	6,611.9	192.8	36.7	-88.87	-3,153.2	-5,715.8	3,832.4	3,609.4	223.03	17.183	
13,582.6	6,702.8	6,940.7	6,610.4	195.1	36.7	-88.85	-3,153.2	-5,715.8	3,855.2	3,629.9	225.34	17.108	
13,600.0	6,702.8	6,940.4	6,610.1	195.6	36.7	-88.84	-3,153.2	-5,715.8	3,860.2	3,634.4	225.83	17.094	
13,681.1	6,702.6	6,938.9	6,608.6	197.8	36.7	-88.82	-3,153.2	-5,715.8	3,884.5	3,656.4	228.10	17.030	
13,700.0	6,702.6	6,938.6	6,608.3	198.4	36.7	-88.81	-3,153.2	-5,715.8	3,890.4	3,661.8	228.63	17.017	
13,779.5	6,702.4	6,937.1	6,606.8	200.6	36.7	-88.79	-3,153.2	-5,715.9	3,916.1	3,685.2	230.85	16.964	
13,800.0	6,702.4	6,936.7	6,606.4	201.2	36.7	-88.78	-3,153.2	-5,715.9	3,922.9	3,691.5	231.42	16.951	
13,877.9	6,702.2	6,935.3	6,605.0	203.3	36.7	-88.76	-3,153.1	-5,715.9	3,949.8	3,716.2	233.60	16.908	
13,900.0	6,702.2	6,934.9	6,604.6	204.0	36.7	-88.76	-3,153.1	-5,715.9	3,957.7	3,723.5	234.22	16.897	
13,976.3	6,702.1	6,933.4	6,603.2	206.1	36.7	-88.73	-3,153.1	-5,716.0	3,985.7	3,749.4	236.35	16.863	
14,000.0	6,702.0	6,933.0	6,602.7	206.8	36.7	-88.73	-3,153.1	-5,716.0	3,994.7	3,757.6	237.02	16.854	
14,074.8	6,701.9	6,931.6	6,601.3	208.9	36.7	-88.70	-3,153.1	-5,716.0	4,023.7	3,784.6	239.11	16.828	
14,100.0	6,701.8	6,931.1	6,600.8	209.6	36.7	-88.70	-3,153.1	-5,716.0	4,033.8	3,793.9	239.81	16.820	
14,173.2	6,701.7	6,929.7	6,599.4	211.6	36.7	-88.67	-3,153.1	-5,716.0	4,063.7	3,821.8	241.86	16.802	
14,200.0	6,701.6	6,929.2	6,598.9	212.4	36.7	-88.67	-3,153.1	-5,716.0	4,074.9	3,832.3	242.61	16.796	
14,271.6	6,701.5	6,927.8	6,597.5	214.4	36.7	-88.65	-3,153.0	-5,716.1	4,105.7	3,861.1	244.61	16.784	
14,300.0	6,701.4	6,927.2	6,596.9	215.2	36.7	-88.64	-3,153.0	-5,716.1	4,118.1	3,872.7	245.41	16.781	
14,370.0	6,701.3	6,925.9	6,595.6	217.1	36.7	-88.62	-3,153.0	-5,716.1	4,149.6	3,902.2	247.37	16.775	
14,400.0	6,701.3	6,925.3	6,595.0	218.0	36.7	-88.61	-3,153.0	-5,716.1	4,163.3	3,915.1	248.20	16.774	
14,468.5	6,701.1	6,923.9	6,593.6	219.9	36.7	-88.59	-3,153.0	-5,716.2	4,195.3	3,945.2	250.12	16.773 SF	
14,500.0	6,701.1	6,923.3	6,593.0	220.8	36.7	-88.58	-3,153.0	-5,716.2	4,210.3	3,959.3	251.00	16.774	
14,566.9	6,701.0	6,922.0	6,591.7	222.6	36.7	-88.56	-3,153.0	-5,716.2	4,242.8	3,990.0	252.87	16.779	
14,600.0	6,700.9	6,921.3	6,591.0	223.6	36.7	-88.54	-3,153.0	-5,716.2	4,259.2	4,005.4	253.80	16.782	
14,665.3	6,700.8	6,920.0	6,589.7	225.4	36.7	-88.52	-3,152.9	-5,716.2	4,292.1	4,036.5	255.63	16.791	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD JURGENS STATE #B16-30D - Wellbore #1 - Wellbo												Offset Site Error:	0.0 usft
Survey Program: 75-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis			Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,700.0	6,700.7	6,919.3	6,589.0	226.4	36.7	-88.51	-3,152.9	-5,716.3	4,309.8	4,053.3	256.60	16.796	
14,763.7	6,700.6	6,918.0	6,587.7	228.2	36.7	-88.49	-3,152.9	-5,716.3	4,343.0	4,084.6	258.38	16.809	
14,800.0	6,700.5	6,917.2	6,586.9	229.2	36.7	-88.48	-3,152.9	-5,716.3	4,362.2	4,102.8	259.39	16.817	
14,862.2	6,700.4	6,915.9	6,585.6	230.9	36.7	-88.46	-3,152.9	-5,716.3	4,395.6	4,134.4	261.13	16.833	
14,900.0	6,700.3	6,915.1	6,584.8	232.0	36.7	-88.45	-3,152.9	-5,716.3	4,416.2	4,154.0	262.19	16.843	
14,960.6	6,700.2	6,913.9	6,583.6	233.7	36.7	-88.43	-3,152.9	-5,716.4	4,449.7	4,185.8	263.89	16.862	
15,000.0	6,700.2	6,913.0	6,582.8	234.8	36.7	-88.42	-3,152.9	-5,716.4	4,471.7	4,206.8	264.99	16.875	
15,059.0	6,700.0	6,911.8	6,581.5	236.4	36.7	-88.40	-3,152.9	-5,716.4	4,505.3	4,238.6	266.64	16.897	
15,082.8	6,700.0	6,911.3	6,581.0	237.1	36.7	-88.39	-3,152.8	-5,716.4	4,518.9	4,251.6	267.30	16.906	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 683-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	120.71	-1,195.2	2,012.2	2,340.4				
98.4	98.4	93.6	93.6	0.1	0.1	120.71	-1,195.2	2,012.2	2,340.4	2,340.2	0.18	N/A	
100.0	100.0	95.3	95.3	0.1	0.1	120.71	-1,195.2	2,012.2	2,340.4	2,340.2	0.19	N/A	
196.8	196.8	194.5	194.5	0.3	0.2	120.71	-1,195.1	2,012.1	2,340.3	2,339.8	0.50	4,713.461	
200.0	200.0	197.7	197.7	0.3	0.2	120.71	-1,195.1	2,012.1	2,340.2	2,339.7	0.51	4,619.624	
295.3	295.3	295.3	295.3	0.5	0.3	120.71	-1,194.9	2,011.9	2,340.0	2,339.2	0.81	2,883.241	
300.0	300.0	300.1	300.1	0.5	0.3	120.71	-1,194.9	2,011.9	2,340.0	2,339.2	0.83	2,830.471	
393.7	393.7	396.1	396.1	0.8	0.4	120.71	-1,194.7	2,011.6	2,339.7	2,338.5	1.13	2,076.610	
400.0	400.0	402.5	402.5	0.8	0.4	120.71	-1,194.7	2,011.6	2,339.6	2,338.5	1.15	2,040.070	
492.1	492.1	496.9	496.9	1.0	0.5	120.71	-1,194.4	2,011.2	2,339.2	2,337.8	1.44	1,622.476	
500.0	500.0	505.0	505.0	1.0	0.5	120.71	-1,194.4	2,011.2	2,339.2	2,337.7	1.47	1,594.567	
590.5	590.5	597.7	597.7	1.2	0.6	120.70	-1,194.1	2,010.8	2,338.7	2,336.9	1.76	1,331.180	
600.0	600.0	607.4	607.4	1.2	0.6	120.70	-1,194.1	2,010.8	2,338.6	2,336.8	1.79	1,308.614	
689.0	689.0	701.0	701.0	1.4	0.7	120.70	-1,193.7	2,010.2	2,338.0	2,335.9	2.10	1,115.596	
700.0	700.0	714.1	714.0	1.4	0.7	120.71	-1,193.8	2,010.1	2,337.9	2,335.8	2.15	1,088.217	
787.4	787.4	794.6	794.5	1.6	0.9	120.77	-1,195.4	2,008.1	2,337.0	2,334.5	2.51	929.768	
800.0	800.0	802.6	802.5	1.7	0.9	120.77	-1,195.7	2,007.9	2,337.0	2,334.4	2.56	913.568	
825.9	825.9	819.0	818.9	1.7	0.9	120.80	-1,196.5	2,007.4	2,336.9	2,334.3	2.65	882.005 CC, ES	
885.8	885.8	854.0	853.8	1.9	1.0	120.85	-1,198.4	2,006.4	2,337.2	2,334.4	2.86	818.601	
900.0	900.0	854.0	853.8	1.9	1.0	120.85	-1,198.4	2,006.4	2,337.4	2,334.5	2.89	809.634	
984.2	984.2	913.5	913.2	2.1	1.1	120.96	-1,202.9	2,005.0	2,339.0	2,335.8	3.20	730.393	
1,000.0	1,000.0	939.0	938.6	2.1	1.2	121.01	-1,205.1	2,004.6	2,339.6	2,336.3	3.29	710.667	
1,082.7	1,082.7	968.9	968.3	2.3	1.3	121.08	-1,208.1	2,004.2	2,342.6	2,339.1	3.55	659.864	
1,100.0	1,100.0	978.5	977.8	2.3	1.3	121.10	-1,209.1	2,004.1	2,343.4	2,339.8	3.61	648.759	
1,181.1	1,181.1	1,025.0	1,024.0	2.5	1.4	92.41	-1,214.5	2,003.9	2,348.1	2,344.2	3.92	599.352	
1,200.0	1,200.0	1,036.6	1,035.6	2.6	1.4	92.43	-1,216.0	2,004.0	2,349.4	2,345.4	3.99	588.652	
1,279.5	1,279.4	1,096.6	1,095.0	2.7	1.6	92.54	-1,223.8	2,004.2	2,355.2	2,350.9	4.33	543.979	
1,300.0	1,299.8	1,110.0	1,108.3	2.8	1.6	92.57	-1,225.6	2,004.2	2,356.8	2,352.4	4.41	534.275	
1,377.9	1,377.5	1,159.2	1,157.0	3.0	1.8	92.67	-1,232.7	2,004.7	2,363.7	2,359.0	4.73	499.530	
1,400.0	1,399.5	1,172.6	1,170.2	3.0	1.8	92.70	-1,234.7	2,004.9	2,365.9	2,361.0	4.82	490.723	
1,476.4	1,475.3	1,219.2	1,216.3	3.2	2.0	92.80	-1,242.0	2,005.7	2,374.0	2,368.8	5.15	461.258	
1,500.0	1,498.7	1,233.7	1,230.5	3.3	2.0	92.84	-1,244.4	2,006.0	2,376.7	2,371.5	5.25	452.699	
1,574.8	1,572.6	1,281.0	1,277.1	3.5	2.2	92.98	-1,252.6	2,007.2	2,386.1	2,380.5	5.60	426.281	
1,600.0	1,597.5	1,281.0	1,277.1	3.5	2.2	92.91	-1,252.6	2,007.2	2,389.5	2,383.8	5.67	421.759	
1,673.2	1,669.4	1,334.0	1,329.2	3.7	2.4	93.11	-1,262.6	2,008.9	2,400.1	2,394.0	6.06	395.749	
1,700.1	1,695.8	1,348.8	1,343.6	3.8	2.4	93.15	-1,265.6	2,009.4	2,404.2	2,398.0	6.20	387.999	
1,771.6	1,765.7	1,391.3	1,385.1	4.1	2.6	93.51	-1,274.4	2,011.0	2,416.0	2,409.5	6.58	367.295	
1,800.0	1,793.4	1,409.3	1,402.8	4.2	2.7	93.66	-1,278.2	2,011.8	2,420.9	2,414.2	6.74	359.424	
1,870.1	1,862.0	1,454.8	1,447.2	4.4	2.9	94.05	-1,288.0	2,014.0	2,433.6	2,426.5	7.14	340.777	
1,900.0	1,891.3	1,483.9	1,475.5	4.5	3.0	94.30	-1,294.3	2,015.4	2,439.2	2,431.9	7.34	332.189	
1,968.5	1,958.3	1,550.5	1,540.4	4.8	3.2	94.85	-1,308.6	2,018.8	2,452.1	2,444.3	7.79	314.683	
2,000.0	1,989.1	1,581.1	1,570.3	4.9	3.3	95.11	-1,315.1	2,020.4	2,458.0	2,450.0	8.00	307.424	
2,066.9	2,054.5	1,652.0	1,639.5	5.1	3.6	95.68	-1,329.9	2,024.0	2,470.8	2,462.3	8.45	292.290	
2,100.0	2,086.9	1,691.9	1,678.5	5.3	3.8	96.01	-1,338.3	2,025.8	2,477.0	2,468.3	8.70	284.787	
2,165.3	2,150.8	1,757.4	1,742.5	5.5	4.0	96.54	-1,352.2	2,028.4	2,489.3	2,480.1	9.16	271.791	
2,200.0	2,184.7	1,790.1	1,774.4	5.6	4.1	96.81	-1,359.2	2,029.6	2,495.8	2,486.4	9.40	265.550	
2,263.8	2,247.1	1,856.3	1,839.0	5.9	4.4	97.35	-1,373.4	2,031.9	2,508.0	2,498.1	9.86	254.393	
2,300.0	2,282.5	1,895.3	1,877.2	6.0	4.6	97.67	-1,381.4	2,033.4	2,514.8	2,504.7	10.12	248.471	
2,362.2	2,343.3	1,965.4	1,945.8	6.3	4.8	98.22	-1,395.7	2,035.8	2,526.6	2,516.0	10.58	238.873	
2,400.0	2,380.3	2,012.4	1,991.7	6.5	5.0	98.59	-1,405.2	2,037.3	2,533.6	2,522.8	10.87	233.037	
2,460.6	2,439.6	2,076.7	2,054.7	6.7	5.3	99.09	-1,418.1	2,038.8	2,544.8	2,533.5	11.32	224.881	
2,500.0	2,478.1	2,111.0	2,088.3	6.9	5.4	99.36	-1,425.1	2,039.6	2,552.1	2,540.5	11.58	220.317	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 683-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,559.0	2,535.9	2,170.5	2,146.6	7.1	5.7	99.82	-1,437.1	2,041.1	2,563.2	2,551.2	12.01	213.474		
2,600.0	2,575.9	2,217.4	2,192.6	7.3	5.9	100.18	-1,446.2	2,042.3	2,570.9	2,558.6	12.31	208.768		
2,657.5	2,632.2	2,269.8	2,243.9	7.5	6.1	100.57	-1,456.2	2,043.7	2,581.7	2,569.0	12.70	203.265		
2,700.0	2,673.8	2,308.0	2,281.4	7.7	6.2	100.85	-1,463.5	2,044.8	2,589.8	2,576.8	12.98	199.452		
2,755.9	2,728.4	2,376.2	2,348.4	7.9	6.5	101.34	-1,476.2	2,046.7	2,600.4	2,587.0	13.41	193.970		
2,800.0	2,771.6	2,415.1	2,386.7	8.1	6.6	101.62	-1,483.2	2,047.8	2,608.7	2,595.0	13.70	190.455		
2,854.3	2,824.7	2,454.6	2,425.5	8.3	6.8	101.90	-1,490.4	2,049.0	2,619.2	2,605.2	14.03	186.648		
2,900.0	2,869.4	2,488.7	2,459.0	8.5	6.9	102.14	-1,496.8	2,050.1	2,628.3	2,613.9	14.32	183.556		
2,952.7	2,921.0	2,531.4	2,500.9	8.8	7.1	102.44	-1,504.9	2,051.5	2,639.0	2,624.3	14.66	179.990		
3,000.0	2,967.2	2,564.0	2,532.8	9.0	7.2	102.67	-1,511.2	2,052.5	2,648.7	2,633.8	14.95	177.147		
3,051.2	3,017.3	2,610.4	2,578.3	9.2	7.4	103.00	-1,520.4	2,054.0	2,659.5	2,644.2	15.30	173.845		
3,100.0	3,065.0	2,650.0	2,617.1	9.4	7.6	103.28	-1,528.1	2,055.5	2,670.0	2,654.4	15.61	170.997		
3,149.6	3,113.5	2,691.9	2,658.1	9.6	7.7	103.57	-1,536.4	2,057.1	2,680.8	2,664.9	15.94	168.182		
3,200.0	3,162.8	2,735.0	2,700.4	9.8	7.9	103.86	-1,544.9	2,058.8	2,692.0	2,675.7	16.27	165.441		
3,248.0	3,209.8	2,840.2	2,803.7	10.0	8.3	104.56	-1,564.0	2,062.4	2,701.7	2,685.0	16.74	161.350		
3,300.0	3,260.6	2,868.7	2,831.7	10.2	8.4	104.75	-1,569.1	2,063.4	2,712.5	2,695.5	17.04	159.214		
3,346.4	3,306.1	2,906.0	2,868.4	10.5	8.6	104.99	-1,576.2	2,064.7	2,722.6	2,705.2	17.33	157.121		
3,400.0	3,358.5	2,937.0	2,898.8	10.7	8.7	105.20	-1,582.2	2,065.8	2,734.4	2,716.8	17.64	155.056		
3,444.9	3,402.3	2,981.4	2,942.3	10.9	8.9	105.49	-1,590.6	2,067.5	2,744.5	2,726.6	17.94	152.979		
3,500.0	3,456.3	3,053.5	3,013.1	11.1	9.1	105.94	-1,603.8	2,070.4	2,756.7	2,738.4	18.35	150.259		
3,543.3	3,498.6	3,151.9	3,110.1	11.3	9.5	106.54	-1,620.2	2,074.4	2,765.9	2,747.2	18.75	147.505		
3,600.0	3,554.1	3,273.7	3,230.5	11.5	9.9	107.26	-1,638.0	2,076.9	2,776.2	2,757.0	19.26	144.179		
3,641.7	3,594.9	3,305.6	3,262.2	11.7	10.0	107.45	-1,642.5	2,077.4	2,783.8	2,764.3	19.50	142.740		
3,700.0	3,651.9	3,334.0	3,290.2	12.0	10.1	107.61	-1,646.6	2,077.8	2,794.6	2,774.8	19.81	141.062		
3,740.1	3,691.2	3,358.6	3,314.5	12.2	10.2	107.76	-1,650.4	2,078.3	2,802.4	2,782.3	20.04	139.840		
3,800.0	3,749.7	3,382.4	3,338.0	12.4	10.3	107.90	-1,654.2	2,078.9	2,814.6	2,794.3	20.35	138.312		
3,838.6	3,787.4	3,419.0	3,374.0	12.6	10.4	108.12	-1,660.6	2,080.0	2,823.1	2,802.5	20.60	137.050		
3,900.0	3,847.5	3,419.0	3,374.0	12.9	10.4	108.12	-1,660.6	2,080.0	2,836.7	2,815.9	20.86	135.993		
3,937.0	3,883.7	3,448.9	3,403.4	13.0	10.5	108.30	-1,666.2	2,081.0	2,845.3	2,824.3	21.09	134.911		
4,000.0	3,945.3	3,491.5	3,445.2	13.3	10.7	108.56	-1,674.3	2,082.6	2,860.4	2,838.9	21.46	133.273		
4,035.4	3,980.0	3,505.0	3,458.4	13.5	10.8	108.64	-1,676.9	2,083.1	2,869.0	2,847.4	21.65	132.545		
4,060.0	4,004.0	3,527.3	3,480.3	13.6	10.9	108.78	-1,681.3	2,084.0	2,875.1	2,853.3	21.81	131.845		
4,100.0	4,043.2	3,549.6	3,502.1	13.7	10.9	109.11	-1,685.8	2,084.9	2,885.1	2,863.1	21.99	131.175		
4,133.8	4,076.5	3,568.4	3,520.5	13.8	11.0	109.38	-1,689.8	2,085.7	2,893.7	2,871.5	22.13	130.758		
4,200.0	4,141.6	3,610.6	3,561.6	14.0	11.2	109.94	-1,698.9	2,087.4	2,910.4	2,888.0	22.41	129.873		
4,232.3	4,173.5	3,634.9	3,585.3	14.1	11.3	110.22	-1,704.2	2,088.4	2,918.6	2,896.0	22.55	129.445		
4,300.0	4,240.6	3,689.4	3,638.4	14.3	11.6	110.81	-1,716.3	2,090.9	2,935.5	2,912.7	22.84	128.510		
4,330.7	4,271.1	3,720.1	3,668.3	14.4	11.7	111.08	-1,723.1	2,092.3	2,943.1	2,920.1	22.98	128.067		
4,400.0	4,340.0	3,792.8	3,739.1	14.5	12.0	111.69	-1,739.0	2,095.7	2,959.7	2,936.4	23.30	127.025		
4,429.1	4,369.0	3,825.4	3,770.9	14.6	12.2	111.93	-1,746.1	2,097.3	2,966.4	2,943.0	23.43	126.617		
4,500.0	4,439.7	3,932.0	3,875.2	14.8	12.6	112.53	-1,767.6	2,103.2	2,981.9	2,958.1	23.80	125.270		
4,527.5	4,467.2	3,953.0	3,895.7	14.8	12.7	112.69	-1,771.5	2,104.5	2,987.6	2,963.7	23.89	125.051		
4,600.0	4,539.7	3,998.7	3,940.4	14.9	12.9	113.06	-1,780.6	2,107.2	3,002.6	2,978.5	24.10	124.598		
4,626.0	4,565.6	4,018.0	3,959.3	15.0	13.0	113.20	-1,784.5	2,108.4	3,007.9	2,983.7	24.17	124.435		
4,660.2	4,599.8	4,037.2	3,978.0	15.0	13.0	142.09	-1,788.6	2,109.5	3,014.9	2,991.2	23.66	127.427		
4,700.0	4,639.6	4,063.0	4,003.2	15.0	13.2	142.14	-1,794.2	2,110.9	3,023.1	2,999.2	23.84	126.797		
4,724.4	4,664.0	4,078.8	4,018.6	15.1	13.2	142.17	-1,797.7	2,111.8	3,028.2	3,004.2	23.96	126.398		
4,800.0	4,739.6	4,162.0	4,099.4	15.2	13.6	142.33	-1,816.9	2,115.6	3,044.2	3,019.8	24.47	124.408		
4,822.8	4,762.5	4,194.9	4,131.4	15.2	13.8	142.41	-1,824.8	2,116.4	3,048.9	3,024.3	24.66	123.636		
4,900.0	4,839.6	4,280.3	4,214.3	15.3	14.1	142.62	-1,845.0	2,118.3	3,064.6	3,039.4	25.18	121.703		
4,921.2	4,860.9	4,302.1	4,235.5	15.4	14.2	142.67	-1,850.1	2,118.7	3,068.9	3,043.6	25.32	121.220		
5,000.0	4,939.6	4,473.5	4,402.3	15.5	15.0	143.09	-1,889.2	2,120.8	3,084.3	3,058.1	26.19	117.767		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 683-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,019.7	4,959.3	4,528.4	4,456.2	15.5	15.2	143.19	-1,899.9	2,121.8	3,087.6	3,061.2	26.44	116.778		
5,100.0	5,039.6	5,130.9	5,055.1	15.6	16.7	143.81	-1,956.6	2,123.0	3,093.9	3,065.8	28.10	110.084		
5,118.1	5,057.7	5,149.1	5,073.3	15.7	16.8	143.81	-1,956.5	2,122.9	3,093.7	3,065.6	28.16	109.856		
5,200.0	5,139.6	5,229.6	5,153.8	15.8	16.9	143.82	-1,956.4	2,122.1	3,093.1	3,064.7	28.42	108.846		
5,216.5	5,156.2	5,244.5	5,168.7	15.8	16.9	143.82	-1,956.4	2,121.9	3,093.0	3,064.6	28.47	108.649		
5,300.0	5,239.6	5,318.3	5,242.5	15.9	17.0	143.83	-1,956.5	2,121.1	3,092.6	3,063.9	28.72	107.670		
5,314.9	5,254.6	5,330.9	5,255.1	16.0	17.0	143.84	-1,956.6	2,121.0	3,092.6	3,063.8	28.77	107.498		
5,361.9	5,301.6	5,370.4	5,294.6	16.0	17.0	143.84	-1,956.6	2,120.8	3,092.5	3,063.6	28.91	106.964		
5,400.0	5,339.6	5,403.9	5,328.1	16.1	17.1	143.84	-1,956.7	2,120.8	3,092.6	3,063.5	29.03	106.527		
5,413.4	5,353.0	5,416.2	5,340.4	16.1	17.1	143.84	-1,956.7	2,120.8	3,092.6	3,063.5	29.07	106.370		
5,500.0	5,439.6	5,501.3	5,425.5	16.3	17.2	143.84	-1,956.9	2,120.9	3,092.8	3,063.5	29.36	105.343		
5,511.8	5,451.4	5,514.6	5,438.8	16.3	17.2	143.84	-1,956.9	2,120.9	3,092.8	3,063.4	29.40	105.195		
5,600.0	5,539.6	5,605.9	5,530.1	16.4	17.3	143.85	-1,957.1	2,120.8	3,092.9	3,063.2	29.70	104.139		
5,610.2	5,549.9	5,615.8	5,540.0	16.4	17.4	143.85	-1,957.1	2,120.8	3,092.9	3,063.2	29.73	104.021		
5,700.0	5,639.6	5,723.1	5,647.3	16.6	17.5	143.85	-1,957.3	2,120.4	3,092.8	3,062.8	30.06	102.898		
5,708.6	5,648.3	5,733.3	5,657.5	16.6	17.5	143.85	-1,957.2	2,120.4	3,092.8	3,062.7	30.09	102.791		
5,800.0	5,739.6	5,828.6	5,752.8	16.7	17.6	143.85	-1,956.7	2,120.0	3,092.2	3,061.8	30.40	101.732		
5,807.1	5,746.7	5,835.1	5,759.3	16.8	17.6	143.85	-1,956.7	2,120.0	3,092.2	3,061.8	30.42	101.655		
5,900.0	5,839.6	5,918.4	5,842.6	16.9	17.7	143.85	-1,956.3	2,119.9	3,091.7	3,061.0	30.71	100.659		
5,905.5	5,845.1	5,923.0	5,847.2	16.9	17.8	143.85	-1,956.2	2,119.9	3,091.7	3,061.0	30.73	100.601		
5,959.9	5,899.6	5,968.4	5,892.6	17.0	17.8	143.85	-1,956.1	2,119.9	3,091.6	3,060.7	30.90	100.041		
6,000.0	5,939.6	6,005.4	5,929.6	17.1	17.9	143.85	-1,956.1	2,120.0	3,091.7	3,060.6	31.04	99.617		
6,003.9	5,943.6	6,009.3	5,933.5	17.1	17.9	143.85	-1,956.1	2,120.0	3,091.7	3,060.6	31.05	99.574		
6,059.2	5,998.8	6,065.1	5,989.3	17.2	17.9	143.84	-1,956.1	2,120.2	3,091.7	3,060.5	31.24	98.968		
6,100.0	6,039.6	6,105.1	6,029.3	17.2	18.0	-126.13	-1,956.0	2,120.3	3,092.4	3,061.6	30.86	100.214		
6,102.3	6,042.0	6,107.4	6,031.6	17.2	18.0	-126.13	-1,956.0	2,120.3	3,092.5	3,061.7	30.86	100.211		
6,150.0	6,089.4	6,153.7	6,077.8	17.3	18.1	-126.02	-1,955.9	2,120.5	3,095.2	3,064.3	30.86	100.288		
6,200.0	6,138.7	6,208.1	6,132.3	17.3	18.1	-125.85	-1,955.8	2,120.8	3,100.0	3,069.2	30.79	100.677		
6,200.8	6,139.5	6,208.9	6,133.1	17.3	18.1	-125.84	-1,955.8	2,120.8	3,100.1	3,069.3	30.79	100.686		
6,250.0	6,187.4	6,262.5	6,186.7	17.3	18.2	-125.60	-1,955.5	2,121.1	3,106.8	3,076.1	30.64	101.395		
6,299.2	6,234.4	6,315.9	6,240.0	17.4	18.3	-125.28	-1,955.0	2,121.4	3,115.3	3,084.9	30.42	102.404		
6,300.0	6,235.1	6,316.7	6,240.9	17.4	18.3	-125.28	-1,955.0	2,121.4	3,115.5	3,085.1	30.42	102.422		
6,350.0	6,281.7	6,359.4	6,283.6	17.4	18.3	-124.80	-1,954.7	2,121.6	3,126.2	3,096.1	30.11	103.810		
6,397.6	6,324.8	6,396.5	6,320.7	17.3	18.4	-124.22	-1,954.4	2,121.8	3,138.4	3,108.6	29.78	105.382		
6,400.0	6,326.9	6,398.4	6,322.5	17.3	18.4	-124.19	-1,954.4	2,121.8	3,139.0	3,109.3	29.76	105.465		
6,450.0	6,370.5	6,446.1	6,370.3	17.3	18.5	-123.54	-1,954.2	2,122.1	3,153.9	3,124.5	29.41	107.225		
6,496.0	6,409.1	6,493.5	6,417.7	17.3	18.5	-122.87	-1,953.8	2,122.4	3,169.2	3,140.1	29.10	108.897		
6,500.0	6,412.3	6,497.5	6,421.6	17.3	18.5	-122.81	-1,953.7	2,122.4	3,170.6	3,141.5	29.08	109.043		
6,550.0	6,452.1	6,533.4	6,457.6	17.3	18.6	-121.82	-1,953.3	2,122.6	3,189.2	3,160.4	28.75	110.947		
6,594.5	6,485.6	6,563.5	6,487.7	17.3	18.6	-120.80	-1,953.0	2,122.9	3,207.4	3,178.9	28.51	112.515		
6,600.0	6,489.7	6,567.1	6,491.3	17.3	18.6	-120.66	-1,952.9	2,122.9	3,209.7	3,181.2	28.48	112.701		
6,650.0	6,524.9	6,596.4	6,520.6	17.2	18.7	-119.28	-1,952.6	2,123.2	3,232.1	3,203.8	28.31	114.151		
6,692.9	6,553.0	6,617.9	6,542.0	17.2	18.7	-117.92	-1,952.4	2,123.5	3,252.8	3,224.6	28.28	115.014		
6,700.0	6,557.5	6,621.3	6,545.4	17.2	18.7	-117.67	-1,952.4	2,123.5	3,256.4	3,228.1	28.29	115.125		
6,750.0	6,587.4	6,644.0	6,568.2	17.2	18.7	-115.84	-1,952.3	2,123.8	3,282.4	3,254.0	28.43	115.465		
6,791.3	6,609.9	6,669.0	6,593.2	17.2	18.8	-114.26	-1,952.2	2,124.1	3,305.2	3,276.5	28.69	115.189		
6,800.0	6,614.4	6,669.0	6,593.2	17.2	18.8	-113.83	-1,952.2	2,124.1	3,310.1	3,281.3	28.76	115.080		
6,850.0	6,638.4	6,669.0	6,593.2	17.2	18.8	-111.17	-1,952.2	2,124.1	3,339.2	3,309.9	29.30	113.958		
6,889.7	6,655.3	6,692.1	6,616.3	17.4	18.8	-109.30	-1,952.1	2,124.4	3,363.4	3,333.5	29.88	112.576		
6,900.0	6,659.4	6,694.8	6,618.9	17.5	18.8	-108.74	-1,952.1	2,124.4	3,369.8	3,339.8	30.03	112.199		
6,950.0	6,677.1	6,706.4	6,630.5	18.0	18.8	-105.81	-1,952.2	2,124.5	3,401.6	3,370.7	30.94	109.951		
6,988.2	6,688.4	6,713.7	6,637.8	18.5	18.8	-103.39	-1,952.2	2,124.6	3,426.7	3,394.9	31.72	108.020		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 683-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,000.0	6,691.5	6,715.6	6,639.8	18.7	18.8	-102.61	-1,952.2	2,124.7	3,434.6	3,402.6	31.97	107.437		
7,050.0	6,702.5	6,722.6	6,646.8	19.5	18.8	-99.14	-1,952.2	2,124.8	3,468.4	3,435.4	33.07	104.888		
7,086.6	6,708.4	6,726.2	6,650.4	20.1	18.8	-96.45	-1,952.3	2,124.8	3,493.7	3,459.8	33.89	103.105		
7,100.0	6,710.1	6,727.2	6,651.4	20.4	18.8	-95.44	-1,952.3	2,124.8	3,503.1	3,468.9	34.17	102.514		
7,150.0	6,714.2	6,729.5	6,653.7	21.3	18.8	-91.52	-1,952.3	2,124.9	3,538.3	3,503.1	35.21	100.487		
7,185.0	6,715.0	6,729.7	6,653.8	21.9	18.8	-88.68	-1,952.3	2,124.9	3,563.2	3,527.4	35.87	99.340		
7,185.6	6,715.0	6,729.7	6,653.8	21.9	18.8	-88.64	-1,952.3	2,124.9	3,563.6	3,527.8	35.88	99.325		
7,200.0	6,715.0	6,729.5	6,653.7	22.2	18.8	-88.64	-1,952.3	2,124.9	3,574.0	3,537.8	36.16	98.850		
7,283.4	6,714.8	6,728.6	6,652.5	23.9	18.8	-88.62	-1,952.3	2,124.9	3,634.2	3,596.4	37.83	96.064		
7,300.0	6,714.8	6,728.4	6,652.5	24.2	18.8	-88.61	-1,952.3	2,124.9	3,646.3	3,608.1	38.16	95.544		
7,381.9	6,714.6	6,727.4	6,651.6	26.0	18.8	-88.59	-1,952.3	2,124.9	3,706.4	3,666.5	39.92	92.842		
7,400.0	6,714.6	6,727.2	6,651.4	26.4	18.8	-88.58	-1,952.3	2,124.8	3,719.9	3,679.6	40.31	92.279		
7,480.3	6,714.4	6,726.3	6,650.5	28.2	18.8	-88.56	-1,952.3	2,124.8	3,779.9	3,737.7	42.13	89.721		
7,500.0	6,714.4	6,726.1	6,650.3	28.7	18.8	-88.56	-1,952.3	2,124.8	3,794.7	3,752.1	42.57	89.130		
7,578.7	6,714.2	6,725.2	6,649.4	30.5	18.8	-88.54	-1,952.3	2,124.8	3,854.4	3,809.9	44.43	86.756		
7,600.0	6,714.2	6,725.0	6,649.1	31.0	18.8	-88.53	-1,952.2	2,124.8	3,870.6	3,825.7	44.93	86.151		
7,677.1	6,714.0	6,724.1	6,648.3	32.9	18.8	-88.51	-1,952.2	2,124.8	3,930.0	3,883.2	46.80	83.975		
7,700.0	6,714.0	6,723.9	6,648.0	33.4	18.8	-88.51	-1,952.2	2,124.8	3,947.6	3,900.3	47.35	83.366		
7,775.6	6,713.9	6,723.0	6,647.2	35.3	18.8	-88.49	-1,952.2	2,124.8	4,006.5	3,957.3	49.23	81.387		
7,800.0	6,713.8	6,722.8	6,646.9	35.9	18.8	-88.48	-1,952.2	2,124.8	4,025.7	3,975.8	49.83	80.781		
7,874.0	6,713.7	6,722.0	6,646.1	37.8	18.8	-88.46	-1,952.2	2,124.8	4,084.0	4,032.3	51.70	78.989		
7,900.0	6,713.6	6,721.7	6,645.8	38.4	18.8	-88.46	-1,952.2	2,124.8	4,104.6	4,052.3	52.36	78.392		
7,972.4	6,713.5	6,720.9	6,645.0	40.3	18.8	-88.44	-1,952.2	2,124.8	4,162.4	4,108.2	54.22	76.773		
8,000.0	6,713.4	6,720.6	6,644.7	41.0	18.8	-88.43	-1,952.2	2,124.8	4,184.5	4,129.6	54.92	76.188		
8,070.8	6,713.3	6,719.8	6,644.0	42.8	18.8	-88.41	-1,952.2	2,124.7	4,241.6	4,184.9	56.76	74.728		
8,100.0	6,713.2	6,719.5	6,643.7	43.6	18.8	-88.41	-1,952.2	2,124.7	4,265.2	4,207.7	57.52	74.156		
8,169.3	6,713.1	6,718.8	6,642.9	45.4	18.8	-88.39	-1,952.2	2,124.7	4,321.6	4,262.3	59.33	72.839		
8,200.0	6,713.0	6,718.4	6,642.6	46.2	18.8	-88.38	-1,952.2	2,124.7	4,346.8	4,286.6	60.14	72.283		
8,267.7	6,712.9	6,717.7	6,641.9	48.0	18.8	-88.37	-1,952.2	2,124.7	4,402.4	4,340.5	61.92	71.095		
8,300.0	6,712.8	6,717.4	6,641.5	48.8	18.8	-88.36	-1,952.2	2,124.7	4,429.1	4,366.3	62.78	70.554		
8,366.1	6,712.7	6,716.7	6,640.8	50.6	18.8	-88.34	-1,952.2	2,124.7	4,483.9	4,419.3	64.53	69.482		
8,400.0	6,712.6	6,716.3	6,640.5	51.5	18.8	-88.33	-1,952.2	2,124.7	4,512.1	4,446.6	65.43	68.957		
8,464.5	6,712.5	6,715.6	6,639.8	53.2	18.8	-88.32	-1,952.2	2,124.7	4,566.0	4,498.8	67.16	67.989		
8,500.0	6,712.4	6,715.2	6,639.4	54.1	18.8	-88.31	-1,952.2	2,124.7	4,595.7	4,527.6	68.11	67.479		
8,563.0	6,712.3	6,714.6	6,638.7	55.8	18.8	-88.30	-1,952.2	2,124.7	4,648.8	4,579.0	69.80	66.604		
8,600.0	6,712.3	6,714.2	6,638.4	56.8	18.8	-88.29	-1,952.2	2,124.7	4,680.0	4,609.3	70.79	66.111		
8,661.4	6,712.1	6,713.6	6,637.7	58.5	18.8	-88.27	-1,952.2	2,124.6	4,732.1	4,659.7	72.45	65.318		
8,700.0	6,712.1	6,713.2	6,637.3	59.5	18.8	-88.26	-1,952.2	2,124.6	4,765.0	4,691.5	73.49	64.840		
8,759.8	6,711.9	6,712.5	6,636.7	61.1	18.8	-88.25	-1,952.2	2,124.6	4,816.1	4,740.9	75.11	64.122		
8,800.0	6,711.9	6,712.1	6,636.3	62.2	18.8	-88.24	-1,952.2	2,124.6	4,850.5	4,774.3	76.19	63.659		
8,858.2	6,711.8	6,711.5	6,635.7	63.8	18.8	-88.23	-1,952.2	2,124.6	4,900.5	4,822.7	77.78	63.008		
8,900.0	6,711.7	6,711.1	6,635.3	64.9	18.8	-88.22	-1,952.2	2,124.6	4,936.5	4,857.6	78.91	62.559		
8,956.7	6,711.6	6,710.5	6,634.7	66.5	18.8	-88.20	-1,952.2	2,124.6	4,985.5	4,905.0	80.45	61.968		
9,000.0	6,711.5	6,710.1	6,634.2	67.6	18.8	-88.19	-1,952.2	2,124.6	5,023.1	4,941.4	81.63	61.533		
9,055.1	6,711.4	6,709.5	6,633.7	69.1	18.8	-88.18	-1,952.2	2,124.6	5,071.0	4,987.8	83.14	60.996		
9,100.0	6,711.3	6,709.1	6,633.2	70.4	18.8	-88.17	-1,952.2	2,124.6	5,110.1	5,025.8	84.36	60.574		
9,153.5	6,711.2	6,708.5	6,632.7	71.8	18.8	-88.16	-1,952.2	2,124.6	5,156.9	5,071.1	85.83	60.086		
9,200.0	6,711.1	6,708.1	6,632.2	73.1	18.8	-88.15	-1,952.2	2,124.6	5,197.6	5,110.5	87.10	59.677		
9,251.9	6,711.0	6,707.6	6,631.7	74.5	18.8	-88.13	-1,952.2	2,124.6	5,243.3	5,154.7	88.52	59.233		
9,300.0	6,710.9	6,707.1	6,631.2	75.8	18.8	-88.12	-1,952.2	2,124.6	5,285.6	5,195.7	89.84	58.836		
9,350.4	6,710.8	6,706.6	6,630.7	77.2	18.8	-88.11	-1,952.2	2,124.5	5,330.1	5,238.8	91.22	58.431		
9,400.0	6,710.7	6,706.1	6,630.2	78.6	18.8	-88.10	-1,952.2	2,124.5	5,374.0	5,281.4	92.58	58.046		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 683-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,710.6	6,705.6	6,629.8	79.9	18.8	-88.09	-1,952.2	2,124.5	5,417.2	5,323.3	93.92	57.678	
9,500.0	6,710.5	6,705.1	6,629.3	81.3	18.8	-88.08	-1,952.2	2,124.5	5,462.7	5,367.4	95.33	57.303	
9,547.2	6,710.4	6,704.6	6,628.8	82.6	18.8	-88.07	-1,952.2	2,124.5	5,504.8	5,408.2	96.63	56.968	
9,600.0	6,710.3	6,704.1	6,628.3	84.1	18.8	-88.06	-1,952.2	2,124.5	5,551.9	5,453.8	98.08	56.604	
9,645.6	6,710.2	6,703.7	6,627.8	85.3	18.8	-88.05	-1,952.2	2,124.5	5,592.7	5,493.4	99.34	56.298	
9,700.0	6,710.1	6,703.2	6,627.3	86.8	18.8	-88.03	-1,952.2	2,124.5	5,641.4	5,540.6	100.84	55.945	
9,744.1	6,710.0	6,702.7	6,626.9	88.1	18.8	-88.02	-1,952.2	2,124.5	5,681.0	5,578.9	102.06	55.666	
9,800.0	6,709.9	6,702.2	6,626.3	89.6	18.8	-88.01	-1,952.2	2,124.5	5,731.3	5,627.7	103.60	55.322	
9,842.5	6,709.9	6,701.8	6,625.9	90.8	18.8	-88.00	-1,952.2	2,124.5	5,769.6	5,664.8	104.77	55.068	
9,900.0	6,709.7	6,701.2	6,625.4	92.4	18.8	-87.99	-1,952.2	2,124.5	5,821.5	5,715.1	106.36	54.734	
9,940.9	6,709.7	6,700.8	6,625.0	93.5	18.8	-87.98	-1,952.2	2,124.5	5,858.5	5,751.0	107.49	54.502	
10,000.0	6,709.6	6,700.3	6,624.4	95.1	18.8	-87.97	-1,952.2	2,124.5	5,912.0	5,802.9	109.12	54.177	
10,039.3	6,709.5	6,699.9	6,624.1	96.2	18.8	-87.96	-1,952.2	2,124.5	5,947.7	5,837.5	110.21	53.965	
10,100.0	6,709.4	6,699.3	6,623.5	97.9	18.8	-87.95	-1,952.2	2,124.4	6,002.8	5,890.9	111.89	53.649	
10,137.8	6,709.3	6,699.0	6,623.1	98.9	18.8	-87.94	-1,952.2	2,124.4	6,037.2	5,924.3	112.94	53.456	
10,200.0	6,709.2	6,698.4	6,622.5	100.7	18.8	-87.93	-1,952.2	2,124.4	6,093.9	5,979.3	114.66	53.148	
10,236.2	6,709.1	6,698.0	6,622.2	101.7	18.8	-87.92	-1,952.2	2,124.4	6,127.0	6,011.3	115.66	52.972	
10,300.0	6,709.0	6,697.5	6,621.6	103.4	18.8	-87.90	-1,952.1	2,124.4	6,185.3	6,067.9	117.43	52.672	
10,334.6	6,708.9	6,697.1	6,621.3	104.4	18.8	-87.90	-1,952.1	2,124.4	6,217.0	6,098.6	118.39	52.512	
10,400.0	6,708.8	6,696.5	6,620.7	106.2	18.8	-87.88	-1,952.1	2,124.4	6,276.9	6,156.7	120.20	52.219	
10,433.0	6,708.7	6,696.2	6,620.4	107.1	18.8	-87.88	-1,952.1	2,124.4	6,307.3	6,186.2	121.12	52.074	
10,500.0	6,708.6	6,695.6	6,619.8	109.0	18.8	-87.86	-1,952.1	2,124.4	6,368.8	6,245.9	122.98	51.788	
10,531.5	6,708.5	6,695.3	6,619.5	109.9	18.8	-87.86	-1,952.1	2,124.4	6,397.8	6,274.0	123.85	51.657	
10,600.0	6,708.4	6,694.7	6,618.8	111.8	18.8	-87.84	-1,952.1	2,124.4	6,461.0	6,335.2	125.75	51.378	
10,629.9	6,708.4	6,694.4	6,618.6	112.6	18.8	-87.84	-1,952.1	2,124.4	6,488.6	6,362.0	126.58	51.259	
10,700.0	6,708.2	6,693.8	6,617.9	114.6	18.8	-87.82	-1,952.1	2,124.4	6,553.3	6,424.8	128.53	50.986	
10,728.3	6,708.2	6,693.5	6,617.7	115.3	18.8	-87.82	-1,952.1	2,124.4	6,579.5	6,450.2	129.32	50.879	
10,800.0	6,708.0	6,692.9	6,617.0	117.3	18.8	-87.80	-1,952.1	2,124.4	6,645.9	6,514.6	131.31	50.612	
10,826.7	6,708.0	6,692.6	6,616.8	118.1	18.8	-87.79	-1,952.1	2,124.4	6,670.7	6,538.7	132.05	50.515	
10,900.0	6,707.8	6,692.0	6,616.1	120.1	18.8	-87.78	-1,952.1	2,124.4	6,738.7	6,604.6	134.09	50.255	
10,925.2	6,707.8	6,691.7	6,615.9	120.8	18.8	-87.77	-1,952.1	2,124.3	6,762.1	6,627.3	134.79	50.168	
11,000.0	6,707.6	6,691.1	6,615.2	122.9	18.8	-87.76	-1,952.1	2,124.3	6,831.7	6,694.8	136.87	49.914	
11,023.6	6,707.6	6,690.9	6,615.0	123.6	18.8	-87.75	-1,952.1	2,124.3	6,853.7	6,716.2	137.53	49.835	
11,100.0	6,707.5	6,690.2	6,614.3	125.7	18.8	-87.74	-1,952.1	2,124.3	6,924.9	6,785.2	139.65	49.587	
11,122.0	6,707.4	6,690.0	6,614.2	126.3	18.8	-87.73	-1,952.1	2,124.3	6,945.4	6,805.2	140.26	49.517	
11,200.0	6,707.3	6,689.3	6,613.5	128.5	18.8	-87.72	-1,952.1	2,124.3	7,018.3	6,875.8	142.43	49.274	
11,220.4	6,707.2	6,689.1	6,613.3	129.0	18.8	-87.72	-1,952.1	2,124.3	7,037.4	6,894.4	143.00	49.211	
11,300.0	6,707.1	6,688.4	6,612.6	131.3	18.8	-87.70	-1,952.1	2,124.3	7,111.8	6,966.6	145.22	48.973	
11,318.9	6,707.0	6,688.3	6,612.4	131.8	18.8	-87.70	-1,952.1	2,124.3	7,129.5	6,983.8	145.74	48.918	
11,400.0	6,706.9	6,687.6	6,611.7	134.0	18.8	-87.68	-1,952.1	2,124.3	7,205.6	7,057.6	148.00	48.685	
11,417.3	6,706.9	6,687.4	6,611.6	134.5	18.8	-87.68	-1,952.1	2,124.3	7,221.8	7,073.3	148.48	48.637	
11,500.0	6,706.7	6,669.0	6,593.2	136.8	18.8	-87.25	-1,952.2	2,124.1	7,299.5	7,148.8	150.71	48.434	
11,515.7	6,706.7	6,669.0	6,593.2	137.3	18.8	-87.25	-1,952.2	2,124.1	7,314.3	7,163.1	151.15	48.391	
11,600.0	6,706.5	6,669.0	6,593.2	139.6	18.8	-87.25	-1,952.2	2,124.1	7,393.6	7,240.1	153.50	48.166	
11,614.1	6,706.5	6,669.0	6,593.2	140.0	18.8	-87.25	-1,952.2	2,124.1	7,406.9	7,253.0	153.90	48.129	
11,700.0	6,706.3	6,669.0	6,593.2	142.4	18.8	-87.25	-1,952.2	2,124.1	7,487.8	7,331.5	156.29	47.909	
11,712.6	6,706.3	6,669.0	6,593.2	142.8	18.8	-87.25	-1,952.2	2,124.1	7,499.6	7,343.0	156.64	47.878	
11,800.0	6,706.1	6,669.0	6,593.2	145.2	18.8	-87.25	-1,952.2	2,124.1	7,582.1	7,423.0	159.08	47.662	
11,811.0	6,706.1	6,669.0	6,593.2	145.5	18.8	-87.25	-1,952.2	2,124.1	7,592.5	7,433.1	159.39	47.636	
11,900.0	6,705.9	6,669.0	6,593.2	148.0	18.8	-87.26	-1,952.2	2,124.1	7,676.6	7,514.8	161.87	47.424	
11,909.4	6,705.9	6,669.0	6,593.2	148.3	18.8	-87.26	-1,952.2	2,124.1	7,685.5	7,523.4	162.13	47.402	
12,000.0	6,705.8	6,669.0	6,593.2	150.8	18.8	-87.26	-1,952.2	2,124.1	7,771.3	7,606.6	164.66	47.195	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 683-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,007.8	6,705.7	6,669.0	6,593.2	151.0	18.8	-87.26	-1,952.2	2,124.1	7,778.7	7,613.8	164.88	47.177	
12,100.0	6,705.6	6,669.0	6,593.2	153.6	18.8	-87.26	-1,952.2	2,124.1	7,866.0	7,698.6	167.45	46.974	
12,106.3	6,705.6	6,669.0	6,593.2	153.8	18.8	-87.26	-1,952.2	2,124.1	7,872.0	7,704.4	167.63	46.961	
12,200.0	6,705.4	6,669.0	6,593.2	156.4	18.8	-87.26	-1,952.2	2,124.1	7,960.9	7,790.7	170.25	46.761	
12,204.7	6,705.4	6,669.0	6,593.2	156.5	18.8	-87.26	-1,952.2	2,124.1	7,965.4	7,795.0	170.38	46.751	
12,300.0	6,705.2	6,669.0	6,593.2	159.2	18.8	-87.26	-1,952.2	2,124.1	8,056.0	7,882.9	173.04	46.555	
12,303.1	6,705.2	6,669.0	6,593.2	159.3	18.8	-87.26	-1,952.2	2,124.1	8,058.9	7,885.8	173.13	46.549	
12,400.0	6,705.0	6,669.0	6,593.2	162.0	18.8	-87.26	-1,952.2	2,124.1	8,151.1	7,975.3	175.83	46.357	
12,401.5	6,705.0	6,669.0	6,593.2	162.0	18.8	-87.26	-1,952.2	2,124.1	8,152.6	7,976.7	175.88	46.354	
12,500.0	6,704.8	6,669.0	6,593.2	164.8	18.8	-87.26	-1,952.2	2,124.1	8,246.4	8,067.7	178.63	46.165	
12,598.4	6,704.6	6,669.0	6,593.2	167.5	18.8	-87.26	-1,952.2	2,124.1	8,340.2	8,158.8	181.38	45.982	
12,600.0	6,704.6	6,669.0	6,593.2	167.6	18.8	-87.26	-1,952.2	2,124.1	8,341.7	8,160.3	181.42	45.979	
12,696.8	6,704.4	6,669.0	6,593.2	170.3	18.8	-87.26	-1,952.2	2,124.1	8,434.2	8,250.0	184.13	45.806	
12,700.0	6,704.4	6,669.0	6,593.2	170.4	18.8	-87.26	-1,952.2	2,124.1	8,437.2	8,253.0	184.22	45.800	
12,795.2	6,704.3	6,669.0	6,593.2	173.0	18.8	-87.26	-1,952.2	2,124.1	8,528.2	8,341.4	186.88	45.635	
12,800.0	6,704.2	6,669.0	6,593.2	173.2	18.8	-87.26	-1,952.2	2,124.1	8,532.8	8,345.8	187.01	45.626	
12,893.7	6,704.1	6,669.0	6,593.2	175.8	18.8	-87.26	-1,952.2	2,124.1	8,622.4	8,432.8	189.63	45.469	
12,900.0	6,704.1	6,669.0	6,593.2	176.0	18.8	-87.26	-1,952.2	2,124.1	8,628.5	8,438.6	189.81	45.458	
12,992.1	6,703.9	6,669.0	6,593.2	178.5	18.8	-87.26	-1,952.2	2,124.1	8,716.7	8,524.3	192.38	45.308	
13,000.0	6,703.9	6,669.0	6,593.2	178.8	18.8	-87.26	-1,952.2	2,124.1	8,724.2	8,531.6	192.61	45.296	
13,090.5	6,703.7	6,669.0	6,593.2	181.3	18.8	-87.26	-1,952.2	2,124.1	8,811.0	8,615.9	195.14	45.153	
13,100.0	6,703.7	6,669.0	6,593.2	181.6	18.8	-87.26	-1,952.2	2,124.1	8,820.1	8,624.7	195.40	45.138	
13,188.9	6,703.5	6,669.0	6,593.2	184.0	18.8	-87.26	-1,952.2	2,124.1	8,905.4	8,707.6	197.89	45.002	
13,200.0	6,703.5	6,669.0	6,593.2	184.4	18.8	-87.26	-1,952.2	2,124.1	8,916.1	8,717.9	198.20	44.985	
13,287.4	6,703.3	6,669.0	6,593.2	186.8	18.8	-87.26	-1,952.2	2,124.1	9,000.0	8,799.3	200.64	44.856	
13,300.0	6,703.3	6,669.0	6,593.2	187.2	18.8	-87.26	-1,952.2	2,124.1	9,012.1	8,811.1	201.00	44.837	
13,385.8	6,703.2	6,669.0	6,593.2	189.6	18.8	-87.26	-1,952.2	2,124.1	9,094.6	8,891.2	203.40	44.713	
13,400.0	6,703.1	6,669.0	6,593.2	190.0	18.8	-87.26	-1,952.2	2,124.1	9,108.2	8,904.4	203.79	44.693	
13,484.2	6,703.0	6,669.0	6,593.2	192.3	18.8	-87.26	-1,952.2	2,124.1	9,189.3	8,983.1	206.15	44.575	
13,500.0	6,702.9	6,669.0	6,593.2	192.8	18.8	-87.26	-1,952.2	2,124.1	9,204.5	8,997.9	206.59	44.554	
13,582.6	6,702.8	6,669.0	6,593.2	195.1	18.8	-87.26	-1,952.2	2,124.1	9,284.0	9,075.1	208.90	44.441	
13,600.0	6,702.8	6,669.0	6,593.2	195.6	18.8	-87.26	-1,952.2	2,124.1	9,300.7	9,091.4	209.39	44.418	
13,681.1	6,702.6	6,669.0	6,593.2	197.8	18.8	-87.26	-1,952.2	2,124.1	9,378.9	9,167.2	211.66	44.311	
13,700.0	6,702.6	6,669.0	6,593.2	198.4	18.8	-87.26	-1,952.2	2,124.1	9,397.1	9,184.9	212.19	44.287	
13,779.5	6,702.4	6,669.0	6,593.2	200.6	18.8	-87.26	-1,952.2	2,124.1	9,473.8	9,259.4	214.41	44.185	
13,800.0	6,702.4	6,669.0	6,593.2	201.2	18.8	-87.26	-1,952.2	2,124.1	9,493.6	9,278.6	214.99	44.159	
13,877.9	6,702.2	6,669.0	6,593.2	203.3	18.8	-87.26	-1,952.2	2,124.1	9,568.8	9,351.6	217.17	44.062	
13,900.0	6,702.2	6,669.0	6,593.2	204.0	18.8	-87.26	-1,952.2	2,124.1	9,590.1	9,372.3	217.79	44.034	
13,976.3	6,702.1	6,669.0	6,593.2	206.1	18.8	-87.26	-1,952.2	2,124.1	9,663.8	9,443.9	219.92	43.942	
14,000.0	6,702.0	6,669.0	6,593.2	206.8	18.8	-87.26	-1,952.2	2,124.1	9,686.7	9,466.1	220.59	43.913	
14,074.8	6,701.9	6,669.0	6,593.2	208.9	18.8	-87.26	-1,952.2	2,124.1	9,759.0	9,536.3	222.68	43.825	
14,100.0	6,701.8	6,669.0	6,593.2	209.6	18.8	-87.26	-1,952.2	2,124.1	9,783.3	9,560.0	223.39	43.796	
14,173.2	6,701.7	6,669.0	6,593.2	211.6	18.8	-87.26	-1,952.2	2,124.1	9,854.1	9,628.7	225.43	43.712	
14,200.0	6,701.6	6,669.0	6,593.2	212.4	18.8	-87.26	-1,952.2	2,124.1	9,880.1	9,653.9	226.18	43.681	
14,271.6	6,701.5	6,669.0	6,593.2	214.4	18.8	-87.26	-1,952.2	2,124.1	9,949.4	9,721.2	228.19	43.601	
14,300.0	6,701.4	6,669.0	6,593.2	215.2	18.8	-87.26	-1,952.2	2,124.1	9,976.9	9,747.9	228.98	43.570 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 510-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
6,299.2	6,234.4	6,359.1	6,280.4	17.4	19.5	-6.77	-571.3	-9,680.7	9,999.1	9,967.9	31.21	320.415	
6,300.0	6,235.1	6,359.6	6,281.0	17.4	19.5	-6.77	-571.3	-9,680.7	9,998.9	9,967.7	31.20	320.502	
6,350.0	6,281.7	6,391.1	6,312.4	17.4	19.5	-6.97	-571.5	-9,680.4	9,980.6	9,950.0	30.56	326.610	
6,397.6	6,324.8	6,424.0	6,345.3	17.3	19.6	-7.21	-571.7	-9,680.3	9,960.2	9,930.4	29.85	333.623	
6,400.0	6,326.9	6,424.0	6,345.3	17.3	19.6	-7.22	-571.7	-9,680.3	9,959.1	9,929.3	29.81	334.036	
6,450.0	6,370.5	6,464.4	6,385.8	17.3	19.6	-7.53	-571.9	-9,680.1	9,934.7	9,905.7	28.99	342.741	
6,496.0	6,409.1	6,503.3	6,424.6	17.3	19.7	-7.87	-572.1	-9,679.9	9,909.5	9,881.4	28.15	352.007	
6,500.0	6,412.3	6,506.5	6,427.9	17.3	19.7	-7.90	-572.2	-9,679.9	9,907.3	9,879.2	28.08	352.864	
6,550.0	6,452.1	6,546.6	6,467.9	17.3	19.7	-8.36	-572.4	-9,679.7	9,877.0	9,849.9	27.10	364.510	
6,594.5	6,485.6	6,580.3	6,501.7	17.3	19.8	-8.85	-572.5	-9,679.5	9,847.9	9,821.7	26.18	376.138	
6,600.0	6,489.7	6,581.0	6,502.3	17.3	19.8	-8.91	-572.6	-9,679.5	9,844.1	9,818.1	26.06	377.748	
6,650.0	6,524.9	6,616.9	6,538.3	17.2	19.8	-9.59	-572.7	-9,679.4	9,808.7	9,783.7	25.00	392.313	
6,692.9	6,553.0	6,643.2	6,564.5	17.2	19.9	-10.30	-572.7	-9,679.3	9,776.4	9,752.3	24.09	405.758	
6,700.0	6,557.5	6,647.4	6,568.7	17.2	19.9	-10.43	-572.7	-9,679.3	9,770.9	9,747.0	23.94	408.061	
6,750.0	6,587.4	6,675.3	6,596.6	17.2	19.9	-11.48	-572.7	-9,679.2	9,731.0	9,708.1	22.93	424.299	
6,791.3	6,609.9	6,696.3	6,617.7	17.2	20.0	-12.56	-572.7	-9,679.1	9,696.6	9,674.4	22.18	437.211	
6,800.0	6,614.4	6,700.5	6,621.9	17.2	20.0	-12.82	-572.6	-9,679.1	9,689.2	9,667.1	22.03	439.855	
6,850.0	6,638.4	6,723.0	6,644.3	17.2	20.0	-14.56	-572.5	-9,679.0	9,645.5	9,624.2	21.31	452.662	
6,889.7	6,655.3	6,739.0	6,660.3	17.4	20.0	-16.37	-572.4	-9,679.0	9,609.8	9,588.8	20.95	458.680	
6,900.0	6,659.4	6,743.6	6,665.0	17.5	20.0	-16.92	-572.4	-9,679.0	9,600.4	9,579.5	20.90	459.252	
6,950.0	6,677.1	6,765.3	6,686.7	18.0	20.1	-20.25	-572.3	-9,678.9	9,553.9	9,532.9	21.03	454.210	
6,988.2	6,688.4	6,779.1	6,700.4	18.5	20.1	-23.82	-572.2	-9,678.9	9,517.6	9,495.9	21.71	438.466	
7,000.0	6,691.5	6,782.9	6,704.2	18.7	20.1	-25.19	-572.2	-9,678.9	9,506.3	9,484.2	22.06	431.021	
7,050.0	6,702.5	6,796.2	6,717.6	19.5	20.1	-33.03	-572.2	-9,678.8	9,457.8	9,433.2	24.63	384.000	
7,086.6	6,708.4	6,803.3	6,724.6	20.1	20.1	-42.11	-572.1	-9,678.8	9,421.9	9,393.8	28.08	335.485	
7,100.0	6,710.1	6,805.3	6,726.6	20.4	20.1	-46.51	-572.1	-9,678.8	9,408.7	9,379.0	29.75	316.217	
7,150.0	6,714.2	6,810.1	6,731.4	21.3	20.1	-70.14	-572.1	-9,678.8	9,359.2	9,322.1	37.09	252.340	
7,185.0	6,715.0	6,810.9	6,732.3	21.9	20.1	-92.70	-572.1	-9,678.8	9,324.5	9,284.6	39.89	233.745	
7,185.6	6,715.0	6,810.9	6,732.3	21.9	20.1	-93.05	-572.1	-9,678.8	9,323.9	9,284.0	39.90	233.700	
7,200.0	6,715.0	6,810.8	6,732.2	22.2	20.1	-93.05	-572.1	-9,678.8	9,309.6	9,269.4	40.17	231.734	
7,283.4	6,714.8	6,810.2	6,731.5	23.9	20.1	-93.02	-572.1	-9,678.8	9,226.8	9,184.9	41.85	220.479	
7,300.0	6,714.8	6,810.1	6,731.4	24.2	20.1	-93.01	-572.1	-9,678.8	9,210.3	9,168.1	42.18	218.353	
7,381.9	6,714.6	6,809.5	6,730.8	26.0	20.1	-92.98	-572.1	-9,678.8	9,129.1	9,085.1	43.94	207.771	
7,400.0	6,714.6	6,809.3	6,730.7	26.4	20.1	-92.97	-572.1	-9,678.8	9,111.1	9,066.7	44.33	205.541	
7,480.3	6,714.4	6,808.7	6,730.1	28.2	20.1	-92.94	-572.1	-9,678.8	9,031.4	8,985.2	46.14	195.723	
7,500.0	6,714.4	6,808.6	6,729.9	28.7	20.1	-92.93	-572.1	-9,678.8	9,011.8	8,965.2	46.59	193.431	
7,578.7	6,714.2	6,808.0	6,729.3	30.5	20.1	-92.90	-572.1	-9,678.8	8,933.7	8,885.3	48.44	184.424	
7,600.0	6,714.2	6,807.9	6,729.2	31.0	20.1	-92.89	-572.1	-9,678.8	8,912.6	8,863.7	48.94	182.107	
7,677.1	6,714.0	6,807.3	6,728.6	32.9	20.1	-92.86	-572.1	-9,678.8	8,836.1	8,785.3	50.81	173.900	
7,700.0	6,714.0	6,807.1	6,728.5	33.4	20.1	-92.86	-572.1	-9,678.8	8,813.4	8,762.0	51.36	171.584	
7,775.6	6,713.9	6,806.6	6,727.9	35.3	20.1	-92.83	-572.1	-9,678.8	8,738.4	8,685.2	53.24	164.136	
7,800.0	6,713.8	6,806.4	6,727.7	35.9	20.1	-92.82	-572.1	-9,678.8	8,714.2	8,660.4	53.84	161.839	
7,874.0	6,713.7	6,805.9	6,727.2	37.8	20.1	-92.79	-572.1	-9,678.8	8,640.8	8,585.1	55.71	155.094	
7,900.0	6,713.6	6,805.7	6,727.0	38.4	20.1	-92.78	-572.1	-9,678.8	8,615.0	8,558.7	56.37	152.829	
7,972.4	6,713.5	6,805.2	6,726.5	40.3	20.1	-92.75	-572.1	-9,678.8	8,543.2	8,485.0	58.23	146.725	
8,000.0	6,713.4	6,805.0	6,726.3	41.0	20.1	-92.74	-572.1	-9,678.8	8,515.9	8,457.0	58.93	144.501	
8,070.8	6,713.3	6,804.5	6,725.8	42.8	20.1	-92.72	-572.1	-9,678.8	8,445.6	8,384.9	60.77	138.977	
8,100.0	6,713.2	6,804.3	6,725.6	43.6	20.1	-92.71	-572.1	-9,678.8	8,416.8	8,355.2	61.53	136.800	
8,169.3	6,713.1	6,803.8	6,725.1	45.4	20.1	-92.68	-572.1	-9,678.8	8,348.1	8,284.8	63.34	131.798	
8,200.0	6,713.0	6,803.6	6,724.9	46.2	20.1	-92.67	-572.1	-9,678.8	8,317.6	8,253.5	64.14	129.670	
8,267.7	6,712.9	6,803.1	6,724.4	48.0	20.1	-92.64	-572.1	-9,678.8	8,250.6	8,184.6	65.93	125.137	
8,300.0	6,712.8	6,802.9	6,724.2	48.8	20.1	-92.63	-572.1	-9,678.8	8,218.6	8,151.8	66.78	123.060	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 510-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,366.1	6,712.7	6,802.4	6,723.7	50.6	20.1	-92.61	-572.1	-9,678.8	8,153.0	8,084.5	68.54	118.949	
8,400.0	6,712.6	6,802.2	6,723.5	51.5	20.1	-92.60	-572.1	-9,678.8	8,119.5	8,050.0	69.44	116.923	
8,464.5	6,712.5	6,801.7	6,723.0	53.2	20.1	-92.57	-572.1	-9,678.8	8,055.6	7,984.4	71.17	113.190	
8,500.0	6,712.4	6,801.5	6,722.8	54.1	20.1	-92.56	-572.1	-9,678.8	8,020.4	7,948.3	72.12	111.215	
8,563.0	6,712.3	6,801.0	6,722.4	55.8	20.1	-92.54	-572.1	-9,678.8	7,958.1	7,884.3	73.81	107.821	
8,600.0	6,712.3	6,800.8	6,722.1	56.8	20.1	-92.52	-572.1	-9,678.8	7,921.4	7,846.6	74.80	105.897	
8,661.4	6,712.1	6,800.4	6,721.7	58.5	20.1	-92.50	-572.1	-9,678.8	7,860.6	7,784.2	76.46	102.808	
8,700.0	6,712.1	6,800.1	6,721.4	59.5	20.1	-92.49	-572.1	-9,678.8	7,822.4	7,744.9	77.50	100.933	
8,759.8	6,711.9	6,799.7	6,721.0	61.1	20.1	-92.47	-572.1	-9,678.8	7,763.2	7,684.1	79.12	98.118	
8,800.0	6,711.9	6,799.4	6,720.8	62.2	20.1	-92.45	-572.2	-9,678.8	7,723.5	7,643.3	80.21	96.291	
8,858.2	6,711.8	6,799.0	6,720.4	63.8	20.1	-92.43	-572.2	-9,678.8	7,665.8	7,584.0	81.79	93.724	
8,900.0	6,711.7	6,798.8	6,720.1	64.9	20.1	-92.42	-572.2	-9,678.8	7,624.5	7,541.6	82.93	91.943	
8,956.7	6,711.6	6,798.4	6,719.7	66.5	20.1	-92.40	-572.2	-9,678.8	7,568.5	7,484.0	84.47	89.599	
9,000.0	6,711.5	6,798.1	6,719.4	67.6	20.1	-92.38	-572.2	-9,678.8	7,525.6	7,440.0	85.65	87.864	
9,055.1	6,711.4	6,797.7	6,719.1	69.1	20.1	-92.36	-572.2	-9,678.8	7,471.1	7,384.0	87.16	85.722	
9,100.0	6,711.3	6,797.4	6,718.8	70.4	20.1	-92.35	-572.2	-9,678.8	7,426.7	7,338.3	88.38	84.030	
9,153.5	6,711.2	6,797.1	6,718.4	71.8	20.1	-92.33	-572.2	-9,678.8	7,373.8	7,284.0	89.85	82.071	
9,200.0	6,711.1	6,796.8	6,718.1	73.1	20.1	-92.31	-572.2	-9,678.8	7,327.9	7,236.7	91.12	80.421	
9,251.9	6,711.0	6,796.4	6,717.8	74.5	20.1	-92.30	-572.2	-9,678.8	7,276.5	7,184.0	92.54	78.628	
9,300.0	6,710.9	6,796.1	6,717.4	75.8	20.1	-92.28	-572.2	-9,678.8	7,229.0	7,135.2	93.86	77.018	
9,350.4	6,710.8	6,795.8	6,717.1	77.2	20.1	-92.26	-572.2	-9,678.8	7,179.3	7,084.0	95.25	75.376	
9,400.0	6,710.7	6,795.5	6,716.8	78.6	20.1	-92.25	-572.2	-9,678.8	7,130.3	7,033.6	96.61	73.805	
9,448.8	6,710.6	6,795.1	6,716.5	79.9	20.1	-92.23	-572.2	-9,678.8	7,082.1	6,984.1	97.95	72.301	
9,500.0	6,710.5	6,794.8	6,716.1	81.3	20.1	-92.21	-572.2	-9,678.8	7,031.5	6,932.1	99.36	70.767	
9,547.2	6,710.4	6,794.5	6,715.8	82.6	20.1	-92.20	-572.2	-9,678.8	6,984.9	6,884.2	100.66	69.389	
9,600.0	6,710.3	6,794.2	6,715.5	84.1	20.1	-92.18	-572.2	-9,678.8	6,932.8	6,830.7	102.12	67.890	
9,645.6	6,710.2	6,793.9	6,715.2	85.3	20.1	-92.16	-572.2	-9,678.8	6,887.7	6,784.3	103.38	66.627	
9,700.0	6,710.1	6,793.5	6,714.9	86.8	20.1	-92.15	-572.2	-9,678.8	6,834.1	6,729.2	104.88	65.163	
9,744.1	6,710.0	6,793.3	6,714.6	88.1	20.1	-92.13	-572.2	-9,678.8	6,790.6	6,684.5	106.09	64.005	
9,800.0	6,709.9	6,792.9	6,714.2	89.6	20.1	-92.11	-572.2	-9,678.8	6,735.4	6,627.8	107.64	62.574	
9,842.5	6,709.9	6,792.6	6,714.0	90.8	20.1	-92.10	-572.2	-9,678.8	6,693.5	6,584.7	108.81	61.513	
9,900.0	6,709.7	6,792.3	6,713.6	92.4	20.1	-92.08	-572.2	-9,678.8	6,636.8	6,526.4	110.40	60.114	
9,940.9	6,709.7	6,792.0	6,713.3	93.5	20.1	-92.07	-572.2	-9,678.8	6,596.5	6,485.0	111.54	59.141	
10,000.0	6,709.6	6,791.6	6,713.0	95.1	20.1	-92.05	-572.2	-9,678.8	6,538.3	6,425.1	113.17	57.772	
10,039.3	6,709.5	6,791.4	6,712.7	96.2	20.1	-92.03	-572.2	-9,678.8	6,499.5	6,385.2	114.26	56.882	
10,100.0	6,709.4	6,791.0	6,712.3	97.9	20.1	-92.01	-572.2	-9,678.8	6,439.8	6,323.8	115.94	55.542	
10,137.8	6,709.3	6,790.8	6,712.1	98.9	20.1	-92.00	-572.2	-9,678.8	6,402.6	6,285.6	116.99	54.727	
10,200.0	6,709.2	6,790.4	6,711.7	100.7	20.1	-91.98	-572.2	-9,678.8	6,341.3	6,222.6	118.72	53.415	
10,236.2	6,709.1	6,790.2	6,711.5	101.7	20.1	-91.97	-572.2	-9,678.8	6,305.7	6,185.9	119.72	52.669	
10,300.0	6,709.0	6,789.8	6,711.1	103.4	20.1	-91.95	-572.2	-9,678.8	6,242.9	6,121.4	121.49	51.385	
10,334.6	6,708.9	6,789.6	6,710.9	104.4	20.1	-91.94	-572.2	-9,678.8	6,208.8	6,086.3	122.45	50.703	
10,400.0	6,708.8	6,789.2	6,710.5	106.2	20.1	-91.92	-572.2	-9,678.8	6,144.5	6,020.2	124.27	49.445	
10,433.0	6,708.7	6,789.0	6,710.3	107.1	20.1	-91.91	-572.2	-9,678.8	6,112.0	5,986.8	125.19	48.823	
10,500.0	6,708.6	6,788.6	6,709.9	109.0	20.1	-91.89	-572.2	-9,678.8	6,046.2	5,919.1	127.05	47.590	
10,531.5	6,708.5	6,788.4	6,709.7	109.9	20.1	-91.88	-572.2	-9,678.8	6,015.2	5,887.3	127.92	47.023	
10,600.0	6,708.4	6,788.0	6,709.3	111.8	20.1	-91.85	-572.2	-9,678.8	5,947.9	5,818.1	129.83	45.814	
10,629.9	6,708.4	6,787.8	6,709.1	112.6	20.1	-91.85	-572.2	-9,678.9	5,918.5	5,787.9	130.66	45.297	
10,700.0	6,708.2	6,787.4	6,708.7	114.6	20.1	-91.82	-572.2	-9,678.9	5,849.7	5,717.1	132.61	44.112	
10,728.3	6,708.2	6,787.2	6,708.5	115.3	20.1	-91.81	-572.2	-9,678.9	5,821.9	5,688.5	133.40	43.643	
10,800.0	6,708.0	6,786.8	6,708.1	117.3	20.1	-91.79	-572.2	-9,678.9	5,751.6	5,616.2	135.39	42.481	
10,826.7	6,708.0	6,786.6	6,707.9	118.1	20.1	-91.78	-572.2	-9,678.9	5,725.3	5,589.2	136.14	42.055	
10,900.0	6,707.8	6,786.2	6,707.5	120.1	20.1	-91.76	-572.2	-9,678.9	5,653.5	5,515.3	138.18	40.915	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 510-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,925.2	6,707.8	6,786.0	6,707.4	120.8	20.1	-91.75	-572.2	-9,678.9	5,628.8	5,489.9	138.88	40.530		
11,000.0	6,707.6	6,785.6	6,706.9	122.9	20.1	-91.73	-572.2	-9,678.9	5,555.5	5,414.5	140.96	39.411		
11,023.6	6,707.6	6,785.4	6,706.8	123.6	20.1	-91.72	-572.2	-9,678.9	5,532.4	5,390.7	141.62	39.065		
11,100.0	6,707.5	6,785.0	6,706.3	125.7	20.1	-91.70	-572.2	-9,678.9	5,457.5	5,313.8	143.75	37.965		
11,122.0	6,707.4	6,784.9	6,706.2	126.3	20.1	-91.69	-572.2	-9,678.9	5,436.0	5,291.6	144.36	37.655		
11,200.0	6,707.3	6,784.4	6,705.7	128.5	20.1	-91.67	-572.2	-9,678.9	5,359.7	5,213.2	146.54	36.575		
11,220.4	6,707.2	6,784.3	6,705.6	129.0	20.1	-91.66	-572.2	-9,678.9	5,339.7	5,192.6	147.11	36.298		
11,300.0	6,707.1	6,783.8	6,705.2	131.3	20.1	-91.64	-572.2	-9,678.9	5,261.9	5,112.6	149.33	35.237		
11,318.9	6,707.0	6,783.7	6,705.1	131.8	20.1	-91.63	-572.2	-9,678.9	5,243.5	5,093.6	149.85	34.990		
11,400.0	6,706.9	6,783.3	6,704.6	134.0	20.1	-91.61	-572.2	-9,678.9	5,164.2	5,012.1	152.12	33.949		
11,417.3	6,706.9	6,783.2	6,704.5	134.5	20.1	-91.60	-572.2	-9,678.9	5,147.3	4,994.7	152.60	33.731		
11,500.0	6,706.7	6,782.7	6,704.0	136.8	20.1	-91.58	-572.2	-9,678.9	5,066.6	4,911.7	154.91	32.707		
11,515.7	6,706.7	6,782.6	6,703.9	137.3	20.1	-91.58	-572.2	-9,678.9	5,051.3	4,895.9	155.35	32.516		
11,600.0	6,706.5	6,782.1	6,703.5	139.6	20.1	-91.55	-572.2	-9,678.9	4,969.1	4,811.4	157.70	31.510		
11,614.1	6,706.5	6,782.0	6,703.4	140.0	20.1	-91.55	-572.2	-9,678.9	4,955.3	4,797.2	158.10	31.344		
11,700.0	6,706.3	6,781.6	6,702.9	142.4	20.1	-91.52	-572.2	-9,678.9	4,871.7	4,711.2	160.49	30.355		
11,712.6	6,706.3	6,781.5	6,702.8	142.8	20.1	-91.52	-572.2	-9,678.9	4,859.5	4,698.6	160.84	30.212		
11,800.0	6,706.1	6,781.0	6,702.3	145.2	20.1	-91.49	-572.2	-9,678.9	4,774.4	4,611.1	163.29	29.239		
11,811.0	6,706.1	6,780.9	6,702.3	145.5	20.1	-91.49	-572.2	-9,678.9	4,763.7	4,600.1	163.59	29.119		
11,900.0	6,705.9	6,780.4	6,701.8	148.0	20.1	-91.46	-572.2	-9,678.9	4,677.2	4,511.1	166.08	28.162		
11,909.4	6,705.9	6,780.4	6,701.7	148.3	20.1	-91.46	-572.2	-9,678.9	4,668.0	4,501.7	166.34	28.063		
12,000.0	6,705.8	6,779.9	6,701.2	150.8	20.1	-91.43	-572.2	-9,678.9	4,580.1	4,411.3	168.87	27.122		
12,007.8	6,705.7	6,779.8	6,701.2	151.0	20.1	-91.43	-572.2	-9,678.9	4,572.5	4,403.4	169.09	27.041		
12,100.0	6,705.6	6,779.3	6,700.7	153.6	20.1	-91.41	-572.2	-9,678.9	4,483.2	4,311.5	171.67	26.115		
12,106.3	6,705.6	6,779.3	6,700.6	153.8	20.1	-91.40	-572.2	-9,678.9	4,477.1	4,305.3	171.85	26.053		
12,200.0	6,705.4	6,778.8	6,700.1	156.4	20.1	-91.38	-572.2	-9,678.9	4,386.4	4,211.9	174.47	25.142		
12,204.7	6,705.4	6,778.8	6,700.1	156.5	20.1	-91.38	-572.2	-9,678.9	4,381.9	4,207.3	174.60	25.097		
12,300.0	6,705.2	6,778.2	6,699.6	159.2	20.1	-91.35	-572.2	-9,678.9	4,289.7	4,112.5	177.26	24.200		
12,303.1	6,705.2	6,778.2	6,699.6	159.3	20.1	-91.35	-572.2	-9,678.9	4,286.7	4,109.4	177.35	24.171		
12,400.0	6,705.0	6,777.7	6,699.0	162.0	20.1	-91.32	-572.2	-9,678.9	4,193.2	4,013.2	180.06	23.288		
12,401.5	6,705.0	6,777.7	6,699.0	162.0	20.1	-91.32	-572.2	-9,678.9	4,191.8	4,011.7	180.10	23.274		
12,500.0	6,704.8	6,777.2	6,698.5	164.8	20.1	-91.29	-572.2	-9,678.9	4,096.9	3,914.1	182.86	22.405		
12,598.4	6,704.6	6,776.6	6,698.0	167.5	20.1	-91.27	-572.2	-9,678.9	4,002.3	3,816.7	185.61	21.563		
12,600.0	6,704.6	6,776.6	6,698.0	167.6	20.1	-91.26	-572.2	-9,678.9	4,000.8	3,815.1	185.65	21.550		
12,696.8	6,704.4	6,776.1	6,697.4	170.3	20.1	-91.24	-572.2	-9,678.9	3,907.9	3,719.5	188.36	20.746		
12,700.0	6,704.4	6,776.1	6,697.4	170.4	20.1	-91.24	-572.2	-9,678.9	3,904.8	3,716.4	188.45	20.720		
12,795.2	6,704.3	6,775.6	6,696.9	173.0	20.1	-91.21	-572.2	-9,678.9	3,813.6	3,622.5	191.12	19.954		
12,800.0	6,704.2	6,775.6	6,696.9	173.2	20.1	-91.21	-572.2	-9,678.9	3,809.1	3,617.8	191.25	19.917		
12,893.7	6,704.1	6,775.1	6,696.4	175.8	20.1	-91.18	-572.2	-9,678.9	3,719.6	3,525.7	193.87	19.186		
12,900.0	6,704.1	6,775.0	6,696.4	176.0	20.1	-91.18	-572.2	-9,678.9	3,713.5	3,519.5	194.05	19.137		
12,992.1	6,703.9	6,774.6	6,695.9	178.5	20.1	-91.16	-572.2	-9,678.9	3,625.8	3,429.2	196.63	18.440		
13,000.0	6,703.9	6,774.5	6,695.9	178.8	20.1	-91.16	-572.2	-9,678.9	3,618.3	3,421.4	196.85	18.381		
13,090.5	6,703.7	6,774.1	6,695.4	181.3	20.1	-91.13	-572.2	-9,678.9	3,532.2	3,332.9	199.38	17.716		
13,100.0	6,703.7	6,774.0	6,695.3	181.6	20.1	-91.13	-572.2	-9,678.9	3,523.2	3,323.6	199.65	17.647		
13,188.9	6,703.5	6,773.5	6,694.9	184.0	20.1	-91.10	-572.2	-9,678.9	3,439.0	3,236.8	202.14	17.013		
13,200.0	6,703.5	6,773.5	6,694.8	184.4	20.1	-91.10	-572.2	-9,678.9	3,428.5	3,226.1	202.45	16.935		
13,287.4	6,703.3	6,773.0	6,694.4	186.8	20.1	-91.08	-572.2	-9,678.9	3,346.0	3,141.1	204.90	16.330		
13,300.0	6,703.3	6,773.0	6,694.3	187.2	20.1	-91.07	-572.2	-9,678.9	3,334.1	3,128.8	205.25	16.244		
13,385.8	6,703.2	6,772.5	6,693.9	189.6	20.1	-91.05	-572.3	-9,678.9	3,253.3	3,045.7	207.65	15.667		
13,400.0	6,703.1	6,772.5	6,693.8	190.0	20.1	-91.05	-572.3	-9,678.9	3,240.0	3,031.9	208.05	15.573		
13,484.2	6,703.0	6,772.0	6,693.4	192.3	20.1	-91.03	-572.3	-9,678.9	3,161.0	2,950.6	210.41	15.023		
13,500.0	6,702.9	6,772.0	6,693.3	192.8	20.1	-91.02	-572.3	-9,678.9	3,146.3	2,935.4	210.85	14.922		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD PJ #81 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 510-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,582.6	6,702.8	6,771.5	6,692.9	195.1	20.1	-91.00	-572.3	-9,678.9	3,069.1	2,855.9	213.17	14.398	
13,600.0	6,702.8	6,771.4	6,692.8	195.6	20.1	-91.00	-572.3	-9,678.9	3,052.9	2,839.3	213.65	14.289	
13,681.1	6,702.6	6,771.0	6,692.4	197.8	20.1	-90.97	-572.3	-9,678.9	2,977.6	2,761.6	215.93	13.790	
13,700.0	6,702.6	6,770.9	6,692.3	198.4	20.1	-90.97	-572.3	-9,678.9	2,960.0	2,743.6	216.46	13.675	
13,779.5	6,702.4	6,770.5	6,691.9	200.6	20.1	-90.95	-572.3	-9,678.9	2,886.5	2,667.8	218.68	13.200	
13,800.0	6,702.4	6,770.4	6,691.8	201.2	20.1	-90.94	-572.3	-9,678.9	2,867.6	2,648.3	219.26	13.079	
13,877.9	6,702.2	6,770.1	6,691.4	203.3	20.1	-90.92	-572.3	-9,678.9	2,795.9	2,574.5	221.44	12.626	
13,900.0	6,702.2	6,770.0	6,691.3	204.0	20.1	-90.92	-572.3	-9,678.9	2,775.7	2,553.6	222.06	12.500	
13,976.3	6,702.1	6,769.6	6,690.9	206.1	20.1	-90.90	-572.3	-9,678.9	2,705.9	2,481.7	224.20	12.069	
14,000.0	6,702.0	6,769.5	6,690.8	206.8	20.1	-90.89	-572.3	-9,678.9	2,684.4	2,459.5	224.86	11.938	
14,074.8	6,701.9	6,769.1	6,690.4	208.9	20.1	-90.87	-572.3	-9,678.9	2,616.5	2,389.6	226.96	11.529	
14,100.0	6,701.8	6,769.0	6,690.3	209.6	20.1	-90.87	-572.3	-9,678.9	2,593.7	2,366.1	227.66	11.393	
14,173.2	6,701.7	6,768.6	6,689.9	211.6	20.1	-90.85	-572.3	-9,678.9	2,527.8	2,298.1	229.72	11.004	
14,200.0	6,701.6	6,768.5	6,689.8	212.4	20.1	-90.84	-572.3	-9,678.9	2,503.8	2,273.3	230.47	10.864	
14,271.6	6,701.5	6,768.1	6,689.5	214.4	20.1	-90.82	-572.3	-9,678.9	2,439.8	2,207.3	232.48	10.495	
14,300.0	6,701.4	6,768.0	6,689.3	215.2	20.1	-90.82	-572.3	-9,678.9	2,414.6	2,181.3	233.27	10.351	
14,370.0	6,701.3	6,767.7	6,689.0	217.1	20.1	-90.80	-572.3	-9,678.9	2,352.6	2,117.4	235.23	10.001	
14,400.0	6,701.3	6,767.5	6,688.8	218.0	20.1	-90.79	-572.3	-9,678.9	2,326.3	2,090.2	236.07	9.854	
14,468.5	6,701.1	6,767.2	6,688.5	219.9	20.1	-90.77	-572.3	-9,678.9	2,266.4	2,028.4	237.99	9.523	
14,500.0	6,701.1	6,767.0	6,688.4	220.8	20.1	-90.77	-572.3	-9,678.9	2,239.0	2,000.1	238.88	9.373	
14,566.9	6,701.0	6,766.7	6,688.0	222.6	20.1	-90.75	-572.3	-9,678.9	2,181.2	1,940.4	240.75	9.060	
14,600.0	6,700.9	6,766.6	6,687.9	223.6	20.1	-90.74	-572.3	-9,678.9	2,152.8	1,911.1	241.68	8.907	
14,665.3	6,700.8	6,766.2	6,687.6	225.4	20.1	-90.73	-572.3	-9,678.9	2,097.1	1,853.6	243.51	8.612	
14,700.0	6,700.7	6,766.1	6,687.4	226.4	20.1	-90.72	-572.3	-9,678.9	2,067.8	1,823.3	244.48	8.458	
14,763.7	6,700.6	6,765.8	6,687.1	228.2	20.1	-90.70	-572.3	-9,678.9	2,014.4	1,768.1	246.27	8.179	
14,800.0	6,700.5	6,765.6	6,686.9	229.2	20.1	-90.69	-572.3	-9,678.9	1,984.2	1,737.0	247.29	8.024	
14,862.2	6,700.4	6,765.3	6,686.6	230.9	20.1	-90.68	-572.3	-9,678.9	1,933.1	1,684.0	249.03	7.762	
14,900.0	6,700.3	6,765.1	6,686.5	232.0	20.1	-90.67	-572.3	-9,678.9	1,902.3	1,652.2	250.09	7.606	
14,960.6	6,700.2	6,764.9	6,686.2	233.7	20.1	-90.65	-572.3	-9,678.9	1,853.5	1,601.7	251.79	7.361	
15,000.0	6,700.2	6,764.7	6,686.0	234.8	20.1	-90.64	-572.3	-9,678.9	1,822.1	1,569.2	252.90	7.205	
15,059.0	6,700.0	6,764.4	6,685.7	236.4	20.1	-90.63	-572.3	-9,678.9	1,775.7	1,521.2	254.55	6.976	
15,082.8	6,700.0	6,764.3	6,685.6	237.1	20.1	-90.62	-572.3	-9,678.9	1,757.2	1,502.0	255.22	6.885 CC, ES, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 223-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	120.49	-1,196.7	2,032.3	2,358.5				
98.4	98.4	93.6	93.6	0.1	0.1	120.51	-1,197.2	2,031.9	2,358.4	2,358.2	0.15	N/A	
100.0	100.0	95.2	95.2	0.1	0.1	120.51	-1,197.2	2,031.9	2,358.4	2,358.2	0.15	N/A	
196.8	196.8	195.4	195.3	0.3	0.1	120.56	-1,199.0	2,030.6	2,358.2	2,357.7	0.43	5,472.988	
200.0	200.0	198.6	198.6	0.3	0.1	120.56	-1,199.1	2,030.6	2,358.2	2,357.7	0.44	5,360.945	
295.3	295.3	295.7	295.7	0.5	0.3	120.64	-1,201.5	2,028.7	2,357.8	2,357.0	0.82	2,887.836	
300.0	300.0	300.0	299.9	0.5	0.3	120.64	-1,201.6	2,028.6	2,357.8	2,357.0	0.84	2,820.964	
378.9	378.9	371.0	370.9	0.7	0.4	120.68	-1,203.0	2,027.7	2,357.7	2,356.5	1.16	2,035.440	
393.7	393.7	382.9	382.8	0.8	0.5	120.68	-1,203.1	2,027.6	2,357.7	2,356.5	1.22	1,937.302	
400.0	400.0	387.8	387.7	0.8	0.5	120.69	-1,203.2	2,027.6	2,357.7	2,356.5	1.24	1,898.740	
492.1	492.1	460.6	460.5	1.0	0.6	120.71	-1,204.2	2,027.5	2,358.2	2,356.6	1.60	1,469.979	
500.0	500.0	467.5	467.4	1.0	0.6	120.71	-1,204.3	2,027.5	2,358.3	2,356.7	1.64	1,440.865	
590.5	590.5	548.3	548.2	1.2	0.8	120.73	-1,205.6	2,027.9	2,359.5	2,357.5	2.01	1,171.362	
600.0	600.0	557.2	557.1	1.2	0.8	120.73	-1,205.8	2,028.0	2,359.6	2,357.6	2.05	1,148.409	
689.0	689.0	640.7	640.6	1.4	1.0	120.76	-1,207.4	2,028.6	2,361.0	2,358.6	2.43	969.676	
700.0	700.0	651.1	650.9	1.4	1.0	120.76	-1,207.6	2,028.6	2,361.2	2,358.8	2.48	951.348	
787.4	787.4	732.7	732.5	1.6	1.2	120.79	-1,209.4	2,029.3	2,362.9	2,360.0	2.85	827.699	
800.0	800.0	744.4	744.2	1.7	1.2	120.80	-1,209.7	2,029.5	2,363.1	2,360.2	2.91	812.511	
885.8	885.8	837.5	837.3	1.9	1.4	120.80	-1,210.8	2,030.9	2,364.8	2,361.5	3.30	716.806	
900.0	900.0	853.8	853.6	1.9	1.5	120.80	-1,210.9	2,031.2	2,365.0	2,361.7	3.37	702.764	
984.2	984.2	1,116.9	1,116.5	2.1	2.0	120.60	-1,201.2	2,031.3	2,364.0	2,359.9	4.09	578.638	
1,000.0	1,000.0	1,147.5	1,146.9	2.1	2.1	120.56	-1,198.8	2,030.4	2,363.0	2,358.8	4.19	564.526	
1,082.7	1,082.7	1,374.0	1,372.2	2.3	2.6	120.33	-1,179.8	2,016.5	2,355.2	2,350.3	4.88	483.091	
1,100.0	1,100.0	1,408.2	1,406.0	2.3	2.7	120.32	-1,177.1	2,013.0	2,352.9	2,347.9	4.99	471.167	
1,181.1	1,181.1	1,566.0	1,562.0	2.5	3.1	91.89	-1,165.2	1,992.4	2,340.7	2,335.2	5.50	425.411	
1,200.0	1,200.0	1,596.7	1,592.4	2.6	3.2	91.99	-1,163.0	1,987.7	2,337.6	2,331.9	5.61	416.464	
1,279.5	1,279.4	1,973.3	1,958.3	2.7	4.7	93.17	-1,129.7	1,906.5	2,320.2	2,313.5	6.71	346.002	
1,300.0	1,299.8	2,051.0	2,032.1	2.8	5.1	93.53	-1,120.1	1,884.3	2,313.9	2,307.0	6.96	332.543	
1,377.9	1,377.5	2,120.7	2,098.1	3.0	5.5	94.28	-1,111.3	1,863.6	2,289.3	2,282.0	7.32	312.768	
1,400.0	1,399.5	2,136.0	2,112.5	3.0	5.6	94.49	-1,109.4	1,859.1	2,282.5	2,275.0	7.41	308.001	
1,476.4	1,475.3	2,196.6	2,170.0	3.2	5.9	95.25	-1,102.0	1,841.3	2,259.0	2,251.3	7.75	291.437	
1,500.0	1,498.7	2,222.0	2,194.1	3.3	6.0	95.53	-1,099.0	1,833.9	2,251.9	2,244.1	7.87	285.980	
1,574.8	1,572.6	2,284.6	2,253.6	3.5	6.3	96.35	-1,091.4	1,815.9	2,229.7	2,221.4	8.24	270.453	
1,600.0	1,597.5	2,309.2	2,276.9	3.5	6.5	96.65	-1,088.4	1,808.9	2,222.3	2,213.9	8.38	265.189	
1,673.2	1,669.4	2,393.0	2,356.4	3.7	7.0	97.65	-1,077.6	1,784.5	2,200.5	2,191.6	8.85	248.704	
1,700.1	1,695.8	2,419.4	2,381.4	3.8	7.1	98.00	-1,074.2	1,776.8	2,192.5	2,183.5	9.01	243.335	
1,771.6	1,765.7	2,479.0	2,437.9	4.1	7.5	98.44	-1,066.8	1,759.3	2,171.6	2,162.2	9.42	230.442	
1,800.0	1,793.4	2,495.6	2,453.7	4.2	7.6	98.57	-1,064.8	1,754.5	2,163.5	2,153.9	9.57	226.141	
1,870.1	1,862.0	2,550.3	2,505.7	4.4	7.9	98.98	-1,058.1	1,738.8	2,143.7	2,133.7	9.97	214.967	
1,900.0	1,891.3	2,573.9	2,528.1	4.5	8.0	99.16	-1,055.2	1,732.2	2,135.4	2,125.3	10.15	210.439	
1,968.5	1,958.3	2,628.4	2,580.1	4.8	8.3	99.57	-1,048.5	1,717.0	2,116.7	2,106.1	10.56	200.460	
2,000.0	1,989.1	2,654.8	2,605.2	4.9	8.4	99.77	-1,045.2	1,709.7	2,108.2	2,097.5	10.75	196.032	
2,066.9	2,054.5	2,726.3	2,673.3	5.1	8.8	100.32	-1,036.3	1,690.0	2,090.2	2,079.0	11.23	186.115	
2,100.0	2,086.9	2,753.0	2,698.7	5.3	9.0	100.53	-1,033.0	1,682.6	2,081.3	2,069.9	11.44	181.931	
2,165.3	2,150.8	2,800.4	2,744.0	5.5	9.3	100.89	-1,026.9	1,669.8	2,064.1	2,052.3	11.84	174.298	
2,200.0	2,184.7	2,829.5	2,771.8	5.6	9.4	101.11	-1,023.1	1,662.1	2,055.2	2,043.2	12.07	170.293	
2,263.8	2,247.1	2,911.5	2,850.1	5.9	9.9	101.72	-1,011.7	1,640.5	2,038.6	2,026.0	12.58	162.061	
2,300.0	2,282.5	2,947.1	2,884.0	6.0	10.1	101.99	-1,006.4	1,631.1	2,029.0	2,016.2	12.84	158.050	
2,362.2	2,343.3	2,992.0	2,926.8	6.3	10.4	102.32	-999.8	1,619.2	2,012.6	1,999.4	13.23	152.100	
2,400.0	2,380.3	3,018.1	2,951.8	6.5	10.5	102.52	-996.0	1,612.3	2,002.9	1,989.5	13.47	148.738	
2,460.6	2,439.6	3,047.4	2,979.8	6.7	10.7	102.75	-992.1	1,604.9	1,988.2	1,974.3	13.80	144.026	
2,500.0	2,478.1	3,077.0	3,008.2	6.9	10.9	102.99	-988.5	1,597.6	1,979.1	1,965.0	14.06	140.779	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 223-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,559.0	2,535.9	3,107.5	3,037.7	7.1	11.0	103.23	-985.1	1,590.2	1,966.0	1,951.6	14.40	136.570		
2,600.0	2,575.9	3,141.1	3,070.0	7.3	11.2	103.51	-981.3	1,582.1	1,957.2	1,942.5	14.67	133.419		
2,657.5	2,632.2	3,207.8	3,134.3	7.5	11.5	104.05	-973.7	1,566.2	1,944.9	1,929.8	15.13	128.582		
2,700.0	2,673.8	3,262.7	3,187.1	7.7	11.8	104.51	-967.2	1,552.6	1,935.5	1,920.0	15.49	124.971		
2,755.9	2,728.4	3,318.4	3,240.7	7.9	12.1	104.97	-960.2	1,538.8	1,923.0	1,907.1	15.91	120.856		
2,800.0	2,771.6	3,354.4	3,275.2	8.1	12.3	105.27	-955.6	1,530.0	1,913.2	1,897.0	16.22	117.980		
2,854.3	2,824.7	3,393.2	3,312.6	8.3	12.5	105.60	-950.8	1,520.6	1,901.5	1,885.0	16.57	114.732		
2,900.0	2,869.4	3,419.0	3,337.4	8.5	12.7	105.82	-947.7	1,514.4	1,892.1	1,875.2	16.85	112.282		
2,952.7	2,921.0	3,462.3	3,379.2	8.8	12.9	106.19	-942.8	1,504.2	1,881.5	1,864.3	17.22	109.276		
3,000.0	2,967.2	3,505.0	3,420.5	9.0	13.1	106.56	-938.3	1,494.2	1,872.5	1,855.0	17.56	106.628		
3,051.2	3,017.3	3,570.1	3,483.4	9.2	13.4	107.15	-931.3	1,478.8	1,862.8	1,844.8	18.01	103.430		
3,100.0	3,065.0	3,642.5	3,553.0	9.4	13.8	107.81	-923.0	1,460.7	1,852.7	1,834.3	18.49	100.217		
3,149.6	3,113.5	3,703.9	3,611.8	9.6	14.2	108.39	-915.5	1,444.8	1,842.1	1,823.2	18.94	97.286		
3,200.0	3,162.8	3,758.6	3,664.1	9.8	14.5	108.91	-908.9	1,430.2	1,831.2	1,811.9	19.37	94.560		
3,248.0	3,209.8	3,804.7	3,708.2	10.0	14.8	109.37	-903.4	1,417.7	1,820.8	1,801.1	19.76	92.162		
3,300.0	3,260.6	3,854.4	3,755.6	10.2	15.1	109.87	-897.5	1,404.1	1,809.7	1,789.5	20.18	89.666		
3,346.4	3,306.1	3,899.6	3,798.7	10.5	15.4	110.34	-892.3	1,391.6	1,799.8	1,779.2	20.57	87.489		
3,400.0	3,358.5	3,949.1	3,845.9	10.7	15.7	110.86	-886.5	1,377.8	1,788.5	1,767.5	21.01	85.125		
3,444.9	3,402.3	3,987.4	3,882.4	10.9	15.9	111.26	-882.0	1,367.3	1,779.2	1,757.9	21.36	83.284		
3,500.0	3,456.3	4,044.2	3,936.6	11.1	16.2	111.85	-875.2	1,351.9	1,768.0	1,746.2	21.84	80.942		
3,543.3	3,498.6	4,102.2	3,991.9	11.3	16.6	112.48	-868.2	1,335.6	1,759.0	1,736.7	22.29	78.928		
3,600.0	3,554.1	4,152.2	4,039.4	11.5	16.9	113.01	-861.8	1,321.5	1,747.1	1,724.4	22.75	76.811		
3,641.7	3,594.9	4,189.6	4,075.1	11.7	17.1	113.39	-856.5	1,311.7	1,738.5	1,715.4	23.09	75.308		
3,700.0	3,651.9	4,277.6	4,159.0	12.0	17.6	114.26	-842.6	1,288.8	1,726.1	1,702.4	23.70	72.823		
3,740.1	3,691.2	4,314.7	4,194.2	12.2	17.8	114.64	-836.5	1,278.9	1,717.3	1,693.3	24.03	71.463		
3,800.0	3,749.7	4,372.9	4,249.5	12.4	18.2	115.23	-826.9	1,263.4	1,704.4	1,679.8	24.54	69.459		
3,838.6	3,787.4	4,418.7	4,292.9	12.6	18.5	115.72	-819.7	1,250.6	1,696.0	1,671.1	24.91	68.074		
3,900.0	3,847.5	4,478.7	4,349.4	12.9	18.9	116.41	-810.7	1,232.8	1,682.5	1,657.0	25.47	66.059		
3,937.0	3,883.7	4,510.3	4,379.2	13.0	19.1	116.80	-806.2	1,223.2	1,674.5	1,648.7	25.79	64.932		
4,000.0	3,945.3	4,552.4	4,418.8	13.3	19.4	117.32	-800.6	1,210.2	1,661.4	1,635.1	26.27	63.241		
4,035.4	3,980.0	4,572.2	4,437.5	13.5	19.5	117.56	-798.0	1,204.3	1,654.4	1,627.9	26.52	62.386		
4,060.0	4,004.0	4,586.0	4,450.6	13.6	19.6	117.73	-796.3	1,200.2	1,649.8	1,623.1	26.69	61.808		
4,100.0	4,043.2	4,617.0	4,480.1	13.7	19.8	117.97	-792.5	1,191.3	1,642.6	1,615.6	26.99	60.847		
4,133.8	4,076.5	4,634.1	4,496.4	13.8	19.9	118.06	-790.5	1,186.6	1,636.5	1,609.3	27.17	60.222		
4,200.0	4,141.6	4,694.2	4,553.7	14.0	20.2	118.50	-783.1	1,170.3	1,624.4	1,596.7	27.65	58.747		
4,232.3	4,173.5	4,732.7	4,590.6	14.1	20.5	118.78	-778.1	1,160.0	1,618.2	1,590.3	27.92	57.964		
4,300.0	4,240.6	4,788.0	4,643.2	14.3	20.8	119.09	-770.7	1,144.9	1,604.5	1,576.2	28.35	56.599		
4,330.7	4,271.1	4,820.6	4,674.3	14.4	21.0	119.29	-766.3	1,136.1	1,598.1	1,569.6	28.56	55.954		
4,400.0	4,340.0	4,873.0	4,724.6	14.5	21.3	119.46	-759.3	1,123.4	1,584.3	1,555.3	28.93	54.759		
4,429.1	4,369.0	4,885.1	4,736.3	14.6	21.3	119.45	-757.7	1,120.6	1,578.5	1,549.4	29.03	54.379		
4,500.0	4,439.7	4,971.2	4,819.1	14.8	21.8	119.80	-746.4	1,100.1	1,563.7	1,534.2	29.50	52.998		
4,527.5	4,467.2	5,039.0	4,883.8	14.8	22.2	120.18	-736.9	1,082.3	1,557.2	1,527.3	29.86	52.155		
4,600.0	4,539.7	5,085.6	4,928.2	14.9	22.5	120.19	-730.3	1,069.5	1,539.1	1,508.9	30.14	51.059		
4,626.0	4,565.6	5,101.1	4,943.0	15.0	22.6	120.18	-728.3	1,065.4	1,532.7	1,502.4	30.23	50.699		
4,660.2	4,599.8	5,130.0	4,970.7	15.0	22.8	148.94	-724.7	1,057.8	1,524.3	1,492.2	32.16	47.406		
4,700.0	4,639.6	5,148.3	4,988.2	15.0	22.9	149.06	-722.5	1,053.1	1,514.8	1,482.5	32.30	46.899		
4,724.4	4,664.0	5,165.8	5,005.0	15.1	23.0	149.16	-720.4	1,048.7	1,509.1	1,476.7	32.42	46.554		
4,800.0	4,739.6	5,215.0	5,052.4	15.2	23.2	149.46	-714.9	1,036.6	1,492.1	1,459.4	32.76	45.548		
4,822.8	4,762.5	5,215.0	5,052.4	15.2	23.2	149.46	-714.9	1,036.6	1,487.4	1,454.6	32.80	45.346		
4,900.0	4,839.6	5,273.3	5,108.9	15.3	23.5	149.78	-708.8	1,023.7	1,471.8	1,438.7	33.15	44.393		
4,921.2	4,860.9	5,301.0	5,136.0	15.4	23.6	149.91	-706.2	1,018.3	1,468.0	1,434.7	33.30	44.091		
5,000.0	4,939.6	5,334.7	5,169.0	15.5	23.8	150.06	-703.1	1,012.2	1,454.3	1,420.8	33.54	43.355		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 223-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	5,348.1	5,182.1	15.5	23.8	150.11	-702.0	1,010.0	1,451.2	1,417.5	33.62	43.159	
5,100.0	5,039.6	5,410.5	5,243.5	15.6	24.0	150.34	-696.6	1,000.4	1,439.0	1,405.0	33.96	42.367	
5,118.1	5,057.7	5,428.3	5,261.1	15.7	24.1	150.40	-695.1	997.8	1,436.3	1,402.3	34.05	42.181	
5,200.0	5,139.6	5,500.3	5,332.0	15.8	24.4	150.65	-689.1	987.3	1,424.4	1,390.0	34.41	41.390	
5,216.5	5,156.2	5,512.8	5,344.4	15.8	24.4	150.70	-688.1	985.5	1,422.1	1,387.6	34.48	41.243	
5,300.0	5,239.6	5,574.8	5,405.7	15.9	24.6	150.90	-683.5	977.1	1,411.2	1,376.4	34.81	40.543	
5,314.9	5,254.6	5,585.4	5,416.2	16.0	24.6	150.94	-682.8	975.7	1,409.4	1,374.5	34.86	40.427	
5,400.0	5,339.6	5,643.0	5,473.2	16.1	24.8	151.12	-679.3	968.7	1,399.9	1,364.7	35.17	39.808	
5,413.4	5,353.0	5,656.3	5,486.4	16.1	24.9	151.16	-678.6	967.1	1,398.5	1,363.3	35.22	39.707	
5,500.0	5,439.6	5,728.0	5,557.6	16.3	25.1	151.40	-675.5	959.0	1,390.4	1,354.9	35.54	39.122	
5,511.8	5,451.4	5,728.0	5,557.6	16.3	25.1	151.40	-675.5	959.0	1,389.4	1,353.8	35.56	39.068	
5,600.0	5,539.6	5,805.9	5,634.9	16.4	25.3	151.65	-673.0	950.7	1,382.3	1,346.5	35.88	38.524	
5,610.2	5,549.9	5,814.0	5,643.0	16.4	25.3	151.68	-672.7	949.8	1,381.6	1,345.7	35.92	38.465	
5,700.0	5,639.6	5,883.4	5,712.1	16.6	25.4	151.88	-671.0	943.4	1,375.7	1,339.5	36.21	37.990	
5,708.6	5,648.3	5,899.0	5,727.7	16.6	25.5	151.92	-670.7	942.1	1,375.2	1,338.9	36.26	37.930	
5,800.0	5,739.6	5,961.3	5,789.8	16.7	25.6	152.07	-669.7	937.5	1,370.6	1,334.1	36.53	37.522	
5,807.1	5,746.7	5,972.1	5,800.5	16.8	25.6	152.10	-669.6	936.7	1,370.3	1,333.8	36.56	37.483	
5,900.0	5,839.6	6,026.5	5,854.8	16.9	25.7	152.22	-669.5	933.4	1,367.5	1,330.7	36.80	37.157	
5,905.5	5,845.1	6,029.7	5,858.1	16.9	25.7	152.22	-669.5	933.3	1,367.4	1,330.6	36.82	37.140	
5,961.6	5,901.3	6,070.0	5,898.3	17.0	25.8	152.30	-670.2	931.5	1,367.1	1,330.1	36.97	36.973 CC, ES	
6,000.0	5,939.6	6,090.2	5,918.5	17.1	25.8	152.33	-670.7	930.9	1,367.3	1,330.2	37.06	36.890	
6,003.9	5,943.6	6,093.2	5,921.5	17.1	25.8	152.34	-670.7	930.9	1,367.3	1,330.2	37.07	36.881	
6,059.2	5,998.8	6,135.5	5,963.7	17.2	25.9	152.37	-671.7	930.4	1,368.1	1,330.9	37.22	36.762	
6,100.0	6,039.6	6,175.9	6,004.1	17.2	25.9	-117.57	-672.5	930.8	1,369.6	1,333.7	35.92	38.131	
6,102.3	6,042.0	6,179.2	6,007.5	17.2	25.9	-117.57	-672.5	930.9	1,369.7	1,333.8	35.93	38.125	
6,150.0	6,089.4	6,244.8	6,073.1	17.3	25.9	-117.65	-672.8	932.0	1,372.3	1,336.2	36.09	38.027	
6,200.0	6,138.7	6,292.7	6,121.0	17.3	26.0	-117.68	-672.7	933.0	1,376.4	1,340.2	36.20	38.022	
6,200.8	6,139.5	6,293.5	6,121.7	17.3	26.0	-117.68	-672.7	933.0	1,376.5	1,340.3	36.20	38.023	
6,250.0	6,187.4	6,338.0	6,166.2	17.3	26.0	-117.67	-672.7	933.7	1,382.3	1,346.0	36.28	38.102	
6,299.2	6,234.4	6,376.6	6,204.8	17.4	26.0	-117.57	-672.9	934.4	1,389.9	1,353.6	36.33	38.257	
6,300.0	6,235.1	6,377.2	6,205.5	17.4	26.0	-117.57	-672.9	934.4	1,390.1	1,353.7	36.33	38.260	
6,350.0	6,281.7	6,412.0	6,240.2	17.4	26.1	-117.34	-673.2	935.1	1,399.9	1,363.5	36.37	38.487	
6,397.6	6,324.8	6,453.2	6,281.5	17.3	26.1	-117.19	-673.8	936.0	1,411.1	1,374.7	36.40	38.770	
6,400.0	6,326.9	6,455.1	6,283.3	17.3	26.1	-117.17	-673.8	936.0	1,411.7	1,375.3	36.40	38.785	
6,450.0	6,370.5	6,498.0	6,326.2	17.3	26.1	-116.95	-674.7	936.8	1,425.5	1,389.1	36.42	39.135	
6,496.0	6,409.1	6,528.7	6,356.8	17.3	26.1	-116.50	-675.4	937.4	1,439.9	1,403.4	36.49	39.463	
6,500.0	6,412.3	6,531.7	6,359.8	17.3	26.1	-116.47	-675.5	937.4	1,441.2	1,404.7	36.49	39.493	
6,550.0	6,452.1	6,568.6	6,396.8	17.3	26.2	-115.96	-676.5	938.1	1,459.0	1,422.4	36.60	39.867	
6,594.5	6,485.6	6,600.4	6,428.5	17.3	26.2	-115.39	-677.4	938.6	1,476.3	1,439.6	36.74	40.182	
6,600.0	6,489.7	6,604.2	6,432.4	17.3	26.2	-115.31	-677.5	938.7	1,478.6	1,441.8	36.76	40.220	
6,650.0	6,524.9	6,638.0	6,466.2	17.2	26.2	-114.50	-678.6	939.2	1,500.2	1,463.2	37.02	40.524	
6,692.9	6,553.0	6,665.1	6,493.2	17.2	26.2	-113.64	-679.4	939.6	1,520.2	1,482.9	37.33	40.720	
6,700.0	6,557.5	6,669.4	6,497.5	17.2	26.2	-113.48	-679.5	939.7	1,523.7	1,486.3	37.39	40.749	
6,750.0	6,587.4	6,699.4	6,527.5	17.2	26.3	-112.27	-680.5	940.1	1,549.0	1,511.1	37.89	40.876	
6,791.3	6,609.9	6,722.1	6,550.1	17.2	26.3	-111.06	-681.2	940.4	1,571.2	1,532.8	38.43	40.889	
6,800.0	6,614.4	6,726.6	6,554.6	17.2	26.3	-110.79	-681.4	940.4	1,576.1	1,537.5	38.55	40.884	
6,850.0	6,638.4	6,750.7	6,578.8	17.2	26.3	-109.01	-682.2	940.7	1,604.9	1,565.5	39.36	40.771	
6,889.7	6,655.3	6,766.9	6,594.9	17.4	26.3	-107.32	-682.7	940.8	1,628.9	1,588.8	40.13	40.590	
6,900.0	6,659.4	6,770.7	6,598.7	17.5	26.3	-106.85	-682.8	940.9	1,635.3	1,594.9	40.33	40.545	
6,950.0	6,677.1	6,787.3	6,615.3	18.0	26.3	-104.32	-683.4	941.1	1,667.2	1,625.8	41.43	40.244	
6,988.2	6,688.4	6,797.8	6,625.9	18.5	26.3	-102.13	-683.8	941.2	1,692.5	1,650.2	42.32	39.990	
7,000.0	6,691.5	6,800.7	6,628.7	18.7	26.3	-101.41	-683.9	941.2	1,700.5	1,657.9	42.60	39.921	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 223-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,050.0	6,702.5	6,810.9	6,638.9	19.5	26.3	-98.09	-684.2	941.3	1,735.0	1,691.3	43.77	39.637	
7,086.6	6,708.4	6,816.3	6,644.3	20.1	26.3	-95.42	-684.4	941.3	1,761.0	1,716.4	44.59	39.489	
7,100.0	6,710.1	6,817.8	6,645.8	20.4	26.3	-94.38	-684.5	941.3	1,770.6	1,725.7	44.87	39.461	
7,150.0	6,714.2	6,821.4	6,649.4	21.3	26.3	-90.30	-684.6	941.4	1,807.0	1,761.2	45.79	39.466	
7,185.0	6,715.0	6,821.8	6,649.8	21.9	26.4	-87.25	-684.6	941.4	1,832.9	1,786.6	46.27	39.615	
7,185.6	6,715.0	6,821.8	6,649.8	21.9	26.4	-87.20	-684.6	941.4	1,833.3	1,787.0	46.27	39.619	
7,200.0	6,715.0	6,821.7	6,649.7	22.2	26.4	-87.20	-684.6	941.4	1,844.0	1,797.5	46.55	39.615	
7,283.4	6,714.8	6,820.8	6,648.8	23.9	26.3	-87.15	-684.6	941.4	1,907.2	1,859.0	48.22	39.550	
7,300.0	6,714.8	6,820.6	6,648.6	24.2	26.3	-87.15	-684.6	941.4	1,919.9	1,871.3	48.55	39.541	
7,381.9	6,714.6	6,819.7	6,647.7	26.0	26.3	-87.10	-684.6	941.4	1,983.6	1,933.3	50.31	39.428	
7,400.0	6,714.6	6,819.5	6,647.5	26.4	26.3	-87.10	-684.6	941.4	1,997.8	1,947.1	50.70	39.407	
7,480.3	6,714.4	6,818.7	6,646.7	28.2	26.3	-87.06	-684.5	941.3	2,061.8	2,009.3	52.51	39.264	
7,500.0	6,714.4	6,818.4	6,646.4	28.7	26.3	-87.05	-684.5	941.3	2,077.7	2,024.7	52.96	39.234	
7,578.7	6,714.2	6,817.6	6,645.6	30.5	26.3	-87.01	-684.5	941.3	2,141.7	2,086.9	54.81	39.079	
7,600.0	6,714.2	6,817.4	6,645.4	31.0	26.3	-86.99	-684.5	941.3	2,159.2	2,103.9	55.31	39.042	
7,677.1	6,714.0	6,816.5	6,644.5	32.9	26.3	-86.96	-684.5	941.3	2,223.2	2,166.0	57.17	38.885	
7,700.0	6,714.0	6,816.3	6,644.3	33.4	26.3	-86.94	-684.4	941.3	2,242.2	2,184.5	57.73	38.843	
7,775.6	6,713.9	6,815.4	6,643.4	35.3	26.3	-86.91	-684.4	941.3	2,305.9	2,246.3	59.60	38.692	
7,800.0	6,713.8	6,815.2	6,643.2	35.9	26.3	-86.89	-684.4	941.3	2,326.6	2,266.4	60.20	38.647	
7,874.0	6,713.7	6,814.4	6,642.4	37.8	26.3	-86.85	-684.4	941.3	2,389.8	2,327.7	62.07	38.504	
7,900.0	6,713.6	6,814.1	6,642.1	38.4	26.3	-86.84	-684.4	941.3	2,412.2	2,349.4	62.72	38.458	
7,972.4	6,713.5	6,813.3	6,641.3	40.3	26.3	-86.80	-684.3	941.3	2,474.8	2,410.2	64.57	38.325	
8,000.0	6,713.4	6,813.0	6,641.0	41.0	26.3	-86.79	-684.3	941.3	2,498.8	2,433.5	65.28	38.278	
8,070.8	6,713.3	6,812.2	6,640.2	42.8	26.3	-86.75	-684.3	941.3	2,560.8	2,493.6	67.11	38.156	
8,100.0	6,713.2	6,811.9	6,639.9	43.6	26.3	-86.74	-684.3	941.3	2,586.4	2,518.5	67.87	38.110	
8,169.3	6,713.1	6,811.1	6,639.1	45.4	26.3	-86.70	-684.3	941.3	2,647.6	2,577.9	69.68	37.998	
8,200.0	6,713.0	6,810.8	6,638.8	46.2	26.3	-86.69	-684.2	941.3	2,674.8	2,604.4	70.48	37.952	
8,267.7	6,712.9	6,810.0	6,638.0	48.0	26.3	-86.65	-684.2	941.3	2,735.2	2,662.9	72.26	37.851	
8,300.0	6,712.8	6,809.6	6,637.6	48.8	26.3	-86.64	-684.2	941.3	2,764.1	2,691.0	73.11	37.806	
8,366.1	6,712.7	6,808.9	6,636.9	50.6	26.3	-86.60	-684.2	941.3	2,823.5	2,748.6	74.86	37.715	
8,400.0	6,712.6	6,808.5	6,636.5	51.5	26.3	-86.58	-684.2	941.3	2,854.1	2,778.3	75.76	37.671	
8,464.5	6,712.5	6,807.8	6,635.8	53.2	26.3	-86.55	-684.1	941.2	2,912.5	2,835.0	77.48	37.589	
8,500.0	6,712.4	6,807.4	6,635.4	54.1	26.3	-86.53	-684.1	941.2	2,944.7	2,866.2	78.43	37.546	
8,563.0	6,712.3	6,806.7	6,634.7	55.8	26.3	-86.50	-684.1	941.2	3,002.0	2,921.9	80.11	37.472	
8,600.0	6,712.3	6,806.3	6,634.3	56.8	26.3	-86.48	-684.1	941.2	3,035.9	2,954.8	81.11	37.431	
8,661.4	6,712.1	6,805.6	6,633.6	58.5	26.3	-86.45	-684.1	941.2	3,092.1	3,009.4	82.76	37.364	
8,700.0	6,712.1	6,805.2	6,633.2	59.5	26.3	-86.43	-684.0	941.2	3,127.6	3,043.8	83.79	37.325	
8,759.8	6,711.9	6,804.5	6,632.5	61.1	26.3	-86.39	-684.0	941.2	3,182.7	3,097.3	85.41	37.265	
8,800.0	6,711.9	6,804.0	6,632.0	62.2	26.3	-86.37	-684.0	941.2	3,219.8	3,133.3	86.49	37.227	
8,858.2	6,711.8	6,803.4	6,631.4	63.8	26.3	-86.34	-684.0	941.2	3,273.8	3,185.7	88.07	37.173	
8,900.0	6,711.7	6,802.9	6,630.9	64.9	26.3	-86.32	-684.0	941.2	3,312.5	3,223.3	89.20	37.136	
8,956.7	6,711.6	6,802.2	6,630.2	66.5	26.3	-86.29	-683.9	941.2	3,365.2	3,274.5	90.74	37.088	
9,000.0	6,711.5	6,801.7	6,629.7	67.6	26.3	-86.27	-683.9	941.2	3,405.6	3,313.7	91.91	37.053	
9,055.1	6,711.4	6,801.1	6,629.1	69.1	26.3	-86.24	-683.9	941.2	3,457.0	3,363.6	93.41	37.009	
9,100.0	6,711.3	6,800.6	6,628.6	70.4	26.3	-86.21	-683.9	941.2	3,499.1	3,404.4	94.63	36.976	
9,153.5	6,711.2	6,800.0	6,628.0	71.8	26.3	-86.19	-683.9	941.2	3,549.2	3,453.2	96.09	36.937	
9,200.0	6,711.1	6,799.4	6,627.5	73.1	26.3	-86.16	-683.8	941.2	3,592.9	3,495.5	97.36	36.905	
9,251.9	6,711.0	6,798.8	6,626.9	74.5	26.3	-86.13	-683.8	941.2	3,641.8	3,543.0	98.77	36.870	
9,300.0	6,710.9	6,798.3	6,626.3	75.8	26.3	-86.11	-683.8	941.2	3,687.0	3,586.9	100.09	36.839	
9,350.4	6,710.8	6,797.7	6,625.7	77.2	26.3	-86.08	-683.8	941.2	3,734.6	3,633.1	101.46	36.807	
9,400.0	6,710.7	6,797.1	6,625.1	78.6	26.3	-86.05	-683.8	941.1	3,781.5	3,678.7	102.82	36.778	
9,448.8	6,710.6	6,796.6	6,624.6	79.9	26.3	-86.03	-683.7	941.1	3,827.7	3,723.5	104.16	36.750	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 223-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,710.5	6,796.0	6,624.0	81.3	26.3	-86.00	-683.7	941.1	3,876.2	3,770.7	105.56	36.721	
9,547.2	6,710.4	6,795.4	6,623.4	82.6	26.3	-85.97	-683.7	941.1	3,921.0	3,814.2	106.85	36.696	
9,600.0	6,710.3	6,794.8	6,622.8	84.1	26.3	-85.94	-683.7	941.1	3,971.2	3,862.9	108.30	36.669	
9,645.6	6,710.2	6,794.3	6,622.3	85.3	26.3	-85.92	-683.7	941.1	4,014.6	3,905.1	109.55	36.646	
9,700.0	6,710.1	6,793.6	6,621.6	86.8	26.3	-85.89	-683.6	941.1	4,066.4	3,955.4	111.04	36.620	
9,744.1	6,710.0	6,793.1	6,621.1	88.1	26.3	-85.87	-683.6	941.1	4,108.5	3,996.2	112.25	36.600	
9,800.0	6,709.9	6,792.4	6,620.5	89.6	26.3	-85.84	-683.6	941.1	4,161.9	4,048.1	113.79	36.575	
9,842.5	6,709.9	6,791.9	6,620.0	90.8	26.3	-85.81	-683.6	941.1	4,202.5	4,087.5	114.96	36.557	
9,900.0	6,709.7	6,791.3	6,619.3	92.4	26.3	-85.78	-683.6	941.1	4,257.5	4,141.0	116.54	36.533	
9,940.9	6,709.7	6,790.8	6,618.8	93.5	26.3	-85.76	-683.5	941.1	4,296.7	4,179.1	117.66	36.517	
10,000.0	6,709.6	6,790.1	6,618.1	95.1	26.3	-85.73	-683.5	941.1	4,353.4	4,234.1	119.29	36.494	
10,039.3	6,709.5	6,789.6	6,617.6	96.2	26.3	-85.70	-683.5	941.1	4,391.1	4,270.8	120.37	36.480	
10,100.0	6,709.4	6,788.9	6,616.9	97.9	26.3	-85.67	-683.5	941.1	4,449.4	4,327.4	122.04	36.458	
10,137.8	6,709.3	6,788.4	6,616.5	98.9	26.3	-85.65	-683.5	941.1	4,485.7	4,362.6	123.08	36.445	
10,200.0	6,709.2	6,787.7	6,615.7	100.7	26.3	-85.62	-683.4	941.1	4,545.6	4,420.8	124.80	36.424	
10,236.2	6,709.1	6,787.3	6,615.3	101.7	26.3	-85.59	-683.4	941.1	4,580.5	4,454.7	125.79	36.412	
10,300.0	6,709.0	6,786.5	6,614.5	103.4	26.3	-85.56	-683.4	941.0	4,642.0	4,514.4	127.55	36.393	
10,334.6	6,708.9	6,786.1	6,614.1	104.4	26.3	-85.54	-683.4	941.0	4,675.4	4,546.9	128.51	36.382	
10,400.0	6,708.8	6,785.3	6,613.3	106.2	26.3	-85.50	-683.3	941.0	4,738.5	4,608.2	130.31	36.363	
10,433.0	6,708.7	6,784.9	6,612.9	107.1	26.3	-85.49	-683.3	941.0	4,770.4	4,639.2	131.22	36.354	
10,500.0	6,708.6	6,784.1	6,612.1	109.0	26.3	-85.45	-683.3	941.0	4,835.2	4,702.1	133.07	36.336	
10,531.5	6,708.5	6,783.7	6,611.7	109.9	26.3	-85.43	-683.3	941.0	4,865.6	4,731.7	133.94	36.328	
10,600.0	6,708.4	6,782.9	6,610.9	111.8	26.3	-85.39	-683.3	941.0	4,931.9	4,796.1	135.83	36.310	
10,629.9	6,708.4	6,782.5	6,610.5	112.6	26.3	-85.37	-683.2	941.0	4,960.9	4,824.3	136.65	36.303	
10,700.0	6,708.2	6,781.7	6,609.7	114.6	26.3	-85.33	-683.2	941.0	5,028.9	4,890.3	138.59	36.286	
10,728.3	6,708.2	6,781.3	6,609.3	115.3	26.3	-85.32	-683.2	941.0	5,056.3	4,917.0	139.37	36.280	
10,800.0	6,708.0	6,780.4	6,608.5	117.3	26.3	-85.28	-683.2	941.0	5,125.9	4,984.5	141.35	36.264	
10,826.7	6,708.0	6,780.1	6,608.1	118.1	26.3	-85.26	-683.2	941.0	5,151.9	5,009.8	142.09	36.258	
10,900.0	6,707.8	6,779.2	6,607.2	120.1	26.3	-85.22	-683.1	941.0	5,223.0	5,078.9	144.11	36.243	
10,925.2	6,707.8	6,778.9	6,606.9	120.8	26.3	-85.21	-683.1	941.0	5,247.5	5,102.7	144.81	36.238	
11,000.0	6,707.6	6,778.0	6,606.0	122.9	26.3	-85.16	-683.1	941.0	5,320.3	5,173.4	146.87	36.224	
11,023.6	6,707.6	6,777.7	6,605.7	123.6	26.3	-85.15	-683.1	941.0	5,343.3	5,195.7	147.53	36.219	
11,100.0	6,707.5	6,776.7	6,604.8	125.7	26.3	-85.11	-683.0	940.9	5,417.6	5,268.0	149.64	36.206	
11,122.0	6,707.4	6,776.5	6,604.5	126.3	26.3	-85.09	-683.0	940.9	5,439.1	5,288.8	150.24	36.202	
11,200.0	6,707.3	6,775.5	6,603.5	128.5	26.3	-85.05	-683.0	940.9	5,515.1	5,362.7	152.40	36.188	
11,220.4	6,707.2	6,775.2	6,603.3	129.0	26.3	-85.04	-683.0	940.9	5,535.0	5,382.1	152.96	36.185	
11,300.0	6,707.1	6,774.3	6,602.3	131.3	26.3	-84.99	-683.0	940.9	5,612.6	5,457.5	155.16	36.173	
11,318.9	6,707.0	6,774.0	6,602.0	131.8	26.3	-84.98	-683.0	940.9	5,631.0	5,475.4	155.68	36.170	
11,400.0	6,706.9	6,773.0	6,601.0	134.0	26.3	-84.93	-682.9	940.9	5,710.2	5,552.3	157.93	36.158	
11,417.3	6,706.9	6,772.8	6,600.8	134.5	26.3	-84.92	-682.9	940.9	5,727.1	5,568.7	158.40	36.155	
11,500.0	6,706.7	6,771.7	6,599.8	136.8	26.3	-84.88	-682.9	940.9	5,807.9	5,647.2	160.69	36.144	
11,515.7	6,706.7	6,771.6	6,599.6	137.3	26.3	-84.87	-682.9	940.9	5,823.3	5,662.2	161.12	36.142	
11,600.0	6,706.5	6,770.5	6,598.5	139.6	26.3	-84.82	-682.8	940.9	5,905.7	5,742.3	163.45	36.131	
11,614.1	6,706.5	6,770.3	6,598.3	140.0	26.3	-84.81	-682.8	940.9	5,919.6	5,755.7	163.84	36.129	
11,700.0	6,706.3	6,769.2	6,597.3	142.4	26.3	-84.76	-682.8	940.9	6,003.6	5,837.3	166.22	36.119	
11,712.6	6,706.3	6,769.1	6,597.1	142.8	26.3	-84.75	-682.8	940.9	6,015.9	5,849.3	166.56	36.117	
11,800.0	6,706.1	6,768.0	6,596.0	145.2	26.3	-84.70	-682.7	940.9	6,101.5	5,932.5	168.98	36.107	
11,811.0	6,706.1	6,767.8	6,595.8	145.5	26.3	-84.69	-682.7	940.9	6,112.3	5,943.0	169.29	36.106	
11,900.0	6,705.9	6,766.7	6,594.7	148.0	26.3	-84.64	-682.7	940.8	6,199.5	6,027.7	171.74	36.097	
11,909.4	6,705.9	6,766.6	6,594.6	148.3	26.3	-84.64	-682.7	940.8	6,208.7	6,036.7	172.01	36.096	
12,000.0	6,705.8	6,765.4	6,593.4	150.8	26.3	-84.58	-682.7	940.8	6,297.5	6,123.0	174.51	36.087	
12,007.8	6,705.7	6,765.3	6,593.3	151.0	26.3	-84.58	-682.7	940.8	6,305.2	6,130.5	174.73	36.086	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 223-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,100.0	6,705.6	6,764.1	6,592.2	153.6	26.3	-84.52	-682.6	940.8	6,395.6	6,218.4	177.27	36.078	
12,106.3	6,705.6	6,764.0	6,592.1	153.8	26.3	-84.52	-682.6	940.8	6,401.8	6,224.3	177.45	36.077	
12,200.0	6,705.4	6,762.8	6,590.9	156.4	26.3	-84.46	-682.6	940.8	6,493.8	6,313.8	180.04	36.070	
12,204.7	6,705.4	6,762.8	6,590.8	156.5	26.3	-84.46	-682.6	940.8	6,498.4	6,318.2	180.17	36.069	
12,300.0	6,705.2	6,761.5	6,589.6	159.2	26.3	-84.40	-682.5	940.8	6,592.0	6,409.2	182.80	36.062	
12,303.1	6,705.2	6,761.5	6,589.5	159.3	26.3	-84.40	-682.5	940.8	6,595.1	6,412.2	182.88	36.061	
12,400.0	6,705.0	6,760.2	6,588.3	162.0	26.3	-84.34	-682.5	940.8	6,690.3	6,504.7	185.56	36.054	
12,401.5	6,705.0	6,760.2	6,588.2	162.0	26.3	-84.34	-682.5	940.8	6,691.8	6,506.2	185.60	36.054	
12,500.0	6,704.8	6,758.9	6,587.0	164.8	26.3	-84.28	-682.4	940.8	6,788.6	6,600.3	188.32	36.048	
12,598.4	6,704.6	6,757.6	6,585.7	167.5	26.3	-84.22	-682.4	940.8	6,885.4	6,694.4	191.04	36.042	
12,600.0	6,704.6	6,757.6	6,585.7	167.6	26.3	-84.22	-682.4	940.8	6,887.0	6,695.9	191.09	36.041	
12,696.8	6,704.4	6,756.3	6,584.4	170.3	26.3	-84.16	-682.4	940.7	6,982.3	6,788.5	193.76	36.036	
12,700.0	6,704.4	6,756.3	6,584.3	170.4	26.3	-84.16	-682.4	940.7	6,985.4	6,791.6	193.85	36.036	
12,795.2	6,704.3	6,755.0	6,583.1	173.0	26.3	-84.10	-682.3	940.7	7,079.2	6,882.7	196.48	36.031	
12,800.0	6,704.2	6,755.0	6,583.0	173.2	26.3	-84.10	-682.3	940.7	7,083.9	6,887.3	196.61	36.030	
12,893.7	6,704.1	6,753.3	6,581.3	175.8	26.3	-84.02	-682.3	940.7	7,176.1	6,977.0	199.18	36.028	
12,900.0	6,704.1	6,753.1	6,581.2	176.0	26.3	-84.02	-682.2	940.7	7,182.4	6,983.0	199.36	36.027	
12,992.1	6,703.9	6,751.4	6,579.5	178.5	26.3	-83.94	-682.2	940.7	7,273.1	7,071.2	201.89	36.025	
13,000.0	6,703.9	6,751.3	6,579.3	178.8	26.3	-83.93	-682.2	940.7	7,280.9	7,078.8	202.11	36.025	
13,090.5	6,703.7	6,749.6	6,577.6	181.3	26.3	-83.85	-682.1	940.7	7,370.2	7,165.6	204.60	36.023	
13,100.0	6,703.7	6,749.4	6,577.4	181.6	26.3	-83.84	-682.1	940.7	7,379.5	7,174.6	204.86	36.023	
13,188.9	6,703.5	6,747.7	6,575.7	184.0	26.3	-83.76	-682.1	940.6	7,467.2	7,259.9	207.30	36.021	
13,200.0	6,703.5	6,747.5	6,575.5	184.4	26.3	-83.75	-682.1	940.6	7,478.1	7,270.5	207.60	36.021	
13,287.4	6,703.3	6,745.8	6,573.8	186.8	26.3	-83.67	-682.0	940.6	7,564.3	7,354.3	210.00	36.020	
13,300.0	6,703.3	6,745.5	6,573.6	187.2	26.3	-83.66	-682.0	940.6	7,576.8	7,366.4	210.35	36.020	
13,385.8	6,703.2	6,743.8	6,571.9	189.6	26.3	-83.58	-681.9	940.6	7,661.4	7,448.7	212.70	36.019	
13,400.0	6,703.1	6,743.5	6,571.6	190.0	26.3	-83.57	-681.9	940.6	7,675.5	7,462.4	213.09	36.019	
13,484.2	6,703.0	6,741.9	6,569.9	192.3	26.3	-83.49	-681.9	940.6	7,758.6	7,543.2	215.40	36.019	
13,500.0	6,702.9	6,741.5	6,569.6	192.8	26.3	-83.48	-681.9	940.6	7,774.2	7,558.4	215.84	36.019 SF	
13,582.6	6,702.8	6,739.9	6,567.9	195.1	26.3	-83.40	-681.8	940.6	7,855.8	7,637.7	218.10	36.019	
13,600.0	6,702.8	6,739.5	6,567.5	195.6	26.3	-83.38	-681.8	940.6	7,872.9	7,654.4	218.58	36.019	
13,681.1	6,702.6	6,737.8	6,565.9	197.8	26.3	-83.31	-681.7	940.5	7,953.0	7,732.2	220.80	36.020	
13,700.0	6,702.6	6,737.4	6,565.5	198.4	26.3	-83.29	-681.7	940.5	7,971.7	7,750.4	221.31	36.020	
13,779.5	6,702.4	6,735.8	6,563.8	200.6	26.3	-83.21	-681.7	940.5	8,050.3	7,826.8	223.49	36.021	
13,800.0	6,702.4	6,735.3	6,563.4	201.2	26.3	-83.19	-681.7	940.5	8,070.5	7,846.5	224.05	36.021	
13,877.9	6,702.2	6,733.7	6,561.7	203.3	26.3	-83.11	-681.6	940.5	8,147.6	7,921.4	226.18	36.023	
13,900.0	6,702.2	6,733.2	6,561.2	204.0	26.3	-83.09	-681.6	940.5	8,169.4	7,942.6	226.78	36.023	
13,976.3	6,702.1	6,731.5	6,559.6	206.1	26.3	-83.02	-681.5	940.5	8,244.9	8,016.0	228.87	36.025	
14,000.0	6,702.0	6,731.0	6,559.1	206.8	26.3	-82.99	-681.5	940.5	8,268.3	8,038.8	229.51	36.025	
14,074.8	6,701.9	6,729.4	6,557.4	208.9	26.3	-82.92	-681.5	940.4	8,342.2	8,110.7	231.55	36.027	
14,100.0	6,701.8	6,728.8	6,556.9	209.6	26.3	-82.89	-681.4	940.4	8,367.2	8,134.9	232.24	36.028	
14,173.2	6,701.7	6,727.2	6,555.2	211.6	26.3	-82.81	-681.4	940.4	8,439.6	8,205.3	234.24	36.030	
14,200.0	6,701.6	6,726.5	6,554.6	212.4	26.3	-82.79	-681.4	940.4	8,466.1	8,231.1	234.97	36.031	
14,271.6	6,701.5	6,724.9	6,553.0	214.4	26.3	-82.71	-681.3	940.4	8,537.0	8,300.0	236.92	36.033	
14,300.0	6,701.4	6,724.3	6,552.3	215.2	26.3	-82.68	-681.3	940.4	8,565.0	8,327.3	237.69	36.034	
14,370.0	6,701.3	6,722.6	6,550.7	217.1	26.3	-82.61	-681.2	940.4	8,634.4	8,394.8	239.60	36.037	
14,400.0	6,701.3	6,721.9	6,550.0	218.0	26.3	-82.58	-681.2	940.4	8,664.0	8,423.6	240.41	36.038	
14,468.5	6,701.1	6,720.3	6,548.4	219.9	26.3	-82.50	-681.2	940.3	8,731.8	8,489.5	242.28	36.041	
14,500.0	6,701.1	6,719.6	6,547.6	220.8	26.3	-82.47	-681.1	940.3	8,763.0	8,519.9	243.13	36.042	
14,566.9	6,701.0	6,718.0	6,546.0	222.6	26.3	-82.39	-681.1	940.3	8,829.2	8,584.3	244.95	36.045	
14,600.0	6,700.9	6,717.2	6,545.2	223.6	26.3	-82.36	-681.1	940.3	8,862.0	8,616.2	245.85	36.047	
14,665.3	6,700.8	6,715.6	6,543.7	225.4	26.3	-82.28	-681.0	940.3	8,926.7	8,679.1	247.62	36.050	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD WACKER B #10-20D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 223-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,714.7	6,542.8	226.4	26.3	-82.24	-681.0	940.3	8,961.1	8,712.5	248.56	36.052	
14,763.7	6,700.6	6,713.2	6,541.2	228.2	26.3	-82.17	-680.9	940.2	9,024.2	8,773.9	250.29	36.055	
14,800.0	6,700.5	6,712.2	6,540.3	229.2	26.3	-82.13	-680.9	940.2	9,060.1	8,808.9	251.27	36.058	
14,862.2	6,700.4	6,710.7	6,538.7	230.9	26.3	-82.06	-680.9	940.2	9,121.7	8,868.8	252.95	36.061	
14,900.0	6,700.3	6,709.7	6,537.8	232.0	26.3	-82.01	-680.8	940.2	9,159.2	8,905.2	253.97	36.064	
14,960.6	6,700.2	6,708.2	6,536.2	233.7	26.3	-81.94	-680.8	940.2	9,219.3	8,963.6	255.61	36.067	
15,000.0	6,700.2	6,707.1	6,535.2	234.8	26.3	-81.89	-680.7	940.2	9,258.3	9,001.6	256.68	36.070	
15,059.0	6,700.0	6,705.6	6,533.7	236.4	26.3	-81.82	-680.7	940.2	9,316.8	9,058.5	258.27	36.074	
15,082.8	6,700.0	6,705.0	6,533.0	237.1	26.3	-81.79	-680.7	940.1	9,340.4	9,081.5	258.91	36.076	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 655-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	110.24	-1,427.1	3,870.8	4,125.5				
98.4	98.4	90.4	90.4	0.1	0.1	110.24	-1,427.1	3,870.8	4,125.5	4,125.3	0.18	N/A	
100.0	100.0	92.0	92.0	0.1	0.1	110.24	-1,427.1	3,870.8	4,125.5	4,125.3	0.18	N/A	
196.8	196.8	188.8	188.8	0.3	0.2	110.24	-1,427.1	3,870.8	4,125.5	4,125.0	0.49	8,417.484	
200.0	200.0	192.0	192.0	0.3	0.2	110.24	-1,427.1	3,870.8	4,125.5	4,125.0	0.50	8,249.281	
295.3	295.3	287.3	287.3	0.5	0.3	110.24	-1,427.1	3,870.8	4,125.5	4,124.7	0.80	5,141.693	
300.0	300.0	292.0	292.0	0.5	0.3	110.24	-1,427.1	3,870.8	4,125.5	4,124.7	0.82	5,047.396	
393.7	393.7	385.7	385.7	0.8	0.4	110.24	-1,427.1	3,870.8	4,125.5	4,124.4	1.11	3,701.283	
400.0	400.0	392.0	392.0	0.8	0.4	110.24	-1,427.1	3,870.8	4,125.5	4,124.3	1.13	3,636.082	
492.1	492.1	484.1	484.1	1.0	0.4	110.24	-1,427.1	3,870.8	4,125.5	4,124.0	1.43	2,891.304	
500.0	500.0	492.0	492.0	1.0	0.5	110.24	-1,427.1	3,870.8	4,125.5	4,124.0	1.45	2,841.550	
590.5	590.5	582.5	582.5	1.2	0.5	110.24	-1,427.1	3,870.8	4,125.5	4,123.7	1.74	2,372.182	
600.0	600.0	592.0	592.0	1.2	0.5	110.24	-1,427.1	3,870.8	4,125.5	4,123.7	1.77	2,331.982	
689.0	689.0	701.1	701.1	1.4	0.7	110.24	-1,426.9	3,870.7	4,125.4	4,123.3	2.13	1,936.352	
700.0	700.0	720.6	720.6	1.4	0.8	110.23	-1,426.7	3,870.7	4,125.3	4,123.1	2.20	1,875.948	
787.4	787.4	802.1	802.1	1.6	0.9	110.23	-1,425.9	3,870.3	4,124.7	4,122.2	2.56	1,610.355	
800.0	800.0	812.6	812.6	1.7	0.9	110.23	-1,425.9	3,870.3	4,124.6	4,122.0	2.61	1,580.144	
885.8	885.8	898.8	898.8	1.9	1.1	110.24	-1,426.5	3,869.7	4,124.3	4,121.3	2.97	1,389.992	
900.0	900.0	914.0	913.9	1.9	1.1	110.24	-1,426.6	3,869.5	4,124.2	4,121.2	3.03	1,362.239	
933.0	933.0	925.0	925.0	2.0	1.2	110.24	-1,426.7	3,869.4	4,124.1	4,120.9	3.12	1,320.801 CC	
984.2	984.2	925.0	925.0	2.1	1.2	110.24	-1,426.7	3,869.4	4,124.4	4,121.2	3.24	1,273.896	
993.2	993.2	956.8	956.7	2.1	1.2	110.24	-1,427.1	3,869.3	4,124.2	4,120.9	3.32	1,241.942 ES	
1,000.0	1,000.0	959.3	959.3	2.1	1.2	110.25	-1,427.1	3,869.3	4,124.2	4,120.9	3.34	1,234.410	
1,082.7	1,082.7	1,018.0	1,018.0	2.3	1.3	110.26	-1,428.5	3,870.0	4,125.6	4,122.0	3.64	1,132.458	
1,100.0	1,100.0	1,018.0	1,018.0	2.3	1.3	110.26	-1,428.5	3,870.0	4,125.9	4,122.2	3.68	1,120.555	
1,181.1	1,181.1	1,018.0	1,018.0	2.5	1.3	81.49	-1,428.5	3,870.0	4,128.0	4,124.1	3.86	1,068.647	
1,200.0	1,200.0	1,046.1	1,046.0	2.6	1.4	81.50	-1,429.5	3,870.6	4,128.5	4,124.5	3.96	1,041.872	
1,279.5	1,279.4	1,111.0	1,110.9	2.7	1.5	81.52	-1,432.3	3,872.4	4,131.1	4,126.8	4.27	967.016	
1,300.0	1,299.8	1,111.0	1,110.9	2.8	1.5	81.51	-1,432.3	3,872.4	4,131.8	4,127.4	4.32	957.048	
1,377.9	1,377.5	1,152.4	1,152.2	3.0	1.6	81.53	-1,434.5	3,873.8	4,134.6	4,130.0	4.58	902.207	
1,400.0	1,399.5	1,165.5	1,165.2	3.0	1.6	81.53	-1,435.3	3,874.2	4,135.5	4,130.8	4.66	887.220	
1,476.4	1,475.3	1,211.0	1,210.6	3.2	1.7	81.58	-1,438.3	3,875.9	4,138.6	4,133.7	4.94	837.402	
1,500.0	1,498.7	1,232.4	1,231.9	3.3	1.8	81.61	-1,439.9	3,876.7	4,139.6	4,134.6	5.05	820.089	
1,574.8	1,572.6	1,301.9	1,301.1	3.5	2.0	81.76	-1,445.6	3,879.2	4,142.8	4,137.4	5.40	767.043	
1,600.0	1,597.5	1,356.3	1,355.3	3.5	2.1	81.93	-1,451.0	3,880.7	4,143.7	4,138.1	5.60	740.158	
1,673.2	1,669.4	1,432.6	1,431.0	3.7	2.3	82.19	-1,460.4	3,881.4	4,145.7	4,139.7	6.00	690.523	
1,700.1	1,695.8	1,448.1	1,446.3	3.8	2.3	82.24	-1,462.4	3,881.5	4,146.5	4,140.4	6.12	677.062	
1,771.6	1,765.7	1,494.0	1,491.9	4.1	2.5	82.44	-1,468.4	3,882.2	4,149.0	4,142.6	6.48	640.567	
1,800.0	1,793.4	1,515.7	1,513.4	4.2	2.5	82.54	-1,471.3	3,882.5	4,150.2	4,143.5	6.63	625.928	
1,870.1	1,862.0	1,593.3	1,590.1	4.4	2.7	82.89	-1,482.3	3,883.5	4,152.9	4,145.8	7.09	586.022	
1,900.0	1,891.3	1,644.8	1,641.1	4.5	2.9	83.13	-1,490.0	3,883.7	4,154.0	4,146.6	7.34	565.776	
1,968.5	1,958.3	1,684.0	1,679.8	4.8	3.0	83.32	-1,496.1	3,883.5	4,156.4	4,148.7	7.71	539.333	
2,000.0	1,989.1	1,710.4	1,705.9	4.9	3.1	83.45	-1,500.3	3,883.4	4,157.6	4,149.7	7.90	526.177	
2,066.9	2,054.5	1,733.3	1,728.4	5.1	3.2	83.56	-1,504.0	3,883.6	4,160.9	4,152.6	8.22	506.004	
2,100.0	2,086.9	1,763.0	1,757.7	5.3	3.3	83.70	-1,509.0	3,884.1	4,162.9	4,154.4	8.44	493.349	
2,165.3	2,150.8	1,763.0	1,757.7	5.5	3.3	83.70	-1,509.0	3,884.1	4,167.0	4,158.3	8.69	479.463	
2,200.0	2,184.7	1,786.8	1,781.2	5.6	3.4	83.82	-1,513.2	3,884.7	4,169.5	4,160.6	8.90	468.278	
2,263.8	2,247.1	1,819.6	1,813.4	5.9	3.5	83.98	-1,519.3	3,885.5	4,174.5	4,165.2	9.26	450.620	
2,300.0	2,282.5	1,858.0	1,851.0	6.0	3.6	84.18	-1,526.9	3,886.5	4,177.6	4,168.1	9.53	438.205	
2,362.2	2,343.3	1,881.0	1,873.5	6.3	3.7	84.30	-1,531.7	3,887.1	4,183.1	4,173.3	9.86	424.120	
2,400.0	2,380.3	1,918.9	1,910.6	6.5	3.8	84.49	-1,539.5	3,888.1	4,186.6	4,176.5	10.15	412.627	
2,460.6	2,439.6	2,001.6	1,991.4	6.7	4.2	84.93	-1,556.9	3,889.8	4,192.2	4,181.5	10.69	392.216	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 usft	
Survey Program: 655-MWD														Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
2,500.0	2,478.1	2,047.0	2,035.6	6.9	4.4	85.18	-1,567.1	3,890.1	4,195.6	4,184.6	11.01	380.900				
2,559.0	2,535.9	2,095.2	2,082.5	7.1	4.6	85.45	-1,578.4	3,890.2	4,200.8	4,189.4	11.45	366.978				
2,600.0	2,575.9	2,122.2	2,108.8	7.3	4.7	85.60	-1,584.7	3,890.3	4,204.7	4,192.9	11.72	358.715				
2,657.5	2,632.2	2,252.7	2,235.8	7.5	5.2	86.32	-1,614.4	3,890.3	4,209.8	4,197.3	12.45	338.263				
2,700.0	2,673.8	2,279.5	2,261.9	7.7	5.3	86.47	-1,620.5	3,890.0	4,213.3	4,200.6	12.73	331.059				
2,755.9	2,728.4	2,314.5	2,295.9	7.9	5.5	86.67	-1,628.8	3,889.7	4,218.2	4,205.1	13.10	322.078				
2,800.0	2,771.6	2,332.0	2,312.9	8.1	5.5	86.77	-1,633.0	3,889.5	4,222.3	4,209.0	13.35	316.278				
2,854.3	2,824.7	2,366.9	2,346.7	8.3	5.7	86.98	-1,641.8	3,889.1	4,227.7	4,213.9	13.74	307.764				
2,900.0	2,869.4	2,389.5	2,368.5	8.5	5.8	87.11	-1,647.7	3,888.9	4,232.5	4,218.5	14.03	301.650				
2,952.7	2,921.0	2,427.0	2,404.6	8.8	6.0	87.33	-1,657.9	3,888.6	4,238.4	4,224.0	14.42	293.860				
3,000.0	2,967.2	2,454.3	2,430.8	9.0	6.1	87.50	-1,665.4	3,888.4	4,243.9	4,229.2	14.74	287.872				
3,051.2	3,017.3	2,514.2	2,488.5	9.2	6.4	87.86	-1,681.7	3,887.9	4,250.0	4,234.7	15.22	279.248				
3,100.0	3,065.0	2,556.1	2,528.8	9.4	6.6	88.11	-1,692.9	3,887.5	4,255.7	4,240.2	15.60	272.886				
3,149.6	3,113.5	2,596.5	2,567.8	9.6	6.8	88.34	-1,703.5	3,887.4	4,261.8	4,245.8	15.97	266.924				
3,200.0	3,162.8	2,640.0	2,609.9	9.8	7.0	88.59	-1,714.6	3,887.4	4,268.0	4,251.7	16.35	261.013				
3,248.0	3,209.8	2,683.4	2,651.9	10.0	7.2	88.84	-1,725.7	3,887.5	4,274.1	4,257.4	16.73	255.532				
3,300.0	3,260.6	2,727.5	2,694.4	10.2	7.4	89.09	-1,736.9	3,887.6	4,280.8	4,263.7	17.12	250.039				
3,346.4	3,306.1	2,763.1	2,729.0	10.5	7.5	89.29	-1,745.8	3,887.8	4,286.9	4,269.4	17.46	245.533				
3,400.0	3,358.5	2,806.0	2,770.5	10.7	7.7	89.53	-1,756.4	3,888.3	4,294.1	4,276.2	17.86	240.473				
3,444.9	3,402.3	2,843.6	2,806.9	10.9	7.9	89.73	-1,765.7	3,888.6	4,300.3	4,282.1	18.21	236.191				
3,500.0	3,456.3	2,891.5	2,853.2	11.1	8.1	90.01	-1,778.1	3,888.8	4,308.0	4,289.4	18.64	231.081				
3,543.3	3,498.6	2,938.5	2,898.5	11.3	8.3	90.28	-1,790.6	3,888.8	4,314.1	4,295.1	19.03	226.725				
3,600.0	3,554.1	3,003.6	2,961.3	11.5	8.6	90.65	-1,807.6	3,888.7	4,322.1	4,302.6	19.55	221.130				
3,641.7	3,594.9	3,046.8	3,003.1	11.7	8.8	90.89	-1,818.6	3,888.7	4,328.0	4,308.1	19.90	217.517				
3,700.0	3,651.9	3,104.4	3,059.0	12.0	9.1	91.20	-1,832.7	3,888.9	4,336.2	4,315.9	20.38	212.808				
3,740.1	3,691.2	3,138.1	3,091.6	12.2	9.3	91.38	-1,840.9	3,889.2	4,342.0	4,321.3	20.68	209.947				
3,800.0	3,749.7	3,190.4	3,142.4	12.4	9.5	91.66	-1,853.5	3,889.6	4,350.7	4,329.6	21.14	205.766				
3,838.6	3,787.4	3,253.4	3,203.6	12.6	9.8	92.00	-1,868.7	3,889.8	4,356.3	4,334.8	21.56	202.081				
3,900.0	3,847.5	3,329.7	3,277.7	12.9	10.1	92.41	-1,886.7	3,889.8	4,365.0	4,342.8	22.11	197.407				
3,937.0	3,883.7	3,370.6	3,317.6	13.0	10.3	92.61	-1,895.8	3,890.1	4,370.2	4,347.7	22.42	194.888				
4,000.0	3,945.3	3,411.7	3,357.7	13.3	10.5	92.82	-1,904.7	3,890.6	4,379.1	4,356.3	22.85	191.687				
4,035.4	3,980.0	3,433.5	3,378.9	13.5	10.6	92.93	-1,909.4	3,890.9	4,384.4	4,361.3	23.08	189.989				
4,060.0	4,004.0	3,448.5	3,393.6	13.6	10.6	93.00	-1,912.7	3,891.2	4,388.1	4,364.8	23.24	188.835				
4,100.0	4,043.2	3,470.0	3,414.6	13.7	10.7	93.23	-1,917.4	3,891.6	4,394.2	4,370.7	23.46	187.310				
4,133.8	4,076.5	3,497.3	3,441.2	13.8	10.9	93.47	-1,923.5	3,892.0	4,399.4	4,375.8	23.66	185.937				
4,200.0	4,141.6	3,543.8	3,486.4	14.0	11.1	93.89	-1,934.4	3,892.7	4,409.9	4,385.8	24.03	183.533				
4,232.3	4,173.5	3,673.3	3,612.0	14.1	11.7	94.59	-1,966.0	3,892.3	4,414.8	4,390.2	24.61	179.361				
4,300.0	4,240.6	3,731.9	3,668.8	14.3	12.0	95.05	-1,980.6	3,891.0	4,424.3	4,399.2	25.03	176.782				
4,330.7	4,271.1	3,755.0	3,691.1	14.4	12.1	95.24	-1,986.3	3,890.5	4,428.5	4,403.4	25.19	175.824				
4,400.0	4,340.0	3,806.8	3,741.2	14.5	12.3	95.65	-1,999.3	3,889.5	4,438.3	4,412.8	25.55	173.710				
4,429.1	4,369.0	3,827.5	3,761.2	14.6	12.4	95.81	-2,004.5	3,889.1	4,442.5	4,416.8	25.69	172.948				
4,500.0	4,439.7	3,888.8	3,820.6	14.8	12.7	96.24	-2,019.9	3,888.3	4,452.7	4,426.7	26.06	170.880				
4,527.5	4,467.2	3,916.2	3,847.1	14.8	12.8	96.41	-2,026.6	3,888.0	4,456.7	4,430.4	26.20	170.078				
4,600.0	4,539.7	4,055.5	3,982.4	14.9	13.5	97.02	-2,059.7	3,886.3	4,466.5	4,439.7	26.84	166.442				
4,626.0	4,565.6	4,095.5	4,021.4	15.0	13.6	97.20	-2,068.7	3,885.6	4,469.7	4,442.7	27.01	165.469				
4,660.2	4,599.8	4,147.5	4,072.2	15.0	13.9	126.14	-2,080.2	3,884.7	4,473.8	4,451.9	21.86	204.690				
4,700.0	4,639.6	4,206.0	4,129.3	15.0	14.1	126.27	-2,092.5	3,883.9	4,478.3	4,456.2	22.12	202.444				
4,724.4	4,664.0	4,239.2	4,161.8	15.1	14.3	126.34	-2,099.2	3,883.5	4,481.1	4,458.8	22.28	201.133				
4,800.0	4,739.6	4,325.4	4,246.5	15.2	14.6	126.52	-2,115.7	3,882.8	4,489.3	4,466.6	22.71	197.701				
4,822.8	4,762.5	4,351.8	4,272.4	15.2	14.7	126.57	-2,120.6	3,882.7	4,491.8	4,468.9	22.84	196.688				
4,900.0	4,839.6	4,439.8	4,359.0	15.3	15.0	126.73	-2,136.2	3,882.6	4,500.0	4,476.7	23.27	193.381				
4,921.2	4,860.9	4,462.9	4,381.8	15.4	15.1	126.77	-2,140.2	3,882.6	4,502.2	4,478.8	23.39	192.523				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 655-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.0	4,939.6	4,601.7	4,518.8	15.5	15.6	127.00	-2,162.5	3,883.1	4,510.2	4,486.2	23.97	188.188		
5,019.7	4,959.3	4,641.7	4,558.4	15.5	15.7	127.05	-2,168.0	3,883.4	4,511.9	4,487.8	24.12	187.062		
5,100.0	5,039.6	4,886.3	4,801.4	15.6	16.4	127.32	-2,195.0	3,883.3	4,516.9	4,492.0	24.91	181.344		
5,118.1	5,057.7	4,907.9	4,822.9	15.7	16.5	127.35	-2,196.9	3,883.2	4,517.8	4,492.8	25.00	180.747		
5,200.0	5,139.6	5,017.9	4,932.5	15.8	16.7	127.44	-2,206.1	3,882.8	4,521.7	4,496.3	25.41	177.928		
5,216.5	5,156.2	5,057.3	4,971.9	15.8	16.8	127.47	-2,209.1	3,882.6	4,522.4	4,496.9	25.53	177.114		
5,300.0	5,239.6	5,170.7	5,085.0	15.9	17.1	127.55	-2,216.3	3,882.0	4,525.3	4,499.4	25.94	174.425		
5,314.9	5,254.6	5,190.5	5,104.8	16.0	17.1	127.56	-2,217.4	3,881.9	4,525.8	4,499.8	26.02	173.965		
5,400.0	5,339.6	5,305.1	5,219.2	16.1	17.3	127.62	-2,223.0	3,881.6	4,528.1	4,501.7	26.42	171.406		
5,413.4	5,353.0	5,320.2	5,234.4	16.1	17.4	127.63	-2,223.6	3,881.6	4,528.4	4,502.0	26.47	171.050		
5,500.0	5,439.6	5,506.4	5,420.5	16.3	17.7	127.68	-2,228.1	3,881.0	4,529.3	4,502.4	26.98	167.875		
5,511.8	5,451.4	5,514.8	5,428.9	16.3	17.7	127.68	-2,228.2	3,880.9	4,529.4	4,502.3	27.02	167.640		
5,600.0	5,539.6	5,588.5	5,502.5	16.4	17.8	127.69	-2,229.4	3,880.5	4,529.9	4,502.5	27.32	165.804		
5,610.2	5,549.9	5,599.9	5,514.0	16.4	17.8	127.69	-2,229.6	3,880.5	4,529.9	4,502.6	27.36	165.563		
5,700.0	5,639.6	5,701.0	5,615.0	16.6	18.0	127.70	-2,230.5	3,880.4	4,530.4	4,502.7	27.71	163.474		
5,708.6	5,648.3	5,710.7	5,624.8	16.6	18.0	127.71	-2,230.6	3,880.4	4,530.4	4,502.7	27.75	163.274		
5,800.0	5,739.6	5,818.3	5,732.4	16.7	18.1	127.71	-2,231.2	3,880.2	4,530.6	4,502.5	28.11	161.166		
5,807.1	5,746.7	5,826.9	5,740.9	16.8	18.1	127.71	-2,231.2	3,880.1	4,530.6	4,502.4	28.14	161.003		
5,824.8	5,764.5	5,844.0	5,758.0	16.8	18.2	127.71	-2,231.3	3,880.1	4,530.6	4,502.3	28.20	160.634		
5,900.0	5,839.6	5,881.0	5,795.0	16.9	18.2	127.71	-2,231.4	3,880.2	4,530.8	4,502.4	28.42	159.415		
5,905.5	5,845.1	5,883.6	5,797.6	16.9	18.2	127.71	-2,231.3	3,880.2	4,530.9	4,502.4	28.44	159.329		
6,000.0	5,939.6	5,938.0	5,852.0	17.1	18.3	127.70	-2,231.0	3,881.5	4,532.2	4,503.5	28.72	157.792		
6,003.9	5,943.6	5,938.0	5,852.0	17.1	18.3	127.70	-2,231.0	3,881.5	4,532.3	4,503.6	28.73	157.749		
6,059.2	5,998.8	5,938.0	5,852.0	17.2	18.3	127.70	-2,231.0	3,881.5	4,533.7	4,504.8	28.85	157.166		
6,100.0	6,039.6	5,938.0	5,852.0	17.2	18.3	-142.18	-2,231.0	3,881.5	4,536.0	4,502.6	33.46	135.562		
6,102.3	6,042.0	5,938.0	5,852.0	17.2	18.3	-142.17	-2,231.0	3,881.5	4,536.2	4,502.8	33.46	135.585		
6,150.0	6,089.4	5,938.0	5,852.0	17.3	18.3	-141.89	-2,231.0	3,881.5	4,541.9	4,508.6	33.31	136.346		
6,200.0	6,138.7	5,938.0	5,852.0	17.3	18.3	-141.43	-2,231.0	3,881.5	4,551.0	4,518.0	33.03	137.791		
6,200.8	6,139.5	5,938.0	5,852.0	17.3	18.3	-141.42	-2,231.0	3,881.5	4,551.2	4,518.2	33.02	137.819		
6,250.0	6,187.4	5,938.0	5,852.0	17.3	18.3	-140.79	-2,231.0	3,881.5	4,563.3	4,530.7	32.62	139.895		
6,299.2	6,234.4	5,978.5	5,892.4	17.4	18.3	-140.13	-2,230.1	3,884.7	4,577.3	4,545.1	32.14	142.431		
6,300.0	6,235.1	5,978.6	5,892.5	17.4	18.3	-140.12	-2,230.1	3,884.7	4,577.5	4,545.4	32.13	142.479		
6,350.0	6,281.7	5,985.1	5,898.9	17.4	18.3	-139.15	-2,229.8	3,885.5	4,595.5	4,564.0	31.51	145.826		
6,397.6	6,324.8	5,991.0	5,904.7	17.3	18.3	-138.03	-2,229.6	3,886.3	4,615.3	4,584.4	30.86	149.571		
6,400.0	6,326.9	5,991.3	5,905.0	17.3	18.3	-137.96	-2,229.6	3,886.3	4,616.3	4,585.5	30.82	149.769		
6,450.0	6,370.5	6,033.0	5,946.0	17.3	18.4	-136.81	-2,227.4	3,894.0	4,640.8	4,610.7	30.11	154.152		
6,496.0	6,409.1	6,033.0	5,946.0	17.3	18.4	-135.27	-2,227.4	3,894.0	4,664.5	4,635.1	29.41	158.622		
6,500.0	6,412.3	6,033.0	5,946.0	17.3	18.4	-135.13	-2,227.4	3,894.0	4,666.7	4,637.3	29.35	159.016		
6,550.0	6,452.1	6,033.0	5,946.0	17.3	18.4	-133.16	-2,227.4	3,894.0	4,694.9	4,666.3	28.62	164.046		
6,594.5	6,485.6	6,033.0	5,946.0	17.3	18.4	-131.14	-2,227.4	3,894.0	4,722.0	4,694.0	28.04	168.386		
6,600.0	6,489.7	6,033.0	5,946.0	17.3	18.4	-130.87	-2,227.4	3,894.0	4,725.5	4,697.5	27.98	168.905		
6,650.0	6,524.9	6,033.0	5,946.0	17.2	18.4	-128.21	-2,227.4	3,894.0	4,758.1	4,730.6	27.48	173.133		
6,692.9	6,553.0	6,033.0	5,946.0	17.2	18.4	-125.60	-2,227.4	3,894.0	4,787.6	4,760.4	27.23	175.840		
6,700.0	6,557.5	6,033.0	5,946.0	17.2	18.4	-125.14	-2,227.4	3,894.0	4,792.7	4,765.5	27.20	176.194		
6,750.0	6,587.4	6,033.0	5,946.0	17.2	18.4	-121.63	-2,227.4	3,894.0	4,828.9	4,801.7	27.19	177.582		
6,791.3	6,609.9	6,033.0	5,946.0	17.2	18.4	-118.38	-2,227.4	3,894.0	4,859.9	4,832.5	27.42	177.231		
6,800.0	6,614.4	6,033.0	5,946.0	17.2	18.4	-117.65	-2,227.4	3,894.0	4,866.5	4,839.0	27.50	176.994		
6,850.0	6,638.4	6,033.0	5,946.0	17.2	18.4	-113.17	-2,227.4	3,894.0	4,905.5	4,877.3	28.11	174.489		
6,889.7	6,655.3	6,033.0	5,946.0	17.4	18.4	-109.25	-2,227.4	3,894.0	4,937.2	4,908.3	28.81	171.377		
6,900.0	6,659.4	6,033.0	5,946.0	17.5	18.4	-108.19	-2,227.4	3,894.0	4,945.4	4,916.4	29.00	170.530		
6,950.0	6,677.1	6,033.0	5,946.0	18.0	18.4	-102.76	-2,227.4	3,894.0	4,986.2	4,956.1	30.06	165.872		
6,988.2	6,688.4	6,033.0	5,946.0	18.5	18.4	-98.36	-2,227.4	3,894.0	5,017.7	4,986.8	30.91	162.325		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 655-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,000.0	6,691.5	6,033.0	5,946.0	18.7	18.4	-96.95	-2,227.4	3,894.0	5,027.6	4,996.4	31.16	161.343		
7,050.0	6,702.5	6,033.0	5,946.0	19.5	18.4	-90.89	-2,227.4	3,894.0	5,069.3	5,037.2	32.16	157.642		
7,086.6	6,708.4	6,033.0	5,946.0	20.1	18.4	-86.39	-2,227.4	3,894.0	5,100.0	5,067.3	32.76	155.702		
7,100.0	6,710.1	6,033.0	5,946.0	20.4	18.4	-84.74	-2,227.4	3,894.0	5,111.3	5,078.4	32.93	155.223		
7,150.0	6,714.2	6,033.0	5,946.0	21.3	18.4	-78.65	-2,227.4	3,894.0	5,153.2	5,119.8	33.40	154.269		
7,185.0	6,715.0	6,033.0	5,946.0	21.9	18.4	-74.52	-2,227.4	3,894.0	5,182.4	5,148.9	33.55	154.451		
7,185.6	6,715.0	6,033.0	5,946.0	21.9	18.4	-74.46	-2,227.4	3,894.0	5,182.9	5,149.3	33.55	154.459		
7,200.0	6,715.0	6,033.0	5,946.0	22.2	18.4	-74.46	-2,227.4	3,894.0	5,194.9	5,161.1	33.82	153.593		
7,283.4	6,714.8	6,033.0	5,946.0	23.9	18.4	-74.46	-2,227.4	3,894.0	5,264.6	5,229.2	35.44	148.535		
7,300.0	6,714.8	6,033.0	5,946.0	24.2	18.4	-74.46	-2,227.4	3,894.0	5,278.5	5,242.7	35.77	147.588		
7,381.9	6,714.6	6,033.0	5,946.0	26.0	18.4	-74.46	-2,227.4	3,894.0	5,347.4	5,309.9	37.47	142.720		
7,400.0	6,714.6	6,033.0	5,946.0	26.4	18.4	-74.46	-2,227.4	3,894.0	5,362.7	5,324.8	37.84	141.703		
7,480.3	6,714.4	6,033.0	5,946.0	28.2	18.4	-74.46	-2,227.4	3,894.0	5,430.7	5,391.1	39.60	137.121		
7,500.0	6,714.4	6,033.0	5,946.0	28.7	18.4	-74.46	-2,227.4	3,894.0	5,447.4	5,407.4	40.04	136.060		
7,578.7	6,714.2	6,033.0	5,946.0	30.5	18.4	-74.46	-2,227.4	3,894.0	5,514.4	5,472.6	41.83	131.825		
7,600.0	6,714.2	6,033.0	5,946.0	31.0	18.4	-74.46	-2,227.4	3,894.0	5,532.6	5,490.3	42.32	130.744		
7,677.1	6,714.0	6,033.0	5,946.0	32.9	18.4	-74.46	-2,227.4	3,894.0	5,598.7	5,554.6	44.13	126.873		
7,700.0	6,714.0	6,033.0	5,946.0	33.4	18.4	-74.46	-2,227.4	3,894.0	5,618.3	5,573.6	44.66	125.789		
7,775.6	6,713.9	6,033.0	5,946.0	35.3	18.4	-74.46	-2,227.4	3,894.0	5,683.4	5,636.9	46.48	122.275		
7,800.0	6,713.8	6,033.0	5,946.0	35.9	18.4	-74.46	-2,227.4	3,894.0	5,704.5	5,657.4	47.07	121.198		
7,874.0	6,713.7	6,033.0	5,946.0	37.8	18.4	-74.46	-2,227.4	3,894.0	5,768.5	5,719.7	48.88	118.020		
7,900.0	6,713.6	6,033.0	5,946.0	38.4	18.4	-74.46	-2,227.4	3,894.0	5,791.1	5,741.6	49.51	116.960		
7,972.4	6,713.5	6,033.0	5,946.0	40.3	18.4	-74.46	-2,227.4	3,894.0	5,854.1	5,802.8	51.31	114.090		
8,000.0	6,713.4	6,033.0	5,946.0	41.0	18.4	-74.46	-2,227.4	3,894.0	5,878.1	5,826.1	52.00	113.051		
8,070.8	6,713.3	6,033.0	5,946.0	42.8	18.4	-74.46	-2,227.4	3,894.0	5,940.1	5,886.3	53.77	110.462		
8,100.0	6,713.2	6,033.0	5,946.0	43.6	18.4	-74.46	-2,227.4	3,894.0	5,965.6	5,911.1	54.51	109.447		
8,169.3	6,713.1	6,033.0	5,946.0	45.4	18.4	-74.46	-2,227.4	3,894.0	6,026.4	5,970.1	56.26	107.112		
8,200.0	6,713.0	6,033.0	5,946.0	46.2	18.4	-74.46	-2,227.4	3,894.0	6,053.4	5,996.4	57.04	106.123		
8,267.7	6,712.9	6,033.0	5,946.0	48.0	18.4	-74.46	-2,227.4	3,894.0	6,113.1	6,054.3	58.77	104.015		
8,300.0	6,712.8	6,033.0	5,946.0	48.8	18.4	-74.46	-2,227.4	3,894.0	6,141.6	6,082.0	59.60	103.053		
8,366.1	6,712.7	6,033.0	5,946.0	50.6	18.4	-74.46	-2,227.4	3,894.0	6,200.1	6,138.9	61.30	101.148		
8,400.0	6,712.6	6,033.0	5,946.0	51.5	18.4	-74.46	-2,227.4	3,894.0	6,230.2	6,168.0	62.17	100.214		
8,464.5	6,712.5	6,033.0	5,946.0	53.2	18.4	-74.46	-2,227.4	3,894.0	6,287.5	6,223.7	63.84	98.491		
8,500.0	6,712.4	6,033.0	5,946.0	54.1	18.4	-74.46	-2,227.4	3,894.0	6,319.1	6,254.3	64.76	97.584		
8,563.0	6,712.3	6,033.0	5,946.0	55.8	18.4	-74.46	-2,227.4	3,894.0	6,375.2	6,308.9	66.39	96.024		
8,600.0	6,712.3	6,033.0	5,946.0	56.8	18.4	-74.46	-2,227.4	3,894.0	6,408.3	6,341.0	67.35	95.143		
8,661.4	6,712.1	6,033.0	5,946.0	58.5	18.4	-74.46	-2,227.4	3,894.0	6,463.3	6,394.3	68.96	93.729		
8,700.0	6,712.1	6,033.0	5,946.0	59.5	18.4	-74.46	-2,227.4	3,894.0	6,497.9	6,427.9	69.96	92.874		
8,759.8	6,711.9	6,033.0	5,946.0	61.1	18.4	-74.46	-2,227.4	3,894.0	6,551.6	6,480.1	71.53	91.590		
8,800.0	6,711.9	6,033.0	5,946.0	62.2	18.4	-74.46	-2,227.4	3,894.0	6,587.7	6,515.1	72.58	90.760		
8,858.2	6,711.8	6,033.0	5,946.0	63.8	18.4	-74.46	-2,227.4	3,894.0	6,640.2	6,566.1	74.11	89.594		
8,900.0	6,711.7	6,033.0	5,946.0	64.9	18.4	-74.47	-2,227.4	3,894.0	6,677.9	6,602.6	75.21	88.788		
8,956.7	6,711.6	6,033.0	5,946.0	66.5	18.4	-74.47	-2,227.4	3,894.0	6,729.1	6,652.4	76.70	87.728		
9,000.0	6,711.5	6,033.0	5,946.0	67.6	18.4	-74.47	-2,227.4	3,894.0	6,768.3	6,690.4	77.85	86.945		
9,055.1	6,711.4	6,033.0	5,946.0	69.1	18.4	-74.47	-2,227.4	3,894.0	6,818.2	6,738.9	79.30	85.979		
9,100.0	6,711.3	6,033.0	5,946.0	70.4	18.4	-74.47	-2,227.4	3,894.0	6,858.9	6,778.5	80.49	85.219		
9,153.5	6,711.2	6,033.0	5,946.0	71.8	18.4	-74.47	-2,227.4	3,894.0	6,907.6	6,825.7	81.90	84.339		
9,200.0	6,711.1	6,033.0	5,946.0	73.1	18.4	-74.47	-2,227.4	3,894.0	6,949.9	6,866.7	83.13	83.600		
9,251.9	6,711.0	6,033.0	5,946.0	74.5	18.4	-74.47	-2,227.4	3,894.0	6,997.2	6,912.7	84.51	82.798		
9,300.0	6,710.9	6,033.0	5,946.0	75.8	18.4	-74.47	-2,227.4	3,894.0	7,041.1	6,955.3	85.78	82.079		
9,350.4	6,710.8	6,033.0	5,946.0	77.2	18.4	-74.47	-2,227.4	3,894.0	7,087.1	7,000.0	87.12	81.347		
9,400.0	6,710.7	5,989.1	5,902.9	78.6	18.3	-73.65	-2,229.7	3,886.0	7,130.8	7,042.7	88.05	80.989		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 655-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,710.6	5,988.6	5,902.3	79.9	18.3	-73.64	-2,229.7	3,885.9	7,175.4	7,086.1	89.33	80.321	
9,500.0	6,710.5	5,988.0	5,901.8	81.3	18.3	-73.63	-2,229.7	3,885.9	7,222.3	7,131.6	90.69	79.641	
9,547.2	6,710.4	5,987.5	5,901.3	82.6	18.3	-73.62	-2,229.8	3,885.8	7,265.6	7,173.7	91.93	79.031	
9,600.0	6,710.3	5,986.9	5,900.7	84.1	18.3	-73.61	-2,229.8	3,885.7	7,314.1	7,220.8	93.33	78.369	
9,645.6	6,710.2	5,986.5	5,900.3	85.3	18.3	-73.61	-2,229.8	3,885.7	7,356.1	7,261.5	94.54	77.812	
9,700.0	6,710.1	5,985.9	5,899.7	86.8	18.3	-73.60	-2,229.8	3,885.6	7,406.1	7,310.1	95.97	77.167	
9,744.1	6,710.0	5,985.5	5,899.3	88.1	18.3	-73.59	-2,229.8	3,885.5	7,446.7	7,349.5	97.14	76.658	
9,800.0	6,709.9	5,984.9	5,898.7	89.6	18.3	-73.58	-2,229.9	3,885.5	7,498.3	7,399.6	98.62	76.029	
9,842.5	6,709.9	5,984.5	5,898.3	90.8	18.3	-73.57	-2,229.9	3,885.4	7,537.5	7,437.8	99.75	75.564	
9,900.0	6,709.7	5,983.9	5,897.8	92.4	18.3	-73.56	-2,229.9	3,885.3	7,590.7	7,489.4	101.27	74.951	
9,940.9	6,709.7	5,983.5	5,897.4	93.5	18.3	-73.55	-2,229.9	3,885.3	7,628.5	7,526.2	102.36	74.526	
10,000.0	6,709.6	5,983.0	5,896.8	95.1	18.3	-73.54	-2,229.9	3,885.2	7,683.2	7,579.3	103.93	73.928	
10,039.3	6,709.5	5,982.6	5,896.5	96.2	18.3	-73.53	-2,229.9	3,885.2	7,719.7	7,614.7	104.97	73.540	
10,100.0	6,709.4	5,938.0	5,852.0	97.9	18.3	-72.70	-2,231.0	3,881.5	7,777.7	7,671.6	106.09	73.312	
10,137.8	6,709.3	5,938.0	5,852.0	98.9	18.3	-72.70	-2,231.0	3,881.5	7,812.8	7,705.7	107.09	72.952	
10,200.0	6,709.2	5,938.0	5,852.0	100.7	18.3	-72.70	-2,231.0	3,881.5	7,870.6	7,761.8	108.75	72.375	
10,236.2	6,709.1	5,938.0	5,852.0	101.7	18.3	-72.70	-2,231.0	3,881.5	7,904.2	7,794.5	109.71	72.047	
10,300.0	6,709.0	5,938.0	5,852.0	103.4	18.3	-72.70	-2,231.0	3,881.5	7,963.6	7,852.2	111.41	71.483	
10,334.6	6,708.9	5,938.0	5,852.0	104.4	18.3	-72.70	-2,231.0	3,881.5	7,995.9	7,883.5	112.33	71.184	
10,400.0	6,708.8	5,938.0	5,852.0	106.2	18.3	-72.70	-2,231.0	3,881.5	8,056.8	7,942.8	114.07	70.633	
10,433.0	6,708.7	5,938.0	5,852.0	107.1	18.3	-72.70	-2,231.0	3,881.5	8,087.7	7,972.7	114.95	70.361	
10,500.0	6,708.6	5,938.0	5,852.0	109.0	18.3	-72.70	-2,231.0	3,881.5	8,150.2	8,033.5	116.73	69.822	
10,531.5	6,708.5	5,938.0	5,852.0	109.9	18.3	-72.70	-2,231.0	3,881.5	8,179.6	8,062.0	117.57	69.574	
10,600.0	6,708.4	5,938.0	5,852.0	111.8	18.3	-72.70	-2,231.0	3,881.5	8,243.7	8,124.3	119.39	69.048	
10,629.9	6,708.4	5,938.0	5,852.0	112.6	18.3	-72.70	-2,231.0	3,881.5	8,271.7	8,151.5	120.19	68.823	
10,700.0	6,708.2	5,938.0	5,852.0	114.6	18.3	-72.70	-2,231.0	3,881.5	8,337.4	8,215.3	122.06	68.308	
10,728.3	6,708.2	5,938.0	5,852.0	115.3	18.3	-72.70	-2,231.0	3,881.5	8,363.9	8,241.1	122.81	68.104	
10,800.0	6,708.0	5,938.0	5,852.0	117.3	18.3	-72.70	-2,231.0	3,881.5	8,431.2	8,306.5	124.72	67.600	
10,826.7	6,708.0	5,938.0	5,852.0	118.1	18.3	-72.70	-2,231.0	3,881.5	8,456.3	8,330.9	125.44	67.416	
10,900.0	6,707.8	5,938.0	5,852.0	120.1	18.3	-72.70	-2,231.0	3,881.5	8,525.2	8,397.8	127.39	66.922	
10,925.2	6,707.8	5,938.0	5,852.0	120.8	18.3	-72.70	-2,231.0	3,881.5	8,548.8	8,420.8	128.06	66.756	
11,000.0	6,707.6	5,938.0	5,852.0	122.9	18.3	-72.70	-2,231.0	3,881.5	8,619.2	8,489.2	130.06	66.273	
11,023.6	6,707.6	5,938.0	5,852.0	123.6	18.3	-72.70	-2,231.0	3,881.5	8,641.5	8,510.8	130.69	66.123	
11,100.0	6,707.5	5,938.0	5,852.0	125.7	18.3	-72.70	-2,231.0	3,881.5	8,713.5	8,580.7	132.73	65.650	
11,122.0	6,707.4	5,938.0	5,852.0	126.3	18.3	-72.70	-2,231.0	3,881.5	8,734.2	8,600.9	133.31	65.516	
11,200.0	6,707.3	5,938.0	5,852.0	128.5	18.3	-72.70	-2,231.0	3,881.5	8,807.8	8,672.4	135.40	65.052	
11,220.4	6,707.2	5,938.0	5,852.0	129.0	18.3	-72.70	-2,231.0	3,881.5	8,827.1	8,691.2	135.94	64.933	
11,300.0	6,707.1	5,938.0	5,852.0	131.3	18.3	-72.70	-2,231.0	3,881.5	8,902.3	8,764.2	138.07	64.478	
11,318.9	6,707.0	5,938.0	5,852.0	131.8	18.3	-72.70	-2,231.0	3,881.5	8,920.1	8,781.6	138.57	64.372	
11,400.0	6,706.9	5,938.0	5,852.0	134.0	18.3	-72.70	-2,231.0	3,881.5	8,996.9	8,856.2	140.74	63.926	
11,417.3	6,706.9	5,938.0	5,852.0	134.5	18.3	-72.70	-2,231.0	3,881.5	9,013.3	8,872.1	141.20	63.832	
11,500.0	6,706.7	5,938.0	5,852.0	136.8	18.3	-72.70	-2,231.0	3,881.5	9,091.6	8,948.2	143.41	63.395	
11,515.7	6,706.7	5,938.0	5,852.0	137.3	18.3	-72.70	-2,231.0	3,881.5	9,106.5	8,962.7	143.83	63.313	
11,600.0	6,706.5	5,938.0	5,852.0	139.6	18.3	-72.70	-2,231.0	3,881.5	9,186.4	9,040.3	146.09	62.884	
11,614.1	6,706.5	5,938.0	5,852.0	140.0	18.3	-72.70	-2,231.0	3,881.5	9,199.9	9,053.4	146.46	62.813	
11,700.0	6,706.3	5,938.0	5,852.0	142.4	18.3	-72.70	-2,231.0	3,881.5	9,281.4	9,132.6	148.76	62.391	
11,712.6	6,706.3	5,938.0	5,852.0	142.8	18.3	-72.70	-2,231.0	3,881.5	9,293.3	9,144.2	149.10	62.331	
11,800.0	6,706.1	5,938.0	5,852.0	145.2	18.3	-72.70	-2,231.0	3,881.5	9,376.4	9,225.0	151.44	61.917	
11,811.0	6,706.1	5,938.0	5,852.0	145.5	18.3	-72.70	-2,231.0	3,881.5	9,386.9	9,235.1	151.73	61.866	
11,900.0	6,705.9	5,938.0	5,852.0	148.0	18.3	-72.70	-2,231.0	3,881.5	9,471.5	9,317.4	154.11	61.459	
11,909.4	6,705.9	5,938.0	5,852.0	148.3	18.3	-72.70	-2,231.0	3,881.5	9,480.5	9,326.1	154.36	61.417	
12,000.0	6,705.8	5,938.0	5,852.0	150.8	18.3	-72.70	-2,231.0	3,881.5	9,566.8	9,410.0	156.79	61.018	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 655-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,705.7	5,938.0	5,852.0	151.0	18.3	-72.70	-2,231.0	3,881.5	9,574.3	9,417.3	157.00	60.984	
12,100.0	6,705.6	5,938.0	5,852.0	153.6	18.3	-72.70	-2,231.0	3,881.5	9,662.1	9,502.6	159.46	60.591	
12,106.3	6,705.6	5,938.0	5,852.0	153.8	18.3	-72.70	-2,231.0	3,881.5	9,668.1	9,508.5	159.63	60.565	
12,200.0	6,705.4	5,938.0	5,852.0	156.4	18.3	-72.70	-2,231.0	3,881.5	9,757.5	9,595.4	162.14	60.179	
12,204.7	6,705.4	5,938.0	5,852.0	156.5	18.3	-72.70	-2,231.0	3,881.5	9,762.0	9,599.8	162.27	60.160	
12,300.0	6,705.2	5,938.0	5,852.0	159.2	18.3	-72.70	-2,231.0	3,881.5	9,853.1	9,688.2	164.82	59.781	
12,303.1	6,705.2	5,938.0	5,852.0	159.3	18.3	-72.70	-2,231.0	3,881.5	9,856.0	9,691.1	164.90	59.769	
12,400.0	6,705.0	5,938.0	5,852.0	162.0	18.3	-72.70	-2,231.0	3,881.5	9,948.7	9,781.2	167.50	59.396	
12,401.5	6,705.0	5,938.0	5,852.0	162.0	18.3	-72.70	-2,231.0	3,881.5	9,950.1	9,782.6	167.54	59.390 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 645-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	109.94	-1,404.5	3,871.1	4,118.0				
98.4	98.4	91.4	91.4	0.1	0.1	109.94	-1,404.5	3,871.1	4,118.0	4,117.8	0.18	N/A	
100.0	100.0	93.0	93.0	0.1	0.1	109.94	-1,404.5	3,871.1	4,118.0	4,117.8	0.18	N/A	
196.8	196.8	189.8	189.8	0.3	0.2	109.94	-1,404.5	3,871.1	4,118.0	4,117.5	0.49	8,402.037	
200.0	200.0	193.0	193.0	0.3	0.2	109.94	-1,404.5	3,871.1	4,118.0	4,117.5	0.50	8,234.397	
295.3	295.3	288.3	288.3	0.5	0.3	109.94	-1,404.5	3,871.1	4,118.0	4,117.2	0.80	5,135.332	
300.0	300.0	293.0	293.0	0.5	0.3	109.94	-1,404.5	3,871.1	4,118.0	4,117.2	0.82	5,041.239	
393.7	393.7	386.7	386.7	0.8	0.4	109.94	-1,404.5	3,871.1	4,118.0	4,116.9	1.11	3,697.678	
400.0	400.0	393.0	393.0	0.8	0.4	109.94	-1,404.5	3,871.1	4,118.0	4,116.8	1.13	3,632.585	
492.1	492.1	485.1	485.1	1.0	0.4	109.94	-1,404.5	3,871.1	4,118.0	4,116.5	1.43	2,888.916	
500.0	500.0	493.0	493.0	1.0	0.5	109.94	-1,404.5	3,871.1	4,118.0	4,116.5	1.45	2,839.230	
590.5	590.5	583.5	583.5	1.2	0.5	109.94	-1,404.5	3,871.1	4,118.0	4,116.2	1.74	2,370.448	
600.0	600.0	593.0	593.0	1.2	0.5	109.94	-1,404.5	3,871.1	4,118.0	4,116.2	1.77	2,330.294	
638.2	638.2	631.2	631.2	1.3	0.6	109.94	-1,404.5	3,871.1	4,118.0	4,116.1	1.89	2,180.848	
689.0	689.0	672.4	672.4	1.4	0.6	109.94	-1,404.6	3,871.1	4,118.0	4,115.9	2.07	1,990.211	
700.0	700.0	680.5	680.5	1.4	0.7	109.94	-1,404.7	3,871.1	4,118.0	4,115.9	2.11	1,951.619	
787.4	787.4	754.0	754.0	1.6	0.8	109.96	-1,406.0	3,871.0	4,118.5	4,116.1	2.45	1,678.758	
800.0	800.0	767.1	767.1	1.7	0.8	109.96	-1,406.2	3,871.0	4,118.6	4,116.1	2.51	1,641.957	
885.8	885.8	853.6	853.6	1.9	1.0	109.98	-1,407.3	3,871.2	4,119.1	4,116.2	2.88	1,431.357	
900.0	900.0	867.2	867.2	1.9	1.0	109.98	-1,407.4	3,871.2	4,119.2	4,116.3	2.94	1,402.234	
984.2	984.2	1,018.2	1,018.2	2.1	1.4	109.99	-1,408.2	3,870.9	4,119.3	4,115.9	3.44	1,198.062	
1,000.0	1,000.0	1,032.3	1,032.3	2.1	1.4	109.99	-1,408.1	3,870.8	4,119.1	4,115.6	3.50	1,175.602	
1,082.7	1,082.7	1,108.4	1,108.3	2.3	1.5	109.99	-1,407.7	3,870.3	4,118.4	4,114.6	3.85	1,068.981	
1,100.0	1,100.0	1,127.4	1,127.4	2.3	1.6	109.99	-1,407.5	3,870.2	4,118.3	4,114.4	3.93	1,047.183	
1,181.1	1,181.1	1,216.3	1,216.3	2.5	1.8	81.28	-1,406.7	3,869.6	4,117.4	4,113.1	4.31	956.330	
1,200.0	1,200.0	1,236.8	1,236.7	2.6	1.8	81.30	-1,406.5	3,869.4	4,117.1	4,112.7	4.39	937.496	
1,279.5	1,279.4	1,316.0	1,315.9	2.7	2.0	81.37	-1,405.6	3,868.8	4,115.6	4,110.9	4.74	868.968	
1,300.0	1,299.8	1,333.3	1,333.2	2.8	2.0	81.39	-1,405.5	3,868.7	4,115.2	4,110.4	4.82	854.338	
1,377.9	1,377.5	1,399.9	1,399.9	3.0	2.2	81.50	-1,404.9	3,868.3	4,113.6	4,108.4	5.13	801.966	
1,400.0	1,399.5	1,419.9	1,419.9	3.0	2.2	81.53	-1,404.8	3,868.2	4,113.1	4,107.9	5.22	788.119	
1,476.4	1,475.3	1,489.1	1,489.1	3.2	2.3	81.68	-1,404.6	3,867.8	4,111.3	4,105.8	5.54	742.169	
1,500.0	1,498.7	1,510.8	1,510.8	3.3	2.4	81.73	-1,404.6	3,867.7	4,110.7	4,105.1	5.64	728.713	
1,574.8	1,572.6	1,575.0	1,574.9	3.5	2.5	81.90	-1,404.5	3,867.4	4,108.8	4,102.8	5.97	688.388	
1,600.0	1,597.5	1,601.9	1,601.8	3.5	2.6	81.98	-1,404.5	3,867.4	4,108.1	4,102.0	6.09	674.431	
1,673.2	1,669.4	1,670.0	1,669.9	3.7	2.7	82.20	-1,404.6	3,867.2	4,106.1	4,099.6	6.45	636.695	
1,700.1	1,695.8	1,694.4	1,694.3	3.8	2.8	82.29	-1,404.7	3,867.1	4,105.3	4,098.7	6.58	623.922	
1,771.6	1,765.7	1,764.0	1,763.9	4.1	2.9	82.49	-1,405.0	3,866.9	4,103.1	4,096.2	6.96	589.734	
1,800.0	1,793.4	1,787.3	1,787.2	4.2	2.9	82.56	-1,405.2	3,866.8	4,102.3	4,095.2	7.10	577.806	
1,870.1	1,862.0	1,837.3	1,837.3	4.4	3.1	82.72	-1,406.1	3,866.5	4,100.6	4,093.1	7.45	550.565	
1,900.0	1,891.3	1,859.0	1,858.9	4.5	3.1	82.79	-1,406.7	3,866.4	4,099.9	4,092.3	7.60	539.611	
1,968.5	1,958.3	1,914.1	1,914.0	4.8	3.2	82.97	-1,408.5	3,866.2	4,098.6	4,090.7	7.96	514.624	
2,000.0	1,989.1	1,939.5	1,939.4	4.9	3.3	83.06	-1,409.6	3,866.0	4,098.1	4,090.0	8.13	503.859	
2,066.9	2,054.5	1,984.2	1,984.1	5.1	3.4	83.22	-1,411.6	3,865.8	4,097.3	4,088.8	8.48	483.055	
2,100.0	2,086.9	2,004.6	2,004.4	5.3	3.4	83.29	-1,412.7	3,865.7	4,097.1	4,088.4	8.65	473.567	
2,165.3	2,150.8	2,048.0	2,047.7	5.5	3.5	83.45	-1,415.3	3,865.7	4,096.9	4,087.9	9.00	455.271	
2,166.5	2,152.0	2,048.0	2,047.7	5.5	3.5	83.45	-1,415.3	3,865.7	4,096.9	4,087.9	9.00	455.038 CC	
2,200.0	2,184.7	2,069.6	2,069.2	5.6	3.5	83.53	-1,416.7	3,865.7	4,096.9	4,087.8	9.18	446.218	
2,263.8	2,247.1	2,116.3	2,115.8	5.9	3.7	83.70	-1,419.9	3,865.8	4,097.3	4,087.7	9.54	429.570 ES	
2,300.0	2,282.5	2,144.0	2,143.5	6.0	3.7	83.81	-1,422.0	3,865.9	4,097.6	4,087.9	9.74	420.542	
2,362.2	2,343.3	2,185.5	2,184.8	6.3	3.8	83.97	-1,425.2	3,866.1	4,098.4	4,088.3	10.09	406.217	
2,400.0	2,380.3	2,211.4	2,210.6	6.5	3.9	84.07	-1,427.4	3,866.2	4,099.1	4,088.8	10.30	397.926	
2,460.6	2,439.6	2,238.0	2,237.2	6.7	3.9	84.17	-1,429.6	3,866.4	4,100.4	4,089.8	10.61	386.483	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 645-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,478.1	2,275.6	2,274.6	6.9	4.0	84.32	-1,433.1	3,866.8	4,101.4	4,090.5	10.86	377.660	
2,559.0	2,535.9	2,311.9	2,310.7	7.1	4.1	84.47	-1,436.6	3,867.2	4,103.2	4,092.0	11.19	366.690	
2,600.0	2,575.9	2,333.0	2,331.7	7.3	4.2	84.56	-1,438.8	3,867.5	4,104.7	4,093.3	11.41	359.768	
2,657.5	2,632.2	2,370.7	2,369.2	7.5	4.3	84.71	-1,443.0	3,868.1	4,107.0	4,095.3	11.74	349.756	
2,700.0	2,673.8	2,395.8	2,394.1	7.7	4.3	84.82	-1,446.0	3,868.5	4,109.0	4,097.0	11.98	342.926	
2,755.9	2,728.4	2,428.0	2,426.0	7.9	4.4	84.96	-1,450.0	3,869.1	4,111.9	4,099.6	12.30	334.380	
2,800.0	2,771.6	2,458.1	2,455.9	8.1	4.5	85.09	-1,453.9	3,869.8	4,114.4	4,101.8	12.56	327.569	
2,854.3	2,824.7	2,494.2	2,491.6	8.3	4.6	85.25	-1,458.8	3,870.6	4,117.7	4,104.8	12.88	319.577	
2,900.0	2,869.4	2,525.1	2,522.2	8.5	4.7	85.39	-1,463.2	3,871.3	4,120.7	4,107.5	13.16	313.146	
2,952.7	2,921.0	2,575.8	2,572.3	8.8	4.8	85.62	-1,470.9	3,872.2	4,124.3	4,110.7	13.52	304.989	
3,000.0	2,967.2	2,620.8	2,616.7	9.0	4.9	85.84	-1,478.4	3,872.8	4,127.5	4,113.7	13.85	298.067	
3,051.2	3,017.3	2,670.4	2,665.5	9.2	5.1	86.09	-1,487.3	3,873.0	4,131.1	4,116.9	14.21	290.655	
3,100.0	3,065.0	2,712.0	2,706.3	9.4	5.2	86.31	-1,495.4	3,872.9	4,134.6	4,120.1	14.54	284.271	
3,149.6	3,113.5	2,753.0	2,746.5	9.6	5.4	86.53	-1,503.6	3,872.7	4,138.3	4,123.4	14.88	278.146	
3,200.0	3,162.8	2,790.8	2,783.5	9.8	5.5	86.73	-1,511.0	3,872.7	4,142.2	4,127.0	15.21	272.418	
3,248.0	3,209.8	2,870.6	2,861.9	10.0	5.7	87.14	-1,526.3	3,872.7	4,146.0	4,130.4	15.64	265.084	
3,300.0	3,260.6	2,902.0	2,892.7	10.2	5.8	87.30	-1,532.2	3,872.5	4,149.8	4,133.9	15.95	260.127	
3,346.4	3,306.1	2,941.5	2,931.5	10.5	5.9	87.51	-1,539.8	3,872.3	4,153.4	4,137.1	16.28	255.182	
3,400.0	3,358.5	2,966.3	2,955.7	10.7	6.0	87.64	-1,544.7	3,872.3	4,157.9	4,141.4	16.58	250.720	
3,444.9	3,402.3	2,997.0	2,985.8	10.9	6.1	87.80	-1,550.8	3,872.4	4,162.1	4,145.2	16.87	246.667	
3,500.0	3,456.3	3,033.2	3,021.3	11.1	6.2	87.98	-1,558.0	3,872.8	4,167.4	4,150.2	17.22	241.965	
3,543.3	3,498.6	3,080.6	3,067.8	11.3	6.4	88.22	-1,567.1	3,873.4	4,171.6	4,154.1	17.56	237.617	
3,600.0	3,554.1	3,165.9	3,151.7	11.5	6.7	88.64	-1,582.6	3,874.5	4,177.0	4,159.0	18.05	231.456	
3,641.7	3,594.9	3,214.2	3,199.2	11.7	6.8	88.87	-1,590.9	3,875.0	4,180.8	4,162.4	18.36	227.653	
3,700.0	3,651.9	3,269.9	3,254.2	12.0	7.0	89.14	-1,600.2	3,875.7	4,186.1	4,167.3	18.78	222.956	
3,740.1	3,691.2	3,306.0	3,289.9	12.2	7.1	89.30	-1,605.9	3,876.4	4,189.8	4,170.8	19.05	219.943	
3,800.0	3,749.7	3,358.9	3,342.2	12.4	7.2	89.53	-1,613.4	3,877.9	4,195.5	4,176.1	19.45	215.674	
3,838.6	3,787.4	3,510.6	3,492.8	12.6	7.7	90.13	-1,630.6	3,882.4	4,198.7	4,178.7	20.00	209.989	
3,900.0	3,847.5	3,761.4	3,743.1	12.9	8.2	90.96	-1,644.1	3,888.1	4,201.9	4,181.1	20.79	202.131	
3,937.0	3,883.7	3,866.3	3,848.0	13.0	8.4	91.25	-1,644.3	3,889.6	4,202.5	4,181.4	21.14	198.821	
4,000.0	3,945.3	3,927.8	3,909.5	13.3	8.5	91.42	-1,644.2	3,890.2	4,203.3	4,181.7	21.52	195.299	
4,035.4	3,980.0	3,961.2	3,942.9	13.5	8.6	91.52	-1,644.2	3,890.4	4,203.7	4,182.0	21.74	193.383	
4,060.0	4,004.0	3,983.4	3,965.1	13.6	8.6	91.58	-1,644.3	3,890.6	4,204.0	4,182.1	21.89	192.083	
4,100.0	4,043.2	4,019.7	4,001.4	13.7	8.7	91.69	-1,644.4	3,890.9	4,204.6	4,182.5	22.11	190.192	
4,133.8	4,076.5	4,053.2	4,034.9	13.8	8.8	91.78	-1,644.5	3,891.1	4,205.1	4,182.8	22.28	188.775	
4,200.0	4,141.6	4,130.5	4,112.2	14.0	8.9	91.99	-1,645.0	3,891.4	4,205.9	4,183.3	22.63	185.861	
4,232.3	4,173.5	4,158.5	4,140.2	14.1	9.0	92.05	-1,645.3	3,891.5	4,206.3	4,183.5	22.77	184.701	
4,300.0	4,240.6	4,214.0	4,195.6	14.3	9.1	92.18	-1,646.0	3,891.5	4,207.1	4,184.1	23.07	182.362	
4,330.7	4,271.1	4,249.0	4,230.7	14.4	9.1	92.25	-1,646.5	3,891.6	4,207.6	4,184.3	23.21	181.257	
4,400.0	4,340.0	4,347.4	4,329.0	14.5	9.3	92.42	-1,647.9	3,891.1	4,208.0	4,184.4	23.58	178.485	
4,429.1	4,369.0	4,370.5	4,352.2	14.6	9.4	92.46	-1,648.2	3,890.9	4,208.2	4,184.5	23.68	177.694	
4,500.0	4,439.7	4,431.9	4,413.6	14.8	9.5	92.54	-1,649.3	3,890.6	4,208.7	4,184.7	23.95	175.731	
4,527.5	4,467.2	4,472.5	4,454.2	14.8	9.6	92.58	-1,649.7	3,890.5	4,208.8	4,184.7	24.07	174.828	
4,600.0	4,539.7	4,555.7	4,537.3	14.9	9.7	92.61	-1,649.3	3,890.6	4,208.9	4,184.5	24.35	172.820	
4,626.0	4,565.6	4,579.6	4,561.3	15.0	9.8	92.61	-1,649.3	3,890.6	4,208.9	4,184.4	24.43	172.251	
4,660.2	4,599.8	4,611.6	4,593.3	15.0	9.8	121.35	-1,649.3	3,890.6	4,208.9	4,188.8	20.05	209.919	
4,700.0	4,639.6	4,721.3	4,702.9	15.0	10.0	121.35	-1,649.1	3,889.5	4,208.4	4,188.1	20.34	206.937	
4,724.4	4,664.0	4,746.1	4,727.7	15.1	10.1	121.35	-1,649.0	3,889.1	4,208.0	4,187.6	20.43	205.932	
4,800.0	4,739.6	4,823.5	4,805.1	15.2	10.2	121.36	-1,648.9	3,887.6	4,206.7	4,186.0	20.74	202.868	
4,822.8	4,762.5	4,847.1	4,828.8	15.2	10.3	121.37	-1,648.9	3,887.1	4,206.3	4,185.5	20.83	201.947	
4,900.0	4,839.6	4,922.0	4,903.6	15.3	10.4	121.38	-1,649.0	3,885.5	4,205.0	4,183.8	21.13	198.987	
4,921.2	4,860.9	4,940.4	4,922.0	15.4	10.5	121.38	-1,649.1	3,885.1	4,204.6	4,183.4	21.21	198.225	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 645-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.0	4,939.6	5,010.7	4,992.3	15.5	10.6	121.40	-1,649.3	3,883.8	4,203.4	4,181.9	21.51	195.422	
5,019.7	4,959.3	5,029.8	5,011.4	15.5	10.6	121.40	-1,649.3	3,883.4	4,203.1	4,181.6	21.59	194.707	
5,100.0	5,039.6	5,086.0	5,067.6	15.6	10.7	121.40	-1,649.2	3,882.6	4,202.1	4,180.2	21.86	192.221	
5,118.1	5,057.7	5,111.2	5,092.8	15.7	10.8	121.40	-1,649.1	3,882.3	4,201.9	4,179.9	21.95	191.451	
5,200.0	5,139.6	5,162.0	5,143.6	15.8	10.9	121.40	-1,649.0	3,882.0	4,201.3	4,179.1	22.22	189.117	
5,216.5	5,156.2	5,180.0	5,161.6	15.8	10.9	121.40	-1,649.0	3,882.0	4,201.3	4,179.0	22.28	188.527	
5,239.5	5,179.2	5,188.7	5,170.3	15.9	10.9	121.40	-1,649.0	3,882.0	4,201.3	4,179.0	22.35	187.978	
5,300.0	5,239.6	5,238.1	5,219.7	15.9	11.0	121.40	-1,649.0	3,882.0	4,201.4	4,178.8	22.57	186.113	
5,314.9	5,254.6	5,250.4	5,231.9	16.0	11.0	121.40	-1,649.1	3,882.1	4,201.5	4,178.8	22.63	185.657	
5,400.0	5,339.6	5,332.3	5,313.8	16.1	11.2	121.40	-1,649.2	3,882.4	4,201.9	4,178.9	22.97	182.911	
5,413.4	5,353.0	5,346.2	5,327.8	16.1	11.2	121.40	-1,649.2	3,882.5	4,201.9	4,178.9	23.03	182.468	
5,500.0	5,439.6	5,439.1	5,420.7	16.3	11.4	121.39	-1,648.6	3,883.3	4,202.2	4,178.8	23.39	179.625	
5,511.8	5,451.4	5,451.9	5,433.5	16.3	11.4	121.39	-1,648.5	3,883.4	4,202.3	4,178.8	23.44	179.242	
5,600.0	5,539.6	5,595.0	5,576.5	16.4	11.7	121.36	-1,646.6	3,883.7	4,201.8	4,177.9	23.91	175.723	
5,610.2	5,549.9	5,605.8	5,587.4	16.4	11.7	121.36	-1,646.5	3,883.7	4,201.7	4,177.7	23.95	175.405	
5,700.0	5,639.6	5,707.8	5,689.4	16.6	11.9	121.35	-1,645.2	3,883.1	4,200.6	4,176.3	24.34	172.559	
5,708.6	5,648.3	5,718.3	5,699.9	16.6	11.9	121.35	-1,645.1	3,882.9	4,200.5	4,176.1	24.38	172.277	
5,800.0	5,739.6	5,794.0	5,775.6	16.7	12.1	121.36	-1,644.8	3,881.9	4,199.3	4,174.6	24.72	169.843	
5,807.1	5,746.7	5,798.8	5,780.4	16.8	12.1	121.36	-1,644.8	3,881.9	4,199.2	4,174.5	24.75	169.672	
5,890.9	5,830.5	5,842.0	5,823.5	16.9	12.2	121.36	-1,644.8	3,881.5	4,198.7	4,173.7	25.01	167.872	
5,900.0	5,839.6	5,842.0	5,823.5	16.9	12.2	121.36	-1,644.8	3,881.5	4,198.7	4,173.7	25.03	167.744	
5,905.5	5,845.1	5,842.0	5,823.5	16.9	12.2	121.36	-1,644.8	3,881.5	4,198.8	4,173.7	25.04	167.668	
6,000.0	5,939.6	5,877.8	5,859.4	17.1	12.2	121.36	-1,644.9	3,881.7	4,199.6	4,174.3	25.32	165.885	
6,003.9	5,943.6	5,878.9	5,860.5	17.1	12.2	121.36	-1,644.9	3,881.7	4,199.7	4,174.3	25.33	165.819	
6,059.2	5,998.8	5,894.3	5,875.8	17.2	12.3	121.36	-1,645.0	3,882.1	4,200.9	4,175.5	25.48	164.901	
6,100.0	6,039.6	5,937.0	5,918.5	17.2	12.4	-148.57	-1,645.4	3,883.9	4,203.6	4,174.3	29.34	143.267	
6,102.3	6,042.0	5,937.0	5,918.5	17.2	12.4	-148.56	-1,645.4	3,883.9	4,203.8	4,174.5	29.34	143.280	
6,150.0	6,089.4	5,937.0	5,918.5	17.3	12.4	-148.34	-1,645.4	3,883.9	4,209.2	4,179.9	29.27	143.819	
6,200.0	6,138.7	5,937.0	5,918.5	17.3	12.4	-147.95	-1,645.4	3,883.9	4,218.3	4,189.2	29.09	145.002	
6,200.8	6,139.5	5,937.0	5,918.5	17.3	12.4	-147.94	-1,645.4	3,883.9	4,218.4	4,189.4	29.09	145.026	
6,250.0	6,187.4	5,937.0	5,918.5	17.3	12.4	-147.39	-1,645.4	3,883.9	4,230.8	4,202.0	28.82	146.805	
6,299.2	6,234.4	5,937.0	5,918.5	17.4	12.4	-146.68	-1,645.4	3,883.9	4,246.4	4,217.9	28.47	149.166	
6,300.0	6,235.1	5,937.0	5,918.5	17.4	12.4	-146.66	-1,645.4	3,883.9	4,246.7	4,218.2	28.46	149.209	
6,350.0	6,281.7	5,937.0	5,918.5	17.4	12.4	-145.74	-1,645.4	3,883.9	4,265.8	4,237.8	28.03	152.183	
6,397.6	6,324.8	5,937.0	5,918.5	17.3	12.4	-144.66	-1,645.4	3,883.9	4,287.0	4,259.4	27.57	155.499	
6,400.0	6,326.9	5,937.0	5,918.5	17.3	12.4	-144.60	-1,645.4	3,883.9	4,288.1	4,260.5	27.55	155.674	
6,450.0	6,370.5	5,937.0	5,918.5	17.3	12.4	-143.23	-1,645.4	3,883.9	4,313.3	4,286.3	27.03	159.588	
6,496.0	6,409.1	5,937.0	5,918.5	17.3	12.4	-141.72	-1,645.4	3,883.9	4,339.0	4,312.4	26.55	163.440	
6,500.0	6,412.3	5,937.0	5,918.5	17.3	12.4	-141.58	-1,645.4	3,883.9	4,341.3	4,314.8	26.51	163.775	
6,550.0	6,452.1	5,937.0	5,918.5	17.3	12.4	-139.62	-1,645.4	3,883.9	4,371.8	4,345.8	26.02	168.001	
6,594.5	6,485.6	5,937.0	5,918.5	17.3	12.4	-137.57	-1,645.4	3,883.9	4,401.1	4,375.4	25.66	171.520	
6,600.0	6,489.7	5,937.0	5,918.5	17.3	12.4	-137.29	-1,645.4	3,883.9	4,404.8	4,379.2	25.62	171.929	
6,650.0	6,524.9	5,980.2	5,961.5	17.2	12.5	-134.98	-1,646.2	3,887.9	4,438.2	4,412.8	25.39	174.772	
6,692.9	6,553.0	5,983.0	5,964.3	17.2	12.5	-132.33	-1,646.3	3,888.3	4,469.7	4,444.4	25.31	176.588	
6,700.0	6,557.5	5,983.5	5,964.7	17.2	12.5	-131.85	-1,646.3	3,888.3	4,475.0	4,449.7	25.31	176.790	
6,750.0	6,587.4	5,986.3	5,967.6	17.2	12.5	-128.17	-1,646.4	3,888.7	4,513.6	4,488.1	25.48	177.129	
6,791.3	6,609.9	5,988.4	5,969.6	17.2	12.5	-124.66	-1,646.5	3,889.0	4,546.7	4,520.8	25.84	175.925	
6,800.0	6,614.4	5,988.8	5,970.0	17.2	12.5	-123.86	-1,646.5	3,889.1	4,553.7	4,527.8	25.95	175.505	
6,850.0	6,638.4	6,032.0	6,012.5	17.2	12.6	-119.62	-1,648.1	3,896.8	4,596.7	4,570.0	26.70	172.183	
6,889.7	6,655.3	6,032.0	6,012.5	17.4	12.6	-115.16	-1,648.1	3,896.8	4,630.3	4,602.8	27.51	168.320	
6,900.0	6,659.4	6,032.0	6,012.5	17.5	12.6	-113.93	-1,648.1	3,896.8	4,639.1	4,611.3	27.73	167.289	
6,950.0	6,677.1	6,032.0	6,012.5	18.0	12.6	-107.50	-1,648.1	3,896.8	4,682.3	4,653.4	28.94	161.817	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 645-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
6,988.2	6,688.4	6,032.0	6,012.5	18.5	12.6	-102.13	-1,648.1	3,896.8	4,715.7	4,685.9	29.88	157.845	
7,000.0	6,691.5	6,032.0	6,012.5	18.7	12.6	-100.40	-1,648.1	3,896.8	4,726.2	4,696.0	30.14	156.783	
7,050.0	6,702.5	6,032.0	6,012.5	19.5	12.6	-92.83	-1,648.1	3,896.8	4,770.4	4,739.3	31.16	153.099	
7,086.6	6,708.4	6,032.0	6,012.5	20.1	12.6	-87.14	-1,648.1	3,896.8	4,803.0	4,771.3	31.68	151.596	
7,100.0	6,710.1	6,032.0	6,012.5	20.4	12.6	-85.05	-1,648.1	3,896.8	4,814.9	4,783.1	31.81	151.374	
7,150.0	6,714.2	6,032.0	6,012.5	21.3	12.6	-77.39	-1,648.1	3,896.8	4,859.4	4,827.4	32.00	151.834	
7,185.0	6,715.0	6,032.0	6,012.5	21.9	12.6	-72.24	-1,648.1	3,896.8	4,890.4	4,858.5	31.88	153.395	
7,185.6	6,715.0	6,032.0	6,012.5	21.9	12.6	-72.17	-1,648.1	3,896.8	4,890.8	4,859.0	31.88	153.427	
7,200.0	6,715.0	6,032.0	6,012.5	22.2	12.6	-72.17	-1,648.1	3,896.8	4,903.6	4,871.4	32.14	152.561	
7,283.4	6,714.8	6,032.0	6,012.5	23.9	12.6	-72.17	-1,648.1	3,896.8	4,977.4	4,943.7	33.74	147.503	
7,300.0	6,714.8	6,032.0	6,012.5	24.2	12.6	-72.17	-1,648.1	3,896.8	4,992.1	4,958.1	34.06	146.558	
7,381.9	6,714.6	6,032.0	6,012.5	26.0	12.6	-72.17	-1,648.1	3,896.8	5,064.9	5,029.2	35.75	141.693	
7,400.0	6,714.6	6,032.0	6,012.5	26.4	12.6	-72.17	-1,648.1	3,896.8	5,081.1	5,045.0	36.12	140.678	
7,480.3	6,714.4	5,989.2	5,970.4	28.2	12.5	-71.16	-1,646.5	3,889.1	5,151.1	5,113.6	37.57	137.108	
7,500.0	6,714.4	5,988.9	5,970.1	28.7	12.5	-71.16	-1,646.5	3,889.1	5,168.7	5,130.8	37.99	136.047	
7,578.7	6,714.2	5,987.7	5,969.0	30.5	12.5	-71.13	-1,646.4	3,888.9	5,239.3	5,199.5	39.75	131.808	
7,600.0	6,714.2	5,987.4	5,968.6	31.0	12.5	-71.12	-1,646.4	3,888.9	5,258.4	5,218.2	40.22	130.727	
7,677.1	6,714.0	5,986.3	5,967.6	32.9	12.5	-71.10	-1,646.4	3,888.7	5,327.8	5,285.8	42.00	126.859	
7,700.0	6,714.0	5,986.0	5,967.2	33.4	12.5	-71.09	-1,646.4	3,888.7	5,348.4	5,305.9	42.52	125.777	
7,775.6	6,713.9	5,984.9	5,966.2	35.3	12.5	-71.06	-1,646.4	3,888.5	5,416.6	5,372.3	44.30	122.271	
7,800.0	6,713.8	5,984.6	5,965.9	35.9	12.5	-71.06	-1,646.3	3,888.5	5,438.7	5,393.9	44.87	121.199	
7,874.0	6,713.7	5,983.6	5,964.9	37.8	12.5	-71.03	-1,646.3	3,888.3	5,505.8	5,459.2	46.65	118.033	
7,900.0	6,713.6	5,983.3	5,964.5	38.4	12.5	-71.02	-1,646.3	3,888.3	5,529.4	5,482.1	47.27	116.978	
7,972.4	6,713.5	5,982.3	5,963.6	40.3	12.5	-71.00	-1,646.3	3,888.2	5,595.3	5,546.3	49.03	114.125	
8,000.0	6,713.4	5,982.0	5,963.3	41.0	12.5	-70.99	-1,646.3	3,888.1	5,620.4	5,570.7	49.70	113.093	
8,070.8	6,713.3	5,981.1	5,962.4	42.8	12.5	-70.97	-1,646.2	3,888.0	5,685.1	5,633.6	51.44	110.522	
8,100.0	6,713.2	5,980.7	5,962.0	43.6	12.5	-70.97	-1,646.2	3,888.0	5,711.7	5,659.5	52.15	109.516	
8,169.3	6,713.1	5,937.0	5,918.5	45.4	12.4	-69.95	-1,645.4	3,883.9	5,776.8	5,723.3	53.48	108.020	
8,200.0	6,713.0	5,937.0	5,918.5	46.2	12.4	-69.95	-1,645.4	3,883.9	5,805.0	5,750.7	54.24	107.023	
8,267.7	6,712.9	5,937.0	5,918.5	48.0	12.4	-69.95	-1,645.4	3,883.9	5,867.1	5,811.1	55.93	104.900	
8,300.0	6,712.8	5,937.0	5,918.5	48.8	12.4	-69.95	-1,645.4	3,883.9	5,896.7	5,840.0	56.74	103.932	
8,366.1	6,712.7	5,937.0	5,918.5	50.6	12.4	-69.95	-1,645.4	3,883.9	5,957.5	5,899.1	58.40	102.016	
8,400.0	6,712.6	5,937.0	5,918.5	51.5	12.4	-69.95	-1,645.4	3,883.9	5,988.7	5,929.5	59.25	101.077	
8,464.5	6,712.5	5,937.0	5,918.5	53.2	12.4	-69.95	-1,645.4	3,883.9	6,048.3	5,987.4	60.88	99.347	
8,500.0	6,712.4	5,937.0	5,918.5	54.1	12.4	-69.95	-1,645.4	3,883.9	6,081.0	6,019.2	61.78	98.436	
8,563.0	6,712.3	5,937.0	5,918.5	55.8	12.4	-69.95	-1,645.4	3,883.9	6,139.2	6,075.9	63.37	96.872	
8,600.0	6,712.3	5,937.0	5,918.5	56.8	12.4	-69.95	-1,645.4	3,883.9	6,173.5	6,109.2	64.31	95.989	
8,661.4	6,712.1	5,937.0	5,918.5	58.5	12.4	-69.95	-1,645.4	3,883.9	6,230.4	6,164.5	65.88	94.572	
8,700.0	6,712.1	5,937.0	5,918.5	59.5	12.4	-69.95	-1,645.4	3,883.9	6,266.3	6,199.4	66.86	93.716	
8,759.8	6,711.9	5,937.0	5,918.5	61.1	12.4	-69.95	-1,645.4	3,883.9	6,321.8	6,253.4	68.40	92.431	
8,800.0	6,711.9	5,937.0	5,918.5	62.2	12.4	-69.95	-1,645.4	3,883.9	6,359.2	6,289.8	69.42	91.601	
8,858.2	6,711.8	5,937.0	5,918.5	63.8	12.4	-69.95	-1,645.4	3,883.9	6,413.5	6,342.5	70.92	90.435	
8,900.0	6,711.7	5,937.0	5,918.5	64.9	12.4	-69.95	-1,645.4	3,883.9	6,452.4	6,380.4	71.99	89.630	
8,956.7	6,711.6	5,937.0	5,918.5	66.5	12.4	-69.95	-1,645.4	3,883.9	6,505.3	6,431.8	73.45	88.570	
9,000.0	6,711.5	5,937.0	5,918.5	67.6	12.4	-69.95	-1,645.4	3,883.9	6,545.8	6,471.2	74.56	87.789	
9,055.1	6,711.4	5,937.0	5,918.5	69.1	12.4	-69.95	-1,645.4	3,883.9	6,597.3	6,521.3	75.98	86.825	
9,100.0	6,711.3	5,937.0	5,918.5	70.4	12.4	-69.95	-1,645.4	3,883.9	6,639.3	6,562.2	77.14	86.066	
9,153.5	6,711.2	5,937.0	5,918.5	71.8	12.4	-69.95	-1,645.4	3,883.9	6,689.5	6,610.9	78.53	85.188	
9,200.0	6,711.1	5,937.0	5,918.5	73.1	12.4	-69.95	-1,645.4	3,883.9	6,733.1	6,653.3	79.73	84.451	
9,251.9	6,711.0	5,937.0	5,918.5	74.5	12.4	-69.95	-1,645.4	3,883.9	6,781.8	6,700.8	81.07	83.651	
9,300.0	6,710.9	5,937.0	5,918.5	75.8	12.4	-69.95	-1,645.4	3,883.9	6,827.0	6,744.7	82.32	82.935	
9,350.4	6,710.8	5,937.0	5,918.5	77.2	12.4	-69.95	-1,645.4	3,883.9	6,874.4	6,790.8	83.62	82.206	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 645-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,400.0	6,710.7	5,937.0	5,918.5	78.6	12.4	-69.95	-1,645.4	3,883.9	6,921.1	6,836.2	84.91	81.510	
9,448.8	6,710.6	5,937.0	5,918.5	79.9	12.4	-69.95	-1,645.4	3,883.9	6,967.1	6,880.9	86.18	80.844	
9,500.0	6,710.5	5,937.0	5,918.5	81.3	12.4	-69.95	-1,645.4	3,883.9	7,015.4	6,927.8	87.51	80.167	
9,547.2	6,710.4	5,937.0	5,918.5	82.6	12.4	-69.95	-1,645.4	3,883.9	7,059.9	6,971.2	88.74	79.559	
9,600.0	6,710.3	5,937.0	5,918.5	84.1	12.4	-69.95	-1,645.4	3,883.9	7,109.8	7,019.7	90.11	78.900	
9,645.6	6,710.2	5,937.0	5,918.5	85.3	12.4	-69.95	-1,645.4	3,883.9	7,152.9	7,061.6	91.30	78.345	
9,700.0	6,710.1	5,937.0	5,918.5	86.8	12.4	-69.95	-1,645.4	3,883.9	7,204.3	7,111.6	92.72	77.704	
9,744.1	6,710.0	5,937.0	5,918.5	88.1	12.4	-69.95	-1,645.4	3,883.9	7,246.1	7,152.2	93.87	77.197	
9,800.0	6,709.9	5,937.0	5,918.5	89.6	12.4	-69.95	-1,645.4	3,883.9	7,299.1	7,203.7	95.32	76.571	
9,842.5	6,709.9	5,937.0	5,918.5	90.8	12.4	-69.95	-1,645.4	3,883.9	7,339.3	7,242.9	96.43	76.108	
9,900.0	6,709.7	5,937.0	5,918.5	92.4	12.4	-69.95	-1,645.4	3,883.9	7,393.9	7,296.0	97.93	75.499	
9,940.9	6,709.7	5,937.0	5,918.5	93.5	12.4	-69.95	-1,645.4	3,883.9	7,432.8	7,333.8	99.00	75.076	
10,000.0	6,709.6	5,937.0	5,918.5	95.1	12.4	-69.95	-1,645.4	3,883.9	7,488.9	7,388.3	100.55	74.482	
10,039.3	6,709.5	5,937.0	5,918.5	96.2	12.4	-69.95	-1,645.4	3,883.9	7,526.3	7,424.7	101.58	74.096	
10,100.0	6,709.4	5,937.0	5,918.5	97.9	12.4	-69.95	-1,645.4	3,883.9	7,584.0	7,480.8	103.16	73.516	
10,137.8	6,709.3	5,937.0	5,918.5	98.9	12.4	-69.95	-1,645.4	3,883.9	7,620.0	7,515.8	104.15	73.164	
10,200.0	6,709.2	5,937.0	5,918.5	100.7	12.4	-69.95	-1,645.4	3,883.9	7,679.2	7,573.5	105.78	72.598	
10,236.2	6,709.1	5,937.0	5,918.5	101.7	12.4	-69.95	-1,645.4	3,883.9	7,713.8	7,607.0	106.73	72.276	
10,300.0	6,709.0	5,937.0	5,918.5	103.4	12.4	-69.95	-1,645.4	3,883.9	7,774.6	7,666.2	108.40	71.723	
10,334.6	6,708.9	5,937.0	5,918.5	104.4	12.4	-69.95	-1,645.4	3,883.9	7,807.6	7,698.3	109.30	71.430	
10,400.0	6,708.8	5,937.0	5,918.5	106.2	12.4	-69.95	-1,645.4	3,883.9	7,870.1	7,759.1	111.02	70.891	
10,433.0	6,708.7	5,937.0	5,918.5	107.1	12.4	-69.95	-1,645.4	3,883.9	7,901.7	7,789.8	111.88	70.624	
10,500.0	6,708.6	5,937.0	5,918.5	109.0	12.4	-69.95	-1,645.4	3,883.9	7,965.7	7,852.0	113.64	70.096	
10,531.5	6,708.5	5,937.0	5,918.5	109.9	12.4	-69.95	-1,645.4	3,883.9	7,995.8	7,881.3	114.47	69.853	
10,600.0	6,708.4	5,937.0	5,918.5	111.8	12.4	-69.95	-1,645.4	3,883.9	8,061.4	7,945.1	116.26	69.337	
10,629.9	6,708.4	5,937.0	5,918.5	112.6	12.4	-69.95	-1,645.4	3,883.9	8,090.0	7,972.9	117.05	69.117	
10,700.0	6,708.2	5,937.0	5,918.5	114.6	12.4	-69.95	-1,645.4	3,883.9	8,157.2	8,038.3	118.89	68.612	
10,728.3	6,708.2	5,937.0	5,918.5	115.3	12.4	-69.95	-1,645.4	3,883.9	8,184.3	8,064.7	119.63	68.413	
10,800.0	6,708.0	5,937.0	5,918.5	117.3	12.4	-69.95	-1,645.4	3,883.9	8,253.0	8,131.5	121.51	67.919	
10,826.7	6,708.0	5,937.0	5,918.5	118.1	12.4	-69.95	-1,645.4	3,883.9	8,278.7	8,156.5	122.22	67.738	
10,900.0	6,707.8	5,937.0	5,918.5	120.1	12.4	-69.95	-1,645.4	3,883.9	8,349.0	8,224.9	124.14	67.254	
10,925.2	6,707.8	5,937.0	5,918.5	120.8	12.4	-69.95	-1,645.4	3,883.9	8,373.2	8,248.4	124.80	67.092	
11,000.0	6,707.6	5,937.0	5,918.5	122.9	12.4	-69.95	-1,645.4	3,883.9	8,445.1	8,318.4	126.77	66.618	
11,023.6	6,707.6	5,937.0	5,918.5	123.6	12.4	-69.95	-1,645.4	3,883.9	8,467.8	8,340.4	127.39	66.472	
11,100.0	6,707.5	5,937.0	5,918.5	125.7	12.4	-69.95	-1,645.4	3,883.9	8,541.3	8,411.9	129.40	66.008	
11,122.0	6,707.4	5,937.0	5,918.5	126.3	12.4	-69.95	-1,645.4	3,883.9	8,562.5	8,432.5	129.98	65.876	
11,200.0	6,707.3	5,937.0	5,918.5	128.5	12.4	-69.95	-1,645.4	3,883.9	8,637.6	8,505.5	132.03	65.422	
11,220.4	6,707.2	5,937.0	5,918.5	129.0	12.4	-69.95	-1,645.4	3,883.9	8,657.3	8,524.7	132.57	65.305	
11,300.0	6,707.1	5,937.0	5,918.5	131.3	12.4	-69.95	-1,645.4	3,883.9	8,733.9	8,599.2	134.66	64.859	
11,318.9	6,707.0	5,937.0	5,918.5	131.8	12.4	-69.95	-1,645.4	3,883.9	8,752.1	8,616.9	135.16	64.755	
11,400.0	6,706.9	5,937.0	5,918.5	134.0	12.4	-69.95	-1,645.4	3,883.9	8,830.3	8,693.0	137.29	64.318	
11,417.3	6,706.9	5,937.0	5,918.5	134.5	12.4	-69.95	-1,645.4	3,883.9	8,847.0	8,709.3	137.75	64.226	
11,500.0	6,706.7	5,937.0	5,918.5	136.8	12.4	-69.95	-1,645.4	3,883.9	8,926.8	8,786.9	139.93	63.797	
11,515.7	6,706.7	5,937.0	5,918.5	137.3	12.4	-69.95	-1,645.4	3,883.9	8,942.0	8,801.7	140.34	63.717	
11,600.0	6,706.5	5,937.0	5,918.5	139.6	12.4	-69.95	-1,645.4	3,883.9	9,023.4	8,880.9	142.56	63.296	
11,614.1	6,706.5	5,937.0	5,918.5	140.0	12.4	-69.95	-1,645.4	3,883.9	9,037.1	8,894.2	142.93	63.227	
11,700.0	6,706.3	5,937.0	5,918.5	142.4	12.4	-69.95	-1,645.4	3,883.9	9,120.1	8,974.9	145.19	62.813	
11,712.6	6,706.3	5,937.0	5,918.5	142.8	12.4	-69.95	-1,645.4	3,883.9	9,132.2	8,986.7	145.52	62.754	
11,800.0	6,706.1	5,937.0	5,918.5	145.2	12.4	-69.95	-1,645.4	3,883.9	9,216.8	9,069.0	147.83	62.348	
11,811.0	6,706.1	5,937.0	5,918.5	145.5	12.4	-69.95	-1,645.4	3,883.9	9,227.4	9,079.3	148.12	62.298	
11,900.0	6,705.9	5,937.0	5,918.5	148.0	12.4	-69.95	-1,645.4	3,883.9	9,313.6	9,163.1	150.46	61.899	
11,909.4	6,705.9	5,937.0	5,918.5	148.3	12.4	-69.95	-1,645.4	3,883.9	9,322.7	9,172.0	150.71	61.858	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 645-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,000.0	6,705.8	5,937.0	5,918.5	150.8	12.4	-69.95	-1,645.4	3,883.9	9,410.5	9,257.4	153.10	61.466	
12,007.8	6,705.7	5,937.0	5,918.5	151.0	12.4	-69.95	-1,645.4	3,883.9	9,418.1	9,264.8	153.31	61.433	
12,100.0	6,705.6	5,937.0	5,918.5	153.6	12.4	-69.95	-1,645.4	3,883.9	9,507.4	9,351.7	155.74	61.048	
12,106.3	6,705.6	5,937.0	5,918.5	153.8	12.4	-69.95	-1,645.4	3,883.9	9,513.5	9,357.6	155.90	61.022	
12,200.0	6,705.4	5,937.0	5,918.5	156.4	12.4	-69.95	-1,645.4	3,883.9	9,604.4	9,446.0	158.37	60.644	
12,204.7	6,705.4	5,937.0	5,918.5	156.5	12.4	-69.95	-1,645.4	3,883.9	9,608.9	9,450.4	158.50	60.625	
12,300.0	6,705.2	5,937.0	5,918.5	159.2	12.4	-69.95	-1,645.4	3,883.9	9,701.4	9,540.4	161.01	60.253	
12,303.1	6,705.2	5,937.0	5,918.5	159.3	12.4	-69.95	-1,645.4	3,883.9	9,704.5	9,543.4	161.09	60.241	
12,400.0	6,705.0	5,937.0	5,918.5	162.0	12.4	-69.96	-1,645.4	3,883.9	9,798.5	9,634.9	163.65	59.875	
12,401.5	6,705.0	5,937.0	5,918.5	162.0	12.4	-69.96	-1,645.4	3,883.9	9,800.0	9,636.4	163.69	59.869	
12,500.0	6,704.8	5,937.0	5,918.5	164.8	12.4	-69.96	-1,645.4	3,883.9	9,895.7	9,729.4	166.29	59.509	
12,598.4	6,704.6	5,937.0	5,918.5	167.5	12.4	-69.96	-1,645.4	3,883.9	9,991.4	9,822.5	168.88	59.161	
12,600.0	6,704.6	5,937.0	5,918.5	167.6	12.4	-69.96	-1,645.4	3,883.9	9,992.9	9,824.0	168.93	59.155 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 290-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	173.33	-1,022.3	119.5	1,029.3				
98.4	98.4	87.8	87.8	0.1	0.1	173.34	-1,022.1	119.3	1,029.1	1,028.9	0.16	6,492.120	
100.0	100.0	89.4	89.4	0.1	0.1	173.35	-1,022.1	119.3	1,029.1	1,028.9	0.16	6,374.020	
196.8	196.8	190.1	190.1	0.3	0.1	173.38	-1,021.7	118.5	1,028.6	1,028.1	0.45	2,281.466	
200.0	200.0	193.4	193.4	0.3	0.1	173.38	-1,021.7	118.5	1,028.5	1,028.1	0.46	2,234.761	
295.3	295.3	290.0	290.0	0.5	0.2	173.45	-1,020.9	117.3	1,027.7	1,026.9	0.74	1,382.846	
300.0	300.0	296.6	296.5	0.5	0.2	173.45	-1,020.9	117.2	1,027.6	1,026.9	0.77	1,340.372	
393.7	393.7	384.0	384.0	0.8	0.4	173.48	-1,020.3	116.6	1,027.0	1,025.8	1.15	891.321	
400.0	400.0	389.4	389.4	0.8	0.4	173.48	-1,020.3	116.6	1,027.0	1,025.8	1.18	872.009	
492.1	492.1	479.3	479.3	1.0	0.6	173.48	-1,020.1	116.6	1,026.8	1,025.2	1.57	653.181	
500.0	500.0	487.0	487.0	1.0	0.6	173.48	-1,020.1	116.6	1,026.8	1,025.1	1.61	639.467	
540.6	540.6	526.6	526.6	1.1	0.7	173.47	-1,020.1	116.7	1,026.7	1,025.0	1.78	576.992 CC	
590.5	590.5	575.4	575.3	1.2	0.8	173.46	-1,020.1	116.9	1,026.8	1,024.8	1.99	515.150	
600.0	600.0	584.6	584.6	1.2	0.8	173.46	-1,020.1	117.0	1,026.8	1,024.7	2.03	504.912 ES	
689.0	689.0	666.2	666.2	1.4	1.0	173.49	-1,020.6	116.4	1,027.2	1,024.8	2.41	427.028	
700.0	700.0	677.0	677.0	1.4	1.0	173.50	-1,020.7	116.2	1,027.3	1,024.9	2.45	418.731	
787.4	787.4	762.5	762.5	1.6	1.2	173.58	-1,021.7	114.9	1,028.2	1,025.4	2.83	362.984	
800.0	800.0	774.9	774.8	1.7	1.2	173.59	-1,021.8	114.7	1,028.3	1,025.4	2.89	356.164	
885.8	885.8	858.8	858.7	1.9	1.4	173.67	-1,023.0	113.5	1,029.3	1,026.1	3.26	315.791	
900.0	900.0	872.7	872.6	1.9	1.4	173.68	-1,023.2	113.3	1,029.5	1,026.2	3.32	309.995	
984.2	984.2	956.1	956.0	2.1	1.6	173.75	-1,024.5	112.1	1,030.7	1,027.0	3.69	279.419	
1,000.0	1,000.0	972.0	972.0	2.1	1.6	173.77	-1,024.7	111.9	1,030.9	1,027.1	3.76	274.313	
1,082.7	1,082.7	1,056.0	1,055.9	2.3	1.8	173.83	-1,025.9	110.9	1,032.0	1,027.8	4.12	250.316	
1,100.0	1,100.0	1,073.6	1,073.5	2.3	1.9	173.84	-1,026.1	110.7	1,032.2	1,028.0	4.20	245.812	
1,181.1	1,181.1	1,160.7	1,160.6	2.5	2.0	145.20	-1,027.2	109.6	1,034.0	1,029.4	4.56	226.680	
1,200.0	1,200.0	1,182.4	1,182.3	2.6	2.1	145.24	-1,027.3	109.1	1,034.6	1,029.9	4.65	222.584	
1,279.5	1,279.4	1,287.9	1,287.7	2.7	2.3	145.64	-1,027.1	104.3	1,037.2	1,032.2	5.04	205.603	
1,300.0	1,299.8	1,314.8	1,314.5	2.8	2.4	145.79	-1,026.6	102.3	1,037.8	1,032.7	5.15	201.679	
1,377.9	1,377.5	1,395.2	1,394.6	3.0	2.5	146.27	-1,024.8	96.6	1,041.0	1,035.5	5.49	189.459	
1,400.0	1,399.5	1,415.7	1,415.1	3.0	2.6	146.39	-1,024.3	95.2	1,042.2	1,036.6	5.59	186.484	
1,476.4	1,475.3	1,483.3	1,482.5	3.2	2.7	146.83	-1,023.0	90.4	1,047.9	1,041.9	5.91	177.227	
1,500.0	1,498.7	1,504.4	1,503.6	3.3	2.8	146.98	-1,022.8	88.8	1,050.1	1,044.1	6.01	174.630	
1,574.8	1,572.6	1,572.3	1,571.2	3.5	2.9	147.50	-1,022.1	83.1	1,058.6	1,052.2	6.34	166.845	
1,600.0	1,597.5	1,595.0	1,593.9	3.5	3.0	147.69	-1,022.0	81.0	1,061.9	1,055.5	6.46	164.502	
1,673.2	1,669.4	1,661.6	1,660.2	3.7	3.2	148.24	-1,021.8	75.1	1,073.0	1,066.2	6.79	158.089	
1,700.1	1,695.8	1,683.0	1,681.5	3.8	3.2	148.41	-1,021.8	73.3	1,077.6	1,070.7	6.90	156.155	
1,771.6	1,765.7	1,737.9	1,736.2	4.1	3.3	148.97	-1,022.3	68.7	1,090.8	1,083.6	7.22	151.025	
1,800.0	1,793.4	1,758.6	1,756.8	4.2	3.4	149.18	-1,022.7	67.0	1,096.4	1,089.1	7.35	149.209	
1,870.1	1,862.0	1,814.5	1,812.4	4.4	3.5	149.75	-1,024.3	62.2	1,110.9	1,103.2	7.68	144.686	
1,900.0	1,891.3	1,839.4	1,837.3	4.5	3.6	150.00	-1,025.2	60.0	1,117.3	1,109.5	7.82	142.871	
1,968.5	1,958.3	1,894.1	1,891.7	4.8	3.7	150.55	-1,027.4	55.0	1,132.5	1,124.3	8.14	139.062	
2,000.0	1,989.1	1,917.7	1,915.2	4.9	3.8	150.79	-1,028.6	52.9	1,139.8	1,131.5	8.29	137.458	
2,066.9	2,054.5	1,967.0	1,964.2	5.1	3.9	151.26	-1,031.4	48.6	1,155.9	1,147.3	8.60	134.383	
2,100.0	2,086.9	1,992.8	1,989.9	5.3	4.0	151.50	-1,033.1	46.4	1,164.2	1,155.4	8.76	132.917	
2,165.3	2,150.8	2,042.2	2,038.9	5.5	4.1	151.96	-1,036.8	42.2	1,181.1	1,172.1	9.07	130.285	
2,200.0	2,184.7	2,062.0	2,058.6	5.6	4.2	152.13	-1,038.4	40.5	1,190.5	1,181.3	9.21	129.215	
2,263.8	2,247.1	2,110.4	2,106.6	5.9	4.3	152.56	-1,042.9	36.6	1,208.3	1,198.8	9.51	127.015	
2,300.0	2,282.5	2,134.6	2,130.6	6.0	4.4	152.76	-1,045.5	34.7	1,218.9	1,209.2	9.68	125.978	
2,362.2	2,343.3	2,183.5	2,179.0	6.3	4.5	153.14	-1,051.1	31.1	1,237.7	1,227.7	9.97	124.144	
2,400.0	2,380.3	2,218.6	2,213.8	6.5	4.6	153.42	-1,055.3	28.5	1,249.2	1,239.1	10.16	122.971	
2,460.6	2,439.6	2,275.0	2,269.6	6.7	4.8	153.87	-1,061.9	23.9	1,267.8	1,257.4	10.46	121.193	
2,500.0	2,478.1	2,311.5	2,305.7	6.9	4.9	154.16	-1,066.2	20.7	1,279.9	1,269.3	10.66	120.112	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 290-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,535.9	2,361.1	2,354.8	7.1	5.0	154.58	-1,072.0	15.8	1,298.3	1,287.3	10.94	118.665	
2,600.0	2,575.9	2,389.9	2,383.1	7.3	5.1	154.82	-1,075.6	12.9	1,311.3	1,300.1	11.13	117.835	
2,657.5	2,632.2	2,439.0	2,431.5	7.5	5.3	155.24	-1,082.1	7.5	1,330.1	1,318.7	11.41	116.555	
2,700.0	2,673.8	2,461.0	2,453.2	7.7	5.3	155.42	-1,085.2	5.0	1,344.3	1,332.8	11.59	115.991	
2,755.9	2,728.4	2,502.7	2,494.2	7.9	5.5	155.77	-1,091.3	0.3	1,363.5	1,351.7	11.86	114.993	
2,800.0	2,771.6	2,534.0	2,524.9	8.1	5.6	156.03	-1,096.1	-3.4	1,379.0	1,366.9	12.06	114.311	
2,854.3	2,824.7	2,570.2	2,560.3	8.3	5.7	156.33	-1,101.9	-7.6	1,398.5	1,386.1	12.31	113.570	
2,900.0	2,869.4	2,599.3	2,588.8	8.5	5.8	156.56	-1,106.8	-11.2	1,415.3	1,402.8	12.52	113.049	
2,952.7	2,921.0	2,634.5	2,623.2	8.8	6.0	156.84	-1,113.2	-15.5	1,435.3	1,422.5	12.76	112.481	
3,000.0	2,967.2	2,676.9	2,664.5	9.0	6.1	157.18	-1,120.9	-20.8	1,453.4	1,440.4	13.00	111.805	
3,051.2	3,017.3	2,722.9	2,709.4	9.2	6.3	157.52	-1,129.4	-26.4	1,473.1	1,459.8	13.26	111.114	
3,100.0	3,065.0	2,770.1	2,755.4	9.4	6.4	157.86	-1,138.1	-31.8	1,491.9	1,478.4	13.50	110.490	
3,149.6	3,113.5	2,818.1	2,802.4	9.6	6.6	158.18	-1,146.9	-37.1	1,510.9	1,497.2	13.75	109.878	
3,200.0	3,162.8	2,866.8	2,850.0	9.8	6.8	158.48	-1,155.8	-42.0	1,530.2	1,516.2	14.00	109.310	
3,248.0	3,209.8	2,913.4	2,895.5	10.0	6.9	158.74	-1,164.3	-46.4	1,548.5	1,534.3	14.24	108.782	
3,300.0	3,260.6	2,962.3	2,943.5	10.2	7.1	159.01	-1,173.1	-50.9	1,568.4	1,553.9	14.49	108.252	
3,346.4	3,306.1	3,006.0	2,986.3	10.5	7.3	159.26	-1,181.0	-55.1	1,586.1	1,571.4	14.71	107.802	
3,400.0	3,358.5	3,076.1	3,055.0	10.7	7.5	159.65	-1,193.1	-62.0	1,606.2	1,591.2	15.01	107.009	
3,444.9	3,402.3	3,129.2	3,107.1	10.9	7.7	159.93	-1,201.7	-67.0	1,622.6	1,607.3	15.25	106.429	
3,500.0	3,456.3	3,188.5	3,165.4	11.1	7.9	160.24	-1,210.9	-72.7	1,642.5	1,627.0	15.52	105.817	
3,543.3	3,498.6	3,229.9	3,206.1	11.3	8.0	160.45	-1,217.3	-76.6	1,658.0	1,642.3	15.73	105.397	
3,600.0	3,554.1	3,282.7	3,258.1	11.5	8.2	160.72	-1,225.4	-81.7	1,678.4	1,662.4	16.00	104.881	
3,641.7	3,594.9	3,320.4	3,295.1	11.7	8.3	160.90	-1,231.1	-85.4	1,693.4	1,677.2	16.20	104.511	
3,700.0	3,651.9	3,372.4	3,346.2	12.0	8.5	161.16	-1,239.0	-90.7	1,714.4	1,697.9	16.48	104.020	
3,740.1	3,691.2	3,386.0	3,359.6	12.2	8.6	161.23	-1,241.1	-92.1	1,729.1	1,712.4	16.63	103.500	
3,800.0	3,749.7	3,437.9	3,410.6	12.4	8.8	161.50	-1,249.4	-97.7	1,751.2	1,734.3	16.92	103.528	
3,838.6	3,787.4	3,461.4	3,433.5	12.6	8.9	161.61	-1,253.4	-100.3	1,765.9	1,748.8	17.08	103.394	
3,900.0	3,847.5	3,508.1	3,479.2	12.9	9.0	161.84	-1,261.7	-105.6	1,789.6	1,772.3	17.36	103.094	
3,937.0	3,883.7	3,542.8	3,513.1	13.0	9.2	162.01	-1,267.9	-109.4	1,804.0	1,786.5	17.54	102.838	
4,000.0	3,945.3	3,596.7	3,565.8	13.3	9.4	162.26	-1,277.5	-115.5	1,828.5	1,810.7	17.84	102.486	
4,035.4	3,980.0	3,623.2	3,591.7	13.5	9.5	162.38	-1,282.3	-118.4	1,842.4	1,824.4	18.00	102.350	
4,060.0	4,004.0	3,641.6	3,609.7	13.6	9.6	162.47	-1,285.7	-120.5	1,852.1	1,834.0	18.11	102.262	
4,100.0	4,043.2	3,671.0	3,638.4	13.7	9.7	162.70	-1,291.2	-123.8	1,867.8	1,849.5	18.30	102.084	
4,133.8	4,076.5	3,699.4	3,666.1	13.8	9.8	162.90	-1,296.6	-127.0	1,880.7	1,862.3	18.45	101.942	
4,200.0	4,141.6	3,754.1	3,719.5	14.0	10.0	163.26	-1,307.1	-133.0	1,905.2	1,886.5	18.74	101.648	
4,232.3	4,173.5	3,782.7	3,747.3	14.1	10.2	163.43	-1,312.7	-136.1	1,916.8	1,897.9	18.89	101.494	
4,300.0	4,240.6	3,845.6	3,808.6	14.3	10.4	163.76	-1,325.0	-142.6	1,939.9	1,920.7	19.19	101.112	
4,330.7	4,271.1	3,968.2	3,928.7	14.4	10.9	164.13	-1,346.7	-154.0	1,949.4	1,929.9	19.52	99.872	
4,400.0	4,340.0	4,064.3	4,023.4	14.5	11.2	164.48	-1,360.3	-162.8	1,967.2	1,947.3	19.87	98.987	
4,429.1	4,369.0	4,089.5	4,048.3	14.6	11.3	164.58	-1,363.8	-165.3	1,974.0	1,954.1	19.99	98.763	
4,500.0	4,439.7	4,145.0	4,103.0	14.8	11.5	164.80	-1,371.4	-170.7	1,989.8	1,969.5	20.25	98.268	
4,527.5	4,467.2	4,170.9	4,128.5	14.8	11.6	164.89	-1,375.0	-173.3	1,995.6	1,975.2	20.36	98.021	
4,600.0	4,539.7	4,225.2	4,181.9	14.9	11.8	165.08	-1,383.0	-178.9	2,010.0	1,989.3	20.61	97.534	
4,626.0	4,565.6	4,239.0	4,195.5	15.0	11.9	165.14	-1,385.0	-180.4	2,014.9	1,994.2	20.68	97.434	
4,660.2	4,599.8	4,274.3	4,230.1	15.0	12.0	-166.03	-1,390.4	-184.2	2,021.0	1,994.7	20.68	97.434	
4,700.0	4,639.6	4,308.0	4,263.2	15.0	12.1	-165.96	-1,395.6	-187.9	2,028.1	2,001.6	20.68	97.434	
4,724.4	4,664.0	4,334.0	4,288.8	15.1	12.2	-165.91	-1,399.7	-190.9	2,032.5	2,005.9	20.68	97.434	
4,800.0	4,739.6	4,382.9	4,336.7	15.2	12.4	-165.80	-1,407.6	-196.6	2,046.4	2,019.5	20.68	97.434	
4,822.8	4,762.5	4,399.0	4,352.4	15.2	12.5	-165.77	-1,410.3	-198.6	2,050.8	2,023.8	20.68	97.434	
4,900.0	4,839.6	4,479.1	4,430.7	15.3	12.8	-165.58	-1,423.8	-208.7	2,065.9	2,038.5	20.68	97.434	
4,921.2	4,860.9	4,510.0	4,461.0	15.4	13.0	-165.52	-1,428.8	-212.5	2,069.9	2,042.3	20.68	97.434	
5,000.0	4,939.6	4,584.9	4,534.4	15.5	13.3	-165.36	-1,440.9	-221.2	2,084.6	2,056.5	20.68	97.434	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 290-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	4,602.2	4,551.4	15.5	13.3	-165.33	-1,443.7	-223.3	2,088.3	2,060.2	28.11	74.295	
5,100.0	5,039.6	4,697.0	4,644.2	15.6	13.7	-165.13	-1,458.9	-234.5	2,103.2	2,074.6	28.60	73.536	
5,118.1	5,057.7	4,714.0	4,660.9	15.7	13.8	-165.10	-1,461.6	-236.6	2,106.5	2,077.8	28.70	73.408	
5,200.0	5,139.6	4,781.8	4,727.3	15.8	14.0	-164.96	-1,472.3	-244.6	2,121.6	2,092.5	29.09	72.938	
5,216.5	5,156.2	4,794.7	4,740.0	15.8	14.1	-164.94	-1,474.4	-246.1	2,124.7	2,095.5	29.16	72.854	
5,300.0	5,239.6	4,853.1	4,797.2	15.9	14.3	-164.82	-1,484.2	-253.1	2,140.9	2,111.4	29.54	72.479	
5,314.9	5,254.6	4,863.2	4,807.0	16.0	14.4	-164.80	-1,486.0	-254.4	2,143.9	2,114.3	29.61	72.417	
5,400.0	5,339.6	4,935.6	4,877.6	16.1	14.7	-164.65	-1,498.9	-263.8	2,161.5	2,131.5	30.05	71.935	
5,413.4	5,353.0	4,952.3	4,893.9	16.1	14.8	-164.61	-1,501.9	-265.9	2,164.3	2,134.1	30.14	71.808	
5,500.0	5,439.6	5,178.6	5,116.4	16.3	15.6	-164.40	-1,538.3	-284.3	2,180.0	2,148.9	31.11	70.076	
5,511.8	5,451.4	5,218.1	5,155.6	16.3	15.7	-164.39	-1,543.4	-285.9	2,181.6	2,150.4	31.25	69.821	
5,600.0	5,539.6	5,409.1	5,345.5	16.4	16.2	-164.46	-1,562.8	-288.6	2,190.2	2,158.3	31.89	68.689	
5,610.2	5,549.9	5,420.9	5,357.2	16.4	16.2	-164.46	-1,563.7	-288.8	2,191.0	2,159.1	31.93	68.620	
5,700.0	5,639.6	5,583.3	5,519.2	16.6	16.6	-164.42	-1,574.0	-293.2	2,197.4	2,164.9	32.44	67.735	
5,708.6	5,648.3	5,597.7	5,533.6	16.6	16.6	-164.42	-1,574.6	-293.7	2,197.8	2,165.3	32.48	67.658	
5,800.0	5,739.6	5,742.1	5,677.9	16.7	16.9	-164.32	-1,578.1	-298.7	2,200.8	2,167.9	32.91	66.878	
5,807.1	5,746.7	5,752.9	5,688.7	16.8	16.9	-164.31	-1,578.3	-299.1	2,200.9	2,168.0	32.94	66.819	
5,900.0	5,839.6	5,871.3	5,807.1	16.9	17.1	-164.27	-1,579.2	-301.0	2,202.0	2,168.7	33.29	66.152	
5,905.5	5,845.1	5,875.8	5,811.6	16.9	17.1	-164.27	-1,579.3	-301.0	2,202.1	2,168.8	33.30	66.121	
6,000.0	5,939.6	6,080.9	6,015.6	17.1	17.3	-164.68	-1,581.7	-285.0	2,201.9	2,168.2	33.70	65.332	
6,003.9	5,943.6	6,084.9	6,019.5	17.1	17.3	-164.70	-1,581.8	-284.3	2,201.8	2,168.0	33.71	65.310	
6,059.2	5,998.8	6,143.7	6,076.9	17.2	17.3	-165.04	-1,582.9	-271.3	2,199.5	2,165.7	33.83	65.008	
6,100.0	6,039.6	6,365.7	6,279.9	17.2	17.2	-77.72	-1,588.6	-183.8	2,196.7	2,168.8	27.98	78.502	
6,102.3	6,042.0	6,368.5	6,282.3	17.2	17.2	-77.78	-1,588.6	-182.4	2,196.4	2,168.4	27.99	78.465	
6,150.0	6,089.4	6,420.1	6,325.5	17.3	17.1	-79.12	-1,589.6	-154.3	2,190.0	2,161.9	28.18	77.713	
6,200.0	6,138.7	6,457.9	6,356.1	17.3	17.1	-80.38	-1,590.6	-132.0	2,183.0	2,154.6	28.39	76.900	
6,200.8	6,139.5	6,458.4	6,356.5	17.3	17.1	-80.40	-1,590.6	-131.7	2,182.9	2,154.5	28.39	76.888	
6,250.0	6,187.4	6,489.3	6,380.5	17.3	17.0	-81.59	-1,591.8	-112.4	2,176.0	2,147.4	28.56	76.178	
6,299.2	6,234.4	6,515.1	6,400.0	17.4	17.0	-82.71	-1,592.9	-95.4	2,169.4	2,140.7	28.72	75.544	
6,300.0	6,235.1	6,516.5	6,401.1	17.4	17.0	-82.75	-1,593.0	-94.5	2,169.3	2,140.5	28.72	75.520	
6,350.0	6,281.7	6,580.8	6,446.2	17.4	16.9	-84.84	-1,596.0	-48.9	2,162.7	2,133.6	29.08	74.371	
6,397.6	6,324.8	6,610.8	6,465.5	17.3	16.9	-86.08	-1,597.3	-26.0	2,156.9	2,127.6	29.27	73.688	
6,400.0	6,326.9	6,611.4	6,465.9	17.3	16.9	-86.12	-1,597.3	-25.5	2,156.6	2,127.3	29.28	73.661	
6,450.0	6,370.5	6,620.6	6,471.6	17.3	16.9	-86.79	-1,597.7	-18.3	2,151.3	2,121.9	29.41	73.159	
6,496.0	6,409.1	6,624.4	6,473.9	17.3	16.9	-87.21	-1,597.9	-15.2	2,147.3	2,117.8	29.50	72.788	
6,500.0	6,412.3	6,624.6	6,474.0	17.3	16.9	-87.24	-1,597.9	-15.1	2,147.0	2,117.5	29.51	72.761	
6,550.0	6,452.1	6,624.6	6,474.0	17.3	16.9	-87.51	-1,597.9	-15.1	2,143.6	2,114.0	29.60	72.414	
6,594.5	6,485.6	6,622.0	6,472.4	17.3	16.9	-87.61	-1,597.8	-17.2	2,141.5	2,111.8	29.70	72.104	
6,600.0	6,489.7	6,621.5	6,472.1	17.3	16.9	-87.61	-1,597.8	-17.6	2,141.3	2,111.6	29.71	72.071	
6,650.0	6,524.9	6,609.0	6,464.4	17.2	16.9	-87.39	-1,597.2	-27.4	2,140.0	2,110.1	29.81	71.795	
6,692.7	6,552.9	6,609.0	6,464.4	17.2	16.9	-87.42	-1,597.2	-27.4	2,139.6	2,109.6	30.00	71.309	
6,692.9	6,553.0	6,609.0	6,464.4	17.2	16.9	-87.42	-1,597.2	-27.4	2,139.6	2,109.6	30.00	71.308	
6,700.0	6,557.5	6,608.7	6,464.2	17.2	16.9	-87.41	-1,597.2	-27.6	2,139.6	2,109.6	30.04	71.234	
6,750.0	6,587.4	6,596.5	6,456.4	17.2	16.9	-87.04	-1,596.7	-37.1	2,140.2	2,109.9	30.30	70.641	
6,791.3	6,609.9	6,585.4	6,449.2	17.2	16.9	-86.66	-1,596.2	-45.4	2,141.4	2,110.8	30.57	70.043	
6,800.0	6,614.4	6,583.0	6,447.7	17.2	16.9	-86.58	-1,596.1	-47.2	2,141.7	2,111.1	30.63	69.924	
6,850.0	6,638.4	6,568.6	6,438.0	17.2	16.9	-86.02	-1,595.4	-57.9	2,144.1	2,113.1	31.04	69.078	
6,889.7	6,655.3	6,556.5	6,429.7	17.4	17.0	-85.53	-1,594.9	-66.7	2,146.6	2,115.1	31.43	68.303	
6,900.0	6,659.4	6,553.4	6,427.5	17.5	17.0	-85.39	-1,594.7	-69.0	2,147.3	2,115.8	31.53	68.109	
6,950.0	6,677.1	6,537.5	6,416.4	18.0	17.0	-84.69	-1,594.0	-80.1	2,151.2	2,119.1	32.09	67.034	
6,988.2	6,688.4	6,514.0	6,399.2	18.5	17.0	-83.85	-1,592.9	-96.2	2,154.7	2,122.2	32.54	66.223	
7,000.0	6,691.5	6,514.0	6,399.2	18.7	17.0	-83.76	-1,592.9	-96.2	2,155.8	2,123.1	32.70	65.927	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 290-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,050.0	6,702.5	6,514.0	6,399.2	19.5	17.0	-83.35	-1,592.9	-96.2	2,161.0	2,127.6	33.46	64.592	
7,086.6	6,708.4	6,514.0	6,399.2	20.1	17.0	-83.01	-1,592.9	-96.2	2,165.3	2,131.2	34.05	63.587	
7,100.0	6,710.1	6,514.0	6,399.2	20.4	17.0	-82.87	-1,592.9	-96.2	2,167.0	2,132.7	34.27	63.233	
7,150.0	6,714.2	6,480.7	6,373.9	21.3	17.0	-81.64	-1,591.4	-117.9	2,173.0	2,138.0	35.06	61.977	
7,185.0	6,715.0	6,470.9	6,366.3	21.9	17.0	-81.07	-1,591.1	-124.0	2,177.7	2,142.1	35.66	61.064	
7,185.6	6,715.0	6,470.7	6,366.2	21.9	17.0	-81.06	-1,591.1	-124.1	2,177.8	2,142.1	35.67	61.051	
7,200.0	6,715.0	6,466.6	6,363.0	22.2	17.0	-80.97	-1,590.9	-126.7	2,179.8	2,143.9	35.94	60.656	
7,283.4	6,714.8	6,420.0	6,325.5	23.9	17.1	-79.99	-1,589.6	-154.3	2,193.2	2,155.7	37.49	58.508	
7,300.0	6,714.8	6,420.0	6,325.5	24.2	17.1	-79.99	-1,589.6	-154.3	2,196.0	2,158.2	37.81	58.074	
7,381.9	6,714.6	6,420.0	6,325.5	26.0	17.1	-79.99	-1,589.6	-154.3	2,211.7	2,172.1	39.55	55.920	
7,400.0	6,714.6	6,420.0	6,325.5	26.4	17.1	-79.99	-1,589.6	-154.3	2,215.6	2,175.6	39.94	55.478	
7,480.3	6,714.4	6,391.7	6,301.9	28.2	17.1	-79.37	-1,589.0	-170.0	2,234.0	2,192.3	41.68	53.605	
7,500.0	6,714.4	6,386.3	6,297.4	28.7	17.1	-79.25	-1,588.9	-172.9	2,238.9	2,196.8	42.10	53.176	
7,578.7	6,714.2	6,366.0	6,280.1	30.5	17.2	-78.81	-1,588.6	-183.7	2,259.7	2,215.9	43.88	51.496	
7,600.0	6,714.2	6,360.7	6,275.6	31.0	17.2	-78.69	-1,588.5	-186.4	2,265.8	2,221.4	44.36	51.074	
7,677.1	6,714.0	6,325.0	6,244.7	32.9	17.2	-77.89	-1,588.1	-204.2	2,289.0	2,242.9	46.10	49.651	
7,700.0	6,714.0	6,325.0	6,244.7	33.4	17.2	-77.89	-1,588.1	-204.2	2,296.2	2,249.5	46.65	49.225	
7,775.6	6,713.9	6,325.0	6,244.7	35.3	17.2	-77.89	-1,588.1	-204.2	2,321.4	2,272.9	48.49	47.876	
7,800.0	6,713.8	6,325.0	6,244.7	35.9	17.2	-77.89	-1,588.1	-204.2	2,330.0	2,280.9	49.08	47.471	
7,874.0	6,713.7	6,289.3	6,213.0	37.8	17.2	-77.07	-1,587.6	-220.7	2,356.9	2,306.1	50.80	46.397	
7,900.0	6,713.6	6,282.2	6,206.6	38.4	17.2	-76.91	-1,587.4	-223.7	2,366.8	2,315.4	51.42	46.033	
7,972.4	6,713.5	6,263.9	6,190.1	40.3	17.3	-76.48	-1,586.9	-231.4	2,395.5	2,342.4	53.16	45.062	
8,000.0	6,713.4	6,257.5	6,184.1	41.0	17.3	-76.33	-1,586.7	-234.1	2,406.9	2,353.0	53.82	44.717	
8,070.8	6,713.3	6,230.0	6,158.8	42.8	17.3	-75.68	-1,585.7	-244.6	2,437.1	2,381.7	55.50	43.916	
8,100.0	6,713.2	6,230.0	6,158.8	43.6	17.3	-75.68	-1,585.7	-244.6	2,450.0	2,393.7	56.23	43.569	
8,169.3	6,713.1	6,230.0	6,158.8	45.4	17.3	-75.68	-1,585.7	-244.6	2,481.6	2,423.6	58.00	42.788	
8,200.0	6,713.0	6,230.0	6,158.8	46.2	17.3	-75.68	-1,585.7	-244.6	2,496.1	2,437.3	58.78	42.465	
8,267.7	6,712.9	6,230.0	6,158.8	48.0	17.3	-75.68	-1,585.7	-244.6	2,529.1	2,468.6	60.52	41.790	
8,300.0	6,712.8	6,230.0	6,158.8	48.8	17.3	-75.68	-1,585.7	-244.6	2,545.3	2,483.9	61.35	41.489	
8,366.1	6,712.7	6,230.0	6,158.8	50.6	17.3	-75.68	-1,585.7	-244.6	2,579.4	2,516.4	63.06	40.905	
8,400.0	6,712.6	6,230.0	6,158.8	51.5	17.3	-75.68	-1,585.7	-244.6	2,597.4	2,533.5	63.93	40.626	
8,464.5	6,712.5	6,230.0	6,158.8	53.2	17.3	-75.68	-1,585.7	-244.6	2,632.5	2,566.9	65.61	40.122	
8,500.0	6,712.4	6,193.4	6,124.5	54.1	17.3	-74.81	-1,584.3	-257.2	2,651.3	2,585.0	66.31	39.987	
8,563.0	6,712.3	6,188.1	6,119.5	55.8	17.3	-74.68	-1,584.1	-258.9	2,686.9	2,619.0	67.91	39.566	
8,600.0	6,712.3	6,185.1	6,116.7	56.8	17.3	-74.61	-1,584.0	-259.8	2,708.3	2,639.4	68.85	39.335	
8,661.4	6,712.1	6,180.4	6,112.1	58.5	17.3	-74.50	-1,583.9	-261.3	2,744.4	2,674.0	70.42	38.971	
8,700.0	6,712.1	6,177.5	6,109.4	59.5	17.3	-74.43	-1,583.8	-262.1	2,767.6	2,696.2	71.41	38.757	
8,759.8	6,711.9	6,173.2	6,105.2	61.1	17.3	-74.32	-1,583.7	-263.4	2,804.1	2,731.2	72.94	38.443	
8,800.0	6,711.9	6,136.0	6,069.4	62.2	17.3	-73.42	-1,582.7	-273.2	2,830.0	2,756.3	73.70	38.397	
8,858.2	6,711.8	6,136.0	6,069.4	63.8	17.3	-73.42	-1,582.7	-273.2	2,866.6	2,791.4	75.23	38.107	
8,900.0	6,711.7	6,136.0	6,069.4	64.9	17.3	-73.42	-1,582.7	-273.2	2,893.3	2,817.0	76.32	37.911	
8,956.7	6,711.6	6,136.0	6,069.4	66.5	17.3	-73.42	-1,582.7	-273.2	2,930.1	2,852.3	77.80	37.660	
9,000.0	6,711.5	6,136.0	6,069.4	67.6	17.3	-73.42	-1,582.7	-273.2	2,958.6	2,879.7	78.94	37.480	
9,055.1	6,711.4	6,136.0	6,069.4	69.1	17.3	-73.42	-1,582.7	-273.2	2,995.4	2,915.0	80.39	37.262	
9,100.0	6,711.3	6,136.0	6,069.4	70.4	17.3	-73.42	-1,582.7	-273.2	3,025.8	2,944.3	81.57	37.096	
9,153.5	6,711.2	6,136.0	6,069.4	71.8	17.3	-73.42	-1,582.7	-273.2	3,062.6	2,979.6	82.98	36.909	
9,200.0	6,711.1	6,136.0	6,069.4	73.1	17.3	-73.42	-1,582.7	-273.2	3,094.8	3,010.6	84.20	36.755	
9,251.9	6,711.0	6,136.0	6,069.4	74.5	17.3	-73.42	-1,582.7	-273.2	3,131.3	3,045.8	85.57	36.593	
9,300.0	6,710.9	6,136.0	6,069.4	75.8	17.3	-73.42	-1,582.7	-273.2	3,165.5	3,078.7	86.84	36.452	
9,350.4	6,710.8	6,136.0	6,069.4	77.2	17.3	-73.42	-1,582.7	-273.2	3,201.7	3,113.5	88.17	36.312	
9,400.0	6,710.7	6,136.0	6,069.4	78.6	17.3	-73.42	-1,582.7	-273.2	3,237.7	3,148.2	89.48	36.183	
9,448.8	6,710.6	6,136.0	6,069.4	79.9	17.3	-73.42	-1,582.7	-273.2	3,273.5	3,182.7	90.77	36.062	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 290-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,710.5	6,136.0	6,069.4	81.3	17.3	-73.43	-1,582.7	-273.2	3,311.3	3,219.2	92.13	35.942	
9,547.2	6,710.4	6,136.0	6,069.4	82.6	17.3	-73.43	-1,582.7	-273.2	3,346.6	3,253.2	93.38	35.838	
9,600.0	6,710.3	6,136.0	6,069.4	84.1	17.3	-73.43	-1,582.7	-273.2	3,386.3	3,291.6	94.78	35.729	
9,645.6	6,710.2	6,136.0	6,069.4	85.3	17.3	-73.43	-1,582.7	-273.2	3,421.0	3,325.0	95.99	35.639	
9,700.0	6,710.1	6,136.0	6,069.4	86.8	17.3	-73.43	-1,582.7	-273.2	3,462.6	3,365.2	97.43	35.538	
9,744.1	6,710.0	6,136.0	6,069.4	88.1	17.3	-73.43	-1,582.7	-273.2	3,496.6	3,398.0	98.60	35.461	
9,800.0	6,709.9	6,136.0	6,069.4	89.6	17.3	-73.43	-1,582.7	-273.2	3,540.0	3,440.0	100.09	35.369	
9,842.5	6,709.9	6,136.0	6,069.4	90.8	17.3	-73.43	-1,582.7	-273.2	3,573.3	3,472.1	101.22	35.302	
9,900.0	6,709.7	6,136.0	6,069.4	92.4	17.3	-73.43	-1,582.7	-273.2	3,618.6	3,515.8	102.75	35.218	
9,940.9	6,709.7	6,136.0	6,069.4	93.5	17.3	-73.43	-1,582.7	-273.2	3,651.0	3,547.2	103.84	35.161	
10,000.0	6,709.6	6,136.0	6,069.4	95.1	17.3	-73.43	-1,582.7	-273.2	3,698.2	3,592.8	105.41	35.083	
10,039.3	6,709.5	6,098.4	6,032.7	96.2	17.3	-72.52	-1,582.0	-281.5	3,729.0	3,623.0	105.98	35.186	
10,100.0	6,709.4	6,095.3	6,029.7	97.9	17.3	-72.44	-1,581.9	-282.2	3,777.8	3,670.3	107.55	35.127	
10,137.8	6,709.3	6,093.4	6,027.9	98.9	17.3	-72.40	-1,581.9	-282.6	3,808.4	3,699.9	108.52	35.093	
10,200.0	6,709.2	6,090.4	6,024.9	100.7	17.3	-72.32	-1,581.9	-283.2	3,859.1	3,748.9	110.13	35.040	
10,236.2	6,709.1	6,088.7	6,023.2	101.7	17.3	-72.28	-1,581.8	-283.5	3,888.7	3,777.6	111.07	35.011	
10,300.0	6,709.0	6,085.7	6,020.3	103.4	17.3	-72.21	-1,581.8	-284.1	3,941.1	3,828.4	112.72	34.964	
10,334.6	6,708.9	6,084.1	6,018.8	104.4	17.3	-72.17	-1,581.8	-284.4	3,969.7	3,856.1	113.62	34.940	
10,400.0	6,708.8	6,081.2	6,015.9	106.2	17.3	-72.10	-1,581.8	-285.0	4,024.0	3,908.7	115.31	34.898	
10,433.0	6,708.7	6,079.8	6,014.5	107.1	17.3	-72.07	-1,581.7	-285.2	4,051.6	3,935.4	116.16	34.878	
10,500.0	6,708.6	6,041.0	5,976.3	109.0	17.3	-71.14	-1,581.5	-292.0	4,108.3	3,991.0	117.35	35.009	
10,531.5	6,708.5	6,041.0	5,976.3	109.9	17.3	-71.14	-1,581.5	-292.0	4,134.7	4,016.5	118.18	34.986	
10,600.0	6,708.4	6,041.0	5,976.3	111.8	17.3	-71.14	-1,581.5	-292.0	4,192.5	4,072.5	119.99	34.939	
10,629.9	6,708.4	6,041.0	5,976.3	112.6	17.3	-71.14	-1,581.5	-292.0	4,217.8	4,097.0	120.78	34.920	
10,700.0	6,708.2	6,041.0	5,976.3	114.6	17.3	-71.14	-1,581.5	-292.0	4,277.3	4,154.7	122.64	34.878	
10,728.3	6,708.2	6,041.0	5,976.3	115.3	17.3	-71.14	-1,581.5	-292.0	4,301.4	4,178.1	123.38	34.862	
10,800.0	6,708.0	6,041.0	5,976.3	117.3	17.3	-71.14	-1,581.5	-292.0	4,362.8	4,237.5	125.28	34.824	
10,826.7	6,708.0	6,041.0	5,976.3	118.1	17.3	-71.14	-1,581.5	-292.0	4,385.7	4,259.7	125.99	34.811	
10,900.0	6,707.8	6,041.0	5,976.3	120.1	17.3	-71.14	-1,581.5	-292.0	4,448.8	4,320.9	127.92	34.777	
10,925.2	6,707.8	6,041.0	5,976.3	120.8	17.3	-71.14	-1,581.5	-292.0	4,470.6	4,342.0	128.59	34.766	
11,000.0	6,707.6	6,041.0	5,976.3	122.9	17.3	-71.14	-1,581.5	-292.0	4,535.5	4,404.9	130.57	34.736	
11,023.6	6,707.6	6,041.0	5,976.3	123.6	17.3	-71.14	-1,581.5	-292.0	4,556.0	4,424.8	131.20	34.727	
11,100.0	6,707.5	6,041.0	5,976.3	125.7	17.3	-71.14	-1,581.5	-292.0	4,622.7	4,489.5	133.22	34.700	
11,122.0	6,707.4	6,041.0	5,976.3	126.3	17.3	-71.14	-1,581.5	-292.0	4,642.0	4,508.2	133.80	34.693	
11,200.0	6,707.3	6,041.0	5,976.3	128.5	17.3	-71.14	-1,581.5	-292.0	4,710.4	4,574.5	135.87	34.669	
11,220.4	6,707.2	6,041.0	5,976.3	129.0	17.3	-71.14	-1,581.5	-292.0	4,728.4	4,592.0	136.41	34.664	
11,300.0	6,707.1	6,041.0	5,976.3	131.3	17.3	-71.14	-1,581.5	-292.0	4,798.6	4,660.1	138.52	34.643	
11,318.9	6,707.0	6,041.0	5,976.3	131.8	17.3	-71.14	-1,581.5	-292.0	4,815.3	4,676.3	139.02	34.638	
11,400.0	6,706.9	6,041.0	5,976.3	134.0	17.3	-71.14	-1,581.5	-292.0	4,887.2	4,746.0	141.16	34.621	
11,417.3	6,706.9	6,041.0	5,976.3	134.5	17.3	-71.14	-1,581.5	-292.0	4,902.6	4,761.0	141.62	34.617	
11,500.0	6,706.7	6,041.0	5,976.3	136.8	17.3	-71.14	-1,581.5	-292.0	4,976.3	4,832.5	143.82	34.602	
11,515.7	6,706.7	6,041.0	5,976.3	137.3	17.3	-71.14	-1,581.5	-292.0	4,990.3	4,846.1	144.23	34.599	
11,600.0	6,706.5	6,041.0	5,976.3	139.6	17.3	-71.14	-1,581.5	-292.0	5,065.8	4,919.3	146.47	34.586	
11,614.1	6,706.5	6,041.0	5,976.3	140.0	17.3	-71.14	-1,581.5	-292.0	5,078.4	4,931.6	146.84	34.584	
11,700.0	6,706.3	6,041.0	5,976.3	142.4	17.3	-71.14	-1,581.5	-292.0	5,155.6	5,006.5	149.12	34.574	
11,712.6	6,706.3	6,041.0	5,976.3	142.8	17.3	-71.14	-1,581.5	-292.0	5,166.9	5,017.5	149.45	34.572	
11,800.0	6,706.1	6,041.0	5,976.3	145.2	17.3	-71.14	-1,581.5	-292.0	5,245.8	5,094.1	151.77	34.564	
11,811.0	6,706.1	6,041.0	5,976.3	145.5	17.3	-71.14	-1,581.5	-292.0	5,255.8	5,103.7	152.06	34.563	
11,900.0	6,705.9	6,041.0	5,976.3	148.0	17.3	-71.14	-1,581.5	-292.0	5,336.4	5,182.0	154.43	34.557	
11,909.4	6,705.9	6,041.0	5,976.3	148.3	17.3	-71.14	-1,581.5	-292.0	5,345.0	5,190.3	154.68	34.556	
12,000.0	6,705.8	6,041.0	5,976.3	150.8	17.3	-71.14	-1,581.5	-292.0	5,427.3	5,270.3	157.08	34.552	
12,007.8	6,705.7	6,041.0	5,976.3	151.0	17.3	-71.14	-1,581.5	-292.0	5,434.5	5,277.2	157.29	34.551	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 290-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,100.0	6,705.6	6,041.0	5,976.3	153.6	17.3	-71.14	-1,581.5	-292.0	5,518.6	5,358.8	159.73	34.548		
12,106.3	6,705.6	6,041.0	5,976.3	153.8	17.3	-71.14	-1,581.5	-292.0	5,524.3	5,364.4	159.90	34.548		
12,200.0	6,705.4	6,041.0	5,976.3	156.4	17.3	-71.14	-1,581.5	-292.0	5,610.1	5,447.7	162.39	34.547		
12,204.7	6,705.4	6,041.0	5,976.3	156.5	17.3	-71.14	-1,581.5	-292.0	5,614.4	5,451.9	162.51	34.547 SF		
12,300.0	6,705.2	6,041.0	5,976.3	159.2	17.3	-71.14	-1,581.5	-292.0	5,701.9	5,536.8	165.04	34.548		
12,303.1	6,705.2	6,041.0	5,976.3	159.3	17.3	-71.14	-1,581.5	-292.0	5,704.8	5,539.6	165.13	34.548		
12,400.0	6,705.0	6,041.0	5,976.3	162.0	17.3	-71.14	-1,581.5	-292.0	5,794.0	5,626.3	167.70	34.549		
12,401.5	6,705.0	6,041.0	5,976.3	162.0	17.3	-71.14	-1,581.5	-292.0	5,795.4	5,627.6	167.74	34.550		
12,500.0	6,704.8	6,041.0	5,976.3	164.8	17.3	-71.14	-1,581.5	-292.0	5,886.3	5,715.9	170.36	34.553		
12,598.4	6,704.6	6,041.0	5,976.3	167.5	17.3	-71.14	-1,581.5	-292.0	5,977.4	5,804.4	172.97	34.557		
12,600.0	6,704.6	6,041.0	5,976.3	167.6	17.3	-71.14	-1,581.5	-292.0	5,978.9	5,805.9	173.01	34.557		
12,696.8	6,704.4	6,041.0	5,976.3	170.3	17.3	-71.14	-1,581.5	-292.0	6,068.7	5,893.2	175.59	34.563		
12,700.0	6,704.4	6,041.0	5,976.3	170.4	17.3	-71.14	-1,581.5	-292.0	6,071.7	5,896.0	175.67	34.563		
12,795.2	6,704.3	6,041.0	5,976.3	173.0	17.3	-71.14	-1,581.5	-292.0	6,160.3	5,982.1	178.20	34.569		
12,800.0	6,704.2	6,041.0	5,976.3	173.2	17.3	-71.14	-1,581.5	-292.0	6,164.7	5,986.4	178.33	34.570		
12,893.7	6,704.1	6,041.0	5,976.3	175.8	17.3	-71.14	-1,581.5	-292.0	6,252.1	6,071.3	180.82	34.577		
12,900.0	6,704.1	6,041.0	5,976.3	176.0	17.3	-71.14	-1,581.5	-292.0	6,258.0	6,077.0	180.99	34.577		
12,992.1	6,703.9	6,041.0	5,976.3	178.5	17.3	-71.14	-1,581.5	-292.0	6,344.1	6,160.6	183.44	34.585		
13,000.0	6,703.9	6,041.0	5,976.3	178.8	17.3	-71.14	-1,581.5	-292.0	6,351.5	6,167.8	183.65	34.585		
13,090.5	6,703.7	6,041.0	5,976.3	181.3	17.3	-71.14	-1,581.5	-292.0	6,436.2	6,250.2	186.05	34.594		
13,100.0	6,703.7	6,041.0	5,976.3	181.6	17.3	-71.14	-1,581.5	-292.0	6,445.1	6,258.8	186.30	34.595		
13,188.9	6,703.5	6,041.0	5,976.3	184.0	17.3	-71.14	-1,581.5	-292.0	6,528.6	6,339.9	188.67	34.603		
13,200.0	6,703.5	6,041.0	5,976.3	184.4	17.3	-71.14	-1,581.5	-292.0	6,539.0	6,350.0	188.96	34.604		
13,287.4	6,703.3	6,041.0	5,976.3	186.8	17.3	-71.14	-1,581.5	-292.0	6,621.1	6,429.8	191.29	34.614		
13,300.0	6,703.3	6,041.0	5,976.3	187.2	17.3	-71.14	-1,581.5	-292.0	6,633.0	6,441.4	191.62	34.615		
13,385.8	6,703.2	6,041.0	5,976.3	189.6	17.3	-71.14	-1,581.5	-292.0	6,713.8	6,519.9	193.90	34.624		
13,400.0	6,703.1	6,041.0	5,976.3	190.0	17.3	-71.14	-1,581.5	-292.0	6,727.2	6,532.9	194.28	34.626		
13,484.2	6,703.0	6,041.0	5,976.3	192.3	17.3	-71.14	-1,581.5	-292.0	6,806.7	6,610.1	196.52	34.636		
13,500.0	6,702.9	6,041.0	5,976.3	192.8	17.3	-71.14	-1,581.5	-292.0	6,821.6	6,624.6	196.94	34.637		
13,582.6	6,702.8	6,041.0	5,976.3	195.1	17.3	-71.14	-1,581.5	-292.0	6,899.7	6,700.5	199.14	34.647		
13,600.0	6,702.8	6,041.0	5,976.3	195.6	17.3	-71.14	-1,581.5	-292.0	6,916.1	6,716.5	199.60	34.649		
13,681.1	6,702.6	6,041.0	5,976.3	197.8	17.3	-71.14	-1,581.5	-292.0	6,992.8	6,791.1	201.76	34.659		
13,700.0	6,702.6	6,041.0	5,976.3	198.4	17.3	-71.14	-1,581.5	-292.0	7,010.8	6,808.5	202.26	34.662		
13,779.5	6,702.4	6,041.0	5,976.3	200.6	17.3	-71.14	-1,581.5	-292.0	7,086.1	6,881.7	204.38	34.672		
13,800.0	6,702.4	6,041.0	5,976.3	201.2	17.3	-71.14	-1,581.5	-292.0	7,105.6	6,900.7	204.92	34.674		
13,877.9	6,702.2	6,041.0	5,976.3	203.3	17.3	-71.14	-1,581.5	-292.0	7,179.6	6,972.6	207.00	34.684		
13,900.0	6,702.2	6,041.0	5,976.3	204.0	17.3	-71.14	-1,581.5	-292.0	7,200.5	6,993.0	207.58	34.687		
13,976.3	6,702.1	6,041.0	5,976.3	206.1	17.3	-71.14	-1,581.5	-292.0	7,273.1	7,063.5	209.62	34.697		
14,000.0	6,702.0	6,041.0	5,976.3	206.8	17.3	-71.14	-1,581.5	-292.0	7,295.6	7,085.4	210.25	34.700		
14,074.8	6,701.9	6,041.0	5,976.3	208.9	17.3	-71.14	-1,581.5	-292.0	7,366.8	7,154.6	212.24	34.711		
14,100.0	6,701.8	6,041.0	5,976.3	209.6	17.3	-71.14	-1,581.5	-292.0	7,390.9	7,178.0	212.91	34.714		
14,173.2	6,701.7	6,041.0	5,976.3	211.6	17.3	-71.14	-1,581.5	-292.0	7,460.6	7,245.8	214.86	34.724		
14,200.0	6,701.6	6,041.0	5,976.3	212.4	17.3	-71.14	-1,581.5	-292.0	7,486.2	7,270.6	215.57	34.728		
14,271.6	6,701.5	6,041.0	5,976.3	214.4	17.3	-71.14	-1,581.5	-292.0	7,554.6	7,337.1	217.48	34.738		
14,300.0	6,701.4	6,041.0	5,976.3	215.2	17.3	-71.14	-1,581.5	-292.0	7,581.7	7,363.4	218.23	34.741		
14,370.0	6,701.3	6,041.0	5,976.3	217.1	17.3	-71.14	-1,581.5	-292.0	7,648.6	7,428.5	220.10	34.751		
14,400.0	6,701.3	6,041.0	5,976.3	218.0	17.3	-71.14	-1,581.5	-292.0	7,677.3	7,456.4	220.89	34.756		
14,468.5	6,701.1	6,041.0	5,976.3	219.9	17.3	-71.14	-1,581.5	-292.0	7,742.8	7,520.1	222.72	34.765		
14,500.0	6,701.1	6,041.0	5,976.3	220.8	17.3	-71.14	-1,581.5	-292.0	7,773.0	7,549.4	223.56	34.770		
14,566.9	6,701.0	6,041.0	5,976.3	222.6	17.3	-71.14	-1,581.5	-292.0	7,837.0	7,611.7	225.34	34.779		
14,600.0	6,700.9	6,041.0	5,976.3	223.6	17.3	-71.14	-1,581.5	-292.0	7,868.8	7,642.5	226.22	34.784		
14,665.3	6,700.8	6,041.0	5,976.3	225.4	17.3	-71.14	-1,581.5	-292.0	7,931.4	7,703.4	227.96	34.793		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST HZ SEYLOR #B10-64-1HN - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 290-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,041.0	5,976.3	226.4	17.3	-71.15	-1,581.5	-292.0	7,964.7	7,735.8	228.88	34.798	
14,763.7	6,700.6	6,041.0	5,976.3	228.2	17.3	-71.15	-1,581.5	-292.0	8,025.9	7,795.3	230.58	34.808	
14,800.0	6,700.5	5,997.4	5,933.1	229.2	17.2	-70.10	-1,581.2	-297.5	8,059.2	7,829.1	230.14	35.019	
14,862.2	6,700.4	5,996.9	5,932.6	230.9	17.2	-70.09	-1,581.2	-297.5	8,119.0	7,887.2	231.77	35.030	
14,900.0	6,700.3	5,996.6	5,932.3	232.0	17.2	-70.08	-1,581.2	-297.6	8,155.3	7,922.5	232.76	35.037	
14,960.6	6,700.2	5,996.1	5,931.8	233.7	17.2	-70.07	-1,581.2	-297.6	8,213.5	7,979.2	234.35	35.048	
15,000.0	6,700.2	5,995.8	5,931.5	234.8	17.2	-70.07	-1,581.2	-297.6	8,251.4	8,016.1	235.38	35.055	
15,059.0	6,700.0	5,995.4	5,931.1	236.4	17.2	-70.06	-1,581.2	-297.7	8,308.2	8,071.3	236.93	35.066	
15,082.8	6,700.0	5,995.2	5,930.9	237.1	17.2	-70.05	-1,581.2	-297.7	8,331.1	8,093.6	237.55	35.071	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST HZ SEYLOR STATE #B15-79HNM - Wellbore #1 - Wellb												Offset Site Error:	0.0 usft
Survey Program: 597-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	173.29	-1,001.1	117.8	1,008.1				
98.4	98.4	85.4	85.4	0.1	0.1	173.29	-1,001.1	117.8	1,008.0	1,007.9	0.17	5,788.097	
100.0	100.0	87.0	87.0	0.1	0.1	173.29	-1,001.1	117.8	1,008.0	1,007.9	0.18	5,683.312	
196.8	196.8	183.8	183.8	0.3	0.2	173.29	-1,001.1	117.8	1,008.0	1,007.6	0.48	2,084.185	
200.0	200.0	187.0	187.0	0.3	0.2	173.29	-1,001.1	117.8	1,008.0	1,007.5	0.49	2,042.123	
295.3	295.3	282.3	282.3	0.5	0.3	173.29	-1,001.1	117.8	1,008.0	1,007.2	0.79	1,268.078	
300.0	300.0	287.0	287.0	0.5	0.3	173.29	-1,001.1	117.8	1,008.0	1,007.2	0.81	1,244.680	
393.7	393.7	380.7	380.7	0.8	0.3	173.29	-1,001.1	117.8	1,008.0	1,006.9	1.11	911.256	
400.0	400.0	387.0	387.0	0.8	0.4	173.29	-1,001.1	117.8	1,008.0	1,006.9	1.13	895.133	
492.1	492.1	479.1	479.1	1.0	0.4	173.29	-1,001.1	117.8	1,008.0	1,006.6	1.42	711.148	
500.0	500.0	487.0	487.0	1.0	0.4	173.29	-1,001.1	117.8	1,008.0	1,006.6	1.44	698.868	
590.5	590.5	577.5	577.5	1.2	0.5	173.29	-1,001.1	117.8	1,008.0	1,006.3	1.73	583.101	
600.0	600.0	587.0	587.0	1.2	0.5	173.29	-1,001.1	117.8	1,008.0	1,006.3	1.76	573.192	
689.0	689.0	683.1	683.0	1.4	0.7	173.26	-1,000.6	118.3	1,007.6	1,005.5	2.16	467.459	
700.0	700.0	694.2	694.2	1.4	0.8	173.25	-1,000.6	118.4	1,007.6	1,005.4	2.20	457.112	
787.4	787.4	784.7	784.7	1.6	1.0	173.18	-999.7	119.5	1,006.9	1,004.3	2.60	387.794	
800.0	800.0	798.2	798.1	1.7	1.0	173.17	-999.5	119.7	1,006.7	1,004.1	2.65	379.329	
885.8	885.8	884.3	884.3	1.9	1.2	173.11	-998.3	120.7	1,005.7	1,002.6	3.03	332.303	
900.0	900.0	898.0	897.9	1.9	1.2	173.10	-998.2	120.8	1,005.5	1,002.4	3.09	325.866	
984.2	984.2	997.0	997.0	2.1	1.4	173.08	-996.6	121.0	1,004.3	1,000.8	3.47	289.100	
1,000.0	1,000.0	1,017.7	1,017.7	2.1	1.4	173.09	-996.1	120.7	1,003.8	1,000.3	3.55	282.716	
1,082.7	1,082.7	1,117.2	1,117.0	2.3	1.6	173.26	-992.6	117.2	1,000.6	996.6	3.95	253.220	
1,100.0	1,100.0	1,138.9	1,138.6	2.3	1.7	173.32	-991.6	116.1	999.7	995.7	4.04	247.561	
1,181.1	1,181.1	1,238.6	1,238.0	2.5	1.9	144.99	-986.1	110.1	995.6	991.2	4.44	224.167	
1,200.0	1,200.0	1,260.2	1,259.5	2.6	2.0	145.10	-984.7	108.6	994.8	990.2	4.53	219.436	
1,279.5	1,279.4	1,347.3	1,346.2	2.7	2.2	145.64	-978.7	101.6	991.8	986.9	4.91	201.849	
1,300.0	1,299.8	1,368.6	1,367.3	2.8	2.3	145.80	-977.2	99.5	991.3	986.2	5.01	197.891	
1,360.0	1,359.7	1,423.1	1,421.3	2.9	2.4	146.27	-973.3	93.7	990.4	985.1	5.28	187.698 CC, ES	
1,377.9	1,377.5	1,436.3	1,434.4	3.0	2.4	146.40	-972.5	92.0	990.5	985.2	5.35	185.134	
1,400.0	1,399.5	1,452.5	1,450.4	3.0	2.5	146.56	-971.6	89.9	990.9	985.4	5.44	182.128	
1,476.4	1,475.3	1,499.0	1,496.4	3.2	2.6	147.09	-969.6	82.8	994.4	988.6	5.73	173.461	
1,500.0	1,498.7	1,521.4	1,518.4	3.3	2.7	147.37	-969.0	79.2	996.1	990.3	5.85	170.317	
1,574.8	1,572.6	1,567.5	1,563.9	3.5	2.8	147.93	-968.6	71.6	1,004.4	998.2	6.15	163.371	
1,600.0	1,597.5	1,594.0	1,590.1	3.5	2.9	148.27	-968.9	67.3	1,008.1	1,001.8	6.28	160.460	
1,673.2	1,669.4	1,639.0	1,634.5	3.7	3.0	148.80	-969.9	60.1	1,020.8	1,014.2	6.58	155.060	
1,700.1	1,695.8	1,661.0	1,656.2	3.8	3.1	149.07	-970.5	56.7	1,026.1	1,019.4	6.71	152.973	
1,771.6	1,765.7	1,718.1	1,712.6	4.1	3.2	149.89	-972.5	48.3	1,041.3	1,034.2	7.05	147.609	
1,800.0	1,793.4	1,740.3	1,734.6	4.2	3.3	150.19	-973.4	45.1	1,047.5	1,040.4	7.19	145.719	
1,870.1	1,862.0	1,795.0	1,788.7	4.4	3.4	150.91	-976.1	37.8	1,063.8	1,056.2	7.53	141.338	
1,900.0	1,891.3	1,818.3	1,811.8	4.5	3.5	151.20	-977.4	34.9	1,071.0	1,063.3	7.67	139.672	
1,968.5	1,958.3	1,877.0	1,870.0	4.8	3.6	151.88	-981.3	28.0	1,088.2	1,080.2	8.01	135.876	
2,000.0	1,989.1	1,903.0	1,895.8	4.9	3.7	152.18	-983.2	25.1	1,096.3	1,088.1	8.17	134.258	
2,066.9	2,054.5	1,974.8	1,966.9	5.1	3.9	152.98	-987.8	16.8	1,113.3	1,104.8	8.54	130.396	
2,100.0	2,086.9	2,012.3	2,004.1	5.3	4.0	153.39	-990.0	12.2	1,121.6	1,112.8	8.73	128.473	
2,165.3	2,150.8	2,088.5	2,079.5	5.5	4.2	154.24	-993.8	2.8	1,137.5	1,128.4	9.11	124.798	
2,200.0	2,184.7	2,131.4	2,122.1	5.6	4.3	154.70	-995.5	-2.4	1,145.6	1,136.3	9.32	122.863	
2,263.8	2,247.1	2,207.8	2,198.0	5.9	4.5	155.49	-997.6	-11.4	1,160.0	1,150.3	9.70	119.560	
2,300.0	2,282.5	2,250.4	2,240.2	6.0	4.7	155.91	-998.3	-16.4	1,167.9	1,158.0	9.91	117.805	
2,362.2	2,343.3	2,313.6	2,303.1	6.3	4.8	156.54	-999.1	-23.8	1,181.2	1,170.9	10.26	115.138	
2,400.0	2,380.3	2,351.9	2,341.0	6.5	5.0	156.93	-999.5	-28.6	1,189.3	1,178.8	10.47	113.605	
2,460.6	2,439.6	2,420.6	2,409.1	6.7	5.2	157.64	-999.7	-37.8	1,202.1	1,191.2	10.84	110.910	
2,500.0	2,478.1	2,460.9	2,449.0	6.9	5.3	158.07	-999.5	-43.6	1,210.2	1,199.1	11.07	109.344	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST HZ SEYLOR STATE #B15-79HNM - Wellbore #1 - Wellb										Offset Site Error:		0.0 usft			
Survey Program: 597-MWD														Offset Well Error:		0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
2,559.0	2,535.9	2,514.2	2,501.6	7.1	5.5	158.66	-999.2	-51.8	1,222.5	1,211.1	11.40	107.275					
2,600.0	2,575.9	2,551.3	2,538.3	7.3	5.6	159.07	-999.1	-57.7	1,231.2	1,219.6	11.63	105.900					
2,657.5	2,632.2	2,604.4	2,590.6	7.5	5.8	159.67	-998.8	-66.7	1,243.7	1,231.7	11.96	103.984					
2,700.0	2,673.8	2,643.4	2,629.0	7.7	5.9	160.14	-998.6	-73.8	1,253.0	1,240.8	12.21	102.657					
2,755.9	2,728.4	2,695.1	2,679.7	7.9	6.1	160.74	-998.4	-83.4	1,265.4	1,252.9	12.53	100.983					
2,800.0	2,771.6	2,735.1	2,719.0	8.1	6.3	161.20	-998.2	-90.9	1,275.4	1,262.6	12.78	99.764					
2,854.3	2,824.7	2,780.0	2,763.2	8.3	6.4	161.71	-998.2	-99.2	1,288.0	1,274.9	13.08	98.486					
2,900.0	2,869.4	2,817.7	2,800.2	8.5	6.6	162.13	-998.3	-106.1	1,298.8	1,285.5	13.32	97.484					
2,952.7	2,921.0	2,864.1	2,845.8	8.8	6.7	162.63	-998.7	-114.6	1,311.6	1,298.0	13.61	96.348					
3,000.0	2,967.2	2,906.0	2,887.1	9.0	6.9	163.07	-999.2	-122.2	1,323.3	1,309.4	13.87	95.382					
3,051.2	3,017.3	2,949.2	2,929.6	9.2	7.0	163.51	-999.8	-129.8	1,336.2	1,322.0	14.15	94.462					
3,100.0	3,065.0	2,989.7	2,969.4	9.4	7.2	163.91	-1,000.6	-136.8	1,348.7	1,334.3	14.40	93.653					
3,149.6	3,113.5	3,031.3	3,010.4	9.6	7.3	164.30	-1,001.6	-143.8	1,361.8	1,347.1	14.66	92.880					
3,200.0	3,162.8	3,074.4	3,052.9	9.8	7.5	164.69	-1,002.9	-150.9	1,375.2	1,360.3	14.92	92.146					
3,248.0	3,209.8	3,118.2	3,096.2	10.0	7.6	165.06	-1,004.4	-157.8	1,388.3	1,373.1	15.18	91.451					
3,300.0	3,260.6	3,179.4	3,156.6	10.2	7.8	165.56	-1,006.3	-167.0	1,402.2	1,386.7	15.49	90.531					
3,346.4	3,306.1	3,231.6	3,208.2	10.5	8.0	165.96	-1,007.6	-174.5	1,414.4	1,398.6	15.75	89.781					
3,400.0	3,358.5	3,289.5	3,265.6	10.7	8.2	166.38	-1,008.9	-182.3	1,428.2	1,412.2	16.05	88.985					
3,444.9	3,402.3	3,342.8	3,318.5	10.9	8.3	166.76	-1,009.8	-189.4	1,439.6	1,423.3	16.31	88.251					
3,500.0	3,456.3	3,410.0	3,385.1	11.1	8.5	167.24	-1,010.3	-198.5	1,453.2	1,436.6	16.64	87.326					
3,543.3	3,498.6	3,463.9	3,438.5	11.3	8.7	167.61	-1,010.1	-205.7	1,463.6	1,446.6	16.90	86.583					
3,600.0	3,554.1	3,520.1	3,494.2	11.5	8.9	168.00	-1,009.7	-213.0	1,476.8	1,459.6	17.21	85.821					
3,641.7	3,594.9	3,556.3	3,530.0	11.7	9.0	168.24	-1,009.5	-217.7	1,486.6	1,469.2	17.42	85.353					
3,700.0	3,651.9	3,607.0	3,580.3	12.0	9.1	168.58	-1,009.3	-224.4	1,500.6	1,482.9	17.71	84.719					
3,740.1	3,691.2	3,642.1	3,615.1	12.2	9.3	168.81	-1,009.3	-229.2	1,510.4	1,492.5	17.92	84.291					
3,800.0	3,749.7	3,695.7	3,668.2	12.4	9.4	169.17	-1,009.3	-236.7	1,525.2	1,506.9	18.23	83.670					
3,838.6	3,787.4	3,731.8	3,703.9	12.6	9.6	169.41	-1,009.3	-241.8	1,534.8	1,516.3	18.43	83.261					
3,900.0	3,847.5	3,789.8	3,761.4	12.9	9.7	169.79	-1,009.4	-249.9	1,550.1	1,531.4	18.76	82.638					
3,937.0	3,883.7	3,825.5	3,796.7	13.0	9.9	170.01	-1,009.5	-254.8	1,559.4	1,540.5	18.95	82.276					
4,000.0	3,945.3	3,899.0	3,869.5	13.3	10.1	170.46	-1,009.6	-264.6	1,575.2	1,555.9	19.32	81.534					
4,035.4	3,980.0	3,954.9	3,924.9	13.5	10.3	170.80	-1,008.9	-272.0	1,583.6	1,564.0	19.56	80.952					
4,060.0	4,004.0	3,978.1	3,948.0	13.6	10.3	170.94	-1,008.4	-275.1	1,589.3	1,569.6	19.69	80.713					
4,100.0	4,043.2	4,011.3	3,980.9	13.7	10.4	171.16	-1,007.9	-279.4	1,598.4	1,578.5	19.91	80.294					
4,133.8	4,076.5	4,039.5	4,008.8	13.8	10.5	171.35	-1,007.5	-283.1	1,605.7	1,585.7	20.08	79.982					
4,200.0	4,141.6	4,114.2	4,082.9	14.0	10.7	171.79	-1,006.5	-292.7	1,619.1	1,598.6	20.46	79.146					
4,232.3	4,173.5	4,154.4	4,122.8	14.1	10.9	172.02	-1,005.6	-297.8	1,624.9	1,604.2	20.65	78.694					
4,300.0	4,240.6	4,228.4	4,196.1	14.3	11.1	172.43	-1,003.8	-307.0	1,635.5	1,614.5	21.01	77.838					
4,330.7	4,271.1	4,258.2	4,225.7	14.4	11.2	172.58	-1,003.0	-310.5	1,639.7	1,618.5	21.16	77.484					
4,400.0	4,340.0	4,317.1	4,284.1	14.5	11.4	172.89	-1,001.6	-317.8	1,648.3	1,626.9	21.47	76.764					
4,429.1	4,369.0	4,340.0	4,306.9	14.6	11.4	173.01	-1,001.1	-320.8	1,651.6	1,630.0	21.59	76.489					
4,500.0	4,439.7	4,392.1	4,358.4	14.8	11.6	173.28	-1,000.1	-327.9	1,658.9	1,637.0	21.88	75.829					
4,527.5	4,467.2	4,411.7	4,377.9	14.8	11.7	173.38	-999.9	-330.7	1,661.5	1,639.5	21.98	75.592					
4,600.0	4,539.7	4,478.2	4,443.6	14.9	11.9	173.71	-999.6	-340.2	1,667.5	1,645.2	22.28	74.844					
4,626.0	4,565.6	4,506.5	4,471.7	15.0	12.0	173.84	-999.5	-343.9	1,669.2	1,646.8	22.40	74.535					
4,660.2	4,599.8	4,543.6	4,508.6	15.0	12.1	-157.29	-999.6	-348.4	1,671.0	1,646.3	24.72	67.591					
4,700.0	4,639.6	4,586.6	4,551.2	15.0	12.2	-157.12	-999.5	-353.6	1,672.9	1,648.0	24.89	67.222					
4,724.4	4,664.0	4,612.8	4,577.3	15.1	12.3	-157.02	-999.4	-356.8	1,674.0	1,649.0	24.99	66.989					
4,800.0	4,739.6	4,683.7	4,647.6	15.2	12.5	-156.74	-999.2	-365.5	1,677.4	1,652.1	25.28	66.344					
4,822.8	4,762.5	4,704.5	4,668.3	15.2	12.6	-156.66	-999.1	-368.2	1,678.5	1,653.1	25.37	66.157					
4,900.0	4,839.6	4,768.8	4,731.9	15.3	12.8	-156.39	-999.0	-376.7	1,682.5	1,656.8	25.66	65.580					
4,921.2	4,860.9	4,786.0	4,749.0	15.4	12.8	-156.32	-999.0	-379.0	1,683.7	1,658.0	25.73	65.429					
5,000.0	4,939.6	4,853.1	4,815.4	15.5	13.0	-156.03	-999.4	-388.4	1,688.6	1,662.6	26.03	64.861					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 597-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	4,870.4	4,832.5	15.5	13.1	-155.95	-999.5	-391.0	1,689.9	1,663.8	26.11	64.718	
5,100.0	5,039.6	4,947.1	4,908.2	15.6	13.4	-155.57	-999.8	-403.3	1,695.5	1,669.1	26.45	64.099	
5,118.1	5,057.7	4,966.1	4,927.0	15.7	13.4	-155.48	-999.9	-406.3	1,696.8	1,670.3	26.53	63.949	
5,200.0	5,139.6	5,049.6	5,009.5	15.8	13.7	-155.09	-1,000.2	-419.2	1,702.4	1,675.5	26.89	63.303	
5,216.5	5,156.2	5,066.1	5,025.8	15.8	13.8	-155.02	-1,000.4	-421.5	1,703.6	1,676.6	26.96	63.178	
5,300.0	5,239.6	5,154.3	5,113.3	15.9	14.0	-154.69	-1,001.6	-432.9	1,709.3	1,681.9	27.33	62.539	
5,314.9	5,254.6	5,170.7	5,129.6	16.0	14.1	-154.64	-1,001.9	-434.8	1,710.2	1,682.8	27.40	62.423	
5,400.0	5,339.6	5,298.0	5,256.3	16.1	14.4	-154.29	-1,003.6	-447.3	1,714.9	1,687.0	27.85	61.572	
5,413.4	5,353.0	5,313.0	5,271.2	16.1	14.5	-154.25	-1,003.6	-448.6	1,715.4	1,687.5	27.91	61.465	
5,500.0	5,439.6	5,407.5	5,365.3	16.3	14.7	-154.00	-1,003.5	-456.9	1,718.7	1,690.4	28.27	60.790	
5,511.8	5,451.4	5,419.5	5,377.3	16.3	14.7	-153.97	-1,003.5	-457.8	1,719.1	1,690.8	28.32	60.704	
5,600.0	5,539.6	5,512.0	5,469.6	16.4	15.0	-153.77	-1,003.8	-464.6	1,722.2	1,693.5	28.67	60.060	
5,610.2	5,549.9	5,523.2	5,480.8	16.4	15.0	-153.75	-1,003.9	-465.3	1,722.5	1,693.8	28.72	59.984	
5,700.0	5,639.6	5,628.5	5,585.8	16.6	15.2	-153.58	-1,004.3	-471.2	1,725.1	1,696.0	29.09	59.295	
5,708.6	5,648.3	5,639.2	5,596.6	16.6	15.2	-153.57	-1,004.4	-471.7	1,725.3	1,696.2	29.13	59.226	
5,800.0	5,739.6	5,765.8	5,723.1	16.7	15.5	-153.44	-1,004.1	-475.9	1,726.5	1,697.0	29.54	58.447	
5,807.1	5,746.7	5,775.0	5,732.3	16.8	15.5	-153.43	-1,004.0	-476.1	1,726.5	1,696.9	29.57	58.390	
5,887.7	5,827.3	5,857.0	5,814.3	16.9	15.6	-153.38	-1,003.0	-477.3	1,726.1	1,696.3	29.86	57.813	
5,900.0	5,839.6	5,857.0	5,814.3	16.9	15.6	-153.38	-1,003.0	-477.3	1,726.2	1,696.3	29.88	57.776	
5,905.5	5,845.1	5,857.0	5,814.3	16.9	15.6	-153.38	-1,003.0	-477.3	1,726.2	1,696.3	29.89	57.760	
6,000.0	5,939.6	5,926.8	5,884.1	17.1	15.8	-153.37	-1,003.2	-477.9	1,727.2	1,697.0	30.18	57.233	
6,003.9	5,943.6	5,928.9	5,886.2	17.1	15.8	-153.37	-1,003.3	-477.9	1,727.3	1,697.1	30.19	57.216	
6,059.2	5,998.8	5,952.0	5,909.2	17.2	15.8	-153.37	-1,004.0	-478.1	1,729.1	1,698.8	30.32	57.020	
6,100.0	6,039.6	5,952.0	5,909.2	17.2	15.8	-63.24	-1,004.0	-478.1	1,730.9	1,702.0	28.85	59.990	
6,102.3	6,042.0	5,952.0	5,909.2	17.2	15.8	-63.24	-1,004.0	-478.1	1,731.0	1,702.1	28.85	59.990	
6,150.0	6,089.4	5,990.2	5,947.4	17.3	15.9	-63.26	-1,006.2	-478.5	1,731.8	1,702.8	28.94	59.834	
6,200.0	6,138.7	6,008.5	5,965.6	17.3	15.9	-63.33	-1,007.8	-478.7	1,732.4	1,703.4	28.99	59.763	
6,200.8	6,139.5	6,008.8	5,965.9	17.3	15.9	-63.33	-1,007.8	-478.7	1,732.4	1,703.4	28.99	59.762	
6,250.0	6,187.4	6,046.0	6,002.8	17.3	16.0	-63.66	-1,012.2	-479.2	1,732.6	1,703.5	29.05	59.635	
6,299.2	6,234.4	6,046.0	6,002.8	17.4	16.0	-63.73	-1,012.2	-479.2	1,731.6	1,702.6	29.04	59.628	
6,300.0	6,235.1	6,046.0	6,002.8	17.4	16.0	-63.73	-1,012.2	-479.2	1,731.6	1,702.6	29.04	59.628	
6,350.0	6,281.7	6,046.0	6,002.8	17.4	16.0	-63.80	-1,012.2	-479.2	1,730.5	1,701.5	29.02	59.640	
6,397.6	6,324.8	6,076.7	6,033.2	17.3	16.0	-64.35	-1,016.8	-479.7	1,728.7	1,699.6	29.07	59.473	
6,400.0	6,326.9	6,077.4	6,033.9	17.3	16.0	-64.37	-1,017.0	-479.7	1,728.6	1,699.5	29.07	59.468	
6,450.0	6,370.5	6,093.3	6,049.5	17.3	16.0	-64.79	-1,019.7	-480.1	1,726.3	1,697.2	29.09	59.338	
6,496.0	6,409.1	6,107.3	6,063.3	17.3	16.1	-65.22	-1,022.4	-480.5	1,723.8	1,694.7	29.13	59.169	
6,500.0	6,412.3	6,108.5	6,064.5	17.3	16.1	-65.26	-1,022.6	-480.6	1,723.6	1,694.5	29.14	59.155	
6,550.0	6,452.1	6,141.0	6,096.2	17.3	16.1	-66.15	-1,029.5	-481.7	1,720.8	1,691.6	29.27	58.785	
6,594.5	6,485.6	6,141.0	6,096.2	17.3	16.1	-66.38	-1,029.5	-481.7	1,717.6	1,688.3	29.34	58.551	
6,600.0	6,489.7	6,141.0	6,096.2	17.3	16.1	-66.41	-1,029.5	-481.7	1,717.2	1,687.9	29.34	58.524	
6,650.0	6,524.9	6,141.0	6,096.2	17.2	16.1	-66.67	-1,029.5	-481.7	1,713.7	1,684.2	29.46	58.179	
6,692.9	6,553.0	6,141.0	6,096.2	17.2	16.1	-66.89	-1,029.5	-481.7	1,710.7	1,681.1	29.60	57.793	
6,700.0	6,557.5	6,141.0	6,096.2	17.2	16.1	-66.93	-1,029.5	-481.7	1,710.2	1,680.6	29.62	57.732	
6,750.0	6,587.4	6,141.0	6,096.2	17.2	16.1	-67.18	-1,029.5	-481.7	1,706.9	1,677.0	29.86	57.171	
6,791.3	6,609.9	6,141.0	6,096.2	17.2	16.1	-67.38	-1,029.5	-481.7	1,704.1	1,674.0	30.11	56.597	
6,800.0	6,614.4	6,141.0	6,096.2	17.2	16.1	-67.42	-1,029.5	-481.7	1,703.6	1,673.4	30.16	56.486	
6,850.0	6,638.4	6,181.2	6,135.0	17.2	16.2	-68.84	-1,039.9	-483.5	1,698.8	1,668.0	30.80	55.155	
6,889.7	6,655.3	6,186.3	6,139.8	17.4	16.2	-69.21	-1,041.3	-483.7	1,695.9	1,664.7	31.22	54.327	
6,900.0	6,659.4	6,187.5	6,141.0	17.5	16.2	-69.30	-1,041.7	-483.8	1,695.2	1,663.9	31.33	54.113	
6,950.0	6,677.1	6,193.0	6,146.2	18.0	16.3	-69.73	-1,043.3	-484.0	1,691.8	1,659.8	31.93	52.978	
6,988.2	6,688.4	6,196.5	6,149.6	18.5	16.3	-70.03	-1,044.4	-484.2	1,689.3	1,656.9	32.45	52.052	
7,000.0	6,691.5	6,197.5	6,150.5	18.7	16.3	-70.12	-1,044.7	-484.2	1,688.6	1,656.0	32.62	51.772	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 597-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,050.0	6,702.5	6,201.2	6,154.0	19.5	16.3	-70.46	-1,045.9	-484.4	1,685.6	1,652.3	33.37	50.521	
7,086.6	6,708.4	6,236.0	6,186.7	20.1	16.4	-71.77	-1,057.6	-486.3	1,684.8	1,650.6	34.23	49.224	
7,100.0	6,710.1	6,236.0	6,186.7	20.4	16.4	-71.83	-1,057.6	-486.3	1,684.1	1,649.6	34.44	48.898	
7,150.0	6,714.2	6,236.0	6,186.7	21.3	16.4	-72.02	-1,057.6	-486.3	1,681.6	1,646.3	35.29	47.654	
7,185.0	6,715.0	6,236.0	6,186.7	21.9	16.4	-72.13	-1,057.6	-486.3	1,680.1	1,644.2	35.91	46.791	
7,185.6	6,715.0	6,236.0	6,186.7	21.9	16.4	-72.13	-1,057.6	-486.3	1,680.1	1,644.2	35.92	46.779	
7,200.0	6,715.0	6,236.0	6,186.7	22.2	16.4	-72.13	-1,057.6	-486.3	1,679.6	1,643.4	36.18	46.423	
7,251.3	6,714.9	6,236.0	6,186.7	23.3	16.4	-72.13	-1,057.6	-486.3	1,678.8	1,641.7	37.17	45.171	
7,283.4	6,714.8	6,236.0	6,186.7	23.9	16.4	-72.13	-1,057.6	-486.3	1,679.1	1,641.3	37.78	44.441	
7,300.0	6,714.8	6,236.0	6,186.7	24.2	16.4	-72.13	-1,057.6	-486.3	1,679.5	1,641.4	38.10	44.081	
7,381.9	6,714.6	6,236.0	6,186.7	26.0	16.4	-72.13	-1,057.6	-486.3	1,683.9	1,644.1	39.78	42.326	
7,400.0	6,714.6	6,236.0	6,186.7	26.4	16.4	-72.13	-1,057.6	-486.3	1,685.4	1,645.2	40.16	41.971	
7,480.3	6,714.4	6,236.0	6,186.7	28.2	16.4	-72.13	-1,057.6	-486.3	1,694.4	1,652.5	41.90	40.441	
7,500.0	6,714.4	6,236.0	6,186.7	28.7	16.4	-72.13	-1,057.6	-486.3	1,697.1	1,654.8	42.32	40.099	
7,578.7	6,714.2	6,236.0	6,186.7	30.5	16.4	-72.13	-1,057.6	-486.3	1,710.5	1,666.4	44.10	38.787	
7,600.0	6,714.2	6,236.0	6,186.7	31.0	16.4	-72.13	-1,057.6	-486.3	1,714.7	1,670.1	44.58	38.464	
7,677.1	6,714.0	6,236.0	6,186.7	32.9	16.4	-72.13	-1,057.6	-486.3	1,732.0	1,685.6	46.37	37.352	
7,700.0	6,714.0	6,236.0	6,186.7	33.4	16.4	-72.13	-1,057.6	-486.3	1,737.7	1,690.8	46.90	37.052	
7,775.6	6,713.9	6,236.0	6,186.7	35.3	16.4	-72.13	-1,057.6	-486.3	1,758.8	1,710.1	48.70	36.118	
7,800.0	6,713.8	6,236.0	6,186.7	35.9	16.4	-72.13	-1,057.6	-486.3	1,766.2	1,716.9	49.28	35.843	
7,874.0	6,713.7	6,236.0	6,186.7	37.8	16.4	-72.13	-1,057.6	-486.3	1,790.6	1,739.5	51.07	35.064	
7,900.0	6,713.6	6,236.0	6,186.7	38.4	16.4	-72.13	-1,057.6	-486.3	1,799.8	1,748.1	51.69	34.816	
7,972.4	6,713.5	6,236.0	6,186.7	40.3	16.4	-72.13	-1,057.6	-486.3	1,827.1	1,773.7	53.47	34.170	
8,000.0	6,713.4	6,236.0	6,186.7	41.0	16.4	-72.13	-1,057.6	-486.3	1,838.2	1,784.1	54.15	33.947	
8,070.8	6,713.3	6,236.0	6,186.7	42.8	16.4	-72.13	-1,057.6	-486.3	1,868.2	1,812.3	55.91	33.415	
8,100.0	6,713.2	6,236.0	6,186.7	43.6	16.4	-72.13	-1,057.6	-486.3	1,881.1	1,824.5	56.63	33.217	
8,169.3	6,713.1	6,236.0	6,186.7	45.4	16.4	-72.13	-1,057.6	-486.3	1,913.4	1,855.0	58.37	32.782	
8,200.0	6,713.0	6,236.0	6,186.7	46.2	16.4	-72.13	-1,057.6	-486.3	1,928.3	1,869.2	59.14	32.607	
8,267.7	6,712.9	6,236.0	6,186.7	48.0	16.4	-72.13	-1,057.6	-486.3	1,962.5	1,901.7	60.85	32.253	
8,300.0	6,712.8	6,236.0	6,186.7	48.8	16.4	-72.13	-1,057.6	-486.3	1,979.4	1,917.8	61.66	32.100	
8,366.1	6,712.7	6,236.0	6,186.7	50.6	16.4	-72.13	-1,057.6	-486.3	2,015.3	1,951.9	63.35	31.813	
8,400.0	6,712.6	6,236.0	6,186.7	51.5	16.4	-72.13	-1,057.6	-486.3	2,034.2	1,970.0	64.21	31.681	
8,464.5	6,712.5	6,236.0	6,186.7	53.2	16.4	-72.13	-1,057.6	-486.3	2,071.3	2,005.5	65.86	31.451	
8,500.0	6,712.4	6,236.0	6,186.7	54.1	16.4	-72.13	-1,057.6	-486.3	2,092.3	2,025.5	66.77	31.338	
8,563.0	6,712.3	6,236.0	6,186.7	55.8	16.4	-72.13	-1,057.6	-486.3	2,130.5	2,062.1	68.38	31.155	
8,600.0	6,712.3	6,236.0	6,186.7	56.8	16.4	-72.13	-1,057.6	-486.3	2,153.5	2,084.1	69.34	31.059	
8,661.4	6,712.1	6,236.0	6,186.7	58.5	16.4	-72.13	-1,057.6	-486.3	2,192.4	2,121.5	70.92	30.914	
8,700.0	6,712.1	6,236.0	6,186.7	59.5	16.4	-72.13	-1,057.6	-486.3	2,217.5	2,145.6	71.92	30.834	
8,759.8	6,711.9	6,236.0	6,186.7	61.1	16.4	-72.13	-1,057.6	-486.3	2,257.0	2,183.5	73.47	30.722	
8,800.0	6,711.9	6,236.0	6,186.7	62.2	16.4	-72.13	-1,057.6	-486.3	2,284.1	2,209.5	74.51	30.656	
8,858.2	6,711.8	6,236.0	6,186.7	63.8	16.4	-72.13	-1,057.6	-486.3	2,323.9	2,247.9	76.02	30.571	
8,900.0	6,711.7	6,236.0	6,186.7	64.9	16.4	-72.13	-1,057.6	-486.3	2,353.0	2,275.9	77.10	30.518	
8,956.7	6,711.6	6,236.0	6,186.7	66.5	16.4	-72.13	-1,057.6	-486.3	2,393.1	2,314.5	78.58	30.454	
9,000.0	6,711.5	6,236.0	6,186.7	67.6	16.4	-72.13	-1,057.6	-486.3	2,424.1	2,344.4	79.71	30.413	
9,055.1	6,711.4	6,236.0	6,186.7	69.1	16.4	-72.13	-1,057.6	-486.3	2,464.2	2,383.0	81.15	30.367	
9,100.0	6,711.3	6,236.0	6,186.7	70.4	16.4	-72.13	-1,057.6	-486.3	2,497.2	2,414.9	82.32	30.336	
9,153.5	6,711.2	6,236.0	6,186.7	71.8	16.4	-72.13	-1,057.6	-486.3	2,537.1	2,453.4	83.72	30.305	
9,200.0	6,711.1	6,236.0	6,186.7	73.1	16.4	-72.13	-1,057.6	-486.3	2,572.1	2,487.2	84.94	30.283	
9,251.9	6,711.0	6,236.0	6,186.7	74.5	16.4	-72.13	-1,057.6	-486.3	2,611.7	2,525.4	86.30	30.264	
9,300.0	6,710.9	6,236.0	6,186.7	75.8	16.4	-72.13	-1,057.6	-486.3	2,648.7	2,561.1	87.56	30.251	
9,350.4	6,710.8	6,236.0	6,186.7	77.2	16.4	-72.13	-1,057.6	-486.3	2,687.9	2,599.0	88.88	30.241	
9,400.0	6,710.7	6,236.0	6,186.7	78.6	16.4	-72.13	-1,057.6	-486.3	2,726.8	2,636.6	90.18	30.236	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 597-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,710.6	6,236.0	6,186.7	79.9	16.4	-72.13	-1,057.6	-486.3	2,765.4	2,673.9	91.47	30.234 SF	
9,500.0	6,710.5	6,236.0	6,186.7	81.3	16.4	-72.13	-1,057.6	-486.3	2,806.3	2,713.4	92.81	30.236	
9,547.2	6,710.4	6,236.0	6,186.7	82.6	16.4	-72.13	-1,057.6	-486.3	2,844.2	2,750.2	94.06	30.240	
9,600.0	6,710.3	6,236.0	6,186.7	84.1	16.4	-72.13	-1,057.6	-486.3	2,887.0	2,791.6	95.45	30.248	
9,645.6	6,710.2	6,236.0	6,186.7	85.3	16.4	-72.13	-1,057.6	-486.3	2,924.3	2,827.6	96.65	30.256	
9,700.0	6,710.1	6,236.0	6,186.7	86.8	16.4	-72.13	-1,057.6	-486.3	2,968.9	2,870.8	98.08	30.270	
9,744.1	6,710.0	6,236.0	6,186.7	88.1	16.4	-72.13	-1,057.6	-486.3	3,005.4	2,906.1	99.25	30.282	
9,800.0	6,709.9	6,236.0	6,186.7	89.6	16.4	-72.13	-1,057.6	-486.3	3,051.9	2,951.2	100.72	30.301	
9,842.5	6,709.9	6,236.0	6,186.7	90.8	16.4	-72.13	-1,057.6	-486.3	3,087.5	2,985.7	101.84	30.316	
9,900.0	6,709.7	6,236.0	6,186.7	92.4	16.4	-72.13	-1,057.6	-486.3	3,135.9	3,032.6	103.36	30.339	
9,940.9	6,709.7	6,236.0	6,186.7	93.5	16.4	-72.13	-1,057.6	-486.3	3,170.6	3,066.1	104.45	30.356	
10,000.0	6,709.6	6,236.0	6,186.7	95.1	16.4	-72.13	-1,057.6	-486.3	3,220.8	3,114.8	106.01	30.383	
10,039.3	6,709.5	6,236.0	6,186.7	96.2	16.4	-72.13	-1,057.6	-486.3	3,254.5	3,147.4	107.05	30.402	
10,100.0	6,709.4	6,236.0	6,186.7	97.9	16.4	-72.13	-1,057.6	-486.3	3,306.6	3,197.9	108.66	30.432	
10,137.8	6,709.3	6,236.0	6,186.7	98.9	16.4	-72.13	-1,057.6	-486.3	3,339.2	3,229.5	109.66	30.452	
10,200.0	6,709.2	6,236.0	6,186.7	100.7	16.4	-72.13	-1,057.6	-486.3	3,393.1	3,281.8	111.30	30.485	
10,236.2	6,709.1	6,236.0	6,186.7	101.7	16.4	-72.13	-1,057.6	-486.3	3,424.6	3,312.4	112.26	30.505	
10,300.0	6,709.0	6,236.0	6,186.7	103.4	16.4	-72.13	-1,057.6	-486.3	3,480.4	3,366.4	113.95	30.542	
10,334.6	6,708.9	6,236.0	6,186.7	104.4	16.4	-72.13	-1,057.6	-486.3	3,510.7	3,395.9	114.87	30.562	
10,400.0	6,708.8	6,236.0	6,186.7	106.2	16.4	-72.13	-1,057.6	-486.3	3,568.3	3,451.7	116.61	30.601	
10,433.0	6,708.7	6,236.0	6,186.7	107.1	16.4	-72.13	-1,057.6	-486.3	3,597.5	3,480.0	117.48	30.621	
10,500.0	6,708.6	6,236.0	6,186.7	109.0	16.4	-72.13	-1,057.6	-486.3	3,656.8	3,537.6	119.26	30.662	
10,531.5	6,708.5	6,236.0	6,186.7	109.9	16.4	-72.13	-1,057.6	-486.3	3,684.8	3,564.7	120.10	30.682	
10,600.0	6,708.4	6,236.0	6,186.7	111.8	16.4	-72.13	-1,057.6	-486.3	3,746.0	3,624.0	121.92	30.726	
10,629.9	6,708.4	6,236.0	6,186.7	112.6	16.4	-72.13	-1,057.6	-486.3	3,772.7	3,650.0	122.71	30.745	
10,700.0	6,708.2	6,236.0	6,186.7	114.6	16.4	-72.13	-1,057.6	-486.3	3,835.6	3,711.0	124.57	30.790	
10,728.3	6,708.2	6,236.0	6,186.7	115.3	16.4	-72.13	-1,057.6	-486.3	3,861.1	3,735.8	125.33	30.808	
10,800.0	6,708.0	6,236.0	6,186.7	117.3	16.4	-72.13	-1,057.6	-486.3	3,925.8	3,798.5	127.23	30.855	
10,826.7	6,708.0	6,236.0	6,186.7	118.1	16.4	-72.13	-1,057.6	-486.3	3,950.0	3,822.0	127.94	30.873	
10,900.0	6,707.8	6,236.0	6,186.7	120.1	16.4	-72.13	-1,057.6	-486.3	4,016.4	3,886.5	129.89	30.921	
10,925.2	6,707.8	6,236.0	6,186.7	120.8	16.4	-72.13	-1,057.6	-486.3	4,039.3	3,908.7	130.56	30.938	
11,000.0	6,707.6	6,236.0	6,186.7	122.9	16.4	-72.13	-1,057.6	-486.3	4,107.5	3,974.9	132.55	30.988	
11,023.6	6,707.6	6,236.0	6,186.7	123.6	16.4	-72.13	-1,057.6	-486.3	4,129.0	3,995.8	133.18	31.003	
11,100.0	6,707.5	6,236.0	6,186.7	125.7	16.4	-72.13	-1,057.6	-486.3	4,198.9	4,063.7	135.21	31.054	
11,122.0	6,707.4	6,236.0	6,186.7	126.3	16.4	-72.13	-1,057.6	-486.3	4,219.1	4,083.3	135.80	31.069	
11,200.0	6,707.3	6,236.0	6,186.7	128.5	16.4	-72.13	-1,057.6	-486.3	4,290.8	4,152.9	137.88	31.121	
11,220.4	6,707.2	6,236.0	6,186.7	129.0	16.4	-72.13	-1,057.6	-486.3	4,309.6	4,171.2	138.42	31.134	
11,300.0	6,707.1	6,236.0	6,186.7	131.3	16.4	-72.13	-1,057.6	-486.3	4,383.0	4,242.4	140.54	31.187	
11,318.9	6,707.0	6,236.0	6,186.7	131.8	16.4	-72.13	-1,057.6	-486.3	4,400.4	4,259.4	141.04	31.199	
11,400.0	6,706.9	6,236.0	6,186.7	134.0	16.4	-72.13	-1,057.6	-486.3	4,475.5	4,332.3	143.20	31.253	
11,417.3	6,706.9	6,236.0	6,186.7	134.5	16.4	-72.13	-1,057.6	-486.3	4,491.6	4,347.9	143.66	31.264	
11,500.0	6,706.7	6,271.2	6,219.1	136.8	16.4	-73.33	-1,071.3	-488.2	4,567.9	4,421.0	146.84	31.108	
11,515.7	6,706.7	6,271.4	6,219.3	137.3	16.4	-73.33	-1,071.4	-488.2	4,582.5	4,435.2	147.26	31.117	
11,600.0	6,706.5	6,272.6	6,220.4	139.6	16.5	-73.38	-1,071.9	-488.3	4,661.0	4,511.4	149.56	31.165	
11,614.1	6,706.5	6,272.8	6,220.6	140.0	16.5	-73.38	-1,072.0	-488.3	4,674.2	4,524.2	149.94	31.173	
11,700.0	6,706.3	6,274.1	6,221.7	142.4	16.5	-73.42	-1,072.5	-488.4	4,754.4	4,602.1	152.28	31.221	
11,712.6	6,706.3	6,274.3	6,221.9	142.8	16.5	-73.43	-1,072.6	-488.4	4,766.1	4,613.5	152.62	31.228	
11,800.0	6,706.1	6,275.5	6,223.0	145.2	16.5	-73.47	-1,073.1	-488.4	4,848.0	4,693.0	155.01	31.277	
11,811.0	6,706.1	6,275.7	6,223.2	145.5	16.5	-73.48	-1,073.1	-488.4	4,858.4	4,703.0	155.31	31.283	
11,900.0	6,705.9	6,277.0	6,224.4	148.0	16.5	-73.52	-1,073.7	-488.5	4,941.9	4,784.2	157.73	31.331	
11,909.4	6,705.9	6,277.1	6,224.5	148.3	16.5	-73.53	-1,073.8	-488.5	4,950.8	4,792.8	157.99	31.336	
12,000.0	6,705.8	6,278.4	6,225.7	150.8	16.5	-73.57	-1,074.3	-488.6	5,036.1	4,875.6	160.46	31.385	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 597-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,007.8	6,705.7	6,278.6	6,225.8	151.0	16.5	-73.58	-1,074.4	-488.6	5,043.5	4,882.8	160.67	31.389		
12,100.0	6,705.6	6,279.9	6,227.0	153.6	16.5	-73.62	-1,074.9	-488.7	5,130.4	4,967.2	163.19	31.438		
12,106.3	6,705.6	6,280.0	6,227.1	153.8	16.5	-73.62	-1,075.0	-488.7	5,136.4	4,973.0	163.36	31.442		
12,200.0	6,705.4	6,281.4	6,228.3	156.4	16.5	-73.67	-1,075.5	-488.8	5,225.0	5,059.1	165.92	31.491		
12,204.7	6,705.4	6,281.4	6,228.4	156.5	16.5	-73.67	-1,075.6	-488.8	5,229.4	5,063.4	166.05	31.493		
12,300.0	6,705.2	6,282.8	6,229.6	159.2	16.5	-73.72	-1,076.2	-488.8	5,319.8	5,151.1	168.65	31.542		
12,303.1	6,705.2	6,282.8	6,229.6	159.3	16.5	-73.72	-1,076.2	-488.8	5,322.7	5,154.0	168.74	31.544		
12,400.0	6,705.0	6,284.2	6,230.9	162.0	16.5	-73.77	-1,076.8	-488.9	5,414.7	5,243.3	171.39	31.593		
12,401.5	6,705.0	6,284.3	6,230.9	162.0	16.5	-73.77	-1,076.8	-488.9	5,416.2	5,244.8	171.43	31.594		
12,500.0	6,704.8	6,285.7	6,232.2	164.8	16.5	-73.82	-1,077.4	-489.0	5,509.8	5,335.7	174.13	31.643		
12,598.4	6,704.6	6,287.1	6,233.5	167.5	16.5	-73.86	-1,078.0	-489.1	5,603.6	5,426.8	176.82	31.691		
12,600.0	6,704.6	6,287.1	6,233.5	167.6	16.5	-73.86	-1,078.0	-489.1	5,605.1	5,428.3	176.86	31.692		
12,696.8	6,704.4	6,288.5	6,234.8	170.3	16.5	-73.91	-1,078.6	-489.1	5,697.6	5,518.0	179.52	31.739		
12,700.0	6,704.4	6,288.6	6,234.8	170.4	16.5	-73.91	-1,078.7	-489.1	5,700.6	5,521.0	179.60	31.740		
12,795.2	6,704.3	6,290.0	6,236.0	173.0	16.5	-73.96	-1,079.3	-489.2	5,791.7	5,609.4	182.21	31.785		
12,800.0	6,704.2	6,290.0	6,236.1	173.2	16.5	-73.96	-1,079.3	-489.2	5,796.2	5,613.9	182.34	31.787		
12,893.7	6,704.1	6,291.4	6,237.3	175.8	16.5	-74.01	-1,079.9	-489.3	5,885.9	5,701.0	184.91	31.831		
12,900.0	6,704.1	6,291.5	6,237.4	176.0	16.5	-74.01	-1,079.9	-489.3	5,891.9	5,706.9	185.08	31.834		
12,992.1	6,703.9	6,292.8	6,238.6	178.5	16.5	-74.05	-1,080.5	-489.4	5,980.3	5,792.6	187.61	31.876		
13,000.0	6,703.9	6,292.9	6,238.7	178.8	16.5	-74.06	-1,080.6	-489.4	5,987.8	5,800.0	187.83	31.879		
13,090.5	6,703.7	6,294.2	6,239.9	181.3	16.5	-74.10	-1,081.2	-489.5	6,074.8	5,884.4	190.31	31.920		
13,100.0	6,703.7	6,294.4	6,240.0	181.6	16.5	-74.11	-1,081.2	-489.5	6,083.9	5,893.3	190.57	31.924		
13,188.9	6,703.5	6,295.6	6,241.1	184.0	16.5	-74.15	-1,081.8	-489.5	6,169.4	5,976.4	193.02	31.963		
13,200.0	6,703.5	6,295.8	6,241.3	184.4	16.5	-74.16	-1,081.9	-489.5	6,180.0	5,986.7	193.32	31.968		
13,287.4	6,703.3	6,331.0	6,272.2	186.8	16.6	-75.32	-1,098.5	-491.5	6,264.4	6,067.7	196.78	31.835		
13,300.0	6,703.3	6,331.0	6,272.2	187.2	16.6	-75.32	-1,098.5	-491.5	6,276.6	6,079.5	197.12	31.841		
13,385.8	6,703.2	6,331.0	6,272.2	189.6	16.6	-75.32	-1,098.5	-491.5	6,359.3	6,159.8	199.45	31.884		
13,400.0	6,703.1	6,331.0	6,272.2	190.0	16.6	-75.32	-1,098.5	-491.5	6,372.9	6,173.1	199.84	31.891		
13,484.2	6,703.0	6,331.0	6,272.2	192.3	16.6	-75.32	-1,098.5	-491.5	6,454.2	6,252.1	202.12	31.932		
13,500.0	6,702.9	6,331.0	6,272.2	192.8	16.6	-75.32	-1,098.5	-491.5	6,469.4	6,266.9	202.55	31.939		
13,582.6	6,702.8	6,331.0	6,272.2	195.1	16.6	-75.32	-1,098.5	-491.5	6,549.2	6,344.4	204.80	31.979		
13,600.0	6,702.8	6,331.0	6,272.2	195.6	16.6	-75.32	-1,098.5	-491.5	6,566.0	6,360.7	205.27	31.987		
13,681.1	6,702.6	6,331.0	6,272.2	197.8	16.6	-75.32	-1,098.5	-491.5	6,644.3	6,436.9	207.47	32.026		
13,700.0	6,702.6	6,331.0	6,272.2	198.4	16.6	-75.32	-1,098.5	-491.5	6,662.6	6,454.7	207.98	32.034		
13,779.5	6,702.4	6,331.0	6,272.2	200.6	16.6	-75.32	-1,098.5	-491.5	6,739.6	6,529.4	210.14	32.071		
13,800.0	6,702.4	6,331.0	6,272.2	201.2	16.6	-75.32	-1,098.5	-491.5	6,759.4	6,548.7	210.70	32.081		
13,877.9	6,702.2	6,331.0	6,272.2	203.3	16.6	-75.32	-1,098.5	-491.5	6,834.9	6,622.0	212.82	32.116		
13,900.0	6,702.2	6,331.0	6,272.2	204.0	16.6	-75.32	-1,098.5	-491.5	6,856.3	6,642.8	213.42	32.126		
13,976.3	6,702.1	6,331.0	6,272.2	206.1	16.6	-75.32	-1,098.5	-491.5	6,930.3	6,714.8	215.49	32.161		
14,000.0	6,702.0	6,331.0	6,272.2	206.8	16.6	-75.32	-1,098.5	-491.5	6,953.2	6,737.1	216.13	32.171		
14,074.8	6,701.9	6,331.0	6,272.2	208.9	16.6	-75.32	-1,098.5	-491.5	7,025.7	6,807.6	218.16	32.204		
14,100.0	6,701.8	6,331.0	6,272.2	209.6	16.6	-75.32	-1,098.5	-491.5	7,050.2	6,831.4	218.85	32.215		
14,173.2	6,701.7	6,331.0	6,272.2	211.6	16.6	-75.32	-1,098.5	-491.5	7,121.3	6,900.5	220.84	32.247		
14,200.0	6,701.6	6,331.0	6,272.2	212.4	16.6	-75.32	-1,098.5	-491.5	7,147.3	6,925.8	221.56	32.258		
14,271.6	6,701.5	6,331.0	6,272.2	214.4	16.6	-75.32	-1,098.5	-491.5	7,216.9	6,993.4	223.51	32.289		
14,300.0	6,701.4	6,331.0	6,272.2	215.2	16.6	-75.32	-1,098.5	-491.5	7,244.5	7,020.2	224.28	32.301		
14,370.0	6,701.3	6,331.0	6,272.2	217.1	16.6	-75.32	-1,098.5	-491.5	7,312.7	7,086.5	226.18	32.330		
14,400.0	6,701.3	6,331.0	6,272.2	218.0	16.6	-75.32	-1,098.5	-491.5	7,341.8	7,114.8	227.00	32.343		
14,468.5	6,701.1	6,331.0	6,272.2	219.9	16.6	-75.32	-1,098.5	-491.5	7,408.4	7,179.6	228.86	32.371		
14,500.0	6,701.1	6,331.0	6,272.2	220.8	16.6	-75.32	-1,098.5	-491.5	7,439.1	7,209.4	229.72	32.384		
14,566.9	6,701.0	6,331.0	6,272.2	222.6	16.6	-75.32	-1,098.5	-491.5	7,504.3	7,272.8	231.53	32.411		
14,600.0	6,700.9	6,331.0	6,272.2	223.6	16.6	-75.32	-1,098.5	-491.5	7,536.5	7,304.1	232.43	32.424		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST HZ SEYLOR STATE #B15-79HNM - Wellbore #1 - Wellb												Offset Site Error:	0.0 usft
Survey Program: 597-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,665.3	6,700.8	6,331.0	6,272.2	225.4	16.6	-75.32	-1,098.5	-491.5	7,600.2	7,366.0	234.21	32.451	
14,700.0	6,700.7	6,331.0	6,272.2	226.4	16.6	-75.32	-1,098.5	-491.5	7,634.0	7,398.9	235.15	32.464	
14,763.7	6,700.6	6,331.0	6,272.2	228.2	16.6	-75.32	-1,098.5	-491.5	7,696.2	7,459.3	236.88	32.489	
14,800.0	6,700.5	6,331.0	6,272.2	229.2	16.6	-75.32	-1,098.5	-491.5	7,731.5	7,493.7	237.87	32.503	
14,862.2	6,700.4	6,331.0	6,272.2	230.9	16.6	-75.32	-1,098.5	-491.5	7,792.2	7,552.7	239.56	32.527	
14,900.0	6,700.3	6,331.0	6,272.2	232.0	16.6	-75.32	-1,098.5	-491.5	7,829.2	7,588.6	240.59	32.542	
14,960.6	6,700.2	6,331.0	6,272.2	233.7	16.6	-75.32	-1,098.5	-491.5	7,888.3	7,646.1	242.23	32.565	
15,000.0	6,700.2	6,331.0	6,272.2	234.8	16.6	-75.32	-1,098.5	-491.5	7,926.8	7,683.5	243.31	32.580	
15,059.0	6,700.0	6,331.0	6,272.2	236.4	16.6	-75.32	-1,098.5	-491.5	7,984.5	7,739.6	244.91	32.602	
15,082.8	6,700.0	6,331.0	6,272.2	237.1	16.6	-75.32	-1,098.5	-491.5	8,007.7	7,762.2	245.56	32.610	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-119.31	-1,407.9	-2,507.7	2,876.2				
98.4	98.4	49.0	49.0	0.1	0.0	-119.31	-1,408.1	-2,507.7	2,876.0	2,875.8	0.11	N/A	
100.0	100.0	50.4	50.4	0.1	0.0	-119.32	-1,408.1	-2,507.7	2,876.0	2,875.8	0.11	N/A	
196.8	196.8	139.7	139.7	0.3	0.1	-119.33	-1,409.0	-2,507.7	2,876.4	2,876.0	0.42	6,883.835	
200.0	200.0	142.9	142.9	0.3	0.1	-119.33	-1,409.1	-2,507.7	2,876.5	2,876.0	0.43	6,675.846	
295.3	295.3	238.5	238.5	0.5	0.2	-119.35	-1,410.0	-2,507.7	2,877.0	2,876.2	0.78	3,668.246	
300.0	300.0	243.1	243.1	0.5	0.3	-119.35	-1,410.0	-2,507.7	2,877.0	2,876.2	0.80	3,600.821	
393.7	393.7	336.1	336.0	0.8	0.3	-119.36	-1,410.8	-2,507.9	2,877.5	2,876.5	1.09	2,649.521	
400.0	400.0	342.5	342.5	0.8	0.3	-119.36	-1,410.8	-2,507.9	2,877.6	2,876.5	1.10	2,604.442	
492.1	492.1	436.2	436.2	1.0	0.4	-119.37	-1,411.5	-2,508.1	2,878.1	2,876.7	1.38	2,091.663	
500.0	500.0	444.1	444.1	1.0	0.4	-119.37	-1,411.6	-2,508.1	2,878.1	2,876.7	1.40	2,057.840	
590.5	590.5	537.2	537.1	1.2	0.5	-119.38	-1,412.3	-2,508.3	2,878.6	2,876.9	1.66	1,736.308	
600.0	600.0	547.3	547.2	1.2	0.5	-119.38	-1,412.3	-2,508.3	2,878.6	2,876.9	1.68	1,708.627	
689.0	689.0	640.8	640.8	1.4	0.5	-119.39	-1,412.9	-2,508.3	2,878.9	2,877.0	1.93	1,488.261	
700.0	700.0	652.2	652.1	1.4	0.5	-119.39	-1,413.0	-2,508.3	2,878.9	2,876.9	1.96	1,465.248	
787.4	787.4	744.1	744.1	1.6	0.6	-119.41	-1,413.7	-2,508.1	2,879.1	2,876.9	2.20	1,306.161	
800.0	800.0	757.6	757.6	1.7	0.6	-119.41	-1,413.8	-2,508.0	2,879.1	2,876.8	2.24	1,286.149	
857.1	857.1	816.1	816.1	1.8	0.6	-119.42	-1,414.2	-2,507.8	2,879.1	2,876.7	2.39	1,203.685	
885.8	885.8	842.3	842.3	1.9	0.6	-119.42	-1,414.4	-2,507.7	2,879.1	2,876.6	2.47	1,166.943	
900.0	900.0	855.2	855.2	1.9	0.6	-119.43	-1,414.5	-2,507.7	2,879.1	2,876.6	2.50	1,149.564	
984.2	984.2	936.3	936.3	2.1	0.7	-119.44	-1,415.2	-2,507.5	2,879.3	2,876.6	2.73	1,055.356	
1,000.0	1,000.0	952.6	952.6	2.1	0.7	-119.44	-1,415.3	-2,507.5	2,879.3	2,876.6	2.77	1,039.285	
1,082.7	1,082.7	1,039.6	1,039.6	2.3	0.7	-119.46	-1,416.0	-2,507.2	2,879.5	2,876.5	2.99	962.694	
1,100.0	1,100.0	1,058.3	1,058.3	2.3	0.7	-119.46	-1,416.2	-2,507.1	2,879.5	2,876.4	3.04	948.133	
1,181.1	1,181.1	1,139.3	1,139.3	2.5	0.7	-148.20	-1,416.8	-2,506.8	2,880.4	2,877.2	3.21	896.673	
1,200.0	1,200.0	1,156.8	1,156.8	2.6	0.8	-148.21	-1,416.9	-2,506.7	2,880.9	2,877.7	3.26	883.536	
1,279.5	1,279.4	1,236.0	1,235.9	2.7	0.8	-148.22	-1,417.5	-2,506.5	2,884.3	2,880.9	3.47	832.218	
1,300.0	1,299.8	1,258.3	1,258.3	2.8	0.8	-148.23	-1,417.6	-2,506.5	2,885.5	2,882.0	3.52	819.960	
1,377.9	1,377.5	1,337.3	1,337.3	3.0	0.8	-148.25	-1,418.1	-2,506.2	2,891.0	2,887.3	3.72	776.481	
1,400.0	1,399.5	1,358.0	1,358.0	3.0	0.8	-148.26	-1,418.2	-2,506.1	2,892.9	2,889.1	3.78	765.271	
1,476.4	1,475.3	1,432.2	1,432.1	3.2	0.9	-148.28	-1,418.6	-2,505.9	2,900.6	2,896.6	3.98	727.939	
1,500.0	1,498.7	1,456.2	1,456.1	3.3	0.9	-148.28	-1,418.8	-2,505.8	2,903.3	2,899.3	4.05	717.290	
1,574.8	1,572.6	1,531.0	1,530.9	3.5	0.9	-148.31	-1,419.2	-2,505.6	2,913.1	2,908.8	4.26	684.506	
1,600.0	1,597.5	1,555.6	1,555.6	3.5	0.9	-148.32	-1,419.3	-2,505.5	2,916.7	2,912.4	4.32	674.455	
1,673.2	1,669.4	1,628.7	1,628.7	3.7	0.9	-148.34	-1,419.7	-2,505.3	2,928.4	2,923.9	4.54	645.505	
1,700.1	1,695.8	1,656.5	1,656.5	3.8	1.0	-148.36	-1,419.9	-2,505.2	2,933.1	2,928.5	4.61	635.789	
1,771.6	1,765.7	1,728.5	1,728.4	4.1	1.0	-148.52	-1,420.3	-2,504.9	2,945.8	2,940.9	4.82	611.442	
1,800.0	1,793.4	1,756.0	1,756.0	4.2	1.0	-148.59	-1,420.5	-2,504.7	2,950.8	2,945.9	4.90	602.566	
1,870.1	1,862.0	1,821.1	1,821.0	4.4	1.0	-148.73	-1,420.9	-2,504.4	2,963.2	2,958.1	5.10	580.728	
1,900.0	1,891.3	1,846.6	1,846.5	4.5	1.0	-148.79	-1,421.1	-2,504.3	2,968.6	2,963.4	5.19	572.166	
1,968.5	1,958.3	1,905.2	1,905.1	4.8	1.1	-148.93	-1,421.7	-2,504.2	2,981.1	2,975.7	5.39	552.849	
2,000.0	1,989.1	1,934.2	1,934.1	4.9	1.1	-148.99	-1,422.0	-2,504.2	2,986.8	2,981.4	5.49	544.251	
2,066.9	2,054.5	1,995.7	1,995.6	5.1	1.1	-149.13	-1,422.6	-2,504.1	2,999.2	2,993.5	5.69	526.740	
2,100.0	2,086.9	2,026.0	2,025.9	5.3	1.1	-149.20	-1,423.0	-2,504.1	3,005.3	2,999.5	5.80	518.568	
2,165.3	2,150.8	2,085.8	2,085.7	5.5	1.1	-149.34	-1,423.8	-2,504.2	3,017.6	3,011.6	6.00	503.045	
2,200.0	2,184.7	2,117.9	2,117.9	5.6	1.1	-149.41	-1,424.2	-2,504.2	3,024.1	3,018.0	6.11	495.242	
2,263.8	2,247.1	2,177.6	2,177.6	5.9	1.2	-149.54	-1,425.0	-2,504.3	3,036.1	3,029.8	6.31	481.373	
2,300.0	2,282.5	2,211.1	2,211.1	6.0	1.2	-149.62	-1,425.6	-2,504.4	3,043.0	3,036.6	6.42	473.919	
2,362.2	2,343.3	2,267.3	2,267.2	6.3	1.2	-149.74	-1,426.4	-2,504.6	3,054.9	3,048.3	6.62	461.587	
2,400.0	2,380.3	2,301.5	2,301.4	6.5	1.2	-149.82	-1,427.0	-2,504.7	3,062.2	3,055.4	6.74	454.476	
2,460.6	2,439.6	2,361.2	2,361.1	6.7	1.2	-149.95	-1,428.0	-2,504.9	3,073.9	3,067.0	6.93	443.414	
2,500.0	2,478.1	2,400.0	2,399.8	6.9	1.2	-150.04	-1,428.7	-2,505.1	3,081.5	3,074.4	7.06	436.581	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
2,559.0	2,535.9	2,453.8	2,453.7	7.1	1.3	-150.16	-1,429.6	-2,505.3	3,092.9	3,085.7	7.25	426.752		
2,600.0	2,575.9	2,491.1	2,491.0	7.3	1.3	-150.24	-1,430.2	-2,505.5	3,100.9	3,093.5	7.38	420.259		
2,657.5	2,632.2	2,549.5	2,549.4	7.5	1.3	-150.36	-1,431.2	-2,505.9	3,112.1	3,104.6	7.56	411.391		
2,700.0	2,673.8	2,593.6	2,593.4	7.7	1.3	-150.46	-1,432.0	-2,506.1	3,120.4	3,112.7	7.70	405.114		
2,755.9	2,728.4	2,646.3	2,646.2	7.9	1.3	-150.57	-1,432.9	-2,506.3	3,131.3	3,123.4	7.88	397.217		
2,800.0	2,771.6	2,687.4	2,687.3	8.1	1.3	-150.66	-1,433.6	-2,506.5	3,139.9	3,131.9	8.03	391.267		
2,854.3	2,824.7	2,741.0	2,740.9	8.3	1.4	-150.77	-1,434.6	-2,506.7	3,150.6	3,142.4	8.20	384.138		
2,900.0	2,869.4	2,787.0	2,786.8	8.5	1.4	-150.87	-1,435.4	-2,506.9	3,159.5	3,151.2	8.35	378.382		
2,952.7	2,921.0	2,839.8	2,839.6	8.8	1.4	-150.98	-1,436.3	-2,507.2	3,169.8	3,161.3	8.52	371.976		
3,000.0	2,967.2	2,887.1	2,886.9	9.0	1.4	-151.08	-1,437.2	-2,507.3	3,179.0	3,170.4	8.67	366.472		
3,051.2	3,017.3	2,948.4	2,948.2	9.2	1.4	-151.21	-1,438.3	-2,507.4	3,189.0	3,180.1	8.84	360.712		
3,100.0	3,065.0	3,007.1	3,006.9	9.4	1.4	-151.33	-1,439.1	-2,507.3	3,198.2	3,189.2	9.00	355.398		
3,149.6	3,113.5	3,051.2	3,051.0	9.6	1.5	-151.42	-1,439.8	-2,507.2	3,207.6	3,198.5	9.16	350.254		
3,200.0	3,162.8	3,100.0	3,099.8	9.8	1.5	-151.52	-1,440.6	-2,507.1	3,217.3	3,207.9	9.32	345.228		
3,248.0	3,209.8	3,143.2	3,143.0	10.0	1.5	-151.61	-1,441.3	-2,507.1	3,226.5	3,217.0	9.47	340.552		
3,300.0	3,260.6	3,195.0	3,194.8	10.2	1.5	-151.72	-1,442.2	-2,507.0	3,236.4	3,226.8	9.64	335.637		
3,346.4	3,306.1	3,234.1	3,233.9	10.5	1.5	-151.80	-1,442.9	-2,506.9	3,245.4	3,235.6	9.79	331.400		
3,400.0	3,358.5	3,278.1	3,277.9	10.7	1.5	-151.89	-1,443.7	-2,506.9	3,255.8	3,245.8	9.97	326.720		
3,444.9	3,402.3	3,315.9	3,315.7	10.9	1.6	-151.96	-1,444.5	-2,507.0	3,264.7	3,254.6	10.11	322.899		
3,500.0	3,456.3	3,364.0	3,363.7	11.1	1.6	-152.06	-1,445.5	-2,507.2	3,275.6	3,265.4	10.29	318.328		
3,543.3	3,498.6	3,400.0	3,399.7	11.3	1.6	-152.13	-1,446.3	-2,507.4	3,284.3	3,273.9	10.43	314.850		
3,600.0	3,554.1	3,452.4	3,452.1	11.5	1.6	-152.23	-1,447.4	-2,507.7	3,295.8	3,285.2	10.62	310.421		
3,641.7	3,594.9	3,489.6	3,489.3	11.7	1.6	-152.31	-1,448.2	-2,508.0	3,304.3	3,293.6	10.75	307.267		
3,700.0	3,651.9	3,544.0	3,543.7	12.0	1.6	-152.41	-1,449.4	-2,508.5	3,316.3	3,305.3	10.94	302.993		
3,740.1	3,691.2	3,581.8	3,581.5	12.2	1.6	-152.49	-1,450.3	-2,508.9	3,324.5	3,313.4	11.08	300.133		
3,800.0	3,749.7	3,642.0	3,641.7	12.4	1.7	-152.60	-1,451.6	-2,509.5	3,336.8	3,325.5	11.27	295.993		
3,838.6	3,787.4	3,682.1	3,681.7	12.6	1.7	-152.68	-1,452.5	-2,509.8	3,344.7	3,333.3	11.40	293.394		
3,900.0	3,847.5	3,740.9	3,740.6	12.9	1.7	-152.79	-1,453.8	-2,510.3	3,357.3	3,345.7	11.60	289.402		
3,937.0	3,883.7	3,775.2	3,774.9	13.0	1.7	-152.85	-1,454.6	-2,510.6	3,364.9	3,353.2	11.72	287.069		
4,000.0	3,945.3	3,840.1	3,839.7	13.3	1.7	-152.98	-1,456.0	-2,511.2	3,377.9	3,365.9	11.93	283.183		
4,035.4	3,980.0	3,879.3	3,878.9	13.5	1.7	-153.05	-1,456.9	-2,511.5	3,385.1	3,373.0	12.04	281.039		
4,060.0	4,004.0	3,906.1	3,905.7	13.6	1.8	-153.10	-1,457.4	-2,511.7	3,390.1	3,378.0	12.13	279.577		
4,100.0	4,043.2	3,948.2	3,947.8	13.7	1.8	-153.24	-1,458.1	-2,512.0	3,397.9	3,385.7	12.23	277.832		
4,133.8	4,076.5	3,983.9	3,983.5	13.8	1.8	-153.36	-1,458.7	-2,512.3	3,404.2	3,391.9	12.31	276.641		
4,200.0	4,141.6	4,049.3	4,048.9	14.0	1.8	-153.55	-1,459.6	-2,512.8	3,415.3	3,402.9	12.45	274.242		
4,232.3	4,173.5	4,080.6	4,080.2	14.1	1.8	-153.64	-1,460.1	-2,513.1	3,420.3	3,407.8	12.52	273.202		
4,300.0	4,240.6	4,148.2	4,147.7	14.3	1.8	-153.80	-1,461.0	-2,513.7	3,429.7	3,417.0	12.66	270.988		
4,330.7	4,271.1	4,179.2	4,178.7	14.4	1.8	-153.86	-1,461.4	-2,514.0	3,433.4	3,420.7	12.72	270.030		
4,400.0	4,340.0	4,253.9	4,253.4	14.5	1.9	-153.98	-1,462.2	-2,514.7	3,440.8	3,428.0	12.85	267.802		
4,429.1	4,369.0	4,286.1	4,285.7	14.6	1.9	-154.03	-1,462.5	-2,515.0	3,443.4	3,430.5	12.90	266.933		
4,500.0	4,439.7	4,360.2	4,359.8	14.8	1.9	-154.11	-1,463.1	-2,515.7	3,448.6	3,435.6	13.02	264.781		
4,527.5	4,467.2	4,388.7	4,388.2	14.8	1.9	-154.14	-1,463.3	-2,515.9	3,450.2	3,437.1	13.07	264.007		
4,600.0	4,539.7	4,464.8	4,464.3	14.9	1.9	-154.18	-1,463.9	-2,516.5	3,453.1	3,440.0	13.19	261.892		
4,626.0	4,565.6	4,492.2	4,491.7	15.0	1.9	-154.19	-1,464.0	-2,516.7	3,453.8	3,440.6	13.22	261.162		
4,660.2	4,599.8	4,522.8	4,522.3	15.0	1.9	-125.47	-1,464.2	-2,517.0	3,454.3	3,438.2	16.06	215.023		
4,700.0	4,639.6	4,556.7	4,556.3	15.0	1.9	-125.47	-1,464.4	-2,517.3	3,454.8	3,438.6	16.12	214.254		
4,724.4	4,664.0	4,577.5	4,577.0	15.1	2.0	-125.47	-1,464.6	-2,517.5	3,455.1	3,438.9	16.16	213.743		
4,800.0	4,739.6	4,656.3	4,655.8	15.2	2.0	-125.47	-1,465.2	-2,518.3	3,456.1	3,439.8	16.29	212.153		
4,822.8	4,762.5	4,682.4	4,681.9	15.2	2.0	-125.47	-1,465.4	-2,518.6	3,456.4	3,440.0	16.33	211.668		
4,900.0	4,839.6	4,757.0	4,756.5	15.3	2.0	-125.47	-1,465.9	-2,519.3	3,457.3	3,440.8	16.46	210.069		
4,921.2	4,860.9	4,776.6	4,776.1	15.4	2.0	-125.47	-1,466.0	-2,519.5	3,457.5	3,441.0	16.49	209.633		
5,000.0	4,939.6	4,852.2	4,851.7	15.5	2.0	-125.47	-1,466.5	-2,520.4	3,458.6	3,441.9	16.63	208.034		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	4,871.5	4,871.0	15.5	2.0	-125.47	-1,466.6	-2,520.6	3,458.8	3,442.2	16.66	207.635	
5,100.0	5,039.6	4,964.9	4,964.4	15.6	2.0	-125.47	-1,467.1	-2,521.7	3,459.8	3,443.0	16.79	206.040	
5,118.1	5,057.7	4,987.9	4,987.4	15.7	2.1	-125.46	-1,467.2	-2,521.9	3,460.0	3,443.2	16.82	205.681	
5,200.0	5,139.6	5,080.0	5,079.5	15.8	2.1	-125.46	-1,467.2	-2,522.7	3,460.6	3,443.6	16.96	204.103	
5,216.5	5,156.2	5,098.3	5,097.8	15.8	2.1	-125.46	-1,467.2	-2,522.8	3,460.6	3,443.7	16.98	203.785	
5,300.0	5,239.6	5,183.4	5,182.9	15.9	2.1	-125.45	-1,467.1	-2,523.3	3,461.0	3,443.9	17.12	202.207	
5,314.9	5,254.6	5,198.6	5,198.1	16.0	2.1	-125.45	-1,467.1	-2,523.4	3,461.1	3,444.0	17.14	201.926	
5,400.0	5,339.6	5,280.6	5,280.1	16.1	2.1	-125.44	-1,467.0	-2,524.0	3,461.5	3,444.3	17.28	200.334	
5,413.4	5,353.0	5,293.5	5,292.9	16.1	2.1	-125.44	-1,467.0	-2,524.1	3,461.6	3,444.3	17.30	200.084	
5,500.0	5,439.6	5,377.9	5,377.4	16.3	2.1	-125.43	-1,466.9	-2,524.8	3,462.1	3,444.7	17.44	198.479	
5,511.8	5,451.4	5,389.4	5,388.9	16.3	2.1	-125.43	-1,466.8	-2,524.9	3,462.2	3,444.7	17.46	198.262	
5,600.0	5,539.6	5,464.3	5,463.7	16.4	2.1	-125.42	-1,466.7	-2,525.7	3,462.9	3,445.3	17.61	196.640	
5,610.2	5,549.9	5,472.8	5,472.2	16.4	2.1	-125.42	-1,466.8	-2,525.8	3,463.0	3,445.4	17.63	196.453	
5,700.0	5,639.6	5,549.1	5,548.6	16.6	2.1	-125.41	-1,467.0	-2,526.8	3,464.1	3,446.3	17.78	194.809	
5,708.6	5,648.3	5,556.5	5,556.0	16.6	2.1	-125.41	-1,467.0	-2,526.9	3,464.3	3,446.5	17.80	194.651	
5,800.0	5,739.6	5,636.4	5,635.8	16.7	2.2	-125.41	-1,467.6	-2,528.1	3,465.8	3,447.8	17.96	192.984	
5,807.1	5,746.7	5,642.7	5,642.1	16.8	2.2	-125.41	-1,467.7	-2,528.2	3,465.9	3,447.9	17.97	192.855	
5,900.0	5,839.6	5,725.2	5,724.7	16.9	2.2	-125.41	-1,468.5	-2,529.6	3,467.7	3,449.6	18.14	191.178	
5,905.5	5,845.1	5,730.1	5,729.5	16.9	2.2	-125.41	-1,468.6	-2,529.7	3,467.9	3,449.7	18.15	191.079	
6,000.0	5,939.6	5,820.6	5,820.0	17.1	2.2	-125.40	-1,469.6	-2,531.5	3,470.0	3,451.7	18.32	189.406	
6,003.9	5,943.6	5,825.8	5,825.2	17.1	2.2	-125.40	-1,469.7	-2,531.6	3,470.1	3,451.8	18.33	189.337	
6,059.2	5,998.8	5,898.3	5,897.7	17.2	2.2	-125.40	-1,470.2	-2,533.0	3,471.2	3,452.8	18.43	188.357	
6,100.0	6,039.6	5,947.8	5,947.2	17.2	2.2	-35.42	-1,470.3	-2,533.9	3,470.9	3,454.5	16.39	211.709	
6,102.3	6,042.0	5,950.7	5,950.0	17.2	2.2	-35.42	-1,470.3	-2,533.9	3,470.8	3,454.4	16.40	211.679	
6,150.0	6,089.4	6,007.4	6,006.7	17.3	2.2	-35.60	-1,470.3	-2,534.9	3,467.8	3,451.4	16.43	211.007	
6,200.0	6,138.7	6,062.0	6,061.4	17.3	2.3	-35.96	-1,470.2	-2,535.7	3,461.8	3,445.4	16.48	210.111	
6,200.8	6,139.5	6,062.9	6,062.2	17.3	2.3	-35.97	-1,470.2	-2,535.8	3,461.7	3,445.2	16.48	210.095	
6,250.0	6,187.4	6,114.9	6,114.2	17.3	2.3	-36.50	-1,470.0	-2,536.5	3,453.0	3,436.5	16.52	209.055	
6,299.2	6,234.4	6,163.3	6,162.7	17.4	2.3	-37.20	-1,469.8	-2,537.2	3,441.6	3,425.0	16.55	207.935	
6,300.0	6,235.1	6,164.1	6,163.4	17.4	2.3	-37.21	-1,469.8	-2,537.2	3,441.4	3,424.8	16.55	207.917	
6,350.0	6,281.7	6,212.1	6,211.5	17.4	2.3	-38.12	-1,469.7	-2,537.8	3,427.1	3,410.5	16.58	206.722	
6,397.6	6,324.8	6,256.6	6,255.9	17.3	2.3	-39.17	-1,469.6	-2,538.3	3,411.0	3,394.4	16.60	205.523	
6,400.0	6,326.9	6,258.8	6,258.1	17.3	2.3	-39.23	-1,469.6	-2,538.3	3,410.2	3,393.6	16.60	205.466	
6,450.0	6,370.5	6,303.6	6,303.0	17.3	2.3	-40.56	-1,469.5	-2,538.8	3,390.8	3,374.2	16.61	204.101	
6,496.0	6,409.1	6,341.6	6,341.0	17.3	2.3	-41.98	-1,469.5	-2,539.3	3,370.9	3,354.3	16.63	202.658	
6,500.0	6,412.3	6,344.8	6,344.2	17.3	2.3	-42.11	-1,469.5	-2,539.3	3,369.1	3,352.5	16.63	202.535	
6,550.0	6,452.1	6,384.2	6,383.5	17.3	2.3	-43.91	-1,469.3	-2,539.8	3,345.2	3,328.5	16.68	200.610	
6,594.5	6,485.6	6,418.6	6,417.9	17.3	2.3	-45.74	-1,469.2	-2,540.3	3,322.2	3,305.4	16.74	198.409	
6,600.0	6,489.7	6,422.8	6,422.2	17.3	2.3	-45.98	-1,469.2	-2,540.3	3,319.2	3,302.4	16.75	198.128	
6,650.0	6,524.9	6,460.1	6,459.4	17.2	2.3	-48.35	-1,469.0	-2,540.8	3,291.3	3,274.4	16.89	194.898	
6,692.9	6,553.0	6,489.8	6,489.2	17.2	2.3	-50.63	-1,468.9	-2,541.1	3,265.9	3,248.8	17.07	191.365	
6,700.0	6,557.5	6,494.6	6,493.9	17.2	2.3	-51.03	-1,468.9	-2,541.2	3,261.6	3,244.5	17.10	190.770	
6,750.0	6,587.4	6,529.6	6,528.9	17.2	2.3	-54.08	-1,468.8	-2,541.5	3,230.3	3,212.9	17.40	185.622	
6,791.3	6,609.9	6,556.4	6,555.8	17.2	2.3	-56.85	-1,468.7	-2,541.8	3,203.4	3,185.6	17.74	180.554	
6,800.0	6,614.4	6,561.8	6,561.1	17.2	2.3	-57.46	-1,468.7	-2,541.8	3,197.6	3,179.8	17.81	179.526	
6,850.0	6,638.4	6,590.3	6,589.6	17.2	2.3	-61.16	-1,468.6	-2,542.0	3,163.7	3,145.4	18.32	172.657	
6,889.7	6,655.3	6,609.2	6,608.5	17.4	2.3	-64.28	-1,468.6	-2,542.1	3,136.0	3,117.2	18.80	166.787	
6,900.0	6,659.4	6,613.4	6,612.7	17.5	2.3	-65.11	-1,468.5	-2,542.1	3,128.8	3,109.9	18.93	165.283	
6,950.0	6,677.1	6,632.0	6,631.3	18.0	2.3	-69.28	-1,468.5	-2,542.2	3,093.1	3,073.5	19.62	157.657	
6,988.2	6,688.4	6,643.9	6,643.2	18.5	2.3	-72.59	-1,468.4	-2,542.3	3,065.5	3,045.3	20.20	151.745	
7,000.0	6,691.5	6,647.2	6,646.5	18.7	2.3	-73.63	-1,468.4	-2,542.3	3,056.9	3,036.5	20.38	149.984	
7,050.0	6,702.5	6,658.8	6,658.1	19.5	2.3	-78.10	-1,468.4	-2,542.3	3,020.3	2,999.1	21.21	142.394	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,708.4	6,665.0	6,664.3	20.1	2.3	-81.38	-1,468.4	-2,542.4	2,993.4	2,971.6	21.87	136.879	
7,100.0	6,710.1	6,666.8	6,666.1	20.4	2.3	-82.58	-1,468.4	-2,542.4	2,983.6	2,961.5	22.11	134.926	
7,150.0	6,714.2	6,671.2	6,670.6	21.3	2.3	-87.00	-1,468.4	-2,542.4	2,947.0	2,923.9	23.10	127.587	
7,185.0	6,715.0	6,672.2	6,671.5	21.9	2.3	-90.00	-1,468.4	-2,542.4	2,921.4	2,897.6	23.84	122.551	
7,185.6	6,715.0	6,672.2	6,671.5	21.9	2.3	-90.05	-1,468.4	-2,542.4	2,921.0	2,897.2	23.85	122.476	
7,200.0	6,715.0	6,672.2	6,671.5	22.2	2.3	-90.05	-1,468.4	-2,542.4	2,910.6	2,886.5	24.13	120.635	
7,283.4	6,714.8	6,672.3	6,671.7	23.9	2.3	-90.05	-1,468.4	-2,542.4	2,850.8	2,825.0	25.81	110.472	
7,300.0	6,714.8	6,672.4	6,671.7	24.2	2.3	-90.05	-1,468.4	-2,542.4	2,839.0	2,812.9	26.14	108.617	
7,381.9	6,714.6	6,672.5	6,671.8	26.0	2.3	-90.06	-1,468.4	-2,542.4	2,781.8	2,753.9	27.90	99.709	
7,400.0	6,714.6	6,672.5	6,671.8	26.4	2.3	-90.06	-1,468.4	-2,542.4	2,769.3	2,741.0	28.29	97.893	
7,480.3	6,714.4	6,672.6	6,671.9	28.2	2.3	-90.06	-1,468.4	-2,542.4	2,714.6	2,684.5	30.11	90.160	
7,500.0	6,714.4	6,672.6	6,672.0	28.7	2.3	-90.06	-1,468.4	-2,542.4	2,701.4	2,670.9	30.56	88.410	
7,578.7	6,714.2	6,672.8	6,672.1	30.5	2.3	-90.06	-1,468.4	-2,542.4	2,649.4	2,617.0	32.41	81.745	
7,600.0	6,714.2	6,672.8	6,672.1	31.0	2.3	-90.06	-1,468.4	-2,542.4	2,635.6	2,602.7	32.91	80.080	
7,677.1	6,714.0	6,672.9	6,672.2	32.9	2.3	-90.07	-1,468.4	-2,542.4	2,586.3	2,551.5	34.78	74.351	
7,700.0	6,714.0	6,672.9	6,672.2	33.4	2.3	-90.07	-1,468.4	-2,542.4	2,572.0	2,536.6	35.34	72.779	
7,775.6	6,713.9	6,673.0	6,672.3	35.3	2.3	-90.07	-1,468.4	-2,542.4	2,525.5	2,488.2	37.22	67.858	
7,800.0	6,713.8	6,673.1	6,672.4	35.9	2.3	-90.07	-1,468.4	-2,542.4	2,510.7	2,472.9	37.82	66.380	
7,874.0	6,713.7	6,673.2	6,672.5	37.8	2.3	-90.07	-1,468.4	-2,542.4	2,467.0	2,427.3	39.70	62.149	
7,900.0	6,713.6	6,673.2	6,672.5	38.4	2.3	-90.08	-1,468.4	-2,542.4	2,452.0	2,411.7	40.35	60.765	
7,972.4	6,713.5	6,673.3	6,672.6	40.3	2.3	-90.08	-1,468.4	-2,542.4	2,411.2	2,369.0	42.21	57.122	
8,000.0	6,713.4	6,673.3	6,672.7	41.0	2.3	-90.08	-1,468.4	-2,542.4	2,396.1	2,353.2	42.92	55.827	
8,070.8	6,713.3	6,673.4	6,672.7	42.8	2.3	-90.08	-1,468.4	-2,542.4	2,358.2	2,313.4	44.76	52.686	
8,100.0	6,713.2	6,673.5	6,672.8	43.6	2.3	-90.08	-1,468.4	-2,542.4	2,343.0	2,297.5	45.52	51.477	
8,169.3	6,713.1	6,673.6	6,672.9	45.4	2.3	-90.09	-1,468.4	-2,542.4	2,308.1	2,260.8	47.33	48.764	
8,200.0	6,713.0	6,673.6	6,672.9	46.2	2.3	-90.09	-1,468.4	-2,542.4	2,293.2	2,245.0	48.14	47.637	
8,267.7	6,712.9	6,673.7	6,673.0	48.0	2.3	-90.09	-1,468.4	-2,542.4	2,261.3	2,211.3	49.93	45.291	
8,300.0	6,712.8	6,673.7	6,673.1	48.8	2.3	-90.09	-1,468.4	-2,542.4	2,246.6	2,195.8	50.78	44.241	
8,366.1	6,712.7	6,673.8	6,673.1	50.6	2.3	-90.09	-1,468.4	-2,542.4	2,217.8	2,165.2	52.54	42.211	
8,400.0	6,712.6	6,673.9	6,673.2	51.5	2.3	-90.09	-1,468.4	-2,542.4	2,203.6	2,150.2	53.44	41.234	
8,464.5	6,712.5	6,673.9	6,673.3	53.2	2.3	-90.10	-1,468.4	-2,542.4	2,177.9	2,122.7	55.17	39.476	
8,500.0	6,712.4	6,674.0	6,673.3	54.1	2.3	-90.10	-1,468.4	-2,542.4	2,164.4	2,108.3	56.12	38.569	
8,563.0	6,712.3	6,674.1	6,673.4	55.8	2.3	-90.10	-1,468.4	-2,542.4	2,141.8	2,083.9	57.81	37.047	
8,600.0	6,712.3	6,674.1	6,673.5	56.8	2.3	-90.10	-1,468.4	-2,542.4	2,129.2	2,070.4	58.81	36.206	
8,661.4	6,712.1	6,674.2	6,673.5	58.5	2.3	-90.10	-1,468.4	-2,542.4	2,109.6	2,049.1	60.47	34.889	
8,700.0	6,712.1	6,674.3	6,673.6	59.5	2.3	-90.11	-1,468.4	-2,542.4	2,098.1	2,036.6	61.51	34.111	
8,759.8	6,711.9	6,674.3	6,673.7	61.1	2.3	-90.11	-1,468.4	-2,542.4	2,081.6	2,018.5	63.13	32.974	
8,800.0	6,711.8	6,674.4	6,673.8	62.2	2.3	-90.11	-1,468.4	-2,542.4	2,071.4	2,007.2	64.22	32.256	
8,858.2	6,711.7	6,674.5	6,673.8	63.8	2.3	-90.11	-1,468.4	-2,542.4	2,058.0	1,992.2	65.80	31.275	
8,900.0	6,711.7	6,674.5	6,673.8	64.9	2.3	-90.11	-1,468.4	-2,542.4	2,049.3	1,982.3	66.94	30.615	
8,956.7	6,711.6	6,674.6	6,673.9	66.5	2.3	-90.11	-1,468.4	-2,542.4	2,038.8	1,970.3	68.48	29.771	
9,000.0	6,711.5	6,674.6	6,674.0	67.6	2.3	-90.12	-1,468.4	-2,542.4	2,031.8	1,962.1	69.66	29.166	
9,055.1	6,711.4	6,674.7	6,674.0	69.1	2.3	-90.12	-1,468.4	-2,542.4	2,024.2	1,953.1	71.17	28.442	
9,100.0	6,711.3	6,674.8	6,674.1	70.4	2.3	-90.12	-1,468.4	-2,542.4	2,019.2	1,946.8	72.40	27.890	
9,153.5	6,711.2	6,674.8	6,674.2	71.8	2.3	-90.12	-1,468.4	-2,542.4	2,014.4	1,940.5	73.86	27.272	
9,200.0	6,711.1	6,674.9	6,674.2	73.1	2.3	-90.12	-1,468.4	-2,542.4	2,011.4	1,936.3	75.14	26.770	
9,251.9	6,711.0	6,675.0	6,674.3	74.5	2.3	-90.13	-1,468.4	-2,542.4	2,009.3	1,932.7	76.56	26.244	
9,300.0	6,710.9	6,675.0	6,674.3	75.8	2.3	-90.13	-1,468.4	-2,542.4	2,008.6	1,930.7	77.88	25.790	
9,306.4	6,710.9	6,675.0	6,674.4	76.0	2.3	-90.13	-1,468.4	-2,542.4	2,008.6	1,930.5	78.06	25.732 CC	
9,350.4	6,710.8	6,675.1	6,674.4	77.2	2.3	-90.13	-1,468.4	-2,542.4	2,009.1	1,929.8	79.27	25.346 ES	
9,400.0	6,710.7	6,675.2	6,674.5	78.6	2.3	-90.13	-1,468.4	-2,542.4	2,010.7	1,930.1	80.63	24.938	
9,448.8	6,710.6	6,675.2	6,674.5	79.9	2.3	-90.13	-1,468.4	-2,542.4	2,013.6	1,931.6	81.97	24.564	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,710.5	6,675.3	6,674.6	81.3	2.3	-90.13	-1,468.4	-2,542.4	2,017.9	1,934.5	83.38	24.200	
9,547.2	6,710.4	6,675.3	6,674.7	82.6	2.3	-90.14	-1,468.4	-2,542.4	2,023.0	1,938.3	84.69	23.888	
9,600.0	6,710.3	6,675.4	6,674.7	84.1	2.3	-90.14	-1,468.4	-2,542.4	2,029.9	1,943.8	86.14	23.565	
9,645.6	6,710.2	6,675.5	6,674.8	85.3	2.3	-90.14	-1,468.4	-2,542.4	2,037.0	1,949.6	87.40	23.306	
9,700.0	6,710.1	6,675.5	6,674.8	86.8	2.3	-90.14	-1,468.4	-2,542.4	2,046.8	1,957.9	88.90	23.023	
9,744.1	6,710.0	6,675.6	6,674.9	88.1	2.3	-90.14	-1,468.4	-2,542.4	2,055.7	1,965.6	90.12	22.811	
9,800.0	6,709.9	6,675.6	6,675.0	89.6	2.3	-90.14	-1,468.4	-2,542.4	2,068.3	1,976.7	91.67	22.564	
9,842.5	6,709.9	6,675.7	6,675.0	90.8	2.3	-90.15	-1,468.4	-2,542.4	2,078.9	1,986.0	92.84	22.392	
9,900.0	6,709.7	6,675.8	6,675.1	92.4	2.3	-90.15	-1,468.4	-2,542.4	2,094.4	2,000.0	94.43	22.179	
9,940.9	6,709.7	6,675.8	6,675.1	93.5	2.3	-90.15	-1,468.4	-2,542.4	2,106.4	2,010.8	95.57	22.041	
10,000.0	6,709.6	6,675.9	6,675.2	95.1	2.3	-90.15	-1,468.4	-2,542.4	2,124.9	2,027.7	97.20	21.861	
10,039.3	6,709.5	6,675.9	6,675.3	96.2	2.3	-90.15	-1,468.4	-2,542.4	2,138.1	2,039.8	98.29	21.753	
10,100.0	6,709.4	6,676.0	6,675.3	97.9	2.3	-90.16	-1,468.4	-2,542.4	2,159.6	2,059.7	99.97	21.602	
10,137.8	6,709.3	6,676.1	6,675.4	98.9	2.3	-90.16	-1,468.4	-2,542.4	2,173.8	2,072.8	101.02	21.518	
10,200.0	6,709.2	6,676.1	6,675.5	100.7	2.3	-90.16	-1,468.4	-2,542.4	2,198.4	2,095.6	102.75	21.396	
10,236.2	6,709.1	6,676.2	6,675.5	101.7	2.3	-90.16	-1,468.4	-2,542.4	2,213.3	2,109.6	103.75	21.333	
10,300.0	6,709.0	6,676.3	6,675.6	103.4	2.3	-90.16	-1,468.4	-2,542.4	2,240.9	2,135.3	105.52	21.236	
10,334.6	6,708.9	6,676.3	6,675.6	104.4	2.3	-90.16	-1,468.4	-2,542.4	2,256.4	2,150.0	106.48	21.190	
10,400.0	6,708.8	6,676.4	6,675.7	106.2	2.3	-90.17	-1,468.4	-2,542.4	2,287.0	2,178.7	108.30	21.117	
10,433.0	6,708.7	6,676.4	6,675.7	107.1	2.3	-90.17	-1,468.4	-2,542.4	2,303.0	2,193.7	109.22	21.086	
10,500.0	6,708.6	6,676.5	6,675.8	109.0	2.3	-90.17	-1,468.4	-2,542.4	2,336.4	2,225.4	111.08	21.034	
10,531.5	6,708.5	6,676.5	6,675.9	109.9	2.3	-90.17	-1,468.4	-2,542.4	2,352.7	2,240.7	111.96	21.014	
10,600.0	6,708.4	6,676.6	6,675.9	111.8	2.3	-90.17	-1,468.4	-2,542.4	2,389.1	2,275.2	113.86	20.982	
10,629.9	6,708.4	6,676.6	6,676.0	112.6	2.3	-90.17	-1,468.4	-2,542.4	2,405.4	2,290.7	114.69	20.972	
10,700.0	6,708.2	6,676.7	6,676.0	114.6	2.3	-90.18	-1,468.4	-2,542.4	2,444.7	2,328.0	116.64	20.958	
10,728.3	6,708.2	6,676.8	6,676.1	115.3	2.3	-90.18	-1,468.4	-2,542.4	2,460.9	2,343.5	117.43	20.956 SF	
10,800.0	6,708.0	6,676.8	6,676.2	117.3	2.3	-90.18	-1,468.4	-2,542.4	2,503.0	2,383.6	119.43	20.958	
10,826.7	6,708.0	6,676.9	6,676.2	118.1	2.3	-90.18	-1,468.4	-2,542.4	2,519.1	2,398.9	120.17	20.962	
10,900.0	6,707.8	6,677.0	6,676.3	120.1	2.3	-90.18	-1,468.4	-2,542.4	2,563.9	2,441.7	122.21	20.979	
10,925.2	6,707.8	6,677.0	6,676.3	120.8	2.3	-90.18	-1,468.4	-2,542.4	2,579.7	2,456.7	122.91	20.988	
11,000.0	6,707.6	6,677.1	6,676.4	122.9	2.3	-90.19	-1,468.4	-2,542.4	2,627.3	2,502.3	125.00	21.018	
11,023.6	6,707.6	6,677.1	6,676.4	123.6	2.3	-90.19	-1,468.4	-2,542.4	2,642.5	2,516.9	125.66	21.030	
11,100.0	6,707.5	6,677.2	6,676.5	125.7	2.3	-90.19	-1,468.4	-2,542.4	2,692.8	2,565.0	127.79	21.073	
11,122.0	6,707.4	6,677.2	6,676.5	126.3	2.3	-90.19	-1,468.4	-2,542.4	2,707.5	2,579.1	128.40	21.087	
11,200.0	6,707.3	6,677.3	6,676.6	128.5	2.3	-90.19	-1,468.4	-2,542.4	2,760.4	2,629.8	130.57	21.141	
11,220.4	6,707.2	6,677.3	6,676.7	129.0	2.3	-90.19	-1,468.4	-2,542.4	2,774.5	2,643.3	131.14	21.156	
11,300.0	6,707.1	6,677.4	6,676.7	131.3	2.3	-90.20	-1,468.4	-2,542.4	2,829.9	2,696.6	133.36	21.220	
11,318.9	6,707.0	6,677.4	6,676.8	131.8	2.3	-90.20	-1,468.4	-2,542.4	2,843.3	2,709.4	133.89	21.236	
11,400.0	6,706.9	6,677.5	6,676.9	134.0	2.3	-90.20	-1,468.4	-2,542.4	2,901.3	2,765.1	136.15	21.309	
11,417.3	6,706.9	6,677.6	6,676.9	134.5	2.3	-90.20	-1,468.4	-2,542.4	2,913.8	2,777.1	136.64	21.325	
11,500.0	6,706.7	6,677.6	6,677.0	136.8	2.3	-90.20	-1,468.4	-2,542.4	2,974.2	2,835.3	138.95	21.406	
11,515.7	6,706.7	6,677.7	6,677.0	137.3	2.3	-90.20	-1,468.4	-2,542.4	2,985.8	2,846.5	139.38	21.422	
11,600.0	6,706.5	6,677.8	6,677.1	139.6	2.3	-90.21	-1,468.4	-2,542.4	3,048.7	2,907.0	141.74	21.510	
11,614.1	6,706.5	6,677.8	6,677.1	140.0	2.3	-90.21	-1,468.4	-2,542.4	3,059.4	2,917.3	142.13	21.525	
11,700.0	6,706.3	6,677.9	6,677.2	142.4	2.3	-90.21	-1,468.4	-2,542.4	3,124.7	2,980.1	144.53	21.619	
11,712.6	6,706.3	6,677.9	6,677.2	142.8	2.3	-90.21	-1,468.4	-2,542.4	3,134.3	2,989.4	144.88	21.634	
11,800.0	6,706.1	6,678.0	6,677.3	145.2	2.3	-90.21	-1,468.4	-2,542.4	3,201.9	3,054.6	147.32	21.734	
11,811.0	6,706.1	6,678.0	6,677.3	145.5	2.3	-90.21	-1,468.4	-2,542.4	3,210.5	3,062.8	147.63	21.747	
11,900.0	6,705.9	6,678.1	6,677.4	148.0	2.3	-90.22	-1,468.4	-2,542.4	3,280.4	3,130.3	150.12	21.852	
11,909.4	6,705.9	6,678.1	6,677.4	148.3	2.3	-90.22	-1,468.4	-2,542.4	3,287.8	3,137.5	150.38	21.863	
12,000.0	6,705.8	6,678.2	6,677.5	150.8	2.3	-90.22	-1,468.4	-2,542.4	3,360.0	3,207.1	152.91	21.973	
12,007.8	6,705.7	6,678.2	6,677.5	151.0	2.3	-90.22	-1,468.4	-2,542.4	3,366.3	3,213.2	153.13	21.983	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,100.0	6,705.6	6,678.3	6,677.6	153.6	2.3	-90.22	-1,468.4	-2,542.4	3,440.7	3,285.0	155.71	22.097	
12,106.3	6,705.6	6,678.3	6,677.6	153.8	2.3	-90.22	-1,468.4	-2,542.4	3,445.8	3,289.9	155.88	22.105	
12,200.0	6,705.4	6,678.4	6,677.7	156.4	2.3	-90.23	-1,468.4	-2,542.4	3,522.4	3,363.9	158.50	22.223	
12,204.7	6,705.4	6,678.4	6,677.7	156.5	2.3	-90.23	-1,468.4	-2,542.4	3,526.2	3,367.6	158.63	22.229	
12,300.0	6,705.2	6,678.5	6,677.9	159.2	2.3	-90.23	-1,468.4	-2,542.4	3,605.0	3,443.7	161.30	22.349	
12,303.1	6,705.2	6,678.5	6,677.9	159.3	2.3	-90.23	-1,468.4	-2,542.4	3,607.6	3,446.2	161.39	22.353	
12,400.0	6,705.0	6,678.6	6,678.0	162.0	2.3	-90.23	-1,468.4	-2,542.4	3,688.4	3,524.3	164.10	22.477	
12,401.5	6,705.0	6,678.6	6,678.0	162.0	2.3	-90.23	-1,468.4	-2,542.4	3,689.7	3,525.6	164.14	22.479	
12,500.0	6,704.8	6,678.7	6,678.1	164.8	2.3	-90.24	-1,468.4	-2,542.4	3,772.7	3,605.8	166.89	22.605	
12,598.4	6,704.6	6,678.9	6,678.2	167.5	2.3	-90.24	-1,468.4	-2,542.4	3,856.3	3,686.7	169.65	22.732	
12,600.0	6,704.6	6,678.9	6,678.2	167.6	2.3	-90.24	-1,468.4	-2,542.4	3,857.7	3,688.0	169.69	22.734	
12,696.8	6,704.4	6,679.0	6,678.3	170.3	2.3	-90.24	-1,468.4	-2,542.4	3,940.7	3,768.3	172.40	22.858	
12,700.0	6,704.4	6,679.0	6,678.3	170.4	2.3	-90.24	-1,468.4	-2,542.4	3,943.4	3,770.9	172.49	22.862	
12,795.2	6,704.3	6,679.1	6,678.4	173.0	2.3	-90.24	-1,468.4	-2,542.4	4,025.7	3,850.5	175.16	22.983	
12,800.0	6,704.2	6,679.1	6,678.4	173.2	2.3	-90.24	-1,468.4	-2,542.4	4,029.8	3,854.5	175.29	22.990	
12,893.7	6,704.1	6,679.2	6,678.5	175.8	2.3	-90.25	-1,468.4	-2,542.4	4,111.3	3,933.4	177.91	23.109	
12,900.0	6,704.1	6,679.2	6,678.5	176.0	2.3	-90.25	-1,468.4	-2,542.4	4,116.8	3,938.7	178.09	23.117	
12,992.1	6,703.9	6,679.3	6,678.6	178.5	2.3	-90.25	-1,468.4	-2,542.4	4,197.4	4,016.8	180.67	23.233	
13,000.0	6,703.9	6,679.3	6,678.6	178.8	2.3	-90.25	-1,468.4	-2,542.4	4,204.4	4,023.5	180.89	23.243	
13,090.5	6,703.7	6,679.4	6,678.7	181.3	2.3	-90.25	-1,468.4	-2,542.4	4,284.1	4,100.7	183.42	23.357	
13,100.0	6,703.7	6,679.4	6,678.7	181.6	2.3	-90.25	-1,468.4	-2,542.4	4,292.5	4,108.8	183.69	23.368	
13,188.9	6,703.5	6,679.5	6,678.8	184.0	2.3	-90.26	-1,468.4	-2,542.4	4,371.3	4,185.1	186.18	23.479	
13,200.0	6,703.5	6,679.5	6,678.8	184.4	2.3	-90.26	-1,468.4	-2,542.4	4,381.1	4,194.6	186.49	23.493	
13,287.4	6,703.3	6,679.6	6,678.9	186.8	2.3	-90.26	-1,468.4	-2,542.4	4,458.9	4,270.0	188.93	23.601	
13,300.0	6,703.3	6,679.6	6,678.9	187.2	2.3	-90.26	-1,468.4	-2,542.4	4,470.2	4,280.9	189.29	23.616	
13,385.8	6,703.2	6,679.7	6,679.0	189.6	2.3	-90.26	-1,468.4	-2,542.4	4,547.0	4,355.3	191.69	23.721	
13,400.0	6,703.1	6,679.7	6,679.0	190.0	2.3	-90.26	-1,468.4	-2,542.4	4,559.8	4,367.7	192.09	23.738	
13,484.2	6,703.0	6,679.8	6,679.1	192.3	2.3	-90.27	-1,468.4	-2,542.4	4,635.5	4,441.1	194.45	23.840	
13,500.0	6,702.9	6,679.8	6,679.1	192.8	2.3	-90.27	-1,468.4	-2,542.4	4,649.8	4,454.9	194.89	23.858	
13,582.6	6,702.8	6,679.9	6,679.2	195.1	2.3	-90.27	-1,468.4	-2,542.4	4,724.4	4,527.2	197.20	23.957	
13,600.0	6,702.8	6,679.9	6,679.2	195.6	2.3	-90.27	-1,468.4	-2,542.4	4,740.1	4,542.5	197.69	23.978	
13,681.1	6,702.6	6,680.0	6,679.3	197.8	2.3	-90.27	-1,468.4	-2,542.4	4,813.7	4,613.7	199.96	24.073	
13,700.0	6,702.6	6,680.0	6,679.3	198.4	2.3	-90.27	-1,468.4	-2,542.4	4,830.9	4,630.4	200.49	24.095	
13,779.5	6,702.4	6,680.1	6,679.4	200.6	2.3	-90.28	-1,468.4	-2,542.4	4,903.3	4,700.6	202.72	24.188	
13,800.0	6,702.4	6,680.1	6,679.4	201.2	2.3	-90.28	-1,468.4	-2,542.4	4,922.0	4,718.7	203.29	24.211	
13,877.9	6,702.2	6,680.2	6,679.5	203.3	2.3	-90.28	-1,468.4	-2,542.4	4,993.3	4,787.8	205.48	24.301	
13,900.0	6,702.2	6,680.2	6,679.5	204.0	2.3	-90.28	-1,468.4	-2,542.4	5,013.5	4,807.4	206.10	24.326	
13,976.3	6,702.1	6,680.3	6,679.6	206.1	2.3	-90.28	-1,468.4	-2,542.4	5,083.5	4,875.3	208.24	24.412	
14,000.0	6,702.0	6,680.3	6,679.6	206.8	2.3	-90.28	-1,468.4	-2,542.4	5,105.3	4,896.4	208.90	24.439	
14,074.8	6,701.9	6,680.4	6,679.7	208.9	2.3	-90.28	-1,468.4	-2,542.4	5,174.1	4,963.1	210.99	24.522	
14,100.0	6,701.8	6,680.4	6,679.7	209.6	2.3	-90.29	-1,468.4	-2,542.4	5,197.4	4,985.7	211.70	24.550	
14,173.2	6,701.7	6,680.5	6,679.8	211.6	2.3	-90.29	-1,468.4	-2,542.4	5,264.9	5,051.2	213.75	24.631	
14,200.0	6,701.6	6,680.5	6,679.8	212.4	2.3	-90.29	-1,468.4	-2,542.4	5,289.7	5,075.2	214.50	24.660	
14,271.6	6,701.5	6,680.6	6,679.9	214.4	2.3	-90.29	-1,468.4	-2,542.4	5,356.1	5,139.5	216.51	24.738	
14,300.0	6,701.4	6,680.6	6,679.9	215.2	2.3	-90.29	-1,468.4	-2,542.4	5,382.4	5,165.1	217.31	24.769	
14,370.0	6,701.3	6,680.7	6,680.0	217.1	2.3	-90.29	-1,468.4	-2,542.4	5,447.4	5,228.2	219.27	24.843	
14,400.0	6,701.3	6,680.7	6,680.0	218.0	2.3	-90.29	-1,468.4	-2,542.4	5,475.3	5,255.2	220.11	24.875	
14,468.5	6,701.1	6,680.8	6,680.1	219.9	2.3	-90.30	-1,468.4	-2,542.4	5,539.0	5,317.0	222.03	24.947	
14,500.0	6,701.1	6,680.8	6,680.1	220.8	2.3	-90.30	-1,468.4	-2,542.4	5,568.4	5,345.5	222.91	24.980	
14,566.9	6,701.0	6,680.9	6,680.2	222.6	2.3	-90.30	-1,468.4	-2,542.4	5,630.9	5,406.1	224.79	25.050	
14,600.0	6,700.9	6,680.9	6,680.2	223.6	2.3	-90.30	-1,468.4	-2,542.4	5,661.8	5,436.1	225.72	25.084	
14,665.3	6,700.8	6,681.0	6,680.3	225.4	2.3	-90.30	-1,468.4	-2,542.4	5,722.9	5,495.4	227.55	25.150	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,681.0	6,680.3	226.4	2.3	-90.30	-1,468.4	-2,542.4	5,755.4	5,526.9	228.52	25.185	
14,763.7	6,700.6	6,681.1	6,680.4	228.2	2.3	-90.31	-1,468.4	-2,542.4	5,815.2	5,584.9	230.31	25.250	
14,800.0	6,700.5	6,681.1	6,680.4	229.2	2.3	-90.31	-1,468.4	-2,542.4	5,849.2	5,617.9	231.33	25.286	
14,862.2	6,700.4	6,681.2	6,680.5	230.9	2.3	-90.31	-1,468.4	-2,542.4	5,907.7	5,674.6	233.07	25.347	
14,900.0	6,700.3	6,681.2	6,680.5	232.0	2.3	-90.31	-1,468.4	-2,542.4	5,943.2	5,709.1	234.13	25.384	
14,960.6	6,700.2	6,681.3	6,680.6	233.7	2.3	-90.31	-1,468.4	-2,542.4	6,000.3	5,764.5	235.83	25.444	
15,000.0	6,700.2	6,681.3	6,680.6	234.8	2.3	-90.31	-1,468.4	-2,542.4	6,037.5	5,800.5	236.93	25.482	
15,059.0	6,700.0	6,681.3	6,680.7	236.4	2.3	-90.31	-1,468.4	-2,542.4	6,093.2	5,854.6	238.59	25.538	
15,082.8	6,700.0	6,681.4	6,680.7	237.1	2.3	-90.31	-1,468.4	-2,542.4	6,115.6	5,876.4	239.26	25.561	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-75.45	1,298.9	-5,004.5	5,170.3				
98.4	98.4	76.4	76.4	0.1	0.0	-75.45	1,298.9	-5,004.5	5,170.3	5,170.2	0.10	N/A	
100.0	100.0	78.0	78.0	0.1	0.0	-75.45	1,298.9	-5,004.5	5,170.3	5,170.2	0.10	N/A	
196.8	196.8	174.8	174.8	0.3	1.0	-75.45	1,298.9	-5,004.5	5,170.3	5,169.0	1.29	4,001.610	
200.0	200.0	178.0	178.0	0.3	1.0	-75.45	1,298.9	-5,004.5	5,170.3	5,168.9	1.34	3,857.758	
295.3	295.3	273.3	273.3	0.5	3.0	-75.45	1,298.9	-5,004.5	5,170.3	5,166.8	3.50	1,476.226	
300.0	300.0	278.0	278.0	0.5	3.1	-75.45	1,298.9	-5,004.5	5,170.3	5,166.7	3.62	1,428.220	
393.7	393.7	371.7	371.7	0.8	5.1	-75.45	1,298.9	-5,004.5	5,170.3	5,164.5	5.82	888.668	
400.0	400.0	378.0	378.0	0.8	5.2	-75.45	1,298.9	-5,004.5	5,170.3	5,164.3	5.96	867.064	
492.1	492.1	470.1	470.1	1.0	7.1	-75.45	1,298.9	-5,004.5	5,170.3	5,162.2	8.06	641.596	
500.0	500.0	478.0	478.0	1.0	7.2	-75.45	1,298.9	-5,004.5	5,170.3	5,162.0	8.24	627.694	
590.5	590.5	568.5	568.5	1.2	9.1	-75.45	1,298.9	-5,004.5	5,170.3	5,160.0	10.28	502.928	
600.0	600.0	578.0	578.0	1.2	9.3	-75.45	1,298.9	-5,004.5	5,170.3	5,159.8	10.49	492.721	
689.0	689.0	667.0	667.0	1.4	11.1	-75.45	1,298.9	-5,004.5	5,170.3	5,157.8	12.49	413.810	
700.0	700.0	678.0	678.0	1.4	11.3	-75.45	1,298.9	-5,004.5	5,170.3	5,157.5	12.74	405.763	
787.4	787.4	765.4	765.4	1.6	13.1	-75.45	1,298.9	-5,004.5	5,170.3	5,155.6	14.70	351.621	
800.0	800.0	778.0	778.0	1.7	13.3	-75.45	1,298.9	-5,004.5	5,170.3	5,155.3	14.99	344.987	
885.8	885.8	863.8	863.8	1.9	15.0	-75.45	1,298.9	-5,004.5	5,170.3	5,153.4	16.91	305.727	
900.0	900.0	878.0	878.0	1.9	15.3	-75.45	1,298.9	-5,004.5	5,170.3	5,153.1	17.23	300.088	
984.2	984.2	962.2	962.2	2.1	17.0	-75.45	1,298.9	-5,004.5	5,170.3	5,151.2	19.12	270.453	
1,000.0	1,000.0	978.0	978.0	2.1	17.3	-75.45	1,298.9	-5,004.5	5,170.3	5,150.8	19.47	265.551	
1,082.7	1,082.7	1,060.7	1,060.7	2.3	19.0	-75.45	1,298.9	-5,004.5	5,170.3	5,149.0	21.32	242.489	
1,100.0	1,100.0	1,078.0	1,078.0	2.3	19.4	-75.45	1,298.9	-5,004.5	5,170.3	5,148.6	21.71	238.155	
1,181.1	1,181.1	1,159.1	1,159.1	2.5	21.0	-104.19	1,298.9	-5,004.5	5,170.6	5,147.0	23.52	219.811	
1,200.0	1,200.0	1,178.0	1,178.0	2.6	21.4	-104.19	1,298.9	-5,004.5	5,170.7	5,146.8	23.94	215.942	
1,279.5	1,279.5	1,257.4	1,257.4	2.7	23.0	-104.21	1,298.9	-5,004.5	5,171.7	5,145.9	25.72	201.090	
1,300.0	1,299.8	1,277.8	1,277.8	2.8	23.4	-104.22	1,298.9	-5,004.5	5,172.0	5,145.8	26.17	197.601	
1,377.9	1,377.5	1,355.5	1,355.5	3.0	25.0	-104.26	1,298.9	-5,004.5	5,173.6	5,145.7	27.91	185.361	
1,400.0	1,399.5	1,377.5	1,377.5	3.0	25.4	-104.27	1,298.9	-5,004.5	5,174.1	5,145.7	28.40	182.180	
1,476.4	1,475.3	1,453.3	1,453.3	3.2	26.9	-104.32	1,298.9	-5,004.5	5,176.4	5,146.3	30.11	171.942	
1,500.0	1,498.7	1,476.7	1,476.7	3.3	27.4	-104.34	1,298.9	-5,004.5	5,177.2	5,146.5	30.63	169.016	
1,574.8	1,572.6	1,550.6	1,550.6	3.5	28.9	-104.41	1,298.9	-5,004.5	5,180.0	5,147.7	32.31	160.338	
1,600.0	1,597.5	1,575.5	1,575.5	3.5	29.4	-104.43	1,298.9	-5,004.5	5,181.1	5,148.2	32.87	157.624	
1,673.2	1,669.4	1,647.4	1,647.4	3.7	30.8	-104.51	1,298.9	-5,004.5	5,184.6	5,150.1	34.52	150.184	
1,700.1	1,695.8	1,673.8	1,673.8	3.8	31.4	-104.54	1,298.9	-5,004.5	5,186.0	5,150.9	35.13	147.636	
1,771.6	1,765.7	1,743.7	1,743.7	4.1	32.8	-104.69	1,298.9	-5,004.5	5,189.8	5,153.0	36.76	141.172	
1,800.0	1,793.4	1,771.4	1,771.4	4.2	33.3	-104.76	1,298.9	-5,004.5	5,191.3	5,153.9	37.41	138.764	
1,870.1	1,862.0	1,840.0	1,840.0	4.4	34.7	-104.91	1,298.9	-5,004.5	5,195.1	5,156.1	39.03	133.116	
1,900.0	1,891.3	1,869.3	1,869.3	4.5	35.3	-104.97	1,298.9	-5,004.5	5,196.8	5,157.1	39.72	130.843	
1,968.5	1,958.3	1,936.3	1,936.3	4.8	36.6	-105.12	1,298.9	-5,004.5	5,200.6	5,159.3	41.31	125.898	
2,000.0	1,989.1	1,967.1	1,967.1	4.9	37.3	-105.19	1,298.9	-5,004.5	5,202.3	5,160.3	42.04	123.751	
2,066.9	2,054.5	2,032.5	2,032.5	5.1	38.6	-105.33	1,298.9	-5,004.5	5,206.0	5,162.4	43.60	119.407	
2,100.0	2,086.9	2,064.9	2,064.9	5.3	39.2	-105.41	1,298.9	-5,004.5	5,207.9	5,163.5	44.37	117.373	
2,165.3	2,150.8	2,128.8	2,128.8	5.5	40.5	-105.55	1,298.9	-5,004.5	5,211.6	5,165.7	45.90	113.542	
2,200.0	2,184.7	2,162.7	2,162.7	5.6	41.2	-105.62	1,298.9	-5,004.5	5,213.6	5,166.9	46.71	111.613	
2,263.8	2,247.1	2,225.1	2,225.1	5.9	42.4	-105.76	1,298.9	-5,004.5	5,217.2	5,169.0	48.21	108.222	
2,300.0	2,282.5	2,260.5	2,260.5	6.0	43.2	-105.84	1,298.9	-5,004.5	5,219.3	5,170.3	49.06	106.389	
2,362.2	2,343.3	2,321.3	2,321.3	6.3	44.4	-105.97	1,298.9	-5,004.5	5,223.0	5,172.4	50.52	103.378	
2,400.0	2,380.3	2,358.3	2,358.3	6.5	45.1	-106.05	1,298.9	-5,004.5	5,225.2	5,173.8	51.41	101.632	
2,460.6	2,439.6	2,417.6	2,417.6	6.7	46.3	-106.18	1,298.9	-5,004.5	5,228.7	5,175.9	52.84	98.951	
2,500.0	2,478.1	2,456.1	2,456.1	6.9	47.1	-106.27	1,298.9	-5,004.5	5,231.1	5,177.3	53.77	97.286	
2,559.0	2,535.9	2,513.9	2,513.9	7.1	48.3	-106.39	1,298.9	-5,004.5	5,234.6	5,179.4	55.16	94.891	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,553.9	2,553.9	7.3	49.1	-106.48	1,298.9	-5,004.5	5,237.1	5,180.9	56.13	93.300	
2,657.5	2,632.2	2,610.2	2,610.2	7.5	50.2	-106.60	1,298.9	-5,004.5	5,240.5	5,183.0	57.49	91.155	
2,700.0	2,673.8	2,651.8	2,651.8	7.7	51.0	-106.69	1,298.9	-5,004.5	5,243.1	5,184.6	58.50	89.633	
2,755.9	2,728.4	2,706.4	2,706.4	7.9	52.1	-106.81	1,298.9	-5,004.5	5,246.5	5,186.7	59.82	87.708	
2,800.0	2,771.6	2,749.6	2,749.6	8.1	53.0	-106.91	1,298.9	-5,004.5	5,249.3	5,188.4	60.86	86.249	
2,854.3	2,824.7	2,802.7	2,802.7	8.3	54.1	-107.02	1,298.9	-5,004.5	5,252.6	5,190.5	62.15	84.518	
2,900.0	2,869.4	2,847.4	2,847.4	8.5	55.0	-107.12	1,298.9	-5,004.5	5,255.5	5,192.2	63.23	83.117	
2,952.7	2,921.0	2,899.0	2,899.0	8.8	56.0	-107.23	1,298.9	-5,004.5	5,258.8	5,194.3	64.48	81.557	
3,000.0	2,967.2	2,945.2	2,945.2	9.0	56.9	-107.33	1,298.9	-5,004.5	5,261.7	5,196.1	65.60	80.211	
3,051.2	3,017.3	2,995.3	2,995.3	9.2	57.9	-107.44	1,298.9	-5,004.5	5,265.0	5,198.2	66.81	78.803	
3,100.0	3,065.0	3,043.0	3,043.0	9.4	58.9	-107.54	1,298.9	-5,004.5	5,268.1	5,200.1	67.97	77.507	
3,149.6	3,113.5	3,091.5	3,091.5	9.6	59.9	-107.65	1,298.9	-5,004.5	5,271.3	5,202.1	69.15	76.235	
3,200.0	3,162.8	3,140.8	3,140.8	9.8	60.9	-107.75	1,298.9	-5,004.5	5,274.5	5,204.2	70.34	74.986	
3,248.0	3,209.8	3,187.8	3,187.8	10.0	61.8	-107.86	1,298.9	-5,004.5	5,277.7	5,206.2	71.48	73.834	
3,300.0	3,260.6	3,238.6	3,238.6	10.2	62.8	-107.97	1,298.9	-5,004.5	5,281.0	5,208.3	72.71	72.629	
3,346.4	3,306.1	3,284.1	3,284.1	10.5	63.8	-108.06	1,298.9	-5,004.5	5,284.1	5,210.3	73.81	71.586	
3,400.0	3,358.5	3,336.5	3,336.5	10.7	64.8	-108.18	1,298.9	-5,004.5	5,287.6	5,212.5	75.08	70.422	
3,444.9	3,402.3	3,380.3	3,380.3	10.9	65.7	-108.27	1,298.9	-5,004.5	5,290.6	5,214.5	76.15	69.477	
3,500.0	3,456.3	3,434.3	3,434.3	11.1	66.8	-108.39	1,298.9	-5,004.5	5,294.3	5,216.8	77.46	68.351	
3,543.3	3,498.6	3,476.6	3,476.6	11.3	67.6	-108.48	1,298.9	-5,004.5	5,297.2	5,218.7	78.48	67.493	
3,600.0	3,554.1	3,532.1	3,532.1	11.5	68.7	-108.59	1,298.9	-5,004.5	5,301.0	5,221.2	79.83	66.404	
3,641.7	3,594.9	3,572.9	3,572.9	11.7	69.6	-108.68	1,298.9	-5,004.5	5,303.8	5,223.0	80.82	65.625	
3,700.0	3,651.9	3,629.9	3,629.9	12.0	70.7	-108.80	1,298.9	-5,004.5	5,307.8	5,225.6	82.20	64.570	
3,740.1	3,691.2	3,669.2	3,669.2	12.2	71.5	-108.89	1,298.9	-5,004.5	5,310.6	5,227.4	83.15	63.863	
3,800.0	3,749.7	3,727.7	3,727.7	12.4	72.7	-109.01	1,298.9	-5,004.5	5,314.7	5,230.1	84.57	62.840	
3,838.6	3,787.4	3,765.4	3,765.4	12.6	73.4	-109.09	1,298.9	-5,004.5	5,317.4	5,231.9	85.49	62.199	
3,900.0	3,847.5	3,825.5	3,825.5	12.9	74.6	-109.22	1,298.9	-5,004.5	5,321.6	5,234.7	86.95	61.205	
3,937.0	3,883.7	3,861.7	3,861.7	13.0	75.4	-109.30	1,298.9	-5,004.5	5,324.2	5,236.4	87.82	60.623	
4,000.0	3,945.3	3,923.3	3,923.3	13.3	76.6	-109.43	1,298.9	-5,004.5	5,328.6	5,239.3	89.32	59.659	
4,035.4	3,980.0	3,958.0	3,958.0	13.5	77.3	-109.50	1,298.9	-5,004.5	5,331.1	5,241.0	90.16	59.130	
4,060.0	4,004.0	3,982.0	3,982.0	13.6	77.8	-109.55	1,298.9	-5,004.5	5,332.9	5,242.1	90.74	58.770	
4,100.0	4,043.2	4,021.2	4,021.2	13.7	78.6	-109.68	1,298.9	-5,004.5	5,335.6	5,243.9	91.69	58.190	
4,133.8	4,076.5	4,054.5	4,054.5	13.8	79.2	-109.79	1,298.9	-5,004.5	5,337.8	5,245.3	92.48	57.719	
4,200.0	4,141.6	4,119.6	4,119.6	14.0	80.6	-109.97	1,298.9	-5,004.5	5,341.7	5,247.7	94.02	56.817	
4,232.3	4,173.5	4,151.5	4,151.5	14.1	81.2	-110.05	1,298.9	-5,004.5	5,343.5	5,248.7	94.76	56.391	
4,300.0	4,240.6	4,218.6	4,218.6	14.3	82.5	-110.21	1,298.9	-5,004.5	5,346.7	5,250.4	96.31	55.514	
4,330.7	4,271.1	4,249.1	4,249.1	14.4	83.2	-110.27	1,298.9	-5,004.5	5,348.0	5,251.0	97.01	55.129	
4,400.0	4,340.0	4,318.0	4,318.0	14.5	84.5	-110.39	1,298.9	-5,004.5	5,350.4	5,251.9	98.58	54.277	
4,429.1	4,369.0	4,347.0	4,347.0	14.6	85.1	-110.43	1,298.9	-5,004.5	5,351.3	5,252.1	99.23	53.931	
4,500.0	4,439.7	4,417.7	4,417.7	14.8	86.6	-110.51	1,298.9	-5,004.5	5,353.0	5,252.2	100.80	53.104	
4,527.5	4,467.2	4,445.2	4,445.2	14.8	87.1	-110.53	1,298.9	-5,004.5	5,353.5	5,252.1	101.41	52.793	
4,600.0	4,539.7	4,517.7	4,517.7	14.9	88.6	-110.57	1,298.9	-5,004.5	5,354.4	5,251.4	102.99	51.991	
4,626.0	4,565.6	4,543.6	4,543.6	15.0	89.1	-110.58	1,298.9	-5,004.5	5,354.5	5,251.0	103.55	51.712	
4,660.2	4,599.8	4,577.8	4,577.8	15.0	89.8	-81.85	1,298.9	-5,004.5	5,354.6	5,253.4	101.18	52.919	
4,700.0	4,639.6	4,617.6	4,617.6	15.0	90.6	-81.85	1,298.9	-5,004.5	5,354.6	5,252.5	102.05	52.468	
4,724.4	4,664.0	4,642.0	4,642.0	15.1	91.1	-81.85	1,298.9	-5,004.5	5,354.6	5,252.0	102.59	52.193	
4,800.0	4,739.6	4,717.6	4,717.6	15.2	92.6	-81.85	1,298.9	-5,004.5	5,354.6	5,250.3	104.26	51.359	
4,822.8	4,762.5	4,740.5	4,740.5	15.2	93.0	-81.85	1,298.9	-5,004.5	5,354.6	5,249.8	104.76	51.112	
4,900.0	4,839.6	4,817.6	4,817.6	15.3	94.6	-81.85	1,298.9	-5,004.5	5,354.6	5,248.1	106.46	50.295	
4,921.2	4,860.9	4,838.9	4,838.9	15.4	95.0	-81.85	1,298.9	-5,004.5	5,354.6	5,247.7	106.93	50.075	
5,000.0	4,939.6	4,917.6	4,917.6	15.5	96.6	-81.85	1,298.9	-5,004.5	5,354.6	5,245.9	108.67	49.275	
5,019.7	4,959.3	4,937.3	4,937.3	15.5	97.0	-81.85	1,298.9	-5,004.5	5,354.6	5,245.5	109.10	49.078	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,017.6	5,017.6	15.6	98.6	-81.85	1,298.9	-5,004.5	5,354.6	5,243.7	110.88	48.294	
5,118.1	5,057.7	5,035.7	5,035.7	15.7	99.0	-81.85	1,298.9	-5,004.5	5,354.6	5,243.3	111.27	48.120	
5,200.0	5,139.6	5,117.6	5,117.6	15.8	100.6	-81.85	1,298.9	-5,004.5	5,354.6	5,241.5	113.08	47.351	
5,216.5	5,156.2	5,134.2	5,134.2	15.8	101.0	-81.85	1,298.9	-5,004.5	5,354.6	5,241.1	113.45	47.199	
5,300.0	5,239.6	5,217.6	5,217.6	15.9	102.6	-81.85	1,298.9	-5,004.5	5,354.6	5,239.3	115.29	46.444	
5,314.9	5,254.6	5,232.6	5,232.6	16.0	102.9	-81.85	1,298.9	-5,004.5	5,354.6	5,239.0	115.62	46.311	
5,400.0	5,339.6	5,317.6	5,317.6	16.1	104.6	-81.85	1,298.9	-5,004.5	5,354.6	5,237.1	117.50	45.570	
5,413.4	5,353.0	5,331.0	5,331.0	16.1	104.9	-81.85	1,298.9	-5,004.5	5,354.6	5,236.8	117.80	45.456	
5,500.0	5,439.6	5,417.6	5,417.6	16.3	106.7	-81.85	1,298.9	-5,004.5	5,354.6	5,234.9	119.71	44.729	
5,511.8	5,451.4	5,429.4	5,429.4	16.3	106.9	-81.85	1,298.9	-5,004.5	5,354.6	5,234.6	119.97	44.632	
5,600.0	5,539.6	5,517.6	5,517.6	16.4	108.7	-81.85	1,298.9	-5,004.5	5,354.6	5,232.7	121.92	43.918	
5,610.2	5,549.9	5,527.9	5,527.9	16.4	108.9	-81.85	1,298.9	-5,004.5	5,354.6	5,232.4	122.15	43.836	
5,700.0	5,639.6	5,617.6	5,617.6	16.6	110.7	-81.85	1,298.9	-5,004.5	5,354.6	5,230.5	124.14	43.135	
5,708.6	5,648.3	5,626.3	5,626.3	16.6	110.9	-81.85	1,298.9	-5,004.5	5,354.6	5,230.3	124.33	43.069	
5,800.0	5,739.6	5,717.6	5,717.6	16.7	112.7	-81.85	1,298.9	-5,004.5	5,354.6	5,228.2	126.35	42.380	
5,807.1	5,746.7	5,724.7	5,724.7	16.8	112.8	-81.85	1,298.9	-5,004.5	5,354.6	5,228.1	126.50	42.327	
5,900.0	5,839.6	5,817.6	5,817.6	16.9	114.7	-81.85	1,298.9	-5,004.5	5,354.6	5,226.0	128.56	41.650	
5,905.5	5,845.1	5,823.1	5,823.1	16.9	114.8	-81.85	1,298.9	-5,004.5	5,354.6	5,225.9	128.68	41.611	
6,000.0	5,939.6	5,917.6	5,917.6	17.1	116.7	-81.85	1,298.9	-5,004.5	5,354.6	5,223.8	130.78	40.945	
6,003.9	5,943.6	5,921.6	5,921.6	17.1	116.8	-81.85	1,298.9	-5,004.5	5,354.6	5,223.7	130.86	40.918	
6,059.2	5,998.8	5,976.8	5,976.8	17.2	117.9	-81.85	1,298.9	-5,004.5	5,354.6	5,222.5	132.09	40.539	
6,100.0	6,039.6	6,017.6	6,017.6	17.2	118.7	8.16	1,298.9	-5,004.5	5,353.4	5,218.1	135.29	39.570	
6,102.3	6,042.0	6,020.0	6,020.0	17.2	118.8	8.16	1,298.9	-5,004.5	5,353.3	5,218.0	135.31	39.562	
6,150.0	6,089.4	6,067.4	6,067.4	17.3	119.7	8.22	1,298.9	-5,004.5	5,348.9	5,213.4	135.50	39.477	
6,200.0	6,138.7	6,116.7	6,116.7	17.3	120.7	8.33	1,298.9	-5,004.5	5,340.9	5,205.9	135.04	39.551	
6,200.8	6,139.5	6,117.5	6,117.5	17.3	120.7	8.33	1,298.9	-5,004.5	5,340.8	5,205.7	135.03	39.553	
6,250.0	6,187.4	6,165.4	6,165.4	17.3	121.7	8.48	1,298.9	-5,004.5	5,329.6	5,195.6	133.92	39.798	
6,299.2	6,234.4	6,212.4	6,212.4	17.4	122.6	8.68	1,298.9	-5,004.5	5,315.1	5,183.0	132.16	40.219	
6,300.0	6,235.1	6,213.1	6,213.1	17.4	122.7	8.69	1,298.9	-5,004.5	5,314.9	5,182.8	132.12	40.227	
6,350.0	6,281.7	6,259.7	6,259.7	17.4	123.6	8.95	1,298.9	-5,004.5	5,296.9	5,167.3	129.66	40.851	
6,397.6	6,324.8	6,302.8	6,302.8	17.3	124.5	9.27	1,298.9	-5,004.5	5,276.9	5,150.2	126.72	41.643	
6,400.0	6,326.9	6,304.9	6,304.9	17.3	124.5	9.29	1,298.9	-5,004.5	5,275.8	5,149.3	126.56	41.688	
6,450.0	6,370.5	6,348.5	6,348.5	17.3	125.4	9.69	1,298.9	-5,004.5	5,251.6	5,128.8	122.82	42.759	
6,496.0	6,409.1	6,387.1	6,387.1	17.3	126.2	10.15	1,298.9	-5,004.5	5,226.7	5,107.9	118.86	43.974	
6,500.0	6,412.3	6,390.3	6,390.3	17.3	126.2	10.19	1,298.9	-5,004.5	5,224.5	5,106.0	118.50	44.090	
6,550.0	6,452.1	6,430.1	6,430.1	17.3	127.0	10.80	1,298.9	-5,004.5	5,194.5	5,080.9	113.64	45.711	
6,594.5	6,485.6	6,463.6	6,463.6	17.3	127.7	11.45	1,298.9	-5,004.5	5,165.7	5,056.7	108.93	47.422	
6,600.0	6,489.7	6,467.7	6,467.7	17.3	127.8	11.53	1,298.9	-5,004.5	5,161.9	5,053.6	108.32	47.653	
6,650.0	6,524.9	6,502.9	6,502.9	17.2	128.5	12.44	1,298.9	-5,004.5	5,126.8	5,024.1	102.67	49.936	
6,692.9	6,553.0	6,531.0	6,531.0	17.2	129.1	13.37	1,298.9	-5,004.5	5,094.8	4,997.1	97.67	52.165	
6,700.0	6,557.5	6,535.5	6,535.5	17.2	129.1	13.55	1,298.9	-5,004.5	5,089.3	4,992.5	96.84	52.555	
6,750.0	6,587.4	6,565.4	6,565.4	17.2	129.7	14.94	1,298.9	-5,004.5	5,049.7	4,958.6	91.09	55.434	
6,791.3	6,609.9	6,587.9	6,587.9	17.2	130.2	16.36	1,298.9	-5,004.5	5,015.5	4,928.8	86.70	57.851	
6,800.0	6,614.4	6,592.4	6,592.4	17.2	130.3	16.69	1,298.9	-5,004.5	5,008.2	4,922.3	85.85	58.338	
6,850.0	6,638.4	6,616.4	6,616.4	17.2	130.8	18.97	1,298.9	-5,004.5	4,964.8	4,883.1	81.75	60.734	
6,889.7	6,655.3	6,633.3	6,633.3	17.4	131.1	21.30	1,298.9	-5,004.5	4,929.3	4,849.3	79.97	61.636	
6,900.0	6,659.4	6,637.4	6,637.4	17.5	131.2	21.99	1,298.9	-5,004.5	4,920.0	4,840.2	79.82	61.642	
6,950.0	6,677.1	6,655.1	6,655.1	18.0	131.5	26.14	1,298.9	-5,004.5	4,873.8	4,792.2	81.54	59.771	
6,988.2	6,688.4	6,666.4	6,666.4	18.5	131.8	30.44	1,298.9	-5,004.5	4,837.8	4,751.3	86.49	55.933	
7,000.0	6,691.5	6,669.5	6,669.5	18.7	131.8	32.04	1,298.9	-5,004.5	4,826.5	4,737.7	88.81	54.343	
7,050.0	6,702.5	6,680.5	6,680.5	19.5	132.1	40.81	1,298.9	-5,004.5	4,778.4	4,674.9	103.44	46.193	
7,086.6	6,708.4	6,686.4	6,686.4	20.1	132.2	50.04	1,298.9	-5,004.5	4,742.7	4,623.7	119.04	39.841	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	6,688.1	6,688.1	20.4	132.2	54.19	1,298.9	-5,004.5	4,729.6	4,604.1	125.48	37.692	
7,150.0	6,714.2	6,692.2	6,692.2	21.3	132.3	73.82	1,298.9	-5,004.5	4,680.4	4,532.6	147.79	31.669	
7,185.0	6,715.0	6,693.0	6,693.0	21.9	132.3	90.42	1,298.9	-5,004.5	4,645.9	4,491.9	153.93	30.182	
7,185.6	6,715.0	6,693.0	6,693.0	21.9	132.3	90.68	1,298.9	-5,004.5	4,645.3	4,491.4	153.93	30.179	
7,200.0	6,715.0	6,693.0	6,693.0	22.2	132.3	90.67	1,298.9	-5,004.5	4,631.1	4,476.9	154.20	30.033	
7,283.4	6,714.8	6,692.8	6,692.8	23.9	132.3	90.66	1,298.9	-5,004.5	4,548.8	4,392.9	155.88	29.182	
7,300.0	6,714.8	6,692.8	6,692.8	24.2	132.3	90.66	1,298.9	-5,004.5	4,532.5	4,376.3	156.21	29.015	
7,381.9	6,714.6	6,692.6	6,692.6	26.0	132.3	90.65	1,298.9	-5,004.5	4,451.8	4,293.8	157.97	28.181	
7,400.0	6,714.6	6,692.6	6,692.6	26.4	132.3	90.64	1,298.9	-5,004.5	4,433.9	4,275.6	158.36	27.999	
7,480.3	6,714.4	6,692.4	6,692.4	28.2	132.3	90.63	1,298.9	-5,004.5	4,354.8	4,194.6	160.18	27.188	
7,500.0	6,714.4	6,692.4	6,692.4	28.7	132.3	90.63	1,298.9	-5,004.5	4,335.4	4,174.8	160.62	26.992	
7,578.7	6,714.2	6,692.2	6,692.2	30.5	132.3	90.62	1,298.9	-5,004.5	4,257.9	4,095.5	162.47	26.207	
7,600.0	6,714.2	6,692.2	6,692.2	31.0	132.3	90.61	1,298.9	-5,004.5	4,237.0	4,074.0	162.97	25.998	
7,677.1	6,714.0	6,692.0	6,692.0	32.9	132.3	90.60	1,298.9	-5,004.5	4,161.1	3,996.3	164.85	25.243	
7,700.0	6,714.0	6,692.0	6,692.0	33.4	132.3	90.60	1,298.9	-5,004.5	4,138.7	3,973.3	165.40	25.022	
7,775.6	6,713.9	6,691.9	6,691.9	35.3	132.3	90.59	1,298.9	-5,004.5	4,064.4	3,897.1	167.27	24.298	
7,800.0	6,713.8	6,691.8	6,691.8	35.9	132.3	90.58	1,298.9	-5,004.5	4,040.4	3,872.5	167.88	24.067	
7,874.0	6,713.7	6,691.7	6,691.7	37.8	132.3	90.57	1,298.9	-5,004.5	3,967.7	3,798.0	169.75	23.374	
7,900.0	6,713.6	6,691.6	6,691.6	38.4	132.3	90.57	1,298.9	-5,004.5	3,942.2	3,771.8	170.41	23.134	
7,972.4	6,713.5	6,691.5	6,691.5	40.3	132.3	90.56	1,298.9	-5,004.5	3,871.2	3,698.9	172.26	22.472	
8,000.0	6,713.4	6,691.4	6,691.4	41.0	132.3	90.55	1,298.9	-5,004.5	3,844.1	3,671.2	172.97	22.224	
8,070.8	6,713.3	6,691.3	6,691.3	42.8	132.3	90.54	1,298.9	-5,004.5	3,774.7	3,599.9	174.81	21.593	
8,100.0	6,713.2	6,691.2	6,691.2	43.6	132.3	90.54	1,298.9	-5,004.5	3,746.2	3,570.6	175.56	21.338	
8,169.3	6,713.1	6,691.1	6,691.1	45.4	132.3	90.53	1,298.9	-5,004.5	3,678.3	3,501.0	177.38	20.737	
8,200.0	6,713.0	6,691.0	6,691.0	46.2	132.3	90.52	1,298.9	-5,004.5	3,648.3	3,470.1	178.18	20.475	
8,267.7	6,712.9	6,690.9	6,690.9	48.0	132.3	90.51	1,298.9	-5,004.5	3,582.1	3,402.1	179.97	19.904	
8,300.0	6,712.8	6,690.8	6,690.8	48.8	132.3	90.51	1,298.9	-5,004.5	3,550.5	3,369.7	180.82	19.635	
8,366.1	6,712.7	6,690.7	6,690.7	50.6	132.3	90.50	1,298.9	-5,004.5	3,486.0	3,303.4	182.58	19.093	
8,400.0	6,712.6	6,690.6	6,690.6	51.5	132.3	90.49	1,298.9	-5,004.5	3,452.9	3,269.4	183.48	18.819	
8,464.5	6,712.5	6,690.5	6,690.5	53.2	132.3	90.48	1,298.9	-5,004.5	3,390.0	3,204.8	185.21	18.304	
8,500.0	6,712.4	6,690.4	6,690.4	54.1	132.3	90.48	1,298.9	-5,004.5	3,355.4	3,169.3	186.15	18.025	
8,563.0	6,712.3	6,690.3	6,690.3	55.8	132.3	90.47	1,298.9	-5,004.5	3,294.1	3,106.3	187.84	17.536	
8,600.0	6,712.3	6,690.3	6,690.3	56.8	132.3	90.46	1,298.9	-5,004.5	3,258.1	3,069.3	188.84	17.253	
8,661.4	6,712.1	6,690.1	6,690.1	58.5	132.3	90.45	1,298.9	-5,004.5	3,198.4	3,007.9	190.50	16.790	
8,700.0	6,712.1	6,690.1	6,690.1	59.5	132.2	90.45	1,298.9	-5,004.5	3,160.9	2,969.4	191.54	16.503	
8,759.8	6,711.9	6,689.9	6,689.9	61.1	132.2	90.44	1,298.9	-5,004.5	3,102.9	2,909.7	193.16	16.064	
8,800.0	6,711.9	6,689.9	6,689.9	62.2	132.2	90.43	1,298.9	-5,004.5	3,063.9	2,869.7	194.24	15.774	
8,858.2	6,711.8	6,689.8	6,689.8	63.8	132.2	90.42	1,298.9	-5,004.5	3,007.5	2,811.7	195.83	15.358	
8,900.0	6,711.7	6,689.7	6,689.7	64.9	132.2	90.42	1,298.9	-5,004.5	2,967.2	2,770.2	196.96	15.065	
8,956.7	6,711.6	6,689.6	6,689.6	66.5	132.2	90.41	1,298.9	-5,004.5	2,912.4	2,713.9	198.50	14.672	
9,000.0	6,711.5	6,689.5	6,689.5	67.6	132.2	90.40	1,298.9	-5,004.5	2,870.6	2,670.9	199.68	14.376	
9,055.1	6,711.4	6,689.4	6,689.4	69.1	132.2	90.40	1,298.9	-5,004.5	2,817.5	2,616.3	201.19	14.004	
9,100.0	6,711.3	6,689.3	6,689.3	70.4	132.2	90.39	1,298.9	-5,004.5	2,774.3	2,571.9	202.41	13.706	
9,153.5	6,711.2	6,689.2	6,689.2	71.8	132.2	90.38	1,298.9	-5,004.5	2,722.8	2,519.0	203.88	13.355	
9,200.0	6,711.1	6,689.1	6,689.1	73.1	132.2	90.37	1,298.9	-5,004.5	2,678.2	2,473.1	205.15	13.055	
9,251.9	6,711.0	6,689.0	6,689.0	74.5	132.2	90.37	1,298.9	-5,004.5	2,628.5	2,421.9	206.57	12.724	
9,300.0	6,710.9	6,688.9	6,688.9	75.8	132.2	90.36	1,298.9	-5,004.5	2,582.5	2,374.6	207.89	12.422	
9,350.4	6,710.8	6,688.8	6,688.8	77.2	132.2	90.35	1,298.9	-5,004.5	2,534.4	2,325.1	209.27	12.110	
9,400.0	6,710.7	6,688.7	6,688.7	78.6	132.2	90.34	1,298.9	-5,004.5	2,487.1	2,276.4	210.64	11.807	
9,448.8	6,710.6	6,688.6	6,688.6	79.9	132.2	90.34	1,298.9	-5,004.5	2,440.6	2,228.7	211.98	11.514	
9,500.0	6,710.5	6,688.5	6,688.5	81.3	132.2	90.33	1,298.9	-5,004.5	2,392.0	2,178.7	213.39	11.210	
9,547.2	6,710.4	6,688.4	6,688.4	82.6	132.2	90.32	1,298.9	-5,004.5	2,347.3	2,132.6	214.69	10.934	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,600.0	6,710.3	6,688.3	6,688.3	84.1	132.2	90.31	1,298.9	-5,004.5	2,297.4	2,081.3	216.14	10.629	
9,645.6	6,710.2	6,688.2	6,688.2	85.3	132.2	90.31	1,298.9	-5,004.5	2,254.4	2,037.0	217.40	10.370	
9,700.0	6,710.1	6,688.1	6,688.1	86.8	132.2	90.30	1,298.9	-5,004.5	2,203.3	1,984.4	218.90	10.065	
9,744.1	6,710.0	6,688.0	6,688.0	88.1	132.2	90.29	1,298.9	-5,004.5	2,162.0	1,941.8	220.11	9.822	
9,800.0	6,709.9	6,687.9	6,687.9	89.6	132.2	90.29	1,298.9	-5,004.5	2,109.7	1,888.0	221.66	9.518	
9,842.5	6,709.9	6,687.9	6,687.9	90.8	132.2	90.28	1,298.9	-5,004.5	2,070.1	1,847.2	222.83	9.290	
9,900.0	6,709.7	6,687.7	6,687.7	92.4	132.2	90.27	1,298.9	-5,004.5	2,016.7	1,792.3	224.42	8.986	
9,940.9	6,709.7	6,687.7	6,687.7	93.5	132.2	90.26	1,298.9	-5,004.5	1,978.8	1,753.3	225.55	8.773	
10,000.0	6,709.6	6,687.6	6,687.6	95.1	132.2	90.26	1,298.9	-5,004.5	1,924.4	1,697.2	227.19	8.471	
10,039.3	6,709.5	6,687.5	6,687.5	96.2	132.2	90.25	1,298.9	-5,004.5	1,888.3	1,660.0	228.28	8.272	
10,100.0	6,709.4	6,687.4	6,687.4	97.9	132.2	90.24	1,298.9	-5,004.5	1,832.9	1,603.0	229.96	7.971	
10,137.8	6,709.3	6,687.3	6,687.3	98.9	132.2	90.24	1,298.9	-5,004.5	1,798.6	1,567.6	231.00	7.786	
10,200.0	6,709.2	6,687.2	6,687.2	100.7	132.2	90.23	1,298.9	-5,004.5	1,742.4	1,509.7	232.73	7.487	
10,236.2	6,709.1	6,687.1	6,687.1	101.7	132.2	90.22	1,298.9	-5,004.5	1,709.9	1,476.1	233.73	7.316	
10,300.0	6,709.0	6,687.0	6,687.0	103.4	132.2	90.21	1,298.9	-5,004.5	1,652.9	1,417.4	235.50	7.019	
10,334.6	6,708.9	6,686.9	6,686.9	104.4	132.2	90.21	1,298.9	-5,004.5	1,622.3	1,385.8	236.46	6.861	
10,400.0	6,708.8	6,686.8	6,686.8	106.2	132.2	90.20	1,298.9	-5,004.5	1,564.8	1,326.5	238.27	6.567	
10,433.0	6,708.7	6,686.7	6,686.7	107.1	132.2	90.19	1,298.9	-5,004.5	1,535.9	1,296.8	239.19	6.421	
10,500.0	6,708.6	6,686.6	6,686.6	109.0	132.2	90.18	1,298.9	-5,004.5	1,478.1	1,237.1	241.05	6.132	
10,531.5	6,708.5	6,686.5	6,686.5	109.9	132.2	90.18	1,298.9	-5,004.5	1,451.2	1,209.3	241.92	5.999	
10,600.0	6,708.4	6,686.4	6,686.4	111.8	132.2	90.17	1,298.9	-5,004.5	1,393.2	1,149.4	243.83	5.714	
10,629.9	6,708.4	6,686.4	6,686.4	112.6	132.2	90.16	1,298.9	-5,004.5	1,368.3	1,123.6	244.66	5.593	
10,700.0	6,708.2	6,686.2	6,686.2	114.6	132.2	90.15	1,298.9	-5,004.5	1,310.5	1,063.9	246.61	5.314	
10,728.3	6,708.2	6,686.2	6,686.2	115.3	132.2	90.15	1,298.9	-5,004.5	1,287.5	1,040.1	247.39	5.204	
10,800.0	6,708.0	6,686.0	6,686.0	117.3	132.2	90.14	1,298.9	-5,004.5	1,230.3	980.9	249.39	4.933	
10,826.7	6,708.0	6,686.0	6,686.0	118.1	132.2	90.14	1,298.9	-5,004.5	1,209.4	959.2	250.13	4.835	
10,900.0	6,707.8	6,685.8	6,685.8	120.1	132.2	90.12	1,298.9	-5,004.5	1,153.2	901.1	252.17	4.573	
10,925.2	6,707.8	6,685.8	6,685.8	120.8	132.2	90.12	1,298.9	-5,004.5	1,134.4	881.5	252.87	4.486	
11,000.0	6,707.6	6,685.6	6,685.6	122.9	132.2	90.11	1,298.9	-5,004.5	1,079.9	825.0	254.95	4.236	
11,023.6	6,707.6	6,685.6	6,685.6	123.6	132.2	90.11	1,298.9	-5,004.5	1,063.3	807.7	255.61	4.160	
11,100.0	6,707.5	6,685.5	6,685.5	125.7	132.2	90.10	1,298.9	-5,004.5	1,011.2	753.5	257.73	3.924	
11,122.0	6,707.4	6,685.4	6,685.4	126.3	132.2	90.09	1,298.9	-5,004.5	996.8	738.4	258.35	3.858	
11,200.0	6,707.3	6,685.3	6,685.3	128.5	132.2	90.08	1,298.9	-5,004.5	948.1	687.6	260.52	3.639	
11,220.4	6,707.2	6,685.2	6,685.2	129.0	132.2	90.08	1,298.9	-5,004.5	936.0	674.9	261.09	3.585	
11,300.0	6,707.1	6,685.1	6,685.1	131.3	132.1	90.07	1,298.9	-5,004.5	891.7	628.4	263.31	3.387	
11,318.9	6,707.0	6,685.0	6,685.0	131.8	132.1	90.06	1,298.9	-5,004.5	881.9	618.1	263.83	3.343	
11,400.0	6,706.9	6,684.9	6,684.9	134.0	132.1	90.05	1,298.9	-5,004.5	843.5	577.4	266.09	3.170	
11,417.3	6,706.9	6,684.9	6,684.9	134.5	132.1	90.05	1,298.9	-5,004.5	836.1	569.5	266.57	3.136	
11,500.0	6,706.7	6,684.7	6,684.7	136.8	132.1	90.04	1,298.9	-5,004.5	804.8	535.9	268.88	2.993	
11,515.7	6,706.7	6,684.7	6,684.7	137.3	132.1	90.04	1,298.9	-5,004.5	799.7	530.4	269.32	2.969	
11,600.0	6,706.5	6,684.5	6,684.5	139.6	132.1	90.02	1,298.9	-5,004.5	777.2	505.5	271.67	2.861	
11,614.1	6,706.5	6,684.5	6,684.5	140.0	132.1	90.02	1,298.9	-5,004.5	774.3	502.2	272.06	2.846	
11,700.0	6,706.3	6,684.3	6,684.3	142.4	132.1	90.01	1,298.9	-5,004.5	761.8	487.3	274.46	2.776	
11,712.6	6,706.3	6,684.3	6,684.3	142.8	132.1	90.01	1,298.9	-5,004.5	760.8	486.0	274.81	2.768	
11,768.5	6,706.2	6,684.2	6,684.2	144.3	132.1	90.00	1,298.9	-5,004.5	758.7	482.3	276.37	2.745 CC	
11,800.0	6,706.1	6,684.1	6,684.1	145.2	132.1	90.00	1,298.9	-5,004.5	759.4	482.1	277.25	2.739 ES	
11,811.0	6,706.1	6,684.1	6,684.1	145.5	132.1	89.99	1,298.9	-5,004.5	759.9	482.3	277.55	2.738 SF	
11,900.0	6,705.9	6,683.9	6,683.9	148.0	132.1	89.98	1,298.9	-5,004.5	770.0	490.0	280.04	2.750	
11,909.4	6,705.9	6,683.9	6,683.9	148.3	132.1	89.98	1,298.9	-5,004.5	771.7	491.4	280.30	2.753	
12,000.0	6,705.8	6,683.8	6,683.8	150.8	132.1	89.97	1,298.9	-5,004.5	793.2	510.4	282.83	2.805	
12,007.8	6,705.7	6,683.7	6,683.7	151.0	132.1	89.97	1,298.9	-5,004.5	795.6	512.5	283.05	2.811	
12,100.0	6,705.6	6,683.6	6,683.6	153.6	132.1	89.95	1,298.9	-5,004.5	828.0	542.3	285.62	2.899	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,683.6	6,683.6	153.8	132.1	89.95	1,298.9	-5,004.5	830.5	544.7	285.80	2.906	
12,200.0	6,705.4	6,683.4	6,683.4	156.4	132.1	89.94	1,298.9	-5,004.5	872.8	584.4	288.41	3.026	
12,204.7	6,705.4	6,683.4	6,683.4	156.5	132.1	89.94	1,298.9	-5,004.5	875.1	586.6	288.54	3.033	
12,300.0	6,705.2	6,683.2	6,683.2	159.2	132.1	89.92	1,298.9	-5,004.5	926.3	635.1	291.21	3.181	
12,303.1	6,705.2	6,683.2	6,683.2	159.3	132.1	89.92	1,298.9	-5,004.5	928.1	636.8	291.29	3.186	
12,400.0	6,705.0	6,683.0	6,683.0	162.0	132.1	89.91	1,298.9	-5,004.5	987.1	693.1	294.00	3.358	
12,401.5	6,705.0	6,683.0	6,683.0	162.0	132.1	89.91	1,298.9	-5,004.5	988.1	694.1	294.04	3.360	
12,500.0	6,704.8	6,682.8	6,682.8	164.8	132.1	89.90	1,298.9	-5,004.5	1,053.9	757.1	296.79	3.551	
12,598.4	6,704.6	6,682.6	6,682.6	167.5	132.1	89.88	1,298.9	-5,004.5	1,124.4	824.9	299.54	3.754	
12,600.0	6,704.6	6,682.6	6,682.6	167.6	132.1	89.88	1,298.9	-5,004.5	1,125.6	826.0	299.59	3.757	
12,696.8	6,704.4	6,682.4	6,682.4	170.3	132.1	89.87	1,298.9	-5,004.5	1,198.9	896.6	302.29	3.966	
12,700.0	6,704.4	6,682.4	6,682.4	170.4	132.1	89.87	1,298.9	-5,004.5	1,201.4	899.0	302.38	3.973	
12,795.2	6,704.3	6,682.3	6,682.3	173.0	132.1	89.85	1,298.9	-5,004.5	1,276.6	971.6	305.04	4.185	
12,800.0	6,704.2	6,682.2	6,682.2	173.2	132.1	89.85	1,298.9	-5,004.5	1,280.5	975.3	305.18	4.196	
12,893.7	6,704.1	6,682.1	6,682.1	175.8	132.1	89.84	1,298.9	-5,004.5	1,357.0	1,049.3	307.80	4.409	
12,900.0	6,704.1	6,682.1	6,682.1	176.0	132.1	89.84	1,298.9	-5,004.5	1,362.3	1,054.3	307.97	4.423	
12,992.1	6,703.9	6,681.9	6,681.9	178.5	132.1	89.83	1,298.9	-5,004.5	1,439.7	1,129.2	310.55	4.636	
13,000.0	6,703.9	6,681.9	6,681.9	178.8	132.1	89.83	1,298.9	-5,004.5	1,446.4	1,135.7	310.77	4.654	
13,090.5	6,703.7	6,681.7	6,681.7	181.3	132.1	89.81	1,298.9	-5,004.5	1,524.2	1,210.9	313.30	4.865	
13,100.0	6,703.7	6,681.7	6,681.7	181.6	132.1	89.81	1,298.9	-5,004.5	1,532.5	1,218.9	313.56	4.887	
13,188.9	6,703.5	6,681.5	6,681.5	184.0	132.1	89.80	1,298.9	-5,004.5	1,610.3	1,294.3	316.05	5.095	
13,200.0	6,703.5	6,681.5	6,681.5	184.4	132.1	89.80	1,298.9	-5,004.5	1,620.1	1,303.7	316.36	5.121	
13,287.4	6,703.3	6,681.3	6,681.3	186.8	132.1	89.79	1,298.9	-5,004.5	1,697.8	1,379.0	318.80	5.326	
13,300.0	6,703.3	6,681.3	6,681.3	187.2	132.1	89.78	1,298.9	-5,004.5	1,709.1	1,389.9	319.16	5.355	
13,385.8	6,703.2	6,681.2	6,681.2	189.6	132.1	89.77	1,298.9	-5,004.5	1,786.4	1,464.8	321.56	5.555	
13,400.0	6,703.1	6,681.1	6,681.1	190.0	132.1	89.77	1,298.9	-5,004.5	1,799.3	1,477.3	321.95	5.589	
13,484.2	6,703.0	6,681.0	6,681.0	192.3	132.1	89.76	1,298.9	-5,004.5	1,876.0	1,551.7	324.31	5.784	
13,500.0	6,702.9	6,680.9	6,680.9	192.8	132.1	89.76	1,298.9	-5,004.5	1,890.4	1,565.6	324.75	5.821	
13,582.6	6,702.8	6,680.8	6,680.8	195.1	132.1	89.74	1,298.9	-5,004.5	1,966.4	1,639.3	327.06	6.012	
13,600.0	6,702.8	6,680.8	6,680.8	195.6	132.1	89.74	1,298.9	-5,004.5	1,982.4	1,654.8	327.55	6.052	
13,681.1	6,702.6	6,680.6	6,680.6	197.8	132.1	89.73	1,298.9	-5,004.5	2,057.5	1,727.7	329.82	6.238	
13,700.0	6,702.6	6,680.6	6,680.6	198.4	132.1	89.73	1,298.9	-5,004.5	2,075.1	1,744.8	330.35	6.282	
13,779.5	6,702.4	6,680.4	6,680.4	200.6	132.1	89.72	1,298.9	-5,004.5	2,149.3	1,816.8	332.57	6.463	
13,800.0	6,702.4	6,680.4	6,680.4	201.2	132.1	89.71	1,298.9	-5,004.5	2,168.5	1,835.4	333.15	6.509	
13,877.9	6,702.2	6,680.2	6,680.2	203.3	132.1	89.70	1,298.9	-5,004.5	2,241.7	1,906.4	335.33	6.685	
13,900.0	6,702.2	6,680.2	6,680.2	204.0	132.1	89.70	1,298.9	-5,004.5	2,262.5	1,926.5	335.94	6.735	
13,976.3	6,702.1	6,680.1	6,680.1	206.1	132.0	89.69	1,298.9	-5,004.5	2,334.5	1,996.5	338.08	6.905	
14,000.0	6,702.0	6,680.0	6,680.0	206.8	132.0	89.69	1,298.9	-5,004.5	2,356.9	2,018.2	338.74	6.958	
14,074.8	6,701.9	6,679.9	6,679.9	208.9	132.0	89.68	1,298.9	-5,004.5	2,427.8	2,087.0	340.84	7.123	
14,100.0	6,701.8	6,679.8	6,679.8	209.6	132.0	89.67	1,298.9	-5,004.5	2,451.8	2,110.3	341.54	7.179	
14,173.2	6,701.7	6,679.7	6,679.7	211.6	132.0	89.66	1,298.9	-5,004.5	2,521.5	2,177.9	343.59	7.339	
14,200.0	6,701.6	6,679.6	6,679.6	212.4	132.0	89.66	1,298.9	-5,004.5	2,547.1	2,202.7	344.34	7.397	
14,271.6	6,701.5	6,679.5	6,679.5	214.4	132.0	89.65	1,298.9	-5,004.5	2,615.5	2,269.2	346.34	7.552	
14,300.0	6,701.4	6,679.4	6,679.4	215.2	132.0	89.65	1,298.9	-5,004.5	2,642.7	2,295.6	347.14	7.613	
14,370.0	6,701.3	6,679.3	6,679.3	217.1	132.0	89.64	1,298.9	-5,004.5	2,709.9	2,360.8	349.10	7.763	
14,400.0	6,701.3	6,679.3	6,679.3	218.0	132.0	89.63	1,298.9	-5,004.5	2,738.7	2,388.7	349.94	7.826	
14,468.5	6,701.1	6,679.1	6,679.1	219.9	132.0	89.62	1,298.9	-5,004.5	2,804.5	2,452.7	351.86	7.971	
14,500.0	6,701.1	6,679.1	6,679.1	220.8	132.0	89.62	1,298.9	-5,004.5	2,834.9	2,482.1	352.74	8.037	
14,566.9	6,701.0	6,679.0	6,679.0	222.6	132.0	89.61	1,298.9	-5,004.5	2,899.4	2,544.8	354.61	8.176	
14,600.0	6,700.9	6,678.9	6,678.9	223.6	132.0	89.60	1,298.9	-5,004.5	2,931.4	2,575.8	355.54	8.245	
14,665.3	6,700.8	6,678.8	6,678.8	225.4	132.0	89.59	1,298.9	-5,004.5	2,994.5	2,637.1	357.37	8.379	
14,700.0	6,700.7	6,678.7	6,678.7	226.4	132.0	89.59	1,298.9	-5,004.5	3,028.1	2,669.7	358.34	8.450	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	6,678.6	6,678.6	228.2	132.0	89.58	1,298.9	-5,004.5	3,089.8	2,729.7	360.12	8.580	
14,800.0	6,700.5	6,678.5	6,678.5	229.2	132.0	89.58	1,298.9	-5,004.5	3,125.0	2,763.8	361.14	8.653	
14,862.2	6,700.4	6,678.4	6,678.4	230.9	132.0	89.57	1,298.9	-5,004.5	3,185.3	2,822.4	362.88	8.778	
14,900.0	6,700.3	6,678.3	6,678.3	232.0	132.0	89.56	1,298.9	-5,004.5	3,222.1	2,858.1	363.94	8.853	
14,960.6	6,700.2	6,678.2	6,678.2	233.7	132.0	89.55	1,298.9	-5,004.5	3,281.0	2,915.4	365.63	8.973	
15,000.0	6,700.2	6,678.2	6,678.2	234.8	132.0	89.55	1,298.9	-5,004.5	3,319.3	2,952.6	366.74	9.051	
15,059.0	6,700.0	6,678.0	6,678.0	236.4	132.0	89.54	1,298.9	-5,004.5	3,376.8	3,008.4	368.39	9.166	
15,082.8	6,700.0	6,678.0	6,678.0	237.1	132.0	89.54	1,298.9	-5,004.5	3,400.0	3,031.0	369.06	9.213	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-87.55	213.6	-4,984.6	4,989.3				
98.4	98.4	66.4	66.4	0.1	0.1	-87.55	213.6	-4,984.6	4,989.2	4,989.0	0.17	N/A	
100.0	100.0	68.0	68.0	0.1	0.1	-87.55	213.6	-4,984.6	4,989.2	4,989.0	0.17	N/A	
196.8	196.8	164.8	164.8	0.3	1.8	-87.55	213.6	-4,984.6	4,989.2	4,987.1	2.12	2,353.429	
200.0	200.0	168.0	168.0	0.3	1.9	-87.55	213.6	-4,984.6	4,989.2	4,987.0	2.21	2,258.038	
295.3	295.3	263.3	263.3	0.5	4.0	-87.55	213.6	-4,984.6	4,989.2	4,984.6	4.57	1,092.428	
300.0	300.0	268.0	268.0	0.5	4.1	-87.55	213.6	-4,984.6	4,989.2	4,984.5	4.68	1,067.166	
393.7	393.7	361.7	361.7	0.8	6.0	-87.55	213.6	-4,984.6	4,989.2	4,982.4	6.80	733.725	
400.0	400.0	368.0	368.0	0.8	6.2	-87.55	213.6	-4,984.6	4,989.2	4,982.3	6.94	718.697	
492.1	492.1	460.1	460.1	1.0	8.0	-87.55	213.6	-4,984.6	4,989.2	4,980.2	9.02	553.414	
500.0	500.0	468.0	468.0	1.0	8.2	-87.55	213.6	-4,984.6	4,989.2	4,980.0	9.19	542.760	
590.5	590.5	558.5	558.5	1.2	10.0	-87.55	213.6	-4,984.6	4,989.2	4,978.0	11.22	444.488	
600.0	600.0	568.0	568.0	1.2	10.2	-87.55	213.6	-4,984.6	4,989.2	4,977.8	11.44	436.250	
689.0	689.0	657.0	657.0	1.4	12.0	-87.55	213.6	-4,984.6	4,989.2	4,975.8	13.43	371.472	
700.0	700.0	668.0	668.0	1.4	12.2	-87.55	213.6	-4,984.6	4,989.2	4,975.5	13.68	364.763	
787.4	787.4	755.4	755.4	1.6	14.0	-87.55	213.6	-4,984.6	4,989.2	4,973.6	15.64	319.094	
800.0	800.0	768.0	768.0	1.7	14.2	-87.55	213.6	-4,984.6	4,989.2	4,973.3	15.92	313.438	
885.8	885.8	853.8	853.8	1.9	16.0	-87.55	213.6	-4,984.6	4,989.2	4,971.4	17.84	279.678	
900.0	900.0	868.0	868.0	1.9	16.3	-87.55	213.6	-4,984.6	4,989.2	4,971.1	18.16	274.790	
984.2	984.2	952.2	952.2	2.1	18.0	-87.55	213.6	-4,984.6	4,989.2	4,969.2	20.04	248.937	
1,000.0	1,000.0	968.0	968.0	2.1	18.3	-87.55	213.6	-4,984.6	4,989.2	4,968.8	20.39	244.635	
1,082.7	1,082.7	1,050.7	1,050.7	2.3	19.9	-87.55	213.6	-4,984.6	4,989.2	4,967.0	22.24	224.290	
1,100.0	1,100.0	1,068.0	1,068.0	2.3	20.3	-87.55	213.6	-4,984.6	4,989.2	4,966.6	22.63	220.448	
1,181.1	1,181.1	1,149.1	1,149.1	2.5	21.9	-116.28	213.6	-4,984.6	4,989.7	4,965.3	24.44	204.142	
1,200.0	1,200.0	1,168.0	1,168.0	2.6	22.3	-116.28	213.6	-4,984.6	4,990.0	4,965.1	24.86	200.695	
1,279.5	1,279.4	1,247.4	1,247.4	2.7	23.9	-116.29	213.6	-4,984.6	4,991.7	4,965.1	26.63	187.443	
1,300.0	1,299.8	1,267.8	1,267.8	2.8	24.3	-116.29	213.6	-4,984.6	4,992.3	4,965.2	27.08	184.326	
1,377.9	1,377.5	1,345.5	1,345.5	3.0	25.9	-116.31	213.6	-4,984.6	4,995.2	4,966.4	28.81	173.384	
1,400.0	1,399.5	1,367.5	1,367.5	3.0	26.3	-116.31	213.6	-4,984.6	4,996.2	4,966.9	29.30	170.539	
1,476.4	1,475.3	1,443.3	1,443.3	3.2	27.8	-116.33	213.6	-4,984.6	5,000.2	4,969.2	30.98	161.382	
1,500.0	1,498.7	1,466.7	1,466.7	3.3	28.3	-116.34	213.6	-4,984.6	5,001.6	4,970.1	31.50	158.766	
1,574.8	1,572.6	1,540.6	1,540.6	3.5	29.8	-116.36	213.6	-4,984.6	5,006.7	4,973.6	33.15	151.011	
1,600.0	1,597.5	1,565.5	1,565.5	3.5	30.3	-116.37	213.6	-4,984.6	5,008.6	4,974.9	33.71	148.588	
1,673.2	1,669.4	1,637.4	1,637.4	3.7	31.7	-116.40	213.6	-4,984.6	5,014.8	4,979.4	35.33	141.952	
1,700.1	1,695.8	1,663.8	1,663.8	3.8	32.3	-116.41	213.6	-4,984.6	5,017.2	4,981.3	35.92	139.682	
1,771.6	1,765.7	1,733.7	1,733.7	4.1	33.7	-116.56	213.6	-4,984.6	5,024.0	4,986.5	37.54	133.830	
1,800.0	1,793.4	1,761.4	1,761.4	4.2	34.2	-116.62	213.6	-4,984.6	5,026.7	4,988.5	38.18	131.648	
1,870.1	1,862.0	1,830.0	1,830.0	4.4	35.6	-116.76	213.6	-4,984.6	5,033.3	4,993.6	39.78	126.519	
1,900.0	1,891.3	1,859.3	1,859.3	4.5	36.2	-116.82	213.6	-4,984.6	5,036.2	4,995.7	40.47	124.454	
1,968.5	1,958.3	1,926.3	1,926.3	4.8	37.6	-116.97	213.6	-4,984.6	5,042.8	5,000.7	42.04	119.952	
2,000.0	1,989.1	1,957.1	1,957.1	4.9	38.2	-117.03	213.6	-4,984.6	5,045.8	5,003.0	42.76	117.994	
2,066.9	2,054.5	2,022.5	2,022.5	5.1	39.5	-117.17	213.6	-4,984.6	5,052.2	5,007.9	44.31	114.030	
2,100.0	2,086.9	2,054.9	2,054.9	5.3	40.1	-117.24	213.6	-4,984.6	5,055.4	5,010.4	45.07	112.170	
2,165.3	2,150.8	2,118.8	2,118.8	5.5	41.4	-117.37	213.6	-4,984.6	5,061.8	5,015.2	46.58	108.665	
2,200.0	2,184.7	2,152.7	2,152.7	5.6	42.1	-117.44	213.6	-4,984.6	5,065.2	5,017.8	47.38	106.897	
2,263.8	2,247.1	2,215.1	2,215.1	5.9	43.4	-117.57	213.6	-4,984.6	5,071.4	5,022.5	48.86	103.787	
2,300.0	2,282.5	2,250.5	2,250.5	6.0	44.1	-117.65	213.6	-4,984.6	5,074.9	5,025.2	49.70	102.104	
2,362.2	2,343.3	2,311.3	2,311.3	6.3	45.3	-117.77	213.6	-4,984.6	5,081.1	5,029.9	51.15	99.337	
2,400.0	2,380.3	2,348.3	2,348.3	6.5	46.0	-117.85	213.6	-4,984.6	5,084.8	5,032.8	52.03	97.731	
2,460.6	2,439.6	2,407.6	2,407.6	6.7	47.2	-117.98	213.6	-4,984.6	5,090.8	5,037.4	53.44	95.261	
2,500.0	2,478.1	2,446.1	2,446.1	6.9	48.0	-118.06	213.6	-4,984.6	5,094.7	5,040.3	54.36	93.726	
2,559.0	2,535.9	2,503.9	2,503.9	7.1	49.2	-118.17	213.6	-4,984.6	5,100.6	5,044.9	55.73	91.516	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,543.9	2,543.9	7.3	50.0	-118.26	213.6	-4,984.6	5,104.7	5,048.0	56.69	90.047	
2,657.5	2,632.2	2,600.2	2,600.2	7.5	51.1	-118.37	213.6	-4,984.6	5,110.5	5,052.4	58.03	88.065	
2,700.0	2,673.8	2,641.8	2,641.8	7.7	51.9	-118.46	213.6	-4,984.6	5,114.7	5,055.7	59.02	86.656	
2,755.9	2,728.4	2,696.4	2,696.4	7.9	53.0	-118.57	213.6	-4,984.6	5,120.4	5,060.1	60.33	84.874	
2,800.0	2,771.6	2,739.6	2,739.6	8.1	53.9	-118.66	213.6	-4,984.6	5,124.8	5,063.5	61.36	83.522	
2,854.3	2,824.7	2,792.7	2,792.7	8.3	55.0	-118.77	213.6	-4,984.6	5,130.4	5,067.7	62.63	81.917	
2,900.0	2,869.4	2,837.4	2,837.4	8.5	55.9	-118.86	213.6	-4,984.6	5,135.0	5,071.3	63.70	80.617	
2,952.7	2,921.0	2,889.0	2,889.0	8.8	56.9	-118.97	213.6	-4,984.6	5,140.4	5,075.5	64.93	79.169	
3,000.0	2,967.2	2,935.2	2,935.2	9.0	57.8	-119.06	213.6	-4,984.6	5,145.3	5,079.2	66.03	77.918	
3,051.2	3,017.3	2,985.3	2,985.3	9.2	58.9	-119.16	213.6	-4,984.6	5,150.5	5,083.3	67.23	76.609	
3,100.0	3,065.0	3,033.0	3,033.0	9.4	59.8	-119.26	213.6	-4,984.6	5,155.6	5,087.2	68.37	75.403	
3,149.6	3,113.5	3,081.5	3,081.5	9.6	60.8	-119.36	213.6	-4,984.6	5,160.7	5,091.2	69.53	74.219	
3,200.0	3,162.8	3,130.8	3,130.8	9.8	61.8	-119.46	213.6	-4,984.6	5,165.9	5,095.2	70.71	73.055	
3,248.0	3,209.8	3,177.8	3,177.8	10.0	62.7	-119.55	213.6	-4,984.6	5,170.9	5,099.1	71.84	71.982	
3,300.0	3,260.6	3,228.6	3,228.6	10.2	63.7	-119.65	213.6	-4,984.6	5,176.4	5,103.3	73.05	70.859	
3,346.4	3,306.1	3,274.1	3,274.1	10.5	64.7	-119.75	213.6	-4,984.6	5,181.2	5,107.1	74.14	69.885	
3,400.0	3,358.5	3,326.5	3,326.5	10.7	65.7	-119.85	213.6	-4,984.6	5,186.9	5,111.5	75.39	68.799	
3,444.9	3,402.3	3,370.3	3,370.3	10.9	66.6	-119.94	213.6	-4,984.6	5,191.6	5,115.1	76.44	67.916	
3,500.0	3,456.3	3,424.3	3,424.3	11.1	67.7	-120.05	213.6	-4,984.6	5,197.4	5,119.7	77.73	66.864	
3,543.3	3,498.6	3,466.6	3,466.6	11.3	68.5	-120.13	213.6	-4,984.6	5,202.0	5,123.3	78.74	66.062	
3,600.0	3,554.1	3,522.1	3,522.1	11.5	69.6	-120.24	213.6	-4,984.6	5,208.0	5,128.0	80.07	65.043	
3,641.7	3,594.9	3,562.9	3,562.9	11.7	70.5	-120.32	213.6	-4,984.6	5,212.5	5,131.4	81.05	64.314	
3,700.0	3,651.9	3,619.9	3,619.9	12.0	71.6	-120.43	213.6	-4,984.6	5,218.7	5,136.3	82.41	63.326	
3,740.1	3,691.2	3,659.2	3,659.2	12.2	72.4	-120.51	213.6	-4,984.6	5,223.0	5,139.7	83.35	62.664	
3,800.0	3,749.7	3,717.7	3,717.7	12.4	73.6	-120.63	213.6	-4,984.6	5,229.4	5,144.7	84.75	61.705	
3,838.6	3,787.4	3,755.4	3,755.4	12.6	74.3	-120.70	213.6	-4,984.6	5,233.6	5,148.0	85.65	61.104	
3,900.0	3,847.5	3,815.5	3,815.5	12.9	75.6	-120.82	213.6	-4,984.6	5,240.2	5,153.2	87.09	60.173	
3,937.0	3,883.7	3,851.7	3,851.7	13.0	76.3	-120.89	213.6	-4,984.6	5,244.3	5,156.3	87.95	59.626	
4,000.0	3,945.3	3,913.3	3,913.3	13.3	77.5	-121.01	213.6	-4,984.6	5,251.1	5,161.7	89.42	58.721	
4,035.4	3,980.0	3,948.0	3,948.0	13.5	78.2	-121.08	213.6	-4,984.6	5,255.0	5,164.7	90.25	58.225	
4,060.0	4,004.0	3,972.0	3,972.0	13.6	78.7	-121.13	213.6	-4,984.6	5,257.6	5,166.8	90.83	57.886	
4,100.0	4,043.2	4,011.2	4,011.2	13.7	79.5	-121.27	213.6	-4,984.6	5,261.9	5,170.1	91.80	57.319	
4,133.8	4,076.5	4,044.5	4,044.5	13.8	80.2	-121.39	213.6	-4,984.6	5,265.2	5,172.6	92.60	56.858	
4,200.0	4,141.6	4,109.6	4,109.6	14.0	81.5	-121.60	213.6	-4,984.6	5,271.2	5,177.1	94.17	55.974	
4,232.3	4,173.5	4,141.5	4,141.5	14.1	82.1	-121.69	213.6	-4,984.6	5,273.9	5,178.9	94.93	55.556	
4,300.0	4,240.6	4,208.6	4,208.6	14.3	83.5	-121.86	213.6	-4,984.6	5,278.8	5,182.3	96.51	54.695	
4,330.7	4,271.1	4,239.1	4,239.1	14.4	84.1	-121.92	213.6	-4,984.6	5,280.7	5,183.5	97.22	54.317	
4,400.0	4,340.0	4,308.0	4,308.0	14.5	85.5	-122.05	213.6	-4,984.6	5,284.5	5,185.7	98.81	53.480	
4,429.1	4,369.0	4,337.0	4,337.0	14.6	86.0	-122.10	213.6	-4,984.6	5,285.9	5,186.4	99.47	53.140	
4,500.0	4,439.7	4,407.7	4,407.7	14.8	87.5	-122.19	213.6	-4,984.6	5,288.4	5,187.4	101.06	52.327	
4,527.5	4,467.2	4,435.2	4,435.2	14.8	88.0	-122.21	213.6	-4,984.6	5,289.2	5,187.5	101.67	52.022	
4,600.0	4,539.7	4,507.7	4,507.7	14.9	89.5	-122.26	213.6	-4,984.6	5,290.5	5,187.2	103.26	51.233	
4,626.0	4,565.6	4,533.6	4,533.6	15.0	90.0	-122.26	213.6	-4,984.6	5,290.7	5,186.9	103.82	50.959	
4,660.2	4,599.8	4,567.8	4,567.8	15.0	90.7	-93.54	213.6	-4,984.6	5,290.8	5,188.0	102.85	51.441	
4,700.0	4,639.6	4,607.6	4,607.6	15.0	91.5	-93.54	213.6	-4,984.6	5,290.8	5,187.1	103.72	51.011	
4,724.4	4,664.0	4,632.0	4,632.0	15.1	92.0	-93.54	213.6	-4,984.6	5,290.8	5,186.6	104.25	50.750	
4,800.0	4,739.6	4,707.6	4,707.6	15.2	93.5	-93.54	213.6	-4,984.6	5,290.8	5,184.9	105.91	49.955	
4,822.8	4,762.5	4,730.5	4,730.5	15.2	93.9	-93.54	213.6	-4,984.6	5,290.8	5,184.4	106.41	49.720	
4,900.0	4,839.6	4,807.6	4,807.6	15.3	95.5	-93.54	213.6	-4,984.6	5,290.8	5,182.7	108.10	48.942	
4,921.2	4,860.9	4,828.9	4,828.9	15.4	95.9	-93.54	213.6	-4,984.6	5,290.8	5,182.2	108.57	48.732	
5,000.0	4,939.6	4,907.6	4,907.6	15.5	97.5	-93.54	213.6	-4,984.6	5,290.8	5,180.5	110.30	47.968	
5,019.7	4,959.3	4,927.3	4,927.3	15.5	97.9	-93.54	213.6	-4,984.6	5,290.8	5,180.1	110.73	47.781	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,007.6	5,007.6	15.6	99.5	-93.54	213.6	-4,984.6	5,290.8	5,178.3	112.50	47.032	
5,118.1	5,057.7	5,025.7	5,025.7	15.7	99.9	-93.54	213.6	-4,984.6	5,290.8	5,177.9	112.89	46.866	
5,200.0	5,139.6	5,107.6	5,107.6	15.8	101.5	-93.54	213.6	-4,984.6	5,290.8	5,176.1	114.69	46.130	
5,216.5	5,156.2	5,124.2	5,124.2	15.8	101.9	-93.54	213.6	-4,984.6	5,290.8	5,175.8	115.06	45.985	
5,300.0	5,239.6	5,207.6	5,207.6	15.9	103.5	-93.54	213.6	-4,984.6	5,290.8	5,173.9	116.89	45.263	
5,314.9	5,254.6	5,222.6	5,222.6	16.0	103.8	-93.54	213.6	-4,984.6	5,290.8	5,173.6	117.22	45.136	
5,400.0	5,339.6	5,307.6	5,307.6	16.1	105.6	-93.54	213.6	-4,984.6	5,290.8	5,171.7	119.09	44.427	
5,413.4	5,353.0	5,321.0	5,321.0	16.1	105.8	-93.54	213.6	-4,984.6	5,290.8	5,171.4	119.39	44.317	
5,500.0	5,439.6	5,407.6	5,407.6	16.3	107.6	-93.54	213.6	-4,984.6	5,290.8	5,169.5	121.29	43.621	
5,511.8	5,451.4	5,419.4	5,419.4	16.3	107.8	-93.54	213.6	-4,984.6	5,290.8	5,169.3	121.55	43.527	
5,600.0	5,539.6	5,507.6	5,507.6	16.4	109.6	-93.54	213.6	-4,984.6	5,290.8	5,167.3	123.49	42.843	
5,610.2	5,549.9	5,517.9	5,517.9	16.4	109.8	-93.54	213.6	-4,984.6	5,290.8	5,167.1	123.72	42.765	
5,700.0	5,639.6	5,607.6	5,607.6	16.6	111.6	-93.54	213.6	-4,984.6	5,290.8	5,165.1	125.70	42.092	
5,708.6	5,648.3	5,616.3	5,616.3	16.6	111.8	-93.54	213.6	-4,984.6	5,290.8	5,164.9	125.89	42.028	
5,800.0	5,739.6	5,707.6	5,707.6	16.7	113.6	-93.54	213.6	-4,984.6	5,290.8	5,162.9	127.90	41.367	
5,807.1	5,746.7	5,714.7	5,714.7	16.8	113.7	-93.54	213.6	-4,984.6	5,290.8	5,162.8	128.06	41.317	
5,900.0	5,839.6	5,807.6	5,807.6	16.9	115.6	-93.54	213.6	-4,984.6	5,290.8	5,160.7	130.10	40.666	
5,905.5	5,845.1	5,813.1	5,813.1	16.9	115.7	-93.54	213.6	-4,984.6	5,290.8	5,160.6	130.23	40.628	
6,000.0	5,939.6	5,907.6	5,907.6	17.1	117.6	-93.54	213.6	-4,984.6	5,290.8	5,158.5	132.31	39.988	
6,003.9	5,943.6	5,911.6	5,911.6	17.1	117.7	-93.54	213.6	-4,984.6	5,290.8	5,158.4	132.40	39.962	
6,059.2	5,998.8	5,966.8	5,966.8	17.2	118.8	-93.54	213.6	-4,984.6	5,290.8	5,157.2	133.62	39.597	
6,100.0	6,039.6	6,007.6	6,007.6	17.2	119.6	-3.55	213.6	-4,984.6	5,289.7	5,154.0	135.63	38.999	
6,102.3	6,042.0	6,010.0	6,010.0	17.2	119.7	-3.55	213.6	-4,984.6	5,289.5	5,153.9	135.66	38.992	
6,150.0	6,089.4	6,057.4	6,057.4	17.3	120.6	-3.57	213.6	-4,984.6	5,285.1	5,149.3	135.81	38.915	
6,200.0	6,138.7	6,106.7	6,106.7	17.3	121.6	-3.62	213.6	-4,984.6	5,277.0	5,141.7	135.31	38.999	
6,200.8	6,139.5	6,107.5	6,107.5	17.3	121.6	-3.62	213.6	-4,984.6	5,276.9	5,141.6	135.30	39.002	
6,250.0	6,187.4	6,155.4	6,155.4	17.3	122.6	-3.69	213.6	-4,984.6	5,265.6	5,131.5	134.13	39.258	
6,299.2	6,234.4	6,202.4	6,202.4	17.4	123.5	-3.78	213.6	-4,984.6	5,251.0	5,118.8	132.29	39.694	
6,300.0	6,235.1	6,203.1	6,203.1	17.4	123.6	-3.78	213.6	-4,984.6	5,250.8	5,118.5	132.25	39.702	
6,350.0	6,281.7	6,249.7	6,249.7	17.4	124.5	-3.89	213.6	-4,984.6	5,232.7	5,103.0	129.69	40.348	
6,397.6	6,324.8	6,292.8	6,292.8	17.3	125.4	-4.03	213.6	-4,984.6	5,212.5	5,085.9	126.61	41.171	
6,400.0	6,326.9	6,294.9	6,294.9	17.3	125.4	-4.04	213.6	-4,984.6	5,211.4	5,085.0	126.44	41.217	
6,450.0	6,370.5	6,338.5	6,338.5	17.3	126.3	-4.22	213.6	-4,984.6	5,187.0	5,064.5	122.51	42.338	
6,496.0	6,409.1	6,377.1	6,377.1	17.3	127.1	-4.42	213.6	-4,984.6	5,161.9	5,043.6	118.32	43.625	
6,500.0	6,412.3	6,380.3	6,380.3	17.3	127.1	-4.44	213.6	-4,984.6	5,159.6	5,041.7	117.94	43.748	
6,550.0	6,452.1	6,420.1	6,420.1	17.3	127.9	-4.71	213.6	-4,984.6	5,129.4	5,016.7	112.74	45.499	
6,594.5	6,485.6	6,453.6	6,453.6	17.3	128.6	-5.00	213.6	-4,984.6	5,100.3	4,992.7	107.62	47.393	
6,600.0	6,489.7	6,457.7	6,457.7	17.3	128.7	-5.04	213.6	-4,984.6	5,096.5	4,989.6	106.95	47.653	
6,650.0	6,524.9	6,492.9	6,492.9	17.2	129.4	-5.44	213.6	-4,984.6	5,061.1	4,960.5	100.62	50.297	
6,692.9	6,553.0	6,521.0	6,521.0	17.2	130.0	-5.87	213.6	-4,984.6	5,028.8	4,934.0	94.82	53.035	
6,700.0	6,557.5	6,525.5	6,525.5	17.2	130.0	-5.94	213.6	-4,984.6	5,023.3	4,929.4	93.83	53.537	
6,750.0	6,587.4	6,555.4	6,555.4	17.2	130.6	-6.58	213.6	-4,984.6	4,983.3	4,896.6	86.66	57.504	
6,791.3	6,609.9	6,577.9	6,577.9	17.2	131.1	-7.23	213.6	-4,984.6	4,948.7	4,868.2	80.56	61.431	
6,800.0	6,614.4	6,582.4	6,582.4	17.2	131.2	-7.38	213.6	-4,984.6	4,941.3	4,862.1	79.27	62.339	
6,850.0	6,638.4	6,606.4	6,606.4	17.2	131.7	-8.45	213.6	-4,984.6	4,897.6	4,825.7	71.88	68.132	
6,889.7	6,655.3	6,623.3	6,623.3	17.4	132.0	-9.56	213.6	-4,984.6	4,861.7	4,795.4	66.31	73.320	
6,900.0	6,659.4	6,627.4	6,627.4	17.5	132.1	-9.90	213.6	-4,984.6	4,852.3	4,787.3	64.96	74.697	
6,950.0	6,677.1	6,645.1	6,645.1	18.0	132.5	-11.97	213.6	-4,984.6	4,805.6	4,746.3	59.39	80.921	
6,988.2	6,688.4	6,656.4	6,656.4	18.5	132.7	-14.25	213.6	-4,984.6	4,769.3	4,712.1	57.16	83.434	
7,000.0	6,691.5	6,659.5	6,659.5	18.7	132.7	-15.14	213.6	-4,984.6	4,757.9	4,700.8	57.07	83.369	
7,050.0	6,702.5	6,670.5	6,670.5	19.5	133.0	-20.47	213.6	-4,984.6	4,709.2	4,647.3	61.92	76.056	
7,086.6	6,708.4	6,676.4	6,676.4	20.1	133.1	-27.29	213.6	-4,984.6	4,673.2	4,599.1	74.15	63.028	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	6,678.1	6,678.1	20.4	133.1	-30.93	213.6	-4,984.6	4,660.0	4,578.5	81.49	57.181	
7,150.0	6,714.2	6,682.2	6,682.2	21.3	133.2	-56.12	213.6	-4,984.6	4,610.3	4,482.4	127.89	36.049	
7,185.0	6,715.0	6,683.0	6,683.0	21.9	133.2	-90.97	213.6	-4,984.6	4,575.3	4,420.5	154.86	29.545	
7,185.6	6,715.0	6,683.0	6,683.0	21.9	133.2	-91.56	213.6	-4,984.6	4,574.8	4,419.9	154.85	29.543	
7,200.0	6,715.0	6,683.0	6,683.0	22.2	133.2	-91.56	213.6	-4,984.6	4,560.4	4,405.3	155.13	29.397	
7,283.4	6,714.8	6,682.8	6,682.8	23.9	133.2	-91.53	213.6	-4,984.6	4,477.2	4,320.4	156.80	28.553	
7,300.0	6,714.8	6,682.8	6,682.8	24.2	133.2	-91.52	213.6	-4,984.6	4,460.7	4,303.5	157.14	28.387	
7,381.9	6,714.6	6,682.6	6,682.6	26.0	133.2	-91.49	213.6	-4,984.6	4,379.0	4,220.1	158.89	27.559	
7,400.0	6,714.6	6,682.6	6,682.6	26.4	133.2	-91.49	213.6	-4,984.6	4,360.9	4,201.7	159.28	27.378	
7,480.3	6,714.4	6,682.4	6,682.4	28.2	133.2	-91.46	213.6	-4,984.6	4,280.9	4,119.8	161.10	26.573	
7,500.0	6,714.4	6,682.4	6,682.4	28.7	133.2	-91.45	213.6	-4,984.6	4,261.2	4,099.7	161.55	26.378	
7,578.7	6,714.2	6,682.2	6,682.2	30.5	133.2	-91.43	213.6	-4,984.6	4,182.7	4,019.3	163.40	25.598	
7,600.0	6,714.2	6,682.2	6,682.2	31.0	133.2	-91.42	213.6	-4,984.6	4,161.5	3,997.6	163.90	25.391	
7,677.1	6,714.0	6,682.0	6,682.0	32.9	133.2	-91.39	213.6	-4,984.6	4,084.6	3,918.8	165.77	24.640	
7,700.0	6,714.0	6,682.0	6,682.0	33.4	133.2	-91.38	213.6	-4,984.6	4,061.8	3,895.5	166.32	24.421	
7,775.6	6,713.9	6,681.9	6,681.9	35.3	133.2	-91.36	213.6	-4,984.6	3,986.5	3,818.3	168.20	23.701	
7,800.0	6,713.8	6,681.8	6,681.8	35.9	133.2	-91.35	213.6	-4,984.6	3,962.2	3,793.4	168.80	23.472	
7,874.0	6,713.7	6,681.7	6,681.7	37.8	133.2	-91.32	213.6	-4,984.6	3,888.4	3,717.8	170.67	22.783	
7,900.0	6,713.6	6,681.6	6,681.6	38.4	133.2	-91.31	213.6	-4,984.6	3,862.5	3,691.2	171.33	22.544	
7,972.4	6,713.5	6,681.5	6,681.5	40.3	133.2	-91.29	213.6	-4,984.6	3,790.4	3,617.2	173.19	21.886	
8,000.0	6,713.4	6,681.4	6,681.4	41.0	133.2	-91.28	213.6	-4,984.6	3,762.9	3,589.0	173.89	21.639	
8,070.8	6,713.3	6,681.3	6,681.3	42.8	133.2	-91.25	213.6	-4,984.6	3,692.3	3,516.6	175.73	21.011	
8,100.0	6,713.2	6,681.2	6,681.2	43.6	133.2	-91.24	213.6	-4,984.6	3,663.3	3,486.8	176.49	20.757	
8,169.3	6,713.1	6,681.1	6,681.1	45.4	133.2	-91.22	213.6	-4,984.6	3,594.3	3,416.0	178.30	20.159	
8,200.0	6,713.0	6,681.0	6,681.0	46.2	133.2	-91.21	213.6	-4,984.6	3,563.7	3,384.6	179.10	19.897	
8,267.7	6,712.9	6,680.9	6,680.9	48.0	133.2	-91.18	213.6	-4,984.6	3,496.3	3,315.4	180.89	19.328	
8,300.0	6,712.8	6,680.8	6,680.8	48.8	133.2	-91.17	213.6	-4,984.6	3,464.1	3,282.4	181.74	19.060	
8,366.1	6,712.7	6,680.7	6,680.7	50.6	133.2	-91.15	213.6	-4,984.6	3,398.3	3,214.8	183.50	18.519	
8,400.0	6,712.6	6,680.6	6,680.6	51.5	133.2	-91.14	213.6	-4,984.6	3,364.6	3,180.2	184.40	18.246	
8,464.5	6,712.5	6,680.5	6,680.5	53.2	133.2	-91.12	213.6	-4,984.6	3,300.3	3,114.2	186.13	17.732	
8,500.0	6,712.4	6,680.4	6,680.4	54.1	133.2	-91.10	213.6	-4,984.6	3,265.1	3,078.0	187.07	17.453	
8,563.0	6,712.3	6,680.3	6,680.3	55.8	133.2	-91.08	213.6	-4,984.6	3,202.4	3,013.6	188.77	16.965	
8,600.0	6,712.3	6,680.3	6,680.3	56.8	133.2	-91.07	213.6	-4,984.6	3,165.6	2,975.8	189.76	16.682	
8,661.4	6,712.1	6,680.1	6,680.1	58.5	133.2	-91.05	213.6	-4,984.6	3,104.5	2,913.1	191.42	16.219	
8,700.0	6,712.1	6,680.1	6,680.1	59.5	133.2	-91.03	213.6	-4,984.6	3,066.1	2,873.7	192.46	15.932	
8,759.8	6,711.9	6,679.9	6,679.9	61.1	133.2	-91.01	213.6	-4,984.6	3,006.7	2,812.6	194.08	15.492	
8,800.0	6,711.9	6,679.9	6,679.9	62.2	133.2	-91.00	213.6	-4,984.6	2,966.7	2,771.6	195.16	15.201	
8,858.2	6,711.8	6,679.8	6,679.8	63.8	133.1	-90.98	213.6	-4,984.6	2,908.8	2,712.1	196.75	14.785	
8,900.0	6,711.7	6,679.7	6,679.7	64.9	133.1	-90.96	213.6	-4,984.6	2,867.4	2,669.5	197.88	14.490	
8,956.7	6,711.6	6,679.6	6,679.6	66.5	133.1	-90.95	213.6	-4,984.6	2,811.1	2,611.6	199.42	14.096	
9,000.0	6,711.5	6,679.5	6,679.5	67.6	133.1	-90.93	213.6	-4,984.6	2,768.0	2,567.4	200.60	13.799	
9,055.1	6,711.4	6,679.4	6,679.4	69.1	133.1	-90.91	213.6	-4,984.6	2,713.3	2,511.2	202.11	13.425	
9,100.0	6,711.3	6,679.3	6,679.3	70.4	133.1	-90.90	213.6	-4,984.6	2,668.8	2,465.4	203.33	13.125	
9,153.5	6,711.2	6,679.2	6,679.2	71.8	133.1	-90.88	213.6	-4,984.6	2,615.6	2,410.8	204.80	12.772	
9,200.0	6,711.1	6,679.1	6,679.1	73.1	133.1	-90.86	213.6	-4,984.6	2,569.5	2,363.5	206.07	12.469	
9,251.9	6,711.0	6,679.0	6,679.0	74.5	133.1	-90.84	213.6	-4,984.6	2,518.0	2,310.5	207.49	12.135	
9,300.0	6,710.9	6,678.9	6,678.9	75.8	133.1	-90.83	213.6	-4,984.6	2,470.4	2,261.6	208.81	11.831	
9,350.4	6,710.8	6,678.8	6,678.8	77.2	133.1	-90.81	213.6	-4,984.6	2,420.5	2,210.3	210.19	11.515	
9,400.0	6,710.7	6,678.7	6,678.7	78.6	133.1	-90.79	213.6	-4,984.6	2,371.3	2,159.7	211.56	11.209	
9,448.8	6,710.6	6,678.6	6,678.6	79.9	133.1	-90.78	213.6	-4,984.6	2,323.0	2,110.1	212.90	10.911	
9,500.0	6,710.5	6,678.5	6,678.5	81.3	133.1	-90.76	213.6	-4,984.6	2,272.3	2,058.0	214.31	10.603	
9,547.2	6,710.4	6,678.4	6,678.4	82.6	133.1	-90.74	213.6	-4,984.6	2,225.6	2,010.0	215.61	10.322	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,600.0	6,710.3	6,678.3	6,678.3	84.1	133.1	-90.72	213.6	-4,984.6	2,173.4	1,956.3	217.06	10.013	
9,645.6	6,710.2	6,678.2	6,678.2	85.3	133.1	-90.71	213.6	-4,984.6	2,128.3	1,909.9	218.32	9.748	
9,700.0	6,710.1	6,678.1	6,678.1	86.8	133.1	-90.69	213.6	-4,984.6	2,074.6	1,854.7	219.82	9.438	
9,744.1	6,710.0	6,678.0	6,678.0	88.1	133.1	-90.67	213.6	-4,984.6	2,031.0	1,810.0	221.03	9.189	
9,800.0	6,709.9	6,677.9	6,677.9	89.6	133.1	-90.66	213.6	-4,984.6	1,975.9	1,753.3	222.58	8.877	
9,842.5	6,709.9	6,677.9	6,677.9	90.8	133.1	-90.64	213.6	-4,984.6	1,934.0	1,710.2	223.75	8.643	
9,900.0	6,709.7	6,677.7	6,677.7	92.4	133.1	-90.62	213.6	-4,984.6	1,877.3	1,652.0	225.34	8.331	
9,940.9	6,709.7	6,677.7	6,677.7	93.5	133.1	-90.61	213.6	-4,984.6	1,837.0	1,610.6	226.47	8.112	
10,000.0	6,709.6	6,677.6	6,677.6	95.1	133.1	-90.59	213.6	-4,984.6	1,778.9	1,550.8	228.11	7.799	
10,039.3	6,709.5	6,677.5	6,677.5	96.2	133.1	-90.57	213.6	-4,984.6	1,740.3	1,511.1	229.20	7.593	
10,100.0	6,709.4	6,677.4	6,677.4	97.9	133.1	-90.55	213.6	-4,984.6	1,680.7	1,449.9	230.87	7.280	
10,137.8	6,709.3	6,677.3	6,677.3	98.9	133.1	-90.54	213.6	-4,984.6	1,643.7	1,411.8	231.92	7.087	
10,200.0	6,709.2	6,677.2	6,677.2	100.7	133.1	-90.52	213.6	-4,984.6	1,582.8	1,349.1	233.64	6.774	
10,236.2	6,709.1	6,677.1	6,677.1	101.7	133.1	-90.51	213.6	-4,984.6	1,547.4	1,312.7	234.65	6.594	
10,300.0	6,709.0	6,677.0	6,677.0	103.4	133.1	-90.49	213.6	-4,984.6	1,485.1	1,248.6	236.42	6.282	
10,334.6	6,708.9	6,676.9	6,676.9	104.4	133.1	-90.47	213.6	-4,984.6	1,451.3	1,213.9	237.38	6.114	
10,400.0	6,708.8	6,676.8	6,676.8	106.2	133.1	-90.45	213.6	-4,984.6	1,387.7	1,148.5	239.19	5.802	
10,433.0	6,708.7	6,676.7	6,676.7	107.1	133.1	-90.44	213.6	-4,984.6	1,355.6	1,115.5	240.11	5.646	
10,500.0	6,708.6	6,676.6	6,676.6	109.0	133.1	-90.42	213.6	-4,984.6	1,290.7	1,048.7	241.97	5.334	
10,531.5	6,708.5	6,676.5	6,676.5	109.9	133.1	-90.41	213.6	-4,984.6	1,260.3	1,017.4	242.84	5.190	
10,600.0	6,708.4	6,676.4	6,676.4	111.8	133.1	-90.38	213.6	-4,984.6	1,194.2	949.5	244.74	4.879	
10,629.9	6,708.4	6,676.4	6,676.4	112.6	133.1	-90.37	213.6	-4,984.6	1,165.5	919.9	245.57	4.746	
10,700.0	6,708.2	6,676.2	6,676.2	114.6	133.1	-90.35	213.6	-4,984.6	1,098.4	850.8	247.52	4.437	
10,728.3	6,708.2	6,676.2	6,676.2	115.3	133.1	-90.34	213.6	-4,984.6	1,071.4	823.1	248.31	4.315	
10,800.0	6,708.0	6,676.0	6,676.0	117.3	133.1	-90.32	213.6	-4,984.6	1,003.3	753.0	250.30	4.009	
10,826.7	6,708.0	6,676.0	6,676.0	118.1	133.1	-90.31	213.6	-4,984.6	978.1	727.0	251.05	3.896	
10,900.0	6,707.8	6,675.8	6,675.8	120.1	133.1	-90.28	213.6	-4,984.6	909.4	656.3	253.08	3.593	
10,925.2	6,707.8	6,675.8	6,675.8	120.8	133.1	-90.27	213.6	-4,984.6	885.9	632.1	253.78	3.491	
11,000.0	6,707.6	6,675.6	6,675.6	122.9	133.1	-90.25	213.6	-4,984.6	816.8	561.0	255.86	3.192	
11,023.6	6,707.6	6,675.6	6,675.6	123.6	133.1	-90.24	213.6	-4,984.6	795.2	538.7	256.52	3.100	
11,100.0	6,707.5	6,675.5	6,675.5	125.7	133.1	-90.22	213.6	-4,984.6	726.3	467.6	258.65	2.808	
11,122.0	6,707.4	6,675.4	6,675.4	126.3	133.1	-90.21	213.6	-4,984.6	706.7	447.4	259.26	2.726	
11,200.0	6,707.3	6,675.3	6,675.3	128.5	133.1	-90.18	213.6	-4,984.6	638.5	377.1	261.43	2.442	
11,220.4	6,707.2	6,675.2	6,675.2	129.0	133.1	-90.18	213.6	-4,984.6	621.0	359.0	262.00	2.370	
11,300.0	6,707.1	6,675.1	6,675.1	131.3	133.1	-90.15	213.6	-4,984.6	555.0	290.7	264.22	2.100	
11,318.9	6,707.0	6,675.0	6,675.0	131.8	133.1	-90.14	213.6	-4,984.6	539.8	275.1	264.74	2.039	
11,400.0	6,706.9	6,674.9	6,674.9	134.0	133.1	-90.12	213.6	-4,984.6	477.8	210.7	267.00	1.789	
11,417.3	6,706.9	6,674.9	6,674.9	134.5	133.1	-90.11	213.6	-4,984.6	465.3	197.8	267.49	1.739	
11,500.0	6,706.7	6,674.7	6,674.7	136.8	133.0	-90.08	213.6	-4,984.6	410.5	140.7	269.79	1.522	
11,515.7	6,706.7	6,674.7	6,674.7	137.3	133.0	-90.08	213.6	-4,984.6	401.2	130.9	270.23	1.485 Level 3	
11,600.0	6,706.5	6,674.5	6,674.5	139.6	133.0	-90.05	213.6	-4,984.6	358.8	86.3	272.58	1.316 Level 3	
11,614.1	6,706.5	6,674.5	6,674.5	140.0	133.0	-90.04	213.6	-4,984.6	353.2	80.2	272.97	1.294 Level 3	
11,700.0	6,706.3	6,674.3	6,674.3	142.4	133.0	-90.02	213.6	-4,984.6	330.2	54.8	275.37	1.199 Level 2	
11,712.6	6,706.3	6,674.3	6,674.3	142.8	133.0	-90.01	213.6	-4,984.6	328.6	52.9	275.72	1.192 Level 2	
11,748.7	6,706.2	6,674.2	6,674.2	143.8	133.0	-90.00	213.6	-4,984.6	326.6	49.9	276.72	1.180 Level 2, CC, ES, SF	
11,800.0	6,706.1	6,674.1	6,674.1	145.2	133.0	-89.98	213.6	-4,984.6	330.6	52.4	278.15	1.189 Level 2	
11,811.0	6,706.1	6,674.1	6,674.1	145.5	133.0	-89.98	213.6	-4,984.6	332.5	54.0	278.46	1.194 Level 2	
11,900.0	6,705.9	6,673.9	6,673.9	148.0	133.0	-89.95	213.6	-4,984.6	359.9	79.0	280.94	1.281 Level 3	
11,909.4	6,705.9	6,673.9	6,673.9	148.3	133.0	-89.95	213.6	-4,984.6	364.0	82.8	281.21	1.294 Level 3	
12,000.0	6,705.8	6,673.8	6,673.8	150.8	133.0	-89.92	213.6	-4,984.6	412.1	128.3	283.73	1.452 Level 3	
12,007.8	6,705.7	6,673.7	6,673.7	151.0	133.0	-89.91	213.6	-4,984.6	416.9	133.0	283.95	1.468 Level 3	
12,100.0	6,705.6	6,673.6	6,673.6	153.6	133.0	-89.88	213.6	-4,984.6	479.7	193.1	286.52	1.674	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,673.6	6,673.6	153.8	133.0	-89.88	213.6	-4,984.6	484.3	197.6	286.70	1.689	
12,200.0	6,705.4	6,673.4	6,673.4	156.4	133.0	-89.85	213.6	-4,984.6	557.1	267.8	289.31	1.925	
12,204.7	6,705.4	6,673.4	6,673.4	156.5	133.0	-89.85	213.6	-4,984.6	560.9	271.4	289.45	1.938	
12,300.0	6,705.2	6,673.2	6,673.2	159.2	133.0	-89.82	213.6	-4,984.6	640.8	348.7	292.11	2.194	
12,303.1	6,705.2	6,673.2	6,673.2	159.3	133.0	-89.82	213.6	-4,984.6	643.5	351.3	292.19	2.202	
12,400.0	6,705.0	6,673.0	6,673.0	162.0	133.0	-89.78	213.6	-4,984.6	728.6	433.7	294.90	2.471	
12,401.5	6,705.0	6,673.0	6,673.0	162.0	133.0	-89.78	213.6	-4,984.6	730.0	435.0	294.94	2.475	
12,500.0	6,704.8	6,672.8	6,672.8	164.8	133.0	-89.75	213.6	-4,984.6	819.2	521.5	297.69	2.752	
12,598.4	6,704.6	6,672.6	6,672.6	167.5	133.0	-89.72	213.6	-4,984.6	910.3	609.9	300.44	3.030	
12,600.0	6,704.6	6,672.6	6,672.6	167.6	133.0	-89.72	213.6	-4,984.6	911.8	611.3	300.48	3.034	
12,696.8	6,704.4	6,672.4	6,672.4	170.3	133.0	-89.69	213.6	-4,984.6	1,002.8	699.6	303.19	3.308	
12,700.0	6,704.4	6,672.4	6,672.4	170.4	133.0	-89.69	213.6	-4,984.6	1,005.8	702.5	303.27	3.316	
12,795.2	6,704.3	6,672.3	6,672.3	173.0	133.0	-89.66	213.6	-4,984.6	1,096.3	790.4	305.93	3.584	
12,800.0	6,704.2	6,672.2	6,672.2	173.2	133.0	-89.65	213.6	-4,984.6	1,100.9	794.8	306.07	3.597	
12,893.7	6,704.1	6,672.1	6,672.1	175.8	133.0	-89.62	213.6	-4,984.6	1,190.6	882.0	308.68	3.857	
12,900.0	6,704.1	6,672.1	6,672.1	176.0	133.0	-89.62	213.6	-4,984.6	1,196.7	887.9	308.86	3.875	
12,992.1	6,703.9	6,671.9	6,671.9	178.5	133.0	-89.59	213.6	-4,984.6	1,285.6	974.1	311.43	4.128	
13,000.0	6,703.9	6,671.9	6,671.9	178.8	133.0	-89.59	213.6	-4,984.6	1,293.2	981.6	311.65	4.150	
13,090.5	6,703.7	6,671.7	6,671.7	181.3	133.0	-89.56	213.6	-4,984.6	1,381.0	1,066.8	314.18	4.396	
13,100.0	6,703.7	6,671.7	6,671.7	181.6	133.0	-89.56	213.6	-4,984.6	1,390.2	1,075.8	314.45	4.421	
13,188.9	6,703.5	6,671.5	6,671.5	184.0	133.0	-89.53	213.6	-4,984.6	1,476.8	1,159.9	316.93	4.660	
13,200.0	6,703.5	6,671.5	6,671.5	184.4	133.0	-89.52	213.6	-4,984.6	1,487.6	1,170.3	317.24	4.689	
13,287.4	6,703.3	6,671.3	6,671.3	186.8	133.0	-89.49	213.6	-4,984.6	1,573.0	1,253.3	319.68	4.920	
13,300.0	6,703.3	6,671.3	6,671.3	187.2	133.0	-89.49	213.6	-4,984.6	1,585.3	1,265.3	320.04	4.954	
13,385.8	6,703.2	6,671.2	6,671.2	189.6	133.0	-89.46	213.6	-4,984.6	1,669.4	1,346.9	322.43	5.177	
13,400.0	6,703.1	6,671.1	6,671.1	190.0	133.0	-89.46	213.6	-4,984.6	1,683.3	1,360.5	322.83	5.214	
13,484.2	6,703.0	6,671.0	6,671.0	192.3	133.0	-89.43	213.6	-4,984.6	1,766.0	1,440.8	325.18	5.431	
13,500.0	6,702.9	6,670.9	6,670.9	192.8	133.0	-89.43	213.6	-4,984.6	1,781.5	1,455.9	325.62	5.471	
13,582.6	6,702.8	6,670.8	6,670.8	195.1	133.0	-89.40	213.6	-4,984.6	1,862.8	1,534.9	327.93	5.680	
13,600.0	6,702.8	6,670.8	6,670.8	195.6	133.0	-89.39	213.6	-4,984.6	1,879.9	1,551.5	328.42	5.724	
13,681.1	6,702.6	6,670.6	6,670.6	197.8	133.0	-89.37	213.6	-4,984.6	1,959.8	1,629.1	330.69	5.926	
13,700.0	6,702.6	6,670.6	6,670.6	198.4	133.0	-89.36	213.6	-4,984.6	1,978.4	1,647.2	331.21	5.973	
13,779.5	6,702.4	6,670.4	6,670.4	200.6	133.0	-89.34	213.6	-4,984.6	2,056.9	1,723.5	333.44	6.169	
13,800.0	6,702.4	6,670.4	6,670.4	201.2	133.0	-89.33	213.6	-4,984.6	2,077.1	1,743.1	334.01	6.219	
13,877.9	6,702.2	6,670.2	6,670.2	203.3	133.0	-89.30	213.6	-4,984.6	2,154.1	1,817.9	336.19	6.408	
13,900.0	6,702.2	6,670.2	6,670.2	204.0	133.0	-89.30	213.6	-4,984.6	2,175.9	1,839.1	336.80	6.461	
13,976.3	6,702.1	6,670.1	6,670.1	206.1	133.0	-89.27	213.6	-4,984.6	2,251.5	1,912.5	338.94	6.643	
14,000.0	6,702.0	6,670.0	6,670.0	206.8	133.0	-89.27	213.6	-4,984.6	2,274.9	1,935.3	339.60	6.699	
14,074.8	6,701.9	6,669.9	6,669.9	208.9	133.0	-89.24	213.6	-4,984.6	2,348.9	2,007.2	341.69	6.874	
14,100.0	6,701.8	6,669.8	6,669.8	209.6	133.0	-89.23	213.6	-4,984.6	2,373.9	2,031.5	342.40	6.933	
14,173.2	6,701.7	6,669.7	6,669.7	211.6	132.9	-89.21	213.6	-4,984.6	2,446.4	2,102.0	344.44	7.103	
14,200.0	6,701.6	6,669.6	6,669.6	212.4	132.9	-89.20	213.6	-4,984.6	2,473.0	2,127.8	345.19	7.164	
14,271.6	6,701.5	6,669.5	6,669.5	214.4	132.9	-89.18	213.6	-4,984.6	2,544.0	2,196.8	347.19	7.327	
14,300.0	6,701.4	6,669.4	6,669.4	215.2	132.9	-89.17	213.6	-4,984.6	2,572.1	2,224.1	347.99	7.391	
14,370.0	6,701.3	6,669.3	6,669.3	217.1	132.9	-89.15	213.6	-4,984.6	2,641.6	2,291.7	349.94	7.549	
14,400.0	6,701.3	6,669.3	6,669.3	218.0	132.9	-89.14	213.6	-4,984.6	2,671.3	2,320.6	350.78	7.615	
14,468.5	6,701.1	6,669.1	6,669.1	219.9	132.9	-89.11	213.6	-4,984.6	2,739.3	2,386.6	352.70	7.767	
14,500.0	6,701.1	6,669.1	6,669.1	220.8	132.9	-89.11	213.6	-4,984.6	2,770.6	2,417.0	353.58	7.836	
14,566.9	6,701.0	6,669.0	6,669.0	222.6	132.9	-89.08	213.6	-4,984.6	2,837.1	2,481.6	355.45	7.982	
14,600.0	6,700.9	6,668.9	6,668.9	223.6	132.9	-89.07	213.6	-4,984.6	2,869.9	2,513.6	356.37	8.053	
14,665.3	6,700.8	6,668.8	6,668.8	225.4	132.9	-89.05	213.6	-4,984.6	2,934.9	2,576.7	358.20	8.193	
14,700.0	6,700.7	6,668.7	6,668.7	226.4	132.9	-89.04	213.6	-4,984.6	2,969.3	2,610.1	359.17	8.267	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BLOSKAS #12-9 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	6,668.6	6,668.6	228.2	132.9	-89.02	213.6	-4,984.6	3,032.7	2,671.7	360.95	8.402	
14,800.0	6,700.5	6,668.5	6,668.5	229.2	132.9	-89.01	213.6	-4,984.6	3,068.7	2,706.8	361.96	8.478	
14,862.2	6,700.4	6,668.4	6,668.4	230.9	132.9	-88.99	213.6	-4,984.6	3,130.6	2,766.9	363.70	8.607	
14,900.0	6,700.3	6,668.3	6,668.3	232.0	132.9	-88.98	213.6	-4,984.6	3,168.2	2,803.4	364.76	8.686	
14,960.6	6,700.2	6,668.2	6,668.2	233.7	132.9	-88.96	213.6	-4,984.6	3,228.5	2,862.0	366.45	8.810	
15,000.0	6,700.2	6,668.2	6,668.2	234.8	132.9	-88.95	213.6	-4,984.6	3,267.7	2,900.1	367.56	8.890	
15,059.0	6,700.0	6,668.0	6,668.0	236.4	132.9	-88.93	213.6	-4,984.6	3,326.4	2,957.2	369.21	9.010	
15,082.8	6,700.0	6,668.0	6,668.0	237.1	132.9	-88.92	213.6	-4,984.6	3,350.1	2,980.2	369.87	9.057	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore #1		Offset Site Error:		0.0 usft
Survey Program: 100-GYD_CT														Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis		Distance								Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
0.0	0.0	0.0	0.0	0.0	0.0	-106.58	-1,145.1	-3,844.8	4,011.9							
98.4	98.4	63.5	63.5	0.1	0.0	-106.58	-1,145.0	-3,844.8	4,011.7	4,011.6	0.11	N/A				
100.0	100.0	65.2	65.2	0.1	0.0	-106.58	-1,145.0	-3,844.8	4,011.7	4,011.6	0.11	N/A				
177.5	177.5	137.5	137.5	0.3	0.1	-106.58	-1,144.6	-3,844.8	4,011.6	4,011.3	0.35	N/A				
196.8	196.8	153.5	153.5	0.3	0.1	-106.58	-1,144.6	-3,844.9	4,011.6	4,011.2	0.42	9,484.057				
200.0	200.0	156.1	156.1	0.3	0.1	-106.58	-1,144.5	-3,844.9	4,011.6	4,011.2	0.43	9,235.941				
295.3	295.3	246.6	246.6	0.5	0.2	-106.57	-1,144.3	-3,845.2	4,011.8	4,011.1	0.74	5,423.469				
300.0	300.0	251.8	251.8	0.5	0.2	-106.57	-1,144.3	-3,845.2	4,011.9	4,011.1	0.75	5,331.656				
393.7	393.7	346.4	346.4	0.8	0.3	-106.57	-1,144.4	-3,845.3	4,012.0	4,011.0	1.02	3,924.542				
400.0	400.0	352.3	352.2	0.8	0.3	-106.57	-1,144.4	-3,845.3	4,012.0	4,011.0	1.04	3,852.954				
492.1	492.1	442.6	442.6	1.0	0.3	-106.58	-1,144.7	-3,845.5	4,012.2	4,010.9	1.32	3,050.685				
500.0	500.0	450.8	450.8	1.0	0.3	-106.58	-1,144.7	-3,845.5	4,012.3	4,010.9	1.34	2,998.292				
590.5	590.5	545.5	545.5	1.2	0.4	-106.58	-1,145.3	-3,845.5	4,012.4	4,010.8	1.60	2,507.803				
600.0	600.0	555.3	555.3	1.2	0.4	-106.59	-1,145.3	-3,845.5	4,012.4	4,010.8	1.63	2,466.183				
689.0	689.0	651.6	651.6	1.4	0.5	-106.59	-1,145.7	-3,845.4	4,012.5	4,010.6	1.88	2,138.810				
700.0	700.0	663.9	663.9	1.4	0.5	-106.59	-1,145.7	-3,845.4	4,012.5	4,010.5	1.91	2,104.863				
787.4	787.4	756.6	756.6	1.6	0.5	-106.60	-1,146.1	-3,845.1	4,012.3	4,010.1	2.14	1,871.762				
800.0	800.0	769.5	769.5	1.7	0.5	-106.60	-1,146.1	-3,845.1	4,012.3	4,010.1	2.18	1,842.490				
885.8	885.8	849.6	849.6	1.9	0.5	-106.61	-1,146.7	-3,844.7	4,012.1	4,009.7	2.40	1,668.396				
900.0	900.0	862.2	862.2	1.9	0.6	-106.61	-1,146.8	-3,844.7	4,012.1	4,009.6	2.44	1,643.029				
919.1	919.1	879.1	879.1	1.9	0.6	-106.61	-1,147.0	-3,844.6	4,012.1	4,009.6	2.49	1,610.049				
984.2	984.2	938.3	938.3	2.1	0.6	-106.62	-1,147.5	-3,844.5	4,012.1	4,009.5	2.66	1,506.659				
1,000.0	1,000.0	952.8	952.8	2.1	0.6	-106.62	-1,147.6	-3,844.5	4,012.2	4,009.4	2.70	1,483.617				
1,082.7	1,082.7	1,031.9	1,031.9	2.3	0.6	-106.63	-1,148.1	-3,844.6	4,012.4	4,009.4	2.92	1,372.795				
1,100.0	1,100.0	1,049.5	1,049.5	2.3	0.6	-106.63	-1,148.2	-3,844.6	4,012.4	4,009.4	2.97	1,351.437				
1,181.1	1,181.1	1,139.5	1,139.5	2.5	0.7	-135.36	-1,148.8	-3,844.6	4,013.4	4,010.2	3.17	1,267.912				
1,200.0	1,200.0	1,163.4	1,163.4	2.6	0.7	-135.37	-1,148.9	-3,844.6	4,013.8	4,010.6	3.21	1,248.691				
1,279.5	1,279.4	1,256.4	1,256.4	2.7	0.7	-135.38	-1,149.2	-3,844.2	4,016.3	4,012.9	3.42	1,174.088				
1,300.0	1,299.8	1,279.3	1,279.3	2.8	0.7	-135.39	-1,149.3	-3,844.1	4,017.2	4,013.7	3.47	1,156.534				
1,377.9	1,377.5	1,352.4	1,352.4	3.0	0.8	-135.39	-1,149.6	-3,843.6	4,021.5	4,017.8	3.67	1,094.312				
1,400.0	1,399.5	1,371.9	1,371.9	3.0	0.8	-135.39	-1,149.6	-3,843.6	4,023.0	4,019.3	3.73	1,078.095				
1,476.4	1,475.3	1,455.1	1,455.1	3.2	0.8	-135.41	-1,149.8	-3,843.2	4,029.2	4,025.2	3.94	1,022.860				
1,500.0	1,498.7	1,484.4	1,484.4	3.3	0.8	-135.42	-1,149.8	-3,843.0	4,031.3	4,027.3	4.00	1,006.908				
1,574.8	1,572.6	1,550.2	1,550.2	3.5	0.8	-135.41	-1,150.0	-3,842.6	4,039.0	4,034.8	4.21	959.113				
1,600.0	1,597.5	1,570.5	1,570.5	3.5	0.8	-135.41	-1,150.0	-3,842.5	4,042.0	4,037.7	4.28	944.377				
1,673.2	1,669.4	1,630.4	1,630.4	3.7	0.8	-135.39	-1,150.3	-3,842.3	4,051.7	4,047.2	4.50	900.868				
1,700.1	1,695.8	1,652.9	1,652.8	3.8	0.9	-135.38	-1,150.5	-3,842.2	4,055.6	4,051.0	4.58	886.037				
1,771.6	1,765.7	1,715.7	1,715.6	4.1	0.9	-135.51	-1,150.8	-3,842.3	4,066.5	4,061.7	4.80	847.999				
1,800.0	1,793.4	1,745.6	1,745.6	4.2	0.9	-135.58	-1,150.9	-3,842.3	4,070.8	4,065.9	4.88	833.797				
1,870.1	1,862.0	1,817.7	1,817.7	4.4	0.9	-135.73	-1,151.2	-3,842.3	4,081.4	4,076.3	5.11	799.223				
1,900.0	1,891.3	1,846.0	1,846.0	4.5	0.9	-135.79	-1,151.4	-3,842.3	4,085.9	4,080.7	5.20	785.665				
1,968.5	1,958.3	1,910.9	1,910.9	4.8	0.9	-135.93	-1,151.8	-3,842.3	4,096.4	4,091.0	5.42	755.217				
2,000.0	1,989.1	1,941.3	1,941.3	4.9	1.0	-136.00	-1,152.0	-3,842.2	4,101.2	4,095.7	5.53	742.019				
2,066.9	2,054.5	2,000.0	2,000.0	5.1	1.0	-136.12	-1,152.5	-3,842.2	4,111.5	4,105.7	5.75	715.106				
2,100.0	2,086.9	2,030.0	2,030.0	5.3	1.0	-136.19	-1,152.7	-3,842.2	4,116.6	4,110.7	5.86	702.499				
2,165.3	2,150.8	2,080.1	2,080.0	5.5	1.0	-136.30	-1,153.3	-3,842.3	4,126.9	4,120.8	6.08	678.755				
2,200.0	2,184.7	2,110.5	2,110.4	5.6	1.0	-136.36	-1,153.8	-3,842.4	4,132.4	4,126.2	6.20	666.766				
2,263.8	2,247.1	2,188.3	2,188.3	5.9	1.1	-136.53	-1,155.0	-3,842.6	4,142.6	4,136.1	6.42	645.152				
2,300.0	2,282.5	2,224.3	2,224.3	6.0	1.1	-136.61	-1,155.4	-3,842.6	4,148.2	4,141.7	6.55	633.794				
2,362.2	2,343.3	2,281.0	2,281.0	6.3	1.1	-136.74	-1,156.3	-3,842.6	4,158.0	4,151.3	6.76	615.122				
2,400.0	2,380.3	2,315.5	2,315.4	6.5	1.1	-136.81	-1,156.8	-3,842.6	4,164.0	4,157.2	6.89	604.345				
2,460.6	2,439.6	2,370.9	2,370.8	6.7	1.1	-136.93	-1,157.7	-3,842.7	4,173.7	4,166.6	7.10	587.654				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,500.0	2,478.1	2,409.1	2,409.0	6.9	1.1	-137.01	-1,158.1	-3,842.8	4,180.1	4,172.8	7.24	577.338		
2,559.0	2,535.9	2,480.2	2,480.1	7.1	1.2	-137.16	-1,159.1	-3,842.9	4,189.5	4,182.0	7.45	562.385		
2,600.0	2,575.9	2,523.9	2,523.8	7.3	1.2	-137.26	-1,159.7	-3,842.8	4,195.9	4,188.3	7.59	552.603		
2,657.5	2,632.2	2,580.1	2,580.0	7.5	1.2	-137.37	-1,160.3	-3,842.8	4,204.9	4,197.1	7.80	539.425		
2,700.0	2,673.8	2,618.0	2,617.9	7.7	1.2	-137.45	-1,160.5	-3,842.9	4,211.7	4,203.7	7.94	530.131		
2,755.9	2,728.4	2,663.2	2,663.1	7.9	1.2	-137.54	-1,160.8	-3,843.0	4,220.6	4,212.4	8.14	518.366		
2,800.0	2,771.6	2,700.0	2,699.9	8.1	1.2	-137.62	-1,161.1	-3,843.1	4,227.7	4,219.4	8.30	509.427		
2,854.3	2,824.7	2,760.5	2,760.4	8.3	1.2	-137.74	-1,161.6	-3,843.4	4,236.5	4,228.0	8.49	498.710		
2,900.0	2,869.4	2,809.9	2,809.8	8.5	1.3	-137.83	-1,161.8	-3,843.6	4,243.9	4,235.2	8.66	490.096		
2,952.7	2,921.0	2,856.5	2,856.4	8.8	1.3	-137.92	-1,162.0	-3,843.8	4,252.3	4,243.5	8.85	480.600		
3,000.0	2,967.2	2,900.0	2,899.9	9.0	1.3	-138.01	-1,162.2	-3,844.0	4,260.0	4,251.0	9.02	472.444		
3,051.2	3,017.3	2,958.3	2,958.2	9.2	1.3	-138.12	-1,162.6	-3,844.2	4,268.3	4,259.1	9.20	463.922		
3,100.0	3,065.0	3,011.9	3,011.8	9.4	1.3	-138.23	-1,162.9	-3,844.3	4,276.1	4,266.7	9.37	456.118		
3,149.6	3,113.5	3,055.0	3,054.9	9.6	1.3	-138.31	-1,163.3	-3,844.3	4,284.1	4,274.5	9.55	448.518		
3,200.0	3,162.8	3,100.0	3,099.9	9.8	1.4	-138.40	-1,163.7	-3,844.4	4,292.2	4,282.5	9.73	441.087		
3,248.0	3,209.8	3,143.6	3,143.5	10.0	1.4	-138.49	-1,164.2	-3,844.5	4,300.0	4,290.1	9.90	434.187		
3,300.0	3,260.6	3,192.2	3,192.0	10.2	1.4	-138.58	-1,164.7	-3,844.7	4,308.6	4,298.5	10.09	426.990		
3,346.4	3,306.1	3,239.1	3,239.0	10.5	1.4	-138.67	-1,165.0	-3,844.9	4,316.2	4,305.9	10.26	420.884		
3,400.0	3,358.5	3,294.4	3,294.2	10.7	1.4	-138.77	-1,165.0	-3,845.2	4,324.9	4,314.5	10.44	414.200		
3,444.9	3,402.3	3,352.2	3,352.0	10.9	1.4	-138.87	-1,164.4	-3,845.7	4,332.2	4,321.6	10.60	408.603		
3,500.0	3,456.3	3,415.4	3,415.3	11.1	1.4	-138.97	-1,163.2	-3,846.2	4,341.0	4,330.2	10.80	401.944		
3,543.3	3,498.6	3,450.4	3,450.3	11.3	1.4	-139.02	-1,162.3	-3,846.6	4,347.9	4,336.9	10.95	396.922		
3,600.0	3,554.1	3,500.0	3,499.8	11.5	1.4	-139.09	-1,160.9	-3,847.3	4,357.0	4,345.9	11.16	390.552		
3,641.7	3,594.9	3,541.2	3,541.0	11.7	1.4	-139.14	-1,159.6	-3,847.9	4,363.8	4,352.5	11.31	385.962		
3,700.0	3,651.9	3,605.1	3,604.9	12.0	1.4	-139.23	-1,157.6	-3,848.9	4,373.2	4,361.7	11.52	379.719		
3,740.1	3,691.2	3,643.7	3,643.4	12.2	1.4	-139.28	-1,156.4	-3,849.4	4,379.7	4,368.0	11.66	375.592		
3,800.0	3,749.7	3,700.0	3,699.7	12.4	1.4	-139.36	-1,154.6	-3,850.2	4,389.3	4,377.4	11.87	369.640		
3,838.6	3,787.4	3,731.2	3,730.9	12.6	1.4	-139.40	-1,153.7	-3,850.7	4,395.6	4,383.5	12.01	365.908		
3,900.0	3,847.5	3,779.5	3,779.1	12.9	1.4	-139.47	-1,152.5	-3,851.4	4,405.7	4,393.4	12.23	360.168		
3,937.0	3,883.7	3,815.1	3,814.7	13.0	1.4	-139.52	-1,151.7	-3,852.0	4,411.8	4,399.5	12.37	356.794		
4,000.0	3,945.3	3,902.0	3,901.6	13.3	1.4	-139.65	-1,150.3	-3,852.9	4,422.1	4,409.5	12.59	351.148		
4,035.4	3,980.0	3,936.8	3,936.4	13.5	1.4	-139.71	-1,150.0	-3,853.0	4,427.8	4,415.1	12.72	348.132		
4,060.0	4,004.0	3,960.9	3,960.5	13.6	1.4	-139.75	-1,149.8	-3,853.1	4,431.8	4,419.0	12.81	346.075		
4,100.0	4,043.2	4,000.0	3,999.6	13.7	1.4	-139.89	-1,149.6	-3,853.2	4,438.0	4,425.1	12.92	343.563		
4,133.8	4,076.5	4,021.3	4,021.0	13.8	1.4	-139.99	-1,149.5	-3,853.3	4,443.0	4,430.0	13.00	341.861		
4,200.0	4,141.6	4,062.9	4,062.6	14.0	1.4	-140.16	-1,149.2	-3,853.7	4,452.1	4,439.0	13.15	338.553		
4,232.3	4,173.5	4,100.0	4,099.6	14.1	1.4	-140.26	-1,148.9	-3,854.3	4,456.4	4,443.1	13.22	337.052		
4,300.0	4,240.6	4,143.0	4,142.6	14.3	1.4	-140.40	-1,148.4	-3,855.1	4,464.4	4,451.0	13.37	334.016		
4,330.7	4,271.1	4,175.1	4,174.7	14.4	1.4	-140.46	-1,148.0	-3,855.7	4,467.6	4,454.2	13.43	332.736		
4,400.0	4,340.0	4,256.1	4,255.7	14.5	1.4	-140.59	-1,146.5	-3,857.3	4,473.9	4,460.3	13.57	329.810		
4,429.1	4,369.0	4,292.0	4,291.6	14.6	1.4	-140.63	-1,145.8	-3,858.0	4,476.1	4,462.5	13.62	328.716		
4,500.0	4,439.7	4,342.2	4,341.7	14.8	1.4	-140.70	-1,144.7	-3,858.9	4,480.6	4,466.8	13.74	326.132		
4,527.5	4,467.2	4,360.2	4,359.7	14.8	1.4	-140.71	-1,144.3	-3,859.4	4,482.1	4,468.3	13.78	325.266		
4,600.0	4,539.7	4,400.0	4,399.5	14.9	1.4	-140.75	-1,143.5	-3,860.4	4,485.2	4,471.4	13.89	322.974		
4,626.0	4,565.6	4,400.0	4,399.5	15.0	1.4	-140.76	-1,143.5	-3,860.4	4,486.2	4,472.3	13.92	322.319		
4,660.2	4,599.8	4,436.3	4,435.8	15.0	1.4	-112.04	-1,142.9	-3,861.6	4,487.2	4,472.3	14.91	300.988		
4,700.0	4,639.6	4,456.4	4,455.9	15.0	1.5	-112.03	-1,142.6	-3,862.4	4,488.4	4,473.4	14.97	299.863		
4,724.4	4,664.0	4,468.7	4,468.2	15.1	1.5	-112.03	-1,142.4	-3,862.9	4,489.2	4,474.2	15.01	299.107		
4,800.0	4,739.6	4,591.7	4,591.0	15.2	1.5	-112.00	-1,142.3	-3,867.5	4,492.0	4,476.9	15.14	296.616		
4,822.8	4,762.5	4,700.4	4,699.8	15.2	1.5	-112.01	-1,143.7	-3,868.6	4,492.3	4,477.1	15.20	295.513		
4,900.0	4,839.6	4,822.7	4,822.0	15.3	1.5	-112.03	-1,145.1	-3,868.0	4,492.2	4,476.9	15.36	292.505		
4,921.2	4,860.9	4,845.3	4,844.7	15.4	1.5	-112.04	-1,145.3	-3,867.8	4,492.1	4,476.7	15.40	291.718		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.0	4,939.6	4,925.3	4,924.6	15.5	1.5	-112.05	-1,146.0	-3,867.0	4,491.7	4,476.1	15.55	288.858	
5,019.7	4,959.3	4,943.4	4,942.7	15.5	1.6	-112.05	-1,146.1	-3,866.8	4,491.6	4,476.0	15.59	288.160	
5,100.0	5,039.6	5,025.5	5,024.8	15.6	1.6	-112.06	-1,146.4	-3,866.3	4,491.2	4,475.5	15.74	285.362	
5,118.1	5,057.7	5,049.9	5,049.2	15.7	1.6	-112.06	-1,146.4	-3,866.1	4,491.1	4,475.3	15.77	284.741	
5,200.0	5,139.6	5,146.7	5,146.0	15.8	1.6	-112.06	-1,145.9	-3,865.4	4,490.3	4,474.4	15.92	281.984	
5,216.5	5,156.2	5,163.9	5,163.3	15.8	1.6	-112.06	-1,145.8	-3,865.2	4,490.1	4,474.2	15.95	281.436	
5,300.0	5,239.6	5,237.5	5,236.9	15.9	1.6	-112.06	-1,145.5	-3,864.5	4,489.3	4,473.2	16.11	278.708	
5,314.9	5,254.6	5,249.0	5,248.3	16.0	1.6	-112.06	-1,145.4	-3,864.5	4,489.2	4,473.0	16.14	278.226	
5,400.0	5,339.6	5,317.7	5,317.0	16.1	1.6	-112.06	-1,145.4	-3,864.1	4,488.7	4,472.4	16.29	275.505	
5,413.4	5,353.0	5,330.4	5,329.7	16.1	1.6	-112.06	-1,145.4	-3,864.0	4,488.7	4,472.4	16.32	275.072	
5,500.0	5,439.6	5,420.2	5,419.5	16.3	1.6	-112.06	-1,145.7	-3,863.6	4,488.4	4,471.9	16.49	272.268	
5,511.8	5,451.4	5,438.3	5,437.6	16.3	1.6	-112.06	-1,145.7	-3,863.5	4,488.3	4,471.8	16.51	271.866	
5,600.0	5,539.6	5,566.3	5,565.6	16.4	1.6	-112.07	-1,145.9	-3,862.0	4,487.4	4,470.7	16.69	268.896	
5,610.2	5,549.9	5,580.4	5,579.7	16.4	1.6	-112.07	-1,145.9	-3,861.7	4,487.2	4,470.5	16.71	268.554	
5,700.0	5,639.6	5,697.1	5,696.4	16.6	1.6	-112.09	-1,146.0	-3,859.3	4,485.6	4,468.7	16.89	265.584	
5,708.6	5,648.3	5,707.9	5,707.2	16.6	1.6	-112.09	-1,146.0	-3,859.1	4,485.4	4,468.5	16.91	265.298	
5,800.0	5,739.6	5,817.0	5,816.2	16.7	1.6	-112.10	-1,146.0	-3,856.2	4,483.1	4,466.1	17.09	262.333	
5,807.1	5,746.7	5,824.2	5,823.4	16.8	1.6	-112.10	-1,146.0	-3,856.0	4,483.0	4,465.9	17.10	262.106	
5,900.0	5,839.6	5,920.7	5,919.9	16.9	1.7	-112.12	-1,146.2	-3,853.2	4,480.5	4,463.2	17.29	259.155	
5,905.5	5,845.1	5,926.9	5,926.1	16.9	1.7	-112.12	-1,146.2	-3,853.0	4,480.4	4,463.1	17.30	258.981	
6,000.0	5,939.6	6,056.1	6,055.3	17.1	1.7	-112.14	-1,146.2	-3,848.9	4,477.6	4,460.1	17.49	255.946	
6,003.9	5,943.6	6,063.7	6,062.8	17.1	1.7	-112.14	-1,146.2	-3,848.6	4,477.5	4,460.0	17.50	255.813	
6,059.2	5,998.8	6,143.1	6,142.2	17.2	1.7	-112.16	-1,146.2	-3,845.3	4,475.3	4,457.7	17.62	254.016	
6,100.0	6,039.6	6,191.5	6,190.5	17.2	1.7	-22.26	-1,146.3	-3,843.0	4,472.5	4,455.8	16.71	267.695	
6,102.3	6,042.0	6,194.2	6,193.2	17.2	1.7	-22.27	-1,146.3	-3,842.9	4,472.3	4,455.6	16.71	267.625	
6,150.0	6,089.4	6,244.0	6,242.9	17.3	1.7	-22.49	-1,146.5	-3,840.5	4,466.1	4,449.3	16.79	265.960	
6,200.0	6,138.7	6,294.9	6,293.7	17.3	1.7	-22.85	-1,146.5	-3,838.1	4,456.5	4,439.6	16.89	263.789	
6,200.8	6,139.5	6,295.6	6,294.5	17.3	1.7	-22.86	-1,146.5	-3,838.1	4,456.4	4,439.5	16.90	263.753	
6,250.0	6,187.4	6,348.6	6,347.4	17.3	1.7	-23.34	-1,146.4	-3,835.6	4,443.8	4,426.8	16.99	261.481	
6,299.2	6,234.4	6,400.0	6,398.8	17.4	1.7	-23.96	-1,146.1	-3,833.2	4,428.2	4,411.1	17.08	259.329	
6,300.0	6,235.1	6,400.0	6,398.8	17.4	1.7	-23.97	-1,146.1	-3,833.2	4,427.9	4,410.8	17.08	259.302	
6,350.0	6,281.7	6,430.4	6,429.1	17.4	1.7	-24.71	-1,145.9	-3,831.8	4,409.1	4,392.0	17.12	257.558	
6,397.6	6,324.8	6,457.7	6,456.4	17.3	1.7	-25.55	-1,145.8	-3,830.6	4,388.6	4,371.5	17.13	256.246	
6,400.0	6,326.9	6,459.0	6,457.7	17.3	1.7	-25.60	-1,145.8	-3,830.6	4,387.6	4,370.4	17.13	256.194	
6,450.0	6,370.5	6,500.0	6,498.7	17.3	1.8	-26.72	-1,145.9	-3,828.9	4,363.4	4,346.3	17.11	255.070	
6,496.0	6,409.1	6,500.0	6,498.7	17.3	1.8	-27.78	-1,145.9	-3,828.9	4,338.9	4,321.9	17.04	254.572	
6,500.0	6,412.3	6,500.0	6,498.7	17.3	1.8	-27.88	-1,145.9	-3,828.9	4,336.8	4,319.7	17.04	254.549	
6,550.0	6,452.1	6,500.0	6,498.7	17.3	1.8	-29.23	-1,145.9	-3,828.9	4,307.9	4,291.0	16.95	254.183	
6,594.5	6,485.6	6,532.5	6,531.1	17.3	1.8	-30.82	-1,146.0	-3,827.9	4,280.2	4,263.3	16.89	253.432	
6,600.0	6,489.7	6,533.9	6,532.5	17.3	1.8	-31.02	-1,146.1	-3,827.9	4,276.6	4,259.8	16.88	253.369	
6,650.0	6,524.9	6,546.2	6,544.9	17.2	1.8	-32.99	-1,146.1	-3,827.6	4,243.4	4,226.6	16.82	252.241	
6,692.9	6,553.0	6,556.1	6,554.8	17.2	1.8	-34.95	-1,146.2	-3,827.5	4,213.4	4,196.6	16.82	250.496	
6,700.0	6,557.5	6,557.7	6,556.4	17.2	1.8	-35.30	-1,146.2	-3,827.4	4,208.3	4,191.5	16.82	250.177	
6,750.0	6,587.4	6,600.0	6,598.7	17.2	1.8	-38.36	-1,146.6	-3,827.3	4,171.8	4,154.8	16.95	246.151	
6,791.3	6,609.9	6,600.0	6,598.7	17.2	1.8	-40.91	-1,146.6	-3,827.3	4,139.9	4,122.8	17.12	241.802	
6,800.0	6,614.4	6,600.0	6,598.7	17.2	1.8	-41.49	-1,146.6	-3,827.3	4,133.1	4,115.9	17.16	240.857	
6,850.0	6,638.4	6,600.0	6,598.7	17.2	1.8	-45.16	-1,146.6	-3,827.3	4,093.1	4,075.5	17.53	233.472	
6,889.7	6,655.3	6,600.0	6,598.7	17.4	1.8	-48.52	-1,146.6	-3,827.3	4,060.3	4,042.4	17.96	226.136	
6,900.0	6,659.4	6,600.0	6,598.7	17.5	1.8	-49.46	-1,146.6	-3,827.3	4,051.8	4,033.7	18.08	224.091	
6,950.0	6,677.1	6,600.0	6,598.7	18.0	1.8	-54.47	-1,146.6	-3,827.3	4,009.4	3,990.6	18.81	213.205	
6,988.2	6,688.4	6,612.2	6,610.9	18.5	1.8	-59.11	-1,146.7	-3,827.3	3,976.5	3,957.0	19.49	204.043	
7,000.0	6,691.5	6,614.8	6,613.4	18.7	1.8	-60.62	-1,146.7	-3,827.3	3,966.2	3,946.5	19.70	201.301	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,050.0	6,702.5	6,624.0	6,622.7	19.5	1.8	-67.51	-1,146.8	-3,827.4	3,922.2	3,901.6	20.66	189.807	
7,086.6	6,708.4	6,629.1	6,627.8	20.1	1.8	-72.99	-1,146.8	-3,827.5	3,889.7	3,868.3	21.38	181.949	
7,100.0	6,710.1	6,630.6	6,629.2	20.4	1.8	-75.07	-1,146.8	-3,827.5	3,877.8	3,856.1	21.63	179.283	
7,150.0	6,714.2	6,634.3	6,633.0	21.3	1.8	-83.06	-1,146.8	-3,827.5	3,833.0	3,810.4	22.60	169.602	
7,185.0	6,715.0	6,635.3	6,633.9	21.9	1.8	-88.74	-1,146.8	-3,827.5	3,801.6	3,778.3	23.35	162.776	
7,185.6	6,715.0	6,635.3	6,633.9	21.9	1.8	-88.83	-1,146.8	-3,827.5	3,801.1	3,777.8	23.37	162.671	
7,200.0	6,715.0	6,635.4	6,634.0	22.2	1.8	-88.83	-1,146.8	-3,827.5	3,788.2	3,764.6	23.64	160.216	
7,283.4	6,714.8	6,635.9	6,634.5	23.9	1.8	-88.85	-1,146.8	-3,827.5	3,713.7	3,688.4	25.32	146.653	
7,300.0	6,714.8	6,636.0	6,634.6	24.2	1.8	-88.85	-1,146.8	-3,827.5	3,698.9	3,673.3	25.66	144.176	
7,381.9	6,714.6	6,636.5	6,635.1	26.0	1.8	-88.87	-1,146.9	-3,827.5	3,626.3	3,598.9	27.42	132.264	
7,400.0	6,714.6	6,636.6	6,635.2	26.4	1.8	-88.88	-1,146.9	-3,827.5	3,610.2	3,582.4	27.81	129.833	
7,480.3	6,714.4	6,637.1	6,635.7	28.2	1.8	-88.89	-1,146.9	-3,827.5	3,539.5	3,509.8	29.63	119.466	
7,500.0	6,714.4	6,637.2	6,635.9	28.7	1.8	-88.90	-1,146.9	-3,827.5	3,522.2	3,492.1	30.07	117.117	
7,578.7	6,714.2	6,637.7	6,636.4	30.5	1.8	-88.91	-1,146.9	-3,827.5	3,453.3	3,421.3	31.93	108.152	
7,600.0	6,714.2	6,637.9	6,636.5	31.0	1.8	-88.92	-1,146.9	-3,827.5	3,434.7	3,402.3	32.43	105.908	
7,677.1	6,714.0	6,638.4	6,637.0	32.9	1.8	-88.93	-1,146.9	-3,827.5	3,367.7	3,333.4	34.30	98.172	
7,700.0	6,714.0	6,638.5	6,637.2	33.4	1.8	-88.94	-1,146.9	-3,827.5	3,348.0	3,313.1	34.86	96.042	
7,775.6	6,713.9	6,639.0	6,637.7	35.3	1.8	-88.96	-1,146.9	-3,827.5	3,282.9	3,246.2	36.74	89.363	
7,800.0	6,713.8	6,639.2	6,637.8	35.9	1.8	-88.96	-1,146.9	-3,827.5	3,262.0	3,224.6	37.34	87.350	
7,874.0	6,713.7	6,639.7	6,638.3	37.8	1.8	-88.98	-1,146.9	-3,827.6	3,198.9	3,159.7	39.22	81.571	
7,900.0	6,713.6	6,639.9	6,638.5	38.4	1.8	-88.99	-1,146.9	-3,827.6	3,176.8	3,137.0	39.87	79.672	
7,972.4	6,713.5	6,640.4	6,639.0	40.3	1.8	-89.00	-1,146.9	-3,827.6	3,115.7	3,074.0	41.73	74.658	
8,000.0	6,713.4	6,640.5	6,639.2	41.0	1.8	-89.01	-1,146.9	-3,827.6	3,092.6	3,050.1	42.44	72.867	
8,070.8	6,713.3	6,641.0	6,639.7	42.8	1.8	-89.03	-1,146.9	-3,827.6	3,033.4	2,989.1	44.28	68.504	
8,100.0	6,713.2	6,641.3	6,639.9	43.6	1.8	-89.03	-1,146.9	-3,827.6	3,009.2	2,964.2	45.04	66.815	
8,169.3	6,713.1	6,641.8	6,640.4	45.4	1.8	-89.05	-1,146.9	-3,827.6	2,952.1	2,905.3	46.86	63.006	
8,200.0	6,713.0	6,642.0	6,640.6	46.2	1.8	-89.06	-1,146.9	-3,827.6	2,927.0	2,879.3	47.66	61.413	
8,267.7	6,712.9	6,642.5	6,641.1	48.0	1.8	-89.07	-1,146.9	-3,827.6	2,871.9	2,822.5	49.45	58.076	
8,300.0	6,712.8	6,642.7	6,641.4	48.8	1.8	-89.08	-1,146.9	-3,827.6	2,845.9	2,795.5	50.30	56.572	
8,366.1	6,712.7	6,643.2	6,641.9	50.6	1.8	-89.10	-1,146.9	-3,827.6	2,792.9	2,740.8	52.06	53.642	
8,400.0	6,712.6	6,643.5	6,642.1	51.5	1.8	-89.11	-1,146.9	-3,827.6	2,766.0	2,713.0	52.97	52.221	
8,464.5	6,712.5	6,644.0	6,642.6	53.2	1.8	-89.12	-1,146.9	-3,827.6	2,715.1	2,660.4	54.69	49.641	
8,500.0	6,712.4	6,644.3	6,642.9	54.1	1.8	-89.13	-1,146.9	-3,827.6	2,687.4	2,631.8	55.64	48.297	
8,563.0	6,712.3	6,644.8	6,643.4	55.8	1.8	-89.15	-1,146.9	-3,827.6	2,638.7	2,581.4	57.34	46.020	
8,600.0	6,712.3	6,645.0	6,643.7	56.8	1.8	-89.16	-1,146.9	-3,827.6	2,610.3	2,552.0	58.33	44.749	
8,661.4	6,712.1	6,645.5	6,644.2	58.5	1.8	-89.18	-1,146.9	-3,827.6	2,563.8	2,503.8	59.99	42.736	
8,700.0	6,712.1	6,645.9	6,644.5	59.5	1.8	-89.19	-1,146.9	-3,827.6	2,534.9	2,473.8	61.03	41.531	
8,759.8	6,711.9	6,646.3	6,645.0	61.1	1.8	-89.21	-1,146.9	-3,827.6	2,490.5	2,427.9	62.66	39.749	
8,800.0	6,711.9	6,646.7	6,645.3	62.2	1.8	-89.22	-1,146.9	-3,827.6	2,461.1	2,397.4	63.75	38.608	
8,858.2	6,711.8	6,647.2	6,645.8	63.8	1.8	-89.23	-1,146.9	-3,827.6	2,419.1	2,353.7	65.33	37.028	
8,900.0	6,711.7	6,647.5	6,646.2	64.9	1.8	-89.25	-1,146.9	-3,827.6	2,389.3	2,322.8	66.47	35.948	
8,956.7	6,711.6	6,648.0	6,646.7	66.5	1.8	-89.26	-1,146.9	-3,827.6	2,349.5	2,281.5	68.01	34.546	
9,000.0	6,711.5	6,648.4	6,647.0	67.6	1.8	-89.27	-1,146.9	-3,827.6	2,319.6	2,250.4	69.19	33.523	
9,055.1	6,711.4	6,648.9	6,647.5	69.1	1.8	-89.29	-1,146.9	-3,827.6	2,282.1	2,211.4	70.70	32.279	
9,100.0	6,711.3	6,649.3	6,647.9	70.4	1.8	-89.30	-1,146.9	-3,827.7	2,252.1	2,180.2	71.93	31.311	
9,153.5	6,711.2	6,649.8	6,648.4	71.8	1.8	-89.32	-1,146.9	-3,827.7	2,217.0	2,143.7	73.39	30.207	
9,200.0	6,711.1	6,650.2	6,648.8	73.1	1.8	-89.34	-1,146.9	-3,827.7	2,187.2	2,112.5	74.67	29.292	
9,251.9	6,711.0	6,650.7	6,649.3	74.5	1.8	-89.35	-1,146.9	-3,827.7	2,154.5	2,078.4	76.09	28.314	
9,300.0	6,710.9	6,651.1	6,649.8	75.8	1.8	-89.37	-1,146.9	-3,827.7	2,124.9	2,047.5	77.41	27.450	
9,350.4	6,710.8	6,651.6	6,650.3	77.2	1.8	-89.38	-1,146.9	-3,827.7	2,094.7	2,015.9	78.80	26.583	
9,400.0	6,710.7	6,652.1	6,650.7	78.6	1.8	-89.40	-1,146.9	-3,827.7	2,065.7	1,985.5	80.16	25.769	
9,448.8	6,710.6	6,652.6	6,651.2	79.9	1.8	-89.42	-1,146.9	-3,827.7	2,037.9	1,956.4	81.51	25.003	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,500.0	6,710.5	6,653.1	6,651.7	81.3	1.8	-89.43	-1,146.9	-3,827.7	2,009.7	1,926.7	82.92	24.237	
9,547.2	6,710.4	6,653.5	6,652.2	82.6	1.8	-89.45	-1,146.9	-3,827.7	1,984.4	1,900.2	84.22	23.562	
9,600.0	6,710.3	6,654.1	6,652.7	84.1	1.8	-89.47	-1,146.9	-3,827.7	1,957.1	1,871.5	85.68	22.843	
9,645.6	6,710.2	6,654.5	6,653.2	85.3	1.8	-89.48	-1,146.9	-3,827.7	1,934.4	1,847.5	86.94	22.251	
9,700.0	6,710.1	6,655.1	6,653.7	86.8	1.8	-89.50	-1,146.9	-3,827.7	1,908.4	1,820.0	88.44	21.579	
9,744.1	6,710.0	6,655.6	6,654.2	88.1	1.8	-89.52	-1,146.9	-3,827.7	1,888.2	1,798.5	89.66	21.061	
9,800.0	6,709.9	6,656.1	6,654.8	89.6	1.8	-89.54	-1,146.9	-3,827.7	1,863.8	1,772.6	91.20	20.436	
9,842.5	6,709.9	6,656.6	6,655.3	90.8	1.8	-89.55	-1,146.9	-3,827.7	1,846.1	1,753.7	92.38	19.984	
9,900.0	6,709.7	6,657.2	6,655.9	92.4	1.8	-89.57	-1,146.9	-3,827.7	1,823.5	1,729.6	93.97	19.405	
9,940.9	6,709.7	6,657.7	6,656.3	93.5	1.8	-89.59	-1,146.9	-3,827.7	1,808.4	1,713.3	95.10	19.015	
10,000.0	6,709.6	6,658.3	6,657.0	95.1	1.8	-89.61	-1,146.9	-3,827.8	1,788.0	1,691.2	96.74	18.482	
10,039.3	6,709.5	6,658.8	6,657.4	96.2	1.8	-89.63	-1,147.0	-3,827.8	1,775.3	1,677.5	97.83	18.147	
10,100.0	6,709.4	6,659.5	6,658.1	97.9	1.8	-89.65	-1,147.0	-3,827.8	1,757.4	1,657.9	99.51	17.660	
10,137.8	6,709.3	6,659.9	6,658.6	98.9	1.8	-89.67	-1,147.0	-3,827.8	1,747.2	1,646.7	100.56	17.375	
10,200.0	6,709.2	6,660.7	6,659.3	100.7	1.8	-89.69	-1,147.0	-3,827.8	1,732.1	1,629.8	102.29	16.933	
10,236.2	6,709.1	6,661.1	6,659.7	101.7	1.8	-89.70	-1,147.0	-3,827.8	1,724.3	1,621.0	103.29	16.693	
10,300.0	6,709.0	6,661.9	6,660.5	103.4	1.8	-89.73	-1,147.0	-3,827.8	1,712.2	1,607.2	105.07	16.297	
10,334.6	6,708.9	6,662.3	6,660.9	104.4	1.8	-89.75	-1,147.0	-3,827.8	1,706.7	1,600.7	106.03	16.097	
10,400.0	6,708.8	6,663.1	6,661.7	106.2	1.8	-89.77	-1,147.0	-3,827.8	1,698.1	1,590.2	107.84	15.745	
10,433.0	6,708.7	6,663.5	6,662.2	107.1	1.8	-89.79	-1,147.0	-3,827.8	1,694.6	1,585.9	108.76	15.581	
10,500.0	6,708.6	6,664.4	6,663.0	109.0	1.8	-89.82	-1,147.0	-3,827.8	1,689.7	1,579.1	110.63	15.274	
10,531.5	6,708.5	6,664.8	6,663.4	109.9	1.8	-89.83	-1,147.0	-3,827.8	1,688.3	1,576.8	111.50	15.141	
10,591.9	6,708.4	6,665.6	6,664.2	111.5	1.8	-89.86	-1,147.0	-3,827.8	1,687.2	1,574.0	113.18	14.907 CC	
10,600.0	6,708.4	6,665.7	6,664.3	111.8	1.8	-89.86	-1,147.0	-3,827.8	1,687.2	1,573.8	113.41	14.877	
10,629.9	6,708.4	6,666.1	6,664.7	112.6	1.8	-89.87	-1,147.0	-3,827.8	1,687.6	1,573.4	114.24	14.772 ES	
10,700.0	6,708.2	6,667.0	6,665.7	114.6	1.8	-89.91	-1,147.0	-3,827.9	1,690.6	1,574.4	116.19	14.550	
10,728.3	6,708.2	6,667.4	6,666.1	115.3	1.8	-89.92	-1,147.0	-3,827.9	1,692.7	1,575.7	116.98	14.470	
10,800.0	6,708.0	6,668.4	6,667.1	117.3	1.8	-89.95	-1,147.0	-3,827.9	1,700.0	1,581.0	118.98	14.288	
10,826.7	6,708.0	6,668.8	6,667.5	118.1	1.8	-89.97	-1,147.0	-3,827.9	1,703.4	1,583.7	119.72	14.228	
10,900.0	6,707.8	6,669.9	6,668.5	120.1	1.8	-90.00	-1,147.0	-3,827.9	1,715.1	1,593.3	121.76	14.085	
10,925.2	6,707.8	6,670.2	6,668.9	120.8	1.8	-90.02	-1,147.0	-3,827.9	1,719.8	1,597.3	122.47	14.043	
11,000.0	6,707.6	6,671.3	6,670.0	122.9	1.8	-90.05	-1,147.0	-3,827.9	1,735.8	1,611.3	124.55	13.937	
11,023.6	6,707.6	6,671.7	6,670.3	123.6	1.8	-90.06	-1,147.0	-3,827.9	1,741.5	1,616.3	125.21	13.909	
11,100.0	6,707.5	6,672.9	6,671.5	125.7	1.8	-90.10	-1,147.0	-3,827.9	1,762.0	1,634.7	127.34	13.837	
11,122.0	6,707.4	6,673.2	6,671.8	126.3	1.8	-90.12	-1,147.0	-3,827.9	1,768.5	1,640.5	127.95	13.821	
11,200.0	6,707.3	6,674.4	6,673.1	128.5	1.8	-90.16	-1,147.0	-3,828.0	1,793.4	1,663.3	130.13	13.782	
11,220.4	6,707.2	6,674.7	6,673.4	129.0	1.8	-90.17	-1,147.0	-3,828.0	1,800.4	1,669.7	130.70	13.775	
11,300.0	6,707.1	6,676.0	6,674.7	131.3	1.8	-90.21	-1,147.0	-3,828.0	1,829.7	1,696.8	132.92	13.766 SF	
11,318.9	6,707.0	6,676.4	6,675.0	131.8	1.8	-90.22	-1,147.0	-3,828.0	1,837.1	1,703.7	133.45	13.767	
11,400.0	6,706.9	6,677.7	6,676.4	134.0	1.8	-90.27	-1,147.0	-3,828.0	1,870.7	1,735.0	135.71	13.784	
11,417.3	6,706.9	6,678.0	6,676.7	134.5	1.8	-90.28	-1,147.0	-3,828.0	1,878.2	1,742.0	136.19	13.791	
11,500.0	6,706.7	6,679.4	6,678.1	136.8	1.8	-90.33	-1,147.0	-3,828.0	1,916.0	1,777.5	138.50	13.834	
11,515.7	6,706.7	6,679.7	6,678.4	137.3	1.8	-90.34	-1,147.0	-3,828.0	1,923.5	1,784.6	138.94	13.844	
11,600.0	6,706.5	6,681.2	6,679.9	139.6	1.8	-90.39	-1,147.0	-3,828.1	1,965.4	1,824.1	141.30	13.910	
11,614.1	6,706.5	6,681.5	6,680.1	140.0	1.8	-90.40	-1,147.0	-3,828.1	1,972.7	1,831.0	141.69	13.922	
11,700.0	6,706.3	6,683.1	6,681.7	142.4	1.8	-90.45	-1,147.0	-3,828.1	2,018.5	1,874.4	144.09	14.008	
11,712.6	6,706.3	6,683.3	6,682.0	142.8	1.8	-90.46	-1,147.0	-3,828.1	2,025.4	1,881.0	144.44	14.022	
11,800.0	6,706.1	6,685.0	6,683.6	145.2	1.8	-90.52	-1,147.0	-3,828.1	2,075.0	1,928.2	146.88	14.127	
11,811.0	6,706.1	6,685.2	6,683.8	145.5	1.8	-90.52	-1,147.0	-3,828.1	2,081.5	1,934.3	147.19	14.141	
11,900.0	6,705.9	6,687.0	6,685.6	148.0	1.8	-90.58	-1,147.0	-3,828.1	2,134.8	1,985.1	149.68	14.263	
11,909.4	6,705.9	6,687.2	6,685.8	148.3	1.8	-90.59	-1,147.0	-3,828.1	2,140.6	1,990.6	149.94	14.276	
12,000.0	6,705.8	6,689.0	6,687.7	150.8	1.8	-90.65	-1,147.0	-3,828.2	2,197.5	2,045.0	152.47	14.412	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,705.7	6,689.2	6,687.8	151.0	1.8	-90.66	-1,147.0	-3,828.2	2,202.5	2,049.8	152.69	14.424	
12,100.0	6,705.6	6,691.1	6,689.8	153.6	1.8	-90.73	-1,147.0	-3,828.2	2,262.9	2,107.6	155.27	14.574	
12,106.3	6,705.6	6,691.3	6,689.9	153.8	1.8	-90.73	-1,147.0	-3,828.2	2,267.0	2,111.6	155.44	14.584	
12,200.0	6,705.4	6,693.3	6,692.0	156.4	1.8	-90.80	-1,147.0	-3,828.2	2,330.7	2,172.6	158.07	14.745	
12,204.7	6,705.4	6,693.4	6,692.1	156.5	1.8	-90.80	-1,147.0	-3,828.2	2,333.9	2,175.7	158.20	14.753	
12,300.0	6,705.2	6,695.6	6,694.3	159.2	1.8	-90.88	-1,147.0	-3,828.3	2,400.7	2,239.9	160.86	14.924	
12,303.1	6,705.2	6,695.7	6,694.3	159.3	1.8	-90.88	-1,147.0	-3,828.3	2,403.0	2,242.0	160.95	14.930	
12,400.0	6,705.0	6,698.0	6,696.6	162.0	1.8	-90.96	-1,147.0	-3,828.3	2,472.9	2,309.2	163.66	15.110	
12,401.5	6,705.0	6,698.0	6,696.7	162.0	1.8	-90.96	-1,147.0	-3,828.3	2,474.0	2,310.3	163.70	15.113	
12,500.0	6,704.8	6,700.5	6,699.1	164.8	1.8	-91.04	-1,147.0	-3,828.4	2,546.9	2,380.4	166.45	15.301	
12,598.4	6,704.6	6,703.0	6,701.6	167.5	1.8	-91.13	-1,147.0	-3,828.4	2,621.4	2,452.2	169.21	15.492	
12,600.0	6,704.6	6,703.0	6,701.7	167.6	1.8	-91.13	-1,147.0	-3,828.4	2,622.6	2,453.4	169.25	15.496	
12,696.8	6,704.4	6,705.6	6,704.3	170.3	1.8	-91.22	-1,147.0	-3,828.4	2,697.5	2,525.5	171.96	15.687	
12,700.0	6,704.4	6,705.7	6,704.4	170.4	1.8	-91.22	-1,147.0	-3,828.4	2,699.9	2,527.9	172.05	15.693	
12,795.2	6,704.3	6,708.4	6,707.0	173.0	1.8	-91.31	-1,147.0	-3,828.5	2,774.9	2,600.2	174.71	15.883	
12,800.0	6,704.2	6,708.5	6,707.2	173.2	1.8	-91.32	-1,147.0	-3,828.5	2,778.7	2,603.9	174.84	15.893	
12,893.7	6,704.1	6,711.2	6,709.9	175.8	1.8	-91.41	-1,147.0	-3,828.5	2,853.7	2,676.2	177.46	16.081	
12,900.0	6,704.1	6,711.4	6,710.1	176.0	1.8	-91.41	-1,147.0	-3,828.5	2,858.8	2,681.2	177.64	16.093	
12,992.1	6,703.9	6,714.2	6,712.9	178.5	1.8	-91.51	-1,147.0	-3,828.6	2,933.6	2,753.4	180.21	16.279	
13,000.0	6,703.9	6,714.5	6,713.1	178.8	1.8	-91.52	-1,147.0	-3,828.6	2,940.1	2,759.7	180.43	16.295	
13,090.5	6,703.7	6,717.3	6,716.0	181.3	1.8	-91.62	-1,147.0	-3,828.7	3,014.7	2,831.7	182.96	16.477	
13,100.0	6,703.7	6,717.6	6,716.3	181.6	1.8	-91.63	-1,146.9	-3,828.7	3,022.5	2,839.3	183.23	16.496	
13,188.9	6,703.5	6,720.6	6,719.2	184.0	1.8	-91.73	-1,146.9	-3,828.7	3,096.7	2,911.0	185.71	16.675	
13,200.0	6,703.5	13,200.0	6,684.7	184.4	2.6	-90.56	-1,146.9	-3,828.2	3,106.0	2,919.1	186.91	16.617	
13,287.4	6,703.3	13,287.4	6,685.5	186.8	2.7	-90.58	-1,146.9	-3,828.2	3,179.7	2,990.3	189.37	16.791	
13,300.0	6,703.3	13,300.0	6,685.6	187.2	2.7	-90.59	-1,146.9	-3,828.2	3,190.4	3,000.7	189.73	16.816	
13,385.8	6,703.2	13,385.8	6,686.4	189.6	2.7	-90.61	-1,146.9	-3,828.2	3,263.6	3,071.4	192.14	16.985	
13,400.0	6,703.1	13,400.0	6,686.5	190.0	2.7	-90.62	-1,146.9	-3,828.2	3,275.7	3,083.2	192.54	17.013	
13,484.2	6,703.0	13,484.2	6,687.3	192.3	2.7	-90.64	-1,146.9	-3,828.2	3,348.2	3,153.3	194.91	17.178	
13,500.0	6,702.9	13,500.0	6,687.4	192.8	2.7	-90.65	-1,146.9	-3,828.2	3,361.8	3,166.5	195.36	17.209	
13,582.6	6,702.8	13,582.6	6,688.2	195.1	2.7	-90.67	-1,146.9	-3,828.2	3,433.6	3,235.9	197.68	17.369	
13,600.0	6,702.8	13,600.0	6,688.3	195.6	2.7	-90.68	-1,146.9	-3,828.2	3,448.7	3,250.5	198.17	17.403	
13,681.1	6,702.6	13,681.1	6,689.1	197.8	2.7	-90.70	-1,146.9	-3,828.2	3,519.6	3,319.2	200.45	17.559	
13,700.0	6,702.6	13,700.0	6,689.2	198.4	2.7	-90.71	-1,147.0	-3,828.2	3,536.2	3,335.3	200.98	17.595	
13,779.5	6,702.4	13,779.5	6,690.0	200.6	2.7	-90.73	-1,147.0	-3,828.3	3,606.3	3,403.1	203.22	17.746	
13,800.0	6,702.4	13,800.0	6,690.1	201.2	2.7	-90.74	-1,147.0	-3,828.3	3,624.4	3,420.6	203.80	17.784	
13,877.9	6,702.2	13,877.9	6,690.8	203.3	2.7	-90.76	-1,147.0	-3,828.3	3,693.6	3,487.6	205.99	17.931	
13,900.0	6,702.2	13,900.0	6,691.0	204.0	2.8	-90.77	-1,147.0	-3,828.3	3,713.2	3,506.6	206.61	17.972	
13,976.3	6,702.1	13,976.3	6,691.7	206.1	2.8	-90.79	-1,147.0	-3,828.3	3,781.4	3,572.6	208.76	18.114	
14,000.0	6,702.0	14,000.0	6,691.9	206.8	2.8	-90.80	-1,147.0	-3,828.3	3,802.6	3,593.1	209.43	18.157	
14,074.8	6,701.9	14,074.8	6,692.6	208.9	2.8	-90.82	-1,147.0	-3,828.3	3,869.7	3,658.2	211.53	18.294	
14,100.0	6,701.8	14,100.0	6,692.9	209.6	2.8	-90.83	-1,147.0	-3,828.3	3,892.4	3,680.2	212.24	18.340	
14,173.2	6,701.7	14,173.2	6,693.5	211.6	2.8	-90.85	-1,147.0	-3,828.3	3,958.5	3,744.2	214.30	18.472	
14,200.0	6,701.6	14,200.0	6,693.8	212.4	2.8	-90.86	-1,147.0	-3,828.3	3,982.8	3,767.7	215.06	18.520	
14,271.6	6,701.5	14,271.6	6,694.4	214.4	2.8	-90.88	-1,147.0	-3,828.3	4,047.8	3,830.7	217.07	18.647	
14,300.0	6,701.4	14,300.0	6,694.7	215.2	2.8	-90.89	-1,147.0	-3,828.3	4,073.6	3,855.7	217.87	18.697	
14,370.0	6,701.3	14,370.0	6,695.3	217.1	2.8	-90.92	-1,147.0	-3,828.3	4,137.5	3,917.6	219.84	18.820	
14,400.0	6,701.3	14,400.0	6,695.6	218.0	2.8	-90.92	-1,147.0	-3,828.3	4,164.8	3,944.1	220.69	18.872	
14,468.5	6,701.1	14,468.5	6,696.2	219.9	2.8	-90.95	-1,147.0	-3,828.3	4,227.5	4,004.9	222.61	18.990	
14,500.0	6,701.1	14,500.0	6,696.5	220.8	2.8	-90.96	-1,147.0	-3,828.3	4,256.4	4,032.9	223.50	19.044	
14,566.9	6,701.0	14,566.9	6,697.1	222.6	2.8	-90.98	-1,147.0	-3,828.3	4,317.9	4,092.6	225.38	19.158	
14,600.0	6,700.9	14,600.0	6,697.4	223.6	2.9	-90.99	-1,147.0	-3,828.3	4,348.4	4,122.1	226.32	19.214	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,665.3	6,700.8	14,665.3	6,697.9	225.4	2.9	-91.01	-1,147.0	-3,828.3	4,408.7	4,180.5	228.16	19.323	
14,700.0	6,700.7	14,700.0	6,698.3	226.4	2.9	-91.02	-1,147.0	-3,828.3	4,440.8	4,211.6	229.13	19.381	
14,763.7	6,700.6	6,700.0	6,698.6	228.2	1.8	-91.03	-1,147.0	-3,828.3	4,499.8	4,269.9	229.86	19.576	
14,800.0	6,700.5	6,700.0	6,698.6	229.2	1.8	-91.03	-1,147.0	-3,828.3	4,533.4	4,302.5	230.88	19.636	
14,862.2	6,700.4	6,700.0	6,698.6	230.9	1.8	-91.03	-1,147.0	-3,828.3	4,591.2	4,358.6	232.62	19.737	
14,900.0	6,700.3	6,700.0	6,698.6	232.0	1.8	-91.03	-1,147.0	-3,828.3	4,626.4	4,392.7	233.68	19.798	
14,960.6	6,700.2	6,700.0	6,698.6	233.7	1.8	-91.03	-1,147.0	-3,828.3	4,682.9	4,447.5	235.38	19.895	
15,000.0	6,700.2	6,700.0	6,698.6	234.8	1.8	-91.03	-1,147.0	-3,828.3	4,719.6	4,483.1	236.48	19.957	
15,059.0	6,700.0	6,700.0	6,698.6	236.4	1.8	-91.03	-1,147.0	-3,828.3	4,774.8	4,536.7	238.14	20.050	
15,082.8	6,700.0	6,700.0	6,698.6	237.1	1.8	-91.03	-1,147.0	-3,828.3	4,797.1	4,558.3	238.81	20.088	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-81.10	694.8	-4,439.1	4,493.2				
98.4	98.4	50.9	50.9	0.1	0.0	-81.10	694.9	-4,439.1	4,493.2	4,493.1	0.10	N/A	
100.0	100.0	52.2	52.2	0.1	0.0	-81.10	694.9	-4,439.1	4,493.2	4,493.1	0.10	N/A	
196.8	196.8	143.9	143.9	0.3	0.1	-81.09	695.7	-4,439.4	4,493.6	4,493.2	0.41	N/A	
200.0	200.0	147.5	147.5	0.3	0.1	-81.09	695.7	-4,439.4	4,493.6	4,493.2	0.43	N/A	
295.3	295.3	290.5	290.5	0.5	0.3	-81.06	698.6	-4,438.9	4,493.6	4,492.8	0.82	5,461.625	
300.0	300.0	299.1	299.1	0.5	0.3	-81.05	698.8	-4,438.7	4,493.6	4,492.7	0.84	5,341.631	
393.7	393.7	406.9	406.8	0.8	0.4	-81.00	702.5	-4,437.1	4,492.7	4,491.5	1.13	3,974.127	
400.0	400.0	412.8	412.7	0.8	0.4	-81.00	702.7	-4,437.0	4,492.6	4,491.4	1.15	3,912.521	
492.1	492.1	500.0	499.8	1.0	0.4	-80.95	706.3	-4,435.6	4,491.6	4,490.2	1.41	3,189.210	
500.0	500.0	507.9	507.7	1.0	0.5	-80.95	706.6	-4,435.4	4,491.6	4,490.1	1.43	3,140.190	
590.5	590.5	601.0	600.7	1.2	0.5	-80.89	710.9	-4,433.8	4,490.7	4,489.0	1.68	2,667.093	
600.0	600.0	610.9	610.6	1.2	0.5	-80.89	711.3	-4,433.6	4,490.6	4,488.9	1.71	2,626.323	
689.0	689.0	704.0	703.5	1.4	0.6	-80.83	715.6	-4,431.9	4,489.6	4,487.6	1.96	2,296.165	
700.0	700.0	714.6	714.1	1.4	0.6	-80.82	716.0	-4,431.7	4,489.5	4,487.5	1.98	2,261.878	
787.4	787.4	800.0	799.4	1.6	0.6	-80.77	719.8	-4,430.2	4,488.5	4,486.3	2.22	2,021.864	
800.0	800.0	811.4	810.8	1.7	0.6	-80.76	720.3	-4,430.0	4,488.4	4,486.2	2.25	1,992.042	
885.8	885.8	898.9	898.3	1.9	0.7	-80.71	724.0	-4,428.4	4,487.5	4,485.0	2.48	1,807.109	
900.0	900.0	912.8	912.1	1.9	0.7	-80.71	724.6	-4,428.2	4,487.3	4,484.8	2.52	1,780.171	
984.2	984.2	994.8	994.0	2.1	0.7	-80.66	727.8	-4,426.8	4,486.5	4,483.7	2.74	1,635.394	
1,000.0	1,000.0	1,009.9	1,009.1	2.1	0.7	-80.66	728.3	-4,426.6	4,486.3	4,483.5	2.78	1,611.049	
1,082.7	1,082.7	1,088.6	1,087.8	2.3	0.7	-80.62	731.3	-4,425.3	4,485.5	4,482.5	3.00	1,494.619	
1,100.0	1,100.0	1,105.0	1,104.1	2.3	0.7	-80.61	731.9	-4,425.1	4,485.3	4,482.3	3.05	1,472.396	
1,166.9	1,166.8	1,166.4	1,165.5	2.5	0.8	-109.32	734.1	-4,424.2	4,485.1	4,481.9	3.19	1,407.551	
1,181.1	1,181.1	1,179.5	1,178.6	2.5	0.8	-109.32	734.5	-4,424.0	4,485.1	4,481.8	3.22	1,391.847	
1,200.0	1,200.0	1,200.0	1,199.1	2.6	0.8	-109.32	735.3	-4,423.7	4,485.1	4,481.9	3.27	1,371.111	
1,279.5	1,279.4	1,266.4	1,265.4	2.7	0.8	-109.31	737.6	-4,422.9	4,485.9	4,482.5	3.47	1,293.400	
1,300.0	1,299.8	1,284.2	1,283.3	2.8	0.8	-109.31	738.2	-4,422.7	4,486.3	4,482.8	3.52	1,274.744	
1,377.9	1,377.5	1,384.0	1,383.0	3.0	0.9	-109.33	741.7	-4,421.6	4,488.0	4,484.2	3.73	1,204.196	
1,400.0	1,399.5	1,415.7	1,414.7	3.0	0.9	-109.35	742.7	-4,421.1	4,488.5	4,484.7	3.79	1,185.405	
1,476.4	1,475.3	1,518.7	1,517.5	3.2	0.9	-109.42	745.5	-4,419.0	4,490.3	4,486.3	4.00	1,122.822	
1,500.0	1,498.7	1,541.5	1,540.4	3.3	0.9	-109.44	746.0	-4,418.5	4,491.0	4,486.9	4.06	1,105.410	
1,574.8	1,572.6	1,600.0	1,598.8	3.5	1.0	-109.47	747.4	-4,417.3	4,493.5	4,489.3	4.28	1,051.104	
1,600.0	1,597.5	1,630.0	1,628.8	3.5	1.0	-109.50	748.1	-4,416.7	4,494.6	4,490.2	4.35	1,033.223	
1,673.2	1,669.4	1,685.2	1,684.0	3.7	1.0	-109.54	749.3	-4,415.8	4,498.2	4,493.6	4.58	982.169	
1,700.1	1,695.8	1,700.0	1,698.8	3.8	1.0	-109.54	749.7	-4,415.6	4,499.8	4,495.1	4.66	964.963	
1,771.6	1,765.7	1,761.7	1,760.4	4.1	1.0	-109.68	750.9	-4,414.8	4,504.3	4,499.4	4.91	917.515	
1,800.0	1,793.4	1,783.8	1,782.6	4.2	1.0	-109.73	751.3	-4,414.6	4,506.1	4,501.1	5.01	900.082	
1,870.1	1,862.0	1,834.5	1,833.3	4.4	1.0	-109.85	752.1	-4,414.3	4,510.9	4,505.6	5.26	858.198	
1,900.0	1,891.3	1,855.4	1,854.2	4.5	1.1	-109.89	752.4	-4,414.3	4,513.0	4,507.7	5.36	841.573	
1,968.5	1,958.3	1,900.0	1,898.8	4.8	1.1	-110.00	753.0	-4,414.3	4,518.1	4,512.5	5.61	804.738	
2,000.0	1,989.1	1,929.3	1,928.1	4.9	1.1	-110.07	753.3	-4,414.4	4,520.6	4,514.9	5.73	788.678	
2,066.9	2,054.5	1,983.5	1,982.3	5.1	1.1	-110.19	753.9	-4,414.7	4,525.9	4,519.9	5.99	756.006	
2,100.0	2,086.9	2,010.1	2,008.8	5.3	1.1	-110.26	754.2	-4,414.9	4,528.7	4,522.5	6.11	740.787	
2,165.3	2,150.8	2,061.8	2,060.6	5.5	1.1	-110.38	754.6	-4,415.4	4,534.2	4,527.8	6.37	712.089	
2,200.0	2,184.7	2,089.2	2,088.0	5.6	1.1	-110.45	754.9	-4,415.7	4,537.2	4,530.7	6.50	697.782	
2,263.8	2,247.1	2,146.1	2,144.9	5.9	1.1	-110.58	755.3	-4,416.4	4,542.8	4,536.1	6.76	672.448	
2,300.0	2,282.5	2,179.4	2,178.1	6.0	1.1	-110.66	755.4	-4,416.9	4,546.1	4,539.2	6.90	658.882	
2,362.2	2,343.3	2,240.4	2,239.1	6.3	1.2	-110.81	755.6	-4,417.8	4,551.7	4,544.6	7.15	636.506	
2,400.0	2,380.3	2,278.8	2,277.5	6.5	1.2	-110.91	755.7	-4,418.4	4,555.1	4,547.8	7.30	623.650	
2,460.6	2,439.6	2,335.2	2,333.9	6.7	1.2	-111.05	755.8	-4,419.2	4,560.6	4,553.1	7.55	603.961	
2,500.0	2,478.1	2,370.0	2,368.7	6.9	1.2	-111.13	755.8	-4,419.8	4,564.3	4,556.6	7.71	591.883	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,559.0	2,535.9	2,423.7	2,422.4	7.1	1.2	-111.27	755.7	-4,420.7	4,569.8	4,561.8	7.95	574.502		
2,600.0	2,575.9	2,462.4	2,461.1	7.3	1.2	-111.36	755.6	-4,421.3	4,573.7	4,565.5	8.12	563.035		
2,657.5	2,632.2	2,517.2	2,515.9	7.5	1.2	-111.50	755.4	-4,422.3	4,579.1	4,570.8	8.36	547.616		
2,700.0	2,673.8	2,558.6	2,557.2	7.7	1.2	-111.60	755.1	-4,423.1	4,583.2	4,574.7	8.54	536.757		
2,755.9	2,728.4	2,613.3	2,612.0	7.9	1.2	-111.74	754.9	-4,424.1	4,588.6	4,579.8	8.77	523.074		
2,800.0	2,771.6	2,657.5	2,656.2	8.1	1.2	-111.85	754.6	-4,424.9	4,592.8	4,583.9	8.96	512.812		
2,854.3	2,824.7	2,712.6	2,711.2	8.3	1.2	-111.99	754.1	-4,425.9	4,598.1	4,588.9	9.18	500.635		
2,900.0	2,869.4	2,761.0	2,759.6	8.5	1.2	-112.12	753.6	-4,426.7	4,602.5	4,593.1	9.38	490.870		
2,952.7	2,921.0	2,815.7	2,814.3	8.8	1.2	-112.26	752.8	-4,427.7	4,607.5	4,597.9	9.60	480.038		
3,000.0	2,967.2	2,862.4	2,861.0	9.0	1.2	-112.38	752.1	-4,428.5	4,612.1	4,602.3	9.80	470.781		
3,051.2	3,017.3	2,914.0	2,912.6	9.2	1.2	-112.52	751.3	-4,429.3	4,617.0	4,607.0	10.01	461.132		
3,100.0	3,065.0	2,965.8	2,964.4	9.4	1.2	-112.65	750.5	-4,430.2	4,621.7	4,611.5	10.22	452.299		
3,149.6	3,113.5	3,022.8	3,021.4	9.6	1.2	-112.80	749.6	-4,431.0	4,626.4	4,616.0	10.43	443.649		
3,200.0	3,162.8	3,089.1	3,087.6	9.8	1.3	-112.97	748.4	-4,431.8	4,631.1	4,620.4	10.64	435.194		
3,248.0	3,209.8	3,143.2	3,141.8	10.0	1.3	-113.11	747.4	-4,432.3	4,635.4	4,624.6	10.84	427.479		
3,300.0	3,260.6	3,199.7	3,198.3	10.2	1.3	-113.26	746.3	-4,432.8	4,640.1	4,629.0	11.06	419.465		
3,346.4	3,306.1	3,255.0	3,253.6	10.5	1.3	-113.41	745.2	-4,433.1	4,644.2	4,633.0	11.26	412.545		
3,400.0	3,358.5	3,318.4	3,316.9	10.7	1.3	-113.57	743.8	-4,433.4	4,648.9	4,637.4	11.48	404.870		
3,444.9	3,402.3	3,370.8	3,369.3	10.9	1.3	-113.71	742.6	-4,433.5	4,652.7	4,641.0	11.67	398.670		
3,500.0	3,456.3	3,431.9	3,430.3	11.1	1.3	-113.87	741.2	-4,433.5	4,657.3	4,645.4	11.90	391.337		
3,543.3	3,498.6	3,477.7	3,476.2	11.3	1.3	-113.99	740.1	-4,433.5	4,660.9	4,648.8	12.08	385.771		
3,600.0	3,554.1	3,535.3	3,533.8	11.5	1.3	-114.14	738.7	-4,433.4	4,665.6	4,653.3	12.32	378.737		
3,641.7	3,594.9	3,576.7	3,575.1	11.7	1.3	-114.25	737.7	-4,433.3	4,669.1	4,656.6	12.49	373.731		
3,700.0	3,651.9	3,634.5	3,632.9	12.0	1.3	-114.40	736.3	-4,433.2	4,674.0	4,661.3	12.74	366.982		
3,740.1	3,691.2	3,674.3	3,672.7	12.2	1.3	-114.51	735.3	-4,433.1	4,677.4	4,664.5	12.90	362.475		
3,800.0	3,749.7	3,734.3	3,732.7	12.4	1.3	-114.67	733.8	-4,433.0	4,682.4	4,669.2	13.15	355.981		
3,838.6	3,787.4	3,773.4	3,771.8	12.6	1.3	-114.77	732.8	-4,432.9	4,685.6	4,672.3	13.31	351.924		
3,900.0	3,847.5	3,838.2	3,836.6	12.9	1.3	-114.94	731.1	-4,432.7	4,690.8	4,677.3	13.57	345.671		
3,937.0	3,883.7	3,878.5	3,876.9	13.0	1.3	-115.04	730.1	-4,432.5	4,693.9	4,680.2	13.72	342.015		
4,000.0	3,945.3	3,945.6	3,943.9	13.3	1.3	-115.22	728.4	-4,432.1	4,699.1	4,685.2	13.99	335.987		
4,035.4	3,980.0	3,983.0	3,981.3	13.5	1.3	-115.31	727.6	-4,431.9	4,702.1	4,687.9	14.13	332.697		
4,060.0	4,004.0	4,007.8	4,006.1	13.6	1.3	-115.38	727.0	-4,431.7	4,704.1	4,689.9	14.24	330.456		
4,100.0	4,043.2	4,044.8	4,043.1	13.7	1.3	-115.53	726.2	-4,431.5	4,707.3	4,692.9	14.38	327.440		
4,133.8	4,076.5	4,076.3	4,074.6	13.8	1.3	-115.65	725.5	-4,431.3	4,709.8	4,695.4	14.47	325.391		
4,200.0	4,141.6	4,136.8	4,135.0	14.0	1.3	-115.86	724.3	-4,430.9	4,714.4	4,699.7	14.67	321.423		
4,232.3	4,173.5	4,166.0	4,164.3	14.1	1.3	-115.95	723.8	-4,430.8	4,716.4	4,701.6	14.75	319.727		
4,300.0	4,240.6	4,226.9	4,225.2	14.3	1.4	-116.12	722.7	-4,430.5	4,720.1	4,705.2	14.93	316.186		
4,330.7	4,271.1	4,254.3	4,252.6	14.4	1.4	-116.19	722.3	-4,430.4	4,721.6	4,706.6	15.00	314.802		
4,400.0	4,340.0	4,316.8	4,315.1	14.5	1.4	-116.32	721.5	-4,430.3	4,724.6	4,709.4	15.16	311.675		
4,429.1	4,369.0	4,343.8	4,342.0	14.6	1.4	-116.37	721.2	-4,430.2	4,725.6	4,710.4	15.22	310.559		
4,500.0	4,439.7	4,409.5	4,407.7	14.8	1.4	-116.46	720.5	-4,430.2	4,727.7	4,712.3	15.36	307.825		
4,527.5	4,467.2	4,435.1	4,433.4	14.8	1.4	-116.49	720.2	-4,430.2	4,728.3	4,712.9	15.40	306.940		
4,600.0	4,539.7	4,500.0	4,498.2	14.9	1.4	-116.54	719.6	-4,430.2	4,729.4	4,713.9	15.53	304.588		
4,626.0	4,565.6	4,525.5	4,523.7	15.0	1.4	-116.55	719.4	-4,430.2	4,729.6	4,714.1	15.57	303.862		
4,660.2	4,599.8	4,555.6	4,553.9	15.0	1.4	-87.83	719.0	-4,430.3	4,729.8	4,716.6	13.18	358.972		
4,700.0	4,639.6	4,590.8	4,589.1	15.0	1.4	-87.84	718.5	-4,430.4	4,729.9	4,716.6	13.25	357.014		
4,724.4	4,664.0	4,612.7	4,610.9	15.1	1.4	-87.84	718.2	-4,430.5	4,730.0	4,716.7	13.30	355.695		
4,800.0	4,739.6	4,681.4	4,679.6	15.2	1.4	-87.86	716.9	-4,430.8	4,730.3	4,716.8	13.45	351.662		
4,822.8	4,762.5	4,702.9	4,701.2	15.2	1.4	-87.87	716.4	-4,431.0	4,730.4	4,716.9	13.50	350.451		
4,900.0	4,839.6	4,802.1	4,800.3	15.3	1.4	-87.90	713.9	-4,431.3	4,730.6	4,717.0	13.66	346.270		
4,921.2	4,860.9	4,829.1	4,827.3	15.4	1.4	-87.90	713.2	-4,431.4	4,730.6	4,716.9	13.71	345.123		
5,000.0	4,939.6	4,934.2	4,932.3	15.5	1.5	-87.94	710.3	-4,431.2	4,730.4	4,716.5	13.88	340.899		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	4,963.4	4,961.5	15.5	1.5	-87.95	709.5	-4,431.0	4,730.3	4,716.4	13.92	339.835	
5,100.0	5,039.6	5,066.9	5,065.0	15.6	1.5	-87.98	707.0	-4,429.9	4,729.4	4,715.3	14.09	335.616	
5,118.1	5,057.7	5,088.7	5,086.8	15.7	1.5	-87.98	706.6	-4,429.7	4,729.1	4,715.0	14.13	334.681	
5,200.0	5,139.6	5,183.3	5,181.3	15.8	1.5	-88.00	705.0	-4,428.3	4,727.9	4,713.6	14.30	330.523	
5,216.5	5,156.2	5,202.6	5,200.6	15.8	1.5	-88.01	704.7	-4,428.0	4,727.6	4,713.3	14.34	329.690	
5,300.0	5,239.6	5,310.4	5,308.5	15.9	1.5	-88.02	703.0	-4,425.9	4,726.0	4,711.5	14.52	325.486	
5,314.9	5,254.6	5,326.8	5,324.8	16.0	1.5	-88.03	702.8	-4,425.5	4,725.6	4,711.1	14.55	324.750	
5,400.0	5,339.6	5,419.0	5,417.0	16.1	1.5	-88.04	701.4	-4,423.4	4,723.7	4,708.9	14.73	320.621	
5,413.4	5,353.0	5,433.1	5,431.0	16.1	1.5	-88.05	701.1	-4,423.1	4,723.3	4,708.6	14.76	319.979	
5,500.0	5,439.6	5,521.6	5,519.6	16.3	1.6	-88.06	699.6	-4,421.0	4,721.2	4,706.3	14.95	315.882	
5,511.8	5,451.4	5,532.8	5,530.7	16.3	1.6	-88.07	699.4	-4,420.7	4,720.9	4,706.0	14.97	315.332	
5,600.0	5,539.6	5,618.3	5,616.2	16.4	1.6	-88.09	697.7	-4,418.7	4,718.8	4,703.7	15.16	311.273	
5,610.2	5,549.9	5,629.3	5,627.1	16.4	1.6	-88.09	697.5	-4,418.5	4,718.6	4,703.4	15.18	310.801	
5,700.0	5,639.6	5,724.9	5,722.8	16.6	1.6	-88.11	695.3	-4,416.2	4,716.4	4,701.0	15.38	306.717	
5,708.6	5,648.3	5,734.0	5,731.9	16.6	1.6	-88.12	695.1	-4,416.0	4,716.1	4,700.7	15.40	306.327	
5,800.0	5,739.6	5,828.1	5,825.9	16.7	1.6	-88.15	692.6	-4,413.6	4,713.8	4,698.2	15.59	302.266	
5,807.1	5,746.7	5,835.0	5,832.8	16.8	1.6	-88.15	692.5	-4,413.5	4,713.6	4,698.0	15.61	301.955	
5,900.0	5,839.6	5,928.1	5,925.8	16.9	1.6	-88.18	689.8	-4,411.1	4,711.2	4,695.4	15.81	297.922	
5,905.5	5,845.1	5,933.9	5,931.6	16.9	1.6	-88.18	689.6	-4,411.0	4,711.1	4,695.2	15.83	297.684	
6,000.0	5,939.6	6,040.0	6,037.6	17.1	1.7	-88.22	686.2	-4,408.3	4,708.5	4,692.5	16.04	293.622	
6,003.9	5,943.6	6,045.1	6,042.7	17.1	1.7	-88.22	686.0	-4,408.1	4,708.4	4,692.4	16.04	293.452	
6,059.2	5,998.8	6,114.1	6,111.7	17.2	1.7	-88.25	683.8	-4,406.1	4,706.7	4,690.6	16.17	291.089	
6,100.0	6,039.6	6,160.8	6,158.3	17.2	1.7	1.74	682.4	-4,404.6	4,704.3	4,686.1	18.16	259.012	
6,102.3	6,042.0	6,163.5	6,161.0	17.2	1.7	1.74	682.3	-4,404.6	4,704.1	4,685.9	18.17	258.934	
6,150.0	6,089.4	6,218.2	6,215.6	17.3	1.7	1.74	680.8	-4,402.8	4,698.0	4,679.7	18.28	257.061	
6,200.0	6,138.7	6,276.2	6,273.5	17.3	1.7	1.75	679.2	-4,400.7	4,688.2	4,669.8	18.40	254.744	
6,200.8	6,139.5	6,277.0	6,274.4	17.3	1.7	1.75	679.2	-4,400.7	4,688.0	4,669.6	18.41	254.707	
6,250.0	6,187.4	6,340.8	6,338.1	17.3	1.7	1.77	677.5	-4,398.3	4,674.9	4,656.4	18.53	252.319	
6,299.2	6,234.4	6,405.8	6,403.0	17.4	1.7	1.80	675.8	-4,395.7	4,658.4	4,639.7	18.63	250.067	
6,300.0	6,235.1	6,406.6	6,403.8	17.4	1.7	1.80	675.8	-4,395.6	4,658.1	4,639.5	18.63	250.035	
6,350.0	6,281.7	6,453.6	6,450.8	17.4	1.8	1.84	674.6	-4,393.6	4,637.9	4,619.2	18.68	248.232	
6,397.6	6,324.8	6,497.0	6,494.1	17.3	1.8	1.90	673.5	-4,391.7	4,615.8	4,597.1	18.69	246.943	
6,400.0	6,326.9	6,499.1	6,496.3	17.3	1.8	1.91	673.4	-4,391.6	4,614.6	4,595.9	18.69	246.889	
6,450.0	6,370.5	6,570.3	6,567.3	17.3	1.8	1.98	671.5	-4,388.3	4,588.1	4,569.5	18.67	245.689	
6,496.0	6,409.1	6,633.0	6,629.9	17.3	1.8	2.07	669.8	-4,385.0	4,561.0	4,542.3	18.62	244.963	
6,500.0	6,412.3	6,638.2	6,635.1	17.3	1.8	2.08	669.7	-4,384.7	4,558.5	4,539.9	18.61	244.917	
6,550.0	6,452.1	6,702.3	6,699.0	17.3	1.8	2.20	667.8	-4,380.9	4,525.9	4,507.4	18.50	244.587	
6,594.5	6,485.6	6,764.1	6,760.7	17.3	1.8	2.34	666.0	-4,376.9	4,494.6	4,476.2	18.38	244.506	
6,600.0	6,489.7	6,771.5	6,768.0	17.3	1.8	2.36	665.7	-4,376.4	4,490.6	4,472.2	18.36	244.520	
6,650.0	6,524.9	6,790.0	6,786.5	17.2	1.8	2.56	665.1	-4,375.1	4,452.7	4,434.6	18.12	245.704	
6,692.9	6,553.0	6,790.0	6,786.5	17.2	1.8	2.77	665.1	-4,375.1	4,418.6	4,400.7	17.87	247.333	
6,700.0	6,557.5	6,790.0	6,786.5	17.2	1.8	2.81	665.1	-4,375.1	4,412.8	4,395.0	17.82	247.629	
6,750.0	6,587.4	6,790.0	6,786.5	17.2	1.8	3.12	665.1	-4,375.1	4,371.1	4,353.6	17.50	249.833	
6,791.3	6,609.9	6,790.0	6,786.5	17.2	1.8	3.45	665.1	-4,375.1	4,335.4	4,318.2	17.22	251.717	
6,800.0	6,614.4	6,790.0	6,786.5	17.2	1.8	3.52	665.1	-4,375.1	4,327.8	4,310.6	17.17	252.102	
6,850.0	6,638.4	6,790.0	6,786.5	17.2	1.8	4.06	665.1	-4,375.1	4,282.9	4,266.1	16.85	254.117	
6,889.7	6,655.3	6,790.0	6,786.5	17.4	1.8	4.63	665.1	-4,375.1	4,246.3	4,229.7	16.64	255.203	
6,900.0	6,659.4	6,790.0	6,786.5	17.5	1.8	4.81	665.1	-4,375.1	4,236.7	4,220.1	16.59	255.405	
6,950.0	6,677.1	6,790.0	6,786.5	18.0	1.8	5.91	665.1	-4,375.1	4,189.4	4,173.0	16.41	255.244	
6,988.2	6,688.4	6,790.0	6,786.5	18.5	1.8	7.18	665.1	-4,375.1	4,152.6	4,136.2	16.39	253.408	
7,000.0	6,691.5	6,790.0	6,786.5	18.7	1.8	7.69	665.1	-4,375.1	4,141.1	4,124.7	16.40	252.434	
7,050.0	6,702.5	6,790.0	6,786.5	19.5	1.8	10.99	665.1	-4,375.1	4,092.0	4,075.3	16.74	244.449	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,708.4	6,790.0	6,786.5	20.1	1.8	15.95	665.1	-4,375.1	4,055.8	4,038.2	17.53	231.389	
7,100.0	6,710.1	6,790.0	6,786.5	20.4	1.8	19.05	665.1	-4,375.1	4,042.4	4,024.4	18.08	223.601	
7,150.0	6,714.2	6,790.0	6,786.5	21.3	1.8	56.73	665.1	-4,375.1	3,992.5	3,969.2	23.33	171.100	
7,185.0	6,715.0	6,790.0	6,786.5	21.9	1.8	131.94	665.1	-4,375.1	3,957.5	3,936.5	21.00	188.453	
7,185.6	6,715.0	6,790.0	6,786.5	21.9	1.8	132.68	665.1	-4,375.1	3,957.0	3,936.1	20.91	189.253	
7,200.0	6,715.0	6,790.0	6,786.5	22.2	1.8	132.68	665.1	-4,375.1	3,942.6	3,921.5	21.11	186.720	
7,283.4	6,714.8	6,790.0	6,786.5	23.9	1.8	132.68	665.1	-4,375.1	3,859.2	3,836.8	22.37	172.526	
7,300.0	6,714.8	6,790.0	6,786.5	24.2	1.8	132.68	665.1	-4,375.1	3,842.7	3,820.1	22.62	169.898	
7,381.9	6,714.6	6,790.0	6,786.5	26.0	1.8	132.68	665.1	-4,375.1	3,760.9	3,736.9	23.94	157.104	
7,400.0	6,714.6	6,790.0	6,786.5	26.4	1.8	132.68	665.1	-4,375.1	3,742.8	3,718.5	24.23	154.461	
7,480.3	6,714.4	6,790.0	6,786.5	28.2	1.8	132.68	665.1	-4,375.1	3,662.6	3,637.0	25.60	143.066	
7,500.0	6,714.4	6,790.0	6,786.5	28.7	1.8	132.68	665.1	-4,375.1	3,642.9	3,616.9	25.94	140.455	
7,578.7	6,714.2	6,790.0	6,786.5	30.5	1.8	132.68	665.1	-4,375.1	3,564.2	3,536.9	27.33	130.395	
7,600.0	6,714.2	6,790.0	6,786.5	31.0	1.8	132.68	665.1	-4,375.1	3,543.0	3,515.3	27.71	127.851	
7,677.1	6,714.0	6,790.0	6,786.5	32.9	1.8	132.68	665.1	-4,375.1	3,465.9	3,436.8	29.12	119.004	
7,700.0	6,714.0	6,790.0	6,786.5	33.4	1.8	132.68	665.1	-4,375.1	3,443.1	3,413.6	29.54	116.546	
7,775.6	6,713.9	6,790.0	6,786.5	35.3	1.8	132.68	665.1	-4,375.1	3,367.6	3,336.7	30.96	108.774	
7,800.0	6,713.8	6,790.0	6,786.5	35.9	1.8	132.68	665.1	-4,375.1	3,343.2	3,311.8	31.42	106.413	
7,874.0	6,713.7	6,790.0	6,786.5	37.8	1.8	132.68	665.1	-4,375.1	3,269.3	3,236.5	32.83	99.581	
7,900.0	6,713.6	6,790.0	6,786.5	38.4	1.8	132.68	665.1	-4,375.1	3,243.4	3,210.0	33.33	97.318	
7,972.4	6,713.5	6,790.0	6,786.5	40.3	1.8	132.68	665.1	-4,375.1	3,171.1	3,136.3	34.73	91.302	
8,000.0	6,713.4	6,790.0	6,786.5	41.0	1.8	132.67	665.1	-4,375.1	3,143.5	3,108.3	35.27	89.138	
8,070.8	6,713.3	6,790.0	6,786.5	42.8	1.8	132.67	665.1	-4,375.1	3,072.8	3,036.1	36.66	83.828	
8,100.0	6,713.2	6,790.0	6,786.5	43.6	1.8	132.67	665.1	-4,375.1	3,043.7	3,006.4	37.23	81.759	
8,169.3	6,713.1	6,790.0	6,786.5	45.4	1.8	132.67	665.1	-4,375.1	2,974.5	2,935.9	38.60	77.061	
8,200.0	6,713.0	6,790.0	6,786.5	46.2	1.8	132.67	665.1	-4,375.1	2,943.8	2,904.6	39.21	75.082	
8,267.7	6,712.9	6,790.0	6,786.5	48.0	1.8	132.67	665.1	-4,375.1	2,876.2	2,835.7	40.56	70.913	
8,300.0	6,712.8	6,790.0	6,786.5	48.8	1.8	132.67	665.1	-4,375.1	2,844.0	2,802.8	41.21	69.021	
8,366.1	6,712.7	6,790.0	6,786.5	50.6	1.8	132.67	665.1	-4,375.1	2,778.0	2,735.5	42.53	65.312	
8,400.0	6,712.6	6,790.0	6,786.5	51.5	1.8	132.67	665.1	-4,375.1	2,744.2	2,701.0	43.22	63.500	
8,464.5	6,712.5	6,790.0	6,786.5	53.2	1.8	132.67	665.1	-4,375.1	2,679.8	2,635.2	44.52	60.191	
8,500.0	6,712.4	6,790.0	6,786.5	54.1	1.8	132.67	665.1	-4,375.1	2,644.4	2,599.1	45.24	58.455	
8,563.0	6,712.3	6,790.0	6,786.5	55.8	1.8	132.67	665.1	-4,375.1	2,581.5	2,535.0	46.52	55.496	
8,600.0	6,712.3	6,790.0	6,786.5	56.8	1.8	132.67	665.1	-4,375.1	2,544.6	2,497.3	47.27	53.831	
8,661.4	6,712.1	6,790.0	6,786.5	58.5	1.8	132.67	665.1	-4,375.1	2,483.3	2,434.8	48.52	51.179	
8,700.0	6,712.1	6,790.0	6,786.5	59.5	1.8	132.67	665.1	-4,375.1	2,444.8	2,395.5	49.31	49.580	
8,759.8	6,711.9	6,790.0	6,786.5	61.1	1.8	132.67	665.1	-4,375.1	2,385.2	2,334.6	50.54	47.198	
8,800.0	6,711.9	6,790.0	6,786.5	62.2	1.8	132.67	665.1	-4,375.1	2,345.1	2,293.7	51.36	45.661	
8,858.2	6,711.8	6,790.0	6,786.5	63.8	1.8	132.67	665.1	-4,375.1	2,287.0	2,234.4	52.55	43.516	
8,900.0	6,711.7	6,790.0	6,786.5	64.9	1.8	132.67	665.1	-4,375.1	2,245.4	2,191.9	53.41	42.038	
8,956.7	6,711.6	6,790.0	6,786.5	66.5	1.8	132.67	665.1	-4,375.1	2,188.9	2,134.3	54.58	40.103	
9,000.0	6,711.5	6,790.0	6,786.5	67.6	1.8	132.67	665.1	-4,375.1	2,145.7	2,090.2	55.47	38.679	
9,055.1	6,711.4	6,790.0	6,786.5	69.1	1.8	132.67	665.1	-4,375.1	2,090.7	2,034.1	56.61	36.932	
9,100.0	6,711.3	6,790.0	6,786.5	70.4	1.8	132.67	665.1	-4,375.1	2,046.0	1,988.5	57.54	35.559	
9,153.5	6,711.2	6,790.0	6,786.5	71.8	1.8	132.67	665.1	-4,375.1	1,992.7	1,934.0	58.65	33.978	
9,200.0	6,711.1	6,790.0	6,786.5	73.1	1.8	132.66	665.1	-4,375.1	1,946.4	1,886.7	59.61	32.653	
9,251.9	6,711.0	6,790.0	6,786.5	74.5	1.8	132.66	665.1	-4,375.1	1,894.6	1,833.9	60.68	31.221	
9,300.0	6,710.9	6,790.0	6,786.5	75.8	1.8	132.66	665.1	-4,375.1	1,846.8	1,785.1	61.68	29.940	
9,350.4	6,710.8	6,790.0	6,786.5	77.2	1.8	132.66	665.1	-4,375.1	1,796.6	1,733.9	62.73	28.641	
9,400.0	6,710.7	6,790.0	6,786.5	78.6	1.8	132.66	665.1	-4,375.1	1,747.2	1,683.4	63.76	27.404	
9,448.8	6,710.6	6,790.0	6,786.5	79.9	1.8	132.66	665.1	-4,375.1	1,698.6	1,633.9	64.77	26.225	
9,500.0	6,710.5	6,790.0	6,786.5	81.3	1.8	132.66	665.1	-4,375.1	1,647.7	1,581.9	65.84	25.027	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BLOSKAS BOND #9D - Wellbore #1 - Wellbore #										Offset Site Error:		0.0 usft	
Survey Program: 100-GYD_CT												Offset Well Error:		0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
9,547.2	6,710.4	6,796.6	6,793.1	82.6	1.8	134.30	664.9	-4,374.6	1,600.7	1,535.2	65.50	24.437			
9,600.0	6,710.3	6,791.9	6,788.4	84.1	1.8	133.15	665.1	-4,374.9	1,548.3	1,480.7	67.53	22.927			
9,645.6	6,710.2	6,787.9	6,784.4	85.3	1.8	132.13	665.2	-4,375.2	1,502.9	1,433.6	69.31	21.683			
9,700.0	6,710.1	6,783.2	6,779.7	86.8	1.8	130.89	665.4	-4,375.6	1,448.9	1,377.4	71.47	20.273			
9,744.1	6,710.0	6,779.4	6,776.0	88.1	1.8	129.86	665.5	-4,375.8	1,405.1	1,331.9	73.25	19.184			
9,800.0	6,709.9	6,774.7	6,771.3	89.6	1.8	128.54	665.6	-4,376.2	1,349.6	1,274.1	75.53	17.868			
9,842.5	6,709.9	6,771.2	6,767.7	90.8	1.8	127.51	665.7	-4,376.4	1,307.4	1,230.1	77.29	16.915			
9,900.0	6,709.7	6,766.4	6,763.0	92.4	1.8	126.10	665.9	-4,376.7	1,250.3	1,170.6	79.70	15.689			
9,940.9	6,709.7	6,763.1	6,759.7	93.5	1.8	125.08	666.0	-4,376.9	1,209.7	1,128.3	81.42	14.857			
10,000.0	6,709.6	6,758.4	6,755.0	95.1	1.8	123.58	666.1	-4,377.3	1,151.1	1,067.2	83.94	13.714			
10,039.3	6,709.5	6,755.3	6,751.9	96.2	1.8	122.56	666.2	-4,377.5	1,112.1	1,026.5	85.62	12.989			
10,100.0	6,709.4	6,750.5	6,747.1	97.9	1.8	120.98	666.4	-4,377.8	1,052.1	963.8	88.23	11.924			
10,137.8	6,709.3	6,747.6	6,744.2	98.9	1.8	119.98	666.5	-4,378.0	1,014.7	924.8	89.86	11.292			
10,200.0	6,709.2	6,742.8	6,739.5	100.7	1.8	118.31	666.6	-4,378.3	953.1	860.6	92.54	10.299			
10,236.2	6,709.1	6,740.1	6,736.7	101.7	1.8	117.32	666.7	-4,378.5	917.4	823.3	94.10	9.749			
10,300.0	6,709.0	6,735.3	6,732.0	103.4	1.8	115.57	666.9	-4,378.8	854.4	757.5	96.84	8.822			
10,334.6	6,708.9	6,732.8	6,729.4	104.4	1.8	114.61	666.9	-4,379.0	820.2	721.9	98.32	8.342			
10,400.0	6,708.8	6,728.0	6,724.7	106.2	1.8	112.79	667.1	-4,379.3	755.9	654.8	101.09	7.477			
10,433.0	6,708.7	6,725.6	6,722.3	107.1	1.8	111.86	667.2	-4,379.4	723.4	620.9	102.48	7.059			
10,500.0	6,708.6	6,720.8	6,717.5	109.0	1.8	109.96	667.3	-4,379.7	657.8	552.5	105.26	6.249			
10,531.5	6,708.5	6,718.6	6,715.3	109.9	1.8	109.07	667.4	-4,379.9	627.0	520.4	106.55	5.884			
10,600.0	6,708.4	6,713.8	6,710.6	111.8	1.8	107.11	667.5	-4,380.2	560.2	450.9	109.32	5.125			
10,629.9	6,708.4	6,711.8	6,708.5	112.6	1.8	106.25	667.6	-4,380.3	531.2	420.7	110.51	4.807			
10,700.0	6,708.2	6,707.0	6,703.7	114.6	1.8	104.25	667.7	-4,380.6	463.7	350.4	113.24	4.095			
10,728.3	6,708.2	6,705.1	6,701.8	115.3	1.8	103.43	667.8	-4,380.7	436.6	322.3	114.32	3.819			
10,800.0	6,708.0	6,700.3	6,697.1	117.3	1.8	101.38	667.9	-4,381.0	368.8	251.8	116.99	3.152			
10,826.7	6,708.0	6,698.6	6,695.3	118.1	1.8	100.62	668.0	-4,381.1	343.9	225.9	117.97	2.915			
10,900.0	6,707.8	6,693.8	6,690.6	120.1	1.8	98.55	668.1	-4,381.4	277.4	156.9	120.56	2.301			
10,925.2	6,707.8	6,692.2	6,689.0	120.8	1.8	97.84	668.1	-4,381.5	255.4	134.0	121.43	2.103			
11,000.0	6,707.6	6,687.4	6,684.2	122.9	1.8	95.73	668.3	-4,381.8	194.5	70.6	123.95	1.569			
11,023.6	6,707.6	6,686.0	6,682.7	123.6	1.8	95.07	668.3	-4,381.9	177.5	52.8	124.72	1.423 Level 3			
11,100.0	6,707.5	6,681.2	6,678.0	125.7	1.8	92.95	668.5	-4,382.2	136.5	9.4	127.14	1.074 Level 2			
11,122.0	6,707.4	6,679.8	6,676.6	126.3	1.8	92.34	668.5	-4,382.3	130.7	2.9	127.81	1.022 Level 2			
11,146.4	6,707.4	6,678.3	6,675.1	127.0	1.8	91.67	668.6	-4,382.4	128.4	-0.2	128.55	0.999 Level 1, CC, ES, SF			
11,200.0	6,707.3	6,675.0	6,671.8	128.5	1.8	90.20	668.6	-4,382.5	139.1	9.0	130.13	1.069 Level 2			
11,220.4	6,707.2	6,673.8	6,670.6	129.0	1.8	89.65	668.7	-4,382.6	148.1	17.4	130.72	1.133 Level 2			
11,300.0	6,707.1	6,669.0	6,665.8	131.3	1.8	87.52	668.8	-4,382.9	200.0	67.1	132.92	1.504			
11,318.9	6,707.0	6,667.8	6,664.7	131.8	1.8	87.02	668.9	-4,383.0	214.8	81.3	133.42	1.610			
11,400.0	6,706.9	6,663.0	6,659.9	134.0	1.8	84.89	669.0	-4,383.3	283.8	148.3	135.49	2.095			
11,417.3	6,706.9	6,662.0	6,658.8	134.5	1.8	84.45	669.0	-4,383.3	299.3	163.4	135.91	2.202			
11,500.0	6,706.7	6,657.2	6,654.0	136.8	1.8	82.34	669.2	-4,383.6	375.6	237.7	137.84	2.725			
11,515.7	6,706.7	6,656.3	6,653.1	137.3	1.8	81.95	669.2	-4,383.6	390.4	252.2	138.19	2.825			
11,600.0	6,706.5	6,651.4	6,648.3	139.6	1.8	79.87	669.3	-4,383.9	470.6	330.6	139.97	3.362			
11,614.1	6,706.5	6,650.6	6,647.5	140.0	1.8	79.53	669.3	-4,384.0	484.2	344.0	140.25	3.452			
11,700.0	6,706.3	6,645.8	6,642.7	142.4	1.8	77.48	669.5	-4,384.2	567.3	425.4	141.88	3.998			
11,712.6	6,706.3	6,645.1	6,642.0	142.8	1.8	77.19	669.5	-4,384.3	579.5	437.4	142.11	4.078			
11,800.0	6,706.1	6,640.2	6,637.1	145.2	1.8	75.18	669.6	-4,384.6	664.9	521.4	143.58	4.631			
11,811.0	6,706.1	6,639.6	6,636.5	145.5	1.8	74.93	669.7	-4,384.6	675.7	532.0	143.76	4.700			
11,900.0	6,705.9	6,634.8	6,631.7	148.0	1.8	72.97	669.8	-4,384.9	763.1	618.0	145.08	5.260			
11,909.4	6,705.9	6,634.3	6,631.2	148.3	1.8	72.77	669.8	-4,384.9	772.4	627.2	145.22	5.319			
12,000.0	6,705.8	6,629.4	6,626.3	150.8	1.8	70.85	669.9	-4,385.2	861.7	715.3	146.41	5.886			
12,007.8	6,705.7	6,629.0	6,625.9	151.0	1.8	70.69	670.0	-4,385.2	869.5	723.0	146.50	5.935			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,100.0	6,705.6	6,624.1	6,621.0	153.6	1.8	68.82	670.1	-4,385.4	960.5	813.0	147.56	6.510	
12,106.3	6,705.6	6,623.8	6,620.7	153.8	1.8	68.70	670.1	-4,385.5	966.8	819.1	147.63	6.549	
12,200.0	6,705.4	6,618.9	6,615.9	156.4	1.8	66.89	670.2	-4,385.7	1,059.6	911.0	148.56	7.132	
12,204.7	6,705.4	6,618.7	6,615.6	156.5	1.8	66.80	670.2	-4,385.7	1,064.2	915.6	148.61	7.161	
12,300.0	6,705.2	6,613.8	6,610.8	159.2	1.8	65.04	670.4	-4,386.0	1,158.7	1,009.3	149.44	7.754	
12,303.1	6,705.2	6,613.7	6,610.6	159.3	1.8	64.98	670.4	-4,386.0	1,161.8	1,012.4	149.46	7.773	
12,400.0	6,705.0	6,608.8	6,605.7	162.0	1.8	63.27	670.5	-4,386.3	1,258.0	1,107.8	150.19	8.376	
12,401.5	6,705.0	6,608.7	6,605.7	162.0	1.8	63.25	670.5	-4,386.3	1,259.6	1,109.4	150.21	8.386	
12,500.0	6,704.8	6,600.0	6,597.0	164.8	1.8	60.32	670.7	-4,386.7	1,357.4	1,208.0	149.37	9.088	
12,598.4	6,704.6	6,600.0	6,597.0	167.5	1.8	60.32	670.7	-4,386.7	1,455.2	1,303.4	151.79	9.587	
12,600.0	6,704.6	6,600.0	6,597.0	167.6	1.8	60.32	670.7	-4,386.7	1,456.8	1,305.0	151.83	9.595	
12,696.8	6,704.4	6,600.0	6,597.0	170.3	1.8	60.32	670.7	-4,386.7	1,553.2	1,399.0	154.21	10.072	
12,700.0	6,704.4	6,600.0	6,597.0	170.4	1.8	60.32	670.7	-4,386.7	1,556.3	1,402.0	154.29	10.087	
12,795.2	6,704.3	6,589.7	6,586.7	173.0	1.8	57.09	671.0	-4,387.3	1,651.1	1,498.8	152.34	10.838	
12,800.0	6,704.2	6,589.5	6,586.5	173.2	1.8	57.02	671.0	-4,387.3	1,655.8	1,503.5	152.36	10.868	
12,893.7	6,704.1	6,585.1	6,582.1	175.8	1.8	55.73	671.1	-4,387.5	1,749.1	1,596.4	152.72	11.453	
12,900.0	6,704.1	6,584.8	6,581.8	176.0	1.8	55.64	671.2	-4,387.5	1,755.4	1,602.7	152.75	11.492	
12,992.1	6,703.9	6,580.6	6,577.6	178.5	1.8	54.43	671.3	-4,387.7	1,847.2	1,694.1	153.07	12.068	
13,000.0	6,703.9	6,580.3	6,577.3	178.8	1.8	54.33	671.3	-4,387.8	1,855.0	1,701.9	153.09	12.117	
13,090.5	6,703.7	6,576.2	6,573.2	181.3	1.8	53.20	671.4	-4,388.0	1,945.2	1,791.8	153.38	12.682	
13,100.0	6,703.7	6,575.8	6,572.8	181.6	1.8	53.08	671.4	-4,388.0	1,954.7	1,801.3	153.41	12.742	
13,188.9	6,703.5	6,571.8	6,568.8	184.0	1.8	52.02	671.5	-4,388.2	2,043.3	1,889.6	153.66	13.297	
13,200.0	6,703.5	6,571.3	6,568.3	184.4	1.8	51.89	671.5	-4,388.2	2,054.3	1,900.6	153.69	13.366	
13,287.4	6,703.3	6,567.5	6,564.5	186.8	1.8	50.90	671.6	-4,388.4	2,141.4	1,987.5	153.93	13.912	
13,300.0	6,703.3	6,567.0	6,564.0	187.2	1.8	50.76	671.6	-4,388.4	2,154.0	2,000.0	153.96	13.991	
13,385.8	6,703.2	6,563.3	6,560.3	189.6	1.8	49.83	671.7	-4,388.6	2,239.5	2,085.4	154.18	14.526	
13,400.0	6,703.1	6,562.7	6,559.7	190.0	1.8	49.68	671.8	-4,388.6	2,253.7	2,099.5	154.21	14.614	
13,484.2	6,703.0	6,559.1	6,556.1	192.3	1.8	48.81	671.8	-4,388.8	2,337.7	2,183.3	154.41	15.139	
13,500.0	6,702.9	6,558.4	6,555.5	192.8	1.8	48.65	671.9	-4,388.9	2,353.4	2,199.0	154.45	15.237	
13,582.6	6,702.8	6,555.0	6,552.0	195.1	1.8	47.83	672.0	-4,389.0	2,435.8	2,281.2	154.65	15.751	
13,600.0	6,702.8	6,554.2	6,551.3	195.6	1.8	47.67	672.0	-4,389.1	2,453.1	2,298.4	154.69	15.859	
13,681.1	6,702.6	6,550.9	6,547.9	197.8	1.8	46.90	672.1	-4,389.2	2,534.0	2,379.1	154.88	16.362	
13,700.0	6,702.6	6,550.1	6,547.2	198.4	1.8	46.73	672.1	-4,389.3	2,552.9	2,398.0	154.92	16.479	
13,779.5	6,702.4	6,546.9	6,543.9	200.6	1.8	46.02	672.2	-4,389.4	2,632.2	2,477.1	155.10	16.971	
13,800.0	6,702.4	6,546.1	6,543.1	201.2	1.8	45.84	672.2	-4,389.4	2,652.6	2,497.5	155.15	17.097	
13,877.9	6,702.2	6,543.0	6,540.0	203.3	1.8	45.17	672.3	-4,389.6	2,730.4	2,575.0	155.33	17.578	
13,900.0	6,702.2	6,542.1	6,539.1	204.0	1.8	44.98	672.3	-4,389.6	2,752.4	2,597.0	155.39	17.713	
13,976.3	6,702.1	6,539.1	6,536.1	206.1	1.8	44.35	672.4	-4,389.8	2,828.6	2,673.0	155.57	18.182	
14,000.0	6,702.0	6,538.1	6,535.2	206.8	1.8	44.16	672.4	-4,389.8	2,852.2	2,696.5	155.63	18.327	
14,074.8	6,701.9	6,535.2	6,532.3	208.9	1.8	43.58	672.5	-4,390.0	2,926.8	2,771.0	155.81	18.785	
14,100.0	6,701.8	6,534.2	6,531.3	209.6	1.8	43.38	672.5	-4,390.0	2,952.0	2,796.1	155.87	18.938	
14,173.2	6,701.7	6,531.4	6,528.5	211.6	1.8	42.83	672.6	-4,390.1	3,025.0	2,868.9	156.05	19.384	
14,200.0	6,701.6	6,530.4	6,527.5	212.4	1.8	42.63	672.6	-4,390.2	3,051.7	2,895.6	156.12	19.547	
14,271.6	6,701.5	6,527.7	6,524.8	214.4	1.8	42.12	672.7	-4,390.3	3,123.2	2,966.9	156.31	19.981	
14,300.0	6,701.4	6,526.6	6,523.7	215.2	1.8	41.92	672.7	-4,390.4	3,151.5	2,995.2	156.38	20.152	
14,370.0	6,701.3	6,524.0	6,521.1	217.1	1.8	41.43	672.8	-4,390.5	3,221.5	3,064.9	156.57	20.575	
14,400.0	6,701.3	6,522.9	6,520.0	218.0	1.8	41.23	672.8	-4,390.5	3,251.3	3,094.7	156.66	20.755	
14,468.5	6,701.1	6,520.4	6,517.5	219.9	1.8	40.78	672.9	-4,390.6	3,319.7	3,162.8	156.85	21.165	
14,500.0	6,701.1	6,519.2	6,516.3	220.8	1.8	40.57	672.9	-4,390.7	3,351.2	3,194.2	156.94	21.354	
14,566.9	6,701.0	6,516.8	6,513.9	222.6	1.8	40.15	673.0	-4,390.8	3,417.9	3,260.8	157.13	21.752	
14,600.0	6,700.9	6,515.6	6,512.7	223.6	1.8	39.94	673.0	-4,390.9	3,451.0	3,293.7	157.23	21.949	
14,665.3	6,700.8	6,513.3	6,510.3	225.4	1.8	39.54	673.1	-4,391.0	3,516.2	3,358.8	157.42	22.336	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BLOSKAS BOND #9D - Wellbore #1 - Wellbore #												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,512.0	6,509.1	226.4	1.8	39.33	673.1	-4,391.0	3,550.8	3,393.3	157.53	22.540	
14,763.7	6,700.6	6,500.0	6,497.1	228.2	1.8	37.41	673.4	-4,391.6	3,614.5	3,460.9	153.57	23.536	
14,800.0	6,700.5	6,500.0	6,497.1	229.2	1.8	37.41	673.4	-4,391.6	3,650.6	3,496.4	154.23	23.670	
14,862.2	6,700.4	6,500.0	6,497.1	230.9	1.8	37.41	673.4	-4,391.6	3,712.7	3,557.4	155.35	23.899	
14,900.0	6,700.3	6,500.0	6,497.1	232.0	1.8	37.41	673.4	-4,391.6	3,750.5	3,594.4	156.03	24.036	
14,960.6	6,700.2	6,500.0	6,497.1	233.7	1.8	37.41	673.4	-4,391.6	3,811.0	3,653.8	157.13	24.254	
15,000.0	6,700.2	6,500.0	6,497.1	234.8	1.8	37.41	673.4	-4,391.6	3,850.3	3,692.5	157.84	24.394	
15,059.0	6,700.0	6,500.0	6,497.1	236.4	1.8	37.41	673.4	-4,391.6	3,909.2	3,750.3	158.90	24.601	
15,082.8	6,700.0	6,498.4	6,495.5	237.1	1.8	37.16	673.4	-4,391.6	3,933.0	3,774.4	158.63	24.793	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-89.79	13.8	-3,799.6	3,799.8				
98.4	98.4	39.5	39.5	0.1	0.0	-89.79	13.7	-3,799.7	3,799.8	3,799.6	0.11	N/A	
100.0	100.0	40.5	40.5	0.1	0.0	-89.79	13.7	-3,799.7	3,799.8	3,799.7	0.11	N/A	
196.8	196.8	106.1	106.1	0.3	0.0	-89.80	13.6	-3,800.4	3,800.8	3,800.4	0.36	N/A	
200.0	200.0	110.6	110.6	0.3	0.0	-89.80	13.6	-3,800.4	3,800.8	3,800.4	0.38	N/A	
295.3	295.3	236.5	236.5	0.5	0.2	-89.80	13.2	-3,801.6	3,801.7	3,800.9	0.78	4,880.364	
300.0	300.0	241.9	241.9	0.5	0.2	-89.80	13.2	-3,801.6	3,801.7	3,800.9	0.79	4,789.408	
393.7	393.7	348.2	348.2	0.8	0.3	-89.81	12.3	-3,802.0	3,802.1	3,801.0	1.08	3,509.256	
400.0	400.0	355.3	355.3	0.8	0.3	-89.82	12.3	-3,802.1	3,802.1	3,801.0	1.10	3,448.266	
492.1	492.1	448.8	448.8	1.0	0.4	-89.83	11.5	-3,802.2	3,802.2	3,800.8	1.37	2,774.578	
500.0	500.0	456.1	456.1	1.0	0.4	-89.83	11.4	-3,802.2	3,802.2	3,800.8	1.39	2,730.587	
590.5	590.5	542.4	542.4	1.2	0.4	-89.84	10.8	-3,802.4	3,802.4	3,800.8	1.65	2,310.214	
600.0	600.0	551.6	551.6	1.2	0.5	-89.84	10.8	-3,802.4	3,802.5	3,800.8	1.67	2,273.755	
689.0	689.0	640.0	640.0	1.4	0.5	-89.85	10.1	-3,802.7	3,802.7	3,800.8	1.92	1,980.755	
700.0	700.0	651.1	651.1	1.4	0.5	-89.85	10.0	-3,802.8	3,802.8	3,800.8	1.95	1,949.798	
787.4	787.4	741.5	741.5	1.6	0.6	-89.86	9.4	-3,803.0	3,803.0	3,800.8	2.19	1,735.728	
800.0	800.0	754.8	754.8	1.7	0.6	-89.86	9.3	-3,803.0	3,803.1	3,800.8	2.23	1,708.835	
885.8	885.8	846.5	846.5	1.9	0.6	-89.87	8.4	-3,803.2	3,803.2	3,800.7	2.46	1,546.715	
900.0	900.0	861.7	861.7	1.9	0.6	-89.88	8.2	-3,803.2	3,803.2	3,800.7	2.50	1,523.013	
984.2	984.2	955.2	955.2	2.1	0.7	-89.89	7.5	-3,803.1	3,803.1	3,800.4	2.72	1,398.237	
1,000.0	1,000.0	973.0	973.0	2.1	0.7	-89.89	7.4	-3,803.1	3,803.1	3,800.3	2.76	1,377.451	
1,082.7	1,082.7	1,059.7	1,059.6	2.3	0.7	-89.89	7.0	-3,802.8	3,802.8	3,799.8	2.97	1,278.739	
1,100.0	1,100.0	1,077.2	1,077.2	2.3	0.7	-89.90	6.9	-3,802.7	3,802.7	3,799.7	3.02	1,259.892	
1,122.6	1,122.6	1,100.0	1,100.0	2.4	0.7	-118.63	6.7	-3,802.6	3,802.7	3,799.7	3.05	1,246.625	
1,181.1	1,181.1	1,152.6	1,152.5	2.5	0.7	-118.64	6.4	-3,802.5	3,803.0	3,799.8	3.20	1,189.580	
1,200.0	1,200.0	1,169.5	1,169.5	2.6	0.7	-118.64	6.4	-3,802.4	3,803.3	3,800.0	3.24	1,172.272	
1,279.5	1,279.4	1,251.6	1,251.6	2.7	0.8	-118.67	6.0	-3,802.3	3,805.0	3,801.6	3.45	1,104.228	
1,300.0	1,299.8	1,274.8	1,274.8	2.8	0.8	-118.68	5.9	-3,802.3	3,805.6	3,802.1	3.50	1,087.878	
1,377.9	1,377.5	1,348.9	1,348.9	3.0	0.8	-118.72	5.6	-3,802.0	3,808.5	3,804.8	3.70	1,030.164	
1,400.0	1,399.5	1,368.3	1,368.2	3.0	0.8	-118.73	5.5	-3,802.0	3,809.5	3,805.8	3.75	1,015.148	
1,476.4	1,475.3	1,446.9	1,446.9	3.2	0.8	-118.78	5.1	-3,801.9	3,813.8	3,809.8	3.96	963.946	
1,500.0	1,498.7	1,474.5	1,474.4	3.3	0.9	-118.81	4.9	-3,801.8	3,815.3	3,811.3	4.02	949.078	
1,574.8	1,572.6	1,549.5	1,549.4	3.5	0.9	-118.87	4.6	-3,801.5	3,820.5	3,816.3	4.23	902.539	
1,600.0	1,597.5	1,573.0	1,572.9	3.5	0.9	-118.89	4.4	-3,801.4	3,822.5	3,818.2	4.30	888.026	
1,673.2	1,669.4	1,644.9	1,644.8	3.7	0.9	-118.96	3.9	-3,801.2	3,829.0	3,824.4	4.53	844.618	
1,700.1	1,695.8	1,672.2	1,672.2	3.8	0.9	-118.99	3.7	-3,801.1	3,831.6	3,827.0	4.62	829.719	
1,771.6	1,765.7	1,737.3	1,737.3	4.1	0.9	-119.17	3.4	-3,800.9	3,838.7	3,833.8	4.85	790.857	
1,800.0	1,793.4	1,761.3	1,761.2	4.2	1.0	-119.24	3.2	-3,800.8	3,841.6	3,836.6	4.95	776.616	
1,870.1	1,862.0	1,819.8	1,819.8	4.4	1.0	-119.40	2.9	-3,800.8	3,848.8	3,843.6	5.19	742.012	
1,900.0	1,891.3	1,844.2	1,844.2	4.5	1.0	-119.47	2.8	-3,800.9	3,852.0	3,846.7	5.29	728.378	
1,968.5	1,958.3	1,900.2	1,900.1	4.8	1.0	-119.63	2.6	-3,801.1	3,859.4	3,853.9	5.53	697.775	
2,000.0	1,989.1	1,934.5	1,934.4	4.9	1.0	-119.72	2.5	-3,801.3	3,862.9	3,857.2	5.64	684.317	
2,066.9	2,054.5	2,005.8	2,005.8	5.1	1.0	-119.92	2.3	-3,801.5	3,870.2	3,864.3	5.89	656.728	
2,100.0	2,086.9	2,034.5	2,034.5	5.3	1.0	-119.99	2.2	-3,801.6	3,873.8	3,867.8	6.01	644.189	
2,165.3	2,150.8	2,091.2	2,091.2	5.5	1.1	-120.15	2.1	-3,801.9	3,881.0	3,874.8	6.26	620.359	
2,200.0	2,184.7	2,126.2	2,126.1	5.6	1.1	-120.24	2.1	-3,802.1	3,884.9	3,878.5	6.39	608.341	
2,263.8	2,247.1	2,194.2	2,194.1	5.9	1.1	-120.42	2.3	-3,802.4	3,892.0	3,885.4	6.63	586.996	
2,300.0	2,282.5	2,234.9	2,234.8	6.0	1.1	-120.52	2.5	-3,802.6	3,896.0	3,889.3	6.77	575.609	
2,362.2	2,343.3	2,304.9	2,304.9	6.3	1.1	-120.70	2.9	-3,802.7	3,902.8	3,895.8	7.01	556.845	
2,400.0	2,380.3	2,343.7	2,343.6	6.5	1.1	-120.80	3.1	-3,802.7	3,906.9	3,899.8	7.15	546.112	
2,460.6	2,439.6	2,406.1	2,406.0	6.7	1.1	-120.96	3.4	-3,802.7	3,913.5	3,906.1	7.39	529.576	
2,500.0	2,478.1	2,448.9	2,448.8	6.9	1.1	-121.07	3.5	-3,802.7	3,917.7	3,910.2	7.54	519.407	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,535.9	2,511.0	2,510.9	7.1	1.1	-121.23	3.8	-3,802.5	3,924.0	3,916.2	7.77	504.834	
2,600.0	2,575.9	2,548.2	2,548.1	7.3	1.1	-121.32	4.0	-3,802.4	3,928.4	3,920.4	7.93	495.272	
2,657.5	2,632.2	2,600.5	2,600.4	7.5	1.1	-121.46	4.4	-3,802.4	3,934.6	3,926.4	8.16	482.391	
2,700.0	2,673.8	2,645.6	2,645.6	7.7	1.1	-121.57	4.8	-3,802.3	3,939.2	3,930.9	8.32	473.270	
2,755.9	2,728.4	2,700.0	2,699.9	7.9	1.1	-121.70	5.1	-3,802.2	3,945.3	3,936.7	8.54	461.792	
2,800.0	2,771.6	2,742.2	2,742.1	8.1	1.1	-121.81	5.3	-3,802.1	3,950.0	3,941.3	8.72	453.178	
2,854.3	2,824.7	2,789.2	2,789.1	8.3	1.1	-121.93	5.5	-3,802.0	3,956.0	3,947.1	8.93	443.019	
2,900.0	2,869.4	2,832.4	2,832.3	8.5	1.1	-122.04	5.7	-3,802.0	3,961.2	3,952.0	9.11	434.789	
2,952.7	2,921.0	2,884.0	2,883.9	8.8	1.1	-122.16	6.0	-3,802.1	3,967.1	3,957.8	9.32	425.639	
3,000.0	2,967.2	2,934.4	2,934.4	9.0	1.1	-122.29	6.3	-3,802.1	3,972.4	3,962.9	9.51	417.827	
3,051.2	3,017.3	2,991.5	2,991.4	9.2	1.1	-122.43	6.6	-3,802.0	3,978.1	3,968.4	9.71	409.694	
3,100.0	3,065.0	3,038.9	3,038.9	9.4	1.1	-122.55	6.8	-3,801.8	3,983.5	3,973.6	9.90	402.269	
3,149.6	3,113.5	3,085.9	3,085.8	9.6	1.1	-122.66	7.1	-3,801.8	3,989.0	3,978.9	10.10	394.999	
3,200.0	3,162.8	3,128.1	3,128.0	9.8	1.1	-122.76	7.4	-3,801.7	3,994.7	3,984.4	10.30	387.907	
3,248.0	3,209.8	3,166.1	3,166.0	10.0	1.1	-122.86	7.8	-3,801.8	4,000.2	3,989.7	10.49	381.422	
3,300.0	3,260.6	3,209.4	3,209.3	10.2	1.1	-122.96	8.1	-3,801.9	4,006.3	3,995.6	10.69	374.649	
3,346.4	3,306.1	3,257.1	3,257.0	10.5	1.2	-123.07	8.7	-3,802.1	4,011.8	4,000.9	10.88	368.752	
3,400.0	3,358.5	3,311.1	3,311.1	10.7	1.2	-123.20	9.4	-3,802.3	4,018.1	4,007.0	11.09	362.211	
3,444.9	3,402.3	3,353.5	3,353.4	10.9	1.2	-123.29	9.9	-3,802.5	4,023.4	4,012.2	11.27	356.944	
3,500.0	3,456.3	3,405.4	3,405.3	11.1	1.2	-123.42	10.4	-3,802.7	4,030.0	4,018.5	11.49	350.713	
3,543.3	3,498.6	3,445.9	3,445.8	11.3	1.2	-123.51	10.8	-3,802.9	4,035.2	4,023.6	11.66	345.972	
3,600.0	3,554.1	3,500.0	3,499.9	11.5	1.2	-123.64	11.2	-3,803.2	4,042.1	4,030.2	11.89	339.981	
3,641.7	3,594.9	3,540.4	3,540.3	11.7	1.2	-123.73	11.5	-3,803.4	4,047.2	4,035.1	12.06	335.716	
3,700.0	3,651.9	3,598.4	3,598.3	12.0	1.2	-123.87	12.2	-3,803.7	4,054.2	4,042.0	12.29	329.956	
3,740.1	3,691.2	3,635.1	3,635.0	12.2	1.2	-123.95	12.6	-3,803.9	4,059.2	4,046.7	12.45	326.119	
3,800.0	3,749.7	3,689.7	3,689.6	12.4	1.2	-124.08	13.1	-3,804.2	4,066.5	4,053.9	12.68	320.594	
3,838.6	3,787.4	3,726.3	3,726.2	12.6	1.2	-124.16	13.4	-3,804.5	4,071.3	4,058.5	12.84	317.133	
3,900.0	3,847.5	3,785.7	3,785.6	12.9	1.2	-124.30	13.8	-3,804.9	4,079.0	4,065.9	13.08	311.794	
3,937.0	3,883.7	3,825.9	3,825.8	13.0	1.2	-124.39	14.1	-3,805.1	4,083.6	4,070.4	13.23	308.674	
4,000.0	3,945.3	3,899.4	3,899.3	13.3	1.3	-124.57	14.5	-3,805.5	4,091.4	4,077.9	13.48	303.522	
4,035.4	3,980.0	3,940.5	3,940.4	13.5	1.3	-124.66	14.7	-3,805.5	4,095.7	4,082.1	13.62	300.763	
4,060.0	4,004.0	3,969.1	3,969.0	13.6	1.3	-124.73	14.8	-3,805.6	4,098.6	4,084.9	13.71	298.879	
4,100.0	4,043.2	4,013.3	4,013.2	13.7	1.3	-124.91	14.9	-3,805.5	4,103.2	4,089.4	13.84	296.449	
4,133.8	4,076.5	4,047.0	4,046.9	13.8	1.3	-125.04	15.0	-3,805.5	4,106.9	4,093.0	13.93	294.802	
4,200.0	4,141.6	4,117.9	4,117.8	14.0	1.3	-125.28	15.3	-3,805.3	4,113.3	4,099.2	14.11	291.587	
4,232.3	4,173.5	4,162.3	4,162.2	14.1	1.3	-125.40	15.5	-3,805.2	4,116.1	4,101.9	14.18	290.210	
4,300.0	4,240.6	4,235.5	4,235.4	14.3	1.3	-125.59	15.7	-3,804.6	4,121.0	4,106.6	14.34	287.291	
4,330.7	4,271.1	4,262.5	4,262.4	14.4	1.3	-125.66	15.8	-3,804.4	4,122.9	4,108.5	14.41	286.134	
4,400.0	4,340.0	4,330.7	4,330.6	14.5	1.3	-125.80	16.1	-3,804.0	4,126.7	4,112.1	14.56	283.472	
4,429.1	4,369.0	4,364.1	4,364.0	14.6	1.3	-125.85	16.3	-3,803.8	4,127.9	4,113.3	14.61	282.491	
4,500.0	4,439.7	4,428.6	4,428.5	14.8	1.3	-125.93	16.7	-3,803.3	4,130.2	4,115.4	14.75	280.102	
4,527.5	4,467.2	4,448.5	4,448.4	14.8	1.3	-125.95	16.8	-3,803.2	4,130.9	4,116.1	14.79	279.334	
4,600.0	4,539.7	4,501.4	4,501.3	14.9	1.4	-125.99	17.0	-3,803.2	4,132.2	4,117.2	14.90	277.276	
4,626.0	4,565.6	4,533.1	4,533.0	15.0	1.4	-126.00	17.2	-3,803.2	4,132.4	4,117.5	14.94	276.609	
4,660.2	4,599.8	4,574.8	4,574.7	15.0	1.4	-97.27	17.3	-3,803.1	4,132.4	4,118.6	13.80	299.358	
4,700.0	4,639.6	4,622.2	4,622.0	15.0	1.4	-97.27	17.4	-3,802.9	4,132.3	4,118.4	13.88	297.821	
4,724.4	4,664.0	4,650.3	4,650.2	15.1	1.4	-97.27	17.5	-3,802.8	4,132.2	4,118.2	13.92	296.781	
4,800.0	4,739.6	4,730.4	4,730.2	15.2	1.4	-97.26	17.9	-3,802.3	4,131.7	4,117.6	14.07	293.627	
4,822.8	4,762.5	4,751.7	4,751.6	15.2	1.4	-97.26	18.0	-3,802.2	4,131.5	4,117.4	14.12	292.691	
4,900.0	4,839.6	4,830.7	4,830.6	15.3	1.4	-97.26	18.2	-3,801.8	4,131.1	4,116.8	14.27	289.550	
4,921.2	4,860.9	4,856.2	4,856.1	15.4	1.4	-97.26	18.3	-3,801.6	4,130.9	4,116.6	14.31	288.679	
5,000.0	4,939.6	4,940.8	4,940.7	15.5	1.4	-97.26	18.6	-3,800.8	4,130.2	4,115.7	14.47	285.521	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	4,959.8	4,959.6	15.5	1.4	-97.26	18.6	-3,800.7	4,130.0	4,115.5	14.50	284.745	
5,100.0	5,039.6	5,038.7	5,038.6	15.6	1.4	-97.25	18.9	-3,800.0	4,129.3	4,114.6	14.66	281.612	
5,118.1	5,057.7	5,056.9	5,056.7	15.7	1.4	-97.25	19.0	-3,799.9	4,129.1	4,114.4	14.70	280.910	
5,200.0	5,139.6	5,143.3	5,143.1	15.8	1.5	-97.24	19.6	-3,799.2	4,128.4	4,113.5	14.86	277.752	
5,216.5	5,156.2	5,161.6	5,161.5	15.8	1.5	-97.24	19.8	-3,799.0	4,128.2	4,113.3	14.90	277.114	
5,300.0	5,239.6	5,258.4	5,258.2	15.9	1.5	-97.23	20.7	-3,798.0	4,127.3	4,112.2	15.07	273.919	
5,314.9	5,254.6	5,276.2	5,276.0	16.0	1.5	-97.23	20.9	-3,797.7	4,127.1	4,112.0	15.10	273.348	
5,400.0	5,339.6	5,359.3	5,359.2	16.1	1.5	-97.22	21.7	-3,796.6	4,125.8	4,110.6	15.27	270.194	
5,413.4	5,353.0	5,371.5	5,371.4	16.1	1.5	-97.22	21.8	-3,796.5	4,125.7	4,110.4	15.30	269.705	
5,500.0	5,439.6	5,489.1	5,488.9	16.3	1.5	-97.21	22.8	-3,794.7	4,124.3	4,108.8	15.48	266.487	
5,511.8	5,451.4	5,504.6	5,504.4	16.3	1.5	-97.21	22.9	-3,794.4	4,124.1	4,108.6	15.50	266.050	
5,600.0	5,539.6	5,584.8	5,584.6	16.4	1.6	-97.21	23.1	-3,792.7	4,122.2	4,106.5	15.68	262.928	
5,610.2	5,549.9	5,594.1	5,593.9	16.4	1.6	-97.21	23.1	-3,792.6	4,122.0	4,106.3	15.70	262.569	
5,700.0	5,639.6	5,667.0	5,666.8	16.6	1.6	-97.21	23.3	-3,791.3	4,120.4	4,104.6	15.88	259.494	
5,708.6	5,648.3	5,673.9	5,673.7	16.6	1.6	-97.21	23.3	-3,791.2	4,120.3	4,104.4	15.90	259.201	
5,800.0	5,739.6	5,768.6	5,768.4	16.7	1.6	-97.21	23.6	-3,789.8	4,119.0	4,102.9	16.08	256.109	
5,807.1	5,746.7	5,776.8	5,776.6	16.8	1.6	-97.21	23.6	-3,789.7	4,118.8	4,102.7	16.10	255.869	
5,900.0	5,839.6	5,855.5	5,855.3	16.9	1.6	-97.21	23.6	-3,788.4	4,117.4	4,101.1	16.28	252.843	
5,905.5	5,845.1	5,859.7	5,859.5	16.9	1.6	-97.21	23.6	-3,788.4	4,117.4	4,101.1	16.30	252.668	
6,000.0	5,939.6	5,944.1	5,943.9	17.1	1.6	-97.21	23.3	-3,787.5	4,116.4	4,099.9	16.49	249.679	
6,003.9	5,943.6	5,948.3	5,948.0	17.1	1.6	-97.22	23.2	-3,787.4	4,116.3	4,099.8	16.49	249.555	
6,059.2	5,998.8	6,007.2	6,006.9	17.2	1.6	-97.22	23.1	-3,786.8	4,115.8	4,099.1	16.61	247.819	
6,100.0	6,039.6	6,052.0	6,051.7	17.2	1.6	-7.24	22.9	-3,786.3	4,114.1	4,096.5	17.65	233.077	
6,102.3	6,042.0	6,054.6	6,054.3	17.2	1.6	-7.24	22.9	-3,786.2	4,114.0	4,096.3	17.66	233.017	
6,150.0	6,089.4	6,107.5	6,107.2	17.3	1.7	-7.31	22.8	-3,785.5	4,109.0	4,091.2	17.75	231.549	
6,200.0	6,138.7	6,169.4	6,169.1	17.3	1.7	-7.42	22.4	-3,784.6	4,100.2	4,082.4	17.85	229.650	
6,200.8	6,139.5	6,170.4	6,170.1	17.3	1.7	-7.42	22.4	-3,784.5	4,100.1	4,082.2	17.86	229.619	
6,250.0	6,187.4	6,266.3	6,266.0	17.3	1.7	-7.62	21.4	-3,782.4	4,087.9	4,069.9	17.97	227.426	
6,299.2	6,234.4	6,338.6	6,338.2	17.4	1.7	-7.86	20.5	-3,779.9	4,071.9	4,053.8	18.07	225.400	
6,300.0	6,235.1	6,339.4	6,339.1	17.4	1.7	-7.86	20.4	-3,779.8	4,071.6	4,053.5	18.07	225.371	
6,350.0	6,281.7	6,391.2	6,390.8	17.4	1.7	-8.16	19.5	-3,777.9	4,052.0	4,033.9	18.11	223.735	
6,397.6	6,324.8	6,456.5	6,456.0	17.3	1.7	-8.54	18.0	-3,775.1	4,030.2	4,012.1	18.12	222.375	
6,400.0	6,326.9	6,459.9	6,459.4	17.3	1.7	-8.56	18.0	-3,775.0	4,029.1	4,011.0	18.12	222.315	
6,450.0	6,370.5	6,525.0	6,524.4	17.3	1.7	-9.05	16.3	-3,771.8	4,002.9	3,984.8	18.09	221.286	
6,496.0	6,409.1	6,576.8	6,576.2	17.3	1.7	-9.59	14.6	-3,769.0	3,976.1	3,958.1	18.01	220.751	
6,500.0	6,412.3	6,581.2	6,580.5	17.3	1.7	-9.65	14.5	-3,768.7	3,973.7	3,955.7	18.00	220.725	
6,550.0	6,452.1	6,618.8	6,618.0	17.3	1.8	-10.33	13.1	-3,766.6	3,941.6	3,923.8	17.85	220.784	
6,594.5	6,485.6	6,643.4	6,642.5	17.3	1.8	-11.04	12.2	-3,765.2	3,911.0	3,893.4	17.68	221.268	
6,600.0	6,489.7	6,646.3	6,645.5	17.3	1.8	-11.13	12.1	-3,765.0	3,907.1	3,889.5	17.65	221.356	
6,650.0	6,524.9	6,672.0	6,671.1	17.2	1.8	-12.12	11.2	-3,763.7	3,870.3	3,852.9	17.41	222.260	
6,692.9	6,553.0	6,700.0	6,699.0	17.2	1.8	-13.18	10.2	-3,762.2	3,836.9	3,819.7	17.20	223.057	
6,700.0	6,557.5	6,700.0	6,699.0	17.2	1.8	-13.36	10.2	-3,762.2	3,831.3	3,814.1	17.16	223.280	
6,750.0	6,587.4	6,700.0	6,699.0	17.2	1.8	-14.74	10.2	-3,762.2	3,790.4	3,773.5	16.87	224.664	
6,791.3	6,609.9	6,700.0	6,699.0	17.2	1.8	-16.15	10.2	-3,762.2	3,755.3	3,738.6	16.66	225.441	
6,800.0	6,614.4	6,700.0	6,699.0	17.2	1.8	-16.49	10.2	-3,762.2	3,747.8	3,731.2	16.61	225.607	
6,850.0	6,638.4	6,700.0	6,699.0	17.2	1.8	-18.75	10.2	-3,762.2	3,703.7	3,687.3	16.43	225.433	
6,889.7	6,655.3	6,700.0	6,699.0	17.4	1.8	-21.07	10.2	-3,762.2	3,667.7	3,651.3	16.39	223.827	
6,900.0	6,659.4	6,700.0	6,699.0	17.5	1.8	-21.76	10.2	-3,762.2	3,658.3	3,641.9	16.40	223.093	
6,950.0	6,677.1	6,700.0	6,699.0	18.0	1.8	-25.90	10.2	-3,762.2	3,611.7	3,595.1	16.64	217.111	
6,988.2	6,688.4	6,700.0	6,699.0	18.5	1.8	-30.23	10.2	-3,762.2	3,575.5	3,558.4	17.10	209.038	
7,000.0	6,691.5	6,700.0	6,699.0	18.7	1.8	-31.85	10.2	-3,762.2	3,564.2	3,546.9	17.31	205.874	
7,050.0	6,702.5	6,700.0	6,699.0	19.5	1.8	-40.79	10.2	-3,762.2	3,515.8	3,497.2	18.63	188.733	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,086.6	6,708.4	6,700.0	6,699.0	20.1	1.8	-50.32	10.2	-3,762.2	3,480.1	3,460.1	20.03	173.702		
7,100.0	6,710.1	6,700.0	6,699.0	20.4	1.8	-54.65	10.2	-3,762.2	3,466.9	3,446.3	20.60	168.303		
7,150.0	6,714.2	6,700.0	6,699.0	21.3	1.8	-75.29	10.2	-3,762.2	3,417.7	3,395.3	22.43	152.400		
7,185.0	6,715.0	6,700.0	6,699.0	21.9	1.8	-92.71	10.2	-3,762.2	3,383.1	3,359.7	23.41	144.513		
7,185.6	6,715.0	6,700.0	6,699.0	21.9	1.8	-92.98	10.2	-3,762.2	3,382.6	3,359.1	23.43	144.362		
7,200.0	6,715.0	6,700.0	6,699.0	22.2	1.8	-92.98	10.2	-3,762.2	3,368.3	3,344.6	23.71	142.075		
7,283.4	6,714.8	6,700.0	6,699.0	23.9	1.8	-92.98	10.2	-3,762.2	3,285.9	3,260.5	25.38	129.452		
7,300.0	6,714.8	6,700.0	6,699.0	24.2	1.8	-92.98	10.2	-3,762.2	3,269.6	3,243.9	25.72	127.144		
7,381.9	6,714.6	6,700.0	6,699.0	26.0	1.8	-92.98	10.2	-3,762.2	3,188.8	3,161.4	27.47	116.070		
7,400.0	6,714.6	6,700.0	6,699.0	26.4	1.8	-92.98	10.2	-3,762.2	3,171.0	3,143.1	27.86	113.807		
7,480.3	6,714.4	6,700.0	6,699.0	28.2	1.8	-92.98	10.2	-3,762.2	3,091.8	3,062.1	29.68	104.175		
7,500.0	6,714.4	6,700.0	6,699.0	28.7	1.8	-92.98	10.2	-3,762.2	3,072.4	3,042.3	30.12	101.989		
7,578.7	6,714.2	6,700.0	6,699.0	30.5	1.8	-92.98	10.2	-3,762.2	2,994.9	2,962.9	31.98	93.659		
7,600.0	6,714.2	6,700.0	6,699.0	31.0	1.8	-92.98	10.2	-3,762.2	2,974.0	2,941.5	32.48	91.571		
7,677.1	6,714.0	6,700.0	6,699.0	32.9	1.8	-92.98	10.2	-3,762.2	2,898.1	2,863.7	34.35	84.377		
7,700.0	6,714.0	6,700.0	6,699.0	33.4	1.8	-92.98	10.2	-3,762.2	2,875.6	2,840.7	34.90	82.395		
7,775.6	6,713.9	6,700.0	6,699.0	35.3	1.8	-92.98	10.2	-3,762.2	2,801.4	2,764.6	36.77	76.177		
7,800.0	6,713.8	6,700.0	6,699.0	35.9	1.8	-92.98	10.2	-3,762.2	2,777.4	2,740.0	37.38	74.301		
7,874.0	6,713.7	6,700.0	6,699.0	37.8	1.8	-92.98	10.2	-3,762.2	2,704.8	2,665.6	39.25	68.914		
7,900.0	6,713.6	6,700.0	6,699.0	38.4	1.8	-92.98	10.2	-3,762.2	2,679.3	2,639.4	39.91	67.141		
7,972.4	6,713.5	6,700.0	6,699.0	40.3	1.8	-92.98	10.2	-3,762.2	2,608.4	2,566.6	41.76	62.459		
8,000.0	6,713.4	6,700.0	6,699.0	41.0	1.8	-92.97	10.2	-3,762.2	2,581.4	2,538.9	42.47	60.784		
8,070.8	6,713.3	6,700.0	6,699.0	42.8	1.8	-92.97	10.2	-3,762.2	2,512.1	2,467.8	44.30	56.700		
8,100.0	6,713.2	6,700.0	6,699.0	43.6	1.8	-92.97	10.2	-3,762.2	2,483.6	2,438.5	45.06	55.117		
8,169.3	6,713.1	6,700.0	6,699.0	45.4	1.8	-92.97	10.2	-3,762.2	2,416.0	2,369.1	46.87	51.542		
8,200.0	6,713.0	6,700.0	6,699.0	46.2	1.8	-92.97	10.2	-3,762.2	2,386.0	2,338.3	47.68	50.044		
8,267.7	6,712.9	6,700.0	6,699.0	48.0	1.8	-92.97	10.2	-3,762.2	2,320.0	2,270.6	49.46	46.903		
8,300.0	6,712.8	6,700.0	6,699.0	48.8	1.8	-92.97	10.2	-3,762.2	2,288.6	2,238.3	50.32	45.484		
8,366.1	6,712.7	6,700.0	6,699.0	50.6	1.8	-92.97	10.2	-3,762.2	2,224.3	2,172.3	52.07	42.715		
8,400.0	6,712.6	6,700.0	6,699.0	51.5	1.8	-92.97	10.2	-3,762.2	2,191.5	2,138.5	52.97	41.368		
8,464.5	6,712.5	6,700.0	6,699.0	53.2	1.8	-92.97	10.2	-3,762.2	2,128.9	2,074.2	54.70	38.920		
8,500.0	6,712.4	6,700.0	6,699.0	54.1	1.8	-92.97	10.2	-3,762.2	2,094.6	2,038.9	55.65	37.641		
8,563.0	6,712.3	6,700.0	6,699.0	55.8	1.8	-92.97	10.2	-3,762.2	2,033.7	1,976.4	57.34	35.469		
8,600.0	6,712.3	6,700.0	6,699.0	56.8	1.8	-92.97	10.2	-3,762.2	1,998.0	1,939.7	58.33	34.252		
8,661.4	6,712.1	6,700.0	6,699.0	58.5	1.8	-92.97	10.2	-3,762.2	1,938.9	1,878.9	59.99	32.321		
8,700.0	6,712.1	6,700.0	6,699.0	59.5	1.8	-92.97	10.2	-3,762.2	1,901.8	1,840.8	61.03	31.162		
8,759.8	6,711.9	6,700.0	6,699.0	61.1	1.8	-92.97	10.2	-3,762.2	1,844.4	1,781.8	62.65	29.441		
8,800.0	6,711.9	6,700.0	6,699.0	62.2	1.8	-92.97	10.2	-3,762.2	1,806.0	1,742.2	63.74	28.335		
8,858.2	6,711.8	6,700.0	6,699.0	63.8	1.8	-92.97	10.2	-3,762.2	1,750.4	1,685.1	65.32	26.798		
8,900.0	6,711.7	6,700.0	6,699.0	64.9	1.8	-92.97	10.2	-3,762.2	1,710.6	1,644.2	66.45	25.743		
8,956.7	6,711.6	6,700.0	6,699.0	66.5	1.8	-92.97	10.2	-3,762.2	1,656.9	1,588.9	67.99	24.368		
9,000.0	6,711.5	6,700.0	6,699.0	67.6	1.8	-92.97	10.2	-3,762.2	1,615.9	1,546.7	69.17	23.360		
9,055.1	6,711.4	6,700.0	6,699.0	69.1	1.8	-92.97	10.2	-3,762.2	1,563.9	1,493.3	70.68	22.128		
9,100.0	6,711.3	6,700.0	6,699.0	70.4	1.8	-92.97	10.2	-3,762.2	1,521.8	1,449.9	71.90	21.164		
9,153.5	6,711.2	6,700.0	6,699.0	71.8	1.8	-92.97	10.2	-3,762.2	1,471.7	1,398.4	73.37	20.060		
9,200.0	6,711.1	6,700.0	6,699.0	73.1	1.8	-92.97	10.2	-3,762.2	1,428.5	1,353.8	74.64	19.139		
9,251.9	6,711.0	6,700.0	6,699.0	74.5	1.8	-92.97	10.2	-3,762.2	1,380.4	1,304.3	76.06	18.148		
9,300.0	6,710.9	6,700.0	6,699.0	75.8	1.8	-92.97	10.2	-3,762.2	1,336.1	1,258.8	77.38	17.267		
9,350.4	6,710.8	6,700.0	6,699.0	77.2	1.8	-92.97	10.2	-3,762.2	1,290.1	1,211.3	78.76	16.379		
9,400.0	6,710.7	6,700.0	6,699.0	78.6	1.8	-92.97	10.2	-3,762.2	1,245.0	1,164.9	80.12	15.538		
9,448.8	6,710.6	6,700.0	6,699.0	79.9	1.8	-92.97	10.2	-3,762.2	1,201.0	1,119.6	81.47	14.743		
9,500.0	6,710.5	6,700.0	6,699.0	81.3	1.8	-92.97	10.2	-3,762.2	1,155.3	1,072.5	82.87	13.941		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,547.2	6,710.4	6,700.0	6,699.0	82.6	1.8	-92.97	10.2	-3,762.2	1,113.6	1,029.4	84.17	13.230		
9,600.0	6,710.3	6,700.0	6,699.0	84.1	1.8	-92.97	10.2	-3,762.2	1,067.5	981.9	85.63	12.467		
9,645.6	6,710.2	6,700.0	6,699.0	85.3	1.8	-92.97	10.2	-3,762.2	1,028.1	941.2	86.89	11.833		
9,700.0	6,710.1	6,700.0	6,699.0	86.8	1.8	-92.97	10.2	-3,762.2	982.0	893.6	88.39	11.110		
9,744.1	6,710.0	6,695.4	6,694.5	88.1	1.8	-92.48	10.4	-3,762.5	945.2	855.6	89.61	10.548		
9,800.0	6,709.9	6,692.6	6,691.7	89.6	1.8	-92.17	10.5	-3,762.6	899.4	808.3	91.16	9.867		
9,842.5	6,709.9	6,690.4	6,689.5	90.8	1.8	-91.94	10.6	-3,762.7	865.5	773.1	92.33	9.373		
9,900.0	6,709.7	6,687.5	6,686.6	92.4	1.8	-91.62	10.7	-3,762.9	820.8	726.8	93.92	8.739		
9,940.9	6,709.7	6,685.4	6,684.5	93.5	1.8	-91.40	10.7	-3,763.0	789.9	694.9	95.06	8.310		
10,000.0	6,709.6	6,682.3	6,681.4	95.1	1.8	-91.07	10.8	-3,763.1	747.1	650.5	96.69	7.727		
10,039.3	6,709.5	6,680.3	6,679.3	96.2	1.8	-90.84	10.9	-3,763.2	719.9	622.1	97.78	7.363		
10,100.0	6,709.4	6,677.1	6,676.1	97.9	1.8	-90.50	11.0	-3,763.4	680.3	580.8	99.45	6.840		
10,137.8	6,709.3	6,675.0	6,674.1	98.9	1.8	-90.28	11.1	-3,763.5	657.2	556.7	100.50	6.539		
10,200.0	6,709.2	6,671.7	6,670.8	100.7	1.8	-89.92	11.2	-3,763.7	622.3	520.1	102.21	6.088		
10,236.2	6,709.1	6,669.8	6,668.9	101.7	1.8	-89.71	11.3	-3,763.8	604.0	500.8	103.21	5.852		
10,300.0	6,709.0	6,666.3	6,665.4	103.4	1.8	-89.33	11.4	-3,764.0	575.9	470.9	104.97	5.487		
10,334.6	6,708.9	6,664.4	6,663.5	104.4	1.8	-89.13	11.5	-3,764.1	563.1	457.2	105.92	5.316		
10,400.0	6,708.8	6,660.8	6,659.9	106.2	1.8	-88.74	11.6	-3,764.3	544.1	436.4	107.72	5.051		
10,433.0	6,708.7	6,658.9	6,658.1	107.1	1.8	-88.54	11.7	-3,764.4	537.2	428.6	108.62	4.946		
10,500.0	6,708.6	6,655.2	6,654.3	109.0	1.8	-88.13	11.8	-3,764.6	529.5	419.0	110.46	4.793		
10,528.8	6,708.5	6,653.5	6,652.7	109.8	1.8	-87.95	11.9	-3,764.7	528.7	417.4	111.24	4.752 CC		
10,531.5	6,708.5	6,653.4	6,652.5	109.9	1.8	-87.94	11.9	-3,764.7	528.7	417.4	111.32	4.749 ES		
10,600.0	6,708.4	6,649.5	6,648.6	111.8	1.8	-87.51	12.0	-3,764.9	533.4	420.3	113.19	4.713 SF		
10,629.9	6,708.4	6,647.7	6,646.9	112.6	1.8	-87.33	12.1	-3,765.0	538.2	424.2	114.00	4.721		
10,700.0	6,708.2	6,643.7	6,642.8	114.6	1.8	-86.89	12.2	-3,765.2	555.6	439.7	115.91	4.794		
10,728.3	6,708.2	6,642.0	6,641.2	115.3	1.8	-86.71	12.3	-3,765.3	565.0	448.3	116.68	4.842		
10,800.0	6,708.0	6,637.8	6,637.0	117.3	1.8	-86.25	12.4	-3,765.5	594.0	475.4	118.62	5.008		
10,826.7	6,708.0	6,636.2	6,635.4	118.1	1.8	-86.08	12.5	-3,765.6	606.6	487.3	119.34	5.083		
10,900.0	6,707.8	6,631.8	6,631.0	120.1	1.8	-85.61	12.6	-3,765.8	645.7	524.3	121.31	5.322		
10,925.2	6,707.8	6,630.3	6,629.5	120.8	1.8	-85.44	12.7	-3,765.9	660.4	538.4	121.99	5.414		
11,000.0	6,707.6	6,625.7	6,624.9	122.9	1.8	-84.95	12.9	-3,766.2	707.7	583.7	123.99	5.708		
11,023.6	6,707.6	6,624.3	6,623.5	123.6	1.8	-84.79	12.9	-3,766.3	723.6	599.0	124.62	5.806		
11,100.0	6,707.5	6,619.6	6,618.8	125.7	1.8	-84.28	13.1	-3,766.5	777.7	651.0	126.65	6.140		
11,122.0	6,707.4	6,618.2	6,617.4	126.3	1.8	-84.14	13.1	-3,766.6	793.9	666.7	127.24	6.240		
11,200.0	6,707.3	6,613.3	6,612.5	128.5	1.8	-83.61	13.3	-3,766.9	853.6	724.3	129.29	6.602		
11,220.4	6,707.2	6,612.0	6,611.2	129.0	1.8	-83.47	13.4	-3,767.0	869.7	739.8	129.83	6.699		
11,300.0	6,707.1	6,606.9	6,606.1	131.3	1.8	-82.92	13.5	-3,767.3	934.0	802.1	131.91	7.080		
11,318.9	6,707.0	6,605.7	6,604.9	131.8	1.8	-82.79	13.6	-3,767.3	949.6	817.2	132.40	7.172		
11,400.0	6,706.9	6,600.4	6,599.6	134.0	1.8	-82.22	13.8	-3,767.6	1,017.8	883.3	134.51	7.567		
11,417.3	6,706.9	6,600.0	6,599.3	134.5	1.8	-82.18	13.8	-3,767.7	1,032.6	897.7	134.97	7.651		
11,500.0	6,706.7	6,600.0	6,599.3	136.8	1.8	-82.18	13.8	-3,767.7	1,104.4	967.1	137.26	8.046		
11,515.7	6,706.7	6,600.0	6,599.3	137.3	1.8	-82.18	13.8	-3,767.7	1,118.2	980.5	137.70	8.121		
11,600.0	6,706.5	6,589.8	6,589.1	139.6	1.7	-81.10	14.2	-3,768.3	1,192.9	1,053.2	139.71	8.539		
11,614.1	6,706.5	6,589.1	6,588.4	140.0	1.7	-81.02	14.2	-3,768.3	1,205.6	1,065.6	140.07	8.607		
11,700.0	6,706.3	6,584.7	6,584.0	142.4	1.7	-80.55	14.4	-3,768.5	1,283.2	1,140.9	142.29	9.018		
11,712.6	6,706.3	6,584.1	6,583.4	142.8	1.7	-80.48	14.4	-3,768.6	1,294.6	1,152.0	142.61	9.078		
11,800.0	6,706.1	6,579.7	6,579.0	145.2	1.7	-80.01	14.5	-3,768.8	1,374.8	1,229.9	144.86	9.491		
11,811.0	6,706.1	6,579.1	6,578.4	145.5	1.7	-79.96	14.6	-3,768.9	1,384.9	1,239.8	145.14	9.542		
11,900.0	6,705.9	6,574.7	6,574.0	148.0	1.7	-79.49	14.7	-3,769.1	1,467.4	1,320.0	147.41	9.955		
11,909.4	6,705.9	6,574.2	6,573.5	148.3	1.7	-79.44	14.7	-3,769.1	1,476.2	1,328.6	147.65	9.998		
12,000.0	6,705.8	6,569.8	6,569.1	150.8	1.7	-78.97	14.9	-3,769.4	1,561.0	1,411.0	149.94	10.410		
12,007.8	6,705.7	6,569.4	6,568.7	151.0	1.7	-78.93	14.9	-3,769.4	1,568.4	1,418.2	150.14	10.446		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
12,100.0	6,705.6	6,565.0	6,564.3	153.6	1.7	-78.46	15.0	-3,769.7	1,655.3	1,502.8	152.47	10.857		
12,106.3	6,705.6	6,564.7	6,564.0	153.8	1.7	-78.43	15.0	-3,769.7	1,661.2	1,508.6	152.62	10.884		
12,200.0	6,705.4	6,560.2	6,559.5	156.4	1.7	-77.96	15.2	-3,769.9	1,750.2	1,595.2	154.97	11.293		
12,204.7	6,705.4	6,560.0	6,559.3	156.5	1.7	-77.94	15.2	-3,769.9	1,754.6	1,599.6	155.09	11.314		
12,300.0	6,705.2	6,555.5	6,554.9	159.2	1.7	-77.47	15.3	-3,770.2	1,845.6	1,688.1	157.47	11.721		
12,303.1	6,705.2	6,555.4	6,554.7	159.3	1.7	-77.45	15.3	-3,770.2	1,848.6	1,691.0	157.55	11.734		
12,400.0	6,705.0	6,550.9	6,550.2	162.0	1.7	-76.99	15.5	-3,770.4	1,941.5	1,781.5	159.95	12.138		
12,401.5	6,705.0	6,550.8	6,550.2	162.0	1.7	-76.98	15.5	-3,770.4	1,943.0	1,783.0	159.98	12.145		
12,500.0	6,704.8	6,546.3	6,545.7	164.8	1.7	-76.51	15.6	-3,770.7	2,037.7	1,875.3	162.41	12.547		
12,598.4	6,704.6	6,541.9	6,541.3	167.5	1.7	-76.05	15.8	-3,770.9	2,132.8	1,968.0	164.82	12.940		
12,600.0	6,704.6	6,541.8	6,541.2	167.6	1.7	-76.05	15.8	-3,770.9	2,134.3	1,969.5	164.86	12.946		
12,696.8	6,704.4	6,537.5	6,536.9	170.3	1.7	-75.60	15.9	-3,771.1	2,228.1	2,060.9	167.22	13.325		
12,700.0	6,704.4	6,537.4	6,536.8	170.4	1.7	-75.59	15.9	-3,771.1	2,231.2	2,063.9	167.30	13.337		
12,795.2	6,704.3	6,533.2	6,532.6	173.0	1.7	-75.16	16.0	-3,771.4	2,323.7	2,154.1	169.60	13.701		
12,800.0	6,704.2	6,533.0	6,532.4	173.2	1.7	-75.14	16.0	-3,771.4	2,328.3	2,158.6	169.72	13.719		
12,893.7	6,704.1	6,529.0	6,528.4	175.8	1.7	-74.72	16.2	-3,771.6	2,419.5	2,247.6	171.97	14.069		
12,900.0	6,704.1	6,528.7	6,528.1	176.0	1.7	-74.70	16.2	-3,771.6	2,425.7	2,253.6	172.13	14.093		
12,992.1	6,703.9	6,524.8	6,524.2	178.5	1.7	-74.29	16.3	-3,771.8	2,515.5	2,341.2	174.33	14.430		
13,000.0	6,703.9	6,524.4	6,523.8	178.8	1.7	-74.26	16.3	-3,771.8	2,523.2	2,348.7	174.52	14.458		
13,090.5	6,703.7	6,520.6	6,520.0	181.3	1.7	-73.87	16.4	-3,772.0	2,611.7	2,435.0	176.67	14.783		
13,100.0	6,703.7	6,520.2	6,519.6	181.6	1.7	-73.83	16.4	-3,772.0	2,621.0	2,444.1	176.90	14.816		
13,188.9	6,703.5	6,516.5	6,516.0	184.0	1.7	-73.46	16.5	-3,772.2	2,708.0	2,529.0	179.01	15.128		
13,200.0	6,703.5	6,516.1	6,515.5	184.4	1.7	-73.41	16.5	-3,772.3	2,718.9	2,539.6	179.27	15.167		
13,287.4	6,703.3	6,512.5	6,511.9	186.8	1.7	-73.05	16.6	-3,772.4	2,804.5	2,623.2	181.32	15.467		
13,300.0	6,703.3	6,512.0	6,511.4	187.2	1.7	-73.00	16.6	-3,772.5	2,816.9	2,635.3	181.62	15.510		
13,385.8	6,703.2	6,500.0	6,499.5	189.6	1.7	-71.80	17.0	-3,773.1	2,901.1	2,718.2	182.88	15.863		
13,400.0	6,703.1	6,500.0	6,499.5	190.0	1.7	-71.80	17.0	-3,773.1	2,915.1	2,731.8	183.26	15.906		
13,484.2	6,703.0	6,500.0	6,499.5	192.3	1.7	-71.80	17.0	-3,773.1	2,997.8	2,812.3	185.51	16.160		
13,500.0	6,702.9	6,500.0	6,499.5	192.8	1.7	-71.80	17.0	-3,773.1	3,013.3	2,827.4	185.93	16.206		
13,582.6	6,702.8	6,500.0	6,499.5	195.1	1.7	-71.80	17.0	-3,773.1	3,094.6	2,906.5	188.14	16.448		
13,600.0	6,702.8	6,500.0	6,499.5	195.6	1.7	-71.80	17.0	-3,773.1	3,111.7	2,923.1	188.60	16.499		
13,681.1	6,702.6	6,500.0	6,499.5	197.8	1.7	-71.80	17.0	-3,773.1	3,191.5	3,000.7	190.77	16.730		
13,700.0	6,702.6	6,500.0	6,499.5	198.4	1.7	-71.80	17.0	-3,773.1	3,210.2	3,018.9	191.27	16.783		
13,779.5	6,702.4	6,500.0	6,499.5	200.6	1.7	-71.80	17.0	-3,773.1	3,288.5	3,095.1	193.40	17.004		
13,800.0	6,702.4	6,500.0	6,499.5	201.2	1.7	-71.80	17.0	-3,773.1	3,308.7	3,114.8	193.94	17.060		
13,877.9	6,702.2	6,500.0	6,499.5	203.3	1.7	-71.80	17.0	-3,773.1	3,385.6	3,189.6	196.02	17.271		
13,900.0	6,702.2	6,500.0	6,499.5	204.0	1.7	-71.80	17.0	-3,773.1	3,407.4	3,210.7	196.61	17.330		
13,976.3	6,702.1	6,486.0	6,485.5	206.1	1.7	-70.42	17.3	-3,773.7	3,482.7	3,285.4	197.25	17.656		
14,000.0	6,702.0	6,485.2	6,484.6	206.8	1.7	-70.34	17.3	-3,773.8	3,506.0	3,308.3	197.79	17.726		
14,074.8	6,701.9	6,482.5	6,482.0	208.9	1.7	-70.08	17.4	-3,773.9	3,579.9	3,380.4	199.48	17.946		
14,100.0	6,701.8	6,481.6	6,481.1	209.6	1.7	-69.99	17.4	-3,774.0	3,604.8	3,404.8	200.05	18.019		
14,173.2	6,701.7	6,479.0	6,478.5	211.6	1.7	-69.74	17.5	-3,774.1	3,677.2	3,475.4	201.71	18.230		
14,200.0	6,701.6	6,478.0	6,477.5	212.4	1.7	-69.65	17.5	-3,774.1	3,703.6	3,501.3	202.31	18.306		
14,271.6	6,701.5	6,475.6	6,475.0	214.4	1.7	-69.40	17.6	-3,774.2	3,774.5	3,570.5	203.93	18.509		
14,300.0	6,701.4	6,474.6	6,474.1	215.2	1.7	-69.31	17.6	-3,774.3	3,802.5	3,598.0	204.56	18.589		
14,370.0	6,701.3	6,472.2	6,471.7	217.1	1.7	-69.08	17.7	-3,774.4	3,871.8	3,665.7	206.13	18.783		
14,400.0	6,701.3	6,471.1	6,470.6	218.0	1.7	-68.98	17.7	-3,774.5	3,901.5	3,694.7	206.80	18.866		
14,468.5	6,701.1	6,468.8	6,468.3	219.9	1.7	-68.76	17.7	-3,774.6	3,969.3	3,760.9	208.33	19.053		
14,500.0	6,701.1	6,467.8	6,467.3	220.8	1.7	-68.66	17.8	-3,774.6	4,000.5	3,791.4	209.03	19.138		
14,566.9	6,701.0	6,465.5	6,465.0	222.6	1.7	-68.44	17.8	-3,774.7	4,066.7	3,856.2	210.52	19.317		
14,600.0	6,700.9	6,464.4	6,463.9	223.6	1.7	-68.34	17.9	-3,774.8	4,099.5	3,888.2	211.26	19.405		
14,665.3	6,700.8	6,462.3	6,461.8	225.4	1.7	-68.13	17.9	-3,774.9	4,164.2	3,951.5	212.70	19.578		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,461.2	6,460.7	226.4	1.7	-68.03	17.9	-3,774.9	4,198.6	3,985.1	213.47	19.668	
14,763.7	6,700.6	6,459.1	6,458.6	228.2	1.7	-67.83	18.0	-3,775.0	4,261.8	4,046.9	214.87	19.834	
14,800.0	6,700.5	6,457.9	6,457.4	229.2	1.7	-67.72	18.0	-3,775.1	4,297.7	4,082.0	215.67	19.927	
14,862.2	6,700.4	6,455.9	6,455.5	230.9	1.7	-67.53	18.1	-3,775.2	4,359.3	4,142.3	217.04	20.085	
14,900.0	6,700.3	6,454.7	6,454.3	232.0	1.7	-67.42	18.1	-3,775.2	4,396.8	4,179.0	217.87	20.181	
14,960.6	6,700.2	6,452.8	6,452.3	233.7	1.7	-67.24	18.1	-3,775.3	4,456.9	4,237.7	219.20	20.333	
15,000.0	6,700.2	6,451.6	6,451.1	234.8	1.7	-67.12	18.2	-3,775.3	4,496.0	4,276.0	220.06	20.431	
15,059.0	6,700.0	6,449.8	6,449.3	236.4	1.7	-66.95	18.2	-3,775.4	4,554.6	4,333.2	221.34	20.577	
15,082.8	6,700.0	6,449.0	6,448.5	237.1	1.7	-66.88	18.2	-3,775.5	4,578.2	4,356.3	221.86	20.635	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-70.22	1,326.7	-3,689.9	3,921.2				
98.4	98.4	84.4	84.4	0.1	0.0	-70.22	1,326.7	-3,689.9	3,921.2	3,921.1	0.10	N/A	
100.0	100.0	86.0	86.0	0.1	0.0	-70.22	1,326.7	-3,689.9	3,921.2	3,921.1	0.10	N/A	
196.8	196.8	182.8	182.8	0.3	1.0	-70.22	1,326.7	-3,689.9	3,921.2	3,919.9	1.31	2,997.430	
200.0	200.0	186.0	186.0	0.3	1.0	-70.22	1,326.7	-3,689.9	3,921.2	3,919.8	1.35	2,898.127	
295.3	295.3	281.3	281.3	0.5	3.1	-70.22	1,326.7	-3,689.9	3,921.2	3,917.6	3.60	1,090.487	
300.0	300.0	286.0	286.0	0.5	3.2	-70.22	1,326.7	-3,689.9	3,921.2	3,917.5	3.71	1,055.610	
393.7	393.7	379.7	379.7	0.8	5.1	-70.22	1,326.7	-3,689.9	3,921.2	3,915.3	5.90	664.361	
400.0	400.0	386.0	386.0	0.8	5.3	-70.22	1,326.7	-3,689.9	3,921.2	3,915.1	6.05	648.421	
492.1	492.1	478.1	478.1	1.0	7.2	-70.22	1,326.7	-3,689.9	3,921.2	3,913.1	8.14	481.673	
500.0	500.0	486.0	486.0	1.0	7.3	-70.22	1,326.7	-3,689.9	3,921.2	3,912.9	8.32	471.336	
590.5	590.5	576.5	576.5	1.2	9.2	-70.22	1,326.7	-3,689.9	3,921.2	3,910.8	10.36	378.421	
600.0	600.0	586.0	586.0	1.2	9.4	-70.22	1,326.7	-3,689.9	3,921.2	3,910.6	10.57	370.800	
689.0	689.0	675.0	675.0	1.4	11.2	-70.22	1,326.7	-3,689.9	3,921.2	3,908.6	12.58	311.810	
700.0	700.0	686.0	686.0	1.4	11.4	-70.22	1,326.7	-3,689.9	3,921.2	3,908.4	12.82	305.785	
787.4	787.4	773.4	773.4	1.6	13.1	-70.22	1,326.7	-3,689.9	3,921.2	3,906.4	14.79	265.211	
800.0	800.0	786.0	786.0	1.7	13.4	-70.22	1,326.7	-3,689.9	3,921.2	3,906.1	15.07	260.234	
885.8	885.8	871.8	871.8	1.9	15.1	-70.22	1,326.7	-3,689.9	3,921.2	3,904.2	16.99	230.762	
900.0	900.0	886.0	886.0	1.9	15.4	-70.22	1,326.7	-3,689.9	3,921.2	3,903.9	17.31	226.526	
984.2	984.2	970.2	970.2	2.1	17.1	-70.22	1,326.7	-3,689.9	3,921.2	3,902.0	19.20	204.251	
1,000.0	1,000.0	986.0	986.0	2.1	17.4	-70.22	1,326.7	-3,689.9	3,921.2	3,901.6	19.55	200.564	
1,082.7	1,082.7	1,068.7	1,068.7	2.3	19.1	-70.22	1,326.7	-3,689.9	3,921.2	3,899.8	21.40	183.212	
1,100.0	1,100.0	1,086.0	1,086.0	2.3	19.4	-70.22	1,326.7	-3,689.9	3,921.2	3,899.4	21.79	179.950	
1,181.1	1,181.1	1,167.1	1,167.1	2.5	21.1	-98.97	1,326.7	-3,689.9	3,921.4	3,897.8	23.60	166.133	
1,200.0	1,200.0	1,186.0	1,186.0	2.6	21.5	-98.97	1,326.7	-3,689.9	3,921.5	3,897.4	24.03	163.217	
1,279.5	1,279.4	1,265.4	1,265.4	2.7	23.1	-99.02	1,326.7	-3,689.9	3,922.1	3,896.3	25.80	152.014	
1,300.0	1,299.8	1,285.8	1,285.8	2.8	23.5	-99.03	1,326.7	-3,689.9	3,922.3	3,896.0	26.26	149.380	
1,377.9	1,377.5	1,363.5	1,363.5	3.0	25.0	-99.10	1,326.7	-3,689.9	3,923.3	3,895.3	28.00	140.135	
1,400.0	1,399.5	1,385.5	1,385.5	3.0	25.5	-99.13	1,326.7	-3,689.9	3,923.7	3,895.2	28.49	137.731	
1,476.4	1,475.3	1,461.3	1,461.3	3.2	27.0	-99.23	1,326.7	-3,689.9	3,925.1	3,894.9	30.20	129.987	
1,500.0	1,498.7	1,484.7	1,484.7	3.3	27.5	-99.26	1,326.7	-3,689.9	3,925.6	3,894.9	30.72	127.771	
1,574.8	1,572.6	1,558.6	1,558.6	3.5	29.0	-99.39	1,326.7	-3,689.9	3,927.5	3,895.1	32.41	121.198	
1,600.0	1,597.5	1,583.5	1,583.5	3.5	29.5	-99.44	1,326.7	-3,689.9	3,928.2	3,895.2	32.97	119.141	
1,673.2	1,669.4	1,655.4	1,655.4	3.7	30.9	-99.58	1,326.7	-3,689.9	3,930.5	3,895.9	34.63	113.498	
1,700.1	1,695.8	1,681.8	1,681.8	3.8	31.4	-99.64	1,326.7	-3,689.9	3,931.4	3,896.2	35.24	111.564	
1,771.6	1,765.7	1,751.7	1,751.7	4.1	32.8	-99.85	1,326.7	-3,689.9	3,934.0	3,897.1	36.88	106.675	
1,800.0	1,793.4	1,779.4	1,779.4	4.2	33.4	-99.93	1,326.7	-3,689.9	3,935.0	3,897.5	37.53	104.853	
1,870.1	1,862.0	1,848.0	1,848.0	4.4	34.8	-100.14	1,326.7	-3,689.9	3,937.6	3,898.5	39.15	100.581	
1,900.0	1,891.3	1,877.3	1,877.3	4.5	35.4	-100.23	1,326.7	-3,689.9	3,938.8	3,898.9	39.84	98.861	
1,968.5	1,958.3	1,944.3	1,944.3	4.8	36.7	-100.43	1,326.7	-3,689.9	3,941.4	3,899.9	41.43	95.122	
2,000.0	1,989.1	1,975.1	1,975.1	4.9	37.3	-100.52	1,326.7	-3,689.9	3,942.6	3,900.4	42.17	93.497	
2,066.9	2,054.5	2,040.5	2,040.5	5.1	38.7	-100.71	1,326.7	-3,689.9	3,945.2	3,901.5	43.73	90.212	
2,100.0	2,086.9	2,072.9	2,072.9	5.3	39.3	-100.81	1,326.7	-3,689.9	3,946.5	3,902.0	44.51	88.673	
2,165.3	2,150.8	2,136.8	2,136.8	5.5	40.6	-101.00	1,326.7	-3,689.9	3,949.1	3,903.1	46.04	85.776	
2,200.0	2,184.7	2,170.7	2,170.7	5.6	41.3	-101.10	1,326.7	-3,689.9	3,950.5	3,903.7	46.85	84.317	
2,263.8	2,247.1	2,233.1	2,233.1	5.9	42.5	-101.28	1,326.7	-3,689.9	3,953.2	3,904.8	48.35	81.754	
2,300.0	2,282.5	2,268.5	2,268.5	6.0	43.2	-101.39	1,326.7	-3,689.9	3,954.7	3,905.5	49.21	80.367	
2,362.2	2,343.3	2,329.3	2,329.3	6.3	44.5	-101.57	1,326.7	-3,689.9	3,957.3	3,906.6	50.68	78.091	
2,400.0	2,380.3	2,366.3	2,366.3	6.5	45.2	-101.68	1,326.7	-3,689.9	3,958.9	3,907.4	51.57	76.772	
2,460.6	2,439.6	2,425.6	2,425.6	6.7	46.4	-101.85	1,326.7	-3,689.9	3,961.6	3,908.6	53.00	74.745	
2,500.0	2,478.1	2,464.1	2,464.1	6.9	47.2	-101.96	1,326.7	-3,689.9	3,963.3	3,909.4	53.93	73.487	
2,559.0	2,535.9	2,521.9	2,521.9	7.1	48.3	-102.13	1,326.7	-3,689.9	3,965.9	3,910.6	55.33	71.678	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,561.9	2,561.9	7.3	49.1	-102.25	1,326.7	-3,689.9	3,967.7	3,911.4	56.30	70.476	
2,657.5	2,632.2	2,618.2	2,618.2	7.5	50.3	-102.42	1,326.7	-3,689.9	3,970.3	3,912.7	57.66	68.856	
2,700.0	2,673.8	2,659.8	2,659.8	7.7	51.1	-102.54	1,326.7	-3,689.9	3,972.3	3,913.6	58.67	67.706	
2,755.9	2,728.4	2,714.4	2,714.4	7.9	52.2	-102.70	1,326.7	-3,689.9	3,974.9	3,914.9	60.00	66.253	
2,800.0	2,771.6	2,757.6	2,757.6	8.1	53.1	-102.83	1,326.7	-3,689.9	3,977.0	3,915.9	61.04	65.151	
2,854.3	2,824.7	2,810.7	2,810.7	8.3	54.1	-102.98	1,326.7	-3,689.9	3,979.5	3,917.2	62.33	63.844	
2,900.0	2,869.4	2,855.4	2,855.4	8.5	55.0	-103.11	1,326.7	-3,689.9	3,981.7	3,918.3	63.42	62.787	
2,952.7	2,921.0	2,907.0	2,907.0	8.8	56.1	-103.26	1,326.7	-3,689.9	3,984.3	3,919.6	64.67	61.610	
3,000.0	2,967.2	2,953.2	2,953.2	9.0	57.0	-103.40	1,326.7	-3,689.9	3,986.6	3,920.8	65.79	60.594	
3,051.2	3,017.3	3,003.3	3,003.3	9.2	58.0	-103.54	1,326.7	-3,689.9	3,989.1	3,922.1	67.01	59.532	
3,100.0	3,065.0	3,051.0	3,051.0	9.4	59.0	-103.68	1,326.7	-3,689.9	3,991.6	3,923.4	68.17	58.554	
3,149.6	3,113.5	3,099.5	3,099.5	9.6	60.0	-103.82	1,326.7	-3,689.9	3,994.1	3,924.7	69.35	57.595	
3,200.0	3,162.8	3,148.8	3,148.8	9.8	61.0	-103.96	1,326.7	-3,689.9	3,996.6	3,926.1	70.55	56.653	
3,248.0	3,209.8	3,195.8	3,195.8	10.0	61.9	-104.10	1,326.7	-3,689.9	3,999.1	3,927.4	71.69	55.785	
3,300.0	3,260.6	3,246.6	3,246.6	10.2	62.9	-104.25	1,326.7	-3,689.9	4,001.8	3,928.9	72.92	54.877	
3,346.4	3,306.1	3,292.1	3,292.1	10.5	63.8	-104.38	1,326.7	-3,689.9	4,004.3	3,930.2	74.03	54.091	
3,400.0	3,358.5	3,344.5	3,344.5	10.7	64.9	-104.53	1,326.7	-3,689.9	4,007.1	3,931.8	75.30	53.214	
3,444.9	3,402.3	3,388.3	3,388.3	10.9	65.8	-104.66	1,326.7	-3,689.9	4,009.5	3,933.1	76.37	52.501	
3,500.0	3,456.3	3,442.3	3,442.3	11.1	66.9	-104.81	1,326.7	-3,689.9	4,012.5	3,934.8	77.68	51.654	
3,543.3	3,498.6	3,484.6	3,484.6	11.3	67.7	-104.93	1,326.7	-3,689.9	4,014.8	3,936.1	78.71	51.008	
3,600.0	3,554.1	3,540.1	3,540.1	11.5	68.8	-105.09	1,326.7	-3,689.9	4,017.9	3,937.9	80.06	50.188	
3,641.7	3,594.9	3,580.9	3,580.9	11.7	69.6	-105.21	1,326.7	-3,689.9	4,020.3	3,939.2	81.05	49.602	
3,700.0	3,651.9	3,637.9	3,637.9	12.0	70.8	-105.37	1,326.7	-3,689.9	4,023.5	3,941.1	82.44	48.808	
3,740.1	3,691.2	3,677.2	3,677.2	12.2	71.6	-105.48	1,326.7	-3,689.9	4,025.8	3,942.4	83.39	48.276	
3,800.0	3,749.7	3,735.7	3,735.7	12.4	72.8	-105.65	1,326.7	-3,689.9	4,029.2	3,944.4	84.81	47.507	
3,838.6	3,787.4	3,773.4	3,773.4	12.6	73.5	-105.76	1,326.7	-3,689.9	4,031.4	3,945.7	85.73	47.024	
3,900.0	3,847.5	3,833.5	3,833.5	12.9	74.7	-105.93	1,326.7	-3,689.9	4,035.0	3,947.8	87.19	46.278	
3,937.0	3,883.7	3,869.7	3,869.7	13.0	75.4	-106.03	1,326.7	-3,689.9	4,037.1	3,949.1	88.07	45.840	
4,000.0	3,945.3	3,931.3	3,931.3	13.3	76.7	-106.21	1,326.7	-3,689.9	4,040.9	3,951.3	89.57	45.115	
4,035.4	3,980.0	3,966.0	3,966.0	13.5	77.4	-106.31	1,326.7	-3,689.9	4,043.0	3,952.5	90.41	44.718	
4,060.0	4,004.0	3,990.0	3,990.0	13.6	77.9	-106.37	1,326.7	-3,689.9	4,044.4	3,953.4	90.99	44.448	
4,100.0	4,043.2	4,029.2	4,029.2	13.7	78.7	-106.53	1,326.7	-3,689.9	4,046.7	3,954.8	91.94	44.015	
4,133.8	4,076.5	4,062.5	4,062.5	13.8	79.3	-106.65	1,326.7	-3,689.9	4,048.6	3,955.9	92.72	43.664	
4,200.0	4,141.6	4,127.6	4,127.6	14.0	80.6	-106.86	1,326.7	-3,689.9	4,051.9	3,957.7	94.25	42.991	
4,232.3	4,173.5	4,159.5	4,159.5	14.1	81.3	-106.96	1,326.7	-3,689.9	4,053.4	3,958.4	94.99	42.673	
4,300.0	4,240.6	4,226.6	4,226.6	14.3	82.6	-107.13	1,326.7	-3,689.9	4,056.1	3,959.6	96.54	42.016	
4,330.7	4,271.1	4,257.1	4,257.1	14.4	83.2	-107.20	1,326.7	-3,689.9	4,057.2	3,960.0	97.23	41.729	
4,400.0	4,340.0	4,326.0	4,326.0	14.5	84.6	-107.34	1,326.7	-3,689.9	4,059.3	3,960.5	98.79	41.090	
4,429.1	4,369.0	4,355.0	4,355.0	14.6	85.2	-107.39	1,326.7	-3,689.9	4,060.1	3,960.6	99.44	40.830	
4,500.0	4,439.7	4,425.7	4,425.7	14.8	86.6	-107.48	1,326.7	-3,689.9	4,061.5	3,960.5	101.01	40.208	
4,527.5	4,467.2	4,453.2	4,453.2	14.8	87.2	-107.51	1,326.7	-3,689.9	4,062.0	3,960.3	101.61	39.975	
4,600.0	4,539.7	4,525.7	4,525.7	14.9	88.6	-107.55	1,326.7	-3,689.9	4,062.7	3,959.5	103.19	39.370	
4,626.0	4,565.6	4,551.6	4,551.6	15.0	89.2	-107.56	1,326.7	-3,689.9	4,062.8	3,959.1	103.75	39.159	
4,660.2	4,599.8	4,585.8	4,585.8	15.0	89.9	-78.84	1,326.7	-3,689.9	4,062.9	3,961.8	101.10	40.185	
4,700.0	4,639.6	4,625.6	4,625.6	15.0	90.7	-78.84	1,326.7	-3,689.9	4,062.9	3,960.9	101.97	39.842	
4,724.4	4,664.0	4,650.0	4,650.0	15.1	91.1	-78.84	1,326.7	-3,689.9	4,062.9	3,960.4	102.51	39.633	
4,800.0	4,739.6	4,725.6	4,725.6	15.2	92.7	-78.84	1,326.7	-3,689.9	4,062.9	3,958.7	104.18	38.998	
4,822.8	4,762.5	4,748.5	4,748.5	15.2	93.1	-78.84	1,326.7	-3,689.9	4,062.9	3,958.2	104.68	38.811	
4,900.0	4,839.6	4,825.6	4,825.6	15.3	94.7	-78.84	1,326.7	-3,689.9	4,062.9	3,956.5	106.39	38.189	
4,921.2	4,860.9	4,846.9	4,846.9	15.4	95.1	-78.84	1,326.7	-3,689.9	4,062.9	3,956.0	106.86	38.022	
5,000.0	4,939.6	4,925.6	4,925.6	15.5	96.7	-78.84	1,326.7	-3,689.9	4,062.9	3,954.3	108.60	37.413	
5,019.7	4,959.3	4,945.3	4,945.3	15.5	97.1	-78.84	1,326.7	-3,689.9	4,062.9	3,953.9	109.03	37.264	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-INC													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.0	5,039.6	5,025.6	5,025.6	15.6	98.7	-78.84	1,326.7	-3,689.9	4,062.9	3,952.1	110.81	36.667		
5,118.1	5,057.7	5,043.7	5,043.7	15.7	99.1	-78.84	1,326.7	-3,689.9	4,062.9	3,951.7	111.21	36.535		
5,200.0	5,139.6	5,125.6	5,125.6	15.8	100.7	-78.84	1,326.7	-3,689.9	4,062.9	3,949.9	113.02	35.950		
5,216.5	5,156.2	5,142.2	5,142.2	15.8	101.0	-78.84	1,326.7	-3,689.9	4,062.9	3,949.5	113.38	35.834		
5,300.0	5,239.6	5,225.6	5,225.6	15.9	102.7	-78.84	1,326.7	-3,689.9	4,062.9	3,947.7	115.23	35.260		
5,314.9	5,254.6	5,240.6	5,240.6	16.0	103.0	-78.84	1,326.7	-3,689.9	4,062.9	3,947.3	115.56	35.159		
5,400.0	5,339.6	5,325.6	5,325.6	16.1	104.7	-78.84	1,326.7	-3,689.9	4,062.9	3,945.4	117.44	34.596		
5,413.4	5,353.0	5,339.0	5,339.0	16.1	105.0	-78.84	1,326.7	-3,689.9	4,062.9	3,945.2	117.73	34.509		
5,500.0	5,439.6	5,425.6	5,425.6	16.3	106.7	-78.84	1,326.7	-3,689.9	4,062.9	3,943.2	119.65	33.956		
5,511.8	5,451.4	5,437.4	5,437.4	16.3	107.0	-78.84	1,326.7	-3,689.9	4,062.9	3,943.0	119.91	33.882		
5,600.0	5,539.6	5,525.6	5,525.6	16.4	108.8	-78.84	1,326.7	-3,689.9	4,062.9	3,941.0	121.86	33.340		
5,610.2	5,549.9	5,535.9	5,535.9	16.4	109.0	-78.84	1,326.7	-3,689.9	4,062.9	3,940.8	122.09	33.278		
5,700.0	5,639.6	5,625.6	5,625.6	16.6	110.8	-78.84	1,326.7	-3,689.9	4,062.9	3,938.8	124.08	32.745		
5,708.6	5,648.3	5,634.3	5,634.3	16.6	110.9	-78.84	1,326.7	-3,689.9	4,062.9	3,938.6	124.27	32.694		
5,800.0	5,739.6	5,725.6	5,725.6	16.7	112.8	-78.84	1,326.7	-3,689.9	4,062.9	3,936.6	126.29	32.170		
5,807.1	5,746.7	5,732.7	5,732.7	16.8	112.9	-78.84	1,326.7	-3,689.9	4,062.9	3,936.4	126.45	32.131		
5,900.0	5,839.6	5,825.6	5,825.6	16.9	114.8	-78.84	1,326.7	-3,689.9	4,062.9	3,934.4	128.51	31.616		
5,905.5	5,845.1	5,831.1	5,831.1	16.9	114.9	-78.84	1,326.7	-3,689.9	4,062.9	3,934.3	128.63	31.586		
6,000.0	5,939.6	5,925.6	5,925.6	17.1	116.8	-78.84	1,326.7	-3,689.9	4,062.9	3,932.2	130.72	31.080		
6,003.9	5,943.6	5,929.6	5,929.6	17.1	116.9	-78.84	1,326.7	-3,689.9	4,062.9	3,932.1	130.81	31.059		
6,059.2	5,998.8	5,984.8	5,984.8	17.2	118.0	-78.84	1,326.7	-3,689.9	4,062.9	3,930.9	132.04	30.771		
6,100.0	6,039.6	6,025.6	6,025.6	17.2	118.8	11.18	1,326.7	-3,689.9	4,061.7	3,926.3	135.49	29.979		
6,102.3	6,042.0	6,028.0	6,028.0	17.2	118.9	11.19	1,326.7	-3,689.9	4,061.6	3,926.1	135.51	29.973		
6,150.0	6,089.4	6,075.4	6,075.4	17.3	119.8	11.27	1,326.7	-3,689.9	4,057.2	3,921.5	135.71	29.897		
6,200.0	6,138.7	6,124.7	6,124.7	17.3	120.8	11.41	1,326.7	-3,689.9	4,049.3	3,914.1	135.28	29.933		
6,200.8	6,139.5	6,125.5	6,125.5	17.3	120.8	11.42	1,326.7	-3,689.9	4,049.2	3,913.9	135.27	29.934		
6,250.0	6,187.4	6,173.4	6,173.4	17.3	121.8	11.63	1,326.7	-3,689.9	4,038.1	3,903.9	134.20	30.090		
6,299.2	6,234.4	6,220.4	6,220.4	17.4	122.7	11.92	1,326.7	-3,689.9	4,023.8	3,891.3	132.50	30.368		
6,300.0	6,235.1	6,221.1	6,221.1	17.4	122.7	11.92	1,326.7	-3,689.9	4,023.5	3,891.1	132.47	30.374		
6,350.0	6,281.7	6,267.7	6,267.7	17.4	123.7	12.30	1,326.7	-3,689.9	4,005.8	3,875.7	130.09	30.791		
6,397.6	6,324.8	6,310.8	6,310.8	17.3	124.5	12.74	1,326.7	-3,689.9	3,985.9	3,858.6	127.26	31.321		
6,400.0	6,326.9	6,312.9	6,312.9	17.3	124.6	12.76	1,326.7	-3,689.9	3,984.8	3,857.7	127.10	31.351		
6,450.0	6,370.5	6,356.5	6,356.5	17.3	125.5	13.34	1,326.7	-3,689.9	3,960.9	3,837.3	123.53	32.064		
6,496.0	6,409.1	6,395.1	6,395.1	17.3	126.2	13.97	1,326.7	-3,689.9	3,936.2	3,816.5	119.77	32.864		
6,500.0	6,412.3	6,398.3	6,398.3	17.3	126.3	14.03	1,326.7	-3,689.9	3,934.0	3,814.6	119.43	32.939		
6,550.0	6,452.1	6,438.1	6,438.1	17.3	127.1	14.88	1,326.7	-3,689.9	3,904.4	3,789.5	114.89	33.984		
6,594.5	6,485.6	6,471.6	6,471.6	17.3	127.8	15.78	1,326.7	-3,689.9	3,875.8	3,765.2	110.57	35.054		
6,600.0	6,489.7	6,475.7	6,475.7	17.3	127.9	15.90	1,326.7	-3,689.9	3,872.1	3,762.0	110.02	35.195		
6,650.0	6,524.9	6,510.9	6,510.9	17.2	128.6	17.15	1,326.7	-3,689.9	3,837.3	3,732.3	104.99	36.550		
6,692.9	6,553.0	6,539.0	6,539.0	17.2	129.1	18.44	1,326.7	-3,689.9	3,805.6	3,704.9	100.73	37.779		
6,700.0	6,557.5	6,543.5	6,543.5	17.2	129.2	18.68	1,326.7	-3,689.9	3,800.2	3,700.2	100.05	37.983		
6,750.0	6,587.4	6,573.4	6,573.4	17.2	129.8	20.57	1,326.7	-3,689.9	3,761.0	3,665.5	95.58	39.349		
6,791.3	6,609.9	6,595.9	6,595.9	17.2	130.3	22.49	1,326.7	-3,689.9	3,727.2	3,634.6	92.62	40.242		
6,800.0	6,614.4	6,600.4	6,600.4	17.2	130.4	22.94	1,326.7	-3,689.9	3,719.9	3,627.8	92.13	40.379		
6,850.0	6,638.4	6,624.4	6,624.4	17.2	130.8	25.96	1,326.7	-3,689.9	3,677.1	3,586.6	90.46	40.650		
6,889.7	6,655.3	6,641.3	6,641.3	17.4	131.2	28.97	1,326.7	-3,689.9	3,642.0	3,550.9	91.08	39.988		
6,900.0	6,659.4	6,645.4	6,645.4	17.5	131.3	29.85	1,326.7	-3,689.9	3,632.8	3,541.2	91.58	39.666		
6,950.0	6,677.1	6,663.1	6,663.1	18.0	131.6	34.98	1,326.7	-3,689.9	3,587.1	3,490.5	96.61	37.131		
6,988.2	6,688.4	6,674.4	6,674.4	18.5	131.9	40.04	1,326.7	-3,689.9	3,551.6	3,447.9	103.63	34.273		
7,000.0	6,691.5	6,677.5	6,677.5	18.7	131.9	41.86	1,326.7	-3,689.9	3,540.4	3,434.1	106.38	33.281		
7,050.0	6,702.5	6,688.5	6,688.5	19.5	132.1	51.14	1,326.7	-3,689.9	3,492.9	3,372.1	120.80	28.914		
7,086.6	6,708.4	6,694.4	6,694.4	20.1	132.3	59.83	1,326.7	-3,689.9	3,457.7	3,324.6	133.10	25.979		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BOND #21-9 - Wellbore #1 - Design #1											Offset Site Error:		0.0 usft
Survey Program: 0-INC													Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
7,100.0	6,710.1	6,696.1	6,696.1	20.4	132.3	63.44	1,326.7	-3,689.9	3,444.8	3,307.2	137.54	25.046			
7,150.0	6,714.2	6,700.2	6,700.2	21.3	132.4	78.67	1,326.7	-3,689.9	3,396.3	3,245.6	150.75	22.529			
7,185.0	6,715.0	6,701.0	6,701.0	21.9	132.4	90.29	1,326.7	-3,689.9	3,362.3	3,208.2	154.02	21.831			
7,185.6	6,715.0	6,701.0	6,701.0	21.9	132.4	90.46	1,326.7	-3,689.9	3,361.7	3,207.7	154.02	21.827			
7,200.0	6,715.0	6,701.0	6,701.0	22.2	132.4	90.46	1,326.7	-3,689.9	3,347.7	3,193.4	154.29	21.697			
7,283.4	6,714.8	6,700.8	6,700.8	23.9	132.4	90.45	1,326.7	-3,689.9	3,266.6	3,110.7	155.97	20.944			
7,300.0	6,714.8	6,700.8	6,700.8	24.2	132.4	90.45	1,326.7	-3,689.9	3,250.6	3,094.3	156.30	20.797			
7,381.9	6,714.6	6,700.6	6,700.6	26.0	132.4	90.44	1,326.7	-3,689.9	3,171.2	3,013.1	158.06	20.063			
7,400.0	6,714.6	6,700.6	6,700.6	26.4	132.4	90.43	1,326.7	-3,689.9	3,153.6	2,995.2	158.45	19.903			
7,480.3	6,714.4	6,700.4	6,700.4	28.2	132.4	90.42	1,326.7	-3,689.9	3,075.9	2,915.7	160.27	19.193			
7,500.0	6,714.4	6,700.4	6,700.4	28.7	132.4	90.42	1,326.7	-3,689.9	3,056.9	2,896.2	160.71	19.021			
7,578.7	6,714.2	6,700.2	6,700.2	30.5	132.4	90.41	1,326.7	-3,689.9	2,980.9	2,818.3	162.57	18.337			
7,600.0	6,714.2	6,700.2	6,700.2	31.0	132.4	90.40	1,326.7	-3,689.9	2,960.4	2,797.3	163.07	18.154			
7,677.1	6,714.0	6,700.0	6,700.0	32.9	132.4	90.39	1,326.7	-3,689.9	2,886.1	2,721.1	164.94	17.498			
7,700.0	6,714.0	6,700.0	6,700.0	33.4	132.4	90.39	1,326.7	-3,689.9	2,864.1	2,698.6	165.49	17.307			
7,775.6	6,713.9	6,699.9	6,699.9	35.3	132.4	90.38	1,326.7	-3,689.9	2,791.5	2,624.1	167.37	16.679			
7,800.0	6,713.8	6,699.8	6,699.8	35.9	132.4	90.38	1,326.7	-3,689.9	2,768.1	2,600.1	167.97	16.479			
7,874.0	6,713.7	6,699.7	6,699.7	37.8	132.4	90.37	1,326.7	-3,689.9	2,697.2	2,527.4	169.84	15.881			
7,900.0	6,713.6	6,699.6	6,699.6	38.4	132.4	90.36	1,326.7	-3,689.9	2,672.4	2,501.9	170.50	15.674			
7,972.4	6,713.5	6,699.5	6,699.5	40.3	132.4	90.35	1,326.7	-3,689.9	2,603.2	2,430.9	172.35	15.104			
8,000.0	6,713.4	6,699.4	6,699.4	41.0	132.4	90.35	1,326.7	-3,689.9	2,577.0	2,403.9	173.06	14.890			
8,070.8	6,713.3	6,699.3	6,699.3	42.8	132.4	90.34	1,326.7	-3,689.9	2,509.6	2,334.7	174.90	14.349			
8,100.0	6,713.2	6,699.2	6,699.2	43.6	132.4	90.33	1,326.7	-3,689.9	2,481.9	2,306.3	175.65	14.130			
8,169.3	6,713.1	6,699.1	6,699.1	45.4	132.3	90.32	1,326.7	-3,689.9	2,416.3	2,238.8	177.47	13.615			
8,200.0	6,713.0	6,699.0	6,699.0	46.2	132.3	90.32	1,326.7	-3,689.9	2,387.3	2,209.0	178.27	13.391			
8,267.7	6,712.9	6,698.9	6,698.9	48.0	132.3	90.31	1,326.7	-3,689.9	2,323.5	2,143.4	180.06	12.904			
8,300.0	6,712.8	6,698.8	6,698.8	48.8	132.3	90.30	1,326.7	-3,689.9	2,293.1	2,112.2	180.91	12.675			
8,366.1	6,712.7	6,698.7	6,698.7	50.6	132.3	90.29	1,326.7	-3,689.9	2,231.1	2,048.4	182.67	12.214			
8,400.0	6,712.6	6,698.6	6,698.6	51.5	132.3	90.29	1,326.7	-3,689.9	2,199.4	2,015.9	183.57	11.981			
8,464.5	6,712.5	6,698.5	6,698.5	53.2	132.3	90.28	1,326.7	-3,689.9	2,139.3	1,954.0	185.30	11.545			
8,500.0	6,712.4	6,698.4	6,698.4	54.1	132.3	90.28	1,326.7	-3,689.9	2,106.3	1,920.1	186.24	11.310			
8,563.0	6,712.3	6,698.3	6,698.3	55.8	132.3	90.27	1,326.7	-3,689.9	2,048.1	1,860.1	187.93	10.898			
8,600.0	6,712.3	6,698.3	6,698.3	56.8	132.3	90.26	1,326.7	-3,689.9	2,013.9	1,825.0	188.93	10.660			
8,661.4	6,712.1	6,698.1	6,698.1	58.5	132.3	90.25	1,326.7	-3,689.9	1,957.6	1,767.0	190.59	10.271			
8,700.0	6,712.1	6,698.1	6,698.1	59.5	132.3	90.25	1,326.7	-3,689.9	1,922.3	1,730.6	191.63	10.031			
8,759.8	6,711.9	6,697.9	6,697.9	61.1	132.3	90.24	1,326.7	-3,689.9	1,867.8	1,674.6	193.25	9.666			
8,800.0	6,711.9	6,697.9	6,697.9	62.2	132.3	90.23	1,326.7	-3,689.9	1,831.5	1,637.1	194.33	9.424			
8,858.2	6,711.8	6,697.8	6,697.8	63.8	132.3	90.22	1,326.7	-3,689.9	1,779.0	1,583.1	195.92	9.081			
8,900.0	6,711.7	6,697.7	6,697.7	64.9	132.3	90.22	1,326.7	-3,689.9	1,741.7	1,544.7	197.05	8.839			
8,956.7	6,711.6	6,697.6	6,697.6	66.5	132.3	90.21	1,326.7	-3,689.9	1,691.3	1,492.7	198.59	8.517			
9,000.0	6,711.5	6,697.5	6,697.5	67.6	132.3	90.20	1,326.7	-3,689.9	1,653.1	1,453.3	199.77	8.275			
9,055.1	6,711.4	6,697.4	6,697.4	69.1	132.3	90.20	1,326.7	-3,689.9	1,604.8	1,403.6	201.28	7.973			
9,100.0	6,711.3	6,697.3	6,697.3	70.4	132.3	90.19	1,326.7	-3,689.9	1,565.9	1,363.4	202.50	7.733			
9,153.5	6,711.2	6,697.2	6,697.2	71.8	132.3	90.18	1,326.7	-3,689.9	1,519.8	1,315.9	203.97	7.451			
9,200.0	6,711.1	6,697.1	6,697.1	73.1	132.3	90.18	1,326.7	-3,689.9	1,480.2	1,275.0	205.24	7.212			
9,251.9	6,711.0	6,697.0	6,697.0	74.5	132.3	90.17	1,326.7	-3,689.9	1,436.5	1,229.8	206.66	6.951			
9,300.0	6,710.9	6,696.9	6,696.9	75.8	132.3	90.16	1,326.7	-3,689.9	1,396.5	1,188.6	207.98	6.715			
9,350.4	6,710.8	6,696.8	6,696.8	77.2	132.3	90.15	1,326.7	-3,689.9	1,355.2	1,145.9	209.36	6.473			
9,400.0	6,710.7	6,696.7	6,696.7	78.6	132.3	90.15	1,326.7	-3,689.9	1,315.1	1,104.4	210.72	6.241			
9,448.8	6,710.6	6,696.6	6,696.6	79.9	132.3	90.14	1,326.7	-3,689.9	1,276.3	1,064.3	212.07	6.019			
9,500.0	6,710.5	6,696.5	6,696.5	81.3	132.3	90.13	1,326.7	-3,689.9	1,236.4	1,022.9	213.47	5.792			
9,547.2	6,710.4	6,696.4	6,696.4	82.6	132.3	90.13	1,326.7	-3,689.9	1,200.4	985.6	214.77	5.589			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BOND #21-9 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,600.0	6,710.3	6,696.3	6,696.3	84.1	132.3	90.12	1,326.7	-3,689.9	1,161.0	944.8	216.23	5.369	
9,645.6	6,710.2	6,696.2	6,696.2	85.3	132.3	90.11	1,326.7	-3,689.9	1,127.9	910.4	217.49	5.186	
9,700.0	6,710.1	6,696.1	6,696.1	86.8	132.3	90.11	1,326.7	-3,689.9	1,089.6	870.6	218.99	4.975	
9,744.1	6,710.0	6,696.0	6,696.0	88.1	132.3	90.10	1,326.7	-3,689.9	1,059.5	839.3	220.20	4.812	
9,800.0	6,709.9	6,695.9	6,695.9	89.6	132.3	90.09	1,326.7	-3,689.9	1,022.9	801.2	221.75	4.613	
9,842.5	6,709.9	6,695.9	6,695.9	90.8	132.3	90.09	1,326.7	-3,689.9	996.3	773.4	222.92	4.469	
9,900.0	6,709.7	6,695.7	6,695.7	92.4	132.3	90.08	1,326.7	-3,689.9	962.1	737.5	224.51	4.285	
9,940.9	6,709.7	6,695.7	6,695.7	93.5	132.3	90.07	1,326.7	-3,689.9	939.1	713.4	225.64	4.162	
10,000.0	6,709.6	6,695.6	6,695.6	95.1	132.3	90.06	1,326.7	-3,689.9	908.2	680.9	227.27	3.996	
10,039.3	6,709.5	6,695.5	6,695.5	96.2	132.3	90.06	1,326.7	-3,689.9	889.1	660.8	228.36	3.894	
10,100.0	6,709.4	6,695.4	6,695.4	97.9	132.3	90.05	1,326.7	-3,689.9	862.5	632.5	230.04	3.749	
10,137.8	6,709.3	6,695.3	6,695.3	98.9	132.3	90.04	1,326.7	-3,689.9	847.7	616.6	231.09	3.668	
10,200.0	6,709.2	6,695.2	6,695.2	100.7	132.3	90.04	1,326.7	-3,689.9	826.5	593.7	232.81	3.550	
10,236.2	6,709.1	6,695.1	6,695.1	101.7	132.3	90.03	1,326.7	-3,689.9	816.1	582.3	233.82	3.490	
10,300.0	6,709.0	6,695.0	6,695.0	103.4	132.3	90.02	1,326.7	-3,689.9	801.5	565.9	235.59	3.402	
10,334.6	6,708.9	6,694.9	6,694.9	104.4	132.3	90.02	1,326.7	-3,689.9	795.5	559.0	236.55	3.363	
10,400.0	6,708.8	6,694.8	6,694.8	106.2	132.3	90.01	1,326.7	-3,689.9	788.4	550.0	238.36	3.308	
10,433.0	6,708.7	6,694.7	6,694.7	107.1	132.3	90.00	1,326.7	-3,689.9	786.8	547.5	239.28	3.288	
10,454.0	6,708.7	6,694.7	6,694.7	107.7	132.3	90.00	1,326.7	-3,689.9	786.5	546.7	239.86	3.279 CC, ES	
10,500.0	6,708.6	6,694.6	6,694.6	109.0	132.3	89.99	1,326.7	-3,689.9	787.9	546.7	241.14	3.267	
10,531.5	6,708.5	6,694.5	6,694.5	109.9	132.3	89.99	1,326.7	-3,689.9	790.3	548.3	242.01	3.266 SF	
10,600.0	6,708.4	6,694.4	6,694.4	111.8	132.3	89.98	1,326.7	-3,689.9	800.0	556.1	243.91	3.280	
10,629.9	6,708.4	6,694.4	6,694.4	112.6	132.3	89.98	1,326.7	-3,689.9	806.0	561.2	244.74	3.293	
10,700.0	6,708.2	6,694.2	6,694.2	114.6	132.3	89.97	1,326.7	-3,689.9	824.1	577.4	246.69	3.341	
10,728.3	6,708.2	6,694.2	6,694.2	115.3	132.3	89.96	1,326.7	-3,689.9	833.0	585.5	247.48	3.366	
10,800.0	6,708.0	6,694.0	6,694.0	117.3	132.2	89.95	1,326.7	-3,689.9	859.3	609.8	249.47	3.444	
10,826.7	6,708.0	6,694.0	6,694.0	118.1	132.2	89.95	1,326.7	-3,689.9	870.4	620.2	250.22	3.479	
10,900.0	6,707.8	6,693.8	6,693.8	120.1	132.2	89.94	1,326.7	-3,689.9	904.2	651.9	252.25	3.584	
10,925.2	6,707.8	6,693.8	6,693.8	120.8	132.2	89.93	1,326.7	-3,689.9	916.9	663.9	252.95	3.625	
11,000.0	6,707.6	6,693.6	6,693.6	122.9	132.2	89.92	1,326.7	-3,689.9	957.5	702.4	255.04	3.754	
11,023.6	6,707.6	6,693.6	6,693.6	123.6	132.2	89.92	1,326.7	-3,689.9	971.1	715.4	255.69	3.798	
11,100.0	6,707.5	6,693.5	6,693.5	125.7	132.2	89.91	1,326.7	-3,689.9	1,017.8	760.0	257.82	3.948	
11,122.0	6,707.4	6,693.4	6,693.4	126.3	132.2	89.91	1,326.7	-3,689.9	1,031.9	773.5	258.43	3.993	
11,200.0	6,707.3	6,693.3	6,693.3	128.5	132.2	89.90	1,326.7	-3,689.9	1,084.0	823.4	260.60	4.160	
11,220.4	6,707.2	6,693.2	6,693.2	129.0	132.2	89.89	1,326.7	-3,689.9	1,098.2	837.0	261.17	4.205	
11,300.0	6,707.1	6,693.1	6,693.1	131.3	132.2	89.88	1,326.7	-3,689.9	1,155.1	891.8	263.39	4.386	
11,318.9	6,707.0	6,693.0	6,693.0	131.8	132.2	89.88	1,326.7	-3,689.9	1,169.0	905.1	263.92	4.430	
11,400.0	6,706.9	6,692.9	6,692.9	134.0	132.2	89.87	1,326.7	-3,689.9	1,230.3	964.1	266.18	4.622	
11,417.3	6,706.9	6,692.9	6,692.9	134.5	132.2	89.87	1,326.7	-3,689.9	1,243.6	977.0	266.66	4.664	
11,500.0	6,706.7	6,692.7	6,692.7	136.8	132.2	89.86	1,326.7	-3,689.9	1,308.7	1,039.8	268.96	4.866	
11,515.7	6,706.7	6,692.7	6,692.7	137.3	132.2	89.85	1,326.7	-3,689.9	1,321.3	1,051.9	269.40	4.905	
11,600.0	6,706.5	6,692.5	6,692.5	139.6	132.2	89.84	1,326.7	-3,689.9	1,389.9	1,118.2	271.75	5.115	
11,614.1	6,706.5	6,692.5	6,692.5	140.0	132.2	89.84	1,326.7	-3,689.9	1,401.6	1,129.5	272.15	5.150	
11,700.0	6,706.3	6,692.3	6,692.3	142.4	132.2	89.83	1,326.7	-3,689.9	1,473.5	1,198.9	274.54	5.367	
11,712.6	6,706.3	6,692.3	6,692.3	142.8	132.2	89.83	1,326.7	-3,689.9	1,484.1	1,209.2	274.89	5.399	
11,800.0	6,706.1	6,692.1	6,692.1	145.2	132.2	89.81	1,326.7	-3,689.9	1,559.0	1,281.6	277.33	5.621	
11,811.0	6,706.1	6,692.1	6,692.1	145.5	132.2	89.81	1,326.7	-3,689.9	1,568.5	1,290.8	277.64	5.649	
11,900.0	6,705.9	6,691.9	6,691.9	148.0	132.2	89.80	1,326.7	-3,689.9	1,646.1	1,366.0	280.12	5.876	
11,909.4	6,705.9	6,691.9	6,691.9	148.3	132.2	89.80	1,326.7	-3,689.9	1,654.4	1,374.0	280.38	5.900	
12,000.0	6,705.8	6,691.8	6,691.8	150.8	132.2	89.79	1,326.7	-3,689.9	1,734.6	1,451.7	282.91	6.131	
12,007.8	6,705.7	6,691.7	6,691.7	151.0	132.2	89.79	1,326.7	-3,689.9	1,741.6	1,458.4	283.13	6.151	
12,100.0	6,705.6	6,691.6	6,691.6	153.6	132.2	89.77	1,326.7	-3,689.9	1,824.3	1,538.6	285.70	6.385	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,691.6	6,691.6	153.8	132.2	89.77	1,326.7	-3,689.9	1,829.9	1,544.1	285.88	6.401	
12,200.0	6,705.4	6,691.4	6,691.4	156.4	132.2	89.76	1,326.7	-3,689.9	1,915.0	1,626.5	288.50	6.638	
12,204.7	6,705.4	6,691.4	6,691.4	156.5	132.2	89.76	1,326.7	-3,689.9	1,919.3	1,630.6	288.63	6.650	
12,300.0	6,705.2	6,691.2	6,691.2	159.2	132.2	89.75	1,326.7	-3,689.9	2,006.6	1,715.3	291.29	6.889	
12,303.1	6,705.2	6,691.2	6,691.2	159.3	132.2	89.75	1,326.7	-3,689.9	2,009.5	1,718.1	291.38	6.896	
12,400.0	6,705.0	6,691.0	6,691.0	162.0	132.2	89.73	1,326.7	-3,689.9	2,098.9	1,804.9	294.08	7.137	
12,401.5	6,705.0	6,691.0	6,691.0	162.0	132.2	89.73	1,326.7	-3,689.9	2,100.4	1,806.3	294.12	7.141	
12,500.0	6,704.8	6,690.8	6,690.8	164.8	132.2	89.72	1,326.7	-3,689.9	2,192.0	1,895.1	296.88	7.383	
12,598.4	6,704.6	6,690.6	6,690.6	167.5	132.2	89.71	1,326.7	-3,689.9	2,284.1	1,984.5	299.62	7.623	
12,600.0	6,704.6	6,690.6	6,690.6	167.6	132.2	89.71	1,326.7	-3,689.9	2,285.6	1,985.9	299.67	7.627	
12,696.8	6,704.4	6,690.4	6,690.4	170.3	132.2	89.69	1,326.7	-3,689.9	2,376.7	2,074.4	302.37	7.860	
12,700.0	6,704.4	6,690.4	6,690.4	170.4	132.2	89.69	1,326.7	-3,689.9	2,379.7	2,077.3	302.46	7.868	
12,795.2	6,704.3	6,690.3	6,690.3	173.0	132.2	89.68	1,326.7	-3,689.9	2,469.8	2,164.7	305.13	8.094	
12,800.0	6,704.2	6,690.2	6,690.2	173.2	132.2	89.68	1,326.7	-3,689.9	2,474.3	2,169.1	305.26	8.106	
12,893.7	6,704.1	6,690.1	6,690.1	175.8	132.2	89.67	1,326.7	-3,689.9	2,563.3	2,255.5	307.88	8.326	
12,900.0	6,704.1	6,690.1	6,690.1	176.0	132.2	89.67	1,326.7	-3,689.9	2,569.3	2,261.3	308.05	8.341	
12,992.1	6,703.9	6,689.9	6,689.9	178.5	132.2	89.65	1,326.7	-3,689.9	2,657.2	2,346.5	310.63	8.554	
13,000.0	6,703.9	6,689.9	6,689.9	178.8	132.2	89.65	1,326.7	-3,689.9	2,664.7	2,353.9	310.85	8.572	
13,090.5	6,703.7	6,689.7	6,689.7	181.3	132.2	89.64	1,326.7	-3,689.9	2,751.3	2,438.0	313.38	8.780	
13,100.0	6,703.7	6,689.7	6,689.7	181.6	132.2	89.64	1,326.7	-3,689.9	2,760.4	2,446.8	313.64	8.801	
13,188.9	6,703.5	6,689.5	6,689.5	184.0	132.2	89.63	1,326.7	-3,689.9	2,845.8	2,529.7	316.13	9.002	
13,200.0	6,703.5	6,689.5	6,689.5	184.4	132.2	89.63	1,326.7	-3,689.9	2,856.4	2,540.0	316.44	9.027	
13,287.4	6,703.3	6,689.3	6,689.3	186.8	132.2	89.61	1,326.7	-3,689.9	2,940.5	2,621.6	318.88	9.221	
13,300.0	6,703.3	6,689.3	6,689.3	187.2	132.2	89.61	1,326.7	-3,689.9	2,952.7	2,633.4	319.24	9.249	
13,385.8	6,703.2	6,689.2	6,689.2	189.6	132.2	89.60	1,326.7	-3,689.9	3,035.5	2,713.8	321.64	9.438	
13,400.0	6,703.1	6,689.1	6,689.1	190.0	132.1	89.60	1,326.7	-3,689.9	3,049.2	2,727.2	322.03	9.469	
13,484.2	6,703.0	6,689.0	6,689.0	192.3	132.1	89.59	1,326.7	-3,689.9	3,130.6	2,806.2	324.39	9.651	
13,500.0	6,702.9	6,688.9	6,688.9	192.8	132.1	89.59	1,326.7	-3,689.9	3,145.9	2,821.1	324.83	9.685	
13,582.6	6,702.8	6,688.8	6,688.8	195.1	132.1	89.57	1,326.7	-3,689.9	3,226.0	2,898.9	327.14	9.861	
13,600.0	6,702.8	6,688.8	6,688.8	195.6	132.1	89.57	1,326.7	-3,689.9	3,242.8	2,915.2	327.63	9.898	
13,681.1	6,702.6	6,688.6	6,688.6	197.8	132.1	89.56	1,326.7	-3,689.9	3,321.5	2,991.6	329.90	10.068	
13,700.0	6,702.6	6,688.6	6,688.6	198.4	132.1	89.56	1,326.7	-3,689.9	3,339.9	3,009.5	330.43	10.108	
13,779.5	6,702.4	6,688.4	6,688.4	200.6	132.1	89.55	1,326.7	-3,689.9	3,417.2	3,084.6	332.65	10.273	
13,800.0	6,702.4	6,688.4	6,688.4	201.2	132.1	89.55	1,326.7	-3,689.9	3,437.2	3,104.0	333.22	10.315	
13,877.9	6,702.2	6,688.2	6,688.2	203.3	132.1	89.54	1,326.7	-3,689.9	3,513.1	3,177.7	335.40	10.474	
13,900.0	6,702.2	6,688.2	6,688.2	204.0	132.1	89.53	1,326.7	-3,689.9	3,534.6	3,198.6	336.02	10.519	
13,976.3	6,702.1	6,688.1	6,688.1	206.1	132.1	89.52	1,326.7	-3,689.9	3,609.1	3,270.9	338.16	10.673	
14,000.0	6,702.0	6,688.0	6,688.0	206.8	132.1	89.52	1,326.7	-3,689.9	3,632.2	3,293.4	338.82	10.720	
14,074.8	6,701.9	6,687.9	6,687.9	208.9	132.1	89.51	1,326.7	-3,689.9	3,705.2	3,364.3	340.91	10.869	
14,100.0	6,701.8	6,687.8	6,687.8	209.6	132.1	89.51	1,326.7	-3,689.9	3,729.9	3,388.3	341.62	10.918	
14,173.2	6,701.7	6,687.7	6,687.7	211.6	132.1	89.50	1,326.7	-3,689.9	3,801.5	3,457.8	343.67	11.061	
14,200.0	6,701.6	6,687.6	6,687.6	212.4	132.1	89.49	1,326.7	-3,689.9	3,827.7	3,483.3	344.42	11.113	
14,271.6	6,701.5	6,687.5	6,687.5	214.4	132.1	89.48	1,326.7	-3,689.9	3,897.8	3,551.4	346.42	11.252	
14,300.0	6,701.4	6,687.4	6,687.4	215.2	132.1	89.48	1,326.7	-3,689.9	3,925.6	3,578.4	347.22	11.306	
14,370.0	6,701.3	6,687.3	6,687.3	217.1	132.1	89.47	1,326.7	-3,689.9	3,994.3	3,645.1	349.18	11.439	
14,400.0	6,701.3	6,687.3	6,687.3	218.0	132.1	89.47	1,326.7	-3,689.9	4,023.6	3,673.6	350.02	11.496	
14,468.5	6,701.1	6,687.1	6,687.1	219.9	132.1	89.46	1,326.7	-3,689.9	4,090.8	3,738.9	351.93	11.624	
14,500.0	6,701.1	6,687.1	6,687.1	220.8	132.1	89.45	1,326.7	-3,689.9	4,121.7	3,768.9	352.82	11.682	
14,566.9	6,701.0	6,687.0	6,687.0	222.6	132.1	89.44	1,326.7	-3,689.9	4,187.4	3,832.7	354.69	11.806	
14,600.0	6,700.9	6,686.9	6,686.9	223.6	132.1	89.44	1,326.7	-3,689.9	4,219.9	3,864.3	355.61	11.867	
14,665.3	6,700.8	6,686.8	6,686.8	225.4	132.1	89.43	1,326.7	-3,689.9	4,284.1	3,926.7	357.44	11.986	
14,700.0	6,700.7	6,686.7	6,686.7	226.4	132.1	89.43	1,326.7	-3,689.9	4,318.2	3,959.8	358.41	12.048	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BOND #21-9 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	6,686.6	6,686.6	228.2	132.1	89.42	1,326.7	-3,689.9	4,380.9	4,020.7	360.20	12.163	
14,800.0	6,700.5	6,686.5	6,686.5	229.2	132.1	89.41	1,326.7	-3,689.9	4,416.6	4,055.4	361.21	12.227	
14,862.2	6,700.4	6,686.4	6,686.4	230.9	132.1	89.41	1,326.7	-3,689.9	4,477.8	4,114.8	362.95	12.337	
14,900.0	6,700.3	6,686.3	6,686.3	232.0	132.1	89.40	1,326.7	-3,689.9	4,515.0	4,151.0	364.01	12.403	
14,960.6	6,700.2	6,686.2	6,686.2	233.7	132.1	89.39	1,326.7	-3,689.9	4,574.7	4,209.0	365.71	12.509	
15,000.0	6,700.2	6,686.2	6,686.2	234.8	132.1	89.39	1,326.7	-3,689.9	4,613.5	4,246.7	366.81	12.577	
15,059.0	6,700.0	6,686.0	6,686.0	236.4	132.1	89.38	1,326.7	-3,689.9	4,671.7	4,303.2	368.47	12.679	
15,082.8	6,700.0	6,686.0	6,686.0	237.1	132.1	89.38	1,326.7	-3,689.9	4,695.2	4,326.0	369.13	12.719	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-89.27	30.7	-2,405.6	2,406.1				
98.4	98.4	79.7	79.7	0.1	0.0	-89.27	30.6	-2,405.3	2,405.5	2,405.4	0.11	N/A	
100.0	100.0	81.8	81.8	0.1	0.0	-89.27	30.6	-2,405.3	2,405.5	2,405.4	0.11	N/A	
196.8	196.8	165.6	165.6	0.3	0.1	-89.28	30.3	-2,404.7	2,404.9	2,404.5	0.37	6,447.368	
200.0	200.0	168.1	168.1	0.3	0.1	-89.28	30.3	-2,404.7	2,404.9	2,404.5	0.38	6,305.494	
238.0	238.0	200.0	200.0	0.4	0.1	-89.28	30.2	-2,404.6	2,404.8	2,404.4	0.48	4,973.297	
295.3	295.3	258.7	258.7	0.5	0.1	-89.28	30.1	-2,404.7	2,404.8	2,404.2	0.66	3,631.905	
300.0	300.0	263.7	263.7	0.5	0.1	-89.28	30.1	-2,404.7	2,404.8	2,404.2	0.68	3,552.020	
393.7	393.7	374.5	374.5	0.8	0.2	-89.29	30.0	-2,404.3	2,404.5	2,403.6	0.96	2,515.667	
400.0	400.0	382.4	382.4	0.8	0.2	-89.29	30.0	-2,404.2	2,404.5	2,403.5	0.97	2,469.003	
492.1	492.1	461.6	461.6	1.0	0.2	-89.28	30.3	-2,403.6	2,403.8	2,402.6	1.22	1,972.867	
500.0	500.0	467.8	467.8	1.0	0.2	-89.28	30.4	-2,403.6	2,403.8	2,402.6	1.24	1,940.030	
590.5	590.5	565.8	565.8	1.2	0.3	-89.27	30.4	-2,403.4	2,403.7	2,402.2	1.46	1,644.470	
600.0	600.0	578.3	578.3	1.2	0.3	-89.28	30.4	-2,403.4	2,403.6	2,402.1	1.48	1,620.038	
689.0	689.0	659.8	659.8	1.4	0.3	-89.28	30.1	-2,402.8	2,403.0	2,401.3	1.70	1,410.719	
700.0	700.0	668.9	668.9	1.4	0.3	-89.28	30.1	-2,402.8	2,403.0	2,401.3	1.73	1,388.224	
787.4	787.4	770.7	770.7	1.6	0.3	-89.28	30.1	-2,402.4	2,402.7	2,400.7	1.97	1,218.987	
800.0	800.0	788.7	788.7	1.7	0.3	-89.28	30.1	-2,402.2	2,402.6	2,400.6	2.01	1,196.336	
885.8	885.8	871.2	871.2	1.9	0.4	-89.28	30.1	-2,401.3	2,401.6	2,399.4	2.25	1,065.915	
900.0	900.0	884.2	884.1	1.9	0.4	-89.28	30.1	-2,401.2	2,401.5	2,399.2	2.29	1,047.135	
984.2	984.2	959.6	959.6	2.1	0.4	-89.28	30.1	-2,400.6	2,400.9	2,398.3	2.52	952.746	
1,000.0	1,000.0	973.6	973.6	2.1	0.4	-89.28	30.0	-2,400.6	2,400.8	2,398.2	2.56	937.169	
1,081.4	1,081.4	1,043.5	1,043.4	2.3	0.5	-89.29	29.9	-2,400.4	2,400.6	2,397.8	2.76	870.633	
1,082.7	1,082.7	1,044.5	1,044.5	2.3	0.5	-89.29	29.9	-2,400.4	2,400.6	2,397.8	2.76	869.757	
1,100.0	1,100.0	1,059.0	1,059.0	2.3	0.5	-89.29	29.9	-2,400.4	2,400.6	2,397.8	2.80	857.620	
1,181.1	1,181.1	1,134.9	1,134.9	2.5	0.5	-118.01	30.4	-2,400.6	2,401.4	2,398.4	3.00	800.758	
1,200.0	1,200.0	1,155.4	1,155.4	2.6	0.5	-118.02	30.5	-2,400.7	2,401.7	2,398.7	3.05	787.461	
1,279.5	1,279.4	1,234.9	1,234.9	2.7	0.5	-118.05	30.9	-2,400.9	2,403.7	2,400.5	3.25	739.491	
1,300.0	1,299.8	1,253.5	1,253.5	2.8	0.5	-118.07	30.9	-2,400.9	2,404.4	2,401.1	3.30	728.998	
1,377.9	1,377.5	1,329.4	1,329.4	3.0	0.5	-118.15	30.7	-2,401.3	2,407.8	2,404.3	3.49	689.321	
1,400.0	1,399.5	1,353.6	1,353.6	3.0	0.5	-118.18	30.6	-2,401.4	2,409.0	2,405.4	3.55	678.080	
1,476.4	1,475.3	1,441.3	1,441.3	3.2	0.5	-118.32	30.6	-2,401.5	2,413.3	2,409.6	3.75	642.794	
1,500.0	1,498.7	1,469.9	1,469.9	3.3	0.5	-118.38	30.5	-2,401.4	2,414.8	2,411.0	3.81	633.366	
1,574.8	1,572.6	1,556.3	1,556.3	3.5	0.6	-118.57	30.2	-2,400.8	2,419.8	2,415.8	4.03	600.740	
1,600.0	1,597.5	1,584.6	1,584.6	3.5	0.6	-118.64	29.9	-2,400.5	2,421.6	2,417.5	4.10	590.148	
1,673.2	1,669.4	1,650.1	1,650.0	3.7	0.6	-118.81	29.0	-2,399.9	2,427.5	2,423.2	4.34	559.332	
1,700.1	1,695.8	1,672.7	1,672.6	3.8	0.6	-118.87	28.8	-2,399.7	2,430.0	2,425.6	4.43	548.918	
1,771.6	1,765.7	1,742.1	1,742.1	4.1	0.6	-119.18	28.4	-2,399.4	2,437.0	2,432.3	4.67	522.115	
1,800.0	1,793.4	1,772.8	1,772.8	4.2	0.6	-119.31	28.3	-2,399.2	2,439.7	2,435.0	4.76	512.333	
1,870.1	1,862.0	1,840.7	1,840.7	4.4	0.7	-119.60	28.5	-2,398.7	2,446.5	2,441.5	5.01	488.299	
1,900.0	1,891.3	1,867.7	1,867.7	4.5	0.7	-119.71	28.6	-2,398.5	2,449.4	2,444.3	5.12	478.726	
1,968.5	1,958.3	1,943.2	1,943.1	4.8	0.7	-120.03	28.7	-2,398.0	2,456.2	2,450.8	5.37	457.290	
2,000.0	1,989.1	1,984.6	1,984.6	4.9	0.7	-120.20	28.7	-2,397.5	2,459.2	2,453.7	5.49	448.027	
2,066.9	2,054.5	2,044.2	2,044.1	5.1	0.7	-120.46	28.5	-2,396.7	2,465.4	2,459.7	5.74	429.710	
2,100.0	2,086.9	2,070.6	2,070.5	5.3	0.7	-120.57	28.3	-2,396.5	2,468.6	2,462.8	5.86	421.313	
2,165.3	2,150.8	2,120.9	2,120.9	5.5	0.8	-120.79	27.9	-2,396.1	2,475.3	2,469.2	6.10	405.671	
2,200.0	2,184.7	2,146.4	2,146.4	5.6	0.8	-120.90	27.8	-2,396.1	2,479.0	2,472.8	6.23	398.111	
2,263.8	2,247.1	2,200.0	2,199.9	5.9	0.8	-121.13	27.7	-2,396.3	2,486.1	2,479.7	6.46	384.907	
2,300.0	2,282.5	2,232.6	2,232.5	6.0	0.8	-121.26	27.7	-2,396.5	2,490.3	2,483.7	6.59	377.796	
2,362.2	2,343.3	2,300.0	2,299.9	6.3	0.8	-121.53	27.9	-2,396.6	2,497.3	2,490.5	6.83	365.901	
2,400.0	2,380.3	2,335.9	2,335.8	6.5	0.8	-121.67	28.0	-2,396.7	2,501.5	2,494.6	6.97	359.157	
2,460.6	2,439.6	2,385.5	2,385.5	6.7	0.8	-121.87	28.1	-2,396.9	2,508.6	2,501.4	7.19	348.828	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,500.0	2,478.1	2,420.3	2,420.2	6.9	0.8	-122.01	28.1	-2,397.2	2,513.3	2,505.9	7.34	342.374		
2,559.0	2,535.9	2,475.4	2,475.3	7.1	0.8	-122.24	28.1	-2,397.6	2,520.4	2,512.8	7.57	332.956		
2,600.0	2,575.9	2,516.5	2,516.4	7.3	0.8	-122.40	28.0	-2,398.0	2,525.4	2,517.7	7.73	326.831		
2,657.5	2,632.2	2,581.7	2,581.6	7.5	0.8	-122.66	28.2	-2,398.5	2,532.3	2,524.4	7.95	318.722		
2,700.0	2,673.8	2,622.9	2,622.8	7.7	0.8	-122.81	28.6	-2,398.7	2,537.4	2,529.3	8.11	312.958		
2,755.9	2,728.4	2,671.2	2,671.1	7.9	0.8	-123.00	28.9	-2,399.0	2,544.1	2,535.8	8.32	305.660		
2,800.0	2,771.6	2,712.8	2,712.7	8.1	0.8	-123.16	29.0	-2,399.4	2,549.6	2,541.1	8.49	300.184		
2,854.3	2,824.7	2,777.6	2,777.5	8.3	0.8	-123.41	29.4	-2,399.8	2,556.2	2,547.5	8.70	293.668		
2,900.0	2,869.4	2,823.2	2,823.1	8.5	0.9	-123.57	29.8	-2,400.0	2,561.7	2,552.8	8.88	288.466		
2,952.7	2,921.0	2,868.5	2,868.4	8.8	0.9	-123.75	30.0	-2,400.2	2,568.1	2,559.0	9.08	282.731		
3,000.0	2,967.2	2,914.8	2,914.7	9.0	0.9	-123.92	30.1	-2,400.5	2,573.9	2,564.7	9.26	277.857		
3,051.2	3,017.3	2,987.1	2,987.0	9.2	0.9	-124.19	30.6	-2,400.7	2,580.1	2,570.6	9.46	272.820		
3,100.0	3,065.0	3,032.4	3,032.3	9.4	0.9	-124.35	31.2	-2,400.6	2,585.7	2,576.1	9.64	268.146		
3,149.6	3,113.5	3,072.7	3,072.6	9.6	0.9	-124.50	31.5	-2,400.6	2,591.6	2,581.8	9.83	263.560		
3,200.0	3,162.8	3,121.7	3,121.6	9.8	0.9	-124.68	31.6	-2,400.7	2,597.7	2,587.7	10.03	259.110		
3,248.0	3,209.8	3,183.8	3,183.7	10.0	0.9	-124.91	32.0	-2,400.6	2,603.4	2,593.2	10.21	255.009		
3,300.0	3,260.6	3,239.0	3,238.9	10.2	0.9	-125.11	32.5	-2,400.4	2,609.4	2,599.0	10.41	250.719		
3,346.4	3,306.1	3,284.8	3,284.7	10.5	0.9	-125.28	32.7	-2,400.1	2,614.8	2,604.2	10.58	247.032		
3,400.0	3,358.5	3,335.4	3,335.3	10.7	0.9	-125.47	32.7	-2,399.8	2,621.0	2,610.2	10.79	242.896		
3,444.9	3,402.3	3,377.1	3,377.0	10.9	0.9	-125.62	32.8	-2,399.6	2,626.3	2,615.3	10.96	239.531		
3,500.0	3,456.3	3,425.9	3,425.8	11.1	1.0	-125.80	33.0	-2,399.4	2,632.8	2,621.6	11.18	235.541		
3,543.3	3,498.6	3,462.6	3,462.5	11.3	1.0	-125.93	33.3	-2,399.4	2,638.1	2,626.8	11.35	232.515		
3,600.0	3,554.1	3,512.5	3,512.4	11.5	1.0	-126.10	33.6	-2,399.5	2,645.2	2,633.6	11.56	228.751		
3,641.7	3,594.9	3,553.8	3,553.7	11.7	1.0	-126.25	33.8	-2,399.5	2,650.4	2,638.7	11.72	226.178		
3,700.0	3,651.9	3,609.2	3,609.1	12.0	1.0	-126.45	33.8	-2,399.6	2,657.8	2,645.8	11.93	222.692		
3,740.1	3,691.2	3,641.4	3,641.3	12.2	1.0	-126.57	33.7	-2,399.7	2,662.9	2,650.9	12.09	220.297		
3,800.0	3,749.7	3,689.4	3,689.3	12.4	1.0	-126.74	33.6	-2,400.0	2,670.9	2,658.5	12.32	216.859		
3,838.6	3,787.4	3,731.9	3,731.8	12.6	1.0	-126.90	33.5	-2,400.3	2,676.1	2,663.6	12.46	214.727		
3,900.0	3,847.5	3,807.6	3,807.5	12.9	1.0	-127.17	33.6	-2,400.6	2,684.1	2,671.4	12.69	211.454		
3,937.0	3,883.7	3,844.4	3,844.3	13.0	1.0	-127.30	33.5	-2,400.6	2,688.8	2,676.0	12.83	209.619		
4,000.0	3,945.3	3,908.2	3,908.1	13.3	1.0	-127.53	33.1	-2,400.6	2,696.9	2,683.8	13.06	206.541		
4,035.4	3,980.0	3,950.2	3,950.1	13.5	1.0	-127.70	32.4	-2,400.4	2,701.4	2,688.2	13.19	204.771		
4,060.0	4,004.0	3,979.3	3,979.1	13.6	1.0	-127.81	31.9	-2,400.2	2,704.5	2,691.2	13.29	203.570		
4,100.0	4,043.2	4,028.2	4,028.1	13.7	1.0	-128.08	30.6	-2,399.6	2,709.2	2,695.8	13.40	202.106		
4,133.8	4,076.5	4,070.9	4,070.7	13.8	1.0	-128.30	29.3	-2,399.0	2,712.9	2,699.4	13.49	201.136		
4,200.0	4,141.6	4,148.8	4,148.6	14.0	1.0	-128.68	26.5	-2,397.3	2,719.0	2,705.4	13.65	199.183		
4,232.3	4,173.5	4,185.6	4,185.3	14.1	1.1	-128.85	25.1	-2,396.4	2,721.6	2,707.9	13.72	198.329		
4,300.0	4,240.6	4,243.2	4,242.9	14.3	1.1	-129.10	22.9	-2,395.0	2,726.3	2,712.4	13.88	196.478		
4,330.7	4,271.1	4,267.4	4,267.0	14.4	1.1	-129.20	21.9	-2,394.5	2,728.2	2,714.3	13.94	195.749		
4,400.0	4,340.0	4,326.4	4,326.0	14.5	1.1	-129.41	19.5	-2,393.4	2,732.0	2,718.0	14.08	194.061		
4,429.1	4,369.0	4,354.0	4,353.6	14.6	1.1	-129.50	18.4	-2,393.0	2,733.4	2,719.3	14.13	193.443		
4,500.0	4,439.7	4,423.8	4,423.3	14.8	1.1	-129.67	15.8	-2,391.9	2,735.9	2,721.7	14.26	191.878		
4,527.5	4,467.2	4,452.9	4,452.4	14.8	1.1	-129.73	14.8	-2,391.5	2,736.6	2,722.3	14.30	191.345		
4,600.0	4,539.7	4,532.9	4,532.4	14.9	1.1	-129.83	12.7	-2,390.3	2,737.5	2,723.1	14.42	189.836		
4,626.0	4,565.6	4,563.6	4,563.0	15.0	1.1	-129.85	12.1	-2,389.8	2,737.4	2,723.0	14.46	189.329		
4,660.2	4,599.8	4,600.0	4,599.4	15.0	1.1	-101.14	11.3	-2,389.1	2,737.1	2,723.2	13.87	197.393		
4,700.0	4,639.6	4,635.9	4,635.3	15.0	1.2	-101.16	10.6	-2,388.5	2,736.5	2,722.6	13.94	196.350		
4,724.4	4,664.0	4,656.3	4,655.7	15.1	1.2	-101.17	10.1	-2,388.2	2,736.3	2,722.3	13.98	195.664		
4,800.0	4,739.6	4,721.4	4,720.8	15.2	1.2	-101.21	8.5	-2,387.3	2,735.6	2,721.5	14.13	193.573		
4,822.8	4,762.5	4,742.6	4,741.9	15.2	1.2	-101.22	8.0	-2,387.0	2,735.5	2,721.3	14.18	192.943		
4,900.0	4,839.6	4,813.0	4,812.3	15.3	1.2	-101.25	6.6	-2,386.4	2,735.0	2,720.7	14.33	190.863		
4,921.2	4,860.9	4,831.0	4,830.3	15.4	1.2	-101.26	6.4	-2,386.3	2,735.0	2,720.6	14.37	190.304		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,969.8	4,909.5	4,872.2	4,871.5	15.4	1.2	-101.27	5.8	-2,386.1	2,734.9	2,720.4	14.47	189.045		
5,000.0	4,939.6	4,900.0	4,899.3	15.5	1.2	-101.28	5.4	-2,386.0	2,734.9	2,720.4	14.53	188.270		
5,019.7	4,959.3	4,924.8	4,924.1	15.5	1.2	-101.28	5.0	-2,386.0	2,734.9	2,720.4	14.57	187.752		
5,100.0	5,039.6	5,026.8	5,026.1	15.6	1.2	-101.31	4.1	-2,385.1	2,734.4	2,719.7	14.73	185.624		
5,118.1	5,057.7	5,043.7	5,043.0	15.7	1.2	-101.31	4.0	-2,384.9	2,734.2	2,719.5	14.77	185.160		
5,200.0	5,139.6	5,120.8	5,120.1	15.8	1.3	-101.32	3.7	-2,384.3	2,733.6	2,718.7	14.93	183.107		
5,216.5	5,156.2	5,136.9	5,136.3	15.8	1.3	-101.32	3.7	-2,384.2	2,733.5	2,718.6	14.96	182.704		
5,300.0	5,239.6	5,219.3	5,218.6	15.9	1.3	-101.32	3.8	-2,383.7	2,733.0	2,717.9	15.12	180.702		
5,314.9	5,254.6	5,234.6	5,233.9	16.0	1.3	-101.32	3.9	-2,383.6	2,732.9	2,717.7	15.15	180.346		
5,400.0	5,339.6	5,321.2	5,320.5	16.1	1.3	-101.31	4.3	-2,383.1	2,732.3	2,717.0	15.32	178.349		
5,413.4	5,353.0	5,334.6	5,333.9	16.1	1.3	-101.31	4.4	-2,383.0	2,732.2	2,716.9	15.35	178.040		
5,500.0	5,439.6	5,423.7	5,423.0	16.3	1.3	-101.29	5.3	-2,382.6	2,731.6	2,716.1	15.52	176.059		
5,511.8	5,451.4	5,436.9	5,436.2	16.3	1.3	-101.29	5.5	-2,382.5	2,731.5	2,716.0	15.54	175.789		
5,600.0	5,539.6	5,536.1	5,535.4	16.4	1.3	-101.26	6.8	-2,381.7	2,730.6	2,714.9	15.71	173.785		
5,610.2	5,549.9	5,547.8	5,547.1	16.4	1.3	-101.26	7.0	-2,381.6	2,730.5	2,714.8	15.73	173.553		
5,700.0	5,639.6	5,635.5	5,634.8	16.6	1.4	-101.25	7.6	-2,380.5	2,729.3	2,713.3	15.91	171.541		
5,708.6	5,648.3	5,642.5	5,641.7	16.6	1.4	-101.25	7.6	-2,380.4	2,729.1	2,713.2	15.93	171.351		
5,800.0	5,739.6	5,727.1	5,726.4	16.7	1.4	-101.25	8.2	-2,379.8	2,728.4	2,712.2	16.11	169.375		
5,807.1	5,746.7	5,736.8	5,736.1	16.8	1.4	-101.24	8.2	-2,379.7	2,728.3	2,712.2	16.12	169.219		
5,900.0	5,839.6	5,834.1	5,833.4	16.9	1.4	-101.24	8.7	-2,378.4	2,727.0	2,710.7	16.31	167.215		
5,905.5	5,845.1	5,838.1	5,837.4	16.9	1.4	-101.24	8.8	-2,378.4	2,727.0	2,710.6	16.32	167.101		
6,000.0	5,939.6	5,911.2	5,910.5	17.1	1.4	-101.23	9.3	-2,378.0	2,726.4	2,709.9	16.50	165.192		
6,003.9	5,943.6	5,915.9	5,915.2	17.1	1.4	-101.23	9.3	-2,378.0	2,726.3	2,709.8	16.51	165.112		
6,059.2	5,998.8	5,981.7	5,980.9	17.2	1.4	-101.22	9.8	-2,377.8	2,726.0	2,709.4	16.62	163.975		
6,100.0	6,039.6	6,022.4	6,021.7	17.2	1.4	-11.24	10.1	-2,377.5	2,724.6	2,707.4	17.22	158.248		
6,102.3	6,042.0	6,024.5	6,023.8	17.2	1.4	-11.24	10.1	-2,377.5	2,724.4	2,707.2	17.22	158.201		
6,150.0	6,089.4	6,066.3	6,065.5	17.3	1.4	-11.33	10.5	-2,377.3	2,719.8	2,702.4	17.32	157.047		
6,200.0	6,138.7	6,113.2	6,112.4	17.3	1.4	-11.48	10.9	-2,377.2	2,711.7	2,694.2	17.43	155.531		
6,200.8	6,139.5	6,114.1	6,113.3	17.3	1.4	-11.48	10.9	-2,377.2	2,711.5	2,694.1	17.44	155.506		
6,250.0	6,187.4	6,170.9	6,170.2	17.3	1.4	-11.72	11.3	-2,376.9	2,700.1	2,682.6	17.54	153.901		
6,299.2	6,234.4	6,217.6	6,216.9	17.4	1.5	-12.04	11.4	-2,376.5	2,685.4	2,667.8	17.62	152.398		
6,300.0	6,235.1	6,218.2	6,217.5	17.4	1.5	-12.04	11.4	-2,376.5	2,685.2	2,667.5	17.62	152.375		
6,350.0	6,281.7	6,254.8	6,254.1	17.4	1.5	-12.44	11.4	-2,376.3	2,667.1	2,649.5	17.65	151.074		
6,397.6	6,324.8	6,288.8	6,288.0	17.3	1.5	-12.90	11.4	-2,376.2	2,647.2	2,629.5	17.64	150.050		
6,400.0	6,326.9	6,300.0	6,299.3	17.3	1.5	-12.95	11.3	-2,376.2	2,646.1	2,628.5	17.65	149.965		
6,450.0	6,370.5	6,338.4	6,337.7	17.3	1.5	-13.56	11.3	-2,376.2	2,622.1	2,604.6	17.59	149.107		
6,496.0	6,409.1	6,385.3	6,384.5	17.3	1.5	-14.29	11.2	-2,376.0	2,597.4	2,579.9	17.50	148.435		
6,500.0	6,412.3	6,389.2	6,388.5	17.3	1.5	-14.36	11.2	-2,376.0	2,595.1	2,577.7	17.49	148.389		
6,550.0	6,452.1	6,425.3	6,424.5	17.3	1.5	-15.28	11.1	-2,375.7	2,565.3	2,548.0	17.34	147.929		
6,594.5	6,485.6	6,452.8	6,452.0	17.3	1.5	-16.24	11.1	-2,375.7	2,536.6	2,519.5	17.18	147.649		
6,600.0	6,489.7	6,456.1	6,455.4	17.3	1.5	-16.37	11.1	-2,375.7	2,532.9	2,515.8	17.16	147.627		
6,650.0	6,524.9	6,485.1	6,484.4	17.2	1.5	-17.69	11.1	-2,375.7	2,498.2	2,481.3	16.95	147.359		
6,692.9	6,553.0	6,510.9	6,510.2	17.2	1.5	-19.08	11.1	-2,375.7	2,466.7	2,449.9	16.78	146.988		
6,700.0	6,557.5	6,515.7	6,515.0	17.2	1.5	-19.34	11.1	-2,375.7	2,461.3	2,444.5	16.75	146.919		
6,750.0	6,587.4	6,547.6	6,546.8	17.2	1.5	-21.42	11.1	-2,375.8	2,422.2	2,405.6	16.59	146.020		
6,791.3	6,609.9	6,571.5	6,570.8	17.2	1.5	-23.53	11.0	-2,375.8	2,388.4	2,371.9	16.52	144.617		
6,800.0	6,614.4	6,576.3	6,575.5	17.2	1.5	-24.02	11.0	-2,375.8	2,381.2	2,364.7	16.50	144.286		
6,850.0	6,638.4	6,601.7	6,601.0	17.2	1.5	-27.33	10.9	-2,375.7	2,338.5	2,321.9	16.57	141.166		
6,889.7	6,655.3	6,600.0	6,599.2	17.4	1.5	-30.12	10.9	-2,375.7	2,303.5	2,286.8	16.72	137.776		
6,900.0	6,659.4	6,600.0	6,599.2	17.5	1.5	-30.94	10.9	-2,375.7	2,294.4	2,277.6	16.79	136.680		
6,950.0	6,677.1	6,600.0	6,599.2	18.0	1.5	-35.59	10.9	-2,375.7	2,249.2	2,231.9	17.30	130.028		
6,988.2	6,688.4	6,600.0	6,599.2	18.5	1.5	-40.03	10.9	-2,375.7	2,214.0	2,196.1	17.93	123.507		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
7,000.0	6,691.5	6,600.0	6,599.2	18.7	1.5	-41.60	10.9	-2,375.7	2,203.0	2,184.8	18.16	121.313		
7,050.0	6,702.5	6,600.0	6,599.2	19.5	1.5	-49.43	10.9	-2,375.7	2,156.0	2,136.6	19.38	111.270		
7,086.6	6,708.4	6,600.0	6,599.2	20.1	1.5	-56.58	10.9	-2,375.7	2,121.2	2,100.8	20.43	103.830		
7,100.0	6,710.1	6,600.0	6,599.2	20.4	1.5	-59.53	10.9	-2,375.7	2,108.4	2,087.6	20.82	101.277		
7,150.0	6,714.2	6,600.0	6,599.2	21.3	1.5	-72.02	10.9	-2,375.7	2,060.4	2,038.2	22.16	92.959		
7,185.0	6,715.0	6,600.0	6,599.2	21.9	1.5	-81.89	10.9	-2,375.7	2,026.7	2,003.7	22.91	88.462		
7,185.6	6,715.0	6,600.0	6,599.2	21.9	1.5	-82.05	10.9	-2,375.7	2,026.1	2,003.2	22.92	88.398		
7,200.0	6,715.0	6,600.0	6,599.2	22.2	1.5	-82.05	10.9	-2,375.7	2,012.2	1,989.0	23.20	86.750		
7,283.4	6,714.8	6,600.0	6,599.2	23.9	1.5	-82.05	10.9	-2,375.7	1,931.9	1,907.0	24.86	77.713		
7,300.0	6,714.8	6,600.0	6,599.2	24.2	1.5	-82.05	10.9	-2,375.7	1,916.0	1,890.8	25.19	76.064		
7,381.9	6,714.6	6,600.0	6,599.2	26.0	1.5	-82.05	10.9	-2,375.7	1,837.5	1,810.6	26.94	68.218		
7,400.0	6,714.6	6,600.0	6,599.2	26.4	1.5	-82.05	10.9	-2,375.7	1,820.2	1,792.8	27.32	66.619		
7,480.3	6,714.4	6,600.0	6,599.2	28.2	1.5	-82.05	10.9	-2,375.7	1,743.6	1,714.4	29.13	59.860		
7,500.0	6,714.4	6,600.0	6,599.2	28.7	1.5	-82.05	10.9	-2,375.7	1,724.8	1,695.3	29.57	58.330		
7,578.7	6,714.2	6,600.0	6,599.2	30.5	1.5	-82.05	10.9	-2,375.7	1,650.2	1,618.7	31.41	52.535		
7,600.0	6,714.2	6,600.0	6,599.2	31.0	1.5	-82.05	10.9	-2,375.7	1,630.0	1,598.1	31.91	51.086		
7,677.1	6,714.0	6,600.0	6,599.2	32.9	1.5	-82.05	10.9	-2,375.7	1,557.4	1,523.6	33.77	46.122		
7,700.0	6,714.0	6,600.0	6,599.2	33.4	1.5	-82.05	10.9	-2,375.7	1,535.9	1,501.6	34.32	44.758		
7,775.6	6,713.9	6,600.0	6,599.2	35.3	1.5	-82.05	10.9	-2,375.7	1,465.3	1,429.1	36.18	40.502		
7,800.0	6,713.8	6,600.0	6,599.2	35.9	1.5	-82.05	10.9	-2,375.7	1,442.6	1,405.8	36.78	39.222		
7,874.0	6,713.7	6,600.0	6,599.2	37.8	1.5	-82.05	10.9	-2,375.7	1,374.1	1,335.5	38.64	35.566		
7,900.0	6,713.6	6,600.0	6,599.2	38.4	1.5	-82.05	10.9	-2,375.7	1,350.2	1,310.9	39.29	34.367		
7,972.4	6,713.5	6,600.0	6,599.2	40.3	1.5	-82.05	10.9	-2,375.7	1,284.0	1,242.9	41.13	31.217		
8,000.0	6,713.4	6,600.0	6,599.2	41.0	1.5	-82.05	10.9	-2,375.7	1,259.0	1,217.2	41.83	30.095		
8,070.8	6,713.3	6,600.0	6,599.2	42.8	1.5	-82.05	10.9	-2,375.7	1,195.2	1,151.6	43.66	27.377		
8,100.0	6,713.2	6,600.0	6,599.2	43.6	1.5	-82.05	10.9	-2,375.7	1,169.2	1,124.8	44.41	26.329		
8,169.3	6,713.1	6,600.0	6,599.2	45.4	1.5	-82.05	10.9	-2,375.7	1,108.1	1,061.9	46.21	23.979		
8,200.0	6,713.0	6,600.0	6,599.2	46.2	1.5	-82.05	10.9	-2,375.7	1,081.3	1,034.2	47.01	23.001		
8,267.7	6,712.9	6,600.0	6,599.2	48.0	1.5	-82.05	10.9	-2,375.7	1,022.9	974.2	48.78	20.969		
8,300.0	6,712.8	6,600.0	6,599.2	48.8	1.5	-82.05	10.9	-2,375.7	995.5	945.9	49.63	20.060		
8,366.1	6,712.7	6,600.0	6,599.2	50.6	1.5	-82.05	10.9	-2,375.7	940.4	889.1	51.37	18.306		
8,400.0	6,712.6	6,600.0	6,599.2	51.5	1.5	-82.05	10.9	-2,375.7	912.8	860.5	52.27	17.463		
8,464.5	6,712.5	6,600.0	6,599.2	53.2	1.5	-82.05	10.9	-2,375.7	861.3	807.3	53.98	15.955		
8,500.0	6,712.4	6,600.0	6,599.2	54.1	1.5	-82.05	10.9	-2,375.7	833.8	778.8	54.92	15.181		
8,563.0	6,712.3	6,600.0	6,599.2	55.8	1.5	-82.05	10.9	-2,375.7	786.5	729.9	56.60	13.895		
8,600.0	6,712.3	6,600.0	6,599.2	56.8	1.5	-82.05	10.9	-2,375.7	759.7	702.1	57.59	13.192		
8,661.4	6,712.1	6,600.0	6,599.2	58.5	1.5	-82.05	10.9	-2,375.7	717.4	658.1	59.23	12.111		
8,700.0	6,712.1	6,600.0	6,599.2	59.5	1.5	-82.05	10.9	-2,375.7	692.2	632.0	60.26	11.486		
8,759.8	6,711.9	6,600.0	6,599.2	61.1	1.5	-82.05	10.9	-2,375.7	655.8	594.0	61.87	10.600		
8,800.0	6,711.9	6,600.0	6,599.2	62.2	1.5	-82.05	10.9	-2,375.7	633.4	570.4	62.95	10.062		
8,858.2	6,711.8	6,600.0	6,599.2	63.8	1.5	-82.05	10.9	-2,375.7	604.1	539.6	64.52	9.363		
8,900.0	6,711.7	6,600.0	6,599.2	64.9	1.5	-82.05	10.9	-2,375.7	585.8	520.2	65.65	8.924		
8,956.7	6,711.6	6,600.0	6,599.2	66.5	1.5	-82.05	10.9	-2,375.7	565.0	497.8	67.18	8.410		
9,000.0	6,711.5	6,600.0	6,599.2	67.6	1.5	-82.05	10.9	-2,375.7	552.4	484.1	68.35	8.083		
9,055.1	6,711.4	6,600.0	6,599.2	69.1	1.5	-82.05	10.9	-2,375.7	541.1	471.3	69.84	7.748		
9,100.0	6,711.3	6,600.0	6,599.2	70.4	1.5	-82.05	10.9	-2,375.7	535.9	464.9	71.06	7.542		
9,139.9	6,711.2	6,600.0	6,599.2	71.5	1.5	-82.05	10.9	-2,375.7	534.4	462.3	72.14	7.408 CC		
9,153.5	6,711.2	6,600.0	6,599.2	71.8	1.5	-82.05	10.9	-2,375.7	534.6	462.1	72.51	7.373 ES		
9,200.0	6,711.1	6,600.0	6,599.2	73.1	1.5	-82.05	10.9	-2,375.7	537.8	464.0	73.77	7.290		
9,251.9	6,711.0	6,600.0	6,599.2	74.5	1.5	-82.05	10.9	-2,375.7	546.0	470.9	75.19	7.263 SF		
9,300.0	6,710.9	6,600.0	6,599.2	75.8	1.5	-82.05	10.9	-2,375.7	557.9	481.4	76.49	7.293		
9,350.4	6,710.8	6,600.0	6,599.2	77.2	1.5	-82.05	10.9	-2,375.7	574.4	496.5	77.86	7.377		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,400.0	6,710.7	6,600.0	6,599.2	78.6	1.5	-82.05	10.9	-2,375.7	594.3	515.1	79.22	7.503	
9,448.8	6,710.6	6,600.0	6,599.2	79.9	1.5	-82.05	10.9	-2,375.7	617.3	536.7	80.55	7.663	
9,500.0	6,710.5	6,600.0	6,599.2	81.3	1.5	-82.05	10.9	-2,375.7	644.4	562.5	81.95	7.864	
9,547.2	6,710.4	6,600.0	6,599.2	82.6	1.5	-82.05	10.9	-2,375.7	671.9	588.7	83.24	8.073	
9,600.0	6,710.3	6,600.0	6,599.2	84.1	1.5	-82.05	10.9	-2,375.7	705.2	620.5	84.68	8.328	
9,645.6	6,710.2	6,600.0	6,599.2	85.3	1.5	-82.05	10.9	-2,375.7	735.8	649.8	85.93	8.563	
9,700.0	6,710.1	6,600.0	6,599.2	86.8	1.5	-82.05	10.9	-2,375.7	774.1	686.7	87.41	8.856	
9,744.1	6,710.0	6,600.0	6,599.2	88.1	1.5	-82.05	10.9	-2,375.7	806.6	718.0	88.62	9.102	
9,800.0	6,709.9	6,600.0	6,599.2	89.6	1.5	-82.05	10.9	-2,375.7	849.3	759.1	90.15	9.421	
9,842.5	6,709.9	6,600.0	6,599.2	90.8	1.5	-82.05	10.9	-2,375.7	882.7	791.4	91.32	9.667	
9,900.0	6,709.7	6,600.0	6,599.2	92.4	1.5	-82.05	10.9	-2,375.7	929.1	836.3	92.89	10.002	
9,940.9	6,709.7	6,600.0	6,599.2	93.5	1.5	-82.05	10.9	-2,375.7	962.9	868.9	94.02	10.242	
10,000.0	6,709.6	6,600.0	6,599.2	95.1	1.5	-82.05	10.9	-2,375.7	1,012.6	916.9	95.64	10.588	
10,039.3	6,709.5	6,600.0	6,599.2	96.2	1.5	-82.05	10.9	-2,375.7	1,046.2	949.5	96.72	10.817	
10,100.0	6,709.4	6,600.0	6,599.2	97.9	1.5	-82.05	10.9	-2,375.7	1,098.8	1,000.4	98.39	11.168	
10,137.8	6,709.3	6,600.0	6,599.2	98.9	1.5	-82.05	10.9	-2,375.7	1,131.9	1,032.5	99.42	11.385	
10,200.0	6,709.2	6,600.0	6,599.2	100.7	1.5	-82.05	10.9	-2,375.7	1,187.2	1,086.0	101.13	11.738	
10,236.2	6,709.1	6,600.0	6,599.2	101.7	1.5	-82.05	10.9	-2,375.7	1,219.6	1,117.5	102.13	11.942	
10,300.0	6,709.0	6,600.0	6,599.2	103.4	1.5	-82.05	10.9	-2,375.7	1,277.2	1,173.4	103.89	12.295	
10,334.6	6,708.9	6,600.0	6,599.2	104.4	1.5	-82.05	10.9	-2,375.7	1,308.8	1,203.9	104.84	12.484	
10,400.0	6,708.8	6,600.0	6,599.2	106.2	1.5	-82.05	10.9	-2,375.7	1,368.7	1,262.1	106.64	12.835	
10,433.0	6,708.7	6,600.0	6,599.2	107.1	1.5	-82.05	10.9	-2,375.7	1,399.2	1,291.6	107.55	13.010	
10,500.0	6,708.6	6,600.0	6,599.2	109.0	1.5	-82.05	10.9	-2,375.7	1,461.3	1,351.9	109.39	13.358	
10,531.5	6,708.5	6,600.0	6,599.2	109.9	1.5	-82.05	10.9	-2,375.7	1,490.6	1,380.4	110.26	13.519	
10,600.0	6,708.4	6,600.0	6,599.2	111.8	1.5	-82.05	10.9	-2,375.7	1,554.8	1,442.7	112.15	13.864	
10,629.9	6,708.4	6,600.0	6,599.2	112.6	1.5	-82.05	10.9	-2,375.7	1,582.9	1,469.9	112.97	14.012	
10,700.0	6,708.2	6,600.0	6,599.2	114.6	1.5	-82.05	10.9	-2,375.7	1,649.1	1,534.2	114.90	14.352	
10,728.3	6,708.2	6,600.0	6,599.2	115.3	1.5	-82.05	10.9	-2,375.7	1,675.9	1,560.2	115.69	14.486	
10,800.0	6,708.0	6,600.0	6,599.2	117.3	1.5	-82.05	10.9	-2,375.7	1,744.0	1,626.3	117.66	14.822	
10,826.7	6,708.0	6,600.0	6,599.2	118.1	1.5	-82.05	10.9	-2,375.7	1,769.4	1,651.0	118.40	14.944	
10,900.0	6,707.8	6,600.0	6,599.2	120.1	1.5	-82.05	10.9	-2,375.7	1,839.4	1,719.0	120.42	15.275	
10,925.2	6,707.8	6,600.0	6,599.2	120.8	1.5	-82.05	10.9	-2,375.7	1,863.5	1,742.4	121.12	15.386	
11,000.0	6,707.6	6,600.0	6,599.2	122.9	1.5	-82.05	10.9	-2,375.7	1,935.3	1,812.1	123.18	15.711	
11,023.6	6,707.6	6,600.0	6,599.2	123.6	1.5	-82.05	10.9	-2,375.7	1,958.0	1,834.2	123.84	15.811	
11,100.0	6,707.5	6,600.0	6,599.2	125.7	1.5	-82.05	10.9	-2,375.7	2,031.6	1,905.7	125.95	16.131	
11,122.0	6,707.4	6,600.0	6,599.2	126.3	1.5	-82.05	10.9	-2,375.7	2,052.9	1,926.3	126.55	16.221	
11,200.0	6,707.3	6,600.0	6,599.2	128.5	1.5	-82.05	10.9	-2,375.7	2,128.3	1,999.5	128.71	16.535	
11,220.4	6,707.2	6,600.0	6,599.2	129.0	1.5	-82.05	10.9	-2,375.7	2,148.1	2,018.8	129.27	16.616	
11,300.0	6,707.1	6,600.0	6,599.2	131.3	1.5	-82.05	10.9	-2,375.7	2,225.2	2,093.7	131.47	16.925	
11,318.9	6,707.0	6,600.0	6,599.2	131.8	1.5	-82.05	10.9	-2,375.7	2,243.5	2,111.5	132.00	16.997	
11,400.0	6,706.9	6,600.0	6,599.2	134.0	1.5	-82.05	10.9	-2,375.7	2,322.4	2,188.2	134.24	17.300	
11,417.3	6,706.9	6,600.0	6,599.2	134.5	1.5	-82.05	10.9	-2,375.7	2,339.2	2,204.5	134.72	17.364	
11,500.0	6,706.7	6,600.0	6,599.2	136.8	1.5	-82.05	10.9	-2,375.7	2,419.8	2,282.8	137.00	17.662	
11,515.7	6,706.7	6,600.0	6,599.2	137.3	1.5	-82.05	10.9	-2,375.7	2,435.2	2,297.7	137.44	17.718	
11,600.0	6,706.5	6,600.0	6,599.2	139.6	1.5	-82.05	10.9	-2,375.7	2,517.4	2,377.7	139.77	18.011	
11,614.1	6,706.5	6,600.0	6,599.2	140.0	1.5	-82.05	10.9	-2,375.7	2,531.3	2,391.1	140.16	18.060	
11,700.0	6,706.3	6,600.0	6,599.2	142.4	1.5	-82.05	10.9	-2,375.7	2,615.3	2,472.7	142.54	18.348	
11,712.6	6,706.3	6,600.0	6,599.2	142.8	1.5	-82.05	10.9	-2,375.7	2,627.6	2,484.7	142.89	18.389	
11,800.0	6,706.1	6,600.0	6,599.2	145.2	1.5	-82.05	10.9	-2,375.7	2,713.2	2,567.9	145.31	18.672	
11,811.0	6,706.1	6,600.0	6,599.2	145.5	1.5	-82.05	10.9	-2,375.7	2,724.0	2,578.4	145.61	18.707	
11,900.0	6,705.9	6,600.0	6,599.2	148.0	1.5	-82.05	10.9	-2,375.7	2,811.3	2,663.3	148.07	18.986	
11,909.4	6,705.9	6,600.0	6,599.2	148.3	1.5	-82.05	10.9	-2,375.7	2,820.6	2,672.2	148.34	19.015	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
12,000.0	6,705.8	6,600.0	6,599.2	150.8	1.5	-82.05	10.9	-2,375.7	2,909.6	2,758.7	150.84	19.289		
12,007.8	6,705.7	6,600.0	6,599.2	151.0	1.5	-82.05	10.9	-2,375.7	2,917.3	2,766.2	151.06	19.312		
12,100.0	6,705.6	6,600.0	6,599.2	153.6	1.5	-82.05	10.9	-2,375.7	3,007.9	2,854.3	153.61	19.581		
12,106.3	6,705.6	6,600.0	6,599.2	153.8	1.5	-82.05	10.9	-2,375.7	3,014.1	2,860.3	153.79	19.599		
12,200.0	6,705.4	6,600.0	6,599.2	156.4	1.5	-82.05	10.9	-2,375.7	3,106.4	2,950.0	156.38	19.864		
12,204.7	6,705.4	6,600.0	6,599.2	156.5	1.5	-82.05	10.9	-2,375.7	3,111.0	2,954.5	156.51	19.877		
12,300.0	6,705.2	6,600.0	6,599.2	159.2	1.5	-82.05	10.9	-2,375.7	3,204.9	3,045.8	159.16	20.137		
12,303.1	6,705.2	6,600.0	6,599.2	159.3	1.5	-82.05	10.9	-2,375.7	3,208.0	3,048.8	159.24	20.146		
12,400.0	6,705.0	6,600.0	6,599.2	162.0	1.5	-82.05	10.9	-2,375.7	3,303.6	3,141.7	161.93	20.402		
12,401.5	6,705.0	6,600.0	6,599.2	162.0	1.5	-82.05	10.9	-2,375.7	3,305.1	3,143.1	161.97	20.406		
12,500.0	6,704.8	6,600.0	6,599.2	164.8	1.5	-82.05	10.9	-2,375.7	3,402.3	3,237.6	164.70	20.658		
12,598.4	6,704.6	6,600.0	6,599.2	167.5	1.5	-82.05	10.9	-2,375.7	3,499.5	3,332.1	167.43	20.902		
12,600.0	6,704.6	6,600.0	6,599.2	167.6	1.5	-82.05	10.9	-2,375.7	3,501.1	3,333.6	167.47	20.906		
12,696.8	6,704.4	6,600.0	6,599.2	170.3	1.5	-82.05	10.9	-2,375.7	3,596.8	3,426.7	170.16	21.138		
12,700.0	6,704.4	6,600.0	6,599.2	170.4	1.5	-82.05	10.9	-2,375.7	3,600.0	3,429.7	170.24	21.146		
12,795.2	6,704.3	6,600.0	6,599.2	173.0	1.5	-82.05	10.9	-2,375.7	3,694.2	3,521.3	172.88	21.368		
12,800.0	6,704.2	6,600.0	6,599.2	173.2	1.5	-82.05	10.9	-2,375.7	3,698.9	3,525.9	173.02	21.379		
12,893.7	6,704.1	6,600.0	6,599.2	175.8	1.5	-82.05	10.9	-2,375.7	3,791.6	3,616.0	175.61	21.590		
12,900.0	6,704.1	6,600.0	6,599.2	176.0	1.5	-82.06	10.9	-2,375.7	3,797.9	3,622.1	175.79	21.604		
12,992.1	6,703.9	6,600.0	6,599.2	178.5	1.5	-82.06	10.9	-2,375.7	3,889.1	3,710.7	178.35	21.806		
13,000.0	6,703.9	6,600.0	6,599.2	178.8	1.5	-82.06	10.9	-2,375.7	3,896.9	3,718.3	178.56	21.823		
13,090.5	6,703.7	6,600.0	6,599.2	181.3	1.5	-82.06	10.9	-2,375.7	3,986.6	3,805.5	181.08	22.016		
13,100.0	6,703.7	6,600.0	6,599.2	181.6	1.5	-82.06	10.9	-2,375.7	3,996.0	3,814.6	181.34	22.036		
13,188.9	6,703.5	6,600.0	6,599.2	184.0	1.5	-82.06	10.9	-2,375.7	4,084.1	3,900.3	183.81	22.220		
13,200.0	6,703.5	6,600.0	6,599.2	184.4	1.5	-82.06	10.9	-2,375.7	4,095.1	3,911.0	184.11	22.242		
13,287.4	6,703.3	6,600.0	6,599.2	186.8	1.5	-82.06	10.9	-2,375.7	4,181.7	3,995.2	186.54	22.418		
13,300.0	6,703.3	6,600.0	6,599.2	187.2	1.5	-82.06	10.9	-2,375.7	4,194.3	4,007.4	186.89	22.443		
13,385.8	6,703.2	6,600.0	6,599.2	189.6	1.5	-82.06	10.9	-2,375.7	4,279.4	4,090.1	189.27	22.610		
13,400.0	6,703.1	6,600.0	6,599.2	190.0	1.5	-82.06	10.9	-2,375.7	4,293.5	4,103.8	189.66	22.637		
13,484.2	6,703.0	6,600.0	6,599.2	192.3	1.5	-82.06	10.9	-2,375.7	4,377.0	4,185.0	192.00	22.797		
13,500.0	6,702.9	6,600.0	6,599.2	192.8	1.5	-82.06	10.9	-2,375.7	4,392.7	4,200.3	192.44	22.826		
13,582.6	6,702.8	6,600.0	6,599.2	195.1	1.5	-82.06	10.9	-2,375.7	4,474.7	4,280.0	194.73	22.979		
13,600.0	6,702.8	6,600.0	6,599.2	195.6	1.5	-82.06	10.9	-2,375.7	4,492.0	4,296.8	195.22	23.010		
13,681.1	6,702.6	6,600.0	6,599.2	197.8	1.5	-82.06	10.9	-2,375.7	4,572.5	4,375.0	197.47	23.156		
13,700.0	6,702.6	6,600.0	6,599.2	198.4	1.5	-82.06	10.9	-2,375.7	4,591.3	4,393.3	197.99	23.189		
13,779.5	6,702.4	6,600.0	6,599.2	200.6	1.5	-82.06	10.9	-2,375.7	4,670.2	4,470.0	200.20	23.328		
13,800.0	6,702.4	6,600.0	6,599.2	201.2	1.5	-82.06	10.9	-2,375.7	4,690.6	4,489.8	200.77	23.363		
13,877.9	6,702.2	6,600.0	6,599.2	203.3	1.5	-82.06	10.9	-2,375.7	4,768.0	4,565.1	202.93	23.496		
13,900.0	6,702.2	6,600.0	6,599.2	204.0	1.5	-82.06	10.9	-2,375.7	4,790.0	4,586.4	203.55	23.533		
13,976.3	6,702.1	6,600.0	6,599.2	206.1	1.5	-82.06	10.9	-2,375.7	4,865.9	4,660.2	205.67	23.659		
14,000.0	6,702.0	6,600.0	6,599.2	206.8	1.5	-82.06	10.9	-2,375.7	4,889.4	4,683.0	206.32	23.698		
14,074.8	6,701.9	6,600.0	6,599.2	208.9	1.5	-82.06	10.9	-2,375.7	4,963.7	4,755.3	208.40	23.818		
14,100.0	6,701.8	6,600.0	6,599.2	209.6	1.5	-82.06	10.9	-2,375.7	4,988.8	4,779.7	209.10	23.858		
14,173.2	6,701.7	6,600.0	6,599.2	211.6	1.5	-82.06	10.9	-2,375.7	5,061.6	4,850.4	211.13	23.973		
14,200.0	6,701.6	6,600.0	6,599.2	212.4	1.5	-82.06	10.9	-2,375.7	5,088.2	4,876.3	211.88	24.015		
14,271.6	6,701.5	6,600.0	6,599.2	214.4	1.5	-82.06	10.9	-2,375.7	5,159.4	4,945.6	213.87	24.125		
14,300.0	6,701.4	6,600.0	6,599.2	215.2	1.5	-82.06	10.9	-2,375.7	5,187.7	4,973.0	214.65	24.168		
14,370.0	6,701.3	6,600.0	6,599.2	217.1	1.5	-82.06	10.9	-2,375.7	5,257.3	5,040.7	216.60	24.272		
14,400.0	6,701.3	6,600.0	6,599.2	218.0	1.5	-82.06	10.9	-2,375.7	5,287.1	5,069.7	217.43	24.316		
14,468.5	6,701.1	6,600.0	6,599.2	219.9	1.5	-82.06	10.9	-2,375.7	5,355.3	5,135.9	219.33	24.416		
14,500.0	6,701.1	6,600.0	6,599.2	220.8	1.5	-82.07	10.9	-2,375.7	5,386.6	5,166.4	220.21	24.461		
14,566.9	6,701.0	6,600.0	6,599.2	222.6	1.5	-82.07	10.9	-2,375.7	5,453.2	5,231.1	222.07	24.556		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,600.0	6,700.9	6,600.0	6,599.2	223.6	1.5	-82.07	10.9	-2,375.7	5,486.2	5,263.2	222.99	24.603	
14,665.3	6,700.8	6,600.0	6,599.2	225.4	1.5	-82.07	10.9	-2,375.7	5,551.2	5,326.4	224.80	24.693	
14,700.0	6,700.7	6,600.0	6,599.2	226.4	1.5	-82.07	10.9	-2,375.7	5,585.7	5,359.9	225.77	24.741	
14,763.7	6,700.6	6,600.0	6,599.2	228.2	1.5	-82.07	10.9	-2,375.7	5,649.2	5,421.6	227.54	24.827	
14,800.0	6,700.5	6,600.0	6,599.2	229.2	1.5	-82.07	10.9	-2,375.7	5,685.2	5,456.7	228.55	24.876	
14,862.2	6,700.4	6,600.0	6,599.2	230.9	1.5	-82.07	10.9	-2,375.7	5,747.1	5,516.9	230.27	24.958	
14,900.0	6,700.3	6,600.0	6,599.2	232.0	1.5	-82.07	10.9	-2,375.7	5,784.8	5,553.5	231.33	25.007	
14,960.6	6,700.2	6,600.0	6,599.2	233.7	1.5	-82.07	10.9	-2,375.7	5,845.1	5,612.1	233.01	25.086	
15,000.0	6,700.2	6,600.0	6,599.2	234.8	1.5	-82.07	10.9	-2,375.7	5,884.4	5,650.3	234.10	25.136	
15,059.0	6,700.0	6,600.0	6,599.2	236.4	1.5	-82.07	10.9	-2,375.7	5,943.2	5,707.4	235.74	25.210	
15,082.8	6,700.0	6,600.0	6,599.2	237.1	1.5	-82.07	10.9	-2,375.7	5,966.9	5,730.5	236.41	25.240	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	173.65	-1,068.5	118.9	1,075.5				
98.4	98.4	68.0	68.0	0.1	0.0	173.65	-1,068.6	118.9	1,075.2	1,075.1	0.10	N/A CC	
100.0	100.0	69.6	69.6	0.1	0.0	173.65	-1,068.6	118.9	1,075.2	1,075.1	0.10	N/A	
196.8	196.8	169.4	169.4	0.3	0.0	173.65	-1,068.8	119.0	1,075.4	1,075.1	0.33	3,251.645	
200.0	200.0	172.7	172.7	0.3	0.0	173.65	-1,068.8	119.0	1,075.4	1,075.0	0.34	3,180.424	
280.9	280.9	252.8	252.8	0.5	0.1	173.65	-1,068.7	118.9	1,075.3	1,074.7	0.59	1,835.027	
295.3	295.3	266.7	266.7	0.5	0.1	173.65	-1,068.7	118.9	1,075.3	1,074.7	0.64	1,693.325	
300.0	300.0	271.2	271.2	0.5	0.1	173.65	-1,068.7	118.9	1,075.3	1,074.6	0.65	1,651.520	
393.7	393.7	363.7	363.7	0.8	0.2	173.66	-1,068.9	118.7	1,075.5	1,074.5	0.99	1,114.834	
400.0	400.0	370.0	370.0	0.8	0.2	173.66	-1,068.9	118.7	1,075.5	1,074.5	0.99	1,091.291	
492.1	492.1	462.5	462.5	1.0	0.3	173.67	-1,069.1	118.7	1,075.6	1,074.4	1.26	852.490	
500.0	500.0	470.4	470.4	1.0	0.3	173.67	-1,069.1	118.7	1,075.6	1,074.4	1.28	837.581	
590.5	590.5	560.5	560.5	1.2	0.3	173.66	-1,069.2	118.8	1,075.8	1,074.2	1.55	695.585	
600.0	600.0	569.8	569.8	1.2	0.4	173.66	-1,069.2	118.8	1,075.8	1,074.2	1.57	683.441 ES	
689.0	689.0	656.5	656.5	1.4	0.4	173.64	-1,069.4	119.2	1,076.1	1,074.2	1.83	588.989	
700.0	700.0	667.1	667.1	1.4	0.4	173.64	-1,069.5	119.2	1,076.1	1,074.2	1.86	579.156	
787.4	787.4	751.1	751.0	1.6	0.5	173.62	-1,069.9	119.7	1,076.6	1,074.5	2.10	511.974	
800.0	800.0	763.1	763.1	1.7	0.5	173.62	-1,070.0	119.7	1,076.7	1,074.6	2.14	503.632	
885.8	885.8	846.1	846.1	1.9	0.5	173.59	-1,070.8	120.4	1,077.6	1,075.2	2.38	453.645	
900.0	900.0	859.9	859.9	1.9	0.5	173.58	-1,070.9	120.5	1,077.7	1,075.3	2.41	446.372	
984.2	984.2	942.1	942.1	2.1	0.6	173.54	-1,071.8	121.4	1,078.8	1,076.1	2.65	407.787	
1,000.0	1,000.0	957.4	957.4	2.1	0.6	173.53	-1,072.0	121.6	1,079.0	1,076.3	2.69	401.346	
1,082.7	1,082.7	1,040.4	1,040.3	2.3	0.6	173.48	-1,073.0	122.6	1,080.1	1,077.2	2.91	370.667	
1,100.0	1,100.0	1,058.3	1,058.2	2.3	0.6	173.47	-1,073.2	122.8	1,080.3	1,077.4	2.96	364.824	
1,181.1	1,181.1	1,140.6	1,140.6	2.5	0.7	144.71	-1,074.1	123.8	1,082.2	1,079.1	3.18	340.676	
1,200.0	1,200.0	1,159.5	1,159.4	2.6	0.7	144.71	-1,074.3	124.0	1,082.9	1,079.7	3.23	335.485	
1,279.5	1,279.4	1,239.9	1,239.9	2.7	0.7	144.75	-1,075.2	124.7	1,087.0	1,083.6	3.45	315.489	
1,300.0	1,299.8	1,261.0	1,260.9	2.8	0.7	144.77	-1,075.4	124.9	1,088.3	1,084.8	3.50	310.823	
1,377.9	1,377.5	1,341.5	1,341.5	3.0	0.7	144.89	-1,076.0	125.2	1,094.3	1,090.6	3.72	294.292	
1,400.0	1,399.5	1,364.5	1,364.4	3.0	0.7	144.94	-1,076.2	125.3	1,096.3	1,092.5	3.78	290.044	
1,476.4	1,475.3	1,442.5	1,442.4	3.2	0.8	145.13	-1,076.6	125.2	1,104.1	1,100.1	3.99	276.555	
1,500.0	1,498.7	1,466.3	1,466.2	3.3	0.8	145.20	-1,076.7	125.1	1,106.8	1,102.8	4.06	272.832	
1,574.8	1,572.6	1,543.9	1,543.8	3.5	0.8	145.47	-1,077.0	124.6	1,116.4	1,112.2	4.27	261.690	
1,600.0	1,597.5	1,570.6	1,570.5	3.5	0.8	145.57	-1,077.0	124.4	1,120.0	1,115.6	4.34	258.269	
1,673.2	1,669.4	1,642.5	1,642.5	3.7	0.8	145.85	-1,076.9	123.9	1,131.1	1,126.6	4.55	248.575	
1,700.1	1,695.8	1,667.6	1,667.5	3.8	0.8	145.95	-1,076.9	123.8	1,135.7	1,131.1	4.63	245.319	
1,771.6	1,765.7	1,735.7	1,735.6	4.1	0.8	146.37	-1,077.0	123.5	1,148.2	1,143.4	4.84	237.471	
1,800.0	1,793.4	1,763.2	1,763.1	4.2	0.8	146.53	-1,077.1	123.5	1,153.2	1,148.3	4.92	234.583	
1,870.1	1,862.0	1,829.8	1,829.8	4.4	0.9	146.91	-1,077.2	123.6	1,165.7	1,160.5	5.13	227.292	
1,900.0	1,891.3	1,857.5	1,857.4	4.5	0.9	147.06	-1,077.3	123.7	1,171.0	1,165.8	5.22	224.317	
1,968.5	1,958.3	1,921.8	1,921.7	4.8	0.9	147.40	-1,077.7	124.0	1,183.5	1,178.1	5.44	217.756	
2,000.0	1,989.1	1,952.2	1,952.1	4.9	0.9	147.56	-1,078.0	124.2	1,189.3	1,183.8	5.54	214.798	
2,066.9	2,054.5	2,017.8	2,017.7	5.1	0.9	147.89	-1,078.4	124.8	1,201.7	1,195.9	5.75	208.972	
2,100.0	2,086.9	2,051.5	2,051.4	5.3	0.9	148.05	-1,078.6	125.2	1,207.8	1,201.9	5.85	206.288	
2,165.3	2,150.8	2,117.0	2,116.9	5.5	1.0	148.35	-1,078.9	126.1	1,219.7	1,213.7	6.06	201.207	
2,200.0	2,184.7	2,150.1	2,150.0	5.6	1.0	148.50	-1,079.1	126.6	1,226.1	1,219.9	6.17	198.672	
2,263.8	2,247.1	2,211.3	2,211.2	5.9	1.0	148.77	-1,079.4	127.5	1,237.8	1,231.5	6.37	194.196	
2,300.0	2,282.5	2,246.8	2,246.7	6.0	1.0	148.92	-1,079.6	128.1	1,244.6	1,238.1	6.49	191.771	
2,362.2	2,343.3	2,307.6	2,307.5	6.3	1.0	149.18	-1,080.0	129.2	1,256.1	1,249.4	6.69	187.771	
2,400.0	2,380.3	2,343.6	2,343.5	6.5	1.0	149.32	-1,080.2	129.9	1,263.1	1,256.3	6.81	185.469	
2,460.6	2,439.6	2,401.5	2,401.3	6.7	1.0	149.56	-1,080.6	130.8	1,274.5	1,267.5	7.01	181.932	
2,500.0	2,478.1	2,441.2	2,441.1	6.9	1.1	149.73	-1,080.9	131.4	1,281.9	1,274.8	7.13	179.743	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,535.9	2,500.8	2,500.7	7.1	1.1	149.97	-1,081.3	132.3	1,292.9	1,285.6	7.32	176.580	
2,600.0	2,575.9	2,541.3	2,541.1	7.3	1.1	150.14	-1,081.5	132.8	1,300.6	1,293.1	7.45	174.511	
2,657.5	2,632.2	2,598.0	2,597.9	7.5	1.1	150.36	-1,081.8	133.6	1,311.3	1,303.7	7.64	171.712	
2,700.0	2,673.8	2,638.9	2,638.8	7.7	1.1	150.52	-1,082.0	134.2	1,319.2	1,311.5	7.77	169.728	
2,755.9	2,728.4	2,692.6	2,692.4	7.9	1.1	150.73	-1,082.3	134.9	1,329.7	1,321.8	7.95	167.219	
2,800.0	2,771.6	2,735.7	2,735.5	8.1	1.2	150.89	-1,082.5	135.5	1,338.1	1,330.0	8.09	165.317	
2,854.3	2,824.7	2,788.9	2,788.7	8.3	1.2	151.10	-1,082.8	136.1	1,348.3	1,340.0	8.27	163.061	
2,900.0	2,869.4	2,831.6	2,831.4	8.5	1.2	151.27	-1,083.1	136.5	1,357.0	1,348.5	8.42	161.240	
2,952.7	2,921.0	2,880.0	2,879.8	8.8	1.2	151.45	-1,083.5	137.1	1,367.1	1,358.5	8.59	159.217	
3,000.0	2,967.2	2,924.9	2,924.7	9.0	1.2	151.61	-1,084.0	137.8	1,376.2	1,367.5	8.74	157.479	
3,051.2	3,017.3	2,974.9	2,974.7	9.2	1.2	151.79	-1,084.6	138.4	1,386.2	1,377.3	8.91	155.659	
3,100.0	3,065.0	3,023.4	3,023.2	9.4	1.3	151.97	-1,085.1	138.9	1,395.7	1,386.6	9.06	154.006	
3,149.6	3,113.5	3,073.8	3,073.6	9.6	1.3	152.15	-1,085.5	139.5	1,405.3	1,396.1	9.22	152.388	
3,200.0	3,162.8	3,123.8	3,123.6	9.8	1.3	152.32	-1,086.0	140.2	1,415.0	1,405.6	9.38	150.805	
3,248.0	3,209.8	3,170.3	3,170.1	10.0	1.3	152.48	-1,086.4	140.8	1,424.3	1,414.8	9.54	149.351	
3,300.0	3,260.6	3,222.1	3,221.9	10.2	1.3	152.66	-1,086.8	141.5	1,434.3	1,424.6	9.70	147.844	
3,346.4	3,306.1	3,270.4	3,270.1	10.5	1.3	152.81	-1,087.2	142.3	1,443.3	1,433.4	9.85	146.537	
3,400.0	3,358.5	3,324.2	3,323.9	10.7	1.4	152.96	-1,087.4	143.6	1,453.5	1,443.5	10.02	145.075	
3,444.9	3,402.3	3,367.5	3,367.2	10.9	1.4	153.08	-1,087.7	144.8	1,462.0	1,451.9	10.16	143.891	
3,500.0	3,456.3	3,421.5	3,421.2	11.1	1.4	153.21	-1,088.0	146.4	1,472.6	1,462.2	10.34	142.481	
3,543.3	3,498.6	3,464.8	3,464.5	11.3	1.4	153.32	-1,088.3	147.9	1,480.9	1,470.4	10.47	141.399	
3,600.0	3,554.1	3,521.8	3,521.5	11.5	1.4	153.45	-1,088.6	149.8	1,491.6	1,481.0	10.65	140.028	
3,641.7	3,594.9	3,564.1	3,563.8	11.7	1.4	153.55	-1,088.8	151.2	1,499.5	1,488.8	10.78	139.050	
3,700.0	3,651.9	3,620.8	3,620.4	12.0	1.5	153.68	-1,089.0	153.2	1,510.6	1,499.6	10.97	137.719	
3,740.1	3,691.2	3,657.3	3,656.8	12.2	1.5	153.76	-1,089.1	154.4	1,518.2	1,507.1	11.10	136.828	
3,800.0	3,749.7	3,713.0	3,712.6	12.4	1.5	153.88	-1,089.6	156.3	1,529.7	1,518.5	11.29	135.550	
3,838.6	3,787.4	3,752.5	3,752.0	12.6	1.5	153.96	-1,089.9	157.8	1,537.2	1,525.8	11.41	134.741	
3,900.0	3,847.5	3,815.2	3,814.7	12.9	1.5	154.09	-1,090.2	160.1	1,548.9	1,537.3	11.60	133.488	
3,937.0	3,883.7	3,852.6	3,852.0	13.0	1.5	154.16	-1,090.4	161.6	1,556.0	1,544.3	11.72	132.759	
4,000.0	3,945.3	3,915.9	3,915.3	13.3	1.5	154.28	-1,090.7	164.1	1,568.0	1,556.0	11.92	131.548	
4,035.4	3,980.0	3,950.9	3,950.2	13.5	1.6	154.34	-1,090.8	165.5	1,574.7	1,562.6	12.03	130.883	
4,060.0	4,004.0	3,975.1	3,974.5	13.6	1.6	154.39	-1,090.9	166.4	1,579.3	1,567.2	12.11	130.429	
4,100.0	4,043.2	4,014.9	4,014.2	13.7	1.6	154.52	-1,091.0	168.0	1,586.6	1,574.4	12.20	130.017	
4,133.8	4,076.5	4,049.1	4,048.3	13.8	1.6	154.63	-1,091.1	169.3	1,592.4	1,580.2	12.27	129.794	
4,200.0	4,141.6	4,117.3	4,116.5	14.0	1.6	154.81	-1,091.2	171.7	1,602.7	1,590.3	12.40	129.287	
4,232.3	4,173.5	4,152.8	4,152.0	14.1	1.6	154.89	-1,091.2	172.8	1,607.1	1,594.6	12.45	129.051	
4,300.0	4,240.6	4,226.9	4,226.1	14.3	1.6	155.04	-1,090.9	174.9	1,615.1	1,602.5	12.57	128.473	
4,330.7	4,271.1	4,260.2	4,259.4	14.4	1.6	155.09	-1,090.6	175.8	1,618.2	1,605.5	12.62	128.213	
4,400.0	4,340.0	4,336.7	4,335.9	14.5	1.7	155.19	-1,089.8	177.8	1,623.8	1,611.1	12.73	127.534	
4,429.1	4,369.0	4,369.5	4,368.6	14.6	1.7	155.22	-1,089.4	178.6	1,625.6	1,612.8	12.77	127.250	
4,500.0	4,439.7	4,446.5	4,445.6	14.8	1.7	155.26	-1,088.0	180.5	1,628.6	1,615.7	12.88	126.448	
4,527.5	4,467.2	4,475.8	4,474.9	14.8	1.7	155.27	-1,087.5	181.1	1,629.3	1,616.4	12.92	126.135	
4,600.0	4,539.7	4,550.3	4,549.4	14.9	1.7	155.25	-1,085.9	182.8	1,629.9	1,616.9	13.02	125.202	
4,626.0	4,565.6	4,576.6	4,575.6	15.0	1.7	155.24	-1,085.3	183.4	1,629.7	1,616.6	13.05	124.860	
4,660.2	4,599.8	4,611.6	4,610.6	15.0	1.7	-176.06	-1,084.5	184.2	1,629.0	1,613.1	15.97	102.036	
4,700.0	4,639.6	4,653.5	4,652.5	15.0	1.7	-176.09	-1,083.6	185.1	1,628.1	1,612.0	16.03	101.565	
4,724.4	4,664.0	4,679.1	4,678.1	15.1	1.7	-176.11	-1,082.9	185.6	1,627.4	1,611.4	16.07	101.259	
4,800.0	4,739.6	4,757.4	4,756.3	15.2	1.7	-176.16	-1,081.0	187.3	1,625.4	1,609.2	16.20	100.321	
4,822.8	4,762.5	4,780.9	4,779.8	15.2	1.7	-176.18	-1,080.3	187.8	1,624.8	1,608.5	16.24	100.037	
4,900.0	4,839.6	4,854.0	4,852.8	15.3	1.8	-176.22	-1,078.5	189.3	1,622.7	1,606.3	16.37	99.097	
4,921.2	4,860.9	4,873.5	4,872.4	15.4	1.8	-176.24	-1,078.0	189.7	1,622.2	1,605.8	16.41	98.843	
5,000.0	4,939.6	4,942.6	4,941.5	15.5	1.8	-176.28	-1,076.6	190.9	1,620.5	1,603.9	16.55	97.922	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	4,959.4	4,958.2	15.5	1.8	-176.29	-1,076.3	191.2	1,620.1	1,603.5	16.58	97.697	
5,100.0	5,039.6	5,030.6	5,029.4	15.6	1.8	-176.32	-1,075.4	192.3	1,619.0	1,602.3	16.73	96.800	
5,118.1	5,057.7	5,047.5	5,046.4	15.7	1.8	-176.33	-1,075.3	192.6	1,618.9	1,602.1	16.76	96.599	
5,200.0	5,139.6	5,123.6	5,122.4	15.8	1.8	-176.37	-1,074.7	193.6	1,618.1	1,601.2	16.91	95.703	
5,216.5	5,156.2	5,138.6	5,137.5	15.8	1.8	-176.38	-1,074.6	193.8	1,618.0	1,601.1	16.94	95.525	
5,300.0	5,239.6	5,214.6	5,213.4	15.9	1.8	-176.41	-1,074.4	194.8	1,617.8	1,600.7	17.09	94.645	
5,314.9	5,254.6	5,228.1	5,226.9	16.0	1.9	-176.42	-1,074.4	195.0	1,617.7	1,600.6	17.12	94.491	
5,317.9	5,257.5	5,230.7	5,229.5	16.0	1.9	-176.42	-1,074.4	195.0	1,617.7	1,600.6	17.13	94.461	
5,400.0	5,339.6	5,305.0	5,303.8	16.1	1.9	-176.44	-1,074.6	195.7	1,618.0	1,600.7	17.28	93.636	
5,413.4	5,353.0	5,317.9	5,316.7	16.1	1.9	-176.45	-1,074.7	195.9	1,618.0	1,600.7	17.30	93.503	
5,500.0	5,439.6	5,401.3	5,400.1	16.3	1.9	-176.47	-1,075.2	196.6	1,618.6	1,601.1	17.47	92.659	
5,511.8	5,451.4	5,412.8	5,411.6	16.3	1.9	-176.48	-1,075.3	196.7	1,618.6	1,601.1	17.49	92.547	
5,600.0	5,539.6	5,500.0	5,498.8	16.4	1.9	-176.50	-1,076.1	197.2	1,619.3	1,601.7	17.66	91.721	
5,610.2	5,549.9	5,508.5	5,507.3	16.4	1.9	-176.50	-1,076.1	197.2	1,619.4	1,601.8	17.67	91.630	
5,700.0	5,639.6	5,592.9	5,591.7	16.6	2.0	-176.51	-1,077.1	197.6	1,620.4	1,602.6	17.84	90.836	
5,708.6	5,648.3	5,600.0	5,598.8	16.6	2.0	-176.51	-1,077.2	197.6	1,620.5	1,602.6	17.85	90.761	
5,800.0	5,739.6	5,687.7	5,686.5	16.7	2.0	-176.53	-1,078.4	198.0	1,621.8	1,603.8	18.02	89.985	
5,807.1	5,746.7	5,694.4	5,693.2	16.8	2.0	-176.53	-1,078.5	198.0	1,621.9	1,603.9	18.04	89.926	
5,900.0	5,839.6	5,786.7	5,785.5	16.9	2.0	-176.55	-1,080.0	198.5	1,623.4	1,605.2	18.21	89.154	
5,905.5	5,845.1	5,792.2	5,791.0	16.9	2.0	-176.55	-1,080.1	198.5	1,623.5	1,605.3	18.22	89.109	
6,000.0	5,939.6	5,891.2	5,890.0	17.1	2.0	-176.57	-1,081.6	199.0	1,624.9	1,606.5	18.40	88.319	
6,003.9	5,943.6	5,895.4	5,894.1	17.1	2.0	-176.57	-1,081.7	199.0	1,624.9	1,606.5	18.41	88.286	
6,059.2	5,998.8	5,949.2	5,948.0	17.2	2.0	-176.59	-1,082.4	199.3	1,625.7	1,607.2	18.51	87.828	
6,100.0	6,039.6	5,988.7	5,987.5	17.2	2.1	-86.59	-1,083.0	199.6	1,626.2	1,610.1	16.13	100.814	
6,102.3	6,042.0	5,991.0	5,989.7	17.2	2.1	-86.60	-1,083.0	199.6	1,626.2	1,610.1	16.13	100.793	
6,150.0	6,089.4	6,041.2	6,040.0	17.3	2.1	-86.74	-1,083.8	199.8	1,626.6	1,610.4	16.21	100.321	
6,200.0	6,138.7	6,094.6	6,093.3	17.3	2.1	-87.04	-1,084.4	200.1	1,626.8	1,610.5	16.29	99.843	
6,200.8	6,139.5	6,095.4	6,094.1	17.3	2.1	-87.05	-1,084.4	200.1	1,626.8	1,610.5	16.29	99.837	
6,250.0	6,187.4	6,147.3	6,146.1	17.3	2.1	-87.48	-1,084.9	200.4	1,626.7	1,610.4	16.37	99.382	
6,299.2	6,234.4	6,198.3	6,197.0	17.4	2.1	-88.04	-1,085.3	200.6	1,626.5	1,610.1	16.44	98.941	
6,300.0	6,235.1	6,199.1	6,197.8	17.4	2.1	-88.05	-1,085.3	200.6	1,626.5	1,610.0	16.44	98.933	
6,350.0	6,281.7	6,249.1	6,247.8	17.4	2.1	-88.72	-1,085.6	200.8	1,626.2	1,609.7	16.51	98.506	
6,397.6	6,324.8	6,295.3	6,294.0	17.3	2.1	-89.43	-1,085.7	201.0	1,626.0	1,609.4	16.58	98.093	
6,400.0	6,326.9	6,297.6	6,296.3	17.3	2.1	-89.47	-1,085.7	201.0	1,626.0	1,609.4	16.58	98.073	
6,420.1	6,344.6	6,314.6	6,313.3	17.3	2.2	-89.76	-1,085.7	201.1	1,625.9	1,609.3	16.61	97.899	
6,450.0	6,370.5	6,339.1	6,337.8	17.3	2.2	-90.19	-1,085.8	201.2	1,626.0	1,609.4	16.65	97.656	
6,496.0	6,409.1	6,375.4	6,374.1	17.3	2.2	-90.86	-1,085.9	201.5	1,626.5	1,609.8	16.73	97.231	
6,500.0	6,412.3	6,378.5	6,377.2	17.3	2.2	-90.92	-1,085.9	201.5	1,626.6	1,609.8	16.73	97.197	
6,550.0	6,452.1	6,414.6	6,413.3	17.3	2.2	-91.60	-1,086.1	201.9	1,627.7	1,610.9	16.84	96.659	
6,594.5	6,485.6	6,443.7	6,442.4	17.3	2.2	-92.14	-1,086.3	202.2	1,629.5	1,612.5	16.96	96.071	
6,600.0	6,489.7	6,447.2	6,445.9	17.3	2.2	-92.21	-1,086.3	202.3	1,629.7	1,612.8	16.98	96.003	
6,650.0	6,524.9	6,477.7	6,476.4	17.2	2.2	-92.73	-1,086.7	202.6	1,632.7	1,615.6	17.16	95.174	
6,692.9	6,553.0	6,500.0	6,498.7	17.2	2.2	-93.06	-1,086.9	202.9	1,636.1	1,618.8	17.35	94.286	
6,700.0	6,557.5	6,500.0	6,498.7	17.2	2.2	-93.00	-1,086.9	202.9	1,636.8	1,619.4	17.38	94.175	
6,750.0	6,587.4	6,528.3	6,527.0	17.2	2.2	-93.38	-1,087.4	203.2	1,642.1	1,624.4	17.68	92.861	
6,791.3	6,609.9	6,545.7	6,544.4	17.2	2.2	-93.46	-1,087.7	203.4	1,647.5	1,629.5	17.99	91.589	
6,800.0	6,614.4	6,549.1	6,547.8	17.2	2.2	-93.46	-1,087.8	203.5	1,648.7	1,630.7	18.05	91.333	
6,850.0	6,638.4	6,567.5	6,566.2	17.2	2.2	-93.38	-1,088.2	203.7	1,656.7	1,638.2	18.50	89.559	
6,889.7	6,655.3	6,580.3	6,579.0	17.4	2.2	-93.19	-1,088.6	203.9	1,664.1	1,645.2	18.92	87.959	
6,900.0	6,659.4	6,583.4	6,582.0	17.5	2.2	-93.12	-1,088.6	203.9	1,666.2	1,647.2	19.03	87.569	
6,950.0	6,677.1	6,600.0	6,598.7	18.0	2.2	-92.77	-1,089.1	204.2	1,677.1	1,657.5	19.64	85.389	
6,988.2	6,688.4	6,600.0	6,598.7	18.5	2.2	-92.00	-1,089.1	204.2	1,686.4	1,666.3	20.15	83.682	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis					Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,000.0	6,691.5	6,608.2	6,606.9	18.7	2.2	-92.03	-1,089.4	204.3	1,689.5	1,669.1	20.32	83.133	
7,050.0	6,702.5	6,617.2	6,615.8	19.5	2.2	-91.19	-1,089.7	204.4	1,703.3	1,682.2	21.08	80.805	
7,086.6	6,708.4	6,621.9	6,620.6	20.1	2.2	-90.43	-1,089.8	204.5	1,714.2	1,692.5	21.68	79.083	
7,100.0	6,710.1	6,623.2	6,621.9	20.4	2.2	-90.13	-1,089.8	204.5	1,718.4	1,696.5	21.89	78.487	
7,150.0	6,714.2	6,626.3	6,624.9	21.3	2.2	-88.84	-1,089.9	204.5	1,734.9	1,712.1	22.76	76.230	
7,185.0	6,715.0	6,626.6	6,625.3	21.9	2.2	-87.80	-1,090.0	204.5	1,747.1	1,723.7	23.39	74.708	
7,185.6	6,715.0	6,626.6	6,625.3	21.9	2.2	-87.79	-1,090.0	204.5	1,747.3	1,723.9	23.40	74.686	
7,200.0	6,715.0	6,626.4	6,625.1	22.2	2.2	-87.78	-1,090.0	204.5	1,752.6	1,728.9	23.67	74.034	
7,283.4	6,714.8	6,625.4	6,624.0	23.9	2.2	-87.74	-1,089.9	204.5	1,784.7	1,759.4	25.35	70.408	
7,300.0	6,714.8	6,625.1	6,623.8	24.2	2.2	-87.74	-1,089.9	204.5	1,791.5	1,765.8	25.68	69.761	
7,381.9	6,714.6	6,624.1	6,622.7	26.0	2.2	-87.70	-1,089.9	204.5	1,826.9	1,799.4	27.44	66.578	
7,400.0	6,714.6	6,623.8	6,622.5	26.4	2.2	-87.69	-1,089.9	204.5	1,835.1	1,807.3	27.83	65.942	
7,480.3	6,714.4	6,622.8	6,621.4	28.2	2.2	-87.65	-1,089.8	204.5	1,873.2	1,843.6	29.65	63.185	
7,500.0	6,714.4	6,622.5	6,621.2	28.7	2.2	-87.64	-1,089.8	204.5	1,883.0	1,852.9	30.09	62.573	
7,578.7	6,714.2	6,621.5	6,620.1	30.5	2.2	-87.61	-1,089.8	204.5	1,923.5	1,891.6	31.95	60.212	
7,600.0	6,714.2	6,621.2	6,619.9	31.0	2.2	-87.60	-1,089.8	204.5	1,934.9	1,902.4	32.45	59.633	
7,677.1	6,714.0	6,620.2	6,618.8	32.9	2.2	-87.56	-1,089.7	204.5	1,977.4	1,943.1	34.32	57.623	
7,700.0	6,714.0	6,619.8	6,618.5	33.4	2.2	-87.55	-1,089.7	204.5	1,990.4	1,955.5	34.87	57.080	
7,775.6	6,713.9	6,618.8	6,617.5	35.3	2.2	-87.51	-1,089.7	204.4	2,034.6	1,997.9	36.75	55.372	
7,800.0	6,713.8	6,618.5	6,617.1	35.9	2.2	-87.50	-1,089.7	204.4	2,049.3	2,012.0	37.35	54.867	
7,874.0	6,713.7	6,617.4	6,616.1	37.8	2.2	-87.47	-1,089.7	204.4	2,095.0	2,055.7	39.22	53.415	
7,900.0	6,713.6	6,617.1	6,615.7	38.4	2.2	-87.45	-1,089.6	204.4	2,111.4	2,071.5	39.88	52.947	
7,972.4	6,713.5	6,616.1	6,614.7	40.3	2.2	-87.42	-1,089.6	204.4	2,158.1	2,116.3	41.73	51.711	
8,000.0	6,713.4	6,615.7	6,614.3	41.0	2.2	-87.40	-1,089.6	204.4	2,176.2	2,133.8	42.44	51.278	
8,070.8	6,713.3	6,614.7	6,613.3	42.8	2.2	-87.37	-1,089.6	204.4	2,223.7	2,179.5	44.28	50.224	
8,100.0	6,713.2	6,614.2	6,612.9	43.6	2.2	-87.35	-1,089.6	204.4	2,243.6	2,198.6	45.03	49.823	
8,169.3	6,713.1	6,613.2	6,611.9	45.4	2.2	-87.32	-1,089.5	204.4	2,291.7	2,244.9	46.85	48.922	
8,200.0	6,713.0	6,612.8	6,611.5	46.2	2.2	-87.30	-1,089.5	204.4	2,313.4	2,265.8	47.65	48.551	
8,267.7	6,712.9	6,611.8	6,610.5	48.0	2.2	-87.27	-1,089.5	204.3	2,361.9	2,312.5	49.44	47.778	
8,300.0	6,712.8	6,611.3	6,610.0	48.8	2.2	-87.25	-1,089.5	204.3	2,385.4	2,335.1	50.29	47.435	
8,366.1	6,712.7	6,610.3	6,609.0	50.6	2.2	-87.22	-1,089.4	204.3	2,434.0	2,382.0	52.04	46.769	
8,400.0	6,712.6	6,609.8	6,608.5	51.5	2.2	-87.20	-1,089.4	204.3	2,459.3	2,406.3	52.94	46.451	
8,464.5	6,712.5	6,608.9	6,607.5	53.2	2.2	-87.17	-1,089.4	204.3	2,507.9	2,453.3	54.67	45.876	
8,500.0	6,712.4	6,608.3	6,607.0	54.1	2.2	-87.15	-1,089.4	204.3	2,535.0	2,479.3	55.61	45.581	
8,563.0	6,712.3	6,607.4	6,606.0	55.8	2.2	-87.11	-1,089.3	204.3	2,583.5	2,526.2	57.30	45.084	
8,600.0	6,712.3	6,606.8	6,605.5	56.8	2.2	-87.09	-1,089.3	204.3	2,612.3	2,554.0	58.30	44.810	
8,661.4	6,712.1	6,605.8	6,604.5	58.5	2.2	-87.06	-1,089.3	204.3	2,660.5	2,600.6	59.95	44.378	
8,700.0	6,712.1	6,605.2	6,603.9	59.5	2.2	-87.04	-1,089.3	204.3	2,691.1	2,630.1	60.99	44.122	
8,759.8	6,711.9	6,604.3	6,603.0	61.1	2.2	-87.01	-1,089.2	204.2	2,738.9	2,676.3	62.61	43.746	
8,800.0	6,711.9	6,603.6	6,602.3	62.2	2.2	-86.98	-1,089.2	204.2	2,771.3	2,707.6	63.70	43.508	
8,858.2	6,711.8	6,602.7	6,601.4	63.8	2.2	-86.95	-1,089.2	204.2	2,818.6	2,753.3	65.28	43.180	
8,900.0	6,711.7	6,602.0	6,600.7	64.9	2.2	-86.93	-1,089.2	204.2	2,852.7	2,786.3	66.41	42.958	
8,956.7	6,711.6	6,601.1	6,599.8	66.5	2.2	-86.89	-1,089.2	204.2	2,899.4	2,831.4	67.95	42.670	
9,000.0	6,711.5	6,600.4	6,599.1	67.6	2.2	-86.87	-1,089.1	204.2	2,935.3	2,866.2	69.13	42.463	
9,055.1	6,711.4	6,600.0	6,598.7	69.1	2.2	-86.86	-1,089.1	204.2	2,981.3	2,910.6	70.63	42.210	
9,100.0	6,711.3	6,600.0	6,598.7	70.4	2.2	-86.86	-1,089.1	204.2	3,018.9	2,947.1	71.86	42.014	
9,153.5	6,711.2	6,600.0	6,598.7	71.8	2.2	-86.86	-1,089.1	204.2	3,064.1	2,990.8	73.32	41.791	
9,200.0	6,711.1	6,600.0	6,598.7	73.1	2.2	-86.86	-1,089.1	204.2	3,103.5	3,029.0	74.59	41.608	
9,251.9	6,711.0	6,600.0	6,598.7	74.5	2.2	-86.86	-1,089.1	204.2	3,147.9	3,071.8	76.01	41.411	
9,300.0	6,710.9	6,600.0	6,598.7	75.8	2.2	-86.86	-1,089.1	204.2	3,189.0	3,111.7	77.33	41.239	
9,350.4	6,710.8	6,600.0	6,598.7	77.2	2.2	-86.86	-1,089.1	204.2	3,232.4	3,153.7	78.71	41.065	
9,400.0	6,710.7	6,600.0	6,598.7	78.6	2.2	-86.86	-1,089.1	204.2	3,275.4	3,195.3	80.08	40.903	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,710.6	6,600.0	6,598.7	79.9	2.2	-86.86	-1,089.1	204.2	3,317.8	3,236.3	81.42	40.750	
9,500.0	6,710.5	6,600.0	6,598.7	81.3	2.2	-86.86	-1,089.1	204.2	3,362.4	3,279.6	82.83	40.596	
9,547.2	6,710.4	6,600.0	6,598.7	82.6	2.2	-86.86	-1,089.1	204.2	3,403.8	3,319.7	84.13	40.461	
9,600.0	6,710.3	6,600.0	6,598.7	84.1	2.2	-86.86	-1,089.1	204.2	3,450.2	3,364.6	85.58	40.316	
9,645.6	6,710.2	6,600.0	6,598.7	85.3	2.2	-86.86	-1,089.1	204.2	3,490.5	3,403.7	86.84	40.196	
9,700.0	6,710.1	6,600.0	6,598.7	86.8	2.2	-86.86	-1,089.1	204.2	3,538.6	3,450.3	88.34	40.059	
9,744.1	6,710.0	6,600.0	6,598.7	88.1	2.2	-86.86	-1,089.1	204.2	3,577.8	3,488.3	89.55	39.952	
9,800.0	6,709.9	6,600.0	6,598.7	89.6	2.2	-86.86	-1,089.1	204.2	3,627.7	3,536.6	91.10	39.822	
9,842.5	6,709.9	6,600.0	6,598.7	90.8	2.2	-86.86	-1,089.1	204.2	3,665.7	3,573.4	92.27	39.728	
9,900.0	6,709.7	6,600.0	6,598.7	92.4	2.2	-86.86	-1,089.1	204.2	3,717.3	3,623.4	93.86	39.605	
9,940.9	6,709.7	6,600.0	6,598.7	93.5	2.2	-86.86	-1,089.1	204.2	3,754.1	3,659.1	94.99	39.520	
10,000.0	6,709.6	6,600.0	6,598.7	95.1	2.2	-86.86	-1,089.1	204.2	3,807.4	3,710.7	96.62	39.404	
10,039.3	6,709.5	6,600.0	6,598.7	96.2	2.2	-86.86	-1,089.1	204.2	3,842.9	3,745.2	97.71	39.329	
10,100.0	6,709.4	6,600.0	6,598.7	97.9	2.2	-86.86	-1,089.1	204.2	3,897.9	3,798.5	99.39	39.218	
10,137.8	6,709.3	6,600.0	6,598.7	98.9	2.2	-86.86	-1,089.1	204.2	3,932.3	3,831.8	100.44	39.151	
10,200.0	6,709.2	6,585.9	6,584.5	100.7	2.2	-86.36	-1,088.7	204.0	3,988.9	3,886.8	102.11	39.065	
10,236.2	6,709.1	6,585.4	6,584.1	101.7	2.2	-86.35	-1,088.7	204.0	4,022.0	3,918.9	103.11	39.006	
10,300.0	6,709.0	6,584.7	6,583.4	103.4	2.2	-86.32	-1,088.7	204.0	4,080.4	3,975.5	104.88	38.907	
10,334.6	6,708.9	6,584.3	6,583.0	104.4	2.2	-86.31	-1,088.7	204.0	4,112.1	4,006.3	105.83	38.854	
10,400.0	6,708.8	6,583.5	6,582.2	106.2	2.2	-86.28	-1,088.6	203.9	4,172.2	4,064.6	107.64	38.760	
10,433.0	6,708.7	6,583.1	6,581.8	107.1	2.2	-86.27	-1,088.6	203.9	4,202.7	4,094.1	108.56	38.713	
10,500.0	6,708.6	6,582.4	6,581.0	109.0	2.2	-86.24	-1,088.6	203.9	4,264.4	4,154.0	110.41	38.623	
10,531.5	6,708.5	6,582.0	6,580.7	109.9	2.2	-86.23	-1,088.6	203.9	4,293.5	4,182.3	111.28	38.581	
10,600.0	6,708.4	6,581.2	6,579.9	111.8	2.2	-86.20	-1,088.6	203.9	4,357.0	4,243.8	113.18	38.495	
10,629.9	6,708.4	6,580.9	6,579.5	112.6	2.2	-86.19	-1,088.6	203.9	4,384.7	4,270.7	114.01	38.459	
10,700.0	6,708.2	6,580.1	6,578.7	114.6	2.2	-86.16	-1,088.6	203.9	4,449.9	4,333.9	115.95	38.376	
10,728.3	6,708.2	6,579.7	6,578.4	115.3	2.2	-86.15	-1,088.5	203.9	4,476.2	4,359.5	116.74	38.344	
10,800.0	6,708.0	6,578.9	6,577.6	117.3	2.2	-86.12	-1,088.5	203.9	4,543.0	4,424.3	118.73	38.265	
10,826.7	6,708.0	6,578.6	6,577.3	118.1	2.2	-86.11	-1,088.5	203.9	4,568.0	4,448.5	119.47	38.236	
10,900.0	6,707.8	6,577.8	6,576.4	120.1	2.2	-86.08	-1,088.5	203.9	4,636.5	4,515.0	121.50	38.160	
10,925.2	6,707.8	6,577.5	6,576.2	120.8	2.2	-86.07	-1,088.5	203.9	4,660.1	4,537.9	122.20	38.135	
11,000.0	6,707.6	6,576.6	6,575.3	122.9	2.2	-86.04	-1,088.5	203.8	4,730.2	4,606.0	124.28	38.063	
11,023.6	6,707.6	6,576.4	6,575.0	123.6	2.2	-86.03	-1,088.5	203.8	4,752.4	4,627.5	124.93	38.040	
11,100.0	6,707.5	6,575.5	6,574.2	125.7	2.2	-86.00	-1,088.4	203.8	4,824.2	4,697.2	127.05	37.971	
11,122.0	6,707.4	6,575.2	6,573.9	126.3	2.2	-85.99	-1,088.4	203.8	4,844.9	4,717.3	127.66	37.951	
11,200.0	6,707.3	6,574.4	6,573.0	128.5	2.2	-85.96	-1,088.4	203.8	4,918.4	4,788.6	129.83	37.885	
11,220.4	6,707.2	6,574.1	6,572.8	129.0	2.2	-85.95	-1,088.4	203.8	4,937.7	4,807.3	130.39	37.868	
11,300.0	6,707.1	6,573.2	6,571.9	131.3	2.2	-85.92	-1,088.4	203.8	5,012.9	4,880.3	132.60	37.804	
11,318.9	6,707.0	6,573.0	6,571.7	131.8	2.2	-85.91	-1,088.4	203.8	5,030.7	4,897.6	133.13	37.789	
11,400.0	6,706.9	6,572.1	6,570.8	134.0	2.2	-85.88	-1,088.3	203.8	5,107.5	4,972.1	135.38	37.727	
11,417.3	6,706.9	6,571.9	6,570.6	134.5	2.2	-85.87	-1,088.3	203.8	5,123.9	4,988.1	135.86	37.714	
11,500.0	6,706.7	6,571.0	6,569.7	136.8	2.2	-85.84	-1,088.3	203.8	5,202.4	5,064.2	138.16	37.655	
11,515.7	6,706.7	6,570.8	6,569.5	137.3	2.2	-85.84	-1,088.3	203.8	5,217.3	5,078.7	138.60	37.644	
11,600.0	6,706.5	6,569.9	6,568.6	139.6	2.2	-85.80	-1,088.3	203.8	5,297.4	5,156.5	140.94	37.587	
11,614.1	6,706.5	6,569.7	6,568.4	140.0	2.2	-85.80	-1,088.3	203.8	5,310.9	5,169.5	141.33	37.578	
11,700.0	6,706.3	6,568.8	6,567.5	142.4	2.2	-85.77	-1,088.3	203.7	5,392.6	5,248.9	143.72	37.523	
11,712.6	6,706.3	6,568.6	6,567.3	142.8	2.2	-85.76	-1,088.3	203.7	5,404.6	5,260.5	144.06	37.515	
11,800.0	6,706.1	6,567.7	6,566.4	145.2	2.2	-85.73	-1,088.2	203.7	5,488.0	5,341.5	146.49	37.462	
11,811.0	6,706.1	6,567.6	6,566.2	145.5	2.2	-85.72	-1,088.2	203.7	5,498.5	5,351.7	146.80	37.456	
11,900.0	6,705.9	6,566.6	6,565.3	148.0	2.2	-85.69	-1,088.2	203.7	5,583.6	5,434.3	149.27	37.405	
11,909.4	6,705.9	6,566.5	6,565.2	148.3	2.2	-85.69	-1,088.2	203.7	5,592.6	5,443.0	149.54	37.399	
12,000.0	6,705.8	6,565.5	6,564.2	150.8	2.2	-85.65	-1,088.2	203.7	5,679.3	5,527.2	152.05	37.350	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,705.7	6,565.4	6,564.1	151.0	2.2	-85.65	-1,088.2	203.7	5,686.8	5,534.5	152.27	37.346	
12,100.0	6,705.6	6,564.4	6,563.1	153.6	2.2	-85.61	-1,088.2	203.7	5,775.1	5,620.3	154.83	37.299	
12,106.3	6,705.6	6,564.3	6,563.0	153.8	2.2	-85.61	-1,088.2	203.7	5,781.1	5,626.1	155.01	37.295	
12,200.0	6,705.4	6,563.3	6,562.0	156.4	2.2	-85.58	-1,088.1	203.7	5,871.1	5,713.5	157.62	37.250	
12,204.7	6,705.4	6,563.3	6,562.0	156.5	2.2	-85.57	-1,088.1	203.7	5,875.6	5,717.9	157.75	37.247	
12,300.0	6,705.2	6,562.2	6,560.9	159.2	2.2	-85.54	-1,088.1	203.6	5,967.2	5,806.8	160.40	37.203	
12,303.1	6,705.2	6,562.2	6,560.9	159.3	2.2	-85.54	-1,088.1	203.6	5,970.2	5,809.7	160.48	37.202	
12,400.0	6,705.0	6,561.2	6,559.8	162.0	2.2	-85.50	-1,088.1	203.6	6,063.5	5,900.3	163.18	37.159	
12,401.5	6,705.0	6,561.1	6,559.8	162.0	2.2	-85.50	-1,088.1	203.6	6,065.0	5,901.7	163.22	37.158	
12,500.0	6,704.8	6,560.1	6,558.8	164.8	2.2	-85.46	-1,088.1	203.6	6,159.8	5,993.9	165.96	37.117	
12,598.4	6,704.6	6,559.0	6,557.7	167.5	2.2	-85.43	-1,088.0	203.6	6,254.8	6,086.1	168.69	37.077	
12,600.0	6,704.6	6,559.0	6,557.7	167.6	2.2	-85.43	-1,088.0	203.6	6,256.3	6,087.6	168.74	37.077	
12,696.8	6,704.4	6,558.0	6,556.7	170.3	2.2	-85.39	-1,088.0	203.6	6,349.8	6,178.4	171.43	37.040	
12,700.0	6,704.4	6,558.0	6,556.6	170.4	2.2	-85.39	-1,088.0	203.6	6,352.9	6,181.4	171.52	37.039	
12,795.2	6,704.3	6,556.9	6,555.6	173.0	2.2	-85.35	-1,088.0	203.6	6,445.0	6,270.8	174.17	37.004	
12,800.0	6,704.2	6,556.9	6,555.6	173.2	2.2	-85.35	-1,088.0	203.6	6,449.6	6,275.3	174.30	37.002	
12,893.7	6,704.1	6,555.9	6,554.6	175.8	2.2	-85.32	-1,088.0	203.6	6,540.2	6,363.3	176.91	36.970	
12,900.0	6,704.1	6,555.8	6,554.5	176.0	2.2	-85.32	-1,088.0	203.6	6,546.4	6,369.3	177.08	36.968	
12,992.1	6,703.9	6,554.9	6,553.6	178.5	2.2	-85.28	-1,087.9	203.6	6,635.6	6,455.9	179.65	36.937	
13,000.0	6,703.9	6,554.8	6,553.5	178.8	2.2	-85.28	-1,087.9	203.5	6,643.2	6,463.4	179.87	36.934	
13,090.5	6,703.7	6,553.8	6,552.5	181.3	2.2	-85.25	-1,087.9	203.5	6,731.0	6,548.6	182.38	36.906	
13,100.0	6,703.7	6,553.7	6,552.4	181.6	2.2	-85.24	-1,087.9	203.5	6,740.2	6,557.6	182.65	36.903	
13,188.9	6,703.5	6,552.8	6,551.5	184.0	2.2	-85.21	-1,087.9	203.5	6,826.6	6,641.4	185.12	36.876	
13,200.0	6,703.5	6,552.7	6,551.4	184.4	2.2	-85.21	-1,087.9	203.5	6,837.3	6,651.9	185.43	36.873	
13,287.4	6,703.3	6,551.8	6,550.5	186.8	2.2	-85.17	-1,087.9	203.5	6,922.2	6,734.3	187.86	36.847	
13,300.0	6,703.3	6,551.7	6,550.4	187.2	2.2	-85.17	-1,087.9	203.5	6,934.4	6,746.2	188.21	36.844	
13,385.8	6,703.2	6,550.8	6,549.5	189.6	2.2	-85.14	-1,087.8	203.5	7,017.8	6,827.2	190.60	36.820	
13,400.0	6,703.1	6,550.6	6,549.3	190.0	2.2	-85.13	-1,087.8	203.5	7,031.6	6,840.7	190.99	36.816	
13,484.2	6,703.0	6,549.8	6,548.5	192.3	2.2	-85.10	-1,087.8	203.5	7,113.6	6,920.3	193.34	36.794	
13,500.0	6,702.9	6,549.6	6,548.3	192.8	2.2	-85.10	-1,087.8	203.5	7,129.0	6,935.2	193.77	36.790	
13,582.6	6,702.8	6,548.7	6,547.4	195.1	2.2	-85.07	-1,087.8	203.5	7,209.4	7,013.4	196.07	36.769	
13,600.0	6,702.8	6,548.6	6,547.3	195.6	2.2	-85.06	-1,087.8	203.5	7,226.3	7,029.8	196.56	36.765	
13,681.1	6,702.6	6,547.7	6,546.4	197.8	2.2	-85.03	-1,087.8	203.5	7,305.3	7,106.5	198.81	36.745	
13,700.0	6,702.6	6,547.5	6,546.2	198.4	2.2	-85.03	-1,087.8	203.5	7,323.8	7,124.4	199.34	36.740	
13,779.5	6,702.4	6,546.7	6,545.4	200.6	2.2	-85.00	-1,087.8	203.4	7,401.3	7,199.7	201.55	36.722	
13,800.0	6,702.4	6,546.5	6,545.2	201.2	2.2	-84.99	-1,087.7	203.4	7,421.3	7,219.2	202.12	36.717	
13,877.9	6,702.2	6,545.7	6,544.4	203.3	2.2	-84.96	-1,087.7	203.4	7,497.3	7,293.0	204.29	36.700	
13,900.0	6,702.2	6,545.5	6,544.2	204.0	2.2	-84.96	-1,087.7	203.4	7,518.9	7,314.0	204.90	36.695	
13,976.3	6,702.1	6,544.7	6,543.4	206.1	2.2	-84.93	-1,087.7	203.4	7,593.4	7,386.4	207.03	36.679	
14,000.0	6,702.0	6,544.5	6,543.2	206.8	2.2	-84.92	-1,087.7	203.4	7,616.5	7,408.8	207.68	36.674	
14,074.8	6,701.9	6,543.7	6,542.4	208.9	2.2	-84.90	-1,087.7	203.4	7,689.5	7,479.8	209.76	36.658	
14,100.0	6,701.8	6,543.5	6,542.2	209.6	2.2	-84.89	-1,087.7	203.4	7,714.2	7,503.7	210.46	36.653	
14,173.2	6,701.7	6,542.8	6,541.5	211.6	2.2	-84.86	-1,087.7	203.4	7,785.8	7,573.3	212.50	36.639	
14,200.0	6,701.6	6,542.5	6,541.2	212.4	2.2	-84.85	-1,087.7	203.4	7,812.0	7,598.7	213.25	36.634	
14,271.6	6,701.5	6,541.8	6,540.5	214.4	2.2	-84.83	-1,087.6	203.4	7,882.0	7,666.8	215.24	36.620	
14,300.0	6,701.4	6,541.5	6,540.2	215.2	2.2	-84.82	-1,087.6	203.4	7,909.8	7,693.7	216.03	36.615	
14,370.0	6,701.3	6,540.8	6,539.5	217.1	2.2	-84.79	-1,087.6	203.4	7,978.3	7,760.3	217.98	36.602	
14,400.0	6,701.3	6,540.5	6,539.2	218.0	2.2	-84.78	-1,087.6	203.4	8,007.6	7,788.8	218.81	36.597	
14,468.5	6,701.1	6,539.8	6,538.5	219.9	2.2	-84.76	-1,087.6	203.4	8,074.7	7,854.0	220.71	36.585	
14,500.0	6,701.1	6,539.5	6,538.2	220.8	2.2	-84.75	-1,087.6	203.3	8,105.6	7,884.0	221.59	36.579	
14,566.9	6,701.0	6,538.8	6,537.5	222.6	2.2	-84.73	-1,087.6	203.3	8,171.1	7,947.6	223.45	36.568	
14,600.0	6,700.9	6,538.5	6,537.2	223.6	2.2	-84.71	-1,087.6	203.3	8,203.5	7,979.2	224.37	36.562	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,665.3	6,700.8	6,537.9	6,536.6	225.4	2.2	-84.69	-1,087.6	203.3	8,267.6	8,041.4	226.19	36.552	
14,700.0	6,700.7	6,537.5	6,536.2	226.4	2.2	-84.68	-1,087.6	203.3	8,301.5	8,074.4	227.15	36.546	
14,763.7	6,700.6	6,536.9	6,535.6	228.2	2.2	-84.66	-1,087.6	203.3	8,364.1	8,135.1	228.92	36.536	
14,800.0	6,700.5	6,536.5	6,535.2	229.2	2.2	-84.65	-1,087.5	203.3	8,399.6	8,169.7	229.93	36.531	
14,862.2	6,700.4	6,535.9	6,534.6	230.9	2.2	-84.63	-1,087.5	203.3	8,460.6	8,228.9	231.66	36.522	
14,900.0	6,700.3	6,535.6	6,534.3	232.0	2.2	-84.61	-1,087.5	203.3	8,497.7	8,265.0	232.71	36.516	
14,960.6	6,700.2	6,535.0	6,533.7	233.7	2.2	-84.59	-1,087.5	203.3	8,557.2	8,322.8	234.40	36.507	
15,000.0	6,700.2	6,534.6	6,533.3	234.8	2.2	-84.58	-1,087.5	203.3	8,595.9	8,360.4	235.49	36.502	
15,059.0	6,700.0	6,534.0	6,532.7	236.4	2.2	-84.56	-1,087.5	203.3	8,653.8	8,416.7	237.13	36.493	
15,082.8	6,700.0	6,533.8	6,532.5	237.1	2.2	-84.55	-1,087.5	203.3	8,677.2	8,439.4	237.80	36.490 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-76.73	1,503.6	-6,374.1	6,549.0				
98.4	98.4	77.4	77.4	0.1	0.0	-76.73	1,503.6	-6,374.1	6,549.0	6,548.9	0.10	N/A	
100.0	100.0	79.0	79.0	0.1	0.0	-76.73	1,503.6	-6,374.1	6,549.0	6,548.9	0.10	N/A	
196.8	196.8	175.8	175.8	0.3	1.0	-76.73	1,503.6	-6,374.1	6,549.0	6,547.7	1.29	5,057.159	
200.0	200.0	179.0	179.0	0.3	1.0	-76.73	1,503.6	-6,374.1	6,549.0	6,547.7	1.34	4,877.284	
295.3	295.3	274.3	274.3	0.5	3.0	-76.73	1,503.6	-6,374.1	6,549.0	6,545.5	3.51	1,863.801	
300.0	300.0	279.0	279.0	0.5	3.1	-76.73	1,503.6	-6,374.1	6,549.0	6,545.4	3.63	1,803.316	
393.7	393.7	372.7	372.7	0.8	5.1	-76.73	1,503.6	-6,374.1	6,549.0	6,543.2	5.83	1,123.626	
400.0	400.0	379.0	379.0	0.8	5.2	-76.73	1,503.6	-6,374.1	6,549.0	6,543.0	5.97	1,096.355	
492.1	492.1	471.1	471.1	1.0	7.1	-76.73	1,503.6	-6,374.1	6,549.0	6,540.9	8.07	811.655	
500.0	500.0	479.0	479.0	1.0	7.3	-76.73	1,503.6	-6,374.1	6,549.0	6,540.8	8.25	794.090	
590.5	590.5	569.5	569.5	1.2	9.1	-76.73	1,503.6	-6,374.1	6,549.0	6,538.7	10.29	636.411	
600.0	600.0	579.0	579.0	1.2	9.3	-76.73	1,503.6	-6,374.1	6,549.0	6,538.5	10.50	623.508	
689.0	689.0	668.0	668.0	1.4	11.1	-76.73	1,503.6	-6,374.1	6,549.0	6,536.5	12.50	523.734	
700.0	700.0	679.0	679.0	1.4	11.3	-76.73	1,503.6	-6,374.1	6,549.0	6,536.3	12.75	513.558	
787.4	787.4	766.4	766.4	1.6	13.1	-76.73	1,503.6	-6,374.1	6,549.0	6,534.3	14.71	445.080	
800.0	800.0	779.0	779.0	1.7	13.3	-76.73	1,503.6	-6,374.1	6,549.0	6,534.0	15.00	436.689	
885.8	885.8	864.8	864.8	1.9	15.1	-76.73	1,503.6	-6,374.1	6,549.0	6,532.1	16.92	387.023	
900.0	900.0	879.0	879.0	1.9	15.3	-76.73	1,503.6	-6,374.1	6,549.0	6,531.8	17.24	379.889	
984.2	984.2	963.2	963.2	2.1	17.0	-76.73	1,503.6	-6,374.1	6,549.0	6,529.9	19.13	342.393	
1,000.0	1,000.0	979.0	979.0	2.1	17.4	-76.73	1,503.6	-6,374.1	6,549.0	6,529.5	19.48	336.190	
1,082.7	1,082.7	1,061.7	1,061.7	2.3	19.0	-76.73	1,503.6	-6,374.1	6,549.0	6,527.7	21.33	307.007	
1,100.0	1,100.0	1,079.0	1,079.0	2.3	19.4	-76.73	1,503.6	-6,374.1	6,549.0	6,527.3	21.72	301.523	
1,181.1	1,181.1	1,160.1	1,160.1	2.5	21.0	-105.46	1,503.6	-6,374.1	6,549.3	6,525.8	23.53	278.307	
1,200.0	1,200.0	1,179.0	1,179.0	2.6	21.4	-105.46	1,503.6	-6,374.1	6,549.5	6,525.5	23.95	273.410	
1,279.5	1,279.4	1,258.4	1,258.4	2.7	23.0	-105.47	1,503.6	-6,374.1	6,550.5	6,524.8	25.73	254.610	
1,300.0	1,299.8	1,278.8	1,278.8	2.8	23.4	-105.48	1,503.6	-6,374.1	6,550.9	6,524.7	26.18	250.193	
1,377.9	1,377.5	1,356.5	1,356.5	3.0	25.0	-105.50	1,503.6	-6,374.1	6,552.6	6,524.7	27.92	234.697	
1,400.0	1,399.5	1,378.5	1,378.5	3.0	25.4	-105.51	1,503.6	-6,374.1	6,553.2	6,524.8	28.41	230.669	
1,476.4	1,475.3	1,454.3	1,454.3	3.2	26.9	-105.53	1,503.6	-6,374.1	6,555.6	6,525.5	30.11	217.705	
1,500.0	1,498.7	1,477.7	1,477.7	3.3	27.4	-105.54	1,503.6	-6,374.1	6,556.5	6,525.9	30.64	213.999	
1,574.8	1,572.6	1,551.6	1,551.6	3.5	28.9	-105.58	1,503.6	-6,374.1	6,559.6	6,527.3	32.31	203.008	
1,600.0	1,597.5	1,576.5	1,576.5	3.5	29.4	-105.59	1,503.6	-6,374.1	6,560.7	6,527.9	32.87	199.571	
1,673.2	1,669.4	1,648.4	1,648.4	3.7	30.8	-105.63	1,503.6	-6,374.1	6,564.5	6,530.0	34.52	190.145	
1,700.1	1,695.8	1,674.8	1,674.8	3.8	31.4	-105.65	1,503.6	-6,374.1	6,566.0	6,530.9	35.13	186.916	
1,771.6	1,765.7	1,744.7	1,744.7	4.1	32.8	-105.77	1,503.6	-6,374.1	6,570.1	6,533.3	36.76	178.716	
1,800.0	1,793.4	1,772.4	1,772.4	4.2	33.3	-105.82	1,503.6	-6,374.1	6,571.7	6,534.3	37.41	175.661	
1,870.1	1,862.0	1,841.0	1,841.0	4.4	34.7	-105.94	1,503.6	-6,374.1	6,575.8	6,536.8	39.03	168.495	
1,900.0	1,891.3	1,870.3	1,870.3	4.5	35.3	-105.99	1,503.6	-6,374.1	6,577.5	6,537.8	39.72	165.611	
1,968.5	1,958.3	1,937.3	1,937.3	4.8	36.6	-106.11	1,503.6	-6,374.1	6,581.6	6,540.3	41.31	159.337	
2,000.0	1,989.1	1,968.1	1,968.1	4.9	37.3	-106.16	1,503.6	-6,374.1	6,583.4	6,541.4	42.04	156.612	
2,066.9	2,054.5	2,033.5	2,033.5	5.1	38.6	-106.28	1,503.6	-6,374.1	6,587.4	6,543.8	43.60	151.099	
2,100.0	2,086.9	2,065.9	2,065.9	5.3	39.2	-106.33	1,503.6	-6,374.1	6,589.4	6,545.0	44.37	148.517	
2,165.3	2,150.8	2,129.8	2,129.8	5.5	40.5	-106.44	1,503.6	-6,374.1	6,593.3	6,547.4	45.90	143.655	
2,200.0	2,184.7	2,163.7	2,163.7	5.6	41.2	-106.50	1,503.6	-6,374.1	6,595.4	6,548.7	46.71	141.206	
2,263.8	2,247.1	2,226.1	2,226.1	5.9	42.5	-106.61	1,503.6	-6,374.1	6,599.2	6,551.0	48.20	136.901	
2,300.0	2,282.5	2,261.5	2,261.5	6.0	43.2	-106.67	1,503.6	-6,374.1	6,601.4	6,552.4	49.05	134.573	
2,362.2	2,343.3	2,322.3	2,322.3	6.3	44.4	-106.78	1,503.6	-6,374.1	6,605.2	6,554.7	50.52	130.750	
2,400.0	2,380.3	2,359.3	2,359.3	6.5	45.1	-106.84	1,503.6	-6,374.1	6,607.5	6,556.1	51.41	128.534	
2,460.6	2,439.6	2,418.6	2,418.6	6.7	46.3	-106.94	1,503.6	-6,374.1	6,611.3	6,558.4	52.84	125.128	
2,500.0	2,478.1	2,457.1	2,457.1	6.9	47.1	-107.01	1,503.6	-6,374.1	6,613.7	6,560.0	53.76	123.014	
2,559.0	2,535.9	2,514.9	2,514.9	7.1	48.3	-107.11	1,503.6	-6,374.1	6,617.4	6,562.2	55.16	119.971	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,554.9	2,554.9	7.3	49.1	-107.18	1,503.6	-6,374.1	6,620.0	6,563.8	56.12	117.950	
2,657.5	2,632.2	2,611.2	2,611.2	7.5	50.2	-107.28	1,503.6	-6,374.1	6,623.6	6,566.1	57.48	115.226	
2,700.0	2,673.8	2,652.8	2,652.8	7.7	51.0	-107.35	1,503.6	-6,374.1	6,626.3	6,567.8	58.49	113.291	
2,755.9	2,728.4	2,707.4	2,707.4	7.9	52.1	-107.44	1,503.6	-6,374.1	6,629.8	6,570.0	59.81	110.845	
2,800.0	2,771.6	2,750.6	2,750.6	8.1	53.0	-107.52	1,503.6	-6,374.1	6,632.6	6,571.8	60.85	108.991	
2,854.3	2,824.7	2,803.7	2,803.7	8.3	54.1	-107.61	1,503.6	-6,374.1	6,636.1	6,573.9	62.14	106.791	
2,900.0	2,869.4	2,848.4	2,848.4	8.5	55.0	-107.68	1,503.6	-6,374.1	6,639.0	6,575.8	63.22	105.010	
2,952.7	2,921.0	2,900.0	2,900.0	8.8	56.0	-107.77	1,503.6	-6,374.1	6,642.4	6,578.0	64.47	103.027	
3,000.0	2,967.2	2,946.2	2,946.2	9.0	56.9	-107.85	1,503.6	-6,374.1	6,645.5	6,579.9	65.59	101.315	
3,051.2	3,017.3	2,996.3	2,996.3	9.2	58.0	-107.94	1,503.6	-6,374.1	6,648.8	6,582.0	66.81	99.525	
3,100.0	3,065.0	3,044.0	3,044.0	9.4	58.9	-108.02	1,503.6	-6,374.1	6,652.0	6,584.1	67.96	97.877	
3,149.6	3,113.5	3,092.5	3,092.5	9.6	59.9	-108.10	1,503.6	-6,374.1	6,655.3	6,586.2	69.14	96.259	
3,200.0	3,162.8	3,141.8	3,141.8	9.8	60.9	-108.18	1,503.6	-6,374.1	6,658.6	6,588.3	70.33	94.670	
3,248.0	3,209.8	3,188.8	3,188.8	10.0	61.8	-108.26	1,503.6	-6,374.1	6,661.8	6,590.3	71.47	93.206	
3,300.0	3,260.6	3,239.6	3,239.6	10.2	62.8	-108.35	1,503.6	-6,374.1	6,665.3	6,592.6	72.71	91.672	
3,346.4	3,306.1	3,285.1	3,285.1	10.5	63.8	-108.43	1,503.6	-6,374.1	6,668.4	6,594.6	73.81	90.345	
3,400.0	3,358.5	3,337.5	3,337.5	10.7	64.8	-108.52	1,503.6	-6,374.1	6,672.0	6,596.9	75.08	88.864	
3,444.9	3,402.3	3,381.3	3,381.3	10.9	65.7	-108.59	1,503.6	-6,374.1	6,675.0	6,598.9	76.15	87.661	
3,500.0	3,456.3	3,435.3	3,435.3	11.1	66.8	-108.68	1,503.6	-6,374.1	6,678.7	6,601.3	77.45	86.228	
3,543.3	3,498.6	3,477.6	3,477.6	11.3	67.6	-108.75	1,503.6	-6,374.1	6,681.7	6,603.2	78.48	85.136	
3,600.0	3,554.1	3,533.1	3,533.1	11.5	68.7	-108.85	1,503.6	-6,374.1	6,685.6	6,605.7	79.83	83.750	
3,641.7	3,594.9	3,573.9	3,573.9	11.7	69.6	-108.92	1,503.6	-6,374.1	6,688.4	6,607.6	80.82	82.758	
3,700.0	3,651.9	3,630.9	3,630.9	12.0	70.7	-109.01	1,503.6	-6,374.1	6,692.4	6,610.2	82.20	81.415	
3,740.1	3,691.2	3,670.2	3,670.2	12.2	71.5	-109.08	1,503.6	-6,374.1	6,695.2	6,612.1	83.16	80.515	
3,800.0	3,749.7	3,728.7	3,728.7	12.4	72.7	-109.18	1,503.6	-6,374.1	6,699.4	6,614.8	84.58	79.211	
3,838.6	3,787.4	3,766.4	3,766.4	12.6	73.4	-109.24	1,503.6	-6,374.1	6,702.1	6,616.6	85.49	78.394	
3,900.0	3,847.5	3,826.5	3,826.5	12.9	74.7	-109.34	1,503.6	-6,374.1	6,706.4	6,619.4	86.95	77.129	
3,937.0	3,883.7	3,862.7	3,862.7	13.0	75.4	-109.40	1,503.6	-6,374.1	6,709.0	6,621.2	87.83	76.387	
4,000.0	3,945.3	3,924.3	3,924.3	13.3	76.6	-109.51	1,503.6	-6,374.1	6,713.4	6,624.1	89.32	75.158	
4,035.4	3,980.0	3,959.0	3,959.0	13.5	77.3	-109.57	1,503.6	-6,374.1	6,715.9	6,625.8	90.17	74.485	
4,060.0	4,004.0	3,983.0	3,983.0	13.6	77.8	-109.61	1,503.6	-6,374.1	6,717.7	6,626.9	90.75	74.025	
4,100.0	4,043.2	4,022.2	4,022.2	13.7	78.6	-109.72	1,503.6	-6,374.1	6,720.5	6,628.8	91.70	73.286	
4,133.8	4,076.5	4,055.5	4,055.5	13.8	79.3	-109.81	1,503.6	-6,374.1	6,722.6	6,630.2	92.49	72.687	
4,200.0	4,141.6	4,120.6	4,120.6	14.0	80.6	-109.98	1,503.6	-6,374.1	6,726.6	6,632.5	94.03	71.539	
4,232.3	4,173.5	4,152.5	4,152.5	14.1	81.2	-110.05	1,503.6	-6,374.1	6,728.3	6,633.5	94.77	70.997	
4,300.0	4,240.6	4,219.6	4,219.6	14.3	82.6	-110.18	1,503.6	-6,374.1	6,731.5	6,635.2	96.32	69.884	
4,330.7	4,271.1	4,250.1	4,250.1	14.4	83.2	-110.24	1,503.6	-6,374.1	6,732.8	6,635.8	97.02	69.396	
4,400.0	4,340.0	4,319.0	4,319.0	14.5	84.6	-110.34	1,503.6	-6,374.1	6,735.3	6,636.7	98.59	68.316	
4,429.1	4,369.0	4,348.0	4,348.0	14.6	85.1	-110.37	1,503.6	-6,374.1	6,736.1	6,636.9	99.24	67.879	
4,500.0	4,439.7	4,418.7	4,418.7	14.8	86.6	-110.44	1,503.6	-6,374.1	6,737.8	6,637.0	100.82	66.833	
4,527.5	4,467.2	4,446.2	4,446.2	14.8	87.1	-110.47	1,503.6	-6,374.1	6,738.3	6,636.9	101.42	66.441	
4,600.0	4,539.7	4,518.7	4,518.7	14.9	88.6	-110.50	1,503.6	-6,374.1	6,739.2	6,636.2	103.00	65.429	
4,626.0	4,565.6	4,544.6	4,544.6	15.0	89.1	-110.51	1,503.6	-6,374.1	6,739.3	6,635.8	103.56	65.077	
4,660.2	4,599.8	4,578.8	4,578.8	15.0	89.8	-81.78	1,503.6	-6,374.1	6,739.4	6,638.2	101.19	66.601	
4,700.0	4,639.6	4,618.6	4,618.6	15.0	90.6	-81.78	1,503.6	-6,374.1	6,739.4	6,637.3	102.06	66.033	
4,724.4	4,664.0	4,643.0	4,643.0	15.1	91.1	-81.78	1,503.6	-6,374.1	6,739.4	6,636.8	102.60	65.687	
4,800.0	4,739.6	4,718.6	4,718.6	15.2	92.6	-81.78	1,503.6	-6,374.1	6,739.4	6,635.1	104.26	64.638	
4,822.8	4,762.5	4,741.5	4,741.5	15.2	93.1	-81.78	1,503.6	-6,374.1	6,739.4	6,634.6	104.77	64.327	
4,900.0	4,839.6	4,818.6	4,818.6	15.3	94.6	-81.78	1,503.6	-6,374.1	6,739.4	6,632.9	106.47	63.299	
4,921.2	4,860.9	4,839.9	4,839.9	15.4	95.0	-81.78	1,503.6	-6,374.1	6,739.4	6,632.4	106.94	63.022	
5,000.0	4,939.6	4,918.6	4,918.6	15.5	96.6	-81.78	1,503.6	-6,374.1	6,739.4	6,630.7	108.67	62.014	
5,019.7	4,959.3	4,938.3	4,938.3	15.5	97.0	-81.78	1,503.6	-6,374.1	6,739.4	6,630.3	109.11	61.768	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,018.6	5,018.6	15.6	98.6	-81.78	1,503.6	-6,374.1	6,739.4	6,628.5	110.88	60.780	
5,118.1	5,057.7	5,036.7	5,036.7	15.7	99.0	-81.78	1,503.6	-6,374.1	6,739.4	6,628.1	111.28	60.562	
5,200.0	5,139.6	5,118.6	5,118.6	15.8	100.6	-81.78	1,503.6	-6,374.1	6,739.4	6,626.3	113.09	59.593	
5,216.5	5,156.2	5,135.2	5,135.2	15.8	101.0	-81.78	1,503.6	-6,374.1	6,739.4	6,625.9	113.45	59.402	
5,300.0	5,239.6	5,218.6	5,218.6	15.9	102.6	-81.78	1,503.6	-6,374.1	6,739.4	6,624.1	115.30	58.452	
5,314.9	5,254.6	5,233.6	5,233.6	16.0	102.9	-81.78	1,503.6	-6,374.1	6,739.4	6,623.8	115.63	58.285	
5,400.0	5,339.6	5,318.6	5,318.6	16.1	104.7	-81.78	1,503.6	-6,374.1	6,739.4	6,621.9	117.51	57.353	
5,413.4	5,353.0	5,332.0	5,332.0	16.1	104.9	-81.78	1,503.6	-6,374.1	6,739.4	6,621.6	117.80	57.209	
5,500.0	5,439.6	5,418.6	5,418.6	16.3	106.7	-81.78	1,503.6	-6,374.1	6,739.4	6,619.7	119.72	56.294	
5,511.8	5,451.4	5,430.4	5,430.4	16.3	106.9	-81.78	1,503.6	-6,374.1	6,739.4	6,619.4	119.98	56.171	
5,600.0	5,539.6	5,518.6	5,518.6	16.4	108.7	-81.78	1,503.6	-6,374.1	6,739.4	6,617.5	121.93	55.273	
5,610.2	5,549.9	5,528.9	5,528.9	16.4	108.9	-81.78	1,503.6	-6,374.1	6,739.4	6,617.2	122.16	55.170	
5,700.0	5,639.6	5,618.6	5,618.6	16.6	110.7	-81.78	1,503.6	-6,374.1	6,739.4	6,615.2	124.14	54.288	
5,708.6	5,648.3	5,627.3	5,627.3	16.6	110.9	-81.78	1,503.6	-6,374.1	6,739.4	6,615.1	124.33	54.204	
5,800.0	5,739.6	5,718.6	5,718.6	16.7	112.7	-81.78	1,503.6	-6,374.1	6,739.4	6,613.0	126.35	53.337	
5,807.1	5,746.7	5,725.7	5,725.7	16.8	112.8	-81.78	1,503.6	-6,374.1	6,739.4	6,612.9	126.51	53.271	
5,900.0	5,839.6	5,818.6	5,818.6	16.9	114.7	-81.78	1,503.6	-6,374.1	6,739.4	6,610.8	128.57	52.419	
5,905.5	5,845.1	5,824.1	5,824.1	16.9	114.8	-81.78	1,503.6	-6,374.1	6,739.4	6,610.7	128.69	52.369	
6,000.0	5,939.6	5,918.6	5,918.6	17.1	116.7	-81.78	1,503.6	-6,374.1	6,739.4	6,608.6	130.78	51.531	
6,003.9	5,943.6	5,922.6	5,922.6	17.1	116.8	-81.78	1,503.6	-6,374.1	6,739.4	6,608.5	130.87	51.497	
6,059.2	5,998.8	5,977.8	5,977.8	17.2	117.9	-81.78	1,503.6	-6,374.1	6,739.4	6,607.3	132.09	51.020	
6,100.0	6,039.6	6,018.6	6,018.6	17.2	118.7	8.23	1,503.6	-6,374.1	6,738.2	6,602.9	135.30	49.802	
6,102.3	6,042.0	6,021.0	6,021.0	17.2	118.8	8.24	1,503.6	-6,374.1	6,738.1	6,602.8	135.33	49.792	
6,150.0	6,089.4	6,068.4	6,068.4	17.3	119.7	8.29	1,503.6	-6,374.1	6,733.7	6,598.2	135.51	49.692	
6,200.0	6,138.7	6,117.7	6,117.7	17.3	120.7	8.40	1,503.6	-6,374.1	6,725.7	6,590.7	135.05	49.800	
6,200.8	6,139.5	6,118.5	6,118.5	17.3	120.7	8.40	1,503.6	-6,374.1	6,725.6	6,590.5	135.04	49.804	
6,250.0	6,187.4	6,166.4	6,166.4	17.3	121.7	8.55	1,503.6	-6,374.1	6,714.4	6,580.4	133.93	50.133	
6,299.2	6,234.4	6,213.4	6,213.4	17.4	122.7	8.75	1,503.6	-6,374.1	6,699.9	6,567.8	132.17	50.692	
6,300.0	6,235.1	6,214.1	6,214.1	17.4	122.7	8.75	1,503.6	-6,374.1	6,699.7	6,567.5	132.14	50.703	
6,350.0	6,281.7	6,260.7	6,260.7	17.4	123.6	9.01	1,503.6	-6,374.1	6,681.7	6,552.1	129.68	51.525	
6,397.6	6,324.8	6,303.8	6,303.8	17.3	124.5	9.32	1,503.6	-6,374.1	6,661.7	6,535.0	126.73	52.565	
6,400.0	6,326.9	6,305.9	6,305.9	17.3	124.5	9.34	1,503.6	-6,374.1	6,660.6	6,534.1	126.57	52.624	
6,450.0	6,370.5	6,349.5	6,349.5	17.3	125.4	9.74	1,503.6	-6,374.1	6,636.4	6,513.6	122.84	54.027	
6,496.0	6,409.1	6,388.1	6,388.1	17.3	126.2	10.19	1,503.6	-6,374.1	6,611.6	6,492.7	118.87	55.618	
6,500.0	6,412.3	6,391.3	6,391.3	17.3	126.2	10.23	1,503.6	-6,374.1	6,609.3	6,490.8	118.51	55.769	
6,550.0	6,452.1	6,431.1	6,431.1	17.3	127.0	10.82	1,503.6	-6,374.1	6,579.4	6,465.7	113.65	57.890	
6,594.5	6,485.6	6,464.6	6,464.6	17.3	127.7	11.46	1,503.6	-6,374.1	6,550.5	6,441.5	108.94	60.128	
6,600.0	6,489.7	6,468.7	6,468.7	17.3	127.8	11.55	1,503.6	-6,374.1	6,546.8	6,438.4	108.34	60.430	
6,650.0	6,524.9	6,503.9	6,503.9	17.2	128.5	12.43	1,503.6	-6,374.1	6,511.6	6,409.0	102.67	63.421	
6,692.9	6,553.0	6,532.0	6,532.0	17.2	129.1	13.35	1,503.6	-6,374.1	6,479.6	6,382.0	97.66	66.347	
6,700.0	6,557.5	6,536.5	6,536.5	17.2	129.2	13.52	1,503.6	-6,374.1	6,474.2	6,377.3	96.83	66.860	
6,750.0	6,587.4	6,566.4	6,566.4	17.2	129.8	14.88	1,503.6	-6,374.1	6,434.6	6,343.5	91.07	70.658	
6,791.3	6,609.9	6,588.9	6,588.9	17.2	130.2	16.28	1,503.6	-6,374.1	6,400.3	6,313.7	86.64	73.877	
6,800.0	6,614.4	6,593.4	6,593.4	17.2	130.3	16.61	1,503.6	-6,374.1	6,393.0	6,307.2	85.78	74.530	
6,850.0	6,638.4	6,617.4	6,617.4	17.2	130.8	18.84	1,503.6	-6,374.1	6,349.6	6,268.0	81.61	77.809	
6,889.7	6,655.3	6,634.3	6,634.3	17.4	131.1	21.12	1,503.6	-6,374.1	6,314.1	6,234.3	79.74	79.180	
6,900.0	6,659.4	6,638.4	6,638.4	17.5	131.2	21.81	1,503.6	-6,374.1	6,304.8	6,225.2	79.56	79.250	
6,950.0	6,677.1	6,656.1	6,656.1	18.0	131.6	25.88	1,503.6	-6,374.1	6,258.6	6,177.5	81.11	77.163	
6,988.2	6,688.4	6,667.4	6,667.4	18.5	131.8	30.11	1,503.6	-6,374.1	6,222.5	6,136.7	85.90	72.443	
7,000.0	6,691.5	6,670.5	6,670.5	18.7	131.8	31.69	1,503.6	-6,374.1	6,211.3	6,123.1	88.17	70.449	
7,050.0	6,702.5	6,681.5	6,681.5	19.5	132.1	40.36	1,503.6	-6,374.1	6,163.1	6,060.5	102.62	60.056	
7,086.6	6,708.4	6,687.4	6,687.4	20.1	132.2	49.54	1,503.6	-6,374.1	6,127.4	6,009.2	118.24	51.822	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT HECKENDORF #1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	6,689.1	6,689.1	20.4	132.2	53.69	1,503.6	-6,374.1	6,114.3	5,989.6	124.75	49.014	
7,150.0	6,714.2	6,693.2	6,693.2	21.3	132.3	73.49	1,503.6	-6,374.1	6,065.1	5,917.5	147.57	41.099	
7,185.0	6,715.0	6,694.0	6,694.0	21.9	132.3	90.43	1,503.6	-6,374.1	6,030.6	5,876.6	153.94	39.175	
7,185.6	6,715.0	6,694.0	6,694.0	21.9	132.3	90.69	1,503.6	-6,374.1	6,030.0	5,876.1	153.93	39.173	
7,200.0	6,715.0	6,694.0	6,694.0	22.2	132.3	90.69	1,503.6	-6,374.1	6,015.8	5,861.6	154.21	39.010	
7,283.4	6,714.8	6,693.8	6,693.8	23.9	132.3	90.68	1,503.6	-6,374.1	5,933.4	5,777.5	155.89	38.062	
7,300.0	6,714.8	6,693.8	6,693.8	24.2	132.3	90.68	1,503.6	-6,374.1	5,917.1	5,760.9	156.22	37.877	
7,381.9	6,714.6	6,693.6	6,693.6	26.0	132.3	90.67	1,503.6	-6,374.1	5,836.3	5,678.3	157.98	36.944	
7,400.0	6,714.6	6,693.6	6,693.6	26.4	132.3	90.67	1,503.6	-6,374.1	5,818.4	5,660.1	158.37	36.740	
7,480.3	6,714.4	6,693.4	6,693.4	28.2	132.3	90.66	1,503.6	-6,374.1	5,739.3	5,579.1	160.18	35.829	
7,500.0	6,714.4	6,693.4	6,693.4	28.7	132.3	90.65	1,503.6	-6,374.1	5,719.8	5,559.2	160.63	35.609	
7,578.7	6,714.2	6,693.2	6,693.2	30.5	132.3	90.64	1,503.6	-6,374.1	5,642.3	5,479.8	162.48	34.725	
7,600.0	6,714.2	6,693.2	6,693.2	31.0	132.3	90.64	1,503.6	-6,374.1	5,621.3	5,458.3	162.98	34.490	
7,677.1	6,714.0	6,693.0	6,693.0	32.9	132.3	90.63	1,503.6	-6,374.1	5,545.3	5,380.5	164.85	33.638	
7,700.0	6,714.0	6,693.0	6,693.0	33.4	132.3	90.63	1,503.6	-6,374.1	5,522.8	5,357.4	165.41	33.389	
7,775.6	6,713.9	6,692.9	6,692.9	35.3	132.3	90.62	1,503.6	-6,374.1	5,448.4	5,281.1	167.28	32.570	
7,800.0	6,713.8	6,692.8	6,692.8	35.9	132.3	90.62	1,503.6	-6,374.1	5,424.4	5,256.5	167.89	32.309	
7,874.0	6,713.7	6,692.7	6,692.7	37.8	132.3	90.61	1,503.6	-6,374.1	5,351.6	5,181.8	169.76	31.525	
7,900.0	6,713.6	6,692.6	6,692.6	38.4	132.3	90.61	1,503.6	-6,374.1	5,326.0	5,155.6	170.41	31.253	
7,972.4	6,713.5	6,692.5	6,692.5	40.3	132.3	90.60	1,503.6	-6,374.1	5,254.8	5,082.5	172.27	30.503	
8,000.0	6,713.4	6,692.4	6,692.4	41.0	132.3	90.59	1,503.6	-6,374.1	5,227.7	5,054.7	172.98	30.222	
8,070.8	6,713.3	6,692.3	6,692.3	42.8	132.3	90.59	1,503.6	-6,374.1	5,158.1	4,983.2	174.82	29.506	
8,100.0	6,713.2	6,692.2	6,692.2	43.6	132.3	90.58	1,503.6	-6,374.1	5,129.4	4,953.8	175.57	29.216	
8,169.3	6,713.1	6,692.1	6,692.1	45.4	132.3	90.57	1,503.6	-6,374.1	5,061.4	4,884.0	177.39	28.533	
8,200.0	6,713.0	6,692.0	6,692.0	46.2	132.3	90.57	1,503.6	-6,374.1	5,031.2	4,853.0	178.19	28.235	
8,267.7	6,712.9	6,691.9	6,691.9	48.0	132.3	90.56	1,503.6	-6,374.1	4,964.8	4,784.8	179.98	27.586	
8,300.0	6,712.8	6,691.8	6,691.8	48.8	132.3	90.56	1,503.6	-6,374.1	4,933.1	4,752.3	180.83	27.280	
8,366.1	6,712.7	6,691.7	6,691.7	50.6	132.3	90.55	1,503.6	-6,374.1	4,868.3	4,685.7	182.59	26.663	
8,400.0	6,712.6	6,691.6	6,691.6	51.5	132.3	90.55	1,503.6	-6,374.1	4,835.1	4,651.6	183.49	26.351	
8,464.5	6,712.5	6,691.5	6,691.5	53.2	132.3	90.54	1,503.6	-6,374.1	4,771.8	4,586.6	185.21	25.764	
8,500.0	6,712.4	6,691.4	6,691.4	54.1	132.3	90.53	1,503.6	-6,374.1	4,737.1	4,551.0	186.16	25.446	
8,563.0	6,712.3	6,691.3	6,691.3	55.8	132.3	90.53	1,503.6	-6,374.1	4,675.5	4,487.6	187.85	24.889	
8,600.0	6,712.3	6,691.3	6,691.3	56.8	132.3	90.52	1,503.6	-6,374.1	4,639.3	4,450.4	188.85	24.566	
8,661.4	6,712.1	6,691.1	6,691.1	58.5	132.3	90.51	1,503.6	-6,374.1	4,579.2	4,388.7	190.50	24.038	
8,700.0	6,712.1	6,691.1	6,691.1	59.5	132.3	90.51	1,503.6	-6,374.1	4,541.5	4,350.0	191.54	23.710	
8,759.8	6,711.9	6,690.9	6,690.9	61.1	132.3	90.50	1,503.6	-6,374.1	4,483.0	4,289.9	193.16	23.209	
8,800.0	6,711.9	6,690.9	6,690.9	62.2	132.3	90.50	1,503.6	-6,374.1	4,443.8	4,249.6	194.25	22.877	
8,858.2	6,711.8	6,690.8	6,690.8	63.8	132.3	90.49	1,503.6	-6,374.1	4,387.0	4,191.1	195.83	22.402	
8,900.0	6,711.7	6,690.7	6,690.7	64.9	132.3	90.49	1,503.6	-6,374.1	4,346.3	4,149.3	196.97	22.066	
8,956.7	6,711.6	6,690.6	6,690.6	66.5	132.2	90.48	1,503.6	-6,374.1	4,291.0	4,092.5	198.51	21.616	
9,000.0	6,711.5	6,690.5	6,690.5	67.6	132.2	90.47	1,503.6	-6,374.1	4,248.8	4,049.1	199.69	21.277	
9,055.1	6,711.4	6,690.4	6,690.4	69.1	132.2	90.47	1,503.6	-6,374.1	4,195.2	3,994.0	201.19	20.851	
9,100.0	6,711.3	6,690.3	6,690.3	70.4	132.2	90.46	1,503.6	-6,374.1	4,151.5	3,949.0	202.42	20.509	
9,153.5	6,711.2	6,690.2	6,690.2	71.8	132.2	90.46	1,503.6	-6,374.1	4,099.4	3,895.5	203.88	20.107	
9,200.0	6,711.1	6,690.1	6,690.1	73.1	132.2	90.45	1,503.6	-6,374.1	4,054.3	3,849.1	205.16	19.762	
9,251.9	6,711.0	6,690.0	6,690.0	74.5	132.2	90.45	1,503.6	-6,374.1	4,003.8	3,797.2	206.58	19.382	
9,300.0	6,710.9	6,689.9	6,689.9	75.8	132.2	90.44	1,503.6	-6,374.1	3,957.2	3,749.3	207.90	19.034	
9,350.4	6,710.8	6,689.8	6,689.8	77.2	132.2	90.43	1,503.6	-6,374.1	3,908.4	3,699.1	209.28	18.675	
9,400.0	6,710.7	6,689.7	6,689.7	78.6	132.2	90.43	1,503.6	-6,374.1	3,860.3	3,649.6	210.64	18.326	
9,448.8	6,710.6	6,689.6	6,689.6	79.9	132.2	90.42	1,503.6	-6,374.1	3,813.0	3,601.1	211.98	17.987	
9,500.0	6,710.5	6,689.5	6,689.5	81.3	132.2	90.42	1,503.6	-6,374.1	3,763.5	3,550.1	213.39	17.637	
9,547.2	6,710.4	6,689.4	6,689.4	82.6	132.2	90.41	1,503.6	-6,374.1	3,717.9	3,503.2	214.69	17.317	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT HECKENDORF #1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,600.0	6,710.3	6,689.3	6,689.3	84.1	132.2	90.40	1,503.6	-6,374.1	3,667.0	3,450.8	216.15	16.965	
9,645.6	6,710.2	6,689.2	6,689.2	85.3	132.2	90.40	1,503.6	-6,374.1	3,622.9	3,405.5	217.40	16.664	
9,700.0	6,710.1	6,689.1	6,689.1	86.8	132.2	90.39	1,503.6	-6,374.1	3,570.6	3,351.7	218.90	16.311	
9,744.1	6,710.0	6,689.0	6,689.0	88.1	132.2	90.39	1,503.6	-6,374.1	3,528.1	3,308.0	220.12	16.028	
9,800.0	6,709.9	6,688.9	6,688.9	89.6	132.2	90.38	1,503.6	-6,374.1	3,474.4	3,252.7	221.66	15.674	
9,842.5	6,709.9	6,688.9	6,688.9	90.8	132.2	90.38	1,503.6	-6,374.1	3,433.6	3,210.7	222.84	15.408	
9,900.0	6,709.7	6,688.7	6,688.7	92.4	132.2	90.37	1,503.6	-6,374.1	3,378.4	3,154.0	224.43	15.054	
9,940.9	6,709.7	6,688.7	6,688.7	93.5	132.2	90.36	1,503.6	-6,374.1	3,339.2	3,113.6	225.56	14.804	
10,000.0	6,709.6	6,688.6	6,688.6	95.1	132.2	90.36	1,503.6	-6,374.1	3,282.7	3,055.5	227.19	14.449	
10,039.3	6,709.5	6,688.5	6,688.5	96.2	132.2	90.35	1,503.6	-6,374.1	3,245.1	3,016.8	228.28	14.215	
10,100.0	6,709.4	6,688.4	6,688.4	97.9	132.2	90.35	1,503.6	-6,374.1	3,187.2	2,957.3	229.96	13.860	
10,137.8	6,709.3	6,688.3	6,688.3	98.9	132.2	90.34	1,503.6	-6,374.1	3,151.2	2,920.2	231.01	13.641	
10,200.0	6,709.2	6,688.2	6,688.2	100.7	132.2	90.33	1,503.6	-6,374.1	3,092.1	2,859.3	232.73	13.286	
10,236.2	6,709.1	6,688.1	6,688.1	101.7	132.2	90.33	1,503.6	-6,374.1	3,057.7	2,823.9	233.73	13.082	
10,300.0	6,709.0	6,688.0	6,688.0	103.4	132.2	90.32	1,503.6	-6,374.1	2,997.2	2,761.7	235.50	12.727	
10,334.6	6,708.9	6,687.9	6,687.9	104.4	132.2	90.32	1,503.6	-6,374.1	2,964.4	2,728.0	236.46	12.536	
10,400.0	6,708.8	6,687.8	6,687.8	106.2	132.2	90.31	1,503.6	-6,374.1	2,902.7	2,664.4	238.28	12.182	
10,433.0	6,708.7	6,687.7	6,687.7	107.1	132.2	90.31	1,503.6	-6,374.1	2,871.5	2,632.3	239.20	12.005	
10,500.0	6,708.6	6,687.6	6,687.6	109.0	132.2	90.30	1,503.6	-6,374.1	2,808.5	2,567.5	241.05	11.651	
10,531.5	6,708.5	6,687.5	6,687.5	109.9	132.2	90.30	1,503.6	-6,374.1	2,779.0	2,537.1	241.93	11.487	
10,600.0	6,708.4	6,687.4	6,687.4	111.8	132.2	90.29	1,503.6	-6,374.1	2,714.8	2,471.0	243.83	11.134	
10,629.9	6,708.4	6,687.4	6,687.4	112.6	132.2	90.28	1,503.6	-6,374.1	2,686.9	2,442.2	244.66	10.982	
10,700.0	6,708.2	6,687.2	6,687.2	114.6	132.2	90.28	1,503.6	-6,374.1	2,621.6	2,375.0	246.61	10.630	
10,728.3	6,708.2	6,687.2	6,687.2	115.3	132.2	90.27	1,503.6	-6,374.1	2,595.3	2,347.9	247.40	10.490	
10,800.0	6,708.0	6,687.0	6,687.0	117.3	132.2	90.26	1,503.6	-6,374.1	2,528.8	2,279.4	249.39	10.140	
10,826.7	6,708.0	6,687.0	6,687.0	118.1	132.2	90.26	1,503.6	-6,374.1	2,504.1	2,254.0	250.14	10.011	
10,900.0	6,707.8	6,686.8	6,686.8	120.1	132.2	90.25	1,503.6	-6,374.1	2,436.7	2,184.5	252.17	9.663	
10,925.2	6,707.8	6,686.8	6,686.8	120.8	132.2	90.25	1,503.6	-6,374.1	2,413.6	2,160.7	252.87	9.545	
11,000.0	6,707.6	6,686.6	6,686.6	122.9	132.2	90.24	1,503.6	-6,374.1	2,345.2	2,090.2	254.96	9.198	
11,023.6	6,707.6	6,686.6	6,686.6	123.6	132.2	90.24	1,503.6	-6,374.1	2,323.7	2,068.1	255.61	9.091	
11,100.0	6,707.5	6,686.5	6,686.5	125.7	132.2	90.23	1,503.6	-6,374.1	2,254.4	1,996.6	257.74	8.747	
11,122.0	6,707.4	6,686.4	6,686.4	126.3	132.2	90.23	1,503.6	-6,374.1	2,234.5	1,976.1	258.35	8.649	
11,200.0	6,707.3	6,686.3	6,686.3	128.5	132.2	90.22	1,503.6	-6,374.1	2,164.4	1,903.9	260.52	8.308	
11,220.4	6,707.2	6,686.2	6,686.2	129.0	132.2	90.22	1,503.6	-6,374.1	2,146.1	1,885.0	261.09	8.220	
11,300.0	6,707.1	6,686.1	6,686.1	131.3	132.2	90.21	1,503.6	-6,374.1	2,075.3	1,812.0	263.31	7.882	
11,318.9	6,707.0	6,686.0	6,686.0	131.8	132.2	90.21	1,503.6	-6,374.1	2,058.6	1,794.8	263.84	7.803	
11,400.0	6,706.9	6,685.9	6,685.9	134.0	132.2	90.20	1,503.6	-6,374.1	1,987.3	1,721.2	266.10	7.468	
11,417.3	6,706.9	6,685.9	6,685.9	134.5	132.2	90.19	1,503.6	-6,374.1	1,972.2	1,705.6	266.58	7.398	
11,500.0	6,706.7	6,685.7	6,685.7	136.8	132.2	90.18	1,503.6	-6,374.1	1,900.4	1,631.5	268.88	7.068	
11,515.7	6,706.7	6,685.7	6,685.7	137.3	132.2	90.18	1,503.6	-6,374.1	1,886.9	1,617.6	269.32	7.006	
11,600.0	6,706.5	6,685.5	6,685.5	139.6	132.1	90.17	1,503.6	-6,374.1	1,814.9	1,543.3	271.67	6.681	
11,614.1	6,706.5	6,685.5	6,685.5	140.0	132.1	90.17	1,503.6	-6,374.1	1,803.0	1,530.9	272.07	6.627	
11,700.0	6,706.3	6,685.3	6,685.3	142.4	132.1	90.16	1,503.6	-6,374.1	1,731.0	1,456.5	274.46	6.307	
11,712.6	6,706.3	6,685.3	6,685.3	142.8	132.1	90.16	1,503.6	-6,374.1	1,720.6	1,445.8	274.81	6.261	
11,800.0	6,706.1	6,685.1	6,685.1	145.2	132.1	90.15	1,503.6	-6,374.1	1,648.9	1,371.6	277.25	5.947	
11,811.0	6,706.1	6,685.1	6,685.1	145.5	132.1	90.15	1,503.6	-6,374.1	1,640.0	1,362.4	277.56	5.908	
11,900.0	6,705.9	6,684.9	6,684.9	148.0	132.1	90.14	1,503.6	-6,374.1	1,568.8	1,288.8	280.04	5.602	
11,909.4	6,705.9	6,684.9	6,684.9	148.3	132.1	90.14	1,503.6	-6,374.1	1,561.4	1,281.1	280.31	5.570	
12,000.0	6,705.8	6,684.8	6,684.8	150.8	132.1	90.13	1,503.6	-6,374.1	1,491.1	1,208.3	282.83	5.272	
12,007.8	6,705.7	6,684.7	6,684.7	151.0	132.1	90.13	1,503.6	-6,374.1	1,485.2	1,202.1	283.05	5.247	
12,100.0	6,705.6	6,684.6	6,684.6	153.6	132.1	90.12	1,503.6	-6,374.1	1,416.3	1,130.7	285.63	4.959	
12,106.3	6,705.6	6,684.6	6,684.6	153.8	132.1	90.12	1,503.6	-6,374.1	1,411.7	1,125.9	285.80	4.939	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,200.0	6,705.4	6,684.4	6,684.4	156.4	132.1	90.11	1,503.6	-6,374.1	1,344.7	1,056.3	288.42	4.662	
12,204.7	6,705.4	6,684.4	6,684.4	156.5	132.1	90.10	1,503.6	-6,374.1	1,341.4	1,052.9	288.55	4.649	
12,300.0	6,705.2	6,684.2	6,684.2	159.2	132.1	90.09	1,503.6	-6,374.1	1,277.0	985.7	291.21	4.385	
12,303.1	6,705.2	6,684.2	6,684.2	159.3	132.1	90.09	1,503.6	-6,374.1	1,274.9	983.6	291.30	4.377	
12,400.0	6,705.0	6,684.0	6,684.0	162.0	132.1	90.08	1,503.6	-6,374.1	1,213.7	919.7	294.00	4.128	
12,401.5	6,705.0	6,684.0	6,684.0	162.0	132.1	90.08	1,503.6	-6,374.1	1,212.7	918.7	294.05	4.124	
12,500.0	6,704.8	6,683.8	6,683.8	164.8	132.1	90.07	1,503.6	-6,374.1	1,155.6	858.8	296.80	3.893	
12,598.4	6,704.6	6,683.6	6,683.6	167.5	132.1	90.06	1,503.6	-6,374.1	1,104.3	804.7	299.55	3.687	
12,600.0	6,704.6	6,683.6	6,683.6	167.6	132.1	90.06	1,503.6	-6,374.1	1,103.5	803.9	299.59	3.683	
12,696.8	6,704.4	6,683.4	6,683.4	170.3	132.1	90.05	1,503.6	-6,374.1	1,059.7	757.4	302.30	3.505	
12,700.0	6,704.4	6,683.4	6,683.4	170.4	132.1	90.05	1,503.6	-6,374.1	1,058.3	756.0	302.39	3.500	
12,795.2	6,704.3	6,683.3	6,683.3	173.0	132.1	90.04	1,503.6	-6,374.1	1,022.6	717.5	305.05	3.352	
12,800.0	6,704.2	6,683.2	6,683.2	173.2	132.1	90.04	1,503.6	-6,374.1	1,021.0	715.8	305.18	3.346	
12,893.7	6,704.1	6,683.1	6,683.1	175.8	132.1	90.03	1,503.6	-6,374.1	993.9	686.1	307.80	3.229	
12,900.0	6,704.1	6,683.1	6,683.1	176.0	132.1	90.03	1,503.6	-6,374.1	992.4	684.4	307.98	3.222	
12,992.1	6,703.9	6,682.9	6,682.9	178.5	132.1	90.02	1,503.6	-6,374.1	974.4	663.8	310.55	3.138	
13,000.0	6,703.9	6,682.9	6,682.9	178.8	132.1	90.02	1,503.6	-6,374.1	973.3	662.5	310.77	3.132	
13,090.5	6,703.7	6,682.7	6,682.7	181.3	132.1	90.01	1,503.6	-6,374.1	964.6	651.3	313.31	3.079	
13,100.0	6,703.7	6,682.7	6,682.7	181.6	132.1	90.00	1,503.6	-6,374.1	964.2	650.6	313.57	3.075	
13,138.1	6,703.6	6,682.6	6,682.6	182.6	132.1	90.00	1,503.6	-6,374.1	963.4	648.8	314.64	3.062 CC	
13,188.9	6,703.5	6,682.5	6,682.5	184.0	132.1	89.99	1,503.6	-6,374.1	964.7	648.7	316.06	3.052 ES	
13,200.0	6,703.5	6,682.5	6,682.5	184.4	132.1	89.99	1,503.6	-6,374.1	965.4	649.0	316.37	3.051 SF	
13,287.4	6,703.3	6,682.3	6,682.3	186.8	132.1	89.98	1,503.6	-6,374.1	974.9	656.1	318.81	3.058	
13,300.0	6,703.3	6,682.3	6,682.3	187.2	132.1	89.98	1,503.6	-6,374.1	976.9	657.7	319.16	3.061	
13,385.8	6,703.2	6,682.2	6,682.2	189.6	132.1	89.97	1,503.6	-6,374.1	994.7	673.2	321.56	3.093	
13,400.0	6,703.1	6,682.1	6,682.1	190.0	132.1	89.97	1,503.6	-6,374.1	998.3	676.4	321.96	3.101	
13,484.2	6,703.0	6,682.0	6,682.0	192.3	132.1	89.96	1,503.6	-6,374.1	1,023.7	699.4	324.32	3.156	
13,500.0	6,702.9	6,681.9	6,681.9	192.8	132.1	89.96	1,503.6	-6,374.1	1,029.1	704.4	324.76	3.169	
13,582.6	6,702.8	6,681.8	6,681.8	195.1	132.1	89.95	1,503.6	-6,374.1	1,061.0	733.9	327.07	3.244	
13,600.0	6,702.8	6,681.8	6,681.8	195.6	132.1	89.95	1,503.6	-6,374.1	1,068.4	740.8	327.56	3.262	
13,681.1	6,702.6	6,681.6	6,681.6	197.8	132.1	89.94	1,503.6	-6,374.1	1,105.9	776.0	329.83	3.353	
13,700.0	6,702.6	6,681.6	6,681.6	198.4	132.1	89.94	1,503.6	-6,374.1	1,115.3	784.9	330.36	3.376	
13,779.5	6,702.4	6,681.4	6,681.4	200.6	132.1	89.93	1,503.6	-6,374.1	1,157.4	824.8	332.58	3.480	
13,800.0	6,702.4	6,681.4	6,681.4	201.2	132.1	89.93	1,503.6	-6,374.1	1,168.8	835.7	333.15	3.508	
13,877.9	6,702.2	6,681.2	6,681.2	203.3	132.1	89.92	1,503.6	-6,374.1	1,214.7	879.3	335.33	3.622	
13,900.0	6,702.2	6,681.2	6,681.2	204.0	132.1	89.92	1,503.6	-6,374.1	1,228.2	892.3	335.95	3.656	
13,976.3	6,702.1	6,681.1	6,681.1	206.1	132.1	89.91	1,503.6	-6,374.1	1,277.0	938.9	338.09	3.777	
14,000.0	6,702.0	6,681.0	6,681.0	206.8	132.1	89.90	1,503.6	-6,374.1	1,292.6	953.9	338.75	3.816	
14,074.8	6,701.9	6,680.9	6,680.9	208.9	132.1	89.90	1,503.6	-6,374.1	1,343.7	1,002.8	340.84	3.942	
14,100.0	6,701.8	6,680.8	6,680.8	209.6	132.1	89.89	1,503.6	-6,374.1	1,361.4	1,019.8	341.55	3.986	
14,173.2	6,701.7	6,680.7	6,680.7	211.6	132.1	89.89	1,503.6	-6,374.1	1,414.0	1,070.4	343.60	4.115	
14,200.0	6,701.6	6,680.6	6,680.6	212.4	132.0	89.88	1,503.6	-6,374.1	1,433.8	1,089.4	344.35	4.164	
14,271.6	6,701.5	6,680.5	6,680.5	214.4	132.0	89.87	1,503.6	-6,374.1	1,487.6	1,141.2	346.35	4.295	
14,300.0	6,701.4	6,680.4	6,680.4	215.2	132.0	89.87	1,503.6	-6,374.1	1,509.3	1,162.2	347.15	4.348	
14,370.0	6,701.3	6,680.3	6,680.3	217.1	132.0	89.86	1,503.6	-6,374.1	1,563.9	1,214.8	349.11	4.480	
14,400.0	6,701.3	6,680.3	6,680.3	218.0	132.0	89.86	1,503.6	-6,374.1	1,587.6	1,237.6	349.95	4.537	
14,468.5	6,701.1	6,680.1	6,680.1	219.9	132.0	89.85	1,503.6	-6,374.1	1,642.5	1,290.7	351.87	4.668	
14,500.0	6,701.1	6,680.1	6,680.1	220.8	132.0	89.85	1,503.6	-6,374.1	1,668.2	1,315.4	352.75	4.729	
14,566.9	6,701.0	6,680.0	6,680.0	222.6	132.0	89.84	1,503.6	-6,374.1	1,723.2	1,368.6	354.62	4.859	
14,600.0	6,700.9	6,679.9	6,679.9	223.6	132.0	89.84	1,503.6	-6,374.1	1,750.8	1,395.2	355.55	4.924	
14,665.3	6,700.8	6,679.8	6,679.8	225.4	132.0	89.83	1,503.6	-6,374.1	1,805.7	1,448.3	357.38	5.053	
14,700.0	6,700.7	6,679.7	6,679.7	226.4	132.0	89.83	1,503.6	-6,374.1	1,835.1	1,476.7	358.35	5.121	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT HECKENDORF #1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	6,679.6	6,679.6	228.2	132.0	89.82	1,503.6	-6,374.1	1,889.6	1,529.5	360.13	5.247	
14,800.0	6,700.5	6,679.5	6,679.5	229.2	132.0	89.82	1,503.6	-6,374.1	1,920.9	1,559.8	361.15	5.319	
14,862.2	6,700.4	6,679.4	6,679.4	230.9	132.0	89.81	1,503.6	-6,374.1	1,974.9	1,612.1	362.89	5.442	
14,900.0	6,700.3	6,679.3	6,679.3	232.0	132.0	89.81	1,503.6	-6,374.1	2,008.0	1,644.1	363.95	5.517	
14,960.6	6,700.2	6,679.2	6,679.2	233.7	132.0	89.80	1,503.6	-6,374.1	2,061.4	1,695.8	365.65	5.638	
15,000.0	6,700.2	6,679.2	6,679.2	234.8	132.0	89.80	1,503.6	-6,374.1	2,096.3	1,729.6	366.75	5.716	
15,059.0	6,700.0	6,679.0	6,679.0	236.4	132.0	89.79	1,503.6	-6,374.1	2,148.9	1,780.5	368.40	5.833	
15,082.8	6,700.0	6,679.0	6,679.0	237.1	132.0	89.79	1,503.6	-6,374.1	2,170.2	1,801.2	369.07	5.880	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	4.0	4.0	0.0	0.0	-35.87	1,368.7	-989.6	1,689.0				
98.4	98.4	102.4	102.4	0.1	0.0	-35.87	1,368.7	-989.6	1,689.0	1,688.9	0.12	N/A	
100.0	100.0	104.0	104.0	0.1	0.0	-35.87	1,368.7	-989.6	1,689.0	1,688.9	0.14	N/A	
196.8	196.8	200.8	200.8	0.3	1.0	-35.87	1,368.7	-989.6	1,689.0	1,687.7	1.29	1,305.279	
200.0	200.0	204.0	204.0	0.3	1.1	-35.87	1,368.7	-989.6	1,689.0	1,687.6	1.37	1,228.403	
295.3	295.3	299.3	299.3	0.5	3.3	-35.87	1,368.7	-989.6	1,689.0	1,685.2	3.82	441.651	
300.0	300.0	304.0	304.0	0.5	3.4	-35.87	1,368.7	-989.6	1,689.0	1,685.1	3.94	429.206	
393.7	393.7	397.7	397.7	0.8	5.3	-35.87	1,368.7	-989.6	1,689.0	1,682.9	6.10	277.062	
400.0	400.0	404.0	404.0	0.8	5.5	-35.87	1,368.7	-989.6	1,689.0	1,682.8	6.24	270.680	
492.1	492.1	496.1	496.1	1.0	7.3	-35.87	1,368.7	-989.6	1,689.0	1,680.7	8.33	202.791	
500.0	500.0	504.0	504.0	1.0	7.5	-35.87	1,368.7	-989.6	1,689.0	1,680.5	8.51	198.548	
590.5	590.5	594.5	594.5	1.2	9.3	-35.87	1,368.7	-989.6	1,689.0	1,678.5	10.55	160.130	
600.0	600.0	604.0	604.0	1.2	9.5	-35.87	1,368.7	-989.6	1,689.0	1,678.2	10.76	156.965	
689.0	689.0	693.0	693.0	1.4	11.3	-35.87	1,368.7	-989.6	1,689.0	1,676.2	12.76	132.366	
700.0	700.0	704.0	704.0	1.4	11.6	-35.87	1,368.7	-989.6	1,689.0	1,676.0	13.01	129.846	
787.4	787.4	791.4	791.4	1.6	13.3	-35.87	1,368.7	-989.6	1,689.0	1,674.0	14.97	112.834	
800.0	800.0	804.0	804.0	1.7	13.6	-35.87	1,368.7	-989.6	1,689.0	1,673.8	15.25	110.743	
885.8	885.8	889.8	889.8	1.9	15.3	-35.87	1,368.7	-989.6	1,689.0	1,671.8	17.18	98.337	
900.0	900.0	904.0	904.0	1.9	15.6	-35.87	1,368.7	-989.6	1,689.0	1,671.5	17.49	96.551	
984.2	984.2	988.2	988.2	2.1	17.3	-35.87	1,368.7	-989.6	1,689.0	1,669.6	19.38	87.148	
1,000.0	1,000.0	1,004.0	1,004.0	2.1	17.6	-35.87	1,368.7	-989.6	1,689.0	1,669.3	19.73	85.590	
1,082.7	1,082.7	1,086.7	1,086.7	2.3	19.3	-35.87	1,368.7	-989.6	1,689.0	1,667.4	21.59	78.248	
1,100.0	1,100.0	1,104.0	1,104.0	2.3	19.6	-35.87	1,368.7	-989.6	1,689.0	1,667.0	21.97	76.867	
1,181.1	1,181.1	1,185.1	1,185.1	2.5	21.3	-64.64	1,368.7	-989.6	1,688.5	1,664.7	23.79	70.989	
1,200.0	1,200.0	1,204.0	1,204.0	2.6	21.6	-64.66	1,368.7	-989.6	1,688.3	1,664.0	24.21	69.742	
1,279.5	1,279.4	1,283.4	1,283.4	2.7	23.2	-64.81	1,368.7	-989.6	1,686.6	1,660.6	25.98	64.926	
1,300.0	1,299.8	1,303.8	1,303.8	2.8	23.7	-64.86	1,368.7	-989.6	1,686.0	1,659.6	26.43	63.787	
1,377.9	1,377.5	1,381.5	1,381.5	3.0	25.2	-65.11	1,368.7	-989.6	1,683.3	1,655.1	28.16	59.769	
1,400.0	1,399.5	1,403.5	1,403.5	3.0	25.7	-65.20	1,368.7	-989.6	1,682.3	1,653.7	28.65	58.718	
1,476.4	1,475.3	1,479.3	1,479.3	3.2	27.2	-65.54	1,368.7	-989.6	1,678.6	1,648.2	30.35	55.315	
1,500.0	1,498.7	1,502.7	1,502.7	3.3	27.7	-65.67	1,368.7	-989.6	1,677.2	1,646.4	30.87	54.335	
1,574.8	1,572.6	1,576.6	1,576.6	3.5	29.1	-66.10	1,368.7	-989.6	1,672.5	1,640.0	32.53	51.413	
1,600.0	1,597.5	1,601.5	1,601.5	3.5	29.6	-66.27	1,368.7	-989.6	1,670.8	1,637.7	33.09	50.492	
1,673.2	1,669.4	1,673.4	1,673.4	3.7	31.1	-66.79	1,368.7	-989.6	1,665.3	1,630.6	34.73	47.953	
1,700.1	1,695.8	1,699.8	1,699.8	3.8	31.6	-67.00	1,368.7	-989.6	1,663.1	1,627.8	35.33	47.076	
1,771.6	1,765.7	1,769.7	1,769.7	4.1	33.0	-67.47	1,368.7	-989.6	1,657.2	1,620.3	36.96	44.833	
1,800.0	1,793.4	1,797.4	1,797.4	4.2	33.6	-67.65	1,368.7	-989.6	1,654.9	1,617.3	37.61	43.997	
1,870.1	1,862.0	1,866.0	1,866.0	4.4	35.0	-68.11	1,368.7	-989.6	1,649.3	1,610.1	39.23	42.040	
1,900.0	1,891.3	1,895.3	1,895.3	4.5	35.6	-68.31	1,368.7	-989.6	1,647.0	1,607.1	39.92	41.253	
1,968.5	1,958.3	1,962.3	1,962.3	4.8	36.9	-68.76	1,368.7	-989.6	1,641.7	1,600.2	41.52	39.543	
2,000.0	1,989.1	1,993.1	1,993.1	4.9	37.5	-68.97	1,368.7	-989.6	1,639.3	1,597.0	42.25	38.799	
2,066.9	2,054.5	2,058.5	2,058.5	5.1	38.8	-69.42	1,368.7	-989.6	1,634.2	1,590.4	43.81	37.299	
2,100.0	2,086.9	2,090.9	2,090.9	5.3	39.5	-69.64	1,368.7	-989.6	1,631.8	1,587.2	44.59	36.596	
2,165.3	2,150.8	2,154.8	2,154.8	5.5	40.8	-70.08	1,368.7	-989.6	1,627.0	1,580.9	46.12	35.274	
2,200.0	2,184.7	2,188.7	2,188.7	5.6	41.5	-70.31	1,368.7	-989.6	1,624.5	1,577.6	46.94	34.609	
2,263.8	2,247.1	2,251.1	2,251.1	5.9	42.7	-70.75	1,368.7	-989.6	1,620.0	1,571.6	48.44	33.441	
2,300.0	2,282.5	2,286.5	2,286.5	6.0	43.4	-70.99	1,368.7	-989.6	1,617.5	1,568.2	49.30	32.810	
2,362.2	2,343.3	2,347.3	2,347.3	6.3	44.6	-71.42	1,368.7	-989.6	1,613.2	1,562.5	50.77	31.774	
2,400.0	2,380.3	2,384.3	2,384.3	6.5	45.4	-71.68	1,368.7	-989.6	1,610.7	1,559.0	51.67	31.174	
2,460.6	2,439.6	2,443.6	2,443.6	6.7	46.6	-72.10	1,368.7	-989.6	1,606.7	1,553.6	53.11	30.254	
2,500.0	2,478.1	2,482.1	2,482.1	6.9	47.4	-72.37	1,368.7	-989.6	1,604.2	1,550.1	54.04	29.683	
2,559.0	2,535.9	2,539.9	2,539.9	7.1	48.5	-72.78	1,368.7	-989.6	1,600.4	1,545.0	55.45	28.863	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,579.9	2,579.9	7.3	49.3	-73.07	1,368.7	-989.6	1,597.9	1,541.4	56.42	28.319	
2,657.5	2,632.2	2,636.2	2,636.2	7.5	50.5	-73.47	1,368.7	-989.6	1,594.3	1,536.6	57.80	27.586	
2,700.0	2,673.8	2,677.8	2,677.8	7.7	51.3	-73.77	1,368.7	-989.6	1,591.8	1,533.0	58.81	27.066	
2,755.9	2,728.4	2,732.4	2,732.4	7.9	52.4	-74.16	1,368.7	-989.6	1,588.5	1,528.4	60.15	26.410	
2,800.0	2,771.6	2,775.6	2,775.6	8.1	53.3	-74.48	1,368.7	-989.6	1,586.0	1,524.8	61.20	25.914	
2,854.3	2,824.7	2,828.7	2,828.7	8.3	54.3	-74.86	1,368.7	-989.6	1,582.9	1,520.4	62.50	25.326	
2,900.0	2,869.4	2,873.4	2,873.4	8.5	55.2	-75.19	1,368.7	-989.6	1,580.4	1,516.8	63.60	24.850	
2,952.7	2,921.0	2,925.0	2,925.0	8.8	56.3	-75.57	1,368.7	-989.6	1,577.6	1,512.7	64.86	24.322	
3,000.0	2,967.2	2,971.2	2,971.2	9.0	57.2	-75.90	1,368.7	-989.6	1,575.1	1,509.1	66.00	23.866	
3,051.2	3,017.3	3,021.3	3,021.3	9.2	58.2	-76.27	1,368.7	-989.6	1,572.5	1,505.3	67.23	23.391	
3,100.0	3,065.0	3,069.0	3,069.0	9.4	59.2	-76.63	1,368.7	-989.6	1,570.1	1,501.7	68.40	22.954	
3,149.6	3,113.5	3,117.5	3,117.5	9.6	60.1	-76.98	1,368.7	-989.6	1,567.7	1,498.1	69.59	22.526	
3,200.0	3,162.8	3,166.8	3,166.8	9.8	61.1	-77.35	1,368.7	-989.6	1,565.3	1,494.5	70.81	22.107	
3,248.0	3,209.8	3,213.8	3,213.8	10.0	62.1	-77.70	1,368.7	-989.6	1,563.1	1,491.2	71.96	21.721	
3,300.0	3,260.6	3,264.6	3,264.6	10.2	63.1	-78.08	1,368.7	-989.6	1,560.8	1,487.6	73.21	21.318	
3,346.4	3,306.1	3,310.1	3,310.1	10.5	64.0	-78.42	1,368.7	-989.6	1,558.8	1,484.5	74.33	20.970	
3,400.0	3,358.5	3,362.5	3,362.5	10.7	65.1	-78.81	1,368.7	-989.6	1,556.5	1,480.9	75.62	20.583	
3,444.9	3,402.3	3,406.3	3,406.3	10.9	65.9	-79.14	1,368.7	-989.6	1,554.7	1,478.0	76.71	20.268	
3,500.0	3,456.3	3,460.3	3,460.3	11.1	67.0	-79.55	1,368.7	-989.6	1,552.6	1,474.5	78.04	19.895	
3,543.3	3,498.6	3,502.6	3,502.6	11.3	67.9	-79.87	1,368.7	-989.6	1,550.9	1,471.8	79.08	19.612	
3,600.0	3,554.1	3,558.1	3,558.1	11.5	69.0	-80.29	1,368.7	-989.6	1,548.8	1,468.4	80.45	19.252	
3,641.7	3,594.9	3,598.9	3,598.9	11.7	69.8	-80.60	1,368.7	-989.6	1,547.4	1,465.9	81.46	18.996	
3,700.0	3,651.9	3,655.9	3,655.9	12.0	71.0	-81.03	1,368.7	-989.6	1,545.4	1,462.5	82.86	18.650	
3,740.1	3,691.2	3,695.2	3,695.2	12.2	71.8	-81.33	1,368.7	-989.6	1,544.1	1,460.2	83.83	18.418	
3,800.0	3,749.7	3,753.7	3,753.7	12.4	72.9	-81.78	1,368.7	-989.6	1,542.2	1,456.9	85.28	18.084	
3,838.6	3,787.4	3,791.4	3,791.4	12.6	73.7	-82.07	1,368.7	-989.6	1,541.1	1,454.9	86.21	17.875	
3,900.0	3,847.5	3,851.5	3,851.5	12.9	74.9	-82.53	1,368.7	-989.6	1,539.3	1,451.6	87.70	17.553	
3,937.0	3,883.7	3,887.7	3,887.7	13.0	75.6	-82.81	1,368.7	-989.6	1,538.3	1,449.7	88.59	17.364	
4,000.0	3,945.3	3,949.3	3,949.3	13.3	76.9	-83.28	1,368.7	-989.6	1,536.7	1,446.6	90.11	17.053	
4,035.4	3,980.0	3,984.0	3,984.0	13.5	77.6	-83.55	1,368.7	-989.6	1,535.8	1,444.9	90.97	16.883	
4,060.0	4,004.0	4,008.0	4,008.0	13.6	78.1	-83.74	1,368.7	-989.6	1,535.2	1,443.7	91.56	16.767	
4,100.0	4,043.2	4,047.2	4,047.2	13.7	78.8	-84.01	1,368.7	-989.6	1,534.4	1,441.9	92.51	16.586	
4,133.8	4,076.5	4,080.5	4,080.5	13.8	79.5	-84.23	1,368.7	-989.6	1,533.7	1,440.4	93.29	16.440	
4,200.0	4,141.6	4,145.6	4,145.6	14.0	80.8	-84.62	1,368.7	-989.6	1,532.6	1,437.8	94.81	16.164	
4,232.3	4,173.5	4,177.5	4,177.5	14.1	81.5	-84.80	1,368.7	-989.6	1,532.1	1,436.6	95.55	16.035	
4,300.0	4,240.6	4,244.6	4,244.6	14.3	82.8	-85.12	1,368.7	-989.6	1,531.3	1,434.2	97.09	15.772	
4,330.7	4,271.1	4,275.1	4,275.1	14.4	83.4	-85.25	1,368.7	-989.6	1,531.0	1,433.2	97.78	15.657	
4,400.0	4,340.0	4,344.0	4,344.0	14.5	84.8	-85.51	1,368.7	-989.6	1,530.4	1,431.1	99.34	15.406	
4,429.1	4,369.0	4,373.0	4,373.0	14.6	85.4	-85.60	1,368.7	-989.6	1,530.2	1,430.2	99.98	15.305	
4,500.0	4,439.7	4,443.7	4,443.7	14.8	86.8	-85.77	1,368.7	-989.6	1,529.9	1,428.3	101.55	15.065	
4,527.5	4,467.2	4,471.2	4,471.2	14.8	87.4	-85.82	1,368.7	-989.6	1,529.8	1,427.6	102.15	14.976	
4,600.0	4,539.7	4,543.7	4,543.7	14.9	88.8	-85.91	1,368.7	-989.6	1,529.6	1,425.9	103.73	14.746	
4,626.0	4,565.6	4,569.6	4,569.6	15.0	89.3	-85.92	1,368.7	-989.6	1,529.5	1,425.3	104.28	14.667	
4,660.2	4,599.8	4,603.8	4,603.8	15.0	90.0	-57.20	1,368.7	-989.6	1,529.5	1,428.7	100.81	15.172	
4,700.0	4,639.6	4,643.6	4,643.6	15.0	90.8	-57.20	1,368.7	-989.6	1,529.5	1,427.8	101.69	15.041	
4,724.4	4,664.0	4,668.0	4,668.0	15.1	91.3	-57.20	1,368.7	-989.6	1,529.5	1,427.3	102.23	14.962	
4,800.0	4,739.6	4,743.6	4,743.6	15.2	92.8	-57.20	1,368.7	-989.6	1,529.5	1,425.6	103.90	14.721	
4,822.8	4,762.5	4,766.5	4,766.5	15.2	93.3	-57.20	1,368.7	-989.6	1,529.5	1,425.1	104.41	14.650	
4,900.0	4,839.6	4,843.6	4,843.6	15.3	94.9	-57.20	1,368.7	-989.6	1,529.5	1,423.4	106.12	14.414	
4,921.2	4,860.9	4,864.9	4,864.9	15.4	95.3	-57.20	1,368.7	-989.6	1,529.5	1,422.9	106.59	14.350	
5,000.0	4,939.6	4,943.6	4,943.6	15.5	96.9	-57.20	1,368.7	-989.6	1,529.5	1,421.2	108.33	14.119	
5,019.7	4,959.3	4,963.3	4,963.3	15.5	97.3	-57.20	1,368.7	-989.6	1,529.5	1,420.8	108.77	14.063	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,043.6	5,043.6	15.6	98.9	-57.20	1,368.7	-989.6	1,529.5	1,419.0	110.54	13.836	
5,118.1	5,057.7	5,061.7	5,061.7	15.7	99.2	-57.20	1,368.7	-989.6	1,529.5	1,418.6	110.95	13.786	
5,200.0	5,139.6	5,143.6	5,143.6	15.8	100.9	-57.20	1,368.7	-989.6	1,529.5	1,416.8	112.76	13.564	
5,216.5	5,156.2	5,160.2	5,160.2	15.8	101.2	-57.20	1,368.7	-989.6	1,529.5	1,416.4	113.13	13.520	
5,300.0	5,239.6	5,243.6	5,243.6	15.9	102.9	-57.20	1,368.7	-989.6	1,529.5	1,414.6	114.98	13.303	
5,314.9	5,254.6	5,258.6	5,258.6	16.0	103.2	-57.20	1,368.7	-989.6	1,529.5	1,414.2	115.31	13.265	
5,400.0	5,339.6	5,343.6	5,343.6	16.1	104.9	-57.20	1,368.7	-989.6	1,529.5	1,412.3	117.19	13.051	
5,413.4	5,353.0	5,357.0	5,357.0	16.1	105.2	-57.20	1,368.7	-989.6	1,529.5	1,412.0	117.49	13.018	
5,500.0	5,439.6	5,443.6	5,443.6	16.3	106.9	-57.20	1,368.7	-989.6	1,529.5	1,410.1	119.41	12.809	
5,511.8	5,451.4	5,455.4	5,455.4	16.3	107.2	-57.20	1,368.7	-989.6	1,529.5	1,409.9	119.67	12.781	
5,600.0	5,539.6	5,543.6	5,543.6	16.4	108.9	-57.20	1,368.7	-989.6	1,529.5	1,407.9	121.63	12.575	
5,610.2	5,549.9	5,553.9	5,553.9	16.4	109.1	-57.20	1,368.7	-989.6	1,529.5	1,407.7	121.86	12.552	
5,700.0	5,639.6	5,643.6	5,643.6	16.6	110.9	-57.20	1,368.7	-989.6	1,529.5	1,405.7	123.85	12.350	
5,708.6	5,648.3	5,652.3	5,652.3	16.6	111.1	-57.20	1,368.7	-989.6	1,529.5	1,405.5	124.04	12.331	
5,800.0	5,739.6	5,743.6	5,743.6	16.7	113.0	-57.20	1,368.7	-989.6	1,529.5	1,403.5	126.07	12.132	
5,807.1	5,746.7	5,750.7	5,750.7	16.8	113.1	-57.20	1,368.7	-989.6	1,529.5	1,403.3	126.23	12.117	
5,900.0	5,839.6	5,843.6	5,843.6	16.9	115.0	-57.20	1,368.7	-989.6	1,529.5	1,401.2	128.29	11.922	
5,905.5	5,845.1	5,849.1	5,849.1	16.9	115.1	-57.20	1,368.7	-989.6	1,529.5	1,401.1	128.41	11.911	
6,000.0	5,939.6	5,943.6	5,943.6	17.1	117.0	-57.20	1,368.7	-989.6	1,529.5	1,399.0	130.51	11.720	
6,003.9	5,943.6	5,947.6	5,947.6	17.1	117.1	-57.20	1,368.7	-989.6	1,529.5	1,398.9	130.60	11.712	
6,059.2	5,998.8	6,002.8	6,002.8	17.2	118.2	-57.20	1,368.7	-989.6	1,529.5	1,397.7	131.82	11.603	
6,100.0	6,039.6	6,043.6	6,043.6	17.2	119.0	32.87	1,368.7	-989.6	1,528.6	1,392.5	136.06	11.235	
6,102.3	6,042.0	6,046.0	6,046.0	17.2	119.0	32.87	1,368.7	-989.6	1,528.4	1,392.3	136.09	11.231	
6,150.0	6,089.4	6,093.4	6,093.4	17.3	120.0	33.13	1,368.7	-989.6	1,524.7	1,388.2	136.51	11.169	
6,200.0	6,138.7	6,142.7	6,142.7	17.3	121.0	33.59	1,368.7	-989.6	1,517.9	1,381.5	136.49	11.122	
6,200.8	6,139.5	6,143.5	6,143.5	17.3	121.0	33.60	1,368.7	-989.6	1,517.8	1,381.3	136.48	11.121	
6,250.0	6,187.4	6,191.4	6,191.4	17.3	122.0	34.27	1,368.7	-989.6	1,508.3	1,372.3	136.02	11.089	
6,299.2	6,234.4	6,238.4	6,238.4	17.4	122.9	35.15	1,368.7	-989.6	1,496.2	1,361.0	135.16	11.069	
6,300.0	6,235.1	6,239.1	6,239.1	17.4	122.9	35.17	1,368.7	-989.6	1,496.0	1,360.8	135.15	11.069	
6,350.0	6,281.7	6,285.7	6,285.7	17.4	123.9	36.31	1,368.7	-989.6	1,480.9	1,346.9	133.96	11.055	
6,397.6	6,324.8	6,328.8	6,328.8	17.3	124.7	37.63	1,368.7	-989.6	1,464.2	1,331.5	132.62	11.040	
6,400.0	6,326.9	6,330.9	6,330.9	17.3	124.8	37.70	1,368.7	-989.6	1,463.3	1,330.7	132.55	11.039	
6,450.0	6,370.5	6,374.5	6,374.5	17.3	125.6	39.36	1,368.7	-989.6	1,443.2	1,312.1	131.06	11.012	
6,496.0	6,409.1	6,413.1	6,413.1	17.3	126.4	41.16	1,368.7	-989.6	1,422.7	1,292.9	129.76	10.964	
6,500.0	6,412.3	6,416.3	6,416.3	17.3	126.5	41.32	1,368.7	-989.6	1,420.8	1,291.2	129.66	10.958	
6,550.0	6,452.1	6,456.1	6,456.1	17.3	127.3	43.60	1,368.7	-989.6	1,396.3	1,267.8	128.55	10.862	
6,594.5	6,485.6	6,489.6	6,489.6	17.3	128.0	45.90	1,368.7	-989.6	1,373.0	1,245.0	127.97	10.728	
6,600.0	6,489.7	6,493.7	6,493.7	17.3	128.0	46.20	1,368.7	-989.6	1,369.9	1,242.0	127.94	10.708	
6,650.0	6,524.9	6,528.9	6,528.9	17.2	128.7	49.16	1,368.7	-989.6	1,341.8	1,213.8	128.02	10.481	
6,692.9	6,553.0	6,557.0	6,557.0	17.2	129.3	51.97	1,368.7	-989.6	1,316.5	1,187.8	128.78	10.223	
6,700.0	6,557.5	6,561.5	6,561.5	17.2	129.4	52.46	1,368.7	-989.6	1,312.2	1,183.3	128.97	10.175	
6,750.0	6,587.4	6,591.4	6,591.4	17.2	130.0	56.09	1,368.7	-989.6	1,281.4	1,150.6	130.82	9.796	
6,791.3	6,609.9	6,613.9	6,613.9	17.2	130.5	59.32	1,368.7	-989.6	1,255.2	1,122.2	132.99	9.439	
6,800.0	6,614.4	6,618.4	6,618.4	17.2	130.5	60.02	1,368.7	-989.6	1,249.6	1,116.1	133.51	9.360	
6,850.0	6,638.4	6,642.4	6,642.4	17.2	131.0	64.17	1,368.7	-989.6	1,217.2	1,080.4	136.83	8.896	
6,889.7	6,655.3	6,659.3	6,659.3	17.4	131.4	67.58	1,368.7	-989.6	1,191.1	1,051.4	139.72	8.525	
6,900.0	6,659.4	6,663.4	6,663.4	17.5	131.5	68.46	1,368.7	-989.6	1,184.3	1,043.9	140.46	8.432	
6,950.0	6,677.1	6,681.1	6,681.1	18.0	131.8	72.78	1,368.7	-989.6	1,151.4	1,007.3	144.07	7.992	
6,988.2	6,688.4	6,692.4	6,692.4	18.5	132.0	76.02	1,368.7	-989.6	1,126.4	979.8	146.60	7.683	
7,000.0	6,691.5	6,695.5	6,695.5	18.7	132.1	77.01	1,368.7	-989.6	1,118.7	971.3	147.32	7.593	
7,050.0	6,702.5	6,706.5	6,706.5	19.5	132.3	81.02	1,368.7	-989.6	1,086.5	936.5	150.01	7.243	
7,086.6	6,708.4	6,712.4	6,712.4	20.1	132.4	83.76	1,368.7	-989.6	1,063.5	911.9	151.58	7.016	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	6,714.1	6,714.1	20.4	132.5	84.72	1,368.7	-989.6	1,055.2	903.2	152.06	6.940	
7,150.0	6,714.2	6,718.2	6,718.2	21.3	132.6	88.01	1,368.7	-989.6	1,025.1	871.6	153.50	6.678	
7,185.0	6,715.0	6,719.0	6,719.0	21.9	132.6	90.05	1,368.7	-989.6	1,004.9	850.7	154.21	6.517	
7,185.6	6,715.0	6,719.0	6,719.0	21.9	132.6	90.08	1,368.7	-989.6	1,004.6	850.4	154.22	6.514	
7,200.0	6,715.0	6,719.0	6,719.0	22.2	132.6	90.07	1,368.7	-989.6	996.5	842.0	154.49	6.450	
7,283.4	6,714.8	6,718.8	6,718.8	23.9	132.6	90.06	1,368.7	-989.6	952.7	796.5	156.17	6.100	
7,300.0	6,714.8	6,718.8	6,718.8	24.2	132.6	90.06	1,368.7	-989.6	944.6	788.1	156.50	6.036	
7,381.9	6,714.6	6,718.6	6,718.6	26.0	132.6	90.05	1,368.7	-989.6	908.1	749.9	158.26	5.738	
7,400.0	6,714.6	6,718.6	6,718.6	26.4	132.6	90.05	1,368.7	-989.6	900.9	742.2	158.65	5.678	
7,480.3	6,714.4	6,718.4	6,718.4	28.2	132.6	90.04	1,368.7	-989.6	872.5	712.0	160.46	5.437	
7,500.0	6,714.4	6,718.4	6,718.4	28.7	132.6	90.03	1,368.7	-989.6	866.5	705.6	160.91	5.385	
7,578.7	6,714.2	6,718.2	6,718.2	30.5	132.6	90.02	1,368.7	-989.6	846.8	684.0	162.76	5.203	
7,600.0	6,714.2	6,718.2	6,718.2	31.0	132.6	90.02	1,368.7	-989.6	842.7	679.4	163.26	5.161	
7,677.1	6,714.0	6,718.0	6,718.0	32.9	132.6	90.01	1,368.7	-989.6	832.1	666.9	165.13	5.039	
7,700.0	6,714.0	6,718.0	6,718.0	33.4	132.5	90.01	1,368.7	-989.6	830.3	664.6	165.69	5.011	
7,753.6	6,713.9	6,717.9	6,717.9	34.8	132.5	90.00	1,368.7	-989.6	828.5	661.5	167.02	4.961 CC	
7,775.6	6,713.9	6,717.9	6,717.9	35.3	132.5	90.00	1,368.7	-989.6	828.8	661.3	167.56	4.946 ES	
7,800.0	6,713.8	6,717.8	6,717.8	35.9	132.5	89.99	1,368.7	-989.6	829.8	661.7	168.17	4.935	
7,874.0	6,713.7	6,717.7	6,717.7	37.8	132.5	89.98	1,368.7	-989.6	837.2	667.2	170.04	4.924 SF	
7,900.0	6,713.6	6,717.6	6,717.6	38.4	132.5	89.98	1,368.7	-989.6	841.4	670.7	170.69	4.929	
7,972.4	6,713.5	6,717.5	6,717.5	40.3	132.5	89.97	1,368.7	-989.6	856.9	684.4	172.55	4.966	
8,000.0	6,713.4	6,717.4	6,717.4	41.0	132.5	89.97	1,368.7	-989.6	864.4	691.1	173.26	4.989	
8,070.8	6,713.3	6,717.3	6,717.3	42.8	132.5	89.96	1,368.7	-989.6	887.2	712.1	175.09	5.067	
8,100.0	6,713.2	6,717.2	6,717.2	43.6	132.5	89.95	1,368.7	-989.6	898.0	722.2	175.85	5.107	
8,169.3	6,713.1	6,717.1	6,717.1	45.4	132.5	89.94	1,368.7	-989.6	926.9	749.3	177.66	5.217	
8,200.0	6,713.0	6,717.0	6,717.0	46.2	132.5	89.94	1,368.7	-989.6	941.1	762.7	178.47	5.273	
8,267.7	6,712.9	6,716.9	6,716.9	48.0	132.5	89.93	1,368.7	-989.6	975.1	794.8	180.25	5.409	
8,300.0	6,712.8	6,716.8	6,716.8	48.8	132.5	89.93	1,368.7	-989.6	992.5	811.4	181.11	5.480	
8,366.1	6,712.7	6,716.7	6,716.7	50.6	132.5	89.92	1,368.7	-989.6	1,030.3	847.5	182.86	5.635	
8,400.0	6,712.6	6,716.6	6,716.6	51.5	132.5	89.91	1,368.7	-989.6	1,050.8	867.1	183.76	5.718	
8,464.5	6,712.5	6,716.5	6,716.5	53.2	132.5	89.90	1,368.7	-989.6	1,091.7	906.2	185.49	5.886	
8,500.0	6,712.4	6,716.4	6,716.4	54.1	132.5	89.90	1,368.7	-989.6	1,115.1	928.7	186.44	5.981	
8,563.0	6,712.3	6,716.3	6,716.3	55.8	132.5	89.89	1,368.7	-989.6	1,158.2	970.1	188.13	6.157	
8,600.0	6,712.3	6,716.3	6,716.3	56.8	132.5	89.89	1,368.7	-989.6	1,184.4	995.3	189.12	6.263	
8,661.4	6,712.1	6,716.1	6,716.1	58.5	132.5	89.88	1,368.7	-989.6	1,229.0	1,038.2	190.78	6.442	
8,700.0	6,712.1	6,716.1	6,716.1	59.5	132.5	89.87	1,368.7	-989.6	1,257.8	1,066.0	191.82	6.557	
8,759.8	6,711.9	6,715.9	6,715.9	61.1	132.5	89.87	1,368.7	-989.6	1,303.4	1,110.0	193.44	6.738	
8,800.0	6,711.9	6,715.9	6,715.9	62.2	132.5	89.86	1,368.7	-989.6	1,334.7	1,140.1	194.53	6.861	
8,858.2	6,711.8	6,715.8	6,715.8	63.8	132.5	89.85	1,368.7	-989.6	1,380.8	1,184.7	196.11	7.041	
8,900.0	6,711.7	6,715.7	6,715.7	64.9	132.5	89.85	1,368.7	-989.6	1,414.4	1,217.2	197.24	7.171	
8,956.7	6,711.6	6,715.6	6,715.6	66.5	132.5	89.84	1,368.7	-989.6	1,460.7	1,262.0	198.78	7.348	
9,000.0	6,711.5	6,715.5	6,715.5	67.6	132.5	89.83	1,368.7	-989.6	1,496.6	1,296.7	199.96	7.484	
9,055.1	6,711.4	6,715.4	6,715.4	69.1	132.5	89.83	1,368.7	-989.6	1,542.8	1,341.3	201.47	7.658	
9,100.0	6,711.3	6,715.3	6,715.3	70.4	132.5	89.82	1,368.7	-989.6	1,580.9	1,378.2	202.69	7.799	
9,153.5	6,711.2	6,715.2	6,715.2	71.8	132.5	89.81	1,368.7	-989.6	1,626.7	1,422.5	204.16	7.968	
9,200.0	6,711.1	6,715.1	6,715.1	73.1	132.5	89.81	1,368.7	-989.6	1,666.9	1,461.4	205.43	8.114	
9,251.9	6,711.0	6,715.0	6,715.0	74.5	132.5	89.80	1,368.7	-989.6	1,712.1	1,505.3	206.85	8.277	
9,300.0	6,710.9	6,714.9	6,714.9	75.8	132.5	89.79	1,368.7	-989.6	1,754.3	1,546.2	208.17	8.427	
9,350.4	6,710.8	6,714.8	6,714.8	77.2	132.5	89.79	1,368.7	-989.6	1,798.9	1,589.3	209.55	8.584	
9,400.0	6,710.7	6,714.7	6,714.7	78.6	132.5	89.78	1,368.7	-989.6	1,843.1	1,632.2	210.91	8.739	
9,448.8	6,710.6	6,714.6	6,714.6	79.9	132.5	89.77	1,368.7	-989.6	1,886.8	1,674.5	212.26	8.889	
9,500.0	6,710.5	6,714.5	6,714.5	81.3	132.5	89.77	1,368.7	-989.6	1,932.9	1,719.3	213.66	9.047	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	6,714.4	6,714.4	82.6	132.5	89.76	1,368.7	-989.6	1,975.7	1,760.7	214.96	9.191	
9,600.0	6,710.3	6,714.3	6,714.3	84.1	132.5	89.75	1,368.7	-989.6	2,023.7	1,807.3	216.42	9.351	
9,645.6	6,710.2	6,714.2	6,714.2	85.3	132.5	89.75	1,368.7	-989.6	2,065.5	1,847.8	217.68	9.489	
9,700.0	6,710.1	6,714.1	6,714.1	86.8	132.5	89.74	1,368.7	-989.6	2,115.4	1,896.2	219.17	9.652	
9,744.1	6,710.0	6,714.0	6,714.0	88.1	132.5	89.74	1,368.7	-989.6	2,156.0	1,935.6	220.39	9.783	
9,800.0	6,709.9	6,713.9	6,713.9	89.6	132.5	89.73	1,368.7	-989.6	2,207.7	1,985.8	221.93	9.948	
9,842.5	6,709.9	6,713.9	6,713.9	90.8	132.5	89.72	1,368.7	-989.6	2,247.2	2,024.1	223.11	10.072	
9,900.0	6,709.7	6,713.7	6,713.7	92.4	132.5	89.72	1,368.7	-989.6	2,300.7	2,076.0	224.70	10.239	
9,940.9	6,709.7	6,713.7	6,713.7	93.5	132.5	89.71	1,368.7	-989.6	2,338.9	2,113.1	225.83	10.357	
10,000.0	6,709.6	6,713.6	6,713.6	95.1	132.5	89.70	1,368.7	-989.6	2,394.3	2,166.8	227.46	10.526	
10,039.3	6,709.5	6,713.5	6,713.5	96.2	132.5	89.70	1,368.7	-989.6	2,431.2	2,202.7	228.55	10.638	
10,100.0	6,709.4	6,713.4	6,713.4	97.9	132.5	89.69	1,368.7	-989.6	2,488.3	2,258.1	230.23	10.808	
10,137.8	6,709.3	6,713.3	6,713.3	98.9	132.5	89.68	1,368.7	-989.6	2,524.0	2,292.7	231.28	10.913	
10,200.0	6,709.2	6,713.2	6,713.2	100.7	132.5	89.68	1,368.7	-989.6	2,582.8	2,349.8	233.00	11.085	
10,236.2	6,709.1	6,713.1	6,713.1	101.7	132.5	89.67	1,368.7	-989.6	2,617.2	2,383.2	234.00	11.184	
10,300.0	6,709.0	6,713.0	6,713.0	103.4	132.4	89.66	1,368.7	-989.6	2,677.8	2,442.0	235.77	11.357	
10,334.6	6,708.9	6,712.9	6,712.9	104.4	132.4	89.66	1,368.7	-989.6	2,710.7	2,474.0	236.73	11.451	
10,400.0	6,708.8	6,712.8	6,712.8	106.2	132.4	89.65	1,368.7	-989.6	2,773.0	2,534.5	238.55	11.625	
10,433.0	6,708.7	6,712.7	6,712.7	107.1	132.4	89.65	1,368.7	-989.6	2,804.6	2,565.1	239.46	11.712	
10,500.0	6,708.6	6,712.6	6,712.6	109.0	132.4	89.64	1,368.7	-989.6	2,868.6	2,627.3	241.32	11.887	
10,531.5	6,708.5	6,712.5	6,712.5	109.9	132.4	89.63	1,368.7	-989.6	2,898.8	2,656.6	242.19	11.969	
10,600.0	6,708.4	6,712.4	6,712.4	111.8	132.4	89.62	1,368.7	-989.6	2,964.5	2,720.4	244.10	12.145	
10,629.9	6,708.4	6,712.4	6,712.4	112.6	132.4	89.62	1,368.7	-989.6	2,993.2	2,748.3	244.93	12.221	
10,700.0	6,708.2	6,712.2	6,712.2	114.6	132.4	89.61	1,368.7	-989.6	3,060.6	2,813.8	246.88	12.397	
10,728.3	6,708.2	6,712.2	6,712.2	115.3	132.4	89.61	1,368.7	-989.6	3,087.9	2,840.2	247.66	12.468	
10,800.0	6,708.0	6,712.0	6,712.0	117.3	132.4	89.60	1,368.7	-989.6	3,157.0	2,907.4	249.66	12.645	
10,826.7	6,708.0	6,712.0	6,712.0	118.1	132.4	89.60	1,368.7	-989.6	3,182.8	2,932.4	250.40	12.711	
10,900.0	6,707.8	6,711.8	6,711.8	120.1	132.4	89.59	1,368.7	-989.6	3,253.6	3,001.2	252.44	12.889	
10,925.2	6,707.8	6,711.8	6,711.8	120.8	132.4	89.58	1,368.7	-989.6	3,278.0	3,024.8	253.14	12.949	
11,000.0	6,707.6	6,711.6	6,711.6	122.9	132.4	89.57	1,368.7	-989.6	3,350.4	3,095.2	255.22	13.128	
11,023.6	6,707.6	6,711.6	6,711.6	123.6	132.4	89.57	1,368.7	-989.6	3,373.3	3,117.4	255.88	13.183	
11,100.0	6,707.5	6,711.5	6,711.5	125.7	132.4	89.56	1,368.7	-989.6	3,447.4	3,189.4	258.00	13.362	
11,122.0	6,707.4	6,711.4	6,711.4	126.3	132.4	89.56	1,368.7	-989.6	3,468.8	3,210.2	258.62	13.413	
11,200.0	6,707.3	6,711.3	6,711.3	128.5	132.4	89.55	1,368.7	-989.6	3,544.5	3,283.8	260.79	13.592	
11,220.4	6,707.2	6,711.2	6,711.2	129.0	132.4	89.54	1,368.7	-989.6	3,564.4	3,303.1	261.36	13.638	
11,300.0	6,707.1	6,711.1	6,711.1	131.3	132.4	89.53	1,368.7	-989.6	3,641.8	3,378.3	263.57	13.817	
11,318.9	6,707.0	6,711.0	6,711.0	131.8	132.4	89.53	1,368.7	-989.6	3,660.2	3,396.1	264.10	13.859	
11,400.0	6,706.9	6,710.9	6,710.9	134.0	132.4	89.52	1,368.7	-989.6	3,739.3	3,472.9	266.36	14.039	
11,417.3	6,706.9	6,710.9	6,710.9	134.5	132.4	89.52	1,368.7	-989.6	3,756.2	3,489.3	266.84	14.076	
11,500.0	6,706.7	6,710.7	6,710.7	136.8	132.4	89.51	1,368.7	-989.6	3,836.9	3,567.7	269.15	14.256	
11,515.7	6,706.7	6,710.7	6,710.7	137.3	132.4	89.51	1,368.7	-989.6	3,852.2	3,582.6	269.58	14.290	
11,600.0	6,706.5	6,710.5	6,710.5	139.6	132.4	89.50	1,368.7	-989.6	3,934.6	3,662.6	271.93	14.469	
11,614.1	6,706.5	6,710.5	6,710.5	140.0	132.4	89.49	1,368.7	-989.6	3,948.4	3,676.1	272.33	14.499	
11,700.0	6,706.3	6,710.3	6,710.3	142.4	132.4	89.48	1,368.7	-989.6	4,032.4	3,757.7	274.72	14.678	
11,712.6	6,706.3	6,710.3	6,710.3	142.8	132.4	89.48	1,368.7	-989.6	4,044.7	3,769.6	275.07	14.704	
11,800.0	6,706.1	6,710.1	6,710.1	145.2	132.4	89.47	1,368.7	-989.6	4,130.3	3,852.8	277.51	14.883	
11,811.0	6,706.1	6,710.1	6,710.1	145.5	132.4	89.47	1,368.7	-989.6	4,141.1	3,863.3	277.82	14.906	
11,900.0	6,705.9	6,709.9	6,709.9	148.0	132.4	89.46	1,368.7	-989.6	4,228.3	3,948.0	280.30	15.085	
11,909.4	6,705.9	6,709.9	6,709.9	148.3	132.4	89.46	1,368.7	-989.6	4,237.6	3,957.0	280.56	15.104	
12,000.0	6,705.8	6,709.8	6,709.8	150.8	132.4	89.45	1,368.7	-989.6	4,326.4	4,043.3	283.09	15.283	
12,007.8	6,705.7	6,709.7	6,709.7	151.0	132.4	89.44	1,368.7	-989.6	4,334.1	4,050.8	283.31	15.298	
12,100.0	6,705.6	6,709.6	6,709.6	153.6	132.4	89.43	1,368.7	-989.6	4,424.6	4,138.7	285.88	15.477	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,709.6	6,709.6	153.8	132.4	89.43	1,368.7	-989.6	4,430.8	4,144.7	286.06	15.489	
12,200.0	6,705.4	6,709.4	6,709.4	156.4	132.4	89.42	1,368.7	-989.6	4,522.9	4,234.2	288.67	15.668	
12,204.7	6,705.4	6,709.4	6,709.4	156.5	132.4	89.42	1,368.7	-989.6	4,527.5	4,238.7	288.81	15.677	
12,300.0	6,705.2	6,709.2	6,709.2	159.2	132.4	89.41	1,368.7	-989.6	4,621.2	4,329.8	291.47	15.855	
12,303.1	6,705.2	6,709.2	6,709.2	159.3	132.4	89.41	1,368.7	-989.6	4,624.3	4,332.7	291.55	15.861	
12,400.0	6,705.0	6,709.0	6,709.0	162.0	132.4	89.40	1,368.7	-989.6	4,719.6	4,425.4	294.26	16.039	
12,401.5	6,705.0	6,709.0	6,709.0	162.0	132.4	89.40	1,368.7	-989.6	4,721.2	4,426.9	294.30	16.042	
12,500.0	6,704.8	6,708.8	6,708.8	164.8	132.4	89.38	1,368.7	-989.6	4,818.1	4,521.1	297.05	16.220	
12,598.4	6,704.6	6,708.6	6,708.6	167.5	132.4	89.37	1,368.7	-989.6	4,915.1	4,615.3	299.80	16.394	
12,600.0	6,704.6	6,708.6	6,708.6	167.6	132.4	89.37	1,368.7	-989.6	4,916.7	4,616.8	299.85	16.397	
12,696.8	6,704.4	6,708.4	6,708.4	170.3	132.4	89.36	1,368.7	-989.6	5,012.1	4,709.6	302.55	16.566	
12,700.0	6,704.4	6,708.4	6,708.4	170.4	132.4	89.36	1,368.7	-989.6	5,015.3	4,712.6	302.64	16.572	
12,795.2	6,704.3	6,708.3	6,708.3	173.0	132.4	89.35	1,368.7	-989.6	5,109.2	4,803.9	305.30	16.735	
12,800.0	6,704.2	6,708.2	6,708.2	173.2	132.4	89.35	1,368.7	-989.6	5,113.9	4,808.5	305.43	16.743	
12,893.7	6,704.1	6,708.1	6,708.1	175.8	132.3	89.33	1,368.7	-989.6	5,206.4	4,898.3	308.05	16.901	
12,900.0	6,704.1	6,708.1	6,708.1	176.0	132.3	89.33	1,368.7	-989.6	5,212.6	4,904.4	308.23	16.912	
12,992.1	6,703.9	6,707.9	6,707.9	178.5	132.3	89.32	1,368.7	-989.6	5,303.6	4,992.8	310.80	17.064	
13,000.0	6,703.9	6,707.9	6,707.9	178.8	132.3	89.32	1,368.7	-989.6	5,311.4	5,000.3	311.02	17.077	
13,090.5	6,703.7	6,707.7	6,707.7	181.3	132.3	89.31	1,368.7	-989.6	5,400.8	5,087.2	313.55	17.224	
13,100.0	6,703.7	6,707.7	6,707.7	181.6	132.3	89.31	1,368.7	-989.6	5,410.2	5,096.3	313.82	17.240	
13,188.9	6,703.5	6,707.5	6,707.5	184.0	132.3	89.30	1,368.7	-989.6	5,498.1	5,181.8	316.31	17.382	
13,200.0	6,703.5	6,707.5	6,707.5	184.4	132.3	89.30	1,368.7	-989.6	5,509.0	5,192.4	316.61	17.400	
13,287.4	6,703.3	6,707.3	6,707.3	186.8	132.3	89.28	1,368.7	-989.6	5,595.4	5,276.3	319.06	17.537	
13,300.0	6,703.3	6,707.3	6,707.3	187.2	132.3	89.28	1,368.7	-989.6	5,607.9	5,288.5	319.41	17.557	
13,385.8	6,703.2	6,707.2	6,707.2	189.6	132.3	89.27	1,368.7	-989.6	5,692.8	5,370.9	321.81	17.690	
13,400.0	6,703.1	6,707.1	6,707.1	190.0	132.3	89.27	1,368.7	-989.6	5,706.8	5,384.6	322.21	17.712	
13,484.2	6,703.0	6,707.0	6,707.0	192.3	132.3	89.26	1,368.7	-989.6	5,790.2	5,465.6	324.56	17.840	
13,500.0	6,702.9	6,706.9	6,706.9	192.8	132.3	89.26	1,368.7	-989.6	5,805.8	5,480.8	325.00	17.864	
13,582.6	6,702.8	6,706.8	6,706.8	195.1	132.3	89.25	1,368.7	-989.6	5,887.6	5,560.3	327.32	17.988	
13,600.0	6,702.8	6,706.8	6,706.8	195.6	132.3	89.25	1,368.7	-989.6	5,904.8	5,577.0	327.80	18.013	
13,681.1	6,702.6	6,706.6	6,706.6	197.8	132.3	89.24	1,368.7	-989.6	5,985.0	5,655.0	330.07	18.133	
13,700.0	6,702.6	6,706.6	6,706.6	198.4	132.3	89.23	1,368.7	-989.6	6,003.8	5,673.2	330.60	18.160	
13,779.5	6,702.4	6,706.4	6,706.4	200.6	132.3	89.22	1,368.7	-989.6	6,082.5	5,749.7	332.82	18.276	
13,800.0	6,702.4	6,706.4	6,706.4	201.2	132.3	89.22	1,368.7	-989.6	6,102.8	5,769.5	333.39	18.305	
13,877.9	6,702.2	6,706.2	6,706.2	203.3	132.3	89.21	1,368.7	-989.6	6,180.1	5,844.5	335.57	18.416	
13,900.0	6,702.2	6,706.2	6,706.2	204.0	132.3	89.21	1,368.7	-989.6	6,201.9	5,865.7	336.19	18.448	
13,976.3	6,702.1	6,706.1	6,706.1	206.1	132.3	89.20	1,368.7	-989.6	6,277.6	5,939.3	338.33	18.555	
14,000.0	6,702.0	6,706.0	6,706.0	206.8	132.3	89.20	1,368.7	-989.6	6,301.1	5,962.1	338.99	18.588	
14,074.8	6,701.9	6,705.9	6,705.9	208.9	132.3	89.19	1,368.7	-989.6	6,375.2	6,034.1	341.08	18.691	
14,100.0	6,701.8	6,705.8	6,705.8	209.6	132.3	89.18	1,368.7	-989.6	6,400.2	6,058.4	341.79	18.726	
14,173.2	6,701.7	6,705.7	6,705.7	211.6	132.3	89.17	1,368.7	-989.6	6,472.8	6,129.0	343.84	18.825	
14,200.0	6,701.6	6,705.6	6,705.6	212.4	132.3	89.17	1,368.7	-989.6	6,499.4	6,154.8	344.59	18.861	
14,271.6	6,701.5	6,705.5	6,705.5	214.4	132.3	89.16	1,368.7	-989.6	6,570.4	6,223.8	346.59	18.957	
14,300.0	6,701.4	6,705.4	6,705.4	215.2	132.3	89.16	1,368.7	-989.6	6,598.6	6,251.2	347.38	18.995	
14,370.0	6,701.3	6,705.3	6,705.3	217.1	132.3	89.15	1,368.7	-989.6	6,668.1	6,318.7	349.34	19.087	
14,400.0	6,701.3	6,705.3	6,705.3	218.0	132.3	89.15	1,368.7	-989.6	6,697.8	6,347.6	350.18	19.127	
14,468.5	6,701.1	6,705.1	6,705.1	219.9	132.3	89.14	1,368.7	-989.6	6,765.7	6,413.6	352.10	19.215	
14,500.0	6,701.1	6,705.1	6,705.1	220.8	132.3	89.14	1,368.7	-989.6	6,797.0	6,444.0	352.98	19.256	
14,566.9	6,701.0	6,705.0	6,705.0	222.6	132.3	89.13	1,368.7	-989.6	6,863.4	6,508.6	354.85	19.342	
14,600.0	6,700.9	6,704.9	6,704.9	223.6	132.3	89.12	1,368.7	-989.6	6,896.3	6,540.5	355.78	19.384	
14,665.3	6,700.8	6,704.8	6,704.8	225.4	132.3	89.11	1,368.7	-989.6	6,961.1	6,603.5	357.61	19.466	
14,700.0	6,700.7	6,704.7	6,704.7	226.4	132.3	89.11	1,368.7	-989.6	6,995.6	6,637.0	358.58	19.509	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	6,704.6	6,704.6	228.2	132.3	89.10	1,368.7	-989.6	7,058.9	6,698.5	360.36	19.588	
14,800.0	6,700.5	6,704.5	6,704.5	229.2	132.3	89.10	1,368.7	-989.6	7,094.9	6,733.5	361.38	19.633	
14,862.2	6,700.4	6,704.4	6,704.4	230.9	132.3	89.09	1,368.7	-989.6	7,156.6	6,793.5	363.12	19.709	
14,900.0	6,700.3	6,704.3	6,704.3	232.0	132.3	89.09	1,368.7	-989.6	7,194.2	6,830.0	364.18	19.755	
14,960.6	6,700.2	6,704.2	6,704.2	233.7	132.3	89.08	1,368.7	-989.6	7,254.4	6,888.5	365.87	19.828	
15,000.0	6,700.2	6,704.2	6,704.2	234.8	132.3	89.07	1,368.7	-989.6	7,293.6	6,926.6	366.98	19.875	
15,059.0	6,700.0	6,704.0	6,704.0	236.4	132.3	89.07	1,368.7	-989.6	7,352.2	6,983.6	368.63	19.945	
15,082.8	6,700.0	6,704.0	6,704.0	237.1	132.3	89.06	1,368.7	-989.6	7,375.8	7,006.5	369.30	19.973	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-102.20	-1,358.4	-6,282.6	6,427.9				
98.4	98.4	79.3	79.3	0.1	0.0	-102.20	-1,358.4	-6,282.6	6,427.7	6,427.6	0.11	N/A	
100.0	100.0	81.3	81.3	0.1	0.0	-102.20	-1,358.3	-6,282.6	6,427.7	6,427.6	0.11	N/A	
196.8	196.8	198.0	198.0	0.3	0.2	-102.20	-1,357.8	-6,282.2	6,427.3	6,426.8	0.52	N/A	
200.0	200.0	201.5	201.5	0.3	0.2	-102.20	-1,357.8	-6,282.2	6,427.3	6,426.8	0.54	N/A	
295.3	295.3	299.5	299.5	0.5	0.3	-102.19	-1,357.3	-6,281.7	6,426.8	6,425.9	0.84	7,664.913	
300.0	300.0	300.0	300.0	0.5	0.3	-102.19	-1,357.3	-6,281.7	6,426.7	6,425.9	0.85	7,564.848	
393.7	393.7	373.8	373.8	0.8	0.3	-102.19	-1,357.1	-6,281.4	6,426.3	6,425.2	1.11	5,813.840	
400.0	400.0	378.5	378.5	0.8	0.4	-102.19	-1,357.0	-6,281.4	6,426.3	6,425.2	1.12	5,725.398	
492.1	492.1	489.0	488.9	1.0	0.4	-102.19	-1,356.6	-6,281.2	6,426.1	6,424.7	1.40	4,603.603	
500.0	500.0	500.0	500.0	1.0	0.4	-102.19	-1,356.5	-6,281.1	6,426.1	6,424.6	1.42	4,524.825	
590.5	590.5	592.7	592.7	1.2	0.5	-102.18	-1,356.1	-6,280.7	6,425.5	6,423.9	1.68	3,831.833	
600.0	600.0	600.0	600.0	1.2	0.5	-102.18	-1,356.0	-6,280.7	6,425.5	6,423.8	1.70	3,774.529	
689.0	689.0	674.5	674.5	1.4	0.5	-102.18	-1,355.8	-6,280.4	6,425.1	6,423.1	1.97	3,258.007	
700.0	700.0	683.5	683.5	1.4	0.5	-102.18	-1,355.8	-6,280.4	6,425.1	6,423.1	1.97	3,258.007	
787.4	787.4	759.8	759.7	1.6	0.6	-102.18	-1,355.6	-6,280.2	6,424.9	6,422.7	2.20	2,916.350	
800.0	800.0	771.0	770.9	1.7	0.6	-102.18	-1,355.6	-6,280.2	6,424.9	6,422.6	2.24	2,873.136	
885.8	885.8	852.3	852.3	1.9	0.6	-102.18	-1,355.4	-6,280.2	6,424.8	6,422.4	2.46	2,606.762	
900.0	900.0	866.2	866.2	1.9	0.6	-102.18	-1,355.4	-6,280.2	6,424.8	6,422.3	2.50	2,567.155	
984.2	984.2	970.9	970.9	2.1	0.6	-102.18	-1,355.3	-6,280.1	6,424.7	6,422.0	2.73	2,356.041	
1,000.0	1,000.0	993.2	993.2	2.1	0.7	-102.18	-1,355.3	-6,280.0	6,424.7	6,421.9	2.77	2,320.532	
1,082.7	1,082.7	1,057.2	1,057.2	2.3	0.7	-102.18	-1,355.3	-6,279.8	6,424.4	6,421.5	2.96	2,167.875	
1,100.0	1,100.0	1,069.9	1,069.9	2.3	0.7	-102.18	-1,355.3	-6,279.8	6,424.4	6,421.4	3.00	2,138.625	
1,102.8	1,102.8	1,072.0	1,072.0	2.4	0.7	-130.91	-1,355.3	-6,279.8	6,424.4	6,421.4	2.99	2,150.223	
1,181.1	1,181.1	1,136.3	1,136.3	2.5	0.7	-130.90	-1,355.5	-6,279.8	6,425.2	6,422.0	3.17	2,025.513	
1,200.0	1,200.0	1,153.4	1,153.4	2.6	0.7	-130.90	-1,355.5	-6,279.8	6,425.6	6,422.4	3.22	1,997.412	
1,279.5	1,279.4	1,249.2	1,249.2	2.7	0.7	-130.89	-1,355.5	-6,280.0	6,428.3	6,424.9	3.40	1,889.315	
1,300.0	1,299.8	1,285.3	1,285.3	2.8	0.7	-130.90	-1,355.5	-6,279.9	6,429.2	6,425.7	3.45	1,864.255	
1,377.9	1,377.5	1,364.6	1,364.6	3.0	0.7	-130.88	-1,355.5	-6,279.6	6,433.1	6,429.5	3.65	1,761.531	
1,400.0	1,399.5	1,385.0	1,385.0	3.0	0.7	-130.87	-1,355.6	-6,279.5	6,434.5	6,430.8	3.71	1,734.300	
1,476.4	1,475.3	1,457.6	1,457.6	3.2	0.7	-130.85	-1,355.7	-6,279.3	6,440.2	6,436.3	3.92	1,642.192	
1,500.0	1,498.7	1,480.2	1,480.2	3.3	0.7	-130.84	-1,355.7	-6,279.2	6,442.2	6,438.2	3.99	1,615.793	
1,574.8	1,572.6	1,551.9	1,551.9	3.5	0.8	-130.80	-1,355.9	-6,279.0	6,449.5	6,445.3	4.20	1,534.046	
1,600.0	1,597.5	1,576.0	1,576.0	3.5	0.8	-130.79	-1,355.9	-6,279.0	6,452.3	6,448.0	4.28	1,508.682	
1,673.2	1,669.4	1,645.9	1,645.9	3.7	0.8	-130.74	-1,356.1	-6,278.8	6,461.1	6,456.7	4.49	1,438.112	
1,700.1	1,695.8	1,671.6	1,671.6	3.8	0.8	-130.72	-1,356.0	-6,278.7	6,464.7	6,460.1	4.57	1,414.666	
1,771.6	1,765.7	1,737.2	1,737.2	4.1	0.8	-130.81	-1,355.7	-6,278.7	6,474.4	6,469.7	4.79	1,351.601	
1,800.0	1,793.4	1,762.5	1,762.5	4.2	0.8	-130.85	-1,355.5	-6,278.8	6,478.3	6,473.4	4.88	1,327.929	
1,870.1	1,862.0	1,828.4	1,828.4	4.4	0.8	-130.93	-1,354.9	-6,278.9	6,488.0	6,482.9	5.11	1,269.832	
1,900.0	1,891.3	1,858.7	1,858.7	4.5	0.8	-130.97	-1,354.6	-6,278.9	6,492.1	6,486.9	5.21	1,246.741	
1,968.5	1,958.3	1,930.2	1,930.1	4.8	0.9	-131.07	-1,353.8	-6,279.1	6,501.5	6,496.1	5.44	1,195.002	
2,000.0	1,989.1	1,964.4	1,964.4	4.9	0.9	-131.11	-1,353.4	-6,279.1	6,505.8	6,500.3	5.55	1,172.658	
2,066.9	2,054.5	2,031.2	2,031.2	5.1	0.9	-131.20	-1,352.6	-6,279.2	6,515.0	6,509.2	5.78	1,127.090	
2,100.0	2,086.9	2,061.4	2,061.4	5.3	0.9	-131.23	-1,352.1	-6,279.2	6,519.5	6,513.6	5.89	1,106.002	
2,165.3	2,150.8	2,138.7	2,138.7	5.5	0.9	-131.33	-1,350.4	-6,279.5	6,528.5	6,522.4	6.13	1,065.273	
2,200.0	2,184.7	2,196.6	2,196.5	5.6	0.9	-131.40	-1,349.3	-6,279.4	6,533.1	6,526.9	6.26	1,044.327	
2,263.8	2,247.1	2,241.8	2,241.8	5.9	1.0	-131.45	-1,348.4	-6,279.4	6,541.6	6,535.1	6.48	1,009.409	
2,300.0	2,282.5	2,266.4	2,266.3	6.0	1.0	-131.48	-1,347.9	-6,279.4	6,546.5	6,539.9	6.61	990.706	
2,362.2	2,343.3	2,318.9	2,318.8	6.3	1.0	-131.54	-1,346.9	-6,279.6	6,555.1	6,548.3	6.83	959.458	
2,400.0	2,380.3	2,375.7	2,375.6	6.5	1.0	-131.61	-1,345.9	-6,279.6	6,560.3	6,553.3	6.97	940.693	
2,460.6	2,439.6	2,500.0	2,499.9	6.7	1.1	-131.77	-1,344.1	-6,278.7	6,568.0	6,560.8	7.21	911.175	
2,500.0	2,478.1	2,539.7	2,539.6	6.9	1.1	-131.82	-1,343.3	-6,278.2	6,572.9	6,565.5	7.35	893.876	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,535.9	2,575.4	2,575.3	7.1	1.1	-131.86	-1,342.6	-6,277.9	6,580.4	6,572.8	7.57	869.623	
2,600.0	2,575.9	2,600.0	2,599.9	7.3	1.1	-131.89	-1,342.0	-6,277.7	6,585.8	6,578.0	7.71	853.629	
2,657.5	2,632.2	2,649.5	2,649.4	7.5	1.1	-131.95	-1,341.0	-6,277.6	6,593.3	6,585.4	7.93	831.426	
2,700.0	2,673.8	2,685.9	2,685.8	7.7	1.1	-131.99	-1,340.3	-6,277.4	6,599.0	6,590.9	8.09	815.821	
2,755.9	2,728.4	2,764.2	2,764.0	7.9	1.1	-132.09	-1,338.9	-6,277.1	6,606.4	6,598.1	8.30	795.568	
2,800.0	2,771.6	2,834.9	2,834.7	8.1	1.2	-132.17	-1,337.3	-6,276.6	6,612.1	6,603.6	8.47	780.193	
2,854.3	2,824.7	2,913.3	2,913.0	8.3	1.2	-132.26	-1,335.4	-6,275.7	6,618.8	6,610.2	8.68	762.157	
2,900.0	2,869.4	2,959.2	2,959.0	8.5	1.2	-132.32	-1,334.5	-6,275.0	6,624.4	6,615.6	8.86	747.929	
2,952.7	2,921.0	3,013.0	3,012.8	8.8	1.2	-132.39	-1,333.7	-6,274.2	6,630.9	6,621.9	9.06	732.063	
3,000.0	2,967.2	3,063.7	3,063.4	9.0	1.2	-132.45	-1,333.3	-6,273.2	6,636.7	6,627.5	9.24	718.311	
3,051.2	3,017.3	3,100.0	3,099.7	9.2	1.3	-132.50	-1,333.2	-6,272.5	6,643.0	6,633.5	9.43	704.336	
3,100.0	3,065.0	3,145.8	3,145.5	9.4	1.3	-132.56	-1,333.1	-6,271.7	6,649.0	6,639.4	9.62	691.226	
3,149.6	3,113.5	3,180.1	3,179.8	9.6	1.3	-132.61	-1,332.9	-6,271.1	6,655.3	6,645.5	9.81	678.634	
3,200.0	3,162.8	3,200.0	3,199.7	9.8	1.3	-132.63	-1,332.8	-6,270.9	6,661.8	6,651.8	9.99	666.636	
3,248.0	3,209.8	3,241.3	3,241.0	10.0	1.3	-132.69	-1,332.6	-6,270.4	6,668.0	6,657.9	10.18	655.064	
3,300.0	3,260.6	3,272.0	3,271.7	10.2	1.3	-132.73	-1,332.5	-6,270.2	6,675.0	6,664.6	10.38	643.327	
3,346.4	3,306.1	3,300.0	3,299.7	10.5	1.3	-132.77	-1,332.4	-6,270.0	6,681.4	6,670.8	10.55	633.190	
3,400.0	3,358.5	3,327.5	3,327.2	10.7	1.3	-132.80	-1,332.4	-6,270.0	6,688.9	6,678.2	10.75	622.322	
3,444.9	3,402.3	3,351.0	3,350.7	10.9	1.3	-132.83	-1,332.4	-6,270.0	6,695.4	6,684.5	10.91	613.568	
3,500.0	3,456.3	3,400.0	3,399.7	11.1	1.3	-132.89	-1,332.3	-6,270.3	6,703.6	6,692.5	11.11	603.251	
3,543.3	3,498.6	3,400.0	3,399.7	11.3	1.3	-132.89	-1,332.3	-6,270.3	6,710.0	6,698.8	11.27	595.440	
3,600.0	3,554.1	3,438.1	3,437.8	11.5	1.3	-132.94	-1,332.3	-6,270.7	6,718.8	6,707.3	11.48	585.458	
3,641.7	3,594.9	3,464.1	3,463.8	11.7	1.3	-132.98	-1,332.4	-6,271.1	6,725.3	6,713.7	11.63	578.318	
3,700.0	3,651.9	3,500.4	3,500.1	12.0	1.3	-133.03	-1,332.6	-6,271.6	6,734.6	6,722.7	11.84	568.646	
3,740.1	3,691.2	3,542.4	3,542.1	12.2	1.3	-133.08	-1,333.0	-6,272.2	6,741.0	6,729.1	11.99	562.188	
3,800.0	3,749.7	3,600.0	3,599.7	12.4	1.3	-133.16	-1,333.5	-6,273.1	6,750.6	6,738.4	12.21	552.856	
3,838.6	3,787.4	3,627.2	3,626.9	12.6	1.3	-133.20	-1,333.8	-6,273.5	6,756.9	6,744.5	12.35	547.034	
3,900.0	3,847.5	3,665.6	3,665.3	12.9	1.3	-133.25	-1,334.1	-6,274.2	6,767.0	6,754.4	12.58	538.059	
3,937.0	3,883.7	3,700.0	3,699.7	13.0	1.3	-133.29	-1,334.3	-6,275.0	6,773.2	6,760.4	12.71	532.783	
4,000.0	3,945.3	3,763.9	3,763.5	13.3	1.3	-133.38	-1,334.6	-6,276.4	6,783.7	6,770.8	12.94	524.061	
4,035.4	3,980.0	3,809.9	3,809.5	13.5	1.3	-133.43	-1,334.7	-6,277.4	6,789.6	6,776.5	13.08	519.269	
4,060.0	4,004.0	3,834.1	3,833.8	13.6	1.3	-133.46	-1,334.7	-6,277.9	6,793.6	6,780.4	13.17	516.024	
4,100.0	4,043.2	3,873.6	3,873.3	13.7	1.3	-133.60	-1,334.7	-6,278.7	6,800.0	6,786.7	13.28	511.988	
4,133.8	4,076.5	3,910.3	3,909.9	13.8	1.3	-133.72	-1,334.6	-6,279.5	6,805.1	6,791.8	13.36	509.254	
4,200.0	4,141.6	4,008.2	4,007.8	14.0	1.4	-133.95	-1,334.2	-6,281.3	6,814.2	6,800.6	13.52	503.862	
4,232.3	4,173.5	4,087.6	4,087.2	14.1	1.4	-134.07	-1,333.7	-6,282.4	6,818.0	6,804.4	13.60	501.476	
4,300.0	4,240.6	4,180.7	4,180.3	14.3	1.4	-134.24	-1,333.4	-6,283.0	6,824.8	6,811.1	13.74	496.668	
4,330.7	4,271.1	4,215.4	4,215.0	14.4	1.4	-134.31	-1,333.5	-6,283.1	6,827.5	6,813.7	13.80	494.753	
4,400.0	4,340.0	4,283.1	4,282.7	14.5	1.4	-134.42	-1,333.5	-6,283.3	6,832.7	6,818.8	13.93	490.367	
4,429.1	4,369.0	4,312.0	4,311.6	14.6	1.4	-134.46	-1,333.4	-6,283.4	6,834.6	6,820.6	13.98	488.751	
4,500.0	4,439.7	4,383.6	4,383.2	14.8	1.4	-134.54	-1,333.3	-6,283.7	6,838.2	6,824.1	14.11	484.683	
4,527.5	4,467.2	4,400.0	4,399.6	14.8	1.4	-134.56	-1,333.3	-6,283.8	6,839.3	6,825.1	14.15	483.364	
4,600.0	4,539.7	4,463.9	4,463.5	14.9	1.4	-134.60	-1,333.1	-6,284.1	6,841.3	6,827.1	14.26	479.753	
4,626.0	4,565.6	4,483.8	4,483.3	15.0	1.4	-134.61	-1,333.1	-6,284.2	6,841.8	6,827.5	14.29	478.618	
4,660.2	4,599.8	4,513.4	4,513.0	15.0	1.4	-105.89	-1,333.0	-6,284.5	6,842.2	6,827.7	14.50	471.872	
4,700.0	4,639.6	4,554.7	4,554.3	15.0	1.4	-105.89	-1,332.9	-6,284.8	6,842.5	6,827.9	14.57	469.633	
4,724.4	4,664.0	4,580.0	4,579.6	15.1	1.4	-105.89	-1,332.9	-6,285.0	6,842.7	6,828.1	14.62	468.147	
4,800.0	4,739.6	4,629.7	4,629.3	15.2	1.5	-105.89	-1,332.8	-6,285.5	6,843.3	6,828.6	14.75	463.819	
4,822.8	4,762.5	4,641.7	4,641.3	15.2	1.5	-105.88	-1,332.8	-6,285.6	6,843.6	6,828.8	14.80	462.556	
4,900.0	4,839.6	4,700.0	4,699.6	15.3	1.5	-105.88	-1,332.8	-6,286.6	6,844.8	6,829.9	14.94	458.224	
4,921.2	4,860.9	4,700.0	4,699.6	15.4	1.5	-105.88	-1,332.8	-6,286.6	6,845.2	6,830.2	14.97	457.131	
5,000.0	4,939.6	4,786.6	4,786.2	15.5	1.5	-105.88	-1,333.3	-6,288.2	6,846.7	6,831.5	15.12	452.789	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis					Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,019.7	4,959.3	4,873.3	4,872.8	15.5	1.5	-105.89	-1,334.1	-6,289.1	6,847.0	6,831.8	15.16	451.621		
5,100.0	5,039.6	4,952.1	4,951.7	15.6	1.5	-105.89	-1,334.8	-6,289.4	6,847.4	6,832.1	15.30	447.418		
5,118.1	5,057.7	4,964.4	4,963.9	15.7	1.5	-105.89	-1,334.9	-6,289.5	6,847.6	6,832.2	15.34	446.487		
5,200.0	5,139.6	5,042.4	5,042.0	15.8	1.5	-105.90	-1,335.5	-6,290.1	6,848.4	6,832.9	15.49	442.247		
5,216.5	5,156.2	5,066.3	5,065.8	15.8	1.5	-105.90	-1,335.7	-6,290.3	6,848.5	6,833.0	15.52	441.366		
5,300.0	5,239.6	5,211.3	5,210.8	15.9	1.5	-105.91	-1,336.7	-6,290.6	6,848.9	6,833.2	15.67	437.082		
5,314.9	5,254.6	5,236.1	5,235.6	16.0	1.5	-105.91	-1,336.9	-6,290.5	6,848.8	6,833.1	15.70	436.324		
5,400.0	5,339.6	5,364.3	5,363.8	16.1	1.5	-105.91	-1,337.2	-6,289.6	6,848.3	6,832.5	15.86	431.933		
5,413.4	5,353.0	5,382.8	5,382.3	16.1	1.5	-105.91	-1,337.2	-6,289.4	6,848.2	6,832.3	15.88	431.228		
5,500.0	5,439.6	5,514.9	5,514.4	16.3	1.5	-105.92	-1,337.3	-6,287.6	6,847.1	6,831.0	16.05	426.654		
5,511.8	5,451.4	5,526.7	5,526.2	16.3	1.5	-105.92	-1,337.2	-6,287.5	6,846.9	6,830.8	16.07	426.046		
5,600.0	5,539.6	5,616.6	5,616.1	16.4	1.5	-105.92	-1,337.2	-6,286.0	6,845.5	6,829.2	16.24	421.484		
5,610.2	5,549.9	5,627.9	5,627.4	16.4	1.5	-105.92	-1,337.2	-6,285.8	6,845.3	6,829.1	16.26	420.963		
5,700.0	5,639.6	5,722.2	5,721.7	16.6	1.5	-105.93	-1,337.9	-6,283.9	6,843.8	6,827.4	16.43	416.476		
5,708.6	5,648.3	5,730.1	5,729.6	16.6	1.5	-105.93	-1,338.0	-6,283.7	6,843.6	6,827.2	16.45	416.050		
5,800.0	5,739.6	5,800.0	5,799.5	16.7	1.6	-105.94	-1,338.9	-6,282.3	6,842.2	6,825.5	16.62	411.637		
5,807.1	5,746.7	5,815.7	5,815.1	16.8	1.6	-105.94	-1,339.1	-6,282.0	6,842.0	6,825.4	16.64	411.279		
5,900.0	5,839.6	5,883.4	5,882.9	16.9	1.6	-105.95	-1,340.1	-6,280.8	6,840.8	6,824.0	16.81	406.902		
5,905.5	5,845.1	5,900.0	5,899.4	16.9	1.6	-105.96	-1,340.3	-6,280.5	6,840.8	6,823.9	16.82	406.624		
6,000.0	5,939.6	5,957.5	5,956.9	17.1	1.6	-105.97	-1,341.2	-6,279.7	6,839.9	6,822.8	17.00	402.295		
6,003.9	5,943.6	5,960.5	5,959.9	17.1	1.6	-105.97	-1,341.2	-6,279.7	6,839.8	6,822.8	17.01	402.116		
6,059.2	5,998.8	6,002.1	6,001.5	17.2	1.6	-105.97	-1,341.8	-6,279.2	6,839.5	6,822.3	17.11	399.618		
6,100.0	6,039.6	6,042.1	6,041.5	17.2	1.6	-16.01	-1,342.2	-6,278.9	6,838.1	6,821.1	17.03	401.504		
6,102.3	6,042.0	6,044.4	6,043.8	17.2	1.6	-16.01	-1,342.3	-6,278.9	6,838.0	6,820.9	17.03	401.417		
6,150.0	6,089.4	6,090.9	6,090.3	17.3	1.6	-16.13	-1,342.7	-6,278.5	6,833.4	6,816.3	17.11	399.307		
6,200.0	6,138.7	6,137.3	6,136.7	17.3	1.6	-16.33	-1,343.1	-6,278.1	6,825.5	6,808.2	17.21	396.604		
6,200.8	6,139.5	6,138.0	6,137.4	17.3	1.6	-16.33	-1,343.1	-6,278.1	6,825.3	6,808.1	17.21	396.560		
6,250.0	6,187.4	6,182.5	6,181.8	17.3	1.6	-16.62	-1,343.7	-6,277.7	6,814.2	6,796.9	17.30	393.890		
6,299.2	6,234.4	6,237.9	6,237.3	17.4	1.6	-17.02	-1,344.5	-6,277.2	6,800.0	6,782.6	17.37	391.450		
6,300.0	6,235.1	6,238.9	6,238.3	17.4	1.6	-17.03	-1,344.5	-6,277.2	6,799.7	6,782.4	17.37	391.414		
6,350.0	6,281.7	6,301.5	6,300.9	17.4	1.6	-17.55	-1,345.3	-6,276.6	6,782.0	6,764.6	17.42	389.397		
6,397.6	6,324.8	6,355.3	6,354.7	17.3	1.6	-18.15	-1,345.9	-6,275.9	6,762.2	6,744.7	17.42	388.100		
6,400.0	6,326.9	6,358.0	6,357.3	17.3	1.6	-18.19	-1,345.9	-6,275.9	6,761.1	6,743.7	17.42	388.056		
6,450.0	6,370.5	6,414.7	6,414.0	17.3	1.6	-18.97	-1,346.5	-6,275.1	6,737.2	6,719.8	17.39	387.380		
6,496.0	6,409.1	6,471.9	6,471.2	17.3	1.6	-19.86	-1,347.1	-6,274.1	6,712.5	6,695.2	17.34	387.187		
6,500.0	6,412.3	6,476.7	6,476.0	17.3	1.6	-19.95	-1,347.1	-6,274.0	6,710.3	6,693.0	17.33	387.205		
6,550.0	6,452.1	6,518.8	6,518.1	17.3	1.6	-21.08	-1,347.6	-6,273.2	6,680.7	6,663.4	17.22	387.889		
6,594.5	6,485.6	6,545.0	6,544.4	17.3	1.6	-22.26	-1,348.0	-6,272.7	6,652.2	6,635.1	17.10	388.963		
6,600.0	6,489.7	6,548.2	6,547.5	17.3	1.6	-22.42	-1,348.0	-6,272.6	6,648.5	6,631.4	17.09	389.133		
6,650.0	6,524.9	6,575.7	6,575.0	17.2	1.6	-24.02	-1,348.4	-6,272.1	6,614.0	6,597.0	16.94	390.338		
6,692.9	6,553.0	6,600.0	6,599.3	17.2	1.6	-25.67	-1,348.9	-6,271.7	6,582.6	6,565.8	16.85	390.767		
6,700.0	6,557.5	6,600.0	6,599.3	17.2	1.6	-25.95	-1,348.9	-6,271.7	6,577.3	6,560.5	16.82	390.929		
6,750.0	6,587.4	6,623.0	6,622.3	17.2	1.6	-28.30	-1,349.3	-6,271.3	6,538.6	6,521.8	16.77	389.988		
6,791.3	6,609.9	6,639.5	6,638.8	17.2	1.6	-30.64	-1,349.6	-6,271.0	6,505.2	6,488.4	16.80	387.129		
6,800.0	6,614.4	6,642.8	6,642.1	17.2	1.6	-31.18	-1,349.7	-6,270.9	6,498.1	6,481.3	16.82	386.438		
6,850.0	6,638.4	6,660.3	6,659.6	17.2	1.6	-34.73	-1,350.1	-6,270.7	6,455.9	6,438.9	17.03	379.035		
6,889.7	6,655.3	6,672.6	6,671.8	17.4	1.6	-38.17	-1,350.4	-6,270.5	6,421.4	6,404.0	17.37	369.764		
6,900.0	6,659.4	6,675.5	6,674.8	17.5	1.6	-39.16	-1,350.5	-6,270.4	6,412.4	6,394.9	17.48	366.874		
6,950.0	6,677.1	6,700.0	6,699.3	18.0	1.7	-44.89	-1,351.1	-6,270.0	6,367.6	6,349.4	18.22	349.457		
6,988.2	6,688.4	6,700.0	6,699.3	18.5	1.7	-49.96	-1,351.1	-6,270.0	6,332.7	6,313.7	18.94	334.376		
7,000.0	6,691.5	6,700.0	6,699.3	18.7	1.7	-51.72	-1,351.1	-6,270.0	6,321.8	6,302.6	19.18	329.560		
7,050.0	6,702.5	6,700.0	6,699.3	19.5	1.7	-60.20	-1,351.1	-6,270.0	6,275.2	6,254.9	20.33	308.741		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,086.6	6,708.4	6,700.0	6,699.3	20.1	1.7	-67.54	-1,351.1	-6,270.0	6,240.7	6,219.6	21.18	294.657	
7,100.0	6,710.1	6,700.0	6,699.3	20.4	1.7	-70.45	-1,351.1	-6,270.0	6,228.1	6,206.6	21.47	290.100	
7,150.0	6,714.2	6,700.0	6,699.3	21.3	1.7	-82.16	-1,351.1	-6,270.0	6,180.6	6,158.1	22.48	274.980	
7,185.0	6,715.0	6,700.0	6,699.3	21.9	1.7	-90.80	-1,351.1	-6,270.0	6,147.3	6,124.0	23.29	263.908	
7,185.6	6,715.0	6,700.0	6,699.3	21.9	1.7	-90.93	-1,351.1	-6,270.0	6,146.8	6,123.5	23.31	263.721	
7,200.0	6,715.0	6,700.0	6,699.3	22.2	1.7	-90.93	-1,351.1	-6,270.0	6,133.0	6,109.4	23.58	260.040	
7,283.4	6,714.8	6,700.0	6,699.3	23.9	1.7	-90.93	-1,351.1	-6,270.0	6,053.7	6,028.4	25.26	239.630	
7,300.0	6,714.8	6,700.0	6,699.3	24.2	1.7	-90.93	-1,351.1	-6,270.0	6,038.0	6,012.4	25.60	235.901	
7,381.9	6,714.6	6,700.0	6,699.3	26.0	1.7	-90.93	-1,351.1	-6,270.0	5,960.3	5,932.9	27.36	217.880	
7,400.0	6,714.6	6,700.0	6,699.3	26.4	1.7	-90.93	-1,351.1	-6,270.0	5,943.1	5,915.4	27.75	214.201	
7,480.3	6,714.4	6,700.0	6,699.3	28.2	1.7	-90.93	-1,351.1	-6,270.0	5,867.0	5,837.5	29.56	198.446	
7,500.0	6,714.4	6,700.0	6,699.3	28.7	1.7	-90.93	-1,351.1	-6,270.0	5,848.4	5,818.4	30.01	194.873	
7,578.7	6,714.2	6,700.0	6,699.3	30.5	1.7	-90.93	-1,351.1	-6,270.0	5,773.9	5,742.1	31.87	181.195	
7,600.0	6,714.2	6,700.0	6,699.3	31.0	1.7	-90.93	-1,351.1	-6,270.0	5,753.9	5,721.5	32.37	177.768	
7,677.1	6,714.0	6,700.0	6,699.3	32.9	1.7	-90.93	-1,351.1	-6,270.0	5,681.0	5,646.8	34.24	165.921	
7,700.0	6,714.0	6,700.0	6,699.3	33.4	1.7	-90.93	-1,351.1	-6,270.0	5,659.5	5,624.7	34.79	162.658	
7,775.6	6,713.9	6,700.0	6,699.3	35.3	1.7	-90.93	-1,351.1	-6,270.0	5,588.3	5,551.7	36.67	152.392	
7,800.0	6,713.8	6,700.0	6,699.3	35.9	1.7	-90.93	-1,351.1	-6,270.0	5,565.4	5,528.1	37.28	149.296	
7,874.0	6,713.7	6,700.0	6,699.3	37.8	1.7	-90.93	-1,351.1	-6,270.0	5,495.8	5,456.7	39.15	140.384	
7,900.0	6,713.6	6,700.0	6,699.3	38.4	1.7	-90.93	-1,351.1	-6,270.0	5,471.4	5,431.6	39.81	137.452	
7,972.4	6,713.5	6,700.0	6,699.3	40.3	1.7	-90.93	-1,351.1	-6,270.0	5,403.5	5,361.8	41.66	129.692	
8,000.0	6,713.4	6,700.0	6,699.3	41.0	1.7	-90.93	-1,351.1	-6,270.0	5,377.7	5,335.3	42.37	126.917	
8,070.8	6,713.3	6,700.0	6,699.3	42.8	1.7	-90.93	-1,351.1	-6,270.0	5,311.4	5,267.2	44.21	120.138	
8,100.0	6,713.2	6,700.0	6,699.3	43.6	1.7	-90.93	-1,351.1	-6,270.0	5,284.2	5,239.2	44.97	117.510	
8,169.3	6,713.1	6,700.0	6,699.3	45.4	1.7	-90.93	-1,351.1	-6,270.0	5,219.6	5,172.8	46.78	111.568	
8,200.0	6,713.0	6,700.0	6,699.3	46.2	1.7	-90.93	-1,351.1	-6,270.0	5,190.9	5,143.4	47.59	109.078	
8,267.7	6,712.9	6,700.0	6,699.3	48.0	1.7	-90.93	-1,351.1	-6,270.0	5,128.0	5,078.6	49.38	103.851	
8,300.0	6,712.8	6,700.0	6,699.3	48.8	1.7	-90.93	-1,351.1	-6,270.0	5,098.0	5,047.7	50.23	101.489	
8,366.1	6,712.7	6,700.0	6,699.3	50.6	1.7	-90.93	-1,351.1	-6,270.0	5,036.6	4,984.6	51.99	96.875	
8,400.0	6,712.6	6,700.0	6,699.3	51.5	1.7	-90.93	-1,351.1	-6,270.0	5,005.2	4,952.3	52.89	94.631	
8,464.5	6,712.5	6,700.0	6,699.3	53.2	1.7	-90.93	-1,351.1	-6,270.0	4,945.5	4,890.9	54.62	90.545	
8,500.0	6,712.4	6,700.0	6,699.3	54.1	1.7	-90.93	-1,351.1	-6,270.0	4,912.8	4,857.2	55.57	88.410	
8,563.0	6,712.3	6,700.0	6,699.3	55.8	1.7	-90.93	-1,351.1	-6,270.0	4,854.7	4,797.5	57.26	84.782	
8,600.0	6,712.3	6,700.0	6,699.3	56.8	1.7	-90.93	-1,351.1	-6,270.0	4,820.7	4,762.4	58.26	82.748	
8,661.4	6,712.1	6,700.0	6,699.3	58.5	1.7	-90.93	-1,351.1	-6,270.0	4,764.2	4,704.3	59.91	79.517	
8,700.0	6,712.1	6,700.0	6,699.3	59.5	1.7	-90.93	-1,351.1	-6,270.0	4,728.8	4,667.9	60.96	77.577	
8,759.8	6,711.9	6,700.0	6,699.3	61.1	1.7	-90.93	-1,351.1	-6,270.0	4,674.1	4,611.5	62.58	74.692	
8,800.0	6,711.9	6,700.0	6,699.3	62.2	1.7	-90.93	-1,351.1	-6,270.0	4,637.4	4,573.7	63.67	72.838	
8,858.2	6,711.8	6,700.0	6,699.3	63.8	1.7	-90.93	-1,351.1	-6,270.0	4,584.2	4,519.0	65.25	70.256	
8,900.0	6,711.7	6,700.0	6,699.3	64.9	1.7	-90.93	-1,351.1	-6,270.0	4,546.2	4,479.9	66.39	68.483	
8,956.7	6,711.6	6,700.0	6,699.3	66.5	1.7	-90.93	-1,351.1	-6,270.0	4,494.8	4,426.8	67.93	66.167	
9,000.0	6,711.5	6,700.0	6,699.3	67.6	1.7	-90.93	-1,351.1	-6,270.0	4,455.5	4,386.4	69.11	64.468	
9,055.1	6,711.4	6,700.0	6,699.3	69.1	1.7	-90.93	-1,351.1	-6,270.0	4,405.7	4,335.1	70.62	62.388	
9,100.0	6,711.3	6,689.6	6,688.9	70.4	1.7	-90.61	-1,350.8	-6,270.2	4,365.1	4,293.3	71.84	60.765	
9,153.5	6,711.2	6,688.9	6,688.2	71.8	1.7	-90.59	-1,350.8	-6,270.2	4,317.0	4,243.7	73.30	58.892	
9,200.0	6,711.1	6,688.3	6,687.5	73.1	1.7	-90.57	-1,350.8	-6,270.2	4,275.2	4,200.7	74.57	57.328	
9,251.9	6,711.0	6,687.6	6,686.8	74.5	1.7	-90.55	-1,350.7	-6,270.2	4,228.7	4,152.7	76.00	55.641	
9,300.0	6,710.9	6,686.9	6,686.2	75.8	1.7	-90.53	-1,350.7	-6,270.2	4,185.8	4,108.5	77.32	54.137	
9,350.4	6,710.8	6,686.2	6,685.5	77.2	1.7	-90.51	-1,350.7	-6,270.3	4,140.9	4,062.2	78.70	52.615	
9,400.0	6,710.7	6,685.5	6,684.8	78.6	1.7	-90.49	-1,350.7	-6,270.3	4,096.8	4,016.8	80.07	51.168	
9,448.8	6,710.6	6,684.9	6,684.1	79.9	1.6	-90.47	-1,350.7	-6,270.3	4,053.6	3,972.2	81.41	49.793	
9,500.0	6,710.5	6,684.2	6,683.4	81.3	1.6	-90.45	-1,350.7	-6,270.3	4,008.4	3,925.6	82.82	48.400	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,547.2	6,710.4	6,683.5	6,682.8	82.6	1.6	-90.43	-1,350.6	-6,270.3	3,966.8	3,882.7	84.12	47.156	
9,600.0	6,710.3	6,682.8	6,682.0	84.1	1.6	-90.40	-1,350.6	-6,270.3	3,920.5	3,834.9	85.57	45.814	
9,645.6	6,710.2	6,682.1	6,681.4	85.3	1.6	-90.38	-1,350.6	-6,270.3	3,880.6	3,793.7	86.83	44.689	
9,700.0	6,710.1	6,681.4	6,680.7	86.8	1.6	-90.36	-1,350.6	-6,270.3	3,833.2	3,744.9	88.33	43.394	
9,744.1	6,710.0	6,680.8	6,680.0	88.1	1.6	-90.34	-1,350.6	-6,270.3	3,794.9	3,705.4	89.55	42.377	
9,800.0	6,709.9	6,680.0	6,679.3	89.6	1.6	-90.32	-1,350.6	-6,270.4	3,746.5	3,655.4	91.10	41.127	
9,842.5	6,709.9	6,679.4	6,678.7	90.8	1.6	-90.30	-1,350.5	-6,270.4	3,709.9	3,617.6	92.27	40.206	
9,900.0	6,709.7	6,678.6	6,677.9	92.4	1.6	-90.28	-1,350.5	-6,270.4	3,660.5	3,566.7	93.86	38.999	
9,940.9	6,709.7	6,678.0	6,677.3	93.5	1.6	-90.26	-1,350.5	-6,270.4	3,625.6	3,530.6	94.99	38.166	
10,000.0	6,709.6	6,677.2	6,676.4	95.1	1.6	-90.23	-1,350.5	-6,270.4	3,575.3	3,478.7	96.63	37.000	
10,039.3	6,709.5	6,676.6	6,675.9	96.2	1.6	-90.22	-1,350.5	-6,270.4	3,542.0	3,444.2	97.72	36.246	
10,100.0	6,709.4	6,675.7	6,675.0	97.9	1.6	-90.19	-1,350.5	-6,270.4	3,490.8	3,391.4	99.40	35.119	
10,137.8	6,709.3	6,675.2	6,674.5	98.9	1.6	-90.17	-1,350.4	-6,270.4	3,459.1	3,358.7	100.45	34.437	
10,200.0	6,709.2	6,674.3	6,673.6	100.7	1.6	-90.15	-1,350.4	-6,270.4	3,407.2	3,305.0	102.17	33.347	
10,236.2	6,709.1	6,673.8	6,673.1	101.7	1.6	-90.13	-1,350.4	-6,270.4	3,377.1	3,274.0	103.18	32.731	
10,300.0	6,709.0	6,672.9	6,672.2	103.4	1.6	-90.10	-1,350.4	-6,270.5	3,324.5	3,219.5	104.95	31.677	
10,334.6	6,708.9	6,672.4	6,671.7	104.4	1.6	-90.09	-1,350.4	-6,270.5	3,296.0	3,190.1	105.91	31.121	
10,400.0	6,708.8	6,671.4	6,670.7	106.2	1.6	-90.06	-1,350.4	-6,270.5	3,242.7	3,135.0	107.72	30.102	
10,433.0	6,708.7	6,671.0	6,670.3	107.1	1.6	-90.05	-1,350.3	-6,270.5	3,215.9	3,107.3	108.64	29.601	
10,500.0	6,708.6	6,670.0	6,669.3	109.0	1.6	-90.02	-1,350.3	-6,270.5	3,162.0	3,051.5	110.50	28.615	
10,531.5	6,708.5	6,669.5	6,668.8	109.9	1.6	-90.00	-1,350.3	-6,270.5	3,136.8	3,025.4	111.38	28.164	
10,600.0	6,708.4	6,668.5	6,667.8	111.8	1.6	-89.97	-1,350.3	-6,270.5	3,082.4	2,969.1	113.28	27.210	
10,629.9	6,708.4	6,668.1	6,667.4	112.6	1.6	-89.96	-1,350.3	-6,270.5	3,058.9	2,944.7	114.11	26.805	
10,700.0	6,708.2	6,667.1	6,666.4	114.6	1.6	-89.93	-1,350.3	-6,270.6	3,004.1	2,888.0	116.06	25.883	
10,728.3	6,708.2	6,666.7	6,666.0	115.3	1.6	-89.91	-1,350.2	-6,270.6	2,982.1	2,865.2	116.85	25.521	
10,800.0	6,708.0	6,665.6	6,664.9	117.3	1.6	-89.88	-1,350.2	-6,270.6	2,927.0	2,808.2	118.85	24.629	
10,826.7	6,708.0	6,665.2	6,664.5	118.1	1.6	-89.87	-1,350.2	-6,270.6	2,906.6	2,787.1	119.59	24.305	
10,900.0	6,707.8	6,664.1	6,663.4	120.1	1.6	-89.84	-1,350.2	-6,270.6	2,851.4	2,729.8	121.63	23.443	
10,925.2	6,707.8	6,663.8	6,663.0	120.8	1.6	-89.83	-1,350.2	-6,270.6	2,832.6	2,710.3	122.33	23.155	
11,000.0	6,707.6	6,662.6	6,661.9	122.9	1.6	-89.79	-1,350.2	-6,270.6	2,777.3	2,652.9	124.41	22.323	
11,023.6	6,707.6	6,662.3	6,661.6	123.6	1.6	-89.78	-1,350.1	-6,270.6	2,760.1	2,635.0	125.07	22.068	
11,100.0	6,707.5	6,661.2	6,660.4	125.7	1.6	-89.75	-1,350.1	-6,270.6	2,704.9	2,577.7	127.20	21.265	
11,122.0	6,707.4	6,660.8	6,660.1	126.3	1.6	-89.74	-1,350.1	-6,270.7	2,689.2	2,561.4	127.81	21.040	
11,200.0	6,707.3	6,659.7	6,658.9	128.5	1.6	-89.70	-1,350.1	-6,270.7	2,634.3	2,504.3	129.99	20.266	
11,220.4	6,707.2	6,659.3	6,658.6	129.0	1.6	-89.69	-1,350.1	-6,270.7	2,620.1	2,489.6	130.56	20.069	
11,300.0	6,707.1	6,658.1	6,657.4	131.3	1.6	-89.66	-1,350.1	-6,270.7	2,565.7	2,432.9	132.77	19.324	
11,318.9	6,707.0	6,657.9	6,657.2	131.8	1.6	-89.65	-1,350.0	-6,270.7	2,553.0	2,419.7	133.30	19.152	
11,400.0	6,706.9	6,656.6	6,655.9	134.0	1.6	-89.61	-1,350.0	-6,270.7	2,499.1	2,363.6	135.56	18.436	
11,417.3	6,706.9	6,656.4	6,655.7	134.5	1.6	-89.60	-1,350.0	-6,270.7	2,487.9	2,351.8	136.04	18.287	
11,500.0	6,706.7	6,655.1	6,654.4	136.8	1.6	-89.56	-1,350.0	-6,270.7	2,434.9	2,296.6	138.35	17.600	
11,515.7	6,706.7	6,654.9	6,654.2	137.3	1.6	-89.56	-1,350.0	-6,270.7	2,425.0	2,286.2	138.79	17.473	
11,600.0	6,706.5	6,653.6	6,652.9	139.6	1.6	-89.52	-1,350.0	-6,270.8	2,373.1	2,232.0	141.14	16.814	
11,614.1	6,706.5	6,653.4	6,652.6	140.0	1.6	-89.51	-1,349.9	-6,270.8	2,364.6	2,223.1	141.53	16.707	
11,700.0	6,706.3	6,652.0	6,651.3	142.4	1.6	-89.47	-1,349.9	-6,270.8	2,314.1	2,170.1	143.93	16.078	
11,712.6	6,706.3	6,651.8	6,651.1	142.8	1.6	-89.46	-1,349.9	-6,270.8	2,306.8	2,162.5	144.28	15.988	
11,800.0	6,706.1	6,650.5	6,649.8	145.2	1.6	-89.42	-1,349.9	-6,270.8	2,257.8	2,111.1	146.72	15.389	
11,811.0	6,706.1	6,650.3	6,649.6	145.5	1.6	-89.42	-1,349.9	-6,270.8	2,251.8	2,104.8	147.03	15.316	
11,900.0	6,705.9	6,648.9	6,648.2	148.0	1.6	-89.38	-1,349.8	-6,270.8	2,204.7	2,055.2	149.51	14.746	
11,909.4	6,705.9	6,648.8	6,648.1	148.3	1.6	-89.37	-1,349.8	-6,270.8	2,199.9	2,050.1	149.78	14.688	
12,000.0	6,705.8	6,647.4	6,646.7	150.8	1.6	-89.33	-1,349.8	-6,270.9	2,155.0	2,002.7	152.30	14.149	
12,007.8	6,705.7	6,647.2	6,646.5	151.0	1.6	-89.33	-1,349.8	-6,270.9	2,151.2	1,998.7	152.52	14.104	
12,100.0	6,705.6	6,645.8	6,645.1	153.6	1.6	-89.28	-1,349.8	-6,270.9	2,108.8	1,953.7	155.10	13.596	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,106.3	6,705.6	6,645.7	6,645.0	153.8	1.6	-89.28	-1,349.8	-6,270.9	2,106.0	1,950.7	155.27	13.563		
12,200.0	6,705.4	6,644.2	6,643.5	156.4	1.6	-89.23	-1,349.7	-6,270.9	2,066.4	1,908.5	157.89	13.087		
12,204.7	6,705.4	6,644.1	6,643.4	156.5	1.6	-89.23	-1,349.7	-6,270.9	2,064.5	1,906.5	158.02	13.065		
12,300.0	6,705.2	6,642.6	6,641.9	159.2	1.6	-89.18	-1,349.7	-6,270.9	2,028.0	1,867.3	160.68	12.621		
12,303.1	6,705.2	6,642.6	6,641.9	159.3	1.6	-89.18	-1,349.7	-6,271.0	2,026.9	1,866.1	160.77	12.607		
12,400.0	6,705.0	6,641.0	6,640.3	162.0	1.6	-89.14	-1,349.7	-6,271.0	1,994.0	1,830.5	163.48	12.197		
12,401.5	6,705.0	6,641.0	6,640.3	162.0	1.6	-89.14	-1,349.7	-6,271.0	1,993.5	1,829.9	163.52	12.191		
12,500.0	6,704.8	6,639.4	6,638.7	164.8	1.6	-89.09	-1,349.6	-6,271.0	1,964.4	1,798.1	166.27	11.814		
12,598.4	6,704.6	6,637.8	6,637.1	167.5	1.6	-89.04	-1,349.6	-6,271.0	1,939.9	1,770.9	169.02	11.477		
12,600.0	6,704.6	6,637.8	6,637.1	167.6	1.6	-89.04	-1,349.6	-6,271.0	1,939.5	1,770.5	169.06	11.472		
12,696.8	6,704.4	6,636.2	6,635.5	170.3	1.6	-88.99	-1,349.6	-6,271.1	1,920.1	1,748.4	171.77	11.178		
12,700.0	6,704.4	6,636.2	6,635.5	170.4	1.6	-88.99	-1,349.6	-6,271.1	1,919.6	1,747.7	171.86	11.169		
12,795.2	6,704.3	6,634.6	6,633.9	173.0	1.6	-88.94	-1,349.5	-6,271.1	1,905.3	1,730.7	174.52	10.917		
12,800.0	6,704.2	6,634.5	6,633.8	173.2	1.6	-88.94	-1,349.5	-6,271.1	1,904.7	1,730.0	174.65	10.905		
12,893.7	6,704.1	6,633.0	6,632.3	175.8	1.6	-88.89	-1,349.5	-6,271.1	1,895.4	1,718.1	177.27	10.692		
12,900.0	6,704.1	6,632.9	6,632.2	176.0	1.6	-88.89	-1,349.5	-6,271.1	1,894.9	1,717.5	177.45	10.679		
12,992.1	6,703.9	6,631.4	6,630.7	178.5	1.6	-88.84	-1,349.5	-6,271.1	1,890.6	1,710.5	180.02	10.502		
13,000.0	6,703.9	6,631.2	6,630.5	178.8	1.6	-88.84	-1,349.5	-6,271.1	1,890.4	1,710.2	180.24	10.488		
13,035.3	6,703.8	6,630.7	6,630.0	179.7	1.6	-88.82	-1,349.5	-6,271.2	1,890.1	1,708.8	181.23	10.429 CC		
13,090.5	6,703.7	6,629.7	6,629.0	181.3	1.6	-88.79	-1,349.4	-6,271.2	1,890.9	1,708.1	182.77	10.345 ES		
13,100.0	6,703.7	6,629.6	6,628.9	181.6	1.6	-88.79	-1,349.4	-6,271.2	1,891.2	1,708.1	183.04	10.332		
13,188.9	6,703.5	6,628.1	6,627.4	184.0	1.6	-88.74	-1,349.4	-6,271.2	1,896.3	1,710.8	185.53	10.221		
13,200.0	6,703.5	6,627.9	6,627.2	184.4	1.6	-88.74	-1,349.4	-6,271.2	1,897.2	1,711.4	185.83	10.209		
13,287.4	6,703.3	6,626.5	6,625.8	186.8	1.6	-88.69	-1,349.4	-6,271.2	1,906.8	1,718.5	188.28	10.128		
13,300.0	6,703.3	6,626.2	6,625.5	187.2	1.6	-88.69	-1,349.4	-6,271.2	1,908.5	1,719.9	188.63	10.118		
13,385.8	6,703.2	6,624.8	6,624.1	189.6	1.6	-88.64	-1,349.3	-6,271.3	1,922.3	1,731.3	191.03	10.063		
13,400.0	6,703.1	6,624.6	6,623.9	190.0	1.6	-88.64	-1,349.3	-6,271.3	1,924.9	1,733.5	191.42	10.056		
13,484.2	6,703.0	6,623.1	6,622.4	192.3	1.6	-88.59	-1,349.3	-6,271.3	1,942.6	1,748.9	193.78	10.025		
13,500.0	6,702.9	6,622.9	6,622.2	192.8	1.6	-88.59	-1,349.3	-6,271.3	1,946.3	1,752.1	194.22	10.021		
13,582.6	6,702.8	6,621.4	6,620.7	195.1	1.6	-88.54	-1,349.3	-6,271.3	1,967.7	1,771.2	196.53	10.012 SF		
13,600.0	6,702.8	6,621.1	6,620.5	195.6	1.6	-88.53	-1,349.3	-6,271.3	1,972.6	1,775.6	197.02	10.012		
13,681.1	6,702.6	6,619.8	6,619.1	197.8	1.6	-88.49	-1,349.2	-6,271.3	1,997.3	1,798.0	199.28	10.023		
13,700.0	6,702.6	6,619.4	6,618.7	198.4	1.6	-88.48	-1,349.2	-6,271.3	2,003.5	1,803.7	199.81	10.027		
13,779.5	6,702.4	6,618.1	6,617.4	200.6	1.6	-88.44	-1,349.2	-6,271.4	2,031.3	1,829.2	202.03	10.054		
13,800.0	6,702.4	6,617.7	6,617.0	201.2	1.6	-88.43	-1,349.2	-6,271.4	2,038.9	1,836.3	202.61	10.063		
13,877.9	6,702.2	6,616.4	6,615.7	203.3	1.6	-88.39	-1,349.2	-6,271.4	2,069.3	1,864.6	204.78	10.105		
13,900.0	6,702.2	6,616.0	6,615.3	204.0	1.6	-88.38	-1,349.2	-6,271.4	2,078.4	1,873.0	205.40	10.119		
13,976.3	6,702.1	6,614.6	6,613.9	206.1	1.6	-88.34	-1,349.1	-6,271.4	2,111.3	1,903.8	207.54	10.173		
14,000.0	6,702.0	6,614.2	6,613.5	206.8	1.6	-88.32	-1,349.1	-6,271.4	2,122.0	1,913.8	208.20	10.192		
14,074.8	6,701.9	6,612.9	6,612.2	208.9	1.6	-88.28	-1,349.1	-6,271.5	2,157.0	1,946.7	210.29	10.257		
14,100.0	6,701.8	6,612.5	6,611.8	209.6	1.6	-88.27	-1,349.1	-6,271.5	2,169.2	1,958.3	210.99	10.281		
14,173.2	6,701.7	6,611.2	6,610.5	211.6	1.6	-88.23	-1,349.1	-6,271.5	2,206.1	1,993.1	213.04	10.355		
14,200.0	6,701.6	6,610.7	6,610.0	212.4	1.6	-88.22	-1,349.1	-6,271.5	2,220.0	2,006.2	213.79	10.384		
14,271.6	6,701.5	6,609.4	6,608.7	214.4	1.6	-88.18	-1,349.0	-6,271.5	2,258.4	2,042.6	215.79	10.466		
14,300.0	6,701.4	6,608.9	6,608.2	215.2	1.6	-88.16	-1,349.0	-6,271.5	2,274.1	2,057.5	216.58	10.500		
14,370.0	6,701.3	6,607.7	6,607.0	217.1	1.6	-88.13	-1,349.0	-6,271.5	2,313.7	2,095.2	218.54	10.587		
14,400.0	6,701.3	6,607.1	6,606.5	218.0	1.6	-88.11	-1,349.0	-6,271.6	2,331.1	2,111.8	219.38	10.626		
14,468.5	6,701.1	6,605.9	6,605.2	219.9	1.6	-88.07	-1,349.0	-6,271.6	2,371.9	2,150.6	221.29	10.718		
14,500.0	6,701.1	6,605.4	6,604.7	220.8	1.6	-88.06	-1,349.0	-6,271.6	2,391.0	2,168.9	222.17	10.762		
14,566.9	6,701.0	6,604.1	6,603.5	222.6	1.6	-88.02	-1,348.9	-6,271.6	2,432.6	2,208.5	224.04	10.858		
14,600.0	6,700.9	6,600.0	6,599.3	223.6	1.6	-87.89	-1,348.9	-6,271.7	2,453.6	2,228.6	224.95	10.907		
14,665.3	6,700.8	6,600.0	6,599.3	225.4	1.6	-87.89	-1,348.9	-6,271.7	2,495.7	2,268.9	226.78	11.005		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,600.0	6,599.3	226.4	1.6	-87.89	-1,348.9	-6,271.7	2,518.5	2,290.7	227.75	11.058	
14,763.7	6,700.6	6,600.0	6,599.3	228.2	1.6	-87.89	-1,348.9	-6,271.7	2,561.1	2,331.5	229.54	11.157	
14,800.0	6,700.5	6,600.0	6,599.3	229.2	1.6	-87.89	-1,348.9	-6,271.7	2,585.7	2,355.1	230.55	11.215	
14,862.2	6,700.4	6,600.0	6,599.3	230.9	1.6	-87.89	-1,348.9	-6,271.7	2,628.5	2,396.2	232.30	11.315	
14,900.0	6,700.3	6,600.0	6,599.3	232.0	1.6	-87.89	-1,348.9	-6,271.7	2,654.9	2,421.5	233.36	11.377	
14,960.6	6,700.2	6,600.0	6,599.3	233.7	1.6	-87.89	-1,348.9	-6,271.7	2,697.8	2,462.7	235.05	11.477	
15,000.0	6,700.2	6,600.0	6,599.3	234.8	1.6	-87.89	-1,348.9	-6,271.7	2,726.0	2,489.9	236.16	11.543	
15,059.0	6,700.0	6,595.2	6,594.5	236.4	1.6	-87.75	-1,348.8	-6,271.8	2,768.9	2,531.1	237.79	11.644	
15,082.8	6,700.0	6,594.8	6,594.1	237.1	1.6	-87.74	-1,348.8	-6,271.8	2,786.3	2,547.8	238.45	11.685	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.42	76.9	-7,599.1	7,599.6				
98.4	98.4	46.1	46.1	0.1	0.0	-89.42	76.9	-7,599.1	7,599.6	7,599.4	0.11	N/A	
100.0	100.0	47.2	47.2	0.1	0.0	-89.42	76.9	-7,599.1	7,599.6	7,599.4	0.11	N/A	
196.8	196.8	136.7	136.7	0.3	0.1	-89.42	76.3	-7,599.5	7,599.9	7,599.5	0.40	N/A	
200.0	200.0	141.5	141.5	0.3	0.1	-89.42	76.3	-7,599.5	7,599.9	7,599.5	0.42	N/A	
295.3	295.3	557.4	557.3	0.5	0.5	-89.45	72.5	-7,591.7	7,597.8	7,596.8	0.98	7,777.590	
300.0	300.0	562.8	562.7	0.5	0.5	-89.45	72.4	-7,591.5	7,597.6	7,596.6	0.99	7,671.044	
393.7	393.7	661.7	661.5	0.8	0.5	-89.46	71.3	-7,587.5	7,593.9	7,592.7	1.25	6,070.540	
400.0	400.0	668.1	667.8	0.8	0.5	-89.46	71.2	-7,587.3	7,593.7	7,592.4	1.27	5,987.875	
492.1	492.1	759.4	759.1	1.0	0.6	-89.47	70.1	-7,583.7	7,590.0	7,588.5	1.52	5,002.826	
500.0	500.0	767.1	766.8	1.0	0.6	-89.47	70.0	-7,583.4	7,589.7	7,588.1	1.54	4,933.847	
590.5	590.5	880.2	879.8	1.2	0.6	-89.48	68.5	-7,578.8	7,586.0	7,584.2	1.79	4,235.902	
600.0	600.0	893.5	893.0	1.2	0.6	-89.48	68.4	-7,578.2	7,585.6	7,583.8	1.82	4,172.913	
689.0	689.0	974.0	973.5	1.4	0.7	-89.49	67.5	-7,574.7	7,581.8	7,579.7	2.05	3,696.648	
700.0	700.0	983.7	983.2	1.4	0.7	-89.49	67.4	-7,574.3	7,581.3	7,579.2	2.08	3,645.321	
787.4	787.4	1,075.8	1,075.2	1.6	0.7	-89.50	66.1	-7,570.5	7,577.6	7,575.3	2.31	3,277.439	
800.0	800.0	1,089.7	1,089.1	1.7	0.7	-89.50	65.9	-7,569.9	7,577.1	7,574.8	2.35	3,230.184	
885.8	885.8	1,164.4	1,163.7	1.9	0.8	-89.51	64.7	-7,566.7	7,573.5	7,570.9	2.57	2,950.615	
900.0	900.0	1,176.3	1,175.6	1.9	0.8	-89.51	64.6	-7,566.2	7,572.9	7,570.3	2.60	2,909.200	
984.2	984.2	1,248.2	1,247.4	2.1	0.8	-89.52	63.8	-7,563.4	7,569.5	7,566.7	2.82	2,685.168	
1,000.0	1,000.0	1,261.7	1,260.9	2.1	0.8	-89.52	63.7	-7,562.8	7,568.9	7,566.0	2.86	2,647.050	
1,082.7	1,082.7	1,324.3	1,323.5	2.3	0.8	-89.52	63.1	-7,560.5	7,565.7	7,562.7	3.07	2,466.422	
1,100.0	1,100.0	1,335.4	1,334.6	2.3	0.8	-89.52	62.9	-7,560.1	7,565.1	7,562.0	3.11	2,432.361	
1,181.1	1,181.1	1,400.0	1,399.1	2.5	0.8	-118.30	62.1	-7,557.9	7,562.9	7,559.6	3.35	2,254.808	
1,200.0	1,200.0	1,400.0	1,399.1	2.6	0.8	-118.31	62.1	-7,557.9	7,562.6	7,559.2	3.40	2,227.158	
1,269.2	1,269.1	1,446.9	1,446.0	2.7	0.9	-118.34	61.4	-7,556.5	7,562.1	7,558.6	3.57	2,120.934	
1,279.5	1,279.4	1,454.0	1,453.1	2.7	0.9	-118.34	61.3	-7,556.3	7,562.1	7,558.5	3.59	2,105.893	
1,300.0	1,299.8	1,468.0	1,467.1	2.8	0.9	-118.35	61.1	-7,556.0	7,562.2	7,558.6	3.64	2,076.740	
1,377.9	1,377.5	1,525.5	1,524.6	3.0	0.9	-118.37	60.3	-7,554.5	7,563.3	7,559.5	3.84	1,969.884	
1,400.0	1,399.5	1,543.5	1,542.5	3.0	0.9	-118.37	60.1	-7,554.1	7,563.9	7,560.0	3.90	1,941.374	
1,476.4	1,475.3	1,600.0	1,599.0	3.2	0.9	-118.38	59.2	-7,552.8	7,566.4	7,562.3	4.10	1,845.689	
1,500.0	1,498.7	1,620.8	1,619.8	3.3	0.9	-118.38	58.9	-7,552.4	7,567.5	7,563.3	4.16	1,817.666	
1,574.8	1,572.6	1,671.9	1,670.9	3.5	1.0	-118.37	58.1	-7,551.4	7,571.5	7,567.1	4.37	1,730.851	
1,600.0	1,597.5	1,700.0	1,699.0	3.5	1.0	-118.37	57.6	-7,550.9	7,573.1	7,568.7	4.45	1,702.001	
1,673.2	1,669.4	1,750.1	1,749.1	3.7	1.0	-118.35	56.6	-7,550.2	7,578.5	7,573.8	4.68	1,621.011	
1,700.1	1,695.8	1,773.6	1,772.6	3.8	1.0	-118.34	56.0	-7,549.8	7,580.7	7,576.0	4.76	1,592.624	
1,771.6	1,765.7	1,828.0	1,827.0	4.1	1.0	-118.43	54.8	-7,549.0	7,586.9	7,581.9	5.00	1,518.140	
1,800.0	1,793.4	1,847.3	1,846.2	4.2	1.0	-118.46	54.3	-7,548.8	7,589.4	7,584.3	5.09	1,490.849	
1,870.1	1,862.0	1,900.0	1,898.9	4.4	1.0	-118.54	53.1	-7,548.3	7,595.8	7,590.4	5.33	1,423.941	
1,900.0	1,891.3	1,916.9	1,915.8	4.5	1.0	-118.57	52.7	-7,548.1	7,598.5	7,593.1	5.44	1,397.761	
1,968.5	1,958.3	1,968.4	1,967.3	4.8	1.1	-118.65	51.7	-7,547.8	7,605.0	7,599.3	5.68	1,338.347	
2,000.0	1,989.1	2,000.0	1,998.9	4.9	1.1	-118.70	51.1	-7,547.6	7,608.0	7,602.2	5.80	1,312.300	
2,066.9	2,054.5	2,057.4	2,056.3	5.1	1.1	-118.78	50.0	-7,547.3	7,614.5	7,608.5	6.05	1,259.634	
2,100.0	2,086.9	2,091.1	2,090.0	5.3	1.1	-118.83	49.4	-7,547.2	7,617.7	7,611.6	6.17	1,234.874	
2,165.3	2,150.8	2,145.2	2,144.1	5.5	1.1	-118.92	48.4	-7,546.9	7,624.1	7,617.7	6.41	1,188.520	
2,200.0	2,184.7	2,172.9	2,171.7	5.6	1.1	-118.96	48.0	-7,546.8	7,627.5	7,621.0	6.54	1,165.415	
2,263.8	2,247.1	2,227.9	2,226.7	5.9	1.1	-119.04	47.1	-7,546.7	7,633.9	7,627.1	6.79	1,124.420	
2,300.0	2,282.5	2,261.8	2,260.6	6.0	1.2	-119.09	46.6	-7,546.6	7,637.6	7,630.7	6.93	1,102.373	
2,362.2	2,343.3	2,317.5	2,316.3	6.3	1.2	-119.17	45.9	-7,546.5	7,643.9	7,636.7	7.17	1,066.155	
2,400.0	2,380.3	2,348.4	2,347.3	6.5	1.2	-119.22	45.5	-7,546.5	7,647.8	7,640.5	7.32	1,045.478	
2,460.6	2,439.6	2,400.0	2,398.9	6.7	1.2	-119.29	44.9	-7,546.5	7,654.1	7,646.5	7.55	1,013.583	
2,500.0	2,478.1	2,437.5	2,436.3	6.9	1.2	-119.34	44.5	-7,546.5	7,658.2	7,650.5	7.71	993.911	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,535.9	2,497.2	2,496.1	7.1	1.2	-119.43	43.9	-7,546.6	7,664.3	7,656.4	7.94	965.504	
2,600.0	2,575.9	2,536.9	2,535.8	7.3	1.2	-119.49	43.5	-7,546.6	7,668.6	7,660.5	8.10	946.834	
2,657.5	2,632.2	2,592.4	2,591.3	7.5	1.3	-119.57	42.9	-7,546.6	7,674.7	7,666.3	8.33	921.663	
2,700.0	2,673.8	2,635.3	2,634.1	7.7	1.3	-119.63	42.3	-7,546.6	7,679.1	7,670.6	8.50	903.891	
2,755.9	2,728.4	2,692.1	2,690.9	7.9	1.3	-119.71	41.6	-7,546.6	7,685.0	7,676.3	8.72	881.422	
2,800.0	2,771.6	2,734.4	2,733.3	8.1	1.3	-119.77	41.0	-7,546.6	7,689.7	7,680.8	8.89	864.545	
2,854.3	2,824.7	2,785.9	2,784.8	8.3	1.3	-119.85	40.3	-7,546.6	7,695.4	7,686.3	9.11	844.552	
2,900.0	2,869.4	2,827.7	2,826.5	8.5	1.3	-119.91	39.7	-7,546.6	7,700.2	7,690.9	9.29	828.513	
2,952.7	2,921.0	2,875.1	2,873.9	8.8	1.3	-119.98	39.0	-7,546.7	7,705.9	7,696.4	9.51	810.693	
3,000.0	2,967.2	2,922.5	2,921.3	9.0	1.4	-120.05	38.3	-7,546.7	7,711.0	7,701.3	9.69	795.357	
3,051.2	3,017.3	2,981.3	2,980.1	9.2	1.4	-120.13	37.4	-7,546.8	7,716.4	7,706.5	9.90	779.277	
3,100.0	3,065.0	3,037.2	3,036.0	9.4	1.4	-120.21	36.5	-7,546.7	7,721.6	7,711.5	10.10	764.536	
3,149.6	3,113.5	3,093.8	3,092.6	9.6	1.4	-120.30	35.7	-7,546.6	7,726.8	7,716.5	10.30	750.084	
3,200.0	3,162.8	3,137.3	3,136.1	9.8	1.4	-120.36	35.2	-7,546.5	7,732.1	7,721.6	10.50	736.102	
3,248.0	3,209.8	3,177.2	3,176.0	10.0	1.4	-120.41	34.8	-7,546.5	7,737.2	7,726.5	10.70	723.251	
3,300.0	3,260.6	3,230.1	3,228.8	10.2	1.5	-120.49	34.4	-7,546.5	7,742.8	7,731.9	10.90	710.098	
3,346.4	3,306.1	3,287.1	3,285.9	10.5	1.5	-120.56	34.5	-7,546.4	7,747.7	7,736.6	11.08	698.940	
3,400.0	3,358.5	3,368.4	3,367.2	10.7	1.5	-120.67	35.3	-7,546.1	7,753.3	7,742.0	11.31	685.791	
3,444.9	3,402.3	3,430.9	3,429.6	10.9	1.5	-120.74	36.2	-7,545.7	7,757.8	7,746.3	11.49	675.049	
3,500.0	3,456.3	3,499.0	3,497.7	11.1	1.5	-120.82	37.5	-7,545.2	7,763.3	7,751.6	11.72	662.375	
3,543.3	3,498.6	3,532.0	3,530.7	11.3	1.5	-120.86	38.2	-7,544.9	7,767.6	7,755.7	11.90	652.922	
3,600.0	3,554.1	3,574.7	3,573.4	11.5	1.5	-120.91	39.2	-7,544.6	7,773.3	7,761.1	12.13	640.977	
3,641.7	3,594.9	3,612.8	3,611.5	11.7	1.5	-120.95	40.1	-7,544.4	7,777.5	7,765.2	12.30	632.409	
3,700.0	3,651.9	3,700.0	3,698.7	12.0	1.5	-121.06	42.1	-7,543.8	7,783.4	7,770.8	12.54	620.570	
3,740.1	3,691.2	3,729.1	3,727.8	12.2	1.5	-121.09	42.7	-7,543.5	7,787.3	7,774.6	12.71	612.901	
3,800.0	3,749.7	3,769.9	3,768.6	12.4	1.5	-121.14	43.6	-7,543.2	7,793.4	7,780.4	12.95	601.864	
3,838.6	3,787.4	3,800.0	3,798.7	12.6	1.5	-121.17	44.1	-7,543.1	7,797.4	7,784.3	13.11	594.937	
3,900.0	3,847.5	3,860.4	3,859.0	12.9	1.5	-121.24	45.3	-7,542.8	7,803.7	7,790.4	13.36	584.169	
3,937.0	3,883.7	3,900.0	3,898.7	13.0	1.5	-121.29	46.0	-7,542.6	7,807.6	7,794.1	13.51	577.848	
4,000.0	3,945.3	3,941.6	3,940.2	13.3	1.5	-121.34	46.7	-7,542.4	7,814.2	7,800.4	13.77	567.621	
4,035.4	3,980.0	3,964.8	3,963.4	13.5	1.5	-121.37	47.1	-7,542.3	7,817.9	7,804.0	13.91	562.038	
4,060.0	4,004.0	3,980.8	3,979.5	13.6	1.5	-121.39	47.3	-7,542.3	7,820.6	7,806.6	14.01	558.235	
4,100.0	4,043.2	4,000.0	3,998.6	13.7	1.5	-121.48	47.5	-7,542.3	7,824.8	7,810.7	14.14	553.233	
4,133.8	4,076.5	4,000.0	3,998.6	13.8	1.5	-121.54	47.5	-7,542.3	7,828.3	7,814.1	14.24	549.914	
4,200.0	4,141.6	4,050.0	4,048.6	14.0	1.5	-121.70	48.0	-7,542.5	7,834.6	7,820.2	14.42	543.444	
4,232.3	4,173.5	4,064.6	4,063.2	14.1	1.5	-121.77	48.1	-7,542.7	7,837.6	7,823.1	14.49	540.712	
4,300.0	4,240.6	4,100.0	4,098.6	14.3	1.5	-121.89	48.2	-7,543.1	7,843.3	7,828.6	14.66	535.048	
4,330.7	4,271.1	4,100.0	4,098.6	14.4	1.5	-121.93	48.2	-7,543.1	7,845.7	7,831.0	14.72	532.864	
4,400.0	4,340.0	4,146.8	4,145.5	14.5	1.5	-122.05	48.3	-7,543.9	7,850.8	7,835.9	14.87	527.918	
4,429.1	4,369.0	4,162.1	4,160.7	14.6	1.5	-122.09	48.4	-7,544.3	7,852.7	7,837.8	14.92	526.175	
4,500.0	4,439.7	4,200.0	4,198.6	14.8	1.5	-122.18	48.4	-7,545.2	7,857.0	7,842.0	15.05	521.921	
4,527.5	4,467.2	4,200.0	4,198.6	14.8	1.5	-122.20	48.4	-7,545.2	7,858.5	7,843.4	15.10	520.605	
4,600.0	4,539.7	4,244.1	4,242.7	14.9	1.5	-122.27	48.3	-7,546.5	7,862.0	7,846.8	15.21	517.046	
4,626.0	4,565.6	4,255.8	4,254.4	15.0	1.5	-122.29	48.3	-7,546.9	7,863.2	7,847.9	15.24	515.994	
4,660.2	4,599.8	4,271.1	4,269.7	15.0	1.5	-93.59	48.2	-7,547.5	7,864.5	7,850.9	13.60	578.389	
4,700.0	4,639.6	4,300.0	4,298.6	15.0	1.5	-93.59	48.1	-7,548.6	7,866.1	7,852.4	13.67	575.568	
4,724.4	4,664.0	4,300.0	4,298.6	15.1	1.5	-93.59	48.1	-7,548.6	7,867.1	7,853.4	13.71	573.786	
4,800.0	4,739.6	4,349.6	4,348.1	15.2	1.5	-93.59	47.7	-7,550.7	7,870.4	7,856.5	13.86	567.996	
4,822.8	4,762.5	4,364.6	4,363.1	15.2	1.5	-93.59	47.6	-7,551.4	7,871.4	7,857.5	13.90	566.263	
4,900.0	4,839.6	4,400.0	4,398.5	15.3	1.5	-93.59	47.2	-7,553.1	7,875.1	7,861.1	14.05	560.601	
4,921.2	4,860.9	4,400.0	4,398.5	15.4	1.5	-93.59	47.2	-7,553.1	7,876.3	7,862.2	14.09	559.127	
5,000.0	4,939.6	4,460.9	4,459.3	15.5	1.5	-93.60	46.5	-7,556.3	7,880.4	7,866.2	14.24	553.297	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,019.7	4,959.3	4,470.6	4,468.9	15.5	1.5	-93.60	46.4	-7,556.8	7,881.6	7,867.3	14.28	551.896		
5,100.0	5,039.6	4,519.3	4,517.5	15.6	1.5	-93.60	45.6	-7,559.7	7,886.4	7,872.0	14.44	546.194		
5,118.1	5,057.7	4,536.2	4,534.4	15.7	1.5	-93.60	45.3	-7,560.7	7,887.5	7,873.1	14.48	544.875		
5,200.0	5,139.6	4,755.9	4,753.7	15.8	1.5	-93.62	41.7	-7,572.5	7,892.1	7,877.5	14.67	537.993		
5,216.5	5,156.2	4,777.8	4,775.6	15.8	1.5	-93.63	41.5	-7,573.4	7,892.9	7,878.2	14.70	536.771		
5,300.0	5,239.6	4,877.9	4,875.7	15.9	1.5	-93.63	40.7	-7,577.6	7,896.4	7,881.5	14.88	530.764		
5,314.9	5,254.6	4,895.4	4,893.1	16.0	1.5	-93.63	40.6	-7,578.4	7,897.0	7,882.1	14.91	529.700		
5,400.0	5,339.6	5,018.2	5,015.9	16.1	1.6	-93.63	39.7	-7,583.1	7,900.4	7,885.3	15.09	523.589		
5,413.4	5,353.0	5,050.8	5,048.5	16.1	1.6	-93.64	39.5	-7,584.3	7,900.9	7,885.7	15.12	522.564		
5,500.0	5,439.6	5,194.3	5,191.9	16.3	1.6	-93.64	38.9	-7,588.5	7,903.4	7,888.1	15.31	516.379		
5,511.8	5,451.4	5,208.6	5,206.2	16.3	1.6	-93.64	38.9	-7,588.9	7,903.7	7,888.4	15.33	515.572		
5,600.0	5,539.6	5,311.9	5,309.5	16.4	1.6	-93.64	38.7	-7,591.6	7,906.0	7,890.5	15.51	509.664		
5,610.2	5,549.9	5,335.0	5,332.6	16.4	1.6	-93.64	38.7	-7,592.2	7,906.3	7,890.7	15.53	508.968		
5,700.0	5,639.6	5,483.8	5,481.3	16.6	1.6	-93.62	40.5	-7,595.0	7,907.9	7,892.2	15.72	503.152		
5,708.6	5,648.3	5,495.7	5,493.2	16.6	1.6	-93.62	40.6	-7,595.2	7,908.0	7,892.3	15.73	502.605		
5,800.0	5,739.6	5,598.1	5,595.6	16.7	1.6	-93.61	42.4	-7,596.8	7,909.4	7,893.5	15.92	496.973		
5,807.1	5,746.7	5,606.0	5,603.4	16.8	1.6	-93.61	42.6	-7,597.0	7,909.5	7,893.5	15.93	496.540		
5,900.0	5,839.6	5,707.7	5,705.1	16.9	1.6	-93.59	44.4	-7,598.4	7,910.7	7,894.6	16.11	490.922		
5,905.5	5,845.1	5,713.3	5,710.7	16.9	1.6	-93.59	44.5	-7,598.5	7,910.8	7,894.6	16.12	490.592		
6,000.0	5,939.6	5,808.3	5,805.7	17.1	1.6	-93.58	46.2	-7,599.8	7,911.9	7,895.6	16.31	484.988		
6,003.9	5,943.6	5,811.8	5,809.2	17.1	1.6	-93.58	46.2	-7,599.8	7,912.0	7,895.7	16.32	484.758		
6,059.2	5,998.8	5,860.7	5,858.1	17.2	1.6	-93.57	47.1	-7,600.5	7,912.7	7,896.3	16.43	481.538		
6,100.0	6,039.6	5,900.0	5,897.4	17.2	1.6	-3.57	47.7	-7,601.1	7,912.1	7,894.3	17.79	444.807		
6,102.3	6,042.0	5,900.0	5,897.4	17.2	1.6	-3.57	47.7	-7,601.1	7,912.0	7,894.2	17.79	444.744		
6,150.0	6,089.4	5,928.1	5,925.5	17.3	1.6	-3.59	48.1	-7,601.5	7,908.3	7,890.4	17.85	443.039		
6,200.0	6,138.7	5,958.2	5,955.6	17.3	1.6	-3.62	48.5	-7,602.1	7,901.1	7,883.2	17.92	440.855		
6,200.8	6,139.5	5,958.7	5,956.0	17.3	1.6	-3.63	48.6	-7,602.1	7,901.0	7,883.0	17.92	440.821		
6,250.0	6,187.4	6,000.0	5,997.3	17.3	1.6	-3.68	49.1	-7,603.0	7,890.6	7,872.6	17.99	438.666		
6,299.2	6,234.4	6,055.9	6,053.2	17.4	1.6	-3.76	49.8	-7,604.2	7,877.1	7,859.0	18.04	436.751		
6,300.0	6,235.1	6,057.5	6,054.8	17.4	1.6	-3.76	49.8	-7,604.2	7,876.8	7,858.8	18.04	436.718		
6,350.0	6,281.7	6,126.1	6,123.4	17.4	1.7	-3.86	50.9	-7,605.4	7,859.5	7,841.4	18.06	435.222		
6,397.6	6,324.8	6,169.7	6,167.0	17.3	1.7	-3.98	51.6	-7,606.1	7,839.9	7,821.9	18.03	434.811		
6,400.0	6,326.9	6,171.8	6,169.1	17.3	1.7	-3.99	51.7	-7,606.2	7,838.9	7,820.9	18.03	434.813		
6,450.0	6,370.5	6,212.8	6,210.1	17.3	1.7	-4.15	52.3	-7,606.9	7,815.2	7,797.2	17.95	435.449		
6,496.0	6,409.1	6,244.1	6,241.4	17.3	1.7	-4.32	52.7	-7,607.4	7,790.7	7,772.9	17.82	437.072		
6,500.0	6,412.3	6,246.8	6,244.0	17.3	1.7	-4.34	52.8	-7,607.4	7,788.5	7,770.7	17.81	437.257		
6,550.0	6,452.1	6,279.2	6,276.5	17.3	1.7	-4.58	53.2	-7,608.0	7,759.0	7,741.4	17.63	440.146		
6,594.5	6,485.6	6,311.0	6,308.2	17.3	1.7	-4.83	53.6	-7,608.7	7,730.5	7,713.1	17.43	443.483		
6,600.0	6,489.7	6,316.4	6,313.6	17.3	1.7	-4.87	53.7	-7,608.8	7,726.8	7,709.4	17.41	443.916		
6,650.0	6,524.9	6,363.7	6,361.0	17.2	1.7	-5.24	54.3	-7,609.6	7,692.0	7,674.8	17.16	448.277		
6,692.9	6,553.0	6,400.0	6,397.2	17.2	1.7	-5.62	54.8	-7,610.3	7,660.1	7,643.2	16.92	452.716		
6,700.0	6,557.5	6,400.0	6,397.2	17.2	1.7	-5.68	54.8	-7,610.3	7,654.7	7,637.8	16.87	453.712		
6,750.0	6,587.4	6,427.5	6,424.7	17.2	1.7	-6.24	55.1	-7,610.7	7,615.2	7,598.7	16.55	459.996		
6,791.3	6,609.9	6,445.0	6,442.3	17.2	1.7	-6.81	55.4	-7,611.0	7,581.1	7,564.8	16.28	465.545		
6,800.0	6,614.4	6,448.5	6,445.8	17.2	1.7	-6.95	55.4	-7,611.1	7,573.7	7,557.5	16.23	466.792		
6,850.0	6,638.4	6,467.4	6,464.6	17.2	1.7	-7.87	55.7	-7,611.5	7,530.4	7,514.5	15.91	473.439		
6,889.7	6,655.3	6,480.7	6,477.9	17.4	1.7	-8.83	55.9	-7,611.7	7,494.8	7,479.2	15.68	478.094		
6,900.0	6,659.4	6,483.9	6,481.1	17.5	1.7	-9.11	56.0	-7,611.8	7,485.5	7,469.9	15.62	479.114		
6,950.0	6,677.1	6,500.0	6,497.2	18.0	1.7	-10.87	56.3	-7,612.1	7,439.2	7,423.8	15.42	482.357		
6,988.2	6,688.4	6,518.3	6,515.5	18.5	1.7	-12.80	56.6	-7,612.5	7,403.0	7,387.7	15.38	481.295		
7,000.0	6,691.5	6,524.7	6,521.9	18.7	1.7	-13.55	56.7	-7,612.6	7,391.7	7,376.3	15.40	480.099		
7,050.0	6,702.5	6,547.3	6,544.5	19.5	1.7	-18.02	57.0	-7,613.0	7,343.3	7,327.6	15.71	467.381		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,086.6	6,708.4	6,559.7	6,556.9	20.1	1.7	-23.60	57.2	-7,613.3	7,307.3	7,290.9	16.43	444.790		
7,100.0	6,710.1	6,563.3	6,560.5	20.4	1.7	-26.54	57.3	-7,613.3	7,294.1	7,277.2	16.88	432.080		
7,150.0	6,714.2	6,572.6	6,569.7	21.3	1.7	-46.77	57.4	-7,613.5	7,244.4	7,224.2	20.24	357.875		
7,185.0	6,715.0	6,575.1	6,572.3	21.9	1.7	-78.41	57.4	-7,613.5	7,209.5	7,186.4	23.11	311.931		
7,185.6	6,715.0	6,575.1	6,572.3	21.9	1.7	-79.02	57.4	-7,613.5	7,209.0	7,185.9	23.13	311.624		
7,200.0	6,715.0	6,575.5	6,572.7	22.2	1.7	-79.07	57.4	-7,613.5	7,194.6	7,171.2	23.41	307.370		
7,283.4	6,714.8	6,577.6	6,574.8	23.9	1.7	-79.31	57.4	-7,613.5	7,111.3	7,086.3	25.06	283.729		
7,300.0	6,714.8	6,578.0	6,575.2	24.2	1.7	-79.35	57.4	-7,613.6	7,094.8	7,069.4	25.39	279.406		
7,381.9	6,714.6	6,580.1	6,577.3	26.0	1.7	-79.59	57.5	-7,613.6	7,013.2	6,986.0	27.13	258.462		
7,400.0	6,714.6	6,580.5	6,577.7	26.4	1.7	-79.64	57.5	-7,613.6	6,995.1	6,967.6	27.52	254.183		
7,480.3	6,714.4	6,582.5	6,579.6	28.2	1.7	-79.86	57.5	-7,613.6	6,915.0	6,885.6	29.32	235.825		
7,500.0	6,714.4	6,582.9	6,580.1	28.7	1.7	-79.91	57.5	-7,613.6	6,895.3	6,865.6	29.76	231.659		
7,578.7	6,714.2	6,584.8	6,582.0	30.5	1.7	-80.13	57.5	-7,613.7	6,816.8	6,785.2	31.60	215.689		
7,600.0	6,714.2	6,585.3	6,582.5	31.0	1.7	-80.18	57.5	-7,613.7	6,795.6	6,763.5	32.10	211.687		
7,677.1	6,714.0	6,587.1	6,584.2	32.9	1.7	-80.39	57.5	-7,613.7	6,718.6	6,684.7	33.96	197.832		
7,700.0	6,714.0	6,587.6	6,584.8	33.4	1.7	-80.44	57.6	-7,613.7	6,695.8	6,661.3	34.51	194.015		
7,775.6	6,713.9	6,589.3	6,586.5	35.3	1.7	-80.64	57.6	-7,613.7	6,620.5	6,584.1	36.38	181.994		
7,800.0	6,713.8	6,589.8	6,587.0	35.9	1.7	-80.70	57.6	-7,613.7	6,596.1	6,559.1	36.98	178.368		
7,874.0	6,713.7	6,591.4	6,588.6	37.8	1.7	-80.89	57.6	-7,613.8	6,522.3	6,483.5	38.84	167.920		
7,900.0	6,713.6	6,592.0	6,589.2	38.4	1.7	-80.95	57.6	-7,613.8	6,496.4	6,456.9	39.50	164.482		
7,972.4	6,713.5	6,593.6	6,590.7	40.3	1.7	-81.13	57.6	-7,613.8	6,424.2	6,382.8	41.35	155.376		
8,000.0	6,713.4	6,594.1	6,591.3	41.0	1.7	-81.20	57.6	-7,613.8	6,396.7	6,354.6	42.05	152.119		
8,070.8	6,713.3	6,595.6	6,592.8	42.8	1.7	-81.37	57.6	-7,613.8	6,326.0	6,282.2	43.88	144.157		
8,100.0	6,713.2	6,596.2	6,593.4	43.6	1.7	-81.44	57.6	-7,613.8	6,297.0	6,252.3	44.64	141.071		
8,169.3	6,713.1	6,597.6	6,594.8	45.4	1.7	-81.61	57.7	-7,613.8	6,227.9	6,181.5	46.45	134.085		
8,200.0	6,713.0	6,598.3	6,595.5	46.2	1.7	-81.68	57.7	-7,613.9	6,197.3	6,150.0	47.25	131.158		
8,267.7	6,712.9	6,599.6	6,596.8	48.0	1.7	-81.83	57.7	-7,613.9	6,129.8	6,080.8	49.04	125.008		
8,300.0	6,712.8	6,600.8	6,597.9	48.8	1.7	-81.96	57.7	-7,613.9	6,097.6	6,047.7	49.89	122.218		
8,366.1	6,712.7	6,604.3	6,601.5	50.6	1.7	-82.38	57.7	-7,613.9	6,031.7	5,980.0	51.67	116.740		
8,400.0	6,712.6	6,606.0	6,603.2	51.5	1.7	-82.58	57.8	-7,614.0	5,997.9	5,945.3	52.58	114.078		
8,464.5	6,712.5	6,609.1	6,606.3	53.2	1.7	-82.94	57.8	-7,614.0	5,933.6	5,879.3	54.32	109.233		
8,500.0	6,712.4	6,610.7	6,607.9	54.1	1.7	-83.12	57.8	-7,614.0	5,898.3	5,843.0	55.28	106.704		
8,563.0	6,712.3	6,613.4	6,610.6	55.8	1.7	-83.44	57.8	-7,614.1	5,835.5	5,778.5	56.98	102.405		
8,600.0	6,712.3	6,614.9	6,612.1	56.8	1.7	-83.62	57.8	-7,614.1	5,798.6	5,740.6	57.99	99.996		
8,661.4	6,712.1	6,617.3	6,614.5	58.5	1.7	-83.90	57.9	-7,614.1	5,737.4	5,677.8	59.66	96.170		
8,700.0	6,712.1	6,618.8	6,615.9	59.5	1.7	-84.06	57.9	-7,614.1	5,699.0	5,638.2	60.71	93.873		
8,759.8	6,711.9	6,620.9	6,618.1	61.1	1.7	-84.31	57.9	-7,614.1	5,639.4	5,577.0	62.34	90.457		
8,800.0	6,711.9	6,622.2	6,619.4	62.2	1.7	-84.47	57.9	-7,614.2	5,599.3	5,535.9	63.44	88.263		
8,858.2	6,711.8	6,624.1	6,621.3	63.8	1.7	-84.69	57.9	-7,614.2	5,541.3	5,476.3	65.03	85.207		
8,900.0	6,711.7	6,625.4	6,622.6	64.9	1.7	-84.84	58.0	-7,614.2	5,499.7	5,433.5	66.18	83.107		
8,956.7	6,711.6	6,627.1	6,624.3	66.5	1.7	-85.04	58.0	-7,614.2	5,443.3	5,375.5	67.73	80.366		
9,000.0	6,711.5	6,628.3	6,625.5	67.6	1.7	-85.19	58.0	-7,614.2	5,400.1	5,331.2	68.92	78.354		
9,055.1	6,711.4	6,629.8	6,627.0	69.1	1.7	-85.36	58.0	-7,614.2	5,345.2	5,274.8	70.43	75.889		
9,100.0	6,711.3	6,631.0	6,628.2	70.4	1.7	-85.50	58.0	-7,614.3	5,300.5	5,228.8	71.67	73.958		
9,153.5	6,711.2	6,632.4	6,629.5	71.8	1.7	-85.66	58.0	-7,614.3	5,247.2	5,174.1	73.14	71.739		
9,200.0	6,711.1	6,633.5	6,630.7	73.1	1.7	-85.79	58.0	-7,614.3	5,200.9	5,126.5	74.42	69.884		
9,251.9	6,711.0	6,634.7	6,631.9	74.5	1.7	-85.94	58.1	-7,614.3	5,149.2	5,073.4	75.86	67.881		
9,300.0	6,710.9	6,635.8	6,632.9	75.8	1.7	-86.06	58.1	-7,614.3	5,101.4	5,024.2	77.18	66.096		
9,350.4	6,710.8	6,636.9	6,634.0	77.2	1.7	-86.19	58.1	-7,614.3	5,051.2	4,972.7	78.57	64.287		
9,400.0	6,710.7	6,637.9	6,635.1	78.6	1.7	-86.31	58.1	-7,614.3	5,001.8	4,921.9	79.94	62.567		
9,448.8	6,710.6	6,638.9	6,636.0	79.9	1.7	-86.43	58.1	-7,614.3	4,953.3	4,872.0	81.29	60.931		
9,500.0	6,710.5	6,639.9	6,637.0	81.3	1.7	-86.55	58.1	-7,614.3	4,902.3	4,819.6	82.71	59.271		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,547.2	6,710.4	6,640.8	6,637.9	82.6	1.7	-86.65	58.1	-7,614.3	4,855.3	4,771.3	84.02	57.790	
9,600.0	6,710.3	6,641.7	6,638.9	84.1	1.7	-86.76	58.1	-7,614.4	4,802.8	4,717.3	85.48	56.187	
9,645.6	6,710.2	6,642.5	6,639.7	85.3	1.7	-86.86	58.1	-7,614.4	4,757.4	4,670.7	86.74	54.844	
9,700.0	6,710.1	6,643.4	6,640.6	86.8	1.7	-86.97	58.2	-7,614.4	4,703.3	4,615.1	88.25	53.295	
9,744.1	6,710.0	6,644.2	6,641.3	88.1	1.7	-87.05	58.2	-7,614.4	4,659.5	4,570.0	89.47	52.077	
9,800.0	6,709.9	6,645.1	6,642.2	89.6	1.7	-87.16	58.2	-7,614.4	4,603.9	4,512.8	91.02	50.578	
9,842.5	6,709.9	6,645.7	6,642.9	90.8	1.7	-87.24	58.2	-7,614.4	4,561.6	4,469.4	92.20	49.473	
9,900.0	6,709.7	6,646.6	6,643.8	92.4	1.7	-87.34	58.2	-7,614.4	4,504.4	4,410.6	93.80	48.021	
9,940.9	6,709.7	6,647.2	6,644.4	93.5	1.7	-87.41	58.2	-7,614.4	4,463.7	4,368.8	94.94	47.018	
10,000.0	6,709.6	6,648.0	6,645.2	95.1	1.7	-87.51	58.2	-7,614.4	4,405.0	4,308.4	96.58	45.610	
10,039.3	6,709.5	6,648.6	6,645.7	96.2	1.7	-87.57	58.2	-7,614.4	4,365.9	4,268.2	97.67	44.699	
10,100.0	6,709.4	6,649.4	6,646.5	97.9	1.7	-87.67	58.2	-7,614.4	4,305.6	4,206.3	99.36	43.334	
10,137.8	6,709.3	6,649.9	6,647.0	98.9	1.7	-87.73	58.2	-7,614.4	4,268.1	4,167.7	100.41	42.507	
10,200.0	6,709.2	6,650.6	6,647.8	100.7	1.7	-87.82	58.2	-7,614.4	4,206.3	4,104.1	102.14	41.181	
10,236.2	6,709.1	6,651.1	6,648.3	101.7	1.7	-87.87	58.2	-7,614.4	4,170.3	4,067.2	103.15	40.430	
10,300.0	6,709.0	6,651.9	6,649.0	103.4	1.7	-87.96	58.3	-7,614.4	4,107.0	4,002.0	104.92	39.142	
10,334.6	6,708.9	6,652.3	6,649.4	104.4	1.7	-88.01	58.3	-7,614.4	4,072.6	3,966.7	105.89	38.461	
10,400.0	6,708.8	6,653.0	6,650.2	106.2	1.7	-88.10	58.3	-7,614.4	4,007.7	3,900.0	107.71	37.208	
10,433.0	6,708.7	6,653.4	6,650.5	107.1	1.7	-88.14	58.3	-7,614.4	3,974.9	3,866.2	108.63	36.591	
10,500.0	6,708.6	6,654.1	6,651.3	109.0	1.7	-88.22	58.3	-7,614.5	3,908.4	3,797.9	110.50	35.372	
10,531.5	6,708.5	6,654.4	6,651.6	109.9	1.7	-88.26	58.3	-7,614.5	3,877.2	3,765.8	111.37	34.812	
10,600.0	6,708.4	6,655.1	6,652.3	111.8	1.7	-88.35	58.3	-7,614.5	3,809.2	3,695.9	113.28	33.625	
10,629.9	6,708.4	6,655.4	6,652.6	112.6	1.7	-88.38	58.3	-7,614.5	3,779.5	3,665.4	114.12	33.120	
10,700.0	6,708.2	6,656.1	6,653.3	114.6	1.7	-88.46	58.3	-7,614.5	3,710.0	3,593.9	116.07	31.963	
10,728.3	6,708.2	6,656.4	6,653.5	115.3	1.7	-88.49	58.3	-7,614.5	3,681.9	3,565.1	116.86	31.507	
10,800.0	6,708.0	6,657.0	6,654.2	117.3	1.7	-88.57	58.3	-7,614.5	3,610.9	3,492.0	118.86	30.379	
10,826.7	6,708.0	6,657.3	6,654.4	118.1	1.7	-88.60	58.3	-7,614.5	3,584.4	3,464.8	119.61	29.968	
10,900.0	6,707.8	6,657.9	6,655.1	120.1	1.7	-88.68	58.3	-7,614.5	3,511.8	3,390.2	121.65	28.868	
10,925.2	6,707.8	6,658.1	6,655.3	120.8	1.7	-88.70	58.3	-7,614.5	3,486.9	3,364.5	122.35	28.498	
11,000.0	6,707.6	6,658.8	6,655.9	122.9	1.7	-88.78	58.3	-7,614.5	3,412.8	3,288.3	124.44	27.425	
11,023.6	6,707.6	6,659.0	6,656.1	123.6	1.7	-88.80	58.3	-7,614.5	3,389.4	3,264.3	125.10	27.093	
11,100.0	6,707.5	6,659.6	6,656.8	125.7	1.7	-88.87	58.3	-7,614.5	3,313.8	3,186.6	127.23	26.045	
11,122.0	6,707.4	6,659.8	6,656.9	126.3	1.7	-88.89	58.3	-7,614.5	3,292.0	3,164.2	127.85	25.749	
11,200.0	6,707.3	6,660.4	6,657.5	128.5	1.7	-88.97	58.3	-7,614.5	3,214.9	3,084.9	130.03	24.725	
11,220.4	6,707.2	6,660.5	6,657.7	129.0	1.7	-88.98	58.3	-7,614.5	3,194.7	3,064.1	130.60	24.462	
11,300.0	6,707.1	6,661.1	6,658.3	131.3	1.7	-89.05	58.4	-7,614.5	3,116.1	2,983.3	132.82	23.461	
11,318.9	6,707.0	6,661.2	6,658.4	131.8	1.7	-89.07	58.4	-7,614.5	3,097.4	2,964.1	133.35	23.228	
11,400.0	6,706.9	6,661.8	6,659.0	134.0	1.7	-89.14	58.4	-7,614.5	3,017.3	2,881.7	135.62	22.249	
11,417.3	6,706.9	6,661.9	6,659.1	134.5	1.7	-89.15	58.4	-7,614.5	3,000.2	2,864.1	136.10	22.045	
11,500.0	6,706.7	6,662.5	6,659.7	136.8	1.7	-89.22	58.4	-7,614.5	2,918.6	2,780.2	138.41	21.087	
11,515.7	6,706.7	6,662.6	6,659.8	137.3	1.7	-89.23	58.4	-7,614.5	2,903.1	2,764.3	138.85	20.909	
11,600.0	6,706.5	6,663.2	6,660.3	139.6	1.7	-89.30	58.4	-7,614.5	2,820.1	2,678.9	141.21	19.971	
11,614.1	6,706.5	6,663.3	6,660.4	140.0	1.7	-89.31	58.4	-7,614.5	2,806.1	2,664.5	141.60	19.817	
11,700.0	6,706.3	6,663.8	6,661.0	142.4	1.7	-89.37	58.4	-7,614.5	2,721.6	2,577.6	144.00	18.900	
11,712.6	6,706.3	6,663.9	6,661.1	142.8	1.7	-89.38	58.4	-7,614.5	2,709.2	2,564.9	144.35	18.768	
11,800.0	6,706.1	6,664.4	6,661.6	145.2	1.7	-89.44	58.4	-7,614.5	2,623.2	2,476.4	146.80	17.870	
11,811.0	6,706.1	6,664.5	6,661.6	145.5	1.7	-89.45	58.4	-7,614.5	2,612.4	2,465.3	147.10	17.759	
11,900.0	6,705.9	6,665.0	6,662.2	148.0	1.7	-89.51	58.4	-7,614.5	2,525.0	2,375.4	149.59	16.879	
11,909.4	6,705.9	6,665.0	6,662.2	148.3	1.7	-89.52	58.4	-7,614.5	2,515.8	2,365.9	149.86	16.788	
12,000.0	6,705.8	6,665.6	6,662.7	150.8	1.7	-89.58	58.4	-7,614.5	2,426.9	2,274.5	152.39	15.926	
12,007.8	6,705.7	6,665.6	6,662.8	151.0	1.7	-89.58	58.4	-7,614.5	2,419.2	2,266.6	152.61	15.852	
12,100.0	6,705.6	6,666.1	6,663.3	153.6	1.7	-89.64	58.4	-7,614.5	2,329.0	2,173.8	155.19	15.007	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,666.1	6,663.3	153.8	1.7	-89.65	58.4	-7,614.5	2,322.9	2,167.5	155.36	14.951	
12,200.0	6,705.4	6,666.6	6,663.8	156.4	1.7	-89.71	58.4	-7,614.5	2,231.2	2,073.3	157.99	14.123	
12,204.7	6,705.4	6,666.7	6,663.8	156.5	1.7	-89.71	58.4	-7,614.5	2,226.7	2,068.5	158.12	14.082	
12,300.0	6,705.2	6,667.1	6,664.3	159.2	1.7	-89.77	58.4	-7,614.5	2,133.7	1,972.9	160.79	13.271	
12,303.1	6,705.2	6,667.1	6,664.3	159.3	1.7	-89.77	58.4	-7,614.5	2,130.7	1,969.8	160.87	13.244	
12,400.0	6,705.0	6,667.6	6,664.8	162.0	1.7	-89.82	58.4	-7,614.5	2,036.4	1,872.8	163.58	12.449	
12,401.5	6,705.0	6,667.6	6,664.8	162.0	1.7	-89.82	58.4	-7,614.5	2,034.9	1,871.3	163.63	12.436	
12,500.0	6,704.8	6,668.1	6,665.3	164.8	1.7	-89.88	58.4	-7,614.5	1,939.4	1,773.0	166.38	11.656	
12,598.4	6,704.6	6,668.5	6,665.7	167.5	1.7	-89.93	58.4	-7,614.5	1,844.3	1,675.1	169.14	10.904	
12,600.0	6,704.6	6,668.6	6,665.7	167.6	1.7	-89.93	58.4	-7,614.5	1,842.7	1,673.5	169.18	10.892	
12,696.8	6,704.4	6,669.0	6,666.2	170.3	1.7	-89.98	58.4	-7,614.5	1,749.4	1,577.5	171.89	10.177	
12,700.0	6,704.4	6,669.0	6,666.2	170.4	1.7	-89.99	58.4	-7,614.5	1,746.4	1,574.4	171.98	10.154	
12,795.2	6,704.3	6,669.4	6,666.6	173.0	1.7	-90.03	58.5	-7,614.5	1,655.0	1,480.4	174.65	9.476	
12,800.0	6,704.2	6,669.4	6,666.6	173.2	1.7	-90.04	58.5	-7,614.5	1,650.5	1,475.7	174.78	9.443	
12,893.7	6,704.1	6,669.8	6,667.0	175.8	1.7	-90.08	58.5	-7,614.5	1,561.1	1,383.7	177.40	8.800	
12,900.0	6,704.1	6,669.8	6,667.0	176.0	1.7	-90.09	58.5	-7,614.6	1,555.1	1,377.5	177.58	8.757	
12,992.1	6,703.9	6,670.2	6,667.4	178.5	1.7	-90.13	58.5	-7,614.6	1,467.8	1,287.7	180.16	8.147	
13,000.0	6,703.9	6,670.2	6,667.4	178.8	1.7	-90.13	58.5	-7,614.6	1,460.4	1,280.0	180.38	8.096	
13,090.5	6,703.7	6,670.6	6,667.8	181.3	1.7	-90.18	58.5	-7,614.6	1,375.2	1,192.3	182.92	7.518	
13,100.0	6,703.7	6,670.6	6,667.8	181.6	1.7	-90.18	58.5	-7,614.6	1,366.4	1,183.2	183.18	7.459	
13,188.9	6,703.5	6,671.0	6,668.1	184.0	1.7	-90.22	58.5	-7,614.6	1,283.5	1,097.8	185.67	6.913	
13,200.0	6,703.5	6,671.0	6,668.2	184.4	1.7	-90.22	58.5	-7,614.6	1,273.3	1,087.3	185.98	6.846	
13,287.4	6,703.3	6,671.3	6,668.5	186.8	1.7	-90.26	58.5	-7,614.6	1,192.9	1,004.4	188.43	6.330	
13,300.0	6,703.3	6,671.4	6,668.5	187.2	1.7	-90.27	58.5	-7,614.6	1,181.3	992.5	188.78	6.257	
13,385.8	6,703.2	6,671.7	6,668.9	189.6	1.7	-90.30	58.5	-7,614.6	1,103.5	912.3	191.19	5.772	
13,400.0	6,703.1	6,671.7	6,668.9	190.0	1.7	-90.31	58.5	-7,614.6	1,090.8	899.2	191.59	5.693	
13,484.2	6,703.0	6,672.0	6,669.2	192.3	1.7	-90.34	58.5	-7,614.6	1,015.9	821.9	193.95	5.238	
13,500.0	6,702.9	6,672.1	6,669.2	192.8	1.7	-90.35	58.5	-7,614.6	1,002.0	807.6	194.39	5.155	
13,582.6	6,702.8	6,672.4	6,669.5	195.1	1.7	-90.38	58.5	-7,614.6	930.4	733.7	196.70	4.730	
13,600.0	6,702.8	6,672.4	6,669.6	195.6	1.7	-90.39	58.5	-7,614.6	915.6	718.4	197.19	4.643	
13,681.1	6,702.6	6,672.7	6,669.9	197.8	1.7	-90.42	58.5	-7,614.6	847.7	648.3	199.46	4.250	
13,700.0	6,702.6	6,672.7	6,669.9	198.4	1.7	-90.43	58.5	-7,614.6	832.2	632.2	199.99	4.161	
13,779.5	6,702.4	6,673.0	6,670.2	200.6	1.7	-90.46	58.5	-7,614.6	768.8	566.6	202.22	3.802	
13,800.0	6,702.4	6,673.1	6,670.2	201.2	1.7	-90.47	58.5	-7,614.6	752.9	550.1	202.79	3.713	
13,877.9	6,702.2	6,673.3	6,670.5	203.3	1.7	-90.50	58.5	-7,614.6	694.8	489.8	204.98	3.390	
13,900.0	6,702.2	6,673.4	6,670.5	204.0	1.7	-90.50	58.5	-7,614.6	679.1	473.5	205.59	3.303	
13,976.3	6,702.1	6,673.6	6,670.8	206.1	1.7	-90.53	58.5	-7,614.6	627.6	419.9	207.73	3.021	
14,000.0	6,702.0	6,673.7	6,670.8	206.8	1.7	-90.54	58.5	-7,614.6	612.7	404.3	208.40	2.940	
14,074.8	6,701.9	6,673.9	6,671.1	208.9	1.7	-90.57	58.5	-7,614.6	569.6	359.1	210.49	2.706	
14,100.0	6,701.8	6,674.0	6,671.1	209.6	1.7	-90.57	58.5	-7,614.6	556.5	345.3	211.20	2.635	
14,173.2	6,701.7	6,674.2	6,671.3	211.6	1.7	-90.60	58.5	-7,614.6	523.7	310.5	213.25	2.456	
14,200.0	6,701.6	6,674.2	6,671.4	212.4	1.7	-90.61	58.5	-7,614.6	513.8	299.8	214.00	2.401	
14,271.6	6,701.5	6,674.4	6,671.6	214.4	1.7	-90.63	58.5	-7,614.6	493.5	277.5	216.01	2.285	
14,300.0	6,701.4	6,674.5	6,671.7	215.2	1.7	-90.64	58.5	-7,614.6	488.1	271.3	216.80	2.251	
14,370.0	6,701.3	6,674.7	6,671.9	217.1	1.7	-90.66	58.5	-7,614.6	481.8	263.1	218.77	2.202	
14,378.6	6,701.3	6,674.7	6,671.9	217.4	1.7	-90.67	58.5	-7,614.6	481.7	262.7	219.01	2.200 CC	
14,400.0	6,701.3	6,674.8	6,672.0	218.0	1.7	-90.67	58.5	-7,614.6	482.2	262.6	219.61	2.196 ES, SF	
14,468.5	6,701.1	6,675.0	6,672.2	219.9	1.7	-90.70	58.5	-7,614.6	490.0	268.5	221.53	2.212	
14,500.0	6,701.1	6,675.1	6,672.2	220.8	1.7	-90.71	58.5	-7,614.6	496.8	274.4	222.41	2.234	
14,566.9	6,701.0	6,675.2	6,672.4	222.6	1.7	-90.73	58.5	-7,614.6	517.2	292.9	224.29	2.306	
14,600.0	6,700.9	6,675.3	6,672.5	223.6	1.7	-90.74	58.5	-7,614.6	530.2	305.0	225.21	2.354	
14,665.3	6,700.8	6,675.5	6,672.7	225.4	1.7	-90.76	58.5	-7,614.6	560.6	333.6	227.04	2.469	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,675.6	6,672.7	226.4	1.7	-90.77	58.5	-7,614.6	579.1	351.1	228.02	2.540	
14,763.7	6,700.6	6,675.7	6,672.9	228.2	1.7	-90.79	58.5	-7,614.6	616.8	387.0	229.80	2.684	
14,800.0	6,700.5	6,675.8	6,673.0	229.2	1.7	-90.80	58.5	-7,614.6	640.0	409.2	230.82	2.773	
14,862.2	6,700.4	6,676.0	6,673.1	230.9	1.7	-90.81	58.5	-7,614.6	682.6	450.0	232.56	2.935	
14,900.0	6,700.3	6,676.1	6,673.2	232.0	1.7	-90.82	58.5	-7,614.6	709.9	476.2	233.62	3.038	
14,960.6	6,700.2	6,676.2	6,673.4	233.7	1.7	-90.84	58.5	-7,614.6	755.5	520.2	235.32	3.210	
15,000.0	6,700.2	6,676.3	6,673.5	234.8	1.7	-90.85	58.5	-7,614.6	786.2	549.8	236.43	3.325	
15,059.0	6,700.0	6,676.4	6,673.6	236.4	1.7	-90.87	58.5	-7,614.6	833.7	595.6	238.08	3.502	
15,082.8	6,700.0	6,676.5	6,673.7	237.1	1.7	-90.87	58.5	-7,614.6	853.2	614.5	238.75	3.574	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-91.22	-139.0	-6,520.4	6,522.0				
98.4	98.4	69.0	69.0	0.1	0.0	-91.22	-139.1	-6,520.4	6,521.9	6,521.8	0.10	N/A	
100.0	100.0	70.7	70.7	0.1	0.0	-91.22	-139.1	-6,520.4	6,521.9	6,521.7	0.11	N/A	
168.0	168.0	129.4	129.4	0.3	0.0	-91.22	-139.1	-6,520.3	6,521.8	6,521.5	0.30	N/A	
196.8	196.8	149.7	149.7	0.3	0.1	-91.22	-139.2	-6,520.3	6,521.8	6,521.4	0.39	N/A	
200.0	200.0	151.9	151.9	0.3	0.1	-91.22	-139.2	-6,520.3	6,521.8	6,521.4	0.39	N/A	
295.3	295.3	219.3	219.3	0.5	0.1	-91.23	-139.5	-6,520.6	6,522.2	6,521.5	0.69	9,512.388	
300.0	300.0	222.6	222.6	0.5	0.2	-91.23	-139.5	-6,520.6	6,522.2	6,521.5	0.70	9,316.403	
393.7	393.7	300.0	300.0	0.8	0.2	-91.23	-140.0	-6,521.3	6,523.1	6,522.1	1.00	6,529.974	
400.0	400.0	300.0	300.0	0.8	0.2	-91.23	-140.0	-6,521.3	6,523.1	6,522.1	1.01	6,438.761	
492.1	492.1	400.0	400.0	1.0	0.3	-91.24	-140.8	-6,522.2	6,524.0	6,522.7	1.30	5,010.235	
500.0	500.0	400.0	400.0	1.0	0.3	-91.24	-140.8	-6,522.2	6,524.0	6,522.7	1.32	4,943.097	
590.5	590.5	471.5	471.5	1.2	0.4	-91.24	-141.6	-6,522.9	6,525.0	6,523.4	1.57	4,151.171	
600.0	600.0	477.7	477.7	1.2	0.4	-91.24	-141.7	-6,523.0	6,525.1	6,523.5	1.60	4,085.020	
689.0	689.0	557.1	557.0	1.4	0.4	-91.25	-142.8	-6,524.1	6,526.4	6,524.5	1.85	3,533.428	
700.0	700.0	568.5	568.4	1.4	0.4	-91.26	-143.0	-6,524.3	6,526.5	6,524.7	1.88	3,473.900	
787.4	787.4	655.2	655.1	1.6	0.5	-91.27	-144.3	-6,525.5	6,527.8	6,525.7	2.12	3,072.850	
800.0	800.0	667.4	667.3	1.7	0.5	-91.27	-144.5	-6,525.7	6,528.0	6,525.8	2.16	3,023.166	
885.8	885.8	748.3	748.2	1.9	0.5	-91.28	-145.7	-6,526.9	6,529.3	6,526.9	2.39	2,726.638	
900.0	900.0	761.4	761.3	1.9	0.5	-91.28	-145.9	-6,527.1	6,529.5	6,527.1	2.43	2,683.522	
984.2	984.2	843.9	843.8	2.1	0.6	-91.29	-147.1	-6,528.4	6,530.9	6,528.2	2.66	2,451.868	
1,000.0	1,000.0	860.2	860.1	2.1	0.6	-91.29	-147.3	-6,528.6	6,531.1	6,528.4	2.71	2,412.728	
1,082.7	1,082.7	941.6	941.5	2.3	0.6	-91.30	-148.4	-6,529.9	6,532.4	6,529.5	2.94	2,219.063	
1,100.0	1,100.0	958.0	957.9	2.3	0.7	-91.30	-148.7	-6,530.2	6,532.7	6,529.7	3.00	2,181.109	
1,181.1	1,181.1	1,034.4	1,034.3	2.5	0.7	-120.02	-149.9	-6,531.4	6,534.6	6,531.4	3.21	2,034.635	
1,200.0	1,200.0	1,052.2	1,052.1	2.6	0.7	-120.01	-150.2	-6,531.7	6,535.2	6,532.0	3.27	2,000.213	
1,279.5	1,279.4	1,133.0	1,132.9	2.7	0.8	-120.00	-151.6	-6,533.1	6,538.6	6,535.1	3.49	1,872.158	
1,300.0	1,299.8	1,156.5	1,156.3	2.8	0.8	-120.00	-152.0	-6,533.4	6,539.6	6,536.0	3.55	1,843.764	
1,377.9	1,377.5	1,237.4	1,237.2	3.0	0.8	-119.98	-153.3	-6,534.7	6,544.1	6,540.3	3.76	1,738.667	
1,400.0	1,399.5	1,258.0	1,257.8	3.0	0.8	-119.97	-153.7	-6,535.0	6,545.6	6,541.7	3.83	1,710.480	
1,476.4	1,475.3	1,329.2	1,329.0	3.2	0.9	-119.95	-154.9	-6,536.2	6,551.3	6,547.3	4.05	1,616.406	
1,500.0	1,498.7	1,351.2	1,351.0	3.3	0.9	-119.94	-155.3	-6,536.5	6,553.3	6,549.2	4.12	1,589.512	
1,574.8	1,572.6	1,419.1	1,418.8	3.5	0.9	-119.90	-156.5	-6,537.7	6,560.4	6,556.0	4.35	1,507.478	
1,600.0	1,597.5	1,440.8	1,440.5	3.5	0.9	-119.89	-156.9	-6,538.0	6,563.0	6,558.6	4.42	1,483.397	
1,673.2	1,669.4	1,505.2	1,504.9	3.7	1.0	-119.85	-158.0	-6,539.2	6,571.3	6,566.6	4.65	1,411.808	
1,700.1	1,695.8	1,539.2	1,538.9	3.8	1.0	-119.85	-158.6	-6,539.9	6,574.6	6,569.8	4.74	1,386.595	
1,771.6	1,765.7	1,655.1	1,654.8	4.1	1.0	-120.05	-161.0	-6,541.6	6,583.3	6,578.3	4.99	1,319.063	
1,800.0	1,793.4	1,715.1	1,714.8	4.2	1.0	-120.16	-162.2	-6,542.1	6,586.5	6,581.4	5.09	1,293.810	
1,870.1	1,862.0	1,902.4	1,902.1	4.4	1.1	-120.48	-165.3	-6,541.8	6,594.1	6,588.8	5.35	1,233.656	
1,900.0	1,891.3	1,950.3	1,950.0	4.5	1.1	-120.56	-166.0	-6,541.1	6,596.9	6,591.5	5.45	1,211.228	
1,968.5	1,958.3	2,043.4	2,043.0	4.8	1.1	-120.72	-167.5	-6,539.5	6,603.1	6,597.4	5.69	1,161.284	
2,000.0	1,989.1	2,079.8	2,079.4	4.9	1.1	-120.78	-168.1	-6,538.8	6,605.9	6,600.1	5.80	1,139.779	
2,066.9	2,054.5	2,148.0	2,147.6	5.1	1.2	-120.89	-169.3	-6,537.4	6,611.9	6,605.8	6.05	1,092.203	
2,100.0	2,086.9	2,180.1	2,179.7	5.3	1.2	-120.95	-169.9	-6,536.8	6,614.8	6,608.6	6.18	1,069.592	
2,165.3	2,150.8	2,243.5	2,243.0	5.5	1.2	-121.06	-171.2	-6,535.5	6,620.6	6,614.2	6.45	1,026.834	
2,200.0	2,184.7	2,277.1	2,276.6	5.6	1.3	-121.12	-171.9	-6,534.8	6,623.7	6,617.2	6.59	1,005.559	
2,263.8	2,247.1	2,338.9	2,338.3	5.9	1.3	-121.23	-173.3	-6,533.5	6,629.5	6,622.6	6.85	968.098	
2,300.0	2,282.5	2,373.9	2,373.4	6.0	1.3	-121.29	-174.2	-6,532.8	6,632.7	6,625.8	7.00	948.081	
2,362.2	2,343.3	2,431.5	2,430.9	6.3	1.3	-121.39	-175.6	-6,531.7	6,638.4	6,631.2	7.24	916.849	
2,400.0	2,380.3	2,465.3	2,464.7	6.5	1.3	-121.45	-176.4	-6,531.0	6,641.9	6,634.5	7.38	899.630	
2,460.6	2,439.6	2,521.5	2,520.9	6.7	1.4	-121.54	-177.6	-6,529.9	6,647.5	6,639.8	7.61	873.030	
2,500.0	2,478.1	2,560.3	2,559.7	6.9	1.4	-121.61	-178.4	-6,529.2	6,651.1	6,643.3	7.76	856.587	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
2,559.0	2,535.9	2,600.0	2,599.4	7.1	1.4	-121.68	-179.2	-6,528.4	6,656.6	6,648.6	7.99	833.117		
2,600.0	2,575.9	2,648.7	2,648.0	7.3	1.4	-121.76	-180.2	-6,527.6	6,660.5	6,652.3	8.16	816.501		
2,657.5	2,632.2	2,695.5	2,694.8	7.5	1.4	-121.84	-181.2	-6,526.8	6,666.0	6,657.6	8.39	794.758		
2,700.0	2,673.8	2,730.2	2,729.5	7.7	1.4	-121.90	-181.8	-6,526.2	6,670.1	6,661.5	8.56	779.443		
2,755.9	2,728.4	2,775.7	2,775.0	7.9	1.4	-121.98	-182.7	-6,525.6	6,675.6	6,666.8	8.78	760.101		
2,800.0	2,771.6	2,812.4	2,811.7	8.1	1.5	-122.04	-183.4	-6,525.1	6,680.0	6,671.1	8.96	745.687		
2,854.3	2,824.7	2,859.5	2,858.7	8.3	1.5	-122.12	-184.3	-6,524.5	6,685.5	6,676.3	9.17	728.952		
2,900.0	2,869.4	2,900.0	2,899.3	8.5	1.5	-122.19	-185.1	-6,524.1	6,690.2	6,680.8	9.35	715.484		
2,952.7	2,921.0	2,939.1	2,938.3	8.8	1.5	-122.25	-185.9	-6,523.7	6,695.7	6,686.1	9.56	700.566		
3,000.0	2,967.2	2,974.8	2,974.1	9.0	1.5	-122.31	-186.6	-6,523.4	6,700.6	6,690.9	9.74	687.755		
3,051.2	3,017.3	3,000.0	2,999.2	9.2	1.5	-122.36	-187.1	-6,523.2	6,706.2	6,696.2	9.94	674.493		
3,100.0	3,065.0	3,038.7	3,038.0	9.4	1.5	-122.42	-187.8	-6,523.0	6,711.5	6,701.4	10.14	662.170		
3,149.6	3,113.5	3,067.5	3,066.8	9.6	1.5	-122.47	-188.2	-6,523.0	6,717.2	6,706.8	10.33	650.207		
3,200.0	3,162.8	3,100.0	3,099.2	9.8	1.5	-122.52	-188.6	-6,523.0	6,723.0	6,712.5	10.53	638.513		
3,248.0	3,209.8	3,141.1	3,140.3	10.0	1.6	-122.59	-189.1	-6,523.2	6,728.7	6,718.0	10.73	627.285		
3,300.0	3,260.6	3,191.2	3,190.4	10.2	1.6	-122.67	-189.6	-6,523.4	6,734.9	6,724.0	10.94	615.539		
3,346.4	3,306.1	3,236.0	3,235.2	10.5	1.6	-122.74	-189.9	-6,523.6	6,740.5	6,729.3	11.13	605.403		
3,400.0	3,358.5	3,287.7	3,287.0	10.7	1.6	-122.82	-190.2	-6,523.9	6,746.9	6,735.5	11.36	594.122		
3,444.9	3,402.3	3,330.9	3,330.1	10.9	1.6	-122.88	-190.4	-6,524.1	6,752.2	6,740.7	11.54	584.987		
3,500.0	3,456.3	3,383.8	3,383.0	11.1	1.7	-122.96	-190.7	-6,524.3	6,758.9	6,747.1	11.77	574.178		
3,543.3	3,498.6	3,425.3	3,424.5	11.3	1.7	-123.03	-190.9	-6,524.6	6,764.1	6,752.1	11.95	565.966		
3,600.0	3,554.1	3,479.7	3,478.9	11.5	1.7	-123.11	-191.1	-6,524.9	6,771.0	6,758.8	12.19	555.588		
3,641.7	3,594.9	3,521.3	3,520.5	11.7	1.7	-123.17	-191.3	-6,525.1	6,776.0	6,763.7	12.36	548.308		
3,700.0	3,651.9	3,581.6	3,580.8	12.0	1.7	-123.26	-191.5	-6,525.4	6,783.1	6,770.5	12.59	538.636		
3,740.1	3,691.2	3,619.3	3,618.5	12.2	1.7	-123.32	-191.6	-6,525.6	6,787.9	6,775.2	12.75	532.182		
3,800.0	3,749.7	3,670.9	3,670.1	12.4	1.7	-123.39	-191.6	-6,525.9	6,795.2	6,782.2	13.00	522.885		
3,838.6	3,787.4	3,704.8	3,704.0	12.6	1.7	-123.44	-191.7	-6,526.1	6,800.0	6,786.8	13.15	517.064		
3,900.0	3,847.5	3,765.8	3,765.0	12.9	1.8	-123.53	-191.7	-6,526.5	6,807.6	6,794.2	13.40	508.031		
3,937.0	3,883.7	3,800.0	3,799.2	13.0	1.8	-123.59	-191.8	-6,526.7	6,812.2	6,798.6	13.55	502.760		
4,000.0	3,945.3	3,857.4	3,856.6	13.3	1.8	-123.67	-192.0	-6,527.2	6,820.0	6,806.2	13.80	494.052		
4,035.4	3,980.0	3,888.5	3,887.7	13.5	1.8	-123.72	-192.1	-6,527.4	6,824.4	6,810.5	13.95	489.301		
4,060.0	4,004.0	3,911.1	3,910.3	13.6	1.8	-123.75	-192.1	-6,527.6	6,827.5	6,813.5	14.05	486.056		
4,100.0	4,043.2	3,950.0	3,949.2	13.7	1.8	-123.89	-192.2	-6,527.9	6,832.4	6,818.2	14.18	481.725		
4,133.8	4,076.5	3,983.0	3,982.2	13.8	1.8	-124.00	-192.3	-6,528.2	6,836.3	6,822.0	14.28	478.755		
4,200.0	4,141.6	4,055.8	4,055.0	14.0	1.8	-124.20	-192.6	-6,528.7	6,843.2	6,828.8	14.47	473.006		
4,232.3	4,173.5	4,092.9	4,092.1	14.1	1.8	-124.29	-192.8	-6,529.0	6,846.3	6,831.7	14.55	470.526		
4,300.0	4,240.6	4,153.1	4,152.2	14.3	1.8	-124.45	-193.2	-6,529.4	6,852.0	6,837.3	14.72	465.434		
4,330.7	4,271.1	4,179.6	4,178.8	14.4	1.9	-124.51	-193.4	-6,529.5	6,854.4	6,839.6	14.79	463.433		
4,400.0	4,340.0	4,228.9	4,228.1	14.5	1.9	-124.63	-193.9	-6,530.0	6,859.1	6,844.1	14.94	458.968		
4,429.1	4,369.0	4,247.4	4,246.5	14.6	1.9	-124.67	-194.1	-6,530.2	6,860.9	6,845.9	15.00	457.380		
4,500.0	4,439.7	4,300.0	4,299.2	14.8	1.9	-124.76	-194.6	-6,530.9	6,864.7	6,849.5	15.14	453.474		
4,527.5	4,467.2	4,315.5	4,314.7	14.8	1.9	-124.79	-194.8	-6,531.1	6,865.9	6,850.7	15.18	452.231		
4,600.0	4,539.7	4,388.3	4,387.4	14.9	1.9	-124.85	-195.6	-6,532.3	6,868.5	6,853.2	15.31	448.734		
4,626.0	4,565.6	4,437.2	4,436.3	15.0	1.9	-124.87	-196.1	-6,533.0	6,869.2	6,853.8	15.35	447.518		
4,660.2	4,599.8	4,511.0	4,510.1	15.0	1.9	-96.16	-196.7	-6,533.7	6,869.6	6,855.4	14.23	482.684		
4,700.0	4,639.6	4,554.4	4,553.6	15.0	2.0	-96.16	-197.1	-6,534.0	6,869.9	6,855.6	14.31	480.200		
4,724.4	4,664.0	4,581.0	4,580.2	15.1	2.0	-96.16	-197.3	-6,534.2	6,870.1	6,855.8	14.36	478.543		
4,800.0	4,739.6	4,658.6	4,657.7	15.2	2.0	-96.17	-198.0	-6,534.6	6,870.6	6,856.1	14.51	473.490		
4,822.8	4,762.5	4,681.6	4,680.7	15.2	2.0	-96.17	-198.2	-6,534.7	6,870.8	6,856.2	14.56	471.977		
4,900.0	4,839.6	4,755.0	4,754.2	15.3	2.0	-96.17	-198.8	-6,535.2	6,871.3	6,856.6	14.72	466.768		
4,921.2	4,860.9	4,774.9	4,774.0	15.4	2.0	-96.18	-199.0	-6,535.3	6,871.5	6,856.7	14.77	465.331		
5,000.0	4,939.6	4,848.5	4,847.6	15.5	2.1	-96.18	-199.8	-6,535.8	6,872.1	6,857.1	14.94	460.084		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,019.7	4,959.3	4,866.9	4,866.0	15.5	2.1	-96.18	-200.0	-6,535.9	6,872.2	6,857.3	14.98	458.785		
5,100.0	5,039.6	4,941.7	4,940.8	15.6	2.1	-96.19	-200.9	-6,536.5	6,872.9	6,857.8	15.15	453.586		
5,118.1	5,057.7	4,958.5	4,957.7	15.7	2.1	-96.19	-201.1	-6,536.6	6,873.1	6,857.9	15.19	452.431		
5,200.0	5,139.6	5,034.6	5,033.7	15.8	2.1	-96.20	-201.9	-6,537.3	6,873.9	6,858.5	15.37	447.277		
5,216.5	5,156.2	5,050.0	5,049.1	15.8	2.1	-96.20	-202.0	-6,537.4	6,874.1	6,858.7	15.40	446.247		
5,300.0	5,239.6	5,134.1	5,133.2	15.9	2.2	-96.21	-202.9	-6,538.2	6,875.0	6,859.4	15.58	441.179		
5,314.9	5,254.6	5,151.4	5,150.5	16.0	2.2	-96.21	-203.0	-6,538.4	6,875.1	6,859.5	15.61	440.300		
5,400.0	5,339.6	5,241.3	5,240.4	16.1	2.2	-96.21	-203.6	-6,539.2	6,875.9	6,860.1	15.79	435.427		
5,413.4	5,353.0	5,254.2	5,253.3	16.1	2.2	-96.21	-203.7	-6,539.3	6,876.0	6,860.2	15.82	434.677		
5,500.0	5,439.6	5,336.8	5,335.9	16.3	2.2	-96.21	-204.1	-6,540.0	6,876.9	6,860.9	15.99	429.952		
5,511.8	5,451.4	5,347.9	5,347.0	16.3	2.2	-96.21	-204.1	-6,540.1	6,877.0	6,861.0	16.02	429.324		
5,600.0	5,539.6	5,436.6	5,435.7	16.4	2.3	-96.21	-204.2	-6,541.0	6,877.9	6,861.7	16.20	424.661		
5,610.2	5,549.9	5,448.0	5,447.1	16.4	2.3	-96.21	-204.2	-6,541.1	6,878.0	6,861.8	16.22	424.118		
5,700.0	5,639.6	5,548.2	5,547.2	16.6	2.3	-96.21	-204.0	-6,542.1	6,878.8	6,862.4	16.40	419.403		
5,708.6	5,648.3	5,557.8	5,556.9	16.6	2.3	-96.21	-204.0	-6,542.1	6,878.8	6,862.4	16.42	418.952		
5,800.0	5,739.6	5,636.1	5,635.2	16.7	2.3	-96.21	-203.7	-6,542.8	6,879.6	6,863.0	16.60	414.463		
5,807.1	5,746.7	5,640.9	5,640.0	16.8	2.3	-96.21	-203.6	-6,542.9	6,879.7	6,863.1	16.61	414.131		
5,900.0	5,839.6	5,700.0	5,699.1	16.9	2.3	-96.20	-203.0	-6,543.7	6,880.8	6,864.0	16.79	409.826		
5,905.5	5,845.1	5,700.0	5,699.1	16.9	2.3	-96.20	-203.0	-6,543.7	6,880.9	6,864.1	16.80	409.573		
6,000.0	5,939.6	5,757.8	5,756.8	17.1	2.3	-96.19	-202.0	-6,544.8	6,882.6	6,865.7	16.98	405.320		
6,003.9	5,943.6	5,759.9	5,759.0	17.1	2.3	-96.19	-202.0	-6,544.9	6,882.7	6,865.7	16.99	405.145		
6,059.2	5,998.8	5,800.0	5,799.0	17.2	2.3	-96.18	-201.1	-6,545.9	6,884.0	6,866.9	17.09	402.717		
6,100.0	6,039.6	5,816.2	5,815.3	17.2	2.3	-6.18	-200.7	-6,546.4	6,883.9	6,865.8	18.11	380.108		
6,102.3	6,042.0	5,817.9	5,816.9	17.2	2.3	-6.18	-200.6	-6,546.5	6,883.9	6,865.7	18.11	380.068		
6,150.0	6,089.4	5,851.5	5,850.5	17.3	2.3	-6.20	-199.7	-6,547.5	6,880.8	6,862.6	18.14	379.215		
6,200.0	6,138.7	5,900.0	5,898.9	17.3	2.3	-6.25	-198.2	-6,549.2	6,874.3	6,856.1	18.17	378.243		
6,200.8	6,139.5	5,900.0	5,898.9	17.3	2.3	-6.25	-198.2	-6,549.2	6,874.2	6,856.0	18.17	378.232		
6,250.0	6,187.4	6,023.2	6,022.0	17.3	2.3	-6.33	-193.6	-6,552.8	6,864.2	6,845.9	18.22	376.740		
6,299.2	6,234.4	6,093.4	6,092.1	17.4	2.3	-6.45	-190.5	-6,554.3	6,850.5	6,832.3	18.23	375.725		
6,300.0	6,235.1	6,094.5	6,093.2	17.4	2.3	-6.45	-190.4	-6,554.4	6,850.2	6,832.0	18.23	375.711		
6,350.0	6,281.7	6,142.8	6,141.4	17.4	2.3	-6.61	-188.3	-6,555.3	6,832.9	6,814.7	18.20	375.345		
6,397.6	6,324.8	6,185.8	6,184.4	17.3	2.3	-6.82	-186.6	-6,556.2	6,813.4	6,795.3	18.14	375.583		
6,400.0	6,326.9	6,187.9	6,186.5	17.3	2.3	-6.83	-186.5	-6,556.2	6,812.4	6,794.3	18.14	375.612		
6,450.0	6,370.5	6,231.6	6,230.2	17.3	2.3	-7.10	-185.0	-6,557.0	6,788.8	6,770.7	18.03	376.589		
6,496.0	6,409.1	6,270.3	6,268.9	17.3	2.3	-7.40	-183.8	-6,557.8	6,764.4	6,746.5	17.89	378.162		
6,500.0	6,412.3	6,273.6	6,272.1	17.3	2.3	-7.43	-183.7	-6,557.8	6,762.2	6,744.3	17.87	378.331		
6,550.0	6,452.1	6,312.7	6,311.2	17.3	2.3	-7.84	-182.6	-6,558.6	6,732.7	6,715.0	17.68	380.877		
6,594.5	6,485.6	6,344.1	6,342.6	17.3	2.3	-8.28	-181.8	-6,559.1	6,704.2	6,686.7	17.47	383.809		
6,600.0	6,489.7	6,347.9	6,346.4	17.3	2.3	-8.34	-181.7	-6,559.2	6,700.5	6,683.1	17.44	384.225		
6,650.0	6,524.9	6,381.0	6,379.5	17.2	2.3	-8.96	-181.0	-6,559.8	6,665.8	6,648.6	17.17	388.280		
6,692.9	6,553.0	6,408.9	6,407.4	17.2	2.3	-9.60	-180.4	-6,560.4	6,634.1	6,617.1	16.92	392.149		
6,700.0	6,557.5	6,413.9	6,412.3	17.2	2.3	-9.72	-180.3	-6,560.5	6,628.6	6,611.8	16.87	392.829		
6,750.0	6,587.4	6,447.1	6,445.6	17.2	2.3	-10.68	-179.6	-6,561.1	6,589.3	6,572.7	16.57	397.561		
6,791.3	6,609.9	6,472.2	6,470.7	17.2	2.3	-11.66	-179.1	-6,561.5	6,555.3	6,538.9	16.34	401.282		
6,800.0	6,614.4	6,477.2	6,475.7	17.2	2.3	-11.90	-179.0	-6,561.6	6,547.9	6,531.7	16.28	402.110		
6,850.0	6,638.4	6,505.0	6,503.4	17.2	2.3	-13.49	-178.5	-6,562.1	6,504.8	6,488.7	16.03	405.661		
6,889.7	6,655.3	6,527.7	6,526.1	17.4	2.3	-15.14	-178.1	-6,562.5	6,469.3	6,453.4	15.90	406.811		
6,900.0	6,659.4	6,533.1	6,531.6	17.5	2.3	-15.64	-178.0	-6,562.6	6,459.9	6,444.1	15.88	406.733		
6,950.0	6,677.1	6,557.0	6,555.5	18.0	2.3	-18.64	-177.5	-6,563.0	6,413.7	6,397.8	15.90	403.275		
6,988.2	6,688.4	6,572.3	6,570.8	18.5	2.3	-21.83	-177.3	-6,563.2	6,377.7	6,361.5	16.13	395.383		
7,000.0	6,691.5	6,576.6	6,575.0	18.7	2.3	-23.04	-177.2	-6,563.3	6,366.4	6,350.1	16.25	391.725		
7,050.0	6,702.5	6,591.7	6,590.1	19.5	2.3	-29.96	-176.9	-6,563.5	6,318.0	6,300.8	17.20	367.281		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
7,086.6	6,708.4	6,599.9	6,598.3	20.1	2.3	-37.91	-176.8	-6,563.6	6,282.2	6,263.7	18.52	339.124		
7,100.0	6,710.1	6,602.3	6,600.7	20.4	2.3	-41.76	-176.8	-6,563.6	6,269.1	6,249.9	19.17	327.017		
7,150.0	6,714.2	6,608.5	6,606.9	21.3	2.3	-62.97	-176.7	-6,563.7	6,219.6	6,197.5	22.11	281.280		
7,185.0	6,715.0	6,610.1	6,608.5	21.9	2.3	-84.97	-176.7	-6,563.7	6,184.8	6,161.2	23.66	261.388		
7,185.6	6,715.0	6,610.1	6,608.5	21.9	2.3	-85.34	-176.7	-6,563.7	6,184.3	6,160.6	23.68	261.154		
7,200.0	6,715.0	6,610.3	6,608.8	22.2	2.3	-85.35	-176.7	-6,563.7	6,170.0	6,146.0	23.96	257.538		
7,283.4	6,714.8	6,611.5	6,610.0	23.9	2.3	-85.45	-176.6	-6,563.7	6,087.1	6,061.5	25.63	237.464		
7,300.0	6,714.8	6,611.8	6,610.2	24.2	2.3	-85.47	-176.6	-6,563.7	6,070.7	6,044.7	25.97	233.791		
7,381.9	6,714.6	6,613.0	6,611.4	26.0	2.3	-85.56	-176.6	-6,563.8	5,989.4	5,961.7	27.73	216.023		
7,400.0	6,714.6	6,613.2	6,611.6	26.4	2.3	-85.58	-176.6	-6,563.8	5,971.4	5,943.3	28.12	212.390		
7,480.3	6,714.4	6,600.0	6,598.4	28.2	2.3	-84.53	-176.8	-6,563.6	5,891.7	5,861.8	29.90	197.078		
7,500.0	6,714.4	6,600.0	6,598.4	28.7	2.3	-84.53	-176.8	-6,563.6	5,872.1	5,841.8	30.34	193.545		
7,578.7	6,714.2	6,600.0	6,598.4	30.5	2.3	-84.53	-176.8	-6,563.6	5,794.0	5,761.8	32.19	180.002		
7,600.0	6,714.2	6,600.0	6,598.4	31.0	2.3	-84.53	-176.8	-6,563.6	5,772.9	5,740.2	32.69	176.605		
7,677.1	6,714.0	6,600.0	6,598.4	32.9	2.3	-84.53	-176.8	-6,563.6	5,696.4	5,661.8	34.55	164.852		
7,700.0	6,714.0	6,600.0	6,598.4	33.4	2.3	-84.53	-176.8	-6,563.6	5,673.7	5,638.6	35.11	161.611		
7,775.6	6,713.9	6,600.0	6,598.4	35.3	2.3	-84.53	-176.8	-6,563.6	5,598.7	5,561.8	36.98	151.409		
7,800.0	6,713.8	6,600.0	6,598.4	35.9	2.3	-84.53	-176.8	-6,563.6	5,574.5	5,536.9	37.58	148.330		
7,874.0	6,713.7	6,600.0	6,598.4	37.8	2.3	-84.53	-176.8	-6,563.6	5,501.2	5,461.7	39.45	139.457		
7,900.0	6,713.6	6,600.0	6,598.4	38.4	2.3	-84.53	-176.8	-6,563.6	5,475.4	5,435.3	40.10	136.536		
7,972.4	6,713.5	6,600.0	6,598.4	40.3	2.3	-84.53	-176.8	-6,563.6	5,403.6	5,361.6	41.95	128.798		
8,000.0	6,713.4	6,600.0	6,598.4	41.0	2.3	-84.53	-176.8	-6,563.6	5,376.3	5,333.6	42.66	126.029		
8,070.8	6,713.3	6,600.0	6,598.4	42.8	2.3	-84.53	-176.8	-6,563.6	5,306.1	5,261.6	44.49	119.260		
8,100.0	6,713.2	6,600.0	6,598.4	43.6	2.3	-84.53	-176.8	-6,563.6	5,277.2	5,231.9	45.25	116.634		
8,169.3	6,713.1	6,600.0	6,598.4	45.4	2.3	-84.53	-176.8	-6,563.6	5,208.6	5,161.5	47.06	110.691		
8,200.0	6,713.0	6,600.0	6,598.4	46.2	2.3	-84.53	-176.8	-6,563.6	5,178.1	5,130.3	47.86	108.199		
8,267.7	6,712.9	6,600.0	6,598.4	48.0	2.3	-84.53	-176.8	-6,563.6	5,111.1	5,061.5	49.64	102.963		
8,300.0	6,712.8	6,600.0	6,598.4	48.8	2.3	-84.53	-176.8	-6,563.6	5,079.1	5,028.6	50.49	100.596		
8,366.1	6,712.7	6,600.0	6,598.4	50.6	2.3	-84.53	-176.8	-6,563.6	5,013.7	4,961.4	52.24	95.968		
8,400.0	6,712.6	6,600.0	6,598.4	51.5	2.3	-84.53	-176.8	-6,563.6	4,980.2	4,927.0	53.14	93.716		
8,464.5	6,712.5	6,600.0	6,598.4	53.2	2.3	-84.53	-176.8	-6,563.6	4,916.3	4,861.4	54.86	89.613		
8,500.0	6,712.4	6,600.0	6,598.4	54.1	2.3	-84.53	-176.8	-6,563.6	4,881.2	4,825.4	55.81	87.467		
8,563.0	6,712.3	6,600.0	6,598.4	55.8	2.3	-84.53	-176.8	-6,563.6	4,819.0	4,761.5	57.49	83.818		
8,600.0	6,712.3	6,600.0	6,598.4	56.8	2.3	-84.53	-176.8	-6,563.6	4,782.3	4,723.9	58.48	81.771		
8,661.4	6,712.1	6,600.0	6,598.4	58.5	2.3	-84.53	-176.8	-6,563.6	4,721.7	4,661.5	60.14	78.516		
8,700.0	6,712.1	6,600.0	6,598.4	59.5	2.3	-84.53	-176.8	-6,563.6	4,683.5	4,622.3	61.17	76.560		
8,759.8	6,711.9	6,600.0	6,598.4	61.1	2.3	-84.53	-176.8	-6,563.6	4,624.4	4,561.6	62.79	73.650		
8,800.0	6,711.9	6,600.0	6,598.4	62.2	2.3	-84.53	-176.8	-6,563.6	4,584.7	4,520.9	63.87	71.778		
8,858.2	6,711.8	6,600.0	6,598.4	63.8	2.3	-84.53	-176.8	-6,563.6	4,527.2	4,461.8	65.45	69.169		
8,900.0	6,711.7	6,600.0	6,598.4	64.9	2.3	-84.53	-176.8	-6,563.6	4,486.0	4,419.4	66.58	67.376		
8,956.7	6,711.6	6,600.0	6,598.4	66.5	2.3	-84.53	-176.8	-6,563.6	4,430.1	4,361.9	68.12	65.033		
9,000.0	6,711.5	6,600.0	6,598.4	67.6	2.3	-84.53	-176.8	-6,563.6	4,387.3	4,318.0	69.30	63.312		
9,055.1	6,711.4	6,600.0	6,598.4	69.1	2.3	-84.53	-176.8	-6,563.6	4,333.0	4,262.2	70.80	61.203		
9,100.0	6,711.3	6,600.0	6,598.4	70.4	2.3	-84.52	-176.8	-6,563.6	4,288.7	4,216.7	72.02	59.550		
9,153.5	6,711.2	6,600.0	6,598.4	71.8	2.3	-84.52	-176.8	-6,563.6	4,236.0	4,162.5	73.48	57.649		
9,200.0	6,711.1	6,600.0	6,598.4	73.1	2.3	-84.52	-176.8	-6,563.6	4,190.2	4,115.4	74.75	56.059		
9,251.9	6,711.0	6,600.0	6,598.4	74.5	2.3	-84.52	-176.8	-6,563.6	4,139.0	4,062.8	76.17	54.342		
9,300.0	6,710.9	6,600.0	6,598.4	75.8	2.3	-84.52	-176.8	-6,563.6	4,091.7	4,014.2	77.48	52.810		
9,350.4	6,710.8	6,600.0	6,598.4	77.2	2.3	-84.52	-176.8	-6,563.6	4,042.1	3,963.3	78.86	51.258		
9,400.0	6,710.7	6,600.0	6,598.4	78.6	2.3	-84.52	-176.8	-6,563.6	3,993.3	3,913.1	80.22	49.781		
9,448.8	6,710.6	6,600.0	6,598.4	79.9	2.3	-84.52	-176.8	-6,563.6	3,945.3	3,863.7	81.55	48.376		
9,500.0	6,710.5	6,600.0	6,598.4	81.3	2.3	-84.52	-176.8	-6,563.6	3,895.0	3,812.0	82.96	46.951		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,547.2	6,710.4	6,600.0	6,598.4	82.6	2.3	-84.52	-176.8	-6,563.6	3,848.6	3,764.3	84.25	45.678		
9,600.0	6,710.3	6,600.0	6,598.4	84.1	2.3	-84.52	-176.8	-6,563.6	3,796.7	3,711.0	85.70	44.301		
9,645.6	6,710.2	6,600.0	6,598.4	85.3	2.3	-84.52	-176.8	-6,563.6	3,751.9	3,665.0	86.96	43.146		
9,700.0	6,710.1	6,600.0	6,598.4	86.8	2.3	-84.52	-176.8	-6,563.6	3,698.6	3,610.2	88.45	41.815		
9,744.1	6,710.0	6,600.0	6,598.4	88.1	2.3	-84.52	-176.8	-6,563.6	3,655.4	3,565.7	89.67	40.767		
9,800.0	6,709.9	6,600.0	6,598.4	89.6	2.3	-84.52	-176.8	-6,563.6	3,600.6	3,509.4	91.20	39.478		
9,842.5	6,709.9	6,600.0	6,598.4	90.8	2.3	-84.52	-176.8	-6,563.6	3,558.9	3,466.6	92.38	38.527		
9,900.0	6,709.7	6,600.0	6,598.4	92.4	2.3	-84.52	-176.8	-6,563.6	3,502.7	3,408.7	93.96	37.279		
9,940.9	6,709.7	6,600.0	6,598.4	93.5	2.3	-84.52	-176.8	-6,563.6	3,462.6	3,367.5	95.09	36.415		
10,000.0	6,709.6	6,600.0	6,598.4	95.1	2.3	-84.52	-176.8	-6,563.6	3,404.9	3,308.1	96.72	35.205		
10,039.3	6,709.5	6,600.0	6,598.4	96.2	2.3	-84.52	-176.8	-6,563.6	3,366.4	3,268.6	97.80	34.421		
10,100.0	6,709.4	6,600.0	6,598.4	97.9	2.3	-84.52	-176.8	-6,563.6	3,307.2	3,207.7	99.48	33.246		
10,137.8	6,709.3	6,600.0	6,598.4	98.9	2.3	-84.52	-176.8	-6,563.6	3,270.3	3,169.8	100.52	32.534		
10,200.0	6,709.2	6,600.0	6,598.4	100.7	2.3	-84.52	-176.8	-6,563.6	3,209.7	3,107.4	102.24	31.394		
10,236.2	6,709.1	6,600.0	6,598.4	101.7	2.3	-84.52	-176.8	-6,563.6	3,174.4	3,071.2	103.24	30.748		
10,300.0	6,709.0	6,600.0	6,598.4	103.4	2.3	-84.52	-176.8	-6,563.6	3,112.3	3,007.3	105.00	29.640		
10,334.6	6,708.9	6,600.0	6,598.4	104.4	2.3	-84.52	-176.8	-6,563.6	3,078.6	2,972.7	105.96	29.055		
10,400.0	6,708.8	6,600.0	6,598.4	106.2	2.3	-84.52	-176.8	-6,563.6	3,015.1	2,907.3	107.77	27.978		
10,433.0	6,708.7	6,600.0	6,598.4	107.1	2.3	-84.52	-176.8	-6,563.6	2,983.0	2,874.3	108.68	27.447		
10,500.0	6,708.6	6,600.0	6,598.4	109.0	2.3	-84.52	-176.8	-6,563.6	2,918.1	2,807.6	110.53	26.400		
10,531.5	6,708.5	6,600.0	6,598.4	109.9	2.3	-84.52	-176.8	-6,563.6	2,887.6	2,776.2	111.41	25.920		
10,600.0	6,708.4	6,600.0	6,598.4	111.8	2.3	-84.52	-176.8	-6,563.6	2,821.3	2,708.0	113.30	24.900		
10,629.9	6,708.4	6,600.0	6,598.4	112.6	2.3	-84.52	-176.8	-6,563.6	2,792.4	2,678.3	114.13	24.466		
10,700.0	6,708.2	6,600.0	6,598.4	114.6	2.3	-84.52	-176.8	-6,563.6	2,724.7	2,608.7	116.07	23.474		
10,728.3	6,708.2	6,600.0	6,598.4	115.3	2.3	-84.52	-176.8	-6,563.6	2,697.4	2,580.6	116.86	23.083		
10,800.0	6,708.0	6,600.0	6,598.4	117.3	2.3	-84.52	-176.8	-6,563.6	2,628.4	2,509.6	118.85	22.116		
10,826.7	6,708.0	6,600.0	6,598.4	118.1	2.3	-84.52	-176.8	-6,563.6	2,602.7	2,483.1	119.59	21.764		
10,900.0	6,707.8	6,600.0	6,598.4	120.1	2.3	-84.52	-176.8	-6,563.6	2,532.4	2,410.8	121.62	20.822		
10,925.2	6,707.8	6,600.0	6,598.4	120.8	2.3	-84.52	-176.8	-6,563.6	2,508.3	2,386.0	122.32	20.506		
11,000.0	6,707.6	6,600.0	6,598.4	122.9	2.3	-84.52	-176.8	-6,563.6	2,436.7	2,312.3	124.39	19.589		
11,023.6	6,707.6	6,600.0	6,598.4	123.6	2.3	-84.52	-176.8	-6,563.6	2,414.2	2,289.1	125.05	19.306		
11,100.0	6,707.5	6,600.0	6,598.4	125.7	2.3	-84.52	-176.8	-6,563.6	2,341.3	2,214.2	127.17	18.412		
11,122.0	6,707.4	6,600.0	6,598.4	126.3	2.3	-84.52	-176.8	-6,563.6	2,320.4	2,192.6	127.78	18.159		
11,200.0	6,707.3	6,600.0	6,598.4	128.5	2.3	-84.52	-176.8	-6,563.6	2,246.4	2,116.5	129.94	17.288		
11,220.4	6,707.2	6,600.0	6,598.4	129.0	2.3	-84.52	-176.8	-6,563.6	2,227.0	2,096.5	130.51	17.064		
11,300.0	6,707.1	6,600.0	6,598.4	131.3	2.3	-84.52	-176.8	-6,563.6	2,151.9	2,019.2	132.72	16.214		
11,318.9	6,707.0	6,600.0	6,598.4	131.8	2.3	-84.52	-176.8	-6,563.6	2,134.2	2,000.9	133.25	16.017		
11,400.0	6,706.9	6,600.0	6,598.4	134.0	2.3	-84.52	-176.8	-6,563.6	2,058.0	1,922.5	135.50	15.188		
11,417.3	6,706.9	6,600.0	6,598.4	134.5	2.3	-84.52	-176.8	-6,563.6	2,041.8	1,905.8	135.98	15.015		
11,500.0	6,706.7	6,600.0	6,598.4	136.8	2.3	-84.52	-176.8	-6,563.6	1,964.6	1,826.3	138.28	14.208		
11,515.7	6,706.7	6,600.0	6,598.4	137.3	2.3	-84.52	-176.8	-6,563.6	1,950.0	1,811.3	138.71	14.057		
11,600.0	6,706.5	6,600.0	6,598.4	139.6	2.3	-84.52	-176.8	-6,563.6	1,871.9	1,730.9	141.06	13.271		
11,614.1	6,706.5	6,600.0	6,598.4	140.0	2.3	-84.52	-176.8	-6,563.6	1,858.9	1,717.4	141.45	13.142		
11,700.0	6,706.3	6,600.0	6,598.4	142.4	2.3	-84.52	-176.8	-6,563.6	1,780.0	1,636.2	143.84	12.375		
11,712.6	6,706.3	6,600.0	6,598.4	142.8	2.3	-84.52	-176.8	-6,563.6	1,768.6	1,624.4	144.19	12.266		
11,800.0	6,706.1	6,600.0	6,598.4	145.2	2.3	-84.52	-176.8	-6,563.6	1,689.1	1,542.5	146.62	11.520		
11,811.0	6,706.1	6,600.0	6,598.4	145.5	2.3	-84.52	-176.8	-6,563.6	1,679.1	1,532.2	146.92	11.429		
11,900.0	6,705.9	6,600.0	6,598.4	148.0	2.3	-84.52	-176.8	-6,563.6	1,599.2	1,449.8	149.40	10.704		
11,909.4	6,705.9	6,600.0	6,598.4	148.3	2.3	-84.52	-176.8	-6,563.6	1,590.8	1,441.1	149.66	10.629		
12,000.0	6,705.8	6,600.0	6,598.4	150.8	2.3	-84.52	-176.8	-6,563.6	1,510.6	1,358.4	152.18	9.926		
12,007.8	6,705.7	6,600.0	6,598.4	151.0	2.3	-84.52	-176.8	-6,563.6	1,503.7	1,351.3	152.40	9.867		
12,100.0	6,705.6	6,600.0	6,598.4	153.6	2.3	-84.52	-176.8	-6,563.6	1,423.5	1,268.5	154.97	9.186		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,600.0	6,598.4	153.8	2.3	-84.52	-176.8	-6,563.6	1,418.1	1,262.9	155.14	9.141	
12,200.0	6,705.4	6,600.0	6,598.4	156.4	2.3	-84.52	-176.8	-6,563.6	1,338.2	1,180.4	157.75	8.483	
12,204.7	6,705.4	6,600.0	6,598.4	156.5	2.3	-84.52	-176.8	-6,563.6	1,334.2	1,176.4	157.88	8.451	
12,300.0	6,705.2	6,600.0	6,598.4	159.2	2.3	-84.52	-176.8	-6,563.6	1,255.1	1,094.5	160.53	7.818	
12,303.1	6,705.2	6,600.0	6,598.4	159.3	2.3	-84.52	-176.8	-6,563.6	1,252.5	1,091.9	160.62	7.798	
12,400.0	6,705.0	6,600.0	6,598.4	162.0	2.3	-84.52	-176.8	-6,563.6	1,174.6	1,011.3	163.32	7.192	
12,401.5	6,705.0	6,600.0	6,598.4	162.0	2.3	-84.52	-176.8	-6,563.6	1,173.4	1,010.0	163.36	7.183	
12,500.0	6,704.8	6,600.0	6,598.4	164.8	2.3	-84.52	-176.8	-6,563.6	1,097.3	931.2	166.10	6.606	
12,598.4	6,704.6	6,600.0	6,598.4	167.5	2.3	-84.52	-176.8	-6,563.6	1,025.1	856.3	168.84	6.071	
12,600.0	6,704.6	6,600.0	6,598.4	167.6	2.3	-84.52	-176.8	-6,563.6	1,024.0	855.1	168.89	6.063	
12,696.8	6,704.4	6,600.0	6,598.4	170.3	2.3	-84.52	-176.8	-6,563.6	957.6	786.0	171.59	5.581	
12,700.0	6,704.4	6,600.0	6,598.4	170.4	2.3	-84.52	-176.8	-6,563.6	955.5	783.8	171.67	5.566	
12,795.2	6,704.3	6,600.0	6,598.4	173.0	2.3	-84.52	-176.8	-6,563.6	895.8	721.5	174.33	5.139	
12,800.0	6,704.2	6,600.0	6,598.4	173.2	2.3	-84.52	-176.8	-6,563.6	893.0	718.5	174.46	5.119	
12,893.7	6,704.1	6,600.0	6,598.4	175.8	2.3	-84.52	-176.8	-6,563.6	841.0	664.0	177.07	4.750	
12,900.0	6,704.1	6,600.0	6,598.4	176.0	2.3	-84.52	-176.8	-6,563.6	837.8	660.5	177.25	4.727	
12,992.1	6,703.9	6,600.0	6,598.4	178.5	2.3	-84.52	-176.8	-6,563.6	794.7	614.9	179.81	4.420	
13,000.0	6,703.9	6,600.0	6,598.4	178.8	2.3	-84.52	-176.8	-6,563.6	791.4	611.4	180.03	4.396	
13,090.5	6,703.7	6,600.0	6,598.4	181.3	2.3	-84.52	-176.8	-6,563.6	758.4	575.8	182.56	4.154	
13,100.0	6,703.7	6,600.0	6,598.4	181.6	2.3	-84.52	-176.8	-6,563.6	755.5	572.7	182.82	4.132	
13,188.9	6,703.5	6,600.0	6,598.4	184.0	2.3	-84.52	-176.8	-6,563.6	733.6	548.3	185.30	3.959	
13,200.0	6,703.5	6,600.0	6,598.4	184.4	2.3	-84.52	-176.8	-6,563.6	731.6	546.0	185.61	3.941	
13,287.4	6,703.3	6,600.0	6,598.4	186.8	2.3	-84.52	-176.8	-6,563.6	721.5	533.4	188.05	3.837	
13,300.0	6,703.3	6,600.0	6,598.4	187.2	2.3	-84.52	-176.8	-6,563.6	720.9	532.5	188.40	3.826	
13,327.8	6,703.3	6,600.0	6,598.4	187.9	2.3	-84.52	-176.8	-6,563.6	720.3	531.2	189.17	3.808 CC, ES	
13,385.8	6,703.2	6,600.0	6,598.4	189.6	2.3	-84.52	-176.8	-6,563.6	722.7	531.9	190.79	3.788	
13,400.0	6,703.1	6,600.0	6,598.4	190.0	2.3	-84.52	-176.8	-6,563.6	723.9	532.8	191.19	3.787 SF	
13,484.2	6,703.0	6,600.0	6,598.4	192.3	2.3	-84.52	-176.8	-6,563.6	737.1	543.6	193.53	3.809	
13,500.0	6,702.9	6,600.0	6,598.4	192.8	2.3	-84.52	-176.8	-6,563.6	740.6	546.7	193.97	3.818	
13,582.6	6,702.8	6,600.0	6,598.4	195.1	2.3	-84.52	-176.8	-6,563.6	764.1	567.8	196.28	3.893	
13,600.0	6,702.8	6,600.0	6,598.4	195.6	2.3	-84.52	-176.8	-6,563.6	770.0	573.3	196.76	3.914	
13,681.1	6,702.6	6,600.0	6,598.4	197.8	2.3	-84.52	-176.8	-6,563.6	802.3	603.3	199.03	4.031	
13,700.0	6,702.6	6,600.0	6,598.4	198.4	2.3	-84.52	-176.8	-6,563.6	810.8	611.3	199.55	4.063	
13,779.5	6,702.4	6,600.0	6,598.4	200.6	2.3	-84.52	-176.8	-6,563.6	850.2	648.5	201.77	4.214	
13,800.0	6,702.4	6,600.0	6,598.4	201.2	2.3	-84.52	-176.8	-6,563.6	861.3	659.0	202.34	4.257	
13,877.9	6,702.2	6,600.0	6,598.4	203.3	2.3	-84.52	-176.8	-6,563.6	906.4	701.9	204.52	4.432	
13,900.0	6,702.2	6,600.0	6,598.4	204.0	2.3	-84.52	-176.8	-6,563.6	919.9	714.8	205.13	4.485	
13,976.3	6,702.1	6,600.0	6,598.4	206.1	2.3	-84.52	-176.8	-6,563.6	969.3	762.0	207.26	4.677	
14,000.0	6,702.0	6,600.0	6,598.4	206.8	2.3	-84.52	-176.8	-6,563.6	985.3	777.3	207.92	4.739	
14,074.8	6,701.9	6,600.0	6,598.4	208.9	2.3	-84.52	-176.8	-6,563.6	1,037.7	827.7	210.01	4.941	
14,100.0	6,701.8	6,600.0	6,598.4	209.6	2.3	-84.52	-176.8	-6,563.6	1,056.0	845.3	210.71	5.012	
14,173.2	6,701.7	6,600.0	6,598.4	211.6	2.3	-84.52	-176.8	-6,563.6	1,110.7	897.9	212.76	5.220	
14,200.0	6,701.6	6,600.0	6,598.4	212.4	2.3	-84.52	-176.8	-6,563.6	1,131.2	917.7	213.50	5.298	
14,271.6	6,701.5	6,600.0	6,598.4	214.4	2.3	-84.52	-176.8	-6,563.6	1,187.3	971.8	215.50	5.510	
14,300.0	6,701.4	6,600.0	6,598.4	215.2	2.3	-84.52	-176.8	-6,563.6	1,210.0	993.7	216.29	5.594	
14,370.0	6,701.3	6,600.0	6,598.4	217.1	2.3	-84.52	-176.8	-6,563.6	1,267.0	1,048.7	218.25	5.805	
14,400.0	6,701.3	6,600.0	6,598.4	218.0	2.3	-84.52	-176.8	-6,563.6	1,291.7	1,072.6	219.08	5.896	
14,468.5	6,701.1	6,600.0	6,598.4	219.9	2.3	-84.52	-176.8	-6,563.6	1,349.1	1,128.1	221.00	6.105	
14,500.0	6,701.1	6,600.0	6,598.4	220.8	2.3	-84.52	-176.8	-6,563.6	1,375.9	1,154.0	221.88	6.201	
14,566.9	6,701.0	6,600.0	6,598.4	222.6	2.3	-84.52	-176.8	-6,563.6	1,433.3	1,209.5	223.74	6.406	
14,600.0	6,700.9	6,600.0	6,598.4	223.6	2.3	-84.52	-176.8	-6,563.6	1,462.0	1,237.3	224.67	6.507	
14,665.3	6,700.8	6,600.0	6,598.4	225.4	2.3	-84.52	-176.8	-6,563.6	1,519.2	1,292.7	226.49	6.707	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,600.0	6,598.4	226.4	2.3	-84.52	-176.8	-6,563.6	1,549.8	1,322.3	227.46	6.814	
14,763.7	6,700.6	6,600.0	6,598.4	228.2	2.3	-84.52	-176.8	-6,563.6	1,606.5	1,377.3	229.24	7.008	
14,800.0	6,700.5	6,600.0	6,598.4	229.2	2.3	-84.52	-176.8	-6,563.6	1,639.0	1,408.7	230.25	7.118	
14,862.2	6,700.4	6,600.0	6,598.4	230.9	2.3	-84.52	-176.8	-6,563.6	1,695.1	1,463.1	231.99	7.307	
14,900.0	6,700.3	6,600.0	6,598.4	232.0	2.3	-84.52	-176.8	-6,563.6	1,729.4	1,496.3	233.04	7.421	
14,960.6	6,700.2	6,600.0	6,598.4	233.7	2.3	-84.52	-176.8	-6,563.6	1,784.6	1,549.9	234.73	7.603	
15,000.0	6,700.2	6,600.0	6,598.4	234.8	2.3	-84.52	-176.8	-6,563.6	1,820.8	1,584.9	235.83	7.721	
15,059.0	6,700.0	6,600.0	6,598.4	236.4	2.3	-84.52	-176.8	-6,563.6	1,875.1	1,637.6	237.48	7.896	
15,082.8	6,700.0	6,600.0	6,598.4	237.1	2.3	-84.52	-176.8	-6,563.6	1,897.1	1,659.0	238.15	7.966	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-105.36	-1,948.1	-7,092.9	7,355.6				
98.4	98.4	56.7	56.7	0.1	0.0	-105.36	-1,948.0	-7,092.9	7,355.6	7,355.5	0.10	N/A	
100.0	100.0	58.0	58.0	0.1	0.0	-105.36	-1,947.9	-7,092.9	7,355.6	7,355.5	0.10	N/A	
196.8	196.8	166.3	166.3	0.3	0.1	-105.35	-1,947.3	-7,093.3	7,355.7	7,355.2	0.46	N/A	
200.0	200.0	170.6	170.6	0.3	0.1	-105.35	-1,947.3	-7,093.3	7,355.7	7,355.2	0.47	N/A	
295.3	295.3	264.7	264.7	0.5	0.3	-105.35	-1,946.7	-7,093.3	7,355.6	7,354.8	0.80	9,223.343	
300.0	300.0	268.9	268.9	0.5	0.3	-105.35	-1,946.6	-7,093.3	7,355.6	7,354.8	0.81	9,060.966	
315.3	315.3	282.3	282.3	0.6	0.3	-105.35	-1,946.5	-7,093.4	7,355.6	7,354.7	0.86	8,573.242	
393.7	393.7	359.8	359.8	0.8	0.3	-105.34	-1,946.1	-7,093.5	7,355.6	7,354.5	1.09	6,740.284	
400.0	400.0	366.3	366.3	0.8	0.3	-105.34	-1,946.0	-7,093.5	7,355.6	7,354.5	1.11	6,627.166	
492.1	492.1	446.7	446.6	1.0	0.4	-105.34	-1,945.4	-7,093.7	7,355.7	7,354.3	1.37	5,384.678	
500.0	500.0	452.8	452.8	1.0	0.4	-105.34	-1,945.4	-7,093.8	7,355.7	7,354.3	1.39	5,302.704	
590.5	590.5	529.0	529.0	1.2	0.4	-105.33	-1,944.9	-7,094.1	7,356.0	7,354.3	1.63	4,509.579	
600.0	600.0	538.0	537.9	1.2	0.5	-105.33	-1,944.8	-7,094.2	7,356.0	7,354.3	1.66	4,439.615	
689.0	689.0	621.5	621.5	1.4	0.5	-105.33	-1,944.3	-7,094.7	7,356.4	7,354.5	1.90	3,878.238	
700.0	700.0	631.5	631.5	1.4	0.5	-105.32	-1,944.2	-7,094.8	7,356.4	7,354.5	1.93	3,819.799	
787.4	787.4	713.3	713.3	1.6	0.5	-105.32	-1,943.9	-7,095.3	7,356.9	7,354.7	2.16	3,411.316	
800.0	800.0	727.3	727.3	1.7	0.6	-105.32	-1,943.9	-7,095.4	7,357.0	7,354.8	2.19	3,358.521	
885.8	885.8	821.3	821.2	1.9	0.6	-105.32	-1,943.7	-7,095.9	7,357.4	7,355.0	2.42	3,039.709	
900.0	900.0	836.2	836.2	1.9	0.6	-105.32	-1,943.7	-7,096.0	7,357.4	7,355.0	2.46	2,993.480	
984.2	984.2	923.9	923.9	2.1	0.6	-105.32	-1,943.7	-7,096.3	7,357.8	7,355.1	2.68	2,746.756	
1,000.0	1,000.0	939.7	939.7	2.1	0.6	-105.32	-1,943.7	-7,096.4	7,357.8	7,355.1	2.72	2,705.724	
1,082.7	1,082.7	1,023.6	1,023.6	2.3	0.7	-105.32	-1,943.5	-7,096.8	7,358.1	7,355.2	2.93	2,510.856	
1,100.0	1,100.0	1,041.6	1,041.6	2.3	0.7	-105.32	-1,943.5	-7,096.8	7,358.2	7,355.2	2.97	2,474.507	
1,181.1	1,181.1	1,123.8	1,123.8	2.5	0.7	-134.04	-1,943.6	-7,097.1	7,359.3	7,356.1	3.20	2,302.224	
1,200.0	1,200.0	1,141.8	1,141.8	2.6	0.7	-134.03	-1,943.6	-7,097.1	7,359.7	7,356.5	3.25	2,267.063	
1,279.5	1,279.4	1,219.1	1,219.1	2.7	0.7	-134.01	-1,943.8	-7,097.4	7,362.7	7,359.3	3.46	2,130.105	
1,300.0	1,299.8	1,240.4	1,240.4	2.8	0.7	-134.00	-1,943.9	-7,097.5	7,363.7	7,360.2	3.51	2,097.332	
1,377.9	1,377.5	1,320.4	1,320.4	3.0	0.8	-133.97	-1,944.0	-7,097.7	7,368.5	7,364.8	3.72	1,980.079	
1,400.0	1,399.5	1,342.3	1,342.2	3.0	0.8	-133.96	-1,944.1	-7,097.8	7,370.1	7,366.4	3.78	1,949.807	
1,476.4	1,475.3	1,418.3	1,418.3	3.2	0.8	-133.92	-1,944.3	-7,097.9	7,376.7	7,372.7	3.99	1,848.656	
1,500.0	1,498.7	1,442.2	1,442.2	3.3	0.8	-133.91	-1,944.4	-7,098.0	7,379.0	7,374.9	4.05	1,819.785	
1,574.8	1,572.6	1,513.2	1,513.2	3.5	0.8	-133.85	-1,944.7	-7,098.1	7,387.1	7,382.9	4.27	1,730.140	
1,600.0	1,597.5	1,532.1	1,532.0	3.5	0.8	-133.82	-1,944.8	-7,098.2	7,390.2	7,385.9	4.34	1,702.817	
1,673.2	1,669.4	1,586.6	1,586.6	3.7	0.9	-133.74	-1,945.1	-7,098.4	7,400.1	7,395.6	4.56	1,622.628	
1,700.1	1,695.8	1,600.0	1,600.0	3.8	0.9	-133.69	-1,945.2	-7,098.5	7,404.2	7,399.5	4.64	1,596.094	
1,771.6	1,765.7	1,663.6	1,663.6	4.1	0.9	-133.77	-1,945.6	-7,098.9	7,415.2	7,410.3	4.87	1,523.912	
1,800.0	1,793.4	1,686.1	1,686.0	4.2	0.9	-133.80	-1,945.8	-7,099.1	7,419.6	7,414.6	4.95	1,497.671	
1,870.1	1,862.0	1,738.5	1,738.4	4.4	0.9	-133.86	-1,946.4	-7,099.5	7,430.5	7,425.4	5.18	1,433.913	
1,900.0	1,891.3	1,760.4	1,760.3	4.5	0.9	-133.89	-1,946.6	-7,099.8	7,435.3	7,430.0	5.28	1,408.728	
1,968.5	1,958.3	1,813.5	1,813.4	4.8	0.9	-133.96	-1,947.3	-7,100.4	7,446.2	7,440.7	5.51	1,351.980	
2,000.0	1,989.1	1,842.8	1,842.8	4.9	0.9	-133.99	-1,947.7	-7,100.7	7,451.3	7,445.7	5.61	1,327.096	
2,066.9	2,054.5	1,905.4	1,905.3	5.1	1.0	-134.07	-1,948.6	-7,101.5	7,462.1	7,456.3	5.85	1,276.324	
2,100.0	2,086.9	1,936.7	1,936.6	5.3	1.0	-134.11	-1,949.1	-7,101.8	7,467.5	7,461.5	5.96	1,252.758	
2,165.3	2,150.8	1,998.6	1,998.5	5.5	1.0	-134.19	-1,950.1	-7,102.6	7,478.1	7,471.9	6.19	1,207.826	
2,200.0	2,184.7	2,029.2	2,029.1	5.6	1.0	-134.23	-1,950.6	-7,102.9	7,483.7	7,477.4	6.31	1,185.506	
2,263.8	2,247.1	2,085.3	2,085.2	5.9	1.0	-134.30	-1,951.4	-7,103.7	7,494.2	7,487.6	6.54	1,145.934	
2,300.0	2,282.5	2,127.7	2,127.6	6.0	1.0	-134.35	-1,952.0	-7,104.2	7,500.1	7,493.4	6.67	1,124.178	
2,362.2	2,343.3	2,210.2	2,210.1	6.3	1.1	-134.45	-1,952.8	-7,105.2	7,510.2	7,503.3	6.90	1,087.822	
2,400.0	2,380.3	2,244.0	2,243.9	6.5	1.1	-134.49	-1,953.1	-7,105.6	7,516.2	7,509.2	7.04	1,067.657	
2,460.6	2,439.6	2,300.0	2,299.9	6.7	1.1	-134.55	-1,953.6	-7,106.3	7,526.0	7,518.8	7.26	1,036.462	
2,500.0	2,478.1	2,330.1	2,329.9	6.9	1.1	-134.59	-1,953.8	-7,106.7	7,532.4	7,525.0	7.40	1,017.394	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,535.9	2,377.5	2,377.4	7.1	1.1	-134.64	-1,954.2	-7,107.4	7,542.1	7,534.5	7.62	989.773	
2,600.0	2,575.9	2,414.9	2,414.8	7.3	1.1	-134.69	-1,954.4	-7,108.0	7,548.8	7,541.1	7.77	971.389	
2,657.5	2,632.2	2,480.7	2,480.5	7.5	1.1	-134.76	-1,954.8	-7,109.0	7,558.3	7,550.3	7.99	946.111	
2,700.0	2,673.8	2,529.2	2,529.0	7.7	1.2	-134.82	-1,955.3	-7,109.6	7,565.2	7,557.1	8.15	928.375	
2,755.9	2,728.4	2,593.0	2,592.8	7.9	1.2	-134.89	-1,955.9	-7,110.4	7,574.3	7,565.9	8.36	905.997	
2,800.0	2,771.6	2,636.8	2,636.6	8.1	1.2	-134.94	-1,956.3	-7,110.9	7,581.4	7,572.9	8.52	889.355	
2,854.3	2,824.7	2,689.5	2,689.3	8.3	1.2	-135.01	-1,956.9	-7,111.4	7,590.3	7,581.5	8.73	869.646	
2,900.0	2,869.4	2,738.3	2,738.1	8.5	1.2	-135.06	-1,957.5	-7,111.9	7,597.7	7,588.8	8.90	853.728	
2,952.7	2,921.0	2,796.2	2,796.0	8.8	1.2	-135.13	-1,958.3	-7,112.4	7,606.2	7,597.1	9.10	835.978	
3,000.0	2,967.2	2,844.1	2,843.9	9.0	1.3	-135.19	-1,959.0	-7,112.8	7,613.8	7,604.5	9.28	820.878	
3,051.2	3,017.3	2,895.8	2,895.6	9.2	1.3	-135.25	-1,959.7	-7,113.2	7,622.0	7,612.5	9.47	805.102	
3,100.0	3,065.0	2,940.3	2,940.1	9.4	1.3	-135.31	-1,960.3	-7,113.6	7,629.9	7,620.2	9.65	790.706	
3,149.6	3,113.5	2,985.0	2,984.8	9.6	1.3	-135.36	-1,960.9	-7,114.0	7,637.9	7,628.1	9.84	776.583	
3,200.0	3,162.8	3,065.2	3,065.0	9.8	1.3	-135.45	-1,961.8	-7,114.6	7,646.0	7,636.0	10.03	762.243	
3,248.0	3,209.8	3,252.9	3,252.7	10.0	1.4	-135.67	-1,963.4	-7,113.9	7,653.1	7,642.9	10.21	749.547	
3,300.0	3,260.6	3,323.4	3,323.2	10.2	1.4	-135.76	-1,964.1	-7,112.8	7,660.3	7,649.9	10.39	737.172	
3,346.4	3,306.1	3,372.7	3,372.5	10.5	1.4	-135.82	-1,964.8	-7,111.9	7,666.7	7,656.1	10.56	726.305	
3,400.0	3,358.5	3,442.1	3,441.8	10.7	1.4	-135.91	-1,965.8	-7,110.6	7,674.0	7,663.3	10.75	714.164	
3,444.9	3,402.3	3,500.0	3,499.7	10.9	1.4	-135.98	-1,966.8	-7,109.3	7,680.1	7,669.2	10.90	704.278	
3,500.0	3,456.3	3,552.2	3,551.9	11.1	1.4	-136.04	-1,967.7	-7,108.0	7,687.5	7,676.4	11.10	692.515	
3,543.3	3,498.6	3,588.8	3,588.5	11.3	1.4	-136.09	-1,968.5	-7,107.2	7,693.3	7,682.0	11.25	683.560	
3,600.0	3,554.1	3,654.5	3,654.1	11.5	1.4	-136.18	-1,969.9	-7,105.6	7,701.0	7,689.5	11.46	672.135	
3,641.7	3,594.9	3,705.1	3,704.6	11.7	1.4	-136.24	-1,971.0	-7,104.3	7,706.5	7,694.9	11.61	663.955	
3,700.0	3,651.9	3,759.4	3,759.0	12.0	1.4	-136.31	-1,972.2	-7,102.8	7,714.3	7,702.5	11.81	652.936	
3,740.1	3,691.2	3,796.9	3,796.4	12.2	1.4	-136.36	-1,973.1	-7,101.8	7,719.7	7,707.7	11.96	645.558	
3,800.0	3,749.7	3,834.4	3,834.0	12.4	1.4	-136.41	-1,973.9	-7,100.9	7,727.8	7,715.6	12.17	634.864	
3,838.6	3,787.4	3,857.9	3,857.4	12.6	1.4	-136.44	-1,974.5	-7,100.4	7,733.1	7,720.8	12.31	628.166	
3,900.0	3,847.5	3,900.0	3,899.5	12.9	1.4	-136.49	-1,975.5	-7,099.5	7,741.8	7,729.2	12.53	617.808	
3,937.0	3,883.7	3,919.6	3,919.1	13.0	1.4	-136.52	-1,976.0	-7,099.1	7,747.1	7,734.4	12.66	611.722	
4,000.0	3,945.3	3,961.8	3,961.2	13.3	1.4	-136.57	-1,977.1	-7,098.4	7,756.2	7,743.3	12.89	601.620	
4,035.4	3,980.0	4,000.0	3,999.4	13.5	1.4	-136.62	-1,978.2	-7,097.9	7,761.4	7,748.4	13.02	596.023	
4,060.0	4,004.0	4,000.0	3,999.4	13.6	1.4	-136.62	-1,978.2	-7,097.9	7,765.0	7,751.9	13.11	592.344	
4,100.0	4,043.2	4,037.7	4,037.1	13.7	1.5	-136.75	-1,979.2	-7,097.4	7,770.8	7,757.6	13.23	587.503	
4,133.8	4,076.5	4,067.5	4,066.9	13.8	1.5	-136.85	-1,980.0	-7,097.0	7,775.4	7,762.1	13.31	584.192	
4,200.0	4,141.6	4,140.6	4,139.9	14.0	1.5	-137.04	-1,981.6	-7,096.2	7,783.5	7,770.1	13.47	577.775	
4,232.3	4,173.5	4,185.1	4,184.5	14.1	1.5	-137.13	-1,982.5	-7,095.7	7,787.0	7,773.5	13.54	574.972	
4,300.0	4,240.6	4,255.2	4,254.5	14.3	1.5	-137.27	-1,983.6	-7,094.9	7,793.5	7,779.8	13.69	569.217	
4,330.7	4,271.1	4,284.9	4,284.3	14.4	1.5	-137.33	-1,984.1	-7,094.5	7,796.0	7,782.3	13.75	566.928	
4,400.0	4,340.0	4,348.9	4,348.2	14.5	1.5	-137.44	-1,985.0	-7,093.8	7,800.9	7,787.0	13.89	561.741	
4,429.1	4,369.0	4,375.4	4,374.7	14.6	1.5	-137.47	-1,985.3	-7,093.6	7,802.6	7,788.6	13.94	559.841	
4,500.0	4,439.7	4,428.7	4,428.0	14.8	1.5	-137.54	-1,986.0	-7,093.1	7,805.8	7,791.8	14.06	555.185	
4,527.5	4,467.2	4,446.8	4,446.1	14.8	1.5	-137.56	-1,986.2	-7,093.0	7,806.8	7,792.7	14.10	553.631	
4,600.0	4,539.7	4,500.0	4,499.3	14.9	1.6	-137.60	-1,986.9	-7,092.8	7,808.6	7,794.4	14.21	549.466	
4,626.0	4,565.6	4,513.4	4,512.7	15.0	1.6	-137.61	-1,987.1	-7,092.8	7,809.0	7,794.7	14.25	548.143	
4,660.2	4,599.8	4,539.8	4,539.1	15.0	1.6	-108.88	-1,987.4	-7,092.7	7,809.2	7,794.5	14.75	529.321	
4,700.0	4,639.6	4,570.7	4,570.0	15.0	1.6	-108.89	-1,987.8	-7,092.7	7,809.4	7,794.6	14.82	526.922	
4,724.4	4,664.0	4,600.0	4,599.3	15.1	1.6	-108.89	-1,988.2	-7,092.8	7,809.5	7,794.7	14.87	525.229	
4,800.0	4,739.6	4,655.9	4,655.2	15.2	1.6	-108.90	-1,988.9	-7,092.9	7,810.0	7,795.0	15.01	520.375	
4,822.8	4,762.5	4,676.5	4,675.8	15.2	1.6	-108.90	-1,989.2	-7,092.9	7,810.1	7,795.1	15.05	518.886	
4,900.0	4,839.6	4,746.5	4,745.8	15.3	1.6	-108.90	-1,990.0	-7,093.2	7,810.7	7,795.5	15.20	513.916	
4,921.2	4,860.9	4,765.8	4,765.1	15.4	1.6	-108.90	-1,990.3	-7,093.3	7,810.9	7,795.6	15.24	512.556	
5,000.0	4,939.6	4,828.7	4,828.0	15.5	1.6	-108.91	-1,991.0	-7,093.6	7,811.6	7,796.2	15.39	507.663	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Wellbore #													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,019.7	4,959.3	4,842.4	4,841.7	15.5	1.7	-108.91	-1,991.2	-7,093.7	7,811.8	7,796.4	15.42	506.468		
5,100.0	5,039.6	4,900.0	4,899.3	15.6	1.7	-108.91	-1,992.0	-7,094.2	7,812.8	7,797.2	15.57	501.643		
5,118.1	5,057.7	4,926.3	4,925.5	15.7	1.7	-108.92	-1,992.4	-7,094.4	7,813.0	7,797.4	15.61	500.468		
5,200.0	5,139.6	5,034.0	5,033.3	15.8	1.7	-108.92	-1,993.6	-7,095.2	7,813.8	7,798.1	15.78	495.298		
5,216.5	5,156.2	5,049.0	5,048.3	15.8	1.7	-108.92	-1,993.7	-7,095.3	7,814.0	7,798.2	15.81	494.313		
5,300.0	5,239.6	5,123.0	5,122.3	15.9	1.7	-108.93	-1,994.3	-7,095.9	7,814.8	7,798.9	15.97	489.434		
5,314.9	5,254.6	5,135.6	5,134.9	16.0	1.7	-108.93	-1,994.4	-7,096.0	7,815.0	7,799.0	16.00	488.578		
5,400.0	5,339.6	5,209.9	5,209.1	16.1	1.8	-108.93	-1,994.8	-7,096.7	7,816.0	7,799.9	16.16	483.759		
5,413.4	5,353.0	5,224.9	5,224.1	16.1	1.8	-108.93	-1,994.9	-7,096.9	7,816.2	7,800.0	16.18	482.992		
5,500.0	5,439.6	5,322.5	5,321.7	16.3	1.8	-108.93	-1,995.5	-7,097.9	7,817.2	7,800.8	16.35	478.091		
5,511.8	5,451.4	5,335.9	5,335.2	16.3	1.8	-108.93	-1,995.6	-7,098.0	7,817.3	7,800.9	16.37	477.434		
5,600.0	5,539.6	5,428.3	5,427.5	16.4	1.8	-108.93	-1,995.8	-7,098.9	7,818.2	7,801.7	16.54	472.603		
5,610.2	5,549.9	5,437.3	5,436.6	16.4	1.8	-108.93	-1,995.9	-7,099.0	7,818.3	7,801.7	16.56	472.052		
5,700.0	5,639.6	5,516.9	5,516.1	16.6	1.8	-108.93	-1,996.4	-7,099.8	7,819.3	7,802.6	16.73	467.242		
5,708.6	5,648.3	5,524.7	5,523.9	16.6	1.8	-108.93	-1,996.5	-7,099.8	7,819.4	7,802.6	16.75	466.772		
5,800.0	5,739.6	5,607.2	5,606.5	16.7	1.9	-108.93	-1,997.3	-7,100.6	7,820.5	7,803.6	16.93	461.864		
5,807.1	5,746.7	5,614.0	5,613.2	16.8	1.9	-108.93	-1,997.3	-7,100.7	7,820.6	7,803.7	16.95	461.482		
5,900.0	5,839.6	5,700.0	5,699.2	16.9	1.9	-108.94	-1,998.3	-7,101.5	7,821.8	7,804.7	17.13	456.545		
5,905.5	5,845.1	5,700.0	5,699.2	16.9	1.9	-108.94	-1,998.3	-7,101.5	7,821.9	7,804.8	17.14	456.282		
6,000.0	5,939.6	5,786.9	5,786.1	17.1	1.9	-108.95	-1,999.6	-7,102.4	7,823.3	7,805.9	17.33	451.328		
6,003.9	5,943.6	5,790.2	5,789.4	17.1	1.9	-108.95	-1,999.7	-7,102.5	7,823.3	7,806.0	17.34	451.125		
6,059.2	5,998.8	5,834.3	5,833.5	17.2	1.9	-108.95	-2,000.4	-7,102.9	7,824.2	7,806.8	17.45	448.329		
6,100.0	6,039.6	5,866.5	5,865.6	17.2	1.9	-18.97	-2,000.9	-7,103.4	7,823.8	7,806.7	17.12	457.115		
6,102.3	6,042.0	5,868.3	5,867.5	17.2	1.9	-18.97	-2,001.0	-7,103.4	7,823.7	7,806.6	17.12	457.055		
6,150.0	6,089.4	5,907.5	5,906.7	17.3	2.0	-19.07	-2,001.5	-7,104.0	7,820.4	7,803.3	17.16	455.691		
6,200.0	6,138.7	5,959.3	5,958.5	17.3	2.0	-19.27	-2,002.2	-7,104.8	7,813.7	7,796.5	17.21	453.916		
6,200.8	6,139.5	5,960.1	5,959.3	17.3	2.0	-19.27	-2,002.2	-7,104.8	7,813.6	7,796.4	17.21	453.887		
6,250.0	6,187.4	6,000.0	5,999.2	17.3	2.0	-19.56	-2,002.8	-7,105.4	7,803.8	7,786.6	17.25	452.290		
6,299.2	6,234.4	6,038.4	6,037.6	17.4	2.0	-19.95	-2,003.3	-7,106.0	7,791.0	7,773.7	17.27	451.058		
6,300.0	6,235.1	6,038.9	6,038.1	17.4	2.0	-19.96	-2,003.3	-7,106.0	7,790.7	7,773.5	17.27	451.045		
6,350.0	6,281.7	6,070.5	6,069.7	17.4	2.0	-20.46	-2,003.7	-7,106.6	7,774.6	7,757.4	17.26	450.473		
6,397.6	6,324.8	6,100.0	6,099.1	17.3	2.0	-21.05	-2,004.1	-7,107.3	7,756.5	7,739.3	17.21	450.596		
6,400.0	6,326.9	6,100.0	6,099.1	17.3	2.0	-21.08	-2,004.1	-7,107.3	7,755.6	7,738.4	17.21	450.648		
6,450.0	6,370.5	6,137.4	6,136.5	17.3	2.0	-21.86	-2,004.4	-7,108.1	7,733.6	7,716.5	17.13	451.421		
6,496.0	6,409.1	6,169.1	6,168.2	17.3	2.0	-22.70	-2,004.8	-7,108.9	7,710.9	7,693.9	17.03	452.729		
6,500.0	6,412.3	6,171.8	6,170.9	17.3	2.0	-22.78	-2,004.8	-7,109.0	7,708.8	7,691.8	17.02	452.879		
6,550.0	6,452.1	6,206.4	6,205.5	17.3	2.0	-23.90	-2,005.2	-7,109.9	7,681.4	7,664.5	16.89	454.771		
6,594.5	6,485.6	6,244.9	6,244.0	17.3	2.1	-25.10	-2,005.5	-7,110.8	7,654.8	7,638.0	16.78	456.307		
6,600.0	6,489.7	6,249.5	6,248.6	17.3	2.1	-25.26	-2,005.6	-7,111.0	7,651.3	7,634.6	16.76	456.527		
6,650.0	6,524.9	6,289.9	6,289.0	17.2	2.1	-26.90	-2,006.0	-7,112.0	7,618.8	7,602.2	16.64	457.879		
6,692.9	6,553.0	6,322.0	6,321.1	17.2	2.1	-28.55	-2,006.3	-7,112.8	7,589.1	7,572.5	16.57	458.065		
6,700.0	6,557.5	6,327.1	6,326.1	17.2	2.1	-28.85	-2,006.4	-7,112.9	7,584.0	7,567.4	16.56	458.062		
6,750.0	6,587.4	6,361.1	6,360.2	17.2	2.1	-31.20	-2,006.7	-7,113.7	7,547.0	7,530.5	16.55	456.075		
6,791.3	6,609.9	6,386.9	6,385.9	17.2	2.1	-33.50	-2,006.9	-7,114.3	7,515.1	7,498.4	16.64	451.743		
6,800.0	6,614.4	6,392.0	6,391.1	17.2	2.1	-34.03	-2,006.9	-7,114.5	7,508.2	7,491.5	16.66	450.733		
6,850.0	6,638.4	6,429.6	6,428.6	17.2	2.1	-37.54	-2,007.2	-7,115.4	7,467.6	7,450.6	16.95	440.477		
6,889.7	6,655.3	6,458.9	6,457.9	17.4	2.1	-40.90	-2,007.3	-7,116.0	7,434.2	7,416.8	17.35	428.546		
6,900.0	6,659.4	6,465.9	6,464.9	17.5	2.1	-41.86	-2,007.4	-7,116.2	7,425.4	7,407.9	17.47	424.975		
6,950.0	6,677.1	6,496.7	6,495.8	18.0	2.1	-47.13	-2,007.5	-7,116.8	7,381.9	7,363.6	18.24	404.812		
6,988.2	6,688.4	6,514.4	6,513.4	18.5	2.1	-51.88	-2,007.6	-7,117.1	7,347.9	7,328.9	18.98	387.230		
7,000.0	6,691.5	6,519.1	6,518.1	18.7	2.1	-53.50	-2,007.6	-7,117.2	7,337.3	7,318.0	19.22	381.717		
7,050.0	6,702.5	6,536.0	6,535.0	19.5	2.1	-61.14	-2,007.7	-7,117.5	7,291.8	7,271.4	20.37	358.004		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,086.6	6,708.4	6,545.2	6,544.2	20.1	2.1	-67.55	-2,007.8	-7,117.7	7,258.0	7,236.8	21.25	341.628		
7,100.0	6,710.1	6,547.9	6,546.9	20.4	2.1	-70.06	-2,007.8	-7,117.7	7,245.6	7,224.1	21.56	336.145		
7,150.0	6,714.2	6,554.9	6,553.9	21.3	2.1	-80.02	-2,007.8	-7,117.8	7,199.1	7,176.4	22.70	317.182		
7,185.0	6,715.0	6,556.8	6,555.8	21.9	2.1	-87.35	-2,007.9	-7,117.9	7,166.4	7,142.9	23.53	304.587		
7,185.6	6,715.0	6,556.8	6,555.8	21.9	2.1	-87.46	-2,007.9	-7,117.9	7,165.9	7,142.3	23.54	304.394		
7,200.0	6,715.0	6,557.1	6,556.1	22.2	2.1	-87.46	-2,007.9	-7,117.9	7,152.4	7,128.6	23.82	300.285		
7,283.4	6,714.8	6,558.6	6,557.6	23.9	2.1	-87.50	-2,007.9	-7,117.9	7,074.5	7,049.0	25.50	277.463		
7,300.0	6,714.8	6,559.0	6,557.9	24.2	2.1	-87.51	-2,007.9	-7,117.9	7,059.1	7,033.2	25.83	273.290		
7,381.9	6,714.6	6,560.5	6,559.5	26.0	2.1	-87.54	-2,007.9	-7,117.9	6,982.8	6,955.2	27.59	253.081		
7,400.0	6,714.6	6,560.8	6,559.8	26.4	2.1	-87.55	-2,007.9	-7,117.9	6,965.9	6,937.9	27.98	248.952		
7,480.3	6,714.4	6,562.2	6,561.2	28.2	2.1	-87.58	-2,007.9	-7,118.0	6,891.2	6,861.4	29.80	231.240		
7,500.0	6,714.4	6,562.6	6,561.6	28.7	2.1	-87.59	-2,007.9	-7,118.0	6,872.9	6,842.7	30.25	227.221		
7,578.7	6,714.2	6,564.0	6,563.0	30.5	2.1	-87.62	-2,007.9	-7,118.0	6,799.9	6,767.8	32.10	211.812		
7,600.0	6,714.2	6,564.4	6,563.4	31.0	2.1	-87.63	-2,007.9	-7,118.0	6,780.2	6,747.6	32.60	207.949		
7,677.1	6,714.0	6,565.7	6,564.7	32.9	2.1	-87.66	-2,007.9	-7,118.0	6,708.8	6,674.3	34.48	194.580		
7,700.0	6,714.0	6,566.1	6,565.1	33.4	2.1	-87.67	-2,007.9	-7,118.0	6,687.6	6,652.6	35.03	190.895		
7,775.6	6,713.9	6,567.4	6,566.4	35.3	2.1	-87.69	-2,008.0	-7,118.0	6,617.8	6,580.9	36.91	179.293		
7,800.0	6,713.8	6,567.8	6,566.8	35.9	2.1	-87.70	-2,008.0	-7,118.0	6,595.3	6,557.8	37.52	175.793		
7,874.0	6,713.7	6,569.0	6,568.0	37.8	2.1	-87.73	-2,008.0	-7,118.1	6,527.1	6,487.7	39.39	165.706		
7,900.0	6,713.6	6,569.5	6,568.5	38.4	2.1	-87.74	-2,008.0	-7,118.1	6,503.2	6,463.1	40.05	162.387		
7,972.4	6,713.5	6,570.7	6,569.6	40.3	2.1	-87.77	-2,008.0	-7,118.1	6,436.6	6,394.7	41.91	153.595		
8,000.0	6,713.4	6,571.1	6,570.1	41.0	2.1	-87.78	-2,008.0	-7,118.1	6,411.3	6,368.7	42.61	150.450		
8,070.8	6,713.3	6,572.2	6,571.2	42.8	2.1	-87.80	-2,008.0	-7,118.1	6,346.4	6,301.9	44.45	142.762		
8,100.0	6,713.2	6,572.7	6,571.7	43.6	2.1	-87.81	-2,008.0	-7,118.1	6,319.7	6,274.5	45.21	139.781		
8,169.3	6,713.1	6,573.8	6,572.8	45.4	2.1	-87.84	-2,008.0	-7,118.1	6,256.4	6,209.3	47.03	133.035		
8,200.0	6,713.0	6,574.3	6,573.3	46.2	2.1	-87.85	-2,008.0	-7,118.1	6,228.3	6,180.5	47.83	130.208		
8,267.7	6,712.9	6,575.3	6,574.3	48.0	2.1	-87.87	-2,008.0	-7,118.1	6,166.6	6,117.0	49.62	124.268		
8,300.0	6,712.8	6,575.8	6,574.8	48.8	2.1	-87.88	-2,008.0	-7,118.2	6,137.2	6,086.8	50.48	121.584		
8,366.1	6,712.7	6,576.8	6,575.8	50.6	2.1	-87.91	-2,008.0	-7,118.2	6,077.1	6,024.9	52.24	116.338		
8,400.0	6,712.6	6,577.3	6,576.3	51.5	2.1	-87.92	-2,008.0	-7,118.2	6,046.4	5,993.3	53.14	113.785		
8,464.5	6,712.5	6,578.3	6,577.3	53.2	2.1	-87.94	-2,008.1	-7,118.2	5,988.0	5,933.1	54.87	109.137		
8,500.0	6,712.4	6,578.8	6,577.8	54.1	2.1	-87.95	-2,008.1	-7,118.2	5,955.9	5,900.1	55.82	106.707		
8,563.0	6,712.3	6,579.7	6,578.7	55.8	2.1	-87.97	-2,008.1	-7,118.2	5,899.0	5,841.5	57.51	102.575		
8,600.0	6,712.3	6,580.3	6,579.3	56.8	2.1	-87.98	-2,008.1	-7,118.2	5,865.7	5,807.2	58.51	100.259		
8,661.4	6,712.1	6,581.1	6,580.1	58.5	2.1	-88.00	-2,008.1	-7,118.2	5,810.4	5,750.3	60.16	96.577		
8,700.0	6,712.1	6,581.7	6,580.7	59.5	2.1	-88.01	-2,008.1	-7,118.2	5,775.8	5,714.6	61.21	94.366		
8,759.8	6,711.9	6,582.5	6,581.5	61.1	2.1	-88.03	-2,008.1	-7,118.2	5,722.2	5,659.3	62.83	91.077		
8,800.0	6,711.9	6,583.1	6,582.1	62.2	2.1	-88.05	-2,008.1	-7,118.3	5,686.2	5,622.3	63.92	88.963		
8,858.2	6,711.8	6,583.9	6,582.9	63.8	2.2	-88.06	-2,008.1	-7,118.3	5,634.2	5,568.7	65.50	86.017		
8,900.0	6,711.7	6,584.5	6,583.5	64.9	2.2	-88.08	-2,008.1	-7,118.3	5,597.0	5,530.4	66.64	83.993		
8,956.7	6,711.6	6,585.2	6,584.2	66.5	2.2	-88.09	-2,008.1	-7,118.3	5,546.6	5,478.5	68.18	81.350		
9,000.0	6,711.5	6,585.8	6,584.8	67.6	2.2	-88.11	-2,008.1	-7,118.3	5,508.2	5,438.8	69.36	79.411		
9,055.1	6,711.4	6,586.6	6,585.6	69.1	2.2	-88.12	-2,008.1	-7,118.3	5,459.4	5,388.5	70.87	77.034		
9,100.0	6,711.3	6,587.2	6,586.1	70.4	2.2	-88.14	-2,008.2	-7,118.3	5,419.8	5,347.7	72.10	75.173		
9,153.5	6,711.2	6,587.9	6,586.8	71.8	2.2	-88.15	-2,008.2	-7,118.3	5,372.6	5,299.0	73.56	73.033		
9,200.0	6,711.1	6,588.5	6,587.5	73.1	2.2	-88.17	-2,008.2	-7,118.3	5,331.7	5,256.9	74.84	71.245		
9,251.9	6,711.0	6,589.1	6,588.1	74.5	2.2	-88.18	-2,008.2	-7,118.3	5,286.1	5,209.9	76.26	69.315		
9,300.0	6,710.9	6,589.7	6,588.7	75.8	2.2	-88.19	-2,008.2	-7,118.3	5,244.1	5,166.5	77.58	67.595		
9,350.4	6,710.8	6,590.4	6,589.4	77.2	2.2	-88.21	-2,008.2	-7,118.4	5,200.1	5,121.2	78.97	65.852		
9,400.0	6,710.7	6,591.0	6,590.0	78.6	2.2	-88.22	-2,008.2	-7,118.4	5,157.0	5,076.6	80.33	64.196		
9,448.8	6,710.6	6,591.6	6,590.6	79.9	2.2	-88.24	-2,008.2	-7,118.4	5,114.6	5,032.9	81.68	62.621		
9,500.0	6,710.5	6,592.2	6,591.2	81.3	2.2	-88.25	-2,008.2	-7,118.4	5,070.3	4,987.2	83.09	61.025		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	6,592.8	6,591.8	82.6	2.2	-88.26	-2,008.2	-7,118.4	5,029.5	4,945.1	84.39	59.600	
9,600.0	6,710.3	6,593.5	6,592.5	84.1	2.2	-88.28	-2,008.2	-7,118.4	4,984.1	4,898.2	85.84	58.060	
9,645.6	6,710.2	6,594.0	6,593.0	85.3	2.2	-88.29	-2,008.2	-7,118.4	4,944.9	4,857.8	87.10	56.771	
9,700.0	6,710.1	6,594.7	6,593.7	86.8	2.2	-88.30	-2,008.2	-7,118.4	4,898.4	4,809.8	88.60	55.284	
9,744.1	6,710.0	6,595.2	6,594.2	88.1	2.2	-88.32	-2,008.2	-7,118.4	4,860.8	4,771.0	89.82	54.116	
9,800.0	6,709.9	6,595.8	6,594.8	89.6	2.2	-88.33	-2,008.3	-7,118.4	4,813.3	4,722.0	91.37	52.680	
9,842.5	6,709.9	6,596.3	6,595.3	90.8	2.2	-88.34	-2,008.3	-7,118.4	4,777.3	4,684.8	92.54	51.622	
9,900.0	6,709.7	6,597.0	6,596.0	92.4	2.2	-88.36	-2,008.3	-7,118.4	4,728.8	4,634.7	94.14	50.234	
9,940.9	6,709.7	6,597.5	6,596.5	93.5	2.2	-88.37	-2,008.3	-7,118.4	4,694.4	4,599.1	95.27	49.275	
10,000.0	6,709.6	6,598.1	6,597.1	95.1	2.2	-88.38	-2,008.3	-7,118.5	4,644.9	4,548.0	96.91	47.932	
10,039.3	6,709.5	6,598.6	6,597.6	96.2	2.2	-88.39	-2,008.3	-7,118.5	4,612.0	4,514.1	98.00	47.063	
10,100.0	6,709.4	6,599.3	6,598.2	97.9	2.2	-88.41	-2,008.3	-7,118.5	4,561.6	4,462.0	99.68	45.764	
10,137.8	6,709.3	6,599.7	6,598.7	98.9	2.2	-88.42	-2,008.3	-7,118.5	4,530.4	4,429.6	100.73	44.977	
10,200.0	6,709.2	6,600.5	6,599.5	100.7	2.2	-88.43	-2,008.3	-7,118.5	4,479.1	4,376.6	102.45	43.718	
10,236.2	6,709.1	6,601.1	6,600.1	101.7	2.2	-88.45	-2,008.3	-7,118.5	4,449.3	4,345.9	103.46	43.006	
10,300.0	6,709.0	6,602.1	6,601.1	103.4	2.2	-88.47	-2,008.3	-7,118.5	4,397.2	4,292.0	105.23	41.787	
10,334.6	6,708.9	6,602.6	6,601.6	104.4	2.2	-88.48	-2,008.3	-7,118.5	4,369.0	4,262.8	106.19	41.143	
10,400.0	6,708.8	6,603.6	6,602.6	106.2	2.2	-88.50	-2,008.4	-7,118.5	4,316.1	4,208.1	108.01	39.961	
10,433.0	6,708.7	6,604.1	6,603.1	107.1	2.2	-88.52	-2,008.4	-7,118.5	4,289.5	4,180.6	108.93	39.379	
10,500.0	6,708.6	6,605.2	6,604.1	109.0	2.2	-88.54	-2,008.4	-7,118.5	4,235.8	4,125.0	110.79	38.233	
10,531.5	6,708.5	6,605.6	6,604.6	109.9	2.2	-88.55	-2,008.4	-7,118.5	4,210.7	4,099.1	111.67	37.708	
10,600.0	6,708.4	6,606.7	6,605.7	111.8	2.2	-88.57	-2,008.4	-7,118.6	4,156.4	4,042.8	113.57	36.597	
10,629.9	6,708.4	6,607.2	6,606.2	112.6	2.2	-88.58	-2,008.4	-7,118.6	4,132.8	4,018.4	114.41	36.125	
10,700.0	6,708.2	6,608.2	6,607.2	114.6	2.2	-88.61	-2,008.4	-7,118.6	4,077.9	3,961.5	116.36	35.046	
10,728.3	6,708.2	6,608.7	6,607.7	115.3	2.2	-88.62	-2,008.4	-7,118.6	4,055.8	3,938.7	117.15	34.622	
10,800.0	6,708.0	6,609.8	6,608.8	117.3	2.2	-88.64	-2,008.4	-7,118.6	4,000.3	3,881.2	119.14	33.576	
10,826.7	6,708.0	6,610.2	6,609.2	118.1	2.2	-88.65	-2,008.4	-7,118.6	3,979.8	3,859.9	119.89	33.196	
10,900.0	6,707.8	6,611.3	6,610.3	120.1	2.2	-88.68	-2,008.4	-7,118.6	3,923.8	3,801.9	121.93	32.181	
10,925.2	6,707.8	6,611.7	6,610.7	120.8	2.2	-88.69	-2,008.4	-7,118.6	3,904.7	3,782.1	122.63	31.841	
11,000.0	6,707.6	6,612.8	6,611.8	122.9	2.2	-88.71	-2,008.5	-7,118.6	3,848.3	3,723.6	124.72	30.856	
11,023.6	6,707.6	6,613.2	6,612.2	123.6	2.2	-88.72	-2,008.5	-7,118.6	3,830.7	3,705.3	125.38	30.554	
11,100.0	6,707.5	6,614.3	6,613.3	125.7	2.2	-88.74	-2,008.5	-7,118.6	3,774.0	3,646.5	127.51	29.599	
11,122.0	6,707.4	6,614.7	6,613.7	126.3	2.2	-88.75	-2,008.5	-7,118.7	3,757.8	3,629.7	128.12	29.330	
11,200.0	6,707.3	6,615.9	6,614.8	128.5	2.2	-88.78	-2,008.5	-7,118.7	3,700.9	3,570.6	130.30	28.404	
11,220.4	6,707.2	6,616.2	6,615.2	129.0	2.2	-88.79	-2,008.5	-7,118.7	3,686.1	3,555.2	130.87	28.167	
11,300.0	6,707.1	6,617.4	6,616.4	131.3	2.2	-88.81	-2,008.5	-7,118.7	3,629.0	3,495.9	133.09	27.268	
11,318.9	6,707.0	6,617.7	6,616.6	131.8	2.2	-88.82	-2,008.5	-7,118.7	3,615.6	3,482.0	133.61	27.060	
11,400.0	6,706.9	6,618.9	6,617.9	134.0	2.2	-88.85	-2,008.5	-7,118.7	3,558.6	3,422.7	135.88	26.189	
11,417.3	6,706.9	6,619.1	6,618.1	134.5	2.2	-88.85	-2,008.5	-7,118.7	3,546.5	3,410.1	136.36	26.008	
11,500.0	6,706.7	6,620.4	6,619.4	136.8	2.2	-88.88	-2,008.5	-7,118.7	3,489.5	3,350.8	138.67	25.164	
11,515.7	6,706.7	6,620.6	6,619.6	137.3	2.2	-88.89	-2,008.5	-7,118.7	3,478.8	3,339.7	139.11	25.007	
11,600.0	6,706.5	6,621.9	6,620.9	139.6	2.2	-88.91	-2,008.6	-7,118.7	3,422.0	3,280.5	141.47	24.190	
11,614.1	6,706.5	6,622.1	6,621.1	140.0	2.2	-88.92	-2,008.6	-7,118.7	3,412.6	3,270.7	141.86	24.056	
11,700.0	6,706.3	6,623.4	6,622.4	142.4	2.2	-88.95	-2,008.6	-7,118.8	3,356.1	3,211.9	144.26	23.264	
11,712.6	6,706.3	6,623.6	6,622.6	142.8	2.2	-88.95	-2,008.6	-7,118.8	3,348.0	3,203.3	144.61	23.151	
11,800.0	6,706.1	6,624.9	6,623.9	145.2	2.2	-88.98	-2,008.6	-7,118.8	3,292.0	3,144.9	147.06	22.386	
11,811.0	6,706.1	6,625.0	6,624.0	145.5	2.2	-88.98	-2,008.6	-7,118.8	3,285.0	3,137.6	147.36	22.292	
11,900.0	6,705.9	6,626.4	6,625.3	148.0	2.2	-89.01	-2,008.6	-7,118.8	3,229.6	3,079.8	149.85	21.552	
11,909.4	6,705.9	6,626.5	6,625.5	148.3	2.2	-89.02	-2,008.6	-7,118.8	3,223.8	3,073.7	150.12	21.476	
12,000.0	6,705.8	6,627.8	6,626.8	150.8	2.2	-89.05	-2,008.6	-7,118.8	3,169.2	3,016.5	152.65	20.761	
12,007.8	6,705.7	6,628.0	6,626.9	151.0	2.2	-89.05	-2,008.6	-7,118.8	3,164.5	3,011.7	152.87	20.701	
12,100.0	6,705.6	6,629.3	6,628.3	153.6	2.2	-89.08	-2,008.6	-7,118.8	3,110.8	2,955.4	155.45	20.012	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,106.3	6,705.6	6,629.4	6,628.4	153.8	2.2	-89.08	-2,008.6	-7,118.8	3,107.2	2,951.6	155.62	19.967		
12,200.0	6,705.4	6,630.8	6,629.8	156.4	2.2	-89.11	-2,008.6	-7,118.8	3,054.6	2,896.4	158.24	19.303		
12,204.7	6,705.4	6,630.9	6,629.9	156.5	2.2	-89.12	-2,008.6	-7,118.8	3,052.0	2,893.6	158.37	19.271		
12,300.0	6,705.2	6,632.3	6,631.3	159.2	2.2	-89.15	-2,008.6	-7,118.9	3,000.7	2,839.6	161.04	18.633		
12,303.1	6,705.2	6,632.3	6,631.3	159.3	2.2	-89.15	-2,008.6	-7,118.9	2,999.0	2,837.9	161.13	18.613		
12,400.0	6,705.0	6,633.7	6,632.7	162.0	2.2	-89.18	-2,008.7	-7,118.9	2,949.1	2,785.3	163.84	18.000		
12,401.5	6,705.0	6,633.8	6,632.7	162.0	2.2	-89.18	-2,008.7	-7,118.9	2,948.4	2,784.5	163.88	17.991		
12,500.0	6,704.8	6,635.2	6,634.2	164.8	2.2	-89.21	-2,008.7	-7,118.9	2,900.1	2,733.5	166.64	17.404		
12,598.4	6,704.6	6,636.6	6,635.6	167.5	2.2	-89.25	-2,008.7	-7,118.9	2,854.5	2,685.1	169.39	16.851		
12,600.0	6,704.6	6,636.7	6,635.6	167.6	2.2	-89.25	-2,008.7	-7,118.9	2,853.8	2,684.4	169.44	16.843		
12,696.8	6,704.4	6,638.1	6,637.1	170.3	2.2	-89.28	-2,008.7	-7,118.9	2,811.6	2,639.5	172.15	16.332		
12,700.0	6,704.4	6,638.1	6,637.1	170.4	2.2	-89.28	-2,008.7	-7,118.9	2,810.3	2,638.0	172.24	16.316		
12,795.2	6,704.3	6,639.5	6,638.5	173.0	2.2	-89.31	-2,008.7	-7,119.0	2,771.5	2,596.6	174.91	15.846		
12,800.0	6,704.2	6,639.6	6,638.6	173.2	2.2	-89.31	-2,008.7	-7,119.0	2,769.7	2,594.6	175.04	15.823		
12,893.7	6,704.1	6,640.9	6,639.9	175.8	2.2	-89.34	-2,008.7	-7,119.0	2,734.4	2,556.7	177.66	15.391		
12,900.0	6,704.1	6,641.0	6,640.0	176.0	2.2	-89.34	-2,008.7	-7,119.0	2,732.1	2,554.3	177.84	15.363		
12,992.1	6,703.9	6,642.4	6,641.3	178.5	2.2	-89.37	-2,008.7	-7,119.0	2,700.3	2,519.9	180.42	14.967		
13,000.0	6,703.9	6,642.5	6,641.4	178.8	2.2	-89.38	-2,008.7	-7,119.0	2,697.7	2,517.1	180.64	14.934		
13,090.5	6,703.7	6,643.8	6,642.8	181.3	2.2	-89.41	-2,008.7	-7,119.0	2,669.5	2,486.3	183.18	14.573		
13,100.0	6,703.7	6,643.9	6,642.9	181.6	2.2	-89.41	-2,008.7	-7,119.0	2,666.7	2,483.2	183.44	14.537		
13,188.9	6,703.5	6,645.2	6,644.2	184.0	2.2	-89.44	-2,008.7	-7,119.0	2,641.9	2,456.0	185.94	14.209		
13,200.0	6,703.5	6,645.3	6,644.3	184.4	2.2	-89.44	-2,008.7	-7,119.0	2,639.0	2,452.8	186.25	14.170		
13,287.4	6,703.3	6,646.6	6,645.6	186.8	2.2	-89.47	-2,008.8	-7,119.0	2,617.8	2,429.1	188.69	13.873		
13,300.0	6,703.3	6,646.8	6,645.8	187.2	2.2	-89.47	-2,008.8	-7,119.0	2,614.9	2,425.9	189.05	13.832		
13,385.8	6,703.2	6,648.0	6,647.0	189.6	2.2	-89.50	-2,008.8	-7,119.1	2,597.1	2,405.7	191.45	13.565		
13,400.0	6,703.1	6,648.2	6,647.2	190.0	2.2	-89.50	-2,008.8	-7,119.1	2,594.5	2,402.6	191.85	13.523		
13,484.2	6,703.0	6,649.4	6,648.4	192.3	2.2	-89.53	-2,008.8	-7,119.1	2,580.1	2,385.9	194.21	13.285		
13,500.0	6,702.9	6,649.6	6,648.6	192.8	2.2	-89.54	-2,008.8	-7,119.1	2,577.7	2,383.1	194.65	13.243		
13,582.6	6,702.8	6,650.8	6,649.8	195.1	2.2	-89.56	-2,008.8	-7,119.1	2,566.7	2,369.8	196.97	13.031		
13,600.0	6,702.8	6,651.1	6,650.0	195.6	2.2	-89.57	-2,008.8	-7,119.1	2,564.8	2,367.3	197.46	12.989		
13,681.1	6,702.6	6,652.2	6,651.2	197.8	2.2	-89.59	-2,008.8	-7,119.1	2,557.1	2,357.3	199.73	12.803		
13,700.0	6,702.6	6,652.5	6,651.5	198.4	2.2	-89.60	-2,008.8	-7,119.1	2,555.7	2,355.4	200.26	12.762		
13,779.5	6,702.4	6,653.6	6,652.6	200.6	2.2	-89.63	-2,008.8	-7,119.1	2,551.2	2,348.7	202.49	12.599		
13,800.0	6,702.4	6,653.9	6,652.9	201.2	2.2	-89.63	-2,008.8	-7,119.1	2,550.4	2,347.4	203.06	12.560		
13,877.9	6,702.2	6,655.0	6,654.0	203.3	2.2	-89.66	-2,008.8	-7,119.1	2,549.1	2,343.8	205.25	12.419		
13,883.2	6,702.2	6,655.1	6,654.0	203.5	2.2	-89.66	-2,008.8	-7,119.1	2,549.1	2,343.7	205.40	12.410 CC		
13,900.0	6,702.2	6,655.3	6,654.3	204.0	2.2	-89.66	-2,008.8	-7,119.1	2,549.1	2,343.3	205.87	12.382		
13,976.3	6,702.1	6,656.4	6,655.4	206.1	2.2	-89.69	-2,008.8	-7,119.2	2,550.8	2,342.8	208.01	12.263 ES		
14,000.0	6,702.0	6,656.7	6,655.7	206.8	2.2	-89.70	-2,008.8	-7,119.2	2,551.8	2,343.1	208.67	12.229		
14,074.8	6,701.9	6,657.8	6,656.7	208.9	2.2	-89.72	-2,008.8	-7,119.2	2,556.3	2,345.5	210.77	12.128		
14,100.0	6,701.8	6,658.1	6,657.1	209.6	2.2	-89.73	-2,008.8	-7,119.2	2,558.3	2,346.8	211.48	12.097		
14,173.2	6,701.7	6,659.1	6,658.1	211.6	2.2	-89.75	-2,008.8	-7,119.2	2,565.5	2,352.0	213.53	12.015		
14,200.0	6,701.6	6,659.5	6,658.5	212.4	2.2	-89.76	-2,008.8	-7,119.2	2,568.7	2,354.4	214.28	11.988		
14,271.6	6,701.5	6,660.5	6,659.5	214.4	2.2	-89.78	-2,008.8	-7,119.2	2,578.5	2,362.2	216.29	11.922		
14,300.0	6,701.4	6,660.9	6,659.9	215.2	2.2	-89.79	-2,008.8	-7,119.2	2,582.9	2,365.8	217.08	11.898		
14,370.0	6,701.3	6,661.9	6,660.9	217.1	2.2	-89.81	-2,008.9	-7,119.2	2,595.1	2,376.1	219.05	11.847		
14,400.0	6,701.3	6,662.3	6,661.3	218.0	2.2	-89.82	-2,008.9	-7,119.2	2,600.9	2,381.0	219.89	11.828		
14,468.5	6,701.1	6,663.3	6,662.2	219.9	2.2	-89.84	-2,008.9	-7,119.2	2,615.4	2,393.6	221.81	11.791		
14,500.0	6,701.1	6,663.7	6,662.7	220.8	2.2	-89.85	-2,008.9	-7,119.2	2,622.6	2,399.9	222.69	11.777		
14,566.9	6,701.0	6,664.6	6,663.6	222.6	2.2	-89.87	-2,008.9	-7,119.2	2,639.2	2,414.6	224.57	11.752		
14,600.0	6,700.9	6,665.1	6,664.1	223.6	2.2	-89.88	-2,008.9	-7,119.3	2,647.9	2,422.4	225.50	11.742		
14,665.3	6,700.8	6,666.0	6,665.0	225.4	2.2	-89.90	-2,008.9	-7,119.3	2,666.3	2,439.0	227.33	11.729		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Wellbore #												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,666.5	6,665.4	226.4	2.2	-89.92	-2,008.9	-7,119.3	2,676.7	2,448.4	228.30	11.724	
14,763.7	6,700.6	6,667.3	6,666.3	228.2	2.2	-89.93	-2,008.9	-7,119.3	2,696.9	2,466.8	230.09	11.721 SF	
14,800.0	6,700.5	6,667.8	6,666.8	229.2	2.2	-89.95	-2,008.9	-7,119.3	2,708.9	2,477.8	231.11	11.721	
14,862.2	6,700.4	6,668.7	6,667.7	230.9	2.2	-89.97	-2,008.9	-7,119.3	2,730.6	2,497.7	232.85	11.727	
14,900.0	6,700.3	6,669.2	6,668.2	232.0	2.2	-89.98	-2,008.9	-7,119.3	2,744.4	2,510.4	233.92	11.732	
14,960.6	6,700.2	6,670.0	6,669.0	233.7	2.2	-90.00	-2,008.9	-7,119.3	2,767.4	2,531.8	235.62	11.745	
15,000.0	6,700.2	6,670.6	6,669.6	234.8	2.2	-90.01	-2,008.9	-7,119.3	2,783.0	2,546.2	236.72	11.756	
15,059.0	6,700.0	6,671.4	6,670.4	236.4	2.2	-90.03	-2,008.9	-7,119.3	2,807.2	2,568.8	238.38	11.776	
15,082.8	6,700.0	6,671.7	6,670.7	237.1	2.2	-90.03	-2,008.9	-7,119.3	2,817.2	2,578.2	239.04	11.785	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-99.24	-1,211.7	-7,448.3	7,546.2				
98.4	98.4	87.4	87.4	0.1	0.0	-99.24	-1,211.7	-7,448.3	7,546.2	7,546.1	0.10	N/A	
100.0	100.0	89.0	89.0	0.1	0.0	-99.24	-1,211.7	-7,448.3	7,546.2	7,546.1	0.10	N/A	
196.8	196.8	185.8	185.8	0.3	1.0	-99.24	-1,211.7	-7,448.3	7,546.2	7,544.9	1.31	5,761.138	
200.0	200.0	189.0	189.0	0.3	1.0	-99.24	-1,211.7	-7,448.3	7,546.2	7,544.8	1.35	5,575.688	
295.3	295.3	284.3	284.3	0.5	3.1	-99.24	-1,211.7	-7,448.3	7,546.2	7,542.6	3.63	2,077.646	
300.0	300.0	289.0	289.0	0.5	3.2	-99.24	-1,211.7	-7,448.3	7,546.2	7,542.4	3.75	2,011.613	
393.7	393.7	382.7	382.7	0.8	5.2	-99.24	-1,211.7	-7,448.3	7,546.2	7,540.3	5.93	1,271.665	
400.0	400.0	389.0	389.0	0.8	5.3	-99.24	-1,211.7	-7,448.3	7,546.2	7,540.1	6.08	1,241.305	
492.1	492.1	481.1	481.1	1.0	7.2	-99.24	-1,211.7	-7,448.3	7,546.2	7,538.0	8.17	923.436	
500.0	500.0	489.0	489.0	1.0	7.4	-99.24	-1,211.7	-7,448.3	7,546.2	7,537.8	8.35	903.692	
590.5	590.5	579.5	579.5	1.2	9.2	-99.24	-1,211.7	-7,448.3	7,546.2	7,535.8	10.39	726.102	
600.0	600.0	589.0	589.0	1.2	9.4	-99.24	-1,211.7	-7,448.3	7,546.2	7,535.6	10.61	711.520	
689.0	689.0	678.0	678.0	1.4	11.2	-99.24	-1,211.7	-7,448.3	7,546.2	7,533.6	12.61	598.610	
700.0	700.0	689.0	689.0	1.4	11.4	-99.24	-1,211.7	-7,448.3	7,546.2	7,533.3	12.85	587.070	
787.4	787.4	776.4	776.4	1.6	13.2	-99.24	-1,211.7	-7,448.3	7,546.2	7,531.4	14.82	509.338	
800.0	800.0	789.0	789.0	1.7	13.4	-99.24	-1,211.7	-7,448.3	7,546.2	7,531.1	15.10	499.799	
885.8	885.8	874.8	874.8	1.9	15.2	-99.24	-1,211.7	-7,448.3	7,546.2	7,529.2	17.02	443.299	
900.0	900.0	889.0	889.0	1.9	15.4	-99.24	-1,211.7	-7,448.3	7,546.2	7,528.8	17.34	435.175	
984.2	984.2	973.2	973.2	2.1	17.1	-99.24	-1,211.7	-7,448.3	7,546.2	7,527.0	19.23	392.451	
1,000.0	1,000.0	989.0	989.0	2.1	17.5	-99.24	-1,211.7	-7,448.3	7,546.2	7,526.6	19.58	385.379	
1,082.7	1,082.7	1,071.7	1,071.7	2.3	19.1	-99.24	-1,211.7	-7,448.3	7,546.2	7,524.8	21.43	352.085	
1,100.0	1,100.0	1,089.0	1,089.0	2.3	19.5	-99.24	-1,211.7	-7,448.3	7,546.2	7,524.4	21.82	345.825	
1,181.1	1,181.1	1,170.1	1,170.1	2.5	21.1	-127.96	-1,211.7	-7,448.3	7,546.9	7,523.3	23.63	319.364	
1,200.0	1,200.0	1,189.0	1,189.0	2.6	21.5	-127.96	-1,211.7	-7,448.3	7,547.3	7,523.2	24.05	313.795	
1,279.5	1,279.4	1,268.4	1,268.4	2.7	23.1	-127.95	-1,211.7	-7,448.3	7,549.7	7,523.8	25.81	292.470	
1,300.0	1,299.8	1,288.8	1,288.8	2.8	23.5	-127.94	-1,211.7	-7,448.3	7,550.5	7,524.2	26.27	287.473	
1,377.9	1,377.5	1,366.5	1,366.5	3.0	25.1	-127.92	-1,211.7	-7,448.3	7,554.5	7,526.5	27.98	270.001	
1,400.0	1,399.5	1,388.5	1,388.5	3.0	25.5	-127.91	-1,211.7	-7,448.3	7,555.9	7,527.4	28.46	265.475	
1,476.4	1,475.3	1,464.3	1,464.3	3.2	27.0	-127.88	-1,211.7	-7,448.3	7,561.4	7,531.3	30.13	250.963	
1,500.0	1,498.7	1,487.7	1,487.7	3.3	27.5	-127.86	-1,211.7	-7,448.3	7,563.4	7,532.7	30.64	246.832	
1,574.8	1,572.6	1,561.6	1,561.6	3.5	29.0	-127.82	-1,211.7	-7,448.3	7,570.4	7,538.1	32.26	234.633	
1,600.0	1,597.5	1,586.5	1,586.5	3.5	29.5	-127.80	-1,211.7	-7,448.3	7,573.0	7,540.2	32.81	230.834	
1,673.2	1,669.4	1,658.4	1,658.4	3.7	30.9	-127.75	-1,211.7	-7,448.3	7,581.5	7,547.1	34.39	220.470	
1,700.1	1,695.8	1,684.8	1,684.8	3.8	31.5	-127.73	-1,211.7	-7,448.3	7,584.9	7,549.9	34.96	216.936	
1,771.6	1,765.7	1,754.7	1,754.7	4.1	32.9	-127.81	-1,211.7	-7,448.3	7,594.1	7,557.5	36.57	207.667	
1,800.0	1,793.4	1,782.4	1,782.4	4.2	33.4	-127.85	-1,211.7	-7,448.3	7,597.8	7,560.6	37.20	204.216	
1,870.1	1,862.0	1,851.0	1,851.0	4.4	34.8	-127.93	-1,211.7	-7,448.3	7,606.9	7,568.1	38.79	196.116	
1,900.0	1,891.3	1,880.3	1,880.3	4.5	35.4	-127.97	-1,211.7	-7,448.3	7,610.7	7,571.3	39.46	192.858	
1,968.5	1,958.3	1,947.3	1,947.3	4.8	36.8	-128.05	-1,211.7	-7,448.3	7,619.6	7,578.6	41.02	185.765	
2,000.0	1,989.1	1,978.1	1,978.1	4.9	37.4	-128.09	-1,211.7	-7,448.3	7,623.7	7,582.0	41.73	182.682	
2,066.9	2,054.5	2,043.5	2,043.5	5.1	38.7	-128.17	-1,211.7	-7,448.3	7,632.4	7,589.2	43.26	176.445	
2,100.0	2,086.9	2,075.9	2,075.9	5.3	39.3	-128.21	-1,211.7	-7,448.3	7,636.7	7,592.7	44.01	173.522	
2,165.3	2,150.8	2,139.8	2,139.8	5.5	40.6	-128.29	-1,211.7	-7,448.3	7,645.3	7,599.8	45.50	168.014	
2,200.0	2,184.7	2,173.7	2,173.7	5.6	41.3	-128.33	-1,211.7	-7,448.3	7,649.8	7,603.5	46.30	165.239	
2,263.8	2,247.1	2,236.1	2,236.1	5.9	42.6	-128.41	-1,211.7	-7,448.3	7,658.1	7,610.4	47.76	160.358	
2,300.0	2,282.5	2,271.5	2,271.5	6.0	43.3	-128.45	-1,211.7	-7,448.3	7,662.9	7,614.3	48.59	157.718	
2,362.2	2,343.3	2,332.3	2,332.3	6.3	44.5	-128.53	-1,211.7	-7,448.3	7,671.1	7,621.0	50.01	153.379	
2,400.0	2,380.3	2,369.3	2,369.3	6.5	45.2	-128.57	-1,211.7	-7,448.3	7,676.0	7,625.1	50.88	150.862	
2,460.6	2,439.6	2,428.6	2,428.6	6.7	46.4	-128.65	-1,211.7	-7,448.3	7,684.0	7,631.7	52.27	146.992	
2,500.0	2,478.1	2,467.1	2,467.1	6.9	47.2	-128.69	-1,211.7	-7,448.3	7,689.2	7,636.0	53.18	144.588	
2,559.0	2,535.9	2,524.9	2,524.9	7.1	48.4	-128.76	-1,211.7	-7,448.3	7,697.0	7,642.4	54.54	141.127	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-INC													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,600.0	2,575.9	2,564.9	2,564.9	7.3	49.2	-128.81	-1,211.7	-7,448.3	7,702.4	7,646.9	55.48	138.828		
2,657.5	2,632.2	2,621.2	2,621.2	7.5	50.3	-128.88	-1,211.7	-7,448.3	7,710.0	7,653.2	56.81	135.725		
2,700.0	2,673.8	2,662.8	2,662.8	7.7	51.1	-128.93	-1,211.7	-7,448.3	7,715.6	7,657.8	57.79	133.522		
2,755.9	2,728.4	2,717.4	2,717.4	7.9	52.2	-129.00	-1,211.7	-7,448.3	7,723.0	7,663.9	59.07	130.734		
2,800.0	2,771.6	2,760.6	2,760.6	8.1	53.1	-129.05	-1,211.7	-7,448.3	7,728.9	7,668.8	60.09	128.619		
2,854.3	2,824.7	2,813.7	2,813.7	8.3	54.2	-129.11	-1,211.7	-7,448.3	7,736.1	7,674.7	61.34	126.108		
2,900.0	2,869.4	2,858.4	2,858.4	8.5	55.1	-129.17	-1,211.7	-7,448.3	7,742.1	7,679.8	62.40	124.076		
2,952.7	2,921.0	2,910.0	2,910.0	8.8	56.1	-129.23	-1,211.7	-7,448.3	7,749.2	7,685.6	63.62	121.811		
3,000.0	2,967.2	2,956.2	2,956.2	9.0	57.0	-129.29	-1,211.7	-7,448.3	7,755.5	7,690.8	64.71	119.856		
3,051.2	3,017.3	3,006.3	3,006.3	9.2	58.1	-129.35	-1,211.7	-7,448.3	7,762.3	7,696.4	65.89	117.809		
3,100.0	3,065.0	3,054.0	3,054.0	9.4	59.0	-129.40	-1,211.7	-7,448.3	7,768.8	7,701.8	67.02	115.925		
3,149.6	3,113.5	3,102.5	3,102.5	9.6	60.0	-129.46	-1,211.7	-7,448.3	7,775.5	7,707.3	68.16	114.073		
3,200.0	3,162.8	3,151.8	3,151.8	9.8	61.0	-129.52	-1,211.7	-7,448.3	7,782.2	7,712.9	69.33	112.255		
3,248.0	3,209.8	3,198.8	3,198.8	10.0	61.9	-129.58	-1,211.7	-7,448.3	7,788.7	7,718.2	70.44	110.578		
3,300.0	3,260.6	3,249.6	3,249.6	10.2	62.9	-129.64	-1,211.7	-7,448.3	7,795.6	7,724.0	71.64	108.822		
3,346.4	3,306.1	3,295.1	3,295.1	10.5	63.9	-129.69	-1,211.7	-7,448.3	7,801.9	7,729.2	72.71	107.301		
3,400.0	3,358.5	3,347.5	3,347.5	10.7	64.9	-129.75	-1,211.7	-7,448.3	7,809.1	7,735.2	73.95	105.603		
3,444.9	3,402.3	3,391.3	3,391.3	10.9	65.8	-129.80	-1,211.7	-7,448.3	7,815.2	7,740.2	74.98	104.223		
3,500.0	3,456.3	3,445.3	3,445.3	11.1	66.9	-129.87	-1,211.7	-7,448.3	7,822.6	7,746.3	76.26	102.580		
3,543.3	3,498.6	3,487.6	3,487.6	11.3	67.7	-129.92	-1,211.7	-7,448.3	7,828.4	7,751.2	77.26	101.327		
3,600.0	3,554.1	3,543.1	3,543.1	11.5	68.8	-129.98	-1,211.7	-7,448.3	7,836.1	7,757.5	78.57	99.734		
3,641.7	3,594.9	3,583.9	3,583.9	11.7	69.7	-130.03	-1,211.7	-7,448.3	7,841.8	7,762.2	79.53	98.596		
3,700.0	3,651.9	3,640.9	3,640.9	12.0	70.8	-130.10	-1,211.7	-7,448.3	7,849.7	7,768.8	80.88	97.052		
3,740.1	3,691.2	3,680.2	3,680.2	12.2	71.6	-130.14	-1,211.7	-7,448.3	7,855.1	7,773.3	81.81	96.017		
3,800.0	3,749.7	3,738.7	3,738.7	12.4	72.8	-130.21	-1,211.7	-7,448.3	7,863.2	7,780.1	83.19	94.519		
3,838.6	3,787.4	3,776.4	3,776.4	12.6	73.5	-130.26	-1,211.7	-7,448.3	7,868.5	7,784.4	84.08	93.579		
3,900.0	3,847.5	3,836.5	3,836.5	12.9	74.8	-130.33	-1,211.7	-7,448.3	7,876.9	7,791.4	85.50	92.123		
3,937.0	3,883.7	3,872.7	3,872.7	13.0	75.5	-130.37	-1,211.7	-7,448.3	7,881.9	7,795.5	86.36	91.269		
4,000.0	3,945.3	3,934.3	3,934.3	13.3	76.7	-130.44	-1,211.7	-7,448.3	7,890.5	7,802.7	87.81	89.854		
4,035.4	3,980.0	3,969.0	3,969.0	13.5	77.4	-130.48	-1,211.7	-7,448.3	7,895.3	7,806.7	88.63	89.079		
4,060.0	4,004.0	3,993.0	3,993.0	13.6	77.9	-130.51	-1,211.7	-7,448.3	7,898.7	7,809.5	89.20	88.549		
4,100.0	4,043.2	4,032.2	4,032.2	13.7	78.7	-130.63	-1,211.7	-7,448.3	7,904.0	7,813.8	90.20	87.630		
4,133.8	4,076.5	4,065.5	4,065.5	13.8	79.4	-130.73	-1,211.7	-7,448.3	7,908.2	7,817.2	91.02	86.883		
4,200.0	4,141.6	4,130.6	4,130.6	14.0	80.7	-130.91	-1,211.7	-7,448.3	7,915.7	7,823.1	92.63	85.457		
4,232.3	4,173.5	4,162.5	4,162.5	14.1	81.3	-130.98	-1,211.7	-7,448.3	7,919.0	7,825.6	93.40	84.785		
4,300.0	4,240.6	4,229.6	4,229.6	14.3	82.7	-131.13	-1,211.7	-7,448.3	7,925.1	7,830.1	95.02	83.408		
4,330.7	4,271.1	4,260.1	4,260.1	14.4	83.3	-131.18	-1,211.7	-7,448.3	7,927.5	7,831.8	95.74	82.806		
4,400.0	4,340.0	4,329.0	4,329.0	14.5	84.7	-131.29	-1,211.7	-7,448.3	7,932.2	7,834.9	97.35	81.480		
4,429.1	4,369.0	4,358.0	4,358.0	14.6	85.2	-131.33	-1,211.7	-7,448.3	7,933.9	7,835.9	98.02	80.942		
4,500.0	4,439.7	4,428.7	4,428.7	14.8	86.7	-131.41	-1,211.7	-7,448.3	7,937.1	7,837.5	99.63	79.666		
4,527.5	4,467.2	4,456.2	4,456.2	14.8	87.2	-131.43	-1,211.7	-7,448.3	7,938.0	7,837.8	100.24	79.188		
4,600.0	4,539.7	4,528.7	4,528.7	14.9	88.7	-131.47	-1,211.7	-7,448.3	7,939.6	7,837.8	101.84	77.961		
4,626.0	4,565.6	4,554.6	4,554.6	15.0	89.2	-131.47	-1,211.7	-7,448.3	7,939.9	7,837.5	102.40	77.536		
4,660.2	4,599.8	4,588.8	4,588.8	15.0	89.9	-102.75	-1,211.7	-7,448.3	7,940.1	7,837.3	102.73	77.292		
4,700.0	4,639.6	4,628.6	4,628.6	15.0	90.7	-102.75	-1,211.7	-7,448.3	7,940.1	7,836.5	103.59	76.648		
4,724.4	4,664.0	4,653.0	4,653.0	15.1	91.2	-102.75	-1,211.7	-7,448.3	7,940.1	7,835.9	104.12	76.256		
4,800.0	4,739.6	4,728.6	4,728.6	15.2	92.7	-102.75	-1,211.7	-7,448.3	7,940.1	7,834.3	105.77	75.066		
4,822.8	4,762.5	4,751.5	4,751.5	15.2	93.2	-102.75	-1,211.7	-7,448.3	7,940.1	7,833.8	106.27	74.714		
4,900.0	4,839.6	4,828.6	4,828.6	15.3	94.7	-102.75	-1,211.7	-7,448.3	7,940.1	7,832.1	107.96	73.547		
4,921.2	4,860.9	4,849.9	4,849.9	15.4	95.1	-102.75	-1,211.7	-7,448.3	7,940.1	7,831.6	108.42	73.232		
5,000.0	4,939.6	4,928.6	4,928.6	15.5	96.7	-102.75	-1,211.7	-7,448.3	7,940.1	7,829.9	110.14	72.088		
5,019.7	4,959.3	4,948.3	4,948.3	15.5	97.1	-102.75	-1,211.7	-7,448.3	7,940.1	7,829.5	110.57	71.807		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,028.6	5,028.6	15.6	98.7	-102.75	-1,211.7	-7,448.3	7,940.1	7,827.7	112.33	70.684	
5,118.1	5,057.7	5,046.7	5,046.7	15.7	99.1	-102.75	-1,211.7	-7,448.3	7,940.1	7,827.3	112.73	70.435	
5,200.0	5,139.6	5,128.6	5,128.6	15.8	100.7	-102.75	-1,211.7	-7,448.3	7,940.1	7,825.5	114.52	69.333	
5,216.5	5,156.2	5,145.2	5,145.2	15.8	101.1	-102.75	-1,211.7	-7,448.3	7,940.1	7,825.2	114.88	69.114	
5,300.0	5,239.6	5,228.6	5,228.6	15.9	102.7	-102.75	-1,211.7	-7,448.3	7,940.1	7,823.3	116.71	68.032	
5,314.9	5,254.6	5,243.6	5,243.6	16.0	103.0	-102.75	-1,211.7	-7,448.3	7,940.1	7,823.0	117.04	67.841	
5,400.0	5,339.6	5,328.6	5,328.6	16.1	104.8	-102.75	-1,211.7	-7,448.3	7,940.1	7,821.2	118.90	66.778	
5,413.4	5,353.0	5,342.0	5,342.0	16.1	105.0	-102.75	-1,211.7	-7,448.3	7,940.1	7,820.9	119.20	66.614	
5,500.0	5,439.6	5,428.6	5,428.6	16.3	106.8	-102.75	-1,211.7	-7,448.3	7,940.1	7,819.0	121.09	65.569	
5,511.8	5,451.4	5,440.4	5,440.4	16.3	107.0	-102.75	-1,211.7	-7,448.3	7,940.1	7,818.7	121.35	65.429	
5,600.0	5,539.6	5,528.6	5,528.6	16.4	108.8	-102.75	-1,211.7	-7,448.3	7,940.1	7,816.8	123.29	64.402	
5,610.2	5,549.9	5,538.9	5,538.9	16.4	109.0	-102.75	-1,211.7	-7,448.3	7,940.1	7,816.5	123.51	64.285	
5,700.0	5,639.6	5,628.6	5,628.6	16.6	110.8	-102.75	-1,211.7	-7,448.3	7,940.1	7,814.6	125.48	63.275	
5,708.6	5,648.3	5,637.3	5,637.3	16.6	111.0	-102.75	-1,211.7	-7,448.3	7,940.1	7,814.4	125.67	63.180	
5,800.0	5,739.6	5,728.6	5,728.6	16.7	112.8	-102.75	-1,211.7	-7,448.3	7,940.1	7,812.4	127.68	62.187	
5,807.1	5,746.7	5,735.7	5,735.7	16.8	112.9	-102.75	-1,211.7	-7,448.3	7,940.1	7,812.2	127.84	62.111	
5,900.0	5,839.6	5,828.6	5,828.6	16.9	114.8	-102.75	-1,211.7	-7,448.3	7,940.1	7,810.2	129.88	61.135	
5,905.5	5,845.1	5,834.1	5,834.1	16.9	114.9	-102.75	-1,211.7	-7,448.3	7,940.1	7,810.1	130.00	61.078	
6,000.0	5,939.6	5,928.6	5,928.6	17.1	116.8	-102.75	-1,211.7	-7,448.3	7,940.1	7,808.0	132.08	60.117	
6,003.9	5,943.6	5,932.6	5,932.6	17.1	116.9	-102.75	-1,211.7	-7,448.3	7,940.1	7,807.9	132.16	60.078	
6,059.2	5,998.8	5,987.8	5,987.8	17.2	118.0	-102.75	-1,211.7	-7,448.3	7,940.1	7,806.7	133.38	59.531	
6,100.0	6,039.6	6,028.6	6,028.6	17.2	118.8	-12.77	-1,211.7	-7,448.3	7,938.9	7,804.6	134.31	59.108	
6,102.3	6,042.0	6,031.0	6,031.0	17.2	118.9	-12.77	-1,211.7	-7,448.3	7,938.8	7,804.4	134.34	59.096	
6,150.0	6,089.4	6,078.4	6,078.4	17.3	119.8	-12.86	-1,211.7	-7,448.3	7,934.4	7,799.9	134.53	58.980	
6,200.0	6,138.7	6,127.7	6,127.7	17.3	120.8	-13.01	-1,211.7	-7,448.3	7,926.6	7,792.5	134.10	59.108	
6,200.8	6,139.5	6,128.5	6,128.5	17.3	120.8	-13.01	-1,211.7	-7,448.3	7,926.4	7,792.3	134.09	59.112	
6,250.0	6,187.4	6,176.4	6,176.4	17.3	121.8	-13.24	-1,211.7	-7,448.3	7,915.4	7,782.4	133.04	59.498	
6,299.2	6,234.4	6,223.4	6,223.4	17.4	122.8	-13.54	-1,211.7	-7,448.3	7,901.2	7,769.8	131.37	60.147	
6,300.0	6,235.1	6,224.1	6,224.1	17.4	122.8	-13.54	-1,211.7	-7,448.3	7,900.9	7,769.6	131.33	60.160	
6,350.0	6,281.7	6,270.7	6,270.7	17.4	123.7	-13.93	-1,211.7	-7,448.3	7,883.3	7,754.2	129.00	61.109	
6,397.6	6,324.8	6,313.8	6,313.8	17.3	124.6	-14.39	-1,211.7	-7,448.3	7,863.5	7,737.3	126.22	62.298	
6,400.0	6,326.9	6,315.9	6,315.9	17.3	124.6	-14.42	-1,211.7	-7,448.3	7,862.4	7,736.4	126.07	62.365	
6,450.0	6,370.5	6,359.5	6,359.5	17.3	125.5	-15.02	-1,211.7	-7,448.3	7,838.6	7,716.0	122.58	63.947	
6,496.0	6,409.1	6,398.1	6,398.1	17.3	126.3	-15.68	-1,211.7	-7,448.3	7,814.1	7,695.2	118.92	65.709	
6,500.0	6,412.3	6,401.3	6,401.3	17.3	126.3	-15.74	-1,211.7	-7,448.3	7,811.9	7,693.3	118.59	65.874	
6,550.0	6,452.1	6,441.1	6,441.1	17.3	127.1	-16.62	-1,211.7	-7,448.3	7,782.4	7,668.2	114.18	68.159	
6,594.5	6,485.6	6,474.6	6,474.6	17.3	127.8	-17.55	-1,211.7	-7,448.3	7,754.0	7,643.9	110.01	70.484	
6,600.0	6,489.7	6,478.7	6,478.7	17.3	127.9	-17.68	-1,211.7	-7,448.3	7,750.3	7,640.8	109.48	70.792	
6,650.0	6,524.9	6,513.9	6,513.9	17.2	128.6	-18.96	-1,211.7	-7,448.3	7,715.7	7,611.0	104.67	73.715	
6,692.9	6,553.0	6,542.0	6,542.0	17.2	129.2	-20.29	-1,211.7	-7,448.3	7,684.2	7,583.5	100.65	76.346	
6,700.0	6,557.5	6,546.5	6,546.5	17.2	129.3	-20.53	-1,211.7	-7,448.3	7,678.8	7,578.8	100.01	76.783	
6,750.0	6,587.4	6,576.4	6,576.4	17.2	129.9	-22.46	-1,211.7	-7,448.3	7,639.8	7,543.9	95.87	79.688	
6,791.3	6,609.9	6,598.9	6,598.9	17.2	130.3	-24.42	-1,211.7	-7,448.3	7,606.1	7,512.9	93.24	81.578	
6,800.0	6,614.4	6,603.4	6,603.4	17.2	130.4	-24.87	-1,211.7	-7,448.3	7,598.9	7,506.1	92.80	81.880	
6,850.0	6,638.4	6,627.4	6,627.4	17.2	130.9	-27.92	-1,211.7	-7,448.3	7,556.2	7,464.7	91.55	82.540	
6,889.7	6,655.3	6,644.3	6,644.3	17.4	131.2	-30.94	-1,211.7	-7,448.3	7,521.2	7,428.8	92.45	81.358	
6,900.0	6,659.4	6,648.4	6,648.4	17.5	131.3	-31.82	-1,211.7	-7,448.3	7,512.1	7,419.0	93.02	80.757	
6,950.0	6,677.1	6,666.1	6,666.1	18.0	131.7	-36.93	-1,211.7	-7,448.3	7,466.6	7,368.4	98.21	76.030	
6,988.2	6,688.4	6,677.4	6,677.4	18.5	131.9	-41.91	-1,211.7	-7,448.3	7,431.2	7,326.0	105.13	70.686	
7,000.0	6,691.5	6,680.5	6,680.5	18.7	131.9	-43.69	-1,211.7	-7,448.3	7,420.1	7,312.3	107.81	68.827	
7,050.0	6,702.5	6,691.5	6,691.5	19.5	132.2	-52.72	-1,211.7	-7,448.3	7,372.7	7,251.1	121.64	60.609	
7,086.6	6,708.4	6,697.4	6,697.4	20.1	132.3	-61.09	-1,211.7	-7,448.3	7,337.6	7,204.3	133.34	55.030	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	6,699.1	6,699.1	20.4	132.3	-64.55	-1,211.7	-7,448.3	7,324.7	7,187.2	137.57	53.245	
7,150.0	6,714.2	6,703.2	6,703.2	21.3	132.4	-79.12	-1,211.7	-7,448.3	7,276.4	7,126.0	150.40	48.379	
7,185.0	6,715.0	6,704.0	6,704.0	21.9	132.4	-90.28	-1,211.7	-7,448.3	7,242.4	7,088.3	154.06	47.009	
7,185.6	6,715.0	6,704.0	6,704.0	21.9	132.4	-90.45	-1,211.7	-7,448.3	7,241.9	7,087.8	154.07	47.002	
7,200.0	6,715.0	6,704.0	6,704.0	22.2	132.4	-90.45	-1,211.7	-7,448.3	7,227.9	7,073.5	154.35	46.827	
7,283.4	6,714.8	6,703.8	6,703.8	23.9	132.4	-90.44	-1,211.7	-7,448.3	7,146.9	6,990.9	156.03	45.806	
7,300.0	6,714.8	6,703.8	6,703.8	24.2	132.4	-90.44	-1,211.7	-7,448.3	7,130.9	6,974.5	156.36	45.606	
7,381.9	6,714.6	6,703.6	6,703.6	26.0	132.4	-90.44	-1,211.7	-7,448.3	7,051.5	6,893.4	158.12	44.597	
7,400.0	6,714.6	6,703.6	6,703.6	26.4	132.4	-90.43	-1,211.7	-7,448.3	7,034.0	6,875.5	158.50	44.377	
7,480.3	6,714.4	6,703.4	6,703.4	28.2	132.4	-90.43	-1,211.7	-7,448.3	6,956.2	6,795.9	160.32	43.389	
7,500.0	6,714.4	6,703.4	6,703.4	28.7	132.4	-90.43	-1,211.7	-7,448.3	6,937.2	6,776.4	160.77	43.151	
7,578.7	6,714.2	6,703.2	6,703.2	30.5	132.4	-90.42	-1,211.7	-7,448.3	6,861.0	6,698.4	162.62	42.191	
7,600.0	6,714.2	6,703.2	6,703.2	31.0	132.4	-90.42	-1,211.7	-7,448.3	6,840.5	6,677.4	163.12	41.935	
7,677.1	6,714.0	6,703.0	6,703.0	32.9	132.4	-90.42	-1,211.7	-7,448.3	6,765.9	6,600.9	164.99	41.008	
7,700.0	6,714.0	6,703.0	6,703.0	33.4	132.4	-90.41	-1,211.7	-7,448.3	6,743.9	6,578.3	165.54	40.738	
7,775.6	6,713.9	6,702.9	6,702.9	35.3	132.4	-90.41	-1,211.7	-7,448.3	6,670.9	6,503.5	167.42	39.846	
7,800.0	6,713.8	6,702.8	6,702.8	35.9	132.4	-90.41	-1,211.7	-7,448.3	6,647.3	6,479.3	168.02	39.562	
7,874.0	6,713.7	6,702.7	6,702.7	37.8	132.4	-90.40	-1,211.7	-7,448.3	6,576.0	6,406.1	169.89	38.707	
7,900.0	6,713.6	6,702.6	6,702.6	38.4	132.4	-90.40	-1,211.7	-7,448.3	6,550.9	6,380.4	170.55	38.411	
7,972.4	6,713.5	6,702.5	6,702.5	40.3	132.4	-90.40	-1,211.7	-7,448.3	6,481.2	6,308.8	172.40	37.593	
8,000.0	6,713.4	6,702.4	6,702.4	41.0	132.4	-90.39	-1,211.7	-7,448.3	6,454.6	6,281.5	173.11	37.286	
8,070.8	6,713.3	6,702.3	6,702.3	42.8	132.4	-90.39	-1,211.7	-7,448.3	6,386.5	6,211.5	174.95	36.505	
8,100.0	6,713.2	6,702.2	6,702.2	43.6	132.4	-90.39	-1,211.7	-7,448.3	6,358.4	6,182.7	175.70	36.189	
8,169.3	6,713.1	6,702.1	6,702.1	45.4	132.4	-90.38	-1,211.7	-7,448.3	6,291.9	6,114.4	177.52	35.444	
8,200.0	6,713.0	6,702.0	6,702.0	46.2	132.4	-90.38	-1,211.7	-7,448.3	6,262.4	6,084.0	178.32	35.119	
8,267.7	6,712.9	6,701.9	6,701.9	48.0	132.4	-90.38	-1,211.7	-7,448.3	6,197.4	6,017.3	180.11	34.410	
8,300.0	6,712.8	6,701.8	6,701.8	48.8	132.4	-90.37	-1,211.7	-7,448.3	6,166.4	5,985.5	180.96	34.076	
8,366.1	6,712.7	6,701.7	6,701.7	50.6	132.4	-90.37	-1,211.7	-7,448.3	6,103.1	5,920.3	182.72	33.402	
8,400.0	6,712.6	6,701.6	6,701.6	51.5	132.4	-90.37	-1,211.7	-7,448.3	6,070.6	5,887.0	183.62	33.061	
8,464.5	6,712.5	6,701.5	6,701.5	53.2	132.4	-90.36	-1,211.7	-7,448.3	6,008.8	5,823.5	185.34	32.420	
8,500.0	6,712.4	6,701.4	6,701.4	54.1	132.4	-90.36	-1,211.7	-7,448.3	5,974.9	5,788.6	186.29	32.074	
8,563.0	6,712.3	6,701.3	6,701.3	55.8	132.4	-90.36	-1,211.7	-7,448.3	5,914.8	5,726.8	187.98	31.465	
8,600.0	6,712.3	6,701.3	6,701.3	56.8	132.4	-90.35	-1,211.7	-7,448.3	5,879.4	5,690.4	188.97	31.112	
8,661.4	6,712.1	6,701.1	6,701.1	58.5	132.4	-90.35	-1,211.7	-7,448.3	5,820.8	5,630.2	190.63	30.535	
8,700.0	6,712.1	6,701.1	6,701.1	59.5	132.4	-90.35	-1,211.7	-7,448.3	5,784.0	5,592.4	191.67	30.177	
8,759.8	6,711.9	6,700.9	6,700.9	61.1	132.4	-90.34	-1,211.7	-7,448.3	5,727.0	5,533.8	193.29	29.629	
8,800.0	6,711.9	6,700.9	6,700.9	62.2	132.4	-90.34	-1,211.7	-7,448.3	5,688.8	5,494.4	194.38	29.267	
8,858.2	6,711.8	6,700.8	6,700.8	63.8	132.4	-90.34	-1,211.7	-7,448.3	5,633.4	5,437.5	195.96	28.748	
8,900.0	6,711.7	6,700.7	6,700.7	64.9	132.4	-90.34	-1,211.7	-7,448.3	5,593.7	5,396.7	197.09	28.382	
8,956.7	6,711.6	6,700.6	6,700.6	66.5	132.3	-90.33	-1,211.7	-7,448.3	5,540.0	5,341.3	198.63	27.890	
9,000.0	6,711.5	6,700.5	6,700.5	67.6	132.3	-90.33	-1,211.7	-7,448.3	5,498.9	5,299.1	199.81	27.520	
9,055.1	6,711.4	6,700.4	6,700.4	69.1	132.3	-90.33	-1,211.7	-7,448.3	5,446.7	5,245.4	201.32	27.055	
9,100.0	6,711.3	6,700.3	6,700.3	70.4	132.3	-90.32	-1,211.7	-7,448.3	5,404.2	5,201.6	202.54	26.682	
9,153.5	6,711.2	6,700.2	6,700.2	71.8	132.3	-90.32	-1,211.7	-7,448.3	5,353.6	5,149.6	204.01	26.242	
9,200.0	6,711.1	6,700.1	6,700.1	73.1	132.3	-90.32	-1,211.7	-7,448.3	5,309.7	5,104.4	205.28	25.866	
9,251.9	6,711.0	6,700.0	6,700.0	74.5	132.3	-90.31	-1,211.7	-7,448.3	5,260.7	5,054.0	206.70	25.450	
9,300.0	6,710.9	6,699.9	6,699.9	75.8	132.3	-90.31	-1,211.7	-7,448.3	5,215.4	5,007.4	208.02	25.072	
9,350.4	6,710.8	6,699.8	6,699.8	77.2	132.3	-90.31	-1,211.7	-7,448.3	5,168.0	4,958.6	209.40	24.680	
9,400.0	6,710.7	6,699.7	6,699.7	78.6	132.3	-90.30	-1,211.7	-7,448.3	5,121.3	4,910.5	210.76	24.299	
9,448.8	6,710.6	6,699.6	6,699.6	79.9	132.3	-90.30	-1,211.7	-7,448.3	5,075.5	4,863.4	212.11	23.929	
9,500.0	6,710.5	6,699.5	6,699.5	81.3	132.3	-90.30	-1,211.7	-7,448.3	5,027.4	4,813.9	213.51	23.546	
9,547.2	6,710.4	6,699.4	6,699.4	82.6	132.3	-90.29	-1,211.7	-7,448.3	4,983.2	4,768.4	214.81	23.198	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,600.0	6,710.3	6,699.3	6,699.3	84.1	132.3	-90.29	-1,211.7	-7,448.3	4,933.8	4,717.6	216.27	22.814	
9,645.6	6,710.2	6,699.2	6,699.2	85.3	132.3	-90.29	-1,211.7	-7,448.3	4,891.2	4,673.7	217.52	22.486	
9,700.0	6,710.1	6,699.1	6,699.1	86.8	132.3	-90.28	-1,211.7	-7,448.3	4,840.5	4,621.5	219.02	22.100	
9,744.1	6,710.0	6,699.0	6,699.0	88.1	132.3	-90.28	-1,211.7	-7,448.3	4,799.4	4,579.2	220.24	21.792	
9,800.0	6,709.9	6,698.9	6,698.9	89.6	132.3	-90.28	-1,211.7	-7,448.3	4,747.4	4,525.6	221.78	21.406	
9,842.5	6,709.9	6,698.9	6,698.9	90.8	132.3	-90.27	-1,211.7	-7,448.3	4,707.9	4,485.0	222.96	21.116	
9,900.0	6,709.7	6,698.7	6,698.7	92.4	132.3	-90.27	-1,211.7	-7,448.3	4,654.6	4,430.1	224.55	20.729	
9,940.9	6,709.7	6,698.7	6,698.7	93.5	132.3	-90.27	-1,211.7	-7,448.3	4,616.7	4,391.0	225.68	20.457	
10,000.0	6,709.6	6,698.6	6,698.6	95.1	132.3	-90.26	-1,211.7	-7,448.3	4,562.1	4,334.8	227.31	20.070	
10,039.3	6,709.5	6,698.5	6,698.5	96.2	132.3	-90.26	-1,211.7	-7,448.3	4,525.8	4,297.4	228.40	19.815	
10,100.0	6,709.4	6,698.4	6,698.4	97.9	132.3	-90.26	-1,211.7	-7,448.3	4,469.9	4,239.9	230.08	19.428	
10,137.8	6,709.3	6,698.3	6,698.3	98.9	132.3	-90.25	-1,211.7	-7,448.3	4,435.2	4,204.1	231.12	19.190	
10,200.0	6,709.2	6,698.2	6,698.2	100.7	132.3	-90.25	-1,211.7	-7,448.3	4,378.1	4,145.3	232.85	18.802	
10,236.2	6,709.1	6,698.1	6,698.1	101.7	132.3	-90.25	-1,211.7	-7,448.3	4,345.0	4,111.1	233.85	18.580	
10,300.0	6,709.0	6,698.0	6,698.0	103.4	132.3	-90.24	-1,211.7	-7,448.3	4,286.7	4,051.0	235.62	18.193	
10,334.6	6,708.9	6,697.9	6,697.9	104.4	132.3	-90.24	-1,211.7	-7,448.3	4,255.1	4,018.5	236.58	17.986	
10,400.0	6,708.8	6,697.8	6,697.8	106.2	132.3	-90.24	-1,211.7	-7,448.3	4,195.6	3,957.2	238.39	17.599	
10,433.0	6,708.7	6,697.7	6,697.7	107.1	132.3	-90.24	-1,211.7	-7,448.3	4,165.6	3,926.3	239.31	17.407	
10,500.0	6,708.6	6,697.6	6,697.6	109.0	132.3	-90.23	-1,211.7	-7,448.3	4,104.9	3,863.8	241.17	17.021	
10,531.5	6,708.5	6,697.5	6,697.5	109.9	132.3	-90.23	-1,211.7	-7,448.3	4,076.5	3,834.5	242.04	16.842	
10,600.0	6,708.4	6,697.4	6,697.4	111.8	132.3	-90.23	-1,211.7	-7,448.3	4,014.7	3,770.8	243.95	16.457	
10,629.9	6,708.4	6,697.4	6,697.4	112.6	132.3	-90.22	-1,211.7	-7,448.3	3,987.9	3,743.1	244.78	16.292	
10,700.0	6,708.2	6,697.2	6,697.2	114.6	132.3	-90.22	-1,211.7	-7,448.3	3,925.0	3,678.3	246.72	15.908	
10,728.3	6,708.2	6,697.2	6,697.2	115.3	132.3	-90.22	-1,211.7	-7,448.3	3,899.7	3,652.2	247.51	15.756	
10,800.0	6,708.0	6,697.0	6,697.0	117.3	132.3	-90.21	-1,211.7	-7,448.3	3,835.8	3,586.3	249.50	15.374	
10,826.7	6,708.0	6,697.0	6,697.0	118.1	132.3	-90.21	-1,211.7	-7,448.3	3,812.0	3,561.7	250.25	15.233	
10,900.0	6,707.8	6,696.8	6,696.8	120.1	132.3	-90.21	-1,211.7	-7,448.3	3,747.1	3,494.8	252.29	14.853	
10,925.2	6,707.8	6,696.8	6,696.8	120.8	132.3	-90.20	-1,211.7	-7,448.3	3,724.9	3,471.9	252.99	14.724	
11,000.0	6,707.6	6,696.6	6,696.6	122.9	132.3	-90.20	-1,211.7	-7,448.3	3,659.0	3,403.9	255.07	14.345	
11,023.6	6,707.6	6,696.6	6,696.6	123.6	132.3	-90.20	-1,211.7	-7,448.3	3,638.3	3,382.6	255.72	14.227	
11,100.0	6,707.5	6,696.5	6,696.5	125.7	132.3	-90.19	-1,211.7	-7,448.3	3,571.5	3,313.7	257.85	13.851	
11,122.0	6,707.4	6,696.4	6,696.4	126.3	132.3	-90.19	-1,211.7	-7,448.3	3,552.3	3,293.9	258.46	13.744	
11,200.0	6,707.3	6,696.3	6,696.3	128.5	132.3	-90.19	-1,211.7	-7,448.3	3,484.7	3,224.1	260.64	13.370	
11,220.4	6,707.2	6,696.2	6,696.2	129.0	132.3	-90.19	-1,211.7	-7,448.3	3,467.1	3,205.9	261.21	13.273	
11,300.0	6,707.1	6,696.1	6,696.1	131.3	132.3	-90.18	-1,211.7	-7,448.3	3,398.7	3,135.2	263.42	12.902	
11,318.9	6,707.0	6,696.0	6,696.0	131.8	132.3	-90.18	-1,211.7	-7,448.3	3,382.5	3,118.5	263.95	12.815	
11,400.0	6,706.9	6,695.9	6,695.9	134.0	132.3	-90.17	-1,211.7	-7,448.3	3,313.4	3,047.2	266.21	12.447	
11,417.3	6,706.9	6,695.9	6,695.9	134.5	132.3	-90.17	-1,211.7	-7,448.3	3,298.7	3,032.0	266.69	12.369	
11,500.0	6,706.7	6,695.7	6,695.7	136.8	132.3	-90.17	-1,211.7	-7,448.3	3,228.9	2,959.9	268.99	12.004	
11,515.7	6,706.7	6,695.7	6,695.7	137.3	132.3	-90.17	-1,211.7	-7,448.3	3,215.7	2,946.3	269.43	11.935	
11,600.0	6,706.5	6,695.5	6,695.5	139.6	132.2	-90.16	-1,211.7	-7,448.3	3,145.4	2,873.6	271.78	11.573	
11,614.1	6,706.5	6,695.5	6,695.5	140.0	132.2	-90.16	-1,211.7	-7,448.3	3,133.6	2,861.5	272.18	11.513	
11,700.0	6,706.3	6,695.3	6,695.3	142.4	132.2	-90.16	-1,211.7	-7,448.3	3,062.8	2,788.3	274.57	11.155	
11,712.6	6,706.3	6,695.3	6,695.3	142.8	132.2	-90.15	-1,211.7	-7,448.3	3,052.5	2,777.6	274.92	11.103	
11,800.0	6,706.1	6,695.1	6,695.1	145.2	132.2	-90.15	-1,211.7	-7,448.3	2,981.4	2,704.0	277.36	10.749	
11,811.0	6,706.1	6,695.1	6,695.1	145.5	132.2	-90.15	-1,211.7	-7,448.3	2,972.5	2,694.8	277.67	10.705	
11,900.0	6,705.9	6,694.9	6,694.9	148.0	132.2	-90.14	-1,211.7	-7,448.3	2,901.0	2,620.9	280.15	10.355	
11,909.4	6,705.9	6,694.9	6,694.9	148.3	132.2	-90.14	-1,211.7	-7,448.3	2,893.5	2,613.1	280.41	10.319	
12,000.0	6,705.8	6,694.8	6,694.8	150.8	132.2	-90.14	-1,211.7	-7,448.3	2,822.0	2,539.0	282.94	9.974	
12,007.8	6,705.7	6,694.7	6,694.7	151.0	132.2	-90.14	-1,211.7	-7,448.3	2,815.8	2,532.7	283.16	9.944	
12,100.0	6,705.6	6,694.6	6,694.6	153.6	132.2	-90.13	-1,211.7	-7,448.3	2,744.3	2,458.6	285.73	9.604	
12,106.3	6,705.6	6,694.6	6,694.6	153.8	132.2	-90.13	-1,211.7	-7,448.3	2,739.5	2,453.5	285.91	9.582	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,200.0	6,705.4	6,694.4	6,694.4	156.4	132.2	-90.12	-1,211.7	-7,448.3	2,668.1	2,379.6	288.52	9.247	
12,204.7	6,705.4	6,694.4	6,694.4	156.5	132.2	-90.12	-1,211.7	-7,448.3	2,664.5	2,375.9	288.66	9.231	
12,300.0	6,705.2	6,694.2	6,694.2	159.2	132.2	-90.12	-1,211.7	-7,448.3	2,593.5	2,302.2	291.32	8.903	
12,303.1	6,705.2	6,694.2	6,694.2	159.3	132.2	-90.12	-1,211.7	-7,448.3	2,591.2	2,299.8	291.40	8.892	
12,400.0	6,705.0	6,694.0	6,694.0	162.0	132.2	-90.11	-1,211.7	-7,448.3	2,520.7	2,226.5	294.11	8.570	
12,401.5	6,705.0	6,694.0	6,694.0	162.0	132.2	-90.11	-1,211.7	-7,448.3	2,519.5	2,225.4	294.15	8.565	
12,500.0	6,704.8	6,693.8	6,693.8	164.8	132.2	-90.11	-1,211.7	-7,448.3	2,449.7	2,152.8	296.90	8.251	
12,598.4	6,704.6	6,693.6	6,693.6	167.5	132.2	-90.10	-1,211.7	-7,448.3	2,382.0	2,082.3	299.65	7.949	
12,600.0	6,704.6	6,693.6	6,693.6	167.6	132.2	-90.10	-1,211.7	-7,448.3	2,380.9	2,081.2	299.70	7.944	
12,696.8	6,704.4	6,693.4	6,693.4	170.3	132.2	-90.09	-1,211.7	-7,448.3	2,316.4	2,014.0	302.40	7.660	
12,700.0	6,704.4	6,693.4	6,693.4	170.4	132.2	-90.09	-1,211.7	-7,448.3	2,314.4	2,011.9	302.49	7.651	
12,795.2	6,704.3	6,693.3	6,693.3	173.0	132.2	-90.09	-1,211.7	-7,448.3	2,253.3	1,948.1	305.15	7.384	
12,800.0	6,704.2	6,693.2	6,693.2	173.2	132.2	-90.09	-1,211.7	-7,448.3	2,250.3	1,945.0	305.29	7.371	
12,893.7	6,704.1	6,693.1	6,693.1	175.8	132.2	-90.08	-1,211.7	-7,448.3	2,192.7	1,884.8	307.91	7.121	
12,900.0	6,704.1	6,693.1	6,693.1	176.0	132.2	-90.08	-1,211.7	-7,448.3	2,188.9	1,880.8	308.08	7.105	
12,992.1	6,703.9	6,692.9	6,692.9	178.5	132.2	-90.07	-1,211.7	-7,448.3	2,135.0	1,824.3	310.66	6.872	
13,000.0	6,703.9	6,692.9	6,692.9	178.8	132.2	-90.07	-1,211.7	-7,448.3	2,130.5	1,819.6	310.88	6.853	
13,090.5	6,703.7	6,692.7	6,692.7	181.3	132.2	-90.07	-1,211.7	-7,448.3	2,080.3	1,766.9	313.41	6.638	
13,100.0	6,703.7	6,692.7	6,692.7	181.6	132.2	-90.07	-1,211.7	-7,448.3	2,075.2	1,761.5	313.67	6.616	
13,188.9	6,703.5	6,692.5	6,692.5	184.0	132.2	-90.06	-1,211.7	-7,448.3	2,028.9	1,712.7	316.16	6.417	
13,200.0	6,703.5	6,692.5	6,692.5	184.4	132.2	-90.06	-1,211.7	-7,448.3	2,023.4	1,706.9	316.47	6.394	
13,287.4	6,703.3	6,692.3	6,692.3	186.8	132.2	-90.06	-1,211.7	-7,448.3	1,981.1	1,662.2	318.91	6.212	
13,300.0	6,703.3	6,692.3	6,692.3	187.2	132.2	-90.06	-1,211.7	-7,448.3	1,975.2	1,656.0	319.27	6.187	
13,385.8	6,703.2	6,692.2	6,692.2	189.6	132.2	-90.05	-1,211.7	-7,448.3	1,937.1	1,615.4	321.67	6.022	
13,400.0	6,703.1	6,692.1	6,692.1	190.0	132.2	-90.05	-1,211.7	-7,448.3	1,931.1	1,609.0	322.06	5.996	
13,484.2	6,703.0	6,692.0	6,692.0	192.3	132.2	-90.04	-1,211.7	-7,448.3	1,897.2	1,572.8	324.42	5.848	
13,500.0	6,702.9	6,691.9	6,691.9	192.8	132.2	-90.04	-1,211.7	-7,448.3	1,891.2	1,566.3	324.86	5.822	
13,582.6	6,702.8	6,691.8	6,691.8	195.1	132.2	-90.04	-1,211.7	-7,448.3	1,861.6	1,534.5	327.17	5.690	
13,600.0	6,702.8	6,691.8	6,691.8	195.6	132.2	-90.04	-1,211.7	-7,448.3	1,855.8	1,528.2	327.66	5.664	
13,681.1	6,702.6	6,691.6	6,691.6	197.8	132.2	-90.03	-1,211.7	-7,448.3	1,830.7	1,500.7	329.93	5.549	
13,700.0	6,702.6	6,691.6	6,691.6	198.4	132.2	-90.03	-1,211.7	-7,448.3	1,825.3	1,494.8	330.46	5.524	
13,779.5	6,702.4	6,691.4	6,691.4	200.6	132.2	-90.03	-1,211.7	-7,448.3	1,804.6	1,471.9	332.68	5.424	
13,800.0	6,702.4	6,691.4	6,691.4	201.2	132.2	-90.03	-1,211.7	-7,448.3	1,799.8	1,466.5	333.25	5.401	
13,877.9	6,702.2	6,691.2	6,691.2	203.3	132.2	-90.02	-1,211.7	-7,448.3	1,783.5	1,448.1	335.43	5.317	
13,900.0	6,702.2	6,691.2	6,691.2	204.0	132.2	-90.02	-1,211.7	-7,448.3	1,779.5	1,443.5	336.05	5.295	
13,976.3	6,702.1	6,691.1	6,691.1	206.1	132.2	-90.01	-1,211.7	-7,448.3	1,767.7	1,429.5	338.19	5.227	
14,000.0	6,702.0	6,691.0	6,691.0	206.8	132.2	-90.01	-1,211.7	-7,448.3	1,764.7	1,425.9	338.85	5.208	
14,074.8	6,701.9	6,690.9	6,690.9	208.9	132.2	-90.01	-1,211.7	-7,448.3	1,757.3	1,416.3	340.94	5.154	
14,100.0	6,701.8	6,690.8	6,690.8	209.6	132.2	-90.01	-1,211.7	-7,448.3	1,755.5	1,413.8	341.65	5.138	
14,173.2	6,701.7	6,690.7	6,690.7	211.6	132.2	-90.00	-1,211.7	-7,448.3	1,752.3	1,408.6	343.70	5.098	
14,200.0	6,701.6	6,690.6	6,690.6	212.4	132.1	-90.00	-1,211.7	-7,448.3	1,751.9	1,407.5	344.45	5.086	
14,212.3	6,701.6	6,690.6	6,690.6	212.7	132.1	-90.00	-1,211.7	-7,448.3	1,751.9	1,407.1	344.79	5.081 CC	
14,271.6	6,701.5	6,690.5	6,690.5	214.4	132.1	-90.00	-1,211.7	-7,448.3	1,752.9	1,406.4	346.45	5.060 ES	
14,300.0	6,701.4	6,690.4	6,690.4	215.2	132.1	-89.99	-1,211.7	-7,448.3	1,754.1	1,406.8	347.25	5.051	
14,370.0	6,701.3	6,690.3	6,690.3	217.1	132.1	-89.99	-1,211.7	-7,448.3	1,759.0	1,409.8	349.21	5.037	
14,400.0	6,701.3	6,690.3	6,690.3	218.0	132.1	-89.99	-1,211.7	-7,448.3	1,761.9	1,411.9	350.05	5.033	
14,468.5	6,701.1	6,690.1	6,690.1	219.9	132.1	-89.98	-1,211.7	-7,448.3	1,770.5	1,418.6	351.96	5.030 SF	
14,500.0	6,701.1	6,690.1	6,690.1	220.8	132.1	-89.98	-1,211.7	-7,448.3	1,775.4	1,422.5	352.85	5.032	
14,566.9	6,701.0	6,690.0	6,690.0	222.6	132.1	-89.98	-1,211.7	-7,448.3	1,787.4	1,432.7	354.72	5.039	
14,600.0	6,700.9	6,689.9	6,689.9	223.6	132.1	-89.98	-1,211.7	-7,448.3	1,794.3	1,438.6	355.64	5.045	
14,665.3	6,700.8	6,689.8	6,689.8	225.4	132.1	-89.97	-1,211.7	-7,448.3	1,809.5	1,452.0	357.47	5.062	
14,700.0	6,700.7	6,689.7	6,689.7	226.4	132.1	-89.97	-1,211.7	-7,448.3	1,818.5	1,460.1	358.44	5.073	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - Design #												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	6,689.6	6,689.6	228.2	132.1	-89.97	-1,211.7	-7,448.3	1,836.6	1,476.4	360.23	5.098	
14,800.0	6,700.5	6,689.5	6,689.5	229.2	132.1	-89.96	-1,211.7	-7,448.3	1,847.8	1,486.6	361.24	5.115	
14,862.2	6,700.4	6,689.4	6,689.4	230.9	132.1	-89.96	-1,211.7	-7,448.3	1,868.5	1,505.5	362.99	5.148	
14,900.0	6,700.3	6,689.3	6,689.3	232.0	132.1	-89.96	-1,211.7	-7,448.3	1,882.0	1,518.0	364.05	5.170	
14,960.6	6,700.2	6,689.2	6,689.2	233.7	132.1	-89.95	-1,211.7	-7,448.3	1,905.0	1,539.3	365.74	5.209	
15,000.0	6,700.2	6,689.2	6,689.2	234.8	132.1	-89.95	-1,211.7	-7,448.3	1,920.8	1,554.0	366.85	5.236	
15,059.0	6,700.0	6,689.0	6,689.0	236.4	132.1	-89.95	-1,211.7	-7,448.3	1,945.8	1,577.3	368.50	5.280	
15,082.8	6,700.0	6,689.0	6,689.0	237.1	132.1	-89.95	-1,211.7	-7,448.3	1,956.2	1,587.1	369.16	5.299	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-86.72	401.0	-7,002.3	7,013.8				
98.4	98.4	34.0	34.0	0.1	0.0	-86.72	401.0	-7,002.3	7,013.9	7,013.8	0.11	N/A	
100.0	100.0	34.8	34.8	0.1	0.0	-86.72	401.0	-7,002.3	7,013.9	7,013.8	0.11	N/A	
196.8	196.8	100.0	100.0	0.3	0.0	-86.73	400.6	-7,002.9	7,014.7	7,014.3	0.35	N/A	
200.0	200.0	100.0	100.0	0.3	0.0	-86.73	400.6	-7,002.9	7,014.7	7,014.3	0.36	N/A	
295.3	295.3	182.9	182.9	0.5	0.2	-86.73	400.0	-7,004.0	7,015.8	7,015.1	0.72	9,742.641	
300.0	300.0	188.4	188.4	0.5	0.2	-86.73	400.0	-7,004.0	7,015.9	7,015.1	0.74	9,472.560	
393.7	393.7	277.1	277.0	0.8	0.3	-86.73	399.7	-7,005.0	7,016.9	7,015.9	1.04	6,757.600	
400.0	400.0	282.9	282.9	0.8	0.3	-86.73	399.7	-7,005.1	7,017.0	7,015.9	1.06	6,635.423	
492.1	492.1	373.2	373.1	1.0	0.4	-86.73	399.8	-7,006.2	7,018.1	7,016.8	1.33	5,269.678	
500.0	500.0	381.0	381.0	1.0	0.4	-86.73	399.8	-7,006.3	7,018.2	7,016.8	1.36	5,179.021	
590.5	590.5	457.7	457.7	1.2	0.4	-86.73	399.9	-7,007.3	7,019.4	7,017.8	1.61	4,364.741	
600.0	600.0	465.3	465.3	1.2	0.4	-86.73	399.9	-7,007.4	7,019.5	7,017.9	1.63	4,295.412	
689.0	689.0	538.6	538.5	1.4	0.5	-86.73	399.9	-7,008.5	7,020.9	7,019.0	1.88	3,738.753	
700.0	700.0	547.8	547.8	1.4	0.5	-86.73	399.9	-7,008.7	7,021.1	7,019.2	1.91	3,679.905	
787.4	787.4	622.9	622.9	1.6	0.5	-86.74	399.6	-7,010.0	7,022.6	7,020.5	2.15	3,271.528	
800.0	800.0	634.4	634.4	1.7	0.5	-86.74	399.6	-7,010.2	7,022.9	7,020.7	2.18	3,219.941	
885.8	885.8	713.8	713.8	1.9	0.6	-86.74	399.2	-7,011.8	7,024.5	7,022.1	2.42	2,907.448	
900.0	900.0	728.0	727.9	1.9	0.6	-86.74	399.2	-7,012.1	7,024.8	7,022.3	2.46	2,861.398	
984.2	984.2	812.3	812.2	2.1	0.6	-86.75	398.7	-7,013.8	7,026.4	7,023.8	2.69	2,615.398	
1,000.0	1,000.0	828.4	828.3	2.1	0.6	-86.75	398.6	-7,014.1	7,026.8	7,024.0	2.73	2,574.226	
1,082.7	1,082.7	913.6	913.5	2.3	0.7	-86.75	398.1	-7,015.8	7,028.4	7,025.4	2.96	2,377.532	
1,100.0	1,100.0	932.9	932.7	2.3	0.7	-86.75	398.0	-7,016.2	7,028.7	7,025.7	3.00	2,339.813	
1,181.1	1,181.1	1,018.6	1,018.4	2.5	0.7	-115.46	397.3	-7,017.8	7,030.7	7,027.5	3.22	2,180.088	
1,200.0	1,200.0	1,035.7	1,035.5	2.6	0.7	-115.46	397.2	-7,018.1	7,031.3	7,028.0	3.27	2,147.077	
1,279.5	1,279.4	1,108.7	1,108.5	2.7	0.7	-115.43	396.4	-7,019.5	7,034.5	7,031.0	3.48	2,018.881	
1,300.0	1,299.8	1,129.8	1,129.6	2.8	0.8	-115.43	396.1	-7,020.0	7,035.5	7,031.9	3.54	1,987.984	
1,377.9	1,377.5	1,208.8	1,208.6	3.0	0.8	-115.40	395.2	-7,021.5	7,039.7	7,036.0	3.75	1,876.909	
1,400.0	1,399.5	1,228.4	1,228.2	3.0	0.8	-115.40	395.0	-7,021.9	7,041.1	7,037.3	3.81	1,848.397	
1,476.4	1,475.3	1,300.0	1,299.8	3.2	0.8	-115.37	394.2	-7,023.4	7,046.5	7,042.5	4.02	1,751.610	
1,500.0	1,498.7	1,316.5	1,316.3	3.3	0.8	-115.35	394.0	-7,023.8	7,048.4	7,044.3	4.09	1,724.682	
1,574.8	1,572.6	1,380.2	1,380.0	3.5	0.9	-115.31	393.6	-7,025.2	7,055.0	7,050.7	4.31	1,637.518	
1,600.0	1,597.5	1,404.2	1,403.9	3.5	0.9	-115.29	393.6	-7,025.7	7,057.4	7,053.0	4.38	1,609.823	
1,673.2	1,669.4	1,531.1	1,530.9	3.7	0.9	-115.34	393.0	-7,028.0	7,064.6	7,060.0	4.64	1,521.505	
1,700.1	1,695.8	1,560.4	1,560.1	3.8	0.9	-115.34	393.0	-7,028.5	7,067.4	7,062.6	4.73	1,493.651	
1,771.6	1,765.7	1,631.7	1,631.5	4.1	1.0	-115.45	393.0	-7,029.5	7,074.9	7,069.9	4.98	1,420.313	
1,800.0	1,793.4	1,657.4	1,657.2	4.2	1.0	-115.48	393.0	-7,029.8	7,077.9	7,072.8	5.08	1,393.339	
1,870.1	1,862.0	1,725.5	1,725.2	4.4	1.0	-115.59	393.0	-7,030.8	7,085.3	7,080.0	5.34	1,327.652	
1,900.0	1,891.3	1,758.4	1,758.2	4.5	1.0	-115.64	392.9	-7,031.3	7,088.5	7,083.0	5.45	1,301.241	
1,968.5	1,958.3	1,824.8	1,824.5	4.8	1.0	-115.74	392.6	-7,032.2	7,095.7	7,090.0	5.71	1,243.365	
2,000.0	1,989.1	1,850.1	1,849.8	4.9	1.0	-115.78	392.5	-7,032.6	7,099.1	7,093.3	5.82	1,218.941	
2,066.9	2,054.5	1,909.3	1,909.0	5.1	1.1	-115.88	391.9	-7,033.5	7,106.3	7,100.2	6.08	1,168.520	
2,100.0	2,086.9	1,972.4	1,972.0	5.3	1.1	-115.98	391.2	-7,034.4	7,109.8	7,103.6	6.22	1,143.399	
2,165.3	2,150.8	2,120.6	2,120.2	5.5	1.1	-116.22	389.3	-7,035.3	7,116.3	7,109.8	6.48	1,097.392	
2,200.0	2,184.7	2,179.0	2,178.7	5.6	1.1	-116.31	388.5	-7,035.2	7,119.4	7,112.8	6.62	1,075.832	
2,263.8	2,247.1	2,258.0	2,257.7	5.9	1.2	-116.44	387.5	-7,034.8	7,125.1	7,118.2	6.86	1,038.520	
2,300.0	2,282.5	2,298.9	2,298.6	6.0	1.2	-116.50	387.1	-7,034.5	7,128.3	7,121.3	7.00	1,018.614	
2,362.2	2,343.3	2,359.7	2,359.4	6.3	1.2	-116.60	386.4	-7,034.1	7,133.7	7,126.5	7.24	985.764	
2,400.0	2,380.3	2,396.6	2,396.2	6.5	1.2	-116.66	386.0	-7,033.9	7,137.0	7,129.6	7.38	966.847	
2,460.6	2,439.6	2,460.6	2,460.3	6.7	1.2	-116.76	385.2	-7,033.4	7,142.3	7,134.7	7.62	937.620	
2,500.0	2,478.1	2,500.0	2,499.6	6.9	1.2	-116.82	384.8	-7,033.1	7,145.8	7,138.0	7.77	919.619	
2,559.0	2,535.9	2,552.4	2,552.0	7.1	1.2	-116.91	384.2	-7,032.8	7,151.0	7,143.0	8.00	893.678	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,587.3	2,586.9	7.3	1.2	-116.96	383.8	-7,032.5	7,154.6	7,146.5	8.16	876.580	
2,657.5	2,632.2	2,632.4	2,632.0	7.5	1.2	-117.03	383.3	-7,032.3	7,159.8	7,151.4	8.39	853.412	
2,700.0	2,673.8	2,664.8	2,664.5	7.7	1.2	-117.08	382.9	-7,032.2	7,163.7	7,155.2	8.56	837.060	
2,755.9	2,728.4	2,712.0	2,711.6	7.9	1.2	-117.16	382.4	-7,032.1	7,169.0	7,160.2	8.78	816.348	
2,800.0	2,771.6	2,766.1	2,765.7	8.1	1.3	-117.24	381.7	-7,031.9	7,173.1	7,164.1	8.96	800.560	
2,854.3	2,824.7	2,824.4	2,824.0	8.3	1.3	-117.34	381.0	-7,031.6	7,178.1	7,168.9	9.18	781.963	
2,900.0	2,869.4	2,866.1	2,865.7	8.5	1.3	-117.40	380.5	-7,031.5	7,182.4	7,173.0	9.36	767.107	
2,952.7	2,921.0	2,911.8	2,911.4	8.8	1.3	-117.47	379.9	-7,031.3	7,187.3	7,177.7	9.58	750.567	
3,000.0	2,967.2	2,947.6	2,947.2	9.0	1.3	-117.53	379.4	-7,031.2	7,191.8	7,182.0	9.77	736.352	
3,051.2	3,017.3	2,986.4	2,986.0	9.2	1.3	-117.59	378.9	-7,031.2	7,196.7	7,186.8	9.97	721.533	
3,100.0	3,065.0	3,042.0	3,041.6	9.4	1.3	-117.68	378.2	-7,031.1	7,201.5	7,191.3	10.17	707.817	
3,149.6	3,113.5	3,156.8	3,156.4	9.6	1.4	-117.86	376.4	-7,030.6	7,206.2	7,195.8	10.38	694.097	
3,200.0	3,162.8	3,348.7	3,348.2	9.8	1.4	-118.18	371.8	-7,026.5	7,210.0	7,199.4	10.59	681.059	
3,248.0	3,209.8	3,428.0	3,427.4	10.0	1.4	-118.31	369.7	-7,023.9	7,213.2	7,202.4	10.78	669.181	
3,300.0	3,260.6	3,490.5	3,489.8	10.2	1.4	-118.42	367.9	-7,021.7	7,216.5	7,205.6	10.99	656.803	
3,346.4	3,306.1	3,548.4	3,547.7	10.5	1.4	-118.51	366.3	-7,019.5	7,219.5	7,208.3	11.17	646.077	
3,400.0	3,358.5	3,616.3	3,615.5	10.7	1.4	-118.63	364.4	-7,016.9	7,222.8	7,211.4	11.39	634.147	
3,444.9	3,402.3	3,674.8	3,673.9	10.9	1.4	-118.72	362.9	-7,014.5	7,225.4	7,213.9	11.57	624.464	
3,500.0	3,456.3	3,753.8	3,752.8	11.1	1.5	-118.85	360.9	-7,011.0	7,228.6	7,216.8	11.79	612.962	
3,543.3	3,498.6	3,800.0	3,799.0	11.3	1.5	-118.93	359.8	-7,008.8	7,231.0	7,219.0	11.97	604.235	
3,600.0	3,554.1	3,851.0	3,849.9	11.5	1.5	-119.01	358.4	-7,006.4	7,234.1	7,221.9	12.20	593.171	
3,641.7	3,594.9	3,881.7	3,880.6	11.7	1.5	-119.06	357.5	-7,005.0	7,236.5	7,224.1	12.36	585.303	
3,700.0	3,651.9	3,928.6	3,927.3	12.0	1.5	-119.14	355.9	-7,003.0	7,239.9	7,227.3	12.60	574.651	
3,740.1	3,691.2	3,962.9	3,961.6	12.2	1.5	-119.20	354.8	-7,001.5	7,242.3	7,229.6	12.76	567.520	
3,800.0	3,749.7	4,000.0	3,998.7	12.4	1.5	-119.26	353.6	-7,000.0	7,246.0	7,233.0	13.00	557.269	
3,838.6	3,787.4	4,035.4	4,034.1	12.6	1.5	-119.32	352.6	-6,998.6	7,248.4	7,235.3	13.16	550.818	
3,900.0	3,847.5	4,075.0	4,073.6	12.9	1.5	-119.39	351.5	-6,997.1	7,252.5	7,239.1	13.41	540.920	
3,937.0	3,883.7	4,100.0	4,098.6	13.0	1.5	-119.43	350.9	-6,996.2	7,255.0	7,241.5	13.56	535.130	
4,000.0	3,945.3	4,145.8	4,144.3	13.3	1.5	-119.50	349.8	-6,994.6	7,259.5	7,245.6	13.81	525.554	
4,035.4	3,980.0	4,172.3	4,170.8	13.5	1.5	-119.55	349.2	-6,993.8	7,262.0	7,248.1	13.96	520.322	
4,060.0	4,004.0	4,200.0	4,198.5	13.6	1.5	-119.59	348.6	-6,993.0	7,263.8	7,249.8	14.06	516.736	
4,100.0	4,043.2	4,218.5	4,217.0	13.7	1.5	-119.67	348.3	-6,992.4	7,266.7	7,252.5	14.19	511.942	
4,133.8	4,076.5	4,241.2	4,239.7	13.8	1.5	-119.74	347.9	-6,991.8	7,268.9	7,254.6	14.29	508.646	
4,200.0	4,141.6	4,300.0	4,298.4	14.0	1.6	-119.89	346.8	-6,990.3	7,272.9	7,258.4	14.48	502.264	
4,232.3	4,173.5	4,309.2	4,307.6	14.1	1.6	-119.93	346.7	-6,990.0	7,274.6	7,260.1	14.56	499.574	
4,300.0	4,240.6	4,364.3	4,362.7	14.3	1.6	-120.04	345.8	-6,988.8	7,277.8	7,263.1	14.74	493.887	
4,330.7	4,271.1	4,389.3	4,387.7	14.4	1.6	-120.09	345.4	-6,988.3	7,279.0	7,264.2	14.81	491.654	
4,400.0	4,340.0	4,444.1	4,442.4	14.5	1.6	-120.17	344.6	-6,987.2	7,281.2	7,266.3	14.96	486.636	
4,429.1	4,369.0	4,466.9	4,465.3	14.6	1.6	-120.20	344.4	-6,986.7	7,281.9	7,266.9	15.02	484.839	
4,500.0	4,439.7	4,525.5	4,523.9	14.8	1.6	-120.25	343.8	-6,985.7	7,283.2	7,268.0	15.16	480.444	
4,527.5	4,467.2	4,550.0	4,548.3	14.8	1.6	-120.26	343.6	-6,985.3	7,283.4	7,268.2	15.21	479.007	
4,600.0	4,539.7	4,600.0	4,598.3	14.9	1.6	-120.28	343.1	-6,984.5	7,283.6	7,268.3	15.33	475.243	
4,626.0	4,565.6	4,628.9	4,627.2	15.0	1.6	-120.29	342.9	-6,984.1	7,283.4	7,268.1	15.36	474.047	
4,660.2	4,599.8	4,652.4	4,650.7	15.0	1.6	-91.55	342.6	-6,983.8	7,283.1	7,269.4	13.66	533.066	
4,700.0	4,639.6	4,679.8	4,678.1	15.0	1.6	-91.56	342.3	-6,983.5	7,282.7	7,268.9	13.73	530.230	
4,724.4	4,664.0	4,700.0	4,698.3	15.1	1.6	-91.56	342.0	-6,983.3	7,282.5	7,268.7	13.78	528.300	
4,800.0	4,739.6	4,748.8	4,747.1	15.2	1.7	-91.56	341.3	-6,983.0	7,281.9	7,268.0	13.94	522.475	
4,822.8	4,762.5	4,764.6	4,762.9	15.2	1.7	-91.57	341.1	-6,982.9	7,281.8	7,267.8	13.98	520.721	
4,900.0	4,839.6	4,818.2	4,816.5	15.3	1.7	-91.57	340.3	-6,982.7	7,281.5	7,267.4	14.14	514.881	
4,921.2	4,860.9	4,833.0	4,831.3	15.4	1.7	-91.57	340.1	-6,982.7	7,281.5	7,267.3	14.19	513.285	
4,933.0	4,872.6	4,841.2	4,839.5	15.4	1.7	-91.58	340.0	-6,982.7	7,281.5	7,267.3	14.21	512.410	
5,000.0	4,939.6	4,900.0	4,898.3	15.5	1.7	-91.58	339.2	-6,982.7	7,281.6	7,267.3	14.35	507.338	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	4,900.0	4,898.3	15.5	1.7	-91.58	339.2	-6,982.7	7,281.7	7,267.3	14.39	506.044	
5,100.0	5,039.6	4,973.5	4,971.8	15.6	1.7	-91.59	338.1	-6,983.0	7,282.0	7,267.4	14.56	500.074	
5,118.1	5,057.7	4,989.6	4,987.9	15.7	1.7	-91.59	337.9	-6,983.1	7,282.1	7,267.5	14.60	498.747	
5,200.0	5,139.6	5,063.4	5,061.7	15.8	1.7	-91.60	337.0	-6,983.4	7,282.5	7,267.7	14.78	492.857	
5,216.5	5,156.2	5,078.3	5,076.6	15.8	1.8	-91.60	336.8	-6,983.5	7,282.6	7,267.8	14.81	491.682	
5,300.0	5,239.6	5,139.4	5,137.7	15.9	1.8	-91.61	336.2	-6,984.0	7,283.2	7,268.3	14.99	486.013	
5,314.9	5,254.6	5,149.3	5,147.6	16.0	1.8	-91.61	336.1	-6,984.1	7,283.4	7,268.4	15.02	485.021	
5,400.0	5,339.6	5,213.9	5,212.2	16.1	1.8	-91.61	335.5	-6,984.8	7,284.4	7,269.2	15.19	479.408	
5,413.4	5,353.0	5,235.9	5,234.2	16.1	1.8	-91.61	335.3	-6,985.1	7,284.6	7,269.3	15.23	478.448	
5,500.0	5,439.6	5,333.4	5,331.6	16.3	1.8	-91.62	334.5	-6,986.0	7,285.4	7,270.0	15.41	472.672	
5,511.8	5,451.4	5,341.6	5,339.9	16.3	1.8	-91.62	334.5	-6,986.1	7,285.5	7,270.1	15.44	471.934	
5,600.0	5,539.6	5,404.8	5,403.1	16.4	1.8	-91.62	334.2	-6,986.9	7,286.6	7,271.0	15.62	466.499	
5,610.2	5,549.9	5,414.6	5,412.9	16.4	1.8	-91.62	334.1	-6,987.0	7,286.8	7,271.1	15.64	465.868	
5,700.0	5,639.6	5,500.6	5,498.8	16.6	1.9	-91.62	333.7	-6,988.2	7,288.1	7,272.2	15.83	460.404	
5,708.6	5,648.3	5,510.2	5,508.5	16.6	1.9	-91.62	333.7	-6,988.4	7,288.2	7,272.3	15.85	459.868	
5,800.0	5,739.6	5,610.6	5,608.8	16.7	1.9	-91.63	332.9	-6,989.7	7,289.4	7,273.4	16.05	454.284	
5,807.1	5,746.7	5,617.4	5,615.6	16.8	1.9	-91.63	332.9	-6,989.8	7,289.5	7,273.5	16.06	453.858	
5,900.0	5,839.6	5,707.9	5,706.1	16.9	1.9	-91.63	332.2	-6,991.0	7,290.8	7,274.5	16.26	448.365	
5,905.5	5,845.1	5,713.9	5,712.1	16.9	1.9	-91.64	332.2	-6,991.1	7,290.9	7,274.6	16.27	448.053	
6,000.0	5,939.6	5,817.7	5,815.9	17.1	1.9	-91.64	332.1	-6,992.5	7,292.1	7,275.6	16.47	442.788	
6,003.9	5,943.6	5,822.1	5,820.4	17.1	1.9	-91.64	332.1	-6,992.5	7,292.1	7,275.7	16.48	442.578	
6,059.2	5,998.8	5,884.8	5,883.0	17.2	1.9	-91.63	332.4	-6,993.3	7,292.8	7,276.2	16.59	439.648	
6,100.0	6,039.6	5,928.6	5,926.8	17.2	1.9	-1.63	332.7	-6,993.8	7,292.1	7,274.1	17.96	405.988	
6,102.3	6,042.0	5,931.0	5,929.2	17.2	1.9	-1.63	332.7	-6,993.8	7,292.0	7,274.0	17.96	405.901	
6,150.0	6,089.4	5,980.4	5,978.7	17.3	1.9	-1.64	333.2	-6,994.3	7,288.0	7,270.0	18.05	403.852	
6,200.0	6,138.7	6,030.2	6,028.4	17.3	1.9	-1.65	333.7	-6,994.9	7,280.5	7,262.3	18.14	401.391	
6,200.8	6,139.5	6,031.0	6,029.2	17.3	1.9	-1.65	333.7	-6,994.9	7,280.3	7,262.2	18.14	401.353	
6,250.0	6,187.4	6,078.3	6,076.5	17.3	1.9	-1.68	334.3	-6,995.4	7,269.5	7,251.3	18.22	399.020	
6,299.2	6,234.4	6,120.7	6,118.9	17.4	1.9	-1.71	334.9	-6,995.9	7,255.5	7,237.2	18.27	397.150	
6,300.0	6,235.1	6,121.3	6,119.5	17.4	1.9	-1.71	334.9	-6,995.9	7,255.2	7,236.9	18.27	397.125	
6,350.0	6,281.7	6,159.8	6,158.0	17.4	1.9	-1.75	335.6	-6,996.3	7,237.6	7,219.4	18.28	395.956	
6,397.6	6,324.8	6,200.0	6,198.2	17.3	1.9	-1.81	336.3	-6,996.9	7,218.0	7,199.7	18.25	395.550	
6,400.0	6,326.9	6,200.0	6,198.2	17.3	1.9	-1.81	336.3	-6,996.9	7,216.9	7,198.7	18.24	395.580	
6,450.0	6,370.5	6,246.4	6,244.5	17.3	1.9	-1.88	337.2	-6,997.5	7,193.0	7,174.9	18.17	395.965	
6,496.0	6,409.1	6,290.8	6,289.0	17.3	1.9	-1.95	338.2	-6,998.1	7,168.4	7,150.3	18.05	397.062	
6,500.0	6,412.3	6,294.5	6,292.7	17.3	1.9	-1.96	338.3	-6,998.1	7,166.2	7,148.1	18.04	397.194	
6,550.0	6,452.1	6,335.8	6,333.9	17.3	1.9	-2.06	339.2	-6,998.7	7,136.4	7,118.5	17.87	399.425	
6,594.5	6,485.6	6,370.1	6,368.2	17.3	1.9	-2.18	340.1	-6,999.1	7,107.6	7,089.9	17.67	402.193	
6,600.0	6,489.7	6,374.2	6,372.3	17.3	1.9	-2.19	340.2	-6,999.1	7,103.9	7,086.2	17.65	402.591	
6,650.0	6,524.9	6,410.8	6,408.9	17.2	1.9	-2.35	341.1	-6,999.6	7,068.8	7,051.4	17.38	406.619	
6,692.9	6,553.0	6,441.1	6,439.2	17.2	1.9	-2.51	342.0	-7,000.0	7,036.7	7,019.6	17.14	410.659	
6,700.0	6,557.5	6,445.9	6,444.0	17.2	1.9	-2.54	342.1	-7,000.0	7,031.3	7,014.2	17.09	411.391	
6,750.0	6,587.4	6,478.2	6,476.3	17.2	1.9	-2.79	343.1	-7,000.4	6,991.6	6,974.8	16.77	416.805	
6,791.3	6,609.9	6,500.0	6,498.0	17.2	1.9	-3.05	343.8	-7,000.7	6,957.2	6,940.7	16.50	421.671	
6,800.0	6,614.4	6,506.4	6,504.4	17.2	1.9	-3.11	344.0	-7,000.7	6,949.8	6,933.4	16.44	422.678	
6,850.0	6,638.4	6,528.5	6,526.5	17.2	1.9	-3.52	344.7	-7,001.0	6,906.3	6,890.2	16.11	428.748	
6,889.7	6,655.3	6,544.1	6,542.2	17.4	1.9	-3.96	345.2	-7,001.2	6,870.5	6,854.7	15.86	433.331	
6,900.0	6,659.4	6,547.9	6,545.9	17.5	1.9	-4.09	345.3	-7,001.2	6,861.1	6,845.3	15.79	434.453	
6,950.0	6,677.1	6,564.4	6,562.4	18.0	1.9	-4.91	345.8	-7,001.5	6,814.6	6,799.1	15.52	439.174	
6,988.2	6,688.4	6,575.0	6,573.0	18.5	1.9	-5.81	346.1	-7,001.6	6,778.3	6,763.0	15.35	441.575	
7,000.0	6,691.5	6,578.0	6,576.0	18.7	1.9	-6.16	346.2	-7,001.6	6,766.9	6,751.6	15.31	442.070	
7,050.0	6,702.5	6,588.5	6,586.5	19.5	1.9	-8.28	346.5	-7,001.8	6,718.3	6,703.1	15.21	441.696	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - Wellbore											Offset Site Error:		0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
7,086.6	6,708.4	6,594.3	6,592.3	20.1	1.9	-11.08	346.7	-7,001.8	6,682.3	6,667.0	15.29	436.990			
7,100.0	6,710.1	6,600.0	6,598.0	20.4	1.9	-12.68	346.9	-7,001.9	6,669.0	6,653.6	15.40	433.040			
7,150.0	6,714.2	6,600.0	6,598.0	21.3	1.9	-25.94	346.9	-7,001.9	6,619.3	6,602.2	17.11	386.782			
7,185.0	6,715.0	6,600.0	6,598.0	21.9	1.9	-68.78	346.9	-7,001.9	6,584.3	6,561.4	22.88	287.714			
7,185.6	6,715.0	6,600.0	6,598.0	21.9	1.9	-70.06	346.9	-7,001.9	6,583.8	6,560.8	22.96	286.757			
7,200.0	6,715.0	6,600.0	6,598.0	22.2	1.9	-70.06	346.9	-7,001.9	6,569.3	6,546.1	23.22	282.908			
7,283.4	6,714.8	6,600.0	6,598.0	23.9	1.9	-70.06	346.9	-7,001.9	6,485.9	6,461.1	24.80	261.481			
7,300.0	6,714.8	6,600.0	6,598.0	24.2	1.9	-70.05	346.9	-7,001.9	6,469.4	6,444.3	25.12	257.556			
7,381.9	6,714.6	6,600.0	6,598.0	26.0	1.9	-70.05	346.9	-7,001.9	6,387.6	6,360.8	26.78	238.501			
7,400.0	6,714.6	6,600.0	6,598.0	26.4	1.9	-70.05	346.9	-7,001.9	6,369.5	6,342.3	27.15	234.602			
7,480.3	6,714.4	6,600.0	6,598.0	28.2	1.9	-70.05	346.9	-7,001.9	6,289.2	6,260.3	28.87	217.840			
7,500.0	6,714.4	6,600.0	6,598.0	28.7	1.9	-70.05	346.9	-7,001.9	6,269.5	6,240.2	29.29	214.032			
7,578.7	6,714.2	6,600.0	6,598.0	30.5	1.9	-70.05	346.9	-7,001.9	6,190.8	6,159.8	31.05	199.403			
7,600.0	6,714.2	6,600.0	6,598.0	31.0	1.9	-70.05	346.9	-7,001.9	6,169.6	6,138.0	31.52	195.732			
7,677.1	6,714.0	6,600.0	6,598.0	32.9	1.9	-70.05	346.9	-7,001.9	6,092.5	6,059.2	33.29	183.003			
7,700.0	6,714.0	6,600.0	6,598.0	33.4	1.9	-70.04	346.9	-7,001.9	6,069.6	6,035.8	33.82	179.492			
7,775.6	6,713.9	6,600.0	6,598.0	35.3	1.9	-70.04	346.9	-7,001.9	5,994.1	5,958.5	35.59	168.417			
7,800.0	6,713.8	6,600.0	6,598.0	35.9	1.9	-70.04	346.9	-7,001.9	5,969.7	5,933.5	36.16	165.073			
7,874.0	6,713.7	6,600.0	6,598.0	37.8	1.9	-70.04	346.9	-7,001.9	5,895.7	5,857.8	37.93	155.422			
7,900.0	6,713.6	6,600.0	6,598.0	38.4	1.9	-70.04	346.9	-7,001.9	5,869.7	5,831.2	38.55	152.244			
7,972.4	6,713.5	6,600.0	6,598.0	40.3	1.9	-70.04	346.9	-7,001.9	5,797.4	5,757.0	40.31	143.813			
8,000.0	6,713.4	6,600.0	6,598.0	41.0	1.9	-70.04	346.9	-7,001.9	5,769.8	5,728.8	40.98	140.794			
8,070.8	6,713.3	6,600.0	6,598.0	42.8	1.9	-70.04	346.9	-7,001.9	5,699.0	5,656.3	42.72	133.406			
8,100.0	6,713.2	6,600.0	6,598.0	43.6	1.9	-70.04	346.9	-7,001.9	5,669.9	5,626.4	43.43	130.539			
8,169.3	6,713.1	6,600.0	6,598.0	45.4	1.9	-70.04	346.9	-7,001.9	5,600.6	5,555.5	45.15	124.043			
8,200.0	6,713.0	6,600.0	6,598.0	46.2	1.9	-70.03	346.9	-7,001.9	5,569.9	5,524.0	45.91	121.318			
8,267.7	6,712.9	6,600.0	6,598.0	48.0	1.9	-70.03	346.9	-7,001.9	5,502.3	5,454.7	47.60	115.588			
8,300.0	6,712.8	6,600.0	6,598.0	48.8	1.9	-70.03	346.9	-7,001.9	5,470.0	5,421.6	48.41	112.996			
8,366.1	6,712.7	6,600.0	6,598.0	50.6	1.9	-70.03	346.9	-7,001.9	5,403.9	5,353.8	50.07	107.925			
8,400.0	6,712.6	6,600.0	6,598.0	51.5	1.9	-70.03	346.9	-7,001.9	5,370.1	5,319.1	50.92	105.456			
8,464.5	6,712.5	6,600.0	6,598.0	53.2	1.9	-70.03	346.9	-7,001.9	5,305.6	5,253.0	52.55	100.954			
8,500.0	6,712.4	6,600.0	6,598.0	54.1	1.9	-70.03	346.9	-7,001.9	5,270.1	5,216.7	53.45	98.600			
8,563.0	6,712.3	6,600.0	6,598.0	55.8	1.9	-70.03	346.9	-7,001.9	5,207.2	5,152.2	55.05	94.591			
8,600.0	6,712.3	6,600.0	6,598.0	56.8	1.9	-70.03	346.9	-7,001.9	5,170.2	5,114.2	55.99	92.343			
8,661.4	6,712.1	6,600.0	6,598.0	58.5	1.9	-70.03	346.9	-7,001.9	5,108.9	5,051.3	57.56	88.764			
8,700.0	6,712.1	6,600.0	6,598.0	59.5	1.9	-70.03	346.9	-7,001.9	5,070.3	5,011.8	58.54	86.613			
8,759.8	6,711.9	6,600.0	6,598.0	61.1	1.9	-70.03	346.9	-7,001.9	5,010.5	4,950.5	60.07	83.410			
8,800.0	6,711.9	6,600.0	6,598.0	62.2	1.9	-70.02	346.9	-7,001.9	4,970.4	4,909.3	61.10	81.350			
8,858.2	6,711.8	6,600.0	6,598.0	63.8	1.9	-70.02	346.9	-7,001.9	4,912.2	4,849.6	62.59	78.476			
8,900.0	6,711.7	6,614.8	6,612.8	64.9	1.9	-73.96	347.3	-7,002.1	4,870.4	4,805.8	64.69	75.289			
8,956.7	6,711.6	6,615.3	6,613.3	66.5	1.9	-74.10	347.3	-7,002.1	4,813.8	4,747.6	66.21	72.703			
9,000.0	6,711.5	6,615.7	6,613.7	67.6	1.9	-74.20	347.3	-7,002.1	4,770.5	4,703.2	67.38	70.805			
9,055.1	6,711.4	6,616.2	6,614.2	69.1	1.9	-74.34	347.3	-7,002.1	4,715.5	4,646.6	68.86	68.477			
9,100.0	6,711.3	6,616.6	6,614.6	70.4	1.9	-74.45	347.3	-7,002.2	4,670.6	4,600.5	70.07	66.653			
9,153.5	6,711.2	6,617.1	6,615.1	71.8	1.9	-74.58	347.3	-7,002.2	4,617.1	4,545.6	71.52	64.554			
9,200.0	6,711.1	6,617.5	6,615.5	73.1	1.9	-74.69	347.4	-7,002.2	4,570.7	4,497.9	72.78	62.799			
9,251.9	6,711.0	6,618.0	6,616.0	74.5	1.9	-74.82	347.4	-7,002.2	4,518.8	4,444.6	74.20	60.904			
9,300.0	6,710.9	6,618.5	6,616.4	75.8	1.9	-74.94	347.4	-7,002.2	4,470.8	4,395.3	75.50	59.214			
9,350.4	6,710.8	6,618.9	6,616.9	77.2	1.9	-75.07	347.4	-7,002.2	4,420.5	4,343.6	76.88	57.500			
9,400.0	6,710.7	6,619.4	6,617.4	78.6	1.9	-75.20	347.4	-7,002.2	4,370.9	4,292.7	78.23	55.870			
9,448.8	6,710.6	6,619.8	6,617.8	79.9	1.9	-75.33	347.4	-7,002.2	4,322.2	4,242.6	79.57	54.319			
9,500.0	6,710.5	6,620.3	6,618.3	81.3	1.9	-75.46	347.4	-7,002.2	4,271.0	4,190.0	80.97	52.746			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	6,620.8	6,618.8	82.6	1.9	-75.58	347.4	-7,002.2	4,223.8	4,141.6	82.27	51.341	
9,600.0	6,710.3	6,621.3	6,619.3	84.1	1.9	-75.72	347.5	-7,002.2	4,171.1	4,087.4	83.72	49.821	
9,645.6	6,710.2	6,621.7	6,619.7	85.3	1.9	-75.84	347.5	-7,002.2	4,125.5	4,040.6	84.98	48.547	
9,700.0	6,710.1	6,622.2	6,620.2	86.8	1.9	-75.98	347.5	-7,002.2	4,071.2	3,984.8	86.48	47.077	
9,744.1	6,710.0	6,622.7	6,620.6	88.1	1.9	-76.10	347.5	-7,002.2	4,027.2	3,939.5	87.70	45.921	
9,800.0	6,709.9	6,623.2	6,621.2	89.6	1.9	-76.25	347.5	-7,002.2	3,971.4	3,882.1	89.25	44.499	
9,842.5	6,709.9	6,623.6	6,621.6	90.8	1.9	-76.37	347.5	-7,002.3	3,928.9	3,838.5	90.42	43.450	
9,900.0	6,709.7	6,624.2	6,622.2	92.4	1.9	-76.53	347.5	-7,002.3	3,871.5	3,779.5	92.02	42.072	
9,940.9	6,709.7	6,624.6	6,622.6	93.5	1.9	-76.64	347.5	-7,002.3	3,830.6	3,737.5	93.16	41.119	
10,000.0	6,709.6	6,625.2	6,623.2	95.1	1.9	-76.81	347.6	-7,002.3	3,771.6	3,676.8	94.80	39.784	
10,039.3	6,709.5	6,625.6	6,623.6	96.2	1.9	-76.92	347.6	-7,002.3	3,732.3	3,636.4	95.90	38.919	
10,100.0	6,709.4	6,626.2	6,624.2	97.9	1.9	-77.09	347.6	-7,002.3	3,671.8	3,574.2	97.59	37.624	
10,137.8	6,709.3	6,626.6	6,624.6	98.9	1.9	-77.20	347.6	-7,002.3	3,634.1	3,535.4	98.65	36.839	
10,200.0	6,709.2	6,627.2	6,625.2	100.7	1.9	-77.37	347.6	-7,002.3	3,571.9	3,471.5	100.39	35.581	
10,236.2	6,709.1	6,627.6	6,625.6	101.7	1.9	-77.48	347.6	-7,002.3	3,535.8	3,434.4	101.40	34.868	
10,300.0	6,709.0	6,628.3	6,626.2	103.4	1.9	-77.66	347.6	-7,002.3	3,472.1	3,368.9	103.19	33.647	
10,334.6	6,708.9	6,628.6	6,626.6	104.4	1.9	-77.77	347.6	-7,002.3	3,437.5	3,333.3	104.17	33.001	
10,400.0	6,708.8	6,629.3	6,627.3	106.2	1.9	-77.96	347.7	-7,002.3	3,372.2	3,266.2	106.00	31.813	
10,433.0	6,708.7	6,629.7	6,627.6	107.1	1.9	-78.06	347.7	-7,002.3	3,339.3	3,232.3	106.93	31.227	
10,500.0	6,708.6	6,630.4	6,628.4	109.0	1.9	-78.26	347.7	-7,002.4	3,272.4	3,163.6	108.82	30.072	
10,531.5	6,708.5	6,630.7	6,628.7	109.9	1.9	-78.35	347.7	-7,002.4	3,241.0	3,131.3	109.71	29.542	
10,600.0	6,708.4	6,631.4	6,629.4	111.8	1.9	-78.56	347.7	-7,002.4	3,172.6	3,061.0	111.64	28.418	
10,629.9	6,708.4	6,631.8	6,629.7	112.6	1.9	-78.65	347.7	-7,002.4	3,142.8	3,030.3	112.49	27.939	
10,700.0	6,708.2	6,632.5	6,630.5	114.6	1.9	-78.87	347.7	-7,002.4	3,072.8	2,958.3	114.47	26.843	
10,728.3	6,708.2	6,632.8	6,630.8	115.3	1.9	-78.96	347.8	-7,002.4	3,044.5	2,929.3	115.27	26.411	
10,800.0	6,708.0	6,633.6	6,631.6	117.3	1.9	-79.18	347.8	-7,002.4	2,973.0	2,855.7	117.31	25.344	
10,826.7	6,708.0	6,633.9	6,631.9	118.1	1.9	-79.27	347.8	-7,002.4	2,946.3	2,828.3	118.06	24.955	
10,900.0	6,707.8	6,634.8	6,632.7	120.1	1.9	-79.50	347.8	-7,002.4	2,873.2	2,753.1	120.14	23.915	
10,925.2	6,707.8	6,635.0	6,633.0	120.8	1.9	-79.58	347.8	-7,002.4	2,848.1	2,727.3	120.86	23.565	
11,000.0	6,707.6	6,635.9	6,633.9	122.9	1.9	-79.82	347.8	-7,002.4	2,773.5	2,650.5	122.99	22.551	
11,023.6	6,707.6	6,636.1	6,634.1	123.6	1.9	-79.90	347.8	-7,002.4	2,749.9	2,626.3	123.66	22.238	
11,100.0	6,707.5	6,637.0	6,635.0	125.7	1.9	-80.15	347.9	-7,002.5	2,673.7	2,547.9	125.84	21.247	
11,122.0	6,707.4	6,637.3	6,635.2	126.3	1.9	-80.22	347.9	-7,002.5	2,651.8	2,525.3	126.47	20.968	
11,200.0	6,707.3	6,638.2	6,636.2	128.5	1.9	-80.48	347.9	-7,002.5	2,574.0	2,445.3	128.69	20.001	
11,220.4	6,707.2	6,638.4	6,636.4	129.0	1.9	-80.55	347.9	-7,002.5	2,553.6	2,424.3	129.28	19.753	
11,300.0	6,707.1	6,639.4	6,637.3	131.3	1.9	-80.82	347.9	-7,002.5	2,474.3	2,342.8	131.55	18.809	
11,318.9	6,707.0	6,639.6	6,637.5	131.8	1.9	-80.89	347.9	-7,002.5	2,455.5	2,323.4	132.09	18.590	
11,400.0	6,706.9	6,640.5	6,638.5	134.0	1.9	-81.16	347.9	-7,002.5	2,374.6	2,240.2	134.41	17.667	
11,417.3	6,706.9	6,640.7	6,638.7	134.5	1.9	-81.22	347.9	-7,002.5	2,357.4	2,222.5	134.91	17.474	
11,500.0	6,706.7	6,641.7	6,639.7	136.8	1.9	-81.51	348.0	-7,002.5	2,275.0	2,137.7	137.28	16.572	
11,515.7	6,706.7	6,641.9	6,639.9	137.3	1.9	-81.57	348.0	-7,002.5	2,259.3	2,121.6	137.73	16.404	
11,600.0	6,706.5	6,643.0	6,640.9	139.6	1.9	-81.87	348.0	-7,002.6	2,175.4	2,035.2	140.14	15.522	
11,614.1	6,706.5	6,643.1	6,641.1	140.0	1.9	-81.92	348.0	-7,002.6	2,161.3	2,020.7	140.55	15.377	
11,700.0	6,706.3	6,644.2	6,642.2	142.4	1.9	-82.23	348.0	-7,002.6	2,075.8	1,932.8	143.01	14.515	
11,712.6	6,706.3	6,644.4	6,642.3	142.8	1.9	-82.27	348.0	-7,002.6	2,063.3	1,919.9	143.38	14.391	
11,800.0	6,706.1	6,645.5	6,643.4	145.2	1.9	-82.59	348.1	-7,002.6	1,976.2	1,830.4	145.89	13.546	
11,811.0	6,706.1	6,645.6	6,643.6	145.5	1.9	-82.63	348.1	-7,002.6	1,965.3	1,819.1	146.20	13.442	
11,900.0	6,705.9	6,646.7	6,644.7	148.0	1.9	-82.96	348.1	-7,002.6	1,876.8	1,728.0	148.76	12.616	
11,909.4	6,705.9	6,646.8	6,644.8	148.3	1.9	-83.00	348.1	-7,002.6	1,867.4	1,718.3	149.03	12.530	
12,000.0	6,705.8	6,648.0	6,646.0	150.8	1.9	-83.34	348.1	-7,002.6	1,777.3	1,625.7	151.64	11.721	
12,007.8	6,705.7	6,648.1	6,646.1	151.0	1.9	-83.37	348.1	-7,002.6	1,769.5	1,617.6	151.86	11.652	
12,100.0	6,705.6	6,649.3	6,647.3	153.6	1.9	-83.72	348.1	-7,002.7	1,677.9	1,523.4	154.51	10.859	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,106.3	6,705.6	6,649.4	6,647.4	153.8	1.9	-83.74	348.1	-7,002.7	1,671.7	1,517.0	154.70	10.806		
12,200.0	6,705.4	6,650.6	6,648.6	156.4	1.9	-84.11	348.2	-7,002.7	1,578.6	1,421.3	157.39	10.030		
12,204.7	6,705.4	6,650.7	6,648.7	156.5	1.9	-84.13	348.2	-7,002.7	1,574.0	1,416.5	157.53	9.992		
12,300.0	6,705.2	6,652.0	6,649.9	159.2	1.9	-84.50	348.2	-7,002.7	1,479.5	1,319.2	160.27	9.231		
12,303.1	6,705.2	6,652.0	6,650.0	159.3	1.9	-84.52	348.2	-7,002.7	1,476.4	1,316.0	160.36	9.207		
12,400.0	6,705.0	6,653.3	6,651.3	162.0	1.9	-84.90	348.2	-7,002.7	1,380.4	1,217.2	163.15	8.461		
12,401.5	6,705.0	6,653.4	6,651.3	162.0	1.9	-84.91	348.2	-7,002.7	1,378.8	1,215.6	163.19	8.449		
12,500.0	6,704.8	6,654.7	6,652.7	164.8	1.9	-85.31	348.3	-7,002.8	1,281.4	1,115.4	166.02	7.718		
12,598.4	6,704.6	6,656.1	6,654.1	167.5	1.9	-85.72	348.3	-7,002.8	1,184.2	1,015.4	168.85	7.014		
12,600.0	6,704.6	6,656.1	6,654.1	167.6	1.9	-85.72	348.3	-7,002.8	1,182.7	1,013.8	168.90	7.002		
12,696.8	6,704.4	6,657.5	6,655.5	170.3	1.9	-86.13	348.3	-7,002.8	1,087.2	915.6	171.68	6.333		
12,700.0	6,704.4	6,657.5	6,655.5	170.4	1.9	-86.14	348.3	-7,002.8	1,084.1	912.3	171.77	6.312		
12,795.2	6,704.3	6,658.9	6,656.9	173.0	1.9	-86.55	348.3	-7,002.8	990.5	816.0	174.50	5.676		
12,800.0	6,704.2	6,659.0	6,656.9	173.2	1.9	-86.57	348.3	-7,002.8	985.8	811.2	174.63	5.645		
12,893.7	6,704.1	6,660.3	6,658.3	175.8	1.9	-86.98	348.4	-7,002.9	894.2	716.8	177.32	5.043		
12,900.0	6,704.1	6,660.4	6,658.4	176.0	1.9	-87.00	348.4	-7,002.9	888.0	710.5	177.50	5.003		
12,992.1	6,703.9	6,661.8	6,659.8	178.5	1.9	-87.41	348.4	-7,002.9	798.3	618.2	180.13	4.432		
13,000.0	6,703.9	6,661.9	6,659.9	178.8	1.9	-87.44	348.4	-7,002.9	790.6	610.3	180.36	4.384		
13,090.5	6,703.7	6,663.3	6,661.2	181.3	1.9	-87.85	348.4	-7,002.9	703.2	520.2	182.94	3.844		
13,100.0	6,703.7	6,663.4	6,661.4	181.6	1.9	-87.89	348.4	-7,002.9	694.1	510.8	183.21	3.788		
13,188.9	6,703.5	6,664.8	6,662.7	184.0	1.9	-88.30	348.5	-7,002.9	609.1	423.3	185.75	3.279		
13,200.0	6,703.5	6,664.9	6,662.9	184.4	1.9	-88.35	348.5	-7,002.9	598.6	412.5	186.06	3.217		
13,287.4	6,703.3	6,666.3	6,664.2	186.8	1.9	-88.75	348.5	-7,003.0	516.6	328.0	188.55	2.740		
13,300.0	6,703.3	6,666.5	6,664.4	187.2	1.9	-88.81	348.5	-7,003.0	504.9	316.0	188.90	2.673		
13,385.8	6,703.2	6,667.8	6,665.8	189.6	1.9	-89.21	348.5	-7,003.0	426.8	235.4	191.34	2.230		
13,400.0	6,703.1	6,668.1	6,666.0	190.0	1.9	-89.28	348.5	-7,003.0	414.1	222.4	191.74	2.160		
13,484.2	6,703.0	6,669.4	6,667.4	192.3	1.9	-89.68	348.6	-7,003.0	341.7	147.6	194.12	1.760		
13,500.0	6,702.9	6,669.6	6,667.6	192.8	1.9	-89.75	348.6	-7,003.0	328.8	134.2	194.56	1.690		
13,582.6	6,702.8	6,671.0	6,668.9	195.1	1.9	-90.15	348.6	-7,003.1	266.0	69.1	196.89	1.351 Level 3		
13,600.0	6,702.8	6,671.3	6,669.2	195.6	1.9	-90.24	348.6	-7,003.1	254.3	56.9	197.38	1.288 Level 3		
13,681.1	6,702.6	6,672.6	6,670.6	197.8	1.9	-90.63	348.6	-7,003.1	210.1	10.4	199.65	1.052 Level 2		
13,700.0	6,702.6	6,672.9	6,670.9	198.4	1.9	-90.73	348.6	-7,003.1	203.0	2.9	200.18	1.014 Level 2		
13,767.2	6,702.4	6,674.0	6,672.0	200.2	1.9	-91.06	348.6	-7,003.1	191.6	-10.4	202.06	0.948 Level 1, CC, ES, SF		
13,779.5	6,702.4	6,674.2	6,672.2	200.6	1.9	-91.12	348.6	-7,003.1	192.0	-10.4	202.40	0.949 Level 1		
13,800.0	6,702.4	6,674.6	6,672.5	201.2	1.9	-91.22	348.7	-7,003.1	194.4	-8.6	202.97	0.958 Level 1		
13,877.9	6,702.2	6,675.9	6,673.9	203.3	1.9	-91.62	348.7	-7,003.2	221.3	16.2	205.14	1.079 Level 2		
13,900.0	6,702.2	6,676.3	6,674.2	204.0	1.9	-91.73	348.7	-7,003.2	233.1	27.4	205.75	1.133 Level 2		
13,976.3	6,702.1	6,677.6	6,675.5	206.1	1.9	-92.12	348.7	-7,003.2	283.6	75.8	207.86	1.365 Level 3		
14,000.0	6,702.0	6,678.0	6,676.0	206.8	1.9	-92.25	348.7	-7,003.2	301.5	93.0	208.51	1.446 Level 3		
14,074.8	6,701.9	6,679.3	6,677.3	208.9	1.9	-92.64	348.7	-7,003.2	362.4	151.8	210.57	1.721		
14,100.0	6,701.8	6,679.7	6,677.7	209.6	1.9	-92.77	348.7	-7,003.2	384.0	172.7	211.26	1.818		
14,173.2	6,701.7	6,681.0	6,679.0	211.6	1.9	-93.16	348.8	-7,003.3	448.9	235.6	213.26	2.105		
14,200.0	6,701.6	6,681.5	6,679.5	212.4	1.9	-93.30	348.8	-7,003.3	473.3	259.3	213.99	2.212		
14,271.6	6,701.5	6,682.8	6,680.8	214.4	1.9	-93.68	348.8	-7,003.3	539.5	323.6	215.94	2.499		
14,300.0	6,701.4	6,683.3	6,681.3	215.2	1.9	-93.84	348.8	-7,003.3	566.2	349.4	216.70	2.613		
14,370.0	6,701.3	6,684.6	6,682.6	217.1	1.9	-94.22	348.8	-7,003.3	632.5	413.9	218.59	2.894		
14,400.0	6,701.3	6,685.2	6,683.1	218.0	1.9	-94.38	348.8	-7,003.3	661.1	441.7	219.39	3.013		
14,468.5	6,701.1	6,686.4	6,684.4	219.9	1.9	-94.76	348.9	-7,003.4	726.9	505.7	221.22	3.286		
14,500.0	6,701.1	6,687.0	6,685.0	220.8	1.9	-94.94	348.9	-7,003.4	757.3	535.3	222.06	3.411		
14,566.9	6,701.0	6,688.3	6,686.2	222.6	1.9	-95.31	348.9	-7,003.4	822.2	598.4	223.84	3.673		
14,600.0	6,700.9	6,688.9	6,686.9	223.6	1.9	-95.50	348.9	-7,003.4	854.5	629.7	224.71	3.802		
14,665.3	6,700.8	6,690.2	6,688.1	225.4	1.9	-95.87	348.9	-7,003.4	918.2	691.8	226.42	4.055		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - Wellbore												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,690.8	6,688.8	226.4	1.9	-96.07	348.9	-7,003.4	952.2	724.8	227.33	4.188	
14,763.7	6,700.6	6,692.1	6,690.0	228.2	1.9	-96.44	349.0	-7,003.5	1,014.7	785.7	228.99	4.431	
14,800.0	6,700.5	6,692.8	6,690.7	229.2	1.9	-96.65	349.0	-7,003.5	1,050.3	820.4	229.92	4.568	
14,862.2	6,700.4	6,694.0	6,692.0	230.9	1.9	-97.02	349.0	-7,003.5	1,111.5	879.9	231.52	4.801	
14,900.0	6,700.3	6,694.8	6,692.7	232.0	1.9	-97.24	349.0	-7,003.5	1,148.7	916.2	232.49	4.941	
14,960.6	6,700.2	6,696.0	6,694.0	233.7	1.9	-97.60	349.0	-7,003.6	1,208.5	974.5	234.03	5.164	
15,000.0	6,700.2	6,696.8	6,694.8	234.8	1.9	-97.84	349.0	-7,003.6	1,247.4	1,012.4	235.02	5.308	
15,059.0	6,700.0	6,698.0	6,696.0	236.4	1.9	-98.20	349.0	-7,003.6	1,305.8	1,069.3	236.50	5.521	
15,082.8	6,700.0	6,698.5	6,696.5	237.1	1.9	-98.34	349.0	-7,003.6	1,329.3	1,092.2	237.10	5.607	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	5.61	1,703.9	167.3	1,712.1				
98.4	98.4	93.4	93.4	0.1	1.1	5.61	1,703.9	167.3	1,712.1	1,710.8	1.24	1,380.361	
100.0	100.0	95.0	95.0	0.1	1.2	5.61	1,703.9	167.3	1,712.1	1,710.8	1.26	1,357.313	
196.8	196.8	191.8	191.8	0.3	3.3	5.61	1,703.9	167.3	1,712.1	1,708.5	3.64	470.615	
200.0	200.0	195.0	195.0	0.3	3.4	5.61	1,703.9	167.3	1,712.1	1,708.4	3.72	460.610	
295.3	295.3	290.3	290.3	0.5	5.4	5.61	1,703.9	167.3	1,712.1	1,706.2	5.92	289.150	
300.0	300.0	295.0	295.0	0.5	5.5	5.61	1,703.9	167.3	1,712.1	1,706.1	6.03	283.933	
393.7	393.7	388.7	388.7	0.8	7.4	5.61	1,703.9	167.3	1,712.1	1,703.9	8.16	209.925	
400.0	400.0	395.0	395.0	0.8	7.5	5.61	1,703.9	167.3	1,712.1	1,703.8	8.30	206.313	
492.1	492.1	487.1	487.1	1.0	9.4	5.61	1,703.9	167.3	1,712.1	1,701.7	10.38	165.013	
500.0	500.0	495.0	495.0	1.0	9.6	5.61	1,703.9	167.3	1,712.1	1,701.5	10.55	162.238	
590.5	590.5	585.5	585.5	1.2	11.4	5.61	1,703.9	167.3	1,712.1	1,699.5	12.59	136.005	
600.0	600.0	595.0	595.0	1.2	11.6	5.61	1,703.9	167.3	1,712.1	1,699.3	12.80	133.749	
689.0	689.0	684.0	684.0	1.4	13.4	5.61	1,703.9	167.3	1,712.1	1,697.3	14.80	115.701	
700.0	700.0	695.0	695.0	1.4	13.6	5.61	1,703.9	167.3	1,712.1	1,697.0	15.04	113.798	
787.4	787.4	782.4	782.4	1.6	15.4	5.61	1,703.9	167.3	1,712.1	1,695.1	17.00	100.684	
800.0	800.0	795.0	795.0	1.7	15.6	5.61	1,703.9	167.3	1,712.1	1,694.8	17.29	99.039	
885.8	885.8	880.8	880.8	1.9	17.3	5.61	1,703.9	167.3	1,712.1	1,692.9	19.21	89.125	
900.0	900.0	895.0	895.0	1.9	17.6	5.61	1,703.9	167.3	1,712.1	1,692.6	19.53	87.675	
984.2	984.2	979.2	979.2	2.1	19.3	5.61	1,703.9	167.3	1,712.1	1,690.7	21.41	79.950	
1,000.0	1,000.0	995.0	995.0	2.1	19.6	5.61	1,703.9	167.3	1,712.1	1,690.3	21.77	78.655	
1,082.7	1,082.7	1,077.7	1,077.7	2.3	21.3	5.61	1,703.9	167.3	1,712.1	1,688.5	23.62	72.490	
1,100.0	1,100.0	1,095.0	1,095.0	2.3	21.7	5.61	1,703.9	167.3	1,712.1	1,688.1	24.01	71.319	
1,181.1	1,181.1	1,176.1	1,176.1	2.5	23.3	-23.14	1,703.9	167.3	1,711.0	1,685.2	25.81	66.289	
1,200.0	1,200.0	1,195.0	1,195.0	2.6	23.7	-23.15	1,703.9	167.3	1,710.5	1,684.3	26.23	65.212	
1,279.5	1,279.4	1,274.4	1,274.4	2.7	25.3	-23.23	1,703.9	167.3	1,706.9	1,678.9	27.97	61.017	
1,300.0	1,299.8	1,294.8	1,294.8	2.8	25.7	-23.26	1,703.9	167.3	1,705.7	1,677.3	28.42	60.017	
1,377.9	1,377.5	1,372.5	1,372.5	3.0	27.2	-23.40	1,703.9	167.3	1,699.7	1,669.6	30.10	56.468	
1,400.0	1,399.5	1,394.5	1,394.5	3.0	27.7	-23.44	1,703.9	167.3	1,697.7	1,667.1	30.57	55.533	
1,476.4	1,475.3	1,470.3	1,470.3	3.2	29.2	-23.63	1,703.9	167.3	1,689.4	1,657.2	32.18	52.493	
1,500.0	1,498.7	1,493.7	1,493.7	3.3	29.7	-23.70	1,703.9	167.3	1,686.5	1,653.8	32.68	51.613	
1,574.8	1,572.6	1,567.6	1,567.6	3.5	31.2	-23.94	1,703.9	167.3	1,676.1	1,641.8	34.22	48.980	
1,600.0	1,597.5	1,592.5	1,592.5	3.5	31.7	-24.03	1,703.9	167.3	1,672.1	1,637.4	34.73	48.146	
1,673.2	1,669.4	1,664.4	1,664.4	3.7	33.1	-24.32	1,703.9	167.3	1,659.7	1,623.5	36.20	45.842	
1,700.1	1,695.8	1,690.8	1,690.8	3.8	33.7	-24.44	1,703.9	167.3	1,654.7	1,617.9	36.74	45.041	
1,771.6	1,765.7	1,760.7	1,760.7	4.1	35.1	-24.66	1,703.9	167.3	1,641.1	1,602.8	38.31	42.842	
1,800.0	1,793.4	1,788.4	1,788.4	4.2	35.6	-24.74	1,703.9	167.3	1,635.7	1,596.8	38.93	42.019	
1,870.1	1,862.0	1,857.0	1,857.0	4.4	37.0	-24.96	1,703.9	167.3	1,622.4	1,582.0	40.47	40.088	
1,900.0	1,891.3	1,886.3	1,886.3	4.5	37.6	-25.05	1,703.9	167.3	1,616.8	1,575.6	41.13	39.309	
1,968.5	1,958.3	1,953.3	1,953.3	4.8	38.9	-25.27	1,703.9	167.3	1,603.8	1,561.2	42.64	37.612	
2,000.0	1,989.1	1,984.1	1,984.1	4.9	39.6	-25.37	1,703.9	167.3	1,597.9	1,554.5	43.34	36.868	
2,066.9	2,054.5	2,049.5	2,049.5	5.1	40.9	-25.58	1,703.9	167.3	1,585.3	1,540.5	44.82	35.367	
2,100.0	2,086.9	2,081.9	2,081.9	5.3	41.5	-25.69	1,703.9	167.3	1,579.0	1,533.5	45.56	34.661	
2,165.3	2,150.8	2,145.8	2,145.8	5.5	42.8	-25.90	1,703.9	167.3	1,566.8	1,519.8	47.01	33.329	
2,200.0	2,184.7	2,179.7	2,179.7	5.6	43.5	-26.02	1,703.9	167.3	1,560.3	1,512.5	47.78	32.656	
2,263.8	2,247.1	2,242.1	2,242.1	5.9	44.7	-26.23	1,703.9	167.3	1,548.3	1,499.1	49.20	31.470	
2,300.0	2,282.5	2,277.5	2,277.5	6.0	45.5	-26.36	1,703.9	167.3	1,541.5	1,491.5	50.01	30.826	
2,362.2	2,343.3	2,338.3	2,338.3	6.3	46.7	-26.57	1,703.9	167.3	1,529.9	1,478.5	51.40	29.767	
2,400.0	2,380.3	2,375.3	2,375.3	6.5	47.4	-26.70	1,703.9	167.3	1,522.8	1,470.6	52.24	29.151	
2,460.6	2,439.6	2,434.6	2,434.6	6.7	48.6	-26.92	1,703.9	167.3	1,511.5	1,457.9	53.60	28.202	
2,500.0	2,478.1	2,473.1	2,473.1	6.9	49.4	-27.06	1,703.9	167.3	1,504.2	1,449.7	54.48	27.611	
2,559.0	2,535.9	2,530.9	2,530.9	7.1	50.6	-27.27	1,703.9	167.3	1,493.2	1,437.4	55.80	26.759	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,570.9	2,570.9	7.3	51.4	-27.42	1,703.9	167.3	1,485.6	1,428.9	56.72	26.192	
2,657.5	2,632.2	2,627.2	2,627.2	7.5	52.5	-27.63	1,703.9	167.3	1,475.0	1,417.0	58.01	25.425	
2,700.0	2,673.8	2,668.8	2,668.8	7.7	53.3	-27.79	1,703.9	167.3	1,467.1	1,408.1	58.97	24.880	
2,755.9	2,728.4	2,723.4	2,723.4	7.9	54.4	-28.00	1,703.9	167.3	1,456.8	1,396.6	60.23	24.188	
2,800.0	2,771.6	2,766.6	2,766.6	8.1	55.3	-28.17	1,703.9	167.3	1,448.7	1,387.4	61.22	23.663	
2,854.3	2,824.7	2,819.7	2,819.7	8.3	56.4	-28.38	1,703.9	167.3	1,438.7	1,376.2	62.45	23.039	
2,900.0	2,869.4	2,864.4	2,864.4	8.5	57.3	-28.56	1,703.9	167.3	1,430.3	1,366.8	63.48	22.532	
2,952.7	2,921.0	2,916.0	2,916.0	8.8	58.3	-28.77	1,703.9	167.3	1,420.6	1,355.9	64.67	21.967	
3,000.0	2,967.2	2,962.2	2,962.2	9.0	59.2	-28.97	1,703.9	167.3	1,411.9	1,346.2	65.74	21.478	
3,051.2	3,017.3	3,012.3	3,012.3	9.2	60.2	-29.18	1,703.9	167.3	1,402.6	1,335.7	66.90	20.967	
3,100.0	3,065.0	3,060.0	3,060.0	9.4	61.2	-29.38	1,703.9	167.3	1,393.7	1,325.7	68.00	20.494	
3,149.6	3,113.5	3,108.5	3,108.5	9.6	62.2	-29.59	1,703.9	167.3	1,384.7	1,315.5	69.13	20.030	
3,200.0	3,162.8	3,157.8	3,157.8	9.8	63.2	-29.80	1,703.9	167.3	1,375.5	1,305.2	70.27	19.574	
3,248.0	3,209.8	3,204.8	3,204.8	10.0	64.1	-30.01	1,703.9	167.3	1,366.8	1,295.4	71.37	19.152	
3,300.0	3,260.6	3,255.6	3,255.6	10.2	65.1	-30.23	1,703.9	167.3	1,357.4	1,284.9	72.55	18.710	
3,346.4	3,306.1	3,301.1	3,301.1	10.5	66.0	-30.44	1,703.9	167.3	1,349.0	1,275.4	73.61	18.327	
3,400.0	3,358.5	3,353.5	3,353.5	10.7	67.1	-30.68	1,703.9	167.3	1,339.4	1,264.5	74.83	17.899	
3,444.9	3,402.3	3,397.3	3,397.3	10.9	68.0	-30.88	1,703.9	167.3	1,331.3	1,255.5	75.85	17.551	
3,500.0	3,456.3	3,451.3	3,451.3	11.1	69.1	-31.14	1,703.9	167.3	1,321.4	1,244.3	77.11	17.136	
3,543.3	3,498.6	3,493.6	3,493.6	11.3	69.9	-31.34	1,703.9	167.3	1,313.7	1,235.6	78.10	16.820	
3,600.0	3,554.1	3,549.1	3,549.1	11.5	71.0	-31.61	1,703.9	167.3	1,303.6	1,224.2	79.40	16.417	
3,641.7	3,594.9	3,589.9	3,589.9	11.7	71.9	-31.81	1,703.9	167.3	1,296.1	1,215.8	80.36	16.129	
3,700.0	3,651.9	3,646.9	3,646.9	12.0	73.0	-32.09	1,703.9	167.3	1,285.8	1,204.1	81.70	15.738	
3,740.1	3,691.2	3,686.2	3,686.2	12.2	73.8	-32.29	1,703.9	167.3	1,278.7	1,196.1	82.62	15.477	
3,800.0	3,749.7	3,744.7	3,744.7	12.4	75.0	-32.59	1,703.9	167.3	1,268.1	1,184.1	84.00	15.097	
3,838.6	3,787.4	3,782.4	3,782.4	12.6	75.7	-32.78	1,703.9	167.3	1,261.3	1,176.4	84.89	14.859	
3,900.0	3,847.5	3,842.5	3,842.5	12.9	76.9	-33.10	1,703.9	167.3	1,250.5	1,164.2	86.30	14.490	
3,937.0	3,883.7	3,878.7	3,878.7	13.0	77.7	-33.29	1,703.9	167.3	1,244.0	1,156.9	87.16	14.273	
4,000.0	3,945.3	3,940.3	3,940.3	13.3	78.9	-33.62	1,703.9	167.3	1,233.0	1,144.4	88.62	13.914	
4,035.4	3,980.0	3,975.0	3,975.0	13.5	79.6	-33.81	1,703.9	167.3	1,226.9	1,137.4	89.44	13.718	
4,060.0	4,004.0	3,999.0	3,999.0	13.6	80.1	-33.94	1,703.9	167.3	1,222.6	1,132.6	90.01	13.584	
4,100.0	4,043.2	4,038.2	4,038.2	13.7	80.9	-34.07	1,703.9	167.3	1,215.9	1,124.8	91.07	13.351	
4,133.8	4,076.5	4,071.5	4,071.5	13.8	81.5	-34.18	1,703.9	167.3	1,210.6	1,118.6	91.95	13.166	
4,200.0	4,141.6	4,136.6	4,136.6	14.0	82.8	-34.38	1,703.9	167.3	1,201.2	1,107.5	93.64	12.827	
4,232.3	4,173.5	4,168.5	4,168.5	14.1	83.5	-34.46	1,703.9	167.3	1,197.0	1,102.6	94.46	12.673	
4,300.0	4,240.6	4,235.6	4,235.6	14.3	84.8	-34.63	1,703.9	167.3	1,189.4	1,093.2	96.15	12.370	
4,330.7	4,271.1	4,266.1	4,266.1	14.4	85.5	-34.70	1,703.9	167.3	1,186.3	1,089.4	96.90	12.243	
4,400.0	4,340.0	4,335.0	4,335.0	14.5	86.8	-34.82	1,703.9	167.3	1,180.5	1,081.9	98.57	11.976	
4,429.1	4,369.0	4,364.0	4,364.0	14.6	87.4	-34.87	1,703.9	167.3	1,178.4	1,079.2	99.25	11.873	
4,500.0	4,439.7	4,434.7	4,434.7	14.8	88.8	-34.96	1,703.9	167.3	1,174.5	1,073.6	100.90	11.640	
4,527.5	4,467.2	4,462.2	4,462.2	14.8	89.4	-34.99	1,703.9	167.3	1,173.3	1,071.8	101.53	11.557	
4,600.0	4,539.7	4,534.7	4,534.7	14.9	90.9	-35.03	1,703.9	167.3	1,171.3	1,068.2	103.14	11.357	
4,626.0	4,565.6	4,560.6	4,560.6	15.0	91.4	-35.04	1,703.9	167.3	1,171.0	1,067.3	103.70	11.291	
4,660.2	4,599.8	4,594.8	4,594.8	15.0	92.1	-6.31	1,703.9	167.3	1,170.8	1,065.0	105.76	11.070	
4,700.0	4,639.6	4,634.6	4,634.6	15.0	92.9	-6.31	1,703.9	167.3	1,170.8	1,064.2	106.62	10.981	
4,724.4	4,664.0	4,659.0	4,659.0	15.1	93.4	-6.31	1,703.9	167.3	1,170.8	1,063.6	107.15	10.927	
4,800.0	4,739.6	4,734.6	4,734.6	15.2	94.9	-6.31	1,703.9	167.3	1,170.8	1,062.0	108.79	10.762	
4,822.8	4,762.5	4,757.5	4,757.5	15.2	95.3	-6.31	1,703.9	167.3	1,170.8	1,061.5	109.28	10.713	
4,900.0	4,839.6	4,834.6	4,834.6	15.3	96.9	-6.31	1,703.9	167.3	1,170.8	1,059.8	110.96	10.552	
4,921.2	4,860.9	4,855.9	4,855.9	15.4	97.3	-6.31	1,703.9	167.3	1,170.8	1,059.4	111.42	10.508	
5,000.0	4,939.6	4,934.6	4,934.6	15.5	98.9	-6.31	1,703.9	167.3	1,170.8	1,057.7	113.13	10.349	
5,019.7	4,959.3	4,954.3	4,954.3	15.5	99.3	-6.31	1,703.9	167.3	1,170.8	1,057.2	113.56	10.310	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,034.6	5,034.6	15.6	100.9	-6.31	1,703.9	167.3	1,170.8	1,055.5	115.30	10.154	
5,118.1	5,057.7	5,052.7	5,052.7	15.7	101.3	-6.31	1,703.9	167.3	1,170.8	1,055.1	115.70	10.119	
5,200.0	5,139.6	5,134.6	5,134.6	15.8	102.9	-6.31	1,703.9	167.3	1,170.8	1,053.3	117.48	9.966	
5,216.5	5,156.2	5,151.2	5,151.2	15.8	103.3	-6.31	1,703.9	167.3	1,170.8	1,053.0	117.84	9.936	
5,300.0	5,239.6	5,234.6	5,234.6	15.9	104.9	-6.31	1,703.9	167.3	1,170.8	1,051.1	119.66	9.785	
5,314.9	5,254.6	5,249.6	5,249.6	16.0	105.2	-6.31	1,703.9	167.3	1,170.8	1,050.8	119.98	9.758	
5,400.0	5,339.6	5,334.6	5,334.6	16.1	106.9	-6.31	1,703.9	167.3	1,170.8	1,049.0	121.83	9.610	
5,413.4	5,353.0	5,348.0	5,348.0	16.1	107.2	-6.31	1,703.9	167.3	1,170.8	1,048.7	122.13	9.587	
5,500.0	5,439.6	5,434.6	5,434.6	16.3	109.0	-6.31	1,703.9	167.3	1,170.8	1,046.8	124.01	9.441	
5,511.8	5,451.4	5,446.4	5,446.4	16.3	109.2	-6.31	1,703.9	167.3	1,170.8	1,046.5	124.27	9.421	
5,600.0	5,539.6	5,534.6	5,534.6	16.4	111.0	-6.31	1,703.9	167.3	1,170.8	1,044.6	126.19	9.278	
5,610.2	5,549.9	5,544.9	5,544.9	16.4	111.2	-6.31	1,703.9	167.3	1,170.8	1,044.4	126.42	9.261	
5,700.0	5,639.6	5,634.6	5,634.6	16.6	113.0	-6.31	1,703.9	167.3	1,170.8	1,042.4	128.38	9.120	
5,708.6	5,648.3	5,643.3	5,643.3	16.6	113.1	-6.31	1,703.9	167.3	1,170.8	1,042.2	128.57	9.107	
5,800.0	5,739.6	5,734.6	5,734.6	16.7	115.0	-6.31	1,703.9	167.3	1,170.8	1,040.2	130.56	8.967	
5,807.1	5,746.7	5,741.7	5,741.7	16.8	115.1	-6.31	1,703.9	167.3	1,170.8	1,040.1	130.72	8.957	
5,900.0	5,839.6	5,834.6	5,834.6	16.9	117.0	-6.31	1,703.9	167.3	1,170.8	1,038.0	132.75	8.820	
5,905.5	5,845.1	5,840.1	5,840.1	16.9	117.1	-6.31	1,703.9	167.3	1,170.8	1,037.9	132.87	8.812	
6,000.0	5,939.6	5,934.6	5,934.6	17.1	119.0	-6.31	1,703.9	167.3	1,170.8	1,035.9	134.93	8.677	
6,003.9	5,943.6	5,938.6	5,938.6	17.1	119.1	-6.31	1,703.9	167.3	1,170.8	1,035.8	135.02	8.671	
6,059.2	5,998.8	5,993.8	5,993.8	17.2	120.2	-6.31	1,703.9	167.3	1,170.8	1,034.6	136.23	8.594	
6,100.0	6,039.6	6,034.6	6,034.6	17.2	121.0	83.75	1,703.9	167.3	1,170.7	1,034.6	136.05	8.604	
6,102.3	6,042.0	6,037.0	6,037.0	17.2	121.1	83.76	1,703.9	167.3	1,170.6	1,034.5	136.10	8.601	
6,150.0	6,089.4	6,084.4	6,084.4	17.3	122.0	84.01	1,703.9	167.3	1,170.2	1,033.1	137.09	8.536	
6,200.0	6,138.7	6,133.7	6,133.7	17.3	123.0	84.47	1,703.9	167.3	1,169.4	1,031.3	138.09	8.468	
6,200.8	6,139.5	6,134.5	6,134.5	17.3	123.0	84.47	1,703.9	167.3	1,169.3	1,031.2	138.10	8.467	
6,250.0	6,187.4	6,182.4	6,182.4	17.3	124.0	85.10	1,703.9	167.3	1,168.3	1,029.2	139.04	8.402	
6,299.2	6,234.4	6,229.4	6,229.4	17.4	124.9	85.87	1,703.9	167.3	1,167.1	1,027.1	139.96	8.339	
6,300.0	6,235.1	6,230.1	6,230.1	17.4	125.0	85.89	1,703.9	167.3	1,167.1	1,027.1	139.97	8.338	
6,350.0	6,281.7	6,276.7	6,276.7	17.4	125.9	86.81	1,703.9	167.3	1,165.8	1,025.0	140.87	8.276	
6,397.6	6,324.8	6,319.8	6,319.8	17.3	126.8	87.80	1,703.9	167.3	1,164.8	1,023.1	141.71	8.220	
6,400.0	6,326.9	6,321.9	6,321.9	17.3	126.8	87.85	1,703.9	167.3	1,164.7	1,023.0	141.75	8.217	
6,450.0	6,370.5	6,365.5	6,365.5	17.3	127.7	88.96	1,703.9	167.3	1,164.0	1,021.3	142.60	8.162	
6,495.3	6,408.5	6,403.5	6,403.5	17.3	128.4	90.00	1,703.9	167.3	1,163.7	1,020.3	143.36	8.117 CC	
6,496.0	6,409.1	6,404.1	6,404.1	17.3	128.4	90.02	1,703.9	167.3	1,163.7	1,020.3	143.38	8.116	
6,500.0	6,412.3	6,407.3	6,407.3	17.3	128.5	90.11	1,703.9	167.3	1,163.7	1,020.3	143.44	8.113	
6,550.0	6,452.1	6,447.1	6,447.1	17.3	129.3	91.26	1,703.9	167.3	1,164.2	1,019.9	144.25	8.070 ES	
6,594.5	6,485.6	6,480.6	6,480.6	17.3	130.0	92.24	1,703.9	167.3	1,165.3	1,020.4	144.96	8.039	
6,600.0	6,489.7	6,484.7	6,484.7	17.3	130.1	92.36	1,703.9	167.3	1,165.6	1,020.5	145.04	8.036	
6,650.0	6,524.9	6,519.9	6,519.9	17.2	130.8	93.39	1,703.9	167.3	1,168.1	1,022.3	145.80	8.012	
6,692.9	6,553.0	6,548.0	6,548.0	17.2	131.3	94.17	1,703.9	167.3	1,171.4	1,024.9	146.45	7.998	
6,700.0	6,557.5	6,552.5	6,552.5	17.2	131.4	94.28	1,703.9	167.3	1,172.0	1,025.5	146.55	7.997	
6,750.0	6,587.4	6,582.4	6,582.4	17.2	132.0	95.02	1,703.9	167.3	1,177.4	1,030.1	147.30	7.993 SF	
6,791.3	6,609.9	6,604.9	6,604.9	17.2	132.5	95.48	1,703.9	167.3	1,183.2	1,035.3	147.95	7.997	
6,800.0	6,614.4	6,609.4	6,609.4	17.2	132.6	95.55	1,703.9	167.3	1,184.6	1,036.5	148.08	8.000	
6,850.0	6,638.4	6,633.4	6,633.4	17.2	133.1	95.85	1,703.9	167.3	1,193.5	1,044.6	148.91	8.015	
6,889.7	6,655.3	6,650.3	6,650.3	17.4	133.4	95.91	1,703.9	167.3	1,202.1	1,052.4	149.63	8.033	
6,900.0	6,659.4	6,654.4	6,654.4	17.5	133.5	95.89	1,703.9	167.3	1,204.4	1,054.6	149.82	8.039	
6,950.0	6,677.1	6,672.1	6,672.1	18.0	133.8	95.63	1,703.9	167.3	1,217.3	1,066.5	150.82	8.071	
6,988.2	6,688.4	6,683.4	6,683.4	18.5	134.1	95.23	1,703.9	167.3	1,228.5	1,076.9	151.66	8.100	
7,000.0	6,691.5	6,686.5	6,686.5	18.7	134.1	95.06	1,703.9	167.3	1,232.3	1,080.3	151.93	8.111	
7,050.0	6,702.5	6,697.5	6,697.5	19.5	134.3	94.16	1,703.9	167.3	1,249.1	1,096.0	153.10	8.159	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,708.4	6,703.4	6,703.4	20.1	134.5	93.27	1,703.9	167.3	1,262.7	1,108.7	154.00	8.200	
7,100.0	6,710.1	6,705.1	6,705.1	20.4	134.5	92.90	1,703.9	167.3	1,267.9	1,113.6	154.32	8.216	
7,150.0	6,714.2	6,709.2	6,709.2	21.3	134.6	91.30	1,703.9	167.3	1,288.5	1,133.0	155.49	8.287	
7,185.0	6,715.0	6,710.0	6,710.0	21.9	134.6	89.97	1,703.9	167.3	1,303.9	1,147.7	156.24	8.346	
7,185.6	6,715.0	6,710.0	6,710.0	21.9	134.6	89.94	1,703.9	167.3	1,304.2	1,147.9	156.25	8.347	
7,200.0	6,715.0	6,710.0	6,710.0	22.2	134.6	89.94	1,703.9	167.3	1,310.8	1,154.2	156.53	8.374	
7,283.4	6,714.8	6,709.8	6,709.8	23.9	134.6	89.93	1,703.9	167.3	1,351.2	1,193.0	158.20	8.541	
7,300.0	6,714.8	6,709.8	6,709.8	24.2	134.6	89.93	1,703.9	167.3	1,359.7	1,201.2	158.53	8.577	
7,381.9	6,714.6	6,709.6	6,709.6	26.0	134.6	89.92	1,703.9	167.3	1,403.8	1,243.5	160.29	8.758	
7,400.0	6,714.6	6,709.6	6,709.6	26.4	134.6	89.92	1,703.9	167.3	1,414.0	1,253.3	160.68	8.800	
7,480.3	6,714.4	6,709.4	6,709.4	28.2	134.6	89.92	1,703.9	167.3	1,461.1	1,298.6	162.50	8.992	
7,500.0	6,714.4	6,709.4	6,709.4	28.7	134.6	89.91	1,703.9	167.3	1,473.1	1,310.2	162.94	9.041	
7,578.7	6,714.2	6,709.2	6,709.2	30.5	134.6	89.91	1,703.9	167.3	1,522.7	1,357.9	164.80	9.240	
7,600.0	6,714.2	6,709.2	6,709.2	31.0	134.6	89.90	1,703.9	167.3	1,536.5	1,371.2	165.30	9.295	
7,677.1	6,714.0	6,709.0	6,709.0	32.9	134.6	89.90	1,703.9	167.3	1,587.9	1,420.8	167.17	9.499	
7,700.0	6,714.0	6,709.0	6,709.0	33.4	134.6	89.89	1,703.9	167.3	1,603.6	1,435.8	167.72	9.561	
7,775.6	6,713.9	6,708.9	6,708.9	35.3	134.6	89.89	1,703.9	167.3	1,656.5	1,486.9	169.59	9.767	
7,800.0	6,713.8	6,708.8	6,708.8	35.9	134.6	89.88	1,703.9	167.3	1,673.9	1,503.7	170.20	9.835	
7,874.0	6,713.7	6,708.7	6,708.7	37.8	134.6	89.88	1,703.9	167.3	1,727.9	1,555.8	172.07	10.042	
7,900.0	6,713.6	6,708.6	6,708.6	38.4	134.6	89.88	1,703.9	167.3	1,747.2	1,574.5	172.73	10.115	
7,972.4	6,713.5	6,708.5	6,708.5	40.3	134.6	89.87	1,703.9	167.3	1,801.9	1,627.3	174.58	10.321	
8,000.0	6,713.4	6,708.4	6,708.4	41.0	134.6	89.87	1,703.9	167.3	1,823.0	1,647.7	175.29	10.400	
8,070.8	6,713.3	6,708.3	6,708.3	42.8	134.6	89.86	1,703.9	167.3	1,878.1	1,701.0	177.13	10.603	
8,100.0	6,713.2	6,708.2	6,708.2	43.6	134.6	89.86	1,703.9	167.3	1,901.1	1,723.2	177.88	10.687	
8,169.3	6,713.1	6,708.1	6,708.1	45.4	134.6	89.85	1,703.9	167.3	1,956.3	1,776.6	179.69	10.887	
8,200.0	6,713.0	6,708.0	6,708.0	46.2	134.6	89.85	1,703.9	167.3	1,981.1	1,800.6	180.50	10.976	
8,267.7	6,712.9	6,707.9	6,707.9	48.0	134.6	89.84	1,703.9	167.3	2,036.3	1,854.0	182.29	11.171	
8,300.0	6,712.8	6,707.8	6,707.8	48.8	134.6	89.84	1,703.9	167.3	2,062.8	1,879.7	183.14	11.264	
8,366.1	6,712.7	6,707.7	6,707.7	50.6	134.6	89.83	1,703.9	167.3	2,117.8	1,932.9	184.90	11.454	
8,400.0	6,712.6	6,707.6	6,707.6	51.5	134.6	89.83	1,703.9	167.3	2,146.2	1,960.4	185.80	11.551	
8,464.5	6,712.5	6,707.5	6,707.5	53.2	134.6	89.82	1,703.9	167.3	2,200.7	2,013.2	187.52	11.736	
8,500.0	6,712.4	6,707.4	6,707.4	54.1	134.5	89.82	1,703.9	167.3	2,230.8	2,042.4	188.47	11.837	
8,563.0	6,712.3	6,707.3	6,707.3	55.8	134.5	89.81	1,703.9	167.3	2,284.8	2,094.6	190.16	12.015	
8,600.0	6,712.3	6,707.3	6,707.3	56.8	134.5	89.81	1,703.9	167.3	2,316.7	2,125.6	191.15	12.120	
8,661.4	6,712.1	6,707.1	6,707.1	58.5	134.5	89.80	1,703.9	167.3	2,370.0	2,177.2	192.81	12.292	
8,700.0	6,712.1	6,707.1	6,707.1	59.5	134.5	89.80	1,703.9	167.3	2,403.7	2,209.9	193.85	12.400	
8,759.8	6,711.9	6,706.9	6,706.9	61.1	134.5	89.79	1,703.9	167.3	2,456.3	2,260.8	195.47	12.566	
8,800.0	6,711.9	6,706.9	6,706.9	62.2	134.5	89.79	1,703.9	167.3	2,491.7	2,295.2	196.56	12.677	
8,858.2	6,711.8	6,706.8	6,706.8	63.8	134.5	89.78	1,703.9	167.3	2,543.4	2,345.2	198.14	12.836	
8,900.0	6,711.7	6,706.7	6,706.7	64.9	134.5	89.78	1,703.9	167.3	2,580.6	2,381.3	199.27	12.950	
8,956.7	6,711.6	6,706.6	6,706.6	66.5	134.5	89.78	1,703.9	167.3	2,631.3	2,430.4	200.82	13.103	
9,000.0	6,711.5	6,706.5	6,706.5	67.6	134.5	89.77	1,703.9	167.3	2,670.2	2,468.2	201.99	13.219	
9,055.1	6,711.4	6,706.4	6,706.4	69.1	134.5	89.77	1,703.9	167.3	2,719.9	2,516.4	203.50	13.366	
9,100.0	6,711.3	6,706.3	6,706.3	70.4	134.5	89.76	1,703.9	167.3	2,760.5	2,555.8	204.72	13.484	
9,153.5	6,711.2	6,706.2	6,706.2	71.8	134.5	89.76	1,703.9	167.3	2,809.2	2,603.0	206.19	13.624	
9,200.0	6,711.1	6,706.1	6,706.1	73.1	134.5	89.75	1,703.9	167.3	2,851.5	2,644.1	207.46	13.745	
9,251.9	6,711.0	6,706.0	6,706.0	74.5	134.5	89.75	1,703.9	167.3	2,899.0	2,690.2	208.88	13.879	
9,300.0	6,710.9	6,705.9	6,705.9	75.8	134.5	89.74	1,703.9	167.3	2,943.1	2,732.9	210.20	14.001	
9,350.4	6,710.8	6,705.8	6,705.8	77.2	134.5	89.74	1,703.9	167.3	2,989.4	2,777.9	211.58	14.129	
9,400.0	6,710.7	6,705.7	6,705.7	78.6	134.5	89.73	1,703.9	167.3	3,035.2	2,822.3	212.95	14.254	
9,448.8	6,710.6	6,705.6	6,705.6	79.9	134.5	89.73	1,703.9	167.3	3,080.3	2,866.1	214.29	14.375	
9,500.0	6,710.5	6,705.5	6,705.5	81.3	134.5	89.73	1,703.9	167.3	3,127.8	2,912.1	215.69	14.501	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	6,705.4	6,705.4	82.6	134.5	89.72	1,703.9	167.3	3,171.7	2,954.7	216.99	14.616	
9,600.0	6,710.3	6,705.3	6,705.3	84.1	134.5	89.72	1,703.9	167.3	3,220.8	3,002.4	218.45	14.744	
9,645.6	6,710.2	6,705.2	6,705.2	85.3	134.5	89.71	1,703.9	167.3	3,263.5	3,043.7	219.71	14.854	
9,700.0	6,710.1	6,705.1	6,705.1	86.8	134.5	89.71	1,703.9	167.3	3,314.3	3,093.1	221.20	14.983	
9,744.1	6,710.0	6,705.0	6,705.0	88.1	134.5	89.70	1,703.9	167.3	3,355.6	3,133.2	222.42	15.087	
9,800.0	6,709.9	6,704.9	6,704.9	89.6	134.5	89.70	1,703.9	167.3	3,408.1	3,184.1	223.96	15.217	
9,842.5	6,709.9	6,704.9	6,704.9	90.8	134.5	89.69	1,703.9	167.3	3,448.1	3,222.9	225.14	15.315	
9,900.0	6,709.7	6,704.7	6,704.7	92.4	134.5	89.69	1,703.9	167.3	3,502.3	3,275.5	226.73	15.447	
9,940.9	6,709.7	6,704.7	6,704.7	93.5	134.5	89.68	1,703.9	167.3	3,540.9	3,313.0	227.86	15.540	
10,000.0	6,709.6	6,704.6	6,704.6	95.1	134.5	89.68	1,703.9	167.3	3,596.7	3,367.2	229.49	15.673	
10,039.3	6,709.5	6,704.5	6,704.5	96.2	134.5	89.68	1,703.9	167.3	3,634.0	3,403.4	230.58	15.760	
10,100.0	6,709.4	6,704.4	6,704.4	97.9	134.5	89.67	1,703.9	167.3	3,691.5	3,459.2	232.26	15.894	
10,137.8	6,709.3	6,704.3	6,704.3	98.9	134.5	89.67	1,703.9	167.3	3,727.4	3,494.1	233.31	15.976	
10,200.0	6,709.2	6,704.2	6,704.2	100.7	134.5	89.66	1,703.9	167.3	3,786.5	3,551.5	235.03	16.111	
10,236.2	6,709.1	6,704.1	6,704.1	101.7	134.5	89.66	1,703.9	167.3	3,821.0	3,585.0	236.03	16.188	
10,300.0	6,709.0	6,704.0	6,704.0	103.4	134.5	89.65	1,703.9	167.3	3,881.8	3,644.0	237.80	16.324	
10,334.6	6,708.9	6,703.9	6,703.9	104.4	134.5	89.65	1,703.9	167.3	3,914.9	3,676.1	238.76	16.396	
10,400.0	6,708.8	6,703.8	6,703.8	106.2	134.5	89.64	1,703.9	167.3	3,977.3	3,736.7	240.58	16.532	
10,433.0	6,708.7	6,703.7	6,703.7	107.1	134.5	89.64	1,703.9	167.3	4,008.9	3,767.4	241.49	16.601	
10,500.0	6,708.6	6,703.6	6,703.6	109.0	134.5	89.63	1,703.9	167.3	4,073.0	3,829.7	243.35	16.737	
10,531.5	6,708.5	6,703.5	6,703.5	109.9	134.5	89.63	1,703.9	167.3	4,103.2	3,859.0	244.23	16.801	
10,600.0	6,708.4	6,703.4	6,703.4	111.8	134.5	89.62	1,703.9	167.3	4,169.0	3,922.8	246.13	16.938	
10,629.9	6,708.4	6,703.4	6,703.4	112.6	134.5	89.62	1,703.9	167.3	4,197.7	3,950.7	246.96	16.998	
10,700.0	6,708.2	6,703.2	6,703.2	114.6	134.5	89.62	1,703.9	167.3	4,265.1	4,016.2	248.91	17.135	
10,728.3	6,708.2	6,703.2	6,703.2	115.3	134.5	89.61	1,703.9	167.3	4,292.4	4,042.7	249.69	17.190	
10,800.0	6,708.0	6,703.0	6,703.0	117.3	134.5	89.61	1,703.9	167.3	4,361.4	4,109.7	251.69	17.329	
10,826.7	6,708.0	6,703.0	6,703.0	118.1	134.5	89.60	1,703.9	167.3	4,387.2	4,134.7	252.43	17.380	
10,900.0	6,707.8	6,702.8	6,702.8	120.1	134.5	89.60	1,703.9	167.3	4,457.8	4,203.4	254.47	17.518	
10,925.2	6,707.8	6,702.8	6,702.8	120.8	134.5	89.59	1,703.9	167.3	4,482.1	4,227.0	255.17	17.565	
11,000.0	6,707.6	6,702.6	6,702.6	122.9	134.5	89.59	1,703.9	167.3	4,554.4	4,297.2	257.25	17.704	
11,023.6	6,707.6	6,702.6	6,702.6	123.6	134.5	89.59	1,703.9	167.3	4,577.3	4,319.4	257.91	17.748	
11,100.0	6,707.5	6,702.5	6,702.5	125.7	134.4	89.58	1,703.9	167.3	4,651.2	4,391.2	260.03	17.887	
11,122.0	6,707.4	6,702.4	6,702.4	126.3	134.4	89.58	1,703.9	167.3	4,672.5	4,411.9	260.65	17.927	
11,200.0	6,707.3	6,702.3	6,702.3	128.5	134.4	89.57	1,703.9	167.3	4,748.1	4,485.3	262.82	18.066	
11,220.4	6,707.2	6,702.2	6,702.2	129.0	134.4	89.57	1,703.9	167.3	4,767.9	4,504.5	263.39	18.102	
11,300.0	6,707.1	6,702.1	6,702.1	131.3	134.4	89.56	1,703.9	167.3	4,845.1	4,579.5	265.60	18.242	
11,318.9	6,707.0	6,702.0	6,702.0	131.8	134.4	89.56	1,703.9	167.3	4,863.4	4,597.3	266.13	18.275	
11,400.0	6,706.9	6,701.9	6,701.9	134.0	134.4	89.55	1,703.9	167.3	4,942.2	4,673.8	268.39	18.414	
11,417.3	6,706.9	6,701.9	6,701.9	134.5	134.4	89.55	1,703.9	167.3	4,959.0	4,690.2	268.87	18.444	
11,500.0	6,706.7	6,701.7	6,701.7	136.8	134.4	89.54	1,703.9	167.3	5,039.5	4,768.3	271.18	18.584	
11,515.7	6,706.7	6,701.7	6,701.7	137.3	134.4	89.54	1,703.9	167.3	5,054.8	4,783.2	271.62	18.610	
11,600.0	6,706.5	6,701.5	6,701.5	139.6	134.4	89.53	1,703.9	167.3	5,136.8	4,862.9	273.96	18.750	
11,614.1	6,706.5	6,701.5	6,701.5	140.0	134.4	89.53	1,703.9	167.3	5,150.6	4,876.2	274.36	18.773	
11,700.0	6,706.3	6,701.3	6,701.3	142.4	134.4	89.52	1,703.9	167.3	5,234.3	4,957.5	276.75	18.913	
11,712.6	6,706.3	6,701.3	6,701.3	142.8	134.4	89.52	1,703.9	167.3	5,246.5	4,969.4	277.10	18.933	
11,800.0	6,706.1	6,701.1	6,701.1	145.2	134.4	89.52	1,703.9	167.3	5,331.8	5,052.3	279.54	19.073	
11,811.0	6,706.1	6,701.1	6,701.1	145.5	134.4	89.51	1,703.9	167.3	5,342.5	5,062.7	279.85	19.091	
11,900.0	6,705.9	6,700.9	6,700.9	148.0	134.4	89.51	1,703.9	167.3	5,429.4	5,147.1	282.33	19.231	
11,909.4	6,705.9	6,700.9	6,700.9	148.3	134.4	89.51	1,703.9	167.3	5,438.7	5,156.1	282.60	19.245	
12,000.0	6,705.8	6,700.8	6,700.8	150.8	134.4	89.50	1,703.9	167.3	5,527.2	5,242.0	285.12	19.385	
12,007.8	6,705.7	6,700.7	6,700.7	151.0	134.4	89.50	1,703.9	167.3	5,534.8	5,249.5	285.34	19.397	
12,100.0	6,705.6	6,700.6	6,700.6	153.6	134.4	89.49	1,703.9	167.3	5,625.0	5,337.0	287.91	19.537	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-INC													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,106.3	6,705.6	6,700.6	6,700.6	153.8	134.4	89.49	1,703.9	167.3	5,631.1	5,343.0	288.09	19.546		
12,200.0	6,705.4	6,700.4	6,700.4	156.4	134.4	89.48	1,703.9	167.3	5,722.8	5,432.1	290.71	19.686		
12,204.7	6,705.4	6,700.4	6,700.4	156.5	134.4	89.48	1,703.9	167.3	5,727.4	5,436.6	290.84	19.693		
12,300.0	6,705.2	6,700.2	6,700.2	159.2	134.4	89.47	1,703.9	167.3	5,820.8	5,527.3	293.50	19.832		
12,303.1	6,705.2	6,700.2	6,700.2	159.3	134.4	89.47	1,703.9	167.3	5,823.8	5,530.3	293.59	19.837		
12,400.0	6,705.0	6,700.0	6,700.0	162.0	134.4	89.46	1,703.9	167.3	5,918.8	5,622.5	296.29	19.976		
12,401.5	6,705.0	6,700.0	6,700.0	162.0	134.4	89.46	1,703.9	167.3	5,920.3	5,624.0	296.33	19.978		
12,500.0	6,704.8	6,699.8	6,699.8	164.8	134.4	89.45	1,703.9	167.3	6,016.9	5,717.8	299.08	20.118		
12,598.4	6,704.6	6,699.6	6,699.6	167.5	134.4	89.44	1,703.9	167.3	6,113.4	5,811.6	301.83	20.254		
12,600.0	6,704.6	6,699.6	6,699.6	167.6	134.4	89.44	1,703.9	167.3	6,115.0	5,813.1	301.88	20.257		
12,696.8	6,704.4	6,699.4	6,699.4	170.3	134.4	89.44	1,703.9	167.3	6,210.1	5,905.5	304.58	20.389		
12,700.0	6,704.4	6,699.4	6,699.4	170.4	134.4	89.44	1,703.9	167.3	6,213.2	5,908.5	304.67	20.393		
12,795.2	6,704.3	6,699.3	6,699.3	173.0	134.4	89.43	1,703.9	167.3	6,306.8	5,999.5	307.33	20.521		
12,800.0	6,704.2	6,699.2	6,699.2	173.2	134.4	89.43	1,703.9	167.3	6,311.5	6,004.0	307.47	20.527		
12,893.7	6,704.1	6,699.1	6,699.1	175.8	134.4	89.42	1,703.9	167.3	6,403.6	6,093.5	310.08	20.651		
12,900.0	6,704.1	6,699.1	6,699.1	176.0	134.4	89.42	1,703.9	167.3	6,409.8	6,099.5	310.26	20.659		
12,992.1	6,703.9	6,698.9	6,698.9	178.5	134.4	89.41	1,703.9	167.3	6,500.4	6,187.5	312.84	20.779		
13,000.0	6,703.9	6,698.9	6,698.9	178.8	134.4	89.41	1,703.9	167.3	6,508.2	6,195.1	313.06	20.789		
13,090.5	6,703.7	6,698.7	6,698.7	181.3	134.4	89.40	1,703.9	167.3	6,597.2	6,281.6	315.59	20.905		
13,100.0	6,703.7	6,698.7	6,698.7	181.6	134.4	89.40	1,703.9	167.3	6,606.6	6,290.7	315.85	20.917		
13,188.9	6,703.5	6,698.5	6,698.5	184.0	134.4	89.39	1,703.9	167.3	6,694.1	6,375.8	318.34	21.028		
13,200.0	6,703.5	6,698.5	6,698.5	184.4	134.4	89.39	1,703.9	167.3	6,705.0	6,386.4	318.65	21.042		
13,287.4	6,703.3	6,698.3	6,698.3	186.8	134.4	89.38	1,703.9	167.3	6,791.1	6,470.0	321.09	21.150		
13,300.0	6,703.3	6,698.3	6,698.3	187.2	134.4	89.38	1,703.9	167.3	6,803.5	6,482.1	321.44	21.165		
13,385.8	6,703.2	6,698.2	6,698.2	189.6	134.4	89.37	1,703.9	167.3	6,888.1	6,564.2	323.84	21.270		
13,400.0	6,703.1	6,698.1	6,698.1	190.0	134.4	89.37	1,703.9	167.3	6,902.1	6,577.8	324.24	21.287		
13,484.2	6,703.0	6,698.0	6,698.0	192.3	134.4	89.37	1,703.9	167.3	6,985.1	6,658.5	326.60	21.388		
13,500.0	6,702.9	6,697.9	6,697.9	192.8	134.4	89.37	1,703.9	167.3	7,000.7	6,673.6	327.04	21.406		
13,582.6	6,702.8	6,697.8	6,697.8	195.1	134.4	89.36	1,703.9	167.3	7,082.2	6,752.8	329.35	21.503		
13,600.0	6,702.8	6,697.8	6,697.8	195.6	134.4	89.36	1,703.9	167.3	7,099.3	6,769.5	329.84	21.524		
13,681.1	6,702.6	6,697.6	6,697.6	197.8	134.4	89.35	1,703.9	167.3	7,179.3	6,847.2	332.10	21.618		
13,700.0	6,702.6	6,697.6	6,697.6	198.4	134.4	89.35	1,703.9	167.3	7,198.0	6,865.3	332.63	21.639		
13,779.5	6,702.4	6,697.4	6,697.4	200.6	134.3	89.34	1,703.9	167.3	7,276.4	6,941.6	334.86	21.730		
13,800.0	6,702.4	6,697.4	6,697.4	201.2	134.3	89.34	1,703.9	167.3	7,296.7	6,961.2	335.43	21.753		
13,877.9	6,702.2	6,697.2	6,697.2	203.3	134.3	89.33	1,703.9	167.3	7,373.6	7,036.0	337.61	21.841		
13,900.0	6,702.2	6,697.2	6,697.2	204.0	134.3	89.33	1,703.9	167.3	7,395.4	7,057.2	338.23	21.865		
13,976.3	6,702.1	6,697.1	6,697.1	206.1	134.3	89.32	1,703.9	167.3	7,470.8	7,130.4	340.36	21.949		
14,000.0	6,702.0	6,697.0	6,697.0	206.8	134.3	89.32	1,703.9	167.3	7,494.2	7,153.1	341.03	21.975		
14,074.8	6,701.9	6,696.9	6,696.9	208.9	134.3	89.31	1,703.9	167.3	7,568.0	7,224.9	343.12	22.057		
14,100.0	6,701.8	6,696.8	6,696.8	209.6	134.3	89.31	1,703.9	167.3	7,593.0	7,249.1	343.83	22.084		
14,173.2	6,701.7	6,696.7	6,696.7	211.6	134.3	89.31	1,703.9	167.3	7,665.3	7,319.4	345.87	22.162		
14,200.0	6,701.6	6,696.6	6,696.6	212.4	134.3	89.30	1,703.9	167.3	7,691.8	7,345.2	346.62	22.191		
14,271.6	6,701.5	6,696.5	6,696.5	214.4	134.3	89.30	1,703.9	167.3	7,762.6	7,414.0	348.63	22.266		
14,300.0	6,701.4	6,696.4	6,696.4	215.2	134.3	89.30	1,703.9	167.3	7,790.7	7,441.2	349.42	22.296		
14,370.0	6,701.3	6,696.3	6,696.3	217.1	134.3	89.29	1,703.9	167.3	7,859.9	7,508.6	351.38	22.369		
14,400.0	6,701.3	6,696.3	6,696.3	218.0	134.3	89.29	1,703.9	167.3	7,889.6	7,537.3	352.22	22.399		
14,468.5	6,701.1	6,696.1	6,696.1	219.9	134.3	89.28	1,703.9	167.3	7,957.3	7,603.2	354.14	22.469		
14,500.0	6,701.1	6,696.1	6,696.1	220.8	134.3	89.28	1,703.9	167.3	7,988.5	7,633.5	355.02	22.501		
14,566.9	6,701.0	6,696.0	6,696.0	222.6	134.3	89.27	1,703.9	167.3	8,054.7	7,697.8	356.89	22.569		
14,600.0	6,700.9	6,695.9	6,695.9	223.6	134.3	89.27	1,703.9	167.3	8,087.4	7,729.6	357.82	22.602		
14,665.3	6,700.8	6,695.8	6,695.8	225.4	134.3	89.26	1,703.9	167.3	8,152.1	7,792.4	359.65	22.667		
14,700.0	6,700.7	6,695.7	6,695.7	226.4	134.3	89.26	1,703.9	167.3	8,186.4	7,825.8	360.62	22.701		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	6,695.6	6,695.6	228.2	134.3	89.26	1,703.9	167.3	8,249.5	7,887.1	362.40	22.763	
14,800.0	6,700.5	6,695.5	6,695.5	229.2	134.3	89.25	1,703.9	167.3	8,285.4	7,922.0	363.42	22.798	
14,862.2	6,700.4	6,695.4	6,695.4	230.9	134.3	89.25	1,703.9	167.3	8,347.0	7,981.8	365.16	22.858	
14,900.0	6,700.3	6,695.3	6,695.3	232.0	134.3	89.24	1,703.9	167.3	8,384.4	8,018.2	366.22	22.895	
14,960.6	6,700.2	6,695.2	6,695.2	233.7	134.3	89.24	1,703.9	167.3	8,444.4	8,076.5	367.92	22.952	
15,000.0	6,700.2	6,695.2	6,695.2	234.8	134.3	89.24	1,703.9	167.3	8,483.5	8,114.4	369.02	22.989	
15,059.0	6,700.0	6,695.0	6,695.0	236.4	134.3	89.23	1,703.9	167.3	8,541.9	8,171.3	370.67	23.044	
15,082.8	6,700.0	6,695.0	6,695.0	237.1	134.3	89.23	1,703.9	167.3	8,565.5	8,194.2	371.34	23.067	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-54.53	1,557.2	-2,185.2	2,683.3				
98.4	98.4	94.4	94.4	0.1	0.0	-54.53	1,557.2	-2,185.2	2,683.3	2,683.2	0.10	N/A	
100.0	100.0	96.0	96.0	0.1	0.0	-54.53	1,557.2	-2,185.2	2,683.3	2,683.2	0.10	N/A	
196.8	196.8	192.8	192.8	0.3	1.0	-54.53	1,557.2	-2,185.2	2,683.3	2,682.0	1.30	2,057.094	
200.0	200.0	196.0	196.0	0.3	1.0	-54.53	1,557.2	-2,185.2	2,683.3	2,681.9	1.35	1,994.954	
295.3	295.3	291.3	291.3	0.5	3.2	-54.53	1,557.2	-2,185.2	2,683.3	2,679.5	3.72	721.412	
300.0	300.0	296.0	296.0	0.5	3.3	-54.53	1,557.2	-2,185.2	2,683.3	2,679.4	3.84	698.820	
393.7	393.7	389.7	389.7	0.8	5.3	-54.53	1,557.2	-2,185.2	2,683.3	2,677.2	6.01	446.525	
400.0	400.0	396.0	396.0	0.8	5.4	-54.53	1,557.2	-2,185.2	2,683.3	2,677.1	6.15	435.988	
492.1	492.1	488.1	488.1	1.0	7.3	-54.53	1,557.2	-2,185.2	2,683.3	2,675.0	8.24	325.450	
500.0	500.0	496.0	496.0	1.0	7.4	-54.53	1,557.2	-2,185.2	2,683.3	2,674.8	8.42	318.551	
590.5	590.5	586.5	586.5	1.2	9.3	-54.53	1,557.2	-2,185.2	2,683.3	2,672.8	10.46	256.408	
600.0	600.0	596.0	596.0	1.2	9.5	-54.53	1,557.2	-2,185.2	2,683.3	2,672.6	10.68	251.293	
689.0	689.0	685.0	685.0	1.4	11.3	-54.53	1,557.2	-2,185.2	2,683.3	2,670.6	12.68	211.650	
700.0	700.0	696.0	696.0	1.4	11.5	-54.53	1,557.2	-2,185.2	2,683.3	2,670.3	12.93	207.592	
787.4	787.4	783.4	783.4	1.6	13.2	-54.53	1,557.2	-2,185.2	2,683.3	2,668.4	14.89	180.241	
800.0	800.0	796.0	796.0	1.7	13.5	-54.53	1,557.2	-2,185.2	2,683.3	2,668.1	15.17	176.881	
885.8	885.8	881.8	881.8	1.9	15.2	-54.53	1,557.2	-2,185.2	2,683.3	2,666.2	17.09	156.971	
900.0	900.0	896.0	896.0	1.9	15.5	-54.53	1,557.2	-2,185.2	2,683.3	2,665.8	17.41	154.106	
984.2	984.2	980.2	980.2	2.1	17.2	-54.53	1,557.2	-2,185.2	2,683.3	2,664.0	19.30	139.033	
1,000.0	1,000.0	996.0	996.0	2.1	17.5	-54.53	1,557.2	-2,185.2	2,683.3	2,663.6	19.65	136.537	
1,082.7	1,082.7	1,078.7	1,078.7	2.3	19.2	-54.53	1,557.2	-2,185.2	2,683.3	2,661.8	21.50	124.780	
1,100.0	1,100.0	1,096.0	1,096.0	2.3	19.5	-54.53	1,557.2	-2,185.2	2,683.3	2,661.4	21.89	122.569	
1,181.1	1,181.1	1,177.1	1,177.1	2.5	21.2	-83.28	1,557.2	-2,185.2	2,683.1	2,659.4	23.71	113.186	
1,200.0	1,200.0	1,196.0	1,196.0	2.6	21.6	-83.30	1,557.2	-2,185.2	2,683.1	2,658.9	24.13	111.202	
1,279.5	1,279.4	1,275.4	1,275.4	2.7	23.2	-83.39	1,557.2	-2,185.2	2,682.6	2,656.7	25.90	103.562	
1,300.0	1,299.8	1,295.8	1,295.8	2.8	23.6	-83.42	1,557.2	-2,185.2	2,682.4	2,656.1	26.36	101.762	
1,377.9	1,377.5	1,373.5	1,373.5	3.0	25.1	-83.57	1,557.2	-2,185.2	2,681.7	2,653.6	28.10	95.431	
1,400.0	1,399.5	1,395.5	1,395.5	3.0	25.6	-83.62	1,557.2	-2,185.2	2,681.5	2,652.9	28.59	93.780	
1,476.4	1,475.3	1,471.3	1,471.3	3.2	27.1	-83.83	1,557.2	-2,185.2	2,680.5	2,650.2	30.30	88.453	
1,500.0	1,498.7	1,494.7	1,494.7	3.3	27.6	-83.91	1,557.2	-2,185.2	2,680.1	2,649.3	30.83	86.924	
1,574.8	1,572.6	1,568.6	1,568.6	3.5	29.1	-84.17	1,557.2	-2,185.2	2,678.9	2,646.4	32.52	82.381	
1,600.0	1,597.5	1,593.5	1,593.5	3.5	29.6	-84.27	1,557.2	-2,185.2	2,678.5	2,645.4	33.09	80.955	
1,673.2	1,669.4	1,665.4	1,665.4	3.7	31.0	-84.58	1,557.2	-2,185.2	2,677.1	2,642.4	34.75	77.036	
1,700.1	1,695.8	1,691.8	1,691.8	3.8	31.5	-84.70	1,557.2	-2,185.2	2,676.6	2,641.3	35.36	75.689	
1,771.6	1,765.7	1,761.7	1,761.7	4.1	32.9	-85.01	1,557.2	-2,185.2	2,675.3	2,638.3	37.01	72.289	
1,800.0	1,793.4	1,789.4	1,789.4	4.2	33.5	-85.14	1,557.2	-2,185.2	2,674.7	2,637.1	37.66	71.022	
1,870.1	1,862.0	1,858.0	1,858.0	4.4	34.9	-85.44	1,557.2	-2,185.2	2,673.5	2,634.2	39.29	68.053	
1,900.0	1,891.3	1,887.3	1,887.3	4.5	35.5	-85.57	1,557.2	-2,185.2	2,673.0	2,633.0	39.98	66.857	
1,968.5	1,958.3	1,954.3	1,954.3	4.8	36.8	-85.87	1,557.2	-2,185.2	2,671.9	2,630.4	41.58	64.259	
2,000.0	1,989.1	1,985.1	1,985.1	4.9	37.4	-86.01	1,557.2	-2,185.2	2,671.5	2,629.1	42.32	63.130	
2,066.9	2,054.5	2,050.5	2,050.5	5.1	38.8	-86.30	1,557.2	-2,185.2	2,670.5	2,626.6	43.89	60.848	
2,100.0	2,086.9	2,082.9	2,082.9	5.3	39.4	-86.44	1,557.2	-2,185.2	2,670.1	2,625.4	44.67	59.779	
2,165.3	2,150.8	2,146.8	2,146.8	5.5	40.7	-86.73	1,557.2	-2,185.2	2,669.2	2,623.0	46.21	57.768	
2,200.0	2,184.7	2,180.7	2,180.7	5.6	41.4	-86.88	1,557.2	-2,185.2	2,668.8	2,621.8	47.02	56.755	
2,263.8	2,247.1	2,243.1	2,243.1	5.9	42.6	-87.16	1,557.2	-2,185.2	2,668.1	2,619.6	48.53	54.977	
2,300.0	2,282.5	2,278.5	2,278.5	6.0	43.3	-87.31	1,557.2	-2,185.2	2,667.7	2,618.4	49.39	54.015	
2,362.2	2,343.3	2,339.3	2,339.3	6.3	44.6	-87.59	1,557.2	-2,185.2	2,667.2	2,616.3	50.86	52.437	
2,400.0	2,380.3	2,376.3	2,376.3	6.5	45.3	-87.75	1,557.2	-2,185.2	2,666.8	2,615.1	51.76	51.522	
2,460.6	2,439.6	2,435.6	2,435.6	6.7	46.5	-88.02	1,557.2	-2,185.2	2,666.4	2,613.2	53.20	50.117	
2,500.0	2,478.1	2,474.1	2,474.1	6.9	47.3	-88.19	1,557.2	-2,185.2	2,666.1	2,611.9	54.14	49.245	
2,559.0	2,535.9	2,531.9	2,531.9	7.1	48.4	-88.45	1,557.2	-2,185.2	2,665.7	2,610.2	55.55	47.992	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,571.9	2,571.9	7.3	49.2	-88.63	1,557.2	-2,185.2	2,665.5	2,609.0	56.52	47.160	
2,657.5	2,632.2	2,628.2	2,628.2	7.5	50.4	-88.88	1,557.2	-2,185.2	2,665.2	2,607.3	57.89	46.038	
2,700.0	2,673.8	2,669.8	2,669.8	7.7	51.2	-89.06	1,557.2	-2,185.2	2,665.1	2,606.2	58.91	45.243	
2,755.9	2,728.4	2,724.4	2,724.4	7.9	52.3	-89.31	1,557.2	-2,185.2	2,664.9	2,604.6	60.24	44.237	
2,800.0	2,771.6	2,767.6	2,767.6	8.1	53.2	-89.50	1,557.2	-2,185.2	2,664.8	2,603.5	61.29	43.476	
2,854.3	2,824.7	2,820.7	2,820.7	8.3	54.3	-89.74	1,557.2	-2,185.2	2,664.7	2,602.1	62.59	42.573	
2,900.0	2,869.4	2,865.4	2,865.4	8.5	55.1	-89.94	1,557.2	-2,185.2	2,664.7	2,601.0	63.68	41.842	
2,914.4	2,883.5	2,879.5	2,879.5	8.6	55.4	-90.00	1,557.2	-2,185.2	2,664.7	2,600.7	64.03	41.617	
2,952.7	2,921.0	2,917.0	2,917.0	8.8	56.2	-90.17	1,557.2	-2,185.2	2,664.7	2,599.8	64.95	41.029	
3,000.0	2,967.2	2,963.2	2,963.2	9.0	57.1	-90.37	1,557.2	-2,185.2	2,664.7	2,598.7	66.08	40.328	
3,051.2	3,017.3	3,013.3	3,013.3	9.2	58.1	-90.60	1,557.2	-2,185.2	2,664.8	2,597.5	67.30	39.596	
3,100.0	3,065.0	3,061.0	3,061.0	9.4	59.1	-90.81	1,557.2	-2,185.2	2,665.0	2,596.5	68.47	38.922	
3,149.6	3,113.5	3,109.5	3,109.5	9.6	60.1	-91.03	1,557.2	-2,185.2	2,665.1	2,595.5	69.66	38.260	
3,200.0	3,162.8	3,158.8	3,158.8	9.8	61.1	-91.25	1,557.2	-2,185.2	2,665.3	2,594.5	70.86	37.612	
3,248.0	3,209.8	3,205.8	3,205.8	10.0	62.0	-91.46	1,557.2	-2,185.2	2,665.6	2,593.6	72.02	37.014	
3,300.0	3,260.6	3,256.6	3,256.6	10.2	63.0	-91.69	1,557.2	-2,185.2	2,665.9	2,592.6	73.26	36.389	
3,346.4	3,306.1	3,302.1	3,302.1	10.5	63.9	-91.89	1,557.2	-2,185.2	2,666.2	2,591.8	74.37	35.848	
3,400.0	3,358.5	3,354.5	3,354.5	10.7	65.0	-92.12	1,557.2	-2,185.2	2,666.6	2,590.9	75.66	35.246	
3,444.9	3,402.3	3,398.3	3,398.3	10.9	65.9	-92.32	1,557.2	-2,185.2	2,667.0	2,590.2	76.73	34.756	
3,500.0	3,456.3	3,452.3	3,452.3	11.1	67.0	-92.56	1,557.2	-2,185.2	2,667.5	2,589.4	78.05	34.174	
3,543.3	3,498.6	3,494.6	3,494.6	11.3	67.8	-92.75	1,557.2	-2,185.2	2,667.9	2,588.8	79.09	33.731	
3,600.0	3,554.1	3,550.1	3,550.1	11.5	68.9	-93.00	1,557.2	-2,185.2	2,668.5	2,588.0	80.45	33.169	
3,641.7	3,594.9	3,590.9	3,590.9	11.7	69.7	-93.18	1,557.2	-2,185.2	2,669.0	2,587.5	81.45	32.767	
3,700.0	3,651.9	3,647.9	3,647.9	12.0	70.9	-93.43	1,557.2	-2,185.2	2,669.7	2,586.8	82.85	32.224	
3,740.1	3,691.2	3,687.2	3,687.2	12.2	71.7	-93.61	1,557.2	-2,185.2	2,670.2	2,586.4	83.81	31.860	
3,800.0	3,749.7	3,745.7	3,745.7	12.4	72.9	-93.87	1,557.2	-2,185.2	2,671.0	2,585.8	85.25	31.333	
3,838.6	3,787.4	3,783.4	3,783.4	12.6	73.6	-94.04	1,557.2	-2,185.2	2,671.6	2,585.4	86.17	31.003	
3,900.0	3,847.5	3,843.5	3,843.5	12.9	74.8	-94.30	1,557.2	-2,185.2	2,672.6	2,584.9	87.64	30.493	
3,937.0	3,883.7	3,879.7	3,879.7	13.0	75.5	-94.46	1,557.2	-2,185.2	2,673.2	2,584.6	88.53	30.195	
4,000.0	3,945.3	3,941.3	3,941.3	13.3	76.8	-94.74	1,557.2	-2,185.2	2,674.2	2,584.2	90.04	29.700	
4,035.4	3,980.0	3,976.0	3,976.0	13.5	77.5	-94.89	1,557.2	-2,185.2	2,674.9	2,584.0	90.89	29.430	
4,060.0	4,004.0	4,000.0	4,000.0	13.6	78.0	-95.00	1,557.2	-2,185.2	2,675.3	2,583.8	91.48	29.245	
4,100.0	4,043.2	4,039.2	4,039.2	13.7	78.8	-95.18	1,557.2	-2,185.2	2,676.0	2,583.6	92.42	28.956	
4,133.8	4,076.5	4,072.5	4,072.5	13.8	79.4	-95.33	1,557.2	-2,185.2	2,676.6	2,583.4	93.19	28.722	
4,200.0	4,141.6	4,137.6	4,137.6	14.0	80.7	-95.59	1,557.2	-2,185.2	2,677.7	2,583.0	94.71	28.273	
4,232.3	4,173.5	4,169.5	4,169.5	14.1	81.4	-95.70	1,557.2	-2,185.2	2,678.2	2,582.8	95.44	28.062	
4,300.0	4,240.6	4,236.6	4,236.6	14.3	82.7	-95.91	1,557.2	-2,185.2	2,679.2	2,582.2	96.98	27.627	
4,330.7	4,271.1	4,267.1	4,267.1	14.4	83.3	-96.00	1,557.2	-2,185.2	2,679.6	2,581.9	97.66	27.437	
4,400.0	4,340.0	4,336.0	4,336.0	14.5	84.7	-96.17	1,557.2	-2,185.2	2,680.3	2,581.1	99.22	27.015	
4,429.1	4,369.0	4,365.0	4,365.0	14.6	85.3	-96.22	1,557.2	-2,185.2	2,680.6	2,580.7	99.86	26.844	
4,500.0	4,439.7	4,435.7	4,435.7	14.8	86.7	-96.34	1,557.2	-2,185.2	2,681.1	2,579.7	101.43	26.434	
4,527.5	4,467.2	4,463.2	4,463.2	14.8	87.3	-96.37	1,557.2	-2,185.2	2,681.3	2,579.3	102.02	26.281	
4,600.0	4,539.7	4,535.7	4,535.7	14.9	88.7	-96.43	1,557.2	-2,185.2	2,681.5	2,577.9	103.60	25.883	
4,626.0	4,565.6	4,561.6	4,561.6	15.0	89.3	-96.44	1,557.2	-2,185.2	2,681.6	2,577.4	104.16	25.745	
4,660.2	4,599.8	4,595.8	4,595.8	15.0	90.0	-67.71	1,557.2	-2,185.2	2,681.6	2,580.8	100.80	26.605	
4,700.0	4,639.6	4,635.6	4,635.6	15.0	90.8	-67.71	1,557.2	-2,185.2	2,681.6	2,579.9	101.67	26.376	
4,724.4	4,664.0	4,660.0	4,660.0	15.1	91.2	-67.71	1,557.2	-2,185.2	2,681.6	2,579.4	102.21	26.237	
4,800.0	4,739.6	4,735.6	4,735.6	15.2	92.8	-67.71	1,557.2	-2,185.2	2,681.6	2,577.7	103.88	25.814	
4,822.8	4,762.5	4,758.5	4,758.5	15.2	93.2	-67.71	1,557.2	-2,185.2	2,681.6	2,577.2	104.39	25.689	
4,900.0	4,839.6	4,835.6	4,835.6	15.3	94.8	-67.71	1,557.2	-2,185.2	2,681.6	2,575.5	106.09	25.276	
4,921.2	4,860.9	4,856.9	4,856.9	15.4	95.2	-67.71	1,557.2	-2,185.2	2,681.6	2,575.1	106.57	25.164	
5,000.0	4,939.6	4,935.6	4,935.6	15.5	96.8	-67.71	1,557.2	-2,185.2	2,681.6	2,573.3	108.31	24.759	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	4,955.3	4,955.3	15.5	97.2	-67.71	1,557.2	-2,185.2	2,681.6	2,572.9	108.74	24.660	
5,100.0	5,039.6	5,035.6	5,035.6	15.6	98.8	-67.71	1,557.2	-2,185.2	2,681.6	2,571.1	110.52	24.263	
5,118.1	5,057.7	5,053.7	5,053.7	15.7	99.2	-67.71	1,557.2	-2,185.2	2,681.6	2,570.7	110.93	24.175	
5,200.0	5,139.6	5,135.6	5,135.6	15.8	100.8	-67.71	1,557.2	-2,185.2	2,681.6	2,568.9	112.74	23.786	
5,216.5	5,156.2	5,152.2	5,152.2	15.8	101.1	-67.71	1,557.2	-2,185.2	2,681.6	2,568.5	113.11	23.709	
5,300.0	5,239.6	5,235.6	5,235.6	15.9	102.8	-67.71	1,557.2	-2,185.2	2,681.6	2,566.7	114.96	23.327	
5,314.9	5,254.6	5,250.6	5,250.6	16.0	103.1	-67.71	1,557.2	-2,185.2	2,681.6	2,566.3	115.29	23.260	
5,400.0	5,339.6	5,335.6	5,335.6	16.1	104.8	-67.71	1,557.2	-2,185.2	2,681.6	2,564.4	117.17	22.886	
5,413.4	5,353.0	5,349.0	5,349.0	16.1	105.1	-67.71	1,557.2	-2,185.2	2,681.6	2,564.1	117.47	22.828	
5,500.0	5,439.6	5,435.6	5,435.6	16.3	106.8	-67.71	1,557.2	-2,185.2	2,681.6	2,562.2	119.39	22.461	
5,511.8	5,451.4	5,447.4	5,447.4	16.3	107.1	-67.71	1,557.2	-2,185.2	2,681.6	2,562.0	119.65	22.412	
5,600.0	5,539.6	5,535.6	5,535.6	16.4	108.9	-67.71	1,557.2	-2,185.2	2,681.6	2,560.0	121.61	22.051	
5,610.2	5,549.9	5,545.9	5,545.9	16.4	109.1	-67.71	1,557.2	-2,185.2	2,681.6	2,559.8	121.84	22.010	
5,700.0	5,639.6	5,635.6	5,635.6	16.6	110.9	-67.71	1,557.2	-2,185.2	2,681.6	2,557.8	123.83	21.656	
5,708.6	5,648.3	5,644.3	5,644.3	16.6	111.0	-67.71	1,557.2	-2,185.2	2,681.6	2,557.6	124.02	21.622	
5,800.0	5,739.6	5,735.6	5,735.6	16.7	112.9	-67.71	1,557.2	-2,185.2	2,681.6	2,555.6	126.05	21.275	
5,807.1	5,746.7	5,742.7	5,742.7	16.8	113.0	-67.71	1,557.2	-2,185.2	2,681.6	2,555.4	126.21	21.248	
5,900.0	5,839.6	5,835.6	5,835.6	16.9	114.9	-67.71	1,557.2	-2,185.2	2,681.6	2,553.3	128.27	20.906	
5,905.5	5,845.1	5,841.1	5,841.1	16.9	115.0	-67.71	1,557.2	-2,185.2	2,681.6	2,553.2	128.39	20.886	
6,000.0	5,939.6	5,935.6	5,935.6	17.1	116.9	-67.71	1,557.2	-2,185.2	2,681.6	2,551.1	130.49	20.551	
6,003.9	5,943.6	5,939.6	5,939.6	17.1	117.0	-67.71	1,557.2	-2,185.2	2,681.6	2,551.0	130.58	20.537	
6,059.2	5,998.8	5,994.8	5,994.8	17.2	118.1	-67.71	1,557.2	-2,185.2	2,681.6	2,549.8	131.80	20.346	
6,100.0	6,039.6	6,035.6	6,035.6	17.2	118.9	22.33	1,557.2	-2,185.2	2,680.5	2,544.6	135.89	19.726	
6,102.3	6,042.0	6,038.0	6,038.0	17.2	119.0	22.33	1,557.2	-2,185.2	2,680.4	2,544.5	135.92	19.721	
6,150.0	6,089.4	6,085.4	6,085.4	17.3	119.9	22.50	1,557.2	-2,185.2	2,676.3	2,540.1	136.21	19.648	
6,200.0	6,138.7	6,134.7	6,134.7	17.3	120.9	22.79	1,557.2	-2,185.2	2,668.8	2,532.9	135.96	19.630	
6,200.8	6,139.5	6,135.5	6,135.5	17.3	120.9	22.80	1,557.2	-2,185.2	2,668.7	2,532.8	135.95	19.631	
6,250.0	6,187.4	6,183.4	6,183.4	17.3	121.9	23.23	1,557.2	-2,185.2	2,658.2	2,523.1	135.13	19.672	
6,299.2	6,234.4	6,230.4	6,230.4	17.4	122.8	23.80	1,557.2	-2,185.2	2,644.8	2,511.0	133.79	19.768	
6,300.0	6,235.1	6,231.1	6,231.1	17.4	122.8	23.81	1,557.2	-2,185.2	2,644.5	2,510.8	133.76	19.770	
6,350.0	6,281.7	6,277.7	6,277.7	17.4	123.8	24.55	1,557.2	-2,185.2	2,627.8	2,495.9	131.89	19.924	
6,397.6	6,324.8	6,320.8	6,320.8	17.3	124.6	25.42	1,557.2	-2,185.2	2,609.1	2,479.4	129.70	20.116	
6,400.0	6,326.9	6,322.9	6,322.9	17.3	124.7	25.47	1,557.2	-2,185.2	2,608.2	2,478.6	129.59	20.127	
6,450.0	6,370.5	6,366.5	6,366.5	17.3	125.6	26.59	1,557.2	-2,185.2	2,585.7	2,458.7	126.93	20.370	
6,496.0	6,409.1	6,405.1	6,405.1	17.3	126.3	27.81	1,557.2	-2,185.2	2,562.6	2,438.3	124.29	20.617	
6,500.0	6,412.3	6,408.3	6,408.3	17.3	126.4	27.93	1,557.2	-2,185.2	2,560.5	2,436.4	124.06	20.638	
6,550.0	6,452.1	6,448.1	6,448.1	17.3	127.2	29.52	1,557.2	-2,185.2	2,532.7	2,411.6	121.15	20.905	
6,594.5	6,485.6	6,481.6	6,481.6	17.3	127.9	31.19	1,557.2	-2,185.2	2,506.0	2,387.3	118.71	21.110	
6,600.0	6,489.7	6,485.7	6,485.7	17.3	128.0	31.42	1,557.2	-2,185.2	2,502.6	2,384.1	118.43	21.132	
6,650.0	6,524.9	6,520.9	6,520.9	17.2	128.7	33.65	1,557.2	-2,185.2	2,470.2	2,354.0	116.18	21.262	
6,692.9	6,553.0	6,549.0	6,549.0	17.2	129.2	35.89	1,557.2	-2,185.2	2,440.7	2,325.8	114.89	21.243	
6,700.0	6,557.5	6,553.5	6,553.5	17.2	129.3	36.29	1,557.2	-2,185.2	2,435.7	2,320.9	114.75	21.225	
6,750.0	6,587.4	6,583.4	6,583.4	17.2	129.9	39.40	1,557.2	-2,185.2	2,399.3	2,284.8	114.53	20.949	
6,791.3	6,609.9	6,605.9	6,605.9	17.2	130.4	42.37	1,557.2	-2,185.2	2,368.0	2,252.5	115.51	20.501	
6,800.0	6,614.4	6,610.4	6,610.4	17.2	130.5	43.04	1,557.2	-2,185.2	2,361.3	2,245.5	115.86	20.380	
6,850.0	6,638.4	6,634.4	6,634.4	17.2	130.9	47.29	1,557.2	-2,185.2	2,321.8	2,202.9	118.97	19.515	
6,889.7	6,655.3	6,651.3	6,651.3	17.4	131.3	51.13	1,557.2	-2,185.2	2,289.5	2,166.8	122.73	18.655	
6,900.0	6,659.4	6,655.4	6,655.4	17.5	131.4	52.19	1,557.2	-2,185.2	2,281.1	2,157.2	123.85	18.418	
6,950.0	6,677.1	6,673.1	6,673.1	18.0	131.7	57.79	1,557.2	-2,185.2	2,239.3	2,109.2	130.16	17.204	
6,988.2	6,688.4	6,684.4	6,684.4	18.5	132.0	62.50	1,557.2	-2,185.2	2,206.9	2,071.4	135.52	16.284	
7,000.0	6,691.5	6,687.5	6,687.5	18.7	132.0	64.04	1,557.2	-2,185.2	2,196.8	2,059.6	137.20	16.012	
7,050.0	6,702.5	6,698.5	6,698.5	19.5	132.2	70.83	1,557.2	-2,185.2	2,153.7	2,009.7	144.00	14.956	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1											Offset Site Error:		0.0 usft
Survey Program: 0-INC													Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
7,086.6	6,708.4	6,704.4	6,704.4	20.1	132.4	76.03	1,557.2	-2,185.2	2,121.9	1,973.7	148.24	14.314			
7,100.0	6,710.1	6,706.1	6,706.1	20.4	132.4	77.97	1,557.2	-2,185.2	2,110.3	1,960.7	149.54	14.112			
7,150.0	6,714.2	6,710.2	6,710.2	21.3	132.5	85.18	1,557.2	-2,185.2	2,066.8	1,913.7	153.06	13.503			
7,185.0	6,715.0	6,711.0	6,711.0	21.9	132.5	90.12	1,557.2	-2,185.2	2,036.4	1,882.2	154.12	13.213			
7,185.6	6,715.0	6,711.0	6,711.0	21.9	132.5	90.19	1,557.2	-2,185.2	2,035.9	1,881.8	154.13	13.209			
7,200.0	6,715.0	6,711.0	6,711.0	22.2	132.5	90.19	1,557.2	-2,185.2	2,023.4	1,869.0	154.41	13.104			
7,283.4	6,714.8	6,710.8	6,710.8	23.9	132.5	90.18	1,557.2	-2,185.2	1,951.7	1,795.6	156.08	12.504			
7,300.0	6,714.8	6,710.8	6,710.8	24.2	132.5	90.18	1,557.2	-2,185.2	1,937.6	1,781.2	156.41	12.388			
7,381.9	6,714.6	6,710.6	6,710.6	26.0	132.5	90.17	1,557.2	-2,185.2	1,868.4	1,710.2	158.17	11.812			
7,400.0	6,714.6	6,710.6	6,710.6	26.4	132.5	90.17	1,557.2	-2,185.2	1,853.2	1,694.7	158.56	11.688			
7,480.3	6,714.4	6,710.4	6,710.4	28.2	132.5	90.16	1,557.2	-2,185.2	1,786.6	1,626.3	160.38	11.140			
7,500.0	6,714.4	6,710.4	6,710.4	28.7	132.5	90.16	1,557.2	-2,185.2	1,770.5	1,609.6	160.82	11.009			
7,578.7	6,714.2	6,710.2	6,710.2	30.5	132.5	90.15	1,557.2	-2,185.2	1,706.6	1,544.0	162.68	10.491			
7,600.0	6,714.2	6,710.2	6,710.2	31.0	132.5	90.15	1,557.2	-2,185.2	1,689.6	1,526.4	163.18	10.354			
7,677.1	6,714.0	6,710.0	6,710.0	32.9	132.5	90.14	1,557.2	-2,185.2	1,628.6	1,463.6	165.05	9.868			
7,700.0	6,714.0	6,710.0	6,710.0	33.4	132.5	90.14	1,557.2	-2,185.2	1,610.9	1,445.3	165.60	9.727			
7,775.6	6,713.9	6,709.9	6,709.9	35.3	132.5	90.13	1,557.2	-2,185.2	1,553.0	1,385.5	167.48	9.273			
7,800.0	6,713.8	6,709.8	6,709.8	35.9	132.5	90.13	1,557.2	-2,185.2	1,534.6	1,366.5	168.08	9.130			
7,874.0	6,713.7	6,709.7	6,709.7	37.8	132.5	90.12	1,557.2	-2,185.2	1,480.0	1,310.1	169.95	8.708			
7,900.0	6,713.6	6,709.6	6,709.6	38.4	132.5	90.11	1,557.2	-2,185.2	1,461.2	1,290.6	170.61	8.565			
7,972.4	6,713.5	6,709.5	6,709.5	40.3	132.5	90.11	1,557.2	-2,185.2	1,410.1	1,237.7	172.46	8.176			
8,000.0	6,713.4	6,709.4	6,709.4	41.0	132.5	90.10	1,557.2	-2,185.2	1,391.2	1,218.0	173.17	8.033			
8,070.8	6,713.3	6,709.3	6,709.3	42.8	132.5	90.10	1,557.2	-2,185.2	1,343.8	1,168.8	175.01	7.679			
8,100.0	6,713.2	6,709.2	6,709.2	43.6	132.5	90.09	1,557.2	-2,185.2	1,324.9	1,149.2	175.76	7.538			
8,169.3	6,713.1	6,709.1	6,709.1	45.4	132.5	90.09	1,557.2	-2,185.2	1,281.6	1,104.1	177.58	7.217			
8,200.0	6,713.0	6,709.0	6,709.0	46.2	132.4	90.08	1,557.2	-2,185.2	1,263.2	1,084.8	178.38	7.081			
8,267.7	6,712.9	6,708.9	6,708.9	48.0	132.4	90.07	1,557.2	-2,185.2	1,224.2	1,044.1	180.17	6.795			
8,300.0	6,712.8	6,708.8	6,708.8	48.8	132.4	90.07	1,557.2	-2,185.2	1,206.6	1,025.5	181.02	6.665			
8,366.1	6,712.7	6,708.7	6,708.7	50.6	132.4	90.06	1,557.2	-2,185.2	1,172.3	989.5	182.78	6.414			
8,400.0	6,712.6	6,708.6	6,708.6	51.5	132.4	90.06	1,557.2	-2,185.2	1,155.8	972.1	183.68	6.293			
8,464.5	6,712.5	6,708.5	6,708.5	53.2	132.4	90.05	1,557.2	-2,185.2	1,126.6	941.2	185.40	6.076			
8,500.0	6,712.4	6,708.4	6,708.4	54.1	132.4	90.05	1,557.2	-2,185.2	1,111.8	925.4	186.35	5.966			
8,563.0	6,712.3	6,708.3	6,708.3	55.8	132.4	90.04	1,557.2	-2,185.2	1,087.9	899.8	188.04	5.785			
8,600.0	6,712.3	6,708.3	6,708.3	56.8	132.4	90.04	1,557.2	-2,185.2	1,075.3	886.2	189.04	5.688			
8,661.4	6,712.1	6,708.1	6,708.1	58.5	132.4	90.03	1,557.2	-2,185.2	1,056.9	866.2	190.69	5.543			
8,700.0	6,712.1	6,708.1	6,708.1	59.5	132.4	90.03	1,557.2	-2,185.2	1,047.1	855.3	191.73	5.461			
8,759.8	6,711.9	6,707.9	6,707.9	61.1	132.4	90.02	1,557.2	-2,185.2	1,034.5	841.1	193.35	5.350			
8,800.0	6,711.9	6,707.9	6,707.9	62.2	132.4	90.02	1,557.2	-2,185.2	1,027.9	833.4	194.44	5.286			
8,858.2	6,711.8	6,707.8	6,707.8	63.8	132.4	90.01	1,557.2	-2,185.2	1,021.0	825.0	196.02	5.209			
8,900.0	6,711.7	6,707.7	6,707.7	64.9	132.4	90.01	1,557.2	-2,185.2	1,018.2	821.0	197.16	5.164			
8,949.3	6,711.6	6,707.6	6,707.6	66.3	132.4	90.00	1,557.2	-2,185.2	1,017.0	818.5	198.50	5.123 CC			
8,956.7	6,711.6	6,707.6	6,707.6	66.5	132.4	90.00	1,557.2	-2,185.2	1,017.0	818.3	198.70	5.118 ES			
9,000.0	6,711.5	6,707.5	6,707.5	67.6	132.4	89.99	1,557.2	-2,185.2	1,018.2	818.4	199.88	5.094			
9,055.1	6,711.4	6,707.4	6,707.4	69.1	132.4	89.99	1,557.2	-2,185.2	1,022.5	821.1	201.38	5.077			
9,100.0	6,711.3	6,707.3	6,707.3	70.4	132.4	89.98	1,557.2	-2,185.2	1,028.1	825.5	202.61	5.074 SF			
9,153.5	6,711.2	6,707.2	6,707.2	71.8	132.4	89.98	1,557.2	-2,185.2	1,037.3	833.2	204.07	5.083			
9,200.0	6,711.1	6,707.1	6,707.1	73.1	132.4	89.97	1,557.2	-2,185.2	1,047.4	842.1	205.34	5.101			
9,251.9	6,711.0	6,707.0	6,707.0	74.5	132.4	89.97	1,557.2	-2,185.2	1,061.1	854.3	206.77	5.132			
9,300.0	6,710.9	6,706.9	6,706.9	75.8	132.4	89.96	1,557.2	-2,185.2	1,075.7	867.7	208.09	5.170			
9,350.4	6,710.8	6,706.8	6,706.8	77.2	132.4	89.96	1,557.2	-2,185.2	1,093.2	883.7	209.47	5.219			
9,400.0	6,710.7	6,706.7	6,706.7	78.6	132.4	89.95	1,557.2	-2,185.2	1,112.4	901.5	210.83	5.276			
9,448.8	6,710.6	6,706.6	6,706.6	79.9	132.4	89.95	1,557.2	-2,185.2	1,133.0	920.9	212.17	5.340			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,710.5	6,706.5	6,706.5	81.3	132.4	89.94	1,557.2	-2,185.2	1,156.5	942.9	213.58	5.415	
9,547.2	6,710.4	6,706.4	6,706.4	82.6	132.4	89.94	1,557.2	-2,185.2	1,179.7	964.9	214.88	5.490	
9,600.0	6,710.3	6,706.3	6,706.3	84.1	132.4	89.93	1,557.2	-2,185.2	1,207.3	991.0	216.33	5.581	
9,645.6	6,710.2	6,706.2	6,706.2	85.3	132.4	89.92	1,557.2	-2,185.2	1,232.5	1,015.0	217.59	5.664	
9,700.0	6,710.1	6,706.1	6,706.1	86.8	132.4	89.92	1,557.2	-2,185.2	1,264.1	1,045.0	219.09	5.770	
9,744.1	6,710.0	6,706.0	6,706.0	88.1	132.4	89.91	1,557.2	-2,185.2	1,290.7	1,070.4	220.31	5.859	
9,800.0	6,709.9	6,705.9	6,705.9	89.6	132.4	89.91	1,557.2	-2,185.2	1,325.9	1,104.0	221.85	5.976	
9,842.5	6,709.9	6,705.9	6,705.9	90.8	132.4	89.90	1,557.2	-2,185.2	1,353.5	1,130.5	223.02	6.069	
9,900.0	6,709.7	6,705.7	6,705.7	92.4	132.4	89.90	1,557.2	-2,185.2	1,392.2	1,167.5	224.61	6.198	
9,940.9	6,709.7	6,705.7	6,705.7	93.5	132.4	89.89	1,557.2	-2,185.2	1,420.4	1,194.7	225.75	6.292	
10,000.0	6,709.6	6,705.6	6,705.6	95.1	132.4	89.89	1,557.2	-2,185.2	1,462.3	1,234.9	227.38	6.431	
10,039.3	6,709.5	6,705.5	6,705.5	96.2	132.4	89.88	1,557.2	-2,185.2	1,490.8	1,262.3	228.47	6.525	
10,100.0	6,709.4	6,705.4	6,705.4	97.9	132.4	89.88	1,557.2	-2,185.2	1,535.7	1,305.6	230.15	6.673	
10,137.8	6,709.3	6,705.3	6,705.3	98.9	132.4	89.87	1,557.2	-2,185.2	1,564.2	1,333.0	231.19	6.766	
10,200.0	6,709.2	6,705.2	6,705.2	100.7	132.4	89.87	1,557.2	-2,185.2	1,612.0	1,379.1	232.92	6.921	
10,236.2	6,709.1	6,705.1	6,705.1	101.7	132.4	89.86	1,557.2	-2,185.2	1,640.2	1,406.3	233.92	7.012	
10,300.0	6,709.0	6,705.0	6,705.0	103.4	132.4	89.85	1,557.2	-2,185.2	1,690.8	1,455.1	235.69	7.174	
10,334.6	6,708.9	6,704.9	6,704.9	104.4	132.4	89.85	1,557.2	-2,185.2	1,718.6	1,481.9	236.65	7.262	
10,400.0	6,708.8	6,704.8	6,704.8	106.2	132.4	89.84	1,557.2	-2,185.2	1,771.7	1,533.2	238.46	7.430	
10,433.0	6,708.7	6,704.7	6,704.7	107.1	132.4	89.84	1,557.2	-2,185.2	1,798.8	1,559.5	239.38	7.515	
10,500.0	6,708.6	6,704.6	6,704.6	109.0	132.4	89.83	1,557.2	-2,185.2	1,854.5	1,613.2	241.24	7.687	
10,531.5	6,708.5	6,704.5	6,704.5	109.9	132.4	89.83	1,557.2	-2,185.2	1,880.9	1,638.7	242.11	7.768	
10,600.0	6,708.4	6,704.4	6,704.4	111.8	132.4	89.82	1,557.2	-2,185.2	1,938.9	1,694.8	244.02	7.946	
10,629.9	6,708.4	6,704.4	6,704.4	112.6	132.4	89.82	1,557.2	-2,185.2	1,964.4	1,719.5	244.85	8.023	
10,700.0	6,708.2	6,704.2	6,704.2	114.6	132.4	89.81	1,557.2	-2,185.2	2,024.7	1,777.9	246.79	8.204	
10,728.3	6,708.2	6,704.2	6,704.2	115.3	132.4	89.81	1,557.2	-2,185.2	2,049.2	1,801.6	247.58	8.277	
10,800.0	6,708.0	6,704.0	6,704.0	117.3	132.3	89.80	1,557.2	-2,185.2	2,111.7	1,862.2	249.57	8.461	
10,826.7	6,708.0	6,704.0	6,704.0	118.1	132.3	89.80	1,557.2	-2,185.2	2,135.2	1,884.9	250.32	8.530	
10,900.0	6,707.8	6,703.8	6,703.8	120.1	132.3	89.79	1,557.2	-2,185.2	2,199.9	1,947.5	252.36	8.717	
10,925.2	6,707.8	6,703.8	6,703.8	120.8	132.3	89.79	1,557.2	-2,185.2	2,222.3	1,969.2	253.06	8.782	
11,000.0	6,707.6	6,703.6	6,703.6	122.9	132.3	89.78	1,557.2	-2,185.2	2,289.0	2,033.9	255.14	8.972	
11,023.6	6,707.6	6,703.6	6,703.6	123.6	132.3	89.78	1,557.2	-2,185.2	2,310.2	2,054.4	255.80	9.031	
11,100.0	6,707.5	6,703.5	6,703.5	125.7	132.3	89.77	1,557.2	-2,185.2	2,379.0	2,121.1	257.92	9.224	
11,122.0	6,707.4	6,703.4	6,703.4	126.3	132.3	89.77	1,557.2	-2,185.2	2,399.0	2,140.4	258.54	9.279	
11,200.0	6,707.3	6,703.3	6,703.3	128.5	132.3	89.76	1,557.2	-2,185.2	2,469.8	2,209.1	260.71	9.474	
11,220.4	6,707.2	6,703.2	6,703.2	129.0	132.3	89.76	1,557.2	-2,185.2	2,488.5	2,227.2	261.28	9.524	
11,300.0	6,707.1	6,703.1	6,703.1	131.3	132.3	89.75	1,557.2	-2,185.2	2,561.3	2,297.8	263.49	9.721	
11,318.9	6,707.0	6,703.0	6,703.0	131.8	132.3	89.75	1,557.2	-2,185.2	2,578.6	2,314.6	264.02	9.767	
11,400.0	6,706.9	6,702.9	6,702.9	134.0	132.3	89.74	1,557.2	-2,185.2	2,653.4	2,387.1	266.28	9.965	
11,417.3	6,706.9	6,702.9	6,702.9	134.5	132.3	89.74	1,557.2	-2,185.2	2,669.3	2,402.6	266.76	10.007	
11,500.0	6,706.7	6,702.7	6,702.7	136.8	132.3	89.73	1,557.2	-2,185.2	2,746.0	2,476.9	269.07	10.206	
11,515.7	6,706.7	6,702.7	6,702.7	137.3	132.3	89.73	1,557.2	-2,185.2	2,760.6	2,491.1	269.50	10.243	
11,600.0	6,706.5	6,702.5	6,702.5	139.6	132.3	89.72	1,557.2	-2,185.2	2,839.1	2,567.3	271.85	10.444	
11,614.1	6,706.5	6,702.5	6,702.5	140.0	132.3	89.72	1,557.2	-2,185.2	2,852.3	2,580.1	272.25	10.477	
11,700.0	6,706.3	6,702.3	6,702.3	142.4	132.3	89.71	1,557.2	-2,185.2	2,932.7	2,658.1	274.64	10.678	
11,712.6	6,706.3	6,702.3	6,702.3	142.8	132.3	89.71	1,557.2	-2,185.2	2,944.5	2,669.5	274.99	10.708	
11,800.0	6,706.1	6,702.1	6,702.1	145.2	132.3	89.70	1,557.2	-2,185.2	3,026.7	2,749.3	277.43	10.910	
11,811.0	6,706.1	6,702.1	6,702.1	145.5	132.3	89.70	1,557.2	-2,185.2	3,037.1	2,759.3	277.74	10.935	
11,900.0	6,705.9	6,701.9	6,701.9	148.0	132.3	89.69	1,557.2	-2,185.2	3,121.1	2,840.8	280.22	11.138	
11,909.4	6,705.9	6,701.9	6,701.9	148.3	132.3	89.68	1,557.2	-2,185.2	3,130.0	2,849.5	280.49	11.159	
12,000.0	6,705.8	6,701.8	6,701.8	150.8	132.3	89.68	1,557.2	-2,185.2	3,215.8	2,932.8	283.01	11.363	
12,007.8	6,705.7	6,701.7	6,701.7	151.0	132.3	89.67	1,557.2	-2,185.2	3,223.2	2,940.0	283.23	11.380	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,100.0	6,705.6	6,701.6	6,701.6	153.6	132.3	89.67	1,557.2	-2,185.2	3,310.8	3,025.0	285.80	11.584	
12,106.3	6,705.6	6,701.6	6,701.6	153.8	132.3	89.66	1,557.2	-2,185.2	3,316.8	3,030.8	285.98	11.598	
12,200.0	6,705.4	6,701.4	6,701.4	156.4	132.3	89.65	1,557.2	-2,185.2	3,406.1	3,117.5	288.60	11.802	
12,204.7	6,705.4	6,701.4	6,701.4	156.5	132.3	89.65	1,557.2	-2,185.2	3,410.6	3,121.8	288.73	11.812	
12,300.0	6,705.2	6,701.2	6,701.2	159.2	132.3	89.64	1,557.2	-2,185.2	3,501.7	3,210.3	291.39	12.017	
12,303.1	6,705.2	6,701.2	6,701.2	159.3	132.3	89.64	1,557.2	-2,185.2	3,504.6	3,213.2	291.48	12.024	
12,400.0	6,705.0	6,701.0	6,701.0	162.0	132.3	89.63	1,557.2	-2,185.2	3,597.5	3,303.3	294.18	12.229	
12,401.5	6,705.0	6,701.0	6,701.0	162.0	132.3	89.63	1,557.2	-2,185.2	3,599.0	3,304.7	294.23	12.232	
12,500.0	6,704.8	6,700.8	6,700.8	164.8	132.3	89.62	1,557.2	-2,185.2	3,693.5	3,396.5	296.98	12.437	
12,598.4	6,704.6	6,700.6	6,700.6	167.5	132.3	89.61	1,557.2	-2,185.2	3,788.2	3,488.5	299.72	12.639	
12,600.0	6,704.6	6,700.6	6,700.6	167.6	132.3	89.61	1,557.2	-2,185.2	3,789.7	3,490.0	299.77	12.642	
12,696.8	6,704.4	6,700.4	6,700.4	170.3	132.3	89.60	1,557.2	-2,185.2	3,883.1	3,580.6	302.48	12.838	
12,700.0	6,704.4	6,700.4	6,700.4	170.4	132.3	89.60	1,557.2	-2,185.2	3,886.2	3,583.6	302.56	12.844	
12,795.2	6,704.3	6,700.3	6,700.3	173.0	132.3	89.59	1,557.2	-2,185.2	3,978.2	3,672.9	305.23	13.034	
12,800.0	6,704.2	6,700.2	6,700.2	173.2	132.3	89.59	1,557.2	-2,185.2	3,982.8	3,677.4	305.36	13.043	
12,893.7	6,704.1	6,700.1	6,700.1	175.8	132.3	89.58	1,557.2	-2,185.2	4,073.4	3,765.4	307.98	13.226	
12,900.0	6,704.1	6,700.1	6,700.1	176.0	132.3	89.58	1,557.2	-2,185.2	4,079.5	3,771.4	308.15	13.239	
12,992.1	6,703.9	6,699.9	6,699.9	178.5	132.3	89.57	1,557.2	-2,185.2	4,168.8	3,858.0	310.73	13.416	
13,000.0	6,703.9	6,699.9	6,699.9	178.8	132.3	89.57	1,557.2	-2,185.2	4,176.4	3,865.5	310.95	13.431	
13,090.5	6,703.7	6,699.7	6,699.7	181.3	132.3	89.56	1,557.2	-2,185.2	4,264.3	3,950.8	313.48	13.603	
13,100.0	6,703.7	6,699.7	6,699.7	181.6	132.3	89.56	1,557.2	-2,185.2	4,273.5	3,959.7	313.74	13.621	
13,188.9	6,703.5	6,699.5	6,699.5	184.0	132.3	89.55	1,557.2	-2,185.2	4,359.9	4,043.7	316.23	13.787	
13,200.0	6,703.5	6,699.5	6,699.5	184.4	132.3	89.55	1,557.2	-2,185.2	4,370.7	4,054.1	316.54	13.808	
13,287.4	6,703.3	6,699.3	6,699.3	186.8	132.3	89.54	1,557.2	-2,185.2	4,455.7	4,136.7	318.98	13.968	
13,300.0	6,703.3	6,699.3	6,699.3	187.2	132.3	89.54	1,557.2	-2,185.2	4,468.0	4,148.7	319.34	13.991	
13,385.8	6,703.2	6,699.2	6,699.2	189.6	132.3	89.53	1,557.2	-2,185.2	4,551.6	4,229.9	321.74	14.147	
13,400.0	6,703.1	6,699.1	6,699.1	190.0	132.3	89.53	1,557.2	-2,185.2	4,565.4	4,243.3	322.13	14.172	
13,484.2	6,703.0	6,699.0	6,699.0	192.3	132.2	89.52	1,557.2	-2,185.2	4,647.6	4,323.1	324.49	14.323	
13,500.0	6,702.9	6,698.9	6,698.9	192.8	132.2	89.52	1,557.2	-2,185.2	4,663.0	4,338.0	324.93	14.351	
13,582.6	6,702.8	6,698.8	6,698.8	195.1	132.2	89.51	1,557.2	-2,185.2	4,743.7	4,416.4	327.24	14.496	
13,600.0	6,702.8	6,698.8	6,698.8	195.6	132.2	89.51	1,557.2	-2,185.2	4,760.6	4,432.9	327.73	14.526	
13,681.1	6,702.6	6,698.6	6,698.6	197.8	132.2	89.50	1,557.2	-2,185.2	4,839.9	4,509.9	330.00	14.666	
13,700.0	6,702.6	6,698.6	6,698.6	198.4	132.2	89.50	1,557.2	-2,185.2	4,858.4	4,527.8	330.53	14.699	
13,779.5	6,702.4	6,698.4	6,698.4	200.6	132.2	89.49	1,557.2	-2,185.2	4,936.1	4,603.4	332.75	14.834	
13,800.0	6,702.4	6,698.4	6,698.4	201.2	132.2	89.49	1,557.2	-2,185.2	4,956.2	4,622.9	333.32	14.869	
13,877.9	6,702.2	6,698.2	6,698.2	203.3	132.2	89.48	1,557.2	-2,185.2	5,032.5	4,697.0	335.50	15.000	
13,900.0	6,702.2	6,698.2	6,698.2	204.0	132.2	89.48	1,557.2	-2,185.2	5,054.1	4,718.0	336.12	15.036	
13,976.3	6,702.1	6,698.1	6,698.1	206.1	132.2	89.47	1,557.2	-2,185.2	5,128.9	4,790.7	338.26	15.163	
14,000.0	6,702.0	6,698.0	6,698.0	206.8	132.2	89.47	1,557.2	-2,185.2	5,152.1	4,813.2	338.92	15.201	
14,074.8	6,701.9	6,697.9	6,697.9	208.9	132.2	89.46	1,557.2	-2,185.2	5,225.4	4,884.4	341.01	15.323	
14,100.0	6,701.8	6,697.8	6,697.8	209.6	132.2	89.46	1,557.2	-2,185.2	5,250.2	4,908.4	341.72	15.364	
14,173.2	6,701.7	6,697.7	6,697.7	211.6	132.2	89.45	1,557.2	-2,185.2	5,322.0	4,978.2	343.77	15.481	
14,200.0	6,701.6	6,697.6	6,697.6	212.4	132.2	89.45	1,557.2	-2,185.2	5,348.3	5,003.8	344.52	15.524	
14,271.6	6,701.5	6,697.5	6,697.5	214.4	132.2	89.44	1,557.2	-2,185.2	5,418.6	5,072.1	346.52	15.637	
14,300.0	6,701.4	6,697.4	6,697.4	215.2	132.2	89.44	1,557.2	-2,185.2	5,446.5	5,099.2	347.32	15.682	
14,370.0	6,701.3	6,697.3	6,697.3	217.1	132.2	89.43	1,557.2	-2,185.2	5,515.3	5,166.1	349.28	15.791	
14,400.0	6,701.3	6,697.3	6,697.3	218.0	132.2	89.43	1,557.2	-2,185.2	5,544.8	5,194.7	350.12	15.837	
14,468.5	6,701.1	6,697.1	6,697.1	219.9	132.2	89.42	1,557.2	-2,185.2	5,612.1	5,260.1	352.03	15.942	
14,500.0	6,701.1	6,697.1	6,697.1	220.8	132.2	89.42	1,557.2	-2,185.2	5,643.1	5,290.2	352.91	15.990	
14,566.9	6,701.0	6,697.0	6,697.0	222.6	132.2	89.41	1,557.2	-2,185.2	5,708.9	5,354.1	354.79	16.091	
14,600.0	6,700.9	6,696.9	6,696.9	223.6	132.2	89.41	1,557.2	-2,185.2	5,741.5	5,385.8	355.71	16.141	
14,665.3	6,700.8	6,696.8	6,696.8	225.4	132.2	89.40	1,557.2	-2,185.2	5,805.8	5,448.3	357.54	16.238	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,696.7	6,696.7	226.4	132.2	89.40	1,557.2	-2,185.2	5,840.0	5,481.4	358.51	16.289	
14,763.7	6,700.6	6,696.6	6,696.6	228.2	132.2	89.39	1,557.2	-2,185.2	5,902.7	5,542.4	360.30	16.383	
14,800.0	6,700.5	6,696.5	6,696.5	229.2	132.2	89.39	1,557.2	-2,185.2	5,938.4	5,577.1	361.31	16.436	
14,862.2	6,700.4	6,696.4	6,696.4	230.9	132.2	89.38	1,557.2	-2,185.2	5,999.7	5,636.7	363.05	16.526	
14,900.0	6,700.3	6,696.3	6,696.3	232.0	132.2	89.38	1,557.2	-2,185.2	6,037.0	5,672.9	364.11	16.580	
14,960.6	6,700.2	6,696.2	6,696.2	233.7	132.2	89.37	1,557.2	-2,185.2	6,096.7	5,730.9	365.81	16.666	
15,000.0	6,700.2	6,696.2	6,696.2	234.8	132.2	89.37	1,557.2	-2,185.2	6,135.6	5,768.7	366.91	16.722	
15,059.0	6,700.0	6,696.0	6,696.0	236.4	132.2	89.36	1,557.2	-2,185.2	6,193.8	5,825.2	368.57	16.805	
15,082.8	6,700.0	6,696.0	6,696.0	237.1	132.2	89.36	1,557.2	-2,185.2	6,217.3	5,848.0	369.23	16.838	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-90.91	-145.9	-9,147.1	9,148.3				
98.4	98.4	73.4	73.4	0.1	0.0	-90.91	-145.9	-9,147.1	9,148.3	9,148.2	0.11	N/A	
100.0	100.0	75.0	75.0	0.1	0.0	-90.91	-145.9	-9,147.1	9,148.3	9,148.2	0.11	N/A	
196.8	196.8	171.8	171.8	0.3	1.9	-90.91	-145.9	-9,147.1	9,148.3	9,146.0	2.24	4,087.997	
200.0	200.0	175.0	175.0	0.3	2.0	-90.91	-145.9	-9,147.1	9,148.3	9,146.0	2.33	3,928.635	
295.3	295.3	270.3	270.3	0.5	4.1	-90.91	-145.9	-9,147.1	9,148.3	9,143.6	4.65	1,966.246	
300.0	300.0	275.0	275.0	0.5	4.2	-90.91	-145.9	-9,147.1	9,148.3	9,143.5	4.76	1,921.713	
393.7	393.7	368.7	368.7	0.8	6.1	-90.91	-145.9	-9,147.1	9,148.3	9,141.4	6.88	1,329.778	
400.0	400.0	375.0	375.0	0.8	6.2	-90.91	-145.9	-9,147.1	9,148.3	9,141.3	7.02	1,302.884	
492.1	492.1	467.1	467.1	1.0	8.1	-90.91	-145.9	-9,147.1	9,148.3	9,139.2	9.09	1,006.135	
500.0	500.0	475.0	475.0	1.0	8.3	-90.91	-145.9	-9,147.1	9,148.3	9,139.0	9.27	986.940	
590.5	590.5	565.5	565.5	1.2	10.1	-90.91	-145.9	-9,147.1	9,148.3	9,137.0	11.30	809.557	
600.0	600.0	575.0	575.0	1.2	10.3	-90.91	-145.9	-9,147.1	9,148.3	9,136.8	11.51	794.659	
689.0	689.0	664.0	664.0	1.4	12.1	-90.91	-145.9	-9,147.1	9,148.3	9,134.8	13.51	677.363	
700.0	700.0	675.0	675.0	1.4	12.3	-90.91	-145.9	-9,147.1	9,148.3	9,134.5	13.75	665.200	
787.4	787.4	762.4	762.4	1.6	14.1	-90.91	-145.9	-9,147.1	9,148.3	9,132.6	15.71	582.333	
800.0	800.0	775.0	775.0	1.7	14.3	-90.91	-145.9	-9,147.1	9,148.3	9,132.3	15.99	572.061	
885.8	885.8	860.8	860.8	1.9	16.0	-90.91	-145.9	-9,147.1	9,148.3	9,130.4	17.91	510.712	
900.0	900.0	875.0	875.0	1.9	16.3	-90.91	-145.9	-9,147.1	9,148.3	9,130.0	18.23	501.824	
984.2	984.2	959.2	959.2	2.1	18.0	-90.91	-145.9	-9,147.1	9,148.3	9,128.2	20.12	454.792	
1,000.0	1,000.0	975.0	975.0	2.1	18.3	-90.91	-145.9	-9,147.1	9,148.3	9,127.8	20.47	446.961	
1,082.7	1,082.7	1,057.7	1,057.7	2.3	20.0	-90.91	-145.9	-9,147.1	9,148.3	9,126.0	22.32	409.916	
1,100.0	1,100.0	1,075.0	1,075.0	2.3	20.4	-90.91	-145.9	-9,147.1	9,148.3	9,125.6	22.71	402.918	
1,181.1	1,181.1	1,156.1	1,156.1	2.5	22.0	-119.64	-145.9	-9,147.1	9,148.8	9,124.3	24.51	373.198	
1,200.0	1,200.0	1,175.0	1,175.0	2.6	22.4	-119.64	-145.9	-9,147.1	9,149.1	9,124.2	24.94	366.912	
1,279.5	1,279.4	1,254.4	1,254.4	2.7	24.0	-119.62	-145.9	-9,147.1	9,151.1	9,124.4	26.70	342.729	
1,300.0	1,299.8	1,274.8	1,274.8	2.8	24.4	-119.62	-145.9	-9,147.1	9,151.7	9,124.6	27.15	337.037	
1,377.9	1,377.5	1,352.5	1,352.5	3.0	25.9	-119.60	-145.9	-9,147.1	9,155.0	9,126.1	28.88	317.046	
1,400.0	1,399.5	1,374.5	1,374.5	3.0	26.4	-119.59	-145.9	-9,147.1	9,156.1	9,126.7	29.36	311.845	
1,476.4	1,475.3	1,450.3	1,450.3	3.2	27.9	-119.56	-145.9	-9,147.1	9,160.5	9,129.5	31.04	295.096	
1,500.0	1,498.7	1,473.7	1,473.7	3.3	28.4	-119.55	-145.9	-9,147.1	9,162.1	9,130.5	31.56	290.307	
1,574.8	1,572.6	1,547.6	1,547.6	3.5	29.9	-119.52	-145.9	-9,147.1	9,167.8	9,134.6	33.20	276.106	
1,600.0	1,597.5	1,572.5	1,572.5	3.5	30.4	-119.50	-145.9	-9,147.1	9,169.9	9,136.1	33.75	271.665	
1,673.2	1,669.4	1,644.4	1,644.4	3.7	31.8	-119.46	-145.9	-9,147.1	9,176.7	9,141.3	35.36	259.494	
1,700.1	1,695.8	1,670.8	1,670.8	3.8	32.3	-119.44	-145.9	-9,147.1	9,179.4	9,143.5	35.95	255.328	
1,771.6	1,765.7	1,740.7	1,740.7	4.1	33.8	-119.52	-145.9	-9,147.1	9,186.9	9,149.3	37.57	244.532	
1,800.0	1,793.4	1,768.4	1,768.4	4.2	34.3	-119.55	-145.9	-9,147.1	9,189.8	9,151.6	38.21	240.505	
1,870.1	1,862.0	1,837.0	1,837.0	4.4	35.7	-119.63	-145.9	-9,147.1	9,197.1	9,157.3	39.81	231.041	
1,900.0	1,891.3	1,866.3	1,866.3	4.5	36.3	-119.66	-145.9	-9,147.1	9,200.3	9,159.8	40.49	227.229	
1,968.5	1,958.3	1,933.3	1,933.3	4.8	37.6	-119.73	-145.9	-9,147.1	9,207.4	9,165.4	42.06	218.919	
2,000.0	1,989.1	1,964.1	1,964.1	4.9	38.2	-119.77	-145.9	-9,147.1	9,210.7	9,168.0	42.78	215.303	
2,066.9	2,054.5	2,029.5	2,029.5	5.1	39.6	-119.84	-145.9	-9,147.1	9,217.8	9,173.5	44.32	207.981	
2,100.0	2,086.9	2,061.9	2,061.9	5.3	40.2	-119.88	-145.9	-9,147.1	9,221.3	9,176.2	45.08	204.546	
2,165.3	2,150.8	2,125.8	2,125.8	5.5	41.5	-119.95	-145.9	-9,147.1	9,228.1	9,181.6	46.59	198.068	
2,200.0	2,184.7	2,159.7	2,159.7	5.6	42.2	-119.99	-145.9	-9,147.1	9,231.8	9,184.4	47.39	194.801	
2,263.8	2,247.1	2,222.1	2,222.1	5.9	43.4	-120.06	-145.9	-9,147.1	9,238.5	9,189.7	48.87	189.052	
2,300.0	2,282.5	2,257.5	2,257.5	6.0	44.1	-120.10	-145.9	-9,147.1	9,242.4	9,192.7	49.71	185.938	
2,362.2	2,343.3	2,318.3	2,318.3	6.3	45.4	-120.17	-145.9	-9,147.1	9,249.0	9,197.8	51.15	180.820	
2,400.0	2,380.3	2,355.3	2,355.3	6.5	46.1	-120.21	-145.9	-9,147.1	9,253.0	9,201.0	52.03	177.848	
2,460.6	2,439.6	2,414.6	2,414.6	6.7	47.3	-120.28	-145.9	-9,147.1	9,259.5	9,206.0	53.44	173.277	
2,500.0	2,478.1	2,453.1	2,453.1	6.9	48.1	-120.32	-145.9	-9,147.1	9,263.7	9,209.3	54.35	170.436	
2,559.0	2,535.9	2,510.9	2,510.9	7.1	49.2	-120.38	-145.9	-9,147.1	9,270.0	9,214.2	55.73	166.344	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT PAULINE #5 - Wellbore #1 - Design #1											Offset Site Error:		0.0 usft
Survey Program: 0-INC													Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
2,600.0	2,575.9	2,550.9	2,550.9	7.3	50.0	-120.43	-145.9	-9,147.1	9,274.4	9,217.7	56.68	163.623			
2,657.5	2,632.2	2,607.2	2,607.2	7.5	51.2	-120.49	-145.9	-9,147.1	9,280.5	9,222.5	58.02	159.951			
2,700.0	2,673.8	2,648.8	2,648.8	7.7	52.0	-120.54	-145.9	-9,147.1	9,285.1	9,226.1	59.01	157.341			
2,755.9	2,728.4	2,703.4	2,703.4	7.9	53.1	-120.60	-145.9	-9,147.1	9,291.1	9,230.8	60.32	154.038			
2,800.0	2,771.6	2,746.6	2,746.6	8.1	54.0	-120.64	-145.9	-9,147.1	9,295.8	9,234.5	61.35	151.532			
2,854.3	2,824.7	2,799.7	2,799.7	8.3	55.1	-120.70	-145.9	-9,147.1	9,301.7	9,239.1	62.61	148.555			
2,900.0	2,869.4	2,844.4	2,844.4	8.5	56.0	-120.75	-145.9	-9,147.1	9,306.6	9,242.9	63.68	146.145			
2,952.7	2,921.0	2,896.0	2,896.0	8.8	57.0	-120.81	-145.9	-9,147.1	9,312.3	9,247.4	64.91	143.457			
3,000.0	2,967.2	2,942.2	2,942.2	9.0	57.9	-120.86	-145.9	-9,147.1	9,317.4	9,251.4	66.02	141.136			
3,051.2	3,017.3	2,992.3	2,992.3	9.2	58.9	-120.92	-145.9	-9,147.1	9,323.0	9,255.8	67.21	138.706			
3,100.0	3,065.0	3,040.0	3,040.0	9.4	59.9	-120.97	-145.9	-9,147.1	9,328.3	9,259.9	68.36	136.468			
3,149.6	3,113.5	3,088.5	3,088.5	9.6	60.9	-121.02	-145.9	-9,147.1	9,333.7	9,264.2	69.52	134.268			
3,200.0	3,162.8	3,137.8	3,137.8	9.8	61.9	-121.08	-145.9	-9,147.1	9,339.2	9,268.5	70.69	132.107			
3,248.0	3,209.8	3,184.8	3,184.8	10.0	62.8	-121.13	-145.9	-9,147.1	9,344.4	9,272.6	71.82	130.113			
3,300.0	3,260.6	3,235.6	3,235.6	10.2	63.8	-121.18	-145.9	-9,147.1	9,350.1	9,277.1	73.03	128.024			
3,346.4	3,306.1	3,281.1	3,281.1	10.5	64.7	-121.23	-145.9	-9,147.1	9,355.2	9,281.1	74.12	126.215			
3,400.0	3,358.5	3,333.5	3,333.5	10.7	65.8	-121.29	-145.9	-9,147.1	9,361.1	9,285.7	75.37	124.195			
3,444.9	3,402.3	3,377.3	3,377.3	10.9	66.7	-121.34	-145.9	-9,147.1	9,366.0	9,289.6	76.42	122.552			
3,500.0	3,456.3	3,431.3	3,431.3	11.1	67.8	-121.40	-145.9	-9,147.1	9,372.1	9,294.4	77.71	120.596			
3,543.3	3,498.6	3,473.6	3,473.6	11.3	68.6	-121.44	-145.9	-9,147.1	9,376.8	9,298.1	78.73	119.104			
3,600.0	3,554.1	3,529.1	3,529.1	11.5	69.7	-121.50	-145.9	-9,147.1	9,383.1	9,303.0	80.06	117.207			
3,641.7	3,594.9	3,569.9	3,569.9	11.7	70.5	-121.55	-145.9	-9,147.1	9,387.7	9,306.7	81.03	115.851			
3,700.0	3,651.9	3,626.9	3,626.9	12.0	71.7	-121.61	-145.9	-9,147.1	9,394.2	9,311.8	82.40	114.011			
3,740.1	3,691.2	3,666.2	3,666.2	12.2	72.5	-121.65	-145.9	-9,147.1	9,398.6	9,315.3	83.34	112.778			
3,800.0	3,749.7	3,724.7	3,724.7	12.4	73.7	-121.72	-145.9	-9,147.1	9,405.3	9,320.5	84.74	110.992			
3,838.6	3,787.4	3,762.4	3,762.4	12.6	74.4	-121.76	-145.9	-9,147.1	9,409.5	9,323.9	85.64	109.871			
3,900.0	3,847.5	3,822.5	3,822.5	12.9	75.6	-121.82	-145.9	-9,147.1	9,416.4	9,329.3	87.08	108.135			
3,937.0	3,883.7	3,858.7	3,858.7	13.0	76.3	-121.86	-145.9	-9,147.1	9,420.5	9,332.6	87.95	107.117			
4,000.0	3,945.3	3,920.3	3,920.3	13.3	77.6	-121.93	-145.9	-9,147.1	9,427.5	9,338.1	89.42	105.429			
4,035.4	3,980.0	3,955.0	3,955.0	13.5	78.3	-121.97	-145.9	-9,147.1	9,431.5	9,341.2	90.25	104.504			
4,060.0	4,004.0	3,979.0	3,979.0	13.6	78.8	-121.99	-145.9	-9,147.1	9,434.2	9,343.4	90.83	103.872			
4,100.0	4,043.2	4,018.2	4,018.2	13.7	79.6	-122.11	-145.9	-9,147.1	9,438.6	9,346.8	91.80	102.814			
4,133.8	4,076.5	4,051.5	4,051.5	13.8	80.2	-122.20	-145.9	-9,147.1	9,442.0	9,349.4	92.61	101.955			
4,200.0	4,141.6	4,116.6	4,116.6	14.0	81.5	-122.36	-145.9	-9,147.1	9,448.1	9,353.9	94.19	100.313			
4,232.3	4,173.5	4,148.5	4,148.5	14.1	82.2	-122.43	-145.9	-9,147.1	9,450.8	9,355.9	94.95	99.540			
4,300.0	4,240.6	4,215.6	4,215.6	14.3	83.5	-122.56	-145.9	-9,147.1	9,455.8	9,359.3	96.53	97.953			
4,330.7	4,271.1	4,246.1	4,246.1	14.4	84.1	-122.61	-145.9	-9,147.1	9,457.8	9,360.6	97.24	97.259			
4,400.0	4,340.0	4,315.0	4,315.0	14.5	85.5	-122.72	-145.9	-9,147.1	9,461.7	9,362.9	98.84	95.728			
4,429.1	4,369.0	4,344.0	4,344.0	14.6	86.1	-122.75	-145.9	-9,147.1	9,463.1	9,363.6	99.50	95.108			
4,500.0	4,439.7	4,414.7	4,414.7	14.8	87.5	-122.82	-145.9	-9,147.1	9,465.7	9,364.6	101.09	93.632			
4,527.5	4,467.2	4,442.2	4,442.2	14.8	88.1	-122.84	-145.9	-9,147.1	9,466.4	9,364.7	101.70	93.079			
4,600.0	4,539.7	4,514.7	4,514.7	14.9	89.5	-122.87	-145.9	-9,147.1	9,467.8	9,364.5	103.29	91.658			
4,626.0	4,565.6	4,540.6	4,540.6	15.0	90.1	-122.88	-145.9	-9,147.1	9,468.0	9,364.1	103.85	91.166			
4,660.2	4,599.8	4,574.8	4,574.8	15.0	90.7	-94.16	-145.9	-9,147.1	9,468.1	9,365.1	102.97	91.952			
4,700.0	4,639.6	4,614.6	4,614.6	15.0	91.6	-94.16	-145.9	-9,147.1	9,468.1	9,364.3	103.83	91.186			
4,724.4	4,664.0	4,639.0	4,639.0	15.1	92.0	-94.16	-145.9	-9,147.1	9,468.1	9,363.7	104.37	90.718			
4,800.0	4,739.6	4,714.6	4,714.6	15.2	93.6	-94.16	-145.9	-9,147.1	9,468.1	9,362.1	106.02	89.301			
4,822.8	4,762.5	4,737.5	4,737.5	15.2	94.0	-94.16	-145.9	-9,147.1	9,468.1	9,361.6	106.53	88.881			
4,900.0	4,839.6	4,814.6	4,814.6	15.3	95.6	-94.16	-145.9	-9,147.1	9,468.1	9,359.9	108.22	87.491			
4,921.2	4,860.9	4,835.9	4,835.9	15.4	96.0	-94.16	-145.9	-9,147.1	9,468.1	9,359.4	108.68	87.116			
5,000.0	4,939.6	4,914.6	4,914.6	15.5	97.6	-94.16	-145.9	-9,147.1	9,468.1	9,357.7	110.41	85.753			
5,019.7	4,959.3	4,934.3	4,934.3	15.5	98.0	-94.16	-145.9	-9,147.1	9,468.1	9,357.3	110.84	85.418			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,014.6	5,014.6	15.6	99.6	-94.16	-145.9	-9,147.1	9,468.1	9,355.5	112.61	84.081	
5,118.1	5,057.7	5,032.7	5,032.7	15.7	100.0	-94.16	-145.9	-9,147.1	9,468.1	9,355.1	113.01	83.785	
5,200.0	5,139.6	5,114.6	5,114.6	15.8	101.6	-94.16	-145.9	-9,147.1	9,468.1	9,353.3	114.80	82.472	
5,216.5	5,156.2	5,131.2	5,131.2	15.8	101.9	-94.16	-145.9	-9,147.1	9,468.1	9,352.9	115.17	82.212	
5,300.0	5,239.6	5,214.6	5,214.6	15.9	103.6	-94.16	-145.9	-9,147.1	9,468.1	9,351.1	117.00	80.922	
5,314.9	5,254.6	5,229.6	5,229.6	16.0	103.9	-94.16	-145.9	-9,147.1	9,468.1	9,350.8	117.33	80.696	
5,400.0	5,339.6	5,314.6	5,314.6	16.1	105.6	-94.16	-145.9	-9,147.1	9,468.1	9,348.9	119.20	79.430	
5,413.4	5,353.0	5,328.0	5,328.0	16.1	105.9	-94.16	-145.9	-9,147.1	9,468.1	9,348.6	119.50	79.234	
5,500.0	5,439.6	5,414.6	5,414.6	16.3	107.6	-94.16	-145.9	-9,147.1	9,468.1	9,346.7	121.40	77.990	
5,511.8	5,451.4	5,426.4	5,426.4	16.3	107.9	-94.16	-145.9	-9,147.1	9,468.1	9,346.4	121.66	77.823	
5,600.0	5,539.6	5,514.6	5,514.6	16.4	109.6	-94.16	-145.9	-9,147.1	9,468.1	9,344.5	123.60	76.601	
5,610.2	5,549.9	5,524.9	5,524.9	16.4	109.9	-94.16	-145.9	-9,147.1	9,468.1	9,344.3	123.83	76.462	
5,700.0	5,639.6	5,614.6	5,614.6	16.6	111.7	-94.16	-145.9	-9,147.1	9,468.1	9,342.3	125.81	75.260	
5,708.6	5,648.3	5,623.3	5,623.3	16.6	111.8	-94.16	-145.9	-9,147.1	9,468.1	9,342.1	126.00	75.146	
5,800.0	5,739.6	5,714.6	5,714.6	16.7	113.7	-94.16	-145.9	-9,147.1	9,468.1	9,340.1	128.01	73.965	
5,807.1	5,746.7	5,721.7	5,721.7	16.8	113.8	-94.16	-145.9	-9,147.1	9,468.1	9,339.9	128.16	73.875	
5,900.0	5,839.6	5,814.6	5,814.6	16.9	115.7	-94.16	-145.9	-9,147.1	9,468.1	9,337.9	130.21	72.713	
5,905.5	5,845.1	5,820.1	5,820.1	16.9	115.8	-94.16	-145.9	-9,147.1	9,468.1	9,337.8	130.33	72.645	
6,000.0	5,939.6	5,914.6	5,914.6	17.1	117.7	-94.16	-145.9	-9,147.1	9,468.1	9,335.7	132.42	71.502	
6,003.9	5,943.6	5,918.6	5,918.6	17.1	117.8	-94.16	-145.9	-9,147.1	9,468.1	9,335.6	132.50	71.455	
6,059.2	5,998.8	5,973.8	5,973.8	17.2	118.9	-94.16	-145.9	-9,147.1	9,468.1	9,334.4	133.72	70.804	
6,100.0	6,039.6	6,014.6	6,014.6	17.2	119.7	-4.16	-145.9	-9,147.1	9,466.9	9,331.3	135.67	69.778	
6,102.3	6,042.0	6,017.0	6,017.0	17.2	119.8	-4.16	-145.9	-9,147.1	9,466.8	9,331.1	135.69	69.765	
6,150.0	6,089.4	6,064.4	6,064.4	17.3	120.7	-4.19	-145.9	-9,147.1	9,462.4	9,326.5	135.85	69.654	
6,200.0	6,138.7	6,113.7	6,113.7	17.3	121.7	-4.24	-145.9	-9,147.1	9,454.3	9,319.0	135.35	69.850	
6,200.8	6,139.5	6,114.5	6,114.5	17.3	121.7	-4.24	-145.9	-9,147.1	9,454.2	9,318.8	135.34	69.856	
6,250.0	6,187.4	6,162.4	6,162.4	17.3	122.7	-4.32	-145.9	-9,147.1	9,442.9	9,308.7	134.17	70.380	
6,299.2	6,234.4	6,209.4	6,209.4	17.4	123.6	-4.42	-145.9	-9,147.1	9,428.4	9,296.0	132.33	71.247	
6,300.0	6,235.1	6,210.1	6,210.1	17.4	123.6	-4.42	-145.9	-9,147.1	9,428.1	9,295.8	132.30	71.264	
6,350.0	6,281.7	6,256.7	6,256.7	17.4	124.6	-4.55	-145.9	-9,147.1	9,410.0	9,280.3	129.74	72.531	
6,397.6	6,324.8	6,299.8	6,299.8	17.3	125.4	-4.70	-145.9	-9,147.1	9,389.8	9,263.1	126.66	74.132	
6,400.0	6,326.9	6,301.9	6,301.9	17.3	125.5	-4.71	-145.9	-9,147.1	9,388.7	9,262.2	126.49	74.223	
6,450.0	6,370.5	6,345.5	6,345.5	17.3	126.4	-4.91	-145.9	-9,147.1	9,364.4	9,241.8	122.58	76.393	
6,496.0	6,409.1	6,384.1	6,384.1	17.3	127.1	-5.14	-145.9	-9,147.1	9,339.3	9,220.9	118.40	78.876	
6,500.0	6,412.3	6,387.3	6,387.3	17.3	127.2	-5.16	-145.9	-9,147.1	9,337.0	9,219.0	118.02	79.113	
6,550.0	6,452.1	6,427.1	6,427.1	17.3	128.0	-5.45	-145.9	-9,147.1	9,306.8	9,194.0	112.84	82.478	
6,594.5	6,485.6	6,460.6	6,460.6	17.3	128.7	-5.77	-145.9	-9,147.1	9,277.7	9,170.0	107.74	86.108	
6,600.0	6,489.7	6,464.7	6,464.7	17.3	128.8	-5.82	-145.9	-9,147.1	9,273.9	9,166.9	107.08	86.607	
6,650.0	6,524.9	6,499.9	6,499.9	17.2	129.5	-6.26	-145.9	-9,147.1	9,238.5	9,137.7	100.80	91.654	
6,692.9	6,553.0	6,528.0	6,528.0	17.2	130.0	-6.73	-145.9	-9,147.1	9,206.2	9,111.2	95.05	96.862	
6,700.0	6,557.5	6,532.5	6,532.5	17.2	130.1	-6.81	-145.9	-9,147.1	9,200.7	9,106.7	94.06	97.813	
6,750.0	6,587.4	6,562.4	6,562.4	17.2	130.7	-7.51	-145.9	-9,147.1	9,160.8	9,073.8	86.99	105.308	
6,791.3	6,609.9	6,584.9	6,584.9	17.2	131.2	-8.23	-145.9	-9,147.1	9,126.3	9,045.3	81.00	112.663	
6,800.0	6,614.4	6,589.4	6,589.4	17.2	131.3	-8.40	-145.9	-9,147.1	9,118.9	9,039.1	79.74	114.354	
6,850.0	6,638.4	6,613.4	6,613.4	17.2	131.7	-9.57	-145.9	-9,147.1	9,075.2	9,002.6	72.60	125.006	
6,889.7	6,655.3	6,630.3	6,630.3	17.4	132.1	-10.78	-145.9	-9,147.1	9,039.3	8,972.0	67.32	134.282	
6,900.0	6,659.4	6,634.4	6,634.4	17.5	132.2	-11.15	-145.9	-9,147.1	9,029.9	8,963.8	66.07	136.681	
6,950.0	6,677.1	6,652.1	6,652.1	18.0	132.5	-13.41	-145.9	-9,147.1	8,983.3	8,922.1	61.15	146.903	
6,988.2	6,688.4	6,663.4	6,663.4	18.5	132.8	-15.89	-145.9	-9,147.1	8,946.9	8,887.2	59.69	149.883	
7,000.0	6,691.5	6,666.5	6,666.5	18.7	132.8	-16.85	-145.9	-9,147.1	8,935.5	8,875.6	59.89	149.197	
7,050.0	6,702.5	6,677.5	6,677.5	19.5	133.0	-22.58	-145.9	-9,147.1	8,886.9	8,820.7	66.19	134.258	
7,086.6	6,708.4	6,683.4	6,683.4	20.1	133.2	-29.79	-145.9	-9,147.1	8,850.9	8,771.4	79.49	111.344	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT PAULINE #5 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	6,685.1	6,685.1	20.4	133.2	-33.59	-145.9	-9,147.1	8,837.7	8,750.5	87.11	101.454	
7,150.0	6,714.2	6,689.2	6,689.2	21.3	133.3	-58.66	-145.9	-9,147.1	8,788.0	8,656.4	131.58	66.790	
7,185.0	6,715.0	6,690.0	6,690.0	21.9	133.3	-90.88	-145.9	-9,147.1	8,753.1	8,598.1	154.93	56.496	
7,185.6	6,715.0	6,690.0	6,690.0	21.9	133.3	-91.42	-145.9	-9,147.1	8,752.5	8,597.6	154.93	56.494	
7,200.0	6,715.0	6,690.0	6,690.0	22.2	133.3	-91.42	-145.9	-9,147.1	8,738.1	8,582.9	155.21	56.301	
7,283.4	6,714.8	6,689.8	6,689.8	23.9	133.3	-91.41	-145.9	-9,147.1	8,655.0	8,498.1	156.88	55.169	
7,300.0	6,714.8	6,689.8	6,689.8	24.2	133.3	-91.40	-145.9	-9,147.1	8,638.5	8,481.2	157.21	54.948	
7,381.9	6,714.6	6,689.6	6,689.6	26.0	133.3	-91.39	-145.9	-9,147.1	8,556.8	8,397.9	158.97	53.827	
7,400.0	6,714.6	6,689.6	6,689.6	26.4	133.3	-91.39	-145.9	-9,147.1	8,538.8	8,379.4	159.36	53.582	
7,480.3	6,714.4	6,689.4	6,689.4	28.2	133.3	-91.37	-145.9	-9,147.1	8,458.7	8,297.6	161.17	52.482	
7,500.0	6,714.4	6,689.4	6,689.4	28.7	133.3	-91.37	-145.9	-9,147.1	8,439.1	8,277.5	161.62	52.216	
7,578.7	6,714.2	6,689.2	6,689.2	30.5	133.3	-91.36	-145.9	-9,147.1	8,360.6	8,197.2	163.47	51.144	
7,600.0	6,714.2	6,689.2	6,689.2	31.0	133.3	-91.35	-145.9	-9,147.1	8,339.4	8,175.5	163.97	50.859	
7,677.1	6,714.0	6,689.0	6,689.0	32.9	133.3	-91.34	-145.9	-9,147.1	8,262.6	8,096.7	165.84	49.822	
7,700.0	6,714.0	6,689.0	6,689.0	33.4	133.3	-91.33	-145.9	-9,147.1	8,239.8	8,073.4	166.40	49.519	
7,775.6	6,713.9	6,688.9	6,688.9	35.3	133.3	-91.32	-145.9	-9,147.1	8,164.5	7,996.2	168.27	48.520	
7,800.0	6,713.8	6,688.8	6,688.8	35.9	133.3	-91.32	-145.9	-9,147.1	8,140.1	7,971.3	168.88	48.202	
7,874.0	6,713.7	6,688.7	6,688.7	37.8	133.3	-91.30	-145.9	-9,147.1	8,066.4	7,895.7	170.74	47.243	
7,900.0	6,713.6	6,688.6	6,688.6	38.4	133.3	-91.30	-145.9	-9,147.1	8,040.5	7,869.1	171.40	46.911	
7,972.4	6,713.5	6,688.5	6,688.5	40.3	133.3	-91.29	-145.9	-9,147.1	7,968.3	7,795.1	173.26	45.992	
8,000.0	6,713.4	6,688.4	6,688.4	41.0	133.3	-91.28	-145.9	-9,147.1	7,940.9	7,766.9	173.96	45.647	
8,070.8	6,713.3	6,688.3	6,688.3	42.8	133.3	-91.27	-145.9	-9,147.1	7,870.3	7,694.5	175.80	44.769	
8,100.0	6,713.2	6,688.2	6,688.2	43.6	133.3	-91.27	-145.9	-9,147.1	7,841.2	7,664.7	176.56	44.412	
8,169.3	6,713.1	6,688.1	6,688.1	45.4	133.2	-91.25	-145.9	-9,147.1	7,772.2	7,593.9	178.37	43.574	
8,200.0	6,713.0	6,688.0	6,688.0	46.2	133.2	-91.25	-145.9	-9,147.1	7,741.6	7,562.5	179.17	43.208	
8,267.7	6,712.9	6,687.9	6,687.9	48.0	133.2	-91.24	-145.9	-9,147.1	7,674.2	7,493.2	180.96	42.408	
8,300.0	6,712.8	6,687.8	6,687.8	48.8	133.2	-91.23	-145.9	-9,147.1	7,642.0	7,460.2	181.81	42.033	
8,366.1	6,712.7	6,687.7	6,687.7	50.6	133.2	-91.22	-145.9	-9,147.1	7,576.2	7,392.6	183.57	41.272	
8,400.0	6,712.6	6,687.6	6,687.6	51.5	133.2	-91.21	-145.9	-9,147.1	7,542.4	7,358.0	184.47	40.887	
8,464.5	6,712.5	6,687.5	6,687.5	53.2	133.2	-91.20	-145.9	-9,147.1	7,478.2	7,292.0	186.19	40.163	
8,500.0	6,712.4	6,687.4	6,687.4	54.1	133.2	-91.20	-145.9	-9,147.1	7,442.9	7,255.7	187.14	39.771	
8,563.0	6,712.3	6,687.3	6,687.3	55.8	133.2	-91.19	-145.9	-9,147.1	7,380.2	7,191.3	188.83	39.083	
8,600.0	6,712.3	6,687.3	6,687.3	56.8	133.2	-91.18	-145.9	-9,147.1	7,343.3	7,153.5	189.83	38.684	
8,661.4	6,712.1	6,687.1	6,687.1	58.5	133.2	-91.17	-145.9	-9,147.1	7,282.2	7,090.7	191.48	38.031	
8,700.0	6,712.1	6,687.1	6,687.1	59.5	133.2	-91.16	-145.9	-9,147.1	7,243.7	7,051.2	192.52	37.625	
8,759.8	6,711.9	6,686.9	6,686.9	61.1	133.2	-91.15	-145.9	-9,147.1	7,184.2	6,990.0	194.14	37.005	
8,800.0	6,711.9	6,686.9	6,686.9	62.2	133.2	-91.15	-145.9	-9,147.1	7,144.2	6,949.0	195.23	36.594	
8,858.2	6,711.8	6,686.8	6,686.8	63.8	133.2	-91.14	-145.9	-9,147.1	7,086.2	6,889.4	196.81	36.005	
8,900.0	6,711.7	6,686.7	6,686.7	64.9	133.2	-91.13	-145.9	-9,147.1	7,044.7	6,846.7	197.94	35.589	
8,956.7	6,711.6	6,686.6	6,686.6	66.5	133.2	-91.12	-145.9	-9,147.1	6,988.3	6,788.8	199.49	35.031	
9,000.0	6,711.5	6,686.5	6,686.5	67.6	133.2	-91.11	-145.9	-9,147.1	6,945.1	6,744.5	200.67	34.610	
9,055.1	6,711.4	6,686.4	6,686.4	69.1	133.2	-91.10	-145.9	-9,147.1	6,890.3	6,688.1	202.17	34.082	
9,100.0	6,711.3	6,686.3	6,686.3	70.4	133.2	-91.10	-145.9	-9,147.1	6,845.6	6,642.2	203.40	33.657	
9,153.5	6,711.2	6,686.2	6,686.2	71.8	133.2	-91.09	-145.9	-9,147.1	6,792.4	6,587.5	204.86	33.156	
9,200.0	6,711.1	6,686.1	6,686.1	73.1	133.2	-91.08	-145.9	-9,147.1	6,746.2	6,540.0	206.13	32.727	
9,251.9	6,711.0	6,686.0	6,686.0	74.5	133.2	-91.07	-145.9	-9,147.1	6,694.5	6,486.9	207.56	32.254	
9,300.0	6,710.9	6,685.9	6,685.9	75.8	133.2	-91.06	-145.9	-9,147.1	6,646.7	6,437.8	208.87	31.822	
9,350.4	6,710.8	6,685.8	6,685.8	77.2	133.2	-91.05	-145.9	-9,147.1	6,596.6	6,386.3	210.26	31.374	
9,400.0	6,710.7	6,685.7	6,685.7	78.6	133.2	-91.05	-145.9	-9,147.1	6,547.2	6,335.6	211.62	30.939	
9,448.8	6,710.6	6,685.6	6,685.6	79.9	133.2	-91.04	-145.9	-9,147.1	6,498.7	6,285.7	212.96	30.516	
9,500.0	6,710.5	6,685.5	6,685.5	81.3	133.2	-91.03	-145.9	-9,147.1	6,447.8	6,233.4	214.37	30.078	
9,547.2	6,710.4	6,685.4	6,685.4	82.6	133.2	-91.02	-145.9	-9,147.1	6,400.8	6,185.2	215.67	29.679	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT PAULINE #5 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,600.0	6,710.3	6,685.3	6,685.3	84.1	133.2	-91.01	-145.9	-9,147.1	6,348.4	6,131.2	217.12	29.239	
9,645.6	6,710.2	6,685.2	6,685.2	85.3	133.2	-91.00	-145.9	-9,147.1	6,303.0	6,084.6	218.38	28.862	
9,700.0	6,710.1	6,685.1	6,685.1	86.8	133.2	-91.00	-145.9	-9,147.1	6,249.0	6,029.1	219.88	28.420	
9,744.1	6,710.0	6,685.0	6,685.0	88.1	133.2	-90.99	-145.9	-9,147.1	6,205.1	5,984.1	221.09	28.066	
9,800.0	6,709.9	6,684.9	6,684.9	89.6	133.2	-90.98	-145.9	-9,147.1	6,149.6	5,926.9	222.64	27.621	
9,842.5	6,709.9	6,684.9	6,684.9	90.8	133.2	-90.97	-145.9	-9,147.1	6,107.3	5,883.5	223.81	27.288	
9,900.0	6,709.7	6,684.7	6,684.7	92.4	133.2	-90.96	-145.9	-9,147.1	6,050.2	5,824.8	225.40	26.842	
9,940.9	6,709.7	6,684.7	6,684.7	93.5	133.2	-90.96	-145.9	-9,147.1	6,009.5	5,783.0	226.53	26.528	
10,000.0	6,709.6	6,684.6	6,684.6	95.1	133.2	-90.95	-145.9	-9,147.1	5,950.9	5,722.7	228.17	26.081	
10,039.3	6,709.5	6,684.5	6,684.5	96.2	133.2	-90.94	-145.9	-9,147.1	5,911.8	5,682.5	229.26	25.787	
10,100.0	6,709.4	6,684.4	6,684.4	97.9	133.2	-90.93	-145.9	-9,147.1	5,851.5	5,620.6	230.94	25.338	
10,137.8	6,709.3	6,684.3	6,684.3	98.9	133.2	-90.92	-145.9	-9,147.1	5,814.0	5,582.0	231.98	25.062	
10,200.0	6,709.2	6,684.2	6,684.2	100.7	133.2	-90.91	-145.9	-9,147.1	5,752.2	5,518.5	233.71	24.613	
10,236.2	6,709.1	6,684.1	6,684.1	101.7	133.2	-90.91	-145.9	-9,147.1	5,716.3	5,481.6	234.71	24.355	
10,300.0	6,709.0	6,684.0	6,684.0	103.4	133.2	-90.90	-145.9	-9,147.1	5,653.0	5,416.5	236.48	23.905	
10,334.6	6,708.9	6,683.9	6,683.9	104.4	133.2	-90.89	-145.9	-9,147.1	5,618.6	5,381.2	237.44	23.663	
10,400.0	6,708.8	6,683.8	6,683.8	106.2	133.2	-90.88	-145.9	-9,147.1	5,553.7	5,314.5	239.25	23.213	
10,433.0	6,708.7	6,683.7	6,683.7	107.1	133.2	-90.87	-145.9	-9,147.1	5,520.9	5,280.8	240.17	22.988	
10,500.0	6,708.6	6,683.6	6,683.6	109.0	133.2	-90.86	-145.9	-9,147.1	5,454.5	5,212.5	242.03	22.537	
10,531.5	6,708.5	6,683.5	6,683.5	109.9	133.2	-90.86	-145.9	-9,147.1	5,423.3	5,180.4	242.90	22.327	
10,600.0	6,708.4	6,683.4	6,683.4	111.8	133.2	-90.85	-145.9	-9,147.1	5,355.3	5,110.5	244.81	21.876	
10,629.9	6,708.4	6,683.4	6,683.4	112.6	133.2	-90.84	-145.9	-9,147.1	5,325.7	5,080.0	245.64	21.681	
10,700.0	6,708.2	6,683.2	6,683.2	114.6	133.1	-90.83	-145.9	-9,147.1	5,256.1	5,008.6	247.58	21.230	
10,728.3	6,708.2	6,683.2	6,683.2	115.3	133.1	-90.82	-145.9	-9,147.1	5,228.1	4,979.7	248.37	21.049	
10,800.0	6,708.0	6,683.0	6,683.0	117.3	133.1	-90.81	-145.9	-9,147.1	5,157.0	4,906.7	250.36	20.598	
10,826.7	6,708.0	6,683.0	6,683.0	118.1	133.1	-90.81	-145.9	-9,147.1	5,130.5	4,879.4	251.11	20.431	
10,900.0	6,707.8	6,682.8	6,682.8	120.1	133.1	-90.80	-145.9	-9,147.1	5,057.9	4,804.8	253.15	19.980	
10,925.2	6,707.8	6,682.8	6,682.8	120.8	133.1	-90.79	-145.9	-9,147.1	5,033.0	4,779.1	253.85	19.827	
11,000.0	6,707.6	6,682.6	6,682.6	122.9	133.1	-90.78	-145.9	-9,147.1	4,958.9	4,702.9	255.93	19.376	
11,023.6	6,707.6	6,682.6	6,682.6	123.6	133.1	-90.78	-145.9	-9,147.1	4,935.5	4,678.9	256.59	19.235	
11,100.0	6,707.5	6,682.5	6,682.5	125.7	133.1	-90.76	-145.9	-9,147.1	4,859.9	4,601.1	258.71	18.785	
11,122.0	6,707.4	6,682.4	6,682.4	126.3	133.1	-90.76	-145.9	-9,147.1	4,838.0	4,578.7	259.33	18.656	
11,200.0	6,707.3	6,682.3	6,682.3	128.5	133.1	-90.75	-145.9	-9,147.1	4,760.9	4,499.4	261.50	18.206	
11,220.4	6,707.2	6,682.2	6,682.2	129.0	133.1	-90.74	-145.9	-9,147.1	4,740.6	4,478.6	262.07	18.089	
11,300.0	6,707.1	6,682.1	6,682.1	131.3	133.1	-90.73	-145.9	-9,147.1	4,661.9	4,397.7	264.28	17.640	
11,318.9	6,707.0	6,682.0	6,682.0	131.8	133.1	-90.73	-145.9	-9,147.1	4,643.3	4,378.5	264.81	17.534	
11,400.0	6,706.9	6,681.9	6,681.9	134.0	133.1	-90.71	-145.9	-9,147.1	4,563.1	4,296.0	267.07	17.086	
11,417.3	6,706.9	6,681.9	6,681.9	134.5	133.1	-90.71	-145.9	-9,147.1	4,546.0	4,278.4	267.55	16.991	
11,500.0	6,706.7	6,681.7	6,681.7	136.8	133.1	-90.70	-145.9	-9,147.1	4,464.2	4,194.4	269.86	16.543	
11,515.7	6,706.7	6,681.7	6,681.7	137.3	133.1	-90.70	-145.9	-9,147.1	4,448.7	4,178.4	270.30	16.459	
11,600.0	6,706.5	6,681.5	6,681.5	139.6	133.1	-90.68	-145.9	-9,147.1	4,365.4	4,092.8	272.65	16.011	
11,614.1	6,706.5	6,681.5	6,681.5	140.0	133.1	-90.68	-145.9	-9,147.1	4,351.5	4,078.4	273.04	15.937	
11,700.0	6,706.3	6,681.3	6,681.3	142.4	133.1	-90.67	-145.9	-9,147.1	4,266.7	3,991.3	275.43	15.491	
11,712.6	6,706.3	6,681.3	6,681.3	142.8	133.1	-90.66	-145.9	-9,147.1	4,254.3	3,978.5	275.79	15.426	
11,800.0	6,706.1	6,681.1	6,681.1	145.2	133.1	-90.65	-145.9	-9,147.1	4,168.0	3,889.8	278.22	14.981	
11,811.0	6,706.1	6,681.1	6,681.1	145.5	133.1	-90.65	-145.9	-9,147.1	4,157.2	3,878.7	278.53	14.925	
11,900.0	6,705.9	6,680.9	6,680.9	148.0	133.1	-90.63	-145.9	-9,147.1	4,069.4	3,788.4	281.02	14.481	
11,909.4	6,705.9	6,680.9	6,680.9	148.3	133.1	-90.63	-145.9	-9,147.1	4,060.1	3,778.9	281.28	14.435	
12,000.0	6,705.8	6,680.8	6,680.8	150.8	133.1	-90.62	-145.9	-9,147.1	3,970.9	3,687.1	283.81	13.992	
12,007.8	6,705.7	6,680.7	6,680.7	151.0	133.1	-90.62	-145.9	-9,147.1	3,963.2	3,679.1	284.03	13.954	
12,100.0	6,705.6	6,680.6	6,680.6	153.6	133.1	-90.60	-145.9	-9,147.1	3,872.4	3,585.8	286.60	13.512	
12,106.3	6,705.6	6,680.6	6,680.6	153.8	133.1	-90.60	-145.9	-9,147.1	3,866.3	3,579.5	286.77	13.482	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT PAULINE #5 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,200.0	6,705.4	6,680.4	6,680.4	156.4	133.1	-90.58	-145.9	-9,147.1	3,774.1	3,484.7	289.39	13.041	
12,204.7	6,705.4	6,680.4	6,680.4	156.5	133.1	-90.58	-145.9	-9,147.1	3,769.4	3,479.9	289.52	13.020	
12,300.0	6,705.2	6,680.2	6,680.2	159.2	133.1	-90.57	-145.9	-9,147.1	3,675.8	3,383.6	292.18	12.580	
12,303.1	6,705.2	6,680.2	6,680.2	159.3	133.1	-90.57	-145.9	-9,147.1	3,672.7	3,380.4	292.27	12.566	
12,400.0	6,705.0	6,680.0	6,680.0	162.0	133.1	-90.55	-145.9	-9,147.1	3,577.6	3,282.6	294.98	12.128	
12,401.5	6,705.0	6,680.0	6,680.0	162.0	133.1	-90.55	-145.9	-9,147.1	3,576.1	3,281.0	295.02	12.121	
12,500.0	6,704.8	6,679.8	6,679.8	164.8	133.1	-90.54	-145.9	-9,147.1	3,479.5	3,181.7	297.77	11.685	
12,598.4	6,704.6	6,679.6	6,679.6	167.5	133.1	-90.52	-145.9	-9,147.1	3,383.1	3,082.6	300.52	11.257	
12,600.0	6,704.6	6,679.6	6,679.6	167.6	133.1	-90.52	-145.9	-9,147.1	3,381.5	3,080.9	300.56	11.251	
12,696.8	6,704.4	6,679.4	6,679.4	170.3	133.1	-90.50	-145.9	-9,147.1	3,286.8	2,983.5	303.27	10.838	
12,700.0	6,704.4	6,679.4	6,679.4	170.4	133.1	-90.50	-145.9	-9,147.1	3,283.7	2,980.3	303.36	10.824	
12,795.2	6,704.3	6,679.3	6,679.3	173.0	133.1	-90.49	-145.9	-9,147.1	3,190.6	2,884.5	306.02	10.426	
12,800.0	6,704.2	6,679.2	6,679.2	173.2	133.1	-90.49	-145.9	-9,147.1	3,185.9	2,879.8	306.15	10.406	
12,893.7	6,704.1	6,679.1	6,679.1	175.8	133.1	-90.47	-145.9	-9,147.1	3,094.5	2,785.7	308.77	10.022	
12,900.0	6,704.1	6,679.1	6,679.1	176.0	133.1	-90.47	-145.9	-9,147.1	3,088.4	2,779.4	308.95	9.996	
12,992.1	6,703.9	6,678.9	6,678.9	178.5	133.1	-90.46	-145.9	-9,147.1	2,998.6	2,687.1	311.52	9.626	
13,000.0	6,703.9	6,678.9	6,678.9	178.8	133.1	-90.46	-145.9	-9,147.1	2,990.9	2,679.2	311.75	9.594	
13,090.5	6,703.7	6,678.7	6,678.7	181.3	133.1	-90.44	-145.9	-9,147.1	2,902.9	2,588.6	314.28	9.237	
13,100.0	6,703.7	6,678.7	6,678.7	181.6	133.1	-90.44	-145.9	-9,147.1	2,893.7	2,579.2	314.54	9.200	
13,188.9	6,703.5	6,678.5	6,678.5	184.0	133.1	-90.43	-145.9	-9,147.1	2,807.4	2,490.3	317.03	8.855	
13,200.0	6,703.5	6,678.5	6,678.5	184.4	133.1	-90.42	-145.9	-9,147.1	2,796.6	2,479.3	317.34	8.813	
13,287.4	6,703.3	6,678.3	6,678.3	186.8	133.1	-90.41	-145.9	-9,147.1	2,712.0	2,392.2	319.78	8.481	
13,300.0	6,703.3	6,678.3	6,678.3	187.2	133.1	-90.41	-145.9	-9,147.1	2,699.8	2,379.7	320.14	8.433	
13,385.8	6,703.2	6,678.2	6,678.2	189.6	133.0	-90.39	-145.9	-9,147.1	2,616.9	2,294.4	322.54	8.114	
13,400.0	6,703.1	6,678.1	6,678.1	190.0	133.0	-90.39	-145.9	-9,147.1	2,603.2	2,280.3	322.93	8.061	
13,484.2	6,703.0	6,678.0	6,678.0	192.3	133.0	-90.38	-145.9	-9,147.1	2,522.1	2,196.8	325.29	7.753	
13,500.0	6,702.9	6,677.9	6,677.9	192.8	133.0	-90.38	-145.9	-9,147.1	2,506.9	2,181.2	325.73	7.696	
13,582.6	6,702.8	6,677.8	6,677.8	195.1	133.0	-90.36	-145.9	-9,147.1	2,427.5	2,099.5	328.04	7.400	
13,600.0	6,702.8	6,677.8	6,677.8	195.6	133.0	-90.36	-145.9	-9,147.1	2,410.9	2,082.3	328.53	7.338	
13,681.1	6,702.6	6,677.6	6,677.6	197.8	133.0	-90.35	-145.9	-9,147.1	2,333.3	2,002.5	330.80	7.053	
13,700.0	6,702.6	6,677.6	6,677.6	198.4	133.0	-90.34	-145.9	-9,147.1	2,315.2	1,983.9	331.33	6.988	
13,779.5	6,702.4	6,677.4	6,677.4	200.6	133.0	-90.33	-145.9	-9,147.1	2,239.4	1,905.8	333.55	6.714	
13,800.0	6,702.4	6,677.4	6,677.4	201.2	133.0	-90.33	-145.9	-9,147.1	2,219.9	1,885.7	334.12	6.644	
13,877.9	6,702.2	6,677.2	6,677.2	203.3	133.0	-90.32	-145.9	-9,147.1	2,145.9	1,809.6	336.30	6.381	
13,900.0	6,702.2	6,677.2	6,677.2	204.0	133.0	-90.31	-145.9	-9,147.1	2,125.0	1,788.1	336.92	6.307	
13,976.3	6,702.1	6,677.1	6,677.1	206.1	133.0	-90.30	-145.9	-9,147.1	2,052.9	1,713.8	339.06	6.055	
14,000.0	6,702.0	6,677.0	6,677.0	206.8	133.0	-90.30	-145.9	-9,147.1	2,030.6	1,690.9	339.72	5.977	
14,074.8	6,701.9	6,676.9	6,676.9	208.9	133.0	-90.29	-145.9	-9,147.1	1,960.4	1,618.6	341.81	5.735	
14,100.0	6,701.8	6,676.8	6,676.8	209.6	133.0	-90.28	-145.9	-9,147.1	1,936.8	1,594.3	342.52	5.654	
14,173.2	6,701.7	6,676.7	6,676.7	211.6	133.0	-90.27	-145.9	-9,147.1	1,868.5	1,523.9	344.57	5.423	
14,200.0	6,701.6	6,676.6	6,676.6	212.4	133.0	-90.27	-145.9	-9,147.1	1,843.6	1,498.3	345.32	5.339	
14,271.6	6,701.5	6,676.5	6,676.5	214.4	133.0	-90.25	-145.9	-9,147.1	1,777.3	1,430.0	347.32	5.117	
14,300.0	6,701.4	6,676.4	6,676.4	215.2	133.0	-90.25	-145.9	-9,147.1	1,751.2	1,403.1	348.12	5.030	
14,370.0	6,701.3	6,676.3	6,676.3	217.1	133.0	-90.24	-145.9	-9,147.1	1,687.0	1,336.9	350.08	4.819	
14,400.0	6,701.3	6,676.3	6,676.3	218.0	133.0	-90.23	-145.9	-9,147.1	1,659.6	1,308.7	350.92	4.729	
14,468.5	6,701.1	6,676.1	6,676.1	219.9	133.0	-90.22	-145.9	-9,147.1	1,597.5	1,244.7	352.83	4.528	
14,500.0	6,701.1	6,676.1	6,676.1	220.8	133.0	-90.22	-145.9	-9,147.1	1,569.1	1,215.4	353.72	4.436	
14,566.9	6,701.0	6,676.0	6,676.0	222.6	133.0	-90.21	-145.9	-9,147.1	1,509.2	1,153.7	355.59	4.244	
14,600.0	6,700.9	6,675.9	6,675.9	223.6	133.0	-90.20	-145.9	-9,147.1	1,479.8	1,123.3	356.52	4.151	
14,665.3	6,700.8	6,675.8	6,675.8	225.4	133.0	-90.19	-145.9	-9,147.1	1,422.3	1,063.9	358.35	3.969	
14,700.0	6,700.7	6,675.7	6,675.7	226.4	133.0	-90.19	-145.9	-9,147.1	1,392.0	1,032.7	359.32	3.874	
14,763.7	6,700.6	6,675.6	6,675.6	228.2	133.0	-90.18	-145.9	-9,147.1	1,336.9	975.8	361.10	3.702	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT PAULINE #5 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,800.0	6,700.5	6,675.5	6,675.5	229.2	133.0	-90.17	-145.9	-9,147.1	1,305.9	943.8	362.12	3.606	
14,862.2	6,700.4	6,675.4	6,675.4	230.9	133.0	-90.16	-145.9	-9,147.1	1,253.4	889.6	363.86	3.445	
14,900.0	6,700.3	6,675.3	6,675.3	232.0	133.0	-90.16	-145.9	-9,147.1	1,222.0	857.1	364.92	3.349	
14,960.6	6,700.2	6,675.2	6,675.2	233.7	133.0	-90.15	-145.9	-9,147.1	1,172.3	805.7	366.61	3.198	
15,000.0	6,700.2	6,675.2	6,675.2	234.8	133.0	-90.14	-145.9	-9,147.1	1,140.6	772.9	367.72	3.102	
15,059.0	6,700.0	6,675.0	6,675.0	236.4	133.0	-90.13	-145.9	-9,147.1	1,094.0	724.7	369.37	2.962	
15,082.8	6,700.0	6,675.0	6,675.0	237.1	133.0	-90.13	-145.9	-9,147.1	1,075.6	705.6	370.04	2.907 CC, ES, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-97.09	-1,091.0	-8,767.6	8,835.3				
98.4	98.4	108.4	108.4	0.1	0.0	-97.09	-1,090.9	-8,767.4	8,835.1	8,834.9	0.12	N/A	
100.0	100.0	109.9	109.9	0.1	0.0	-97.09	-1,090.9	-8,767.4	8,835.1	8,834.9	0.13	N/A	
196.8	196.8	200.0	200.0	0.3	0.2	-97.09	-1,091.0	-8,766.9	8,834.6	8,834.1	0.50	N/A	
200.0	200.0	200.0	200.0	0.3	0.2	-97.09	-1,091.0	-8,766.9	8,834.6	8,834.1	0.51	N/A	
295.3	295.3	282.9	282.9	0.5	0.2	-97.09	-1,090.9	-8,766.6	8,834.3	8,833.5	0.75	N/A	
300.0	300.0	286.7	286.7	0.5	0.2	-97.09	-1,090.9	-8,766.6	8,834.3	8,833.5	0.77	N/A	
367.0	367.0	334.0	334.0	0.7	0.2	-97.09	-1,090.6	-8,766.6	8,834.2	8,833.2	0.94	9,397.839	
393.7	393.7	351.9	351.9	0.8	0.3	-97.09	-1,090.5	-8,766.6	8,834.2	8,833.2	1.01	8,747.844	
400.0	400.0	356.2	356.2	0.8	0.3	-97.09	-1,090.5	-8,766.6	8,834.2	8,833.2	1.03	8,607.416	
492.1	492.1	507.9	507.9	1.0	0.3	-97.09	-1,090.1	-8,766.7	8,834.3	8,833.0	1.28	6,926.886	
500.0	500.0	515.5	515.5	1.0	0.3	-97.09	-1,090.1	-8,766.6	8,834.3	8,833.0	1.30	6,803.693	
590.5	590.5	602.5	602.5	1.2	0.4	-97.09	-1,089.8	-8,766.2	8,833.8	8,832.2	1.56	5,648.404	
600.0	600.0	611.6	611.6	1.2	0.4	-97.09	-1,089.7	-8,766.1	8,833.7	8,832.1	1.59	5,552.456	
689.0	689.0	696.8	696.8	1.4	0.4	-97.08	-1,089.4	-8,765.8	8,833.3	8,831.5	1.85	4,786.457	
700.0	700.0	707.7	707.7	1.4	0.4	-97.08	-1,089.3	-8,765.7	8,833.3	8,831.4	1.88	4,706.689	
787.4	787.4	795.4	795.4	1.6	0.5	-97.08	-1,088.9	-8,765.4	8,832.8	8,830.7	2.12	4,159.087	
800.0	800.0	800.0	800.0	1.7	0.5	-97.08	-1,088.9	-8,765.4	8,832.8	8,830.6	2.15	4,099.281	
885.8	885.8	876.2	876.2	1.9	0.5	-97.08	-1,088.7	-8,765.1	8,832.5	8,830.1	2.37	3,733.961	
900.0	900.0	887.7	887.7	1.9	0.5	-97.08	-1,088.8	-8,765.1	8,832.5	8,830.1	2.40	3,680.185	
975.8	975.8	942.8	942.8	2.1	0.5	-97.08	-1,088.9	-8,765.0	8,832.4	8,829.8	2.58	3,423.238	
984.2	984.2	948.8	948.8	2.1	0.5	-97.08	-1,088.9	-8,765.0	8,832.4	8,829.8	2.60	3,397.014	
1,000.0	1,000.0	959.9	959.9	2.1	0.5	-97.08	-1,088.9	-8,765.0	8,832.4	8,829.7	2.64	3,349.104	
1,082.7	1,082.7	1,100.0	1,100.0	2.3	0.5	-97.08	-1,089.1	-8,764.9	8,832.4	8,829.6	2.83	3,118.112	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	0.5	-97.08	-1,089.1	-8,764.9	8,832.3	8,829.5	2.87	3,075.800	
1,120.4	1,120.4	1,124.2	1,124.2	2.4	0.5	-125.81	-1,089.1	-8,764.8	8,832.3	8,829.4	2.92	3,026.558	
1,181.1	1,181.1	1,162.8	1,162.7	2.5	0.5	-125.81	-1,089.0	-8,764.7	8,832.7	8,829.7	3.06	2,885.346	
1,200.0	1,200.0	1,174.7	1,174.7	2.6	0.5	-125.81	-1,089.0	-8,764.6	8,833.1	8,830.0	3.11	2,843.947	
1,279.5	1,279.4	1,262.1	1,262.1	2.7	0.6	-125.79	-1,088.8	-8,764.6	8,835.3	8,832.0	3.29	2,681.765	
1,300.0	1,299.8	1,294.1	1,294.1	2.8	0.6	-125.79	-1,088.8	-8,764.6	8,836.1	8,832.7	3.34	2,642.776	
1,377.9	1,377.5	1,371.7	1,371.7	3.0	0.6	-125.77	-1,088.7	-8,764.3	8,839.6	8,836.1	3.54	2,497.405	
1,400.0	1,399.5	1,393.0	1,392.9	3.0	0.6	-125.76	-1,088.6	-8,764.3	8,840.8	8,837.2	3.60	2,459.194	
1,476.4	1,475.3	1,495.9	1,495.9	3.2	0.6	-125.74	-1,088.4	-8,763.8	8,845.8	8,842.0	3.81	2,323.273	
1,500.0	1,498.7	1,525.4	1,525.4	3.3	0.6	-125.73	-1,088.4	-8,763.6	8,847.5	8,843.6	3.88	2,282.992	
1,574.8	1,572.6	1,600.0	1,600.0	3.5	0.6	-125.69	-1,088.2	-8,763.1	8,853.6	8,849.5	4.10	2,160.579	
1,600.0	1,597.5	1,626.6	1,626.6	3.5	0.7	-125.68	-1,088.0	-8,762.9	8,856.0	8,851.8	4.17	2,121.465	
1,673.2	1,669.4	1,675.9	1,675.9	3.7	0.7	-125.60	-1,087.8	-8,762.7	8,863.6	8,859.2	4.40	2,012.743	
1,700.1	1,695.8	1,700.0	1,700.0	3.8	0.7	-125.57	-1,087.7	-8,762.6	8,866.7	8,862.2	4.49	1,974.674	
1,771.6	1,765.7	1,827.7	1,827.7	4.1	0.7	-125.51	-1,087.1	-8,761.6	8,874.8	8,870.1	4.75	1,868.507	
1,800.0	1,793.4	1,848.9	1,848.8	4.2	0.8	-125.73	-1,086.9	-8,761.4	8,878.0	8,873.2	4.84	1,833.966	
1,870.1	1,862.0	1,900.0	1,900.0	4.4	0.8	-125.79	-1,086.4	-8,761.0	8,886.0	8,881.0	5.08	1,750.028	
1,900.0	1,891.3	1,926.5	1,926.5	4.5	0.8	-125.81	-1,086.2	-8,760.8	8,889.5	8,884.3	5.18	1,716.015	
1,968.5	1,958.3	1,984.4	1,984.3	4.8	0.8	-125.87	-1,085.8	-8,760.4	8,897.5	8,892.0	5.42	1,640.564	
2,000.0	1,989.1	2,027.0	2,027.0	4.9	0.8	-125.92	-1,085.7	-8,760.2	8,901.1	8,895.6	5.54	1,606.351	
2,066.9	2,054.5	2,100.0	2,100.0	5.1	0.9	-126.00	-1,085.6	-8,759.4	8,908.7	8,903.0	5.79	1,538.174	
2,100.0	2,086.9	2,131.5	2,131.5	5.3	0.9	-126.03	-1,085.6	-8,759.1	8,912.5	8,906.6	5.91	1,507.750	
2,165.3	2,150.8	2,163.1	2,163.1	5.5	0.9	-126.07	-1,085.7	-8,758.9	8,920.2	8,914.0	6.14	1,452.024	
2,200.0	2,184.7	2,200.0	2,200.0	5.6	0.9	-126.11	-1,085.8	-8,758.7	8,924.4	8,918.1	6.27	1,422.944	
2,263.8	2,247.1	2,231.5	2,231.5	5.9	0.9	-126.15	-1,085.9	-8,758.7	8,932.1	8,925.6	6.50	1,373.378	
2,300.0	2,282.5	2,282.9	2,282.9	6.0	0.9	-126.20	-1,086.3	-8,758.5	8,936.5	8,929.9	6.65	1,344.717	
2,362.2	2,343.3	2,339.0	2,338.9	6.3	0.9	-126.27	-1,086.8	-8,758.2	8,944.1	8,937.2	6.88	1,299.635	
2,400.0	2,380.3	2,368.4	2,368.4	6.5	0.9	-126.30	-1,086.9	-8,758.1	8,948.7	8,941.6	7.02	1,274.018	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,460.6	2,439.6	2,400.0	2,399.9	6.7	0.9	-126.34	-1,087.0	-8,758.0	8,956.2	8,948.9	7.25	1,235.335	
2,500.0	2,478.1	2,433.0	2,433.0	6.9	0.9	-126.37	-1,087.0	-8,758.0	8,961.1	8,953.7	7.39	1,212.043	
2,559.0	2,535.9	2,465.7	2,465.7	7.1	0.9	-126.41	-1,087.0	-8,758.1	8,968.6	8,961.0	7.61	1,178.884	
2,600.0	2,575.9	2,500.0	2,499.9	7.3	0.9	-126.44	-1,087.1	-8,758.3	8,974.0	8,966.2	7.76	1,156.827	
2,657.5	2,632.2	2,592.8	2,592.7	7.5	0.9	-126.54	-1,087.2	-8,758.6	8,981.5	8,973.5	7.97	1,126.392	
2,700.0	2,673.8	2,634.8	2,634.7	7.7	0.9	-126.59	-1,087.2	-8,758.6	8,986.8	8,978.7	8.13	1,105.732	
2,755.9	2,728.4	2,683.7	2,683.7	7.9	0.9	-126.64	-1,087.2	-8,758.7	8,993.9	8,985.6	8.33	1,079.612	
2,800.0	2,771.6	2,719.4	2,719.4	8.1	0.9	-126.68	-1,087.0	-8,758.8	8,999.6	8,991.1	8.50	1,059.361	
2,854.3	2,824.7	2,760.7	2,760.7	8.3	0.9	-126.72	-1,086.7	-8,759.0	9,006.6	8,997.8	8.70	1,034.846	
2,900.0	2,869.4	2,800.0	2,799.9	8.5	1.0	-126.76	-1,086.1	-8,759.2	9,012.5	9,003.6	8.88	1,015.018	
2,952.7	2,921.0	2,834.8	2,834.7	8.8	1.0	-126.79	-1,085.5	-8,759.5	9,019.4	9,010.4	9.08	993.202	
3,000.0	2,967.2	2,869.9	2,869.8	9.0	1.0	-126.83	-1,085.0	-8,759.8	9,025.7	9,016.5	9.26	974.402	
3,051.2	3,017.3	3,031.8	3,031.7	9.2	1.0	-126.98	-1,082.1	-8,760.6	9,032.4	9,022.9	9.48	953.036	
3,100.0	3,065.0	3,100.0	3,099.9	9.4	1.0	-127.04	-1,080.7	-8,760.3	9,038.3	9,028.6	9.67	934.458	
3,149.6	3,113.5	3,129.4	3,129.2	9.6	1.0	-127.07	-1,080.2	-8,760.2	9,044.2	9,034.4	9.86	917.061	
3,200.0	3,162.8	3,153.2	3,153.0	9.8	1.0	-127.09	-1,079.8	-8,760.1	9,050.4	9,040.4	10.05	900.171	
3,248.0	3,209.8	3,200.0	3,199.9	10.0	1.0	-127.14	-1,079.5	-8,760.2	9,056.5	9,046.3	10.24	884.326	
3,300.0	3,260.6	3,200.7	3,200.6	10.2	1.0	-127.14	-1,079.5	-8,760.2	9,063.2	9,052.7	10.44	868.448	
3,346.4	3,306.1	3,255.4	3,255.2	10.5	1.1	-127.20	-1,079.2	-8,760.4	9,069.2	9,058.6	10.62	854.023	
3,400.0	3,358.5	3,312.3	3,312.2	10.7	1.1	-127.26	-1,079.0	-8,760.5	9,076.1	9,065.3	10.83	838.052	
3,444.9	3,402.3	3,347.6	3,347.4	10.9	1.1	-127.29	-1,078.7	-8,760.6	9,081.9	9,070.9	11.00	825.279	
3,500.0	3,456.3	3,400.0	3,399.9	11.1	1.1	-127.34	-1,078.0	-8,760.9	9,089.2	9,077.9	11.22	810.036	
3,543.3	3,498.6	3,427.5	3,427.4	11.3	1.1	-127.37	-1,077.5	-8,761.1	9,094.9	9,083.5	11.39	798.586	
3,600.0	3,554.1	3,476.4	3,476.3	11.5	1.1	-127.41	-1,076.6	-8,761.5	9,102.4	9,090.8	11.61	783.954	
3,641.7	3,594.9	3,573.7	3,573.5	11.7	1.1	-127.50	-1,074.9	-8,762.0	9,107.9	9,096.1	11.78	772.985	
3,700.0	3,651.9	3,642.9	3,642.7	12.0	1.2	-127.57	-1,073.5	-8,762.0	9,115.2	9,103.2	12.01	758.750	
3,740.1	3,691.2	3,675.2	3,675.0	12.2	1.2	-127.60	-1,073.0	-8,762.1	9,120.3	9,108.1	12.17	749.357	
3,800.0	3,749.7	3,730.2	3,730.1	12.4	1.2	-127.65	-1,072.3	-8,762.1	9,127.9	9,115.5	12.41	735.700	
3,838.6	3,787.4	3,770.4	3,770.2	12.6	1.2	-127.69	-1,071.9	-8,762.1	9,132.8	9,120.2	12.56	727.094	
3,900.0	3,847.5	3,843.9	3,843.7	12.9	1.2	-127.76	-1,071.4	-8,762.0	9,140.6	9,127.8	12.81	713.717	
3,937.0	3,883.7	3,893.0	3,892.9	13.0	1.2	-127.81	-1,071.1	-8,761.9	9,145.2	9,132.3	12.96	705.855	
4,000.0	3,945.3	3,900.0	3,899.8	13.3	1.2	-127.82	-1,071.0	-8,761.8	9,153.2	9,140.0	13.20	693.623	
4,035.4	3,980.0	3,940.2	3,940.0	13.5	1.2	-127.86	-1,070.8	-8,761.8	9,157.7	9,144.4	13.33	686.899	
4,060.0	4,004.0	3,950.8	3,950.6	13.6	1.2	-127.87	-1,070.8	-8,761.8	9,161.0	9,147.5	13.43	682.365	
4,100.0	4,043.2	3,968.0	3,967.8	13.7	1.2	-127.97	-1,070.8	-8,761.9	9,166.1	9,152.6	13.55	676.572	
4,133.8	4,076.5	4,000.0	3,999.8	13.8	1.2	-128.07	-1,070.8	-8,762.1	9,170.3	9,156.7	13.63	672.613	
4,200.0	4,141.6	4,000.0	3,999.8	14.0	1.2	-128.19	-1,070.8	-8,762.1	9,177.9	9,164.1	13.80	665.054	
4,232.3	4,173.5	4,027.4	4,027.2	14.1	1.2	-128.26	-1,070.9	-8,762.4	9,181.4	9,167.5	13.88	661.682	
4,300.0	4,240.6	4,059.3	4,059.1	14.3	1.2	-128.39	-1,071.1	-8,762.8	9,188.1	9,174.1	14.03	654.815	
4,330.7	4,271.1	4,073.8	4,073.6	14.4	1.3	-128.45	-1,071.2	-8,763.0	9,191.0	9,176.9	14.09	652.134	
4,400.0	4,340.0	4,111.2	4,111.0	14.5	1.3	-128.56	-1,071.7	-8,763.7	9,196.8	9,182.5	14.23	646.088	
4,429.1	4,369.0	4,134.7	4,134.5	14.6	1.3	-128.60	-1,072.1	-8,764.2	9,199.0	9,184.7	14.29	643.901	
4,500.0	4,439.7	4,200.0	4,199.8	14.8	1.3	-128.70	-1,073.1	-8,765.5	9,203.6	9,189.2	14.41	638.524	
4,527.5	4,467.2	4,214.9	4,214.7	14.8	1.3	-128.73	-1,073.3	-8,765.8	9,205.1	9,190.7	14.45	636.838	
4,600.0	4,539.7	4,276.3	4,276.0	14.9	1.3	-128.79	-1,074.0	-8,767.2	9,208.4	9,193.9	14.56	632.254	
4,626.0	4,565.6	4,300.0	4,299.7	15.0	1.3	-128.81	-1,074.3	-8,767.8	9,209.3	9,194.7	14.60	630.832	
4,660.2	4,599.8	4,323.3	4,323.0	15.0	1.3	-100.10	-1,074.5	-8,768.3	9,210.4	9,196.5	13.89	663.152	
4,700.0	4,639.6	4,352.2	4,351.9	15.0	1.3	-100.10	-1,074.7	-8,769.1	9,211.4	9,197.5	13.96	660.034	
4,724.4	4,664.0	4,369.8	4,369.5	15.1	1.3	-100.10	-1,074.8	-8,769.6	9,212.1	9,198.1	14.00	657.939	
4,800.0	4,739.6	4,424.3	4,424.0	15.2	1.3	-100.10	-1,075.2	-8,771.1	9,214.4	9,200.2	14.14	651.535	
4,822.8	4,762.5	4,440.6	4,440.3	15.2	1.3	-100.10	-1,075.3	-8,771.6	9,215.1	9,200.9	14.19	649.613	
4,900.0	4,839.6	4,500.0	4,499.6	15.3	1.3	-100.10	-1,075.8	-8,773.5	9,217.6	9,203.2	14.33	643.174	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,921.2	4,860.9	4,571.6	4,571.2	15.4	1.3	-100.10	-1,076.4	-8,775.7	9,218.2	9,203.9	14.38	641.006		
5,000.0	4,939.6	4,654.8	4,654.3	15.5	1.3	-100.10	-1,076.9	-8,777.8	9,220.3	9,205.8	14.53	634.369		
5,019.7	4,959.3	4,669.6	4,669.2	15.5	1.3	-100.10	-1,077.0	-8,778.2	9,220.9	9,206.3	14.57	632.767		
5,100.0	5,039.6	4,732.7	4,732.3	15.6	1.3	-100.10	-1,077.1	-8,780.0	9,223.2	9,208.5	14.73	626.290		
5,118.1	5,057.7	4,747.5	4,747.1	15.7	1.3	-100.10	-1,077.1	-8,780.5	9,223.7	9,209.0	14.76	624.835		
5,200.0	5,139.6	4,873.9	4,873.4	15.8	1.3	-100.10	-1,078.0	-8,784.1	9,226.2	9,211.3	14.93	617.958		
5,216.5	5,156.2	4,913.0	4,912.5	15.8	1.3	-100.11	-1,078.3	-8,785.0	9,226.6	9,211.6	14.97	616.491		
5,300.0	5,239.6	5,000.0	4,999.4	15.9	1.3	-100.10	-1,078.5	-8,786.9	9,228.4	9,213.3	15.13	609.875		
5,314.9	5,254.6	5,020.9	5,020.3	16.0	1.4	-100.10	-1,078.4	-8,787.4	9,228.7	9,213.6	15.16	608.636		
5,400.0	5,339.6	5,079.9	5,079.3	16.1	1.4	-100.10	-1,078.1	-8,788.8	9,230.7	9,215.4	15.33	602.136		
5,413.4	5,353.0	5,100.0	5,099.4	16.1	1.4	-100.10	-1,078.0	-8,789.3	9,231.0	9,215.7	15.36	601.038		
5,500.0	5,439.6	5,155.8	5,155.2	16.3	1.4	-100.10	-1,077.7	-8,790.9	9,233.3	9,217.8	15.53	594.594		
5,511.8	5,451.4	5,165.0	5,164.4	16.3	1.4	-100.09	-1,077.6	-8,791.1	9,233.6	9,218.1	15.55	593.710		
5,600.0	5,539.6	5,364.7	5,364.0	16.4	1.4	-100.07	-1,075.0	-8,795.8	9,235.4	9,219.6	15.76	586.062		
5,610.2	5,549.9	5,374.7	5,374.0	16.4	1.4	-100.07	-1,074.8	-8,796.0	9,235.6	9,219.8	15.78	585.277		
5,700.0	5,639.6	5,473.4	5,472.7	16.6	1.5	-100.06	-1,073.0	-8,797.9	9,236.9	9,221.0	15.97	578.394		
5,708.6	5,648.3	5,483.3	5,482.6	16.6	1.5	-100.06	-1,072.9	-8,798.0	9,237.0	9,221.1	15.99	577.733		
5,800.0	5,739.6	5,600.0	5,599.2	16.7	1.5	-100.04	-1,070.8	-8,799.9	9,238.2	9,222.0	16.19	570.715		
5,807.1	5,746.7	5,600.0	5,599.2	16.8	1.5	-100.04	-1,070.8	-8,799.9	9,238.3	9,222.0	16.20	570.251		
5,900.0	5,839.6	5,664.8	5,664.0	16.9	1.5	-100.03	-1,069.4	-8,801.0	9,239.5	9,223.1	16.39	563.709		
5,905.5	5,845.1	5,667.9	5,667.1	16.9	1.5	-100.03	-1,069.4	-8,801.0	9,239.6	9,223.2	16.40	563.331		
6,000.0	5,939.6	5,775.6	5,774.8	17.1	1.5	-100.02	-1,067.4	-8,803.2	9,241.1	9,224.5	16.61	556.498		
6,003.9	5,943.6	5,783.5	5,782.6	17.1	1.5	-100.02	-1,067.2	-8,803.3	9,241.2	9,224.6	16.62	556.190		
6,059.2	5,998.8	5,947.5	5,946.6	17.2	1.6	-99.99	-1,062.3	-8,805.2	9,241.4	9,224.6	16.76	551.329		
6,100.0	6,039.6	5,984.4	5,983.5	17.2	1.6	-10.00	-1,061.4	-8,805.5	9,240.3	9,223.0	17.31	533.961		
6,102.3	6,042.0	5,986.5	5,985.6	17.2	1.6	-10.00	-1,061.4	-8,805.5	9,240.2	9,222.9	17.31	533.860		
6,150.0	6,089.4	6,000.0	5,999.1	17.3	1.6	-10.06	-1,061.1	-8,805.6	9,236.0	9,218.6	17.38	531.477		
6,200.0	6,138.7	6,046.4	6,045.5	17.3	1.6	-10.17	-1,060.2	-8,805.9	9,228.3	9,210.8	17.47	528.150		
6,200.8	6,139.5	6,046.9	6,045.9	17.3	1.6	-10.17	-1,060.2	-8,806.0	9,228.1	9,210.7	17.47	528.099		
6,250.0	6,187.4	6,074.1	6,073.1	17.3	1.6	-10.33	-1,059.6	-8,806.3	9,217.4	9,199.8	17.56	525.044		
6,299.2	6,234.4	6,100.0	6,099.0	17.4	1.6	-10.54	-1,059.0	-8,806.6	9,203.5	9,185.9	17.61	522.655		
6,300.0	6,235.1	6,100.0	6,099.0	17.4	1.6	-10.55	-1,059.0	-8,806.6	9,203.2	9,185.6	17.61	522.630		
6,350.0	6,281.7	6,141.4	6,140.4	17.4	1.6	-10.83	-1,058.1	-8,807.3	9,185.9	9,168.3	17.63	520.985		
6,397.6	6,324.8	6,178.0	6,177.0	17.3	1.6	-11.17	-1,057.2	-8,807.9	9,166.5	9,148.9	17.61	520.503		
6,400.0	6,326.9	6,179.8	6,178.8	17.3	1.6	-11.19	-1,057.2	-8,807.9	9,165.4	9,147.8	17.61	520.510		
6,450.0	6,370.5	6,247.2	6,246.2	17.3	1.7	-11.65	-1,055.5	-8,809.0	9,141.9	9,124.3	17.56	520.541		
6,496.0	6,409.1	6,300.0	6,299.0	17.3	1.7	-12.15	-1,054.0	-8,809.7	9,117.4	9,100.0	17.48	521.675		
6,500.0	6,412.3	6,300.0	6,299.0	17.3	1.7	-12.20	-1,054.0	-8,809.7	9,115.2	9,097.8	17.46	521.939		
6,550.0	6,452.1	6,341.4	6,340.4	17.3	1.7	-12.86	-1,052.7	-8,810.3	9,085.7	9,068.4	17.32	524.697		
6,594.5	6,485.6	6,365.0	6,363.9	17.3	1.7	-13.56	-1,051.9	-8,810.6	9,057.3	9,040.2	17.14	528.364		
6,600.0	6,489.7	6,367.8	6,366.7	17.3	1.7	-13.66	-1,051.8	-8,810.7	9,053.6	9,036.5	17.12	528.896		
6,650.0	6,524.9	6,400.0	6,398.9	17.2	1.7	-14.63	-1,050.6	-8,811.3	9,019.0	9,002.1	16.90	533.674		
6,692.9	6,553.0	6,400.0	6,398.9	17.2	1.7	-15.60	-1,050.6	-8,811.3	8,987.5	8,970.9	16.67	539.035		
6,700.0	6,557.5	6,400.0	6,398.9	17.2	1.7	-15.78	-1,050.6	-8,811.3	8,982.2	8,965.5	16.63	539.990		
6,750.0	6,587.4	6,400.0	6,398.9	17.2	1.7	-17.19	-1,050.6	-8,811.3	8,943.2	8,926.8	16.38	546.098		
6,791.3	6,609.9	6,400.0	6,398.9	17.2	1.7	-18.62	-1,050.6	-8,811.3	8,909.6	8,893.4	16.20	550.014		
6,800.0	6,614.4	6,400.0	6,398.9	17.2	1.7	-18.95	-1,050.6	-8,811.3	8,902.3	8,886.2	16.16	550.838		
6,850.0	6,638.4	6,400.0	6,398.9	17.2	1.7	-21.19	-1,050.6	-8,811.3	8,859.8	8,843.7	16.04	552.435		
6,889.7	6,655.3	6,400.0	6,398.9	17.4	1.7	-23.42	-1,050.6	-8,811.3	8,824.8	8,808.7	16.05	549.837		
6,900.0	6,659.4	6,400.0	6,398.9	17.5	1.7	-24.08	-1,050.6	-8,811.3	8,815.6	8,799.5	16.08	548.368		
6,950.0	6,677.1	6,400.0	6,398.9	18.0	1.7	-27.93	-1,050.6	-8,811.3	8,770.1	8,753.8	16.38	535.544		
6,988.2	6,688.4	6,400.0	6,398.9	18.5	1.7	-31.79	-1,050.6	-8,811.3	8,734.6	8,717.8	16.86	517.973		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,000.0	6,691.5	6,400.0	6,398.9	18.7	1.7	-33.20	-1,050.6	-8,811.3	8,723.5	8,706.4	17.07	511.164	
7,050.0	6,702.5	6,400.0	6,398.9	19.5	1.7	-40.64	-1,050.6	-8,811.3	8,675.9	8,657.6	18.28	474.614	
7,086.6	6,708.4	6,400.0	6,398.9	20.1	1.7	-48.11	-1,050.6	-8,811.3	8,640.6	8,621.1	19.54	442.239	
7,100.0	6,710.1	6,400.0	6,398.9	20.4	1.7	-51.40	-1,050.6	-8,811.3	8,627.6	8,607.6	20.06	430.161	
7,150.0	6,714.2	6,400.0	6,398.9	21.3	1.7	-66.74	-1,050.6	-8,811.3	8,578.8	8,556.8	22.05	389.065	
7,185.0	6,715.0	6,400.0	6,398.9	21.9	1.7	-80.26	-1,050.6	-8,811.3	8,544.5	8,521.3	23.13	369.385	
7,185.6	6,715.0	6,400.0	6,398.9	21.9	1.7	-80.48	-1,050.6	-8,811.3	8,543.9	8,520.8	23.15	369.143	
7,200.0	6,715.0	6,400.0	6,398.9	22.2	1.7	-80.48	-1,050.6	-8,811.3	8,529.8	8,506.3	23.42	364.225	
7,283.4	6,714.8	6,400.0	6,398.9	23.9	1.7	-80.48	-1,050.6	-8,811.3	8,447.8	8,422.7	25.08	336.885	
7,300.0	6,714.8	6,400.0	6,398.9	24.2	1.7	-80.48	-1,050.6	-8,811.3	8,431.6	8,406.2	25.40	331.888	
7,381.9	6,714.6	6,400.0	6,398.9	26.0	1.7	-80.48	-1,050.6	-8,811.3	8,351.2	8,324.1	27.14	307.657	
7,400.0	6,714.6	6,400.0	6,398.9	26.4	1.7	-80.48	-1,050.6	-8,811.3	8,333.5	8,305.9	27.53	302.708	
7,480.3	6,714.4	6,400.0	6,398.9	28.2	1.7	-80.48	-1,050.6	-8,811.3	8,254.7	8,225.4	29.33	281.459	
7,500.0	6,714.4	6,400.0	6,398.9	28.7	1.7	-80.48	-1,050.6	-8,811.3	8,235.4	8,205.6	29.77	276.639	
7,578.7	6,714.2	6,400.0	6,398.9	30.5	1.7	-80.48	-1,050.6	-8,811.3	8,158.2	8,126.6	31.60	258.147	
7,600.0	6,714.2	6,400.0	6,398.9	31.0	1.7	-80.48	-1,050.6	-8,811.3	8,137.3	8,105.2	32.10	253.513	
7,677.1	6,714.0	6,400.0	6,398.9	32.9	1.7	-80.48	-1,050.6	-8,811.3	8,061.7	8,027.8	33.95	237.465	
7,700.0	6,714.0	6,400.0	6,398.9	33.4	1.7	-80.48	-1,050.6	-8,811.3	8,039.3	8,004.8	34.50	233.043	
7,775.6	6,713.9	6,400.0	6,398.9	35.3	1.7	-80.48	-1,050.6	-8,811.3	7,965.3	7,929.0	36.35	219.115	
7,800.0	6,713.8	6,400.0	6,398.9	35.9	1.7	-80.48	-1,050.6	-8,811.3	7,941.4	7,904.4	36.95	214.913	
7,874.0	6,713.7	6,400.0	6,398.9	37.8	1.7	-80.48	-1,050.6	-8,811.3	7,868.9	7,830.1	38.80	202.802	
7,900.0	6,713.6	6,400.0	6,398.9	38.4	1.7	-80.48	-1,050.6	-8,811.3	7,843.5	7,804.1	39.45	198.817	
7,972.4	6,713.5	6,400.0	6,398.9	40.3	1.7	-80.48	-1,050.6	-8,811.3	7,772.6	7,731.4	41.29	188.258	
8,000.0	6,713.4	6,400.0	6,398.9	41.0	1.7	-80.48	-1,050.6	-8,811.3	7,745.7	7,703.7	41.99	184.481	
8,070.8	6,713.3	6,400.0	6,398.9	42.8	1.7	-80.48	-1,050.6	-8,811.3	7,676.4	7,632.6	43.80	175.245	
8,100.0	6,713.2	6,400.0	6,398.9	43.6	1.7	-80.48	-1,050.6	-8,811.3	7,647.9	7,603.3	44.55	171.664	
8,169.3	6,713.1	6,400.0	6,398.9	45.4	1.7	-80.48	-1,050.6	-8,811.3	7,580.2	7,533.8	46.35	163.557	
8,200.0	6,713.0	6,400.0	6,398.9	46.2	1.7	-80.48	-1,050.6	-8,811.3	7,550.2	7,503.0	47.14	160.160	
8,267.7	6,712.9	6,400.0	6,398.9	48.0	1.7	-80.48	-1,050.6	-8,811.3	7,484.0	7,435.1	48.91	153.020	
8,300.0	6,712.8	6,400.0	6,398.9	48.8	1.7	-80.48	-1,050.6	-8,811.3	7,452.5	7,402.8	49.75	149.793	
8,366.1	6,712.7	6,400.0	6,398.9	50.6	1.7	-80.48	-1,050.6	-8,811.3	7,388.0	7,336.5	51.49	143.484	
8,400.0	6,712.6	6,400.0	6,398.9	51.5	1.7	-80.48	-1,050.6	-8,811.3	7,354.9	7,302.5	52.38	140.414	
8,464.5	6,712.5	6,400.0	6,398.9	53.2	1.7	-80.48	-1,050.6	-8,811.3	7,291.9	7,237.9	54.09	134.821	
8,500.0	6,712.4	6,400.0	6,398.9	54.1	1.7	-80.48	-1,050.6	-8,811.3	7,257.4	7,202.4	55.02	131.897	
8,563.0	6,712.3	6,400.0	6,398.9	55.8	1.7	-80.48	-1,050.6	-8,811.3	7,196.0	7,139.3	56.70	126.923	
8,600.0	6,712.3	6,400.0	6,398.9	56.8	1.7	-80.48	-1,050.6	-8,811.3	7,159.9	7,102.2	57.68	124.134	
8,661.4	6,712.1	6,400.0	6,398.9	58.5	1.7	-80.48	-1,050.6	-8,811.3	7,100.1	7,040.8	59.32	119.699	
8,700.0	6,712.1	6,400.0	6,398.9	59.5	1.7	-80.48	-1,050.6	-8,811.3	7,062.5	7,002.2	60.35	117.035	
8,759.8	6,711.9	6,400.0	6,398.9	61.1	1.7	-80.48	-1,050.6	-8,811.3	7,004.3	6,942.3	61.95	113.070	
8,800.0	6,711.9	6,400.0	6,398.9	62.2	1.7	-80.48	-1,050.6	-8,811.3	6,965.2	6,902.2	63.02	110.521	
8,858.2	6,711.8	6,400.0	6,398.9	63.8	1.7	-80.48	-1,050.6	-8,811.3	6,908.5	6,844.0	64.59	106.967	
8,900.0	6,711.7	6,400.0	6,398.9	64.9	1.7	-80.48	-1,050.6	-8,811.3	6,868.0	6,802.3	65.71	104.525	
8,956.7	6,711.6	6,400.0	6,398.9	66.5	1.7	-80.48	-1,050.6	-8,811.3	6,812.9	6,745.6	67.23	101.334	
9,000.0	6,711.5	6,400.0	6,398.9	67.6	1.7	-80.48	-1,050.6	-8,811.3	6,770.8	6,702.4	68.40	98.991	
9,055.1	6,711.4	6,400.0	6,398.9	69.1	1.7	-80.48	-1,050.6	-8,811.3	6,717.3	6,647.4	69.89	96.119	
9,100.0	6,711.3	6,400.0	6,398.9	70.4	1.7	-80.48	-1,050.6	-8,811.3	6,673.7	6,602.6	71.10	93.868	
9,153.5	6,711.2	6,400.0	6,398.9	71.8	1.7	-80.48	-1,050.6	-8,811.3	6,621.8	6,549.2	72.54	91.279	
9,200.0	6,711.1	6,400.0	6,398.9	73.1	1.7	-80.47	-1,050.6	-8,811.3	6,576.7	6,502.9	73.80	89.114	
9,251.9	6,711.0	6,400.0	6,398.9	74.5	1.7	-80.47	-1,050.6	-8,811.3	6,526.4	6,451.2	75.21	86.777	
9,300.0	6,710.9	6,400.0	6,398.9	75.8	1.7	-80.47	-1,050.6	-8,811.3	6,479.8	6,403.3	76.51	84.692	
9,350.4	6,710.8	6,400.0	6,398.9	77.2	1.7	-80.47	-1,050.6	-8,811.3	6,431.1	6,353.2	77.88	82.579	
9,400.0	6,710.7	6,400.0	6,398.9	78.6	1.7	-80.47	-1,050.6	-8,811.3	6,383.0	6,303.8	79.22	80.569	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,710.6	6,400.0	6,398.9	79.9	1.7	-80.47	-1,050.6	-8,811.3	6,335.8	6,255.3	80.55	78.656	
9,500.0	6,710.5	6,400.0	6,398.9	81.3	1.7	-80.47	-1,050.6	-8,811.3	6,286.3	6,204.4	81.94	76.716	
9,547.2	6,710.4	6,400.0	6,398.9	82.6	1.7	-80.47	-1,050.6	-8,811.3	6,240.7	6,157.5	83.23	74.983	
9,600.0	6,710.3	6,400.0	6,398.9	84.1	1.7	-80.47	-1,050.6	-8,811.3	6,189.7	6,105.1	84.66	73.109	
9,645.6	6,710.2	6,400.0	6,398.9	85.3	1.7	-80.47	-1,050.6	-8,811.3	6,145.7	6,059.8	85.91	71.538	
9,700.0	6,710.1	6,400.0	6,398.9	86.8	1.7	-80.47	-1,050.6	-8,811.3	6,093.2	6,005.8	87.39	69.725	
9,744.1	6,710.0	6,400.0	6,398.9	88.1	1.7	-80.47	-1,050.6	-8,811.3	6,050.7	5,962.2	88.59	68.299	
9,800.0	6,709.9	6,400.0	6,398.9	89.6	1.7	-80.47	-1,050.6	-8,811.3	5,996.9	5,906.7	90.12	66.545	
9,842.5	6,709.9	6,400.0	6,398.9	90.8	1.7	-80.47	-1,050.6	-8,811.3	5,955.9	5,864.7	91.28	65.251	
9,900.0	6,709.7	6,400.0	6,398.9	92.4	1.7	-80.47	-1,050.6	-8,811.3	5,900.6	5,807.8	92.85	63.551	
9,940.9	6,709.7	6,400.0	6,398.9	93.5	1.7	-80.47	-1,050.6	-8,811.3	5,861.3	5,767.3	93.97	62.376	
10,000.0	6,709.6	6,400.0	6,398.9	95.1	1.7	-80.47	-1,050.6	-8,811.3	5,804.5	5,708.9	95.58	60.728	
10,039.3	6,709.5	6,400.0	6,398.9	96.2	1.7	-80.47	-1,050.6	-8,811.3	5,766.7	5,670.0	96.66	59.661	
10,100.0	6,709.4	6,400.0	6,398.9	97.9	1.7	-80.47	-1,050.6	-8,811.3	5,708.5	5,610.2	98.32	58.062	
10,137.8	6,709.3	6,400.0	6,398.9	98.9	1.7	-80.47	-1,050.6	-8,811.3	5,672.3	5,572.9	99.35	57.093	
10,200.0	6,709.2	6,400.0	6,398.9	100.7	1.7	-80.47	-1,050.6	-8,811.3	5,612.6	5,511.6	101.06	55.540	
10,236.2	6,709.1	6,400.0	6,398.9	101.7	1.7	-80.47	-1,050.6	-8,811.3	5,578.0	5,475.9	102.05	54.661	
10,300.0	6,709.0	6,400.0	6,398.9	103.4	1.7	-80.47	-1,050.6	-8,811.3	5,516.9	5,413.1	103.80	53.152	
10,334.6	6,708.9	6,400.0	6,398.9	104.4	1.7	-80.47	-1,050.6	-8,811.3	5,483.8	5,379.1	104.74	52.354	
10,400.0	6,708.8	6,400.0	6,398.9	106.2	1.7	-80.47	-1,050.6	-8,811.3	5,421.4	5,314.8	106.54	50.887	
10,433.0	6,708.7	6,400.0	6,398.9	107.1	1.7	-80.47	-1,050.6	-8,811.3	5,389.8	5,282.4	107.44	50.164	
10,500.0	6,708.6	6,400.0	6,398.9	109.0	1.7	-80.47	-1,050.6	-8,811.3	5,326.0	5,216.7	109.28	48.737	
10,531.5	6,708.5	6,400.0	6,398.9	109.9	1.7	-80.47	-1,050.6	-8,811.3	5,296.0	5,185.9	110.14	48.083	
10,600.0	6,708.4	6,400.0	6,398.9	111.8	1.7	-80.47	-1,050.6	-8,811.3	5,230.8	5,118.7	112.02	46.693	
10,629.9	6,708.4	6,400.0	6,398.9	112.6	1.7	-80.47	-1,050.6	-8,811.3	5,202.3	5,089.5	112.85	46.101	
10,700.0	6,708.2	6,400.0	6,398.9	114.6	1.7	-80.47	-1,050.6	-8,811.3	5,135.7	5,021.0	114.77	44.748	
10,728.3	6,708.2	6,400.0	6,398.9	115.3	1.7	-80.47	-1,050.6	-8,811.3	5,108.9	4,993.3	115.55	44.214	
10,800.0	6,708.0	6,400.0	6,398.9	117.3	1.7	-80.47	-1,050.6	-8,811.3	5,040.9	4,923.4	117.52	42.894	
10,826.7	6,708.0	6,400.0	6,398.9	118.1	1.7	-80.47	-1,050.6	-8,811.3	5,015.6	4,897.3	118.25	42.414	
10,900.0	6,707.8	6,400.0	6,398.9	120.1	1.7	-80.47	-1,050.6	-8,811.3	4,946.3	4,826.0	120.27	41.127	
10,925.2	6,707.8	6,400.0	6,398.9	120.8	1.7	-80.47	-1,050.6	-8,811.3	4,922.5	4,801.5	120.96	40.695	
11,000.0	6,707.6	6,400.0	6,398.9	122.9	1.7	-80.47	-1,050.6	-8,811.3	4,851.8	4,728.8	123.02	39.440	
11,023.6	6,707.6	6,400.0	6,398.9	123.6	1.7	-80.47	-1,050.6	-8,811.3	4,829.6	4,705.9	123.67	39.053	
11,100.0	6,707.5	6,400.0	6,398.9	125.7	1.7	-80.47	-1,050.6	-8,811.3	4,757.6	4,631.9	125.77	37.829	
11,122.0	6,707.4	6,400.0	6,398.9	126.3	1.7	-80.47	-1,050.6	-8,811.3	4,736.9	4,610.6	126.37	37.483	
11,200.0	6,707.3	6,400.0	6,398.9	128.5	1.7	-80.47	-1,050.6	-8,811.3	4,663.7	4,535.2	128.52	36.288	
11,220.4	6,707.2	6,400.0	6,398.9	129.0	1.7	-80.47	-1,050.6	-8,811.3	4,644.5	4,515.4	129.08	35.981	
11,300.0	6,707.1	6,400.0	6,398.9	131.3	1.7	-80.47	-1,050.6	-8,811.3	4,570.0	4,438.7	131.27	34.813	
11,318.9	6,707.0	6,400.0	6,398.9	131.8	1.7	-80.47	-1,050.6	-8,811.3	4,552.3	4,420.5	131.79	34.542	
11,400.0	6,706.9	6,400.0	6,398.9	134.0	1.7	-80.47	-1,050.6	-8,811.3	4,476.6	4,342.5	134.03	33.401	
11,417.3	6,706.9	6,400.0	6,398.9	134.5	1.7	-80.47	-1,050.6	-8,811.3	4,460.4	4,325.9	134.50	33.162	
11,500.0	6,706.7	6,400.0	6,398.9	136.8	1.7	-80.47	-1,050.6	-8,811.3	4,383.4	4,246.7	136.78	32.047	
11,515.7	6,706.7	6,400.0	6,398.9	137.3	1.7	-80.47	-1,050.6	-8,811.3	4,368.8	4,231.6	137.21	31.839	
11,600.0	6,706.5	6,400.0	6,398.9	139.6	1.7	-80.47	-1,050.6	-8,811.3	4,290.6	4,151.1	139.54	30.749	
11,614.1	6,706.5	6,400.0	6,398.9	140.0	1.7	-80.47	-1,050.6	-8,811.3	4,277.5	4,137.6	139.93	30.570	
11,700.0	6,706.3	6,400.0	6,398.9	142.4	1.7	-80.47	-1,050.6	-8,811.3	4,198.1	4,055.8	142.29	29.503	
11,712.6	6,706.3	6,400.0	6,398.9	142.8	1.7	-80.47	-1,050.6	-8,811.3	4,186.5	4,043.9	142.64	29.350	
11,800.0	6,706.1	6,400.0	6,398.9	145.2	1.7	-80.47	-1,050.6	-8,811.3	4,106.0	3,960.9	145.05	28.307	
11,811.0	6,706.1	6,400.0	6,398.9	145.5	1.7	-80.47	-1,050.6	-8,811.3	4,095.9	3,950.5	145.35	28.179	
11,900.0	6,705.9	6,400.0	6,398.9	148.0	1.7	-80.47	-1,050.6	-8,811.3	4,014.2	3,866.4	147.81	27.158	
11,909.4	6,705.9	6,400.0	6,398.9	148.3	1.7	-80.47	-1,050.6	-8,811.3	4,005.6	3,857.5	148.07	27.052	
12,000.0	6,705.8	6,400.0	6,398.9	150.8	1.7	-80.47	-1,050.6	-8,811.3	3,922.8	3,772.3	150.57	26.054	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,705.7	6,400.0	6,398.9	151.0	1.7	-80.47	-1,050.6	-8,811.3	3,915.7	3,764.9	150.78	25.969	
12,100.0	6,705.6	6,400.0	6,398.9	153.6	1.7	-80.47	-1,050.6	-8,811.3	3,831.9	3,678.6	153.32	24.992	
12,106.3	6,705.6	6,400.0	6,398.9	153.8	1.7	-80.47	-1,050.6	-8,811.3	3,826.2	3,672.7	153.50	24.927	
12,200.0	6,705.4	6,400.0	6,398.9	156.4	1.7	-80.47	-1,050.6	-8,811.3	3,741.4	3,585.4	156.08	23.971	
12,204.7	6,705.4	6,400.0	6,398.9	156.5	1.7	-80.47	-1,050.6	-8,811.3	3,737.2	3,581.0	156.21	23.924	
12,300.0	6,705.2	6,400.0	6,398.9	159.2	1.7	-80.47	-1,050.6	-8,811.3	3,651.5	3,492.6	158.84	22.988	
12,303.1	6,705.2	6,400.0	6,398.9	159.3	1.7	-80.47	-1,050.6	-8,811.3	3,648.7	3,489.7	158.93	22.958	
12,400.0	6,705.0	6,400.0	6,398.9	162.0	1.7	-80.47	-1,050.6	-8,811.3	3,562.0	3,400.4	161.60	22.042	
12,401.5	6,705.0	6,400.0	6,398.9	162.0	1.7	-80.47	-1,050.6	-8,811.3	3,560.6	3,399.0	161.65	22.027	
12,500.0	6,704.8	6,400.0	6,398.9	164.8	1.7	-80.47	-1,050.6	-8,811.3	3,473.2	3,308.8	164.36	21.131	
12,598.4	6,704.6	6,400.0	6,398.9	167.5	1.7	-80.47	-1,050.6	-8,811.3	3,386.3	3,219.2	167.08	20.268	
12,600.0	6,704.6	6,400.0	6,398.9	167.6	1.7	-80.47	-1,050.6	-8,811.3	3,384.9	3,217.8	167.12	20.254	
12,696.8	6,704.4	6,400.0	6,398.9	170.3	1.7	-80.47	-1,050.6	-8,811.3	3,300.1	3,130.3	169.80	19.435	
12,700.0	6,704.4	6,400.0	6,398.9	170.4	1.7	-80.47	-1,050.6	-8,811.3	3,297.3	3,127.5	169.89	19.409	
12,795.2	6,704.3	6,400.0	6,398.9	173.0	1.7	-80.47	-1,050.6	-8,811.3	3,214.6	3,042.1	172.52	18.634	
12,800.0	6,704.2	6,400.0	6,398.9	173.2	1.7	-80.47	-1,050.6	-8,811.3	3,210.5	3,037.9	172.65	18.596	
12,893.7	6,704.1	6,400.0	6,398.9	175.8	1.7	-80.47	-1,050.6	-8,811.3	3,129.9	2,954.6	175.24	17.861	
12,900.0	6,704.1	6,400.0	6,398.9	176.0	1.7	-80.47	-1,050.6	-8,811.3	3,124.4	2,949.0	175.41	17.812	
12,992.1	6,703.9	6,400.0	6,398.9	178.5	1.7	-80.47	-1,050.6	-8,811.3	3,045.9	2,868.0	177.96	17.116	
13,000.0	6,703.9	6,400.0	6,398.9	178.8	1.7	-80.47	-1,050.6	-8,811.3	3,039.2	2,861.1	178.17	17.058	
13,090.5	6,703.7	6,400.0	6,398.9	181.3	1.7	-80.47	-1,050.6	-8,811.3	2,962.9	2,782.2	180.67	16.399	
13,100.0	6,703.7	6,400.0	6,398.9	181.6	1.7	-80.47	-1,050.6	-8,811.3	2,955.0	2,774.0	180.94	16.332	
13,188.9	6,703.5	6,400.0	6,398.9	184.0	1.7	-80.47	-1,050.6	-8,811.3	2,880.9	2,697.5	183.39	15.709	
13,200.0	6,703.5	6,400.0	6,398.9	184.4	1.7	-80.47	-1,050.6	-8,811.3	2,871.7	2,688.0	183.70	15.633	
13,287.4	6,703.3	6,400.0	6,398.9	186.8	1.7	-80.47	-1,050.6	-8,811.3	2,799.8	2,613.7	186.11	15.044	
13,300.0	6,703.3	6,400.0	6,398.9	187.2	1.7	-80.47	-1,050.6	-8,811.3	2,789.5	2,603.1	186.46	14.960	
13,385.8	6,703.2	6,400.0	6,398.9	189.6	1.7	-80.47	-1,050.6	-8,811.3	2,720.0	2,531.2	188.83	14.404	
13,400.0	6,703.1	6,400.0	6,398.9	190.0	1.7	-80.47	-1,050.6	-8,811.3	2,708.6	2,519.3	189.23	14.314	
13,484.2	6,703.0	6,400.0	6,398.9	192.3	1.7	-80.47	-1,050.6	-8,811.3	2,641.4	2,449.8	191.56	13.789	
13,500.0	6,702.9	6,400.0	6,398.9	192.8	1.7	-80.47	-1,050.6	-8,811.3	2,628.9	2,436.9	191.99	13.693	
13,582.6	6,702.8	6,400.0	6,398.9	195.1	1.7	-80.47	-1,050.6	-8,811.3	2,564.2	2,369.9	194.28	13.198	
13,600.0	6,702.8	6,400.0	6,398.9	195.6	1.7	-80.47	-1,050.6	-8,811.3	2,550.7	2,355.9	194.76	13.097	
13,681.1	6,702.6	6,400.0	6,398.9	197.8	1.7	-80.47	-1,050.6	-8,811.3	2,488.4	2,291.4	197.00	12.632	
13,700.0	6,702.6	6,400.0	6,398.9	198.4	1.7	-80.47	-1,050.6	-8,811.3	2,474.0	2,276.5	197.52	12.525	
13,779.5	6,702.4	6,400.0	6,398.9	200.6	1.7	-80.47	-1,050.6	-8,811.3	2,414.3	2,214.6	199.72	12.089	
13,800.0	6,702.4	6,400.0	6,398.9	201.2	1.7	-80.47	-1,050.6	-8,811.3	2,399.1	2,198.8	200.29	11.978	
13,877.9	6,702.2	6,400.0	6,398.9	203.3	1.7	-80.47	-1,050.6	-8,811.3	2,342.0	2,139.6	202.44	11.569	
13,900.0	6,702.2	6,400.0	6,398.9	204.0	1.7	-80.47	-1,050.6	-8,811.3	2,326.1	2,123.0	203.05	11.456	
13,976.3	6,702.1	6,400.0	6,398.9	206.1	1.7	-80.47	-1,050.6	-8,811.3	2,271.7	2,066.5	205.16	11.073	
14,000.0	6,702.0	6,400.0	6,398.9	206.8	1.7	-80.47	-1,050.6	-8,811.3	2,255.1	2,049.3	205.82	10.957	
14,074.8	6,701.9	6,400.0	6,398.9	208.9	1.7	-80.47	-1,050.6	-8,811.3	2,203.5	1,995.6	207.88	10.599	
14,100.0	6,701.8	6,400.0	6,398.9	209.6	1.7	-80.47	-1,050.6	-8,811.3	2,186.4	1,977.8	208.58	10.482	
14,173.2	6,701.7	6,400.0	6,398.9	211.6	1.7	-80.47	-1,050.6	-8,811.3	2,137.6	1,927.0	210.61	10.150	
14,200.0	6,701.6	6,400.0	6,398.9	212.4	1.7	-80.47	-1,050.6	-8,811.3	2,120.1	1,908.8	211.35	10.032	
14,271.6	6,701.5	6,400.0	6,398.9	214.4	1.7	-80.47	-1,050.6	-8,811.3	2,074.4	1,861.1	213.33	9.724	
14,300.0	6,701.4	6,400.0	6,398.9	215.2	1.7	-80.47	-1,050.6	-8,811.3	2,056.7	1,842.5	214.11	9.605	
14,370.0	6,701.3	6,400.0	6,398.9	217.1	1.7	-80.47	-1,050.6	-8,811.3	2,014.0	1,797.9	216.05	9.322	
14,400.0	6,701.3	6,400.0	6,398.9	218.0	1.7	-80.47	-1,050.6	-8,811.3	1,996.2	1,779.3	216.88	9.204	
14,468.5	6,701.1	6,400.0	6,398.9	219.9	1.7	-80.47	-1,050.6	-8,811.3	1,956.6	1,737.8	218.78	8.944	
14,500.0	6,701.1	6,400.0	6,398.9	220.8	1.7	-80.47	-1,050.6	-8,811.3	1,939.0	1,719.3	219.65	8.828	
14,566.9	6,701.0	6,400.0	6,398.9	222.6	1.7	-80.47	-1,050.6	-8,811.3	1,902.6	1,681.2	221.50	8.590	
14,600.0	6,700.9	6,400.0	6,398.9	223.6	1.7	-80.47	-1,050.6	-8,811.3	1,885.3	1,662.9	222.41	8.477	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT PJ #2 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,665.3	6,700.8	6,400.0	6,398.9	225.4	1.7	-80.47	-1,050.6	-8,811.3	1,852.3	1,628.1	224.22	8.261	
14,700.0	6,700.7	6,400.0	6,398.9	226.4	1.7	-80.47	-1,050.6	-8,811.3	1,835.5	1,610.4	225.18	8.151	
14,763.7	6,700.6	6,400.0	6,398.9	228.2	1.7	-80.47	-1,050.6	-8,811.3	1,806.0	1,579.0	226.95	7.958	
14,800.0	6,700.5	6,400.0	6,398.9	229.2	1.7	-80.47	-1,050.6	-8,811.3	1,790.0	1,562.0	227.95	7.853	
14,862.2	6,700.4	6,400.0	6,398.9	230.9	1.7	-80.47	-1,050.6	-8,811.3	1,763.9	1,534.3	229.67	7.680	
14,900.0	6,700.3	6,400.0	6,398.9	232.0	1.7	-80.47	-1,050.6	-8,811.3	1,749.0	1,518.3	230.72	7.581	
14,960.6	6,700.2	6,400.0	6,398.9	233.7	1.7	-80.47	-1,050.6	-8,811.3	1,726.5	1,494.1	232.39	7.429	
15,000.0	6,700.2	6,400.0	6,398.9	234.8	1.7	-80.47	-1,050.6	-8,811.3	1,712.8	1,479.3	233.48	7.336	
15,059.0	6,700.0	6,400.0	6,398.9	236.4	1.7	-80.47	-1,050.6	-8,811.3	1,693.9	1,458.8	235.12	7.204	
15,082.8	6,700.0	6,400.0	6,398.9	237.1	1.7	-80.47	-1,050.6	-8,811.3	1,686.8	1,451.0	235.78	7.154 CC, ES, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-86.56	582.2	-9,674.8	9,692.3				
98.4	98.4	81.4	81.4	0.1	0.0	-86.56	582.2	-9,674.8	9,692.3				
100.0	100.0	83.0	83.0	0.1	0.0	-86.56	582.2	-9,674.8	9,692.3	9,692.2	0.10	N/A	
196.8	196.8	179.8	179.8	0.3	1.0	-86.56	582.2	-9,674.8	9,692.3	9,691.0	1.30	7,431.988	
200.0	200.0	183.0	183.0	0.3	1.0	-86.56	582.2	-9,674.8	9,692.3	9,690.9	1.35	7,178.337	
295.3	295.3	278.3	278.3	0.5	3.0	-86.56	582.2	-9,674.8	9,692.3	9,688.7	3.56	2,722.378	
300.0	300.0	283.0	283.0	0.5	3.1	-86.56	582.2	-9,674.8	9,692.3	9,688.6	3.68	2,634.760	
393.7	393.7	376.7	376.7	0.8	5.1	-86.56	582.2	-9,674.8	9,692.3	9,686.4	5.87	1,651.022	
400.0	400.0	383.0	383.0	0.8	5.2	-86.56	582.2	-9,674.8	9,692.3	9,686.3	6.02	1,611.212	
492.1	492.1	475.1	475.1	1.0	7.1	-86.56	582.2	-9,674.8	9,692.3	9,684.2	8.11	1,195.130	
500.0	500.0	483.0	483.0	1.0	7.3	-86.56	582.2	-9,674.8	9,692.3	9,684.0	8.29	1,169.390	
590.5	590.5	573.5	573.5	1.2	9.1	-86.56	582.2	-9,674.8	9,692.3	9,682.0	10.33	938.147	
600.0	600.0	583.0	583.0	1.2	9.3	-86.56	582.2	-9,674.8	9,692.3	9,681.8	10.54	919.198	
689.0	689.0	672.0	672.0	1.4	11.1	-86.56	582.2	-9,674.8	9,692.3	9,679.7	12.55	772.598	
700.0	700.0	683.0	683.0	1.4	11.3	-86.56	582.2	-9,674.8	9,692.3	9,679.5	12.79	757.633	
787.4	787.4	770.4	770.4	1.6	13.1	-86.56	582.2	-9,674.8	9,692.3	9,677.5	14.75	656.893	
800.0	800.0	783.0	783.0	1.7	13.4	-86.56	582.2	-9,674.8	9,692.3	9,677.3	15.04	644.542	
885.8	885.8	868.8	868.8	1.9	15.1	-86.56	582.2	-9,674.8	9,692.3	9,675.3	16.96	571.413	
900.0	900.0	883.0	883.0	1.9	15.4	-86.56	582.2	-9,674.8	9,692.3	9,675.0	17.28	560.905	
984.2	984.2	967.2	967.2	2.1	17.1	-86.56	582.2	-9,674.8	9,692.3	9,673.1	19.17	505.660	
1,000.0	1,000.0	983.0	983.0	2.1	17.4	-86.56	582.2	-9,674.8	9,692.3	9,672.8	19.52	496.519	
1,082.7	1,082.7	1,065.7	1,065.7	2.3	19.1	-86.56	582.2	-9,674.8	9,692.3	9,670.9	21.37	453.501	
1,100.0	1,100.0	1,083.0	1,083.0	2.3	19.4	-86.56	582.2	-9,674.8	9,692.3	9,670.5	21.76	445.414	
1,181.1	1,181.1	1,164.1	1,164.1	2.5	21.0	-115.28	582.2	-9,674.8	9,692.8	9,669.2	23.57	411.198	
1,200.0	1,200.0	1,183.0	1,183.0	2.6	21.4	-115.28	582.2	-9,674.8	9,693.0	9,669.0	23.99	403.985	
1,279.5	1,279.4	1,262.4	1,262.4	2.7	23.0	-115.27	582.2	-9,674.8	9,694.7	9,668.9	25.76	376.312	
1,300.0	1,299.8	1,282.8	1,282.8	2.8	23.4	-115.27	582.2	-9,674.8	9,695.3	9,669.1	26.22	369.815	
1,377.9	1,377.5	1,360.5	1,360.5	3.0	25.0	-115.25	582.2	-9,674.8	9,698.1	9,670.1	27.94	347.044	
1,400.0	1,399.5	1,382.5	1,382.5	3.0	25.4	-115.25	582.2	-9,674.8	9,699.0	9,670.6	28.43	341.130	
1,476.4	1,475.3	1,458.3	1,458.3	3.2	27.0	-115.22	582.2	-9,674.8	9,702.9	9,672.7	30.12	322.117	
1,500.0	1,498.7	1,481.7	1,481.7	3.3	27.4	-115.22	582.2	-9,674.8	9,704.2	9,673.6	30.64	316.688	
1,574.8	1,572.6	1,555.6	1,555.6	3.5	28.9	-115.19	582.2	-9,674.8	9,709.1	9,676.8	32.30	300.605	
1,600.0	1,597.5	1,580.5	1,580.5	3.5	29.4	-115.18	582.2	-9,674.8	9,711.0	9,678.1	32.85	295.581	
1,673.2	1,669.4	1,652.4	1,652.4	3.7	30.9	-115.14	582.2	-9,674.8	9,716.8	9,682.4	34.48	281.822	
1,700.1	1,695.8	1,678.8	1,678.8	3.8	31.4	-115.13	582.2	-9,674.8	9,719.2	9,684.1	35.07	277.114	
1,771.6	1,765.7	1,748.7	1,748.7	4.1	32.8	-115.21	582.2	-9,674.8	9,725.6	9,689.0	36.70	265.024	
1,800.0	1,793.4	1,776.4	1,776.4	4.2	33.4	-115.24	582.2	-9,674.8	9,728.2	9,690.9	37.34	260.521	
1,870.1	1,862.0	1,845.0	1,845.0	4.4	34.8	-115.31	582.2	-9,674.8	9,734.5	9,695.6	38.95	249.954	
1,900.0	1,891.3	1,874.3	1,874.3	4.5	35.3	-115.35	582.2	-9,674.8	9,737.3	9,697.6	39.63	245.703	
1,968.5	1,958.3	1,941.3	1,941.3	4.8	36.7	-115.42	582.2	-9,674.8	9,743.5	9,702.3	41.21	236.450	
2,000.0	1,989.1	1,972.1	1,972.1	4.9	37.3	-115.45	582.2	-9,674.8	9,746.3	9,704.4	41.93	232.429	
2,066.9	2,054.5	2,037.5	2,037.5	5.1	38.6	-115.53	582.2	-9,674.8	9,752.4	9,709.0	43.48	224.296	
2,100.0	2,086.9	2,069.9	2,069.9	5.3	39.3	-115.56	582.2	-9,674.8	9,755.5	9,711.2	44.25	220.486	
2,165.3	2,150.8	2,133.8	2,133.8	5.5	40.6	-115.63	582.2	-9,674.8	9,761.4	9,715.7	45.76	213.308	
2,200.0	2,184.7	2,167.7	2,167.7	5.6	41.2	-115.67	582.2	-9,674.8	9,764.6	9,718.0	46.57	209.692	
2,263.8	2,247.1	2,230.1	2,230.1	5.9	42.5	-115.74	582.2	-9,674.8	9,770.5	9,722.4	48.05	203.335	
2,300.0	2,282.5	2,265.5	2,265.5	6.0	43.2	-115.78	582.2	-9,674.8	9,773.8	9,724.9	48.89	199.896	
2,362.2	2,343.3	2,326.3	2,326.3	6.3	44.4	-115.85	582.2	-9,674.8	9,779.5	9,729.2	50.35	194.248	
2,400.0	2,380.3	2,363.3	2,363.3	6.5	45.2	-115.89	582.2	-9,674.8	9,783.0	9,731.8	51.23	190.972	
2,460.6	2,439.6	2,422.6	2,422.6	6.7	46.4	-115.95	582.2	-9,674.8	9,788.6	9,736.0	52.64	185.937	
2,500.0	2,478.1	2,461.1	2,461.1	6.9	47.1	-115.99	582.2	-9,674.8	9,792.3	9,738.7	53.57	182.811	
2,559.0	2,535.9	2,518.9	2,518.9	7.1	48.3	-116.06	582.2	-9,674.8	9,797.8	9,742.8	54.95	178.311	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,558.9	2,558.9	7.3	49.1	-116.10	582.2	-9,674.8	9,801.6	9,745.7	55.91	175.321	
2,657.5	2,632.2	2,615.2	2,615.2	7.5	50.2	-116.16	582.2	-9,674.8	9,806.9	9,749.7	57.25	171.289	
2,700.0	2,673.8	2,656.8	2,656.8	7.7	51.1	-116.21	582.2	-9,674.8	9,810.9	9,752.7	58.25	168.427	
2,755.9	2,728.4	2,711.4	2,711.4	7.9	52.2	-116.27	582.2	-9,674.8	9,816.1	9,756.6	59.56	164.805	
2,800.0	2,771.6	2,754.6	2,754.6	8.1	53.1	-116.32	582.2	-9,674.8	9,820.3	9,759.7	60.60	162.059	
2,854.3	2,824.7	2,807.7	2,807.7	8.3	54.1	-116.37	582.2	-9,674.8	9,825.4	9,763.5	61.87	158.800	
2,900.0	2,869.4	2,852.4	2,852.4	8.5	55.0	-116.42	582.2	-9,674.8	9,829.7	9,766.7	62.95	156.163	
2,952.7	2,921.0	2,904.0	2,904.0	8.8	56.1	-116.48	582.2	-9,674.8	9,834.6	9,770.5	64.18	153.224	
3,000.0	2,967.2	2,950.2	2,950.2	9.0	57.0	-116.53	582.2	-9,674.8	9,839.1	9,773.8	65.30	150.687	
3,051.2	3,017.3	3,000.3	3,000.3	9.2	58.0	-116.58	582.2	-9,674.8	9,844.0	9,777.5	66.50	148.033	
3,100.0	3,065.0	3,048.0	3,048.0	9.4	59.0	-116.63	582.2	-9,674.8	9,848.6	9,780.9	67.65	145.590	
3,149.6	3,113.5	3,096.5	3,096.5	9.6	59.9	-116.69	582.2	-9,674.8	9,853.3	9,784.5	68.81	143.189	
3,200.0	3,162.8	3,145.8	3,145.8	9.8	60.9	-116.74	582.2	-9,674.8	9,858.1	9,788.1	70.00	140.833	
3,248.0	3,209.8	3,192.8	3,192.8	10.0	61.9	-116.79	582.2	-9,674.8	9,862.7	9,791.5	71.13	138.660	
3,300.0	3,260.6	3,243.6	3,243.6	10.2	62.9	-116.85	582.2	-9,674.8	9,867.6	9,795.3	72.35	136.384	
3,346.4	3,306.1	3,289.1	3,289.1	10.5	63.8	-116.90	582.2	-9,674.8	9,872.1	9,798.6	73.44	134.414	
3,400.0	3,358.5	3,341.5	3,341.5	10.7	64.9	-116.95	582.2	-9,674.8	9,877.2	9,802.5	74.71	132.215	
3,444.9	3,402.3	3,385.3	3,385.3	10.9	65.7	-117.00	582.2	-9,674.8	9,881.5	9,805.7	75.76	130.428	
3,500.0	3,456.3	3,439.3	3,439.3	11.1	66.8	-117.06	582.2	-9,674.8	9,886.8	9,809.8	77.06	128.301	
3,543.3	3,498.6	3,481.6	3,481.6	11.3	67.7	-117.10	582.2	-9,674.8	9,891.0	9,812.9	78.08	126.679	
3,600.0	3,554.1	3,537.1	3,537.1	11.5	68.8	-117.16	582.2	-9,674.8	9,896.5	9,817.0	79.41	124.618	
3,641.7	3,594.9	3,577.9	3,577.9	11.7	69.6	-117.21	582.2	-9,674.8	9,900.5	9,820.1	80.40	123.145	
3,700.0	3,651.9	3,634.9	3,634.9	12.0	70.8	-117.27	582.2	-9,674.8	9,906.1	9,824.4	81.77	121.147	
3,740.1	3,691.2	3,674.2	3,674.2	12.2	71.5	-117.31	582.2	-9,674.8	9,910.0	9,827.3	82.72	119.809	
3,800.0	3,749.7	3,732.7	3,732.7	12.4	72.7	-117.37	582.2	-9,674.8	9,915.8	9,831.7	84.12	117.871	
3,838.6	3,787.4	3,770.4	3,770.4	12.6	73.5	-117.41	582.2	-9,674.8	9,919.6	9,834.6	85.03	116.656	
3,900.0	3,847.5	3,830.5	3,830.5	12.9	74.7	-117.48	582.2	-9,674.8	9,925.6	9,839.1	86.48	114.773	
3,937.0	3,883.7	3,866.7	3,866.7	13.0	75.4	-117.52	582.2	-9,674.8	9,929.2	9,841.9	87.35	113.670	
4,000.0	3,945.3	3,928.3	3,928.3	13.3	76.7	-117.58	582.2	-9,674.8	9,935.4	9,846.5	88.84	111.840	
4,035.4	3,980.0	3,963.0	3,963.0	13.5	77.4	-117.62	582.2	-9,674.8	9,938.8	9,849.2	89.67	110.838	
4,060.0	4,004.0	3,987.0	3,987.0	13.6	77.8	-117.65	582.2	-9,674.8	9,941.3	9,851.0	90.25	110.154	
4,100.0	4,043.2	4,026.2	4,026.2	13.7	78.6	-117.75	582.2	-9,674.8	9,945.1	9,853.8	91.22	109.027	
4,133.8	4,076.5	4,059.5	4,059.5	13.8	79.3	-117.84	582.2	-9,674.8	9,948.1	9,856.1	92.02	108.114	
4,200.0	4,141.6	4,124.6	4,124.6	14.0	80.6	-117.99	582.2	-9,674.8	9,953.4	9,859.9	93.58	106.367	
4,232.3	4,173.5	4,156.5	4,156.5	14.1	81.2	-118.06	582.2	-9,674.8	9,955.8	9,861.5	94.33	105.544	
4,300.0	4,240.6	4,223.6	4,223.6	14.3	82.6	-118.18	582.2	-9,674.8	9,960.2	9,864.3	95.91	103.855	
4,330.7	4,271.1	4,254.1	4,254.1	14.4	83.2	-118.23	582.2	-9,674.8	9,962.0	9,865.4	96.61	103.117	
4,400.0	4,340.0	4,323.0	4,323.0	14.5	84.6	-118.33	582.2	-9,674.8	9,965.4	9,867.2	98.19	101.486	
4,429.1	4,369.0	4,352.0	4,352.0	14.6	85.2	-118.36	582.2	-9,674.8	9,966.5	9,867.7	98.85	100.826	
4,500.0	4,439.7	4,422.7	4,422.7	14.8	86.6	-118.43	582.2	-9,674.8	9,968.8	9,868.4	100.44	99.254	
4,527.5	4,467.2	4,450.2	4,450.2	14.8	87.2	-118.45	582.2	-9,674.8	9,969.5	9,868.5	101.04	98.665	
4,600.0	4,539.7	4,522.7	4,522.7	14.9	88.6	-118.48	582.2	-9,674.8	9,970.7	9,868.0	102.63	97.150	
4,626.0	4,565.6	4,548.6	4,548.6	15.0	89.1	-118.48	582.2	-9,674.8	9,970.9	9,867.7	103.19	96.625	
4,660.2	4,599.8	4,582.8	4,582.8	15.0	89.8	-89.76	582.2	-9,674.8	9,971.0	9,869.2	101.73	98.014	
4,700.0	4,639.6	4,622.6	4,622.6	15.0	90.6	-89.76	582.2	-9,674.8	9,971.0	9,868.4	102.60	97.185	
4,724.4	4,664.0	4,647.0	4,647.0	15.1	91.1	-89.76	582.2	-9,674.8	9,971.0	9,867.8	103.13	96.680	
4,800.0	4,739.6	4,722.6	4,722.6	15.2	92.6	-89.76	582.2	-9,674.8	9,971.0	9,866.2	104.79	95.149	
4,822.8	4,762.5	4,745.5	4,745.5	15.2	93.1	-89.76	582.2	-9,674.8	9,971.0	9,865.7	105.30	94.695	
4,900.0	4,839.6	4,822.6	4,822.6	15.3	94.6	-89.76	582.2	-9,674.8	9,971.0	9,864.0	106.99	93.194	
4,921.2	4,860.9	4,843.9	4,843.9	15.4	95.1	-89.76	582.2	-9,674.8	9,971.0	9,863.5	107.46	92.789	
5,000.0	4,939.6	4,922.6	4,922.6	15.5	96.7	-89.76	582.2	-9,674.8	9,971.0	9,861.8	109.19	91.318	
5,019.7	4,959.3	4,942.3	4,942.3	15.5	97.1	-89.76	582.2	-9,674.8	9,971.0	9,861.4	109.62	90.957	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,022.6	5,022.6	15.6	98.7	-89.76	582.2	-9,674.8	9,971.0	9,859.6	111.39	89.514	
5,118.1	5,057.7	5,040.7	5,040.7	15.7	99.0	-89.76	582.2	-9,674.8	9,971.0	9,859.2	111.79	89.195	
5,200.0	5,139.6	5,122.6	5,122.6	15.8	100.7	-89.76	582.2	-9,674.8	9,971.0	9,857.4	113.59	87.780	
5,216.5	5,156.2	5,139.2	5,139.2	15.8	101.0	-89.76	582.2	-9,674.8	9,971.0	9,857.0	113.95	87.500	
5,300.0	5,239.6	5,222.6	5,222.6	15.9	102.7	-89.76	582.2	-9,674.8	9,971.0	9,855.2	115.79	86.111	
5,314.9	5,254.6	5,237.6	5,237.6	16.0	103.0	-89.76	582.2	-9,674.8	9,971.0	9,854.9	116.12	85.866	
5,400.0	5,339.6	5,322.6	5,322.6	16.1	104.7	-89.76	582.2	-9,674.8	9,971.0	9,853.0	118.00	84.503	
5,413.4	5,353.0	5,336.0	5,336.0	16.1	105.0	-89.76	582.2	-9,674.8	9,971.0	9,852.7	118.29	84.292	
5,500.0	5,439.6	5,422.6	5,422.6	16.3	106.7	-89.76	582.2	-9,674.8	9,971.0	9,850.8	120.20	82.953	
5,511.8	5,451.4	5,434.4	5,434.4	16.3	106.9	-89.76	582.2	-9,674.8	9,971.0	9,850.5	120.46	82.774	
5,600.0	5,539.6	5,522.6	5,522.6	16.4	108.7	-89.76	582.2	-9,674.8	9,971.0	9,848.6	122.40	81.459	
5,610.2	5,549.9	5,532.9	5,532.9	16.4	108.9	-89.76	582.2	-9,674.8	9,971.0	9,848.3	122.63	81.309	
5,700.0	5,639.6	5,622.6	5,622.6	16.6	110.7	-89.76	582.2	-9,674.8	9,971.0	9,846.4	124.61	80.017	
5,708.6	5,648.3	5,631.3	5,631.3	16.6	110.9	-89.76	582.2	-9,674.8	9,971.0	9,846.2	124.80	79.894	
5,800.0	5,739.6	5,722.6	5,722.6	16.7	112.7	-89.76	582.2	-9,674.8	9,971.0	9,844.2	126.82	78.624	
5,807.1	5,746.7	5,729.7	5,729.7	16.8	112.9	-89.76	582.2	-9,674.8	9,971.0	9,844.0	126.97	78.528	
5,900.0	5,839.6	5,822.6	5,822.6	16.9	114.8	-89.76	582.2	-9,674.8	9,971.0	9,842.0	129.03	77.279	
5,905.5	5,845.1	5,828.1	5,828.1	16.9	114.9	-89.76	582.2	-9,674.8	9,971.0	9,841.8	129.15	77.206	
6,000.0	5,939.6	5,922.6	5,922.6	17.1	116.8	-89.76	582.2	-9,674.8	9,971.0	9,839.7	131.23	75.979	
6,003.9	5,943.6	5,926.6	5,926.6	17.1	116.8	-89.76	582.2	-9,674.8	9,971.0	9,839.7	131.32	75.928	
6,059.2	5,998.8	5,981.8	5,981.8	17.2	118.0	-89.76	582.2	-9,674.8	9,971.0	9,838.4	132.54	75.229	
6,100.0	6,039.6	6,022.6	6,022.6	17.2	118.8	0.24	582.2	-9,674.8	9,969.8	9,834.8	134.98	73.864	
6,102.3	6,042.0	6,025.0	6,025.0	17.2	118.8	0.24	582.2	-9,674.8	9,969.7	9,834.7	135.00	73.850	
6,150.0	6,089.4	6,072.4	6,072.4	17.3	119.8	0.24	582.2	-9,674.8	9,965.2	9,830.1	135.16	73.730	
6,200.0	6,138.7	6,121.7	6,121.7	17.3	120.8	0.25	582.2	-9,674.8	9,957.2	9,822.5	134.67	73.940	
6,200.8	6,139.5	6,122.5	6,122.5	17.3	120.8	0.25	582.2	-9,674.8	9,957.0	9,822.4	134.65	73.946	
6,250.0	6,187.4	6,170.4	6,170.4	17.3	121.7	0.25	582.2	-9,674.8	9,945.7	9,812.2	133.49	74.506	
6,299.2	6,234.4	6,217.4	6,217.4	17.4	122.7	0.26	582.2	-9,674.8	9,931.1	9,799.5	131.66	75.433	
6,300.0	6,235.1	6,218.1	6,218.1	17.4	122.7	0.26	582.2	-9,674.8	9,930.9	9,799.2	131.62	75.451	
6,350.0	6,281.7	6,264.7	6,264.7	17.4	123.6	0.26	582.2	-9,674.8	9,912.7	9,783.7	129.06	76.808	
6,397.6	6,324.8	6,307.8	6,307.8	17.3	124.5	0.27	582.2	-9,674.8	9,892.5	9,766.5	125.98	78.525	
6,400.0	6,326.9	6,309.9	6,309.9	17.3	124.6	0.27	582.2	-9,674.8	9,891.4	9,765.6	125.81	78.622	
6,450.0	6,370.5	6,353.5	6,353.5	17.3	125.4	0.29	582.2	-9,674.8	9,867.0	9,745.1	121.88	80.955	
6,496.0	6,409.1	6,392.1	6,392.1	17.3	126.2	0.30	582.2	-9,674.8	9,841.8	9,724.1	117.68	83.634	
6,500.0	6,412.3	6,395.3	6,395.3	17.3	126.3	0.30	582.2	-9,674.8	9,839.5	9,722.2	117.29	83.890	
6,550.0	6,452.1	6,435.1	6,435.1	17.3	127.1	0.32	582.2	-9,674.8	9,809.3	9,697.2	112.06	87.537	
6,594.5	6,485.6	6,468.6	6,468.6	17.3	127.7	0.34	582.2	-9,674.8	9,780.1	9,673.2	106.89	91.499	
6,600.0	6,489.7	6,472.7	6,472.7	17.3	127.8	0.34	582.2	-9,674.8	9,776.3	9,670.1	106.21	92.045	
6,650.0	6,524.9	6,507.9	6,507.9	17.2	128.5	0.36	582.2	-9,674.8	9,740.8	9,641.0	99.79	97.617	
6,692.9	6,553.0	6,536.0	6,536.0	17.2	129.1	0.39	582.2	-9,674.8	9,708.4	9,614.6	93.84	103.456	
6,700.0	6,557.5	6,540.5	6,540.5	17.2	129.2	0.40	582.2	-9,674.8	9,702.9	9,610.1	92.82	104.534	
6,750.0	6,587.4	6,570.4	6,570.4	17.2	129.8	0.44	582.2	-9,674.8	9,662.8	9,577.5	85.36	113.195	
6,791.3	6,609.9	6,592.9	6,592.9	17.2	130.2	0.48	582.2	-9,674.8	9,628.2	9,549.3	78.87	122.074	
6,800.0	6,614.4	6,597.4	6,597.4	17.2	130.3	0.49	582.2	-9,674.8	9,620.8	9,543.3	77.47	124.181	
6,850.0	6,638.4	6,621.4	6,621.4	17.2	130.8	0.56	582.2	-9,674.8	9,576.9	9,507.7	69.21	138.367	
6,889.7	6,655.3	6,638.3	6,638.3	17.4	131.2	0.63	582.2	-9,674.8	9,541.0	9,478.5	62.43	152.816	
6,900.0	6,659.4	6,642.4	6,642.4	17.5	131.2	0.65	582.2	-9,674.8	9,531.5	9,470.9	60.66	157.132	
6,950.0	6,677.1	6,660.1	6,660.1	18.0	131.6	0.79	582.2	-9,674.8	9,484.8	9,432.9	51.90	182.749	
6,988.2	6,688.4	6,671.4	6,671.4	18.5	131.8	0.94	582.2	-9,674.8	9,448.3	9,403.2	45.15	209.279	
7,000.0	6,691.5	6,674.5	6,674.5	18.7	131.9	1.00	582.2	-9,674.8	9,436.9	9,393.9	43.05	219.189	
7,050.0	6,702.5	6,685.5	6,685.5	19.5	132.1	1.38	582.2	-9,674.8	9,388.2	9,353.8	34.32	273.563	
7,086.6	6,708.4	6,691.4	6,691.4	20.1	132.2	1.90	582.2	-9,674.8	9,352.0	9,323.7	28.30	330.479	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	6,693.1	6,693.1	20.4	132.3	2.20	582.2	-9,674.8	9,338.8	9,312.4	26.32	354.842	
7,150.0	6,714.2	6,697.2	6,697.2	21.3	132.3	5.42	582.2	-9,674.8	9,288.9	9,264.3	24.68	376.417	
7,185.0	6,715.0	6,698.0	6,698.0	21.9	132.4	104.87	582.2	-9,674.8	9,253.9	9,105.4	148.53	62.302	
7,185.6	6,715.0	6,698.0	6,698.0	21.9	132.4	113.26	582.2	-9,674.8	9,253.4	9,112.2	141.15	65.558	
7,200.0	6,715.0	6,698.0	6,698.0	22.2	132.4	113.22	582.2	-9,674.8	9,238.9	9,097.5	141.44	65.322	
7,283.4	6,714.8	6,697.8	6,697.8	23.9	132.4	113.04	582.2	-9,674.8	9,155.5	9,012.3	143.18	63.942	
7,300.0	6,714.8	6,697.8	6,697.8	24.2	132.4	112.98	582.2	-9,674.8	9,138.9	8,995.4	143.55	63.665	
7,381.9	6,714.6	6,697.6	6,697.6	26.0	132.4	112.80	582.2	-9,674.8	9,057.1	8,911.7	145.37	62.302	
7,400.0	6,714.6	6,697.6	6,697.6	26.4	132.3	112.74	582.2	-9,674.8	9,038.9	8,893.2	145.79	61.998	
7,480.3	6,714.4	6,697.4	6,697.4	28.2	132.3	112.56	582.2	-9,674.8	8,958.6	8,811.0	147.68	60.664	
7,500.0	6,714.4	6,697.4	6,697.4	28.7	132.3	112.50	582.2	-9,674.8	8,938.9	8,790.8	148.15	60.336	
7,578.7	6,714.2	6,697.2	6,697.2	30.5	132.3	112.33	582.2	-9,674.8	8,860.2	8,710.2	150.07	59.041	
7,600.0	6,714.2	6,697.2	6,697.2	31.0	132.3	112.26	582.2	-9,674.8	8,839.0	8,688.3	150.60	58.691	
7,677.1	6,714.0	6,697.0	6,697.0	32.9	132.3	112.09	582.2	-9,674.8	8,761.8	8,609.3	152.54	57.441	
7,700.0	6,714.0	6,697.0	6,697.0	33.4	132.3	112.02	582.2	-9,674.8	8,739.0	8,585.8	153.12	57.072	
7,775.6	6,713.9	6,696.9	6,696.9	35.3	132.3	111.85	582.2	-9,674.8	8,663.4	8,508.3	155.06	55.871	
7,800.0	6,713.8	6,696.8	6,696.8	35.9	132.3	111.78	582.2	-9,674.8	8,639.0	8,483.3	155.70	55.484	
7,874.0	6,713.7	6,696.7	6,696.7	37.8	132.3	111.61	582.2	-9,674.8	8,565.0	8,407.3	157.63	54.335	
7,900.0	6,713.6	6,696.6	6,696.6	38.4	132.3	111.54	582.2	-9,674.8	8,539.0	8,380.6	158.33	53.933	
7,972.4	6,713.5	6,696.5	6,696.5	40.3	132.3	111.37	582.2	-9,674.8	8,466.5	8,306.3	160.25	52.835	
8,000.0	6,713.4	6,696.4	6,696.4	41.0	132.3	111.30	582.2	-9,674.8	8,439.0	8,278.0	160.99	52.419	
8,070.8	6,713.3	6,696.3	6,696.3	42.8	132.3	111.13	582.2	-9,674.8	8,368.1	8,205.2	162.89	51.372	
8,100.0	6,713.2	6,696.2	6,696.2	43.6	132.3	111.05	582.2	-9,674.8	8,339.0	8,175.3	163.69	50.944	
8,169.3	6,713.1	6,696.1	6,696.1	45.4	132.3	110.89	582.2	-9,674.8	8,269.7	8,104.1	165.57	49.947	
8,200.0	6,713.0	6,696.0	6,696.0	46.2	132.3	110.81	582.2	-9,674.8	8,239.0	8,072.5	166.42	49.508	
8,267.7	6,712.9	6,695.9	6,695.9	48.0	132.3	110.65	582.2	-9,674.8	8,171.3	8,003.0	168.27	48.561	
8,300.0	6,712.8	6,695.8	6,695.8	48.8	132.3	110.56	582.2	-9,674.8	8,139.0	7,969.8	169.17	48.112	
8,366.1	6,712.7	6,695.7	6,695.7	50.6	132.3	110.41	582.2	-9,674.8	8,072.8	7,901.8	170.99	47.212	
8,400.0	6,712.6	6,695.6	6,695.6	51.5	132.3	110.32	582.2	-9,674.8	8,039.0	7,867.0	171.94	46.754	
8,464.5	6,712.5	6,695.5	6,695.5	53.2	132.3	110.17	582.2	-9,674.8	7,974.4	7,800.7	173.73	45.900	
8,500.0	6,712.4	6,695.4	6,695.4	54.1	132.3	110.08	582.2	-9,674.8	7,939.0	7,764.2	174.73	45.435	
8,563.0	6,712.3	6,695.3	6,695.3	55.8	132.3	109.93	582.2	-9,674.8	7,876.0	7,699.5	176.49	44.625	
8,600.0	6,712.3	6,695.3	6,695.3	56.8	132.3	109.83	582.2	-9,674.8	7,839.0	7,661.4	177.54	44.153	
8,661.4	6,712.1	6,695.1	6,695.1	58.5	132.3	109.69	582.2	-9,674.8	7,777.6	7,598.3	179.27	43.386	
8,700.0	6,712.1	6,695.1	6,695.1	59.5	132.3	109.58	582.2	-9,674.8	7,739.0	7,558.6	180.37	42.907	
8,759.8	6,711.9	6,694.9	6,694.9	61.1	132.3	109.44	582.2	-9,674.8	7,679.1	7,497.1	182.05	42.181	
8,800.0	6,711.9	6,694.9	6,694.9	62.2	132.3	109.34	582.2	-9,674.8	7,639.0	7,455.8	183.20	41.697	
8,858.2	6,711.8	6,694.8	6,694.8	63.8	132.3	109.20	582.2	-9,674.8	7,580.7	7,395.9	184.85	41.009	
8,900.0	6,711.7	6,694.7	6,694.7	64.9	132.3	109.09	582.2	-9,674.8	7,539.0	7,352.9	186.05	40.521	
8,956.7	6,711.6	6,694.6	6,694.6	66.5	132.3	108.96	582.2	-9,674.8	7,482.3	7,294.6	187.67	39.870	
9,000.0	6,711.5	6,694.5	6,694.5	67.6	132.3	108.84	582.2	-9,674.8	7,439.0	7,250.1	188.91	39.378	
9,055.1	6,711.4	6,694.4	6,694.4	69.1	132.3	108.71	582.2	-9,674.8	7,383.9	7,193.4	190.49	38.763	
9,100.0	6,711.3	6,694.3	6,694.3	70.4	132.3	108.60	582.2	-9,674.8	7,339.0	7,147.2	191.78	38.267	
9,153.5	6,711.2	6,694.2	6,694.2	71.8	132.3	108.47	582.2	-9,674.8	7,285.4	7,092.1	193.32	37.686	
9,200.0	6,711.1	6,694.1	6,694.1	73.1	132.3	108.35	582.2	-9,674.8	7,239.0	7,044.3	194.66	37.187	
9,251.9	6,711.0	6,694.0	6,694.0	74.5	132.3	108.22	582.2	-9,674.8	7,187.0	6,990.9	196.16	36.639	
9,300.0	6,710.9	6,693.9	6,693.9	75.8	132.3	108.10	582.2	-9,674.8	7,139.0	6,941.4	197.55	36.137	
9,350.4	6,710.8	6,693.8	6,693.8	77.2	132.3	107.98	582.2	-9,674.8	7,088.6	6,889.6	199.01	35.620	
9,400.0	6,710.7	6,693.7	6,693.7	78.6	132.3	107.85	582.2	-9,674.8	7,039.0	6,838.5	200.45	35.116	
9,448.8	6,710.6	6,693.6	6,693.6	79.9	132.3	107.73	582.2	-9,674.8	6,990.2	6,788.3	201.86	34.628	
9,500.0	6,710.5	6,693.5	6,693.5	81.3	132.3	107.60	582.2	-9,674.8	6,939.0	6,735.6	203.36	34.122	
9,547.2	6,710.4	6,693.4	6,693.4	82.6	132.3	107.49	582.2	-9,674.8	6,891.8	6,687.0	204.73	33.663	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,600.0	6,710.3	6,693.3	6,693.3	84.1	132.3	107.35	582.2	-9,674.8	6,839.0	6,632.7	206.27	33.156	
9,645.6	6,710.2	6,693.2	6,693.2	85.3	132.3	107.24	582.2	-9,674.8	6,793.3	6,585.7	207.60	32.724	
9,700.0	6,710.1	6,693.1	6,693.1	86.8	132.3	107.10	582.2	-9,674.8	6,739.0	6,529.8	209.19	32.215	
9,744.1	6,710.0	6,693.0	6,693.0	88.1	132.3	107.00	582.2	-9,674.8	6,694.9	6,484.4	210.47	31.809	
9,800.0	6,709.9	6,692.9	6,692.9	89.6	132.3	106.85	582.2	-9,674.8	6,639.0	6,426.9	212.11	31.299	
9,842.5	6,709.9	6,692.9	6,692.9	90.8	132.3	106.75	582.2	-9,674.8	6,596.5	6,383.1	213.35	30.918	
9,900.0	6,709.7	6,692.7	6,692.7	92.4	132.3	106.60	582.2	-9,674.8	6,539.0	6,323.9	215.04	30.408	
9,940.9	6,709.7	6,692.7	6,692.7	93.5	132.3	106.50	582.2	-9,674.8	6,498.1	6,281.8	216.24	30.050	
10,000.0	6,709.6	6,692.6	6,692.6	95.1	132.2	106.35	582.2	-9,674.8	6,439.0	6,221.0	217.98	29.539	
10,039.3	6,709.5	6,692.5	6,692.5	96.2	132.2	106.26	582.2	-9,674.8	6,399.6	6,180.5	219.13	29.205	
10,100.0	6,709.4	6,692.4	6,692.4	97.9	132.2	106.10	582.2	-9,674.8	6,339.0	6,118.1	220.92	28.694	
10,137.8	6,709.3	6,692.3	6,692.3	98.9	132.2	106.01	582.2	-9,674.8	6,301.2	6,079.2	222.03	28.380	
10,200.0	6,709.2	6,692.2	6,692.2	100.7	132.2	105.85	582.2	-9,674.8	6,239.0	6,015.1	223.87	27.869	
10,236.2	6,709.1	6,692.1	6,692.1	101.7	132.2	105.76	582.2	-9,674.8	6,202.8	5,977.9	224.93	27.577	
10,300.0	6,709.0	6,692.0	6,692.0	103.4	132.2	105.60	582.2	-9,674.8	6,139.0	5,912.2	226.82	27.066	
10,334.6	6,708.9	6,691.9	6,691.9	104.4	132.2	105.51	582.2	-9,674.8	6,104.4	5,876.5	227.83	26.793	
10,400.0	6,708.8	6,691.8	6,691.8	106.2	132.2	105.34	582.2	-9,674.8	6,039.0	5,809.2	229.77	26.283	
10,433.0	6,708.7	6,691.7	6,691.7	107.1	132.2	105.26	582.2	-9,674.8	6,006.0	5,775.2	230.74	26.029	
10,500.0	6,708.6	6,691.6	6,691.6	109.0	132.2	105.09	582.2	-9,674.8	5,939.0	5,706.3	232.73	25.519	
10,531.5	6,708.5	6,691.5	6,691.5	109.9	132.2	105.01	582.2	-9,674.8	5,907.5	5,673.9	233.65	25.283	
10,600.0	6,708.4	6,691.4	6,691.4	111.8	132.2	104.84	582.2	-9,674.8	5,839.0	5,603.3	235.69	24.774	
10,629.9	6,708.4	6,691.4	6,691.4	112.6	132.2	104.77	582.2	-9,674.8	5,809.1	5,572.5	236.57	24.556	
10,700.0	6,708.2	6,691.2	6,691.2	114.6	132.2	104.58	582.2	-9,674.8	5,739.0	5,500.4	238.65	24.048	
10,728.3	6,708.2	6,691.2	6,691.2	115.3	132.2	104.52	582.2	-9,674.8	5,710.7	5,471.2	239.49	23.845	
10,800.0	6,708.0	6,691.0	6,691.0	117.3	132.2	104.33	582.2	-9,674.8	5,639.0	5,397.4	241.62	23.339	
10,826.7	6,708.0	6,691.0	6,691.0	118.1	132.2	104.27	582.2	-9,674.8	5,612.3	5,369.9	242.41	23.152	
10,900.0	6,707.8	6,690.8	6,690.8	120.1	132.2	104.08	582.2	-9,674.8	5,539.0	5,294.4	244.59	22.646	
10,925.2	6,707.8	6,690.8	6,690.8	120.8	132.2	104.02	582.2	-9,674.8	5,513.8	5,268.5	245.33	22.475	
11,000.0	6,707.6	6,690.6	6,690.6	122.9	132.2	103.82	582.2	-9,674.8	5,439.0	5,191.5	247.56	21.971	
11,023.6	6,707.6	6,690.6	6,690.6	123.6	132.2	103.77	582.2	-9,674.8	5,415.4	5,167.2	248.26	21.814	
11,100.0	6,707.5	6,690.5	6,690.5	125.7	132.2	103.57	582.2	-9,674.8	5,339.0	5,088.5	250.53	21.311	
11,122.0	6,707.4	6,690.4	6,690.4	126.3	132.2	103.52	582.2	-9,674.8	5,317.0	5,065.8	251.18	21.168	
11,200.0	6,707.3	6,690.3	6,690.3	128.5	132.2	103.32	582.2	-9,674.8	5,239.0	4,985.5	253.51	20.666	
11,220.4	6,707.2	6,690.2	6,690.2	129.0	132.2	103.27	582.2	-9,674.8	5,218.6	4,964.5	254.11	20.536	
11,300.0	6,707.1	6,690.1	6,690.1	131.3	132.2	103.06	582.2	-9,674.8	5,139.0	4,882.5	256.48	20.036	
11,318.9	6,707.0	6,690.0	6,690.0	131.8	132.2	103.02	582.2	-9,674.8	5,120.2	4,863.1	257.05	19.919	
11,400.0	6,706.9	6,689.9	6,689.9	134.0	132.2	102.81	582.2	-9,674.8	5,039.0	4,779.6	259.46	19.421	
11,417.3	6,706.9	6,689.9	6,689.9	134.5	132.2	102.77	582.2	-9,674.8	5,021.7	4,761.8	259.98	19.316	
11,500.0	6,706.7	6,689.7	6,689.7	136.8	132.2	102.55	582.2	-9,674.8	4,939.0	4,676.6	262.44	18.819	
11,515.7	6,706.7	6,689.7	6,689.7	137.3	132.2	102.51	582.2	-9,674.8	4,923.3	4,660.4	262.91	18.726	
11,600.0	6,706.5	6,689.5	6,689.5	139.6	132.2	102.30	582.2	-9,674.8	4,839.0	4,573.6	265.42	18.231	
11,614.1	6,706.5	6,689.5	6,689.5	140.0	132.2	102.26	582.2	-9,674.8	4,824.9	4,559.0	265.85	18.149	
11,700.0	6,706.3	6,689.3	6,689.3	142.4	132.2	102.04	582.2	-9,674.8	4,739.0	4,470.6	268.41	17.656	
11,712.6	6,706.3	6,689.3	6,689.3	142.8	132.2	102.01	582.2	-9,674.8	4,726.5	4,457.7	268.78	17.585	
11,800.0	6,706.1	6,689.1	6,689.1	145.2	132.2	101.79	582.2	-9,674.8	4,639.0	4,367.7	271.39	17.094	
11,811.0	6,706.1	6,689.1	6,689.1	145.5	132.2	101.76	582.2	-9,674.8	4,628.0	4,356.3	271.72	17.033	
11,900.0	6,705.9	6,688.9	6,688.9	148.0	132.2	101.53	582.2	-9,674.8	4,539.1	4,264.7	274.37	16.543	
11,909.4	6,705.9	6,688.9	6,688.9	148.3	132.2	101.51	582.2	-9,674.8	4,529.6	4,255.0	274.65	16.492	
12,000.0	6,705.8	6,688.8	6,688.8	150.8	132.2	101.28	582.2	-9,674.8	4,439.1	4,161.7	277.35	16.005	
12,007.8	6,705.7	6,688.7	6,688.7	151.0	132.2	101.26	582.2	-9,674.8	4,431.2	4,153.6	277.59	15.963	
12,100.0	6,705.6	6,688.6	6,688.6	153.6	132.2	101.02	582.2	-9,674.8	4,339.1	4,058.7	280.34	15.478	
12,106.3	6,705.6	6,688.6	6,688.6	153.8	132.2	101.01	582.2	-9,674.8	4,332.8	4,052.3	280.52	15.445	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,200.0	6,705.4	6,688.4	6,688.4	156.4	132.2	100.77	582.2	-9,674.8	4,239.1	3,955.7	283.32	14.962	
12,204.7	6,705.4	6,688.4	6,688.4	156.5	132.2	100.76	582.2	-9,674.8	4,234.4	3,950.9	283.46	14.938	
12,300.0	6,705.2	6,688.2	6,688.2	159.2	132.2	100.51	582.2	-9,674.8	4,139.1	3,852.8	286.30	14.457	
12,303.1	6,705.2	6,688.2	6,688.2	159.3	132.2	100.50	582.2	-9,674.8	4,135.9	3,849.6	286.40	14.441	
12,400.0	6,705.0	6,688.0	6,688.0	162.0	132.2	100.26	582.2	-9,674.8	4,039.1	3,749.8	289.28	13.962	
12,401.5	6,705.0	6,688.0	6,688.0	162.0	132.2	100.25	582.2	-9,674.8	4,037.5	3,748.2	289.33	13.955	
12,500.0	6,704.8	6,687.8	6,687.8	164.8	132.2	100.00	582.2	-9,674.8	3,939.1	3,646.8	292.26	13.478	
12,598.4	6,704.6	6,687.6	6,687.6	167.5	132.1	99.76	582.2	-9,674.8	3,840.7	3,545.5	295.19	13.011	
12,600.0	6,704.6	6,687.6	6,687.6	167.6	132.1	99.74	582.2	-9,674.8	3,839.1	3,543.8	295.24	13.003	
12,696.8	6,704.4	6,687.4	6,687.4	170.3	132.1	99.50	582.2	-9,674.8	3,742.3	3,444.1	298.12	12.553	
12,700.0	6,704.4	6,687.4	6,687.4	170.4	132.1	99.49	582.2	-9,674.8	3,739.1	3,440.9	298.22	12.538	
12,795.2	6,704.3	6,687.3	6,687.3	173.0	132.1	99.25	582.2	-9,674.8	3,643.9	3,342.8	301.05	12.104	
12,800.0	6,704.2	6,687.2	6,687.2	173.2	132.1	99.23	582.2	-9,674.8	3,639.1	3,337.9	301.20	12.082	
12,893.7	6,704.1	6,687.1	6,687.1	175.8	132.1	99.00	582.2	-9,674.8	3,545.4	3,241.5	303.98	11.663	
12,900.0	6,704.1	6,687.1	6,687.1	176.0	132.1	98.98	582.2	-9,674.8	3,539.1	3,234.9	304.18	11.635	
12,992.1	6,703.9	6,686.9	6,686.9	178.5	132.1	98.75	582.2	-9,674.8	3,447.0	3,140.1	306.91	11.231	
13,000.0	6,703.9	6,686.9	6,686.9	178.8	132.1	98.72	582.2	-9,674.8	3,439.1	3,132.0	307.15	11.197	
13,090.5	6,703.7	6,686.7	6,686.7	181.3	132.1	98.50	582.2	-9,674.8	3,348.6	3,038.8	309.84	10.808	
13,100.0	6,703.7	6,686.7	6,686.7	181.6	132.1	98.47	582.2	-9,674.8	3,339.1	3,029.0	310.12	10.767	
13,188.9	6,703.5	6,686.5	6,686.5	184.0	132.1	98.24	582.2	-9,674.8	3,250.2	2,937.4	312.76	10.392	
13,200.0	6,703.5	6,686.5	6,686.5	184.4	132.1	98.21	582.2	-9,674.8	3,239.1	2,926.0	313.09	10.346	
13,287.4	6,703.3	6,686.3	6,686.3	186.8	132.1	97.99	582.2	-9,674.8	3,151.8	2,836.1	315.68	9.984	
13,300.0	6,703.3	6,686.3	6,686.3	187.2	132.1	97.95	582.2	-9,674.8	3,139.1	2,823.1	316.06	9.932	
13,385.8	6,703.2	6,686.2	6,686.2	189.6	132.1	97.74	582.2	-9,674.8	3,053.4	2,734.8	318.60	9.584	
13,400.0	6,703.1	6,686.1	6,686.1	190.0	132.1	97.70	582.2	-9,674.8	3,039.2	2,720.1	319.02	9.526	
13,484.2	6,703.0	6,686.0	6,686.0	192.3	132.1	97.49	582.2	-9,674.8	2,954.9	2,633.4	321.52	9.191	
13,500.0	6,702.9	6,685.9	6,685.9	192.8	132.1	97.44	582.2	-9,674.8	2,939.2	2,617.2	321.99	9.128	
13,582.6	6,702.8	6,685.8	6,685.8	195.1	132.1	97.24	582.2	-9,674.8	2,856.5	2,532.1	324.43	8.805	
13,600.0	6,702.8	6,685.8	6,685.8	195.6	132.1	97.19	582.2	-9,674.8	2,839.2	2,514.2	324.95	8.737	
13,681.1	6,702.6	6,685.6	6,685.6	197.8	132.1	96.98	582.2	-9,674.8	2,758.1	2,430.8	327.34	8.426	
13,700.0	6,702.6	6,685.6	6,685.6	198.4	132.1	96.93	582.2	-9,674.8	2,739.2	2,411.3	327.90	8.354	
13,779.5	6,702.4	6,685.4	6,685.4	200.6	132.1	96.73	582.2	-9,674.8	2,659.7	2,329.4	330.25	8.054	
13,800.0	6,702.4	6,685.4	6,685.4	201.2	132.1	96.68	582.2	-9,674.8	2,639.2	2,308.3	330.86	7.977	
13,877.9	6,702.2	6,685.2	6,685.2	203.3	132.1	96.48	582.2	-9,674.8	2,561.3	2,228.1	333.15	7.688	
13,900.0	6,702.2	6,685.2	6,685.2	204.0	132.1	96.42	582.2	-9,674.8	2,539.2	2,205.4	333.81	7.607	
13,976.3	6,702.1	6,685.1	6,685.1	206.1	132.1	96.23	582.2	-9,674.8	2,462.9	2,126.8	336.05	7.329	
14,000.0	6,702.0	6,685.0	6,685.0	206.8	132.1	96.16	582.2	-9,674.8	2,439.2	2,102.5	336.75	7.243	
14,074.8	6,701.9	6,684.9	6,684.9	208.9	132.1	95.98	582.2	-9,674.8	2,364.5	2,025.5	338.95	6.976	
14,100.0	6,701.8	6,684.8	6,684.8	209.6	132.1	95.91	582.2	-9,674.8	2,339.2	1,999.5	339.70	6.886	
14,173.2	6,701.7	6,684.7	6,684.7	211.6	132.1	95.73	582.2	-9,674.8	2,266.1	1,924.2	341.85	6.629	
14,200.0	6,701.6	6,684.6	6,684.6	212.4	132.1	95.65	582.2	-9,674.8	2,239.3	1,896.6	342.64	6.535	
14,271.6	6,701.5	6,684.5	6,684.5	214.4	132.1	95.47	582.2	-9,674.8	2,167.6	1,822.9	344.74	6.288	
14,300.0	6,701.4	6,684.4	6,684.4	215.2	132.1	95.40	582.2	-9,674.8	2,139.3	1,793.7	345.57	6.191	
14,370.0	6,701.3	6,684.3	6,684.3	217.1	132.1	95.22	582.2	-9,674.8	2,069.2	1,721.6	347.62	5.953	
14,400.0	6,701.3	6,684.3	6,684.3	218.0	132.1	95.14	582.2	-9,674.8	2,039.3	1,690.8	348.50	5.852	
14,468.5	6,701.1	6,684.1	6,684.1	219.9	132.1	94.97	582.2	-9,674.8	1,970.8	1,620.3	350.50	5.623	
14,500.0	6,701.1	6,684.1	6,684.1	220.8	132.1	94.89	582.2	-9,674.8	1,939.3	1,587.9	351.43	5.518	
14,566.9	6,701.0	6,684.0	6,684.0	222.6	132.1	94.72	582.2	-9,674.8	1,872.4	1,519.1	353.38	5.299	
14,600.0	6,700.9	6,683.9	6,683.9	223.6	132.1	94.64	582.2	-9,674.8	1,839.3	1,485.0	354.35	5.191	
14,665.3	6,700.8	6,683.8	6,683.8	225.4	132.1	94.47	582.2	-9,674.8	1,774.0	1,417.8	356.25	4.980	
14,700.0	6,700.7	6,683.7	6,683.7	226.4	132.1	94.38	582.2	-9,674.8	1,739.4	1,382.1	357.27	4.869	
14,763.7	6,700.6	6,683.6	6,683.6	228.2	132.1	94.22	582.2	-9,674.8	1,675.6	1,316.5	359.12	4.666	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT PJ #5 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,800.0	6,700.5	6,683.5	6,683.5	229.2	132.1	94.13	582.2	-9,674.8	1,639.4	1,279.2	360.18	4.552	
14,862.2	6,700.4	6,683.4	6,683.4	230.9	132.1	93.97	582.2	-9,674.8	1,577.2	1,215.3	361.99	4.357	
14,900.0	6,700.3	6,683.3	6,683.3	232.0	132.1	93.87	582.2	-9,674.8	1,539.4	1,176.4	363.09	4.240	
14,960.6	6,700.2	6,683.2	6,683.2	233.7	132.1	93.72	582.2	-9,674.8	1,478.9	1,114.0	364.85	4.053	
15,000.0	6,700.2	6,683.2	6,683.2	234.8	132.1	93.62	582.2	-9,674.8	1,439.5	1,073.5	365.99	3.933	
15,059.0	6,700.0	6,683.0	6,683.0	236.4	132.1	93.47	582.2	-9,674.8	1,380.5	1,012.8	367.70	3.754	
15,082.8	6,700.0	6,683.0	6,683.0	237.1	132.1	93.41	582.2	-9,674.8	1,356.7	988.3	368.39	3.683 CC, ES, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	102.02	-867.1	4,071.5	4,162.8				
98.4	98.4	88.9	88.9	0.1	0.0	102.02	-867.1	4,071.4	4,162.7	4,162.6	0.10	N/A	
100.0	100.0	90.5	90.5	0.1	0.0	102.02	-867.1	4,071.4	4,162.7	4,162.6	0.10	N/A	
181.3	181.3	167.3	167.3	0.3	0.1	102.02	-867.1	4,071.4	4,162.7	4,162.3	0.34	N/A	
196.8	196.8	181.8	181.8	0.3	0.1	102.02	-867.1	4,071.4	4,162.7	4,162.3	0.39	N/A	
200.0	200.0	184.7	184.7	0.3	0.1	102.02	-867.1	4,071.4	4,162.7	4,162.3	0.40	N/A	
295.3	295.3	283.2	283.2	0.5	0.2	102.02	-867.2	4,071.4	4,162.7	4,162.0	0.69	5,999.089	
300.0	300.0	288.2	288.2	0.5	0.2	102.02	-867.2	4,071.4	4,162.7	4,162.0	0.71	5,876.961	
345.0	345.0	331.0	331.0	0.6	0.2	102.02	-867.2	4,071.3	4,162.7	4,161.9	0.82	5,065.760	
393.7	393.7	375.7	375.7	0.8	0.2	102.02	-867.2	4,071.4	4,162.7	4,161.8	0.94	4,448.808	
400.0	400.0	381.5	381.5	0.8	0.2	102.02	-867.2	4,071.4	4,162.7	4,161.8	0.95	4,379.760	
492.1	492.1	477.1	477.1	1.0	0.2	102.02	-866.9	4,071.5	4,162.8	4,161.6	1.22	3,399.368	
500.0	500.0	485.5	485.5	1.0	0.3	102.02	-866.9	4,071.5	4,162.8	4,161.5	1.25	3,331.723	
590.5	590.5	567.9	567.9	1.2	0.3	102.02	-866.6	4,071.7	4,162.9	4,161.4	1.51	2,761.559	
600.0	600.0	576.2	576.2	1.2	0.3	102.02	-866.6	4,071.7	4,162.9	4,161.4	1.53	2,713.997	
689.0	689.0	663.1	663.1	1.4	0.4	102.01	-866.4	4,072.0	4,163.2	4,161.4	1.79	2,327.214	
700.0	700.0	674.3	674.3	1.4	0.4	102.01	-866.4	4,072.0	4,163.2	4,161.4	1.82	2,286.395	
787.4	787.4	760.9	760.9	1.6	0.4	102.01	-866.4	4,072.3	4,163.4	4,161.4	2.07	2,012.453	
800.0	800.0	773.3	773.3	1.7	0.4	102.01	-866.4	4,072.3	4,163.5	4,161.4	2.10	1,978.575	
885.8	885.8	860.9	860.9	1.9	0.5	102.01	-866.3	4,072.6	4,163.7	4,161.4	2.34	1,776.396	
900.0	900.0	875.7	875.6	1.9	0.5	102.01	-866.3	4,072.6	4,163.8	4,161.4	2.38	1,747.010	
984.2	984.2	960.4	960.4	2.1	0.5	102.01	-866.2	4,072.8	4,164.0	4,161.3	2.61	1,594.085	
1,000.0	1,000.0	976.0	976.0	2.1	0.5	102.01	-866.2	4,072.9	4,164.0	4,161.3	2.65	1,568.662	
1,082.7	1,082.7	1,061.9	1,061.9	2.3	0.6	102.01	-866.2	4,073.1	4,164.2	4,161.3	2.87	1,449.216	
1,100.0	1,100.0	1,080.2	1,080.2	2.3	0.6	102.01	-866.2	4,073.1	4,164.2	4,161.3	2.92	1,426.595	
1,181.1	1,181.1	1,159.2	1,159.2	2.5	0.6	73.29	-866.2	4,073.2	4,164.0	4,160.9	3.11	1,339.864	
1,200.0	1,200.0	1,177.2	1,177.2	2.6	0.6	73.31	-866.2	4,073.3	4,163.9	4,160.7	3.15	1,320.699	
1,279.5	1,279.4	1,266.4	1,266.4	2.7	0.6	73.38	-866.4	4,073.4	4,162.9	4,159.5	3.33	1,248.990	
1,300.0	1,299.8	1,290.9	1,290.9	2.8	0.6	73.41	-866.3	4,073.3	4,162.5	4,159.1	3.38	1,232.068	
1,377.9	1,377.5	1,366.7	1,366.6	3.0	0.6	73.53	-866.2	4,073.3	4,160.5	4,156.9	3.57	1,165.523	
1,400.0	1,399.5	1,387.5	1,387.5	3.0	0.6	73.57	-866.2	4,073.3	4,159.9	4,156.2	3.62	1,147.764	
1,476.4	1,475.3	1,458.0	1,458.0	3.2	0.6	73.73	-866.3	4,073.3	4,157.3	4,153.5	3.82	1,089.069	
1,500.0	1,498.7	1,479.7	1,479.7	3.3	0.6	73.79	-866.3	4,073.3	4,156.4	4,152.6	3.88	1,072.078	
1,574.8	1,572.6	1,561.4	1,561.4	3.5	0.6	74.02	-866.5	4,073.3	4,153.3	4,149.2	4.09	1,015.840	
1,600.0	1,597.5	1,590.7	1,590.7	3.5	0.6	74.11	-866.5	4,073.2	4,152.1	4,147.9	4.16	997.779	
1,673.2	1,669.4	1,675.9	1,675.9	3.7	0.7	74.40	-866.6	4,072.9	4,148.1	4,143.7	4.40	942.559	
1,700.1	1,695.8	1,706.3	1,706.3	3.8	0.7	74.51	-866.7	4,072.8	4,146.4	4,141.9	4.49	923.566	
1,771.6	1,765.7	1,779.7	1,779.7	4.1	0.7	74.72	-866.5	4,072.3	4,141.9	4,137.2	4.74	873.935	
1,800.0	1,793.4	1,809.1	1,809.1	4.2	0.7	74.80	-866.4	4,072.1	4,140.2	4,135.3	4.84	855.511	
1,870.1	1,862.0	1,882.7	1,882.7	4.4	0.7	75.00	-866.2	4,071.6	4,135.7	4,130.6	5.10	810.951	
1,900.0	1,891.3	1,911.6	1,911.6	4.5	0.7	75.08	-866.2	4,071.3	4,133.8	4,128.6	5.21	793.332	
1,968.5	1,958.3	1,970.7	1,970.7	4.8	0.7	75.25	-866.0	4,070.9	4,129.6	4,124.1	5.47	754.714	
2,000.0	1,989.1	2,000.0	2,000.0	4.9	0.7	75.33	-865.9	4,070.8	4,127.7	4,122.1	5.59	738.080	
2,066.9	2,054.5	2,072.9	2,072.9	5.1	0.8	75.53	-865.6	4,070.4	4,123.7	4,117.8	5.86	703.466	
2,100.0	2,086.9	2,100.0	2,100.0	5.3	0.8	75.60	-865.5	4,070.2	4,121.7	4,115.7	5.99	687.765	
2,165.3	2,150.8	2,160.5	2,160.5	5.5	0.8	75.77	-865.2	4,069.8	4,117.7	4,111.5	6.26	657.948	
2,200.0	2,184.7	2,188.7	2,188.7	5.6	0.8	75.85	-865.1	4,069.7	4,115.8	4,109.4	6.40	643.221	
2,263.8	2,247.1	2,245.5	2,245.5	5.9	0.8	76.00	-864.8	4,069.5	4,112.2	4,105.6	6.66	617.295	
2,300.0	2,282.5	2,278.6	2,278.6	6.0	0.8	76.10	-864.6	4,069.5	4,110.3	4,103.5	6.81	603.426	
2,362.2	2,343.3	2,337.9	2,337.9	6.3	0.8	76.26	-864.1	4,069.5	4,107.0	4,099.9	7.07	580.572	
2,400.0	2,380.3	2,374.9	2,374.9	6.5	0.9	76.36	-863.8	4,069.5	4,105.0	4,097.8	7.23	567.438	
2,460.6	2,439.6	2,432.4	2,432.4	6.7	0.9	76.51	-863.5	4,069.4	4,101.9	4,094.4	7.49	547.389	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,478.1	2,469.0	2,468.9	6.9	0.9	76.61	-863.2	4,069.5	4,099.9	4,092.2	7.66	535.107	
2,559.0	2,535.9	2,526.3	2,526.3	7.1	0.9	76.77	-862.8	4,069.5	4,096.9	4,089.0	7.92	517.468	
2,600.0	2,575.9	2,568.4	2,568.4	7.3	0.9	76.89	-862.5	4,069.5	4,094.9	4,086.8	8.10	505.842	
2,657.5	2,632.2	2,627.4	2,627.4	7.5	0.9	77.05	-862.0	4,069.5	4,092.0	4,083.7	8.35	490.231	
2,700.0	2,673.8	2,671.0	2,671.0	7.7	0.9	77.17	-861.7	4,069.5	4,089.9	4,081.4	8.53	479.261	
2,755.9	2,728.4	2,726.2	2,726.2	7.9	1.0	77.32	-861.3	4,069.5	4,087.1	4,078.3	8.78	465.488	
2,800.0	2,771.6	2,768.0	2,768.0	8.1	1.0	77.44	-861.0	4,069.4	4,084.9	4,076.0	8.97	455.182	
2,854.3	2,824.7	2,820.0	2,819.9	8.3	1.0	77.58	-860.6	4,069.4	4,082.3	4,073.1	9.21	443.018	
2,900.0	2,869.4	2,864.3	2,864.3	8.5	1.0	77.70	-860.3	4,069.4	4,080.1	4,070.7	9.42	433.266	
2,952.7	2,921.0	2,914.8	2,914.7	8.8	1.0	77.84	-860.0	4,069.4	4,077.7	4,068.0	9.65	422.476	
3,000.0	2,967.2	2,958.4	2,958.4	9.0	1.0	77.96	-859.7	4,069.4	4,075.5	4,065.6	9.86	413.273	
3,051.2	3,017.3	3,006.3	3,006.3	9.2	1.1	78.10	-859.5	4,069.4	4,073.2	4,063.1	10.09	403.693	
3,100.0	3,065.0	3,056.0	3,055.9	9.4	1.1	78.24	-859.3	4,069.4	4,071.0	4,060.7	10.31	394.906	
3,149.6	3,113.5	3,105.8	3,105.8	9.6	1.1	78.38	-859.1	4,069.4	4,068.8	4,058.3	10.53	386.330	
3,200.0	3,162.8	3,151.9	3,151.9	9.8	1.1	78.51	-858.8	4,069.4	4,066.6	4,055.8	10.76	378.041	
3,248.0	3,209.8	3,195.8	3,195.8	10.0	1.1	78.63	-858.6	4,069.5	4,064.5	4,053.6	10.97	370.437	
3,300.0	3,260.6	3,270.3	3,270.2	10.2	1.1	78.84	-858.2	4,069.4	4,062.2	4,051.0	11.21	362.364	
3,346.4	3,306.1	3,300.0	3,300.0	10.5	1.1	78.92	-858.0	4,069.2	4,060.1	4,048.6	11.42	355.661	
3,400.0	3,358.5	3,348.5	3,348.5	10.7	1.1	79.06	-857.7	4,069.1	4,057.7	4,046.0	11.65	348.344	
3,444.9	3,402.3	3,375.7	3,375.7	10.9	1.2	79.14	-857.6	4,069.2	4,055.9	4,044.1	11.84	342.472	
3,500.0	3,456.3	3,418.9	3,418.8	11.1	1.2	79.26	-857.5	4,069.4	4,054.0	4,041.9	12.08	335.462	
3,543.3	3,498.6	3,472.9	3,472.8	11.3	1.2	79.41	-857.4	4,069.7	4,052.5	4,040.2	12.28	329.986	
3,600.0	3,554.1	3,527.5	3,527.5	11.5	1.2	79.56	-857.1	4,070.0	4,050.4	4,037.9	12.54	323.113	
3,641.7	3,594.9	3,560.4	3,560.4	11.7	1.2	79.66	-856.9	4,070.1	4,049.0	4,036.3	12.72	318.246	
3,700.0	3,651.9	3,608.3	3,608.3	12.0	1.2	79.79	-856.7	4,070.5	4,047.2	4,034.2	12.98	311.728	
3,740.1	3,691.2	3,649.6	3,649.5	12.2	1.2	79.91	-856.6	4,070.9	4,046.0	4,032.8	13.16	307.342	
3,800.0	3,749.7	3,711.9	3,711.9	12.4	1.2	80.09	-856.6	4,071.3	4,044.1	4,030.7	13.43	301.028	
3,838.6	3,787.4	3,754.9	3,754.9	12.6	1.2	80.21	-856.6	4,071.6	4,043.0	4,029.3	13.61	297.071	
3,900.0	3,847.5	3,821.9	3,821.8	12.9	1.2	80.40	-856.3	4,071.9	4,041.0	4,027.1	13.89	290.983	
3,937.0	3,883.7	3,860.4	3,860.3	13.0	1.3	80.51	-856.2	4,072.0	4,039.8	4,025.7	14.05	287.434	
4,000.0	3,945.3	3,926.2	3,926.1	13.3	1.3	80.70	-856.3	4,072.2	4,037.7	4,023.4	14.34	281.595	
4,035.4	3,980.0	3,963.4	3,963.3	13.5	1.3	80.81	-856.4	4,072.2	4,036.5	4,022.0	14.50	278.420	
4,060.0	4,004.0	3,989.1	3,989.1	13.6	1.3	80.89	-856.5	4,072.1	4,035.7	4,021.1	14.61	276.256	
4,100.0	4,043.2	4,023.8	4,023.8	13.7	1.3	80.96	-856.7	4,072.1	4,034.4	4,019.7	14.77	273.200	
4,133.8	4,076.5	4,051.1	4,051.0	13.8	1.3	81.02	-856.9	4,072.1	4,033.5	4,018.6	14.88	271.092	
4,200.0	4,141.6	4,106.5	4,106.4	14.0	1.3	81.13	-857.4	4,072.1	4,032.0	4,016.9	15.10	267.079	
4,232.3	4,173.5	4,143.4	4,143.3	14.1	1.3	81.20	-857.8	4,072.2	4,031.4	4,016.2	15.19	265.328	
4,300.0	4,240.6	4,223.9	4,223.8	14.3	1.3	81.35	-859.1	4,071.9	4,030.1	4,014.7	15.40	261.718	
4,330.7	4,271.1	4,263.9	4,263.8	14.4	1.3	81.42	-859.8	4,071.6	4,029.6	4,014.1	15.48	260.286	
4,400.0	4,340.0	4,333.3	4,333.3	14.5	1.3	81.51	-861.0	4,071.0	4,028.3	4,012.6	15.66	257.194	
4,429.1	4,369.0	4,356.7	4,356.6	14.6	1.3	81.54	-861.4	4,070.8	4,027.9	4,012.2	15.73	256.125	
4,500.0	4,439.7	4,421.6	4,421.5	14.8	1.3	81.61	-862.7	4,070.4	4,027.3	4,011.4	15.88	253.559	
4,527.5	4,467.2	4,456.9	4,456.8	14.8	1.3	81.64	-863.4	4,070.2	4,027.1	4,011.1	15.94	252.714	
4,600.0	4,539.7	4,539.0	4,538.9	14.9	1.3	81.69	-864.9	4,069.4	4,026.5	4,010.5	16.07	250.554	
4,626.0	4,565.6	4,565.2	4,565.0	15.0	1.3	81.70	-865.3	4,069.1	4,026.4	4,010.3	16.11	249.925	
4,660.2	4,599.8	4,599.6	4,599.4	15.0	1.3	110.44	-865.9	4,068.8	4,026.2	4,014.0	12.18	330.456	
4,700.0	4,639.6	4,650.4	4,650.2	15.0	1.3	110.45	-866.6	4,068.3	4,026.0	4,013.8	12.26	328.388	
4,724.4	4,664.0	4,681.6	4,681.4	15.1	1.3	110.46	-866.9	4,067.9	4,025.9	4,013.6	12.31	326.996	
4,800.0	4,739.6	4,764.5	4,764.3	15.2	1.3	110.47	-867.7	4,066.8	4,025.2	4,012.7	12.47	322.750	
4,822.8	4,762.5	4,788.5	4,788.4	15.2	1.3	110.48	-867.9	4,066.5	4,025.0	4,012.4	12.52	321.477	
4,900.0	4,839.6	4,869.5	4,869.3	15.3	1.3	110.49	-868.7	4,065.3	4,024.2	4,011.5	12.69	317.234	
4,921.2	4,860.9	4,891.8	4,891.6	15.4	1.3	110.50	-868.8	4,065.0	4,023.9	4,011.2	12.73	316.084	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,939.6	4,974.5	4,974.3	15.5	1.3	110.51	-869.3	4,063.8	4,023.0	4,010.1	12.90	311.860	
5,019.7	4,959.3	4,995.2	4,995.0	15.5	1.3	110.51	-869.3	4,063.5	4,022.8	4,009.8	12.94	310.816	
5,100.0	5,039.6	5,078.8	5,078.5	15.6	1.4	110.52	-869.7	4,062.3	4,021.8	4,008.6	13.12	306.610	
5,118.1	5,057.7	5,097.6	5,097.4	15.7	1.4	110.53	-869.7	4,062.0	4,021.5	4,008.4	13.16	305.673	
5,200.0	5,139.6	5,184.6	5,184.3	15.8	1.4	110.54	-870.0	4,060.6	4,020.4	4,007.0	13.34	301.490	
5,216.5	5,156.2	5,204.7	5,204.5	15.8	1.4	110.54	-870.1	4,060.2	4,020.1	4,006.8	13.37	300.646	
5,300.0	5,239.6	5,383.2	5,382.9	15.9	1.4	110.55	-869.3	4,055.2	4,017.8	4,004.2	13.57	296.108	
5,314.9	5,254.6	5,408.1	5,407.8	16.0	1.4	110.56	-869.2	4,054.2	4,017.2	4,003.6	13.60	295.311	
5,400.0	5,339.6	5,517.8	5,517.3	16.1	1.4	110.57	-868.3	4,049.3	4,013.4	3,999.6	13.79	290.938	
5,413.4	5,353.0	5,536.0	5,535.6	16.1	1.5	110.57	-868.2	4,048.4	4,012.7	3,998.9	13.82	290.251	
5,500.0	5,439.6	5,642.3	5,641.7	16.3	1.5	110.59	-867.0	4,042.9	4,008.2	3,994.2	14.02	285.895	
5,511.8	5,451.4	5,654.9	5,654.3	16.3	1.5	110.59	-866.9	4,042.2	4,007.6	3,993.5	14.05	285.313	
5,600.0	5,539.6	5,740.3	5,739.6	16.4	1.5	110.59	-865.8	4,037.7	4,002.8	3,988.5	14.24	281.061	
5,610.2	5,549.9	5,749.3	5,748.6	16.4	1.5	110.60	-865.7	4,037.2	4,002.2	3,988.0	14.26	280.577	
5,700.0	5,639.6	5,820.4	5,819.5	16.6	1.5	110.60	-864.4	4,033.8	3,997.6	3,983.1	14.46	276.432	
5,708.6	5,648.3	5,825.9	5,825.0	16.6	1.5	110.60	-864.3	4,033.5	3,997.2	3,982.7	14.48	276.044	
5,800.0	5,739.6	5,900.0	5,899.1	16.7	1.5	110.60	-863.3	4,030.6	3,993.3	3,978.6	14.68	271.991	
5,807.1	5,746.7	5,900.0	5,899.1	16.8	1.5	110.60	-863.3	4,030.6	3,993.0	3,978.3	14.70	271.697	
5,900.0	5,839.6	5,951.5	5,950.5	16.9	1.5	110.60	-862.7	4,028.9	3,989.7	3,974.8	14.90	267.803	
5,905.5	5,845.1	5,955.3	5,954.4	16.9	1.5	110.60	-862.7	4,028.8	3,989.5	3,974.6	14.91	267.575	
6,000.0	5,939.6	6,024.8	6,023.8	17.1	1.6	110.60	-862.1	4,027.0	3,986.9	3,971.8	15.12	263.723	
6,003.9	5,943.6	6,028.0	6,027.0	17.1	1.6	110.60	-862.0	4,026.9	3,986.8	3,971.7	15.13	263.564	
6,059.2	5,998.8	6,073.2	6,072.2	17.2	1.6	110.60	-861.6	4,026.0	3,985.6	3,970.3	15.25	261.363	
6,075.4	6,015.0	6,086.4	6,085.4	17.2	1.6	-159.41	-861.4	4,025.7	3,985.4	3,966.7	18.67	213.429 CC, ES	
6,100.0	6,039.6	6,100.0	6,099.0	17.2	1.6	-159.40	-861.3	4,025.5	3,985.8	3,967.1	18.71	213.035	
6,102.3	6,042.0	6,100.0	6,099.0	17.2	1.6	-159.40	-861.3	4,025.5	3,985.9	3,967.2	18.71	213.006	
6,150.0	6,089.4	6,145.1	6,144.1	17.3	1.6	-159.33	-860.8	4,024.8	3,989.2	3,970.4	18.80	212.204	
6,200.0	6,138.7	6,183.6	6,182.6	17.3	1.6	-159.17	-860.4	4,024.3	3,995.9	3,977.0	18.90	211.474	
6,200.8	6,139.5	6,184.2	6,183.2	17.3	1.6	-159.17	-860.4	4,024.2	3,996.0	3,977.1	18.90	211.466	
6,250.0	6,187.4	6,228.8	6,227.8	17.3	1.6	-158.93	-860.0	4,023.7	4,006.0	3,987.0	18.99	211.005	
6,299.2	6,234.4	6,277.8	6,276.8	17.4	1.6	-158.62	-859.7	4,023.2	4,019.0	4,000.0	19.05	210.951	
6,300.0	6,235.1	6,278.6	6,277.6	17.4	1.6	-158.62	-859.7	4,023.1	4,019.2	4,000.2	19.05	210.954	
6,350.0	6,281.7	6,323.1	6,322.1	17.4	1.6	-158.20	-859.3	4,022.6	4,035.6	4,016.5	19.08	211.476	
6,397.6	6,324.8	6,361.2	6,360.2	17.3	1.6	-157.69	-859.1	4,022.2	4,054.0	4,035.0	19.07	212.562	
6,400.0	6,326.9	6,363.1	6,362.1	17.3	1.6	-157.66	-859.1	4,022.2	4,055.0	4,036.0	19.07	212.629	
6,450.0	6,370.5	6,400.0	6,399.0	17.3	1.7	-157.00	-858.8	4,021.8	4,077.5	4,058.5	19.02	214.416	
6,496.0	6,409.1	6,435.1	6,434.0	17.3	1.7	-156.27	-858.6	4,021.5	4,100.7	4,081.8	18.94	216.551	
6,500.0	6,412.3	6,437.8	6,436.8	17.3	1.7	-156.20	-858.6	4,021.5	4,102.8	4,083.9	18.93	216.754	
6,550.0	6,452.1	6,472.3	6,471.2	17.3	1.7	-155.22	-858.4	4,021.2	4,130.9	4,112.1	18.81	219.610	
6,594.5	6,485.6	6,500.0	6,498.9	17.3	1.7	-154.18	-858.3	4,021.1	4,158.2	4,139.5	18.69	222.474	
6,600.0	6,489.7	6,500.0	6,498.9	17.3	1.7	-154.02	-858.3	4,021.1	4,161.7	4,143.0	18.67	222.878	
6,650.0	6,524.9	6,536.8	6,535.7	17.2	1.7	-152.64	-858.1	4,020.8	4,194.9	4,176.4	18.55	226.139	
6,692.9	6,553.0	6,562.2	6,561.2	17.2	1.7	-151.19	-858.0	4,020.7	4,225.3	4,206.8	18.46	228.830	
6,700.0	6,557.5	6,566.3	6,565.2	17.2	1.7	-150.93	-858.0	4,020.7	4,230.5	4,212.0	18.45	229.243	
6,750.0	6,587.4	6,593.2	6,592.2	17.2	1.7	-148.85	-858.0	4,020.6	4,268.2	4,249.8	18.42	231.667	
6,791.3	6,609.9	6,615.0	6,614.0	17.2	1.7	-146.79	-857.9	4,020.5	4,300.8	4,282.3	18.48	232.753	
6,800.0	6,614.4	6,619.5	6,618.4	17.2	1.7	-146.32	-857.9	4,020.5	4,307.8	4,289.3	18.50	232.812	
6,850.0	6,638.4	6,643.5	6,642.4	17.2	1.7	-143.20	-857.8	4,020.4	4,349.2	4,330.5	18.74	232.102	
6,889.7	6,655.3	6,660.3	6,659.3	17.4	1.7	-140.18	-857.8	4,020.4	4,383.2	4,364.2	19.07	229.829	
6,900.0	6,659.4	6,664.4	6,663.3	17.5	1.7	-139.30	-857.8	4,020.3	4,392.1	4,373.0	19.17	229.106	
6,950.0	6,677.1	6,682.1	6,681.0	18.0	1.7	-134.41	-857.7	4,020.3	4,436.4	4,416.6	19.82	223.786	
6,988.2	6,688.4	6,693.4	6,692.3	18.5	1.7	-129.81	-857.7	4,020.3	4,471.0	4,450.5	20.47	218.446	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,000.0	6,691.5	6,696.5	6,695.4	18.7	1.7	-128.21	-857.7	4,020.2	4,481.8	4,461.1	20.68	216.748	
7,050.0	6,702.5	6,700.0	6,698.9	19.5	1.7	-120.16	-857.7	4,020.2	4,528.1	4,506.5	21.63	209.376	
7,086.6	6,708.4	6,700.0	6,698.9	20.1	1.7	-113.03	-857.7	4,020.2	4,562.5	4,540.2	22.26	204.935	
7,100.0	6,710.1	6,700.0	6,698.9	20.4	1.7	-110.17	-857.7	4,020.2	4,575.1	4,552.7	22.45	203.782	
7,150.0	6,714.2	6,700.0	6,698.9	21.3	1.7	-98.50	-857.7	4,020.2	4,622.6	4,599.7	22.95	201.435	
7,185.0	6,715.0	6,700.0	6,698.9	21.9	1.7	-89.70	-857.7	4,020.2	4,656.0	4,632.7	23.27	200.117	
7,185.6	6,715.0	6,700.0	6,698.9	21.9	1.7	-89.56	-857.7	4,020.2	4,656.5	4,633.2	23.27	200.084	
7,200.0	6,715.0	6,700.0	6,698.9	22.2	1.7	-89.56	-857.7	4,020.2	4,670.3	4,646.7	23.55	198.314	
7,283.4	6,714.8	6,700.0	6,698.9	23.9	1.7	-89.56	-857.7	4,020.2	4,750.0	4,724.7	25.23	188.281	
7,300.0	6,714.8	6,700.0	6,698.9	24.2	1.7	-89.56	-857.7	4,020.2	4,765.8	4,740.2	25.56	186.448	
7,381.9	6,714.6	6,700.0	6,698.9	26.0	1.7	-89.56	-857.7	4,020.2	4,844.1	4,816.8	27.32	177.299	
7,400.0	6,714.6	6,700.0	6,698.9	26.4	1.7	-89.56	-857.7	4,020.2	4,861.5	4,833.8	27.71	175.431	
7,480.3	6,714.4	6,700.0	6,698.9	28.2	1.7	-89.56	-857.7	4,020.2	4,938.4	4,908.9	29.53	167.226	
7,500.0	6,714.4	6,700.0	6,698.9	28.7	1.7	-89.56	-857.7	4,020.2	4,957.3	4,927.4	29.98	165.366	
7,578.7	6,714.2	6,700.0	6,698.9	30.5	1.7	-89.56	-857.7	4,020.2	5,032.9	5,001.1	31.83	158.102	
7,600.0	6,714.2	6,700.0	6,698.9	31.0	1.7	-89.56	-857.7	4,020.2	5,053.4	5,021.0	32.33	156.283	
7,677.1	6,714.0	6,700.0	6,698.9	32.9	1.7	-89.56	-857.7	4,020.2	5,127.5	5,093.3	34.21	149.895	
7,700.0	6,714.0	6,700.0	6,698.9	33.4	1.7	-89.56	-857.7	4,020.2	5,149.5	5,114.8	34.76	148.136	
7,775.6	6,713.9	6,700.0	6,698.9	35.3	1.7	-89.56	-857.7	4,020.2	5,222.3	5,185.7	36.64	142.532	
7,800.0	6,713.8	6,700.0	6,698.9	35.9	1.7	-89.56	-857.7	4,020.2	5,245.8	5,208.6	37.25	140.842	
7,874.0	6,713.7	6,700.0	6,698.9	37.8	1.7	-89.56	-857.7	4,020.2	5,317.2	5,278.1	39.12	135.927	
7,900.0	6,713.6	6,700.0	6,698.9	38.4	1.7	-89.56	-857.7	4,020.2	5,342.3	5,302.5	39.78	134.311	
7,972.4	6,713.5	6,700.0	6,698.9	40.3	1.7	-89.56	-857.7	4,020.2	5,412.2	5,370.6	41.63	129.994	
8,000.0	6,713.4	6,700.0	6,698.9	41.0	1.7	-89.56	-857.7	4,020.2	5,438.9	5,396.5	42.34	128.451	
8,070.8	6,713.3	6,700.0	6,698.9	42.8	1.7	-89.56	-857.7	4,020.2	5,507.4	5,463.2	44.18	124.652	
8,100.0	6,713.2	6,700.0	6,698.9	43.6	1.7	-89.56	-857.7	4,020.2	5,535.6	5,490.6	44.94	123.180	
8,169.3	6,713.1	6,700.0	6,698.9	45.4	1.7	-89.56	-857.7	4,020.2	5,602.6	5,555.9	46.76	119.829	
8,200.0	6,713.0	6,700.0	6,698.9	46.2	1.7	-89.56	-857.7	4,020.2	5,632.4	5,584.8	47.56	118.425	
8,267.7	6,712.9	6,700.0	6,698.9	48.0	1.7	-89.56	-857.7	4,020.2	5,698.0	5,648.6	49.35	115.461	
8,300.0	6,712.8	6,700.0	6,698.9	48.8	1.7	-89.56	-857.7	4,020.2	5,729.3	5,679.1	50.20	114.121	
8,366.1	6,712.7	6,700.0	6,698.9	50.6	1.7	-89.56	-857.7	4,020.2	5,793.5	5,741.5	51.96	111.491	
8,400.0	6,712.6	6,700.0	6,698.9	51.5	1.7	-89.56	-857.7	4,020.2	5,826.3	5,773.5	52.86	110.212	
8,464.5	6,712.5	6,700.0	6,698.9	53.2	1.7	-89.56	-857.7	4,020.2	5,889.0	5,834.4	54.59	107.873	
8,500.0	6,712.4	6,700.0	6,698.9	54.1	1.7	-89.56	-857.7	4,020.2	5,923.5	5,867.9	55.54	106.650	
8,563.0	6,712.3	6,700.0	6,698.9	55.8	1.7	-89.56	-857.7	4,020.2	5,984.7	5,927.5	57.23	104.564	
8,600.0	6,712.3	6,700.0	6,698.9	56.8	1.7	-89.56	-857.7	4,020.2	6,020.7	5,962.5	58.23	103.395	
8,661.4	6,712.1	6,700.0	6,698.9	58.5	1.7	-89.56	-857.7	4,020.2	6,080.4	6,020.5	59.89	101.529	
8,700.0	6,712.1	6,700.0	6,698.9	59.5	1.7	-89.56	-857.7	4,020.2	6,118.0	6,057.1	60.93	100.409	
8,759.8	6,711.9	6,700.0	6,698.9	61.1	1.7	-89.56	-857.7	4,020.2	6,176.3	6,113.7	62.55	98.738	
8,800.0	6,711.9	6,700.0	6,698.9	62.2	1.7	-89.56	-857.7	4,020.2	6,215.4	6,151.8	63.64	97.663	
8,858.2	6,711.8	6,700.0	6,698.9	63.8	1.7	-89.56	-857.7	4,020.2	6,272.2	6,206.9	65.22	96.162	
8,900.0	6,711.7	6,700.0	6,698.9	64.9	1.7	-89.57	-857.7	4,020.2	6,312.9	6,246.5	66.36	95.131	
8,956.7	6,711.6	6,700.0	6,698.9	66.5	1.7	-89.57	-857.7	4,020.2	6,368.2	6,300.3	67.91	93.780	
9,000.0	6,711.5	6,700.0	6,698.9	67.6	1.7	-89.57	-857.7	4,020.2	6,410.4	6,341.3	69.09	92.789	
9,055.1	6,711.4	6,700.0	6,698.9	69.1	1.7	-89.57	-857.7	4,020.2	6,464.2	6,393.6	70.59	91.571	
9,100.0	6,711.3	6,700.0	6,698.9	70.4	1.7	-89.57	-857.7	4,020.2	6,508.1	6,436.2	71.82	90.617	
9,153.5	6,711.2	6,700.0	6,698.9	71.8	1.7	-89.57	-857.7	4,020.2	6,560.3	6,487.1	73.29	89.517	
9,200.0	6,711.1	6,700.0	6,698.9	73.1	1.7	-89.57	-857.7	4,020.2	6,605.8	6,531.2	74.56	88.598	
9,251.9	6,711.0	6,700.0	6,698.9	74.5	1.7	-89.57	-857.7	4,020.2	6,656.5	6,580.6	75.98	87.604	
9,300.0	6,710.9	6,700.0	6,698.9	75.8	1.7	-89.57	-857.7	4,020.2	6,703.5	6,626.2	77.30	86.718	
9,350.4	6,710.8	6,700.0	6,698.9	77.2	1.7	-89.57	-857.7	4,020.2	6,752.8	6,674.1	78.69	85.818	
9,400.0	6,710.7	6,700.0	6,698.9	78.6	1.7	-89.57	-857.7	4,020.2	6,801.4	6,721.3	80.05	84.962	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,710.6	6,700.0	6,698.9	79.9	1.7	-89.57	-857.7	4,020.2	6,849.1	6,767.7	81.40	84.146	
9,500.0	6,710.5	6,700.0	6,698.9	81.3	1.7	-89.57	-857.7	4,020.2	6,899.3	6,816.5	82.81	83.319	
9,547.2	6,710.4	6,700.0	6,698.9	82.6	1.7	-89.57	-857.7	4,020.2	6,945.5	6,861.4	84.11	82.579	
9,600.0	6,710.3	6,700.0	6,698.9	84.1	1.7	-89.57	-857.7	4,020.2	6,997.2	6,911.7	85.56	81.779	
9,645.6	6,710.2	6,700.0	6,698.9	85.3	1.7	-89.57	-857.7	4,020.2	7,042.0	6,955.1	86.82	81.107	
9,700.0	6,710.1	6,700.0	6,698.9	86.8	1.7	-89.57	-857.7	4,020.2	7,095.2	7,006.9	88.32	80.333	
9,744.1	6,710.0	6,700.0	6,698.9	88.1	1.7	-89.57	-857.7	4,020.2	7,138.4	7,048.9	89.54	79.723	
9,800.0	6,709.9	6,700.0	6,698.9	89.6	1.7	-89.57	-857.7	4,020.2	7,193.3	7,102.2	91.09	78.972	
9,842.5	6,709.9	6,700.0	6,698.9	90.8	1.7	-89.57	-857.7	4,020.2	7,235.0	7,142.7	92.26	78.418	
9,900.0	6,709.7	6,700.0	6,698.9	92.4	1.7	-89.57	-857.7	4,020.2	7,291.4	7,197.6	93.85	77.690	
9,940.9	6,709.7	6,700.0	6,698.9	93.5	1.7	-89.57	-857.7	4,020.2	7,331.6	7,236.6	94.99	77.186	
10,000.0	6,709.6	6,700.0	6,698.9	95.1	1.7	-89.57	-857.7	4,020.2	7,389.6	7,293.0	96.62	76.479	
10,039.3	6,709.5	6,700.0	6,698.9	96.2	1.7	-89.57	-857.7	4,020.2	7,428.2	7,330.5	97.71	76.021	
10,100.0	6,709.4	6,700.0	6,698.9	97.9	1.7	-89.57	-857.7	4,020.2	7,487.8	7,388.4	99.39	75.335	
10,137.8	6,709.3	6,700.0	6,698.9	98.9	1.7	-89.57	-857.7	4,020.2	7,524.9	7,424.5	100.44	74.918	
10,200.0	6,709.2	6,700.0	6,698.9	100.7	1.7	-89.57	-857.7	4,020.2	7,586.1	7,483.9	102.17	74.251	
10,236.2	6,709.1	6,700.0	6,698.9	101.7	1.7	-89.57	-857.7	4,020.2	7,621.7	7,518.5	103.17	73.873	
10,300.0	6,709.0	6,700.0	6,698.9	103.4	1.7	-89.57	-857.7	4,020.2	7,684.4	7,579.4	104.94	73.224	
10,334.6	6,708.9	6,700.0	6,698.9	104.4	1.7	-89.57	-857.7	4,020.2	7,718.4	7,612.5	105.90	72.881	
10,400.0	6,708.8	6,700.0	6,698.9	106.2	1.7	-89.57	-857.7	4,020.2	7,782.7	7,675.0	107.72	72.249	
10,433.0	6,708.7	6,700.0	6,698.9	107.1	1.7	-89.57	-857.7	4,020.2	7,815.2	7,706.6	108.64	71.938	
10,500.0	6,708.6	6,700.0	6,698.9	109.0	1.7	-89.57	-857.7	4,020.2	7,881.1	7,770.6	110.50	71.322	
10,531.5	6,708.5	6,700.0	6,698.9	109.9	1.7	-89.57	-857.7	4,020.2	7,912.1	7,800.7	111.38	71.040	
10,600.0	6,708.4	6,700.0	6,698.9	111.8	1.7	-89.57	-857.7	4,020.2	7,979.6	7,866.3	113.28	70.441	
10,629.9	6,708.4	6,700.0	6,698.9	112.6	1.7	-89.57	-857.7	4,020.2	8,009.0	7,894.9	114.11	70.185	
10,700.0	6,708.2	6,700.0	6,698.9	114.6	1.7	-89.57	-857.7	4,020.2	8,078.0	7,962.0	116.06	69.600	
10,728.3	6,708.2	6,700.0	6,698.9	115.3	1.7	-89.57	-857.7	4,020.2	8,105.9	7,989.1	116.85	69.369	
10,800.0	6,708.0	6,700.0	6,698.9	117.3	1.7	-89.57	-857.7	4,020.2	8,176.5	8,057.7	118.85	68.799	
10,826.7	6,708.0	6,700.0	6,698.9	118.1	1.7	-89.57	-857.7	4,020.2	8,202.9	8,083.3	119.59	68.591	
10,900.0	6,707.8	6,700.0	6,698.9	120.1	1.7	-89.57	-857.7	4,020.2	8,275.1	8,153.5	121.63	68.034	
10,925.2	6,707.8	6,700.0	6,698.9	120.8	1.7	-89.57	-857.7	4,020.2	8,299.9	8,177.6	122.33	67.847	
11,000.0	6,707.6	6,700.0	6,698.9	122.9	1.7	-89.57	-857.7	4,020.2	8,373.7	8,249.2	124.42	67.303	
11,023.6	6,707.6	6,700.0	6,698.9	123.6	1.7	-89.57	-857.7	4,020.2	8,396.9	8,271.9	125.08	67.135	
11,100.0	6,707.5	6,700.0	6,698.9	125.7	1.7	-89.57	-857.7	4,020.2	8,472.3	8,345.1	127.21	66.603	
11,122.0	6,707.4	6,700.0	6,698.9	126.3	1.7	-89.57	-857.7	4,020.2	8,494.0	8,366.2	127.82	66.453	
11,200.0	6,707.3	6,700.0	6,698.9	128.5	1.7	-89.57	-857.7	4,020.2	8,570.9	8,440.9	129.99	65.934	
11,220.4	6,707.2	6,700.0	6,698.9	129.0	1.7	-89.57	-857.7	4,020.2	8,591.1	8,460.5	130.56	65.800	
11,300.0	6,707.1	6,700.0	6,698.9	131.3	1.7	-89.58	-857.7	4,020.2	8,669.6	8,536.8	132.78	65.292	
11,318.9	6,707.0	6,700.0	6,698.9	131.8	1.7	-89.58	-857.7	4,020.2	8,688.2	8,554.9	133.31	65.173	
11,400.0	6,706.9	6,700.0	6,698.9	134.0	1.7	-89.58	-857.7	4,020.2	8,768.3	8,632.7	135.57	64.676	
11,417.3	6,706.9	6,700.0	6,698.9	134.5	1.7	-89.58	-857.7	4,020.2	8,785.4	8,649.3	136.06	64.572	
11,500.0	6,706.7	6,700.0	6,698.9	136.8	1.7	-89.58	-857.7	4,020.2	8,867.0	8,728.7	138.36	64.085	
11,515.7	6,706.7	6,700.0	6,698.9	137.3	1.7	-89.58	-857.7	4,020.2	8,882.6	8,743.8	138.80	63.994	
11,600.0	6,706.5	6,700.0	6,698.9	139.6	1.7	-89.58	-857.7	4,020.2	8,965.8	8,824.7	141.16	63.517	
11,614.1	6,706.5	6,700.0	6,698.9	140.0	1.7	-89.58	-857.7	4,020.2	8,979.8	8,838.2	141.55	63.439	
11,700.0	6,706.3	6,700.0	6,698.9	142.4	1.7	-89.58	-857.7	4,020.2	9,064.6	8,920.6	143.95	62.971	
11,712.6	6,706.3	6,700.0	6,698.9	142.8	1.7	-89.58	-857.7	4,020.2	9,077.0	8,932.7	144.30	62.904	
11,800.0	6,706.1	6,700.0	6,698.9	145.2	1.7	-89.58	-857.7	4,020.2	9,163.4	9,016.7	146.74	62.446	
11,811.0	6,706.1	6,700.0	6,698.9	145.5	1.7	-89.58	-857.7	4,020.2	9,174.3	9,027.2	147.05	62.389	
11,900.0	6,705.9	6,700.0	6,698.9	148.0	1.7	-89.58	-857.7	4,020.2	9,262.3	9,112.7	149.54	61.940	
11,909.4	6,705.9	6,700.0	6,698.9	148.3	1.7	-89.58	-857.7	4,020.2	9,271.6	9,121.8	149.80	61.894	
12,000.0	6,705.8	6,700.0	6,698.9	150.8	1.7	-89.58	-857.7	4,020.2	9,361.1	9,208.8	152.33	61.453	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,705.7	6,700.0	6,698.9	151.0	1.7	-89.58	-857.7	4,020.2	9,368.9	9,216.3	152.55	61.415	
12,100.0	6,705.6	6,700.0	6,698.9	153.6	1.7	-89.58	-857.7	4,020.2	9,460.0	9,304.9	155.13	60.983	
12,106.3	6,705.6	6,700.0	6,698.9	153.8	1.7	-89.58	-857.7	4,020.2	9,466.2	9,310.9	155.30	60.954	
12,200.0	6,705.4	6,700.0	6,698.9	156.4	1.7	-89.58	-857.7	4,020.2	9,558.9	9,401.0	157.92	60.530	
12,204.7	6,705.4	6,700.0	6,698.9	156.5	1.7	-89.58	-857.7	4,020.2	9,563.6	9,405.5	158.05	60.509	
12,300.0	6,705.2	6,700.0	6,698.9	159.2	1.7	-89.58	-857.7	4,020.2	9,657.9	9,497.1	160.72	60.092	
12,303.1	6,705.2	6,700.0	6,698.9	159.3	1.7	-89.58	-857.7	4,020.2	9,661.0	9,500.2	160.80	60.079	
12,400.0	6,705.0	6,700.0	6,698.9	162.0	1.7	-89.58	-857.7	4,020.2	9,756.8	9,593.3	163.51	59.670	
12,401.5	6,705.0	6,700.0	6,698.9	162.0	1.7	-89.58	-857.7	4,020.2	9,758.4	9,594.8	163.56	59.663	
12,500.0	6,704.8	6,700.0	6,698.9	164.8	1.7	-89.58	-857.7	4,020.2	9,855.8	9,689.5	166.31	59.261	
12,598.4	6,704.6	6,700.0	6,698.9	167.5	1.7	-89.58	-857.7	4,020.2	9,953.2	9,784.2	169.06	58.872	
12,600.0	6,704.6	6,700.0	6,698.9	167.6	1.7	-89.58	-857.7	4,020.2	9,954.8	9,785.7	169.11	58.866 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	126.22	-1,225.1	1,672.8	2,073.5				
98.4	98.4	77.4	77.4	0.1	0.0	126.22	-1,225.2	1,672.7	2,073.4	2,073.3	0.10	N/A	
100.0	100.0	79.0	79.0	0.1	0.0	126.22	-1,225.2	1,672.7	2,073.4	2,073.3	0.10	N/A	
162.3	162.3	140.3	140.3	0.2	0.0	126.23	-1,225.3	1,672.6	2,073.4	2,073.1	0.28	7,418.340 CC	
196.8	196.8	173.8	173.8	0.3	0.1	126.23	-1,225.3	1,672.6	2,073.4	2,073.0	0.39	5,288.887	
200.0	200.0	176.9	176.9	0.3	0.1	126.23	-1,225.3	1,672.6	2,073.4	2,073.0	0.40	5,154.113	
295.3	295.3	261.1	261.1	0.5	0.2	126.23	-1,225.5	1,672.7	2,073.7	2,072.9	0.72	2,890.238 ES	
300.0	300.0	265.2	265.2	0.5	0.2	126.23	-1,225.6	1,672.7	2,073.7	2,073.0	0.73	2,828.320	
393.7	393.7	356.1	356.1	0.8	0.3	126.24	-1,226.3	1,673.1	2,074.4	2,073.4	1.03	2,005.071	
400.0	400.0	362.8	362.8	0.8	0.3	126.24	-1,226.4	1,673.1	2,074.5	2,073.4	1.05	1,967.582	
492.1	492.1	454.3	454.3	1.0	0.4	126.25	-1,227.0	1,673.4	2,075.1	2,073.8	1.33	1,562.456	
500.0	500.0	461.8	461.8	1.0	0.4	126.25	-1,227.1	1,673.4	2,075.2	2,073.8	1.35	1,536.332	
590.5	590.5	548.2	548.1	1.2	0.4	126.26	-1,227.7	1,673.9	2,076.0	2,074.4	1.61	1,291.426	
600.0	600.0	557.2	557.2	1.2	0.4	126.26	-1,227.8	1,673.9	2,076.1	2,074.4	1.63	1,270.523	
689.0	689.0	645.7	645.7	1.4	0.5	126.27	-1,228.7	1,674.5	2,077.0	2,075.1	1.88	1,102.962	
700.0	700.0	657.2	657.1	1.4	0.5	126.27	-1,228.8	1,674.6	2,077.1	2,075.2	1.91	1,085.277	
787.4	787.4	746.7	746.6	1.6	0.5	126.28	-1,229.4	1,675.1	2,077.9	2,075.8	2.16	963.920	
800.0	800.0	759.4	759.4	1.7	0.5	126.28	-1,229.5	1,675.2	2,078.1	2,075.9	2.19	948.758	
885.8	885.8	845.9	845.9	1.9	0.6	126.28	-1,230.0	1,675.8	2,078.8	2,076.4	2.42	857.655	
900.0	900.0	860.2	860.1	1.9	0.6	126.28	-1,230.1	1,675.9	2,078.9	2,076.5	2.46	844.365	
984.2	984.2	944.3	944.3	2.1	0.6	126.29	-1,230.7	1,676.3	2,079.7	2,077.0	2.69	773.536	
1,000.0	1,000.0	960.0	959.9	2.1	0.6	126.29	-1,230.8	1,676.4	2,079.8	2,077.1	2.73	761.655	
1,082.7	1,082.7	1,046.1	1,046.1	2.3	0.7	126.29	-1,231.5	1,676.8	2,080.5	2,077.5	2.95	704.881	
1,100.0	1,100.0	1,064.9	1,064.9	2.3	0.7	126.30	-1,231.6	1,676.9	2,080.6	2,077.6	3.00	694.042	
1,181.1	1,181.1	1,153.2	1,153.2	2.5	0.7	97.60	-1,232.1	1,677.0	2,081.1	2,077.9	3.24	641.580	
1,200.0	1,200.0	1,173.8	1,173.7	2.6	0.7	97.62	-1,232.1	1,677.0	2,081.2	2,077.9	3.29	631.813	
1,279.5	1,279.4	1,255.5	1,255.5	2.7	0.8	97.72	-1,232.3	1,677.0	2,081.9	2,078.4	3.50	594.811	
1,300.0	1,299.8	1,276.0	1,276.0	2.8	0.8	97.75	-1,232.4	1,677.0	2,082.1	2,078.5	3.55	586.103	
1,377.9	1,377.5	1,356.4	1,356.4	3.0	0.8	97.92	-1,232.6	1,676.8	2,083.0	2,079.2	3.75	555.281	
1,400.0	1,399.5	1,379.4	1,379.4	3.0	0.8	97.98	-1,232.7	1,676.8	2,083.3	2,079.5	3.81	547.225	
1,476.4	1,475.3	1,455.8	1,455.8	3.2	0.8	98.21	-1,232.8	1,676.6	2,084.4	2,080.4	4.01	519.921	
1,500.0	1,498.7	1,479.1	1,479.0	3.3	0.8	98.29	-1,232.8	1,676.5	2,084.9	2,080.8	4.07	511.950	
1,574.8	1,572.6	1,552.7	1,552.7	3.5	0.9	98.57	-1,233.0	1,676.3	2,086.5	2,082.2	4.29	486.511	
1,600.0	1,597.5	1,577.5	1,577.5	3.5	0.9	98.67	-1,233.0	1,676.3	2,087.1	2,082.8	4.36	478.411	
1,673.2	1,669.4	1,649.2	1,649.2	3.7	0.9	99.00	-1,233.2	1,676.0	2,089.2	2,084.6	4.60	454.308	
1,700.1	1,695.8	1,675.5	1,675.4	3.8	0.9	99.13	-1,233.3	1,675.9	2,090.0	2,085.3	4.69	445.966	
1,771.6	1,765.7	1,748.9	1,748.8	4.1	0.9	99.56	-1,233.6	1,675.6	2,092.4	2,087.5	4.94	423.670	
1,800.0	1,793.4	1,778.8	1,778.7	4.2	0.9	99.73	-1,233.8	1,675.3	2,093.3	2,088.3	5.04	415.341	
1,870.1	1,862.0	1,851.9	1,851.8	4.4	0.9	100.16	-1,234.1	1,674.6	2,095.6	2,090.3	5.30	395.520	
1,900.0	1,891.3	1,883.0	1,882.9	4.5	1.0	100.34	-1,234.2	1,674.3	2,096.5	2,091.1	5.41	387.576	
1,968.5	1,958.3	1,945.4	1,945.4	4.8	1.0	100.70	-1,234.3	1,673.7	2,098.8	2,093.1	5.67	370.245	
2,000.0	1,989.1	1,972.9	1,972.8	4.9	1.0	100.86	-1,234.5	1,673.5	2,099.9	2,094.1	5.79	362.642	
2,066.9	2,054.5	2,030.4	2,030.3	5.1	1.0	101.20	-1,234.9	1,673.1	2,102.6	2,096.5	6.05	347.272	
2,100.0	2,086.9	2,058.4	2,058.3	5.3	1.0	101.36	-1,235.1	1,672.9	2,104.0	2,097.8	6.19	340.115	
2,165.3	2,150.8	2,115.1	2,115.1	5.5	1.0	101.69	-1,235.7	1,672.8	2,107.1	2,100.7	6.45	326.581	
2,200.0	2,184.7	2,147.4	2,147.3	5.6	1.0	101.88	-1,236.1	1,672.7	2,108.9	2,102.3	6.60	319.754	
2,263.8	2,247.1	2,206.8	2,206.8	5.9	1.1	102.23	-1,237.0	1,672.6	2,112.2	2,105.3	6.86	307.787	
2,300.0	2,282.5	2,240.9	2,240.9	6.0	1.1	102.43	-1,237.5	1,672.6	2,114.2	2,107.2	7.01	301.397	
2,362.2	2,343.3	2,300.0	2,299.9	6.3	1.1	102.77	-1,238.4	1,672.6	2,117.7	2,110.4	7.28	290.939	
2,400.0	2,380.3	2,336.8	2,336.7	6.5	1.1	102.98	-1,238.9	1,672.6	2,119.9	2,112.4	7.44	284.931	
2,460.6	2,439.6	2,396.7	2,396.6	6.7	1.1	103.32	-1,239.7	1,672.7	2,123.4	2,115.7	7.70	275.737	
2,500.0	2,478.1	2,435.6	2,435.5	6.9	1.1	103.54	-1,240.1	1,672.8	2,125.8	2,117.9	7.87	270.088	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,535.9	2,493.9	2,493.8	7.1	1.2	103.87	-1,240.8	1,672.9	2,129.3	2,121.2	8.13	262.007	
2,600.0	2,575.9	2,536.1	2,536.0	7.3	1.2	104.11	-1,241.3	1,673.0	2,131.8	2,123.5	8.30	256.713	
2,657.5	2,632.2	2,595.9	2,595.8	7.5	1.2	104.45	-1,242.0	1,673.0	2,135.2	2,126.7	8.55	249.604	
2,700.0	2,673.8	2,637.9	2,637.8	7.7	1.2	104.69	-1,242.5	1,672.9	2,137.8	2,129.1	8.74	244.642	
2,755.9	2,728.4	2,692.8	2,692.7	7.9	1.2	105.00	-1,243.2	1,672.7	2,141.2	2,132.2	8.98	238.418	
2,800.0	2,771.6	2,737.5	2,737.4	8.1	1.2	105.25	-1,243.7	1,672.5	2,143.9	2,134.7	9.17	233.742	
2,854.3	2,824.7	2,792.9	2,792.7	8.3	1.3	105.56	-1,244.3	1,672.4	2,147.3	2,137.9	9.41	228.223	
2,900.0	2,869.4	2,836.8	2,836.7	8.5	1.3	105.80	-1,244.6	1,672.3	2,150.1	2,140.5	9.61	223.798	
2,952.7	2,921.0	2,887.1	2,887.0	8.8	1.3	106.08	-1,245.0	1,672.4	2,153.5	2,143.6	9.84	218.908	
3,000.0	2,967.2	2,937.7	2,937.6	9.0	1.3	106.35	-1,245.2	1,672.5	2,156.5	2,146.5	10.04	214.833	
3,051.2	3,017.3	2,995.0	2,994.9	9.2	1.3	106.65	-1,245.3	1,672.5	2,159.7	2,149.4	10.25	210.633	
3,100.0	3,065.0	3,043.3	3,043.2	9.4	1.3	106.91	-1,245.3	1,672.5	2,162.7	2,152.2	10.45	206.883	
3,149.6	3,113.5	3,091.6	3,091.5	9.6	1.3	107.17	-1,245.3	1,672.5	2,165.7	2,155.1	10.66	203.224	
3,200.0	3,162.8	3,140.0	3,139.9	9.8	1.3	107.42	-1,245.4	1,672.4	2,168.9	2,158.1	10.87	199.498	
3,248.0	3,209.8	3,185.9	3,185.8	10.0	1.3	107.67	-1,245.5	1,672.4	2,172.0	2,161.0	11.08	196.053	
3,300.0	3,260.6	3,234.8	3,234.6	10.2	1.3	107.92	-1,245.6	1,672.4	2,175.5	2,164.2	11.31	192.432	
3,346.4	3,306.1	3,278.0	3,277.9	10.5	1.4	108.15	-1,245.7	1,672.4	2,178.6	2,167.1	11.51	189.304	
3,400.0	3,358.5	3,330.3	3,330.2	10.7	1.4	108.43	-1,246.0	1,672.3	2,182.4	2,170.6	11.74	185.853	
3,444.9	3,402.3	3,375.7	3,375.5	10.9	1.4	108.67	-1,246.2	1,672.3	2,185.5	2,173.6	11.94	183.070	
3,500.0	3,456.3	3,432.7	3,432.5	11.1	1.4	108.97	-1,246.4	1,672.2	2,189.4	2,177.2	12.18	179.816	
3,543.3	3,498.6	3,478.2	3,478.0	11.3	1.4	109.21	-1,246.6	1,672.0	2,192.4	2,180.0	12.36	177.372	
3,600.0	3,554.1	3,532.7	3,532.6	11.5	1.4	109.50	-1,246.8	1,671.7	2,196.3	2,183.7	12.60	174.290	
3,641.7	3,594.9	3,570.7	3,570.6	11.7	1.4	109.70	-1,247.0	1,671.5	2,199.3	2,186.5	12.78	172.105	
3,700.0	3,651.9	3,626.2	3,626.1	12.0	1.5	109.99	-1,247.3	1,671.3	2,203.6	2,190.6	13.03	169.155	
3,740.1	3,691.2	3,666.5	3,666.4	12.2	1.5	110.20	-1,247.5	1,671.1	2,206.6	2,193.4	13.20	167.178	
3,800.0	3,749.7	3,726.1	3,726.0	12.4	1.5	110.51	-1,247.7	1,670.9	2,211.1	2,197.6	13.45	164.339	
3,838.6	3,787.4	3,764.1	3,763.9	12.6	1.5	110.71	-1,247.9	1,670.8	2,214.0	2,200.4	13.62	162.574	
3,900.0	3,847.5	3,823.5	3,823.4	12.9	1.5	111.02	-1,248.1	1,670.6	2,218.7	2,204.8	13.88	159.859	
3,937.0	3,883.7	3,858.4	3,858.3	13.0	1.5	111.20	-1,248.3	1,670.4	2,221.5	2,207.5	14.04	158.275	
4,000.0	3,945.3	3,917.2	3,917.1	13.3	1.6	111.51	-1,248.7	1,670.2	2,226.5	2,212.2	14.30	155.665	
4,035.4	3,980.0	3,949.4	3,949.3	13.5	1.6	111.67	-1,248.9	1,670.0	2,229.4	2,215.0	14.45	154.237	
4,060.0	4,004.0	3,971.8	3,971.6	13.6	1.6	111.79	-1,249.1	1,670.0	2,231.4	2,216.9	14.56	153.268	
4,100.0	4,043.2	4,008.3	4,008.1	13.7	1.6	112.03	-1,249.4	1,669.9	2,234.7	2,220.0	14.70	151.975	
4,133.8	4,076.5	4,039.6	4,039.5	13.8	1.6	112.23	-1,249.7	1,669.8	2,237.4	2,222.6	14.81	151.115	
4,200.0	4,141.6	4,100.0	4,099.9	14.0	1.6	112.58	-1,250.4	1,669.8	2,242.2	2,227.2	15.00	149.447	
4,232.3	4,173.5	4,130.5	4,130.4	14.1	1.6	112.73	-1,250.7	1,669.8	2,244.5	2,229.4	15.09	148.731	
4,300.0	4,240.6	4,192.7	4,192.6	14.3	1.6	113.03	-1,251.5	1,669.8	2,248.8	2,233.6	15.27	147.232	
4,330.7	4,271.1	4,224.0	4,223.8	14.4	1.7	113.15	-1,251.9	1,669.9	2,250.6	2,235.3	15.35	146.645	
4,400.0	4,340.0	4,297.1	4,296.9	14.5	1.7	113.41	-1,252.8	1,669.9	2,254.2	2,238.7	15.52	145.290	
4,429.1	4,369.0	4,327.8	4,327.6	14.6	1.7	113.50	-1,253.2	1,669.9	2,255.4	2,239.9	15.58	144.807	
4,500.0	4,439.7	4,400.0	4,399.8	14.8	1.7	113.67	-1,253.9	1,669.8	2,257.9	2,242.2	15.72	143.605	
4,527.5	4,467.2	4,428.1	4,427.9	14.8	1.7	113.72	-1,254.2	1,669.8	2,258.7	2,242.9	15.77	143.211	
4,600.0	4,539.7	4,495.7	4,495.5	14.9	1.8	113.82	-1,255.0	1,669.8	2,260.3	2,244.4	15.90	142.161	
4,626.0	4,565.6	4,524.4	4,524.2	15.0	1.8	113.84	-1,255.3	1,669.8	2,260.7	2,244.8	15.94	141.831	
4,660.2	4,599.8	4,563.4	4,563.3	15.0	1.8	142.59	-1,255.7	1,669.7	2,261.1	2,248.0	13.09	172.681	
4,700.0	4,639.6	4,608.1	4,607.9	15.0	1.8	142.60	-1,256.1	1,669.7	2,261.3	2,248.1	13.17	171.648	
4,724.4	4,664.0	4,633.2	4,633.0	15.1	1.8	142.60	-1,256.2	1,669.6	2,261.4	2,248.1	13.23	170.981	
4,800.0	4,739.6	4,711.4	4,711.2	15.2	1.8	142.60	-1,256.6	1,669.6	2,261.6	2,248.2	13.39	168.949	
4,822.8	4,762.5	4,735.4	4,735.3	15.2	1.8	142.61	-1,256.7	1,669.6	2,261.7	2,248.3	13.44	168.339	
4,900.0	4,839.6	4,814.3	4,814.1	15.3	1.9	142.62	-1,257.0	1,669.4	2,261.8	2,248.2	13.60	166.320	
4,921.2	4,860.9	4,833.3	4,833.2	15.4	1.9	142.62	-1,257.1	1,669.3	2,261.8	2,248.2	13.64	165.789	
5,000.0	4,939.6	4,904.3	4,904.1	15.5	1.9	142.62	-1,257.4	1,669.4	2,262.2	2,248.4	13.80	163.869	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	4,923.4	4,923.2	15.5	1.9	142.62	-1,257.5	1,669.5	2,262.3	2,248.5	13.84	163.407	
5,100.0	5,039.6	5,000.0	4,999.8	15.6	1.9	142.62	-1,257.9	1,669.8	2,262.9	2,248.8	14.01	161.555	
5,118.1	5,057.7	5,016.5	5,016.3	15.7	1.9	142.62	-1,257.9	1,669.9	2,263.0	2,249.0	14.04	161.145	
5,200.0	5,139.6	5,086.0	5,085.8	15.8	1.9	142.62	-1,258.5	1,670.5	2,263.9	2,249.7	14.21	159.344	
5,216.5	5,156.2	5,100.0	5,099.8	15.8	1.9	142.62	-1,258.7	1,670.6	2,264.2	2,249.9	14.24	158.986	
5,300.0	5,239.6	5,177.3	5,177.1	15.9	1.9	142.61	-1,259.6	1,671.5	2,265.5	2,251.1	14.41	157.205	
5,314.9	5,254.6	5,191.1	5,190.9	16.0	1.9	142.61	-1,259.8	1,671.6	2,265.8	2,251.4	14.44	156.889	
5,400.0	5,339.6	5,269.7	5,269.5	16.1	2.0	142.61	-1,261.0	1,672.7	2,267.5	2,252.9	14.62	155.134	
5,413.4	5,353.0	5,282.1	5,281.8	16.1	2.0	142.61	-1,261.2	1,672.9	2,267.8	2,253.1	14.64	154.861	
5,500.0	5,439.6	5,362.7	5,362.5	16.3	2.0	142.61	-1,262.6	1,674.0	2,269.8	2,255.0	14.82	153.124	
5,511.8	5,451.4	5,373.7	5,373.5	16.3	2.0	142.61	-1,262.9	1,674.2	2,270.1	2,255.2	14.85	152.890	
5,600.0	5,539.6	5,454.9	5,454.6	16.4	2.0	142.61	-1,264.6	1,675.4	2,272.4	2,257.3	15.03	151.175	
5,610.2	5,549.9	5,464.2	5,463.9	16.4	2.0	142.61	-1,264.8	1,675.6	2,272.7	2,257.6	15.05	150.978	
5,700.0	5,639.6	5,543.5	5,543.2	16.6	2.0	142.61	-1,266.7	1,676.9	2,275.4	2,260.1	15.24	149.298	
5,708.6	5,648.3	5,550.9	5,550.6	16.6	2.0	142.61	-1,266.9	1,677.1	2,275.7	2,260.4	15.26	149.140	
5,800.0	5,739.6	5,628.9	5,628.5	16.7	2.1	142.62	-1,269.2	1,678.7	2,279.0	2,263.5	15.45	147.505	
5,807.1	5,746.7	5,634.8	5,634.5	16.8	2.1	142.62	-1,269.4	1,678.9	2,279.2	2,263.8	15.47	147.380	
5,900.0	5,839.6	5,715.5	5,715.0	16.9	2.1	142.63	-1,272.6	1,680.4	2,283.2	2,267.5	15.66	145.775	
5,905.5	5,845.1	5,720.9	5,720.4	16.9	2.1	142.63	-1,272.8	1,680.5	2,283.4	2,267.8	15.67	145.680	
6,000.0	5,939.6	5,812.7	5,812.2	17.1	2.1	142.65	-1,276.4	1,682.7	2,287.7	2,271.9	15.88	144.084	
6,003.9	5,943.6	5,816.4	5,815.8	17.1	2.1	142.65	-1,276.5	1,682.8	2,287.9	2,272.0	15.89	144.019	
6,059.2	5,998.8	5,867.4	5,866.8	17.2	2.1	142.65	-1,278.5	1,684.2	2,290.5	2,274.5	16.00	143.124	
6,100.0	6,039.6	5,905.6	5,905.0	17.2	2.2	-127.20	-1,280.0	1,685.3	2,293.2	2,274.5	18.73	122.437	
6,102.3	6,042.0	5,908.0	5,907.4	17.2	2.2	-127.19	-1,280.1	1,685.4	2,293.4	2,274.7	18.73	122.421	
6,150.0	6,089.4	5,956.8	5,956.1	17.3	2.2	-126.96	-1,281.9	1,686.9	2,298.4	2,279.6	18.81	122.161	
6,200.0	6,138.7	6,007.6	6,006.9	17.3	2.2	-126.66	-1,283.7	1,688.5	2,305.7	2,286.8	18.87	122.166	
6,200.8	6,139.5	6,008.4	6,007.7	17.3	2.2	-126.66	-1,283.8	1,688.6	2,305.8	2,287.0	18.87	122.170	
6,250.0	6,187.4	6,058.9	6,058.1	17.3	2.2	-126.30	-1,285.4	1,690.2	2,315.0	2,296.1	18.91	122.452	
6,299.2	6,234.4	6,107.0	6,106.1	17.4	2.2	-125.86	-1,287.0	1,691.9	2,326.1	2,307.2	18.91	123.007	
6,300.0	6,235.1	6,107.6	6,106.7	17.4	2.2	-125.85	-1,287.0	1,691.9	2,326.3	2,307.4	18.91	123.017	
6,350.0	6,281.7	6,148.4	6,147.5	17.4	2.2	-125.26	-1,288.3	1,693.3	2,339.7	2,320.9	18.89	123.883	
6,397.6	6,324.8	6,185.9	6,184.9	17.3	2.2	-124.59	-1,289.5	1,694.7	2,354.5	2,335.7	18.84	124.946	
6,400.0	6,326.9	6,187.8	6,186.8	17.3	2.2	-124.55	-1,289.6	1,694.8	2,355.3	2,336.4	18.84	125.003	
6,450.0	6,370.5	6,228.1	6,227.1	17.3	2.2	-123.73	-1,291.0	1,696.4	2,372.9	2,354.1	18.79	126.315	
6,496.0	6,409.1	6,264.7	6,263.6	17.3	2.3	-122.87	-1,292.2	1,697.8	2,390.9	2,372.2	18.73	127.639	
6,500.0	6,412.3	6,267.8	6,266.7	17.3	2.3	-122.79	-1,292.3	1,697.9	2,392.6	2,373.8	18.73	127.757	
6,550.0	6,452.1	6,305.1	6,303.9	17.3	2.3	-121.68	-1,293.6	1,699.4	2,414.1	2,395.5	18.68	129.252	
6,594.5	6,485.6	6,335.1	6,333.9	17.3	2.3	-120.53	-1,294.6	1,700.7	2,434.9	2,416.3	18.65	130.534	
6,600.0	6,489.7	6,338.7	6,337.5	17.3	2.3	-120.37	-1,294.7	1,700.8	2,437.6	2,419.0	18.65	130.693	
6,650.0	6,524.9	6,369.9	6,368.7	17.2	2.3	-118.86	-1,295.8	1,702.1	2,463.0	2,444.3	18.67	131.933	
6,692.9	6,553.0	6,394.8	6,393.5	17.2	2.3	-117.37	-1,296.7	1,703.1	2,486.1	2,467.4	18.73	132.712	
6,700.0	6,557.5	6,400.0	6,398.7	17.2	2.3	-117.14	-1,296.9	1,703.4	2,490.1	2,471.3	18.75	132.819	
6,750.0	6,587.4	6,423.1	6,421.8	17.2	2.3	-115.07	-1,297.8	1,704.3	2,518.9	2,500.0	18.90	133.259	
6,791.3	6,609.9	6,441.3	6,439.9	17.2	2.3	-113.17	-1,298.5	1,705.1	2,543.9	2,524.8	19.10	133.174	
6,800.0	6,614.4	6,444.8	6,443.5	17.2	2.3	-112.75	-1,298.6	1,705.3	2,549.3	2,530.1	19.15	133.124	
6,850.0	6,638.4	6,463.9	6,462.5	17.2	2.3	-110.12	-1,299.4	1,706.1	2,581.2	2,561.7	19.50	132.396	
6,889.7	6,655.3	6,477.0	6,475.6	17.4	2.3	-107.80	-1,299.9	1,706.7	2,607.4	2,587.6	19.85	131.366	
6,900.0	6,659.4	6,480.1	6,478.7	17.5	2.3	-107.17	-1,300.1	1,706.8	2,614.3	2,594.4	19.94	131.117	
6,950.0	6,677.1	6,500.0	6,498.5	18.0	2.3	-104.06	-1,300.9	1,707.7	2,648.7	2,628.3	20.48	129.341	
6,988.2	6,688.4	6,502.3	6,500.8	18.5	2.3	-101.16	-1,301.0	1,707.8	2,675.7	2,654.7	20.94	127.800	
7,000.0	6,691.5	6,505.0	6,503.5	18.7	2.3	-100.29	-1,301.1	1,707.9	2,684.1	2,663.0	21.08	127.333	
7,050.0	6,702.5	6,514.3	6,512.8	19.5	2.3	-96.41	-1,301.5	1,708.3	2,720.3	2,698.6	21.75	125.071	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore #1										Offset Site Error:		0.0 usft	
Survey Program: 100-GYD_CT										Offset Well Error:		0.0 usft	
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,086.6	6,708.4	6,518.8	6,517.3	20.1	2.3	-93.37	-1,301.7	1,708.5	2,747.3	2,725.0	22.28	123.312	
7,100.0	6,710.1	6,519.9	6,518.4	20.4	2.3	-92.22	-1,301.8	1,708.6	2,757.3	2,734.8	22.47	122.704	
7,150.0	6,714.2	6,521.8	6,520.4	21.3	2.3	-87.77	-1,301.8	1,708.7	2,794.7	2,771.4	23.23	120.314	
7,185.0	6,715.0	6,521.0	6,519.5	21.9	2.3	-84.54	-1,301.8	1,708.6	2,821.0	2,797.3	23.77	118.693	
7,185.6	6,715.0	6,521.0	6,519.5	21.9	2.3	-84.49	-1,301.8	1,708.6	2,821.4	2,797.7	23.78	118.670	
7,200.0	6,715.0	6,520.3	6,518.8	22.2	2.3	-84.47	-1,301.8	1,708.6	2,832.4	2,808.3	24.05	117.767	
7,283.4	6,714.8	6,516.1	6,514.7	23.9	2.3	-84.34	-1,301.6	1,708.4	2,896.0	2,870.3	25.72	112.616	
7,300.0	6,714.8	6,515.3	6,513.8	24.2	2.3	-84.32	-1,301.6	1,708.4	2,908.8	2,882.7	26.05	111.678	
7,381.9	6,714.6	6,511.3	6,509.8	26.0	2.3	-84.19	-1,301.4	1,708.2	2,972.4	2,944.6	27.79	106.945	
7,400.0	6,714.6	6,510.4	6,509.0	26.4	2.3	-84.17	-1,301.4	1,708.2	2,986.6	2,958.4	28.18	105.982	
7,480.3	6,714.4	6,506.6	6,505.1	28.2	2.3	-84.05	-1,301.2	1,708.0	3,050.0	3,020.0	29.99	101.714	
7,500.0	6,714.4	6,505.6	6,504.2	28.7	2.3	-84.02	-1,301.2	1,707.9	3,065.7	3,035.3	30.43	100.749	
7,578.7	6,714.2	6,501.9	6,500.4	30.5	2.3	-83.90	-1,301.0	1,707.8	3,128.8	3,096.5	32.27	96.958	
7,600.0	6,714.2	6,500.8	6,499.4	31.0	2.3	-83.87	-1,301.0	1,707.7	3,146.0	3,113.2	32.77	96.011	
7,677.1	6,714.0	6,500.0	6,498.5	32.9	2.3	-83.84	-1,300.9	1,707.7	3,208.7	3,174.1	34.63	92.657	
7,700.0	6,714.0	6,500.0	6,498.5	33.4	2.3	-83.84	-1,300.9	1,707.7	3,227.4	3,192.2	35.18	91.734	
7,775.6	6,713.9	6,500.0	6,498.5	35.3	2.3	-83.84	-1,300.9	1,707.7	3,289.6	3,252.5	37.05	88.786	
7,800.0	6,713.8	6,500.0	6,498.5	35.9	2.3	-83.84	-1,300.9	1,707.7	3,309.8	3,272.1	37.65	87.899	
7,874.0	6,713.7	6,490.0	6,488.6	37.8	2.3	-83.54	-1,300.5	1,707.2	3,371.3	3,331.8	39.49	85.362	
7,900.0	6,713.6	6,489.0	6,487.5	38.4	2.3	-83.50	-1,300.4	1,707.2	3,393.1	3,352.9	40.15	84.518	
7,972.4	6,713.5	6,486.2	6,484.7	40.3	2.3	-83.42	-1,300.3	1,707.1	3,454.0	3,412.0	41.99	82.261	
8,000.0	6,713.4	6,485.1	6,483.7	41.0	2.3	-83.38	-1,300.3	1,707.0	3,477.3	3,434.6	42.69	81.456	
8,070.8	6,713.3	6,482.4	6,481.0	42.8	2.3	-83.30	-1,300.2	1,706.9	3,537.5	3,492.9	44.51	79.472	
8,100.0	6,713.2	6,481.2	6,479.8	43.6	2.3	-83.27	-1,300.1	1,706.9	3,562.3	3,517.1	45.26	78.705	
8,169.3	6,713.1	6,478.6	6,477.2	45.4	2.3	-83.18	-1,300.0	1,706.7	3,621.7	3,574.6	47.06	76.959	
8,200.0	6,713.0	6,477.4	6,476.0	46.2	2.3	-83.15	-1,300.0	1,706.7	3,648.1	3,600.2	47.86	76.229	
8,267.7	6,712.9	6,474.8	6,473.4	48.0	2.3	-83.07	-1,299.9	1,706.6	3,706.6	3,656.9	49.63	74.687	
8,300.0	6,712.8	6,473.6	6,472.2	48.8	2.3	-83.03	-1,299.8	1,706.5	3,734.6	3,684.1	50.47	73.992	
8,366.1	6,712.7	6,471.1	6,469.7	50.6	2.3	-82.95	-1,299.7	1,706.4	3,792.1	3,739.9	52.21	72.628	
8,400.0	6,712.6	6,469.8	6,468.4	51.5	2.3	-82.91	-1,299.6	1,706.4	3,821.7	3,768.6	53.10	71.966	
8,464.5	6,712.5	6,467.3	6,465.9	53.2	2.3	-82.84	-1,299.5	1,706.2	3,878.3	3,823.5	54.81	70.756	
8,500.0	6,712.4	6,466.0	6,464.6	54.1	2.3	-82.80	-1,299.5	1,706.2	3,909.4	3,853.7	55.75	70.125	
8,563.0	6,712.3	6,463.6	6,462.2	55.8	2.3	-82.72	-1,299.4	1,706.1	3,965.0	3,907.6	57.42	69.049	
8,600.0	6,712.3	6,462.2	6,460.8	56.8	2.3	-82.68	-1,299.3	1,706.0	3,997.8	3,939.3	58.41	68.448	
8,661.4	6,712.1	6,459.9	6,458.5	58.5	2.3	-82.61	-1,299.2	1,705.9	4,052.2	3,992.2	60.04	67.488	
8,700.0	6,712.1	6,458.4	6,457.1	59.5	2.3	-82.57	-1,299.2	1,705.9	4,086.6	4,025.5	61.07	66.914	
8,759.8	6,711.9	6,456.2	6,454.8	61.1	2.3	-82.50	-1,299.1	1,705.8	4,140.0	4,077.3	62.67	66.057	
8,800.0	6,711.9	6,454.7	6,453.3	62.2	2.3	-82.45	-1,299.0	1,705.7	4,176.0	4,112.2	63.75	65.508	
8,858.2	6,711.8	6,452.5	6,451.2	63.8	2.3	-82.38	-1,298.9	1,705.6	4,228.2	4,162.9	65.31	64.741	
8,900.0	6,711.7	6,451.0	6,449.6	64.9	2.3	-82.34	-1,298.9	1,705.5	4,265.8	4,199.3	66.43	64.215	
8,956.7	6,711.6	6,448.9	6,447.5	66.5	2.3	-82.27	-1,298.8	1,705.4	4,316.9	4,248.9	67.95	63.528	
9,000.0	6,711.5	6,447.3	6,445.9	67.6	2.3	-82.22	-1,298.7	1,705.4	4,356.0	4,286.9	69.12	63.024	
9,055.1	6,711.4	6,445.2	6,443.9	69.1	2.3	-82.16	-1,298.7	1,705.3	4,405.9	4,335.3	70.60	62.406	
9,100.0	6,711.3	6,443.6	6,442.2	70.4	2.3	-82.11	-1,298.6	1,705.2	4,446.7	4,374.9	71.81	61.923	
9,153.5	6,711.2	6,441.6	6,440.2	71.8	2.3	-82.05	-1,298.5	1,705.1	4,495.4	4,422.1	73.25	61.367	
9,200.0	6,711.1	6,439.9	6,438.5	73.1	2.3	-82.00	-1,298.4	1,705.1	4,537.8	4,463.2	74.51	60.904	
9,251.9	6,711.0	6,438.0	6,436.6	74.5	2.3	-81.94	-1,298.4	1,705.0	4,585.2	4,509.3	75.91	60.403	
9,300.0	6,710.9	6,436.2	6,434.9	75.8	2.3	-81.88	-1,298.3	1,704.9	4,629.2	4,552.0	77.21	59.958	
9,350.4	6,710.8	6,434.4	6,433.0	77.2	2.3	-81.83	-1,298.2	1,704.8	4,675.4	4,596.8	78.57	59.506	
9,400.0	6,710.7	6,432.6	6,431.2	78.6	2.3	-81.77	-1,298.2	1,704.7	4,721.0	4,641.0	79.91	59.077	
9,448.8	6,710.6	6,430.8	6,429.5	79.9	2.3	-81.72	-1,298.1	1,704.7	4,765.9	4,684.6	81.23	58.669	
9,500.0	6,710.5	6,428.9	6,427.6	81.3	2.3	-81.66	-1,298.0	1,704.6	4,813.0	4,730.4	82.62	58.257	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	6,427.2	6,425.9	82.6	2.3	-81.61	-1,297.9	1,704.5	4,856.6	4,772.7	83.90	57.888	
9,600.0	6,710.3	6,425.3	6,424.0	84.1	2.3	-81.55	-1,297.9	1,704.4	4,905.4	4,820.1	85.33	57.490	
9,645.6	6,710.2	6,423.7	6,422.4	85.3	2.3	-81.50	-1,297.8	1,704.4	4,947.7	4,861.2	86.56	57.157	
9,700.0	6,710.1	6,421.7	6,420.4	86.8	2.3	-81.44	-1,297.7	1,704.3	4,998.1	4,910.1	88.04	56.773	
9,744.1	6,710.0	6,420.1	6,418.8	88.1	2.3	-81.39	-1,297.7	1,704.2	5,039.1	4,949.8	89.23	56.471	
9,800.0	6,709.9	6,418.1	6,416.8	89.6	2.3	-81.33	-1,297.6	1,704.1	5,091.1	5,000.3	90.75	56.101	
9,842.5	6,709.9	6,416.6	6,415.3	90.8	2.3	-81.28	-1,297.5	1,704.1	5,130.7	5,038.8	91.90	55.828	
9,900.0	6,709.7	6,414.6	6,413.3	92.4	2.3	-81.22	-1,297.5	1,704.0	5,184.3	5,090.9	93.46	55.470	
9,940.9	6,709.7	6,413.1	6,411.8	93.5	2.3	-81.18	-1,297.4	1,703.9	5,222.5	5,128.0	94.57	55.223	
10,000.0	6,709.6	6,411.0	6,409.7	95.1	2.3	-81.11	-1,297.3	1,703.8	5,277.8	5,181.6	96.18	54.877	
10,039.3	6,709.5	6,400.0	6,398.7	96.2	2.3	-80.78	-1,296.9	1,703.4	5,314.6	5,217.5	97.17	54.692	
10,100.0	6,709.4	6,400.0	6,398.7	97.9	2.3	-80.78	-1,296.9	1,703.4	5,371.5	5,272.7	98.83	54.348	
10,137.8	6,709.3	6,400.0	6,398.7	98.9	2.3	-80.78	-1,296.9	1,703.4	5,406.9	5,307.1	99.87	54.140	
10,200.0	6,709.2	6,400.0	6,398.7	100.7	2.3	-80.78	-1,296.9	1,703.4	5,465.4	5,363.8	101.57	53.807	
10,236.2	6,709.1	6,400.0	6,398.7	101.7	2.3	-80.78	-1,296.9	1,703.4	5,499.5	5,396.9	102.57	53.618	
10,300.0	6,709.0	6,400.0	6,398.7	103.4	2.3	-80.78	-1,296.9	1,703.4	5,559.5	5,455.2	104.32	53.295	
10,334.6	6,708.9	6,400.0	6,398.7	104.4	2.3	-80.78	-1,296.9	1,703.4	5,592.2	5,486.9	105.27	53.124	
10,400.0	6,708.8	6,400.0	6,398.7	106.2	2.3	-80.78	-1,296.9	1,703.4	5,653.9	5,546.8	107.06	52.810	
10,433.0	6,708.7	6,400.0	6,398.7	107.1	2.3	-80.78	-1,296.9	1,703.4	5,685.1	5,577.1	107.97	52.655	
10,500.0	6,708.6	6,392.7	6,391.4	109.0	2.3	-80.55	-1,296.7	1,703.1	5,748.4	5,638.6	109.74	52.380	
10,531.5	6,708.5	6,391.5	6,390.2	109.9	2.3	-80.52	-1,296.6	1,703.0	5,778.2	5,667.6	110.60	52.245	
10,600.0	6,708.4	6,388.8	6,387.5	111.8	2.3	-80.44	-1,296.5	1,702.9	5,843.1	5,730.6	112.46	51.959	
10,629.9	6,708.4	6,387.6	6,386.4	112.6	2.3	-80.40	-1,296.5	1,702.9	5,871.4	5,758.2	113.27	51.837	
10,700.0	6,708.2	6,384.9	6,383.7	114.6	2.3	-80.32	-1,296.4	1,702.7	5,937.9	5,822.8	115.17	51.560	
10,728.3	6,708.2	6,383.8	6,382.6	115.3	2.3	-80.29	-1,296.3	1,702.7	5,964.8	5,848.9	115.93	51.450	
10,800.0	6,708.0	6,381.1	6,379.8	117.3	2.3	-80.20	-1,296.2	1,702.6	6,033.0	5,915.1	117.88	51.181	
10,826.7	6,708.0	6,380.0	6,378.8	118.1	2.3	-80.17	-1,296.2	1,702.5	6,058.4	5,939.8	118.60	51.082	
10,900.0	6,707.8	6,377.2	6,376.0	120.1	2.3	-80.09	-1,296.1	1,702.4	6,128.2	6,007.6	120.58	50.820	
10,925.2	6,707.8	6,376.3	6,375.0	120.8	2.3	-80.06	-1,296.1	1,702.4	6,152.1	6,030.9	121.27	50.732	
11,000.0	6,707.6	6,373.4	6,372.1	122.9	2.3	-79.97	-1,296.0	1,702.3	6,223.5	6,100.2	123.29	50.477	
11,023.6	6,707.6	6,372.5	6,371.2	123.6	2.3	-79.94	-1,295.9	1,702.2	6,246.0	6,122.1	123.93	50.399	
11,100.0	6,707.5	6,369.6	6,368.3	125.7	2.3	-79.85	-1,295.8	1,702.1	6,319.0	6,193.0	126.00	50.151	
11,122.0	6,707.4	6,368.7	6,367.5	126.3	2.3	-79.83	-1,295.8	1,702.1	6,340.0	6,213.4	126.60	50.081	
11,200.0	6,707.3	6,365.7	6,364.5	128.5	2.3	-79.74	-1,295.7	1,701.9	6,414.6	6,285.9	128.71	49.839	
11,220.4	6,707.2	6,364.9	6,363.7	129.0	2.3	-79.71	-1,295.6	1,701.9	6,434.1	6,304.9	129.26	49.777	
11,300.0	6,707.1	6,361.9	6,360.7	131.3	2.3	-79.62	-1,295.5	1,701.8	6,510.3	6,378.9	131.41	49.542	
11,318.9	6,707.0	6,361.2	6,360.0	131.8	2.3	-79.60	-1,295.5	1,701.8	6,528.4	6,396.5	131.92	49.488	
11,400.0	6,706.9	6,358.1	6,356.9	134.0	2.3	-79.51	-1,295.4	1,701.6	6,606.2	6,472.1	134.11	49.258	
11,417.3	6,706.9	6,357.5	6,356.2	134.5	2.3	-79.49	-1,295.4	1,701.6	6,622.8	6,488.2	134.58	49.211	
11,500.0	6,706.7	6,354.3	6,353.1	136.8	2.3	-79.39	-1,295.3	1,701.5	6,702.2	6,565.4	136.81	48.987	
11,515.7	6,706.7	6,353.7	6,352.5	137.3	2.3	-79.37	-1,295.2	1,701.4	6,717.3	6,580.0	137.24	48.946	
11,600.0	6,706.5	6,350.5	6,349.3	139.6	2.3	-79.28	-1,295.1	1,701.3	6,798.3	6,658.7	139.51	48.728	
11,614.1	6,706.5	6,350.0	6,348.8	140.0	2.3	-79.26	-1,295.1	1,701.3	6,811.9	6,672.0	139.90	48.692	
11,700.0	6,706.3	6,346.7	6,345.5	142.4	2.3	-79.16	-1,295.0	1,701.2	6,894.5	6,752.3	142.21	48.480	
11,712.6	6,706.3	6,346.3	6,345.1	142.8	2.3	-79.15	-1,295.0	1,701.1	6,906.6	6,764.0	142.55	48.449	
11,800.0	6,706.1	6,343.0	6,341.8	145.2	2.3	-79.05	-1,294.9	1,701.0	6,990.8	6,845.9	144.91	48.242	
11,811.0	6,706.1	6,342.6	6,341.4	145.5	2.3	-79.04	-1,294.9	1,701.0	7,001.4	6,856.2	145.21	48.217	
11,900.0	6,705.9	6,339.2	6,338.0	148.0	2.3	-78.93	-1,294.7	1,700.8	7,087.2	6,939.6	147.61	48.014	
11,909.4	6,705.9	6,338.9	6,337.7	148.3	2.3	-78.92	-1,294.7	1,700.8	7,096.3	6,948.4	147.86	47.993	
12,000.0	6,705.8	6,335.5	6,334.3	150.8	2.3	-78.82	-1,294.6	1,700.7	7,183.7	7,033.4	150.30	47.796	
12,007.8	6,705.7	6,335.2	6,334.0	151.0	2.3	-78.81	-1,294.6	1,700.7	7,191.3	7,040.8	150.51	47.779	
12,100.0	6,705.6	6,331.7	6,330.5	153.6	2.3	-78.71	-1,294.5	1,700.5	7,280.3	7,127.3	152.99	47.586	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,331.5	6,330.3	153.8	2.3	-78.70	-1,294.5	1,700.5	7,286.4	7,133.2	153.16	47.574	
12,200.0	6,705.4	6,328.0	6,326.8	156.4	2.3	-78.60	-1,294.3	1,700.4	7,377.0	7,221.3	155.68	47.385	
12,204.7	6,705.4	6,327.8	6,326.6	156.5	2.3	-78.59	-1,294.3	1,700.4	7,381.5	7,225.7	155.81	47.376	
12,300.0	6,705.2	6,324.2	6,323.1	159.2	2.3	-78.48	-1,294.2	1,700.2	7,473.7	7,315.4	158.37	47.192	
12,303.1	6,705.2	6,324.1	6,323.0	159.3	2.3	-78.48	-1,294.2	1,700.2	7,476.8	7,318.3	158.45	47.186	
12,400.0	6,705.0	6,320.5	6,319.4	162.0	2.3	-78.37	-1,294.1	1,700.1	7,570.6	7,409.5	161.06	47.006	
12,401.5	6,705.0	6,320.5	6,319.3	162.0	2.3	-78.37	-1,294.1	1,700.1	7,572.1	7,411.0	161.10	47.003	
12,500.0	6,704.8	6,316.8	6,315.7	164.8	2.3	-78.26	-1,294.0	1,699.9	7,667.5	7,503.8	163.74	46.828	
12,598.4	6,704.6	6,313.2	6,312.0	167.5	2.3	-78.15	-1,293.8	1,699.8	7,763.0	7,596.6	166.38	46.659	
12,600.0	6,704.6	6,313.1	6,312.0	167.6	2.3	-78.15	-1,293.8	1,699.8	7,764.5	7,598.1	166.42	46.656	
12,696.8	6,704.4	6,309.5	6,308.4	170.3	2.3	-78.04	-1,293.7	1,699.6	7,858.5	7,689.5	169.02	46.496	
12,700.0	6,704.4	6,309.4	6,308.3	170.4	2.3	-78.04	-1,293.7	1,699.6	7,861.6	7,692.5	169.10	46.490	
12,795.2	6,704.3	6,300.0	6,298.9	173.0	2.3	-77.76	-1,293.4	1,699.2	7,954.1	7,782.6	171.55	46.366	
12,800.0	6,704.2	6,300.0	6,298.9	173.2	2.3	-77.76	-1,293.4	1,699.2	7,958.8	7,787.1	171.68	46.358	
12,893.7	6,704.1	6,300.0	6,298.9	175.8	2.3	-77.76	-1,293.4	1,699.2	8,049.8	7,875.6	174.25	46.198	
12,900.0	6,704.1	6,300.0	6,298.9	176.0	2.3	-77.76	-1,293.4	1,699.2	8,056.0	7,881.6	174.42	46.187	
12,992.1	6,703.9	6,300.0	6,298.9	178.5	2.3	-77.76	-1,293.4	1,699.2	8,145.6	7,968.6	176.94	46.035	
13,000.0	6,703.9	6,300.0	6,298.9	178.8	2.3	-77.76	-1,293.4	1,699.2	8,153.3	7,976.1	177.16	46.022	
13,090.5	6,703.7	6,300.0	6,298.9	181.3	2.3	-77.76	-1,293.4	1,699.2	8,241.4	8,061.7	179.64	45.877	
13,100.0	6,703.7	6,300.0	6,298.9	181.6	2.3	-77.76	-1,293.4	1,699.2	8,250.6	8,070.7	179.90	45.863	
13,188.9	6,703.5	6,291.2	6,290.1	184.0	2.3	-77.49	-1,293.1	1,698.9	8,337.3	8,155.1	182.17	45.766	
13,200.0	6,703.5	6,290.8	6,289.7	184.4	2.3	-77.48	-1,293.1	1,698.9	8,348.0	8,165.6	182.47	45.751	
13,287.4	6,703.3	6,287.5	6,286.4	186.8	2.3	-77.38	-1,293.0	1,698.7	8,433.2	8,248.4	184.79	45.635	
13,300.0	6,703.3	6,287.1	6,285.9	187.2	2.3	-77.37	-1,292.9	1,698.7	8,445.5	8,260.4	185.13	45.619	
13,385.8	6,703.2	6,283.9	6,282.7	189.6	2.3	-77.27	-1,292.8	1,698.6	8,529.2	8,341.7	187.42	45.509	
13,400.0	6,703.1	6,283.3	6,282.2	190.0	2.3	-77.26	-1,292.8	1,698.6	8,543.0	8,355.2	187.79	45.491	
13,484.2	6,703.0	6,280.2	6,279.1	192.3	2.3	-77.16	-1,292.7	1,698.4	8,625.2	8,435.2	190.04	45.387	
13,500.0	6,702.9	6,279.6	6,278.5	192.8	2.3	-77.15	-1,292.7	1,698.4	8,640.6	8,450.1	190.46	45.368	
13,582.6	6,702.8	6,276.5	6,275.4	195.1	2.3	-77.06	-1,292.6	1,698.3	8,721.3	8,528.6	192.65	45.270	
13,600.0	6,702.8	6,275.9	6,274.8	195.6	2.3	-77.04	-1,292.6	1,698.3	8,738.2	8,545.1	193.11	45.249	
13,681.1	6,702.6	6,272.9	6,271.8	197.8	2.3	-76.95	-1,292.5	1,698.1	8,817.4	8,622.1	195.27	45.156	
13,700.0	6,702.6	6,272.2	6,271.1	198.4	2.3	-76.93	-1,292.4	1,698.1	8,835.9	8,640.1	195.77	45.134	
13,779.5	6,702.4	6,269.2	6,268.1	200.6	2.3	-76.84	-1,292.3	1,698.0	8,913.6	8,715.7	197.88	45.046	
13,800.0	6,702.4	6,268.5	6,267.4	201.2	2.3	-76.82	-1,292.3	1,698.0	8,933.6	8,735.2	198.42	45.023	
13,877.9	6,702.2	6,265.6	6,264.5	203.3	2.3	-76.73	-1,292.2	1,697.9	9,009.8	8,809.3	200.49	44.939	
13,900.0	6,702.2	6,264.8	6,263.7	204.0	2.3	-76.71	-1,292.2	1,697.8	9,031.4	8,830.3	201.07	44.916	
13,976.3	6,702.1	6,262.0	6,260.9	206.1	2.3	-76.62	-1,292.1	1,697.7	9,106.1	8,903.0	203.10	44.836	
14,000.0	6,702.0	6,261.1	6,260.0	206.8	2.3	-76.60	-1,292.1	1,697.7	9,129.2	8,925.5	203.72	44.812	
14,074.8	6,701.9	6,258.4	6,257.3	208.9	2.3	-76.52	-1,292.0	1,697.6	9,202.4	8,996.7	205.70	44.737	
14,100.0	6,701.8	6,257.4	6,256.4	209.6	2.3	-76.49	-1,291.9	1,697.5	9,227.1	9,020.7	206.37	44.712	
14,173.2	6,701.7	6,254.8	6,253.7	211.6	2.3	-76.41	-1,291.9	1,697.4	9,298.8	9,090.5	208.30	44.640	
14,200.0	6,701.6	6,253.8	6,252.7	212.4	2.3	-76.38	-1,291.8	1,697.4	9,325.0	9,116.0	209.01	44.615	
14,271.6	6,701.5	6,251.2	6,250.1	214.4	2.3	-76.30	-1,291.7	1,697.3	9,395.2	9,184.3	210.90	44.547	
14,300.0	6,701.4	6,250.1	6,249.1	215.2	2.3	-76.27	-1,291.7	1,697.2	9,423.0	9,211.3	211.65	44.521	
14,370.0	6,701.3	6,247.6	6,246.5	217.1	2.3	-76.20	-1,291.6	1,697.1	9,491.6	9,278.1	213.50	44.457	
14,400.0	6,701.3	6,246.5	6,245.4	218.0	2.3	-76.16	-1,291.6	1,697.1	9,521.0	9,306.7	214.29	44.430	
14,468.5	6,701.1	6,244.0	6,243.0	219.9	2.3	-76.09	-1,291.5	1,697.0	9,588.1	9,372.0	216.10	44.369	
14,500.0	6,701.1	6,242.9	6,241.8	220.8	2.3	-76.06	-1,291.5	1,696.9	9,619.0	9,402.1	216.93	44.342	
14,566.9	6,701.0	6,240.5	6,239.4	222.6	2.3	-75.99	-1,291.4	1,696.9	9,684.6	9,465.9	218.69	44.285	
14,600.0	6,700.9	6,239.3	6,238.2	223.6	2.3	-75.95	-1,291.3	1,696.8	9,717.1	9,497.5	219.56	44.257	
14,665.3	6,700.8	6,236.9	6,235.9	225.4	2.2	-75.88	-1,291.3	1,696.7	9,781.2	9,559.9	221.28	44.203	
14,700.0	6,700.7	6,235.7	6,234.6	226.4	2.2	-75.84	-1,291.2	1,696.7	9,815.2	9,593.0	222.19	44.174	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	6,233.4	6,232.3	228.2	2.2	-75.78	-1,291.1	1,696.6	9,877.8	9,653.9	223.87	44.123	
14,800.0	6,700.5	6,232.1	6,231.0	229.2	2.2	-75.74	-1,291.1	1,696.5	9,913.3	9,688.5	224.82	44.094	
14,862.2	6,700.4	6,229.8	6,228.8	230.9	2.2	-75.67	-1,291.0	1,696.4	9,974.4	9,747.9	226.45	44.046 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	113.04	-1,193.0	2,805.3	3,048.5				
98.4	98.4	85.9	85.9	0.1	0.0	113.04	-1,192.8	2,805.3	3,048.4	3,048.3	0.10	N/A	
100.0	100.0	87.6	87.6	0.1	0.0	113.04	-1,192.8	2,805.3	3,048.4	3,048.3	0.10	N/A	
196.8	196.8	181.2	181.2	0.3	0.1	113.03	-1,192.5	2,805.3	3,048.2	3,047.8	0.40	7,708.606	
200.0	200.0	184.2	184.2	0.3	0.1	113.03	-1,192.5	2,805.3	3,048.2	3,047.8	0.41	7,517.805	
295.3	295.3	294.4	294.4	0.5	0.2	113.03	-1,192.2	2,805.1	3,048.0	3,047.2	0.74	4,129.472	
300.0	300.0	300.0	300.0	0.5	0.2	113.03	-1,192.2	2,805.0	3,047.9	3,047.2	0.75	4,038.057	
364.8	364.8	346.8	346.8	0.7	0.2	113.02	-1,192.0	2,805.0	3,047.7	3,046.8	0.91	3,339.631	
393.7	393.7	367.6	367.6	0.8	0.2	113.02	-1,192.0	2,805.0	3,047.8	3,046.8	0.98	3,100.304	
400.0	400.0	372.2	372.2	0.8	0.2	113.02	-1,191.9	2,805.0	3,047.8	3,046.8	1.00	3,052.669	
492.1	492.1	460.9	460.8	1.0	0.3	113.01	-1,191.4	2,805.8	3,048.3	3,047.0	1.26	2,420.408	
500.0	500.0	469.8	469.8	1.0	0.3	113.01	-1,191.4	2,805.9	3,048.3	3,047.0	1.28	2,374.066	
590.5	590.5	551.9	551.9	1.2	0.4	112.98	-1,190.5	2,806.6	3,048.7	3,047.2	1.54	1,975.296	
600.0	600.0	559.6	559.6	1.2	0.4	112.98	-1,190.4	2,806.7	3,048.8	3,047.2	1.57	1,942.562	
689.0	689.0	647.4	647.4	1.4	0.4	112.96	-1,189.8	2,807.8	3,049.6	3,047.8	1.82	1,673.755	
700.0	700.0	660.7	660.7	1.4	0.4	112.96	-1,189.7	2,808.0	3,049.7	3,047.8	1.85	1,644.515	
787.4	787.4	757.2	757.2	1.6	0.5	112.94	-1,188.9	2,808.8	3,050.1	3,048.0	2.10	1,449.847	
800.0	800.0	770.4	770.3	1.7	0.5	112.94	-1,188.8	2,808.9	3,050.2	3,048.0	2.14	1,425.967	
885.8	885.8	864.2	864.2	1.9	0.5	112.92	-1,188.1	2,809.5	3,050.4	3,048.0	2.38	1,283.117	
900.0	900.0	880.0	880.0	1.9	0.5	112.92	-1,188.0	2,809.5	3,050.4	3,048.0	2.42	1,262.303	
984.2	984.2	952.0	951.9	2.1	0.6	112.91	-1,187.6	2,809.9	3,050.6	3,047.9	2.64	1,156.762	
1,000.0	1,000.0	964.3	964.3	2.1	0.6	112.91	-1,187.5	2,810.0	3,050.6	3,048.0	2.68	1,139.245	
1,082.7	1,082.7	1,040.3	1,040.3	2.3	0.6	112.89	-1,186.8	2,810.9	3,051.3	3,048.4	2.90	1,053.308	
1,100.0	1,100.0	1,059.2	1,059.2	2.3	0.6	112.89	-1,186.6	2,811.2	3,051.4	3,048.5	2.94	1,036.386	
1,181.1	1,181.1	1,146.6	1,146.5	2.5	0.7	84.15	-1,185.8	2,812.1	3,051.8	3,048.7	3.14	972.898	
1,200.0	1,200.0	1,166.8	1,166.7	2.6	0.7	84.16	-1,185.7	2,812.3	3,051.9	3,048.7	3.19	957.815	
1,279.5	1,279.4	1,249.4	1,249.4	2.7	0.7	84.23	-1,185.5	2,812.8	3,051.8	3,048.4	3.39	899.599	
1,300.0	1,299.8	1,270.3	1,270.3	2.8	0.7	84.25	-1,185.4	2,812.9	3,051.8	3,048.3	3.45	885.794	
1,377.9	1,377.5	1,348.7	1,348.6	3.0	0.8	84.37	-1,185.0	2,813.4	3,051.4	3,047.8	3.65	835.928	
1,400.0	1,399.5	1,370.6	1,370.6	3.0	0.8	84.41	-1,184.9	2,813.5	3,051.3	3,047.6	3.71	822.824	
1,476.4	1,475.3	1,444.5	1,444.4	3.2	0.8	84.58	-1,184.6	2,813.9	3,050.7	3,046.8	3.92	778.669	
1,500.0	1,498.7	1,466.9	1,466.9	3.3	0.8	84.64	-1,184.6	2,814.0	3,050.5	3,046.5	3.98	765.891	
1,574.8	1,572.6	1,539.8	1,539.7	3.5	0.8	84.85	-1,184.5	2,814.5	3,049.8	3,045.6	4.21	725.136	
1,600.0	1,597.5	1,564.8	1,564.8	3.5	0.8	84.94	-1,184.4	2,814.6	3,049.5	3,045.3	4.28	712.189	
1,673.2	1,669.4	1,641.3	1,641.2	3.7	0.9	85.22	-1,184.4	2,815.0	3,048.7	3,044.2	4.52	673.913	
1,700.1	1,695.8	1,670.7	1,670.6	3.8	0.9	85.33	-1,184.3	2,815.1	3,048.3	3,043.7	4.61	660.775	
1,771.6	1,765.7	1,739.7	1,739.6	4.1	0.9	85.60	-1,184.1	2,815.4	3,047.2	3,042.4	4.87	625.873	
1,800.0	1,793.4	1,764.9	1,764.8	4.2	0.9	85.69	-1,184.0	2,815.5	3,046.9	3,041.9	4.97	612.973	
1,870.1	1,862.0	1,833.3	1,833.2	4.4	0.9	85.95	-1,183.7	2,815.9	3,046.1	3,040.8	5.24	581.801	
1,900.0	1,891.3	1,865.8	1,865.7	4.5	1.0	86.07	-1,183.5	2,816.1	3,045.7	3,040.4	5.35	569.261	
1,968.5	1,958.3	1,930.6	1,930.6	4.8	1.0	86.32	-1,183.3	2,816.4	3,044.9	3,039.3	5.62	541.967	
2,000.0	1,989.1	1,956.7	1,956.6	4.9	1.0	86.42	-1,183.2	2,816.5	3,044.6	3,038.9	5.74	530.373	
2,066.9	2,054.5	2,014.3	2,014.2	5.1	1.0	86.64	-1,183.2	2,817.0	3,044.2	3,038.2	6.01	506.596	
2,100.0	2,086.9	2,046.6	2,046.6	5.3	1.0	86.77	-1,183.2	2,817.2	3,044.0	3,037.9	6.15	495.355	
2,165.3	2,150.8	2,111.3	2,111.2	5.5	1.0	87.02	-1,183.2	2,817.7	3,043.8	3,037.3	6.42	474.125	
2,200.0	2,184.7	2,147.8	2,147.7	5.6	1.1	87.16	-1,183.2	2,818.0	3,043.6	3,037.1	6.57	463.531	
2,263.8	2,247.1	2,212.8	2,212.7	5.9	1.1	87.41	-1,183.4	2,818.3	3,043.3	3,036.5	6.84	444.981	
2,300.0	2,282.5	2,245.6	2,245.5	6.0	1.1	87.54	-1,183.5	2,818.5	3,043.2	3,036.2	6.99	435.175	
2,361.5	2,342.7	2,300.0	2,299.9	6.3	1.1	87.76	-1,183.8	2,818.7	3,043.1	3,035.9	7.26	419.310 CC	
2,362.2	2,343.3	2,300.0	2,299.9	6.3	1.1	87.76	-1,183.8	2,818.7	3,043.1	3,035.9	7.26	419.154	
2,400.0	2,380.3	2,335.1	2,335.0	6.5	1.1	87.90	-1,184.1	2,818.9	3,043.1	3,035.7	7.42	409.941	
2,460.6	2,439.6	2,388.5	2,388.4	6.7	1.1	88.11	-1,184.5	2,819.3	3,043.3	3,035.6	7.69	395.898	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbore #1		Offset Site Error:		0.0 usft	
Survey Program: 100-GYD_CT													Offset Well Error:		0.0 usft			
Reference		Offset		Semi Major Axis			Distance							Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor						
2,500.0	2,478.1	2,430.9	2,430.8	6.9	1.1	88.27	-1,184.7	2,819.7	3,043.5	3,035.6	7.86	387.181						
2,559.0	2,535.9	2,500.2	2,500.1	7.1	1.1	88.55	-1,185.1	2,820.1	3,043.6	3,035.5	8.12	374.618						
2,600.0	2,575.9	2,542.6	2,542.5	7.3	1.1	88.72	-1,185.4	2,820.2	3,043.6	3,035.3	8.31	366.442						
2,657.5	2,632.2	2,601.9	2,601.8	7.5	1.2	88.96	-1,185.9	2,820.3	3,043.6	3,035.1	8.56	355.480						
2,700.0	2,673.8	2,644.3	2,644.2	7.7	1.2	89.13	-1,186.2	2,820.3	3,043.6	3,034.9	8.75	347.806						
2,755.9	2,728.4	2,700.0	2,699.9	7.9	1.2	89.35	-1,186.6	2,820.3	3,043.7	3,034.7	9.00	338.159						
2,800.0	2,771.6	2,740.2	2,740.1	8.1	1.2	89.51	-1,186.8	2,820.4	3,043.8	3,034.6	9.20	330.941						
2,854.3	2,824.7	2,789.7	2,789.6	8.3	1.2	89.71	-1,187.2	2,820.5	3,044.0	3,034.5	9.44	322.434	ES					
2,900.0	2,869.4	2,833.0	2,832.9	8.5	1.2	89.89	-1,187.6	2,820.6	3,044.2	3,034.6	9.65	315.599						
2,952.7	2,921.0	2,883.7	2,883.6	8.8	1.2	90.09	-1,188.0	2,820.6	3,044.6	3,034.7	9.88	308.028						
3,000.0	2,967.2	2,931.9	2,931.8	9.0	1.2	90.29	-1,188.5	2,820.7	3,044.9	3,034.8	10.10	301.533						
3,051.2	3,017.3	2,985.8	2,985.7	9.2	1.2	90.51	-1,189.0	2,820.8	3,045.2	3,034.9	10.33	294.769						
3,100.0	3,065.0	3,031.3	3,031.2	9.4	1.2	90.69	-1,189.3	2,820.8	3,045.6	3,035.0	10.55	288.628						
3,149.6	3,113.5	3,075.3	3,075.1	9.6	1.2	90.87	-1,189.7	2,820.9	3,046.0	3,035.2	10.78	282.655						
3,200.0	3,162.8	3,124.8	3,124.7	9.8	1.2	91.07	-1,190.2	2,821.0	3,046.6	3,035.6	11.01	276.819						
3,248.0	3,209.8	3,177.9	3,177.8	10.0	1.2	91.28	-1,190.7	2,821.1	3,047.0	3,035.8	11.23	271.440						
3,300.0	3,260.6	3,228.5	3,228.3	10.2	1.3	91.49	-1,191.1	2,821.1	3,047.5	3,036.1	11.46	265.885						
3,346.4	3,306.1	3,269.7	3,269.6	10.5	1.3	91.65	-1,191.5	2,821.1	3,048.1	3,036.4	11.67	261.134						
3,400.0	3,358.5	3,317.9	3,317.8	10.7	1.3	91.85	-1,192.1	2,821.2	3,048.8	3,036.9	11.92	255.852						
3,444.9	3,402.3	3,359.0	3,358.9	10.9	1.3	92.02	-1,192.6	2,821.2	3,049.5	3,037.3	12.12	251.604						
3,500.0	3,456.3	3,411.0	3,410.9	11.1	1.3	92.23	-1,193.2	2,821.4	3,050.4	3,038.0	12.37	246.558						
3,543.3	3,498.6	3,456.9	3,456.7	11.3	1.3	92.42	-1,193.8	2,821.5	3,051.1	3,038.6	12.57	242.715						
3,600.0	3,554.1	3,513.3	3,513.2	11.5	1.3	92.65	-1,194.5	2,821.6	3,052.1	3,039.3	12.83	237.864						
3,641.7	3,594.9	3,548.1	3,548.0	11.7	1.3	92.79	-1,194.9	2,821.6	3,052.9	3,039.9	13.02	234.454						
3,700.0	3,651.9	3,600.0	3,599.8	12.0	1.3	93.00	-1,195.6	2,821.8	3,054.2	3,040.9	13.29	229.849						
3,740.1	3,691.2	3,637.1	3,636.9	12.2	1.3	93.15	-1,196.2	2,822.0	3,055.1	3,041.6	13.47	226.773						
3,800.0	3,749.7	3,698.4	3,698.2	12.4	1.4	93.40	-1,197.1	2,822.3	3,056.5	3,042.8	13.75	222.311						
3,838.6	3,787.4	3,734.0	3,733.8	12.6	1.4	93.55	-1,197.5	2,822.5	3,057.5	3,043.5	13.93	219.546						
3,900.0	3,847.5	3,790.4	3,790.2	12.9	1.4	93.77	-1,198.3	2,822.8	3,059.1	3,044.9	14.21	215.293						
3,937.0	3,883.7	3,828.0	3,827.8	13.0	1.4	93.93	-1,198.9	2,823.0	3,060.1	3,045.7	14.38	212.799						
4,000.0	3,945.3	3,894.4	3,894.3	13.3	1.4	94.19	-1,199.8	2,823.4	3,061.8	3,047.1	14.67	208.675						
4,035.4	3,980.0	3,930.5	3,930.3	13.5	1.4	94.34	-1,200.2	2,823.5	3,062.7	3,047.9	14.84	206.431						
4,060.0	4,004.0	3,955.4	3,955.2	13.6	1.4	94.44	-1,200.5	2,823.7	3,063.4	3,048.4	14.95	204.904						
4,100.0	4,043.2	3,995.9	3,995.7	13.7	1.4	94.62	-1,200.9	2,823.8	3,064.4	3,049.3	15.11	202.760						
4,133.8	4,076.5	4,034.7	4,034.5	13.8	1.4	94.77	-1,201.3	2,824.0	3,065.3	3,050.0	15.23	201.289						
4,200.0	4,141.6	4,110.3	4,110.1	14.0	1.4	95.05	-1,201.9	2,824.1	3,066.6	3,051.2	15.45	198.469						
4,232.3	4,173.5	4,143.5	4,143.3	14.1	1.5	95.16	-1,202.2	2,824.1	3,067.2	3,051.7	15.55	197.286						
4,300.0	4,240.6	4,210.6	4,210.4	14.3	1.5	95.37	-1,202.8	2,824.0	3,068.3	3,052.6	15.75	194.846						
4,330.7	4,271.1	4,236.3	4,236.1	14.4	1.5	95.44	-1,203.0	2,824.0	3,068.8	3,053.0	15.83	193.907						
4,400.0	4,340.0	4,300.0	4,299.8	14.5	1.5	95.59	-1,203.6	2,824.2	3,070.0	3,054.0	16.01	191.811						
4,429.1	4,369.0	4,323.6	4,323.4	14.6	1.5	95.64	-1,203.8	2,824.3	3,070.5	3,054.5	16.07	191.063						
4,500.0	4,439.7	4,398.0	4,397.8	14.8	1.5	95.76	-1,204.4	2,824.7	3,071.6	3,055.4	16.23	189.199						
4,527.5	4,467.2	4,427.6	4,427.4	14.8	1.5	95.80	-1,204.6	2,824.8	3,072.0	3,055.7	16.29	188.613						
4,600.0	4,539.7	4,505.0	4,504.8	14.9	1.5	95.87	-1,205.2	2,824.9	3,072.7	3,056.2	16.42	187.074						
4,626.0	4,565.6	4,529.8	4,529.6	15.0	1.5	95.88	-1,205.5	2,824.9	3,072.9	3,056.4	16.47	186.622						
4,660.2	4,599.8	4,562.5	4,562.3	15.0	1.6	124.62	-1,205.7	2,825.0	3,073.1	3,060.9	12.16	252.820						
4,700.0	4,639.6	4,600.6	4,600.4	15.0	1.6	124.62	-1,206.0	2,825.1	3,073.4	3,061.1	12.23	251.227						
4,724.4	4,664.0	4,628.6	4,628.4	15.1	1.6	124.63	-1,206.2	2,825.2	3,073.5	3,061.2	12.29	250.151						
4,800.0	4,739.6	4,711.0	4,710.8	15.2	1.6	124.63	-1,206.7	2,825.2	3,073.8	3,061.4	12.45	246.882						
4,822.8	4,762.5	4,729.6	4,729.4	15.2	1.6	124.64	-1,206.8	2,825.2	3,073.9	3,061.4	12.50	245.920						
4,900.0	4,839.6	4,800.0	4,799.8	15.3	1.6	124.65	-1,207.6	2,825.3	3,074.5	3,061.8	12.67	242.729						
4,921.2	4,860.9	4,813.1	4,812.8	15.4	1.6	124.65	-1,207.8	2,825.4	3,074.7	3,062.0	12.71	241.881						

