

PDC ENERGY

**WELD COUNTY, COLORADO
SW NW SEC. 10 T5N R64W 6th P.M.
WACKER 10F-234**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

04 February, 2016



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are 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	14,995.1	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	11,593.8	6,606.4	1,598.1	1,324.4	5.839	CC
ABDN VERT BLOSKAS #13-9 - Wellbore #1 - Design #1	11,614.1	6,606.3	1,598.3	1,324.0	5.827	ES
ABDN VERT BLOSKAS #13-9 - Wellbore #1 - Design #1	11,811.0	6,606.1	1,612.8	1,333.0	5.765	SF
ABDN VERT HEINRICH #1 - Wellbore #1 - Design #1	7,933.3	6,623.0	274.3	102.1	1.593	CC, ES, SF
ABDN VERT OGRADY #3 - Wellbore #1 - Design #1	9,063.7	6,647.5	1,037.3	834.4	5.113	CC
ABDN VERT OGRADY #3 - Wellbore #1 - Design #1	9,100.0	6,647.5	1,037.9	834.0	5.091	ES
ABDN VERT OGRADY #3 - Wellbore #1 - Design #1	9,200.0	6,647.4	1,046.2	839.6	5.063	SF
ABDN VERT PLUMB #2 - Wellbore #1 - Design #1	14,995.1	6,610.0	1,189.9	821.0	3.225	CC, ES, SF
EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellb	13,534.0	6,790.8	1,032.4	819.6	4.851	CC
EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellb	13,582.6	6,790.9	1,033.5	819.4	4.826	ES
EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellb	13,681.1	6,791.0	1,042.8	825.9	4.807	SF
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	14,824.3	6,766.2	2,253.1	1,996.6	8.784	CC
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	14,900.0	6,766.2	2,254.3	1,995.7	8.717	ES
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	14,995.1	6,766.1	2,259.5	1,998.2	8.648	SF
EXIST DD JURGENS STATE #B16-30D - Wellbore #1 -	12,394.7	6,910.6	3,463.5	3,268.7	17.782	CC
EXIST DD JURGENS STATE #B16-30D - Wellbore #1 -	12,500.0	6,908.6	3,465.1	3,267.4	17.526	ES
EXIST DD JURGENS STATE #B16-30D - Wellbore #1 -	14,100.0	6,876.3	3,860.3	3,617.9	15.921	SF
EXIST DD PETERSON B #10-24D - Wellbore #1 - Wellb	828.5	821.5	2,322.0	2,319.3	872.642	CC, ES
EXIST DD PETERSON B #10-24D - Wellbore #1 - Wellb	14,271.6	6,614.5	9,977.2	9,746.4	43.223	SF
EXIST DD PJ #8I - Wellbore #1 - Wellbore #1	14,995.1	6,696.7	1,623.4	1,368.1	6.357	CC, ES, SF
EXIST DD WACKER B #10-20D - Wellbore #1 - Wellbore	5,949.4	6,070.0	1,167.7	1,131.2	32.006	CC, ES
EXIST DD WACKER B #10-20D - Wellbore #1 - Wellbore	5,971.9	6,086.1	1,167.8	1,131.3	31.957	SF
EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore	933.0	925.0	4,114.1	4,111.0	1,317.491	CC
EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore	993.3	957.0	4,114.2	4,110.9	1,238.707	ES
EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore	12,401.5	5,938.0	9,965.8	9,795.6	58.538	SF
EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #	2,698.1	2,404.8	4,052.6	4,041.2	355.088	CC
EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #	2,755.9	2,428.0	4,052.8	4,041.1	346.404	ES
EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #	12,500.0	5,937.0	9,926.4	9,757.7	58.851	SF
EXIST HZ SEYLROR #B10-64-1HN - Wellbore #1 - Wellbc	540.1	526.2	997.1	995.3	560.996	CC
EXIST HZ SEYLROR #B10-64-1HN - Wellbore #1 - Wellbc	1,414.8	1,429.0	1,000.6	994.9	176.740	ES
EXIST HZ SEYLROR #B10-64-1HN - Wellbore #1 - Wellbc	11,000.0	6,041.0	4,498.9	4,365.9	33.811	SF
EXIST HZ SEYLROR STATE #B15-79HNM - Wellbore #1	1,470.3	1,499.0	947.7	942.0	165.574	CC, ES
EXIST HZ SEYLROR STATE #B15-79HNM - Wellbore #1	8,700.0	6,236.0	2,103.8	2,029.4	28.277	SF
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	9,220.3	6,608.4	1,779.0	1,700.7	22.728	CC
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	9,251.9	6,608.5	1,779.3	1,700.1	22.482	ES
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	10,334.6	6,612.7	2,099.1	1,990.0	19.236	SF
EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1	11,682.7	6,617.2	988.5	713.2	3.591	CC

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-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are 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	11,712.6	6,617.2	988.9	712.8	3.581	ES
EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1	11,800.0	6,617.1	995.4	716.9	3.573	SF
EXIST VERT BLOSKAS #12-9 - Wellbore #1 - Design #1	11,662.9	6,607.3	96.8	-178.9	0.351	Level 1, CC, ES, SF
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore	10,505.5	6,588.8	1,456.9	1,343.5	12.847	CC
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore	10,531.5	6,588.8	1,457.2	1,343.0	12.768	ES
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore	11,023.6	6,588.2	1,546.3	1,418.5	12.095	SF
EXIST VERT BLOSKAS BOND #9D - Wellbore #1 - Wel	11,064.1	6,617.0	360.0	231.1	2.792	CC, ES
EXIST VERT BLOSKAS BOND #9D - Wellbore #1 - Wel	11,100.0	6,615.0	361.8	231.8	2.784	SF
EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1	10,446.3	6,593.7	296.6	185.0	2.658	CC, ES, SF
EXIST VERT BOND #21-9 - Wellbore #1 - Design #1	10,368.2	6,626.9	1,016.3	777.6	4.257	CC
EXIST VERT BOND #21-9 - Wellbore #1 - Design #1	10,400.0	6,626.9	1,016.8	777.2	4.243	ES
EXIST VERT BOND #21-9 - Wellbore #1 - Design #1	10,500.0	6,626.7	1,024.8	782.4	4.228	SF
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	9,054.0	6,600.0	299.6	226.7	4.111	CC
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	9,055.1	6,600.0	299.6	226.7	4.109	ES
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	9,100.0	6,600.0	303.1	228.9	4.088	SF
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	98.4	68.1	1,045.5	1,045.4	10,000.000	CC
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	600.0	569.9	1,046.1	1,044.6	665.176	ES
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	14,995.1	6,500.0	8,634.3	8,396.0	36.238	SF
EXIST VERT HECKENDORF #1 - Wellbore #1 - Design	13,052.3	6,616.5	1,193.2	879.6	3.805	CC
EXIST VERT HECKENDORF #1 - Wellbore #1 - Design	13,090.5	6,616.5	1,193.8	879.1	3.794	ES
EXIST VERT HECKENDORF #1 - Wellbore #1 - Design	13,188.9	6,616.4	1,201.0	883.6	3.784	SF
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	7,667.8	6,648.3	1,058.3	892.6	6.388	CC
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	7,700.0	6,648.2	1,058.8	892.3	6.360	ES
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	7,874.0	6,648.0	1,078.2	907.3	6.308	SF
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #	12,950.4	6,575.7	1,659.1	1,477.5	9.138	CC
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #	13,000.0	6,574.8	1,659.8	1,476.9	9.073	ES
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #	13,385.8	6,568.0	1,715.2	1,521.5	8.853	SF
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore	14,292.2	6,606.4	252.7	33.4	1.152	Level 2, CC
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore	14,300.0	6,606.5	252.8	33.3	1.152	Level 2, ES, SF
EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore	13,241.8	6,600.0	487.2	296.9	2.560	CC, ES
EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore	13,287.4	6,600.0	489.4	297.8	2.554	SF
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Well	13,796.5	6,580.0	2,318.6	2,113.0	11.275	CC
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Well	13,877.9	6,580.8	2,320.1	2,112.1	11.158	ES
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Well	14,500.0	6,587.0	2,423.0	2,197.6	10.751	SF
EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - D	14,126.5	6,625.2	1,522.1	1,178.3	4.428	CC
EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - D	14,173.2	6,625.1	1,522.8	1,177.7	4.413	ES
EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - D	14,300.0	6,625.0	1,531.9	1,183.3	4.394	SF
EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - W	13,680.2	6,603.7	36.6	-165.7	0.181	Level 1, CC, SF
EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - W	13,681.1	6,603.7	36.6	-165.7	0.181	Level 1, ES
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	6,410.6	6,335.5	1,393.5	1,251.9	9.841	CC
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	6,450.0	6,367.2	1,393.7	1,251.4	9.796	ES
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	6,791.3	6,575.8	1,423.2	1,275.3	9.618	SF
EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1	8,863.4	6,638.8	1,246.7	1,049.4	6.319	CC
EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1	8,900.0	6,638.7	1,247.3	1,049.0	6.289	ES
EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1	9,100.0	6,638.5	1,269.0	1,065.2	6.227	SF
EXIST VERT PAULINE #5 - Wellbore #1 - Design #1	14,995.1	6,610.0	947.4	578.4	2.567	CC, ES, SF
EXIST VERT PJ #2 - Wellbore #1 - Wellbore #1	14,995.1	6,400.0	1,462.2	1,225.5	6.178	CC, ES, SF
EXIST VERT PJ #5 - Wellbore #1 - Design #1	14,995.1	6,618.0	1,384.8	1,016.8	3.763	CC, ES, SF
EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbo	5,990.1	6,029.0	3,910.7	3,894.3	237.653	CC, ES
EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbo	12,500.0	6,662.0	9,911.3	9,742.3	58.647	SF
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore	2,201.4	2,153.9	2,054.6	2,048.4	328.891	CC
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore	2,300.0	2,246.4	2,054.8	2,048.2	309.340	ES
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore	14,800.0	6,200.0	9,955.2	9,728.3	43.869	SF

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

Anticollision Report



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Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Summary

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SW NW SEC. 10 T5N R64W 6th P.M.						
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbor	3,878.5	3,781.4	2,943.0	2,930.1	228.660	CC
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbor	3,900.0	3,801.8	2,943.0	2,930.1	227.737	ES
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbor	13,700.0	6,557.1	9,965.3	9,762.9	49.234	SF
EXIST VERT WACKER #1 - Wellbore #1 - Wellbore #1	6,515.4	6,409.1	32.0	15.6	1.950	CC, ES, SF
EXIST VERT WACKER #10D - Wellbore #1 - Wellbore #	5,971.9	5,924.0	653.3	636.4	38.833	ES, SF
EXIST VERT WACKER #10D - Wellbore #1 - Wellbore #	5,981.7	5,933.9	653.2	637.6	41.967	CC
EXIST VERT WACKER #2 - Wellbore #1 - Design #1	5,971.9	5,920.8	1,686.0	1,552.2	12.595	CC, ES, SF
EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore	3,999.9	3,932.2	1,458.0	1,445.4	115.508	CC
EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore	4,000.0	3,932.4	1,458.0	1,445.4	115.505	ES
EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore	13,500.0	6,328.4	8,577.8	8,417.0	53.327	SF
EXIST VERT WACKER #31-10 - Wellbore #1 - Design #	5,971.9	5,884.8	2,627.5	2,495.2	19.862	CC, ES, SF
EXIST VERT WACKER #32-10 - Wellbore #1 - Design #	5,971.9	5,924.8	2,353.3	2,222.5	17.991	CC
EXIST VERT WACKER #32-10 - Wellbore #1 - Design #	6,000.0	5,952.9	2,353.9	2,222.4	17.896	ES
EXIST VERT WACKER #32-10 - Wellbore #1 - Design #	6,050.0	6,002.7	2,357.6	2,225.7	17.873	SF
EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore	5,971.9	6,039.3	4,169.2	4,152.9	254.654	ES
EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore	5,994.6	6,059.8	4,168.9	4,153.6	273.157	CC
EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore	12,303.1	6,730.0	9,966.1	9,802.9	61.067	SF
EXIST VERT WACKER #42-10 - Wellbore #1 - Wellbore	5,770.5	5,710.3	3,860.5	3,845.1	251.065	CC
EXIST VERT WACKER #42-10 - Wellbore #1 - Wellbore	5,807.1	5,742.4	3,860.5	3,845.0	249.746	ES
EXIST VERT WACKER #42-10 - Wellbore #1 - Wellbore	12,500.0	6,500.0	9,981.6	9,845.5	73.323	SF
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	1,229.0	1,189.1	1,487.9	1,484.6	454.072	CC
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	7,578.7	6,568.2	1,515.1	1,481.2	44.617	ES
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	9,547.2	6,535.2	2,505.8	2,419.1	28.918	SF
WACKER 10F-204 - ORIGINAL WELLBORE - PROPOS	1,000.0	1,000.0	44.8	40.6	10.565	CC
WACKER 10F-204 - ORIGINAL WELLBORE - PROPOS	14,995.1	15,029.4	459.7	-14.6	0.969	Level 1, ES, SF
WACKER 10F-232 - ORIGINAL WELLBORE - PROPOS	1,300.0	1,300.0	15.0	9.4	2.675	CC, ES
WACKER 10F-232 - ORIGINAL WELLBORE - PROPOS	6,970.6	7,302.5	61.9	14.8	1.314	Level 3, SF
WACKER 10F-302 - ORIGINAL WELLBORE - PROPOS	1,200.0	1,200.0	14.9	9.8	2.907	CC, ES
WACKER 10F-302 - ORIGINAL WELLBORE - PROPOS	1,279.5	1,279.3	15.4	9.9	2.810	SF
WACKER 10F-304 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	29.9	25.2	6.370	CC
WACKER 10F-304 - ORIGINAL WELLBORE - PROPOS	14,995.1	15,081.1	238.8	-218.1	0.523	Level 1, ES, SF
WACKER 10G-212 - ORIGINAL WELLBORE - PROPOS	1,200.0	1,200.0	75.0	69.9	14.600	CC
WACKER 10G-212 - ORIGINAL WELLBORE - PROPOS	1,300.0	1,299.7	75.2	69.7	13.498	ES
WACKER 10G-212 - ORIGINAL WELLBORE - PROPOS	7,500.0	6,800.0	531.7	478.6	10.028	SF
WACKER 10G-214 - ORIGINAL WELLBORE - PROPOS	1,300.0	1,300.0	60.1	54.5	10.754	CC, ES
WACKER 10G-214 - ORIGINAL WELLBORE - PROPOS	14,995.1	14,982.9	565.5	90.7	1.191	Level 2, SF
WACKER 10G-302 - ORIGINAL WELLBORE - PROPOS	1,000.0	1,000.0	104.9	100.7	24.739	CC, ES
WACKER 10G-302 - ORIGINAL WELLBORE - PROPOS	7,900.0	6,623.3	889.6	826.6	14.119	SF
WACKER 10G-304 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	90.0	85.3	19.184	CC, ES
WACKER 10G-304 - ORIGINAL WELLBORE - PROPOS	14,995.1	15,065.7	783.2	310.6	1.657	SF
WACKER 10G-312 - ORIGINAL WELLBORE - PROPOS	1,300.0	1,300.0	45.2	39.6	8.081	CC, ES
WACKER 10G-312 - ORIGINAL WELLBORE - PROPOS	7,480.3	6,880.6	268.1	214.4	4.997	SF
WACKER 10G-314 - ORIGINAL WELLBORE - PROPOS	1,300.0	1,300.0	30.2	24.6	5.410	CC
WACKER 10G-314 - ORIGINAL WELLBORE - PROPOS	14,995.1	15,049.3	334.7	-132.0	0.717	Level 1, ES, 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)	Minimum Separation (usft)	Factor

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
0.0	0.0	0.0	0.0	0.0	0.0	-104.35	-1,257.8	-4,915.3	5,073.8				
98.4	98.4	65.4	65.4	0.1	0.1	-104.35	-1,257.8	-4,915.3	5,073.7	5,073.5	0.17	N/A	
100.0	100.0	67.0	67.0	0.1	0.1	-104.35	-1,257.8	-4,915.3	5,073.7	5,073.5	0.18	N/A	
196.8	196.8	163.8	163.8	0.3	1.8	-104.35	-1,257.8	-4,915.3	5,073.7	5,071.6	2.10	2,411.817	
200.0	200.0	167.0	167.0	0.3	1.9	-104.35	-1,257.8	-4,915.3	5,073.7	5,071.5	2.19	2,313.511	
295.3	295.3	262.3	262.3	0.5	4.0	-104.35	-1,257.8	-4,915.3	5,073.7	5,069.2	4.55	1,113.900	
300.0	300.0	267.0	267.0	0.5	4.1	-104.35	-1,257.8	-4,915.3	5,073.7	5,069.0	4.66	1,088.066	
393.7	393.7	360.7	360.7	0.8	6.0	-104.35	-1,257.8	-4,915.3	5,073.7	5,066.9	6.79	747.400	
400.0	400.0	367.0	367.0	0.8	6.2	-104.35	-1,257.8	-4,915.3	5,073.7	5,066.8	6.93	732.064	
492.1	492.1	459.1	459.1	1.0	8.0	-104.35	-1,257.8	-4,915.3	5,073.7	5,064.7	9.00	563.474	
500.0	500.0	467.0	467.0	1.0	8.2	-104.35	-1,257.8	-4,915.3	5,073.7	5,064.5	9.18	552.613	
590.5	590.5	557.5	557.5	1.2	10.0	-104.35	-1,257.8	-4,915.3	5,073.7	5,062.5	11.21	452.451	
600.0	600.0	567.0	567.0	1.2	10.2	-104.35	-1,257.8	-4,915.3	5,073.7	5,062.3	11.43	444.057	
689.0	689.0	656.0	656.0	1.4	12.0	-104.35	-1,257.8	-4,915.3	5,073.7	5,060.3	13.42	378.063	
700.0	700.0	667.0	667.0	1.4	12.2	-104.35	-1,257.8	-4,915.3	5,073.7	5,060.0	13.67	371.230	
787.4	787.4	754.4	754.4	1.6	14.0	-104.35	-1,257.8	-4,915.3	5,073.7	5,058.1	15.62	324.718	
800.0	800.0	767.0	767.0	1.7	14.2	-104.35	-1,257.8	-4,915.3	5,073.7	5,057.8	15.91	318.958	
885.8	885.8	852.8	852.8	1.9	16.0	-104.35	-1,257.8	-4,915.3	5,073.7	5,055.9	17.83	284.582	
900.0	900.0	867.0	867.0	1.9	16.3	-104.35	-1,257.8	-4,915.3	5,073.7	5,055.6	18.15	279.606	
984.2	984.2	951.2	951.2	2.1	17.9	-104.35	-1,257.8	-4,915.3	5,073.7	5,053.7	20.03	253.285	
1,000.0	1,000.0	967.0	967.0	2.1	18.3	-104.35	-1,257.8	-4,915.3	5,073.7	5,053.3	20.38	248.906	
1,082.7	1,082.7	1,049.7	1,049.7	2.3	19.9	-104.35	-1,257.8	-4,915.3	5,073.7	5,051.5	22.23	228.195	
1,100.0	1,100.0	1,067.0	1,067.0	2.3	20.3	-104.35	-1,257.8	-4,915.3	5,073.7	5,051.1	22.62	224.285	
1,181.1	1,181.1	1,148.1	1,148.1	2.5	21.9	-104.35	-1,257.8	-4,915.3	5,073.7	5,049.3	24.44	207.631	
1,200.0	1,200.0	1,167.0	1,167.0	2.6	22.3	-104.35	-1,257.8	-4,915.3	5,073.7	5,048.8	24.86	204.100	
1,279.5	1,279.5	1,246.5	1,246.5	2.7	23.9	-104.35	-1,257.8	-4,915.3	5,073.7	5,047.1	26.64	190.469	
1,300.0	1,300.0	1,267.0	1,267.0	2.8	24.3	-104.35	-1,257.8	-4,915.3	5,073.7	5,046.6	27.10	187.249	
1,377.9	1,377.9	1,344.9	1,344.9	3.0	25.9	-145.54	-1,257.8	-4,915.3	5,074.6	5,045.8	28.83	176.021	
1,400.0	1,400.0	1,367.0	1,367.0	3.0	26.3	-145.54	-1,257.8	-4,915.3	5,075.1	5,045.8	29.32	173.115	
1,476.4	1,476.3	1,443.3	1,443.3	3.2	27.8	-145.53	-1,257.8	-4,915.3	5,078.2	5,047.2	30.99	163.861	
1,500.0	1,499.8	1,466.8	1,466.8	3.2	28.3	-145.52	-1,257.8	-4,915.3	5,079.5	5,048.0	31.50	161.231	
1,574.8	1,574.4	1,541.4	1,541.4	3.4	29.8	-145.50	-1,257.8	-4,915.3	5,084.6	5,051.5	33.12	153.526	
1,600.0	1,599.5	1,566.5	1,566.5	3.5	30.3	-145.50	-1,257.8	-4,915.3	5,086.7	5,053.0	33.66	151.133	
1,673.2	1,672.2	1,639.2	1,639.2	3.6	31.8	-145.47	-1,257.8	-4,915.3	5,093.7	5,058.5	35.21	144.670	
1,700.0	1,698.7	1,665.7	1,665.7	3.7	32.3	-145.46	-1,257.8	-4,915.3	5,096.7	5,060.9	35.77	142.486	
1,771.6	1,769.5	1,736.5	1,736.5	3.9	33.7	-145.43	-1,257.8	-4,915.3	5,105.7	5,068.4	37.26	137.031	
1,800.0	1,797.5	1,764.5	1,764.5	4.0	34.3	-145.41	-1,257.8	-4,915.3	5,109.7	5,071.8	37.84	135.033	
1,870.1	1,866.3	1,833.3	1,833.3	4.2	35.7	-145.37	-1,257.8	-4,915.3	5,120.4	5,081.2	39.27	130.403	
1,899.9	1,895.6	1,862.6	1,862.6	4.3	36.3	-145.35	-1,257.8	-4,915.3	5,125.4	5,085.6	39.86	128.573	
1,968.5	1,962.6	1,929.6	1,929.6	4.5	37.6	-145.44	-1,257.8	-4,915.3	5,137.3	5,095.9	41.37	124.179	
2,000.0	1,993.4	1,960.4	1,960.4	4.6	38.3	-145.48	-1,257.8	-4,915.3	5,142.7	5,100.6	42.06	122.269	
2,066.9	2,058.9	2,025.9	2,025.9	4.8	39.6	-145.57	-1,257.8	-4,915.3	5,154.2	5,110.7	43.54	118.387	
2,100.0	2,091.3	2,058.3	2,058.3	4.9	40.2	-145.61	-1,257.8	-4,915.3	5,159.9	5,115.7	44.26	116.570	
2,165.3	2,155.2	2,122.2	2,122.2	5.2	41.5	-145.70	-1,257.8	-4,915.3	5,171.2	5,125.5	45.71	113.133	
2,200.0	2,189.1	2,156.1	2,156.1	5.3	42.2	-145.74	-1,257.8	-4,915.3	5,177.2	5,130.8	46.48	111.394	
2,263.8	2,251.5	2,218.5	2,218.5	5.5	43.4	-145.82	-1,257.8	-4,915.3	5,188.3	5,140.4	47.89	108.334	
2,300.0	2,286.9	2,253.9	2,253.9	5.7	44.2	-145.87	-1,257.8	-4,915.3	5,194.5	5,145.9	48.69	106.676	
2,362.2	2,347.7	2,314.7	2,314.7	5.9	45.4	-145.95	-1,257.8	-4,915.3	5,205.3	5,155.3	50.08	103.945	
2,400.0	2,384.7	2,351.7	2,351.7	6.0	46.1	-146.00	-1,257.8	-4,915.3	5,211.9	5,161.0	50.92	102.359	
2,460.6	2,444.0	2,411.0	2,411.0	6.3	47.3	-146.07	-1,257.8	-4,915.3	5,222.4	5,170.1	52.27	99.916	
2,500.0	2,482.5	2,449.5	2,449.5	6.4	48.1	-146.12	-1,257.8	-4,915.3	5,229.3	5,176.1	53.14	98.396	
2,559.0	2,540.3	2,507.3	2,507.3	6.7	49.2	-146.20	-1,257.8	-4,915.3	5,239.5	5,185.1	54.46	96.205	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,547.3	2,547.3	6.8	50.1	-146.25	-1,257.8	-4,915.3	5,246.6	5,191.3	55.38	94.747	
2,657.5	2,636.5	2,603.5	2,603.5	7.1	51.2	-146.32	-1,257.8	-4,915.3	5,256.6	5,200.0	56.66	92.777	
2,700.0	2,678.1	2,645.1	2,645.1	7.2	52.0	-146.37	-1,257.8	-4,915.3	5,264.1	5,206.4	57.61	91.376	
2,755.9	2,732.8	2,699.8	2,699.8	7.5	53.1	-146.44	-1,257.8	-4,915.3	5,273.8	5,214.9	58.86	89.601	
2,800.0	2,776.0	2,743.0	2,743.0	7.7	54.0	-146.50	-1,257.8	-4,915.3	5,281.5	5,221.6	59.84	88.254	
2,854.3	2,829.1	2,796.1	2,796.1	7.9	55.1	-146.56	-1,257.8	-4,915.3	5,291.0	5,229.9	61.06	86.652	
2,900.0	2,873.8	2,840.8	2,840.8	8.1	56.0	-146.62	-1,257.8	-4,915.3	5,299.0	5,236.9	62.08	85.355	
2,952.7	2,925.4	2,892.4	2,892.4	8.3	57.0	-146.68	-1,257.8	-4,915.3	5,308.2	5,244.9	63.26	83.907	
3,000.0	2,971.6	2,938.6	2,938.6	8.5	57.9	-146.74	-1,257.8	-4,915.3	5,316.4	5,252.1	64.32	82.655	
3,051.2	3,021.6	2,988.6	2,988.6	8.7	58.9	-146.80	-1,257.8	-4,915.3	5,325.4	5,259.9	65.47	81.345	
3,100.0	3,069.4	3,036.4	3,036.4	8.9	59.9	-146.86	-1,257.8	-4,915.3	5,334.0	5,267.4	66.56	80.137	
3,149.6	3,117.9	3,084.9	3,084.9	9.1	60.9	-146.92	-1,257.8	-4,915.3	5,342.6	5,275.0	67.67	78.949	
3,200.0	3,167.2	3,134.2	3,134.2	9.3	61.9	-146.98	-1,257.8	-4,915.3	5,351.5	5,282.7	68.80	77.781	
3,248.0	3,214.2	3,181.2	3,181.2	9.5	62.8	-147.04	-1,257.8	-4,915.3	5,359.9	5,290.0	69.88	76.703	
3,300.0	3,265.0	3,232.0	3,232.0	9.8	63.8	-147.10	-1,257.8	-4,915.3	5,369.0	5,298.0	71.04	75.574	
3,346.4	3,310.5	3,277.5	3,277.5	10.0	64.7	-147.16	-1,257.8	-4,915.3	5,377.2	5,305.1	72.09	74.595	
3,400.0	3,362.9	3,329.9	3,329.9	10.2	65.8	-147.22	-1,257.8	-4,915.3	5,386.6	5,313.3	73.29	73.501	
3,444.9	3,406.7	3,373.7	3,373.7	10.4	66.7	-147.28	-1,257.8	-4,915.3	5,394.5	5,320.2	74.29	72.611	
3,473.0	3,434.2	3,401.2	3,401.2	10.5	67.2	-147.31	-1,257.8	-4,915.3	5,399.5	5,324.5	74.92	72.067	
3,500.0	3,460.7	3,427.7	3,427.7	10.6	67.8	-147.39	-1,257.8	-4,915.3	5,404.1	5,328.5	75.61	71.470	
3,543.3	3,503.2	3,470.2	3,470.2	10.7	68.6	-147.52	-1,257.8	-4,915.3	5,411.1	5,334.4	76.70	70.548	
3,600.0	3,559.0	3,526.0	3,526.0	10.9	69.7	-147.66	-1,257.8	-4,915.3	5,419.5	5,341.4	78.12	69.375	
3,641.7	3,600.2	3,567.2	3,567.2	11.0	70.6	-147.76	-1,257.8	-4,915.3	5,425.1	5,345.9	79.15	68.543	
3,700.0	3,657.9	3,624.9	3,624.9	11.2	71.7	-147.88	-1,257.8	-4,915.3	5,432.0	5,351.4	80.58	67.415	
3,740.1	3,697.8	3,664.8	3,664.8	11.3	72.5	-147.95	-1,257.8	-4,915.3	5,436.2	5,354.6	81.54	66.665	
3,800.0	3,757.3	3,724.3	3,724.3	11.4	73.7	-148.04	-1,257.8	-4,915.3	5,441.5	5,358.6	82.97	65.581	
3,838.6	3,795.7	3,762.7	3,762.7	11.5	74.5	-148.09	-1,257.8	-4,915.3	5,444.4	5,360.6	83.88	64.908	
3,900.0	3,857.0	3,824.0	3,824.0	11.7	75.7	-148.16	-1,257.8	-4,915.3	5,448.1	5,362.8	85.30	63.867	
3,937.0	3,893.9	3,860.9	3,860.9	11.7	76.5	-148.19	-1,257.8	-4,915.3	5,449.8	5,363.7	86.15	63.263	
4,000.0	3,956.9	3,923.9	3,923.9	11.8	77.7	-148.22	-1,257.8	-4,915.3	5,451.8	5,364.2	87.56	62.265	
4,035.4	3,992.3	3,959.3	3,959.3	11.9	78.5	-148.23	-1,257.8	-4,915.3	5,452.4	5,364.0	88.34	61.723	
4,072.9	4,029.8	3,996.8	3,996.8	11.9	79.2	-107.04	-1,257.8	-4,915.3	5,452.6	5,362.1	90.49	60.256	
4,100.0	4,056.9	4,023.9	4,023.9	12.0	79.8	-107.04	-1,257.8	-4,915.3	5,452.6	5,361.5	91.08	59.868	
4,133.8	4,090.7	4,057.7	4,057.7	12.0	80.4	-107.04	-1,257.8	-4,915.3	5,452.6	5,360.8	91.82	59.386	
4,200.0	4,156.9	4,123.9	4,123.9	12.1	81.8	-107.04	-1,257.8	-4,915.3	5,452.6	5,359.3	93.26	58.467	
4,232.3	4,189.2	4,156.2	4,156.2	12.2	82.4	-107.04	-1,257.8	-4,915.3	5,452.6	5,358.6	93.96	58.029	
4,300.0	4,256.9	4,223.9	4,223.9	12.3	83.8	-107.04	-1,257.8	-4,915.3	5,452.6	5,357.1	95.44	57.130	
4,330.7	4,287.6	4,254.6	4,254.6	12.4	84.4	-107.04	-1,257.8	-4,915.3	5,452.6	5,356.5	96.11	56.731	
4,400.0	4,356.9	4,323.9	4,323.9	12.5	85.8	-107.04	-1,257.8	-4,915.3	5,452.6	5,355.0	97.63	55.851	
4,429.1	4,386.0	4,353.0	4,353.0	12.5	86.4	-107.04	-1,257.8	-4,915.3	5,452.6	5,354.3	98.26	55.489	
4,500.0	4,456.9	4,423.9	4,423.9	12.6	87.8	-107.04	-1,257.8	-4,915.3	5,452.6	5,352.8	99.81	54.627	
4,527.5	4,484.4	4,451.4	4,451.4	12.7	88.3	-107.04	-1,257.8	-4,915.3	5,452.6	5,352.2	100.42	54.299	
4,600.0	4,556.9	4,523.9	4,523.9	12.8	89.8	-107.04	-1,257.8	-4,915.3	5,452.6	5,350.6	102.00	53.455	
4,626.0	4,582.9	4,549.9	4,549.9	12.9	90.3	-107.04	-1,257.8	-4,915.3	5,452.6	5,350.0	102.57	53.159	
4,700.0	4,656.9	4,623.9	4,623.9	13.0	91.8	-107.04	-1,257.8	-4,915.3	5,452.6	5,348.4	104.19	52.332	
4,724.4	4,681.3	4,648.3	4,648.3	13.0	92.3	-107.04	-1,257.8	-4,915.3	5,452.6	5,347.9	104.73	52.065	
4,800.0	4,756.9	4,723.9	4,723.9	13.1	93.8	-107.04	-1,257.8	-4,915.3	5,452.6	5,346.2	106.38	51.254	
4,822.8	4,779.7	4,746.7	4,746.7	13.2	94.3	-107.04	-1,257.8	-4,915.3	5,452.6	5,345.7	106.88	51.014	
4,900.0	4,856.9	4,823.9	4,823.9	13.3	95.8	-107.04	-1,257.8	-4,915.3	5,452.6	5,344.0	108.58	50.219	
4,921.2	4,878.1	4,845.1	4,845.1	13.4	96.3	-107.04	-1,257.8	-4,915.3	5,452.6	5,343.5	109.04	50.004	
5,000.0	4,956.9	4,923.9	4,923.9	13.5	97.8	-107.04	-1,257.8	-4,915.3	5,452.6	5,341.8	110.77	49.224	
5,019.7	4,976.6	4,943.6	4,943.6	13.5	98.2	-107.04	-1,257.8	-4,915.3	5,452.6	5,341.4	111.20	49.033	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,023.9	5,023.9	13.7	99.9	-107.04	-1,257.8	-4,915.3	5,452.6	5,339.6	112.97	48.267	
5,118.1	5,075.0	5,042.0	5,042.0	13.7	100.2	-107.04	-1,257.8	-4,915.3	5,452.6	5,339.2	113.36	48.098	
5,200.0	5,156.9	5,123.9	5,123.9	13.8	101.9	-107.04	-1,257.8	-4,915.3	5,452.6	5,337.4	115.16	47.346	
5,216.5	5,173.4	5,140.4	5,140.4	13.9	102.2	-107.04	-1,257.8	-4,915.3	5,452.6	5,337.1	115.53	47.198	
5,300.0	5,256.9	5,223.9	5,223.9	14.0	103.9	-107.04	-1,257.8	-4,915.3	5,452.6	5,335.2	117.36	46.460	
5,314.9	5,271.8	5,238.8	5,238.8	14.1	104.2	-107.04	-1,257.8	-4,915.3	5,452.6	5,334.9	117.69	46.330	
5,400.0	5,356.9	5,323.9	5,323.9	14.2	105.9	-107.04	-1,257.8	-4,915.3	5,452.6	5,333.0	119.56	45.605	
5,413.4	5,370.3	5,337.3	5,337.3	14.2	106.2	-107.04	-1,257.8	-4,915.3	5,452.6	5,332.7	119.85	45.493	
5,500.0	5,456.9	5,423.9	5,423.9	14.4	107.9	-107.04	-1,257.8	-4,915.3	5,452.6	5,330.8	121.76	44.781	
5,511.8	5,468.7	5,435.7	5,435.7	14.4	108.1	-107.04	-1,257.8	-4,915.3	5,452.6	5,330.6	122.02	44.686	
5,600.0	5,556.9	5,523.9	5,523.9	14.6	109.9	-107.04	-1,257.8	-4,915.3	5,452.6	5,328.6	123.96	43.986	
5,610.2	5,567.1	5,534.1	5,534.1	14.6	110.1	-107.04	-1,257.8	-4,915.3	5,452.6	5,328.4	124.19	43.906	
5,700.0	5,656.9	5,623.9	5,623.9	14.7	111.9	-107.04	-1,257.8	-4,915.3	5,452.6	5,326.4	126.16	43.218	
5,708.6	5,665.5	5,632.5	5,632.5	14.8	112.1	-107.04	-1,257.8	-4,915.3	5,452.6	5,326.2	126.35	43.153	
5,800.0	5,756.9	5,723.9	5,723.9	14.9	113.9	-107.04	-1,257.8	-4,915.3	5,452.6	5,324.2	128.37	42.476	
5,807.1	5,764.0	5,731.0	5,731.0	14.9	114.1	-107.04	-1,257.8	-4,915.3	5,452.6	5,324.1	128.52	42.425	
5,900.0	5,856.9	5,823.9	5,823.9	15.1	115.9	-107.04	-1,257.8	-4,915.3	5,452.6	5,322.0	130.57	41.759	
5,905.5	5,862.4	5,829.4	5,829.4	15.1	116.1	-107.04	-1,257.8	-4,915.3	5,452.6	5,321.9	130.69	41.721	
5,971.9	5,928.8	5,895.8	5,895.8	15.3	117.4	-107.04	-1,257.8	-4,915.3	5,452.6	5,320.4	132.16	41.258	
6,000.0	5,956.9	5,923.9	5,923.9	15.3	118.0	-17.06	-1,257.8	-4,915.3	5,452.1	5,320.5	131.60	41.430	
6,003.9	5,960.8	5,927.8	5,927.8	15.3	118.0	-17.06	-1,257.8	-4,915.3	5,451.9	5,320.2	131.65	41.412	
6,050.0	6,006.7	5,973.7	5,973.7	15.4	119.0	-17.15	-1,257.8	-4,915.3	5,448.5	5,316.5	132.02	41.270	
6,100.0	6,056.2	6,023.2	6,023.2	15.4	120.0	-17.34	-1,257.8	-4,915.3	5,441.7	5,309.8	131.85	41.271	
6,102.3	6,058.5	6,025.5	6,025.5	15.4	120.0	-17.35	-1,257.8	-4,915.3	5,441.3	5,309.4	131.83	41.275	
6,150.0	6,105.1	6,072.1	6,072.1	15.4	120.9	-17.62	-1,257.8	-4,915.3	5,431.5	5,300.4	131.08	41.436	
6,200.0	6,153.0	6,120.0	6,120.0	15.5	121.9	-18.01	-1,257.8	-4,915.3	5,418.2	5,288.4	129.72	41.767	
6,200.8	6,153.8	6,120.8	6,120.8	15.5	121.9	-18.01	-1,257.8	-4,915.3	5,417.9	5,288.2	129.70	41.774	
6,250.0	6,199.9	6,166.9	6,166.9	15.5	122.8	-18.50	-1,257.8	-4,915.3	5,401.6	5,273.8	127.79	42.269	
6,299.2	6,244.8	6,211.8	6,211.8	15.5	123.7	-19.11	-1,257.8	-4,915.3	5,382.4	5,257.0	125.37	42.932	
6,300.0	6,245.5	6,212.5	6,212.5	15.5	123.8	-19.12	-1,257.8	-4,915.3	5,382.0	5,256.7	125.33	42.944	
6,350.0	6,289.6	6,256.6	6,256.6	15.5	124.6	-19.88	-1,257.8	-4,915.3	5,359.4	5,237.1	122.38	43.794	
6,397.6	6,329.9	6,296.9	6,296.9	15.4	125.5	-20.75	-1,257.8	-4,915.3	5,335.3	5,216.1	119.19	44.761	
6,400.0	6,331.8	6,298.8	6,298.8	15.4	125.5	-20.80	-1,257.8	-4,915.3	5,334.0	5,215.0	119.03	44.813	
6,450.0	6,372.2	6,339.2	6,339.2	15.4	126.3	-21.91	-1,257.8	-4,915.3	5,305.8	5,190.4	115.39	45.982	
6,496.0	6,407.4	6,374.4	6,374.4	15.4	127.0	-23.13	-1,257.8	-4,915.3	5,277.5	5,165.6	111.92	47.155	
6,500.0	6,410.3	6,377.3	6,377.3	15.4	127.1	-23.24	-1,257.8	-4,915.3	5,275.0	5,163.4	111.62	47.259	
6,550.0	6,446.1	6,413.1	6,413.1	15.4	127.8	-24.84	-1,257.8	-4,915.3	5,241.8	5,133.8	107.94	48.560	
6,594.5	6,475.9	6,442.9	6,442.9	15.4	128.4	-26.53	-1,257.8	-4,915.3	5,210.3	5,105.3	104.99	49.625	
6,600.0	6,479.4	6,446.4	6,446.4	15.4	128.5	-26.76	-1,257.8	-4,915.3	5,206.3	5,101.6	104.66	49.744	
6,650.0	6,510.0	6,477.0	6,477.0	15.5	129.1	-29.09	-1,257.8	-4,915.3	5,168.7	5,066.5	102.18	50.586	
6,692.9	6,534.0	6,501.0	6,501.0	15.7	129.6	-31.49	-1,257.8	-4,915.3	5,134.9	5,033.8	101.06	50.808	
6,700.0	6,537.8	6,504.8	6,504.8	15.7	129.6	-31.93	-1,257.8	-4,915.3	5,129.2	5,028.2	100.99	50.787	
6,750.0	6,562.6	6,529.6	6,529.6	16.2	130.1	-35.39	-1,257.8	-4,915.3	5,087.9	4,986.2	101.70	50.029	
6,791.3	6,580.8	6,547.8	6,547.8	16.6	130.5	-38.85	-1,257.8	-4,915.3	5,052.7	4,948.6	104.11	48.534	
6,800.0	6,584.3	6,551.3	6,551.3	16.7	130.6	-39.66	-1,257.8	-4,915.3	5,045.2	4,940.4	104.86	48.114	
6,850.0	6,602.9	6,569.9	6,569.9	17.3	130.9	-44.94	-1,257.8	-4,915.3	5,001.2	4,890.4	110.85	45.119	
6,889.7	6,615.2	6,582.2	6,582.2	17.9	131.2	-50.00	-1,257.8	-4,915.3	4,965.4	4,847.8	117.60	42.222	
6,900.0	6,618.1	6,585.1	6,585.1	18.0	131.3	-51.44	-1,257.8	-4,915.3	4,956.1	4,836.5	119.59	41.443	
6,950.0	6,630.0	6,597.0	6,597.0	18.8	131.5	-59.38	-1,257.8	-4,915.3	4,910.2	4,779.9	130.28	37.688	
6,988.2	6,636.8	6,603.8	6,603.8	19.5	131.6	-66.45	-1,257.8	-4,915.3	4,874.7	4,736.0	138.71	35.144	
7,000.0	6,638.5	6,605.5	6,605.5	19.7	131.7	-68.80	-1,257.8	-4,915.3	4,863.6	4,722.5	141.16	34.454	
7,050.0	6,643.5	6,610.5	6,610.5	20.6	131.8	-79.46	-1,257.8	-4,915.3	4,816.7	4,667.0	149.63	32.190	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,611.9	6,611.9	21.3	131.8	-87.67	-1,257.8	-4,915.3	4,782.2	4,629.3	152.88	31.281	
7,097.8	6,645.0	6,612.0	6,612.0	21.5	131.8	-90.20	-1,257.8	-4,915.3	4,771.6	4,618.3	153.26	31.134	
7,100.0	6,645.0	6,612.0	6,612.0	21.6	131.8	-90.20	-1,257.8	-4,915.3	4,769.6	4,616.3	153.30	31.112	
7,185.0	6,644.9	6,611.9	6,611.9	23.3	131.8	-90.20	-1,257.8	-4,915.3	4,689.5	4,534.5	155.03	30.250	
7,200.0	6,644.9	6,611.9	6,611.9	23.6	131.8	-90.20	-1,257.8	-4,915.3	4,675.5	4,520.1	155.33	30.100	
7,283.4	6,644.8	6,611.8	6,611.8	25.4	131.8	-90.19	-1,257.8	-4,915.3	4,597.1	4,440.0	157.15	29.254	
7,300.0	6,644.7	6,611.7	6,611.7	25.8	131.8	-90.19	-1,257.8	-4,915.3	4,581.6	4,424.1	157.51	29.088	
7,381.9	6,644.6	6,611.6	6,611.6	27.7	131.8	-90.19	-1,257.8	-4,915.3	4,505.0	4,345.6	159.38	28.266	
7,400.0	6,644.6	6,611.6	6,611.6	28.1	131.8	-90.19	-1,257.8	-4,915.3	4,488.0	4,328.2	159.79	28.086	
7,480.3	6,644.5	6,611.5	6,611.5	30.0	131.8	-90.19	-1,257.8	-4,915.3	4,413.1	4,251.4	161.70	27.291	
7,500.0	6,644.5	6,611.5	6,611.5	30.5	131.8	-90.18	-1,257.8	-4,915.3	4,394.7	4,232.6	162.17	27.099	
7,578.7	6,644.4	6,611.4	6,611.4	32.4	131.8	-90.18	-1,257.8	-4,915.3	4,321.5	4,157.4	164.09	26.335	
7,600.0	6,644.4	6,611.4	6,611.4	32.9	131.8	-90.18	-1,257.8	-4,915.3	4,301.7	4,137.1	164.61	26.132	
7,677.1	6,644.3	6,611.3	6,611.3	34.8	131.8	-90.18	-1,257.8	-4,915.3	4,230.2	4,063.6	166.54	25.400	
7,700.0	6,644.2	6,611.2	6,611.2	35.4	131.8	-90.18	-1,257.8	-4,915.3	4,209.0	4,041.9	167.11	25.187	
7,775.6	6,644.1	6,611.1	6,611.1	37.3	131.8	-90.17	-1,257.8	-4,915.3	4,139.2	3,970.2	169.03	24.488	
7,800.0	6,644.1	6,611.1	6,611.1	38.0	131.8	-90.17	-1,257.8	-4,915.3	4,116.7	3,947.1	169.65	24.265	
7,874.0	6,644.0	6,611.0	6,611.0	39.9	131.8	-90.17	-1,257.8	-4,915.3	4,048.6	3,877.1	171.56	23.599	
7,900.0	6,644.0	6,611.0	6,611.0	40.5	131.8	-90.17	-1,257.8	-4,915.3	4,024.7	3,852.5	172.23	23.368	
7,972.4	6,643.9	6,610.9	6,610.9	42.4	131.8	-90.16	-1,257.8	-4,915.3	3,958.4	3,784.3	174.12	22.734	
8,000.0	6,643.9	6,610.9	6,610.9	43.1	131.8	-90.16	-1,257.8	-4,915.3	3,933.2	3,758.3	174.84	22.496	
8,070.8	6,643.8	6,610.8	6,610.8	45.0	131.8	-90.16	-1,257.8	-4,915.3	3,868.5	3,691.8	176.70	21.893	
8,100.0	6,643.7	6,610.7	6,610.7	45.8	131.8	-90.16	-1,257.8	-4,915.3	3,842.0	3,664.5	177.47	21.649	
8,169.3	6,643.7	6,610.7	6,610.7	47.6	131.8	-90.15	-1,257.8	-4,915.3	3,779.1	3,599.8	179.30	21.077	
8,200.0	6,643.6	6,610.6	6,610.6	48.4	131.8	-90.15	-1,257.8	-4,915.3	3,751.3	3,571.2	180.12	20.827	
8,267.7	6,643.5	6,610.5	6,610.5	50.2	131.8	-90.15	-1,257.8	-4,915.3	3,690.2	3,508.2	181.92	20.284	
8,300.0	6,643.5	6,610.5	6,610.5	51.1	131.8	-90.15	-1,257.8	-4,915.3	3,661.1	3,478.3	182.79	20.029	
8,366.1	6,643.4	6,610.4	6,610.4	52.9	131.8	-90.15	-1,257.8	-4,915.3	3,601.7	3,417.1	184.56	19.515	
8,400.0	6,643.4	6,610.4	6,610.4	53.8	131.8	-90.14	-1,257.8	-4,915.3	3,571.4	3,385.9	185.47	19.256	
8,464.5	6,643.3	6,610.3	6,610.3	55.5	131.8	-90.14	-1,257.8	-4,915.3	3,513.8	3,326.6	187.21	18.769	
8,500.0	6,643.2	6,610.2	6,610.2	56.5	131.8	-90.14	-1,257.8	-4,915.3	3,482.2	3,294.1	188.16	18.507	
8,563.0	6,643.2	6,610.2	6,610.2	58.2	131.8	-90.14	-1,257.8	-4,915.3	3,426.4	3,236.5	189.86	18.047	
8,600.0	6,643.1	6,610.1	6,610.1	59.2	131.8	-90.13	-1,257.8	-4,915.3	3,393.7	3,202.8	190.87	17.781	
8,661.4	6,643.0	6,610.0	6,610.0	60.8	131.8	-90.13	-1,257.8	-4,915.3	3,339.7	3,147.1	192.53	17.346	
8,700.0	6,643.0	6,610.0	6,610.0	61.9	131.8	-90.13	-1,257.8	-4,915.3	3,305.8	3,112.2	193.58	17.077	
8,759.8	6,642.9	6,609.9	6,609.9	63.5	131.8	-90.13	-1,257.8	-4,915.3	3,253.6	3,058.4	195.21	16.667	
8,800.0	6,642.9	6,609.9	6,609.9	64.6	131.8	-90.13	-1,257.8	-4,915.3	3,218.6	3,022.3	196.30	16.396	
8,858.2	6,642.8	6,609.8	6,609.8	66.2	131.8	-90.12	-1,257.8	-4,915.3	3,168.2	2,970.3	197.89	16.010	
8,900.0	6,642.7	6,609.7	6,609.7	67.3	131.8	-90.12	-1,257.8	-4,915.3	3,132.2	2,933.2	199.03	15.737	
8,956.7	6,642.7	6,609.7	6,609.7	68.9	131.8	-90.12	-1,257.8	-4,915.3	3,083.6	2,883.0	200.58	15.373	
9,000.0	6,642.6	6,609.6	6,609.6	70.1	131.7	-90.12	-1,257.8	-4,915.3	3,046.6	2,844.9	201.77	15.100	
9,055.1	6,642.5	6,609.5	6,609.5	71.6	131.7	-90.11	-1,257.8	-4,915.3	2,999.9	2,796.6	203.28	14.758	
9,100.0	6,642.5	6,609.5	6,609.5	72.8	131.7	-90.11	-1,257.8	-4,915.3	2,962.0	2,757.5	204.51	14.483	
9,153.5	6,642.4	6,609.4	6,609.4	74.3	131.7	-90.11	-1,257.8	-4,915.3	2,917.1	2,711.1	205.98	14.162	
9,200.0	6,642.4	6,609.4	6,609.4	75.6	131.7	-90.11	-1,257.8	-4,915.3	2,878.3	2,671.0	207.25	13.888	
9,251.9	6,642.3	6,609.3	6,609.3	77.0	131.7	-90.11	-1,257.8	-4,915.3	2,835.2	2,626.5	208.68	13.586	
9,300.0	6,642.2	6,609.2	6,609.2	78.3	131.7	-90.10	-1,257.8	-4,915.3	2,795.7	2,585.7	210.00	13.313	
9,350.4	6,642.2	6,609.2	6,609.2	79.7	131.7	-90.10	-1,257.8	-4,915.3	2,754.5	2,543.1	211.39	13.030	
9,400.0	6,642.1	6,609.1	6,609.1	81.1	131.7	-90.10	-1,257.8	-4,915.3	2,714.2	2,501.5	212.76	12.757	
9,448.8	6,642.0	6,609.0	6,609.0	82.4	131.7	-90.10	-1,257.8	-4,915.3	2,674.9	2,460.8	214.10	12.494	
9,500.0	6,642.0	6,609.0	6,609.0	83.8	131.7	-90.09	-1,257.8	-4,915.3	2,634.1	2,418.5	215.52	12.222	
9,547.2	6,641.9	6,608.9	6,608.9	85.1	131.7	-90.09	-1,257.8	-4,915.3	2,596.7	2,379.9	216.82	11.976	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,608.9	6,608.9	86.6	131.7	-90.09	-1,257.8	-4,915.3	2,555.3	2,337.0	218.28	11.707	
9,645.6	6,641.8	6,608.8	6,608.8	87.9	131.7	-90.09	-1,257.8	-4,915.3	2,519.8	2,300.3	219.54	11.478	
9,700.0	6,641.7	6,608.7	6,608.7	89.4	131.7	-90.09	-1,257.8	-4,915.3	2,478.0	2,257.0	221.04	11.211	
9,744.1	6,641.7	6,608.7	6,608.7	90.6	131.7	-90.08	-1,257.8	-4,915.3	2,444.5	2,222.3	222.26	10.998	
9,800.0	6,641.6	6,608.6	6,608.6	92.1	131.7	-90.08	-1,257.8	-4,915.3	2,402.5	2,178.7	223.81	10.735	
9,842.5	6,641.6	6,608.6	6,608.6	93.3	131.7	-90.08	-1,257.8	-4,915.3	2,370.9	2,145.9	224.98	10.538	
9,900.0	6,641.5	6,608.5	6,608.5	94.9	131.7	-90.08	-1,257.8	-4,915.3	2,328.8	2,102.2	226.58	10.278	
9,940.9	6,641.4	6,608.4	6,608.4	96.0	131.7	-90.07	-1,257.8	-4,915.3	2,299.2	2,071.5	227.71	10.097	
10,000.0	6,641.4	6,608.4	6,608.4	97.7	131.7	-90.07	-1,257.8	-4,915.3	2,257.1	2,027.7	229.35	9.841	
10,039.3	6,641.3	6,608.3	6,608.3	98.8	131.7	-90.07	-1,257.8	-4,915.3	2,229.5	1,999.0	230.44	9.675	
10,100.0	6,641.2	6,608.2	6,608.2	100.4	131.7	-90.07	-1,257.8	-4,915.3	2,187.6	1,955.5	232.12	9.424	
10,137.8	6,641.2	6,608.2	6,608.2	101.5	131.7	-90.07	-1,257.8	-4,915.3	2,162.0	1,928.8	233.17	9.272	
10,200.0	6,641.1	6,608.1	6,608.1	103.2	131.7	-90.06	-1,257.8	-4,915.3	2,120.6	1,885.7	234.90	9.028	
10,236.2	6,641.1	6,608.1	6,608.1	104.2	131.7	-90.06	-1,257.8	-4,915.3	2,097.0	1,861.1	235.90	8.889	
10,300.0	6,641.0	6,608.0	6,608.0	106.0	131.7	-90.06	-1,257.8	-4,915.3	2,056.2	1,818.6	237.67	8.651	
10,334.6	6,640.9	6,607.9	6,607.9	107.0	131.7	-90.06	-1,257.8	-4,915.3	2,034.6	1,796.0	238.64	8.526	
10,400.0	6,640.9	6,607.9	6,607.9	108.8	131.7	-90.05	-1,257.8	-4,915.3	1,994.8	1,754.4	240.45	8.296	
10,433.0	6,640.8	6,607.8	6,607.8	109.7	131.7	-90.05	-1,257.8	-4,915.3	1,975.2	1,733.8	241.37	8.183	
10,500.0	6,640.7	6,607.7	6,607.7	111.6	131.7	-90.05	-1,257.8	-4,915.3	1,936.6	1,693.4	243.23	7.962	
10,531.5	6,640.7	6,607.7	6,607.7	112.4	131.7	-90.05	-1,257.8	-4,915.3	1,919.0	1,674.9	244.11	7.861	
10,600.0	6,640.6	6,607.6	6,607.6	114.3	131.7	-90.04	-1,257.8	-4,915.3	1,882.0	1,635.9	246.02	7.650	
10,629.9	6,640.6	6,607.6	6,607.6	115.2	131.7	-90.04	-1,257.8	-4,915.3	1,866.3	1,619.5	246.85	7.561	
10,700.0	6,640.5	6,607.5	6,607.5	117.1	131.7	-90.04	-1,257.8	-4,915.3	1,831.1	1,582.3	248.80	7.360	
10,728.3	6,640.4	6,607.4	6,607.4	117.9	131.7	-90.04	-1,257.8	-4,915.3	1,817.5	1,567.9	249.59	7.282	
10,800.0	6,640.4	6,607.4	6,607.4	119.9	131.7	-90.04	-1,257.8	-4,915.3	1,784.4	1,532.9	251.58	7.093	
10,826.7	6,640.3	6,607.3	6,607.3	120.7	131.7	-90.03	-1,257.8	-4,915.3	1,772.7	1,520.4	252.33	7.025	
10,900.0	6,640.2	6,607.2	6,607.2	122.7	131.7	-90.03	-1,257.8	-4,915.3	1,742.3	1,487.9	254.37	6.849	
10,925.2	6,640.2	6,607.2	6,607.2	123.4	131.7	-90.03	-1,257.8	-4,915.3	1,732.4	1,477.3	255.07	6.792	
11,000.0	6,640.1	6,607.1	6,607.1	125.5	131.7	-90.03	-1,257.8	-4,915.3	1,704.9	1,447.8	257.15	6.630	
11,023.6	6,640.1	6,607.1	6,607.1	126.1	131.7	-90.03	-1,257.8	-4,915.3	1,696.8	1,439.0	257.81	6.582	
11,100.0	6,640.0	6,607.0	6,607.0	128.3	131.7	-90.02	-1,257.8	-4,915.3	1,672.7	1,412.8	259.94	6.435	
11,122.0	6,639.9	6,606.9	6,606.9	128.9	131.7	-90.02	-1,257.8	-4,915.3	1,666.3	1,405.8	260.55	6.395	
11,200.0	6,639.8	6,606.8	6,606.8	131.1	131.7	-90.02	-1,257.8	-4,915.3	1,646.0	1,383.2	262.73	6.265	
11,220.4	6,639.8	6,606.8	6,606.8	131.6	131.7	-90.02	-1,257.8	-4,915.3	1,641.2	1,377.9	263.30	6.233	
11,300.0	6,639.7	6,606.7	6,606.7	133.9	131.7	-90.01	-1,257.8	-4,915.3	1,624.9	1,359.4	265.52	6.120	
11,318.9	6,639.7	6,606.7	6,606.7	134.4	131.7	-90.01	-1,257.8	-4,915.3	1,621.6	1,355.6	266.04	6.095	
11,400.0	6,639.6	6,606.6	6,606.6	136.7	131.7	-90.01	-1,257.8	-4,915.3	1,609.9	1,341.5	268.31	6.000	
11,417.3	6,639.6	6,606.6	6,606.6	137.1	131.7	-90.01	-1,257.8	-4,915.3	1,607.9	1,339.1	268.79	5.982	
11,500.0	6,639.5	6,606.5	6,606.5	139.4	131.7	-90.00	-1,257.8	-4,915.3	1,600.9	1,329.8	271.10	5.905	
11,515.7	6,639.5	6,606.5	6,606.5	139.9	131.7	-90.00	-1,257.8	-4,915.3	1,600.0	1,328.5	271.54	5.893	
11,593.8	6,639.4	6,606.4	6,606.4	142.1	131.7	-90.00	-1,257.8	-4,915.3	1,598.1	1,324.4	273.72	5.839 CC	
11,600.0	6,639.3	6,606.3	6,606.3	142.2	131.7	-90.00	-1,257.8	-4,915.3	1,598.2	1,324.3	273.89	5.835	
11,614.1	6,639.3	6,606.3	6,606.3	142.6	131.7	-90.00	-1,257.8	-4,915.3	1,598.3	1,324.0	274.28	5.827 ES	
11,700.0	6,639.2	6,606.2	6,606.2	145.0	131.7	-90.00	-1,257.8	-4,915.3	1,601.7	1,325.0	276.68	5.789	
11,712.6	6,639.2	6,606.2	6,606.2	145.4	131.7	-89.99	-1,257.8	-4,915.3	1,602.5	1,325.5	277.03	5.785	
11,800.0	6,639.1	6,606.1	6,606.1	147.8	131.7	-89.99	-1,257.8	-4,915.3	1,611.4	1,331.9	279.47	5.766	
11,811.0	6,639.1	6,606.1	6,606.1	148.1	131.7	-89.99	-1,257.8	-4,915.3	1,612.8	1,333.0	279.78	5.765 SF	
11,900.0	6,639.0	6,606.0	6,606.0	150.6	131.7	-89.99	-1,257.8	-4,915.3	1,627.2	1,344.9	282.27	5.765	
11,909.4	6,639.0	6,606.0	6,606.0	150.9	131.7	-89.99	-1,257.8	-4,915.3	1,629.0	1,346.5	282.53	5.766	
12,000.0	6,638.8	6,605.8	6,605.8	153.4	131.7	-89.98	-1,257.8	-4,915.3	1,648.9	1,363.9	285.06	5.785	
12,007.8	6,638.8	6,605.8	6,605.8	153.6	131.7	-89.98	-1,257.8	-4,915.3	1,650.9	1,365.6	285.28	5.787	
12,100.0	6,638.7	6,605.7	6,605.7	156.2	131.7	-89.98	-1,257.8	-4,915.3	1,676.4	1,388.5	287.85	5.824	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,605.7	6,605.7	156.4	131.7	-89.98	-1,257.8	-4,915.3	1,678.3	1,390.3	288.03	5.827	
12,200.0	6,638.6	6,605.6	6,605.6	159.0	131.7	-89.97	-1,257.8	-4,915.3	1,709.2	1,418.6	290.65	5.881	
12,204.7	6,638.6	6,605.6	6,605.6	159.1	131.7	-89.97	-1,257.8	-4,915.3	1,710.9	1,420.1	290.78	5.884	
12,300.0	6,638.5	6,605.5	6,605.5	161.8	131.7	-89.97	-1,257.8	-4,915.3	1,747.2	1,453.8	293.44	5.954	
12,303.1	6,638.5	6,605.5	6,605.5	161.9	131.7	-89.97	-1,257.8	-4,915.3	1,748.5	1,454.9	293.53	5.957	
12,400.0	6,638.3	6,605.3	6,605.3	164.6	131.7	-89.96	-1,257.8	-4,915.3	1,790.0	1,493.7	296.24	6.042	
12,401.5	6,638.3	6,605.3	6,605.3	164.6	131.7	-89.96	-1,257.8	-4,915.3	1,790.7	1,494.4	296.28	6.044	
12,500.0	6,638.2	6,605.2	6,605.2	167.4	131.7	-89.96	-1,257.8	-4,915.3	1,837.2	1,538.1	299.04	6.144	
12,598.4	6,638.1	6,605.1	6,605.1	170.2	131.7	-89.95	-1,257.8	-4,915.3	1,887.6	1,585.9	301.79	6.255	
12,600.0	6,638.1	6,605.1	6,605.1	170.2	131.7	-89.95	-1,257.8	-4,915.3	1,888.5	1,586.7	301.83	6.257	
12,696.8	6,638.0	6,605.0	6,605.0	172.9	131.7	-89.95	-1,257.8	-4,915.3	1,941.8	1,637.3	304.54	6.376	
12,700.0	6,638.0	6,605.0	6,605.0	173.0	131.7	-89.95	-1,257.8	-4,915.3	1,943.6	1,639.0	304.63	6.380	
12,795.2	6,637.8	6,604.8	6,604.8	175.7	131.7	-89.95	-1,257.8	-4,915.3	1,999.4	1,692.1	307.29	6.506	
12,800.0	6,637.8	6,604.8	6,604.8	175.8	131.7	-89.95	-1,257.8	-4,915.3	2,002.2	1,694.8	307.43	6.513	
12,893.7	6,637.7	6,604.7	6,604.7	178.4	131.7	-89.94	-1,257.8	-4,915.3	2,060.0	1,750.0	310.05	6.644	
12,900.0	6,637.7	6,604.7	6,604.7	178.6	131.7	-89.94	-1,257.8	-4,915.3	2,064.0	1,753.8	310.22	6.653	
12,992.1	6,637.6	6,604.6	6,604.6	181.2	131.6	-89.94	-1,257.8	-4,915.3	2,123.5	1,810.7	312.80	6.789	
13,000.0	6,637.6	6,604.6	6,604.6	181.4	131.6	-89.94	-1,257.8	-4,915.3	2,128.7	1,815.7	313.02	6.800	
13,090.5	6,637.5	6,604.5	6,604.5	183.9	131.6	-89.93	-1,257.8	-4,915.3	2,189.5	1,874.0	315.55	6.939	
13,100.0	6,637.5	6,604.5	6,604.5	184.2	131.6	-89.93	-1,257.8	-4,915.3	2,196.0	1,880.2	315.82	6.953	
13,188.9	6,637.4	6,604.4	6,604.4	186.7	131.6	-89.93	-1,257.8	-4,915.3	2,258.0	1,939.7	318.31	7.094	
13,200.0	6,637.3	6,604.3	6,604.3	187.0	131.6	-89.93	-1,257.8	-4,915.3	2,265.8	1,947.2	318.62	7.111	
13,287.4	6,637.2	6,604.2	6,604.2	189.4	131.6	-89.92	-1,257.8	-4,915.3	2,328.5	2,007.5	321.06	7.253	
13,300.0	6,637.2	6,604.2	6,604.2	189.8	131.6	-89.92	-1,257.8	-4,915.3	2,337.7	2,016.3	321.42	7.273	
13,385.8	6,637.1	6,604.1	6,604.1	192.2	131.6	-89.92	-1,257.8	-4,915.3	2,401.1	2,077.3	323.82	7.415	
13,400.0	6,637.1	6,604.1	6,604.1	192.6	131.6	-89.92	-1,257.8	-4,915.3	2,411.7	2,087.5	324.22	7.439	
13,484.2	6,637.0	6,604.0	6,604.0	195.0	131.6	-89.91	-1,257.8	-4,915.3	2,475.4	2,148.8	326.57	7.580	
13,500.0	6,637.0	6,604.0	6,604.0	195.4	131.6	-89.91	-1,257.8	-4,915.3	2,487.5	2,160.4	327.02	7.607	
13,582.6	6,636.9	6,603.9	6,603.9	197.7	131.6	-89.91	-1,257.8	-4,915.3	2,551.4	2,222.0	329.33	7.747	
13,600.0	6,636.8	6,603.8	6,603.8	198.2	131.6	-89.91	-1,257.8	-4,915.3	2,564.9	2,235.1	329.81	7.777	
13,681.1	6,636.7	6,603.7	6,603.7	200.5	131.6	-89.91	-1,257.8	-4,915.3	2,628.8	2,296.7	332.08	7.916	
13,700.0	6,636.7	6,603.7	6,603.7	201.0	131.6	-89.91	-1,257.8	-4,915.3	2,643.8	2,311.2	332.61	7.949	
13,779.5	6,636.6	6,603.6	6,603.6	203.2	131.6	-89.90	-1,257.8	-4,915.3	2,707.6	2,372.8	334.84	8.086	
13,800.0	6,636.6	6,603.6	6,603.6	203.8	131.6	-89.90	-1,257.8	-4,915.3	2,724.2	2,388.8	335.41	8.122	
13,877.9	6,636.5	6,603.5	6,603.5	206.0	131.6	-89.90	-1,257.8	-4,915.3	2,787.7	2,450.1	337.60	8.257	
13,900.0	6,636.5	6,603.5	6,603.5	206.6	131.6	-89.90	-1,257.8	-4,915.3	2,805.8	2,467.6	338.21	8.296	
13,976.3	6,636.4	6,603.4	6,603.4	208.8	131.6	-89.89	-1,257.8	-4,915.3	2,868.9	2,528.5	340.35	8.429	
14,000.0	6,636.3	6,603.3	6,603.3	209.4	131.6	-89.89	-1,257.8	-4,915.3	2,888.5	2,547.5	341.02	8.470	
14,074.8	6,636.2	6,603.2	6,603.2	211.5	131.6	-89.89	-1,257.8	-4,915.3	2,951.1	2,608.0	343.11	8.601	
14,100.0	6,636.2	6,603.2	6,603.2	212.2	131.6	-89.89	-1,257.8	-4,915.3	2,972.3	2,628.5	343.82	8.645	
14,173.2	6,636.1	6,603.1	6,603.1	214.3	131.6	-89.88	-1,257.8	-4,915.3	3,034.3	2,688.5	345.87	8.773	
14,200.0	6,636.1	6,603.1	6,603.1	215.0	131.6	-89.88	-1,257.8	-4,915.3	3,057.1	2,710.5	346.62	8.820	
14,271.6	6,636.0	6,603.0	6,603.0	217.0	131.6	-89.88	-1,257.8	-4,915.3	3,118.4	2,769.8	348.62	8.945	
14,300.0	6,636.0	6,603.0	6,603.0	217.8	131.6	-89.88	-1,257.8	-4,915.3	3,142.8	2,793.4	349.42	8.994	
14,370.0	6,635.9	6,602.9	6,602.9	219.8	131.6	-89.88	-1,257.8	-4,915.3	3,203.3	2,852.0	351.38	9.116	
14,400.0	6,635.8	6,602.8	6,602.8	220.6	131.6	-89.87	-1,257.8	-4,915.3	3,229.3	2,877.1	352.22	9.169	
14,468.5	6,635.7	6,602.7	6,602.7	222.6	131.6	-89.87	-1,257.8	-4,915.3	3,289.0	2,934.9	354.14	9.287	
14,500.0	6,635.7	6,602.7	6,602.7	223.4	131.6	-89.87	-1,257.8	-4,915.3	3,316.6	2,961.6	355.02	9.342	
14,566.9	6,635.6	6,602.6	6,602.6	225.3	131.6	-89.87	-1,257.8	-4,915.3	3,375.4	3,018.5	356.89	9.458	
14,600.0	6,635.6	6,602.6	6,602.6	226.2	131.6	-89.86	-1,257.8	-4,915.3	3,404.6	3,046.7	357.82	9.515	
14,665.3	6,635.5	6,602.5	6,602.5	228.1	131.6	-89.86	-1,257.8	-4,915.3	3,462.4	3,102.7	359.65	9.627	
14,700.0	6,635.5	6,602.5	6,602.5	229.0	131.6	-89.86	-1,257.8	-4,915.3	3,493.2	3,132.5	360.62	9.686	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,635.4	6,602.4	6,602.4	230.8	131.6	-89.86	-1,257.8	-4,915.3	3,550.0	3,187.6	362.41	9.795	
14,800.0	6,635.3	6,602.3	6,602.3	231.8	131.6	-89.86	-1,257.8	-4,915.3	3,582.4	3,219.0	363.43	9.857	
14,862.2	6,635.2	6,602.2	6,602.2	233.6	131.6	-89.85	-1,257.8	-4,915.3	3,638.1	3,273.0	365.17	9.963	
14,900.0	6,635.2	6,602.2	6,602.2	234.7	131.6	-89.85	-1,257.8	-4,915.3	3,672.2	3,305.9	366.23	10.027	
14,960.6	6,635.1	6,602.1	6,602.1	236.4	131.6	-89.85	-1,257.8	-4,915.3	3,726.8	3,358.9	367.93	10.129	
14,995.1	6,635.0	6,602.0	6,602.0	237.3	131.6	-89.85	-1,257.8	-4,915.3	3,758.0	3,389.1	368.89	10.187	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-86.99	66.0	-1,254.7	1,256.6				
98.4	98.4	77.4	77.4	0.1	0.0	-86.99	66.0	-1,254.7	1,256.5	1,256.4	0.10	N/A	
100.0	100.0	79.0	79.0	0.1	0.0	-86.99	66.0	-1,254.7	1,256.5	1,256.4	0.10	N/A	
196.8	196.8	175.8	175.8	0.3	1.0	-86.99	66.0	-1,254.7	1,256.5	1,255.2	1.29	970.242	
200.0	200.0	179.0	179.0	0.3	1.0	-86.99	66.0	-1,254.7	1,256.5	1,255.1	1.34	935.732	
295.3	295.3	274.3	274.3	0.5	3.0	-86.99	66.0	-1,254.7	1,256.5	1,252.9	3.51	357.580	
300.0	300.0	279.0	279.0	0.5	3.1	-86.99	66.0	-1,254.7	1,256.5	1,252.8	3.63	345.976	
393.7	393.7	372.7	372.7	0.8	5.1	-86.99	66.0	-1,254.7	1,256.5	1,250.6	5.83	215.573	
400.0	400.0	379.0	379.0	0.8	5.2	-86.99	66.0	-1,254.7	1,256.5	1,250.5	5.97	210.341	
492.1	492.1	471.1	471.1	1.0	7.1	-86.99	66.0	-1,254.7	1,256.5	1,248.4	8.07	155.720	
500.0	500.0	479.0	479.0	1.0	7.3	-86.99	66.0	-1,254.7	1,256.5	1,248.2	8.25	152.350	
590.5	590.5	569.5	569.5	1.2	9.1	-86.99	66.0	-1,254.7	1,256.5	1,246.2	10.29	122.099	
600.0	600.0	579.0	579.0	1.2	9.3	-86.99	66.0	-1,254.7	1,256.5	1,246.0	10.50	119.623	
689.0	689.0	668.0	668.0	1.4	11.1	-86.99	66.0	-1,254.7	1,256.5	1,244.0	12.50	100.481	
700.0	700.0	679.0	679.0	1.4	11.3	-86.99	66.0	-1,254.7	1,256.5	1,243.7	12.75	98.529	
787.4	787.4	766.4	766.4	1.6	13.1	-86.99	66.0	-1,254.7	1,256.5	1,241.7	14.71	85.391	
800.0	800.0	779.0	779.0	1.7	13.3	-86.99	66.0	-1,254.7	1,256.5	1,241.5	15.00	83.781	
885.8	885.8	864.8	864.8	1.9	15.1	-86.99	66.0	-1,254.7	1,256.5	1,239.5	16.92	74.252	
900.0	900.0	879.0	879.0	1.9	15.3	-86.99	66.0	-1,254.7	1,256.5	1,239.2	17.24	72.884	
984.2	984.2	963.2	963.2	2.1	17.0	-86.99	66.0	-1,254.7	1,256.5	1,237.3	19.13	65.690	
1,000.0	1,000.0	979.0	979.0	2.1	17.4	-86.99	66.0	-1,254.7	1,256.5	1,237.0	19.48	64.500	
1,082.7	1,082.7	1,061.7	1,061.7	2.3	19.0	-86.99	66.0	-1,254.7	1,256.5	1,235.1	21.33	58.901	
1,100.0	1,100.0	1,079.0	1,079.0	2.3	19.4	-86.99	66.0	-1,254.7	1,256.5	1,234.7	21.72	57.849	
1,181.1	1,181.1	1,160.1	1,160.1	2.5	21.0	-86.99	66.0	-1,254.7	1,256.5	1,232.9	23.54	53.386	
1,200.0	1,200.0	1,179.0	1,179.0	2.6	21.4	-86.99	66.0	-1,254.7	1,256.5	1,232.5	23.96	52.443	
1,279.5	1,279.5	1,258.5	1,258.5	2.7	23.0	-86.99	66.0	-1,254.7	1,256.5	1,230.7	25.74	48.816	
1,300.0	1,300.0	1,279.0	1,279.0	2.8	23.4	-86.99	66.0	-1,254.7	1,256.5	1,230.3	26.20	47.962	
1,377.9	1,377.9	1,356.9	1,356.9	3.0	25.0	-128.21	66.0	-1,254.7	1,257.1	1,229.2	27.93	45.002	
1,400.0	1,400.0	1,379.0	1,379.0	3.0	25.4	-128.23	66.0	-1,254.7	1,257.5	1,229.1	28.42	44.242	
1,476.4	1,476.3	1,455.3	1,455.3	3.2	27.0	-128.32	66.0	-1,254.7	1,259.8	1,229.7	30.11	41.839	
1,500.0	1,499.8	1,478.8	1,478.8	3.2	27.4	-128.36	66.0	-1,254.7	1,260.8	1,230.2	30.63	41.161	
1,574.8	1,574.4	1,553.4	1,553.4	3.4	28.9	-128.52	66.0	-1,254.7	1,264.6	1,232.4	32.27	39.192	
1,600.0	1,599.5	1,578.5	1,578.5	3.5	29.4	-128.58	66.0	-1,254.7	1,266.2	1,233.4	32.82	38.585	
1,673.2	1,672.2	1,651.2	1,651.2	3.6	30.9	-128.80	66.0	-1,254.7	1,271.6	1,237.2	34.40	36.960	
1,700.0	1,698.7	1,677.7	1,677.7	3.7	31.4	-128.89	66.0	-1,254.7	1,273.9	1,238.9	34.98	36.416	
1,771.6	1,769.5	1,748.5	1,748.5	3.9	32.9	-129.16	66.0	-1,254.7	1,280.8	1,244.2	36.52	35.070	
1,800.0	1,797.5	1,776.5	1,776.5	4.0	33.4	-129.28	66.0	-1,254.7	1,283.8	1,246.7	37.12	34.583	
1,870.1	1,866.3	1,845.3	1,845.3	4.2	34.8	-129.59	66.0	-1,254.7	1,292.2	1,253.6	38.61	33.465	
1,899.9	1,895.6	1,874.6	1,874.6	4.3	35.4	-129.73	66.0	-1,254.7	1,296.1	1,256.8	39.24	33.030	
1,968.5	1,962.6	1,941.6	1,941.6	4.5	36.7	-130.21	66.0	-1,254.7	1,305.4	1,264.6	40.76	32.024	
2,000.0	1,993.4	1,972.4	1,972.4	4.6	37.4	-130.42	66.0	-1,254.7	1,309.7	1,268.2	41.46	31.587	
2,066.9	2,058.9	2,037.9	2,037.9	4.8	38.7	-130.88	66.0	-1,254.7	1,318.8	1,275.9	42.96	30.702	
2,100.0	2,091.3	2,070.3	2,070.3	4.9	39.3	-131.10	66.0	-1,254.7	1,323.4	1,279.7	43.69	30.288	
2,165.3	2,155.2	2,134.2	2,134.2	5.2	40.6	-131.53	66.0	-1,254.7	1,332.5	1,287.3	45.16	29.508	
2,200.0	2,189.1	2,168.1	2,168.1	5.3	41.3	-131.76	66.0	-1,254.7	1,337.3	1,291.4	45.93	29.115	
2,263.8	2,251.5	2,230.5	2,230.5	5.5	42.5	-132.18	66.0	-1,254.7	1,346.3	1,298.9	47.36	28.424	
2,300.0	2,286.9	2,265.9	2,265.9	5.7	43.3	-132.41	66.0	-1,254.7	1,351.4	1,303.2	48.18	28.051	
2,362.2	2,347.7	2,326.7	2,326.7	5.9	44.5	-132.81	66.0	-1,254.7	1,360.3	1,310.7	49.58	27.438	
2,400.0	2,384.7	2,363.7	2,363.7	6.0	45.2	-133.05	66.0	-1,254.7	1,365.7	1,315.3	50.43	27.083	
2,460.6	2,444.0	2,423.0	2,423.0	6.3	46.4	-133.43	66.0	-1,254.7	1,374.4	1,322.6	51.79	26.537	
2,500.0	2,482.5	2,461.5	2,461.5	6.4	47.2	-133.67	66.0	-1,254.7	1,380.1	1,327.5	52.68	26.199	
2,559.0	2,540.3	2,519.3	2,519.3	6.7	48.4	-134.03	66.0	-1,254.7	1,388.7	1,334.7	54.01	25.713	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,559.3	2,559.3	6.8	49.2	-134.28	66.0	-1,254.7	1,394.7	1,339.8	54.93	25.390	
2,657.5	2,636.5	2,615.5	2,615.5	7.1	50.3	-134.63	66.0	-1,254.7	1,403.2	1,347.0	56.23	24.955	
2,700.0	2,678.1	2,657.1	2,657.1	7.2	51.1	-134.88	66.0	-1,254.7	1,409.5	1,352.3	57.19	24.647	
2,755.9	2,732.8	2,711.8	2,711.8	7.5	52.2	-135.21	66.0	-1,254.7	1,417.8	1,359.4	58.45	24.258	
2,800.0	2,776.0	2,755.0	2,755.0	7.7	53.1	-135.47	66.0	-1,254.7	1,424.4	1,365.0	59.44	23.963	
2,854.3	2,829.1	2,808.1	2,808.1	7.9	54.2	-135.78	66.0	-1,254.7	1,432.6	1,371.9	60.67	23.614	
2,900.0	2,873.8	2,852.8	2,852.8	8.1	55.1	-136.04	66.0	-1,254.7	1,439.5	1,377.8	61.70	23.332	
2,952.7	2,925.4	2,904.4	2,904.4	8.3	56.1	-136.34	66.0	-1,254.7	1,447.5	1,384.6	62.88	23.018	
3,000.0	2,971.6	2,950.6	2,950.6	8.5	57.0	-136.60	66.0	-1,254.7	1,454.6	1,390.7	63.95	22.747	
3,051.2	3,021.6	3,000.6	3,000.6	8.7	58.0	-136.89	66.0	-1,254.7	1,462.5	1,397.4	65.10	22.464	
3,100.0	3,069.4	3,048.4	3,048.4	8.9	59.0	-137.16	66.0	-1,254.7	1,470.0	1,403.8	66.20	22.205	
3,149.6	3,117.9	3,096.9	3,096.9	9.1	60.0	-137.42	66.0	-1,254.7	1,477.6	1,410.3	67.32	21.950	
3,200.0	3,167.2	3,146.2	3,146.2	9.3	61.0	-137.70	66.0	-1,254.7	1,485.4	1,417.0	68.45	21.700	
3,248.0	3,214.2	3,193.2	3,193.2	9.5	61.9	-137.95	66.0	-1,254.7	1,492.9	1,423.4	69.53	21.470	
3,300.0	3,265.0	3,244.0	3,244.0	9.8	62.9	-138.22	66.0	-1,254.7	1,501.0	1,430.3	70.70	21.230	
3,346.4	3,310.5	3,289.5	3,289.5	10.0	63.8	-138.47	66.0	-1,254.7	1,508.3	1,436.6	71.75	21.022	
3,400.0	3,362.9	3,341.9	3,341.9	10.2	64.9	-138.74	66.0	-1,254.7	1,516.7	1,443.8	72.95	20.791	
3,444.9	3,406.7	3,385.7	3,385.7	10.4	65.8	-138.97	66.0	-1,254.7	1,523.8	1,449.9	73.96	20.604	
3,473.0	3,434.2	3,413.2	3,413.2	10.5	66.3	-139.11	66.0	-1,254.7	1,528.3	1,453.7	74.59	20.489	
3,500.0	3,460.7	3,439.7	3,439.7	10.6	66.9	-139.30	66.0	-1,254.7	1,532.5	1,457.2	75.26	20.362	
3,543.3	3,503.2	3,482.2	3,482.2	10.7	67.7	-139.59	66.0	-1,254.7	1,538.8	1,462.5	76.32	20.163	
3,600.0	3,559.0	3,538.0	3,538.0	10.9	68.8	-139.92	66.0	-1,254.7	1,546.4	1,468.7	77.70	19.902	
3,641.7	3,600.2	3,579.2	3,579.2	11.0	69.7	-140.14	66.0	-1,254.7	1,551.5	1,472.8	78.71	19.712	
3,700.0	3,657.9	3,636.9	3,636.9	11.2	70.8	-140.41	66.0	-1,254.7	1,557.8	1,477.7	80.11	19.446	
3,740.1	3,697.8	3,676.8	3,676.8	11.3	71.6	-140.58	66.0	-1,254.7	1,561.6	1,480.5	81.06	19.265	
3,800.0	3,757.3	3,736.3	3,736.3	11.4	72.8	-140.78	66.0	-1,254.7	1,566.5	1,484.0	82.46	18.996	
3,838.6	3,795.7	3,774.7	3,774.7	11.5	73.6	-140.90	66.0	-1,254.7	1,569.1	1,485.8	83.36	18.824	
3,900.0	3,857.0	3,836.0	3,836.0	11.7	74.8	-141.04	66.0	-1,254.7	1,572.5	1,487.7	84.77	18.551	
3,937.0	3,893.9	3,872.9	3,872.9	11.7	75.6	-141.10	66.0	-1,254.7	1,574.1	1,488.5	85.60	18.388	
4,000.0	3,956.9	3,935.9	3,935.9	11.8	76.9	-141.18	66.0	-1,254.7	1,575.9	1,488.8	87.01	18.112	
4,035.4	3,992.3	3,971.3	3,971.3	11.9	77.6	-141.20	66.0	-1,254.7	1,576.4	1,488.6	87.78	17.958	
4,072.9	4,029.8	4,008.8	4,008.8	11.9	78.3	-100.02	66.0	-1,254.7	1,576.6	1,487.3	89.30	17.655	
4,100.0	4,056.9	4,035.9	4,035.9	12.0	78.9	-100.02	66.0	-1,254.7	1,576.6	1,486.7	89.89	17.540	
4,133.8	4,090.7	4,069.7	4,069.7	12.0	79.5	-100.02	66.0	-1,254.7	1,576.6	1,486.0	90.63	17.396	
4,200.0	4,156.9	4,135.9	4,135.9	12.1	80.9	-100.02	66.0	-1,254.7	1,576.6	1,484.5	92.07	17.123	
4,232.3	4,189.2	4,168.2	4,168.2	12.2	81.5	-100.02	66.0	-1,254.7	1,576.6	1,483.8	92.78	16.993	
4,300.0	4,256.9	4,235.9	4,235.9	12.3	82.9	-100.02	66.0	-1,254.7	1,576.6	1,482.3	94.26	16.726	
4,330.7	4,287.6	4,266.6	4,266.6	12.4	83.5	-100.02	66.0	-1,254.7	1,576.6	1,481.6	94.93	16.607	
4,400.0	4,356.9	4,335.9	4,335.9	12.5	84.9	-100.02	66.0	-1,254.7	1,576.6	1,480.1	96.45	16.346	
4,429.1	4,386.0	4,365.0	4,365.0	12.5	85.5	-100.02	66.0	-1,254.7	1,576.6	1,479.5	97.09	16.239	
4,500.0	4,456.9	4,435.9	4,435.9	12.6	86.9	-100.02	66.0	-1,254.7	1,576.6	1,477.9	98.64	15.983	
4,527.5	4,484.4	4,463.4	4,463.4	12.7	87.5	-100.02	66.0	-1,254.7	1,576.6	1,477.3	99.25	15.886	
4,600.0	4,556.9	4,535.9	4,535.9	12.8	88.9	-100.02	66.0	-1,254.7	1,576.6	1,475.7	100.83	15.635	
4,626.0	4,582.9	4,561.9	4,561.9	12.9	89.4	-100.02	66.0	-1,254.7	1,576.6	1,475.2	101.40	15.547	
4,700.0	4,656.9	4,635.9	4,635.9	13.0	90.9	-100.02	66.0	-1,254.7	1,576.6	1,473.5	103.03	15.302	
4,724.4	4,681.3	4,660.3	4,660.3	13.0	91.4	-100.02	66.0	-1,254.7	1,576.6	1,473.0	103.57	15.223	
4,800.0	4,756.9	4,735.9	4,735.9	13.1	92.9	-100.02	66.0	-1,254.7	1,576.6	1,471.4	105.22	14.983	
4,822.8	4,779.7	4,758.7	4,758.7	13.2	93.4	-100.02	66.0	-1,254.7	1,576.6	1,470.9	105.73	14.912	
4,900.0	4,856.9	4,835.9	4,835.9	13.3	95.0	-100.02	66.0	-1,254.7	1,576.6	1,469.2	107.42	14.676	
4,921.2	4,878.1	4,857.1	4,857.1	13.4	95.4	-100.02	66.0	-1,254.7	1,576.6	1,468.7	107.89	14.613	
5,000.0	4,956.9	4,935.9	4,935.9	13.5	97.0	-100.02	66.0	-1,254.7	1,576.6	1,467.0	109.62	14.382	
5,019.7	4,976.6	4,955.6	4,955.6	13.5	97.4	-100.02	66.0	-1,254.7	1,576.6	1,466.5	110.05	14.326	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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							Warning												
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	5,056.9	5,035.9	5,035.9	13.7	99.0	-100.02	66.0	-1,254.7	1,576.6	1,464.8	111.82	14.099														
5,118.1	5,075.0	5,054.0	5,054.0	13.7	99.3	-100.02	66.0	-1,254.7	1,576.6	1,464.4	112.22	14.049														
5,200.0	5,156.9	5,135.9	5,135.9	13.8	101.0	-100.02	66.0	-1,254.7	1,576.6	1,462.6	114.02	13.827														
5,216.5	5,173.4	5,152.4	5,152.4	13.9	101.3	-100.02	66.0	-1,254.7	1,576.6	1,462.2	114.38	13.783														
5,300.0	5,256.9	5,235.9	5,235.9	14.0	103.0	-100.02	66.0	-1,254.7	1,576.6	1,460.4	116.22	13.565														
5,314.9	5,271.8	5,250.8	5,250.8	14.1	103.3	-100.02	66.0	-1,254.7	1,576.6	1,460.0	116.55	13.527														
														5,400.0	5,356.9	5,335.9	5,335.9	14.2	105.0	-100.02	66.0	-1,254.7	1,576.6	1,458.2	118.42	13.313
														5,413.4	5,370.3	5,349.3	5,349.3	14.2	105.3	-100.02	66.0	-1,254.7	1,576.6	1,457.9	118.72	13.280
														5,500.0	5,456.9	5,435.9	5,435.9	14.4	107.0	-100.02	66.0	-1,254.7	1,576.6	1,456.0	120.63	13.070
														5,511.8	5,468.7	5,447.7	5,447.7	14.4	107.3	-100.02	66.0	-1,254.7	1,576.6	1,455.7	120.89	13.042
5,600.0	5,556.9	5,535.9	5,535.9	14.6	109.0	-100.02	66.0	-1,254.7	1,576.6	1,453.7	122.83	12.835														
														5,610.2	5,567.1	5,546.1	5,546.1	14.6	109.2	-100.02	66.0	-1,254.7	1,576.6	1,453.5	123.06	12.812
														5,700.0	5,656.9	5,635.9	5,635.9	14.7	111.0	-100.02	66.0	-1,254.7	1,576.6	1,451.5	125.04	12.609
														5,708.6	5,665.5	5,644.5	5,644.5	14.8	111.2	-100.02	66.0	-1,254.7	1,576.6	1,451.3	125.23	12.589
														5,800.0	5,756.9	5,735.9	5,735.9	14.9	113.0	-100.02	66.0	-1,254.7	1,576.6	1,449.3	127.25	12.390
5,807.1	5,764.0	5,743.0	5,743.0	14.9	113.2	-100.02	66.0	-1,254.7	1,576.6	1,449.2	127.40	12.375														
														5,900.0	5,856.9	5,835.9	5,835.9	15.1	115.1	-100.02	66.0	-1,254.7	1,576.6	1,447.1	129.45	12.179
														5,905.5	5,862.4	5,841.4	5,841.4	15.1	115.2	-100.02	66.0	-1,254.7	1,576.6	1,447.0	129.57	12.167
														5,971.9	5,928.8	5,907.8	5,907.8	15.3	116.5	-100.02	66.0	-1,254.7	1,576.6	1,445.5	131.04	12.031
														6,000.0	5,956.9	5,935.9	5,935.9	15.3	117.1	-10.03	66.0	-1,254.7	1,576.0	1,445.1	130.95	12.036
6,003.9	5,960.8	5,939.8	5,939.8	15.3	117.2	-10.03	66.0	-1,254.7	1,575.9	1,444.9	131.00	12.029														
														6,050.0	6,006.7	5,985.7	5,985.7	15.4	118.1	-10.11	66.0	-1,254.7	1,572.4	1,441.1	131.34	11.972
														6,100.0	6,056.2	6,035.2	6,035.2	15.4	119.1	-10.25	66.0	-1,254.7	1,565.3	1,434.2	131.10	11.940
														6,102.3	6,058.5	6,037.5	6,037.5	15.4	119.1	-10.26	66.0	-1,254.7	1,564.9	1,433.8	131.08	11.939
														6,150.0	6,105.1	6,084.1	6,084.1	15.4	120.1	-10.48	66.0	-1,254.7	1,554.9	1,424.7	130.22	11.940
6,200.0	6,153.0	6,132.0	6,132.0	15.5	121.0	-10.78	66.0	-1,254.7	1,541.1	1,412.4	128.71	11.974														
														6,200.8	6,153.8	6,132.8	6,132.8	15.5	121.0	-10.79	66.0	-1,254.7	1,540.9	1,412.2	128.68	11.975
														6,250.0	6,199.9	6,178.9	6,178.9	15.5	122.0	-11.18	66.0	-1,254.7	1,524.1	1,397.6	126.55	12.043
														6,299.2	6,244.8	6,223.8	6,223.8	15.5	122.9	-11.68	66.0	-1,254.7	1,504.3	1,380.4	123.84	12.147
														6,300.0	6,245.5	6,224.5	6,224.5	15.5	122.9	-11.69	66.0	-1,254.7	1,503.9	1,380.1	123.79	12.149
6,350.0	6,289.6	6,268.6	6,268.6	15.5	123.8	-12.31	66.0	-1,254.7	1,480.7	1,360.2	120.45	12.293														
														6,397.6	6,329.9	6,308.9	6,308.9	15.4	124.6	-13.04	66.0	-1,254.7	1,455.8	1,339.0	116.78	12.466
														6,400.0	6,331.8	6,310.8	6,310.8	15.4	124.6	-13.08	66.0	-1,254.7	1,454.5	1,337.9	116.58	12.476
														6,450.0	6,372.2	6,351.2	6,351.2	15.4	125.4	-14.02	66.0	-1,254.7	1,425.4	1,313.2	112.26	12.697
														6,496.0	6,407.4	6,386.4	6,386.4	15.4	126.1	-15.07	66.0	-1,254.7	1,396.4	1,288.4	107.99	12.931
6,500.0	6,410.3	6,389.3	6,389.3	15.4	126.2	-15.17	66.0	-1,254.7	1,393.8	1,286.2	107.61	12.952														
														6,550.0	6,446.1	6,425.1	6,425.1	15.4	126.9	-16.59	66.0	-1,254.7	1,359.6	1,256.8	102.81	13.224
														6,594.5	6,475.9	6,454.9	6,454.9	15.4	127.5	-18.12	66.0	-1,254.7	1,327.2	1,228.6	98.63	13.457
														6,600.0	6,479.4	6,458.4	6,458.4	15.4	127.6	-18.34	66.0	-1,254.7	1,323.1	1,225.0	98.12	13.484
														6,650.0	6,510.0	6,489.0	6,489.0	15.5	128.2	-20.51	66.0	-1,254.7	1,284.4	1,190.5	93.96	13.671
6,692.9	6,534.0	6,513.0	6,513.0	15.7	128.7	-22.82	66.0	-1,254.7	1,249.7	1,158.5	91.25	13.696														
														6,700.0	6,537.8	6,516.8	6,516.8	15.7	128.8	-23.25	66.0	-1,254.7	1,243.9	1,153.0	90.91	13.682
														6,750.0	6,562.6	6,541.6	6,541.6	16.2	129.3	-26.73	66.0	-1,254.7	1,201.6	1,111.7	89.84	13.375
														6,791.3	6,580.8	6,559.8	6,559.8	16.6	129.6	-30.33	66.0	-1,254.7	1,165.5	1,074.3	91.18	12.783
														6,800.0	6,584.3	6,563.3	6,563.3	16.7	129.7	-31.19	66.0	-1,254.7	1,157.8	1,066.0	91.79	12.614
6,850.0	6,602.9	6,581.9	6,581.9	17.3	130.1	-36.97	66.0	-1,254.7	1,112.7	1,015.0	97.75	11.383														
														6,889.7	6,615.2	6,594.2	6,594.2	17.9	130.3	-42.74	66.0	-1,254.7	1,076.2	970.5	105.69	10.182
														6,900.0	6,618.1	6,597.1	6,597.1	18.0	130.4	-44.43	66.0	-1,254.7	1,066.7	958.5	108.17	9.861
														6,950.0	6,630.0	6,609.0	6,609.0	18.8	130.6	-53.89	66.0	-1,254.7	1,019.8	897.6	122.17	8.348
														6,988.2	6,636.8	6,615.8	6,615.8	19.5	130.7	-62.49	66.0	-1,254.7	983.7	850.1	133.58	7.364
7,000.0	6,638.5	6,617.5	6,617.5	19.7	130.8	-65.35	66.0	-1,254.7	972.5	835.5	136.91	7.103														
														7,050.0	6,643.5	6,622.5	6,622.5	20.6	130.9	-78.10	66.0	-1,254.7	924.8	776.8	148.06	6.246

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,623.9	6,623.9	21.3	130.9	-87.45	66.0	-1,254.7	890.0	738.0	151.96	5.857	
7,097.8	6,645.0	6,624.0	6,624.0	21.5	130.9	-90.22	66.0	-1,254.7	879.3	726.9	152.37	5.771	
7,100.0	6,645.0	6,624.0	6,624.0	21.6	130.9	-90.22	66.0	-1,254.7	877.2	724.8	152.42	5.756	
7,185.0	6,644.9	6,623.9	6,623.9	23.3	130.9	-90.20	66.0	-1,254.7	796.9	642.8	154.14	5.170	
7,200.0	6,644.9	6,623.9	6,623.9	23.6	130.9	-90.19	66.0	-1,254.7	782.9	628.4	154.44	5.069	
7,283.4	6,644.8	6,623.8	6,623.8	25.4	130.9	-90.17	66.0	-1,254.7	705.3	549.1	156.26	4.514	
7,300.0	6,644.7	6,623.7	6,623.7	25.8	130.9	-90.17	66.0	-1,254.7	690.1	533.5	156.62	4.406	
7,381.9	6,644.6	6,623.6	6,623.6	27.7	130.9	-90.14	66.0	-1,254.7	615.9	457.4	158.49	3.886	
7,400.0	6,644.6	6,623.6	6,623.6	28.1	130.9	-90.14	66.0	-1,254.7	599.7	440.8	158.91	3.774	
7,480.3	6,644.5	6,623.5	6,623.5	30.0	130.9	-90.12	66.0	-1,254.7	529.5	368.7	160.81	3.293	
7,500.0	6,644.5	6,623.5	6,623.5	30.5	130.9	-90.11	66.0	-1,254.7	512.8	351.5	161.28	3.180	
7,578.7	6,644.4	6,623.4	6,623.4	32.4	130.9	-90.09	66.0	-1,254.7	448.3	285.1	163.21	2.747	
7,600.0	6,644.4	6,623.4	6,623.4	32.9	130.9	-90.09	66.0	-1,254.7	431.6	267.9	163.73	2.636	
7,677.1	6,644.3	6,623.3	6,623.3	34.8	130.9	-90.07	66.0	-1,254.7	375.3	209.6	165.65	2.266	
7,700.0	6,644.2	6,623.2	6,623.2	35.4	130.9	-90.06	66.0	-1,254.7	360.1	193.9	166.22	2.166	
7,775.6	6,644.1	6,623.1	6,623.1	37.3	130.9	-90.04	66.0	-1,254.7	316.4	148.3	168.15	1.882	
7,800.0	6,644.1	6,623.1	6,623.1	38.0	130.9	-90.03	66.0	-1,254.7	305.0	136.2	168.77	1.807	
7,874.0	6,644.0	6,623.0	6,623.0	39.9	130.9	-90.02	66.0	-1,254.7	280.7	110.0	170.67	1.644	
7,900.0	6,644.0	6,623.0	6,623.0	40.5	130.9	-90.01	66.0	-1,254.7	276.3	105.0	171.34	1.613	
7,933.3	6,644.0	6,623.0	6,623.0	41.4	130.9	-90.00	66.0	-1,254.7	274.3	102.1	172.21	1.593 CC, ES, SF	
7,972.4	6,643.9	6,622.9	6,622.9	42.4	130.9	-89.99	66.0	-1,254.7	277.1	103.9	173.23	1.600	
8,000.0	6,643.9	6,622.9	6,622.9	43.1	130.9	-89.98	66.0	-1,254.7	282.3	108.4	173.95	1.623	
8,070.8	6,643.8	6,622.8	6,622.8	45.0	130.9	-89.96	66.0	-1,254.7	306.9	131.1	175.81	1.746	
8,100.0	6,643.7	6,622.7	6,622.7	45.8	130.9	-89.96	66.0	-1,254.7	321.0	144.4	176.58	1.818	
8,169.3	6,643.7	6,622.7	6,622.7	47.6	130.9	-89.94	66.0	-1,254.7	361.9	183.5	178.41	2.028	
8,200.0	6,643.6	6,622.6	6,622.6	48.4	130.9	-89.93	66.0	-1,254.7	382.6	203.4	179.23	2.135	
8,267.7	6,643.5	6,622.5	6,622.5	50.2	130.9	-89.91	66.0	-1,254.7	432.6	251.5	181.03	2.389	
8,300.0	6,643.5	6,622.5	6,622.5	51.1	130.9	-89.90	66.0	-1,254.7	458.0	276.1	181.89	2.518	
8,366.1	6,643.4	6,622.4	6,622.4	52.9	130.9	-89.89	66.0	-1,254.7	512.5	328.8	183.67	2.790	
8,400.0	6,643.4	6,622.4	6,622.4	53.8	130.9	-89.88	66.0	-1,254.7	541.4	356.8	184.58	2.933	
8,464.5	6,643.3	6,622.3	6,622.3	55.5	130.9	-89.86	66.0	-1,254.7	597.9	411.6	186.31	3.209	
8,500.0	6,643.2	6,622.2	6,622.2	56.5	130.9	-89.85	66.0	-1,254.7	629.6	442.4	187.27	3.362	
8,563.0	6,643.2	6,622.2	6,622.2	58.2	130.9	-89.83	66.0	-1,254.7	686.9	497.9	188.97	3.635	
8,600.0	6,643.1	6,622.1	6,622.1	59.2	130.9	-89.83	66.0	-1,254.7	721.0	531.0	189.97	3.795	
8,661.4	6,643.0	6,622.0	6,622.0	60.8	130.9	-89.81	66.0	-1,254.7	778.1	586.5	191.64	4.060	
8,700.0	6,643.0	6,622.0	6,622.0	61.9	130.9	-89.80	66.0	-1,254.7	814.3	621.7	192.69	4.226	
8,759.8	6,642.9	6,621.9	6,621.9	63.5	130.9	-89.78	66.0	-1,254.7	870.9	676.6	194.31	4.482	
8,800.0	6,642.9	6,621.9	6,621.9	64.6	130.9	-89.77	66.0	-1,254.7	909.1	713.7	195.41	4.652	
8,858.2	6,642.8	6,621.8	6,621.8	66.2	130.9	-89.76	66.0	-1,254.7	964.8	767.8	197.00	4.898	
8,900.0	6,642.7	6,621.7	6,621.7	67.3	130.9	-89.75	66.0	-1,254.7	1,004.9	806.8	198.14	5.072	
8,956.7	6,642.7	6,621.7	6,621.7	68.9	130.9	-89.73	66.0	-1,254.7	1,059.5	859.9	199.69	5.306	
9,000.0	6,642.6	6,621.6	6,621.6	70.1	130.9	-89.72	66.0	-1,254.7	1,101.5	900.6	200.87	5.483	
9,055.1	6,642.5	6,621.5	6,621.5	71.6	130.9	-89.71	66.0	-1,254.7	1,154.9	952.5	202.38	5.707	
9,100.0	6,642.5	6,621.5	6,621.5	72.8	130.9	-89.69	66.0	-1,254.7	1,198.6	994.9	203.61	5.887	
9,153.5	6,642.4	6,621.4	6,621.4	74.3	130.9	-89.68	66.0	-1,254.7	1,250.7	1,045.6	205.08	6.099	
9,200.0	6,642.4	6,621.4	6,621.4	75.6	130.9	-89.67	66.0	-1,254.7	1,296.1	1,089.8	206.36	6.281	
9,251.9	6,642.3	6,621.3	6,621.3	77.0	130.9	-89.65	66.0	-1,254.7	1,346.9	1,139.1	207.78	6.482	
9,300.0	6,642.2	6,621.2	6,621.2	78.3	130.9	-89.64	66.0	-1,254.7	1,394.0	1,184.9	209.10	6.667	
9,350.4	6,642.2	6,621.2	6,621.2	79.7	130.9	-89.63	66.0	-1,254.7	1,443.4	1,232.9	210.49	6.857	
9,400.0	6,642.1	6,621.1	6,621.1	81.1	130.9	-89.62	66.0	-1,254.7	1,492.2	1,280.3	211.86	7.043	
9,448.8	6,642.0	6,621.0	6,621.0	82.4	130.9	-89.60	66.0	-1,254.7	1,540.2	1,327.0	213.20	7.224	
9,500.0	6,642.0	6,621.0	6,621.0	83.8	130.8	-89.59	66.0	-1,254.7	1,590.6	1,376.0	214.61	7.411	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,620.9	6,620.9	85.1	130.8	-89.58	66.0	-1,254.7	1,637.1	1,421.2	215.92	7.582	
9,600.0	6,641.9	6,620.9	6,620.9	86.6	130.8	-89.56	66.0	-1,254.7	1,689.2	1,471.8	217.37	7.771	
9,645.6	6,641.8	6,620.8	6,620.8	87.9	130.8	-89.55	66.0	-1,254.7	1,734.2	1,515.6	218.64	7.932	
9,700.0	6,641.7	6,620.7	6,620.7	89.4	130.8	-89.54	66.0	-1,254.7	1,787.9	1,567.8	220.14	8.122	
9,744.1	6,641.7	6,620.7	6,620.7	90.6	130.8	-89.53	66.0	-1,254.7	1,831.5	1,610.1	221.36	8.274	
9,800.0	6,641.6	6,620.6	6,620.6	92.1	130.8	-89.51	66.0	-1,254.7	1,886.8	1,663.9	222.90	8.465	
9,842.5	6,641.6	6,620.6	6,620.6	93.3	130.8	-89.50	66.0	-1,254.7	1,928.9	1,704.8	224.08	8.608	
9,900.0	6,641.5	6,620.5	6,620.5	94.9	130.8	-89.48	66.0	-1,254.7	1,985.8	1,760.1	225.67	8.799	
9,940.9	6,641.4	6,620.4	6,620.4	96.0	130.8	-89.47	66.0	-1,254.7	2,026.3	1,799.5	226.80	8.934	
10,000.0	6,641.4	6,620.4	6,620.4	97.7	130.8	-89.46	66.0	-1,254.7	2,084.9	1,856.4	228.44	9.127	
10,039.3	6,641.3	6,620.3	6,620.3	98.8	130.8	-89.45	66.0	-1,254.7	2,123.9	1,894.4	229.53	9.253	
10,100.0	6,641.2	6,620.2	6,620.2	100.4	130.8	-89.43	66.0	-1,254.7	2,184.0	1,952.8	231.21	9.446	
10,137.8	6,641.2	6,620.2	6,620.2	101.5	130.8	-89.42	66.0	-1,254.7	2,221.5	1,989.3	232.26	9.565	
10,200.0	6,641.1	6,620.1	6,620.1	103.2	130.8	-89.41	66.0	-1,254.7	2,283.3	2,049.3	233.99	9.758	
10,236.2	6,641.1	6,620.1	6,620.1	104.2	130.8	-89.40	66.0	-1,254.7	2,319.2	2,084.2	234.99	9.869	
10,300.0	6,641.0	6,620.0	6,620.0	106.0	130.8	-89.38	66.0	-1,254.7	2,382.6	2,145.8	236.76	10.063	
10,334.6	6,640.9	6,619.9	6,619.9	107.0	130.8	-89.37	66.0	-1,254.7	2,417.0	2,179.3	237.72	10.167	
10,400.0	6,640.9	6,619.9	6,619.9	108.8	130.8	-89.35	66.0	-1,254.7	2,482.0	2,242.4	239.54	10.361	
10,433.0	6,640.8	6,619.8	6,619.8	109.7	130.8	-89.34	66.0	-1,254.7	2,514.8	2,274.3	240.46	10.458	
10,500.0	6,640.7	6,619.7	6,619.7	111.6	130.8	-89.33	66.0	-1,254.7	2,581.4	2,339.0	242.32	10.653	
10,531.5	6,640.7	6,619.7	6,619.7	112.4	130.8	-89.32	66.0	-1,254.7	2,612.7	2,369.5	243.19	10.743	
10,600.0	6,640.6	6,619.6	6,619.6	114.3	130.8	-89.30	66.0	-1,254.7	2,680.8	2,435.7	245.10	10.938	
10,629.9	6,640.6	6,619.6	6,619.6	115.2	130.8	-89.29	66.0	-1,254.7	2,710.6	2,464.6	245.93	11.022	
10,700.0	6,640.5	6,619.5	6,619.5	117.1	130.8	-89.27	66.0	-1,254.7	2,780.3	2,532.4	247.88	11.216	
10,728.3	6,640.4	6,619.4	6,619.4	117.9	130.8	-89.27	66.0	-1,254.7	2,808.5	2,559.8	248.67	11.294	
10,800.0	6,640.4	6,619.4	6,619.4	119.9	130.8	-89.25	66.0	-1,254.7	2,879.8	2,629.2	250.66	11.489	
10,826.7	6,640.3	6,619.3	6,619.3	120.7	130.8	-89.24	66.0	-1,254.7	2,906.5	2,655.1	251.41	11.561	
10,900.0	6,640.2	6,619.2	6,619.2	122.7	130.8	-89.22	66.0	-1,254.7	2,979.4	2,726.0	253.44	11.756	
10,925.2	6,640.2	6,619.2	6,619.2	123.4	130.8	-89.22	66.0	-1,254.7	3,004.5	2,750.3	254.14	11.822	
11,000.0	6,640.1	6,619.1	6,619.1	125.5	130.8	-89.20	66.0	-1,254.7	3,079.0	2,822.8	256.23	12.017	
11,023.6	6,640.1	6,619.1	6,619.1	126.1	130.8	-89.19	66.0	-1,254.7	3,102.5	2,845.6	256.88	12.077	
11,100.0	6,640.0	6,619.0	6,619.0	128.3	130.8	-89.17	66.0	-1,254.7	3,178.6	2,919.6	259.01	12.272	
11,122.0	6,639.9	6,618.9	6,618.9	128.9	130.8	-89.16	66.0	-1,254.7	3,200.5	2,940.9	259.63	12.328	
11,200.0	6,639.8	6,618.8	6,618.8	131.1	130.8	-89.14	66.0	-1,254.7	3,278.2	3,016.4	261.80	12.522	
11,220.4	6,639.8	6,618.8	6,618.8	131.6	130.8	-89.14	66.0	-1,254.7	3,298.6	3,036.3	262.37	12.572	
11,300.0	6,639.7	6,618.7	6,618.7	133.9	130.8	-89.12	66.0	-1,254.7	3,377.9	3,113.3	264.58	12.767	
11,318.9	6,639.7	6,618.7	6,618.7	134.4	130.8	-89.11	66.0	-1,254.7	3,396.7	3,131.6	265.11	12.812	
11,400.0	6,639.6	6,618.6	6,618.6	136.7	130.8	-89.09	66.0	-1,254.7	3,477.6	3,210.2	267.37	13.007	
11,417.3	6,639.6	6,618.6	6,618.6	137.1	130.8	-89.09	66.0	-1,254.7	3,494.8	3,227.0	267.85	13.047	
11,500.0	6,639.5	6,618.5	6,618.5	139.4	130.8	-89.06	66.0	-1,254.7	3,577.3	3,307.1	270.16	13.241	
11,515.7	6,639.5	6,618.5	6,618.5	139.9	130.8	-89.06	66.0	-1,254.7	3,593.0	3,322.4	270.60	13.278	
11,600.0	6,639.3	6,618.3	6,618.3	142.2	130.8	-89.04	66.0	-1,254.7	3,677.0	3,404.0	272.95	13.471	
11,614.1	6,639.3	6,618.3	6,618.3	142.6	130.8	-89.03	66.0	-1,254.7	3,691.1	3,417.8	273.34	13.504	
11,700.0	6,639.2	6,618.2	6,618.2	145.0	130.8	-89.01	66.0	-1,254.7	3,776.7	3,501.0	275.74	13.697	
11,712.6	6,639.2	6,618.2	6,618.2	145.4	130.8	-89.01	66.0	-1,254.7	3,789.3	3,513.2	276.09	13.725	
11,800.0	6,639.1	6,618.1	6,618.1	147.8	130.8	-88.99	66.0	-1,254.7	3,876.5	3,597.9	278.53	13.918	
11,811.0	6,639.1	6,618.1	6,618.1	148.1	130.8	-88.98	66.0	-1,254.7	3,887.4	3,608.6	278.83	13.942	
11,900.0	6,639.0	6,618.0	6,618.0	150.6	130.8	-88.96	66.0	-1,254.7	3,976.2	3,694.9	281.32	14.134	
11,909.4	6,639.0	6,618.0	6,618.0	150.9	130.8	-88.96	66.0	-1,254.7	3,985.6	3,704.0	281.58	14.155	
12,000.0	6,638.8	6,617.8	6,617.8	153.4	130.8	-88.93	66.0	-1,254.7	4,076.0	3,791.9	284.11	14.347	
12,007.8	6,638.8	6,617.8	6,617.8	153.6	130.8	-88.93	66.0	-1,254.7	4,083.8	3,799.5	284.33	14.363	
12,100.0	6,638.7	6,617.7	6,617.7	156.2	130.8	-88.91	66.0	-1,254.7	4,175.8	3,888.9	286.90	14.555	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,617.7	6,617.7	156.4	130.8	-88.91	66.0	-1,254.7	4,182.0	3,895.0	287.07	14.568		
12,200.0	6,638.6	6,617.6	6,617.6	159.0	130.8	-88.88	66.0	-1,254.7	4,275.6	3,985.9	289.69	14.759		
12,204.7	6,638.6	6,617.6	6,617.6	159.1	130.8	-88.88	66.0	-1,254.7	4,280.2	3,990.4	289.82	14.769		
12,300.0	6,638.5	6,617.5	6,617.5	161.8	130.8	-88.85	66.0	-1,254.7	4,375.4	4,082.9	292.48	14.959		
12,303.1	6,638.5	6,617.5	6,617.5	161.9	130.8	-88.85	66.0	-1,254.7	4,378.5	4,085.9	292.57	14.966		
12,400.0	6,638.3	6,617.3	6,617.3	164.6	130.8	-88.83	66.0	-1,254.7	4,475.2	4,179.9	295.27	15.156		
12,401.5	6,638.3	6,617.3	6,617.3	164.6	130.8	-88.83	66.0	-1,254.7	4,476.7	4,181.4	295.32	15.159		
12,500.0	6,638.2	6,617.2	6,617.2	167.4	130.8	-88.80	66.0	-1,254.7	4,575.0	4,276.9	298.06	15.349		
12,598.4	6,638.1	6,617.1	6,617.1	170.2	130.8	-88.78	66.0	-1,254.7	4,673.2	4,372.4	300.81	15.535		
12,600.0	6,638.1	6,617.1	6,617.1	170.2	130.8	-88.78	66.0	-1,254.7	4,674.8	4,373.9	300.86	15.538		
12,696.8	6,638.0	6,617.0	6,617.0	172.9	130.8	-88.75	66.0	-1,254.7	4,771.5	4,467.9	303.56	15.718		
12,700.0	6,638.0	6,617.0	6,617.0	173.0	130.8	-88.75	66.0	-1,254.7	4,774.6	4,471.0	303.65	15.724		
12,795.2	6,637.8	6,616.8	6,616.8	175.7	130.8	-88.72	66.0	-1,254.7	4,869.7	4,563.4	306.31	15.898		
12,800.0	6,637.8	6,616.8	6,616.8	175.8	130.8	-88.72	66.0	-1,254.7	4,874.5	4,568.0	306.44	15.907		
12,893.7	6,637.7	6,616.7	6,616.7	178.4	130.8	-88.70	66.0	-1,254.7	4,968.0	4,658.9	309.06	16.075		
12,900.0	6,637.7	6,616.7	6,616.7	178.6	130.8	-88.70	66.0	-1,254.7	4,974.3	4,665.1	309.24	16.086		
12,992.1	6,637.6	6,616.6	6,616.6	181.2	130.8	-88.67	66.0	-1,254.7	5,066.3	4,754.5	311.81	16.248		
13,000.0	6,637.6	6,616.6	6,616.6	181.4	130.8	-88.67	66.0	-1,254.7	5,074.2	4,762.1	312.03	16.262		
13,090.5	6,637.5	6,616.5	6,616.5	183.9	130.8	-88.65	66.0	-1,254.7	5,164.6	4,850.0	314.56	16.418		
13,100.0	6,637.5	6,616.5	6,616.5	184.2	130.8	-88.65	66.0	-1,254.7	5,174.0	4,859.2	314.82	16.435		
13,188.9	6,637.4	6,616.4	6,616.4	186.7	130.8	-88.62	66.0	-1,254.7	5,262.8	4,945.5	317.31	16.586		
13,200.0	6,637.3	6,616.3	6,616.3	187.0	130.8	-88.62	66.0	-1,254.7	5,273.9	4,956.3	317.62	16.604		
13,287.4	6,637.2	6,616.2	6,616.2	189.4	130.8	-88.60	66.0	-1,254.7	5,361.1	5,041.1	320.06	16.750		
13,300.0	6,637.2	6,616.2	6,616.2	189.8	130.8	-88.59	66.0	-1,254.7	5,373.7	5,053.3	320.41	16.771		
13,385.8	6,637.1	6,616.1	6,616.1	192.2	130.8	-88.57	66.0	-1,254.7	5,459.4	5,136.6	322.81	16.912		
13,400.0	6,637.1	6,616.1	6,616.1	192.6	130.8	-88.57	66.0	-1,254.7	5,473.6	5,150.4	323.21	16.935		
13,484.2	6,637.0	6,616.0	6,616.0	195.0	130.7	-88.54	66.0	-1,254.7	5,557.7	5,232.2	325.56	17.071		
13,500.0	6,637.0	6,616.0	6,616.0	195.4	130.7	-88.54	66.0	-1,254.7	5,573.5	5,247.5	326.00	17.097		
13,582.6	6,636.9	6,615.9	6,615.9	197.7	130.7	-88.52	66.0	-1,254.7	5,656.0	5,327.7	328.31	17.228		
13,600.0	6,636.8	6,615.8	6,615.8	198.2	130.7	-88.51	66.0	-1,254.7	5,673.4	5,344.6	328.80	17.255		
13,681.1	6,636.7	6,615.7	6,615.7	200.5	130.7	-88.49	66.0	-1,254.7	5,754.4	5,423.3	331.06	17.382		
13,700.0	6,636.7	6,615.7	6,615.7	201.0	130.7	-88.49	66.0	-1,254.7	5,773.3	5,441.7	331.59	17.411		
13,779.5	6,636.6	6,615.6	6,615.6	203.2	130.7	-88.47	66.0	-1,254.7	5,852.7	5,518.9	333.81	17.533		
13,800.0	6,636.6	6,615.6	6,615.6	203.8	130.7	-88.46	66.0	-1,254.7	5,873.2	5,538.8	334.38	17.564		
13,877.9	6,636.5	6,615.5	6,615.5	206.0	130.7	-88.44	66.0	-1,254.7	5,951.0	5,614.4	336.56	17.682		
13,900.0	6,636.5	6,615.5	6,615.5	206.6	130.7	-88.44	66.0	-1,254.7	5,973.0	5,635.9	337.18	17.715		
13,976.3	6,636.4	6,615.4	6,615.4	208.8	130.7	-88.42	66.0	-1,254.7	6,049.3	5,710.0	339.31	17.828		
14,000.0	6,636.3	6,615.3	6,615.3	209.4	130.7	-88.41	66.0	-1,254.7	6,072.9	5,733.0	339.97	17.863		
14,074.8	6,636.2	6,615.2	6,615.2	211.5	130.7	-88.39	66.0	-1,254.7	6,147.6	5,805.6	342.06	17.972		
14,100.0	6,636.2	6,615.2	6,615.2	212.2	130.7	-88.38	66.0	-1,254.7	6,172.8	5,830.1	342.77	18.009		
14,173.2	6,636.1	6,615.1	6,615.1	214.3	130.7	-88.36	66.0	-1,254.7	6,246.0	5,901.2	344.82	18.114		
14,200.0	6,636.1	6,615.1	6,615.1	215.0	130.7	-88.36	66.0	-1,254.7	6,272.7	5,927.2	345.56	18.152		
14,271.6	6,636.0	6,615.0	6,615.0	217.0	130.7	-88.34	66.0	-1,254.7	6,344.3	5,996.7	347.57	18.253		
14,300.0	6,636.0	6,615.0	6,615.0	217.8	130.7	-88.33	66.0	-1,254.7	6,372.6	6,024.3	348.36	18.293		
14,370.0	6,635.9	6,614.9	6,614.9	219.8	130.7	-88.31	66.0	-1,254.7	6,442.6	6,092.3	350.32	18.391		
14,400.0	6,635.8	6,614.8	6,614.8	220.6	130.7	-88.30	66.0	-1,254.7	6,472.6	6,121.4	351.15	18.432		
14,468.5	6,635.7	6,614.7	6,614.7	222.6	130.7	-88.29	66.0	-1,254.7	6,541.0	6,187.9	353.07	18.526		
14,500.0	6,635.7	6,614.7	6,614.7	223.4	130.7	-88.28	66.0	-1,254.7	6,572.5	6,218.5	353.95	18.569		
14,566.9	6,635.6	6,614.6	6,614.6	225.3	130.7	-88.26	66.0	-1,254.7	6,639.3	6,283.5	355.82	18.659		
14,600.0	6,635.6	6,614.6	6,614.6	226.2	130.7	-88.25	66.0	-1,254.7	6,672.4	6,315.6	356.74	18.704		
14,665.3	6,635.5	6,614.5	6,614.5	228.1	130.7	-88.23	66.0	-1,254.7	6,737.7	6,379.1	358.57	18.790		
14,700.0	6,635.5	6,614.5	6,614.5	229.0	130.7	-88.23	66.0	-1,254.7	6,772.3	6,412.8	359.54	18.836		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,635.4	6,614.4	6,614.4	230.8	130.7	-88.21	66.0	-1,254.7	6,836.0	6,474.7	361.32	18.919	
14,800.0	6,635.3	6,614.3	6,614.3	231.8	130.7	-88.20	66.0	-1,254.7	6,872.2	6,509.9	362.34	18.966	
14,862.2	6,635.2	6,614.2	6,614.2	233.6	130.7	-88.18	66.0	-1,254.7	6,934.3	6,570.3	364.07	19.047	
14,900.0	6,635.2	6,614.2	6,614.2	234.7	130.7	-88.17	66.0	-1,254.7	6,972.1	6,607.0	365.13	19.095	
14,960.6	6,635.1	6,614.1	6,614.1	236.4	130.7	-88.16	66.0	-1,254.7	7,032.7	6,665.9	366.82	19.172	
14,995.1	6,635.0	6,614.0	6,614.0	237.3	130.7	-88.15	66.0	-1,254.7	7,067.2	6,699.4	367.79	19.215	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-59.99	1,377.6	-2,385.1	2,754.4				
98.4	98.4	103.4	103.4	0.1	0.0	-59.99	1,377.6	-2,385.1	2,754.4	2,754.3	0.13	N/A	
100.0	100.0	105.0	105.0	0.1	0.0	-59.99	1,377.6	-2,385.1	2,754.4	2,754.2	0.15	N/A	
196.8	196.8	201.8	201.8	0.3	1.0	-59.99	1,377.6	-2,385.1	2,754.4	2,753.1	1.30	2,111.954	
200.0	200.0	205.0	205.0	0.3	1.1	-59.99	1,377.6	-2,385.1	2,754.4	2,753.0	1.39	1,988.333	
295.3	295.3	300.3	300.3	0.5	3.3	-59.99	1,377.6	-2,385.1	2,754.4	2,750.5	3.84	717.837	
300.0	300.0	305.0	305.0	0.5	3.4	-59.99	1,377.6	-2,385.1	2,754.4	2,750.4	3.95	698.014	
393.7	393.7	398.7	398.7	0.8	5.3	-59.99	1,377.6	-2,385.1	2,754.4	2,748.3	6.11	451.016	
400.0	400.0	405.0	405.0	0.8	5.5	-59.99	1,377.6	-2,385.1	2,754.4	2,748.1	6.25	440.672	
492.1	492.1	497.1	497.1	1.0	7.4	-59.99	1,377.6	-2,385.1	2,754.4	2,746.0	8.34	330.289	
500.0	500.0	505.0	505.0	1.0	7.5	-59.99	1,377.6	-2,385.1	2,754.4	2,745.9	8.52	323.391	
590.5	590.5	595.5	595.5	1.2	9.4	-59.99	1,377.6	-2,385.1	2,754.4	2,743.8	10.56	260.880	
600.0	600.0	605.0	605.0	1.2	9.5	-59.99	1,377.6	-2,385.1	2,754.4	2,743.6	10.77	255.728	
689.0	689.0	694.0	694.0	1.4	11.3	-59.99	1,377.6	-2,385.1	2,754.4	2,741.6	12.77	215.685	
700.0	700.0	705.0	705.0	1.4	11.6	-59.99	1,377.6	-2,385.1	2,754.4	2,741.4	13.02	211.582	
787.4	787.4	792.4	792.4	1.6	13.3	-59.99	1,377.6	-2,385.1	2,754.4	2,739.4	14.98	183.880	
800.0	800.0	805.0	805.0	1.7	13.6	-59.99	1,377.6	-2,385.1	2,754.4	2,739.1	15.26	180.475	
885.8	885.8	890.8	890.8	1.9	15.3	-59.99	1,377.6	-2,385.1	2,754.4	2,737.2	17.19	160.270	
900.0	900.0	905.0	905.0	1.9	15.6	-59.99	1,377.6	-2,385.1	2,754.4	2,736.9	17.50	157.361	
984.2	984.2	989.2	989.2	2.1	17.3	-59.99	1,377.6	-2,385.1	2,754.4	2,735.0	19.39	142.044	
1,000.0	1,000.0	1,005.0	1,005.0	2.1	17.6	-59.99	1,377.6	-2,385.1	2,754.4	2,734.6	19.74	139.505	
1,082.7	1,082.7	1,087.7	1,087.7	2.3	19.3	-59.99	1,377.6	-2,385.1	2,754.4	2,732.8	21.60	127.545	
1,100.0	1,100.0	1,105.0	1,105.0	2.3	19.6	-59.99	1,377.6	-2,385.1	2,754.4	2,732.4	21.98	125.294	
1,181.1	1,181.1	1,186.1	1,186.1	2.5	21.3	-59.99	1,377.6	-2,385.1	2,754.4	2,730.6	23.80	115.736	
1,200.0	1,200.0	1,205.0	1,205.0	2.6	21.7	-59.99	1,377.6	-2,385.1	2,754.4	2,730.2	24.22	113.714	
1,279.5	1,279.5	1,284.5	1,284.5	2.7	23.3	-59.99	1,377.6	-2,385.1	2,754.4	2,728.4	26.00	105.930	
1,300.0	1,300.0	1,305.0	1,305.0	2.8	23.7	-59.99	1,377.6	-2,385.1	2,754.4	2,727.9	26.46	104.095	
1,377.9	1,377.9	1,382.9	1,382.9	3.0	25.2	-101.20	1,377.6	-2,385.1	2,754.6	2,726.4	28.20	97.677	
1,400.0	1,400.0	1,405.0	1,405.0	3.0	25.7	-101.21	1,377.6	-2,385.1	2,754.7	2,726.0	28.69	96.007	
1,476.4	1,476.3	1,481.3	1,481.3	3.2	27.2	-101.27	1,377.6	-2,385.1	2,755.4	2,725.0	30.39	90.657	
1,500.0	1,499.8	1,504.8	1,504.8	3.2	27.7	-101.30	1,377.6	-2,385.1	2,755.7	2,724.8	30.92	89.127	
1,574.8	1,574.4	1,579.4	1,579.4	3.4	29.2	-101.40	1,377.6	-2,385.1	2,757.0	2,724.4	32.58	84.609	
1,600.0	1,599.5	1,604.5	1,604.5	3.5	29.7	-101.44	1,377.6	-2,385.1	2,757.5	2,724.3	33.15	83.194	
1,673.2	1,672.2	1,677.2	1,677.2	3.6	31.2	-101.58	1,377.6	-2,385.1	2,759.2	2,724.4	34.78	79.339	
1,700.0	1,698.7	1,703.7	1,703.7	3.7	31.7	-101.64	1,377.6	-2,385.1	2,759.9	2,724.6	35.37	78.022	
1,771.6	1,769.5	1,774.5	1,774.5	3.9	33.1	-101.81	1,377.6	-2,385.1	2,762.2	2,725.2	36.98	74.700	
1,800.0	1,797.5	1,802.5	1,802.5	4.0	33.7	-101.89	1,377.6	-2,385.1	2,763.2	2,725.5	37.61	73.469	
1,870.1	1,866.3	1,871.3	1,871.3	4.2	35.1	-102.09	1,377.6	-2,385.1	2,765.9	2,726.7	39.19	70.581	
1,899.9	1,895.6	1,900.6	1,900.6	4.3	35.7	-102.19	1,377.6	-2,385.1	2,767.2	2,727.3	39.86	69.426	
1,968.5	1,962.6	1,967.6	1,967.6	4.5	37.0	-102.47	1,377.6	-2,385.1	2,770.3	2,728.9	41.42	66.882	
2,000.0	1,993.4	1,998.4	1,998.4	4.6	37.6	-102.60	1,377.6	-2,385.1	2,771.8	2,729.6	42.14	65.774	
2,066.9	2,058.9	2,063.9	2,063.9	4.8	38.9	-102.87	1,377.6	-2,385.1	2,774.9	2,731.2	43.68	63.531	
2,100.0	2,091.3	2,096.3	2,096.3	4.9	39.6	-103.01	1,377.6	-2,385.1	2,776.5	2,732.0	44.44	62.478	
2,165.3	2,155.2	2,160.2	2,160.2	5.2	40.9	-103.28	1,377.6	-2,385.1	2,779.6	2,733.7	45.95	60.492	
2,200.0	2,189.1	2,194.1	2,194.1	5.3	41.6	-103.42	1,377.6	-2,385.1	2,781.3	2,734.6	46.75	59.491	
2,263.8	2,251.5	2,256.5	2,256.5	5.5	42.8	-103.68	1,377.6	-2,385.1	2,784.5	2,736.3	48.23	57.728	
2,300.0	2,286.9	2,291.9	2,291.9	5.7	43.5	-103.83	1,377.6	-2,385.1	2,786.3	2,737.2	49.08	56.775	
2,362.2	2,347.7	2,352.7	2,352.7	5.9	44.7	-104.08	1,377.6	-2,385.1	2,789.5	2,739.0	50.53	55.207	
2,400.0	2,384.7	2,389.7	2,389.7	6.0	45.5	-104.23	1,377.6	-2,385.1	2,791.5	2,740.1	51.41	54.298	
2,460.6	2,444.0	2,449.0	2,449.0	6.3	46.7	-104.48	1,377.6	-2,385.1	2,794.7	2,741.8	52.83	52.900	
2,500.0	2,482.5	2,487.5	2,487.5	6.4	47.5	-104.64	1,377.6	-2,385.1	2,796.8	2,743.0	53.75	52.032	
2,559.0	2,540.3	2,545.3	2,545.3	6.7	48.6	-104.87	1,377.6	-2,385.1	2,799.9	2,744.8	55.14	50.782	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,585.3	2,585.3	6.8	49.4	-105.04	1,377.6	-2,385.1	2,802.2	2,746.1	56.10	49.953	
2,657.5	2,636.5	2,641.5	2,641.5	7.1	50.6	-105.27	1,377.6	-2,385.1	2,805.4	2,747.9	57.45	48.834	
2,700.0	2,678.1	2,683.1	2,683.1	7.2	51.4	-105.44	1,377.6	-2,385.1	2,807.8	2,749.3	58.45	48.039	
2,755.9	2,732.8	2,737.8	2,737.8	7.5	52.5	-105.66	1,377.6	-2,385.1	2,810.9	2,751.2	59.76	47.035	
2,800.0	2,776.0	2,781.0	2,781.0	7.7	53.4	-105.84	1,377.6	-2,385.1	2,813.5	2,752.7	60.80	46.274	
2,854.3	2,829.1	2,834.1	2,834.1	7.9	54.4	-106.06	1,377.6	-2,385.1	2,816.7	2,754.6	62.08	45.371	
2,900.0	2,873.8	2,878.8	2,878.8	8.1	55.3	-106.24	1,377.6	-2,385.1	2,819.3	2,756.2	63.16	44.640	
2,952.7	2,925.4	2,930.4	2,930.4	8.3	56.4	-106.45	1,377.6	-2,385.1	2,822.5	2,758.1	64.40	43.827	
3,000.0	2,971.6	2,976.6	2,976.6	8.5	57.3	-106.63	1,377.6	-2,385.1	2,825.4	2,759.8	65.52	43.125	
3,051.2	3,021.6	3,026.6	3,026.6	8.7	58.3	-106.84	1,377.6	-2,385.1	2,828.5	2,761.8	66.72	42.391	
3,100.0	3,069.4	3,074.4	3,074.4	8.9	59.3	-107.03	1,377.6	-2,385.1	2,831.5	2,763.6	67.88	41.716	
3,149.6	3,117.9	3,122.9	3,122.9	9.1	60.2	-107.22	1,377.6	-2,385.1	2,834.6	2,765.5	69.05	41.053	
3,200.0	3,167.2	3,172.2	3,172.2	9.3	61.2	-107.42	1,377.6	-2,385.1	2,837.8	2,767.5	70.24	40.403	
3,248.0	3,214.2	3,219.2	3,219.2	9.5	62.2	-107.61	1,377.6	-2,385.1	2,840.8	2,769.5	71.37	39.804	
3,300.0	3,265.0	3,270.0	3,270.0	9.8	63.2	-107.81	1,377.6	-2,385.1	2,844.2	2,771.6	72.60	39.178	
3,346.4	3,310.5	3,315.5	3,315.5	10.0	64.1	-108.00	1,377.6	-2,385.1	2,847.2	2,773.5	73.69	38.636	
3,400.0	3,362.9	3,367.9	3,367.9	10.2	65.2	-108.20	1,377.6	-2,385.1	2,850.8	2,775.8	74.96	38.031	
3,444.9	3,406.7	3,411.7	3,411.7	10.4	66.0	-108.38	1,377.6	-2,385.1	2,853.7	2,777.7	76.02	37.540	
3,473.0	3,434.2	3,439.2	3,439.2	10.5	66.6	-108.49	1,377.6	-2,385.1	2,855.6	2,778.9	76.68	37.240	
3,500.0	3,460.7	3,465.7	3,465.7	10.6	67.1	-108.62	1,377.6	-2,385.1	2,857.4	2,780.1	77.32	36.955	
3,543.3	3,503.2	3,508.2	3,508.2	10.7	68.0	-108.83	1,377.6	-2,385.1	2,860.1	2,781.8	78.32	36.518	
3,600.0	3,559.0	3,564.0	3,564.0	10.9	69.1	-109.08	1,377.6	-2,385.1	2,863.4	2,783.7	79.63	35.957	
3,641.7	3,600.2	3,605.2	3,605.2	11.0	69.9	-109.24	1,377.6	-2,385.1	2,865.5	2,784.9	80.59	35.558	
3,700.0	3,657.9	3,662.9	3,662.9	11.2	71.1	-109.44	1,377.6	-2,385.1	2,868.3	2,786.3	81.93	35.011	
3,740.1	3,697.8	3,702.8	3,702.8	11.3	71.9	-109.57	1,377.6	-2,385.1	2,869.9	2,787.1	82.83	34.646	
3,800.0	3,757.3	3,762.3	3,762.3	11.4	73.1	-109.73	1,377.6	-2,385.1	2,872.0	2,787.9	84.19	34.113	
3,838.6	3,795.7	3,800.7	3,800.7	11.5	73.9	-109.81	1,377.6	-2,385.1	2,873.2	2,788.2	85.05	33.781	
3,900.0	3,857.0	3,862.0	3,862.0	11.7	75.1	-109.92	1,377.6	-2,385.1	2,874.7	2,788.3	86.43	33.262	
3,937.0	3,893.9	3,898.9	3,898.9	11.7	75.8	-109.97	1,377.6	-2,385.1	2,875.4	2,788.1	87.24	32.960	
4,000.0	3,956.9	3,961.9	3,961.9	11.8	77.1	-110.03	1,377.6	-2,385.1	2,876.2	2,787.5	88.62	32.454	
4,035.4	3,992.3	3,997.3	3,997.3	11.9	77.8	-110.05	1,377.6	-2,385.1	2,876.4	2,787.0	89.39	32.178	
4,072.9	4,029.8	4,034.8	4,034.8	11.9	78.6	-68.86	1,377.6	-2,385.1	2,876.5	2,788.4	88.13	32.640	
4,100.0	4,056.9	4,061.9	4,061.9	12.0	79.1	-68.86	1,377.6	-2,385.1	2,876.5	2,787.8	88.72	32.422	
4,133.8	4,090.7	4,095.7	4,095.7	12.0	79.8	-68.86	1,377.6	-2,385.1	2,876.5	2,787.0	89.47	32.151	
4,200.0	4,156.9	4,161.9	4,161.9	12.1	81.1	-68.86	1,377.6	-2,385.1	2,876.5	2,785.5	90.93	31.634	
4,232.3	4,189.2	4,194.2	4,194.2	12.2	81.8	-68.86	1,377.6	-2,385.1	2,876.5	2,784.8	91.65	31.387	
4,300.0	4,256.9	4,261.9	4,261.9	12.3	83.1	-68.86	1,377.6	-2,385.1	2,876.5	2,783.3	93.14	30.882	
4,330.7	4,287.6	4,292.6	4,292.6	12.4	83.8	-68.86	1,377.6	-2,385.1	2,876.5	2,782.7	93.82	30.659	
4,400.0	4,356.9	4,361.9	4,361.9	12.5	85.2	-68.86	1,377.6	-2,385.1	2,876.5	2,781.1	95.36	30.166	
4,429.1	4,386.0	4,391.0	4,391.0	12.5	85.7	-68.86	1,377.6	-2,385.1	2,876.5	2,780.5	96.00	29.963	
4,500.0	4,456.9	4,461.9	4,461.9	12.6	87.2	-68.86	1,377.6	-2,385.1	2,876.5	2,778.9	97.57	29.481	
4,527.5	4,484.4	4,489.4	4,489.4	12.7	87.7	-68.86	1,377.6	-2,385.1	2,876.5	2,778.3	98.18	29.298	
4,600.0	4,556.9	4,561.9	4,561.9	12.8	89.2	-68.86	1,377.6	-2,385.1	2,876.5	2,776.7	99.78	28.827	
4,626.0	4,582.9	4,587.9	4,587.9	12.9	89.7	-68.86	1,377.6	-2,385.1	2,876.5	2,776.1	100.36	28.661	
4,700.0	4,656.9	4,661.9	4,661.9	13.0	91.2	-68.86	1,377.6	-2,385.1	2,876.5	2,774.5	102.00	28.201	
4,724.4	4,681.3	4,686.3	4,686.3	13.0	91.7	-68.86	1,377.6	-2,385.1	2,876.5	2,773.9	102.54	28.052	
4,800.0	4,756.9	4,761.9	4,761.9	13.1	93.2	-68.86	1,377.6	-2,385.1	2,876.5	2,772.3	104.22	27.601	
4,822.8	4,779.7	4,784.7	4,784.7	13.2	93.7	-68.86	1,377.6	-2,385.1	2,876.5	2,771.8	104.72	27.468	
4,900.0	4,856.9	4,861.9	4,861.9	13.3	95.2	-68.86	1,377.6	-2,385.1	2,876.5	2,770.0	106.43	27.026	
4,921.2	4,878.1	4,883.1	4,883.1	13.4	95.6	-68.86	1,377.6	-2,385.1	2,876.5	2,769.6	106.91	26.907	
5,000.0	4,956.9	4,961.9	4,961.9	13.5	97.2	-68.86	1,377.6	-2,385.1	2,876.5	2,767.8	108.65	26.474	
5,019.7	4,976.6	4,981.6	4,981.6	13.5	97.6	-68.86	1,377.6	-2,385.1	2,876.5	2,767.4	109.09	26.368	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,061.9	5,061.9	13.7	99.2	-68.86	1,377.6	-2,385.1	2,876.5	2,765.6	110.87	25.945	
5,118.1	5,075.0	5,080.0	5,080.0	13.7	99.6	-68.86	1,377.6	-2,385.1	2,876.5	2,765.2	111.27	25.851	
5,200.0	5,156.9	5,161.9	5,161.9	13.8	101.2	-68.86	1,377.6	-2,385.1	2,876.5	2,763.4	113.09	25.435	
5,216.5	5,173.4	5,178.4	5,178.4	13.9	101.6	-68.86	1,377.6	-2,385.1	2,876.5	2,763.0	113.46	25.353	
5,300.0	5,256.9	5,261.9	5,261.9	14.0	103.3	-68.86	1,377.6	-2,385.1	2,876.5	2,761.2	115.31	24.946	
5,314.9	5,271.8	5,276.8	5,276.8	14.1	103.6	-68.86	1,377.6	-2,385.1	2,876.5	2,760.8	115.64	24.874	
5,400.0	5,356.9	5,361.9	5,361.9	14.2	105.3	-68.86	1,377.6	-2,385.1	2,876.5	2,758.9	117.53	24.475	
5,413.4	5,370.3	5,375.3	5,375.3	14.2	105.5	-68.86	1,377.6	-2,385.1	2,876.5	2,758.7	117.83	24.413	
5,500.0	5,456.9	5,461.9	5,461.9	14.4	107.3	-68.86	1,377.6	-2,385.1	2,876.5	2,756.7	119.75	24.021	
5,511.8	5,468.7	5,473.7	5,473.7	14.4	107.5	-68.86	1,377.6	-2,385.1	2,876.5	2,756.5	120.01	23.968	
5,600.0	5,556.9	5,561.9	5,561.9	14.6	109.3	-68.86	1,377.6	-2,385.1	2,876.5	2,754.5	121.97	23.583	
5,610.2	5,567.1	5,572.1	5,572.1	14.6	109.5	-68.86	1,377.6	-2,385.1	2,876.5	2,754.3	122.20	23.539	
5,700.0	5,656.9	5,661.9	5,661.9	14.7	111.3	-68.86	1,377.6	-2,385.1	2,876.5	2,752.3	124.19	23.161	
5,708.6	5,665.5	5,670.5	5,670.5	14.8	111.5	-68.86	1,377.6	-2,385.1	2,876.5	2,752.1	124.39	23.126	
5,800.0	5,756.9	5,761.9	5,761.9	14.9	113.3	-68.86	1,377.6	-2,385.1	2,876.5	2,750.1	126.42	22.754	
5,807.1	5,764.0	5,769.0	5,769.0	14.9	113.5	-68.86	1,377.6	-2,385.1	2,876.5	2,749.9	126.57	22.726	
5,900.0	5,856.9	5,861.9	5,861.9	15.1	115.3	-68.86	1,377.6	-2,385.1	2,876.5	2,747.8	128.64	22.361	
5,905.5	5,862.4	5,867.4	5,867.4	15.1	115.4	-68.86	1,377.6	-2,385.1	2,876.5	2,747.7	128.76	22.340	
5,971.9	5,928.8	5,933.8	5,933.8	15.3	116.8	-68.86	1,377.6	-2,385.1	2,876.5	2,746.2	130.24	22.086	
6,000.0	5,956.9	5,961.9	5,961.9	15.3	117.3	21.16	1,377.6	-2,385.1	2,876.0	2,743.7	132.26	21.744	
6,003.9	5,960.8	5,965.8	5,965.8	15.3	117.4	21.16	1,377.6	-2,385.1	2,875.8	2,743.5	132.32	21.734	
6,050.0	6,006.7	6,011.7	6,011.7	15.4	118.3	21.28	1,377.6	-2,385.1	2,872.5	2,739.8	132.74	21.640	
6,100.0	6,056.2	6,061.2	6,061.2	15.4	119.3	21.53	1,377.6	-2,385.1	2,865.8	2,733.2	132.65	21.604	
6,102.3	6,058.5	6,063.5	6,063.5	15.4	119.4	21.55	1,377.6	-2,385.1	2,865.4	2,732.8	132.63	21.604	
6,150.0	6,105.1	6,110.1	6,110.1	15.4	120.3	21.91	1,377.6	-2,385.1	2,855.9	2,723.9	132.00	21.637	
6,200.0	6,153.0	6,158.0	6,158.0	15.5	121.3	22.42	1,377.6	-2,385.1	2,842.9	2,712.1	130.79	21.736	
6,200.8	6,153.8	6,158.8	6,158.8	15.5	121.3	22.43	1,377.6	-2,385.1	2,842.7	2,711.9	130.77	21.738	
6,250.0	6,199.9	6,204.9	6,204.9	15.5	122.2	23.08	1,377.6	-2,385.1	2,826.8	2,697.7	129.08	21.900	
6,299.2	6,244.8	6,249.8	6,249.8	15.5	123.1	23.89	1,377.6	-2,385.1	2,808.1	2,681.1	126.94	22.122	
6,300.0	6,245.5	6,250.5	6,250.5	15.5	123.1	23.91	1,377.6	-2,385.1	2,807.7	2,680.8	126.90	22.126	
6,350.0	6,289.6	6,294.6	6,294.6	15.5	124.0	24.91	1,377.6	-2,385.1	2,785.8	2,661.4	124.33	22.405	
6,397.6	6,329.9	6,334.9	6,334.9	15.4	124.8	26.06	1,377.6	-2,385.1	2,762.3	2,640.6	121.64	22.709	
6,400.0	6,331.8	6,336.8	6,336.8	15.4	124.9	26.12	1,377.6	-2,385.1	2,761.0	2,639.5	121.50	22.725	
6,450.0	6,372.2	6,377.2	6,377.2	15.4	125.7	27.57	1,377.6	-2,385.1	2,733.7	2,615.1	118.54	23.061	
6,496.0	6,407.4	6,412.4	6,412.4	15.4	126.4	29.15	1,377.6	-2,385.1	2,706.2	2,590.4	115.88	23.354	
6,500.0	6,410.3	6,415.3	6,415.3	15.4	126.5	29.30	1,377.6	-2,385.1	2,703.8	2,588.1	115.66	23.377	
6,550.0	6,446.1	6,451.1	6,451.1	15.4	127.2	31.35	1,377.6	-2,385.1	2,671.6	2,558.5	113.13	23.614	
6,594.5	6,475.9	6,480.9	6,480.9	15.4	127.8	33.49	1,377.6	-2,385.1	2,641.2	2,529.7	111.45	23.699	
6,600.0	6,479.4	6,484.4	6,484.4	15.4	127.8	33.78	1,377.6	-2,385.1	2,637.3	2,526.0	111.29	23.698	
6,650.0	6,510.0	6,515.0	6,515.0	15.5	128.5	36.66	1,377.6	-2,385.1	2,601.0	2,490.5	110.51	23.536	
6,692.9	6,534.0	6,539.0	6,539.0	15.7	128.9	39.55	1,377.6	-2,385.1	2,568.4	2,457.4	111.00	23.139	
6,700.0	6,537.8	6,542.8	6,542.8	15.7	129.0	40.06	1,377.6	-2,385.1	2,562.9	2,451.7	111.20	23.048	
6,750.0	6,562.6	6,567.6	6,567.6	16.2	129.5	44.08	1,377.6	-2,385.1	2,523.3	2,409.6	113.68	22.196	
6,791.3	6,580.8	6,585.8	6,585.8	16.6	129.9	47.92	1,377.6	-2,385.1	2,489.5	2,372.3	117.22	21.239	
6,800.0	6,584.3	6,589.3	6,589.3	16.7	130.0	48.79	1,377.6	-2,385.1	2,482.3	2,364.2	118.11	21.018	
6,850.0	6,602.9	6,607.9	6,607.9	17.3	130.3	54.26	1,377.6	-2,385.1	2,440.2	2,315.9	124.30	19.632	
6,889.7	6,615.2	6,620.2	6,620.2	17.9	130.6	59.16	1,377.6	-2,385.1	2,406.1	2,276.0	130.12	18.492	
6,900.0	6,618.1	6,623.1	6,623.1	18.0	130.6	60.50	1,377.6	-2,385.1	2,397.2	2,265.5	131.68	18.205	
6,950.0	6,630.0	6,635.0	6,635.0	18.8	130.9	67.47	1,377.6	-2,385.1	2,353.5	2,214.2	139.31	16.895	
6,988.2	6,636.8	6,641.8	6,641.8	19.5	131.0	73.16	1,377.6	-2,385.1	2,319.9	2,175.3	144.56	16.048	
7,000.0	6,638.5	6,643.5	6,643.5	19.7	131.0	74.98	1,377.6	-2,385.1	2,309.4	2,163.4	145.98	15.820	
7,050.0	6,643.5	6,648.5	6,648.5	20.6	131.1	82.76	1,377.6	-2,385.1	2,265.1	2,114.5	150.64	15.036	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,649.9	6,649.9	21.3	131.2	88.43	1,377.6	-2,385.1	2,232.7	2,080.3	152.39	14.651	
7,097.8	6,645.0	6,650.0	6,650.0	21.5	131.2	90.14	1,377.6	-2,385.1	2,222.7	2,070.1	152.63	14.563	
7,100.0	6,645.0	6,650.0	6,650.0	21.6	131.2	90.14	1,377.6	-2,385.1	2,220.8	2,068.1	152.67	14.546	
7,185.0	6,644.9	6,649.9	6,649.9	23.3	131.2	90.13	1,377.6	-2,385.1	2,146.0	1,991.6	154.40	13.899	
7,200.0	6,644.9	6,649.9	6,649.9	23.6	131.2	90.13	1,377.6	-2,385.1	2,132.9	1,978.2	154.70	13.787	
7,283.4	6,644.8	6,649.8	6,649.8	25.4	131.2	90.12	1,377.6	-2,385.1	2,060.4	1,903.9	156.52	13.164	
7,300.0	6,644.7	6,649.7	6,649.7	25.8	131.2	90.12	1,377.6	-2,385.1	2,046.1	1,889.2	156.88	13.043	
7,381.9	6,644.6	6,649.6	6,649.6	27.7	131.2	90.12	1,377.6	-2,385.1	1,975.9	1,817.2	158.75	12.447	
7,400.0	6,644.6	6,649.6	6,649.6	28.1	131.2	90.12	1,377.6	-2,385.1	1,960.5	1,801.4	159.16	12.318	
7,480.3	6,644.5	6,649.5	6,649.5	30.0	131.2	90.11	1,377.6	-2,385.1	1,892.9	1,731.8	161.07	11.752	
7,500.0	6,644.5	6,649.5	6,649.5	30.5	131.2	90.11	1,377.6	-2,385.1	1,876.4	1,714.9	161.54	11.616	
7,578.7	6,644.4	6,649.4	6,649.4	32.4	131.2	90.10	1,377.6	-2,385.1	1,811.4	1,647.9	163.46	11.081	
7,600.0	6,644.4	6,649.4	6,649.4	32.9	131.2	90.10	1,377.6	-2,385.1	1,794.0	1,630.0	163.98	10.940	
7,677.1	6,644.3	6,649.3	6,649.3	34.8	131.2	90.10	1,377.6	-2,385.1	1,731.6	1,565.7	165.91	10.437	
7,700.0	6,644.2	6,649.2	6,649.2	35.4	131.2	90.09	1,377.6	-2,385.1	1,713.3	1,546.9	166.48	10.291	
7,775.6	6,644.1	6,649.1	6,649.1	37.3	131.2	90.09	1,377.6	-2,385.1	1,653.8	1,485.4	168.40	9.821	
7,800.0	6,644.1	6,649.1	6,649.1	38.0	131.2	90.09	1,377.6	-2,385.1	1,634.9	1,465.8	169.03	9.672	
7,874.0	6,644.0	6,649.0	6,649.0	39.9	131.2	90.08	1,377.6	-2,385.1	1,578.4	1,407.4	170.93	9.234	
7,900.0	6,644.0	6,649.0	6,649.0	40.5	131.2	90.08	1,377.6	-2,385.1	1,558.9	1,387.3	171.60	9.084	
7,972.4	6,643.9	6,648.9	6,648.9	42.4	131.1	90.08	1,377.6	-2,385.1	1,505.6	1,332.1	173.49	8.678	
8,000.0	6,643.9	6,648.9	6,648.9	43.1	131.1	90.07	1,377.6	-2,385.1	1,485.7	1,311.5	174.21	8.528	
8,070.8	6,643.8	6,648.8	6,648.8	45.0	131.1	90.07	1,377.6	-2,385.1	1,435.8	1,259.8	176.07	8.155	
8,100.0	6,643.7	6,648.7	6,648.7	45.8	131.1	90.07	1,377.6	-2,385.1	1,415.8	1,239.0	176.84	8.006	
8,169.3	6,643.7	6,648.7	6,648.7	47.6	131.1	90.06	1,377.6	-2,385.1	1,369.6	1,191.0	178.68	7.665	
8,200.0	6,643.6	6,648.6	6,648.6	48.4	131.1	90.06	1,377.6	-2,385.1	1,349.8	1,170.3	179.49	7.520	
8,267.7	6,643.5	6,648.5	6,648.5	50.2	131.1	90.06	1,377.6	-2,385.1	1,307.5	1,126.2	181.30	7.212	
8,300.0	6,643.5	6,648.5	6,648.5	51.1	131.1	90.05	1,377.6	-2,385.1	1,288.1	1,105.9	182.16	7.071	
8,366.1	6,643.4	6,648.4	6,648.4	52.9	131.1	90.05	1,377.6	-2,385.1	1,250.0	1,066.1	183.93	6.796	
8,400.0	6,643.4	6,648.4	6,648.4	53.8	131.1	90.05	1,377.6	-2,385.1	1,231.4	1,046.6	184.84	6.662	
8,464.5	6,643.3	6,648.3	6,648.3	55.5	131.1	90.04	1,377.6	-2,385.1	1,197.9	1,011.3	186.58	6.420	
8,500.0	6,643.2	6,648.2	6,648.2	56.5	131.1	90.04	1,377.6	-2,385.1	1,180.5	993.0	187.53	6.295	
8,563.0	6,643.2	6,648.2	6,648.2	58.2	131.1	90.03	1,377.6	-2,385.1	1,151.8	962.6	189.24	6.087	
8,600.0	6,643.1	6,648.1	6,648.1	59.2	131.1	90.03	1,377.6	-2,385.1	1,136.2	946.0	190.24	5.973	
8,661.4	6,643.0	6,648.0	6,648.0	60.8	131.1	90.03	1,377.6	-2,385.1	1,112.6	920.7	191.90	5.797	
8,700.0	6,643.0	6,648.0	6,648.0	61.9	131.1	90.03	1,377.6	-2,385.1	1,099.2	906.2	192.95	5.697	
8,759.8	6,642.9	6,647.9	6,647.9	63.5	131.1	90.02	1,377.6	-2,385.1	1,080.9	886.3	194.58	5.555	
8,800.0	6,642.9	6,647.9	6,647.9	64.6	131.1	90.02	1,377.6	-2,385.1	1,070.3	874.6	195.67	5.470	
8,858.2	6,642.8	6,647.8	6,647.8	66.2	131.1	90.01	1,377.6	-2,385.1	1,057.4	860.2	197.26	5.360	
8,900.0	6,642.7	6,647.7	6,647.7	67.3	131.1	90.01	1,377.6	-2,385.1	1,050.1	851.7	198.40	5.293	
8,956.7	6,642.7	6,647.7	6,647.7	68.9	131.1	90.01	1,377.6	-2,385.1	1,042.8	842.8	199.95	5.215	
9,000.0	6,642.6	6,647.6	6,647.6	70.1	131.1	90.00	1,377.6	-2,385.1	1,039.2	838.1	201.14	5.167	
9,055.1	6,642.5	6,647.5	6,647.5	71.6	131.1	90.00	1,377.6	-2,385.1	1,037.3	834.7	202.65	5.119	
9,063.7	6,642.5	6,647.5	6,647.5	71.8	131.1	90.00	1,377.6	-2,385.1	1,037.3	834.4	202.88	5.113 CC	
9,100.0	6,642.5	6,647.5	6,647.5	72.8	131.1	90.00	1,377.6	-2,385.1	1,037.9	834.0	203.88	5.091 ES	
9,153.5	6,642.4	6,647.4	6,647.4	74.3	131.1	89.99	1,377.6	-2,385.1	1,041.2	835.8	205.35	5.070	
9,200.0	6,642.4	6,647.4	6,647.4	75.6	131.1	89.99	1,377.6	-2,385.1	1,046.2	839.6	206.63	5.063 SF	
9,251.9	6,642.3	6,647.3	6,647.3	77.0	131.1	89.99	1,377.6	-2,385.1	1,054.2	846.2	208.05	5.067	
9,300.0	6,642.2	6,647.2	6,647.2	78.3	131.1	89.98	1,377.6	-2,385.1	1,063.9	854.5	209.38	5.081	
9,350.4	6,642.2	6,647.2	6,647.2	79.7	131.1	89.98	1,377.6	-2,385.1	1,076.2	865.4	210.76	5.106	
9,400.0	6,642.1	6,647.1	6,647.1	81.1	131.1	89.98	1,377.6	-2,385.1	1,090.4	878.3	212.13	5.140	
9,448.8	6,642.0	6,647.0	6,647.0	82.4	131.1	89.97	1,377.6	-2,385.1	1,106.5	893.0	213.48	5.183	
9,500.0	6,642.0	6,647.0	6,647.0	83.8	131.1	89.97	1,377.6	-2,385.1	1,125.3	910.4	214.89	5.237	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,646.9	6,646.9	85.1	131.1	89.97	1,377.6	-2,385.1	1,144.5	928.3	216.19	5.294	
9,600.0	6,641.9	6,646.9	6,646.9	86.6	131.1	89.96	1,377.6	-2,385.1	1,167.7	950.1	217.65	5.365	
9,645.6	6,641.8	6,646.8	6,646.8	87.9	131.1	89.96	1,377.6	-2,385.1	1,189.4	970.5	218.91	5.433	
9,700.0	6,641.7	6,646.7	6,646.7	89.4	131.1	89.96	1,377.6	-2,385.1	1,216.9	996.5	220.41	5.521	
9,744.1	6,641.7	6,646.7	6,646.7	90.6	131.1	89.95	1,377.6	-2,385.1	1,240.5	1,018.9	221.63	5.597	
9,800.0	6,641.6	6,646.6	6,646.6	92.1	131.1	89.95	1,377.6	-2,385.1	1,272.1	1,048.9	223.18	5.700	
9,842.5	6,641.6	6,646.6	6,646.6	93.3	131.1	89.95	1,377.6	-2,385.1	1,297.1	1,072.8	224.36	5.781	
9,900.0	6,641.5	6,646.5	6,646.5	94.9	131.1	89.94	1,377.6	-2,385.1	1,332.4	1,106.5	225.95	5.897	
9,940.9	6,641.4	6,646.4	6,646.4	96.0	131.1	89.94	1,377.6	-2,385.1	1,358.5	1,131.4	227.09	5.982	
10,000.0	6,641.4	6,646.4	6,646.4	97.7	131.1	89.94	1,377.6	-2,385.1	1,397.4	1,168.7	228.72	6.110	
10,039.3	6,641.3	6,646.3	6,646.3	98.8	131.1	89.93	1,377.6	-2,385.1	1,424.0	1,194.2	229.81	6.197	
10,100.0	6,641.2	6,646.2	6,646.2	100.4	131.1	89.93	1,377.6	-2,385.1	1,466.3	1,234.8	231.50	6.334	
10,137.8	6,641.2	6,646.2	6,646.2	101.5	131.1	89.93	1,377.6	-2,385.1	1,493.2	1,260.7	232.54	6.421	
10,200.0	6,641.1	6,646.1	6,646.1	103.2	131.1	89.92	1,377.6	-2,385.1	1,538.6	1,304.3	234.27	6.567	
10,236.2	6,641.1	6,646.1	6,646.1	104.2	131.1	89.92	1,377.6	-2,385.1	1,565.5	1,330.2	235.28	6.654	
10,300.0	6,641.0	6,646.0	6,646.0	106.0	131.1	89.91	1,377.6	-2,385.1	1,613.8	1,376.8	237.05	6.808	
10,334.6	6,640.9	6,645.9	6,645.9	107.0	131.1	89.91	1,377.6	-2,385.1	1,640.5	1,402.5	238.01	6.893	
10,400.0	6,640.9	6,645.9	6,645.9	108.8	131.1	89.91	1,377.6	-2,385.1	1,691.7	1,451.8	239.83	7.054	
10,433.0	6,640.8	6,645.8	6,645.8	109.7	131.1	89.91	1,377.6	-2,385.1	1,717.9	1,477.2	240.75	7.136	
10,500.0	6,640.7	6,645.7	6,645.7	111.6	131.1	89.90	1,377.6	-2,385.1	1,771.7	1,529.1	242.61	7.303	
10,531.5	6,640.7	6,645.7	6,645.7	112.4	131.1	89.90	1,377.6	-2,385.1	1,797.3	1,553.9	243.48	7.382	
10,600.0	6,640.6	6,645.6	6,645.6	114.3	131.1	89.89	1,377.6	-2,385.1	1,853.7	1,608.3	245.39	7.554	
10,629.9	6,640.6	6,645.6	6,645.6	115.2	131.1	89.89	1,377.6	-2,385.1	1,878.6	1,632.4	246.22	7.630	
10,700.0	6,640.5	6,645.5	6,645.5	117.1	131.1	89.89	1,377.6	-2,385.1	1,937.4	1,689.2	248.17	7.807	
10,728.3	6,640.4	6,645.4	6,645.4	117.9	131.1	89.88	1,377.6	-2,385.1	1,961.4	1,712.4	248.96	7.878	
10,800.0	6,640.4	6,645.4	6,645.4	119.9	131.1	89.88	1,377.6	-2,385.1	2,022.6	1,771.6	250.96	8.059	
10,826.7	6,640.3	6,645.3	6,645.3	120.7	131.1	89.88	1,377.6	-2,385.1	2,045.6	1,793.9	251.70	8.127	
10,900.0	6,640.2	6,645.2	6,645.2	122.7	131.1	89.87	1,377.6	-2,385.1	2,109.0	1,855.3	253.74	8.312	
10,925.2	6,640.2	6,645.2	6,645.2	123.4	131.1	89.87	1,377.6	-2,385.1	2,131.0	1,876.6	254.44	8.375	
11,000.0	6,640.1	6,645.1	6,645.1	125.5	131.1	89.87	1,377.6	-2,385.1	2,196.7	1,940.1	256.53	8.563	
11,023.6	6,640.1	6,645.1	6,645.1	126.1	131.1	89.86	1,377.6	-2,385.1	2,217.5	1,960.3	257.19	8.622	
11,100.0	6,640.0	6,645.0	6,645.0	128.3	131.1	89.86	1,377.6	-2,385.1	2,285.3	2,026.0	259.32	8.813	
11,122.0	6,639.9	6,644.9	6,644.9	128.9	131.1	89.86	1,377.6	-2,385.1	2,305.0	2,045.0	259.93	8.868	
11,200.0	6,639.8	6,644.8	6,644.8	131.1	131.1	89.85	1,377.6	-2,385.1	2,374.8	2,112.7	262.10	9.061	
11,220.4	6,639.8	6,644.8	6,644.8	131.6	131.1	89.85	1,377.6	-2,385.1	2,393.3	2,130.6	262.68	9.111	
11,300.0	6,639.7	6,644.7	6,644.7	133.9	131.1	89.84	1,377.6	-2,385.1	2,465.2	2,200.3	264.89	9.306	
11,318.9	6,639.7	6,644.7	6,644.7	134.4	131.1	89.84	1,377.6	-2,385.1	2,482.3	2,216.9	265.42	9.352	
11,400.0	6,639.6	6,644.6	6,644.6	136.7	131.1	89.84	1,377.6	-2,385.1	2,556.2	2,288.6	267.68	9.550	
11,417.3	6,639.6	6,644.6	6,644.6	137.1	131.1	89.84	1,377.6	-2,385.1	2,572.1	2,303.9	268.17	9.591	
11,500.0	6,639.5	6,644.5	6,644.5	139.4	131.1	89.83	1,377.6	-2,385.1	2,648.0	2,377.5	270.47	9.790	
11,515.7	6,639.5	6,644.5	6,644.5	139.9	131.1	89.83	1,377.6	-2,385.1	2,662.4	2,391.5	270.91	9.828	
11,600.0	6,639.3	6,644.3	6,644.3	142.2	131.1	89.82	1,377.6	-2,385.1	2,740.2	2,467.0	273.27	10.028	
11,614.1	6,639.3	6,644.3	6,644.3	142.6	131.1	89.82	1,377.6	-2,385.1	2,753.3	2,479.7	273.66	10.061	
11,700.0	6,639.2	6,644.2	6,644.2	145.0	131.1	89.82	1,377.6	-2,385.1	2,833.1	2,557.0	276.06	10.263	
11,712.6	6,639.2	6,644.2	6,644.2	145.4	131.1	89.82	1,377.6	-2,385.1	2,844.8	2,568.4	276.41	10.292	
11,800.0	6,639.1	6,644.1	6,644.1	147.8	131.1	89.81	1,377.6	-2,385.1	2,926.3	2,647.5	278.85	10.494	
11,811.0	6,639.1	6,644.1	6,644.1	148.1	131.1	89.81	1,377.6	-2,385.1	2,936.6	2,657.5	279.16	10.520	
11,900.0	6,639.0	6,644.0	6,644.0	150.6	131.1	89.80	1,377.6	-2,385.1	3,020.1	2,738.4	281.64	10.723	
11,909.4	6,639.0	6,644.0	6,644.0	150.9	131.1	89.80	1,377.6	-2,385.1	3,028.9	2,747.0	281.91	10.744	
12,000.0	6,638.8	6,643.8	6,643.8	153.4	131.0	89.80	1,377.6	-2,385.1	3,114.2	2,829.7	284.44	10.949	
12,007.8	6,638.8	6,643.8	6,643.8	153.6	131.0	89.80	1,377.6	-2,385.1	3,121.6	2,836.9	284.66	10.966	
12,100.0	6,638.7	6,643.7	6,643.7	156.2	131.0	89.79	1,377.6	-2,385.1	3,208.6	2,921.4	287.23	11.171	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,643.7	6,643.7	156.4	131.0	89.79	1,377.6	-2,385.1	3,214.6	2,927.2	287.41	11.185	
12,200.0	6,638.6	6,643.6	6,643.6	159.0	131.0	89.78	1,377.6	-2,385.1	3,303.4	3,013.4	290.03	11.390	
12,204.7	6,638.6	6,643.6	6,643.6	159.1	131.0	89.78	1,377.6	-2,385.1	3,307.9	3,017.7	290.16	11.400	
12,300.0	6,638.5	6,643.5	6,643.5	161.8	131.0	89.78	1,377.6	-2,385.1	3,398.5	3,105.7	292.82	11.606	
12,303.1	6,638.5	6,643.5	6,643.5	161.9	131.0	89.78	1,377.6	-2,385.1	3,401.5	3,108.6	292.91	11.613	
12,400.0	6,638.3	6,643.3	6,643.3	164.6	131.0	89.77	1,377.6	-2,385.1	3,493.9	3,198.2	295.62	11.819	
12,401.5	6,638.3	6,643.3	6,643.3	164.6	131.0	89.77	1,377.6	-2,385.1	3,495.3	3,199.7	295.66	11.822	
12,500.0	6,638.2	6,643.2	6,643.2	167.4	131.0	89.76	1,377.6	-2,385.1	3,589.5	3,291.1	298.41	12.029	
12,598.4	6,638.1	6,643.1	6,643.1	170.2	131.0	89.75	1,377.6	-2,385.1	3,683.8	3,382.6	301.16	12.232	
12,600.0	6,638.1	6,643.1	6,643.1	170.2	131.0	89.75	1,377.6	-2,385.1	3,685.3	3,384.1	301.21	12.235	
12,696.8	6,638.0	6,643.0	6,643.0	172.9	131.0	89.75	1,377.6	-2,385.1	3,778.3	3,474.4	303.92	12.432	
12,700.0	6,638.0	6,643.0	6,643.0	173.0	131.0	89.75	1,377.6	-2,385.1	3,781.4	3,477.4	304.01	12.439	
12,795.2	6,637.8	6,642.8	6,642.8	175.7	131.0	89.74	1,377.6	-2,385.1	3,873.1	3,566.4	306.67	12.629	
12,800.0	6,637.8	6,642.8	6,642.8	175.8	131.0	89.74	1,377.6	-2,385.1	3,877.6	3,570.8	306.80	12.639	
12,893.7	6,637.7	6,642.7	6,642.7	178.4	131.0	89.73	1,377.6	-2,385.1	3,968.0	3,658.6	309.42	12.824	
12,900.0	6,637.7	6,642.7	6,642.7	178.6	131.0	89.73	1,377.6	-2,385.1	3,974.1	3,664.5	309.60	12.836	
12,992.1	6,637.6	6,642.6	6,642.6	181.2	131.0	89.73	1,377.6	-2,385.1	4,063.1	3,750.9	312.18	13.015	
13,000.0	6,637.6	6,642.6	6,642.6	181.4	131.0	89.73	1,377.6	-2,385.1	4,070.7	3,758.3	312.40	13.030	
13,090.5	6,637.5	6,642.5	6,642.5	183.9	131.0	89.72	1,377.6	-2,385.1	4,158.3	3,843.4	314.93	13.204	
13,100.0	6,637.5	6,642.5	6,642.5	184.2	131.0	89.72	1,377.6	-2,385.1	4,167.5	3,852.3	315.20	13.222	
13,188.9	6,637.4	6,642.4	6,642.4	186.7	131.0	89.71	1,377.6	-2,385.1	4,253.7	3,936.0	317.69	13.390	
13,200.0	6,637.3	6,642.3	6,642.3	187.0	131.0	89.71	1,377.6	-2,385.1	4,264.4	3,946.4	318.00	13.410	
13,287.4	6,637.2	6,642.2	6,642.2	189.4	131.0	89.71	1,377.6	-2,385.1	4,349.2	4,028.8	320.44	13.573	
13,300.0	6,637.2	6,642.2	6,642.2	189.8	131.0	89.71	1,377.6	-2,385.1	4,361.5	4,040.7	320.79	13.596	
13,385.8	6,637.1	6,642.1	6,642.1	192.2	131.0	89.70	1,377.6	-2,385.1	4,444.9	4,121.7	323.20	13.753	
13,400.0	6,637.1	6,642.1	6,642.1	192.6	131.0	89.70	1,377.6	-2,385.1	4,458.7	4,135.1	323.59	13.779	
13,484.2	6,637.0	6,642.0	6,642.0	195.0	131.0	89.69	1,377.6	-2,385.1	4,540.6	4,214.7	325.95	13.930	
13,500.0	6,637.0	6,642.0	6,642.0	195.4	131.0	89.69	1,377.6	-2,385.1	4,556.0	4,229.6	326.39	13.959	
13,582.6	6,636.9	6,641.9	6,641.9	197.7	131.0	89.69	1,377.6	-2,385.1	4,636.5	4,307.8	328.71	14.105	
13,600.0	6,636.8	6,641.8	6,641.8	198.2	131.0	89.69	1,377.6	-2,385.1	4,653.4	4,324.2	329.19	14.136	
13,681.1	6,636.7	6,641.7	6,641.7	200.5	131.0	89.68	1,377.6	-2,385.1	4,732.5	4,401.0	331.46	14.278	
13,700.0	6,636.7	6,641.7	6,641.7	201.0	131.0	89.68	1,377.6	-2,385.1	4,750.9	4,419.0	331.99	14.310	
13,779.5	6,636.6	6,641.6	6,641.6	203.2	131.0	89.67	1,377.6	-2,385.1	4,828.6	4,494.3	334.22	14.447	
13,800.0	6,636.6	6,641.6	6,641.6	203.8	131.0	89.67	1,377.6	-2,385.1	4,848.6	4,513.8	334.79	14.482	
13,877.9	6,636.5	6,641.5	6,641.5	206.0	131.0	89.67	1,377.6	-2,385.1	4,924.7	4,587.8	336.97	14.615	
13,900.0	6,636.5	6,641.5	6,641.5	206.6	131.0	89.66	1,377.6	-2,385.1	4,946.3	4,608.7	337.59	14.652	
13,976.3	6,636.4	6,641.4	6,641.4	208.8	131.0	89.66	1,377.6	-2,385.1	5,021.0	4,681.3	339.73	14.779	
14,000.0	6,636.3	6,641.3	6,641.3	209.4	131.0	89.66	1,377.6	-2,385.1	5,044.1	4,703.7	340.39	14.819	
14,074.8	6,636.2	6,641.2	6,641.2	211.5	131.0	89.65	1,377.6	-2,385.1	5,117.3	4,774.8	342.49	14.942	
14,100.0	6,636.2	6,641.2	6,641.2	212.2	131.0	89.65	1,377.6	-2,385.1	5,142.0	4,798.8	343.19	14.983	
14,173.2	6,636.1	6,641.1	6,641.1	214.3	131.0	89.65	1,377.6	-2,385.1	5,213.8	4,868.5	345.24	15.102	
14,200.0	6,636.1	6,641.1	6,641.1	215.0	131.0	89.64	1,377.6	-2,385.1	5,240.0	4,894.0	345.99	15.145	
14,271.6	6,636.0	6,641.0	6,641.0	217.0	131.0	89.64	1,377.6	-2,385.1	5,310.3	4,962.2	348.00	15.259	
14,300.0	6,635.9	6,640.9	6,640.9	217.8	131.0	89.64	1,377.6	-2,385.1	5,338.1	4,989.3	348.80	15.304	
14,370.0	6,635.9	6,640.9	6,640.9	219.8	131.0	89.63	1,377.6	-2,385.1	5,406.8	5,056.1	350.76	15.415	
14,400.0	6,635.8	6,640.8	6,640.8	220.6	131.0	89.63	1,377.6	-2,385.1	5,436.2	5,084.6	351.60	15.461	
14,468.5	6,635.7	6,640.7	6,640.7	222.6	131.0	89.63	1,377.6	-2,385.1	5,503.4	5,149.9	353.52	15.568	
14,500.0	6,635.7	6,640.7	6,640.7	223.4	131.0	89.62	1,377.6	-2,385.1	5,534.4	5,180.0	354.40	15.616	
14,566.9	6,635.6	6,640.6	6,640.6	225.3	131.0	89.62	1,377.6	-2,385.1	5,600.1	5,243.9	356.27	15.719	
14,600.0	6,635.6	6,640.6	6,640.6	226.2	131.0	89.62	1,377.6	-2,385.1	5,632.7	5,275.5	357.20	15.769	
14,665.3	6,635.5	6,640.5	6,640.5	228.1	131.0	89.61	1,377.6	-2,385.1	5,696.9	5,337.9	359.03	15.867	
14,700.0	6,635.5	6,640.5	6,640.5	229.0	131.0	89.61	1,377.6	-2,385.1	5,731.0	5,371.0	360.00	15.919	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,635.4	6,640.4	6,640.4	230.8	131.0	89.60	1,377.6	-2,385.1	5,793.7	5,431.9	361.79	16.014	
14,800.0	6,635.3	6,640.3	6,640.3	231.8	131.0	89.60	1,377.6	-2,385.1	5,829.4	5,466.6	362.80	16.068	
14,862.2	6,635.2	6,640.2	6,640.2	233.6	131.0	89.60	1,377.6	-2,385.1	5,890.6	5,526.0	364.55	16.159	
14,900.0	6,635.2	6,640.2	6,640.2	234.7	131.0	89.60	1,377.6	-2,385.1	5,927.8	5,562.2	365.61	16.214	
14,960.6	6,635.1	6,640.1	6,640.1	236.4	131.0	89.59	1,377.6	-2,385.1	5,987.5	5,620.2	367.30	16.301	
14,995.1	6,635.0	6,640.0	6,640.0	237.3	131.0	89.59	1,377.6	-2,385.1	6,021.5	5,653.2	368.27	16.351	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-81.85	1,293.1	-9,029.4	9,121.5				
98.4	98.4	73.4	73.4	0.1	0.0	-81.85	1,293.1	-9,029.4	9,121.5	9,121.4	0.11	N/A	
100.0	100.0	75.0	75.0	0.1	0.0	-81.85	1,293.1	-9,029.4	9,121.5	9,121.4	0.11	N/A	
196.8	196.8	171.8	171.8	0.3	1.9	-81.85	1,293.1	-9,029.4	9,121.5	9,119.3	2.24	4,076.030	
200.0	200.0	175.0	175.0	0.3	2.0	-81.85	1,293.1	-9,029.4	9,121.5	9,119.2	2.33	3,917.134	
295.3	295.3	270.3	270.3	0.5	4.1	-81.85	1,293.1	-9,029.4	9,121.5	9,116.8	4.65	1,960.490	
300.0	300.0	275.0	275.0	0.5	4.2	-81.85	1,293.1	-9,029.4	9,121.5	9,116.7	4.76	1,916.087	
393.7	393.7	368.7	368.7	0.8	6.1	-81.85	1,293.1	-9,029.4	9,121.5	9,114.6	6.88	1,325.886	
400.0	400.0	375.0	375.0	0.8	6.2	-81.85	1,293.1	-9,029.4	9,121.5	9,114.5	7.02	1,299.070	
492.1	492.1	467.1	467.1	1.0	8.1	-81.85	1,293.1	-9,029.4	9,121.5	9,112.4	9.09	1,003.190	
500.0	500.0	475.0	475.0	1.0	8.3	-81.85	1,293.1	-9,029.4	9,121.5	9,112.2	9.27	984.050	
590.5	590.5	565.5	565.5	1.2	10.1	-81.85	1,293.1	-9,029.4	9,121.5	9,110.2	11.30	807.187	
600.0	600.0	575.0	575.0	1.2	10.3	-81.85	1,293.1	-9,029.4	9,121.5	9,110.0	11.51	792.332	
689.0	689.0	664.0	664.0	1.4	12.1	-81.85	1,293.1	-9,029.4	9,121.5	9,108.0	13.51	675.380	
700.0	700.0	675.0	675.0	1.4	12.3	-81.85	1,293.1	-9,029.4	9,121.5	9,107.7	13.75	663.252	
787.4	787.4	762.4	762.4	1.6	14.1	-81.85	1,293.1	-9,029.4	9,121.5	9,105.8	15.71	580.629	
800.0	800.0	775.0	775.0	1.7	14.3	-81.85	1,293.1	-9,029.4	9,121.5	9,105.5	15.99	570.386	
885.8	885.8	860.8	860.8	1.9	16.0	-81.85	1,293.1	-9,029.4	9,121.5	9,103.6	17.91	509.217	
900.0	900.0	875.0	875.0	1.9	16.3	-81.85	1,293.1	-9,029.4	9,121.5	9,103.3	18.23	500.355	
984.2	984.2	959.2	959.2	2.1	18.0	-81.85	1,293.1	-9,029.4	9,121.5	9,101.4	20.12	453.460	
1,000.0	1,000.0	975.0	975.0	2.1	18.3	-81.85	1,293.1	-9,029.4	9,121.5	9,101.0	20.47	445.652	
1,082.7	1,082.7	1,057.7	1,057.7	2.3	20.0	-81.85	1,293.1	-9,029.4	9,121.5	9,099.2	22.32	408.716	
1,100.0	1,100.0	1,075.0	1,075.0	2.3	20.4	-81.85	1,293.1	-9,029.4	9,121.5	9,098.8	22.71	401.739	
1,181.1	1,181.1	1,156.1	1,156.1	2.5	22.0	-81.85	1,293.1	-9,029.4	9,121.5	9,097.0	24.52	372.014	
1,200.0	1,200.0	1,175.0	1,175.0	2.6	22.4	-81.85	1,293.1	-9,029.4	9,121.5	9,096.6	24.94	365.708	
1,279.5	1,279.5	1,254.5	1,254.5	2.7	24.0	-81.85	1,293.1	-9,029.4	9,121.5	9,094.8	26.72	341.362	
1,300.0	1,300.0	1,275.0	1,275.0	2.8	24.4	-81.85	1,293.1	-9,029.4	9,121.5	9,094.3	27.18	335.610	
1,377.9	1,377.9	1,352.9	1,352.9	3.0	26.0	-123.04	1,293.1	-9,029.4	9,122.1	9,093.2	28.92	315.470	
1,400.0	1,400.0	1,375.0	1,375.0	3.0	26.4	-123.03	1,293.1	-9,029.4	9,122.4	9,093.0	29.41	310.227	
1,476.4	1,476.3	1,451.3	1,451.3	3.2	27.9	-123.02	1,293.1	-9,029.4	9,124.5	9,093.4	31.09	293.439	
1,500.0	1,499.8	1,474.8	1,474.8	3.2	28.4	-123.01	1,293.1	-9,029.4	9,125.3	9,093.7	31.62	288.635	
1,574.8	1,574.4	1,549.4	1,549.4	3.4	29.9	-122.99	1,293.1	-9,029.4	9,128.7	9,095.4	33.26	274.472	
1,600.0	1,599.5	1,574.5	1,574.5	3.5	30.4	-122.98	1,293.1	-9,029.4	9,130.1	9,096.3	33.81	270.039	
1,673.2	1,672.2	1,647.2	1,647.2	3.6	31.9	-122.94	1,293.1	-9,029.4	9,134.8	9,099.3	35.41	257.974	
1,700.0	1,698.7	1,673.7	1,673.7	3.7	32.4	-122.93	1,293.1	-9,029.4	9,136.7	9,100.7	35.99	253.861	
1,771.6	1,769.5	1,744.5	1,744.5	3.9	33.8	-122.89	1,293.1	-9,029.4	9,142.7	9,105.1	37.55	243.490	
1,800.0	1,797.5	1,772.5	1,772.5	4.0	34.4	-122.87	1,293.1	-9,029.4	9,145.3	9,107.1	38.16	239.653	
1,870.1	1,866.3	1,841.3	1,841.3	4.2	35.8	-122.81	1,293.1	-9,029.4	9,152.4	9,112.8	39.68	230.665	
1,899.9	1,895.6	1,870.6	1,870.6	4.3	36.4	-122.79	1,293.1	-9,029.4	9,155.8	9,115.5	40.32	227.073	
1,968.5	1,962.6	1,937.6	1,937.6	4.5	37.7	-122.86	1,293.1	-9,029.4	9,163.6	9,121.8	41.86	218.907	
2,000.0	1,993.4	1,968.4	1,968.4	4.6	38.3	-122.90	1,293.1	-9,029.4	9,167.2	9,124.7	42.57	215.351	
2,066.9	2,058.9	2,033.9	2,033.9	4.8	39.6	-122.97	1,293.1	-9,029.4	9,174.9	9,130.8	44.08	208.129	
2,100.0	2,091.3	2,066.3	2,066.3	4.9	40.3	-123.00	1,293.1	-9,029.4	9,178.7	9,133.9	44.83	204.740	
2,165.3	2,155.2	2,130.2	2,130.2	5.2	41.6	-123.07	1,293.1	-9,029.4	9,186.2	9,139.9	46.32	198.335	
2,200.0	2,189.1	2,164.1	2,164.1	5.3	42.3	-123.11	1,293.1	-9,029.4	9,190.2	9,143.1	47.11	195.098	
2,263.8	2,251.5	2,226.5	2,226.5	5.5	43.5	-123.18	1,293.1	-9,029.4	9,197.6	9,149.0	48.56	189.397	
2,300.0	2,286.9	2,261.9	2,261.9	5.7	44.2	-123.22	1,293.1	-9,029.4	9,201.8	9,152.4	49.39	186.307	
2,362.2	2,347.7	2,322.7	2,322.7	5.9	45.5	-123.28	1,293.1	-9,029.4	9,209.0	9,158.2	50.82	181.221	
2,400.0	2,384.7	2,359.7	2,359.7	6.0	46.2	-123.32	1,293.1	-9,029.4	9,213.4	9,161.7	51.68	178.266	
2,460.6	2,444.0	2,419.0	2,419.0	6.3	47.4	-123.39	1,293.1	-9,029.4	9,220.4	9,167.3	53.08	173.716	
2,500.0	2,482.5	2,457.5	2,457.5	6.4	48.2	-123.43	1,293.1	-9,029.4	9,225.0	9,171.0	53.98	170.887	
2,559.0	2,540.3	2,515.3	2,515.3	6.7	49.3	-123.49	1,293.1	-9,029.4	9,231.8	9,176.5	55.34	166.809	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,555.3	2,555.3	6.8	50.1	-123.54	1,293.1	-9,029.4	9,236.6	9,180.3	56.29	164.096		
2,657.5	2,636.5	2,611.5	2,611.5	7.1	51.3	-123.60	1,293.1	-9,029.4	9,243.3	9,185.7	57.62	160.431		
2,700.0	2,678.1	2,653.1	2,653.1	7.2	52.1	-123.64	1,293.1	-9,029.4	9,248.3	9,189.7	58.60	157.827		
2,755.9	2,732.8	2,707.8	2,707.8	7.5	53.2	-123.70	1,293.1	-9,029.4	9,254.8	9,194.9	59.89	154.529		
2,800.0	2,776.0	2,751.0	2,751.0	7.7	54.1	-123.75	1,293.1	-9,029.4	9,260.0	9,199.1	60.91	152.025		
2,854.3	2,829.1	2,804.1	2,804.1	7.9	55.1	-123.80	1,293.1	-9,029.4	9,266.4	9,204.2	62.17	149.050		
2,900.0	2,873.8	2,848.8	2,848.8	8.1	56.0	-123.85	1,293.1	-9,029.4	9,271.7	9,208.5	63.23	146.641		
2,952.7	2,925.4	2,900.4	2,900.4	8.3	57.1	-123.91	1,293.1	-9,029.4	9,278.0	9,213.5	64.45	143.954		
3,000.0	2,971.6	2,946.6	2,946.6	8.5	58.0	-123.96	1,293.1	-9,029.4	9,283.5	9,218.0	65.55	141.632		
3,051.2	3,021.6	2,996.6	2,996.6	8.7	59.0	-124.01	1,293.1	-9,029.4	9,289.6	9,222.8	66.73	139.202		
3,100.0	3,069.4	3,044.4	3,044.4	8.9	60.0	-124.06	1,293.1	-9,029.4	9,295.3	9,227.5	67.87	136.962		
3,149.6	3,117.9	3,092.9	3,092.9	9.1	60.9	-124.11	1,293.1	-9,029.4	9,301.2	9,232.2	69.02	134.761		
3,200.0	3,167.2	3,142.2	3,142.2	9.3	61.9	-124.17	1,293.1	-9,029.4	9,307.2	9,237.0	70.19	132.598		
3,248.0	3,214.2	3,189.2	3,189.2	9.5	62.9	-124.22	1,293.1	-9,029.4	9,312.9	9,241.6	71.31	130.602		
3,300.0	3,265.0	3,240.0	3,240.0	9.8	63.9	-124.27	1,293.1	-9,029.4	9,319.0	9,246.5	72.52	128.512		
3,346.4	3,310.5	3,285.5	3,285.5	10.0	64.8	-124.32	1,293.1	-9,029.4	9,324.6	9,251.0	73.60	126.700		
3,400.0	3,362.9	3,337.9	3,337.9	10.2	65.9	-124.37	1,293.1	-9,029.4	9,330.9	9,256.1	74.84	124.677		
3,444.9	3,406.7	3,381.7	3,381.7	10.4	66.8	-124.42	1,293.1	-9,029.4	9,336.3	9,260.4	75.88	123.032		
3,473.0	3,434.2	3,409.2	3,409.2	10.5	67.3	-124.45	1,293.1	-9,029.4	9,339.6	9,263.1	76.54	122.025		
3,500.0	3,460.7	3,435.7	3,435.7	10.6	67.8	-124.53	1,293.1	-9,029.4	9,342.8	9,265.6	77.20	121.026		
3,543.3	3,503.2	3,478.2	3,478.2	10.7	68.7	-124.65	1,293.1	-9,029.4	9,347.5	9,269.3	78.23	119.488		
3,600.0	3,559.0	3,534.0	3,534.0	10.9	69.8	-124.79	1,293.1	-9,029.4	9,353.2	9,273.6	79.58	117.529		
3,641.7	3,600.2	3,575.2	3,575.2	11.0	70.6	-124.89	1,293.1	-9,029.4	9,357.0	9,276.4	80.57	116.141		
3,700.0	3,657.9	3,632.9	3,632.9	11.2	71.8	-125.01	1,293.1	-9,029.4	9,361.7	9,279.8	81.94	114.255		
3,740.1	3,697.8	3,672.8	3,672.8	11.3	72.6	-125.08	1,293.1	-9,029.4	9,364.6	9,281.7	82.87	113.005		
3,800.0	3,757.3	3,732.3	3,732.3	11.4	73.8	-125.17	1,293.1	-9,029.4	9,368.2	9,283.9	84.25	111.191		
3,838.6	3,795.7	3,770.7	3,770.7	11.5	74.6	-125.22	1,293.1	-9,029.4	9,370.2	9,285.0	85.13	110.067		
3,900.0	3,857.0	3,832.0	3,832.0	11.7	75.8	-125.28	1,293.1	-9,029.4	9,372.7	9,286.2	86.52	108.326		
3,937.0	3,893.9	3,868.9	3,868.9	11.7	76.6	-125.31	1,293.1	-9,029.4	9,373.8	9,286.5	87.35	107.317		
4,000.0	3,956.9	3,931.9	3,931.9	11.8	77.8	-125.34	1,293.1	-9,029.4	9,375.2	9,286.4	88.74	105.645		
4,035.4	3,992.3	3,967.3	3,967.3	11.9	78.5	-125.35	1,293.1	-9,029.4	9,375.6	9,286.1	89.51	104.740		
4,072.9	4,029.8	4,004.8	4,004.8	11.9	79.3	-84.17	1,293.1	-9,029.4	9,375.7	9,286.2	89.50	104.752		
4,100.0	4,056.9	4,031.9	4,031.9	12.0	79.8	-84.17	1,293.1	-9,029.4	9,375.7	9,285.6	90.09	104.065		
4,133.8	4,090.7	4,065.7	4,065.7	12.0	80.5	-84.17	1,293.1	-9,029.4	9,375.7	9,284.9	90.84	103.212		
4,200.0	4,156.9	4,131.9	4,131.9	12.1	81.8	-84.17	1,293.1	-9,029.4	9,375.7	9,283.4	92.29	101.586		
4,232.3	4,189.2	4,164.2	4,164.2	12.2	82.5	-84.17	1,293.1	-9,029.4	9,375.7	9,282.7	93.00	100.810		
4,300.0	4,256.9	4,231.9	4,231.9	12.3	83.9	-84.17	1,293.1	-9,029.4	9,375.7	9,281.2	94.49	99.220		
4,330.7	4,287.6	4,262.6	4,262.6	12.4	84.5	-84.17	1,293.1	-9,029.4	9,375.7	9,280.5	95.17	98.516		
4,400.0	4,356.9	4,331.9	4,331.9	12.5	85.9	-84.17	1,293.1	-9,029.4	9,375.7	9,279.0	96.70	96.961		
4,429.1	4,386.0	4,361.0	4,361.0	12.5	86.5	-84.17	1,293.1	-9,029.4	9,375.7	9,278.4	97.34	96.322		
4,500.0	4,456.9	4,431.9	4,431.9	12.6	87.9	-84.17	1,293.1	-9,029.4	9,375.7	9,276.8	98.90	94.801		
4,527.5	4,484.4	4,459.4	4,459.4	12.7	88.4	-84.17	1,293.1	-9,029.4	9,375.7	9,276.2	99.51	94.223		
4,600.0	4,556.9	4,531.9	4,531.9	12.8	89.9	-84.17	1,293.1	-9,029.4	9,375.7	9,274.6	101.10	92.735		
4,626.0	4,582.9	4,557.9	4,557.9	12.9	90.4	-84.17	1,293.1	-9,029.4	9,375.7	9,274.0	101.68	92.212		
4,700.0	4,656.9	4,631.9	4,631.9	13.0	91.9	-84.17	1,293.1	-9,029.4	9,375.7	9,272.4	103.31	90.755		
4,724.4	4,681.3	4,656.3	4,656.3	13.0	92.4	-84.17	1,293.1	-9,029.4	9,375.7	9,271.9	103.85	90.284		
4,800.0	4,756.9	4,731.9	4,731.9	13.1	93.9	-84.17	1,293.1	-9,029.4	9,375.7	9,270.2	105.51	88.857		
4,822.8	4,779.7	4,754.7	4,754.7	13.2	94.4	-84.17	1,293.1	-9,029.4	9,375.7	9,269.7	106.02	88.435		
4,900.0	4,856.9	4,831.9	4,831.9	13.3	95.9	-84.17	1,293.1	-9,029.4	9,375.7	9,268.0	107.72	87.036		
4,921.2	4,878.1	4,853.1	4,853.1	13.4	96.3	-84.17	1,293.1	-9,029.4	9,375.7	9,267.5	108.19	86.659		
5,000.0	4,956.9	4,931.9	4,931.9	13.5	97.9	-84.17	1,293.1	-9,029.4	9,375.7	9,265.8	109.93	85.288		
5,019.7	4,976.6	4,951.6	4,951.6	13.5	98.3	-84.17	1,293.1	-9,029.4	9,375.7	9,265.3	110.37	84.952		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,031.9	5,031.9	13.7	99.9	-84.17	1,293.1	-9,029.4	9,375.7	9,263.6	112.14	83.607	
5,118.1	5,075.0	5,050.0	5,050.0	13.7	100.3	-84.17	1,293.1	-9,029.4	9,375.7	9,263.2	112.54	83.310	
5,200.0	5,156.9	5,131.9	5,131.9	13.8	102.0	-84.17	1,293.1	-9,029.4	9,375.7	9,261.4	114.35	81.991	
5,216.5	5,173.4	5,148.4	5,148.4	13.9	102.3	-84.17	1,293.1	-9,029.4	9,375.7	9,261.0	114.72	81.730	
5,300.0	5,256.9	5,231.9	5,231.9	14.0	104.0	-84.17	1,293.1	-9,029.4	9,375.7	9,259.2	116.56	80.436	
5,314.9	5,271.8	5,246.8	5,246.8	14.1	104.3	-84.17	1,293.1	-9,029.4	9,375.7	9,258.8	116.89	80.208	
5,400.0	5,356.9	5,331.9	5,331.9	14.2	106.0	-84.17	1,293.1	-9,029.4	9,375.7	9,256.9	118.77	78.938	
5,413.4	5,370.3	5,345.3	5,345.3	14.2	106.2	-84.17	1,293.1	-9,029.4	9,375.7	9,256.6	119.07	78.742	
5,500.0	5,456.9	5,431.9	5,431.9	14.4	108.0	-84.17	1,293.1	-9,029.4	9,375.7	9,254.7	120.99	77.494	
5,511.8	5,468.7	5,443.7	5,443.7	14.4	108.2	-84.17	1,293.1	-9,029.4	9,375.7	9,254.5	121.25	77.327	
5,600.0	5,556.9	5,531.9	5,531.9	14.6	110.0	-84.17	1,293.1	-9,029.4	9,375.7	9,252.5	123.20	76.102	
5,610.2	5,567.1	5,542.1	5,542.1	14.6	110.2	-84.17	1,293.1	-9,029.4	9,375.7	9,252.3	123.43	75.962	
5,700.0	5,656.9	5,631.9	5,631.9	14.7	112.0	-84.17	1,293.1	-9,029.4	9,375.7	9,250.3	125.41	74.758	
5,708.6	5,665.5	5,640.5	5,640.5	14.8	112.2	-84.17	1,293.1	-9,029.4	9,375.7	9,250.1	125.61	74.644	
5,800.0	5,756.9	5,731.9	5,731.9	14.9	114.0	-84.17	1,293.1	-9,029.4	9,375.7	9,248.1	127.63	73.461	
5,807.1	5,764.0	5,739.0	5,739.0	14.9	114.2	-84.17	1,293.1	-9,029.4	9,375.7	9,247.9	127.79	73.371	
5,900.0	5,856.9	5,831.9	5,831.9	15.1	116.0	-84.17	1,293.1	-9,029.4	9,375.7	9,245.9	129.84	72.208	
5,905.5	5,862.4	5,837.4	5,837.4	15.1	116.1	-84.17	1,293.1	-9,029.4	9,375.7	9,245.7	129.97	72.140	
5,971.9	5,928.8	5,903.8	5,903.8	15.3	117.5	-84.17	1,293.1	-9,029.4	9,375.7	9,244.3	131.44	71.332	
6,000.0	5,956.9	5,931.9	5,931.9	15.3	118.0	5.84	1,293.1	-9,029.4	9,375.2	9,242.7	132.49	70.761	
6,003.9	5,960.8	5,935.8	5,935.8	15.3	118.1	5.84	1,293.1	-9,029.4	9,375.0	9,242.5	132.54	70.731	
6,050.0	6,006.7	5,981.7	5,981.7	15.4	119.0	5.87	1,293.1	-9,029.4	9,371.5	9,238.6	132.88	70.528	
6,100.0	6,056.2	6,031.2	6,031.2	15.4	120.0	5.93	1,293.1	-9,029.4	9,364.4	9,231.7	132.61	70.618	
6,102.3	6,058.5	6,033.5	6,033.5	15.4	120.1	5.94	1,293.1	-9,029.4	9,363.9	9,231.4	132.58	70.630	
6,150.0	6,105.1	6,080.1	6,080.1	15.4	121.0	6.03	1,293.1	-9,029.4	9,353.8	9,222.1	131.67	71.038	
6,200.0	6,153.0	6,128.0	6,128.0	15.5	122.0	6.16	1,293.1	-9,029.4	9,339.9	9,209.8	130.07	71.805	
6,200.8	6,153.8	6,128.8	6,128.8	15.5	122.0	6.17	1,293.1	-9,029.4	9,339.6	9,209.6	130.04	71.820	
6,250.0	6,199.9	6,174.9	6,174.9	15.5	122.9	6.33	1,293.1	-9,029.4	9,322.7	9,194.9	127.80	72.945	
6,299.2	6,244.8	6,219.8	6,219.8	15.5	123.8	6.55	1,293.1	-9,029.4	9,302.6	9,177.7	124.93	74.464	
6,300.0	6,245.5	6,220.5	6,220.5	15.5	123.8	6.55	1,293.1	-9,029.4	9,302.3	9,177.4	124.88	74.492	
6,350.0	6,289.6	6,264.6	6,264.6	15.5	124.7	6.81	1,293.1	-9,029.4	9,278.7	9,157.4	121.30	76.494	
6,397.6	6,329.9	6,304.9	6,304.9	15.4	125.5	7.12	1,293.1	-9,029.4	9,253.5	9,136.2	117.31	78.878	
6,400.0	6,331.8	6,306.8	6,306.8	15.4	125.6	7.14	1,293.1	-9,029.4	9,252.2	9,135.1	117.10	79.010	
6,450.0	6,372.2	6,347.2	6,347.2	15.4	126.4	7.53	1,293.1	-9,029.4	9,222.8	9,110.5	112.31	82.116	
6,496.0	6,407.4	6,382.4	6,382.4	15.4	127.1	7.97	1,293.1	-9,029.4	9,193.3	9,085.9	107.43	85.578	
6,500.0	6,410.3	6,385.3	6,385.3	15.4	127.2	8.02	1,293.1	-9,029.4	9,190.7	9,083.7	106.99	85.905	
6,550.0	6,446.1	6,421.1	6,421.1	15.4	127.9	8.60	1,293.1	-9,029.4	9,156.0	9,054.8	101.19	90.486	
6,594.5	6,475.9	6,450.9	6,450.9	15.4	128.5	9.24	1,293.1	-9,029.4	9,123.1	9,027.4	95.71	95.320	
6,600.0	6,479.4	6,454.4	6,454.4	15.4	128.5	9.33	1,293.1	-9,029.4	9,118.9	9,023.9	95.01	95.975	
6,650.0	6,510.0	6,485.0	6,485.0	15.5	129.2	10.24	1,293.1	-9,029.4	9,079.6	8,991.0	88.61	102.465	
6,692.9	6,534.0	6,509.0	6,509.0	15.7	129.6	11.21	1,293.1	-9,029.4	9,044.2	8,961.1	83.11	108.827	
6,700.0	6,537.8	6,512.8	6,512.8	15.7	129.7	11.39	1,293.1	-9,029.4	9,038.3	8,956.0	82.21	109.942	
6,750.0	6,562.6	6,537.6	6,537.6	16.2	130.2	12.89	1,293.1	-9,029.4	8,995.1	8,918.9	76.18	118.069	
6,791.3	6,580.8	6,555.8	6,555.8	16.6	130.6	14.49	1,293.1	-9,029.4	8,958.2	8,886.2	71.95	124.501	
6,800.0	6,584.3	6,559.3	6,559.3	16.7	130.7	14.89	1,293.1	-9,029.4	8,950.3	8,879.1	71.20	125.714	
6,850.0	6,602.9	6,577.9	6,577.9	17.3	131.0	17.66	1,293.1	-9,029.4	8,904.2	8,835.7	68.41	130.157	
6,889.7	6,615.2	6,590.2	6,590.2	17.9	131.3	20.75	1,293.1	-9,029.4	8,866.6	8,797.5	69.07	128.371	
6,900.0	6,618.1	6,593.1	6,593.1	18.0	131.3	21.73	1,293.1	-9,029.4	8,856.8	8,787.0	69.84	126.821	
6,950.0	6,630.0	6,605.0	6,605.0	18.8	131.6	28.11	1,293.1	-9,029.4	8,808.6	8,730.0	78.58	112.091	
6,988.2	6,636.8	6,611.8	6,611.8	19.5	131.7	35.85	1,293.1	-9,029.4	8,771.2	8,678.5	92.75	94.565	
7,000.0	6,638.5	6,613.5	6,613.5	19.7	131.7	39.04	1,293.1	-9,029.4	8,759.6	8,660.8	98.79	88.668	
7,050.0	6,643.5	6,618.5	6,618.5	20.6	131.8	59.25	1,293.1	-9,029.4	8,710.1	8,578.1	132.08	65.944	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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			
7,086.6	6,644.9	6,619.9	6,619.9	21.3	131.9	82.57	1,293.1	-9,029.4	8,673.8	8,521.8	152.00	57.063			
7,097.8	6,645.0	6,620.0	6,620.0	21.5	131.9	90.65	1,293.1	-9,029.4	8,662.6	8,509.3	153.32	56.501			
7,100.0	6,645.0	6,620.0	6,620.0	21.6	131.9	90.65	1,293.1	-9,029.4	8,660.5	8,507.1	153.36	56.472			
7,185.0	6,644.9	6,619.9	6,619.9	23.3	131.9	90.64	1,293.1	-9,029.4	8,576.0	8,420.9	155.08	55.299			
7,200.0	6,644.9	6,619.9	6,619.9	23.6	131.9	90.64	1,293.1	-9,029.4	8,561.1	8,405.7	155.39	55.095			
7,283.4	6,644.8	6,619.8	6,619.8	25.4	131.9	90.64	1,293.1	-9,029.4	8,478.2	8,321.0	157.20	53.931			
7,300.0	6,644.7	6,619.7	6,619.7	25.8	131.9	90.63	1,293.1	-9,029.4	8,461.7	8,304.1	157.56	53.703			
7,381.9	6,644.6	6,619.6	6,619.6	27.7	131.9	90.63	1,293.1	-9,029.4	8,380.4	8,220.9	159.44	52.562			
7,400.0	6,644.6	6,619.6	6,619.6	28.1	131.9	90.63	1,293.1	-9,029.4	8,362.4	8,202.5	159.85	52.313			
7,480.3	6,644.5	6,619.5	6,619.5	30.0	131.9	90.62	1,293.1	-9,029.4	8,282.6	8,120.8	161.76	51.203			
7,500.0	6,644.5	6,619.5	6,619.5	30.5	131.9	90.62	1,293.1	-9,029.4	8,263.0	8,100.8	162.23	50.935			
7,578.7	6,644.4	6,619.4	6,619.4	32.4	131.9	90.61	1,293.1	-9,029.4	8,184.8	8,020.7	164.15	49.861			
7,600.0	6,644.4	6,619.4	6,619.4	32.9	131.9	90.61	1,293.1	-9,029.4	8,163.7	7,999.0	164.67	49.575			
7,677.1	6,644.3	6,619.3	6,619.3	34.8	131.9	90.61	1,293.1	-9,029.4	8,087.1	7,920.5	166.60	48.542			
7,700.0	6,644.2	6,619.2	6,619.2	35.4	131.9	90.60	1,293.1	-9,029.4	8,064.4	7,897.2	167.17	48.240			
7,775.6	6,644.1	6,619.1	6,619.1	37.3	131.9	90.60	1,293.1	-9,029.4	7,989.3	7,820.2	169.09	47.248			
7,800.0	6,644.1	6,619.1	6,619.1	38.0	131.9	90.60	1,293.1	-9,029.4	7,965.1	7,795.4	169.71	46.932			
7,874.0	6,644.0	6,619.0	6,619.0	39.9	131.9	90.59	1,293.1	-9,029.4	7,891.6	7,720.0	171.62	45.983			
7,900.0	6,644.0	6,619.0	6,619.0	40.5	131.9	90.59	1,293.1	-9,029.4	7,865.8	7,693.5	172.29	45.654			
7,972.4	6,643.9	6,618.9	6,618.9	42.4	131.9	90.58	1,293.1	-9,029.4	7,793.9	7,619.8	174.18	44.747			
8,000.0	6,643.9	6,618.9	6,618.9	43.1	131.9	90.58	1,293.1	-9,029.4	7,766.6	7,591.7	174.90	44.406			
8,070.8	6,643.8	6,618.8	6,618.8	45.0	131.9	90.58	1,293.1	-9,029.4	7,696.3	7,519.5	176.76	43.540			
8,100.0	6,643.7	6,618.7	6,618.7	45.8	131.9	90.57	1,293.1	-9,029.4	7,667.3	7,489.8	177.53	43.189			
8,169.3	6,643.7	6,618.7	6,618.7	47.6	131.9	90.57	1,293.1	-9,029.4	7,598.6	7,419.2	179.36	42.364			
8,200.0	6,643.6	6,618.6	6,618.6	48.4	131.9	90.57	1,293.1	-9,029.4	7,568.1	7,387.9	180.18	42.003			
8,267.7	6,643.5	6,618.5	6,618.5	50.2	131.8	90.56	1,293.1	-9,029.4	7,501.0	7,319.0	181.99	41.217			
8,300.0	6,643.5	6,618.5	6,618.5	51.1	131.8	90.56	1,293.1	-9,029.4	7,468.9	7,286.1	182.85	40.848			
8,366.1	6,643.4	6,618.4	6,618.4	52.9	131.8	90.55	1,293.1	-9,029.4	7,403.3	7,218.7	184.62	40.100			
8,400.0	6,643.4	6,618.4	6,618.4	53.8	131.8	90.55	1,293.1	-9,029.4	7,369.8	7,184.2	185.53	39.723			
8,464.5	6,643.3	6,618.3	6,618.3	55.5	131.8	90.55	1,293.1	-9,029.4	7,305.7	7,118.5	187.27	39.012			
8,500.0	6,643.2	6,618.2	6,618.2	56.5	131.8	90.54	1,293.1	-9,029.4	7,270.6	7,082.4	188.22	38.628			
8,563.0	6,643.2	6,618.2	6,618.2	58.2	131.8	90.54	1,293.1	-9,029.4	7,208.2	7,018.2	189.93	37.952			
8,600.0	6,643.1	6,618.1	6,618.1	59.2	131.8	90.54	1,293.1	-9,029.4	7,171.5	6,980.5	190.93	37.561			
8,661.4	6,643.0	6,618.0	6,618.0	60.8	131.8	90.53	1,293.1	-9,029.4	7,110.6	6,918.0	192.59	36.920			
8,700.0	6,643.0	6,618.0	6,618.0	61.9	131.8	90.53	1,293.1	-9,029.4	7,072.4	6,878.7	193.64	36.523			
8,759.8	6,642.9	6,617.9	6,617.9	63.5	131.8	90.52	1,293.1	-9,029.4	7,013.1	6,817.8	195.27	35.915			
8,800.0	6,642.9	6,617.9	6,617.9	64.6	131.8	90.52	1,293.1	-9,029.4	6,973.3	6,776.9	196.36	35.512			
8,858.2	6,642.8	6,617.8	6,617.8	66.2	131.8	90.52	1,293.1	-9,029.4	6,915.6	6,717.6	197.95	34.935			
8,900.0	6,642.7	6,617.7	6,617.7	67.3	131.8	90.51	1,293.1	-9,029.4	6,874.3	6,675.2	199.09	34.528			
8,956.7	6,642.7	6,617.7	6,617.7	68.9	131.8	90.51	1,293.1	-9,029.4	6,818.1	6,617.5	200.64	33.981			
9,000.0	6,642.6	6,617.6	6,617.6	70.1	131.8	90.51	1,293.1	-9,029.4	6,775.2	6,573.4	201.83	33.569			
9,055.1	6,642.5	6,617.5	6,617.5	71.6	131.8	90.50	1,293.1	-9,029.4	6,720.7	6,517.3	203.34	33.052			
9,100.0	6,642.5	6,617.5	6,617.5	72.8	131.8	90.50	1,293.1	-9,029.4	6,676.2	6,471.7	204.57	32.635			
9,153.5	6,642.4	6,617.4	6,617.4	74.3	131.8	90.49	1,293.1	-9,029.4	6,623.3	6,417.2	206.04	32.145			
9,200.0	6,642.4	6,617.4	6,617.4	75.6	131.8	90.49	1,293.1	-9,029.4	6,577.3	6,370.0	207.32	31.726			
9,251.9	6,642.3	6,617.3	6,617.3	77.0	131.8	90.49	1,293.1	-9,029.4	6,525.9	6,317.1	208.75	31.262			
9,300.0	6,642.2	6,617.2	6,617.2	78.3	131.8	90.48	1,293.1	-9,029.4	6,478.4	6,268.3	210.07	30.839			
9,350.4	6,642.2	6,617.2	6,617.2	79.7	131.8	90.48	1,293.1	-9,029.4	6,428.5	6,217.1	211.46	30.401			
9,400.0	6,642.1	6,617.1	6,617.1	81.1	131.8	90.48	1,293.1	-9,029.4	6,379.5	6,166.6	212.82	29.976			
9,448.8	6,642.0	6,617.0	6,617.0	82.4	131.8	90.47	1,293.1	-9,029.4	6,331.2	6,117.0	214.17	29.562			
9,500.0	6,642.0	6,617.0	6,617.0	83.8	131.8	90.47	1,293.1	-9,029.4	6,280.6	6,065.0	215.58	29.133			
9,547.2	6,641.9	6,616.9	6,616.9	85.1	131.8	90.47	1,293.1	-9,029.4	6,233.9	6,017.0	216.88	28.743			