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.0	4,939.6	4,895.8	4,895.5	15.5	1.6	124.67	-1,209.0	2,825.5	3,075.4	3,062.5	12.88	238.692	
5,019.7	4,959.3	4,915.6	4,915.3	15.5	1.6	124.67	-1,209.3	2,825.5	3,075.6	3,062.6	12.93	237.905	
5,100.0	5,039.6	4,995.6	4,995.3	15.6	1.7	124.69	-1,210.4	2,825.5	3,076.2	3,063.1	13.10	234.754	
5,118.1	5,057.7	5,017.2	5,017.0	15.7	1.7	124.69	-1,210.7	2,825.6	3,076.4	3,063.2	13.14	234.043	
5,200.0	5,139.6	5,119.0	5,118.7	15.8	1.7	124.71	-1,211.7	2,825.3	3,076.7	3,063.4	13.33	230.864	
5,216.5	5,156.2	5,138.4	5,138.1	15.8	1.7	124.71	-1,211.8	2,825.3	3,076.7	3,063.4	13.36	230.239	
5,300.0	5,239.6	5,230.8	5,230.6	15.9	1.7	124.72	-1,212.0	2,824.9	3,076.6	3,063.0	13.55	227.113	
5,314.9	5,254.6	5,245.6	5,245.4	16.0	1.7	124.72	-1,212.0	2,824.9	3,076.5	3,062.9	13.58	226.554	
5,400.0	5,339.6	5,330.3	5,330.0	16.1	1.7	124.72	-1,212.0	2,824.6	3,076.3	3,062.5	13.77	223.471	
5,413.4	5,353.0	5,343.7	5,343.4	16.1	1.7	124.72	-1,211.9	2,824.6	3,076.2	3,062.5	13.79	223.003	
5,500.0	5,439.6	5,428.2	5,428.0	16.3	1.7	124.72	-1,211.7	2,824.5	3,076.0	3,062.0	13.98	220.009	
5,511.8	5,451.4	5,439.2	5,438.9	16.3	1.7	124.72	-1,211.6	2,824.5	3,076.0	3,062.0	14.01	219.604	
5,600.0	5,539.6	5,526.2	5,525.9	16.4	1.7	124.71	-1,211.2	2,824.7	3,075.9	3,061.7	14.20	216.616	
5,610.2	5,549.9	5,538.0	5,537.7	16.4	1.7	124.71	-1,211.2	2,824.7	3,075.9	3,061.7	14.22	216.268	
5,700.0	5,639.6	5,636.3	5,636.1	16.6	1.7	124.69	-1,210.3	2,824.8	3,075.6	3,061.1	14.42	213.255	
5,708.6	5,648.3	5,645.1	5,644.8	16.6	1.7	124.69	-1,210.2	2,824.8	3,075.5	3,061.1	14.44	212.967	
5,800.0	5,739.6	5,742.6	5,742.4	16.7	1.7	124.68	-1,209.4	2,824.8	3,075.0	3,060.4	14.64	209.982	
5,807.1	5,746.7	5,750.8	5,750.5	16.8	1.7	124.68	-1,209.3	2,824.8	3,075.0	3,060.3	14.66	209.752	
5,900.0	5,839.6	5,844.8	5,844.6	16.9	1.7	124.67	-1,208.6	2,824.3	3,074.2	3,059.4	14.87	206.803	
5,905.5	5,845.1	5,849.8	5,849.5	16.9	1.7	124.67	-1,208.6	2,824.3	3,074.2	3,059.3	14.88	206.632	
6,000.0	5,939.6	5,944.6	5,944.3	17.1	1.7	124.66	-1,207.5	2,824.3	3,073.6	3,058.5	15.09	203.717	
6,003.9	5,943.6	5,949.2	5,948.9	17.1	1.7	124.65	-1,207.5	2,824.3	3,073.6	3,058.5	15.10	203.595	
6,059.2	5,998.8	6,000.0	5,999.7	17.2	1.7	124.65	-1,206.9	2,824.2	3,073.1	3,057.9	15.22	201.920	
6,066.5	6,006.1	6,014.2	6,013.9	17.2	1.7	-145.36	-1,206.7	2,824.1	3,073.0	3,054.2	18.86	162.965	
6,100.0	6,039.6	6,039.3	6,039.0	17.2	1.7	-145.34	-1,206.4	2,824.1	3,073.7	3,054.8	18.92	162.475	
6,102.3	6,042.0	6,041.0	6,040.8	17.2	1.7	-145.34	-1,206.4	2,824.1	3,073.8	3,054.9	18.92	162.450	
6,150.0	6,089.4	6,076.5	6,076.3	17.3	1.7	-145.22	-1,206.1	2,824.2	3,077.3	3,058.3	19.00	161.964	
6,200.0	6,138.7	6,114.2	6,113.9	17.3	1.7	-144.98	-1,205.9	2,824.3	3,084.0	3,064.9	19.07	161.695	
6,200.8	6,139.5	6,114.8	6,114.5	17.3	1.7	-144.97	-1,205.9	2,824.3	3,084.1	3,065.0	19.07	161.694	
6,250.0	6,187.4	6,152.7	6,152.4	17.3	1.7	-144.62	-1,205.9	2,824.5	3,093.6	3,074.5	19.13	161.729	
6,299.2	6,234.4	6,200.0	6,199.7	17.4	1.7	-144.18	-1,206.2	2,824.7	3,106.0	3,086.9	19.16	162.096	
6,300.0	6,235.1	6,200.0	6,199.7	17.4	1.7	-144.17	-1,206.2	2,824.7	3,106.2	3,087.1	19.16	162.107	
6,350.0	6,281.7	6,232.2	6,231.9	17.4	1.7	-143.54	-1,206.6	2,824.9	3,121.7	3,102.5	19.16	162.944	
6,397.6	6,324.8	6,272.5	6,272.2	17.3	1.7	-142.85	-1,207.1	2,825.0	3,138.9	3,119.8	19.13	164.091	
6,400.0	6,326.9	6,274.4	6,274.1	17.3	1.7	-142.81	-1,207.1	2,825.0	3,139.9	3,120.7	19.13	164.155	
6,450.0	6,370.5	6,315.8	6,315.5	17.3	1.7	-141.93	-1,207.7	2,825.2	3,160.7	3,141.6	19.07	165.767	
6,496.0	6,409.1	6,353.3	6,353.0	17.3	1.8	-140.97	-1,208.3	2,825.3	3,182.1	3,163.1	18.99	167.554	
6,500.0	6,412.3	6,356.5	6,356.2	17.3	1.8	-140.88	-1,208.4	2,825.4	3,184.1	3,165.1	18.98	167.717	
6,550.0	6,452.1	6,395.1	6,394.8	17.3	1.8	-139.65	-1,208.9	2,825.5	3,209.9	3,191.0	18.89	169.904	
6,594.5	6,485.6	6,427.0	6,426.7	17.3	1.8	-138.35	-1,209.4	2,825.7	3,234.8	3,216.0	18.82	171.926	
6,600.0	6,489.7	6,430.8	6,430.5	17.3	1.8	-138.18	-1,209.5	2,825.7	3,238.0	3,219.2	18.81	172.178	
6,650.0	6,524.9	6,464.1	6,463.8	17.2	1.8	-136.45	-1,210.0	2,825.9	3,268.4	3,249.7	18.75	174.328	
6,692.9	6,553.0	6,490.6	6,490.3	17.2	1.8	-134.73	-1,210.4	2,826.1	3,296.2	3,277.4	18.74	175.867	
6,700.0	6,557.5	6,494.8	6,494.5	17.2	1.8	-134.42	-1,210.4	2,826.1	3,300.9	3,282.2	18.75	176.944	
6,750.0	6,587.4	6,527.2	6,526.9	17.2	1.8	-132.10	-1,210.9	2,826.3	3,335.4	3,316.5	18.83	177.150	
6,791.3	6,609.9	6,552.5	6,552.1	17.2	1.8	-129.89	-1,211.3	2,826.4	3,365.1	3,346.2	18.98	177.337	
6,800.0	6,614.4	6,557.5	6,557.2	17.2	1.8	-129.39	-1,211.4	2,826.5	3,371.5	3,352.5	19.02	177.285	
6,850.0	6,638.4	6,584.5	6,584.2	17.2	1.8	-126.22	-1,211.8	2,826.5	3,409.3	3,390.0	19.33	176.358	
6,889.7	6,655.3	6,603.2	6,602.8	17.4	1.8	-123.31	-1,212.2	2,826.6	3,440.4	3,420.7	19.68	174.802	
6,900.0	6,659.4	6,607.2	6,606.9	17.5	1.8	-122.49	-1,212.2	2,826.6	3,448.6	3,428.8	19.77	174.399	
6,950.0	6,677.1	6,624.8	6,624.5	18.0	1.8	-118.10	-1,212.5	2,826.6	3,489.1	3,468.8	20.33	171.643	
6,988.2	6,688.4	6,636.1	6,635.7	18.5	1.8	-114.31	-1,212.7	2,826.6	3,520.8	3,500.0	20.81	169.195	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,000.0	6,691.5	6,639.2	6,638.8	18.7	1.8	-113.05	-1,212.8	2,826.6	3,530.7	3,509.8	20.95	168.495		
7,050.0	6,702.5	6,650.1	6,649.8	19.5	1.8	-107.29	-1,213.0	2,826.6	3,573.2	3,551.6	21.60	165.442		
7,086.6	6,708.4	6,656.0	6,655.6	20.1	1.8	-102.64	-1,213.1	2,826.6	3,604.8	3,582.7	22.06	163.438		
7,100.0	6,710.1	6,657.7	6,657.3	20.4	1.8	-100.86	-1,213.1	2,826.6	3,616.4	3,594.2	22.21	162.824		
7,150.0	6,714.2	6,661.7	6,661.4	21.3	1.8	-93.86	-1,213.2	2,826.6	3,660.1	3,637.3	22.81	160.442		
7,185.0	6,715.0	6,662.5	6,662.2	21.9	1.8	-88.73	-1,213.2	2,826.6	3,690.9	3,667.6	23.29	158.457		
7,185.6	6,715.0	6,662.5	6,662.2	21.9	1.8	-88.66	-1,213.2	2,826.6	3,691.4	3,668.1	23.30	158.425		
7,200.0	6,715.0	6,662.5	6,662.1	22.2	1.8	-88.65	-1,213.2	2,826.6	3,704.1	3,680.5	23.58	157.102		
7,283.4	6,714.8	6,662.2	6,661.9	23.9	1.8	-88.65	-1,213.2	2,826.6	3,777.8	3,752.5	25.26	149.585		
7,300.0	6,714.8	6,662.2	6,661.9	24.2	1.8	-88.64	-1,213.2	2,826.6	3,792.4	3,766.9	25.59	148.213		
7,381.9	6,714.6	6,662.0	6,661.6	26.0	1.8	-88.64	-1,213.2	2,826.6	3,865.2	3,837.9	27.35	141.334		
7,400.0	6,714.6	6,661.9	6,661.6	26.4	1.8	-88.64	-1,213.2	2,826.6	3,881.4	3,853.6	27.74	139.931		
7,480.3	6,714.4	6,661.7	6,661.3	28.2	1.8	-88.63	-1,213.2	2,826.6	3,953.2	3,923.6	29.56	133.746		
7,500.0	6,714.4	6,661.6	6,661.3	28.7	1.8	-88.63	-1,213.2	2,826.6	3,970.9	3,940.8	30.00	132.345		
7,578.7	6,714.2	6,661.4	6,661.1	30.5	1.8	-88.62	-1,213.2	2,826.6	4,041.6	4,009.8	31.86	126.862		
7,600.0	6,714.2	6,661.3	6,661.0	31.0	1.8	-88.62	-1,213.2	2,826.6	4,060.8	4,028.4	32.36	125.489		
7,677.1	6,714.0	6,661.1	6,660.8	32.9	1.8	-88.61	-1,213.2	2,826.6	4,130.5	4,096.3	34.23	120.662		
7,700.0	6,714.0	6,661.1	6,660.7	33.4	1.8	-88.61	-1,213.2	2,826.6	4,151.2	4,116.4	34.79	119.333		
7,775.6	6,713.9	6,660.8	6,660.5	35.3	1.8	-88.60	-1,213.2	2,826.6	4,219.8	4,183.2	36.66	115.096		
7,800.0	6,713.8	6,660.8	6,660.4	35.9	1.8	-88.60	-1,213.2	2,826.6	4,242.1	4,204.8	37.27	113.820		
7,874.0	6,713.7	6,660.6	6,660.2	37.8	1.8	-88.59	-1,213.2	2,826.6	4,309.6	4,270.4	39.14	110.102		
7,900.0	6,713.6	6,660.5	6,660.1	38.4	1.8	-88.59	-1,213.2	2,826.6	4,333.3	4,293.5	39.80	108.881		
7,972.4	6,713.5	6,660.3	6,659.9	40.3	1.8	-88.58	-1,213.2	2,826.6	4,399.6	4,358.0	41.66	105.616		
8,000.0	6,713.4	6,660.2	6,659.9	41.0	1.8	-88.58	-1,213.2	2,826.6	4,424.9	4,382.6	42.36	104.450		
8,070.8	6,713.3	6,660.0	6,659.6	42.8	1.8	-88.57	-1,213.2	2,826.6	4,490.1	4,445.9	44.20	101.577		
8,100.0	6,713.2	6,659.9	6,659.6	43.6	1.8	-88.57	-1,213.2	2,826.6	4,516.9	4,472.0	44.96	100.465		
8,169.3	6,713.1	6,659.7	6,659.4	45.4	1.8	-88.56	-1,213.2	2,826.6	4,580.8	4,534.1	46.78	97.931		
8,200.0	6,713.0	6,659.6	6,659.3	46.2	1.8	-88.56	-1,213.2	2,826.6	4,609.2	4,561.7	47.58	96.871		
8,267.7	6,712.9	6,659.4	6,659.1	48.0	1.8	-88.56	-1,213.2	2,826.6	4,671.9	4,622.6	49.37	94.630		
8,300.0	6,712.8	6,659.3	6,659.0	48.8	1.8	-88.55	-1,213.2	2,826.6	4,701.9	4,651.7	50.22	93.619		
8,366.1	6,712.7	6,659.1	6,658.8	50.6	1.8	-88.55	-1,213.2	2,826.6	4,763.3	4,711.3	51.98	91.633		
8,400.0	6,712.6	6,659.0	6,658.7	51.5	1.8	-88.54	-1,213.2	2,826.6	4,794.8	4,741.9	52.88	90.667		
8,464.5	6,712.5	6,658.9	6,658.5	53.2	1.8	-88.54	-1,213.2	2,826.6	4,854.9	4,800.3	54.61	88.901		
8,500.0	6,712.4	6,658.8	6,658.4	54.1	1.8	-88.53	-1,213.2	2,826.6	4,888.0	4,832.5	55.56	87.979		
8,563.0	6,712.3	6,658.6	6,658.2	55.8	1.8	-88.53	-1,213.1	2,826.6	4,946.8	4,889.6	57.25	86.405		
8,600.0	6,712.3	6,658.5	6,658.1	56.8	1.8	-88.53	-1,213.1	2,826.6	4,981.5	4,923.2	58.25	85.523		
8,661.4	6,712.1	6,658.3	6,657.9	58.5	1.8	-88.52	-1,213.1	2,826.6	5,039.0	4,979.1	59.90	84.117		
8,700.0	6,712.1	6,658.2	6,657.8	59.5	1.8	-88.52	-1,213.1	2,826.6	5,075.2	5,014.3	60.95	83.273		
8,759.8	6,711.9	6,658.0	6,657.7	61.1	1.8	-88.51	-1,213.1	2,826.6	5,131.4	5,068.8	62.57	82.014		
8,800.0	6,711.9	6,657.9	6,657.5	62.2	1.8	-88.51	-1,213.1	2,826.6	5,169.2	5,105.5	63.66	81.205		
8,858.2	6,711.8	6,657.7	6,657.4	63.8	1.8	-88.50	-1,213.1	2,826.6	5,224.0	5,158.7	65.24	80.075		
8,900.0	6,711.7	6,657.6	6,657.3	64.9	1.8	-88.50	-1,213.1	2,826.6	5,263.3	5,197.0	66.37	79.299		
8,956.7	6,711.6	6,657.4	6,657.1	66.5	1.8	-88.49	-1,213.1	2,826.6	5,316.8	5,248.9	67.92	78.283		
9,000.0	6,711.5	6,657.3	6,657.0	67.6	1.8	-88.49	-1,213.1	2,826.6	5,357.7	5,288.6	69.10	77.537		
9,055.1	6,711.4	6,657.1	6,656.8	69.1	1.8	-88.48	-1,213.1	2,826.6	5,409.8	5,339.2	70.60	76.622		
9,100.0	6,711.3	6,657.0	6,656.7	70.4	1.8	-88.48	-1,213.1	2,826.6	5,452.3	5,380.5	71.83	75.905		
9,153.5	6,711.2	6,656.9	6,656.5	71.8	1.8	-88.47	-1,213.1	2,826.6	5,503.0	5,429.7	73.30	75.079		
9,200.0	6,711.1	6,656.7	6,656.4	73.1	1.8	-88.47	-1,213.1	2,826.6	5,547.1	5,472.5	74.57	74.389		
9,251.9	6,711.0	6,656.6	6,656.2	74.5	1.8	-88.46	-1,213.1	2,826.6	5,596.4	5,520.4	75.99	73.643		
9,300.0	6,710.9	6,656.4	6,656.1	75.8	1.8	-88.46	-1,213.1	2,826.6	5,642.0	5,564.7	77.31	72.978		
9,350.4	6,710.8	6,656.3	6,655.9	77.2	1.8	-88.46	-1,213.1	2,826.6	5,689.9	5,611.3	78.70	72.303		
9,400.0	6,710.7	6,656.1	6,655.8	78.6	1.8	-88.45	-1,213.1	2,826.6	5,737.2	5,657.1	80.06	71.662		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,710.6	6,656.0	6,655.7	79.9	1.8	-88.45	-1,213.1	2,826.6	5,783.7	5,702.3	81.40	71.051	
9,500.0	6,710.5	6,655.8	6,655.5	81.3	1.8	-88.44	-1,213.1	2,826.6	5,832.5	5,749.7	82.81	70.431	
9,547.2	6,710.4	6,655.7	6,655.4	82.6	1.8	-88.44	-1,213.1	2,826.6	5,877.5	5,793.4	84.11	69.877	
9,600.0	6,710.3	6,655.6	6,655.2	84.1	1.8	-88.43	-1,213.1	2,826.6	5,927.9	5,842.3	85.57	69.278	
9,645.6	6,710.2	6,655.4	6,655.1	85.3	1.8	-88.43	-1,213.1	2,826.6	5,971.5	5,884.7	86.83	68.776	
9,700.0	6,710.1	6,655.3	6,654.9	86.8	1.8	-88.42	-1,213.1	2,826.6	6,023.5	5,935.2	88.33	68.197	
9,744.1	6,710.0	6,655.1	6,654.8	88.1	1.8	-88.42	-1,213.1	2,826.6	6,065.7	5,976.1	89.54	67.740	
9,800.0	6,709.9	6,655.0	6,654.6	89.6	1.8	-88.41	-1,213.1	2,826.6	6,119.2	6,028.2	91.09	67.180	
9,842.5	6,709.9	6,654.8	6,654.5	90.8	1.8	-88.41	-1,213.1	2,826.6	6,160.0	6,067.7	92.26	66.765	
9,900.0	6,709.7	6,654.7	6,654.3	92.4	1.8	-88.40	-1,213.1	2,826.6	6,215.1	6,121.3	93.85	66.222	
9,940.9	6,709.7	6,654.6	6,654.2	93.5	1.8	-88.40	-1,213.1	2,826.6	6,254.4	6,159.4	94.99	65.846	
10,000.0	6,709.6	6,654.4	6,654.0	95.1	1.8	-88.40	-1,213.1	2,826.6	6,311.1	6,214.5	96.62	65.319	
10,039.3	6,709.5	6,654.3	6,653.9	96.2	1.8	-88.39	-1,213.1	2,826.6	6,348.9	6,251.2	97.71	64.977	
10,100.0	6,709.4	6,654.1	6,653.7	97.9	1.8	-88.39	-1,213.1	2,826.6	6,407.2	6,307.8	99.39	64.465	
10,137.8	6,709.3	6,654.0	6,653.6	98.9	1.8	-88.38	-1,213.1	2,826.6	6,443.6	6,343.1	100.44	64.155	
10,200.0	6,709.2	6,653.8	6,653.5	100.7	1.8	-88.38	-1,213.1	2,826.6	6,503.5	6,401.3	102.16	63.658	
10,236.2	6,709.1	6,653.7	6,653.3	101.7	1.8	-88.37	-1,213.1	2,826.6	6,538.3	6,435.2	103.17	63.376	
10,300.0	6,709.0	6,653.5	6,653.2	103.4	1.8	-88.37	-1,213.1	2,826.6	6,599.8	6,494.9	104.94	62.893	
10,334.6	6,708.9	6,653.4	6,653.1	104.4	1.8	-88.36	-1,213.1	2,826.6	6,633.2	6,527.3	105.90	62.638	
10,400.0	6,708.8	6,653.2	6,652.9	106.2	1.8	-88.36	-1,213.1	2,826.6	6,696.3	6,588.6	107.71	62.168	
10,433.0	6,708.7	6,653.1	6,652.8	107.1	1.8	-88.35	-1,213.0	2,826.6	6,728.2	6,619.6	108.63	61.936	
10,500.0	6,708.6	6,652.9	6,652.6	109.0	1.8	-88.35	-1,213.0	2,826.6	6,792.8	6,682.3	110.49	61.479	
10,531.5	6,708.5	6,652.8	6,652.5	109.9	1.8	-88.35	-1,213.0	2,826.6	6,823.3	6,711.9	111.36	61.269	
10,600.0	6,708.4	6,652.6	6,652.3	111.8	1.8	-88.34	-1,213.0	2,826.6	6,889.5	6,776.2	113.27	60.824	
10,629.9	6,708.4	6,652.5	6,652.2	112.6	1.8	-88.34	-1,213.0	2,826.6	6,918.4	6,804.3	114.10	60.634	
10,700.0	6,708.2	6,652.3	6,652.0	114.6	1.8	-88.33	-1,213.0	2,826.6	6,986.2	6,870.2	116.05	60.200	
10,728.3	6,708.2	6,652.2	6,651.9	115.3	1.8	-88.33	-1,213.0	2,826.6	7,013.7	6,896.8	116.84	60.029	
10,800.0	6,708.0	6,652.0	6,651.7	117.3	1.8	-88.32	-1,213.0	2,826.6	7,083.1	6,964.3	118.83	59.606	
10,826.7	6,708.0	6,651.9	6,651.6	118.1	1.8	-88.32	-1,213.0	2,826.6	7,109.0	6,989.4	119.58	59.452	
10,900.0	6,707.8	6,651.7	6,651.4	120.1	1.8	-88.31	-1,213.0	2,826.6	7,180.0	7,058.4	121.61	59.039	
10,925.2	6,707.8	6,651.7	6,651.3	120.8	1.8	-88.31	-1,213.0	2,826.6	7,204.4	7,082.1	122.32	58.900	
11,000.0	6,707.6	6,651.4	6,651.1	122.9	1.8	-88.30	-1,213.0	2,826.6	7,277.0	7,152.6	124.40	58.497	
11,023.6	6,707.6	6,651.4	6,651.0	123.6	1.8	-88.30	-1,213.0	2,826.6	7,299.9	7,174.9	125.06	58.373	
11,100.0	6,707.5	6,651.1	6,650.8	125.7	1.8	-88.29	-1,213.0	2,826.6	7,374.1	7,246.9	127.18	57.980	
11,122.0	6,707.4	6,651.1	6,650.7	126.3	1.8	-88.29	-1,213.0	2,826.6	7,395.5	7,267.7	127.80	57.869	
11,200.0	6,707.3	6,650.8	6,650.5	128.5	1.8	-88.28	-1,213.0	2,826.6	7,471.3	7,341.3	129.97	57.484	
11,220.4	6,707.2	6,650.8	6,650.4	129.0	1.8	-88.28	-1,213.0	2,826.6	7,491.2	7,360.6	130.54	57.386	
11,300.0	6,707.1	6,650.5	6,650.2	131.3	1.8	-88.27	-1,213.0	2,826.6	7,568.5	7,435.8	132.76	57.010	
11,318.9	6,707.0	6,650.5	6,650.1	131.8	1.8	-88.27	-1,213.0	2,826.6	7,586.9	7,453.6	133.28	56.923	
11,400.0	6,706.9	6,650.2	6,649.9	134.0	1.8	-88.26	-1,213.0	2,826.6	7,665.8	7,530.3	135.55	56.555	
11,417.3	6,706.9	6,650.2	6,649.9	134.5	1.8	-88.26	-1,213.0	2,826.6	7,682.7	7,546.7	136.03	56.478	
11,500.0	6,706.7	6,649.9	6,649.6	136.8	1.8	-88.25	-1,213.0	2,826.6	7,763.2	7,624.9	138.34	56.119	
11,515.7	6,706.7	6,649.9	6,649.6	137.3	1.8	-88.25	-1,213.0	2,826.6	7,778.5	7,639.8	138.77	56.052	
11,600.0	6,706.5	6,649.7	6,649.3	139.6	1.8	-88.25	-1,213.0	2,826.6	7,860.7	7,719.5	141.12	55.700	
11,614.1	6,706.5	6,649.6	6,649.3	140.0	1.8	-88.24	-1,213.0	2,826.6	7,874.5	7,732.9	141.52	55.642	
11,700.0	6,706.3	6,649.4	6,649.0	142.4	1.8	-88.24	-1,213.0	2,826.6	7,958.2	7,814.3	143.92	55.298	
11,712.6	6,706.3	6,649.3	6,649.0	142.8	1.8	-88.23	-1,213.0	2,826.6	7,970.4	7,826.2	144.27	55.248	
11,800.0	6,706.1	6,649.1	6,648.7	145.2	1.8	-88.23	-1,213.0	2,826.6	8,055.8	7,909.0	146.71	54.911	
11,811.0	6,706.1	6,649.0	6,648.7	145.5	1.8	-88.23	-1,213.0	2,826.6	8,066.5	7,919.5	147.01	54.869	
11,900.0	6,705.9	6,648.8	6,648.4	148.0	1.8	-88.22	-1,213.0	2,826.6	8,153.4	8,003.9	149.50	54.538	
11,909.4	6,705.9	6,648.7	6,648.4	148.3	1.8	-88.22	-1,213.0	2,826.6	8,162.6	8,012.8	149.76	54.504	
12,000.0	6,705.8	6,648.5	6,648.1	150.8	1.8	-88.21	-1,213.0	2,826.6	8,251.1	8,098.8	152.29	54.180	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,705.7	6,648.4	6,648.1	151.0	1.8	-88.21	-1,213.0	2,826.6	8,258.7	8,106.2	152.51	54.152	
12,100.0	6,705.6	6,648.2	6,647.8	153.6	1.8	-88.20	-1,213.0	2,826.6	8,348.8	8,193.7	155.08	53.834	
12,106.3	6,705.6	6,648.1	6,647.8	153.8	1.8	-88.20	-1,213.0	2,826.6	8,354.9	8,199.7	155.26	53.813	
12,200.0	6,705.4	6,647.9	6,647.5	156.4	1.8	-88.19	-1,213.0	2,826.6	8,446.6	8,288.7	157.88	53.501	
12,204.7	6,705.4	6,647.8	6,647.5	156.5	1.8	-88.19	-1,213.0	2,826.6	8,451.2	8,293.2	158.01	53.486	
12,300.0	6,705.2	6,647.6	6,647.2	159.2	1.8	-88.18	-1,212.9	2,826.6	8,544.4	8,383.8	160.67	53.180	
12,303.1	6,705.2	6,647.5	6,647.2	159.3	1.8	-88.18	-1,212.9	2,826.6	8,547.5	8,386.7	160.76	53.170	
12,400.0	6,705.0	6,647.3	6,646.9	162.0	1.8	-88.17	-1,212.9	2,826.6	8,642.3	8,478.9	163.47	52.870	
12,401.5	6,705.0	6,647.2	6,646.9	162.0	1.8	-88.17	-1,212.9	2,826.6	8,643.9	8,480.4	163.51	52.865	
12,500.0	6,704.8	6,647.0	6,646.6	164.8	1.8	-88.16	-1,212.9	2,826.6	8,740.3	8,574.0	166.26	52.570	
12,598.4	6,704.6	6,646.7	6,646.3	167.5	1.8	-88.15	-1,212.9	2,826.6	8,836.7	8,667.7	169.01	52.285	
12,600.0	6,704.6	6,646.7	6,646.3	167.6	1.8	-88.15	-1,212.9	2,826.6	8,838.3	8,669.2	169.06	52.280	
12,696.8	6,704.4	6,646.4	6,646.0	170.3	1.8	-88.14	-1,212.9	2,826.6	8,933.2	8,761.4	171.76	52.009	
12,700.0	6,704.4	6,646.3	6,646.0	170.4	1.8	-88.14	-1,212.9	2,826.6	8,936.3	8,764.5	171.85	52.000	
12,795.2	6,704.3	6,646.1	6,645.7	173.0	1.8	-88.13	-1,212.9	2,826.6	9,029.7	8,855.2	174.51	51.742	
12,800.0	6,704.2	6,646.0	6,645.7	173.2	1.8	-88.13	-1,212.9	2,826.6	9,034.4	8,859.7	174.65	51.729	
12,893.7	6,704.1	6,645.8	6,645.4	175.8	1.8	-88.12	-1,212.9	2,826.6	9,126.3	8,949.0	177.27	51.483	
12,900.0	6,704.1	6,645.7	6,645.4	176.0	1.8	-88.12	-1,212.9	2,826.6	9,132.5	8,955.1	177.44	51.467	
12,992.1	6,703.9	6,645.5	6,645.1	178.5	1.8	-88.11	-1,212.9	2,826.6	9,222.9	9,042.9	180.02	51.233	
13,000.0	6,703.9	6,645.4	6,645.1	178.8	1.8	-88.11	-1,212.9	2,826.6	9,230.7	9,050.4	180.24	51.213	
13,090.5	6,703.7	6,645.2	6,644.8	181.3	1.8	-88.10	-1,212.9	2,826.6	9,319.6	9,136.8	182.77	50.990	
13,100.0	6,703.7	6,645.1	6,644.8	181.6	1.8	-88.10	-1,212.9	2,826.6	9,328.9	9,145.8	183.04	50.967	
13,188.9	6,703.5	6,644.9	6,644.5	184.0	1.8	-88.09	-1,212.9	2,826.6	9,416.2	9,230.7	185.53	50.754	
13,200.0	6,703.5	6,644.8	6,644.5	184.4	1.8	-88.09	-1,212.9	2,826.6	9,427.1	9,241.3	185.84	50.728	
13,287.4	6,703.3	6,644.6	6,644.2	186.8	1.8	-88.09	-1,212.9	2,826.6	9,513.0	9,324.7	188.28	50.526	
13,300.0	6,703.3	6,644.5	6,644.2	187.2	1.8	-88.08	-1,212.9	2,826.6	9,525.4	9,336.7	188.63	50.497	
13,385.8	6,703.2	6,644.3	6,643.9	189.6	1.8	-88.08	-1,212.9	2,826.6	9,609.7	9,418.7	191.03	50.304	
13,400.0	6,703.1	6,644.2	6,643.9	190.0	1.8	-88.08	-1,212.9	2,826.6	9,623.7	9,432.2	191.43	50.272	
13,484.2	6,703.0	6,644.0	6,643.6	192.3	1.8	-88.07	-1,212.9	2,826.6	9,706.5	9,512.7	193.79	50.088	
13,500.0	6,702.9	6,643.9	6,643.6	192.8	1.8	-88.07	-1,212.9	2,826.6	9,722.0	9,527.8	194.23	50.054	
13,582.6	6,702.8	6,643.7	6,643.3	195.1	1.8	-88.06	-1,212.9	2,826.6	9,803.3	9,606.8	196.54	49.879	
13,600.0	6,702.8	6,643.6	6,643.3	195.6	1.8	-88.06	-1,212.9	2,826.6	9,820.4	9,623.4	197.03	49.843	
13,681.1	6,702.6	6,643.4	6,643.0	197.8	1.8	-88.05	-1,212.9	2,826.6	9,900.2	9,700.9	199.30	49.676	
13,700.0	6,702.6	6,643.3	6,643.0	198.4	1.8	-88.05	-1,212.9	2,826.6	9,918.8	9,719.0	199.83	49.637	
13,779.5	6,702.4	6,643.1	6,642.7	200.6	1.8	-88.04	-1,212.9	2,826.6	9,997.1	9,795.0	202.05	49.478 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	12.94	256.8	59.0	263.9				
98.4	98.4	86.3	86.3	0.1	0.0	12.93	256.7	59.0	263.4	263.3	0.10	2,743.615	
100.0	100.0	87.9	87.9	0.1	0.0	12.93	256.7	59.0	263.4	263.3	0.10	2,693.893	
196.8	196.8	185.0	185.0	0.3	0.1	12.90	256.4	58.7	263.0	262.6	0.40	665.646	
200.0	200.0	188.1	188.1	0.3	0.1	12.90	256.4	58.7	263.0	262.6	0.41	649.123	
295.3	295.3	283.3	283.3	0.5	0.2	12.85	256.0	58.4	262.6	261.9	0.74	352.712	
300.0	300.0	288.0	288.0	0.5	0.2	12.85	256.0	58.4	262.6	261.8	0.76	344.777	
393.7	393.7	381.3	381.3	0.8	0.3	12.79	255.8	58.1	262.3	261.3	1.05	250.151	
400.0	400.0	387.5	387.5	0.8	0.3	12.79	255.8	58.0	262.3	261.2	1.07	245.738	
492.1	492.1	479.8	479.8	1.0	0.4	12.69	255.7	57.6	262.1	260.8	1.34	196.287	
500.0	500.0	487.7	487.7	1.0	0.4	12.68	255.7	57.5	262.1	260.7	1.36	192.976	
590.5	590.5	578.3	578.3	1.2	0.4	12.59	255.5	57.1	261.8	260.2	1.61	162.362	
600.0	600.0	587.8	587.8	1.2	0.4	12.58	255.5	57.0	261.8	260.2	1.64	159.726	
689.0	689.0	676.6	676.5	1.4	0.5	12.51	255.3	56.7	261.6	259.7	1.88	138.907	
700.0	700.0	687.5	687.5	1.4	0.5	12.50	255.3	56.6	261.5	259.6	1.91	136.707	
787.4	787.4	775.1	775.1	1.6	0.5	12.43	255.2	56.3	261.3	259.2	2.15	121.621	
800.0	800.0	787.8	787.7	1.7	0.5	12.42	255.2	56.2	261.3	259.1	2.18	119.716	
885.8	885.8	873.4	873.4	1.9	0.6	12.35	255.0	55.8	261.1	258.7	2.41	108.303	
900.0	900.0	887.6	887.6	1.9	0.6	12.33	255.0	55.8	261.0	258.6	2.45	106.629	
984.2	984.2	972.1	972.1	2.1	0.6	12.25	254.9	55.3	260.8	258.2	2.67	97.713	
1,000.0	1,000.0	987.9	987.9	2.1	0.6	12.23	254.9	55.3	260.8	258.1	2.71	96.205	
1,082.7	1,082.7	1,070.6	1,070.6	2.3	0.7	12.17	254.6	54.9	260.5	257.6	2.93	89.007	
1,100.0	1,100.0	1,087.9	1,087.9	2.3	0.7	12.16	254.6	54.8	260.4	257.5	2.97	87.632	
1,181.1	1,181.1	1,168.8	1,168.8	2.5	0.7	-16.71	254.4	54.5	259.1	255.9	3.21	80.665	
1,200.0	1,200.0	1,187.7	1,187.6	2.6	0.7	-16.76	254.4	54.5	258.4	255.2	3.26	79.232	
1,279.5	1,279.4	1,267.2	1,267.1	2.7	0.8	-17.11	254.2	54.1	254.5	251.1	3.47	73.253	
1,300.0	1,299.8	1,287.6	1,287.6	2.8	0.8	-17.23	254.2	54.0	253.2	249.6	3.53	71.734	
1,377.9	1,377.5	1,365.5	1,365.5	3.0	0.8	-17.79	254.0	53.7	246.7	243.0	3.74	65.939	
1,400.0	1,399.5	1,387.5	1,387.5	3.0	0.8	-17.98	253.9	53.6	244.5	240.7	3.80	64.321	
1,476.4	1,475.3	1,463.0	1,463.0	3.2	0.8	-18.75	253.6	53.4	235.7	231.7	4.01	58.778	
1,500.0	1,498.7	1,486.3	1,486.2	3.3	0.9	-19.02	253.6	53.3	232.6	228.5	4.07	57.100	
1,574.8	1,572.6	1,559.5	1,559.5	3.5	0.9	-20.01	253.5	53.5	221.8	217.5	4.27	51.923	
1,600.0	1,597.5	1,584.1	1,584.1	3.5	0.9	-20.39	253.5	53.6	217.8	213.5	4.34	50.217	
1,673.2	1,669.4	1,655.6	1,655.6	3.7	0.9	-21.68	253.7	54.0	205.3	200.7	4.54	45.200	
1,700.1	1,695.8	1,681.9	1,681.9	3.8	0.9	-22.24	253.8	54.2	200.3	195.7	4.62	43.391	
1,771.6	1,765.7	1,751.6	1,751.6	4.1	0.9	-23.79	254.1	54.8	186.9	182.1	4.81	38.850	
1,800.0	1,793.4	1,779.3	1,779.3	4.2	0.9	-24.45	254.2	55.0	181.7	176.8	4.89	37.157	
1,870.1	1,862.0	1,847.5	1,847.5	4.4	0.9	-26.21	254.7	55.8	169.0	163.9	5.09	33.177	
1,900.0	1,891.3	1,876.6	1,876.6	4.5	0.9	-27.02	254.9	56.3	163.7	158.5	5.18	31.594	
1,968.5	1,958.3	1,943.6	1,943.5	4.8	0.9	-29.04	255.6	57.3	151.8	146.4	5.39	28.164	
2,000.0	1,989.1	1,974.4	1,974.4	4.9	0.9	-30.07	256.0	57.9	146.4	140.9	5.49	26.663	
2,066.9	2,054.5	2,040.0	2,039.9	5.1	0.9	-32.49	256.8	59.1	135.2	129.5	5.71	23.664	
2,100.0	2,086.9	2,072.4	2,072.4	5.3	0.9	-33.80	257.2	59.7	129.8	124.0	5.83	22.268	
2,165.3	2,150.8	2,136.7	2,136.6	5.5	0.9	-36.63	258.1	61.3	119.4	113.3	6.07	19.665	
2,200.0	2,184.7	2,170.7	2,170.6	5.6	0.9	-38.32	258.6	62.2	113.9	107.7	6.20	18.367	
2,263.8	2,247.1	2,233.6	2,233.5	5.9	1.0	-41.82	259.4	63.9	104.2	97.7	6.47	16.115	
2,300.0	2,282.5	2,269.4	2,269.2	6.0	1.0	-44.10	259.8	64.9	98.8	92.1	6.62	14.910	
2,362.2	2,343.3	2,330.7	2,330.6	6.3	1.0	-48.61	260.4	66.7	89.7	82.8	6.92	12.971	
2,400.0	2,380.3	2,368.0	2,367.7	6.5	1.0	-51.83	260.7	67.8	84.5	77.4	7.11	11.885	
2,460.6	2,439.6	2,427.5	2,427.3	6.7	1.0	-57.94	261.0	69.5	76.7	69.3	7.44	10.311	
2,500.0	2,478.1	2,466.1	2,465.8	6.9	1.0	-62.64	261.1	70.4	72.2	64.5	7.66	9.421	
2,559.0	2,535.9	2,523.9	2,523.6	7.1	1.0	-70.86	261.4	71.7	66.6	58.6	8.01	8.316	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,563.9	2,563.7	7.3	1.0	-77.31	261.5	72.5	63.8	55.5	8.24	7.736	
2,657.5	2,632.2	2,620.2	2,619.9	7.5	1.0	-87.18	261.8	73.6	61.4	52.9	8.53	7.201	
2,694.1	2,668.0	2,656.1	2,655.9	7.7	1.0	-93.76	262.0	74.2	61.0	52.3	8.68	7.030 CC	
2,700.0	2,673.8	2,661.9	2,661.6	7.7	1.0	-94.81	262.0	74.3	61.0	52.3	8.70	7.014 ES, SF	
2,755.9	2,728.4	2,716.6	2,716.3	7.9	1.0	-104.77	262.3	75.2	62.2	53.4	8.85	7.029	
2,800.0	2,771.6	2,759.7	2,759.4	8.1	1.0	-112.20	262.5	75.9	64.5	55.6	8.92	7.238	
2,854.3	2,824.7	2,812.8	2,812.5	8.3	1.1	-120.49	262.8	76.6	69.0	60.0	8.96	7.696	
2,900.0	2,869.4	2,857.5	2,857.2	8.5	1.1	-126.65	262.9	77.1	73.8	64.8	8.98	8.216	
2,952.7	2,921.0	2,909.1	2,908.8	8.8	1.1	-132.82	263.0	77.6	80.3	71.4	9.00	8.931	
3,000.0	2,967.2	2,955.4	2,955.1	9.0	1.1	-137.57	263.1	78.0	86.9	77.9	9.02	9.641	
3,051.2	3,017.3	3,005.5	3,005.2	9.2	1.1	-141.96	263.2	78.6	94.6	85.6	9.05	10.453	
3,100.0	3,065.0	3,053.1	3,052.8	9.4	1.1	-145.53	263.2	79.0	102.4	93.3	9.10	11.261	
3,149.6	3,113.5	3,101.5	3,101.1	9.6	1.1	-148.66	263.1	79.5	110.8	101.7	9.16	12.105	
3,200.0	3,162.8	3,150.8	3,150.5	9.8	1.1	-151.41	262.9	79.8	119.7	110.5	9.23	12.971	
3,248.0	3,209.8	3,197.8	3,197.4	10.0	1.1	-153.68	262.8	80.2	128.4	119.1	9.31	13.792	
3,300.0	3,260.6	3,248.6	3,248.3	10.2	1.2	-155.82	262.6	80.7	137.9	128.5	9.40	14.672	
3,346.4	3,306.1	3,294.0	3,293.7	10.5	1.2	-157.49	262.5	81.0	146.6	137.1	9.49	15.448	
3,400.0	3,358.5	3,346.3	3,346.0	10.7	1.2	-159.18	262.3	81.4	156.8	147.2	9.60	16.328	
3,444.9	3,402.3	3,390.2	3,389.8	10.9	1.2	-160.44	262.2	81.7	165.5	155.8	9.70	17.053	
3,500.0	3,456.3	3,444.2	3,443.9	11.1	1.2	-161.83	262.0	82.1	176.2	166.3	9.83	17.925	
3,543.3	3,498.6	3,486.7	3,486.4	11.3	1.2	-162.82	261.8	82.5	184.6	174.7	9.93	18.592	
3,600.0	3,554.1	3,542.3	3,542.0	11.5	1.2	-163.98	261.6	83.0	195.7	185.6	10.07	19.441	
3,641.7	3,594.9	3,583.3	3,582.9	11.7	1.2	-164.74	261.6	83.4	203.9	193.7	10.17	20.048	
3,700.0	3,651.9	3,640.5	3,640.1	12.0	1.3	-165.68	261.6	83.8	215.3	205.0	10.32	20.868	
3,740.1	3,691.2	3,679.9	3,679.5	12.2	1.3	-166.28	261.6	84.2	223.2	212.8	10.42	21.418	
3,800.0	3,749.7	3,738.5	3,738.1	12.4	1.3	-167.09	261.6	84.7	234.9	224.4	10.58	22.215	
3,838.6	3,787.4	3,776.2	3,775.8	12.6	1.3	-167.58	261.6	85.0	242.6	231.9	10.68	22.716	
3,900.0	3,847.5	3,836.4	3,836.0	12.9	1.3	-168.29	261.5	85.6	254.7	243.9	10.84	23.496	
3,937.0	3,883.7	3,872.7	3,872.4	13.0	1.3	-168.69	261.6	85.9	262.1	251.1	10.94	23.952	
4,000.0	3,945.3	3,934.6	3,934.3	13.3	1.3	-169.32	261.6	86.5	274.5	263.4	11.11	24.705	
4,035.4	3,980.0	3,969.5	3,969.1	13.5	1.3	-169.65	261.6	86.9	281.5	270.3	11.21	25.117	
4,060.0	4,004.0	3,993.6	3,993.3	13.6	1.3	-169.87	261.7	87.1	286.4	275.1	11.27	25.398	
4,100.0	4,043.2	4,032.8	4,032.4	13.7	1.4	-170.23	261.7	87.5	294.0	282.6	11.36	25.882	
4,133.8	4,076.5	4,066.0	4,065.6	13.8	1.4	-170.51	261.8	87.9	300.0	288.6	11.42	26.276	
4,200.0	4,141.6	4,131.0	4,130.6	14.0	1.4	-170.99	261.8	88.6	310.8	299.2	11.54	26.940	
4,232.3	4,173.5	4,162.7	4,162.3	14.1	1.4	-171.20	261.7	89.0	315.5	303.9	11.59	27.222	
4,300.0	4,240.6	4,229.5	4,229.1	14.3	1.4	-171.58	261.7	89.6	324.3	312.6	11.70	27.715	
4,330.7	4,271.1	4,259.9	4,259.5	14.4	1.4	-171.73	261.6	89.9	327.8	316.1	11.75	27.899	
4,400.0	4,340.0	4,328.9	4,328.5	14.5	1.4	-172.03	261.5	90.6	334.6	322.7	11.86	28.215	
4,429.1	4,369.0	4,358.0	4,357.6	14.6	1.4	-172.14	261.4	90.9	336.9	325.0	11.90	28.310	
4,500.0	4,439.7	4,428.8	4,428.5	14.8	1.5	-172.39	261.3	91.7	341.4	329.4	12.01	28.435	
4,527.5	4,467.2	4,456.3	4,455.9	14.8	1.5	-172.47	261.2	92.0	342.6	330.6	12.04	28.450	
4,600.0	4,539.7	4,529.0	4,528.6	14.9	1.5	-172.63	261.2	92.7	344.7	332.5	12.14	28.382	
4,626.0	4,565.6	4,555.3	4,554.9	15.0	1.5	-172.67	261.2	92.9	344.9	332.8	12.18	28.321	
4,660.2	4,599.8	4,589.9	4,589.5	15.0	1.5	-143.97	261.3	93.2	344.9	328.5	16.43	20.994	
4,700.0	4,639.6	4,629.9	4,629.5	15.0	1.5	-144.00	261.5	93.6	344.6	328.1	16.49	20.896	
4,724.4	4,664.0	4,654.3	4,653.9	15.1	1.5	-144.01	261.6	93.7	344.4	327.8	16.53	20.833	
4,800.0	4,739.6	4,730.2	4,729.8	15.2	1.5	-144.03	262.0	94.2	343.7	327.1	16.65	20.639	
4,822.8	4,762.5	4,753.2	4,752.8	15.2	1.5	-144.04	262.2	94.4	343.5	326.8	16.69	20.580	
4,900.0	4,839.6	4,830.8	4,830.4	15.3	1.6	-144.04	262.8	94.9	342.7	325.9	16.82	20.378	
4,921.2	4,860.9	4,852.2	4,851.8	15.4	1.6	-144.04	263.0	95.0	342.5	325.6	16.85	20.322	
5,000.0	4,939.6	4,931.2	4,930.8	15.5	1.6	-144.03	263.8	95.5	341.5	324.5	16.98	20.114	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	4,951.0	4,950.6	15.5	1.6	-144.02	264.0	95.6	341.3	324.3	17.01	20.061	
5,100.0	5,039.6	5,031.7	5,031.3	15.6	1.6	-143.99	265.0	96.1	340.2	323.1	17.14	19.849	
5,118.1	5,057.7	5,050.0	5,049.5	15.7	1.6	-143.98	265.2	96.2	340.0	322.8	17.17	19.800	
5,200.0	5,139.6	5,132.4	5,132.0	15.8	1.6	-143.96	266.3	96.8	338.8	321.4	17.31	19.571	
5,216.5	5,156.2	5,149.0	5,148.6	15.8	1.6	-143.96	266.5	97.0	338.5	321.2	17.34	19.525	
5,300.0	5,239.6	5,232.4	5,231.9	15.9	1.6	-143.94	267.7	97.7	337.1	319.7	17.48	19.291	
5,314.9	5,254.6	5,247.2	5,246.8	16.0	1.6	-143.93	267.9	97.8	336.9	319.4	17.50	19.250	
5,400.0	5,339.6	5,331.6	5,331.2	16.1	1.7	-143.92	268.9	98.4	335.7	318.1	17.64	19.025	
5,413.4	5,353.0	5,344.9	5,344.5	16.1	1.7	-143.91	269.1	98.5	335.5	317.9	17.67	18.991	
5,500.0	5,439.6	5,431.5	5,431.1	16.3	1.7	-143.86	270.2	98.9	334.4	316.6	17.81	18.772	
5,511.8	5,451.4	5,443.4	5,442.9	16.3	1.7	-143.86	270.3	99.0	334.2	316.4	17.83	18.742	
5,600.0	5,539.6	5,532.0	5,531.5	16.4	1.7	-143.80	271.5	99.4	333.0	315.0	17.98	18.517	
5,610.2	5,549.9	5,542.2	5,541.8	16.4	1.7	-143.79	271.7	99.5	332.8	314.8	18.00	18.491	
5,700.0	5,639.6	5,631.8	5,631.3	16.6	1.7	-143.72	273.0	100.0	331.5	313.4	18.15	18.262	
5,708.6	5,648.3	5,640.3	5,639.8	16.6	1.7	-143.72	273.1	100.0	331.4	313.2	18.17	18.240	
5,800.0	5,739.6	5,731.0	5,730.5	16.7	1.7	-143.64	274.2	100.3	330.3	311.9	18.32	18.024	
5,807.1	5,746.7	5,738.1	5,737.6	16.8	1.7	-143.64	274.3	100.4	330.2	311.9	18.34	18.007	
5,900.0	5,839.6	5,830.6	5,830.1	16.9	1.8	-143.59	275.3	100.8	329.1	310.6	18.50	17.792	
5,905.5	5,845.1	5,836.0	5,835.5	16.9	1.8	-143.59	275.4	100.8	329.1	310.5	18.51	17.780	
6,000.0	5,939.6	5,929.4	5,928.9	17.1	1.8	-143.53	276.2	101.0	328.3	309.6	18.67	17.582	
6,003.9	5,943.6	5,933.3	5,932.8	17.1	1.8	-143.53	276.2	101.0	328.3	309.6	18.68	17.574	
6,059.2	5,998.8	5,988.3	5,987.8	17.2	1.8	-143.49	276.7	101.0	327.9	309.1	18.77	17.466	
6,100.0	6,039.6	6,029.0	6,028.5	17.2	1.8	-53.68	277.0	101.0	327.0	311.5	15.48	21.122	
6,102.3	6,042.0	6,031.3	6,030.8	17.2	1.8	-53.70	277.0	101.0	326.9	311.4	15.48	21.112	
6,150.0	6,089.4	6,078.7	6,078.2	17.3	1.8	-54.50	277.3	101.0	324.0	308.4	15.54	20.848	
6,200.0	6,138.7	6,127.7	6,127.2	17.3	1.8	-55.96	277.6	101.1	319.1	303.5	15.60	20.450	
6,200.8	6,139.5	6,128.5	6,128.0	17.3	1.8	-55.98	277.6	101.1	319.0	303.4	15.60	20.442	
6,250.0	6,187.4	6,175.9	6,175.4	17.3	1.8	-58.07	277.8	101.0	312.5	296.9	15.67	19.940	
6,299.2	6,234.4	6,222.7	6,222.2	17.4	1.8	-60.82	278.0	101.0	304.7	289.0	15.75	19.344	
6,300.0	6,235.1	6,223.5	6,223.0	17.4	1.8	-60.88	278.0	100.9	304.6	288.8	15.75	19.333	
6,350.0	6,281.7	6,270.1	6,269.6	17.4	1.8	-64.41	278.2	100.9	295.6	279.8	15.85	18.648	
6,397.6	6,324.8	6,313.1	6,312.6	17.3	1.8	-68.43	278.4	100.9	286.7	270.7	15.97	17.952	
6,400.0	6,326.9	6,315.2	6,314.7	17.3	1.8	-68.64	278.4	100.9	286.2	270.2	15.97	17.917	
6,450.0	6,370.5	6,358.4	6,357.9	17.3	1.8	-73.46	278.4	100.9	277.2	261.0	16.12	17.195	
6,496.0	6,409.1	6,396.6	6,396.0	17.3	1.8	-78.32	278.5	100.9	269.9	253.6	16.28	16.580	
6,500.0	6,412.3	6,400.0	6,399.5	17.3	1.8	-78.78	278.5	101.0	269.4	253.1	16.29	16.532	
6,550.0	6,452.1	6,439.3	6,438.8	17.3	1.8	-84.31	278.4	101.0	263.9	247.4	16.50	15.989	
6,594.5	6,485.6	6,472.5	6,472.0	17.3	1.9	-89.24	278.4	101.1	261.9	245.1	16.74	15.644	
6,599.3	6,489.2	6,476.0	6,475.5	17.3	1.9	-89.77	278.3	101.1	261.9	245.1	16.77	15.618	
6,600.0	6,489.7	6,476.5	6,476.0	17.3	1.9	-89.84	278.3	101.1	261.9	245.1	16.77	15.615	
6,650.0	6,524.9	6,511.2	6,510.7	17.2	1.9	-95.06	278.2	101.3	264.4	247.2	17.11	15.447	
6,692.9	6,553.0	6,539.2	6,538.6	17.2	1.9	-99.09	278.1	101.5	270.7	253.3	17.47	15.494	
6,700.0	6,557.5	6,543.6	6,543.1	17.2	1.9	-99.71	278.1	101.5	272.2	254.7	17.53	15.524	
6,750.0	6,587.4	6,573.2	6,572.7	17.2	1.9	-103.59	278.0	101.6	285.8	267.8	18.00	15.878	
6,791.3	6,609.9	6,595.5	6,595.0	17.2	1.9	-106.11	277.9	101.8	301.4	283.0	18.41	16.375	
6,800.0	6,614.4	6,600.0	6,599.5	17.2	1.9	-106.56	277.9	101.8	305.2	286.7	18.49	16.505	
6,850.0	6,638.4	6,623.9	6,623.4	17.2	1.9	-108.55	277.8	101.9	329.9	310.9	19.00	17.361	
6,889.7	6,655.3	6,640.7	6,640.2	17.4	1.9	-109.37	277.7	102.0	352.9	333.5	19.44	18.155	
6,900.0	6,659.4	6,644.7	6,644.2	17.5	1.9	-109.47	277.7	102.0	359.3	339.8	19.55	18.382	
6,950.0	6,677.1	6,662.3	6,661.8	18.0	1.9	-109.25	277.6	102.1	392.8	372.7	20.14	19.501	
6,988.2	6,688.4	6,673.5	6,673.0	18.5	1.9	-108.25	277.6	102.1	420.7	400.1	20.64	20.382	
7,000.0	6,691.5	6,676.6	6,676.1	18.7	1.9	-107.78	277.6	102.2	429.7	408.9	20.79	20.666	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,050.0	6,702.5	6,687.5	6,687.0	19.5	1.9	-104.93	277.5	102.2	469.3	447.8	21.48	21.852	
7,086.6	6,708.4	6,693.3	6,692.8	20.1	1.9	-101.87	277.5	102.2	499.7	477.7	21.98	22.730	
7,100.0	6,710.1	6,695.0	6,694.5	20.4	1.9	-100.53	277.5	102.2	511.1	488.9	22.16	23.065	
7,150.0	6,714.2	6,699.0	6,698.5	21.3	1.9	-94.48	277.5	102.2	554.4	531.6	22.81	24.301	
7,185.0	6,715.0	6,699.7	6,699.2	21.9	1.9	-89.24	277.5	102.2	585.5	562.2	23.30	25.122	
7,185.6	6,715.0	6,699.7	6,699.2	21.9	1.9	-89.16	277.5	102.2	585.9	562.6	23.31	25.134	
7,200.0	6,715.0	6,699.6	6,699.1	22.2	1.9	-89.14	277.5	102.2	598.9	575.3	23.59	25.388	
7,283.4	6,714.8	6,699.1	6,698.6	23.9	1.9	-89.04	277.5	102.2	674.9	649.6	25.27	26.712	
7,300.0	6,714.8	6,699.0	6,698.5	24.2	1.9	-89.02	277.5	102.2	690.2	664.6	25.60	26.962	
7,381.9	6,714.6	6,698.6	6,698.1	26.0	1.9	-88.92	277.5	102.2	766.5	739.1	27.36	28.020	
7,400.0	6,714.6	6,698.5	6,697.9	26.4	1.9	-88.89	277.5	102.2	783.5	755.8	27.74	28.241	
7,480.3	6,714.4	6,698.0	6,697.5	28.2	1.9	-88.79	277.5	102.2	859.6	830.1	29.56	29.078	
7,500.0	6,714.4	6,697.9	6,697.4	28.7	1.9	-88.77	277.5	102.2	878.4	848.4	30.01	29.272	
7,578.7	6,714.2	6,697.4	6,696.9	30.5	1.9	-88.67	277.5	102.2	953.8	921.9	31.86	29.937	
7,600.0	6,714.2	6,697.3	6,696.8	31.0	1.9	-88.64	277.5	102.2	974.3	941.9	32.36	30.106	
7,677.1	6,714.0	6,696.9	6,696.4	32.9	1.9	-88.55	277.5	102.2	1,048.8	1,014.5	34.23	30.638	
7,700.0	6,714.0	6,696.7	6,696.2	33.4	1.9	-88.52	277.5	102.2	1,070.9	1,036.1	34.79	30.786	
7,775.6	6,713.9	6,696.3	6,695.8	35.3	1.9	-88.42	277.5	102.2	1,144.3	1,107.7	36.66	31.215	
7,800.0	6,713.8	6,696.2	6,695.6	35.9	1.9	-88.39	277.5	102.2	1,168.1	1,130.8	37.27	31.346	
7,874.0	6,713.7	6,695.7	6,695.2	37.8	1.9	-88.30	277.5	102.2	1,240.3	1,201.2	39.13	31.694	
7,900.0	6,713.6	6,695.6	6,695.1	38.4	1.9	-88.27	277.5	102.2	1,265.7	1,226.0	39.79	31.810	
7,972.4	6,713.5	6,695.2	6,694.6	40.3	1.9	-88.18	277.5	102.2	1,336.7	1,295.0	41.65	32.096	
8,000.0	6,713.4	6,695.0	6,694.5	41.0	1.9	-88.14	277.5	102.2	1,363.7	1,321.4	42.35	32.199	
8,070.8	6,713.3	6,694.6	6,694.1	42.8	1.9	-88.05	277.5	102.2	1,433.3	1,389.1	44.19	32.436	
8,100.0	6,713.2	6,694.4	6,693.9	43.6	1.9	-88.01	277.5	102.2	1,462.0	1,417.0	44.94	32.529	
8,169.3	6,713.1	6,694.0	6,693.5	45.4	1.9	-87.93	277.5	102.2	1,530.2	1,483.4	46.76	32.726	
8,200.0	6,713.0	6,693.8	6,693.3	46.2	1.9	-87.89	277.5	102.2	1,560.4	1,512.9	47.56	32.809	
8,267.7	6,712.9	6,693.4	6,692.9	48.0	1.9	-87.80	277.5	102.2	1,627.2	1,577.9	49.35	32.975	
8,300.0	6,712.8	6,693.2	6,692.7	48.8	1.9	-87.76	277.5	102.2	1,659.1	1,608.9	50.20	33.051	
8,366.1	6,712.7	6,692.9	6,692.3	50.6	1.9	-87.67	277.5	102.2	1,724.4	1,672.5	51.95	33.192	
8,400.0	6,712.6	6,692.7	6,692.1	51.5	1.9	-87.63	277.5	102.2	1,757.9	1,705.1	52.85	33.260	
8,464.5	6,712.5	6,692.3	6,691.8	53.2	1.9	-87.55	277.5	102.2	1,821.8	1,767.2	54.58	33.380	
8,500.0	6,712.4	6,692.1	6,691.5	54.1	1.9	-87.50	277.5	102.2	1,856.8	1,801.3	55.52	33.443	
8,563.0	6,712.3	6,691.7	6,691.2	55.8	1.9	-87.42	277.5	102.2	1,919.2	1,862.0	57.21	33.546	
8,600.0	6,712.3	6,691.5	6,690.9	56.8	1.9	-87.37	277.5	102.2	1,955.9	1,897.7	58.20	33.604	
8,661.4	6,712.1	6,691.1	6,690.6	58.5	1.9	-87.29	277.5	102.2	2,016.8	1,956.9	59.86	33.693	
8,700.0	6,712.1	6,690.9	6,690.4	59.5	1.9	-87.24	277.5	102.2	2,055.0	1,994.1	60.90	33.746	
8,759.8	6,711.9	6,690.5	6,690.0	61.1	1.9	-87.17	277.5	102.2	2,114.4	2,051.9	62.51	33.823	
8,800.0	6,711.9	6,690.3	6,689.8	62.2	1.9	-87.11	277.5	102.2	2,154.2	2,090.6	63.60	33.873	
8,858.2	6,711.8	6,689.9	6,689.4	63.8	1.9	-87.04	277.5	102.2	2,212.1	2,146.9	65.18	33.940	
8,900.0	6,711.7	6,689.7	6,689.1	64.9	1.9	-86.98	277.5	102.2	2,253.5	2,187.2	66.31	33.986	
8,956.7	6,711.6	6,689.3	6,688.8	66.5	1.9	-86.91	277.5	102.2	2,309.8	2,242.0	67.85	34.045	
9,000.0	6,711.5	6,689.1	6,688.5	67.6	1.9	-86.85	277.5	102.2	2,352.9	2,283.9	69.02	34.088	
9,055.1	6,711.4	6,688.7	6,688.2	69.1	1.9	-86.78	277.5	102.2	2,407.6	2,337.1	70.52	34.140	
9,100.0	6,711.3	6,688.5	6,687.9	70.4	1.9	-86.72	277.5	102.2	2,452.3	2,380.5	71.74	34.181	
9,153.5	6,711.2	6,688.1	6,687.6	71.8	1.9	-86.65	277.5	102.2	2,505.5	2,432.3	73.20	34.226	
9,200.0	6,711.1	6,687.8	6,687.3	73.1	1.9	-86.59	277.5	102.2	2,551.7	2,477.2	74.47	34.265	
9,251.9	6,711.0	6,687.5	6,687.0	74.5	1.9	-86.52	277.5	102.2	2,603.4	2,527.5	75.89	34.305	
9,300.0	6,710.9	6,687.2	6,686.7	75.8	1.9	-86.46	277.5	102.2	2,651.2	2,574.0	77.20	34.341	
9,350.4	6,710.8	6,686.9	6,686.4	77.2	1.9	-86.39	277.5	102.2	2,701.3	2,622.8	78.58	34.377	
9,400.0	6,710.7	6,686.6	6,686.1	78.6	1.9	-86.33	277.5	102.2	2,750.7	2,670.8	79.94	34.411	
9,448.8	6,710.6	6,686.3	6,685.8	79.9	1.9	-86.26	277.5	102.2	2,799.3	2,718.0	81.27	34.443	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,710.5	6,686.0	6,685.5	81.3	1.9	-86.19	277.5	102.2	2,850.3	2,767.6	82.67	34.476	
9,547.2	6,710.4	6,685.7	6,685.2	82.6	1.9	-86.13	277.5	102.2	2,897.3	2,813.3	83.97	34.505	
9,600.0	6,710.3	6,685.4	6,684.9	84.1	1.9	-86.06	277.5	102.2	2,949.9	2,864.5	85.42	34.536	
9,645.6	6,710.2	6,685.1	6,684.6	85.3	1.9	-86.00	277.5	102.2	2,995.3	2,908.7	86.67	34.561	
9,700.0	6,710.1	6,684.8	6,684.3	86.8	1.9	-85.93	277.5	102.2	3,049.5	2,961.3	88.16	34.591	
9,744.1	6,710.0	6,684.5	6,684.0	88.1	1.9	-85.87	277.5	102.2	3,093.4	3,004.0	89.37	34.614	
9,800.0	6,709.9	6,684.1	6,683.6	89.6	1.9	-85.79	277.5	102.2	3,149.1	3,058.2	90.90	34.643	
9,842.5	6,709.9	6,683.9	6,683.4	90.8	1.9	-85.73	277.5	102.2	3,191.5	3,099.4	92.07	34.664	
9,900.0	6,709.7	6,683.5	6,683.0	92.4	1.9	-85.66	277.5	102.2	3,248.8	3,155.1	93.65	34.691	
9,940.9	6,709.7	6,683.3	6,682.7	93.5	1.9	-85.60	277.5	102.2	3,289.6	3,194.8	94.77	34.710	
10,000.0	6,709.6	6,682.9	6,682.4	95.1	1.9	-85.52	277.5	102.2	3,348.5	3,252.1	96.40	34.736	
10,039.3	6,709.5	6,682.6	6,682.1	96.2	1.9	-85.47	277.6	102.2	3,387.7	3,290.2	97.48	34.753	
10,100.0	6,709.4	6,682.3	6,681.7	97.9	1.9	-85.39	277.6	102.2	3,448.2	3,349.0	99.15	34.779	
10,137.8	6,709.3	6,682.0	6,681.5	98.9	1.9	-85.33	277.6	102.2	3,485.8	3,385.6	100.18	34.794	
10,200.0	6,709.2	6,681.6	6,681.1	100.7	1.9	-85.25	277.6	102.2	3,547.9	3,446.0	101.89	34.819	
10,236.2	6,709.1	6,681.4	6,680.9	101.7	1.9	-85.20	277.6	102.2	3,584.0	3,481.1	102.89	34.833	
10,300.0	6,709.0	6,681.0	6,680.5	103.4	1.9	-85.11	277.6	102.2	3,647.6	3,543.0	104.64	34.857	
10,334.6	6,708.9	6,680.8	6,680.3	104.4	1.9	-85.07	277.6	102.2	3,682.1	3,576.6	105.60	34.870	
10,400.0	6,708.8	6,680.4	6,679.8	106.2	1.9	-84.98	277.6	102.2	3,747.4	3,640.0	107.39	34.893	
10,433.0	6,708.7	6,680.1	6,679.6	107.1	1.9	-84.93	277.6	102.2	3,780.3	3,672.0	108.30	34.905	
10,500.0	6,708.6	6,679.7	6,679.2	109.0	1.9	-84.84	277.6	102.2	3,847.1	3,737.0	110.15	34.928	
10,531.5	6,708.5	6,679.5	6,679.0	109.9	1.9	-84.79	277.6	102.2	3,878.5	3,767.5	111.01	34.938	
10,600.0	6,708.4	6,679.1	6,678.6	111.8	1.9	-84.70	277.6	102.2	3,946.9	3,834.0	112.90	34.961	
10,629.9	6,708.4	6,678.9	6,678.4	112.6	1.9	-84.66	277.6	102.2	3,976.7	3,863.0	113.72	34.970	
10,700.0	6,708.2	6,678.4	6,677.9	114.6	1.9	-84.56	277.6	102.2	4,046.7	3,931.0	115.65	34.992	
10,728.3	6,708.2	6,678.2	6,677.7	115.3	1.9	-84.52	277.6	102.2	4,074.9	3,958.5	116.42	35.001	
10,800.0	6,708.0	6,677.8	6,677.3	117.3	1.9	-84.42	277.6	102.2	4,146.5	4,028.1	118.39	35.022	
10,826.7	6,708.0	6,677.6	6,677.1	118.1	1.9	-84.39	277.6	102.2	4,173.2	4,054.0	119.13	35.030	
10,900.0	6,707.8	6,677.1	6,676.6	120.1	1.9	-84.28	277.6	102.2	4,246.3	4,125.1	121.14	35.051	
10,925.2	6,707.8	6,677.0	6,676.5	120.8	1.9	-84.25	277.6	102.2	4,271.4	4,149.6	121.84	35.059	
11,000.0	6,707.6	6,676.5	6,676.0	122.9	1.9	-84.14	277.6	102.2	4,346.1	4,222.2	123.89	35.080	
11,023.6	6,707.6	6,676.3	6,675.8	123.6	1.9	-84.11	277.6	102.2	4,369.6	4,245.1	124.54	35.086	
11,100.0	6,707.5	6,675.8	6,675.3	125.7	1.9	-84.00	277.6	102.2	4,445.9	4,319.3	126.64	35.107	
11,122.0	6,707.4	6,675.7	6,675.2	126.3	1.9	-83.97	277.6	102.2	4,467.9	4,340.6	127.24	35.113	
11,200.0	6,707.3	6,675.2	6,674.7	128.5	1.9	-83.86	277.6	102.2	4,545.7	4,416.3	129.39	35.133	
11,220.4	6,707.2	6,675.0	6,674.5	129.0	1.9	-83.83	277.6	102.2	4,566.1	4,436.2	129.95	35.138	
11,300.0	6,707.1	6,674.5	6,674.0	131.3	1.9	-83.72	277.6	102.2	4,645.6	4,513.4	132.13	35.159	
11,318.9	6,707.0	6,674.4	6,673.9	131.8	1.9	-83.70	277.6	102.2	4,664.4	4,531.8	132.65	35.163	
11,400.0	6,706.9	6,673.8	6,673.3	134.0	1.9	-83.58	277.6	102.1	4,745.4	4,610.5	134.88	35.184	
11,417.3	6,706.9	6,673.7	6,673.2	134.5	1.9	-83.56	277.6	102.1	4,762.7	4,627.3	135.35	35.188	
11,500.0	6,706.7	6,673.2	6,672.7	136.8	1.9	-83.44	277.6	102.1	4,845.2	4,707.6	137.62	35.208	
11,515.7	6,706.7	6,673.1	6,672.6	137.3	1.9	-83.42	277.6	102.1	4,860.9	4,722.9	138.05	35.212	
11,600.0	6,706.5	6,672.5	6,672.0	139.6	1.9	-83.30	277.6	102.1	4,945.1	4,804.7	140.36	35.232	
11,614.1	6,706.5	6,672.4	6,671.9	140.0	1.9	-83.28	277.6	102.1	4,959.2	4,818.5	140.75	35.235	
11,700.0	6,706.3	6,671.8	6,671.3	142.4	1.9	-83.15	277.6	102.1	5,045.0	4,901.9	143.10	35.255	
11,712.6	6,706.3	6,671.8	6,671.2	142.8	1.9	-83.14	277.6	102.1	5,057.5	4,914.1	143.44	35.258	
11,800.0	6,706.1	6,671.2	6,670.7	145.2	1.9	-83.01	277.6	102.1	5,144.8	4,999.0	145.84	35.278	
11,811.0	6,706.1	6,671.1	6,670.6	145.5	1.9	-82.99	277.6	102.1	5,155.8	5,009.7	146.14	35.280	
11,900.0	6,705.9	6,670.5	6,670.0	148.0	1.9	-82.87	277.6	102.1	5,244.7	5,096.1	148.57	35.300	
11,909.4	6,705.9	6,670.4	6,669.9	148.3	1.9	-82.85	277.6	102.1	5,254.1	5,105.3	148.83	35.303	
12,000.0	6,705.8	6,669.8	6,669.3	150.8	1.9	-82.72	277.6	102.1	5,344.6	5,193.3	151.31	35.323	
12,007.8	6,705.7	6,669.8	6,669.2	151.0	1.9	-82.71	277.6	102.1	5,352.4	5,200.9	151.52	35.324	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,100.0	6,705.6	6,669.1	6,668.6	153.6	1.9	-82.58	277.6	102.1	5,444.4	5,290.4	154.04	35.344	
12,106.3	6,705.6	6,669.1	6,668.6	153.8	1.9	-82.57	277.6	102.1	5,450.7	5,296.5	154.21	35.346	
12,200.0	6,705.4	6,668.4	6,667.9	156.4	1.9	-82.43	277.6	102.1	5,544.3	5,387.6	156.77	35.366	
12,204.7	6,705.4	6,668.4	6,667.9	156.5	1.9	-82.43	277.6	102.1	5,549.0	5,392.1	156.90	35.367	
12,300.0	6,705.2	6,667.8	6,667.2	159.2	1.9	-82.29	277.6	102.1	5,644.2	5,484.7	159.50	35.387	
12,303.1	6,705.2	6,667.7	6,667.2	159.3	1.9	-82.28	277.6	102.1	5,647.3	5,487.8	159.58	35.388	
12,400.0	6,705.0	6,667.1	6,666.6	162.0	1.9	-82.14	277.6	102.1	5,744.1	5,581.9	162.22	35.409	
12,401.5	6,705.0	6,667.1	6,666.5	162.0	1.9	-82.14	277.6	102.1	5,745.7	5,583.4	162.27	35.409	
12,500.0	6,704.8	6,666.4	6,665.9	164.8	1.9	-81.99	277.6	102.1	5,844.0	5,679.1	164.95	35.430	
12,598.4	6,704.6	6,665.7	6,665.2	167.5	1.9	-81.85	277.6	102.1	5,942.3	5,774.7	167.62	35.450	
12,600.0	6,704.6	6,665.7	6,665.2	167.6	1.9	-81.85	277.6	102.1	5,943.9	5,776.2	167.67	35.450	
12,696.8	6,704.4	6,665.0	6,664.5	170.3	1.9	-81.70	277.6	102.1	6,040.6	5,870.3	170.30	35.471	
12,700.0	6,704.4	6,665.0	6,664.5	170.4	1.9	-81.70	277.6	102.1	6,043.8	5,873.4	170.39	35.471	
12,795.2	6,704.3	6,664.3	6,663.8	173.0	1.9	-81.56	277.6	102.1	6,139.0	5,966.0	172.97	35.491	
12,800.0	6,704.2	6,664.3	6,663.8	173.2	1.9	-81.55	277.6	102.1	6,143.7	5,970.6	173.10	35.492	
12,893.7	6,704.1	6,663.6	6,663.1	175.8	1.9	-81.41	277.6	102.1	6,237.3	6,061.7	175.64	35.511	
12,900.0	6,704.1	6,663.6	6,663.1	176.0	1.9	-81.40	277.6	102.1	6,243.6	6,067.8	175.82	35.512	
12,992.1	6,703.9	6,662.9	6,662.4	178.5	1.9	-81.26	277.6	102.1	6,335.6	6,157.3	178.31	35.531	
13,000.0	6,703.9	6,662.9	6,662.4	178.8	1.9	-81.25	277.6	102.1	6,343.5	6,165.0	178.53	35.533	
13,090.5	6,703.7	6,662.2	6,661.7	181.3	1.9	-81.12	277.6	102.1	6,434.0	6,253.0	180.98	35.552	
13,100.0	6,703.7	6,662.2	6,661.6	181.6	1.9	-81.10	277.6	102.1	6,443.4	6,262.2	181.23	35.553	
13,188.9	6,703.5	6,661.5	6,661.0	184.0	1.9	-80.97	277.6	102.1	6,532.3	6,348.7	183.64	35.572	
13,200.0	6,703.5	6,661.4	6,660.9	184.4	1.9	-80.95	277.6	102.1	6,543.4	6,359.4	183.94	35.574	
13,287.4	6,703.3	6,660.8	6,660.3	186.8	1.9	-80.82	277.6	102.1	6,630.7	6,444.4	186.30	35.592	
13,300.0	6,703.3	6,660.7	6,660.2	187.2	1.9	-80.80	277.6	102.1	6,643.3	6,456.6	186.64	35.595	
13,385.8	6,703.2	6,660.1	6,659.6	189.6	1.9	-80.67	277.6	102.1	6,729.0	6,540.1	188.95	35.612	
13,400.0	6,703.1	6,660.0	6,659.5	190.0	1.9	-80.65	277.6	102.1	6,743.2	6,553.9	189.34	35.615	
13,484.2	6,703.0	6,659.4	6,658.9	192.3	1.9	-80.52	277.6	102.1	6,827.4	6,635.8	191.60	35.633	
13,500.0	6,702.9	6,659.3	6,658.8	192.8	1.9	-80.50	277.6	102.1	6,843.1	6,651.1	192.03	35.636	
13,582.6	6,702.8	6,658.7	6,658.2	195.1	1.9	-80.37	277.6	102.1	6,925.7	6,731.5	194.25	35.653	
13,600.0	6,702.8	6,658.6	6,658.0	195.6	1.9	-80.35	277.6	102.1	6,943.1	6,748.3	194.72	35.656	
13,681.1	6,702.6	6,658.0	6,657.5	197.8	1.9	-80.22	277.6	102.1	7,024.1	6,827.2	196.90	35.673	
13,700.0	6,702.6	6,657.8	6,657.3	198.4	1.9	-80.20	277.6	102.1	7,043.0	6,845.6	197.41	35.677	
13,779.5	6,702.4	6,657.3	6,656.7	200.6	1.9	-80.07	277.6	102.1	7,122.4	6,922.9	199.54	35.694	
13,800.0	6,702.4	6,657.1	6,656.6	201.2	1.9	-80.04	277.6	102.1	7,142.9	6,942.8	200.09	35.698	
13,877.9	6,702.2	6,656.5	6,656.0	203.3	1.9	-79.92	277.6	102.1	7,220.8	7,018.6	202.18	35.714	
13,900.0	6,702.2	6,656.4	6,655.9	204.0	1.9	-79.89	277.6	102.1	7,242.8	7,040.1	202.77	35.719	
13,976.3	6,702.1	6,655.8	6,655.3	206.1	1.9	-79.77	277.7	102.1	7,319.1	7,114.3	204.82	35.735	
14,000.0	6,702.0	6,655.6	6,655.1	206.8	1.9	-79.74	277.7	102.1	7,342.8	7,137.3	205.45	35.740	
14,074.8	6,701.9	6,655.1	6,654.6	208.9	1.9	-79.62	277.7	102.1	7,417.5	7,210.0	207.45	35.756	
14,100.0	6,701.8	6,654.9	6,654.4	209.6	1.9	-79.58	277.7	102.1	7,442.7	7,234.6	208.12	35.761	
14,173.2	6,701.7	6,654.3	6,653.8	211.6	1.9	-79.47	277.7	102.1	7,515.9	7,305.8	210.08	35.777	
14,200.0	6,701.6	6,654.1	6,653.6	212.4	1.9	-79.43	277.7	102.1	7,542.6	7,331.9	210.79	35.782	
14,271.6	6,701.5	6,653.6	6,653.1	214.4	1.9	-79.31	277.7	102.1	7,614.2	7,401.5	212.70	35.798	
14,300.0	6,701.4	6,653.4	6,652.9	215.2	1.9	-79.27	277.7	102.1	7,642.6	7,429.1	213.46	35.804	
14,370.0	6,701.3	6,652.9	6,652.4	217.1	1.9	-79.16	277.7	102.1	7,712.6	7,497.3	215.32	35.819	
14,400.0	6,701.3	6,652.7	6,652.1	218.0	1.9	-79.12	277.7	102.1	7,742.5	7,526.4	216.12	35.826	
14,468.5	6,701.1	6,652.1	6,651.6	219.9	1.9	-79.01	277.7	102.1	7,811.0	7,593.0	217.94	35.841	
14,500.0	6,701.1	6,651.9	6,651.4	220.8	1.9	-78.96	277.7	102.1	7,842.5	7,623.7	218.77	35.847	
14,566.9	6,701.0	6,651.4	6,650.9	222.6	1.9	-78.85	277.7	102.1	7,909.3	7,688.8	220.55	35.862	
14,600.0	6,700.9	6,651.1	6,650.6	223.6	1.9	-78.80	277.7	102.0	7,942.4	7,721.0	221.43	35.869	
14,665.3	6,700.8	6,650.6	6,650.1	225.4	1.9	-78.70	277.7	102.0	8,007.7	7,784.5	223.16	35.884	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,650.4	6,649.9	226.4	1.9	-78.64	277.7	102.0	8,042.3	7,818.3	224.07	35.891	
14,763.7	6,700.6	6,649.9	6,649.4	228.2	1.9	-78.54	277.7	102.0	8,106.1	7,880.3	225.76	35.906	
14,800.0	6,700.5	6,649.6	6,649.1	229.2	1.9	-78.49	277.7	102.0	8,142.3	7,915.6	226.72	35.914	
14,862.2	6,700.4	6,649.1	6,648.6	230.9	1.9	-78.39	277.7	102.0	8,204.4	7,976.1	228.36	35.928	
14,900.0	6,700.3	6,648.9	6,648.3	232.0	1.9	-78.33	277.7	102.0	8,242.2	8,012.9	229.36	35.936	
14,960.6	6,700.2	6,648.4	6,647.9	233.7	1.9	-78.23	277.7	102.0	8,302.8	8,071.9	230.95	35.950	
15,000.0	6,700.2	6,648.1	6,647.6	234.8	1.9	-78.17	277.7	102.0	8,342.2	8,110.2	231.99	35.959	
15,059.0	6,700.0	6,647.6	6,647.1	236.4	1.9	-78.07	277.7	102.0	8,401.2	8,167.6	233.54	35.973	
15,082.8	6,700.0	6,647.4	6,646.9	237.1	1.9	-78.04	277.7	102.0	8,425.0	8,190.8	234.17	35.978	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	51.65	709.3	896.6	1,143.3				
98.4	98.4	87.9	87.9	0.1	0.0	51.65	709.3	896.5	1,143.2	1,143.1	0.10	N/A	
100.0	100.0	89.5	89.5	0.1	0.0	51.65	709.3	896.5	1,143.2	1,143.1	0.10	N/A	
196.8	196.8	186.1	186.1	0.3	0.1	51.65	709.1	896.4	1,143.0	1,142.6	0.40	2,881.345	
200.0	200.0	189.2	189.2	0.3	0.1	51.65	709.1	896.4	1,143.0	1,142.5	0.41	2,810.249	
295.3	295.3	284.7	284.7	0.5	0.2	51.66	709.0	896.3	1,142.8	1,142.0	0.75	1,525.663	
300.0	300.0	289.5	289.5	0.5	0.2	51.66	709.0	896.2	1,142.8	1,142.0	0.77	1,491.353	
393.7	393.7	387.4	387.4	0.8	0.3	51.66	708.6	896.0	1,142.4	1,141.3	1.07	1,070.526	
400.0	400.0	394.0	394.0	0.8	0.3	51.66	708.6	896.0	1,142.4	1,141.3	1.09	1,050.901	
492.1	492.1	486.2	486.2	1.0	0.4	51.67	708.1	895.7	1,141.8	1,140.4	1.36	839.462	
500.0	500.0	494.1	494.1	1.0	0.4	51.67	708.0	895.7	1,141.7	1,140.3	1.38	825.317	
590.5	590.5	584.8	584.8	1.2	0.4	51.68	707.5	895.3	1,141.2	1,139.5	1.64	694.299	
600.0	600.0	594.3	594.3	1.2	0.5	51.69	707.4	895.3	1,141.1	1,139.4	1.67	682.996	
689.0	689.0	683.4	683.4	1.4	0.5	51.70	706.9	895.0	1,140.5	1,138.6	1.92	593.618	
700.0	700.0	694.4	694.4	1.4	0.5	51.70	706.9	894.9	1,140.5	1,138.5	1.95	584.151	
787.4	787.4	781.9	781.9	1.6	0.6	51.71	706.4	894.6	1,139.9	1,137.7	2.19	519.316	
800.0	800.0	794.5	794.5	1.7	0.6	51.71	706.3	894.5	1,139.8	1,137.6	2.23	511.138	
885.8	885.8	880.7	880.7	1.9	0.6	51.71	705.9	894.2	1,139.2	1,136.8	2.47	462.140	
900.0	900.0	894.9	894.9	1.9	0.6	51.71	705.8	894.1	1,139.1	1,136.6	2.50	454.937	
984.2	984.2	980.0	980.0	2.1	0.7	51.71	705.4	893.6	1,138.5	1,135.8	2.73	416.594	
1,000.0	1,000.0	995.9	995.9	2.1	0.7	51.71	705.3	893.5	1,138.4	1,135.6	2.78	410.126	
1,082.7	1,082.7	1,078.6	1,078.5	2.3	0.7	51.71	704.9	893.0	1,137.7	1,134.7	3.00	379.425	
1,100.0	1,100.0	1,095.9	1,095.8	2.3	0.7	51.72	704.8	892.9	1,137.6	1,134.6	3.05	373.562	
1,181.1	1,181.1	1,175.6	1,175.6	2.5	0.7	23.03	704.4	892.5	1,136.0	1,132.7	3.27	347.798	
1,200.0	1,200.0	1,194.2	1,194.2	2.6	0.7	23.05	704.3	892.5	1,135.3	1,132.0	3.32	342.214	
1,279.5	1,279.4	1,272.1	1,272.1	2.7	0.8	23.16	703.9	892.2	1,131.3	1,127.7	3.53	320.214	
1,300.0	1,299.8	1,292.1	1,292.1	2.8	0.8	23.19	703.9	892.1	1,129.9	1,126.3	3.59	314.902	
1,377.9	1,377.5	1,370.2	1,370.2	3.0	0.8	23.38	703.6	891.8	1,123.6	1,119.8	3.80	295.502	
1,400.0	1,399.5	1,392.3	1,392.3	3.0	0.8	23.44	703.5	891.7	1,121.4	1,117.6	3.86	290.334	
1,476.4	1,475.3	1,468.4	1,468.4	3.2	0.9	23.70	703.3	891.4	1,112.8	1,108.7	4.08	273.048	
1,500.0	1,498.7	1,491.9	1,491.9	3.3	0.9	23.79	703.1	891.4	1,109.7	1,105.6	4.14	268.032	
1,574.8	1,572.6	1,566.0	1,566.0	3.5	0.9	24.12	702.8	891.1	1,098.9	1,094.5	4.35	252.433	
1,600.0	1,597.5	1,590.9	1,590.9	3.5	0.9	24.25	702.7	891.0	1,094.8	1,090.4	4.42	247.491	
1,673.2	1,669.4	1,666.2	1,666.2	3.7	0.9	24.68	702.3	890.6	1,081.9	1,077.2	4.64	233.088	
1,700.1	1,695.8	1,693.9	1,693.9	3.8	1.0	24.85	702.1	890.4	1,076.6	1,071.9	4.72	228.084	
1,771.6	1,765.7	1,766.4	1,766.4	4.1	1.0	25.21	701.5	889.8	1,062.3	1,057.3	4.93	215.419	
1,800.0	1,793.4	1,795.1	1,795.0	4.2	1.0	25.35	701.2	889.6	1,056.5	1,051.5	5.01	210.737	
1,870.1	1,862.0	1,866.7	1,866.6	4.4	1.0	25.72	700.3	888.8	1,042.3	1,037.1	5.23	199.427	
1,900.0	1,891.3	1,897.2	1,897.1	4.5	1.0	25.89	699.9	888.5	1,036.1	1,030.8	5.32	194.930	
1,968.5	1,958.3	1,965.4	1,965.4	4.8	1.1	26.28	698.6	887.8	1,022.0	1,016.5	5.52	184.989	
2,000.0	1,989.1	1,996.7	1,996.7	4.9	1.1	26.47	697.9	887.5	1,015.5	1,009.9	5.62	180.623	
2,066.9	2,054.5	2,062.9	2,062.8	5.1	1.1	26.88	696.4	886.9	1,001.6	995.8	5.83	171.787	
2,100.0	2,086.9	2,095.6	2,095.5	5.3	1.1	27.08	695.7	886.6	994.8	988.8	5.93	167.635	
2,165.3	2,150.8	2,158.0	2,157.9	5.5	1.1	27.48	694.3	885.9	981.3	975.1	6.14	159.795	
2,200.0	2,184.7	2,191.1	2,190.9	5.6	1.2	27.69	693.7	885.5	974.2	967.9	6.25	155.853	
2,263.8	2,247.1	2,254.9	2,254.8	5.9	1.2	28.09	692.7	884.7	961.1	954.7	6.46	148.816	
2,300.0	2,282.5	2,291.5	2,291.3	6.0	1.2	28.31	692.1	884.0	953.6	947.1	6.58	144.997	
2,362.2	2,343.3	2,352.1	2,351.9	6.3	1.2	28.68	691.3	882.9	940.8	934.0	6.78	138.685	
2,400.0	2,380.3	2,388.7	2,388.5	6.5	1.2	28.91	690.9	882.2	933.0	926.1	6.91	135.031	
2,460.6	2,439.6	2,448.5	2,448.3	6.7	1.2	29.29	690.2	881.0	920.6	913.5	7.12	129.385	
2,500.0	2,478.1	2,487.4	2,487.2	6.9	1.3	29.54	689.7	880.2	912.5	905.2	7.25	125.880	
2,559.0	2,535.9	2,544.2	2,543.9	7.1	1.3	29.92	689.1	879.0	900.4	892.9	7.45	120.836	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,583.2	2,583.0	7.3	1.3	30.18	688.7	878.2	892.0	884.4	7.59	117.500	
2,657.5	2,632.2	2,639.0	2,638.8	7.5	1.3	30.55	688.3	877.0	880.4	872.6	7.79	112.991	
2,700.0	2,673.8	2,680.6	2,680.4	7.7	1.3	30.83	687.9	876.1	871.8	863.9	7.94	109.792	
2,755.9	2,728.4	2,735.3	2,735.0	7.9	1.3	31.20	687.6	874.9	860.5	852.4	8.14	105.730	
2,800.0	2,771.6	2,778.4	2,778.1	8.1	1.4	31.51	687.2	873.9	851.7	843.4	8.30	102.652	
2,854.3	2,824.7	2,831.6	2,831.3	8.3	1.4	31.90	686.7	872.8	840.8	832.3	8.49	98.989	
2,900.0	2,869.4	2,876.4	2,876.1	8.5	1.4	32.24	686.3	871.9	831.6	822.9	8.66	96.026	
2,952.7	2,921.0	2,927.4	2,927.1	8.8	1.4	32.64	685.7	870.8	821.1	812.2	8.85	92.730	
3,000.0	2,967.2	2,972.5	2,972.2	9.0	1.4	33.01	685.1	869.9	811.7	802.7	9.03	89.899	
3,051.2	3,017.3	3,021.1	3,020.8	9.2	1.4	33.43	684.4	869.1	801.6	792.4	9.22	86.948	
3,100.0	3,065.0	3,067.2	3,066.9	9.4	1.5	33.84	683.7	868.5	792.2	782.8	9.40	84.252	
3,149.6	3,113.5	3,114.2	3,113.8	9.6	1.5	34.28	683.0	867.9	782.7	773.1	9.59	81.612	
3,200.0	3,162.8	3,162.4	3,162.0	9.8	1.5	34.73	682.2	867.4	773.2	763.4	9.78	79.033	
3,248.0	3,209.8	3,208.2	3,207.8	10.0	1.5	35.18	681.5	867.0	764.2	754.3	9.97	76.663	
3,300.0	3,260.6	3,257.5	3,257.1	10.2	1.5	35.68	680.8	866.6	754.7	744.5	10.17	74.204	
3,346.4	3,306.1	3,301.5	3,301.1	10.5	1.5	36.13	680.1	866.4	746.2	735.9	10.35	72.083	
3,400.0	3,358.5	3,352.7	3,352.2	10.7	1.6	36.68	679.3	866.2	736.7	726.1	10.56	69.739	
3,444.9	3,402.3	3,395.5	3,395.1	10.9	1.6	37.15	678.6	866.1	728.8	718.0	10.74	67.841	
3,500.0	3,456.3	3,449.3	3,448.9	11.1	1.6	37.75	677.9	866.0	719.2	708.2	10.97	65.585	
3,543.3	3,498.6	3,491.6	3,491.2	11.3	1.6	38.23	677.3	865.9	711.7	700.5	11.14	63.869	
3,600.0	3,554.1	3,547.2	3,546.8	11.5	1.6	38.87	676.6	865.7	701.9	690.5	11.38	61.690	
3,641.7	3,594.9	3,588.1	3,587.7	11.7	1.6	39.36	676.0	865.6	694.8	683.2	11.55	60.135	
3,700.0	3,651.9	3,644.8	3,644.4	12.0	1.7	40.05	675.2	865.4	684.9	673.1	11.80	58.035	
3,740.1	3,691.2	3,683.8	3,683.4	12.2	1.7	40.53	674.7	865.3	678.2	666.2	11.97	56.637	
3,800.0	3,749.7	3,742.8	3,742.4	12.4	1.7	41.27	673.9	865.1	668.2	656.0	12.24	54.613	
3,838.6	3,787.4	3,781.1	3,780.6	12.6	1.7	41.77	673.5	864.9	661.8	649.4	12.41	53.344	
3,900.0	3,847.5	3,841.0	3,840.6	12.9	1.7	42.56	672.7	864.5	651.6	639.0	12.68	51.390	
3,937.0	3,883.7	3,876.9	3,876.5	13.0	1.7	43.05	672.3	864.4	645.6	632.8	12.85	50.251	
4,000.0	3,945.3	3,938.1	3,937.6	13.3	1.8	43.90	671.5	864.1	635.5	622.3	13.14	48.377	
4,035.4	3,980.0	3,972.6	3,972.1	13.5	1.8	44.38	671.1	863.9	629.8	616.5	13.30	47.358	
4,060.0	4,004.0	3,996.5	3,996.0	13.6	1.8	44.72	670.9	863.8	625.9	612.5	13.41	46.666	
4,100.0	4,043.2	4,036.1	4,035.6	13.7	1.8	45.18	670.6	863.5	619.9	606.3	13.57	45.664	
4,133.8	4,076.5	4,069.7	4,069.2	13.8	1.8	45.55	670.3	863.3	615.0	601.3	13.69	44.914	
4,200.0	4,141.6	4,136.2	4,135.7	14.0	1.8	46.24	669.7	862.7	606.4	592.5	13.92	43.548	
4,232.3	4,173.5	4,168.9	4,168.4	14.1	1.8	46.56	669.4	862.4	602.5	588.5	14.03	42.949	
4,300.0	4,240.6	4,238.0	4,237.5	14.3	1.9	47.16	668.6	861.5	595.2	580.9	14.25	41.779	
4,330.7	4,271.1	4,269.5	4,269.0	14.4	1.9	47.40	668.3	861.1	592.1	577.8	14.33	41.310	
4,400.0	4,340.0	4,339.4	4,338.9	14.5	1.9	47.85	667.7	859.8	585.9	571.4	14.53	40.335	
4,429.1	4,369.0	4,368.4	4,367.9	14.6	1.9	48.01	667.5	859.2	583.7	569.1	14.60	39.984	
4,500.0	4,439.7	4,439.1	4,438.6	14.8	1.9	48.30	667.1	857.8	579.0	564.2	14.76	39.214	
4,527.5	4,467.2	4,466.6	4,466.0	14.8	1.9	48.38	667.0	857.3	577.5	562.7	14.82	38.967	
4,600.0	4,539.7	4,536.4	4,535.8	14.9	2.0	48.50	666.8	855.9	574.5	559.5	14.96	38.407	
4,626.0	4,565.6	4,560.7	4,560.1	15.0	2.0	48.52	666.7	855.6	573.8	558.8	15.00	38.255	
4,660.2	4,599.8	4,592.6	4,592.1	15.0	2.0	77.26	666.7	855.2	573.3	558.8	14.46	39.646	
4,700.0	4,639.6	4,629.8	4,629.3	15.0	2.0	77.26	666.5	855.0	573.0	558.5	14.53	39.447	
4,724.4	4,664.0	4,652.6	4,652.0	15.1	2.0	77.27	666.4	855.0	572.9	558.4	14.57	39.322	
4,738.5	4,678.2	4,665.7	4,665.2	15.1	2.0	77.28	666.4	855.0	572.9	558.3	14.60	39.253	
4,800.0	4,739.6	4,724.7	4,724.1	15.2	2.0	77.32	666.0	855.2	573.1	558.4	14.71	38.960	
4,822.8	4,762.5	4,747.5	4,746.9	15.2	2.0	77.34	665.8	855.4	573.2	558.5	14.76	38.848	
4,900.0	4,839.6	4,825.3	4,824.7	15.3	2.0	77.41	665.2	855.9	573.5	558.6	14.91	38.474	
4,921.2	4,860.9	4,847.1	4,846.5	15.4	2.0	77.43	665.0	856.0	573.6	558.7	14.95	38.369	
5,000.0	4,939.6	4,927.2	4,926.7	15.5	2.0	77.50	664.3	856.2	573.7	558.6	15.11	37.974	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,019.7	4,959.3	4,946.9	4,946.4	15.5	2.0	77.52	664.2	856.2	573.7	558.5	15.15	37.874		
5,100.0	5,039.6	5,027.4	5,026.8	15.6	2.1	77.58	663.5	856.3	573.7	558.3	15.31	37.471		
5,118.1	5,057.7	5,045.6	5,045.0	15.7	2.1	77.60	663.4	856.4	573.6	558.3	15.35	37.380		
5,200.0	5,139.6	5,127.8	5,127.2	15.8	2.1	77.67	662.7	856.5	573.6	558.1	15.51	36.974		
5,216.5	5,156.2	5,144.3	5,143.7	15.8	2.1	77.69	662.5	856.5	573.6	558.0	15.55	36.892		
5,300.0	5,239.6	5,228.5	5,227.9	15.9	2.1	77.78	661.6	856.6	573.5	557.8	15.72	36.486		
5,314.9	5,254.6	5,243.8	5,243.3	16.0	2.1	77.80	661.4	856.6	573.4	557.7	15.75	36.413		
5,400.0	5,339.6	5,330.3	5,329.7	16.1	2.1	77.88	660.5	856.4	573.0	557.1	15.92	35.990		
5,413.4	5,353.0	5,343.6	5,343.0	16.1	2.2	77.90	660.3	856.3	573.0	557.0	15.95	35.924		
5,500.0	5,439.6	5,430.8	5,430.2	16.3	2.2	77.98	659.4	856.0	572.5	556.4	16.13	35.500		
5,511.8	5,451.4	5,442.8	5,442.2	16.3	2.2	77.99	659.3	856.0	572.4	556.3	16.15	35.442		
5,600.0	5,539.6	5,532.5	5,531.9	16.4	2.2	78.05	658.6	855.4	571.7	555.4	16.33	35.007		
5,610.2	5,549.9	5,542.9	5,542.3	16.4	2.2	78.06	658.5	855.3	571.6	555.3	16.35	34.956		
5,700.0	5,639.6	5,633.1	5,632.5	16.6	2.2	78.11	657.7	854.5	570.7	554.2	16.53	34.516		
5,708.6	5,648.3	5,641.8	5,641.1	16.6	2.3	78.12	657.7	854.5	570.6	554.1	16.55	34.474		
5,800.0	5,739.6	5,733.1	5,732.4	16.7	2.3	78.15	657.2	853.6	569.7	553.0	16.74	34.039		
5,807.1	5,746.7	5,740.2	5,739.6	16.8	2.3	78.15	657.1	853.6	569.6	552.9	16.75	34.006		
5,900.0	5,839.6	5,833.4	5,832.8	16.9	2.3	78.18	656.7	852.6	568.6	551.7	16.94	33.569		
5,905.5	5,845.1	5,838.9	5,838.2	16.9	2.3	78.18	656.7	852.6	568.6	551.6	16.95	33.543		
6,000.0	5,939.6	5,933.1	5,932.5	17.1	2.3	78.23	656.0	851.7	567.6	550.5	17.14	33.108		
6,003.9	5,943.6	5,937.0	5,936.4	17.1	2.3	78.23	656.0	851.7	567.6	550.4	17.15	33.090		
6,059.2	5,998.8	5,992.3	5,991.7	17.2	2.4	78.26	655.5	851.2	567.0	549.7	17.27	32.838		
6,066.8	6,006.4	6,000.0	5,999.3	17.2	2.4	168.27	655.5	851.1	567.0	549.2	17.78	31.895 CC, ES		
6,100.0	6,039.6	6,033.8	6,033.2	17.2	2.4	168.30	655.2	850.8	567.7	549.9	17.81	31.878 SF		
6,102.3	6,042.0	6,036.2	6,035.6	17.2	2.4	168.31	655.2	850.8	567.8	550.0	17.81	31.880		
6,150.0	6,089.4	6,084.6	6,083.9	17.3	2.4	168.37	654.7	850.3	571.6	553.7	17.86	31.999		
6,200.0	6,138.7	6,134.5	6,133.8	17.3	2.4	168.45	654.2	849.7	578.8	560.9	17.92	32.297		
6,200.8	6,139.5	6,135.2	6,134.6	17.3	2.4	168.45	654.2	849.7	578.9	561.0	17.92	32.303		
6,250.0	6,187.4	6,183.5	6,182.9	17.3	2.4	168.55	653.6	849.1	589.3	571.4	17.97	32.789		
6,299.2	6,234.4	6,230.6	6,229.9	17.4	2.4	168.66	652.9	848.5	603.0	585.0	18.01	33.480		
6,300.0	6,235.1	6,231.3	6,230.7	17.4	2.4	168.66	652.9	848.5	603.2	585.2	18.01	33.493		
6,350.0	6,281.7	6,277.8	6,277.2	17.4	2.5	168.77	652.2	848.0	620.4	602.4	18.02	34.429		
6,397.6	6,324.8	6,321.0	6,320.4	17.3	2.5	168.85	651.5	847.5	639.8	621.8	18.00	35.549		
6,400.0	6,326.9	6,323.2	6,322.5	17.3	2.5	168.86	651.5	847.5	640.8	622.8	17.99	35.611		
6,450.0	6,370.5	6,367.0	6,366.3	17.3	2.5	168.92	650.7	847.1	664.3	646.4	17.93	37.051		
6,496.0	6,409.1	6,405.9	6,405.2	17.3	2.5	168.96	649.9	846.7	688.6	670.8	17.83	38.616		
6,500.0	6,412.3	6,409.2	6,408.5	17.3	2.5	168.96	649.9	846.6	690.8	673.0	17.82	38.761		
6,550.0	6,452.1	6,449.6	6,448.9	17.3	2.5	168.95	649.0	846.2	720.2	702.5	17.67	40.750		
6,594.5	6,485.6	6,483.8	6,483.1	17.3	2.5	168.90	648.2	845.9	748.6	731.1	17.51	42.760		
6,600.0	6,489.7	6,487.9	6,487.2	17.3	2.5	168.88	648.1	845.8	752.3	734.8	17.48	43.027		
6,650.0	6,524.9	6,525.1	6,524.3	17.2	2.5	168.76	647.2	845.4	786.9	769.6	17.26	45.590		
6,692.9	6,553.0	6,555.5	6,554.8	17.2	2.6	168.57	646.4	845.0	818.5	801.5	17.05	48.010		
6,700.0	6,557.5	6,560.3	6,559.6	17.2	2.6	168.54	646.2	844.9	823.9	806.9	17.01	48.434		
6,750.0	6,587.4	6,593.0	6,592.2	17.2	2.6	168.19	645.3	844.4	863.0	846.3	16.74	51.544		
6,791.3	6,609.9	6,615.0	6,614.3	17.2	2.6	167.70	644.7	844.0	897.0	880.4	16.52	54.289		
6,800.0	6,614.4	6,619.2	6,618.4	17.2	2.6	167.57	644.5	843.9	904.2	887.8	16.47	54.896		
6,850.0	6,638.4	6,641.5	6,640.7	17.2	2.6	166.66	643.9	843.6	947.4	931.2	16.22	58.402		
6,889.7	6,655.3	6,657.1	6,656.3	17.4	2.6	165.64	643.5	843.4	982.9	966.8	16.06	61.196		
6,900.0	6,659.4	6,660.8	6,660.0	17.5	2.6	165.32	643.4	843.4	992.2	976.2	16.03	61.897		
6,950.0	6,677.1	6,677.1	6,676.3	18.0	2.6	163.35	642.9	843.2	1,038.5	1,022.5	15.95	65.089		
6,988.2	6,688.4	6,687.5	6,686.7	18.5	2.6	161.14	642.7	843.1	1,074.6	1,058.6	16.04	66.995		
7,000.0	6,691.5	6,690.4	6,689.5	18.7	2.6	160.28	642.6	843.1	1,086.0	1,069.9	16.10	67.438		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,050.0	6,702.5	6,700.0	6,699.2	19.5	2.6	155.09	642.4	843.0	1,134.4	1,117.7	16.71	67.903	
7,086.6	6,708.4	6,706.1	6,705.3	20.1	2.6	148.76	642.2	843.0	1,170.3	1,152.6	17.71	66.098	
7,100.0	6,710.1	6,707.8	6,707.0	20.4	2.6	145.45	642.2	843.0	1,183.6	1,165.3	18.27	64.798	
7,150.0	6,714.2	6,711.8	6,711.0	21.3	2.6	123.89	642.1	843.0	1,233.2	1,211.6	21.58	57.143	
7,185.0	6,715.0	6,712.8	6,711.9	21.9	2.6	94.73	642.0	843.0	1,268.1	1,244.3	23.81	53.257	
7,185.6	6,715.0	6,712.8	6,711.9	21.9	2.6	94.20	642.0	843.0	1,268.6	1,244.8	23.84	53.220	
7,200.0	6,715.0	6,712.8	6,712.0	22.2	2.6	94.23	642.0	843.0	1,283.0	1,258.9	24.11	53.209	
7,283.4	6,714.8	6,713.1	6,712.3	23.9	2.6	94.39	642.0	843.0	1,366.2	1,340.4	25.78	52.992	
7,300.0	6,714.8	6,713.2	6,712.4	24.2	2.6	94.43	642.0	843.0	1,382.7	1,356.6	26.11	52.952	
7,381.9	6,714.6	6,713.5	6,712.6	26.0	2.6	94.59	642.0	843.0	1,464.4	1,436.5	27.86	52.555	
7,400.0	6,714.6	6,713.5	6,712.7	26.4	2.6	94.62	642.0	843.0	1,482.4	1,454.2	28.25	52.475	
7,480.3	6,714.4	6,713.8	6,713.0	28.2	2.6	94.78	642.0	843.0	1,562.6	1,532.5	30.06	51.981	
7,500.0	6,714.4	6,713.9	6,713.0	28.7	2.6	94.81	642.0	843.0	1,582.2	1,551.7	30.50	51.869	
7,578.7	6,714.2	6,714.1	6,713.3	30.5	2.6	94.96	642.0	843.0	1,660.8	1,628.4	32.35	51.341	
7,600.0	6,714.2	6,714.2	6,713.4	31.0	2.6	95.00	642.0	843.0	1,682.0	1,649.2	32.85	51.209	
7,677.1	6,714.0	6,714.5	6,713.6	32.9	2.6	95.15	642.0	843.0	1,759.0	1,724.3	34.71	50.682	
7,700.0	6,714.0	6,714.5	6,713.7	33.4	2.6	95.19	642.0	843.0	1,781.8	1,746.6	35.26	50.538	
7,775.6	6,713.9	6,714.8	6,714.0	35.3	2.6	95.33	642.0	843.0	1,857.3	1,820.2	37.12	50.032	
7,800.0	6,713.8	6,714.9	6,714.0	35.9	2.6	95.38	642.0	843.0	1,881.7	1,844.0	37.72	49.880	
7,874.0	6,713.7	6,715.1	6,714.3	37.8	2.6	95.51	642.0	842.9	1,955.6	1,916.0	39.58	49.405	
7,900.0	6,713.6	6,715.2	6,714.4	38.4	2.6	95.56	642.0	842.9	1,981.6	1,941.3	40.23	49.250	
7,972.4	6,713.5	6,715.4	6,714.6	40.3	2.6	95.69	642.0	842.9	2,053.9	2,011.8	42.08	48.810	
8,000.0	6,713.4	6,715.5	6,714.7	41.0	2.6	95.74	642.0	842.9	2,081.4	2,038.6	42.78	48.654	
8,070.8	6,713.3	6,715.7	6,714.9	42.8	2.6	95.86	642.0	842.9	2,152.2	2,107.6	44.60	48.250	
8,100.0	6,713.2	6,715.8	6,715.0	43.6	2.6	95.92	642.0	842.9	2,181.3	2,136.0	45.35	48.094	
8,169.3	6,713.1	6,716.0	6,715.2	45.4	2.6	96.04	641.9	842.9	2,250.5	2,203.4	47.15	47.726	
8,200.0	6,713.0	6,716.1	6,715.3	46.2	2.6	96.09	641.9	842.9	2,281.2	2,233.3	47.95	47.572	
8,267.7	6,712.9	6,716.3	6,715.5	48.0	2.6	96.21	641.9	842.9	2,348.8	2,299.1	49.72	47.237	
8,300.0	6,712.8	6,716.4	6,715.6	48.8	2.6	96.27	641.9	842.9	2,381.1	2,330.5	50.57	47.086	
8,366.1	6,712.7	6,716.6	6,715.8	50.6	2.6	96.38	641.9	842.9	2,447.2	2,394.9	52.31	46.781	
8,400.0	6,712.6	6,716.7	6,715.9	51.5	2.6	96.44	641.9	842.9	2,481.0	2,427.8	53.20	46.633	
8,464.5	6,712.5	6,716.9	6,716.1	53.2	2.6	96.55	641.9	842.9	2,545.5	2,490.6	54.91	46.357	
8,500.0	6,712.4	6,717.0	6,716.2	54.1	2.6	96.61	641.9	842.9	2,580.9	2,525.1	55.85	46.213	
8,563.0	6,712.3	6,717.2	6,716.4	55.8	2.6	96.71	641.9	842.9	2,643.9	2,586.3	57.52	45.962	
8,600.0	6,712.3	6,717.3	6,716.5	56.8	2.6	96.78	641.9	842.9	2,680.9	2,622.4	58.51	45.822	
8,661.4	6,712.1	6,717.5	6,716.7	58.5	2.6	96.88	641.9	842.9	2,742.2	2,682.1	60.14	45.594	
8,700.0	6,712.1	6,717.6	6,716.8	59.5	2.6	96.94	641.9	842.9	2,780.8	2,719.6	61.17	45.458	
8,759.8	6,711.9	6,717.8	6,717.0	61.1	2.6	97.04	641.9	842.9	2,840.6	2,777.8	62.77	45.251	
8,800.0	6,711.9	6,717.9	6,717.1	62.2	2.6	97.10	641.9	842.9	2,880.7	2,816.9	63.85	45.119	
8,858.2	6,711.8	6,718.1	6,717.3	63.8	2.6	97.20	641.9	842.9	2,938.9	2,873.5	65.41	44.931	
8,900.0	6,711.7	6,718.2	6,717.4	64.9	2.6	97.27	641.9	842.9	2,980.7	2,914.1	66.53	44.802	
8,956.7	6,711.6	6,718.4	6,717.5	66.5	2.6	97.36	641.9	842.9	3,037.3	2,969.3	68.05	44.632	
9,000.0	6,711.5	6,718.5	6,717.7	67.6	2.6	97.43	641.9	842.9	3,080.6	3,011.4	69.22	44.507	
9,055.1	6,711.4	6,718.6	6,717.8	69.1	2.6	97.51	641.9	842.9	3,135.7	3,065.0	70.70	44.352	
9,100.0	6,711.3	6,718.8	6,717.9	70.4	2.6	97.58	641.9	842.9	3,180.6	3,108.6	71.91	44.231	
9,153.5	6,711.2	6,718.9	6,718.1	71.8	2.6	97.67	641.9	842.9	3,234.1	3,160.7	73.35	44.090	
9,200.0	6,711.1	6,719.0	6,718.2	73.1	2.6	97.74	641.9	842.9	3,280.5	3,205.9	74.60	43.973	
9,251.9	6,711.0	6,719.2	6,718.4	74.5	2.6	97.82	641.9	842.9	3,332.4	3,256.4	76.00	43.845	
9,300.0	6,710.9	6,719.3	6,718.5	75.8	2.6	97.89	641.9	842.9	3,380.5	3,303.2	77.30	43.731	
9,350.4	6,710.8	6,719.5	6,718.6	77.2	2.6	97.97	641.9	842.9	3,430.8	3,352.1	78.66	43.614	
9,400.0	6,710.7	6,719.6	6,718.8	78.6	2.6	98.05	641.9	842.9	3,480.4	3,400.4	80.00	43.504	
9,448.8	6,710.6	6,719.7	6,718.9	79.9	2.6	98.12	641.9	842.9	3,529.2	3,447.9	81.32	43.398	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,500.0	6,710.5	6,719.9	6,719.0	81.3	2.6	98.20	641.8	842.9	3,580.4	3,497.7	82.71	43.291		
9,547.2	6,710.4	6,720.0	6,719.2	82.6	2.6	98.27	641.8	842.9	3,627.6	3,543.6	83.98	43.194		
9,600.0	6,710.3	6,720.1	6,719.3	84.1	2.6	98.35	641.8	842.9	3,680.3	3,594.9	85.41	43.090		
9,645.6	6,710.2	6,720.2	6,719.4	85.3	2.6	98.41	641.8	842.9	3,726.0	3,639.3	86.65	43.002		
9,700.0	6,710.1	6,720.4	6,719.6	86.8	2.6	98.49	641.8	842.9	3,780.3	3,692.2	88.12	42.901		
9,744.1	6,710.0	6,720.5	6,719.7	88.1	2.6	98.56	641.8	842.9	3,824.3	3,735.0	89.31	42.821		
9,800.0	6,709.9	6,720.6	6,719.8	89.6	2.6	98.64	641.8	842.9	3,880.3	3,789.4	90.82	42.723		
9,842.5	6,709.9	6,720.7	6,719.9	90.8	2.6	98.70	641.8	842.9	3,922.7	3,830.8	91.98	42.650		
9,900.0	6,709.7	6,720.9	6,720.1	92.4	2.6	98.78	641.8	842.9	3,980.2	3,886.7	93.53	42.555		
9,940.9	6,709.7	6,721.0	6,720.2	93.5	2.6	98.84	641.8	842.9	4,021.1	3,926.5	94.64	42.488		
10,000.0	6,709.6	6,721.1	6,720.3	95.1	2.6	98.93	641.8	842.9	4,080.2	3,983.9	96.24	42.396		
10,039.3	6,709.5	6,721.2	6,720.4	96.2	2.6	98.98	641.8	842.9	4,119.5	4,022.2	97.31	42.336		
10,100.0	6,709.4	6,721.4	6,720.6	97.9	2.6	99.07	641.8	842.9	4,180.2	4,081.2	98.95	42.246		
10,137.8	6,709.3	6,721.5	6,720.7	98.9	2.6	99.12	641.8	842.9	4,217.9	4,117.9	99.97	42.191		
10,200.0	6,709.2	6,721.6	6,720.8	100.7	2.6	99.21	641.8	842.9	4,280.1	4,178.5	101.66	42.103		
10,236.2	6,709.1	6,721.7	6,720.9	101.7	2.6	99.25	641.8	842.9	4,316.3	4,213.7	102.64	42.054		
10,300.0	6,709.0	6,721.9	6,721.1	103.4	2.6	99.34	641.8	842.9	4,380.1	4,275.7	104.37	41.969		
10,334.6	6,708.9	6,722.0	6,721.2	104.4	2.6	99.39	641.8	842.9	4,414.7	4,309.4	105.30	41.923		
10,400.0	6,708.8	6,722.1	6,721.3	106.2	2.6	99.48	641.8	842.9	4,480.1	4,373.0	107.07	41.841		
10,433.0	6,708.7	6,722.2	6,721.4	107.1	2.6	99.52	641.8	842.9	4,513.1	4,405.1	107.97	41.800		
10,500.0	6,708.6	6,722.4	6,721.5	109.0	2.6	99.62	641.8	842.9	4,580.0	4,470.3	109.78	41.719		
10,531.5	6,708.5	6,722.4	6,721.6	109.9	2.6	99.66	641.8	842.9	4,611.5	4,500.9	110.63	41.682		
10,600.0	6,708.4	6,722.6	6,721.8	111.8	2.6	99.75	641.8	842.9	4,680.0	4,567.5	112.49	41.604		
10,629.9	6,708.4	6,722.7	6,721.9	112.6	2.6	99.79	641.8	842.9	4,709.9	4,596.6	113.30	41.571		
10,700.0	6,708.2	6,722.8	6,722.0	114.6	2.6	99.88	641.8	842.9	4,780.0	4,664.8	115.20	41.494		
10,728.3	6,708.2	6,722.9	6,722.1	115.3	2.6	99.92	641.8	842.9	4,808.3	4,692.4	115.96	41.464		
10,800.0	6,708.0	6,723.1	6,722.3	117.3	2.6	100.01	641.8	842.9	4,880.0	4,762.1	117.90	41.390		
10,826.7	6,708.0	6,723.1	6,722.3	118.1	2.6	100.05	641.8	842.9	4,906.7	4,788.1	118.63	41.363		
10,900.0	6,707.8	6,723.3	6,722.5	120.1	2.6	100.14	641.8	842.9	4,980.0	4,859.3	120.61	41.291		
10,925.2	6,707.8	6,723.4	6,722.5	120.8	2.6	100.17	641.8	842.9	5,005.1	4,883.8	121.29	41.267		
11,000.0	6,707.6	6,723.5	6,722.7	122.9	2.6	100.27	641.8	842.9	5,079.9	4,956.6	123.31	41.196		
11,023.6	6,707.6	6,723.6	6,722.8	123.6	2.6	100.30	641.8	842.9	5,103.5	4,979.6	123.95	41.175		
11,100.0	6,707.5	6,723.8	6,722.9	125.7	2.6	100.40	641.7	842.9	5,179.9	5,053.9	126.01	41.106		
11,122.0	6,707.4	6,723.8	6,723.0	126.3	2.6	100.42	641.7	842.9	5,201.9	5,075.3	126.61	41.087		
11,200.0	6,707.3	6,724.0	6,723.2	128.5	2.6	100.52	641.7	842.9	5,279.9	5,151.2	128.71	41.020		
11,220.4	6,707.2	6,724.0	6,723.2	129.0	2.6	100.55	641.7	842.9	5,300.3	5,171.1	129.27	41.003		
11,300.0	6,707.1	6,724.2	6,723.4	131.3	2.6	100.65	641.7	842.9	5,379.9	5,248.5	131.42	40.938		
11,318.9	6,707.0	6,724.2	6,723.4	131.8	2.6	100.67	641.7	842.9	5,398.7	5,266.8	131.93	40.923		
11,400.0	6,706.9	6,724.4	6,723.6	134.0	2.6	100.77	641.7	842.9	5,479.9	5,345.7	134.11	40.860		
11,417.3	6,706.9	6,724.5	6,723.6	134.5	2.6	100.79	641.7	842.9	5,497.2	5,362.6	134.58	40.846		
11,500.0	6,706.7	6,724.6	6,723.8	136.8	2.6	100.89	641.7	842.9	5,579.8	5,443.0	136.81	40.785		
11,515.7	6,706.7	6,724.7	6,723.8	137.3	2.6	100.91	641.7	842.9	5,595.6	5,458.3	137.24	40.773		
11,600.0	6,706.5	6,724.8	6,724.0	139.6	2.6	101.01	641.7	842.9	5,679.8	5,540.3	139.51	40.713		
11,614.1	6,706.5	6,724.9	6,724.0	140.0	2.6	101.03	641.7	842.9	5,694.0	5,554.1	139.89	40.703		
11,700.0	6,706.3	6,725.1	6,724.2	142.4	2.6	101.13	641.7	842.9	5,779.8	5,637.6	142.20	40.644		
11,712.6	6,706.3	6,725.1	6,724.3	142.8	2.6	101.15	641.7	842.9	5,792.4	5,649.8	142.54	40.636		
11,800.0	6,706.1	6,725.3	6,724.4	145.2	2.6	101.25	641.7	842.9	5,879.8	5,734.9	144.90	40.579		
11,811.0	6,706.1	6,725.3	6,724.5	145.5	2.6	101.26	641.7	842.9	5,890.8	5,745.6	145.19	40.572		
11,900.0	6,705.9	6,725.5	6,724.6	148.0	2.6	101.37	641.7	842.9	5,979.8	5,832.2	147.59	40.516		
11,909.4	6,705.9	6,725.5	6,724.7	148.3	2.6	101.38	641.7	842.9	5,989.2	5,841.4	147.84	40.510		
12,000.0	6,705.8	6,725.7	6,724.9	150.8	2.6	101.48	641.7	842.9	6,079.8	5,929.5	150.28	40.456		
12,007.8	6,705.7	6,725.7	6,724.9	151.0	2.6	101.49	641.7	842.9	6,087.6	5,937.1	150.49	40.451		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #10D - Wellbore #1 - Wellbore #1		Offset Site Error:		0.0 usft	
Survey Program: 100-GYD_CT														Offset Well Error:		0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
12,100.0	6,705.6	6,725.9	6,725.1	153.6	2.6	101.60	641.7	842.9	6,179.7	6,026.8	152.97	40.398					
12,106.3	6,705.6	6,725.9	6,725.1	153.8	2.6	101.60	641.7	842.9	6,186.0	6,032.9	153.14	40.395					
12,200.0	6,705.4	6,726.1	6,725.3	156.4	2.6	101.71	641.7	842.9	6,279.7	6,124.1	155.66	40.343					
12,204.7	6,705.4	6,726.1	6,725.3	156.5	2.6	101.72	641.7	842.9	6,284.4	6,128.6	155.78	40.341					
12,300.0	6,705.2	6,726.3	6,725.5	159.2	2.6	101.82	641.7	842.9	6,379.7	6,221.4	158.34	40.290					
12,303.1	6,705.2	6,726.3	6,725.5	159.3	2.6	101.83	641.7	842.9	6,382.8	6,224.4	158.43	40.289					
12,400.0	6,705.0	6,726.5	6,725.6	162.0	2.6	101.94	641.7	842.9	6,479.7	6,318.7	161.03	40.240					
12,401.5	6,705.0	6,726.5	6,725.7	162.0	2.6	101.94	641.7	842.9	6,481.3	6,320.2	161.07	40.239					
12,500.0	6,704.8	6,726.7	6,725.8	164.8	2.6	102.05	641.7	842.9	6,579.7	6,416.0	163.71	40.191					
12,598.4	6,704.6	6,726.9	6,726.0	167.5	2.6	102.15	641.7	842.9	6,678.1	6,511.7	166.35	40.144					
12,600.0	6,704.6	6,726.9	6,726.0	167.6	2.6	102.16	641.7	842.9	6,679.7	6,513.3	166.39	40.144					
12,696.8	6,704.4	6,727.0	6,726.2	170.3	2.6	102.26	641.7	842.9	6,776.5	6,607.5	168.99	40.100					
12,700.0	6,704.4	6,727.1	6,726.2	170.4	2.6	102.26	641.7	842.9	6,779.7	6,610.6	169.07	40.099					
12,795.2	6,704.3	6,727.2	6,726.4	173.0	2.6	102.36	641.7	842.9	6,874.9	6,703.3	171.63	40.058					
12,800.0	6,704.2	6,727.2	6,726.4	173.2	2.6	102.37	641.7	842.9	6,879.7	6,707.9	171.75	40.056					
12,893.7	6,704.1	6,727.4	6,726.6	175.8	2.6	102.47	641.7	842.9	6,973.3	6,799.1	174.26	40.017					
12,900.0	6,704.1	6,727.4	6,726.6	176.0	2.6	102.48	641.7	842.9	6,979.6	6,805.2	174.43	40.015					
12,992.1	6,703.9	6,727.6	6,726.8	178.5	2.6	102.57	641.6	842.9	7,071.7	6,894.8	176.89	39.978					
13,000.0	6,703.9	6,727.6	6,726.8	178.8	2.6	102.58	641.6	842.9	7,079.6	6,902.5	177.10	39.975					
13,090.5	6,703.7	6,727.8	6,727.0	181.3	2.6	102.67	641.6	842.9	7,170.1	6,990.6	179.52	39.940					
13,100.0	6,703.7	6,727.8	6,727.0	181.6	2.6	102.69	641.6	842.9	7,179.6	6,999.8	179.77	39.937					
13,188.9	6,703.5	6,728.0	6,727.1	184.0	2.6	102.78	641.6	842.9	7,268.6	7,086.4	182.15	39.904					
13,200.0	6,703.5	6,728.0	6,727.2	184.4	2.6	102.79	641.6	842.9	7,279.6	7,097.2	182.44	39.900					
13,287.4	6,703.3	6,728.1	6,727.3	186.8	2.6	102.88	641.6	842.9	7,367.0	7,182.2	184.78	39.869					
13,300.0	6,703.3	6,728.2	6,727.3	187.2	2.6	102.90	641.6	842.9	7,379.6	7,194.5	185.11	39.865					
13,385.8	6,703.2	6,728.3	6,727.5	189.6	2.6	102.98	641.6	842.9	7,465.4	7,278.0	187.41	39.836					
13,400.0	6,703.1	6,728.3	6,727.5	190.0	2.6	103.00	641.6	842.9	7,479.6	7,291.8	187.78	39.831					
13,484.2	6,703.0	6,728.5	6,727.7	192.3	2.6	103.08	641.6	842.9	7,563.8	7,373.8	190.03	39.803					
13,500.0	6,702.9	6,728.5	6,727.7	192.8	2.6	103.10	641.6	842.9	7,579.6	7,389.1	190.45	39.799					
13,582.6	6,702.8	6,728.7	6,727.8	195.1	2.6	103.18	641.6	842.9	7,662.2	7,469.6	192.65	39.772					
13,600.0	6,702.8	6,728.7	6,727.9	195.6	2.6	103.20	641.6	842.9	7,679.6	7,486.5	193.11	39.768					
13,681.1	6,702.6	6,728.8	6,728.0	197.8	2.6	103.28	641.6	842.9	7,760.6	7,565.4	195.27	39.743					
13,700.0	6,702.6	6,728.9	6,728.0	198.4	2.6	103.30	641.6	842.9	7,779.6	7,583.8	195.77	39.738					
13,779.5	6,702.4	6,729.0	6,728.2	200.6	2.6	103.37	641.6	842.9	7,859.1	7,661.2	197.89	39.714					
13,800.0	6,702.4	6,729.0	6,728.2	201.2	2.6	103.40	641.6	842.9	7,879.6	7,681.1	198.43	39.709					
13,877.9	6,702.2	6,729.2	6,728.4	203.3	2.6	103.47	641.6	842.9	7,957.5	7,757.0	200.51	39.686					
13,900.0	6,702.2	6,729.2	6,728.4	204.0	2.6	103.50	641.6	842.9	7,979.5	7,778.5	201.09	39.681					
13,976.3	6,702.1	6,729.3	6,728.5	206.1	2.6	103.57	641.6	842.9	8,055.9	7,852.8	203.13	39.660					
14,000.0	6,702.0	6,729.4	6,728.6	206.8	2.6	103.59	641.6	842.9	8,079.5	7,875.8	203.75	39.654					
14,074.8	6,701.9	6,729.5	6,728.7	208.9	2.6	103.66	641.6	842.9	8,154.3	7,948.6	205.74	39.634					
14,100.0	6,701.8	6,729.6	6,728.7	209.6	2.6	103.69	641.6	842.9	8,179.5	7,973.1	206.41	39.628					
14,173.2	6,701.7	6,729.7	6,728.9	211.6	2.6	103.75	641.6	842.9	8,252.7	8,044.4	208.35	39.610					
14,200.0	6,701.6	6,729.7	6,728.9	212.4	2.6	103.78	641.6	842.9	8,279.5	8,070.5	209.06	39.604					
14,271.6	6,701.5	6,729.8	6,729.0	214.4	2.6	103.85	641.6	842.9	8,351.1	8,140.2	210.96	39.586					
14,300.0	6,701.4	6,729.9	6,729.1	215.2	2.6	103.88	641.6	842.9	8,379.5	8,167.8	211.71	39.580					
14,370.0	6,701.3	6,730.0	6,729.2	217.1	2.6	103.94	641.6	842.9	8,449.6	8,236.0	213.57	39.563					
14,400.0	6,701.3	6,730.1	6,729.2	218.0	2.6	103.97	641.6	842.9	8,479.5	8,265.1	214.36	39.557					
14,468.5	6,701.1	6,730.2	6,729.3	219.9	2.6	104.03	641.6	842.9	8,548.0	8,331.8	216.18	39.541					
14,500.0	6,701.1	6,730.2	6,729.4	220.8	2.6	104.07	641.6	842.9	8,579.5	8,362.5	217.01	39.535					
14,566.9	6,701.0	6,730.3	6,729.5	222.6	2.6	104.12	641.6	842.9	8,646.4	8,427.6	218.78	39.520					
14,600.0	6,700.9	6,730.4	6,729.6	223.6	2.6	104.16	641.6	842.9	8,679.5	8,459.8	219.66	39.514					
14,665.3	6,700.8	6,730.5	6,729.7	225.4	2.6	104.21	641.6	842.9	8,744.8	8,523.4	221.39	39.500					

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #10D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	6,730.5	6,729.7	226.4	2.6	104.25	641.6	842.9	8,779.5	8,557.2	222.30	39.494	
14,763.7	6,700.6	6,730.6	6,729.8	228.2	2.6	104.30	641.6	842.9	8,843.2	8,619.2	223.99	39.481	
14,800.0	6,700.5	6,730.7	6,729.9	229.2	2.6	104.34	641.6	842.9	8,879.5	8,654.5	224.94	39.474	
14,862.2	6,700.4	6,730.8	6,730.0	230.9	2.6	104.39	641.6	842.9	8,941.6	8,715.1	226.59	39.462	
14,900.0	6,700.3	6,730.9	6,730.0	232.0	2.6	104.43	641.6	842.9	8,979.5	8,751.9	227.59	39.455	
14,960.6	6,700.2	6,730.9	6,730.1	233.7	2.6	104.48	641.6	842.9	9,040.1	8,810.9	229.19	39.444	
15,000.0	6,700.2	6,731.0	6,730.2	234.8	2.6	104.52	641.6	842.9	9,079.5	8,849.2	230.23	39.437	
15,059.0	6,700.0	6,731.1	6,730.3	236.4	2.6	104.57	641.6	842.9	9,138.5	8,906.7	231.79	39.426	
15,082.8	6,700.0	6,731.1	6,730.3	237.1	2.6	104.59	641.6	842.9	9,162.3	8,929.9	232.41	39.423	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	56.15	1,171.7	1,747.0	2,103.5				
98.4	98.4	90.4	90.4	0.1	1.1	56.15	1,171.7	1,747.0	2,103.5	2,102.3	1.24	1,696.800	
100.0	100.0	92.0	92.0	0.1	1.2	56.15	1,171.7	1,747.0	2,103.5	2,102.2	1.26	1,667.622	
196.8	196.8	188.8	188.8	0.3	3.3	56.15	1,171.7	1,747.0	2,103.5	2,099.9	3.60	584.023	
200.0	200.0	192.0	192.0	0.3	3.4	56.15	1,171.7	1,747.0	2,103.5	2,099.8	3.68	571.527	
295.3	295.3	287.3	287.3	0.5	5.4	56.15	1,171.7	1,747.0	2,103.5	2,097.6	5.89	357.168	
300.0	300.0	292.0	292.0	0.5	5.5	56.15	1,171.7	1,747.0	2,103.5	2,097.5	6.00	350.692	
393.7	393.7	385.7	385.7	0.8	7.4	56.15	1,171.7	1,747.0	2,103.5	2,095.4	8.12	258.900	
400.0	400.0	392.0	392.0	0.8	7.5	56.15	1,171.7	1,747.0	2,103.5	2,095.2	8.27	254.428	
492.1	492.1	484.1	484.1	1.0	9.4	56.15	1,171.7	1,747.0	2,103.5	2,093.2	10.34	203.339	
500.0	500.0	492.0	492.0	1.0	9.5	56.15	1,171.7	1,747.0	2,103.5	2,093.0	10.52	199.909	
590.5	590.5	582.5	582.5	1.2	11.4	56.15	1,171.7	1,747.0	2,103.5	2,090.9	12.56	167.505	
600.0	600.0	592.0	592.0	1.2	11.5	56.15	1,171.7	1,747.0	2,103.5	2,090.7	12.77	164.719	
689.0	689.0	681.0	681.0	1.4	13.3	56.15	1,171.7	1,747.0	2,103.5	2,088.7	14.77	142.445	
700.0	700.0	692.0	692.0	1.4	13.6	56.15	1,171.7	1,747.0	2,103.5	2,088.5	15.01	140.098	
787.4	787.4	779.4	779.4	1.6	15.3	56.15	1,171.7	1,747.0	2,103.5	2,086.5	16.97	123.924	
800.0	800.0	792.0	792.0	1.7	15.6	56.15	1,171.7	1,747.0	2,103.5	2,086.2	17.26	121.895	
885.8	885.8	877.8	877.8	1.9	17.3	56.15	1,171.7	1,747.0	2,103.5	2,084.3	19.18	109.674	
900.0	900.0	892.0	892.0	1.9	17.6	56.15	1,171.7	1,747.0	2,103.5	2,084.0	19.50	107.887	
984.2	984.2	976.2	976.2	2.1	19.3	56.15	1,171.7	1,747.0	2,103.5	2,082.1	21.38	98.368	
1,000.0	1,000.0	992.0	992.0	2.1	19.6	56.15	1,171.7	1,747.0	2,103.5	2,081.8	21.74	96.771	
1,082.7	1,082.7	1,074.7	1,074.7	2.3	21.3	56.15	1,171.7	1,747.0	2,103.5	2,079.9	23.59	89.178	
1,100.0	1,100.0	1,092.0	1,092.0	2.3	21.6	56.15	1,171.7	1,747.0	2,103.5	2,079.5	23.98	87.735	
1,181.1	1,181.1	1,173.1	1,173.1	2.5	23.3	27.45	1,171.7	1,747.0	2,102.5	2,076.7	25.78	81.550	
1,200.0	1,200.0	1,192.0	1,192.0	2.6	23.6	27.46	1,171.7	1,747.0	2,102.0	2,075.8	26.20	80.229	
1,279.5	1,279.4	1,271.4	1,271.4	2.7	25.2	27.54	1,171.7	1,747.0	2,098.5	2,070.6	27.95	75.094	
1,300.0	1,299.8	1,291.8	1,291.8	2.8	25.7	27.57	1,171.7	1,747.0	2,097.3	2,068.9	28.39	73.874	
1,377.9	1,377.5	1,369.5	1,369.5	3.0	27.2	27.70	1,171.7	1,747.0	2,091.6	2,061.5	30.07	69.549	
1,400.0	1,399.5	1,391.5	1,391.5	3.0	27.7	27.75	1,171.7	1,747.0	2,089.6	2,059.0	30.54	68.413	
1,476.4	1,475.3	1,467.3	1,467.3	3.2	29.2	27.94	1,171.7	1,747.0	2,081.6	2,049.5	32.16	64.724	
1,500.0	1,498.7	1,490.7	1,490.7	3.3	29.7	28.01	1,171.7	1,747.0	2,078.8	2,046.1	32.65	63.660	
1,574.8	1,572.6	1,564.6	1,564.6	3.5	31.1	28.25	1,171.7	1,747.0	2,068.7	2,034.5	34.21	60.479	
1,600.0	1,597.5	1,589.5	1,589.5	3.5	31.6	28.34	1,171.7	1,747.0	2,065.0	2,030.3	34.72	59.475	
1,673.2	1,669.4	1,661.4	1,661.4	3.7	33.1	28.64	1,171.7	1,747.0	2,052.9	2,016.7	36.20	56.704	
1,700.1	1,695.8	1,687.8	1,687.8	3.8	33.6	28.76	1,171.7	1,747.0	2,048.1	2,011.4	36.74	55.746	
1,771.6	1,765.7	1,757.7	1,757.7	4.1	35.0	28.96	1,171.7	1,747.0	2,035.0	1,996.7	38.31	53.117	
1,800.0	1,793.4	1,785.4	1,785.4	4.2	35.6	29.04	1,171.7	1,747.0	2,029.8	1,990.9	38.93	52.136	
1,870.1	1,862.0	1,854.0	1,854.0	4.4	37.0	29.24	1,171.7	1,747.0	2,017.0	1,976.6	40.48	49.827	
1,900.0	1,891.3	1,883.3	1,883.3	4.5	37.6	29.33	1,171.7	1,747.0	2,011.6	1,970.5	41.14	48.897	
1,968.5	1,958.3	1,950.3	1,950.3	4.8	38.9	29.53	1,171.7	1,747.0	1,999.1	1,956.5	42.66	46.866	
2,000.0	1,989.1	1,981.1	1,981.1	4.9	39.5	29.62	1,171.7	1,747.0	1,993.4	1,950.0	43.35	45.979	
2,066.9	2,054.5	2,046.5	2,046.5	5.1	40.8	29.82	1,171.7	1,747.0	1,981.2	1,936.4	44.84	44.184	
2,100.0	2,086.9	2,078.9	2,078.9	5.3	41.5	29.91	1,171.7	1,747.0	1,975.2	1,929.7	45.58	43.340	
2,165.3	2,150.8	2,142.8	2,142.8	5.5	42.8	30.11	1,171.7	1,747.0	1,963.4	1,916.4	47.03	41.746	
2,200.0	2,184.7	2,176.7	2,176.7	5.6	43.5	30.22	1,171.7	1,747.0	1,957.1	1,909.3	47.80	40.941	
2,263.8	2,247.1	2,239.1	2,239.1	5.9	44.7	30.41	1,171.7	1,747.0	1,945.6	1,896.4	49.23	39.522	
2,300.0	2,282.5	2,274.5	2,274.5	6.0	45.4	30.52	1,171.7	1,747.0	1,939.1	1,889.1	50.04	38.752	
2,362.2	2,343.3	2,335.3	2,335.3	6.3	46.6	30.72	1,171.7	1,747.0	1,927.9	1,876.5	51.43	37.485	
2,400.0	2,380.3	2,372.3	2,372.3	6.5	47.4	30.84	1,171.7	1,747.0	1,921.1	1,868.8	52.28	36.747	
2,460.6	2,439.6	2,431.6	2,431.6	6.7	48.6	31.03	1,171.7	1,747.0	1,910.2	1,856.6	53.64	35.612	
2,500.0	2,478.1	2,470.1	2,470.1	6.9	49.4	31.16	1,171.7	1,747.0	1,903.2	1,848.7	54.52	34.905	
2,559.0	2,535.9	2,527.9	2,527.9	7.1	50.5	31.35	1,171.7	1,747.0	1,892.6	1,836.8	55.85	33.886	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,567.9	2,567.9	7.3	51.3	31.48	1,171.7	1,747.0	1,885.3	1,828.5	56.77	33.207	
2,657.5	2,632.2	2,624.2	2,624.2	7.5	52.5	31.67	1,171.7	1,747.0	1,875.1	1,817.0	58.07	32.290	
2,700.0	2,673.8	2,665.8	2,665.8	7.7	53.3	31.81	1,171.7	1,747.0	1,867.5	1,808.5	59.03	31.637	
2,755.9	2,728.4	2,720.4	2,720.4	7.9	54.4	32.00	1,171.7	1,747.0	1,857.6	1,797.3	60.29	30.810	
2,800.0	2,771.6	2,763.6	2,763.6	8.1	55.3	32.15	1,171.7	1,747.0	1,849.8	1,788.5	61.29	30.181	
2,854.3	2,824.7	2,816.7	2,816.7	8.3	56.3	32.34	1,171.7	1,747.0	1,840.1	1,777.6	62.52	29.434	
2,900.0	2,869.4	2,861.4	2,861.4	8.5	57.2	32.49	1,171.7	1,747.0	1,832.1	1,768.5	63.55	28.828	
2,952.7	2,921.0	2,913.0	2,913.0	8.8	58.3	32.68	1,171.7	1,747.0	1,822.8	1,758.0	64.75	28.152	
3,000.0	2,967.2	2,959.2	2,959.2	9.0	59.2	32.84	1,171.7	1,747.0	1,814.5	1,748.6	65.82	27.567	
3,051.2	3,017.3	3,009.3	3,009.3	9.2	60.2	33.03	1,171.7	1,747.0	1,805.5	1,738.5	66.98	26.954	
3,100.0	3,065.0	3,057.0	3,057.0	9.4	61.2	33.20	1,171.7	1,747.0	1,796.9	1,728.8	68.09	26.389	
3,149.6	3,113.5	3,105.5	3,105.5	9.6	62.1	33.38	1,171.7	1,747.0	1,788.2	1,719.0	69.22	25.833	
3,200.0	3,162.8	3,154.8	3,154.8	9.8	63.1	33.57	1,171.7	1,747.0	1,779.4	1,709.1	70.37	25.287	
3,248.0	3,209.8	3,201.8	3,201.8	10.0	64.1	33.74	1,171.7	1,747.0	1,771.1	1,699.6	71.46	24.783	
3,300.0	3,260.6	3,252.6	3,252.6	10.2	65.1	33.94	1,171.7	1,747.0	1,762.0	1,689.4	72.65	24.254	
3,346.4	3,306.1	3,298.1	3,298.1	10.5	66.0	34.11	1,171.7	1,747.0	1,754.0	1,680.2	73.71	23.795	
3,400.0	3,358.5	3,350.5	3,350.5	10.7	67.1	34.32	1,171.7	1,747.0	1,744.7	1,669.7	74.93	23.283	
3,444.9	3,402.3	3,394.3	3,394.3	10.9	68.0	34.49	1,171.7	1,747.0	1,736.9	1,661.0	75.96	22.866	
3,500.0	3,456.3	3,448.3	3,448.3	11.1	69.0	34.70	1,171.7	1,747.0	1,727.4	1,650.2	77.22	22.369	
3,543.3	3,498.6	3,490.6	3,490.6	11.3	69.9	34.87	1,171.7	1,747.0	1,720.0	1,641.8	78.22	21.990	
3,600.0	3,554.1	3,546.1	3,546.1	11.5	71.0	35.10	1,171.7	1,747.0	1,710.2	1,630.7	79.52	21.508	
3,641.7	3,594.9	3,586.9	3,586.9	11.7	71.8	35.26	1,171.7	1,747.0	1,703.1	1,622.6	80.48	21.163	
3,700.0	3,651.9	3,643.9	3,643.9	12.0	73.0	35.50	1,171.7	1,747.0	1,693.1	1,611.3	81.82	20.695	
3,740.1	3,691.2	3,683.2	3,683.2	12.2	73.8	35.66	1,171.7	1,747.0	1,686.3	1,603.6	82.74	20.381	
3,800.0	3,749.7	3,741.7	3,741.7	12.4	74.9	35.91	1,171.7	1,747.0	1,676.1	1,592.0	84.12	19.926	
3,838.6	3,787.4	3,779.4	3,779.4	12.6	75.7	36.07	1,171.7	1,747.0	1,669.6	1,584.6	85.01	19.641	
3,900.0	3,847.5	3,839.5	3,839.5	12.9	76.9	36.32	1,171.7	1,747.0	1,659.2	1,572.8	86.42	19.198	
3,937.0	3,883.7	3,875.7	3,875.7	13.0	77.6	36.48	1,171.7	1,747.0	1,653.0	1,565.7	87.28	18.939	
4,000.0	3,945.3	3,937.3	3,937.3	13.3	78.9	36.75	1,171.7	1,747.0	1,642.4	1,553.6	88.74	18.508	
4,035.4	3,980.0	3,972.0	3,972.0	13.5	79.6	36.90	1,171.7	1,747.0	1,636.4	1,546.9	89.56	18.273	
4,060.0	4,004.0	3,996.0	3,996.0	13.6	80.1	37.01	1,171.7	1,747.0	1,632.3	1,542.2	90.13	18.112	
4,100.0	4,043.2	4,035.2	4,035.2	13.7	80.8	37.10	1,171.7	1,747.0	1,625.8	1,534.7	91.18	17.832	
4,133.8	4,076.5	4,068.5	4,068.5	13.8	81.5	37.17	1,171.7	1,747.0	1,620.7	1,528.7	92.05	17.607	
4,200.0	4,141.6	4,133.6	4,133.6	14.0	82.8	37.30	1,171.7	1,747.0	1,611.6	1,517.9	93.73	17.194	
4,232.3	4,173.5	4,165.5	4,165.5	14.1	83.5	37.36	1,171.7	1,747.0	1,607.7	1,513.1	94.54	17.005	
4,300.0	4,240.6	4,232.6	4,232.6	14.3	84.8	37.47	1,171.7	1,747.0	1,600.3	1,504.0	96.22	16.631	
4,330.7	4,271.1	4,263.1	4,263.1	14.4	85.4	37.52	1,171.7	1,747.0	1,597.3	1,500.4	96.97	16.473	
4,400.0	4,340.0	4,332.0	4,332.0	14.5	86.8	37.60	1,171.7	1,747.0	1,591.7	1,493.0	98.63	16.137	
4,429.1	4,369.0	4,361.0	4,361.0	14.6	87.4	37.64	1,171.7	1,747.0	1,589.7	1,490.4	99.32	16.006	
4,500.0	4,439.7	4,431.7	4,431.7	14.8	88.8	37.69	1,171.7	1,747.0	1,585.9	1,484.9	100.96	15.708	
4,527.5	4,467.2	4,459.2	4,459.2	14.8	89.4	37.71	1,171.7	1,747.0	1,584.8	1,483.2	101.59	15.600	
4,600.0	4,539.7	4,531.7	4,531.7	14.9	90.8	37.74	1,171.7	1,747.0	1,582.8	1,479.6	103.20	15.338	
4,626.0	4,565.6	4,557.6	4,557.6	15.0	91.3	37.75	1,171.7	1,747.0	1,582.5	1,478.7	103.76	15.251	
4,660.2	4,599.8	4,591.8	4,591.8	15.0	92.0	66.48	1,171.7	1,747.0	1,582.3	1,476.7	105.65	14.978	
4,700.0	4,639.6	4,631.6	4,631.6	15.0	92.8	66.48	1,171.7	1,747.0	1,582.3	1,475.8	106.51	14.857	
4,724.4	4,664.0	4,656.0	4,656.0	15.1	93.3	66.48	1,171.7	1,747.0	1,582.3	1,475.3	107.04	14.783	
4,800.0	4,739.6	4,731.6	4,731.6	15.2	94.8	66.48	1,171.7	1,747.0	1,582.3	1,473.7	108.68	14.560	
4,822.8	4,762.5	4,754.5	4,754.5	15.2	95.3	66.48	1,171.7	1,747.0	1,582.3	1,473.2	109.18	14.493	
4,900.0	4,839.6	4,831.6	4,831.6	15.3	96.9	66.48	1,171.7	1,747.0	1,582.3	1,471.5	110.85	14.274	
4,921.2	4,860.9	4,852.9	4,852.9	15.4	97.3	66.48	1,171.7	1,747.0	1,582.3	1,471.0	111.32	14.215	
5,000.0	4,939.6	4,931.6	4,931.6	15.5	98.9	66.48	1,171.7	1,747.0	1,582.3	1,469.3	113.03	13.999	
5,019.7	4,959.3	4,951.3	4,951.3	15.5	99.3	66.48	1,171.7	1,747.0	1,582.3	1,468.9	113.46	13.946	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,031.6	5,031.6	15.6	100.9	66.48	1,171.7	1,747.0	1,582.3	1,467.1	115.21	13.734	
5,118.1	5,057.7	5,049.7	5,049.7	15.7	101.2	66.48	1,171.7	1,747.0	1,582.3	1,466.7	115.60	13.688	
5,200.0	5,139.6	5,131.6	5,131.6	15.8	102.9	66.48	1,171.7	1,747.0	1,582.3	1,464.9	117.39	13.479	
5,216.5	5,156.2	5,148.2	5,148.2	15.8	103.2	66.48	1,171.7	1,747.0	1,582.3	1,464.6	117.75	13.438	
5,300.0	5,239.6	5,231.6	5,231.6	15.9	104.9	66.48	1,171.7	1,747.0	1,582.3	1,462.8	119.57	13.234	
5,314.9	5,254.6	5,246.6	5,246.6	16.0	105.2	66.48	1,171.7	1,747.0	1,582.3	1,462.4	119.90	13.198	
5,400.0	5,339.6	5,331.6	5,331.6	16.1	106.9	66.48	1,171.7	1,747.0	1,582.3	1,460.6	121.75	12.996	
5,413.4	5,353.0	5,345.0	5,345.0	16.1	107.2	66.48	1,171.7	1,747.0	1,582.3	1,460.3	122.04	12.965	
5,500.0	5,439.6	5,431.6	5,431.6	16.3	108.9	66.48	1,171.7	1,747.0	1,582.3	1,458.4	123.94	12.767	
5,511.8	5,451.4	5,443.4	5,443.4	16.3	109.2	66.48	1,171.7	1,747.0	1,582.3	1,458.1	124.19	12.741	
5,600.0	5,539.6	5,531.6	5,531.6	16.4	110.9	66.48	1,171.7	1,747.0	1,582.3	1,456.2	126.12	12.546	
5,610.2	5,549.9	5,541.9	5,541.9	16.4	111.1	66.48	1,171.7	1,747.0	1,582.3	1,456.0	126.34	12.524	
5,700.0	5,639.6	5,631.6	5,631.6	16.6	112.9	66.48	1,171.7	1,747.0	1,582.3	1,454.0	128.31	12.332	
5,708.6	5,648.3	5,640.3	5,640.3	16.6	113.1	66.48	1,171.7	1,747.0	1,582.3	1,453.8	128.50	12.314	
5,800.0	5,739.6	5,731.6	5,731.6	16.7	115.0	66.48	1,171.7	1,747.0	1,582.3	1,451.8	130.50	12.126	
5,807.1	5,746.7	5,738.7	5,738.7	16.8	115.1	66.48	1,171.7	1,747.0	1,582.3	1,451.7	130.65	12.111	
5,900.0	5,839.6	5,831.6	5,831.6	16.9	117.0	66.48	1,171.7	1,747.0	1,582.3	1,449.6	132.68	11.926	
5,905.5	5,845.1	5,837.1	5,837.1	16.9	117.1	66.48	1,171.7	1,747.0	1,582.3	1,449.5	132.81	11.915	
6,000.0	5,939.6	5,931.6	5,931.6	17.1	119.0	66.48	1,171.7	1,747.0	1,582.3	1,447.5	134.88	11.732	
6,003.9	5,943.6	5,935.6	5,935.6	17.1	119.1	66.48	1,171.7	1,747.0	1,582.3	1,447.4	134.96	11.724	
6,059.2	5,998.8	5,990.8	5,990.8	17.2	120.2	66.48	1,171.7	1,747.0	1,582.3	1,446.2	136.17	11.620 CC, ES, SF	
6,100.0	6,039.6	6,031.6	6,031.6	17.2	121.0	156.46	1,171.7	1,747.0	1,583.4	1,447.6	135.82	11.658	
6,102.3	6,042.0	6,034.0	6,034.0	17.2	121.0	156.46	1,171.7	1,747.0	1,583.5	1,447.7	135.85	11.656	
6,150.0	6,089.4	6,081.4	6,081.4	17.3	122.0	156.39	1,171.7	1,747.0	1,587.6	1,451.5	136.12	11.663	
6,200.0	6,138.7	6,130.7	6,130.7	17.3	123.0	156.27	1,171.7	1,747.0	1,595.0	1,459.1	135.85	11.741	
6,200.8	6,139.5	6,131.5	6,131.5	17.3	123.0	156.27	1,171.7	1,747.0	1,595.1	1,459.3	135.84	11.743	
6,250.0	6,187.4	6,179.4	6,179.4	17.3	124.0	156.09	1,171.7	1,747.0	1,605.5	1,470.5	135.02	11.892	
6,299.2	6,234.4	6,226.4	6,226.4	17.4	124.9	155.84	1,171.7	1,747.0	1,619.0	1,485.3	133.65	12.114	
6,300.0	6,235.1	6,227.1	6,227.1	17.4	124.9	155.84	1,171.7	1,747.0	1,619.2	1,485.6	133.62	12.118	
6,350.0	6,281.7	6,273.7	6,273.7	17.4	125.9	155.51	1,171.7	1,747.0	1,635.9	1,504.2	131.69	12.422	
6,397.6	6,324.8	6,316.8	6,316.8	17.3	126.7	155.12	1,171.7	1,747.0	1,654.6	1,525.2	129.39	12.788	
6,400.0	6,326.9	6,318.9	6,318.9	17.3	126.8	155.10	1,171.7	1,747.0	1,655.6	1,526.3	129.26	12.808	
6,450.0	6,370.5	6,362.5	6,362.5	17.3	127.6	154.59	1,171.7	1,747.0	1,678.2	1,551.8	126.39	13.278	
6,496.0	6,409.1	6,401.1	6,401.1	17.3	128.4	154.01	1,171.7	1,747.0	1,701.6	1,578.1	123.41	13.787	
6,500.0	6,412.3	6,404.3	6,404.3	17.3	128.5	153.95	1,171.7	1,747.0	1,703.7	1,580.5	123.15	13.835	
6,550.0	6,452.1	6,444.1	6,444.1	17.3	129.3	153.17	1,171.7	1,747.0	1,731.8	1,612.2	119.64	14.476	
6,594.5	6,485.6	6,477.6	6,477.6	17.3	130.0	152.33	1,171.7	1,747.0	1,759.0	1,642.6	116.42	15.110	
6,600.0	6,489.7	6,481.7	6,481.7	17.3	130.0	152.21	1,171.7	1,747.0	1,762.6	1,646.5	116.01	15.193	
6,650.0	6,524.9	6,516.9	6,516.9	17.2	130.7	151.03	1,171.7	1,747.0	1,795.8	1,683.3	112.47	15.967	
6,692.9	6,553.0	6,545.0	6,545.0	17.2	131.3	149.81	1,171.7	1,747.0	1,826.1	1,716.4	109.70	16.647	
6,700.0	6,557.5	6,549.5	6,549.5	17.2	131.4	149.58	1,171.7	1,747.0	1,831.3	1,722.0	109.27	16.759	
6,750.0	6,587.4	6,579.4	6,579.4	17.2	132.0	147.78	1,171.7	1,747.0	1,868.9	1,762.2	106.77	17.504	
6,791.3	6,609.9	6,601.9	6,601.9	17.2	132.5	145.97	1,171.7	1,747.0	1,901.5	1,796.0	105.54	18.017	
6,800.0	6,614.4	6,606.4	6,606.4	17.2	132.5	145.55	1,171.7	1,747.0	1,908.6	1,803.2	105.40	18.108	
6,850.0	6,638.4	6,630.4	6,630.4	17.2	133.0	142.73	1,171.7	1,747.0	1,950.0	1,844.3	105.69	18.451	
6,889.7	6,655.3	6,647.3	6,647.3	17.4	133.4	139.96	1,171.7	1,747.0	1,984.1	1,876.6	107.47	18.461	
6,900.0	6,659.4	6,651.4	6,651.4	17.5	133.5	139.16	1,171.7	1,747.0	1,993.0	1,884.8	108.20	18.420	
6,950.0	6,677.1	6,669.1	6,669.1	18.0	133.8	134.57	1,171.7	1,747.0	2,037.4	1,924.0	113.43	17.962	
6,988.2	6,688.4	6,680.4	6,680.4	18.5	134.0	130.18	1,171.7	1,747.0	2,072.1	1,952.7	119.42	17.352	
7,000.0	6,691.5	6,683.5	6,683.5	18.7	134.1	128.64	1,171.7	1,747.0	2,083.0	1,961.3	121.61	17.129	
7,050.0	6,702.5	6,694.5	6,694.5	19.5	134.3	120.95	1,171.7	1,747.0	2,129.5	1,997.1	132.34	16.091	
7,086.6	6,708.4	6,700.4	6,700.4	20.1	134.4	113.99	1,171.7	1,747.0	2,164.0	2,023.0	140.96	15.352	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	6,702.1	6,702.1	20.4	134.5	111.14	1,171.7	1,747.0	2,176.7	2,032.7	144.02	15.114	
7,150.0	6,714.2	6,706.2	6,706.2	21.3	134.6	99.15	1,171.7	1,747.0	2,224.4	2,071.1	153.36	14.505	
7,185.0	6,715.0	6,707.0	6,707.0	21.9	134.6	89.76	1,171.7	1,747.0	2,258.0	2,101.8	156.21	14.455	
7,185.6	6,715.0	6,707.0	6,707.0	21.9	134.6	89.62	1,171.7	1,747.0	2,258.5	2,102.3	156.23	14.457	
7,200.0	6,715.0	6,707.0	6,707.0	22.2	134.6	89.61	1,171.7	1,747.0	2,272.4	2,115.9	156.50	14.520	
7,283.4	6,714.8	6,706.8	6,706.8	23.9	134.6	89.60	1,171.7	1,747.0	2,352.7	2,194.5	158.18	14.874	
7,300.0	6,714.8	6,706.8	6,706.8	24.2	134.6	89.60	1,171.7	1,747.0	2,368.6	2,210.1	158.51	14.943	
7,381.9	6,714.6	6,706.6	6,706.6	26.0	134.6	89.58	1,171.7	1,747.0	2,447.6	2,287.4	160.27	15.272	
7,400.0	6,714.6	6,706.6	6,706.6	26.4	134.6	89.58	1,171.7	1,747.0	2,465.2	2,304.5	160.66	15.344	
7,480.3	6,714.4	6,706.4	6,706.4	28.2	134.6	89.56	1,171.7	1,747.0	2,542.9	2,380.4	162.47	15.651	
7,500.0	6,714.4	6,706.4	6,706.4	28.7	134.6	89.56	1,171.7	1,747.0	2,561.9	2,399.0	162.92	15.725	
7,578.7	6,714.2	6,706.2	6,706.2	30.5	134.6	89.55	1,171.7	1,747.0	2,638.3	2,473.5	164.77	16.012	
7,600.0	6,714.2	6,706.2	6,706.2	31.0	134.6	89.54	1,171.7	1,747.0	2,659.0	2,493.7	165.27	16.089	
7,677.1	6,714.0	6,706.0	6,706.0	32.9	134.6	89.53	1,171.7	1,747.0	2,734.0	2,566.8	167.14	16.357	
7,700.0	6,714.0	6,706.0	6,706.0	33.4	134.6	89.53	1,171.7	1,747.0	2,756.2	2,588.5	167.69	16.436	
7,775.6	6,713.9	6,705.9	6,705.9	35.3	134.5	89.51	1,171.7	1,747.0	2,829.8	2,660.3	169.57	16.688	
7,800.0	6,713.8	6,705.8	6,705.8	35.9	134.5	89.51	1,171.7	1,747.0	2,853.7	2,683.5	170.17	16.769	
7,874.0	6,713.7	6,705.7	6,705.7	37.8	134.5	89.50	1,171.7	1,747.0	2,925.9	2,753.8	172.04	17.007	
7,900.0	6,713.6	6,705.6	6,705.6	38.4	134.5	89.49	1,171.7	1,747.0	2,951.3	2,778.6	172.70	17.089	
7,972.4	6,713.5	6,705.5	6,705.5	40.3	134.5	89.48	1,171.7	1,747.0	3,022.0	2,847.5	174.56	17.313	
8,000.0	6,713.4	6,705.4	6,705.4	41.0	134.5	89.47	1,171.7	1,747.0	3,049.0	2,873.8	175.26	17.397	
8,070.8	6,713.3	6,705.3	6,705.3	42.8	134.5	89.46	1,171.7	1,747.0	3,118.4	2,941.3	177.10	17.608	
8,100.0	6,713.2	6,705.2	6,705.2	43.6	134.5	89.46	1,171.7	1,747.0	3,146.9	2,969.1	177.85	17.694	
8,169.3	6,713.1	6,705.1	6,705.1	45.4	134.5	89.45	1,171.7	1,747.0	3,214.8	3,035.1	179.67	17.893	
8,200.0	6,713.0	6,705.0	6,705.0	46.2	134.5	89.44	1,171.7	1,747.0	3,244.9	3,064.5	180.47	17.980	
8,267.7	6,712.9	6,704.9	6,704.9	48.0	134.5	89.43	1,171.7	1,747.0	3,311.4	3,129.1	182.26	18.169	
8,300.0	6,712.8	6,704.8	6,704.8	48.8	134.5	89.42	1,171.7	1,747.0	3,343.1	3,160.0	183.11	18.257	
8,366.1	6,712.7	6,704.7	6,704.7	50.6	134.5	89.41	1,171.7	1,747.0	3,408.0	3,223.2	184.87	18.435	
8,400.0	6,712.6	6,704.6	6,704.6	51.5	134.5	89.41	1,171.7	1,747.0	3,441.3	3,255.6	185.77	18.525	
8,464.5	6,712.5	6,704.5	6,704.5	53.2	134.5	89.39	1,171.7	1,747.0	3,504.8	3,317.3	187.49	18.693	
8,500.0	6,712.4	6,704.4	6,704.4	54.1	134.5	89.39	1,171.7	1,747.0	3,539.7	3,351.2	188.44	18.784	
8,563.0	6,712.3	6,704.3	6,704.3	55.8	134.5	89.38	1,171.7	1,747.0	3,601.7	3,411.5	190.13	18.943	
8,600.0	6,712.3	6,704.3	6,704.3	56.8	134.5	89.37	1,171.7	1,747.0	3,638.1	3,447.0	191.12	19.035	
8,661.4	6,712.1	6,704.1	6,704.1	58.5	134.5	89.36	1,171.7	1,747.0	3,698.6	3,505.8	192.78	19.186	
8,700.0	6,712.1	6,704.1	6,704.1	59.5	134.5	89.35	1,171.7	1,747.0	3,736.6	3,542.8	193.82	19.279	
8,759.8	6,711.9	6,703.9	6,703.9	61.1	134.5	89.34	1,171.7	1,747.0	3,795.6	3,600.2	195.44	19.421	
8,800.0	6,711.9	6,703.9	6,703.9	62.2	134.5	89.34	1,171.7	1,747.0	3,835.2	3,638.7	196.53	19.515	
8,858.2	6,711.8	6,703.8	6,703.8	63.8	134.5	89.33	1,171.7	1,747.0	3,892.7	3,694.6	198.11	19.649	
8,900.0	6,711.7	6,703.7	6,703.7	64.9	134.5	89.32	1,171.7	1,747.0	3,933.9	3,734.7	199.24	19.744	
8,956.7	6,711.6	6,703.6	6,703.6	66.5	134.5	89.31	1,171.7	1,747.0	3,989.9	3,789.1	200.78	19.871	
9,000.0	6,711.5	6,703.5	6,703.5	67.6	134.5	89.30	1,171.7	1,747.0	4,032.6	3,830.7	201.96	19.967	
9,055.1	6,711.4	6,703.4	6,703.4	69.1	134.5	89.29	1,171.7	1,747.0	4,087.1	3,883.6	203.47	20.087	
9,100.0	6,711.3	6,703.3	6,703.3	70.4	134.5	89.29	1,171.7	1,747.0	4,131.4	3,926.8	204.69	20.184	
9,153.5	6,711.2	6,703.2	6,703.2	71.8	134.5	89.28	1,171.7	1,747.0	4,184.3	3,978.2	206.16	20.297	
9,200.0	6,711.1	6,703.1	6,703.1	73.1	134.5	89.27	1,171.7	1,747.0	4,230.3	4,022.9	207.43	20.394	
9,251.9	6,711.0	6,703.0	6,703.0	74.5	134.5	89.26	1,171.7	1,747.0	4,281.7	4,072.8	208.85	20.501	
9,300.0	6,710.9	6,702.9	6,702.9	75.8	134.5	89.25	1,171.7	1,747.0	4,329.2	4,119.0	210.17	20.599	
9,350.4	6,710.8	6,702.8	6,702.8	77.2	134.5	89.24	1,171.7	1,747.0	4,379.0	4,167.5	211.55	20.700	
9,400.0	6,710.7	6,702.7	6,702.7	78.6	134.5	89.24	1,171.7	1,747.0	4,428.2	4,215.2	212.91	20.798	
9,448.8	6,710.6	6,702.6	6,702.6	79.9	134.5	89.23	1,171.7	1,747.0	4,476.5	4,262.2	214.25	20.893	
9,500.0	6,710.5	6,702.5	6,702.5	81.3	134.5	89.22	1,171.7	1,747.0	4,527.2	4,311.5	215.66	20.992	
9,547.2	6,710.4	6,702.4	6,702.4	82.6	134.5	89.21	1,171.7	1,747.0	4,573.9	4,357.0	216.96	21.082	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,600.0	6,710.3	6,702.3	6,702.3	84.1	134.5	89.20	1,171.7	1,747.0	4,626.2	4,407.8	218.41	21.181	
9,645.6	6,710.2	6,702.2	6,702.2	85.3	134.5	89.19	1,171.7	1,747.0	4,671.4	4,451.8	219.67	21.266	
9,700.0	6,710.1	6,702.1	6,702.1	86.8	134.5	89.18	1,171.7	1,747.0	4,725.3	4,504.1	221.17	21.365	
9,744.1	6,710.0	6,702.0	6,702.0	88.1	134.5	89.18	1,171.7	1,747.0	4,769.0	4,546.6	222.38	21.445	
9,800.0	6,709.9	6,701.9	6,701.9	89.6	134.5	89.17	1,171.7	1,747.0	4,824.4	4,600.5	223.93	21.544	
9,842.5	6,709.9	6,701.9	6,701.9	90.8	134.5	89.16	1,171.7	1,747.0	4,866.5	4,641.4	225.10	21.619	
9,900.0	6,709.7	6,701.7	6,701.7	92.4	134.5	89.15	1,171.7	1,747.0	4,923.6	4,696.9	226.69	21.719	
9,940.9	6,709.7	6,701.7	6,701.7	93.5	134.5	89.14	1,171.7	1,747.0	4,964.2	4,736.3	227.82	21.790	
10,000.0	6,709.6	6,701.6	6,701.6	95.1	134.5	89.13	1,171.7	1,747.0	5,022.8	4,793.3	229.45	21.890	
10,039.3	6,709.5	6,701.5	6,701.5	96.2	134.5	89.13	1,171.7	1,747.0	5,061.8	4,831.2	230.54	21.956	
10,100.0	6,709.4	6,701.4	6,701.4	97.9	134.5	89.12	1,171.7	1,747.0	5,122.0	4,889.8	232.22	22.056	
10,137.8	6,709.3	6,701.3	6,701.3	98.9	134.5	89.11	1,171.7	1,747.0	5,159.5	4,926.2	233.27	22.118	
10,200.0	6,709.2	6,701.2	6,701.2	100.7	134.5	89.10	1,171.7	1,747.0	5,221.2	4,986.2	234.99	22.219	
10,236.2	6,709.1	6,701.1	6,701.1	101.7	134.5	89.09	1,171.7	1,747.0	5,257.2	5,021.2	235.99	22.277	
10,300.0	6,709.0	6,701.0	6,701.0	103.4	134.4	89.08	1,171.7	1,747.0	5,320.5	5,082.7	237.76	22.378	
10,334.6	6,708.9	6,700.9	6,700.9	104.4	134.4	89.08	1,171.7	1,747.0	5,354.9	5,116.2	238.72	22.432	
10,400.0	6,708.8	6,700.8	6,700.8	106.2	134.4	89.07	1,171.7	1,747.0	5,419.8	5,179.3	240.53	22.532	
10,433.0	6,708.7	6,700.7	6,700.7	107.1	134.4	89.06	1,171.7	1,747.0	5,452.6	5,211.2	241.45	22.583	
10,500.0	6,708.6	6,700.6	6,700.6	109.0	134.4	89.05	1,171.7	1,747.0	5,519.1	5,275.8	243.31	22.684	
10,531.5	6,708.5	6,700.5	6,700.5	109.9	134.4	89.05	1,171.7	1,747.0	5,550.4	5,306.2	244.18	22.731	
10,600.0	6,708.4	6,700.4	6,700.4	111.8	134.4	89.03	1,171.7	1,747.0	5,618.5	5,372.4	246.08	22.832	
10,629.9	6,708.4	6,700.4	6,700.4	112.6	134.4	89.03	1,171.7	1,747.0	5,648.2	5,401.3	246.91	22.875	
10,700.0	6,708.2	6,700.2	6,700.2	114.6	134.4	89.02	1,171.7	1,747.0	5,717.9	5,469.0	248.86	22.976	
10,728.3	6,708.2	6,700.2	6,700.2	115.3	134.4	89.01	1,171.7	1,747.0	5,746.0	5,496.4	249.65	23.016	
10,800.0	6,708.0	6,700.0	6,700.0	117.3	134.4	89.00	1,171.7	1,747.0	5,817.3	5,565.6	251.64	23.117	
10,826.7	6,708.0	6,700.0	6,700.0	118.1	134.4	89.00	1,171.7	1,747.0	5,843.9	5,591.5	252.38	23.155	
10,900.0	6,707.8	6,699.8	6,699.8	120.1	134.4	88.98	1,171.7	1,747.0	5,916.7	5,662.3	254.42	23.256	
10,925.2	6,707.8	6,699.8	6,699.8	120.8	134.4	88.98	1,171.7	1,747.0	5,941.7	5,686.6	255.12	23.290	
11,000.0	6,707.6	6,699.6	6,699.6	122.9	134.4	88.97	1,171.7	1,747.0	6,016.1	5,758.9	257.20	23.391	
11,023.6	6,707.6	6,699.6	6,699.6	123.6	134.4	88.96	1,171.7	1,747.0	6,039.6	5,781.7	257.86	23.422	
11,100.0	6,707.5	6,699.5	6,699.5	125.7	134.4	88.95	1,171.7	1,747.0	6,115.6	5,855.6	259.98	23.523	
11,122.0	6,707.4	6,699.4	6,699.4	126.3	134.4	88.95	1,171.7	1,747.0	6,137.5	5,876.9	260.60	23.552	
11,200.0	6,707.3	6,699.3	6,699.3	128.5	134.4	88.94	1,171.7	1,747.0	6,215.1	5,952.3	262.77	23.652	
11,220.4	6,707.2	6,699.2	6,699.2	129.0	134.4	88.93	1,171.7	1,747.0	6,235.4	5,972.1	263.34	23.678	
11,300.0	6,707.1	6,699.1	6,699.1	131.3	134.4	88.92	1,171.7	1,747.0	6,314.5	6,049.0	265.55	23.779	
11,318.9	6,707.0	6,699.0	6,699.0	131.8	134.4	88.92	1,171.7	1,747.0	6,333.3	6,067.3	266.08	23.803	
11,400.0	6,706.9	6,698.9	6,698.9	134.0	134.4	88.90	1,171.7	1,747.0	6,414.1	6,145.7	268.34	23.903	
11,417.3	6,706.9	6,698.9	6,698.9	134.5	134.4	88.90	1,171.7	1,747.0	6,431.3	6,162.5	268.82	23.924	
11,500.0	6,706.7	6,698.7	6,698.7	136.8	134.4	88.89	1,171.7	1,747.0	6,513.6	6,242.5	271.12	24.025	
11,515.7	6,706.7	6,698.7	6,698.7	137.3	134.4	88.88	1,171.7	1,747.0	6,529.2	6,257.7	271.56	24.043	
11,600.0	6,706.5	6,698.5	6,698.5	139.6	134.4	88.87	1,171.7	1,747.0	6,613.1	6,339.2	273.91	24.143	
11,614.1	6,706.5	6,698.5	6,698.5	140.0	134.4	88.87	1,171.7	1,747.0	6,627.2	6,352.9	274.30	24.160	
11,700.0	6,706.3	6,698.3	6,698.3	142.4	134.4	88.85	1,171.7	1,747.0	6,712.7	6,436.0	276.70	24.260	
11,712.6	6,706.3	6,698.3	6,698.3	142.8	134.4	88.85	1,171.7	1,747.0	6,725.2	6,448.1	277.05	24.275	
11,800.0	6,706.1	6,698.1	6,698.1	145.2	134.4	88.84	1,171.7	1,747.0	6,812.2	6,532.7	279.48	24.374	
11,811.0	6,706.1	6,698.1	6,698.1	145.5	134.4	88.83	1,171.7	1,747.0	6,823.2	6,543.4	279.79	24.387	
11,900.0	6,705.9	6,697.9	6,697.9	148.0	134.4	88.82	1,171.7	1,747.0	6,911.8	6,629.5	282.27	24.486	
11,909.4	6,705.9	6,697.9	6,697.9	148.3	134.4	88.82	1,171.7	1,747.0	6,921.2	6,638.7	282.54	24.497	
12,000.0	6,705.8	6,697.8	6,697.8	150.8	134.4	88.80	1,171.7	1,747.0	7,011.4	6,726.3	285.06	24.596	
12,007.8	6,705.7	6,697.7	6,697.7	151.0	134.4	88.80	1,171.7	1,747.0	7,019.2	6,733.9	285.28	24.605	
12,100.0	6,705.6	6,697.6	6,697.6	153.6	134.4	88.79	1,171.7	1,747.0	7,111.0	6,823.1	287.85	24.704	
12,106.3	6,705.6	6,697.6	6,697.6	153.8	134.4	88.79	1,171.7	1,747.0	7,117.2	6,829.2	288.03	24.710	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,200.0	6,705.4	6,697.4	6,697.4	156.4	134.4	88.77	1,171.7	1,747.0	7,210.6	6,920.0	290.64	24.809	
12,204.7	6,705.4	6,697.4	6,697.4	156.5	134.4	88.77	1,171.7	1,747.0	7,215.3	6,924.5	290.77	24.814	
12,300.0	6,705.2	6,697.2	6,697.2	159.2	134.4	88.76	1,171.7	1,747.0	7,310.2	7,016.8	293.43	24.913	
12,303.1	6,705.2	6,697.2	6,697.2	159.3	134.4	88.76	1,171.7	1,747.0	7,313.3	7,019.8	293.52	24.916	
12,400.0	6,705.0	6,697.0	6,697.0	162.0	134.4	88.74	1,171.7	1,747.0	7,409.8	7,113.6	296.22	25.014	
12,401.5	6,705.0	6,697.0	6,697.0	162.0	134.4	88.74	1,171.7	1,747.0	7,411.4	7,115.1	296.27	25.016	
12,500.0	6,704.8	6,696.8	6,696.8	164.8	134.4	88.72	1,171.7	1,747.0	7,509.5	7,210.5	299.01	25.114	
12,598.4	6,704.6	6,696.6	6,696.6	167.5	134.4	88.71	1,171.7	1,747.0	7,607.5	7,305.8	301.76	25.210	
12,600.0	6,704.6	6,696.6	6,696.6	167.6	134.4	88.71	1,171.7	1,747.0	7,609.1	7,307.3	301.81	25.212	
12,696.8	6,704.4	6,696.4	6,696.4	170.3	134.4	88.69	1,171.7	1,747.0	7,705.6	7,401.1	304.51	25.305	
12,700.0	6,704.4	6,696.4	6,696.4	170.4	134.4	88.69	1,171.7	1,747.0	7,708.8	7,404.2	304.60	25.308	
12,795.2	6,704.3	6,696.3	6,696.3	173.0	134.4	88.67	1,171.7	1,747.0	7,803.7	7,496.5	307.26	25.398	
12,800.0	6,704.2	6,696.2	6,696.2	173.2	134.4	88.67	1,171.7	1,747.0	7,808.5	7,501.1	307.39	25.402	
12,893.7	6,704.1	6,696.1	6,696.1	175.8	134.4	88.66	1,171.7	1,747.0	7,901.8	7,591.8	310.01	25.489	
12,900.0	6,704.1	6,696.1	6,696.1	176.0	134.4	88.66	1,171.7	1,747.0	7,908.1	7,598.0	310.19	25.495	
12,992.1	6,703.9	6,695.9	6,695.9	178.5	134.3	88.64	1,171.7	1,747.0	8,000.0	7,687.2	312.76	25.579	
13,000.0	6,703.9	6,695.9	6,695.9	178.8	134.3	88.64	1,171.7	1,747.0	8,007.8	7,694.8	312.98	25.586	
13,090.5	6,703.7	6,695.7	6,695.7	181.3	134.3	88.63	1,171.7	1,747.0	8,098.1	7,782.6	315.51	25.667	
13,100.0	6,703.7	6,695.7	6,695.7	181.6	134.3	88.63	1,171.7	1,747.0	8,107.5	7,791.7	315.77	25.675	
13,188.9	6,703.5	6,695.5	6,695.5	184.0	134.3	88.61	1,171.7	1,747.0	8,196.2	7,877.9	318.26	25.753	
13,200.0	6,703.5	6,695.5	6,695.5	184.4	134.3	88.61	1,171.7	1,747.0	8,207.2	7,888.7	318.57	25.763	
13,287.4	6,703.3	6,695.3	6,695.3	186.8	134.3	88.60	1,171.7	1,747.0	8,294.3	7,973.3	321.01	25.838	
13,300.0	6,703.3	6,695.3	6,695.3	187.2	134.3	88.59	1,171.7	1,747.0	8,306.9	7,985.6	321.36	25.849	
13,385.8	6,703.2	6,695.2	6,695.2	189.6	134.3	88.58	1,171.7	1,747.0	8,392.5	8,068.7	323.76	25.922	
13,400.0	6,703.1	6,695.1	6,695.1	190.0	134.3	88.58	1,171.7	1,747.0	8,406.6	8,082.5	324.16	25.934	
13,484.2	6,703.0	6,695.0	6,695.0	192.3	134.3	88.56	1,171.7	1,747.0	8,490.6	8,164.1	326.51	26.004	
13,500.0	6,702.9	6,694.9	6,694.9	192.8	134.3	88.56	1,171.7	1,747.0	8,506.4	8,179.4	326.95	26.017	
13,582.6	6,702.8	6,694.8	6,694.8	195.1	134.3	88.55	1,171.7	1,747.0	8,588.8	8,259.5	329.26	26.085	
13,600.0	6,702.8	6,694.8	6,694.8	195.6	134.3	88.55	1,171.7	1,747.0	8,606.1	8,276.3	329.75	26.099	
13,681.1	6,702.6	6,694.6	6,694.6	197.8	134.3	88.53	1,171.7	1,747.0	8,686.9	8,354.9	332.01	26.165	
13,700.0	6,702.6	6,694.6	6,694.6	198.4	134.3	88.53	1,171.7	1,747.0	8,705.8	8,373.3	332.54	26.180	
13,779.5	6,702.4	6,694.4	6,694.4	200.6	134.3	88.52	1,171.7	1,747.0	8,785.1	8,450.4	334.76	26.243	
13,800.0	6,702.4	6,694.4	6,694.4	201.2	134.3	88.52	1,171.7	1,747.0	8,805.6	8,470.2	335.34	26.259	
13,877.9	6,702.2	6,694.2	6,694.2	203.3	134.3	88.50	1,171.7	1,747.0	8,883.3	8,545.8	337.51	26.320	
13,900.0	6,702.2	6,694.2	6,694.2	204.0	134.3	88.50	1,171.7	1,747.0	8,905.3	8,567.2	338.13	26.337	
13,976.3	6,702.1	6,694.1	6,694.1	206.1	134.3	88.49	1,171.7	1,747.0	8,981.5	8,641.2	340.27	26.395	
14,000.0	6,702.0	6,694.0	6,694.0	206.8	134.3	88.48	1,171.7	1,747.0	9,005.1	8,664.1	340.93	26.413	
14,074.8	6,701.9	6,693.9	6,693.9	208.9	134.3	88.47	1,171.7	1,747.0	9,079.6	8,736.6	343.02	26.470	
14,100.0	6,701.8	6,693.8	6,693.8	209.6	134.3	88.47	1,171.7	1,747.0	9,104.8	8,761.1	343.72	26.489	
14,173.2	6,701.7	6,693.7	6,693.7	211.6	134.3	88.46	1,171.7	1,747.0	9,177.8	8,832.1	345.77	26.543	
14,200.0	6,701.6	6,693.6	6,693.6	212.4	134.3	88.45	1,171.7	1,747.0	9,204.6	8,858.1	346.52	26.563	
14,271.6	6,701.5	6,693.5	6,693.5	214.4	134.3	88.44	1,171.7	1,747.0	9,276.0	8,927.5	348.52	26.615	
14,300.0	6,701.4	6,693.4	6,693.4	215.2	134.3	88.44	1,171.7	1,747.0	9,304.3	8,955.0	349.32	26.636	
14,370.0	6,701.3	6,693.3	6,693.3	217.1	134.3	88.43	1,171.7	1,747.0	9,374.2	9,023.0	351.28	26.686	
14,400.0	6,701.3	6,693.3	6,693.3	218.0	134.3	88.42	1,171.7	1,747.0	9,404.1	9,052.0	352.11	26.708	
14,468.5	6,701.1	6,693.1	6,693.1	219.9	134.3	88.41	1,171.7	1,747.0	9,472.4	9,118.4	354.03	26.756	
14,500.0	6,701.1	6,693.1	6,693.1	220.8	134.3	88.41	1,171.7	1,747.0	9,503.9	9,149.0	354.91	26.778	
14,566.9	6,701.0	6,693.0	6,693.0	222.6	134.3	88.39	1,171.7	1,747.0	9,570.6	9,213.9	356.78	26.825	
14,600.0	6,700.9	6,692.9	6,692.9	223.6	134.3	88.39	1,171.7	1,747.0	9,603.7	9,246.0	357.71	26.848	
14,665.3	6,700.8	6,692.8	6,692.8	225.4	134.3	88.38	1,171.7	1,747.0	9,668.9	9,309.3	359.53	26.893	
14,700.0	6,700.7	6,692.7	6,692.7	226.4	134.3	88.37	1,171.7	1,747.0	9,703.5	9,343.0	360.50	26.916	
14,763.7	6,700.6	6,692.6	6,692.6	228.2	134.3	88.36	1,171.7	1,747.0	9,767.1	9,404.8	362.29	26.960	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #2 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,800.0	6,700.5	6,692.5	6,692.5	229.2	134.3	88.36	1,171.7	1,747.0	9,803.2	9,439.9	363.30	26.984	
14,862.2	6,700.4	6,692.4	6,692.4	230.9	134.3	88.35	1,171.7	1,747.0	9,865.3	9,500.3	365.04	27.025	
14,900.0	6,700.3	6,692.3	6,692.3	232.0	134.3	88.34	1,171.7	1,747.0	9,903.0	9,536.9	366.10	27.050	
14,960.6	6,700.2	6,692.2	6,692.2	233.7	134.3	88.33	1,171.7	1,747.0	9,963.5	9,595.7	367.79	27.090	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	92.25	-66.2	1,683.3	1,684.6				
98.4	98.4	85.8	85.8	0.1	0.0	92.26	-66.4	1,683.4	1,684.7	1,684.6	0.10	N/A	
100.0	100.0	87.3	87.3	0.1	0.0	92.26	-66.4	1,683.4	1,684.7	1,684.6	0.10	N/A	
196.8	196.8	183.5	183.5	0.3	0.1	92.27	-66.7	1,683.6	1,684.9	1,684.5	0.39	4,321.024	
200.0	200.0	186.7	186.7	0.3	0.1	92.27	-66.7	1,683.6	1,684.9	1,684.5	0.40	4,214.219	
295.3	295.3	282.0	282.0	0.5	0.2	92.28	-67.0	1,683.8	1,685.2	1,684.4	0.74	2,277.935	
300.0	300.0	286.7	286.7	0.5	0.2	92.28	-67.0	1,683.9	1,685.2	1,684.4	0.76	2,226.219	
393.7	393.7	376.5	376.5	0.8	0.3	92.29	-67.4	1,684.2	1,685.5	1,684.5	1.05	1,609.444	
400.0	400.0	382.5	382.5	0.8	0.3	92.30	-67.5	1,684.2	1,685.6	1,684.5	1.07	1,580.866	
492.1	492.1	473.3	473.3	1.0	0.4	92.33	-68.5	1,684.6	1,686.1	1,684.7	1.33	1,263.305	
500.0	500.0	481.2	481.2	1.0	0.4	92.33	-68.6	1,684.7	1,686.1	1,684.8	1.36	1,242.162	
590.5	590.5	572.6	572.5	1.2	0.4	92.37	-69.7	1,685.2	1,686.6	1,685.0	1.61	1,045.859	
600.0	600.0	582.1	582.1	1.2	0.4	92.37	-69.8	1,685.2	1,686.7	1,685.0	1.64	1,029.006	
689.0	689.0	669.5	669.5	1.4	0.5	92.42	-71.2	1,685.6	1,687.2	1,685.3	1.88	896.170	
700.0	700.0	680.3	680.2	1.4	0.5	92.42	-71.3	1,685.7	1,687.2	1,685.3	1.91	882.151	
787.4	787.4	767.5	767.5	1.6	0.5	92.47	-72.7	1,686.2	1,687.8	1,685.7	2.15	785.576	
800.0	800.0	780.2	780.1	1.7	0.6	92.48	-72.9	1,686.3	1,687.9	1,685.7	2.18	773.405	
885.8	885.8	865.4	865.4	1.9	0.6	92.52	-74.4	1,686.8	1,688.5	1,686.1	2.41	700.390	
900.0	900.0	879.5	879.4	1.9	0.6	92.53	-74.6	1,686.9	1,688.6	1,686.1	2.45	689.681	
984.2	984.2	963.0	962.9	2.1	0.6	92.58	-76.0	1,687.4	1,689.2	1,686.5	2.67	632.645	
1,000.0	1,000.0	978.6	978.6	2.1	0.6	92.59	-76.2	1,687.5	1,689.3	1,686.6	2.71	623.042	
1,082.7	1,082.7	1,061.5	1,061.4	2.3	0.7	92.63	-77.6	1,688.1	1,689.9	1,687.0	2.93	577.298	
1,100.0	1,100.0	1,078.9	1,078.8	2.3	0.7	92.64	-77.9	1,688.2	1,690.0	1,687.0	2.97	568.569	
1,181.1	1,181.1	1,158.5	1,158.4	2.5	0.7	63.98	-79.1	1,688.7	1,690.1	1,686.9	3.20	528.381	
1,200.0	1,200.0	1,176.9	1,176.8	2.6	0.7	64.01	-79.3	1,688.8	1,690.0	1,686.8	3.25	520.413	
1,279.5	1,279.4	1,252.9	1,252.8	2.7	0.8	64.18	-80.4	1,689.5	1,689.0	1,685.6	3.45	489.402	
1,300.0	1,299.8	1,272.3	1,272.2	2.8	0.8	64.23	-80.7	1,689.7	1,688.7	1,685.2	3.50	481.982	
1,377.9	1,377.5	1,347.7	1,347.5	3.0	0.8	64.49	-81.8	1,690.5	1,686.8	1,683.1	3.71	454.911	
1,400.0	1,399.5	1,369.2	1,369.1	3.0	0.8	64.58	-82.1	1,690.8	1,686.1	1,682.3	3.77	447.733	
1,476.4	1,475.3	1,444.4	1,444.3	3.2	0.9	64.94	-83.2	1,691.7	1,683.2	1,679.3	3.98	423.364	
1,500.0	1,498.7	1,467.8	1,467.7	3.3	0.9	65.07	-83.5	1,692.0	1,682.2	1,678.2	4.04	416.281	
1,574.8	1,572.6	1,542.1	1,542.0	3.5	0.9	65.53	-84.6	1,692.9	1,678.4	1,674.1	4.26	393.792	
1,600.0	1,597.5	1,567.2	1,567.0	3.5	0.9	65.70	-85.0	1,693.2	1,676.9	1,672.6	4.34	386.671	
1,673.2	1,669.4	1,642.6	1,642.4	3.7	0.9	66.26	-86.1	1,694.0	1,672.2	1,667.6	4.58	365.451	
1,700.1	1,695.8	1,671.0	1,670.8	3.8	0.9	66.49	-86.4	1,694.3	1,670.2	1,665.6	4.66	358.097	
1,771.6	1,765.7	1,744.6	1,744.4	4.1	1.0	67.00	-87.4	1,694.8	1,664.9	1,659.9	4.92	338.706	
1,800.0	1,793.4	1,773.3	1,773.1	4.2	1.0	67.20	-87.8	1,695.0	1,662.7	1,657.7	5.02	331.543	
1,870.1	1,862.0	1,844.3	1,844.0	4.4	1.0	67.70	-88.6	1,695.3	1,657.5	1,652.2	5.27	314.302	
1,900.0	1,891.3	1,874.6	1,874.4	4.5	1.0	67.92	-88.9	1,695.4	1,655.2	1,649.8	5.38	307.435	
1,968.5	1,958.3	1,944.9	1,944.6	4.8	1.1	68.41	-89.7	1,695.6	1,650.1	1,644.4	5.65	292.235	
2,000.0	1,989.1	1,977.4	1,977.2	4.9	1.1	68.65	-90.1	1,695.7	1,647.7	1,642.0	5.77	285.708	
2,066.9	2,054.5	2,048.5	2,048.3	5.1	1.1	69.15	-90.6	1,695.6	1,642.6	1,636.6	6.03	272.491	
2,100.0	2,086.9	2,084.1	2,083.9	5.3	1.1	69.40	-90.9	1,695.5	1,640.1	1,633.9	6.16	266.368	
2,165.3	2,150.8	2,155.9	2,155.7	5.5	1.1	69.90	-91.1	1,695.0	1,634.8	1,628.4	6.42	254.836	
2,200.0	2,184.7	2,194.3	2,194.0	5.6	1.1	70.17	-91.2	1,694.6	1,632.0	1,625.4	6.55	249.072	
2,263.8	2,247.1	2,264.4	2,264.2	5.9	1.1	70.65	-91.0	1,693.7	1,626.6	1,619.8	6.81	238.831	
2,300.0	2,282.5	2,303.9	2,303.7	6.0	1.1	70.92	-90.8	1,693.0	1,623.4	1,616.4	6.96	233.320	
2,362.2	2,343.3	2,366.2	2,366.0	6.3	1.1	71.35	-90.5	1,691.8	1,617.9	1,610.7	7.21	224.297	
2,400.0	2,380.3	2,404.0	2,403.7	6.5	1.1	71.62	-90.3	1,691.1	1,614.6	1,607.2	7.37	219.110	
2,460.6	2,439.6	2,462.6	2,462.4	6.7	1.1	72.02	-89.9	1,690.0	1,609.4	1,601.7	7.62	211.173	
2,500.0	2,478.1	2,500.0	2,499.7	6.9	1.1	72.28	-89.6	1,689.3	1,606.0	1,598.2	7.79	206.293	
2,559.0	2,535.9	2,556.6	2,556.3	7.1	1.2	72.68	-89.2	1,688.3	1,601.1	1,593.1	8.03	199.289	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,595.3	2,595.0	7.3	1.2	72.95	-88.9	1,687.6	1,597.8	1,589.6	8.21	194.684	
2,657.5	2,632.2	2,651.7	2,651.4	7.5	1.2	73.34	-88.5	1,686.7	1,593.2	1,584.8	8.45	188.477	
2,700.0	2,673.8	2,693.5	2,693.2	7.7	1.2	73.64	-88.2	1,686.0	1,589.9	1,581.3	8.64	184.106	
2,755.9	2,728.4	2,745.9	2,745.6	7.9	1.2	74.01	-87.8	1,685.2	1,585.6	1,576.7	8.88	178.613	
2,800.0	2,771.6	2,787.1	2,786.8	8.1	1.2	74.30	-87.5	1,684.6	1,582.3	1,573.3	9.07	174.491	
2,854.3	2,824.7	2,837.7	2,837.3	8.3	1.2	74.66	-87.1	1,683.9	1,578.5	1,569.1	9.31	169.632	
2,900.0	2,869.4	2,880.1	2,879.8	8.5	1.2	74.97	-86.8	1,683.4	1,575.3	1,565.8	9.50	165.737	
2,952.7	2,921.0	2,928.2	2,927.9	8.8	1.2	75.31	-86.4	1,682.9	1,571.8	1,562.1	9.74	161.444	
3,000.0	2,967.2	2,970.6	2,970.3	9.0	1.2	75.62	-86.2	1,682.6	1,568.9	1,558.9	9.94	157.771	
3,051.2	3,017.3	3,016.1	3,015.8	9.2	1.2	75.95	-85.9	1,682.4	1,565.9	1,555.7	10.17	153.969	
3,100.0	3,065.0	3,058.8	3,058.4	9.4	1.2	76.26	-85.7	1,682.3	1,563.2	1,552.8	10.38	150.542	
3,149.6	3,113.5	3,100.0	3,099.7	9.6	1.2	76.55	-85.5	1,682.4	1,560.8	1,550.2	10.60	147.214	
3,200.0	3,162.8	3,144.3	3,144.0	9.8	1.2	76.87	-85.2	1,682.6	1,558.5	1,547.7	10.83	143.933	
3,248.0	3,209.8	3,184.7	3,184.3	10.0	1.2	77.16	-84.9	1,683.1	1,556.6	1,545.6	11.04	140.955	
3,300.0	3,260.6	3,230.4	3,230.0	10.2	1.2	77.47	-84.4	1,683.8	1,554.9	1,543.6	11.28	137.863	
3,346.4	3,306.1	3,272.2	3,271.8	10.5	1.2	77.76	-84.0	1,684.6	1,553.5	1,542.0	11.49	135.204	
3,400.0	3,358.5	3,320.0	3,319.7	10.7	1.2	78.09	-83.4	1,685.6	1,552.1	1,540.3	11.73	132.272	
3,444.9	3,402.3	3,359.8	3,359.4	10.9	1.2	78.37	-82.9	1,686.6	1,551.1	1,539.1	11.94	129.914	
3,500.0	3,456.3	3,409.4	3,409.0	11.1	1.2	78.70	-82.3	1,688.0	1,550.0	1,537.9	12.19	127.138	
3,543.3	3,498.6	3,450.9	3,450.5	11.3	1.2	78.98	-81.7	1,689.3	1,549.4	1,537.0	12.39	125.031	
3,600.0	3,554.1	3,505.4	3,505.0	11.5	1.3	79.35	-80.9	1,691.0	1,548.6	1,535.9	12.65	122.377	
3,641.7	3,594.9	3,546.7	3,546.1	11.7	1.3	79.62	-80.2	1,692.4	1,548.1	1,535.2	12.85	120.488	
3,700.0	3,651.9	3,604.1	3,603.6	12.0	1.3	80.00	-79.3	1,694.2	1,547.4	1,534.3	13.12	117.947	
3,740.1	3,691.2	3,642.9	3,642.4	12.2	1.3	80.26	-78.7	1,695.5	1,547.0	1,533.7	13.31	116.259	
3,800.0	3,749.7	3,700.9	3,700.3	12.4	1.3	80.64	-77.7	1,697.4	1,546.5	1,532.9	13.59	113.835	
3,838.6	3,787.4	3,741.1	3,740.5	12.6	1.3	80.91	-77.0	1,698.8	1,546.1	1,532.4	13.77	112.315	
3,900.0	3,847.5	3,805.9	3,805.2	12.9	1.3	81.34	-75.9	1,700.8	1,545.6	1,531.5	14.05	109.969	
3,937.0	3,883.7	3,849.6	3,848.9	13.0	1.3	81.64	-75.2	1,701.9	1,545.2	1,530.9	14.23	108.579	
4,000.0	3,945.3	3,921.5	3,920.8	13.3	1.3	82.14	-74.3	1,703.3	1,544.1	1,529.6	14.53	106.277	
4,035.4	3,980.0	3,958.8	3,958.1	13.5	1.3	82.40	-73.8	1,703.8	1,543.4	1,528.7	14.70	105.025	
4,060.0	4,004.0	3,984.7	3,984.0	13.6	1.3	82.58	-73.5	1,704.1	1,542.9	1,528.1	14.81	104.172	
4,100.0	4,043.2	4,025.7	4,025.0	13.7	1.3	82.85	-73.1	1,704.6	1,542.1	1,527.2	14.98	102.966	
4,133.8	4,076.5	4,059.9	4,059.2	13.8	1.3	83.06	-72.7	1,704.9	1,541.5	1,526.5	15.09	102.133	
4,200.0	4,141.6	4,126.4	4,125.6	14.0	1.4	83.43	-72.1	1,705.6	1,540.5	1,525.2	15.32	100.556	
4,232.3	4,173.5	4,158.5	4,157.7	14.1	1.4	83.59	-71.7	1,705.8	1,540.1	1,524.7	15.42	99.886	
4,300.0	4,240.6	4,226.6	4,225.9	14.3	1.4	83.89	-71.1	1,706.4	1,539.4	1,523.7	15.62	98.521	
4,330.7	4,271.1	4,258.1	4,257.3	14.4	1.4	84.01	-70.8	1,706.6	1,539.1	1,523.4	15.71	97.990	
4,400.0	4,340.0	4,327.9	4,327.2	14.5	1.4	84.24	-70.2	1,707.1	1,538.5	1,522.6	15.89	96.824	
4,429.1	4,369.0	4,356.6	4,355.8	14.6	1.4	84.32	-70.0	1,707.3	1,538.3	1,522.4	15.96	96.415	
4,500.0	4,439.7	4,426.4	4,425.6	14.8	1.4	84.46	-69.4	1,707.7	1,538.1	1,522.0	16.11	95.447	
4,527.5	4,467.2	4,453.6	4,452.8	14.8	1.4	84.50	-69.2	1,707.9	1,538.0	1,521.9	16.17	95.142	
4,548.7	4,488.4	4,474.4	4,473.7	14.8	1.4	84.53	-69.1	1,708.1	1,538.0	1,521.8	16.20	94.911 CC	
4,600.0	4,539.7	4,523.7	4,522.9	14.9	1.4	84.57	-68.7	1,708.4	1,538.1	1,521.8	16.30	94.362 ES	
4,626.0	4,565.6	4,548.0	4,547.2	15.0	1.4	84.58	-68.6	1,708.6	1,538.2	1,521.9	16.34	94.138	
4,660.2	4,599.8	4,579.9	4,579.1	15.0	1.4	113.31	-68.4	1,708.9	1,538.4	1,526.2	12.20	126.089	
4,700.0	4,639.6	4,616.1	4,615.3	15.0	1.4	113.30	-68.3	1,709.3	1,538.8	1,526.5	12.28	125.313	
4,724.4	4,664.0	4,637.4	4,636.7	15.1	1.5	113.29	-68.2	1,709.6	1,539.0	1,526.7	12.33	124.798	
4,800.0	4,739.6	4,703.9	4,703.1	15.2	1.5	113.27	-68.2	1,710.7	1,540.2	1,527.7	12.50	123.258	
4,822.8	4,762.5	4,725.2	4,724.4	15.2	1.5	113.26	-68.2	1,711.2	1,540.6	1,528.0	12.55	122.802	
4,900.0	4,839.6	4,800.0	4,799.2	15.3	1.5	113.24	-68.3	1,712.8	1,542.2	1,529.5	12.71	121.298	
4,921.2	4,860.9	4,818.2	4,817.4	15.4	1.5	113.24	-68.3	1,713.2	1,542.6	1,529.9	12.76	120.896	
5,000.0	4,939.6	4,898.0	4,897.2	15.5	1.5	113.23	-68.7	1,715.0	1,544.4	1,531.4	12.93	119.414	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance								Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	4,918.4	4,917.6	15.5	1.5	113.22	-68.8	1,715.4	1,544.8	1,531.8	12.98	119.047	
5,100.0	5,039.6	5,001.9	5,001.1	15.6	1.5	113.22	-69.4	1,717.0	1,546.4	1,533.3	13.15	117.570	
5,118.1	5,057.7	5,020.8	5,020.0	15.7	1.5	113.22	-69.6	1,717.3	1,546.8	1,533.6	13.19	117.241	
5,200.0	5,139.6	5,106.1	5,105.3	15.8	1.6	113.24	-70.6	1,718.5	1,548.2	1,534.8	13.37	115.770	
5,216.5	5,156.2	5,122.6	5,121.7	15.8	1.6	113.24	-70.8	1,718.7	1,548.5	1,535.0	13.41	115.477	
5,300.0	5,239.6	5,205.5	5,204.6	15.9	1.6	113.27	-72.0	1,719.7	1,549.8	1,536.3	13.59	114.022	
5,314.9	5,254.6	5,220.0	5,219.2	16.0	1.6	113.28	-72.3	1,719.8	1,550.1	1,536.5	13.63	113.765	
5,400.0	5,339.6	5,303.1	5,302.2	16.1	1.6	113.31	-73.8	1,720.8	1,551.6	1,537.8	13.81	112.335	
5,413.4	5,353.0	5,316.8	5,315.9	16.1	1.6	113.32	-74.0	1,720.9	1,551.9	1,538.0	13.84	112.112	
5,500.0	5,439.6	5,405.5	5,404.6	16.3	1.6	113.36	-75.7	1,721.9	1,553.4	1,539.3	14.03	110.690	
5,511.8	5,451.4	5,417.4	5,416.5	16.3	1.6	113.37	-75.9	1,722.0	1,553.6	1,539.5	14.06	110.498	
5,600.0	5,539.6	5,505.9	5,505.0	16.4	1.7	113.40	-77.4	1,723.0	1,555.0	1,540.8	14.25	109.087	
5,610.2	5,549.9	5,515.7	5,514.7	16.4	1.7	113.41	-77.5	1,723.1	1,555.2	1,540.9	14.28	108.926	
5,700.0	5,639.6	5,600.0	5,599.0	16.6	1.7	113.42	-78.6	1,724.3	1,556.8	1,542.3	14.48	107.545	
5,708.6	5,648.3	5,609.7	5,608.8	16.6	1.7	113.42	-78.7	1,724.5	1,557.0	1,542.5	14.50	107.412	
5,800.0	5,739.6	5,697.3	5,696.3	16.7	1.7	113.43	-79.6	1,726.1	1,558.9	1,544.2	14.70	106.058	
5,807.1	5,746.7	5,704.0	5,703.0	16.8	1.7	113.43	-79.6	1,726.2	1,559.0	1,544.3	14.71	105.955	
5,900.0	5,839.6	5,791.9	5,790.9	16.9	1.7	113.42	-80.2	1,728.2	1,561.3	1,546.3	14.92	104.636	
5,905.5	5,845.1	5,797.1	5,796.1	16.9	1.7	113.42	-80.2	1,728.4	1,561.4	1,546.5	14.93	104.559	
6,000.0	5,939.6	5,895.0	5,894.0	17.1	1.8	113.39	-80.5	1,730.9	1,563.7	1,548.6	15.15	103.246	
6,003.9	5,943.6	5,899.1	5,898.0	17.1	1.8	113.39	-80.5	1,731.0	1,563.8	1,548.7	15.15	103.192	
6,059.2	5,998.8	5,954.5	5,953.5	17.2	1.8	113.38	-80.6	1,732.4	1,565.1	1,549.8	15.28	102.438	
6,100.0	6,039.6	5,995.5	5,994.4	17.2	1.8	-156.59	-80.7	1,733.4	1,567.1	1,548.1	19.00	82.495	
6,102.3	6,042.0	5,997.8	5,996.7	17.2	1.8	-156.59	-80.7	1,733.4	1,567.3	1,548.3	19.00	82.486	
6,150.0	6,089.4	6,043.1	6,042.0	17.3	1.8	-156.49	-80.9	1,734.5	1,572.5	1,553.4	19.10	82.350	
6,200.0	6,138.7	6,090.0	6,088.9	17.3	1.8	-156.32	-81.3	1,735.6	1,581.1	1,562.0	19.19	82.411	
6,200.8	6,139.5	6,090.8	6,089.6	17.3	1.8	-156.32	-81.4	1,735.6	1,581.3	1,562.1	19.19	82.414	
6,250.0	6,187.4	6,134.5	6,133.4	17.3	1.8	-156.07	-82.1	1,736.6	1,593.0	1,573.7	19.26	82.724	
6,299.2	6,234.4	6,176.9	6,175.8	17.4	1.8	-155.73	-83.0	1,737.5	1,607.8	1,588.5	19.30	83.317	
6,300.0	6,235.1	6,177.6	6,176.5	17.4	1.8	-155.73	-83.0	1,737.5	1,608.1	1,588.8	19.30	83.329	
6,350.0	6,281.7	6,218.2	6,217.0	17.4	1.9	-155.28	-84.2	1,738.5	1,626.3	1,607.0	19.30	84.256	
6,397.6	6,324.8	6,254.1	6,252.9	17.3	1.9	-154.75	-85.4	1,739.4	1,646.6	1,627.3	19.27	85.455	
6,400.0	6,326.9	6,255.9	6,254.7	17.3	1.9	-154.72	-85.5	1,739.4	1,647.6	1,628.4	19.27	85.522	
6,450.0	6,370.5	6,292.1	6,290.8	17.3	1.9	-154.02	-86.9	1,740.4	1,672.0	1,652.8	19.19	87.127	
6,496.0	6,409.1	6,320.7	6,319.4	17.3	1.9	-153.20	-88.2	1,741.3	1,697.1	1,678.0	19.09	88.898	
6,500.0	6,412.3	6,323.0	6,321.7	17.3	1.9	-153.12	-88.3	1,741.3	1,699.3	1,680.2	19.08	89.061	
6,550.0	6,452.1	6,351.1	6,349.8	17.3	1.9	-152.02	-89.8	1,742.3	1,729.5	1,710.5	18.95	91.287	
6,594.5	6,485.6	6,374.6	6,373.2	17.3	1.9	-150.83	-91.2	1,743.2	1,758.5	1,739.7	18.82	93.454	
6,600.0	6,489.7	6,377.4	6,376.0	17.3	1.9	-150.66	-91.4	1,743.3	1,762.3	1,743.5	18.80	93.732	
6,650.0	6,524.9	6,400.0	6,398.5	17.2	1.9	-148.98	-92.9	1,744.2	1,797.6	1,778.9	18.67	96.286	
6,692.9	6,553.0	6,422.8	6,421.2	17.2	1.9	-147.31	-94.5	1,745.2	1,829.7	1,811.1	18.59	98.401	
6,700.0	6,557.5	6,426.0	6,424.5	17.2	1.9	-147.00	-94.8	1,745.3	1,835.1	1,816.6	18.59	98.739	
6,750.0	6,587.4	6,447.9	6,446.2	17.2	1.9	-144.52	-96.5	1,746.3	1,874.7	1,856.2	18.58	100.893	
6,791.3	6,609.9	6,464.1	6,462.4	17.2	1.9	-142.02	-97.8	1,747.1	1,908.9	1,890.2	18.67	102.246	
6,800.0	6,614.4	6,467.3	6,465.5	17.2	1.9	-141.43	-98.0	1,747.2	1,916.2	1,897.5	18.70	102.453	
6,850.0	6,638.4	6,484.2	6,482.3	17.2	1.9	-137.54	-99.4	1,748.1	1,959.2	1,940.2	19.00	103.143	
6,889.7	6,655.3	6,500.0	6,498.1	17.4	1.9	-133.88	-100.8	1,748.9	1,994.4	1,975.0	19.38	102.929	
6,900.0	6,659.4	6,500.0	6,498.1	17.5	1.9	-132.66	-100.8	1,748.9	2,003.6	1,984.1	19.49	102.812	
6,950.0	6,677.1	6,510.6	6,508.6	18.0	1.9	-126.32	-101.8	1,749.4	2,049.2	2,029.0	20.17	101.577	
6,988.2	6,688.4	6,518.0	6,516.0	18.5	1.9	-120.39	-102.4	1,749.8	2,084.6	2,063.8	20.78	100.318	
7,000.0	6,691.5	6,520.0	6,517.9	18.7	1.9	-118.32	-102.6	1,749.9	2,095.7	2,074.7	20.96	99.985	
7,050.0	6,702.5	6,526.6	6,524.5	19.5	1.9	-108.35	-103.2	1,750.2	2,142.8	2,121.2	21.65	98.972	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,086.6	6,708.4	6,529.7	6,527.6	20.1	1.9	-99.82	-103.5	1,750.4	2,177.7	2,155.7	21.99	99.047	
7,100.0	6,710.1	6,530.4	6,528.4	20.4	2.0	-96.48	-103.6	1,750.5	2,190.5	2,168.4	22.07	99.244	
7,150.0	6,714.2	6,531.5	6,529.4	21.3	2.0	-83.47	-103.7	1,750.5	2,238.3	2,215.7	22.54	99.305	
7,185.0	6,715.0	6,530.7	6,528.6	21.9	2.0	-74.38	-103.6	1,750.5	2,271.8	2,248.8	22.94	99.028	
7,185.6	6,715.0	6,530.7	6,528.6	21.9	2.0	-74.24	-103.6	1,750.5	2,272.3	2,249.4	22.95	99.031	
7,200.0	6,715.0	6,530.0	6,527.9	22.2	1.9	-74.19	-103.5	1,750.4	2,286.1	2,262.9	23.21	98.494	
7,283.4	6,714.8	6,526.4	6,524.3	23.9	1.9	-73.88	-103.2	1,750.2	2,366.0	2,341.2	24.81	95.347	
7,300.0	6,714.8	6,525.7	6,523.6	24.2	1.9	-73.82	-103.1	1,750.2	2,381.9	2,356.8	25.13	94.774	
7,381.9	6,714.6	6,522.2	6,520.1	26.0	1.9	-73.53	-102.8	1,750.0	2,460.6	2,433.8	26.81	91.770	
7,400.0	6,714.6	6,521.4	6,519.4	26.4	1.9	-73.47	-102.7	1,750.0	2,478.0	2,450.8	27.18	91.159	
7,480.3	6,714.4	6,518.0	6,516.0	28.2	1.9	-73.18	-102.4	1,749.8	2,555.4	2,526.5	28.92	88.375	
7,500.0	6,714.4	6,517.2	6,515.2	28.7	1.9	-73.11	-102.4	1,749.7	2,574.4	2,545.1	29.34	87.746	
7,578.7	6,714.2	6,513.9	6,511.9	30.5	1.9	-72.84	-102.1	1,749.6	2,650.5	2,619.4	31.10	85.225	
7,600.0	6,714.2	6,513.0	6,511.1	31.0	1.9	-72.77	-102.0	1,749.5	2,671.1	2,639.5	31.57	84.595	
7,677.1	6,714.0	6,500.0	6,498.1	32.9	1.9	-71.69	-100.8	1,748.9	2,745.8	2,712.6	33.26	82.548	
7,700.0	6,714.0	6,500.0	6,498.1	33.4	1.9	-71.69	-100.8	1,748.9	2,768.0	2,734.2	33.79	81.911	
7,775.6	6,713.9	6,500.0	6,498.1	35.3	1.9	-71.69	-100.8	1,748.9	2,841.4	2,805.8	35.58	79.849	
7,800.0	6,713.8	6,500.0	6,498.1	35.9	1.9	-71.69	-100.8	1,748.9	2,865.1	2,828.9	36.16	79.227	
7,874.0	6,713.7	6,500.0	6,498.1	37.8	1.9	-71.69	-100.8	1,748.9	2,937.0	2,899.1	37.95	77.394	
7,900.0	6,713.6	6,500.0	6,498.1	38.4	1.9	-71.69	-100.8	1,748.9	2,962.4	2,923.8	38.58	76.792	
7,972.4	6,713.5	6,500.0	6,498.1	40.3	1.9	-71.69	-100.8	1,748.9	3,032.9	2,992.6	40.35	75.166	
8,000.0	6,713.4	6,500.0	6,498.1	41.0	1.9	-71.69	-100.8	1,748.9	3,059.8	3,018.8	41.02	74.584	
8,070.8	6,713.3	6,500.0	6,498.1	42.8	1.9	-71.69	-100.8	1,748.9	3,129.0	3,086.2	42.78	73.141	
8,100.0	6,713.2	6,500.0	6,498.1	43.6	1.9	-71.69	-100.8	1,748.9	3,157.4	3,113.9	43.50	72.581	
8,169.3	6,713.1	6,500.0	6,498.1	45.4	1.9	-71.69	-100.8	1,748.9	3,225.1	3,179.9	45.23	71.298	
8,200.0	6,713.0	6,500.0	6,498.1	46.2	1.9	-71.69	-100.8	1,748.9	3,255.2	3,209.2	46.00	70.761	
8,267.7	6,712.9	6,500.0	6,498.1	48.0	1.9	-71.69	-100.8	1,748.9	3,321.4	3,273.7	47.71	69.618	
8,300.0	6,712.8	6,500.0	6,498.1	48.8	1.9	-71.69	-100.8	1,748.9	3,353.1	3,304.5	48.52	69.102	
8,366.1	6,712.7	6,483.6	6,481.8	50.6	1.9	-70.35	-99.4	1,748.0	3,417.8	3,367.9	49.93	68.452	
8,400.0	6,712.6	6,482.4	6,480.6	51.5	1.9	-70.25	-99.3	1,748.0	3,451.0	3,400.3	50.76	67.984	
8,464.5	6,712.5	6,480.1	6,478.3	53.2	1.9	-70.06	-99.1	1,747.9	3,514.3	3,462.0	52.35	67.127	
8,500.0	6,712.4	6,478.8	6,477.0	54.1	1.9	-69.96	-99.0	1,747.8	3,549.1	3,495.9	53.23	66.680	
8,563.0	6,712.3	6,476.6	6,474.8	55.8	1.9	-69.78	-98.8	1,747.7	3,610.9	3,556.2	54.78	65.916	
8,600.0	6,712.3	6,475.3	6,473.5	56.8	1.9	-69.67	-98.7	1,747.6	3,647.3	3,591.6	55.69	65.489	
8,661.4	6,712.1	6,473.2	6,471.4	58.5	1.9	-69.50	-98.5	1,747.5	3,707.6	3,650.4	57.21	64.807	
8,700.0	6,712.1	6,471.8	6,470.1	59.5	1.9	-69.39	-98.4	1,747.4	3,745.6	3,687.4	58.16	64.399	
8,759.8	6,711.9	6,469.8	6,468.0	61.1	1.9	-69.23	-98.2	1,747.3	3,804.4	3,744.8	59.64	63.789	
8,800.0	6,711.9	6,468.4	6,466.6	62.2	1.9	-69.12	-98.1	1,747.3	3,844.0	3,783.3	60.63	63.398	
8,858.2	6,711.8	6,466.4	6,464.7	63.8	1.9	-68.96	-98.0	1,747.2	3,901.3	3,839.2	62.07	62.852	
8,900.0	6,711.7	6,465.0	6,463.3	64.9	1.9	-68.84	-97.8	1,747.1	3,942.4	3,879.3	63.10	62.477	
8,956.7	6,711.6	6,463.1	6,461.4	66.5	1.9	-68.69	-97.7	1,747.0	3,998.2	3,933.7	64.50	61.987	
9,000.0	6,711.5	6,461.7	6,459.9	67.6	1.9	-68.58	-97.6	1,747.0	4,040.9	3,975.4	65.57	61.629	
9,055.1	6,711.4	6,459.8	6,458.1	69.1	1.9	-68.43	-97.4	1,746.9	4,095.2	4,028.3	66.93	61.189	
9,100.0	6,711.3	6,458.3	6,456.6	70.4	1.9	-68.31	-97.3	1,746.8	4,139.5	4,071.5	68.03	60.845	
9,153.5	6,711.2	6,456.6	6,454.9	71.8	1.9	-68.17	-97.2	1,746.7	4,192.3	4,122.9	69.35	60.449	
9,200.0	6,711.1	6,455.1	6,453.4	73.1	1.9	-68.05	-97.0	1,746.6	4,238.2	4,167.7	70.50	60.119	
9,251.9	6,711.0	6,453.4	6,451.7	74.5	1.9	-67.92	-96.9	1,746.6	4,289.4	4,217.6	71.77	59.763	
9,300.0	6,710.9	6,451.8	6,450.1	75.8	1.9	-67.80	-96.8	1,746.5	4,336.9	4,263.9	72.95	59.446	
9,350.4	6,710.8	6,450.2	6,448.5	77.2	1.9	-67.67	-96.6	1,746.4	4,386.6	4,312.4	74.19	59.125	
9,400.0	6,710.7	6,448.6	6,447.0	78.6	1.9	-67.54	-96.5	1,746.3	4,435.6	4,360.2	75.41	58.821	
9,448.8	6,710.6	6,447.1	6,445.4	79.9	1.9	-67.42	-96.4	1,746.3	4,483.8	4,407.2	76.61	58.532	
9,500.0	6,710.5	6,445.5	6,443.8	81.3	1.9	-67.29	-96.3	1,746.2	4,534.4	4,456.6	77.86	58.239	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,547.2	6,710.4	6,444.0	6,442.3	82.6	1.9	-67.18	-96.2	1,746.1	4,581.1	4,502.1	79.01	57.978	
9,600.0	6,710.3	6,442.3	6,440.7	84.1	1.9	-67.05	-96.0	1,746.1	4,633.3	4,553.0	80.30	57.697	
9,645.6	6,710.2	6,440.9	6,439.3	85.3	1.9	-66.94	-95.9	1,746.0	4,678.4	4,597.0	81.42	57.461	
9,700.0	6,710.1	6,439.3	6,437.6	86.8	1.9	-66.81	-95.8	1,745.9	4,732.2	4,649.4	82.74	57.191	
9,744.1	6,710.0	6,437.9	6,436.3	88.1	1.9	-66.70	-95.7	1,745.9	4,775.8	4,692.0	83.82	56.978	
9,800.0	6,709.9	6,436.2	6,434.6	89.6	1.9	-66.57	-95.6	1,745.8	4,831.1	4,746.0	85.18	56.717	
9,842.5	6,709.9	6,434.9	6,433.3	90.8	1.9	-66.47	-95.5	1,745.7	4,873.2	4,787.0	86.21	56.525	
9,900.0	6,709.7	6,433.2	6,431.6	92.4	1.9	-66.33	-95.3	1,745.6	4,930.1	4,842.5	87.61	56.274	
9,940.9	6,709.7	6,432.0	6,430.4	93.5	1.9	-66.24	-95.2	1,745.6	4,970.6	4,882.0	88.60	56.101	
10,000.0	6,709.6	6,430.2	6,428.6	95.1	1.9	-66.10	-95.1	1,745.5	5,029.1	4,939.1	90.03	55.859	
10,039.3	6,709.5	6,429.1	6,427.5	96.2	1.9	-66.01	-95.0	1,745.5	5,068.1	4,977.1	90.99	55.702	
10,100.0	6,709.4	6,427.3	6,425.7	97.9	1.9	-65.88	-94.9	1,745.4	5,128.2	5,035.8	92.45	55.469	
10,137.8	6,709.3	6,426.2	6,424.6	98.9	1.9	-65.79	-94.8	1,745.3	5,165.6	5,072.3	93.36	55.328	
10,200.0	6,709.2	6,424.4	6,422.8	100.7	1.9	-65.65	-94.7	1,745.2	5,227.3	5,132.4	94.87	55.102	
10,236.2	6,709.1	6,423.3	6,421.7	101.7	1.9	-65.57	-94.6	1,745.2	5,263.2	5,167.4	95.74	54.975	
10,300.0	6,709.0	6,421.5	6,419.9	103.4	1.9	-65.43	-94.5	1,745.1	5,326.4	5,229.1	97.27	54.758	
10,334.6	6,708.9	6,420.5	6,418.9	104.4	1.9	-65.35	-94.4	1,745.1	5,360.7	5,262.6	98.10	54.643	
10,400.0	6,708.8	6,400.0	6,398.5	106.2	1.9	-63.80	-92.9	1,744.2	5,425.6	5,326.9	98.73	54.957	
10,433.0	6,708.7	6,400.0	6,398.5	107.1	1.9	-63.80	-92.9	1,744.2	5,458.4	5,358.8	99.56	54.828	
10,500.0	6,708.6	6,400.0	6,398.5	109.0	1.9	-63.80	-92.9	1,744.2	5,524.8	5,423.6	101.24	54.572	
10,531.5	6,708.5	6,400.0	6,398.5	109.9	1.9	-63.80	-92.9	1,744.2	5,556.0	5,454.0	102.03	54.455	
10,600.0	6,708.4	6,400.0	6,398.5	111.8	1.9	-63.80	-92.9	1,744.2	5,624.0	5,520.2	103.75	54.205	
10,629.9	6,708.4	6,400.0	6,398.5	112.6	1.9	-63.80	-92.9	1,744.2	5,653.7	5,549.1	104.51	54.099	
10,700.0	6,708.2	6,400.0	6,398.5	114.6	1.9	-63.80	-92.9	1,744.2	5,723.2	5,616.9	106.27	53.856	
10,728.3	6,708.2	6,400.0	6,398.5	115.3	1.9	-63.80	-92.9	1,744.2	5,751.3	5,644.3	106.98	53.760	
10,800.0	6,708.0	6,400.0	6,398.5	117.3	1.9	-63.80	-92.9	1,744.2	5,822.5	5,713.7	108.79	53.522	
10,826.7	6,708.0	6,400.0	6,398.5	118.1	1.9	-63.80	-92.9	1,744.2	5,849.0	5,739.6	109.46	53.435	
10,900.0	6,707.8	6,400.0	6,398.5	120.1	1.9	-63.80	-92.9	1,744.2	5,921.7	5,810.4	111.30	53.203	
10,925.2	6,707.8	6,400.0	6,398.5	120.8	1.9	-63.80	-92.9	1,744.2	5,946.7	5,834.8	111.94	53.125	
11,000.0	6,707.6	6,400.0	6,398.5	122.9	1.9	-63.80	-92.9	1,744.2	6,021.0	5,907.2	113.82	52.898	
11,023.6	6,707.6	6,400.0	6,398.5	123.6	1.9	-63.80	-92.9	1,744.2	6,044.5	5,930.1	114.42	52.827	
11,100.0	6,707.5	6,400.0	6,398.5	125.7	1.9	-63.80	-92.9	1,744.2	6,120.4	6,004.0	116.34	52.605	
11,122.0	6,707.4	6,400.0	6,398.5	126.3	1.9	-63.80	-92.9	1,744.2	6,142.2	6,025.3	116.90	52.543	
11,200.0	6,707.3	6,400.0	6,398.5	128.5	1.9	-63.80	-92.9	1,744.2	6,219.7	6,100.8	118.87	52.325	
11,220.4	6,707.2	6,400.0	6,398.5	129.0	1.9	-63.80	-92.9	1,744.2	6,240.0	6,120.6	119.38	52.269	
11,300.0	6,707.1	6,400.0	6,398.5	131.3	1.9	-63.80	-92.9	1,744.2	6,319.1	6,197.7	121.39	52.057	
11,318.9	6,707.0	6,400.0	6,398.5	131.8	1.9	-63.80	-92.9	1,744.2	6,337.8	6,216.0	121.86	52.007	
11,400.0	6,706.9	6,400.0	6,398.5	134.0	1.9	-63.80	-92.9	1,744.2	6,418.4	6,294.5	123.91	51.799	
11,417.3	6,706.9	6,400.0	6,398.5	134.5	1.9	-63.80	-92.9	1,744.2	6,435.6	6,311.3	124.35	51.755	
11,500.0	6,706.7	6,400.0	6,398.5	136.8	1.9	-63.80	-92.9	1,744.2	6,517.9	6,391.4	126.44	51.551	
11,515.7	6,706.7	6,400.0	6,398.5	137.3	1.9	-63.80	-92.9	1,744.2	6,533.5	6,406.7	126.83	51.513	
11,600.0	6,706.5	6,400.0	6,398.5	139.6	1.9	-63.80	-92.9	1,744.2	6,617.3	6,488.3	128.96	51.313	
11,614.1	6,706.5	6,400.0	6,398.5	140.0	1.9	-63.80	-92.9	1,744.2	6,631.3	6,502.0	129.32	51.280	
11,700.0	6,706.3	6,400.0	6,398.5	142.4	1.9	-63.81	-92.9	1,744.2	6,716.7	6,585.2	131.49	51.083	
11,712.6	6,706.3	6,400.0	6,398.5	142.8	1.9	-63.81	-92.9	1,744.2	6,729.2	6,597.4	131.80	51.055	
11,800.0	6,706.1	6,400.0	6,398.5	145.2	1.9	-63.81	-92.9	1,744.2	6,816.2	6,682.2	134.01	50.863	
11,811.0	6,706.1	6,400.0	6,398.5	145.5	1.9	-63.81	-92.9	1,744.2	6,827.1	6,692.8	134.29	50.839	
11,900.0	6,705.9	6,400.0	6,398.5	148.0	1.9	-63.81	-92.9	1,744.2	6,915.6	6,779.1	136.54	50.650	
11,909.4	6,705.9	6,400.0	6,398.5	148.3	1.9	-63.81	-92.9	1,744.2	6,925.0	6,788.2	136.78	50.630	
12,000.0	6,705.8	6,400.0	6,398.5	150.8	1.9	-63.81	-92.9	1,744.2	7,015.1	6,876.1	139.06	50.445	
12,007.8	6,705.7	6,400.0	6,398.5	151.0	1.9	-63.81	-92.9	1,744.2	7,022.9	6,883.7	139.26	50.429	
12,100.0	6,705.6	6,400.0	6,398.5	153.6	1.9	-63.81	-92.9	1,744.2	7,114.6	6,973.0	141.59	50.247	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,400.0	6,398.5	153.8	1.9	-63.81	-92.9	1,744.2	7,120.9	6,979.1	141.75	50.235	
12,200.0	6,705.4	6,400.0	6,398.5	156.4	1.9	-63.81	-92.9	1,744.2	7,214.1	7,070.0	144.12	50.056	
12,204.7	6,705.4	6,400.0	6,398.5	156.5	1.9	-63.81	-92.9	1,744.2	7,218.8	7,074.6	144.24	50.047	
12,300.0	6,705.2	6,400.0	6,398.5	159.2	1.9	-63.81	-92.9	1,744.2	7,313.7	7,167.0	146.65	49.872	
12,303.1	6,705.2	6,400.0	6,398.5	159.3	1.9	-63.81	-92.9	1,744.2	7,316.8	7,170.0	146.73	49.866	
12,400.0	6,705.0	6,372.9	6,371.5	162.0	1.9	-61.81	-91.1	1,743.1	7,413.1	7,266.2	146.92	50.457	
12,401.5	6,705.0	6,372.9	6,371.5	162.0	1.9	-61.80	-91.1	1,743.1	7,414.6	7,267.7	146.95	50.455	
12,500.0	6,704.8	6,371.0	6,369.6	164.8	1.9	-61.67	-91.0	1,743.0	7,512.6	7,363.4	149.24	50.338	
12,598.4	6,704.6	6,369.2	6,367.8	167.5	1.9	-61.54	-90.9	1,743.0	7,610.6	7,459.1	151.53	50.226	
12,600.0	6,704.6	6,369.1	6,367.8	167.6	1.9	-61.54	-90.9	1,743.0	7,612.2	7,460.6	151.57	50.224	
12,696.8	6,704.4	6,367.4	6,366.0	170.3	1.9	-61.41	-90.8	1,742.9	7,708.6	7,554.8	153.81	50.118	
12,700.0	6,704.4	6,367.3	6,365.9	170.4	1.9	-61.40	-90.8	1,742.9	7,711.7	7,557.9	153.88	50.114	
12,795.2	6,704.3	6,365.6	6,364.2	173.0	1.9	-61.28	-90.7	1,742.8	7,806.6	7,650.5	156.09	50.014	
12,800.0	6,704.2	6,365.5	6,364.1	173.2	1.9	-61.27	-90.7	1,742.8	7,811.3	7,655.1	156.20	50.009	
12,893.7	6,704.1	6,363.8	6,362.4	175.8	1.9	-61.15	-90.6	1,742.8	7,904.6	7,746.2	158.36	49.915	
12,900.0	6,704.1	6,363.7	6,362.3	176.0	1.9	-61.15	-90.6	1,742.8	7,910.9	7,752.4	158.51	49.908	
12,992.1	6,703.9	6,362.1	6,360.7	178.5	1.9	-61.03	-90.5	1,742.7	8,002.6	7,842.0	160.63	49.819	
13,000.0	6,703.9	6,361.9	6,360.6	178.8	1.9	-61.02	-90.5	1,742.7	8,010.5	7,849.7	160.82	49.811	
13,090.5	6,703.7	6,360.3	6,359.0	181.3	1.9	-60.91	-90.4	1,742.6	8,100.6	7,937.7	162.90	49.727	
13,100.0	6,703.7	6,360.2	6,358.8	181.6	1.9	-60.90	-90.4	1,742.6	8,110.1	7,947.0	163.12	49.719	
13,188.9	6,703.5	6,358.6	6,357.3	184.0	1.9	-60.79	-90.3	1,742.6	8,198.7	8,033.5	165.17	49.639	
13,200.0	6,703.5	6,358.5	6,357.1	184.4	1.9	-60.77	-90.3	1,742.6	8,209.7	8,044.3	165.42	49.629	
13,287.4	6,703.3	6,357.0	6,355.6	186.8	1.9	-60.67	-90.2	1,742.5	8,296.7	8,129.3	167.43	49.555	
13,300.0	6,703.3	6,356.7	6,355.4	187.2	1.9	-60.65	-90.2	1,742.5	8,309.3	8,141.6	167.72	49.544	
13,385.8	6,703.2	6,355.3	6,353.9	189.6	1.9	-60.55	-90.1	1,742.4	8,394.8	8,225.1	169.68	49.473	
13,400.0	6,703.1	6,355.1	6,353.7	190.0	1.9	-60.53	-90.1	1,742.4	8,408.9	8,238.9	170.01	49.461	
13,484.2	6,703.0	6,353.6	6,352.3	192.3	1.9	-60.43	-90.0	1,742.4	8,492.8	8,320.9	171.94	49.395	
13,500.0	6,702.9	6,353.4	6,352.0	192.8	1.9	-60.41	-90.0	1,742.4	8,508.6	8,336.3	172.30	49.382	
13,582.6	6,702.8	6,352.0	6,350.7	195.1	1.9	-60.32	-89.9	1,742.3	8,590.9	8,416.7	174.19	49.319	
13,600.0	6,702.8	6,351.7	6,350.4	195.6	1.9	-60.30	-89.9	1,742.3	8,608.2	8,433.6	174.59	49.306	
13,681.1	6,702.6	6,350.4	6,349.1	197.8	1.9	-60.21	-89.8	1,742.3	8,689.0	8,512.6	176.44	49.246	
13,700.0	6,702.6	6,350.1	6,348.7	198.4	1.9	-60.18	-89.8	1,742.3	8,707.9	8,531.0	176.87	49.233	
13,779.5	6,702.4	6,348.8	6,347.5	200.6	1.9	-60.09	-89.7	1,742.2	8,787.1	8,608.4	178.68	49.177	
13,800.0	6,702.4	6,348.5	6,347.1	201.2	1.9	-60.07	-89.7	1,742.2	8,807.5	8,628.4	179.15	49.162	
13,877.9	6,702.2	6,347.2	6,345.9	203.3	1.9	-59.98	-89.6	1,742.2	8,885.2	8,704.2	180.93	49.109	
13,900.0	6,702.2	6,346.9	6,345.5	204.0	1.9	-59.96	-89.6	1,742.1	8,907.2	8,725.7	181.43	49.094	
13,976.3	6,702.1	6,345.7	6,344.3	206.1	1.9	-59.88	-89.5	1,742.1	8,983.3	8,800.1	183.17	49.044	
14,000.0	6,702.0	6,345.3	6,344.0	206.8	1.9	-59.85	-89.5	1,742.1	9,006.8	8,823.1	183.70	49.029	
14,074.8	6,701.9	6,344.1	6,342.8	208.9	1.9	-59.77	-89.4	1,742.0	9,081.4	8,896.0	185.40	48.982	
14,100.0	6,701.8	6,343.7	6,342.4	209.6	1.9	-59.74	-89.4	1,742.0	9,106.5	8,920.5	185.98	48.966	
14,173.2	6,701.7	6,342.6	6,341.3	211.6	1.9	-59.66	-89.4	1,742.0	9,179.5	8,991.8	187.64	48.922	
14,200.0	6,701.6	6,342.2	6,340.9	212.4	1.9	-59.63	-89.3	1,742.0	9,206.2	9,018.0	188.24	48.905	
14,271.6	6,701.5	6,341.1	6,339.8	214.4	1.9	-59.56	-89.3	1,741.9	9,277.6	9,087.7	189.87	48.864	
14,300.0	6,701.4	6,340.7	6,339.3	215.2	1.9	-59.53	-89.3	1,741.9	9,305.9	9,115.4	190.51	48.847	
14,370.0	6,701.3	6,339.6	6,338.3	217.1	1.9	-59.46	-89.2	1,741.9	9,375.7	9,183.6	192.10	48.808	
14,400.0	6,701.3	6,339.2	6,337.8	218.0	1.9	-59.42	-89.2	1,741.9	9,405.6	9,212.8	192.77	48.791	
14,468.5	6,701.1	6,338.1	6,336.8	219.9	1.9	-59.35	-89.1	1,741.8	9,473.9	9,279.5	194.32	48.754	
14,500.0	6,701.1	6,337.7	6,336.3	220.8	1.9	-59.32	-89.1	1,741.8	9,505.3	9,310.2	195.03	48.737	
14,566.9	6,701.0	6,336.7	6,335.4	222.6	1.9	-59.25	-89.0	1,741.8	9,572.0	9,375.4	196.54	48.702	
14,600.0	6,700.9	6,336.2	6,334.9	223.6	1.9	-59.22	-89.0	1,741.8	9,605.0	9,407.7	197.29	48.684	
14,665.3	6,700.8	6,335.2	6,333.9	225.4	1.9	-59.15	-89.0	1,741.7	9,670.1	9,471.4	198.76	48.651	
14,700.0	6,700.7	6,334.7	6,333.4	226.4	1.9	-59.12	-88.9	1,741.7	9,704.7	9,505.2	199.55	48.634	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis			Distance									Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,763.7	6,700.6	6,333.8	6,332.5	228.2	1.9	-59.06	-88.9	1,741.7	9,768.3	9,567.3	200.98	48.603		
14,800.0	6,700.5	6,333.3	6,332.0	229.2	1.9	-59.02	-88.9	1,741.7	9,804.4	9,602.6	201.80	48.585		
14,862.2	6,700.4	6,332.4	6,331.1	230.9	1.9	-58.96	-88.8	1,741.6	9,866.4	9,663.2	203.20	48.556		
14,900.0	6,700.3	6,331.9	6,330.5	232.0	1.9	-58.92	-88.8	1,741.6	9,904.1	9,700.1	204.05	48.538		
14,960.6	6,700.2	6,331.0	6,329.7	233.7	1.9	-58.86	-88.7	1,741.6	9,964.6	9,759.2	205.41	48.511 SF		