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,616.9	6,616.9	86.6	131.8	90.46	1,293.1	-9,029.4	6,181.8	5,963.4	218.34	28.312		
9,645.6	6,641.8	6,616.8	6,616.8	87.9	131.8	90.46	1,293.1	-9,029.4	6,136.7	5,917.1	219.60	27.944		
9,700.0	6,641.7	6,616.7	6,616.7	89.4	131.8	90.45	1,293.1	-9,029.4	6,083.0	5,861.9	221.11	27.512		
9,744.1	6,641.7	6,616.7	6,616.7	90.6	131.8	90.45	1,293.1	-9,029.4	6,039.5	5,817.1	222.33	27.165		
9,800.0	6,641.6	6,616.6	6,616.6	92.1	131.8	90.45	1,293.1	-9,029.4	5,984.2	5,760.4	223.87	26.730		
9,842.5	6,641.6	6,616.6	6,616.6	93.3	131.8	90.44	1,293.1	-9,029.4	5,942.3	5,717.2	225.05	26.404		
9,900.0	6,641.5	6,616.5	6,616.5	94.9	131.8	90.44	1,293.1	-9,029.4	5,885.5	5,658.9	226.64	25.968		
9,940.9	6,641.4	6,616.4	6,616.4	96.0	131.8	90.44	1,293.1	-9,029.4	5,845.2	5,617.4	227.78	25.662		
10,000.0	6,641.4	6,616.4	6,616.4	97.7	131.8	90.43	1,293.1	-9,029.4	5,786.9	5,557.5	229.41	25.225		
10,039.3	6,641.3	6,616.3	6,616.3	98.8	131.8	90.43	1,293.1	-9,029.4	5,748.1	5,517.6	230.51	24.937		
10,100.0	6,641.2	6,616.2	6,616.2	100.4	131.8	90.42	1,293.1	-9,029.4	5,688.3	5,456.1	232.19	24.498		
10,137.8	6,641.2	6,616.2	6,616.2	101.5	131.8	90.42	1,293.1	-9,029.4	5,651.0	5,417.8	233.24	24.229		
10,200.0	6,641.1	6,616.1	6,616.1	103.2	131.8	90.42	1,293.1	-9,029.4	5,589.7	5,354.7	234.96	23.790		
10,236.2	6,641.1	6,616.1	6,616.1	104.2	131.8	90.41	1,293.1	-9,029.4	5,554.0	5,318.1	235.97	23.537		
10,300.0	6,641.0	6,616.0	6,616.0	106.0	131.8	90.41	1,293.1	-9,029.4	5,491.2	5,253.5	237.74	23.097		
10,334.6	6,640.9	6,615.9	6,615.9	107.0	131.8	90.41	1,293.1	-9,029.4	5,457.1	5,218.4	238.70	22.861		
10,400.0	6,640.9	6,615.9	6,615.9	108.8	131.8	90.40	1,293.1	-9,029.4	5,392.7	5,152.2	240.52	22.421		
10,433.0	6,640.8	6,615.8	6,615.8	109.7	131.8	90.40	1,293.1	-9,029.4	5,360.2	5,118.8	241.44	22.201		
10,500.0	6,640.7	6,615.7	6,615.7	111.6	131.8	90.39	1,293.1	-9,029.4	5,294.3	5,051.0	243.30	21.760		
10,531.5	6,640.7	6,615.7	6,615.7	112.4	131.8	90.39	1,293.1	-9,029.4	5,263.4	5,019.2	244.18	21.556		
10,600.0	6,640.6	6,615.6	6,615.6	114.3	131.8	90.39	1,293.1	-9,029.4	5,196.0	4,949.9	246.08	21.115		
10,629.9	6,640.6	6,615.6	6,615.6	115.2	131.8	90.38	1,293.1	-9,029.4	5,166.6	4,919.7	246.92	20.925		
10,700.0	6,640.5	6,615.5	6,615.5	117.1	131.8	90.38	1,293.1	-9,029.4	5,097.7	4,848.9	248.87	20.484		
10,728.3	6,640.4	6,615.4	6,615.4	117.9	131.8	90.38	1,293.1	-9,029.4	5,069.9	4,820.3	249.66	20.308		
10,800.0	6,640.4	6,615.4	6,615.4	119.9	131.8	90.37	1,293.1	-9,029.4	4,999.5	4,747.9	251.65	19.867		
10,826.7	6,640.3	6,615.3	6,615.3	120.7	131.8	90.37	1,293.1	-9,029.4	4,973.3	4,720.9	252.40	19.704		
10,900.0	6,640.2	6,615.2	6,615.2	122.7	131.8	90.36	1,293.1	-9,029.4	4,901.4	4,647.0	254.44	19.264		
10,925.2	6,640.2	6,615.2	6,615.2	123.4	131.8	90.36	1,293.1	-9,029.4	4,876.7	4,621.6	255.14	19.114		
11,000.0	6,640.1	6,615.1	6,615.1	125.5	131.8	90.36	1,293.1	-9,029.4	4,803.4	4,546.1	257.22	18.674		
11,023.6	6,640.1	6,615.1	6,615.1	126.1	131.8	90.35	1,293.1	-9,029.4	4,780.2	4,522.3	257.88	18.537		
11,100.0	6,640.0	6,615.0	6,615.0	128.3	131.8	90.35	1,293.1	-9,029.4	4,705.4	4,445.4	260.01	18.097		
11,122.0	6,639.9	6,614.9	6,614.9	128.9	131.8	90.35	1,293.1	-9,029.4	4,683.8	4,423.2	260.62	17.971		
11,200.0	6,639.8	6,614.8	6,614.8	131.1	131.8	90.34	1,293.1	-9,029.4	4,607.5	4,344.7	262.80	17.532		
11,220.4	6,639.8	6,614.8	6,614.8	131.6	131.8	90.34	1,293.1	-9,029.4	4,587.5	4,324.1	263.37	17.418		
11,300.0	6,639.7	6,614.7	6,614.7	133.9	131.8	90.33	1,293.1	-9,029.4	4,509.7	4,244.1	265.59	16.980		
11,318.9	6,639.7	6,614.7	6,614.7	134.4	131.8	90.33	1,293.1	-9,029.4	4,491.3	4,225.1	266.11	16.877		
11,400.0	6,639.6	6,614.6	6,614.6	136.7	131.8	90.33	1,293.1	-9,029.4	4,412.0	4,143.6	268.38	16.440		
11,417.3	6,639.6	6,614.6	6,614.6	137.1	131.8	90.32	1,293.1	-9,029.4	4,395.1	4,126.3	268.86	16.347		
11,500.0	6,639.5	6,614.5	6,614.5	139.4	131.8	90.32	1,293.1	-9,029.4	4,314.4	4,043.3	271.17	15.910		
11,515.7	6,639.5	6,614.5	6,614.5	139.9	131.8	90.32	1,293.1	-9,029.4	4,299.1	4,027.5	271.61	15.828		
11,600.0	6,639.3	6,614.3	6,614.3	142.2	131.8	90.31	1,293.1	-9,029.4	4,217.0	3,943.0	273.96	15.393		
11,614.1	6,639.3	6,614.3	6,614.3	142.6	131.8	90.31	1,293.1	-9,029.4	4,203.2	3,928.8	274.36	15.320		
11,700.0	6,639.2	6,614.2	6,614.2	145.0	131.8	90.30	1,293.1	-9,029.4	4,119.6	3,842.9	276.75	14.885		
11,712.6	6,639.2	6,614.2	6,614.2	145.4	131.8	90.30	1,293.1	-9,029.4	4,107.4	3,830.3	277.10	14.822		
11,800.0	6,639.1	6,614.1	6,614.1	147.8	131.8	90.30	1,293.1	-9,029.4	4,022.4	3,742.8	279.55	14.389		
11,811.0	6,639.1	6,614.1	6,614.1	148.1	131.8	90.29	1,293.1	-9,029.4	4,011.7	3,731.8	279.85	14.335		
11,900.0	6,639.0	6,614.0	6,614.0	150.6	131.8	90.29	1,293.1	-9,029.4	3,925.3	3,643.0	282.34	13.903		
11,909.4	6,639.0	6,614.0	6,614.0	150.9	131.8	90.29	1,293.1	-9,029.4	3,916.2	3,633.6	282.60	13.857		
12,000.0	6,638.8	6,613.8	6,613.8	153.4	131.8	90.28	1,293.1	-9,029.4	3,828.4	3,543.2	285.13	13.427		
12,007.8	6,638.8	6,613.8	6,613.8	153.6	131.8	90.28	1,293.1	-9,029.4	3,820.8	3,535.4	285.35	13.390		
12,100.0	6,638.7	6,613.7	6,613.7	156.2	131.8	90.27	1,293.1	-9,029.4	3,731.6	3,443.7	287.93	12.960		
12,106.3	6,638.7	6,613.7	6,613.7	156.4	131.8	90.27	1,293.1	-9,029.4	3,725.5	3,437.4	288.10	12.931		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.6	6,613.6	6,613.6	159.0	131.7	90.26	1,293.1	-9,029.4	3,635.0	3,344.3	290.72	12.503	
12,204.7	6,638.6	6,613.6	6,613.6	159.1	131.7	90.26	1,293.1	-9,029.4	3,630.5	3,339.6	290.85	12.482	
12,300.0	6,638.5	6,613.5	6,613.5	161.8	131.7	90.26	1,293.1	-9,029.4	3,538.6	3,245.1	293.52	12.056	
12,303.1	6,638.5	6,613.5	6,613.5	161.9	131.7	90.26	1,293.1	-9,029.4	3,535.6	3,242.0	293.61	12.042	
12,400.0	6,638.3	6,613.3	6,613.3	164.6	131.7	90.25	1,293.1	-9,029.4	3,442.4	3,146.1	296.31	11.617	
12,401.5	6,638.3	6,613.3	6,613.3	164.6	131.7	90.25	1,293.1	-9,029.4	3,440.9	3,144.6	296.36	11.611	
12,500.0	6,638.2	6,613.2	6,613.2	167.4	131.7	90.24	1,293.1	-9,029.4	3,346.4	3,047.3	299.11	11.188	
12,598.4	6,638.1	6,613.1	6,613.1	170.2	131.7	90.23	1,293.1	-9,029.4	3,252.2	2,950.4	301.86	10.774	
12,600.0	6,638.1	6,613.1	6,613.1	170.2	131.7	90.23	1,293.1	-9,029.4	3,250.7	2,948.8	301.91	10.767	
12,696.8	6,638.0	6,613.0	6,613.0	172.9	131.7	90.23	1,293.1	-9,029.4	3,158.2	2,853.6	304.62	10.368	
12,700.0	6,638.0	6,613.0	6,613.0	173.0	131.7	90.23	1,293.1	-9,029.4	3,155.2	2,850.5	304.70	10.355	
12,795.2	6,637.8	6,612.8	6,612.8	175.7	131.7	90.22	1,293.1	-9,029.4	3,064.5	2,757.2	307.37	9.970	
12,800.0	6,637.8	6,612.8	6,612.8	175.8	131.7	90.22	1,293.1	-9,029.4	3,060.0	2,752.5	307.50	9.951	
12,893.7	6,637.7	6,612.7	6,612.7	178.4	131.7	90.21	1,293.1	-9,029.4	2,971.2	2,661.0	310.12	9.581	
12,900.0	6,637.7	6,612.7	6,612.7	178.6	131.7	90.21	1,293.1	-9,029.4	2,965.2	2,654.9	310.30	9.556	
12,992.1	6,637.6	6,612.6	6,612.6	181.2	131.7	90.21	1,293.1	-9,029.4	2,878.1	2,565.2	312.88	9.199	
13,000.0	6,637.6	6,612.6	6,612.6	181.4	131.7	90.20	1,293.1	-9,029.4	2,870.6	2,557.6	313.10	9.169	
13,090.5	6,637.5	6,612.5	6,612.5	183.9	131.7	90.20	1,293.1	-9,029.4	2,785.4	2,469.8	315.63	8.825	
13,100.0	6,637.5	6,612.5	6,612.5	184.2	131.7	90.20	1,293.1	-9,029.4	2,776.5	2,460.6	315.90	8.789	
13,188.9	6,637.4	6,612.4	6,612.4	186.7	131.7	90.19	1,293.1	-9,029.4	2,693.1	2,374.8	318.39	8.459	
13,200.0	6,637.3	6,612.3	6,612.3	187.0	131.7	90.19	1,293.1	-9,029.4	2,682.8	2,364.1	318.70	8.418	
13,287.4	6,637.2	6,612.2	6,612.2	189.4	131.7	90.18	1,293.1	-9,029.4	2,601.3	2,280.2	321.14	8.100	
13,300.0	6,637.2	6,612.2	6,612.2	189.8	131.7	90.18	1,293.1	-9,029.4	2,589.6	2,268.1	321.49	8.055	
13,385.8	6,637.1	6,612.1	6,612.1	192.2	131.7	90.18	1,293.1	-9,029.4	2,510.0	2,186.1	323.90	7.749	
13,400.0	6,637.1	6,612.1	6,612.1	192.6	131.7	90.17	1,293.1	-9,029.4	2,496.9	2,172.6	324.29	7.699	
13,484.2	6,637.0	6,612.0	6,612.0	195.0	131.7	90.17	1,293.1	-9,029.4	2,419.2	2,092.6	326.65	7.406	
13,500.0	6,637.0	6,612.0	6,612.0	195.4	131.7	90.17	1,293.1	-9,029.4	2,404.7	2,077.6	327.09	7.352	
13,582.6	6,636.9	6,611.9	6,611.9	197.7	131.7	90.16	1,293.1	-9,029.4	2,329.1	1,999.7	329.41	7.070	
13,600.0	6,636.8	6,611.8	6,611.8	198.2	131.7	90.16	1,293.1	-9,029.4	2,313.3	1,983.4	329.89	7.012	
13,681.1	6,636.7	6,611.7	6,611.7	200.5	131.7	90.15	1,293.1	-9,029.4	2,239.6	1,907.5	332.16	6.743	
13,700.0	6,636.7	6,611.7	6,611.7	201.0	131.7	90.15	1,293.1	-9,029.4	2,222.5	1,889.8	332.69	6.680	
13,779.5	6,636.6	6,611.6	6,611.6	203.2	131.7	90.15	1,293.1	-9,029.4	2,151.0	1,816.0	334.92	6.422	
13,800.0	6,636.6	6,611.6	6,611.6	203.8	131.7	90.14	1,293.1	-9,029.4	2,132.6	1,797.1	335.49	6.357	
13,877.9	6,636.5	6,611.5	6,611.5	206.0	131.7	90.14	1,293.1	-9,029.4	2,063.2	1,725.5	337.68	6.110	
13,900.0	6,636.5	6,611.5	6,611.5	206.6	131.7	90.14	1,293.1	-9,029.4	2,043.6	1,705.3	338.29	6.041	
13,976.3	6,636.4	6,611.4	6,611.4	208.8	131.7	90.13	1,293.1	-9,029.4	1,976.4	1,636.0	340.43	5.806	
14,000.0	6,636.3	6,611.3	6,611.3	209.4	131.7	90.13	1,293.1	-9,029.4	1,955.7	1,614.6	341.10	5.734	
14,074.8	6,636.2	6,611.2	6,611.2	211.5	131.7	90.12	1,293.1	-9,029.4	1,890.8	1,547.6	343.19	5.509	
14,100.0	6,636.2	6,611.2	6,611.2	212.2	131.7	90.12	1,293.1	-9,029.4	1,869.0	1,525.1	343.90	5.435	
14,173.2	6,636.1	6,611.1	6,611.1	214.3	131.7	90.12	1,293.1	-9,029.4	1,806.4	1,460.5	345.95	5.222	
14,200.0	6,636.1	6,611.1	6,611.1	215.0	131.7	90.11	1,293.1	-9,029.4	1,783.7	1,437.0	346.70	5.145	
14,271.6	6,636.0	6,611.0	6,611.0	217.0	131.7	90.11	1,293.1	-9,029.4	1,723.6	1,374.9	348.70	4.943	
14,300.0	6,636.0	6,611.0	6,611.0	217.8	131.7	90.11	1,293.1	-9,029.4	1,700.0	1,350.5	349.50	4.864	
14,370.0	6,635.9	6,610.9	6,610.9	219.8	131.7	90.10	1,293.1	-9,029.4	1,642.5	1,291.0	351.46	4.673	
14,400.0	6,635.8	6,610.8	6,610.8	220.6	131.7	90.10	1,293.1	-9,029.4	1,618.2	1,265.9	352.30	4.593	
14,468.5	6,635.7	6,610.7	6,610.7	222.6	131.7	90.09	1,293.1	-9,029.4	1,563.4	1,209.1	354.22	4.414	
14,500.0	6,635.7	6,610.7	6,610.7	223.4	131.7	90.09	1,293.1	-9,029.4	1,538.5	1,183.4	355.10	4.333	
14,566.9	6,635.6	6,610.6	6,610.6	225.3	131.7	90.09	1,293.1	-9,029.4	1,486.5	1,129.6	356.98	4.164	
14,600.0	6,635.6	6,610.6	6,610.6	226.2	131.7	90.08	1,293.1	-9,029.4	1,461.3	1,103.4	357.90	4.083	
14,665.3	6,635.5	6,610.5	6,610.5	228.1	131.7	90.08	1,293.1	-9,029.4	1,412.4	1,052.7	359.73	3.926	
14,700.0	6,635.5	6,610.5	6,610.5	229.0	131.7	90.08	1,293.1	-9,029.4	1,387.0	1,026.3	360.71	3.845	
14,763.7	6,635.4	6,610.4	6,610.4	230.8	131.7	90.07	1,293.1	-9,029.4	1,341.4	978.9	362.49	3.700	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.3	6,610.3	6,610.3	231.8	131.7	90.07	1,293.1	-9,029.4	1,316.1	952.6	363.51	3.621	
14,862.2	6,635.2	6,610.2	6,610.2	233.6	131.7	90.06	1,293.1	-9,029.4	1,274.0	908.8	365.25	3.488	
14,900.0	6,635.2	6,610.2	6,610.2	234.7	131.7	90.06	1,293.1	-9,029.4	1,249.2	882.9	366.31	3.410	
14,960.6	6,635.1	6,610.1	6,610.1	236.4	131.7	90.06	1,293.1	-9,029.4	1,210.9	842.9	368.01	3.291	
14,995.1	6,635.0	6,610.0	6,610.0	237.3	131.7	90.05	1,293.1	-9,029.4	1,189.9	821.0	368.98	3.225 CC, ES, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-104.96	-1,894.5	-7,092.6	7,341.3				
98.4	98.4	46.2	46.2	0.1	0.0	-104.95	-1,894.5	-7,092.7	7,341.3	7,341.2	0.11	N/A	
100.0	100.0	47.3	47.3	0.1	0.0	-104.95	-1,894.5	-7,092.7	7,341.3	7,341.2	0.12	N/A	
196.8	196.8	115.6	115.6	0.3	0.0	-104.95	-1,894.4	-7,093.0	7,341.8	7,341.4	0.36	N/A	
200.0	200.0	137.0	137.0	0.3	0.1	-104.95	-1,894.4	-7,093.2	7,341.8	7,341.5	0.37	N/A	
295.3	295.3	340.2	340.2	0.5	0.5	-104.94	-1,893.1	-7,093.5	7,342.2	7,341.2	1.02	7,194.176	
300.0	300.0	344.1	344.1	0.5	0.5	-104.94	-1,893.1	-7,093.5	7,342.1	7,341.1	1.04	7,063.711	
393.7	393.7	424.3	424.3	0.8	0.7	-104.94	-1,892.1	-7,093.0	7,341.3	7,339.8	1.42	5,167.826	
400.0	400.0	432.2	432.2	0.8	0.7	-104.94	-1,892.0	-7,092.9	7,341.2	7,339.8	1.45	5,057.826	
492.1	492.1	590.2	590.2	1.0	1.0	-104.92	-1,889.8	-7,091.5	7,340.1	7,338.1	2.00	3,673.814	
500.0	500.0	607.0	607.0	1.0	1.1	-104.92	-1,889.5	-7,091.2	7,340.0	7,337.9	2.05	3,576.961	
590.5	590.5	1,426.1	1,415.3	1.2	3.5	-104.18	-1,785.0	-7,063.6	7,336.0	7,331.8	4.24	1,729.781	
600.0	600.0	1,429.8	1,418.9	1.2	3.5	-104.17	-1,784.0	-7,063.5	7,334.9	7,330.6	4.27	1,716.564	
689.0	689.0	1,482.0	1,468.9	1.4	3.7	-104.07	-1,769.2	-7,061.4	7,325.0	7,320.3	4.62	1,584.376	
700.0	700.0	1,482.0	1,468.9	1.4	3.7	-104.07	-1,769.2	-7,061.4	7,323.7	7,319.1	4.65	1,575.667	
787.4	787.4	1,569.1	1,552.3	1.6	4.2	-103.88	-1,744.4	-7,058.3	7,314.4	7,309.3	5.10	1,433.296	
800.0	800.0	1,582.6	1,565.2	1.7	4.2	-103.85	-1,740.5	-7,057.8	7,313.0	7,307.8	5.17	1,413.291	
885.8	885.8	1,662.8	1,641.9	1.9	4.6	-103.68	-1,717.2	-7,054.9	7,303.6	7,298.0	5.62	1,299.304	
900.0	900.0	1,671.8	1,650.5	1.9	4.7	-103.66	-1,714.5	-7,054.6	7,302.1	7,296.4	5.68	1,285.429	
984.2	984.2	1,728.0	1,704.3	2.1	5.0	-103.54	-1,698.4	-7,052.6	7,293.2	7,287.2	6.04	1,206.791	
1,000.0	1,000.0	1,742.6	1,718.3	2.1	5.0	-103.51	-1,694.2	-7,052.1	7,291.6	7,285.5	6.12	1,190.852	
1,082.7	1,082.7	1,831.6	1,803.6	2.3	5.5	-103.32	-1,669.0	-7,049.0	7,283.0	7,276.4	6.58	1,106.647	
1,100.0	1,100.0	1,844.4	1,815.8	2.3	5.5	-103.29	-1,665.4	-7,048.5	7,281.2	7,274.6	6.66	1,093.205	
1,181.1	1,181.1	1,905.6	1,874.6	2.5	5.8	-103.16	-1,648.1	-7,046.5	7,273.0	7,266.0	7.04	1,033.670	
1,200.0	1,200.0	1,921.2	1,889.6	2.6	5.9	-103.13	-1,643.8	-7,045.9	7,271.1	7,264.0	7.13	1,020.203	
1,279.5	1,279.5	2,218.0	2,174.5	2.7	7.4	-102.53	-1,562.6	-7,030.6	7,261.7	7,253.4	8.26	879.599	
1,300.0	1,300.0	2,218.0	2,174.5	2.8	7.4	-102.53	-1,562.6	-7,030.6	7,259.1	7,250.8	8.30	874.411	
1,377.9	1,377.9	2,263.4	2,218.2	3.0	7.6	-143.74	-1,550.3	-7,027.7	7,250.3	7,240.0	10.26	706.930	
1,400.0	1,400.0	2,273.0	2,227.3	3.0	7.7	-143.74	-1,547.7	-7,027.1	7,248.2	7,237.8	10.35	700.399	
1,476.4	1,476.3	2,318.4	2,271.0	3.2	7.9	-143.73	-1,535.5	-7,024.6	7,242.3	7,231.6	10.73	675.098	
1,500.0	1,499.8	2,349.4	2,300.8	3.2	8.1	-143.70	-1,527.1	-7,022.9	7,240.8	7,229.9	10.93	662.570	
1,574.8	1,574.4	2,413.3	2,362.2	3.4	8.4	-143.63	-1,509.4	-7,019.5	7,237.2	7,225.8	11.41	634.523	
1,600.0	1,599.5	2,429.2	2,377.3	3.5	8.5	-143.62	-1,505.0	-7,018.7	7,236.4	7,224.8	11.54	627.135	
1,673.2	1,672.2	2,463.0	2,409.7	3.6	8.7	-143.58	-1,495.3	-7,017.1	7,235.2	7,223.4	11.87	609.778	
1,683.8	1,682.6	2,481.0	2,427.0	3.7	8.8	-143.55	-1,490.1	-7,016.3	7,235.2	7,223.2	11.98	604.126	
1,700.0	1,698.7	2,490.8	2,436.3	3.7	8.8	-143.53	-1,487.4	-7,015.8	7,235.3	7,223.2	12.06	600.057	
1,771.6	1,769.5	2,545.0	2,488.4	3.9	9.1	-143.45	-1,472.5	-7,013.4	7,236.5	7,224.0	12.48	579.966	
1,800.0	1,797.5	2,791.0	2,723.7	4.0	10.4	-143.11	-1,402.2	-6,999.1	7,236.6	7,222.8	13.80	524.471	
1,870.1	1,866.3	2,816.9	2,748.4	4.2	10.6	-143.06	-1,394.8	-6,997.3	7,238.0	7,223.9	14.07	514.318	
1,899.9	1,895.6	2,831.2	2,762.2	4.3	10.6	-143.04	-1,390.8	-6,996.4	7,239.1	7,224.9	14.20	509.637	
1,968.5	1,962.6	2,954.0	2,879.7	4.5	11.3	-142.90	-1,356.4	-6,988.3	7,242.2	7,227.2	15.00	482.828	
2,000.0	1,993.4	2,979.1	2,903.6	4.6	11.4	-142.87	-1,348.8	-6,986.6	7,243.2	7,228.0	15.22	475.979	
2,066.9	2,058.9	3,007.9	2,930.9	4.8	11.6	-142.83	-1,340.1	-6,984.7	7,245.8	7,230.3	15.56	465.749	
2,100.0	2,091.3	3,035.0	2,956.7	4.9	11.8	-142.80	-1,331.9	-6,983.1	7,247.3	7,231.5	15.79	458.871	
2,165.3	2,155.2	3,035.0	2,956.7	5.2	11.8	-142.80	-1,331.9	-6,983.1	7,250.3	7,234.4	15.98	453.793	
2,200.0	2,189.1	3,065.3	2,985.6	5.3	11.9	-142.76	-1,322.9	-6,981.5	7,252.1	7,235.8	16.23	446.812	
2,263.8	2,251.5	3,092.9	3,012.1	5.5	12.1	-142.73	-1,315.0	-6,980.0	7,255.5	7,239.0	16.56	438.221	
2,300.0	2,286.9	3,117.0	3,035.2	5.7	12.2	-142.70	-1,308.3	-6,978.8	7,257.7	7,240.9	16.78	432.394	
2,362.2	2,347.7	3,178.4	3,094.2	5.9	12.5	-142.64	-1,291.7	-6,975.7	7,261.4	7,244.1	17.27	420.547	
2,400.0	2,384.7	3,267.9	3,180.3	6.0	13.0	-142.55	-1,267.9	-6,970.7	7,263.5	7,245.7	17.81	407.734	
2,460.6	2,444.0	3,310.5	3,221.3	6.3	13.2	-142.51	-1,256.5	-6,968.1	7,266.7	7,248.5	18.21	399.056	
2,500.0	2,482.5	3,331.1	3,241.1	6.4	13.3	-142.49	-1,250.9	-6,967.0	7,268.9	7,250.5	18.43	394.354	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
2,559.0	2,540.3	3,362.0	3,270.7	6.7	13.5	-142.45	-1,242.3	-6,965.4	7,272.4	7,253.6	18.77	387.463		
2,600.0	2,580.3	3,445.1	3,350.5	6.8	13.9	-142.37	-1,219.6	-6,961.1	7,274.8	7,255.5	19.31	376.690		
2,657.5	2,636.5	3,647.6	3,544.7	7.1	15.0	-142.15	-1,163.4	-6,948.3	7,277.7	7,257.2	20.53	354.423		
2,700.0	2,678.1	3,689.0	3,584.1	7.2	15.2	-142.10	-1,151.3	-6,945.3	7,279.2	7,258.3	20.89	348.493		
2,755.9	2,732.8	3,734.6	3,627.5	7.5	15.5	-142.05	-1,137.8	-6,942.0	7,281.2	7,259.9	21.31	341.627		
2,800.0	2,776.0	3,771.0	3,662.2	7.7	15.7	-142.00	-1,126.9	-6,939.6	7,282.9	7,261.3	21.65	336.360		
2,854.3	2,829.1	3,830.3	3,718.6	7.9	16.1	-141.93	-1,108.9	-6,935.6	7,285.0	7,262.8	22.16	328.773		
2,900.0	2,873.8	3,878.5	3,764.3	8.1	16.3	-141.87	-1,094.1	-6,932.4	7,286.7	7,264.1	22.58	322.719		
2,952.7	2,925.4	3,928.1	3,811.3	8.3	16.6	-141.80	-1,078.4	-6,929.2	7,288.7	7,265.7	23.04	316.383		
3,000.0	2,971.6	3,935.0	3,817.8	8.5	16.7	-141.79	-1,076.1	-6,928.7	7,290.6	7,267.4	23.23	313.851		
3,051.2	3,021.6	3,970.8	3,851.7	8.7	16.9	-141.74	-1,064.8	-6,926.5	7,292.8	7,269.2	23.59	309.084		
3,100.0	3,069.4	3,990.1	3,870.0	8.9	17.0	-141.72	-1,059.0	-6,925.4	7,295.1	7,271.3	23.86	305.746		
3,149.6	3,117.9	4,098.0	3,972.8	9.1	17.6	-141.58	-1,026.7	-6,918.8	7,297.4	7,272.8	24.61	296.472		
3,200.0	3,167.2	4,130.7	4,003.8	9.3	17.8	-141.54	-1,016.5	-6,916.7	7,299.5	7,274.5	24.97	292.370		
3,248.0	3,214.2	4,144.3	4,016.7	9.5	17.9	-141.52	-1,012.3	-6,915.9	7,301.7	7,276.5	25.20	289.724		
3,300.0	3,265.0	4,180.0	4,050.5	9.8	18.1	-141.47	-1,001.1	-6,914.2	7,304.5	7,278.9	25.58	285.571		
3,346.4	3,310.5	4,180.0	4,050.5	10.0	18.1	-141.47	-1,001.1	-6,914.2	7,307.1	7,281.3	25.73	283.972		
3,400.0	3,362.9	4,227.1	4,095.2	10.2	18.4	-141.41	-986.3	-6,912.1	7,310.3	7,284.1	26.17	279.305		
3,444.9	3,406.7	4,302.6	4,167.1	10.4	18.8	-141.31	-963.5	-6,908.3	7,312.8	7,286.1	26.74	273.514		
3,473.0	3,434.2	4,343.0	4,205.6	10.5	19.0	-141.26	-951.6	-6,906.0	7,314.3	7,287.3	27.05	270.431		
3,500.0	3,460.7	4,360.4	4,222.3	10.6	19.1	-141.26	-946.5	-6,905.0	7,315.7	7,288.4	27.23	268.632		
3,543.3	3,503.2	4,386.1	4,246.8	10.7	19.3	-141.25	-939.1	-6,903.6	7,317.5	7,290.0	27.50	266.085		
3,600.0	3,559.0	4,425.0	4,284.0	10.9	19.5	-141.22	-927.9	-6,901.6	7,319.3	7,291.4	27.88	262.561		
3,641.7	3,600.2	4,507.0	4,362.5	11.0	19.9	-141.12	-904.6	-6,896.9	7,319.8	7,291.4	28.43	257.496		
3,700.0	3,657.9	4,540.1	4,394.2	11.2	20.1	-141.07	-895.3	-6,895.0	7,319.9	7,291.1	28.76	254.505		
3,740.1	3,697.8	4,553.8	4,407.3	11.3	20.2	-141.05	-891.4	-6,894.3	7,319.6	7,290.6	28.93	252.979		
3,800.0	3,757.3	4,589.0	4,441.0	11.4	20.4	-140.98	-881.5	-6,892.6	7,318.6	7,289.3	29.26	250.081		
3,838.6	3,795.7	4,589.0	4,441.0	11.5	20.4	-140.97	-881.5	-6,892.6	7,317.6	7,288.2	29.35	249.344		
3,900.0	3,857.0	4,658.7	4,508.0	11.7	20.7	-140.82	-862.5	-6,889.5	7,315.2	7,285.4	29.84	245.171		
3,937.0	3,893.9	4,670.0	4,518.9	11.7	20.8	-140.77	-859.4	-6,888.9	7,313.4	7,283.4	29.96	244.080		
4,000.0	3,956.9	4,711.7	4,559.0	11.8	21.0	-140.65	-848.3	-6,887.1	7,309.5	7,279.2	30.29	241.327		
4,035.4	3,992.3	4,727.9	4,574.6	11.9	21.1	-140.59	-844.0	-6,886.5	7,307.0	7,276.6	30.43	240.154		
4,072.9	4,029.8	4,752.0	4,597.8	11.9	21.2	-99.31	-837.5	-6,885.6	7,304.1	7,279.7	24.38	299.537		
4,100.0	4,056.9	4,761.8	4,607.3	12.0	21.2	-99.29	-834.9	-6,885.2	7,301.9	7,277.4	24.45	298.611		
4,133.8	4,090.7	4,790.7	4,635.1	12.0	21.4	-99.23	-827.4	-6,884.2	7,299.2	7,274.6	24.59	296.876		
4,200.0	4,156.9	4,850.6	4,693.1	12.1	21.7	-99.12	-812.5	-6,882.0	7,294.0	7,269.2	24.86	293.449		
4,232.3	4,189.2	4,885.0	4,726.6	12.2	21.8	-99.06	-804.7	-6,880.6	7,291.5	7,266.5	25.00	291.670		
4,300.0	4,256.9	4,985.8	4,825.0	12.3	22.3	-98.91	-783.7	-6,875.9	7,286.1	7,260.7	25.38	287.137		
4,330.7	4,287.6	5,024.1	4,862.5	12.4	22.4	-98.84	-775.7	-6,874.0	7,283.5	7,258.0	25.53	285.298		
4,400.0	4,356.9	5,079.0	4,916.1	12.5	22.7	-98.76	-764.3	-6,871.2	7,277.8	7,252.0	25.80	282.113		
4,429.1	4,386.0	5,102.6	4,939.1	12.5	22.8	-98.72	-759.4	-6,870.1	7,275.4	7,249.5	25.91	280.810		
4,500.0	4,456.9	5,136.7	4,972.5	12.6	22.9	-98.67	-752.7	-6,868.4	7,269.8	7,243.7	26.12	278.304		
4,527.5	4,484.4	5,161.0	4,996.4	12.7	23.0	-98.64	-748.1	-6,867.4	7,267.8	7,241.6	26.23	277.047		
4,600.0	4,556.9	5,161.0	4,996.4	12.8	23.0	-98.64	-748.1	-6,867.4	7,262.7	7,236.4	26.37	275.463		
4,626.0	4,582.9	5,191.9	5,026.8	12.9	23.1	-98.60	-742.6	-6,866.1	7,260.9	7,234.4	26.48	274.171		
4,700.0	4,656.9	5,242.0	5,076.2	13.0	23.3	-98.54	-734.7	-6,864.2	7,256.4	7,229.6	26.73	271.423		
4,724.4	4,681.3	5,242.0	5,076.2	13.0	23.3	-98.54	-734.7	-6,864.2	7,254.9	7,228.1	26.78	270.909		
4,800.0	4,756.9	5,267.1	5,101.0	13.1	23.4	-98.51	-731.2	-6,863.4	7,250.7	7,223.7	26.97	268.815		
4,822.8	4,779.7	5,278.0	5,111.9	13.2	23.4	-98.50	-729.7	-6,863.0	7,249.6	7,222.5	27.04	268.117		
4,900.0	4,856.9	5,324.0	5,157.5	13.3	23.5	-98.45	-723.8	-6,861.8	7,245.9	7,218.6	27.28	265.606		
4,921.2	4,878.1	5,324.0	5,157.5	13.4	23.5	-98.45	-723.8	-6,861.8	7,244.9	7,217.6	27.32	265.183		
5,000.0	4,956.9	5,356.3	5,189.5	13.5	23.6	-98.43	-720.0	-6,861.0	7,241.8	7,214.3	27.53	263.034		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
5,019.7	4,976.6	5,364.1	5,197.3	13.5	23.6	-98.42	-719.2	-6,860.9	7,241.1	7,213.5	27.58	262.508		
5,100.0	5,056.9	5,406.0	5,239.0	13.7	23.8	-98.39	-714.9	-6,860.2	7,238.6	7,210.7	27.82	260.203		
5,118.1	5,075.0	5,406.0	5,239.0	13.7	23.8	-98.39	-714.9	-6,860.2	7,238.0	7,210.2	27.85	259.862		
5,200.0	5,156.9	5,439.8	5,272.7	13.8	23.8	-98.36	-712.0	-6,859.8	7,236.1	7,208.0	28.07	257.804		
5,216.5	5,173.4	5,447.3	5,280.1	13.9	23.8	-98.36	-711.5	-6,859.8	7,235.8	7,207.7	28.11	257.381		
5,300.0	5,256.9	5,488.0	5,320.7	14.0	23.9	-98.34	-709.1	-6,859.5	7,234.4	7,206.1	28.35	255.224		
5,314.9	5,271.8	5,488.0	5,320.7	14.1	23.9	-98.34	-709.1	-6,859.5	7,234.2	7,205.9	28.37	254.959		
5,400.0	5,356.9	5,539.8	5,372.5	14.2	24.0	-98.33	-707.0	-6,859.3	7,233.4	7,204.8	28.62	252.735		
5,413.4	5,370.3	5,547.1	5,379.8	14.2	24.0	-98.32	-706.8	-6,859.2	7,233.4	7,204.7	28.66	252.400		
5,500.0	5,456.9	5,699.0	5,531.7	14.4	24.2	-98.31	-704.5	-6,857.9	7,232.4	7,203.3	29.07	248.798		
5,511.8	5,468.7	5,708.4	5,541.1	14.4	24.2	-98.31	-704.5	-6,857.8	7,232.2	7,203.1	29.11	248.465		
5,600.0	5,556.9	5,764.5	5,597.1	14.6	24.3	-98.31	-704.2	-6,857.1	7,231.1	7,201.7	29.37	246.220		
5,610.2	5,567.1	5,770.1	5,602.7	14.6	24.3	-98.31	-704.2	-6,857.0	7,231.0	7,201.6	29.40	245.975		
5,700.0	5,656.9	5,825.0	5,657.6	14.7	24.3	-98.30	-703.9	-6,856.7	7,230.4	7,200.7	29.66	243.785		
5,708.6	5,665.5	5,836.1	5,668.8	14.8	24.3	-98.30	-703.8	-6,856.6	7,230.3	7,200.6	29.69	243.501		
5,800.0	5,756.9	5,936.6	5,769.3	14.9	24.5	-98.30	-703.5	-6,856.1	7,229.8	7,199.7	30.03	240.750		
5,807.1	5,764.0	5,943.0	5,775.7	14.9	24.5	-98.30	-703.4	-6,856.0	7,229.7	7,199.7	30.05	240.556		
5,900.0	5,856.9	6,011.4	5,844.1	15.1	24.5	-98.30	-703.1	-6,855.7	7,229.3	7,198.9	30.35	238.233		
5,905.5	5,862.4	6,014.9	5,847.5	15.1	24.5	-98.30	-703.1	-6,855.7	7,229.2	7,198.9	30.36	238.105		
5,953.0	5,909.9	6,044.5	5,877.1	15.2	24.6	-98.30	-702.8	-6,855.7	7,229.2	7,198.7	30.50	237.006		
5,971.9	5,928.8	6,060.0	5,892.6	15.3	24.6	-98.29	-702.6	-6,855.8	7,229.2	7,198.6	30.56	236.528		
6,000.0	5,956.9	6,105.3	5,937.9	15.3	24.6	-8.30	-702.1	-6,855.8	7,228.6	7,190.9	37.73	191.589		
6,003.9	5,960.8	6,113.3	5,946.0	15.3	24.7	-8.30	-702.1	-6,855.8	7,228.5	7,190.7	37.73	191.575		
6,050.0	6,006.7	6,165.3	5,998.0	15.4	24.7	-8.34	-701.7	-6,855.7	7,224.8	7,187.2	37.62	192.027		
6,100.0	6,056.2	6,201.5	6,034.1	15.4	24.8	-8.43	-701.4	-6,855.6	7,217.6	7,180.3	37.32	193.405		
6,102.3	6,058.5	6,203.2	6,035.8	15.4	24.8	-8.44	-701.4	-6,855.6	7,217.2	7,179.9	37.30	193.490		
6,150.0	6,105.1	6,223.0	6,055.6	15.4	24.8	-8.56	-701.1	-6,855.6	7,207.1	7,170.2	36.83	195.701		
6,200.0	6,153.0	6,266.2	6,098.8	15.5	24.8	-8.75	-700.6	-6,855.8	7,193.3	7,157.1	36.20	198.717		
6,200.8	6,153.8	6,266.7	6,099.3	15.5	24.8	-8.75	-700.6	-6,855.8	7,193.1	7,156.9	36.19	198.772		
6,250.0	6,199.9	6,305.0	6,137.6	15.5	24.9	-8.98	-700.1	-6,856.0	7,176.4	7,141.0	35.40	202.698		
6,299.2	6,244.8	6,336.3	6,168.9	15.5	24.9	-9.27	-699.6	-6,856.3	7,156.7	7,122.2	34.47	207.642		
6,300.0	6,245.5	6,337.0	6,169.6	15.5	24.9	-9.27	-699.6	-6,856.3	7,156.3	7,121.9	34.45	207.729		
6,350.0	6,289.6	6,381.0	6,213.6	15.5	25.0	-9.64	-698.8	-6,856.7	7,133.2	7,099.8	33.37	213.789		
6,397.6	6,329.9	6,455.3	6,287.9	15.4	25.1	-10.09	-697.6	-6,857.1	7,108.3	7,076.0	32.24	220.454		
6,400.0	6,331.8	6,459.2	6,291.8	15.4	25.1	-10.12	-697.5	-6,857.2	7,107.0	7,074.8	32.18	220.816		
6,450.0	6,372.2	6,546.3	6,378.9	15.4	25.2	-10.72	-696.4	-6,857.1	7,077.6	7,046.8	30.89	229.139		
6,496.0	6,407.4	6,604.2	6,436.8	15.4	25.3	-11.38	-695.3	-6,856.9	7,048.1	7,018.5	29.58	238.306		
6,500.0	6,410.3	6,608.9	6,441.5	15.4	25.3	-11.44	-695.2	-6,856.8	7,045.4	7,016.0	29.46	239.161		
6,550.0	6,446.1	6,663.6	6,496.2	15.4	25.4	-12.32	-694.2	-6,856.4	7,010.5	6,982.6	27.94	250.953		
6,594.5	6,475.9	6,705.9	6,538.5	15.4	25.4	-13.28	-693.4	-6,856.0	6,977.5	6,950.9	26.53	263.043		
6,600.0	6,479.4	6,710.9	6,543.5	15.4	25.4	-13.41	-693.3	-6,855.9	6,973.2	6,946.9	26.35	264.660		
6,650.0	6,510.0	6,714.0	6,546.6	15.5	25.4	-14.67	-693.3	-6,855.9	6,933.8	6,909.1	24.70	280.772		
6,692.9	6,534.0	6,737.0	6,569.6	15.7	25.5	-16.06	-692.9	-6,855.7	6,898.3	6,875.0	23.34	295.610		
6,700.0	6,537.8	6,738.7	6,571.2	15.7	25.5	-16.32	-692.8	-6,855.6	6,892.4	6,869.2	23.11	298.206		
6,750.0	6,562.6	6,749.7	6,582.2	16.2	25.5	-18.39	-692.7	-6,855.6	6,849.2	6,827.6	21.65	316.366		
6,791.3	6,580.8	6,757.7	6,590.3	16.6	25.5	-20.60	-692.5	-6,855.5	6,812.4	6,791.8	20.64	330.074		
6,800.0	6,584.3	6,759.3	6,591.9	16.7	25.5	-21.13	-692.5	-6,855.5	6,804.6	6,784.1	20.47	332.387		
6,850.0	6,602.9	6,767.6	6,600.2	17.3	25.5	-24.86	-692.3	-6,855.5	6,758.6	6,738.8	19.84	340.618		
6,889.7	6,615.2	6,795.0	6,627.5	17.9	25.5	-29.14	-691.8	-6,855.5	6,721.3	6,701.2	20.13	333.964		
6,900.0	6,618.1	6,795.0	6,627.5	18.0	25.5	-30.39	-691.8	-6,855.5	6,711.6	6,691.2	20.32	330.330		
6,950.0	6,630.0	6,795.0	6,627.5	18.8	25.5	-38.21	-691.8	-6,855.5	6,663.5	6,641.1	22.43	297.115		
6,988.2	6,636.8	6,795.0	6,627.5	19.5	25.5	-46.88	-691.8	-6,855.5	6,626.4	6,600.7	25.65	258.328		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
7,000.0	6,638.5	6,795.0	6,627.5	19.7	25.5	-50.21	-691.8	-6,855.5	6,614.8	6,587.9	26.95	245.479		
7,050.0	6,643.5	6,795.0	6,627.5	20.6	25.5	-68.46	-691.8	-6,855.5	6,565.7	6,532.3	33.40	196.566		
7,086.6	6,644.9	6,795.0	6,627.5	21.3	25.5	-85.72	-691.8	-6,855.5	6,529.6	6,492.3	37.31	175.011		
7,097.8	6,645.0	6,795.0	6,627.5	21.5	25.5	-91.31	-691.8	-6,855.5	6,518.5	6,480.5	37.98	171.630		
7,100.0	6,645.0	6,795.0	6,627.5	21.6	25.5	-91.31	-691.8	-6,855.5	6,516.3	6,478.3	38.02	171.383		
7,185.0	6,644.9	6,795.0	6,627.5	23.3	25.5	-91.31	-691.8	-6,855.5	6,432.4	6,392.7	39.75	161.830		
7,200.0	6,644.9	6,795.0	6,627.5	23.6	25.5	-91.31	-691.8	-6,855.5	6,417.6	6,377.6	40.05	160.233		
7,283.4	6,644.8	6,795.0	6,627.5	25.4	25.5	-91.31	-691.8	-6,855.5	6,335.3	6,293.4	41.87	151.314		
7,300.0	6,644.7	6,795.0	6,627.5	25.8	25.5	-91.31	-691.8	-6,855.5	6,318.9	6,276.7	42.23	149.636		
7,381.9	6,644.6	6,795.0	6,627.5	27.7	25.5	-91.31	-691.8	-6,855.5	6,238.2	6,194.1	44.10	141.444		
7,400.0	6,644.6	6,795.0	6,627.5	28.1	25.5	-91.31	-691.8	-6,855.5	6,220.3	6,175.8	44.52	139.724		
7,480.3	6,644.5	6,795.0	6,627.5	30.0	25.5	-91.31	-691.8	-6,855.5	6,141.1	6,094.7	46.43	132.273		
7,500.0	6,644.5	6,795.0	6,627.5	30.5	25.5	-91.31	-691.8	-6,855.5	6,121.7	6,074.8	46.90	130.538		
7,578.7	6,644.4	6,795.0	6,627.5	32.4	25.5	-91.31	-691.8	-6,855.5	6,044.1	5,995.3	48.82	123.801		
7,600.0	6,644.4	6,795.0	6,627.5	32.9	25.5	-91.31	-691.8	-6,855.5	6,023.2	5,973.8	49.34	122.070		
7,677.1	6,644.3	6,795.0	6,627.5	34.8	25.5	-91.31	-691.8	-6,855.5	5,947.2	5,895.9	51.27	115.996		
7,700.0	6,644.2	6,795.0	6,627.5	35.4	25.5	-91.31	-691.8	-6,855.5	5,924.7	5,872.8	51.84	114.283		
7,775.6	6,644.1	6,795.0	6,627.5	37.3	25.5	-91.31	-691.8	-6,855.5	5,850.3	5,796.5	53.76	108.813		
7,800.0	6,644.1	6,795.0	6,627.5	38.0	25.5	-91.31	-691.8	-6,855.5	5,826.2	5,771.9	54.39	107.128		
7,874.0	6,644.0	6,795.0	6,627.5	39.9	25.5	-91.31	-691.8	-6,855.5	5,753.4	5,697.1	56.29	102.203		
7,900.0	6,644.0	6,795.0	6,627.5	40.5	25.5	-91.31	-691.8	-6,855.5	5,727.8	5,670.9	56.96	100.551		
7,972.4	6,643.9	6,795.0	6,627.5	42.4	25.5	-91.31	-691.8	-6,855.5	5,656.6	5,597.8	58.85	96.114		
8,000.0	6,643.9	6,795.0	6,627.5	43.1	25.5	-91.31	-691.8	-6,855.5	5,629.5	5,569.9	59.57	94.498		
8,070.8	6,643.8	6,795.0	6,627.5	45.0	25.5	-91.31	-691.8	-6,855.5	5,559.9	5,498.4	61.44	90.497		
8,100.0	6,643.7	6,795.0	6,627.5	45.8	25.5	-91.31	-691.8	-6,855.5	5,531.2	5,469.0	62.20	88.920		
8,169.3	6,643.7	6,795.0	6,627.5	47.6	25.5	-91.31	-691.8	-6,855.5	5,463.2	5,399.2	64.04	85.307		
8,200.0	6,643.6	6,795.0	6,627.5	48.4	25.5	-91.31	-691.8	-6,855.5	5,433.0	5,368.2	64.86	83.770		
8,267.7	6,643.5	6,795.0	6,627.5	50.2	25.5	-91.31	-691.8	-6,855.5	5,366.6	5,299.9	66.66	80.503		
8,300.0	6,643.5	6,795.0	6,627.5	51.1	25.5	-91.31	-691.8	-6,855.5	5,334.9	5,267.4	67.53	79.005		
8,366.1	6,643.4	6,795.0	6,627.5	52.9	25.5	-91.31	-691.8	-6,855.5	5,270.0	5,200.7	69.30	76.047		
8,400.0	6,643.4	6,795.0	6,627.5	53.8	25.5	-91.31	-691.8	-6,855.5	5,236.8	5,166.6	70.21	74.589		
8,464.5	6,643.3	6,795.0	6,627.5	55.5	25.5	-91.31	-691.8	-6,855.5	5,173.5	5,101.6	71.95	71.906		
8,500.0	6,643.2	6,795.0	6,627.5	56.5	25.5	-91.31	-691.8	-6,855.5	5,138.8	5,065.9	72.90	70.487		
8,563.0	6,643.2	6,795.0	6,627.5	58.2	25.5	-91.31	-691.8	-6,855.5	5,077.1	5,002.5	74.61	68.050		
8,600.0	6,643.1	6,795.0	6,627.5	59.2	25.5	-91.31	-691.8	-6,855.5	5,040.9	4,965.3	75.61	66.669		
8,661.4	6,643.0	6,795.0	6,627.5	60.8	25.5	-91.31	-691.8	-6,855.5	4,980.8	4,903.5	77.28	64.453		
8,700.0	6,643.0	6,795.0	6,627.5	61.9	25.5	-91.31	-691.8	-6,855.5	4,943.1	4,864.7	78.33	63.108		
8,759.8	6,642.9	6,795.0	6,627.5	63.5	25.5	-91.31	-691.8	-6,855.5	4,884.6	4,804.6	79.96	61.090		
8,800.0	6,642.9	6,795.0	6,627.5	64.6	25.5	-91.31	-691.8	-6,855.5	4,845.3	4,764.3	81.05	59.781		
8,858.2	6,642.8	6,795.0	6,627.5	66.2	25.5	-91.31	-691.8	-6,855.5	4,788.4	4,705.8	82.64	57.942		
8,900.0	6,642.7	6,795.0	6,627.5	67.3	25.5	-91.31	-691.8	-6,855.5	4,747.6	4,663.9	83.78	56.667		
8,956.7	6,642.7	6,795.0	6,627.5	68.9	25.5	-91.31	-691.8	-6,855.5	4,692.3	4,607.0	85.33	54.989		
9,000.0	6,642.6	6,795.0	6,627.5	70.1	25.5	-91.31	-691.8	-6,855.5	4,650.1	4,563.6	86.52	53.746		
9,055.1	6,642.5	6,795.0	6,627.5	71.6	25.5	-91.31	-691.8	-6,855.5	4,596.4	4,508.4	88.03	52.214		
9,100.0	6,642.5	6,795.0	6,627.5	72.8	25.5	-91.31	-691.8	-6,855.5	4,552.6	4,463.4	89.26	51.003		
9,153.5	6,642.4	6,795.0	6,627.5	74.3	25.5	-91.31	-691.8	-6,855.5	4,500.5	4,409.8	90.73	49.602		
9,200.0	6,642.4	6,795.0	6,627.5	75.6	25.5	-91.31	-691.8	-6,855.5	4,455.3	4,363.3	92.01	48.422		
9,251.9	6,642.3	6,795.0	6,627.5	77.0	25.5	-91.31	-691.8	-6,855.5	4,404.8	4,311.3	93.44	47.141		
9,300.0	6,642.2	6,795.0	6,627.5	78.3	25.5	-91.31	-691.8	-6,855.5	4,358.1	4,263.3	94.76	45.990		
9,350.4	6,642.2	6,795.0	6,627.5	79.7	25.5	-91.31	-691.8	-6,855.5	4,309.2	4,213.0	96.15	44.817		
9,400.0	6,642.1	6,795.0	6,627.5	81.1	25.5	-91.31	-691.8	-6,855.5	4,261.0	4,163.5	97.52	43.694		
9,448.8	6,642.0	6,795.0	6,627.5	82.4	25.5	-91.31	-691.8	-6,855.5	4,213.7	4,114.8	98.86	42.620		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,500.0	6,642.0	6,795.0	6,627.5	83.8	25.5	-91.31	-691.8	-6,855.5	4,164.0	4,063.8	100.28	41.525	
9,547.2	6,641.9	6,795.0	6,627.5	85.1	25.5	-91.31	-691.8	-6,855.5	4,118.3	4,016.7	101.58	40.541	
9,600.0	6,641.9	6,795.0	6,627.5	86.6	25.5	-91.31	-691.8	-6,855.5	4,067.2	3,964.2	103.04	39.472	
9,645.6	6,641.8	6,795.0	6,627.5	87.9	25.5	-91.31	-691.8	-6,855.5	4,023.1	3,918.8	104.30	38.571	
9,700.0	6,641.7	6,795.0	6,627.5	89.4	25.5	-91.31	-691.8	-6,855.5	3,970.6	3,864.8	105.81	37.527	
9,744.1	6,641.7	6,795.0	6,627.5	90.6	25.5	-91.31	-691.8	-6,855.5	3,928.1	3,821.0	107.03	36.701	
9,800.0	6,641.6	6,795.0	6,627.5	92.1	25.5	-91.31	-691.8	-6,855.5	3,874.1	3,765.6	108.58	35.681	
9,842.5	6,641.6	6,795.0	6,627.5	93.3	25.5	-91.31	-691.8	-6,855.5	3,833.2	3,723.4	109.75	34.925	
9,900.0	6,641.5	6,795.0	6,627.5	94.9	25.5	-91.31	-691.8	-6,855.5	3,777.8	3,666.5	111.35	33.928	
9,940.9	6,641.4	6,795.0	6,627.5	96.0	25.5	-91.31	-691.8	-6,855.5	3,738.5	3,626.0	112.48	33.236	
10,000.0	6,641.4	6,795.0	6,627.5	97.7	25.5	-91.31	-691.8	-6,855.5	3,681.7	3,567.6	114.12	32.262	
10,039.3	6,641.3	6,795.0	6,627.5	98.8	25.5	-91.31	-691.8	-6,855.5	3,644.0	3,528.8	115.21	31.628	
10,100.0	6,641.2	6,795.0	6,627.5	100.4	25.5	-91.31	-691.8	-6,855.5	3,585.9	3,469.0	116.90	30.676	
10,137.8	6,641.2	6,795.0	6,627.5	101.5	25.5	-91.31	-691.8	-6,855.5	3,549.7	3,431.8	117.95	30.096	
10,200.0	6,641.1	6,795.0	6,627.5	103.2	25.5	-91.31	-691.8	-6,855.5	3,490.2	3,370.5	119.67	29.165	
10,236.2	6,641.1	6,795.0	6,627.5	104.2	25.5	-91.31	-691.8	-6,855.5	3,455.7	3,335.0	120.68	28.635	
10,300.0	6,641.0	6,795.0	6,627.5	106.0	25.5	-91.31	-691.8	-6,855.5	3,394.8	3,272.4	122.45	27.724	
10,334.6	6,640.9	6,795.0	6,627.5	107.0	25.5	-91.31	-691.8	-6,855.5	3,361.9	3,238.4	123.42	27.240	
10,400.0	6,640.9	6,795.0	6,627.5	108.8	25.5	-91.31	-691.8	-6,855.5	3,299.7	3,174.5	125.23	26.348	
10,433.0	6,640.8	6,795.0	6,627.5	109.7	25.5	-91.31	-691.8	-6,855.5	3,268.3	3,142.2	126.15	25.908	
10,500.0	6,640.7	6,795.0	6,627.5	111.6	25.5	-91.31	-691.8	-6,855.5	3,204.9	3,076.9	128.02	25.035	
10,531.5	6,640.7	6,795.0	6,627.5	112.4	25.5	-91.31	-691.8	-6,855.5	3,175.1	3,046.2	128.89	24.634	
10,600.0	6,640.6	6,795.0	6,627.5	114.3	25.5	-91.31	-691.8	-6,855.5	3,110.4	2,979.6	130.80	23.780	
10,629.9	6,640.6	6,795.0	6,627.5	115.2	25.5	-91.31	-691.8	-6,855.5	3,082.2	2,950.6	131.63	23.415	
10,700.0	6,640.5	6,795.0	6,627.5	117.1	25.5	-91.31	-691.8	-6,855.5	3,016.2	2,882.6	133.58	22.579	
10,728.3	6,640.4	6,795.0	6,627.5	117.9	25.5	-91.31	-691.8	-6,855.5	2,989.6	2,855.3	134.37	22.249	
10,800.0	6,640.4	6,795.0	6,627.5	119.9	25.5	-91.31	-691.8	-6,855.5	2,922.5	2,786.1	136.37	21.430	
10,826.7	6,640.3	6,795.0	6,627.5	120.7	25.5	-91.31	-691.8	-6,855.5	2,897.5	2,760.3	137.12	21.131	
10,900.0	6,640.2	6,795.0	6,627.5	122.7	25.5	-91.31	-691.8	-6,855.5	2,829.1	2,690.0	139.16	20.330	
10,925.2	6,640.2	6,795.0	6,627.5	123.4	25.5	-91.31	-691.8	-6,855.5	2,805.7	2,665.8	139.86	20.061	
11,000.0	6,640.1	6,795.0	6,627.5	125.5	25.5	-91.31	-691.8	-6,855.5	2,736.3	2,594.3	141.95	19.277	
11,023.6	6,640.1	6,795.0	6,627.5	126.1	25.5	-91.31	-691.8	-6,855.5	2,714.4	2,571.8	142.60	19.035	
11,100.0	6,640.0	6,795.0	6,627.5	128.3	25.5	-91.31	-691.8	-6,855.5	2,643.9	2,499.2	144.73	18.267	
11,122.0	6,639.9	6,795.0	6,627.5	128.9	25.5	-91.31	-691.8	-6,855.5	2,623.7	2,478.3	145.35	18.051	
11,200.0	6,639.8	6,795.0	6,627.5	131.1	25.5	-91.31	-691.8	-6,855.5	2,552.2	2,404.6	147.52	17.300	
11,220.4	6,639.8	6,795.0	6,627.5	131.6	25.5	-91.31	-691.8	-6,855.5	2,533.5	2,385.4	148.10	17.107	
11,300.0	6,639.7	6,795.0	6,627.5	133.9	25.5	-91.31	-691.8	-6,855.5	2,461.0	2,310.7	150.32	16.373	
11,318.9	6,639.7	6,795.0	6,627.5	134.4	25.5	-91.31	-691.8	-6,855.5	2,443.9	2,293.1	150.84	16.202	
11,400.0	6,639.6	6,795.0	6,627.5	136.7	25.5	-91.31	-691.8	-6,855.5	2,370.6	2,217.5	153.11	15.484	
11,417.3	6,639.6	6,795.0	6,627.5	137.1	25.5	-91.31	-691.8	-6,855.5	2,355.1	2,201.5	153.59	15.333	
11,500.0	6,639.5	6,795.0	6,627.5	139.4	25.5	-91.31	-691.8	-6,855.5	2,281.0	2,125.1	155.90	14.631	
11,515.7	6,639.5	6,795.0	6,627.5	139.9	25.5	-91.31	-691.8	-6,855.5	2,267.0	2,110.7	156.34	14.501	
11,600.0	6,639.3	6,795.0	6,627.5	142.2	25.5	-91.31	-691.8	-6,855.5	2,192.3	2,033.6	158.69	13.815	
11,614.1	6,639.3	6,795.0	6,627.5	142.6	25.5	-91.31	-691.8	-6,855.5	2,179.9	2,020.8	159.09	13.702	
11,700.0	6,639.2	6,795.0	6,627.5	145.0	25.5	-91.31	-691.8	-6,855.5	2,104.6	1,943.2	161.49	13.033	
11,712.6	6,639.2	6,795.0	6,627.5	145.4	25.5	-91.31	-691.8	-6,855.5	2,093.7	1,931.9	161.84	12.937	
11,800.0	6,639.1	6,795.0	6,627.5	147.8	25.5	-91.31	-691.8	-6,855.5	2,018.1	1,853.8	164.28	12.284	
11,811.0	6,639.1	6,795.0	6,627.5	148.1	25.5	-91.31	-691.8	-6,855.5	2,008.7	1,844.1	164.59	12.204	
11,900.0	6,639.0	6,795.0	6,627.5	150.6	25.5	-91.31	-691.8	-6,855.5	1,932.8	1,765.8	167.08	11.569	
11,909.4	6,639.0	6,795.0	6,627.5	150.9	25.5	-91.31	-691.8	-6,855.5	1,924.9	1,757.5	167.34	11.503	
12,000.0	6,638.8	6,795.0	6,627.5	153.4	25.5	-91.31	-691.8	-6,855.5	1,849.1	1,679.2	169.87	10.885	
12,007.8	6,638.8	6,795.0	6,627.5	153.6	25.5	-91.31	-691.8	-6,855.5	1,842.6	1,672.5	170.09	10.833	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
12,100.0	6,638.7	6,795.0	6,627.5	156.2	25.5	-91.31	-691.8	-6,855.5	1,767.0	1,594.3	172.67	10.233		
12,106.3	6,638.7	6,795.0	6,627.5	156.4	25.5	-91.31	-691.8	-6,855.5	1,761.9	1,589.1	172.84	10.194		
12,200.0	6,638.6	6,795.0	6,627.5	159.0	25.5	-91.31	-691.8	-6,855.5	1,686.9	1,511.4	175.47	9.614		
12,204.7	6,638.6	6,795.0	6,627.5	159.1	25.5	-91.31	-691.8	-6,855.5	1,683.1	1,507.5	175.60	9.585		
12,300.0	6,638.5	6,795.0	6,627.5	161.8	25.5	-91.31	-691.8	-6,855.5	1,608.9	1,430.7	178.26	9.026		
12,303.1	6,638.5	6,795.0	6,627.5	161.9	25.5	-91.31	-691.8	-6,855.5	1,606.5	1,428.2	178.35	9.008		
12,400.0	6,638.3	6,795.0	6,627.5	164.6	25.5	-91.31	-691.8	-6,855.5	1,533.6	1,352.5	181.06	8.470		
12,401.5	6,638.3	6,795.0	6,627.5	164.6	25.5	-91.31	-691.8	-6,855.5	1,532.4	1,351.3	181.10	8.462		
12,500.0	6,638.2	6,795.0	6,627.5	167.4	25.5	-91.31	-691.8	-6,855.5	1,461.2	1,277.3	183.86	7.947		
12,598.4	6,638.1	6,795.0	6,627.5	170.2	25.5	-91.31	-691.8	-6,855.5	1,393.3	1,206.7	186.61	7.466		
12,600.0	6,638.1	6,795.0	6,627.5	170.2	25.5	-91.31	-691.8	-6,855.5	1,392.2	1,205.6	186.66	7.459		
12,696.8	6,638.0	6,789.8	6,622.4	172.9	25.5	-91.02	-691.9	-6,855.5	1,329.2	1,139.8	189.36	7.019		
12,700.0	6,638.0	6,789.8	6,622.4	173.0	25.5	-91.02	-691.9	-6,855.5	1,327.2	1,137.7	189.44	7.006		
12,795.2	6,637.8	6,789.9	6,622.5	175.7	25.5	-91.03	-691.9	-6,855.5	1,269.5	1,077.4	192.11	6.608		
12,800.0	6,637.8	6,789.9	6,622.5	175.8	25.5	-91.03	-691.9	-6,855.5	1,266.7	1,074.5	192.24	6.589		
12,893.7	6,637.7	6,790.0	6,622.6	178.4	25.5	-91.04	-691.9	-6,855.5	1,214.8	1,020.0	194.87	6.234		
12,900.0	6,637.7	6,790.0	6,622.6	178.6	25.5	-91.04	-691.9	-6,855.5	1,211.5	1,016.5	195.04	6.212		
12,992.1	6,637.6	6,790.1	6,622.7	181.2	25.5	-91.04	-691.9	-6,855.5	1,166.0	968.3	197.62	5.900		
13,000.0	6,637.6	6,790.1	6,622.7	181.4	25.5	-91.04	-691.9	-6,855.5	1,162.3	964.5	197.84	5.875		
13,090.5	6,637.5	6,790.2	6,622.8	183.9	25.5	-91.05	-691.9	-6,855.5	1,123.6	923.2	200.38	5.607		
13,100.0	6,637.5	6,790.3	6,622.8	184.2	25.5	-91.05	-691.9	-6,855.5	1,119.9	919.3	200.65	5.582		
13,188.9	6,637.4	6,790.4	6,622.9	186.7	25.5	-91.05	-691.9	-6,855.5	1,088.5	885.4	203.14	5.359		
13,200.0	6,637.3	6,790.4	6,622.9	187.0	25.5	-91.06	-691.9	-6,855.5	1,085.1	881.6	203.45	5.333		
13,287.4	6,637.2	6,790.5	6,623.0	189.4	25.5	-91.06	-691.9	-6,855.5	1,061.4	855.5	205.89	5.155		
13,300.0	6,637.2	6,790.5	6,623.0	189.8	25.5	-91.06	-691.9	-6,855.5	1,058.6	852.3	206.25	5.133		
13,385.8	6,637.1	6,790.6	6,623.2	192.2	25.5	-91.07	-691.9	-6,855.5	1,043.0	834.3	208.65	4.999		
13,400.0	6,637.1	6,790.6	6,623.2	192.6	25.5	-91.07	-691.9	-6,855.5	1,041.0	832.0	209.05	4.980		
13,484.2	6,637.0	6,790.7	6,623.3	195.0	25.5	-91.07	-691.9	-6,855.5	1,033.6	822.2	211.41	4.889		
13,500.0	6,637.0	6,790.8	6,623.3	195.4	25.5	-91.08	-691.9	-6,855.5	1,032.9	821.1	211.85	4.876		
13,534.0	6,636.9	6,790.8	6,623.4	196.4	25.5	-91.08	-691.9	-6,855.5	1,032.4	819.6	212.80	4.851 CC		
13,582.6	6,636.9	6,790.9	6,623.4	197.7	25.5	-91.08	-691.9	-6,855.5	1,033.5	819.4	214.17	4.826 ES		
13,600.0	6,636.8	6,790.9	6,623.4	198.2	25.5	-91.08	-691.9	-6,855.5	1,034.5	819.8	214.65	4.819		
13,681.1	6,636.7	6,791.0	6,623.6	200.5	25.5	-91.09	-691.9	-6,855.5	1,042.8	825.9	216.93	4.807 SF		
13,700.0	6,636.7	6,791.0	6,623.6	201.0	25.5	-91.09	-691.9	-6,855.5	1,045.6	828.2	217.46	4.808		
13,779.5	6,636.6	6,791.2	6,623.7	203.2	25.5	-91.10	-691.9	-6,855.5	1,061.2	841.5	219.68	4.830		
13,800.0	6,636.6	6,791.2	6,623.7	203.8	25.5	-91.10	-691.9	-6,855.5	1,066.1	845.8	220.26	4.840		
13,877.9	6,636.5	6,791.3	6,623.9	206.0	25.5	-91.11	-691.9	-6,855.5	1,088.1	865.7	222.44	4.892		
13,900.0	6,636.5	6,791.3	6,623.9	206.6	25.5	-91.11	-691.9	-6,855.5	1,095.3	872.3	223.06	4.910		
13,976.3	6,636.4	6,791.5	6,624.0	208.8	25.5	-91.11	-691.9	-6,855.5	1,123.1	897.9	225.20	4.987		
14,000.0	6,636.3	6,791.5	6,624.0	209.4	25.5	-91.12	-691.9	-6,855.5	1,132.7	906.8	225.86	5.015		
14,074.8	6,636.2	6,791.6	6,624.2	211.5	25.5	-91.12	-691.9	-6,855.5	1,165.4	937.5	227.96	5.112		
14,100.0	6,636.2	6,791.7	6,624.2	212.2	25.5	-91.13	-691.9	-6,855.5	1,177.3	948.7	228.67	5.149		
14,173.2	6,636.1	6,791.8	6,624.3	214.3	25.5	-91.13	-691.9	-6,855.5	1,214.2	983.5	230.72	5.263		
14,200.0	6,636.1	6,791.8	6,624.4	215.0	25.5	-91.14	-691.9	-6,855.5	1,228.5	997.1	231.47	5.308		
14,271.6	6,636.0	6,792.0	6,624.5	217.0	25.5	-91.14	-691.9	-6,855.5	1,268.8	1,035.3	233.48	5.434		
14,300.0	6,636.0	6,792.0	6,624.6	217.8	25.5	-91.15	-691.9	-6,855.5	1,285.5	1,051.2	234.27	5.487		
14,370.0	6,635.9	6,792.2	6,624.7	219.8	25.5	-91.15	-691.9	-6,855.5	1,328.4	1,092.2	236.24	5.623		
14,400.0	6,635.8	6,792.2	6,624.8	220.6	25.5	-91.16	-691.9	-6,855.5	1,347.5	1,110.4	237.08	5.684		
14,468.5	6,635.7	6,792.3	6,624.9	222.6	25.5	-91.16	-691.9	-6,855.5	1,392.5	1,153.5	239.00	5.826		
14,500.0	6,635.7	6,792.4	6,625.0	223.4	25.5	-91.17	-691.9	-6,855.5	1,413.8	1,173.9	239.88	5.894		
14,566.9	6,635.6	6,792.5	6,625.1	225.3	25.5	-91.18	-691.9	-6,855.5	1,460.3	1,218.6	241.76	6.041		
14,600.0	6,635.6	6,792.6	6,625.2	226.2	25.5	-91.18	-691.9	-6,855.5	1,483.9	1,241.3	242.69	6.115		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,665.3	6,635.5	6,792.8	6,625.3	228.1	25.5	-91.19	-691.9	-6,855.5	1,531.5	1,287.0	244.52	6.264	
14,700.0	6,635.5	6,792.8	6,625.4	229.0	25.5	-91.19	-691.9	-6,855.5	1,557.3	1,311.8	245.49	6.344	
14,763.7	6,635.4	6,793.0	6,625.5	230.8	25.5	-91.20	-691.9	-6,855.5	1,605.6	1,358.3	247.28	6.493	
14,800.0	6,635.3	6,793.1	6,625.6	231.8	25.5	-91.20	-691.9	-6,855.5	1,633.5	1,385.3	248.29	6.579	
14,862.2	6,635.2	6,793.2	6,625.8	233.6	25.5	-91.21	-691.8	-6,855.5	1,682.2	1,432.2	250.04	6.728	
14,900.0	6,635.2	6,793.3	6,625.8	234.7	25.5	-91.22	-691.8	-6,855.5	1,712.2	1,461.1	251.10	6.819	
14,960.6	6,635.1	6,793.4	6,626.0	236.4	25.5	-91.23	-691.8	-6,855.5	1,760.9	1,508.1	252.80	6.966	
14,995.1	6,635.0	6,793.4	6,626.0	237.3	25.5	-91.23	-691.8	-6,855.5	1,789.0	1,535.3	253.77	7.050	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-105.30	-1,940.8	-7,092.3	7,353.1				
98.4	98.4	39.1	39.1	0.1	0.0	-105.30	-1,940.8	-7,092.4	7,353.3	7,353.2	0.10	N/A	
100.0	100.0	39.9	39.9	0.1	0.0	-105.30	-1,940.8	-7,092.4	7,353.3	7,353.2	0.10	N/A	
196.8	196.8	94.6	94.6	0.3	0.0	-105.31	-1,941.1	-7,092.8	7,354.1	7,353.8	0.33	N/A	
200.0	200.0	96.8	96.8	0.3	0.0	-105.31	-1,941.1	-7,092.9	7,354.1	7,353.8	0.34	N/A	
295.3	295.3	168.0	168.0	0.5	0.1	-105.31	-1,942.1	-7,093.6	7,355.4	7,354.8	0.62	N/A	
300.0	300.0	168.8	168.8	0.5	0.1	-105.31	-1,942.1	-7,093.6	7,355.5	7,354.8	0.64	N/A	
393.7	393.7	284.2	284.1	0.8	0.3	-105.33	-1,944.3	-7,094.4	7,356.6	7,355.5	1.08	6,792.348	
400.0	400.0	288.5	288.4	0.8	0.3	-105.33	-1,944.4	-7,094.5	7,356.7	7,355.6	1.11	6,649.762	
492.1	492.1	352.0	351.9	1.0	0.5	-105.34	-1,945.8	-7,095.0	7,358.0	7,356.5	1.45	5,087.397	
500.0	500.0	367.3	367.2	1.0	0.5	-105.34	-1,946.1	-7,095.2	7,358.1	7,356.6	1.50	4,919.115	
590.5	590.5	469.2	469.1	1.2	0.7	-105.35	-1,948.4	-7,095.9	7,359.2	7,357.3	1.91	3,850.386	
600.0	600.0	473.7	473.6	1.2	0.7	-105.35	-1,948.4	-7,095.9	7,359.3	7,357.4	1.94	3,789.807	
689.0	689.0	535.0	534.9	1.4	0.9	-105.36	-1,949.6	-7,096.8	7,360.9	7,358.9	2.29	3,210.333	
700.0	700.0	535.0	534.9	1.4	0.9	-105.36	-1,949.6	-7,096.8	7,361.1	7,358.9	2.29	3,210.333	
787.4	787.4	579.3	579.1	1.6	1.0	-105.37	-1,950.4	-7,097.7	7,363.2	7,360.6	2.58	2,851.542	
800.0	800.0	588.6	588.5	1.7	1.0	-105.37	-1,950.6	-7,097.9	7,363.5	7,360.9	2.63	2,799.725	
885.8	885.8	654.0	653.8	1.9	1.1	-105.37	-1,951.6	-7,099.5	7,365.9	7,362.9	2.96	2,488.031	
900.0	900.0	665.6	665.5	1.9	1.1	-105.37	-1,951.8	-7,099.8	7,366.3	7,363.3	3.02	2,441.509	
984.2	984.2	734.8	734.7	2.1	1.3	-105.37	-1,952.6	-7,101.7	7,368.8	7,365.4	3.35	2,197.459	
1,000.0	1,000.0	747.0	746.8	2.1	1.3	-105.37	-1,952.7	-7,102.1	7,369.3	7,365.9	3.41	2,158.233	
1,082.7	1,082.7	820.2	819.9	2.3	1.5	-105.37	-1,953.1	-7,104.4	7,371.9	7,368.2	3.76	1,961.896	
1,100.0	1,100.0	828.0	827.8	2.3	1.5	-105.37	-1,953.1	-7,104.7	7,372.5	7,368.7	3.81	1,933.358	
1,181.1	1,181.1	880.8	880.5	2.5	1.6	-105.37	-1,953.0	-7,106.6	7,375.4	7,371.3	4.11	1,794.004	
1,200.0	1,200.0	892.0	891.7	2.6	1.6	-105.36	-1,952.9	-7,107.1	7,376.1	7,372.0	4.18	1,765.464	
1,279.5	1,279.5	936.0	935.7	2.7	1.7	-105.35	-1,952.1	-7,109.2	7,379.4	7,375.0	4.45	1,656.504	
1,300.0	1,300.0	946.9	946.5	2.8	1.8	-105.35	-1,951.9	-7,109.8	7,380.3	7,375.8	4.53	1,630.887	
1,377.9	1,377.9	992.0	991.6	3.0	1.9	-146.48	-1,950.8	-7,112.3	7,384.9	7,380.1	4.80	1,539.822	
1,400.0	1,400.0	992.0	991.6	3.0	1.9	-146.46	-1,950.8	-7,112.3	7,386.6	7,381.8	4.84	1,524.609	
1,476.4	1,476.3	1,025.3	1,024.8	3.2	1.9	-146.38	-1,950.0	-7,114.4	7,393.9	7,388.8	5.09	1,453.760	
1,500.0	1,499.8	1,033.9	1,033.4	3.2	2.0	-146.35	-1,949.8	-7,115.0	7,396.6	7,391.4	5.16	1,434.456	
1,574.8	1,574.4	1,073.0	1,072.3	3.4	2.1	-146.24	-1,948.8	-7,117.9	7,406.5	7,401.1	5.41	1,369.832	
1,600.0	1,599.5	1,073.0	1,072.3	3.5	2.1	-146.19	-1,948.8	-7,117.9	7,410.2	7,404.8	5.46	1,356.823	
1,673.2	1,672.2	1,073.0	1,072.3	3.6	2.1	-146.05	-1,948.8	-7,117.9	7,422.7	7,417.1	5.62	1,319.774	
1,700.0	1,698.7	1,104.1	1,103.3	3.7	2.1	-146.00	-1,948.0	-7,120.5	7,427.6	7,421.9	5.75	1,290.990	
1,771.6	1,769.5	1,155.0	1,154.0	3.9	2.3	-145.85	-1,946.5	-7,125.3	7,442.5	7,436.5	6.03	1,233.750	
1,800.0	1,797.5	1,155.0	1,154.0	4.0	2.3	-145.78	-1,946.5	-7,125.3	7,448.8	7,442.7	6.10	1,221.913	
1,870.1	1,866.3	1,155.0	1,154.0	4.2	2.3	-145.58	-1,946.5	-7,125.3	7,465.7	7,459.4	6.26	1,192.009	
1,899.9	1,895.6	1,155.0	1,154.0	4.3	2.3	-145.49	-1,946.5	-7,125.3	7,473.5	7,467.1	6.33	1,180.051	
1,968.5	1,962.6	1,155.0	1,154.0	4.5	2.3	-145.49	-1,946.5	-7,125.3	7,492.1	7,485.6	6.51	1,150.612	
2,000.0	1,993.4	1,155.0	1,154.0	4.6	2.3	-145.49	-1,946.5	-7,125.3	7,500.8	7,494.2	6.59	1,137.823	
2,066.9	2,058.9	1,197.5	1,196.1	4.8	2.4	-145.51	-1,945.1	-7,130.1	7,519.2	7,512.4	6.87	1,093.801	
2,100.0	2,091.3	1,236.0	1,234.3	4.9	2.5	-145.52	-1,943.8	-7,135.4	7,529.0	7,521.9	7.05	1,067.356	
2,165.3	2,155.2	1,236.0	1,234.3	5.2	2.5	-145.52	-1,943.8	-7,135.4	7,547.6	7,540.4	7.23	1,043.380	
2,200.0	2,189.1	1,236.0	1,234.3	5.3	2.5	-145.52	-1,943.8	-7,135.4	7,557.7	7,550.4	7.33	1,030.975	
2,263.8	2,251.5	1,236.0	1,234.3	5.5	2.5	-145.52	-1,943.8	-7,135.4	7,576.7	7,569.2	7.51	1,008.677	
2,300.0	2,286.9	1,236.0	1,234.3	5.7	2.5	-145.52	-1,943.8	-7,135.4	7,587.7	7,580.1	7.61	996.503	
2,362.2	2,347.7	1,236.0	1,234.3	5.9	2.5	-145.52	-1,943.8	-7,135.4	7,607.0	7,599.2	7.79	975.944	
2,400.0	2,384.7	1,267.9	1,265.8	6.0	2.6	-145.53	-1,942.8	-7,140.2	7,618.6	7,610.6	7.98	954.442	
2,460.6	2,444.0	1,281.9	1,279.6	6.3	2.6	-145.54	-1,942.4	-7,142.5	7,637.8	7,629.6	8.20	931.954	
2,500.0	2,482.5	1,318.0	1,315.2	6.4	2.7	-145.55	-1,941.6	-7,148.6	7,650.6	7,642.2	8.40	910.796	
2,559.0	2,540.3	1,318.0	1,315.2	6.7	2.7	-145.55	-1,941.6	-7,148.6	7,669.7	7,661.1	8.58	894.287	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
2,600.0	2,580.3	1,318.0	1,315.2	6.8	2.7	-145.55	-1,941.6	-7,148.6	7,683.2	7,674.5	8.70	883.277	
2,657.5	2,636.5	1,318.0	1,315.2	7.1	2.7	-145.55	-1,941.6	-7,148.6	7,702.4	7,693.5	8.87	868.145	
2,700.0	2,678.1	1,318.0	1,315.2	7.2	2.7	-145.55	-1,941.6	-7,148.6	7,716.8	7,707.8	9.00	857.369	
2,755.9	2,732.8	1,357.9	1,354.4	7.5	2.9	-145.57	-1,941.0	-7,155.8	7,735.8	7,726.5	9.27	834.770	
2,800.0	2,776.0	1,370.5	1,366.8	7.7	2.9	-145.58	-1,940.8	-7,158.1	7,751.1	7,741.6	9.43	821.813	
2,854.3	2,829.1	1,400.0	1,395.7	7.9	3.0	-145.59	-1,940.7	-7,163.8	7,770.1	7,760.4	9.67	803.560	
2,900.0	2,873.8	1,400.0	1,395.7	8.1	3.0	-145.59	-1,940.7	-7,163.8	7,786.2	7,776.4	9.81	793.690	
2,952.7	2,925.4	1,400.0	1,395.7	8.3	3.0	-145.59	-1,940.7	-7,163.8	7,805.1	7,795.1	9.97	782.556	
3,000.0	2,971.6	1,432.3	1,427.4	8.5	3.1	-145.61	-1,940.6	-7,170.3	7,822.1	7,811.9	10.20	767.063	
3,051.2	3,021.6	1,449.4	1,444.1	8.7	3.2	-145.61	-1,940.5	-7,173.8	7,840.7	7,830.3	10.40	754.053	
3,100.0	3,069.4	1,481.0	1,475.0	8.9	3.3	-145.63	-1,940.4	-7,180.4	7,858.7	7,848.1	10.63	739.586	
3,149.6	3,117.9	1,481.0	1,475.0	9.1	3.3	-145.63	-1,940.4	-7,180.4	7,877.1	7,866.3	10.78	730.601	
3,200.0	3,167.2	1,481.0	1,475.0	9.3	3.3	-145.63	-1,940.4	-7,180.4	7,896.1	7,885.1	10.94	721.766	
3,248.0	3,214.2	1,517.2	1,510.4	9.5	3.5	-145.64	-1,940.3	-7,188.4	7,914.2	7,903.0	11.18	707.920	
3,300.0	3,265.0	1,535.6	1,528.3	9.8	3.6	-145.65	-1,940.3	-7,192.5	7,934.0	7,922.6	11.39	696.689	
3,346.4	3,310.5	1,563.0	1,554.9	10.0	3.7	-145.66	-1,940.2	-7,198.7	7,951.9	7,940.3	11.60	685.370	
3,400.0	3,362.9	1,563.0	1,554.9	10.2	3.7	-145.66	-1,940.2	-7,198.7	7,972.7	7,960.9	11.77	677.253	
3,444.9	3,406.7	1,563.0	1,554.9	10.4	3.7	-145.66	-1,940.2	-7,198.7	7,990.3	7,978.4	11.91	670.617	
3,473.0	3,434.2	1,563.0	1,554.9	10.5	3.7	-145.66	-1,940.2	-7,198.7	8,001.4	7,989.4	12.00	666.553	
3,500.0	3,460.7	1,594.1	1,585.2	10.6	3.8	-145.80	-1,940.0	-7,206.1	8,011.9	7,999.8	12.16	658.820	
3,543.3	3,503.2	1,605.2	1,595.9	10.7	3.9	-146.01	-1,940.0	-7,208.8	8,028.7	8,016.4	12.30	652.854	
3,600.0	3,559.0	1,645.0	1,634.4	10.9	4.0	-146.27	-1,939.7	-7,218.9	8,050.2	8,037.6	12.54	641.880	
3,641.7	3,600.2	1,645.0	1,634.4	11.0	4.0	-146.45	-1,939.7	-7,218.9	8,065.4	8,052.8	12.64	638.226	
3,700.0	3,657.9	1,645.0	1,634.4	11.2	4.0	-146.70	-1,939.7	-7,218.9	8,086.2	8,073.4	12.77	633.289	
3,740.1	3,697.8	1,645.0	1,634.4	11.3	4.0	-146.86	-1,939.7	-7,218.9	8,100.2	8,087.4	12.85	630.329	
3,800.0	3,757.3	1,645.0	1,634.4	11.4	4.0	-147.10	-1,939.7	-7,218.9	8,120.6	8,107.6	12.97	626.060	
3,838.6	3,795.7	1,679.0	1,667.2	11.5	4.2	-147.24	-1,939.4	-7,228.0	8,133.2	8,120.0	13.14	619.137	
3,900.0	3,857.0	1,694.0	1,681.6	11.7	4.3	-147.46	-1,939.3	-7,232.1	8,152.8	8,139.5	13.29	613.552	
3,937.0	3,893.9	1,726.0	1,712.3	11.7	4.5	-147.57	-1,939.2	-7,241.1	8,164.3	8,150.9	13.44	607.586	
4,000.0	3,956.9	1,726.0	1,712.3	11.8	4.5	-147.78	-1,939.2	-7,241.1	8,183.1	8,169.6	13.53	604.629	
4,035.4	3,992.3	1,726.0	1,712.3	11.9	4.5	-147.90	-1,939.2	-7,241.1	8,193.3	8,179.8	13.58	603.251	
4,072.9	4,029.8	1,726.0	1,712.3	11.9	4.5	-106.82	-1,939.2	-7,241.1	8,204.0	8,188.3	15.66	523.725	
4,100.0	4,056.9	1,726.0	1,712.3	12.0	4.5	-106.82	-1,939.2	-7,241.1	8,211.6	8,195.9	15.71	522.817	
4,133.8	4,090.7	1,757.7	1,742.6	12.0	4.6	-106.80	-1,939.0	-7,250.3	8,221.0	8,205.1	15.93	515.982	
4,200.0	4,156.9	1,777.9	1,761.9	12.1	4.7	-106.79	-1,938.9	-7,256.4	8,239.9	8,223.8	16.15	510.102	
4,232.3	4,189.2	1,808.0	1,790.6	12.2	4.9	-106.77	-1,938.6	-7,265.6	8,249.3	8,233.0	16.37	503.940	
4,300.0	4,256.9	1,811.4	1,793.8	12.3	4.9	-106.77	-1,938.6	-7,266.7	8,269.1	8,252.6	16.50	501.054	
4,330.7	4,287.6	1,903.4	1,881.3	12.4	5.4	-106.70	-1,937.5	-7,294.9	8,278.0	8,261.0	17.01	486.635	
4,400.0	4,356.9	1,971.0	1,945.8	12.5	5.7	-106.65	-1,936.8	-7,315.2	8,297.9	8,280.5	17.44	475.689	
4,429.1	4,386.0	1,971.0	1,945.8	12.5	5.7	-106.65	-1,936.8	-7,315.2	8,306.4	8,288.9	17.50	474.778	
4,500.0	4,456.9	2,015.5	1,988.2	12.6	6.0	-106.62	-1,936.3	-7,328.8	8,327.0	8,309.1	17.86	466.327	
4,527.5	4,484.4	2,025.4	1,997.6	12.7	6.0	-106.61	-1,936.1	-7,331.8	8,335.1	8,317.1	17.96	464.152	
4,600.0	4,556.9	2,053.0	2,023.8	12.8	6.2	-106.59	-1,935.6	-7,340.5	8,356.7	8,338.5	18.23	458.327	
4,626.0	4,582.9	2,081.4	2,050.7	12.9	6.4	-106.57	-1,935.1	-7,349.5	8,364.5	8,346.1	18.44	453.676	
4,700.0	4,656.9	2,205.0	2,168.2	13.0	7.1	-106.49	-1,934.9	-7,387.8	8,386.6	8,367.3	19.24	435.932	
4,724.4	4,681.3	2,216.0	2,178.7	13.0	7.1	-106.48	-1,935.0	-7,391.1	8,393.7	8,374.4	19.34	433.990	
4,800.0	4,756.9	2,264.8	2,225.2	13.1	7.4	-106.46	-1,935.5	-7,406.0	8,416.1	8,396.4	19.75	426.094	
4,822.8	4,779.7	2,276.5	2,236.3	13.2	7.5	-106.45	-1,935.5	-7,409.6	8,423.0	8,403.1	19.86	424.128	
4,900.0	4,856.9	2,324.6	2,282.0	13.3	7.8	-106.42	-1,935.7	-7,424.6	8,446.2	8,425.9	20.28	416.490	
4,921.2	4,878.1	2,340.5	2,297.2	13.4	7.9	-106.41	-1,935.8	-7,429.6	8,452.6	8,432.2	20.41	414.067	
5,000.0	4,956.9	2,379.0	2,333.7	13.5	8.1	-106.39	-1,936.0	-7,441.7	8,476.6	8,455.8	20.79	407.773	
5,019.7	4,976.6	2,379.0	2,333.7	13.5	8.1	-106.39	-1,936.0	-7,441.7	8,482.7	8,461.8	20.82	407.352	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	2,419.5	2,372.1	13.7	8.3	-106.37	-1,936.4	-7,454.6	8,507.5	8,486.3	21.23	400.822		
5,118.1	5,075.0	2,425.2	2,377.5	13.7	8.4	-106.36	-1,936.4	-7,456.4	8,513.2	8,491.9	21.29	399.783		
5,200.0	5,156.9	2,461.0	2,411.3	13.8	8.6	-106.34	-1,936.9	-7,468.1	8,539.2	8,517.5	21.67	394.048		
5,216.5	5,173.4	2,618.2	2,559.9	13.9	9.6	-106.23	-1,935.6	-7,519.2	8,544.4	8,521.8	22.63	377.553		
5,300.0	5,256.9	2,669.7	2,608.7	14.0	9.9	-106.19	-1,934.4	-7,535.8	8,569.8	8,546.7	23.09	371.113		
5,314.9	5,271.8	2,677.8	2,616.4	14.1	10.0	-106.19	-1,934.2	-7,538.4	8,574.4	8,551.2	23.17	370.081		
5,400.0	5,356.9	2,869.0	2,797.5	14.2	11.1	-106.04	-1,930.3	-7,599.4	8,600.3	8,575.8	24.44	351.830		
5,413.4	5,370.3	2,898.1	2,825.2	14.2	11.3	-106.02	-1,929.5	-7,608.4	8,604.1	8,579.5	24.64	349.200		
5,500.0	5,456.9	2,951.0	2,875.3	14.4	11.6	-105.97	-1,927.3	-7,625.3	8,629.8	8,604.7	25.11	343.652		
5,511.8	5,468.7	2,951.0	2,875.3	14.4	11.6	-105.97	-1,927.3	-7,625.3	8,633.4	8,608.2	25.13	343.485		
5,600.0	5,556.9	3,494.7	3,396.2	14.6	14.7	-105.60	-1,915.2	-7,779.9	8,655.3	8,627.1	28.20	306.973		
5,610.2	5,567.1	3,499.7	3,401.0	14.6	14.7	-105.60	-1,915.1	-7,781.2	8,657.8	8,629.6	28.24	306.579		
5,700.0	5,656.9	3,551.4	3,450.9	14.7	15.0	-105.57	-1,914.0	-7,794.8	8,680.3	8,651.6	28.68	302.664		
5,708.6	5,665.5	3,557.2	3,456.5	14.8	15.0	-105.56	-1,913.9	-7,796.4	8,682.4	8,653.7	28.73	302.241		
5,800.0	5,756.9	3,604.0	3,501.6	14.9	15.2	-105.53	-1,912.9	-7,808.9	8,705.6	8,676.5	29.15	298.654		
5,807.1	5,764.0	3,604.0	3,501.6	14.9	15.2	-105.53	-1,912.9	-7,808.9	8,707.4	8,678.3	29.16	298.576		
5,900.0	5,856.9	3,652.4	3,548.1	15.1	15.5	-105.50	-1,912.1	-7,822.0	8,731.5	8,701.9	29.61	294.921		
5,905.5	5,862.4	3,652.4	3,548.1	15.1	15.5	-105.50	-1,912.1	-7,822.0	8,731.5	8,701.9	29.61	294.921		
5,971.9	5,928.8	6,017.2	5,869.3	15.3	23.1	-104.93	-1,909.5	-8,140.0	8,732.7	8,695.5	37.16	235.031		
6,000.0	5,956.9	6,041.3	5,893.4	15.3	23.1	-14.94	-1,910.1	-8,140.0	8,732.3	8,703.5	28.78	303.373		
6,003.9	5,960.8	6,044.6	5,896.8	15.3	23.1	-14.95	-1,910.1	-8,140.0	8,732.1	8,703.3	28.80	303.198		
6,050.0	6,006.7	6,053.0	5,905.2	15.4	23.1	-15.01	-1,910.3	-8,140.0	8,729.0	8,700.1	28.89	302.100		
6,100.0	6,056.2	6,097.8	5,950.0	15.4	23.2	-15.16	-1,911.1	-8,140.1	8,722.5	8,693.5	28.96	301.181		
6,102.3	6,058.5	6,099.1	5,951.2	15.4	23.2	-15.17	-1,911.1	-8,140.1	8,722.1	8,693.1	28.96	301.176		
6,150.0	6,105.1	6,135.0	5,987.1	15.4	23.2	-15.39	-1,911.3	-8,140.5	8,712.8	8,683.9	28.92	301.317		
6,200.0	6,153.0	6,172.7	6,024.8	15.5	23.2	-15.69	-1,911.3	-8,141.0	8,699.9	8,671.1	28.78	302.298		
6,200.8	6,153.8	6,173.8	6,025.9	15.5	23.2	-15.70	-1,911.3	-8,141.0	8,699.7	8,670.9	28.78	302.311		
6,250.0	6,199.9	6,240.1	6,092.2	15.5	23.3	-16.11	-1,911.2	-8,141.8	8,683.7	8,655.1	28.60	303.594		
6,299.2	6,244.8	6,298.0	6,150.1	15.5	23.4	-16.63	-1,911.3	-8,142.3	8,664.6	8,636.3	28.34	305.785		
6,300.0	6,245.5	6,298.0	6,150.1	15.5	23.4	-16.63	-1,911.3	-8,142.3	8,664.3	8,636.0	28.33	305.844		
6,350.0	6,289.6	6,326.7	6,178.8	15.5	23.4	-17.25	-1,911.5	-8,142.6	8,641.9	8,613.9	27.94	309.339		
6,397.6	6,329.9	6,350.3	6,202.5	15.4	23.5	-17.95	-1,911.6	-8,142.8	8,617.9	8,590.4	27.51	313.287		
6,400.0	6,331.8	6,351.5	6,203.6	15.4	23.5	-17.99	-1,911.7	-8,142.8	8,616.6	8,589.1	27.49	313.498		
6,450.0	6,372.2	6,380.0	6,232.1	15.4	23.5	-18.89	-1,911.9	-8,143.1	8,588.6	8,561.6	27.01	317.974		
6,496.0	6,407.4	6,496.2	6,348.4	15.4	23.7	-20.06	-1,912.5	-8,143.9	8,560.2	8,533.4	26.73	320.222		
6,500.0	6,410.3	6,498.9	6,351.0	15.4	23.7	-20.16	-1,912.5	-8,143.9	8,557.6	8,530.9	26.70	320.558		
6,550.0	6,446.1	6,530.9	6,383.0	15.4	23.7	-21.51	-1,912.5	-8,144.1	8,524.2	8,497.9	26.28	324.396		
6,594.5	6,475.9	6,543.0	6,395.1	15.4	23.7	-22.91	-1,912.5	-8,144.2	8,492.5	8,466.5	25.96	327.190		
6,600.0	6,479.4	6,543.0	6,395.1	15.4	23.7	-23.10	-1,912.5	-8,144.2	8,488.4	8,462.5	25.92	327.499		
6,650.0	6,510.0	6,576.1	6,428.2	15.5	23.7	-25.10	-1,912.4	-8,144.4	8,450.5	8,424.7	25.78	327.832		
6,692.9	6,534.0	6,591.9	6,444.0	15.7	23.8	-27.14	-1,912.4	-8,144.5	8,416.4	8,390.6	25.84	325.671		
6,700.0	6,537.8	6,594.4	6,446.5	15.7	23.8	-27.52	-1,912.4	-8,144.5	8,410.6	8,384.8	25.87	325.056		
6,750.0	6,562.6	6,625.0	6,477.1	16.2	23.8	-30.59	-1,912.5	-8,144.8	8,369.1	8,342.7	26.41	316.937		
6,791.3	6,580.8	6,625.0	6,477.1	16.6	23.8	-33.56	-1,912.5	-8,144.8	8,333.5	8,306.4	27.16	306.825		
6,800.0	6,584.3	6,625.5	6,477.6	16.7	23.8	-34.26	-1,912.5	-8,144.8	8,325.9	8,298.5	27.38	304.043		
6,850.0	6,602.9	6,647.8	6,499.9	17.3	23.8	-39.12	-1,912.6	-8,145.0	8,281.4	8,252.3	29.15	284.104		
6,889.7	6,615.2	6,663.3	6,515.4	17.9	23.9	-43.94	-1,912.7	-8,145.1	8,245.2	8,214.1	31.15	264.660		
6,900.0	6,618.1	6,666.9	6,519.0	18.0	23.9	-45.35	-1,912.7	-8,145.2	8,235.8	8,204.0	31.76	259.345		
6,950.0	6,630.0	6,681.8	6,533.9	18.8	23.9	-53.33	-1,912.7	-8,145.3	8,189.2	8,154.0	35.21	232.601		
6,988.2	6,636.8	6,690.5	6,542.6	19.5	23.9	-60.83	-1,912.7	-8,145.4	8,153.1	8,114.9	38.25	213.151		
7,000.0	6,638.5	6,692.6	6,544.8	19.7	23.9	-63.41	-1,912.8	-8,145.4	8,141.9	8,102.7	39.21	207.653		
7,050.0	6,643.5	6,699.3	6,551.4	20.6	23.9	-75.57	-1,912.8	-8,145.5	8,094.2	8,051.2	42.98	188.323		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
7,086.6	6,644.9	6,788.0	6,640.1	21.3	24.0	-87.58	-1,912.7	-8,145.8	8,059.1	8,013.9	45.18	178.384		
7,097.8	6,645.0	6,788.0	6,640.1	21.5	24.0	-90.66	-1,912.7	-8,145.8	8,048.3	8,002.8	45.48	176.947		
7,100.0	6,645.0	6,788.0	6,640.1	21.6	24.0	-90.66	-1,912.7	-8,145.8	8,046.2	8,000.7	45.53	176.737		
7,185.0	6,644.9	6,788.0	6,640.1	23.3	24.0	-90.66	-1,912.7	-8,145.8	7,964.6	7,917.4	47.25	168.554		
7,200.0	6,644.9	6,788.0	6,640.1	23.6	24.0	-90.66	-1,912.7	-8,145.8	7,950.3	7,902.7	47.56	167.175		
7,283.4	6,644.8	6,788.0	6,640.1	25.4	24.0	-90.66	-1,912.7	-8,145.8	7,870.3	7,820.9	49.37	159.402		
7,300.0	6,644.7	6,788.0	6,640.1	25.8	24.0	-90.66	-1,912.7	-8,145.8	7,854.4	7,804.7	49.73	157.928		
7,381.9	6,644.6	6,788.0	6,640.1	27.7	24.0	-90.66	-1,912.7	-8,145.8	7,776.0	7,724.4	51.61	150.670		
7,400.0	6,644.6	6,788.0	6,640.1	28.1	24.0	-90.66	-1,912.7	-8,145.8	7,758.7	7,706.6	52.02	149.135		
7,480.3	6,644.5	6,788.0	6,640.1	30.0	24.0	-90.66	-1,912.7	-8,145.8	7,681.9	7,627.9	53.93	142.431		
7,500.0	6,644.5	6,788.0	6,640.1	30.5	24.0	-90.66	-1,912.7	-8,145.8	7,663.0	7,608.6	54.40	140.858		
7,578.7	6,644.4	6,788.0	6,640.1	32.4	24.0	-90.66	-1,912.7	-8,145.8	7,587.8	7,531.5	56.33	134.707		
7,600.0	6,644.4	6,788.0	6,640.1	32.9	24.0	-90.66	-1,912.7	-8,145.8	7,567.5	7,510.7	56.85	133.116		
7,677.1	6,644.3	6,788.0	6,640.1	34.8	24.0	-90.66	-1,912.7	-8,145.8	7,493.9	7,435.1	58.78	127.494		
7,700.0	6,644.2	6,788.0	6,640.1	35.4	24.0	-90.66	-1,912.7	-8,145.8	7,472.1	7,412.8	59.35	125.900		
7,775.6	6,644.1	6,788.0	6,640.1	37.3	24.0	-90.66	-1,912.7	-8,145.8	7,400.1	7,338.8	61.27	120.773		
7,800.0	6,644.1	6,788.0	6,640.1	38.0	24.0	-90.66	-1,912.7	-8,145.8	7,376.8	7,314.9	61.89	119.185		
7,874.0	6,644.0	6,788.0	6,640.1	39.9	24.0	-90.66	-1,912.7	-8,145.8	7,306.4	7,242.6	63.80	114.515		
7,900.0	6,644.0	6,788.0	6,640.1	40.5	24.0	-90.66	-1,912.7	-8,145.8	7,281.7	7,217.2	64.47	112.940		
7,972.4	6,643.9	6,788.0	6,640.1	42.4	24.0	-90.66	-1,912.7	-8,145.8	7,212.8	7,146.5	66.36	108.688		
8,000.0	6,643.9	6,788.0	6,640.1	43.1	24.0	-90.66	-1,912.7	-8,145.8	7,186.6	7,119.6	67.08	107.132		
8,070.8	6,643.8	6,788.0	6,640.1	45.0	24.0	-90.66	-1,912.7	-8,145.8	7,119.4	7,050.4	68.95	103.259		
8,100.0	6,643.7	6,788.0	6,640.1	45.8	24.0	-90.66	-1,912.7	-8,145.8	7,091.7	7,022.0	69.71	101.726		
8,169.3	6,643.7	6,788.0	6,640.1	47.6	24.0	-90.66	-1,912.7	-8,145.8	7,026.1	6,954.5	71.55	98.196		
8,200.0	6,643.6	6,788.0	6,640.1	48.4	24.0	-90.66	-1,912.7	-8,145.8	6,997.0	6,924.6	72.37	96.688		
8,267.7	6,643.5	6,788.0	6,640.1	50.2	24.0	-90.66	-1,912.7	-8,145.8	6,932.9	6,858.8	74.17	93.468		
8,300.0	6,643.5	6,788.0	6,640.1	51.1	24.0	-90.66	-1,912.7	-8,145.8	6,902.4	6,827.4	75.04	91.987		
8,366.1	6,643.4	6,788.0	6,640.1	52.9	24.0	-90.66	-1,912.7	-8,145.8	6,839.9	6,763.1	76.81	89.048		
8,400.0	6,643.4	6,788.0	6,640.1	53.8	24.0	-90.66	-1,912.7	-8,145.8	6,808.0	6,730.2	77.72	87.595		
8,464.5	6,643.3	6,788.0	6,640.1	55.5	24.0	-90.66	-1,912.7	-8,145.8	6,747.1	6,667.6	79.46	84.911		
8,500.0	6,643.2	6,788.0	6,640.1	56.5	24.0	-90.66	-1,912.7	-8,145.8	6,713.7	6,633.3	80.42	83.486		
8,563.0	6,643.2	6,788.0	6,640.1	58.2	24.0	-90.66	-1,912.7	-8,145.8	6,654.4	6,572.3	82.12	81.031		
8,600.0	6,643.1	6,788.0	6,640.1	59.2	24.0	-90.66	-1,912.7	-8,145.8	6,619.6	6,536.4	83.12	79.635		
8,661.4	6,643.0	6,788.0	6,640.1	60.8	24.0	-90.66	-1,912.7	-8,145.8	6,561.9	6,477.1	84.79	77.388		
8,700.0	6,643.0	6,788.0	6,640.1	61.9	24.0	-90.66	-1,912.7	-8,145.8	6,525.6	6,439.8	85.84	76.021		
8,759.8	6,642.9	6,788.0	6,640.1	63.5	24.0	-90.66	-1,912.7	-8,145.8	6,469.5	6,382.0	87.47	73.963		
8,800.0	6,642.9	6,788.0	6,640.1	64.6	24.0	-90.66	-1,912.7	-8,145.8	6,431.9	6,343.3	88.56	72.623		
8,858.2	6,642.8	6,787.1	6,639.2	66.2	24.0	-90.63	-1,912.7	-8,145.8	6,377.3	6,287.2	90.15	70.738		
8,900.0	6,642.7	6,786.0	6,638.1	67.3	24.0	-90.61	-1,912.7	-8,145.8	6,338.3	6,247.0	91.29	69.428		
8,956.7	6,642.7	6,784.7	6,636.8	68.9	24.0	-90.57	-1,912.7	-8,145.8	6,285.4	6,192.5	92.84	67.698		
9,000.0	6,642.6	6,783.8	6,635.9	70.1	24.0	-90.55	-1,912.7	-8,145.8	6,244.9	6,150.9	94.03	66.415		
9,055.1	6,642.5	6,782.8	6,634.9	71.6	24.0	-90.52	-1,912.7	-8,145.8	6,193.6	6,098.0	95.54	64.828		
9,100.0	6,642.5	6,782.0	6,634.1	72.8	24.0	-90.50	-1,912.7	-8,145.8	6,151.8	6,055.0	96.77	63.571		
9,153.5	6,642.4	6,781.1	6,633.2	74.3	24.0	-90.48	-1,912.7	-8,145.8	6,102.0	6,003.8	98.24	62.114		
9,200.0	6,642.4	6,780.5	6,632.6	75.6	24.0	-90.46	-1,912.7	-8,145.8	6,058.8	5,959.3	99.52	60.883		
9,251.9	6,642.3	6,779.8	6,631.9	77.0	24.0	-90.45	-1,912.7	-8,145.8	6,010.6	5,909.7	100.94	59.544		
9,300.0	6,642.2	6,779.2	6,631.3	78.3	24.0	-90.43	-1,912.7	-8,145.8	5,966.1	5,863.8	102.27	58.339		
9,350.4	6,642.2	6,778.6	6,630.7	79.7	24.0	-90.42	-1,912.7	-8,145.8	5,919.5	5,815.8	103.65	57.108		
9,400.0	6,642.1	6,778.0	6,630.2	81.1	24.0	-90.40	-1,912.7	-8,145.8	5,873.6	5,768.6	105.02	55.928		
9,448.8	6,642.0	6,777.6	6,629.7	82.4	24.0	-90.39	-1,912.7	-8,145.8	5,828.6	5,722.2	106.37	54.796		
9,500.0	6,642.0	6,777.1	6,629.2	83.8	24.0	-90.38	-1,912.7	-8,145.8	5,781.4	5,673.6	107.78	53.640		
9,547.2	6,641.9	6,776.7	6,628.8	85.1	24.0	-90.37	-1,912.7	-8,145.8	5,738.0	5,628.9	109.09	52.600		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,776.2	6,628.3	86.6	24.0	-90.36	-1,912.7	-8,145.8	5,689.5	5,578.9	110.54	51.468	
9,645.6	6,641.8	6,775.9	6,628.0	87.9	24.0	-90.35	-1,912.7	-8,145.8	5,647.6	5,535.8	111.81	50.512	
9,700.0	6,641.7	6,775.5	6,627.6	89.4	24.0	-90.34	-1,912.7	-8,145.8	5,597.8	5,484.5	113.31	49.403	
9,744.1	6,641.7	6,775.2	6,627.3	90.6	24.0	-90.33	-1,912.7	-8,145.8	5,557.5	5,442.9	114.53	48.524	
9,800.0	6,641.6	6,774.8	6,626.9	92.1	24.0	-90.32	-1,912.7	-8,145.8	5,506.4	5,390.3	116.08	47.437	
9,842.5	6,641.6	6,774.5	6,626.6	93.3	24.0	-90.31	-1,912.7	-8,145.8	5,467.6	5,350.4	117.26	46.630	
9,900.0	6,641.5	6,774.2	6,626.3	94.9	24.0	-90.31	-1,912.7	-8,145.8	5,415.3	5,296.4	118.85	45.565	
9,940.9	6,641.4	6,774.0	6,626.1	96.0	24.0	-90.30	-1,912.7	-8,145.8	5,378.1	5,258.1	119.98	44.824	
10,000.0	6,641.4	6,773.6	6,625.8	97.7	24.0	-90.29	-1,912.7	-8,145.8	5,324.5	5,202.9	121.62	43.779	
10,039.3	6,641.3	6,773.4	6,625.6	98.8	24.0	-90.29	-1,912.7	-8,145.8	5,288.9	5,166.2	122.71	43.099	
10,100.0	6,641.2	6,773.2	6,625.3	100.4	24.0	-90.28	-1,912.7	-8,145.8	5,234.1	5,109.7	124.40	42.076	
10,137.8	6,641.2	6,773.0	6,625.1	101.5	24.0	-90.27	-1,912.7	-8,145.8	5,200.0	5,074.6	125.45	41.452	
10,200.0	6,641.1	6,772.7	6,624.8	103.2	24.0	-90.27	-1,912.7	-8,145.8	5,144.0	5,016.8	127.17	40.448	
10,236.2	6,641.1	6,772.5	6,624.7	104.2	24.0	-90.26	-1,912.7	-8,145.8	5,111.5	4,983.3	128.18	39.877	
10,300.0	6,641.0	6,772.3	6,624.4	106.0	24.0	-90.26	-1,912.7	-8,145.8	5,054.3	4,924.3	129.95	38.893	
10,334.6	6,640.9	6,772.2	6,624.3	107.0	24.0	-90.25	-1,912.7	-8,145.8	5,023.3	4,892.4	130.92	38.370	
10,400.0	6,640.9	6,771.9	6,624.0	108.8	24.0	-90.25	-1,912.7	-8,145.8	4,965.0	4,832.2	132.73	37.405	
10,433.0	6,640.8	6,771.8	6,623.9	109.7	24.0	-90.24	-1,912.7	-8,145.8	4,935.6	4,801.9	133.65	36.928	
10,500.0	6,640.7	6,771.6	6,623.7	111.6	24.0	-90.24	-1,912.7	-8,145.8	4,876.1	4,740.6	135.52	35.981	
10,531.5	6,640.7	6,771.5	6,623.6	112.4	24.0	-90.24	-1,912.7	-8,145.8	4,848.2	4,711.8	136.39	35.546	
10,600.0	6,640.6	6,771.2	6,623.4	114.3	24.0	-90.23	-1,912.7	-8,145.8	4,787.6	4,649.3	138.30	34.617	
10,629.9	6,640.6	6,771.2	6,623.3	115.2	24.0	-90.23	-1,912.7	-8,145.8	4,761.3	4,622.1	139.13	34.221	
10,700.0	6,640.5	6,771.0	6,623.1	117.1	24.0	-90.22	-1,912.7	-8,145.8	4,699.6	4,558.5	141.09	33.310	
10,728.3	6,640.4	6,770.9	6,623.0	117.9	24.0	-90.22	-1,912.7	-8,145.8	4,674.8	4,532.9	141.87	32.950	
10,800.0	6,640.4	6,770.7	6,622.8	119.9	24.0	-90.22	-1,912.7	-8,145.8	4,612.1	4,468.2	143.87	32.057	
10,826.7	6,640.3	6,770.6	6,622.7	120.7	24.0	-90.21	-1,912.7	-8,145.8	4,588.8	4,444.2	144.62	31.730	
10,900.0	6,640.2	6,770.4	6,622.5	122.7	24.0	-90.21	-1,912.7	-8,145.8	4,525.1	4,378.5	146.66	30.855	
10,925.2	6,640.2	6,770.4	6,622.5	123.4	24.0	-90.21	-1,912.7	-8,145.8	4,503.3	4,355.9	147.36	30.560	
11,000.0	6,640.1	6,770.2	6,622.3	125.5	24.0	-90.20	-1,912.7	-8,145.8	4,438.7	4,289.2	149.45	29.700	
11,023.6	6,640.1	6,770.1	6,622.2	126.1	24.0	-90.20	-1,912.7	-8,145.8	4,418.4	4,268.2	150.11	29.435	
11,100.0	6,640.0	6,770.0	6,622.1	128.3	24.0	-90.20	-1,912.7	-8,145.8	4,352.8	4,200.6	152.24	28.592	
11,122.0	6,639.9	6,769.9	6,622.0	128.9	24.0	-90.20	-1,912.7	-8,145.8	4,334.0	4,181.1	152.85	28.354	
11,200.0	6,639.8	6,769.7	6,621.9	131.1	24.0	-90.19	-1,912.7	-8,145.8	4,267.6	4,112.5	155.03	27.528	
11,220.4	6,639.8	6,769.7	6,621.8	131.6	24.0	-90.19	-1,912.7	-8,145.8	4,250.2	4,094.6	155.60	27.315	
11,300.0	6,639.7	6,769.5	6,621.7	133.9	24.0	-90.19	-1,912.7	-8,145.8	4,183.0	4,025.1	157.82	26.505	
11,318.9	6,639.7	6,769.5	6,621.6	134.4	24.0	-90.19	-1,912.7	-8,145.8	4,167.1	4,008.7	158.35	26.316	
11,400.0	6,639.6	6,769.4	6,621.5	136.7	24.0	-90.18	-1,912.7	-8,145.8	4,099.1	3,938.5	160.61	25.522	
11,417.3	6,639.6	6,769.3	6,621.4	137.1	24.0	-90.18	-1,912.7	-8,145.8	4,084.6	3,923.5	161.09	25.356	
11,500.0	6,639.5	6,769.2	6,621.3	139.4	24.0	-90.18	-1,912.7	-8,145.8	4,015.9	3,852.5	163.40	24.577	
11,515.7	6,639.5	6,769.2	6,621.3	139.9	24.0	-90.18	-1,912.7	-8,145.8	4,002.9	3,839.1	163.84	24.431	
11,600.0	6,639.3	6,769.0	6,621.1	142.2	24.0	-90.17	-1,912.7	-8,145.8	3,933.5	3,767.3	166.20	23.668	
11,614.1	6,639.3	6,769.0	6,621.1	142.6	24.0	-90.17	-1,912.7	-8,145.8	3,921.9	3,755.3	166.59	23.542	
11,700.0	6,639.2	6,768.9	6,621.0	145.0	24.0	-90.17	-1,912.7	-8,145.8	3,852.0	3,683.0	168.99	22.794	
11,712.6	6,639.2	6,768.8	6,620.9	145.4	24.0	-90.17	-1,912.7	-8,145.8	3,841.8	3,672.4	169.34	22.686	
11,800.0	6,639.1	6,768.7	6,620.8	147.8	24.0	-90.17	-1,912.7	-8,145.8	3,771.3	3,599.5	171.79	21.954	
11,811.0	6,639.1	6,768.7	6,620.8	148.1	24.0	-90.17	-1,912.7	-8,145.8	3,762.5	3,590.4	172.09	21.863	
11,900.0	6,639.0	6,768.6	6,620.7	150.6	24.0	-90.16	-1,912.7	-8,145.8	3,691.6	3,517.0	174.58	21.145	
11,909.4	6,639.0	6,768.5	6,620.7	150.9	24.0	-90.16	-1,912.7	-8,145.8	3,684.2	3,509.3	174.85	21.071	
12,000.0	6,638.8	6,768.4	6,620.5	153.4	24.0	-90.16	-1,912.7	-8,145.8	3,612.9	3,435.5	177.38	20.368	
12,007.8	6,638.8	6,768.4	6,620.5	153.6	24.0	-90.16	-1,912.8	-8,145.8	3,606.8	3,429.2	177.60	20.309	
12,100.0	6,638.7	6,768.3	6,620.4	156.2	24.0	-90.16	-1,912.8	-8,145.8	3,535.3	3,355.1	180.17	19.621	
12,106.3	6,638.7	6,768.3	6,620.4	156.4	24.0	-90.16	-1,912.8	-8,145.8	3,530.5	3,350.1	180.35	19.576	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.6	6,768.2	6,620.3	159.0	24.0	-90.15	-1,912.8	-8,145.8	3,458.8	3,275.8	182.97	18.904		
12,204.7	6,638.6	6,768.2	6,620.3	159.1	24.0	-90.15	-1,912.8	-8,145.8	3,455.3	3,272.1	183.10	18.871		
12,300.0	6,638.5	6,768.1	6,620.2	161.8	24.0	-90.15	-1,912.8	-8,145.8	3,383.6	3,197.8	185.77	18.214		
12,303.1	6,638.5	6,768.1	6,620.2	161.9	24.0	-90.15	-1,912.8	-8,145.8	3,381.2	3,195.4	185.86	18.193		
12,400.0	6,638.3	6,767.9	6,620.1	164.6	24.0	-90.15	-1,912.8	-8,145.8	3,309.6	3,121.1	188.57	17.551		
12,401.5	6,638.3	6,767.9	6,620.1	164.6	24.0	-90.15	-1,912.8	-8,145.8	3,308.5	3,119.9	188.61	17.541		
12,500.0	6,638.2	6,767.8	6,620.0	167.4	24.0	-90.14	-1,912.8	-8,145.8	3,237.1	3,045.7	191.37	16.916		
12,598.4	6,638.1	6,767.7	6,619.9	170.2	24.0	-90.14	-1,912.8	-8,145.8	3,167.2	2,973.1	194.12	16.316		
12,600.0	6,638.1	6,767.7	6,619.8	170.2	24.0	-90.14	-1,912.8	-8,145.8	3,166.1	2,971.9	194.16	16.306		
12,696.8	6,638.0	6,767.6	6,619.8	172.9	24.0	-90.14	-1,912.8	-8,145.8	3,098.8	2,901.9	196.88	15.740		
12,700.0	6,638.0	6,767.6	6,619.8	173.0	24.0	-90.14	-1,912.8	-8,145.8	3,096.6	2,899.7	196.96	15.722		
12,795.2	6,637.8	6,767.6	6,619.7	175.7	24.0	-90.14	-1,912.8	-8,145.8	3,032.1	2,832.4	199.63	15.188		
12,800.0	6,637.8	6,767.5	6,619.7	175.8	24.0	-90.14	-1,912.8	-8,145.8	3,028.9	2,829.1	199.76	15.162		
12,893.7	6,637.7	6,767.5	6,619.6	178.4	24.0	-90.13	-1,912.8	-8,145.8	2,967.1	2,764.7	202.39	14.661		
12,900.0	6,637.7	6,767.5	6,619.6	178.6	24.0	-90.13	-1,912.8	-8,145.8	2,963.0	2,760.4	202.56	14.627		
12,992.1	6,637.6	6,767.4	6,619.5	181.2	24.0	-90.13	-1,912.8	-8,145.8	2,904.0	2,698.9	205.14	14.156		
13,000.0	6,637.6	6,767.4	6,619.5	181.4	24.0	-90.13	-1,912.8	-8,145.8	2,899.0	2,693.7	205.36	14.117		
13,090.5	6,637.5	6,767.3	6,619.4	183.9	24.0	-90.13	-1,912.8	-8,145.8	2,843.0	2,635.1	207.90	13.675		
13,100.0	6,637.5	6,767.3	6,619.4	184.2	24.0	-90.13	-1,912.8	-8,145.8	2,837.2	2,629.0	208.16	13.630		
13,188.9	6,637.4	6,767.2	6,619.3	186.7	24.0	-90.13	-1,912.8	-8,145.8	2,784.0	2,573.4	210.66	13.216		
13,200.0	6,637.3	6,767.2	6,619.3	187.0	24.0	-90.13	-1,912.8	-8,145.8	2,777.5	2,566.6	210.97	13.166		
13,287.4	6,637.2	6,767.1	6,619.3	189.4	24.0	-90.13	-1,912.8	-8,145.8	2,727.4	2,514.0	213.41	12.780		
13,300.0	6,637.2	6,767.1	6,619.2	189.8	24.0	-90.13	-1,912.8	-8,145.8	2,720.3	2,506.5	213.77	12.725		
13,385.8	6,637.1	6,767.1	6,619.2	192.2	24.0	-90.12	-1,912.8	-8,145.8	2,673.1	2,457.0	216.17	12.366		
13,400.0	6,637.1	6,767.1	6,619.2	192.6	24.0	-90.12	-1,912.8	-8,145.8	2,665.5	2,449.0	216.57	12.308		
13,484.2	6,637.0	6,767.0	6,619.1	195.0	24.0	-90.12	-1,912.8	-8,145.8	2,621.5	2,402.6	218.93	11.974		
13,500.0	6,637.0	6,767.0	6,619.1	195.4	24.0	-90.12	-1,912.8	-8,145.8	2,613.5	2,394.1	219.37	11.913		
13,582.6	6,636.9	6,766.9	6,619.0	197.7	24.0	-90.12	-1,912.8	-8,145.8	2,572.6	2,350.9	221.69	11.605		
13,600.0	6,636.8	6,766.9	6,619.0	198.2	24.0	-90.12	-1,912.8	-8,145.8	2,564.2	2,342.1	222.17	11.542		
13,681.1	6,636.7	6,766.9	6,619.0	200.5	24.0	-90.12	-1,912.8	-8,145.8	2,526.5	2,302.1	224.44	11.257		
13,700.0	6,636.7	6,766.9	6,619.0	201.0	24.0	-90.12	-1,912.8	-8,145.8	2,518.0	2,293.0	224.97	11.192		
13,779.5	6,636.6	6,766.8	6,618.9	203.2	24.0	-90.12	-1,912.8	-8,145.8	2,483.5	2,256.3	227.20	10.931		
13,800.0	6,636.6	6,766.8	6,618.9	203.8	24.0	-90.12	-1,912.8	-8,145.8	2,475.0	2,247.2	227.78	10.866		
13,877.9	6,636.5	6,766.7	6,618.8	206.0	24.0	-90.12	-1,912.8	-8,145.8	2,443.8	2,213.8	229.96	10.627		
13,900.0	6,636.5	6,766.7	6,618.8	206.6	24.0	-90.12	-1,912.8	-8,145.8	2,435.3	2,204.7	230.58	10.562		
13,976.3	6,636.4	6,766.7	6,618.8	208.8	24.0	-90.11	-1,912.8	-8,145.8	2,407.4	2,174.6	232.72	10.344		
14,000.0	6,636.3	6,766.7	6,618.8	209.4	24.0	-90.11	-1,912.8	-8,145.8	2,399.1	2,165.7	233.38	10.280		
14,074.8	6,636.2	6,766.6	6,618.7	211.5	24.0	-90.11	-1,912.8	-8,145.8	2,374.5	2,139.0	235.48	10.084		
14,100.0	6,636.2	6,766.6	6,618.7	212.2	24.0	-90.11	-1,912.8	-8,145.8	2,366.6	2,130.4	236.19	10.020		
14,173.2	6,636.1	6,766.6	6,618.7	214.3	24.0	-90.11	-1,912.8	-8,145.8	2,345.3	2,107.0	238.24	9.844		
14,200.0	6,636.1	6,766.6	6,618.7	215.0	24.0	-90.11	-1,912.8	-8,145.8	2,338.0	2,099.0	238.99	9.783		
14,271.6	6,636.0	6,766.5	6,618.6	217.0	24.0	-90.11	-1,912.8	-8,145.8	2,319.9	2,078.9	241.00	9.626		
14,300.0	6,636.0	6,766.5	6,618.6	217.8	24.0	-90.11	-1,912.8	-8,145.8	2,313.3	2,071.5	241.79	9.567		
14,370.0	6,635.9	6,766.5	6,618.6	219.8	24.0	-90.11	-1,912.8	-8,145.8	2,298.4	2,054.6	243.76	9.429		
14,400.0	6,635.8	6,766.4	6,618.6	220.6	24.0	-90.11	-1,912.8	-8,145.8	2,292.7	2,048.1	244.60	9.373		
14,468.5	6,635.7	6,766.4	6,618.5	222.6	24.0	-90.11	-1,912.8	-8,145.8	2,281.0	2,034.5	246.52	9.253		
14,500.0	6,635.7	6,766.4	6,618.5	223.4	24.0	-90.11	-1,912.8	-8,145.8	2,276.3	2,028.9	247.40	9.201		
14,566.9	6,635.6	6,766.4	6,618.5	225.3	24.0	-90.11	-1,912.8	-8,145.8	2,267.7	2,018.4	249.28	9.097		
14,600.0	6,635.6	6,766.3	6,618.5	226.2	24.0	-90.11	-1,912.8	-8,145.8	2,264.2	2,014.0	250.21	9.049		
14,665.3	6,635.5	6,766.3	6,618.4	228.1	24.0	-90.10	-1,912.8	-8,145.8	2,258.7	2,006.6	252.04	8.962		
14,700.0	6,635.5	6,766.3	6,618.4	229.0	24.0	-90.10	-1,912.8	-8,145.8	2,256.5	2,003.5	253.01	8.919		
14,763.7	6,635.4	6,766.3	6,618.4	230.8	24.0	-90.10	-1,912.8	-8,145.8	2,253.9	1,999.1	254.80	8.846		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,635.3	6,766.3	6,618.4	231.8	24.0	-90.10	-1,912.8	-8,145.8	2,253.2	1,997.4	255.81	8.808	
14,824.3	6,635.3	6,766.2	6,618.3	232.5	24.0	-90.10	-1,912.8	-8,145.8	2,253.1	1,996.6	256.50	8.784 CC	
14,862.2	6,635.2	6,766.2	6,618.3	233.6	24.0	-90.10	-1,912.8	-8,145.8	2,253.4	1,995.8	257.56	8.749	
14,900.0	6,635.2	6,766.2	6,618.3	234.7	24.0	-90.10	-1,912.8	-8,145.8	2,254.3	1,995.7	258.62	8.717 ES	
14,960.6	6,635.1	6,766.2	6,618.3	236.4	24.0	-90.10	-1,912.8	-8,145.8	2,257.2	1,996.9	260.32	8.671	
14,995.1	6,635.0	6,766.1	6,618.2	237.3	24.0	-90.10	-1,912.8	-8,145.8	2,259.5	1,998.2	261.29	8.648 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-105.47	-1,962.3	-7,091.8	7,358.3				
98.4	98.4	51.0	51.0	0.1	0.0	-105.47	-1,962.2	-7,091.9	7,358.4	7,358.3	0.10	N/A	
100.0	100.0	52.0	52.0	0.1	0.0	-105.47	-1,962.2	-7,091.9	7,358.4	7,358.3	0.10	N/A	
196.8	196.8	153.0	153.0	0.3	0.1	-105.47	-1,962.4	-7,092.3	7,358.8	7,358.4	0.39	N/A	
200.0	200.0	157.0	157.0	0.3	0.1	-105.47	-1,962.5	-7,092.3	7,358.8	7,358.4	0.40	N/A	
295.3	295.3	1,108.4	1,093.9	0.5	3.5	-106.50	-2,075.3	-7,004.0	7,350.7	7,346.8	3.92	1,876.891	
300.0	300.0	1,110.4	1,095.9	0.5	3.5	-106.51	-2,075.7	-7,003.6	7,350.2	7,346.2	3.94	1,866.535	
393.7	393.7	1,590.1	1,547.5	0.8	6.5	-107.68	-2,199.1	-6,900.3	7,336.8	7,329.8	7.01	1,047.289	
400.0	400.0	1,593.8	1,551.0	0.8	6.5	-107.69	-2,200.0	-6,899.5	7,335.8	7,328.7	7.04	1,041.318	
492.1	492.1	1,645.0	1,598.8	1.0	6.9	-107.82	-2,213.7	-6,887.1	7,321.3	7,313.7	7.60	963.056	
500.0	500.0	1,645.0	1,598.8	1.0	6.9	-107.82	-2,213.7	-6,887.1	7,320.1	7,312.5	7.62	960.660	
590.5	590.5	1,714.5	1,663.3	1.2	7.4	-108.01	-2,233.3	-6,870.3	7,306.4	7,298.1	8.31	879.546	
600.0	600.0	1,726.0	1,674.0	1.2	7.5	-108.04	-2,236.6	-6,867.6	7,305.0	7,296.6	8.41	868.785	
689.0	689.0	1,758.8	1,704.4	1.4	7.8	-108.13	-2,246.2	-6,859.7	7,292.0	7,283.2	8.83	825.636	
700.0	700.0	1,763.3	1,708.5	1.4	7.8	-108.14	-2,247.5	-6,858.7	7,290.4	7,281.6	8.89	820.349	
787.4	787.4	1,808.0	1,749.9	1.6	8.1	-108.27	-2,260.9	-6,848.3	7,278.5	7,269.1	9.39	775.305	
800.0	800.0	1,808.0	1,749.9	1.7	8.1	-108.27	-2,260.9	-6,848.3	7,276.8	7,267.3	9.42	772.793	
885.8	885.8	2,086.7	2,005.9	1.9	10.2	-109.10	-2,347.7	-6,780.6	7,265.5	7,254.0	11.56	628.500	
900.0	900.0	2,092.8	2,011.5	1.9	10.3	-109.12	-2,349.6	-6,779.0	7,263.3	7,251.7	11.64	624.221	
984.2	984.2	2,135.0	2,050.1	2.1	10.6	-109.24	-2,362.7	-6,768.2	7,250.5	7,238.4	12.13	597.959	
1,000.0	1,000.0	2,189.2	2,099.8	2.1	11.0	-109.41	-2,379.3	-6,754.3	7,248.1	7,235.6	12.52	578.872	
1,082.7	1,082.7	2,216.0	2,124.4	2.3	11.2	-109.48	-2,387.3	-6,747.4	7,235.5	7,222.7	12.88	561.553	
1,100.0	1,100.0	2,216.0	2,124.4	2.3	11.2	-109.48	-2,387.3	-6,747.4	7,233.0	7,220.1	12.92	559.665	
1,181.1	1,181.1	3,049.6	2,899.4	2.5	17.0	-111.62	-2,583.0	-6,515.9	7,221.5	7,202.8	18.69	386.381	
1,200.0	1,200.0	3,063.6	2,912.4	2.6	17.1	-111.66	-2,585.8	-6,511.3	7,217.0	7,198.1	18.84	383.166	
1,279.5	1,279.5	3,114.0	2,959.0	2.7	17.4	-111.78	-2,595.6	-6,495.0	7,198.0	7,178.6	19.38	371.396	
1,300.0	1,300.0	3,114.0	2,959.0	2.8	17.4	-111.78	-2,595.6	-6,495.0	7,193.2	7,173.8	19.43	370.269	
1,377.9	1,377.9	3,152.8	2,995.1	3.0	17.7	-153.23	-2,603.0	-6,482.8	7,176.0	7,156.3	19.73	363.730	
1,400.0	1,400.0	3,160.6	3,002.4	3.0	17.7	-153.29	-2,604.4	-6,480.4	7,171.6	7,151.8	19.83	361.712	
1,476.4	1,476.3	3,196.0	3,035.5	3.2	18.0	-153.50	-2,610.9	-6,469.6	7,157.8	7,137.6	20.21	354.243	
1,500.0	1,499.8	3,196.0	3,035.5	3.2	18.0	-153.53	-2,610.9	-6,469.6	7,154.0	7,133.8	20.25	353.208	
1,574.8	1,574.4	3,227.3	3,064.8	3.4	18.2	-153.71	-2,616.8	-6,460.3	7,143.4	7,122.8	20.59	346.899	
1,600.0	1,599.5	3,237.8	3,074.6	3.5	18.3	-153.77	-2,618.8	-6,457.2	7,140.4	7,119.7	20.70	344.907	
1,673.2	1,672.2	3,277.0	3,111.3	3.6	18.5	-153.94	-2,626.5	-6,445.8	7,132.9	7,111.8	21.07	338.515	
1,700.0	1,698.7	3,686.0	3,492.5	3.7	21.4	-155.10	-2,699.6	-6,317.2	7,129.5	7,105.8	23.70	300.803	
1,771.6	1,769.5	3,731.6	3,534.1	3.9	21.8	-155.32	-2,709.1	-6,301.2	7,121.1	7,097.0	24.15	294.859	
1,800.0	1,797.5	3,749.2	3,550.1	4.0	21.9	-155.40	-2,713.0	-6,295.0	7,118.3	7,094.0	24.32	292.696	
1,870.1	1,866.3	4,049.0	3,818.2	4.2	24.7	-156.54	-2,786.3	-6,182.6	7,111.8	7,084.8	26.92	264.190	
1,899.9	1,895.6	4,087.2	3,851.9	4.3	25.0	-156.70	-2,795.9	-6,167.5	7,108.9	7,081.7	27.28	260.600	
1,968.5	1,962.6	4,142.4	3,901.0	4.5	25.5	-156.91	-2,809.1	-6,145.9	7,102.9	7,075.0	27.89	254.647	
2,000.0	1,993.4	4,167.1	3,923.2	4.6	25.7	-157.00	-2,814.4	-6,136.4	7,100.1	7,072.0	28.17	252.089	
2,066.9	2,058.9	4,176.0	3,931.2	4.8	25.8	-157.03	-2,816.3	-6,133.0	7,094.6	7,066.2	28.41	249.759	
2,100.0	2,091.3	4,176.0	3,931.2	4.9	25.8	-157.03	-2,816.3	-6,133.0	7,092.2	7,063.7	28.49	248.960	
2,165.3	2,155.2	4,216.6	3,967.8	5.2	26.1	-157.17	-2,824.9	-6,117.8	7,087.3	7,058.3	28.96	244.728	
2,200.0	2,189.1	4,225.7	3,976.1	5.3	26.2	-157.20	-2,826.8	-6,114.5	7,085.0	7,055.9	29.12	243.315	
2,263.8	2,251.5	4,257.0	4,004.4	5.5	26.5	-157.31	-2,833.8	-6,103.1	7,081.1	7,051.6	29.52	239.861	
2,300.0	2,286.9	4,257.0	4,004.4	5.7	26.5	-157.31	-2,833.8	-6,103.1	7,079.0	7,049.4	29.62	239.024	
2,362.2	2,347.7	4,282.5	4,027.5	5.9	26.7	-157.40	-2,839.5	-6,094.0	7,075.8	7,045.8	29.98	236.031	
2,400.0	2,384.7	4,304.8	4,047.7	6.0	26.9	-157.48	-2,844.6	-6,086.1	7,073.9	7,043.7	30.25	233.848	
2,460.6	2,444.0	4,339.0	4,078.7	6.3	27.1	-157.60	-2,852.4	-6,074.0	7,071.2	7,040.5	30.68	230.503	
2,500.0	2,482.5	4,339.0	4,078.7	6.4	27.1	-157.60	-2,852.4	-6,074.0	7,069.6	7,038.8	30.78	229.662	
2,559.0	2,540.3	4,369.9	4,106.7	6.7	27.4	-157.71	-2,859.7	-6,063.1	7,067.5	7,036.3	31.19	226.616	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	4,382.4	4,118.1	6.8	27.5	-157.75	-2,862.7	-6,058.8	7,066.2	7,034.8	31.40	225.064	
2,657.5	2,636.5	4,420.0	4,152.2	7.1	27.8	-157.89	-2,871.9	-6,045.9	7,064.8	7,032.9	31.85	221.811	
2,700.0	2,678.1	4,420.0	4,152.2	7.2	27.8	-157.89	-2,871.9	-6,045.9	7,063.8	7,031.9	31.97	220.975	
2,755.9	2,732.8	4,420.0	4,152.2	7.5	27.8	-157.89	-2,871.9	-6,045.9	7,063.0	7,030.9	32.12	219.886	
2,800.0	2,776.0	4,420.0	4,152.2	7.7	27.8	-157.89	-2,871.9	-6,045.9	7,062.6	7,030.4	32.24	219.047	
2,854.3	2,829.1	4,463.7	4,191.9	7.9	28.2	-158.05	-2,882.9	-6,031.4	7,062.2	7,029.5	32.73	215.764	
2,866.3	2,840.8	4,467.7	4,195.6	7.9	28.2	-158.06	-2,883.9	-6,030.1	7,062.2	7,029.4	32.80	215.341	
2,900.0	2,873.8	4,502.0	4,226.9	8.1	28.5	-158.18	-2,892.4	-6,019.1	7,062.2	7,029.1	33.15	213.019	
2,910.3	2,883.9	4,502.0	4,226.9	8.1	28.5	-158.18	-2,892.4	-6,019.1	7,062.2	7,029.1	33.18	212.834	
2,952.7	2,925.4	4,502.0	4,226.9	8.3	28.5	-158.18	-2,892.4	-6,019.1	7,062.4	7,029.1	33.30	212.081	
3,000.0	2,971.6	4,582.1	4,300.3	8.5	29.1	-158.46	-2,911.9	-5,993.5	7,062.6	7,028.6	34.04	207.492	
3,051.2	3,021.6	4,584.0	4,302.0	8.7	29.1	-158.47	-2,912.4	-5,992.9	7,062.9	7,028.7	34.20	206.545	
3,100.0	3,069.4	4,620.5	4,335.4	8.9	29.4	-158.60	-2,921.2	-5,981.3	7,063.3	7,028.7	34.61	204.107	
3,149.6	3,117.9	4,638.8	4,352.2	9.1	29.6	-158.66	-2,925.6	-5,975.6	7,064.0	7,029.2	34.88	202.508	
3,200.0	3,167.2	4,665.0	4,376.4	9.3	29.8	-158.75	-2,932.0	-5,967.5	7,065.0	7,029.8	35.22	200.590	
3,248.0	3,214.2	4,665.0	4,376.4	9.5	29.8	-158.75	-2,932.0	-5,967.5	7,066.1	7,030.8	35.36	199.854	
3,300.0	3,265.0	4,694.6	4,403.7	9.8	30.0	-158.85	-2,939.2	-5,958.6	7,067.6	7,031.9	35.71	197.901	
3,346.4	3,310.5	4,712.1	4,419.9	10.0	30.1	-158.91	-2,943.3	-5,953.4	7,069.1	7,033.1	35.97	196.539	
3,400.0	3,362.9	4,747.0	4,452.3	10.2	30.4	-159.03	-2,951.4	-5,943.5	7,071.1	7,034.8	36.37	194.444	
3,444.9	3,406.7	4,763.8	4,468.0	10.4	30.5	-159.08	-2,955.2	-5,938.7	7,073.0	7,036.4	36.61	193.203	
3,473.0	3,434.2	4,832.1	4,531.6	10.5	31.0	-159.30	-2,970.6	-5,919.3	7,074.1	7,036.9	37.16	190.369	
3,500.0	3,460.7	4,855.3	4,553.2	10.6	31.1	-159.39	-2,975.7	-5,912.7	7,075.0	7,037.5	37.44	188.975	
3,543.3	3,503.2	4,892.6	4,588.1	10.7	31.4	-159.51	-2,983.9	-5,902.1	7,076.0	7,038.1	37.87	186.857	
3,600.0	3,559.0	4,910.0	4,604.3	10.9	31.5	-159.57	-2,987.7	-5,897.1	7,076.5	7,038.3	38.20	185.232	
3,641.7	3,600.2	4,910.0	4,604.3	11.0	31.5	-159.57	-2,987.7	-5,897.1	7,076.5	7,038.1	38.35	184.529	
3,700.0	3,657.9	4,948.1	4,640.1	11.2	31.8	-159.68	-2,995.8	-5,886.7	7,075.6	7,036.8	38.78	182.452	
3,740.1	3,697.8	4,959.5	4,650.8	11.3	31.8	-159.70	-2,998.1	-5,883.8	7,074.6	7,035.6	38.97	181.536	
3,800.0	3,757.3	4,992.0	4,681.7	11.4	32.0	-159.77	-3,004.5	-5,875.7	7,072.5	7,033.1	39.34	179.781	
3,838.6	3,795.7	5,155.0	4,836.6	11.5	33.0	-160.16	-3,034.0	-5,834.5	7,070.4	7,029.9	40.41	174.973	
3,900.0	3,857.0	5,180.3	4,860.6	11.7	33.2	-160.19	-3,038.1	-5,828.1	7,065.4	7,024.7	40.68	173.674	
3,937.0	3,893.9	5,194.1	4,873.9	11.7	33.3	-160.20	-3,040.4	-5,824.6	7,061.9	7,021.1	40.83	172.975	
4,000.0	3,956.9	5,237.0	4,915.0	11.8	33.5	-160.25	-3,047.2	-5,814.4	7,055.4	7,014.2	41.16	171.399	
4,035.4	3,992.3	5,237.0	4,915.0	11.9	33.5	-160.22	-3,047.2	-5,814.4	7,051.2	7,010.0	41.21	171.109	
4,072.9	4,029.8	5,237.0	4,915.0	11.9	33.5	-119.00	-3,047.2	-5,814.4	7,046.5	7,016.5	30.04	234.537	
4,100.0	4,056.9	5,237.0	4,915.0	12.0	33.5	-119.00	-3,047.2	-5,814.4	7,043.1	7,013.0	30.08	234.108	
4,133.8	4,090.7	5,266.4	4,943.3	12.0	33.7	-119.05	-3,051.6	-5,807.8	7,038.8	7,008.6	30.22	232.912	
4,200.0	4,156.9	5,290.2	4,966.3	12.1	33.8	-119.10	-3,054.7	-5,802.8	7,030.8	7,000.4	30.40	231.311	
4,232.3	4,189.2	5,318.0	4,993.4	12.2	33.9	-119.14	-3,058.0	-5,797.5	7,027.1	6,996.5	30.53	230.189	
4,300.0	4,256.9	5,318.0	4,993.4	12.3	33.9	-119.14	-3,058.0	-5,797.5	7,019.5	6,988.8	30.64	229.094	
4,330.7	4,287.6	5,318.0	4,993.4	12.4	33.9	-119.14	-3,058.0	-5,797.5	7,016.2	6,985.5	30.69	228.604	
4,400.0	4,356.9	5,318.0	4,993.4	12.5	33.9	-119.14	-3,058.0	-5,797.5	7,009.4	6,978.6	30.81	227.517	
4,429.1	4,386.0	5,350.7	5,025.5	12.5	34.0	-119.19	-3,061.5	-5,791.7	7,006.4	6,975.4	30.93	226.493	
4,500.0	4,456.9	5,366.0	5,040.5	12.6	34.1	-119.21	-3,063.1	-5,789.3	7,000.0	6,968.9	31.09	225.148	
4,527.5	4,484.4	5,400.0	5,073.9	12.7	34.2	-119.26	-3,066.6	-5,784.3	6,997.9	6,966.7	31.22	224.160	
4,600.0	4,556.9	5,400.0	5,073.9	12.8	34.2	-119.26	-3,066.6	-5,784.3	6,992.0	6,960.6	31.34	223.081	
4,626.0	4,582.9	5,400.0	5,073.9	12.9	34.2	-119.26	-3,066.6	-5,784.3	6,990.0	6,958.6	31.39	222.700	
4,700.0	4,656.9	5,422.1	5,095.7	13.0	34.3	-119.28	-3,068.9	-5,781.4	6,984.9	6,953.4	31.56	221.317	
4,724.4	4,681.3	5,434.4	5,107.8	13.0	34.3	-119.30	-3,070.1	-5,779.8	6,983.3	6,951.7	31.63	220.794	
4,800.0	4,756.9	5,482.0	5,154.8	13.1	34.5	-119.36	-3,074.7	-5,773.9	6,978.7	6,946.9	31.86	219.059	
4,822.8	4,779.7	5,482.0	5,154.8	13.2	34.5	-119.36	-3,074.7	-5,773.9	6,977.4	6,945.5	31.90	218.741	
4,900.0	4,856.9	5,517.4	5,189.9	13.3	34.6	-119.40	-3,078.0	-5,769.9	6,973.2	6,941.1	32.10	217.232	
4,921.2	4,878.1	5,526.6	5,199.0	13.4	34.6	-119.41	-3,078.9	-5,768.9	6,972.2	6,940.0	32.16	216.827	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	4,956.9	5,563.0	5,235.0	13.5	34.7	-119.44	-3,082.2	-5,765.1	6,968.6	6,936.2	32.36	215.318	
5,019.7	4,976.6	5,563.0	5,235.0	13.5	34.7	-119.44	-3,082.2	-5,765.1	6,967.8	6,935.4	32.40	215.059	
5,100.0	5,056.9	5,563.0	5,235.0	13.7	34.7	-119.44	-3,082.2	-5,765.1	6,965.0	6,932.5	32.54	214.024	
5,118.1	5,075.0	5,595.1	5,266.8	13.7	34.8	-119.48	-3,085.0	-5,762.2	6,964.3	6,931.6	32.63	213.451	
5,200.0	5,156.9	5,645.0	5,316.4	13.8	34.9	-119.52	-3,089.2	-5,758.6	6,962.3	6,929.4	32.86	211.903	
5,216.5	5,173.4	5,645.0	5,316.4	13.9	34.9	-119.52	-3,089.2	-5,758.6	6,961.9	6,929.0	32.89	211.698	
5,300.0	5,256.9	5,645.0	5,316.4	14.0	34.9	-119.52	-3,089.2	-5,758.6	6,960.4	6,927.4	33.04	210.681	
5,314.9	5,271.8	5,645.0	5,316.4	14.1	34.9	-119.52	-3,089.2	-5,758.6	6,960.3	6,927.2	33.07	210.502	
5,400.0	5,356.9	5,727.0	5,398.0	14.2	35.1	-119.59	-3,096.1	-5,753.8	6,959.5	6,926.2	33.34	208.757	
5,413.4	5,370.3	5,808.0	5,478.6	14.2	35.3	-119.66	-3,102.5	-5,749.0	6,959.4	6,925.9	33.48	207.853	
5,500.0	5,456.9	5,875.0	5,545.4	14.4	35.4	-119.70	-3,106.7	-5,745.2	6,957.8	6,924.1	33.74	206.213	
5,511.8	5,468.7	5,890.0	5,560.3	14.4	35.4	-119.71	-3,107.6	-5,744.5	6,957.7	6,923.9	33.79	205.937	
5,600.0	5,556.9	5,993.0	5,663.1	14.6	35.6	-119.76	-3,112.0	-5,739.9	6,956.2	6,922.1	34.10	204.009	
5,610.2	5,567.1	6,001.6	5,671.7	14.6	35.6	-119.76	-3,112.2	-5,739.6	6,956.0	6,921.9	34.13	203.816	
5,700.0	5,656.9	6,079.3	5,749.3	14.7	35.7	-119.79	-3,114.4	-5,736.9	6,954.5	6,920.1	34.41	202.125	
5,708.6	5,665.5	6,087.2	5,757.2	14.8	35.7	-119.79	-3,114.6	-5,736.6	6,954.3	6,919.9	34.43	201.960	
5,800.0	5,756.9	6,177.0	5,846.9	14.9	35.8	-119.81	-3,116.1	-5,734.1	6,952.9	6,918.2	34.73	200.191	
5,807.1	5,764.0	6,184.5	5,854.5	14.9	35.9	-119.81	-3,116.2	-5,733.9	6,952.8	6,918.0	34.76	200.051	
5,900.0	5,856.9	6,296.3	5,966.2	15.1	36.0	-119.83	-3,117.1	-5,731.2	6,951.2	6,916.1	35.09	198.110	
5,905.5	5,862.4	6,301.9	5,971.8	15.1	36.0	-119.83	-3,117.1	-5,731.1	6,951.1	6,916.0	35.11	198.002	
5,971.9	5,928.8	6,364.3	6,034.2	15.3	36.1	-119.84	-3,117.7	-5,729.4	6,949.9	6,914.6	35.32	196.760	
6,000.0	5,956.9	6,391.3	6,061.2	15.3	36.1	-29.89	-3,118.0	-5,728.7	6,948.9	6,901.2	47.75	145.522	
6,003.9	5,960.8	6,395.2	6,065.1	15.3	36.1	-29.90	-3,118.1	-5,728.6	6,948.7	6,900.9	47.75	145.523	
6,050.0	6,006.7	6,440.7	6,110.5	15.4	36.1	-30.08	-3,118.6	-5,727.3	6,944.8	6,897.1	47.67	145.672	
6,100.0	6,056.2	6,461.0	6,130.9	15.4	36.2	-30.38	-3,118.8	-5,726.8	6,937.8	6,890.3	47.45	146.222	
6,102.3	6,058.5	6,461.0	6,130.9	15.4	36.2	-30.40	-3,118.8	-5,726.8	6,937.4	6,889.9	47.43	146.258	
6,150.0	6,105.1	6,503.2	6,173.0	15.4	36.2	-30.84	-3,119.3	-5,725.8	6,927.9	6,880.7	47.14	146.966	
6,200.0	6,153.0	6,543.0	6,212.8	15.5	36.3	-31.44	-3,119.8	-5,725.0	6,915.2	6,868.5	46.73	147.967	
6,200.8	6,153.8	6,543.0	6,212.8	15.5	36.3	-31.44	-3,119.8	-5,725.0	6,915.0	6,868.3	46.73	147.987	
6,250.0	6,199.9	6,594.3	6,264.1	15.5	36.3	-32.22	-3,120.5	-5,724.0	6,899.8	6,853.5	46.27	149.124	
6,299.2	6,244.8	6,682.9	6,352.7	15.5	36.4	-33.25	-3,121.1	-5,722.1	6,881.7	6,835.8	45.81	150.212	
6,300.0	6,245.5	6,684.2	6,354.0	15.5	36.4	-33.27	-3,121.1	-5,722.0	6,881.3	6,835.5	45.81	150.231	
6,350.0	6,289.6	6,733.8	6,403.5	15.5	36.5	-34.44	-3,121.4	-5,720.8	6,860.0	6,814.8	45.26	151.571	
6,397.6	6,329.9	6,768.7	6,438.4	15.4	36.5	-35.73	-3,121.6	-5,719.8	6,837.4	6,792.7	44.72	152.881	
6,400.0	6,331.8	6,770.3	6,440.1	15.4	36.5	-35.80	-3,121.7	-5,719.8	6,836.2	6,791.5	44.70	152.946	
6,450.0	6,372.2	6,806.4	6,476.2	15.4	36.6	-37.41	-3,122.0	-5,718.8	6,810.0	6,765.8	44.17	154.168	
6,496.0	6,407.4	6,839.1	6,508.8	15.4	36.6	-39.12	-3,122.3	-5,717.9	6,783.9	6,740.1	43.76	155.020	
6,500.0	6,410.3	6,841.8	6,511.5	15.4	36.6	-39.28	-3,122.4	-5,717.9	6,781.5	6,737.8	43.73	155.081	
6,550.0	6,446.1	6,870.0	6,539.7	15.4	36.6	-41.42	-3,122.6	-5,717.1	6,750.9	6,707.5	43.40	155.560	
6,594.5	6,475.9	6,890.5	6,560.2	15.4	36.6	-43.59	-3,122.8	-5,716.6	6,722.1	6,678.9	43.24	155.461	
6,600.0	6,479.4	6,892.6	6,562.3	15.4	36.6	-43.87	-3,122.8	-5,716.6	6,718.4	6,675.2	43.23	155.421	
6,650.0	6,510.0	6,910.5	6,580.2	15.5	36.7	-46.67	-3,123.0	-5,716.2	6,684.1	6,640.9	43.26	154.496	
6,692.9	6,534.0	6,924.5	6,594.2	15.7	36.7	-49.39	-3,123.1	-5,715.9	6,653.5	6,610.0	43.50	152.950	
6,700.0	6,537.8	6,926.7	6,596.4	15.7	36.7	-49.87	-3,123.1	-5,715.8	6,648.3	6,604.7	43.55	152.647	
6,750.0	6,562.6	6,951.0	6,620.7	16.2	36.7	-53.61	-3,123.5	-5,715.3	6,611.0	6,566.9	44.15	149.729	
6,791.3	6,580.8	6,952.4	6,622.1	16.6	36.7	-56.89	-3,123.5	-5,715.3	6,579.3	6,534.5	44.79	146.903	
6,800.0	6,584.3	6,956.7	6,626.4	16.7	36.7	-57.66	-3,123.6	-5,715.2	6,572.5	6,527.5	44.96	146.181	
6,850.0	6,602.9	6,978.9	6,648.6	17.3	36.7	-62.41	-3,123.8	-5,714.8	6,532.9	6,486.8	46.08	141.783	
6,889.7	6,615.2	6,993.6	6,663.3	17.9	36.8	-66.54	-3,124.0	-5,714.5	6,500.8	6,453.7	47.09	138.064	
6,900.0	6,618.1	6,997.0	6,666.7	18.0	36.8	-67.65	-3,124.0	-5,714.4	6,492.4	6,445.1	47.35	137.121	
6,950.0	6,630.0	7,010.9	6,680.6	18.8	36.8	-73.30	-3,124.2	-5,714.2	6,451.3	6,402.6	48.67	132.543	
6,988.2	6,636.8	7,018.6	6,688.3	19.5	36.8	-77.84	-3,124.2	-5,714.0	6,419.6	6,369.9	49.66	129.279	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
7,000.0	6,638.5	7,020.5	6,690.2	19.7	36.8	-79.27	-3,124.2	-5,714.0	6,409.7	6,359.8	49.94	128.348	
7,050.0	6,643.5	7,025.7	6,695.4	20.6	36.8	-85.41	-3,124.3	-5,713.9	6,367.9	6,316.8	51.05	124.736	
7,086.6	6,644.9	7,026.7	6,696.4	21.3	36.8	-89.92	-3,124.3	-5,713.9	6,337.2	6,285.5	51.73	122.499	
7,097.8	6,645.0	7,026.5	6,696.2	21.5	36.8	-91.29	-3,124.3	-5,713.9	6,327.8	6,275.9	51.91	121.891	
7,100.0	6,645.0	7,026.5	6,696.1	21.6	36.8	-91.29	-3,124.3	-5,713.9	6,326.0	6,274.0	51.96	121.757	
7,185.0	6,644.9	7,024.4	6,694.0	23.3	36.8	-91.25	-3,124.3	-5,713.9	6,255.0	6,201.3	53.68	116.524	
7,200.0	6,644.9	7,024.0	6,693.7	23.6	36.8	-91.25	-3,124.3	-5,713.9	6,242.6	6,188.6	53.98	115.638	
7,283.4	6,644.8	7,021.9	6,691.6	25.4	36.8	-91.21	-3,124.3	-5,714.0	6,173.3	6,117.5	55.80	110.635	
7,300.0	6,644.7	7,021.5	6,691.2	25.8	36.8	-91.20	-3,124.2	-5,714.0	6,159.6	6,103.5	56.16	109.682	
7,381.9	6,644.6	7,019.5	6,689.1	27.7	36.8	-91.17	-3,124.2	-5,714.0	6,092.1	6,034.1	58.03	104.977	
7,400.0	6,644.6	7,019.0	6,688.7	28.1	36.8	-91.16	-3,124.2	-5,714.0	6,077.2	6,018.8	58.45	103.977	
7,480.3	6,644.5	7,017.0	6,686.7	30.0	36.8	-91.13	-3,124.2	-5,714.1	6,011.4	5,951.1	60.36	99.600	
7,500.0	6,644.5	7,016.5	6,686.2	30.5	36.8	-91.12	-3,124.2	-5,714.1	5,995.3	5,934.5	60.82	98.569	
7,578.7	6,644.4	7,014.5	6,684.2	32.4	36.8	-91.09	-3,124.2	-5,714.1	5,931.3	5,868.5	62.75	94.525	
7,600.0	6,644.4	7,014.0	6,683.6	32.9	36.8	-91.08	-3,124.2	-5,714.1	5,914.0	5,850.7	63.27	93.476	
7,677.1	6,644.3	7,012.0	6,681.7	34.8	36.8	-91.05	-3,124.2	-5,714.2	5,851.7	5,786.5	65.20	89.755	
7,700.0	6,644.2	7,011.4	6,681.1	35.4	36.8	-91.04	-3,124.2	-5,714.2	5,833.3	5,767.5	65.77	88.696	
7,775.6	6,644.1	7,009.5	6,679.2	37.3	36.8	-91.01	-3,124.2	-5,714.2	5,772.7	5,705.0	67.69	85.283	
7,800.0	6,644.1	7,008.9	6,678.5	38.0	36.8	-91.00	-3,124.1	-5,714.2	5,753.1	5,684.8	68.31	84.222	
7,874.0	6,644.0	7,007.0	6,676.6	39.9	36.8	-90.96	-3,124.1	-5,714.2	5,694.2	5,624.0	70.22	81.095	
7,900.0	6,644.0	7,006.3	6,676.0	40.5	36.8	-90.95	-3,124.1	-5,714.3	5,673.6	5,602.7	70.89	80.038	
7,972.4	6,643.9	7,004.4	6,674.1	42.4	36.8	-90.92	-3,124.1	-5,714.3	5,616.4	5,543.7	72.77	77.176	
8,000.0	6,643.9	7,003.7	6,673.4	43.1	36.8	-90.91	-3,124.1	-5,714.3	5,594.8	5,521.3	73.49	76.126	
8,070.8	6,643.8	7,001.9	6,671.5	45.0	36.8	-90.88	-3,124.1	-5,714.3	5,539.3	5,464.0	75.36	73.507	
8,100.0	6,643.7	7,001.1	6,670.8	45.8	36.8	-90.87	-3,124.1	-5,714.4	5,516.6	5,440.5	76.12	72.469	
8,169.3	6,643.7	6,999.3	6,669.0	47.6	36.8	-90.84	-3,124.1	-5,714.4	5,462.9	5,384.9	77.96	70.072	
8,200.0	6,643.6	6,998.5	6,668.2	48.4	36.8	-90.82	-3,124.0	-5,714.4	5,439.1	5,360.4	78.77	69.047	
8,267.7	6,643.5	6,996.7	6,666.4	50.2	36.8	-90.79	-3,124.0	-5,714.4	5,387.1	5,306.6	80.58	66.854	
8,300.0	6,643.5	6,995.9	6,665.5	51.1	36.8	-90.78	-3,124.0	-5,714.5	5,362.4	5,281.0	81.44	65.843	
8,366.1	6,643.4	6,994.1	6,663.8	52.9	36.8	-90.75	-3,124.0	-5,714.5	5,312.1	5,228.9	83.22	63.835	
8,400.0	6,643.4	6,993.2	6,662.9	53.8	36.8	-90.74	-3,124.0	-5,714.5	5,286.5	5,202.4	84.12	62.841	
8,464.5	6,643.3	6,991.5	6,661.2	55.5	36.8	-90.71	-3,124.0	-5,714.5	5,237.9	5,152.1	85.86	61.002	
8,500.0	6,643.2	6,990.5	6,660.2	56.5	36.8	-90.69	-3,124.0	-5,714.6	5,211.4	5,124.6	86.82	60.026	
8,563.0	6,643.2	6,988.9	6,658.6	58.2	36.8	-90.66	-3,123.9	-5,714.6	5,164.5	5,076.0	88.52	58.341	
8,600.0	6,643.1	6,987.9	6,657.6	59.2	36.8	-90.65	-3,123.9	-5,714.6	5,137.1	5,047.6	89.52	57.382	
8,661.4	6,643.0	6,986.2	6,655.9	60.8	36.8	-90.62	-3,123.9	-5,714.6	5,091.9	5,000.8	91.19	55.838	
8,700.0	6,643.0	6,985.2	6,654.9	61.9	36.8	-90.60	-3,123.9	-5,714.7	5,063.7	4,971.5	92.24	54.898	
8,759.8	6,642.9	6,983.6	6,653.3	63.5	36.8	-90.58	-3,123.9	-5,714.7	5,020.3	4,926.4	93.87	53.482	
8,800.0	6,642.9	6,982.5	6,652.2	64.6	36.8	-90.56	-3,123.9	-5,714.7	4,991.3	4,896.3	94.96	52.561	
8,858.2	6,642.8	6,980.9	6,650.6	66.2	36.7	-90.53	-3,123.9	-5,714.7	4,949.5	4,852.9	96.55	51.263	
8,900.0	6,642.7	6,979.8	6,649.5	67.3	36.7	-90.51	-3,123.8	-5,714.8	4,919.8	4,822.1	97.69	50.360	
8,956.7	6,642.7	6,978.2	6,647.9	68.9	36.7	-90.49	-3,123.8	-5,714.8	4,879.7	4,780.4	99.24	49.170	
9,000.0	6,642.6	6,977.0	6,646.7	70.1	36.7	-90.47	-3,123.8	-5,714.8	4,849.3	4,748.8	100.43	48.286	
9,055.1	6,642.5	6,975.5	6,645.2	71.6	36.7	-90.44	-3,123.8	-5,714.8	4,810.9	4,708.9	101.94	47.194	
9,100.0	6,642.5	6,974.3	6,644.0	72.8	36.7	-90.42	-3,123.8	-5,714.9	4,779.8	4,676.7	103.17	46.330	
9,153.5	6,642.4	6,972.8	6,642.5	74.3	36.7	-90.40	-3,123.8	-5,714.9	4,743.1	4,638.5	104.64	45.328	
9,200.0	6,642.4	6,971.5	6,641.2	75.6	36.7	-90.38	-3,123.7	-5,714.9	4,711.5	4,605.6	105.92	44.484	
9,251.9	6,642.3	6,970.1	6,639.8	77.0	36.7	-90.35	-3,123.7	-5,714.9	4,676.4	4,569.1	107.34	43.565	
9,300.0	6,642.2	6,968.7	6,638.4	78.3	36.7	-90.33	-3,123.7	-5,715.0	4,644.3	4,535.6	108.67	42.739	
9,350.4	6,642.2	6,967.3	6,637.0	79.7	36.7	-90.31	-3,123.7	-5,715.0	4,610.9	4,500.8	110.05	41.897	
9,400.0	6,642.1	6,965.9	6,635.6	81.1	36.7	-90.29	-3,123.7	-5,715.0	4,578.3	4,466.9	111.42	41.090	
9,448.8	6,642.0	6,964.5	6,634.2	82.4	36.7	-90.26	-3,123.7	-5,715.1	4,546.5	4,433.8	112.77	40.318	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,500.0	6,642.0	6,963.1	6,632.8	83.8	36.7	-90.24	-3,123.6	-5,715.1	4,513.5	4,399.4	114.18	39.530	
9,547.2	6,641.9	6,961.8	6,631.5	85.1	36.7	-90.22	-3,123.6	-5,715.1	4,483.4	4,367.9	115.48	38.823	
9,600.0	6,641.9	6,960.3	6,630.0	86.6	36.7	-90.19	-3,123.6	-5,715.1	4,450.1	4,333.1	116.94	38.054	
9,645.6	6,641.8	6,959.0	6,628.7	87.9	36.7	-90.17	-3,123.6	-5,715.2	4,421.6	4,303.4	118.20	37.407	
9,700.0	6,641.7	6,957.4	6,627.1	89.4	36.7	-90.14	-3,123.6	-5,715.2	4,388.0	4,268.3	119.70	36.657	
9,744.1	6,641.7	6,956.2	6,625.9	90.6	36.7	-90.12	-3,123.5	-5,715.2	4,361.1	4,240.2	120.92	36.065	
9,800.0	6,641.6	6,954.5	6,624.2	92.1	36.7	-90.10	-3,123.5	-5,715.2	4,327.3	4,204.9	122.47	35.333	
9,842.5	6,641.6	6,953.3	6,623.0	93.3	36.7	-90.08	-3,123.5	-5,715.3	4,302.0	4,178.3	123.65	34.792	
9,900.0	6,641.5	6,951.7	6,621.4	94.9	36.7	-90.05	-3,123.5	-5,715.3	4,268.1	4,142.9	125.24	34.079	
9,940.9	6,641.4	6,951.0	6,620.7	96.0	36.7	-90.04	-3,123.5	-5,715.3	4,244.4	4,118.0	126.38	33.585	
10,000.0	6,641.4	6,951.0	6,620.7	97.7	36.7	-90.04	-3,123.5	-5,715.3	4,210.5	4,082.5	128.01	32.891	
10,039.3	6,641.3	6,951.0	6,620.7	98.8	36.7	-90.04	-3,123.5	-5,715.3	4,188.2	4,059.1	129.11	32.440	
10,100.0	6,641.2	6,951.0	6,620.7	100.4	36.7	-90.04	-3,123.5	-5,715.3	4,154.5	4,023.7	130.79	31.764	
10,137.8	6,641.2	6,951.0	6,620.7	101.5	36.7	-90.04	-3,123.5	-5,715.3	4,133.7	4,001.9	131.84	31.354	
10,200.0	6,641.1	6,951.0	6,620.7	103.2	36.7	-90.04	-3,123.5	-5,715.3	4,100.1	3,966.5	133.57	30.696	
10,236.2	6,641.1	6,951.0	6,620.7	104.2	36.7	-90.04	-3,123.5	-5,715.3	4,080.8	3,946.3	134.57	30.324	
10,300.0	6,641.0	6,951.0	6,620.7	106.0	36.7	-90.04	-3,123.5	-5,715.3	4,047.5	3,911.1	136.35	29.685	
10,334.6	6,640.9	6,951.0	6,620.7	107.0	36.7	-90.04	-3,123.5	-5,715.3	4,029.7	3,892.3	137.31	29.347	
10,400.0	6,640.9	6,951.0	6,620.7	108.8	36.7	-90.04	-3,123.5	-5,715.3	3,996.6	3,857.5	139.13	28.726	
10,433.0	6,640.8	6,951.0	6,620.7	109.7	36.7	-90.04	-3,123.5	-5,715.3	3,980.3	3,840.2	140.05	28.420	
10,500.0	6,640.7	6,951.0	6,620.7	111.6	36.7	-90.04	-3,123.5	-5,715.3	3,947.7	3,805.8	141.91	27.818	
10,531.5	6,640.7	6,951.0	6,620.7	112.4	36.7	-90.04	-3,123.5	-5,715.3	3,932.7	3,789.9	142.79	27.542	
10,600.0	6,640.6	6,951.0	6,620.7	114.3	36.7	-90.04	-3,123.5	-5,715.3	3,900.7	3,756.0	144.70	26.958	
10,629.9	6,640.6	6,951.0	6,620.7	115.2	36.7	-90.04	-3,123.5	-5,715.3	3,887.1	3,741.5	145.53	26.710	
10,700.0	6,640.5	6,939.3	6,609.0	117.1	36.7	-89.85	-3,123.3	-5,715.6	3,855.7	3,708.3	147.47	26.146	
10,728.3	6,640.4	6,938.9	6,608.6	117.9	36.7	-89.84	-3,123.3	-5,715.6	3,843.4	3,695.1	148.26	25.923	
10,800.0	6,640.4	6,937.7	6,607.4	119.9	36.7	-89.82	-3,123.3	-5,715.6	3,812.9	3,662.6	150.26	25.376	
10,826.7	6,640.3	6,937.3	6,607.0	120.7	36.7	-89.81	-3,123.3	-5,715.6	3,801.7	3,650.7	151.00	25.177	
10,900.0	6,640.2	6,936.1	6,605.9	122.7	36.7	-89.79	-3,123.3	-5,715.6	3,772.1	3,619.1	153.04	24.648	
10,925.2	6,640.2	6,935.7	6,605.5	123.4	36.7	-89.79	-3,123.3	-5,715.6	3,762.2	3,608.5	153.74	24.471	
11,000.0	6,640.1	6,934.5	6,604.3	125.5	36.7	-89.77	-3,123.2	-5,715.7	3,733.7	3,577.8	155.83	23.960	
11,023.6	6,640.1	6,934.2	6,603.9	126.1	36.7	-89.76	-3,123.2	-5,715.7	3,724.9	3,568.4	156.49	23.803	
11,100.0	6,640.0	6,932.9	6,602.6	128.3	36.7	-89.74	-3,123.2	-5,715.7	3,697.5	3,538.9	158.62	23.311	
11,122.0	6,639.9	6,932.6	6,602.3	128.9	36.7	-89.73	-3,123.2	-5,715.7	3,689.8	3,530.6	159.23	23.173	
11,200.0	6,639.8	6,931.3	6,601.0	131.1	36.7	-89.71	-3,123.2	-5,715.7	3,663.7	3,502.3	161.40	22.699	
11,220.4	6,639.8	6,931.0	6,600.7	131.6	36.7	-89.71	-3,123.2	-5,715.7	3,657.1	3,495.1	161.98	22.578	
11,300.0	6,639.7	6,929.7	6,599.4	133.9	36.7	-89.69	-3,123.2	-5,715.8	3,632.3	3,468.1	164.19	22.122	
11,318.9	6,639.7	6,929.4	6,599.1	134.4	36.7	-89.68	-3,123.2	-5,715.8	3,626.7	3,461.9	164.72	22.017	
11,400.0	6,639.6	6,928.0	6,597.7	136.7	36.7	-89.66	-3,123.2	-5,715.8	3,603.4	3,436.5	166.98	21.579	
11,417.3	6,639.6	6,927.7	6,597.4	137.1	36.7	-89.65	-3,123.2	-5,715.8	3,598.7	3,431.2	167.47	21.489	
11,500.0	6,639.5	6,926.3	6,596.0	139.4	36.7	-89.63	-3,123.1	-5,715.8	3,577.1	3,407.4	169.78	21.070	
11,515.7	6,639.5	6,926.1	6,595.8	139.9	36.7	-89.63	-3,123.1	-5,715.8	3,573.2	3,403.0	170.21	20.993	
11,600.0	6,639.3	6,924.6	6,594.3	142.2	36.7	-89.60	-3,123.1	-5,715.9	3,553.4	3,380.9	172.57	20.592	
11,614.1	6,639.3	6,924.4	6,594.1	142.6	36.7	-89.60	-3,123.1	-5,715.9	3,550.3	3,377.3	172.96	20.527	
11,700.0	6,639.2	6,922.9	6,592.6	145.0	36.7	-89.57	-3,123.1	-5,715.9	3,532.4	3,357.1	175.36	20.144	
11,712.6	6,639.2	6,922.7	6,592.4	145.4	36.7	-89.57	-3,123.1	-5,715.9	3,530.0	3,354.3	175.71	20.090	
11,800.0	6,639.1	6,921.2	6,590.9	147.8	36.7	-89.55	-3,123.1	-5,715.9	3,514.1	3,336.0	178.15	19.726	
11,811.0	6,639.1	6,921.0	6,590.7	148.1	36.7	-89.54	-3,123.1	-5,715.9	3,512.3	3,333.8	178.46	19.681	
11,900.0	6,639.0	6,919.5	6,589.2	150.6	36.7	-89.52	-3,123.1	-5,716.0	3,498.6	3,317.7	180.94	19.335	
11,909.4	6,639.0	6,919.3	6,589.0	150.9	36.7	-89.51	-3,123.1	-5,716.0	3,497.3	3,316.1	181.21	19.300	
12,000.0	6,638.8	6,917.7	6,587.4	153.4	36.7	-89.49	-3,123.0	-5,716.0	3,485.9	3,302.1	183.74	18.972	
12,007.8	6,638.8	6,917.6	6,587.3	153.6	36.7	-89.49	-3,123.0	-5,716.0	3,485.0	3,301.0	183.96	18.945	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
12,100.0	6,638.7	6,915.9	6,585.6	156.2	36.7	-89.46	-3,123.0	-5,716.1	3,476.0	3,289.5	186.53	18.635		
12,106.3	6,638.7	6,915.8	6,585.5	156.4	36.7	-89.46	-3,123.0	-5,716.1	3,475.5	3,288.8	186.71	18.614		
12,200.0	6,638.6	6,914.1	6,583.8	159.0	36.7	-89.43	-3,123.0	-5,716.1	3,468.9	3,279.6	189.33	18.322		
12,204.7	6,638.6	6,914.1	6,583.8	159.1	36.7	-89.43	-3,123.0	-5,716.1	3,468.7	3,279.2	189.46	18.308		
12,300.0	6,638.5	6,912.3	6,582.0	161.8	36.7	-89.40	-3,123.0	-5,716.1	3,464.8	3,272.6	192.12	18.034		
12,303.1	6,638.5	6,912.3	6,582.0	161.9	36.7	-89.40	-3,123.0	-5,716.1	3,464.7	3,272.5	192.21	18.026		
12,394.7	6,638.3	6,910.6	6,580.3	164.5	36.7	-89.37	-3,123.0	-5,716.2	3,463.5	3,268.7	194.77	17.782 CC		
12,400.0	6,638.3	6,910.5	6,580.2	164.6	36.7	-89.37	-3,123.0	-5,716.2	3,463.5	3,268.6	194.92	17.769		
12,401.5	6,638.3	6,910.5	6,580.2	164.6	36.7	-89.37	-3,123.0	-5,716.2	3,463.5	3,268.5	194.96	17.765		
12,500.0	6,638.2	6,908.6	6,578.4	167.4	36.7	-89.34	-3,122.9	-5,716.2	3,465.1	3,267.4	197.71	17.526 ES		
12,598.4	6,638.1	6,906.8	6,576.5	170.2	36.7	-89.31	-3,122.9	-5,716.3	3,469.5	3,269.0	200.46	17.307		
12,600.0	6,638.1	6,906.8	6,576.5	170.2	36.7	-89.31	-3,122.9	-5,716.3	3,469.5	3,269.0	200.51	17.304		
12,696.8	6,638.0	6,904.9	6,574.7	172.9	36.7	-89.28	-3,122.9	-5,716.3	3,476.6	3,273.4	203.22	17.108		
12,700.0	6,638.0	6,904.9	6,574.6	173.0	36.7	-89.28	-3,122.9	-5,716.3	3,476.9	3,273.6	203.30	17.102		
12,795.2	6,637.8	6,903.1	6,572.8	175.7	36.7	-89.25	-3,122.9	-5,716.3	3,486.5	3,280.6	205.97	16.928		
12,800.0	6,637.8	6,903.0	6,572.7	175.8	36.7	-89.24	-3,122.9	-5,716.3	3,487.1	3,281.0	206.10	16.919		
12,893.7	6,637.7	6,901.2	6,570.9	178.4	36.7	-89.21	-3,122.9	-5,716.4	3,499.2	3,290.5	208.72	16.765		
12,900.0	6,637.7	6,901.1	6,570.8	178.6	36.7	-89.21	-3,122.9	-5,716.4	3,500.1	3,291.2	208.90	16.755		
12,992.1	6,637.6	6,899.3	6,569.0	181.2	36.7	-89.18	-3,122.8	-5,716.4	3,514.6	3,303.1	211.47	16.620		
13,000.0	6,637.6	6,899.1	6,568.8	181.4	36.7	-89.18	-3,122.8	-5,716.4	3,515.9	3,304.2	211.69	16.609		
13,090.5	6,637.5	6,897.3	6,567.0	183.9	36.7	-89.15	-3,122.8	-5,716.5	3,532.6	3,318.4	214.23	16.490		
13,100.0	6,637.5	6,897.1	6,566.9	184.2	36.7	-89.15	-3,122.8	-5,716.5	3,534.5	3,320.0	214.49	16.479		
13,188.9	6,637.4	6,895.4	6,565.1	186.7	36.7	-89.12	-3,122.8	-5,716.5	3,553.3	3,336.3	216.98	16.376		
13,200.0	6,637.3	6,895.2	6,564.9	187.0	36.7	-89.12	-3,122.8	-5,716.5	3,555.8	3,338.5	217.29	16.365		
13,287.4	6,637.2	6,893.4	6,563.1	189.4	36.7	-89.09	-3,122.8	-5,716.6	3,576.6	3,356.9	219.73	16.277		
13,300.0	6,637.2	6,893.1	6,562.9	189.8	36.7	-89.08	-3,122.8	-5,716.6	3,579.8	3,359.7	220.08	16.265		
13,385.8	6,637.1	6,891.4	6,561.1	192.2	36.6	-89.05	-3,122.8	-5,716.6	3,602.4	3,379.9	222.48	16.192		
13,400.0	6,637.1	6,891.1	6,560.8	192.6	36.6	-89.05	-3,122.8	-5,716.6	3,606.3	3,383.5	222.88	16.181		
13,484.2	6,637.0	6,889.4	6,559.1	195.0	36.6	-89.02	-3,122.7	-5,716.7	3,630.7	3,405.5	225.24	16.119		
13,500.0	6,637.0	6,889.1	6,558.8	195.4	36.6	-89.01	-3,122.7	-5,716.7	3,635.5	3,409.8	225.68	16.109		
13,582.6	6,636.9	6,887.4	6,557.1	197.7	36.6	-88.99	-3,122.7	-5,716.7	3,661.4	3,433.4	227.99	16.060		
13,600.0	6,636.8	6,887.0	6,556.7	198.2	36.6	-88.98	-3,122.7	-5,716.7	3,667.1	3,438.6	228.48	16.050		
13,681.1	6,636.7	6,885.3	6,555.0	200.5	36.6	-88.95	-3,122.7	-5,716.8	3,694.5	3,463.8	230.74	16.011		
13,700.0	6,636.7	6,884.9	6,554.6	201.0	36.6	-88.95	-3,122.7	-5,716.8	3,701.2	3,469.9	231.27	16.003		
13,779.5	6,636.6	6,883.2	6,552.9	203.2	36.6	-88.92	-3,122.7	-5,716.8	3,729.9	3,496.4	233.50	15.974		
13,800.0	6,636.6	6,882.8	6,552.5	203.8	36.6	-88.91	-3,122.7	-5,716.8	3,737.6	3,503.5	234.07	15.968		
13,877.9	6,636.5	6,881.1	6,550.8	206.0	36.6	-88.88	-3,122.7	-5,716.9	3,767.5	3,531.3	236.25	15.947		
13,900.0	6,636.5	6,880.6	6,550.4	206.6	36.6	-88.88	-3,122.7	-5,716.9	3,776.3	3,539.4	236.87	15.942		
13,976.3	6,636.4	6,879.0	6,548.7	208.8	36.6	-88.85	-3,122.7	-5,716.9	3,807.3	3,568.3	239.01	15.930		
14,000.0	6,636.3	6,878.5	6,548.2	209.4	36.6	-88.84	-3,122.7	-5,716.9	3,817.2	3,577.6	239.67	15.927		
14,074.8	6,636.2	6,876.8	6,546.6	211.5	36.6	-88.81	-3,122.6	-5,717.0	3,849.3	3,607.5	241.76	15.922		
14,100.0	6,636.2	6,876.3	6,546.0	212.2	36.6	-88.80	-3,122.6	-5,717.0	3,860.3	3,617.9	242.46	15.921 SF		
14,173.2	6,636.1	6,870.0	6,539.7	214.3	36.6	-88.70	-3,122.6	-5,717.1	3,893.2	3,648.7	244.50	15.923		
14,200.0	6,636.1	6,870.0	6,539.7	215.0	36.6	-88.70	-3,122.6	-5,717.1	3,905.5	3,660.3	245.25	15.925		
14,271.6	6,636.0	6,870.0	6,539.7	217.0	36.6	-88.70	-3,122.6	-5,717.1	3,939.1	3,691.9	247.26	15.931		
14,300.0	6,636.0	6,870.0	6,539.7	217.8	36.6	-88.70	-3,122.6	-5,717.1	3,952.7	3,704.6	248.05	15.935		
14,370.0	6,635.9	6,870.0	6,539.7	219.8	36.6	-88.70	-3,122.6	-5,717.1	3,986.9	3,736.9	250.02	15.947		
14,400.0	6,635.8	6,869.4	6,539.1	220.6	36.6	-88.69	-3,122.6	-5,717.2	4,001.8	3,751.0	250.86	15.953		
14,468.5	6,635.7	6,867.1	6,536.9	222.6	36.6	-88.65	-3,122.6	-5,717.2	4,036.6	3,783.8	252.77	15.969		