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	61.28	1,458.1	2,661.1	3,034.7				
98.4	98.4	54.4	54.4	0.1	0.1	61.28	1,458.1	2,661.1	3,034.4	3,034.1	0.24	N/A	
100.0	100.0	56.0	56.0	0.1	0.1	61.28	1,458.1	2,661.1	3,034.4	3,034.1	0.25	N/A	
196.8	196.8	152.8	152.8	0.3	1.6	61.28	1,458.1	2,661.1	3,034.4	3,032.4	1.93	1,569.772	
200.0	200.0	156.0	156.0	0.3	1.7	61.28	1,458.1	2,661.1	3,034.4	3,032.3	2.02	1,501.703	
295.3	295.3	251.3	251.3	0.5	3.9	61.28	1,458.1	2,661.1	3,034.4	3,029.9	4.42	686.215	
300.0	300.0	256.0	256.0	0.5	4.0	61.28	1,458.1	2,661.1	3,034.4	3,029.8	4.53	669.782	
393.7	393.7	349.7	349.7	0.8	5.9	61.28	1,458.1	2,661.1	3,034.4	3,027.7	6.66	455.319	
400.0	400.0	356.0	356.0	0.8	6.0	61.28	1,458.1	2,661.1	3,034.4	3,027.6	6.81	445.792	
492.1	492.1	448.1	448.1	1.0	7.9	61.28	1,458.1	2,661.1	3,034.4	3,025.5	8.88	341.558	
500.0	500.0	456.0	456.0	1.0	8.1	61.28	1,458.1	2,661.1	3,034.4	3,025.3	9.06	334.881	
590.5	590.5	546.5	546.5	1.2	9.9	61.28	1,458.1	2,661.1	3,034.4	3,023.3	11.10	273.477	
600.0	600.0	556.0	556.0	1.2	10.1	61.28	1,458.1	2,661.1	3,034.4	3,023.1	11.31	268.348	
689.0	689.0	645.0	645.0	1.4	11.9	61.28	1,458.1	2,661.1	3,034.4	3,021.1	13.30	228.091	
700.0	700.0	656.0	656.0	1.4	12.1	61.28	1,458.1	2,661.1	3,034.4	3,020.8	13.55	223.931	
787.4	787.4	743.4	743.4	1.6	13.9	61.28	1,458.1	2,661.1	3,034.4	3,018.9	15.51	195.652	
800.0	800.0	756.0	756.0	1.7	14.1	61.28	1,458.1	2,661.1	3,034.4	3,018.6	15.79	192.155	
885.8	885.8	841.8	841.8	1.9	15.8	61.28	1,458.1	2,661.1	3,034.4	3,016.7	17.71	171.304	
900.0	900.0	856.0	856.0	1.9	16.1	61.28	1,458.1	2,661.1	3,034.4	3,016.3	18.03	168.289	
984.2	984.2	940.2	940.2	2.1	17.8	61.28	1,458.1	2,661.1	3,034.4	3,014.5	19.92	152.352	
1,000.0	1,000.0	956.0	956.0	2.1	18.1	61.28	1,458.1	2,661.1	3,034.4	3,014.1	20.27	149.702	
1,082.7	1,082.7	1,038.7	1,038.7	2.3	19.8	61.28	1,458.1	2,661.1	3,034.4	3,012.2	22.12	137.179	
1,100.0	1,100.0	1,056.0	1,056.0	2.3	20.2	61.28	1,458.1	2,661.1	3,034.4	3,011.9	22.51	134.816	
1,181.1	1,181.1	1,137.1	1,137.1	2.5	21.8	32.57	1,458.1	2,661.1	3,033.4	3,009.1	24.31	124.761	
1,200.0	1,200.0	1,156.0	1,156.0	2.6	22.2	32.58	1,458.1	2,661.1	3,032.9	3,008.2	24.73	122.629	
1,279.5	1,279.4	1,235.4	1,235.4	2.7	23.8	32.66	1,458.1	2,661.1	3,029.6	3,003.1	26.48	114.405	
1,300.0	1,299.8	1,255.8	1,255.8	2.8	24.2	32.69	1,458.1	2,661.1	3,028.5	3,001.6	26.93	112.465	
1,377.9	1,377.5	1,333.5	1,333.5	3.0	25.7	32.81	1,458.1	2,661.1	3,023.0	2,994.4	28.62	105.631	
1,400.0	1,399.5	1,355.5	1,355.5	3.0	26.2	32.85	1,458.1	2,661.1	3,021.2	2,992.1	29.09	103.848	
1,476.4	1,475.3	1,431.3	1,431.3	3.2	27.7	33.03	1,458.1	2,661.1	3,013.6	2,982.9	30.72	98.093	
1,500.0	1,498.7	1,454.7	1,454.7	3.3	28.2	33.09	1,458.1	2,661.1	3,010.9	2,979.7	31.22	96.443	
1,574.8	1,572.6	1,528.6	1,528.6	3.5	29.7	33.32	1,458.1	2,661.1	3,001.4	2,968.6	32.79	91.539	
1,600.0	1,597.5	1,553.5	1,553.5	3.5	30.2	33.40	1,458.1	2,661.1	2,997.8	2,964.5	33.31	90.000	
1,673.2	1,669.4	1,625.4	1,625.4	3.7	31.6	33.67	1,458.1	2,661.1	2,986.3	2,951.5	34.82	85.776	
1,700.1	1,695.8	1,651.8	1,651.8	3.8	32.2	33.78	1,458.1	2,661.1	2,981.8	2,946.4	35.36	84.323	
1,771.6	1,765.7	1,721.7	1,721.7	4.1	33.6	33.94	1,458.1	2,661.1	2,969.3	2,932.4	36.94	80.384	
1,800.0	1,793.4	1,749.4	1,749.4	4.2	34.1	34.00	1,458.1	2,661.1	2,964.4	2,926.8	37.56	78.916	
1,870.1	1,862.0	1,818.0	1,818.0	4.4	35.5	34.16	1,458.1	2,661.1	2,952.3	2,913.1	39.12	75.469	
1,900.0	1,891.3	1,847.3	1,847.3	4.5	36.1	34.23	1,458.1	2,661.1	2,947.1	2,907.3	39.78	74.083	
1,968.5	1,958.3	1,914.3	1,914.3	4.8	37.4	34.38	1,458.1	2,661.1	2,935.2	2,893.9	41.31	71.062	
2,000.0	1,989.1	1,945.1	1,945.1	4.9	38.1	34.45	1,458.1	2,661.1	2,929.8	2,887.8	42.01	69.745	
2,066.9	2,054.5	2,010.5	2,010.5	5.1	39.4	34.61	1,458.1	2,661.1	2,918.2	2,874.7	43.50	67.083	
2,100.0	2,086.9	2,042.9	2,042.9	5.3	40.0	34.68	1,458.1	2,661.1	2,912.5	2,868.3	44.24	65.834	
2,165.3	2,150.8	2,106.8	2,106.8	5.5	41.3	34.84	1,458.1	2,661.1	2,901.3	2,855.6	45.71	63.478	
2,200.0	2,184.7	2,140.7	2,140.7	5.6	42.0	34.92	1,458.1	2,661.1	2,895.3	2,848.9	46.48	62.290	
2,263.8	2,247.1	2,203.1	2,203.1	5.9	43.2	35.07	1,458.1	2,661.1	2,884.4	2,836.5	47.91	60.199	
2,300.0	2,282.5	2,238.5	2,238.5	6.0	44.0	35.15	1,458.1	2,661.1	2,878.2	2,829.5	48.73	59.066	
2,362.2	2,343.3	2,299.3	2,299.3	6.3	45.2	35.30	1,458.1	2,661.1	2,867.5	2,817.4	50.13	57.203	
2,400.0	2,380.3	2,336.3	2,336.3	6.5	45.9	35.39	1,458.1	2,661.1	2,861.1	2,810.1	50.98	56.121	
2,460.6	2,439.6	2,395.6	2,395.6	6.7	47.1	35.54	1,458.1	2,661.1	2,850.7	2,798.4	52.35	54.456	
2,500.0	2,478.1	2,434.1	2,434.1	6.9	47.9	35.63	1,458.1	2,661.1	2,844.0	2,790.8	53.24	53.420	
2,559.0	2,535.9	2,491.9	2,491.9	7.1	49.0	35.77	1,458.1	2,661.1	2,834.0	2,779.4	54.57	51.929	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,531.9	2,531.9	7.3	49.9	35.88	1,458.1	2,661.1	2,827.0	2,771.5	55.50	50.937	
2,657.5	2,632.2	2,588.2	2,588.2	7.5	51.0	36.02	1,458.1	2,661.1	2,817.3	2,760.5	56.80	49.597	
2,700.0	2,673.8	2,629.8	2,629.8	7.7	51.8	36.12	1,458.1	2,661.1	2,810.1	2,752.3	57.77	48.645	
2,755.9	2,728.4	2,684.4	2,684.4	7.9	52.9	36.26	1,458.1	2,661.1	2,800.6	2,741.6	59.04	47.439	
2,800.0	2,771.6	2,727.6	2,727.6	8.1	53.8	36.37	1,458.1	2,661.1	2,793.2	2,733.1	60.04	46.524	
2,854.3	2,824.7	2,780.7	2,780.7	8.3	54.9	36.51	1,458.1	2,661.1	2,784.0	2,722.7	61.27	45.436	
2,900.0	2,869.4	2,825.4	2,825.4	8.5	55.8	36.62	1,458.1	2,661.1	2,776.3	2,714.0	62.31	44.555	
2,952.7	2,921.0	2,877.0	2,877.0	8.8	56.8	36.76	1,458.1	2,661.1	2,767.5	2,704.0	63.51	43.573	
3,000.0	2,967.2	2,923.2	2,923.2	9.0	57.7	36.88	1,458.1	2,661.1	2,759.5	2,694.9	64.59	42.724	
3,051.2	3,017.3	2,973.3	2,973.3	9.2	58.7	37.01	1,458.1	2,661.1	2,751.0	2,685.2	65.76	41.835	
3,100.0	3,065.0	3,021.0	3,021.0	9.4	59.7	37.14	1,458.1	2,661.1	2,742.8	2,675.9	66.87	41.016	
3,149.6	3,113.5	3,069.5	3,069.5	9.6	60.7	37.27	1,458.1	2,661.1	2,734.5	2,666.5	68.00	40.211	
3,200.0	3,162.8	3,118.8	3,118.8	9.8	61.7	37.40	1,458.1	2,661.1	2,726.1	2,657.0	69.16	39.420	
3,248.0	3,209.8	3,165.8	3,165.8	10.0	62.6	37.53	1,458.1	2,661.1	2,718.1	2,647.9	70.25	38.689	
3,300.0	3,260.6	3,216.6	3,216.6	10.2	63.6	37.66	1,458.1	2,661.1	2,709.5	2,638.0	71.44	37.924	
3,346.4	3,306.1	3,262.1	3,262.1	10.5	64.5	37.79	1,458.1	2,661.1	2,701.8	2,629.3	72.51	37.262	
3,400.0	3,358.5	3,314.5	3,314.5	10.7	65.6	37.93	1,458.1	2,661.1	2,692.9	2,619.2	73.74	36.521	
3,444.9	3,402.3	3,358.3	3,358.3	10.9	66.5	38.05	1,458.1	2,661.1	2,685.5	2,610.7	74.77	35.919	
3,500.0	3,456.3	3,412.3	3,412.3	11.1	67.6	38.20	1,458.1	2,661.1	2,676.4	2,600.4	76.03	35.202	
3,543.3	3,498.6	3,454.6	3,454.6	11.3	68.4	38.32	1,458.1	2,661.1	2,669.3	2,592.3	77.03	34.655	
3,600.0	3,554.1	3,510.1	3,510.1	11.5	69.5	38.48	1,458.1	2,661.1	2,660.0	2,581.6	78.33	33.959	
3,641.7	3,594.9	3,550.9	3,550.9	11.7	70.3	38.59	1,458.1	2,661.1	2,653.1	2,573.8	79.29	33.462	
3,700.0	3,651.9	3,607.9	3,607.9	12.0	71.5	38.76	1,458.1	2,661.1	2,643.6	2,562.9	80.63	32.787	
3,740.1	3,691.2	3,647.2	3,647.2	12.2	72.3	38.87	1,458.1	2,661.1	2,637.0	2,555.5	81.55	32.335	
3,800.0	3,749.7	3,705.7	3,705.7	12.4	73.5	39.04	1,458.1	2,661.1	2,627.3	2,544.3	82.93	31.679	
3,838.6	3,787.4	3,743.4	3,743.4	12.6	74.2	39.15	1,458.1	2,661.1	2,621.0	2,537.2	83.82	31.268	
3,900.0	3,847.5	3,803.5	3,803.5	12.9	75.4	39.32	1,458.1	2,661.1	2,611.0	2,525.8	85.24	30.631	
3,937.0	3,883.7	3,839.7	3,839.7	13.0	76.2	39.43	1,458.1	2,661.1	2,605.0	2,518.9	86.09	30.257	
4,000.0	3,945.3	3,901.3	3,901.3	13.3	77.4	39.61	1,458.1	2,661.1	2,594.8	2,507.2	87.55	29.638	
4,035.4	3,980.0	3,936.0	3,936.0	13.5	78.1	39.71	1,458.1	2,661.1	2,589.1	2,500.7	88.37	29.298	
4,060.0	4,004.0	3,960.0	3,960.0	13.6	78.6	39.79	1,458.1	2,661.1	2,585.1	2,496.2	88.94	29.067	
4,100.0	4,043.2	3,999.2	3,999.2	13.7	79.4	39.82	1,458.1	2,661.1	2,578.9	2,488.9	89.97	28.662	
4,133.8	4,076.5	4,032.5	4,032.5	13.8	80.0	39.85	1,458.1	2,661.1	2,573.9	2,483.1	90.83	28.337	
4,200.0	4,141.6	4,097.6	4,097.6	14.0	81.3	39.89	1,458.1	2,661.1	2,565.2	2,472.7	92.50	27.732	
4,232.3	4,173.5	4,129.5	4,129.5	14.1	82.0	39.91	1,458.1	2,661.1	2,561.3	2,468.1	93.30	27.454	
4,300.0	4,240.6	4,196.6	4,196.6	14.3	83.3	39.96	1,458.1	2,661.1	2,554.2	2,459.2	94.96	26.898	
4,330.7	4,271.1	4,227.1	4,227.1	14.4	83.9	39.97	1,458.1	2,661.1	2,551.4	2,455.7	95.70	26.660	
4,400.0	4,340.0	4,296.0	4,296.0	14.5	85.3	40.00	1,458.1	2,661.1	2,545.9	2,448.6	97.35	26.152	
4,429.1	4,369.0	4,325.0	4,325.0	14.6	85.9	40.02	1,458.1	2,661.1	2,544.0	2,446.0	98.03	25.951	
4,500.0	4,439.7	4,395.7	4,395.7	14.8	87.3	40.04	1,458.1	2,661.1	2,540.3	2,440.6	99.67	25.488	
4,527.5	4,467.2	4,423.2	4,423.2	14.8	87.9	40.04	1,458.1	2,661.1	2,539.2	2,438.9	100.29	25.320	
4,600.0	4,539.7	4,495.7	4,495.7	14.9	89.3	40.06	1,458.1	2,661.1	2,537.3	2,435.4	101.90	24.901	
4,626.0	4,565.6	4,521.6	4,521.6	15.0	89.9	40.06	1,458.1	2,661.1	2,537.0	2,434.6	102.46	24.761	
4,660.2	4,599.8	4,555.8	4,555.8	15.0	90.6	68.79	1,458.1	2,661.1	2,536.9	2,432.8	104.01	24.390	
4,700.0	4,639.6	4,595.6	4,595.6	15.0	91.4	68.79	1,458.1	2,661.1	2,536.9	2,432.0	104.87	24.189	
4,724.4	4,664.0	4,620.0	4,620.0	15.1	91.8	68.79	1,458.1	2,661.1	2,536.9	2,431.5	105.41	24.068	
4,800.0	4,739.6	4,695.6	4,695.6	15.2	93.4	68.79	1,458.1	2,661.1	2,536.9	2,429.8	107.05	23.698	
4,822.8	4,762.5	4,718.5	4,718.5	15.2	93.8	68.79	1,458.1	2,661.1	2,536.9	2,429.3	107.55	23.589	
4,900.0	4,839.6	4,795.6	4,795.6	15.3	95.4	68.79	1,458.1	2,661.1	2,536.9	2,427.6	109.23	23.226	
4,921.2	4,860.9	4,816.9	4,816.9	15.4	95.8	68.79	1,458.1	2,661.1	2,536.9	2,427.2	109.69	23.128	
5,000.0	4,939.6	4,895.6	4,895.6	15.5	97.4	68.79	1,458.1	2,661.1	2,536.9	2,425.5	111.40	22.772	
5,019.7	4,959.3	4,915.3	4,915.3	15.5	97.8	68.79	1,458.1	2,661.1	2,536.9	2,425.0	111.83	22.684	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	4,995.6	4,995.6	15.6	99.4	68.79	1,458.1	2,661.1	2,536.9	2,423.3	113.58	22.335	
5,118.1	5,057.7	5,013.7	5,013.7	15.7	99.8	68.79	1,458.1	2,661.1	2,536.9	2,422.9	113.98	22.257	
5,200.0	5,139.6	5,095.6	5,095.6	15.8	101.4	68.79	1,458.1	2,661.1	2,536.9	2,421.1	115.77	21.914	
5,216.5	5,156.2	5,112.2	5,112.2	15.8	101.7	68.79	1,458.1	2,661.1	2,536.9	2,420.7	116.13	21.846	
5,300.0	5,239.6	5,195.6	5,195.6	15.9	103.4	68.79	1,458.1	2,661.1	2,536.9	2,418.9	117.95	21.508	
5,314.9	5,254.6	5,210.6	5,210.6	16.0	103.7	68.79	1,458.1	2,661.1	2,536.9	2,418.6	118.27	21.449	
5,400.0	5,339.6	5,295.6	5,295.6	16.1	105.4	68.79	1,458.1	2,661.1	2,536.9	2,416.7	120.13	21.117	
5,413.4	5,353.0	5,309.0	5,309.0	16.1	105.7	68.79	1,458.1	2,661.1	2,536.9	2,416.4	120.42	21.066	
5,500.0	5,439.6	5,395.6	5,395.6	16.3	107.4	68.79	1,458.1	2,661.1	2,536.9	2,414.5	122.32	20.740	
5,511.8	5,451.4	5,407.4	5,407.4	16.3	107.7	68.79	1,458.1	2,661.1	2,536.9	2,414.3	122.58	20.696	
5,600.0	5,539.6	5,495.6	5,495.6	16.4	109.5	68.79	1,458.1	2,661.1	2,536.9	2,412.4	124.51	20.376	
5,610.2	5,549.9	5,505.9	5,505.9	16.4	109.7	68.79	1,458.1	2,661.1	2,536.9	2,412.1	124.73	20.339	
5,700.0	5,639.6	5,595.6	5,595.6	16.6	111.5	68.79	1,458.1	2,661.1	2,536.9	2,410.2	126.69	20.024	
5,708.6	5,648.3	5,604.3	5,604.3	16.6	111.6	68.79	1,458.1	2,661.1	2,536.9	2,410.0	126.88	19.994	
5,800.0	5,739.6	5,695.6	5,695.6	16.7	113.5	68.79	1,458.1	2,661.1	2,536.9	2,408.0	128.88	19.683	
5,807.1	5,746.7	5,702.7	5,702.7	16.8	113.6	68.79	1,458.1	2,661.1	2,536.9	2,407.8	129.04	19.660	
5,900.0	5,839.6	5,795.6	5,795.6	16.9	115.5	68.79	1,458.1	2,661.1	2,536.9	2,405.8	131.07	19.354	
5,905.5	5,845.1	5,801.1	5,801.1	16.9	115.6	68.79	1,458.1	2,661.1	2,536.9	2,405.7	131.19	19.337	
6,000.0	5,939.6	5,895.6	5,895.6	17.1	117.5	68.79	1,458.1	2,661.1	2,536.9	2,403.6	133.27	19.036	
6,003.9	5,943.6	5,899.6	5,899.6	17.1	117.6	68.79	1,458.1	2,661.1	2,536.9	2,403.5	133.35	19.024	
6,059.2	5,998.8	5,954.8	5,954.8	17.2	118.7	68.79	1,458.1	2,661.1	2,536.9	2,402.3	134.56	18.853 CC, ES, SF	
6,100.0	6,039.6	5,995.6	5,995.6	17.2	119.5	158.77	1,458.1	2,661.1	2,537.9	2,403.5	134.48	18.872	
6,102.3	6,042.0	5,998.0	5,998.0	17.2	119.6	158.76	1,458.1	2,661.1	2,538.1	2,403.6	134.51	18.869	
6,150.0	6,089.4	6,045.4	6,045.4	17.3	120.5	158.68	1,458.1	2,661.1	2,542.2	2,407.5	134.76	18.864	
6,200.0	6,138.7	6,094.7	6,094.7	17.3	121.5	158.52	1,458.1	2,661.1	2,549.7	2,415.3	134.46	18.962	
6,200.8	6,139.5	6,095.5	6,095.5	17.3	121.5	158.52	1,458.1	2,661.1	2,549.9	2,415.4	134.45	18.965	
6,250.0	6,187.4	6,143.4	6,143.4	17.3	122.5	158.29	1,458.1	2,661.1	2,560.4	2,426.9	133.58	19.168	
6,299.2	6,234.4	6,190.4	6,190.4	17.4	123.4	157.99	1,458.1	2,661.1	2,574.0	2,441.9	132.16	19.477	
6,300.0	6,235.1	6,191.1	6,191.1	17.4	123.4	157.99	1,458.1	2,661.1	2,574.3	2,442.2	132.13	19.483	
6,350.0	6,281.7	6,237.7	6,237.7	17.4	124.4	157.59	1,458.1	2,661.1	2,591.2	2,461.1	130.13	19.913	
6,397.6	6,324.8	6,280.8	6,280.8	17.3	125.2	157.12	1,458.1	2,661.1	2,610.2	2,482.4	127.75	20.432	
6,400.0	6,326.9	6,282.9	6,282.9	17.3	125.3	157.10	1,458.1	2,661.1	2,611.2	2,483.6	127.62	20.461	
6,450.0	6,370.5	6,326.5	6,326.5	17.3	126.2	156.49	1,458.1	2,661.1	2,634.1	2,509.4	124.66	21.131	
6,496.0	6,409.1	6,365.1	6,365.1	17.3	126.9	155.82	1,458.1	2,661.1	2,657.7	2,536.1	121.59	21.858	
6,500.0	6,412.3	6,368.3	6,368.3	17.3	127.0	155.76	1,458.1	2,661.1	2,659.8	2,538.5	121.32	21.925	
6,550.0	6,452.1	6,408.1	6,408.1	17.3	127.8	154.86	1,458.1	2,661.1	2,688.3	2,570.5	117.71	22.839	
6,594.5	6,485.6	6,441.6	6,441.6	17.3	128.5	153.91	1,458.1	2,661.1	2,715.7	2,601.3	114.40	23.740	
6,600.0	6,489.7	6,445.7	6,445.7	17.3	128.6	153.78	1,458.1	2,661.1	2,719.3	2,605.3	113.98	23.857	
6,650.0	6,524.9	6,480.9	6,480.9	17.2	129.3	152.47	1,458.1	2,661.1	2,752.7	2,642.4	110.35	24.946	
6,692.9	6,553.0	6,509.0	6,509.0	17.2	129.8	151.12	1,458.1	2,661.1	2,783.3	2,675.7	107.51	25.888	
6,700.0	6,557.5	6,513.5	6,513.5	17.2	129.9	150.87	1,458.1	2,661.1	2,788.5	2,681.4	107.08	26.041	
6,750.0	6,587.4	6,543.4	6,543.4	17.2	130.5	148.92	1,458.1	2,661.1	2,826.3	2,721.8	104.54	27.035	
6,791.3	6,609.9	6,565.9	6,565.9	17.2	131.0	146.97	1,458.1	2,661.1	2,859.1	2,755.8	103.33	27.671	
6,800.0	6,614.4	6,570.4	6,570.4	17.2	131.1	146.51	1,458.1	2,661.1	2,866.1	2,762.9	103.19	27.775	
6,850.0	6,638.4	6,594.4	6,594.4	17.2	131.6	143.51	1,458.1	2,661.1	2,907.7	2,804.1	103.58	28.072	
6,889.7	6,655.3	6,611.3	6,611.3	17.4	131.9	140.58	1,458.1	2,661.1	2,941.8	2,836.3	105.51	27.882	
6,900.0	6,659.4	6,615.4	6,615.4	17.5	132.0	139.73	1,458.1	2,661.1	2,950.8	2,844.5	106.28	27.765	
6,950.0	6,677.1	6,633.1	6,633.1	18.0	132.3	134.93	1,458.1	2,661.1	2,995.3	2,883.5	111.77	26.798	
6,988.2	6,688.4	6,644.4	6,644.4	18.5	132.6	130.37	1,458.1	2,661.1	3,030.0	2,912.0	117.98	25.682	
7,000.0	6,691.5	6,647.5	6,647.5	18.7	132.6	128.77	1,458.1	2,661.1	3,040.9	2,920.6	120.23	25.292	
7,050.0	6,702.5	6,658.5	6,658.5	19.5	132.8	120.88	1,458.1	2,661.1	3,087.4	2,956.2	131.16	23.540	
7,086.6	6,708.4	6,664.4	6,664.4	20.1	133.0	113.82	1,458.1	2,661.1	3,121.9	2,982.1	139.79	22.332	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	6,666.1	6,666.1	20.4	133.0	110.95	1,458.1	2,661.1	3,134.6	2,991.8	142.83	21.947	
7,150.0	6,714.2	6,670.2	6,670.2	21.3	133.1	98.99	1,458.1	2,661.1	3,182.3	3,030.3	151.97	20.940	
7,185.0	6,715.0	6,671.0	6,671.0	21.9	133.1	89.77	1,458.1	2,661.1	3,215.8	3,061.1	154.74	20.782	
7,185.6	6,715.0	6,671.0	6,671.0	21.9	133.1	89.62	1,458.1	2,661.1	3,216.3	3,061.6	154.75	20.784	
7,200.0	6,715.0	6,671.0	6,671.0	22.2	133.1	89.62	1,458.1	2,661.1	3,230.2	3,075.1	155.03	20.836	
7,283.4	6,714.8	6,670.8	6,670.8	23.9	133.1	89.61	1,458.1	2,661.1	3,310.3	3,153.6	156.70	21.125	
7,300.0	6,714.8	6,670.8	6,670.8	24.2	133.1	89.61	1,458.1	2,661.1	3,326.2	3,169.1	157.03	21.181	
7,381.9	6,714.6	6,670.6	6,670.6	26.0	133.1	89.60	1,458.1	2,661.1	3,404.9	3,246.2	158.79	21.443	
7,400.0	6,714.6	6,670.6	6,670.6	26.4	133.1	89.60	1,458.1	2,661.1	3,422.4	3,263.2	159.18	21.500	
7,480.3	6,714.4	6,670.4	6,670.4	28.2	133.1	89.59	1,458.1	2,661.1	3,499.8	3,338.8	161.00	21.738	
7,500.0	6,714.4	6,670.4	6,670.4	28.7	133.1	89.59	1,458.1	2,661.1	3,518.8	3,357.4	161.44	21.796	
7,578.7	6,714.2	6,670.2	6,670.2	30.5	133.1	89.58	1,458.1	2,661.1	3,594.9	3,431.6	163.29	22.015	
7,600.0	6,714.2	6,670.2	6,670.2	31.0	133.1	89.57	1,458.1	2,661.1	3,615.5	3,451.7	163.79	22.073	
7,677.1	6,714.0	6,670.0	6,670.0	32.9	133.1	89.57	1,458.1	2,661.1	3,690.1	3,524.5	165.66	22.275	
7,700.0	6,714.0	6,670.0	6,670.0	33.4	133.1	89.56	1,458.1	2,661.1	3,712.3	3,546.1	166.22	22.334	
7,775.6	6,713.9	6,669.9	6,669.9	35.3	133.1	89.55	1,458.1	2,661.1	3,785.6	3,617.5	168.09	22.521	
7,800.0	6,713.8	6,669.8	6,669.8	35.9	133.1	89.55	1,458.1	2,661.1	3,809.3	3,640.6	168.70	22.580	
7,874.0	6,713.7	6,669.7	6,669.7	37.8	133.1	89.54	1,458.1	2,661.1	3,881.1	3,710.5	170.57	22.754	
7,900.0	6,713.6	6,669.6	6,669.6	38.4	133.1	89.54	1,458.1	2,661.1	3,906.4	3,735.2	171.22	22.815	
7,972.4	6,713.5	6,669.5	6,669.5	40.3	133.1	89.53	1,458.1	2,661.1	3,976.8	3,803.7	173.08	22.977	
8,000.0	6,713.4	6,669.4	6,669.4	41.0	133.1	89.53	1,458.1	2,661.1	4,003.7	3,829.9	173.79	23.038	
8,070.8	6,713.3	6,669.3	6,669.3	42.8	133.1	89.52	1,458.1	2,661.1	4,072.6	3,897.0	175.62	23.190	
8,100.0	6,713.2	6,669.2	6,669.2	43.6	133.1	89.52	1,458.1	2,661.1	4,101.1	3,924.7	176.38	23.251	
8,169.3	6,713.1	6,669.1	6,669.1	45.4	133.1	89.51	1,458.1	2,661.1	4,168.6	3,990.4	178.19	23.394	
8,200.0	6,713.0	6,669.0	6,669.0	46.2	133.1	89.50	1,458.1	2,661.1	4,198.6	4,019.6	179.00	23.456	
8,267.7	6,712.9	6,668.9	6,668.9	48.0	133.1	89.50	1,458.1	2,661.1	4,264.7	4,083.9	180.78	23.590	
8,300.0	6,712.8	6,668.8	6,668.8	48.8	133.1	89.49	1,458.1	2,661.1	4,296.2	4,114.6	181.63	23.653	
8,366.1	6,712.7	6,668.7	6,668.7	50.6	133.0	89.48	1,458.1	2,661.1	4,360.8	4,177.4	183.39	23.779	
8,400.0	6,712.6	6,668.6	6,668.6	51.5	133.0	89.48	1,458.1	2,661.1	4,394.0	4,209.7	184.29	23.842	
8,464.5	6,712.5	6,668.5	6,668.5	53.2	133.0	89.47	1,458.1	2,661.1	4,457.1	4,271.1	186.02	23.961	
8,500.0	6,712.4	6,668.4	6,668.4	54.1	133.0	89.47	1,458.1	2,661.1	4,491.8	4,304.8	186.96	24.025	
8,563.0	6,712.3	6,668.3	6,668.3	55.8	133.0	89.46	1,458.1	2,661.1	4,553.5	4,364.8	188.65	24.136	
8,600.0	6,712.3	6,668.3	6,668.3	56.8	133.0	89.46	1,458.1	2,661.1	4,589.7	4,400.1	189.65	24.201	
8,661.4	6,712.1	6,668.1	6,668.1	58.5	133.0	89.45	1,458.1	2,661.1	4,649.9	4,458.6	191.30	24.306	
8,700.0	6,712.1	6,668.1	6,668.1	59.5	133.0	89.45	1,458.1	2,661.1	4,687.8	4,495.4	192.35	24.372	
8,759.8	6,711.9	6,667.9	6,667.9	61.1	133.0	89.44	1,458.1	2,661.1	4,746.4	4,552.5	193.96	24.471	
8,800.0	6,711.9	6,667.9	6,667.9	62.2	133.0	89.43	1,458.1	2,661.1	4,785.9	4,590.8	195.05	24.536	
8,858.2	6,711.8	6,667.8	6,667.8	63.8	133.0	89.43	1,458.1	2,661.1	4,843.0	4,646.4	196.63	24.630	
8,900.0	6,711.7	6,667.7	6,667.7	64.9	133.0	89.42	1,458.1	2,661.1	4,884.0	4,686.3	197.77	24.696	
8,956.7	6,711.6	6,667.6	6,667.6	66.5	133.0	89.42	1,458.1	2,661.1	4,939.7	4,740.4	199.31	24.784	
9,000.0	6,711.5	6,667.5	6,667.5	67.6	133.0	89.41	1,458.1	2,661.1	4,982.3	4,781.8	200.49	24.851	
9,055.1	6,711.4	6,667.4	6,667.4	69.1	133.0	89.40	1,458.1	2,661.1	5,036.5	4,834.5	201.99	24.934	
9,100.0	6,711.3	6,667.3	6,667.3	70.4	133.0	89.40	1,458.1	2,661.1	5,080.6	4,877.4	203.22	25.001	
9,153.5	6,711.2	6,667.2	6,667.2	71.8	133.0	89.39	1,458.1	2,661.1	5,133.3	4,928.6	204.68	25.079	
9,200.0	6,711.1	6,667.1	6,667.1	73.1	133.0	89.39	1,458.1	2,661.1	5,179.0	4,973.0	205.95	25.147	
9,251.9	6,711.0	6,667.0	6,667.0	74.5	133.0	89.38	1,458.1	2,661.1	5,230.1	5,022.8	207.38	25.221	
9,300.0	6,710.9	6,666.9	6,666.9	75.8	133.0	89.38	1,458.1	2,661.1	5,277.4	5,068.7	208.69	25.288	
9,350.4	6,710.8	6,666.8	6,666.8	77.2	133.0	89.37	1,458.1	2,661.1	5,327.1	5,117.0	210.08	25.358	
9,400.0	6,710.7	6,666.7	6,666.7	78.6	133.0	89.36	1,458.1	2,661.1	5,375.9	5,164.5	211.44	25.426	
9,448.8	6,710.6	6,666.6	6,666.6	79.9	133.0	89.36	1,458.1	2,661.1	5,424.0	5,211.3	212.78	25.491	
9,500.0	6,710.5	6,666.5	6,666.5	81.3	133.0	89.35	1,458.1	2,661.1	5,474.5	5,260.3	214.19	25.559	
9,547.2	6,710.4	6,666.4	6,666.4	82.6	133.0	89.35	1,458.1	2,661.1	5,521.1	5,305.6	215.49	25.621	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #31-10 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,600.0	6,710.3	6,666.3	6,666.3	84.1	133.0	89.34	1,458.1	2,661.1	5,573.1	5,356.2	216.94	25.690	
9,645.6	6,710.2	6,666.2	6,666.2	85.3	133.0	89.34	1,458.1	2,661.1	5,618.1	5,399.9	218.20	25.748	
9,700.0	6,710.1	6,666.1	6,666.1	86.8	133.0	89.33	1,458.1	2,661.1	5,671.8	5,452.1	219.70	25.816	
9,744.1	6,710.0	6,666.0	6,666.0	88.1	133.0	89.32	1,458.1	2,661.1	5,715.3	5,494.4	220.91	25.871	
9,800.0	6,709.9	6,665.9	6,665.9	89.6	133.0	89.32	1,458.1	2,661.1	5,770.5	5,548.0	222.46	25.940	
9,842.5	6,709.9	6,665.9	6,665.9	90.8	133.0	89.31	1,458.1	2,661.1	5,812.4	5,588.8	223.63	25.991	
9,900.0	6,709.7	6,665.7	6,665.7	92.4	133.0	89.31	1,458.1	2,661.1	5,869.2	5,644.0	225.22	26.060	
9,940.9	6,709.7	6,665.7	6,665.7	93.5	133.0	89.30	1,458.1	2,661.1	5,909.6	5,683.3	226.35	26.109	
10,000.0	6,709.6	6,665.6	6,665.6	95.1	133.0	89.30	1,458.1	2,661.1	5,968.0	5,740.0	227.98	26.177	
10,039.3	6,709.5	6,665.5	6,665.5	96.2	133.0	89.29	1,458.1	2,661.1	6,006.9	5,777.8	229.07	26.223	
10,100.0	6,709.4	6,665.4	6,665.4	97.9	133.0	89.28	1,458.1	2,661.1	6,066.8	5,836.1	230.75	26.292	
10,137.8	6,709.3	6,665.3	6,665.3	98.9	133.0	89.28	1,458.1	2,661.1	6,104.2	5,872.4	231.80	26.334	
10,200.0	6,709.2	6,665.2	6,665.2	100.7	133.0	89.27	1,458.1	2,661.1	6,165.7	5,932.2	233.52	26.403	
10,236.2	6,709.1	6,665.1	6,665.1	101.7	133.0	89.27	1,458.1	2,661.1	6,201.5	5,967.0	234.52	26.443	
10,300.0	6,709.0	6,665.0	6,665.0	103.4	133.0	89.26	1,458.1	2,661.1	6,264.6	6,028.3	236.29	26.512	
10,334.6	6,708.9	6,664.9	6,664.9	104.4	133.0	89.26	1,458.1	2,661.1	6,298.9	6,061.6	237.25	26.549	
10,400.0	6,708.8	6,664.8	6,664.8	106.2	133.0	89.25	1,458.1	2,661.1	6,363.6	6,124.5	239.06	26.619	
10,433.0	6,708.7	6,664.7	6,664.7	107.1	133.0	89.25	1,458.1	2,661.1	6,396.3	6,156.3	239.98	26.653	
10,500.0	6,708.6	6,664.6	6,664.6	109.0	133.0	89.24	1,458.1	2,661.1	6,462.5	6,220.7	241.84	26.722	
10,531.5	6,708.5	6,664.5	6,664.5	109.9	133.0	89.23	1,458.1	2,661.1	6,493.7	6,251.0	242.71	26.755	
10,600.0	6,708.4	6,664.4	6,664.4	111.8	133.0	89.23	1,458.1	2,661.1	6,561.5	6,316.9	244.62	26.824	
10,629.9	6,708.4	6,664.4	6,664.4	112.6	133.0	89.22	1,458.1	2,661.1	6,591.1	6,345.7	245.45	26.854	
10,700.0	6,708.2	6,664.2	6,664.2	114.6	133.0	89.22	1,458.1	2,661.1	6,660.6	6,413.2	247.39	26.923	
10,728.3	6,708.2	6,664.2	6,664.2	115.3	133.0	89.21	1,458.1	2,661.1	6,688.6	6,440.4	248.18	26.951	
10,800.0	6,708.0	6,664.0	6,664.0	117.3	133.0	89.20	1,458.1	2,661.1	6,759.6	6,509.4	250.17	27.020	
10,826.7	6,708.0	6,664.0	6,664.0	118.1	133.0	89.20	1,458.1	2,661.1	6,786.1	6,535.2	250.92	27.045	
10,900.0	6,707.8	6,663.8	6,663.8	120.1	132.9	89.19	1,458.1	2,661.1	6,858.7	6,605.7	252.95	27.114	
10,925.2	6,707.8	6,663.8	6,663.8	120.8	132.9	89.19	1,458.1	2,661.1	6,883.6	6,630.0	253.65	27.138	
11,000.0	6,707.6	6,663.6	6,663.6	122.9	132.9	89.18	1,458.1	2,661.1	6,957.8	6,702.1	255.74	27.207	
11,023.6	6,707.6	6,663.6	6,663.6	123.6	132.9	89.18	1,458.1	2,661.1	6,981.2	6,724.8	256.39	27.229	
11,100.0	6,707.5	6,663.5	6,663.5	125.7	132.9	89.17	1,458.1	2,661.1	7,057.0	6,798.4	258.52	27.298	
11,122.0	6,707.4	6,663.4	6,663.4	126.3	132.9	89.17	1,458.1	2,661.1	7,078.8	6,819.7	259.13	27.317	
11,200.0	6,707.3	6,663.3	6,663.3	128.5	132.9	89.16	1,458.1	2,661.1	7,156.1	6,894.8	261.30	27.386	
11,220.4	6,707.2	6,663.2	6,663.2	129.0	132.9	89.16	1,458.1	2,661.1	7,176.4	6,914.5	261.87	27.404	
11,300.0	6,707.1	6,663.1	6,663.1	131.3	132.9	89.15	1,458.1	2,661.1	7,255.3	6,991.2	264.09	27.473	
11,318.9	6,707.0	6,663.0	6,663.0	131.8	132.9	89.15	1,458.1	2,661.1	7,274.0	7,009.4	264.61	27.489	
11,400.0	6,706.9	6,662.9	6,662.9	134.0	132.9	89.14	1,458.1	2,661.1	7,354.5	7,087.6	266.87	27.558	
11,417.3	6,706.9	6,662.9	6,662.9	134.5	132.9	89.13	1,458.1	2,661.1	7,371.7	7,104.3	267.35	27.573	
11,500.0	6,706.7	6,662.7	6,662.7	136.8	132.9	89.13	1,458.1	2,661.1	7,453.7	7,184.1	269.66	27.641	
11,515.7	6,706.7	6,662.7	6,662.7	137.3	132.9	89.12	1,458.1	2,661.1	7,469.3	7,199.2	270.10	27.654	
11,600.0	6,706.5	6,662.5	6,662.5	139.6	132.9	89.11	1,458.1	2,661.1	7,553.0	7,280.5	272.45	27.723	
11,614.1	6,706.5	6,662.5	6,662.5	140.0	132.9	89.11	1,458.1	2,661.1	7,567.0	7,294.2	272.84	27.734	
11,700.0	6,706.3	6,662.3	6,662.3	142.4	132.9	89.10	1,458.1	2,661.1	7,652.2	7,377.0	275.23	27.803	
11,712.6	6,706.3	6,662.3	6,662.3	142.8	132.9	89.10	1,458.1	2,661.1	7,664.7	7,389.1	275.58	27.813	
11,800.0	6,706.1	6,662.1	6,662.1	145.2	132.9	89.09	1,458.1	2,661.1	7,751.5	7,473.5	278.02	27.881	
11,811.0	6,706.1	6,662.1	6,662.1	145.5	132.9	89.09	1,458.1	2,661.1	7,762.5	7,484.1	278.33	27.889	
11,900.0	6,705.9	6,661.9	6,661.9	148.0	132.9	89.08	1,458.1	2,661.1	7,850.8	7,570.0	280.81	27.958	
11,909.4	6,705.9	6,661.9	6,661.9	148.3	132.9	89.08	1,458.1	2,661.1	7,860.2	7,579.1	281.08	27.965	
12,000.0	6,705.8	6,661.8	6,661.8	150.8	132.9	89.07	1,458.1	2,661.1	7,950.2	7,666.6	283.60	28.033	
12,007.8	6,705.7	6,661.7	6,661.7	151.0	132.9	89.07	1,458.1	2,661.1	7,958.0	7,674.1	283.82	28.039	
12,100.0	6,705.6	6,661.6	6,661.6	153.6	132.9	89.06	1,458.1	2,661.1	8,049.5	7,763.1	286.39	28.107	
12,106.3	6,705.6	6,661.6	6,661.6	153.8	132.9	89.06	1,458.1	2,661.1	8,055.7	7,769.2	286.57	28.111	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #31-10 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,200.0	6,705.4	6,661.4	6,661.4	156.4	132.9	89.05	1,458.1	2,661.1	8,148.9	7,859.7	289.18	28.179	
12,204.7	6,705.4	6,661.4	6,661.4	156.5	132.9	89.05	1,458.1	2,661.1	8,153.5	7,864.2	289.32	28.182	
12,300.0	6,705.2	6,661.2	6,661.2	159.2	132.9	89.04	1,458.1	2,661.1	8,248.2	7,956.3	291.98	28.250	
12,303.1	6,705.2	6,661.2	6,661.2	159.3	132.9	89.04	1,458.1	2,661.1	8,251.3	7,959.3	292.06	28.252	
12,400.0	6,705.0	6,661.0	6,661.0	162.0	132.9	89.03	1,458.1	2,661.1	8,347.6	8,052.8	294.77	28.319	
12,401.5	6,705.0	6,661.0	6,661.0	162.0	132.9	89.03	1,458.1	2,661.1	8,349.2	8,054.3	294.81	28.320	
12,500.0	6,704.8	6,660.8	6,660.8	164.8	132.9	89.01	1,458.1	2,661.1	8,447.0	8,149.5	297.56	28.388	
12,598.4	6,704.6	6,660.6	6,660.6	167.5	132.9	89.00	1,458.1	2,661.1	8,544.8	8,244.5	300.31	28.454	
12,600.0	6,704.6	6,660.6	6,660.6	167.6	132.9	89.00	1,458.1	2,661.1	8,546.4	8,246.1	300.35	28.455	
12,696.8	6,704.4	6,660.4	6,660.4	170.3	132.9	88.99	1,458.1	2,661.1	8,642.7	8,339.6	303.06	28.518	
12,700.0	6,704.4	6,660.4	6,660.4	170.4	132.9	88.99	1,458.1	2,661.1	8,645.9	8,342.7	303.15	28.520	
12,795.2	6,704.3	6,660.3	6,660.3	173.0	132.9	88.98	1,458.1	2,661.1	8,740.6	8,434.8	305.81	28.582	
12,800.0	6,704.2	6,660.2	6,660.2	173.2	132.9	88.98	1,458.1	2,661.1	8,745.3	8,439.4	305.94	28.585	
12,893.7	6,704.1	6,660.1	6,660.1	175.8	132.9	88.97	1,458.1	2,661.1	8,838.5	8,529.9	308.56	28.644	
12,900.0	6,704.1	6,660.1	6,660.1	176.0	132.9	88.97	1,458.1	2,661.1	8,844.8	8,536.0	308.73	28.648	
12,992.1	6,703.9	6,659.9	6,659.9	178.5	132.9	88.96	1,458.1	2,661.1	8,936.4	8,625.1	311.31	28.706	
13,000.0	6,703.9	6,659.9	6,659.9	178.8	132.9	88.96	1,458.1	2,661.1	8,944.2	8,632.7	311.53	28.711	
13,090.5	6,703.7	6,659.7	6,659.7	181.3	132.9	88.95	1,458.1	2,661.1	9,034.3	8,720.2	314.06	28.766	
13,100.0	6,703.7	6,659.7	6,659.7	181.6	132.9	88.95	1,458.1	2,661.1	9,043.7	8,729.4	314.32	28.772	
13,188.9	6,703.5	6,659.5	6,659.5	184.0	132.9	88.94	1,458.1	2,661.1	9,132.2	8,815.4	316.81	28.825	
13,200.0	6,703.5	6,659.5	6,659.5	184.4	132.9	88.94	1,458.1	2,661.1	9,143.2	8,826.1	317.12	28.832	
13,287.4	6,703.3	6,659.3	6,659.3	186.8	132.9	88.93	1,458.1	2,661.1	9,230.1	8,910.6	319.56	28.884	
13,300.0	6,703.3	6,659.3	6,659.3	187.2	132.9	88.93	1,458.1	2,661.1	9,242.7	8,922.8	319.91	28.891	
13,385.8	6,703.2	6,659.2	6,659.2	189.6	132.9	88.92	1,458.1	2,661.1	9,328.1	9,005.8	322.31	28.941	
13,400.0	6,703.1	6,659.1	6,659.1	190.0	132.9	88.92	1,458.1	2,661.1	9,342.2	9,019.5	322.71	28.949	
13,484.2	6,703.0	6,659.0	6,659.0	192.3	132.9	88.91	1,458.1	2,661.1	9,426.0	9,101.0	325.07	28.997	
13,500.0	6,702.9	6,658.9	6,658.9	192.8	132.9	88.90	1,458.1	2,661.1	9,441.7	9,116.2	325.51	29.006	
13,582.6	6,702.8	6,658.8	6,658.8	195.1	132.8	88.90	1,458.1	2,661.1	9,524.0	9,196.2	327.82	29.053	
13,600.0	6,702.8	6,658.8	6,658.8	195.6	132.8	88.89	1,458.1	2,661.1	9,541.2	9,212.9	328.30	29.062	
13,681.1	6,702.6	6,658.6	6,658.6	197.8	132.8	88.88	1,458.1	2,661.1	9,622.0	9,291.4	330.57	29.107	
13,700.0	6,702.6	6,658.6	6,658.6	198.4	132.8	88.88	1,458.1	2,661.1	9,640.8	9,309.7	331.10	29.118	
13,779.5	6,702.4	6,658.4	6,658.4	200.6	132.8	88.87	1,458.1	2,661.1	9,719.9	9,386.6	333.32	29.161	
13,800.0	6,702.4	6,658.4	6,658.4	201.2	132.8	88.87	1,458.1	2,661.1	9,740.3	9,406.4	333.90	29.172	
13,877.9	6,702.2	6,658.2	6,658.2	203.3	132.8	88.86	1,458.1	2,661.1	9,817.9	9,481.8	336.08	29.213	
13,900.0	6,702.2	6,658.2	6,658.2	204.0	132.8	88.86	1,458.1	2,661.1	9,839.9	9,503.2	336.69	29.225	
13,976.3	6,702.1	6,658.1	6,658.1	206.1	132.8	88.85	1,458.1	2,661.1	9,915.9	9,577.1	338.83	29.265	
14,000.0	6,702.0	6,658.0	6,658.0	206.8	132.8	88.85	1,458.1	2,661.1	9,939.5	9,600.0	339.49	29.278	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	84.39	260.3	2,650.3	2,663.1				
98.4	98.4	94.4	94.4	0.1	0.0	84.39	260.3	2,650.3	2,663.1	2,663.0	0.10	N/A	
100.0	100.0	96.0	96.0	0.1	0.0	84.39	260.3	2,650.3	2,663.1	2,663.0	0.10	N/A	
196.8	196.8	192.8	192.8	0.3	1.0	84.39	260.3	2,650.3	2,663.1	2,661.8	1.30	2,041.627	
200.0	200.0	196.0	196.0	0.3	1.0	84.39	260.3	2,650.3	2,663.1	2,661.7	1.35	1,979.954	
295.3	295.3	291.3	291.3	0.5	3.2	84.39	260.3	2,650.3	2,663.1	2,659.4	3.72	715.988	
300.0	300.0	296.0	296.0	0.5	3.3	84.39	260.3	2,650.3	2,663.1	2,659.2	3.84	693.566	
393.7	393.7	389.7	389.7	0.8	5.3	84.39	260.3	2,650.3	2,663.1	2,657.1	6.01	443.168	
400.0	400.0	396.0	396.0	0.8	5.4	84.39	260.3	2,650.3	2,663.1	2,656.9	6.15	432.710	
492.1	492.1	488.1	488.1	1.0	7.3	84.39	260.3	2,650.3	2,663.1	2,654.8	8.24	323.003	
500.0	500.0	496.0	496.0	1.0	7.4	84.39	260.3	2,650.3	2,663.1	2,654.7	8.42	316.156	
590.5	590.5	586.5	586.5	1.2	9.3	84.39	260.3	2,650.3	2,663.1	2,652.6	10.46	254.480	
600.0	600.0	596.0	596.0	1.2	9.5	84.39	260.3	2,650.3	2,663.1	2,652.4	10.68	249.404	
689.0	689.0	685.0	685.0	1.4	11.3	84.39	260.3	2,650.3	2,663.1	2,650.4	12.68	210.058	
700.0	700.0	696.0	696.0	1.4	11.5	84.39	260.3	2,650.3	2,663.1	2,650.2	12.93	206.031	
787.4	787.4	783.4	783.4	1.6	13.2	84.39	260.3	2,650.3	2,663.1	2,648.2	14.89	178.886	
800.0	800.0	796.0	796.0	1.7	13.5	84.39	260.3	2,650.3	2,663.1	2,647.9	15.17	175.552	
885.8	885.8	881.8	881.8	1.9	15.2	84.39	260.3	2,650.3	2,663.1	2,646.0	17.09	155.791	
900.0	900.0	896.0	896.0	1.9	15.5	84.39	260.3	2,650.3	2,663.1	2,645.7	17.41	152.947	
984.2	984.2	980.2	980.2	2.1	17.2	84.39	260.3	2,650.3	2,663.1	2,643.8	19.30	137.988	
1,000.0	1,000.0	996.0	996.0	2.1	17.5	84.39	260.3	2,650.3	2,663.1	2,643.4	19.65	135.510	
1,082.7	1,082.7	1,078.7	1,078.7	2.3	19.2	84.39	260.3	2,650.3	2,663.1	2,641.6	21.50	123.842	
1,100.0	1,100.0	1,096.0	1,096.0	2.3	19.5	84.39	260.3	2,650.3	2,663.1	2,641.2	21.89	121.647	
1,181.1	1,181.1	1,177.1	1,177.1	2.5	21.2	55.69	260.3	2,650.3	2,662.4	2,638.7	23.70	112.328	
1,200.0	1,200.0	1,196.0	1,196.0	2.6	21.6	55.71	260.3	2,650.3	2,662.1	2,638.0	24.12	110.354	
1,279.5	1,279.4	1,275.4	1,275.4	2.7	23.2	55.82	260.3	2,650.3	2,659.9	2,634.0	25.89	102.750	
1,300.0	1,299.8	1,295.8	1,295.8	2.8	23.6	55.85	260.3	2,650.3	2,659.2	2,632.8	26.34	100.956	
1,377.9	1,377.5	1,373.5	1,373.5	3.0	25.1	56.03	260.3	2,650.3	2,655.5	2,627.4	28.06	94.641	
1,400.0	1,399.5	1,395.5	1,395.5	3.0	25.6	56.09	260.3	2,650.3	2,654.3	2,625.7	28.54	92.993	
1,476.4	1,475.3	1,471.3	1,471.3	3.2	27.1	56.33	260.3	2,650.3	2,649.2	2,619.0	30.22	87.668	
1,500.0	1,498.7	1,494.7	1,494.7	3.3	27.6	56.42	260.3	2,650.3	2,647.5	2,616.7	30.73	86.139	
1,574.8	1,572.6	1,568.6	1,568.6	3.5	29.1	56.73	260.3	2,650.3	2,641.1	2,608.8	32.37	81.589	
1,600.0	1,597.5	1,593.5	1,593.5	3.5	29.6	56.85	260.3	2,650.3	2,638.8	2,605.9	32.92	80.158	
1,673.2	1,669.4	1,665.4	1,665.4	3.7	31.0	57.22	260.3	2,650.3	2,631.3	2,596.7	34.52	76.221	
1,700.1	1,695.8	1,691.8	1,691.8	3.8	31.5	57.37	260.3	2,650.3	2,628.3	2,593.2	35.11	74.865	
1,771.6	1,765.7	1,761.7	1,761.7	4.1	32.9	57.64	260.3	2,650.3	2,620.1	2,583.4	36.73	71.344	
1,800.0	1,793.4	1,789.4	1,789.4	4.2	33.5	57.75	260.3	2,650.3	2,616.9	2,579.6	37.37	70.033	
1,870.1	1,862.0	1,858.0	1,858.0	4.4	34.9	58.01	260.3	2,650.3	2,609.1	2,570.1	38.97	66.957	
1,900.0	1,891.3	1,887.3	1,887.3	4.5	35.5	58.13	260.3	2,650.3	2,605.7	2,566.1	39.65	65.720	
1,968.5	1,958.3	1,954.3	1,954.3	4.8	36.8	58.39	260.3	2,650.3	2,598.1	2,556.9	41.22	63.027	
2,000.0	1,989.1	1,985.1	1,985.1	4.9	37.4	58.51	260.3	2,650.3	2,594.6	2,552.7	41.95	61.857	
2,066.9	2,054.5	2,050.5	2,050.5	5.1	38.8	58.77	260.3	2,650.3	2,587.3	2,543.8	43.49	59.491	
2,100.0	2,086.9	2,082.9	2,082.9	5.3	39.4	58.90	260.3	2,650.3	2,583.7	2,539.4	44.25	58.382	
2,165.3	2,150.8	2,146.8	2,146.8	5.5	40.7	59.15	260.3	2,650.3	2,576.5	2,530.8	45.77	56.294	
2,200.0	2,184.7	2,180.7	2,180.7	5.6	41.4	59.29	260.3	2,650.3	2,572.8	2,526.2	46.57	55.241	
2,263.8	2,247.1	2,243.1	2,243.1	5.9	42.6	59.54	260.3	2,650.3	2,565.9	2,517.9	48.06	53.392	
2,300.0	2,282.5	2,278.5	2,278.5	6.0	43.3	59.68	260.3	2,650.3	2,562.1	2,513.2	48.90	52.392	
2,362.2	2,343.3	2,339.3	2,339.3	6.3	44.6	59.93	260.3	2,650.3	2,555.5	2,505.1	50.36	50.749	
2,400.0	2,380.3	2,376.3	2,376.3	6.5	45.3	60.08	260.3	2,650.3	2,551.5	2,500.2	51.24	49.796	
2,460.6	2,439.6	2,435.6	2,435.6	6.7	46.5	60.32	260.3	2,650.3	2,545.1	2,492.4	52.66	48.331	
2,500.0	2,478.1	2,474.1	2,474.1	6.9	47.3	60.48	260.3	2,650.3	2,541.0	2,487.4	53.58	47.422	
2,559.0	2,535.9	2,531.9	2,531.9	7.1	48.4	60.71	260.3	2,650.3	2,534.8	2,479.9	54.97	46.114	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,571.9	2,571.9	7.3	49.2	60.88	260.3	2,650.3	2,530.6	2,474.7	55.93	45.245	
2,657.5	2,632.2	2,628.2	2,628.2	7.5	50.4	61.11	260.3	2,650.3	2,524.7	2,467.4	57.29	44.073	
2,700.0	2,673.8	2,669.8	2,669.8	7.7	51.2	61.29	260.3	2,650.3	2,520.4	2,462.1	58.29	43.241	
2,755.9	2,728.4	2,724.4	2,724.4	7.9	52.3	61.51	260.3	2,650.3	2,514.7	2,455.1	59.61	42.189	
2,800.0	2,771.6	2,767.6	2,767.6	8.1	53.2	61.69	260.3	2,650.3	2,510.3	2,449.6	60.65	41.392	
2,854.3	2,824.7	2,820.7	2,820.7	8.3	54.3	61.92	260.3	2,650.3	2,504.9	2,442.9	61.93	40.445	
2,900.0	2,869.4	2,865.4	2,865.4	8.5	55.1	62.11	260.3	2,650.3	2,500.3	2,437.3	63.01	39.680	
2,952.7	2,921.0	2,917.0	2,917.0	8.8	56.2	62.33	260.3	2,650.3	2,495.1	2,430.9	64.26	38.827	
3,000.0	2,967.2	2,963.2	2,963.2	9.0	57.1	62.52	260.3	2,650.3	2,490.5	2,425.1	65.38	38.091	
3,051.2	3,017.3	3,013.3	3,013.3	9.2	58.1	62.74	260.3	2,650.3	2,485.5	2,418.9	66.60	37.322	
3,100.0	3,065.0	3,061.0	3,061.0	9.4	59.1	62.94	260.3	2,650.3	2,480.8	2,413.0	67.76	36.614	
3,149.6	3,113.5	3,109.5	3,109.5	9.6	60.1	63.15	260.3	2,650.3	2,476.0	2,407.1	68.94	35.918	
3,200.0	3,162.8	3,158.8	3,158.8	9.8	61.1	63.36	260.3	2,650.3	2,471.2	2,401.1	70.13	35.236	
3,248.0	3,209.8	3,205.8	3,205.8	10.0	62.0	63.57	260.3	2,650.3	2,466.7	2,395.4	71.28	34.607	
3,300.0	3,260.6	3,256.6	3,256.6	10.2	63.0	63.79	260.3	2,650.3	2,461.8	2,389.3	72.52	33.949	
3,346.4	3,306.1	3,302.1	3,302.1	10.5	63.9	63.99	260.3	2,650.3	2,457.5	2,383.9	73.62	33.379	
3,400.0	3,358.5	3,354.5	3,354.5	10.7	65.0	64.22	260.3	2,650.3	2,452.5	2,377.6	74.90	32.744	
3,444.9	3,402.3	3,398.3	3,398.3	10.9	65.9	64.41	260.3	2,650.3	2,448.4	2,372.5	75.97	32.228	
3,500.0	3,456.3	3,452.3	3,452.3	11.1	67.0	64.65	260.3	2,650.3	2,443.4	2,366.1	77.29	31.614	
3,543.3	3,498.6	3,494.6	3,494.6	11.3	67.8	64.84	260.3	2,650.3	2,439.5	2,361.2	78.32	31.146	
3,600.0	3,554.1	3,550.1	3,550.1	11.5	68.9	65.08	260.3	2,650.3	2,434.4	2,354.7	79.68	30.552	
3,641.7	3,594.9	3,590.9	3,590.9	11.7	69.7	65.26	260.3	2,650.3	2,430.7	2,350.0	80.68	30.128	
3,700.0	3,651.9	3,647.9	3,647.9	12.0	70.9	65.52	260.3	2,650.3	2,425.6	2,343.5	82.07	29.553	
3,740.1	3,691.2	3,687.2	3,687.2	12.2	71.7	65.70	260.3	2,650.3	2,422.1	2,339.0	83.04	29.169	
3,800.0	3,749.7	3,745.7	3,745.7	12.4	72.9	65.96	260.3	2,650.3	2,416.9	2,332.4	84.47	28.612	
3,838.6	3,787.4	3,783.4	3,783.4	12.6	73.6	66.13	260.3	2,650.3	2,413.5	2,328.1	85.40	28.263	
3,900.0	3,847.5	3,843.5	3,843.5	12.9	74.8	66.40	260.3	2,650.3	2,408.3	2,321.4	86.87	27.723	
3,937.0	3,883.7	3,879.7	3,879.7	13.0	75.5	66.57	260.3	2,650.3	2,405.2	2,317.4	87.76	27.406	
4,000.0	3,945.3	3,941.3	3,941.3	13.3	76.8	66.85	260.3	2,650.3	2,399.9	2,310.6	89.27	26.882	
4,035.4	3,980.0	3,976.0	3,976.0	13.5	77.5	67.01	260.3	2,650.3	2,397.0	2,306.8	90.13	26.596	
4,060.0	4,004.0	4,000.0	4,000.0	13.6	78.0	67.12	260.3	2,650.3	2,394.9	2,304.2	90.72	26.400	
4,100.0	4,043.2	4,039.2	4,039.2	13.7	78.8	67.24	260.3	2,650.3	2,391.8	2,300.1	91.69	26.085	
4,133.8	4,076.5	4,072.5	4,072.5	13.8	79.4	67.33	260.3	2,650.3	2,389.3	2,296.8	92.49	25.832	
4,200.0	4,141.6	4,137.6	4,137.6	14.0	80.7	67.49	260.3	2,650.3	2,384.8	2,290.8	94.06	25.355	
4,232.3	4,173.5	4,169.5	4,169.5	14.1	81.4	67.57	260.3	2,650.3	2,382.9	2,288.1	94.81	25.134	
4,300.0	4,240.6	4,236.6	4,236.6	14.3	82.7	67.71	260.3	2,650.3	2,379.4	2,283.0	96.39	24.686	
4,330.7	4,271.1	4,267.1	4,267.1	14.4	83.3	67.76	260.3	2,650.3	2,378.0	2,280.9	97.09	24.493	
4,400.0	4,340.0	4,336.0	4,336.0	14.5	84.7	67.87	260.3	2,650.3	2,375.3	2,276.6	98.67	24.072	
4,429.1	4,369.0	4,365.0	4,365.0	14.6	85.3	67.91	260.3	2,650.3	2,374.3	2,275.0	99.33	23.904	
4,500.0	4,439.7	4,435.7	4,435.7	14.8	86.7	67.98	260.3	2,650.3	2,372.5	2,271.6	100.91	23.510	
4,527.5	4,467.2	4,463.2	4,463.2	14.8	87.3	68.01	260.3	2,650.3	2,372.0	2,270.4	101.52	23.365	
4,600.0	4,539.7	4,535.7	4,535.7	14.9	88.7	68.04	260.3	2,650.3	2,371.1	2,268.0	103.10	22.997	
4,626.0	4,565.6	4,561.6	4,561.6	15.0	89.3	68.05	260.3	2,650.3	2,370.9	2,267.2	103.66	22.871	
4,660.2	4,599.8	4,595.8	4,595.8	15.0	90.0	96.78	260.3	2,650.3	2,370.8	2,269.4	101.44	23.371	
4,700.0	4,639.6	4,635.6	4,635.6	15.0	90.8	96.78	260.3	2,650.3	2,370.8	2,268.5	102.31	23.172	
4,724.4	4,664.0	4,660.0	4,660.0	15.1	91.2	96.78	260.3	2,650.3	2,370.8	2,268.0	102.85	23.051	
4,800.0	4,739.6	4,735.6	4,735.6	15.2	92.8	96.78	260.3	2,650.3	2,370.8	2,266.3	104.52	22.684	
4,822.8	4,762.5	4,758.5	4,758.5	15.2	93.2	96.78	260.3	2,650.3	2,370.8	2,265.8	105.02	22.575	
4,900.0	4,839.6	4,835.6	4,835.6	15.3	94.8	96.78	260.3	2,650.3	2,370.8	2,264.1	106.72	22.215	
4,921.2	4,860.9	4,856.9	4,856.9	15.4	95.2	96.78	260.3	2,650.3	2,370.8	2,263.6	107.19	22.118	
5,000.0	4,939.6	4,935.6	4,935.6	15.5	96.8	96.78	260.3	2,650.3	2,370.8	2,261.9	108.92	21.766	
5,019.7	4,959.3	4,955.3	4,955.3	15.5	97.2	96.78	260.3	2,650.3	2,370.8	2,261.5	109.36	21.679	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,035.6	5,035.6	15.6	98.8	96.78	260.3	2,650.3	2,370.8	2,259.7	111.13	21.334	
5,118.1	5,057.7	5,053.7	5,053.7	15.7	99.2	96.78	260.3	2,650.3	2,370.8	2,259.3	111.53	21.257	
5,200.0	5,139.6	5,135.6	5,135.6	15.8	100.8	96.78	260.3	2,650.3	2,370.8	2,257.5	113.34	20.918	
5,216.5	5,156.2	5,152.2	5,152.2	15.8	101.1	96.78	260.3	2,650.3	2,370.8	2,257.1	113.70	20.851	
5,300.0	5,239.6	5,235.6	5,235.6	15.9	102.8	96.78	260.3	2,650.3	2,370.8	2,255.3	115.54	20.519	
5,314.9	5,254.6	5,250.6	5,250.6	16.0	103.1	96.78	260.3	2,650.3	2,370.8	2,254.9	115.87	20.460	
5,400.0	5,339.6	5,335.6	5,335.6	16.1	104.8	96.78	260.3	2,650.3	2,370.8	2,253.1	117.75	20.134	
5,413.4	5,353.0	5,349.0	5,349.0	16.1	105.1	96.78	260.3	2,650.3	2,370.8	2,252.8	118.05	20.083	
5,500.0	5,439.6	5,435.6	5,435.6	16.3	106.8	96.78	260.3	2,650.3	2,370.8	2,250.9	119.96	19.763	
5,511.8	5,451.4	5,447.4	5,447.4	16.3	107.1	96.78	260.3	2,650.3	2,370.8	2,250.6	120.22	19.720	
5,600.0	5,539.6	5,535.6	5,535.6	16.4	108.9	96.78	260.3	2,650.3	2,370.8	2,248.6	122.17	19.405	
5,610.2	5,549.9	5,545.9	5,545.9	16.4	109.1	96.78	260.3	2,650.3	2,370.8	2,248.4	122.40	19.370	
5,700.0	5,639.6	5,635.6	5,635.6	16.6	110.9	96.78	260.3	2,650.3	2,370.8	2,246.4	124.38	19.061	
5,708.6	5,648.3	5,644.3	5,644.3	16.6	111.0	96.78	260.3	2,650.3	2,370.8	2,246.2	124.58	19.031	
5,800.0	5,739.6	5,735.6	5,735.6	16.7	112.9	96.78	260.3	2,650.3	2,370.8	2,244.2	126.60	18.728	
5,807.1	5,746.7	5,742.7	5,742.7	16.8	113.0	96.78	260.3	2,650.3	2,370.8	2,244.1	126.75	18.704	
5,900.0	5,839.6	5,835.6	5,835.6	16.9	114.9	96.78	260.3	2,650.3	2,370.8	2,242.0	128.81	18.406	
5,905.5	5,845.1	5,841.1	5,841.1	16.9	115.0	96.78	260.3	2,650.3	2,370.8	2,241.9	128.93	18.388	
6,000.0	5,939.6	5,935.6	5,935.6	17.1	116.9	96.78	260.3	2,650.3	2,370.8	2,239.8	131.02	18.095	
6,003.9	5,943.6	5,939.6	5,939.6	17.1	117.0	96.78	260.3	2,650.3	2,370.8	2,239.7	131.11	18.083	
6,059.2	5,998.8	5,994.8	5,994.8	17.2	118.1	96.78	260.3	2,650.3	2,370.8	2,238.5	132.33	17.916 CC	
6,100.0	6,039.6	6,035.6	6,035.6	17.2	118.9	-173.21	260.3	2,650.3	2,372.0	2,236.6	135.41	17.517 ES	
6,102.3	6,042.0	6,038.0	6,038.0	17.2	119.0	-173.21	260.3	2,650.3	2,372.1	2,236.7	135.44	17.515 SF	
6,150.0	6,089.4	6,085.4	6,085.4	17.3	119.9	-173.18	260.3	2,650.3	2,376.5	2,240.9	135.61	17.525	
6,200.0	6,138.7	6,134.7	6,134.7	17.3	120.9	-173.13	260.3	2,650.3	2,384.5	2,249.4	135.14	17.645	
6,200.8	6,139.5	6,135.5	6,135.5	17.3	120.9	-173.13	260.3	2,650.3	2,384.7	2,249.5	135.13	17.647	
6,250.0	6,187.4	6,183.4	6,183.4	17.3	121.9	-173.05	260.3	2,650.3	2,395.9	2,261.9	134.00	17.881	
6,299.2	6,234.4	6,230.4	6,230.4	17.4	122.8	-172.94	260.3	2,650.3	2,410.4	2,278.2	132.20	18.232	
6,300.0	6,235.1	6,231.1	6,231.1	17.4	122.8	-172.94	260.3	2,650.3	2,410.7	2,278.5	132.17	18.239	
6,350.0	6,281.7	6,277.7	6,277.7	17.4	123.8	-172.80	260.3	2,650.3	2,428.7	2,299.0	129.67	18.730	
6,397.6	6,324.8	6,320.8	6,320.8	17.3	124.6	-172.64	260.3	2,650.3	2,448.8	2,322.1	126.66	19.334	
6,400.0	6,326.9	6,322.9	6,322.9	17.3	124.7	-172.63	260.3	2,650.3	2,449.9	2,323.4	126.49	19.367	
6,450.0	6,370.5	6,366.5	6,366.5	17.3	125.6	-172.41	260.3	2,650.3	2,474.1	2,351.5	122.67	20.169	
6,496.0	6,409.1	6,405.1	6,405.1	17.3	126.3	-172.17	260.3	2,650.3	2,499.1	2,380.5	118.59	21.074	
6,500.0	6,412.3	6,408.3	6,408.3	17.3	126.4	-172.15	260.3	2,650.3	2,501.4	2,383.2	118.22	21.159	
6,550.0	6,452.1	6,448.1	6,448.1	17.3	127.2	-171.82	260.3	2,650.3	2,531.5	2,418.3	113.18	22.368	
6,594.5	6,485.6	6,481.6	6,481.6	17.3	127.9	-171.47	260.3	2,650.3	2,560.5	2,452.3	108.23	23.657	
6,600.0	6,489.7	6,485.7	6,485.7	17.3	128.0	-171.42	260.3	2,650.3	2,564.3	2,456.7	107.59	23.833	
6,650.0	6,524.9	6,520.9	6,520.9	17.2	128.7	-170.93	260.3	2,650.3	2,599.6	2,498.0	101.54	25.602	
6,692.9	6,553.0	6,549.0	6,549.0	17.2	129.2	-170.41	260.3	2,650.3	2,631.7	2,535.7	96.04	27.403	
6,700.0	6,557.5	6,553.5	6,553.5	17.2	129.3	-170.32	260.3	2,650.3	2,637.2	2,542.1	95.11	27.729	
6,750.0	6,587.4	6,583.4	6,583.4	17.2	129.9	-169.54	260.3	2,650.3	2,677.1	2,588.6	88.45	30.267	
6,791.3	6,609.9	6,605.9	6,605.9	17.2	130.4	-168.74	260.3	2,650.3	2,711.5	2,628.6	82.92	32.699	
6,800.0	6,614.4	6,610.4	6,610.4	17.2	130.5	-168.55	260.3	2,650.3	2,718.9	2,637.1	81.78	33.246	
6,850.0	6,638.4	6,634.4	6,634.4	17.2	130.9	-167.24	260.3	2,650.3	2,762.5	2,687.0	75.47	36.603	
6,889.7	6,655.3	6,651.3	6,651.3	17.4	131.3	-165.88	260.3	2,650.3	2,798.3	2,727.2	71.12	39.344	
6,900.0	6,659.4	6,655.4	6,655.4	17.5	131.4	-165.46	260.3	2,650.3	2,807.7	2,737.5	70.16	40.020	
6,950.0	6,677.1	6,673.1	6,673.1	18.0	131.7	-162.94	260.3	2,650.3	2,854.2	2,787.2	67.00	42.602	
6,988.2	6,688.4	6,684.4	6,684.4	18.5	132.0	-160.20	260.3	2,650.3	2,890.5	2,823.2	67.27	42.966	
7,000.0	6,691.5	6,687.5	6,687.5	18.7	132.0	-159.14	260.3	2,650.3	2,901.8	2,833.8	68.06	42.635	
7,050.0	6,702.5	6,698.5	6,698.5	19.5	132.2	-152.90	260.3	2,650.3	2,950.4	2,873.5	76.85	38.393	
7,086.6	6,708.4	6,704.4	6,704.4	20.1	132.4	-145.26	260.3	2,650.3	2,986.3	2,895.1	91.27	32.720	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	6,706.1	6,706.1	20.4	132.4	-141.36	260.3	2,650.3	2,999.6	2,900.7	98.85	30.345	
7,150.0	6,714.2	6,710.2	6,710.2	21.3	132.5	-117.35	260.3	2,650.3	3,049.2	2,911.7	137.48	22.180	
7,185.0	6,715.0	6,711.0	6,711.0	21.9	132.5	-89.24	260.3	2,650.3	3,084.0	2,929.9	154.09	20.014	
7,185.6	6,715.0	6,711.0	6,711.0	21.9	132.5	-88.77	260.3	2,650.3	3,084.6	2,930.5	154.07	20.021	
7,200.0	6,715.0	6,711.0	6,711.0	22.2	132.5	-88.77	260.3	2,650.3	3,098.9	2,944.6	154.34	20.078	
7,283.4	6,714.8	6,710.8	6,710.8	23.9	132.5	-88.73	260.3	2,650.3	3,182.1	3,026.0	156.01	20.396	
7,300.0	6,714.8	6,710.8	6,710.8	24.2	132.5	-88.73	260.3	2,650.3	3,198.5	3,042.2	156.35	20.458	
7,381.9	6,714.6	6,710.6	6,710.6	26.0	132.5	-88.69	260.3	2,650.3	3,280.1	3,122.0	158.10	20.747	
7,400.0	6,714.6	6,710.6	6,710.6	26.4	132.5	-88.69	260.3	2,650.3	3,298.2	3,139.7	158.49	20.810	
7,480.3	6,714.4	6,710.4	6,710.4	28.2	132.5	-88.66	260.3	2,650.3	3,378.2	3,217.9	160.30	21.074	
7,500.0	6,714.4	6,710.4	6,710.4	28.7	132.5	-88.65	260.3	2,650.3	3,397.8	3,237.1	160.75	21.138	
7,578.7	6,714.2	6,710.2	6,710.2	30.5	132.5	-88.62	260.3	2,650.3	3,476.3	3,313.7	162.60	21.380	
7,600.0	6,714.2	6,710.2	6,710.2	31.0	132.5	-88.61	260.3	2,650.3	3,497.5	3,334.4	163.10	21.444	
7,677.1	6,714.0	6,710.0	6,710.0	32.9	132.5	-88.58	260.3	2,650.3	3,574.4	3,409.4	164.96	21.668	
7,700.0	6,714.0	6,710.0	6,710.0	33.4	132.5	-88.57	260.3	2,650.3	3,597.2	3,431.7	165.52	21.733	
7,775.6	6,713.9	6,709.9	6,709.9	35.3	132.5	-88.54	260.3	2,650.3	3,672.5	3,505.1	167.39	21.940	
7,800.0	6,713.8	6,709.8	6,709.8	35.9	132.5	-88.53	260.3	2,650.3	3,696.9	3,528.9	167.99	22.006	
7,874.0	6,713.7	6,709.7	6,709.7	37.8	132.5	-88.50	260.3	2,650.3	3,770.7	3,600.8	169.86	22.199	
7,900.0	6,713.6	6,709.6	6,709.6	38.4	132.5	-88.49	260.3	2,650.3	3,796.6	3,626.1	170.51	22.266	
7,972.4	6,713.5	6,709.5	6,709.5	40.3	132.5	-88.47	260.3	2,650.3	3,868.8	3,696.5	172.37	22.446	
8,000.0	6,713.4	6,709.4	6,709.4	41.0	132.5	-88.46	260.3	2,650.3	3,896.3	3,723.3	173.07	22.513	
8,070.8	6,713.3	6,709.3	6,709.3	42.8	132.5	-88.43	260.3	2,650.3	3,967.0	3,792.1	174.90	22.681	
8,100.0	6,713.2	6,709.2	6,709.2	43.6	132.5	-88.42	260.3	2,650.3	3,996.1	3,820.4	175.66	22.749	
8,169.3	6,713.1	6,709.1	6,709.1	45.4	132.5	-88.39	260.3	2,650.3	4,065.2	3,887.7	177.47	22.906	
8,200.0	6,713.0	6,709.0	6,709.0	46.2	132.4	-88.38	260.3	2,650.3	4,095.9	3,917.6	178.27	22.975	
8,267.7	6,712.9	6,708.9	6,708.9	48.0	132.4	-88.35	260.3	2,650.3	4,163.4	3,983.3	180.06	23.123	
8,300.0	6,712.8	6,708.8	6,708.8	48.8	132.4	-88.34	260.3	2,650.3	4,195.6	4,014.7	180.91	23.192	
8,366.1	6,712.7	6,708.7	6,708.7	50.6	132.4	-88.31	260.3	2,650.3	4,261.6	4,078.9	182.66	23.331	
8,400.0	6,712.6	6,708.6	6,708.6	51.5	132.4	-88.30	260.3	2,650.3	4,295.4	4,111.8	183.56	23.401	
8,464.5	6,712.5	6,708.5	6,708.5	53.2	132.4	-88.28	260.3	2,650.3	4,359.8	4,174.5	185.28	23.531	
8,500.0	6,712.4	6,708.4	6,708.4	54.1	132.4	-88.26	260.3	2,650.3	4,395.2	4,209.0	186.23	23.601	
8,563.0	6,712.3	6,708.3	6,708.3	55.8	132.4	-88.24	260.3	2,650.3	4,458.0	4,270.1	187.91	23.724	
8,600.0	6,712.3	6,708.3	6,708.3	56.8	132.4	-88.22	260.3	2,650.3	4,495.0	4,306.1	188.91	23.795	
8,661.4	6,712.1	6,708.1	6,708.1	58.5	132.4	-88.20	260.3	2,650.3	4,556.3	4,365.7	190.56	23.910	
8,700.0	6,712.1	6,708.1	6,708.1	59.5	132.4	-88.19	260.3	2,650.3	4,594.8	4,403.2	191.60	23.982	
8,759.8	6,711.9	6,707.9	6,707.9	61.1	132.4	-88.16	260.3	2,650.3	4,654.5	4,461.3	193.21	24.090	
8,800.0	6,711.9	6,707.9	6,707.9	62.2	132.4	-88.15	260.3	2,650.3	4,694.6	4,500.3	194.30	24.162	
8,858.2	6,711.8	6,707.8	6,707.8	63.8	132.4	-88.13	260.3	2,650.3	4,752.8	4,556.9	195.87	24.264	
8,900.0	6,711.7	6,707.7	6,707.7	64.9	132.4	-88.11	260.3	2,650.3	4,794.5	4,597.4	197.01	24.337	
8,956.7	6,711.6	6,707.6	6,707.6	66.5	132.4	-88.09	260.3	2,650.3	4,851.0	4,652.5	198.54	24.433	
9,000.0	6,711.5	6,707.5	6,707.5	67.6	132.4	-88.07	260.3	2,650.3	4,894.3	4,694.6	199.72	24.506	
9,055.1	6,711.4	6,707.4	6,707.4	69.1	132.4	-88.05	260.3	2,650.3	4,949.3	4,748.1	201.22	24.596	
9,100.0	6,711.3	6,707.3	6,707.3	70.4	132.4	-88.03	260.3	2,650.3	4,994.1	4,791.7	202.44	24.669	
9,153.5	6,711.2	6,707.2	6,707.2	71.8	132.4	-88.01	260.3	2,650.3	5,047.6	4,843.7	203.90	24.755	
9,200.0	6,711.1	6,707.1	6,707.1	73.1	132.4	-88.00	260.3	2,650.3	5,094.0	4,888.8	205.17	24.828	
9,251.9	6,711.0	6,707.0	6,707.0	74.5	132.4	-87.98	260.3	2,650.3	5,145.8	4,939.2	206.59	24.908	
9,300.0	6,710.9	6,706.9	6,706.9	75.8	132.4	-87.96	260.3	2,650.3	5,193.8	4,985.9	207.91	24.982	
9,350.4	6,710.8	6,706.8	6,706.8	77.2	132.4	-87.94	260.3	2,650.3	5,244.1	5,034.8	209.28	25.057	
9,400.0	6,710.7	6,706.7	6,706.7	78.6	132.4	-87.92	260.3	2,650.3	5,293.7	5,083.0	210.64	25.131	
9,448.8	6,710.6	6,706.6	6,706.6	79.9	132.4	-87.90	260.3	2,650.3	5,342.4	5,130.4	211.98	25.202	
9,500.0	6,710.5	6,706.5	6,706.5	81.3	132.4	-87.88	260.3	2,650.3	5,393.5	5,180.2	213.39	25.276	
9,547.2	6,710.4	6,706.4	6,706.4	82.6	132.4	-87.86	260.3	2,650.3	5,440.7	5,226.0	214.68	25.343	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,600.0	6,710.3	6,706.3	6,706.3	84.1	132.4	-87.84	260.3	2,650.3	5,493.4	5,277.3	216.13	25.417	
9,645.6	6,710.2	6,706.2	6,706.2	85.3	132.4	-87.83	260.3	2,650.3	5,539.0	5,321.6	217.39	25.480	
9,700.0	6,710.1	6,706.1	6,706.1	86.8	132.4	-87.81	260.3	2,650.3	5,593.3	5,374.4	218.88	25.554	
9,744.1	6,710.0	6,706.0	6,706.0	88.1	132.4	-87.79	260.3	2,650.3	5,637.3	5,417.2	220.09	25.613	
9,800.0	6,709.9	6,705.9	6,705.9	89.6	132.4	-87.77	260.3	2,650.3	5,693.2	5,471.5	221.63	25.688	
9,842.5	6,709.9	6,705.9	6,705.9	90.8	132.4	-87.75	260.3	2,650.3	5,735.6	5,512.8	222.80	25.743	
9,900.0	6,709.7	6,705.7	6,705.7	92.4	132.4	-87.73	260.3	2,650.3	5,793.0	5,568.7	224.39	25.817	
9,940.9	6,709.7	6,705.7	6,705.7	93.5	132.4	-87.72	260.3	2,650.3	5,833.9	5,608.4	225.51	25.869	
10,000.0	6,709.6	6,705.6	6,705.6	95.1	132.4	-87.69	260.3	2,650.3	5,892.9	5,665.8	227.14	25.944	
10,039.3	6,709.5	6,705.5	6,705.5	96.2	132.4	-87.68	260.3	2,650.3	5,932.2	5,704.0	228.23	25.993	
10,100.0	6,709.4	6,705.4	6,705.4	97.9	132.4	-87.66	260.3	2,650.3	5,992.8	5,762.9	229.90	26.067	
10,137.8	6,709.3	6,705.3	6,705.3	98.9	132.4	-87.64	260.3	2,650.3	6,030.5	5,799.6	230.94	26.113	
10,200.0	6,709.2	6,705.2	6,705.2	100.7	132.4	-87.62	260.3	2,650.3	6,092.7	5,860.0	232.66	26.187	
10,236.2	6,709.1	6,705.1	6,705.1	101.7	132.4	-87.61	260.3	2,650.3	6,128.9	5,895.2	233.66	26.230	
10,300.0	6,709.0	6,705.0	6,705.0	103.4	132.4	-87.58	260.3	2,650.3	6,192.6	5,957.2	235.42	26.304	
10,334.6	6,708.9	6,704.9	6,704.9	104.4	132.4	-87.57	260.3	2,650.3	6,227.2	5,990.8	236.38	26.344	
10,400.0	6,708.8	6,704.8	6,704.8	106.2	132.4	-87.54	260.3	2,650.3	6,292.5	6,054.3	238.19	26.418	
10,433.0	6,708.7	6,704.7	6,704.7	107.1	132.4	-87.53	260.3	2,650.3	6,325.5	6,086.4	239.10	26.455	
10,500.0	6,708.6	6,704.6	6,704.6	109.0	132.4	-87.51	260.3	2,650.3	6,392.4	6,151.4	240.95	26.530	
10,531.5	6,708.5	6,704.5	6,704.5	109.9	132.4	-87.50	260.3	2,650.3	6,423.8	6,182.0	241.82	26.564	
10,600.0	6,708.4	6,704.4	6,704.4	111.8	132.4	-87.47	260.3	2,650.3	6,492.3	6,248.6	243.72	26.638	
10,629.9	6,708.4	6,704.4	6,704.4	112.6	132.4	-87.46	260.3	2,650.3	6,522.2	6,277.6	244.55	26.670	
10,700.0	6,708.2	6,704.2	6,704.2	114.6	132.4	-87.43	260.3	2,650.3	6,592.2	6,345.7	246.49	26.744	
10,728.3	6,708.2	6,704.2	6,704.2	115.3	132.4	-87.42	260.3	2,650.3	6,620.5	6,373.2	247.27	26.774	
10,800.0	6,708.0	6,704.0	6,704.0	117.3	132.3	-87.40	260.3	2,650.3	6,692.1	6,442.9	249.26	26.848	
10,826.7	6,708.0	6,704.0	6,704.0	118.1	132.3	-87.39	260.3	2,650.3	6,718.9	6,468.9	250.00	26.876	
10,900.0	6,707.8	6,703.8	6,703.8	120.1	132.3	-87.36	260.3	2,650.3	6,792.0	6,540.0	252.03	26.949	
10,925.2	6,707.8	6,703.8	6,703.8	120.8	132.3	-87.35	260.3	2,650.3	6,817.2	6,564.5	252.73	26.975	
11,000.0	6,707.6	6,703.6	6,703.6	122.9	132.3	-87.32	260.3	2,650.3	6,892.0	6,637.2	254.80	27.049	
11,023.6	6,707.6	6,703.6	6,703.6	123.6	132.3	-87.31	260.3	2,650.3	6,915.5	6,660.1	255.45	27.072	
11,100.0	6,707.5	6,703.5	6,703.5	125.7	132.3	-87.29	260.3	2,650.3	6,991.9	6,734.3	257.57	27.145	
11,122.0	6,707.4	6,703.4	6,703.4	126.3	132.3	-87.28	260.3	2,650.3	7,013.9	6,755.7	258.18	27.166	
11,200.0	6,707.3	6,703.3	6,703.3	128.5	132.3	-87.25	260.3	2,650.3	7,091.8	6,831.4	260.34	27.240	
11,220.4	6,707.2	6,703.2	6,703.2	129.0	132.3	-87.24	260.3	2,650.3	7,112.2	6,851.3	260.91	27.259	
11,300.0	6,707.1	6,703.1	6,703.1	131.3	132.3	-87.21	260.3	2,650.3	7,191.7	6,928.6	263.12	27.333	
11,318.9	6,707.0	6,703.0	6,703.0	131.8	132.3	-87.20	260.3	2,650.3	7,210.6	6,946.9	263.64	27.350	
11,400.0	6,706.9	6,702.9	6,702.9	134.0	132.3	-87.17	260.3	2,650.3	7,291.6	7,025.7	265.89	27.423	
11,417.3	6,706.9	6,702.9	6,702.9	134.5	132.3	-87.17	260.3	2,650.3	7,308.9	7,042.6	266.37	27.439	
11,500.0	6,706.7	6,702.7	6,702.7	136.8	132.3	-87.14	260.3	2,650.3	7,391.6	7,122.9	268.67	27.512	
11,515.7	6,706.7	6,702.7	6,702.7	137.3	132.3	-87.13	260.3	2,650.3	7,407.3	7,138.2	269.10	27.526	
11,600.0	6,706.5	6,702.5	6,702.5	139.6	132.3	-87.10	260.3	2,650.3	7,491.5	7,220.1	271.44	27.599	
11,614.1	6,706.5	6,702.5	6,702.5	140.0	132.3	-87.10	260.3	2,650.3	7,505.6	7,233.8	271.84	27.611	
11,700.0	6,706.3	6,702.3	6,702.3	142.4	132.3	-87.07	260.3	2,650.3	7,591.4	7,317.2	274.22	27.684	
11,712.6	6,706.3	6,702.3	6,702.3	142.8	132.3	-87.06	260.3	2,650.3	7,604.0	7,329.4	274.57	27.694	
11,800.0	6,706.1	6,702.1	6,702.1	145.2	132.3	-87.03	260.3	2,650.3	7,691.4	7,414.4	276.99	27.767	
11,811.0	6,706.1	6,702.1	6,702.1	145.5	132.3	-87.02	260.3	2,650.3	7,702.4	7,425.1	277.30	27.776	
11,900.0	6,705.9	6,701.9	6,701.9	148.0	132.3	-86.99	260.3	2,650.3	7,791.3	7,511.5	279.77	27.849	
11,909.4	6,705.9	6,701.9	6,701.9	148.3	132.3	-86.99	260.3	2,650.3	7,800.7	7,520.7	280.03	27.856	
12,000.0	6,705.8	6,701.8	6,701.8	150.8	132.3	-86.96	260.3	2,650.3	7,891.2	7,608.7	282.55	27.929	
12,007.8	6,705.7	6,701.7	6,701.7	151.0	132.3	-86.95	260.3	2,650.3	7,899.1	7,616.3	282.77	27.935	
12,100.0	6,705.6	6,701.6	6,701.6	153.6	132.3	-86.92	260.3	2,650.3	7,991.2	7,705.8	285.33	28.007	
12,106.3	6,705.6	6,701.6	6,701.6	153.8	132.3	-86.92	260.3	2,650.3	7,997.4	7,711.9	285.50	28.012	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,200.0	6,705.4	6,701.4	6,701.4	156.4	132.3	-86.88	260.3	2,650.3	8,091.1	7,803.0	288.10	28.084	
12,204.7	6,705.4	6,701.4	6,701.4	156.5	132.3	-86.88	260.3	2,650.3	8,095.8	7,807.6	288.23	28.088	
12,300.0	6,705.2	6,701.2	6,701.2	159.2	132.3	-86.85	260.3	2,650.3	8,191.1	7,900.2	290.88	28.159	
12,303.1	6,705.2	6,701.2	6,701.2	159.3	132.3	-86.85	260.3	2,650.3	8,194.2	7,903.2	290.97	28.162	
12,400.0	6,705.0	6,701.0	6,701.0	162.0	132.3	-86.81	260.3	2,650.3	8,291.0	7,997.3	293.66	28.233	
12,401.5	6,705.0	6,701.0	6,701.0	162.0	132.3	-86.81	260.3	2,650.3	8,292.5	7,998.8	293.70	28.234	
12,500.0	6,704.8	6,700.8	6,700.8	164.8	132.3	-86.77	260.3	2,650.3	8,390.9	8,094.5	296.44	28.306	
12,598.4	6,704.6	6,700.6	6,700.6	167.5	132.3	-86.74	260.3	2,650.3	8,489.3	8,190.1	299.17	28.376	
12,600.0	6,704.6	6,700.6	6,700.6	167.6	132.3	-86.74	260.3	2,650.3	8,490.9	8,191.7	299.22	28.377	
12,696.8	6,704.4	6,700.4	6,700.4	170.3	132.3	-86.70	260.3	2,650.3	8,587.7	8,285.7	301.91	28.445	
12,700.0	6,704.4	6,700.4	6,700.4	170.4	132.3	-86.70	260.3	2,650.3	8,590.8	8,288.8	302.00	28.447	
12,795.2	6,704.3	6,700.3	6,700.3	173.0	132.3	-86.67	260.3	2,650.3	8,686.0	8,381.4	304.64	28.512	
12,800.0	6,704.2	6,700.2	6,700.2	173.2	132.3	-86.67	260.3	2,650.3	8,690.8	8,386.0	304.77	28.515	
12,893.7	6,704.1	6,700.1	6,700.1	175.8	132.3	-86.63	260.3	2,650.3	8,784.4	8,477.0	307.38	28.579	
12,900.0	6,704.1	6,700.1	6,700.1	176.0	132.3	-86.63	260.3	2,650.3	8,790.7	8,483.2	307.55	28.583	
12,992.1	6,703.9	6,699.9	6,699.9	178.5	132.3	-86.60	260.3	2,650.3	8,882.8	8,572.7	310.11	28.644	
13,000.0	6,703.9	6,699.9	6,699.9	178.8	132.3	-86.60	260.3	2,650.3	8,890.7	8,580.3	310.33	28.649	
13,090.5	6,703.7	6,699.7	6,699.7	181.3	132.3	-86.56	260.3	2,650.3	8,981.2	8,668.3	312.85	28.708	
13,100.0	6,703.7	6,699.7	6,699.7	181.6	132.3	-86.56	260.3	2,650.3	8,990.6	8,677.5	313.11	28.714	
13,188.9	6,703.5	6,699.5	6,699.5	184.0	132.3	-86.53	260.3	2,650.3	9,079.5	8,763.9	315.58	28.771	
13,200.0	6,703.5	6,699.5	6,699.5	184.4	132.3	-86.52	260.3	2,650.3	9,090.6	8,774.7	315.89	28.778	
13,287.4	6,703.3	6,699.3	6,699.3	186.8	132.3	-86.49	260.3	2,650.3	9,177.9	8,859.6	318.32	28.833	
13,300.0	6,703.3	6,699.3	6,699.3	187.2	132.3	-86.49	260.3	2,650.3	9,190.5	8,871.9	318.67	28.840	
13,385.8	6,703.2	6,699.2	6,699.2	189.6	132.3	-86.46	260.3	2,650.3	9,276.3	8,955.2	321.05	28.893	
13,400.0	6,703.1	6,699.1	6,699.1	190.0	132.3	-86.45	260.3	2,650.3	9,290.5	8,969.0	321.45	28.902	
13,484.2	6,703.0	6,699.0	6,699.0	192.3	132.2	-86.42	260.3	2,650.3	9,374.7	9,050.9	323.79	28.953	
13,500.0	6,702.9	6,698.9	6,698.9	192.8	132.2	-86.42	260.3	2,650.3	9,390.4	9,066.2	324.23	28.962	
13,582.6	6,702.8	6,698.8	6,698.8	195.1	132.2	-86.39	260.3	2,650.3	9,473.1	9,146.5	326.52	29.012	
13,600.0	6,702.8	6,698.8	6,698.8	195.6	132.2	-86.38	260.3	2,650.3	9,490.4	9,163.4	327.01	29.022	
13,681.1	6,702.6	6,698.6	6,698.6	197.8	132.2	-86.35	260.3	2,650.3	9,571.4	9,242.2	329.26	29.070	
13,700.0	6,702.6	6,698.6	6,698.6	198.4	132.2	-86.35	260.3	2,650.3	9,590.3	9,260.6	329.79	29.081	
13,779.5	6,702.4	6,698.4	6,698.4	200.6	132.2	-86.32	260.3	2,650.3	9,669.8	9,337.8	331.99	29.126	
13,800.0	6,702.4	6,698.4	6,698.4	201.2	132.2	-86.31	260.3	2,650.3	9,690.3	9,357.7	332.56	29.138	
13,877.9	6,702.2	6,698.2	6,698.2	203.3	132.2	-86.28	260.3	2,650.3	9,768.2	9,433.5	334.73	29.182	
13,900.0	6,702.2	6,698.2	6,698.2	204.0	132.2	-86.28	260.3	2,650.3	9,790.3	9,454.9	335.34	29.195	
13,976.3	6,702.1	6,698.1	6,698.1	206.1	132.2	-86.25	260.3	2,650.3	9,866.6	9,529.1	337.46	29.237	
14,000.0	6,702.0	6,698.0	6,698.0	206.8	132.2	-86.24	260.3	2,650.3	9,890.2	9,552.1	338.12	29.250	
14,074.8	6,701.9	6,697.9	6,697.9	208.9	132.2	-86.21	260.3	2,650.3	9,965.0	9,624.8	340.20	29.292	
14,100.0	6,701.8	6,697.8	6,697.8	209.6	132.2	-86.20	260.3	2,650.3	9,990.2	9,649.3	340.90	29.305	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	72.15	1,389.9	4,316.4	4,534.7				
98.4	98.4	78.1	78.1	0.1	0.0	72.15	1,390.2	4,316.3	4,534.7	4,534.6	0.10	N/A	
100.0	100.0	79.6	79.6	0.1	0.0	72.15	1,390.2	4,316.3	4,534.7	4,534.6	0.10	N/A	
196.8	196.8	182.6	182.6	0.3	0.1	72.14	1,390.9	4,316.0	4,534.6	4,534.2	0.40	N/A	
200.0	200.0	186.0	186.0	0.3	0.1	72.14	1,391.0	4,316.0	4,534.6	4,534.2	0.41	N/A	
295.3	295.3	291.8	291.8	0.5	0.2	72.13	1,391.4	4,315.6	4,534.4	4,533.6	0.76	5,989.073	
300.0	300.0	297.1	297.1	0.5	0.2	72.13	1,391.4	4,315.6	4,534.4	4,533.6	0.77	5,853.791	
370.6	370.6	350.6	350.6	0.7	0.3	72.13	1,391.7	4,315.3	4,534.2	4,533.3	0.97	4,670.993	
393.7	393.7	367.8	367.8	0.8	0.3	72.12	1,391.9	4,315.3	4,534.2	4,533.2	1.03	4,384.749	
400.0	400.0	372.5	372.5	0.8	0.3	72.12	1,391.9	4,315.3	4,534.2	4,533.2	1.05	4,312.701	
492.1	492.1	459.7	459.7	1.0	0.3	72.11	1,392.7	4,315.3	4,534.5	4,533.2	1.32	3,441.766	
500.0	500.0	468.2	468.2	1.0	0.4	72.11	1,392.8	4,315.3	4,534.5	4,533.2	1.34	3,381.408	
590.5	590.5	558.1	558.1	1.2	0.4	72.10	1,393.4	4,315.4	4,534.8	4,533.2	1.59	2,847.342	
600.0	600.0	567.1	567.1	1.2	0.4	72.10	1,393.5	4,315.4	4,534.8	4,533.2	1.62	2,802.832	
689.0	689.0	690.8	690.8	1.4	0.4	72.10	1,393.8	4,315.3	4,534.9	4,533.0	1.85	2,457.876	
700.0	700.0	700.0	700.0	1.4	0.4	72.10	1,393.8	4,315.2	4,534.8	4,532.9	1.87	2,423.661	
787.4	787.4	769.8	769.8	1.6	0.5	72.09	1,394.1	4,314.9	4,534.5	4,532.4	2.09	2,165.561	
797.1	797.1	777.1	777.1	1.7	0.5	72.09	1,394.2	4,314.9	4,534.5	4,532.4	2.12	2,140.515	
800.0	800.0	779.3	779.3	1.7	0.5	72.09	1,394.2	4,314.9	4,534.5	4,532.4	2.13	2,133.080	
885.8	885.8	863.1	863.1	1.9	0.5	72.09	1,394.7	4,314.8	4,534.6	4,532.3	2.36	1,923.968	
900.0	900.0	878.4	878.4	1.9	0.5	72.09	1,394.8	4,314.8	4,534.6	4,532.2	2.40	1,892.450	
984.2	984.2	983.2	983.2	2.1	0.6	72.08	1,395.1	4,314.5	4,534.5	4,531.9	2.62	1,730.247	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	0.6	72.08	1,395.1	4,314.4	4,534.4	4,531.8	2.66	1,703.989	
1,082.7	1,082.7	1,066.7	1,066.7	2.3	0.6	72.08	1,395.2	4,314.2	4,534.2	4,531.3	2.86	1,583.943	
1,100.0	1,100.0	1,080.2	1,080.2	2.3	0.6	72.08	1,395.3	4,314.2	4,534.2	4,531.3	2.90	1,560.979	
1,181.1	1,181.1	1,148.7	1,148.6	2.5	0.6	43.36	1,395.5	4,314.2	4,533.5	4,530.4	3.10	1,463.691	
1,200.0	1,200.0	1,165.2	1,165.1	2.6	0.6	43.37	1,395.6	4,314.2	4,533.1	4,530.0	3.15	1,441.243	
1,279.5	1,279.4	1,239.7	1,239.7	2.7	0.7	43.44	1,395.9	4,314.5	4,530.6	4,527.3	3.35	1,352.167	
1,300.0	1,299.8	1,260.2	1,260.2	2.8	0.7	43.46	1,395.9	4,314.5	4,529.7	4,526.3	3.40	1,330.502	
1,377.9	1,377.5	1,335.7	1,335.7	3.0	0.7	43.57	1,396.2	4,314.8	4,525.3	4,521.7	3.61	1,252.849	
1,400.0	1,399.5	1,356.3	1,356.3	3.0	0.7	43.61	1,396.2	4,314.9	4,523.8	4,520.2	3.67	1,232.586	
1,476.4	1,475.3	1,431.2	1,431.2	3.2	0.7	43.77	1,396.4	4,315.3	4,517.7	4,513.8	3.88	1,164.308	
1,500.0	1,498.7	1,456.1	1,456.1	3.3	0.7	43.83	1,396.5	4,315.4	4,515.5	4,511.6	3.95	1,144.576	
1,574.8	1,572.6	1,527.3	1,527.2	3.5	0.8	44.04	1,396.8	4,315.7	4,507.7	4,503.5	4.16	1,083.928	
1,600.0	1,597.5	1,547.9	1,547.9	3.5	0.8	44.11	1,396.8	4,315.8	4,504.7	4,500.5	4.23	1,065.273	
1,673.2	1,669.4	1,609.2	1,609.2	3.7	0.8	44.34	1,397.0	4,316.2	4,495.4	4,491.0	4.45	1,010.163	
1,700.1	1,695.8	1,634.9	1,634.9	3.8	0.8	44.44	1,397.1	4,316.4	4,491.7	4,487.2	4.53	991.244	
1,771.6	1,765.7	1,704.0	1,703.9	4.1	0.8	44.57	1,397.6	4,316.9	4,481.7	4,476.9	4.75	942.797	
1,800.0	1,793.4	1,738.8	1,738.8	4.2	0.8	44.63	1,397.9	4,317.2	4,477.7	4,472.8	4.84	924.437	
1,870.1	1,862.0	1,817.4	1,817.4	4.4	0.9	44.77	1,398.7	4,317.4	4,467.6	4,462.6	5.07	880.322	
1,900.0	1,891.3	1,843.1	1,843.1	4.5	0.9	44.81	1,399.1	4,317.5	4,463.3	4,458.2	5.17	863.278	
1,968.5	1,958.3	1,902.4	1,902.3	4.8	0.9	44.92	1,399.9	4,317.7	4,453.6	4,448.2	5.40	825.163	
2,000.0	1,989.1	1,936.2	1,936.1	4.9	0.9	44.98	1,400.4	4,317.8	4,449.2	4,443.7	5.50	808.476	
2,066.9	2,054.5	2,008.8	2,008.7	5.1	0.9	45.10	1,401.7	4,317.9	4,439.7	4,434.0	5.73	774.223	
2,100.0	2,086.9	2,047.6	2,047.6	5.3	1.0	45.17	1,402.4	4,317.9	4,435.0	4,429.1	5.85	758.067	
2,165.3	2,150.8	2,114.5	2,114.4	5.5	1.0	45.28	1,403.5	4,317.8	4,425.5	4,419.4	6.08	727.969	
2,200.0	2,184.7	2,138.8	2,138.7	5.6	1.0	45.32	1,403.9	4,317.8	4,420.5	4,414.3	6.20	713.329	
2,263.8	2,247.1	2,183.5	2,183.5	5.9	1.0	45.40	1,404.8	4,317.9	4,411.6	4,405.2	6.42	687.423	
2,300.0	2,282.5	2,212.9	2,212.8	6.0	1.0	45.45	1,405.4	4,318.1	4,406.7	4,400.1	6.54	673.426	
2,362.2	2,343.3	2,275.6	2,275.4	6.3	1.0	45.56	1,406.7	4,318.4	4,398.2	4,391.4	6.77	649.905	
2,400.0	2,380.3	2,310.7	2,310.6	6.5	1.1	45.62	1,407.5	4,318.6	4,393.0	4,386.1	6.90	636.422	
2,460.6	2,439.6	2,358.8	2,358.7	6.7	1.1	45.70	1,408.6	4,318.9	4,384.9	4,377.8	7.12	615.785	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,500.0	2,478.1	2,390.1	2,389.9	6.9	1.1	45.75	1,409.3	4,319.1	4,379.7	4,372.4	7.26	603.055		
2,559.0	2,535.9	2,441.6	2,441.4	7.1	1.1	45.84	1,410.6	4,319.7	4,372.0	4,364.5	7.48	584.595		
2,600.0	2,575.9	2,478.2	2,478.0	7.3	1.1	45.90	1,411.5	4,320.1	4,366.7	4,359.1	7.63	572.394		
2,657.5	2,632.2	2,528.8	2,528.6	7.5	1.1	45.98	1,412.9	4,320.6	4,359.4	4,351.5	7.84	555.922		
2,700.0	2,673.8	2,565.9	2,565.6	7.7	1.2	46.05	1,413.9	4,321.1	4,354.0	4,346.0	8.00	544.299		
2,755.9	2,728.4	2,618.8	2,618.6	7.9	1.2	46.14	1,415.4	4,321.8	4,347.0	4,338.8	8.21	529.496		
2,800.0	2,771.6	2,668.4	2,668.2	8.1	1.2	46.22	1,416.9	4,322.5	4,341.5	4,333.1	8.38	518.156		
2,854.3	2,824.7	2,700.0	2,699.7	8.3	1.2	46.27	1,417.8	4,322.8	4,334.7	4,326.1	8.58	505.269		
2,900.0	2,869.4	2,746.5	2,746.1	8.5	1.2	46.35	1,419.2	4,323.5	4,329.0	4,320.2	8.75	494.596		
2,952.7	2,921.0	2,780.6	2,780.2	8.8	1.2	46.41	1,420.3	4,324.1	4,322.7	4,313.7	8.95	483.062		
3,000.0	2,967.2	2,812.8	2,812.4	9.0	1.2	46.46	1,421.4	4,324.8	4,317.3	4,308.1	9.12	473.151		
3,051.2	3,017.3	2,850.9	2,850.5	9.2	1.3	46.52	1,422.8	4,325.7	4,311.5	4,302.2	9.32	462.776		
3,100.0	3,065.0	2,887.3	2,886.8	9.4	1.3	46.58	1,424.4	4,326.6	4,306.2	4,296.7	9.50	453.285		
3,149.6	3,113.5	2,935.2	2,934.7	9.6	1.3	46.65	1,426.6	4,327.8	4,300.9	4,291.2	9.69	443.781		
3,200.0	3,162.8	2,989.8	2,989.2	9.8	1.3	46.73	1,429.2	4,329.2	4,295.4	4,285.6	9.89	434.385		
3,248.0	3,209.8	3,053.6	3,053.0	10.0	1.3	46.83	1,432.0	4,330.7	4,290.2	4,280.1	10.08	425.493		
3,300.0	3,260.6	3,138.4	3,137.6	10.2	1.4	46.97	1,435.4	4,332.3	4,284.2	4,273.9	10.30	415.930		
3,346.4	3,306.1	3,218.9	3,218.1	10.5	1.4	47.11	1,437.6	4,333.3	4,278.4	4,267.9	10.50	407.524		
3,400.0	3,358.5	3,280.3	3,279.5	10.7	1.4	47.22	1,438.6	4,334.0	4,271.6	4,260.8	10.72	398.637		
3,444.9	3,402.3	3,333.9	3,333.1	10.9	1.4	47.33	1,439.3	4,334.5	4,265.7	4,254.8	10.90	391.403		
3,500.0	3,456.3	3,401.3	3,400.5	11.1	1.5	47.46	1,439.7	4,335.1	4,258.4	4,247.3	11.12	382.796		
3,543.3	3,498.6	3,456.2	3,455.4	11.3	1.5	47.58	1,439.8	4,335.5	4,252.6	4,241.3	11.30	376.171		
3,600.0	3,554.1	3,527.1	3,526.3	11.5	1.5	47.72	1,439.9	4,335.7	4,244.7	4,233.2	11.54	367.982		
3,641.7	3,594.9	3,578.3	3,577.5	11.7	1.5	47.83	1,439.9	4,335.8	4,238.9	4,227.2	11.70	362.351		
3,700.0	3,651.9	3,636.0	3,635.2	12.0	1.5	47.96	1,439.7	4,335.7	4,230.6	4,218.6	11.93	354.748		
3,740.1	3,691.2	3,671.7	3,670.8	12.2	1.5	48.03	1,439.6	4,335.8	4,224.9	4,212.8	12.08	349.669		
3,800.0	3,749.7	3,730.1	3,729.2	12.4	1.5	48.16	1,439.5	4,335.8	4,216.5	4,204.2	12.31	342.404		
3,838.6	3,787.4	3,771.5	3,770.7	12.6	1.5	48.25	1,439.4	4,335.8	4,211.1	4,198.6	12.46	337.898		
3,900.0	3,847.5	3,835.1	3,834.3	12.9	1.5	48.38	1,439.4	4,335.7	4,202.4	4,189.7	12.70	330.903		
3,937.0	3,883.7	3,872.2	3,871.4	13.0	1.5	48.46	1,439.3	4,335.7	4,197.2	4,184.3	12.84	326.791		
4,000.0	3,945.3	3,935.4	3,934.6	13.3	1.5	48.60	1,439.2	4,335.6	4,188.3	4,175.2	13.09	319.944		
4,035.4	3,980.0	3,970.9	3,970.1	13.5	1.5	48.68	1,439.1	4,335.5	4,183.2	4,170.0	13.23	316.180		
4,060.0	4,004.0	3,995.5	3,994.7	13.6	1.5	48.73	1,439.0	4,335.5	4,179.8	4,166.4	13.33	313.611		
4,100.0	4,043.2	4,025.8	4,025.0	13.7	1.5	48.72	1,438.9	4,335.4	4,174.3	4,160.9	13.45	310.278		
4,133.8	4,076.5	4,050.4	4,049.6	13.8	1.5	48.70	1,438.9	4,335.5	4,170.1	4,156.6	13.54	307.946		
4,200.0	4,141.6	4,100.0	4,099.2	14.0	1.5	48.68	1,438.8	4,335.7	4,162.8	4,149.1	13.71	303.544		
4,232.3	4,173.5	4,140.2	4,139.4	14.1	1.5	48.70	1,438.7	4,335.9	4,159.6	4,145.8	13.79	301.565		
4,300.0	4,240.6	4,223.4	4,222.5	14.3	1.5	48.72	1,438.8	4,336.0	4,153.5	4,139.6	13.96	297.530		
4,330.7	4,271.1	4,255.2	4,254.3	14.4	1.5	48.73	1,438.8	4,335.9	4,151.1	4,137.1	14.03	295.937		
4,400.0	4,340.0	4,319.9	4,319.1	14.5	1.5	48.72	1,438.9	4,335.9	4,146.3	4,132.1	14.17	292.517		
4,429.1	4,369.0	4,342.2	4,341.4	14.6	1.5	48.72	1,438.9	4,335.9	4,144.7	4,130.5	14.23	291.331		
4,500.0	4,439.7	4,400.0	4,399.2	14.8	1.5	48.71	1,439.0	4,336.1	4,141.8	4,127.4	14.35	288.533		
4,527.5	4,467.2	4,443.8	4,443.0	14.8	1.5	48.72	1,439.1	4,336.2	4,141.0	4,126.6	14.40	287.602		
4,600.0	4,539.7	4,578.4	4,577.5	14.9	1.5	48.73	1,439.7	4,335.2	4,138.9	4,124.3	14.52	285.106		
4,626.0	4,565.6	4,611.4	4,610.6	15.0	1.5	48.72	1,439.9	4,334.6	4,138.2	4,123.6	14.55	284.366		
4,660.2	4,599.8	4,639.0	4,638.2	15.0	1.5	77.44	1,440.1	4,334.2	4,137.5	4,123.2	14.32	288.939		
4,700.0	4,639.6	4,671.2	4,670.3	15.0	1.5	77.44	1,440.1	4,333.7	4,137.0	4,122.6	14.39	287.562		
4,724.4	4,664.0	4,700.0	4,699.2	15.1	1.5	77.44	1,440.0	4,333.4	4,136.7	4,122.3	14.43	286.618		
4,800.0	4,739.6	4,770.9	4,770.1	15.2	1.5	77.44	1,439.8	4,332.6	4,135.9	4,121.3	14.57	283.815		
4,822.8	4,762.5	4,796.1	4,795.3	15.2	1.5	77.44	1,439.7	4,332.3	4,135.6	4,121.0	14.62	282.961		
4,900.0	4,839.6	4,874.7	4,873.9	15.3	1.6	77.44	1,439.5	4,331.3	4,134.6	4,119.8	14.76	280.108		
4,921.2	4,860.9	4,896.3	4,895.4	15.4	1.6	77.44	1,439.5	4,331.0	4,134.3	4,119.5	14.80	279.328		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.0	4,939.6	4,967.8	4,966.9	15.5	1.6	77.44	1,439.2	4,330.2	4,133.3	4,118.4	14.95	276.528	
5,019.7	4,959.3	4,985.5	4,984.6	15.5	1.6	77.44	1,439.1	4,330.0	4,133.1	4,118.1	14.98	275.835	
5,100.0	5,039.6	5,063.0	5,062.1	15.6	1.6	77.44	1,438.7	4,329.3	4,132.3	4,117.1	15.13	273.062	
5,118.1	5,057.7	5,080.7	5,079.9	15.7	1.6	77.44	1,438.6	4,329.1	4,132.1	4,116.9	15.17	272.442	
5,200.0	5,139.6	5,152.4	5,151.5	15.8	1.6	77.45	1,438.1	4,328.5	4,131.3	4,116.0	15.32	269.740	
5,216.5	5,156.2	5,166.3	5,165.4	15.8	1.6	77.45	1,438.0	4,328.5	4,131.2	4,115.9	15.35	269.204	
5,300.0	5,239.6	5,261.5	5,260.6	15.9	1.6	77.46	1,437.3	4,327.9	4,130.6	4,115.1	15.50	266.505	
5,314.9	5,254.6	5,282.6	5,281.8	16.0	1.6	77.46	1,437.1	4,327.7	4,130.4	4,114.9	15.53	266.018	
5,400.0	5,339.6	5,413.7	5,412.8	16.1	1.6	77.47	1,436.0	4,325.6	4,128.9	4,113.2	15.69	263.127	
5,413.4	5,353.0	5,426.1	5,425.2	16.1	1.6	77.47	1,435.8	4,325.4	4,128.6	4,112.9	15.72	262.683	
5,500.0	5,439.6	5,507.3	5,506.3	16.3	1.6	77.47	1,435.0	4,323.8	4,126.8	4,110.9	15.88	259.825	
5,511.8	5,451.4	5,520.5	5,519.5	16.3	1.6	77.47	1,434.9	4,323.5	4,126.5	4,110.6	15.91	259.435	
5,600.0	5,539.6	5,616.1	5,615.2	16.4	1.6	77.48	1,434.0	4,321.5	4,124.5	4,108.5	16.08	256.545	
5,610.2	5,549.9	5,625.7	5,624.8	16.4	1.6	77.48	1,433.9	4,321.3	4,124.3	4,108.2	16.10	256.213	
5,700.0	5,639.6	5,711.0	5,710.0	16.6	1.6	77.49	1,433.2	4,319.5	4,122.3	4,106.0	16.27	253.328	
5,708.6	5,648.3	5,720.1	5,719.1	16.6	1.6	77.49	1,433.2	4,319.3	4,122.1	4,105.8	16.29	253.049	
5,800.0	5,739.6	5,817.3	5,816.3	16.7	1.6	77.49	1,432.7	4,317.1	4,120.0	4,103.6	16.47	250.114	
5,807.1	5,746.7	5,825.2	5,824.2	16.8	1.6	77.49	1,432.7	4,316.9	4,119.9	4,103.4	16.49	249.886	
5,900.0	5,839.6	5,937.7	5,936.7	16.9	1.6	77.48	1,432.7	4,314.0	4,117.5	4,100.8	16.68	246.862	
5,905.5	5,845.1	5,945.7	5,944.7	16.9	1.6	77.48	1,432.7	4,313.8	4,117.4	4,100.7	16.69	246.677	
6,000.0	5,939.6	6,053.6	6,052.5	17.1	1.7	77.44	1,434.1	4,309.9	4,114.3	4,097.4	16.89	243.543	
6,003.9	5,943.6	6,057.3	6,056.2	17.1	1.7	77.44	1,434.2	4,309.8	4,114.2	4,097.3	16.90	243.415	
6,059.2	5,998.8	6,186.7	6,185.3	17.2	1.7	77.35	1,439.3	4,303.6	4,112.4	4,095.3	17.05	241.205	
6,098.5	6,038.2	6,240.3	6,238.6	17.2	1.7	167.31	1,443.1	4,299.9	4,111.3	4,094.1	17.21	238.869 CC	
6,100.0	6,039.6	6,241.8	6,240.2	17.2	1.7	167.31	1,443.2	4,299.8	4,111.3	4,094.1	17.21	238.843 ES	
6,102.3	6,042.0	6,244.3	6,242.7	17.2	1.7	167.31	1,443.4	4,299.6	4,111.3	4,094.1	17.22	238.801	
6,150.0	6,089.4	6,295.0	6,293.0	17.3	1.7	167.23	1,447.2	4,295.9	4,113.1	4,095.8	17.30	237.809	
6,200.0	6,138.7	6,336.7	6,334.5	17.3	1.7	167.10	1,450.5	4,292.9	4,118.3	4,100.9	17.40	236.639	
6,200.8	6,139.5	6,337.3	6,335.1	17.3	1.7	167.10	1,450.5	4,292.9	4,118.4	4,101.0	17.40	236.622	
6,250.0	6,187.4	6,376.8	6,374.4	17.3	1.8	166.93	1,453.3	4,290.2	4,127.0	4,109.5	17.51	235.675	
6,299.2	6,234.4	6,416.6	6,414.1	17.4	1.8	166.70	1,456.0	4,287.6	4,138.9	4,121.3	17.60	235.179	
6,300.0	6,235.1	6,417.3	6,414.7	17.4	1.8	166.69	1,456.0	4,287.5	4,139.1	4,121.5	17.60	235.176	
6,350.0	6,281.7	6,458.2	6,455.5	17.4	1.8	166.40	1,458.5	4,285.0	4,154.5	4,136.9	17.66	235.300	
6,397.6	6,324.8	6,500.0	6,497.1	17.3	1.8	166.05	1,460.7	4,282.5	4,172.3	4,154.6	17.68	236.055	
6,400.0	6,326.9	6,500.0	6,497.1	17.3	1.8	166.03	1,460.7	4,282.5	4,173.2	4,155.6	17.67	236.132	
6,450.0	6,370.5	6,527.8	6,524.9	17.3	1.8	165.58	1,462.1	4,281.0	4,195.2	4,177.5	17.64	237.864	
6,496.0	6,409.1	6,553.8	6,550.8	17.3	1.8	165.08	1,463.3	4,279.6	4,218.1	4,200.6	17.56	240.158	
6,500.0	6,412.3	6,555.9	6,552.9	17.3	1.8	165.03	1,463.4	4,279.5	4,220.2	4,202.7	17.56	240.391	
6,550.0	6,452.1	6,600.0	6,596.9	17.3	1.8	164.39	1,465.2	4,277.5	4,248.4	4,230.9	17.45	243.443	
6,594.5	6,485.6	6,600.0	6,596.9	17.3	1.8	163.63	1,465.2	4,277.5	4,275.7	4,258.4	17.29	247.337	
6,600.0	6,489.7	6,600.0	6,596.9	17.3	1.8	163.53	1,465.2	4,277.5	4,279.2	4,262.0	17.26	247.873	
6,650.0	6,524.9	6,635.4	6,632.3	17.2	1.8	162.57	1,466.5	4,276.1	4,312.8	4,295.7	17.10	252.265	
6,692.9	6,553.0	6,656.6	6,653.5	17.2	1.8	161.56	1,467.3	4,275.3	4,343.6	4,326.7	16.94	256.438	
6,700.0	6,557.5	6,660.0	6,656.8	17.2	1.8	161.37	1,467.4	4,275.2	4,348.9	4,332.0	16.91	257.173	
6,750.0	6,587.4	6,682.5	6,679.4	17.2	1.8	159.89	1,468.2	4,274.4	4,387.2	4,370.5	16.74	262.066	
6,791.3	6,609.9	6,700.0	6,696.8	17.2	1.8	158.39	1,468.8	4,273.9	4,420.5	4,403.8	16.64	265.589	
6,800.0	6,614.4	6,703.5	6,700.2	17.2	1.8	158.03	1,469.0	4,273.7	4,427.6	4,411.0	16.62	266.340	
6,850.0	6,638.4	6,724.7	6,721.5	17.2	1.8	155.70	1,469.7	4,273.1	4,469.9	4,453.3	16.61	269.071	
6,889.7	6,655.3	6,730.0	6,726.8	17.4	1.8	153.25	1,469.9	4,272.9	4,504.8	4,488.0	16.71	269.546	
6,900.0	6,659.4	6,730.0	6,726.8	17.5	1.8	152.52	1,469.9	4,272.9	4,513.9	4,497.1	16.76	269.293	
6,950.0	6,677.1	6,730.0	6,726.8	18.0	1.8	148.20	1,469.9	4,272.9	4,559.3	4,542.2	17.19	265.232	
6,988.2	6,688.4	6,730.0	6,726.8	18.5	1.8	143.84	1,469.9	4,272.9	4,594.9	4,577.1	17.78	258.375	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,000.0	6,691.5	6,730.0	6,726.8	18.7	1.8	142.25	1,469.9	4,272.9	4,606.0	4,588.0	18.02	255.632	
7,050.0	6,702.5	6,730.0	6,726.8	19.5	1.8	133.84	1,469.9	4,272.9	4,653.7	4,634.3	19.33	240.729	
7,086.6	6,708.4	6,730.0	6,726.8	20.1	1.8	125.46	1,469.9	4,272.9	4,689.0	4,668.4	20.57	228.002	
7,100.0	6,710.1	6,730.0	6,726.8	20.4	1.8	121.82	1,469.9	4,272.9	4,702.0	4,681.0	21.03	223.534	
7,150.0	6,714.2	6,730.0	6,726.8	21.3	1.8	105.32	1,469.9	4,272.9	4,750.8	4,728.2	22.60	210.230	
7,185.0	6,715.0	6,730.0	6,726.8	21.9	1.8	91.61	1,469.9	4,272.9	4,785.2	4,761.8	23.41	204.373	
7,185.6	6,715.0	6,730.0	6,726.8	21.9	1.8	91.39	1,469.9	4,272.9	4,785.7	4,762.3	23.43	204.274	
7,200.0	6,715.0	6,730.0	6,726.8	22.2	1.8	91.39	1,469.9	4,272.9	4,799.9	4,776.2	23.70	202.484	
7,283.4	6,714.8	6,730.0	6,726.8	23.9	1.8	91.39	1,469.9	4,272.9	4,881.8	4,856.4	25.38	192.325	
7,300.0	6,714.8	6,730.0	6,726.8	24.2	1.8	91.39	1,469.9	4,272.9	4,898.0	4,872.3	25.72	190.468	
7,381.9	6,714.6	6,730.0	6,726.8	26.0	1.8	91.39	1,469.9	4,272.9	4,978.4	4,950.9	27.48	181.190	
7,400.0	6,714.6	6,730.0	6,726.8	26.4	1.8	91.39	1,469.9	4,272.9	4,996.2	4,968.4	27.87	179.295	
7,480.3	6,714.4	6,730.0	6,726.8	28.2	1.8	91.39	1,469.9	4,272.9	5,075.1	5,045.5	29.69	170.962	
7,500.0	6,714.4	6,730.0	6,726.8	28.7	1.8	91.39	1,469.9	4,272.9	5,094.5	5,064.4	30.13	169.072	
7,578.7	6,714.2	6,730.0	6,726.8	30.5	1.8	91.39	1,469.9	4,272.9	5,171.9	5,139.9	31.99	161.687	
7,600.0	6,714.2	6,730.0	6,726.8	31.0	1.8	91.39	1,469.9	4,272.9	5,192.9	5,160.4	32.49	159.837	
7,677.1	6,714.0	6,730.0	6,726.8	32.9	1.8	91.39	1,469.9	4,272.9	5,268.8	5,234.4	34.36	153.335	
7,700.0	6,714.0	6,730.0	6,726.8	33.4	1.8	91.39	1,469.9	4,272.9	5,291.3	5,256.4	34.92	151.544	
7,775.6	6,713.9	6,730.0	6,726.8	35.3	1.8	91.39	1,469.9	4,272.9	5,365.7	5,328.9	36.79	145.835	
7,800.0	6,713.8	6,730.0	6,726.8	35.9	1.8	91.39	1,469.9	4,272.9	5,389.7	5,352.3	37.40	144.113	
7,874.0	6,713.7	6,730.0	6,726.8	37.8	1.8	91.39	1,469.9	4,272.9	5,462.6	5,423.4	39.27	139.101	
7,900.0	6,713.6	6,730.0	6,726.8	38.4	1.8	91.39	1,469.9	4,272.9	5,488.3	5,448.3	39.93	137.452	
7,972.4	6,713.5	6,730.0	6,726.8	40.3	1.8	91.39	1,469.9	4,272.9	5,559.7	5,517.9	41.79	133.048	
8,000.0	6,713.4	6,730.0	6,726.8	41.0	1.8	91.40	1,469.9	4,272.9	5,586.9	5,544.4	42.49	131.472	
8,070.8	6,713.3	6,730.0	6,726.8	42.8	1.8	91.40	1,469.9	4,272.9	5,656.7	5,612.4	44.33	127.593	
8,100.0	6,713.2	6,730.0	6,726.8	43.6	1.8	91.40	1,469.9	4,272.9	5,685.5	5,640.4	45.09	126.090	
8,169.3	6,713.1	6,730.0	6,726.8	45.4	1.8	91.40	1,469.9	4,272.9	5,753.8	5,706.9	46.91	122.665	
8,200.0	6,713.0	6,730.0	6,726.8	46.2	1.8	91.40	1,469.9	4,272.9	5,784.2	5,736.4	47.71	121.230	
8,267.7	6,712.9	6,730.0	6,726.8	48.0	1.8	91.40	1,469.9	4,272.9	5,851.0	5,801.5	49.50	118.199	
8,300.0	6,712.8	6,730.0	6,726.8	48.8	1.8	91.40	1,469.9	4,272.9	5,882.9	5,832.5	50.35	116.828	
8,366.1	6,712.7	6,730.0	6,726.8	50.6	1.8	91.40	1,469.9	4,272.9	5,948.2	5,896.1	52.11	114.138	
8,400.0	6,712.6	6,730.0	6,726.8	51.5	1.8	91.40	1,469.9	4,272.9	5,981.6	5,928.6	53.02	112.828	
8,464.5	6,712.5	6,730.0	6,726.8	53.2	1.8	91.40	1,469.9	4,272.9	6,045.4	5,990.7	54.74	110.434	
8,500.0	6,712.4	6,730.0	6,726.8	54.1	1.8	91.40	1,469.9	4,272.9	6,080.4	6,024.8	55.69	109.182	
8,563.0	6,712.3	6,730.0	6,726.8	55.8	1.8	91.40	1,469.9	4,272.9	6,142.7	6,085.3	57.38	107.045	
8,600.0	6,712.3	6,730.0	6,726.8	56.8	1.8	91.40	1,469.9	4,272.9	6,179.3	6,120.9	58.38	105.847	
8,661.4	6,712.1	6,730.0	6,726.8	58.5	1.8	91.40	1,469.9	4,272.9	6,240.0	6,180.0	60.04	103.935	
8,700.0	6,712.1	6,730.0	6,726.8	59.5	1.8	91.40	1,469.9	4,272.9	6,278.2	6,217.1	61.08	102.787	
8,759.8	6,711.9	6,730.0	6,726.8	61.1	1.8	91.40	1,469.9	4,272.9	6,337.3	6,274.6	62.70	101.073	
8,800.0	6,711.9	6,730.0	6,726.8	62.2	1.8	91.40	1,469.9	4,272.9	6,377.1	6,313.3	63.79	99.971	
8,858.2	6,711.8	6,730.0	6,726.8	63.8	1.8	91.40	1,469.9	4,272.9	6,434.7	6,369.3	65.37	98.431	
8,900.0	6,711.7	6,730.0	6,726.8	64.9	1.8	91.40	1,469.9	4,272.9	6,476.0	6,409.5	66.51	97.373	
8,956.7	6,711.6	6,730.0	6,726.8	66.5	1.8	91.40	1,469.9	4,272.9	6,532.1	6,464.1	68.05	95.986	
9,000.0	6,711.5	6,730.0	6,726.8	67.6	1.8	91.40	1,469.9	4,272.9	6,575.0	6,505.8	69.23	94.969	
9,055.1	6,711.4	6,730.0	6,726.8	69.1	1.8	91.40	1,469.9	4,272.9	6,629.6	6,558.8	70.74	93.718	
9,100.0	6,711.3	6,730.0	6,726.8	70.4	1.8	91.40	1,469.9	4,272.9	6,674.0	6,602.1	71.97	92.739	
9,153.5	6,711.2	6,730.0	6,726.8	71.8	1.8	91.40	1,469.9	4,272.9	6,727.0	6,653.6	73.43	91.609	
9,200.0	6,711.1	6,730.0	6,726.8	73.1	1.8	91.40	1,469.9	4,272.9	6,773.1	6,698.4	74.70	90.665	
9,251.9	6,711.0	6,730.0	6,726.8	74.5	1.8	91.40	1,469.9	4,272.9	6,824.5	6,748.4	76.13	89.643	
9,300.0	6,710.9	6,730.0	6,726.8	75.8	1.8	91.40	1,469.9	4,272.9	6,872.1	6,794.7	77.45	88.732	
9,350.4	6,710.8	6,730.0	6,726.8	77.2	1.8	91.40	1,469.9	4,272.9	6,922.0	6,843.2	78.83	87.807	
9,400.0	6,710.7	6,730.0	6,726.8	78.6	1.8	91.40	1,469.9	4,272.9	6,971.2	6,891.0	80.20	86.927	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,448.8	6,710.6	6,730.0	6,726.8	79.9	1.8	91.40	1,469.9	4,272.9	7,019.6	6,938.0	81.54	86.088	
9,500.0	6,710.5	6,730.0	6,726.8	81.3	1.8	91.40	1,469.9	4,272.9	7,070.3	6,987.4	82.95	85.237	
9,547.2	6,710.4	6,730.0	6,726.8	82.6	1.8	91.40	1,469.9	4,272.9	7,117.2	7,032.9	84.25	84.476	
9,600.0	6,710.3	6,730.0	6,726.8	84.1	1.8	91.40	1,469.9	4,272.9	7,169.5	7,083.8	85.71	83.653	
9,645.6	6,710.2	6,730.0	6,726.8	85.3	1.8	91.40	1,469.9	4,272.9	7,214.7	7,127.8	86.97	82.961	
9,700.0	6,710.1	6,730.0	6,726.8	86.8	1.8	91.40	1,469.9	4,272.9	7,268.6	7,180.2	88.46	82.164	
9,744.1	6,710.0	6,730.0	6,726.8	88.1	1.8	91.40	1,469.9	4,272.9	7,312.4	7,222.7	89.68	81.536	
9,800.0	6,709.9	6,730.0	6,726.8	89.6	1.8	91.40	1,469.9	4,272.9	7,367.8	7,276.6	91.23	80.763	
9,842.5	6,709.9	6,730.0	6,726.8	90.8	1.8	91.40	1,469.9	4,272.9	7,410.0	7,317.6	92.40	80.192	
9,900.0	6,709.7	6,730.0	6,726.8	92.4	1.8	91.41	1,469.9	4,272.9	7,467.0	7,373.1	93.99	79.442	
9,940.9	6,709.7	6,730.0	6,726.8	93.5	1.8	91.41	1,469.9	4,272.9	7,507.7	7,412.5	95.13	78.923	
10,000.0	6,709.6	6,730.0	6,726.8	95.1	1.8	91.41	1,469.9	4,272.9	7,566.3	7,469.5	96.76	78.195	
10,039.3	6,709.5	6,730.0	6,726.8	96.2	1.8	91.41	1,469.9	4,272.9	7,605.3	7,507.5	97.85	77.722	
10,100.0	6,709.4	6,730.0	6,726.8	97.9	1.8	91.41	1,469.9	4,272.9	7,665.5	7,566.0	99.53	77.015	
10,137.8	6,709.3	6,730.0	6,726.8	98.9	1.8	91.41	1,469.9	4,272.9	7,703.0	7,602.4	100.58	76.586	
10,200.0	6,709.2	6,730.0	6,726.8	100.7	1.8	91.41	1,469.9	4,272.9	7,764.8	7,662.5	102.31	75.898	
10,236.2	6,709.1	6,730.0	6,726.8	101.7	1.8	91.41	1,469.9	4,272.9	7,800.7	7,697.4	103.31	75.508	
10,300.0	6,709.0	6,730.0	6,726.8	103.4	1.8	91.41	1,469.9	4,272.9	7,864.1	7,759.0	105.08	74.839	
10,334.6	6,708.9	6,730.0	6,726.8	104.4	1.8	91.41	1,469.9	4,272.9	7,898.5	7,792.4	106.04	74.484	
10,400.0	6,708.8	6,730.0	6,726.8	106.2	1.8	91.41	1,469.9	4,272.9	7,963.4	7,855.5	107.86	73.833	
10,433.0	6,708.7	6,730.0	6,726.8	107.1	1.8	91.41	1,469.9	4,272.9	7,996.2	7,887.4	108.78	73.511	
10,500.0	6,708.6	6,730.0	6,726.8	109.0	1.8	91.41	1,469.9	4,272.9	8,062.7	7,952.1	110.64	72.876	
10,531.5	6,708.5	6,730.0	6,726.8	109.9	1.8	91.41	1,469.9	4,272.9	8,094.0	7,982.5	111.51	72.585	
10,600.0	6,708.4	6,730.0	6,726.8	111.8	1.8	91.41	1,469.9	4,272.9	8,162.1	8,048.6	113.42	71.966	
10,629.9	6,708.4	6,730.0	6,726.8	112.6	1.8	91.41	1,469.9	4,272.9	8,191.8	8,077.5	114.25	71.702	
10,700.0	6,708.2	6,730.0	6,726.8	114.6	1.8	91.41	1,469.9	4,272.9	8,261.4	8,145.2	116.20	71.098	
10,728.3	6,708.2	6,730.0	6,726.8	115.3	1.8	91.41	1,469.9	4,272.9	8,289.6	8,172.6	116.99	70.860	
10,800.0	6,708.0	6,730.0	6,726.8	117.3	1.8	91.41	1,469.9	4,272.9	8,360.8	8,241.8	118.98	70.270	
10,826.7	6,708.0	6,730.0	6,726.8	118.1	1.8	91.41	1,469.9	4,272.9	8,387.4	8,267.6	119.73	70.055	
10,900.0	6,707.8	6,730.0	6,726.8	120.1	1.8	91.41	1,469.9	4,272.9	8,460.2	8,338.4	121.76	69.480	
10,925.2	6,707.8	6,730.0	6,726.8	120.8	1.8	91.41	1,469.9	4,272.9	8,485.2	8,362.7	122.47	69.286	
11,000.0	6,707.6	6,730.0	6,726.8	122.9	1.8	91.41	1,469.9	4,272.9	8,559.6	8,435.0	124.55	68.724	
11,023.6	6,707.6	6,730.0	6,726.8	123.6	1.8	91.41	1,469.9	4,272.9	8,583.0	8,457.8	125.21	68.550	
11,100.0	6,707.5	6,730.0	6,726.8	125.7	1.8	91.41	1,469.9	4,272.9	8,659.0	8,531.7	127.34	68.001	
11,122.0	6,707.4	6,730.0	6,726.8	126.3	1.8	91.41	1,469.9	4,272.9	8,680.9	8,552.9	127.95	67.846	
11,200.0	6,707.3	6,730.0	6,726.8	128.5	1.8	91.41	1,469.9	4,272.9	8,758.4	8,628.3	130.12	67.308	
11,220.4	6,707.2	6,730.0	6,726.8	129.0	1.8	91.41	1,469.9	4,272.9	8,778.8	8,648.1	130.69	67.170	
11,300.0	6,707.1	6,730.0	6,726.8	131.3	1.8	91.41	1,469.9	4,272.9	8,857.9	8,724.9	132.91	66.644	
11,318.9	6,707.0	6,730.0	6,726.8	131.8	1.8	91.41	1,469.9	4,272.9	8,876.6	8,743.2	133.44	66.522	
11,400.0	6,706.9	6,730.0	6,726.8	134.0	1.8	91.42	1,469.9	4,272.9	8,957.3	8,821.6	135.70	66.007	
11,417.3	6,706.9	6,730.0	6,726.8	134.5	1.8	91.42	1,469.9	4,272.9	8,974.5	8,838.3	136.18	65.900	
11,500.0	6,706.7	6,730.0	6,726.8	136.8	1.8	91.42	1,469.9	4,272.9	9,056.8	8,918.3	138.49	65.396	
11,515.7	6,706.7	6,730.0	6,726.8	137.3	1.8	91.42	1,469.9	4,272.9	9,072.4	8,933.5	138.93	65.302	
11,600.0	6,706.5	6,730.0	6,726.8	139.6	1.8	91.42	1,469.9	4,272.9	9,156.3	9,015.0	141.28	64.808	
11,614.1	6,706.5	6,730.0	6,726.8	140.0	1.8	91.42	1,469.9	4,272.9	9,170.3	9,028.7	141.68	64.727	
11,700.0	6,706.3	6,730.0	6,726.8	142.4	1.8	91.42	1,469.9	4,272.9	9,255.7	9,111.7	144.07	64.243	
11,712.6	6,706.3	6,730.0	6,726.8	142.8	1.8	91.42	1,469.9	4,272.9	9,268.3	9,123.8	144.43	64.173	
11,800.0	6,706.1	6,730.0	6,726.8	145.2	1.8	91.42	1,469.9	4,272.9	9,355.2	9,208.4	146.87	63.699	
11,811.0	6,706.1	6,730.0	6,726.8	145.5	1.8	91.42	1,469.9	4,272.9	9,366.2	9,219.0	147.17	63.640	
11,900.0	6,705.9	6,730.0	6,726.8	148.0	1.8	91.42	1,469.9	4,272.9	9,454.8	9,305.1	149.66	63.175	
11,909.4	6,705.9	6,730.0	6,726.8	148.3	1.8	91.42	1,469.9	4,272.9	9,464.1	9,314.2	149.92	63.127	
12,000.0	6,705.8	6,730.0	6,726.8	150.8	1.8	91.42	1,469.9	4,272.9	9,554.3	9,401.8	152.45	62.670	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,007.8	6,705.7	6,730.0	6,726.8	151.0	1.8	91.42	1,469.9	4,272.9	9,562.1	9,409.4	152.67	62.631	
12,100.0	6,705.6	6,730.0	6,726.8	153.6	1.8	91.42	1,469.9	4,272.9	9,653.8	9,498.6	155.25	62.183	
12,106.3	6,705.6	6,730.0	6,726.8	153.8	1.8	91.42	1,469.9	4,272.9	9,660.1	9,504.6	155.42	62.153	
12,200.0	6,705.4	6,730.0	6,726.8	156.4	1.8	91.42	1,469.9	4,272.9	9,753.3	9,595.3	158.04	61.713	
12,204.7	6,705.4	6,730.0	6,726.8	156.5	1.8	91.42	1,469.9	4,272.9	9,758.0	9,599.8	158.17	61.692	
12,300.0	6,705.2	6,730.0	6,726.8	159.2	1.8	91.42	1,469.9	4,272.9	9,852.9	9,692.1	160.84	61.260	
12,303.1	6,705.2	6,730.0	6,726.8	159.3	1.8	91.42	1,469.9	4,272.9	9,856.0	9,695.1	160.93	61.246	
12,400.0	6,705.0	6,730.0	6,726.8	162.0	1.8	91.42	1,469.9	4,272.9	9,952.5	9,788.8	163.63	60.821	
12,401.5	6,705.0	6,730.0	6,726.8	162.0	1.8	91.42	1,469.9	4,272.9	9,954.0	9,790.3	163.68	60.815 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	87.59	174.9	4,150.9	4,154.7				
98.4	98.4	80.4	80.4	0.1	0.0	87.59	174.8	4,150.9	4,154.6	4,154.5	0.10	N/A	
100.0	100.0	82.0	82.0	0.1	0.0	87.59	174.8	4,150.9	4,154.6	4,154.5	0.10	N/A	
196.8	196.8	178.1	178.1	0.3	0.1	87.59	174.6	4,151.0	4,154.6	4,154.2	0.39	N/A	
200.0	200.0	181.2	181.2	0.3	0.1	87.59	174.6	4,151.0	4,154.6	4,154.2	0.40	N/A	
295.3	295.3	275.6	275.6	0.5	0.2	87.59	174.4	4,151.0	4,154.7	4,153.9	0.73	5,652.970	
300.0	300.0	280.2	280.2	0.5	0.2	87.59	174.4	4,151.0	4,154.7	4,153.9	0.75	5,526.740	
393.7	393.7	373.9	373.9	0.8	0.3	87.60	174.3	4,151.0	4,154.7	4,153.7	1.05	3,962.821	
400.0	400.0	380.2	380.2	0.8	0.3	87.60	174.2	4,151.1	4,154.7	4,153.6	1.07	3,891.260	
492.1	492.1	471.6	471.6	1.0	0.4	87.60	174.0	4,151.1	4,154.8	4,153.4	1.34	3,107.744	
500.0	500.0	479.4	479.4	1.0	0.4	87.60	174.0	4,151.1	4,154.8	4,153.4	1.36	3,055.839	
590.5	590.5	569.7	569.6	1.2	0.4	87.60	173.7	4,151.2	4,154.8	4,153.2	1.61	2,572.901	
600.0	600.0	579.1	579.1	1.2	0.4	87.60	173.7	4,151.2	4,154.8	4,153.2	1.64	2,531.443	
689.0	689.0	671.1	671.1	1.4	0.5	87.61	173.3	4,151.2	4,154.9	4,153.0	1.89	2,201.397	
700.0	700.0	682.6	682.6	1.4	0.5	87.61	173.3	4,151.2	4,154.9	4,152.9	1.92	2,166.522	
787.4	787.4	771.9	771.9	1.6	0.5	87.62	172.8	4,151.2	4,154.8	4,152.7	2.16	1,927.361	
800.0	800.0	784.7	784.6	1.7	0.6	87.62	172.8	4,151.2	4,154.8	4,152.6	2.19	1,897.252	
885.8	885.8	878.7	878.7	1.9	0.6	87.62	172.2	4,151.1	4,154.7	4,152.3	2.42	1,714.193	
900.0	900.0	894.4	894.4	1.9	0.6	87.63	172.1	4,151.1	4,154.7	4,152.2	2.46	1,687.283	
984.2	984.2	977.8	977.8	2.1	0.6	87.64	171.4	4,150.9	4,154.4	4,151.7	2.69	1,546.298	
1,000.0	1,000.0	993.2	993.2	2.1	0.7	87.64	171.3	4,150.8	4,154.4	4,151.6	2.73	1,522.565	
1,082.7	1,082.7	1,077.0	1,077.0	2.3	0.7	87.65	170.6	4,150.6	4,154.1	4,151.2	2.95	1,409.137	
1,100.0	1,100.0	1,094.6	1,094.6	2.3	0.7	87.65	170.5	4,150.6	4,154.1	4,151.1	2.99	1,387.496	
1,181.1	1,181.1	1,169.1	1,169.1	2.5	0.7	58.95	169.8	4,150.4	4,153.3	4,150.1	3.18	1,304.550	
1,200.0	1,200.0	1,186.3	1,186.3	2.6	0.7	58.97	169.7	4,150.4	4,153.0	4,149.7	3.23	1,285.058	
1,279.5	1,279.4	1,259.7	1,259.6	2.7	0.8	59.05	169.1	4,150.4	4,150.9	4,147.5	3.43	1,209.307	
1,300.0	1,299.8	1,278.6	1,278.6	2.8	0.8	59.08	168.9	4,150.4	4,150.3	4,146.8	3.48	1,191.166	
1,377.9	1,377.5	1,348.2	1,348.2	3.0	0.8	59.21	168.5	4,150.6	4,147.1	4,143.4	3.68	1,126.246	
1,400.0	1,399.5	1,367.6	1,367.6	3.0	0.8	59.25	168.4	4,150.6	4,146.0	4,142.2	3.74	1,109.209	
1,476.4	1,475.3	1,438.0	1,438.0	3.2	0.8	59.43	168.2	4,150.9	4,141.7	4,137.8	3.94	1,050.851	
1,500.0	1,498.7	1,460.7	1,460.7	3.3	0.8	59.50	168.1	4,151.0	4,140.2	4,136.2	4.00	1,033.795	
1,574.8	1,572.6	1,545.2	1,545.2	3.5	0.9	59.75	167.9	4,151.4	4,134.7	4,130.5	4.22	980.182	
1,600.0	1,597.5	1,578.8	1,578.7	3.5	0.9	59.85	167.8	4,151.4	4,132.6	4,128.3	4.29	963.418	
1,673.2	1,669.4	1,667.1	1,667.1	3.7	0.9	60.18	167.6	4,151.3	4,125.5	4,121.0	4.52	912.310	
1,700.1	1,695.8	1,698.6	1,698.5	3.8	0.9	60.31	167.4	4,151.1	4,122.6	4,118.0	4.61	894.465	
1,771.6	1,765.7	1,770.5	1,770.5	4.1	0.9	60.50	167.1	4,150.8	4,114.8	4,109.9	4.85	848.750	
1,800.0	1,793.4	1,799.0	1,799.0	4.2	1.0	60.57	166.9	4,150.6	4,111.7	4,106.7	4.94	831.847	
1,870.1	1,862.0	1,868.7	1,868.7	4.4	1.0	60.75	166.4	4,150.2	4,104.0	4,098.8	5.19	791.002	
1,900.0	1,891.3	1,898.5	1,898.5	4.5	1.0	60.83	166.2	4,150.0	4,100.7	4,095.4	5.29	774.730	
1,968.5	1,958.3	1,965.3	1,965.3	4.8	1.0	61.01	165.5	4,149.6	4,093.2	4,087.7	5.54	738.592	
2,000.0	1,989.1	1,996.0	1,996.0	4.9	1.0	61.10	165.2	4,149.5	4,089.8	4,084.2	5.66	723.044	
2,066.9	2,054.5	2,064.3	2,064.3	5.1	1.1	61.28	164.3	4,149.0	4,082.6	4,076.7	5.91	691.030	
2,100.0	2,086.9	2,098.1	2,098.1	5.3	1.1	61.38	163.8	4,148.8	4,079.0	4,072.9	6.03	676.142	
2,165.3	2,150.8	2,160.6	2,160.6	5.5	1.1	61.55	162.8	4,148.4	4,071.9	4,065.6	6.28	648.044	
2,200.0	2,184.7	2,193.7	2,193.6	5.6	1.1	61.65	162.3	4,148.1	4,068.2	4,061.8	6.42	634.015	
2,263.8	2,247.1	2,255.5	2,255.4	5.9	1.1	61.82	161.7	4,147.7	4,061.4	4,054.7	6.66	609.574	
2,300.0	2,282.5	2,290.8	2,290.7	6.0	1.1	61.91	161.5	4,147.5	4,057.5	4,050.7	6.80	596.483	
2,362.2	2,343.3	2,361.3	2,361.3	6.3	1.1	62.09	161.8	4,147.0	4,050.9	4,043.8	7.05	574.505	
2,400.0	2,380.3	2,404.9	2,404.8	6.5	1.1	62.20	162.3	4,146.6	4,046.8	4,039.6	7.20	561.814	
2,460.6	2,439.6	2,469.2	2,469.1	6.7	1.1	62.35	163.4	4,145.9	4,040.1	4,032.7	7.45	542.243	
2,500.0	2,478.1	2,510.4	2,510.3	6.9	1.1	62.45	164.3	4,145.4	4,035.8	4,028.2	7.61	530.215	
2,559.0	2,535.9	2,569.8	2,569.7	7.1	1.1	62.58	165.6	4,144.6	4,029.3	4,021.4	7.85	513.011	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,600.0	2,575.9	2,610.1	2,610.0	7.3	1.2	62.68	166.5	4,144.1	4,024.7	4,016.7	8.02	501.700	
2,657.5	2,632.2	2,663.2	2,663.0	7.5	1.2	62.80	167.7	4,143.5	4,018.4	4,010.2	8.26	486.562	
2,700.0	2,673.8	2,700.0	2,699.8	7.7	1.2	62.89	168.4	4,143.0	4,013.8	4,005.4	8.43	475.940	
2,755.9	2,728.4	2,753.5	2,753.3	7.9	1.2	63.02	169.4	4,142.5	4,007.8	3,999.1	8.67	462.480	
2,800.0	2,771.6	2,793.7	2,793.5	8.1	1.2	63.12	170.0	4,142.1	4,003.1	3,994.3	8.85	452.379	
2,854.3	2,824.7	2,837.8	2,837.7	8.3	1.2	63.23	170.6	4,141.7	3,997.4	3,988.4	9.07	440.524	
2,900.0	2,869.4	2,874.3	2,874.1	8.5	1.2	63.32	171.0	4,141.4	3,992.8	3,983.5	9.26	431.014	
2,952.7	2,921.0	2,914.4	2,914.2	8.8	1.2	63.42	171.2	4,141.3	3,987.5	3,978.1	9.48	420.582	
3,000.0	2,967.2	2,947.6	2,947.4	9.0	1.2	63.51	171.4	4,141.2	3,983.0	3,973.3	9.67	411.805	
3,051.2	3,017.3	2,983.6	2,983.4	9.2	1.2	63.60	171.6	4,141.3	3,978.3	3,968.4	9.88	402.634	
3,100.0	3,065.0	3,017.1	3,016.9	9.4	1.2	63.69	171.7	4,141.5	3,974.0	3,963.9	10.08	394.192	
3,149.6	3,113.5	3,050.5	3,050.3	9.6	1.2	63.78	171.9	4,141.8	3,969.8	3,959.6	10.29	385.900	
3,200.0	3,162.8	3,100.0	3,099.8	9.8	1.2	63.91	172.3	4,142.6	3,965.9	3,955.4	10.50	377.796	
3,248.0	3,209.8	3,121.1	3,120.9	10.0	1.2	63.96	172.4	4,142.9	3,962.2	3,951.5	10.69	370.470	
3,300.0	3,260.6	3,164.8	3,164.5	10.2	1.2	64.07	172.9	4,143.8	3,958.3	3,947.4	10.91	362.695	
3,346.4	3,306.1	3,200.0	3,199.8	10.5	1.2	64.16	173.3	4,144.5	3,955.0	3,943.9	11.11	356.022	
3,400.0	3,358.5	3,247.5	3,247.3	10.7	1.2	64.28	173.9	4,145.6	3,951.3	3,940.0	11.34	348.539	
3,444.9	3,402.3	3,284.2	3,284.0	10.9	1.2	64.38	174.4	4,146.5	3,948.3	3,936.8	11.53	342.510	
3,500.0	3,456.3	3,336.5	3,336.3	11.1	1.2	64.51	175.1	4,147.9	3,944.7	3,933.0	11.76	335.306	
3,543.3	3,498.6	3,380.7	3,380.4	11.3	1.2	64.62	175.8	4,149.1	3,941.9	3,930.0	11.95	329.804	
3,600.0	3,554.1	3,431.8	3,431.5	11.5	1.2	64.75	176.6	4,150.5	3,938.3	3,926.1	12.20	322.892	
3,641.7	3,594.9	3,467.0	3,466.7	11.7	1.2	64.83	177.2	4,151.5	3,935.6	3,923.3	12.38	317.988	
3,700.0	3,651.9	3,518.7	3,518.3	12.0	1.2	64.96	178.0	4,153.0	3,932.1	3,919.5	12.63	311.357	
3,740.1	3,691.2	3,557.9	3,557.5	12.2	1.2	65.06	178.6	4,154.2	3,929.7	3,916.9	12.80	306.904	
3,800.0	3,749.7	3,618.9	3,618.4	12.4	1.2	65.21	179.6	4,156.1	3,926.2	3,913.1	13.07	300.464	
3,838.6	3,787.4	3,662.3	3,661.8	12.6	1.3	65.32	180.3	4,157.3	3,923.9	3,910.6	13.24	296.401	
3,900.0	3,847.5	3,725.9	3,725.4	12.9	1.3	65.48	181.3	4,159.1	3,920.1	3,906.6	13.51	290.158	
3,937.0	3,883.7	3,760.4	3,759.8	13.0	1.3	65.57	181.8	4,160.0	3,917.9	3,904.2	13.67	286.536	
4,000.0	3,945.3	3,831.2	3,830.7	13.3	1.3	65.75	182.5	4,162.0	3,914.1	3,900.1	13.96	280.470	
4,035.4	3,980.0	3,885.5	3,884.9	13.5	1.3	65.90	182.8	4,163.2	3,911.8	3,897.7	14.12	277.045	
4,060.0	4,004.0	3,924.6	3,924.0	13.6	1.3	66.01	182.8	4,163.9	3,910.1	3,895.9	14.23	274.700	
4,100.0	4,043.2	3,989.7	3,989.2	13.7	1.3	66.13	182.6	4,164.7	3,907.3	3,892.9	14.40	271.409	
4,133.8	4,076.5	4,037.7	4,037.1	13.8	1.3	66.22	182.2	4,165.0	3,905.0	3,890.5	14.51	269.124	
4,200.0	4,141.6	4,124.3	4,123.7	14.0	1.3	66.35	181.3	4,165.2	3,900.5	3,885.8	14.73	264.844	
4,232.3	4,173.5	4,162.2	4,161.6	14.1	1.3	66.39	180.9	4,165.1	3,898.5	3,883.6	14.82	263.038	
4,300.0	4,240.6	4,250.9	4,250.3	14.3	1.4	66.49	180.5	4,164.7	3,894.5	3,879.4	15.02	259.344	
4,330.7	4,271.1	4,294.9	4,294.3	14.4	1.4	66.53	180.4	4,164.3	3,892.7	3,877.6	15.09	257.889	
4,400.0	4,340.0	4,361.9	4,361.3	14.5	1.4	66.57	180.1	4,163.6	3,889.1	3,873.9	15.26	254.792	
4,429.1	4,369.0	4,389.3	4,388.7	14.6	1.4	66.58	180.0	4,163.3	3,887.9	3,872.5	15.32	253.694	
4,500.0	4,439.7	4,494.3	4,493.7	14.8	1.4	66.64	178.7	4,161.8	3,885.0	3,869.5	15.48	250.936	
4,527.5	4,467.2	4,522.4	4,521.8	14.8	1.4	66.65	178.1	4,161.2	3,883.9	3,868.4	15.53	250.078	
4,600.0	4,539.7	4,590.3	4,589.6	14.9	1.4	66.67	176.4	4,159.8	3,881.6	3,866.0	15.66	247.900	
4,626.0	4,565.6	4,614.7	4,614.0	15.0	1.4	66.67	175.7	4,159.3	3,881.0	3,865.3	15.70	247.257	
4,660.2	4,599.8	4,646.9	4,646.2	15.0	1.4	95.40	174.9	4,158.7	3,880.3	3,867.3	13.02	298.131	
4,700.0	4,639.6	4,684.4	4,683.7	15.0	1.4	95.41	174.2	4,158.0	3,879.7	3,866.6	13.09	296.359	
4,724.4	4,664.0	4,700.0	4,699.3	15.1	1.5	95.42	174.0	4,157.7	3,879.3	3,866.2	13.14	295.208	
4,800.0	4,739.6	4,759.1	4,758.4	15.2	1.5	95.43	173.4	4,156.9	3,878.4	3,865.1	13.30	291.695	
4,822.8	4,762.5	4,775.3	4,774.6	15.2	1.5	95.43	173.3	4,156.8	3,878.2	3,864.8	13.34	290.655	
4,900.0	4,839.6	4,825.5	4,824.8	15.3	1.5	95.43	173.2	4,156.5	3,877.8	3,864.3	13.50	287.282	
4,907.9	4,847.6	4,830.3	4,829.6	15.4	1.5	95.43	173.1	4,156.5	3,877.8	3,864.3	13.51	286.946	
4,921.2	4,860.9	4,838.3	4,837.6	15.4	1.5	95.43	173.1	4,156.5	3,877.8	3,864.3	13.54	286.385	
5,000.0	4,939.6	4,900.0	4,899.3	15.5	1.5	95.44	172.5	4,156.9	3,878.3	3,864.6	13.70	283.113	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,959.3	4,900.0	4,899.3	15.5	1.5	95.44	172.5	4,156.9	3,878.5	3,864.7	13.74	282.340	
5,100.0	5,039.6	5,031.7	5,030.9	15.6	1.5	95.47	170.1	4,157.0	3,878.6	3,864.7	13.92	278.617	
5,118.1	5,057.7	5,048.7	5,047.9	15.7	1.5	95.48	169.8	4,156.9	3,878.6	3,864.6	13.96	277.827	
5,193.7	5,133.3	5,116.1	5,115.3	15.8	1.5	95.50	168.4	4,156.7	3,878.5	3,864.4	14.12	274.597	
5,200.0	5,139.6	5,121.0	5,120.2	15.8	1.5	95.50	168.3	4,156.7	3,878.5	3,864.3	14.14	274.336	
5,216.5	5,156.2	5,133.7	5,132.9	15.8	1.5	95.51	168.1	4,156.7	3,878.5	3,864.3	14.17	273.651	
5,300.0	5,239.6	5,200.0	5,199.2	15.9	1.6	95.53	166.5	4,156.8	3,878.8	3,864.5	14.35	270.253	
5,314.9	5,254.6	5,216.5	5,215.8	16.0	1.6	95.53	166.1	4,156.9	3,878.9	3,864.5	14.39	269.630	
5,400.0	5,339.6	5,330.1	5,329.3	16.1	1.6	95.57	163.4	4,156.8	3,879.0	3,864.5	14.58	266.035	
5,413.4	5,353.0	5,347.8	5,347.0	16.1	1.6	95.58	163.0	4,156.7	3,879.0	3,864.4	14.61	265.474	
5,500.0	5,439.6	5,438.0	5,437.1	16.3	1.6	95.60	161.6	4,156.1	3,878.6	3,863.8	14.80	261.979	
5,511.8	5,451.4	5,447.5	5,446.6	16.3	1.6	95.60	161.5	4,156.1	3,878.5	3,863.7	14.83	261.521	
5,600.0	5,539.6	5,531.2	5,530.4	16.4	1.6	95.62	160.7	4,155.9	3,878.4	3,863.4	15.03	258.096	
5,610.2	5,549.9	5,545.2	5,544.4	16.4	1.6	95.62	160.5	4,155.8	3,878.4	3,863.3	15.05	257.683	
5,700.0	5,639.6	5,638.6	5,637.8	16.6	1.7	95.64	159.1	4,155.2	3,877.9	3,862.6	15.25	254.228	
5,708.6	5,648.3	5,645.4	5,644.5	16.6	1.7	95.64	159.0	4,155.1	3,877.8	3,862.6	15.27	253.909	
5,777.5	5,717.1	5,700.0	5,699.1	16.7	1.7	95.65	158.3	4,155.0	3,877.7	3,862.3	15.42	251.402 CC	
5,800.0	5,739.6	5,719.0	5,718.1	16.7	1.7	95.66	158.0	4,155.0	3,877.7	3,862.3	15.47	250.603	
5,807.1	5,746.7	5,725.3	5,724.4	16.8	1.7	95.66	158.0	4,155.0	3,877.8	3,862.3	15.49	250.350	
5,900.0	5,839.6	5,808.7	5,807.9	16.9	1.7	95.66	157.5	4,155.1	3,878.0	3,862.3	15.69	247.084	
5,905.5	5,845.1	5,813.8	5,813.0	16.9	1.7	95.66	157.4	4,155.1	3,878.0	3,862.3	15.71	246.892	
6,000.0	5,939.6	5,902.0	5,901.1	17.1	1.7	95.67	157.0	4,155.5	3,878.4	3,862.5	15.92	243.649	
6,003.9	5,943.6	5,908.4	5,907.5	17.1	1.7	95.67	156.9	4,155.5	3,878.4	3,862.5	15.93	243.508	
6,059.2	5,998.8	5,998.9	5,998.0	17.2	1.8	95.68	156.2	4,155.4	3,878.4	3,862.4	16.06	241.521	
6,062.0	6,001.7	6,000.0	5,999.1	17.2	1.8	-174.32	156.1	4,155.4	3,878.4	3,860.3	18.18	213.341 ES	
6,100.0	6,039.6	6,029.4	6,028.5	17.2	1.8	-174.31	155.8	4,155.3	3,879.5	3,861.2	18.24	212.725	
6,102.3	6,042.0	6,031.1	6,030.2	17.2	1.8	-174.30	155.8	4,155.3	3,879.6	3,861.4	18.24	212.688	
6,150.0	6,089.4	6,065.8	6,064.9	17.3	1.8	-174.27	155.4	4,155.3	3,884.0	3,865.7	18.33	211.861	
6,200.0	6,138.7	6,100.0	6,099.1	17.3	1.8	-174.20	154.9	4,155.3	3,892.2	3,873.8	18.44	211.091	
6,200.8	6,139.5	6,100.0	6,099.1	17.3	1.8	-174.20	154.9	4,155.3	3,892.4	3,873.9	18.44	211.084	
6,250.0	6,187.4	6,145.3	6,144.4	17.3	1.8	-174.11	154.2	4,155.5	3,903.9	3,885.4	18.54	210.584	
6,299.2	6,234.4	6,186.9	6,186.0	17.4	1.8	-173.99	153.6	4,155.8	3,918.7	3,900.1	18.61	210.587	
6,300.0	6,235.1	6,187.6	6,186.7	17.4	1.8	-173.99	153.6	4,155.8	3,919.0	3,900.4	18.61	210.591	
6,350.0	6,281.7	6,233.4	6,232.5	17.4	1.8	-173.84	152.9	4,156.1	3,937.4	3,918.8	18.64	211.208	
6,397.6	6,324.8	6,277.6	6,276.7	17.3	1.8	-173.66	152.2	4,156.3	3,957.9	3,939.3	18.63	212.430	
6,400.0	6,326.9	6,279.8	6,278.9	17.3	1.8	-173.65	152.2	4,156.4	3,959.0	3,940.4	18.63	212.506	
6,450.0	6,370.5	6,322.3	6,321.3	17.3	1.8	-173.43	151.5	4,156.6	3,983.7	3,965.1	18.57	214.552	
6,496.0	6,409.1	6,358.1	6,357.1	17.3	1.9	-173.17	150.9	4,156.8	4,009.0	3,990.6	18.46	217.118	
6,500.0	6,412.3	6,361.1	6,360.1	17.3	1.9	-173.15	150.8	4,156.9	4,011.3	3,992.8	18.45	217.366	
6,550.0	6,452.1	6,400.0	6,399.1	17.3	1.9	-172.81	150.1	4,157.1	4,041.8	4,023.5	18.30	220.907	
6,594.5	6,485.6	6,434.1	6,433.2	17.3	1.9	-172.45	149.5	4,157.4	4,071.1	4,053.0	18.12	224.639	
6,600.0	6,489.7	6,438.5	6,437.6	17.3	1.9	-172.40	149.5	4,157.4	4,074.9	4,056.8	18.10	225.136	
6,650.0	6,524.9	6,476.9	6,476.0	17.2	1.9	-171.91	148.8	4,157.7	4,110.6	4,092.7	17.87	229.981	
6,692.9	6,553.0	6,500.0	6,499.1	17.2	1.9	-171.38	148.4	4,157.8	4,143.0	4,125.3	17.65	234.683	
6,700.0	6,557.5	6,500.0	6,499.1	17.2	1.9	-171.27	148.4	4,157.8	4,148.5	4,130.9	17.61	235.549	
6,750.0	6,587.4	6,500.0	6,499.1	17.2	1.9	-170.41	148.4	4,157.8	4,188.8	4,171.5	17.32	241.804	
6,791.3	6,609.9	6,500.0	6,499.1	17.2	1.9	-169.50	148.4	4,157.8	4,223.7	4,206.6	17.10	246.974	
6,800.0	6,614.4	6,500.0	6,499.1	17.2	1.9	-169.28	148.4	4,157.8	4,231.2	4,214.1	17.06	248.004	
6,850.0	6,638.4	6,500.0	6,499.1	17.2	1.9	-167.76	148.4	4,157.8	4,275.4	4,258.6	16.87	253.462	
6,889.7	6,655.3	6,500.0	6,499.1	17.4	1.9	-166.14	148.4	4,157.8	4,311.8	4,295.0	16.81	256.486	
6,900.0	6,659.4	6,500.0	6,499.1	17.5	1.9	-165.65	148.4	4,157.8	4,321.3	4,304.5	16.81	257.046	
6,950.0	6,677.1	6,500.0	6,499.1	18.0	1.9	-162.53	148.4	4,157.8	4,368.4	4,351.4	17.00	256.944	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
6,988.2	6,688.4	6,500.0	6,499.1	18.5	1.9	-158.99	148.4	4,157.8	4,405.2	4,387.7	17.44	252.660	
7,000.0	6,691.5	6,500.0	6,499.1	18.7	1.9	-157.57	148.4	4,157.8	4,416.6	4,399.0	17.64	250.384	
7,050.0	6,702.5	6,500.0	6,499.1	19.5	1.9	-148.75	148.4	4,157.8	4,465.6	4,446.5	19.10	233.838	
7,086.6	6,708.4	6,500.0	6,499.1	20.1	1.9	-136.92	148.4	4,157.8	4,501.8	4,480.8	20.95	214.860	
7,100.0	6,710.1	6,500.0	6,499.1	20.4	1.9	-130.55	148.4	4,157.8	4,515.1	4,493.4	21.75	207.598	
7,150.0	6,714.2	6,500.0	6,499.1	21.3	1.9	-92.88	148.4	4,157.8	4,564.9	4,541.9	22.97	198.734	
7,185.0	6,715.0	6,500.0	6,499.1	21.9	1.9	-62.55	148.4	4,157.8	4,599.8	4,577.4	22.38	205.513	
7,185.6	6,715.0	6,500.0	6,499.1	21.9	1.9	-62.16	148.4	4,157.8	4,600.3	4,577.9	22.36	205.762	
7,200.0	6,715.0	6,500.0	6,499.1	22.2	1.9	-62.16	148.4	4,157.8	4,614.7	4,592.1	22.60	204.156	
7,283.4	6,714.8	6,500.0	6,499.1	23.9	1.9	-62.16	148.4	4,157.8	4,697.7	4,673.6	24.10	194.944	
7,300.0	6,714.8	6,500.0	6,499.1	24.2	1.9	-62.16	148.4	4,157.8	4,714.2	4,689.8	24.39	193.252	
7,381.9	6,714.6	6,500.0	6,499.1	26.0	1.9	-62.16	148.4	4,157.8	4,795.7	4,769.8	25.97	184.700	
7,400.0	6,714.6	6,500.0	6,499.1	26.4	1.9	-62.16	148.4	4,157.8	4,813.8	4,787.5	26.31	182.946	
7,480.3	6,714.4	6,500.0	6,499.1	28.2	1.9	-62.16	148.4	4,157.8	4,893.7	4,865.8	27.94	175.165	
7,500.0	6,714.4	6,500.0	6,499.1	28.7	1.9	-62.16	148.4	4,157.8	4,913.4	4,885.0	28.34	173.393	
7,578.7	6,714.2	6,500.0	6,499.1	30.5	1.9	-62.16	148.4	4,157.8	4,991.8	4,961.8	29.99	166.425	
7,600.0	6,714.2	6,500.0	6,499.1	31.0	1.9	-62.17	148.4	4,157.8	5,013.0	4,982.5	30.44	164.673	
7,677.1	6,714.0	6,500.0	6,499.1	32.9	1.9	-62.17	148.4	4,157.8	5,089.8	5,057.7	32.12	158.483	
7,700.0	6,714.0	6,500.0	6,499.1	33.4	1.9	-62.17	148.4	4,157.8	5,112.6	5,080.0	32.61	156.773	
7,775.6	6,713.9	6,500.0	6,499.1	35.3	1.9	-62.17	148.4	4,157.8	5,187.9	5,153.6	34.29	151.298	
7,800.0	6,713.8	6,500.0	6,499.1	35.9	1.9	-62.17	148.4	4,157.8	5,212.2	5,177.4	34.83	149.642	
7,874.0	6,713.7	6,500.0	6,499.1	37.8	1.9	-62.17	148.4	4,157.8	5,285.9	5,249.4	36.50	144.804	
7,900.0	6,713.6	6,500.0	6,499.1	38.4	1.9	-62.17	148.4	4,157.8	5,311.9	5,274.8	37.09	143.209	
7,972.4	6,713.5	6,500.0	6,499.1	40.3	1.9	-62.17	148.4	4,157.8	5,384.0	5,345.3	38.75	138.933	
8,000.0	6,713.4	6,500.0	6,499.1	41.0	1.9	-62.17	148.4	4,157.8	5,411.5	5,372.1	39.39	137.400	
8,070.8	6,713.3	6,500.0	6,499.1	42.8	1.9	-62.17	148.4	4,157.8	5,482.1	5,441.1	41.03	133.616	
8,100.0	6,713.2	6,500.0	6,499.1	43.6	1.9	-62.17	148.4	4,157.8	5,511.2	5,469.5	41.71	132.146	
8,169.3	6,713.1	6,500.0	6,499.1	45.4	1.9	-62.17	148.4	4,157.8	5,580.2	5,536.9	43.33	128.790	
8,200.0	6,713.0	6,500.0	6,499.1	46.2	1.9	-62.17	148.4	4,157.8	5,610.9	5,566.8	44.05	127.381	
8,267.7	6,712.9	6,500.0	6,499.1	48.0	1.9	-62.17	148.4	4,157.8	5,678.4	5,632.7	45.65	124.399	
8,300.0	6,712.8	6,500.0	6,499.1	48.8	1.9	-62.17	148.4	4,157.8	5,710.6	5,664.1	46.41	123.048	
8,366.1	6,712.7	6,500.0	6,499.1	50.6	1.9	-62.17	148.4	4,157.8	5,776.5	5,728.5	47.98	120.392	
8,400.0	6,712.6	6,500.0	6,499.1	51.5	1.9	-62.17	148.4	4,157.8	5,810.3	5,761.5	48.79	119.097	
8,464.5	6,712.5	6,500.0	6,499.1	53.2	1.9	-62.17	148.4	4,157.8	5,874.6	5,824.3	50.33	116.725	
8,500.0	6,712.4	6,500.0	6,499.1	54.1	1.9	-62.17	148.4	4,157.8	5,910.0	5,858.8	51.18	115.483	
8,563.0	6,712.3	6,500.0	6,499.1	55.8	1.9	-62.17	148.4	4,157.8	5,972.8	5,920.1	52.69	113.359	
8,600.0	6,712.3	6,500.0	6,499.1	56.8	1.9	-62.17	148.4	4,157.8	6,009.7	5,956.1	53.58	112.167	
8,661.4	6,712.1	6,500.0	6,499.1	58.5	1.9	-62.17	148.4	4,157.8	6,070.9	6,015.9	55.06	110.263	
8,700.0	6,712.1	6,500.0	6,499.1	59.5	1.9	-62.17	148.4	4,157.8	6,109.4	6,053.4	55.99	109.117	
8,759.8	6,711.9	6,500.0	6,499.1	61.1	1.9	-62.17	148.4	4,157.8	6,169.1	6,111.7	57.44	107.405	
8,800.0	6,711.9	6,500.0	6,499.1	62.2	1.9	-62.18	148.4	4,157.8	6,209.2	6,150.8	58.41	106.303	
8,858.2	6,711.8	6,500.0	6,499.1	63.8	1.9	-62.18	148.4	4,157.8	6,267.3	6,207.4	59.82	104.761	
8,900.0	6,711.7	6,500.0	6,499.1	64.9	1.9	-62.18	148.4	4,157.8	6,308.9	6,248.1	60.84	103.700	
8,956.7	6,711.6	6,500.0	6,499.1	66.5	1.9	-62.18	148.4	4,157.8	6,365.5	6,303.2	62.22	102.309	
9,000.0	6,711.5	6,500.0	6,499.1	67.6	1.9	-62.18	148.4	4,157.8	6,408.7	6,345.4	63.27	101.287	
9,055.1	6,711.4	6,500.0	6,499.1	69.1	1.9	-62.18	148.4	4,157.8	6,463.6	6,399.0	64.62	100.030	
9,100.0	6,711.3	6,500.0	6,499.1	70.4	1.9	-62.18	148.4	4,157.8	6,508.4	6,442.7	65.71	99.044	
9,153.5	6,711.2	6,500.0	6,499.1	71.8	1.9	-62.18	148.4	4,157.8	6,561.8	6,494.8	67.02	97.906	
9,200.0	6,711.1	6,500.0	6,499.1	73.1	1.9	-62.18	148.4	4,157.8	6,608.2	6,540.1	68.16	96.954	
9,251.9	6,711.0	6,500.0	6,499.1	74.5	1.9	-62.18	148.4	4,157.8	6,660.0	6,590.6	69.43	95.923	
9,300.0	6,710.9	6,500.0	6,499.1	75.8	1.9	-62.18	148.4	4,157.8	6,708.0	6,637.4	70.61	95.003	
9,350.4	6,710.8	6,500.0	6,499.1	77.2	1.9	-62.18	148.4	4,157.8	6,758.3	6,686.4	71.84	94.068	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,400.0	6,710.7	6,500.0	6,499.1	78.6	1.9	-62.18	148.4	4,157.8	6,807.8	6,734.7	73.06	93.177	
9,448.8	6,710.6	6,500.0	6,499.1	79.9	1.9	-62.18	148.4	4,157.8	6,856.5	6,782.2	74.26	92.328	
9,500.0	6,710.5	6,500.0	6,499.1	81.3	1.9	-62.18	148.4	4,157.8	6,907.6	6,832.0	75.52	91.466	
9,547.2	6,710.4	6,500.0	6,499.1	82.6	1.9	-62.18	148.4	4,157.8	6,954.7	6,878.0	76.68	90.694	
9,600.0	6,710.3	6,500.0	6,499.1	84.1	1.9	-62.18	148.4	4,157.8	7,007.4	6,929.4	77.98	89.859	
9,645.6	6,710.2	6,500.0	6,499.1	85.3	1.9	-62.18	148.4	4,157.8	7,052.9	6,973.8	79.11	89.157	
9,700.0	6,710.1	6,500.0	6,499.1	86.8	1.9	-62.18	148.4	4,157.8	7,107.2	7,026.7	80.45	88.347	
9,744.1	6,710.0	6,500.0	6,499.1	88.1	1.9	-62.18	148.4	4,157.8	7,151.2	7,069.6	81.53	87.708	
9,800.0	6,709.9	6,500.0	6,499.1	89.6	1.9	-62.19	148.4	4,157.8	7,207.0	7,124.1	82.91	86.921	
9,842.5	6,709.9	6,500.0	6,499.1	90.8	1.9	-62.19	148.4	4,157.8	7,249.4	7,165.4	83.96	86.340	
9,900.0	6,709.7	6,500.0	6,499.1	92.4	1.9	-62.19	148.4	4,157.8	7,306.8	7,221.4	85.38	85.576	
9,940.9	6,709.7	6,500.0	6,499.1	93.5	1.9	-62.19	148.4	4,157.8	7,347.6	7,261.2	86.39	85.047	
10,000.0	6,709.6	6,500.0	6,499.1	95.1	1.9	-62.19	148.4	4,157.8	7,406.6	7,318.8	87.86	84.305	
10,039.3	6,709.5	6,500.0	6,499.1	96.2	1.9	-62.19	148.4	4,157.8	7,445.9	7,357.1	88.83	83.823	
10,100.0	6,709.4	6,500.0	6,499.1	97.9	1.9	-62.19	148.4	4,157.8	7,506.4	7,416.1	90.33	83.101	
10,137.8	6,709.3	6,500.0	6,499.1	98.9	1.9	-62.19	148.4	4,157.8	7,544.1	7,452.9	91.26	82.662	
10,200.0	6,709.2	6,500.0	6,499.1	100.7	1.9	-62.19	148.4	4,157.8	7,606.3	7,513.5	92.81	81.959	
10,236.2	6,709.1	6,500.0	6,499.1	101.7	1.9	-62.19	148.4	4,157.8	7,642.4	7,548.7	93.70	81.561	
10,300.0	6,709.0	6,500.0	6,499.1	103.4	1.9	-62.19	148.4	4,157.8	7,706.1	7,610.8	95.28	80.876	
10,334.6	6,708.9	6,500.0	6,499.1	104.4	1.9	-62.19	148.4	4,157.8	7,740.7	7,644.5	96.14	80.513	
10,400.0	6,708.8	6,500.0	6,499.1	106.2	1.9	-62.19	148.4	4,157.8	7,805.9	7,708.2	97.76	79.846	
10,433.0	6,708.7	6,500.0	6,499.1	107.1	1.9	-62.19	148.4	4,157.8	7,838.9	7,740.3	98.58	79.516	
10,500.0	6,708.6	6,500.0	6,499.1	109.0	1.9	-62.19	148.4	4,157.8	7,905.8	7,805.5	100.24	78.865	
10,531.5	6,708.5	6,500.0	6,499.1	109.9	1.9	-62.19	148.4	4,157.8	7,937.2	7,836.2	101.02	78.567	
10,600.0	6,708.4	6,500.0	6,499.1	111.8	1.9	-62.19	148.4	4,157.8	8,005.6	7,902.9	102.73	77.932	
10,629.9	6,708.4	6,500.0	6,499.1	112.6	1.9	-62.19	148.4	4,157.8	8,035.5	7,932.0	103.47	77.661	
10,700.0	6,708.2	6,500.0	6,499.1	114.6	1.9	-62.20	148.4	4,157.8	8,105.5	8,000.3	105.21	77.041	
10,728.3	6,708.2	6,500.0	6,499.1	115.3	1.9	-62.20	148.4	4,157.8	8,133.7	8,027.8	105.91	76.796	
10,800.0	6,708.0	6,500.0	6,499.1	117.3	1.9	-62.20	148.4	4,157.8	8,205.3	8,097.6	107.69	76.190	
10,826.7	6,708.0	6,500.0	6,499.1	118.1	1.9	-62.20	148.4	4,157.8	8,232.0	8,123.7	108.36	75.969	
10,900.0	6,707.8	6,500.0	6,499.1	120.1	1.9	-62.20	148.4	4,157.8	8,305.2	8,195.0	110.18	75.377	
10,925.2	6,707.8	6,500.0	6,499.1	120.8	1.9	-62.20	148.4	4,157.8	8,330.3	8,219.5	110.81	75.179	
11,000.0	6,707.6	6,500.0	6,499.1	122.9	1.9	-62.20	148.4	4,157.8	8,405.0	8,292.4	112.67	74.600	
11,023.6	6,707.6	6,500.0	6,499.1	123.6	1.9	-62.20	148.4	4,157.8	8,428.6	8,315.3	113.26	74.421	
11,100.0	6,707.5	6,500.0	6,499.1	125.7	1.9	-62.20	148.4	4,157.8	8,504.9	8,389.7	115.16	73.855	
11,122.0	6,707.4	6,500.0	6,499.1	126.3	1.9	-62.20	148.4	4,157.8	8,526.9	8,411.2	115.70	73.695	
11,200.0	6,707.3	6,500.0	6,499.1	128.5	1.9	-62.20	148.4	4,157.8	8,604.8	8,487.1	117.65	73.141	
11,220.4	6,707.2	6,500.0	6,499.1	129.0	1.9	-62.20	148.4	4,157.8	8,625.2	8,507.0	118.15	72.999	
11,300.0	6,707.1	6,500.0	6,499.1	131.3	1.9	-62.20	148.4	4,157.8	8,704.6	8,584.5	120.14	72.457	
11,318.9	6,707.0	6,500.0	6,499.1	131.8	1.9	-62.20	148.4	4,157.8	8,723.5	8,602.9	120.61	72.330	
11,400.0	6,706.9	6,500.0	6,499.1	134.0	1.9	-62.20	148.4	4,157.8	8,804.5	8,681.9	122.63	71.799	
11,417.3	6,706.9	6,500.0	6,499.1	134.5	1.9	-62.20	148.4	4,157.8	8,821.8	8,698.7	123.06	71.688	
11,500.0	6,706.7	6,500.0	6,499.1	136.8	1.9	-62.21	148.4	4,157.8	8,904.4	8,779.3	125.12	71.167	
11,515.7	6,706.7	6,500.0	6,499.1	137.3	1.9	-62.21	148.4	4,157.8	8,920.1	8,794.6	125.51	71.070	
11,600.0	6,706.5	6,500.0	6,499.1	139.6	1.9	-62.21	148.4	4,157.8	9,004.3	8,876.6	127.61	70.560	
11,614.1	6,706.5	6,500.0	6,499.1	140.0	1.9	-62.21	148.4	4,157.8	9,018.4	8,890.4	127.96	70.476	
11,700.0	6,706.3	6,500.0	6,499.1	142.4	1.9	-62.21	148.4	4,157.8	9,104.1	8,974.0	130.10	69.976	
11,712.6	6,706.3	6,500.0	6,499.1	142.8	1.9	-62.21	148.4	4,157.8	9,116.7	8,986.3	130.42	69.904	
11,800.0	6,706.1	6,500.0	6,499.1	145.2	1.9	-62.21	148.4	4,157.8	9,204.0	9,071.4	132.60	69.413	
11,811.0	6,706.1	6,500.0	6,499.1	145.5	1.9	-62.21	148.4	4,157.8	9,215.0	9,082.1	132.87	69.352	
11,900.0	6,705.9	6,500.0	6,499.1	148.0	1.9	-62.21	148.4	4,157.8	9,303.9	9,168.8	135.09	68.870	
11,909.4	6,705.9	6,500.0	6,499.1	148.3	1.9	-62.21	148.4	4,157.8	9,313.3	9,178.0	135.33	68.820	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #42-10 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,000.0	6,705.8	6,500.0	6,499.1	150.8	1.9	-62.21	148.4	4,157.8	9,403.8	9,266.2	137.59	68.347	
12,007.8	6,705.7	6,500.0	6,499.1	151.0	1.9	-62.21	148.4	4,157.8	9,411.6	9,273.8	137.78	68.307	
12,100.0	6,705.6	6,500.0	6,499.1	153.6	1.9	-62.21	148.4	4,157.8	9,503.7	9,363.6	140.08	67.843	
12,106.3	6,705.6	6,500.0	6,499.1	153.8	1.9	-62.21	148.4	4,157.8	9,509.9	9,369.7	140.24	67.812	
12,200.0	6,705.4	6,500.0	6,499.1	156.4	1.9	-62.22	148.4	4,157.8	9,603.6	9,461.0	142.58	67.356	
12,204.7	6,705.4	6,500.0	6,499.1	156.5	1.9	-62.22	148.4	4,157.8	9,608.3	9,465.6	142.70	67.333	
12,300.0	6,705.2	6,500.0	6,499.1	159.2	1.9	-62.22	148.4	4,157.8	9,703.5	9,558.4	145.08	66.885	
12,303.1	6,705.2	6,500.0	6,499.1	159.3	1.9	-62.22	148.4	4,157.8	9,706.6	9,561.4	145.15	66.871	
12,400.0	6,705.0	6,500.0	6,499.1	162.0	1.9	-62.22	148.4	4,157.8	9,803.4	9,655.8	147.57	66.430	
12,401.5	6,705.0	6,500.0	6,499.1	162.0	1.9	-62.22	148.4	4,157.8	9,804.9	9,657.3	147.61	66.423	
12,500.0	6,704.8	6,500.0	6,499.1	164.8	1.9	-62.22	148.4	4,157.8	9,903.3	9,753.2	150.07	65.990 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-141.37	-1,186.2	-947.9	1,518.9				
98.4	98.4	60.4	60.4	0.1	0.0	-141.37	-1,186.1	-947.9	1,518.4	1,518.3	0.11	N/A	
100.0	100.0	62.0	62.0	0.1	0.0	-141.37	-1,186.1	-947.9	1,518.4	1,518.3	0.11	N/A	
196.5	196.5	156.5	156.5	0.3	0.0	-141.36	-1,185.9	-948.0	1,518.2	1,517.9	0.33	4,536.080	
196.8	196.8	156.8	156.8	0.3	0.0	-141.36	-1,185.9	-948.0	1,518.2	1,517.9	0.34	4,524.582	
200.0	200.0	159.8	159.8	0.3	0.0	-141.36	-1,185.9	-948.0	1,518.2	1,517.9	0.34	4,430.033	
295.3	295.3	253.8	253.8	0.5	0.1	-141.37	-1,186.1	-947.9	1,518.4	1,517.7	0.66	2,306.135	
300.0	300.0	258.6	258.6	0.5	0.1	-141.37	-1,186.2	-947.9	1,518.4	1,517.7	0.68	2,239.456	
393.7	393.7	361.2	361.2	0.8	0.3	-141.39	-1,186.3	-947.5	1,518.3	1,517.3	1.01	1,508.469	
400.0	400.0	368.4	368.4	0.8	0.3	-141.39	-1,186.3	-947.5	1,518.2	1,517.2	1.03	1,480.531	
492.1	492.1	465.6	465.6	1.0	0.3	-141.41	-1,186.0	-946.5	1,517.5	1,516.2	1.30	1,167.617	
500.0	500.0	473.6	473.6	1.0	0.3	-141.41	-1,186.0	-946.5	1,517.4	1,516.1	1.32	1,146.984	
590.5	590.5	571.7	571.7	1.2	0.4	-141.43	-1,185.5	-945.4	1,516.4	1,514.9	1.59	956.250	
600.0	600.0	582.2	582.2	1.2	0.4	-141.43	-1,185.4	-945.3	1,516.3	1,514.7	1.61	940.082	
689.0	689.0	665.7	665.7	1.4	0.5	-141.44	-1,184.6	-944.4	1,515.1	1,513.2	1.86	816.564	
700.0	700.0	675.6	675.6	1.4	0.5	-141.44	-1,184.5	-944.3	1,515.0	1,513.1	1.89	803.620	
787.4	787.4	760.2	760.2	1.6	0.5	-141.46	-1,184.3	-943.5	1,514.2	1,512.1	2.12	713.463	
800.0	800.0	772.8	772.7	1.7	0.5	-141.46	-1,184.2	-943.4	1,514.1	1,511.9	2.16	702.076	
885.8	885.8	859.1	859.1	1.9	0.6	-141.48	-1,184.0	-942.4	1,513.4	1,511.0	2.39	633.778	
900.0	900.0	873.4	873.4	1.9	0.6	-141.49	-1,184.0	-942.3	1,513.2	1,510.8	2.43	623.792	
984.2	984.2	955.0	954.9	2.1	0.6	-141.52	-1,183.9	-941.2	1,512.5	1,509.9	2.65	571.173	
1,000.0	1,000.0	969.9	969.9	2.1	0.6	-141.52	-1,184.0	-941.1	1,512.4	1,509.7	2.69	562.377	
1,082.7	1,082.7	1,051.7	1,051.7	2.3	0.6	-141.55	-1,184.1	-940.1	1,511.9	1,509.0	2.91	520.296	
1,100.0	1,100.0	1,069.3	1,069.3	2.3	0.7	-141.56	-1,184.1	-939.9	1,511.8	1,508.9	2.95	512.256	
1,118.4	1,118.4	1,088.0	1,088.0	2.4	0.7	-170.29	-1,184.1	-939.7	1,511.8	1,508.8	3.02	500.410 CC, ES	
1,181.1	1,181.1	1,145.8	1,145.7	2.5	0.7	-170.32	-1,184.2	-939.1	1,512.5	1,509.4	3.18	475.344	
1,200.0	1,200.0	1,162.8	1,162.7	2.6	0.7	-170.33	-1,184.3	-938.9	1,513.1	1,509.9	3.23	468.366	
1,279.5	1,279.4	1,237.9	1,237.9	2.7	0.7	-170.37	-1,184.8	-938.3	1,516.9	1,513.5	3.44	441.152	
1,300.0	1,299.8	1,258.3	1,258.2	2.8	0.7	-170.38	-1,185.0	-938.1	1,518.3	1,514.8	3.49	434.614	
1,377.9	1,377.5	1,336.0	1,335.9	3.0	0.8	-170.43	-1,185.5	-937.6	1,524.8	1,521.1	3.70	411.901	
1,400.0	1,399.5	1,358.0	1,357.9	3.0	0.8	-170.44	-1,185.7	-937.5	1,527.0	1,523.2	3.76	406.078	
1,476.4	1,475.3	1,431.9	1,431.9	3.2	0.8	-170.49	-1,186.1	-937.1	1,535.9	1,532.0	3.97	387.258	
1,500.0	1,498.7	1,453.9	1,453.9	3.3	0.8	-170.50	-1,186.2	-937.0	1,539.2	1,535.1	4.03	382.047	
1,574.8	1,572.6	1,524.8	1,524.8	3.5	0.8	-170.55	-1,186.8	-936.7	1,550.7	1,546.5	4.23	366.300	
1,600.0	1,597.5	1,549.6	1,549.5	3.5	0.8	-170.57	-1,187.1	-936.6	1,555.0	1,550.7	4.30	361.497	
1,673.2	1,669.4	1,622.0	1,621.9	3.7	0.9	-170.63	-1,187.7	-936.4	1,568.9	1,564.4	4.51	348.104	
1,700.1	1,695.8	1,649.1	1,649.0	3.8	0.9	-170.65	-1,187.9	-936.3	1,574.4	1,569.8	4.58	343.720	
1,771.6	1,765.7	1,719.9	1,719.8	4.1	0.9	-170.76	-1,188.5	-936.1	1,589.3	1,584.6	4.77	333.342	
1,800.0	1,793.4	1,746.8	1,746.8	4.2	0.9	-170.80	-1,188.7	-936.0	1,595.3	1,590.4	4.84	329.569	
1,870.1	1,862.0	1,814.7	1,814.6	4.4	0.9	-170.90	-1,189.2	-935.8	1,610.0	1,605.0	5.03	320.239	
1,900.0	1,891.3	1,845.8	1,845.7	4.5	0.9	-170.94	-1,189.4	-935.7	1,616.3	1,611.2	5.10	316.606	
1,968.5	1,958.3	1,916.5	1,916.4	4.8	1.0	-171.04	-1,189.8	-935.5	1,630.5	1,625.2	5.29	308.375	
2,000.0	1,989.1	1,947.9	1,947.8	4.9	1.0	-171.08	-1,189.9	-935.4	1,637.0	1,631.6	5.37	304.674	
2,066.9	2,054.5	2,014.4	2,014.3	5.1	1.0	-171.17	-1,190.2	-935.1	1,650.8	1,645.2	5.55	297.211	
2,100.0	2,086.9	2,046.8	2,046.7	5.3	1.0	-171.21	-1,190.3	-934.9	1,657.6	1,651.9	5.64	293.667	
2,165.3	2,150.8	2,111.4	2,111.3	5.5	1.0	-171.30	-1,190.6	-934.6	1,671.0	1,665.2	5.82	286.912	
2,200.0	2,184.7	2,147.6	2,147.6	5.6	1.0	-171.35	-1,190.7	-934.4	1,678.1	1,672.2	5.92	283.507	
2,263.8	2,247.1	2,214.3	2,214.2	5.9	1.1	-171.44	-1,190.9	-933.8	1,691.0	1,684.9	6.10	277.426	
2,300.0	2,282.5	2,252.1	2,252.0	6.0	1.1	-171.50	-1,191.0	-933.4	1,698.3	1,692.1	6.20	274.140	
2,362.2	2,343.3	2,314.9	2,314.8	6.3	1.1	-171.58	-1,190.9	-932.7	1,710.7	1,704.3	6.37	268.637	
2,400.0	2,380.3	2,349.6	2,349.5	6.5	1.1	-171.63	-1,191.0	-932.3	1,718.3	1,711.8	6.47	265.451	
2,460.6	2,439.6	2,405.4	2,405.3	6.7	1.1	-171.70	-1,191.1	-931.7	1,730.5	1,723.9	6.64	260.506	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,478.1	2,443.6	2,443.5	6.9	1.2	-171.75	-1,191.2	-931.4	1,738.5	1,731.7	6.75	257.398	
2,559.0	2,535.9	2,500.9	2,500.8	7.1	1.2	-171.82	-1,191.3	-931.0	1,750.5	1,743.6	6.92	252.884	
2,600.0	2,575.9	2,540.5	2,540.4	7.3	1.2	-171.87	-1,191.3	-930.8	1,758.8	1,751.8	7.04	249.917	
2,657.5	2,632.2	2,596.1	2,596.0	7.5	1.2	-171.93	-1,191.5	-930.4	1,770.5	1,763.3	7.20	245.883	
2,700.0	2,673.8	2,639.6	2,639.4	7.7	1.2	-171.99	-1,191.6	-930.0	1,779.2	1,771.8	7.32	243.023	
2,755.9	2,728.4	2,697.0	2,696.9	7.9	1.2	-172.06	-1,191.7	-929.4	1,790.5	1,783.0	7.48	239.369	
2,800.0	2,771.6	2,740.5	2,740.3	8.1	1.3	-172.12	-1,191.8	-929.0	1,799.3	1,791.7	7.60	236.609	
2,854.3	2,824.7	2,793.9	2,793.8	8.3	1.3	-172.18	-1,191.9	-928.4	1,810.3	1,802.5	7.76	233.306	
2,900.0	2,869.4	2,839.6	2,839.5	8.5	1.3	-172.23	-1,191.9	-928.0	1,819.5	1,811.6	7.89	230.617	
2,952.7	2,921.0	2,892.6	2,892.5	8.8	1.3	-172.29	-1,191.9	-927.5	1,830.0	1,822.0	8.04	227.591	
3,000.0	2,967.2	2,935.8	2,935.7	9.0	1.3	-172.35	-1,191.9	-927.0	1,839.5	1,831.3	8.18	225.012	
3,051.2	3,017.3	2,981.7	2,981.6	9.2	1.3	-172.40	-1,192.1	-926.6	1,849.9	1,841.6	8.32	222.313	
3,100.0	3,065.0	3,028.2	3,028.1	9.4	1.4	-172.45	-1,192.3	-926.2	1,859.9	1,851.4	8.46	219.824	
3,149.6	3,113.5	3,077.4	3,077.3	9.6	1.4	-172.51	-1,192.5	-925.7	1,870.0	1,861.4	8.60	217.355	
3,200.0	3,162.8	3,127.5	3,127.4	9.8	1.4	-172.57	-1,192.8	-925.1	1,880.3	1,871.6	8.75	214.945	
3,248.0	3,209.8	3,175.3	3,175.2	10.0	1.4	-172.63	-1,193.0	-924.6	1,890.1	1,881.2	8.89	212.723	
3,300.0	3,260.6	3,227.0	3,226.8	10.2	1.4	-172.69	-1,193.2	-924.0	1,900.6	1,891.6	9.03	210.393	
3,346.4	3,306.1	3,273.1	3,273.0	10.5	1.4	-172.75	-1,193.4	-923.5	1,910.1	1,900.9	9.17	208.362	
3,400.0	3,358.5	3,326.3	3,326.1	10.7	1.5	-172.80	-1,193.6	-923.0	1,920.9	1,911.6	9.32	206.092	
3,444.9	3,402.3	3,370.8	3,370.7	10.9	1.5	-172.85	-1,193.7	-922.5	1,930.0	1,920.6	9.45	204.236	
3,500.0	3,456.3	3,424.6	3,424.4	11.1	1.5	-172.91	-1,193.9	-921.8	1,941.2	1,931.5	9.61	202.029	
3,543.3	3,498.6	3,466.1	3,465.9	11.3	1.5	-172.96	-1,194.0	-921.3	1,949.9	1,940.2	9.73	200.342	
3,600.0	3,554.1	3,520.9	3,520.8	11.5	1.5	-173.02	-1,194.2	-920.7	1,961.4	1,951.5	9.90	198.200	
3,641.7	3,594.9	3,562.1	3,561.9	11.7	1.5	-173.06	-1,194.3	-920.3	1,969.9	1,959.9	10.02	196.660	
3,700.0	3,651.9	3,620.8	3,620.6	12.0	1.6	-173.13	-1,194.5	-919.7	1,981.7	1,971.5	10.19	194.571	
3,740.1	3,691.2	3,662.8	3,662.6	12.2	1.6	-173.17	-1,194.6	-919.2	1,989.8	1,979.5	10.30	193.161	
3,800.0	3,749.7	3,725.5	3,725.4	12.4	1.6	-173.23	-1,194.6	-918.4	2,001.8	1,991.3	10.47	191.109	
3,838.6	3,787.4	3,766.1	3,765.9	12.6	1.6	-173.28	-1,194.6	-917.8	2,009.4	1,998.9	10.59	189.811	
3,900.0	3,847.5	3,827.7	3,827.6	12.9	1.6	-173.34	-1,194.5	-916.9	2,021.5	2,010.8	10.76	187.794	
3,937.0	3,883.7	3,863.0	3,862.8	13.0	1.7	-173.38	-1,194.5	-916.4	2,028.8	2,018.0	10.87	186.612	
4,000.0	3,945.3	3,925.8	3,925.6	13.3	1.7	-173.44	-1,194.5	-915.4	2,041.3	2,030.2	11.06	184.647	
4,035.4	3,980.0	3,963.9	3,963.7	13.5	1.7	-173.48	-1,194.4	-914.8	2,048.2	2,037.1	11.16	183.551	
4,060.0	4,004.0	3,990.3	3,990.1	13.6	1.7	-173.51	-1,194.3	-914.3	2,053.0	2,041.8	11.23	182.798	
4,100.0	4,043.2	4,034.4	4,034.2	13.7	1.7	-173.57	-1,194.1	-913.6	2,060.5	2,049.1	11.32	181.973	
4,133.8	4,076.5	4,072.1	4,071.9	13.8	1.7	-173.62	-1,193.9	-912.8	2,066.3	2,054.9	11.39	181.423	
4,200.0	4,141.6	4,144.1	4,143.9	14.0	1.7	-173.70	-1,193.2	-911.4	2,076.3	2,064.8	11.52	180.280	
4,232.3	4,173.5	4,178.8	4,178.5	14.1	1.7	-173.73	-1,192.8	-910.7	2,080.6	2,069.0	11.58	179.728	
4,300.0	4,240.6	4,250.0	4,249.8	14.3	1.8	-173.79	-1,191.7	-909.5	2,088.3	2,076.6	11.70	178.484	
4,330.7	4,271.1	4,282.1	4,281.8	14.4	1.8	-173.81	-1,191.2	-908.9	2,091.2	2,079.5	11.75	177.927	
4,400.0	4,340.0	4,353.5	4,353.2	14.5	1.8	-173.85	-1,189.9	-907.6	2,096.6	2,084.7	11.87	176.587	
4,429.1	4,369.0	4,383.4	4,383.1	14.6	1.8	-173.87	-1,189.3	-907.1	2,098.3	2,086.4	11.92	176.029	
4,500.0	4,439.7	4,451.3	4,450.9	14.8	1.8	-173.90	-1,188.1	-905.9	2,101.3	2,089.3	12.03	174.604	
4,527.5	4,467.2	4,477.1	4,476.8	14.8	1.8	-173.90	-1,187.6	-905.5	2,102.1	2,090.0	12.08	174.060	
4,600.0	4,539.7	4,545.9	4,545.5	14.9	1.8	-173.92	-1,186.5	-904.4	2,102.9	2,090.7	12.19	172.543	
4,626.0	4,565.6	4,570.7	4,570.3	15.0	1.8	-173.92	-1,186.1	-904.0	2,102.7	2,090.5	12.23	171.993	
4,660.2	4,599.8	4,603.3	4,602.9	15.0	1.8	-145.19	-1,185.5	-903.6	2,102.2	2,085.5	16.74	125.557	
4,700.0	4,639.6	4,641.5	4,641.2	15.0	1.9	-145.19	-1,184.9	-903.1	2,101.4	2,084.6	16.80	125.069	
4,724.4	4,664.0	4,665.0	4,664.6	15.1	1.9	-145.20	-1,184.6	-902.8	2,100.9	2,084.1	16.84	124.750	
4,800.0	4,739.6	4,736.2	4,735.8	15.2	1.9	-145.21	-1,183.7	-901.8	2,099.5	2,082.6	16.96	123.771	
4,822.8	4,762.5	4,757.4	4,757.0	15.2	1.9	-145.21	-1,183.4	-901.5	2,099.2	2,082.2	17.00	123.476	
4,900.0	4,839.6	4,827.6	4,827.2	15.3	1.9	-145.21	-1,182.7	-900.7	2,098.0	2,080.9	17.13	122.506	
4,921.2	4,860.9	4,846.3	4,845.9	15.4	1.9	-145.22	-1,182.6	-900.5	2,097.7	2,080.6	17.16	122.245	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,000.0	4,939.6	4,916.4	4,916.0	15.5	1.9	-145.22	-1,182.0	-900.1	2,097.0	2,079.7	17.29	121.299	
5,019.7	4,959.3	4,934.5	4,934.0	15.5	1.9	-145.22	-1,181.9	-900.0	2,096.8	2,079.5	17.32	121.065	
5,100.0	5,039.6	5,008.8	5,008.4	15.6	1.9	-145.22	-1,181.6	-899.8	2,096.4	2,078.9	17.45	120.121	
5,118.1	5,057.7	5,027.0	5,026.6	15.7	2.0	-145.22	-1,181.6	-899.7	2,096.3	2,078.8	17.48	119.907	
5,200.0	5,139.6	5,109.0	5,108.6	15.8	2.0	-145.22	-1,181.3	-899.4	2,096.0	2,078.3	17.62	118.951	
5,216.5	5,156.2	5,124.7	5,124.3	15.8	2.0	-145.22	-1,181.3	-899.4	2,095.9	2,078.2	17.65	118.775	
5,300.0	5,239.6	5,200.0	5,199.6	15.9	2.0	-145.22	-1,181.0	-899.4	2,095.6	2,077.9	17.78	117.896	
5,304.7	5,244.4	5,208.1	5,207.7	16.0	2.0	-145.22	-1,181.0	-899.4	2,095.6	2,077.9	17.78	117.851	
5,314.9	5,254.6	5,217.3	5,216.9	16.0	2.0	-145.22	-1,180.9	-899.4	2,095.6	2,077.8	17.80	117.749	
5,337.1	5,276.7	5,237.1	5,236.7	16.0	2.0	-145.21	-1,180.9	-899.5	2,095.6	2,077.8	17.83	117.531	
5,400.0	5,339.6	5,293.6	5,293.1	16.1	2.0	-145.21	-1,180.9	-899.7	2,095.7	2,077.8	17.92	116.921	
5,413.4	5,353.0	5,306.4	5,306.0	16.1	2.0	-145.21	-1,180.9	-899.7	2,095.8	2,077.8	17.95	116.786	
5,500.0	5,439.6	5,396.4	5,396.0	16.3	2.0	-145.21	-1,181.1	-899.8	2,096.0	2,077.9	18.09	115.859	
5,511.8	5,451.4	5,408.0	5,407.5	16.3	2.0	-145.21	-1,181.1	-899.8	2,096.0	2,077.9	18.11	115.723	
5,600.0	5,539.6	5,492.1	5,491.7	16.4	2.0	-145.23	-1,181.8	-899.3	2,096.2	2,078.0	18.28	114.685	
5,610.2	5,549.9	5,502.1	5,501.7	16.4	2.0	-145.24	-1,181.9	-899.1	2,096.3	2,078.0	18.30	114.564	
5,700.0	5,639.6	5,600.0	5,599.5	16.6	2.0	-145.30	-1,183.5	-897.2	2,096.4	2,078.0	18.48	113.471	
5,708.6	5,648.3	5,609.4	5,608.9	16.6	2.0	-145.31	-1,183.6	-897.0	2,096.4	2,077.9	18.49	113.364	
5,730.2	5,669.8	5,630.3	5,629.8	16.6	2.0	-145.33	-1,184.0	-896.4	2,096.4	2,077.9	18.54	113.106	
5,800.0	5,739.6	5,698.1	5,697.5	16.7	2.1	-145.40	-1,185.6	-894.2	2,096.5	2,077.8	18.67	112.275	
5,807.1	5,746.7	5,705.8	5,705.2	16.8	2.1	-145.41	-1,185.7	-894.0	2,096.5	2,077.8	18.69	112.190	
5,900.0	5,839.6	5,810.4	5,809.8	16.9	2.1	-145.54	-1,188.3	-889.9	2,096.3	2,077.4	18.88	111.055	
5,905.5	5,845.1	5,816.3	5,815.7	16.9	2.1	-145.55	-1,188.4	-889.7	2,096.2	2,077.4	18.89	110.988	
6,000.0	5,939.6	5,915.7	5,915.0	17.1	2.1	-145.67	-1,190.4	-885.7	2,095.6	2,076.5	19.08	109.850	
6,003.9	5,943.6	5,919.4	5,918.7	17.1	2.1	-145.68	-1,190.4	-885.5	2,095.6	2,076.5	19.08	109.804	
6,059.2	5,998.8	5,971.8	5,971.0	17.2	2.1	-145.73	-1,191.3	-883.6	2,095.2	2,076.0	19.19	109.160	
6,100.0	6,039.6	6,010.5	6,009.7	17.2	2.2	-55.85	-1,191.9	-882.4	2,094.4	2,078.9	15.41	135.919	
6,102.3	6,042.0	6,012.7	6,011.9	17.2	2.2	-55.86	-1,191.9	-882.3	2,094.3	2,078.9	15.41	135.889	
6,150.0	6,089.4	6,057.9	6,057.1	17.3	2.2	-56.18	-1,192.5	-881.1	2,091.6	2,076.1	15.47	135.196	
6,200.0	6,138.7	6,100.0	6,099.1	17.3	2.2	-56.67	-1,193.1	-880.0	2,086.9	2,071.4	15.54	134.296	
6,200.8	6,139.5	6,100.0	6,099.1	17.3	2.2	-56.68	-1,193.1	-880.0	2,086.8	2,071.3	15.54	134.281	
6,250.0	6,187.4	6,140.8	6,139.9	17.3	2.2	-57.34	-1,193.7	-879.2	2,080.6	2,065.0	15.61	133.263	
6,299.2	6,234.4	6,176.4	6,175.5	17.4	2.2	-58.14	-1,194.4	-878.5	2,072.9	2,057.2	15.69	132.120	
6,300.0	6,235.1	6,177.0	6,176.1	17.4	2.2	-58.16	-1,194.4	-878.5	2,072.7	2,057.0	15.69	132.101	
6,350.0	6,281.7	6,216.6	6,215.7	17.4	2.2	-59.18	-1,195.3	-878.0	2,063.4	2,047.6	15.77	130.807	
6,397.6	6,324.8	6,260.5	6,259.6	17.3	2.2	-60.40	-1,196.3	-877.4	2,053.1	2,037.2	15.86	129.427	
6,400.0	6,326.9	6,262.7	6,261.7	17.3	2.2	-60.46	-1,196.3	-877.4	2,052.5	2,036.7	15.87	129.357	
6,450.0	6,370.5	6,306.5	6,305.5	17.3	2.2	-61.93	-1,197.3	-876.8	2,040.1	2,024.2	15.97	127.728	
6,496.0	6,409.1	6,342.7	6,341.7	17.3	2.2	-63.39	-1,198.2	-876.3	2,027.6	2,011.5	16.09	126.035	
6,500.0	6,412.3	6,345.7	6,344.8	17.3	2.2	-63.53	-1,198.3	-876.3	2,026.4	2,010.3	16.10	125.891	
6,550.0	6,452.1	6,382.9	6,382.0	17.3	2.3	-65.27	-1,199.2	-875.7	2,011.6	1,995.4	16.25	123.820	
6,594.5	6,485.6	6,415.9	6,414.9	17.3	2.3	-66.97	-1,200.1	-875.2	1,997.7	1,981.2	16.41	121.729	
6,600.0	6,489.7	6,420.1	6,419.1	17.3	2.3	-67.19	-1,200.2	-875.1	1,995.9	1,979.4	16.43	121.474	
6,650.0	6,524.9	6,456.6	6,455.6	17.2	2.3	-69.25	-1,201.2	-874.5	1,979.3	1,962.6	16.66	118.822	
6,692.9	6,553.0	6,485.7	6,484.7	17.2	2.3	-71.09	-1,201.9	-874.0	1,964.5	1,947.6	16.90	116.266	
6,700.0	6,557.5	6,490.4	6,489.3	17.2	2.3	-71.40	-1,202.0	-873.9	1,962.0	1,945.1	16.93	115.859	
6,750.0	6,587.4	6,519.1	6,518.1	17.2	2.3	-73.54	-1,202.8	-873.4	1,944.4	1,927.1	17.27	112.587	
6,791.3	6,609.9	6,540.1	6,539.0	17.2	2.3	-75.30	-1,203.3	-873.0	1,929.7	1,912.1	17.60	109.611	
6,800.0	6,614.4	6,544.2	6,543.2	17.2	2.3	-75.67	-1,203.4	-873.0	1,926.6	1,908.9	17.67	109.020	
6,850.0	6,638.4	6,566.7	6,565.6	17.2	2.3	-77.78	-1,203.9	-872.7	1,908.8	1,890.6	18.15	105.192	
6,889.7	6,655.3	6,582.5	6,581.4	17.4	2.3	-79.41	-1,204.3	-872.5	1,894.7	1,876.2	18.58	101.959	
6,900.0	6,659.4	6,586.3	6,585.2	17.5	2.3	-79.82	-1,204.4	-872.5	1,891.2	1,872.5	18.70	101.148	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,950.0	6,677.1	6,603.2	6,602.2	18.0	2.3	-81.78	-1,204.8	-872.3	1,874.0	1,854.6	19.33	96.949	
6,988.2	6,688.4	6,615.1	6,614.1	18.5	2.3	-83.22	-1,205.1	-872.2	1,861.2	1,841.3	19.87	93.649	
7,000.0	6,691.5	6,618.4	6,617.3	18.7	2.3	-83.65	-1,205.2	-872.1	1,857.3	1,837.3	20.04	92.665	
7,050.0	6,702.5	6,629.7	6,628.7	19.5	2.3	-85.34	-1,205.4	-872.0	1,841.5	1,820.6	20.84	88.378	
7,086.6	6,708.4	6,635.7	6,634.6	20.1	2.3	-86.46	-1,205.6	-871.9	1,830.4	1,808.9	21.47	85.262	
7,100.0	6,710.1	6,637.4	6,636.3	20.4	2.3	-86.84	-1,205.6	-871.9	1,826.5	1,804.8	21.70	84.170	
7,150.0	6,714.2	6,641.2	6,640.1	21.3	2.3	-88.12	-1,205.7	-871.9	1,812.6	1,790.0	22.62	80.118	
7,185.0	6,715.0	6,641.6	6,640.6	21.9	2.3	-88.89	-1,205.7	-871.9	1,803.5	1,780.2	23.30	77.406	
7,185.6	6,715.0	6,641.6	6,640.6	21.9	2.3	-88.90	-1,205.7	-871.9	1,803.4	1,780.1	23.31	77.366	
7,200.0	6,715.0	6,641.4	6,640.4	22.2	2.3	-88.89	-1,205.7	-871.9	1,799.8	1,776.3	23.59	76.307	
7,283.4	6,714.8	6,640.2	6,639.2	23.9	2.3	-88.85	-1,205.7	-871.9	1,781.5	1,756.2	25.26	70.515	
7,300.0	6,714.8	6,640.0	6,638.9	24.2	2.3	-88.84	-1,205.7	-871.9	1,778.3	1,752.7	25.60	69.474	
7,381.9	6,714.6	6,638.8	6,637.7	26.0	2.3	-88.81	-1,205.7	-871.9	1,764.6	1,737.3	27.36	64.508	
7,400.0	6,714.6	6,638.6	6,637.5	26.4	2.3	-88.80	-1,205.6	-871.9	1,762.1	1,734.4	27.74	63.511	
7,480.3	6,714.4	6,637.4	6,636.4	28.2	2.3	-88.76	-1,205.6	-871.9	1,753.2	1,723.6	29.56	59.302	
7,500.0	6,714.4	6,637.2	6,636.1	28.7	2.3	-88.75	-1,205.6	-871.9	1,751.5	1,721.5	30.01	58.366	
7,578.7	6,714.2	6,636.1	6,635.0	30.5	2.3	-88.72	-1,205.6	-871.9	1,747.2	1,715.3	31.86	54.833	
7,600.0	6,714.2	6,635.8	6,634.7	31.0	2.3	-88.71	-1,205.6	-871.9	1,746.6	1,714.2	32.36	53.967	
7,636.1	6,714.1	6,635.3	6,634.2	31.9	2.3	-88.69	-1,205.6	-871.9	1,746.2	1,713.0	33.24	52.535	
7,677.1	6,714.0	6,634.7	6,633.6	32.9	2.3	-88.67	-1,205.6	-872.0	1,746.7	1,712.5	34.24	51.020	
7,700.0	6,714.0	6,634.4	6,633.3	33.4	2.3	-88.66	-1,205.6	-872.0	1,747.4	1,712.6	34.79	50.227	
7,775.6	6,713.9	6,633.3	6,632.3	35.3	2.3	-88.63	-1,205.5	-872.0	1,751.8	1,715.1	36.67	47.777	
7,800.0	6,713.8	6,633.0	6,631.9	35.9	2.3	-88.62	-1,205.5	-872.0	1,753.9	1,716.6	37.27	47.057	
7,874.0	6,713.7	6,632.0	6,630.9	37.8	2.3	-88.58	-1,205.5	-872.0	1,762.4	1,723.2	39.14	45.025	
7,900.0	6,713.6	6,631.6	6,630.6	38.4	2.3	-88.57	-1,205.5	-872.0	1,766.1	1,726.3	39.80	44.374	
7,972.4	6,713.5	6,630.7	6,629.6	40.3	2.3	-88.54	-1,205.5	-872.0	1,778.3	1,736.7	41.66	42.690	
8,000.0	6,713.4	6,630.3	6,629.2	41.0	2.3	-88.53	-1,205.5	-872.0	1,783.7	1,741.4	42.36	42.106	
8,070.8	6,713.3	6,629.3	6,628.3	42.8	2.3	-88.50	-1,205.4	-872.0	1,799.5	1,755.3	44.20	40.712	
8,100.0	6,713.2	6,628.9	6,627.9	43.6	2.3	-88.48	-1,205.4	-872.0	1,806.8	1,761.8	44.96	40.188	
8,169.3	6,713.1	6,628.0	6,627.0	45.4	2.3	-88.45	-1,205.4	-872.0	1,825.8	1,779.0	46.77	39.036	
8,200.0	6,713.0	6,627.6	6,626.6	46.2	2.3	-88.44	-1,205.4	-872.0	1,835.0	1,787.4	47.58	38.569	
8,267.7	6,712.9	6,626.7	6,625.7	48.0	2.3	-88.41	-1,205.4	-872.0	1,856.9	1,807.6	49.37	37.616	
8,300.0	6,712.8	6,626.3	6,625.2	48.8	2.3	-88.40	-1,205.4	-872.0	1,868.2	1,817.9	50.22	37.201	
8,366.1	6,712.7	6,625.4	6,624.4	50.6	2.3	-88.37	-1,205.3	-872.1	1,892.7	1,840.7	51.98	36.414	
8,400.0	6,712.6	6,625.0	6,623.9	51.5	2.3	-88.35	-1,205.3	-872.1	1,906.0	1,853.1	52.88	36.046	
8,464.5	6,712.5	6,624.2	6,623.1	53.2	2.3	-88.33	-1,205.3	-872.1	1,932.8	1,878.2	54.60	35.397	
8,500.0	6,712.4	6,623.7	6,622.6	54.1	2.3	-88.31	-1,205.3	-872.1	1,948.2	1,892.7	55.55	35.071	
8,563.0	6,712.3	6,622.9	6,621.8	55.8	2.3	-88.28	-1,205.3	-872.1	1,976.9	1,919.7	57.24	34.537	
8,600.0	6,712.3	6,622.4	6,621.4	56.8	2.3	-88.27	-1,205.3	-872.1	1,994.6	1,936.3	58.24	34.249	
8,661.4	6,712.1	6,621.7	6,620.6	58.5	2.3	-88.24	-1,205.3	-872.1	2,024.9	1,965.1	59.89	33.810	
8,700.0	6,712.1	6,621.2	6,620.1	59.5	2.3	-88.23	-1,205.2	-872.1	2,044.8	1,983.8	60.93	33.557	
8,759.8	6,711.9	6,620.4	6,619.3	61.1	2.3	-88.20	-1,205.2	-872.1	2,076.5	2,014.0	62.55	33.196	
8,800.0	6,711.9	6,619.9	6,618.8	62.2	2.3	-88.19	-1,205.2	-872.1	2,098.5	2,034.9	63.64	32.974	
8,858.2	6,711.8	6,619.2	6,618.1	63.8	2.3	-88.16	-1,205.2	-872.1	2,131.4	2,066.2	65.22	32.678	
8,900.0	6,711.7	6,618.7	6,617.6	64.9	2.3	-88.15	-1,205.2	-872.1	2,155.6	2,089.2	66.36	32.485	
8,956.7	6,711.6	6,618.0	6,616.9	66.5	2.3	-88.12	-1,205.2	-872.1	2,189.3	2,121.4	67.90	32.243	
9,000.0	6,711.5	6,617.4	6,616.4	67.6	2.3	-88.10	-1,205.2	-872.1	2,215.7	2,146.6	69.08	32.074	
9,055.1	6,711.4	6,616.7	6,615.7	69.1	2.3	-88.08	-1,205.1	-872.1	2,250.0	2,179.4	70.58	31.877	
9,100.0	6,711.3	6,616.2	6,615.1	70.4	2.3	-88.06	-1,205.1	-872.2	2,278.6	2,206.8	71.81	31.731	
9,153.5	6,711.2	6,615.5	6,614.5	71.8	2.3	-88.04	-1,205.1	-872.2	2,313.3	2,240.1	73.27	31.571	
9,200.0	6,711.1	6,615.0	6,613.9	73.1	2.3	-88.02	-1,205.1	-872.2	2,344.1	2,269.5	74.55	31.445	
9,251.9	6,711.0	6,614.3	6,613.3	74.5	2.3	-88.00	-1,205.1	-872.2	2,379.1	2,303.1	75.97	31.316	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,300.0	6,710.9	6,613.8	6,612.7	75.8	2.3	-87.99	-1,205.1	-872.2	2,411.9	2,334.7	77.29	31.208	
9,350.4	6,710.8	6,613.2	6,612.1	77.2	2.3	-87.97	-1,205.1	-872.2	2,447.0	2,368.3	78.67	31.105	
9,400.0	6,710.7	6,612.6	6,611.5	78.6	2.3	-87.95	-1,205.0	-872.2	2,482.0	2,401.9	80.03	31.013	
9,448.8	6,710.6	6,612.0	6,610.9	79.9	2.3	-87.93	-1,205.0	-872.2	2,516.9	2,435.5	81.37	30.930	
9,500.0	6,710.5	6,611.4	6,610.3	81.3	2.3	-87.91	-1,205.0	-872.2	2,554.0	2,471.2	82.78	30.853	
9,547.2	6,710.4	6,610.8	6,609.8	82.6	2.3	-87.89	-1,205.0	-872.2	2,588.7	2,504.6	84.08	30.788	
9,600.0	6,710.3	6,610.2	6,609.1	84.1	2.3	-87.87	-1,205.0	-872.2	2,627.9	2,542.3	85.53	30.723	
9,645.6	6,710.2	6,609.7	6,608.6	85.3	2.3	-87.85	-1,205.0	-872.2	2,662.1	2,575.4	86.79	30.673	
9,700.0	6,710.1	6,609.0	6,608.0	86.8	2.3	-87.83	-1,205.0	-872.2	2,703.4	2,615.1	88.29	30.620	
9,744.1	6,710.0	6,608.5	6,607.5	88.1	2.3	-87.81	-1,205.0	-872.2	2,737.2	2,647.7	89.51	30.581	
9,800.0	6,709.9	6,607.9	6,606.8	89.6	2.3	-87.79	-1,204.9	-872.2	2,780.5	2,689.4	91.05	30.538	
9,842.5	6,709.9	6,607.4	6,606.3	90.8	2.3	-87.78	-1,204.9	-872.2	2,813.7	2,721.5	92.22	30.510	
9,900.0	6,709.7	6,606.7	6,605.7	92.4	2.3	-87.76	-1,204.9	-872.2	2,859.0	2,765.2	93.81	30.476	
9,940.9	6,709.7	6,606.3	6,605.2	93.5	2.3	-87.74	-1,204.9	-872.3	2,891.5	2,796.6	94.94	30.455	
10,000.0	6,709.6	6,605.6	6,604.5	95.1	2.3	-87.72	-1,204.9	-872.3	2,938.8	2,842.2	96.57	30.430	
10,039.3	6,709.5	6,605.2	6,604.1	96.2	2.3	-87.70	-1,204.9	-872.3	2,970.5	2,872.9	97.66	30.416	
10,100.0	6,709.4	6,604.5	6,603.4	97.9	2.3	-87.68	-1,204.9	-872.3	3,019.8	2,920.5	99.34	30.398	
10,137.8	6,709.3	6,604.0	6,603.0	98.9	2.3	-87.67	-1,204.8	-872.3	3,050.7	2,950.3	100.39	30.389	
10,200.0	6,709.2	6,603.3	6,602.3	100.7	2.3	-87.64	-1,204.8	-872.3	3,101.9	2,999.8	102.11	30.378	
10,236.2	6,709.1	6,602.9	6,601.9	101.7	2.3	-87.63	-1,204.8	-872.3	3,131.9	3,028.8	103.11	30.374	
10,300.0	6,709.0	6,600.0	6,598.9	103.4	2.3	-87.53	-1,204.7	-872.3	3,185.1	3,080.2	104.87	30.370	
10,334.6	6,708.9	6,600.0	6,598.9	104.4	2.3	-87.53	-1,204.7	-872.3	3,214.1	3,108.2	105.84	30.369	
10,400.0	6,708.8	6,600.0	6,598.9	106.2	2.3	-87.53	-1,204.7	-872.3	3,269.2	3,161.5	107.65	30.368 SF	
10,433.0	6,708.7	6,600.0	6,598.9	107.1	2.3	-87.53	-1,204.7	-872.3	3,297.1	3,188.6	108.57	30.369	
10,500.0	6,708.6	6,600.0	6,598.9	109.0	2.3	-87.53	-1,204.7	-872.3	3,354.1	3,243.7	110.43	30.374	
10,531.5	6,708.5	6,599.6	6,598.5	109.9	2.3	-87.52	-1,204.7	-872.3	3,381.0	3,269.7	111.30	30.378	
10,600.0	6,708.4	6,598.5	6,597.4	111.8	2.3	-87.48	-1,204.7	-872.3	3,439.9	3,326.7	113.20	30.387	
10,629.9	6,708.4	6,598.0	6,596.9	112.6	2.3	-87.47	-1,204.7	-872.3	3,465.7	3,351.6	114.03	30.393	
10,700.0	6,708.2	6,596.8	6,595.8	114.6	2.3	-87.43	-1,204.7	-872.3	3,526.4	3,410.4	115.98	30.406	
10,728.3	6,708.2	6,596.4	6,595.3	115.3	2.3	-87.42	-1,204.7	-872.3	3,551.0	3,434.3	116.76	30.413	
10,800.0	6,708.0	6,595.2	6,594.1	117.3	2.3	-87.38	-1,204.6	-872.4	3,613.6	3,494.9	118.75	30.430	
10,826.7	6,708.0	6,594.7	6,593.6	118.1	2.3	-87.36	-1,204.6	-872.4	3,637.0	3,517.5	119.49	30.437	
10,900.0	6,707.8	6,593.4	6,592.4	120.1	2.3	-87.32	-1,204.6	-872.4	3,701.5	3,579.9	121.53	30.458	
10,925.2	6,707.8	6,593.0	6,592.0	120.8	2.3	-87.31	-1,204.6	-872.4	3,723.7	3,601.4	122.23	30.465	
11,000.0	6,707.6	6,591.7	6,590.6	122.9	2.3	-87.26	-1,204.5	-872.4	3,789.9	3,665.6	124.30	30.489	
11,023.6	6,707.6	6,591.3	6,590.2	123.6	2.3	-87.25	-1,204.5	-872.4	3,810.9	3,685.9	124.96	30.497	
11,100.0	6,707.5	6,589.9	6,588.8	125.7	2.3	-87.20	-1,204.5	-872.4	3,878.9	3,751.9	127.08	30.523	
11,122.0	6,707.4	6,589.5	6,588.4	126.3	2.3	-87.19	-1,204.5	-872.4	3,898.6	3,770.9	127.69	30.531	
11,200.0	6,707.3	6,588.1	6,587.0	128.5	2.3	-87.14	-1,204.5	-872.4	3,968.5	3,838.6	129.86	30.559	
11,220.4	6,707.2	6,587.7	6,586.6	129.0	2.3	-87.13	-1,204.5	-872.4	3,986.9	3,856.4	130.43	30.567	
11,300.0	6,707.1	6,586.2	6,585.1	131.3	2.3	-87.08	-1,204.4	-872.5	4,058.5	3,925.9	132.64	30.598	
11,318.9	6,707.0	6,585.8	6,584.8	131.8	2.3	-87.07	-1,204.4	-872.5	4,075.6	3,942.4	133.16	30.605	
11,400.0	6,706.9	6,584.2	6,583.2	134.0	2.3	-87.02	-1,204.4	-872.5	4,149.0	4,013.6	135.42	30.638	
11,417.3	6,706.9	6,583.9	6,582.9	134.5	2.3	-87.01	-1,204.4	-872.5	4,164.7	4,028.8	135.90	30.645	
11,500.0	6,706.7	6,582.3	6,581.2	136.8	2.3	-86.95	-1,204.3	-872.5	4,239.9	4,101.7	138.20	30.680	
11,515.7	6,706.7	6,581.9	6,580.9	137.3	2.3	-86.94	-1,204.3	-872.5	4,254.2	4,115.6	138.64	30.687	
11,600.0	6,706.5	6,580.2	6,579.2	139.6	2.3	-86.89	-1,204.3	-872.5	4,331.2	4,190.2	140.98	30.723	
11,614.1	6,706.5	6,579.9	6,578.9	140.0	2.3	-86.88	-1,204.3	-872.5	4,344.2	4,202.8	141.37	30.729	
11,700.0	6,706.3	6,578.1	6,577.1	142.4	2.3	-86.82	-1,204.2	-872.5	4,422.9	4,279.2	143.76	30.767	
11,712.6	6,706.3	6,577.9	6,576.8	142.8	2.3	-86.81	-1,204.2	-872.5	4,434.5	4,290.4	144.11	30.772	
11,800.0	6,706.1	6,576.0	6,575.0	145.2	2.3	-86.75	-1,204.2	-872.6	4,514.9	4,368.4	146.54	30.811	
11,811.0	6,706.1	6,575.8	6,574.7	145.5	2.3	-86.74	-1,204.2	-872.6	4,525.1	4,378.3	146.84	30.816	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,900.0	6,705.9	6,573.8	6,572.8	148.0	2.3	-86.68	-1,204.1	-872.6	4,607.3	4,458.0	149.32	30.856	
11,909.4	6,705.9	6,573.6	6,572.5	148.3	2.3	-86.67	-1,204.1	-872.6	4,616.0	4,466.5	149.58	30.861	
12,000.0	6,705.8	6,571.5	6,570.5	150.8	2.3	-86.60	-1,204.1	-872.6	4,700.0	4,547.9	152.09	30.902	
12,007.8	6,705.7	6,571.4	6,570.3	151.0	2.3	-86.60	-1,204.1	-872.6	4,707.3	4,555.0	152.31	30.905	
12,100.0	6,705.6	6,569.2	6,568.2	153.6	2.3	-86.53	-1,204.0	-872.7	4,793.0	4,638.1	154.87	30.948	
12,106.3	6,705.6	6,569.1	6,568.0	153.8	2.3	-86.52	-1,204.0	-872.7	4,798.8	4,643.8	155.05	30.951	
12,200.0	6,705.4	6,566.8	6,565.8	156.4	2.3	-86.45	-1,203.9	-872.7	4,886.2	4,728.6	157.65	30.994	
12,204.7	6,705.4	6,566.7	6,565.7	156.5	2.3	-86.45	-1,203.9	-872.7	4,890.6	4,732.8	157.78	30.996	
12,300.0	6,705.2	6,564.4	6,563.3	159.2	2.3	-86.37	-1,203.9	-872.7	4,979.7	4,819.3	160.43	31.040	
12,303.1	6,705.2	6,564.3	6,563.2	159.3	2.3	-86.37	-1,203.9	-872.7	4,982.7	4,822.2	160.52	31.042	
12,400.0	6,705.0	6,561.8	6,560.8	162.0	2.3	-86.29	-1,203.8	-872.7	5,073.5	4,910.3	163.21	31.086	
12,401.5	6,705.0	6,561.8	6,560.8	162.0	2.3	-86.29	-1,203.8	-872.7	5,075.0	4,911.7	163.25	31.087	
12,500.0	6,704.8	6,559.2	6,558.2	164.8	2.3	-86.20	-1,203.8	-872.8	5,167.5	5,001.5	165.98	31.133	
12,598.4	6,704.6	6,556.6	6,555.6	167.5	2.3	-86.12	-1,203.7	-872.8	5,260.2	5,091.5	168.71	31.178	
12,600.0	6,704.6	6,556.6	6,555.5	167.6	2.3	-86.11	-1,203.7	-872.8	5,261.7	5,093.0	168.76	31.179	
12,696.8	6,704.4	6,553.9	6,552.8	170.3	2.3	-86.03	-1,203.6	-872.9	5,353.1	5,181.7	171.44	31.224	
12,700.0	6,704.4	6,553.8	6,552.8	170.4	2.3	-86.02	-1,203.6	-872.9	5,356.1	5,184.6	171.53	31.225	
12,795.2	6,704.3	6,551.1	6,550.1	173.0	2.3	-85.94	-1,203.6	-872.9	5,446.3	5,272.1	174.17	31.269	
12,800.0	6,704.2	6,551.0	6,549.9	173.2	2.3	-85.93	-1,203.6	-872.9	5,450.8	5,276.5	174.31	31.271	
12,893.7	6,704.1	6,548.2	6,547.2	175.8	2.3	-85.84	-1,203.5	-872.9	5,539.6	5,362.7	176.90	31.314	
12,900.0	6,704.1	6,548.0	6,547.0	176.0	2.3	-85.84	-1,203.5	-872.9	5,545.6	5,368.5	177.08	31.317	
12,992.1	6,703.9	6,545.2	6,544.2	178.5	2.3	-85.74	-1,203.4	-873.0	5,633.0	5,453.4	179.63	31.359	
13,000.0	6,703.9	6,545.0	6,544.0	178.8	2.3	-85.74	-1,203.4	-873.0	5,640.6	5,460.7	179.85	31.363	
13,090.5	6,703.7	6,542.2	6,541.1	181.3	2.3	-85.64	-1,203.3	-873.0	5,726.7	5,544.3	182.36	31.404	
13,100.0	6,703.7	6,541.9	6,540.8	181.6	2.3	-85.63	-1,203.3	-873.0	5,735.7	5,553.1	182.62	31.408	
13,188.9	6,703.5	6,539.0	6,538.0	184.0	2.3	-85.54	-1,203.3	-873.1	5,820.5	5,635.4	185.08	31.448	
13,200.0	6,703.5	6,538.6	6,537.6	184.4	2.3	-85.53	-1,203.3	-873.1	5,831.0	5,645.6	185.39	31.453	
13,287.4	6,703.3	6,535.7	6,534.7	186.8	2.3	-85.43	-1,203.2	-873.1	5,914.4	5,726.6	187.80	31.493	
13,300.0	6,703.3	6,535.3	6,534.3	187.2	2.3	-85.42	-1,203.2	-873.1	5,926.5	5,738.4	188.15	31.498	
13,385.8	6,703.2	6,532.3	6,531.3	189.6	2.3	-85.32	-1,203.1	-873.2	6,008.5	5,818.0	190.53	31.537	
13,400.0	6,703.1	6,531.8	6,530.8	190.0	2.3	-85.31	-1,203.1	-873.2	6,022.1	5,831.2	190.92	31.543	
13,484.2	6,703.0	6,528.9	6,527.8	192.3	2.3	-85.21	-1,203.0	-873.2	6,102.8	5,909.5	193.24	31.581	
13,500.0	6,702.9	6,528.3	6,527.2	192.8	2.3	-85.19	-1,203.0	-873.2	6,117.9	5,924.2	193.68	31.588	
13,582.6	6,702.8	6,525.2	6,524.2	195.1	2.3	-85.09	-1,202.9	-873.3	6,197.1	6,001.2	195.96	31.624	
13,600.0	6,702.8	6,524.6	6,523.6	195.6	2.3	-85.07	-1,202.9	-873.3	6,213.8	6,017.3	196.44	31.632	
13,681.1	6,702.6	6,521.5	6,520.5	197.8	2.3	-84.97	-1,202.8	-873.3	6,291.6	6,092.9	198.67	31.668	
13,700.0	6,702.6	6,520.8	6,519.7	198.4	2.3	-84.95	-1,202.8	-873.3	6,309.8	6,110.6	199.20	31.676	
13,779.5	6,702.4	6,517.6	6,516.6	200.6	2.3	-84.84	-1,202.7	-873.4	6,386.2	6,184.8	201.39	31.711	
13,800.0	6,702.4	6,516.8	6,515.8	201.2	2.3	-84.82	-1,202.7	-873.4	6,405.9	6,204.0	201.95	31.720	
13,877.9	6,702.2	6,513.6	6,512.6	203.3	2.3	-84.71	-1,202.6	-873.5	6,480.9	6,276.8	204.09	31.755	
13,900.0	6,702.2	6,512.7	6,511.7	204.0	2.3	-84.68	-1,202.6	-873.5	6,502.2	6,297.5	204.70	31.764	
13,976.3	6,702.1	6,509.4	6,508.4	206.1	2.3	-84.58	-1,202.5	-873.5	6,575.7	6,368.9	206.80	31.798	
14,000.0	6,702.0	6,508.4	6,507.4	206.8	2.3	-84.54	-1,202.5	-873.6	6,598.5	6,391.1	207.45	31.808	
14,074.8	6,701.9	6,505.1	6,504.1	208.9	2.3	-84.44	-1,202.4	-873.6	6,670.7	6,461.2	209.50	31.841	
14,100.0	6,701.8	6,504.0	6,503.0	209.6	2.3	-84.40	-1,202.4	-873.6	6,695.0	6,484.8	210.19	31.852	
14,173.2	6,701.7	6,500.6	6,499.6	211.6	2.3	-84.29	-1,202.3	-873.7	6,765.7	6,553.5	212.20	31.884	
14,200.0	6,701.6	6,500.0	6,499.0	212.4	2.3	-84.27	-1,202.3	-873.7	6,791.6	6,578.6	212.94	31.894	
14,271.6	6,701.5	6,500.0	6,499.0	214.4	2.3	-84.27	-1,202.3	-873.7	6,860.8	6,645.9	214.94	31.920	
14,300.0	6,701.4	6,500.0	6,499.0	215.2	2.3	-84.27	-1,202.3	-873.7	6,888.2	6,672.5	215.73	31.930	
14,370.0	6,701.3	6,500.0	6,499.0	217.1	2.3	-84.27	-1,202.3	-873.7	6,956.0	6,738.3	217.68	31.955	
14,400.0	6,701.3	6,500.0	6,499.0	218.0	2.3	-84.27	-1,202.3	-873.7	6,985.0	6,766.5	218.52	31.965	
14,468.5	6,701.1	6,494.8	6,493.8	219.9	2.3	-84.10	-1,202.2	-873.8	7,051.3	6,830.9	220.37	31.998	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,500.0	6,701.1	6,494.3	6,493.3	220.8	2.3	-84.08	-1,202.1	-873.8	7,081.9	6,860.6	221.24	32.009	
14,566.9	6,701.0	6,493.1	6,492.0	222.6	2.3	-84.04	-1,202.1	-873.8	7,146.7	6,923.6	223.09	32.034	
14,600.0	6,700.9	6,492.5	6,491.4	223.6	2.3	-84.03	-1,202.1	-873.8	7,178.8	6,954.8	224.01	32.047	
14,665.3	6,700.8	6,491.3	6,490.3	225.4	2.3	-83.99	-1,202.1	-873.9	7,242.2	7,016.3	225.82	32.071	
14,700.0	6,700.7	6,490.7	6,489.6	226.4	2.3	-83.97	-1,202.1	-873.9	7,275.8	7,049.0	226.78	32.083	
14,763.7	6,700.6	6,489.5	6,488.5	228.2	2.3	-83.93	-1,202.0	-873.9	7,337.7	7,109.2	228.54	32.107	
14,800.0	6,700.5	6,488.9	6,487.8	229.2	2.3	-83.91	-1,202.0	-873.9	7,372.9	7,143.4	229.54	32.120	
14,862.2	6,700.4	6,487.7	6,486.7	230.9	2.3	-83.87	-1,202.0	-873.9	7,433.3	7,202.1	231.26	32.142	
14,900.0	6,700.3	6,487.1	6,486.0	232.0	2.3	-83.85	-1,202.0	-873.9	7,470.1	7,237.8	232.31	32.156	
14,960.6	6,700.2	6,486.0	6,485.0	233.7	2.3	-83.81	-1,201.9	-874.0	7,529.0	7,295.0	233.99	32.177	
15,000.0	6,700.2	6,485.3	6,484.3	234.8	2.3	-83.79	-1,201.9	-874.0	7,567.3	7,332.2	235.08	32.191	
15,059.0	6,700.0	6,484.2	6,483.2	236.4	2.3	-83.76	-1,201.9	-874.0	7,624.8	7,388.0	236.71	32.212	
15,082.8	6,700.0	6,483.8	6,482.8	237.1	2.3	-83.74	-1,201.9	-874.0	7,647.9	7,410.6	237.37	32.220	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	0.00	14.9	0.0	14.9				
98.4	98.4	98.4	98.4	0.1	0.1	0.00	14.9	0.0	14.9	14.7	0.19	77.679	
100.0	100.0	100.0	100.0	0.1	0.1	0.00	14.9	0.0	14.9	14.7	0.20	76.364	
196.8	196.8	196.8	196.8	0.3	0.3	0.00	14.9	0.0	14.9	14.3	0.63	23.668	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	14.9	0.0	14.9	14.3	0.65	23.149	
295.3	295.3	295.3	295.3	0.5	0.5	0.00	14.9	0.0	14.9	13.9	1.07	13.912	
300.0	300.0	300.0	300.0	0.5	0.5	0.00	14.9	0.0	14.9	13.8	1.09	13.642	
393.7	393.7	393.7	393.7	0.8	0.8	0.00	14.9	0.0	14.9	13.4	1.52	9.851	
400.0	400.0	400.0	400.0	0.8	0.8	0.00	14.9	0.0	14.9	13.4	1.54	9.671	
492.1	492.1	492.1	492.1	1.0	1.0	0.00	14.9	0.0	14.9	13.0	1.96	7.625	
500.0	500.0	500.0	500.0	1.0	1.0	0.00	14.9	0.0	14.9	12.9	1.99	7.490	
590.5	590.5	590.5	590.5	1.2	1.2	0.00	14.9	0.0	14.9	12.5	2.40	6.220	
600.0	600.0	600.0	600.0	1.2	1.2	0.00	14.9	0.0	14.9	12.5	2.44	6.112	
689.0	689.0	689.0	689.0	1.4	1.4	0.00	14.9	0.0	14.9	12.1	2.84	5.252	
700.0	700.0	700.0	700.0	1.4	1.4	0.00	14.9	0.0	14.9	12.0	2.89	5.162	
787.4	787.4	787.4	787.4	1.6	1.6	0.00	14.9	0.0	14.9	11.6	3.29	4.545	
800.0	800.0	800.0	800.0	1.7	1.7	0.00	14.9	0.0	14.9	11.6	3.34	4.468	
885.8	885.8	885.8	885.8	1.9	1.9	0.00	14.9	0.0	14.9	11.2	3.73	4.005	
900.0	900.0	900.0	900.0	1.9	1.9	0.00	14.9	0.0	14.9	11.1	3.79	3.938	
984.2	984.2	984.2	984.2	2.1	2.1	0.00	14.9	0.0	14.9	10.8	4.17	3.581	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.00	14.9	0.0	14.9	10.7	4.24	3.521 CC	
1,082.7	1,082.7	1,082.3	1,082.3	2.3	2.3	1.92	16.0	0.5	16.0	11.4	4.61	3.470	
1,100.0	1,100.0	1,099.5	1,099.5	2.3	2.3	2.73	16.5	0.8	16.5	11.8	4.69	3.519	
1,181.1	1,181.1	1,180.1	1,180.0	2.5	2.5	-22.63	20.0	2.6	19.1	14.1	5.05	3.784	
1,200.0	1,200.0	1,198.9	1,198.7	2.6	2.6	-22.00	21.1	3.1	19.7	14.6	5.13	3.843	
1,279.5	1,279.4	1,277.8	1,277.4	2.7	2.7	-19.85	26.9	6.1	22.3	16.9	5.48	4.075	
1,300.0	1,299.8	1,298.1	1,297.6	2.8	2.8	-19.40	28.7	7.0	23.0	17.5	5.57	4.132	
1,377.9	1,377.5	1,375.4	1,374.3	3.0	3.0	-18.00	36.8	11.1	25.6	19.7	5.92	4.332	
1,400.0	1,399.5	1,397.2	1,395.9	3.0	3.0	-17.68	39.4	12.5	26.4	20.4	6.01	4.386	
1,476.4	1,475.3	1,472.8	1,470.7	3.2	3.2	-16.79	49.6	17.7	28.9	22.6	6.35	4.557	
1,500.0	1,498.7	1,496.2	1,493.7	3.3	3.3	-16.56	53.1	19.5	29.7	23.3	6.45	4.607	
1,574.8	1,572.6	1,570.2	1,566.5	3.5	3.5	-16.00	65.3	25.7	32.2	25.5	6.79	4.750	
1,600.0	1,597.5	1,595.1	1,590.8	3.5	3.6	-15.86	69.8	28.0	33.1	26.2	6.90	4.797	
1,673.2	1,669.4	1,668.3	1,662.4	3.7	3.8	-15.85	83.4	34.9	34.8	27.5	7.23	4.806	
1,700.1	1,695.8	1,695.2	1,688.7	3.8	3.9	-16.06	88.3	37.4	34.9	27.6	7.36	4.749	
1,771.6	1,765.7	1,766.7	1,758.7	4.1	4.2	-16.77	101.6	44.2	35.0	27.3	7.72	4.540	
1,800.0	1,793.4	1,795.0	1,786.4	4.2	4.3	-17.05	106.8	46.8	35.1	27.2	7.86	4.464	
1,870.1	1,862.0	1,865.1	1,854.9	4.4	4.6	-17.74	119.8	53.4	35.2	27.0	8.23	4.280	
1,900.0	1,891.3	1,895.0	1,884.2	4.5	4.7	-18.03	125.4	56.3	35.3	26.9	8.38	4.207	
1,968.5	1,958.3	1,963.5	1,951.2	4.8	4.9	-18.70	138.1	62.7	35.4	26.6	8.75	4.046	
2,000.0	1,989.1	1,995.0	1,982.0	4.9	5.0	-19.00	143.9	65.7	35.5	26.5	8.92	3.975	
2,066.9	2,054.5	2,062.0	2,047.5	5.1	5.3	-19.65	156.3	72.0	35.6	26.3	9.28	3.832	
2,100.0	2,086.9	2,095.0	2,079.8	5.3	5.4	-19.96	162.4	75.1	35.6	26.2	9.47	3.765	
2,165.3	2,150.8	2,160.4	2,143.8	5.5	5.7	-20.58	174.5	81.3	35.8	25.9	9.83	3.638	
2,200.0	2,184.7	2,195.0	2,177.7	5.6	5.8	-20.91	180.9	84.6	35.9	25.8	10.03	3.574	
2,263.8	2,247.1	2,258.8	2,240.0	5.9	6.1	-21.51	192.8	90.6	36.0	25.6	10.40	3.462	
2,300.0	2,282.5	2,295.0	2,275.5	6.0	6.3	-21.85	199.5	94.0	36.1	25.5	10.61	3.401	
2,362.2	2,343.3	2,357.2	2,336.3	6.3	6.5	-22.43	211.0	99.9	36.2	25.2	10.97	3.301	
2,400.0	2,380.3	2,395.0	2,373.3	6.5	6.7	-22.78	218.0	103.5	36.3	25.1	11.19	3.242	
2,460.6	2,439.6	2,455.7	2,432.6	6.7	6.9	-23.34	229.2	109.2	36.4	24.9	11.56	3.153	
2,500.0	2,478.1	2,495.0	2,471.1	6.9	7.1	-23.69	236.5	112.9	36.5	24.7	11.79	3.097	
2,559.0	2,535.9	2,554.1	2,528.8	7.1	7.3	-24.23	247.5	118.5	36.7	24.5	12.15	3.017	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,594.8	2,568.7	7.3	7.5	-25.10	255.2	122.0	36.9	24.5	12.42	2.971	
2,657.5	2,632.2	2,652.1	2,624.7	7.5	7.7	-27.66	266.3	126.1	37.6	24.7	12.85	2.924	
2,700.0	2,673.8	2,694.6	2,666.3	7.7	7.9	-29.86	274.7	128.9	38.2	25.0	13.20	2.894	
2,755.9	2,728.4	2,750.4	2,720.9	7.9	8.1	-32.64	285.7	132.6	39.1	25.4	13.69	2.858	
2,800.0	2,771.6	2,794.5	2,764.0	8.1	8.3	-34.74	294.4	135.5	39.9	25.8	14.08	2.835	
2,854.3	2,824.7	2,848.8	2,817.1	8.3	8.5	-37.20	305.1	139.0	41.0	26.4	14.58	2.810	
2,900.0	2,869.4	2,894.4	2,861.8	8.5	8.7	-39.18	314.1	142.0	41.9	26.9	15.00	2.793	
2,952.7	2,921.0	2,947.2	2,913.3	8.8	8.9	-41.35	324.5	145.5	43.0	27.5	15.50	2.777	
3,000.0	2,967.2	2,994.4	2,959.5	9.0	9.1	-43.20	333.9	148.6	44.1	28.1	15.95	2.765	
3,051.2	3,017.3	3,045.5	3,009.5	9.2	9.4	-45.10	343.9	151.9	45.3	28.9	16.43	2.756	
3,100.0	3,065.0	3,094.3	3,057.3	9.4	9.6	-46.83	353.6	155.1	46.5	29.6	16.90	2.750	
3,149.6	3,113.5	3,143.9	3,105.8	9.6	9.8	-48.49	363.3	158.4	47.7	30.4	17.38	2.747	
3,200.0	3,162.8	3,194.2	3,155.0	9.8	10.0	-50.08	373.3	161.7	49.1	31.2	17.87	2.745	
3,248.0	3,209.8	3,242.2	3,202.0	10.0	10.2	-51.53	382.7	164.9	50.3	32.0	18.34	2.746	
3,300.0	3,260.6	3,294.2	3,252.8	10.2	10.4	-53.01	393.0	168.3	51.8	32.9	18.84	2.748	
3,346.4	3,306.1	3,340.6	3,298.2	10.5	10.6	-54.27	402.1	171.3	53.1	33.8	19.29	2.751	
3,400.0	3,358.5	3,394.1	3,350.5	10.7	10.9	-55.64	412.7	174.8	54.6	34.8	19.81	2.757	
3,444.9	3,402.3	3,438.9	3,394.4	10.9	11.1	-56.73	421.5	177.8	55.9	35.7	20.24	2.762	
3,500.0	3,456.3	3,494.0	3,448.3	11.1	11.3	-58.00	432.4	181.4	57.5	36.8	20.77	2.770	
3,543.3	3,498.6	3,537.3	3,490.6	11.3	11.5	-58.96	440.9	184.2	58.8	37.6	21.19	2.777	
3,600.0	3,554.1	3,594.0	3,546.0	11.5	11.7	-60.14	452.1	188.0	60.5	38.8	21.73	2.787	
3,641.7	3,594.9	3,635.6	3,586.8	11.7	11.9	-60.97	460.3	190.7	61.8	39.7	22.13	2.794	
3,700.0	3,651.9	3,693.9	3,643.7	12.0	12.2	-62.07	471.8	194.5	63.6	41.0	22.68	2.806	
3,740.1	3,691.2	3,734.0	3,683.0	12.2	12.3	-62.79	479.8	197.2	64.9	41.8	23.07	2.814	
3,800.0	3,749.7	3,793.8	3,741.5	12.4	12.6	-63.81	491.5	201.1	66.8	43.2	23.63	2.827	
3,838.6	3,787.4	3,832.4	3,779.2	12.6	12.8	-64.44	499.2	203.6	68.0	44.0	24.00	2.835	
3,900.0	3,847.5	3,893.7	3,839.2	12.9	13.0	-65.40	511.3	207.7	70.0	45.4	24.58	2.849	
3,937.0	3,883.7	3,930.7	3,875.4	13.0	13.2	-65.95	518.6	210.1	71.2	46.3	24.93	2.858	
4,000.0	3,945.3	3,993.7	3,937.0	13.3	13.5	-66.85	531.0	214.2	73.3	47.8	25.52	2.872	
4,035.4	3,980.0	4,029.1	3,971.6	13.5	13.6	-67.33	538.0	216.6	74.5	48.6	25.85	2.880	
4,060.0	4,004.0	4,053.6	3,995.6	13.6	13.7	-67.66	542.8	218.2	75.3	49.2	26.08	2.886	
4,100.0	4,043.2	4,093.6	4,034.7	13.7	13.9	-68.00	550.7	220.8	76.7	50.3	26.42	2.904	
4,133.8	4,076.5	4,127.4	4,067.8	13.8	14.0	-68.00	557.4	223.0	78.1	51.4	26.65	2.930	
4,200.0	4,141.6	4,193.5	4,132.4	14.0	14.3	-67.23	570.4	227.4	81.2	54.2	27.04	3.004	
4,232.3	4,173.5	4,225.7	4,163.9	14.1	14.5	-66.54	576.7	229.5	83.0	55.8	27.18	3.053	
4,300.0	4,240.6	4,293.2	4,230.0	14.3	14.8	-64.48	590.1	233.9	87.2	59.8	27.40	3.182	
4,330.7	4,271.1	4,323.8	4,259.9	14.4	14.9	-63.31	596.1	235.9	89.4	61.9	27.46	3.255	
4,400.0	4,340.0	4,392.7	4,327.3	14.5	15.2	-60.27	609.7	240.4	95.0	67.5	27.51	3.455	
4,429.1	4,369.0	4,421.6	4,355.5	14.6	15.3	-58.86	615.4	242.3	97.8	70.3	27.49	3.557	
4,500.0	4,439.7	4,491.7	4,424.1	14.8	15.6	-55.20	629.2	246.9	105.3	77.9	27.37	3.848	
4,527.5	4,467.2	4,518.9	4,450.7	14.8	15.8	-53.73	634.6	248.7	108.6	81.3	27.29	3.980	
4,600.0	4,539.7	4,590.2	4,520.5	14.9	16.1	-49.83	648.7	253.4	118.5	91.5	27.05	4.380	
4,626.0	4,565.6	4,615.7	4,545.4	15.0	16.2	-48.44	653.7	255.1	122.5	95.5	26.95	4.544	
4,660.2	4,599.8	4,649.2	4,578.2	15.0	16.3	-17.91	660.3	257.3	128.0	100.7	27.30	4.690	
4,700.0	4,639.6	4,688.2	4,616.3	15.0	16.5	-15.84	668.0	259.9	134.8	107.0	27.84	4.844	
4,724.4	4,664.0	4,712.0	4,639.7	15.1	16.6	-14.67	672.7	261.4	139.1	110.9	28.15	4.941	
4,800.0	4,739.6	4,786.0	4,712.0	15.2	16.9	-11.46	687.3	266.3	152.6	123.5	29.05	5.252	
4,822.8	4,762.5	4,808.3	4,733.8	15.2	17.0	-10.60	691.7	267.7	156.7	127.4	29.31	5.348	
4,900.0	4,839.6	4,883.8	4,807.7	15.3	17.4	-8.00	706.6	272.7	171.0	140.9	30.11	5.679	
4,921.2	4,860.9	4,904.6	4,828.0	15.4	17.5	-7.36	710.7	274.1	175.0	144.7	30.32	5.771	
5,000.0	4,939.6	4,986.6	4,908.4	15.5	17.8	-5.23	725.8	279.1	188.9	157.9	31.03	6.087	
5,019.7	4,959.3	5,007.2	4,928.7	15.5	17.8	-4.79	729.2	280.2	192.1	160.9	31.19	6.159	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,091.9	5,012.4	15.6	18.1	-3.29	741.9	284.5	203.9	172.1	31.76	6.420	
5,118.1	5,057.7	5,111.1	5,031.4	15.7	18.1	-3.02	744.5	285.3	206.3	174.4	31.88	6.471	
5,200.0	5,139.6	5,198.4	5,118.1	15.8	18.4	-1.98	754.6	288.7	215.6	183.2	32.36	6.663	
5,216.5	5,156.2	5,216.1	5,135.7	15.8	18.4	-1.81	756.3	289.3	217.2	184.8	32.44	6.695	
5,300.0	5,239.6	5,305.8	5,225.0	15.9	18.6	-1.13	763.6	291.7	223.9	191.0	32.85	6.815	
5,314.9	5,254.6	5,321.9	5,241.1	16.0	18.6	-1.04	764.6	292.0	224.8	191.9	32.92	6.830	
5,400.0	5,339.6	5,413.7	5,332.8	16.1	18.8	-0.67	768.7	293.4	228.7	195.4	33.26	6.876	
5,413.4	5,353.0	5,428.2	5,347.2	16.1	18.8	-0.64	769.1	293.5	229.0	195.7	33.30	6.877	
5,500.0	5,439.6	5,520.6	5,439.6	16.3	18.9	-0.55	770.1	293.9	229.9	196.3	33.58	6.847	
5,511.8	5,451.4	5,532.4	5,451.4	16.3	18.9	-0.55	770.1	293.9	229.9	196.3	33.62	6.839	
5,600.0	5,539.6	5,620.6	5,539.6	16.4	19.0	-0.55	770.1	293.9	229.9	196.0	33.88	6.786	
5,610.2	5,549.9	5,630.8	5,549.9	16.4	19.1	-0.55	770.1	293.9	229.9	196.0	33.91	6.780	
5,700.0	5,639.6	5,720.6	5,639.6	16.6	19.2	-0.55	770.1	293.9	229.9	195.7	34.19	6.725	
5,708.6	5,648.3	5,729.3	5,648.3	16.6	19.2	-0.55	770.1	293.9	229.9	195.7	34.22	6.720	
5,800.0	5,739.6	5,820.6	5,739.6	16.7	19.3	-0.55	770.1	293.9	229.9	195.4	34.50	6.664	
5,807.1	5,746.7	5,827.7	5,746.7	16.8	19.3	-0.55	770.1	293.9	229.9	195.4	34.52	6.660	
5,900.0	5,839.6	5,920.6	5,839.6	16.9	19.5	-0.55	770.1	293.9	229.9	195.1	34.82	6.604	
5,905.5	5,845.1	5,926.1	5,845.1	16.9	19.5	-0.55	770.1	293.9	229.9	195.1	34.83	6.601	
5,964.5	5,904.1	5,985.1	5,904.1	17.0	19.6	-0.55	770.1	293.9	229.9	194.9	35.02	6.565	
6,000.0	5,939.6	6,020.6	5,939.6	17.1	19.6	-0.58	770.1	293.8	229.9	194.8	35.13	6.545	
6,003.9	5,943.6	6,024.5	5,943.5	17.1	19.6	-0.59	770.1	293.7	229.9	194.8	35.14	6.543	
6,059.2	5,998.8	6,079.3	5,998.3	17.2	19.7	-1.40	770.1	290.5	230.0	194.8	35.22	6.530	
6,100.0	6,039.6	6,119.6	6,038.2	17.2	19.7	87.63	770.1	285.5	230.1	200.1	30.04	7.661	
6,102.3	6,042.0	6,121.9	6,040.4	17.2	19.7	87.57	770.1	285.1	230.1	200.1	30.05	7.658	
6,150.0	6,089.4	6,168.5	6,086.2	17.3	19.7	86.45	770.1	276.4	230.4	200.1	30.30	7.602	
6,200.0	6,138.7	6,217.2	6,133.3	17.3	19.7	85.29	770.1	264.1	230.7	200.2	30.53	7.558	
6,200.8	6,139.5	6,217.9	6,134.0	17.3	19.7	85.27	770.1	263.8	230.7	200.2	30.53	7.557	
6,250.0	6,187.4	6,265.5	6,179.1	17.3	19.7	84.16	770.1	248.7	231.1	200.4	30.71	7.526	
6,299.2	6,234.4	6,312.8	6,222.9	17.4	19.7	83.08	770.1	230.7	231.6	200.8	30.85	7.507	
6,300.0	6,235.1	6,313.6	6,223.6	17.4	19.7	83.06	770.1	230.4	231.6	200.8	30.85	7.507	
6,350.0	6,281.7	6,361.4	6,266.4	17.4	19.7	82.01	770.1	209.3	232.2	201.2	30.96	7.499	
6,397.6	6,324.8	6,406.7	6,305.7	17.3	19.7	81.05	770.1	186.7	232.8	201.7	31.04	7.499	
6,400.0	6,326.9	6,408.9	6,307.6	17.3	19.7	81.00	770.1	185.5	232.8	201.8	31.04	7.499	
6,450.0	6,370.5	6,456.2	6,346.9	17.3	19.7	80.04	770.1	159.2	233.5	202.3	31.11	7.503	
6,496.0	6,409.1	6,500.0	6,381.6	17.3	19.7	79.19	770.1	132.5	234.1	202.9	31.18	7.508	
6,500.0	6,412.3	6,503.3	6,384.2	17.3	19.7	79.13	770.1	130.5	234.1	203.0	31.19	7.508	
6,550.0	6,452.1	6,550.0	6,419.2	17.3	19.6	78.27	770.1	99.6	234.8	203.6	31.28	7.508	
6,594.5	6,485.6	6,591.6	6,448.7	17.3	19.6	77.56	770.1	70.2	235.5	204.1	31.41	7.498	
6,600.0	6,489.7	6,596.8	6,452.3	17.3	19.6	77.47	770.1	66.5	235.5	204.1	31.42	7.497	
6,650.0	6,524.9	6,643.3	6,482.9	17.2	19.6	76.74	770.1	31.5	236.2	204.6	31.63	7.468	
6,692.9	6,553.0	6,683.0	6,507.2	17.2	19.6	76.15	770.1	0.1	236.8	204.9	31.90	7.424	
6,700.0	6,557.5	6,689.6	6,511.0	17.2	19.6	76.06	770.1	-5.3	236.9	205.0	31.95	7.416	
6,750.0	6,587.4	6,735.8	6,536.7	17.2	19.6	75.45	770.1	-43.6	237.6	205.2	32.37	7.338	
6,791.3	6,609.9	6,773.8	6,555.9	17.2	19.6	75.00	770.1	-76.4	238.0	205.2	32.87	7.242	
6,800.0	6,614.4	6,781.8	6,559.8	17.2	19.6	74.91	770.1	-83.5	238.1	205.2	32.98	7.221	
6,850.0	6,638.4	6,827.7	6,580.2	17.2	19.7	74.44	770.1	-124.6	238.7	205.0	33.70	7.083	
6,889.7	6,655.3	6,864.1	6,594.5	17.4	19.8	74.11	770.1	-158.1	239.1	204.7	34.41	6.947	
6,900.0	6,659.4	6,873.5	6,597.9	17.5	19.8	74.03	770.1	-166.8	239.2	204.6	34.61	6.911	
6,950.0	6,677.1	6,919.2	6,612.8	18.0	20.0	73.70	770.1	-210.0	239.6	203.9	35.69	6.712	
6,988.2	6,688.4	6,954.1	6,622.3	18.5	20.3	73.49	770.1	-243.6	239.8	203.2	36.64	6.546	
7,000.0	6,691.5	6,964.9	6,624.9	18.7	20.4	73.43	770.1	-254.0	239.9	202.9	36.95	6.492	
7,050.0	6,702.5	7,010.5	6,634.2	19.5	20.8	73.24	770.1	-298.7	240.1	201.8	38.37	6.258	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,708.4	7,043.9	6,639.2	20.1	21.3	73.14	770.1	-331.7	240.3	200.7	39.52	6.080	
7,100.0	6,710.1	7,056.1	6,640.7	20.4	21.4	73.11	770.1	-343.8	240.3	200.3	39.95	6.015	
7,150.0	6,714.2	7,101.6	6,644.2	21.3	22.2	73.06	770.1	-389.2	240.4	198.7	41.66	5.769	
7,185.0	6,715.0	7,133.5	6,645.0	21.9	22.7	73.07	770.1	-421.1	240.4	197.4	42.93	5.599	
7,185.6	6,715.0	7,134.0	6,645.0	21.9	22.7	73.07	770.1	-421.6	240.4	197.4	42.95	5.596	
7,200.0	6,715.0	7,148.3	6,645.0	22.2	23.0	73.07	770.1	-435.8	240.3	196.9	43.48	5.528	
7,283.4	6,714.8	7,231.8	6,644.9	23.9	24.6	73.08	770.1	-519.3	240.3	193.7	46.68	5.149	
7,300.0	6,714.8	7,248.3	6,644.9	24.2	24.9	73.09	770.1	-535.8	240.3	193.0	47.32	5.078	
7,381.9	6,714.6	7,330.2	6,644.8	26.0	26.6	73.10	770.1	-617.7	240.3	189.6	50.67	4.743	
7,400.0	6,714.6	7,348.3	6,644.7	26.4	27.0	73.10	770.1	-635.8	240.3	188.9	51.42	4.673	
7,480.3	6,714.4	7,428.6	6,644.6	28.2	28.7	73.12	770.1	-716.1	240.3	185.4	54.89	4.378	
7,500.0	6,714.4	7,448.3	6,644.6	28.7	29.2	73.12	770.1	-735.8	240.3	184.5	55.75	4.310	
7,578.7	6,714.2	7,527.0	6,644.5	30.5	31.0	73.13	770.1	-814.6	240.3	181.0	59.29	4.053	
7,600.0	6,714.2	7,548.3	6,644.5	31.0	31.5	73.14	770.1	-835.8	240.3	180.0	60.25	3.988	
7,677.1	6,714.0	7,625.5	6,644.4	32.9	33.3	73.15	770.1	-913.0	240.3	176.4	63.83	3.764	
7,700.0	6,714.0	7,648.3	6,644.4	33.4	33.9	73.15	770.1	-935.8	240.3	175.4	64.90	3.702	
7,775.6	6,713.9	7,723.9	6,644.3	35.3	35.7	73.17	770.1	-1,011.4	240.2	171.8	68.48	3.508	
7,800.0	6,713.8	7,748.3	6,644.3	35.9	36.3	73.17	770.1	-1,035.8	240.2	170.6	69.65	3.449	
7,874.0	6,713.7	7,822.3	6,644.2	37.8	38.1	73.18	770.2	-1,109.8	240.2	167.0	73.23	3.280	
7,900.0	6,713.6	7,848.3	6,644.1	38.4	38.8	73.19	770.2	-1,135.8	240.2	165.7	74.49	3.225	
7,972.4	6,713.5	7,920.7	6,644.0	40.3	40.6	73.20	770.2	-1,208.3	240.2	162.2	78.05	3.078	
8,000.0	6,713.4	7,948.3	6,644.0	41.0	41.3	73.20	770.2	-1,235.8	240.2	160.8	79.41	3.025	
8,070.8	6,713.3	8,019.2	6,643.9	42.8	43.2	73.22	770.2	-1,306.7	240.2	157.3	82.93	2.896	
8,100.0	6,713.2	8,048.3	6,643.9	43.6	43.9	73.22	770.2	-1,335.8	240.2	155.8	84.39	2.846	
8,169.3	6,713.1	8,117.6	6,643.8	45.4	45.7	73.23	770.2	-1,405.1	240.2	152.3	87.87	2.733	
8,200.0	6,713.0	8,148.3	6,643.8	46.2	46.5	73.24	770.2	-1,435.8	240.2	150.7	89.42	2.686	
8,267.7	6,712.9	8,216.0	6,643.7	48.0	48.3	73.25	770.2	-1,503.5	240.2	147.3	92.85	2.587	
8,300.0	6,712.8	8,248.3	6,643.6	48.8	49.1	73.25	770.2	-1,535.8	240.1	145.7	94.49	2.542	
8,366.1	6,712.7	8,314.4	6,643.6	50.6	50.9	73.26	770.2	-1,602.0	240.1	142.3	97.86	2.454	
8,400.0	6,712.6	8,348.3	6,643.5	51.5	51.8	73.27	770.2	-1,635.8	240.1	140.5	99.60	2.411	
8,464.5	6,712.5	8,412.9	6,643.4	53.2	53.5	73.28	770.2	-1,700.4	240.1	137.2	102.91	2.333	
8,500.0	6,712.4	8,448.3	6,643.4	54.1	54.4	73.29	770.2	-1,735.8	240.1	135.4	104.74	2.293	
8,563.0	6,712.3	8,511.3	6,643.3	55.8	56.1	73.30	770.2	-1,798.8	240.1	132.1	107.99	2.223	
8,600.0	6,712.3	8,548.3	6,643.3	56.8	57.1	73.30	770.2	-1,835.8	240.1	130.2	109.90	2.185	
8,661.4	6,712.1	8,609.7	6,643.2	58.5	58.7	73.31	770.2	-1,897.2	240.1	127.0	113.08	2.123	
8,700.0	6,712.1	8,648.3	6,643.1	59.5	59.8	73.32	770.2	-1,935.8	240.1	125.0	115.09	2.086	
8,759.8	6,711.9	8,708.1	6,643.1	61.1	61.4	73.33	770.2	-1,995.7	240.1	121.9	118.20	2.031	
8,800.0	6,711.9	8,748.3	6,643.0	62.2	62.5	73.33	770.2	-2,035.8	240.1	119.8	120.30	1.995	
8,858.2	6,711.8	8,806.6	6,642.9	63.8	64.0	73.34	770.2	-2,094.1	240.0	116.7	123.34	1.946	
8,900.0	6,711.7	8,848.3	6,642.9	64.9	65.2	73.35	770.2	-2,135.8	240.0	114.5	125.53	1.912	
8,956.7	6,711.6	8,905.0	6,642.8	66.5	66.7	73.36	770.2	-2,192.5	240.0	111.5	128.50	1.868	
9,000.0	6,711.5	8,948.3	6,642.8	67.6	67.9	73.37	770.2	-2,235.8	240.0	109.2	130.77	1.835	
9,055.1	6,711.4	9,003.4	6,642.7	69.1	69.4	73.37	770.2	-2,290.9	240.0	106.3	133.67	1.796	
9,100.0	6,711.3	9,048.3	6,642.6	70.4	70.6	73.38	770.2	-2,335.8	240.0	104.0	136.03	1.764	
9,153.5	6,711.2	9,101.8	6,642.6	71.8	72.1	73.39	770.2	-2,389.4	240.0	101.1	138.85	1.728	
9,200.0	6,711.1	9,148.3	6,642.5	73.1	73.3	73.40	770.2	-2,435.8	240.0	98.7	141.30	1.698	
9,251.9	6,711.0	9,200.3	6,642.5	74.5	74.7	73.40	770.2	-2,487.8	240.0	95.9	144.04	1.666	
9,300.0	6,710.9	9,248.3	6,642.4	75.8	76.1	73.41	770.2	-2,535.8	240.0	93.4	146.58	1.637	
9,350.4	6,710.8	9,298.7	6,642.3	77.2	77.4	73.42	770.2	-2,586.2	240.0	90.7	149.24	1.608	
9,400.0	6,710.7	9,348.3	6,642.3	78.6	78.8	73.43	770.2	-2,635.8	239.9	88.1	151.87	1.580	
9,448.8	6,710.6	9,397.1	6,642.2	79.9	80.1	73.44	770.2	-2,684.6	239.9	85.5	154.46	1.553	
9,500.0	6,710.5	9,448.3	6,642.1	81.3	81.5	73.44	770.2	-2,735.8	239.9	82.8	157.17	1.526	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - WACKER 10F-204 - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,547.2	6,710.4	9,495.5	6,642.1	82.6	82.8	73.45	770.2	-2,783.1	239.9	80.2	159.68	1.502		
9,600.0	6,710.3	9,548.3	6,642.0	84.1	84.3	73.46	770.2	-2,835.8	239.9	77.4	162.48	1.476 Level 3		
9,645.6	6,710.2	9,594.0	6,642.0	85.3	85.5	73.47	770.2	-2,881.5	239.9	75.0	164.91	1.455 Level 3		
9,700.0	6,710.1	9,648.3	6,641.9	86.8	87.0	73.47	770.2	-2,935.8	239.9	72.1	167.80	1.430 Level 3		
9,744.1	6,710.0	9,692.4	6,641.8	88.1	88.2	73.48	770.2	-2,979.9	239.9	69.7	170.15	1.410 Level 3		
9,800.0	6,709.9	9,748.3	6,641.8	89.6	89.8	73.49	770.2	-3,035.8	239.9	66.7	173.12	1.386 Level 3		
9,842.5	6,709.9	9,790.8	6,641.7	90.8	91.0	73.50	770.2	-3,078.3	239.9	64.5	175.39	1.368 Level 3		
9,900.0	6,709.7	9,848.3	6,641.6	92.4	92.5	73.50	770.2	-3,135.8	239.8	61.4	178.45	1.344 Level 3		
9,940.9	6,709.7	9,889.2	6,641.6	93.5	93.7	73.51	770.2	-3,176.8	239.8	59.2	180.64	1.328 Level 3		
10,000.0	6,709.6	9,948.3	6,641.5	95.1	95.3	73.52	770.2	-3,235.8	239.8	56.0	183.79	1.305 Level 3		
10,039.3	6,709.5	9,987.7	6,641.5	96.2	96.4	73.53	770.2	-3,275.2	239.8	53.9	185.89	1.290 Level 3		
10,100.0	6,709.4	10,048.3	6,641.4	97.9	98.1	73.54	770.2	-3,335.8	239.8	50.7	189.13	1.268 Level 3		
10,137.8	6,709.3	10,086.1	6,641.4	98.9	99.1	73.54	770.2	-3,373.6	239.8	48.7	191.15	1.255 Level 3		
10,200.0	6,709.2	10,148.3	6,641.3	100.7	100.8	73.55	770.2	-3,435.8	239.8	45.3	194.48	1.233 Level 2		
10,236.2	6,709.1	10,184.5	6,641.2	101.7	101.8	73.56	770.2	-3,472.0	239.8	43.4	196.42	1.221 Level 2		
10,300.0	6,709.0	10,248.3	6,641.1	103.4	103.6	73.57	770.2	-3,535.8	239.8	39.9	199.83	1.200 Level 2		
10,334.6	6,708.9	10,282.9	6,641.1	104.4	104.6	73.57	770.2	-3,570.5	239.8	38.1	201.69	1.189 Level 2		
10,400.0	6,708.8	10,348.3	6,641.0	106.2	106.4	73.58	770.2	-3,635.8	239.8	34.6	205.19	1.168 Level 2		
10,433.0	6,708.7	10,381.4	6,641.0	107.1	107.3	73.59	770.2	-3,668.9	239.8	32.8	206.96	1.158 Level 2		
10,500.0	6,708.6	10,448.3	6,640.9	109.0	109.2	73.60	770.2	-3,735.8	239.7	29.2	210.55	1.139 Level 2		
10,531.5	6,708.5	10,479.8	6,640.9	109.9	110.0	73.60	770.2	-3,767.3	239.7	27.5	212.24	1.130 Level 2		
10,600.0	6,708.4	10,548.3	6,640.8	111.8	111.9	73.61	770.2	-3,835.8	239.7	23.8	215.92	1.110 Level 2		
10,629.9	6,708.4	10,578.2	6,640.7	112.6	112.8	73.61	770.2	-3,865.7	239.7	22.2	217.52	1.102 Level 2		
10,700.0	6,708.2	10,648.3	6,640.6	114.6	114.7	73.63	770.2	-3,935.8	239.7	18.4	221.29	1.083 Level 2		
10,728.3	6,708.2	10,676.6	6,640.6	115.3	115.5	73.63	770.2	-3,964.2	239.7	16.9	222.81	1.076 Level 2		
10,800.0	6,708.0	10,748.3	6,640.5	117.3	117.5	73.64	770.2	-4,035.8	239.7	13.0	226.66	1.057 Level 2		
10,826.7	6,708.0	10,775.1	6,640.5	118.1	118.2	73.64	770.2	-4,062.6	239.7	11.6	228.10	1.051 Level 2		
10,900.0	6,707.8	10,848.3	6,640.4	120.1	120.3	73.65	770.2	-4,135.8	239.7	7.6	232.03	1.033 Level 2		
10,925.2	6,707.8	10,873.5	6,640.4	120.8	121.0	73.66	770.2	-4,161.0	239.7	6.3	233.39	1.027 Level 2		
11,000.0	6,707.6	10,948.3	6,640.3	122.9	123.0	73.67	770.2	-4,235.8	239.6	2.2	237.41	1.009 Level 2		
11,023.6	6,707.6	10,971.9	6,640.2	123.6	123.7	73.67	770.2	-4,259.4	239.6	1.0	238.68	1.004 Level 2		
11,100.0	6,707.5	11,048.3	6,640.1	125.7	125.8	73.68	770.2	-4,335.8	239.6	-3.2	242.79	0.987 Level 1		
11,122.0	6,707.4	11,070.3	6,640.1	126.3	126.4	73.69	770.2	-4,357.9	239.6	-4.4	243.98	0.982 Level 1		
11,200.0	6,707.3	11,148.3	6,640.0	128.5	128.6	73.70	770.2	-4,435.8	239.6	-8.6	248.18	0.965 Level 1		
11,220.4	6,707.2	11,168.8	6,640.0	129.0	129.2	73.70	770.2	-4,456.3	239.6	-9.7	249.28	0.961 Level 1		
11,300.0	6,707.1	11,248.3	6,639.9	131.3	131.4	73.71	770.2	-4,535.8	239.6	-14.0	253.56	0.945 Level 1		
11,318.9	6,707.0	11,267.2	6,639.9	131.8	131.9	73.72	770.2	-4,554.7	239.6	-15.0	254.58	0.941 Level 1		
11,400.0	6,706.9	11,348.3	6,639.8	134.0	134.2	73.73	770.2	-4,635.8	239.6	-19.4	258.95	0.925 Level 1		
11,417.3	6,706.9	11,365.6	6,639.7	134.5	134.7	73.73	770.2	-4,653.1	239.6	-20.3	259.89	0.922 Level 1		
11,500.0	6,706.7	11,448.3	6,639.6	136.8	137.0	73.74	770.2	-4,735.8	239.6	-24.8	264.34	0.906 Level 1		
11,515.7	6,706.7	11,464.0	6,639.6	137.3	137.4	73.74	770.2	-4,751.6	239.6	-25.6	265.19	0.903 Level 1		
11,600.0	6,706.5	11,548.3	6,639.5	139.6	139.8	73.76	770.2	-4,835.8	239.5	-30.2	269.74	0.888 Level 1		
11,614.1	6,706.5	11,562.5	6,639.5	140.0	140.2	73.76	770.2	-4,850.0	239.5	-31.0	270.50	0.886 Level 1		
11,700.0	6,706.3	11,648.3	6,639.4	142.4	142.5	73.77	770.2	-4,935.8	239.5	-35.6	275.13	0.871 Level 1		
11,712.6	6,706.3	11,660.9	6,639.4	142.8	142.9	73.77	770.2	-4,948.4	239.5	-36.3	275.81	0.868 Level 1		
11,800.0	6,706.1	11,748.3	6,639.2	145.2	145.3	73.78	770.2	-5,035.8	239.5	-41.0	280.53	0.854 Level 1		
11,811.0	6,706.1	11,759.3	6,639.2	145.5	145.6	73.79	770.2	-5,046.8	239.5	-41.6	281.13	0.852 Level 1		
11,900.0	6,705.9	11,848.3	6,639.1	148.0	148.1	73.80	770.2	-5,135.8	239.5	-46.5	285.93	0.838 Level 1		
11,909.4	6,705.9	11,857.7	6,639.1	148.3	148.4	73.80	770.2	-5,145.3	239.5	-47.0	286.44	0.836 Level 1		
12,000.0	6,705.8	11,948.3	6,639.0	150.8	150.9	73.81	770.2	-5,235.8	239.5	-51.9	291.33	0.822 Level 1		
12,007.8	6,705.7	11,956.2	6,639.0	151.0	151.1	73.81	770.2	-5,243.7	239.5	-52.3	291.76	0.821 Level 1		
12,100.0	6,705.6	12,048.3	6,638.9	153.6	153.7	73.83	770.2	-5,335.8	239.4	-57.3	296.74	0.807 Level 1		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,106.3	6,705.6	12,054.6	6,638.9	153.8	153.9	73.83	770.2	-5,342.1	239.4	-57.6	297.08	0.806	Level 1	
12,200.0	6,705.4	12,148.3	6,638.7	156.4	156.5	73.84	770.2	-5,435.8	239.4	-62.7	302.14	0.792	Level 1	
12,204.7	6,705.4	12,153.0	6,638.7	156.5	156.6	73.84	770.2	-5,440.5	239.4	-63.0	302.40	0.792	Level 1	
12,300.0	6,705.2	12,248.3	6,638.6	159.2	159.3	73.85	770.2	-5,535.8	239.4	-68.1	307.55	0.778	Level 1	
12,303.1	6,705.2	12,251.4	6,638.6	159.3	159.4	73.85	770.2	-5,539.0	239.4	-68.3	307.72	0.778	Level 1	
12,400.0	6,705.0	12,348.3	6,638.5	162.0	162.1	73.87	770.2	-5,635.8	239.4	-73.6	312.96	0.765	Level 1	
12,401.5	6,705.0	12,349.9	6,638.5	162.0	162.1	73.87	770.2	-5,637.4	239.4	-73.7	313.04	0.765	Level 1	
12,500.0	6,704.8	12,448.3	6,638.4	164.8	164.9	73.88	770.2	-5,735.8	239.4	-79.0	318.37	0.752	Level 1	
12,598.4	6,704.6	12,546.7	6,638.2	167.5	167.6	73.89	770.2	-5,834.2	239.4	-84.3	323.70	0.739	Level 1	
12,600.0	6,704.6	12,548.3	6,638.2	167.6	167.7	73.89	770.2	-5,835.8	239.4	-84.4	323.78	0.739	Level 1	
12,696.8	6,704.4	12,645.1	6,638.1	170.3	170.4	73.91	770.2	-5,932.7	239.3	-89.7	329.02	0.727	Level 1	
12,700.0	6,704.4	12,648.3	6,638.1	170.4	170.5	73.91	770.2	-5,935.8	239.3	-89.9	329.20	0.727	Level 1	
12,795.2	6,704.3	12,743.6	6,638.0	173.0	173.1	73.92	770.2	-6,031.1	239.3	-95.0	334.35	0.716	Level 1	
12,800.0	6,704.2	12,748.3	6,638.0	173.2	173.3	73.92	770.2	-6,035.8	239.3	-95.3	334.61	0.715	Level 1	
12,893.7	6,704.1	12,842.0	6,637.8	175.8	175.9	73.93	770.2	-6,129.5	239.3	-100.4	339.68	0.704	Level 1	
12,900.0	6,704.1	12,848.3	6,637.8	176.0	176.1	73.93	770.2	-6,135.8	239.3	-100.7	340.03	0.704	Level 1	
12,992.1	6,703.9	12,940.4	6,637.7	178.5	178.6	73.95	770.2	-6,227.9	239.3	-105.7	345.02	0.694	Level 1	
13,000.0	6,703.9	12,948.3	6,637.7	178.8	178.9	73.95	770.2	-6,235.8	239.3	-106.2	345.44	0.693	Level 1	
13,090.5	6,703.7	13,038.8	6,637.6	181.3	181.4	73.96	770.2	-6,326.4	239.3	-111.1	350.35	0.683	Level 1	
13,100.0	6,703.7	13,048.3	6,637.6	181.6	181.7	73.96	770.2	-6,335.8	239.3	-111.6	350.86	0.682	Level 1	
13,188.9	6,703.5	13,137.3	6,637.5	184.0	184.2	73.97	770.2	-6,424.8	239.2	-116.4	355.68	0.673	Level 1	
13,200.0	6,703.5	13,148.3	6,637.5	184.4	184.5	73.97	770.2	-6,435.8	239.2	-117.0	356.28	0.671	Level 1	
13,287.4	6,703.3	13,235.7	6,637.3	186.8	186.9	73.99	770.2	-6,523.2	239.2	-121.8	361.02	0.663	Level 1	
13,300.0	6,703.3	13,248.3	6,637.3	187.2	187.3	73.99	770.2	-6,535.8	239.2	-122.5	361.70	0.661	Level 1	
13,385.8	6,703.2	13,334.1	6,637.2	189.6	189.7	74.00	770.2	-6,621.6	239.2	-127.1	366.36	0.653	Level 1	
13,400.0	6,703.1	13,348.3	6,637.2	190.0	190.1	74.00	770.2	-6,635.8	239.2	-127.9	367.13	0.652	Level 1	
13,484.2	6,703.0	13,432.5	6,637.1	192.3	192.4	74.01	770.2	-6,720.1	239.2	-132.5	371.69	0.644	Level 1	
13,500.0	6,702.9	13,448.3	6,637.1	192.8	192.9	74.01	770.2	-6,735.8	239.2	-133.4	372.55	0.642	Level 1	
13,582.6	6,702.8	13,531.0	6,637.0	195.1	195.2	74.02	770.2	-6,818.5	239.2	-137.9	377.03	0.634	Level 1	
13,600.0	6,702.8	13,548.3	6,636.9	195.6	195.7	74.03	770.2	-6,835.8	239.2	-138.8	377.97	0.633	Level 1	
13,681.1	6,702.6	13,629.4	6,636.8	197.8	197.9	74.04	770.2	-6,916.9	239.2	-143.2	382.37	0.625	Level 1	
13,700.0	6,702.6	13,648.3	6,636.8	198.4	198.5	74.04	770.1	-6,935.8	239.1	-144.3	383.40	0.624	Level 1	
13,779.5	6,702.4	13,727.8	6,636.7	200.6	200.7	74.05	770.1	-7,015.3	239.1	-148.6	387.71	0.617	Level 1	
13,800.0	6,702.4	13,748.3	6,636.7	201.2	201.3	74.05	770.1	-7,035.8	239.1	-149.7	388.83	0.615	Level 1	
13,877.9	6,702.2	13,826.2	6,636.6	203.3	203.4	74.06	770.1	-7,113.8	239.1	-153.9	393.06	0.608	Level 1	
13,900.0	6,702.2	13,848.3	6,636.5	204.0	204.1	74.07	770.1	-7,135.8	239.1	-155.1	394.25	0.606	Level 1	
13,976.3	6,702.1	13,924.7	6,636.4	206.1	206.2	74.08	770.1	-7,212.2	239.1	-159.3	398.40	0.600	Level 1	
14,000.0	6,702.0	13,948.3	6,636.4	206.8	206.9	74.08	770.1	-7,235.8	239.1	-160.6	399.68	0.598	Level 1	
14,074.8	6,701.9	14,023.1	6,636.3	208.9	209.0	74.09	770.1	-7,310.6	239.1	-164.7	403.74	0.592	Level 1	
14,100.0	6,701.8	14,048.3	6,636.3	209.6	209.7	74.09	770.1	-7,335.8	239.1	-166.0	405.11	0.590	Level 1	
14,173.2	6,701.7	14,121.5	6,636.2	211.6	211.7	74.10	770.1	-7,409.0	239.1	-170.0	409.09	0.584	Level 1	
14,200.0	6,701.6	14,148.3	6,636.2	212.4	212.5	74.10	770.1	-7,435.8	239.1	-171.5	410.54	0.582	Level 1	
14,271.6	6,701.5	14,219.9	6,636.1	214.4	214.5	74.11	770.1	-7,507.5	239.0	-175.4	414.43	0.577	Level 1	
14,300.0	6,701.4	14,248.3	6,636.0	215.2	215.3	74.12	770.1	-7,535.8	239.0	-176.9	415.98	0.575	Level 1	
14,370.0	6,701.3	14,318.4	6,635.9	217.1	217.2	74.12	770.1	-7,605.9	239.0	-180.8	419.78	0.569	Level 1	
14,400.0	6,701.3	14,348.3	6,635.9	218.0	218.1	74.13	770.1	-7,635.8	239.0	-182.4	421.41	0.567	Level 1	
14,468.5	6,701.1	14,416.8	6,635.8	219.9	220.0	74.14	770.1	-7,704.3	239.0	-186.1	425.13	0.562	Level 1	
14,500.0	6,701.1	14,448.3	6,635.8	220.8	220.9	74.14	770.1	-7,735.8	239.0	-187.8	426.84	0.560	Level 1	
14,566.9	6,701.0	14,515.2	6,635.7	222.6	222.7	74.15	770.1	-7,802.7	239.0	-191.5	430.48	0.555	Level 1	
14,600.0	6,700.9	14,548.3	6,635.6	223.6	223.7	74.15	770.1	-7,835.8	239.0	-193.3	432.28	0.553	Level 1	
14,665.3	6,700.8	14,613.6	6,635.5	225.4	225.5	74.16	770.1	-7,901.2	239.0	-196.9	435.83	0.548	Level 1	
14,700.0	6,700.7	14,648.3	6,635.5	226.4	226.5	74.17	770.1	-7,935.8	239.0	-198.7	437.71	0.546	Level 1	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - WACKER 10F-204 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	14,712.1	6,635.4	228.2	228.3	74.17	770.1	-7,999.6	239.0	-202.2	441.18	0.542	Level 1
14,800.0	6,700.5	14,748.3	6,635.4	229.2	229.3	74.18	770.1	-8,035.8	238.9	-204.2	443.15	0.539	Level 1
14,862.2	6,700.4	14,810.5	6,635.3	230.9	231.0	74.19	770.1	-8,098.0	238.9	-207.6	446.53	0.535	Level 1
14,900.0	6,700.3	14,848.3	6,635.2	232.0	232.1	74.19	770.1	-8,135.8	238.9	-209.7	448.58	0.533	Level 1
14,960.6	6,700.2	14,908.9	6,635.2	233.7	233.8	74.20	770.1	-8,196.4	238.9	-213.0	451.88	0.529	Level 1
15,000.0	6,700.2	14,948.3	6,635.1	234.8	234.9	74.20	770.1	-8,235.8	238.9	-215.1	454.02	0.526	Level 1
15,059.0	6,700.0	15,007.3	6,635.0	236.4	236.5	74.21	770.1	-8,294.9	238.9	-218.3	457.23	0.522	Level 1
15,082.8	6,700.0	15,031.1	6,635.0	237.1	237.2	74.21	770.1	-8,318.7	238.9	-219.6	458.53	0.521	Level 1, ES, SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-179.29	-44.8	-0.6	44.8				
98.4	98.4	98.4	98.4	0.1	0.1	-179.29	-44.8	-0.6	44.8	44.6	0.19	233.203	
100.0	100.0	100.0	100.0	0.1	0.1	-179.29	-44.8	-0.6	44.8	44.6	0.20	229.256	
196.8	196.8	196.8	196.8	0.3	0.3	-179.29	-44.8	-0.6	44.8	44.2	0.63	71.055	
200.0	200.0	200.0	200.0	0.3	0.3	-179.29	-44.8	-0.6	44.8	44.2	0.65	69.496	
295.3	295.3	295.3	295.3	0.5	0.5	-179.29	-44.8	-0.6	44.8	43.8	1.07	41.766	
300.0	300.0	300.0	300.0	0.5	0.5	-179.29	-44.8	-0.6	44.8	43.7	1.09	40.955	
393.7	393.7	393.7	393.7	0.8	0.8	-179.29	-44.8	-0.6	44.8	43.3	1.52	29.575	
400.0	400.0	400.0	400.0	0.8	0.8	-179.29	-44.8	-0.6	44.8	43.3	1.54	29.032	
492.1	492.1	492.1	492.1	1.0	1.0	-179.29	-44.8	-0.6	44.8	42.9	1.96	22.893	
500.0	500.0	500.0	500.0	1.0	1.0	-179.29	-44.8	-0.6	44.8	42.8	1.99	22.486	
590.5	590.5	590.5	590.5	1.2	1.2	-179.29	-44.8	-0.6	44.8	42.4	2.40	18.674	
600.0	600.0	600.0	600.0	1.2	1.2	-179.29	-44.8	-0.6	44.8	42.4	2.44	18.349	
689.0	689.0	689.0	689.0	1.4	1.4	-179.29	-44.8	-0.6	44.8	42.0	2.84	15.768	
700.0	700.0	700.0	700.0	1.4	1.4	-179.29	-44.8	-0.6	44.8	41.9	2.89	15.497	
787.4	787.4	787.4	787.4	1.6	1.6	-179.29	-44.8	-0.6	44.8	41.5	3.29	13.644	
800.0	800.0	800.0	800.0	1.7	1.7	-179.29	-44.8	-0.6	44.8	41.5	3.34	13.413	
885.8	885.8	885.8	885.8	1.9	1.9	-179.29	-44.8	-0.6	44.8	41.1	3.73	12.025	
900.0	900.0	900.0	900.0	1.9	1.9	-179.29	-44.8	-0.6	44.8	41.0	3.79	11.823	
984.2	984.2	984.2	984.2	2.1	2.1	-179.29	-44.8	-0.6	44.8	40.7	4.17	10.749	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.29	-44.8	-0.6	44.8	40.6	4.24	10.570	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-179.29	-44.8	-0.6	44.8	40.2	4.61	9.718	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-179.29	-44.8	-0.6	44.8	40.1	4.69	9.557 CC, ES	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	152.65	-44.8	-0.6	45.8	40.8	5.05	9.072	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	152.98	-44.8	-0.6	46.4	41.2	5.14	9.026	
1,279.5	1,279.4	1,279.4	1,279.4	2.7	2.7	154.98	-44.8	-0.6	49.9	44.4	5.49	9.081	
1,300.0	1,299.8	1,299.8	1,299.8	2.8	2.8	155.61	-44.8	-0.6	51.1	45.5	5.58	9.155	
1,377.9	1,377.5	1,377.5	1,377.5	3.0	3.0	158.26	-44.8	-0.6	57.1	51.2	5.92	9.634	
1,400.0	1,399.5	1,399.5	1,399.5	3.0	3.0	159.04	-44.8	-0.6	59.1	53.1	6.02	9.824	
1,476.4	1,475.3	1,475.4	1,475.4	3.2	3.2	162.56	-44.6	-1.5	67.6	61.2	6.35	10.647	
1,500.0	1,498.7	1,498.8	1,498.8	3.3	3.2	163.90	-44.4	-2.2	70.6	64.1	6.44	10.953	
1,574.8	1,572.6	1,572.5	1,572.4	3.5	3.4	168.53	-43.5	-5.6	81.7	74.9	6.75	12.093	
1,600.0	1,597.5	1,597.2	1,597.0	3.5	3.4	170.15	-43.1	-7.1	86.0	79.1	6.85	12.541	
1,673.2	1,669.4	1,668.4	1,668.0	3.7	3.6	174.80	-41.6	-12.7	100.1	93.0	7.16	13.995	
1,700.1	1,695.8	1,694.3	1,693.8	3.8	3.7	176.45	-40.9	-15.2	106.0	98.8	7.26	14.598	
1,771.6	1,765.7	1,762.8	1,761.8	4.1	3.8	-179.42	-38.9	-22.7	122.6	115.1	7.59	16.160	
1,800.0	1,793.4	1,789.8	1,788.6	4.2	3.9	-177.88	-38.0	-26.1	129.5	121.8	7.72	16.779	
1,870.1	1,862.0	1,856.1	1,854.2	4.4	4.1	-174.30	-35.5	-35.6	147.1	139.1	8.05	18.270	
1,900.0	1,891.3	1,884.2	1,881.9	4.5	4.1	-172.86	-34.3	-40.0	154.9	146.8	8.19	18.910	
1,968.5	1,958.3	1,948.1	1,944.8	4.8	4.3	-169.74	-31.4	-51.1	173.6	165.1	8.54	20.340	
2,000.0	1,989.1	1,977.2	1,973.4	4.9	4.4	-168.38	-29.9	-56.6	182.6	173.9	8.70	20.991	
2,066.9	2,054.5	2,038.7	2,033.4	5.1	4.6	-165.65	-26.6	-69.1	202.3	193.3	9.05	22.352	
2,100.0	2,086.9	2,068.8	2,062.7	5.3	4.7	-164.38	-24.9	-75.7	212.5	203.2	9.23	23.020	
2,165.3	2,150.8	2,127.7	2,119.9	5.5	4.9	-161.99	-21.2	-89.4	233.3	223.7	9.59	24.319	
2,200.0	2,184.7	2,158.6	2,149.8	5.6	5.0	-160.79	-19.2	-97.1	244.8	235.0	9.79	24.999	
2,263.8	2,247.1	2,215.0	2,204.0	5.9	5.3	-158.69	-15.3	-111.8	266.6	256.5	10.16	26.237	
2,300.0	2,282.5	2,246.6	2,234.4	6.0	5.4	-157.57	-12.9	-120.6	279.5	269.1	10.38	26.928	
2,362.2	2,343.3	2,301.8	2,287.0	6.3	5.7	-155.70	-8.7	-136.5	302.3	291.5	10.76	28.084	
2,400.0	2,380.3	2,336.4	2,320.0	6.5	5.8	-154.64	-6.0	-146.7	316.3	305.3	11.01	28.741	
2,460.6	2,439.6	2,392.1	2,373.0	6.7	6.1	-153.12	-1.7	-162.9	339.1	327.7	11.39	29.766	
2,500.0	2,478.1	2,428.2	2,407.5	6.9	6.3	-152.23	1.1	-173.5	353.9	342.3	11.64	30.396	
2,559.0	2,535.9	2,482.3	2,459.1	7.1	6.6	-151.03	5.3	-189.3	376.3	364.3	12.03	31.290	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,519.9	2,494.9	7.3	6.8	-150.28	8.2	-200.3	391.9	379.6	12.29	31.881	
2,657.5	2,632.2	2,572.6	2,545.2	7.5	7.1	-149.32	12.3	-215.7	413.9	401.3	12.67	32.665	
2,700.0	2,673.8	2,611.6	2,582.3	7.7	7.3	-148.67	15.3	-227.1	430.3	417.3	12.95	33.219	
2,755.9	2,728.4	2,662.9	2,631.2	7.9	7.6	-147.89	19.3	-242.1	451.8	438.5	13.33	33.908	
2,800.0	2,771.6	2,703.4	2,669.8	8.1	7.8	-147.32	22.5	-253.9	468.9	455.3	13.62	34.429	
2,854.3	2,824.7	2,753.2	2,717.3	8.3	8.1	-146.68	26.3	-268.5	489.9	476.0	13.98	35.034	
2,900.0	2,869.4	2,795.1	2,757.2	8.5	8.3	-146.18	29.6	-280.7	507.7	493.4	14.29	35.523	
2,952.7	2,921.0	2,843.5	2,803.3	8.8	8.6	-145.64	33.3	-294.8	528.2	513.5	14.65	36.057	
3,000.0	2,967.2	2,886.8	2,844.6	9.0	8.9	-145.20	36.7	-307.5	546.6	531.6	14.97	36.516	
3,051.2	3,017.3	2,933.8	2,889.4	9.2	9.1	-144.74	40.3	-321.2	566.6	551.3	15.32	36.988	
3,100.0	3,065.0	2,978.5	2,932.1	9.4	9.4	-144.34	43.8	-334.3	585.7	570.0	15.65	37.420	
3,149.6	3,113.5	3,024.0	2,975.4	9.6	9.7	-143.96	47.3	-347.6	605.1	589.1	15.99	37.838	
3,200.0	3,162.8	3,070.3	3,019.5	9.8	9.9	-143.60	50.9	-361.1	624.8	608.5	16.34	38.246	
3,248.0	3,209.8	3,114.3	3,061.5	10.0	10.2	-143.27	54.4	-374.0	643.6	627.0	16.67	38.617	
3,300.0	3,260.6	3,162.0	3,106.9	10.2	10.5	-142.94	58.1	-387.9	664.0	647.0	17.03	39.002	
3,346.4	3,306.1	3,204.6	3,147.6	10.5	10.8	-142.66	61.4	-400.4	682.3	664.9	17.35	39.332	
3,400.0	3,358.5	3,253.7	3,194.4	10.7	11.0	-142.35	65.2	-414.7	703.3	685.6	17.72	39.696	
3,444.9	3,402.3	3,294.9	3,233.6	10.9	11.3	-142.11	68.4	-426.8	721.0	703.0	18.03	39.989	
3,500.0	3,456.3	3,345.5	3,281.8	11.1	11.6	-141.83	72.3	-441.5	742.7	724.3	18.41	40.335	
3,543.3	3,498.6	3,385.2	3,319.7	11.3	11.9	-141.62	75.4	-453.1	759.7	741.0	18.71	40.596	
3,600.0	3,554.1	3,437.2	3,369.3	11.5	12.2	-141.35	79.4	-468.3	782.1	763.0	19.11	40.925	
3,641.7	3,594.9	3,475.5	3,405.7	11.7	12.4	-141.17	82.4	-479.5	798.5	779.1	19.40	41.158	
3,700.0	3,651.9	3,528.9	3,456.7	12.0	12.7	-140.93	86.5	-495.2	821.5	801.7	19.81	41.471	
3,740.1	3,691.2	3,565.8	3,491.8	12.2	13.0	-140.77	89.4	-505.9	837.4	817.3	20.09	41.678	
3,800.0	3,749.7	3,620.7	3,544.1	12.4	13.3	-140.54	93.7	-522.0	861.0	840.5	20.51	41.977	
3,838.6	3,787.4	3,656.0	3,577.8	12.6	13.5	-140.40	96.4	-532.3	876.2	855.5	20.78	42.162	
3,900.0	3,847.5	3,712.4	3,631.6	12.9	13.9	-140.19	100.8	-548.8	900.5	879.3	21.21	42.448	
3,937.0	3,883.7	3,746.3	3,663.9	13.0	14.1	-140.06	103.4	-558.7	915.1	893.7	21.48	42.613	
4,000.0	3,945.3	3,804.1	3,719.0	13.3	14.4	-139.86	107.9	-575.6	940.1	918.1	21.92	42.886	
4,035.4	3,980.0	3,836.6	3,750.0	13.5	14.7	-139.75	110.4	-585.1	954.1	931.9	22.17	43.034	
4,060.0	4,004.0	3,859.2	3,771.5	13.6	14.8	-139.68	112.2	-591.7	963.8	941.4	22.34	43.135	
4,100.0	4,043.2	3,895.9	3,806.5	13.7	15.0	-139.77	115.0	-602.4	979.4	956.8	22.65	43.232	
4,133.8	4,076.5	3,927.1	3,836.3	13.8	15.2	-139.83	117.4	-611.5	992.3	969.4	22.90	43.329	
4,200.0	4,141.6	3,988.4	3,894.7	14.0	15.6	-139.89	122.2	-629.4	1,016.8	993.4	23.38	43.484	
4,232.3	4,173.5	4,018.5	3,923.3	14.1	15.8	-139.90	124.5	-638.2	1,028.3	1,004.7	23.61	43.556	
4,300.0	4,240.6	4,081.7	3,983.6	14.3	16.2	-139.87	129.4	-656.7	1,051.7	1,027.6	24.08	43.677	
4,330.7	4,271.1	4,110.5	4,011.1	14.4	16.4	-139.84	131.7	-665.1	1,062.0	1,037.7	24.28	43.731	
4,400.0	4,340.0	4,175.7	4,073.2	14.5	16.8	-139.72	136.7	-684.2	1,084.2	1,059.5	24.74	43.826	
4,429.1	4,369.0	4,203.2	4,099.4	14.6	17.0	-139.66	138.9	-692.2	1,093.3	1,068.3	24.92	43.867	
4,500.0	4,439.7	4,270.2	4,163.3	14.8	17.4	-139.45	144.1	-711.8	1,114.3	1,089.0	25.36	43.942	
4,527.5	4,467.2	4,296.4	4,188.2	14.8	17.5	-139.36	146.1	-719.4	1,122.2	1,096.7	25.52	43.973	
4,600.0	4,539.7	4,365.2	4,253.8	14.9	18.0	-139.07	151.4	-739.6	1,142.1	1,116.1	25.94	44.036	
4,626.0	4,565.6	4,389.9	4,277.4	15.0	18.1	-138.95	153.4	-746.8	1,148.9	1,122.8	26.08	44.059	
4,660.2	4,599.8	4,422.5	4,308.4	15.0	18.3	-110.06	155.9	-756.3	1,157.6	1,127.9	29.75	38.911	
4,700.0	4,639.6	4,460.5	4,344.6	15.0	18.6	-109.73	158.8	-767.4	1,167.7	1,137.7	30.03	38.882	
4,724.4	4,664.0	4,483.7	4,366.8	15.1	18.7	-109.53	160.6	-774.2	1,173.9	1,143.7	30.21	38.859	
4,800.0	4,739.6	4,555.8	4,435.5	15.2	19.2	-108.91	166.2	-795.3	1,193.1	1,162.3	30.76	38.791	
4,822.8	4,762.5	4,577.6	4,456.2	15.2	19.3	-108.73	167.9	-801.6	1,198.9	1,168.0	30.92	38.770	
4,900.0	4,839.6	4,651.1	4,526.3	15.3	19.8	-108.13	173.6	-823.1	1,218.7	1,187.2	31.49	38.702	
4,921.2	4,860.9	4,671.4	4,545.7	15.4	19.9	-107.97	175.2	-829.0	1,224.1	1,192.5	31.65	38.683	
5,000.0	4,939.6	4,746.4	4,617.2	15.5	20.4	-107.39	181.0	-851.0	1,244.5	1,212.3	32.23	38.615	
5,019.7	4,959.3	4,765.2	4,635.1	15.5	20.5	-107.24	182.5	-856.5	1,249.6	1,217.2	32.37	38.598	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	4,841.8	4,708.1	15.6	21.0	-106.67	188.4	-878.8	1,270.5	1,237.5	32.97	38.530	
5,118.1	5,057.7	4,859.0	4,724.5	15.7	21.1	-106.54	189.8	-883.9	1,275.2	1,242.1	33.11	38.515	
5,200.0	5,139.6	4,937.1	4,798.9	15.8	21.6	-105.98	195.8	-906.7	1,296.7	1,263.0	33.73	38.447	
5,216.5	5,156.2	4,952.8	4,813.9	15.8	21.7	-105.87	197.1	-911.3	1,301.0	1,267.2	33.85	38.434	
5,300.0	5,239.6	5,032.4	4,889.8	15.9	22.2	-105.31	203.2	-934.5	1,323.0	1,288.6	34.48	38.367	
5,314.9	5,254.6	5,046.6	4,903.4	16.0	22.3	-105.22	204.3	-938.7	1,327.0	1,292.4	34.60	38.355	
5,400.0	5,339.6	7,908.1	6,626.2	16.1	39.1	176.77	248.5	312.6	1,319.3	1,288.3	30.93	42.652	
5,413.4	5,353.0	7,907.9	6,626.2	16.1	39.1	176.80	248.5	312.4	1,306.2	1,275.3	30.95	42.203	
5,500.0	5,439.6	7,906.8	6,626.2	16.3	39.1	177.02	248.5	311.3	1,222.0	1,190.9	31.08	39.313	
5,511.8	5,451.4	7,906.7	6,626.2	16.3	39.1	177.05	248.5	311.1	1,210.5	1,179.4	31.10	38.922	
5,600.0	5,539.6	7,905.6	6,626.2	16.4	39.0	177.27	248.5	310.0	1,125.1	1,093.9	31.24	36.018	
5,610.2	5,549.9	7,905.4	6,626.2	16.4	39.0	177.30	248.5	309.9	1,115.2	1,084.0	31.25	35.684	
5,700.0	5,639.6	7,904.3	6,626.2	16.6	39.0	177.52	248.5	308.7	1,028.9	997.5	31.39	32.772	
5,708.6	5,648.3	7,904.2	6,626.2	16.6	39.0	177.54	248.5	308.6	1,020.6	989.2	31.41	32.494	
5,800.0	5,739.6	7,903.0	6,626.2	16.7	39.0	177.77	248.5	307.4	933.4	901.9	31.55	29.581	
5,807.1	5,746.7	7,902.9	6,626.2	16.8	39.0	177.79	248.5	307.4	926.7	895.1	31.57	29.358	
5,900.0	5,839.6	7,901.7	6,626.2	16.9	39.0	178.02	248.5	306.2	839.0	807.3	31.72	26.454	
5,905.5	5,845.1	7,901.6	6,626.2	16.9	39.0	178.04	248.5	306.1	833.9	802.1	31.72	26.284	
6,000.0	5,939.6	7,900.4	6,626.3	17.1	38.9	178.28	248.5	304.9	746.1	714.2	31.88	23.402	
6,003.9	5,943.6	7,900.4	6,626.3	17.1	38.9	178.28	248.5	304.8	742.5	710.6	31.89	23.284	
6,059.2	5,998.8	7,899.7	6,626.3	17.2	38.9	178.42	248.5	304.1	692.0	660.0	31.98	21.640	
6,100.0	6,039.6	7,898.0	6,626.3	17.2	38.9	-97.99	248.5	302.4	655.2	601.7	53.57	12.231	
6,102.3	6,042.0	7,897.8	6,626.3	17.2	38.9	-98.32	248.5	302.3	653.1	599.6	53.56	12.194	
6,150.0	6,089.4	7,892.8	6,626.4	17.3	38.8	-104.37	248.5	297.2	611.1	558.0	53.15	11.498	
6,200.0	6,138.7	7,884.1	6,626.5	17.3	38.6	-109.17	248.5	288.5	568.3	515.9	52.49	10.829	
6,200.8	6,139.5	7,883.9	6,626.5	17.3	38.6	-109.23	248.5	288.4	567.7	515.2	52.47	10.819	
6,250.0	6,187.4	7,872.0	6,626.6	17.3	38.3	-112.54	248.5	276.4	527.3	475.5	51.76	10.187	
6,299.2	6,234.4	7,856.8	6,626.8	17.4	38.0	-114.64	248.5	261.3	489.0	437.9	51.09	9.572	
6,300.0	6,235.1	7,856.5	6,626.8	17.4	38.0	-114.67	248.5	261.0	488.4	437.3	51.08	9.562	
6,350.0	6,281.7	7,837.8	6,627.1	17.4	37.6	-115.71	248.5	242.3	452.1	401.6	50.47	8.957	
6,397.6	6,324.8	7,817.0	6,627.3	17.3	37.2	-115.82	248.5	221.5	420.3	370.3	49.98	8.409	
6,400.0	6,326.9	7,815.9	6,627.3	17.3	37.1	-115.80	248.5	220.4	418.8	368.8	49.96	8.382	
6,450.0	6,370.5	7,790.9	6,627.7	17.3	36.6	-115.04	248.5	195.4	388.9	339.3	49.55	7.849	
6,496.0	6,409.1	7,765.3	6,628.0	17.3	36.1	-113.64	248.5	169.7	364.7	315.5	49.25	7.405	
6,500.0	6,412.3	7,762.9	6,628.0	17.3	36.0	-113.49	248.5	167.4	362.8	313.6	49.23	7.370	
6,550.0	6,452.1	7,732.2	6,628.4	17.3	35.4	-111.23	248.5	136.6	340.9	291.9	48.98	6.959	
6,594.5	6,485.6	7,702.5	6,628.8	17.3	34.8	-108.68	248.5	107.0	325.0	276.2	48.80	6.658	
6,600.0	6,489.7	7,698.7	6,628.8	17.3	34.7	-108.33	248.5	103.2	323.2	274.4	48.78	6.626	
6,650.0	6,524.9	7,662.8	6,629.3	17.2	34.1	-104.90	248.5	67.2	309.9	261.2	48.63	6.371	
6,692.9	6,553.0	7,630.0	6,629.7	17.2	33.4	-101.62	248.5	34.5	301.6	253.2	48.49	6.221	
6,700.0	6,557.5	7,624.5	6,629.8	17.2	33.3	-101.05	248.5	28.9	300.6	252.1	48.46	6.203	
6,750.0	6,587.4	7,584.0	6,630.3	17.2	32.6	-96.95	248.5	-11.5	294.9	246.6	48.23	6.113	
6,791.3	6,609.9	7,549.1	6,630.7	17.2	32.0	-93.51	248.5	-46.4	292.5	244.5	48.01	6.092 SF	
6,800.0	6,614.4	7,541.6	6,630.8	17.2	31.8	-92.79	248.5	-53.9	292.2	244.2	47.94	6.094	
6,834.3	6,631.2	7,511.6	6,631.2	17.2	31.3	-90.00	248.5	-84.0	291.7	244.0	47.69	6.117	
6,850.0	6,638.4	7,497.5	6,631.4	17.2	31.1	-88.76	248.5	-98.0	291.8	244.3	47.55	6.137	
6,889.7	6,655.3	7,461.3	6,631.9	17.4	30.5	-85.76	248.5	-134.2	292.7	245.4	47.22	6.198	
6,900.0	6,659.4	7,451.8	6,632.0	17.5	30.3	-85.03	248.5	-143.7	293.0	245.9	47.12	6.218	
6,950.0	6,677.1	7,404.9	6,632.6	18.0	29.6	-81.75	248.5	-190.7	295.1	248.5	46.64	6.327	
6,988.2	6,688.4	7,368.2	6,633.1	18.5	29.1	-79.62	248.5	-227.3	296.9	250.6	46.33	6.409	
7,000.0	6,691.5	7,356.8	6,633.2	18.7	28.9	-79.03	248.5	-238.7	297.5	251.3	46.23	6.434	
7,050.0	6,702.5	7,307.9	6,633.8	19.5	28.2	-76.95	248.5	-287.6	299.7	253.8	45.90	6.530	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,708.4	7,271.7	6,634.3	20.1	27.8	-75.85	248.5	-323.8	301.0	255.2	45.78	6.575	
7,100.0	6,710.1	7,258.4	6,634.5	20.4	27.6	-75.55	248.5	-337.1	301.4	255.6	45.75	6.587	
7,150.0	6,714.2	7,209.3	6,635.1	21.3	27.1	-74.84	248.5	-386.2	302.3	256.5	45.79	6.601	
7,185.0	6,715.0	7,177.8	6,634.5	21.9	26.7	-74.57	248.5	-417.7	302.7	256.7	45.97	6.584	
7,185.6	6,715.0	7,177.3	6,634.5	21.9	26.7	-74.56	248.5	-418.2	302.7	256.7	45.97	6.584	
7,200.0	6,715.0	7,164.3	6,633.8	22.2	26.6	-74.45	248.5	-431.1	302.8	256.8	46.08	6.572	
7,283.4	6,714.8	7,090.2	6,625.6	23.9	25.9	-72.99	248.5	-504.7	305.4	258.8	46.65	6.547	
7,300.0	6,714.8	7,075.8	6,623.1	24.2	25.8	-72.55	248.5	-519.0	306.3	259.5	46.74	6.553	
7,381.9	6,714.6	7,006.0	6,607.1	26.0	25.4	-69.76	248.5	-586.9	312.4	265.3	47.12	6.631	
7,400.0	6,714.6	6,991.0	6,602.8	26.4	25.3	-69.02	248.5	-601.2	314.3	267.2	47.17	6.664	
7,480.3	6,714.4	6,927.1	6,581.1	28.2	25.0	-65.43	248.5	-661.4	325.4	278.1	47.31	6.877	
7,500.0	6,714.4	6,912.0	6,575.3	28.7	24.9	-64.48	248.5	-675.2	328.9	281.5	47.31	6.951	
7,578.7	6,714.2	6,850.0	6,548.0	30.5	24.7	-60.30	248.5	-730.9	346.0	299.0	47.06	7.354	
7,600.0	6,714.2	6,839.9	6,543.1	31.0	24.7	-59.59	248.5	-739.8	351.6	304.4	47.16	7.456	
7,677.1	6,714.0	6,789.2	6,516.8	32.9	24.7	-55.90	248.5	-783.0	375.4	328.5	46.91	8.004	
7,700.0	6,714.0	6,775.1	6,508.8	33.4	24.7	-54.85	248.5	-794.7	383.6	336.8	46.82	8.193	
7,775.6	6,713.9	6,730.8	6,482.7	35.3	24.7	-51.56	248.5	-830.4	414.0	367.5	46.51	8.901	
7,800.0	6,713.8	6,717.4	6,474.3	35.9	24.7	-50.57	248.5	-840.9	424.9	378.5	46.40	9.157	
7,874.0	6,713.7	6,679.0	6,449.2	37.8	24.7	-47.76	248.5	-870.0	461.1	415.0	46.12	9.997	
7,900.0	6,713.6	6,666.3	6,440.7	38.4	24.7	-46.85	248.5	-879.3	474.8	428.8	46.03	10.316	
7,972.4	6,713.5	6,633.2	6,417.4	40.3	24.8	-44.52	248.5	-902.9	515.8	470.0	45.83	11.255	
8,000.0	6,713.4	6,621.3	6,408.8	41.0	24.8	-43.70	248.5	-911.1	532.4	486.6	45.77	11.631	
8,070.8	6,713.3	6,600.0	6,393.0	42.8	24.9	-42.27	248.5	-925.5	577.1	531.1	46.03	12.538	
8,100.0	6,713.2	6,581.6	6,379.1	43.6	24.9	-41.06	248.5	-937.5	596.3	550.6	45.65	13.062	
8,169.3	6,713.1	6,550.0	6,354.4	45.4	25.0	-39.06	248.5	-957.2	643.8	598.4	45.32	14.205	
8,200.0	6,713.0	6,550.0	6,354.4	46.2	25.0	-39.06	248.5	-957.2	665.5	619.6	45.85	14.514	
8,267.7	6,712.9	6,525.0	6,334.3	48.0	25.0	-37.54	248.5	-972.1	714.8	669.0	45.78	15.616	
8,300.0	6,712.8	6,515.4	6,326.4	48.8	25.1	-36.98	248.5	-977.6	739.0	693.2	45.84	16.121	
8,366.1	6,712.7	6,500.0	6,313.7	50.6	25.1	-36.09	248.5	-986.2	789.6	743.5	46.18	17.098	
8,400.0	6,712.6	6,500.0	6,313.7	51.5	25.1	-36.09	248.5	-986.2	816.3	769.6	46.74	17.463	
8,464.5	6,712.5	6,471.5	6,289.6	53.2	25.2	-34.51	248.5	-1,001.5	867.5	821.1	46.38	18.705	
8,500.0	6,712.4	6,450.0	6,271.1	54.1	25.2	-33.38	248.5	-1,012.3	896.4	850.5	45.89	19.534	
8,563.0	6,712.3	6,450.0	6,271.1	55.8	25.2	-33.38	248.5	-1,012.3	947.9	901.0	46.89	20.217	
8,600.0	6,712.3	6,450.0	6,271.1	56.8	25.2	-33.38	248.5	-1,012.3	978.8	931.3	47.47	20.619	
8,661.4	6,712.1	6,428.5	6,252.2	58.5	25.3	-32.29	248.5	-1,022.6	1,030.4	983.1	47.36	21.756	
8,700.0	6,712.1	6,421.1	6,245.6	59.5	25.3	-31.93	248.5	-1,026.0	1,063.3	1,015.7	47.59	22.342	
8,759.8	6,711.9	6,400.0	6,226.7	61.1	25.4	-30.92	248.5	-1,035.4	1,114.9	1,067.4	47.47	23.484	
8,800.0	6,711.9	6,400.0	6,226.7	62.2	25.4	-30.92	248.5	-1,035.4	1,149.6	1,101.5	48.08	23.911	
8,858.2	6,711.8	6,400.0	6,226.7	63.8	25.4	-30.92	248.5	-1,035.4	1,200.6	1,151.7	48.96	24.521	
8,900.0	6,711.7	6,400.0	6,226.7	64.9	25.4	-30.92	248.5	-1,035.4	1,237.6	1,188.0	49.59	24.954	
8,956.7	6,711.6	6,378.3	6,207.0	66.5	25.4	-29.93	248.5	-1,044.4	1,287.7	1,238.3	49.35	26.091	
9,000.0	6,711.5	6,372.1	6,201.3	67.6	25.4	-29.65	248.5	-1,046.9	1,326.4	1,276.7	49.68	26.697	
9,055.1	6,711.4	6,350.0	6,180.9	69.1	25.5	-28.70	248.5	-1,055.3	1,376.1	1,326.7	49.40	27.855	
9,100.0	6,711.3	6,350.0	6,180.9	70.4	25.5	-28.70	248.5	-1,055.3	1,416.5	1,366.5	50.05	28.301	
9,153.5	6,711.2	6,350.0	6,180.9	71.8	25.5	-28.70	248.5	-1,055.3	1,465.1	1,414.2	50.83	28.824	
9,200.0	6,711.1	6,350.0	6,180.9	73.1	25.5	-28.70	248.5	-1,055.3	1,507.5	1,456.0	51.50	29.271	
9,251.9	6,711.0	6,350.0	6,180.9	74.5	25.5	-28.70	248.5	-1,055.3	1,555.2	1,502.9	52.25	29.761	
9,300.0	6,710.9	6,350.0	6,180.9	75.8	25.5	-28.70	248.5	-1,055.3	1,599.5	1,546.6	52.95	30.207	
9,350.4	6,710.8	6,329.5	6,161.7	77.2	25.5	-27.85	248.5	-1,062.5	1,645.8	1,593.2	52.62	31.276	
9,400.0	6,710.7	6,324.4	6,156.9	78.6	25.5	-27.65	248.5	-1,064.2	1,691.8	1,638.7	53.07	31.880	
9,448.8	6,710.6	6,319.6	6,152.4	79.9	25.5	-27.46	248.5	-1,065.8	1,737.2	1,683.7	53.51	32.463	
9,500.0	6,710.5	6,300.0	6,133.7	81.3	25.6	-26.70	248.5	-1,071.9	1,785.2	1,731.9	53.24	33.530	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	6,300.0	6,133.7	82.6	25.6	-26.70	248.5	-1,071.9	1,829.2	1,775.3	53.90	33.940	
9,600.0	6,710.3	6,300.0	6,133.7	84.1	25.6	-26.70	248.5	-1,071.9	1,878.7	1,824.0	54.63	34.390	
9,645.6	6,710.2	6,300.0	6,133.7	85.3	25.6	-26.70	248.5	-1,071.9	1,921.6	1,866.3	55.26	34.771	
9,700.0	6,710.1	6,300.0	6,133.7	86.8	25.6	-26.70	248.5	-1,071.9	1,972.8	1,916.8	56.02	35.217	
9,744.1	6,710.0	6,300.0	6,133.7	88.1	25.6	-26.70	248.5	-1,071.9	2,014.5	1,957.8	56.63	35.572	
9,800.0	6,709.9	6,300.0	6,133.7	89.6	25.6	-26.70	248.5	-1,071.9	2,067.5	2,010.1	57.41	36.013	
9,842.5	6,709.9	6,300.0	6,133.7	90.8	25.6	-26.70	248.5	-1,071.9	2,107.9	2,049.9	58.00	36.342	
9,900.0	6,709.7	6,300.0	6,133.7	92.4	25.6	-26.70	248.5	-1,071.9	2,162.7	2,103.9	58.80	36.779	
9,940.9	6,709.7	6,279.7	6,114.3	93.5	25.6	-25.95	248.5	-1,077.7	2,201.4	2,143.1	58.27	37.780	
10,000.0	6,709.6	6,275.8	6,110.5	95.1	25.6	-25.81	248.5	-1,078.8	2,257.7	2,198.8	58.86	38.355	
10,039.3	6,709.5	6,273.3	6,108.1	96.2	25.6	-25.72	248.5	-1,079.5	2,295.3	2,236.1	59.26	38.731	
10,100.0	6,709.4	6,269.5	6,104.4	97.9	25.6	-25.59	248.5	-1,080.4	2,353.4	2,293.5	59.88	39.300	
10,137.8	6,709.3	6,250.0	6,085.5	98.9	25.7	-24.91	248.5	-1,085.2	2,389.8	2,330.5	59.35	40.264	
10,200.0	6,709.2	6,250.0	6,085.5	100.7	25.7	-24.91	248.5	-1,085.2	2,449.5	2,389.3	60.18	40.700	
10,236.2	6,709.1	6,250.0	6,085.5	101.7	25.7	-24.91	248.5	-1,085.2	2,484.2	2,423.5	60.67	40.949	
10,300.0	6,709.0	6,250.0	6,085.5	103.4	25.7	-24.91	248.5	-1,085.2	2,545.5	2,484.0	61.52	41.379	
10,334.6	6,708.9	6,250.0	6,085.5	104.4	25.7	-24.91	248.5	-1,085.2	2,578.9	2,516.9	61.98	41.608	
10,400.0	6,708.8	6,250.0	6,085.5	106.2	25.7	-24.91	248.5	-1,085.2	2,641.9	2,579.0	62.85	42.033	
10,433.0	6,708.7	6,250.0	6,085.5	107.1	25.7	-24.91	248.5	-1,085.2	2,673.8	2,610.5	63.29	42.244	
10,500.0	6,708.6	6,250.0	6,085.5	109.0	25.7	-24.91	248.5	-1,085.2	2,738.5	2,674.3	64.19	42.664	
10,531.5	6,708.5	6,250.0	6,085.5	109.9	25.7	-24.91	248.5	-1,085.2	2,769.0	2,704.4	64.61	42.858	
10,600.0	6,708.4	6,250.0	6,085.5	111.8	25.7	-24.91	248.5	-1,085.2	2,835.4	2,769.9	65.52	43.272	
10,629.9	6,708.4	6,250.0	6,085.5	112.6	25.7	-24.91	248.5	-1,085.2	2,864.4	2,798.5	65.92	43.449	
10,700.0	6,708.2	6,250.0	6,085.5	114.6	25.7	-24.91	248.5	-1,085.2	2,932.5	2,865.6	66.86	43.858	
10,728.3	6,708.2	6,250.0	6,085.5	115.3	25.7	-24.91	248.5	-1,085.2	2,960.0	2,892.7	67.24	44.020	
10,800.0	6,708.0	6,250.0	6,085.5	117.3	25.7	-24.91	248.5	-1,085.2	3,029.7	2,961.5	68.20	44.423	
10,826.7	6,708.0	6,250.0	6,085.5	118.1	25.7	-24.91	248.5	-1,085.2	3,055.8	2,987.2	68.56	44.571	
10,900.0	6,707.8	6,250.0	6,085.5	120.1	25.7	-24.91	248.5	-1,085.2	3,127.2	3,057.6	69.54	44.969	
10,925.2	6,707.8	6,229.5	6,065.5	120.8	25.7	-24.23	248.5	-1,089.7	3,151.4	3,082.7	68.63	45.916	
11,000.0	6,707.6	6,226.6	6,062.7	122.9	25.7	-24.14	248.5	-1,090.3	3,224.3	3,154.8	69.45	46.427	
11,023.6	6,707.6	6,225.8	6,061.9	123.6	25.7	-24.11	248.5	-1,090.5	3,247.3	3,177.6	69.71	46.585	
11,100.0	6,707.5	6,223.0	6,059.2	125.7	25.7	-24.03	248.5	-1,091.0	3,321.9	3,251.3	70.54	47.090	
11,122.0	6,707.4	6,222.3	6,058.4	126.3	25.7	-24.00	248.5	-1,091.2	3,343.4	3,272.6	70.79	47.233	
11,200.0	6,707.3	6,200.0	6,036.5	128.5	25.7	-23.31	248.5	-1,095.2	3,419.9	3,349.4	70.48	48.525	
11,220.4	6,707.2	6,200.0	6,036.5	129.0	25.7	-23.31	248.5	-1,095.2	3,439.9	3,369.1	70.74	48.627	
11,300.0	6,707.1	6,200.0	6,036.5	131.3	25.7	-23.31	248.5	-1,095.2	3,517.6	3,445.9	71.76	49.019	
11,318.9	6,707.0	6,200.0	6,036.5	131.8	25.7	-23.31	248.5	-1,095.2	3,536.1	3,464.1	72.00	49.110	
11,400.0	6,706.9	6,200.0	6,036.5	134.0	25.7	-23.31	248.5	-1,095.2	3,615.5	3,542.4	73.05	49.496	
11,417.3	6,706.9	6,200.0	6,036.5	134.5	25.7	-23.31	248.5	-1,095.2	3,632.4	3,559.1	73.27	49.577	
11,500.0	6,706.7	6,200.0	6,036.5	136.8	25.7	-23.31	248.5	-1,095.2	3,713.4	3,639.1	74.33	49.958	
11,515.7	6,706.7	6,200.0	6,036.5	137.3	25.7	-23.31	248.5	-1,095.2	3,728.8	3,654.3	74.53	50.029	
11,600.0	6,706.5	6,200.0	6,036.5	139.6	25.7	-23.31	248.5	-1,095.2	3,811.5	3,735.9	75.62	50.406	
11,614.1	6,706.5	6,200.0	6,036.5	140.0	25.7	-23.31	248.5	-1,095.2	3,825.4	3,749.6	75.80	50.468	
11,700.0	6,706.3	6,200.0	6,036.5	142.4	25.7	-23.31	248.5	-1,095.2	3,909.6	3,832.7	76.90	50.839	
11,712.6	6,706.3	6,200.0	6,036.5	142.8	25.7	-23.31	248.5	-1,095.2	3,922.0	3,844.9	77.06	50.893	
11,800.0	6,706.1	6,200.0	6,036.5	145.2	25.7	-23.31	248.5	-1,095.2	4,007.9	3,929.7	78.19	51.259	
11,811.0	6,706.1	6,200.0	6,036.5	145.5	25.7	-23.31	248.5	-1,095.2	4,018.7	3,940.4	78.33	51.305	
11,900.0	6,705.9	6,200.0	6,036.5	148.0	25.7	-23.31	248.5	-1,095.2	4,106.2	4,026.7	79.48	51.667	
11,909.4	6,705.9	6,200.0	6,036.5	148.3	25.7	-23.31	248.5	-1,095.2	4,115.5	4,035.9	79.60	51.704	
12,000.0	6,705.8	6,200.0	6,036.5	150.8	25.7	-23.31	248.5	-1,095.2	4,204.6	4,123.9	80.76	52.062	
12,007.8	6,705.7	6,200.0	6,036.5	151.0	25.7	-23.31	248.5	-1,095.2	4,212.4	4,131.5	80.86	52.092	
12,100.0	6,705.6	6,200.0	6,036.5	153.6	25.7	-23.31	248.5	-1,095.2	4,303.1	4,221.1	82.05	52.445	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,200.0	6,036.5	153.8	25.7	-23.31	248.5	-1,095.2	4,309.3	4,227.2	82.13	52.469	
12,200.0	6,705.4	6,200.0	6,036.5	156.4	25.7	-23.31	248.5	-1,095.2	4,401.7	4,318.3	83.34	52.817	
12,204.7	6,705.4	6,200.0	6,036.5	156.5	25.7	-23.31	248.5	-1,095.2	4,406.3	4,322.9	83.40	52.835	
12,300.0	6,705.2	6,200.0	6,036.5	159.2	25.7	-23.31	248.5	-1,095.2	4,500.3	4,415.7	84.63	53.179	
12,303.1	6,705.2	6,200.0	6,036.5	159.3	25.7	-23.31	248.5	-1,095.2	4,503.4	4,418.7	84.67	53.190	
12,400.0	6,705.0	6,200.0	6,036.5	162.0	25.7	-23.31	248.5	-1,095.2	4,599.0	4,513.1	85.91	53.530	
12,401.5	6,705.0	6,200.0	6,036.5	162.0	25.7	-23.31	248.5	-1,095.2	4,600.5	4,514.6	85.93	53.535	
12,500.0	6,704.8	6,200.0	6,036.5	164.8	25.7	-23.31	248.5	-1,095.2	4,697.7	4,610.5	87.20	53.871	
12,598.4	6,704.6	6,200.0	6,036.5	167.5	25.7	-23.31	248.5	-1,095.2	4,794.9	4,706.4	88.47	54.197	
12,600.0	6,704.6	6,200.0	6,036.5	167.6	25.7	-23.31	248.5	-1,095.2	4,796.5	4,708.0	88.49	54.202	
12,696.8	6,704.4	6,200.0	6,036.5	170.3	25.7	-23.31	248.5	-1,095.2	4,892.2	4,802.4	89.74	54.515	
12,700.0	6,704.4	6,200.0	6,036.5	170.4	25.7	-23.31	248.5	-1,095.2	4,895.3	4,805.5	89.78	54.525	
12,795.2	6,704.3	6,200.0	6,036.5	173.0	25.7	-23.31	248.5	-1,095.2	4,989.5	4,898.5	91.01	54.824	
12,800.0	6,704.2	6,200.0	6,036.5	173.2	25.7	-23.31	248.5	-1,095.2	4,994.2	4,903.1	91.07	54.839	
12,893.7	6,704.1	6,200.0	6,036.5	175.8	25.7	-23.31	248.5	-1,095.2	5,086.9	4,994.6	92.28	55.125	
12,900.0	6,704.1	6,200.0	6,036.5	176.0	25.7	-23.31	248.5	-1,095.2	5,093.1	5,000.8	92.36	55.144	
12,992.1	6,703.9	6,177.5	6,014.3	178.5	25.7	-22.65	248.5	-1,098.5	5,183.9	5,092.0	91.84	56.442	
13,000.0	6,703.9	6,177.4	6,014.2	178.8	25.7	-22.64	248.5	-1,098.5	5,191.7	5,099.8	91.94	56.471	
13,090.5	6,703.7	6,175.9	6,012.7	181.3	25.7	-22.60	248.5	-1,098.7	5,281.3	5,188.3	92.97	56.805	
13,100.0	6,703.7	6,175.8	6,012.6	181.6	25.7	-22.60	248.5	-1,098.7	5,290.6	5,197.6	93.08	56.839	
13,188.9	6,703.5	6,174.4	6,011.2	184.0	25.7	-22.56	248.5	-1,098.9	5,378.7	5,284.6	94.10	57.158	
13,200.0	6,703.5	6,174.2	6,011.0	184.4	25.7	-22.55	248.5	-1,098.9	5,389.6	5,295.4	94.23	57.197	
13,287.4	6,703.3	6,172.9	6,009.7	186.8	25.7	-22.51	248.5	-1,099.1	5,476.1	5,380.9	95.23	57.503	
13,300.0	6,703.3	6,172.7	6,009.6	187.2	25.7	-22.51	248.5	-1,099.1	5,488.6	5,393.3	95.38	57.547	
13,385.8	6,703.2	6,150.0	5,987.0	189.6	25.7	-21.88	248.5	-1,101.6	5,574.0	5,479.2	94.76	58.822	
13,400.0	6,703.1	6,150.0	5,987.0	190.0	25.7	-21.88	248.5	-1,101.6	5,588.0	5,493.1	94.94	58.861	
13,484.2	6,703.0	6,150.0	5,987.0	192.3	25.7	-21.88	248.5	-1,101.6	5,671.5	5,575.5	95.98	59.090	
13,500.0	6,702.9	6,150.0	5,987.0	192.8	25.7	-21.88	248.5	-1,101.6	5,687.1	5,590.9	96.18	59.132	
13,582.6	6,702.8	6,150.0	5,987.0	195.1	25.7	-21.88	248.5	-1,101.6	5,768.9	5,671.7	97.20	59.351	
13,600.0	6,702.8	6,150.0	5,987.0	195.6	25.7	-21.88	248.5	-1,101.6	5,786.1	5,688.7	97.42	59.396	
13,681.1	6,702.6	6,150.0	5,987.0	197.8	25.7	-21.88	248.5	-1,101.6	5,866.5	5,768.1	98.42	59.606	
13,700.0	6,702.6	6,150.0	5,987.0	198.4	25.7	-21.88	248.5	-1,101.6	5,885.2	5,786.6	98.66	59.654	
13,779.5	6,702.4	6,150.0	5,987.0	200.6	25.7	-21.88	248.5	-1,101.6	5,964.0	5,864.4	99.64	59.855	
13,800.0	6,702.4	6,150.0	5,987.0	201.2	25.7	-21.88	248.5	-1,101.6	5,984.4	5,884.5	99.90	59.905	
13,877.9	6,702.2	6,150.0	5,987.0	203.3	25.7	-21.88	248.5	-1,101.6	6,061.6	5,960.8	100.86	60.098	
13,900.0	6,702.2	6,150.0	5,987.0	204.0	25.7	-21.88	248.5	-1,101.6	6,083.5	5,982.4	101.14	60.151	
13,976.3	6,702.1	6,150.0	5,987.0	206.1	25.7	-21.88	248.5	-1,101.6	6,159.2	6,057.2	102.08	60.335	
14,000.0	6,702.0	6,150.0	5,987.0	206.8	25.7	-21.88	248.5	-1,101.6	6,182.7	6,080.3	102.38	60.391	
14,074.8	6,701.9	6,150.0	5,987.0	208.9	25.7	-21.88	248.5	-1,101.6	6,256.9	6,153.6	103.31	60.567	
14,100.0	6,701.8	6,150.0	5,987.0	209.6	25.7	-21.88	248.5	-1,101.6	6,281.9	6,178.3	103.62	60.625	
14,173.2	6,701.7	6,150.0	5,987.0	211.6	25.7	-21.88	248.5	-1,101.6	6,354.5	6,250.0	104.53	60.794	
14,200.0	6,701.6	6,150.0	5,987.0	212.4	25.7	-21.88	248.5	-1,101.6	6,381.1	6,276.3	104.86	60.854	
14,271.6	6,701.5	6,150.0	5,987.0	214.4	25.7	-21.88	248.5	-1,101.6	6,452.2	6,346.5	105.75	61.015	
14,300.0	6,701.4	6,150.0	5,987.0	215.2	25.7	-21.88	248.5	-1,101.6	6,480.4	6,374.3	106.10	61.078	
14,370.0	6,701.3	6,150.0	5,987.0	217.1	25.7	-21.88	248.5	-1,101.6	6,549.9	6,443.0	106.97	61.232	
14,400.0	6,701.3	6,150.0	5,987.0	218.0	25.7	-21.88	248.5	-1,101.6	6,579.7	6,472.3	107.34	61.297	
14,468.5	6,701.1	6,150.0	5,987.0	219.9	25.7	-21.88	248.5	-1,101.6	6,647.7	6,539.5	108.19	61.444	
14,500.0	6,701.1	6,150.0	5,987.0	220.8	25.7	-21.88	248.5	-1,101.6	6,679.0	6,570.4	108.58	61.510	
14,566.9	6,701.0	6,150.0	5,987.0	222.6	25.7	-21.88	248.5	-1,101.6	6,745.4	6,636.0	109.41	61.651	
14,600.0	6,700.9	6,150.0	5,987.0	223.6	25.7	-21.88	248.5	-1,101.6	6,778.3	6,668.5	109.82	61.719	
14,665.3	6,700.8	6,150.0	5,987.0	225.4	25.7	-21.88	248.5	-1,101.6	6,843.2	6,732.6	110.64	61.854	
14,700.0	6,700.7	6,150.0	5,987.0	226.4	25.7	-21.88	248.5	-1,101.6	6,877.6	6,766.6	111.07	61.924	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - WACKER 10F-232 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	6,150.0	5,987.0	228.2	25.7	-21.88	248.5	-1,101.6	6,941.0	6,829.1	111.86	62.052	
14,800.0	6,700.5	6,150.0	5,987.0	229.2	25.7	-21.88	248.5	-1,101.6	6,977.0	6,864.7	112.31	62.124	
14,862.2	6,700.4	6,150.0	5,987.0	230.9	25.7	-21.88	248.5	-1,101.6	7,038.8	6,925.7	113.08	62.246	
14,900.0	6,700.3	6,150.0	5,987.0	232.0	25.7	-21.88	248.5	-1,101.6	7,076.4	6,962.8	113.55	62.320	
14,960.6	6,700.2	6,150.0	5,987.0	233.7	25.7	-21.88	248.5	-1,101.6	7,136.6	7,022.3	114.30	62.437	
15,000.0	6,700.2	6,150.0	5,987.0	234.8	25.7	-21.88	248.5	-1,101.6	7,175.8	7,061.0	114.79	62.511	
15,059.0	6,700.0	6,150.0	5,987.0	236.4	25.7	-21.88	248.5	-1,101.6	7,234.4	7,118.9	115.52	62.623	
15,082.8	6,700.0	6,150.0	5,987.0	237.1	25.7	-21.88	248.5	-1,101.6	7,258.1	7,142.3	115.82	62.667	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-179.47	-29.9	-0.3	29.9					
98.4	98.4	98.4	98.4	0.1	0.1	-179.47	-29.9	-0.3	29.9	29.7	0.19	155.428		
100.0	100.0	100.0	100.0	0.1	0.1	-179.47	-29.9	-0.3	29.9	29.7	0.20	152.797		
196.8	196.8	196.8	196.8	0.3	0.3	-179.47	-29.9	-0.3	29.9	29.2	0.63	47.358		
200.0	200.0	200.0	200.0	0.3	0.3	-179.47	-29.9	-0.3	29.9	29.2	0.65	46.318		
295.3	295.3	295.3	295.3	0.5	0.5	-179.47	-29.9	-0.3	29.9	28.8	1.07	27.837		
300.0	300.0	300.0	300.0	0.5	0.5	-179.47	-29.9	-0.3	29.9	28.8	1.09	27.296		
393.7	393.7	393.7	393.7	0.8	0.8	-179.47	-29.9	-0.3	29.9	28.4	1.52	19.711		
400.0	400.0	400.0	400.0	0.8	0.8	-179.47	-29.9	-0.3	29.9	28.3	1.54	19.350		
492.1	492.1	492.1	492.1	1.0	1.0	-179.47	-29.9	-0.3	29.9	27.9	1.96	15.258		
500.0	500.0	500.0	500.0	1.0	1.0	-179.47	-29.9	-0.3	29.9	27.9	1.99	14.987		
590.5	590.5	590.5	590.5	1.2	1.2	-179.47	-29.9	-0.3	29.9	27.5	2.40	12.446		
600.0	600.0	600.0	600.0	1.2	1.2	-179.47	-29.9	-0.3	29.9	27.4	2.44	12.229		
689.0	689.0	689.0	689.0	1.4	1.4	-179.47	-29.9	-0.3	29.9	27.0	2.84	10.509		
700.0	700.0	700.0	700.0	1.4	1.4	-179.47	-29.9	-0.3	29.9	27.0	2.89	10.329		
787.4	787.4	787.4	787.4	1.6	1.6	-179.47	-29.9	-0.3	29.9	26.6	3.29	9.094		
800.0	800.0	800.0	800.0	1.7	1.7	-179.47	-29.9	-0.3	29.9	26.5	3.34	8.940		
885.8	885.8	885.8	885.8	1.9	1.9	-179.47	-29.9	-0.3	29.9	26.2	3.73	8.015		
900.0	900.0	900.0	900.0	1.9	1.9	-179.47	-29.9	-0.3	29.9	26.1	3.79	7.880		
984.2	984.2	984.2	984.2	2.1	2.1	-179.47	-29.9	-0.3	29.9	25.7	4.17	7.164		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.47	-29.9	-0.3	29.9	25.6	4.24	7.045		
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-179.47	-29.9	-0.3	29.9	25.3	4.61	6.477		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-179.47	-29.9	-0.3	29.9	25.2	4.69	6.370 CC		
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	152.80	-29.9	-0.3	30.9	25.8	5.05	6.113		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	153.29	-29.9	-0.3	31.4	26.3	5.14	6.117		
1,279.5	1,279.4	1,279.4	1,279.4	2.7	2.7	156.13	-29.9	-0.3	34.9	29.4	5.49	6.362		
1,300.0	1,299.8	1,299.8	1,299.8	2.8	2.8	156.98	-29.9	-0.3	36.2	30.6	5.58	6.483		
1,377.9	1,377.5	1,378.5	1,378.5	3.0	3.0	159.64	-29.1	0.4	41.3	35.4	5.92	6.980		
1,400.0	1,399.5	1,400.7	1,400.7	3.0	3.0	160.17	-28.5	0.9	42.8	36.8	6.02	7.120		
1,476.4	1,475.3	1,478.0	1,477.9	3.2	3.2	161.43	-25.7	3.4	48.2	41.8	6.35	7.592		
1,500.0	1,498.7	1,501.9	1,501.7	3.3	3.2	161.67	-24.5	4.4	49.9	43.4	6.45	7.736		
1,574.8	1,572.6	1,577.7	1,577.3	3.5	3.4	162.04	-19.8	8.6	55.3	48.6	6.77	8.170		
1,600.0	1,597.5	1,603.3	1,602.7	3.5	3.5	162.06	-17.8	10.3	57.2	50.3	6.88	8.314		
1,673.2	1,669.4	1,677.6	1,676.5	3.7	3.7	161.86	-11.2	16.1	62.8	55.5	7.21	8.707		
1,700.1	1,695.8	1,705.0	1,703.6	3.8	3.7	161.71	-8.4	18.5	64.8	57.5	7.33	8.849		
1,771.6	1,765.7	1,777.8	1,775.6	4.1	3.9	160.93	0.0	25.9	69.6	61.9	7.68	9.059		
1,800.0	1,793.4	1,806.7	1,804.1	4.2	4.0	160.44	3.8	29.2	71.0	63.2	7.82	9.081		
1,870.1	1,862.0	1,878.2	1,874.3	4.4	4.2	158.76	13.9	38.0	73.6	65.4	8.20	8.984		
1,900.0	1,891.3	1,908.6	1,904.0	4.5	4.3	157.86	18.6	42.1	74.3	66.0	8.36	8.893		
1,968.5	1,958.3	1,977.0	1,970.9	4.8	4.5	155.80	29.3	51.5	75.8	67.1	8.74	8.674		
2,000.0	1,989.1	2,008.5	2,001.7	4.9	4.6	154.89	34.2	55.8	76.6	67.6	8.93	8.575		
2,066.9	2,054.5	2,075.3	2,067.1	5.1	4.8	153.00	44.7	65.0	78.2	68.9	9.33	8.378		
2,100.0	2,086.9	2,108.4	2,099.4	5.3	5.0	152.09	49.8	69.5	79.0	69.5	9.54	8.287		
2,165.3	2,150.8	2,173.7	2,163.3	5.5	5.2	150.36	60.0	78.4	80.7	70.8	9.95	8.111		
2,200.0	2,184.7	2,208.3	2,197.2	5.6	5.3	149.47	65.5	83.2	81.6	71.5	10.18	8.022		
2,263.8	2,247.1	2,272.0	2,259.5	5.9	5.6	147.89	75.4	91.9	83.4	72.8	10.60	7.866		
2,300.0	2,282.5	2,308.2	2,294.9	6.0	5.7	147.02	81.1	96.8	84.4	73.6	10.85	7.781		
2,362.2	2,343.3	2,370.3	2,355.6	6.3	5.9	145.57	90.8	105.3	86.2	74.9	11.28	7.642		
2,400.0	2,380.3	2,408.1	2,392.6	6.5	6.1	144.72	96.7	110.5	87.3	75.8	11.55	7.562		
2,460.6	2,439.6	2,468.6	2,451.8	6.7	6.3	143.41	106.2	118.8	89.2	77.2	11.99	7.438		
2,500.0	2,478.1	2,508.0	2,490.3	6.9	6.5	142.58	112.3	124.2	90.4	78.1	12.28	7.362		
2,559.0	2,535.9	2,567.0	2,548.0	7.1	6.7	141.38	121.6	132.3	92.2	79.5	12.72	7.252		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,607.9	2,588.0	7.3	6.9	140.58	128.0	137.9	93.6	80.5	13.03	7.181	
2,657.5	2,632.2	2,665.3	2,644.2	7.5	7.1	139.49	137.0	145.7	95.4	82.0	13.47	7.084	
2,700.0	2,673.8	2,707.8	2,685.7	7.7	7.3	138.71	143.6	151.5	96.8	83.0	13.80	7.016	
2,755.9	2,728.4	2,763.6	2,740.4	7.9	7.5	137.72	152.3	159.2	98.7	84.5	14.24	6.931	
2,800.0	2,771.6	2,807.7	2,783.4	8.1	7.7	136.97	159.2	165.2	100.2	85.6	14.59	6.867	
2,854.3	2,824.7	2,861.9	2,836.5	8.3	7.9	136.07	167.7	172.6	102.1	87.0	15.03	6.792	
2,900.0	2,869.4	2,907.6	2,881.2	8.5	8.1	135.34	174.9	178.9	103.7	88.3	15.40	6.732	
2,952.7	2,921.0	2,960.2	2,932.7	8.8	8.3	134.52	183.1	186.1	105.5	89.7	15.83	6.666	
3,000.0	2,967.2	3,007.5	2,978.9	9.0	8.5	133.82	190.5	192.6	107.2	91.0	16.22	6.610	
3,051.2	3,017.3	3,058.6	3,028.9	9.2	8.7	133.08	198.5	199.6	109.0	92.4	16.64	6.552	
3,100.0	3,065.0	3,107.3	3,076.6	9.4	8.9	132.39	206.1	206.2	110.8	93.8	17.05	6.499	
3,149.6	3,113.5	3,156.9	3,125.1	9.6	9.1	131.72	213.9	213.0	112.6	95.2	17.47	6.448	
3,200.0	3,162.8	3,207.2	3,174.3	9.8	9.4	131.06	221.7	219.9	114.5	96.6	17.89	6.399	
3,248.0	3,209.8	3,255.2	3,221.2	10.0	9.6	130.45	229.3	226.5	116.3	98.0	18.30	6.354	
3,300.0	3,260.6	3,307.1	3,272.0	10.2	9.8	129.81	237.4	233.6	118.2	99.5	18.74	6.308	
3,346.4	3,306.1	3,353.5	3,317.4	10.5	10.0	129.26	244.6	240.0	120.0	100.8	19.14	6.268	
3,400.0	3,358.5	3,407.0	3,369.7	10.7	10.2	128.64	253.0	247.3	122.0	102.4	19.60	6.225	
3,444.9	3,402.3	3,451.9	3,413.6	10.9	10.4	128.13	260.0	253.4	123.7	103.7	19.99	6.190	
3,500.0	3,456.3	3,506.3	3,466.9	11.1	10.6	127.62	268.4	260.7	125.9	105.5	20.43	6.163	
3,543.3	3,498.6	3,548.8	3,508.6	11.3	10.8	127.50	274.4	266.0	127.9	107.2	20.73	6.171	
3,600.0	3,554.1	3,604.3	3,563.3	11.5	10.9	127.72	281.6	272.3	131.0	109.9	21.09	6.211	
3,641.7	3,594.9	3,645.1	3,603.6	11.7	11.0	128.15	286.4	276.5	133.6	112.2	21.32	6.263	
3,700.0	3,651.9	3,702.0	3,659.9	12.0	11.2	129.08	292.4	281.7	137.6	116.0	21.62	6.365	
3,740.1	3,691.2	3,741.1	3,698.7	12.2	11.3	129.92	296.0	284.9	140.7	118.9	21.79	6.458	
3,800.0	3,749.7	3,800.0	3,757.3	12.4	11.4	131.47	300.6	289.0	145.9	123.9	22.01	6.629	
3,838.6	3,787.4	3,836.5	3,793.7	12.6	11.5	132.59	303.1	291.1	149.6	127.5	22.12	6.763	
3,900.0	3,847.5	3,895.7	3,852.7	12.9	11.7	134.59	306.3	293.9	156.2	133.9	22.27	7.014	
3,937.0	3,883.7	3,931.2	3,888.1	13.0	11.7	135.88	307.8	295.2	160.6	138.3	22.33	7.191	
4,000.0	3,945.3	3,991.3	3,948.2	13.3	11.8	138.20	309.5	296.8	168.9	146.4	22.41	7.533	
4,035.4	3,980.0	4,024.9	3,981.8	13.5	11.9	139.55	310.1	297.3	174.0	151.5	22.44	7.752	
4,060.0	4,004.0	4,048.1	4,005.0	13.6	11.9	140.50	310.3	297.5	177.7	155.3	22.46	7.914	
4,100.0	4,043.2	4,086.3	4,043.2	13.7	12.0	142.09	310.4	297.5	184.0	161.5	22.47	8.188	
4,133.8	4,076.5	4,119.6	4,076.5	13.8	12.0	143.33	310.4	297.5	189.1	166.6	22.48	8.413	
4,200.0	4,141.6	4,184.7	4,141.6	14.0	12.1	145.39	310.4	297.5	198.4	175.8	22.53	8.804	
4,232.3	4,173.5	4,216.6	4,173.5	14.1	12.2	146.23	310.4	297.5	202.5	179.9	22.57	8.974	
4,300.0	4,240.6	4,283.7	4,240.6	14.3	12.3	147.72	310.4	297.5	210.3	187.6	22.67	9.277	
4,330.7	4,271.1	4,314.2	4,271.1	14.4	12.3	148.28	310.4	297.5	213.4	190.7	22.72	9.393	
4,400.0	4,340.0	4,383.1	4,340.0	14.5	12.4	149.32	310.4	297.5	219.5	196.7	22.87	9.601	
4,429.1	4,369.0	4,412.1	4,369.0	14.6	12.5	149.67	310.4	297.5	221.7	198.8	22.93	9.669	
4,500.0	4,439.7	4,482.8	4,439.7	14.8	12.6	150.33	310.4	297.5	225.9	202.8	23.10	9.779	
4,527.5	4,467.2	4,510.4	4,467.2	14.8	12.7	150.51	310.4	297.5	227.1	203.9	23.17	9.803	
4,600.0	4,539.7	4,582.8	4,539.7	14.9	12.8	150.83	310.4	297.5	229.2	205.9	23.36	9.813	
4,626.0	4,565.6	4,608.7	4,565.6	15.0	12.8	150.89	310.4	297.5	229.6	206.2	23.43	9.800	
4,660.2	4,599.8	4,642.9	4,599.8	15.0	12.9	179.65	310.4	297.5	229.8	204.0	25.83	8.895	
4,700.0	4,639.6	4,682.8	4,639.6	15.0	12.9	179.65	310.4	297.5	229.8	203.8	25.96	8.851	
4,724.4	4,664.0	4,707.2	4,664.0	15.1	13.0	179.65	310.4	297.5	229.8	203.7	26.04	8.823	
4,800.0	4,739.6	4,782.8	4,739.6	15.2	13.1	179.65	310.4	297.5	229.8	203.5	26.30	8.738	
4,822.8	4,762.5	4,805.6	4,762.5	15.2	13.2	179.65	310.4	297.5	229.8	203.4	26.38	8.712	
4,900.0	4,839.6	4,882.8	4,839.6	15.3	13.3	179.65	310.4	297.5	229.8	203.1	26.64	8.626	
4,921.2	4,860.9	4,904.0	4,860.9	15.4	13.3	179.65	310.4	297.5	229.8	203.1	26.71	8.603	
5,000.0	4,939.6	4,982.8	4,939.6	15.5	13.5	179.65	310.4	297.5	229.8	202.8	26.98	8.516	
5,019.7	4,959.3	5,002.4	4,959.3	15.5	13.5	179.65	310.4	297.5	229.8	202.7	27.05	8.495	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,082.8	5,039.6	15.6	13.6	179.65	310.4	297.5	229.8	202.5	27.33	8.408	
5,118.1	5,057.7	5,100.9	5,057.7	15.7	13.7	179.65	310.4	297.5	229.8	202.4	27.39	8.389	
5,200.0	5,139.6	5,182.8	5,139.6	15.8	13.8	179.65	310.4	297.5	229.8	202.1	27.68	8.302	
5,216.5	5,156.2	5,199.3	5,156.2	15.8	13.8	179.65	310.4	297.5	229.8	202.0	27.73	8.285	
5,300.0	5,239.6	5,282.8	5,239.6	15.9	14.0	179.65	310.4	297.5	229.8	201.8	28.03	8.198	
5,314.9	5,254.6	5,297.7	5,254.6	16.0	14.0	179.65	310.4	297.5	229.8	201.7	28.08	8.183	
5,400.0	5,339.6	5,382.8	5,339.6	16.1	14.2	179.65	310.4	297.5	229.8	201.4	28.38	8.096	
5,413.4	5,353.0	5,396.1	5,353.0	16.1	14.2	179.65	310.4	297.5	229.8	201.4	28.43	8.082	
5,500.0	5,439.6	5,482.8	5,439.6	16.3	14.4	179.65	310.4	297.5	229.8	201.0	28.74	7.995	
5,511.8	5,451.4	5,494.6	5,451.4	16.3	14.4	179.65	310.4	297.5	229.8	201.0	28.78	7.983	
5,600.0	5,539.6	5,582.8	5,539.6	16.4	14.5	179.65	310.4	297.5	229.8	200.7	29.10	7.896	
5,610.2	5,549.9	5,593.0	5,549.9	16.4	14.6	179.65	310.4	297.5	229.8	200.6	29.14	7.886	
5,700.0	5,639.6	5,682.8	5,639.6	16.6	14.7	179.65	310.4	297.5	229.8	200.3	29.46	7.799	
5,708.6	5,648.3	5,691.4	5,648.3	16.6	14.7	179.65	310.4	297.5	229.8	200.3	29.49	7.791	
5,800.0	5,739.6	5,782.8	5,739.6	16.7	14.9	179.65	310.4	297.5	229.8	200.0	29.83	7.704	
5,807.1	5,746.7	5,789.8	5,746.7	16.8	14.9	179.65	310.4	297.5	229.8	199.9	29.85	7.697	
5,900.0	5,839.6	5,882.8	5,839.6	16.9	15.1	179.65	310.4	297.5	229.8	199.6	30.19	7.610	
5,905.5	5,845.1	5,888.3	5,845.1	16.9	15.1	179.65	310.4	297.5	229.8	199.6	30.21	7.605	
6,000.0	5,939.6	5,982.8	5,939.6	17.1	15.3	179.67	310.4	297.4	229.8	199.2	30.56	7.518	
6,003.9	5,943.6	5,986.7	5,943.6	17.1	15.3	179.68	310.4	297.4	229.8	199.2	30.58	7.514	
6,034.2	5,973.9	6,017.0	5,973.9	17.1	15.3	180.00	310.4	296.1	229.8	199.1	30.71	7.482	
6,059.2	5,998.8	6,041.8	5,998.8	17.2	15.4	-179.50	310.4	294.1	229.8	198.9	30.84	7.451	
6,100.0	6,039.6	6,082.3	6,038.7	17.2	15.4	-88.52	310.4	289.0	229.9	201.0	28.86	7.964	
6,102.3	6,042.0	6,084.6	6,041.0	17.2	15.4	-88.46	310.4	288.7	229.9	201.0	28.86	7.964	
6,150.0	6,089.4	6,131.5	6,087.0	17.3	15.4	-87.32	310.4	279.8	230.0	201.2	28.86	7.971	
6,200.0	6,138.7	6,180.3	6,134.3	17.3	15.5	-86.15	310.4	267.4	230.3	201.5	28.83	7.988	
6,200.8	6,139.5	6,181.1	6,135.0	17.3	15.5	-86.13	310.4	267.2	230.3	201.5	28.83	7.988	
6,250.0	6,187.4	6,228.9	6,180.3	17.3	15.5	-85.00	310.4	251.9	230.7	201.9	28.79	8.011	
6,299.2	6,234.4	6,276.4	6,224.2	17.4	15.5	-83.89	310.4	233.8	231.1	202.3	28.75	8.037	
6,300.0	6,235.1	6,277.2	6,224.9	17.4	15.5	-83.88	310.4	233.4	231.1	202.4	28.75	8.038	
6,350.0	6,281.7	6,325.2	6,267.9	17.4	15.5	-82.79	310.4	212.2	231.6	202.9	28.72	8.066	
6,397.6	6,324.8	6,370.6	6,307.2	17.3	15.4	-81.80	310.4	189.4	232.2	203.5	28.70	8.089	
6,400.0	6,326.9	6,372.9	6,309.2	17.3	15.4	-81.75	310.4	188.2	232.2	203.5	28.70	8.090	
6,450.0	6,370.5	6,420.4	6,348.5	17.3	15.4	-80.75	310.4	161.6	232.8	204.1	28.72	8.106	
6,496.0	6,409.1	6,463.9	6,383.0	17.3	15.4	-79.87	310.4	135.1	233.4	204.7	28.78	8.111	
6,500.0	6,412.3	6,467.6	6,385.9	17.3	15.4	-79.80	310.4	132.7	233.5	204.7	28.79	8.111	
6,550.0	6,452.1	6,514.6	6,421.0	17.3	15.4	-78.90	310.4	101.5	234.2	205.3	28.92	8.099	
6,594.5	6,485.6	6,556.3	6,450.4	17.3	15.4	-78.15	310.4	72.1	234.8	205.7	29.10	8.070	
6,600.0	6,489.7	6,561.4	6,454.0	17.3	15.4	-78.06	310.4	68.3	234.9	205.8	29.12	8.065	
6,650.0	6,524.9	6,608.1	6,484.5	17.2	15.5	-77.28	310.4	33.1	235.6	206.2	29.43	8.006	
6,692.9	6,553.0	6,647.9	6,508.8	17.2	15.5	-76.65	310.4	1.5	236.2	206.4	29.78	7.932	
6,700.0	6,557.5	6,654.5	6,512.6	17.2	15.5	-76.56	310.4	-3.9	236.3	206.4	29.84	7.918	
6,750.0	6,587.4	6,700.0	6,537.8	17.2	15.7	-75.91	310.4	-41.8	236.9	206.6	30.37	7.802	
6,791.3	6,609.9	6,738.9	6,557.4	17.2	16.1	-75.40	310.4	-75.4	237.5	206.5	30.94	7.675	
6,800.0	6,614.4	6,746.9	6,561.2	17.2	16.1	-75.31	310.4	-82.4	237.6	206.5	31.05	7.651	
6,850.0	6,638.4	6,792.9	6,581.4	17.2	16.6	-74.78	310.4	-123.7	238.1	206.3	31.86	7.474	
6,889.7	6,655.3	6,829.4	6,595.6	17.4	17.1	-74.41	310.4	-157.3	238.6	205.9	32.63	7.312	
6,900.0	6,659.4	6,838.8	6,599.0	17.5	17.2	-74.32	310.4	-166.1	238.7	205.8	32.83	7.270	
6,950.0	6,677.1	6,884.6	6,613.8	18.0	17.8	-73.94	310.4	-209.4	239.1	205.2	33.93	7.048	
6,988.2	6,688.4	6,919.5	6,623.1	18.5	18.4	-73.69	310.4	-243.0	239.4	204.6	34.87	6.867	
7,000.0	6,691.5	6,930.3	6,625.7	18.7	18.5	-73.62	310.4	-253.5	239.5	204.3	35.16	6.811	
7,050.0	6,702.5	6,975.9	6,634.8	19.5	19.3	-73.37	310.4	-298.3	239.8	203.3	36.53	6.565	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,708.4	7,009.3	6,639.6	20.1	19.9	-73.23	310.4	-331.3	240.0	202.4	37.60	6.382	
7,100.0	6,710.1	7,021.5	6,641.0	20.4	20.1	-73.19	310.4	-343.4	240.0	202.0	38.00	6.316	
7,150.0	6,714.2	7,067.1	6,644.4	21.3	20.9	-73.09	310.4	-388.9	240.2	200.6	39.58	6.068	
7,185.0	6,715.0	7,099.1	6,645.0	21.9	21.6	-73.06	310.4	-420.9	240.2	199.5	40.74	5.896	
7,185.6	6,715.0	7,099.7	6,645.0	21.9	21.6	-73.06	310.4	-421.4	240.2	199.4	40.76	5.893	
7,200.0	6,715.0	7,114.1	6,645.0	22.2	21.9	-73.06	310.4	-435.9	240.2	198.9	41.31	5.815	
7,283.4	6,714.8	7,197.5	6,644.9	23.9	23.6	-73.07	310.4	-519.3	240.2	195.6	44.54	5.392	
7,300.0	6,714.8	7,214.1	6,644.9	24.2	23.9	-73.07	310.4	-535.9	240.2	195.0	45.21	5.313	
7,381.9	6,714.6	7,296.0	6,644.8	26.0	25.7	-73.09	310.4	-617.7	240.2	191.6	48.61	4.941	
7,400.0	6,714.6	7,314.1	6,644.7	26.4	26.1	-73.09	310.4	-635.9	240.2	190.8	49.38	4.864	
7,480.3	6,714.4	7,394.4	6,644.6	28.2	28.0	-73.10	310.4	-716.2	240.1	187.2	52.90	4.540	
7,500.0	6,714.4	7,414.1	6,644.6	28.7	28.4	-73.11	310.4	-735.9	240.1	186.4	53.77	4.466	
7,578.7	6,714.2	7,492.8	6,644.5	30.5	30.3	-73.12	310.4	-814.6	240.1	182.8	57.36	4.186	
7,600.0	6,714.2	7,514.1	6,644.5	31.0	30.8	-73.12	310.4	-835.9	240.1	181.8	58.34	4.116	
7,677.1	6,714.0	7,591.2	6,644.4	32.9	32.7	-73.13	310.4	-913.0	240.1	178.2	61.95	3.876	
7,700.0	6,714.0	7,614.1	6,644.4	33.4	33.3	-73.14	310.4	-935.9	240.1	177.1	63.03	3.809	
7,775.6	6,713.9	7,689.7	6,644.3	35.3	35.2	-73.15	310.4	-1,011.4	240.1	173.4	66.66	3.602	
7,800.0	6,713.8	7,714.1	6,644.2	35.9	35.8	-73.15	310.4	-1,035.9	240.1	172.2	67.83	3.539	
7,874.0	6,713.7	7,788.1	6,644.1	37.8	37.7	-73.17	310.4	-1,109.9	240.1	168.6	71.45	3.360	
7,900.0	6,713.6	7,814.1	6,644.1	38.4	38.3	-73.17	310.4	-1,135.9	240.1	167.3	72.72	3.301	
7,972.4	6,713.5	7,886.5	6,644.0	40.3	40.2	-73.18	310.4	-1,208.3	240.0	163.7	76.30	3.146	
8,000.0	6,713.4	7,914.1	6,644.0	41.0	40.9	-73.19	310.4	-1,235.9	240.0	162.4	77.67	3.090	
8,070.8	6,713.3	7,984.9	6,643.9	42.8	42.8	-73.20	310.4	-1,306.7	240.0	158.8	81.22	2.955	
8,100.0	6,713.2	8,014.1	6,643.8	43.6	43.5	-73.20	310.4	-1,335.9	240.0	157.3	82.69	2.903	
8,169.3	6,713.1	8,083.4	6,643.8	45.4	45.3	-73.21	310.4	-1,405.1	240.0	153.8	86.19	2.785	
8,200.0	6,713.0	8,114.1	6,643.7	46.2	46.1	-73.22	310.4	-1,435.9	240.0	152.3	87.74	2.735	
8,267.7	6,712.9	8,181.8	6,643.6	48.0	47.9	-73.23	310.4	-1,503.6	240.0	148.8	91.19	2.632	
8,300.0	6,712.8	8,214.1	6,643.6	48.8	48.8	-73.23	310.4	-1,535.9	240.0	147.1	92.84	2.585	
8,366.1	6,712.7	8,280.2	6,643.5	50.6	50.6	-73.24	310.4	-1,602.0	240.0	143.7	96.23	2.494	
8,400.0	6,712.6	8,314.1	6,643.5	51.5	51.5	-73.25	310.4	-1,635.9	240.0	142.0	97.97	2.449	
8,464.5	6,712.5	8,378.6	6,643.4	53.2	53.2	-73.26	310.4	-1,700.4	239.9	138.6	101.30	2.369	
8,500.0	6,712.4	8,414.1	6,643.3	54.1	54.2	-73.26	310.4	-1,735.9	239.9	136.8	103.13	2.327	
8,563.0	6,712.3	8,477.1	6,643.3	55.8	55.8	-73.27	310.4	-1,798.8	239.9	133.5	106.40	2.255	
8,600.0	6,712.3	8,514.1	6,643.2	56.8	56.8	-73.28	310.4	-1,835.9	239.9	131.6	108.32	2.215	
8,661.4	6,712.1	8,575.5	6,643.1	58.5	58.5	-73.29	310.4	-1,897.3	239.9	128.4	111.51	2.151	
8,700.0	6,712.1	8,614.1	6,643.1	59.5	59.6	-73.29	310.4	-1,935.9	239.9	126.4	113.52	2.113	
8,759.8	6,711.9	8,673.9	6,643.0	61.1	61.2	-73.30	310.4	-1,995.7	239.9	123.2	116.65	2.057	
8,800.0	6,711.9	8,714.1	6,643.0	62.2	62.3	-73.31	310.4	-2,035.9	239.9	121.1	118.75	2.020	
8,858.2	6,711.8	8,772.3	6,642.9	63.8	63.9	-73.32	310.4	-2,094.1	239.9	118.1	121.80	1.969	
8,900.0	6,711.7	8,814.1	6,642.8	64.9	65.0	-73.33	310.4	-2,135.9	239.9	115.9	123.99	1.935	
8,956.7	6,711.6	8,870.8	6,642.8	66.5	66.5	-73.33	310.4	-2,192.5	239.9	112.9	126.97	1.889	
9,000.0	6,711.5	8,914.1	6,642.7	67.6	67.7	-73.34	310.4	-2,235.9	239.8	110.6	129.25	1.856	
9,055.1	6,711.4	8,969.2	6,642.6	69.1	69.2	-73.35	310.4	-2,291.0	239.8	107.7	132.15	1.815	
9,100.0	6,711.3	9,014.1	6,642.6	70.4	70.5	-73.36	310.4	-2,335.9	239.8	105.3	134.51	1.783	
9,153.5	6,711.2	9,067.6	6,642.5	71.8	71.9	-73.36	310.4	-2,389.4	239.8	102.5	137.34	1.746	
9,200.0	6,711.1	9,114.1	6,642.5	73.1	73.2	-73.37	310.4	-2,435.9	239.8	100.0	139.79	1.715	
9,251.9	6,711.0	9,166.0	6,642.4	74.5	74.6	-73.38	310.4	-2,487.8	239.8	97.3	142.54	1.682	
9,300.0	6,710.9	9,214.1	6,642.3	75.8	75.9	-73.39	310.4	-2,535.9	239.8	94.7	145.09	1.653	
9,350.4	6,710.8	9,264.5	6,642.3	77.2	77.3	-73.39	310.4	-2,586.2	239.8	92.0	147.75	1.623	
9,400.0	6,710.7	9,314.1	6,642.2	78.6	78.7	-73.40	310.4	-2,635.9	239.8	89.4	150.38	1.594	
9,448.8	6,710.6	9,362.9	6,642.2	79.9	80.0	-73.41	310.4	-2,684.7	239.8	86.8	152.98	1.567	
9,500.0	6,710.5	9,414.1	6,642.1	81.3	81.5	-73.42	310.4	-2,735.9	239.8	84.1	155.69	1.540	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	9,461.3	6,642.0	82.6	82.8	-73.42	310.4	-2,783.1	239.7	81.5	158.20	1.515	
9,600.0	6,710.3	9,514.1	6,642.0	84.1	84.2	-73.43	310.4	-2,835.9	239.7	78.7	161.01	1.489	Level 3
9,645.6	6,710.2	9,559.7	6,641.9	85.3	85.5	-73.44	310.4	-2,881.5	239.7	76.3	163.44	1.467	Level 3
9,700.0	6,710.1	9,614.1	6,641.8	86.8	87.0	-73.45	310.4	-2,935.9	239.7	73.4	166.33	1.441	Level 3
9,744.1	6,710.0	9,658.2	6,641.8	88.1	88.2	-73.45	310.4	-2,979.9	239.7	71.0	168.68	1.421	Level 3
9,800.0	6,709.9	9,714.1	6,641.7	89.6	89.7	-73.46	310.4	-3,035.8	239.7	68.0	171.66	1.396	Level 3
9,842.5	6,709.9	9,756.6	6,641.7	90.8	90.9	-73.47	310.4	-3,078.3	239.7	65.8	173.93	1.378	Level 3
9,900.0	6,709.7	9,814.1	6,641.6	92.4	92.5	-73.48	310.4	-3,135.8	239.7	62.7	177.00	1.354	Level 3
9,940.9	6,709.7	9,855.0	6,641.5	93.5	93.6	-73.48	310.4	-3,176.8	239.7	60.5	179.18	1.338	Level 3
10,000.0	6,709.6	9,914.1	6,641.5	95.1	95.3	-73.49	310.4	-3,235.8	239.7	57.3	182.34	1.314	Level 3
10,039.3	6,709.5	9,953.4	6,641.4	96.2	96.4	-73.50	310.4	-3,275.2	239.7	55.2	184.44	1.299	Level 3
10,100.0	6,709.4	10,014.1	6,641.3	97.9	98.1	-73.51	310.4	-3,335.8	239.6	52.0	187.68	1.277	Level 3
10,137.8	6,709.3	10,051.9	6,641.3	98.9	99.1	-73.51	310.4	-3,373.6	239.6	49.9	189.70	1.263	Level 3
10,200.0	6,709.2	10,114.1	6,641.2	100.7	100.8	-73.52	310.4	-3,435.8	239.6	46.6	193.03	1.241	Level 2
10,236.2	6,709.1	10,150.3	6,641.2	101.7	101.8	-73.53	310.4	-3,472.0	239.6	44.6	194.97	1.229	Level 2
10,300.0	6,709.0	10,214.1	6,641.1	103.4	103.6	-73.54	310.4	-3,535.8	239.6	41.2	198.39	1.208	Level 2
10,334.6	6,708.9	10,248.7	6,641.0	104.4	104.6	-73.54	310.4	-3,570.5	239.6	39.4	200.24	1.197	Level 2
10,400.0	6,708.8	10,314.1	6,641.0	106.2	106.4	-73.55	310.4	-3,635.8	239.6	35.8	203.75	1.176	Level 2
10,433.0	6,708.7	10,347.1	6,640.9	107.1	107.3	-73.56	310.4	-3,668.9	239.6	34.1	205.52	1.166	Level 2
10,500.0	6,708.6	10,414.1	6,640.8	109.0	109.2	-73.57	310.4	-3,735.8	239.6	30.5	209.11	1.146	Level 2
10,531.5	6,708.5	10,445.6	6,640.8	109.9	110.0	-73.57	310.4	-3,767.3	239.6	28.8	210.80	1.136	Level 2
10,600.0	6,708.4	10,514.1	6,640.7	111.8	112.0	-73.58	310.4	-3,835.8	239.5	25.1	214.48	1.117	Level 2
10,629.9	6,708.4	10,544.0	6,640.7	112.6	112.8	-73.59	310.4	-3,865.7	239.5	23.5	216.08	1.109	Level 2
10,700.0	6,708.2	10,614.1	6,640.6	114.6	114.7	-73.60	310.4	-3,935.8	239.5	19.7	219.85	1.090	Level 2
10,728.3	6,708.2	10,642.4	6,640.5	115.3	115.5	-73.60	310.4	-3,964.2	239.5	18.2	221.37	1.082	Level 2
10,800.0	6,708.0	10,714.1	6,640.5	117.3	117.5	-73.61	310.4	-4,035.8	239.5	14.3	225.22	1.063	Level 2
10,826.7	6,708.0	10,740.8	6,640.4	118.1	118.3	-73.62	310.4	-4,062.6	239.5	12.8	226.66	1.057	Level 2
10,900.0	6,707.8	10,814.1	6,640.3	120.1	120.3	-73.63	310.4	-4,135.8	239.5	8.9	230.60	1.039	Level 2
10,925.2	6,707.8	10,839.3	6,640.3	120.8	121.0	-73.63	310.4	-4,161.0	239.5	7.5	231.95	1.033	Level 2
11,000.0	6,707.6	10,914.1	6,640.2	122.9	123.1	-73.64	310.4	-4,235.8	239.5	3.5	235.98	1.015	Level 2
11,023.6	6,707.6	10,937.7	6,640.2	123.6	123.8	-73.65	310.4	-4,259.4	239.5	2.2	237.25	1.009	Level 2
11,100.0	6,707.5	11,014.1	6,640.1	125.7	125.9	-73.66	310.4	-4,335.8	239.5	-1.9	241.36	0.992	Level 1
11,122.0	6,707.4	11,036.1	6,640.1	126.3	126.5	-73.66	310.4	-4,357.9	239.5	-3.1	242.54	0.987	Level 1
11,200.0	6,707.3	11,114.1	6,640.0	128.5	128.7	-73.67	310.4	-4,435.8	239.4	-7.3	246.74	0.970	Level 1
11,220.4	6,707.2	11,134.5	6,639.9	129.0	129.2	-73.68	310.4	-4,456.3	239.4	-8.4	247.84	0.966	Level 1
11,300.0	6,707.1	11,214.1	6,639.8	131.3	131.5	-73.69	310.4	-4,535.8	239.4	-12.7	252.13	0.950	Level 1
11,318.9	6,707.0	11,233.0	6,639.8	131.8	132.0	-73.69	310.4	-4,554.7	239.4	-13.7	253.15	0.946	Level 1
11,400.0	6,706.9	11,314.1	6,639.7	134.0	134.3	-73.70	310.4	-4,635.8	239.4	-18.1	257.52	0.930	Level 1
11,417.3	6,706.9	11,331.4	6,639.7	134.5	134.7	-73.70	310.4	-4,653.1	239.4	-19.0	258.45	0.926	Level 1
11,500.0	6,706.7	11,414.1	6,639.6	136.8	137.0	-73.72	310.4	-4,735.8	239.4	-23.5	262.91	0.911	Level 1
11,515.7	6,706.7	11,429.8	6,639.6	137.3	137.5	-73.72	310.4	-4,751.6	239.4	-24.4	263.76	0.908	Level 1
11,600.0	6,706.5	11,514.1	6,639.5	139.6	139.8	-73.73	310.4	-4,835.8	239.4	-28.9	268.30	0.892	Level 1
11,614.1	6,706.5	11,528.2	6,639.4	140.0	140.2	-73.73	310.4	-4,850.0	239.4	-29.7	269.07	0.890	Level 1
11,700.0	6,706.3	11,614.1	6,639.3	142.4	142.6	-73.75	310.4	-4,935.8	239.4	-34.3	273.70	0.875	Level 1
11,712.6	6,706.3	11,626.7	6,639.3	142.8	143.0	-73.75	310.4	-4,948.4	239.4	-35.0	274.38	0.872	Level 1
11,800.0	6,706.1	11,714.1	6,639.2	145.2	145.4	-73.76	310.4	-5,035.8	239.3	-39.8	279.10	0.858	Level 1
11,811.0	6,706.1	11,725.1	6,639.2	145.5	145.7	-73.76	310.4	-5,046.8	239.3	-40.4	279.69	0.856	Level 1
11,900.0	6,705.9	11,814.1	6,639.1	148.0	148.2	-73.78	310.4	-5,135.8	239.3	-45.2	284.50	0.841	Level 1
11,909.4	6,705.9	11,823.5	6,639.1	148.3	148.5	-73.78	310.4	-5,145.3	239.3	-45.7	285.00	0.840	Level 1
12,000.0	6,705.8	11,914.1	6,639.0	150.8	151.0	-73.79	310.4	-5,235.8	239.3	-50.6	289.90	0.825	Level 1
12,007.8	6,705.7	11,921.9	6,638.9	151.0	151.2	-73.79	310.4	-5,243.7	239.3	-51.0	290.32	0.824	Level 1
12,100.0	6,705.6	12,014.1	6,638.8	153.6	153.8	-73.80	310.4	-5,335.8	239.3	-56.0	295.30	0.810	Level 1

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,106.3	6,705.6	12,020.4	6,638.8	153.8	154.0	-73.81	310.4	-5,342.1	239.3	-56.4	295.64	0.809	Level 1	
12,200.0	6,705.4	12,114.1	6,638.7	156.4	156.6	-73.82	310.4	-5,435.8	239.3	-61.4	300.70	0.796	Level 1	
12,204.7	6,705.4	12,118.8	6,638.7	156.5	156.7	-73.82	310.4	-5,440.5	239.3	-61.7	300.96	0.795	Level 1	
12,300.0	6,705.2	12,214.1	6,638.6	159.2	159.4	-73.83	310.4	-5,535.8	239.3	-66.9	306.11	0.782	Level 1	
12,303.1	6,705.2	12,217.2	6,638.6	159.3	159.5	-73.83	310.4	-5,539.0	239.2	-67.0	306.28	0.781	Level 1	
12,400.0	6,705.0	12,314.1	6,638.4	162.0	162.2	-73.85	310.4	-5,635.8	239.2	-72.3	311.52	0.768	Level 1	
12,401.5	6,705.0	12,315.6	6,638.4	162.0	162.2	-73.85	310.4	-5,637.4	239.2	-72.4	311.60	0.768	Level 1	
12,500.0	6,704.8	12,414.1	6,638.3	164.8	165.0	-73.86	310.4	-5,735.8	239.2	-77.7	316.93	0.755	Level 1	
12,598.4	6,704.6	12,512.5	6,638.2	167.5	167.8	-73.88	310.4	-5,834.2	239.2	-83.1	322.25	0.742	Level 1	
12,600.0	6,704.6	12,514.1	6,638.2	167.6	167.8	-73.88	310.4	-5,835.8	239.2	-83.1	322.34	0.742	Level 1	
12,696.8	6,704.4	12,610.9	6,638.1	170.3	170.5	-73.89	310.4	-5,932.7	239.2	-88.4	327.58	0.730	Level 1	
12,700.0	6,704.4	12,614.1	6,638.1	170.4	170.6	-73.89	310.4	-5,935.8	239.2	-88.6	327.75	0.730	Level 1	
12,795.2	6,704.3	12,709.3	6,638.0	173.0	173.3	-73.90	310.4	-6,031.1	239.2	-93.7	332.91	0.718	Level 1	
12,800.0	6,704.2	12,714.1	6,637.9	173.2	173.4	-73.91	310.4	-6,035.8	239.2	-94.0	333.17	0.718	Level 1	
12,893.7	6,704.1	12,807.8	6,637.8	175.8	176.0	-73.92	310.4	-6,129.5	239.1	-99.1	338.24	0.707	Level 1	
12,900.0	6,704.1	12,814.1	6,637.8	176.0	176.2	-73.92	310.4	-6,135.8	239.1	-99.4	338.58	0.706	Level 1	
12,992.1	6,703.9	12,906.2	6,637.7	178.5	178.8	-73.93	310.4	-6,227.9	239.1	-104.4	343.57	0.696	Level 1	
13,000.0	6,703.9	12,914.1	6,637.7	178.8	179.0	-73.93	310.4	-6,235.8	239.1	-104.9	344.00	0.695	Level 1	
13,090.5	6,703.7	13,004.6	6,637.6	181.3	181.5	-73.95	310.4	-6,326.4	239.1	-109.8	348.90	0.685	Level 1	
13,100.0	6,703.7	13,014.1	6,637.6	181.6	181.8	-73.95	310.4	-6,335.8	239.1	-110.3	349.42	0.684	Level 1	
13,188.9	6,703.5	13,103.0	6,637.5	184.0	184.3	-73.96	310.4	-6,424.8	239.1	-115.1	354.24	0.675	Level 1	
13,200.0	6,703.5	13,114.1	6,637.4	184.4	184.6	-73.96	310.4	-6,435.8	239.1	-115.7	354.84	0.674	Level 1	
13,287.4	6,703.3	13,201.5	6,637.3	186.8	187.0	-73.97	310.4	-6,523.2	239.1	-120.5	359.57	0.665	Level 1	
13,300.0	6,703.3	13,214.1	6,637.3	187.2	187.4	-73.98	310.4	-6,535.8	239.1	-121.2	360.26	0.664	Level 1	
13,385.8	6,703.2	13,299.9	6,637.2	189.6	189.8	-73.99	310.4	-6,621.6	239.1	-125.8	364.91	0.655	Level 1	
13,400.0	6,703.1	13,314.1	6,637.2	190.0	190.2	-73.99	310.4	-6,635.8	239.1	-126.6	365.68	0.654	Level 1	
13,484.2	6,703.0	13,398.3	6,637.1	192.3	192.6	-74.00	310.4	-6,720.1	239.1	-131.2	370.25	0.646	Level 1	
13,500.0	6,702.9	13,414.1	6,637.1	192.8	193.0	-74.00	310.4	-6,735.8	239.0	-132.1	371.10	0.644	Level 1	
13,582.6	6,702.8	13,496.7	6,637.0	195.1	195.3	-74.02	310.4	-6,818.5	239.0	-136.5	375.58	0.636	Level 1	
13,600.0	6,702.8	13,514.1	6,636.9	195.6	195.8	-74.02	310.4	-6,835.8	239.0	-137.5	376.52	0.635	Level 1	
13,681.1	6,702.6	13,595.2	6,636.8	197.8	198.1	-74.03	310.4	-6,916.9	239.0	-141.9	380.92	0.627	Level 1	
13,700.0	6,702.6	13,614.1	6,636.8	198.4	198.6	-74.03	310.4	-6,935.8	239.0	-142.9	381.95	0.626	Level 1	
13,779.5	6,702.4	13,693.6	6,636.7	200.6	200.8	-74.04	310.4	-7,015.3	239.0	-147.3	386.26	0.619	Level 1	
13,800.0	6,702.4	13,714.1	6,636.7	201.2	201.4	-74.05	310.4	-7,035.8	239.0	-148.4	387.38	0.617	Level 1	
13,877.9	6,702.2	13,792.0	6,636.6	203.3	203.6	-74.06	310.4	-7,113.8	239.0	-152.6	391.61	0.610	Level 1	
13,900.0	6,702.2	13,814.1	6,636.6	204.0	204.2	-74.06	310.4	-7,135.8	239.0	-153.8	392.80	0.608	Level 1	
13,976.3	6,702.1	13,890.4	6,636.5	206.1	206.3	-74.07	310.4	-7,212.2	239.0	-158.0	396.95	0.602	Level 1	
14,000.0	6,702.0	13,914.1	6,636.4	206.8	207.0	-74.08	310.4	-7,235.8	239.0	-159.3	398.23	0.600	Level 1	
14,074.8	6,701.9	13,988.9	6,636.3	208.9	209.1	-74.09	310.4	-7,310.6	239.0	-163.3	402.29	0.594	Level 1	
14,100.0	6,701.8	14,014.1	6,636.3	209.6	209.8	-74.09	310.4	-7,335.8	239.0	-164.7	403.66	0.592	Level 1	
14,173.2	6,701.7	14,087.3	6,636.2	211.6	211.9	-74.10	310.4	-7,409.0	238.9	-168.7	407.64	0.586	Level 1	
14,200.0	6,701.6	14,114.1	6,636.2	212.4	212.6	-74.10	310.4	-7,435.8	238.9	-170.2	409.09	0.584	Level 1	
14,271.6	6,701.5	14,185.7	6,636.1	214.4	214.6	-74.11	310.4	-7,507.5	238.9	-174.1	412.98	0.579	Level 1	
14,300.0	6,701.4	14,214.1	6,636.1	215.2	215.4	-74.12	310.4	-7,535.8	238.9	-175.6	414.52	0.576	Level 1	
14,370.0	6,701.3	14,284.1	6,636.0	217.1	217.4	-74.13	310.4	-7,605.9	238.9	-179.4	418.33	0.571	Level 1	
14,400.0	6,701.3	14,314.1	6,635.9	218.0	218.2	-74.13	310.4	-7,635.8	238.9	-181.1	419.96	0.569	Level 1	
14,468.5	6,701.1	14,382.6	6,635.9	219.9	220.1	-74.14	310.4	-7,704.3	238.9	-184.8	423.68	0.564	Level 1	
14,500.0	6,701.1	14,414.1	6,635.8	220.8	221.0	-74.14	310.4	-7,735.8	238.9	-186.5	425.39	0.562	Level 1	
14,566.9	6,701.0	14,481.0	6,635.7	222.6	222.9	-74.15	310.4	-7,802.7	238.9	-190.1	429.02	0.557	Level 1	
14,600.0	6,700.9	14,514.1	6,635.7	223.6	223.8	-74.16	310.4	-7,835.8	238.9	-191.9	430.82	0.554	Level 1	
14,665.3	6,700.8	14,579.4	6,635.6	225.4	225.7	-74.17	310.4	-7,901.2	238.9	-195.5	434.37	0.550	Level 1	
14,700.0	6,700.7	14,614.1	6,635.6	226.4	226.6	-74.17	310.4	-7,935.8	238.9	-197.4	436.26	0.548	Level 1	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - WACKER 10F-234 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	14,677.8	6,635.5	228.2	228.4	-74.18	310.4	-7,999.6	238.8	-200.9	439.72	0.543	Level 1
14,800.0	6,700.5	14,714.1	6,635.4	229.2	229.4	-74.19	310.4	-8,035.8	238.8	-202.9	441.70	0.541	Level 1
14,862.2	6,700.4	14,776.3	6,635.4	230.9	231.2	-74.19	310.4	-8,098.0	238.8	-206.2	445.08	0.537	Level 1
14,900.0	6,700.3	14,814.1	6,635.3	232.0	232.2	-74.20	310.4	-8,135.8	238.8	-208.3	447.13	0.534	Level 1
14,960.6	6,700.2	14,874.7	6,635.2	233.7	233.9	-74.21	310.4	-8,196.4	238.8	-211.6	450.43	0.530	Level 1
14,986.4	6,700.2	14,900.4	6,635.2	234.4	234.7	-74.21	310.4	-8,222.2	238.8	-213.0	451.83	0.529	Level 1
15,000.0	6,700.2	14,914.0	6,635.2	234.8	235.0	-74.21	310.4	-8,235.8	238.8	-213.7	452.56	0.528	Level 1
15,059.0	6,700.0	14,973.1	6,635.0	236.4	236.7	-74.21	310.4	-8,294.8	238.8	-216.9	455.75	0.524	Level 1
15,068.6	6,700.0	14,982.6	6,635.0	236.7	237.0	-74.21	310.4	-8,304.4	238.8	-217.4	456.26	0.523	Level 1
15,082.8	6,700.0	14,995.1	6,635.0	237.1	237.3	-74.21	310.4	-8,316.9	238.8	-218.2	456.99	0.523	Level 1, ES, SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-178.93	-14.9	-0.3	14.9				
98.4	98.4	98.4	98.4	0.1	0.1	-178.93	-14.9	-0.3	14.9	14.7	0.19	77.714	
100.0	100.0	100.0	100.0	0.1	0.1	-178.93	-14.9	-0.3	14.9	14.7	0.20	76.398	
196.8	196.8	196.8	196.8	0.3	0.3	-178.93	-14.9	-0.3	14.9	14.3	0.63	23.679	
200.0	200.0	200.0	200.0	0.3	0.3	-178.93	-14.9	-0.3	14.9	14.3	0.65	23.159	
295.3	295.3	295.3	295.3	0.5	0.5	-178.93	-14.9	-0.3	14.9	13.9	1.07	13.918	
300.0	300.0	300.0	300.0	0.5	0.5	-178.93	-14.9	-0.3	14.9	13.8	1.09	13.648	
393.7	393.7	393.7	393.7	0.8	0.8	-178.93	-14.9	-0.3	14.9	13.4	1.52	9.856	
400.0	400.0	400.0	400.0	0.8	0.8	-178.93	-14.9	-0.3	14.9	13.4	1.54	9.675	
492.1	492.1	492.1	492.1	1.0	1.0	-178.93	-14.9	-0.3	14.9	13.0	1.96	7.629	
500.0	500.0	500.0	500.0	1.0	1.0	-178.93	-14.9	-0.3	14.9	12.9	1.99	7.493	
590.5	590.5	590.5	590.5	1.2	1.2	-178.93	-14.9	-0.3	14.9	12.5	2.40	6.223	
600.0	600.0	600.0	600.0	1.2	1.2	-178.93	-14.9	-0.3	14.9	12.5	2.44	6.115	
689.0	689.0	689.0	689.0	1.4	1.4	-178.93	-14.9	-0.3	14.9	12.1	2.84	5.254	
700.0	700.0	700.0	700.0	1.4	1.4	-178.93	-14.9	-0.3	14.9	12.0	2.89	5.164	
787.4	787.4	787.4	787.4	1.6	1.6	-178.93	-14.9	-0.3	14.9	11.7	3.29	4.547	
800.0	800.0	800.0	800.0	1.7	1.7	-178.93	-14.9	-0.3	14.9	11.6	3.34	4.470	
885.8	885.8	885.8	885.8	1.9	1.9	-178.93	-14.9	-0.3	14.9	11.2	3.73	4.007	
900.0	900.0	900.0	900.0	1.9	1.9	-178.93	-14.9	-0.3	14.9	11.1	3.79	3.940	
984.2	984.2	984.2	984.2	2.1	2.1	-178.93	-14.9	-0.3	14.9	10.8	4.17	3.582	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-178.93	-14.9	-0.3	14.9	10.7	4.24	3.522	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-178.93	-14.9	-0.3	14.9	10.3	4.61	3.239	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-178.93	-14.9	-0.3	14.9	10.2	4.69	3.185 CC	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	154.24	-14.9	-0.3	16.0	10.9	5.05	3.159	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	155.14	-14.9	-0.3	16.5	11.4	5.14	3.212	
1,279.5	1,279.4	1,279.5	1,279.5	2.7	2.7	162.85	-14.5	-1.3	19.8	14.3	5.48	3.613	
1,300.0	1,299.8	1,300.0	1,300.0	2.8	2.8	165.64	-14.2	-1.9	21.0	15.4	5.57	3.767	
1,377.9	1,377.5	1,377.6	1,377.5	3.0	3.0	176.93	-12.7	-5.3	27.1	21.2	5.91	4.597	
1,400.0	1,399.5	1,399.5	1,399.3	3.0	3.0	179.97	-12.1	-6.6	29.4	23.4	6.00	4.908	
1,476.4	1,475.3	1,474.8	1,474.4	3.2	3.2	-170.83	-9.5	-12.3	39.4	33.1	6.33	6.225	
1,500.0	1,498.7	1,498.0	1,497.5	3.3	3.2	-168.46	-8.5	-14.4	43.1	36.7	6.43	6.707	
1,574.8	1,572.6	1,570.9	1,569.9	3.5	3.4	-162.25	-5.0	-22.1	56.9	50.2	6.76	8.418	
1,600.0	1,597.5	1,595.3	1,594.1	3.5	3.5	-160.55	-3.6	-25.1	62.2	55.4	6.87	9.057	
1,673.2	1,669.4	1,665.5	1,663.5	3.7	3.6	-156.47	0.7	-34.6	79.6	72.4	7.21	11.034	
1,700.1	1,695.8	1,691.1	1,688.7	3.8	3.7	-155.24	2.5	-38.5	86.6	79.3	7.34	11.811	
1,771.6	1,765.7	1,758.6	1,755.0	4.1	3.9	-152.44	7.6	-49.7	106.4	98.7	7.71	13.806	
1,800.0	1,793.4	1,785.1	1,781.1	4.2	4.0	-151.41	9.8	-54.5	114.5	106.6	7.85	14.582	
1,870.1	1,862.0	1,850.3	1,844.7	4.4	4.2	-149.01	15.5	-67.1	135.3	127.0	8.24	16.423	
1,900.0	1,891.3	1,877.9	1,871.6	4.5	4.3	-148.05	18.2	-72.9	144.5	136.1	8.40	17.196	
1,968.5	1,958.3	1,940.6	1,932.3	4.8	4.6	-145.96	24.5	-86.9	166.3	157.5	8.80	18.899	
2,000.0	1,989.1	1,969.1	1,959.9	4.9	4.7	-145.05	27.6	-93.7	176.6	167.7	8.98	19.664	
2,066.9	2,054.5	2,029.3	2,017.7	5.1	4.9	-143.22	34.5	-108.7	199.4	190.0	9.39	21.243	
2,100.0	2,086.9	2,058.7	2,045.9	5.3	5.1	-142.37	38.0	-116.5	211.1	201.5	9.59	22.005	
2,165.3	2,150.8	2,119.1	2,103.5	5.5	5.4	-140.77	45.5	-132.9	234.5	224.5	10.01	23.421	
2,200.0	2,184.7	2,151.3	2,134.3	5.6	5.5	-140.04	49.5	-141.6	247.0	236.8	10.24	24.122	
2,263.8	2,247.1	2,210.5	2,190.8	5.9	5.8	-138.88	56.8	-157.6	270.1	259.4	10.65	25.346	
2,300.0	2,282.5	2,244.2	2,222.9	6.0	6.0	-138.30	61.0	-166.8	283.2	272.3	10.89	25.994	
2,362.2	2,343.3	2,302.0	2,278.1	6.3	6.3	-137.42	68.1	-182.4	305.8	294.5	11.31	27.040	
2,400.0	2,380.3	2,337.1	2,311.6	6.5	6.5	-136.95	72.4	-192.0	319.6	308.0	11.56	27.634	
2,460.6	2,439.6	2,393.4	2,365.4	6.7	6.8	-136.27	79.4	-207.2	341.7	329.7	11.98	28.532	
2,500.0	2,478.1	2,430.0	2,400.3	6.9	7.0	-135.87	83.9	-217.1	356.1	343.8	12.24	29.079	
2,559.0	2,535.9	2,484.9	2,452.7	7.1	7.3	-135.33	90.7	-232.0	377.6	365.0	12.65	29.851	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,522.9	2,489.0	7.3	7.5	-135.00	95.4	-242.3	392.6	379.7	12.93	30.357	
2,657.5	2,632.2	2,576.3	2,540.0	7.5	7.8	-134.56	102.0	-256.8	413.7	400.4	13.33	31.024	
2,700.0	2,673.8	2,615.8	2,577.7	7.7	8.1	-134.27	106.9	-267.5	429.3	415.6	13.63	31.491	
2,755.9	2,728.4	2,667.8	2,627.3	7.9	8.4	-133.91	113.3	-281.6	449.8	435.8	14.03	32.070	
2,800.0	2,771.6	2,708.7	2,666.4	8.1	8.6	-133.66	118.4	-292.7	466.0	451.6	14.34	32.504	
2,854.3	2,824.7	2,759.2	2,714.6	8.3	8.9	-133.36	124.6	-306.4	485.9	471.2	14.72	33.007	
2,900.0	2,869.4	2,801.7	2,755.1	8.5	9.2	-133.13	129.9	-317.9	502.7	487.7	15.05	33.410	
2,952.7	2,921.0	2,850.7	2,801.9	8.8	9.4	-132.89	135.9	-331.2	522.1	506.7	15.42	33.850	
3,000.0	2,967.2	2,894.6	2,843.8	9.0	9.7	-132.68	141.3	-343.1	539.5	523.7	15.76	34.226	
3,051.2	3,017.3	2,942.1	2,889.2	9.2	10.0	-132.47	147.2	-356.0	558.3	542.2	16.13	34.611	
3,100.0	3,065.0	2,987.5	2,932.5	9.4	10.3	-132.29	152.8	-368.3	576.3	559.8	16.48	34.963	
3,149.6	3,113.5	3,033.6	2,976.5	9.6	10.5	-132.11	158.5	-380.8	594.5	577.7	16.84	35.301	
3,200.0	3,162.8	3,080.4	3,021.2	9.8	10.8	-131.94	164.3	-393.5	613.1	595.9	17.21	35.631	
3,248.0	3,209.8	3,125.0	3,063.8	10.0	11.1	-131.79	169.8	-405.6	630.8	613.2	17.56	35.929	
3,300.0	3,260.6	3,173.3	3,109.9	10.2	11.4	-131.63	175.8	-418.7	649.9	632.0	17.93	36.239	
3,346.4	3,306.1	3,216.5	3,151.1	10.5	11.6	-131.50	181.1	-430.4	667.0	648.8	18.27	36.503	
3,400.0	3,358.5	3,266.2	3,198.6	10.7	11.9	-131.36	187.3	-443.8	686.8	668.1	18.67	36.794	
3,444.9	3,402.3	3,307.9	3,238.4	10.9	12.2	-131.24	192.4	-455.1	703.3	684.3	18.99	37.028	
3,500.0	3,456.3	3,359.2	3,287.3	11.1	12.5	-131.11	198.7	-469.0	723.6	704.2	19.40	37.303	
3,543.3	3,498.6	3,399.4	3,325.7	11.3	12.8	-131.01	203.7	-479.9	739.6	719.9	19.72	37.511	
3,600.0	3,554.1	3,452.1	3,376.0	11.5	13.1	-130.89	210.2	-494.2	760.5	740.4	20.13	37.771	
3,641.7	3,594.9	3,490.8	3,413.0	11.7	13.3	-130.80	215.0	-504.7	775.9	755.5	20.44	37.955	
3,700.0	3,651.9	3,545.0	3,464.7	12.0	13.7	-130.68	221.7	-519.4	797.4	776.5	20.87	38.202	
3,740.1	3,691.2	3,582.3	3,500.3	12.2	13.9	-130.61	226.3	-529.5	812.2	791.0	21.17	38.366	
3,800.0	3,749.7	3,637.9	3,553.4	12.4	14.2	-130.50	233.2	-544.6	834.3	812.7	21.61	38.600	
3,838.6	3,787.4	3,673.7	3,587.6	12.6	14.4	-130.43	237.6	-554.3	848.5	826.6	21.90	38.746	
3,900.0	3,847.5	3,730.8	3,642.1	12.9	14.8	-130.33	244.7	-569.8	871.2	848.8	22.36	38.970	
3,937.0	3,883.7	3,765.2	3,674.9	13.0	15.0	-130.27	248.9	-579.1	884.8	862.2	22.63	39.099	
4,000.0	3,945.3	3,823.7	3,730.8	13.3	15.4	-130.18	256.2	-595.0	908.1	885.0	23.10	39.313	
4,035.4	3,980.0	3,856.7	3,762.2	13.5	15.6	-130.12	260.2	-603.9	921.1	897.8	23.36	39.428	
4,060.0	4,004.0	3,879.5	3,784.0	13.6	15.7	-130.09	263.1	-610.1	930.2	906.7	23.55	39.507	
4,100.0	4,043.2	3,916.7	3,819.5	13.7	15.9	-130.26	267.7	-620.2	944.8	920.9	23.87	39.582	
4,133.8	4,076.5	3,948.3	3,849.7	13.8	16.1	-130.38	271.6	-628.7	956.9	932.8	24.12	39.664	
4,200.0	4,141.6	4,010.3	3,908.9	14.0	16.5	-130.55	279.2	-645.5	979.8	955.2	24.62	39.797	
4,232.3	4,173.5	4,040.6	3,937.8	14.1	16.7	-130.60	283.0	-653.8	990.7	965.8	24.85	39.862	
4,300.0	4,240.6	4,104.4	3,998.7	14.3	17.1	-130.65	290.8	-671.1	1,012.8	987.4	25.34	39.974	
4,330.7	4,271.1	4,133.4	4,026.4	14.4	17.3	-130.65	294.4	-678.9	1,022.4	996.9	25.54	40.027	
4,400.0	4,340.0	4,199.1	4,089.1	14.5	17.7	-130.60	302.5	-696.7	1,043.6	1,017.6	26.01	40.126	
4,429.1	4,369.0	4,226.7	4,115.5	14.6	17.9	-130.55	306.0	-704.2	1,052.2	1,026.0	26.19	40.171	
4,500.0	4,439.7	4,294.1	4,179.8	14.8	18.3	-130.39	314.3	-722.5	1,072.4	1,045.7	26.63	40.263	
4,527.5	4,467.2	4,320.4	4,204.9	14.8	18.5	-130.31	317.5	-729.6	1,079.9	1,053.1	26.80	40.303	
4,600.0	4,539.7	4,389.4	4,270.8	14.9	18.9	-130.05	326.1	-748.3	1,099.1	1,071.9	27.21	40.393	
4,626.0	4,565.6	4,414.2	4,294.5	15.0	19.0	-129.94	329.1	-755.0	1,105.7	1,078.4	27.35	40.429	
4,660.2	4,599.8	4,446.8	4,325.6	15.0	19.2	-101.05	333.2	-763.9	1,114.3	1,084.5	29.80	37.398	
4,700.0	4,639.6	4,484.9	4,361.9	15.0	19.5	-100.71	337.9	-774.2	1,124.1	1,094.0	30.08	37.373	
4,724.4	4,664.0	4,508.2	4,384.1	15.1	19.6	-100.50	340.7	-780.5	1,130.1	1,099.9	30.26	37.352	
4,800.0	4,739.6	4,580.3	4,453.0	15.2	20.1	-99.86	349.7	-800.1	1,148.9	1,118.1	30.81	37.291	
4,822.8	4,762.5	4,602.1	4,473.8	15.2	20.2	-99.67	352.4	-806.0	1,154.6	1,123.6	30.98	37.272	
4,900.0	4,839.6	4,675.8	4,544.2	15.3	20.7	-99.05	361.5	-825.9	1,174.0	1,142.4	31.55	37.211	
4,921.2	4,860.9	4,696.1	4,563.5	15.4	20.8	-98.88	364.0	-831.4	1,179.3	1,147.6	31.71	37.194	
5,000.0	4,939.6	4,771.2	4,635.3	15.5	21.3	-98.27	373.3	-851.8	1,199.3	1,167.0	32.30	37.134	
5,019.7	4,959.3	4,790.0	4,653.2	15.5	21.4	-98.13	375.6	-856.9	1,204.3	1,171.8	32.44	37.119	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	4,866.7	4,726.4	15.6	21.9	-97.53	385.0	-877.7	1,224.7	1,191.7	33.05	37.059	
5,118.1	5,057.7	4,884.0	4,742.9	15.7	22.0	-97.40	387.2	-882.4	1,229.4	1,196.2	33.19	37.045	
5,200.0	5,139.6	4,962.2	4,817.5	15.8	22.5	-96.81	396.8	-903.6	1,250.4	1,216.6	33.81	36.986	
5,216.5	5,156.2	4,977.9	4,832.6	15.8	22.6	-96.70	398.8	-907.8	1,254.7	1,220.7	33.93	36.975	
5,300.0	5,239.6	5,057.6	4,908.6	15.9	23.1	-96.13	408.6	-929.5	1,276.3	1,241.7	34.57	36.917	
5,314.9	5,254.6	5,071.9	4,922.3	16.0	23.2	-96.03	410.4	-933.3	1,280.1	1,245.5	34.69	36.907	
5,400.0	5,339.6	5,153.1	4,999.8	16.1	23.7	-95.47	420.4	-955.3	1,302.3	1,266.9	35.34	36.850	
5,413.4	5,353.0	5,165.9	5,012.0	16.1	23.8	-95.38	422.0	-958.8	1,305.8	1,270.3	35.44	36.841	
5,500.0	5,439.6	5,017.5	4,913.1	16.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
5,511.8	5,451.4	5,017.3	4,913.1	16.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
5,600.0	5,539.6	5,015.8	4,913.1	16.4	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
5,610.2	5,549.9	5,015.6	4,913.1	16.4	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
5,700.0	5,639.6	5,014.1	4,913.1	16.6	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
5,708.6	5,648.3	5,013.9	4,913.1	16.6	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
5,800.0	5,739.6	5,012.3	4,913.2	16.7	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
5,807.1	5,746.7	5,012.2	4,913.2	16.8	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
5,900.0	5,839.6	5,010.6	4,913.2	16.9	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
5,905.5	5,845.1	5,010.5	4,913.2	16.9	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,000.0	5,939.6	5,008.9	4,913.2	17.1	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,003.9	5,943.6	5,008.9	4,913.2	17.1	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,059.2	5,998.8	5,007.9	4,913.2	17.2	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,100.0	6,039.6	5,006.1	4,913.3	17.2	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,102.3	6,042.0	5,005.9	4,913.3	17.2	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,150.0	6,089.4	5,000.6	4,913.4	17.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,200.0	6,138.7	5,001.7	4,913.5	17.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,200.8	6,139.5	5,001.6	4,913.5	17.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,250.0	6,187.4	5,001.4	4,913.7	17.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,299.2	6,234.4	5,001.4	4,914.0	17.4	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,300.0	6,235.1	5,001.4	4,914.0	17.4	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,350.0	6,281.7	5,001.4	4,914.3	17.4	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,397.6	6,324.8	5,001.4	4,914.7	17.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,400.0	6,326.9	5,001.4	4,914.7	17.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,450.0	6,370.5	5,001.4	4,915.1	17.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,496.0	6,409.1	5,001.4	4,915.6	17.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,500.0	6,412.3	5,001.4	4,915.6	17.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,550.0	6,452.1	5,001.4	4,916.1	17.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,594.5	6,485.6	5,001.4	4,916.6	17.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,600.0	6,489.7	5,001.4	4,916.7	17.3	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,650.0	6,524.9	5,001.4	4,917.3	17.2	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,692.9	6,553.0	5,001.4	4,917.9	17.2	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,700.0	6,557.5	5,001.4	4,918.0	17.2	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,750.0	6,587.4	5,001.4	4,918.7	17.2	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,791.3	6,609.9	5,001.4	4,919.3	17.2	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,800.0	6,614.4	5,001.4	4,919.4	17.2	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,850.0	6,638.4	5,001.4	4,920.2	17.2	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,889.7	6,655.3	5,001.4	4,920.8	17.4	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,900.0	6,659.4	5,001.4	4,920.9	17.5	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,950.0	6,677.1	5,001.4	4,921.7	18.0	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	
6,988.2	6,688.4	5,001.4	4,922.4	18.5	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	1.426 Level 3
7,000.0	6,691.5	5,001.4	4,922.6	18.7	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	1.366 Level 3
7,050.0	6,702.5	5,001.4	4,923.4	19.5	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	1.187 Level 2
7,086.6	6,708.4	5,001.4	4,924.0	20.1	23.9	-95.31	430.7	-968.1	1,324.6	1,287.1	36.19	36.782	1.117 Level 2