14,500.0	6,635.7	6,866.1	6,535.8	223.4	36.6	-88.63	-3,122.6	-5,717.2	4,052.8	3,799.2	253.65	15.978		
14,566.9	6,635.6	6,863.9	6,533.6	225.3	36.6	-88.60	-3,122.5	-5,717.3	4,088.0	3,832.5	255.52	15.999		
14,600.0	6,635.6	6,862.8	6,532.5	226.2	36.6	-88.58	-3,122.5	-5,717.3	4,105.7	3,849.2	256.45	16.010		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,635.5	6,860.6	6,530.3	228.1	36.6	-88.54	-3,122.5	-5,717.4	4,141.1	3,882.8	258.27	16.034	
14,700.0	6,635.5	6,859.4	6,529.2	229.0	36.6	-88.52	-3,122.5	-5,717.4	4,160.2	3,900.9	259.24	16.048	
14,763.7	6,635.4	6,857.3	6,527.0	230.8	36.6	-88.49	-3,122.5	-5,717.5	4,195.8	3,934.8	261.02	16.075	
14,800.0	6,635.3	6,856.1	6,525.8	231.8	36.6	-88.47	-3,122.5	-5,717.5	4,216.4	3,954.4	262.03	16.091	
14,862.2	6,635.2	6,854.0	6,523.7	233.6	36.6	-88.43	-3,122.5	-5,717.5	4,252.1	3,988.4	263.77	16.121	
14,900.0	6,635.2	6,852.7	6,522.4	234.7	36.6	-88.41	-3,122.4	-5,717.6	4,274.2	4,009.4	264.83	16.140	
14,960.6	6,635.1	6,850.6	6,520.4	236.4	36.6	-88.38	-3,122.4	-5,717.6	4,310.0	4,043.5	266.52	16.171	
14,995.1	6,635.0	6,849.3	6,519.1	237.3	36.6	-88.36	-3,122.4	-5,717.7	4,330.6	4,063.1	267.48	16.190	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
0.0	0.0	0.0	0.0	0.0	0.0	120.07	-1,165.3	2,012.5	2,325.6				
98.4	98.4	93.6	93.6	0.1	0.1	120.07	-1,165.3	2,012.5	2,325.5	2,325.3	0.18	N/A	
100.0	100.0	95.2	95.2	0.1	0.1	120.07	-1,165.3	2,012.5	2,325.5	2,325.3	0.19	N/A	
196.8	196.8	194.4	194.4	0.3	0.2	120.07	-1,165.2	2,012.4	2,325.4	2,324.9	0.50	4,683.841	
200.0	200.0	197.6	197.6	0.3	0.2	120.07	-1,165.2	2,012.4	2,325.4	2,324.9	0.51	4,590.592	
295.3	295.3	295.2	295.2	0.5	0.3	120.07	-1,165.1	2,012.2	2,325.1	2,324.3	0.81	2,865.106	
300.0	300.0	300.1	300.1	0.5	0.3	120.07	-1,165.1	2,012.2	2,325.1	2,324.3	0.83	2,812.667	
393.7	393.7	396.0	396.0	0.8	0.4	120.07	-1,164.8	2,011.9	2,324.8	2,323.7	1.13	2,063.543	
400.0	400.0	402.5	402.5	0.8	0.4	120.07	-1,164.8	2,011.9	2,324.8	2,323.6	1.15	2,027.232	
492.1	492.1	496.8	496.8	1.0	0.5	120.07	-1,164.6	2,011.5	2,324.3	2,322.9	1.44	1,612.263	
500.0	500.0	504.9	504.9	1.0	0.5	120.07	-1,164.5	2,011.5	2,324.3	2,322.8	1.47	1,584.529	
590.5	590.5	597.6	597.6	1.2	0.6	120.07	-1,164.2	2,011.1	2,323.8	2,322.0	1.76	1,322.798	
600.0	600.0	607.3	607.3	1.2	0.6	120.07	-1,164.2	2,011.0	2,323.7	2,322.0	1.79	1,300.374	
689.0	689.0	701.0	701.0	1.4	0.7	120.07	-1,163.8	2,010.5	2,323.1	2,321.1	2.10	1,108.397	
700.0	700.0	714.3	714.3	1.4	0.7	120.07	-1,163.9	2,010.3	2,323.1	2,320.9	2.15	1,081.015	
787.4	787.4	795.3	795.2	1.6	0.9	120.13	-1,165.6	2,008.4	2,322.1	2,319.6	2.52	923.178	
800.0	800.0	803.4	803.3	1.7	0.9	120.14	-1,165.9	2,008.1	2,322.1	2,319.5	2.56	907.045	
828.5	828.5	821.5	821.5	1.7	0.9	120.16	-1,166.7	2,007.6	2,322.0	2,319.3	2.66	872.642 CC, ES	
885.8	885.8	854.0	853.8	1.9	1.0	120.21	-1,168.5	2,006.7	2,322.3	2,319.4	2.86	813.221	
900.0	900.0	854.0	853.8	1.9	1.0	120.21	-1,168.5	2,006.7	2,322.5	2,319.6	2.89	804.315	
984.2	984.2	915.0	914.6	2.1	1.1	120.33	-1,173.1	2,005.3	2,324.0	2,320.8	3.20	725.241	
1,000.0	1,000.0	939.0	938.6	2.1	1.2	120.38	-1,175.3	2,004.8	2,324.6	2,321.3	3.29	706.714	
1,082.7	1,082.7	970.7	970.1	2.3	1.3	120.45	-1,178.4	2,004.4	2,327.6	2,324.0	3.55	655.729	
1,100.0	1,100.0	980.3	979.6	2.3	1.3	120.47	-1,179.5	2,004.4	2,328.4	2,324.8	3.61	644.781	
1,181.1	1,181.1	1,025.0	1,024.0	2.5	1.4	120.59	-1,184.7	2,004.2	2,333.0	2,329.1	3.90	598.442	
1,200.0	1,200.0	1,039.7	1,038.6	2.6	1.4	120.62	-1,186.5	2,004.2	2,334.2	2,330.2	3.98	586.383	
1,279.5	1,279.5	1,110.0	1,108.3	2.7	1.6	120.82	-1,195.7	2,004.5	2,339.8	2,335.5	4.35	537.860	
1,300.0	1,300.0	1,110.0	1,108.3	2.8	1.6	120.82	-1,195.7	2,004.5	2,341.4	2,337.0	4.40	532.577	
1,377.9	1,377.9	1,163.2	1,161.0	3.0	1.8	79.67	-1,203.4	2,005.0	2,347.6	2,342.9	4.74	495.141	
1,400.0	1,400.0	1,176.9	1,174.5	3.0	1.8	79.69	-1,205.4	2,005.2	2,349.5	2,344.7	4.83	486.526	
1,476.4	1,476.3	1,224.7	1,221.7	3.2	2.0	79.75	-1,213.0	2,006.1	2,356.4	2,351.3	5.14	458.417	
1,500.0	1,499.8	1,239.6	1,236.3	3.2	2.0	79.78	-1,215.5	2,006.5	2,358.7	2,353.5	5.24	450.284	
1,574.8	1,574.4	1,281.0	1,277.1	3.4	2.2	79.85	-1,222.7	2,007.5	2,366.2	2,360.7	5.54	427.490	
1,600.0	1,599.5	1,300.6	1,296.3	3.5	2.2	79.91	-1,226.3	2,008.1	2,368.9	2,363.2	5.66	418.675	
1,673.2	1,672.2	1,342.7	1,337.6	3.6	2.4	80.01	-1,234.5	2,009.4	2,377.1	2,371.1	5.97	397.899	
1,700.0	1,698.7	1,367.0	1,361.4	3.7	2.5	80.12	-1,239.4	2,010.3	2,380.3	2,374.1	6.12	388.876	
1,771.6	1,769.5	1,403.6	1,397.2	3.9	2.7	80.21	-1,247.1	2,011.8	2,389.1	2,382.7	6.43	371.390	
1,800.0	1,797.5	1,422.1	1,415.2	4.0	2.7	80.28	-1,251.0	2,012.7	2,392.7	2,386.2	6.57	364.048	
1,870.1	1,866.3	1,475.5	1,467.3	4.2	2.9	80.53	-1,262.6	2,015.3	2,402.0	2,395.1	6.96	345.094	
1,899.9	1,895.6	1,504.7	1,495.8	4.3	3.1	80.70	-1,268.9	2,016.7	2,406.0	2,398.9	7.14	336.834	
1,968.5	1,962.6	1,571.6	1,561.0	4.5	3.3	81.26	-1,283.2	2,020.1	2,415.2	2,407.6	7.56	319.491	
2,000.0	1,993.4	1,602.3	1,591.0	4.6	3.4	81.52	-1,289.7	2,021.7	2,419.5	2,411.7	7.75	312.175	
2,066.9	2,058.9	1,679.0	1,665.9	4.8	3.7	82.15	-1,305.7	2,025.5	2,428.5	2,420.3	8.21	295.840	
2,100.0	2,091.3	1,717.1	1,703.2	4.9	3.9	82.47	-1,313.7	2,027.1	2,432.9	2,424.5	8.44	288.219	
2,165.3	2,155.2	1,779.8	1,764.4	5.2	4.1	83.00	-1,327.1	2,029.5	2,441.7	2,432.8	8.88	274.901	
2,200.0	2,189.1	1,814.6	1,798.3	5.3	4.2	83.29	-1,334.6	2,030.7	2,446.4	2,437.2	9.12	268.248	
2,263.8	2,251.5	1,881.0	1,863.1	5.5	4.5	83.84	-1,348.6	2,033.1	2,455.0	2,445.5	9.57	256.558	
2,300.0	2,286.9	1,921.8	1,903.1	5.7	4.7	84.17	-1,357.0	2,034.6	2,459.9	2,450.1	9.83	250.285	
2,362.2	2,347.7	1,994.9	1,974.6	5.9	5.0	84.76	-1,371.8	2,037.1	2,468.3	2,458.0	10.29	239.858	
2,400.0	2,384.7	2,042.0	2,020.8	6.0	5.2	85.14	-1,381.3	2,038.3	2,473.2	2,462.7	10.58	233.692	
2,460.6	2,444.0	2,097.9	2,075.5	6.3	5.4	85.60	-1,392.6	2,039.6	2,481.2	2,470.2	11.00	225.548	
2,500.0	2,482.5	2,132.5	2,109.3	6.4	5.5	85.88	-1,399.6	2,040.4	2,486.5	2,475.2	11.27	220.689	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,540.3	2,198.2	2,173.7	6.7	5.8	86.40	-1,412.6	2,042.1	2,494.4	2,482.7	11.71	213.099	
2,600.0	2,580.3	2,240.0	2,214.7	6.8	5.9	86.73	-1,420.6	2,043.2	2,499.9	2,487.9	12.00	208.408	
2,657.5	2,636.5	2,291.6	2,265.4	7.1	6.1	87.13	-1,430.5	2,044.6	2,507.7	2,495.4	12.38	202.573	
2,700.0	2,678.1	2,337.4	2,310.4	7.2	6.3	87.48	-1,439.2	2,045.9	2,513.6	2,500.9	12.69	198.155	
2,755.9	2,732.8	2,393.0	2,364.9	7.5	6.5	87.89	-1,449.4	2,047.4	2,521.2	2,508.2	13.07	192.839	
2,800.0	2,776.0	2,433.0	2,404.2	7.7	6.7	88.19	-1,456.6	2,048.6	2,527.3	2,514.0	13.37	189.021	
2,854.3	2,829.1	2,479.0	2,449.4	7.9	6.9	88.53	-1,465.1	2,050.1	2,535.2	2,521.4	13.73	184.679	
2,900.0	2,873.8	2,509.9	2,479.8	8.1	7.0	88.76	-1,470.9	2,051.1	2,542.0	2,528.0	14.01	181.452	
2,952.7	2,925.4	2,553.2	2,522.3	8.3	7.2	89.08	-1,479.3	2,052.5	2,550.1	2,535.7	14.36	177.602	
3,000.0	2,971.6	2,591.5	2,559.8	8.5	7.3	89.37	-1,486.8	2,053.7	2,557.5	2,542.8	14.67	174.347	
3,051.2	3,021.6	2,632.8	2,600.3	8.7	7.5	89.68	-1,494.9	2,055.1	2,565.8	2,550.8	15.01	170.985	
3,100.0	3,069.4	2,673.8	2,640.5	8.9	7.7	89.98	-1,502.9	2,056.7	2,573.9	2,558.5	15.33	167.881	
3,149.6	3,117.9	2,716.6	2,682.4	9.1	7.8	90.29	-1,511.4	2,058.4	2,582.3	2,566.6	15.67	164.830	
3,200.0	3,167.2	2,821.0	2,784.8	9.3	8.2	91.03	-1,530.9	2,062.1	2,590.4	2,574.3	16.17	160.232	
3,248.0	3,214.2	2,855.0	2,818.3	9.5	8.4	91.27	-1,536.8	2,063.2	2,597.8	2,581.3	16.46	157.792	
3,300.0	3,265.0	2,884.2	2,847.0	9.8	8.5	91.47	-1,542.1	2,064.2	2,606.2	2,589.5	16.76	155.470	
3,346.4	3,310.5	2,913.5	2,875.7	10.0	8.6	91.68	-1,547.8	2,065.2	2,614.1	2,597.1	17.04	153.402	
3,400.0	3,362.9	2,966.4	2,927.6	10.2	8.8	92.05	-1,557.9	2,067.2	2,623.5	2,606.0	17.42	150.639	
3,444.9	3,406.7	3,017.5	2,977.8	10.4	9.0	92.40	-1,567.5	2,069.2	2,631.3	2,613.5	17.74	148.302	
3,473.0	3,434.2	3,055.5	3,015.1	10.5	9.2	92.65	-1,574.3	2,070.8	2,636.1	2,618.1	17.96	146.785	
3,500.0	3,460.7	3,106.0	3,064.9	10.6	9.3	93.07	-1,583.0	2,072.9	2,640.6	2,622.4	18.18	145.253	
3,543.3	3,503.2	3,246.8	3,203.9	10.7	9.8	94.04	-1,604.3	2,076.9	2,646.9	2,628.3	18.64	142.022	
3,600.0	3,559.0	3,292.2	3,248.9	10.9	10.0	94.44	-1,610.7	2,077.5	2,654.1	2,635.2	18.91	140.317	
3,641.7	3,600.2	3,325.0	3,281.3	11.0	10.1	94.73	-1,615.5	2,078.0	2,659.5	2,640.4	19.11	139.204	
3,700.0	3,657.9	3,334.0	3,290.2	11.2	10.1	94.93	-1,616.8	2,078.1	2,667.5	2,648.3	19.28	138.344	
3,740.1	3,697.8	3,370.9	3,326.7	11.3	10.2	95.22	-1,622.4	2,078.9	2,673.2	2,653.7	19.47	137.287	
3,800.0	3,757.3	3,419.0	3,374.0	11.4	10.4	95.61	-1,630.8	2,080.3	2,682.5	2,662.8	19.74	135.927	
3,838.6	3,795.7	3,419.0	3,374.0	11.5	10.4	95.73	-1,630.8	2,080.3	2,688.6	2,668.8	19.81	135.716	
3,900.0	3,857.0	3,452.3	3,406.7	11.7	10.5	96.06	-1,637.0	2,081.4	2,698.9	2,678.9	20.02	134.797	
3,937.0	3,893.9	3,478.9	3,432.8	11.7	10.6	96.28	-1,642.0	2,082.4	2,705.3	2,685.1	20.15	134.224	
4,000.0	3,956.9	3,521.2	3,474.3	11.8	10.8	96.63	-1,650.2	2,084.1	2,716.3	2,695.9	20.37	133.318	
4,035.4	3,992.3	3,542.7	3,495.3	11.9	10.9	96.81	-1,654.5	2,084.9	2,722.7	2,702.2	20.48	132.932	
4,072.9	4,029.8	3,565.4	3,517.5	11.9	11.0	138.20	-1,659.2	2,085.8	2,729.6	2,710.3	19.23	141.948	
4,100.0	4,056.9	3,590.0	3,541.5	12.0	11.1	138.26	-1,664.5	2,086.8	2,734.6	2,715.3	19.38	141.108	
4,133.8	4,090.7	3,606.0	3,557.2	12.0	11.2	138.29	-1,668.0	2,087.5	2,741.1	2,721.6	19.52	140.442	
4,200.0	4,156.9	3,658.4	3,608.2	12.1	11.4	138.42	-1,679.5	2,089.8	2,753.9	2,734.1	19.88	138.558	
4,232.3	4,189.2	3,686.2	3,635.3	12.2	11.6	138.49	-1,685.7	2,091.0	2,760.3	2,740.3	20.06	137.601	
4,300.0	4,256.9	3,755.6	3,702.9	12.3	11.9	138.65	-1,701.0	2,094.3	2,773.7	2,753.2	20.49	135.354	
4,330.7	4,287.6	3,789.3	3,735.7	12.4	12.0	138.73	-1,708.4	2,095.9	2,779.7	2,759.1	20.69	134.323	
4,400.0	4,356.9	3,875.5	3,819.9	12.5	12.4	138.91	-1,726.7	2,100.1	2,793.2	2,772.0	21.19	131.824	
4,429.1	4,386.0	3,923.5	3,866.8	12.5	12.6	139.00	-1,736.1	2,102.9	2,798.6	2,777.2	21.44	130.527	
4,500.0	4,456.9	3,975.6	3,917.8	12.6	12.8	139.08	-1,746.0	2,106.1	2,811.8	2,790.0	21.80	128.994	
4,527.5	4,484.4	3,993.8	3,935.6	12.7	12.9	139.12	-1,749.7	2,107.2	2,817.0	2,795.1	21.93	128.463	
4,600.0	4,556.9	4,042.2	3,982.9	12.8	13.1	139.21	-1,759.8	2,110.0	2,831.2	2,809.0	22.28	127.070	
4,626.0	4,582.9	4,059.7	4,000.0	12.9	13.1	139.24	-1,763.6	2,111.0	2,836.5	2,814.1	22.41	126.569	
4,700.0	4,656.9	4,118.7	4,057.4	13.0	13.4	139.37	-1,776.9	2,114.2	2,851.8	2,829.0	22.82	124.972	
4,724.4	4,681.3	4,158.5	4,096.0	13.0	13.6	139.47	-1,786.2	2,115.8	2,856.8	2,833.7	23.04	123.977	
4,800.0	4,756.9	4,250.8	4,185.7	13.1	14.0	139.73	-1,808.2	2,117.9	2,871.8	2,848.2	23.60	121.703	
4,822.8	4,779.7	4,275.6	4,209.8	13.2	14.1	139.80	-1,814.0	2,118.4	2,876.2	2,852.5	23.75	121.107	
4,900.0	4,856.9	4,356.5	4,288.4	13.3	14.5	140.03	-1,833.3	2,119.8	2,891.3	2,867.0	24.25	119.207	
4,921.2	4,878.1	4,439.1	4,368.7	13.4	14.9	140.26	-1,852.2	2,120.7	2,895.2	2,870.6	24.64	117.522	
5,000.0	4,956.9	4,637.4	4,563.6	13.5	15.6	140.66	-1,888.3	2,124.5	2,907.3	2,881.8	25.52	113.945	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,976.6	4,875.0	4,799.5	13.5	16.3	140.96	-1,915.4	2,127.1	2,909.2	2,883.0	26.21	110.986	
5,100.0	5,056.9	5,147.6	5,071.8	13.7	16.8	141.16	-1,926.7	2,123.2	2,910.6	2,883.7	26.85	108.389	
5,118.1	5,075.0	5,165.8	5,090.0	13.7	16.8	141.16	-1,926.6	2,123.0	2,910.4	2,883.5	26.91	108.139	
5,200.0	5,156.9	5,245.1	5,169.3	13.8	16.9	141.17	-1,926.5	2,122.2	2,909.8	2,882.6	27.19	107.033	
5,216.5	5,173.4	5,260.2	5,184.4	13.9	16.9	141.17	-1,926.5	2,122.0	2,909.7	2,882.5	27.24	106.817	
5,300.0	5,256.9	5,333.3	5,257.5	14.0	17.0	141.19	-1,926.7	2,121.3	2,909.3	2,881.8	27.51	105.747	
5,314.9	5,271.8	5,345.8	5,270.0	14.1	17.0	141.19	-1,926.7	2,121.2	2,909.3	2,881.7	27.56	105.560	
5,346.9	5,303.8	5,372.6	5,296.8	14.1	17.0	141.19	-1,926.8	2,121.1	2,909.3	2,881.6	27.66	105.163	
5,400.0	5,356.9	5,420.1	5,344.3	14.2	17.1	141.19	-1,926.9	2,121.0	2,909.3	2,881.5	27.84	104.492	
5,413.4	5,370.3	5,432.4	5,356.6	14.2	17.1	141.19	-1,926.9	2,121.1	2,909.4	2,881.5	27.89	104.322	
5,500.0	5,456.9	5,521.2	5,445.4	14.4	17.2	141.19	-1,927.1	2,121.2	2,909.6	2,881.4	28.20	103.189	
5,511.8	5,468.7	5,534.5	5,458.7	14.4	17.2	141.19	-1,927.1	2,121.2	2,909.6	2,881.4	28.24	103.030	
5,600.0	5,556.9	5,623.3	5,547.5	14.6	17.4	141.20	-1,927.3	2,121.0	2,909.7	2,881.1	28.55	101.905	
5,610.2	5,567.1	5,633.2	5,557.4	14.6	17.4	141.20	-1,927.3	2,121.0	2,909.7	2,881.1	28.59	101.778	
5,700.0	5,656.9	5,741.5	5,665.7	14.7	17.5	141.21	-1,927.3	2,120.6	2,909.5	2,880.5	28.93	100.569	
5,708.6	5,665.5	5,750.7	5,674.9	14.8	17.5	141.21	-1,927.3	2,120.6	2,909.4	2,880.5	28.96	100.460	
5,800.0	5,756.9	5,843.2	5,767.4	14.9	17.6	141.20	-1,926.8	2,120.3	2,908.8	2,879.6	29.28	99.339	
5,807.1	5,764.0	5,849.7	5,773.9	14.9	17.7	141.20	-1,926.7	2,120.3	2,908.8	2,879.5	29.31	99.257	
5,900.0	5,856.9	5,932.2	5,856.4	15.1	17.8	141.20	-1,926.3	2,120.2	2,908.4	2,878.8	29.62	98.195	
5,905.5	5,862.4	5,936.8	5,861.0	15.1	17.8	141.20	-1,926.3	2,120.2	2,908.4	2,878.8	29.64	98.134	
5,941.5	5,898.4	5,967.2	5,891.4	15.2	17.8	141.20	-1,926.3	2,120.2	2,908.4	2,878.6	29.76	97.737	
5,971.9	5,928.8	5,994.4	5,918.6	15.3	17.8	141.20	-1,926.3	2,120.3	2,908.4	2,878.5	29.86	97.397	
6,000.0	5,956.9	6,022.6	5,946.8	15.3	17.9	-128.79	-1,926.2	2,120.3	2,908.8	2,879.2	29.51	98.554	
6,003.9	5,960.8	6,026.6	5,950.8	15.3	17.9	-128.78	-1,926.2	2,120.3	2,908.9	2,879.3	29.52	98.542	
6,050.0	6,006.7	6,072.7	5,996.9	15.4	18.0	-128.70	-1,926.2	2,120.5	2,911.1	2,881.6	29.54	98.539	
6,100.0	6,056.2	6,120.9	6,045.1	15.4	18.0	-128.52	-1,926.1	2,120.6	2,915.7	2,886.2	29.48	98.890	
6,102.3	6,058.5	6,123.1	6,047.3	15.4	18.0	-128.51	-1,926.1	2,120.7	2,916.0	2,886.5	29.48	98.917	
6,150.0	6,105.1	6,170.0	6,094.2	15.4	18.1	-128.26	-1,926.0	2,120.9	2,922.4	2,893.1	29.35	99.575	
6,200.0	6,153.0	6,222.5	6,146.7	15.5	18.2	-127.93	-1,925.8	2,121.2	2,931.3	2,902.2	29.15	100.550	
6,200.8	6,153.8	6,223.3	6,147.5	15.5	18.2	-127.93	-1,925.8	2,121.2	2,931.5	2,902.3	29.15	100.568	
6,250.0	6,199.9	6,274.7	6,198.9	15.5	18.2	-127.51	-1,925.5	2,121.5	2,942.3	2,913.4	28.90	101.810	
6,299.2	6,244.8	6,325.1	6,249.3	15.5	18.3	-127.01	-1,925.1	2,121.8	2,955.1	2,926.5	28.61	103.293	
6,300.0	6,245.5	6,325.9	6,250.1	15.5	18.3	-127.00	-1,925.1	2,121.8	2,955.3	2,926.7	28.60	103.318	
6,350.0	6,289.6	6,364.6	6,288.8	15.5	18.3	-126.29	-1,924.8	2,121.9	2,970.4	2,942.1	28.26	105.100	
6,397.6	6,329.9	6,399.7	6,323.9	15.4	18.4	-125.47	-1,924.5	2,122.1	2,986.8	2,958.9	27.94	106.906	
6,400.0	6,331.8	6,401.4	6,325.6	15.4	18.4	-125.43	-1,924.5	2,122.1	2,987.7	2,959.8	27.92	106.998	
6,450.0	6,372.2	6,445.8	6,370.0	15.4	18.5	-124.50	-1,924.3	2,122.4	3,007.0	2,979.4	27.63	108.840	
6,496.0	6,407.4	6,488.1	6,412.3	15.4	18.5	-123.56	-1,923.9	2,122.6	3,026.5	2,999.1	27.41	110.410	
6,500.0	6,410.3	6,491.7	6,415.8	15.4	18.5	-123.47	-1,923.9	2,122.6	3,028.3	3,000.9	27.39	110.541	
6,550.0	6,446.1	6,525.3	6,449.5	15.4	18.6	-122.14	-1,923.5	2,122.8	3,051.4	3,024.1	27.24	112.010	
6,594.5	6,475.9	6,551.9	6,476.0	15.4	18.6	-120.76	-1,923.2	2,123.1	3,073.6	3,046.3	27.22	112.932	
6,600.0	6,479.4	6,555.0	6,479.2	15.4	18.6	-120.58	-1,923.2	2,123.1	3,076.4	3,049.2	27.22	113.025	
6,650.0	6,510.0	6,582.1	6,506.3	15.5	18.6	-118.78	-1,922.9	2,123.4	3,103.3	3,075.9	27.36	113.419	
6,692.9	6,534.0	6,600.9	6,525.1	15.7	18.7	-116.99	-1,922.7	2,123.6	3,127.7	3,100.1	27.64	113.160	
6,700.0	6,537.8	6,603.8	6,528.0	15.7	18.7	-116.68	-1,922.7	2,123.6	3,131.9	3,104.2	27.70	113.077	
6,750.0	6,562.6	6,622.9	6,547.1	16.2	18.7	-114.29	-1,922.5	2,123.8	3,162.1	3,133.8	28.24	111.962	
6,791.3	6,580.8	6,636.9	6,561.0	16.6	18.7	-112.08	-1,922.4	2,124.0	3,188.2	3,159.3	28.86	110.457	
6,800.0	6,584.3	6,639.6	6,563.8	16.7	18.7	-111.59	-1,922.4	2,124.0	3,193.8	3,164.8	29.00	110.140	
6,850.0	6,602.9	6,653.7	6,577.9	17.3	18.7	-108.58	-1,922.3	2,124.2	3,226.8	3,196.8	29.94	107.765	
6,889.7	6,615.2	6,669.0	6,593.2	17.9	18.8	-106.09	-1,922.3	2,124.3	3,253.9	3,223.1	30.81	105.625	
6,900.0	6,618.1	6,669.0	6,593.2	18.0	18.8	-105.33	-1,922.3	2,124.3	3,261.0	3,230.0	31.04	105.069	
6,950.0	6,630.0	6,669.0	6,593.2	18.8	18.8	-101.47	-1,922.3	2,124.3	3,296.2	3,264.0	32.24	102.254	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
6,988.2	6,636.8	6,669.0	6,593.2	19.5	18.8	-98.35	-1,922.3	2,124.3	3,323.7	3,290.5	33.17	100.199	
7,000.0	6,638.5	6,669.0	6,593.2	19.7	18.8	-97.36	-1,922.3	2,124.3	3,332.3	3,298.8	33.45	99.620	
7,050.0	6,643.5	6,669.0	6,593.2	20.6	18.8	-93.04	-1,922.3	2,124.3	3,369.0	3,334.4	34.60	97.359	
7,086.6	6,644.9	6,682.6	6,606.8	21.3	18.8	-90.14	-1,922.3	2,124.5	3,396.2	3,360.8	35.40	95.943	
7,097.8	6,645.0	6,682.6	6,606.8	21.5	18.8	-89.13	-1,922.3	2,124.5	3,404.6	3,369.0	35.62	95.591	
7,100.0	6,645.0	6,682.6	6,606.7	21.6	18.8	-89.13	-1,922.3	2,124.5	3,406.2	3,370.5	35.66	95.523	
7,185.0	6,644.9	6,669.0	6,593.2	23.3	18.8	-88.78	-1,922.3	2,124.3	3,470.2	3,432.9	37.36	92.892	
7,200.0	6,644.9	6,669.0	6,593.2	23.6	18.8	-88.78	-1,922.3	2,124.3	3,481.6	3,444.0	37.66	92.444	
7,283.4	6,644.8	6,669.0	6,593.2	25.4	18.8	-88.78	-1,922.3	2,124.3	3,545.4	3,506.0	39.48	89.806	
7,300.0	6,644.7	6,669.0	6,593.2	25.8	18.8	-88.78	-1,922.3	2,124.3	3,558.2	3,518.4	39.84	89.314	
7,381.9	6,644.6	6,669.0	6,593.2	27.7	18.8	-88.78	-1,922.3	2,124.3	3,621.8	3,580.0	41.71	86.822	
7,400.0	6,644.6	6,669.0	6,593.2	28.1	18.8	-88.78	-1,922.3	2,124.3	3,635.9	3,593.8	42.13	86.303	
7,480.3	6,644.5	6,669.0	6,593.2	30.0	18.8	-88.78	-1,922.3	2,124.3	3,699.1	3,655.1	44.04	83.996	
7,500.0	6,644.5	6,669.0	6,593.2	30.5	18.8	-88.78	-1,922.3	2,124.3	3,714.7	3,670.2	44.51	83.462	
7,578.7	6,644.4	6,669.0	6,593.2	32.4	18.8	-88.78	-1,922.3	2,124.3	3,777.4	3,731.0	46.43	81.351	
7,600.0	6,644.4	6,669.0	6,593.2	32.9	18.8	-88.78	-1,922.3	2,124.3	3,794.5	3,747.5	46.95	80.813	
7,677.1	6,644.3	6,669.0	6,593.2	34.8	18.8	-88.78	-1,922.3	2,124.3	3,856.7	3,807.8	48.88	78.896	
7,700.0	6,644.2	6,669.0	6,593.2	35.4	18.8	-88.78	-1,922.3	2,124.3	3,875.2	3,825.8	49.45	78.359	
7,775.6	6,644.1	6,669.0	6,593.2	37.3	18.8	-88.78	-1,922.3	2,124.3	3,936.8	3,885.4	51.38	76.625	
7,800.0	6,644.1	6,669.0	6,593.2	38.0	18.8	-88.78	-1,922.3	2,124.3	3,956.8	3,904.8	52.00	76.094	
7,874.0	6,644.0	6,669.0	6,593.2	39.9	18.8	-88.78	-1,922.3	2,124.3	4,017.8	3,963.9	53.91	74.530	
7,900.0	6,644.0	6,669.0	6,593.2	40.5	18.8	-88.78	-1,922.3	2,124.3	4,039.3	3,984.7	54.58	74.008	
7,972.4	6,643.9	6,669.0	6,593.2	42.4	18.8	-88.78	-1,922.3	2,124.3	4,099.5	4,043.0	56.47	72.598	
8,000.0	6,643.9	6,669.0	6,593.2	43.1	18.8	-88.78	-1,922.3	2,124.3	4,122.5	4,065.3	57.19	72.088	
8,070.8	6,643.8	6,669.0	6,593.2	45.0	18.8	-88.78	-1,922.3	2,124.3	4,181.9	4,122.8	59.05	70.817	
8,100.0	6,643.7	6,669.0	6,593.2	45.8	18.8	-88.78	-1,922.3	2,124.3	4,206.4	4,146.6	59.82	70.319	
8,169.3	6,643.7	6,669.0	6,593.2	47.6	18.8	-88.78	-1,922.3	2,124.3	4,265.0	4,203.3	61.66	69.173	
8,200.0	6,643.6	6,669.0	6,593.2	48.4	18.8	-88.78	-1,922.3	2,124.3	4,291.1	4,228.6	62.47	68.688	
8,267.7	6,643.5	6,669.0	6,593.2	50.2	18.8	-88.78	-1,922.3	2,124.3	4,348.7	4,284.4	64.28	67.654	
8,300.0	6,643.5	6,669.0	6,593.2	51.1	18.8	-88.78	-1,922.3	2,124.3	4,376.3	4,311.2	65.14	67.183	
8,366.1	6,643.4	6,669.0	6,593.2	52.9	18.8	-88.78	-1,922.3	2,124.3	4,433.1	4,366.1	66.92	66.249	
8,400.0	6,643.4	6,669.0	6,593.2	53.8	18.8	-88.78	-1,922.3	2,124.3	4,462.2	4,394.4	67.82	65.791	
8,464.5	6,643.3	6,669.0	6,593.2	55.5	18.8	-88.78	-1,922.3	2,124.3	4,518.0	4,448.4	69.56	64.946	
8,500.0	6,643.2	6,669.0	6,593.2	56.5	18.8	-88.78	-1,922.3	2,124.3	4,548.7	4,478.2	70.52	64.502	
8,563.0	6,643.2	6,669.0	6,593.2	58.2	18.8	-88.78	-1,922.3	2,124.3	4,603.4	4,531.2	72.23	63.737	
8,600.0	6,643.1	6,669.0	6,593.2	59.2	18.8	-88.78	-1,922.3	2,124.3	4,635.7	4,562.5	73.23	63.306	
8,661.4	6,643.0	6,669.0	6,593.2	60.8	18.8	-88.78	-1,922.3	2,124.3	4,689.4	4,614.5	74.89	62.613	
8,700.0	6,643.0	6,669.0	6,593.2	61.9	18.8	-88.78	-1,922.3	2,124.3	4,723.2	4,647.3	75.94	62.194	
8,759.8	6,642.9	6,669.0	6,593.2	63.5	18.8	-88.78	-1,922.3	2,124.3	4,775.8	4,698.3	77.57	61.566	
8,800.0	6,642.9	6,669.0	6,593.2	64.6	18.8	-88.78	-1,922.3	2,124.3	4,811.2	4,732.6	78.67	61.159	
8,858.2	6,642.8	6,669.0	6,593.2	66.2	18.8	-88.78	-1,922.3	2,124.3	4,862.7	4,782.5	80.26	60.589	
8,900.0	6,642.7	6,669.0	6,593.2	67.3	18.8	-88.78	-1,922.3	2,124.3	4,899.7	4,818.3	81.40	60.194	
8,956.7	6,642.7	6,669.0	6,593.2	68.9	18.8	-88.78	-1,922.3	2,124.3	4,950.1	4,867.1	82.95	59.675	
9,000.0	6,642.6	6,669.0	6,593.2	70.1	18.8	-88.78	-1,922.3	2,124.3	4,988.6	4,904.5	84.14	59.293	
9,055.1	6,642.5	6,669.0	6,593.2	71.6	18.8	-88.78	-1,922.3	2,124.3	5,037.8	4,952.1	85.65	58.820	
9,100.0	6,642.5	6,669.0	6,593.2	72.8	18.8	-88.78	-1,922.3	2,124.3	5,077.9	4,991.1	86.88	58.449	
9,153.5	6,642.4	6,669.0	6,593.2	74.3	18.8	-88.78	-1,922.3	2,124.3	5,125.9	5,037.6	88.35	58.019	
9,200.0	6,642.4	6,669.0	6,593.2	75.6	18.8	-88.78	-1,922.3	2,124.3	5,167.7	5,078.0	89.63	57.658	
9,251.9	6,642.3	6,669.0	6,593.2	77.0	18.8	-88.78	-1,922.3	2,124.3	5,214.4	5,123.4	91.06	57.266	
9,300.0	6,642.2	6,669.0	6,593.2	78.3	18.8	-88.78	-1,922.3	2,124.3	5,257.7	5,165.4	92.38	56.915	
9,350.4	6,642.2	6,669.0	6,593.2	79.7	18.8	-88.78	-1,922.3	2,124.3	5,303.3	5,209.5	93.77	56.558	
9,400.0	6,642.1	6,669.0	6,593.2	81.1	18.8	-88.78	-1,922.3	2,124.3	5,348.2	5,253.0	95.14	56.217	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,669.0	6,593.2	82.4	18.8	-88.78	-1,922.3	2,124.3	5,392.4	5,295.9	96.48	55.891		
9,500.0	6,642.0	6,669.0	6,593.2	83.8	18.8	-88.78	-1,922.3	2,124.3	5,438.9	5,341.0	97.89	55.559		
9,547.2	6,641.9	6,669.0	6,593.2	85.1	18.8	-88.78	-1,922.3	2,124.3	5,481.9	5,382.7	99.20	55.261		
9,600.0	6,641.9	6,658.8	6,583.0	86.6	18.7	-88.53	-1,922.3	2,124.2	5,530.0	5,429.4	100.63	54.953		
9,645.6	6,641.8	6,658.4	6,582.5	87.9	18.7	-88.52	-1,922.3	2,124.2	5,571.7	5,469.8	101.89	54.682		
9,700.0	6,641.7	6,657.8	6,582.0	89.4	18.7	-88.50	-1,922.3	2,124.2	5,621.4	5,518.0	103.39	54.368		
9,744.1	6,641.7	6,657.4	6,581.6	90.6	18.7	-88.49	-1,922.3	2,124.2	5,661.8	5,557.2	104.61	54.121		
9,800.0	6,641.6	6,656.8	6,581.0	92.1	18.7	-88.48	-1,922.3	2,124.2	5,713.1	5,606.9	106.16	53.815		
9,842.5	6,641.6	6,656.4	6,580.6	93.3	18.7	-88.47	-1,922.3	2,124.2	5,752.1	5,644.8	107.34	53.589		
9,900.0	6,641.5	6,655.9	6,580.0	94.9	18.7	-88.45	-1,922.3	2,124.2	5,805.0	5,696.1	108.93	53.292		
9,940.9	6,641.4	6,655.4	6,579.6	96.0	18.7	-88.44	-1,922.3	2,124.2	5,842.7	5,732.7	110.06	53.086		
10,000.0	6,641.4	6,654.9	6,579.0	97.7	18.7	-88.43	-1,922.3	2,124.2	5,897.3	5,785.6	111.70	52.796		
10,039.3	6,641.3	6,654.5	6,578.6	98.8	18.7	-88.42	-1,922.3	2,124.2	5,933.6	5,820.8	112.79	52.608		
10,100.0	6,641.2	6,653.9	6,578.0	100.4	18.7	-88.40	-1,922.3	2,124.2	5,989.7	5,875.2	114.47	52.325		
10,137.8	6,641.2	6,653.5	6,577.7	101.5	18.7	-88.39	-1,922.3	2,124.2	6,024.7	5,909.2	115.52	52.153		
10,200.0	6,641.1	6,652.9	6,577.1	103.2	18.7	-88.38	-1,922.3	2,124.1	6,082.4	5,965.2	117.25	51.878		
10,236.2	6,641.1	6,652.5	6,576.7	104.2	18.7	-88.37	-1,922.3	2,124.1	6,116.0	5,997.8	118.25	51.721		
10,300.0	6,641.0	6,651.9	6,576.1	106.0	18.7	-88.35	-1,922.3	2,124.1	6,175.3	6,055.3	120.02	51.452		
10,334.6	6,640.9	6,651.6	6,575.7	107.0	18.7	-88.34	-1,922.3	2,124.1	6,207.6	6,086.6	120.98	51.310		
10,400.0	6,640.9	6,650.9	6,575.1	108.8	18.7	-88.33	-1,922.3	2,124.1	6,268.5	6,145.7	122.80	51.047		
10,433.0	6,640.8	6,650.6	6,574.8	109.7	18.7	-88.32	-1,922.3	2,124.1	6,299.3	6,175.6	123.72	50.918		
10,500.0	6,640.7	6,649.9	6,574.1	111.6	18.7	-88.30	-1,922.3	2,124.1	6,361.9	6,236.3	125.58	50.661		
10,531.5	6,640.7	6,649.6	6,573.8	112.4	18.7	-88.29	-1,922.3	2,124.1	6,391.3	6,264.8	126.45	50.543		
10,600.0	6,640.6	6,649.0	6,573.1	114.3	18.7	-88.28	-1,922.4	2,124.1	6,455.4	6,327.0	128.36	50.293		
10,629.9	6,640.6	6,648.7	6,572.8	115.2	18.7	-88.27	-1,922.4	2,124.1	6,483.4	6,354.2	129.19	50.186		
10,700.0	6,640.5	6,648.0	6,572.2	117.1	18.7	-88.25	-1,922.4	2,124.1	6,549.1	6,418.0	131.14	49.941		
10,728.3	6,640.4	6,647.7	6,571.9	117.9	18.7	-88.25	-1,922.4	2,124.1	6,575.7	6,443.8	131.93	49.844		
10,800.0	6,640.4	6,647.0	6,571.2	119.9	18.7	-88.23	-1,922.4	2,124.1	6,643.1	6,509.2	133.92	49.605		
10,826.7	6,640.3	6,646.8	6,570.9	120.7	18.7	-88.22	-1,922.4	2,124.1	6,668.2	6,533.6	134.66	49.517		
10,900.0	6,640.2	6,646.0	6,570.2	122.7	18.7	-88.20	-1,922.4	2,124.1	6,737.2	6,600.5	136.70	49.283		
10,925.2	6,640.2	6,645.8	6,570.0	123.4	18.7	-88.20	-1,922.4	2,124.1	6,760.9	6,623.5	137.40	49.205		
11,000.0	6,640.1	6,645.1	6,569.2	125.5	18.7	-88.18	-1,922.4	2,124.1	6,831.4	6,692.0	139.49	48.976		
11,023.6	6,640.1	6,644.8	6,569.0	126.1	18.7	-88.17	-1,922.4	2,124.1	6,853.7	6,713.6	140.14	48.905		
11,100.0	6,640.0	6,644.1	6,568.3	128.3	18.7	-88.15	-1,922.4	2,124.0	6,925.9	6,783.6	142.27	48.681		
11,122.0	6,639.9	6,643.9	6,568.1	128.9	18.7	-88.15	-1,922.4	2,124.0	6,946.7	6,803.8	142.89	48.617		
11,200.0	6,639.8	6,643.1	6,567.3	131.1	18.7	-88.13	-1,922.4	2,124.0	7,020.5	6,875.4	145.06	48.398		
11,220.4	6,639.8	6,642.9	6,567.1	131.6	18.7	-88.12	-1,922.4	2,124.0	7,039.8	6,894.2	145.63	48.341		
11,300.0	6,639.7	6,642.2	6,566.3	133.9	18.7	-88.11	-1,922.4	2,124.0	7,115.2	6,967.3	147.84	48.126		
11,318.9	6,639.7	6,642.0	6,566.2	134.4	18.7	-88.10	-1,922.4	2,124.0	7,133.1	6,984.7	148.37	48.076		
11,400.0	6,639.6	6,641.2	6,565.4	136.7	18.7	-88.08	-1,922.4	2,124.0	7,210.1	7,059.4	150.63	47.866		
11,417.3	6,639.6	6,641.1	6,565.2	137.1	18.7	-88.08	-1,922.4	2,124.0	7,226.5	7,075.4	151.11	47.821		
11,500.0	6,639.5	6,640.3	6,564.4	139.4	18.7	-88.06	-1,922.4	2,124.0	7,305.1	7,151.6	153.42	47.615		
11,515.7	6,639.5	6,640.1	6,564.3	139.9	18.7	-88.05	-1,922.4	2,124.0	7,320.0	7,166.2	153.86	47.576		
11,600.0	6,639.3	6,639.3	6,563.5	142.2	18.7	-88.03	-1,922.4	2,124.0	7,400.2	7,244.0	156.21	47.374		
11,614.1	6,639.3	6,639.2	6,563.3	142.6	18.7	-88.03	-1,922.4	2,124.0	7,413.7	7,257.1	156.60	47.341		
11,700.0	6,639.2	6,638.4	6,562.5	145.0	18.7	-88.01	-1,922.4	2,124.0	7,495.5	7,336.5	159.00	47.142		
11,712.6	6,639.2	6,638.2	6,562.4	145.4	18.7	-88.01	-1,922.4	2,124.0	7,507.5	7,348.1	159.35	47.114		
11,800.0	6,639.1	6,637.4	6,561.6	147.8	18.7	-87.98	-1,922.4	2,124.0	7,590.9	7,429.1	161.79	46.919		
11,811.0	6,639.1	6,637.3	6,561.5	148.1	18.7	-87.98	-1,922.4	2,124.0	7,601.4	7,439.3	162.09	46.895		
11,900.0	6,639.0	6,636.4	6,560.6	150.6	18.7	-87.96	-1,922.4	2,124.0	7,686.4	7,521.8	164.58	46.704		
11,909.4	6,639.0	6,636.4	6,560.5	150.9	18.7	-87.96	-1,922.4	2,124.0	7,695.4	7,530.5	164.84	46.684		
12,000.0	6,638.8	6,635.5	6,559.7	153.4	18.7	-87.94	-1,922.4	2,123.9	7,782.0	7,614.6	167.37	46.496		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.8	6,635.4	6,559.6	153.6	18.7	-87.93	-1,922.4	2,123.9	7,789.5	7,621.9	167.59	46.481	
12,100.0	6,638.7	6,634.6	6,558.7	156.2	18.7	-87.91	-1,922.4	2,123.9	7,877.7	7,707.6	170.16	46.296	
12,106.3	6,638.7	6,634.5	6,558.7	156.4	18.7	-87.91	-1,922.4	2,123.9	7,883.7	7,713.4	170.33	46.284	
12,200.0	6,638.6	6,633.6	6,557.8	159.0	18.7	-87.89	-1,922.4	2,123.9	7,973.6	7,800.6	172.95	46.103	
12,204.7	6,638.6	6,633.6	6,557.7	159.1	18.7	-87.89	-1,922.4	2,123.9	7,978.1	7,805.0	173.08	46.094	
12,300.0	6,638.5	6,632.7	6,556.8	161.8	18.7	-87.86	-1,922.4	2,123.9	8,069.5	7,893.7	175.74	45.917	
12,303.1	6,638.5	6,632.6	6,556.8	161.9	18.7	-87.86	-1,922.4	2,123.9	8,072.5	7,896.7	175.83	45.911	
12,400.0	6,638.3	6,631.7	6,555.9	164.6	18.7	-87.84	-1,922.4	2,123.9	8,165.5	7,987.0	178.53	45.737	
12,401.5	6,638.3	6,631.7	6,555.9	164.6	18.7	-87.84	-1,922.4	2,123.9	8,167.0	7,988.4	178.58	45.734	
12,500.0	6,638.2	6,630.8	6,555.0	167.4	18.7	-87.82	-1,922.5	2,123.9	8,261.6	8,080.3	181.33	45.562	
12,598.4	6,638.1	6,629.9	6,554.0	170.2	18.7	-87.79	-1,922.5	2,123.9	8,356.3	8,172.2	184.07	45.396	
12,600.0	6,638.1	6,629.8	6,554.0	170.2	18.7	-87.79	-1,922.5	2,123.9	8,357.9	8,173.7	184.12	45.394	
12,696.8	6,638.0	6,628.9	6,553.1	172.9	18.7	-87.77	-1,922.5	2,123.9	8,451.1	8,264.3	186.82	45.236	
12,700.0	6,638.0	6,628.9	6,553.1	173.0	18.7	-87.77	-1,922.5	2,123.9	8,454.2	8,267.2	186.91	45.231	
12,795.2	6,637.8	6,628.0	6,552.2	175.7	18.7	-87.75	-1,922.5	2,123.9	8,546.0	8,356.4	189.57	45.080	
12,800.0	6,637.8	6,628.0	6,552.1	175.8	18.7	-87.75	-1,922.5	2,123.9	8,550.5	8,360.8	189.70	45.073	
12,893.7	6,637.7	6,627.1	6,551.3	178.4	18.7	-87.72	-1,922.5	2,123.9	8,640.9	8,448.6	192.32	44.929	
12,900.0	6,637.7	6,627.1	6,551.2	178.6	18.7	-87.72	-1,922.5	2,123.9	8,647.0	8,454.5	192.50	44.920	
12,992.1	6,637.6	6,626.2	6,550.4	181.2	18.7	-87.70	-1,922.5	2,123.8	8,735.9	8,540.9	195.07	44.783	
13,000.0	6,637.6	6,626.1	6,550.3	181.4	18.7	-87.70	-1,922.5	2,123.8	8,743.6	8,548.3	195.29	44.772	
13,090.5	6,637.5	6,625.3	6,549.4	183.9	18.7	-87.68	-1,922.5	2,123.8	8,831.0	8,633.2	197.82	44.641	
13,100.0	6,637.5	6,625.2	6,549.4	184.2	18.7	-87.68	-1,922.5	2,123.8	8,840.2	8,642.1	198.09	44.628	
13,188.9	6,637.4	6,624.4	6,548.5	186.7	18.7	-87.66	-1,922.5	2,123.8	8,926.2	8,725.6	200.57	44.504	
13,200.0	6,637.3	6,624.3	6,548.4	187.0	18.7	-87.65	-1,922.5	2,123.8	8,936.9	8,736.0	200.88	44.489	
13,287.4	6,637.2	6,623.5	6,547.6	189.4	18.7	-87.63	-1,922.5	2,123.8	9,021.4	8,818.1	203.32	44.370	
13,300.0	6,637.2	6,623.3	6,547.5	189.8	18.7	-87.63	-1,922.5	2,123.8	9,033.7	8,830.0	203.67	44.353	
13,385.8	6,637.1	6,622.6	6,546.7	192.2	18.7	-87.61	-1,922.5	2,123.8	9,116.7	8,910.7	206.07	44.241	
13,400.0	6,637.1	6,622.4	6,546.6	192.6	18.7	-87.61	-1,922.5	2,123.8	9,130.5	8,924.0	206.47	44.222	
13,484.2	6,637.0	6,621.7	6,545.8	195.0	18.7	-87.59	-1,922.5	2,123.8	9,212.1	9,003.3	208.82	44.114	
13,500.0	6,637.0	6,621.5	6,545.7	195.4	18.7	-87.58	-1,922.5	2,123.8	9,227.4	9,018.1	209.26	44.095	
13,582.6	6,636.9	6,620.7	6,544.9	197.7	18.7	-87.56	-1,922.5	2,123.8	9,307.6	9,096.0	211.57	43.992	
13,600.0	6,636.8	6,620.6	6,544.8	198.2	18.7	-87.56	-1,922.5	2,123.8	9,324.4	9,112.3	212.06	43.971	
13,681.1	6,636.7	6,619.8	6,544.0	200.5	18.7	-87.54	-1,922.5	2,123.8	9,403.1	9,188.7	214.32	43.873	
13,700.0	6,636.7	6,619.7	6,543.8	201.0	18.7	-87.54	-1,922.5	2,123.8	9,421.4	9,206.6	214.85	43.850	
13,779.5	6,636.6	6,618.9	6,543.1	203.2	18.7	-87.52	-1,922.5	2,123.8	9,498.6	9,281.5	217.08	43.757	
13,800.0	6,636.6	6,618.8	6,542.9	203.8	18.7	-87.51	-1,922.5	2,123.8	9,518.5	9,300.9	217.65	43.733	
13,877.9	6,636.5	6,618.0	6,542.2	206.0	18.7	-87.50	-1,922.5	2,123.7	9,594.2	9,374.4	219.83	43.645	
13,900.0	6,636.5	6,617.8	6,542.0	206.6	18.7	-87.49	-1,922.5	2,123.7	9,615.7	9,395.2	220.44	43.620	
13,976.3	6,636.4	6,617.2	6,541.3	208.8	18.7	-87.47	-1,922.5	2,123.7	9,689.9	9,467.3	222.58	43.535	
14,000.0	6,636.3	6,616.9	6,541.1	209.4	18.7	-87.47	-1,922.6	2,123.7	9,712.9	9,489.6	223.24	43.509	
14,074.8	6,636.2	6,616.3	6,540.4	211.5	18.7	-87.45	-1,922.6	2,123.7	9,785.6	9,560.3	225.33	43.428	
14,100.0	6,636.2	6,616.0	6,540.2	212.2	18.7	-87.44	-1,922.6	2,123.7	9,810.2	9,584.1	226.03	43.401	
14,173.2	6,636.1	6,615.4	6,539.5	214.3	18.7	-87.43	-1,922.6	2,123.7	9,881.4	9,653.3	228.08	43.324	
14,200.0	6,636.1	6,615.1	6,539.3	215.0	18.7	-87.42	-1,922.6	2,123.7	9,907.5	9,678.7	228.83	43.296	
14,271.6	6,636.0	6,614.5	6,538.6	217.0	18.7	-87.41	-1,922.6	2,123.7	9,977.2	9,746.4	230.83	43.223 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
6,150.0	6,105.1	6,266.0	6,187.4	15.4	19.3	-5.23	-540.3	-9,681.4	9,996.6	9,966.8	29.80	335.457		
6,200.0	6,153.0	6,305.9	6,227.3	15.5	19.4	-5.35	-540.8	-9,680.9	9,982.1	9,952.8	29.36	339.960		
6,200.8	6,153.8	6,306.4	6,227.7	15.5	19.4	-5.35	-540.8	-9,680.9	9,981.9	9,952.5	29.35	340.042		
6,250.0	6,199.9	6,337.3	6,258.6	15.5	19.4	-5.50	-541.2	-9,680.6	9,964.5	9,935.7	28.80	345.962		
6,299.2	6,244.8	6,367.3	6,288.7	15.5	19.5	-5.68	-541.5	-9,680.3	9,944.0	9,915.9	28.15	353.251		
6,300.0	6,245.5	6,367.8	6,289.1	15.5	19.5	-5.69	-541.5	-9,680.3	9,943.7	9,915.5	28.14	353.381		
6,350.0	6,289.6	6,397.3	6,318.6	15.5	19.5	-5.92	-541.7	-9,680.1	9,919.9	9,892.5	27.38	362.291		
6,397.6	6,329.9	6,424.5	6,345.9	15.4	19.6	-6.18	-541.9	-9,680.0	9,894.4	9,867.8	26.58	372.225		
6,400.0	6,331.8	6,426.5	6,347.8	15.4	19.6	-6.20	-541.9	-9,680.0	9,893.1	9,866.6	26.54	372.745		
6,450.0	6,372.2	6,467.1	6,388.4	15.4	19.6	-6.55	-542.1	-9,679.8	9,863.5	9,837.8	25.65	384.523		
6,496.0	6,407.4	6,502.5	6,423.9	15.4	19.7	-6.93	-542.3	-9,679.6	9,833.8	9,809.0	24.78	396.790		
6,500.0	6,410.3	6,505.5	6,426.8	15.4	19.7	-6.97	-542.3	-9,679.6	9,831.2	9,806.5	24.71	397.909		
6,550.0	6,446.1	6,541.5	6,462.8	15.4	19.7	-7.49	-542.5	-9,679.4	9,796.3	9,772.6	23.73	412.829		
6,594.5	6,475.9	6,571.3	6,492.7	15.4	19.8	-8.05	-542.6	-9,679.3	9,763.2	9,740.4	22.85	427.204		
6,600.0	6,479.4	6,574.9	6,496.2	15.4	19.8	-8.13	-542.6	-9,679.3	9,759.0	9,736.3	22.75	429.059		
6,650.0	6,510.0	6,603.5	6,524.9	15.5	19.8	-8.92	-542.8	-9,679.2	9,719.5	9,697.7	21.78	446.178		
6,692.9	6,534.0	6,625.5	6,546.9	15.7	19.9	-9.78	-542.8	-9,679.1	9,684.0	9,663.0	21.02	460.807		
6,700.0	6,537.8	6,629.0	6,550.3	15.7	19.9	-9.94	-542.8	-9,679.1	9,678.0	9,657.1	20.89	463.192		
6,750.0	6,562.6	6,651.8	6,573.1	16.2	19.9	-11.26	-542.9	-9,679.0	9,634.7	9,614.6	20.14	478.409		
6,791.3	6,580.8	6,668.5	6,589.8	16.6	19.9	-12.68	-542.8	-9,678.9	9,597.7	9,578.0	19.68	487.794		
6,800.0	6,584.3	6,671.7	6,593.0	16.7	19.9	-13.03	-542.8	-9,678.9	9,589.8	9,570.2	19.61	489.006		
6,850.0	6,602.9	6,688.7	6,610.0	17.3	20.0	-15.51	-542.8	-9,678.8	9,543.5	9,524.0	19.46	490.471		
6,889.7	6,615.2	6,700.1	6,621.4	17.9	20.0	-18.30	-542.8	-9,678.8	9,505.9	9,486.1	19.78	480.689		
6,900.0	6,618.1	6,702.7	6,624.0	18.0	20.0	-19.18	-542.8	-9,678.8	9,496.1	9,476.1	19.95	476.080		
6,950.0	6,630.0	6,713.6	6,634.9	18.8	20.0	-25.07	-542.7	-9,678.8	9,447.7	9,426.1	21.61	437.185		
6,988.2	6,636.8	6,719.8	6,641.1	19.5	20.0	-32.44	-542.7	-9,678.8	9,410.3	9,385.9	24.34	386.595		
7,000.0	6,638.5	6,721.3	6,642.6	19.7	20.0	-35.57	-542.7	-9,678.8	9,398.6	9,373.0	25.58	367.466		
7,050.0	6,643.5	6,725.8	6,647.2	20.6	20.0	-56.62	-542.6	-9,678.7	9,349.1	9,315.6	33.42	279.780		
7,086.6	6,644.9	6,727.1	6,648.5	21.3	20.0	-83.15	-542.6	-9,678.7	9,312.7	9,273.6	39.10	238.168		
7,097.8	6,645.0	6,727.2	6,648.5	21.5	20.0	-92.54	-542.6	-9,678.7	9,301.5	9,261.9	39.56	235.137		
7,100.0	6,645.0	6,727.2	6,648.5	21.6	20.0	-92.54	-542.6	-9,678.7	9,299.3	9,259.7	39.60	234.832		
7,185.0	6,644.9	6,726.9	6,648.2	23.3	20.0	-92.52	-542.6	-9,678.7	9,214.7	9,173.4	41.32	222.985		
7,200.0	6,644.9	6,726.8	6,648.1	23.6	20.0	-92.51	-542.6	-9,678.7	9,199.8	9,158.1	41.63	221.000		
7,283.4	6,644.8	6,726.5	6,647.9	25.4	20.0	-92.50	-542.6	-9,678.7	9,116.7	9,073.3	43.44	209.854		
7,300.0	6,644.7	6,726.5	6,647.8	25.8	20.0	-92.49	-542.6	-9,678.7	9,100.2	9,056.4	43.80	207.753		
7,381.9	6,644.6	6,726.2	6,647.5	27.7	20.0	-92.47	-542.6	-9,678.7	9,018.8	8,973.1	45.68	197.448		
7,400.0	6,644.6	6,726.1	6,647.5	28.1	20.0	-92.47	-542.6	-9,678.7	9,000.7	8,954.6	46.09	195.280		
7,480.3	6,644.5	6,725.9	6,647.2	30.0	20.0	-92.45	-542.6	-9,678.7	8,920.8	8,872.8	48.00	185.854		
7,500.0	6,644.5	6,725.8	6,647.1	30.5	20.0	-92.45	-542.6	-9,678.7	8,901.2	8,852.7	48.47	183.655		
7,578.7	6,644.4	6,725.5	6,646.8	32.4	20.0	-92.43	-542.6	-9,678.7	8,822.9	8,772.5	50.39	175.088		
7,600.0	6,644.4	6,725.4	6,646.8	32.9	20.0	-92.43	-542.6	-9,678.7	8,801.7	8,750.8	50.91	172.884		
7,677.1	6,644.3	6,725.2	6,646.5	34.8	20.0	-92.41	-542.6	-9,678.7	8,725.0	8,672.1	52.84	165.124		
7,700.0	6,644.2	6,725.1	6,646.4	35.4	20.0	-92.40	-542.6	-9,678.7	8,702.2	8,648.8	53.41	162.933		
7,775.6	6,644.1	6,724.8	6,646.2	37.3	20.0	-92.39	-542.6	-9,678.7	8,627.0	8,571.7	55.33	155.917		
7,800.0	6,644.1	6,724.7	6,646.1	38.0	20.0	-92.38	-542.6	-9,678.7	8,602.7	8,546.8	55.95	153.753		
7,874.0	6,644.0	6,724.5	6,645.8	39.9	20.0	-92.36	-542.6	-9,678.7	8,529.1	8,471.3	57.86	147.412		
7,900.0	6,644.0	6,724.4	6,645.7	40.5	20.0	-92.36	-542.7	-9,678.7	8,503.3	8,444.7	58.53	145.282		
7,972.4	6,643.9	6,724.1	6,645.5	42.4	20.0	-92.34	-542.7	-9,678.7	8,431.2	8,370.8	60.42	139.551		
8,000.0	6,643.9	6,724.0	6,645.4	43.1	20.0	-92.34	-542.7	-9,678.7	8,403.8	8,342.7	61.14	137.461		
8,070.8	6,643.8	6,723.8	6,645.1	45.0	20.0	-92.32	-542.7	-9,678.7	8,333.4	8,270.4	63.00	132.276		
8,100.0	6,643.7	6,723.7	6,645.0	45.8	20.0	-92.31	-542.7	-9,678.7	8,304.4	8,240.6	63.77	130.231		
8,169.3	6,643.7	6,723.5	6,644.8	47.6	20.0	-92.30	-542.7	-9,678.8	8,235.5	8,169.9	65.60	125.536		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,200.0	6,643.6	6,723.3	6,644.7	48.4	20.0	-92.29	-542.7	-9,678.8	8,205.0	8,138.5	66.42	123.536	
8,267.7	6,643.5	6,723.1	6,644.4	50.2	20.0	-92.27	-542.7	-9,678.8	8,137.7	8,069.4	68.22	119.279	
8,300.0	6,643.5	6,723.0	6,644.3	51.1	20.0	-92.27	-542.7	-9,678.8	8,105.5	8,036.5	69.09	117.327	
8,366.1	6,643.4	6,722.8	6,644.1	52.9	20.0	-92.25	-542.7	-9,678.8	8,039.8	7,969.0	70.86	113.462	
8,400.0	6,643.4	6,722.6	6,644.0	53.8	20.0	-92.24	-542.7	-9,678.8	8,006.2	7,934.4	71.77	111.556	
8,464.5	6,643.3	6,722.4	6,643.7	55.5	20.0	-92.23	-542.7	-9,678.8	7,942.0	7,868.5	73.51	108.044	
8,500.0	6,643.2	6,722.3	6,643.6	56.5	20.0	-92.22	-542.7	-9,678.8	7,906.8	7,832.3	74.46	106.184	
8,563.0	6,643.2	6,722.1	6,643.4	58.2	20.0	-92.21	-542.7	-9,678.8	7,844.2	7,768.0	76.17	102.987	
8,600.0	6,643.1	6,721.9	6,643.3	59.2	20.0	-92.20	-542.7	-9,678.8	7,807.4	7,730.2	77.17	101.174	
8,661.4	6,643.0	6,721.7	6,643.0	60.8	20.0	-92.18	-542.7	-9,678.8	7,746.4	7,667.6	78.84	98.261	
8,700.0	6,643.0	6,721.6	6,642.9	61.9	20.0	-92.17	-542.7	-9,678.8	7,708.1	7,628.2	79.88	96.492	
8,759.8	6,642.9	6,721.4	6,642.7	63.5	20.0	-92.16	-542.7	-9,678.8	7,648.6	7,567.1	81.51	93.834	
8,800.0	6,642.9	6,721.2	6,642.5	64.6	20.0	-92.15	-542.7	-9,678.8	7,608.7	7,526.1	82.61	92.108	
8,858.2	6,642.8	6,721.0	6,642.3	66.2	20.0	-92.14	-542.7	-9,678.8	7,550.9	7,466.7	84.20	89.681	
8,900.0	6,642.7	6,720.8	6,642.2	67.3	20.0	-92.13	-542.7	-9,678.8	7,509.4	7,424.1	85.34	87.997	
8,956.7	6,642.7	6,720.6	6,642.0	68.9	20.0	-92.11	-542.7	-9,678.8	7,453.1	7,366.2	86.89	85.779	
9,000.0	6,642.6	6,720.5	6,641.8	70.1	20.0	-92.10	-542.7	-9,678.8	7,410.1	7,322.0	88.07	84.136	
9,055.1	6,642.5	6,720.3	6,641.6	71.6	20.0	-92.09	-542.7	-9,678.8	7,355.4	7,265.8	89.58	82.106	
9,100.0	6,642.5	6,720.1	6,641.5	72.8	20.0	-92.08	-542.7	-9,678.8	7,310.8	7,220.0	90.82	80.502	
9,153.5	6,642.4	6,719.9	6,641.3	74.3	20.0	-92.07	-542.7	-9,678.8	7,257.7	7,165.4	92.29	78.643	
9,200.0	6,642.4	6,719.8	6,641.1	75.6	20.0	-92.06	-542.7	-9,678.8	7,211.6	7,118.0	93.56	77.077	
9,251.9	6,642.3	6,719.6	6,640.9	77.0	20.0	-92.05	-542.7	-9,678.8	7,160.0	7,065.0	94.99	75.374	
9,300.0	6,642.2	6,719.4	6,640.7	78.3	20.0	-92.03	-542.7	-9,678.8	7,112.3	7,016.0	96.32	73.845	
9,350.4	6,642.2	6,719.2	6,640.5	79.7	20.0	-92.02	-542.7	-9,678.8	7,062.4	6,964.7	97.70	72.284	
9,400.0	6,642.1	6,719.0	6,640.4	81.1	20.0	-92.01	-542.7	-9,678.8	7,013.1	6,914.1	99.07	70.789	
9,448.8	6,642.0	6,718.9	6,640.2	82.4	20.0	-92.00	-542.7	-9,678.8	6,964.7	6,864.3	100.42	69.357	
9,500.0	6,642.0	6,718.7	6,640.0	83.8	20.0	-91.99	-542.7	-9,678.8	6,913.9	6,812.1	101.83	67.896	
9,547.2	6,641.9	6,718.5	6,639.8	85.1	20.0	-91.98	-542.7	-9,678.8	6,867.1	6,764.0	103.14	66.583	
9,600.0	6,641.9	6,718.3	6,639.6	86.6	20.0	-91.96	-542.7	-9,678.8	6,814.8	6,710.2	104.59	65.155	
9,645.6	6,641.8	6,718.1	6,639.5	87.9	20.0	-91.95	-542.7	-9,678.8	6,769.5	6,663.7	105.86	63.950	
9,700.0	6,641.7	6,717.9	6,639.3	89.4	20.0	-91.94	-542.7	-9,678.8	6,715.6	6,608.3	107.36	62.553	
9,744.1	6,641.7	6,717.8	6,639.1	90.6	20.0	-91.93	-542.7	-9,678.8	6,671.9	6,563.4	108.58	61.447	
9,800.0	6,641.6	6,717.6	6,638.9	92.1	20.0	-91.92	-542.7	-9,678.8	6,616.5	6,506.4	110.13	60.080	
9,842.5	6,641.6	6,717.4	6,638.7	93.3	20.0	-91.90	-542.7	-9,678.8	6,574.4	6,463.1	111.31	59.066	
9,900.0	6,641.5	6,717.2	6,638.5	94.9	20.0	-91.89	-542.7	-9,678.8	6,517.4	6,404.5	112.90	57.728	
9,940.9	6,641.4	6,717.0	6,638.4	96.0	20.0	-91.88	-542.7	-9,678.8	6,476.9	6,362.8	114.03	56.797	
10,000.0	6,641.4	6,716.8	6,638.2	97.7	20.0	-91.87	-542.7	-9,678.8	6,418.4	6,302.7	115.67	55.487	
10,039.3	6,641.3	6,716.7	6,638.0	98.8	20.0	-91.86	-542.7	-9,678.8	6,379.4	6,262.6	116.77	54.634	
10,100.0	6,641.2	6,716.4	6,637.8	100.4	20.0	-91.84	-542.7	-9,678.8	6,319.3	6,200.9	118.45	53.351	
10,137.8	6,641.2	6,716.3	6,637.6	101.5	20.0	-91.83	-542.7	-9,678.8	6,281.9	6,162.4	119.50	52.569	
10,200.0	6,641.1	6,716.1	6,637.4	103.2	20.0	-91.82	-542.7	-9,678.8	6,220.3	6,099.1	121.23	51.312	
10,236.2	6,641.1	6,715.9	6,637.3	104.2	20.0	-91.81	-542.7	-9,678.8	6,184.5	6,062.3	122.23	50.596	
10,300.0	6,641.0	6,715.7	6,637.0	106.0	20.0	-91.79	-542.7	-9,678.8	6,121.4	5,997.3	124.01	49.364	
10,334.6	6,640.9	6,715.6	6,636.9	107.0	20.0	-91.79	-542.7	-9,678.8	6,087.1	5,962.1	124.97	48.709	
10,400.0	6,640.9	6,715.3	6,636.7	108.8	20.0	-91.77	-542.7	-9,678.8	6,022.4	5,895.6	126.79	47.500	
10,433.0	6,640.8	6,715.2	6,636.5	109.7	20.0	-91.76	-542.7	-9,678.8	5,989.7	5,862.0	127.71	46.902	
10,500.0	6,640.7	6,714.9	6,636.3	111.6	20.0	-91.75	-542.7	-9,678.8	5,923.5	5,793.9	129.57	45.717	
10,531.5	6,640.7	6,714.8	6,636.2	112.4	20.0	-91.74	-542.7	-9,678.8	5,892.4	5,761.9	130.45	45.171	
10,600.0	6,640.6	6,714.6	6,635.9	114.3	20.0	-91.72	-542.7	-9,678.8	5,824.7	5,692.3	132.35	44.008	
10,629.9	6,640.6	6,714.5	6,635.8	115.2	20.0	-91.71	-542.7	-9,678.8	5,795.1	5,661.9	133.19	43.511	
10,700.0	6,640.5	6,714.2	6,635.5	117.1	20.0	-91.70	-542.7	-9,678.8	5,725.8	5,590.7	135.14	42.370	
10,728.3	6,640.4	6,714.1	6,635.4	117.9	20.0	-91.69	-542.7	-9,678.8	5,697.8	5,561.9	135.93	41.918	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
10,800.0	6,640.4	6,713.8	6,635.1	119.9	20.0	-91.67	-542.7	-9,678.8	5,627.0	5,489.1	137.92	40.798		
10,826.7	6,640.3	6,713.7	6,635.0	120.7	20.0	-91.67	-542.7	-9,678.8	5,600.6	5,462.0	138.67	40.388		
10,900.0	6,640.2	6,713.4	6,634.8	122.7	20.0	-91.65	-542.7	-9,678.8	5,528.3	5,387.6	140.71	39.288		
10,925.2	6,640.2	6,713.3	6,634.7	123.4	20.0	-91.64	-542.7	-9,678.8	5,503.5	5,362.0	141.41	38.917		
11,000.0	6,640.1	6,713.0	6,634.4	125.5	20.0	-91.62	-542.7	-9,678.8	5,429.6	5,286.1	143.50	37.837		
11,023.6	6,640.1	6,713.0	6,634.3	126.1	20.0	-91.62	-542.7	-9,678.8	5,406.3	5,262.2	144.16	37.502		
11,100.0	6,640.0	6,712.7	6,634.0	128.3	20.0	-91.60	-542.7	-9,678.8	5,331.0	5,184.7	146.29	36.441		
11,122.0	6,639.9	6,712.6	6,633.9	128.9	20.0	-91.59	-542.7	-9,678.8	5,309.3	5,162.3	146.91	36.141		
11,200.0	6,639.8	6,712.3	6,633.6	131.1	20.0	-91.57	-542.7	-9,678.8	5,232.4	5,083.3	149.08	35.097		
11,220.4	6,639.8	6,712.2	6,633.5	131.6	20.0	-91.57	-542.7	-9,678.8	5,212.2	5,062.6	149.65	34.829		
11,300.0	6,639.7	6,711.9	6,633.2	133.9	20.0	-91.55	-542.7	-9,678.8	5,133.8	4,982.0	151.87	33.803		
11,318.9	6,639.7	6,711.8	6,633.2	134.4	20.0	-91.54	-542.7	-9,678.8	5,115.3	4,962.9	152.40	33.565		
11,400.0	6,639.6	6,711.5	6,632.8	136.7	20.0	-91.52	-542.7	-9,678.8	5,035.4	4,880.7	154.67	32.556		
11,417.3	6,639.6	6,711.4	6,632.8	137.1	20.0	-91.52	-542.7	-9,678.8	5,018.3	4,863.2	155.15	32.345		
11,500.0	6,639.5	6,711.1	6,632.4	139.4	20.0	-91.50	-542.7	-9,678.8	4,936.9	4,779.5	157.46	31.354		
11,515.7	6,639.5	6,711.1	6,632.4	139.9	20.0	-91.49	-542.7	-9,678.8	4,921.5	4,763.6	157.90	31.169		
11,600.0	6,639.3	6,710.7	6,632.1	142.2	20.0	-91.47	-542.7	-9,678.8	4,838.6	4,678.3	160.25	30.193		
11,614.1	6,639.3	6,710.7	6,632.0	142.6	20.0	-91.47	-542.7	-9,678.8	4,824.7	4,664.0	160.65	30.033		
11,700.0	6,639.2	6,710.3	6,631.7	145.0	20.0	-91.45	-542.7	-9,678.8	4,740.3	4,577.3	163.05	29.073		
11,712.6	6,639.2	6,710.3	6,631.6	145.4	20.0	-91.44	-542.7	-9,678.8	4,728.0	4,564.6	163.40	28.935		
11,800.0	6,639.1	6,709.9	6,631.3	147.8	20.0	-91.42	-542.7	-9,678.8	4,642.1	4,476.3	165.84	27.991		
11,811.0	6,639.1	6,709.9	6,631.2	148.1	20.0	-91.42	-542.7	-9,678.8	4,631.3	4,465.2	166.15	27.874		
11,900.0	6,639.0	6,709.5	6,630.9	150.6	20.0	-91.40	-542.7	-9,678.8	4,544.0	4,375.3	168.64	26.945		
11,909.4	6,639.0	6,709.5	6,630.8	150.9	20.0	-91.39	-542.7	-9,678.8	4,534.7	4,365.8	168.90	26.848		
12,000.0	6,638.8	6,709.2	6,630.5	153.4	20.0	-91.37	-542.7	-9,678.8	4,445.9	4,274.5	171.44	25.933		
12,007.8	6,638.8	6,709.1	6,630.5	153.6	20.0	-91.37	-542.7	-9,678.8	4,438.2	4,266.6	171.66	25.855		
12,100.0	6,638.7	6,708.8	6,630.1	156.2	20.0	-91.34	-542.7	-9,678.8	4,348.0	4,173.7	174.23	24.955		
12,106.3	6,638.7	6,708.7	6,630.1	156.4	20.0	-91.34	-542.7	-9,678.8	4,341.8	4,167.4	174.41	24.895		
12,200.0	6,638.6	6,708.4	6,629.7	159.0	20.0	-91.32	-542.7	-9,678.8	4,250.1	4,073.1	177.03	24.008		
12,204.7	6,638.6	6,708.3	6,629.7	159.1	20.0	-91.32	-542.7	-9,678.8	4,245.5	4,068.3	177.16	23.964		
12,300.0	6,638.5	6,708.0	6,629.3	161.8	20.0	-91.29	-542.7	-9,678.8	4,152.3	3,972.5	179.83	23.090		
12,303.1	6,638.5	6,708.0	6,629.3	161.9	20.0	-91.29	-542.7	-9,678.8	4,149.3	3,969.4	179.92	23.062		
12,400.0	6,638.3	6,707.6	6,628.9	164.6	20.0	-91.27	-542.7	-9,678.8	4,054.7	3,872.0	182.63	22.202		
12,401.5	6,638.3	6,707.6	6,628.9	164.6	20.0	-91.27	-542.7	-9,678.8	4,053.2	3,870.5	182.67	22.188		
12,500.0	6,638.2	6,707.2	6,628.5	167.4	20.0	-91.24	-542.7	-9,678.8	3,957.1	3,771.7	185.43	21.341		
12,598.4	6,638.1	6,706.8	6,628.1	170.2	20.0	-91.21	-542.7	-9,678.8	3,861.3	3,673.1	188.18	20.519		
12,600.0	6,638.1	6,706.8	6,628.1	170.2	20.0	-91.21	-542.7	-9,678.8	3,859.7	3,671.5	188.23	20.506		
12,696.8	6,638.0	6,706.4	6,627.7	172.9	20.0	-91.19	-542.7	-9,678.8	3,765.5	3,574.6	190.94	19.721		
12,700.0	6,638.0	6,706.4	6,627.7	173.0	20.0	-91.19	-542.7	-9,678.8	3,762.4	3,571.4	191.03	19.696		
12,795.2	6,637.8	6,706.0	6,627.3	175.7	20.0	-91.16	-542.7	-9,678.8	3,669.9	3,476.2	193.69	18.947		
12,800.0	6,637.8	6,706.0	6,627.3	175.8	20.0	-91.16	-542.7	-9,678.8	3,665.3	3,471.5	193.83	18.910		
12,893.7	6,637.7	6,705.6	6,626.9	178.4	20.0	-91.14	-542.7	-9,678.8	3,574.5	3,378.0	196.45	18.195		
12,900.0	6,637.7	6,705.5	6,626.9	178.6	20.0	-91.14	-542.7	-9,678.8	3,568.3	3,371.7	196.63	18.148		
12,992.1	6,637.6	6,705.2	6,626.5	181.2	20.0	-91.11	-542.7	-9,678.8	3,479.2	3,280.0	199.21	17.465		
13,000.0	6,637.6	6,705.1	6,626.5	181.4	20.0	-91.11	-542.7	-9,678.8	3,471.5	3,272.1	199.43	17.408		
13,090.5	6,637.5	6,704.8	6,626.1	183.9	20.0	-91.09	-542.7	-9,678.8	3,384.1	3,182.1	201.96	16.756		
13,100.0	6,637.5	6,704.7	6,626.1	184.2	20.0	-91.08	-542.7	-9,678.8	3,374.9	3,172.7	202.23	16.689		
13,188.9	6,637.4	6,704.4	6,625.7	186.7	20.0	-91.06	-542.7	-9,678.8	3,289.2	3,084.4	204.72	16.067		
13,200.0	6,637.3	6,704.3	6,625.7	187.0	20.0	-91.06	-542.7	-9,678.8	3,278.5	3,073.5	205.03	15.990		
13,287.4	6,637.2	6,704.0	6,625.3	189.4	20.0	-91.03	-542.7	-9,678.8	3,194.5	2,987.0	207.48	15.397		
13,300.0	6,637.2	6,703.9	6,625.2	189.8	20.0	-91.03	-542.7	-9,678.8	3,182.3	2,974.5	207.83	15.312		
13,385.8	6,637.1	6,703.6	6,624.9	192.2	20.0	-91.01	-542.7	-9,678.8	3,100.0	2,889.8	210.24	14.745		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
13,400.0	6,637.1	6,703.5	6,624.8	192.6	20.0	-91.00	-542.7	-9,678.8	3,086.4	2,875.7	210.63	14.653	
13,484.2	6,637.0	6,703.2	6,624.5	195.0	20.0	-90.98	-542.8	-9,678.8	3,005.8	2,792.8	212.99	14.112	
13,500.0	6,637.0	6,703.1	6,624.4	195.4	20.0	-90.98	-542.8	-9,678.8	2,990.7	2,777.3	213.44	14.012	
13,582.6	6,636.9	6,702.7	6,624.1	197.7	20.0	-90.95	-542.8	-9,678.8	2,911.8	2,696.1	215.75	13.496	
13,600.0	6,636.8	6,702.7	6,624.0	198.2	20.0	-90.95	-542.8	-9,678.8	2,895.3	2,679.1	216.24	13.389	
13,681.1	6,636.7	6,702.3	6,623.7	200.5	20.0	-90.93	-542.8	-9,678.8	2,818.2	2,599.7	218.51	12.897	
13,700.0	6,636.7	6,702.3	6,623.6	201.0	20.0	-90.92	-542.8	-9,678.8	2,800.2	2,581.2	219.04	12.784	
13,779.5	6,636.6	6,701.9	6,623.3	203.2	20.0	-90.90	-542.8	-9,678.8	2,724.9	2,503.6	221.27	12.315	
13,800.0	6,636.6	6,701.8	6,623.2	203.8	20.0	-90.90	-542.8	-9,678.8	2,705.5	2,483.7	221.84	12.196	
13,877.9	6,636.5	6,701.5	6,622.8	206.0	20.0	-90.87	-542.8	-9,678.8	2,632.0	2,408.0	224.03	11.748	
13,900.0	6,636.5	6,701.4	6,622.8	206.6	20.0	-90.87	-542.8	-9,678.8	2,611.2	2,386.6	224.65	11.624	
13,976.3	6,636.4	6,701.1	6,622.4	208.8	20.0	-90.85	-542.8	-9,678.8	2,539.5	2,312.7	226.79	11.198	
14,000.0	6,636.3	6,701.0	6,622.3	209.4	20.0	-90.84	-542.8	-9,678.8	2,517.3	2,289.9	227.45	11.068	
14,074.8	6,636.2	6,700.7	6,622.0	211.5	20.0	-90.82	-542.8	-9,678.8	2,447.4	2,217.9	229.55	10.662	
14,100.0	6,636.2	6,700.6	6,621.9	212.2	20.0	-90.81	-542.8	-9,678.8	2,423.9	2,193.7	230.26	10.527	
14,173.2	6,636.1	6,700.3	6,621.6	214.3	20.0	-90.79	-542.8	-9,678.8	2,355.9	2,123.6	232.31	10.141	
14,200.0	6,636.1	6,700.2	6,621.5	215.0	20.0	-90.79	-542.8	-9,678.8	2,331.1	2,098.0	233.06	10.002	
14,271.6	6,636.0	6,699.9	6,621.2	217.0	20.0	-90.77	-542.8	-9,678.8	2,265.0	2,029.9	235.07	9.635	
14,300.0	6,636.0	6,699.7	6,621.1	217.8	20.0	-90.76	-542.8	-9,678.8	2,238.9	2,003.0	235.86	9.492	
14,370.0	6,635.9	6,699.4	6,620.8	219.8	20.0	-90.74	-542.8	-9,678.8	2,174.7	1,936.8	237.83	9.144	
14,400.0	6,635.8	6,699.3	6,620.6	220.6	20.0	-90.73	-542.8	-9,678.8	2,147.3	1,908.7	238.67	8.997	
14,468.5	6,635.7	6,699.0	6,620.3	222.6	20.0	-90.71	-542.8	-9,678.8	2,085.1	1,844.5	240.59	8.667	
14,500.0	6,635.7	6,698.9	6,620.2	223.4	20.0	-90.70	-542.8	-9,678.8	2,056.6	1,815.1	241.47	8.517	
14,566.9	6,635.6	6,698.6	6,619.9	225.3	20.0	-90.68	-542.8	-9,678.8	1,996.4	1,753.0	243.35	8.204	
14,600.0	6,635.6	6,698.4	6,619.8	226.2	20.0	-90.68	-542.8	-9,678.8	1,966.8	1,722.5	244.28	8.051	
14,665.3	6,635.5	6,698.2	6,619.5	228.1	20.0	-90.66	-542.8	-9,678.8	1,908.6	1,662.5	246.11	7.755	
14,700.0	6,635.5	6,698.0	6,619.4	229.0	20.0	-90.65	-542.8	-9,678.8	1,877.9	1,630.9	247.08	7.601	
14,763.7	6,635.4	6,697.7	6,619.1	230.8	20.0	-90.63	-542.8	-9,678.8	1,821.9	1,573.1	248.87	7.321	
14,800.0	6,635.3	6,697.6	6,618.9	231.8	20.0	-90.62	-542.8	-9,678.8	1,790.3	1,540.4	249.89	7.164	
14,862.2	6,635.2	6,697.3	6,618.7	233.6	20.0	-90.60	-542.8	-9,678.8	1,736.5	1,484.9	251.63	6.901	
14,900.0	6,635.2	6,697.2	6,618.5	234.7	20.0	-90.59	-542.8	-9,678.8	1,704.0	1,451.3	252.69	6.744	
14,960.6	6,635.1	6,696.9	6,618.2	236.4	20.0	-90.57	-542.8	-9,678.8	1,652.5	1,398.1	254.39	6.496	
14,995.1	6,635.0	6,696.7	6,618.0	237.3	20.0	-90.56	-542.8	-9,678.8	1,623.4	1,368.1	255.36	6.357 CC, ES, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	119.86	-1,166.8	2,032.6	2,343.7				
98.4	98.4	93.9	93.9	0.1	0.1	119.87	-1,167.3	2,032.2	2,343.6	2,343.4	0.15	N/A	
100.0	100.0	95.6	95.6	0.1	0.1	119.87	-1,167.4	2,032.2	2,343.6	2,343.4	0.16	N/A	
196.8	196.8	196.1	196.1	0.3	0.1	119.93	-1,169.1	2,030.9	2,343.4	2,342.9	0.43	5,390.939	
200.0	200.0	199.4	199.3	0.3	0.1	119.93	-1,169.2	2,030.8	2,343.4	2,342.9	0.44	5,280.765	
295.3	295.3	296.4	296.3	0.5	0.3	120.00	-1,171.7	2,029.0	2,343.0	2,342.2	0.82	2,864.560	
300.0	300.0	300.6	300.6	0.5	0.3	120.01	-1,171.8	2,028.9	2,343.0	2,342.1	0.84	2,798.703	
378.9	378.9	371.0	370.9	0.7	0.4	120.05	-1,173.1	2,028.0	2,342.8	2,341.7	1.16	2,025.203	
393.7	393.7	383.2	383.1	0.8	0.5	120.05	-1,173.3	2,027.9	2,342.8	2,341.6	1.22	1,926.357	
400.0	400.0	388.2	388.1	0.8	0.5	120.05	-1,173.3	2,027.8	2,342.8	2,341.6	1.24	1,888.042	
492.1	492.1	461.0	460.8	1.0	0.6	120.08	-1,174.4	2,027.7	2,343.4	2,341.8	1.60	1,461.837	
500.0	500.0	467.8	467.7	1.0	0.6	120.08	-1,174.5	2,027.8	2,343.5	2,341.8	1.64	1,432.844	
590.5	590.5	548.8	548.7	1.2	0.8	120.10	-1,175.7	2,028.2	2,344.6	2,342.6	2.01	1,164.438	
600.0	600.0	557.7	557.6	1.2	0.8	120.10	-1,175.9	2,028.3	2,344.7	2,342.7	2.05	1,141.578	
689.0	689.0	641.3	641.2	1.4	1.0	120.13	-1,177.5	2,028.9	2,346.1	2,343.7	2.43	963.657	
700.0	700.0	651.7	651.6	1.4	1.0	120.13	-1,177.8	2,028.9	2,346.3	2,343.9	2.48	945.421	
787.4	787.4	733.2	733.1	1.6	1.2	120.16	-1,179.6	2,029.6	2,347.9	2,345.1	2.85	822.481	
800.0	800.0	744.9	744.7	1.7	1.2	120.17	-1,179.8	2,029.8	2,348.2	2,345.3	2.91	807.389	
885.8	885.8	837.6	837.4	1.9	1.4	120.17	-1,181.0	2,031.2	2,349.9	2,346.6	3.30	712.336	
900.0	900.0	853.8	853.6	1.9	1.5	120.17	-1,181.0	2,031.5	2,350.1	2,346.7	3.37	698.393	
984.2	984.2	1,112.6	1,112.2	2.1	2.0	119.97	-1,171.6	2,031.6	2,349.2	2,345.1	4.08	576.247	
1,000.0	1,000.0	1,143.0	1,142.5	2.1	2.1	119.93	-1,169.3	2,030.8	2,348.2	2,344.1	4.18	562.252	
1,082.7	1,082.7	1,369.2	1,367.4	2.3	2.6	119.69	-1,150.3	2,017.3	2,340.6	2,335.7	4.87	480.691	
1,100.0	1,100.0	1,403.5	1,401.5	2.3	2.7	119.68	-1,147.6	2,013.8	2,338.4	2,333.4	4.99	468.496	
1,181.1	1,181.1	1,562.4	1,558.5	2.5	3.1	119.67	-1,135.6	1,993.2	2,326.2	2,320.6	5.57	417.524	
1,200.0	1,200.0	1,593.3	1,589.0	2.6	3.2	119.68	-1,133.4	1,988.5	2,323.0	2,317.3	5.69	407.930	
1,279.5	1,279.5	1,959.7	1,945.2	2.7	4.6	119.97	-1,101.4	1,910.5	2,305.8	2,298.9	6.97	330.878	
1,300.0	1,300.0	2,051.0	2,032.1	2.8	5.1	120.05	-1,090.3	1,884.5	2,299.5	2,292.2	7.34	313.114	
1,377.9	1,377.9	2,118.1	2,095.6	3.0	5.5	79.48	-1,081.7	1,864.7	2,274.4	2,267.1	7.30	311.491	
1,400.0	1,400.0	2,136.0	2,112.5	3.0	5.6	79.66	-1,079.5	1,859.4	2,267.2	2,259.8	7.40	306.560	
1,476.4	1,476.3	2,194.8	2,168.3	3.2	5.9	80.32	-1,072.3	1,842.1	2,242.5	2,234.8	7.71	290.953	
1,500.0	1,499.8	2,212.8	2,185.3	3.2	6.0	80.53	-1,070.2	1,836.9	2,234.9	2,227.1	7.80	286.408	
1,574.8	1,574.4	2,282.5	2,251.6	3.4	6.3	81.28	-1,061.8	1,816.8	2,210.7	2,202.6	8.15	271.234	
1,600.0	1,599.5	2,306.8	2,274.6	3.5	6.5	81.55	-1,058.8	1,809.8	2,202.5	2,194.3	8.27	266.309	
1,673.2	1,672.2	2,393.0	2,356.4	3.6	7.0	82.45	-1,047.7	1,784.8	2,178.1	2,169.5	8.69	250.742	
1,700.0	1,698.7	2,417.8	2,380.0	3.7	7.1	82.76	-1,044.5	1,777.5	2,169.1	2,160.3	8.82	245.841	
1,771.6	1,769.5	2,479.0	2,437.9	3.9	7.5	83.62	-1,036.9	1,759.6	2,145.0	2,135.8	9.19	233.435	
1,800.0	1,797.5	2,494.5	2,452.7	4.0	7.6	83.92	-1,035.1	1,755.1	2,135.5	2,126.2	9.31	229.376	
1,870.1	1,866.3	2,548.6	2,504.0	4.2	7.9	84.79	-1,028.5	1,739.6	2,112.3	2,102.7	9.68	218.318	
1,899.9	1,895.6	2,571.7	2,526.0	4.3	8.0	85.16	-1,025.6	1,733.1	2,102.5	2,092.7	9.83	213.790	
1,968.5	1,962.6	2,625.5	2,577.3	4.5	8.3	85.57	-1,018.9	1,718.1	2,080.3	2,070.1	10.21	203.724	
2,000.0	1,993.4	2,650.5	2,601.1	4.6	8.4	85.76	-1,015.9	1,711.2	2,070.2	2,059.8	10.39	199.306	
2,066.9	2,058.9	2,720.7	2,668.0	4.8	8.8	86.31	-1,007.2	1,691.8	2,048.8	2,038.0	10.83	189.145	
2,100.0	2,091.3	2,748.8	2,694.7	4.9	9.0	86.53	-1,003.6	1,684.0	2,038.2	2,027.2	11.03	184.730	
2,165.3	2,155.2	2,795.3	2,739.2	5.2	9.2	86.89	-997.7	1,671.4	2,017.6	2,006.2	11.41	176.787	
2,200.0	2,189.1	2,821.0	2,763.7	5.3	9.4	87.09	-994.3	1,664.6	2,006.9	1,995.3	11.62	172.737	
2,263.8	2,251.5	2,900.5	2,839.7	5.5	9.8	87.70	-983.4	1,643.7	1,987.1	1,975.0	12.10	164.170	
2,300.0	2,286.9	2,936.8	2,874.2	5.7	10.1	87.97	-978.1	1,634.1	1,975.7	1,963.3	12.36	159.898	
2,362.2	2,347.7	2,992.0	2,926.8	5.9	10.4	88.40	-969.9	1,619.5	1,956.1	1,943.3	12.77	153.148	
2,400.0	2,384.7	3,012.7	2,946.6	6.0	10.5	88.56	-966.9	1,614.0	1,944.4	1,931.4	12.98	149.764	
2,460.6	2,444.0	3,042.2	2,974.8	6.3	10.7	88.79	-962.9	1,606.5	1,926.4	1,913.1	13.31	144.690	
2,500.0	2,482.5	3,077.0	3,008.2	6.4	10.9	89.08	-958.7	1,597.9	1,915.3	1,901.7	13.58	141.034	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,540.3	3,099.0	3,029.4	6.7	11.0	89.27	-956.2	1,592.5	1,898.9	1,885.1	13.89	136.759		
2,600.0	2,580.3	3,132.2	3,061.4	6.8	11.1	89.55	-952.4	1,584.5	1,887.9	1,873.8	14.16	133.375		
2,657.5	2,636.5	3,190.6	3,117.8	7.1	11.4	90.05	-945.8	1,570.6	1,872.7	1,858.2	14.58	128.439		
2,700.0	2,678.1	3,249.7	3,174.6	7.2	11.8	90.56	-938.9	1,556.1	1,861.2	1,846.2	14.96	124.447		
2,755.9	2,732.8	3,304.1	3,226.9	7.5	12.1	91.04	-932.2	1,542.6	1,845.8	1,830.5	15.38	120.044		
2,800.0	2,776.0	3,334.0	3,255.6	7.7	12.2	91.30	-928.3	1,535.2	1,833.8	1,818.1	15.66	117.073		
2,854.3	2,829.1	3,382.4	3,302.2	7.9	12.5	91.72	-922.2	1,523.5	1,819.2	1,803.1	16.06	113.301		
2,900.0	2,873.8	3,419.0	3,337.4	8.1	12.7	92.05	-917.8	1,514.7	1,807.3	1,790.9	16.37	110.375		
2,952.7	2,925.4	3,452.0	3,369.2	8.3	12.8	92.36	-914.1	1,506.9	1,793.9	1,777.2	16.71	107.357		
3,000.0	2,971.6	3,484.9	3,401.1	8.5	13.0	92.66	-910.5	1,499.2	1,782.3	1,765.3	17.02	104.696		
3,051.2	3,021.6	3,542.4	3,456.6	8.7	13.3	93.21	-904.5	1,485.8	1,770.1	1,752.6	17.45	101.436		
3,100.0	3,069.4	3,617.3	3,528.7	8.9	13.7	93.94	-896.1	1,467.4	1,757.8	1,739.8	17.94	97.960		
3,149.6	3,117.9	3,682.4	3,591.2	9.1	14.1	94.59	-888.3	1,450.7	1,744.8	1,726.4	18.42	94.739		
3,200.0	3,167.2	3,736.2	3,642.7	9.3	14.4	95.15	-881.7	1,436.5	1,731.4	1,712.5	18.86	91.824		
3,248.0	3,214.2	3,784.3	3,688.7	9.5	14.7	95.66	-875.9	1,423.6	1,718.5	1,699.2	19.27	89.201		
3,300.0	3,265.0	3,833.2	3,735.4	9.8	15.0	96.20	-870.1	1,410.2	1,704.7	1,685.0	19.70	86.527		
3,346.4	3,310.5	3,877.5	3,777.6	10.0	15.2	96.69	-865.0	1,398.0	1,692.4	1,672.3	20.10	84.205		
3,400.0	3,362.9	3,928.7	3,826.4	10.2	15.5	97.28	-859.0	1,383.8	1,678.4	1,657.8	20.56	81.619		
3,444.9	3,406.7	3,966.7	3,862.7	10.4	15.8	97.72	-854.6	1,373.2	1,666.8	1,645.8	20.93	79.632		
3,473.0	3,434.2	3,990.4	3,885.3	10.5	15.9	97.99	-851.8	1,366.8	1,659.6	1,638.4	21.16	78.429		
3,500.0	3,460.7	4,013.2	3,907.1	10.6	16.0	98.11	-849.0	1,360.6	1,652.7	1,631.4	21.36	77.393		
3,543.3	3,503.2	4,067.3	3,958.7	10.7	16.4	98.48	-842.5	1,345.8	1,641.6	1,619.9	21.72	75.571		
3,600.0	3,559.0	4,128.2	4,016.5	10.9	16.7	98.84	-835.1	1,328.4	1,626.6	1,604.5	22.16	73.418		
3,641.7	3,600.2	4,164.4	4,051.1	11.0	16.9	98.98	-830.2	1,318.5	1,615.6	1,593.2	22.42	72.073		
3,700.0	3,657.9	4,234.0	4,117.5	11.2	17.4	99.26	-819.8	1,300.5	1,600.0	1,577.2	22.85	70.034		
3,740.1	3,697.8	4,286.1	4,167.1	11.3	17.7	99.45	-811.3	1,286.8	1,588.8	1,565.6	23.14	68.656		
3,800.0	3,757.3	4,341.9	4,220.0	11.4	18.0	99.52	-802.1	1,272.0	1,571.7	1,548.2	23.48	66.927		
3,838.6	3,795.7	4,383.2	4,259.2	11.5	18.3	99.58	-795.4	1,260.9	1,560.6	1,536.9	23.72	65.804		
3,900.0	3,857.0	4,454.0	4,326.2	11.7	18.7	99.73	-784.4	1,240.5	1,542.5	1,518.3	24.12	63.953		
3,937.0	3,893.9	4,486.9	4,357.2	11.7	19.0	99.75	-779.7	1,230.6	1,531.3	1,507.0	24.31	62.984		
4,000.0	3,956.9	4,531.0	4,398.7	11.8	19.2	99.69	-773.5	1,217.0	1,512.5	1,487.9	24.59	61.519		
4,035.4	3,992.3	4,559.7	4,425.7	11.9	19.4	99.67	-769.8	1,208.3	1,502.0	1,477.2	24.74	60.708		
4,072.9	4,029.8	4,581.9	4,446.8	11.9	19.6	140.77	-766.9	1,201.7	1,491.2	1,463.7	27.51	54.212		
4,100.0	4,056.9	4,598.1	4,462.1	12.0	19.7	140.87	-764.9	1,197.0	1,483.5	1,455.9	27.64	53.670		
4,133.8	4,090.7	4,619.1	4,482.1	12.0	19.8	140.99	-762.4	1,191.0	1,474.2	1,446.4	27.82	52.991		
4,200.0	4,156.9	4,679.3	4,539.5	12.1	20.1	141.33	-755.1	1,174.5	1,456.4	1,428.2	28.25	51.561		
4,232.3	4,189.2	4,711.4	4,570.2	12.2	20.3	141.50	-751.0	1,166.0	1,447.8	1,419.3	28.47	50.851		
4,300.0	4,256.9	4,788.0	4,643.2	12.3	20.8	141.91	-740.9	1,145.2	1,429.1	1,400.1	29.00	49.287		
4,330.7	4,287.6	4,810.8	4,664.9	12.4	20.9	142.04	-737.8	1,139.0	1,420.7	1,391.5	29.17	48.705		
4,400.0	4,356.9	4,852.7	4,705.1	12.5	21.2	142.24	-732.1	1,128.4	1,402.5	1,373.0	29.51	47.518		
4,429.1	4,386.0	4,873.0	4,724.6	12.5	21.3	142.33	-729.4	1,123.7	1,395.2	1,365.5	29.67	47.017		
4,500.0	4,456.9	4,948.2	4,797.1	12.6	21.7	142.67	-719.5	1,106.0	1,377.5	1,347.4	30.17	45.663		
4,527.5	4,484.4	4,998.5	4,845.3	12.7	22.0	142.93	-712.8	1,093.4	1,370.4	1,339.9	30.47	44.971		
4,600.0	4,556.9	5,075.9	4,919.0	12.8	22.4	143.37	-701.8	1,072.4	1,350.1	1,319.1	31.01	43.545		
4,626.0	4,582.9	5,092.1	4,934.5	12.9	22.5	143.47	-699.6	1,068.0	1,343.1	1,312.0	31.14	43.134		
4,700.0	4,656.9	5,130.0	4,970.7	13.0	22.8	143.70	-694.8	1,058.1	1,324.0	1,292.5	31.47	42.067		
4,724.4	4,681.3	5,157.8	4,997.3	13.0	22.9	143.87	-691.5	1,051.0	1,317.9	1,286.3	31.64	41.651		
4,800.0	4,756.9	5,215.0	5,052.4	13.1	23.2	144.21	-685.0	1,036.9	1,299.8	1,267.8	32.04	40.570		
4,822.8	4,779.7	5,215.0	5,052.4	13.2	23.2	144.21	-685.0	1,036.9	1,294.7	1,262.6	32.09	40.350		
4,900.0	4,856.9	5,269.9	5,105.6	13.3	23.5	144.51	-679.2	1,024.7	1,278.2	1,245.7	32.45	39.391		
4,921.2	4,878.1	5,281.9	5,117.3	13.4	23.5	144.57	-678.1	1,022.2	1,274.0	1,241.4	32.54	39.154		
5,000.0	4,956.9	5,332.1	5,166.5	13.5	23.7	144.80	-673.5	1,013.0	1,259.6	1,226.7	32.87	38.321		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,976.6	5,345.7	5,179.8	13.5	23.8	144.85	-672.3	1,010.7	1,256.2	1,223.3	32.95	38.122	
5,100.0	5,056.9	5,407.8	5,240.9	13.7	24.0	145.08	-667.0	1,001.1	1,243.4	1,210.1	33.32	37.323	
5,118.1	5,075.0	5,425.6	5,258.4	13.7	24.1	145.14	-665.5	998.5	1,240.6	1,207.2	33.41	37.137	
5,200.0	5,156.9	5,498.9	5,330.7	13.8	24.4	145.39	-659.3	987.7	1,228.1	1,194.3	33.79	36.341	
5,216.5	5,173.4	5,511.7	5,343.4	13.9	24.4	145.43	-658.3	985.9	1,225.7	1,191.8	33.87	36.192	
5,300.0	5,256.9	5,575.6	5,406.5	14.0	24.6	145.64	-653.5	977.3	1,214.2	1,180.0	34.22	35.485	
5,314.9	5,271.8	5,586.6	5,417.4	14.1	24.6	145.68	-652.8	975.9	1,212.3	1,178.0	34.28	35.367	
5,400.0	5,356.9	5,643.0	5,473.2	14.2	24.8	145.86	-649.4	969.0	1,202.3	1,167.7	34.60	34.752	
5,413.4	5,370.3	5,660.4	5,490.5	14.2	24.9	145.91	-648.5	967.0	1,200.8	1,166.2	34.66	34.643	
5,500.0	5,456.9	5,728.0	5,557.6	14.4	25.1	146.14	-645.6	959.3	1,192.2	1,157.2	34.99	34.071	
5,511.8	5,468.7	5,738.9	5,568.4	14.4	25.1	146.18	-645.2	958.1	1,191.1	1,156.1	35.04	33.996	
5,600.0	5,556.9	5,814.0	5,643.0	14.6	25.3	146.44	-642.9	950.1	1,183.6	1,148.2	35.37	33.464	
5,610.2	5,567.1	5,814.0	5,643.0	14.6	25.3	146.44	-642.9	950.1	1,182.8	1,147.5	35.39	33.422	
5,700.0	5,656.9	5,899.0	5,727.7	14.7	25.5	146.70	-640.8	942.4	1,176.5	1,140.8	35.73	32.929	
5,708.6	5,665.5	5,899.0	5,727.7	14.8	25.5	146.70	-640.8	942.4	1,176.0	1,140.2	35.75	32.897	
5,800.0	5,756.9	5,972.1	5,800.5	14.9	25.6	146.89	-639.7	937.0	1,171.2	1,135.1	36.05	32.485	
5,807.1	5,764.0	5,978.8	5,807.3	14.9	25.6	146.90	-639.7	936.6	1,170.9	1,134.8	36.08	32.454	
5,900.0	5,856.9	6,038.3	5,866.6	15.1	25.7	147.04	-639.7	933.1	1,168.1	1,131.7	36.34	32.140	
5,905.5	5,862.4	6,041.7	5,870.1	15.1	25.7	147.05	-639.8	933.0	1,168.0	1,131.6	36.36	32.124	
5,949.4	5,906.3	6,070.0	5,898.3	15.2	25.8	147.11	-640.3	931.8	1,167.7	1,131.2	36.48	32.006 CC, ES	
5,971.9	5,928.8	6,086.1	5,914.3	15.3	25.8	147.15	-640.7	931.3	1,167.8	1,131.3	36.54	31.957 SF	
6,000.0	5,956.9	6,107.4	5,935.7	15.3	25.8	-122.80	-641.2	930.9	1,168.3	1,134.6	33.69	34.674	
6,003.9	5,960.8	6,110.4	5,938.7	15.3	25.8	-122.80	-641.3	930.8	1,168.5	1,134.8	33.71	34.661	
6,050.0	6,006.7	6,145.3	5,973.5	15.4	25.9	-122.70	-642.0	930.7	1,171.2	1,137.3	33.90	34.550	
6,100.0	6,056.2	6,201.7	6,029.9	15.4	25.9	-122.72	-642.9	931.5	1,176.1	1,142.1	34.05	34.538	
6,102.3	6,058.5	6,204.7	6,032.9	15.4	25.9	-122.72	-642.9	931.6	1,176.4	1,142.3	34.06	34.540	
6,150.0	6,105.1	6,259.1	6,087.3	15.4	26.0	-122.82	-642.9	932.6	1,182.5	1,148.3	34.15	34.625	
6,200.0	6,153.0	6,306.2	6,134.4	15.5	26.0	-122.84	-642.8	933.5	1,190.7	1,156.5	34.22	34.799	
6,200.8	6,153.8	6,306.9	6,135.1	15.5	26.0	-122.84	-642.8	933.5	1,190.8	1,156.6	34.22	34.803	
6,250.0	6,199.9	6,348.6	6,176.9	15.5	26.0	-122.76	-642.9	934.2	1,201.0	1,166.8	34.27	35.050	
6,299.2	6,244.8	6,386.3	6,214.5	15.5	26.1	-122.56	-643.1	934.8	1,213.4	1,179.1	34.31	35.363	
6,300.0	6,245.5	6,386.9	6,215.1	15.5	26.1	-122.55	-643.1	934.9	1,213.6	1,179.3	34.31	35.369	
6,350.0	6,289.6	6,424.6	6,252.8	15.5	26.1	-122.25	-643.5	935.6	1,228.6	1,194.2	34.37	35.747	
6,397.6	6,329.9	6,460.6	6,288.8	15.4	26.1	-121.88	-644.1	936.4	1,244.9	1,210.5	34.44	36.146	
6,400.0	6,331.8	6,462.4	6,290.6	15.4	26.1	-121.86	-644.1	936.4	1,245.8	1,211.3	34.45	36.166	
6,450.0	6,372.2	6,498.0	6,326.2	15.4	26.1	-121.31	-644.8	937.1	1,265.2	1,230.7	34.57	36.596	
6,496.0	6,407.4	6,531.6	6,359.8	15.4	26.1	-120.73	-645.6	937.7	1,285.1	1,250.4	34.74	36.988	
6,500.0	6,410.3	6,534.4	6,362.5	15.4	26.2	-120.67	-645.7	937.8	1,286.9	1,252.1	34.76	37.021	
6,550.0	6,446.1	6,568.1	6,396.3	15.4	26.2	-119.81	-646.6	938.3	1,310.7	1,275.6	35.05	37.396	
6,594.5	6,475.9	6,596.4	6,424.6	15.4	26.2	-118.87	-647.4	938.8	1,333.6	1,298.2	35.41	37.662	
6,600.0	6,479.4	6,599.9	6,428.0	15.4	26.2	-118.74	-647.5	938.9	1,336.5	1,301.1	35.46	37.692	
6,650.0	6,510.0	6,629.4	6,457.5	15.5	26.2	-117.41	-648.4	939.3	1,364.4	1,328.4	36.02	37.878	
6,692.9	6,534.0	6,652.5	6,480.6	15.7	26.2	-116.02	-649.1	939.7	1,389.9	1,353.3	36.65	37.928	
6,700.0	6,537.8	6,656.1	6,484.2	15.7	26.2	-115.77	-649.2	939.7	1,394.3	1,357.5	36.76	37.931	
6,750.0	6,562.6	6,680.5	6,508.5	16.2	26.2	-113.79	-650.0	940.1	1,426.0	1,388.3	37.68	37.845	
6,791.3	6,580.8	6,698.7	6,526.8	16.6	26.3	-111.87	-650.6	940.3	1,453.5	1,414.9	38.59	37.666	
6,800.0	6,584.3	6,702.3	6,530.3	16.7	26.3	-111.43	-650.7	940.4	1,459.4	1,420.6	38.78	37.631	
6,850.0	6,602.9	6,720.9	6,548.9	17.3	26.3	-108.63	-651.3	940.6	1,494.3	1,454.3	40.04	37.316	
6,889.7	6,615.2	6,733.3	6,561.3	17.9	26.3	-106.05	-651.7	940.8	1,523.1	1,482.0	41.14	37.021	
6,900.0	6,618.1	6,736.1	6,564.2	18.0	26.3	-105.33	-651.8	940.8	1,530.7	1,489.3	41.42	36.951	
6,950.0	6,630.0	6,747.9	6,576.0	18.8	26.3	-101.51	-652.2	940.9	1,568.3	1,525.5	42.84	36.608	
6,988.2	6,636.8	6,754.6	6,582.7	19.5	26.3	-98.23	-652.4	941.0	1,597.7	1,553.9	43.88	36.409	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,638.5	6,756.2	6,584.2	19.7	26.3	-97.15	-652.5	941.0	1,607.0	1,562.8	44.18	36.372				
7,050.0	6,643.5	6,760.6	6,588.6	20.6	26.3	-92.26	-652.6	941.1	1,646.5	1,601.2	45.31	36.338				
7,086.6	6,644.9	6,761.6	6,589.7	21.3	26.3	-88.40	-652.7	941.1	1,675.8	1,629.9	45.92	36.495				
7,097.8	6,645.0	6,761.6	6,589.6	21.5	26.3	-87.17	-652.7	941.1	1,684.9	1,638.8	46.06	36.584				
7,100.0	6,645.0	6,761.6	6,589.6	21.6	26.3	-87.17	-652.7	941.1	1,686.6	1,640.5	46.10	36.589				
7,185.0	6,644.9	6,760.6	6,588.6	23.3	26.3	-87.11	-652.6	941.1	1,756.0	1,708.2	47.82	36.724				
7,200.0	6,644.9	6,760.4	6,588.5	23.6	26.3	-87.10	-652.6	941.1	1,768.4	1,720.3	48.12	36.750				
7,283.4	6,644.8	6,759.5	6,587.5	25.4	26.3	-87.05	-652.6	941.1	1,838.0	1,788.1	49.93	36.811				
7,300.0	6,644.7	6,759.3	6,587.3	25.8	26.3	-87.04	-652.6	941.0	1,852.0	1,801.7	50.29	36.826				
7,381.9	6,644.6	6,758.4	6,586.4	27.7	26.3	-86.98	-652.5	941.0	1,921.5	1,869.4	52.16	36.840				
7,400.0	6,644.6	6,758.2	6,586.2	28.1	26.3	-86.97	-652.5	941.0	1,937.1	1,884.5	52.57	36.846				
7,480.3	6,644.5	6,757.2	6,585.3	30.0	26.3	-86.92	-652.5	941.0	2,006.4	1,951.9	54.47	36.832				
7,500.0	6,644.5	6,757.0	6,585.1	30.5	26.3	-86.91	-652.5	941.0	2,023.5	1,968.6	54.94	36.831				
7,578.7	6,644.4	6,756.1	6,584.2	32.4	26.3	-86.85	-652.5	941.0	2,092.5	2,035.6	56.86	36.800				
7,600.0	6,644.4	6,755.9	6,583.9	32.9	26.3	-86.84	-652.5	941.0	2,111.2	2,053.8	57.38	36.794				
7,677.1	6,644.3	6,755.0	6,583.0	34.8	26.3	-86.79	-652.4	941.0	2,179.6	2,120.3	59.30	36.754				
7,700.0	6,644.2	6,754.7	6,582.7	35.4	26.3	-86.77	-652.4	941.0	2,199.9	2,140.1	59.87	36.745				
7,775.6	6,644.1	6,753.7	6,581.8	37.3	26.3	-86.72	-652.4	941.0	2,267.6	2,205.8	61.78	36.702				
7,800.0	6,644.1	6,753.4	6,581.5	38.0	26.3	-86.70	-652.4	941.0	2,289.6	2,227.2	62.40	36.690				
7,874.0	6,644.0	6,752.5	6,580.5	39.9	26.3	-86.64	-652.3	941.0	2,356.5	2,292.1	64.30	36.645				
7,900.0	6,644.0	6,752.1	6,580.2	40.5	26.3	-86.63	-652.3	941.0	2,380.0	2,315.1	64.97	36.632				
7,972.4	6,643.9	6,751.2	6,579.2	42.4	26.3	-86.57	-652.3	941.0	2,446.0	2,379.2	66.85	36.589				
8,000.0	6,643.9	6,750.8	6,578.9	43.1	26.3	-86.55	-652.3	941.0	2,471.3	2,403.7	67.57	36.574				
8,070.8	6,643.8	6,749.9	6,578.0	45.0	26.3	-86.50	-652.3	941.0	2,536.3	2,466.9	69.42	36.533				
8,100.0	6,643.7	6,749.5	6,577.6	45.8	26.3	-86.47	-652.3	940.9	2,563.1	2,492.9	70.19	36.518				
8,169.3	6,643.7	6,748.6	6,576.6	47.6	26.3	-86.42	-652.2	940.9	2,627.1	2,555.1	72.02	36.479				
8,200.0	6,643.6	6,748.2	6,576.2	48.4	26.3	-86.40	-652.2	940.9	2,655.6	2,582.7	72.83	36.464				
8,267.7	6,643.5	6,747.3	6,575.3	50.2	26.3	-86.35	-652.2	940.9	2,718.5	2,643.8	74.63	36.428				
8,300.0	6,643.5	6,746.8	6,574.9	51.1	26.3	-86.32	-652.2	940.9	2,748.5	2,673.1	75.48	36.413				
8,366.1	6,643.4	6,745.9	6,574.0	52.9	26.3	-86.27	-652.1	940.9	2,810.3	2,733.0	77.25	36.380				
8,400.0	6,643.4	6,745.5	6,573.5	53.8	26.3	-86.24	-652.1	940.9	2,842.0	2,763.8	78.15	36.365				
8,464.5	6,643.3	6,744.6	6,572.6	55.5	26.3	-86.19	-652.1	940.9	2,902.6	2,822.7	79.88	36.335				
8,500.0	6,643.2	6,744.1	6,572.2	56.5	26.3	-86.16	-652.1	940.9	2,935.9	2,855.1	80.83	36.320				
8,563.0	6,643.2	6,743.2	6,571.3	58.2	26.3	-86.11	-652.0	940.9	2,995.2	2,912.7	82.53	36.293				
8,600.0	6,643.1	6,742.7	6,570.8	59.2	26.3	-86.08	-652.0	940.9	3,030.2	2,946.6	83.52	36.279				
8,661.4	6,643.0	6,741.9	6,569.9	60.8	26.3	-86.03	-652.0	940.9	3,088.2	3,003.0	85.18	36.255				
8,700.0	6,643.0	6,741.3	6,569.4	61.9	26.3	-86.00	-652.0	940.9	3,124.8	3,038.6	86.22	36.241				
8,759.8	6,642.9	6,740.5	6,568.5	63.5	26.3	-85.95	-652.0	940.8	3,181.6	3,093.7	87.84	36.219				
8,800.0	6,642.9	6,739.9	6,567.9	64.6	26.3	-85.92	-651.9	940.8	3,219.7	3,130.8	88.93	36.206				
8,858.2	6,642.8	6,739.1	6,567.1	66.2	26.3	-85.87	-651.9	940.8	3,275.2	3,184.7	90.51	36.186				
8,900.0	6,642.7	6,738.4	6,566.5	67.3	26.3	-85.84	-651.9	940.8	3,315.0	3,223.4	91.64	36.173				
8,956.7	6,642.7	6,737.6	6,565.7	68.9	26.3	-85.79	-651.9	940.8	3,369.1	3,275.9	93.18	36.156				
9,000.0	6,642.6	6,737.0	6,565.0	70.1	26.3	-85.75	-651.8	940.8	3,410.5	3,316.2	94.36	36.144				
9,055.1	6,642.5	6,736.2	6,564.2	71.6	26.3	-85.71	-651.8	940.8	3,463.3	3,367.4	95.86	36.128				
9,100.0	6,642.5	6,735.5	6,563.6	72.8	26.3	-85.67	-651.8	940.8	3,506.3	3,409.2	97.08	36.117				
9,153.5	6,642.4	6,734.7	6,562.8	74.3	26.3	-85.62	-651.8	940.8	3,557.7	3,459.1	98.54	36.103				
9,200.0	6,642.4	6,734.0	6,562.1	75.6	26.3	-85.58	-651.7	940.8	3,602.3	3,502.5	99.81	36.092				
9,251.9	6,642.3	6,733.2	6,561.3	77.0	26.3	-85.54	-651.7	940.8	3,652.3	3,551.0	101.23	36.080				
9,300.0	6,642.2	6,732.5	6,560.6	78.3	26.3	-85.50	-651.7	940.8	3,698.5	3,596.0	102.54	36.069				
9,350.4	6,642.2	6,731.7	6,559.8	79.7	26.3	-85.45	-651.7	940.7	3,747.1	3,643.1	103.92	36.058				
9,400.0	6,642.1	6,731.0	6,559.0	81.1	26.3	-85.41	-651.6	940.7	3,794.9	3,689.6	105.27	36.049				
9,448.8	6,642.0	6,730.2	6,558.3	82.4	26.3	-85.37	-651.6	940.7	3,842.0	3,735.4	106.61	36.039				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,729.4	6,557.5	83.8	26.3	-85.32	-651.6	940.7	3,891.5	3,783.5	108.01	36.030	
9,547.2	6,641.9	6,728.7	6,556.8	85.1	26.3	-85.28	-651.6	940.7	3,937.2	3,827.9	109.30	36.022	
9,600.0	6,641.9	6,727.9	6,555.9	86.6	26.3	-85.23	-651.5	940.7	3,988.3	3,877.5	110.75	36.013	
9,645.6	6,641.8	6,727.2	6,555.2	87.9	26.3	-85.19	-651.5	940.7	4,032.5	3,920.5	112.00	36.006	
9,700.0	6,641.7	6,726.3	6,554.4	89.4	26.3	-85.14	-651.5	940.7	4,085.2	3,971.7	113.48	35.998	
9,744.1	6,641.7	6,725.6	6,553.6	90.6	26.3	-85.10	-651.5	940.7	4,127.9	4,013.2	114.69	35.991	
9,800.0	6,641.6	6,724.7	6,552.7	92.1	26.3	-85.05	-651.4	940.7	4,182.2	4,066.0	116.23	35.984	
9,842.5	6,641.6	6,724.0	6,552.1	93.3	26.3	-85.01	-651.4	940.7	4,223.5	4,106.1	117.39	35.978	
9,900.0	6,641.5	6,723.1	6,551.1	94.9	26.3	-84.95	-651.4	940.6	4,279.4	4,160.5	118.97	35.971	
9,940.9	6,641.4	6,722.4	6,550.5	96.0	26.3	-84.91	-651.4	940.6	4,319.2	4,199.1	120.09	35.967	
10,000.0	6,641.4	6,721.4	6,549.5	97.7	26.3	-84.86	-651.3	940.6	4,376.7	4,255.0	121.71	35.960	
10,039.3	6,641.3	6,720.8	6,548.8	98.8	26.3	-84.82	-651.3	940.6	4,415.1	4,292.3	122.79	35.956	
10,100.0	6,641.2	6,719.8	6,547.8	100.4	26.3	-84.76	-651.3	940.6	4,474.2	4,349.7	124.45	35.950	
10,137.8	6,641.2	6,719.1	6,547.2	101.5	26.3	-84.73	-651.2	940.6	4,511.0	4,385.5	125.49	35.947	
10,200.0	6,641.1	6,718.1	6,546.1	103.2	26.3	-84.67	-651.2	940.6	4,571.7	4,444.5	127.20	35.942	
10,236.2	6,641.1	6,717.5	6,545.5	104.2	26.3	-84.63	-651.2	940.6	4,607.1	4,478.9	128.19	35.939	
10,300.0	6,641.0	6,716.4	6,544.4	106.0	26.3	-84.57	-651.2	940.6	4,669.4	4,539.4	129.94	35.934	
10,334.6	6,640.9	6,715.8	6,543.8	107.0	26.3	-84.53	-651.1	940.6	4,703.2	4,572.3	130.89	35.932	
10,400.0	6,640.9	6,714.6	6,542.7	108.8	26.3	-84.47	-651.1	940.5	4,767.1	4,634.4	132.69	35.928	
10,433.0	6,640.8	6,714.1	6,542.1	109.7	26.3	-84.44	-651.1	940.5	4,799.4	4,665.8	133.59	35.926	
10,500.0	6,640.7	6,712.9	6,541.0	111.6	26.3	-84.37	-651.0	940.5	4,865.0	4,729.5	135.43	35.922	
10,531.5	6,640.7	6,712.3	6,540.4	112.4	26.3	-84.34	-651.0	940.5	4,895.8	4,759.5	136.29	35.920	
10,600.0	6,640.6	6,711.1	6,539.2	114.3	26.3	-84.27	-651.0	940.5	4,962.9	4,824.7	138.18	35.917	
10,629.9	6,640.6	6,710.6	6,538.6	115.2	26.3	-84.24	-651.0	940.5	4,992.2	4,853.2	139.00	35.916	
10,700.0	6,640.5	6,709.3	6,537.4	117.1	26.3	-84.16	-650.9	940.5	5,060.9	4,920.0	140.92	35.913	
10,728.3	6,640.4	6,708.8	6,536.9	117.9	26.3	-84.13	-650.9	940.5	5,088.7	4,947.0	141.70	35.913	
10,800.0	6,640.4	6,707.5	6,535.6	119.9	26.3	-84.06	-650.9	940.5	5,159.0	5,015.3	143.66	35.910	
10,826.7	6,640.3	6,707.0	6,535.1	120.7	26.3	-84.03	-650.9	940.4	5,185.2	5,040.8	144.40	35.910	
10,900.0	6,640.2	6,705.6	6,533.7	122.7	26.3	-83.95	-650.8	940.4	5,257.1	5,110.7	146.40	35.908	
10,925.2	6,640.2	6,705.2	6,533.3	123.4	26.3	-83.93	-650.8	940.4	5,281.8	5,134.7	147.09	35.908	
11,000.0	6,640.1	6,703.8	6,531.9	125.5	26.3	-83.85	-650.8	940.4	5,355.3	5,206.2	149.15	35.907	
11,023.6	6,640.1	6,703.3	6,531.4	126.1	26.3	-83.82	-650.7	940.4	5,378.5	5,228.7	149.79	35.907	
11,100.0	6,640.0	6,701.9	6,530.0	128.3	26.3	-83.74	-650.7	940.4	5,453.6	5,301.7	151.89	35.906	
11,122.0	6,639.9	6,701.5	6,529.5	128.9	26.3	-83.71	-650.7	940.4	5,475.3	5,322.8	152.49	35.906	
11,200.0	6,639.8	6,700.0	6,528.0	131.1	26.3	-83.63	-650.6	940.4	5,552.0	5,397.3	154.63	35.906	
11,220.4	6,639.8	6,699.6	6,527.6	131.6	26.3	-83.60	-650.6	940.4	5,572.1	5,416.9	155.19	35.906	
11,300.0	6,639.7	6,698.0	6,526.1	133.9	26.3	-83.52	-650.6	940.3	5,650.4	5,493.0	157.36	35.907	
11,318.9	6,639.7	6,697.7	6,525.7	134.4	26.3	-83.50	-650.6	940.3	5,668.9	5,511.1	157.88	35.907	
11,400.0	6,639.6	6,696.0	6,524.1	136.7	26.3	-83.40	-650.5	940.3	5,748.8	5,588.7	160.10	35.908	
11,417.3	6,639.6	6,695.7	6,523.8	137.1	26.3	-83.38	-650.5	940.3	5,765.9	5,605.3	160.57	35.908	
11,500.0	6,639.5	6,694.1	6,522.1	139.4	26.3	-83.29	-650.4	940.3	5,847.3	5,684.5	162.83	35.910	
11,515.7	6,639.5	6,693.7	6,521.8	139.9	26.3	-83.27	-650.4	940.3	5,862.8	5,699.6	163.26	35.910	
11,600.0	6,639.3	6,692.0	6,520.1	142.2	26.3	-83.17	-650.4	940.3	5,945.9	5,780.3	165.57	35.912	
11,614.1	6,639.3	6,691.7	6,519.8	142.6	26.3	-83.16	-650.4	940.2	5,959.8	5,793.9	165.95	35.913	
11,700.0	6,639.2	6,690.0	6,518.0	145.0	26.3	-83.06	-650.3	940.2	6,044.5	5,876.2	168.30	35.915	
11,712.6	6,639.2	6,689.7	6,517.8	145.4	26.3	-83.04	-650.3	940.2	6,056.9	5,888.3	168.64	35.916	
11,800.0	6,639.1	6,687.9	6,516.0	147.8	26.3	-82.94	-650.2	940.2	6,143.1	5,972.1	171.03	35.919	
11,811.0	6,639.1	6,687.7	6,515.7	148.1	26.3	-82.92	-650.2	940.2	6,154.0	5,982.7	171.33	35.919	
11,900.0	6,639.0	6,685.8	6,513.9	150.6	26.3	-82.82	-650.2	940.2	6,241.8	6,068.1	173.76	35.923	
11,909.4	6,639.0	6,685.6	6,513.7	150.9	26.3	-82.80	-650.2	940.2	6,251.1	6,077.1	174.01	35.924	
12,000.0	6,638.8	6,683.6	6,511.7	153.4	26.3	-82.69	-650.1	940.1	6,340.6	6,164.1	176.48	35.928	
12,007.8	6,638.8	6,683.5	6,511.5	153.6	26.3	-82.68	-650.1	940.1	6,348.3	6,171.6	176.69	35.928	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,638.7	6,681.5	6,509.5	156.2	26.2	-82.57	-650.0	940.1	6,439.3	6,260.1	179.20	35.933		
12,106.3	6,638.7	6,681.3	6,509.4	156.4	26.2	-82.56	-650.0	940.1	6,445.5	6,266.2	179.37	35.934		
12,200.0	6,638.6	6,679.2	6,507.3	159.0	26.2	-82.44	-650.0	940.1	6,538.1	6,356.2	181.92	35.939		
12,204.7	6,638.6	6,679.1	6,507.2	159.1	26.2	-82.44	-650.0	940.1	6,542.8	6,360.7	182.05	35.939		
12,300.0	6,638.5	6,677.0	6,505.1	161.8	26.2	-82.32	-649.9	940.0	6,637.0	6,452.4	184.64	35.945		
12,303.1	6,638.5	6,676.9	6,505.0	161.9	26.2	-82.31	-649.9	940.0	6,640.1	6,455.4	184.73	35.946		
12,400.0	6,638.3	6,674.7	6,502.8	164.6	26.2	-82.19	-649.8	940.0	6,735.9	6,548.5	187.36	35.952		
12,401.5	6,638.3	6,674.7	6,502.8	164.6	26.2	-82.18	-649.8	940.0	6,737.4	6,550.0	187.40	35.952		
12,500.0	6,638.2	6,672.4	6,500.5	167.4	26.2	-82.05	-649.7	940.0	6,834.8	6,644.7	190.07	35.960		
12,598.4	6,638.1	6,670.1	6,498.2	170.2	26.2	-81.92	-649.7	939.9	6,932.1	6,739.4	192.73	35.968		
12,600.0	6,638.1	6,670.1	6,498.2	170.2	26.2	-81.92	-649.7	939.9	6,933.7	6,740.9	192.78	35.968		
12,696.8	6,638.0	6,668.1	6,496.2	172.9	26.2	-81.81	-649.6	939.9	7,029.5	6,834.1	195.40	35.974		
12,700.0	6,638.0	6,668.1	6,496.2	173.0	26.2	-81.81	-649.6	939.9	7,032.7	6,837.2	195.49	35.975		
12,795.2	6,637.8	6,666.4	6,494.5	175.7	26.2	-81.71	-649.6	939.9	7,127.0	6,928.9	198.08	35.980		
12,800.0	6,637.8	6,666.3	6,494.4	175.8	26.2	-81.70	-649.6	939.9	7,131.7	6,933.5	198.21	35.980		
12,893.7	6,637.7	6,664.6	6,492.7	178.4	26.2	-81.61	-649.5	939.9	7,224.4	7,023.7	200.76	35.986		
12,900.0	6,637.7	6,664.5	6,492.6	178.6	26.2	-81.60	-649.5	939.9	7,230.7	7,029.8	200.93	35.986		
12,992.1	6,637.6	6,662.9	6,491.0	181.2	26.2	-81.51	-649.4	939.8	7,321.9	7,118.5	203.43	35.992		
13,000.0	6,637.6	6,662.7	6,490.8	181.4	26.2	-81.50	-649.4	939.8	7,329.8	7,126.1	203.65	35.992		
13,090.5	6,637.5	6,661.1	6,489.2	183.9	26.2	-81.41	-649.4	939.8	7,419.4	7,213.3	206.11	35.998		
13,100.0	6,637.5	6,661.0	6,489.1	184.2	26.2	-81.40	-649.4	939.8	7,428.8	7,222.5	206.36	35.999		
13,188.9	6,637.4	6,659.4	6,487.5	186.7	26.2	-81.31	-649.3	939.8	7,517.0	7,308.2	208.78	36.005		
13,200.0	6,637.3	6,659.2	6,487.3	187.0	26.2	-81.30	-649.3	939.8	7,527.9	7,318.9	209.08	36.005		
13,287.4	6,637.2	6,657.6	6,485.7	189.4	26.2	-81.21	-649.3	939.8	7,614.5	7,403.1	211.45	36.011		
13,300.0	6,637.2	6,657.4	6,485.5	189.8	26.2	-81.20	-649.3	939.8	7,627.1	7,415.3	211.79	36.012		
13,385.8	6,637.1	6,655.8	6,483.9	192.2	26.2	-81.11	-649.2	939.7	7,712.1	7,498.0	214.12	36.019		
13,400.0	6,637.1	6,655.6	6,483.7	192.6	26.2	-81.09	-649.2	939.7	7,726.2	7,511.7	214.50	36.020		
13,484.2	6,637.0	6,654.0	6,482.1	195.0	26.2	-81.01	-649.2	939.7	7,809.7	7,592.9	216.78	36.026		
13,500.0	6,637.0	6,653.7	6,481.8	195.4	26.2	-80.99	-649.2	939.7	7,825.4	7,608.2	217.21	36.027		
13,582.6	6,636.9	6,652.2	6,480.3	197.7	26.2	-80.91	-649.1	939.7	7,907.3	7,687.9	219.44	36.034		
13,600.0	6,636.8	6,651.9	6,480.0	198.2	26.2	-80.89	-649.1	939.7	7,924.6	7,704.6	219.91	36.035		
13,681.1	6,636.7	6,650.4	6,478.5	200.5	26.2	-80.80	-649.1	939.6	8,005.0	7,782.9	222.11	36.041		
13,700.0	6,636.7	6,650.1	6,478.2	201.0	26.2	-80.78	-649.0	939.6	8,023.8	7,801.1	222.62	36.043		
13,779.5	6,636.6	6,648.6	6,476.7	203.2	26.2	-80.70	-649.0	939.6	8,102.6	7,877.9	224.76	36.050		
13,800.0	6,636.6	6,648.3	6,476.4	203.8	26.2	-80.68	-649.0	939.6	8,123.0	7,897.7	225.32	36.051		
13,877.9	6,636.5	6,646.8	6,474.9	206.0	26.2	-80.60	-648.9	939.6	8,200.3	7,972.9	227.42	36.058		
13,900.0	6,636.5	6,646.4	6,474.5	206.6	26.2	-80.58	-648.9	939.6	8,222.2	7,994.2	228.02	36.060		
13,976.3	6,636.4	6,645.0	6,473.1	208.8	26.2	-80.50	-648.9	939.6	8,298.0	8,067.9	230.08	36.066		
14,000.0	6,636.3	6,644.6	6,472.7	209.4	26.2	-80.47	-648.9	939.6	8,321.5	8,090.8	230.71	36.068		
14,074.8	6,636.2	6,643.2	6,471.3	211.5	26.2	-80.39	-648.8	939.5	8,395.7	8,163.0	232.73	36.075		
14,100.0	6,636.2	6,642.7	6,470.8	212.2	26.2	-80.37	-648.8	939.5	8,420.8	8,187.4	233.41	36.077		
14,173.2	6,636.1	6,641.3	6,469.4	214.3	26.2	-80.29	-648.8	939.5	8,493.5	8,258.1	235.38	36.084		
14,200.0	6,636.1	6,640.8	6,468.9	215.0	26.2	-80.26	-648.8	939.5	8,520.1	8,284.0	236.10	36.087		
14,271.6	6,636.0	6,639.5	6,467.6	217.0	26.2	-80.18	-648.7	939.5	8,591.2	8,353.2	238.03	36.093		
14,300.0	6,636.0	6,639.0	6,467.1	217.8	26.2	-80.15	-648.7	939.5	8,619.4	8,380.6	238.79	36.096		
14,370.0	6,635.9	6,637.6	6,465.7	219.8	26.2	-80.08	-648.7	939.5	8,689.0	8,448.3	240.67	36.103		
14,400.0	6,635.8	6,637.1	6,465.2	220.6	26.2	-80.05	-648.6	939.4	8,718.7	8,477.2	241.48	36.106		
14,468.5	6,635.7	6,635.8	6,463.9	222.6	26.2	-79.97	-648.6	939.4	8,786.7	8,543.4	243.31	36.113		
14,500.0	6,635.7	6,635.2	6,463.3	223.4	26.2	-79.94	-648.6	939.4	8,818.1	8,573.9	244.16	36.116		
14,566.9	6,635.6	6,633.9	6,462.0	225.3	26.2	-79.87	-648.5	939.4	8,884.5	8,638.6	245.96	36.123		
14,600.0	6,635.6	6,633.3	6,461.4	226.2	26.2	-79.83	-648.5	939.4	8,917.4	8,670.6	246.84	36.126		
14,665.3	6,635.5	6,632.0	6,460.1	228.1	26.2	-79.76	-648.5	939.4	8,982.3	8,733.7	248.59	36.133		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.5	6,631.4	6,459.5	229.0	26.2	-79.73	-648.5	939.4	9,016.8	8,767.3	249.52	36.136	
14,763.7	6,635.4	6,630.2	6,458.3	230.8	26.2	-79.66	-648.4	939.3	9,080.1	8,828.9	251.23	36.143	
14,800.0	6,635.3	6,629.5	6,457.6	231.8	26.2	-79.62	-648.4	939.3	9,116.2	8,864.0	252.20	36.147	
14,862.2	6,635.2	6,628.3	6,456.4	233.6	26.2	-79.55	-648.4	939.3	9,178.0	8,924.1	253.86	36.154	
14,900.0	6,635.2	6,627.5	6,455.7	234.7	26.2	-79.51	-648.4	939.3	9,215.6	8,960.7	254.87	36.158	
14,960.6	6,635.1	6,626.4	6,454.5	236.4	26.2	-79.44	-648.3	939.3	9,275.8	9,019.3	256.49	36.164	
14,995.1	6,635.0	6,625.6	6,453.7	237.3	26.2	-79.41	-648.3	939.3	9,310.1	9,052.7	257.41	36.168	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	109.85	-1,397.2	3,871.1	4,115.5				
98.4	98.4	90.4	90.4	0.1	0.1	109.85	-1,397.2	3,871.1	4,115.5	4,115.3	0.18	N/A	
100.0	100.0	92.0	92.0	0.1	0.1	109.85	-1,397.2	3,871.1	4,115.5	4,115.3	0.18	N/A	
196.8	196.8	188.8	188.8	0.3	0.2	109.85	-1,397.2	3,871.1	4,115.5	4,115.0	0.49	8,397.125	
200.0	200.0	192.0	192.0	0.3	0.2	109.85	-1,397.2	3,871.1	4,115.5	4,115.0	0.50	8,229.330	
295.3	295.3	287.3	287.3	0.5	0.3	109.85	-1,397.2	3,871.1	4,115.5	4,114.7	0.80	5,129.257	
300.0	300.0	292.0	292.0	0.5	0.3	109.85	-1,397.2	3,871.1	4,115.5	4,114.7	0.82	5,035.188	
393.7	393.7	385.7	385.7	0.8	0.4	109.85	-1,397.2	3,871.1	4,115.5	4,114.4	1.11	3,692.331	
400.0	400.0	392.0	392.0	0.8	0.4	109.85	-1,397.2	3,871.1	4,115.5	4,114.4	1.13	3,627.288	
492.1	492.1	484.1	484.1	1.0	0.4	109.85	-1,397.2	3,871.1	4,115.5	4,114.1	1.43	2,884.311	
500.0	500.0	492.0	492.0	1.0	0.5	109.85	-1,397.2	3,871.1	4,115.5	4,114.0	1.45	2,834.678	
590.5	590.5	582.5	582.5	1.2	0.5	109.85	-1,397.2	3,871.1	4,115.5	4,113.8	1.74	2,366.444	
600.0	600.0	592.0	592.0	1.2	0.5	109.85	-1,397.2	3,871.1	4,115.5	4,113.7	1.77	2,326.341	
689.0	689.0	700.6	700.6	1.4	0.7	109.84	-1,397.0	3,871.0	4,115.4	4,113.3	2.13	1,932.535	
700.0	700.0	720.0	720.0	1.4	0.8	109.84	-1,396.8	3,871.0	4,115.4	4,113.2	2.20	1,872.572	
787.4	787.4	802.1	802.1	1.6	0.9	109.83	-1,396.0	3,870.6	4,114.7	4,112.2	2.56	1,606.419	
800.0	800.0	812.6	812.6	1.7	0.9	109.83	-1,396.1	3,870.6	4,114.7	4,112.1	2.61	1,576.206	
885.8	885.8	899.0	899.0	1.9	1.1	109.84	-1,396.6	3,869.9	4,114.3	4,111.3	2.97	1,386.304	
900.0	900.0	914.2	914.2	1.9	1.1	109.85	-1,396.7	3,869.8	4,114.2	4,111.2	3.03	1,358.611	
933.0	933.0	925.0	925.0	2.0	1.2	109.85	-1,396.8	3,869.7	4,114.1	4,111.0	3.12	1,317.491 CC	
984.2	984.2	925.0	925.0	2.1	1.2	109.85	-1,396.8	3,869.7	4,114.4	4,111.2	3.24	1,270.709	
993.3	993.3	957.0	956.9	2.1	1.2	109.85	-1,397.2	3,869.6	4,114.2	4,110.9	3.32	1,238.707 ES	
1,000.0	1,000.0	959.5	959.5	2.1	1.2	109.85	-1,397.2	3,869.6	4,114.3	4,110.9	3.34	1,231.212	
1,082.7	1,082.7	1,018.0	1,018.0	2.3	1.3	109.87	-1,398.7	3,870.3	4,115.6	4,112.0	3.64	1,129.716	
1,100.0	1,100.0	1,018.0	1,018.0	2.3	1.3	109.87	-1,398.7	3,870.3	4,115.9	4,112.2	3.68	1,117.843	
1,181.1	1,181.1	1,018.0	1,018.0	2.5	1.3	109.87	-1,398.7	3,870.3	4,118.2	4,114.3	3.86	1,065.697	
1,200.0	1,200.0	1,046.8	1,046.7	2.6	1.4	109.88	-1,399.7	3,870.9	4,118.8	4,114.8	3.97	1,038.558	
1,279.5	1,279.5	1,111.0	1,110.9	2.7	1.5	109.91	-1,402.4	3,872.7	4,121.9	4,117.7	4.28	963.858	
1,300.0	1,300.0	1,111.0	1,110.9	2.8	1.5	109.91	-1,402.4	3,872.7	4,122.8	4,118.5	4.32	953.792	
1,377.9	1,377.9	1,154.0	1,153.7	3.0	1.6	68.69	-1,404.7	3,874.1	4,126.2	4,121.6	4.59	899.500	
1,400.0	1,400.0	1,167.2	1,166.9	3.0	1.7	68.68	-1,405.5	3,874.6	4,127.1	4,122.5	4.66	884.887	
1,476.4	1,476.3	1,214.1	1,213.7	3.2	1.8	68.69	-1,408.7	3,876.3	4,130.2	4,125.3	4.93	837.810	
1,500.0	1,499.8	1,236.7	1,236.2	3.2	1.8	68.71	-1,410.4	3,877.2	4,131.1	4,126.1	5.03	821.017	
1,574.8	1,574.4	1,311.2	1,310.4	3.4	2.0	68.81	-1,416.6	3,879.8	4,133.6	4,128.2	5.37	770.464	
1,600.0	1,599.5	1,377.5	1,376.4	3.5	2.1	68.97	-1,423.6	3,881.3	4,134.1	4,128.5	5.58	740.797	
1,673.2	1,672.2	1,439.0	1,437.4	3.6	2.3	69.14	-1,431.3	3,881.7	4,134.8	4,128.9	5.91	700.208	
1,700.0	1,698.7	1,454.8	1,453.0	3.7	2.4	69.19	-1,433.4	3,881.9	4,135.0	4,129.0	6.01	688.191	
1,771.6	1,769.5	1,499.5	1,497.3	3.9	2.5	69.34	-1,439.3	3,882.6	4,135.6	4,129.2	6.30	655.991	
1,800.0	1,797.5	1,531.3	1,528.8	4.0	2.6	69.46	-1,443.6	3,883.0	4,135.7	4,129.2	6.46	639.926	
1,870.1	1,866.3	1,621.2	1,617.8	4.2	2.8	69.84	-1,456.5	3,883.9	4,135.5	4,128.5	6.91	598.559	
1,899.9	1,895.6	1,673.9	1,669.9	4.3	3.0	70.09	-1,464.6	3,883.9	4,135.0	4,127.9	7.15	578.499	
1,968.5	1,962.6	1,684.0	1,679.8	4.5	3.0	70.14	-1,466.2	3,883.8	4,134.2	4,126.8	7.39	559.440	
2,000.0	1,993.4	1,716.5	1,711.9	4.6	3.1	70.29	-1,471.4	3,883.7	4,133.8	4,126.2	7.59	544.871	
2,012.9	2,006.1	1,721.0	1,716.3	4.6	3.1	70.31	-1,472.1	3,883.8	4,133.8	4,126.1	7.64	540.900	
2,066.9	2,058.9	1,763.0	1,757.7	4.8	3.3	70.51	-1,479.2	3,884.4	4,134.1	4,126.1	7.95	520.204	
2,100.0	2,091.3	1,763.0	1,757.7	4.9	3.3	70.51	-1,479.2	3,884.4	4,134.3	4,126.2	8.06	513.140	
2,165.3	2,155.2	1,763.0	1,757.7	5.2	3.3	70.51	-1,479.2	3,884.4	4,135.4	4,127.1	8.28	499.366	
2,200.0	2,189.1	1,797.6	1,791.7	5.3	3.4	70.68	-1,485.3	3,885.2	4,136.2	4,127.7	8.52	485.736	
2,263.8	2,251.5	1,831.1	1,824.6	5.5	3.5	70.84	-1,491.6	3,886.1	4,138.1	4,129.2	8.85	467.402	
2,300.0	2,286.9	1,858.0	1,851.0	5.7	3.6	70.98	-1,497.0	3,886.8	4,139.4	4,130.3	9.07	456.279	
2,362.2	2,347.7	1,905.2	1,897.2	5.9	3.8	71.22	-1,506.8	3,888.0	4,141.9	4,132.4	9.47	437.586	
2,400.0	2,384.7	1,943.4	1,934.5	6.0	3.9	71.42	-1,514.7	3,889.0	4,143.5	4,133.7	9.74	425.511	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
2,460.6	2,444.0	2,047.0	2,035.6	6.3	4.4	71.97	-1,537.2	3,890.4	4,145.7	4,135.4	10.35	400.662	
2,500.0	2,482.5	2,074.6	2,062.5	6.4	4.5	72.12	-1,543.7	3,890.4	4,147.1	4,136.5	10.61	391.039	
2,559.0	2,540.3	2,114.0	2,100.7	6.7	4.6	72.34	-1,552.9	3,890.5	4,149.4	4,138.4	10.99	377.634	
2,600.0	2,580.3	2,142.0	2,128.0	6.8	4.8	72.50	-1,559.5	3,890.7	4,151.2	4,139.9	11.26	368.767	
2,657.5	2,636.5	2,270.4	2,253.1	7.1	5.3	73.20	-1,588.5	3,890.4	4,152.9	4,140.9	11.97	347.071	
2,700.0	2,678.1	2,297.8	2,279.7	7.2	5.4	73.36	-1,594.9	3,890.1	4,154.3	4,142.1	12.24	339.386	
2,755.9	2,732.8	2,332.0	2,312.9	7.5	5.5	73.55	-1,603.2	3,889.7	4,156.4	4,143.8	12.60	329.948	
2,800.0	2,776.0	2,355.8	2,336.0	7.7	5.7	73.69	-1,609.1	3,889.5	4,158.4	4,145.5	12.88	322.815	
2,854.3	2,829.1	2,383.5	2,362.6	7.9	5.8	73.85	-1,616.3	3,889.2	4,161.1	4,147.8	13.23	314.618	
2,900.0	2,873.8	2,427.0	2,404.6	8.1	6.0	74.11	-1,628.0	3,888.9	4,163.7	4,150.1	13.61	305.980	
2,952.7	2,925.4	2,441.0	2,418.0	8.3	6.1	74.20	-1,631.8	3,888.8	4,167.0	4,153.1	13.88	300.135	
3,000.0	2,971.6	2,496.1	2,471.1	8.5	6.3	74.53	-1,646.9	3,888.3	4,170.0	4,155.7	14.32	291.226	
3,051.2	3,021.6	2,545.3	2,518.4	8.7	6.6	74.83	-1,660.2	3,887.9	4,173.3	4,158.6	14.74	283.207	
3,100.0	3,069.4	2,584.7	2,556.5	8.9	6.7	75.06	-1,670.6	3,887.7	4,176.6	4,161.5	15.09	276.697	
3,149.6	3,117.9	2,626.1	2,596.4	9.1	6.9	75.30	-1,681.2	3,887.7	4,180.1	4,164.6	15.46	270.297	
3,200.0	3,167.2	2,671.9	2,640.7	9.3	7.1	75.56	-1,692.9	3,887.8	4,183.8	4,167.9	15.86	263.875	
3,248.0	3,214.2	2,711.0	2,678.5	9.5	7.3	75.78	-1,702.8	3,887.9	4,187.4	4,171.2	16.21	258.326	
3,300.0	3,265.0	2,754.8	2,720.9	9.8	7.5	76.03	-1,713.8	3,888.1	4,191.4	4,174.8	16.60	252.479	
3,346.4	3,310.5	2,790.6	2,755.6	10.0	7.6	76.23	-1,722.7	3,888.4	4,195.2	4,178.2	16.94	247.675	
3,400.0	3,362.9	2,836.4	2,800.0	10.2	7.8	76.49	-1,734.1	3,888.8	4,199.7	4,182.4	17.35	242.009	
3,444.9	3,406.7	2,876.7	2,838.9	10.4	8.0	76.72	-1,744.4	3,889.1	4,203.6	4,185.9	17.71	237.313	
3,473.0	3,434.2	2,901.9	2,863.2	10.5	8.2	76.86	-1,751.0	3,889.1	4,206.1	4,188.1	17.94	234.471	
3,500.0	3,460.7	2,933.3	2,893.5	10.6	8.3	77.09	-1,759.3	3,889.1	4,208.5	4,190.3	18.18	231.530	
3,543.3	3,503.2	2,983.9	2,942.3	10.7	8.6	77.45	-1,772.6	3,889.0	4,212.5	4,193.9	18.53	227.299	
3,600.0	3,559.0	3,043.8	3,000.3	10.9	8.8	77.87	-1,788.0	3,889.0	4,217.9	4,198.9	18.96	222.485	
3,641.7	3,600.2	3,087.5	3,042.6	11.0	9.0	78.17	-1,798.8	3,889.1	4,222.0	4,202.7	19.25	219.293	
3,700.0	3,657.9	3,138.7	3,092.2	11.2	9.3	78.52	-1,811.1	3,889.4	4,228.1	4,208.4	19.62	215.485	
3,740.1	3,697.8	3,173.7	3,126.2	11.3	9.4	78.76	-1,819.6	3,889.7	4,232.4	4,212.6	19.86	213.118	
3,800.0	3,757.3	3,263.1	3,213.0	11.4	9.8	79.27	-1,841.2	3,890.1	4,239.1	4,218.7	20.37	208.144	
3,838.6	3,795.7	3,311.7	3,260.2	11.5	10.1	79.54	-1,852.7	3,890.1	4,243.3	4,222.7	20.64	205.621	
3,900.0	3,857.0	3,376.0	3,322.9	11.7	10.3	79.90	-1,867.1	3,890.5	4,250.2	4,229.1	21.01	202.282	
3,937.0	3,893.9	3,402.5	3,348.7	11.7	10.4	80.07	-1,872.8	3,890.8	4,254.4	4,233.3	21.17	200.943	
4,000.0	3,956.9	3,443.8	3,389.1	11.8	10.6	80.34	-1,881.8	3,891.4	4,262.2	4,240.7	21.43	198.869	
4,035.4	3,992.3	3,470.0	3,414.6	11.9	10.7	80.50	-1,887.5	3,891.8	4,266.8	4,245.2	21.58	197.742	
4,072.9	4,029.8	3,495.4	3,439.4	11.9	10.9	121.86	-1,893.2	3,892.3	4,271.8	4,254.0	17.81	239.859	
4,100.0	4,056.9	3,516.2	3,459.6	12.0	10.9	121.91	-1,898.0	3,892.6	4,275.5	4,257.6	17.93	238.418	
4,133.8	4,090.7	3,542.2	3,484.8	12.0	11.1	121.98	-1,904.1	3,893.0	4,280.2	4,262.1	18.09	236.565	
4,200.0	4,156.9	3,704.7	3,642.4	12.1	11.8	122.44	-1,943.9	3,891.9	4,288.5	4,269.7	18.79	228.244	
4,232.3	4,189.2	3,734.2	3,671.0	12.2	12.0	122.53	-1,951.2	3,891.2	4,292.3	4,273.4	18.96	226.437	
4,300.0	4,256.9	3,787.7	3,722.7	12.3	12.2	122.69	-1,964.7	3,890.1	4,300.5	4,281.2	19.28	223.067	
4,330.7	4,287.6	3,810.0	3,744.4	12.4	12.3	122.75	-1,970.3	3,889.7	4,304.3	4,284.9	19.42	221.645	
4,400.0	4,356.9	3,864.1	3,796.7	12.5	12.6	122.91	-1,983.9	3,888.9	4,313.0	4,293.3	19.75	218.387	
4,429.1	4,386.0	3,892.7	3,824.3	12.5	12.7	122.99	-1,991.0	3,888.5	4,316.8	4,296.9	19.91	216.835	
4,500.0	4,456.9	3,991.6	3,920.3	12.6	13.2	123.27	-2,014.9	3,887.6	4,325.8	4,305.4	20.39	212.151	
4,527.5	4,484.4	4,053.6	3,980.6	12.7	13.5	123.44	-2,029.4	3,886.6	4,329.1	4,308.4	20.65	209.601	
4,600.0	4,556.9	4,158.4	4,082.8	12.8	13.9	123.71	-2,052.7	3,884.8	4,337.1	4,316.0	21.14	205.138	
4,626.0	4,582.9	4,193.8	4,117.4	12.9	14.1	123.79	-2,060.2	3,884.3	4,339.9	4,318.6	21.31	203.670	
4,700.0	4,656.9	4,282.2	4,204.0	13.0	14.4	123.99	-2,077.7	3,883.4	4,347.5	4,325.8	21.74	199.993	
4,724.4	4,681.3	4,309.0	4,230.3	13.0	14.5	124.05	-2,082.8	3,883.2	4,350.0	4,328.1	21.87	198.880	
4,800.0	4,756.9	4,393.4	4,313.3	13.1	14.8	124.22	-2,098.2	3,882.9	4,357.6	4,335.3	22.29	195.501	
4,822.8	4,779.7	4,419.1	4,338.5	13.2	14.9	124.27	-2,102.7	3,882.9	4,359.9	4,337.5	22.42	194.500	
4,900.0	4,856.9	4,501.3	4,419.5	13.3	15.2	124.43	-2,116.9	3,883.0	4,367.5	4,344.7	22.83	191.333	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
4,921.2	4,878.1	4,534.7	4,452.5	13.4	15.4	124.48	-2,122.4	3,883.1	4,369.6	4,346.6	22.97	190.225		
5,000.0	4,956.9	4,813.1	4,728.5	13.5	16.2	124.86	-2,158.1	3,884.1	4,376.3	4,352.4	23.88	183.241		
5,019.7	4,976.6	4,836.4	4,751.8	13.5	16.3	124.89	-2,160.4	3,883.9	4,377.3	4,353.3	23.98	182.548		
5,100.0	5,056.9	4,930.4	4,845.3	13.7	16.5	124.99	-2,169.0	3,883.3	4,381.1	4,356.8	24.37	179.805		
5,118.1	5,075.0	4,951.1	4,865.9	13.7	16.6	125.01	-2,170.8	3,883.3	4,382.0	4,357.5	24.45	179.210		
5,200.0	5,156.9	5,089.5	5,004.0	13.8	16.9	125.12	-2,181.4	3,882.7	4,385.3	4,360.4	24.93	175.906		
5,216.5	5,173.4	5,108.9	5,023.3	13.9	16.9	125.14	-2,182.6	3,882.6	4,385.9	4,360.9	25.01	175.398		
5,300.0	5,256.9	5,211.6	5,125.8	14.0	17.2	125.21	-2,188.7	3,882.2	4,388.4	4,363.0	25.39	172.817		
5,314.9	5,271.8	5,232.3	5,146.5	14.1	17.2	125.22	-2,189.7	3,882.1	4,388.8	4,363.4	25.47	172.335		
5,400.0	5,356.9	5,334.4	5,248.5	14.2	17.4	125.27	-2,194.2	3,881.9	4,390.9	4,365.1	25.85	169.872		
5,413.4	5,370.3	5,349.1	5,263.2	14.2	17.4	125.27	-2,194.8	3,882.0	4,391.2	4,365.3	25.91	169.511		
5,500.0	5,456.9	5,521.2	5,435.3	14.4	17.7	125.32	-2,198.5	3,881.1	4,391.5	4,365.2	26.39	166.419		
5,511.8	5,468.7	5,529.7	5,443.8	14.4	17.7	125.32	-2,198.6	3,881.1	4,391.6	4,365.2	26.43	166.174		
5,600.0	5,556.9	5,611.0	5,525.0	14.6	17.8	125.33	-2,199.8	3,880.7	4,392.1	4,365.3	26.75	164.181		
5,610.2	5,567.1	5,622.2	5,536.2	14.6	17.8	125.34	-2,200.0	3,880.7	4,392.1	4,365.3	26.79	163.934		
5,700.0	5,656.9	5,722.1	5,636.1	14.7	18.0	125.35	-2,200.8	3,880.6	4,392.5	4,365.3	27.15	161.776		
5,708.6	5,665.5	5,731.8	5,645.8	14.8	18.0	125.35	-2,200.8	3,880.6	4,392.5	4,365.3	27.19	161.570		
5,800.0	5,756.9	5,840.4	5,754.5	14.9	18.1	125.35	-2,201.4	3,880.4	4,392.6	4,365.0	27.56	159.380		
5,807.1	5,764.0	5,844.0	5,758.0	14.9	18.2	125.35	-2,201.4	3,880.3	4,392.6	4,365.0	27.58	159.258		
5,809.1	5,766.0	5,844.0	5,758.0	15.0	18.2	125.35	-2,201.4	3,880.3	4,392.6	4,365.0	27.59	159.232		
5,900.0	5,856.9	5,888.8	5,802.8	15.1	18.2	125.35	-2,201.5	3,880.6	4,393.0	4,365.2	27.86	157.700		
5,905.5	5,862.4	5,891.3	5,805.4	15.1	18.2	125.35	-2,201.5	3,880.6	4,393.1	4,365.2	27.87	157.611		
5,971.9	5,928.8	5,938.0	5,852.0	15.3	18.3	125.34	-2,201.1	3,881.8	4,394.2	4,366.1	28.09	156.410		
6,000.0	5,956.9	5,938.0	5,852.0	15.3	18.3	-144.61	-2,201.1	3,881.8	4,395.1	4,363.4	31.79	138.239		
6,003.9	5,960.8	5,938.0	5,852.0	15.3	18.3	-144.60	-2,201.1	3,881.8	4,395.4	4,363.6	31.79	138.263		
6,050.0	6,006.7	5,938.0	5,852.0	15.4	18.3	-144.41	-2,201.1	3,881.8	4,399.5	4,367.9	31.69	138.814		
6,100.0	6,056.2	5,938.0	5,852.0	15.4	18.3	-144.04	-2,201.1	3,881.8	4,407.3	4,375.9	31.47	140.048		
6,102.3	6,058.5	5,938.0	5,852.0	15.4	18.3	-144.02	-2,201.1	3,881.8	4,407.8	4,376.3	31.46	140.124		
6,150.0	6,105.1	5,938.0	5,852.0	15.4	18.3	-143.50	-2,201.1	3,881.8	4,418.4	4,387.3	31.13	141.939		
6,200.0	6,153.0	5,938.0	5,852.0	15.5	18.3	-142.78	-2,201.1	3,881.8	4,432.8	4,402.1	30.68	144.482		
6,200.8	6,153.8	5,938.0	5,852.0	15.5	18.3	-142.77	-2,201.1	3,881.8	4,433.0	4,402.3	30.67	144.527		
6,250.0	6,199.9	5,938.0	5,852.0	15.5	18.3	-141.87	-2,201.1	3,881.8	4,450.2	4,420.1	30.14	147.664		
6,299.2	6,244.8	5,938.0	5,852.0	15.5	18.3	-140.77	-2,201.1	3,881.8	4,470.4	4,440.8	29.53	151.386		
6,300.0	6,245.5	5,938.0	5,852.0	15.5	18.3	-140.75	-2,201.1	3,881.8	4,470.7	4,441.2	29.52	151.450		
6,350.0	6,289.6	5,984.3	5,898.1	15.5	18.3	-139.65	-2,200.0	3,885.7	4,492.4	4,463.6	28.88	155.548		
6,397.6	6,329.9	5,989.5	5,903.3	15.4	18.3	-138.19	-2,199.8	3,886.4	4,516.8	4,488.6	28.23	160.019		
6,400.0	6,331.8	5,989.7	5,903.5	15.4	18.3	-138.12	-2,199.8	3,886.4	4,518.1	4,489.9	28.19	160.249		
6,450.0	6,372.2	6,033.0	5,946.0	15.4	18.4	-136.63	-2,197.5	3,894.3	4,547.5	4,519.9	27.54	165.139		
6,496.0	6,407.4	6,033.0	5,946.0	15.4	18.4	-134.67	-2,197.5	3,894.3	4,575.3	4,548.3	26.97	169.617		
6,500.0	6,410.3	6,033.0	5,946.0	15.4	18.4	-134.49	-2,197.5	3,894.3	4,577.8	4,550.8	26.93	169.991		
6,550.0	6,446.1	6,033.0	5,946.0	15.4	18.4	-131.99	-2,197.5	3,894.3	4,610.3	4,583.9	26.45	174.318		
6,594.5	6,475.9	6,033.0	5,946.0	15.4	18.4	-129.42	-2,197.5	3,894.3	4,641.0	4,614.8	26.18	177.272		
6,600.0	6,479.4	6,033.0	5,946.0	15.4	18.4	-129.08	-2,197.5	3,894.3	4,644.9	4,618.7	26.16	177.572		
6,650.0	6,510.0	6,033.0	5,946.0	15.5	18.4	-125.71	-2,197.5	3,894.3	4,681.3	4,655.2	26.13	179.183		
6,692.9	6,534.0	6,033.0	5,946.0	15.7	18.4	-122.41	-2,197.5	3,894.3	4,713.8	4,687.4	26.35	178.904		
6,700.0	6,537.8	6,033.0	5,946.0	15.7	18.4	-121.82	-2,197.5	3,894.3	4,719.3	4,692.9	26.41	178.725		
6,750.0	6,562.6	6,033.0	5,946.0	16.2	18.4	-117.38	-2,197.5	3,894.3	4,758.6	4,731.6	27.02	176.104		
6,791.3	6,580.8	6,033.0	5,946.0	16.6	18.4	-113.27	-2,197.5	3,894.3	4,792.0	4,764.3	27.78	172.479		
6,800.0	6,584.3	6,033.0	5,946.0	16.7	18.4	-112.36	-2,197.5	3,894.3	4,799.2	4,771.2	27.95	171.686		
6,850.0	6,602.9	6,033.0	5,946.0	17.3	18.4	-106.78	-2,197.5	3,894.3	4,840.6	4,811.5	29.12	166.228		
6,889.7	6,615.2	6,033.0	5,946.0	17.9	18.4	-101.97	-2,197.5	3,894.3	4,874.1	4,843.9	30.14	161.737		
6,900.0	6,618.1	6,033.0	5,946.0	18.0	18.4	-100.69	-2,197.5	3,894.3	4,882.8	4,852.4	30.39	160.669		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
6,950.0	6,630.0	6,033.0	5,946.0	18.8	18.4	-94.21	-2,197.5	3,894.3	4,925.4	4,893.8	31.60	155.874		
6,988.2	6,636.8	6,033.0	5,946.0	19.5	18.4	-89.12	-2,197.5	3,894.3	4,958.1	4,925.8	32.39	153.091		
7,000.0	6,638.5	6,033.0	5,946.0	19.7	18.4	-87.53	-2,197.5	3,894.3	4,968.3	4,935.7	32.59	152.453		
7,050.0	6,643.5	6,033.0	5,946.0	20.6	18.4	-80.85	-2,197.5	3,894.3	5,011.3	4,978.0	33.25	150.700		
7,086.6	6,644.9	6,033.0	5,946.0	21.3	18.4	-76.08	-2,197.5	3,894.3	5,042.6	5,009.1	33.51	150.465		
7,097.8	6,645.0	6,033.0	5,946.0	21.5	18.4	-74.65	-2,197.5	3,894.3	5,052.2	5,018.7	33.55	150.579		
7,100.0	6,645.0	6,033.0	5,946.0	21.6	18.4	-74.65	-2,197.5	3,894.3	5,054.1	5,020.5	33.59	150.451		
7,185.0	6,644.9	6,033.0	5,946.0	23.3	18.4	-74.65	-2,197.5	3,894.3	5,126.9	5,091.6	35.26	145.399		
7,200.0	6,644.9	6,033.0	5,946.0	23.6	18.4	-74.65	-2,197.5	3,894.3	5,139.7	5,104.2	35.55	144.559		
7,283.4	6,644.8	6,033.0	5,946.0	25.4	18.4	-74.65	-2,197.5	3,894.3	5,211.6	5,174.3	37.31	139.678		
7,300.0	6,644.7	6,033.0	5,946.0	25.8	18.4	-74.65	-2,197.5	3,894.3	5,225.9	5,188.2	37.66	138.765		
7,381.9	6,644.6	6,033.0	5,946.0	27.7	18.4	-74.65	-2,197.5	3,894.3	5,296.8	5,257.3	39.47	134.185		
7,400.0	6,644.6	6,033.0	5,946.0	28.1	18.4	-74.65	-2,197.5	3,894.3	5,312.5	5,272.6	39.88	133.229		
7,480.3	6,644.5	6,033.0	5,946.0	30.0	18.4	-74.65	-2,197.5	3,894.3	5,382.4	5,340.7	41.72	129.006		
7,500.0	6,644.5	6,033.0	5,946.0	30.5	18.4	-74.65	-2,197.5	3,894.3	5,399.6	5,357.4	42.18	128.028		
7,578.7	6,644.4	6,033.0	5,946.0	32.4	18.4	-74.65	-2,197.5	3,894.3	5,468.5	5,424.4	44.04	124.175		
7,600.0	6,644.4	6,033.0	5,946.0	32.9	18.4	-74.65	-2,197.5	3,894.3	5,487.1	5,442.6	44.54	123.191		
7,677.1	6,644.3	6,033.0	5,946.0	34.8	18.4	-74.65	-2,197.5	3,894.3	5,554.9	5,508.5	46.41	119.698		
7,700.0	6,644.2	6,033.0	5,946.0	35.4	18.4	-74.65	-2,197.5	3,894.3	5,575.1	5,528.1	46.96	118.718		
7,775.6	6,644.1	6,033.0	5,946.0	37.3	18.4	-74.65	-2,197.5	3,894.3	5,641.8	5,593.0	48.82	115.563		
7,800.0	6,644.1	6,033.0	5,946.0	38.0	18.4	-74.65	-2,197.5	3,894.3	5,663.4	5,614.0	49.42	114.595		
7,874.0	6,644.0	6,033.0	5,946.0	39.9	18.4	-74.65	-2,197.5	3,894.3	5,729.1	5,677.8	51.27	111.748		
7,900.0	6,644.0	6,033.0	5,946.0	40.5	18.4	-74.65	-2,197.5	3,894.3	5,752.2	5,700.3	51.92	110.797		
7,972.4	6,643.9	6,033.0	5,946.0	42.4	18.4	-74.65	-2,197.5	3,894.3	5,816.7	5,762.9	53.74	108.230		
8,000.0	6,643.9	6,033.0	5,946.0	43.1	18.4	-74.65	-2,197.5	3,894.3	5,841.3	5,786.8	54.44	107.299		
8,070.8	6,643.8	6,033.0	5,946.0	45.0	18.4	-74.65	-2,197.5	3,894.3	5,904.6	5,848.4	56.24	104.984		
8,100.0	6,643.7	6,033.0	5,946.0	45.8	18.4	-74.65	-2,197.5	3,894.3	5,930.7	5,873.7	56.98	104.075		
8,169.3	6,643.7	6,033.0	5,946.0	47.6	18.4	-74.65	-2,197.5	3,894.3	5,992.9	5,934.1	58.76	101.986		
8,200.0	6,643.6	6,033.0	5,946.0	48.4	18.4	-74.65	-2,197.5	3,894.3	6,020.5	5,960.9	59.55	101.100		
8,267.7	6,643.5	6,033.0	5,946.0	50.2	18.4	-74.65	-2,197.5	3,894.3	6,081.5	6,020.2	61.30	99.212		
8,300.0	6,643.5	6,033.0	5,946.0	51.1	18.4	-74.65	-2,197.5	3,894.3	6,110.6	6,048.5	62.13	98.350		
8,366.1	6,643.4	6,033.0	5,946.0	52.9	18.4	-74.65	-2,197.5	3,894.3	6,170.3	6,106.5	63.85	96.642		
8,400.0	6,643.4	6,033.0	5,946.0	53.8	18.4	-74.65	-2,197.5	3,894.3	6,201.0	6,136.3	64.73	95.803		
8,464.5	6,643.3	6,033.0	5,946.0	55.5	18.4	-74.65	-2,197.5	3,894.3	6,259.5	6,193.1	66.41	94.256		
8,500.0	6,643.2	6,033.0	5,946.0	56.5	18.4	-74.65	-2,197.5	3,894.3	6,291.7	6,224.4	67.33	93.441		
8,563.0	6,643.2	6,033.0	5,946.0	58.2	18.4	-74.65	-2,197.5	3,894.3	6,348.9	6,280.0	68.98	92.038		
8,600.0	6,643.1	6,033.0	5,946.0	59.2	18.4	-74.65	-2,197.5	3,894.3	6,382.7	6,312.7	69.95	91.245		
8,661.4	6,643.0	6,033.0	5,946.0	60.8	18.4	-74.65	-2,197.5	3,894.3	6,438.6	6,367.1	71.56	89.971		
8,700.0	6,643.0	6,033.0	5,946.0	61.9	18.4	-74.65	-2,197.5	3,894.3	6,473.9	6,401.3	72.58	89.200		
8,759.8	6,642.9	5,989.1	5,902.9	63.5	18.3	-73.77	-2,199.8	3,886.3	6,526.9	6,453.1	73.80	88.442		
8,800.0	6,642.9	5,988.7	5,902.4	64.6	18.3	-73.76	-2,199.8	3,886.2	6,563.6	6,488.8	74.85	87.692		
8,858.2	6,642.8	5,988.0	5,901.8	66.2	18.3	-73.74	-2,199.9	3,886.1	6,617.0	6,540.6	76.37	86.639		
8,900.0	6,642.7	5,987.5	5,901.3	67.3	18.3	-73.73	-2,199.9	3,886.1	6,655.3	6,577.8	77.47	85.910		
8,956.7	6,642.7	5,986.8	5,900.6	68.9	18.3	-73.72	-2,199.9	3,886.0	6,707.3	6,628.4	78.96	84.950		
9,000.0	6,642.6	5,986.4	5,900.2	70.1	18.3	-73.71	-2,199.9	3,885.9	6,747.1	6,667.1	80.09	84.241		
9,055.1	6,642.5	5,985.7	5,899.6	71.6	18.3	-73.70	-2,199.9	3,885.8	6,797.9	6,716.3	81.54	83.365		
9,100.0	6,642.5	5,985.3	5,899.1	72.8	18.3	-73.69	-2,200.0	3,885.8	6,839.2	6,756.5	82.72	82.675		
9,153.5	6,642.4	5,984.7	5,898.5	74.3	18.3	-73.68	-2,200.0	3,885.7	6,888.6	6,804.5	84.13	81.876		
9,200.0	6,642.4	5,984.2	5,898.0	75.6	18.3	-73.67	-2,200.0	3,885.6	6,931.6	6,846.2	85.36	81.205		
9,251.9	6,642.3	5,983.7	5,897.5	77.0	18.3	-73.66	-2,200.0	3,885.6	6,979.6	6,892.9	86.73	80.475		
9,300.0	6,642.2	5,983.2	5,897.0	78.3	18.3	-73.65	-2,200.0	3,885.5	7,024.1	6,936.1	88.00	79.821		
9,350.4	6,642.2	5,982.7	5,896.5	79.7	18.3	-73.64	-2,200.1	3,885.4	7,070.8	6,981.4	89.33	79.154		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,400.0	6,642.1	5,982.2	5,896.0	81.1	18.3	-73.63	-2,200.1	3,885.4	7,116.8	7,026.2	90.64	78.517	
9,448.8	6,642.0	5,938.0	5,852.0	82.4	18.3	-72.72	-2,201.1	3,881.8	7,163.8	7,072.4	91.48	78.312	
9,500.0	6,642.0	5,938.0	5,852.0	83.8	18.3	-72.72	-2,201.1	3,881.8	7,211.4	7,118.6	92.83	77.683	
9,547.2	6,641.9	5,938.0	5,852.0	85.1	18.3	-72.72	-2,201.1	3,881.8	7,255.3	7,161.2	94.08	77.118	
9,600.0	6,641.9	5,938.0	5,852.0	86.6	18.3	-72.72	-2,201.1	3,881.8	7,304.4	7,209.0	95.48	76.504	
9,645.6	6,641.8	5,938.0	5,852.0	87.9	18.3	-72.72	-2,201.1	3,881.8	7,347.0	7,250.3	96.69	75.987	
9,700.0	6,641.7	5,938.0	5,852.0	89.4	18.3	-72.72	-2,201.1	3,881.8	7,397.7	7,299.5	98.13	75.388	
9,744.1	6,641.7	5,938.0	5,852.0	90.6	18.3	-72.72	-2,201.1	3,881.8	7,438.8	7,339.5	99.30	74.915	
9,800.0	6,641.6	5,938.0	5,852.0	92.1	18.3	-72.72	-2,201.1	3,881.8	7,491.0	7,390.3	100.78	74.331	
9,842.5	6,641.6	5,938.0	5,852.0	93.3	18.3	-72.72	-2,201.1	3,881.8	7,530.8	7,428.9	101.91	73.898	
9,900.0	6,641.5	5,938.0	5,852.0	94.9	18.3	-72.72	-2,201.1	3,881.8	7,584.6	7,481.2	103.43	73.328	
9,940.9	6,641.4	5,938.0	5,852.0	96.0	18.3	-72.72	-2,201.1	3,881.8	7,622.9	7,518.4	104.52	72.932	
10,000.0	6,641.4	5,938.0	5,852.0	97.7	18.3	-72.72	-2,201.1	3,881.8	7,678.3	7,572.2	106.09	72.375	
10,039.3	6,641.3	5,938.0	5,852.0	98.8	18.3	-72.72	-2,201.1	3,881.8	7,715.3	7,608.1	107.14	72.013	
10,100.0	6,641.2	5,938.0	5,852.0	100.4	18.3	-72.72	-2,201.1	3,881.8	7,772.2	7,663.5	108.75	71.469	
10,137.8	6,641.2	5,938.0	5,852.0	101.5	18.3	-72.72	-2,201.1	3,881.8	7,807.7	7,698.0	109.75	71.138	
10,200.0	6,641.1	5,938.0	5,852.0	103.2	18.3	-72.72	-2,201.1	3,881.8	7,866.2	7,754.8	111.41	70.606	
10,236.2	6,641.1	5,938.0	5,852.0	104.2	18.3	-72.72	-2,201.1	3,881.8	7,900.3	7,787.9	112.37	70.304	
10,300.0	6,641.0	5,938.0	5,852.0	106.0	18.3	-72.72	-2,201.1	3,881.8	7,960.4	7,846.3	114.07	69.784	
10,334.6	6,640.9	5,938.0	5,852.0	107.0	18.3	-72.72	-2,201.1	3,881.8	7,993.1	7,878.1	114.99	69.508	
10,400.0	6,640.9	5,938.0	5,852.0	108.8	18.3	-72.72	-2,201.1	3,881.8	8,054.7	7,938.0	116.74	69.000	
10,433.0	6,640.8	5,938.0	5,852.0	109.7	18.3	-72.72	-2,201.1	3,881.8	8,085.9	7,968.3	117.62	68.748	
10,500.0	6,640.7	5,938.0	5,852.0	111.6	18.3	-72.72	-2,201.1	3,881.8	8,149.2	8,029.8	119.40	68.251	
10,531.5	6,640.7	5,938.0	5,852.0	112.4	18.3	-72.72	-2,201.1	3,881.8	8,178.9	8,058.7	120.24	68.022	
10,600.0	6,640.6	5,938.0	5,852.0	114.3	18.3	-72.72	-2,201.1	3,881.8	8,243.8	8,121.7	122.07	67.535	
10,629.9	6,640.6	5,938.0	5,852.0	115.2	18.3	-72.72	-2,201.1	3,881.8	8,272.1	8,149.2	122.86	67.327	
10,700.0	6,640.5	5,938.0	5,852.0	117.1	18.3	-72.72	-2,201.1	3,881.8	8,338.5	8,213.7	124.73	66.850	
10,728.3	6,640.4	5,938.0	5,852.0	117.9	18.3	-72.72	-2,201.1	3,881.8	8,365.3	8,239.8	125.49	66.661	
10,800.0	6,640.4	5,938.0	5,852.0	119.9	18.3	-72.72	-2,201.1	3,881.8	8,433.3	8,305.9	127.40	66.194	
10,826.7	6,640.3	5,938.0	5,852.0	120.7	18.3	-72.72	-2,201.1	3,881.8	8,458.7	8,330.6	128.12	66.023	
10,900.0	6,640.2	5,938.0	5,852.0	122.7	18.3	-72.72	-2,201.1	3,881.8	8,528.2	8,398.2	130.07	65.566	
10,925.2	6,640.2	5,938.0	5,852.0	123.4	18.3	-72.72	-2,201.1	3,881.8	8,552.2	8,421.4	130.74	65.411	
11,000.0	6,640.1	5,938.0	5,852.0	125.5	18.3	-72.72	-2,201.1	3,881.8	8,623.3	8,490.6	132.74	64.963	
11,023.6	6,640.1	5,938.0	5,852.0	126.1	18.3	-72.72	-2,201.1	3,881.8	8,645.8	8,512.4	133.37	64.824	
11,100.0	6,640.0	5,938.0	5,852.0	128.3	18.3	-72.72	-2,201.1	3,881.8	8,718.5	8,583.1	135.41	64.384	
11,122.0	6,639.9	5,938.0	5,852.0	128.9	18.3	-72.72	-2,201.1	3,881.8	8,739.5	8,603.4	136.00	64.260	
11,200.0	6,639.8	5,938.0	5,852.0	131.1	18.3	-72.72	-2,201.1	3,881.8	8,813.8	8,675.7	138.09	63.828	
11,220.4	6,639.8	5,938.0	5,852.0	131.6	18.3	-72.72	-2,201.1	3,881.8	8,833.3	8,694.6	138.63	63.717	
11,300.0	6,639.7	5,938.0	5,852.0	133.9	18.3	-72.72	-2,201.1	3,881.8	8,909.1	8,768.4	140.76	63.294	
11,318.9	6,639.7	5,938.0	5,852.0	134.4	18.3	-72.72	-2,201.1	3,881.8	8,927.2	8,785.9	141.26	63.195	
11,400.0	6,639.6	5,938.0	5,852.0	136.7	18.3	-72.72	-2,201.1	3,881.8	9,004.6	8,861.2	143.43	62.779	
11,417.3	6,639.6	5,938.0	5,852.0	137.1	18.3	-72.72	-2,201.1	3,881.8	9,021.1	8,877.3	143.90	62.692	
11,500.0	6,639.5	5,938.0	5,852.0	139.4	18.3	-72.72	-2,201.1	3,881.8	9,100.2	8,954.1	146.11	62.284	
11,515.7	6,639.5	5,938.0	5,852.0	139.9	18.3	-72.72	-2,201.1	3,881.8	9,115.2	8,968.7	146.53	62.208	
11,600.0	6,639.3	5,938.0	5,852.0	142.2	18.3	-72.72	-2,201.1	3,881.8	9,195.9	9,047.1	148.78	61.807	
11,614.1	6,639.3	5,938.0	5,852.0	142.6	18.3	-72.72	-2,201.1	3,881.8	9,209.4	9,060.3	149.16	61.741	
11,700.0	6,639.2	5,938.0	5,852.0	145.0	18.3	-72.72	-2,201.1	3,881.8	9,291.6	9,140.2	151.46	61.348	
11,712.6	6,639.2	5,938.0	5,852.0	145.4	18.3	-72.72	-2,201.1	3,881.8	9,303.7	9,151.9	151.80	61.291	
11,800.0	6,639.1	5,938.0	5,852.0	147.8	18.3	-72.72	-2,201.1	3,881.8	9,387.5	9,233.4	154.13	60.904	
11,811.0	6,639.1	5,938.0	5,852.0	148.1	18.3	-72.72	-2,201.1	3,881.8	9,398.0	9,243.6	154.43	60.857	
11,900.0	6,639.0	5,938.0	5,852.0	150.6	18.3	-72.72	-2,201.1	3,881.8	9,483.4	9,326.6	156.81	60.476	
11,909.4	6,639.0	5,938.0	5,852.0	150.9	18.3	-72.72	-2,201.1	3,881.8	9,492.5	9,335.4	157.06	60.437	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
SW NW SEC. 10 T5N R64W 6th P.M. - EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 usft
Survey Program: 655-MWD													
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	6,638.8	5,938.0	5,852.0	153.4	18.3	-72.72	-2,201.1	3,881.8	9,579.5	9,420.0	159.49	60.063	
12,007.8	6,638.8	5,938.0	5,852.0	153.6	18.3	-72.72	-2,201.1	3,881.8	9,587.0	9,427.3	159.70	60.031	
12,100.0	6,638.7	5,938.0	5,852.0	156.2	18.3	-72.72	-2,201.1	3,881.8	9,675.6	9,513.4	162.17	59.664	
12,106.3	6,638.7	5,938.0	5,852.0	156.4	18.3	-72.72	-2,201.1	3,881.8	9,681.6	9,519.3	162.34	59.639	
12,200.0	6,638.6	5,938.0	5,852.0	159.0	18.3	-72.72	-2,201.1	3,881.8	9,771.7	9,606.9	164.85	59.278	
12,204.7	6,638.6	5,938.0	5,852.0	159.1	18.3	-72.72	-2,201.1	3,881.8	9,776.3	9,611.3	164.97	59.260	
12,300.0	6,638.5	5,938.0	5,852.0	161.8	18.3	-72.72	-2,201.1	3,881.8	9,868.0	9,700.5	167.52	58.905	
12,303.1	6,638.5	5,938.0	5,852.0	161.9	18.3	-72.72	-2,201.1	3,881.8	9,871.0	9,703.4	167.61	58.893	
12,400.0	6,638.3	5,938.0	5,852.0	164.6	18.3	-72.72	-2,201.1	3,881.8	9,964.3	9,794.1	170.20	58.543	
12,401.5	6,638.3	5,938.0	5,852.0	164.6	18.3	-72.72	-2,201.1	3,881.8	9,965.8	9,795.6	170.25	58.538 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	109.55	-1,374.6	3,871.3	4,108.1				
98.4	98.4	91.4	91.4	0.1	0.1	109.55	-1,374.6	3,871.3	4,108.1	4,108.0	0.18	N/A	
100.0	100.0	93.0	93.0	0.1	0.1	109.55	-1,374.6	3,871.3	4,108.1	4,108.0	0.18	N/A	
196.8	196.8	189.8	189.8	0.3	0.2	109.55	-1,374.6	3,871.3	4,108.1	4,107.7	0.49	8,381.977	
200.0	200.0	193.0	193.0	0.3	0.2	109.55	-1,374.6	3,871.3	4,108.1	4,107.6	0.50	8,214.737	
295.3	295.3	288.3	288.3	0.5	0.3	109.55	-1,374.6	3,871.3	4,108.1	4,107.3	0.80	5,123.071	
300.0	300.0	293.0	293.0	0.5	0.3	109.55	-1,374.6	3,871.3	4,108.1	4,107.3	0.82	5,029.203	
393.7	393.7	386.7	386.7	0.8	0.4	109.55	-1,374.6	3,871.3	4,108.1	4,107.0	1.11	3,688.850	
400.0	400.0	393.0	393.0	0.8	0.4	109.55	-1,374.6	3,871.3	4,108.1	4,107.0	1.13	3,623.912	
492.1	492.1	485.1	485.1	1.0	0.4	109.55	-1,374.6	3,871.3	4,108.1	4,106.7	1.43	2,882.019	
500.0	500.0	493.0	493.0	1.0	0.5	109.55	-1,374.6	3,871.3	4,108.1	4,106.7	1.45	2,832.451	
590.5	590.5	583.5	583.5	1.2	0.5	109.55	-1,374.6	3,871.3	4,108.1	4,106.4	1.74	2,364.788	
600.0	600.0	593.0	593.0	1.2	0.5	109.55	-1,374.6	3,871.3	4,108.1	4,106.4	1.77	2,324.731	
638.2	638.2	631.2	631.2	1.3	0.6	109.55	-1,374.6	3,871.3	4,108.1	4,106.3	1.89	2,175.641	
689.0	689.0	672.5	672.5	1.4	0.6	109.55	-1,374.7	3,871.3	4,108.2	4,106.1	2.07	1,985.078	
700.0	700.0	680.8	680.8	1.4	0.7	109.55	-1,374.8	3,871.3	4,108.2	4,106.1	2.11	1,946.483	
787.4	787.4	754.6	754.5	1.6	0.8	109.57	-1,376.1	3,871.3	4,108.7	4,106.2	2.45	1,673.839	
800.0	800.0	767.7	767.7	1.7	0.8	109.57	-1,376.4	3,871.3	4,108.8	4,106.2	2.51	1,637.239	
885.8	885.8	853.9	853.9	1.9	1.0	109.59	-1,377.4	3,871.5	4,109.3	4,106.4	2.88	1,427.567	
900.0	900.0	867.5	867.5	1.9	1.0	109.59	-1,377.6	3,871.5	4,109.4	4,106.4	2.94	1,398.526	
984.2	984.2	1,018.1	1,018.1	2.1	1.4	109.60	-1,378.3	3,871.2	4,109.4	4,106.0	3.44	1,195.304	
1,000.0	1,000.0	1,032.2	1,032.1	2.1	1.4	109.60	-1,378.2	3,871.1	4,109.3	4,105.8	3.50	1,172.898	
1,082.7	1,082.7	1,108.1	1,108.1	2.3	1.5	109.59	-1,377.8	3,870.6	4,108.6	4,104.7	3.85	1,066.574	
1,100.0	1,100.0	1,127.2	1,127.1	2.3	1.6	109.59	-1,377.6	3,870.4	4,108.4	4,104.5	3.93	1,044.831	
1,181.1	1,181.1	1,216.0	1,216.0	2.5	1.8	109.58	-1,376.8	3,869.9	4,107.7	4,103.4	4.31	953.905	
1,200.0	1,200.0	1,236.4	1,236.4	2.6	1.8	109.58	-1,376.6	3,869.7	4,107.5	4,103.1	4.39	935.039	
1,279.5	1,279.5	1,315.8	1,315.8	2.7	2.0	109.57	-1,375.8	3,869.1	4,106.6	4,101.9	4.74	866.277	
1,300.0	1,300.0	1,333.2	1,333.1	2.8	2.0	109.57	-1,375.6	3,868.9	4,106.4	4,101.6	4.82	851.593	
1,377.9	1,377.9	1,400.1	1,400.1	3.0	2.2	68.41	-1,375.1	3,868.5	4,105.4	4,100.2	5.13	800.242	
1,400.0	1,400.0	1,420.2	1,420.2	3.0	2.2	68.42	-1,375.0	3,868.4	4,105.0	4,099.7	5.22	786.663	
1,476.4	1,476.3	1,490.0	1,489.9	3.2	2.3	68.50	-1,374.8	3,868.1	4,103.2	4,097.6	5.52	743.038	
1,500.0	1,499.8	1,511.9	1,511.8	3.2	2.4	68.53	-1,374.7	3,868.0	4,102.5	4,096.9	5.62	730.273	
1,574.8	1,574.4	1,580.9	1,580.9	3.4	2.5	68.65	-1,374.7	3,867.7	4,099.9	4,094.0	5.92	692.087	
1,600.0	1,599.5	1,603.7	1,603.6	3.5	2.6	68.70	-1,374.7	3,867.6	4,098.9	4,092.9	6.03	680.108	
1,673.2	1,672.2	1,670.0	1,669.9	3.6	2.7	68.87	-1,374.8	3,867.5	4,095.7	4,089.3	6.33	646.640	
1,700.0	1,698.7	1,697.7	1,697.7	3.7	2.8	68.94	-1,374.9	3,867.4	4,094.3	4,087.9	6.45	634.438	
1,771.6	1,769.5	1,764.0	1,763.9	3.9	2.9	69.15	-1,375.1	3,867.1	4,090.3	4,083.5	6.77	604.229	
1,800.0	1,797.5	1,790.9	1,790.8	4.0	3.0	69.25	-1,375.4	3,867.0	4,088.5	4,081.6	6.90	592.802	
1,870.1	1,866.3	1,841.9	1,841.8	4.2	3.1	69.47	-1,376.3	3,866.8	4,084.0	4,076.8	7.20	567.411	
1,899.9	1,895.6	1,859.0	1,858.9	4.3	3.1	69.56	-1,376.8	3,866.7	4,082.0	4,074.7	7.32	557.869	
1,968.5	1,962.6	1,920.3	1,920.2	4.5	3.2	69.76	-1,378.9	3,866.4	4,077.5	4,069.8	7.66	532.421	
2,000.0	1,993.4	1,946.0	1,945.9	4.6	3.3	69.84	-1,380.0	3,866.2	4,075.5	4,067.6	7.81	521.743	
2,066.9	2,058.9	1,989.6	1,989.4	4.8	3.4	69.99	-1,382.0	3,866.0	4,071.4	4,063.3	8.12	501.113	
2,100.0	2,091.3	2,010.2	2,010.0	4.9	3.4	70.06	-1,383.1	3,866.0	4,069.6	4,061.3	8.28	491.560	
2,165.3	2,155.2	2,048.0	2,047.7	5.2	3.5	70.20	-1,385.4	3,866.0	4,066.3	4,057.7	8.59	473.642	
2,200.0	2,189.1	2,077.1	2,076.7	5.3	3.6	70.30	-1,387.3	3,866.0	4,064.7	4,055.9	8.77	463.461	
2,263.8	2,251.5	2,124.3	2,123.8	5.5	3.7	70.47	-1,390.6	3,866.1	4,062.0	4,052.9	9.10	446.213	
2,300.0	2,286.9	2,144.0	2,143.5	5.7	3.7	70.55	-1,392.1	3,866.2	4,060.5	4,051.3	9.28	437.693	
2,362.2	2,347.7	2,193.7	2,193.0	5.9	3.8	70.73	-1,396.0	3,866.4	4,058.3	4,048.7	9.62	421.860	
2,400.0	2,384.7	2,219.8	2,219.0	6.0	3.9	70.83	-1,398.2	3,866.6	4,057.2	4,047.3	9.82	413.160	
2,460.6	2,444.0	2,259.5	2,258.5	6.3	4.0	70.98	-1,401.7	3,866.9	4,055.5	4,045.4	10.14	399.904	
2,500.0	2,482.5	2,284.1	2,283.1	6.4	4.0	71.08	-1,404.0	3,867.2	4,054.6	4,044.3	10.35	391.800	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
2,559.0	2,540.3	2,333.0	2,331.7	6.7	4.2	71.28	-1,409.0	3,867.8	4,053.6	4,042.9	10.69	379.108	
2,600.0	2,580.3	2,333.0	2,331.7	6.8	4.2	71.28	-1,409.0	3,867.8	4,053.1	4,042.3	10.85	373.569	
2,657.5	2,636.5	2,380.4	2,378.9	7.1	4.3	71.47	-1,414.3	3,868.5	4,052.7	4,041.5	11.19	362.070	
2,698.1	2,676.3	2,404.8	2,403.0	7.2	4.3	71.57	-1,417.2	3,869.0	4,052.6	4,041.2	11.41	355.088 CC	
2,700.0	2,678.1	2,405.9	2,404.1	7.2	4.3	71.58	-1,417.3	3,869.0	4,052.6	4,041.2	11.42	354.766	
2,755.9	2,732.8	2,428.0	2,426.0	7.5	4.4	71.67	-1,420.1	3,869.4	4,052.8	4,041.1	11.70	346.404 ES	
2,800.0	2,776.0	2,470.7	2,468.4	7.7	4.5	71.86	-1,425.7	3,870.3	4,053.1	4,041.1	11.99	338.122	
2,854.3	2,829.1	2,507.5	2,504.8	7.9	4.6	72.02	-1,430.8	3,871.1	4,053.7	4,041.4	12.30	329.514	
2,900.0	2,873.8	2,545.6	2,542.4	8.1	4.7	72.19	-1,436.3	3,872.0	4,054.5	4,041.9	12.59	322.050	
2,952.7	2,925.4	2,597.7	2,594.0	8.3	4.9	72.44	-1,444.6	3,872.8	4,055.4	4,042.4	12.95	313.191	
3,000.0	2,971.6	2,644.9	2,640.4	8.5	5.0	72.67	-1,452.7	3,873.2	4,056.2	4,043.0	13.28	305.482	
3,051.2	3,021.6	2,695.9	2,690.5	8.7	5.2	72.93	-1,462.3	3,873.2	4,057.2	4,043.6	13.64	297.422	
3,100.0	3,069.4	2,736.3	2,730.1	8.9	5.3	73.15	-1,470.4	3,873.0	4,058.2	4,044.2	13.96	290.648	
3,149.6	3,117.9	2,773.4	2,766.5	9.1	5.4	73.34	-1,477.7	3,873.0	4,059.4	4,045.1	14.28	284.308	
3,200.0	3,167.2	2,820.4	2,812.6	9.3	5.6	73.58	-1,486.8	3,873.1	4,060.8	4,046.2	14.63	277.638	
3,248.0	3,214.2	2,902.0	2,892.7	9.5	5.8	74.01	-1,502.3	3,872.8	4,061.8	4,046.7	15.06	269.647	
3,300.0	3,265.0	2,932.8	2,922.9	9.8	5.9	74.17	-1,508.2	3,872.6	4,063.0	4,047.6	15.38	264.227	
3,346.4	3,310.5	2,954.7	2,944.4	10.0	6.0	74.28	-1,512.5	3,872.5	4,064.4	4,048.7	15.64	259.871	
3,400.0	3,362.9	2,997.0	2,985.8	10.2	6.1	74.50	-1,520.9	3,872.7	4,066.4	4,050.4	16.00	254.182	
3,444.9	3,406.7	3,005.9	2,994.6	10.4	6.1	74.55	-1,522.7	3,872.8	4,068.2	4,052.0	16.21	250.912	
3,473.0	3,434.2	3,035.9	3,024.0	10.5	6.2	74.71	-1,528.7	3,873.1	4,069.5	4,053.1	16.43	247.741	
3,500.0	3,460.7	3,065.0	3,052.5	10.6	6.3	74.88	-1,534.3	3,873.4	4,070.8	4,054.2	16.62	244.923	
3,543.3	3,503.2	3,120.7	3,107.3	10.7	6.5	75.18	-1,544.6	3,874.2	4,072.9	4,056.0	16.93	240.605	
3,600.0	3,559.0	3,201.0	3,186.3	10.9	6.8	75.60	-1,558.8	3,875.1	4,075.7	4,058.3	17.34	235.009	
3,641.7	3,600.2	3,241.1	3,225.8	11.0	6.9	75.80	-1,565.6	3,875.6	4,077.8	4,060.3	17.58	231.974	
3,700.0	3,657.9	3,295.9	3,279.8	11.2	7.1	76.08	-1,574.4	3,876.5	4,081.2	4,063.3	17.90	227.962	
3,740.1	3,697.8	3,330.9	3,314.5	11.3	7.2	76.24	-1,579.7	3,877.3	4,083.7	4,065.6	18.10	225.601	
3,800.0	3,757.3	3,485.2	3,467.5	11.4	7.6	76.73	-1,598.3	3,882.0	4,087.6	4,068.9	18.65	219.130	
3,838.6	3,795.7	3,547.5	3,529.6	11.5	7.7	76.90	-1,603.9	3,883.7	4,089.4	4,070.5	18.88	216.542	
3,900.0	3,857.0	3,806.9	3,788.6	11.7	8.3	77.27	-1,614.6	3,889.1	4,090.5	4,071.0	19.55	209.200	
3,937.0	3,893.9	3,876.3	3,858.0	11.7	8.4	77.31	-1,614.4	3,890.0	4,090.4	4,070.7	19.75	207.150	
3,981.9	3,938.8	3,921.6	3,903.3	11.8	8.5	77.33	-1,614.3	3,890.4	4,090.3	4,070.4	19.91	205.456	
4,000.0	3,956.9	3,939.9	3,921.6	11.8	8.5	77.34	-1,614.3	3,890.6	4,090.4	4,070.4	19.97	204.782	
4,035.4	3,992.3	3,973.2	3,954.9	11.9	8.6	77.35	-1,614.4	3,890.8	4,090.5	4,070.4	20.09	203.618	
4,072.9	4,029.8	4,008.0	3,989.7	11.9	8.7	118.55	-1,614.5	3,891.1	4,090.7	4,073.4	17.34	235.884	
4,100.0	4,056.9	4,033.2	4,014.9	12.0	8.7	118.55	-1,614.6	3,891.2	4,090.9	4,073.5	17.44	234.536	
4,133.8	4,090.7	4,071.5	4,053.2	12.0	8.8	118.55	-1,614.7	3,891.5	4,091.2	4,073.6	17.59	232.603	
4,200.0	4,156.9	4,146.3	4,128.0	12.1	8.9	118.55	-1,615.3	3,891.7	4,091.6	4,073.7	17.87	228.907	
4,232.3	4,189.2	4,173.4	4,155.1	12.2	9.0	118.56	-1,615.6	3,891.8	4,091.8	4,073.8	18.00	227.378	
4,300.0	4,256.9	4,231.0	4,212.7	12.3	9.1	118.56	-1,616.3	3,891.9	4,092.3	4,074.1	18.25	224.225	
4,330.7	4,287.6	4,284.7	4,266.4	12.4	9.2	118.57	-1,617.1	3,891.8	4,092.5	4,074.1	18.42	222.148	
4,400.0	4,356.9	4,363.5	4,345.2	12.5	9.4	118.59	-1,618.2	3,891.3	4,092.6	4,073.8	18.72	218.574	
4,429.1	4,386.0	4,387.0	4,368.7	12.5	9.4	118.60	-1,618.6	3,891.1	4,092.6	4,073.8	18.83	217.328	
4,500.0	4,456.9	4,459.8	4,441.4	12.6	9.5	118.61	-1,619.7	3,890.8	4,092.8	4,073.7	19.12	214.017	
4,527.5	4,484.4	4,497.0	4,478.6	12.7	9.6	118.61	-1,619.8	3,890.8	4,092.9	4,073.6	19.26	212.554	
4,600.0	4,556.9	4,571.0	4,552.7	12.8	9.8	118.61	-1,619.4	3,890.9	4,092.8	4,073.2	19.55	209.318	
4,626.0	4,582.9	4,595.5	4,577.2	12.9	9.8	118.61	-1,619.4	3,890.9	4,092.8	4,073.1	19.66	208.224	
4,700.0	4,656.9	4,738.0	4,719.7	13.0	10.1	118.61	-1,619.1	3,889.5	4,092.0	4,071.9	20.09	203.698	
4,724.4	4,681.3	4,763.0	4,744.7	13.0	10.1	118.62	-1,619.1	3,889.1	4,091.6	4,071.4	20.19	202.674	
4,800.0	4,756.9	4,841.4	4,823.0	13.1	10.3	118.63	-1,619.0	3,887.5	4,090.3	4,069.8	20.50	199.541	
4,822.8	4,779.7	4,865.3	4,846.9	13.2	10.3	118.63	-1,619.0	3,887.0	4,089.9	4,069.3	20.59	198.603	
4,900.0	4,856.9	4,937.5	4,919.1	13.3	10.4	118.64	-1,619.2	3,885.5	4,088.5	4,067.6	20.90	195.654	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
4,921.2	4,878.1	4,955.9	4,937.5	13.4	10.5	118.65	-1,619.2	3,885.1	4,088.1	4,067.2	20.98	194.883		
5,000.0	4,956.9	5,027.5	5,009.1	13.5	10.6	118.66	-1,619.4	3,883.8	4,086.9	4,065.7	21.28	192.027		
5,019.7	4,976.6	5,046.2	5,027.8	13.5	10.7	118.66	-1,619.4	3,883.5	4,086.7	4,065.3	21.36	191.312		
5,100.0	5,056.9	5,110.1	5,091.7	13.7	10.8	118.66	-1,619.2	3,882.6	4,085.6	4,064.0	21.66	188.661		
5,118.1	5,075.0	5,121.5	5,103.0	13.7	10.8	118.66	-1,619.2	3,882.5	4,085.4	4,063.7	21.72	188.127		
5,200.0	5,156.9	5,180.0	5,161.6	13.8	10.9	118.66	-1,619.1	3,882.3	4,085.1	4,063.1	22.00	185.643		
5,211.7	5,168.6	5,180.0	5,161.6	13.9	10.9	118.66	-1,619.1	3,882.3	4,085.0	4,063.0	22.03	185.433		
5,216.5	5,173.4	5,180.0	5,161.6	13.9	10.9	118.66	-1,619.1	3,882.3	4,085.0	4,063.0	22.04	185.347		
5,300.0	5,256.9	5,252.8	5,234.4	14.0	11.1	118.66	-1,619.2	3,882.4	4,085.2	4,062.8	22.36	182.665		
5,314.9	5,271.8	5,265.1	5,246.7	14.1	11.1	118.66	-1,619.2	3,882.4	4,085.3	4,062.8	22.42	182.206		
5,400.0	5,356.9	5,349.3	5,330.9	14.2	11.2	118.66	-1,619.3	3,882.8	4,085.7	4,062.9	22.77	179.409		
5,413.4	5,370.3	5,362.9	5,344.5	14.2	11.3	118.66	-1,619.2	3,882.9	4,085.7	4,062.9	22.83	178.970		
5,500.0	5,456.9	5,456.0	5,437.5	14.4	11.4	118.65	-1,618.6	3,883.7	4,086.1	4,062.9	23.20	176.117		
5,511.8	5,468.7	5,472.2	5,453.7	14.4	11.5	118.64	-1,618.5	3,883.8	4,086.1	4,062.8	23.26	175.682		
5,600.0	5,556.9	5,609.6	5,591.1	14.6	11.7	118.62	-1,616.5	3,883.9	4,085.5	4,061.8	23.72	172.239		
5,610.2	5,567.1	5,620.5	5,602.1	14.6	11.7	118.62	-1,616.4	3,883.9	4,085.4	4,061.6	23.76	171.918		
5,700.0	5,656.9	5,726.9	5,708.4	14.7	11.9	118.61	-1,615.2	3,883.1	4,084.3	4,060.2	24.17	169.003		
5,708.6	5,665.5	5,737.6	5,719.2	14.8	12.0	118.61	-1,615.1	3,883.0	4,084.2	4,060.0	24.21	168.718		
5,800.0	5,756.9	5,805.5	5,787.1	14.9	12.1	118.61	-1,614.9	3,882.1	4,083.1	4,058.5	24.54	166.390		
5,807.1	5,764.0	5,810.4	5,791.9	14.9	12.1	118.61	-1,614.9	3,882.1	4,083.0	4,058.4	24.56	166.219		
5,873.7	5,830.5	5,842.0	5,823.5	15.1	12.2	118.61	-1,614.9	3,881.8	4,082.6	4,057.9	24.77	164.819		
5,900.0	5,856.9	5,842.0	5,823.5	15.1	12.2	118.61	-1,614.9	3,881.8	4,082.7	4,057.9	24.83	164.448		
5,905.5	5,862.4	5,842.0	5,823.5	15.1	12.2	118.61	-1,614.9	3,881.8	4,082.8	4,057.9	24.84	164.372		
5,971.9	5,928.8	5,842.0	5,823.5	15.3	12.2	118.61	-1,614.9	3,881.8	4,083.8	4,058.8	24.98	163.477		
6,000.0	5,956.9	5,883.0	5,864.5	15.3	12.3	-151.35	-1,615.1	3,882.1	4,084.3	4,057.1	27.23	150.003		
6,003.9	5,960.8	5,884.1	5,865.6	15.3	12.3	-151.34	-1,615.1	3,882.1	4,084.6	4,057.3	27.23	150.000		
6,050.0	6,006.7	5,896.9	5,878.4	15.4	12.3	-151.18	-1,615.2	3,882.4	4,088.8	4,061.6	27.22	150.226		
6,100.0	6,056.2	5,937.0	5,918.5	15.4	12.4	-150.92	-1,615.5	3,884.2	4,097.1	4,070.0	27.17	150.814		
6,102.3	6,058.5	5,937.0	5,918.5	15.4	12.4	-150.90	-1,615.5	3,884.2	4,097.6	4,070.4	27.16	150.878		
6,150.0	6,105.1	5,937.0	5,918.5	15.4	12.4	-150.47	-1,615.5	3,884.2	4,108.3	4,081.3	26.95	152.446		
6,200.0	6,153.0	5,937.0	5,918.5	15.5	12.4	-149.86	-1,615.5	3,884.2	4,122.9	4,096.3	26.65	154.693		
6,200.8	6,153.8	5,937.0	5,918.5	15.5	12.4	-149.85	-1,615.5	3,884.2	4,123.2	4,096.5	26.65	154.733		
6,250.0	6,199.9	5,937.0	5,918.5	15.5	12.4	-149.08	-1,615.5	3,884.2	4,141.0	4,114.7	26.29	157.526		
6,299.2	6,244.8	5,937.0	5,918.5	15.5	12.4	-148.11	-1,615.5	3,884.2	4,161.9	4,136.1	25.88	160.836		
6,300.0	6,245.5	5,937.0	5,918.5	15.5	12.4	-148.09	-1,615.5	3,884.2	4,162.3	4,136.4	25.87	160.894		
6,350.0	6,289.6	5,937.0	5,918.5	15.5	12.4	-146.89	-1,615.5	3,884.2	4,186.7	4,161.3	25.42	164.707		
6,397.6	6,329.9	5,937.0	5,918.5	15.4	12.4	-145.51	-1,615.5	3,884.2	4,212.7	4,187.7	24.98	168.625		
6,400.0	6,331.8	5,937.0	5,918.5	15.4	12.4	-145.43	-1,615.5	3,884.2	4,214.1	4,189.1	24.96	168.824		
6,450.0	6,372.2	5,937.0	5,918.5	15.4	12.4	-143.68	-1,615.5	3,884.2	4,244.2	4,219.6	24.53	173.021		
6,496.0	6,407.4	5,937.0	5,918.5	15.4	12.4	-141.77	-1,615.5	3,884.2	4,274.2	4,250.0	24.19	176.672		
6,500.0	6,410.3	5,937.0	5,918.5	15.4	12.4	-141.59	-1,615.5	3,884.2	4,276.8	4,252.7	24.17	176.967		
6,550.0	6,446.1	5,937.0	5,918.5	15.4	12.4	-139.09	-1,615.5	3,884.2	4,311.8	4,287.9	23.93	180.218		
6,594.5	6,475.9	5,937.0	5,918.5	15.4	12.4	-136.46	-1,615.5	3,884.2	4,344.7	4,320.8	23.86	182.076		
6,600.0	6,479.4	5,937.0	5,918.5	15.4	12.4	-136.10	-1,615.5	3,884.2	4,348.9	4,325.0	23.86	182.229		
6,650.0	6,510.0	5,937.0	5,918.5	15.5	12.4	-132.55	-1,615.5	3,884.2	4,387.8	4,363.8	24.05	182.449		
6,692.9	6,534.0	5,980.4	5,961.7	15.7	12.5	-129.63	-1,616.4	3,888.2	4,420.8	4,396.3	24.43	180.936		
6,700.0	6,537.8	5,980.8	5,962.1	15.7	12.5	-129.00	-1,616.4	3,888.2	4,426.6	4,402.1	24.52	180.555		
6,750.0	6,562.6	5,983.0	5,964.3	16.2	12.5	-124.14	-1,616.4	3,888.5	4,468.4	4,443.1	25.32	176.501		
6,791.3	6,580.8	5,984.6	5,965.8	16.6	12.5	-119.49	-1,616.5	3,888.8	4,503.8	4,477.6	26.24	171.659		
6,800.0	6,584.3	5,984.8	5,966.1	16.7	12.5	-118.43	-1,616.5	3,888.8	4,511.4	4,484.9	26.44	170.627		
6,850.0	6,602.9	5,986.2	5,967.5	17.3	12.5	-111.80	-1,616.5	3,889.0	4,555.3	4,527.5	27.81	163.829		
6,889.7	6,615.2	5,987.0	5,968.3	17.9	12.5	-105.89	-1,616.5	3,889.1	4,590.8	4,561.8	28.96	158.514		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
6,900.0	6,618.1	5,987.2	5,968.4	18.0	12.5	-104.28	-1,616.5	3,889.1	4,600.0	4,570.7	29.25	157.289	
6,950.0	6,630.0	5,987.8	5,969.0	18.8	12.5	-96.05	-1,616.6	3,889.2	4,645.1	4,614.6	30.53	152.168	
6,988.2	6,636.8	5,987.9	5,969.1	19.5	12.5	-89.48	-1,616.6	3,889.2	4,679.7	4,648.5	31.25	149.731	
7,000.0	6,638.5	5,987.9	5,969.1	19.7	12.5	-87.42	-1,616.6	3,889.2	4,690.5	4,659.0	31.41	149.316	
7,050.0	6,643.5	5,987.7	5,968.9	20.6	12.5	-78.81	-1,616.6	3,889.2	4,735.9	4,704.1	31.76	149.111	
7,086.6	6,644.9	5,987.3	5,968.5	21.3	12.5	-72.76	-1,616.5	3,889.1	4,769.0	4,737.3	31.67	150.569	
7,097.8	6,645.0	5,987.1	5,968.3	21.5	12.5	-70.97	-1,616.5	3,889.1	4,779.1	4,747.5	31.59	151.283	
7,100.0	6,645.0	5,987.1	5,968.3	21.6	12.5	-70.97	-1,616.5	3,889.1	4,781.1	4,749.5	31.63	151.155	
7,185.0	6,644.9	5,985.8	5,967.0	23.3	12.5	-70.93	-1,616.5	3,888.9	4,857.9	4,824.6	33.26	146.066	
7,200.0	6,644.9	5,985.5	5,966.8	23.6	12.5	-70.92	-1,616.5	3,888.9	4,871.4	4,837.9	33.54	145.222	
7,283.4	6,644.8	5,984.3	5,965.5	25.4	12.5	-70.89	-1,616.5	3,888.7	4,947.1	4,911.8	35.26	140.304	
7,300.0	6,644.7	5,984.0	5,965.3	25.8	12.5	-70.89	-1,616.5	3,888.7	4,962.1	4,926.5	35.60	139.386	
7,381.9	6,644.6	5,982.9	5,964.1	27.7	12.5	-70.86	-1,616.4	3,888.5	5,036.6	4,999.3	37.37	134.775	
7,400.0	6,644.6	5,982.6	5,963.9	28.1	12.5	-70.85	-1,616.4	3,888.5	5,053.2	5,015.4	37.76	133.814	
7,480.3	6,644.5	5,981.5	5,962.8	30.0	12.5	-70.82	-1,616.4	3,888.3	5,126.5	5,086.9	39.57	129.569	
7,500.0	6,644.5	5,981.2	5,962.5	30.5	12.5	-70.81	-1,616.4	3,888.3	5,144.5	5,104.5	40.01	128.588	
7,578.7	6,644.4	5,980.2	5,961.5	32.4	12.5	-70.79	-1,616.3	3,888.2	5,216.7	5,174.9	41.83	124.721	
7,600.0	6,644.4	5,979.9	5,961.2	32.9	12.5	-70.78	-1,616.3	3,888.1	5,236.2	5,193.9	42.32	123.735	
7,677.1	6,644.3	5,937.0	5,918.5	34.8	12.4	-69.66	-1,615.5	3,884.2	5,308.8	5,265.0	43.79	121.236	
7,700.0	6,644.2	5,937.0	5,918.5	35.4	12.4	-69.66	-1,615.5	3,884.2	5,329.8	5,285.5	44.33	120.238	
7,775.6	6,644.1	5,937.0	5,918.5	37.3	12.4	-69.66	-1,615.5	3,884.2	5,399.5	5,353.3	46.14	117.025	
7,800.0	6,644.1	5,937.0	5,918.5	38.0	12.4	-69.66	-1,615.5	3,884.2	5,422.0	5,375.3	46.72	116.041	
7,874.0	6,644.0	5,937.0	5,918.5	39.9	12.4	-69.66	-1,615.5	3,884.2	5,490.4	5,441.9	48.52	113.149	
7,900.0	6,644.0	5,937.0	5,918.5	40.5	12.4	-69.66	-1,615.5	3,884.2	5,514.4	5,465.3	49.16	112.184	
7,972.4	6,643.9	5,937.0	5,918.5	42.4	12.4	-69.66	-1,615.5	3,884.2	5,581.6	5,530.6	50.94	109.581	
8,000.0	6,643.9	5,937.0	5,918.5	43.1	12.4	-69.66	-1,615.5	3,884.2	5,607.1	5,555.5	51.61	108.638	
8,070.8	6,643.8	5,937.0	5,918.5	45.0	12.4	-69.66	-1,615.5	3,884.2	5,673.0	5,619.6	53.37	106.295	
8,100.0	6,643.7	5,937.0	5,918.5	45.8	12.4	-69.66	-1,615.5	3,884.2	5,700.1	5,646.0	54.09	105.376	
8,169.3	6,643.7	5,937.0	5,918.5	47.6	12.4	-69.66	-1,615.5	3,884.2	5,764.6	5,708.8	55.82	103.264	
8,200.0	6,643.6	5,937.0	5,918.5	48.4	12.4	-69.66	-1,615.5	3,884.2	5,793.3	5,736.7	56.59	102.369	
8,267.7	6,643.5	5,937.0	5,918.5	50.2	12.4	-69.66	-1,615.5	3,884.2	5,856.5	5,798.2	58.29	100.464	
8,300.0	6,643.5	5,937.0	5,918.5	51.1	12.4	-69.66	-1,615.5	3,884.2	5,886.7	5,827.6	59.11	99.594	
8,366.1	6,643.4	5,937.0	5,918.5	52.9	12.4	-69.66	-1,615.5	3,884.2	5,948.5	5,887.8	60.78	97.872	
8,400.0	6,643.4	5,937.0	5,918.5	53.8	12.4	-69.66	-1,615.5	3,884.2	5,980.3	5,918.6	61.63	97.027	
8,464.5	6,643.3	5,937.0	5,918.5	55.5	12.4	-69.66	-1,615.5	3,884.2	6,040.8	5,977.5	63.27	95.470	
8,500.0	6,643.2	5,937.0	5,918.5	56.5	12.4	-69.66	-1,615.5	3,884.2	6,074.1	6,009.9	64.17	94.649	
8,563.0	6,643.2	5,937.0	5,918.5	58.2	12.4	-69.66	-1,615.5	3,884.2	6,133.3	6,067.5	65.78	93.239	
8,600.0	6,643.1	5,937.0	5,918.5	59.2	12.4	-69.66	-1,615.5	3,884.2	6,168.1	6,101.4	66.72	92.442	
8,661.4	6,643.0	5,937.0	5,918.5	60.8	12.4	-69.66	-1,615.5	3,884.2	6,225.9	6,157.6	68.30	91.162	
8,700.0	6,643.0	5,937.0	5,918.5	61.9	12.4	-69.66	-1,615.5	3,884.2	6,262.3	6,193.0	69.28	90.388	
8,759.8	6,642.9	5,937.0	5,918.5	63.5	12.4	-69.66	-1,615.5	3,884.2	6,318.8	6,247.9	70.82	89.225	
8,800.0	6,642.9	5,937.0	5,918.5	64.6	12.4	-69.66	-1,615.5	3,884.2	6,356.7	6,284.8	71.85	88.473	
8,858.2	6,642.8	5,937.0	5,918.5	66.2	12.4	-69.66	-1,615.5	3,884.2	6,411.7	6,338.4	73.35	87.416	
8,900.0	6,642.7	5,937.0	5,918.5	67.3	12.4	-69.66	-1,615.5	3,884.2	6,451.2	6,376.8	74.42	86.685	
8,956.7	6,642.7	5,937.0	5,918.5	68.9	12.4	-69.66	-1,615.5	3,884.2	6,504.9	6,429.0	75.88	85.723	
9,000.0	6,642.6	5,937.0	5,918.5	70.1	12.4	-69.66	-1,615.5	3,884.2	6,545.9	6,468.9	77.00	85.012	
9,055.1	6,642.5	5,937.0	5,918.5	71.6	12.4	-69.66	-1,615.5	3,884.2	6,598.2	6,519.8	78.42	84.136	
9,100.0	6,642.5	5,937.0	5,918.5	72.8	12.4	-69.66	-1,615.5	3,884.2	6,640.8	6,561.2	79.58	83.445	
9,153.5	6,642.4	5,937.0	5,918.5	74.3	12.4	-69.66	-1,615.5	3,884.2	6,691.7	6,610.7	80.97	82.645	
9,200.0	6,642.4	5,937.0	5,918.5	75.6	12.4	-69.66	-1,615.5	3,884.2	6,735.8	6,653.7	82.17	81.973	
9,251.9	6,642.3	5,937.0	5,918.5	77.0	12.4	-69.66	-1,615.5	3,884.2	6,785.2	6,701.7	83.52	81.242	
9,300.0	6,642.2	5,937.0	5,918.5	78.3	12.4	-69.66	-1,615.5	3,884.2	6,831.0	6,746.2	84.76	80.588	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,350.4	6,642.2	5,937.0	5,918.5	79.7	12.4	-69.66	-1,615.5	3,884.2	6,879.0	6,792.9	86.07	79.921	
9,400.0	6,642.1	5,937.0	5,918.5	81.1	12.4	-69.66	-1,615.5	3,884.2	6,926.3	6,838.9	87.36	79.284	
9,448.8	6,642.0	5,937.0	5,918.5	82.4	12.4	-69.66	-1,615.5	3,884.2	6,972.8	6,884.2	88.63	78.675	
9,500.0	6,642.0	5,937.0	5,918.5	83.8	12.4	-69.66	-1,615.5	3,884.2	7,021.7	6,931.7	89.96	78.054	
9,547.2	6,641.9	5,937.0	5,918.5	85.1	12.4	-69.66	-1,615.5	3,884.2	7,066.8	6,975.6	91.19	77.497	
9,600.0	6,641.9	5,937.0	5,918.5	86.6	12.4	-69.66	-1,615.5	3,884.2	7,117.2	7,024.7	92.56	76.892	
9,645.6	6,641.8	5,937.0	5,918.5	87.9	12.4	-69.66	-1,615.5	3,884.2	7,160.9	7,067.1	93.75	76.382	
9,700.0	6,641.7	5,937.0	5,918.5	89.4	12.4	-69.66	-1,615.5	3,884.2	7,212.9	7,117.7	95.17	75.792	
9,744.1	6,641.7	5,937.0	5,918.5	90.6	12.4	-69.66	-1,615.5	3,884.2	7,255.1	7,158.8	96.32	75.326	
9,800.0	6,641.6	5,937.0	5,918.5	92.1	12.4	-69.66	-1,615.5	3,884.2	7,308.7	7,210.9	97.77	74.750	
9,842.5	6,641.6	5,937.0	5,918.5	93.3	12.4	-69.66	-1,615.5	3,884.2	7,349.4	7,250.6	98.88	74.324	
9,900.0	6,641.5	5,937.0	5,918.5	94.9	12.4	-69.66	-1,615.5	3,884.2	7,404.6	7,304.2	100.38	73.762	
9,940.9	6,641.4	5,937.0	5,918.5	96.0	12.4	-69.66	-1,615.5	3,884.2	7,443.9	7,342.4	101.45	73.372	
10,000.0	6,641.4	5,937.0	5,918.5	97.7	12.4	-69.66	-1,615.5	3,884.2	7,500.6	7,397.6	103.00	72.824	
10,039.3	6,641.3	5,937.0	5,918.5	98.8	12.4	-69.66	-1,615.5	3,884.2	7,538.4	7,434.4	104.03	72.467	
10,100.0	6,641.2	5,937.0	5,918.5	100.4	12.4	-69.66	-1,615.5	3,884.2	7,596.7	7,491.1	105.61	71.931	
10,137.8	6,641.2	5,937.0	5,918.5	101.5	12.4	-69.66	-1,615.5	3,884.2	7,633.0	7,526.4	106.60	71.605	
10,200.0	6,641.1	5,937.0	5,918.5	103.2	12.4	-69.66	-1,615.5	3,884.2	7,692.9	7,584.7	108.23	71.082	
10,236.2	6,641.1	5,937.0	5,918.5	104.2	12.4	-69.66	-1,615.5	3,884.2	7,727.8	7,618.6	109.17	70.784	
10,300.0	6,641.0	5,937.0	5,918.5	106.0	12.4	-69.66	-1,615.5	3,884.2	7,789.2	7,678.4	110.84	70.272	
10,334.6	6,640.9	5,937.0	5,918.5	107.0	12.4	-69.66	-1,615.5	3,884.2	7,822.6	7,710.8	111.75	70.001	
10,400.0	6,640.9	5,937.0	5,918.5	108.8	12.4	-69.66	-1,615.5	3,884.2	7,885.6	7,772.1	113.46	69.500	
10,433.0	6,640.8	5,937.0	5,918.5	109.7	12.4	-69.66	-1,615.5	3,884.2	7,917.5	7,803.2	114.33	69.252	
10,500.0	6,640.7	5,937.0	5,918.5	111.6	12.4	-69.66	-1,615.5	3,884.2	7,982.1	7,866.0	116.08	68.762	
10,531.5	6,640.7	5,937.0	5,918.5	112.4	12.4	-69.66	-1,615.5	3,884.2	8,012.5	7,895.6	116.91	68.537	
10,600.0	6,640.6	5,937.0	5,918.5	114.3	12.4	-69.66	-1,615.5	3,884.2	8,078.7	7,959.9	118.70	68.057	
10,629.9	6,640.6	5,937.0	5,918.5	115.2	12.4	-69.66	-1,615.5	3,884.2	8,107.5	7,988.1	119.49	67.852	
10,700.0	6,640.5	5,937.0	5,918.5	117.1	12.4	-69.66	-1,615.5	3,884.2	8,175.3	8,054.0	121.33	67.383	
10,728.3	6,640.4	5,937.0	5,918.5	117.9	12.4	-69.66	-1,615.5	3,884.2	8,202.7	8,080.6	122.07	67.197	
10,800.0	6,640.4	5,937.0	5,918.5	119.9	12.4	-69.66	-1,615.5	3,884.2	8,272.0	8,148.1	123.95	66.737	
10,826.7	6,640.3	5,937.0	5,918.5	120.7	12.4	-69.66	-1,615.5	3,884.2	8,297.9	8,173.3	124.65	66.569	
10,900.0	6,640.2	5,937.0	5,918.5	122.7	12.4	-69.66	-1,615.5	3,884.2	8,368.8	8,242.3	126.57	66.118	
10,925.2	6,640.2	5,937.0	5,918.5	123.4	12.4	-69.66	-1,615.5	3,884.2	8,393.2	8,266.0	127.24	65.966	
11,000.0	6,640.1	5,937.0	5,918.5	125.5	12.4	-69.66	-1,615.5	3,884.2	8,465.7	8,336.5	129.20	65.524	
11,023.6	6,640.1	5,937.0	5,918.5	126.1	12.4	-69.66	-1,615.5	3,884.2	8,488.6	8,358.8	129.82	65.387	
11,100.0	6,640.0	5,937.0	5,918.5	128.3	12.4	-69.66	-1,615.5	3,884.2	8,562.7	8,430.8	131.83	64.954	
11,122.0	6,639.9	5,937.0	5,918.5	128.9	12.4	-69.66	-1,615.5	3,884.2	8,584.0	8,451.6	132.41	64.831	
11,200.0	6,639.8	5,937.0	5,918.5	131.1	12.4	-69.66	-1,615.5	3,884.2	8,659.7	8,525.2	134.45	64.406	
11,220.4	6,639.8	5,937.0	5,918.5	131.6	12.4	-69.66	-1,615.5	3,884.2	8,679.5	8,544.5	134.99	64.297	
11,300.0	6,639.7	5,937.0	5,918.5	133.9	12.4	-69.66	-1,615.5	3,884.2	8,756.8	8,619.7	137.08	63.880	
11,318.9	6,639.7	5,937.0	5,918.5	134.4	12.4	-69.66	-1,615.5	3,884.2	8,775.1	8,637.5	137.58	63.782	
11,400.0	6,639.6	5,937.0	5,918.5	136.7	12.4	-69.66	-1,615.5	3,884.2	8,853.9	8,714.2	139.71	63.373	
11,417.3	6,639.6	5,937.0	5,918.5	137.1	12.4	-69.66	-1,615.5	3,884.2	8,870.7	8,730.6	140.17	63.287	
11,500.0	6,639.5	5,937.0	5,918.5	139.4	12.4	-69.66	-1,615.5	3,884.2	8,951.2	8,808.8	142.34	62.885	
11,515.7	6,639.5	5,937.0	5,918.5	139.9	12.4	-69.66	-1,615.5	3,884.2	8,966.4	8,823.7	142.75	62.810	
11,600.0	6,639.3	5,937.0	5,918.5	142.2	12.4	-69.66	-1,615.5	3,884.2	9,048.4	8,903.5	144.97	62.415	
11,614.1	6,639.3	5,937.0	5,918.5	142.6	12.4	-69.66	-1,615.5	3,884.2	9,062.2	8,916.9	145.34	62.350	
11,700.0	6,639.2	5,937.0	5,918.5	145.0	12.4	-69.66	-1,615.5	3,884.2	9,145.8	8,998.2	147.60	61.962	
11,712.6	6,639.2	5,937.0	5,918.5	145.4	12.4	-69.66	-1,615.5	3,884.2	9,158.0	9,010.1	147.93	61.906	
11,800.0	6,639.1	5,937.0	5,918.5	147.8	12.4	-69.66	-1,615.5	3,884.2	9,243.2	9,092.9	150.23	61.525	
11,811.0	6,639.1	5,937.0	5,918.5	148.1	12.4	-69.66	-1,615.5	3,884.2	9,253.9	9,103.4	150.52	61.478	
11,900.0	6,639.0	5,937.0	5,918.5	150.6	12.4	-69.66	-1,615.5	3,884.2	9,340.6	9,187.7	152.87	61.103	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
11,909.4	6,639.0	5,937.0	5,918.5	150.9	12.4	-69.66	-1,615.5	3,884.2	9,349.8	9,196.7	153.11	61.064	
12,000.0	6,638.8	5,937.0	5,918.5	153.4	12.4	-69.66	-1,615.5	3,884.2	9,438.1	9,282.6	155.50	60.696	
12,007.8	6,638.8	5,937.0	5,918.5	153.6	12.4	-69.66	-1,615.5	3,884.2	9,445.8	9,290.1	155.71	60.664	
12,100.0	6,638.7	5,937.0	5,918.5	156.2	12.4	-69.66	-1,615.5	3,884.2	9,535.7	9,377.5	158.13	60.302	
12,106.3	6,638.7	5,937.0	5,918.5	156.4	12.4	-69.66	-1,615.5	3,884.2	9,541.8	9,383.5	158.30	60.278	
12,200.0	6,638.6	5,937.0	5,918.5	159.0	12.4	-69.66	-1,615.5	3,884.2	9,633.3	9,472.5	160.76	59.921	
12,204.7	6,638.6	5,937.0	5,918.5	159.1	12.4	-69.66	-1,615.5	3,884.2	9,637.9	9,477.0	160.89	59.904	
12,300.0	6,638.5	5,937.0	5,918.5	161.8	12.4	-69.66	-1,615.5	3,884.2	9,730.9	9,567.5	163.40	59.553	
12,303.1	6,638.5	5,937.0	5,918.5	161.9	12.4	-69.66	-1,615.5	3,884.2	9,734.0	9,570.5	163.48	59.542	
12,400.0	6,638.3	5,937.0	5,918.5	164.6	12.4	-69.66	-1,615.5	3,884.2	9,828.6	9,662.6	166.03	59.197	
12,401.5	6,638.3	5,937.0	5,918.5	164.6	12.4	-69.66	-1,615.5	3,884.2	9,830.1	9,664.1	166.07	59.191	
12,500.0	6,638.2	5,937.0	5,918.5	167.4	12.4	-69.66	-1,615.5	3,884.2	9,926.4	9,757.7	168.67	58.851 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	173.12	-992.4	119.7	999.7				
98.4	98.4	87.7	87.7	0.1	0.1	173.13	-992.3	119.5	999.4	999.3	0.16	6,306.132	
100.0	100.0	89.3	89.3	0.1	0.1	173.13	-992.3	119.5	999.4	999.3	0.16	6,191.414	
196.8	196.8	189.9	189.9	0.3	0.1	173.17	-991.8	118.8	998.9	998.5	0.45	2,215.984	
200.0	200.0	193.2	193.2	0.3	0.1	173.17	-991.8	118.8	998.9	998.4	0.46	2,170.617	
295.3	295.3	290.0	290.0	0.5	0.2	173.23	-991.1	117.6	998.0	997.3	0.74	1,342.743	
300.0	300.0	296.3	296.3	0.5	0.2	173.24	-991.0	117.5	998.0	997.2	0.77	1,302.365	
393.7	393.7	384.0	384.0	0.8	0.4	173.27	-990.5	116.8	997.3	996.2	1.15	865.780	
400.0	400.0	389.3	389.3	0.8	0.4	173.27	-990.5	116.8	997.3	996.1	1.18	847.154	
492.1	492.1	479.3	479.3	1.0	0.6	173.27	-990.2	116.9	997.1	995.5	1.57	634.401	
500.0	500.0	487.0	487.0	1.0	0.6	173.27	-990.2	116.9	997.1	995.5	1.61	621.071	
540.1	540.1	526.2	526.1	1.1	0.7	173.26	-990.2	117.0	997.1	995.3	1.78	560.996 CC	
590.5	590.5	575.4	575.4	1.2	0.8	173.25	-990.2	117.2	997.1	995.1	1.99	500.260	
600.0	600.0	584.6	584.6	1.2	0.8	173.25	-990.2	117.2	997.1	995.1	2.03	490.313	
689.0	689.0	666.5	666.5	1.4	1.0	173.28	-990.7	116.7	997.6	995.2	2.41	414.586	
700.0	700.0	677.3	677.3	1.4	1.0	173.29	-990.8	116.5	997.7	995.2	2.45	406.532	
787.4	787.4	762.9	762.8	1.6	1.2	173.38	-991.8	115.2	998.5	995.7	2.83	352.421	
800.0	800.0	775.2	775.2	1.7	1.2	173.39	-992.0	115.0	998.7	995.8	2.89	345.802	
885.8	885.8	859.2	859.2	1.9	1.4	173.47	-993.1	113.7	999.7	996.4	3.26	306.613	
900.0	900.0	873.1	873.0	1.9	1.4	173.48	-993.3	113.5	999.9	996.5	3.32	300.987	
984.2	984.2	956.5	956.4	2.1	1.6	173.55	-994.6	112.4	1,001.0	997.3	3.69	271.309	
1,000.0	1,000.0	972.5	972.4	2.1	1.6	173.57	-994.8	112.2	1,001.2	997.5	3.76	266.355	
1,082.7	1,082.7	1,056.4	1,056.3	2.3	1.8	173.63	-996.0	111.2	1,002.3	998.2	4.12	243.071	
1,100.0	1,100.0	1,074.0	1,073.9	2.3	1.9	173.64	-996.3	111.0	1,002.5	998.3	4.20	238.700	
1,181.1	1,181.1	1,161.0	1,160.9	2.5	2.0	173.71	-997.3	109.9	1,003.4	998.8	4.56	219.812	
1,200.0	1,200.0	1,182.7	1,182.6	2.6	2.1	173.74	-997.5	109.4	1,003.4	998.8	4.65	215.717	
1,279.5	1,279.5	1,287.7	1,287.4	2.7	2.3	174.01	-997.2	104.6	1,002.9	997.9	5.05	198.568	
1,300.0	1,300.0	1,314.5	1,314.2	2.8	2.4	174.12	-996.7	102.6	1,002.4	997.2	5.15	194.498	
1,377.9	1,377.9	1,395.0	1,394.5	3.0	2.5	133.32	-994.9	96.9	1,000.8	995.3	5.50	181.835	
1,400.0	1,400.0	1,415.7	1,415.1	3.0	2.6	133.42	-994.4	95.5	1,000.6	995.0	5.60	178.720	
1,414.8	1,414.8	1,429.0	1,428.4	3.0	2.6	133.50	-994.1	94.6	1,000.6	994.9	5.66	176.740 ES	
1,476.4	1,476.3	1,484.1	1,483.3	3.2	2.7	133.82	-993.2	90.6	1,001.2	995.3	5.92	169.119	
1,500.0	1,499.8	1,505.5	1,504.7	3.2	2.8	133.96	-992.9	89.0	1,001.9	995.8	6.02	166.400	
1,574.8	1,574.4	1,574.5	1,573.4	3.4	3.0	134.48	-992.2	83.2	1,005.0	998.6	6.35	158.294	
1,600.0	1,599.5	1,597.6	1,596.4	3.5	3.0	134.67	-992.1	81.0	1,006.5	1,000.0	6.46	155.822	
1,673.2	1,672.2	1,665.1	1,663.6	3.6	3.2	135.25	-991.9	75.0	1,012.0	1,005.2	6.79	149.100	
1,700.0	1,698.7	1,683.0	1,681.5	3.7	3.2	135.39	-992.0	73.5	1,014.4	1,007.5	6.89	147.229	
1,771.6	1,769.5	1,742.5	1,740.7	3.9	3.4	135.91	-992.5	68.6	1,022.7	1,015.5	7.20	141.963	
1,800.0	1,797.5	1,763.6	1,761.8	4.0	3.4	136.09	-992.9	66.9	1,026.6	1,019.3	7.32	140.214	
1,870.1	1,866.3	1,821.2	1,819.1	4.2	3.6	136.63	-994.7	61.9	1,038.0	1,030.4	7.64	135.854	
1,899.9	1,895.6	1,846.3	1,844.1	4.3	3.6	136.87	-995.6	59.7	1,043.5	1,035.7	7.78	134.169	
1,968.5	1,962.6	1,900.8	1,898.4	4.5	3.8	137.57	-997.8	54.7	1,056.9	1,048.8	8.11	130.378	
2,000.0	1,993.4	1,924.7	1,922.1	4.6	3.8	137.87	-999.1	52.6	1,063.4	1,055.1	8.25	128.830	
2,066.9	2,058.9	1,967.0	1,964.2	4.8	3.9	138.39	-1,001.5	48.9	1,077.9	1,069.3	8.55	125.997	
2,100.0	2,091.3	2,000.9	1,997.9	4.9	4.0	138.80	-1,003.8	46.0	1,085.4	1,076.6	8.73	124.275	
2,165.3	2,155.2	2,050.8	2,047.5	5.2	4.2	139.39	-1,007.6	41.8	1,100.8	1,091.8	9.05	121.630	
2,200.0	2,189.1	2,075.7	2,072.2	5.3	4.2	139.68	-1,009.8	39.6	1,109.4	1,100.2	9.22	120.388	
2,263.8	2,251.5	2,119.4	2,115.5	5.5	4.3	140.16	-1,014.0	36.1	1,126.0	1,116.5	9.51	118.342	
2,300.0	2,286.9	2,157.0	2,152.8	5.7	4.4	140.56	-1,018.2	33.3	1,135.9	1,126.2	9.71	116.930	
2,362.2	2,347.7	2,197.2	2,192.6	5.9	4.6	140.97	-1,022.9	30.4	1,153.4	1,143.4	10.00	115.356	
2,400.0	2,384.7	2,232.3	2,227.4	6.0	4.6	141.33	-1,027.0	27.7	1,164.1	1,153.9	10.19	114.197	
2,460.6	2,444.0	2,288.5	2,283.0	6.3	4.8	141.92	-1,033.6	23.0	1,181.4	1,170.9	10.51	112.437	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
2,500.0	2,482.5	2,325.0	2,319.0	6.4	4.9	142.30	-1,037.9	19.7	1,192.8	1,182.1	10.71	111.374	
2,559.0	2,540.3	2,371.7	2,365.2	6.7	5.0	142.80	-1,043.4	15.0	1,210.1	1,199.1	11.00	109.987	
2,600.0	2,580.3	2,400.8	2,393.9	6.8	5.1	143.11	-1,047.1	12.0	1,222.4	1,211.2	11.20	109.163	
2,657.5	2,636.5	2,439.0	2,431.5	7.1	5.3	143.52	-1,052.2	7.8	1,240.3	1,228.9	11.47	108.155	
2,700.0	2,678.1	2,473.8	2,465.7	7.2	5.4	143.89	-1,057.2	3.9	1,254.0	1,242.3	11.69	107.303	
2,755.9	2,732.8	2,515.9	2,507.2	7.5	5.5	144.33	-1,063.4	-1.0	1,272.4	1,260.4	11.97	106.330	
2,800.0	2,776.0	2,534.0	2,524.9	7.7	5.6	144.52	-1,066.2	-3.1	1,287.3	1,275.1	12.15	105.961	
2,854.3	2,829.1	2,582.7	2,572.5	7.9	5.8	145.01	-1,074.1	-8.9	1,306.0	1,293.6	12.44	104.983	
2,900.0	2,873.8	2,612.3	2,601.5	8.1	5.9	145.31	-1,079.3	-12.5	1,322.4	1,309.7	12.66	104.485	
2,952.7	2,925.4	2,653.5	2,641.7	8.3	6.0	145.72	-1,086.8	-17.6	1,341.7	1,328.8	12.92	103.847	
3,000.0	2,971.6	2,696.0	2,683.2	8.5	6.2	146.13	-1,094.6	-22.8	1,359.2	1,346.0	13.17	103.225	
3,051.2	3,021.6	2,743.6	2,729.6	8.7	6.4	146.57	-1,103.3	-28.5	1,378.2	1,364.7	13.43	102.591	
3,100.0	3,069.4	2,791.0	2,775.9	8.9	6.5	146.98	-1,112.0	-33.9	1,396.3	1,382.6	13.69	102.020	
3,149.6	3,117.9	2,839.2	2,823.0	9.1	6.7	147.37	-1,120.9	-39.0	1,414.6	1,400.7	13.94	101.472	
3,200.0	3,167.2	2,888.4	2,871.1	9.3	6.9	147.75	-1,129.8	-43.8	1,433.2	1,419.0	14.20	100.952	
3,248.0	3,214.2	2,934.3	2,916.1	9.5	7.0	148.07	-1,138.2	-48.0	1,450.9	1,436.4	14.44	100.480	
3,300.0	3,265.0	2,982.9	2,963.6	9.8	7.2	148.42	-1,147.0	-52.6	1,470.0	1,455.3	14.70	100.013	
3,346.4	3,310.5	3,033.4	3,013.0	10.0	7.4	148.78	-1,155.9	-57.5	1,487.1	1,472.1	14.94	99.526	
3,400.0	3,362.9	3,102.2	3,080.6	10.2	7.6	149.25	-1,167.5	-64.2	1,506.3	1,491.0	15.24	98.836	
3,444.9	3,406.7	3,149.8	3,127.4	10.4	7.8	149.57	-1,175.1	-68.7	1,522.0	1,506.6	15.47	98.390	
3,473.0	3,434.2	3,179.7	3,156.7	10.5	7.9	149.77	-1,179.7	-71.6	1,531.9	1,516.2	15.61	98.116	
3,500.0	3,460.7	3,206.9	3,183.5	10.6	7.9	150.04	-1,183.9	-74.2	1,541.1	1,525.4	15.74	97.882	
3,543.3	3,503.2	3,247.5	3,223.5	10.7	8.1	150.44	-1,190.1	-78.0	1,555.6	1,539.6	15.93	97.627	
3,600.0	3,559.0	3,300.6	3,275.7	10.9	8.3	150.93	-1,198.2	-83.2	1,573.7	1,557.5	16.18	97.250	
3,641.7	3,600.2	3,338.5	3,312.9	11.0	8.4	151.26	-1,204.0	-86.9	1,586.5	1,570.1	16.36	96.974	
3,700.0	3,657.9	3,386.0	3,359.6	11.2	8.6	151.67	-1,211.3	-91.8	1,603.6	1,587.0	16.60	96.629	
3,740.1	3,697.8	3,416.1	3,389.1	11.3	8.7	151.92	-1,216.0	-95.0	1,615.0	1,598.3	16.75	96.419	
3,800.0	3,757.3	3,454.9	3,427.2	11.4	8.8	152.25	-1,222.4	-99.3	1,631.7	1,614.8	16.96	96.184	
3,838.6	3,795.7	3,481.0	3,452.7	11.5	8.9	152.45	-1,227.0	-102.2	1,642.3	1,625.2	17.10	96.047	
3,900.0	3,857.0	3,539.9	3,510.3	11.7	9.2	152.81	-1,237.5	-108.8	1,658.4	1,641.1	17.35	95.583	
3,937.0	3,893.9	3,576.0	3,545.6	11.7	9.3	153.01	-1,243.9	-112.9	1,667.6	1,650.1	17.50	95.302	
4,000.0	3,956.9	3,627.4	3,595.8	11.8	9.5	153.30	-1,253.2	-118.6	1,682.4	1,664.6	17.72	94.927	
4,035.4	3,992.3	3,656.1	3,623.9	11.9	9.6	153.44	-1,258.5	-121.9	1,690.3	1,672.5	17.84	94.731	
4,072.9	4,029.8	3,688.0	3,655.0	11.9	9.8	-165.23	-1,264.5	-125.5	1,698.5	1,677.7	20.79	81.699	
4,100.0	4,056.9	3,712.0	3,678.4	12.0	9.9	-165.18	-1,269.1	-128.1	1,704.2	1,683.3	20.93	81.415	
4,133.8	4,090.7	3,742.1	3,707.7	12.0	10.0	-165.12	-1,274.9	-131.4	1,711.5	1,690.4	21.12	81.052	
4,200.0	4,156.9	3,804.2	3,768.3	12.1	10.3	-165.00	-1,287.0	-138.1	1,725.8	1,704.3	21.49	80.316	
4,232.3	4,189.2	3,835.7	3,798.9	12.2	10.4	-164.95	-1,293.2	-141.3	1,732.8	1,711.2	21.67	79.949	
4,300.0	4,256.9	3,994.4	3,954.5	12.3	11.0	-164.72	-1,320.7	-156.0	1,745.9	1,723.5	22.39	77.982	
4,330.7	4,287.6	4,039.4	3,998.9	12.4	11.1	-164.64	-1,327.1	-160.2	1,750.8	1,728.2	22.60	77.487	
4,400.0	4,356.9	4,105.5	4,064.0	12.5	11.4	-164.52	-1,336.1	-166.6	1,761.7	1,738.7	22.95	76.778	
4,429.1	4,386.0	4,131.5	4,089.7	12.5	11.5	-164.47	-1,339.6	-169.1	1,766.3	1,743.2	23.09	76.507	
4,500.0	4,456.9	4,188.1	4,145.4	12.6	11.7	-164.36	-1,347.6	-174.7	1,777.9	1,754.5	23.42	75.917	
4,527.5	4,484.4	4,209.3	4,166.3	12.7	11.8	-164.32	-1,350.7	-176.9	1,782.5	1,759.0	23.55	75.702	
4,600.0	4,556.9	4,268.1	4,224.1	12.8	12.0	-164.20	-1,359.6	-183.2	1,795.2	1,771.3	23.90	75.116	
4,626.0	4,582.9	4,290.4	4,246.0	12.9	12.1	-164.15	-1,363.0	-185.7	1,799.8	1,775.8	24.03	74.893	
4,700.0	4,656.9	4,350.8	4,305.2	13.0	12.3	-164.02	-1,372.5	-192.5	1,813.3	1,788.9	24.40	74.310	
4,724.4	4,681.3	4,368.5	4,322.6	13.0	12.4	-163.99	-1,375.4	-194.6	1,817.9	1,793.4	24.52	74.146	
4,800.0	4,756.9	4,429.0	4,381.8	13.1	12.6	-163.84	-1,385.5	-202.1	1,832.6	1,807.7	24.90	73.596	
4,822.8	4,779.7	4,449.5	4,401.8	13.2	12.7	-163.79	-1,388.9	-204.8	1,837.2	1,812.2	25.02	73.416	
4,900.0	4,856.9	4,545.1	4,495.4	13.3	13.1	-163.58	-1,404.6	-216.3	1,851.9	1,826.4	25.54	72.496	
4,921.2	4,878.1	4,564.0	4,513.9	13.4	13.2	-163.54	-1,407.6	-218.5	1,855.9	1,830.3	25.66	72.333	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,000.0	4,956.9	4,639.8	4,588.1	13.5	13.5	-163.38	-1,420.0	-227.5	1,870.9	1,844.8	26.10	71.684	
5,019.7	4,976.6	4,664.0	4,611.8	13.5	13.6	-163.33	-1,423.8	-230.3	1,874.6	1,848.4	26.23	71.468	
5,100.0	5,056.9	4,745.8	4,692.1	13.7	13.9	-163.16	-1,436.6	-240.1	1,889.4	1,862.7	26.70	70.771	
5,118.1	5,075.0	4,760.4	4,706.3	13.7	14.0	-163.13	-1,438.9	-241.8	1,892.8	1,866.0	26.79	70.659	
5,200.0	5,156.9	4,823.6	4,768.3	13.8	14.2	-163.00	-1,449.3	-249.2	1,908.4	1,881.3	27.19	70.187	
5,216.5	5,173.4	4,835.2	4,779.6	13.9	14.3	-162.98	-1,451.2	-250.6	1,911.7	1,884.4	27.27	70.102	
5,300.0	5,256.9	4,903.0	4,845.8	14.0	14.6	-162.83	-1,463.1	-259.3	1,928.8	1,901.1	27.72	69.593	
5,314.9	5,271.8	4,904.0	4,846.8	14.1	14.6	-162.83	-1,463.3	-259.4	1,932.0	1,904.2	27.75	69.627	
5,400.0	5,356.9	5,031.2	4,971.0	14.2	15.1	-162.60	-1,485.9	-274.3	1,949.6	1,921.1	28.43	68.574	
5,413.4	5,370.3	5,081.3	5,020.3	14.2	15.3	-162.56	-1,494.1	-278.5	1,952.0	1,923.3	28.64	68.148	
5,500.0	5,456.9	5,307.1	5,243.9	14.4	15.9	-162.57	-1,523.7	-287.3	1,963.7	1,934.3	29.49	66.587	
5,511.8	5,468.7	5,330.4	5,267.1	14.4	16.0	-162.59	-1,526.0	-287.5	1,964.9	1,935.3	29.57	66.446	
5,600.0	5,556.9	5,449.4	5,385.7	14.6	16.3	-162.63	-1,536.1	-289.0	1,972.3	1,942.3	30.02	65.695	
5,610.2	5,567.1	5,460.8	5,397.1	14.6	16.3	-162.63	-1,537.0	-289.3	1,973.1	1,943.0	30.07	65.622	
5,700.0	5,656.9	5,624.4	5,560.3	14.7	16.6	-162.57	-1,545.6	-294.4	1,978.4	1,947.8	30.59	64.678	
5,708.6	5,665.5	5,637.8	5,573.7	14.8	16.7	-162.56	-1,546.0	-294.8	1,978.8	1,948.1	30.63	64.599	
5,800.0	5,756.9	5,770.9	5,706.7	14.9	16.9	-162.46	-1,548.6	-299.4	1,981.4	1,950.3	31.05	63.814	
5,807.1	5,764.0	5,780.9	5,716.7	14.9	16.9	-162.45	-1,548.7	-299.7	1,981.5	1,950.4	31.08	63.756	
5,900.0	5,856.9	5,887.6	5,823.4	15.1	17.1	-162.43	-1,549.5	-300.7	1,982.4	1,951.0	31.43	63.077	
5,905.5	5,862.4	5,892.2	5,828.0	15.1	17.1	-162.43	-1,549.6	-300.7	1,982.5	1,951.0	31.45	63.043	
5,971.9	5,928.8	6,072.2	6,007.0	15.3	17.3	-162.84	-1,551.8	-286.4	1,982.4	1,950.6	31.78	62.384	
6,000.0	5,956.9	6,102.3	6,036.6	15.3	17.3	-73.14	-1,552.2	-280.5	1,980.9	1,953.6	27.26	72.667	
6,003.9	5,960.8	6,106.5	6,040.6	15.3	17.3	-73.19	-1,552.2	-279.6	1,980.6	1,953.4	27.27	72.622	
6,050.0	6,006.7	6,166.9	6,099.2	15.4	17.3	-73.99	-1,553.6	-264.9	1,977.4	1,949.9	27.45	72.038	
6,100.0	6,056.2	6,384.4	6,295.8	15.4	17.1	-77.89	-1,559.0	-173.7	1,970.6	1,942.8	27.87	70.717	
6,102.3	6,058.5	6,386.9	6,297.9	15.4	17.1	-77.97	-1,559.1	-172.3	1,970.2	1,942.4	27.88	70.680	
6,150.0	6,105.1	6,431.0	6,334.4	15.4	17.1	-79.55	-1,560.0	-147.7	1,962.0	1,934.0	28.06	69.926	
6,200.0	6,153.0	6,464.5	6,361.3	15.5	17.0	-81.02	-1,561.0	-127.7	1,953.4	1,925.2	28.24	69.167	
6,200.8	6,153.8	6,465.0	6,361.7	15.5	17.0	-81.05	-1,561.0	-127.4	1,953.3	1,925.0	28.24	69.156	
6,250.0	6,199.9	6,491.3	6,382.1	15.5	17.0	-82.38	-1,562.0	-110.8	1,945.1	1,916.7	28.39	68.502	
6,299.2	6,244.8	6,511.6	6,397.4	15.5	17.0	-83.55	-1,562.9	-97.5	1,937.4	1,908.8	28.52	67.928	
6,300.0	6,245.5	6,511.9	6,397.6	15.5	17.0	-83.56	-1,562.9	-97.3	1,937.2	1,908.7	28.52	67.919	
6,350.0	6,289.6	6,549.9	6,425.1	15.5	17.0	-85.22	-1,564.7	-71.2	1,930.0	1,901.3	28.76	67.119	
6,397.6	6,329.9	6,570.7	6,439.4	15.4	16.9	-86.33	-1,565.6	-56.1	1,923.9	1,894.9	28.91	66.535	
6,400.0	6,331.8	6,571.4	6,439.9	15.4	16.9	-86.37	-1,565.7	-55.6	1,923.6	1,894.7	28.92	66.511	
6,450.0	6,372.2	6,580.8	6,446.2	15.4	16.9	-87.09	-1,566.1	-48.6	1,918.1	1,889.1	29.05	66.017	
6,496.0	6,407.4	6,582.6	6,447.4	15.4	16.9	-87.47	-1,566.2	-47.3	1,914.1	1,884.9	29.18	65.593	
6,500.0	6,410.3	6,582.5	6,447.4	15.4	16.9	-87.49	-1,566.2	-47.3	1,913.8	1,884.6	29.19	65.561	
6,550.0	6,446.1	6,579.2	6,445.2	15.4	16.9	-87.65	-1,566.0	-49.8	1,910.6	1,881.2	29.35	65.089	
6,594.5	6,475.9	6,573.3	6,441.2	15.4	16.9	-87.63	-1,565.8	-54.2	1,908.7	1,879.1	29.54	64.617	
6,600.0	6,479.4	6,572.4	6,440.6	15.4	16.9	-87.61	-1,565.7	-54.8	1,908.5	1,878.9	29.56	64.562	
6,650.0	6,510.0	6,563.1	6,434.3	15.5	16.9	-87.41	-1,565.3	-61.6	1,907.6	1,877.8	29.83	63.951	
6,666.8	6,519.7	6,559.5	6,431.8	15.6	16.9	-87.31	-1,565.1	-64.2	1,907.5	1,877.6	29.94	63.704	
6,692.9	6,534.0	6,553.6	6,427.7	15.7	17.0	-87.13	-1,564.9	-68.5	1,907.7	1,877.6	30.12	63.336	
6,700.0	6,537.8	6,551.9	6,426.5	15.7	17.0	-87.07	-1,564.8	-69.7	1,907.8	1,877.6	30.17	63.239	
6,750.0	6,562.6	6,539.3	6,417.6	16.2	17.0	-86.60	-1,564.2	-78.6	1,909.0	1,878.4	30.58	62.419	
6,791.3	6,580.8	6,528.0	6,409.5	16.6	17.0	-86.14	-1,563.7	-86.4	1,910.8	1,879.8	30.99	61.652	
6,800.0	6,584.3	6,525.6	6,407.7	16.7	17.0	-86.03	-1,563.5	-88.1	1,911.2	1,880.1	31.08	61.494	
6,850.0	6,602.9	6,514.0	6,399.2	17.3	17.0	-85.45	-1,563.0	-95.9	1,914.4	1,882.7	31.66	60.458	
6,889.7	6,615.2	6,514.0	6,399.2	17.9	17.0	-85.20	-1,563.0	-95.9	1,917.6	1,885.4	32.22	59.513	
6,900.0	6,618.1	6,514.0	6,399.2	18.0	17.0	-85.12	-1,563.0	-95.9	1,918.6	1,886.2	32.37	59.279	
6,950.0	6,630.0	6,488.8	6,380.2	18.8	17.0	-84.05	-1,561.9	-112.4	1,923.4	1,890.3	33.10	58.114	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
6,988.2	6,636.8	6,479.1	6,372.7	19.5	17.0	-83.45	-1,561.5	-118.6	1,927.7	1,894.0	33.72	57.175	
7,000.0	6,638.5	6,476.0	6,370.3	19.7	17.0	-83.26	-1,561.4	-120.5	1,929.1	1,895.2	33.91	56.896	
7,050.0	6,643.5	6,462.4	6,359.7	20.6	17.0	-82.41	-1,560.9	-129.0	1,935.5	1,900.7	34.76	55.681	
7,086.6	6,644.9	6,452.1	6,351.4	21.3	17.1	-81.75	-1,560.6	-135.3	1,940.6	1,905.1	35.41	54.800	
7,097.8	6,645.0	6,448.8	6,348.9	21.5	17.1	-81.55	-1,560.5	-137.2	1,942.2	1,906.6	35.61	54.541	
7,100.0	6,645.0	6,448.2	6,348.3	21.6	17.1	-81.53	-1,560.4	-137.6	1,942.5	1,906.8	35.65	54.487	
7,185.0	6,644.9	6,420.0	6,325.5	23.3	17.1	-80.85	-1,559.7	-154.0	1,956.4	1,919.1	37.30	52.456	
7,200.0	6,644.9	6,420.0	6,325.5	23.6	17.1	-80.85	-1,559.7	-154.0	1,959.2	1,921.6	37.60	52.110	
7,283.4	6,644.8	6,394.9	6,304.6	25.4	17.1	-80.24	-1,559.2	-168.0	1,976.2	1,936.9	39.35	50.221	
7,300.0	6,644.7	6,390.0	6,300.5	25.8	17.1	-80.12	-1,559.1	-170.7	1,979.9	1,940.2	39.70	49.876	
7,381.9	6,644.6	6,366.8	6,280.8	27.7	17.2	-79.54	-1,558.7	-183.0	1,999.9	1,958.4	41.50	48.191	
7,400.0	6,644.6	6,361.9	6,276.7	28.1	17.2	-79.42	-1,558.7	-185.5	2,004.7	1,962.8	41.90	47.847	
7,480.3	6,644.5	6,325.0	6,244.7	30.0	17.2	-78.49	-1,558.2	-203.9	2,027.5	1,983.8	43.68	46.415	
7,500.0	6,644.5	6,325.0	6,244.7	30.5	17.2	-78.49	-1,558.2	-203.9	2,033.4	1,989.3	44.14	46.065	
7,578.7	6,644.4	6,325.0	6,244.7	32.4	17.2	-78.49	-1,558.2	-203.9	2,058.7	2,012.6	46.03	44.721	
7,600.0	6,644.4	6,307.2	6,229.0	32.9	17.2	-78.04	-1,558.0	-212.3	2,065.8	2,019.3	46.49	44.434	
7,677.1	6,644.3	6,283.6	6,207.9	34.8	17.2	-77.43	-1,557.6	-222.8	2,093.4	2,045.0	48.31	43.336	
7,700.0	6,644.2	6,277.2	6,202.1	35.4	17.2	-77.26	-1,557.4	-225.6	2,101.9	2,053.1	48.84	43.035	
7,775.6	6,644.1	6,257.3	6,184.0	37.3	17.3	-76.74	-1,556.8	-233.8	2,131.5	2,080.9	50.64	42.087	
7,800.0	6,644.1	6,251.4	6,178.6	38.0	17.3	-76.58	-1,556.6	-236.2	2,141.5	2,090.3	51.23	41.804	
7,874.0	6,644.0	6,230.0	6,158.8	39.9	17.3	-76.01	-1,555.8	-244.4	2,173.0	2,120.0	52.99	41.006	
7,900.0	6,644.0	6,230.0	6,158.8	40.5	17.3	-76.01	-1,555.8	-244.4	2,184.5	2,130.9	53.64	40.722	
7,972.4	6,643.9	6,230.0	6,158.8	42.4	17.3	-76.01	-1,555.8	-244.4	2,217.8	2,162.3	55.48	39.973	
8,000.0	6,643.9	6,230.0	6,158.8	43.1	17.3	-76.01	-1,555.8	-244.4	2,231.0	2,174.8	56.18	39.710	
8,070.8	6,643.8	6,230.0	6,158.8	45.0	17.3	-76.01	-1,555.8	-244.4	2,266.0	2,208.0	58.00	39.072	
8,100.0	6,643.7	6,230.0	6,158.8	45.8	17.3	-76.01	-1,555.8	-244.4	2,280.9	2,222.2	58.74	38.829	
8,169.3	6,643.7	6,230.0	6,158.8	47.6	17.3	-76.01	-1,555.8	-244.4	2,317.4	2,256.9	60.53	38.285	
8,200.0	6,643.6	6,196.6	6,127.5	48.4	17.3	-75.11	-1,554.6	-255.9	2,333.3	2,272.2	61.12	38.176	
8,267.7	6,643.5	6,190.3	6,121.5	50.2	17.3	-74.94	-1,554.3	-257.9	2,370.6	2,307.8	62.83	37.732	
8,300.0	6,643.5	6,187.4	6,118.8	51.1	17.3	-74.87	-1,554.2	-258.8	2,388.9	2,325.3	63.64	37.536	
8,366.1	6,643.4	6,181.7	6,113.4	52.9	17.3	-74.71	-1,554.1	-260.6	2,427.2	2,361.9	65.32	37.158	
8,400.0	6,643.4	6,178.9	6,110.7	53.8	17.3	-74.63	-1,554.0	-261.4	2,447.2	2,381.1	66.18	36.979	
8,464.5	6,643.3	6,173.7	6,105.7	55.5	17.3	-74.50	-1,553.8	-263.0	2,486.3	2,418.4	67.82	36.657	
8,500.0	6,643.2	6,171.0	6,103.1	56.5	17.3	-74.42	-1,553.7	-263.7	2,508.1	2,439.4	68.73	36.494	
8,563.0	6,643.2	6,136.0	6,069.4	58.2	17.3	-73.47	-1,552.8	-272.9	2,548.4	2,478.3	70.09	36.359	
8,600.0	6,643.1	6,136.0	6,069.4	59.2	17.3	-73.47	-1,552.8	-272.9	2,571.9	2,500.9	71.05	36.198	
8,661.4	6,643.0	6,136.0	6,069.4	60.8	17.3	-73.47	-1,552.8	-272.9	2,611.7	2,539.0	72.66	35.946	
8,700.0	6,643.0	6,136.0	6,069.4	61.9	17.3	-73.47	-1,552.8	-272.9	2,637.1	2,563.5	73.66	35.799	
8,759.8	6,642.9	6,136.0	6,069.4	63.5	17.3	-73.47	-1,552.8	-272.9	2,677.1	2,601.9	75.23	35.586	
8,800.0	6,642.9	6,136.0	6,069.4	64.6	17.3	-73.47	-1,552.8	-272.9	2,704.4	2,628.2	76.28	35.453	
8,858.2	6,642.8	6,136.0	6,069.4	66.2	17.3	-73.47	-1,552.8	-272.9	2,744.6	2,666.8	77.81	35.271	
8,900.0	6,642.7	6,136.0	6,069.4	67.3	17.3	-73.47	-1,552.8	-272.9	2,773.7	2,694.8	78.91	35.151	
8,956.7	6,642.7	6,136.0	6,069.4	68.9	17.3	-73.47	-1,552.8	-272.9	2,813.8	2,733.4	80.40	34.997	
9,000.0	6,642.6	6,136.0	6,069.4	70.1	17.3	-73.47	-1,552.8	-272.9	2,844.8	2,763.3	81.54	34.888	
9,055.1	6,642.5	6,136.0	6,069.4	71.6	17.3	-73.47	-1,552.8	-272.9	2,884.8	2,801.8	82.99	34.758	
9,100.0	6,642.5	6,136.0	6,069.4	72.8	17.3	-73.47	-1,552.8	-272.9	2,917.7	2,833.5	84.18	34.660	
9,153.5	6,642.4	6,136.0	6,069.4	74.3	17.3	-73.47	-1,552.8	-272.9	2,957.3	2,871.7	85.59	34.550	
9,200.0	6,642.4	6,136.0	6,069.4	75.6	17.3	-73.47	-1,552.8	-272.9	2,992.0	2,905.2	86.82	34.462	
9,251.9	6,642.3	6,136.0	6,069.4	77.0	17.3	-73.47	-1,552.8	-272.9	3,031.3	2,943.1	88.20	34.370	
9,300.0	6,642.2	6,136.0	6,069.4	78.3	17.3	-73.47	-1,552.8	-272.9	3,067.9	2,978.4	89.47	34.290	
9,350.4	6,642.2	6,136.0	6,069.4	79.7	17.3	-73.47	-1,552.8	-272.9	3,106.6	3,015.8	90.80	34.213	
9,400.0	6,642.1	6,136.0	6,069.4	81.1	17.3	-73.47	-1,552.8	-272.9	3,145.1	3,052.9	92.12	34.142	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,448.8	6,642.0	6,136.0	6,069.4	82.4	17.3	-73.47	-1,552.8	-272.9	3,183.2	3,089.8	93.41	34.077	
9,500.0	6,642.0	6,136.0	6,069.4	83.8	17.3	-73.47	-1,552.8	-272.9	3,223.5	3,128.7	94.77	34.013	
9,547.2	6,641.9	6,136.0	6,069.4	85.1	17.3	-73.47	-1,552.8	-272.9	3,261.0	3,164.9	96.03	33.959	
9,600.0	6,641.9	6,101.1	6,035.4	86.6	17.3	-72.52	-1,552.1	-280.7	3,302.4	3,205.4	96.98	34.053	
9,645.6	6,641.8	6,098.5	6,032.9	87.9	17.3	-72.46	-1,552.1	-281.2	3,339.0	3,240.9	98.15	34.018	
9,700.0	6,641.7	6,095.6	6,030.0	89.4	17.3	-72.38	-1,552.1	-281.8	3,382.9	3,283.3	99.55	33.981	
9,744.1	6,641.7	6,093.2	6,027.7	90.6	17.3	-72.31	-1,552.0	-282.3	3,418.7	3,318.0	100.69	33.954	
9,800.0	6,641.6	6,090.3	6,024.8	92.1	17.3	-72.23	-1,552.0	-282.9	3,464.3	3,362.2	102.12	33.923	
9,842.5	6,641.6	6,088.1	6,022.7	93.3	17.3	-72.17	-1,552.0	-283.3	3,499.2	3,396.0	103.22	33.901	
9,900.0	6,641.5	6,085.2	6,019.8	94.9	17.3	-72.10	-1,551.9	-283.9	3,546.7	3,442.0	104.70	33.875	
9,940.9	6,641.4	6,083.2	6,017.9	96.0	17.3	-72.04	-1,551.9	-284.3	3,580.7	3,474.9	105.75	33.859	
10,000.0	6,641.4	6,080.4	6,015.1	97.7	17.3	-71.97	-1,551.9	-284.8	3,629.9	3,522.6	107.27	33.838	
10,039.3	6,641.3	6,078.5	6,013.3	98.8	17.3	-71.92	-1,551.8	-285.2	3,662.9	3,554.6	108.29	33.825	
10,100.0	6,641.2	6,041.0	5,976.3	100.4	17.3	-70.91	-1,551.6	-291.7	3,714.6	3,605.3	109.30	33.985	
10,137.8	6,641.2	6,041.0	5,976.3	101.5	17.3	-70.91	-1,551.6	-291.7	3,746.5	3,636.2	110.30	33.968	
10,200.0	6,641.1	6,041.0	5,976.3	103.2	17.3	-70.91	-1,551.6	-291.7	3,799.2	3,687.3	111.94	33.941	
10,236.2	6,641.1	6,041.0	5,976.3	104.2	17.3	-70.91	-1,551.6	-291.7	3,830.0	3,717.2	112.89	33.927	
10,300.0	6,641.0	6,041.0	5,976.3	106.0	17.3	-70.91	-1,551.6	-291.7	3,884.6	3,770.0	114.57	33.905	
10,334.6	6,640.9	6,041.0	5,976.3	107.0	17.3	-70.91	-1,551.6	-291.7	3,914.3	3,798.8	115.48	33.894	
10,400.0	6,640.9	6,041.0	5,976.3	108.8	17.3	-70.91	-1,551.6	-291.7	3,970.6	3,853.4	117.21	33.876	
10,433.0	6,640.8	6,041.0	5,976.3	109.7	17.3	-70.91	-1,551.6	-291.7	3,999.2	3,881.1	118.08	33.868	
10,500.0	6,640.7	6,041.0	5,976.3	111.6	17.3	-70.91	-1,551.6	-291.7	4,057.3	3,937.4	119.85	33.853	
10,531.5	6,640.7	6,041.0	5,976.3	112.4	17.3	-70.91	-1,551.6	-291.7	4,084.7	3,964.0	120.68	33.847	
10,600.0	6,640.6	6,041.0	5,976.3	114.3	17.3	-70.91	-1,551.6	-291.7	4,144.5	4,022.1	122.49	33.836	
10,629.9	6,640.6	6,041.0	5,976.3	115.2	17.3	-70.91	-1,551.6	-291.7	4,170.8	4,047.5	123.28	33.832	
10,700.0	6,640.5	6,041.0	5,976.3	117.1	17.3	-70.91	-1,551.6	-291.7	4,232.4	4,107.3	125.13	33.824	
10,728.3	6,640.4	6,041.0	5,976.3	117.9	17.3	-70.91	-1,551.6	-291.7	4,257.4	4,131.5	125.88	33.821	
10,800.0	6,640.4	6,041.0	5,976.3	119.9	17.3	-70.91	-1,551.6	-291.7	4,320.7	4,193.0	127.77	33.816	
10,826.7	6,640.3	6,041.0	5,976.3	120.7	17.3	-70.91	-1,551.6	-291.7	4,344.5	4,216.0	128.48	33.814	
10,900.0	6,640.2	6,041.0	5,976.3	122.7	17.3	-70.91	-1,551.6	-291.7	4,409.6	4,279.2	130.42	33.812	
10,925.2	6,640.2	6,041.0	5,976.3	123.4	17.3	-70.91	-1,551.6	-291.7	4,432.1	4,301.0	131.08	33.811	
11,000.0	6,640.1	6,041.0	5,976.3	125.5	17.3	-70.91	-1,551.6	-291.7	4,498.9	4,365.9	133.06	33.811 SF	
11,023.6	6,640.1	6,041.0	5,976.3	126.1	17.3	-70.91	-1,551.6	-291.7	4,520.1	4,386.4	133.69	33.811	
11,100.0	6,640.0	6,041.0	5,976.3	128.3	17.3	-70.91	-1,551.6	-291.7	4,588.7	4,453.0	135.71	33.813	
11,122.0	6,639.9	6,041.0	5,976.3	128.9	17.3	-70.91	-1,551.6	-291.7	4,608.5	4,472.2	136.29	33.814	
11,200.0	6,639.8	6,041.0	5,976.3	131.1	17.3	-70.91	-1,551.6	-291.7	4,678.9	4,540.5	138.35	33.818	
11,220.4	6,639.8	6,041.0	5,976.3	131.6	17.3	-70.91	-1,551.6	-291.7	4,697.4	4,558.5	138.90	33.820	
11,300.0	6,639.7	6,041.0	5,976.3	133.9	17.3	-70.91	-1,551.6	-291.7	4,769.5	4,628.5	141.00	33.826	
11,318.9	6,639.7	6,041.0	5,976.3	134.4	17.3	-70.91	-1,551.6	-291.7	4,786.6	4,645.1	141.50	33.827	
11,400.0	6,639.6	6,041.0	5,976.3	136.7	17.3	-70.91	-1,551.6	-291.7	4,860.4	4,716.8	143.65	33.835	
11,417.3	6,639.6	6,041.0	5,976.3	137.1	17.3	-70.91	-1,551.6	-291.7	4,876.2	4,732.1	144.11	33.837	
11,500.0	6,639.5	6,041.0	5,976.3	139.4	17.3	-70.91	-1,551.6	-291.7	4,951.7	4,805.4	146.30	33.847	
11,515.7	6,639.5	6,041.0	5,976.3	139.9	17.3	-70.91	-1,551.6	-291.7	4,966.1	4,819.4	146.71	33.849	
11,600.0	6,639.3	6,041.0	5,976.3	142.2	17.3	-70.91	-1,551.6	-291.7	5,043.3	4,894.4	148.95	33.860	
11,614.1	6,639.3	6,041.0	5,976.3	142.6	17.3	-70.91	-1,551.6	-291.7	5,056.3	4,907.0	149.32	33.862	
11,700.0	6,639.2	6,041.0	5,976.3	145.0	17.3	-70.91	-1,551.6	-291.7	5,135.3	4,983.7	151.60	33.874	
11,712.6	6,639.2	6,041.0	5,976.3	145.4	17.3	-70.91	-1,551.6	-291.7	5,146.8	4,994.9	151.93	33.876	
11,800.0	6,639.1	6,041.0	5,976.3	147.8	17.3	-70.91	-1,551.6	-291.7	5,227.5	5,073.2	154.25	33.890	
11,811.0	6,639.1	6,041.0	5,976.3	148.1	17.3	-70.91	-1,551.6	-291.7	5,237.7	5,083.1	154.54	33.892	
11,900.0	6,639.0	6,041.0	5,976.3	150.6	17.3	-70.91	-1,551.6	-291.7	5,320.0	5,163.1	156.90	33.907	
11,909.4	6,639.0	6,041.0	5,976.3	150.9	17.3	-70.91	-1,551.6	-291.7	5,328.7	5,171.6	157.15	33.909	
12,000.0	6,638.8	6,041.0	5,976.3	153.4	17.3	-70.91	-1,551.6	-291.7	5,412.8	5,253.2	159.55	33.925	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
12,007.8	6,638.8	6,041.0	5,976.3	153.6	17.3	-70.91	-1,551.6	-291.7	5,420.1	5,260.3	159.76	33.927		
12,100.0	6,638.7	6,041.0	5,976.3	156.2	17.3	-70.91	-1,551.6	-291.7	5,505.8	5,343.6	162.20	33.944		
12,106.3	6,638.7	6,041.0	5,976.3	156.4	17.3	-70.91	-1,551.6	-291.7	5,511.7	5,349.3	162.37	33.945		
12,200.0	6,638.6	6,041.0	5,976.3	159.0	17.3	-70.91	-1,551.6	-291.7	5,599.1	5,434.2	164.86	33.964		
12,204.7	6,638.6	6,041.0	5,976.3	159.1	17.3	-70.91	-1,551.6	-291.7	5,603.5	5,438.5	164.98	33.965		
12,300.0	6,638.5	6,041.0	5,976.3	161.8	17.3	-70.91	-1,551.6	-291.7	5,692.6	5,525.1	167.51	33.984		
12,303.1	6,638.5	6,041.0	5,976.3	161.9	17.3	-70.91	-1,551.6	-291.7	5,695.5	5,527.9	167.59	33.985		
12,400.0	6,638.3	6,041.0	5,976.3	164.6	17.3	-70.91	-1,551.6	-291.7	5,786.3	5,616.2	170.16	34.005		
12,401.5	6,638.3	6,041.0	5,976.3	164.6	17.3	-70.91	-1,551.6	-291.7	5,787.8	5,617.6	170.20	34.005		
12,500.0	6,638.2	6,041.0	5,976.3	167.4	17.3	-70.91	-1,551.6	-291.7	5,880.2	5,707.4	172.82	34.026		
12,598.4	6,638.1	6,041.0	5,976.3	170.2	17.3	-70.91	-1,551.6	-291.7	5,972.9	5,797.4	175.43	34.047		
12,600.0	6,638.1	6,041.0	5,976.3	170.2	17.3	-70.91	-1,551.6	-291.7	5,974.4	5,798.9	175.47	34.048		
12,696.8	6,638.0	6,041.0	5,976.3	172.9	17.3	-70.91	-1,551.6	-291.7	6,065.7	5,887.6	178.04	34.069		
12,700.0	6,638.0	6,041.0	5,976.3	173.0	17.3	-70.91	-1,551.6	-291.7	6,068.7	5,890.5	178.12	34.070		
12,795.2	6,637.8	6,041.0	5,976.3	175.7	17.3	-70.91	-1,551.6	-291.7	6,158.7	5,978.0	180.65	34.091		
12,800.0	6,637.8	6,041.0	5,976.3	175.8	17.3	-70.91	-1,551.6	-291.7	6,163.2	5,982.4	180.78	34.092		
12,893.7	6,637.7	6,041.0	5,976.3	178.4	17.3	-70.91	-1,551.6	-291.7	6,251.8	6,068.6	183.27	34.113		
12,900.0	6,637.7	6,041.0	5,976.3	178.6	17.3	-70.91	-1,551.6	-291.7	6,257.8	6,074.4	183.44	34.115		
12,992.1	6,637.6	6,041.0	5,976.3	181.2	17.3	-70.91	-1,551.6	-291.7	6,345.2	6,159.3	185.88	34.136		
13,000.0	6,637.6	6,041.0	5,976.3	181.4	17.3	-70.91	-1,551.6	-291.7	6,352.6	6,166.6	186.09	34.137		
13,090.5	6,637.5	6,041.0	5,976.3	183.9	17.3	-70.91	-1,551.6	-291.7	6,438.6	6,250.1	188.49	34.158		
13,100.0	6,637.5	6,041.0	5,976.3	184.2	17.3	-70.91	-1,551.6	-291.7	6,447.6	6,258.9	188.75	34.160		
13,188.9	6,637.4	6,041.0	5,976.3	186.7	17.3	-70.91	-1,551.6	-291.7	6,532.2	6,341.1	191.11	34.181		
13,200.0	6,637.3	6,041.0	5,976.3	187.0	17.3	-70.91	-1,551.6	-291.7	6,542.8	6,351.4	191.40	34.183		
13,287.4	6,637.2	6,041.0	5,976.3	189.4	17.3	-70.91	-1,551.6	-291.7	6,626.0	6,432.3	193.72	34.203		
13,300.0	6,637.2	6,041.0	5,976.3	189.8	17.3	-70.91	-1,551.6	-291.7	6,638.0	6,444.0	194.06	34.206		
13,385.8	6,637.1	6,041.0	5,976.3	192.2	17.3	-70.91	-1,551.6	-291.7	6,719.9	6,523.6	196.34	34.226		
13,400.0	6,637.1	6,041.0	5,976.3	192.6	17.3	-70.91	-1,551.6	-291.7	6,733.4	6,536.7	196.72	34.229		
13,484.2	6,637.0	6,041.0	5,976.3	195.0	17.3	-70.91	-1,551.6	-291.7	6,813.9	6,615.0	198.95	34.249		
13,500.0	6,637.0	6,041.0	5,976.3	195.4	17.3	-70.91	-1,551.6	-291.7	6,829.0	6,629.6	199.37	34.252		
13,582.6	6,636.9	6,041.0	5,976.3	197.7	17.3	-70.91	-1,551.6	-291.7	6,908.0	6,706.5	201.57	34.271		
13,600.0	6,636.8	6,041.0	5,976.3	198.2	17.3	-70.91	-1,551.6	-291.7	6,924.7	6,722.6	202.03	34.275		
13,681.1	6,636.7	6,041.0	5,976.3	200.5	17.3	-70.91	-1,551.6	-291.7	7,002.3	6,798.1	204.18	34.294		
13,700.0	6,636.7	6,041.0	5,976.3	201.0	17.3	-70.91	-1,551.6	-291.7	7,020.4	6,815.8	204.69	34.298		
13,779.5	6,636.6	6,041.0	5,976.3	203.2	17.3	-70.91	-1,551.6	-291.7	7,096.7	6,889.9	206.80	34.317		
13,800.0	6,636.6	6,041.0	5,976.3	203.8	17.3	-70.91	-1,551.6	-291.7	7,116.4	6,909.0	207.35	34.321		
13,877.9	6,636.5	6,041.0	5,976.3	206.0	17.3	-70.91	-1,551.6	-291.7	7,191.2	6,981.7	209.42	34.339		
13,900.0	6,636.5	6,041.0	5,976.3	206.6	17.3	-70.91	-1,551.6	-291.7	7,212.4	7,002.4	210.00	34.344		
13,976.3	6,636.4	6,041.0	5,976.3	208.8	17.3	-70.91	-1,551.6	-291.7	7,285.7	7,073.7	212.03	34.361		
14,000.0	6,636.3	6,041.0	5,976.3	209.4	17.3	-70.91	-1,551.6	-291.7	7,308.5	7,095.8	212.66	34.367		
14,074.8	6,636.2	5,997.3	5,932.9	211.5	17.2	-69.74	-1,551.3	-297.2	7,379.0	7,165.8	213.18	34.614		
14,100.0	6,636.2	5,997.0	5,932.7	212.2	17.2	-69.73	-1,551.3	-297.3	7,403.2	7,189.4	213.84	34.621		
14,173.2	6,636.1	5,996.4	5,932.1	214.3	17.2	-69.72	-1,551.3	-297.3	7,473.7	7,258.0	215.75	34.641		
14,200.0	6,636.1	5,996.2	5,931.9	215.0	17.2	-69.71	-1,551.3	-297.3	7,499.5	7,283.1	216.45	34.648		
14,271.6	6,636.0	5,995.6	5,931.3	217.0	17.2	-69.70	-1,551.3	-297.4	7,568.5	7,350.2	218.32	34.667		
14,300.0	6,636.0	5,995.4	5,931.1	217.8	17.2	-69.69	-1,551.3	-297.4	7,595.9	7,376.8	219.06	34.675		
14,370.0	6,635.9	5,994.8	5,930.5	219.8	17.2	-69.68	-1,551.3	-297.5	7,663.4	7,442.5	220.89	34.694		
14,400.0	6,635.8	5,994.6	5,930.3	220.6	17.2	-69.67	-1,551.3	-297.5	7,692.3	7,470.7	221.67	34.702		
14,468.5	6,635.7	5,994.1	5,929.8	222.6	17.2	-69.66	-1,551.3	-297.5	7,758.4	7,535.0	223.46	34.720		
14,500.0	6,635.7	5,993.8	5,929.5	223.4	17.2	-69.65	-1,551.3	-297.5	7,788.9	7,564.6	224.28	34.728		
14,566.9	6,635.6	5,993.3	5,929.0	225.3	17.2	-69.64	-1,551.3	-297.6	7,853.5	7,627.5	226.03	34.745		
14,600.0	6,635.6	5,993.1	5,928.8	226.2	17.2	-69.63	-1,551.3	-297.6	7,885.5	7,658.6	226.90	34.754		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,665.3	6,635.5	5,992.6	5,928.3	228.1	17.2	-69.62	-1,551.3	-297.7	7,948.7	7,720.1	228.60	34.771	
14,700.0	6,635.5	5,992.4	5,928.1	229.0	17.2	-69.61	-1,551.3	-297.7	7,982.2	7,752.7	229.51	34.780	
14,763.7	6,635.4	5,991.9	5,927.6	230.8	17.2	-69.60	-1,551.3	-297.7	8,043.9	7,812.7	231.17	34.796	
14,800.0	6,635.3	5,991.6	5,927.3	231.8	17.2	-69.59	-1,551.3	-297.7	8,079.0	7,846.9	232.12	34.805	
14,862.2	6,635.2	5,991.2	5,926.9	233.6	17.2	-69.58	-1,551.2	-297.8	8,139.2	7,905.5	233.74	34.821	
14,900.0	6,635.2	5,990.9	5,926.6	234.7	17.2	-69.57	-1,551.2	-297.8	8,175.9	7,941.1	234.73	34.831	
14,960.6	6,635.1	5,990.5	5,926.2	236.4	17.2	-69.56	-1,551.2	-297.8	8,234.6	7,998.3	236.32	34.846	
14,995.1	6,635.0	5,990.3	5,926.0	237.3	17.2	-69.56	-1,551.2	-297.8	8,268.1	8,030.9	237.22	34.854	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
0.0	0.0	0.0	0.0	0.0	0.0	173.07	-971.3	118.1	978.5				
98.4	98.4	85.4	85.4	0.1	0.1	173.07	-971.3	118.1	978.4	978.2	0.17	5,617.944	
100.0	100.0	87.0	87.0	0.1	0.1	173.07	-971.3	118.1	978.4	978.2	0.18	5,516.240	
196.8	196.8	183.8	183.8	0.3	0.2	173.07	-971.3	118.1	978.4	977.9	0.48	2,022.916	
200.0	200.0	187.0	187.0	0.3	0.2	173.07	-971.3	118.1	978.4	977.9	0.49	1,982.091	
295.3	295.3	282.3	282.3	0.5	0.3	173.07	-971.3	118.1	978.4	977.6	0.79	1,230.800	
300.0	300.0	287.0	287.0	0.5	0.3	173.07	-971.3	118.1	978.4	977.6	0.81	1,208.091	
393.7	393.7	380.7	380.7	0.8	0.3	173.07	-971.3	118.1	978.4	977.3	1.11	884.468	
400.0	400.0	387.0	387.0	0.8	0.4	173.07	-971.3	118.1	978.4	977.3	1.13	868.819	
492.1	492.1	479.1	479.1	1.0	0.4	173.07	-971.3	118.1	978.4	977.0	1.42	690.242	
500.0	500.0	487.0	487.0	1.0	0.4	173.07	-971.3	118.1	978.4	977.0	1.44	678.324	
590.5	590.5	577.5	577.5	1.2	0.5	173.07	-971.3	118.1	978.4	976.7	1.73	565.959	
600.0	600.0	587.0	587.0	1.2	0.5	173.07	-971.3	118.1	978.4	976.6	1.76	556.342	
689.0	689.0	682.8	682.8	1.4	0.7	173.04	-970.8	118.6	978.0	975.9	2.15	453.847	
700.0	700.0	693.9	693.9	1.4	0.8	173.03	-970.7	118.7	977.9	975.7	2.20	443.803	
787.4	787.4	784.3	784.3	1.6	1.0	172.96	-969.8	119.8	977.2	974.6	2.60	376.542	
800.0	800.0	797.7	797.7	1.7	1.0	172.95	-969.7	119.9	977.1	974.4	2.65	368.328	
885.8	885.8	884.0	883.9	1.9	1.2	172.88	-968.5	120.9	976.0	973.0	3.03	322.627	
900.0	900.0	897.6	897.6	1.9	1.2	172.87	-968.3	121.1	975.9	972.8	3.08	316.370	
984.2	984.2	996.1	996.0	2.1	1.4	172.85	-966.8	121.3	974.7	971.2	3.47	280.730	
1,000.0	1,000.0	1,016.6	1,016.6	2.1	1.4	172.86	-966.2	121.0	974.2	970.7	3.55	274.544	
1,082.7	1,082.7	1,115.7	1,115.5	2.3	1.6	173.04	-962.7	117.6	971.0	967.0	3.95	245.873	
1,100.0	1,100.0	1,137.2	1,136.9	2.3	1.7	173.10	-961.8	116.5	970.1	966.1	4.04	240.400	
1,181.1	1,181.1	1,236.4	1,235.9	2.5	1.9	173.41	-956.4	110.6	965.1	960.7	4.44	217.335	
1,200.0	1,200.0	1,258.0	1,257.3	2.6	2.0	173.48	-955.0	109.1	963.8	959.2	4.53	212.658	
1,279.5	1,279.5	1,345.1	1,344.0	2.7	2.2	173.86	-949.0	102.0	957.6	952.7	4.91	195.154	
1,300.0	1,300.0	1,366.4	1,365.1	2.8	2.2	173.97	-947.4	100.0	955.9	950.9	5.00	191.167	
1,377.9	1,377.9	1,435.4	1,433.5	3.0	2.4	133.33	-942.7	92.4	950.4	945.1	5.36	177.371	
1,400.0	1,400.0	1,451.9	1,449.8	3.0	2.5	133.49	-941.8	90.2	949.4	943.9	5.45	174.225	
1,470.3	1,470.2	1,499.0	1,496.4	3.2	2.6	134.03	-939.7	83.1	947.7	942.0	5.72	165.574 CC, ES	
1,476.4	1,476.3	1,499.0	1,496.4	3.2	2.6	134.03	-939.7	83.1	947.7	942.0	5.74	165.200	
1,500.0	1,499.8	1,522.4	1,519.4	3.2	2.7	134.32	-939.1	79.3	947.8	942.0	5.85	161.944	
1,574.8	1,574.4	1,569.9	1,566.2	3.4	2.8	134.91	-938.7	71.5	950.7	944.6	6.15	154.616	
1,600.0	1,599.5	1,594.0	1,590.1	3.5	2.9	135.22	-939.0	67.6	952.5	946.3	6.27	151.850	
1,673.2	1,672.2	1,644.4	1,639.8	3.6	3.0	135.86	-940.2	59.6	959.6	953.0	6.58	145.836	
1,700.0	1,698.7	1,666.8	1,661.9	3.7	3.1	136.14	-940.8	56.1	962.8	956.1	6.70	143.636	
1,771.6	1,769.5	1,724.9	1,719.4	3.9	3.2	136.88	-942.9	47.6	973.0	965.9	7.03	138.311	
1,800.0	1,797.5	1,747.5	1,741.7	4.0	3.3	137.15	-943.8	44.4	977.7	970.5	7.16	136.480	
1,870.1	1,866.3	1,803.0	1,796.7	4.2	3.4	137.81	-946.7	37.1	990.8	983.4	7.49	132.290	
1,899.9	1,895.6	1,826.4	1,819.9	4.3	3.5	138.08	-948.1	34.2	997.2	989.5	7.63	130.745	
1,968.5	1,962.6	1,881.2	1,874.2	4.5	3.6	138.89	-951.7	27.8	1,012.6	1,004.7	7.96	127.148	
2,000.0	1,993.4	1,914.5	1,907.1	4.6	3.7	139.36	-954.1	24.1	1,019.9	1,011.8	8.14	125.299	
2,066.9	2,058.9	1,986.0	1,978.0	4.8	3.9	140.37	-958.6	15.7	1,035.2	1,026.7	8.52	121.463	
2,100.0	2,091.3	2,022.9	2,014.6	4.9	4.0	140.89	-960.7	11.2	1,042.7	1,034.0	8.72	119.629	
2,165.3	2,155.2	2,098.3	2,089.3	5.2	4.2	141.94	-964.4	1.9	1,057.0	1,047.9	9.11	116.047	
2,200.0	2,189.1	2,140.3	2,130.9	5.3	4.3	142.50	-965.9	-3.2	1,064.3	1,055.0	9.32	114.182	
2,263.8	2,251.5	2,214.6	2,204.7	5.5	4.6	143.47	-967.8	-12.0	1,077.3	1,067.6	9.70	111.013	
2,300.0	2,286.9	2,256.2	2,246.0	5.7	4.7	144.00	-968.5	-16.7	1,084.5	1,074.5	9.92	109.330	
2,362.2	2,347.7	2,318.1	2,307.5	5.9	4.9	144.78	-969.3	-24.1	1,096.6	1,086.3	10.27	106.755	
2,400.0	2,384.7	2,356.4	2,345.5	6.0	5.0	145.27	-969.6	-28.9	1,104.0	1,093.5	10.49	105.255	
2,460.6	2,444.0	2,423.4	2,411.9	6.3	5.2	146.15	-969.8	-37.9	1,115.7	1,104.9	10.86	102.702	
2,500.0	2,482.5	2,462.7	2,450.7	6.4	5.3	146.67	-969.6	-43.6	1,123.2	1,112.1	11.10	101.223	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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 SEYLROR 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
2,559.0	2,540.3	2,515.6	2,503.1	6.7	5.5	147.39	-969.3	-51.7	1,134.7	1,123.3	11.43	99.242	
2,600.0	2,580.3	2,552.5	2,539.5	6.8	5.6	147.90	-969.2	-57.6	1,142.8	1,131.2	11.67	97.935	
2,657.5	2,636.5	2,604.8	2,591.0	7.1	5.8	148.63	-968.9	-66.5	1,154.6	1,142.5	12.01	96.138	
2,700.0	2,678.1	2,643.4	2,629.0	7.2	5.9	149.19	-968.7	-73.6	1,163.4	1,151.2	12.26	94.903	
2,755.9	2,732.8	2,694.8	2,679.4	7.5	6.1	149.92	-968.5	-83.1	1,175.3	1,162.7	12.59	93.346	
2,800.0	2,776.0	2,734.7	2,718.6	7.7	6.3	150.48	-968.3	-90.5	1,184.8	1,172.0	12.85	92.218	
2,854.3	2,829.1	2,779.7	2,762.9	7.9	6.4	151.11	-968.3	-98.8	1,196.9	1,183.8	13.15	91.033	
2,900.0	2,873.8	2,817.6	2,800.1	8.1	6.6	151.62	-968.5	-105.8	1,207.4	1,194.0	13.40	90.113	
2,952.7	2,925.4	2,863.9	2,845.7	8.3	6.7	152.23	-968.8	-114.3	1,219.9	1,206.2	13.69	89.082	
3,000.0	2,971.6	2,905.9	2,887.0	8.5	6.9	152.77	-969.3	-121.9	1,231.3	1,217.3	13.96	88.213	
3,051.2	3,021.6	2,949.4	2,929.8	8.7	7.0	153.31	-969.9	-129.6	1,243.8	1,229.6	14.23	87.388	
3,100.0	3,069.4	2,990.2	2,970.0	8.9	7.2	153.79	-970.7	-136.6	1,256.1	1,241.6	14.49	86.666	
3,149.6	3,117.9	3,032.3	3,011.4	9.1	7.3	154.28	-971.7	-143.7	1,268.9	1,254.1	14.76	85.981	
3,200.0	3,167.2	3,075.8	3,054.3	9.3	7.5	154.75	-973.0	-150.8	1,282.1	1,267.1	15.02	85.340	
3,248.0	3,214.2	3,120.5	3,098.4	9.5	7.6	155.22	-974.6	-157.8	1,295.0	1,279.7	15.28	84.732	
3,300.0	3,265.0	3,180.8	3,158.1	9.8	7.8	155.82	-976.4	-166.9	1,308.7	1,293.1	15.59	83.956	
3,346.4	3,310.5	3,232.5	3,209.1	10.0	8.0	156.32	-977.7	-174.3	1,320.7	1,304.8	15.85	83.322	
3,400.0	3,362.9	3,290.2	3,266.3	10.2	8.2	156.84	-979.0	-182.2	1,334.3	1,318.2	16.14	82.646	
3,444.9	3,406.7	3,342.1	3,317.7	10.4	8.3	157.30	-979.9	-189.0	1,345.6	1,329.2	16.40	82.037	
3,473.0	3,434.2	3,374.9	3,350.3	10.5	8.4	157.59	-980.2	-193.4	1,352.5	1,335.9	16.56	81.653	
3,500.0	3,460.7	3,407.2	3,382.3	10.6	8.5	157.93	-980.4	-197.9	1,358.9	1,342.2	16.73	81.246	
3,543.3	3,503.2	3,460.3	3,434.9	10.7	8.7	158.45	-980.3	-204.9	1,368.5	1,351.5	16.97	80.626	
3,600.0	3,559.0	3,517.7	3,491.8	10.9	8.9	158.99	-979.8	-212.4	1,379.8	1,362.6	17.27	79.918	
3,641.7	3,600.2	3,554.3	3,528.1	11.0	9.0	159.32	-979.6	-217.1	1,387.7	1,370.2	17.46	79.471	
3,700.0	3,657.9	3,605.9	3,579.2	11.2	9.1	159.77	-979.5	-224.0	1,397.9	1,380.2	17.73	78.822	
3,740.1	3,697.8	3,641.6	3,614.6	11.3	9.3	160.07	-979.4	-228.8	1,404.5	1,386.5	17.92	78.376	
3,800.0	3,757.3	3,696.3	3,668.8	11.4	9.4	160.50	-979.4	-236.5	1,413.5	1,395.3	18.20	77.681	
3,838.6	3,795.7	3,733.4	3,705.5	11.5	9.6	160.78	-979.4	-241.7	1,418.8	1,400.4	18.37	77.216	
3,900.0	3,857.0	3,793.4	3,764.9	11.7	9.8	161.20	-979.5	-250.1	1,426.3	1,407.6	18.65	76.457	
3,937.0	3,893.9	3,830.5	3,801.6	11.7	9.9	161.44	-979.6	-255.2	1,430.2	1,411.4	18.82	76.002	
4,000.0	3,956.9	3,907.8	3,878.3	11.8	10.1	161.88	-979.7	-265.5	1,435.8	1,416.6	19.13	75.046	
4,035.4	3,992.3	3,961.0	3,931.0	11.9	10.3	162.18	-978.9	-272.5	1,437.8	1,418.5	19.33	74.389	
4,072.9	4,029.8	3,994.0	3,963.7	11.9	10.4	-156.45	-978.3	-276.9	1,439.3	1,419.1	20.21	71.220	
4,100.0	4,056.9	4,017.7	3,987.2	12.0	10.4	-156.33	-977.9	-280.0	1,440.4	1,420.1	20.31	70.910	
4,133.8	4,090.7	4,047.2	4,016.4	12.0	10.5	-156.19	-977.5	-283.8	1,441.8	1,421.3	20.45	70.516	
4,200.0	4,156.9	4,125.5	4,094.1	12.1	10.8	-155.80	-976.4	-293.8	1,444.4	1,423.6	20.76	69.578	
4,232.3	4,189.2	4,163.9	4,132.1	12.2	10.9	-155.61	-975.5	-298.8	1,445.4	1,424.5	20.91	69.117	
4,300.0	4,256.9	4,238.7	4,206.4	12.3	11.1	-155.25	-973.6	-307.9	1,447.3	1,426.1	21.22	68.217	
4,330.7	4,287.6	4,266.6	4,234.1	12.4	11.2	-155.12	-972.9	-311.2	1,448.1	1,426.8	21.34	67.864	
4,400.0	4,356.9	4,326.4	4,293.3	12.5	11.4	-154.83	-971.5	-318.7	1,450.3	1,428.7	21.61	67.117	
4,429.1	4,386.0	4,340.0	4,306.9	12.5	11.4	-154.76	-971.2	-320.5	1,451.4	1,429.7	21.69	66.907	
4,500.0	4,456.9	4,402.2	4,368.4	12.6	11.6	-154.44	-970.1	-329.0	1,454.6	1,432.6	21.98	66.173	
4,527.5	4,484.4	4,422.5	4,388.5	12.7	11.7	-154.33	-970.0	-332.0	1,456.1	1,434.0	22.08	65.932	
4,600.0	4,556.9	4,496.4	4,461.7	12.8	11.9	-153.96	-969.7	-342.3	1,460.3	1,437.9	22.41	65.161	
4,626.0	4,582.9	4,525.2	4,490.3	12.9	12.0	-153.83	-969.7	-345.9	1,461.8	1,439.2	22.53	64.869	
4,700.0	4,656.9	4,604.2	4,568.7	13.0	12.3	-153.49	-969.6	-355.4	1,465.7	1,442.8	22.87	64.084	
4,724.4	4,681.3	4,629.4	4,593.8	13.0	12.3	-153.39	-969.5	-358.5	1,466.9	1,443.9	22.98	63.833	
4,800.0	4,756.9	4,698.4	4,662.2	13.1	12.5	-153.08	-969.2	-367.1	1,470.9	1,447.6	23.30	63.133	
4,822.8	4,779.7	4,719.0	4,682.6	13.2	12.6	-152.99	-969.1	-369.8	1,472.2	1,448.8	23.39	62.930	
4,900.0	4,856.9	4,783.3	4,746.3	13.3	12.8	-152.69	-969.1	-378.4	1,477.0	1,453.2	23.71	62.296	
4,921.2	4,878.1	4,801.0	4,763.8	13.4	12.9	-152.61	-969.2	-380.8	1,478.4	1,454.6	23.80	62.129	
5,000.0	4,956.9	4,869.1	4,831.2	13.5	13.1	-152.28	-969.7	-390.6	1,484.1	1,460.0	24.13	61.499	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,976.6	4,886.2	4,848.1	13.5	13.2	-152.19	-969.7	-393.2	1,485.6	1,461.4	24.22	61.345	
5,100.0	5,056.9	4,965.6	4,926.6	13.7	13.4	-151.76	-970.0	-406.0	1,492.0	1,467.4	24.60	60.653	
5,118.1	5,075.0	4,984.6	4,945.3	13.7	13.5	-151.66	-970.0	-409.0	1,493.4	1,468.7	24.69	60.491	
5,200.0	5,156.9	5,069.0	5,028.7	13.8	13.8	-151.24	-970.5	-421.7	1,499.7	1,474.6	25.08	59.794	
5,216.5	5,173.4	5,086.0	5,045.6	13.9	13.8	-151.16	-970.7	-424.0	1,501.0	1,475.8	25.16	59.658	
5,300.0	5,256.9	5,177.7	5,136.6	14.0	14.1	-150.81	-972.2	-435.3	1,507.2	1,481.6	25.57	58.954	
5,314.9	5,271.8	5,194.6	5,153.3	14.1	14.2	-150.76	-972.5	-437.2	1,508.2	1,482.6	25.64	58.826	
5,400.0	5,356.9	5,317.8	5,276.0	14.2	14.5	-150.40	-973.8	-448.7	1,512.8	1,486.7	26.11	57.946	
5,413.4	5,370.3	5,332.4	5,290.5	14.2	14.5	-150.36	-973.8	-450.0	1,513.4	1,487.3	26.17	57.834	
5,500.0	5,456.9	5,425.0	5,382.8	14.4	14.8	-150.09	-973.7	-458.0	1,517.1	1,490.5	26.55	57.132	
5,511.8	5,468.7	5,437.3	5,395.0	14.4	14.8	-150.06	-973.7	-459.0	1,517.5	1,490.9	26.61	57.039	
5,600.0	5,556.9	5,532.1	5,489.6	14.6	15.0	-149.85	-974.0	-465.6	1,520.9	1,493.9	26.99	56.352	
5,610.2	5,567.1	5,543.3	5,500.8	14.6	15.0	-149.83	-974.1	-466.3	1,521.3	1,494.2	27.03	56.272	
5,700.0	5,656.9	5,650.5	5,607.8	14.7	15.3	-149.66	-974.5	-471.9	1,524.0	1,496.5	27.44	55.542	
5,708.6	5,665.5	5,661.1	5,618.5	14.8	15.3	-149.64	-974.5	-472.4	1,524.2	1,496.7	27.48	55.470	
5,800.0	5,756.9	5,785.3	5,742.6	14.9	15.5	-149.51	-974.1	-476.0	1,525.2	1,497.3	27.90	54.672	
5,807.1	5,764.0	5,794.3	5,751.5	14.9	15.5	-149.51	-974.0	-476.1	1,525.2	1,497.3	27.93	54.613	
5,891.3	5,848.1	5,877.1	5,834.4	15.1	15.7	-149.45	-972.9	-477.2	1,524.8	1,496.6	28.24	53.990	
5,900.0	5,856.9	5,882.1	5,839.4	15.1	15.7	-149.45	-972.9	-477.2	1,524.8	1,496.6	28.27	53.941	
5,905.5	5,862.4	5,885.3	5,842.6	15.1	15.7	-149.45	-972.9	-477.3	1,524.9	1,496.6	28.29	53.910	
5,971.9	5,928.8	5,923.6	5,880.9	15.3	15.7	-149.45	-973.3	-477.6	1,525.8	1,497.3	28.48	53.568	
6,000.0	5,956.9	5,952.0	5,909.2	15.3	15.8	-59.45	-974.1	-477.9	1,526.3	1,498.1	28.27	53.996	
6,003.9	5,960.8	5,952.0	5,909.2	15.3	15.8	-59.45	-974.1	-477.9	1,526.3	1,498.1	28.27	53.987	
6,050.0	6,006.7	5,952.0	5,909.2	15.4	15.8	-59.44	-974.1	-477.9	1,526.4	1,498.1	28.32	53.906	
6,100.0	6,056.2	5,984.0	5,941.2	15.4	15.8	-59.65	-975.8	-478.2	1,525.5	1,497.1	28.40	53.723	
6,102.3	6,058.5	5,985.0	5,942.1	15.4	15.8	-59.67	-975.9	-478.2	1,525.4	1,497.1	28.40	53.717	
6,150.0	6,105.1	6,004.0	5,961.1	15.4	15.9	-59.92	-977.5	-478.4	1,524.0	1,495.5	28.44	53.590	
6,200.0	6,153.0	6,046.0	6,002.8	15.5	16.0	-60.56	-982.3	-478.9	1,522.1	1,493.6	28.51	53.379	
6,200.8	6,153.8	6,046.0	6,002.8	15.5	16.0	-60.57	-982.3	-478.9	1,522.0	1,493.5	28.51	53.377	
6,250.0	6,199.9	6,046.0	6,002.8	15.5	16.0	-60.80	-982.3	-478.9	1,518.7	1,490.2	28.49	53.301	
6,299.2	6,244.8	6,046.0	6,002.8	15.5	16.0	-61.03	-982.3	-478.9	1,515.3	1,486.9	28.46	53.240	
6,300.0	6,245.5	6,046.0	6,002.8	15.5	16.0	-61.04	-982.3	-478.9	1,515.3	1,486.8	28.46	53.239	
6,350.0	6,289.6	6,078.2	6,034.7	15.5	16.0	-61.89	-987.2	-479.5	1,510.9	1,482.4	28.53	52.962	
6,397.6	6,329.9	6,094.3	6,050.5	15.4	16.0	-62.53	-990.0	-479.9	1,506.5	1,477.9	28.57	52.729	
6,400.0	6,331.8	6,095.1	6,051.2	15.4	16.0	-62.56	-990.2	-479.9	1,506.3	1,477.7	28.57	52.717	
6,450.0	6,372.2	6,111.1	6,067.0	15.4	16.1	-63.28	-993.3	-480.4	1,501.2	1,472.6	28.65	52.403	
6,496.0	6,407.4	6,141.0	6,096.2	15.4	16.1	-64.38	-999.7	-481.4	1,496.5	1,467.7	28.82	51.922	
6,500.0	6,410.3	6,141.0	6,096.2	15.4	16.1	-64.41	-999.7	-481.4	1,496.0	1,467.2	28.83	51.897	
6,550.0	6,446.1	6,141.0	6,096.2	15.4	16.1	-64.84	-999.7	-481.4	1,490.2	1,461.3	28.94	51.498	
6,594.5	6,475.9	6,141.0	6,096.2	15.4	16.1	-65.20	-999.7	-481.4	1,485.2	1,456.1	29.09	51.063	
6,600.0	6,479.4	6,141.0	6,096.2	15.4	16.1	-65.25	-999.7	-481.4	1,484.6	1,455.5	29.10	51.010	
6,650.0	6,510.0	6,141.0	6,096.2	15.5	16.1	-65.64	-999.7	-481.4	1,479.2	1,449.9	29.34	50.419	
6,692.9	6,534.0	6,141.0	6,096.2	15.7	16.1	-65.97	-999.7	-481.4	1,474.7	1,445.1	29.60	49.816	
6,700.0	6,537.8	6,141.0	6,096.2	15.7	16.1	-66.02	-999.7	-481.4	1,474.0	1,444.4	29.65	49.719	
6,750.0	6,562.6	6,178.8	6,132.7	16.2	16.2	-67.67	-1,009.3	-483.1	1,467.6	1,437.3	30.31	48.421	
6,791.3	6,580.8	6,184.9	6,138.5	16.6	16.2	-68.21	-1,011.1	-483.3	1,463.2	1,432.5	30.76	47.570	
6,800.0	6,584.3	6,186.1	6,139.6	16.7	16.2	-68.31	-1,011.4	-483.4	1,462.3	1,431.5	30.86	47.383	
6,850.0	6,602.9	6,192.4	6,145.6	17.3	16.3	-68.91	-1,013.3	-483.7	1,457.4	1,425.9	31.50	46.267	
6,889.7	6,615.2	6,196.7	6,149.7	17.9	16.3	-69.35	-1,014.6	-483.9	1,453.7	1,421.6	32.07	45.332	
6,900.0	6,618.1	6,197.7	6,150.7	18.0	16.3	-69.45	-1,014.9	-484.0	1,452.8	1,420.6	32.22	45.097	
6,950.0	6,630.0	6,202.0	6,154.8	18.8	16.3	-69.93	-1,016.3	-484.2	1,448.7	1,415.7	33.00	43.898	
6,988.2	6,636.8	6,236.0	6,186.7	19.5	16.4	-71.47	-1,027.8	-486.0	1,446.9	1,413.0	33.93	42.645	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
7,000.0	6,638.5	6,236.0	6,186.7	19.7	16.4	-71.53	-1,027.8	-486.0	1,446.0	1,411.9	34.12	42.376	
7,050.0	6,643.5	6,236.0	6,186.7	20.6	16.4	-71.78	-1,027.8	-486.0	1,442.8	1,407.8	35.00	41.217	
7,086.6	6,644.9	6,236.0	6,186.7	21.3	16.4	-71.93	-1,027.8	-486.0	1,440.8	1,405.1	35.68	40.383	
7,097.8	6,645.0	6,236.0	6,186.7	21.5	16.4	-71.97	-1,027.8	-486.0	1,440.2	1,404.4	35.88	40.136	
7,100.0	6,645.0	6,236.0	6,186.7	21.6	16.4	-71.97	-1,027.8	-486.0	1,440.1	1,404.2	35.92	40.089	
7,165.1	6,644.9	6,236.0	6,186.7	22.9	16.4	-71.97	-1,027.8	-486.0	1,438.7	1,401.5	37.18	38.692	
7,185.0	6,644.9	6,236.0	6,186.7	23.3	16.4	-71.97	-1,027.8	-486.0	1,438.8	1,401.2	37.57	38.297	
7,200.0	6,644.9	6,236.0	6,186.7	23.6	16.4	-71.97	-1,027.8	-486.0	1,439.1	1,401.2	37.86	38.012	
7,283.4	6,644.8	6,236.0	6,186.7	25.4	16.4	-71.97	-1,027.8	-486.0	1,443.5	1,403.9	39.59	36.459	
7,300.0	6,644.7	6,236.0	6,186.7	25.8	16.4	-71.97	-1,027.8	-486.0	1,445.0	1,405.0	39.94	36.182	
7,381.9	6,644.6	6,236.0	6,186.7	27.7	16.4	-71.97	-1,027.8	-486.0	1,454.9	1,413.2	41.73	34.868	
7,400.0	6,644.6	6,236.0	6,186.7	28.1	16.4	-71.97	-1,027.8	-486.0	1,457.7	1,415.6	42.12	34.606	
7,480.3	6,644.5	6,236.0	6,186.7	30.0	16.4	-71.97	-1,027.8	-486.0	1,472.8	1,428.9	43.95	33.514	
7,500.0	6,644.5	6,236.0	6,186.7	30.5	16.4	-71.97	-1,027.8	-486.0	1,477.1	1,432.8	44.39	33.274	
7,578.7	6,644.4	6,236.0	6,186.7	32.4	16.4	-71.97	-1,027.8	-486.0	1,497.0	1,450.7	46.23	32.379	
7,600.0	6,644.4	6,236.0	6,186.7	32.9	16.4	-71.97	-1,027.8	-486.0	1,503.0	1,456.3	46.73	32.164	
7,677.1	6,644.3	6,236.0	6,186.7	34.8	16.4	-71.97	-1,027.8	-486.0	1,527.1	1,478.5	48.57	31.441	
7,700.0	6,644.2	6,236.0	6,186.7	35.4	16.4	-71.97	-1,027.8	-486.0	1,534.9	1,485.8	49.12	31.251	
7,775.6	6,644.1	6,236.0	6,186.7	37.3	16.4	-71.97	-1,027.8	-486.0	1,562.9	1,511.9	50.95	30.673	
7,800.0	6,644.1	6,236.0	6,186.7	38.0	16.4	-71.97	-1,027.8	-486.0	1,572.6	1,521.0	51.54	30.508	
7,874.0	6,644.0	6,236.0	6,186.7	39.9	16.4	-71.97	-1,027.8	-486.0	1,603.9	1,550.5	53.37	30.053	
7,900.0	6,644.0	6,236.0	6,186.7	40.5	16.4	-71.97	-1,027.8	-486.0	1,615.5	1,561.5	54.01	29.913	
7,972.4	6,643.9	6,236.0	6,186.7	42.4	16.4	-71.97	-1,027.8	-486.0	1,649.7	1,593.9	55.81	29.559	
8,000.0	6,643.9	6,236.0	6,186.7	43.1	16.4	-71.97	-1,027.8	-486.0	1,663.4	1,606.9	56.50	29.442	
8,070.8	6,643.8	6,236.0	6,186.7	45.0	16.4	-71.97	-1,027.8	-486.0	1,700.1	1,641.8	58.28	29.172	
8,100.0	6,643.7	6,236.0	6,186.7	45.8	16.4	-71.97	-1,027.8	-486.0	1,715.8	1,656.8	59.01	29.076	
8,169.3	6,643.7	6,236.0	6,186.7	47.6	16.4	-71.97	-1,027.8	-486.0	1,754.5	1,693.7	60.76	28.874	
8,200.0	6,643.6	6,236.0	6,186.7	48.4	16.4	-71.97	-1,027.8	-486.0	1,772.3	1,710.7	61.54	28.797	
8,267.7	6,643.5	6,236.0	6,186.7	50.2	16.4	-71.97	-1,027.8	-486.0	1,812.6	1,749.4	63.27	28.650	
8,300.0	6,643.5	6,236.0	6,186.7	51.1	16.4	-71.97	-1,027.8	-486.0	1,832.5	1,768.4	64.09	28.592	
8,366.1	6,643.4	6,236.0	6,186.7	52.9	16.4	-71.97	-1,027.8	-486.0	1,874.1	1,808.3	65.78	28.489	
8,400.0	6,643.4	6,236.0	6,186.7	53.8	16.4	-71.97	-1,027.8	-486.0	1,896.0	1,829.4	66.65	28.447	
8,464.5	6,643.3	6,236.0	6,186.7	55.5	16.4	-71.97	-1,027.8	-486.0	1,938.7	1,870.4	68.31	28.380	
8,500.0	6,643.2	6,236.0	6,186.7	56.5	16.4	-71.97	-1,027.8	-486.0	1,962.6	1,893.4	69.22	28.351	
8,563.0	6,643.2	6,236.0	6,186.7	58.2	16.4	-71.97	-1,027.8	-486.0	2,006.0	1,935.1	70.85	28.313	
8,600.0	6,643.1	6,236.0	6,186.7	59.2	16.4	-71.97	-1,027.8	-486.0	2,032.0	1,960.1	71.81	28.297	
8,661.4	6,643.0	6,236.0	6,186.7	60.8	16.4	-71.97	-1,027.8	-486.0	2,075.8	2,002.4	73.40	28.281	
8,700.0	6,643.0	6,236.0	6,186.7	61.9	16.4	-71.97	-1,027.8	-486.0	2,103.8	2,029.4	74.40	28.277 SF	
8,759.8	6,642.9	6,236.0	6,186.7	63.5	16.4	-71.97	-1,027.8	-486.0	2,147.8	2,071.8	75.96	28.277	
8,800.0	6,642.9	6,236.0	6,186.7	64.6	16.4	-71.97	-1,027.8	-486.0	2,177.8	2,100.8	77.00	28.283	
8,858.2	6,642.8	6,236.0	6,186.7	66.2	16.4	-71.97	-1,027.8	-486.0	2,221.9	2,143.3	78.52	28.298	
8,900.0	6,642.7	6,236.0	6,186.7	67.3	16.4	-71.97	-1,027.8	-486.0	2,253.8	2,174.2	79.61	28.313	
8,956.7	6,642.7	6,236.0	6,186.7	68.9	16.4	-71.97	-1,027.8	-486.0	2,297.8	2,216.7	81.09	28.337	
9,000.0	6,642.6	6,236.0	6,186.7	70.1	16.4	-71.97	-1,027.8	-486.0	2,331.7	2,249.5	82.22	28.360	
9,055.1	6,642.5	6,236.0	6,186.7	71.6	16.4	-71.97	-1,027.8	-486.0	2,375.3	2,291.6	83.66	28.392	
9,100.0	6,642.5	6,236.0	6,186.7	72.8	16.4	-71.97	-1,027.8	-486.0	2,411.2	2,326.3	84.84	28.422	
9,153.5	6,642.4	6,236.0	6,186.7	74.3	16.4	-71.97	-1,027.8	-486.0	2,454.3	2,368.1	86.24	28.460	
9,200.0	6,642.4	6,236.0	6,186.7	75.6	16.4	-71.97	-1,027.8	-486.0	2,492.1	2,404.7	87.46	28.495	
9,251.9	6,642.3	6,236.0	6,186.7	77.0	16.4	-71.97	-1,027.8	-486.0	2,534.7	2,445.9	88.82	28.537	
9,300.0	6,642.2	6,236.0	6,186.7	78.3	16.4	-71.97	-1,027.8	-486.0	2,574.4	2,484.4	90.08	28.578	
9,350.4	6,642.2	6,236.0	6,186.7	79.7	16.4	-71.97	-1,027.8	-486.0	2,616.4	2,525.0	91.41	28.623	
9,400.0	6,642.1	6,236.0	6,186.7	81.1	16.4	-71.97	-1,027.8	-486.0	2,658.0	2,565.2	92.71	28.668	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,236.0	6,186.7	82.4	16.4	-71.97	-1,027.8	-486.0	2,699.1	2,605.1	94.00	28.714	
9,500.0	6,642.0	6,236.0	6,186.7	83.8	16.4	-71.97	-1,027.8	-486.0	2,742.6	2,647.2	95.35	28.764	
9,547.2	6,641.9	6,236.0	6,186.7	85.1	16.4	-71.97	-1,027.8	-486.0	2,782.9	2,686.3	96.59	28.810	
9,600.0	6,641.9	6,236.0	6,186.7	86.6	16.4	-71.97	-1,027.8	-486.0	2,828.2	2,730.2	97.98	28.864	
9,645.6	6,641.8	6,236.0	6,186.7	87.9	16.4	-71.97	-1,027.8	-486.0	2,867.6	2,768.4	99.19	28.910	
9,700.0	6,641.7	6,236.0	6,186.7	89.4	16.4	-71.97	-1,027.8	-486.0	2,914.7	2,814.1	100.62	28.967	
9,744.1	6,641.7	6,236.0	6,186.7	90.6	16.4	-71.97	-1,027.8	-486.0	2,953.2	2,851.4	101.79	29.013	
9,800.0	6,641.6	6,236.0	6,186.7	92.1	16.4	-71.97	-1,027.8	-486.0	3,002.1	2,898.9	103.27	29.072	
9,842.5	6,641.6	6,236.0	6,186.7	93.3	16.4	-71.97	-1,027.8	-486.0	3,039.5	2,935.1	104.39	29.117	
9,900.0	6,641.5	6,236.0	6,186.7	94.9	16.4	-71.97	-1,027.8	-486.0	3,090.3	2,984.3	105.91	29.178	
9,940.9	6,641.4	6,236.0	6,186.7	96.0	16.4	-71.97	-1,027.8	-486.0	3,126.5	3,019.5	106.99	29.222	
10,000.0	6,641.4	6,236.0	6,186.7	97.7	16.4	-71.97	-1,027.8	-486.0	3,179.1	3,070.5	108.56	29.285	
10,039.3	6,641.3	6,236.0	6,186.7	98.8	16.4	-71.97	-1,027.8	-486.0	3,214.2	3,104.6	109.60	29.327	
10,100.0	6,641.2	6,236.0	6,186.7	100.4	16.4	-71.97	-1,027.8	-486.0	3,268.6	3,157.4	111.20	29.393	
10,137.8	6,641.2	6,236.0	6,186.7	101.5	16.4	-71.97	-1,027.8	-486.0	3,302.5	3,190.3	112.21	29.433	
10,200.0	6,641.1	6,236.0	6,186.7	103.2	16.4	-71.97	-1,027.8	-486.0	3,358.7	3,244.8	113.85	29.500	
10,236.2	6,641.1	6,236.0	6,186.7	104.2	16.4	-71.97	-1,027.8	-486.0	3,391.4	3,276.6	114.81	29.538	
10,300.0	6,641.0	6,236.0	6,186.7	106.0	16.4	-71.97	-1,027.8	-486.0	3,449.3	3,332.8	116.51	29.606	
10,334.6	6,640.9	6,236.0	6,186.7	107.0	16.4	-71.97	-1,027.8	-486.0	3,480.8	3,363.4	117.42	29.643	
10,400.0	6,640.9	6,236.0	6,186.7	108.8	16.4	-71.97	-1,027.8	-486.0	3,540.4	3,421.3	119.16	29.712	
10,433.0	6,640.8	6,236.0	6,186.7	109.7	16.4	-71.97	-1,027.8	-486.0	3,570.7	3,450.6	120.04	29.746	
10,500.0	6,640.7	6,236.0	6,186.7	111.6	16.4	-71.97	-1,027.8	-486.0	3,632.0	3,510.2	121.81	29.816	
10,531.5	6,640.7	6,236.0	6,186.7	112.4	16.4	-71.97	-1,027.8	-486.0	3,660.9	3,538.3	122.65	29.849	
10,600.0	6,640.6	6,236.0	6,186.7	114.3	16.4	-71.97	-1,027.8	-486.0	3,724.1	3,599.6	124.47	29.919	
10,629.9	6,640.6	6,236.0	6,186.7	115.2	16.4	-71.97	-1,027.8	-486.0	3,751.7	3,626.4	125.26	29.950	
10,700.0	6,640.5	6,269.8	6,217.8	117.1	16.4	-73.31	-1,040.8	-487.8	3,816.0	3,687.9	128.07	29.797	
10,728.3	6,640.4	6,270.2	6,218.2	117.9	16.4	-73.33	-1,041.0	-487.9	3,842.2	3,713.4	128.84	29.822	
10,800.0	6,640.4	6,271.4	6,219.3	119.9	16.4	-73.37	-1,041.5	-487.9	3,908.8	3,778.0	130.79	29.886	
10,826.7	6,640.3	6,271.8	6,219.7	120.7	16.4	-73.39	-1,041.7	-488.0	3,933.6	3,802.1	131.52	29.910	
10,900.0	6,640.2	6,273.0	6,220.8	122.7	16.5	-73.44	-1,042.2	-488.0	4,001.9	3,868.4	133.51	29.974	
10,925.2	6,640.2	6,273.5	6,221.2	123.4	16.5	-73.45	-1,042.3	-488.0	4,025.4	3,891.2	134.20	29.996	
11,000.0	6,640.1	6,274.7	6,222.3	125.5	16.5	-73.50	-1,042.8	-488.1	4,095.3	3,959.1	136.24	30.060	
11,023.6	6,640.1	6,275.1	6,222.6	126.1	16.5	-73.52	-1,043.0	-488.1	4,117.4	3,980.5	136.88	30.080	
11,100.0	6,640.0	6,276.3	6,223.8	128.3	16.5	-73.57	-1,043.5	-488.2	4,189.1	4,050.1	138.97	30.144	
11,122.0	6,639.9	6,276.7	6,224.1	128.9	16.5	-73.58	-1,043.7	-488.2	4,209.7	4,070.2	139.57	30.162	
11,200.0	6,639.8	6,278.0	6,225.2	131.1	16.5	-73.63	-1,044.2	-488.3	4,283.1	4,141.4	141.70	30.227	
11,220.4	6,639.8	6,278.3	6,225.5	131.6	16.5	-73.64	-1,044.4	-488.3	4,302.3	4,160.1	142.26	30.243	
11,300.0	6,639.7	6,279.6	6,226.7	133.9	16.5	-73.70	-1,044.9	-488.4	4,377.4	4,232.9	144.43	30.308	
11,318.9	6,639.7	6,279.9	6,227.0	134.4	16.5	-73.71	-1,045.0	-488.4	4,395.2	4,250.2	144.95	30.323	
11,400.0	6,639.6	6,281.2	6,228.2	136.7	16.5	-73.76	-1,045.6	-488.5	4,471.9	4,324.7	147.17	30.387	
11,417.3	6,639.6	6,281.5	6,228.4	137.1	16.5	-73.77	-1,045.7	-488.5	4,488.3	4,340.6	147.64	30.400	
11,500.0	6,639.5	6,282.9	6,229.7	139.4	16.5	-73.82	-1,046.3	-488.6	4,566.7	4,416.7	149.90	30.464	
11,515.7	6,639.5	6,283.1	6,229.9	139.9	16.5	-73.83	-1,046.4	-488.6	4,581.6	4,431.2	150.33	30.476	
11,600.0	6,639.3	6,284.5	6,231.1	142.2	16.5	-73.89	-1,047.0	-488.6	4,661.6	4,509.0	152.64	30.539	
11,614.1	6,639.3	6,284.7	6,231.3	142.6	16.5	-73.90	-1,047.1	-488.7	4,675.1	4,522.1	153.03	30.550	
11,700.0	6,639.2	6,286.1	6,232.6	145.0	16.5	-73.95	-1,047.7	-488.7	4,756.8	4,601.4	155.38	30.613	
11,712.6	6,639.2	6,286.3	6,232.8	145.4	16.5	-73.96	-1,047.8	-488.7	4,768.8	4,613.1	155.73	30.622	
11,800.0	6,639.1	6,287.8	6,234.1	147.8	16.5	-74.01	-1,048.4	-488.8	4,852.2	4,694.1	158.13	30.685	
11,811.0	6,639.1	6,287.9	6,234.2	148.1	16.5	-74.02	-1,048.5	-488.8	4,862.7	4,704.3	158.43	30.693	
11,900.0	6,639.0	6,289.4	6,235.5	150.6	16.5	-74.08	-1,049.1	-488.9	4,947.7	4,786.9	160.87	30.756	
11,909.4	6,639.0	6,289.5	6,235.7	150.9	16.5	-74.08	-1,049.2	-488.9	4,956.8	4,795.6	161.13	30.762	
12,000.0	6,638.8	6,291.0	6,237.0	153.4	16.5	-74.14	-1,049.9	-489.0	5,043.5	4,879.8	163.62	30.824	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.8	6,291.1	6,237.1	153.6	16.5	-74.15	-1,049.9	-489.0	5,051.0	4,887.1	163.83	30.830	
12,100.0	6,638.7	6,292.6	6,238.4	156.2	16.5	-74.20	-1,050.6	-489.1	5,139.3	4,973.0	166.37	30.891	
12,106.3	6,638.7	6,292.7	6,238.5	156.4	16.5	-74.21	-1,050.6	-489.1	5,145.4	4,978.8	166.54	30.896	
12,200.0	6,638.6	6,294.3	6,239.9	159.0	16.5	-74.27	-1,051.3	-489.2	5,235.4	5,066.3	169.12	30.957	
12,204.7	6,638.6	6,294.3	6,240.0	159.1	16.5	-74.27	-1,051.3	-489.2	5,239.9	5,070.7	169.25	30.960	
12,300.0	6,638.5	6,295.9	6,241.3	161.8	16.5	-74.33	-1,052.0	-489.3	5,331.6	5,159.7	171.87	31.021	
12,303.1	6,638.5	6,295.9	6,241.4	161.9	16.5	-74.33	-1,052.0	-489.3	5,334.6	5,162.6	171.96	31.023	
12,400.0	6,638.3	6,297.5	6,242.8	164.6	16.5	-74.39	-1,052.7	-489.4	5,427.9	5,253.3	174.62	31.083	
12,401.5	6,638.3	6,297.5	6,242.8	164.6	16.5	-74.39	-1,052.8	-489.4	5,429.4	5,254.7	174.67	31.084	
12,500.0	6,638.2	6,331.0	6,272.2	167.4	16.6	-75.68	-1,068.6	-491.2	5,524.6	5,346.2	178.40	30.968	
12,598.4	6,638.1	6,331.0	6,272.2	170.2	16.6	-75.68	-1,068.6	-491.2	5,619.6	5,438.6	181.07	31.035	
12,600.0	6,638.1	6,331.0	6,272.2	170.2	16.6	-75.68	-1,068.6	-491.2	5,621.2	5,440.1	181.12	31.036	
12,696.8	6,638.0	6,331.0	6,272.2	172.9	16.6	-75.68	-1,068.6	-491.2	5,714.8	5,531.0	183.75	31.101	
12,700.0	6,638.0	6,331.0	6,272.2	173.0	16.6	-75.68	-1,068.6	-491.2	5,717.8	5,534.0	183.83	31.103	
12,795.2	6,637.8	6,331.0	6,272.2	175.7	16.6	-75.68	-1,068.6	-491.2	5,810.0	5,623.6	186.42	31.166	
12,800.0	6,637.8	6,331.0	6,272.2	175.8	16.6	-75.68	-1,068.6	-491.2	5,814.6	5,628.0	186.55	31.169	
12,893.7	6,637.7	6,331.0	6,272.2	178.4	16.6	-75.68	-1,068.6	-491.2	5,905.3	5,716.2	189.10	31.229	
12,900.0	6,637.7	6,331.0	6,272.2	178.6	16.6	-75.68	-1,068.6	-491.2	5,911.5	5,722.2	189.27	31.233	
12,992.1	6,637.6	6,331.0	6,272.2	181.2	16.6	-75.68	-1,068.6	-491.2	6,000.8	5,809.0	191.77	31.291	
13,000.0	6,637.6	6,331.0	6,272.2	181.4	16.6	-75.68	-1,068.6	-491.2	6,008.4	5,816.5	191.99	31.296	
13,090.5	6,637.5	6,331.0	6,272.2	183.9	16.6	-75.68	-1,068.6	-491.2	6,096.3	5,901.9	194.45	31.352	
13,100.0	6,637.5	6,331.0	6,272.2	184.2	16.6	-75.68	-1,068.6	-491.2	6,105.5	5,910.8	194.71	31.358	
13,188.9	6,637.4	6,331.0	6,272.2	186.7	16.6	-75.68	-1,068.6	-491.2	6,192.0	5,994.8	197.12	31.411	
13,200.0	6,637.3	6,331.0	6,272.2	187.0	16.6	-75.68	-1,068.6	-491.2	6,202.7	6,005.3	197.42	31.418	
13,287.4	6,637.2	6,331.0	6,272.2	189.4	16.6	-75.68	-1,068.6	-491.2	6,287.7	6,087.9	199.80	31.470	
13,300.0	6,637.2	6,331.0	6,272.2	189.8	16.6	-75.68	-1,068.6	-491.2	6,300.0	6,099.8	200.14	31.477	
13,385.8	6,637.1	6,331.0	6,272.2	192.2	16.6	-75.68	-1,068.6	-491.2	6,383.5	6,181.0	202.48	31.527	
13,400.0	6,637.1	6,331.0	6,272.2	192.6	16.6	-75.68	-1,068.6	-491.2	6,397.3	6,194.4	202.86	31.535	
13,484.2	6,637.0	6,331.0	6,272.2	195.0	16.6	-75.68	-1,068.6	-491.2	6,479.3	6,274.2	205.15	31.583	
13,500.0	6,637.0	6,331.0	6,272.2	195.4	16.6	-75.68	-1,068.6	-491.2	6,494.7	6,289.1	205.58	31.592	
13,582.6	6,636.9	6,331.0	6,272.2	197.7	16.6	-75.68	-1,068.6	-491.2	6,575.3	6,367.5	207.83	31.638	
13,600.0	6,636.8	6,331.0	6,272.2	198.2	16.6	-75.68	-1,068.6	-491.2	6,592.2	6,383.9	208.30	31.647	
13,681.1	6,636.7	6,331.0	6,272.2	200.5	16.6	-75.68	-1,068.6	-491.2	6,671.3	6,460.8	210.51	31.691	
13,700.0	6,636.7	6,331.0	6,272.2	201.0	16.6	-75.68	-1,068.6	-491.2	6,689.8	6,478.8	211.02	31.702	
13,779.5	6,636.6	6,331.0	6,272.2	203.2	16.6	-75.68	-1,068.6	-491.2	6,767.4	6,554.2	213.19	31.744	
13,800.0	6,636.6	6,331.0	6,272.2	203.8	16.6	-75.68	-1,068.6	-491.2	6,787.4	6,573.7	213.74	31.755	
13,877.9	6,636.5	6,331.0	6,272.2	206.0	16.6	-75.68	-1,068.6	-491.2	6,863.6	6,647.7	215.86	31.796	
13,900.0	6,636.5	6,331.0	6,272.2	206.6	16.6	-75.68	-1,068.6	-491.2	6,885.1	6,668.7	216.46	31.807	
13,976.3	6,636.4	6,331.0	6,272.2	208.8	16.6	-75.68	-1,068.6	-491.2	6,959.8	6,741.2	218.54	31.847	
14,000.0	6,636.3	6,331.0	6,272.2	209.4	16.6	-75.68	-1,068.6	-491.2	6,982.9	6,763.7	219.18	31.859	
14,074.8	6,636.2	6,331.0	6,272.2	211.5	16.6	-75.68	-1,068.6	-491.2	7,056.1	6,834.9	221.22	31.896	
14,100.0	6,636.2	6,331.0	6,272.2	212.2	16.6	-75.68	-1,068.6	-491.2	7,080.8	6,858.9	221.91	31.909	
14,173.2	6,636.1	6,331.0	6,272.2	214.3	16.6	-75.68	-1,068.6	-491.2	7,152.4	6,928.5	223.90	31.945	
14,200.0	6,636.1	6,331.0	6,272.2	215.0	16.6	-75.68	-1,068.6	-491.2	7,178.7	6,954.0	224.63	31.958	
14,271.6	6,636.0	6,331.0	6,272.2	217.0	16.6	-75.68	-1,068.6	-491.2	7,248.8	7,022.2	226.58	31.993	
14,300.0	6,636.0	6,331.0	6,272.2	217.8	16.6	-75.68	-1,068.6	-491.2	7,276.6	7,049.3	227.35	32.006	
14,370.0	6,635.9	6,331.0	6,272.2	219.8	16.6	-75.68	-1,068.6	-491.2	7,345.3	7,116.0	229.25	32.040	
14,400.0	6,635.8	6,331.0	6,272.2	220.6	16.6	-75.68	-1,068.6	-491.2	7,374.6	7,144.6	230.07	32.054	
14,468.5	6,635.7	6,331.0	6,272.2	222.6	16.6	-75.68	-1,068.6	-491.2	7,441.8	7,209.8	231.93	32.086	
14,500.0	6,635.7	6,331.0	6,272.2	223.4	16.6	-75.68	-1,068.6	-491.2	7,472.7	7,239.9	232.79	32.100	
14,566.9	6,635.6	6,331.0	6,272.2	225.3	16.6	-75.68	-1,068.6	-491.2	7,538.3	7,303.7	234.61	32.131	
14,600.0	6,635.6	6,331.0	6,272.2	226.2	16.6	-75.68	-1,068.6	-491.2	7,570.8	7,335.3	235.51	32.146	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,665.3	6,635.5	6,331.0	6,272.2	228.1	16.6	-75.68	-1,068.6	-491.2	7,634.9	7,397.6	237.29	32.175	
14,700.0	6,635.5	6,331.0	6,272.2	229.0	16.6	-75.68	-1,068.6	-491.2	7,669.0	7,430.7	238.24	32.191	
14,763.7	6,635.4	6,331.0	6,272.2	230.8	16.6	-75.68	-1,068.6	-491.2	7,731.6	7,491.6	239.97	32.219	
14,800.0	6,635.3	6,331.0	6,272.2	231.8	16.6	-75.68	-1,068.6	-491.2	7,767.2	7,526.2	240.96	32.235	
14,862.2	6,635.2	6,331.0	6,272.2	233.6	16.6	-75.68	-1,068.6	-491.2	7,828.3	7,585.6	242.65	32.261	
14,900.0	6,635.2	6,331.0	6,272.2	234.7	16.6	-75.68	-1,068.6	-491.2	7,865.4	7,621.7	243.68	32.278	
14,960.6	6,635.1	6,331.0	6,272.2	236.4	16.6	-75.68	-1,068.6	-491.2	7,925.0	7,679.7	245.33	32.303	
14,995.1	6,635.0	6,331.0	6,272.2	237.3	16.6	-75.68	-1,068.6	-491.2	7,958.9	7,712.7	246.27	32.317	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-118.79	-1,378.1	-2,507.4	2,861.4				
98.4	98.4	49.2	49.2	0.1	0.0	-118.80	-1,378.2	-2,507.4	2,861.2	2,861.1	0.11	N/A	
100.0	100.0	50.6	50.6	0.1	0.0	-118.80	-1,378.2	-2,507.4	2,861.2	2,861.1	0.11	N/A	
196.8	196.8	140.1	140.1	0.3	0.1	-118.81	-1,379.1	-2,507.4	2,861.7	2,861.3	0.42	6,809.930	
200.0	200.0	143.3	143.3	0.3	0.1	-118.81	-1,379.2	-2,507.4	2,861.7	2,861.3	0.43	6,606.169	
295.3	295.3	238.7	238.7	0.5	0.2	-118.83	-1,380.1	-2,507.4	2,862.2	2,861.4	0.79	3,644.353	
300.0	300.0	243.3	243.3	0.5	0.3	-118.83	-1,380.2	-2,507.4	2,862.2	2,861.4	0.80	3,577.381	
393.7	393.7	336.3	336.3	0.8	0.3	-118.84	-1,380.9	-2,507.6	2,862.8	2,861.7	1.09	2,632.388	
400.0	400.0	342.8	342.7	0.8	0.3	-118.84	-1,381.0	-2,507.7	2,862.8	2,861.7	1.11	2,587.585	
492.1	492.1	436.5	436.4	1.0	0.4	-118.85	-1,381.7	-2,507.8	2,863.3	2,861.9	1.38	2,077.934	
500.0	500.0	444.4	444.3	1.0	0.4	-118.85	-1,381.7	-2,507.9	2,863.3	2,861.9	1.40	2,044.302	
590.5	590.5	537.4	537.4	1.2	0.5	-118.86	-1,382.4	-2,508.0	2,863.8	2,862.1	1.66	1,724.556	
600.0	600.0	547.5	547.4	1.2	0.5	-118.86	-1,382.5	-2,508.0	2,863.8	2,862.1	1.69	1,697.019	
689.0	689.0	641.0	641.0	1.4	0.5	-118.87	-1,383.0	-2,508.0	2,864.1	2,862.2	1.94	1,477.659	
700.0	700.0	652.4	652.3	1.4	0.5	-118.88	-1,383.1	-2,508.0	2,864.1	2,862.2	1.97	1,454.728	
787.4	787.4	744.3	744.3	1.6	0.6	-118.89	-1,383.8	-2,507.8	2,864.3	2,862.1	2.21	1,296.118	
800.0	800.0	757.9	757.8	1.7	0.6	-118.89	-1,383.9	-2,507.8	2,864.3	2,862.0	2.24	1,276.158	
859.3	859.3	818.3	818.3	1.8	0.6	-118.90	-1,384.3	-2,507.5	2,864.3	2,861.9	2.40	1,191.002	
885.8	885.8	842.5	842.5	1.9	0.6	-118.91	-1,384.5	-2,507.4	2,864.3	2,861.8	2.47	1,157.310	
900.0	900.0	855.4	855.4	1.9	0.6	-118.91	-1,384.6	-2,507.4	2,864.3	2,861.8	2.51	1,140.021	
984.2	984.2	936.6	936.6	2.1	0.7	-118.92	-1,385.3	-2,507.2	2,864.5	2,861.7	2.74	1,046.305	
1,000.0	1,000.0	952.9	952.8	2.1	0.7	-118.92	-1,385.4	-2,507.2	2,864.5	2,861.7	2.78	1,030.305	
1,082.7	1,082.7	1,039.9	1,039.9	2.3	0.7	-118.94	-1,386.2	-2,506.9	2,864.6	2,861.6	3.00	954.036	
1,100.0	1,100.0	1,058.5	1,058.5	2.3	0.7	-118.94	-1,386.3	-2,506.9	2,864.7	2,861.6	3.05	939.531	
1,172.4	1,172.4	1,131.5	1,131.4	2.5	0.7	-118.96	-1,386.9	-2,506.5	2,864.6	2,861.4	3.24	884.039	
1,181.1	1,181.1	1,139.5	1,139.5	2.5	0.7	-118.96	-1,386.9	-2,506.5	2,864.6	2,861.4	3.26	877.923	
1,200.0	1,200.0	1,157.1	1,157.0	2.6	0.8	-118.96	-1,387.0	-2,506.4	2,864.6	2,861.3	3.31	864.878	
1,279.5	1,279.5	1,236.3	1,236.3	2.7	0.8	-118.97	-1,387.6	-2,506.2	2,864.7	2,861.2	3.52	813.690	
1,300.0	1,300.0	1,258.7	1,258.7	2.8	0.8	-118.97	-1,387.8	-2,506.2	2,864.7	2,861.2	3.57	801.362	
1,377.9	1,377.9	1,337.9	1,337.9	3.0	0.8	-160.18	-1,388.2	-2,505.9	2,865.7	2,862.0	3.71	771.911	
1,400.0	1,400.0	1,358.7	1,358.7	3.0	0.8	-160.18	-1,388.3	-2,505.8	2,866.3	2,862.6	3.77	760.709	
1,476.4	1,476.3	1,433.4	1,433.4	3.2	0.9	-160.19	-1,388.8	-2,505.6	2,869.9	2,865.9	3.96	724.579	
1,500.0	1,499.8	1,457.6	1,457.6	3.2	0.9	-160.19	-1,388.9	-2,505.6	2,871.3	2,867.3	4.02	714.122	
1,574.8	1,574.4	1,533.0	1,532.9	3.4	0.9	-160.20	-1,389.3	-2,505.3	2,877.2	2,873.0	4.21	682.898	
1,600.0	1,599.5	1,557.9	1,557.8	3.5	0.9	-160.21	-1,389.5	-2,505.3	2,879.5	2,875.3	4.28	673.195	
1,673.2	1,672.2	1,632.0	1,631.9	3.6	0.9	-160.22	-1,389.8	-2,505.1	2,887.6	2,883.2	4.47	646.226	
1,700.0	1,698.7	1,660.0	1,659.9	3.7	1.0	-160.23	-1,390.0	-2,505.0	2,891.0	2,886.5	4.54	637.157	
1,771.6	1,769.5	1,732.7	1,732.6	3.9	1.0	-160.24	-1,390.5	-2,504.6	2,901.2	2,896.4	4.73	613.671	
1,800.0	1,797.5	1,760.4	1,760.4	4.0	1.0	-160.25	-1,390.7	-2,504.4	2,905.6	2,900.8	4.80	605.173	
1,870.1	1,866.3	1,825.3	1,825.3	4.2	1.0	-160.26	-1,391.1	-2,504.1	2,917.8	2,912.8	4.99	584.541	
1,899.9	1,895.6	1,850.8	1,850.8	4.3	1.0	-160.26	-1,391.3	-2,504.0	2,923.6	2,918.5	5.07	576.500	
1,968.5	1,962.6	1,910.0	1,909.9	4.5	1.1	-160.35	-1,391.8	-2,503.9	2,937.2	2,932.0	5.25	559.105	
2,000.0	1,993.4	1,939.0	1,939.0	4.6	1.1	-160.40	-1,392.1	-2,503.9	2,943.5	2,938.2	5.34	551.561	
2,066.9	2,058.9	2,000.0	1,999.9	4.8	1.1	-160.49	-1,392.8	-2,503.9	2,957.0	2,951.5	5.52	535.511	
2,100.0	2,091.3	2,031.0	2,031.0	4.9	1.1	-160.54	-1,393.2	-2,503.9	2,963.7	2,958.1	5.61	528.281	
2,165.3	2,155.2	2,090.9	2,090.8	5.2	1.1	-160.64	-1,394.0	-2,503.9	2,977.0	2,971.2	5.79	514.141	
2,200.0	2,189.1	2,123.2	2,123.1	5.3	1.1	-160.69	-1,394.4	-2,504.0	2,984.1	2,978.2	5.89	506.859	
2,263.8	2,251.5	2,183.0	2,182.9	5.5	1.2	-160.78	-1,395.3	-2,504.1	2,997.2	2,991.1	6.07	493.978	
2,300.0	2,286.9	2,216.4	2,216.3	5.7	1.2	-160.83	-1,395.8	-2,504.1	3,004.7	2,998.5	6.17	487.031	
2,362.2	2,347.7	2,272.6	2,272.5	5.9	1.2	-160.92	-1,396.7	-2,504.3	3,017.6	3,011.2	6.35	475.449	
2,400.0	2,384.7	2,307.4	2,307.3	6.0	1.2	-160.97	-1,397.2	-2,504.5	3,025.4	3,019.0	6.45	468.754	
2,460.6	2,444.0	2,367.1	2,367.0	6.3	1.2	-161.07	-1,398.3	-2,504.7	3,038.1	3,031.5	6.63	458.247	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,482.5	2,405.5	2,405.4	6.4	1.2	-161.13	-1,398.9	-2,504.8	3,046.3	3,039.6	6.74	451.759	
2,559.0	2,540.3	2,459.2	2,459.1	6.7	1.3	-161.21	-1,399.8	-2,505.1	3,058.7	3,051.8	6.91	442.356	
2,600.0	2,580.3	2,496.5	2,496.4	6.8	1.3	-161.26	-1,400.5	-2,505.3	3,067.3	3,060.3	7.03	436.142	
2,657.5	2,636.5	2,555.7	2,555.6	7.1	1.3	-161.35	-1,401.4	-2,505.6	3,079.4	3,072.2	7.20	427.562	
2,700.0	2,678.1	2,599.9	2,599.8	7.2	1.3	-161.42	-1,402.2	-2,505.8	3,088.3	3,081.0	7.33	421.488	
2,755.9	2,732.8	2,652.1	2,651.9	7.5	1.3	-161.50	-1,403.1	-2,506.0	3,100.1	3,092.6	7.49	413.825	
2,800.0	2,776.0	2,693.2	2,693.1	7.7	1.3	-161.56	-1,403.8	-2,506.2	3,109.3	3,101.7	7.62	408.041	
2,854.3	2,829.1	2,747.3	2,747.1	7.9	1.4	-161.64	-1,404.8	-2,506.5	3,120.8	3,113.0	7.78	401.052	
2,900.0	2,873.8	2,793.2	2,793.0	8.1	1.4	-161.71	-1,405.6	-2,506.7	3,130.4	3,122.5	7.92	395.408	
2,952.7	2,925.4	2,846.1	2,845.9	8.3	1.4	-161.78	-1,406.6	-2,506.9	3,141.5	3,133.4	8.07	389.099	
3,000.0	2,971.6	2,893.5	2,893.3	8.5	1.4	-161.85	-1,407.4	-2,507.0	3,151.4	3,143.2	8.21	383.673	
3,051.2	3,021.6	2,956.2	2,956.0	8.7	1.4	-161.94	-1,408.5	-2,507.1	3,162.0	3,153.7	8.37	377.951	
3,100.0	3,069.4	3,012.6	3,012.3	8.9	1.4	-162.02	-1,409.3	-2,507.0	3,172.0	3,163.5	8.51	372.681	
3,149.6	3,117.9	3,056.8	3,056.6	9.1	1.5	-162.09	-1,410.0	-2,506.9	3,182.1	3,173.4	8.66	367.572	
3,200.0	3,167.2	3,101.9	3,101.7	9.3	1.5	-162.15	-1,410.7	-2,506.8	3,192.4	3,183.6	8.80	362.606	
3,248.0	3,214.2	3,149.7	3,149.5	9.5	1.5	-162.22	-1,411.6	-2,506.8	3,202.3	3,193.4	8.95	357.888	
3,300.0	3,265.0	3,200.0	3,199.8	9.8	1.5	-162.29	-1,412.4	-2,506.7	3,213.0	3,203.9	9.10	352.975	
3,346.4	3,310.5	3,239.5	3,239.3	10.0	1.5	-162.35	-1,413.1	-2,506.6	3,222.6	3,213.4	9.24	348.720	
3,400.0	3,362.9	3,283.7	3,283.5	10.2	1.5	-162.41	-1,413.9	-2,506.7	3,233.8	3,224.4	9.40	344.031	
3,444.9	3,406.7	3,321.9	3,321.6	10.4	1.6	-162.47	-1,414.7	-2,506.7	3,243.3	3,233.7	9.53	340.179	
3,473.0	3,434.2	3,346.4	3,346.1	10.5	1.6	-162.50	-1,415.3	-2,506.8	3,249.2	3,239.6	9.62	337.810	
3,500.0	3,460.7	3,369.9	3,369.6	10.6	1.6	-162.57	-1,415.8	-2,506.9	3,254.9	3,245.2	9.69	336.006	
3,543.3	3,503.2	3,407.9	3,407.7	10.7	1.6	-162.67	-1,416.6	-2,507.2	3,263.5	3,253.7	9.78	333.562	
3,600.0	3,559.0	3,458.9	3,458.6	10.9	1.6	-162.80	-1,417.7	-2,507.5	3,273.9	3,264.0	9.91	330.391	
3,641.7	3,600.2	3,500.0	3,499.7	11.0	1.6	-162.88	-1,418.6	-2,507.9	3,280.9	3,270.9	10.00	328.164	
3,700.0	3,657.9	3,552.1	3,551.8	11.2	1.6	-162.99	-1,419.7	-2,508.3	3,289.9	3,279.7	10.12	325.118	
3,740.1	3,697.8	3,590.6	3,590.2	11.3	1.7	-163.05	-1,420.6	-2,508.7	3,295.4	3,285.2	10.20	323.123	
3,800.0	3,757.3	3,652.9	3,652.6	11.4	1.7	-163.14	-1,422.0	-2,509.3	3,302.6	3,292.3	10.32	320.115	
3,838.6	3,795.7	3,693.8	3,693.4	11.5	1.7	-163.19	-1,422.9	-2,509.6	3,306.6	3,296.2	10.39	318.279	
3,900.0	3,857.0	3,752.8	3,752.4	11.7	1.7	-163.26	-1,424.2	-2,510.1	3,311.9	3,301.4	10.50	315.373	
3,937.0	3,893.9	3,788.0	3,787.6	11.7	1.7	-163.29	-1,425.0	-2,510.4	3,314.5	3,304.0	10.57	313.722	
4,000.0	3,956.9	3,856.8	3,856.4	11.8	1.7	-163.34	-1,426.5	-2,511.0	3,317.9	3,307.3	10.68	310.799	
4,035.4	3,992.3	3,896.8	3,896.4	11.9	1.8	-163.36	-1,427.3	-2,511.3	3,319.2	3,308.5	10.73	309.201	
4,072.9	4,029.8	3,936.9	3,936.5	11.9	1.8	-122.19	-1,428.1	-2,511.6	3,320.1	3,306.6	13.42	247.307	
4,100.0	4,056.9	3,965.8	3,965.3	12.0	1.8	-122.19	-1,428.6	-2,511.9	3,320.5	3,307.0	13.47	246.473	
4,133.8	4,090.7	4,001.7	4,001.3	12.0	1.8	-122.20	-1,429.1	-2,512.2	3,321.0	3,307.4	13.54	245.348	
4,200.0	4,156.9	4,066.9	4,066.4	12.1	1.8	-122.21	-1,430.0	-2,512.7	3,322.0	3,308.3	13.66	243.245	
4,232.3	4,189.2	4,098.7	4,098.2	12.2	1.8	-122.21	-1,430.4	-2,513.0	3,322.4	3,308.7	13.72	242.186	
4,300.0	4,256.9	4,167.4	4,166.9	12.3	1.8	-122.22	-1,431.3	-2,513.6	3,323.4	3,309.6	13.85	240.033	
4,330.7	4,287.6	4,198.5	4,198.0	12.4	1.8	-122.22	-1,431.7	-2,513.9	3,323.9	3,310.0	13.90	239.088	
4,400.0	4,356.9	4,274.9	4,274.4	12.5	1.9	-122.23	-1,432.5	-2,514.7	3,324.8	3,310.8	14.03	236.942	
4,429.1	4,386.0	4,306.6	4,306.1	12.5	1.9	-122.23	-1,432.8	-2,514.9	3,325.2	3,311.1	14.09	236.048	
4,500.0	4,456.9	4,379.8	4,379.3	12.6	1.9	-122.23	-1,433.4	-2,515.5	3,326.0	3,311.8	14.22	233.913	
4,527.5	4,484.4	4,408.3	4,407.9	12.7	1.9	-122.23	-1,433.6	-2,515.8	3,326.3	3,312.0	14.27	233.091	
4,600.0	4,556.9	4,484.3	4,483.8	12.8	1.9	-122.23	-1,434.1	-2,516.4	3,327.0	3,312.6	14.40	230.965	
4,626.0	4,582.9	4,509.4	4,508.9	12.9	1.9	-122.23	-1,434.2	-2,516.6	3,327.3	3,312.8	14.45	230.212	
4,700.0	4,656.9	4,573.0	4,572.5	13.0	2.0	-122.23	-1,434.6	-2,517.2	3,328.1	3,313.5	14.59	228.120	
4,724.4	4,681.3	4,600.0	4,599.5	13.0	2.0	-122.23	-1,434.9	-2,517.5	3,328.5	3,313.8	14.64	227.426	
4,800.0	4,756.9	4,677.7	4,677.2	13.1	2.0	-122.24	-1,435.5	-2,518.3	3,329.4	3,314.7	14.78	225.307	
4,822.8	4,779.7	4,700.0	4,699.5	13.2	2.0	-122.24	-1,435.6	-2,518.5	3,329.7	3,314.9	14.82	224.671	
4,900.0	4,856.9	4,774.3	4,773.8	13.3	2.0	-122.24	-1,436.1	-2,519.2	3,330.6	3,315.6	14.96	222.563	
4,921.2	4,878.1	4,793.9	4,793.4	13.4	2.0	-122.24	-1,436.2	-2,519.4	3,330.9	3,315.9	15.00	221.990	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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						
5,000.0	4,956.9	4,870.6	4,870.1	13.5	2.0	-122.23	-1,436.8	-2,520.3	3,331.9	3,316.8	15.15	219.889						
5,019.7	4,976.6	4,889.8	4,889.3	13.5	2.0	-122.23	-1,436.9	-2,520.5	3,332.2	3,317.0	15.19	219.368						
5,100.0	5,056.9	4,987.2	4,986.6	13.7	2.1	-122.23	-1,437.3	-2,521.6	3,333.2	3,317.8	15.34	217.291						
5,118.1	5,075.0	5,008.6	5,008.1	13.7	2.1	-122.23	-1,437.3	-2,521.8	3,333.3	3,317.9	15.37	216.829						
5,200.0	5,156.9	5,099.0	5,098.5	13.8	2.1	-122.22	-1,437.3	-2,522.5	3,333.8	3,318.3	15.52	214.789						
5,216.5	5,173.4	5,115.8	5,115.3	13.9	2.1	-122.22	-1,437.3	-2,522.6	3,333.9	3,318.4	15.55	214.383						
5,300.0	5,256.9	5,200.0	5,199.5	14.0	2.1	-122.22	-1,437.2	-2,523.2	3,334.3	3,318.6	15.70	212.356						
5,314.9	5,271.8	5,214.9	5,214.4	14.1	2.1	-122.21	-1,437.2	-2,523.3	3,334.4	3,318.7	15.73	211.994						
5,400.0	5,356.9	5,297.0	5,296.5	14.2	2.1	-122.21	-1,437.1	-2,523.9	3,334.9	3,319.0	15.88	209.964						
5,413.4	5,370.3	5,310.0	5,309.5	14.2	2.1	-122.21	-1,437.1	-2,524.0	3,334.9	3,319.0	15.91	209.646						
5,500.0	5,456.9	5,394.2	5,393.6	14.4	2.1	-122.20	-1,436.9	-2,524.7	3,335.5	3,319.4	16.07	207.612						
5,511.8	5,468.7	5,400.0	5,399.5	14.4	2.1	-122.20	-1,436.9	-2,524.7	3,335.6	3,319.5	16.09	207.337						
5,600.0	5,556.9	5,478.9	5,478.4	14.6	2.1	-122.19	-1,436.9	-2,525.6	3,336.4	3,320.1	16.25	205.293						
5,610.2	5,567.1	5,487.5	5,486.9	14.6	2.1	-122.19	-1,436.9	-2,525.7	3,336.5	3,320.2	16.27	205.059						
5,700.0	5,656.9	5,565.0	5,564.5	14.7	2.1	-122.18	-1,437.2	-2,526.8	3,337.7	3,321.3	16.44	202.989						
5,708.6	5,665.5	5,572.6	5,572.0	14.8	2.1	-122.18	-1,437.3	-2,526.9	3,337.8	3,321.4	16.46	202.791						
5,800.0	5,756.9	5,653.6	5,653.0	14.9	2.2	-122.18	-1,437.9	-2,528.1	3,339.4	3,322.8	16.64	200.708						
5,807.1	5,764.0	5,659.9	5,659.4	14.9	2.2	-122.18	-1,437.9	-2,528.2	3,339.6	3,322.9	16.65	200.548						
5,900.0	5,856.9	5,742.8	5,742.2	15.1	2.2	-122.18	-1,438.9	-2,529.7	3,341.5	3,324.6	16.84	198.469						
5,905.5	5,862.4	5,747.7	5,747.1	15.1	2.2	-122.18	-1,438.9	-2,529.8	3,341.6	3,324.7	16.85	198.348						
5,971.9	5,928.8	5,809.6	5,809.0	15.3	2.2	-122.18	-1,439.6	-2,531.0	3,343.1	3,326.2	16.98	196.894						
6,000.0	5,956.9	5,845.7	5,845.1	15.3	2.2	-32.18	-1,440.0	-2,531.8	3,343.3	3,328.0	15.31	218.406						
6,003.9	5,960.8	5,850.8	5,850.2	15.3	2.2	-32.18	-1,440.0	-2,531.9	3,343.2	3,327.9	15.31	218.334						
6,050.0	6,006.7	5,909.2	5,908.6	15.4	2.2	-32.31	-1,440.4	-2,532.9	3,341.1	3,325.7	15.37	217.326						
6,100.0	6,056.2	5,968.1	5,967.5	15.4	2.2	-32.61	-1,440.5	-2,534.0	3,335.8	3,320.4	15.45	215.898						
6,102.3	6,058.5	5,970.9	5,970.2	15.4	2.2	-32.62	-1,440.5	-2,534.0	3,335.5	3,320.1	15.45	215.822						
6,150.0	6,105.1	6,024.4	6,023.7	15.4	2.2	-33.08	-1,440.4	-2,534.9	3,327.5	3,312.0	15.54	214.194						
6,200.0	6,153.0	6,077.3	6,076.6	15.5	2.3	-33.72	-1,440.2	-2,535.7	3,316.2	3,300.6	15.62	212.318						
6,200.8	6,153.8	6,078.1	6,077.5	15.5	2.3	-33.73	-1,440.2	-2,535.7	3,316.1	3,300.4	15.62	212.287						
6,250.0	6,199.9	6,127.3	6,126.6	15.5	2.3	-34.54	-1,440.1	-2,536.4	3,302.1	3,286.4	15.70	210.335						
6,299.2	6,244.8	6,173.8	6,173.2	15.5	2.3	-35.55	-1,439.9	-2,537.0	3,285.6	3,269.8	15.77	208.307						
6,300.0	6,245.5	6,174.6	6,173.9	15.5	2.3	-35.56	-1,439.9	-2,537.0	3,285.3	3,269.5	15.77	208.274						
6,350.0	6,289.6	6,220.2	6,219.5	15.5	2.3	-36.80	-1,439.8	-2,537.6	3,265.8	3,250.0	15.85	206.102						
6,397.6	6,329.9	6,261.9	6,261.2	15.4	2.3	-38.19	-1,439.7	-2,538.1	3,245.0	3,229.1	15.92	203.856						
6,400.0	6,331.8	6,263.9	6,263.3	15.4	2.3	-38.26	-1,439.7	-2,538.1	3,243.9	3,228.0	15.92	203.743						
6,450.0	6,372.2	6,305.4	6,304.7	15.4	2.3	-39.97	-1,439.7	-2,538.6	3,219.6	3,203.5	16.01	201.077						
6,496.0	6,407.4	6,340.0	6,339.4	15.4	2.3	-41.78	-1,439.6	-2,539.0	3,195.2	3,179.1	16.12	198.208						
6,500.0	6,410.3	6,342.9	6,342.2	15.4	2.3	-41.95	-1,439.6	-2,539.0	3,193.0	3,176.9	16.13	197.956						
6,550.0	6,446.1	6,378.2	6,377.6	15.4	2.3	-44.21	-1,439.5	-2,539.4	3,164.4	3,148.1	16.30	194.179						
6,594.5	6,475.9	6,408.2	6,407.6	15.4	2.3	-46.51	-1,439.4	-2,539.8	3,137.4	3,120.9	16.50	190.093						
6,600.0	6,479.4	6,412.0	6,411.3	15.4	2.3	-46.81	-1,439.3	-2,539.9	3,133.9	3,117.4	16.53	189.568						
6,650.0	6,510.0	6,444.6	6,443.9	15.5	2.3	-49.78	-1,439.2	-2,540.3	3,101.8	3,084.9	16.86	184.005						
6,692.9	6,534.0	6,470.1	6,469.4	15.7	2.3	-52.62	-1,439.1	-2,540.6	3,072.9	3,055.7	17.22	178.439						
6,700.0	6,537.8	6,474.1	6,473.4	15.7	2.3	-53.12	-1,439.1	-2,540.7	3,068.0	3,050.7	17.28	177.519						
6,750.0	6,562.6	6,500.6	6,499.9	16.2	2.3	-56.83	-1,439.0	-2,541.0	3,033.0	3,015.1	17.82	170.244						
6,791.3	6,580.8	6,522.2	6,521.6	16.6	2.3	-60.23	-1,439.0	-2,541.2	3,003.1	2,984.8	18.33	163.804						
6,800.0	6,584.3	6,526.5	6,525.8	16.7	2.3	-60.97	-1,439.0	-2,541.2	2,996.8	2,978.3	18.45	162.395						
6,850.0	6,602.9	6,548.5	6,547.8	17.3	2.3	-65.45	-1,438.9	-2,541.4	2,959.6	2,940.4	19.18	154.326						
6,889.7	6,615.2	6,563.2	6,562.6	17.9	2.3	-69.22	-1,438.8	-2,541.5	2,929.6	2,909.8	19.81	147.896						
6,900.0	6,618.1	6,566.6	6,566.0	18.0	2.3	-70.22	-1,438.8	-2,541.6	2,921.8	2,901.8	19.97	146.311						
6,950.0	6,630.0	6,580.8	6,580.1	18.8	2.3	-75.17	-1,438.8	-2,541.7	2,883.5	2,862.6	20.81	138.530						
6,988.2	6,636.8	6,588.9	6,588.2	19.5	2.3	-79.02	-1,438.8	-2,541.7	2,854.0	2,832.5	21.50	132.748						