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	7,363.6	6,724.2	20.4	28.2	-105.89	490.7	-335.9	51.5	4.7	46.84	1.100	Level 2
7,150.0	6,714.2	7,313.7	6,725.1	21.3	27.6	-102.38	490.7	-385.8	50.7	3.1	47.66	1.064	Level 2
7,185.0	6,715.0	7,278.2	6,724.5	21.9	27.3	-100.91	490.7	-421.3	50.5	2.3	48.13	1.048	Level 2
7,185.6	6,715.0	7,277.6	6,724.5	21.9	27.3	-100.89	490.7	-421.9	50.4	2.3	48.14	1.048	Level 2
7,200.0	6,715.0	7,263.0	6,723.8	22.2	27.2	-100.10	490.7	-436.5	50.3	2.0	48.32	1.041	Level 2
7,278.1	6,714.8	7,184.9	6,714.8	23.8	26.7	-90.01	490.7	-514.1	49.5	0.3	49.27	1.005	Level 2, ES, SF
7,283.4	6,714.8	7,179.6	6,713.9	23.9	26.6	-88.98	490.7	-519.2	49.5	0.3	49.27	1.006	Level 2
7,300.0	6,714.8	7,163.4	6,710.9	24.2	26.5	-85.51	490.7	-535.2	49.7	0.5	49.16	1.011	Level 2
7,381.9	6,714.6	7,085.6	6,691.4	26.0	26.2	-64.84	490.7	-610.4	55.2	9.9	45.31	1.219	Level 2
7,400.0	6,714.6	7,069.1	6,686.1	26.4	26.1	-60.13	490.7	-626.2	57.9	14.2	43.70	1.326	Level 3
7,480.3	6,714.4	7,000.0	6,660.6	28.2	25.9	-42.58	490.7	-690.3	77.6	41.7	35.98	2.158	
7,500.0	6,714.4	6,982.4	6,653.1	28.7	25.9	-38.92	490.7	-706.2	84.2	50.2	34.08	2.472	
7,578.7	6,714.2	6,920.6	6,623.7	30.5	25.9	-28.66	490.7	-760.6	116.5	87.8	28.73	4.056	
7,600.0	6,714.2	6,904.9	6,615.5	31.0	25.8	-26.62	490.7	-774.0	126.6	99.0	27.69	4.574	
7,677.1	6,714.0	6,850.0	6,584.6	32.9	25.9	-20.91	490.7	-819.3	167.4	142.4	25.00	6.695	
7,700.0	6,714.0	6,836.5	6,576.4	33.4	25.9	-19.78	490.7	-830.0	180.5	156.0	24.56	7.352	
7,775.6	6,713.9	6,790.7	6,547.3	35.3	26.0	-16.54	490.7	-865.5	227.0	203.6	23.41	9.696	
7,800.0	6,713.8	6,776.9	6,538.1	35.9	26.0	-15.72	490.7	-875.7	242.9	219.7	23.18	10.479	
7,874.0	6,713.7	6,737.8	6,511.0	37.8	26.1	-13.71	490.7	-903.9	293.2	270.5	22.75	12.891	
7,900.0	6,713.6	6,725.0	6,501.8	38.4	26.1	-13.14	490.7	-912.7	311.6	289.0	22.67	13.748	
7,972.4	6,713.5	6,700.0	6,483.4	40.3	26.1	-12.12	490.7	-929.6	364.8	342.0	22.75	16.037	
8,000.0	6,713.4	6,680.0	6,468.3	41.0	26.2	-11.40	490.7	-942.7	385.4	362.8	22.61	17.046	
8,070.8	6,713.3	6,650.0	6,444.8	42.8	26.3	-10.43	490.7	-961.4	440.2	417.5	22.71	19.385	
8,100.0	6,713.2	6,650.0	6,444.8	43.6	26.3	-10.43	490.7	-961.4	463.4	440.5	22.93	20.207	
8,169.3	6,713.1	6,616.7	6,418.0	45.4	26.4	-9.50	490.7	-981.1	519.1	496.0	23.04	22.531	
8,200.0	6,713.0	6,600.0	6,404.1	46.2	26.4	-9.09	490.7	-990.5	544.4	521.3	23.08	23.582	
8,267.7	6,712.9	6,586.0	6,392.4	48.0	26.4	-8.76	490.7	-998.1	600.7	577.2	23.45	25.614	
8,300.0	6,712.8	6,576.8	6,384.5	48.8	26.5	-8.55	490.7	-1,003.0	627.9	604.3	23.60	26.606	
8,366.1	6,712.7	6,550.0	6,361.5	50.6	26.5	-8.00	490.7	-1,016.6	684.5	660.7	23.85	28.697	
8,400.0	6,712.6	6,550.0	6,361.5	51.5	26.5	-8.00	490.7	-1,016.6	713.7	689.6	24.11	29.608	
8,464.5	6,712.5	6,535.0	6,348.3	53.2	26.6	-7.72	490.7	-1,023.8	770.0	745.6	24.46	31.478	
8,500.0	6,712.4	6,527.0	6,341.3	54.1	26.6	-7.57	490.7	-1,027.6	801.2	776.6	24.66	32.490	
8,563.0	6,712.3	6,513.6	6,329.4	55.8	26.6	-7.34	490.7	-1,033.7	857.1	832.1	25.03	34.248	
8,600.0	6,712.3	6,500.0	6,317.1	56.8	26.7	-7.12	490.7	-1,039.7	890.3	865.1	25.20	35.326	
8,661.4	6,712.1	6,500.0	6,317.1	58.5	26.7	-7.12	490.7	-1,039.7	945.6	919.9	25.66	36.851	
8,700.0	6,712.1	6,500.0	6,317.1	59.5	26.7	-7.12	490.7	-1,039.7	980.7	954.7	25.95	37.797	
8,759.8	6,711.9	6,477.4	6,296.6	61.1	26.7	-6.77	490.7	-1,049.0	1,035.0	1,008.8	26.23	39.454	
8,800.0	6,711.9	6,470.9	6,290.7	62.2	26.7	-6.68	490.7	-1,051.6	1,071.8	1,045.3	26.49	40.464	
8,858.2	6,711.8	6,450.0	6,271.3	63.8	26.8	-6.39	490.7	-1,059.6	1,125.6	1,098.8	26.79	42.018	
8,900.0	6,711.7	6,450.0	6,271.3	64.9	26.8	-6.39	490.7	-1,059.6	1,164.0	1,136.9	27.10	42.959	
8,956.7	6,711.6	6,450.0	6,271.3	66.5	26.8	-6.39	490.7	-1,059.6	1,216.6	1,189.1	27.52	44.212	
9,000.0	6,711.5	6,450.0	6,271.3	67.6	26.8	-6.39	490.7	-1,059.6	1,257.0	1,229.2	27.84	45.152	
9,055.1	6,711.4	6,450.0	6,271.3	69.1	26.8	-6.39	490.7	-1,059.6	1,308.7	1,280.4	28.25	46.324	
9,100.0	6,711.3	6,429.8	6,252.4	70.4	26.8	-6.13	490.7	-1,066.7	1,350.5	1,322.1	28.46	47.458	
9,153.5	6,711.2	6,423.6	6,246.6	71.8	26.8	-6.05	490.7	-1,068.8	1,400.9	1,372.1	28.82	48.610	
9,200.0	6,711.1	6,418.5	6,241.7	73.1	26.9	-5.99	490.7	-1,070.5	1,444.7	1,415.6	29.13	49.589	
9,251.9	6,711.0	6,400.0	6,224.2	74.5	26.9	-5.78	490.7	-1,076.3	1,494.0	1,464.6	29.42	50.791	
9,300.0	6,710.9	6,400.0	6,224.2	75.8	26.9	-5.78	490.7	-1,076.3	1,539.5	1,509.7	29.77	51.710	
9,350.4	6,710.8	6,400.0	6,224.2	77.2	26.9	-5.78	490.7	-1,076.3	1,587.3	1,557.2	30.15	52.652	
9,400.0	6,710.7	6,400.0	6,224.2	78.6	26.9	-5.78	490.7	-1,076.3	1,634.6	1,604.0	30.52	53.563	
9,448.8	6,710.6	6,400.0	6,224.2	79.9	26.9	-5.78	490.7	-1,076.3	1,681.2	1,650.3	30.88	54.440	
9,500.0	6,710.5	6,400.0	6,224.2	81.3	26.9	-5.78	490.7	-1,076.3	1,730.2	1,698.9	31.26	55.342	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	6,400.0	6,224.2	82.6	26.9	-5.78	490.7	-1,076.3	1,775.5	1,743.9	31.62	56.156	
9,600.0	6,710.3	6,381.6	6,206.6	84.1	26.9	-5.58	490.7	-1,081.6	1,825.9	1,794.0	31.90	57.233	
9,645.6	6,710.2	6,378.1	6,203.2	85.3	26.9	-5.54	490.7	-1,082.5	1,869.8	1,837.6	32.22	58.024	
9,700.0	6,710.1	6,374.1	6,199.3	86.8	26.9	-5.50	490.7	-1,083.6	1,922.1	1,889.5	32.61	58.946	
9,744.1	6,710.0	6,370.9	6,196.3	88.1	26.9	-5.47	490.7	-1,084.4	1,964.6	1,931.7	32.92	59.678	
9,800.0	6,709.9	6,350.0	6,176.0	89.6	27.0	-5.26	490.7	-1,089.6	2,018.8	1,985.6	33.22	60.766	
9,842.5	6,709.9	6,350.0	6,176.0	90.8	27.0	-5.26	490.7	-1,089.6	2,059.8	2,026.3	33.54	61.413	
9,900.0	6,709.7	6,350.0	6,176.0	92.4	27.0	-5.26	490.7	-1,089.6	2,115.4	2,081.4	33.97	62.273	
9,940.9	6,709.7	6,350.0	6,176.0	93.5	27.0	-5.26	490.7	-1,089.6	2,155.0	2,120.7	34.28	62.872	
10,000.0	6,709.6	6,350.0	6,176.0	95.1	27.0	-5.26	490.7	-1,089.6	2,212.2	2,177.5	34.72	63.721	
10,039.3	6,709.5	6,350.0	6,176.0	96.2	27.0	-5.26	490.7	-1,089.6	2,250.4	2,215.4	35.01	64.275	
10,100.0	6,709.4	6,350.0	6,176.0	97.9	27.0	-5.26	490.7	-1,089.6	2,309.3	2,273.8	35.47	65.113	
10,137.8	6,709.3	6,350.0	6,176.0	98.9	27.0	-5.26	490.7	-1,089.6	2,346.1	2,310.3	35.75	65.625	
10,200.0	6,709.2	6,350.0	6,176.0	100.7	27.0	-5.26	490.7	-1,089.6	2,406.6	2,370.4	36.22	66.452	
10,236.2	6,709.1	6,350.0	6,176.0	101.7	27.0	-5.26	490.7	-1,089.6	2,441.9	2,405.5	36.49	66.924	
10,300.0	6,709.0	6,350.0	6,176.0	103.4	27.0	-5.26	490.7	-1,089.6	2,504.2	2,467.2	36.97	67.740	
10,334.6	6,708.9	6,350.0	6,176.0	104.4	27.0	-5.26	490.7	-1,089.6	2,538.0	2,500.8	37.23	68.174	
10,400.0	6,708.8	6,350.0	6,176.0	106.2	27.0	-5.26	490.7	-1,089.6	2,601.9	2,564.2	37.72	68.980	
10,433.0	6,708.7	6,350.0	6,176.0	107.1	27.0	-5.26	490.7	-1,089.6	2,634.3	2,596.3	37.97	69.379	
10,500.0	6,708.6	6,329.1	6,155.6	109.0	27.0	-5.07	490.7	-1,094.2	2,699.5	2,661.1	38.35	70.393	
10,531.5	6,708.5	6,327.8	6,154.3	109.9	27.0	-5.06	490.7	-1,094.5	2,730.3	2,691.7	38.58	70.774	
10,600.0	6,708.4	6,324.9	6,151.5	111.8	27.0	-5.04	490.7	-1,095.0	2,797.3	2,758.3	39.08	71.588	
10,629.9	6,708.4	6,323.7	6,150.3	112.6	27.0	-5.03	490.7	-1,095.3	2,826.6	2,787.3	39.29	71.937	
10,700.0	6,708.2	6,320.9	6,147.6	114.6	27.0	-5.00	490.7	-1,095.8	2,895.3	2,855.5	39.80	72.740	
10,728.3	6,708.2	6,300.0	6,127.0	115.3	27.0	-4.83	490.7	-1,099.6	2,923.5	2,883.6	39.90	73.270	
10,800.0	6,708.0	6,300.0	6,127.0	117.3	27.0	-4.83	490.7	-1,099.6	2,993.7	2,953.3	40.44	74.034	
10,826.7	6,708.0	6,300.0	6,127.0	118.1	27.0	-4.83	490.7	-1,099.6	3,019.9	2,979.3	40.64	74.313	
10,900.0	6,707.8	6,300.0	6,127.0	120.1	27.0	-4.83	490.7	-1,099.6	3,091.8	3,050.6	41.19	75.067	
10,925.2	6,707.8	6,300.0	6,127.0	120.8	27.0	-4.83	490.7	-1,099.6	3,116.5	3,075.2	41.38	75.321	
11,000.0	6,707.6	6,300.0	6,127.0	122.9	27.0	-4.83	490.7	-1,099.6	3,190.0	3,148.1	41.94	76.064	
11,023.6	6,707.6	6,300.0	6,127.0	123.6	27.0	-4.83	490.7	-1,099.6	3,213.2	3,171.1	42.12	76.295	
11,100.0	6,707.5	6,300.0	6,127.0	125.7	27.0	-4.83	490.7	-1,099.6	3,288.4	3,245.7	42.69	77.028	
11,122.0	6,707.4	6,300.0	6,127.0	126.3	27.0	-4.83	490.7	-1,099.6	3,310.0	3,267.2	42.86	77.236	
11,200.0	6,707.3	6,300.0	6,127.0	128.5	27.0	-4.83	490.7	-1,099.6	3,386.8	3,343.4	43.44	77.960	
11,220.4	6,707.2	6,300.0	6,127.0	129.0	27.0	-4.83	490.7	-1,099.6	3,406.9	3,363.3	43.60	78.146	
11,300.0	6,707.1	6,300.0	6,127.0	131.3	27.0	-4.83	490.7	-1,099.6	3,485.3	3,441.1	44.20	78.861	
11,318.9	6,707.0	6,300.0	6,127.0	131.8	27.0	-4.83	490.7	-1,099.6	3,503.9	3,459.6	44.34	79.027	
11,400.0	6,706.9	6,300.0	6,127.0	134.0	27.0	-4.83	490.7	-1,099.6	3,583.9	3,539.0	44.95	79.732	
11,417.3	6,706.9	6,300.0	6,127.0	134.5	27.0	-4.83	490.7	-1,099.6	3,601.0	3,555.9	45.08	79.880	
11,500.0	6,706.7	6,300.0	6,127.0	136.8	27.0	-4.83	490.7	-1,099.6	3,682.6	3,636.9	45.70	80.576	
11,515.7	6,706.7	6,300.0	6,127.0	137.3	27.0	-4.83	490.7	-1,099.6	3,698.1	3,652.3	45.82	80.706	
11,600.0	6,706.5	6,300.0	6,127.0	139.6	27.0	-4.83	490.7	-1,099.6	3,781.4	3,734.9	46.46	81.392	
11,614.1	6,706.5	6,300.0	6,127.0	140.0	27.0	-4.83	490.7	-1,099.6	3,795.3	3,748.8	46.57	81.506	
11,700.0	6,706.3	6,300.0	6,127.0	142.4	27.0	-4.83	490.7	-1,099.6	3,880.2	3,833.0	47.21	82.184	
11,712.6	6,706.3	6,300.0	6,127.0	142.8	27.0	-4.83	490.7	-1,099.6	3,892.6	3,845.3	47.31	82.281	
11,800.0	6,706.1	6,300.0	6,127.0	145.2	27.0	-4.83	490.7	-1,099.6	3,979.0	3,931.1	47.97	82.951	
11,811.0	6,706.1	6,300.0	6,127.0	145.5	27.0	-4.83	490.7	-1,099.6	3,989.9	3,941.9	48.05	83.033	
11,900.0	6,705.9	6,300.0	6,127.0	148.0	27.0	-4.83	490.7	-1,099.6	4,078.0	4,029.2	48.72	83.694	
11,909.4	6,705.9	6,300.0	6,127.0	148.3	27.0	-4.83	490.7	-1,099.6	4,087.3	4,038.5	48.80	83.763	
12,000.0	6,705.8	6,300.0	6,127.0	150.8	27.0	-4.83	490.7	-1,099.6	4,176.9	4,127.5	49.48	84.415	
12,007.8	6,705.7	6,300.0	6,127.0	151.0	27.0	-4.83	490.7	-1,099.6	4,184.7	4,135.2	49.54	84.471	
12,100.0	6,705.6	6,300.0	6,127.0	153.6	27.0	-4.83	490.7	-1,099.6	4,276.0	4,225.7	50.24	85.115	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,300.0	6,127.0	153.8	27.0	-4.83	490.7	-1,099.6	4,282.2	4,231.9	50.29	85.158	
12,200.0	6,705.4	6,300.0	6,127.0	156.4	27.0	-4.83	490.7	-1,099.6	4,375.0	4,324.0	50.99	85.794	
12,204.7	6,705.4	6,300.0	6,127.0	156.5	27.0	-4.83	490.7	-1,099.6	4,379.7	4,328.7	51.03	85.826	
12,300.0	6,705.2	6,277.7	6,105.0	159.2	27.0	-4.65	490.7	-1,102.9	4,473.7	4,422.2	51.60	86.703	
12,303.1	6,705.2	6,277.7	6,104.9	159.3	27.0	-4.65	490.7	-1,102.9	4,476.8	4,425.2	51.62	86.724	
12,400.0	6,705.0	6,275.9	6,103.2	162.0	27.0	-4.64	490.7	-1,103.1	4,572.8	4,520.5	52.34	87.366	
12,401.5	6,705.0	6,275.9	6,103.1	162.0	27.0	-4.64	490.7	-1,103.2	4,574.4	4,522.0	52.35	87.376	
12,500.0	6,704.8	6,274.1	6,101.4	164.8	27.0	-4.63	490.7	-1,103.4	4,671.9	4,618.9	53.08	88.009	
12,598.4	6,704.6	6,272.4	6,099.7	167.5	27.0	-4.61	490.7	-1,103.6	4,769.5	4,715.7	53.82	88.625	
12,600.0	6,704.6	6,272.4	6,099.7	167.6	27.0	-4.61	490.7	-1,103.6	4,771.1	4,717.3	53.83	88.635	
12,696.8	6,704.4	6,250.0	6,077.4	170.3	27.0	-4.45	490.7	-1,106.1	4,867.5	4,813.1	54.41	89.453	
12,700.0	6,704.4	6,250.0	6,077.4	170.4	27.0	-4.45	490.7	-1,106.1	4,870.6	4,816.2	54.44	89.472	
12,795.2	6,704.3	6,250.0	6,077.4	173.0	27.0	-4.45	490.7	-1,106.1	4,965.1	4,909.9	55.16	90.020	
12,800.0	6,704.2	6,250.0	6,077.4	173.2	27.0	-4.45	490.7	-1,106.1	4,969.8	4,914.6	55.19	90.047	
12,893.7	6,704.1	6,250.0	6,077.4	175.8	27.0	-4.45	490.7	-1,106.1	5,062.7	5,006.8	55.90	90.571	
12,900.0	6,704.1	6,250.0	6,077.4	176.0	27.0	-4.45	490.7	-1,106.1	5,069.0	5,013.0	55.95	90.606	
12,992.1	6,703.9	6,250.0	6,077.4	178.5	27.0	-4.45	490.7	-1,106.1	5,160.3	5,103.7	56.64	91.108	
13,000.0	6,703.9	6,250.0	6,077.4	178.8	27.0	-4.45	490.7	-1,106.1	5,168.2	5,111.5	56.70	91.151	
13,090.5	6,703.7	6,250.0	6,077.4	181.3	27.0	-4.45	490.7	-1,106.1	5,258.0	5,200.6	57.38	91.632	
13,100.0	6,703.7	6,250.0	6,077.4	181.6	27.0	-4.45	490.7	-1,106.1	5,267.4	5,210.0	57.45	91.682	
13,188.9	6,703.5	6,250.0	6,077.4	184.0	27.0	-4.45	490.7	-1,106.1	5,355.7	5,297.6	58.12	92.142	
13,200.0	6,703.5	6,250.0	6,077.4	184.4	27.0	-4.45	490.7	-1,106.1	5,366.7	5,308.5	58.21	92.199	
13,287.4	6,703.3	6,250.0	6,077.4	186.8	27.0	-4.45	490.7	-1,106.1	5,453.5	5,394.6	58.87	92.640	
13,300.0	6,703.3	6,250.0	6,077.4	187.2	27.0	-4.45	490.7	-1,106.1	5,466.0	5,407.1	58.96	92.702	
13,385.8	6,703.2	6,250.0	6,077.4	189.6	27.0	-4.45	490.7	-1,106.1	5,551.2	5,491.6	59.61	93.125	
13,400.0	6,703.1	6,250.0	6,077.4	190.0	27.0	-4.45	490.7	-1,106.1	5,565.3	5,505.6	59.72	93.194	
13,484.2	6,703.0	6,250.0	6,077.4	192.3	27.0	-4.45	490.7	-1,106.1	5,649.0	5,588.7	60.35	93.598	
13,500.0	6,702.9	6,250.0	6,077.4	192.8	27.0	-4.45	490.7	-1,106.1	5,664.7	5,604.2	60.47	93.673	
13,582.6	6,702.8	6,250.0	6,077.4	195.1	27.0	-4.45	490.7	-1,106.1	5,746.8	5,685.7	61.10	94.060	
13,600.0	6,702.8	6,250.0	6,077.4	195.6	27.0	-4.45	490.7	-1,106.1	5,764.1	5,702.8	61.23	94.140	
13,681.1	6,702.6	6,250.0	6,077.4	197.8	27.0	-4.45	490.7	-1,106.1	5,844.7	5,782.8	61.84	94.511	
13,700.0	6,702.6	6,250.0	6,077.4	198.4	27.0	-4.45	490.7	-1,106.1	5,863.5	5,801.5	61.98	94.596	
13,779.5	6,702.4	6,250.0	6,077.4	200.6	27.0	-4.45	490.7	-1,106.1	5,942.5	5,879.9	62.58	94.951	
13,800.0	6,702.4	6,250.0	6,077.4	201.2	27.0	-4.45	490.7	-1,106.1	5,962.9	5,900.1	62.74	95.042	
13,877.9	6,702.2	6,250.0	6,077.4	203.3	27.0	-4.45	490.7	-1,106.1	6,040.4	5,977.0	63.33	95.381	
13,900.0	6,702.2	6,250.0	6,077.4	204.0	27.0	-4.45	490.7	-1,106.1	6,062.3	5,998.8	63.50	95.476	
13,976.3	6,702.1	6,250.0	6,077.4	206.1	27.0	-4.45	490.7	-1,106.1	6,138.2	6,074.2	64.07	95.801	
14,000.0	6,702.0	6,250.0	6,077.4	206.8	27.0	-4.45	490.7	-1,106.1	6,161.8	6,097.5	64.25	95.901	
14,074.8	6,701.9	6,250.0	6,077.4	208.9	27.0	-4.45	490.7	-1,106.1	6,236.2	6,171.3	64.82	96.212	
14,100.0	6,701.8	6,250.0	6,077.4	209.6	27.0	-4.45	490.7	-1,106.1	6,261.2	6,196.2	65.01	96.315	
14,173.2	6,701.7	6,250.0	6,077.4	211.6	27.0	-4.45	490.7	-1,106.1	6,334.1	6,268.5	65.56	96.613	
14,200.0	6,701.6	6,250.0	6,077.4	212.4	27.0	-4.45	490.7	-1,106.1	6,360.7	6,295.0	65.76	96.720	
14,271.6	6,701.5	6,250.0	6,077.4	214.4	27.0	-4.45	490.7	-1,106.1	6,432.0	6,365.7	66.31	97.005	
14,300.0	6,701.4	6,250.0	6,077.4	215.2	27.0	-4.45	490.7	-1,106.1	6,460.2	6,393.7	66.52	97.116	
14,370.0	6,701.3	6,250.0	6,077.4	217.1	27.0	-4.45	490.7	-1,106.1	6,529.9	6,462.9	67.05	97.389	
14,400.0	6,701.3	6,250.0	6,077.4	218.0	27.0	-4.45	490.7	-1,106.1	6,559.8	6,492.5	67.28	97.504	
14,468.5	6,701.1	6,250.0	6,077.4	219.9	27.0	-4.45	490.7	-1,106.1	6,627.9	6,560.1	67.80	97.764	
14,500.0	6,701.1	6,250.0	6,077.4	220.8	27.0	-4.45	490.7	-1,106.1	6,659.3	6,591.3	68.03	97.882	
14,566.9	6,701.0	6,250.0	6,077.4	222.6	27.0	-4.45	490.7	-1,106.1	6,725.9	6,657.3	68.54	98.131	
14,600.0	6,700.9	6,250.0	6,077.4	223.6	27.0	-4.45	490.7	-1,106.1	6,758.8	6,690.0	68.79	98.252	
14,665.3	6,700.8	6,250.0	6,077.4	225.4	27.0	-4.45	490.7	-1,106.1	6,823.9	6,754.6	69.28	98.490	
14,700.0	6,700.7	6,250.0	6,077.4	226.4	27.0	-4.45	490.7	-1,106.1	6,858.4	6,788.8	69.55	98.615	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - WACKER 10F-302 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	6,250.0	6,077.4	228.2	27.0	-4.45	490.7	-1,106.1	6,921.9	6,851.8	70.03	98.841	
14,800.0	6,700.5	6,250.0	6,077.4	229.2	27.0	-4.45	490.7	-1,106.1	6,958.0	6,887.7	70.30	98.969	
14,862.2	6,700.4	6,250.0	6,077.4	230.9	27.0	-4.45	490.7	-1,106.1	7,019.9	6,949.1	70.78	99.186	
14,900.0	6,700.3	6,250.0	6,077.4	232.0	27.0	-4.45	490.7	-1,106.1	7,057.6	6,986.5	71.06	99.316	
14,960.6	6,700.2	6,250.0	6,077.4	233.7	27.0	-4.45	490.7	-1,106.1	7,117.9	7,046.4	71.52	99.523	
15,000.0	6,700.2	6,250.0	6,077.4	234.8	27.0	-4.45	490.7	-1,106.1	7,157.1	7,085.3	71.82	99.656	
15,059.0	6,700.0	6,250.0	6,077.4	236.4	27.0	-4.45	490.7	-1,106.1	7,215.9	7,143.7	72.27	99.853	
15,082.8	6,700.0	6,250.0	6,077.4	237.1	27.0	-4.45	490.7	-1,106.1	7,239.6	7,167.2	72.45	99.932	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-179.39	-104.9	-1.1	104.9				
98.4	98.4	98.4	98.4	0.1	0.1	-179.39	-104.9	-1.1	104.9	104.7	0.19	545.826	
100.0	100.0	100.0	100.0	0.1	0.1	-179.39	-104.9	-1.1	104.9	104.7	0.20	536.587	
196.8	196.8	196.8	196.8	0.3	0.3	-179.39	-104.9	-1.1	104.9	104.3	0.63	166.310	
200.0	200.0	200.0	200.0	0.3	0.3	-179.39	-104.9	-1.1	104.9	104.3	0.65	162.659	
295.3	295.3	295.3	295.3	0.5	0.5	-179.39	-104.9	-1.1	104.9	103.9	1.07	97.756	
300.0	300.0	300.0	300.0	0.5	0.5	-179.39	-104.9	-1.1	104.9	103.8	1.09	95.859	
393.7	393.7	393.7	393.7	0.8	0.8	-179.39	-104.9	-1.1	104.9	103.4	1.52	69.222	
400.0	400.0	400.0	400.0	0.8	0.8	-179.39	-104.9	-1.1	104.9	103.4	1.54	67.952	
492.1	492.1	492.1	492.1	1.0	1.0	-179.39	-104.9	-1.1	104.9	103.0	1.96	53.582	
500.0	500.0	500.0	500.0	1.0	1.0	-179.39	-104.9	-1.1	104.9	102.9	1.99	52.630	
590.5	590.5	590.5	590.5	1.2	1.2	-179.39	-104.9	-1.1	104.9	102.5	2.40	43.707	
600.0	600.0	600.0	600.0	1.2	1.2	-179.39	-104.9	-1.1	104.9	102.5	2.44	42.947	
689.0	689.0	689.0	689.0	1.4	1.4	-179.39	-104.9	-1.1	104.9	102.1	2.84	36.905	
700.0	700.0	700.0	700.0	1.4	1.4	-179.39	-104.9	-1.1	104.9	102.0	2.89	36.273	
787.4	787.4	787.4	787.4	1.6	1.6	-179.39	-104.9	-1.1	104.9	101.6	3.29	31.935	
800.0	800.0	800.0	800.0	1.7	1.7	-179.39	-104.9	-1.1	104.9	101.6	3.34	31.394	
885.8	885.8	885.8	885.8	1.9	1.9	-179.39	-104.9	-1.1	104.9	101.2	3.73	28.145	
900.0	900.0	900.0	900.0	1.9	1.9	-179.39	-104.9	-1.1	104.9	101.1	3.79	27.672	
984.2	984.2	984.2	984.2	2.1	2.1	-179.39	-104.9	-1.1	104.9	100.8	4.17	25.159	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.39	-104.9	-1.1	104.9	100.7	4.24	24.739	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-179.39	-104.9	-1.1	104.9	100.3	4.61	22.746	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-179.39	-104.9	-1.1	104.9	100.2	4.69	22.369 CC, ES	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	152.16	-104.9	-1.1	105.9	100.9	5.05	20.963	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	152.31	-104.9	-1.1	106.5	101.3	5.14	20.722	
1,279.5	1,279.4	1,279.0	1,279.0	2.7	2.7	153.77	-105.0	-2.2	110.1	104.6	5.48	20.087	
1,300.0	1,299.8	1,299.3	1,299.3	2.8	2.8	154.39	-105.1	-2.8	111.4	105.8	5.57	20.008	
1,377.9	1,377.5	1,376.2	1,376.1	3.0	2.9	157.47	-105.4	-6.5	118.0	112.1	5.89	20.019	
1,400.0	1,399.5	1,397.8	1,397.6	3.0	3.0	158.51	-105.5	-7.9	120.3	114.3	5.98	20.109	
1,476.4	1,475.3	1,472.1	1,471.7	3.2	3.1	162.51	-106.1	-14.0	130.4	124.1	6.31	20.673	
1,500.0	1,498.7	1,495.0	1,494.4	3.3	3.2	163.82	-106.3	-16.2	134.1	127.7	6.40	20.942	
1,574.8	1,572.6	1,566.4	1,565.4	3.5	3.4	168.03	-107.0	-24.4	148.1	141.4	6.73	22.021	
1,600.0	1,597.5	1,590.3	1,589.0	3.5	3.4	169.44	-107.3	-27.5	153.6	146.7	6.83	22.482	
1,673.2	1,669.4	1,658.6	1,656.6	3.7	3.6	173.38	-108.2	-37.6	171.7	164.5	7.15	24.015	
1,700.1	1,695.8	1,683.4	1,681.1	3.8	3.7	174.75	-108.6	-41.6	179.2	171.9	7.26	24.672	
1,771.6	1,765.7	1,748.5	1,745.1	4.1	3.8	178.19	-109.7	-53.2	200.4	192.8	7.60	26.369	
1,800.0	1,793.4	1,774.0	1,770.2	4.2	3.9	179.45	-110.1	-58.2	209.2	201.5	7.73	27.059	
1,870.1	1,862.0	1,836.5	1,831.3	4.4	4.1	-177.64	-111.3	-71.3	232.0	224.0	8.07	28.737	
1,900.0	1,891.3	1,863.0	1,857.1	4.5	4.2	-176.49	-111.8	-77.2	242.2	234.0	8.22	29.466	
1,968.5	1,958.3	1,922.7	1,915.1	4.8	4.5	-174.04	-113.1	-91.4	266.4	257.8	8.56	31.124	
2,000.0	1,989.1	1,949.9	1,941.4	4.9	4.6	-172.98	-113.8	-98.3	277.9	269.2	8.72	31.872	
2,066.9	2,054.5	2,008.0	1,997.4	5.1	4.8	-170.86	-115.2	-113.8	303.4	294.3	9.07	33.458	
2,100.0	2,086.9	2,038.1	2,026.3	5.3	4.9	-169.87	-115.9	-122.0	316.2	306.9	9.24	34.208	
2,165.3	2,150.8	2,097.5	2,083.5	5.5	5.2	-168.11	-117.4	-138.2	341.7	332.1	9.59	35.620	
2,200.0	2,184.7	2,129.0	2,113.8	5.6	5.4	-167.29	-118.2	-146.7	355.4	345.6	9.78	36.319	
2,263.8	2,247.1	2,187.0	2,169.6	5.9	5.6	-165.91	-119.6	-162.5	380.6	370.5	10.13	37.570	
2,300.0	2,282.5	2,220.0	2,201.2	6.0	5.8	-165.21	-120.4	-171.5	395.0	384.7	10.33	38.247	
2,362.2	2,343.3	2,276.5	2,255.7	6.3	6.1	-164.12	-121.8	-186.8	419.9	409.2	10.67	39.341	
2,400.0	2,380.3	2,310.9	2,288.7	6.5	6.3	-163.51	-122.7	-196.2	435.1	424.2	10.88	39.977	
2,460.6	2,439.6	2,366.0	2,341.7	6.7	6.5	-162.62	-124.0	-211.2	459.5	448.3	11.22	40.937	
2,500.0	2,478.1	2,401.8	2,376.2	6.9	6.7	-162.09	-124.9	-220.9	475.4	464.0	11.45	41.538	
2,559.0	2,535.9	2,455.5	2,427.8	7.1	7.0	-161.36	-126.2	-235.5	499.3	487.5	11.78	42.382	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,492.7	2,463.7	7.3	7.2	-160.90	-127.1	-245.6	515.9	503.9	12.01	42.945	
2,657.5	2,632.2	2,545.0	2,513.9	7.5	7.5	-160.29	-128.4	-259.9	539.3	526.9	12.34	43.690	
2,700.0	2,673.8	2,583.7	2,551.1	7.7	7.7	-159.87	-129.4	-270.4	556.6	544.0	12.59	44.219	
2,755.9	2,728.4	2,634.5	2,600.0	7.9	8.0	-159.36	-130.7	-284.2	579.4	566.5	12.91	44.878	
2,800.0	2,771.6	2,674.6	2,638.6	8.1	8.2	-158.99	-131.6	-295.1	597.4	584.3	13.17	45.376	
2,854.3	2,824.7	2,724.0	2,686.1	8.3	8.4	-158.56	-132.9	-308.5	619.6	606.2	13.48	45.959	
2,900.0	2,869.4	2,765.5	2,726.1	8.5	8.7	-158.22	-133.9	-319.8	638.3	624.6	13.75	46.429	
2,952.7	2,921.0	2,813.5	2,772.2	8.8	8.9	-157.85	-135.1	-332.9	660.0	645.9	14.06	46.946	
3,000.0	2,967.2	2,856.4	2,813.5	9.0	9.2	-157.54	-136.1	-344.6	679.3	665.0	14.34	47.389	
3,051.2	3,017.3	2,903.0	2,858.3	9.2	9.4	-157.22	-137.3	-357.2	700.4	685.7	14.64	47.850	
3,100.0	3,065.0	2,947.4	2,901.0	9.4	9.7	-156.93	-138.4	-369.3	720.4	705.5	14.93	48.269	
3,149.6	3,113.5	2,992.5	2,944.4	9.6	9.9	-156.66	-139.5	-381.6	740.8	725.6	15.22	48.677	
3,200.0	3,162.8	3,038.3	2,988.5	9.8	10.2	-156.39	-140.6	-394.0	761.6	746.0	15.52	49.075	
3,248.0	3,209.8	3,082.0	3,030.5	10.0	10.4	-156.16	-141.7	-405.9	781.3	765.5	15.80	49.439	
3,300.0	3,260.6	3,129.2	3,075.9	10.2	10.7	-155.91	-142.9	-418.8	802.7	786.6	16.11	49.817	
3,346.4	3,306.1	3,171.5	3,116.6	10.5	10.9	-155.70	-143.9	-430.2	821.9	805.5	16.39	50.141	
3,400.0	3,358.5	3,220.1	3,163.4	10.7	11.2	-155.47	-145.1	-443.5	844.0	827.3	16.71	50.501	
3,444.9	3,402.3	3,261.0	3,202.7	10.9	11.4	-155.29	-146.1	-454.6	862.5	845.5	16.98	50.790	
3,500.0	3,456.3	3,311.1	3,250.9	11.1	11.7	-155.08	-147.4	-468.2	885.2	867.9	17.31	51.134	
3,543.3	3,498.6	3,350.4	3,288.8	11.3	12.0	-154.92	-148.4	-478.9	903.1	885.5	17.57	51.392	
3,600.0	3,554.1	3,402.0	3,338.3	11.5	12.2	-154.72	-149.6	-492.9	926.5	908.6	17.91	51.720	
3,641.7	3,594.9	3,439.9	3,374.8	11.7	12.5	-154.58	-150.6	-503.3	943.8	925.6	18.17	51.951	
3,700.0	3,651.9	3,492.9	3,425.8	12.0	12.8	-154.39	-151.9	-517.7	967.9	949.3	18.52	52.264	
3,740.1	3,691.2	3,529.4	3,460.9	12.2	13.0	-154.26	-152.8	-527.6	984.5	965.7	18.76	52.471	
3,800.0	3,749.7	3,583.9	3,513.3	12.4	13.3	-154.09	-154.1	-542.4	1,009.2	990.1	19.12	52.770	
3,838.6	3,787.4	3,618.9	3,547.0	12.6	13.5	-153.98	-155.0	-551.9	1,025.2	1,005.8	19.36	52.956	
3,900.0	3,847.5	3,674.8	3,600.8	12.9	13.8	-153.81	-156.4	-567.1	1,050.6	1,030.8	19.73	53.242	
3,937.0	3,883.7	3,708.4	3,633.1	13.0	14.0	-153.71	-157.2	-576.3	1,065.9	1,045.9	19.96	53.409	
4,000.0	3,945.3	3,765.7	3,688.2	13.3	14.3	-153.55	-158.6	-591.9	1,092.0	1,071.6	20.34	53.683	
4,035.4	3,980.0	3,797.9	3,719.2	13.5	14.5	-153.46	-159.4	-600.6	1,106.6	1,086.1	20.56	53.833	
4,060.0	4,004.0	3,820.3	3,740.7	13.6	14.6	-153.40	-160.0	-606.7	1,116.8	1,096.1	20.71	53.934	
4,100.0	4,043.2	3,856.7	3,775.8	13.7	14.9	-153.46	-160.9	-616.6	1,133.1	1,112.2	20.99	53.988	
4,133.8	4,076.5	3,887.7	3,805.6	13.8	15.0	-153.50	-161.6	-625.1	1,146.6	1,125.4	21.21	54.052	
4,200.0	4,141.6	3,948.7	3,864.3	14.0	15.4	-153.54	-163.1	-641.6	1,172.0	1,150.4	21.65	54.136	
4,232.3	4,173.5	3,978.6	3,893.0	14.1	15.6	-153.55	-163.9	-649.8	1,183.9	1,162.1	21.85	54.173	
4,300.0	4,240.6	4,041.7	3,953.8	14.3	15.9	-153.53	-165.4	-666.9	1,208.0	1,185.7	22.28	54.214	
4,330.7	4,271.1	4,070.5	3,981.4	14.4	16.1	-153.51	-166.2	-674.8	1,218.5	1,196.0	22.47	54.229	
4,400.0	4,340.0	4,135.7	4,044.2	14.5	16.5	-153.43	-167.8	-692.5	1,241.1	1,218.2	22.88	54.234	
4,429.1	4,369.0	4,163.3	4,070.7	14.6	16.6	-153.38	-168.4	-700.0	1,250.2	1,227.1	23.05	54.234	
4,500.0	4,439.7	4,230.5	4,135.4	14.8	17.0	-153.25	-170.1	-718.3	1,271.3	1,247.9	23.45	54.207	
4,527.5	4,467.2	4,256.8	4,160.6	14.8	17.2	-153.18	-170.8	-725.4	1,279.1	1,255.5	23.60	54.197	
4,600.0	4,539.7	4,326.1	4,227.3	14.9	17.6	-152.99	-172.5	-744.3	1,298.6	1,274.6	23.98	54.144	
4,626.0	4,565.6	4,351.0	4,251.3	15.0	17.7	-152.91	-173.1	-751.1	1,305.2	1,281.1	24.12	54.124	
4,660.2	4,599.8	4,383.8	4,282.9	15.0	17.9	-124.07	-173.9	-760.0	1,313.7	1,282.8	30.84	42.591	
4,700.0	4,639.6	4,422.2	4,319.7	15.0	18.1	-123.84	-174.8	-770.4	1,323.3	1,292.2	31.11	42.534	
4,724.4	4,664.0	4,445.6	4,342.3	15.1	18.3	-123.70	-175.4	-776.8	1,329.2	1,297.9	31.28	42.495	
4,800.0	4,739.6	4,518.4	4,412.3	15.2	18.7	-123.29	-177.2	-796.6	1,347.5	1,315.7	31.80	42.376	
4,822.8	4,762.5	4,540.3	4,433.4	15.2	18.8	-123.16	-177.8	-802.5	1,353.1	1,321.1	31.96	42.341	
4,900.0	4,839.6	4,614.6	4,504.8	15.3	19.3	-122.76	-179.6	-822.7	1,371.9	1,339.4	32.49	42.223	
4,921.2	4,860.9	4,635.0	4,524.5	15.4	19.4	-122.64	-180.1	-828.3	1,377.1	1,344.4	32.64	42.191	
5,000.0	4,939.6	4,710.8	4,597.4	15.5	19.8	-122.24	-182.0	-848.9	1,396.3	1,363.1	33.19	42.074	
5,019.7	4,959.3	4,729.7	4,615.6	15.5	19.9	-122.14	-182.4	-854.1	1,401.2	1,367.8	33.33	42.045	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.0	5,039.6	4,807.0	4,689.9	15.6	20.4	-121.74	-184.4	-875.1	1,420.9	1,387.0	33.89	41.929		
5,118.1	5,057.7	4,824.4	4,706.7	15.7	20.5	-121.66	-184.8	-879.8	1,425.3	1,391.3	34.02	41.903		
5,200.0	5,139.6	4,903.2	4,782.4	15.8	20.9	-121.26	-186.7	-901.2	1,445.6	1,411.0	34.59	41.787		
5,216.5	5,156.2	4,919.1	4,797.7	15.8	21.0	-121.19	-187.1	-905.6	1,449.6	1,414.9	34.71	41.764		
5,300.0	5,239.6	4,999.4	4,875.0	15.9	21.5	-120.80	-189.1	-927.4	1,470.3	1,435.0	35.30	41.650		
5,314.9	5,254.6	5,013.7	4,888.8	16.0	21.6	-120.73	-189.5	-931.3	1,474.0	1,438.6	35.41	41.630		
5,400.0	5,339.6	7,885.2	6,626.2	16.1	38.5	178.73	-204.9	312.6	1,486.8	1,456.9	29.91	49.707		
5,413.4	5,353.0	7,885.0	6,626.2	16.1	38.5	178.75	-204.9	312.4	1,475.3	1,445.3	29.94	49.283		
5,500.0	5,439.6	7,883.9	6,626.2	16.3	38.4	178.83	-204.9	311.3	1,401.2	1,371.1	30.08	46.579		
5,511.8	5,451.4	7,883.8	6,626.2	16.3	38.4	178.84	-204.9	311.1	1,391.2	1,361.1	30.10	46.217		
5,600.0	5,539.6	7,882.6	6,626.2	16.4	38.4	178.93	-204.9	310.0	1,317.6	1,287.3	30.25	43.552		
5,610.2	5,549.9	7,882.5	6,626.2	16.4	38.4	178.94	-204.9	309.9	1,309.2	1,278.9	30.27	43.248		
5,700.0	5,639.6	7,881.4	6,626.2	16.6	38.4	179.03	-204.9	308.7	1,236.4	1,206.0	30.43	40.636		
5,708.6	5,648.3	7,881.3	6,626.2	16.6	38.4	179.04	-204.9	308.6	1,229.5	1,199.1	30.44	40.390		
5,800.0	5,739.6	7,880.1	6,626.3	16.7	38.4	179.13	-204.9	307.4	1,158.2	1,127.6	30.60	37.848		
5,807.1	5,746.7	7,880.0	6,626.3	16.8	38.3	179.13	-204.9	307.4	1,152.8	1,122.2	30.61	37.656		
5,900.0	5,839.6	7,878.8	6,626.3	16.9	38.3	179.23	-204.9	306.2	1,083.6	1,052.8	30.78	35.206		
5,905.5	5,845.1	7,878.7	6,626.3	16.9	38.3	179.23	-204.9	306.1	1,079.6	1,048.8	30.79	35.066		
6,000.0	5,939.6	7,877.5	6,626.3	17.1	38.3	179.32	-204.9	304.9	1,013.3	982.3	30.96	32.734		
6,003.9	5,943.6	7,877.5	6,626.3	17.1	38.3	179.33	-204.9	304.8	1,010.6	979.7	30.96	32.641		
6,059.2	5,998.8	7,876.8	6,626.3	17.2	38.3	179.38	-204.9	304.1	974.2	943.1	31.06	31.364		
6,100.0	6,039.6	7,875.1	6,626.3	17.2	38.2	-93.14	-204.9	302.4	948.4	895.3	53.07	17.871		
6,102.3	6,042.0	7,874.9	6,626.3	17.2	38.2	-93.28	-204.9	302.3	947.0	893.9	53.07	17.842		
6,150.0	6,089.4	7,869.9	6,626.4	17.3	38.1	-95.73	-204.9	297.2	918.5	865.4	53.09	17.301		
6,200.0	6,138.7	7,861.2	6,626.5	17.3	37.9	-97.75	-204.9	288.5	890.6	837.6	52.95	16.819		
6,200.8	6,139.5	7,861.0	6,626.5	17.3	37.9	-97.78	-204.9	288.4	890.2	837.2	52.95	16.812		
6,250.0	6,187.4	7,849.1	6,626.7	17.3	37.7	-99.23	-204.9	276.4	865.0	812.3	52.70	16.414		
6,299.2	6,234.4	7,833.9	6,626.9	17.4	37.4	-100.18	-204.9	261.3	842.2	789.8	52.35	16.087		
6,300.0	6,235.1	7,833.6	6,626.9	17.4	37.4	-100.19	-204.9	261.0	841.8	789.5	52.35	16.082		
6,350.0	6,281.7	7,814.9	6,627.1	17.4	37.0	-100.68	-204.9	242.3	821.3	769.4	51.92	15.819		
6,397.6	6,324.8	7,794.1	6,627.4	17.3	36.5	-100.73	-204.9	221.5	804.2	752.8	51.46	15.627		
6,400.0	6,326.9	7,793.0	6,627.4	17.3	36.5	-100.72	-204.9	220.4	803.4	752.0	51.44	15.619		
6,450.0	6,370.5	7,768.0	6,627.7	17.3	36.0	-100.37	-204.9	195.4	788.3	737.3	50.93	15.477		
6,496.0	6,409.1	7,742.4	6,628.0	17.3	35.5	-99.73	-204.9	169.7	776.6	726.2	50.43	15.399		
6,500.0	6,412.3	7,740.0	6,628.1	17.3	35.4	-99.66	-204.9	167.4	775.7	725.3	50.39	15.394		
6,550.0	6,452.1	7,709.3	6,628.4	17.3	34.8	-98.65	-204.9	136.6	765.7	715.9	49.83	15.367		
6,594.5	6,485.6	7,679.6	6,628.8	17.3	34.2	-97.54	-204.9	107.0	758.8	709.4	49.34	15.377		
6,600.0	6,489.7	7,675.8	6,628.9	17.3	34.1	-97.39	-204.9	103.2	758.0	708.7	49.28	15.381		
6,650.0	6,524.9	7,639.9	6,629.3	17.2	33.4	-95.95	-204.9	67.2	752.4	703.7	48.75	15.435		
6,692.9	6,553.0	7,607.1	6,629.8	17.2	32.8	-94.60	-204.9	34.5	749.1	700.8	48.30	15.508		
6,700.0	6,557.5	7,601.6	6,629.8	17.2	32.7	-94.37	-204.9	28.9	748.6	700.4	48.22	15.524		
6,750.0	6,587.4	7,561.1	6,630.3	17.2	32.0	-92.74	-204.9	-11.5	746.4	698.6	47.77	15.624		
6,791.3	6,609.9	7,526.2	6,630.8	17.2	31.3	-91.38	-204.9	-46.4	745.4	698.0	47.42	15.718		
6,800.0	6,614.4	7,518.7	6,630.9	17.2	31.2	-91.10	-204.9	-53.9	745.3	698.0	47.35	15.741		
6,834.4	6,631.3	7,488.6	6,631.3	17.2	30.7	-90.00	-204.9	-84.1	745.1	698.0	47.11	15.818		
6,850.0	6,638.4	7,474.6	6,631.4	17.2	30.4	-89.52	-204.9	-98.0	745.2	698.2	47.00	15.853		
6,889.7	6,655.3	7,438.4	6,631.9	17.4	29.9	-88.34	-204.9	-134.2	745.5	698.7	46.79	15.932		
6,900.0	6,659.4	7,428.9	6,632.0	17.5	29.7	-88.05	-204.9	-143.7	745.6	698.9	46.73	15.955		
6,950.0	6,677.1	7,381.9	6,632.6	18.0	29.0	-86.75	-204.9	-190.7	746.4	699.9	46.55	16.036		
6,988.2	6,688.4	7,345.3	6,633.1	18.5	28.4	-85.90	-204.9	-227.3	747.2	700.7	46.50	16.069		
7,000.0	6,691.5	7,333.9	6,633.2	18.7	28.3	-85.67	-204.9	-238.7	747.4	700.9	46.48	16.080		
7,050.0	6,702.5	7,285.0	6,633.9	19.5	27.6	-84.82	-204.9	-287.6	748.3	701.8	46.51	16.088		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,708.4	7,248.8	6,634.3	20.1	27.2	-84.37	-204.9	-323.8	748.8	702.2	46.64	16.056	
7,100.0	6,710.1	7,235.5	6,634.5	20.4	27.0	-84.24	-204.9	-337.1	748.9	702.3	46.68	16.043	
7,150.0	6,714.2	7,186.7	6,635.1	21.3	26.4	-83.95	-204.9	-385.9	749.3	702.3	46.97	15.954	
7,185.0	6,715.0	7,155.2	6,634.3	21.9	26.1	-83.82	-204.9	-417.3	749.5	702.2	47.27	15.856	
7,185.6	6,715.0	7,154.8	6,634.3	21.9	26.1	-83.82	-204.9	-417.8	749.5	702.2	47.27	15.854	
7,200.0	6,715.0	7,141.8	6,633.6	22.2	26.0	-83.77	-204.9	-430.7	749.6	702.2	47.42	15.809	
7,283.4	6,714.8	7,067.8	6,625.1	23.9	25.3	-83.13	-204.9	-504.3	750.7	702.3	48.34	15.528	
7,300.0	6,714.8	7,053.3	6,622.5	24.2	25.2	-82.94	-204.9	-518.5	751.0	702.5	48.53	15.476	
7,381.9	6,714.6	6,983.7	6,606.3	26.0	24.7	-81.72	-204.9	-586.1	753.6	704.0	49.64	15.183	
7,400.0	6,714.6	6,968.8	6,601.9	26.4	24.6	-81.40	-204.9	-600.4	754.4	704.5	49.89	15.122	
7,480.3	6,714.4	6,905.0	6,580.1	28.2	24.3	-79.77	-204.9	-660.3	759.2	708.1	51.12	14.851	
7,500.0	6,714.4	6,890.0	6,574.2	28.7	24.2	-79.33	-204.9	-674.1	760.7	709.3	51.43	14.791	
7,578.7	6,714.2	6,832.8	6,549.0	30.5	24.1	-77.49	-204.9	-725.5	768.4	715.7	52.74	14.570	
7,600.0	6,714.2	6,818.1	6,541.9	31.0	24.1	-76.97	-204.9	-738.3	771.0	717.9	53.09	14.522	
7,677.1	6,714.0	6,767.7	6,515.5	32.9	24.0	-75.06	-204.9	-781.3	782.3	727.9	54.41	14.379	
7,700.0	6,714.0	6,750.0	6,505.6	33.4	24.0	-74.35	-204.9	-795.9	786.3	731.6	54.75	14.363	
7,775.6	6,713.9	6,709.5	6,481.4	35.3	24.0	-72.65	-204.9	-828.4	801.7	745.6	56.08	14.296	
7,800.0	6,713.8	6,700.0	6,475.5	35.9	24.0	-72.24	-204.9	-835.8	807.5	751.0	56.54	14.282 SF	
7,874.0	6,713.7	6,650.0	6,442.7	37.8	24.1	-69.98	-204.9	-873.5	827.4	769.7	57.63	14.357	
7,900.0	6,713.6	6,650.0	6,442.7	38.4	24.1	-69.98	-204.9	-873.5	835.1	776.9	58.25	14.338	
7,972.4	6,713.5	6,612.3	6,416.3	40.3	24.1	-68.21	-204.9	-900.4	859.3	799.9	59.39	14.468	
8,000.0	6,713.4	6,600.0	6,407.3	41.0	24.2	-67.63	-204.9	-908.9	869.4	809.6	59.83	14.530	
8,070.8	6,713.3	6,571.9	6,386.5	42.8	24.2	-66.27	-204.9	-927.6	897.7	836.6	61.02	14.711	
8,100.0	6,713.2	6,560.9	6,378.1	43.6	24.2	-65.73	-204.9	-934.8	910.2	848.7	61.50	14.801	
8,169.3	6,713.1	6,536.3	6,358.9	45.4	24.3	-64.52	-204.9	-950.2	942.2	879.5	62.64	15.042	
8,200.0	6,713.0	6,526.0	6,350.7	46.2	24.3	-64.01	-204.9	-956.5	957.3	894.1	63.14	15.161	
8,267.7	6,712.9	6,500.0	6,329.7	48.0	24.4	-62.72	-204.9	-971.8	992.4	928.3	64.14	15.473	
8,300.0	6,712.8	6,500.0	6,329.7	48.8	24.4	-62.72	-204.9	-971.8	1,010.1	945.2	64.91	15.562	
8,366.1	6,712.7	6,476.4	6,310.2	50.6	24.5	-61.55	-204.9	-985.0	1,047.9	982.0	65.87	15.907	
8,400.0	6,712.6	6,467.5	6,302.6	51.5	24.5	-61.10	-204.9	-989.8	1,068.1	1,001.6	66.43	16.078	
8,464.5	6,712.5	6,450.0	6,287.8	53.2	24.5	-60.24	-204.9	-999.0	1,108.0	1,040.5	67.47	16.423	
8,500.0	6,712.4	6,450.0	6,287.8	54.1	24.5	-60.24	-204.9	-999.0	1,130.8	1,062.5	68.30	16.556	
8,563.0	6,712.3	6,428.7	6,269.4	55.8	24.6	-59.18	-204.9	-1,009.7	1,172.3	1,103.1	69.15	16.954	
8,600.0	6,712.3	6,420.9	6,262.5	56.8	24.6	-58.80	-204.9	-1,013.5	1,197.4	1,127.7	69.77	17.164	
8,661.4	6,712.1	6,400.0	6,244.1	58.5	24.7	-57.77	-204.9	-1,023.2	1,240.3	1,169.8	70.53	17.586	
8,700.0	6,712.1	6,400.0	6,244.1	59.5	24.7	-57.77	-204.9	-1,023.2	1,267.8	1,196.4	71.42	17.751	
8,759.8	6,711.9	6,400.0	6,244.1	61.1	24.7	-57.77	-204.9	-1,023.2	1,311.5	1,238.6	72.81	18.012	
8,800.0	6,711.9	6,383.2	6,229.0	62.2	24.7	-56.95	-204.9	-1,030.7	1,341.2	1,268.1	73.16	18.332	
8,858.2	6,711.8	6,373.6	6,220.3	63.8	24.7	-56.48	-204.9	-1,034.8	1,385.3	1,311.1	74.16	18.679	
8,900.0	6,711.7	6,367.0	6,214.3	64.9	24.8	-56.16	-204.9	-1,037.5	1,417.4	1,342.5	74.88	18.928	
8,956.7	6,711.6	6,350.0	6,198.7	66.5	24.8	-55.35	-204.9	-1,044.4	1,461.7	1,386.2	75.55	19.348	
9,000.0	6,711.5	6,350.0	6,198.7	67.6	24.8	-55.35	-204.9	-1,044.4	1,496.0	1,419.4	76.53	19.546	
9,055.1	6,711.4	6,350.0	6,198.7	69.1	24.8	-55.35	-204.9	-1,044.4	1,540.2	1,462.4	77.79	19.799	
9,100.0	6,711.3	6,350.0	6,198.7	70.4	24.8	-55.35	-204.9	-1,044.4	1,576.7	1,497.9	78.82	20.005	
9,153.5	6,711.2	6,332.1	6,182.2	71.8	24.8	-54.49	-204.9	-1,051.2	1,620.5	1,541.2	79.32	20.431	
9,200.0	6,711.1	6,326.5	6,177.0	73.1	24.8	-54.23	-204.9	-1,053.2	1,659.1	1,578.9	80.14	20.702	
9,251.9	6,711.0	6,320.5	6,171.4	74.5	24.9	-53.95	-204.9	-1,055.3	1,702.5	1,621.5	81.06	21.003	
9,300.0	6,710.9	6,300.0	6,152.1	75.8	24.9	-52.99	-204.9	-1,062.3	1,743.3	1,662.0	81.27	21.452	
9,350.4	6,710.8	6,300.0	6,152.1	77.2	24.9	-52.99	-204.9	-1,062.3	1,786.1	1,703.7	82.39	21.678	
9,400.0	6,710.7	6,300.0	6,152.1	78.6	24.9	-52.99	-204.9	-1,062.3	1,828.6	1,745.1	83.50	21.898	
9,448.8	6,710.6	6,300.0	6,152.1	79.9	24.9	-52.99	-204.9	-1,062.3	1,870.7	1,786.1	84.59	22.114	
9,500.0	6,710.5	6,300.0	6,152.1	81.3	24.9	-52.99	-204.9	-1,062.3	1,915.2	1,829.5	85.74	22.338	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	6,300.0	6,152.1	82.6	24.9	-52.99	-204.9	-1,062.3	1,956.6	1,869.8	86.80	22.542	
9,600.0	6,710.3	6,300.0	6,152.1	84.1	24.9	-52.99	-204.9	-1,062.3	2,003.2	1,915.2	87.98	22.768	
9,645.6	6,710.2	6,300.0	6,152.1	85.3	24.9	-52.99	-204.9	-1,062.3	2,043.7	1,954.7	89.01	22.960	
9,700.0	6,710.1	6,277.9	6,131.1	86.8	24.9	-51.98	-204.9	-1,069.2	2,091.7	2,002.6	89.16	23.461	
9,744.1	6,710.0	6,274.4	6,127.8	88.1	25.0	-51.82	-204.9	-1,070.2	2,131.1	2,041.2	89.96	23.689	
9,800.0	6,709.9	6,270.2	6,123.7	89.6	25.0	-51.63	-204.9	-1,071.4	2,181.3	2,090.4	90.99	23.973	
9,842.5	6,709.9	6,250.0	6,104.3	90.8	25.0	-50.72	-204.9	-1,076.9	2,219.9	2,129.0	90.91	24.418	
9,900.0	6,709.7	6,250.0	6,104.3	92.4	25.0	-50.72	-204.9	-1,076.9	2,271.9	2,179.7	92.17	24.648	
9,940.9	6,709.7	6,250.0	6,104.3	93.5	25.0	-50.72	-204.9	-1,076.9	2,309.0	2,215.9	93.07	24.810	
10,000.0	6,709.6	6,250.0	6,104.3	95.1	25.0	-50.72	-204.9	-1,076.9	2,362.8	2,268.5	94.36	25.040	
10,039.3	6,709.5	6,250.0	6,104.3	96.2	25.0	-50.72	-204.9	-1,076.9	2,398.8	2,303.6	95.22	25.192	
10,100.0	6,709.4	6,250.0	6,104.3	97.9	25.0	-50.72	-204.9	-1,076.9	2,454.5	2,357.9	96.55	25.421	
10,137.8	6,709.3	6,250.0	6,104.3	98.9	25.0	-50.72	-204.9	-1,076.9	2,489.3	2,391.9	97.38	25.562	
10,200.0	6,709.2	6,250.0	6,104.3	100.7	25.0	-50.72	-204.9	-1,076.9	2,546.8	2,448.0	98.75	25.791	
10,236.2	6,709.1	6,250.0	6,104.3	101.7	25.0	-50.72	-204.9	-1,076.9	2,580.3	2,480.8	99.54	25.923	
10,300.0	6,709.0	6,250.0	6,104.3	103.4	25.0	-50.72	-204.9	-1,076.9	2,639.6	2,538.7	100.94	26.150	
10,334.6	6,708.9	6,250.0	6,104.3	104.4	25.0	-50.72	-204.9	-1,076.9	2,671.9	2,570.2	101.70	26.272	
10,400.0	6,708.8	6,250.0	6,104.3	106.2	25.0	-50.72	-204.9	-1,076.9	2,733.0	2,629.9	103.14	26.499	
10,433.0	6,708.7	6,250.0	6,104.3	107.1	25.0	-50.72	-204.9	-1,076.9	2,764.0	2,660.1	103.86	26.612	
10,500.0	6,708.6	6,228.2	6,083.2	109.0	25.0	-49.76	-204.9	-1,082.2	2,826.4	2,722.4	104.05	27.164	
10,531.5	6,708.5	6,226.7	6,081.7	109.9	25.0	-49.70	-204.9	-1,082.6	2,856.0	2,751.3	104.64	27.292	
10,600.0	6,708.4	6,223.6	6,078.6	111.8	25.0	-49.56	-204.9	-1,083.3	2,920.4	2,814.5	105.94	27.567	
10,629.9	6,708.4	6,222.2	6,077.3	112.6	25.0	-49.50	-204.9	-1,083.6	2,948.6	2,842.1	106.51	27.685	
10,700.0	6,708.2	6,200.0	6,055.6	114.6	25.1	-48.55	-204.9	-1,088.2	3,015.1	2,908.5	106.66	28.269	
10,728.3	6,708.2	6,200.0	6,055.6	115.3	25.1	-48.55	-204.9	-1,088.2	3,041.9	2,934.6	107.27	28.358	
10,800.0	6,708.0	6,200.0	6,055.6	117.3	25.1	-48.55	-204.9	-1,088.2	3,109.7	3,000.9	108.80	28.582	
10,826.7	6,708.0	6,200.0	6,055.6	118.1	25.1	-48.55	-204.9	-1,088.2	3,135.1	3,025.7	109.37	28.665	
10,900.0	6,707.8	6,200.0	6,055.6	120.1	25.1	-48.55	-204.9	-1,088.2	3,204.6	3,093.7	110.94	28.887	
10,925.2	6,707.8	6,200.0	6,055.6	120.8	25.1	-48.55	-204.9	-1,088.2	3,228.6	3,117.1	111.48	28.962	
11,000.0	6,707.6	6,200.0	6,055.6	122.9	25.1	-48.55	-204.9	-1,088.2	3,299.8	3,186.8	113.08	29.182	
11,023.6	6,707.6	6,200.0	6,055.6	123.6	25.1	-48.55	-204.9	-1,088.2	3,322.4	3,208.8	113.58	29.250	
11,100.0	6,707.5	6,200.0	6,055.6	125.7	25.1	-48.55	-204.9	-1,088.2	3,395.3	3,280.1	115.22	29.468	
11,122.0	6,707.4	6,200.0	6,055.6	126.3	25.1	-48.55	-204.9	-1,088.2	3,416.4	3,300.7	115.69	29.530	
11,200.0	6,707.3	6,200.0	6,055.6	128.5	25.1	-48.55	-204.9	-1,088.2	3,491.1	3,373.7	117.36	29.746	
11,220.4	6,707.2	6,200.0	6,055.6	129.0	25.1	-48.55	-204.9	-1,088.2	3,510.7	3,392.9	117.80	29.802	
11,300.0	6,707.1	6,200.0	6,055.6	131.3	25.1	-48.55	-204.9	-1,088.2	3,587.0	3,467.5	119.51	30.016	
11,318.9	6,707.0	6,200.0	6,055.6	131.8	25.1	-48.55	-204.9	-1,088.2	3,605.2	3,485.3	119.91	30.066	
11,400.0	6,706.9	6,200.0	6,055.6	134.0	25.1	-48.55	-204.9	-1,088.2	3,683.2	3,561.6	121.65	30.278	
11,417.3	6,706.9	6,200.0	6,055.6	134.5	25.1	-48.55	-204.9	-1,088.2	3,699.9	3,577.9	122.02	30.322	
11,500.0	6,706.7	6,200.0	6,055.6	136.8	25.1	-48.55	-204.9	-1,088.2	3,779.6	3,655.8	123.79	30.532	
11,515.7	6,706.7	6,200.0	6,055.6	137.3	25.1	-48.55	-204.9	-1,088.2	3,794.8	3,670.7	124.13	30.571	
11,600.0	6,706.5	6,200.0	6,055.6	139.6	25.1	-48.55	-204.9	-1,088.2	3,876.2	3,750.2	125.94	30.779	
11,614.1	6,706.5	6,200.0	6,055.6	140.0	25.1	-48.55	-204.9	-1,088.2	3,889.9	3,763.6	126.24	30.813	
11,700.0	6,706.3	6,200.0	6,055.6	142.4	25.1	-48.55	-204.9	-1,088.2	3,972.9	3,844.8	128.08	31.018	
11,712.6	6,706.3	6,200.0	6,055.6	142.8	25.1	-48.55	-204.9	-1,088.2	3,985.1	3,856.7	128.35	31.048	
11,800.0	6,706.1	6,200.0	6,055.6	145.2	25.1	-48.55	-204.9	-1,088.2	4,069.8	3,939.6	130.23	31.251	
11,811.0	6,706.1	6,200.0	6,055.6	145.5	25.1	-48.55	-204.9	-1,088.2	4,080.5	3,950.0	130.46	31.277	
11,900.0	6,705.9	6,200.0	6,055.6	148.0	25.1	-48.55	-204.9	-1,088.2	4,166.9	4,034.5	132.38	31.478	
11,909.4	6,705.9	6,200.0	6,055.6	148.3	25.1	-48.55	-204.9	-1,088.2	4,176.0	4,043.4	132.58	31.499	
12,000.0	6,705.8	6,177.7	6,033.6	150.8	25.1	-47.62	-204.9	-1,092.1	4,263.6	4,130.8	132.79	32.108	
12,007.8	6,705.7	6,177.5	6,033.4	151.0	25.1	-47.61	-204.9	-1,092.1	4,271.3	4,138.3	132.94	32.129	
12,100.0	6,705.6	6,175.3	6,031.3	153.6	25.1	-47.52	-204.9	-1,092.4	4,360.9	4,226.1	134.73	32.368	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,175.2	6,031.1	153.8	25.1	-47.51	-204.9	-1,092.5	4,367.0	4,232.1	134.85	32.384	
12,200.0	6,705.4	6,173.1	6,029.1	156.4	25.1	-47.43	-204.9	-1,092.8	4,458.2	4,321.5	136.67	32.621	
12,204.7	6,705.4	6,173.0	6,029.0	156.5	25.1	-47.42	-204.9	-1,092.8	4,462.8	4,326.0	136.76	32.632	
12,300.0	6,705.2	6,150.0	6,006.2	159.2	25.1	-46.49	-204.9	-1,096.0	4,556.0	4,419.1	136.92	33.274	
12,303.1	6,705.2	6,150.0	6,006.2	159.3	25.1	-46.49	-204.9	-1,096.0	4,559.0	4,422.0	136.99	33.280	
12,400.0	6,705.0	6,150.0	6,006.2	162.0	25.1	-46.49	-204.9	-1,096.0	4,653.5	4,514.5	139.01	33.476	
12,401.5	6,705.0	6,150.0	6,006.2	162.0	25.1	-46.49	-204.9	-1,096.0	4,655.0	4,515.9	139.04	33.479	
12,500.0	6,704.8	6,150.0	6,006.2	164.8	25.1	-46.49	-204.9	-1,096.0	4,751.1	4,610.0	141.10	33.672	
12,598.4	6,704.6	6,150.0	6,006.2	167.5	25.1	-46.49	-204.9	-1,096.0	4,847.2	4,704.0	143.15	33.861	
12,600.0	6,704.6	6,150.0	6,006.2	167.6	25.1	-46.49	-204.9	-1,096.0	4,848.7	4,705.5	143.18	33.863	
12,696.8	6,704.4	6,150.0	6,006.2	170.3	25.1	-46.49	-204.9	-1,096.0	4,943.4	4,798.2	145.21	34.044	
12,700.0	6,704.4	6,150.0	6,006.2	170.4	25.1	-46.49	-204.9	-1,096.0	4,946.5	4,801.2	145.27	34.050	
12,795.2	6,704.3	6,150.0	6,006.2	173.0	25.1	-46.49	-204.9	-1,096.0	5,039.7	4,892.5	147.26	34.223	
12,800.0	6,704.2	6,150.0	6,006.2	173.2	25.1	-46.49	-204.9	-1,096.0	5,044.4	4,897.0	147.36	34.231	
12,893.7	6,704.1	6,150.0	6,006.2	175.8	25.1	-46.49	-204.9	-1,096.0	5,136.1	4,986.8	149.32	34.397	
12,900.0	6,704.1	6,150.0	6,006.2	176.0	25.1	-46.49	-204.9	-1,096.0	5,142.3	4,992.9	149.45	34.408	
12,992.1	6,703.9	6,150.0	6,006.2	178.5	25.1	-46.49	-204.9	-1,096.0	5,232.6	5,081.2	151.37	34.568	
13,000.0	6,703.9	6,150.0	6,006.2	178.8	25.1	-46.49	-204.9	-1,096.0	5,240.3	5,088.8	151.54	34.581	
13,090.5	6,703.7	6,150.0	6,006.2	181.3	25.1	-46.49	-204.9	-1,096.0	5,329.1	5,175.7	153.43	34.734	
13,100.0	6,703.7	6,150.0	6,006.2	181.6	25.1	-46.49	-204.9	-1,096.0	5,338.4	5,184.8	153.63	34.749	
13,188.9	6,703.5	6,150.0	6,006.2	184.0	25.1	-46.49	-204.9	-1,096.0	5,425.7	5,270.3	155.49	34.896	
13,200.0	6,703.5	6,150.0	6,006.2	184.4	25.1	-46.49	-204.9	-1,096.0	5,436.6	5,280.9	155.72	34.913	
13,287.4	6,703.3	6,150.0	6,006.2	186.8	25.1	-46.49	-204.9	-1,096.0	5,522.4	5,364.9	157.54	35.054	
13,300.0	6,703.3	6,150.0	6,006.2	187.2	25.1	-46.49	-204.9	-1,096.0	5,534.8	5,377.0	157.81	35.074	
13,385.8	6,703.2	6,150.0	6,006.2	189.6	25.1	-46.49	-204.9	-1,096.0	5,619.2	5,459.6	159.60	35.208	
13,400.0	6,703.1	6,150.0	6,006.2	190.0	25.1	-46.49	-204.9	-1,096.0	5,633.1	5,473.2	159.90	35.230	
13,484.2	6,703.0	6,150.0	6,006.2	192.3	25.1	-46.49	-204.9	-1,096.0	5,716.0	5,554.3	161.66	35.359	
13,500.0	6,702.9	6,150.0	6,006.2	192.8	25.1	-46.49	-204.9	-1,096.0	5,731.5	5,569.5	161.99	35.382	
13,582.6	6,702.8	6,150.0	6,006.2	195.1	25.1	-46.49	-204.9	-1,096.0	5,812.8	5,649.1	163.71	35.506	
13,600.0	6,702.8	6,150.0	6,006.2	195.6	25.1	-46.49	-204.9	-1,096.0	5,829.9	5,665.8	164.08	35.531	
13,681.1	6,702.6	6,150.0	6,006.2	197.8	25.1	-46.49	-204.9	-1,096.0	5,909.7	5,743.9	165.77	35.650	
13,700.0	6,702.6	6,150.0	6,006.2	198.4	25.1	-46.49	-204.9	-1,096.0	5,928.3	5,762.2	166.17	35.677	
13,779.5	6,702.4	6,150.0	6,006.2	200.6	25.1	-46.49	-204.9	-1,096.0	6,006.7	5,838.8	167.83	35.790	
13,800.0	6,702.4	6,150.0	6,006.2	201.2	25.1	-46.49	-204.9	-1,096.0	6,026.9	5,858.6	168.26	35.819	
13,877.9	6,702.2	6,150.0	6,006.2	203.3	25.1	-46.49	-204.9	-1,096.0	6,103.7	5,933.8	169.89	35.928	
13,900.0	6,702.2	6,150.0	6,006.2	204.0	25.1	-46.49	-204.9	-1,096.0	6,125.4	5,955.1	170.35	35.958	
13,976.3	6,702.1	6,150.0	6,006.2	206.1	25.1	-46.49	-204.9	-1,096.0	6,200.7	6,028.8	171.95	36.062	
14,000.0	6,702.0	6,150.0	6,006.2	206.8	25.1	-46.49	-204.9	-1,096.0	6,224.0	6,051.6	172.44	36.094	
14,074.8	6,701.9	6,150.0	6,006.2	208.9	25.1	-46.49	-204.9	-1,096.0	6,297.8	6,123.8	174.00	36.193	
14,100.0	6,701.8	6,150.0	6,006.2	209.6	25.1	-46.49	-204.9	-1,096.0	6,322.7	6,148.1	174.53	36.226	
14,173.2	6,701.7	6,150.0	6,006.2	211.6	25.1	-46.49	-204.9	-1,096.0	6,394.9	6,218.8	176.06	36.322	
14,200.0	6,701.6	6,150.0	6,006.2	212.4	25.1	-46.49	-204.9	-1,096.0	6,421.4	6,244.7	176.62	36.356	
14,271.6	6,701.5	6,150.0	6,006.2	214.4	25.1	-46.49	-204.9	-1,096.0	6,492.1	6,314.0	178.12	36.447	
14,300.0	6,701.4	6,150.0	6,006.2	215.2	25.1	-46.49	-204.9	-1,096.0	6,520.1	6,341.4	178.72	36.483	
14,370.0	6,701.3	6,150.0	6,006.2	217.1	25.1	-46.49	-204.9	-1,096.0	6,589.3	6,409.1	180.18	36.570	
14,400.0	6,701.3	6,150.0	6,006.2	218.0	25.1	-46.49	-204.9	-1,096.0	6,618.9	6,438.1	180.81	36.607	
14,468.5	6,701.1	6,150.0	6,006.2	219.9	25.1	-46.49	-204.9	-1,096.0	6,686.5	6,504.3	182.24	36.691	
14,500.0	6,701.1	6,150.0	6,006.2	220.8	25.1	-46.50	-204.9	-1,096.0	6,717.7	6,534.8	182.90	36.729	
14,566.9	6,701.0	6,150.0	6,006.2	222.6	25.1	-46.50	-204.9	-1,096.0	6,783.8	6,599.5	184.30	36.809	
14,600.0	6,700.9	6,150.0	6,006.2	223.6	25.1	-46.50	-204.9	-1,096.0	6,816.5	6,631.5	184.99	36.848	
14,665.3	6,700.8	6,150.0	6,006.2	225.4	25.1	-46.50	-204.9	-1,096.0	6,881.1	6,694.7	186.36	36.924	
14,700.0	6,700.7	6,150.0	6,006.2	226.4	25.1	-46.50	-204.9	-1,096.0	6,915.4	6,728.3	187.08	36.964	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - WACKER 10G-212 - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,763.7	6,700.6	6,150.0	6,006.2	228.2	25.1	-46.50	-204.9	-1,096.0	6,978.4	6,790.0	188.42	37.037		
14,800.0	6,700.5	6,150.0	6,006.2	229.2	25.1	-46.50	-204.9	-1,096.0	7,014.3	6,825.1	189.18	37.078		
14,862.2	6,700.4	6,150.0	6,006.2	230.9	25.1	-46.50	-204.9	-1,096.0	7,075.8	6,885.3	190.48	37.148		
14,900.0	6,700.3	6,150.0	6,006.2	232.0	25.1	-46.50	-204.9	-1,096.0	7,113.2	6,922.0	191.27	37.189		
14,960.6	6,700.2	6,150.0	6,006.2	233.7	25.1	-46.50	-204.9	-1,096.0	7,173.2	6,980.7	192.54	37.256		
15,000.0	6,700.2	6,150.0	6,006.2	234.8	25.1	-46.50	-204.9	-1,096.0	7,212.2	7,018.8	193.36	37.299		
15,059.0	6,700.0	6,150.0	6,006.2	236.4	25.1	-46.50	-204.9	-1,096.0	7,270.6	7,076.0	194.60	37.362		
15,082.8	6,700.0	6,150.0	6,006.2	237.1	25.1	-46.50	-204.9	-1,096.0	7,294.2	7,099.1	195.10	37.388		