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.5	6,590.9	6,590.3	19.7	2.3	-80.22	-1,438.7	-2,541.7	2,844.9	2,823.2	21.71	131.033	
7,050.0	6,643.5	6,597.0	6,596.4	20.6	2.3	-85.24	-1,438.7	-2,541.8	2,806.2	2,783.6	22.67	123.777	
7,086.6	6,644.9	6,599.0	6,598.3	21.3	2.3	-88.83	-1,438.7	-2,541.8	2,778.1	2,754.6	23.43	118.588	
7,097.8	6,645.0	6,599.1	6,598.4	21.5	2.3	-89.91	-1,438.7	-2,541.8	2,769.4	2,745.8	23.66	117.046	
7,100.0	6,645.0	6,599.1	6,598.5	21.6	2.3	-89.91	-1,438.7	-2,541.8	2,767.8	2,744.1	23.70	116.767	
7,185.0	6,644.9	6,599.6	6,598.9	23.3	2.3	-89.92	-1,438.7	-2,541.8	2,703.2	2,677.8	25.43	106.300	
7,200.0	6,644.9	6,599.6	6,599.0	23.6	2.3	-89.92	-1,438.7	-2,541.8	2,691.9	2,666.2	25.73	104.606	
7,283.4	6,644.8	6,600.1	6,599.4	25.4	2.3	-89.94	-1,438.7	-2,541.8	2,629.9	2,602.3	27.55	95.453	
7,300.0	6,644.7	6,600.1	6,599.5	25.8	2.3	-89.94	-1,438.7	-2,541.8	2,617.7	2,589.8	27.91	93.784	
7,381.9	6,644.6	6,600.5	6,599.8	27.7	2.3	-89.95	-1,438.7	-2,541.8	2,558.3	2,528.5	29.79	85.882	
7,400.0	6,644.6	6,600.6	6,599.9	28.1	2.3	-89.95	-1,438.7	-2,541.8	2,545.3	2,515.1	30.20	84.271	
7,480.3	6,644.5	6,601.0	6,600.3	30.0	2.3	-89.97	-1,438.7	-2,541.8	2,488.5	2,456.4	32.11	77.491	
7,500.0	6,644.5	6,601.0	6,600.4	30.5	2.3	-89.97	-1,438.7	-2,541.8	2,474.7	2,442.2	32.58	75.955	
7,578.7	6,644.4	6,601.4	6,600.7	32.4	2.3	-89.98	-1,438.7	-2,541.8	2,420.7	2,386.2	34.51	70.148	
7,600.0	6,644.4	6,601.5	6,600.8	32.9	2.3	-89.98	-1,438.7	-2,541.8	2,406.3	2,371.3	35.03	68.695	
7,677.1	6,644.3	6,601.8	6,601.2	34.8	2.3	-89.99	-1,438.7	-2,541.8	2,355.0	2,318.1	36.96	63.721	
7,700.0	6,644.2	6,601.9	6,601.3	35.4	2.3	-90.00	-1,438.7	-2,541.8	2,340.1	2,302.6	37.53	62.353	
7,775.6	6,644.1	6,602.3	6,601.6	37.3	2.3	-90.01	-1,438.7	-2,541.8	2,291.8	2,252.3	39.45	58.088	
7,800.0	6,644.1	6,602.4	6,601.7	38.0	2.3	-90.01	-1,438.7	-2,541.8	2,276.4	2,236.4	40.07	56.805	
7,874.0	6,644.0	6,602.7	6,602.0	39.9	2.3	-90.02	-1,438.7	-2,541.8	2,231.0	2,189.0	41.98	53.140	
7,900.0	6,644.0	6,602.8	6,602.1	40.5	2.3	-90.03	-1,438.7	-2,541.8	2,215.4	2,172.8	42.65	51.938	
7,972.4	6,643.9	6,603.1	6,602.5	42.4	2.3	-90.04	-1,438.7	-2,541.8	2,173.0	2,128.5	44.54	48.784	
8,000.0	6,643.9	6,603.3	6,602.6	43.1	2.3	-90.04	-1,438.7	-2,541.8	2,157.3	2,112.1	45.26	47.661	
8,070.8	6,643.8	6,603.6	6,602.9	45.0	2.3	-90.05	-1,438.7	-2,541.8	2,118.0	2,070.9	47.13	44.941	
8,100.0	6,643.7	6,603.7	6,603.0	45.8	2.3	-90.05	-1,438.7	-2,541.8	2,102.4	2,054.5	47.90	43.894	
8,169.3	6,643.7	6,604.0	6,603.3	47.6	2.3	-90.06	-1,438.7	-2,541.8	2,066.3	2,016.6	49.73	41.546	
8,200.0	6,643.6	6,604.1	6,603.4	48.4	2.3	-90.07	-1,438.7	-2,541.8	2,050.8	2,000.3	50.55	40.570	
8,267.7	6,643.5	6,604.4	6,603.7	50.2	2.3	-90.08	-1,438.7	-2,541.8	2,018.0	1,965.6	52.36	38.543	
8,300.0	6,643.5	6,604.5	6,603.9	51.1	2.3	-90.08	-1,438.7	-2,541.8	2,003.0	1,949.7	53.22	37.635	
8,366.1	6,643.4	6,604.8	6,604.1	52.9	2.3	-90.09	-1,438.7	-2,541.8	1,973.4	1,918.5	55.00	35.884	
8,400.0	6,643.4	6,605.0	6,604.3	53.8	2.3	-90.10	-1,438.7	-2,541.8	1,959.0	1,903.1	55.90	35.042	
8,464.5	6,643.3	6,605.2	6,604.6	55.5	2.3	-90.10	-1,438.7	-2,541.8	1,932.9	1,875.2	57.65	33.531	
8,500.0	6,643.2	6,605.4	6,604.7	56.5	2.3	-90.11	-1,438.7	-2,541.8	1,919.3	1,860.7	58.60	32.752	
8,563.0	6,643.2	6,605.7	6,605.0	58.2	2.3	-90.12	-1,438.7	-2,541.8	1,896.6	1,836.3	60.31	31.449	
8,600.0	6,643.1	6,605.8	6,605.1	59.2	2.3	-90.12	-1,438.7	-2,541.8	1,884.0	1,822.7	61.31	30.731	
8,661.4	6,643.0	6,606.1	6,605.4	60.8	2.3	-90.13	-1,438.7	-2,541.8	1,864.7	1,801.8	62.98	29.610	
8,700.0	6,643.0	6,606.2	6,605.6	61.9	2.3	-90.14	-1,438.7	-2,541.8	1,853.5	1,789.5	64.03	28.950	
8,759.8	6,642.9	6,606.5	6,605.8	63.5	2.3	-90.14	-1,438.7	-2,541.8	1,837.6	1,772.0	65.66	27.989	
8,800.0	6,642.9	6,606.6	6,606.0	64.6	2.3	-90.15	-1,438.7	-2,541.8	1,828.0	1,761.2	66.75	27.385	
8,858.2	6,642.8	6,606.9	6,606.2	66.2	2.3	-90.16	-1,438.7	-2,541.8	1,815.5	1,747.1	68.34	26.565	
8,900.0	6,642.7	6,607.1	6,606.4	67.3	2.3	-90.16	-1,438.7	-2,541.8	1,807.6	1,738.1	69.48	26.015	
8,956.7	6,642.7	6,607.3	6,606.6	68.9	2.3	-90.17	-1,438.7	-2,541.8	1,798.4	1,727.4	71.03	25.318	
9,000.0	6,642.6	6,607.5	6,606.8	70.1	2.3	-90.18	-1,438.7	-2,541.8	1,792.6	1,720.4	72.22	24.821	
9,055.1	6,642.5	6,607.7	6,607.0	71.6	2.3	-90.18	-1,438.7	-2,541.8	1,786.6	1,712.9	73.73	24.232	
9,100.0	6,642.5	6,607.9	6,607.2	72.8	2.3	-90.19	-1,438.7	-2,541.8	1,783.1	1,708.1	74.96	23.786	
9,153.5	6,642.4	6,608.1	6,607.4	74.3	2.3	-90.20	-1,438.7	-2,541.8	1,780.2	1,703.8	76.43	23.291	
9,200.0	6,642.4	6,608.3	6,607.6	75.6	2.3	-90.20	-1,438.7	-2,541.8	1,779.1	1,701.4	77.71	22.893	
9,220.3	6,642.3	6,608.4	6,607.7	76.1	2.3	-90.20	-1,438.7	-2,541.8	1,779.0	1,700.7	78.27	22.728 CC	
9,251.9	6,642.3	6,608.5	6,607.8	77.0	2.3	-90.21	-1,438.7	-2,541.8	1,779.3	1,700.1	79.14	22.482 ES	
9,300.0	6,642.2	6,608.7	6,608.0	78.3	2.3	-90.21	-1,438.7	-2,541.8	1,780.8	1,700.3	80.47	22.131	
9,350.4	6,642.2	6,608.9	6,608.2	79.7	2.3	-90.22	-1,438.7	-2,541.8	1,783.7	1,701.9	81.85	21.792	
9,400.0	6,642.1	6,609.1	6,608.4	81.1	2.3	-90.23	-1,438.7	-2,541.8	1,788.0	1,704.8	83.22	21.485	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
9,448.8	6,642.0	6,609.3	6,608.6	82.4	2.3	-90.23	-1,438.7	-2,541.8	1,793.6	1,709.0	84.57	21.209	
9,500.0	6,642.0	6,609.5	6,608.8	83.8	2.3	-90.24	-1,438.7	-2,541.8	1,800.8	1,714.9	85.98	20.944	
9,547.2	6,641.9	6,609.7	6,609.0	85.1	2.3	-90.25	-1,438.7	-2,541.8	1,808.8	1,721.5	87.29	20.722	
9,600.0	6,641.9	6,609.9	6,609.2	86.6	2.3	-90.25	-1,438.7	-2,541.8	1,819.0	1,730.3	88.75	20.497	
9,645.6	6,641.8	6,610.0	6,609.4	87.9	2.3	-90.26	-1,438.7	-2,541.8	1,829.1	1,739.1	90.01	20.321	
9,700.0	6,641.7	6,610.3	6,609.6	89.4	2.3	-90.27	-1,438.7	-2,541.8	1,842.5	1,751.0	91.51	20.134	
9,744.1	6,641.7	6,610.4	6,609.7	90.6	2.3	-90.27	-1,438.7	-2,541.8	1,854.5	1,761.7	92.73	19.998	
9,800.0	6,641.6	6,610.6	6,610.0	92.1	2.3	-90.28	-1,438.7	-2,541.8	1,871.0	1,776.8	94.28	19.845	
9,842.5	6,641.6	6,610.8	6,610.1	93.3	2.3	-90.28	-1,438.7	-2,541.8	1,884.6	1,789.2	95.46	19.742	
9,900.0	6,641.5	6,611.0	6,610.4	94.9	2.3	-90.29	-1,438.7	-2,541.8	1,904.4	1,807.3	97.06	19.622	
9,940.9	6,641.4	6,611.2	6,610.5	96.0	2.3	-90.30	-1,438.7	-2,541.8	1,919.4	1,821.2	98.19	19.547	
10,000.0	6,641.4	6,611.4	6,610.7	97.7	2.3	-90.30	-1,438.7	-2,541.8	1,942.3	1,842.5	99.83	19.456	
10,039.3	6,641.3	6,611.6	6,610.9	98.8	2.3	-90.31	-1,438.7	-2,541.8	1,958.5	1,857.5	100.92	19.406	
10,100.0	6,641.2	6,611.8	6,611.1	100.4	2.3	-90.32	-1,438.7	-2,541.8	1,984.6	1,882.0	102.61	19.342	
10,137.8	6,641.2	6,611.9	6,611.3	101.5	2.3	-90.32	-1,438.7	-2,541.8	2,001.6	1,898.0	103.66	19.310	
10,200.0	6,641.1	6,612.2	6,611.5	103.2	2.3	-90.33	-1,438.7	-2,541.9	2,030.9	1,925.5	105.38	19.271	
10,236.2	6,641.1	6,612.3	6,611.6	104.2	2.3	-90.33	-1,438.7	-2,541.9	2,048.6	1,942.2	106.39	19.255	
10,300.0	6,641.0	6,612.5	6,611.9	106.0	2.3	-90.34	-1,438.7	-2,541.9	2,081.0	1,972.8	108.16	19.239	
10,334.6	6,640.9	6,612.7	6,612.0	107.0	2.3	-90.34	-1,438.7	-2,541.9	2,099.1	1,990.0	109.13	19.236 SF	
10,400.0	6,640.9	6,612.9	6,612.2	108.8	2.3	-90.35	-1,438.7	-2,541.9	2,134.6	2,023.6	110.95	19.240	
10,433.0	6,640.8	6,613.0	6,612.4	109.7	2.3	-90.36	-1,438.7	-2,541.9	2,153.0	2,041.1	111.87	19.246	
10,500.0	6,640.7	6,613.3	6,612.6	111.6	2.3	-90.36	-1,438.7	-2,541.9	2,191.4	2,077.7	113.73	19.269	
10,531.5	6,640.7	6,613.4	6,612.7	112.4	2.3	-90.37	-1,438.7	-2,541.9	2,209.9	2,095.3	114.60	19.283	
10,600.0	6,640.6	6,613.7	6,613.0	114.3	2.3	-90.38	-1,438.7	-2,541.9	2,251.3	2,134.8	116.51	19.322	
10,629.9	6,640.6	6,613.8	6,613.1	115.2	2.3	-90.38	-1,438.7	-2,541.9	2,269.7	2,152.4	117.35	19.342	
10,700.0	6,640.5	6,614.0	6,613.4	117.1	2.3	-90.39	-1,438.7	-2,541.9	2,313.9	2,194.6	119.30	19.396	
10,728.3	6,640.4	6,614.1	6,613.5	117.9	2.3	-90.39	-1,438.7	-2,541.9	2,332.1	2,212.0	120.09	19.420	
10,800.0	6,640.4	6,614.4	6,613.7	119.9	2.3	-90.40	-1,438.7	-2,541.9	2,379.1	2,257.0	122.08	19.487	
10,826.7	6,640.3	6,614.5	6,613.8	120.7	2.3	-90.40	-1,438.7	-2,541.9	2,396.9	2,274.1	122.83	19.514	
10,900.0	6,640.2	6,614.8	6,614.1	122.7	2.3	-90.41	-1,438.7	-2,541.9	2,446.6	2,321.8	124.87	19.593	
10,925.2	6,640.2	6,614.9	6,614.2	123.4	2.3	-90.41	-1,438.7	-2,541.9	2,464.0	2,338.4	125.57	19.622	
11,000.0	6,640.1	6,615.1	6,614.4	125.5	2.3	-90.42	-1,438.7	-2,541.9	2,516.3	2,388.7	127.66	19.711	
11,023.6	6,640.1	6,615.2	6,614.5	126.1	2.3	-90.43	-1,438.7	-2,541.9	2,533.1	2,404.8	128.32	19.740	
11,100.0	6,640.0	6,615.5	6,614.8	128.3	2.3	-90.43	-1,438.7	-2,541.9	2,588.0	2,457.6	130.45	19.839	
11,122.0	6,639.9	6,615.6	6,614.9	128.9	2.3	-90.44	-1,438.7	-2,541.9	2,604.1	2,473.0	131.07	19.868	
11,200.0	6,639.8	6,615.8	6,615.2	131.1	2.3	-90.45	-1,438.7	-2,541.9	2,661.5	2,528.3	133.24	19.975	
11,220.4	6,639.8	6,615.9	6,615.2	131.6	2.3	-90.45	-1,438.7	-2,541.9	2,676.8	2,543.0	133.81	20.004	
11,300.0	6,639.7	6,616.2	6,615.5	133.9	2.3	-90.46	-1,438.7	-2,541.9	2,736.7	2,600.7	136.03	20.118	
11,318.9	6,639.7	6,616.3	6,615.6	134.4	2.3	-90.46	-1,438.7	-2,541.9	2,751.1	2,614.5	136.56	20.146	
11,400.0	6,639.6	6,616.5	6,615.9	136.7	2.3	-90.47	-1,438.7	-2,541.9	2,813.5	2,674.6	138.83	20.266	
11,417.3	6,639.6	6,616.6	6,615.9	137.1	2.3	-90.47	-1,438.7	-2,541.9	2,826.9	2,687.6	139.31	20.292	
11,500.0	6,639.5	6,616.9	6,616.2	139.4	2.3	-90.48	-1,438.7	-2,541.9	2,891.6	2,750.0	141.62	20.418	
11,515.7	6,639.5	6,617.0	6,616.3	139.9	2.3	-90.48	-1,438.6	-2,541.9	2,904.0	2,762.0	142.06	20.443	
11,600.0	6,639.3	6,617.2	6,616.6	142.2	2.3	-90.49	-1,438.6	-2,541.9	2,971.1	2,826.7	144.41	20.574	
11,614.1	6,639.3	6,617.3	6,616.6	142.6	2.3	-90.49	-1,438.6	-2,541.9	2,982.4	2,837.6	144.81	20.596	
11,700.0	6,639.2	6,617.6	6,616.9	145.0	2.3	-90.50	-1,438.6	-2,541.9	3,051.8	2,904.6	147.21	20.731	
11,712.6	6,639.2	6,617.6	6,617.0	145.4	2.3	-90.50	-1,438.6	-2,541.9	3,062.0	2,914.5	147.56	20.751	
11,800.0	6,639.1	6,617.9	6,617.3	147.8	2.3	-90.51	-1,438.6	-2,541.9	3,133.6	2,983.6	150.00	20.890	
11,811.0	6,639.1	6,618.0	6,617.3	148.1	2.3	-90.51	-1,438.6	-2,541.9	3,142.6	2,992.3	150.31	20.908	
11,900.0	6,639.0	6,618.3	6,617.6	150.6	2.3	-90.52	-1,438.6	-2,541.9	3,216.4	3,063.6	152.80	21.050	
11,909.4	6,639.0	6,618.3	6,617.6	150.9	2.3	-90.53	-1,438.6	-2,541.9	3,224.3	3,071.2	153.06	21.065	
12,000.0	6,638.8	6,618.6	6,617.9	153.4	2.3	-90.53	-1,438.6	-2,541.9	3,300.2	3,144.6	155.59	21.210	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
12,007.8	6,638.8	6,618.6	6,618.0	153.6	2.3	-90.54	-1,438.6	-2,541.9	3,306.8	3,151.0	155.81	21.223	
12,100.0	6,638.7	6,619.0	6,618.3	156.2	2.3	-90.55	-1,438.6	-2,541.9	3,384.8	3,226.4	158.39	21.370	
12,106.3	6,638.7	6,619.0	6,618.3	156.4	2.3	-90.55	-1,438.6	-2,541.9	3,390.2	3,231.6	158.57	21.380	
12,200.0	6,638.6	6,619.3	6,618.6	159.0	2.3	-90.56	-1,438.6	-2,541.9	3,470.3	3,309.1	161.19	21.530	
12,204.7	6,638.6	6,619.3	6,618.6	159.1	2.3	-90.56	-1,438.6	-2,541.9	3,474.3	3,313.0	161.32	21.537	
12,300.0	6,638.5	6,619.6	6,619.0	161.8	2.3	-90.57	-1,438.6	-2,541.9	3,556.5	3,392.5	163.99	21.688	
12,303.1	6,638.5	6,619.6	6,619.0	161.9	2.3	-90.57	-1,438.6	-2,541.9	3,559.2	3,395.2	164.07	21.693	
12,400.0	6,638.3	6,620.0	6,619.3	164.6	2.3	-90.58	-1,438.6	-2,541.9	3,643.5	3,476.7	166.78	21.845	
12,401.5	6,638.3	6,620.0	6,619.3	164.6	2.3	-90.58	-1,438.6	-2,541.9	3,644.8	3,478.0	166.83	21.848	
12,500.0	6,638.2	6,620.3	6,619.6	167.4	2.3	-90.59	-1,438.6	-2,541.9	3,731.1	3,561.5	169.58	22.001	
12,598.4	6,638.1	6,620.6	6,619.9	170.2	2.3	-90.60	-1,438.6	-2,541.9	3,817.8	3,645.5	172.34	22.153	
12,600.0	6,638.1	6,620.6	6,619.9	170.2	2.3	-90.60	-1,438.6	-2,541.9	3,819.3	3,646.9	172.38	22.156	
12,696.8	6,638.0	6,620.9	6,620.3	172.9	2.3	-90.61	-1,438.6	-2,541.9	3,905.2	3,730.1	175.09	22.304	
12,700.0	6,638.0	6,620.9	6,620.3	173.0	2.3	-90.61	-1,438.6	-2,541.9	3,908.0	3,732.8	175.18	22.309	
12,795.2	6,637.8	6,621.3	6,620.6	175.7	2.3	-90.62	-1,438.6	-2,541.9	3,993.1	3,815.2	177.85	22.452	
12,800.0	6,637.8	6,621.3	6,620.6	175.8	2.3	-90.62	-1,438.6	-2,541.9	3,997.3	3,819.3	177.98	22.459	
12,893.7	6,637.7	6,621.6	6,620.9	178.4	2.3	-90.63	-1,438.6	-2,541.9	4,081.4	3,900.8	180.60	22.599	
12,900.0	6,637.7	6,621.6	6,620.9	178.6	2.3	-90.63	-1,438.6	-2,541.9	4,087.1	3,906.3	180.78	22.608	
12,992.1	6,637.6	6,621.9	6,621.2	181.2	2.3	-90.64	-1,438.6	-2,541.9	4,170.2	3,986.9	183.36	22.743	
13,000.0	6,637.6	6,621.9	6,621.2	181.4	2.3	-90.64	-1,438.6	-2,541.9	4,177.4	3,993.8	183.58	22.755	
13,090.5	6,637.5	6,622.2	6,621.5	183.9	2.3	-90.65	-1,438.6	-2,541.9	4,259.4	4,073.3	186.12	22.886	
13,100.0	6,637.5	6,622.2	6,621.6	184.2	2.3	-90.65	-1,438.6	-2,541.9	4,268.1	4,081.7	186.38	22.900	
13,188.9	6,637.4	6,622.5	6,621.8	186.7	2.3	-90.66	-1,438.6	-2,541.9	4,349.1	4,160.2	188.87	23.027	
13,200.0	6,637.3	6,622.6	6,621.9	187.0	2.3	-90.66	-1,438.6	-2,541.9	4,359.2	4,170.0	189.18	23.042	
13,287.4	6,637.2	6,622.8	6,622.2	189.4	2.3	-90.67	-1,438.6	-2,541.9	4,439.1	4,247.4	191.63	23.165	
13,300.0	6,637.2	6,622.9	6,622.2	189.8	2.3	-90.67	-1,438.6	-2,541.9	4,450.6	4,258.6	191.98	23.182	
13,385.8	6,637.1	6,623.1	6,622.5	192.2	2.3	-90.68	-1,438.6	-2,541.9	4,529.4	4,335.0	194.39	23.301	
13,400.0	6,637.1	6,623.2	6,622.5	192.6	2.3	-90.68	-1,438.6	-2,541.9	4,542.5	4,347.7	194.78	23.321	
13,484.2	6,637.0	6,623.5	6,622.8	195.0	2.3	-90.69	-1,438.6	-2,541.9	4,620.1	4,422.9	197.14	23.435	
13,500.0	6,637.0	6,623.5	6,622.8	195.4	2.3	-90.69	-1,438.6	-2,541.9	4,634.6	4,437.1	197.59	23.456	
13,582.6	6,636.9	6,623.8	6,623.1	197.7	2.3	-90.70	-1,438.6	-2,541.9	4,711.1	4,511.2	199.90	23.567	
13,600.0	6,636.8	6,623.8	6,623.1	198.2	2.3	-90.70	-1,438.6	-2,541.9	4,727.1	4,526.8	200.39	23.590	
13,681.1	6,636.7	6,624.1	6,623.4	200.5	2.3	-90.71	-1,438.6	-2,541.9	4,802.4	4,599.7	202.66	23.697	
13,700.0	6,636.7	6,624.1	6,623.4	201.0	2.3	-90.71	-1,438.6	-2,541.9	4,819.9	4,616.7	203.19	23.721	
13,779.5	6,636.6	6,624.4	6,623.7	203.2	2.3	-90.72	-1,438.6	-2,541.9	4,893.9	4,688.5	205.42	23.824	
13,800.0	6,636.6	6,624.4	6,623.8	203.8	2.3	-90.72	-1,438.6	-2,541.9	4,913.0	4,707.0	205.99	23.850	
13,877.9	6,636.5	6,624.7	6,624.0	206.0	2.3	-90.73	-1,438.6	-2,541.9	4,985.7	4,777.6	208.18	23.950	
13,900.0	6,636.5	6,624.7	6,624.1	206.6	2.3	-90.73	-1,438.6	-2,541.9	5,006.4	4,797.6	208.79	23.977	
13,976.3	6,636.4	6,625.0	6,624.3	208.8	2.3	-90.74	-1,438.6	-2,541.9	5,077.8	4,866.9	210.93	24.073	
14,000.0	6,636.3	6,625.0	6,624.4	209.4	2.3	-90.74	-1,438.6	-2,541.9	5,100.0	4,888.4	211.60	24.102	
14,074.8	6,636.2	6,625.3	6,624.6	211.5	2.3	-90.75	-1,438.6	-2,541.9	5,170.1	4,956.4	213.69	24.194	
14,100.0	6,636.2	6,625.3	6,624.7	212.2	2.3	-90.75	-1,438.6	-2,541.9	5,193.8	4,979.4	214.40	24.225	
14,173.2	6,636.1	6,625.6	6,624.9	214.3	2.3	-90.76	-1,438.6	-2,541.9	5,262.6	5,046.2	216.45	24.313	
14,200.0	6,636.1	6,625.6	6,625.0	215.0	2.3	-90.76	-1,438.6	-2,541.9	5,287.9	5,070.6	217.20	24.345	
14,271.6	6,636.0	6,625.9	6,625.2	217.0	2.3	-90.77	-1,438.6	-2,541.9	5,355.4	5,136.1	219.21	24.430	
14,300.0	6,636.0	6,625.9	6,625.3	217.8	2.3	-90.77	-1,438.6	-2,541.9	5,382.1	5,162.1	220.01	24.463	
14,370.0	6,635.9	6,626.1	6,625.5	219.8	2.3	-90.78	-1,438.6	-2,541.9	5,448.3	5,226.3	221.97	24.545	
14,400.0	6,635.8	6,626.2	6,625.6	220.6	2.3	-90.78	-1,438.6	-2,541.9	5,476.6	5,253.8	222.81	24.580	
14,468.5	6,635.7	6,626.4	6,625.8	222.6	2.3	-90.79	-1,438.6	-2,541.9	5,541.4	5,316.7	224.73	24.658	
14,500.0	6,635.7	6,626.5	6,625.9	223.4	2.3	-90.79	-1,438.6	-2,541.9	5,571.3	5,345.7	225.61	24.694	
14,566.9	6,635.6	6,626.7	6,626.1	225.3	2.3	-90.80	-1,438.6	-2,541.9	5,634.7	5,407.2	227.49	24.769	
14,600.0	6,635.6	6,626.8	6,626.2	226.2	2.3	-90.80	-1,438.6	-2,541.9	5,666.1	5,437.7	228.42	24.806	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,665.3	6,635.5	6,627.0	6,626.3	228.1	2.3	-90.81	-1,438.6	-2,541.9	5,728.2	5,497.9	230.25	24.878	
14,700.0	6,635.5	6,627.1	6,626.4	229.0	2.3	-90.81	-1,438.6	-2,541.9	5,761.2	5,529.9	231.22	24.916	
14,763.7	6,635.4	6,627.3	6,626.6	230.8	2.3	-90.81	-1,438.6	-2,541.9	5,821.8	5,588.8	233.01	24.985	
14,800.0	6,635.3	6,627.4	6,626.7	231.8	2.3	-90.82	-1,438.6	-2,541.9	5,856.4	5,622.3	234.03	25.024	
14,862.2	6,635.2	6,627.6	6,626.9	233.6	2.3	-90.82	-1,438.6	-2,541.9	5,915.6	5,679.9	235.77	25.091	
14,900.0	6,635.2	6,627.7	6,627.0	234.7	2.3	-90.83	-1,438.6	-2,541.9	5,951.7	5,714.9	236.83	25.131	
14,960.6	6,635.1	6,627.9	6,627.2	236.4	2.3	-90.83	-1,438.6	-2,541.9	6,009.6	5,771.0	238.53	25.194	
14,995.1	6,635.0	6,627.9	6,627.2	237.3	2.3	-90.84	-1,438.6	-2,541.9	6,042.6	5,803.1	239.50	25.230	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-75.13	1,328.8	-5,004.2	5,177.6				
98.4	98.4	76.4	76.4	0.1	0.0	-75.13	1,328.8	-5,004.2	5,177.6	5,177.5	0.10	N/A	
100.0	100.0	78.0	78.0	0.1	0.0	-75.13	1,328.8	-5,004.2	5,177.6	5,177.5	0.10	N/A	
196.8	196.8	174.8	174.8	0.3	1.0	-75.13	1,328.8	-5,004.2	5,177.6	5,176.3	1.29	4,007.274	
200.0	200.0	178.0	178.0	0.3	1.0	-75.13	1,328.8	-5,004.2	5,177.6	5,176.3	1.34	3,863.218	
295.3	295.3	273.3	273.3	0.5	3.0	-75.13	1,328.8	-5,004.2	5,177.6	5,174.1	3.50	1,478.315	
300.0	300.0	278.0	278.0	0.5	3.1	-75.13	1,328.8	-5,004.2	5,177.6	5,174.0	3.62	1,430.241	
393.7	393.7	371.7	371.7	0.8	5.1	-75.13	1,328.8	-5,004.2	5,177.6	5,171.8	5.82	889.926	
400.0	400.0	378.0	378.0	0.8	5.2	-75.13	1,328.8	-5,004.2	5,177.6	5,171.6	5.96	868.292	
492.1	492.1	470.1	470.1	1.0	7.1	-75.13	1,328.8	-5,004.2	5,177.6	5,169.5	8.06	642.504	
500.0	500.0	478.0	478.0	1.0	7.2	-75.13	1,328.8	-5,004.2	5,177.6	5,169.4	8.24	628.583	
590.5	590.5	568.5	568.5	1.2	9.1	-75.13	1,328.8	-5,004.2	5,177.6	5,167.3	10.28	503.639	
600.0	600.0	578.0	578.0	1.2	9.3	-75.13	1,328.8	-5,004.2	5,177.6	5,167.1	10.49	493.418	
689.0	689.0	667.0	667.0	1.4	11.1	-75.13	1,328.8	-5,004.2	5,177.6	5,165.1	12.49	414.396	
700.0	700.0	678.0	678.0	1.4	11.3	-75.13	1,328.8	-5,004.2	5,177.6	5,164.9	12.74	406.337	
787.4	787.4	765.4	765.4	1.6	13.1	-75.13	1,328.8	-5,004.2	5,177.6	5,162.9	14.70	352.119	
800.0	800.0	778.0	778.0	1.7	13.3	-75.13	1,328.8	-5,004.2	5,177.6	5,162.6	14.99	345.476	
885.8	885.8	863.8	863.8	1.9	15.0	-75.13	1,328.8	-5,004.2	5,177.6	5,160.7	16.91	306.160	
900.0	900.0	878.0	878.0	1.9	15.3	-75.13	1,328.8	-5,004.2	5,177.6	5,160.4	17.23	300.513	
984.2	984.2	962.2	962.2	2.1	17.0	-75.13	1,328.8	-5,004.2	5,177.6	5,158.5	19.12	270.836	
1,000.0	1,000.0	978.0	978.0	2.1	17.3	-75.13	1,328.8	-5,004.2	5,177.6	5,158.1	19.47	265.927	
1,082.7	1,082.7	1,060.7	1,060.7	2.3	19.0	-75.13	1,328.8	-5,004.2	5,177.6	5,156.3	21.32	242.832	
1,100.0	1,100.0	1,078.0	1,078.0	2.3	19.4	-75.13	1,328.8	-5,004.2	5,177.6	5,155.9	21.71	238.492	
1,181.1	1,181.1	1,159.1	1,159.1	2.5	21.0	-75.13	1,328.8	-5,004.2	5,177.6	5,154.1	23.53	220.084	
1,200.0	1,200.0	1,178.0	1,178.0	2.6	21.4	-75.13	1,328.8	-5,004.2	5,177.6	5,153.6	23.95	216.196	
1,279.5	1,279.5	1,257.5	1,257.5	2.7	23.0	-75.13	1,328.8	-5,004.2	5,177.6	5,151.9	25.73	201.238	
1,300.0	1,300.0	1,278.0	1,278.0	2.8	23.4	-75.13	1,328.8	-5,004.2	5,177.6	5,151.4	26.19	197.716	
1,377.9	1,377.9	1,355.9	1,355.9	3.0	25.0	-116.32	1,328.8	-5,004.2	5,178.1	5,150.1	27.93	185.419	
1,400.0	1,400.0	1,378.0	1,378.0	3.0	25.4	-116.32	1,328.8	-5,004.2	5,178.4	5,150.0	28.42	182.227	
1,476.4	1,476.3	1,454.3	1,454.3	3.2	26.9	-116.33	1,328.8	-5,004.2	5,180.0	5,149.9	30.11	172.026	
1,500.0	1,499.8	1,477.8	1,477.8	3.2	27.4	-116.33	1,328.8	-5,004.2	5,180.7	5,150.1	30.63	169.114	
1,574.8	1,574.4	1,552.4	1,552.4	3.4	28.9	-116.34	1,328.8	-5,004.2	5,183.5	5,151.2	32.29	160.542	
1,600.0	1,599.5	1,577.5	1,577.5	3.5	29.4	-116.35	1,328.8	-5,004.2	5,184.6	5,151.7	32.84	157.865	
1,673.2	1,672.2	1,650.2	1,650.2	3.6	30.9	-116.36	1,328.8	-5,004.2	5,188.4	5,154.0	34.45	150.586	
1,700.0	1,698.7	1,676.7	1,676.7	3.7	31.4	-116.37	1,328.8	-5,004.2	5,190.0	5,155.0	35.04	148.108	
1,771.6	1,769.5	1,747.5	1,747.5	3.9	32.8	-116.39	1,328.8	-5,004.2	5,194.9	5,158.3	36.62	141.867	
1,800.0	1,797.5	1,775.5	1,775.5	4.0	33.4	-116.40	1,328.8	-5,004.2	5,197.0	5,159.8	37.24	139.561	
1,870.1	1,866.3	1,844.3	1,844.3	4.2	34.8	-116.42	1,328.8	-5,004.2	5,202.9	5,164.1	38.78	134.165	
1,899.9	1,895.6	1,873.6	1,873.6	4.3	35.4	-116.43	1,328.8	-5,004.2	5,205.7	5,166.2	39.43	132.010	
1,968.5	1,962.6	1,940.6	1,940.6	4.5	36.7	-116.57	1,328.8	-5,004.2	5,212.1	5,171.1	40.98	127.181	
2,000.0	1,993.4	1,971.4	1,971.4	4.6	37.3	-116.63	1,328.8	-5,004.2	5,215.1	5,173.4	41.69	125.080	
2,066.9	2,058.9	2,036.9	2,036.9	4.8	38.7	-116.76	1,328.8	-5,004.2	5,221.5	5,178.3	43.22	120.820	
2,100.0	2,091.3	2,069.3	2,069.3	4.9	39.3	-116.83	1,328.8	-5,004.2	5,224.6	5,180.7	43.97	118.823	
2,165.3	2,155.2	2,133.2	2,133.2	5.2	40.6	-116.96	1,328.8	-5,004.2	5,230.9	5,185.4	45.46	115.054	
2,200.0	2,189.1	2,167.1	2,167.1	5.3	41.3	-117.03	1,328.8	-5,004.2	5,234.2	5,187.9	46.26	113.152	
2,263.8	2,251.5	2,229.5	2,229.5	5.5	42.5	-117.16	1,328.8	-5,004.2	5,240.3	5,192.6	47.72	109.805	
2,300.0	2,286.9	2,264.9	2,264.9	5.7	43.3	-117.23	1,328.8	-5,004.2	5,243.9	5,195.3	48.56	107.993	
2,362.2	2,347.7	2,325.7	2,325.7	5.9	44.5	-117.35	1,328.8	-5,004.2	5,249.9	5,199.9	49.99	105.013	
2,400.0	2,384.7	2,362.7	2,362.7	6.0	45.2	-117.43	1,328.8	-5,004.2	5,253.6	5,202.7	50.86	103.285	
2,460.6	2,444.0	2,422.0	2,422.0	6.3	46.4	-117.55	1,328.8	-5,004.2	5,259.5	5,207.2	52.27	100.626	
2,500.0	2,482.5	2,460.5	2,460.5	6.4	47.2	-117.62	1,328.8	-5,004.2	5,263.3	5,210.2	53.18	98.974	
2,559.0	2,540.3	2,518.3	2,518.3	6.7	48.3	-117.74	1,328.8	-5,004.2	5,269.1	5,214.6	54.55	96.595	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,558.3	2,558.3	6.8	49.2	-117.82	1,328.8	-5,004.2	5,273.2	5,217.7	55.50	95.015	
2,657.5	2,636.5	2,614.5	2,614.5	7.1	50.3	-117.93	1,328.8	-5,004.2	5,278.9	5,222.0	56.83	92.882	
2,700.0	2,678.1	2,656.1	2,656.1	7.2	51.1	-118.02	1,328.8	-5,004.2	5,283.1	5,225.3	57.82	91.367	
2,755.9	2,732.8	2,710.8	2,710.8	7.5	52.2	-118.13	1,328.8	-5,004.2	5,288.6	5,229.5	59.12	89.451	
2,800.0	2,776.0	2,754.0	2,754.0	7.7	53.1	-118.21	1,328.8	-5,004.2	5,293.0	5,232.9	60.15	87.997	
2,854.3	2,829.1	2,807.1	2,807.1	7.9	54.2	-118.32	1,328.8	-5,004.2	5,298.5	5,237.1	61.42	86.272	
2,900.0	2,873.8	2,851.8	2,851.8	8.1	55.1	-118.41	1,328.8	-5,004.2	5,303.1	5,240.6	62.48	84.876	
2,952.7	2,925.4	2,903.4	2,903.4	8.3	56.1	-118.51	1,328.8	-5,004.2	5,308.4	5,244.7	63.71	83.320	
3,000.0	2,971.6	2,949.6	2,949.6	8.5	57.0	-118.60	1,328.8	-5,004.2	5,313.2	5,248.3	64.81	81.977	
3,051.2	3,021.6	2,999.6	2,999.6	8.7	58.0	-118.70	1,328.8	-5,004.2	5,318.3	5,252.3	66.01	80.572	
3,100.0	3,069.4	3,047.4	3,047.4	8.9	59.0	-118.79	1,328.8	-5,004.2	5,323.3	5,256.2	67.15	79.278	
3,149.6	3,117.9	3,095.9	3,095.9	9.1	60.0	-118.89	1,328.8	-5,004.2	5,328.4	5,260.1	68.31	78.008	
3,200.0	3,167.2	3,145.2	3,145.2	9.3	61.0	-118.99	1,328.8	-5,004.2	5,333.5	5,264.0	69.48	76.761	
3,248.0	3,214.2	3,192.2	3,192.2	9.5	61.9	-119.08	1,328.8	-5,004.2	5,338.5	5,267.9	70.61	75.610	
3,300.0	3,265.0	3,243.0	3,243.0	9.8	62.9	-119.18	1,328.8	-5,004.2	5,343.8	5,272.0	71.82	74.406	
3,346.4	3,310.5	3,288.5	3,288.5	10.0	63.8	-119.27	1,328.8	-5,004.2	5,348.6	5,275.7	72.91	73.364	
3,400.0	3,362.9	3,340.9	3,340.9	10.2	64.9	-119.37	1,328.8	-5,004.2	5,354.1	5,280.0	74.16	72.200	
3,444.9	3,406.7	3,384.7	3,384.7	10.4	65.8	-119.45	1,328.8	-5,004.2	5,358.8	5,283.6	75.21	71.255	
3,473.0	3,434.2	3,412.2	3,412.2	10.5	66.3	-119.51	1,328.8	-5,004.2	5,361.7	5,285.9	75.86	70.676	
3,500.0	3,460.7	3,438.7	3,438.7	10.6	66.9	-119.61	1,328.8	-5,004.2	5,364.5	5,288.0	76.51	70.111	
3,543.3	3,503.2	3,481.2	3,481.2	10.7	67.7	-119.75	1,328.8	-5,004.2	5,368.6	5,291.1	77.53	69.242	
3,600.0	3,559.0	3,537.0	3,537.0	10.9	68.8	-119.93	1,328.8	-5,004.2	5,373.6	5,294.7	78.87	68.132	
3,641.7	3,600.2	3,578.2	3,578.2	11.0	69.7	-120.05	1,328.8	-5,004.2	5,376.9	5,297.1	79.84	67.343	
3,700.0	3,657.9	3,635.9	3,635.9	11.2	70.8	-120.19	1,328.8	-5,004.2	5,381.0	5,299.8	81.20	66.267	
3,740.1	3,697.8	3,675.8	3,675.8	11.3	71.6	-120.28	1,328.8	-5,004.2	5,383.5	5,301.4	82.13	65.552	
3,800.0	3,757.3	3,735.3	3,735.3	11.4	72.8	-120.40	1,328.8	-5,004.2	5,386.7	5,303.2	83.50	64.512	
3,838.6	3,795.7	3,773.7	3,773.7	11.5	73.6	-120.46	1,328.8	-5,004.2	5,388.5	5,304.1	84.37	63.866	
3,900.0	3,857.0	3,835.0	3,835.0	11.7	74.8	-120.54	1,328.8	-5,004.2	5,390.7	5,304.9	85.76	62.860	
3,937.0	3,893.9	3,871.9	3,871.9	11.7	75.6	-120.57	1,328.8	-5,004.2	5,391.7	5,305.1	86.58	62.277	
4,000.0	3,956.9	3,934.9	3,934.9	11.8	76.8	-120.61	1,328.8	-5,004.2	5,392.9	5,304.9	87.97	61.305	
4,035.4	3,992.3	3,970.3	3,970.3	11.9	77.6	-120.62	1,328.8	-5,004.2	5,393.2	5,304.5	88.74	60.778	
4,072.9	4,029.8	4,007.8	4,007.8	11.9	78.3	-79.44	1,328.8	-5,004.2	5,393.3	5,305.0	88.30	61.080	
4,100.0	4,056.9	4,034.9	4,034.9	12.0	78.9	-79.44	1,328.8	-5,004.2	5,393.3	5,304.4	88.89	60.674	
4,133.8	4,090.7	4,068.7	4,068.7	12.0	79.5	-79.44	1,328.8	-5,004.2	5,393.3	5,303.7	89.64	60.169	
4,200.0	4,156.9	4,134.9	4,134.9	12.1	80.9	-79.44	1,328.8	-5,004.2	5,393.3	5,302.2	91.09	59.206	
4,232.3	4,189.2	4,167.2	4,167.2	12.2	81.5	-79.44	1,328.8	-5,004.2	5,393.3	5,301.5	91.81	58.748	
4,300.0	4,256.9	4,234.9	4,234.9	12.3	82.9	-79.44	1,328.8	-5,004.2	5,393.3	5,300.0	93.30	57.808	
4,330.7	4,287.6	4,265.6	4,265.6	12.4	83.5	-79.44	1,328.8	-5,004.2	5,393.3	5,299.4	93.98	57.391	
4,400.0	4,356.9	4,334.9	4,334.9	12.5	84.9	-79.44	1,328.8	-5,004.2	5,393.3	5,297.8	95.50	56.473	
4,429.1	4,386.0	4,364.0	4,364.0	12.5	85.5	-79.44	1,328.8	-5,004.2	5,393.3	5,297.2	96.15	56.095	
4,500.0	4,456.9	4,434.9	4,434.9	12.6	86.9	-79.44	1,328.8	-5,004.2	5,393.3	5,295.6	97.71	55.197	
4,527.5	4,484.4	4,462.4	4,462.4	12.7	87.4	-79.44	1,328.8	-5,004.2	5,393.3	5,295.0	98.32	54.856	
4,600.0	4,556.9	4,534.9	4,534.9	12.8	88.9	-79.44	1,328.8	-5,004.2	5,393.3	5,293.4	99.92	53.978	
4,626.0	4,582.9	4,560.9	4,560.9	12.9	89.4	-79.44	1,328.8	-5,004.2	5,393.3	5,292.8	100.49	53.670	
4,700.0	4,656.9	4,634.9	4,634.9	13.0	90.9	-79.44	1,328.8	-5,004.2	5,393.3	5,291.2	102.13	52.810	
4,724.4	4,681.3	4,659.3	4,659.3	13.0	91.4	-79.44	1,328.8	-5,004.2	5,393.3	5,290.7	102.67	52.533	
4,800.0	4,756.9	4,734.9	4,734.9	13.1	92.9	-79.44	1,328.8	-5,004.2	5,393.3	5,289.0	104.34	51.692	
4,822.8	4,779.7	4,757.7	4,757.7	13.2	93.4	-79.44	1,328.8	-5,004.2	5,393.3	5,288.5	104.84	51.443	
4,900.0	4,856.9	4,834.9	4,834.9	13.3	94.9	-79.44	1,328.8	-5,004.2	5,393.3	5,286.8	106.55	50.619	
4,921.2	4,878.1	4,856.1	4,856.1	13.4	95.4	-79.44	1,328.8	-5,004.2	5,393.3	5,286.3	107.02	50.397	
5,000.0	4,956.9	4,934.9	4,934.9	13.5	97.0	-79.44	1,328.8	-5,004.2	5,393.3	5,284.6	108.76	49.590	
5,019.7	4,976.6	4,954.6	4,954.6	13.5	97.3	-79.44	1,328.8	-5,004.2	5,393.3	5,284.1	109.19	49.392	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,034.9	5,034.9	13.7	99.0	-79.44	1,328.8	-5,004.2	5,393.3	5,282.4	110.97	48.601		
5,118.1	5,075.0	5,053.0	5,053.0	13.7	99.3	-79.44	1,328.8	-5,004.2	5,393.3	5,282.0	111.37	48.426		
5,200.0	5,156.9	5,134.9	5,134.9	13.8	101.0	-79.44	1,328.8	-5,004.2	5,393.3	5,280.2	113.18	47.651		
5,216.5	5,173.4	5,151.4	5,151.4	13.9	101.3	-79.44	1,328.8	-5,004.2	5,393.3	5,279.8	113.55	47.497		
5,300.0	5,256.9	5,234.9	5,234.9	14.0	103.0	-79.44	1,328.8	-5,004.2	5,393.3	5,277.9	115.40	46.737		
5,314.9	5,271.8	5,249.8	5,249.8	14.1	103.3	-79.44	1,328.8	-5,004.2	5,393.3	5,277.6	115.73	46.603		
5,400.0	5,356.9	5,334.9	5,334.9	14.2	105.0	-79.44	1,328.8	-5,004.2	5,393.3	5,275.7	117.61	45.857		
5,413.4	5,370.3	5,348.3	5,348.3	14.2	105.3	-79.44	1,328.8	-5,004.2	5,393.3	5,275.4	117.91	45.741		
5,500.0	5,456.9	5,434.9	5,434.9	14.4	107.0	-79.44	1,328.8	-5,004.2	5,393.3	5,273.5	119.83	45.009		
5,511.8	5,468.7	5,446.7	5,446.7	14.4	107.2	-79.44	1,328.8	-5,004.2	5,393.3	5,273.3	120.09	44.911		
5,600.0	5,556.9	5,534.9	5,534.9	14.6	109.0	-79.44	1,328.8	-5,004.2	5,393.3	5,271.3	122.05	44.191		
5,610.2	5,567.1	5,545.1	5,545.1	14.6	109.2	-79.44	1,328.8	-5,004.2	5,393.3	5,271.1	122.27	44.109		
5,700.0	5,656.9	5,634.9	5,634.9	14.7	111.0	-79.44	1,328.8	-5,004.2	5,393.3	5,269.1	124.26	43.403		
5,708.6	5,665.5	5,643.5	5,643.5	14.8	111.2	-79.44	1,328.8	-5,004.2	5,393.3	5,268.9	124.45	43.336		
5,800.0	5,756.9	5,734.9	5,734.9	14.9	113.0	-79.44	1,328.8	-5,004.2	5,393.3	5,266.9	126.48	42.642		
5,807.1	5,764.0	5,742.0	5,742.0	14.9	113.2	-79.44	1,328.8	-5,004.2	5,393.3	5,266.7	126.64	42.589		
5,900.0	5,856.9	5,834.9	5,834.9	15.1	115.1	-79.44	1,328.8	-5,004.2	5,393.3	5,264.6	128.70	41.907		
5,905.5	5,862.4	5,840.4	5,840.4	15.1	115.2	-79.44	1,328.8	-5,004.2	5,393.3	5,264.5	128.82	41.868		
5,971.9	5,928.8	5,906.8	5,906.8	15.3	116.5	-79.44	1,328.8	-5,004.2	5,393.3	5,263.0	130.29	41.394		
6,000.0	5,956.9	5,934.9	5,934.9	15.3	117.1	10.57	1,328.8	-5,004.2	5,392.8	5,261.1	131.68	40.955		
6,003.9	5,960.8	5,938.8	5,938.8	15.3	117.1	10.57	1,328.8	-5,004.2	5,392.6	5,260.9	131.73	40.937		
6,050.0	6,006.7	5,984.7	5,984.7	15.4	118.1	10.63	1,328.8	-5,004.2	5,389.2	5,257.1	132.08	40.801		
6,100.0	6,056.2	6,034.2	6,034.2	15.4	119.1	10.75	1,328.8	-5,004.2	5,382.1	5,250.3	131.86	40.817		
6,102.3	6,058.5	6,036.5	6,036.5	15.4	119.1	10.76	1,328.8	-5,004.2	5,381.7	5,249.9	131.83	40.822		
6,150.0	6,105.1	6,083.1	6,083.1	15.4	120.0	10.93	1,328.8	-5,004.2	5,371.7	5,240.7	130.99	41.007		
6,200.0	6,153.0	6,131.0	6,131.0	15.5	121.0	11.18	1,328.8	-5,004.2	5,357.9	5,228.5	129.49	41.378		
6,200.8	6,153.8	6,131.8	6,131.8	15.5	121.0	11.18	1,328.8	-5,004.2	5,357.7	5,228.2	129.46	41.385		
6,250.0	6,199.9	6,177.9	6,177.9	15.5	121.9	11.50	1,328.8	-5,004.2	5,340.9	5,213.6	127.35	41.939		
6,299.2	6,244.8	6,222.8	6,222.8	15.5	122.9	11.90	1,328.8	-5,004.2	5,321.1	5,196.5	124.64	42.691		
6,300.0	6,245.5	6,223.5	6,223.5	15.5	122.9	11.90	1,328.8	-5,004.2	5,320.8	5,196.2	124.59	42.705		
6,350.0	6,289.6	6,267.6	6,267.6	15.5	123.8	12.40	1,328.8	-5,004.2	5,297.5	5,176.3	121.25	43.691		
6,397.6	6,329.9	6,307.9	6,307.9	15.4	124.6	12.97	1,328.8	-5,004.2	5,272.6	5,155.1	117.56	44.851		
6,400.0	6,331.8	6,309.8	6,309.8	15.4	124.6	13.00	1,328.8	-5,004.2	5,271.3	5,154.0	117.36	44.914		
6,450.0	6,372.2	6,350.2	6,350.2	15.4	125.4	13.74	1,328.8	-5,004.2	5,242.3	5,129.3	113.00	46.393		
6,496.0	6,407.4	6,385.4	6,385.4	15.4	126.1	14.55	1,328.8	-5,004.2	5,213.2	5,104.5	108.64	47.988		
6,500.0	6,410.3	6,388.3	6,388.3	15.4	126.2	14.63	1,328.8	-5,004.2	5,210.6	5,102.3	108.25	48.135		
6,550.0	6,446.1	6,424.1	6,424.1	15.4	126.9	15.71	1,328.8	-5,004.2	5,176.3	5,073.1	103.25	50.132		
6,594.5	6,475.9	6,453.9	6,453.9	15.4	127.5	16.88	1,328.8	-5,004.2	5,143.9	5,045.1	98.77	52.081		
6,600.0	6,479.4	6,457.4	6,457.4	15.4	127.6	17.04	1,328.8	-5,004.2	5,139.7	5,041.5	98.22	52.331		
6,650.0	6,510.0	6,488.0	6,488.0	15.5	128.2	18.68	1,328.8	-5,004.2	5,101.0	5,007.5	93.44	54.593		
6,692.9	6,534.0	6,512.0	6,512.0	15.7	128.7	20.41	1,328.8	-5,004.2	5,066.1	4,976.2	89.88	56.364		
6,700.0	6,537.8	6,515.8	6,515.8	15.7	128.7	20.73	1,328.8	-5,004.2	5,060.2	4,970.8	89.37	56.620		
6,750.0	6,562.6	6,540.6	6,540.6	16.2	129.2	23.34	1,328.8	-5,004.2	5,017.6	4,930.9	86.69	57.882		
6,791.3	6,580.8	6,558.8	6,558.8	16.6	129.6	26.07	1,328.8	-5,004.2	4,981.3	4,895.1	86.19	57.797		
6,800.0	6,584.3	6,562.3	6,562.3	16.7	129.7	26.72	1,328.8	-5,004.2	4,973.5	4,887.2	86.33	57.612		
6,850.0	6,602.9	6,580.9	6,580.9	17.3	130.1	31.21	1,328.8	-5,004.2	4,928.0	4,838.5	89.47	55.078		
6,889.7	6,615.2	6,593.2	6,593.2	17.9	130.3	35.88	1,328.8	-5,004.2	4,891.0	4,795.7	95.29	51.326		
6,900.0	6,618.1	6,596.1	6,596.1	18.0	130.4	37.29	1,328.8	-5,004.2	4,881.4	4,784.0	97.33	50.151		
6,950.0	6,630.0	6,608.0	6,608.0	18.8	130.6	45.72	1,328.8	-5,004.2	4,833.8	4,723.2	110.60	43.704		
6,988.2	6,636.8	6,614.8	6,614.8	19.5	130.7	54.31	1,328.8	-5,004.2	4,797.1	4,673.2	123.86	38.729		
7,000.0	6,638.5	6,616.5	6,616.5	19.7	130.8	57.42	1,328.8	-5,004.2	4,785.6	4,657.4	128.25	37.315		
7,050.0	6,643.5	6,621.5	6,621.5	20.6	130.9	72.94	1,328.8	-5,004.2	4,737.0	4,591.7	145.23	32.616		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,622.9	6,622.9	21.3	130.9	86.17	1,328.8	-5,004.2	4,701.2	4,549.3	151.88	30.953	
7,097.8	6,645.0	6,623.0	6,623.0	21.5	130.9	90.33	1,328.8	-5,004.2	4,690.2	4,537.9	152.35	30.785	
7,100.0	6,645.0	6,623.0	6,623.0	21.6	130.9	90.33	1,328.8	-5,004.2	4,688.1	4,535.7	152.39	30.763	
7,185.0	6,644.9	6,622.9	6,622.9	23.3	130.9	90.33	1,328.8	-5,004.2	4,605.0	4,450.9	154.12	29.880	
7,200.0	6,644.9	6,622.9	6,622.9	23.6	130.9	90.33	1,328.8	-5,004.2	4,590.4	4,436.0	154.42	29.726	
7,283.4	6,644.8	6,622.8	6,622.8	25.4	130.9	90.32	1,328.8	-5,004.2	4,508.9	4,352.7	156.24	28.859	
7,300.0	6,644.7	6,622.7	6,622.7	25.8	130.9	90.32	1,328.8	-5,004.2	4,492.8	4,336.2	156.60	28.690	
7,381.9	6,644.6	6,622.6	6,622.6	27.7	130.9	90.31	1,328.8	-5,004.2	4,413.0	4,254.5	158.47	27.847	
7,400.0	6,644.6	6,622.6	6,622.6	28.1	130.9	90.31	1,328.8	-5,004.2	4,395.3	4,236.4	158.89	27.663	
7,480.3	6,644.5	6,622.5	6,622.5	30.0	130.9	90.31	1,328.8	-5,004.2	4,317.1	4,156.3	160.79	26.849	
7,500.0	6,644.5	6,622.5	6,622.5	30.5	130.9	90.30	1,328.8	-5,004.2	4,297.9	4,136.7	161.26	26.652	
7,578.7	6,644.4	6,622.4	6,622.4	32.4	130.9	90.30	1,328.8	-5,004.2	4,221.3	4,058.2	163.19	25.868	
7,600.0	6,644.4	6,622.4	6,622.4	32.9	130.9	90.30	1,328.8	-5,004.2	4,200.7	4,037.0	163.71	25.660	
7,677.1	6,644.3	6,622.3	6,622.3	34.8	130.9	90.29	1,328.8	-5,004.2	4,125.7	3,960.1	165.64	24.909	
7,700.0	6,644.2	6,622.2	6,622.2	35.4	130.9	90.29	1,328.8	-5,004.2	4,103.5	3,937.3	166.21	24.689	
7,775.6	6,644.1	6,622.1	6,622.1	37.3	130.9	90.28	1,328.8	-5,004.2	4,030.2	3,862.1	168.13	23.971	
7,800.0	6,644.1	6,622.1	6,622.1	38.0	130.9	90.28	1,328.8	-5,004.2	4,006.6	3,837.8	168.75	23.743	
7,874.0	6,644.0	6,622.0	6,622.0	39.9	130.9	90.28	1,328.8	-5,004.2	3,934.9	3,764.2	170.66	23.057	
7,900.0	6,644.0	6,622.0	6,622.0	40.5	130.9	90.28	1,328.8	-5,004.2	3,909.7	3,738.4	171.33	22.820	
7,972.4	6,643.9	6,621.9	6,621.9	42.4	130.9	90.27	1,328.8	-5,004.2	3,839.7	3,666.5	173.21	22.167	
8,000.0	6,643.9	6,621.9	6,621.9	43.1	130.9	90.27	1,328.8	-5,004.2	3,813.1	3,639.1	173.93	21.923	
8,070.8	6,643.8	6,621.8	6,621.8	45.0	130.9	90.26	1,328.8	-5,004.2	3,744.7	3,568.9	175.80	21.301	
8,100.0	6,643.7	6,621.7	6,621.7	45.8	130.9	90.26	1,328.8	-5,004.2	3,716.6	3,540.0	176.56	21.050	
8,169.3	6,643.7	6,621.7	6,621.7	47.6	130.9	90.26	1,328.8	-5,004.2	3,649.8	3,471.4	178.40	20.459	
8,200.0	6,643.6	6,621.6	6,621.6	48.4	130.9	90.25	1,328.8	-5,004.2	3,620.3	3,441.1	179.21	20.201	
8,267.7	6,643.5	6,621.5	6,621.5	50.2	130.9	90.25	1,328.8	-5,004.2	3,555.2	3,374.2	181.02	19.640	
8,300.0	6,643.5	6,621.5	6,621.5	51.1	130.9	90.25	1,328.8	-5,004.2	3,524.2	3,342.3	181.88	19.376	
8,366.1	6,643.4	6,621.4	6,621.4	52.9	130.9	90.24	1,328.8	-5,004.2	3,460.8	3,277.1	183.65	18.844	
8,400.0	6,643.4	6,621.4	6,621.4	53.8	130.9	90.24	1,328.8	-5,004.2	3,428.3	3,243.7	184.56	18.575	
8,464.5	6,643.3	6,621.3	6,621.3	55.5	130.9	90.23	1,328.8	-5,004.2	3,366.5	3,180.2	186.30	18.070	
8,500.0	6,643.2	6,621.2	6,621.2	56.5	130.9	90.23	1,328.8	-5,004.2	3,332.7	3,145.4	187.26	17.797	
8,563.0	6,643.2	6,621.2	6,621.2	58.2	130.9	90.23	1,328.8	-5,004.2	3,272.6	3,083.6	188.96	17.319	
8,600.0	6,643.1	6,621.1	6,621.1	59.2	130.9	90.22	1,328.8	-5,004.2	3,237.3	3,047.4	189.96	17.042	
8,661.4	6,643.0	6,621.0	6,621.0	60.8	130.9	90.22	1,328.8	-5,004.2	3,178.9	2,987.3	191.63	16.589	
8,700.0	6,643.0	6,621.0	6,621.0	61.9	130.9	90.22	1,328.8	-5,004.2	3,142.2	2,949.6	192.68	16.308	
8,759.8	6,642.9	6,620.9	6,620.9	63.5	130.9	90.21	1,328.8	-5,004.2	3,085.5	2,891.2	194.30	15.880	
8,800.0	6,642.9	6,620.9	6,620.9	64.6	130.9	90.21	1,328.8	-5,004.2	3,047.5	2,852.1	195.40	15.596	
8,858.2	6,642.8	6,620.8	6,620.8	66.2	130.9	90.21	1,328.8	-5,004.2	2,992.4	2,795.4	196.99	15.191	
8,900.0	6,642.7	6,620.7	6,620.7	67.3	130.9	90.20	1,328.8	-5,004.2	2,953.1	2,754.9	198.13	14.905	
8,956.7	6,642.7	6,620.7	6,620.7	68.9	130.9	90.20	1,328.8	-5,004.2	2,899.7	2,700.0	199.68	14.522	
9,000.0	6,642.6	6,620.6	6,620.6	70.1	130.9	90.20	1,328.8	-5,004.2	2,859.0	2,658.2	200.86	14.234	
9,055.1	6,642.5	6,620.5	6,620.5	71.6	130.9	90.19	1,328.8	-5,004.2	2,807.4	2,605.0	202.37	13.872	
9,100.0	6,642.5	6,620.5	6,620.5	72.8	130.8	90.19	1,328.8	-5,004.2	2,765.4	2,561.8	203.60	13.582	
9,153.5	6,642.4	6,620.4	6,620.4	74.3	130.8	90.18	1,328.8	-5,004.2	2,715.5	2,510.4	205.07	13.242	
9,200.0	6,642.4	6,620.4	6,620.4	75.6	130.8	90.18	1,328.8	-5,004.2	2,672.3	2,465.9	206.35	12.950	
9,251.9	6,642.3	6,620.3	6,620.3	77.0	130.8	90.18	1,328.8	-5,004.2	2,624.1	2,416.3	207.78	12.629	
9,300.0	6,642.2	6,620.2	6,620.2	78.3	130.8	90.17	1,328.8	-5,004.2	2,579.6	2,370.5	209.10	12.337	
9,350.4	6,642.2	6,620.2	6,620.2	79.7	130.8	90.17	1,328.8	-5,004.2	2,533.2	2,322.7	210.49	12.035	
9,400.0	6,642.1	6,620.1	6,620.1	81.1	130.8	90.17	1,328.8	-5,004.2	2,487.5	2,275.7	211.86	11.742	
9,448.8	6,642.0	6,620.0	6,620.0	82.4	130.8	90.16	1,328.8	-5,004.2	2,442.8	2,229.6	213.20	11.458	
9,500.0	6,642.0	6,620.0	6,620.0	83.8	130.8	90.16	1,328.8	-5,004.2	2,396.1	2,181.5	214.61	11.165	
9,547.2	6,641.9	6,619.9	6,619.9	85.1	130.8	90.16	1,328.8	-5,004.2	2,353.2	2,137.3	215.92	10.898	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,619.9	6,619.9	86.6	130.8	90.15	1,328.8	-5,004.2	2,305.4	2,088.0	217.37	10.606	
9,645.6	6,641.8	6,619.8	6,619.8	87.9	130.8	90.15	1,328.8	-5,004.2	2,264.2	2,045.6	218.64	10.356	
9,700.0	6,641.7	6,619.7	6,619.7	89.4	130.8	90.14	1,328.8	-5,004.2	2,215.5	1,995.3	220.14	10.064	
9,744.1	6,641.7	6,619.7	6,619.7	90.6	130.8	90.14	1,328.8	-5,004.2	2,176.1	1,954.7	221.36	9.831	
9,800.0	6,641.6	6,619.6	6,619.6	92.1	130.8	90.14	1,328.8	-5,004.2	2,126.4	1,903.5	222.91	9.540	
9,842.5	6,641.6	6,619.6	6,619.6	93.3	130.8	90.13	1,328.8	-5,004.2	2,088.9	1,864.8	224.08	9.322	
9,900.0	6,641.5	6,619.5	6,619.5	94.9	130.8	90.13	1,328.8	-5,004.2	2,038.4	1,812.7	225.68	9.033	
9,940.9	6,641.4	6,619.4	6,619.4	96.0	130.8	90.13	1,328.8	-5,004.2	2,002.7	1,775.9	226.81	8.830	
10,000.0	6,641.4	6,619.4	6,619.4	97.7	130.8	90.12	1,328.8	-5,004.2	1,951.6	1,723.1	228.45	8.543	
10,039.3	6,641.3	6,619.3	6,619.3	98.8	130.8	90.12	1,328.8	-5,004.2	1,917.7	1,688.2	229.54	8.355	
10,100.0	6,641.2	6,619.2	6,619.2	100.4	130.8	90.12	1,328.8	-5,004.2	1,866.0	1,634.8	231.22	8.070	
10,137.8	6,641.2	6,619.2	6,619.2	101.5	130.8	90.11	1,328.8	-5,004.2	1,834.1	1,601.8	232.27	7.896	
10,200.0	6,641.1	6,619.1	6,619.1	103.2	130.8	90.11	1,328.8	-5,004.2	1,782.0	1,548.0	234.00	7.616	
10,236.2	6,641.1	6,619.1	6,619.1	104.2	130.8	90.11	1,328.8	-5,004.2	1,752.0	1,517.0	235.00	7.455	
10,300.0	6,641.0	6,619.0	6,619.0	106.0	130.8	90.10	1,328.8	-5,004.2	1,699.7	1,462.9	236.77	7.179	
10,334.6	6,640.9	6,618.9	6,618.9	107.0	130.8	90.10	1,328.8	-5,004.2	1,671.7	1,433.9	237.74	7.032	
10,400.0	6,640.9	6,618.9	6,618.9	108.8	130.8	90.09	1,328.8	-5,004.2	1,619.4	1,379.8	239.55	6.760	
10,433.0	6,640.8	6,618.8	6,618.8	109.7	130.8	90.09	1,328.8	-5,004.2	1,593.4	1,352.9	240.47	6.626	
10,500.0	6,640.7	6,618.7	6,618.7	111.6	130.8	90.09	1,328.8	-5,004.2	1,541.4	1,299.1	242.33	6.361	
10,531.5	6,640.7	6,618.7	6,618.7	112.4	130.8	90.08	1,328.8	-5,004.2	1,517.4	1,274.2	243.21	6.239	
10,600.0	6,640.6	6,618.6	6,618.6	114.3	130.8	90.08	1,328.8	-5,004.2	1,466.1	1,221.0	245.12	5.981	
10,629.9	6,640.6	6,618.6	6,618.6	115.2	130.8	90.08	1,328.8	-5,004.2	1,444.1	1,198.2	245.95	5.872	
10,700.0	6,640.5	6,618.5	6,618.5	117.1	130.8	90.07	1,328.8	-5,004.2	1,393.9	1,146.0	247.90	5.623	
10,728.3	6,640.4	6,618.4	6,618.4	117.9	130.8	90.07	1,328.8	-5,004.2	1,374.0	1,125.3	248.69	5.525	
10,800.0	6,640.4	6,618.4	6,618.4	119.9	130.8	90.06	1,328.8	-5,004.2	1,325.3	1,074.6	250.68	5.287	
10,826.7	6,640.3	6,618.3	6,618.3	120.7	130.8	90.06	1,328.8	-5,004.2	1,307.6	1,056.2	251.43	5.201	
10,900.0	6,640.2	6,618.2	6,618.2	122.7	130.8	90.06	1,328.8	-5,004.2	1,260.9	1,007.4	253.47	4.974	
10,925.2	6,640.2	6,618.2	6,618.2	123.4	130.8	90.06	1,328.8	-5,004.2	1,245.4	991.2	254.17	4.900	
11,000.0	6,640.1	6,618.1	6,618.1	125.5	130.8	90.05	1,328.8	-5,004.2	1,201.3	945.1	256.25	4.688	
11,023.6	6,640.1	6,618.1	6,618.1	126.1	130.8	90.05	1,328.8	-5,004.2	1,188.1	931.2	256.91	4.624	
11,100.0	6,640.0	6,618.0	6,618.0	128.3	130.8	90.04	1,328.8	-5,004.2	1,147.5	888.4	259.04	4.430	
11,122.0	6,639.9	6,617.9	6,617.9	128.9	130.8	90.04	1,328.8	-5,004.2	1,136.4	876.8	259.66	4.377	
11,200.0	6,639.8	6,617.8	6,617.8	131.1	130.8	90.04	1,328.8	-5,004.2	1,100.1	838.2	261.83	4.201	
11,220.4	6,639.8	6,617.8	6,617.8	131.6	130.8	90.03	1,328.8	-5,004.2	1,091.2	828.8	262.40	4.159	
11,300.0	6,639.7	6,617.7	6,617.7	133.9	130.8	90.03	1,328.8	-5,004.2	1,060.0	795.4	264.62	4.006	
11,318.9	6,639.7	6,617.7	6,617.7	134.4	130.8	90.03	1,328.8	-5,004.2	1,053.3	788.2	265.15	3.973	
11,400.0	6,639.6	6,617.6	6,617.6	136.7	130.8	90.02	1,328.8	-5,004.2	1,028.1	760.7	267.41	3.845	
11,417.3	6,639.6	6,617.6	6,617.6	137.1	130.8	90.02	1,328.8	-5,004.2	1,023.5	755.6	267.89	3.821	
11,500.0	6,639.5	6,617.5	6,617.5	139.4	130.8	90.01	1,328.8	-5,004.2	1,005.2	735.0	270.20	3.720	
11,515.7	6,639.5	6,617.5	6,617.5	139.9	130.8	90.01	1,328.8	-5,004.2	1,002.5	731.9	270.64	3.704	
11,600.0	6,639.3	6,617.3	6,617.3	142.2	130.8	90.01	1,328.8	-5,004.2	991.9	719.0	272.99	3.634	
11,614.1	6,639.3	6,617.3	6,617.3	142.6	130.8	90.00	1,328.8	-5,004.2	990.9	717.5	273.39	3.624	
11,682.7	6,639.2	6,617.2	6,617.2	144.5	130.8	90.00	1,328.8	-5,004.2	988.5	713.2	275.30	3.591 CC	
11,700.0	6,639.2	6,617.2	6,617.2	145.0	130.8	90.00	1,328.8	-5,004.2	988.6	712.9	275.78	3.585	
11,712.6	6,639.2	6,617.2	6,617.2	145.4	130.8	90.00	1,328.8	-5,004.2	988.9	712.8	276.14	3.581 ES	
11,800.0	6,639.1	6,617.1	6,617.1	147.8	130.8	89.99	1,328.8	-5,004.2	995.4	716.9	278.58	3.573 SF	
11,811.0	6,639.1	6,617.1	6,617.1	148.1	130.8	89.99	1,328.8	-5,004.2	996.8	717.9	278.88	3.574	
11,900.0	6,639.0	6,617.0	6,617.0	150.6	130.8	89.98	1,328.8	-5,004.2	1,012.1	730.7	281.37	3.597	
11,909.4	6,639.0	6,617.0	6,617.0	150.9	130.8	89.98	1,328.8	-5,004.2	1,014.2	732.5	281.63	3.601	
12,000.0	6,638.8	6,616.8	6,616.8	153.4	130.8	89.98	1,328.8	-5,004.2	1,038.2	754.0	284.16	3.653	
12,007.8	6,638.8	6,616.8	6,616.8	153.6	130.8	89.98	1,328.8	-5,004.2	1,040.6	756.2	284.38	3.659	
12,100.0	6,638.7	6,616.7	6,616.7	156.2	130.8	89.97	1,328.8	-5,004.2	1,073.0	786.0	286.96	3.739	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,616.7	6,616.7	156.4	130.8	89.97	1,328.8	-5,004.2	1,075.4	788.3	287.13	3.745	
12,200.0	6,638.6	6,616.6	6,616.6	159.0	130.8	89.96	1,328.8	-5,004.2	1,115.7	825.9	289.75	3.850	
12,204.7	6,638.6	6,616.6	6,616.6	159.1	130.8	89.96	1,328.8	-5,004.2	1,117.9	828.0	289.88	3.856	
12,300.0	6,638.5	6,616.5	6,616.5	161.8	130.8	89.96	1,328.8	-5,004.2	1,165.4	872.9	292.55	3.984	
12,303.1	6,638.5	6,616.5	6,616.5	161.9	130.8	89.95	1,328.8	-5,004.2	1,167.1	874.4	292.64	3.988	
12,400.0	6,638.3	6,616.3	6,616.3	164.6	130.8	89.95	1,328.8	-5,004.2	1,221.3	926.0	295.34	4.135	
12,401.5	6,638.3	6,616.3	6,616.3	164.6	130.8	89.95	1,328.8	-5,004.2	1,222.2	926.8	295.39	4.138	
12,500.0	6,638.2	6,616.2	6,616.2	167.4	130.8	89.94	1,328.8	-5,004.2	1,282.6	984.5	298.14	4.302	
12,598.4	6,638.1	6,616.1	6,616.1	170.2	130.8	89.93	1,328.8	-5,004.2	1,347.4	1,046.6	300.89	4.478	
12,600.0	6,638.1	6,616.1	6,616.1	170.2	130.8	89.93	1,328.8	-5,004.2	1,348.5	1,047.6	300.94	4.481	
12,696.8	6,638.0	6,616.0	6,616.0	172.9	130.8	89.93	1,328.8	-5,004.2	1,416.2	1,112.5	303.65	4.664	
12,700.0	6,638.0	6,616.0	6,616.0	173.0	130.8	89.93	1,328.8	-5,004.2	1,418.4	1,114.7	303.73	4.670	
12,795.2	6,637.8	6,615.8	6,615.8	175.7	130.8	89.92	1,328.8	-5,004.2	1,488.2	1,181.8	306.40	4.857	
12,800.0	6,637.8	6,615.8	6,615.8	175.8	130.8	89.92	1,328.8	-5,004.2	1,491.8	1,185.3	306.53	4.867	
12,893.7	6,637.7	6,615.7	6,615.7	178.4	130.8	89.91	1,328.8	-5,004.2	1,563.2	1,254.0	309.15	5.056	
12,900.0	6,637.7	6,615.7	6,615.7	178.6	130.8	89.91	1,328.8	-5,004.2	1,568.1	1,258.8	309.33	5.069	
12,992.1	6,637.6	6,615.6	6,615.6	181.2	130.8	89.90	1,328.8	-5,004.2	1,640.6	1,328.7	311.91	5.260	
13,000.0	6,637.6	6,615.6	6,615.6	181.4	130.8	89.90	1,328.8	-5,004.2	1,646.9	1,334.8	312.13	5.276	
13,090.5	6,637.5	6,615.5	6,615.5	183.9	130.7	89.90	1,328.8	-5,004.2	1,720.2	1,405.5	314.66	5.467	
13,100.0	6,637.5	6,615.5	6,615.5	184.2	130.7	89.90	1,328.8	-5,004.2	1,728.0	1,413.0	314.93	5.487	
13,188.9	6,637.4	6,615.4	6,615.4	186.7	130.7	89.89	1,328.8	-5,004.2	1,801.6	1,484.2	317.41	5.676	
13,200.0	6,637.3	6,615.3	6,615.3	187.0	130.7	89.89	1,328.8	-5,004.2	1,810.9	1,493.2	317.72	5.700	
13,287.4	6,637.2	6,615.2	6,615.2	189.4	130.7	89.88	1,328.8	-5,004.2	1,884.7	1,564.5	320.17	5.887	
13,300.0	6,637.2	6,615.2	6,615.2	189.8	130.7	89.88	1,328.8	-5,004.2	1,895.5	1,574.9	320.52	5.914	
13,385.8	6,637.1	6,615.1	6,615.1	192.2	130.7	89.88	1,328.8	-5,004.2	1,969.2	1,646.2	322.92	6.098	
13,400.0	6,637.1	6,615.1	6,615.1	192.6	130.7	89.87	1,328.8	-5,004.2	1,981.5	1,658.1	323.32	6.128	
13,484.2	6,637.0	6,615.0	6,615.0	195.0	130.7	89.87	1,328.8	-5,004.2	2,054.9	1,729.2	325.68	6.310	
13,500.0	6,637.0	6,615.0	6,615.0	195.4	130.7	89.87	1,328.8	-5,004.2	2,068.7	1,742.6	326.12	6.343	
13,582.6	6,636.9	6,614.9	6,614.9	197.7	130.7	89.86	1,328.8	-5,004.2	2,141.7	1,813.3	328.44	6.521	
13,600.0	6,636.8	6,614.8	6,614.8	198.2	130.7	89.86	1,328.8	-5,004.2	2,157.1	1,828.2	328.92	6.558	
13,681.1	6,636.7	6,614.7	6,614.7	200.5	130.7	89.85	1,328.8	-5,004.2	2,229.5	1,898.3	331.19	6.732	
13,700.0	6,636.7	6,614.7	6,614.7	201.0	130.7	89.85	1,328.8	-5,004.2	2,246.5	1,914.7	331.72	6.772	
13,779.5	6,636.6	6,614.6	6,614.6	203.2	130.7	89.85	1,328.8	-5,004.2	2,318.1	1,984.2	333.95	6.942	
13,800.0	6,636.6	6,614.6	6,614.6	203.8	130.7	89.85	1,328.8	-5,004.2	2,336.7	2,002.2	334.52	6.985	
13,877.9	6,636.5	6,614.5	6,614.5	206.0	130.7	89.84	1,328.8	-5,004.2	2,407.5	2,070.8	336.70	7.150	
13,900.0	6,636.5	6,614.5	6,614.5	206.6	130.7	89.84	1,328.8	-5,004.2	2,427.7	2,090.3	337.32	7.197	
13,976.3	6,636.4	6,614.4	6,614.4	208.8	130.7	89.83	1,328.8	-5,004.2	2,497.6	2,158.1	339.46	7.358	
14,000.0	6,636.3	6,614.3	6,614.3	209.4	130.7	89.83	1,328.8	-5,004.2	2,519.3	2,179.2	340.12	7.407	
14,074.8	6,636.2	6,614.2	6,614.2	211.5	130.7	89.83	1,328.8	-5,004.2	2,588.3	2,246.0	342.22	7.563	
14,100.0	6,636.2	6,614.2	6,614.2	212.2	130.7	89.82	1,328.8	-5,004.2	2,611.6	2,268.7	342.92	7.616	
14,173.2	6,636.1	6,614.1	6,614.1	214.3	130.7	89.82	1,328.8	-5,004.2	2,679.5	2,334.5	344.97	7.767	
14,200.0	6,636.1	6,614.1	6,614.1	215.0	130.7	89.82	1,328.8	-5,004.2	2,704.4	2,358.7	345.72	7.822	
14,271.6	6,636.0	6,614.0	6,614.0	217.0	130.7	89.81	1,328.8	-5,004.2	2,771.2	2,423.5	347.73	7.969	
14,300.0	6,636.0	6,614.0	6,614.0	217.8	130.7	89.81	1,328.8	-5,004.2	2,797.7	2,449.2	348.53	8.027	
14,370.0	6,635.9	6,613.9	6,613.9	219.8	130.7	89.80	1,328.8	-5,004.2	2,863.4	2,512.9	350.49	8.170	
14,400.0	6,635.8	6,613.8	6,613.8	220.6	130.7	89.80	1,328.8	-5,004.2	2,891.5	2,540.2	351.33	8.230	
14,468.5	6,635.7	6,613.7	6,613.7	222.6	130.7	89.80	1,328.8	-5,004.2	2,955.9	2,602.7	353.25	8.368	
14,500.0	6,635.7	6,613.7	6,613.7	223.4	130.7	89.79	1,328.8	-5,004.2	2,985.7	2,631.5	354.13	8.431	
14,566.9	6,635.6	6,613.6	6,613.6	225.3	130.7	89.79	1,328.8	-5,004.2	3,048.9	2,692.9	356.00	8.564	
14,600.0	6,635.6	6,613.6	6,613.6	226.2	130.7	89.79	1,328.8	-5,004.2	3,080.2	2,723.3	356.93	8.630	
14,665.3	6,635.5	6,613.5	6,613.5	228.1	130.7	89.78	1,328.8	-5,004.2	3,142.1	2,783.4	358.76	8.758	
14,700.0	6,635.5	6,613.5	6,613.5	229.0	130.7	89.78	1,328.8	-5,004.2	3,175.1	2,815.4	359.73	8.826	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.4	6,613.4	6,613.4	230.8	130.7	89.78	1,328.8	-5,004.2	3,235.7	2,874.2	361.52	8.950	
14,800.0	6,635.3	6,613.3	6,613.3	231.8	130.7	89.77	1,328.8	-5,004.2	3,270.3	2,907.7	362.53	9.021	
14,862.2	6,635.2	6,613.2	6,613.2	233.6	130.7	89.77	1,328.8	-5,004.2	3,329.6	2,965.3	364.28	9.140	
14,900.0	6,635.2	6,613.2	6,613.2	234.7	130.7	89.77	1,328.8	-5,004.2	3,365.7	3,000.4	365.34	9.213	
14,960.6	6,635.1	6,613.1	6,613.1	236.4	130.7	89.76	1,328.8	-5,004.2	3,423.7	3,056.7	367.03	9.328	
14,995.1	6,635.0	6,613.0	6,613.0	237.3	130.7	89.76	1,328.8	-5,004.2	3,456.8	3,088.8	368.00	9.393	