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-179.29	-90.0	-1.1	90.0				
98.4	98.4	98.4	98.4	0.1	0.1	-179.29	-90.0	-1.1	90.0	89.8	0.19	468.131	
100.0	100.0	100.0	100.0	0.1	0.1	-179.29	-90.0	-1.1	90.0	89.8	0.20	460.207	
196.8	196.8	196.8	196.8	0.3	0.3	-179.29	-90.0	-1.1	90.0	89.4	0.63	142.637	
200.0	200.0	200.0	200.0	0.3	0.3	-179.29	-90.0	-1.1	90.0	89.3	0.65	139.506	
295.3	295.3	295.3	295.3	0.5	0.5	-179.29	-90.0	-1.1	90.0	88.9	1.07	83.841	
300.0	300.0	300.0	300.0	0.5	0.5	-179.29	-90.0	-1.1	90.0	88.9	1.09	82.214	
393.7	393.7	393.7	393.7	0.8	0.8	-179.29	-90.0	-1.1	90.0	88.5	1.52	59.368	
400.0	400.0	400.0	400.0	0.8	0.8	-179.29	-90.0	-1.1	90.0	88.4	1.54	58.280	
492.1	492.1	492.1	492.1	1.0	1.0	-179.29	-90.0	-1.1	90.0	88.0	1.96	45.955	
500.0	500.0	500.0	500.0	1.0	1.0	-179.29	-90.0	-1.1	90.0	88.0	1.99	45.139	
590.5	590.5	590.5	590.5	1.2	1.2	-179.29	-90.0	-1.1	90.0	87.6	2.40	37.485	
600.0	600.0	600.0	600.0	1.2	1.2	-179.29	-90.0	-1.1	90.0	87.5	2.44	36.834	
689.0	689.0	689.0	689.0	1.4	1.4	-179.29	-90.0	-1.1	90.0	87.1	2.84	31.652	
700.0	700.0	700.0	700.0	1.4	1.4	-179.29	-90.0	-1.1	90.0	87.1	2.89	31.110	
787.4	787.4	787.4	787.4	1.6	1.6	-179.29	-90.0	-1.1	90.0	86.7	3.29	27.390	
800.0	800.0	800.0	800.0	1.7	1.7	-179.29	-90.0	-1.1	90.0	86.6	3.34	26.925	
885.8	885.8	885.8	885.8	1.9	1.9	-179.29	-90.0	-1.1	90.0	86.3	3.73	24.139	
900.0	900.0	900.0	900.0	1.9	1.9	-179.29	-90.0	-1.1	90.0	86.2	3.79	23.733	
984.2	984.2	984.2	984.2	2.1	2.1	-179.29	-90.0	-1.1	90.0	85.8	4.17	21.578	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.29	-90.0	-1.1	90.0	85.8	4.24	21.218	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-179.29	-90.0	-1.1	90.0	85.4	4.61	19.508	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-179.29	-90.0	-1.1	90.0	85.3	4.69	19.185 CC, ES	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	152.31	-90.0	-1.1	91.0	86.0	5.05	18.007	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	152.48	-90.0	-1.1	91.5	86.4	5.14	17.816	
1,279.5	1,279.4	1,279.4	1,279.4	2.7	2.7	153.53	-90.0	-1.1	95.0	89.5	5.49	17.299	
1,300.0	1,299.8	1,299.8	1,299.8	2.8	2.8	153.88	-90.0	-1.1	96.2	90.6	5.58	17.238	
1,377.9	1,377.5	1,376.4	1,376.4	3.0	3.0	154.89	-90.5	-0.2	102.5	96.6	5.91	17.351	
1,400.0	1,399.5	1,398.0	1,398.0	3.0	3.0	155.05	-90.8	0.4	104.8	98.8	6.00	17.468	
1,476.4	1,475.3	1,472.5	1,472.4	3.2	3.1	155.23	-92.5	3.4	114.5	108.2	6.31	18.138	
1,500.0	1,498.7	1,495.5	1,495.4	3.3	3.2	155.18	-93.2	4.7	118.0	111.6	6.41	18.419	
1,574.8	1,572.6	1,567.9	1,567.5	3.5	3.3	154.76	-96.0	9.9	130.8	124.1	6.72	19.468	
1,600.0	1,597.5	1,592.1	1,591.6	3.5	3.4	154.54	-97.1	11.9	135.7	128.9	6.82	19.886	
1,673.2	1,669.4	1,662.1	1,661.2	3.7	3.5	153.77	-100.9	18.9	151.5	144.4	7.15	21.207	
1,700.1	1,695.8	1,687.7	1,686.5	3.8	3.6	153.45	-102.5	21.9	158.0	150.7	7.26	21.749	
1,771.6	1,765.7	1,755.1	1,753.2	4.1	3.8	152.56	-107.3	30.5	175.8	168.2	7.61	23.096	
1,800.0	1,793.4	1,781.7	1,779.4	4.2	3.8	152.12	-109.4	34.3	183.1	175.4	7.75	23.621	
1,870.1	1,862.0	1,847.1	1,843.8	4.4	4.0	150.92	-115.0	44.6	201.7	193.6	8.12	24.842	
1,900.0	1,891.3	1,874.9	1,871.0	4.5	4.1	150.36	-117.5	49.3	209.9	201.6	8.28	25.357	
1,968.5	1,958.3	1,939.5	1,934.3	4.8	4.3	149.03	-123.9	61.0	229.1	220.4	8.66	26.462	
2,000.0	1,989.1	1,969.6	1,963.7	4.9	4.4	148.48	-126.9	66.5	238.0	229.1	8.84	26.923	
2,066.9	2,054.5	2,033.7	2,026.4	5.1	4.6	147.42	-133.3	78.2	256.9	247.7	9.23	27.840	
2,100.0	2,086.9	2,065.3	2,057.3	5.3	4.7	146.95	-136.5	84.0	266.3	256.9	9.42	28.259	
2,165.3	2,150.8	2,127.9	2,118.5	5.5	4.9	146.12	-142.7	95.4	284.9	275.1	9.82	29.026	
2,200.0	2,184.7	2,161.0	2,150.9	5.6	5.1	145.72	-146.0	101.5	294.8	284.8	10.03	29.402	
2,263.8	2,247.1	2,222.0	2,210.6	5.9	5.3	145.05	-152.1	112.6	313.1	302.6	10.42	30.044	
2,300.0	2,282.5	2,256.7	2,244.5	6.0	5.4	144.70	-155.6	118.9	323.4	312.8	10.65	30.379	
2,362.2	2,343.3	2,316.2	2,302.7	6.3	5.7	144.15	-161.5	129.8	341.2	330.2	11.04	30.923	
2,400.0	2,380.3	2,352.4	2,338.1	6.5	5.8	143.85	-165.1	136.4	352.1	340.8	11.28	31.227	
2,460.6	2,439.6	2,410.4	2,394.8	6.7	6.0	143.40	-170.9	147.0	369.5	357.8	11.66	31.685	
2,500.0	2,478.1	2,448.0	2,431.7	6.9	6.2	143.13	-174.6	153.9	380.8	368.9	11.92	31.960	
2,559.0	2,535.9	2,504.5	2,486.9	7.1	6.4	142.75	-180.3	164.2	397.8	385.5	12.30	32.350	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,543.7	2,525.3	7.3	6.6	142.50	-184.2	171.3	409.6	397.0	12.56	32.600	
2,657.5	2,632.2	2,598.7	2,579.1	7.5	6.8	142.18	-189.7	181.4	426.2	413.2	12.94	32.933	
2,700.0	2,673.8	2,639.4	2,618.9	7.7	7.0	141.96	-193.7	188.8	438.4	425.2	13.22	33.161	
2,755.9	2,728.4	2,692.9	2,671.2	7.9	7.2	141.69	-199.1	198.5	454.5	441.0	13.59	33.446	
2,800.0	2,771.6	2,735.1	2,712.5	8.1	7.4	141.49	-203.3	206.2	467.3	453.4	13.88	33.656	
2,854.3	2,824.7	2,787.1	2,763.3	8.3	7.6	141.26	-208.5	215.7	483.0	468.7	14.25	33.901	
2,900.0	2,869.4	2,830.8	2,806.0	8.5	7.8	141.07	-212.8	223.7	496.2	481.6	14.55	34.094	
2,952.7	2,921.0	2,881.2	2,855.4	8.8	8.0	140.87	-217.8	232.9	511.4	496.5	14.91	34.306	
3,000.0	2,967.2	2,926.5	2,899.6	9.0	8.2	140.70	-222.4	241.2	525.1	509.8	15.23	34.485	
3,051.2	3,017.3	2,978.3	2,950.4	9.2	8.4	140.52	-227.5	250.6	539.8	524.2	15.57	34.663	
3,100.0	3,065.0	3,031.5	3,002.6	9.4	8.6	140.42	-232.3	259.4	553.4	537.5	15.89	34.823	
3,149.6	3,113.5	3,085.9	3,056.2	9.6	8.8	140.41	-236.8	267.6	566.6	550.4	16.21	34.963	
3,200.0	3,162.8	3,141.6	3,111.2	9.8	8.9	140.49	-240.9	275.1	579.5	563.0	16.52	35.082	
3,248.0	3,209.8	3,194.9	3,164.0	10.0	9.1	140.63	-244.3	281.4	591.3	574.4	16.81	35.164	
3,300.0	3,260.6	3,252.9	3,221.6	10.2	9.2	140.87	-247.5	287.2	603.4	586.2	17.12	35.238	
3,346.4	3,306.1	3,304.9	3,273.4	10.5	9.3	141.15	-249.9	291.6	613.6	596.2	17.40	35.276	
3,400.0	3,358.5	3,365.1	3,333.4	10.7	9.5	141.55	-252.1	295.6	624.9	607.2	17.70	35.312	
3,444.9	3,402.3	3,415.6	3,383.9	10.9	9.6	141.94	-253.5	298.2	633.8	615.9	17.94	35.323	
3,500.0	3,456.3	3,477.9	3,446.1	11.1	9.7	142.50	-254.6	300.2	644.2	625.9	18.24	35.326	
3,543.3	3,498.6	3,526.8	3,495.0	11.3	9.8	142.99	-255.0	301.0	651.9	633.4	18.46	35.319	
3,600.0	3,554.1	3,585.9	3,554.1	11.5	9.9	143.63	-255.1	301.1	661.5	642.7	18.73	35.316	
3,641.7	3,594.9	3,626.7	3,594.9	11.7	9.9	144.07	-255.1	301.1	668.5	649.6	18.93	35.317	
3,700.0	3,651.9	3,683.7	3,651.9	12.0	10.0	144.66	-255.1	301.1	678.4	659.2	19.21	35.321	
3,740.1	3,691.2	3,723.0	3,691.2	12.2	10.1	145.06	-255.1	301.1	685.3	665.9	19.40	35.326	
3,800.0	3,749.7	3,781.5	3,749.7	12.4	10.2	145.65	-255.1	301.1	695.6	675.9	19.68	35.339	
3,838.6	3,787.4	3,819.2	3,787.4	12.6	10.3	146.01	-255.1	301.1	702.3	682.4	19.87	35.350	
3,900.0	3,847.5	3,879.3	3,847.5	12.9	10.4	146.58	-255.1	301.1	713.0	692.9	20.16	35.372	
3,937.0	3,883.7	3,915.5	3,883.7	13.0	10.4	146.92	-255.1	301.1	719.5	699.2	20.33	35.387	
4,000.0	3,945.3	3,977.1	3,945.3	13.3	10.5	147.48	-255.1	301.1	730.6	709.9	20.63	35.417	
4,035.4	3,980.0	4,011.8	3,980.0	13.5	10.6	147.78	-255.1	301.1	736.8	716.0	20.79	35.435	
4,060.0	4,004.0	4,035.8	4,004.0	13.6	10.6	147.99	-255.1	301.1	741.2	720.3	20.91	35.449	
4,100.0	4,043.2	4,075.0	4,043.2	13.7	10.7	148.39	-255.1	301.1	748.1	727.0	21.11	35.444	
4,133.8	4,076.5	4,108.2	4,076.5	13.8	10.8	148.70	-255.1	301.1	753.5	732.3	21.26	35.452	
4,200.0	4,141.6	4,173.4	4,141.6	14.0	10.9	149.24	-255.1	301.1	763.3	741.7	21.55	35.427	
4,232.3	4,173.5	4,205.3	4,173.5	14.1	10.9	149.47	-255.1	301.1	767.6	745.9	21.68	35.404	
4,300.0	4,240.6	4,272.4	4,240.6	14.3	11.0	149.90	-255.1	301.1	775.6	753.7	21.96	35.316	
4,330.7	4,271.1	4,302.9	4,271.1	14.4	11.1	150.07	-255.1	301.1	778.8	756.7	22.08	35.267	
4,400.0	4,340.0	4,371.8	4,340.0	14.5	11.2	150.39	-255.1	301.1	785.0	762.7	22.35	35.116	
4,429.1	4,369.0	4,400.8	4,369.0	14.6	11.3	150.50	-255.1	301.1	787.2	764.7	22.46	35.044	
4,500.0	4,439.7	4,471.5	4,439.7	14.8	11.4	150.72	-255.1	301.1	791.4	768.7	22.72	34.830	
4,527.5	4,467.2	4,499.0	4,467.2	14.8	11.4	150.78	-255.1	301.1	792.6	769.8	22.82	34.740	
4,600.0	4,539.7	4,571.4	4,539.7	14.9	11.6	150.88	-255.1	301.1	794.7	771.7	23.06	34.462	
4,626.0	4,565.6	4,597.4	4,565.6	15.0	11.6	150.90	-255.1	301.1	795.1	772.0	23.15	34.354	
4,660.2	4,599.8	4,631.6	4,599.8	15.0	11.7	150.94	-255.1	301.1	795.3	770.9	24.43	32.556	
4,700.0	4,639.6	4,671.4	4,639.6	15.0	11.8	179.64	-255.1	301.1	795.3	770.7	24.57	32.374	
4,724.4	4,664.0	4,695.8	4,664.0	15.1	11.8	179.64	-255.1	301.1	795.3	770.6	24.65	32.260	
4,800.0	4,739.6	4,771.4	4,739.6	15.2	11.9	179.64	-255.1	301.1	795.3	770.4	24.92	31.912	
4,822.8	4,762.5	4,794.3	4,762.5	15.2	12.0	179.64	-255.1	301.1	795.3	770.3	25.00	31.807	
4,900.0	4,839.6	4,871.4	4,839.6	15.3	12.1	179.64	-255.1	301.1	795.3	770.0	25.28	31.459	
4,921.2	4,860.9	4,892.7	4,860.9	15.4	12.2	179.64	-255.1	301.1	795.3	769.9	25.36	31.364	
5,000.0	4,939.6	4,971.4	4,939.6	15.5	12.3	179.64	-255.1	301.1	795.3	769.7	25.64	31.015	
5,019.7	4,959.3	4,991.1	4,959.3	15.5	12.4	179.64	-255.1	301.1	795.3	769.6	25.71	30.929	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,071.4	5,039.6	15.6	12.5	179.64	-255.1	301.1	795.3	769.3	26.01	30.581	
5,118.1	5,057.7	5,089.5	5,057.7	15.7	12.5	179.64	-255.1	301.1	795.3	769.2	26.07	30.504	
5,200.0	5,139.6	5,171.4	5,139.6	15.8	12.7	179.64	-255.1	301.1	795.3	768.9	26.37	30.156	
5,216.5	5,156.2	5,188.0	5,156.2	15.8	12.7	179.64	-255.1	301.1	795.3	768.9	26.43	30.087	
5,300.0	5,239.6	5,271.4	5,239.6	15.9	12.9	179.64	-255.1	301.1	795.3	768.6	26.74	29.741	
5,314.9	5,254.6	5,286.4	5,254.6	16.0	12.9	179.64	-255.1	301.1	795.3	768.5	26.80	29.679	
5,400.0	5,339.6	5,371.4	5,339.6	16.1	13.1	179.64	-255.1	301.1	795.3	768.2	27.11	29.334	
5,413.4	5,353.0	5,384.8	5,353.0	16.1	13.1	179.64	-255.1	301.1	795.3	768.1	27.16	29.280	
5,500.0	5,439.6	5,471.4	5,439.6	16.3	13.3	179.64	-255.1	301.1	795.3	767.8	27.49	28.936	
5,511.8	5,451.4	5,483.2	5,451.4	16.3	13.3	179.64	-255.1	301.1	795.3	767.8	27.53	28.889	
5,600.0	5,539.6	5,571.4	5,539.6	16.4	13.5	179.64	-255.1	301.1	795.3	767.4	27.86	28.546	
5,610.2	5,549.9	5,581.7	5,549.9	16.4	13.5	179.64	-255.1	301.1	795.3	767.4	27.90	28.506	
5,700.0	5,639.6	5,671.4	5,639.6	16.6	13.7	179.64	-255.1	301.1	795.3	767.1	28.24	28.165	
5,708.6	5,648.3	5,680.1	5,648.3	16.6	13.7	179.64	-255.1	301.1	795.3	767.0	28.27	28.132	
5,800.0	5,739.6	5,771.4	5,739.6	16.7	13.8	179.64	-255.1	301.1	795.3	766.7	28.62	27.791	
5,807.1	5,746.7	5,778.5	5,746.7	16.8	13.9	179.64	-255.1	301.1	795.3	766.7	28.64	27.765	
5,900.0	5,839.6	5,871.4	5,839.6	16.9	14.0	179.64	-255.1	301.1	795.3	766.3	29.00	27.426	
5,905.5	5,845.1	5,876.9	5,845.1	16.9	14.1	179.64	-255.1	301.1	795.3	766.3	29.02	27.406	
6,000.0	5,939.6	5,971.5	5,939.7	17.1	14.2	179.65	-255.1	301.0	795.3	765.9	29.38	27.070	
6,003.9	5,943.6	5,975.5	5,943.7	17.1	14.2	179.65	-255.1	300.9	795.3	765.9	29.39	27.056	
6,059.2	5,998.8	6,030.9	5,999.0	17.2	14.3	179.89	-255.1	297.7	795.3	765.7	29.60	26.867	
6,075.1	6,014.7	6,046.7	6,014.7	17.2	14.3	-90.00	-255.1	295.9	795.3	766.6	28.68	27.734	
6,100.0	6,039.6	6,071.5	6,039.2	17.2	14.4	-89.83	-255.1	292.5	795.3	766.6	28.74	27.675	
6,102.3	6,042.0	6,073.8	6,041.6	17.2	14.4	-89.81	-255.1	292.2	795.3	766.5	28.74	27.670	
6,150.0	6,089.4	6,120.9	6,087.8	17.3	14.4	-89.48	-255.1	283.2	795.3	766.5	28.83	27.586	
6,200.0	6,138.7	6,170.0	6,135.3	17.3	14.4	-89.13	-255.1	270.7	795.4	766.5	28.90	27.525	
6,200.8	6,139.5	6,170.8	6,136.0	17.3	14.4	-89.13	-255.1	270.5	795.4	766.5	28.90	27.524	
6,250.0	6,187.4	6,218.8	6,181.5	17.3	14.5	-88.79	-255.1	255.1	795.5	766.5	28.94	27.485	
6,299.2	6,234.4	6,266.5	6,225.5	17.4	14.5	-88.47	-255.1	236.8	795.6	766.6	28.98	27.456	
6,300.0	6,235.1	6,267.3	6,226.2	17.4	14.5	-88.46	-255.1	236.4	795.6	766.6	28.98	27.455	
6,350.0	6,281.7	6,315.5	6,269.4	17.4	14.5	-88.13	-255.1	215.0	795.7	766.7	29.01	27.426	
6,397.6	6,324.8	6,361.1	6,308.8	17.3	14.5	-87.83	-255.1	192.0	795.9	766.8	29.06	27.386	
6,400.0	6,326.9	6,363.4	6,310.7	17.3	14.5	-87.82	-255.1	190.8	795.9	766.8	29.06	27.384	
6,450.0	6,370.5	6,411.1	6,350.2	17.3	14.6	-87.52	-255.1	164.1	796.0	766.9	29.14	27.314	
6,496.0	6,409.1	6,454.7	6,384.7	17.3	14.6	-87.25	-255.1	137.3	796.2	767.0	29.26	27.213	
6,500.0	6,412.3	6,458.5	6,387.5	17.3	14.6	-87.22	-255.1	134.9	796.2	767.0	29.27	27.201	
6,550.0	6,452.1	6,505.6	6,422.8	17.3	14.7	-86.94	-255.1	103.6	796.4	767.0	29.47	27.028	
6,594.5	6,485.6	6,547.4	6,452.1	17.3	14.8	-86.71	-255.1	73.9	796.6	766.9	29.71	26.810	
6,600.0	6,489.7	6,552.6	6,455.7	17.3	14.9	-86.68	-255.1	70.1	796.6	766.9	29.75	26.780	
6,650.0	6,524.9	6,600.0	6,486.6	17.2	15.1	-86.43	-255.1	34.2	796.8	766.7	30.14	26.441	
6,692.9	6,553.0	6,639.3	6,510.4	17.2	15.3	-86.23	-255.1	2.9	797.0	766.4	30.57	26.068	
6,700.0	6,557.5	6,645.9	6,514.2	17.2	15.3	-86.20	-255.1	-2.5	797.0	766.4	30.65	26.007	
6,750.0	6,587.4	6,692.3	6,539.7	17.2	15.7	-85.99	-255.1	-41.2	797.2	765.9	31.30	25.472	
6,791.3	6,609.9	6,730.5	6,558.8	17.2	16.0	-85.82	-255.1	-74.3	797.4	765.4	31.96	24.950	
6,800.0	6,614.4	6,738.5	6,562.5	17.2	16.1	-85.79	-255.1	-81.4	797.4	765.3	32.10	24.842	
6,850.0	6,638.4	6,784.6	6,582.7	17.2	16.6	-85.61	-255.1	-122.9	797.6	764.6	33.06	24.130	
6,889.7	6,655.3	6,821.1	6,596.7	17.4	17.1	-85.49	-255.1	-156.6	797.8	763.8	33.93	23.511	
6,900.0	6,659.4	6,830.6	6,600.1	17.5	17.2	-85.46	-255.1	-165.4	797.8	763.6	34.16	23.351	
6,950.0	6,677.1	6,876.4	6,614.7	18.0	17.8	-85.32	-255.1	-208.8	797.9	762.5	35.42	22.525	
6,988.2	6,688.4	6,911.4	6,623.9	18.5	18.4	-85.23	-255.1	-242.5	798.1	761.6	36.49	21.872	
7,000.0	6,691.5	6,922.2	6,626.4	18.7	18.6	-85.21	-255.1	-253.1	798.1	761.3	36.83	21.671	
7,050.0	6,702.5	6,967.9	6,635.4	19.5	19.3	-85.11	-255.1	-297.9	798.2	759.8	38.36	20.810	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,708.4	7,000.0	6,639.9	20.1	19.9	-85.06	-255.1	-329.7	798.3	758.7	39.53	20.196	
7,100.0	6,710.1	7,013.5	6,641.4	20.4	20.1	-85.04	-255.1	-343.1	798.3	758.3	40.00	19.958	
7,150.0	6,714.2	7,059.1	6,644.5	21.3	21.0	-84.99	-255.1	-388.5	798.3	756.6	41.73	19.130	
7,185.0	6,715.0	7,091.4	6,645.0	21.9	21.6	-84.97	-255.1	-420.9	798.4	755.4	43.00	18.564	
7,185.6	6,715.0	7,091.9	6,645.0	21.9	21.6	-84.97	-255.1	-421.4	798.4	755.3	43.03	18.556	
7,200.0	6,715.0	7,106.4	6,645.0	22.2	21.9	-84.97	-255.1	-435.8	798.4	754.8	43.59	18.315	
7,283.4	6,714.8	7,189.8	6,644.9	23.9	23.7	-84.97	-255.1	-519.3	798.4	751.4	46.99	16.992	
7,300.0	6,714.8	7,206.4	6,644.8	24.2	24.0	-84.97	-255.1	-535.8	798.4	750.7	47.67	16.749	
7,381.9	6,714.6	7,288.2	6,644.7	26.0	25.8	-84.98	-255.1	-617.7	798.4	747.1	51.22	15.586	
7,400.0	6,714.6	7,306.4	6,644.7	26.4	26.2	-84.98	-255.1	-635.8	798.3	746.3	52.02	15.348	
7,480.3	6,714.4	7,386.7	6,644.6	28.2	28.1	-84.98	-255.1	-716.1	798.3	742.7	55.68	14.337	
7,500.0	6,714.4	7,406.4	6,644.6	28.7	28.6	-84.98	-255.1	-735.8	798.3	741.8	56.59	14.108	
7,578.7	6,714.2	7,485.1	6,644.4	30.5	30.4	-84.99	-255.1	-814.6	798.3	738.0	60.32	13.235	
7,600.0	6,714.2	7,506.4	6,644.4	31.0	31.0	-84.99	-255.1	-835.8	798.3	737.0	61.33	13.017	
7,677.1	6,714.0	7,583.5	6,644.3	32.9	32.9	-84.99	-255.1	-913.0	798.3	733.2	65.09	12.265	
7,700.0	6,714.0	7,606.4	6,644.3	33.4	33.4	-84.99	-255.1	-935.8	798.3	732.1	66.21	12.058	
7,775.6	6,713.9	7,681.9	6,644.2	35.3	35.3	-84.99	-255.1	-1,011.4	798.3	728.4	69.97	11.409	
7,800.0	6,713.8	7,706.4	6,644.1	35.9	35.9	-84.99	-255.1	-1,035.8	798.3	727.1	71.19	11.214	
7,874.0	6,713.7	7,780.4	6,644.0	37.8	37.8	-85.00	-255.1	-1,109.8	798.3	723.4	74.94	10.653	
7,900.0	6,713.6	7,806.4	6,644.0	38.4	38.5	-85.00	-255.1	-1,135.8	798.3	722.1	76.26	10.468	
7,972.4	6,713.5	7,878.8	6,643.9	40.3	40.4	-85.00	-255.1	-1,208.3	798.3	718.3	79.98	9.981	
8,000.0	6,713.4	7,906.4	6,643.9	41.0	41.1	-85.00	-255.1	-1,235.8	798.3	716.9	81.40	9.807	
8,070.8	6,713.3	7,977.2	6,643.8	42.8	42.9	-85.01	-255.1	-1,306.7	798.3	713.2	85.08	9.383	
8,100.0	6,713.2	8,006.4	6,643.7	43.6	43.7	-85.01	-255.1	-1,335.8	798.3	711.7	86.60	9.219	
8,169.3	6,713.1	8,075.7	6,643.6	45.4	45.5	-85.01	-255.1	-1,405.1	798.3	708.1	90.23	8.847	
8,200.0	6,713.0	8,106.4	6,643.6	46.2	46.3	-85.01	-255.1	-1,435.8	798.3	706.5	91.84	8.692	
8,267.7	6,712.9	8,174.1	6,643.5	48.0	48.1	-85.01	-255.1	-1,503.5	798.3	702.9	95.42	8.366	
8,300.0	6,712.8	8,206.4	6,643.5	48.8	49.0	-85.01	-255.1	-1,535.8	798.3	701.2	97.13	8.219	
8,366.1	6,712.7	8,272.5	6,643.4	50.6	50.8	-85.02	-255.1	-1,602.0	798.3	697.7	100.64	7.932	
8,400.0	6,712.6	8,306.4	6,643.3	51.5	51.7	-85.02	-255.1	-1,635.8	798.3	695.9	102.45	7.792	
8,464.5	6,712.5	8,370.9	6,643.2	53.2	53.4	-85.02	-255.1	-1,700.4	798.3	692.4	105.90	7.538	
8,500.0	6,712.4	8,406.4	6,643.2	54.1	54.4	-85.02	-255.1	-1,735.8	798.3	690.5	107.79	7.406	
8,563.0	6,712.3	8,469.4	6,643.1	55.8	56.1	-85.03	-255.1	-1,798.8	798.3	687.1	111.18	7.180	
8,600.0	6,712.3	8,506.4	6,643.1	56.8	57.1	-85.03	-255.1	-1,835.8	798.3	685.1	113.17	7.054	
8,661.4	6,712.1	8,567.8	6,643.0	58.5	58.7	-85.03	-255.1	-1,897.2	798.3	681.8	116.48	6.854	
8,700.0	6,712.1	8,606.4	6,642.9	59.5	59.8	-85.03	-255.1	-1,935.8	798.3	679.7	118.56	6.733	
8,759.8	6,711.9	8,666.2	6,642.8	61.1	61.4	-85.03	-255.1	-1,995.7	798.3	676.5	121.80	6.554	
8,800.0	6,711.9	8,706.4	6,642.8	62.2	62.5	-85.04	-255.1	-2,035.8	798.3	674.3	123.97	6.439	
8,858.2	6,711.8	8,764.6	6,642.7	63.8	64.1	-85.04	-255.1	-2,094.1	798.3	671.1	127.13	6.279	
8,900.0	6,711.7	8,806.4	6,642.6	64.9	65.2	-85.04	-255.1	-2,135.8	798.3	668.9	129.40	6.169	
8,956.7	6,711.6	8,863.1	6,642.6	66.5	66.8	-85.04	-255.1	-2,192.5	798.3	665.8	132.48	6.025	
9,000.0	6,711.5	8,906.4	6,642.5	67.6	68.0	-85.04	-255.1	-2,235.8	798.3	663.4	134.84	5.920	
9,055.1	6,711.4	8,961.5	6,642.4	69.1	69.5	-85.05	-255.1	-2,290.9	798.3	660.4	137.85	5.791	
9,100.0	6,711.3	9,006.4	6,642.4	70.4	70.7	-85.05	-255.1	-2,335.8	798.3	658.0	140.30	5.690	
9,153.5	6,711.2	9,059.9	6,642.3	71.8	72.2	-85.05	-255.1	-2,389.4	798.3	655.0	143.22	5.574	
9,200.0	6,711.1	9,106.4	6,642.2	73.1	73.4	-85.05	-255.1	-2,435.8	798.3	652.5	145.76	5.476	
9,251.9	6,711.0	9,158.3	6,642.2	74.5	74.9	-85.05	-255.1	-2,487.8	798.3	649.7	148.61	5.372	
9,300.0	6,710.9	9,206.4	6,642.1	75.8	76.2	-85.06	-255.1	-2,535.8	798.3	647.0	151.24	5.278	
9,350.4	6,710.8	9,256.8	6,642.0	77.2	77.6	-85.06	-255.1	-2,586.2	798.3	644.3	154.00	5.183	
9,400.0	6,710.7	9,306.4	6,642.0	78.6	79.0	-85.06	-255.1	-2,635.8	798.2	641.5	156.72	5.093	
9,448.8	6,710.6	9,355.2	6,641.9	79.9	80.3	-85.06	-255.1	-2,684.6	798.2	638.8	159.40	5.008	
9,500.0	6,710.5	9,406.4	6,641.9	81.3	81.7	-85.07	-255.1	-2,735.8	798.2	636.0	162.22	4.921	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	9,453.6	6,641.8	82.6	83.0	-85.07	-255.1	-2,783.1	798.2	633.4	164.82	4.843	
9,600.0	6,710.3	9,506.4	6,641.7	84.1	84.5	-85.07	-255.1	-2,835.8	798.2	630.5	167.72	4.759	
9,645.6	6,710.2	9,552.0	6,641.7	85.3	85.7	-85.07	-255.1	-2,881.5	798.2	628.0	170.23	4.689	
9,700.0	6,710.1	9,606.4	6,641.6	86.8	87.2	-85.07	-255.1	-2,935.8	798.2	625.0	173.23	4.608	
9,744.1	6,710.0	9,650.5	6,641.5	88.1	88.5	-85.08	-255.1	-2,979.9	798.2	622.6	175.66	4.544	
9,800.0	6,709.9	9,706.4	6,641.5	89.6	90.0	-85.08	-255.1	-3,035.8	798.2	619.5	178.74	4.466	
9,842.5	6,709.9	9,748.9	6,641.4	90.8	91.2	-85.08	-255.1	-3,078.3	798.2	617.1	181.08	4.408	
9,900.0	6,709.7	9,806.4	6,641.3	92.4	92.8	-85.08	-255.1	-3,135.8	798.2	614.0	184.26	4.332	
9,940.9	6,709.7	9,847.3	6,641.3	93.5	93.9	-85.08	-255.1	-3,176.8	798.2	611.7	186.52	4.280	
10,000.0	6,709.6	9,906.4	6,641.2	95.1	95.5	-85.09	-255.1	-3,235.8	798.2	608.4	189.78	4.206	
10,039.3	6,709.5	9,945.7	6,641.1	96.2	96.6	-85.09	-255.1	-3,275.2	798.2	606.3	191.96	4.158	
10,100.0	6,709.4	10,006.4	6,641.1	97.9	98.3	-85.09	-255.1	-3,335.8	798.2	602.9	195.31	4.087	
10,137.8	6,709.3	10,044.2	6,641.0	98.9	99.4	-85.09	-255.1	-3,373.6	798.2	600.8	197.40	4.044	
10,200.0	6,709.2	10,106.4	6,640.9	100.7	101.1	-85.10	-255.1	-3,435.8	798.2	597.4	200.84	3.974	
10,236.2	6,709.1	10,142.6	6,640.9	101.7	102.1	-85.10	-255.1	-3,472.0	798.2	595.4	202.85	3.935	
10,300.0	6,709.0	10,206.4	6,640.8	103.4	103.9	-85.10	-255.1	-3,535.8	798.2	591.8	206.38	3.868	
10,334.6	6,708.9	10,241.0	6,640.8	104.4	104.8	-85.10	-255.1	-3,570.5	798.2	589.9	208.30	3.832	
10,400.0	6,708.8	10,306.4	6,640.7	106.2	106.7	-85.10	-255.1	-3,635.8	798.2	586.3	211.92	3.767	
10,433.0	6,708.7	10,339.4	6,640.6	107.1	107.6	-85.11	-255.1	-3,668.9	798.2	584.4	213.75	3.734	
10,500.0	6,708.6	10,406.4	6,640.5	109.0	109.4	-85.11	-255.1	-3,735.8	798.2	580.7	217.46	3.670	
10,531.5	6,708.5	10,437.9	6,640.5	109.9	110.3	-85.11	-255.1	-3,767.3	798.2	579.0	219.21	3.641	
10,600.0	6,708.4	10,506.4	6,640.4	111.8	112.2	-85.11	-255.1	-3,835.8	798.2	575.2	223.01	3.579	
10,629.9	6,708.4	10,536.3	6,640.4	112.6	113.1	-85.11	-255.1	-3,865.7	798.2	573.5	224.67	3.553	
10,700.0	6,708.2	10,606.4	6,640.3	114.6	115.0	-85.12	-255.1	-3,935.8	798.2	569.6	228.56	3.492	
10,728.3	6,708.2	10,634.7	6,640.3	115.3	115.8	-85.12	-255.1	-3,964.2	798.2	568.1	230.13	3.468	
10,800.0	6,708.0	10,706.4	6,640.2	117.3	117.8	-85.12	-255.1	-4,035.8	798.2	564.1	234.11	3.409	
10,826.7	6,708.0	10,733.1	6,640.1	118.1	118.5	-85.12	-255.1	-4,062.6	798.2	562.6	235.60	3.388	
10,900.0	6,707.8	10,806.4	6,640.0	120.1	120.6	-85.13	-255.1	-4,135.8	798.2	558.5	239.66	3.330	
10,925.2	6,707.8	10,831.6	6,640.0	120.8	121.3	-85.13	-255.1	-4,161.0	798.2	557.1	241.06	3.311	
11,000.0	6,707.6	10,906.4	6,639.9	122.9	123.4	-85.13	-255.1	-4,235.8	798.2	552.9	245.22	3.255	
11,023.6	6,707.6	10,930.0	6,639.9	123.6	124.0	-85.13	-255.1	-4,259.4	798.2	551.6	246.53	3.238	
11,100.0	6,707.5	11,006.4	6,639.8	125.7	126.2	-85.14	-255.1	-4,335.8	798.2	547.4	250.78	3.183	
11,122.0	6,707.4	11,028.4	6,639.8	126.3	126.8	-85.14	-255.1	-4,357.9	798.2	546.2	252.01	3.167	
11,200.0	6,707.3	11,106.4	6,639.7	128.5	129.0	-85.14	-255.1	-4,435.8	798.2	541.8	256.34	3.114	
11,220.4	6,707.2	11,126.8	6,639.6	129.0	129.5	-85.14	-255.1	-4,456.3	798.2	540.7	257.48	3.100	
11,300.0	6,707.1	11,206.4	6,639.5	131.3	131.7	-85.14	-255.1	-4,535.8	798.2	536.2	261.90	3.047	
11,318.9	6,707.0	11,225.3	6,639.5	131.8	132.3	-85.15	-255.1	-4,554.7	798.2	535.2	262.95	3.035	
11,400.0	6,706.9	11,306.4	6,639.4	134.0	134.5	-85.15	-255.1	-4,635.8	798.1	530.7	267.47	2.984	
11,417.3	6,706.9	11,323.7	6,639.4	134.5	135.0	-85.15	-255.1	-4,653.1	798.1	529.7	268.43	2.973	
11,500.0	6,706.7	11,406.4	6,639.3	136.8	137.3	-85.15	-255.1	-4,735.8	798.1	525.1	273.04	2.923	
11,515.7	6,706.7	11,422.1	6,639.3	137.3	137.8	-85.15	-255.1	-4,751.6	798.1	524.2	273.91	2.914	
11,600.0	6,706.5	11,506.4	6,639.2	139.6	140.1	-85.16	-255.1	-4,835.9	798.1	519.5	278.60	2.865	
11,614.1	6,706.5	11,520.5	6,639.1	140.0	140.5	-85.16	-255.1	-4,850.0	798.1	518.7	279.39	2.857	
11,700.0	6,706.3	11,606.4	6,639.0	142.4	142.9	-85.16	-255.1	-4,935.9	798.1	514.0	284.17	2.809	
11,712.6	6,706.3	11,619.0	6,639.0	142.8	143.3	-85.16	-255.1	-4,948.4	798.1	513.3	284.87	2.802	
11,800.0	6,706.1	11,706.4	6,638.9	145.2	145.7	-85.17	-255.1	-5,035.9	798.1	508.4	289.74	2.755	
11,811.0	6,706.1	11,717.4	6,638.9	145.5	146.0	-85.17	-255.1	-5,046.9	798.1	507.8	290.36	2.749	
11,900.0	6,705.9	11,806.4	6,638.8	148.0	148.5	-85.17	-255.1	-5,135.9	798.1	502.8	295.32	2.703	
11,909.4	6,705.9	11,815.8	6,638.8	148.3	148.8	-85.17	-255.1	-5,145.3	798.1	502.3	295.84	2.698	
12,000.0	6,705.8	11,906.4	6,638.7	150.8	151.3	-85.18	-255.1	-5,235.9	798.1	497.2	300.89	2.653	
12,007.8	6,705.7	11,914.2	6,638.6	151.0	151.5	-85.18	-255.1	-5,243.7	798.1	496.8	301.33	2.649	
12,100.0	6,705.6	12,006.4	6,638.5	153.6	154.1	-85.18	-255.1	-5,335.9	798.1	491.6	306.46	2.604	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - WACKER 10G-214 - ORIGINAL WELLBORE - PROPOSAL #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,106.3	6,705.6	12,012.7	6,638.5	153.8	154.3	-85.18	-255.1	-5,342.1	798.1	491.3	306.81	2.601		
12,200.0	6,705.4	12,106.4	6,638.4	156.4	156.9	-85.19	-255.1	-5,435.9	798.1	486.1	312.04	2.558		
12,204.7	6,705.4	12,111.1	6,638.4	156.5	157.0	-85.19	-255.1	-5,440.6	798.1	485.8	312.30	2.556		
12,300.0	6,705.2	12,206.4	6,638.3	159.2	159.7	-85.19	-255.1	-5,535.9	798.1	480.5	317.62	2.513		
12,303.1	6,705.2	12,209.5	6,638.3	159.3	159.8	-85.19	-255.1	-5,539.0	798.1	480.3	317.79	2.511		
12,400.0	6,705.0	12,306.4	6,638.2	162.0	162.5	-85.20	-255.1	-5,635.9	798.1	474.9	323.19	2.469		
12,401.5	6,705.0	12,307.9	6,638.2	162.0	162.5	-85.20	-255.1	-5,637.4	798.1	474.8	323.28	2.469		
12,500.0	6,704.8	12,406.4	6,638.0	164.8	165.3	-85.20	-255.1	-5,735.9	798.1	469.3	328.77	2.427		
12,598.4	6,704.6	12,504.8	6,637.9	167.5	168.0	-85.21	-255.1	-5,834.3	798.1	463.8	334.26	2.388		
12,600.0	6,704.6	12,506.4	6,637.9	167.6	168.1	-85.21	-255.1	-5,835.9	798.1	463.7	334.35	2.387		
12,696.8	6,704.4	12,603.2	6,637.8	170.3	170.8	-85.21	-255.1	-5,932.7	798.1	458.3	339.76	2.349		
12,700.0	6,704.4	12,606.4	6,637.8	170.4	170.9	-85.21	-255.1	-5,935.9	798.1	458.1	339.93	2.348		
12,795.2	6,704.3	12,701.6	6,637.7	173.0	173.6	-85.21	-255.1	-6,031.1	798.1	452.8	345.25	2.312		
12,800.0	6,704.2	12,706.4	6,637.7	173.2	173.7	-85.21	-255.1	-6,035.9	798.1	452.6	345.52	2.310		
12,893.7	6,704.1	12,800.1	6,637.6	175.8	176.3	-85.22	-255.1	-6,129.5	798.1	447.3	350.74	2.275		
12,900.0	6,704.1	12,806.4	6,637.6	176.0	176.5	-85.22	-255.1	-6,135.9	798.1	447.0	351.10	2.273		
12,992.1	6,703.9	12,898.5	6,637.4	178.5	179.1	-85.22	-255.1	-6,228.0	798.1	441.8	356.24	2.240		
13,000.0	6,703.9	12,906.4	6,637.4	178.8	179.3	-85.22	-255.1	-6,235.9	798.1	441.4	356.68	2.237		
13,090.5	6,703.7	12,996.9	6,637.3	181.3	181.8	-85.23	-255.1	-6,326.4	798.1	436.3	361.74	2.206		
13,100.0	6,703.7	13,006.4	6,637.3	181.6	182.1	-85.23	-255.1	-6,335.9	798.1	435.8	362.27	2.203		
13,188.9	6,703.5	13,095.3	6,637.2	184.0	184.6	-85.23	-255.1	-6,424.8	798.1	430.8	367.23	2.173		
13,200.0	6,703.5	13,106.4	6,637.2	184.4	184.9	-85.23	-255.1	-6,435.9	798.1	430.2	367.85	2.170		
13,287.4	6,703.3	13,193.8	6,637.1	186.8	187.3	-85.24	-255.1	-6,523.2	798.0	425.3	372.73	2.141		
13,300.0	6,703.3	13,206.4	6,637.1	187.2	187.7	-85.24	-255.1	-6,535.9	798.0	424.6	373.44	2.137		
13,385.8	6,703.2	13,292.2	6,637.0	189.6	190.1	-85.24	-255.1	-6,621.7	798.0	419.8	378.23	2.110		
13,400.0	6,703.1	13,306.4	6,637.0	190.0	190.5	-85.24	-255.1	-6,635.9	798.0	419.0	379.02	2.106		
13,484.2	6,703.0	13,390.6	6,636.9	192.3	192.8	-85.25	-255.1	-6,720.1	798.0	414.3	383.73	2.080		
13,500.0	6,702.9	13,406.4	6,636.8	192.8	193.3	-85.25	-255.1	-6,735.9	798.0	413.4	384.61	2.075		
13,582.6	6,702.8	13,489.0	6,636.7	195.1	195.6	-85.25	-255.1	-6,818.5	798.0	408.8	389.23	2.050		
13,600.0	6,702.8	13,506.4	6,636.7	195.6	196.1	-85.25	-255.1	-6,835.9	798.0	407.8	390.20	2.045		
13,681.1	6,702.6	13,587.5	6,636.6	197.8	198.4	-85.26	-255.1	-6,916.9	798.0	403.3	394.73	2.022		
13,700.0	6,702.6	13,606.4	6,636.6	198.4	198.9	-85.26	-255.1	-6,935.9	798.0	402.2	395.78	2.016		
13,779.5	6,702.4	13,685.9	6,636.5	200.6	201.1	-85.26	-255.1	-7,015.4	798.0	397.8	400.23	1.994		
13,800.0	6,702.4	13,706.4	6,636.5	201.2	201.7	-85.26	-255.1	-7,035.9	798.0	396.6	401.37	1.988		
13,877.9	6,702.2	13,784.3	6,636.4	203.3	203.9	-85.27	-255.1	-7,113.8	798.0	392.3	405.73	1.967		
13,900.0	6,702.2	13,806.4	6,636.4	204.0	204.5	-85.27	-255.1	-7,135.9	798.0	391.1	406.96	1.961		
13,976.3	6,702.1	13,882.7	6,636.3	206.1	206.6	-85.27	-255.1	-7,212.2	798.0	386.8	411.23	1.941		
14,000.0	6,702.0	13,906.4	6,636.2	206.8	207.3	-85.27	-255.1	-7,235.9	798.0	385.5	412.55	1.934		
14,074.8	6,701.9	13,981.2	6,636.2	208.9	209.4	-85.28	-255.1	-7,310.6	798.0	381.3	416.73	1.915		
14,100.0	6,701.8	14,006.4	6,636.1	209.6	210.1	-85.28	-255.1	-7,335.9	798.0	379.9	418.14	1.908		
14,173.2	6,701.7	14,079.6	6,636.0	211.6	212.2	-85.28	-255.1	-7,409.1	798.0	375.8	422.23	1.890		
14,200.0	6,701.6	14,106.4	6,636.0	212.4	212.9	-85.28	-255.1	-7,435.9	798.0	374.3	423.73	1.883		
14,271.6	6,701.5	14,178.0	6,635.9	214.4	214.9	-85.29	-255.1	-7,507.5	798.0	370.3	427.74	1.866		
14,300.0	6,701.4	14,206.4	6,635.9	215.2	215.7	-85.29	-255.1	-7,535.9	798.0	368.7	429.32	1.859		
14,370.0	6,701.3	14,276.4	6,635.8	217.1	217.7	-85.29	-255.1	-7,605.9	798.0	364.7	433.24	1.842		
14,400.0	6,701.3	14,306.4	6,635.8	218.0	218.5	-85.29	-255.1	-7,635.9	798.0	363.1	434.91	1.835		
14,468.5	6,701.1	14,374.9	6,635.7	219.9	220.4	-85.30	-255.1	-7,704.3	798.0	359.2	438.74	1.819		
14,500.0	6,701.1	14,406.4	6,635.7	220.8	221.3	-85.30	-255.1	-7,735.9	798.0	357.5	440.51	1.812		
14,566.9	6,701.0	14,473.3	6,635.6	222.6	223.2	-85.30	-255.1	-7,802.8	798.0	353.7	444.25	1.796		
14,600.0	6,700.9	14,506.4	6,635.5	223.6	224.1	-85.30	-255.1	-7,835.9	798.0	351.9	446.10	1.789		
14,665.3	6,700.8	14,571.7	6,635.5	225.4	226.0	-85.31	-255.1	-7,901.2	798.0	348.2	449.75	1.774		
14,700.0	6,700.7	14,606.4	6,635.4	226.4	226.9	-85.31	-255.1	-7,935.9	798.0	346.3	451.69	1.767		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - WACKER 10G-214 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	14,670.1	6,635.4	228.2	228.7	-85.31	-255.1	-7,999.6	798.0	342.7	455.26	1.753	
14,800.0	6,700.5	14,706.4	6,635.3	229.2	229.7	-85.31	-255.1	-8,035.9	798.0	340.7	457.29	1.745	
14,862.2	6,700.4	14,768.6	6,635.2	230.9	231.5	-85.32	-255.1	-8,098.0	798.0	337.2	460.76	1.732	
14,900.0	6,700.3	14,806.4	6,635.2	232.0	232.5	-85.32	-255.1	-8,135.9	798.0	335.1	462.88	1.724	
14,960.6	6,700.2	14,867.0	6,635.1	233.7	234.2	-85.32	-255.1	-8,196.5	798.0	331.7	466.27	1.711	
15,000.0	6,700.2	14,906.4	6,635.1	234.8	235.3	-85.32	-255.1	-8,235.9	798.0	329.5	468.47	1.703	
15,059.0	6,700.0	14,965.4	6,635.0	236.4	237.0	-85.33	-255.1	-8,294.9	797.9	326.2	471.78	1.691	
15,076.5	6,700.0	14,982.9	6,635.0	236.9	237.5	-85.33	-255.1	-8,312.3	797.9	325.2	472.75	1.688	
15,082.8	6,700.0	14,982.9	6,635.0	237.1	237.5	-85.33	-255.1	-8,312.3	798.0	325.0	472.93	1.687 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-179.29	-134.8	-1.7	134.8				
98.4	98.4	98.4	98.4	0.1	0.1	-179.29	-134.8	-1.7	134.8	134.6	0.19	701.250	
100.0	100.0	100.0	100.0	0.1	0.1	-179.29	-134.8	-1.7	134.8	134.6	0.20	689.380	
196.8	196.8	196.8	196.8	0.3	0.3	-179.29	-134.8	-1.7	134.8	134.2	0.63	213.666	
200.0	200.0	200.0	200.0	0.3	0.3	-179.29	-134.8	-1.7	134.8	134.2	0.65	208.976	
295.3	295.3	295.3	295.3	0.5	0.5	-179.29	-134.8	-1.7	134.8	133.7	1.07	125.591	
300.0	300.0	300.0	300.0	0.5	0.5	-179.29	-134.8	-1.7	134.8	133.7	1.09	123.154	
393.7	393.7	393.7	393.7	0.8	0.8	-179.29	-134.8	-1.7	134.8	133.3	1.52	88.933	
400.0	400.0	400.0	400.0	0.8	0.8	-179.29	-134.8	-1.7	134.8	133.3	1.54	87.301	
492.1	492.1	492.1	492.1	1.0	1.0	-179.29	-134.8	-1.7	134.8	132.8	1.96	68.839	
500.0	500.0	500.0	500.0	1.0	1.0	-179.29	-134.8	-1.7	134.8	132.8	1.99	67.617	
590.5	590.5	590.5	590.5	1.2	1.2	-179.29	-134.8	-1.7	134.8	132.4	2.40	56.152	
600.0	600.0	600.0	600.0	1.2	1.2	-179.29	-134.8	-1.7	134.8	132.4	2.44	55.176	
689.0	689.0	689.0	689.0	1.4	1.4	-179.29	-134.8	-1.7	134.8	132.0	2.84	47.414	
700.0	700.0	700.0	700.0	1.4	1.4	-179.29	-134.8	-1.7	134.8	131.9	2.89	46.601	
787.4	787.4	787.4	787.4	1.6	1.6	-179.29	-134.8	-1.7	134.8	131.5	3.29	41.029	
800.0	800.0	800.0	800.0	1.7	1.7	-179.29	-134.8	-1.7	134.8	131.5	3.34	40.334	
885.8	885.8	885.8	885.8	1.9	1.9	-179.29	-134.8	-1.7	134.8	131.1	3.73	36.160	
900.0	900.0	900.0	900.0	1.9	1.9	-179.29	-134.8	-1.7	134.8	131.0	3.79	35.552	
984.2	984.2	984.2	984.2	2.1	2.1	-179.29	-134.8	-1.7	134.8	130.6	4.17	32.323	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.29	-134.8	-1.7	134.8	130.6	4.24	31.784 CC, ES	
1,082.7	1,082.7	1,081.4	1,081.3	2.3	2.3	-178.83	-135.2	-2.8	135.2	130.6	4.60	29.422	
1,100.0	1,100.0	1,098.4	1,098.4	2.3	2.3	-178.62	-135.3	-3.3	135.4	130.7	4.67	28.995	
1,181.1	1,181.1	1,178.0	1,177.9	2.5	2.5	154.34	-136.6	-6.9	137.8	132.8	5.01	27.519	
1,200.0	1,200.0	1,196.5	1,196.3	2.6	2.5	154.90	-137.0	-8.0	138.9	133.8	5.09	27.293	
1,279.5	1,279.4	1,273.8	1,273.4	2.7	2.7	157.80	-139.1	-14.0	145.1	139.7	5.43	26.730	
1,300.0	1,299.8	1,293.6	1,293.1	2.8	2.7	158.67	-139.7	-15.9	147.2	141.7	5.51	26.700	
1,377.9	1,377.5	1,368.3	1,367.3	3.0	2.9	162.26	-142.5	-24.0	157.6	151.8	5.86	26.915	
1,400.0	1,399.5	1,389.2	1,388.0	3.0	2.9	163.33	-143.4	-26.6	161.2	155.3	5.95	27.090	
1,476.4	1,475.3	1,460.9	1,458.9	3.2	3.1	167.07	-146.9	-36.6	176.1	169.8	6.29	27.981	
1,500.0	1,498.7	1,482.8	1,480.5	3.3	3.2	168.21	-148.0	-40.0	181.5	175.1	6.40	28.369	
1,574.8	1,572.6	1,551.2	1,547.8	3.5	3.4	171.71	-152.0	-51.6	200.9	194.1	6.73	29.832	
1,600.0	1,597.5	1,573.9	1,570.0	3.5	3.5	172.82	-153.5	-55.8	208.2	201.4	6.84	30.429	
1,673.2	1,669.4	1,638.7	1,633.4	3.7	3.7	175.87	-157.9	-68.7	232.0	224.8	7.17	32.353	
1,700.1	1,695.8	1,662.1	1,656.2	3.8	3.8	176.91	-159.6	-73.7	241.6	234.3	7.29	33.150	
1,771.6	1,765.7	1,723.4	1,715.7	4.1	4.0	179.48	-164.4	-87.6	268.5	260.8	7.63	35.205	
1,800.0	1,793.4	1,747.4	1,738.9	4.2	4.1	-179.59	-166.4	-93.3	279.5	271.8	7.76	36.023	
1,870.1	1,862.0	1,808.5	1,797.9	4.4	4.4	-177.40	-171.7	-108.6	307.8	299.7	8.10	37.972	
1,900.0	1,891.3	1,835.5	1,823.9	4.5	4.5	-176.55	-174.0	-115.4	320.0	311.7	8.25	38.781	
1,968.5	1,958.3	1,897.2	1,883.4	4.8	4.8	-174.81	-179.4	-131.0	348.1	339.5	8.59	40.542	
2,000.0	1,989.1	1,925.6	1,910.7	4.9	4.9	-174.10	-181.9	-138.2	361.1	352.4	8.75	41.292	
2,066.9	2,054.5	1,986.0	1,968.9	5.1	5.2	-172.75	-187.1	-153.5	389.0	379.9	9.08	42.829	
2,100.0	2,086.9	2,015.8	1,997.6	5.3	5.4	-172.15	-189.7	-161.0	402.8	393.5	9.25	43.559	
2,165.3	2,150.8	2,074.7	2,054.4	5.5	5.7	-171.08	-194.9	-175.9	430.1	420.6	9.58	44.904	
2,200.0	2,184.7	2,105.9	2,084.5	5.6	5.8	-170.56	-197.6	-183.8	444.7	434.9	9.75	45.593	
2,263.8	2,247.1	2,163.4	2,139.9	5.9	6.1	-169.69	-202.6	-198.3	471.6	461.5	10.08	46.774	
2,300.0	2,282.5	2,196.1	2,171.3	6.0	6.3	-169.24	-205.4	-206.5	486.9	476.6	10.27	47.423	
2,362.2	2,343.3	2,252.1	2,225.4	6.3	6.6	-168.53	-210.3	-220.7	513.2	502.6	10.59	48.461	
2,400.0	2,380.3	2,286.2	2,258.2	6.5	6.8	-168.13	-213.3	-229.3	529.2	518.4	10.79	49.068	
2,460.6	2,439.6	2,340.9	2,310.9	6.7	7.1	-167.54	-218.1	-243.1	555.0	543.9	11.10	49.985	
2,500.0	2,478.1	2,376.4	2,345.1	6.9	7.3	-167.19	-221.1	-252.1	571.7	560.4	11.31	50.555	
2,559.0	2,535.9	2,429.6	2,396.4	7.1	7.5	-166.69	-225.8	-265.5	596.9	585.3	11.62	51.364	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,466.5	2,431.9	7.3	7.7	-166.37	-229.0	-274.8	614.3	602.5	11.84	51.901	
2,657.5	2,632.2	2,518.3	2,481.9	7.5	8.0	-165.95	-233.5	-287.9	638.9	626.7	12.14	52.617	
2,700.0	2,673.8	2,556.6	2,518.8	7.7	8.2	-165.66	-236.8	-297.6	657.0	644.7	12.37	53.123	
2,755.9	2,728.4	2,607.0	2,567.4	7.9	8.5	-165.30	-241.2	-310.3	680.9	668.3	12.67	53.758	
2,800.0	2,771.6	2,646.8	2,605.7	8.1	8.7	-165.03	-244.7	-320.4	699.8	686.9	12.90	54.235	
2,854.3	2,824.7	2,695.8	2,652.9	8.3	9.0	-164.73	-249.0	-332.7	723.1	709.9	13.19	54.798	
2,900.0	2,869.4	2,736.9	2,692.5	8.5	9.2	-164.48	-252.6	-343.1	742.6	729.2	13.44	55.250	
2,952.7	2,921.0	2,784.5	2,738.4	8.8	9.5	-164.21	-256.7	-355.2	765.2	751.5	13.73	55.749	
3,000.0	2,967.2	2,827.1	2,779.4	9.0	9.7	-163.99	-260.4	-365.9	785.5	771.5	13.98	56.178	
3,051.2	3,017.3	2,873.2	2,823.9	9.2	10.0	-163.76	-264.4	-377.6	807.5	793.2	14.26	56.622	
3,100.0	3,065.0	2,917.2	2,866.3	9.4	10.2	-163.55	-268.3	-388.7	828.4	813.9	14.53	57.030	
3,149.6	3,113.5	2,961.9	2,909.4	9.6	10.5	-163.34	-272.2	-400.0	849.7	834.9	14.80	57.426	
3,200.0	3,162.8	3,007.4	2,953.1	9.8	10.7	-163.15	-276.1	-411.5	871.4	856.3	15.07	57.815	
3,248.0	3,209.8	3,050.7	2,994.9	10.0	11.0	-162.97	-279.9	-422.4	892.0	876.7	15.34	58.167	
3,300.0	3,260.6	3,097.5	3,040.0	10.2	11.2	-162.79	-284.0	-434.2	914.4	898.8	15.62	58.537	
3,346.4	3,306.1	3,139.4	3,080.4	10.5	11.5	-162.63	-287.6	-444.8	934.4	918.5	15.88	58.853	
3,400.0	3,358.5	3,187.6	3,126.9	10.7	11.7	-162.46	-291.8	-457.0	957.4	941.2	16.17	59.205	
3,444.9	3,402.3	3,228.1	3,165.8	10.9	12.0	-162.32	-295.3	-467.2	976.7	960.3	16.42	59.488	
3,500.0	3,456.3	3,277.8	3,213.7	11.1	12.2	-162.16	-299.7	-479.8	1,000.4	983.7	16.72	59.824	
3,543.3	3,498.6	3,316.8	3,251.3	11.3	12.5	-162.03	-303.1	-489.6	1,019.1	1,002.1	16.96	60.078	
3,600.0	3,554.1	3,367.9	3,300.6	11.5	12.8	-161.88	-307.5	-502.5	1,043.5	1,026.2	17.28	60.399	
3,641.7	3,594.9	3,405.5	3,336.8	11.7	13.0	-161.77	-310.8	-512.0	1,061.5	1,044.0	17.51	60.627	
3,700.0	3,651.9	3,458.1	3,387.5	12.0	13.3	-161.63	-315.4	-525.3	1,086.6	1,068.7	17.83	60.934	
3,740.1	3,691.2	3,494.3	3,422.3	12.2	13.5	-161.53	-318.5	-534.5	1,103.9	1,085.8	18.06	61.139	
3,800.0	3,749.7	3,548.2	3,474.3	12.4	13.8	-161.39	-323.2	-548.1	1,129.7	1,111.3	18.39	61.433	
3,838.6	3,787.4	3,583.0	3,507.8	12.6	14.0	-161.31	-326.3	-556.9	1,146.3	1,127.7	18.60	61.617	
3,900.0	3,847.5	3,638.4	3,561.2	12.9	14.3	-161.18	-331.1	-570.9	1,172.8	1,153.8	18.95	61.900	
3,937.0	3,883.7	3,671.7	3,593.3	13.0	14.5	-161.10	-334.0	-579.3	1,188.7	1,169.6	19.15	62.064	
4,000.0	3,945.3	3,728.5	3,648.1	13.3	14.8	-160.97	-338.9	-593.6	1,215.9	1,196.4	19.51	62.336	
4,035.4	3,980.0	3,760.4	3,678.8	13.5	15.0	-160.90	-341.7	-601.7	1,231.2	1,211.5	19.70	62.484	
4,060.0	4,004.0	3,782.6	3,700.2	13.6	15.1	-160.86	-343.6	-607.3	1,241.8	1,221.9	19.84	62.585	
4,100.0	4,043.2	3,818.8	3,735.0	13.7	15.3	-160.90	-346.8	-616.4	1,258.8	1,238.7	20.11	62.602	
4,133.8	4,076.5	3,849.5	3,764.7	13.8	15.5	-160.93	-349.5	-624.2	1,272.8	1,252.5	20.32	62.636	
4,200.0	4,141.6	3,910.1	3,823.1	14.0	15.8	-160.97	-354.7	-639.5	1,299.3	1,278.5	20.73	62.665	
4,232.3	4,173.5	3,939.8	3,851.7	14.1	16.0	-160.97	-357.3	-647.0	1,311.7	1,290.7	20.93	62.673	
4,300.0	4,240.6	4,002.6	3,912.2	14.3	16.4	-160.96	-362.8	-662.9	1,336.7	1,315.3	21.33	62.656	
4,330.7	4,271.1	4,031.3	3,939.8	14.4	16.5	-160.95	-365.3	-670.1	1,347.6	1,326.1	21.51	62.645	
4,400.0	4,340.0	4,096.3	4,002.5	14.5	16.9	-160.90	-371.0	-686.5	1,371.1	1,349.2	21.91	62.587	
4,429.1	4,369.0	4,123.8	4,029.0	14.6	17.1	-160.87	-373.4	-693.5	1,380.5	1,358.4	22.07	62.561	
4,500.0	4,439.7	4,191.0	4,093.7	14.8	17.4	-160.78	-379.2	-710.4	1,402.4	1,379.9	22.45	62.468	
4,527.5	4,467.2	4,217.2	4,119.0	14.8	17.6	-160.74	-381.5	-717.1	1,410.4	1,387.9	22.59	62.431	
4,600.0	4,539.7	4,286.5	4,185.8	14.9	18.0	-160.61	-387.5	-734.6	1,430.6	1,407.6	22.96	62.307	
4,626.0	4,565.6	4,311.4	4,209.8	15.0	18.1	-160.55	-389.7	-740.9	1,437.4	1,414.3	23.09	62.261	
4,660.2	4,599.8	4,344.3	4,241.5	15.0	18.3	-131.74	-392.6	-749.2	1,446.0	1,414.0	32.06	45.103	
4,700.0	4,639.6	4,382.7	4,278.5	15.0	18.5	-131.58	-395.9	-758.9	1,455.9	1,423.6	32.33	45.034	
4,724.4	4,664.0	4,406.2	4,301.1	15.1	18.7	-131.49	-398.0	-764.8	1,462.0	1,429.5	32.50	44.988	
4,800.0	4,739.6	4,479.1	4,371.4	15.2	19.1	-131.19	-404.3	-783.2	1,480.8	1,447.7	33.02	44.847	
4,822.8	4,762.5	4,501.1	4,392.5	15.2	19.2	-131.10	-406.2	-788.8	1,486.4	1,453.3	33.18	44.805	
4,900.0	4,839.6	4,575.4	4,464.2	15.3	19.6	-130.81	-412.7	-807.6	1,505.7	1,472.0	33.71	44.666	
4,921.2	4,860.9	4,595.9	4,483.9	15.4	19.8	-130.73	-414.5	-812.7	1,511.0	1,477.1	33.86	44.628	
5,000.0	4,939.6	4,671.8	4,557.1	15.5	20.2	-130.44	-421.1	-831.9	1,530.6	1,496.2	34.40	44.490	
5,019.7	4,959.3	4,690.8	4,575.3	15.5	20.3	-130.37	-422.7	-836.7	1,535.5	1,501.0	34.54	44.456	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	4,768.2	4,649.9	15.6	20.7	-130.08	-429.5	-856.2	1,555.7	1,520.6	35.10	44.318	
5,118.1	5,057.7	4,785.6	4,666.7	15.7	20.8	-130.02	-431.0	-860.6	1,560.2	1,525.0	35.23	44.288	
5,200.0	5,139.6	4,864.5	4,742.8	15.8	21.3	-129.73	-437.9	-880.6	1,580.7	1,544.9	35.80	44.151	
5,216.5	5,156.2	4,880.5	4,758.1	15.8	21.4	-129.68	-439.3	-884.6	1,584.9	1,549.0	35.92	44.124	
5,300.0	5,239.6	4,960.9	4,835.7	15.9	21.9	-129.40	-446.3	-904.9	1,605.9	1,569.4	36.51	43.989	
5,314.9	5,254.6	4,975.3	4,849.5	16.0	21.9	-129.35	-447.5	-908.6	1,609.6	1,573.0	36.61	43.965	
5,400.0	5,339.6	5,057.3	4,928.5	16.1	22.4	-129.07	-454.7	-929.3	1,631.0	1,593.8	37.21	43.831	
5,413.4	5,353.0	5,070.2	4,940.9	16.1	22.5	-129.03	-455.8	-932.5	1,634.4	1,597.1	37.31	43.810	
5,500.0	5,439.6	7,987.0	6,713.2	16.3	38.3	178.82	-514.4	317.8	1,653.7	1,621.7	31.93	51.792	
5,511.8	5,451.4	7,986.8	6,713.2	16.3	38.3	178.83	-514.4	317.6	1,644.6	1,612.6	31.95	51.475	
5,600.0	5,539.6	7,985.3	6,713.2	16.4	38.2	178.91	-514.4	316.1	1,577.9	1,545.8	32.10	49.152	
5,610.2	5,549.9	7,985.1	6,713.2	16.4	38.2	178.92	-514.4	315.9	1,570.4	1,538.2	32.12	48.889	
5,700.0	5,639.6	7,983.6	6,713.3	16.6	38.2	179.01	-514.4	314.4	1,505.1	1,472.8	32.28	46.627	
5,708.6	5,648.3	7,983.4	6,713.3	16.6	38.2	179.01	-514.4	314.3	1,498.9	1,466.6	32.29	46.414	
5,800.0	5,739.6	7,981.8	6,713.3	16.7	38.2	179.10	-514.4	312.7	1,435.4	1,403.0	32.46	44.227	
5,807.1	5,746.7	7,981.7	6,713.3	16.8	38.2	179.10	-514.4	312.6	1,430.6	1,398.2	32.47	44.062	
5,900.0	5,839.6	7,980.1	6,713.3	16.9	38.1	179.19	-514.4	311.0	1,369.6	1,336.9	32.63	41.967	
5,905.5	5,845.1	7,980.0	6,713.3	16.9	38.1	179.20	-514.4	310.9	1,366.1	1,333.4	32.64	41.847	
6,000.0	5,939.6	7,978.4	6,713.3	17.1	38.1	179.28	-514.4	309.3	1,308.0	1,275.2	32.81	39.862	
6,003.9	5,943.6	7,978.4	6,713.3	17.1	38.1	179.29	-514.4	309.2	1,305.7	1,272.9	32.82	39.783	
6,059.2	5,998.8	7,977.4	6,713.4	17.2	38.1	179.34	-514.4	308.3	1,274.0	1,241.0	32.92	38.697	
6,100.0	6,039.6	7,975.6	6,713.4	17.2	38.0	-92.71	-514.4	306.4	1,251.5	1,198.7	52.84	23.683	
6,102.3	6,042.0	7,975.4	6,713.4	17.2	38.0	-92.82	-514.4	306.2	1,250.3	1,197.4	52.85	23.657	
6,150.0	6,089.4	7,970.1	6,713.5	17.3	37.9	-94.85	-514.4	301.0	1,225.5	1,172.6	52.89	23.172	
6,200.0	6,138.7	7,961.2	6,713.6	17.3	37.7	-96.60	-514.4	292.1	1,201.2	1,148.4	52.78	22.756	
6,200.8	6,139.5	7,961.1	6,713.6	17.3	37.7	-96.62	-514.4	291.9	1,200.8	1,148.0	52.78	22.750	
6,250.0	6,187.4	7,948.9	6,713.9	17.3	37.5	-97.95	-514.4	279.8	1,178.7	1,126.2	52.56	22.427	
6,299.2	6,234.4	7,933.6	6,714.1	17.4	37.1	-98.92	-514.4	264.4	1,158.6	1,106.4	52.23	22.183	
6,300.0	6,235.1	7,933.3	6,714.1	17.4	37.1	-98.93	-514.4	264.1	1,158.3	1,106.1	52.23	22.179	
6,350.0	6,281.7	7,914.4	6,714.4	17.4	36.7	-99.57	-514.4	245.2	1,140.0	1,088.2	51.80	22.005	
6,397.6	6,324.8	7,893.4	6,714.8	17.3	36.3	-99.87	-514.4	224.2	1,124.4	1,073.1	51.34	21.902	
6,400.0	6,326.9	7,892.2	6,714.8	17.3	36.3	-99.88	-514.4	223.1	1,123.7	1,072.4	51.32	21.898	
6,450.0	6,370.5	7,867.1	6,715.2	17.3	35.8	-99.89	-514.4	197.9	1,109.5	1,058.7	50.79	21.847	
6,496.0	6,409.1	7,841.3	6,715.7	17.3	35.2	-99.68	-514.4	172.1	1,098.3	1,048.0	50.26	21.850	
6,500.0	6,412.3	7,838.9	6,715.7	17.3	35.2	-99.65	-514.4	169.8	1,097.4	1,047.2	50.22	21.853	
6,550.0	6,452.1	7,808.0	6,716.3	17.3	34.6	-99.19	-514.4	138.9	1,087.2	1,037.6	49.62	21.908	
6,594.5	6,485.6	7,778.2	6,716.8	17.3	34.0	-98.63	-514.4	109.1	1,079.6	1,030.5	49.12	21.982	
6,600.0	6,489.7	7,774.4	6,716.8	17.3	33.9	-98.55	-514.4	105.3	1,078.8	1,029.7	49.05	21.993	
6,650.0	6,524.9	7,738.3	6,717.4	17.2	33.2	-97.76	-514.4	69.2	1,072.0	1,023.6	48.49	22.106	
6,692.9	6,553.0	7,705.4	6,718.0	17.2	32.6	-97.00	-514.4	36.3	1,067.4	1,019.4	48.04	22.220	
6,700.0	6,557.5	7,699.8	6,718.1	17.2	32.5	-96.87	-514.4	30.7	1,066.8	1,018.8	47.96	22.242	
6,750.0	6,587.4	7,659.3	6,718.8	17.2	31.8	-95.91	-514.4	-9.8	1,062.8	1,015.2	47.52	22.365	
6,791.3	6,609.9	7,624.3	6,719.4	17.2	31.2	-95.11	-514.4	-44.8	1,060.3	1,013.1	47.19	22.467	
6,800.0	6,614.4	7,616.8	6,719.5	17.2	31.1	-94.95	-514.4	-52.3	1,059.8	1,012.7	47.12	22.491	
6,850.0	6,638.4	7,572.5	6,720.3	17.2	30.4	-94.00	-514.4	-96.6	1,057.8	1,010.9	46.83	22.590	
6,889.7	6,655.3	7,536.3	6,720.9	17.4	29.8	-93.29	-514.4	-132.8	1,056.6	1,010.0	46.66	22.644	
6,900.0	6,659.4	7,526.8	6,721.1	17.5	29.7	-93.11	-514.4	-142.3	1,056.4	1,009.8	46.62	22.661	
6,950.0	6,677.1	7,479.7	6,721.9	18.0	29.0	-92.32	-514.4	-189.3	1,055.6	1,009.0	46.51	22.694	
6,988.2	6,688.4	7,443.1	6,722.5	18.5	28.5	-91.79	-514.4	-226.0	1,055.2	1,008.6	46.52	22.680	
7,000.0	6,691.5	7,431.6	6,722.7	18.7	28.3	-91.65	-514.4	-237.4	1,055.1	1,008.5	46.52	22.677	
7,050.0	6,702.5	7,382.7	6,723.5	19.5	27.7	-91.13	-514.4	-286.4	1,054.8	1,008.2	46.64	22.617	
7,086.6	6,708.4	7,346.5	6,724.1	20.1	27.3	-90.85	-514.4	-322.6	1,054.7	1,007.9	46.82	22.528	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	7,333.1	6,724.4	20.4	27.2	-90.77	-514.4	-335.9	1,054.7	1,007.8	46.88	22.497	
7,150.0	6,714.2	7,283.1	6,725.1	21.3	26.7	-90.59	-514.4	-386.0	1,054.7	1,007.5	47.20	22.343	
7,185.0	6,715.0	7,247.6	6,724.2	21.9	26.4	-90.50	-514.4	-421.4	1,054.6	1,007.1	47.50	22.204	
7,185.6	6,715.0	7,247.0	6,724.2	21.9	26.3	-90.50	-514.4	-422.0	1,054.6	1,007.1	47.50	22.201	
7,200.0	6,715.0	7,232.4	6,723.3	22.2	26.2	-90.45	-514.4	-436.5	1,054.6	1,007.0	47.64	22.135	
7,271.8	6,714.8	7,160.7	6,714.7	23.7	25.7	-89.99	-514.4	-507.7	1,054.6	1,006.1	48.46	21.761	
7,283.4	6,714.8	7,149.3	6,712.7	23.9	25.6	-89.88	-514.4	-519.0	1,054.6	1,006.0	48.60	21.698	
7,300.0	6,714.8	7,133.1	6,709.5	24.2	25.6	-89.71	-514.4	-534.8	1,054.6	1,005.8	48.82	21.601	
7,381.9	6,714.6	7,055.7	6,689.4	26.0	25.2	-88.63	-514.4	-609.6	1,054.9	1,004.8	50.08	21.064	
7,400.0	6,714.6	7,039.2	6,684.1	26.4	25.1	-88.34	-514.4	-625.2	1,055.1	1,004.7	50.39	20.941	
7,480.3	6,714.4	6,969.4	6,657.6	28.2	25.0	-86.91	-514.4	-689.7	1,056.5	1,004.6	51.88	20.362	
7,500.0	6,714.4	6,953.2	6,650.6	28.7	24.9	-86.53	-514.4	-704.3	1,057.0	1,004.7	52.26	20.226	
7,578.7	6,714.2	6,891.9	6,621.0	30.5	24.9	-84.94	-514.4	-758.1	1,060.2	1,006.3	53.89	19.673	
7,600.0	6,714.2	6,876.3	6,612.8	31.0	24.9	-84.50	-514.4	-771.3	1,061.4	1,007.1	54.34	19.532	
7,677.1	6,714.0	6,823.2	6,582.6	32.9	24.9	-82.89	-514.4	-814.9	1,067.3	1,011.2	56.03	19.049	
7,700.0	6,714.0	6,808.5	6,573.7	33.4	25.0	-82.41	-514.4	-826.6	1,069.5	1,013.0	56.52	18.921	
7,775.6	6,713.9	6,763.1	6,544.7	35.3	25.0	-80.87	-514.4	-861.5	1,078.6	1,020.3	58.21	18.529	
7,800.0	6,713.8	6,750.0	6,535.9	35.9	25.1	-80.41	-514.4	-871.2	1,082.1	1,023.4	58.75	18.419	
7,874.0	6,713.7	6,710.8	6,508.6	37.8	25.1	-78.97	-514.4	-899.3	1,094.8	1,034.4	60.40	18.125	
7,900.0	6,713.6	6,700.0	6,500.8	38.4	25.2	-78.57	-514.4	-906.8	1,100.0	1,039.0	60.99	18.036	
7,972.4	6,713.5	6,665.3	6,474.9	40.3	25.3	-77.23	-514.4	-930.0	1,116.5	1,053.9	62.59	17.838	
8,000.0	6,713.4	6,650.0	6,463.2	41.0	25.3	-76.63	-514.4	-939.8	1,123.6	1,060.4	63.17	17.786	
8,070.8	6,713.3	6,625.6	6,444.1	42.8	25.4	-75.65	-514.4	-955.0	1,143.8	1,079.1	64.77	17.660	
8,100.0	6,713.2	6,614.8	6,435.5	43.6	25.4	-75.21	-514.4	-961.5	1,153.0	1,087.6	65.41	17.628	
8,169.3	6,713.1	6,600.0	6,423.5	45.4	25.4	-74.60	-514.4	-970.2	1,177.0	1,109.9	67.03	17.560 SF	
8,200.0	6,713.0	6,581.0	6,407.9	46.2	25.5	-73.82	-514.4	-981.0	1,188.4	1,120.8	67.61	17.578	
8,267.7	6,712.9	6,550.0	6,381.8	48.0	25.6	-72.52	-514.4	-997.7	1,215.6	1,146.7	68.97	17.626	
8,300.0	6,712.8	6,550.0	6,381.8	48.8	25.6	-72.52	-514.4	-997.7	1,229.4	1,159.6	69.78	17.617	
8,366.1	6,712.7	6,533.6	6,367.7	50.6	25.6	-71.83	-514.4	-1,006.1	1,259.5	1,188.3	71.25	17.677	
8,400.0	6,712.6	6,525.1	6,360.3	51.5	25.7	-71.47	-514.4	-1,010.3	1,275.8	1,203.8	71.99	17.722	
8,464.5	6,712.5	6,500.0	6,338.2	53.2	25.7	-70.40	-514.4	-1,022.2	1,308.6	1,235.3	73.26	17.862	
8,500.0	6,712.4	6,500.0	6,338.2	54.1	25.7	-70.40	-514.4	-1,022.2	1,327.3	1,253.1	74.16	17.898	
8,563.0	6,712.3	6,500.0	6,338.2	55.8	25.7	-70.40	-514.4	-1,022.2	1,362.1	1,286.4	75.76	17.980	
8,600.0	6,712.3	6,481.3	6,321.5	56.8	25.8	-69.60	-514.4	-1,030.6	1,383.3	1,306.9	76.38	18.110	
8,661.4	6,712.1	6,469.8	6,311.1	58.5	25.8	-69.10	-514.4	-1,035.5	1,419.7	1,342.0	77.73	18.264	
8,700.0	6,712.1	6,450.0	6,293.0	59.5	25.9	-68.25	-514.4	-1,043.6	1,443.6	1,365.2	78.34	18.428	
8,759.8	6,711.9	6,450.0	6,293.0	61.1	25.9	-68.25	-514.4	-1,043.6	1,481.3	1,401.4	79.85	18.550	
8,800.0	6,711.9	6,450.0	6,293.0	62.2	25.9	-68.25	-514.4	-1,043.6	1,507.4	1,426.5	80.87	18.640	
8,858.2	6,711.8	6,450.0	6,293.0	63.8	25.9	-68.25	-514.4	-1,043.6	1,546.3	1,464.0	82.35	18.778	
8,900.0	6,711.7	6,431.4	6,275.8	64.9	25.9	-67.45	-514.4	-1,050.8	1,574.7	1,491.7	83.01	18.971	
8,956.7	6,711.6	6,423.5	6,268.5	66.5	25.9	-67.11	-514.4	-1,053.7	1,614.2	1,529.9	84.26	19.156	
9,000.0	6,711.5	6,417.8	6,263.2	67.6	25.9	-66.87	-514.4	-1,055.7	1,645.0	1,559.8	85.23	19.301	
9,055.1	6,711.4	6,400.0	6,246.5	69.1	26.0	-66.10	-514.4	-1,061.9	1,685.0	1,598.8	86.19	19.549	
9,100.0	6,711.3	6,400.0	6,246.5	70.4	26.0	-66.10	-514.4	-1,061.9	1,718.0	1,630.7	87.32	19.674	
9,153.5	6,711.2	6,400.0	6,246.5	71.8	26.0	-66.10	-514.4	-1,061.9	1,758.0	1,669.3	88.67	19.826	
9,200.0	6,711.1	6,400.0	6,246.5	73.1	26.0	-66.10	-514.4	-1,061.9	1,793.4	1,703.5	89.84	19.961	
9,251.9	6,711.0	6,400.0	6,246.5	74.5	26.0	-66.10	-514.4	-1,061.9	1,833.4	1,742.3	91.16	20.113	
9,300.0	6,710.9	6,400.0	6,246.5	75.8	26.0	-66.10	-514.4	-1,061.9	1,871.0	1,778.7	92.37	20.256	
9,350.4	6,710.8	6,379.0	6,226.6	77.2	26.0	-65.21	-514.4	-1,068.5	1,910.6	1,817.5	93.07	20.529	
9,400.0	6,710.7	6,374.4	6,222.2	78.6	26.0	-65.01	-514.4	-1,069.9	1,950.2	1,856.0	94.18	20.707	
9,448.8	6,710.6	6,370.0	6,218.0	79.9	26.0	-64.82	-514.4	-1,071.2	1,989.5	1,894.3	95.28	20.881	
9,500.0	6,710.5	6,350.0	6,198.8	81.3	26.1	-63.98	-514.4	-1,076.8	2,031.5	1,935.5	95.97	21.168	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	6,350.0	6,198.8	82.6	26.1	-63.98	-514.4	-1,076.8	2,070.2	1,973.0	97.15	21.310	
9,600.0	6,710.3	6,350.0	6,198.8	84.1	26.1	-63.98	-514.4	-1,076.8	2,113.9	2,015.4	98.47	21.468	
9,645.6	6,710.2	6,350.0	6,198.8	85.3	26.1	-63.98	-514.4	-1,076.8	2,152.0	2,052.4	99.61	21.605	
9,700.0	6,710.1	6,350.0	6,198.8	86.8	26.1	-63.98	-514.4	-1,076.8	2,197.7	2,096.8	100.97	21.767	
9,744.1	6,710.0	6,350.0	6,198.8	88.1	26.1	-63.98	-514.4	-1,076.8	2,235.1	2,133.1	102.07	21.898	
9,800.0	6,709.9	6,350.0	6,198.8	89.6	26.1	-63.98	-514.4	-1,076.8	2,282.9	2,179.4	103.47	22.064	
9,842.5	6,709.9	6,350.0	6,198.8	90.8	26.1	-63.98	-514.4	-1,076.8	2,319.5	2,214.9	104.53	22.189	
9,900.0	6,709.7	6,350.0	6,198.8	92.4	26.1	-63.98	-514.4	-1,076.8	2,369.3	2,263.3	105.97	22.357	
9,940.9	6,709.7	6,350.0	6,198.8	93.5	26.1	-63.98	-514.4	-1,076.8	2,404.9	2,297.9	107.00	22.475	
10,000.0	6,709.6	6,330.5	6,179.9	95.1	26.1	-63.15	-514.4	-1,081.7	2,456.3	2,348.5	107.79	22.787	
10,039.3	6,709.5	6,328.2	6,177.7	96.2	26.1	-63.06	-514.4	-1,082.2	2,490.9	2,382.2	108.69	22.917	
10,100.0	6,709.4	6,324.8	6,174.4	97.9	26.1	-62.92	-514.4	-1,083.0	2,544.4	2,434.3	110.08	23.114	
10,137.8	6,709.3	6,322.7	6,172.4	98.9	26.1	-62.83	-514.4	-1,083.5	2,577.9	2,466.9	110.94	23.236	
10,200.0	6,709.2	6,319.5	6,169.2	100.7	26.1	-62.69	-514.4	-1,084.2	2,633.3	2,520.9	112.37	23.435	
10,236.2	6,709.1	6,300.0	6,150.2	101.7	26.1	-61.88	-514.4	-1,088.3	2,665.9	2,553.4	112.52	23.693	
10,300.0	6,709.0	6,300.0	6,150.2	103.4	26.1	-61.88	-514.4	-1,088.3	2,723.1	2,609.0	114.10	23.867	
10,334.6	6,708.9	6,300.0	6,150.2	104.4	26.1	-61.88	-514.4	-1,088.3	2,754.2	2,639.3	114.95	23.960	
10,400.0	6,708.8	6,300.0	6,150.2	106.2	26.1	-61.88	-514.4	-1,088.3	2,813.3	2,696.7	116.57	24.134	
10,433.0	6,708.7	6,300.0	6,150.2	107.1	26.1	-61.88	-514.4	-1,088.3	2,843.2	2,725.8	117.39	24.221	
10,500.0	6,708.6	6,300.0	6,150.2	109.0	26.1	-61.88	-514.4	-1,088.3	2,904.1	2,785.0	119.04	24.396	
10,531.5	6,708.5	6,300.0	6,150.2	109.9	26.1	-61.88	-514.4	-1,088.3	2,932.8	2,813.0	119.82	24.477	
10,600.0	6,708.4	6,300.0	6,150.2	111.8	26.1	-61.88	-514.4	-1,088.3	2,995.5	2,874.0	121.52	24.651	
10,629.9	6,708.4	6,300.0	6,150.2	112.6	26.1	-61.88	-514.4	-1,088.3	3,022.9	2,900.7	122.26	24.726	
10,700.0	6,708.2	6,300.0	6,150.2	114.6	26.1	-61.88	-514.4	-1,088.3	3,087.5	2,963.5	123.99	24.900	
10,728.3	6,708.2	6,300.0	6,150.2	115.3	26.1	-61.88	-514.4	-1,088.3	3,113.6	2,988.9	124.69	24.970	
10,800.0	6,708.0	6,300.0	6,150.2	117.3	26.1	-61.88	-514.4	-1,088.3	3,179.9	3,053.4	126.47	25.143	
10,826.7	6,708.0	6,300.0	6,150.2	118.1	26.1	-61.88	-514.4	-1,088.3	3,204.7	3,077.6	127.13	25.207	
10,900.0	6,707.8	6,300.0	6,150.2	120.1	26.1	-61.88	-514.4	-1,088.3	3,272.8	3,143.8	128.95	25.380	
10,925.2	6,707.8	6,300.0	6,150.2	120.8	26.1	-61.88	-514.4	-1,088.3	3,296.2	3,166.6	129.57	25.439	
11,000.0	6,707.6	6,300.0	6,150.2	122.9	26.1	-61.88	-514.4	-1,088.3	3,366.0	3,234.6	131.43	25.611	
11,023.6	6,707.6	6,300.0	6,150.2	123.6	26.1	-61.88	-514.4	-1,088.3	3,388.1	3,256.1	132.01	25.665	
11,100.0	6,707.5	6,300.0	6,150.2	125.7	26.1	-61.88	-514.4	-1,088.3	3,459.7	3,325.8	133.91	25.836	
11,122.0	6,707.4	6,300.0	6,150.2	126.3	26.1	-61.88	-514.4	-1,088.3	3,480.4	3,345.9	134.46	25.885	
11,200.0	6,707.3	6,300.0	6,150.2	128.5	26.1	-61.88	-514.4	-1,088.3	3,553.7	3,417.3	136.39	26.055	
11,220.4	6,707.2	6,300.0	6,150.2	129.0	26.1	-61.88	-514.4	-1,088.3	3,573.0	3,436.1	136.90	26.099	
11,300.0	6,707.1	6,277.2	6,127.7	131.3	26.2	-60.95	-514.4	-1,092.5	3,647.6	3,509.9	137.75	26.479	
11,318.9	6,707.0	6,276.7	6,127.2	131.8	26.2	-60.92	-514.4	-1,092.6	3,665.4	3,527.2	138.19	26.524	
11,400.0	6,706.9	6,274.4	6,125.0	134.0	26.2	-60.83	-514.4	-1,092.9	3,742.1	3,602.1	140.08	26.715	
11,417.3	6,706.9	6,273.9	6,124.5	134.5	26.2	-60.81	-514.4	-1,093.0	3,758.5	3,618.0	140.48	26.755	
11,500.0	6,706.7	6,271.7	6,122.3	136.8	26.2	-60.72	-514.4	-1,093.4	3,836.9	3,694.5	142.40	26.945	
11,515.7	6,706.7	6,271.3	6,121.9	137.3	26.2	-60.71	-514.4	-1,093.4	3,851.8	3,709.1	142.77	26.980	
11,600.0	6,706.5	6,250.0	6,100.8	139.6	26.2	-59.84	-514.4	-1,096.5	3,932.2	3,788.5	143.71	27.362	
11,614.1	6,706.5	6,250.0	6,100.8	140.0	26.2	-59.84	-514.4	-1,096.5	3,945.7	3,801.6	144.06	27.390	
11,700.0	6,706.3	6,250.0	6,100.8	142.4	26.2	-59.84	-514.4	-1,096.5	4,027.4	3,881.3	146.15	27.556	
11,712.6	6,706.3	6,250.0	6,100.8	142.8	26.2	-59.84	-514.4	-1,096.5	4,039.4	3,892.9	146.46	27.581	
11,800.0	6,706.1	6,250.0	6,100.8	145.2	26.2	-59.84	-514.4	-1,096.5	4,122.8	3,974.2	148.59	27.746	
11,811.0	6,706.1	6,250.0	6,100.8	145.5	26.2	-59.84	-514.4	-1,096.5	4,133.3	3,984.5	148.86	27.766	
11,900.0	6,705.9	6,250.0	6,100.8	148.0	26.2	-59.84	-514.4	-1,096.5	4,218.5	4,067.4	151.03	27.931	
11,909.4	6,705.9	6,250.0	6,100.8	148.3	26.2	-59.84	-514.4	-1,096.5	4,227.5	4,076.2	151.26	27.948	
12,000.0	6,705.8	6,250.0	6,100.8	150.8	26.2	-59.84	-514.4	-1,096.5	4,314.3	4,160.8	153.48	28.110	
12,007.8	6,705.7	6,250.0	6,100.8	151.0	26.2	-59.84	-514.4	-1,096.5	4,321.8	4,168.2	153.67	28.124	
12,100.0	6,705.6	6,250.0	6,100.8	153.6	26.2	-59.84	-514.4	-1,096.5	4,410.3	4,254.4	155.92	28.286	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,250.0	6,100.8	153.8	26.2	-59.84	-514.4	-1,096.5	4,416.3	4,260.3	156.07	28.297	
12,200.0	6,705.4	6,250.0	6,100.8	156.4	26.2	-59.84	-514.4	-1,096.5	4,506.5	4,348.1	158.36	28.457	
12,204.7	6,705.4	6,250.0	6,100.8	156.5	26.2	-59.84	-514.4	-1,096.5	4,511.0	4,352.5	158.48	28.465	
12,300.0	6,705.2	6,250.0	6,100.8	159.2	26.2	-59.84	-514.4	-1,096.5	4,602.8	4,442.0	160.81	28.624	
12,303.1	6,705.2	6,250.0	6,100.8	159.3	26.2	-59.84	-514.4	-1,096.5	4,605.8	4,445.0	160.88	28.629	
12,400.0	6,705.0	6,250.0	6,100.8	162.0	26.2	-59.84	-514.4	-1,096.5	4,699.3	4,536.1	163.25	28.786	
12,401.5	6,705.0	6,250.0	6,100.8	162.0	26.2	-59.84	-514.4	-1,096.5	4,700.8	4,537.5	163.29	28.789	
12,500.0	6,704.8	6,250.0	6,100.8	164.8	26.2	-59.84	-514.4	-1,096.5	4,796.0	4,630.3	165.69	28.945	
12,598.4	6,704.6	6,250.0	6,100.8	167.5	26.2	-59.84	-514.4	-1,096.5	4,891.2	4,723.1	168.10	29.097	
12,600.0	6,704.6	6,250.0	6,100.8	167.6	26.2	-59.84	-514.4	-1,096.5	4,892.8	4,724.6	168.14	29.099	
12,696.8	6,704.4	6,250.0	6,100.8	170.3	26.2	-59.84	-514.4	-1,096.5	4,986.6	4,816.1	170.51	29.246	
12,700.0	6,704.4	6,250.0	6,100.8	170.4	26.2	-59.84	-514.4	-1,096.5	4,989.7	4,819.1	170.58	29.250	
12,795.2	6,704.3	6,250.0	6,100.8	173.0	26.2	-59.84	-514.4	-1,096.5	5,082.1	4,909.2	172.91	29.391	
12,800.0	6,704.2	6,250.0	6,100.8	173.2	26.2	-59.84	-514.4	-1,096.5	5,086.7	4,913.7	173.03	29.398	
12,893.7	6,704.1	6,250.0	6,100.8	175.8	26.2	-59.84	-514.4	-1,096.5	5,177.7	5,002.4	175.32	29.533	
12,900.0	6,704.1	6,250.0	6,100.8	176.0	26.2	-59.84	-514.4	-1,096.5	5,183.8	5,008.3	175.48	29.541	
12,992.1	6,703.9	6,250.0	6,100.8	178.5	26.2	-59.84	-514.4	-1,096.5	5,273.4	5,095.7	177.73	29.671	
13,000.0	6,703.9	6,250.0	6,100.8	178.8	26.2	-59.84	-514.4	-1,096.5	5,281.1	5,103.1	177.92	29.682	
13,090.5	6,703.7	6,250.0	6,100.8	181.3	26.2	-59.84	-514.4	-1,096.5	5,369.2	5,189.1	180.14	29.806	
13,100.0	6,703.7	6,250.0	6,100.8	181.6	26.2	-59.84	-514.4	-1,096.5	5,378.4	5,198.0	180.37	29.819	
13,188.9	6,703.5	6,250.0	6,100.8	184.0	26.2	-59.84	-514.4	-1,096.5	5,465.1	5,282.5	182.55	29.938	
13,200.0	6,703.5	6,250.0	6,100.8	184.4	26.2	-59.85	-514.4	-1,096.5	5,475.9	5,293.0	182.82	29.953	
13,287.4	6,703.3	6,250.0	6,100.8	186.8	26.2	-59.85	-514.4	-1,096.5	5,561.1	5,376.1	184.95	30.067	
13,300.0	6,703.3	6,250.0	6,100.8	187.2	26.2	-59.85	-514.4	-1,096.5	5,573.4	5,388.1	185.26	30.084	
13,385.8	6,703.2	6,250.0	6,100.8	189.6	26.2	-59.85	-514.4	-1,096.5	5,657.1	5,469.8	187.36	30.193	
13,400.0	6,703.1	6,250.0	6,100.8	190.0	26.2	-59.85	-514.4	-1,096.5	5,671.0	5,483.3	187.71	30.211	
13,484.2	6,703.0	6,250.0	6,100.8	192.3	26.2	-59.85	-514.4	-1,096.5	5,753.3	5,563.5	189.77	30.317	
13,500.0	6,702.9	6,250.0	6,100.8	192.8	26.2	-59.85	-514.4	-1,096.5	5,768.7	5,578.5	190.16	30.336	
13,582.6	6,702.8	6,250.0	6,100.8	195.1	26.2	-59.85	-514.4	-1,096.5	5,849.5	5,657.3	192.18	30.437	
13,600.0	6,702.8	6,250.0	6,100.8	195.6	26.2	-59.85	-514.4	-1,096.5	5,866.5	5,673.9	192.61	30.458	
13,681.1	6,702.6	6,250.0	6,100.8	197.8	26.2	-59.85	-514.4	-1,096.5	5,945.8	5,751.2	194.59	30.555	
13,700.0	6,702.6	6,250.0	6,100.8	198.4	26.2	-59.85	-514.4	-1,096.5	5,964.3	5,769.3	195.06	30.578	
13,779.5	6,702.4	6,250.0	6,100.8	200.6	26.2	-59.85	-514.4	-1,096.5	6,042.2	5,845.2	197.00	30.671	
13,800.0	6,702.4	6,250.0	6,100.8	201.2	26.2	-59.85	-514.4	-1,096.5	6,062.3	5,864.8	197.50	30.694	
13,877.9	6,702.2	6,250.0	6,100.8	203.3	26.2	-59.85	-514.4	-1,096.5	6,138.6	5,939.2	199.41	30.784	
13,900.0	6,702.2	6,250.0	6,100.8	204.0	26.2	-59.85	-514.4	-1,096.5	6,160.2	5,960.3	199.95	30.808	
13,976.3	6,702.1	6,250.0	6,100.8	206.1	26.2	-59.85	-514.4	-1,096.5	6,235.1	6,033.3	201.82	30.894	
14,000.0	6,702.0	6,250.0	6,100.8	206.8	26.2	-59.85	-514.4	-1,096.5	6,258.3	6,055.9	202.40	30.920	
14,074.8	6,701.9	6,250.0	6,100.8	208.9	26.2	-59.85	-514.4	-1,096.5	6,331.7	6,127.4	204.23	31.002	
14,100.0	6,701.8	6,250.0	6,100.8	209.6	26.2	-59.85	-514.4	-1,096.5	6,356.4	6,151.6	204.85	31.029	
14,173.2	6,701.7	6,250.0	6,100.8	211.6	26.2	-59.85	-514.4	-1,096.5	6,428.3	6,221.6	206.64	31.108	
14,200.0	6,701.6	6,250.0	6,100.8	212.4	26.2	-59.85	-514.4	-1,096.5	6,454.6	6,247.3	207.30	31.136	
14,271.6	6,701.5	6,227.3	6,078.2	214.4	26.2	-58.94	-514.4	-1,099.1	6,524.5	6,317.3	207.27	31.479	
14,300.0	6,701.4	6,227.0	6,078.0	215.2	26.2	-58.93	-514.4	-1,099.1	6,552.4	6,344.5	207.93	31.512	
14,370.0	6,701.3	6,226.3	6,077.3	217.1	26.2	-58.90	-514.4	-1,099.1	6,621.2	6,411.6	209.58	31.593	
14,400.0	6,701.3	6,226.0	6,077.0	218.0	26.2	-58.89	-514.4	-1,099.2	6,650.6	6,440.4	210.29	31.627	
14,468.5	6,701.1	6,225.4	6,076.3	219.9	26.2	-58.86	-514.4	-1,099.2	6,717.9	6,506.1	211.90	31.704	
14,500.0	6,701.1	6,225.1	6,076.1	220.8	26.2	-58.85	-514.4	-1,099.3	6,748.9	6,536.3	212.64	31.739	
14,566.9	6,701.0	6,224.5	6,075.4	222.6	26.2	-58.83	-514.4	-1,099.3	6,814.7	6,600.5	214.21	31.813	
14,600.0	6,700.9	6,224.2	6,075.1	223.6	26.2	-58.82	-514.4	-1,099.3	6,847.3	6,632.3	214.99	31.849	
14,665.3	6,700.8	6,223.6	6,074.6	225.4	26.2	-58.79	-514.4	-1,099.4	6,911.6	6,695.0	216.53	31.920	
14,700.0	6,700.7	6,223.3	6,074.3	226.4	26.2	-58.78	-514.4	-1,099.4	6,945.7	6,728.3	217.34	31.957	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - WACKER 10G-302 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	6,222.7	6,073.7	228.2	26.2	-58.76	-514.4	-1,099.5	7,008.4	6,789.6	218.84	32.025	
14,800.0	6,700.5	6,200.0	6,051.1	229.2	26.2	-57.87	-514.4	-1,101.2	7,044.5	6,826.7	217.81	32.343	
14,862.2	6,700.4	6,200.0	6,051.1	230.9	26.2	-57.87	-514.4	-1,101.2	7,105.7	6,886.4	219.30	32.402	
14,900.0	6,700.3	6,200.0	6,051.1	232.0	26.2	-57.87	-514.4	-1,101.2	7,142.9	6,922.7	220.21	32.437	
14,960.6	6,700.2	6,200.0	6,051.1	233.7	26.2	-57.87	-514.4	-1,101.2	7,202.6	6,980.9	221.67	32.493	
15,000.0	6,700.2	6,200.0	6,051.1	234.8	26.2	-57.87	-514.4	-1,101.2	7,241.4	7,018.8	222.62	32.529	
15,059.0	6,700.0	6,200.0	6,051.1	236.4	26.2	-57.87	-514.4	-1,101.2	7,299.6	7,075.5	224.03	32.582	
15,082.8	6,700.0	6,200.0	6,051.1	237.1	26.2	-57.87	-514.4	-1,101.2	7,323.0	7,098.4	224.61	32.604	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-179.33	-119.9	-1.4	119.9					
98.4	98.4	98.4	98.4	0.1	0.1	-179.33	-119.9	-1.4	119.9	119.7	0.19	623.538		
100.0	100.0	100.0	100.0	0.1	0.1	-179.33	-119.9	-1.4	119.9	119.7	0.20	612.983		
196.8	196.8	196.8	196.8	0.3	0.3	-179.33	-119.9	-1.4	119.9	119.2	0.63	189.988		
200.0	200.0	200.0	200.0	0.3	0.3	-179.33	-119.9	-1.4	119.9	119.2	0.65	185.817		
295.3	295.3	295.3	295.3	0.5	0.5	-179.33	-119.9	-1.4	119.9	118.8	1.07	111.673		
300.0	300.0	300.0	300.0	0.5	0.5	-179.33	-119.9	-1.4	119.9	118.8	1.09	109.506		
393.7	393.7	393.7	393.7	0.8	0.8	-179.33	-119.9	-1.4	119.9	118.4	1.52	79.077		
400.0	400.0	400.0	400.0	0.8	0.8	-179.33	-119.9	-1.4	119.9	118.3	1.54	77.627		
492.1	492.1	492.1	492.1	1.0	1.0	-179.33	-119.9	-1.4	119.9	117.9	1.96	61.210		
500.0	500.0	500.0	500.0	1.0	1.0	-179.33	-119.9	-1.4	119.9	117.9	1.99	60.124		
590.5	590.5	590.5	590.5	1.2	1.2	-179.33	-119.9	-1.4	119.9	117.5	2.40	49.929		
600.0	600.0	600.0	600.0	1.2	1.2	-179.33	-119.9	-1.4	119.9	117.4	2.44	49.061		
689.0	689.0	689.0	689.0	1.4	1.4	-179.33	-119.9	-1.4	119.9	117.0	2.84	42.159		
700.0	700.0	700.0	700.0	1.4	1.4	-179.33	-119.9	-1.4	119.9	117.0	2.89	41.437		
787.4	787.4	787.4	787.4	1.6	1.6	-179.33	-119.9	-1.4	119.9	116.6	3.29	36.482		
800.0	800.0	800.0	800.0	1.7	1.7	-179.33	-119.9	-1.4	119.9	116.5	3.34	35.864		
885.8	885.8	885.8	885.8	1.9	1.9	-179.33	-119.9	-1.4	119.9	116.1	3.73	32.152		
900.0	900.0	900.0	900.0	1.9	1.9	-179.33	-119.9	-1.4	119.9	116.1	3.79	31.612		
984.2	984.2	984.2	984.2	2.1	2.1	-179.33	-119.9	-1.4	119.9	115.7	4.17	28.741		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.33	-119.9	-1.4	119.9	115.6	4.24	28.262		
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-179.33	-119.9	-1.4	119.9	115.3	4.61	25.985		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-179.33	-119.9	-1.4	119.9	115.2	4.69	25.553 CC, ES		
1,181.1	1,181.1	1,178.6	1,178.6	2.5	2.5	151.83	-120.7	-0.7	121.7	116.7	5.03	24.198		
1,200.0	1,200.0	1,196.9	1,196.9	2.6	2.5	151.77	-121.1	-0.3	122.7	117.6	5.11	24.013		
1,279.5	1,279.4	1,273.6	1,273.5	2.7	2.7	151.43	-123.8	2.1	128.9	123.5	5.43	23.745		
1,300.0	1,299.8	1,293.3	1,293.2	2.8	2.7	151.32	-124.8	2.9	131.1	125.6	5.51	23.787		
1,377.9	1,377.5	1,367.9	1,367.5	3.0	2.9	150.83	-129.3	6.8	141.5	135.6	5.83	24.265		
1,400.0	1,399.5	1,388.9	1,388.4	3.0	2.9	150.67	-130.8	8.2	145.0	139.1	5.92	24.496		
1,476.4	1,475.3	1,460.9	1,460.0	3.2	3.1	150.10	-137.0	13.5	159.4	153.1	6.24	25.531		
1,500.0	1,498.7	1,483.1	1,481.9	3.3	3.1	149.92	-139.2	15.4	164.5	158.1	6.34	25.933		
1,574.8	1,572.6	1,552.4	1,550.5	3.5	3.3	149.35	-146.8	22.0	182.6	175.9	6.67	27.374		
1,600.0	1,597.5	1,575.5	1,573.3	3.5	3.3	149.15	-149.6	24.4	189.3	182.5	6.78	27.930		
1,673.2	1,669.4	1,641.9	1,638.7	3.7	3.5	148.60	-158.4	32.1	210.9	203.7	7.11	29.654		
1,700.1	1,695.8	1,666.0	1,662.3	3.8	3.6	148.40	-161.9	35.2	219.5	212.2	7.23	30.344		
1,771.6	1,765.7	1,731.3	1,726.3	4.1	3.8	148.07	-172.0	44.0	243.3	235.7	7.59	32.071		
1,800.0	1,793.4	1,758.0	1,752.4	4.2	3.9	147.93	-176.2	47.6	252.8	245.1	7.73	32.706		
1,870.1	1,862.0	1,824.0	1,816.9	4.4	4.1	147.64	-186.6	56.6	276.3	268.3	8.09	34.145		
1,900.0	1,891.3	1,852.2	1,844.5	4.5	4.2	147.53	-191.0	60.4	286.4	278.1	8.25	34.720		
1,968.5	1,958.3	1,916.7	1,907.6	4.8	4.5	147.31	-201.1	69.2	309.4	300.8	8.61	35.934		
2,000.0	1,989.1	1,946.4	1,936.6	4.9	4.6	147.22	-205.8	73.3	320.0	311.2	8.78	36.437		
2,066.9	2,054.5	2,009.4	1,998.3	5.1	4.8	147.04	-215.7	81.9	342.5	333.3	9.15	37.438		
2,100.0	2,086.9	2,040.6	2,028.7	5.3	4.9	146.97	-220.6	86.1	353.6	344.3	9.33	37.886		
2,165.3	2,150.8	2,102.1	2,088.9	5.5	5.2	146.82	-230.2	94.5	375.5	365.8	9.70	38.735		
2,200.0	2,184.7	2,134.7	2,120.9	5.6	5.3	146.76	-235.3	99.0	387.2	377.3	9.89	39.144		
2,263.8	2,247.1	2,194.8	2,179.6	5.9	5.6	146.64	-244.8	107.2	408.6	398.4	10.25	39.852		
2,300.0	2,282.5	2,228.9	2,213.0	6.0	5.7	146.58	-250.1	111.8	420.8	410.3	10.46	40.223		
2,362.2	2,343.3	2,287.5	2,270.3	6.3	5.9	146.48	-259.3	119.8	441.7	430.9	10.82	40.821		
2,400.0	2,380.3	2,323.1	2,305.1	6.5	6.1	146.43	-264.9	124.7	454.4	443.4	11.04	41.159		
2,460.6	2,439.6	2,380.2	2,360.9	6.7	6.3	146.35	-273.9	132.5	474.8	463.4	11.39	41.666		
2,500.0	2,478.1	2,417.3	2,397.2	6.9	6.5	146.30	-279.7	137.5	488.0	476.4	11.63	41.976		
2,559.0	2,535.9	2,472.9	2,451.6	7.1	6.7	146.23	-288.4	145.1	507.9	495.9	11.98	42.408		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,511.4	2,489.3	7.3	6.9	146.18	-294.5	150.4	521.6	509.4	12.22	42.692	
2,657.5	2,632.2	2,565.6	2,542.3	7.5	7.1	146.13	-303.0	157.8	540.9	528.4	12.56	43.063	
2,700.0	2,673.8	2,605.6	2,581.4	7.7	7.3	146.08	-309.2	163.2	555.2	542.4	12.82	43.324	
2,755.9	2,728.4	2,658.3	2,632.9	7.9	7.5	146.03	-317.5	170.4	574.0	560.9	13.15	43.643	
2,800.0	2,771.6	2,699.8	2,673.6	8.1	7.7	146.00	-324.0	176.1	588.9	575.4	13.42	43.884	
2,854.3	2,824.7	2,751.0	2,723.6	8.3	7.9	145.95	-332.1	183.1	607.1	593.4	13.75	44.161	
2,900.0	2,869.4	2,794.0	2,765.7	8.5	8.1	145.92	-338.8	188.9	622.5	608.5	14.03	44.383	
2,952.7	2,921.0	2,843.6	2,814.3	8.8	8.3	145.88	-346.6	195.7	640.2	625.9	14.35	44.623	
3,000.0	2,967.2	2,888.1	2,857.8	9.0	8.5	145.85	-353.6	201.8	656.1	641.5	14.64	44.829	
3,051.2	3,017.3	2,936.3	2,904.9	9.2	8.7	145.81	-361.2	208.3	673.3	658.3	14.95	45.039	
3,100.0	3,065.0	2,982.3	2,949.9	9.4	9.0	145.78	-368.4	214.6	689.7	674.5	15.25	45.231	
3,149.6	3,113.5	3,029.0	2,995.6	9.6	9.2	145.75	-375.7	221.0	706.4	690.8	15.55	45.415	
3,200.0	3,162.8	3,076.5	3,042.0	9.8	9.4	145.73	-383.2	227.5	723.3	707.5	15.86	45.593	
3,248.0	3,209.8	3,121.7	3,086.3	10.0	9.6	145.70	-390.3	233.6	739.5	723.3	16.16	45.755	
3,300.0	3,260.6	3,170.7	3,134.1	10.2	9.8	145.67	-397.9	240.3	757.0	740.5	16.48	45.922	
3,346.4	3,306.1	3,214.4	3,176.9	10.5	10.0	145.65	-404.8	246.3	772.6	755.8	16.77	46.064	
3,400.0	3,358.5	3,264.9	3,226.3	10.7	10.2	145.63	-412.7	253.2	790.6	773.5	17.10	46.220	
3,444.9	3,402.3	3,307.1	3,267.6	10.9	10.4	145.60	-419.3	258.9	805.7	788.3	17.38	46.346	
3,500.0	3,456.3	3,368.1	3,327.3	11.1	10.7	145.59	-428.7	267.1	824.0	806.3	17.74	46.444	
3,543.3	3,498.6	3,421.6	3,379.9	11.3	10.8	145.62	-436.2	273.6	837.8	819.8	18.03	46.478	
3,600.0	3,554.1	3,492.5	3,449.8	11.5	11.1	145.72	-445.0	281.2	855.0	836.6	18.38	46.506	
3,641.7	3,594.9	3,545.1	3,501.9	11.7	11.2	145.84	-450.7	286.1	866.9	848.2	18.64	46.504	
3,700.0	3,651.9	3,619.4	3,575.6	12.0	11.4	146.06	-457.4	292.0	882.5	863.6	19.00	46.458	
3,740.1	3,691.2	3,671.0	3,626.9	12.2	11.5	146.26	-461.3	295.4	892.7	873.4	19.24	46.406	
3,800.0	3,749.7	3,748.4	3,704.2	12.4	11.7	146.61	-465.8	299.3	906.7	887.1	19.58	46.298	
3,838.6	3,787.4	3,798.7	3,754.3	12.6	11.8	146.87	-467.8	301.1	915.1	895.3	19.80	46.206	
3,900.0	3,847.5	3,879.1	3,834.7	12.9	11.9	147.35	-469.7	302.7	927.4	907.3	20.14	46.044	
3,937.0	3,883.7	3,927.7	3,883.3	13.0	12.0	147.67	-470.1	303.0	934.2	913.9	20.34	45.929	
4,000.0	3,945.3	3,989.7	3,945.3	13.3	12.1	148.10	-470.1	303.0	945.4	924.7	20.64	45.797	
4,035.4	3,980.0	4,024.4	3,980.0	13.5	12.1	148.33	-470.1	303.0	951.7	930.9	20.81	45.725	
4,060.0	4,004.0	4,048.4	4,004.0	13.6	12.1	148.49	-470.1	303.0	956.1	935.1	20.93	45.676	
4,100.0	4,043.2	4,087.6	4,043.2	13.7	12.2	148.81	-470.1	303.0	963.0	941.8	21.14	45.549	
4,133.8	4,076.5	4,120.8	4,076.5	13.8	12.3	149.06	-470.1	303.0	968.5	947.1	21.30	45.464	
4,200.0	4,141.6	4,186.0	4,141.6	14.0	12.3	149.51	-470.1	303.0	978.2	956.6	21.61	45.266	
4,232.3	4,173.5	4,217.9	4,173.5	14.1	12.4	149.70	-470.1	303.0	982.5	960.8	21.75	45.165	
4,300.0	4,240.6	4,285.0	4,240.6	14.3	12.5	150.05	-470.1	303.0	990.6	968.5	22.05	44.922	
4,330.7	4,271.1	4,315.4	4,271.1	14.4	12.5	150.19	-470.1	303.0	993.8	971.6	22.18	44.808	
4,400.0	4,340.0	4,384.4	4,340.0	14.5	12.6	150.45	-470.1	303.0	1,000.0	977.5	22.46	44.520	
4,429.1	4,369.0	4,413.4	4,369.0	14.6	12.7	150.54	-470.1	303.0	1,002.2	979.6	22.57	44.395	
4,500.0	4,439.7	4,484.1	4,439.7	14.8	12.8	150.72	-470.1	303.0	1,006.4	983.5	22.84	44.061	
4,527.5	4,467.2	4,511.6	4,467.2	14.8	12.8	150.77	-470.1	303.0	1,007.6	984.7	22.94	43.928	
4,600.0	4,539.7	4,584.0	4,539.7	14.9	12.9	150.86	-470.1	303.0	1,009.7	986.5	23.19	43.546	
4,626.0	4,565.6	4,610.0	4,565.6	15.0	13.0	150.87	-470.1	303.0	1,010.1	986.8	23.27	43.405	
4,660.2	4,599.8	4,644.2	4,599.8	15.0	13.0	179.61	-470.1	303.0	1,010.3	984.3	25.93	38.956	
4,700.0	4,639.6	4,684.0	4,639.6	15.0	13.1	179.61	-470.1	303.0	1,010.3	984.2	26.06	38.772	
4,724.4	4,664.0	4,708.4	4,664.0	15.1	13.1	179.61	-470.1	303.0	1,010.3	984.1	26.14	38.656	
4,800.0	4,739.6	4,784.0	4,739.6	15.2	13.3	179.61	-470.1	303.0	1,010.3	983.9	26.38	38.298	
4,822.8	4,762.5	4,806.8	4,762.5	15.2	13.3	179.61	-470.1	303.0	1,010.3	983.8	26.45	38.191	
4,900.0	4,839.6	4,884.0	4,839.6	15.3	13.4	179.61	-470.1	303.0	1,010.3	983.6	26.71	37.831	
4,921.2	4,860.9	4,905.3	4,860.9	15.4	13.4	179.61	-470.1	303.0	1,010.3	983.5	26.78	37.732	
5,000.0	4,939.6	4,984.0	4,939.6	15.5	13.6	179.61	-470.1	303.0	1,010.3	983.2	27.03	37.370	
5,019.7	4,959.3	5,003.7	4,959.3	15.5	13.6	179.61	-470.1	303.0	1,010.3	983.2	27.10	37.280	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	5,084.0	5,039.6	15.6	13.7	179.61	-470.1	303.0	1,010.3	982.9	27.37	36.915	
5,118.1	5,057.7	5,102.1	5,057.7	15.7	13.8	179.61	-470.1	303.0	1,010.3	982.9	27.43	36.833	
5,200.0	5,139.6	5,184.0	5,139.6	15.8	13.9	179.61	-470.1	303.0	1,010.3	982.6	27.70	36.467	
5,216.5	5,156.2	5,200.5	5,156.2	15.8	13.9	179.61	-470.1	303.0	1,010.3	982.5	27.76	36.394	
5,300.0	5,239.6	5,284.0	5,239.6	15.9	14.1	179.61	-470.1	303.0	1,010.3	982.2	28.04	36.026	
5,314.9	5,254.6	5,299.0	5,254.6	16.0	14.1	179.61	-470.1	303.0	1,010.3	982.2	28.09	35.960	
5,400.0	5,339.6	5,384.0	5,339.6	16.1	14.2	179.61	-470.1	303.0	1,010.3	981.9	28.39	35.591	
5,413.4	5,353.0	5,397.4	5,353.0	16.1	14.3	179.61	-470.1	303.0	1,010.3	981.9	28.43	35.534	
5,500.0	5,439.6	5,484.0	5,439.6	16.3	14.4	179.61	-470.1	303.0	1,010.3	981.6	28.73	35.163	
5,511.8	5,451.4	5,495.8	5,451.4	16.3	14.4	179.61	-470.1	303.0	1,010.3	981.5	28.77	35.113	
5,600.0	5,539.6	5,584.0	5,539.6	16.4	14.6	179.61	-470.1	303.0	1,010.3	981.2	29.08	34.742	
5,610.2	5,549.9	5,594.2	5,549.9	16.4	14.6	179.61	-470.1	303.0	1,010.3	981.2	29.12	34.700	
5,700.0	5,639.6	5,684.0	5,639.6	16.6	14.7	179.61	-470.1	303.0	1,010.3	980.9	29.43	34.328	
5,708.6	5,648.3	5,692.7	5,648.3	16.6	14.8	179.61	-470.1	303.0	1,010.3	980.8	29.46	34.293	
5,800.0	5,739.6	5,784.0	5,739.6	16.7	14.9	179.61	-470.1	303.0	1,010.3	980.5	29.78	33.921	
5,807.1	5,746.7	5,791.1	5,746.7	16.8	14.9	179.61	-470.1	303.0	1,010.3	980.5	29.81	33.892	
5,900.0	5,839.6	5,884.0	5,839.6	16.9	15.1	179.61	-470.1	303.0	1,010.3	980.1	30.14	33.520	
5,905.5	5,845.1	5,889.5	5,845.1	16.9	15.1	179.61	-470.1	303.0	1,010.3	980.1	30.16	33.498	
6,000.0	5,939.6	5,984.0	5,939.6	17.1	15.3	179.61	-470.1	303.0	1,010.3	979.8	30.50	33.126	
6,003.9	5,943.6	5,987.9	5,943.6	17.1	15.3	179.61	-470.1	303.0	1,010.3	979.8	30.51	33.111	
6,059.2	5,998.8	6,043.2	5,998.8	17.2	15.4	179.61	-470.1	303.0	1,010.3	979.6	30.71	32.896	
6,100.0	6,039.6	6,084.0	6,040.0	17.2	15.4	-90.39	-470.1	301.8	1,010.3	981.5	28.82	35.061	
6,102.3	6,042.0	6,086.8	6,042.4	17.2	15.4	-90.39	-470.1	301.7	1,010.3	981.5	28.82	35.053	
6,150.0	6,089.4	6,134.9	6,090.3	17.3	15.5	-90.39	-470.1	297.1	1,010.3	981.3	28.94	34.907	
6,200.0	6,138.7	6,185.4	6,140.1	17.3	15.5	-90.38	-470.1	288.9	1,010.3	981.2	29.04	34.795	
6,200.8	6,139.5	6,186.2	6,140.8	17.3	15.5	-90.38	-470.1	288.8	1,010.3	981.2	29.04	34.794	
6,250.0	6,187.4	6,235.9	6,189.2	17.3	15.6	-90.38	-470.1	277.2	1,010.3	981.2	29.10	34.718	
6,299.2	6,234.4	6,285.5	6,236.5	17.4	15.6	-90.37	-470.1	262.4	1,010.3	981.1	29.14	34.667	
6,300.0	6,235.1	6,286.3	6,237.3	17.4	15.6	-90.37	-470.1	262.1	1,010.3	981.1	29.14	34.666	
6,350.0	6,281.7	6,336.8	6,284.2	17.4	15.6	-90.36	-470.1	243.7	1,010.3	981.1	29.18	34.626	
6,397.6	6,324.8	6,384.8	6,327.6	17.3	15.6	-90.35	-470.1	223.1	1,010.3	981.1	29.21	34.586	
6,400.0	6,326.9	6,387.2	6,329.8	17.3	15.6	-90.35	-470.1	222.0	1,010.3	981.1	29.21	34.584	
6,450.0	6,370.5	6,437.6	6,373.6	17.3	15.6	-90.33	-470.1	197.1	1,010.3	981.0	29.27	34.519	
6,496.0	6,409.1	6,484.1	6,412.4	17.3	15.6	-90.32	-470.1	171.5	1,010.3	980.9	29.35	34.420	
6,500.0	6,412.3	6,488.0	6,415.6	17.3	15.6	-90.32	-470.1	169.2	1,010.3	980.9	29.36	34.411	
6,550.0	6,452.1	6,538.4	6,455.5	17.3	15.6	-90.30	-470.1	138.5	1,010.3	980.8	29.51	34.235	
6,594.5	6,485.6	6,583.2	6,489.1	17.3	15.6	-90.29	-470.1	108.9	1,010.3	980.6	29.72	33.998	
6,600.0	6,489.7	6,588.8	6,493.1	17.3	15.6	-90.28	-470.1	105.0	1,010.3	980.5	29.74	33.968	
6,650.0	6,524.9	6,639.1	6,528.3	17.2	15.6	-90.26	-470.1	69.0	1,010.3	980.2	30.08	33.587	
6,692.9	6,553.0	6,682.3	6,556.4	17.2	15.6	-90.25	-470.1	36.3	1,010.3	979.8	30.48	33.150	
6,700.0	6,557.5	6,689.4	6,560.9	17.2	15.6	-90.24	-470.1	30.7	1,010.3	979.7	30.54	33.077	
6,750.0	6,587.4	6,739.7	6,590.6	17.2	15.7	-90.22	-470.1	-9.8	1,010.3	979.1	31.15	32.429	
6,791.3	6,609.9	6,781.3	6,613.0	17.2	15.9	-90.20	-470.1	-44.8	1,010.3	978.5	31.79	31.781	
6,800.0	6,614.4	6,790.0	6,617.4	17.2	15.9	-90.20	-470.1	-52.3	1,010.3	978.3	31.93	31.644	
6,850.0	6,638.4	6,840.2	6,641.2	17.2	16.3	-90.17	-470.1	-96.6	1,010.3	977.4	32.87	30.736	
6,889.7	6,655.3	6,880.1	6,657.9	17.4	16.7	-90.15	-470.1	-132.8	1,010.3	976.5	33.75	29.930	
6,900.0	6,659.4	6,890.4	6,661.8	17.5	16.9	-90.15	-470.1	-142.3	1,010.3	976.3	33.99	29.726	
6,950.0	6,677.1	6,940.6	6,679.1	18.0	17.5	-90.12	-470.1	-189.4	1,010.3	975.0	35.27	28.640	
6,988.2	6,688.4	6,978.9	6,690.1	18.5	18.1	-90.10	-470.1	-226.1	1,010.3	973.9	36.38	27.771	
7,000.0	6,691.5	6,990.7	6,693.1	18.7	18.3	-90.10	-470.1	-237.5	1,010.3	973.5	36.72	27.510	
7,050.0	6,702.5	7,040.8	6,703.7	19.5	19.1	-90.07	-470.1	-286.5	1,010.3	971.9	38.32	26.364	
7,086.6	6,708.4	7,077.5	6,709.3	20.1	19.7	-90.05	-470.1	-322.7	1,010.3	970.7	39.58	25.525	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	7,090.9	6,710.8	20.4	20.0	-90.04	-470.1	-336.1	1,010.3	970.2	40.04	25.229	
7,150.0	6,714.2	7,140.9	6,714.5	21.3	20.9	-90.02	-470.1	-385.9	1,010.3	968.4	41.87	24.126	
7,185.0	6,715.0	7,175.9	6,715.0	21.9	21.6	-90.00	-470.1	-421.0	1,010.3	967.1	43.21	23.382	
7,185.6	6,715.0	7,176.5	6,715.0	21.9	21.6	-90.00	-470.1	-421.5	1,010.3	967.0	43.23	23.371	
7,200.0	6,715.0	7,190.9	6,715.0	22.2	21.9	-90.00	-470.1	-435.9	1,010.3	966.5	43.79	23.071	
7,283.4	6,714.8	7,274.4	6,714.8	23.9	23.6	-90.00	-470.1	-519.4	1,010.3	963.1	47.20	21.405	
7,290.2	6,714.8	7,281.1	6,714.8	24.0	23.8	-90.00	-470.1	-526.1	1,010.3	962.8	47.47	21.280	
7,300.0	6,714.8	7,290.9	6,714.8	24.2	24.0	-90.00	-470.1	-535.9	1,010.3	962.4	47.88	21.102	
7,381.9	6,714.6	7,372.8	6,714.6	26.0	25.8	-90.00	-470.1	-617.8	1,010.3	958.8	51.44	19.638	
7,390.6	6,714.6	7,381.6	6,714.6	26.2	26.0	-90.00	-470.1	-626.6	1,010.3	958.4	51.83	19.493	
7,400.0	6,714.6	7,390.9	6,714.6	26.4	26.2	-90.00	-470.1	-635.9	1,010.3	958.0	52.24	19.340	
7,480.3	6,714.4	7,471.2	6,714.4	28.2	28.1	-90.00	-470.1	-716.2	1,010.3	954.3	55.91	18.068	
7,500.0	6,714.4	7,490.9	6,714.4	28.7	28.5	-90.00	-470.1	-735.9	1,010.3	953.4	56.82	17.780	
7,578.7	6,714.2	7,569.6	6,714.2	30.5	30.4	-90.00	-470.1	-814.7	1,010.3	949.7	60.56	16.682	
7,600.0	6,714.2	7,590.9	6,714.2	31.0	30.9	-90.00	-470.1	-835.9	1,010.3	948.7	61.57	16.407	
7,677.1	6,714.0	7,668.1	6,714.0	32.9	32.8	-90.00	-470.1	-913.1	1,010.3	944.9	65.35	15.460	
7,700.0	6,714.0	7,690.9	6,714.0	33.4	33.4	-90.00	-470.1	-935.9	1,010.3	943.8	66.47	15.200	
7,775.6	6,713.9	7,766.5	6,713.8	35.3	35.3	-90.00	-470.1	-1,011.5	1,010.3	940.0	70.24	14.382	
7,800.0	6,713.8	7,790.9	6,713.8	35.9	35.9	-90.00	-470.1	-1,035.9	1,010.3	938.8	71.46	14.137	
7,874.0	6,713.7	7,864.9	6,713.6	37.8	37.8	-90.00	-470.1	-1,109.9	1,010.3	935.0	75.23	13.430	
7,900.0	6,713.6	7,890.9	6,713.6	38.4	38.5	-90.00	-470.1	-1,135.9	1,010.3	933.7	76.55	13.197	
7,972.4	6,713.5	7,963.4	6,713.5	40.3	40.3	-90.00	-470.1	-1,208.4	1,010.3	930.0	80.28	12.584	
8,000.0	6,713.4	7,990.9	6,713.4	41.0	41.1	-90.00	-470.1	-1,235.9	1,010.3	928.6	81.71	12.365	
8,070.8	6,713.3	8,061.8	6,713.3	42.8	42.9	-90.00	-470.1	-1,306.8	1,010.3	924.9	85.40	11.830	
8,100.0	6,713.2	8,090.9	6,713.2	43.6	43.7	-90.00	-470.1	-1,335.9	1,010.3	923.3	86.92	11.623	
8,169.3	6,713.1	8,160.2	6,713.1	45.4	45.5	-90.00	-470.1	-1,405.2	1,010.3	919.7	90.56	11.155	
8,200.0	6,713.0	8,190.9	6,713.0	46.2	46.3	-90.00	-470.1	-1,435.9	1,010.3	918.1	92.18	10.960	
8,267.7	6,712.9	8,258.6	6,712.9	48.0	48.1	-90.00	-470.1	-1,503.6	1,010.3	914.5	95.77	10.549	
8,300.0	6,712.8	8,290.9	6,712.8	48.8	49.0	-90.00	-470.1	-1,535.9	1,010.3	912.8	97.48	10.364	
8,366.1	6,712.7	8,357.1	6,712.7	50.6	50.7	-90.00	-470.1	-1,602.1	1,010.3	909.2	101.01	10.002	
8,400.0	6,712.6	8,390.9	6,712.6	51.5	51.6	-90.00	-470.1	-1,635.9	1,010.3	907.4	102.82	9.826	
8,464.5	6,712.5	8,455.5	6,712.5	53.2	53.4	-90.00	-470.1	-1,700.5	1,010.3	904.0	106.28	9.506	
8,500.0	6,712.4	8,490.9	6,712.4	54.1	54.3	-90.00	-470.1	-1,735.9	1,010.3	902.1	108.18	9.338	
8,563.0	6,712.3	8,553.9	6,712.3	55.8	56.0	-90.00	-470.1	-1,798.9	1,010.3	898.7	111.58	9.054	
8,600.0	6,712.3	8,590.9	6,712.2	56.8	57.0	-90.00	-470.1	-1,835.9	1,010.3	896.7	113.57	8.895	
8,661.4	6,712.1	8,652.3	6,712.1	58.5	58.7	-90.00	-470.1	-1,897.3	1,010.3	893.4	116.89	8.642	
8,700.0	6,712.1	8,690.9	6,712.0	59.5	59.7	-90.00	-470.1	-1,935.9	1,010.3	891.3	118.98	8.491	
8,759.8	6,711.9	8,750.8	6,711.9	61.1	61.4	-90.00	-470.1	-1,995.8	1,010.3	888.0	122.23	8.265	
8,800.0	6,711.9	8,790.9	6,711.9	62.2	62.4	-90.00	-470.1	-2,035.9	1,010.3	885.8	124.41	8.120	
8,858.2	6,711.8	8,849.2	6,711.7	63.8	64.0	-90.00	-470.1	-2,094.2	1,010.3	882.7	127.59	7.918	
8,900.0	6,711.7	8,890.9	6,711.7	64.9	65.2	-90.00	-470.1	-2,135.9	1,010.3	880.4	129.86	7.780	
8,956.7	6,711.6	8,947.6	6,711.5	66.5	66.7	-90.00	-470.1	-2,192.6	1,010.3	877.3	132.95	7.599	
9,000.0	6,711.5	8,990.9	6,711.5	67.6	67.9	-90.00	-470.1	-2,235.9	1,010.3	874.9	135.32	7.466	
9,055.1	6,711.4	9,046.0	6,711.4	69.1	69.4	-90.00	-470.1	-2,291.0	1,010.3	871.9	138.34	7.303	
9,100.0	6,711.3	9,090.9	6,711.3	70.4	70.6	-90.00	-470.1	-2,335.9	1,010.3	869.5	140.79	7.175	
9,153.5	6,711.2	9,144.5	6,711.2	71.8	72.1	-90.00	-470.1	-2,389.5	1,010.3	866.5	143.73	7.029	
9,200.0	6,711.1	9,190.9	6,711.1	73.1	73.4	-90.00	-470.1	-2,435.9	1,010.3	864.0	146.28	6.906	
9,251.9	6,711.0	9,242.9	6,711.0	74.5	74.8	-90.00	-470.1	-2,487.9	1,010.3	861.1	149.13	6.774	
9,300.0	6,710.9	9,290.9	6,710.9	75.8	76.1	-90.00	-470.1	-2,535.9	1,010.3	858.5	151.77	6.656	
9,350.4	6,710.8	9,341.3	6,710.8	77.2	77.5	-90.00	-470.1	-2,586.3	1,010.3	855.7	154.55	6.537	
9,400.0	6,710.7	9,390.9	6,710.7	78.6	78.9	-90.00	-470.1	-2,635.9	1,010.3	853.0	157.28	6.423	
9,448.8	6,710.6	9,439.7	6,710.6	79.9	80.2	-90.00	-470.1	-2,684.7	1,010.3	850.3	159.97	6.315	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,710.5	9,490.9	6,710.5	81.3	81.7	-90.00	-470.1	-2,735.9	1,010.3	847.5	162.79	6.206	
9,547.2	6,710.4	9,538.2	6,710.4	82.6	83.0	-90.00	-470.1	-2,783.2	1,010.3	844.9	165.39	6.108	
9,600.0	6,710.3	9,590.9	6,710.3	84.1	84.4	-90.00	-470.1	-2,835.9	1,010.3	841.9	168.31	6.002	
9,645.6	6,710.2	9,636.6	6,710.2	85.3	85.7	-90.00	-470.1	-2,881.6	1,010.3	839.4	170.83	5.914	
9,700.0	6,710.1	9,690.9	6,710.1	86.8	87.2	-90.00	-470.1	-2,935.9	1,010.3	836.4	173.83	5.812	
9,744.1	6,710.0	9,735.0	6,710.0	88.1	88.4	-90.00	-470.1	-2,980.0	1,010.3	834.0	176.27	5.731	
9,800.0	6,709.9	9,790.9	6,709.9	89.6	89.9	-90.00	-470.1	-3,035.9	1,010.3	830.9	179.37	5.632	
9,842.5	6,709.9	9,833.4	6,709.8	90.8	91.1	-90.00	-470.1	-3,078.4	1,010.3	828.5	181.72	5.559	
9,900.0	6,709.7	9,890.9	6,709.7	92.4	92.7	-90.00	-470.1	-3,135.9	1,010.3	825.4	184.90	5.464	
9,940.9	6,709.7	9,931.9	6,709.7	93.5	93.8	-90.00	-470.1	-3,176.9	1,010.3	823.1	187.17	5.398	
10,000.0	6,709.6	9,990.9	6,709.5	95.1	95.5	-90.00	-470.1	-3,235.9	1,010.3	819.8	190.44	5.305	
10,039.3	6,709.5	10,030.3	6,709.5	96.2	96.6	-90.00	-470.1	-3,275.3	1,010.3	817.6	192.63	5.245	
10,100.0	6,709.4	10,090.9	6,709.4	97.9	98.3	-90.00	-470.1	-3,335.9	1,010.3	814.3	195.99	5.155	
10,137.8	6,709.3	10,128.7	6,709.3	98.9	99.3	-90.00	-470.1	-3,373.7	1,010.3	812.2	198.09	5.100	
10,200.0	6,709.2	10,190.9	6,709.2	100.7	101.0	-90.00	-470.1	-3,435.9	1,010.3	808.7	201.54	5.013	
10,236.2	6,709.1	10,227.1	6,709.1	101.7	102.0	-90.00	-470.1	-3,472.1	1,010.3	806.7	203.55	4.963	
10,300.0	6,709.0	10,290.9	6,709.0	103.4	103.8	-90.00	-470.1	-3,535.9	1,010.3	803.2	207.10	4.878	
10,334.6	6,708.9	10,325.6	6,708.9	104.4	104.8	-90.00	-470.1	-3,570.6	1,010.3	801.2	209.02	4.833	
10,400.0	6,708.8	10,390.9	6,708.8	106.2	106.6	-90.00	-470.1	-3,635.9	1,010.3	797.6	212.65	4.751	
10,433.0	6,708.7	10,424.0	6,708.7	107.1	107.5	-90.00	-470.1	-3,669.0	1,010.3	795.8	214.49	4.710	
10,500.0	6,708.6	10,490.9	6,708.6	109.0	109.4	-90.00	-470.1	-3,735.9	1,010.3	792.0	218.22	4.630	
10,531.5	6,708.5	10,522.4	6,708.5	109.9	110.3	-90.00	-470.1	-3,767.4	1,010.3	790.3	219.97	4.593	
10,600.0	6,708.4	10,590.9	6,708.4	111.8	112.2	-90.00	-470.1	-3,835.9	1,010.3	786.5	223.78	4.514	
10,629.9	6,708.4	10,620.8	6,708.3	112.6	113.0	-90.00	-470.0	-3,865.8	1,010.3	784.8	225.45	4.481	
10,700.0	6,708.2	10,690.9	6,708.2	114.6	114.9	-90.00	-470.0	-3,935.9	1,010.3	780.9	229.35	4.405	
10,728.3	6,708.2	10,719.3	6,708.2	115.3	115.7	-90.00	-470.0	-3,964.3	1,010.3	779.3	230.93	4.375	
10,800.0	6,708.0	10,790.9	6,708.0	117.3	117.7	-90.00	-470.0	-4,035.9	1,010.3	775.3	234.92	4.300	
10,826.7	6,708.0	10,817.7	6,708.0	118.1	118.5	-90.00	-470.0	-4,062.7	1,010.3	773.8	236.41	4.273	
10,900.0	6,707.8	10,890.9	6,707.8	120.1	120.5	-90.00	-470.0	-4,135.9	1,010.3	769.8	240.49	4.201	
10,925.2	6,707.8	10,916.1	6,707.8	120.8	121.2	-90.00	-470.0	-4,161.1	1,010.3	768.4	241.89	4.176	
11,000.0	6,707.6	10,990.9	6,707.6	122.9	123.3	-90.00	-470.0	-4,235.9	1,010.3	764.2	246.06	4.106	
11,023.6	6,707.6	11,014.5	6,707.6	123.6	124.0	-90.00	-470.0	-4,259.5	1,010.3	762.9	247.38	4.084	
11,100.0	6,707.5	11,090.9	6,707.4	125.7	126.1	-90.00	-470.0	-4,335.9	1,010.3	758.6	251.64	4.015	
11,122.0	6,707.4	11,113.0	6,707.4	126.3	126.7	-90.00	-470.0	-4,358.0	1,010.3	757.4	252.87	3.995	
11,200.0	6,707.3	11,190.9	6,707.3	128.5	128.9	-90.00	-470.0	-4,435.9	1,010.3	753.0	257.22	3.928	
11,220.4	6,707.2	11,211.4	6,707.2	129.0	129.5	-90.00	-470.0	-4,456.4	1,010.3	751.9	258.36	3.910	
11,300.0	6,707.1	11,290.9	6,707.1	131.3	131.7	-90.00	-470.0	-4,535.9	1,010.3	747.5	262.80	3.844	
11,318.9	6,707.0	11,309.8	6,707.0	131.8	132.2	-90.00	-470.0	-4,554.8	1,010.3	746.4	263.85	3.829	
11,400.0	6,706.9	11,390.9	6,706.9	134.0	134.5	-90.00	-470.0	-4,635.9	1,010.3	741.9	268.38	3.764	
11,417.3	6,706.9	11,408.2	6,706.8	134.5	134.9	-90.00	-470.0	-4,653.2	1,010.3	740.9	269.35	3.751	
11,500.0	6,706.7	11,490.9	6,706.7	136.8	137.3	-90.00	-470.0	-4,735.9	1,010.3	736.3	273.97	3.688	
11,515.7	6,706.7	11,506.7	6,706.7	137.3	137.7	-90.00	-470.0	-4,751.7	1,010.3	735.4	274.84	3.676	
11,600.0	6,706.5	11,590.9	6,706.5	139.6	140.0	-90.00	-470.0	-4,835.9	1,010.3	730.7	279.55	3.614	
11,614.1	6,706.5	11,605.1	6,706.5	140.0	140.4	-90.00	-470.0	-4,850.1	1,010.3	729.9	280.34	3.604	
11,700.0	6,706.3	11,690.9	6,706.3	142.4	142.8	-90.00	-470.0	-4,935.9	1,010.3	725.1	285.14	3.543	
11,712.6	6,706.3	11,703.5	6,706.3	142.8	143.2	-90.00	-470.0	-4,948.5	1,010.3	724.4	285.84	3.534	
11,800.0	6,706.1	11,790.9	6,706.1	145.2	145.6	-90.00	-470.0	-5,035.9	1,010.3	719.5	290.73	3.475	
11,811.0	6,706.1	11,801.9	6,706.1	145.5	145.9	-90.00	-470.0	-5,046.9	1,010.3	718.9	291.34	3.468	
11,900.0	6,705.9	11,890.9	6,705.9	148.0	148.4	-90.00	-470.0	-5,135.9	1,010.3	713.9	296.32	3.409	
11,909.4	6,705.9	11,900.4	6,705.9	148.3	148.7	-90.00	-470.0	-5,145.4	1,010.3	713.4	296.84	3.403	
12,000.0	6,705.8	11,990.9	6,705.7	150.8	151.2	-90.00	-470.0	-5,235.9	1,010.3	708.3	301.91	3.346	
12,007.8	6,705.7	11,998.8	6,705.7	151.0	151.4	-90.00	-470.0	-5,243.8	1,010.3	707.9	302.35	3.341	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,100.0	6,705.6	12,090.9	6,705.6	153.6	154.0	-90.00	-470.0	-5,335.9	1,010.3	702.8	307.50	3.285		
12,106.3	6,705.6	12,097.2	6,705.5	153.8	154.2	-90.00	-470.0	-5,342.2	1,010.3	702.4	307.85	3.282		
12,200.0	6,705.4	12,190.9	6,705.4	156.4	156.8	-90.00	-470.0	-5,435.9	1,010.3	697.2	313.09	3.227		
12,204.7	6,705.4	12,195.6	6,705.4	156.5	157.0	-90.00	-470.0	-5,440.6	1,010.3	696.9	313.35	3.224		
12,300.0	6,705.2	12,290.9	6,705.2	159.2	159.6	-90.00	-470.0	-5,535.9	1,010.3	691.6	318.69	3.170		
12,303.1	6,705.2	12,294.1	6,705.2	159.3	159.7	-90.00	-470.0	-5,539.1	1,010.3	691.4	318.86	3.168		
12,400.0	6,705.0	12,390.9	6,705.0	162.0	162.4	-90.00	-470.0	-5,635.9	1,010.3	686.0	324.28	3.115		
12,401.5	6,705.0	12,392.5	6,705.0	162.0	162.5	-90.00	-470.0	-5,637.5	1,010.3	685.9	324.37	3.115		
12,500.0	6,704.8	12,490.9	6,704.8	164.8	165.2	-90.00	-470.0	-5,735.9	1,010.3	680.4	329.88	3.063		
12,598.4	6,704.6	12,589.3	6,704.6	167.5	168.0	-90.00	-470.0	-5,834.3	1,010.3	674.9	335.38	3.012		
12,600.0	6,704.6	12,590.9	6,704.6	167.6	168.0	-90.00	-470.0	-5,835.9	1,010.3	674.8	335.47	3.011		
12,696.8	6,704.4	12,687.8	6,704.4	170.3	170.7	-90.00	-470.0	-5,932.8	1,010.2	669.4	340.89	2.964		
12,700.0	6,704.4	12,690.9	6,704.4	170.4	170.8	-90.00	-470.0	-5,935.9	1,010.2	669.2	341.07	2.962		
12,795.2	6,704.3	12,786.2	6,704.2	173.0	173.5	-90.00	-470.0	-6,031.2	1,010.2	663.8	346.40	2.916		
12,800.0	6,704.2	12,790.9	6,704.2	173.2	173.6	-90.00	-470.0	-6,035.9	1,010.2	663.6	346.67	2.914		
12,893.7	6,704.1	12,884.6	6,704.1	175.8	176.2	-90.00	-470.0	-6,129.6	1,010.2	658.3	351.91	2.871		
12,900.0	6,704.1	12,890.9	6,704.0	176.0	176.4	-90.00	-470.0	-6,135.9	1,010.2	658.0	352.27	2.868		
12,992.1	6,703.9	12,983.0	6,703.9	178.5	179.0	-90.00	-470.0	-6,228.0	1,010.2	652.8	357.43	2.826		
13,000.0	6,703.9	12,990.9	6,703.9	178.8	179.2	-90.00	-470.0	-6,235.9	1,010.2	652.4	357.87	2.823		
13,090.5	6,703.7	13,081.5	6,703.7	181.3	181.7	-90.00	-470.0	-6,326.5	1,010.2	647.3	362.94	2.784		
13,100.0	6,703.7	13,090.9	6,703.7	181.6	182.0	-90.00	-470.0	-6,335.9	1,010.2	646.8	363.47	2.779		
13,188.9	6,703.5	13,179.9	6,703.5	184.0	184.5	-90.00	-470.0	-6,424.9	1,010.2	641.8	368.45	2.742		
13,200.0	6,703.5	13,190.9	6,703.5	184.4	184.8	-90.00	-470.0	-6,435.9	1,010.2	641.2	369.07	2.737		
13,287.4	6,703.3	13,278.3	6,703.3	186.8	187.3	-90.00	-470.0	-6,523.3	1,010.2	636.3	373.96	2.701		
13,300.0	6,703.3	13,290.9	6,703.3	187.2	187.6	-90.00	-470.0	-6,535.9	1,010.2	635.6	374.67	2.696		
13,385.8	6,703.2	13,376.7	6,703.1	189.6	190.0	-90.00	-470.0	-6,621.7	1,010.2	630.8	379.48	2.662		
13,400.0	6,703.1	13,390.9	6,703.1	190.0	190.4	-90.00	-470.0	-6,635.9	1,010.2	630.0	380.27	2.657		
13,484.2	6,703.0	13,475.2	6,703.0	192.3	192.8	-90.00	-470.0	-6,720.2	1,010.2	625.3	384.99	2.624		
13,500.0	6,702.9	13,490.9	6,702.9	192.8	193.2	-90.00	-470.0	-6,735.9	1,010.2	624.4	385.88	2.618		
13,582.6	6,702.8	13,573.6	6,702.8	195.1	195.5	-90.00	-470.0	-6,818.6	1,010.2	619.7	390.51	2.587		
13,600.0	6,702.8	13,590.9	6,702.7	195.6	196.0	-90.00	-470.0	-6,835.9	1,010.2	618.8	391.48	2.581		
13,681.1	6,702.6	13,672.0	6,702.6	197.8	198.3	-90.00	-470.0	-6,917.0	1,010.2	614.2	396.02	2.551		
13,700.0	6,702.6	13,690.9	6,702.6	198.4	198.8	-90.00	-470.0	-6,935.9	1,010.2	613.2	397.08	2.544		
13,779.5	6,702.4	13,770.4	6,702.4	200.6	201.0	-90.00	-470.0	-7,015.4	1,010.2	608.7	401.54	2.516		
13,800.0	6,702.4	13,790.9	6,702.4	201.2	201.6	-90.00	-470.0	-7,035.9	1,010.2	607.6	402.69	2.509		
13,877.9	6,702.2	13,868.9	6,702.2	203.3	203.8	-90.00	-470.0	-7,113.9	1,010.2	603.2	407.06	2.482		
13,900.0	6,702.2	13,890.9	6,702.2	204.0	204.4	-90.00	-470.0	-7,135.9	1,010.2	602.0	408.29	2.474		
13,976.3	6,702.1	13,967.3	6,702.0	206.1	206.6	-90.00	-470.0	-7,212.3	1,010.2	597.7	412.57	2.449		
14,000.0	6,702.0	13,990.9	6,702.0	206.8	207.2	-90.00	-470.0	-7,235.9	1,010.2	596.3	413.90	2.441		
14,074.8	6,701.9	14,065.7	6,701.9	208.9	209.3	-90.00	-470.0	-7,310.7	1,010.2	592.2	418.09	2.416		
14,100.0	6,701.8	14,090.9	6,701.8	209.6	210.0	-90.00	-470.0	-7,335.9	1,010.2	590.7	419.50	2.408		
14,173.2	6,701.7	14,164.1	6,701.7	211.6	212.1	-90.00	-470.0	-7,409.1	1,010.2	586.6	423.61	2.385		
14,200.0	6,701.6	14,190.9	6,701.6	212.4	212.8	-90.00	-470.0	-7,435.9	1,010.2	585.1	425.11	2.376		
14,271.6	6,701.5	14,262.6	6,701.5	214.4	214.8	-90.00	-470.0	-7,507.6	1,010.2	581.1	429.13	2.354		
14,300.0	6,701.4	14,290.9	6,701.4	215.2	215.6	-90.00	-470.0	-7,535.9	1,010.2	579.5	430.72	2.345		
14,370.0	6,701.3	14,361.0	6,701.3	217.1	217.6	-90.00	-470.0	-7,606.0	1,010.2	575.6	434.65	2.324		
14,400.0	6,701.3	14,390.9	6,701.2	218.0	218.4	-90.00	-470.0	-7,635.9	1,010.2	573.9	436.32	2.315		
14,468.5	6,701.1	14,459.4	6,701.1	219.9	220.4	-90.00	-470.0	-7,704.4	1,010.2	570.1	440.16	2.295		
14,500.0	6,701.1	14,490.9	6,701.1	220.8	221.2	-90.00	-470.0	-7,735.9	1,010.2	568.3	441.93	2.286		
14,566.9	6,701.0	14,557.8	6,700.9	222.6	223.1	-90.00	-470.0	-7,802.8	1,010.2	564.6	445.68	2.267		
14,600.0	6,700.9	14,590.9	6,700.9	223.6	224.0	-90.00	-470.0	-7,835.9	1,010.2	562.7	447.54	2.257		
14,665.3	6,700.8	14,656.3	6,700.8	225.4	225.9	-90.00	-470.0	-7,901.3	1,010.2	559.0	451.20	2.239		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - WACKER 10G-304 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,700.7	14,690.9	6,700.7	226.4	226.9	-90.00	-470.0	-7,935.9	1,010.2	557.1	453.15	2.229	
14,763.7	6,700.6	14,754.7	6,700.6	228.2	228.6	-90.00	-470.0	-7,999.7	1,010.2	553.5	456.72	2.212	
14,800.0	6,700.5	14,790.9	6,700.5	229.2	229.7	-90.00	-470.0	-8,035.9	1,010.2	551.5	458.76	2.202	
14,862.2	6,700.4	14,853.1	6,700.4	230.9	231.4	-90.00	-470.0	-8,098.1	1,010.2	548.0	462.24	2.186	
14,900.0	6,700.3	14,890.9	6,700.3	232.0	232.5	-90.00	-470.0	-8,135.9	1,010.2	545.9	464.37	2.176	
14,960.6	6,700.2	14,951.5	6,700.2	233.7	234.2	-90.00	-470.0	-8,196.5	1,010.2	542.5	467.76	2.160	
15,000.0	6,700.2	14,990.9	6,700.1	234.8	235.3	-90.00	-470.0	-8,235.9	1,010.2	540.3	469.97	2.150	
15,059.0	6,700.0	15,050.0	6,700.0	236.4	236.4	-90.00	-470.0	-8,295.0	1,010.2	537.5	472.79	2.137	
15,074.8	6,700.0	15,065.7	6,700.0	236.9	236.7	-90.00	-470.0	-8,310.7	1,010.2	536.7	473.51	2.133	
15,082.8	6,700.0	15,065.7	6,700.0	237.1	236.7	-90.00	-470.0	-8,310.7	1,010.3	536.5	473.74	2.133 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-179.36	-75.0	-0.8	75.1				
98.4	98.4	98.4	98.4	0.1	0.1	-179.36	-75.0	-0.8	75.1	74.9	0.19	390.420	
100.0	100.0	100.0	100.0	0.1	0.1	-179.36	-75.0	-0.8	75.1	74.9	0.20	383.811	
196.8	196.8	196.8	196.8	0.3	0.3	-179.36	-75.0	-0.8	75.1	74.4	0.63	118.958	
200.0	200.0	200.0	200.0	0.3	0.3	-179.36	-75.0	-0.8	75.1	74.4	0.65	116.347	
295.3	295.3	295.3	295.3	0.5	0.5	-179.36	-75.0	-0.8	75.1	74.0	1.07	69.923	
300.0	300.0	300.0	300.0	0.5	0.5	-179.36	-75.0	-0.8	75.1	74.0	1.09	68.566	
393.7	393.7	393.7	393.7	0.8	0.8	-179.36	-75.0	-0.8	75.1	73.5	1.52	49.513	
400.0	400.0	400.0	400.0	0.8	0.8	-179.36	-75.0	-0.8	75.1	73.5	1.54	48.605	
492.1	492.1	492.1	492.1	1.0	1.0	-179.36	-75.0	-0.8	75.1	73.1	1.96	38.326	
500.0	500.0	500.0	500.0	1.0	1.0	-179.36	-75.0	-0.8	75.1	73.1	1.99	37.646	
590.5	590.5	590.5	590.5	1.2	1.2	-179.36	-75.0	-0.8	75.1	72.7	2.40	31.263	
600.0	600.0	600.0	600.0	1.2	1.2	-179.36	-75.0	-0.8	75.1	72.6	2.44	30.719	
689.0	689.0	689.0	689.0	1.4	1.4	-179.36	-75.0	-0.8	75.1	72.2	2.84	26.398	
700.0	700.0	700.0	700.0	1.4	1.4	-179.36	-75.0	-0.8	75.1	72.2	2.89	25.945	
787.4	787.4	787.4	787.4	1.6	1.6	-179.36	-75.0	-0.8	75.1	71.8	3.29	22.843	
800.0	800.0	800.0	800.0	1.7	1.7	-179.36	-75.0	-0.8	75.1	71.7	3.34	22.456	
885.8	885.8	885.8	885.8	1.9	1.9	-179.36	-75.0	-0.8	75.1	71.3	3.73	20.132	
900.0	900.0	900.0	900.0	1.9	1.9	-179.36	-75.0	-0.8	75.1	71.3	3.79	19.793	
984.2	984.2	984.2	984.2	2.1	2.1	-179.36	-75.0	-0.8	75.1	70.9	4.17	17.996	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.36	-75.0	-0.8	75.1	70.8	4.24	17.696	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-179.36	-75.0	-0.8	75.1	70.4	4.61	16.270	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-179.36	-75.0	-0.8	75.1	70.4	4.69	16.000 CC, ES	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	152.31	-75.0	-0.8	76.1	71.0	5.05	15.051	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	152.51	-75.0	-0.8	76.6	71.5	5.14	14.908	
1,279.5	1,279.4	1,279.4	1,279.4	2.7	2.7	153.76	-75.0	-0.8	80.1	74.6	5.49	14.579	
1,300.0	1,299.8	1,299.8	1,299.8	2.8	2.8	154.17	-75.0	-0.8	81.3	75.7	5.58	14.562	
1,377.9	1,377.5	1,377.5	1,377.5	3.0	3.0	155.98	-75.0	-0.8	87.2	81.2	5.93	14.712	
1,400.0	1,399.5	1,399.5	1,399.5	3.0	3.0	156.55	-75.0	-0.8	89.2	83.2	6.02	14.815	
1,476.4	1,475.3	1,475.3	1,475.3	3.2	3.2	158.59	-75.0	-0.8	97.5	91.2	6.36	15.346	
1,500.0	1,498.7	1,498.7	1,498.7	3.3	3.2	159.23	-75.0	-0.8	100.5	94.1	6.46	15.566	
1,574.8	1,572.6	1,572.6	1,572.6	3.5	3.4	161.24	-75.0	-0.8	111.2	104.5	6.78	16.405	
1,600.0	1,597.5	1,597.5	1,597.5	3.5	3.5	161.89	-75.0	-0.8	115.3	108.4	6.89	16.739	
1,673.2	1,669.4	1,669.0	1,669.0	3.7	3.6	164.07	-75.0	-1.7	128.4	121.2	7.19	17.860	
1,700.1	1,695.8	1,695.2	1,695.2	3.8	3.7	165.01	-74.9	-2.4	133.8	126.5	7.30	18.333	
1,771.6	1,765.7	1,764.2	1,764.2	4.1	3.8	167.69	-74.5	-5.5	148.8	141.2	7.61	19.556	
1,800.0	1,793.4	1,791.5	1,791.4	4.2	3.9	168.78	-74.4	-7.2	154.9	147.2	7.73	20.041	
1,870.1	1,862.0	1,858.5	1,858.2	4.4	4.0	171.49	-73.8	-12.4	170.5	162.4	8.04	21.210	
1,900.0	1,891.3	1,887.0	1,886.5	4.5	4.1	172.65	-73.5	-15.1	177.3	169.2	8.17	21.717	
1,968.5	1,958.3	1,951.8	1,950.9	4.8	4.2	175.29	-72.7	-22.3	193.7	185.2	8.47	22.861	
2,000.0	1,989.1	1,981.4	1,980.2	4.9	4.3	176.50	-72.3	-26.0	201.5	192.8	8.61	23.386	
2,066.9	2,054.5	2,043.8	2,042.0	5.1	4.5	179.01	-71.3	-34.9	218.6	209.7	8.92	24.500	
2,100.0	2,086.9	2,074.4	2,072.2	5.3	4.5	-179.77	-70.8	-39.8	227.5	218.4	9.08	25.056	
2,165.3	2,150.8	2,134.4	2,131.3	5.5	4.7	-177.43	-69.7	-50.2	245.6	236.2	9.39	26.148	
2,200.0	2,184.7	2,165.9	2,162.2	5.6	4.8	-176.22	-69.0	-56.2	255.6	246.1	9.56	26.730	
2,263.8	2,247.1	2,223.4	2,218.5	5.9	5.0	-174.05	-67.7	-68.0	274.7	264.9	9.88	27.799	
2,300.0	2,282.5	2,255.8	2,250.1	6.0	5.1	-172.87	-66.9	-75.1	286.0	276.0	10.07	28.404	
2,362.2	2,343.3	2,310.8	2,303.5	6.3	5.3	-170.90	-65.5	-88.1	306.2	295.8	10.40	29.450	
2,400.0	2,380.3	2,343.9	2,335.6	6.5	5.4	-169.74	-64.6	-96.3	318.8	308.2	10.60	30.075	
2,460.6	2,439.6	2,396.4	2,386.2	6.7	5.6	-167.96	-63.1	-110.2	339.9	329.0	10.93	31.093	
2,500.0	2,478.1	2,430.1	2,418.6	6.9	5.7	-166.85	-62.1	-119.6	354.1	342.9	11.15	31.743	
2,559.0	2,535.9	2,480.1	2,466.4	7.1	5.9	-165.25	-60.5	-134.2	376.1	364.6	11.49	32.722	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,517.0	2,501.5	7.3	6.1	-164.13	-59.3	-145.3	391.7	379.9	11.74	33.358	
2,657.5	2,632.2	2,569.2	2,551.2	7.5	6.4	-162.68	-57.6	-161.1	413.8	401.7	12.09	34.220	
2,700.0	2,673.8	2,607.8	2,588.0	7.7	6.6	-161.71	-56.3	-172.7	430.4	418.0	12.35	34.839	
2,755.9	2,728.4	2,658.5	2,636.3	7.9	6.8	-160.53	-54.6	-188.0	452.2	439.5	12.70	35.605	
2,800.0	2,771.6	2,698.6	2,674.5	8.1	7.0	-159.67	-53.3	-200.1	469.6	456.6	12.97	36.193	
2,854.3	2,824.7	2,747.9	2,721.4	8.3	7.3	-158.70	-51.7	-215.0	491.1	477.8	13.32	36.875	
2,900.0	2,869.4	2,789.3	2,760.9	8.5	7.5	-157.95	-50.3	-227.5	509.2	495.6	13.61	37.430	
2,952.7	2,921.0	2,837.2	2,806.6	8.8	7.8	-157.14	-48.7	-242.0	530.3	516.4	13.94	38.039	
3,000.0	2,967.2	2,880.1	2,847.4	9.0	8.0	-156.47	-47.3	-254.9	549.2	535.0	14.24	38.564	
3,051.2	3,017.3	2,926.6	2,891.7	9.2	8.3	-155.79	-45.8	-269.0	569.8	555.2	14.57	39.108	
3,100.0	3,065.0	2,970.9	2,933.9	9.4	8.5	-155.19	-44.3	-282.3	589.5	574.6	14.88	39.606	
3,149.6	3,113.5	3,015.9	2,976.8	9.6	8.8	-154.62	-42.8	-295.9	609.6	594.4	15.20	40.091	
3,200.0	3,162.8	3,061.7	3,020.4	9.8	9.0	-154.07	-41.3	-309.7	630.0	614.5	15.53	40.563	
3,248.0	3,209.8	3,105.3	3,062.0	10.0	9.3	-153.58	-39.9	-322.9	649.5	633.7	15.84	40.997	
3,300.0	3,260.6	3,152.4	3,106.9	10.2	9.6	-153.09	-38.3	-337.2	670.7	654.5	16.18	41.445	
3,346.4	3,306.1	3,194.6	3,147.1	10.5	9.8	-152.67	-37.0	-349.9	689.6	673.1	16.49	41.833	
3,400.0	3,358.5	3,243.2	3,193.4	10.7	10.1	-152.21	-35.4	-364.6	711.5	694.7	16.84	42.260	
3,444.9	3,402.3	3,284.0	3,232.2	10.9	10.3	-151.85	-34.0	-376.9	729.8	712.7	17.13	42.605	
3,500.0	3,456.3	3,334.0	3,279.9	11.1	10.6	-151.43	-32.4	-392.0	752.4	734.9	17.49	43.014	
3,543.3	3,498.6	3,373.3	3,317.3	11.3	10.9	-151.12	-31.1	-403.8	770.2	752.4	17.78	43.322	
3,600.0	3,554.1	3,424.8	3,366.4	11.5	11.2	-150.73	-29.4	-419.4	793.5	775.3	18.15	43.712	
3,641.7	3,594.9	3,462.6	3,402.5	11.7	11.4	-150.46	-28.1	-430.8	810.6	792.2	18.43	43.988	
3,700.0	3,651.9	3,515.5	3,452.9	12.0	11.7	-150.10	-26.4	-446.8	834.6	815.8	18.81	44.361	
3,740.1	3,691.2	3,552.0	3,487.6	12.2	12.0	-149.87	-25.2	-457.8	851.2	832.1	19.08	44.608	
3,800.0	3,749.7	3,606.3	3,539.4	12.4	12.3	-149.53	-23.4	-474.2	875.8	856.4	19.48	44.965	
3,838.6	3,787.4	3,641.3	3,572.7	12.6	12.5	-149.32	-22.2	-484.8	891.7	872.0	19.73	45.186	
3,900.0	3,847.5	3,697.1	3,625.8	12.9	12.9	-149.01	-20.4	-501.6	917.1	897.0	20.14	45.528	
3,937.0	3,883.7	3,730.7	3,657.8	13.0	13.1	-148.83	-19.3	-511.7	932.4	912.0	20.39	45.727	
4,000.0	3,945.3	3,787.9	3,712.3	13.3	13.4	-148.53	-17.4	-529.0	958.4	937.6	20.81	46.054	
4,035.4	3,980.0	3,820.0	3,743.0	13.5	13.6	-148.37	-16.4	-538.7	973.1	952.1	21.05	46.232	
4,060.0	4,004.0	3,842.3	3,764.2	13.6	13.8	-148.27	-15.6	-545.4	983.3	962.1	21.21	46.353	
4,100.0	4,043.2	3,878.7	3,798.9	13.7	14.0	-148.27	-14.4	-556.4	999.6	978.1	21.51	46.472	
4,133.8	4,076.5	3,909.7	3,828.4	13.8	14.2	-148.27	-13.4	-565.8	1,013.1	991.4	21.75	46.586	
4,200.0	4,141.6	3,970.4	3,886.3	14.0	14.6	-148.22	-11.4	-584.1	1,038.6	1,016.4	22.21	46.766	
4,232.3	4,173.5	4,000.2	3,914.7	14.1	14.7	-148.18	-10.4	-593.1	1,050.6	1,028.2	22.43	46.847	
4,300.0	4,240.6	4,063.1	3,974.5	14.3	15.1	-148.06	-8.3	-612.1	1,074.9	1,052.1	22.88	46.980	
4,330.7	4,271.1	4,091.7	4,001.8	14.4	15.3	-147.99	-7.4	-620.7	1,085.6	1,062.5	23.08	47.037	
4,400.0	4,340.0	4,156.5	4,063.6	14.5	15.7	-147.80	-5.3	-640.3	1,108.6	1,085.1	23.52	47.132	
4,429.1	4,369.0	4,183.9	4,089.6	14.6	15.9	-147.71	-4.4	-648.6	1,117.9	1,094.2	23.70	47.170	
4,500.0	4,439.7	4,250.7	4,153.3	14.8	16.3	-147.46	-2.2	-668.7	1,139.6	1,115.5	24.13	47.234	
4,527.5	4,467.2	4,276.8	4,178.1	14.8	16.5	-147.35	-1.3	-676.6	1,147.7	1,123.4	24.28	47.259	
4,600.0	4,539.7	4,345.5	4,243.6	14.9	16.9	-147.03	1.0	-697.3	1,168.0	1,143.3	24.69	47.299	
4,626.0	4,565.6	4,370.2	4,267.1	15.0	17.1	-146.90	1.8	-704.8	1,174.9	1,150.1	24.83	47.312	
4,660.2	4,599.8	4,402.7	4,298.1	15.0	17.3	-118.00	2.8	-714.6	1,183.8	1,154.3	29.46	40.189	
4,700.0	4,639.6	4,440.7	4,334.3	15.0	17.5	-117.68	4.1	-726.1	1,193.9	1,164.2	29.73	40.156	
4,724.4	4,664.0	4,463.9	4,356.4	15.1	17.7	-117.48	4.9	-733.1	1,200.2	1,170.3	29.91	40.131	
4,800.0	4,739.6	4,535.9	4,425.1	15.2	18.1	-116.89	7.2	-754.8	1,219.6	1,189.2	30.45	40.055	
4,822.8	4,762.5	4,557.7	4,445.8	15.2	18.3	-116.72	7.9	-761.4	1,225.5	1,194.9	30.61	40.033	
4,900.0	4,839.6	4,631.2	4,515.8	15.3	18.7	-116.14	10.4	-783.6	1,245.5	1,214.4	31.17	39.957	
4,921.2	4,860.9	4,651.5	4,535.1	15.4	18.9	-115.98	11.0	-789.7	1,251.1	1,219.7	31.33	39.936	
5,000.0	4,939.6	4,726.5	4,606.6	15.5	19.3	-115.41	13.5	-812.4	1,271.6	1,239.7	31.90	39.860	
5,019.7	4,959.3	4,745.2	4,624.5	15.5	19.5	-115.28	14.1	-818.0	1,276.8	1,244.7	32.05	39.841	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	5,039.6	4,821.8	4,697.4	15.6	19.9	-114.72	16.6	-841.1	1,297.9	1,265.3	32.64	39.765	
5,118.1	5,057.7	4,839.0	4,713.8	15.7	20.0	-114.60	17.2	-846.3	1,302.7	1,269.9	32.77	39.747	
5,200.0	5,139.6	4,917.0	4,788.2	15.8	20.5	-114.05	19.8	-869.9	1,324.4	1,291.0	33.38	39.672	
5,216.5	5,156.2	4,932.8	4,803.2	15.8	20.6	-113.94	20.3	-874.7	1,328.7	1,295.2	33.51	39.656	
5,300.0	5,239.6	5,012.3	4,878.9	15.9	21.2	-113.41	22.9	-898.7	1,351.0	1,316.8	34.13	39.581	
5,314.9	5,254.6	5,026.6	4,892.5	16.0	21.2	-113.32	23.4	-903.0	1,355.0	1,320.7	34.24	39.567	
5,400.0	5,339.6	5,107.6	4,969.7	16.1	21.8	-112.79	26.1	-927.4	1,377.8	1,342.9	34.89	39.492	
5,413.4	5,353.0	5,120.3	4,981.9	16.1	21.8	-112.71	26.5	-931.3	1,381.3	1,346.4	34.99	39.481	
5,500.0	5,439.6	8,000.4	6,713.1	16.3	39.3	177.48	45.6	317.8	1,366.4	1,336.1	30.29	45.102	
5,511.8	5,451.4	8,000.2	6,713.1	16.3	39.3	177.51	45.6	317.6	1,355.4	1,325.1	30.31	44.711	
5,600.0	5,539.6	7,998.7	6,713.2	16.4	39.3	177.68	45.6	316.1	1,273.7	1,243.2	30.46	41.818	
5,610.2	5,549.9	7,998.5	6,713.2	16.4	39.3	177.70	45.6	316.0	1,264.3	1,233.8	30.47	41.486	
5,700.0	5,639.6	7,997.0	6,713.2	16.6	39.3	177.88	45.6	314.4	1,182.2	1,151.6	30.62	38.604	
5,708.6	5,648.3	7,996.9	6,713.2	16.6	39.3	177.90	45.6	314.3	1,174.3	1,143.7	30.64	38.330	
5,800.0	5,739.6	7,995.3	6,713.2	16.7	39.2	178.08	45.6	312.7	1,092.2	1,061.4	30.79	35.471	
5,807.1	5,746.7	7,995.2	6,713.2	16.8	39.2	178.09	45.6	312.6	1,085.9	1,055.1	30.80	35.253	
5,900.0	5,839.6	7,993.6	6,713.3	16.9	39.2	178.27	45.6	311.0	1,004.0	973.1	30.96	32.431	
5,905.5	5,845.1	7,993.5	6,713.3	16.9	39.2	178.28	45.6	310.9	999.3	968.3	30.97	32.266	
6,000.0	5,939.6	7,991.9	6,713.3	17.1	39.1	178.47	45.6	309.3	918.4	887.2	31.13	29.499	
6,003.9	5,943.6	7,991.8	6,713.3	17.1	39.1	178.48	45.6	309.2	915.0	883.9	31.14	29.387	
6,059.2	5,998.8	7,990.9	6,713.3	17.2	39.1	178.59	45.6	308.3	869.1	837.9	31.23	27.826	
6,100.0	6,039.6	7,989.0	6,713.3	17.2	39.1	-95.76	45.6	306.4	835.9	782.0	53.90	15.509	
6,102.3	6,042.0	7,988.8	6,713.3	17.2	39.1	-95.99	45.6	306.3	834.0	780.1	53.89	15.475	
6,150.0	6,089.4	7,983.6	6,713.4	17.3	39.0	-100.26	45.6	301.0	796.4	742.6	53.74	14.818	
6,200.0	6,138.7	7,974.7	6,713.6	17.3	38.8	-103.85	45.6	292.1	758.4	705.0	53.38	14.208	
6,200.8	6,139.5	7,974.5	6,713.6	17.3	38.8	-103.90	45.6	291.9	757.9	704.5	53.38	14.199	
6,250.0	6,187.4	7,962.4	6,713.8	17.3	38.5	-106.58	45.6	279.8	722.4	669.5	52.90	13.657	
6,299.2	6,234.4	7,947.0	6,714.1	17.4	38.2	-108.50	45.6	264.4	689.1	636.7	52.35	13.163	
6,300.0	6,235.1	7,946.7	6,714.1	17.4	38.2	-108.53	45.6	264.2	688.6	636.2	52.34	13.155	
6,350.0	6,281.7	7,927.8	6,714.4	17.4	37.8	-109.76	45.6	245.2	657.2	605.5	51.76	12.697	
6,397.6	6,324.8	7,906.8	6,714.7	17.3	37.3	-110.35	45.6	224.3	629.9	578.7	51.21	12.301	
6,400.0	6,326.9	7,905.7	6,714.8	17.3	37.3	-110.36	45.6	223.1	628.6	577.4	51.18	12.283	
6,450.0	6,370.5	7,880.5	6,715.2	17.3	36.8	-110.40	45.6	198.0	602.9	552.3	50.62	11.911	
6,496.0	6,409.1	7,854.7	6,715.6	17.3	36.3	-109.99	45.6	172.2	581.9	531.8	50.13	11.609	
6,500.0	6,412.3	7,852.4	6,715.7	17.3	36.2	-109.93	45.6	169.8	580.3	530.2	50.09	11.586	
6,550.0	6,452.1	7,821.4	6,716.2	17.3	35.6	-109.03	45.6	138.9	560.7	511.2	49.58	11.310	
6,594.5	6,485.6	7,791.7	6,716.7	17.3	35.0	-107.92	45.6	109.1	546.0	496.8	49.16	11.105	
6,600.0	6,489.7	7,787.8	6,716.8	17.3	34.9	-107.76	45.6	105.3	544.3	495.2	49.11	11.083	
6,650.0	6,524.9	7,751.7	6,717.4	17.2	34.2	-106.19	45.6	69.2	530.8	482.1	48.71	10.898	
6,692.9	6,553.0	7,718.9	6,717.9	17.2	33.6	-104.66	45.6	36.3	521.4	473.0	48.39	10.776	
6,700.0	6,557.5	7,713.3	6,718.0	17.2	33.5	-104.39	45.6	30.8	520.1	471.7	48.33	10.759	
6,750.0	6,587.4	7,672.7	6,718.7	17.2	32.7	-102.45	45.6	-9.8	511.8	463.8	48.03	10.655	
6,791.3	6,609.9	7,637.7	6,719.3	17.2	32.1	-100.79	45.6	-44.8	506.6	458.8	47.83	10.592	
6,800.0	6,614.4	7,630.2	6,719.5	17.2	31.9	-100.45	45.6	-52.3	505.7	457.9	47.78	10.583	
6,850.0	6,638.4	7,586.0	6,720.2	17.2	31.2	-98.47	45.6	-96.5	501.4	453.8	47.59	10.535	
6,889.7	6,655.3	7,549.7	6,720.8	17.4	30.6	-96.97	45.6	-132.8	499.0	451.5	47.50	10.505	
6,900.0	6,659.4	7,540.2	6,721.0	17.5	30.4	-96.60	45.6	-142.3	498.5	451.0	47.47	10.501	
6,950.0	6,677.1	7,493.2	6,721.8	18.0	29.7	-94.92	45.6	-189.3	496.7	449.3	47.40	10.479	
6,988.2	6,688.4	7,456.5	6,722.4	18.5	29.1	-93.81	45.6	-226.0	495.8	448.4	47.43	10.454	
7,000.0	6,691.5	7,445.1	6,722.6	18.7	29.0	-93.50	45.6	-237.4	495.6	448.2	47.43	10.449	
7,050.0	6,702.5	7,396.1	6,723.4	19.5	28.3	-92.39	45.6	-286.4	495.1	447.6	47.52	10.419	
7,086.6	6,708.4	7,359.9	6,724.1	20.1	27.8	-91.80	45.6	-322.6	494.9	447.2	47.68	10.379	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,100.0	6,710.1	7,346.6	6,724.3	20.4	27.6	-91.64	45.6	-335.9	494.9	447.1	47.74	10.365	
7,150.0	6,714.2	7,296.6	6,725.1	21.3	27.0	-91.26	45.6	-385.9	494.8	446.7	48.03	10.302	
7,185.0	6,715.0	7,261.1	6,724.4	21.9	26.7	-91.09	45.6	-421.4	494.7	446.4	48.30	10.244	
7,185.6	6,715.0	7,260.6	6,724.4	21.9	26.6	-91.09	45.6	-421.9	494.7	446.4	48.30	10.243	
7,200.0	6,715.0	7,245.9	6,723.6	22.2	26.5	-91.00	45.6	-436.5	494.7	446.3	48.42	10.217	
7,274.8	6,714.8	7,171.2	6,714.8	23.7	25.8	-90.00	45.6	-510.7	494.6	445.5	49.19	10.057	
7,283.4	6,714.8	7,162.6	6,713.3	23.9	25.7	-89.83	45.6	-519.1	494.7	445.4	49.28	10.038	
7,300.0	6,714.8	7,146.5	6,710.2	24.2	25.6	-89.47	45.6	-535.0	494.7	445.2	49.46	10.001	
7,381.9	6,714.6	7,068.9	6,690.4	26.0	25.1	-87.20	45.6	-610.0	495.3	444.8	50.54	9.799	
7,400.0	6,714.6	7,052.3	6,685.2	26.4	25.0	-86.59	45.6	-625.7	495.6	444.8	50.78	9.760	
7,480.3	6,714.4	6,982.3	6,658.9	28.2	24.6	-83.59	45.6	-690.6	498.4	446.4	51.97	9.591	
7,500.0	6,714.4	6,966.0	6,651.9	28.7	24.6	-82.79	45.6	-705.3	499.5	447.3	52.25	9.560	
7,578.7	6,714.2	6,904.4	6,622.4	30.5	24.4	-79.47	45.6	-759.4	506.1	452.7	53.39	9.480	
7,600.0	6,714.2	6,888.7	6,614.2	31.0	24.4	-78.56	45.6	-772.7	508.6	454.9	53.68	9.474 SF	
7,677.1	6,714.0	6,835.4	6,584.0	32.9	24.4	-75.26	45.6	-816.6	520.5	465.7	54.71	9.513	
7,700.0	6,714.0	6,820.7	6,575.1	33.4	24.4	-74.30	45.6	-828.4	524.9	469.9	54.99	9.545	
7,775.6	6,713.9	6,775.0	6,546.1	35.3	24.4	-71.23	45.6	-863.5	542.9	487.0	55.89	9.713	
7,800.0	6,713.8	6,761.3	6,536.9	35.9	24.4	-70.29	45.6	-873.8	549.8	493.6	56.16	9.790	
7,874.0	6,713.7	6,722.4	6,509.8	37.8	24.5	-67.57	45.6	-901.7	574.1	517.1	56.96	10.079	
7,900.0	6,713.6	6,709.7	6,500.7	38.4	24.5	-66.67	45.6	-910.5	583.8	526.6	57.22	10.203	
7,972.4	6,713.5	6,676.7	6,476.1	40.3	24.5	-64.32	45.6	-932.6	614.0	556.1	57.95	10.595	
8,000.0	6,713.4	6,664.9	6,467.2	41.0	24.6	-63.48	45.6	-940.2	626.7	568.5	58.22	10.764	
8,070.8	6,713.3	6,636.8	6,445.2	42.8	24.6	-61.48	45.6	-957.8	662.1	603.2	58.92	11.237	
8,100.0	6,713.2	6,626.0	6,436.6	43.6	24.6	-60.72	45.6	-964.3	677.7	618.5	59.20	11.448	
8,169.3	6,713.1	6,600.0	6,415.5	45.4	24.7	-58.90	45.6	-979.4	717.3	657.5	59.81	11.992	
8,200.0	6,713.0	6,600.0	6,415.5	46.2	24.7	-58.90	45.6	-979.4	735.9	675.4	60.51	12.162	
8,267.7	6,712.9	6,571.3	6,391.6	48.0	24.8	-56.91	45.6	-995.2	778.7	717.8	60.89	12.790	
8,300.0	6,712.8	6,562.1	6,383.7	48.8	24.8	-56.28	45.6	-1,000.1	800.1	738.8	61.22	13.069	
8,366.1	6,712.7	6,550.0	6,373.4	50.6	24.8	-55.46	45.6	-1,006.4	845.4	783.2	62.17	13.598	
8,400.0	6,712.6	6,535.8	6,361.1	51.5	24.9	-54.51	45.6	-1,013.5	869.3	807.0	62.29	13.957	
8,464.5	6,712.5	6,520.5	6,347.7	53.2	24.9	-53.49	45.6	-1,020.9	916.4	853.3	63.00	14.545	
8,500.0	6,712.4	6,500.0	6,329.5	54.1	25.0	-52.15	45.6	-1,030.3	943.0	880.2	62.80	15.016	
8,563.0	6,712.3	6,500.0	6,329.5	55.8	25.0	-52.15	45.6	-1,030.3	991.0	926.8	64.16	15.444	
8,600.0	6,712.3	6,500.0	6,329.5	56.8	25.0	-52.15	45.6	-1,030.3	1,019.9	955.0	64.97	15.699	
8,661.4	6,712.1	6,480.2	6,311.7	58.5	25.0	-50.89	45.6	-1,038.9	1,068.6	1,003.3	65.30	16.366	
8,700.0	6,712.1	6,473.3	6,305.4	59.5	25.0	-50.46	45.6	-1,041.8	1,099.8	1,034.0	65.77	16.723	
8,759.8	6,711.9	6,450.0	6,284.0	61.1	25.1	-49.01	45.6	-1,051.1	1,149.0	1,083.2	65.82	17.458	
8,800.0	6,711.9	6,450.0	6,284.0	62.2	25.1	-49.01	45.6	-1,051.1	1,182.2	1,115.6	66.66	17.736	
8,858.2	6,711.8	6,450.0	6,284.0	63.8	25.1	-49.01	45.6	-1,051.1	1,231.1	1,163.3	67.88	18.136	
8,900.0	6,711.7	6,450.0	6,284.0	64.9	25.1	-49.02	45.6	-1,051.1	1,266.7	1,197.9	68.76	18.422	
8,956.7	6,711.6	6,433.8	6,269.0	66.5	25.1	-48.04	45.6	-1,057.1	1,315.2	1,246.2	69.05	19.049	
9,000.0	6,711.5	6,428.1	6,263.6	67.6	25.1	-47.70	45.6	-1,059.2	1,352.8	1,283.1	69.62	19.430	
9,055.1	6,711.4	6,421.1	6,257.1	69.1	25.1	-47.29	45.6	-1,061.6	1,400.9	1,330.5	70.36	19.909	
9,100.0	6,711.3	6,400.0	6,237.2	70.4	25.2	-46.07	45.6	-1,068.7	1,440.6	1,370.6	70.06	20.561	
9,153.5	6,711.2	6,400.0	6,237.2	71.8	25.2	-46.07	45.6	-1,068.7	1,487.9	1,416.7	71.15	20.911	
9,200.0	6,711.1	6,400.0	6,237.2	73.1	25.2	-46.07	45.6	-1,068.7	1,529.3	1,457.2	72.10	21.211	
9,251.9	6,711.0	6,400.0	6,237.2	74.5	25.2	-46.07	45.6	-1,068.7	1,575.9	1,502.7	73.15	21.542	
9,300.0	6,710.9	6,400.0	6,237.2	75.8	25.2	-46.07	45.6	-1,068.7	1,619.2	1,545.1	74.13	21.843	
9,350.4	6,710.8	6,400.0	6,237.2	77.2	25.2	-46.07	45.6	-1,068.7	1,665.0	1,589.8	75.16	22.153	
9,400.0	6,710.7	6,400.0	6,237.2	78.6	25.2	-46.07	45.6	-1,068.7	1,710.3	1,634.2	76.17	22.454	
9,448.8	6,710.6	6,380.2	6,218.3	79.9	25.2	-44.96	45.6	-1,074.7	1,754.7	1,678.8	75.90	23.118	
9,500.0	6,710.5	6,375.8	6,214.1	81.3	25.2	-44.71	45.6	-1,076.0	1,801.8	1,725.1	76.65	23.507	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,710.4	6,371.9	6,210.4	82.6	25.2	-44.50	45.6	-1,077.1	1,845.4	1,768.0	77.34	23.859	
9,600.0	6,710.3	6,350.0	6,189.3	84.1	25.3	-43.33	45.6	-1,082.9	1,894.5	1,817.5	76.98	24.611	
9,645.6	6,710.2	6,350.0	6,189.3	85.3	25.3	-43.33	45.6	-1,082.9	1,936.8	1,858.9	77.87	24.871	
9,700.0	6,710.1	6,350.0	6,189.3	86.8	25.3	-43.33	45.6	-1,082.9	1,987.3	1,908.4	78.94	25.175	
9,744.1	6,710.0	6,350.0	6,189.3	88.1	25.3	-43.33	45.6	-1,082.9	2,028.5	1,948.7	79.81	25.417	
9,800.0	6,709.9	6,350.0	6,189.3	89.6	25.3	-43.33	45.6	-1,082.9	2,080.8	1,999.9	80.91	25.720	
9,842.5	6,709.9	6,350.0	6,189.3	90.8	25.3	-43.33	45.6	-1,082.9	2,120.8	2,039.0	81.74	25.945	
9,900.0	6,709.7	6,350.0	6,189.3	92.4	25.3	-43.33	45.6	-1,082.9	2,174.9	2,092.1	82.87	26.245	
9,940.9	6,709.7	6,350.0	6,189.3	93.5	25.3	-43.33	45.6	-1,082.9	2,213.6	2,129.9	83.68	26.454	
10,000.0	6,709.6	6,350.0	6,189.3	95.1	25.3	-43.33	45.6	-1,082.9	2,269.5	2,184.7	84.84	26.751	
10,039.3	6,709.5	6,350.0	6,189.3	96.2	25.3	-43.33	45.6	-1,082.9	2,306.9	2,221.3	85.62	26.945	
10,100.0	6,709.4	6,350.0	6,189.3	97.9	25.3	-43.33	45.6	-1,082.9	2,364.6	2,277.7	86.81	27.238	
10,137.8	6,709.3	6,350.0	6,189.3	98.9	25.3	-43.33	45.6	-1,082.9	2,400.6	2,313.0	87.55	27.418	
10,200.0	6,709.2	6,329.5	6,169.4	100.7	25.3	-42.26	45.6	-1,087.8	2,459.6	2,372.3	87.26	28.186	
10,236.2	6,709.1	6,327.6	6,167.6	101.7	25.3	-42.17	45.6	-1,088.2	2,494.2	2,406.3	87.83	28.399	
10,300.0	6,709.0	6,324.5	6,164.5	103.4	25.3	-42.01	45.6	-1,088.9	2,555.2	2,466.4	88.83	28.766	
10,334.6	6,708.9	6,322.8	6,162.8	104.4	25.3	-41.92	45.6	-1,089.3	2,588.3	2,499.0	89.37	28.962	
10,400.0	6,708.8	6,319.7	6,159.9	106.2	25.3	-41.77	45.6	-1,089.9	2,651.1	2,560.7	90.40	29.326	
10,433.0	6,708.7	6,300.0	6,140.5	107.1	25.3	-40.80	45.6	-1,093.8	2,683.1	2,593.5	89.54	29.964	
10,500.0	6,708.6	6,300.0	6,140.5	109.0	25.3	-40.80	45.6	-1,093.8	2,747.4	2,656.6	90.81	30.254	
10,531.5	6,708.5	6,300.0	6,140.5	109.9	25.3	-40.80	45.6	-1,093.8	2,777.6	2,686.2	91.41	30.388	
10,600.0	6,708.4	6,300.0	6,140.5	111.8	25.3	-40.80	45.6	-1,093.8	2,843.6	2,750.9	92.70	30.674	
10,629.9	6,708.4	6,300.0	6,140.5	112.6	25.3	-40.80	45.6	-1,093.8	2,872.5	2,779.2	93.27	30.797	
10,700.0	6,708.2	6,300.0	6,140.5	114.6	25.3	-40.80	45.6	-1,093.8	2,940.1	2,845.5	94.60	31.080	
10,728.3	6,708.2	6,300.0	6,140.5	115.3	25.3	-40.80	45.6	-1,093.8	2,967.5	2,872.4	95.14	31.192	
10,800.0	6,708.0	6,300.0	6,140.5	117.3	25.3	-40.80	45.6	-1,093.8	3,036.9	2,940.4	96.50	31.471	
10,826.7	6,708.0	6,300.0	6,140.5	118.1	25.3	-40.80	45.6	-1,093.8	3,062.8	2,965.8	97.00	31.574	
10,900.0	6,707.8	6,300.0	6,140.5	120.1	25.3	-40.80	45.6	-1,093.8	3,133.8	3,035.4	98.39	31.850	
10,925.2	6,707.8	6,300.0	6,140.5	120.8	25.3	-40.80	45.6	-1,093.8	3,158.3	3,059.4	98.87	31.943	
11,000.0	6,707.6	6,300.0	6,140.5	122.9	25.3	-40.80	45.6	-1,093.8	3,231.0	3,130.7	100.29	32.215	
11,023.6	6,707.6	6,300.0	6,140.5	123.6	25.3	-40.80	45.6	-1,093.8	3,253.9	3,153.2	100.74	32.300	
11,100.0	6,707.5	6,300.0	6,140.5	125.7	25.3	-40.80	45.6	-1,093.8	3,328.3	3,226.1	102.19	32.569	
11,122.0	6,707.4	6,300.0	6,140.5	126.3	25.3	-40.80	45.6	-1,093.8	3,349.7	3,247.1	102.61	32.645	
11,200.0	6,707.3	6,300.0	6,140.5	128.5	25.3	-40.80	45.6	-1,093.8	3,425.7	3,321.6	104.09	32.911	
11,220.4	6,707.2	6,300.0	6,140.5	129.0	25.3	-40.80	45.6	-1,093.8	3,445.7	3,341.2	104.48	32.979	
11,300.0	6,707.1	6,300.0	6,140.5	131.3	25.3	-40.80	45.6	-1,093.8	3,523.3	3,417.3	105.99	33.241	
11,318.9	6,707.0	6,300.0	6,140.5	131.8	25.3	-40.80	45.6	-1,093.8	3,541.7	3,435.4	106.35	33.302	
11,400.0	6,706.9	6,300.0	6,140.5	134.0	25.3	-40.80	45.6	-1,093.8	3,621.0	3,513.1	107.89	33.561	
11,417.3	6,706.9	6,300.0	6,140.5	134.5	25.3	-40.80	45.6	-1,093.8	3,638.0	3,529.7	108.22	33.616	
11,500.0	6,706.7	6,300.0	6,140.5	136.8	25.3	-40.80	45.6	-1,093.8	3,718.9	3,609.1	109.79	33.871	
11,515.7	6,706.7	6,300.0	6,140.5	137.3	25.3	-40.80	45.6	-1,093.8	3,734.3	3,624.2	110.09	33.919	
11,600.0	6,706.5	6,300.0	6,140.5	139.6	25.3	-40.80	45.6	-1,093.8	3,816.8	3,705.1	111.70	34.171	
11,614.1	6,706.5	6,278.8	6,119.6	140.0	25.3	-39.78	45.6	-1,097.4	3,830.3	3,720.4	109.99	34.824	
11,700.0	6,706.3	6,276.7	6,117.5	142.4	25.3	-39.69	45.6	-1,097.8	3,914.5	3,803.1	111.40	35.138	
11,712.6	6,706.3	6,276.4	6,117.2	142.8	25.3	-39.67	45.6	-1,097.8	3,926.8	3,815.2	111.61	35.184	
11,800.0	6,706.1	6,274.3	6,115.2	145.2	25.3	-39.58	45.6	-1,098.1	4,012.5	3,899.5	113.05	35.494	
11,811.0	6,706.1	6,274.1	6,114.9	145.5	25.3	-39.57	45.6	-1,098.1	4,023.3	3,910.1	113.23	35.533	
11,900.0	6,705.9	6,272.1	6,113.0	148.0	25.3	-39.47	45.6	-1,098.4	4,110.7	3,996.0	114.70	35.840	
11,909.4	6,705.9	6,271.9	6,112.8	148.3	25.3	-39.46	45.6	-1,098.5	4,119.9	4,005.1	114.85	35.872	
12,000.0	6,705.8	6,250.0	6,091.1	150.8	25.4	-38.47	45.6	-1,101.3	4,209.2	4,094.8	114.44	36.780	
12,007.8	6,705.7	6,250.0	6,091.1	151.0	25.4	-38.47	45.6	-1,101.3	4,216.9	4,102.4	114.59	36.801	
12,100.0	6,705.6	6,250.0	6,091.1	153.6	25.4	-38.47	45.6	-1,101.3	4,307.5	4,191.2	116.27	37.047	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,106.3	6,705.6	6,250.0	6,091.1	153.8	25.4	-38.47	45.6	-1,101.3	4,313.6	4,197.3	116.38	37.064	
12,200.0	6,705.4	6,250.0	6,091.1	156.4	25.4	-38.47	45.6	-1,101.3	4,405.8	4,287.7	118.10	37.307	
12,204.7	6,705.4	6,250.0	6,091.1	156.5	25.4	-38.47	45.6	-1,101.3	4,410.4	4,292.2	118.18	37.319	
12,300.0	6,705.2	6,250.0	6,091.1	159.2	25.4	-38.47	45.6	-1,101.3	4,504.2	4,384.3	119.92	37.559	
12,303.1	6,705.2	6,250.0	6,091.1	159.3	25.4	-38.47	45.6	-1,101.3	4,507.3	4,387.3	119.98	37.566	
12,400.0	6,705.0	6,250.0	6,091.1	162.0	25.4	-38.47	45.6	-1,101.3	4,602.7	4,480.9	121.75	37.803	
12,401.5	6,705.0	6,250.0	6,091.1	162.0	25.4	-38.47	45.6	-1,101.3	4,604.2	4,482.4	121.78	37.807	
12,500.0	6,704.8	6,250.0	6,091.1	164.8	25.4	-38.47	45.6	-1,101.3	4,701.2	4,577.6	123.58	38.042	
12,598.4	6,704.6	6,250.0	6,091.1	167.5	25.4	-38.47	45.6	-1,101.3	4,798.2	4,672.8	125.38	38.270	
12,600.0	6,704.6	6,250.0	6,091.1	167.6	25.4	-38.47	45.6	-1,101.3	4,799.8	4,674.4	125.41	38.273	
12,696.8	6,704.4	6,250.0	6,091.1	170.3	25.4	-38.47	45.6	-1,101.3	4,895.3	4,768.1	127.18	38.491	
12,700.0	6,704.4	6,250.0	6,091.1	170.4	25.4	-38.47	45.6	-1,101.3	4,898.4	4,771.2	127.24	38.498	
12,795.2	6,704.3	6,250.0	6,091.1	173.0	25.4	-38.47	45.6	-1,101.3	4,992.4	4,863.4	128.98	38.707	
12,800.0	6,704.2	6,250.0	6,091.1	173.2	25.4	-38.47	45.6	-1,101.3	4,997.1	4,868.1	129.07	38.717	
12,893.7	6,704.1	6,250.0	6,091.1	175.8	25.4	-38.47	45.6	-1,101.3	5,089.6	4,958.8	130.78	38.917	
12,900.0	6,704.1	6,250.0	6,091.1	176.0	25.4	-38.47	45.6	-1,101.3	5,095.9	4,965.0	130.90	38.931	
12,992.1	6,703.9	6,250.0	6,091.1	178.5	25.4	-38.47	45.6	-1,101.3	5,186.9	5,054.3	132.58	39.122	
13,000.0	6,703.9	6,250.0	6,091.1	178.8	25.4	-38.47	45.6	-1,101.3	5,194.7	5,061.9	132.73	39.138	
13,090.5	6,703.7	6,250.0	6,091.1	181.3	25.4	-38.47	45.6	-1,101.3	5,284.1	5,149.8	134.38	39.322	
13,100.0	6,703.7	6,250.0	6,091.1	181.6	25.4	-38.47	45.6	-1,101.3	5,293.5	5,159.0	134.56	39.341	
13,188.9	6,703.5	6,250.0	6,091.1	184.0	25.4	-38.47	45.6	-1,101.3	5,381.5	5,245.3	136.18	39.516	
13,200.0	6,703.5	6,250.0	6,091.1	184.4	25.4	-38.47	45.6	-1,101.3	5,392.4	5,256.0	136.39	39.538	
13,287.4	6,703.3	6,250.0	6,091.1	186.8	25.4	-38.47	45.6	-1,101.3	5,478.8	5,340.8	137.99	39.706	
13,300.0	6,703.3	6,250.0	6,091.1	187.2	25.4	-38.48	45.6	-1,101.3	5,491.3	5,353.1	138.22	39.730	
13,385.8	6,703.2	6,250.0	6,091.1	189.6	25.4	-38.48	45.6	-1,101.3	5,576.2	5,436.4	139.79	39.891	
13,400.0	6,703.1	6,250.0	6,091.1	190.0	25.4	-38.48	45.6	-1,101.3	5,590.3	5,450.2	140.05	39.917	
13,484.2	6,703.0	6,250.0	6,091.1	192.3	25.4	-38.48	45.6	-1,101.3	5,673.7	5,532.1	141.59	40.071	
13,500.0	6,702.9	6,250.0	6,091.1	192.8	25.4	-38.48	45.6	-1,101.3	5,689.3	5,547.4	141.88	40.100	
13,582.6	6,702.8	6,250.0	6,091.1	195.1	25.4	-38.48	45.6	-1,101.3	5,771.1	5,627.8	143.39	40.247	
13,600.0	6,702.8	6,250.0	6,091.1	195.6	25.4	-38.48	45.6	-1,101.3	5,788.3	5,644.6	143.71	40.278	
13,681.1	6,702.6	6,250.0	6,091.1	197.8	25.4	-38.48	45.6	-1,101.3	5,868.6	5,723.5	145.19	40.419	
13,700.0	6,702.6	6,250.0	6,091.1	198.4	25.4	-38.48	45.6	-1,101.3	5,887.4	5,741.9	145.54	40.452	
13,779.5	6,702.4	6,250.0	6,091.1	200.6	25.4	-38.48	45.6	-1,101.3	5,966.2	5,819.2	147.00	40.587	
13,800.0	6,702.4	6,250.0	6,091.1	201.2	25.4	-38.48	45.6	-1,101.3	5,986.5	5,839.1	147.37	40.621	
13,877.9	6,702.2	6,250.0	6,091.1	203.3	25.4	-38.48	45.6	-1,101.3	6,063.7	5,914.9	148.80	40.751	
13,900.0	6,702.2	6,250.0	6,091.1	204.0	25.4	-38.48	45.6	-1,101.3	6,085.6	5,936.4	149.20	40.787	
13,976.3	6,702.1	6,250.0	6,091.1	206.1	25.4	-38.48	45.6	-1,101.3	6,161.3	6,010.7	150.60	40.911	
14,000.0	6,702.0	6,250.0	6,091.1	206.8	25.4	-38.48	45.6	-1,101.3	6,184.8	6,033.7	151.04	40.949	
14,074.8	6,701.9	6,250.0	6,091.1	208.9	25.4	-38.48	45.6	-1,101.3	6,258.9	6,106.5	152.41	41.068	
14,100.0	6,701.8	6,250.0	6,091.1	209.6	25.4	-38.48	45.6	-1,101.3	6,284.0	6,131.1	152.87	41.107	
14,173.2	6,701.7	6,250.0	6,091.1	211.6	25.4	-38.48	45.6	-1,101.3	6,356.6	6,202.4	154.21	41.220	
14,200.0	6,701.6	6,250.0	6,091.1	212.4	25.4	-38.48	45.6	-1,101.3	6,383.2	6,228.5	154.70	41.261	
14,271.6	6,701.5	6,250.0	6,091.1	214.4	25.4	-38.48	45.6	-1,101.3	6,454.2	6,298.2	156.01	41.370	
14,300.0	6,701.4	6,250.0	6,091.1	215.2	25.4	-38.48	45.6	-1,101.3	6,482.4	6,325.9	156.53	41.412	
14,370.0	6,701.3	6,250.0	6,091.1	217.1	25.4	-38.48	45.6	-1,101.3	6,551.9	6,394.1	157.82	41.516	
14,400.0	6,701.3	6,250.0	6,091.1	218.0	25.4	-38.48	45.6	-1,101.3	6,581.7	6,423.3	158.37	41.560	
14,468.5	6,701.1	6,250.0	6,091.1	219.9	25.4	-38.48	45.6	-1,101.3	6,649.6	6,490.0	159.62	41.659	
14,500.0	6,701.1	6,250.0	6,091.1	220.8	25.4	-38.48	45.6	-1,101.3	6,680.9	6,520.7	160.20	41.704	
14,566.9	6,701.0	6,250.0	6,091.1	222.6	25.4	-38.48	45.6	-1,101.3	6,747.4	6,585.9	161.43	41.799	
14,600.0	6,700.9	6,250.0	6,091.1	223.6	25.4	-38.48	45.6	-1,101.3	6,780.2	6,618.2	162.03	41.845	
14,665.3	6,700.8	6,250.0	6,091.1	225.4	25.4	-38.48	45.6	-1,101.3	6,845.1	6,681.9	163.23	41.936	
14,700.0	6,700.7	6,250.0	6,091.1	226.4	25.4	-38.48	45.6	-1,101.3	6,879.6	6,715.7	163.87	41.983	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - WACKER 10G-312 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	6,250.0	6,091.1	228.2	25.4	-38.48	45.6	-1,101.3	6,942.9	6,777.9	165.03	42.069	
14,800.0	6,700.5	6,250.0	6,091.1	229.2	25.4	-38.48	45.6	-1,101.3	6,978.9	6,813.2	165.70	42.118	
14,862.2	6,700.4	6,250.0	6,091.1	230.9	25.4	-38.48	45.6	-1,101.3	7,040.7	6,873.8	166.84	42.200	
14,900.0	6,700.3	6,250.0	6,091.1	232.0	25.4	-38.48	45.6	-1,101.3	7,078.3	6,910.7	167.53	42.250	
14,960.6	6,700.2	6,250.0	6,091.1	233.7	25.4	-38.48	45.6	-1,101.3	7,138.5	6,969.8	168.64	42.329	
15,000.0	6,700.2	6,250.0	6,091.1	234.8	25.4	-38.48	45.6	-1,101.3	7,177.6	7,008.3	169.37	42.379	
15,059.0	6,700.0	6,250.0	6,091.1	236.4	25.4	-38.48	45.6	-1,101.3	7,236.3	7,065.9	170.45	42.454	
15,082.8	6,700.0	6,250.0	6,091.1	237.1	25.4	-38.48	45.6	-1,101.3	7,260.0	7,089.1	170.89	42.484	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-179.20	-60.1	-0.8	60.1				
98.4	98.4	98.4	98.4	0.1	0.1	-179.20	-60.1	-0.8	60.1	59.9	0.19	312.726	
100.0	100.0	100.0	100.0	0.1	0.1	-179.20	-60.1	-0.8	60.1	59.9	0.20	307.432	
196.8	196.8	196.8	196.8	0.3	0.3	-179.20	-60.1	-0.8	60.1	59.5	0.63	95.285	
200.0	200.0	200.0	200.0	0.3	0.3	-179.20	-60.1	-0.8	60.1	59.5	0.65	93.194	
295.3	295.3	295.3	295.3	0.5	0.5	-179.20	-60.1	-0.8	60.1	59.0	1.07	56.008	
300.0	300.0	300.0	300.0	0.5	0.5	-179.20	-60.1	-0.8	60.1	59.0	1.09	54.921	
393.7	393.7	393.7	393.7	0.8	0.8	-179.20	-60.1	-0.8	60.1	58.6	1.52	39.660	
400.0	400.0	400.0	400.0	0.8	0.8	-179.20	-60.1	-0.8	60.1	58.6	1.54	38.932	
492.1	492.1	492.1	492.1	1.0	1.0	-179.20	-60.1	-0.8	60.1	58.2	1.96	30.699	
500.0	500.0	500.0	500.0	1.0	1.0	-179.20	-60.1	-0.8	60.1	58.1	1.99	30.154	
590.5	590.5	590.5	590.5	1.2	1.2	-179.20	-60.1	-0.8	60.1	57.7	2.40	25.041	
600.0	600.0	600.0	600.0	1.2	1.2	-179.20	-60.1	-0.8	60.1	57.7	2.44	24.606	
689.0	689.0	689.0	689.0	1.4	1.4	-179.20	-60.1	-0.8	60.1	57.3	2.84	21.144	
700.0	700.0	700.0	700.0	1.4	1.4	-179.20	-60.1	-0.8	60.1	57.2	2.89	20.782	
787.4	787.4	787.4	787.4	1.6	1.6	-179.20	-60.1	-0.8	60.1	56.8	3.29	18.297	
800.0	800.0	800.0	800.0	1.7	1.7	-179.20	-60.1	-0.8	60.1	56.8	3.34	17.987	
885.8	885.8	885.8	885.8	1.9	1.9	-179.20	-60.1	-0.8	60.1	56.4	3.73	16.126	
900.0	900.0	900.0	900.0	1.9	1.9	-179.20	-60.1	-0.8	60.1	56.3	3.79	15.855	
984.2	984.2	984.2	984.2	2.1	2.1	-179.20	-60.1	-0.8	60.1	55.9	4.17	14.415	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.20	-60.1	-0.8	60.1	55.9	4.24	14.174	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-179.20	-60.1	-0.8	60.1	55.5	4.61	13.032	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-179.20	-60.1	-0.8	60.1	55.4	4.69	12.816 CC, ES	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	152.56	-60.1	-0.8	61.1	56.1	5.05	12.096	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	152.81	-60.1	-0.8	61.7	56.5	5.14	12.002	
1,279.5	1,279.4	1,279.4	1,279.4	2.7	2.7	154.34	-60.1	-0.8	65.1	59.6	5.49	11.863	
1,300.0	1,299.8	1,299.8	1,299.8	2.8	2.8	154.84	-60.1	-0.8	66.4	60.8	5.58	11.890	
1,377.9	1,377.5	1,377.5	1,377.5	3.0	3.0	156.98	-60.1	-0.8	72.3	66.4	5.92	12.202	
1,400.0	1,399.5	1,399.5	1,399.5	3.0	3.0	157.63	-60.1	-0.8	74.3	68.3	6.02	12.348	
1,476.4	1,475.3	1,475.3	1,475.3	3.2	3.2	159.94	-60.1	-0.8	82.7	76.4	6.35	13.021	
1,500.0	1,498.7	1,498.7	1,498.7	3.3	3.2	160.65	-60.1	-0.8	85.7	79.3	6.46	13.283	
1,574.8	1,572.6	1,573.5	1,573.4	3.5	3.4	162.31	-60.0	0.1	96.3	89.5	6.77	14.214	
1,600.0	1,597.5	1,598.6	1,598.6	3.5	3.5	162.63	-59.9	0.8	100.1	93.2	6.88	14.554	
1,673.2	1,669.4	1,671.8	1,671.7	3.7	3.6	162.98	-59.4	4.3	112.0	104.8	7.18	15.594	
1,700.1	1,695.8	1,698.7	1,698.5	3.8	3.7	162.94	-59.2	6.0	116.6	109.3	7.29	15.997	
1,771.6	1,765.7	1,770.2	1,769.8	4.1	3.8	162.43	-58.3	11.8	128.9	121.3	7.62	16.915	
1,800.0	1,793.4	1,798.5	1,798.0	4.2	3.9	162.05	-58.0	14.6	133.6	125.9	7.75	17.236	
1,870.1	1,862.0	1,868.7	1,867.7	4.4	4.0	160.76	-56.8	22.6	144.9	136.8	8.10	17.895	
1,900.0	1,891.3	1,898.7	1,897.4	4.5	4.1	160.08	-56.3	26.6	149.6	141.4	8.25	18.143	
1,968.5	1,958.3	1,967.2	1,965.2	4.8	4.3	158.26	-54.8	36.8	160.1	151.5	8.61	18.597	
2,000.0	1,989.1	1,998.7	1,996.2	4.9	4.4	157.31	-54.1	42.0	164.8	156.1	8.78	18.770	
2,066.9	2,054.5	2,065.5	2,061.8	5.1	4.6	155.11	-52.4	54.3	174.8	165.6	9.18	19.050	
2,100.0	2,086.9	2,098.4	2,094.1	5.3	4.7	153.93	-51.5	60.8	179.7	170.3	9.37	19.168	
2,165.3	2,150.8	2,162.7	2,156.9	5.5	4.9	151.70	-49.6	74.1	189.5	179.7	9.79	19.355	
2,200.0	2,184.7	2,196.7	2,190.2	5.6	5.0	150.61	-48.6	81.1	194.8	184.8	10.01	19.453	
2,263.8	2,247.1	2,259.4	2,251.5	5.9	5.2	148.74	-46.8	94.0	204.7	194.3	10.44	19.608	
2,300.0	2,282.5	2,295.0	2,286.3	6.0	5.3	147.76	-45.8	101.3	210.4	199.7	10.68	19.694	
2,362.2	2,343.3	2,356.1	2,346.1	6.3	5.5	146.19	-44.0	113.9	220.4	209.3	11.12	19.823	
2,400.0	2,380.3	2,393.2	2,382.5	6.5	5.7	145.31	-42.9	121.5	226.5	215.1	11.38	19.900	
2,460.6	2,439.6	2,452.8	2,440.7	6.7	5.9	143.98	-41.2	133.8	236.5	224.6	11.82	20.008	
2,500.0	2,478.1	2,491.5	2,478.6	6.9	6.0	143.18	-40.1	141.8	243.0	230.9	12.10	20.077	
2,559.0	2,535.9	2,549.5	2,535.3	7.1	6.3	142.06	-38.4	153.7	252.8	240.3	12.54	20.168	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,600.0	2,575.9	2,589.8	2,574.7	7.3	6.4	141.33	-37.3	162.0	259.7	246.9	12.84	20.229	
2,657.5	2,632.2	2,646.2	2,629.9	7.5	6.6	140.36	-35.6	173.6	269.4	256.2	13.27	20.306	
2,700.0	2,673.8	2,688.0	2,670.8	7.7	6.8	139.70	-34.4	182.2	276.7	263.1	13.59	20.361	
2,755.9	2,728.4	2,743.0	2,724.5	7.9	7.0	138.87	-32.8	193.5	286.2	272.2	14.01	20.427	
2,800.0	2,771.6	2,786.3	2,766.9	8.1	7.2	138.25	-31.6	202.4	293.8	279.5	14.35	20.477	
2,854.3	2,824.7	2,839.7	2,819.1	8.3	7.4	137.54	-30.1	213.4	303.2	288.5	14.77	20.534	
2,900.0	2,869.4	2,884.5	2,863.0	8.5	7.6	136.97	-28.8	222.7	311.2	296.0	15.12	20.580	
2,952.7	2,921.0	2,936.4	2,913.7	8.8	7.8	136.35	-27.3	233.4	320.3	304.8	15.53	20.629	
3,000.0	2,967.2	2,983.1	2,959.5	9.0	8.0	135.84	-25.9	242.9	328.6	312.7	15.89	20.685	
3,051.2	3,017.3	3,034.2	3,009.6	9.2	8.1	135.44	-24.6	252.5	337.5	321.2	16.24	20.781	
3,100.0	3,065.0	3,083.0	3,057.7	9.4	8.3	135.22	-23.4	260.9	345.8	329.3	16.56	20.880	
3,149.6	3,113.5	3,132.7	3,106.7	9.6	8.4	135.14	-22.3	268.6	354.2	337.3	16.88	20.984	
3,200.0	3,162.8	3,183.2	3,156.8	9.8	8.6	135.21	-21.3	275.6	362.6	345.5	17.19	21.091	
3,248.0	3,209.8	3,231.3	3,204.5	10.0	8.7	135.40	-20.5	281.4	370.6	353.1	17.48	21.198	
3,300.0	3,260.6	3,283.4	3,256.3	10.2	8.8	135.74	-19.7	286.9	379.0	361.3	17.78	21.317	
3,346.4	3,306.1	3,329.9	3,302.6	10.5	8.9	136.15	-19.2	290.9	386.5	368.5	18.04	21.431	
3,400.0	3,358.5	3,383.4	3,356.0	10.7	9.0	136.73	-18.7	294.6	395.1	376.8	18.32	21.569	
3,444.9	3,402.3	3,428.1	3,400.6	10.9	9.1	137.31	-18.3	297.0	402.2	383.7	18.54	21.696	
3,500.0	3,456.3	3,482.9	3,455.4	11.1	9.2	138.13	-18.1	299.0	410.9	392.1	18.80	21.861	
3,543.3	3,498.6	3,525.8	3,498.3	11.3	9.3	138.84	-17.9	299.8	417.8	398.8	18.99	22.003	
3,600.0	3,554.1	3,581.6	3,554.1	11.5	9.4	139.85	-17.9	300.0	426.9	407.6	19.22	22.203	
3,641.7	3,594.9	3,622.4	3,594.9	11.7	9.5	140.59	-17.9	300.0	433.6	414.2	19.40	22.349	
3,700.0	3,651.9	3,679.4	3,651.9	12.0	9.6	141.57	-17.9	300.0	443.1	423.4	19.65	22.552	
3,740.1	3,691.2	3,718.7	3,691.2	12.2	9.6	142.23	-17.9	300.0	449.7	429.9	19.82	22.693	
3,800.0	3,749.7	3,777.2	3,749.7	12.4	9.7	143.17	-17.9	300.0	459.7	439.6	20.07	22.905	
3,838.6	3,787.4	3,815.0	3,787.4	12.6	9.8	143.76	-17.9	300.0	466.2	446.0	20.23	23.042	
3,900.0	3,847.5	3,875.0	3,847.5	12.9	9.9	144.66	-17.9	300.0	476.6	456.1	20.49	23.262	
3,937.0	3,883.7	3,911.2	3,883.7	13.0	10.0	145.18	-17.9	300.0	483.0	462.3	20.64	23.395	
4,000.0	3,945.3	3,972.9	3,945.3	13.3	10.1	146.05	-17.9	300.0	493.9	473.0	20.91	23.620	
4,035.4	3,980.0	4,007.5	3,980.0	13.5	10.2	146.51	-17.9	300.0	500.0	479.0	21.06	23.747	
4,060.0	4,004.0	4,031.5	4,004.0	13.6	10.2	146.83	-17.9	300.0	504.3	483.2	21.16	23.835	
4,100.0	4,043.2	4,070.7	4,043.2	13.7	10.3	147.40	-17.9	300.0	511.1	489.8	21.33	23.965	
4,133.8	4,076.5	4,104.0	4,076.5	13.8	10.3	147.83	-17.9	300.0	516.5	495.1	21.46	24.075	
4,200.0	4,141.6	4,169.1	4,141.6	14.0	10.5	148.59	-17.9	300.0	526.2	504.5	21.71	24.242	
4,232.3	4,173.5	4,201.0	4,173.5	14.1	10.5	148.92	-17.9	300.0	530.5	508.7	21.83	24.307	
4,300.0	4,240.6	4,268.1	4,240.6	14.3	10.7	149.51	-17.9	300.0	538.5	516.4	22.08	24.393	
4,330.7	4,271.1	4,298.6	4,271.1	14.4	10.7	149.74	-17.9	300.0	541.7	519.5	22.18	24.418	
4,400.0	4,340.0	4,367.5	4,340.0	14.5	10.8	150.17	-17.9	300.0	547.8	525.4	22.43	24.424	
4,429.1	4,369.0	4,396.5	4,369.0	14.6	10.9	150.32	-17.9	300.0	550.0	527.5	22.53	24.413	
4,500.0	4,439.7	4,467.2	4,439.7	14.8	11.0	150.61	-17.9	300.0	554.2	531.4	22.77	24.340	
4,527.5	4,467.2	4,494.8	4,467.2	14.8	11.1	150.69	-17.9	300.0	555.4	532.6	22.86	24.298	
4,600.0	4,539.7	4,567.2	4,539.7	14.9	11.2	150.84	-17.9	300.0	557.6	534.5	23.09	24.144	
4,626.0	4,565.6	4,593.1	4,565.6	15.0	11.3	150.86	-17.9	300.0	557.9	534.8	23.17	24.076	
4,660.2	4,599.8	4,627.3	4,599.8	15.0	11.3	179.60	-17.9	300.0	558.1	534.1	24.06	23.195	
4,700.0	4,639.6	4,667.2	4,639.6	15.0	11.4	179.60	-17.9	300.0	558.1	533.9	24.21	23.058	
4,724.4	4,664.0	4,691.6	4,664.0	15.1	11.5	179.60	-17.9	300.0	558.1	533.8	24.29	22.973	
4,800.0	4,739.6	4,767.2	4,739.6	15.2	11.6	179.60	-17.9	300.0	558.1	533.6	24.57	22.712	
4,822.8	4,762.5	4,790.0	4,762.5	15.2	11.7	179.60	-17.9	300.0	558.1	533.5	24.66	22.634	
4,900.0	4,839.6	4,867.2	4,839.6	15.3	11.8	179.60	-17.9	300.0	558.1	533.2	24.94	22.374	
4,921.2	4,860.9	4,888.4	4,860.9	15.4	11.9	179.60	-17.9	300.0	558.1	533.1	25.02	22.303	
5,000.0	4,939.6	4,967.2	4,939.6	15.5	12.0	179.60	-17.9	300.0	558.1	532.8	25.32	22.044	
5,019.7	4,959.3	4,986.8	4,959.3	15.5	12.0	179.60	-17.9	300.0	558.1	532.7	25.39	21.980	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,039.6	5,067.2	5,039.6	15.6	12.2	179.60	-17.9	300.0	558.1	532.4	25.69	21.722	
5,118.1	5,057.7	5,085.3	5,057.7	15.7	12.2	179.60	-17.9	300.0	558.1	532.4	25.76	21.665	
5,200.0	5,139.6	5,167.2	5,139.6	15.8	12.4	179.60	-17.9	300.0	558.1	532.1	26.07	21.408	
5,216.5	5,156.2	5,183.7	5,156.2	15.8	12.4	179.60	-17.9	300.0	558.1	532.0	26.13	21.357	
5,300.0	5,239.6	5,267.2	5,239.6	15.9	12.6	179.60	-17.9	300.0	558.1	531.7	26.45	21.101	
5,314.9	5,254.6	5,282.1	5,254.6	16.0	12.6	179.60	-17.9	300.0	558.1	531.6	26.51	21.056	
5,400.0	5,339.6	5,367.2	5,339.6	16.1	12.8	179.60	-17.9	300.0	558.1	531.3	26.83	20.801	
5,413.4	5,353.0	5,380.5	5,353.0	16.1	12.8	179.60	-17.9	300.0	558.1	531.2	26.88	20.762	
5,500.0	5,439.6	5,467.2	5,439.6	16.3	13.0	179.60	-17.9	300.0	558.1	530.9	27.21	20.509	
5,511.8	5,451.4	5,479.0	5,451.4	16.3	13.0	179.60	-17.9	300.0	558.1	530.9	27.26	20.474	
5,600.0	5,539.6	5,567.2	5,539.6	16.4	13.2	179.60	-17.9	300.0	558.1	530.5	27.60	20.223	
5,610.2	5,549.9	5,577.4	5,549.9	16.4	13.2	179.60	-17.9	300.0	558.1	530.5	27.64	20.194	
5,700.0	5,639.6	5,667.2	5,639.6	16.6	13.4	179.60	-17.9	300.0	558.1	530.1	27.99	19.944	
5,708.6	5,648.3	5,675.8	5,648.3	16.6	13.4	179.60	-17.9	300.0	558.1	530.1	28.02	19.920	
5,800.0	5,739.6	5,767.2	5,739.6	16.7	13.6	179.60	-17.9	300.0	558.1	529.8	28.37	19.671	
5,807.1	5,746.7	5,774.2	5,746.7	16.8	13.6	179.60	-17.9	300.0	558.1	529.7	28.40	19.652	
5,900.0	5,839.6	5,867.2	5,839.6	16.9	13.8	179.60	-17.9	300.0	558.1	529.4	28.76	19.404	
5,905.5	5,845.1	5,872.7	5,845.1	16.9	13.8	179.60	-17.9	300.0	558.1	529.3	28.78	19.390	
6,000.0	5,939.6	5,967.2	5,939.6	17.1	14.0	179.60	-17.9	300.0	558.1	529.0	29.15	19.144	
6,003.9	5,943.6	5,971.1	5,943.6	17.1	14.0	179.60	-17.9	300.0	558.1	529.0	29.17	19.134	
6,059.2	5,998.8	6,026.3	5,998.8	17.2	14.1	179.60	-17.9	300.0	558.1	528.7	29.39	18.993	
6,100.0	6,039.6	6,067.4	6,039.8	17.2	14.2	-90.40	-17.9	298.8	558.1	529.2	28.89	19.321	
6,102.3	6,042.0	6,069.7	6,042.2	17.2	14.2	-90.40	-17.9	298.6	558.1	529.2	28.89	19.317	
6,150.0	6,089.4	6,117.7	6,089.9	17.3	14.3	-90.39	-17.9	294.1	558.1	529.1	29.02	19.235	
6,200.0	6,138.7	6,167.9	6,139.5	17.3	14.3	-90.39	-17.9	286.0	558.1	529.0	29.11	19.170	
6,200.8	6,139.5	6,168.7	6,140.2	17.3	14.3	-90.39	-17.9	285.9	558.1	529.0	29.12	19.169	
6,250.0	6,187.4	6,218.2	6,188.4	17.3	14.4	-90.38	-17.9	274.4	558.1	528.9	29.18	19.124	
6,299.2	6,234.4	6,267.6	6,235.6	17.4	14.4	-90.37	-17.9	259.7	558.1	528.9	29.23	19.091	
6,300.0	6,235.1	6,268.4	6,236.3	17.4	14.4	-90.37	-17.9	259.4	558.1	528.9	29.24	19.091	
6,350.0	6,281.7	6,318.7	6,283.1	17.4	14.4	-90.36	-17.9	241.1	558.1	528.8	29.28	19.063	
6,397.6	6,324.8	6,366.6	6,326.4	17.3	14.4	-90.35	-17.9	220.7	558.1	528.8	29.32	19.035	
6,400.0	6,326.9	6,368.9	6,328.5	17.3	14.4	-90.35	-17.9	219.6	558.1	528.8	29.32	19.034	
6,450.0	6,370.5	6,419.2	6,372.3	17.3	14.5	-90.34	-17.9	194.9	558.1	528.7	29.39	18.992	
6,496.0	6,409.1	6,465.4	6,410.9	17.3	14.5	-90.32	-17.9	169.5	558.1	528.6	29.48	18.931	
6,500.0	6,412.3	6,469.4	6,414.2	17.3	14.6	-90.32	-17.9	167.2	558.1	528.6	29.49	18.925	
6,550.0	6,452.1	6,519.6	6,454.0	17.3	14.6	-90.31	-17.9	136.7	558.1	528.5	29.65	18.822	
6,594.5	6,485.6	6,564.3	6,487.6	17.3	14.8	-90.29	-17.9	107.2	558.1	528.3	29.87	18.687	
6,600.0	6,489.7	6,569.8	6,491.6	17.3	14.8	-90.29	-17.9	103.4	558.1	528.2	29.90	18.668	
6,650.0	6,524.9	6,620.0	6,526.8	17.2	15.0	-90.27	-17.9	67.7	558.1	527.9	30.25	18.453	
6,692.9	6,553.0	6,663.1	6,554.9	17.2	15.2	-90.25	-17.9	35.1	558.1	527.5	30.65	18.211	
6,700.0	6,557.5	6,670.2	6,559.4	17.2	15.2	-90.25	-17.9	29.5	558.1	527.4	30.72	18.168	
6,750.0	6,587.4	6,720.3	6,589.2	17.2	15.6	-90.23	-17.9	-10.8	558.1	526.8	31.34	17.809	
6,791.3	6,609.9	6,761.8	6,611.7	17.2	15.9	-90.21	-17.9	-45.6	558.1	526.1	31.98	17.454	
6,800.0	6,614.4	6,770.5	6,616.1	17.2	16.0	-90.20	-17.9	-53.1	558.1	526.0	32.12	17.376	
6,850.0	6,638.4	6,820.6	6,640.0	17.2	16.5	-90.18	-17.9	-97.2	558.1	525.0	33.07	16.877	
6,889.7	6,655.3	6,860.5	6,656.7	17.4	16.9	-90.16	-17.9	-133.3	558.1	524.2	33.95	16.439	
6,900.0	6,659.4	6,870.7	6,660.7	17.5	17.1	-90.15	-17.9	-142.8	558.1	523.9	34.19	16.323	
6,950.0	6,677.1	6,920.8	6,678.2	18.0	17.7	-90.13	-17.9	-189.7	558.1	522.6	35.48	15.729	
6,988.2	6,688.4	6,959.1	6,689.4	18.5	18.3	-90.11	-17.9	-226.3	558.1	521.5	36.58	15.256	
7,000.0	6,691.5	6,970.9	6,692.4	18.7	18.5	-90.10	-17.9	-237.7	558.1	521.2	36.94	15.110	
7,050.0	6,702.5	7,021.0	6,703.2	19.5	19.3	-90.07	-17.9	-286.6	558.1	519.6	38.53	14.484	
7,086.6	6,708.4	7,057.6	6,708.9	20.1	19.9	-90.05	-17.9	-322.8	558.1	518.3	39.79	14.027	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