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Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-87.20	243.5	-4,984.4	4,990.4				
98.4	98.4	66.4	66.4	0.1	0.1	-87.20	243.5	-4,984.4	4,990.3	4,990.1	0.17	N/A	
100.0	100.0	68.0	68.0	0.1	0.1	-87.20	243.5	-4,984.4	4,990.3	4,990.1	0.17	N/A	
196.8	196.8	164.8	164.8	0.3	1.8	-87.20	243.5	-4,984.4	4,990.3	4,988.2	2.12	2,353.943	
200.0	200.0	168.0	168.0	0.3	1.9	-87.20	243.5	-4,984.4	4,990.3	4,988.1	2.21	2,258.531	
295.3	295.3	263.3	263.3	0.5	4.0	-87.20	243.5	-4,984.4	4,990.3	4,985.7	4.57	1,092.667	
300.0	300.0	268.0	268.0	0.5	4.1	-87.20	243.5	-4,984.4	4,990.3	4,985.6	4.68	1,067.400	
393.7	393.7	361.7	361.7	0.8	6.0	-87.20	243.5	-4,984.4	4,990.3	4,983.5	6.80	733.885	
400.0	400.0	368.0	368.0	0.8	6.2	-87.20	243.5	-4,984.4	4,990.3	4,983.4	6.94	718.855	
492.1	492.1	460.1	460.1	1.0	8.0	-87.20	243.5	-4,984.4	4,990.3	4,981.3	9.02	553.535	
500.0	500.0	468.0	468.0	1.0	8.2	-87.20	243.5	-4,984.4	4,990.3	4,981.1	9.19	542.879	
590.5	590.5	558.5	558.5	1.2	10.0	-87.20	243.5	-4,984.4	4,990.3	4,979.1	11.22	444.585	
600.0	600.0	568.0	568.0	1.2	10.2	-87.20	243.5	-4,984.4	4,990.3	4,978.9	11.44	436.346	
689.0	689.0	657.0	657.0	1.4	12.0	-87.20	243.5	-4,984.4	4,990.3	4,976.9	13.43	371.553	
700.0	700.0	668.0	668.0	1.4	12.2	-87.20	243.5	-4,984.4	4,990.3	4,976.6	13.68	364.842	
787.4	787.4	755.4	755.4	1.6	14.0	-87.20	243.5	-4,984.4	4,990.3	4,974.7	15.64	319.164	
800.0	800.0	768.0	768.0	1.7	14.2	-87.20	243.5	-4,984.4	4,990.3	4,974.4	15.92	313.506	
885.8	885.8	853.8	853.8	1.9	16.0	-87.20	243.5	-4,984.4	4,990.3	4,972.5	17.84	279.739	
900.0	900.0	868.0	868.0	1.9	16.3	-87.20	243.5	-4,984.4	4,990.3	4,972.1	18.16	274.850	
984.2	984.2	952.2	952.2	2.1	18.0	-87.20	243.5	-4,984.4	4,990.3	4,970.3	20.04	248.992	
1,000.0	1,000.0	968.0	968.0	2.1	18.3	-87.20	243.5	-4,984.4	4,990.3	4,969.9	20.39	244.688	
1,082.7	1,082.7	1,050.7	1,050.7	2.3	19.9	-87.20	243.5	-4,984.4	4,990.3	4,968.1	22.24	224.339	
1,100.0	1,100.0	1,068.0	1,068.0	2.3	20.3	-87.20	243.5	-4,984.4	4,990.3	4,967.7	22.63	220.497	
1,181.1	1,181.1	1,149.1	1,149.1	2.5	21.9	-87.20	243.5	-4,984.4	4,990.3	4,965.9	24.45	204.131	
1,200.0	1,200.0	1,168.0	1,168.0	2.6	22.3	-87.20	243.5	-4,984.4	4,990.3	4,965.4	24.87	200.661	
1,279.5	1,279.5	1,247.5	1,247.5	2.7	23.9	-87.20	243.5	-4,984.4	4,990.3	4,963.6	26.65	187.265	
1,300.0	1,300.0	1,268.0	1,268.0	2.8	24.3	-87.20	243.5	-4,984.4	4,990.3	4,963.2	27.11	184.101	
1,377.9	1,377.9	1,345.9	1,345.9	3.0	25.9	-128.39	243.5	-4,984.4	4,991.0	4,962.1	28.84	173.041	
1,400.0	1,400.0	1,368.0	1,368.0	3.0	26.3	-128.39	243.5	-4,984.4	4,991.4	4,962.0	29.33	170.169	
1,476.4	1,476.3	1,444.3	1,444.3	3.2	27.9	-128.39	243.5	-4,984.4	4,993.7	4,962.7	31.02	160.995	
1,500.0	1,499.8	1,467.8	1,467.8	3.2	28.3	-128.39	243.5	-4,984.4	4,994.6	4,963.1	31.54	158.377	
1,574.8	1,574.4	1,542.4	1,542.4	3.4	29.8	-128.38	243.5	-4,984.4	4,998.5	4,965.3	33.17	150.678	
1,600.0	1,599.5	1,567.5	1,567.5	3.5	30.3	-128.38	243.5	-4,984.4	5,000.1	4,966.3	33.72	148.276	
1,673.2	1,672.2	1,640.2	1,640.2	3.6	31.8	-128.37	243.5	-4,984.4	5,005.4	4,970.1	35.31	141.757	
1,700.0	1,698.7	1,666.7	1,666.7	3.7	32.3	-128.37	243.5	-4,984.4	5,007.7	4,971.8	35.89	139.542	
1,771.6	1,769.5	1,737.5	1,737.5	3.9	33.8	-128.36	243.5	-4,984.4	5,014.4	4,977.0	37.43	133.978	
1,800.0	1,797.5	1,765.5	1,765.5	4.0	34.3	-128.35	243.5	-4,984.4	5,017.4	4,979.4	38.03	131.927	
1,870.1	1,866.3	1,834.3	1,834.3	4.2	35.7	-128.34	243.5	-4,984.4	5,025.6	4,986.1	39.53	127.141	
1,899.9	1,895.6	1,863.6	1,863.6	4.3	36.3	-128.33	243.5	-4,984.4	5,029.4	4,989.2	40.16	125.236	
1,968.5	1,962.6	1,930.6	1,930.6	4.5	37.6	-128.46	243.5	-4,984.4	5,038.4	4,996.7	41.69	120.853	
2,000.0	1,993.4	1,961.4	1,961.4	4.6	38.3	-128.52	243.5	-4,984.4	5,042.5	5,000.1	42.39	118.945	
2,066.9	2,058.9	2,026.9	2,026.9	4.8	39.6	-128.64	243.5	-4,984.4	5,051.3	5,007.4	43.90	115.071	
2,100.0	2,091.3	2,059.3	2,059.3	4.9	40.2	-128.70	243.5	-4,984.4	5,055.7	5,011.0	44.64	113.254	
2,165.3	2,155.2	2,123.2	2,123.2	5.2	41.5	-128.82	243.5	-4,984.4	5,064.3	5,018.2	46.11	109.820	
2,200.0	2,189.1	2,157.1	2,157.1	5.3	42.2	-128.88	243.5	-4,984.4	5,068.9	5,022.0	46.90	108.084	
2,263.8	2,251.5	2,219.5	2,219.5	5.5	43.5	-128.99	243.5	-4,984.4	5,077.3	5,029.0	48.34	105.028	
2,300.0	2,286.9	2,254.9	2,254.9	5.7	44.2	-129.06	243.5	-4,984.4	5,082.1	5,032.9	49.16	103.371	
2,362.2	2,347.7	2,315.7	2,315.7	5.9	45.4	-129.17	243.5	-4,984.4	5,090.4	5,039.8	50.58	100.645	
2,400.0	2,384.7	2,352.7	2,352.7	6.0	46.1	-129.24	243.5	-4,984.4	5,095.4	5,044.0	51.44	99.061	
2,460.6	2,444.0	2,412.0	2,412.0	6.3	47.3	-129.35	243.5	-4,984.4	5,103.5	5,050.7	52.82	96.623	
2,500.0	2,482.5	2,450.5	2,450.5	6.4	48.1	-129.42	243.5	-4,984.4	5,108.8	5,055.0	53.72	95.107	
2,559.0	2,540.3	2,508.3	2,508.3	6.7	49.3	-129.52	243.5	-4,984.4	5,116.7	5,061.6	55.06	92.922	