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Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,100.0	6,710.1	7,071.0	6,710.5	20.4	20.2	-90.05	-17.9	-336.1	558.1	517.9	40.26	13.863		
7,150.0	6,714.2	7,121.0	6,714.4	21.3	21.1	-90.02	-17.9	-385.9	558.1	516.0	42.09	13.260		
7,185.0	6,715.0	7,156.1	6,715.0	21.9	21.8	-90.00	-17.9	-421.0	558.1	514.7	43.42	12.854		
7,185.6	6,715.0	7,156.6	6,715.0	21.9	21.8	-90.00	-17.9	-421.5	558.1	514.7	43.44	12.848		
7,200.0	6,715.0	7,171.0	6,715.0	22.2	22.1	-90.00	-17.9	-435.9	558.1	514.1	44.01	12.683		
7,283.4	6,714.8	7,254.5	6,714.8	23.9	23.8	-90.00	-17.9	-519.4	558.1	510.7	47.41	11.772		
7,289.1	6,714.8	7,260.1	6,714.8	24.0	23.9	-90.00	-17.9	-525.0	558.1	510.5	47.64	11.714		
7,300.0	6,714.8	7,271.0	6,714.8	24.2	24.2	-90.00	-17.9	-535.9	558.1	510.0	48.09	11.605		
7,381.9	6,714.6	7,352.9	6,714.6	26.0	26.0	-90.00	-17.9	-617.8	558.1	506.5	51.65	10.806		
7,400.0	6,714.6	7,371.0	6,714.6	26.4	26.4	-90.00	-17.9	-635.9	558.1	505.7	52.44	10.643		
7,480.3	6,714.4	7,451.3	6,714.4	28.2	28.2	-90.00	-17.9	-716.2	558.1	502.0	56.11	9.948		
7,500.0	6,714.4	7,471.0	6,714.4	28.7	28.7	-90.00	-17.9	-735.9	558.1	501.1	57.01	9.789		
7,578.7	6,714.2	7,549.8	6,714.2	30.5	30.5	-90.00	-17.9	-814.7	558.1	497.4	60.74	9.188		
7,600.0	6,714.2	7,571.0	6,714.2	31.0	31.0	-90.00	-17.9	-835.9	558.1	496.4	61.76	9.037		
7,677.1	6,714.0	7,648.2	6,714.0	32.9	32.9	-90.00	-17.9	-913.1	558.1	492.6	65.52	8.518		
7,700.0	6,714.0	7,671.0	6,714.0	33.4	33.5	-90.00	-17.9	-935.9	558.1	491.5	66.64	8.375		
7,775.6	6,713.9	7,746.6	6,713.8	35.3	35.4	-90.00	-17.9	-1,011.5	558.1	487.7	70.41	7.927		
7,800.0	6,713.8	7,771.0	6,713.8	35.9	36.0	-90.00	-17.9	-1,035.9	558.1	486.5	71.63	7.792		
7,874.0	6,713.7	7,845.0	6,713.7	37.8	37.9	-90.00	-17.9	-1,109.9	558.1	482.7	75.38	7.404		
7,900.0	6,713.6	7,871.0	6,713.6	38.4	38.6	-90.00	-17.9	-1,135.9	558.1	481.4	76.71	7.276		
7,972.4	6,713.5	7,943.5	6,713.5	40.3	40.4	-90.00	-17.9	-1,208.4	558.1	477.7	80.43	6.939		
8,000.0	6,713.4	7,971.0	6,713.4	41.0	41.1	-90.00	-17.9	-1,235.9	558.1	476.3	81.85	6.818		
8,070.8	6,713.3	8,041.9	6,713.3	42.8	43.0	-90.00	-17.9	-1,306.8	558.1	472.6	85.54	6.524		
8,100.0	6,713.2	8,071.0	6,713.2	43.6	43.7	-90.00	-17.9	-1,335.9	558.1	471.0	87.06	6.411		
8,169.3	6,713.1	8,140.3	6,713.1	45.4	45.6	-90.00	-17.9	-1,405.2	558.1	467.4	90.70	6.153		
8,200.0	6,713.0	8,171.0	6,713.0	46.2	46.4	-90.00	-17.9	-1,435.9	558.1	465.8	92.32	6.046		
8,267.7	6,712.9	8,238.7	6,712.9	48.0	48.2	-90.00	-17.9	-1,503.6	558.1	462.2	95.90	5.820		
8,300.0	6,712.8	8,271.0	6,712.8	48.8	49.0	-90.00	-17.9	-1,535.9	558.1	460.5	97.62	5.717		
8,366.1	6,712.7	8,337.2	6,712.7	50.6	50.8	-90.00	-17.9	-1,602.1	558.1	457.0	101.14	5.518		
8,400.0	6,712.6	8,371.0	6,712.6	51.5	51.7	-90.00	-17.9	-1,635.9	558.1	455.2	102.95	5.421		
8,464.5	6,712.5	8,435.6	6,712.5	53.2	53.4	-90.00	-17.9	-1,700.5	558.1	451.7	106.41	5.245		
8,500.0	6,712.4	8,471.0	6,712.4	54.1	54.4	-90.00	-17.9	-1,735.9	558.1	449.8	108.31	5.153		
8,563.0	6,712.3	8,534.0	6,712.3	55.8	56.1	-90.00	-17.9	-1,798.9	558.1	446.4	111.70	4.997		
8,600.0	6,712.3	8,571.0	6,712.2	56.8	57.1	-90.00	-17.9	-1,835.9	558.1	444.4	113.69	4.909		
8,661.4	6,712.1	8,632.4	6,712.1	58.5	58.8	-90.00	-17.9	-1,897.3	558.1	441.1	117.01	4.770		
8,700.0	6,712.1	8,671.0	6,712.1	59.5	59.8	-90.00	-17.9	-1,935.9	558.1	439.0	119.10	4.686		
8,759.8	6,711.9	8,730.9	6,711.9	61.1	61.4	-90.00	-17.9	-1,995.8	558.1	435.8	122.35	4.562		
8,800.0	6,711.9	8,771.0	6,711.9	62.2	62.5	-90.00	-17.9	-2,035.9	558.1	433.6	124.53	4.482		
8,858.2	6,711.8	8,829.3	6,711.7	63.8	64.1	-90.00	-17.9	-2,094.2	558.1	430.4	127.70	4.371		
8,900.0	6,711.7	8,871.0	6,711.7	64.9	65.2	-90.00	-17.9	-2,135.9	558.1	428.1	129.97	4.294		
8,956.7	6,711.6	8,927.7	6,711.6	66.5	66.8	-90.00	-17.9	-2,192.6	558.1	425.0	133.06	4.194		
9,000.0	6,711.5	8,971.0	6,711.5	67.6	68.0	-90.00	-17.9	-2,235.9	558.1	422.7	135.43	4.121		
9,055.1	6,711.4	9,026.1	6,711.4	69.1	69.5	-90.00	-17.9	-2,291.0	558.1	419.7	138.44	4.031		
9,100.0	6,711.3	9,071.0	6,711.3	70.4	70.7	-90.00	-17.9	-2,335.9	558.1	417.2	140.90	3.961		
9,153.5	6,711.2	9,124.6	6,711.2	71.8	72.2	-90.00	-17.9	-2,389.5	558.1	414.3	143.84	3.880		
9,200.0	6,711.1	9,171.0	6,711.1	73.1	73.5	-90.00	-17.9	-2,435.9	558.1	411.7	146.38	3.813		
9,251.9	6,711.0	9,223.0	6,711.0	74.5	74.9	-90.00	-17.9	-2,487.9	558.1	408.9	149.24	3.740		
9,300.0	6,710.9	9,271.0	6,710.9	75.8	76.2	-90.00	-17.9	-2,535.9	558.1	406.2	151.88	3.675		
9,350.4	6,710.8	9,321.4	6,710.8	77.2	77.6	-90.00	-17.9	-2,586.3	558.1	403.5	154.65	3.609		
9,400.0	6,710.7	9,371.0	6,710.7	78.6	79.0	-90.00	-17.9	-2,635.9	558.1	400.7	157.38	3.546		
9,448.8	6,710.6	9,419.8	6,710.6	79.9	80.3	-90.00	-17.9	-2,684.7	558.1	398.0	160.07	3.487		
9,500.0	6,710.5	9,471.0	6,710.5	81.3	81.7	-90.00	-17.9	-2,735.9	558.1	395.2	162.89	3.426		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

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9,547.2	6,710.4	9,518.3	6,710.4	82.6	83.0	-90.00	-17.9	-2,783.2	558.1	392.6	165.49	3.372		
9,600.0	6,710.3	9,571.0	6,710.3	84.1	84.5	-90.00	-17.9	-2,835.9	558.1	389.7	168.41	3.314		
9,645.6	6,710.2	9,616.7	6,710.2	85.3	85.7	-90.00	-17.9	-2,881.6	558.1	387.2	170.93	3.265		
9,700.0	6,710.1	9,671.0	6,710.1	86.8	87.2	-90.00	-17.9	-2,935.9	558.1	384.2	173.93	3.209		
9,744.1	6,710.0	9,715.1	6,710.0	88.1	88.5	-90.00	-17.9	-2,980.0	558.1	381.7	176.37	3.164		
9,800.0	6,709.9	9,771.0	6,709.9	89.6	90.0	-90.00	-17.9	-3,035.9	558.1	378.7	179.46	3.110		
9,842.5	6,709.9	9,813.5	6,709.9	90.8	91.2	-90.00	-17.9	-3,078.4	558.1	376.3	181.81	3.070		
9,900.0	6,709.7	9,871.0	6,709.7	92.4	92.8	-90.00	-17.9	-3,135.9	558.1	373.1	185.00	3.017		
9,940.9	6,709.7	9,912.0	6,709.7	93.5	93.9	-90.00	-17.9	-3,176.9	558.1	370.9	187.26	2.980		
10,000.0	6,709.6	9,971.0	6,709.5	95.1	95.5	-90.00	-17.9	-3,235.9	558.1	367.6	190.54	2.929		
10,039.3	6,709.5	10,010.4	6,709.5	96.2	96.6	-90.00	-17.9	-3,275.3	558.1	365.4	192.72	2.896		
10,100.0	6,709.4	10,071.0	6,709.4	97.9	98.3	-90.00	-17.9	-3,335.9	558.1	362.0	196.08	2.846		
10,137.8	6,709.3	10,108.8	6,709.3	98.9	99.4	-90.00	-17.9	-3,373.7	558.1	359.9	198.18	2.816		
10,200.0	6,709.2	10,171.0	6,709.2	100.7	101.1	-90.00	-17.9	-3,435.9	558.1	356.5	201.63	2.768		
10,236.2	6,709.1	10,207.2	6,709.1	101.7	102.1	-90.00	-17.9	-3,472.1	558.1	354.5	203.64	2.741		
10,300.0	6,709.0	10,271.0	6,709.0	103.4	103.9	-90.00	-17.9	-3,535.9	558.1	350.9	207.19	2.694		
10,334.6	6,708.9	10,305.7	6,708.9	104.4	104.8	-90.00	-17.9	-3,570.6	558.1	349.0	209.11	2.669		
10,400.0	6,708.8	10,371.0	6,708.8	106.2	106.6	-90.00	-17.9	-3,635.9	558.1	345.4	212.74	2.623		
10,433.0	6,708.7	10,404.1	6,708.7	107.1	107.6	-90.00	-17.9	-3,669.0	558.1	343.5	214.58	2.601		
10,500.0	6,708.6	10,471.0	6,708.6	109.0	109.4	-90.00	-17.9	-3,735.9	558.1	339.8	218.30	2.557		
10,531.5	6,708.5	10,502.5	6,708.5	109.9	110.3	-90.00	-17.9	-3,767.4	558.1	338.1	220.05	2.536		
10,600.0	6,708.4	10,571.0	6,708.4	111.8	112.2	-90.00	-17.9	-3,835.9	558.1	334.2	223.87	2.493		
10,629.9	6,708.4	10,600.9	6,708.3	112.6	113.0	-90.00	-17.9	-3,865.8	558.1	332.6	225.53	2.475		
10,700.0	6,708.2	10,671.0	6,708.2	114.6	115.0	-90.00	-17.9	-3,935.9	558.1	328.7	229.43	2.433		
10,728.3	6,708.2	10,699.4	6,708.2	115.3	115.8	-90.00	-17.9	-3,964.3	558.1	327.1	231.01	2.416		
10,800.0	6,708.0	10,771.0	6,708.0	117.3	117.8	-90.00	-17.9	-4,035.9	558.1	323.1	235.00	2.375		
10,826.7	6,708.0	10,797.8	6,708.0	118.1	118.5	-90.00	-17.9	-4,062.7	558.1	321.6	236.49	2.360		
10,900.0	6,707.8	10,871.0	6,707.8	120.1	120.6	-90.00	-17.9	-4,135.9	558.1	317.5	240.57	2.320		
10,925.2	6,707.8	10,896.2	6,707.8	120.8	121.3	-90.00	-17.9	-4,161.1	558.1	316.1	241.98	2.306		
11,000.0	6,707.6	10,971.0	6,707.6	122.9	123.4	-90.00	-17.9	-4,235.9	558.1	312.0	246.15	2.267		
11,023.6	6,707.6	10,994.6	6,707.6	123.6	124.0	-90.00	-17.9	-4,259.5	558.1	310.7	247.46	2.255		
11,100.0	6,707.5	11,071.0	6,707.5	125.7	126.1	-90.00	-17.9	-4,335.9	558.1	306.4	251.72	2.217		
11,122.0	6,707.4	11,093.1	6,707.4	126.3	126.8	-90.00	-17.9	-4,358.0	558.1	305.2	252.95	2.206		
11,200.0	6,707.3	11,171.0	6,707.3	128.5	128.9	-90.00	-17.9	-4,435.9	558.1	300.8	257.30	2.169		
11,220.4	6,707.2	11,191.5	6,707.2	129.0	129.5	-90.00	-17.9	-4,456.4	558.1	299.7	258.44	2.160		
11,300.0	6,707.1	11,271.0	6,707.1	131.3	131.7	-90.00	-17.9	-4,535.9	558.1	295.2	262.88	2.123		
11,318.9	6,707.0	11,289.9	6,707.0	131.8	132.2	-90.00	-17.9	-4,554.8	558.1	294.2	263.93	2.115		
11,400.0	6,706.9	11,371.0	6,706.9	134.0	134.5	-90.00	-17.9	-4,635.9	558.1	289.7	268.46	2.079		
11,417.3	6,706.9	11,388.3	6,706.8	134.5	135.0	-90.00	-17.9	-4,653.2	558.1	288.7	269.43	2.071		
11,500.0	6,706.7	11,471.0	6,706.7	136.8	137.3	-90.00	-17.9	-4,735.9	558.1	284.1	274.05	2.037		
11,515.7	6,706.7	11,486.8	6,706.7	137.3	137.7	-90.00	-17.9	-4,751.7	558.1	283.2	274.92	2.030		
11,600.0	6,706.5	11,571.0	6,706.5	139.6	140.1	-90.00	-17.9	-4,835.9	558.1	278.5	279.63	1.996		
11,614.1	6,706.5	11,585.2	6,706.5	140.0	140.5	-90.00	-17.9	-4,850.1	558.1	277.7	280.42	1.990		
11,700.0	6,706.3	11,671.0	6,706.3	142.4	142.9	-90.00	-17.9	-4,935.9	558.1	272.9	285.22	1.957		
11,712.6	6,706.3	11,683.6	6,706.3	142.8	143.2	-90.00	-17.9	-4,948.5	558.1	272.2	285.92	1.952		
11,800.0	6,706.1	11,771.0	6,706.1	145.2	145.7	-90.00	-17.9	-5,035.9	558.1	267.3	290.80	1.919		
11,811.0	6,706.1	11,782.0	6,706.1	145.5	146.0	-90.00	-17.9	-5,046.9	558.1	266.7	291.42	1.915		
11,900.0	6,705.9	11,871.0	6,705.9	148.0	148.5	-90.00	-17.9	-5,135.9	558.1	261.7	296.39	1.883		
11,909.4	6,705.9	11,880.5	6,705.9	148.3	148.7	-90.00	-17.9	-5,145.4	558.1	261.2	296.92	1.880		
12,000.0	6,705.8	11,971.0	6,705.7	150.8	151.3	-90.00	-17.9	-5,235.9	558.1	256.1	301.98	1.848		
12,007.8	6,705.7	11,978.9	6,705.7	151.0	151.5	-90.00	-17.9	-5,243.8	558.1	255.7	302.42	1.845		
12,100.0	6,705.6	12,071.0	6,705.6	153.6	154.1	-90.00	-17.9	-5,335.9	558.1	250.5	307.58	1.815		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,106.3	6,705.6	12,077.3	6,705.5	153.8	154.2	-90.00	-17.9	-5,342.2	558.1	250.2	307.93	1.813		
12,200.0	6,705.4	12,171.0	6,705.4	156.4	156.9	-90.00	-17.9	-5,435.9	558.1	245.0	313.17	1.782		
12,204.7	6,705.4	12,175.7	6,705.4	156.5	157.0	-90.00	-17.9	-5,440.6	558.1	244.7	313.43	1.781		
12,300.0	6,705.2	12,271.0	6,705.2	159.2	159.7	-90.00	-17.9	-5,535.9	558.1	239.4	318.76	1.751		
12,303.1	6,705.2	12,274.2	6,705.2	159.3	159.8	-90.00	-17.9	-5,539.1	558.1	239.2	318.94	1.750		
12,400.0	6,705.0	12,371.0	6,705.0	162.0	162.5	-90.00	-17.9	-5,635.9	558.1	233.8	324.36	1.721		
12,401.5	6,705.0	12,372.6	6,705.0	162.0	162.5	-90.00	-17.9	-5,637.5	558.1	233.7	324.44	1.720		
12,500.0	6,704.8	12,471.0	6,704.8	164.8	165.3	-90.00	-17.9	-5,735.9	558.1	228.2	329.95	1.692		
12,598.4	6,704.6	12,569.4	6,704.6	167.5	168.0	-90.00	-17.9	-5,834.3	558.1	222.7	335.46	1.664		
12,600.0	6,704.6	12,571.0	6,704.6	167.6	168.1	-90.00	-17.9	-5,835.9	558.1	222.6	335.55	1.663		
12,696.8	6,704.4	12,667.9	6,704.4	170.3	170.8	-90.00	-17.9	-5,932.8	558.1	217.2	340.97	1.637		
12,700.0	6,704.4	12,671.0	6,704.4	170.4	170.9	-90.00	-17.9	-5,935.9	558.1	217.0	341.14	1.636		
12,795.2	6,704.3	12,766.3	6,704.3	173.0	173.5	-90.00	-17.9	-6,031.2	558.1	211.6	346.48	1.611		
12,800.0	6,704.2	12,771.0	6,704.2	173.2	173.7	-90.00	-17.9	-6,035.9	558.1	211.4	346.74	1.610		
12,893.7	6,704.1	12,864.7	6,704.1	175.8	176.3	-90.00	-17.9	-6,129.6	558.1	206.1	351.99	1.586		
12,900.0	6,704.1	12,871.0	6,704.1	176.0	176.5	-90.00	-17.9	-6,135.9	558.1	205.8	352.34	1.584		
12,992.1	6,703.9	12,963.1	6,703.9	178.5	179.0	-90.00	-17.9	-6,228.0	558.1	200.6	357.50	1.561		
13,000.0	6,703.9	12,971.0	6,703.9	178.8	179.3	-90.00	-17.9	-6,235.9	558.1	200.2	357.94	1.559		
13,090.5	6,703.7	13,061.6	6,703.7	181.3	181.8	-90.00	-17.9	-6,326.5	558.1	195.1	363.01	1.537		
13,100.0	6,703.7	13,071.0	6,703.7	181.6	182.1	-90.00	-17.9	-6,335.9	558.1	194.6	363.54	1.535		
13,188.9	6,703.5	13,160.0	6,703.5	184.0	184.6	-90.00	-17.9	-6,424.9	558.1	189.6	368.52	1.514		
13,200.0	6,703.5	13,171.0	6,703.5	184.4	184.9	-90.00	-17.9	-6,435.9	558.1	189.0	369.14	1.512		
13,287.4	6,703.3	13,258.4	6,703.3	186.8	187.3	-90.00	-17.9	-6,523.3	558.1	184.1	374.04	1.492 Level 3		
13,300.0	6,703.3	13,271.0	6,703.3	187.2	187.7	-90.00	-17.9	-6,535.9	558.1	183.4	374.74	1.489 Level 3		
13,385.8	6,703.2	13,356.8	6,703.1	189.6	190.1	-90.00	-17.9	-6,621.7	558.1	178.6	379.55	1.470 Level 3		
13,400.0	6,703.1	13,371.0	6,703.1	190.0	190.5	-90.00	-17.9	-6,635.9	558.1	177.8	380.34	1.467 Level 3		
13,484.2	6,703.0	13,455.3	6,703.0	192.3	192.8	-90.00	-17.9	-6,720.2	558.1	173.1	385.06	1.449 Level 3		
13,500.0	6,702.9	13,471.0	6,702.9	192.8	193.3	-90.00	-17.9	-6,735.9	558.1	172.2	385.95	1.446 Level 3		
13,582.6	6,702.8	13,553.7	6,702.8	195.1	195.6	-90.00	-17.9	-6,818.6	558.1	167.5	390.58	1.429 Level 3		
13,600.0	6,702.8	13,571.0	6,702.7	195.6	196.1	-90.00	-17.9	-6,835.9	558.1	166.6	391.55	1.425 Level 3		
13,681.1	6,702.6	13,652.1	6,702.6	197.8	198.3	-90.00	-17.9	-6,917.0	558.1	162.0	396.09	1.409 Level 3		
13,700.0	6,702.6	13,671.0	6,702.6	198.4	198.9	-90.00	-17.9	-6,935.9	558.1	161.0	397.15	1.405 Level 3		
13,779.5	6,702.4	13,750.5	6,702.4	200.6	201.1	-90.00	-17.9	-7,015.4	558.1	156.5	401.61	1.390 Level 3		
13,800.0	6,702.4	13,771.0	6,702.4	201.2	201.7	-90.00	-17.9	-7,035.9	558.1	155.4	402.76	1.386 Level 3		
13,877.9	6,702.2	13,849.0	6,702.2	203.3	203.9	-90.00	-17.9	-7,113.9	558.1	151.0	407.13	1.371 Level 3		
13,900.0	6,702.2	13,871.0	6,702.2	204.0	204.5	-90.00	-17.9	-7,135.9	558.1	149.8	408.36	1.367 Level 3		
13,976.3	6,702.1	13,947.4	6,702.0	206.1	206.6	-90.00	-17.9	-7,212.3	558.1	145.5	412.64	1.353 Level 3		
14,000.0	6,702.0	13,971.0	6,702.0	206.8	207.3	-90.00	-17.9	-7,235.9	558.1	144.2	413.97	1.348 Level 3		
14,074.8	6,701.9	14,045.8	6,701.9	208.9	209.4	-90.00	-17.9	-7,310.7	558.1	140.0	418.16	1.335 Level 3		
14,100.0	6,701.8	14,071.0	6,701.8	209.6	210.1	-90.00	-17.9	-7,335.9	558.1	138.6	419.57	1.330 Level 3		
14,173.2	6,701.7	14,144.2	6,701.7	211.6	212.1	-90.00	-17.9	-7,409.1	558.1	134.4	423.68	1.317 Level 3		
14,200.0	6,701.6	14,171.0	6,701.6	212.4	212.9	-90.00	-17.9	-7,435.9	558.1	132.9	425.18	1.313 Level 3		
14,271.6	6,701.5	14,242.7	6,701.5	214.4	214.9	-90.00	-17.9	-7,507.6	558.1	128.9	429.20	1.300 Level 3		
14,300.0	6,701.4	14,271.0	6,701.4	215.2	215.7	-90.00	-17.9	-7,535.9	558.1	127.3	430.79	1.296 Level 3		
14,370.0	6,701.3	14,341.1	6,701.3	217.1	217.6	-90.00	-17.9	-7,606.0	558.1	123.4	434.71	1.284 Level 3		
14,400.0	6,701.3	14,371.0	6,701.3	218.0	218.5	-90.00	-17.9	-7,635.9	558.1	121.7	436.39	1.279 Level 3		
14,468.5	6,701.1	14,439.5	6,701.1	219.9	220.4	-90.00	-17.9	-7,704.4	558.1	117.9	440.23	1.268 Level 3		
14,500.0	6,701.1	14,471.0	6,701.1	220.8	221.3	-90.00	-17.9	-7,735.9	558.1	116.1	442.00	1.263 Level 3		
14,566.9	6,701.0	14,537.9	6,700.9	222.6	223.2	-90.00	-17.9	-7,802.8	558.1	112.4	445.75	1.252 Level 3		
14,600.0	6,700.9	14,571.0	6,700.9	223.6	224.1	-90.00	-17.9	-7,835.9	558.1	110.5	447.61	1.247 Level 2		
14,665.3	6,700.8	14,636.4	6,700.8	225.4	225.9	-90.00	-17.9	-7,901.3	558.1	106.9	451.27	1.237 Level 2		
14,700.0	6,700.7	14,671.0	6,700.7	226.4	226.9	-90.00	-17.9	-7,935.9	558.1	104.9	453.22	1.231 Level 2		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - WACKER 10G-314 - ORIGINAL WELLBORE - PROPOSAL #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,700.6	14,734.8	6,700.6	228.2	228.7	-90.00	-17.9	-7,999.7	558.1	101.3	456.79	1.222	Level 2
14,800.0	6,700.5	14,771.0	6,700.5	229.2	229.7	-90.00	-17.9	-8,035.9	558.1	99.3	458.82	1.216	Level 2
14,862.2	6,700.4	14,833.2	6,700.4	230.9	231.4	-90.00	-17.9	-8,098.1	558.1	95.8	462.31	1.207	Level 2
14,900.0	6,700.3	14,871.0	6,700.3	232.0	232.5	-90.00	-17.9	-8,135.9	558.1	93.7	464.43	1.202	Level 2
14,960.6	6,700.2	14,931.6	6,700.2	233.7	234.2	-90.00	-17.9	-8,196.5	558.1	90.3	467.83	1.193	Level 2
15,000.0	6,700.2	14,971.0	6,700.1	234.8	235.3	-90.00	-17.9	-8,235.9	558.1	88.1	470.04	1.187	Level 2
15,059.0	6,700.0	15,030.1	6,700.0	236.4	237.0	-90.00	-17.9	-8,295.0	558.1	84.8	473.35	1.179	Level 2
15,067.5	6,700.0	15,038.5	6,700.0	236.7	237.2	-90.00	-17.9	-8,303.4	558.1	84.3	473.82	1.178	Level 2
15,082.8	6,700.0	15,049.3	6,700.0	237.1	237.5	-90.00	-17.9	-8,314.2	558.1	83.6	474.56	1.176	Level 2, SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB-EST @ 4624.0usft (Original Well ECoordinates are relative to: WACKER 10F-304

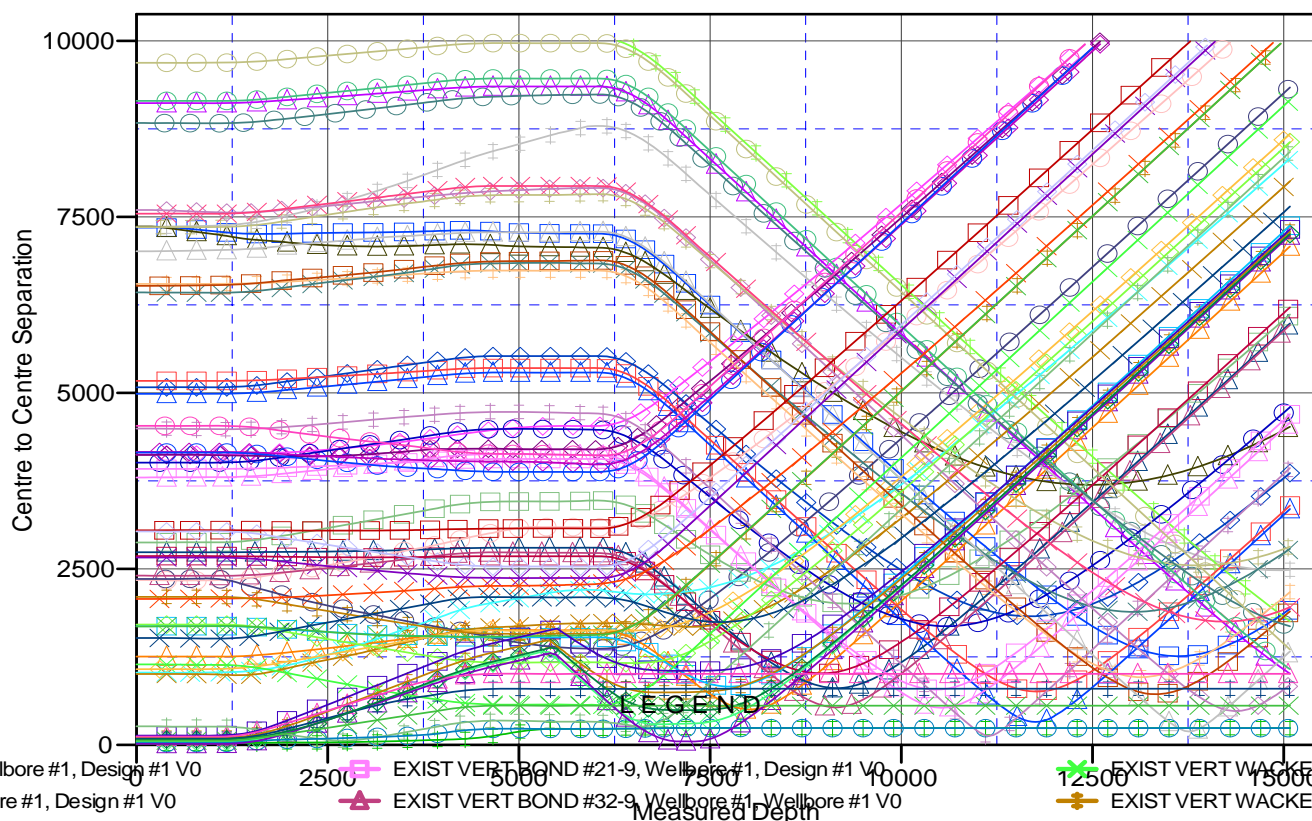
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000

Grid Convergence at Surface is: 0.62°

Ladder Plot



Wellbore #1, Design #1 V0	EXIST VERT BOND #21-9, Wellbore #1, Design #1 V0	EXIST VERT WACKER #10D, V
Wellbore #1, Design #1 V0	EXIST VERT BOND #32-9, Wellbore #1, Wellbore #1 V0	EXIST VERT WACKER #2, Well
Wellbore #1, Design #1 V0	EXIST VERT DR B #10-12, Wellbore #1, Wellbore #1 V0	EXIST VERT WACKER #22-10,
Wellbore #1, Design #1 V0	EXIST VERT HECKENDORF #1, Wellbore #1, Design #1 V0	EXIST VERT WACKER #31-10,
Wellbore #1, Design #1 V0	EXIST VERT HEINRICH #41-9, Wellbore #1, Design #1 V0	EXIST VERT WACKER #32-10,
Wellbore #1, Design #1 V0	EXIST VERT JURGENS #8-1, Wellbore #1, Wellbore #1 V0	EXIST VERT WACKER #41-10,
Wellbore #1, Design #1 V0	EXIST VERT JURGENS #8-13, Wellbore #1, Wellbore #1 V0	EXIST VERT WACKER #42-10,
Wellbore #1, Design #1 V0	EXIST VERT JURGENS #8-14, Wellbore #1, Wellbore #1 V0	EXIST VERT WILLIAMS #1, Wel
Wellbore #1, Design #1 V0	EXIST VERT JURGENS PC #B8-23, Wellbore #1, Wellbore #1 V0	WACKER 10F-204, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT JURGENS PMB #B8-10, Wellbore #1, Design #1 V0	WACKER 10F-232, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT LOWER LATHAM #8-15, Wellbore #1, Wellbore #1 V0	WACKER 10F-234, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT MILLAGE #11-10, Wellbore #1, Design #1 V0	WACKER 10F-302, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT OGRADY #31-9, Wellbore #1, Design #1 V0	WACKER 10G-212, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT PAULINE #5, Wellbore #1, Design #1 V0	WACKER 10G-214, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT PAULINE #5, Wellbore #1, Design #1 V0	WACKER 10G-222, ORIGINAL V

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-304
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-304	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB-EST @ 4624.0usft (Original Well ECoordinates are relative to: WACKER 10F-304

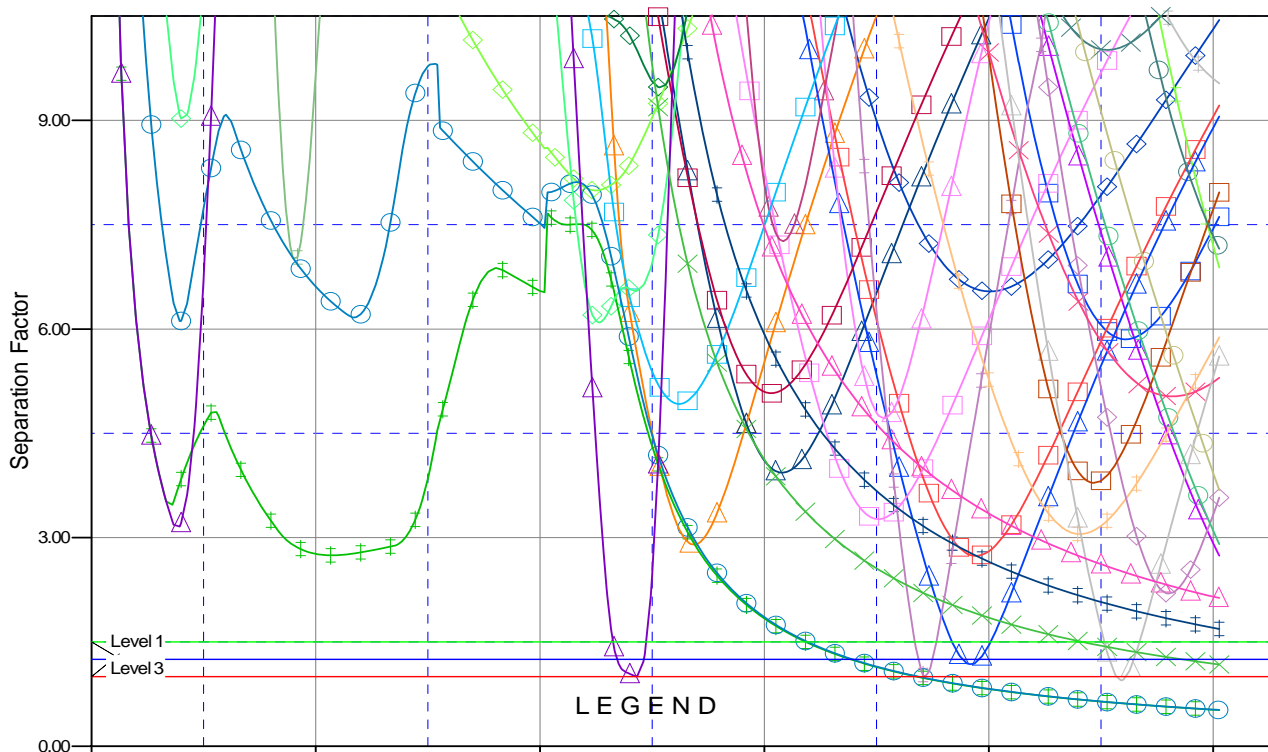
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000

Grid Convergence at Surface is: 0.62°

Separation Factor Plot



Wellbore #1, Design #1 V0	EXIST VERT BOND #21-9, Wellbore #1, Design #1 V0	EXIST VERT WACKER #10D, V
Wellbore #1, Design #1 V0	EXIST VERT BOND #32-9, Wellbore #1, Design #1 V0	EXIST VERT WACKER #2, Well
Wellbore #1, Design #1 V0	EXIST VERT DR B #10-12, Wellbore #1, Wellbore #1 V0	EXIST VERT WACKER #22-10, V
Wellbore #1, Design #1 V0	EXIST VERT HECKENDORF #1, Wellbore #1, Design #1 V0	EXIST VERT WACKER #31-10, V
Wellbore #1, Design #1 V0	EXIST VERT HEINRICH #41-9, Wellbore #1, Design #1 V0	EXIST VERT WACKER #32-10, V
Wellbore #1, Design #1 V0	EXIST VERT JURGENS #8-1, Wellbore #1, Wellbore #1 V0	EXIST VERT WACKER #41-10, V
Wellbore #1, Design #1 V0	EXIST VERT JURGENS #8-13, Wellbore #1, Wellbore #1 V0	EXIST VERT WACKER #42-10, V
Wellbore #1, Design #1 V0	EXIST VERT JURGENS #8-14, Wellbore #1, Wellbore #1 V0	EXIST VERT WILLIAMS #1, Wel
Wellbore #1, Design #1 V0	EXIST VERT JURGENS PC #B8-23, Wellbore #1, Wellbore #1 V0	WACKER 10F-204, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT JURGENS PMB #B8-10, Wellbore #1, Design #1 V0	WACKER 10F-232, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT LOWER LATHAM #8-15, Wellbore #1, Wellbore #1 V0	WACKER 10F-234, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT MILLAGE #11-10, Wellbore #1, Design #1 V0	WACKER 10F-302, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT OGRADY #31-9, Wellbore #1, Design #1 V0	WACKER 10G-212, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT PAULINE #5, Wellbore #1, Design #1 V0	WACKER 10G-214, ORIGINAL V