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

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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	2,580.3	2,548.3	2,548.3	6.8	50.1	-129.59	243.5	-4,984.4	5,122.2	5,066.2	56.00	91.468	
2,657.5	2,636.5	2,604.5	2,604.5	7.1	51.2	-129.70	243.5	-4,984.4	5,129.9	5,072.6	57.31	89.505	
2,700.0	2,678.1	2,646.1	2,646.1	7.2	52.0	-129.77	243.5	-4,984.4	5,135.6	5,077.3	58.29	88.110	
2,755.9	2,732.8	2,700.8	2,700.8	7.5	53.1	-129.87	243.5	-4,984.4	5,143.1	5,083.6	59.57	86.342	
2,800.0	2,776.0	2,744.0	2,744.0	7.7	54.0	-129.95	243.5	-4,984.4	5,149.1	5,088.5	60.58	85.001	
2,854.3	2,829.1	2,797.1	2,797.1	7.9	55.1	-130.04	243.5	-4,984.4	5,156.4	5,094.6	61.82	83.408	
2,900.0	2,873.8	2,841.8	2,841.8	8.1	56.0	-130.12	243.5	-4,984.4	5,162.6	5,099.8	62.87	82.117	
2,952.7	2,925.4	2,893.4	2,893.4	8.3	57.0	-130.21	243.5	-4,984.4	5,169.8	5,105.7	64.08	80.678	
3,000.0	2,971.6	2,939.6	2,939.6	8.5	57.9	-130.30	243.5	-4,984.4	5,176.2	5,111.1	65.16	79.435	
3,051.2	3,021.6	2,989.6	2,989.6	8.7	58.9	-130.38	243.5	-4,984.4	5,183.2	5,116.9	66.34	78.133	
3,100.0	3,069.4	3,037.4	3,037.4	8.9	59.9	-130.47	243.5	-4,984.4	5,189.9	5,122.4	67.46	76.934	
3,149.6	3,117.9	3,085.9	3,085.9	9.1	60.9	-130.55	243.5	-4,984.4	5,196.7	5,128.1	68.60	75.755	
3,200.0	3,167.2	3,135.2	3,135.2	9.3	61.9	-130.64	243.5	-4,984.4	5,203.6	5,133.8	69.76	74.597	
3,248.0	3,214.2	3,182.2	3,182.2	9.5	62.8	-130.72	243.5	-4,984.4	5,210.2	5,139.3	70.86	73.528	
3,300.0	3,265.0	3,233.0	3,233.0	9.8	63.8	-130.81	243.5	-4,984.4	5,217.3	5,145.2	72.05	72.408	
3,346.4	3,310.5	3,278.5	3,278.5	10.0	64.7	-130.89	243.5	-4,984.4	5,223.7	5,150.6	73.12	71.438	
3,400.0	3,362.9	3,330.9	3,330.9	10.2	65.8	-130.98	243.5	-4,984.4	5,231.1	5,156.7	74.35	70.355	
3,444.9	3,406.7	3,374.7	3,374.7	10.4	66.7	-131.06	243.5	-4,984.4	5,237.3	5,161.9	75.38	69.475	
3,473.0	3,434.2	3,402.2	3,402.2	10.5	67.2	-131.10	243.5	-4,984.4	5,241.2	5,165.1	76.03	68.936	
3,500.0	3,460.7	3,428.7	3,428.7	10.6	67.8	-131.21	243.5	-4,984.4	5,244.8	5,168.1	76.70	68.385	
3,543.3	3,503.2	3,471.2	3,471.2	10.7	68.6	-131.36	243.5	-4,984.4	5,250.3	5,172.6	77.74	67.535	
3,600.0	3,559.0	3,527.0	3,527.0	10.9	69.7	-131.54	243.5	-4,984.4	5,256.9	5,177.8	79.11	66.450	
3,641.7	3,600.2	3,568.2	3,568.2	11.0	70.6	-131.65	243.5	-4,984.4	5,261.3	5,181.2	80.11	65.679	
3,700.0	3,657.9	3,625.9	3,625.9	11.2	71.7	-131.80	243.5	-4,984.4	5,266.8	5,185.3	81.49	64.629	
3,740.1	3,697.8	3,665.8	3,665.8	11.3	72.5	-131.89	243.5	-4,984.4	5,270.1	5,187.6	82.43	63.930	
3,800.0	3,757.3	3,725.3	3,725.3	11.4	73.7	-132.01	243.5	-4,984.4	5,274.3	5,190.5	83.83	62.916	
3,838.6	3,795.7	3,763.7	3,763.7	11.5	74.5	-132.07	243.5	-4,984.4	5,276.6	5,191.9	84.72	62.285	
3,900.0	3,857.0	3,825.0	3,825.0	11.7	75.7	-132.15	243.5	-4,984.4	5,279.5	5,193.4	86.12	61.306	
3,937.0	3,893.9	3,861.9	3,861.9	11.7	76.5	-132.18	243.5	-4,984.4	5,280.9	5,193.9	86.95	60.737	
4,000.0	3,956.9	3,924.9	3,924.9	11.8	77.7	-132.22	243.5	-4,984.4	5,282.4	5,194.1	88.35	59.792	
4,035.4	3,992.3	3,960.3	3,960.3	11.9	78.5	-132.23	243.5	-4,984.4	5,282.9	5,193.8	89.12	59.279	
4,072.9	4,029.8	3,997.8	3,997.8	11.9	79.2	-91.05	243.5	-4,984.4	5,283.0	5,193.3	89.77	58.851	
4,100.0	4,056.9	4,024.9	4,024.9	12.0	79.8	-91.05	243.5	-4,984.4	5,283.0	5,192.7	90.36	58.467	
4,133.8	4,090.7	4,058.7	4,058.7	12.0	80.4	-91.05	243.5	-4,984.4	5,283.0	5,191.9	91.10	57.991	
4,200.0	4,156.9	4,124.9	4,124.9	12.1	81.8	-91.05	243.5	-4,984.4	5,283.0	5,190.5	92.55	57.082	
4,232.3	4,189.2	4,157.2	4,157.2	12.2	82.4	-91.05	243.5	-4,984.4	5,283.0	5,189.8	93.26	56.648	
4,300.0	4,256.9	4,224.9	4,224.9	12.3	83.8	-91.05	243.5	-4,984.4	5,283.0	5,188.3	94.75	55.759	
4,330.7	4,287.6	4,255.6	4,255.6	12.4	84.4	-91.05	243.5	-4,984.4	5,283.0	5,187.6	95.42	55.365	
4,400.0	4,356.9	4,324.9	4,324.9	12.5	85.8	-91.05	243.5	-4,984.4	5,283.0	5,186.1	96.94	54.496	
4,429.1	4,386.0	4,354.0	4,354.0	12.5	86.4	-91.05	243.5	-4,984.4	5,283.0	5,185.5	97.58	54.139	
4,500.0	4,456.9	4,424.9	4,424.9	12.6	87.8	-91.05	243.5	-4,984.4	5,283.0	5,183.9	99.14	53.288	
4,527.5	4,484.4	4,452.4	4,452.4	12.7	88.4	-91.05	243.5	-4,984.4	5,283.0	5,183.3	99.75	52.964	
4,600.0	4,556.9	4,524.9	4,524.9	12.8	89.8	-91.05	243.5	-4,984.4	5,283.0	5,181.7	101.34	52.132	
4,626.0	4,582.9	4,550.9	4,550.9	12.9	90.3	-91.05	243.5	-4,984.4	5,283.0	5,181.1	101.91	51.839	
4,700.0	4,656.9	4,624.9	4,624.9	13.0	91.8	-91.05	243.5	-4,984.4	5,283.0	5,179.5	103.54	51.024	
4,724.4	4,681.3	4,649.3	4,649.3	13.0	92.3	-91.05	243.5	-4,984.4	5,283.0	5,179.0	104.08	50.760	
4,800.0	4,756.9	4,724.9	4,724.9	13.1	93.8	-91.05	243.5	-4,984.4	5,283.0	5,177.3	105.74	49.961	
4,822.8	4,779.7	4,747.7	4,747.7	13.2	94.3	-91.05	243.5	-4,984.4	5,283.0	5,176.8	106.25	49.725	
4,900.0	4,856.9	4,824.9	4,824.9	13.3	95.8	-91.05	243.5	-4,984.4	5,283.0	5,175.1	107.95	48.942	
4,921.2	4,878.1	4,846.1	4,846.1	13.4	96.3	-91.05	243.5	-4,984.4	5,283.0	5,174.6	108.41	48.730	
5,000.0	4,956.9	4,924.9	4,924.9	13.5	97.9	-91.05	243.5	-4,984.4	5,283.0	5,172.9	110.15	47.963	
5,019.7	4,976.6	4,944.6	4,944.6	13.5	98.3	-91.05	243.5	-4,984.4	5,283.0	5,172.5	110.58	47.774	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,024.9	5,024.9	13.7	99.9	-91.05	243.5	-4,984.4	5,283.0	5,170.7	112.35	47.021	
5,118.1	5,075.0	5,043.0	5,043.0	13.7	100.2	-91.05	243.5	-4,984.4	5,283.0	5,170.3	112.75	46.855	
5,200.0	5,156.9	5,124.9	5,124.9	13.8	101.9	-91.05	243.5	-4,984.4	5,283.0	5,168.5	114.56	46.116	
5,216.5	5,173.4	5,141.4	5,141.4	13.9	102.2	-91.05	243.5	-4,984.4	5,283.0	5,168.1	114.92	45.970	
5,300.0	5,256.9	5,224.9	5,224.9	14.0	103.9	-91.05	243.5	-4,984.4	5,283.0	5,166.3	116.77	45.244	
5,314.9	5,271.8	5,239.8	5,239.8	14.1	104.2	-91.05	243.5	-4,984.4	5,283.0	5,165.9	117.10	45.117	
5,400.0	5,356.9	5,324.9	5,324.9	14.2	105.9	-91.05	243.5	-4,984.4	5,283.0	5,164.1	118.97	44.405	
5,413.4	5,370.3	5,338.3	5,338.3	14.2	106.2	-91.05	243.5	-4,984.4	5,283.0	5,163.8	119.27	44.295	
5,500.0	5,456.9	5,424.9	5,424.9	14.4	107.9	-91.05	243.5	-4,984.4	5,283.0	5,161.9	121.18	43.595	
5,511.8	5,468.7	5,436.7	5,436.7	14.4	108.2	-91.05	243.5	-4,984.4	5,283.0	5,161.6	121.44	43.502	
5,600.0	5,556.9	5,524.9	5,524.9	14.6	109.9	-91.05	243.5	-4,984.4	5,283.0	5,159.6	123.39	42.815	
5,610.2	5,567.1	5,535.1	5,535.1	14.6	110.1	-91.05	243.5	-4,984.4	5,283.0	5,159.4	123.62	42.736	
5,700.0	5,656.9	5,624.9	5,624.9	14.7	111.9	-91.05	243.5	-4,984.4	5,283.0	5,157.4	125.60	42.061	
5,708.6	5,665.5	5,633.5	5,633.5	14.8	112.1	-91.05	243.5	-4,984.4	5,283.0	5,157.2	125.79	41.997	
5,800.0	5,756.9	5,724.9	5,724.9	14.9	113.9	-91.05	243.5	-4,984.4	5,283.0	5,155.2	127.81	41.334	
5,807.1	5,764.0	5,732.0	5,732.0	14.9	114.1	-91.05	243.5	-4,984.4	5,283.0	5,155.1	127.97	41.283	
5,900.0	5,856.9	5,824.9	5,824.9	15.1	116.0	-91.05	243.5	-4,984.4	5,283.0	5,153.0	130.03	40.630	
5,905.5	5,862.4	5,830.4	5,830.4	15.1	116.1	-91.05	243.5	-4,984.4	5,283.0	5,152.9	130.15	40.592	
5,971.9	5,928.8	5,896.8	5,896.8	15.3	117.4	-91.05	243.5	-4,984.4	5,283.0	5,151.4	131.62	40.139	
6,000.0	5,956.9	5,924.9	5,924.9	15.3	118.0	-1.05	243.5	-4,984.4	5,282.5	5,150.3	132.17	39.967	
6,003.9	5,960.8	5,928.8	5,928.8	15.3	118.0	-1.05	243.5	-4,984.4	5,282.3	5,150.1	132.22	39.950	
6,050.0	6,006.7	5,974.7	5,974.7	15.4	119.0	-1.06	243.5	-4,984.4	5,278.8	5,146.2	132.54	39.826	
6,100.0	6,056.2	6,024.2	6,024.2	15.4	120.0	-1.07	243.5	-4,984.4	5,271.6	5,139.4	132.26	39.858	
6,102.3	6,058.5	6,026.5	6,026.5	15.4	120.0	-1.07	243.5	-4,984.4	5,271.2	5,139.0	132.23	39.864	
6,150.0	6,105.1	6,073.1	6,073.1	15.4	120.9	-1.09	243.5	-4,984.4	5,261.0	5,129.7	131.30	40.068	
6,200.0	6,153.0	6,121.0	6,121.0	15.5	121.9	-1.11	243.5	-4,984.4	5,247.0	5,117.4	129.67	40.464	
6,200.8	6,153.8	6,121.8	6,121.8	15.5	121.9	-1.11	243.5	-4,984.4	5,246.8	5,117.2	129.64	40.472	
6,250.0	6,199.9	6,167.9	6,167.9	15.5	122.9	-1.15	243.5	-4,984.4	5,229.7	5,102.4	127.36	41.064	
6,299.2	6,244.8	6,212.8	6,212.8	15.5	123.8	-1.19	243.5	-4,984.4	5,209.6	5,085.1	124.42	41.871	
6,300.0	6,245.5	6,213.5	6,213.5	15.5	123.8	-1.19	243.5	-4,984.4	5,209.2	5,084.8	124.37	41.886	
6,350.0	6,289.6	6,257.6	6,257.6	15.5	124.7	-1.24	243.5	-4,984.4	5,185.6	5,064.9	120.70	42.961	
6,397.6	6,329.9	6,297.9	6,297.9	15.4	125.5	-1.30	243.5	-4,984.4	5,160.2	5,043.6	116.61	44.253	
6,400.0	6,331.8	6,299.8	6,299.8	15.4	125.5	-1.30	243.5	-4,984.4	5,158.9	5,042.5	116.39	44.325	
6,450.0	6,372.2	6,340.2	6,340.2	15.4	126.3	-1.38	243.5	-4,984.4	5,129.3	5,017.9	111.43	46.030	
6,496.0	6,407.4	6,375.4	6,375.4	15.4	127.0	-1.46	243.5	-4,984.4	5,099.7	4,993.4	106.33	47.960	
6,500.0	6,410.3	6,378.3	6,378.3	15.4	127.1	-1.47	243.5	-4,984.4	5,097.0	4,991.2	105.87	48.144	
6,550.0	6,446.1	6,414.1	6,414.1	15.4	127.8	-1.58	243.5	-4,984.4	5,062.2	4,962.4	99.73	50.759	
6,594.5	6,475.9	6,443.9	6,443.9	15.4	128.4	-1.71	243.5	-4,984.4	5,029.1	4,935.3	93.82	53.606	
6,600.0	6,479.4	6,447.4	6,447.4	15.4	128.5	-1.73	243.5	-4,984.4	5,024.9	4,931.8	93.05	54.001	
6,650.0	6,510.0	6,478.0	6,478.0	15.5	129.1	-1.90	243.5	-4,984.4	4,985.4	4,899.5	85.89	58.046	
6,692.9	6,534.0	6,502.0	6,502.0	15.7	129.6	-2.10	243.5	-4,984.4	4,949.8	4,870.4	79.39	62.347	
6,700.0	6,537.8	6,505.8	6,505.8	15.7	129.7	-2.13	243.5	-4,984.4	4,943.8	4,865.5	78.29	63.148	
6,750.0	6,562.6	6,530.6	6,530.6	16.2	130.2	-2.43	243.5	-4,984.4	4,900.4	4,830.1	70.34	69.672	
6,791.3	6,580.8	6,548.8	6,548.8	16.6	130.5	-2.75	243.5	-4,984.4	4,863.3	4,799.8	63.56	76.517	
6,800.0	6,584.3	6,552.3	6,552.3	16.7	130.6	-2.83	243.5	-4,984.4	4,855.4	4,793.3	62.12	78.160	
6,850.0	6,602.9	6,570.9	6,570.9	17.3	131.0	-3.41	243.5	-4,984.4	4,809.0	4,755.2	53.80	89.389	
6,889.7	6,615.2	6,583.2	6,583.2	17.9	131.2	-4.07	243.5	-4,984.4	4,771.2	4,723.9	47.29	100.885	
6,900.0	6,618.1	6,586.1	6,586.1	18.0	131.3	-4.28	243.5	-4,984.4	4,761.4	4,715.7	45.67	104.261	
6,950.0	6,630.0	6,598.0	6,598.0	18.8	131.5	-5.76	243.5	-4,984.4	4,712.8	4,674.3	38.57	122.198	
6,988.2	6,636.8	6,604.8	6,604.8	19.5	131.6	-7.80	243.5	-4,984.4	4,675.3	4,639.7	35.57	131.449	
7,000.0	6,638.5	6,606.5	6,606.5	19.7	131.7	-8.75	243.5	-4,984.4	4,663.6	4,627.9	35.65	130.829	
7,050.0	6,643.5	6,611.5	6,611.5	20.6	131.8	-17.77	243.5	-4,984.4	4,613.9	4,563.0	50.89	90.657	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,612.9	6,612.9	21.3	131.8	-55.72	243.5	-4,984.4	4,577.3	4,450.7	126.56	36.166	
7,097.8	6,645.0	6,613.0	6,613.0	21.5	131.8	-93.39	243.5	-4,984.4	4,566.1	4,413.0	153.07	29.830	
7,100.0	6,645.0	6,613.0	6,613.0	21.6	131.8	-93.39	243.5	-4,984.4	4,563.9	4,410.8	153.11	29.808	
7,185.0	6,644.9	6,612.9	6,612.9	23.3	131.8	-93.32	243.5	-4,984.4	4,478.9	4,324.1	154.84	28.926	
7,200.0	6,644.9	6,612.9	6,612.9	23.6	131.8	-93.31	243.5	-4,984.4	4,463.9	4,308.8	155.15	28.772	
7,283.4	6,644.8	6,612.8	6,612.8	25.4	131.8	-93.25	243.5	-4,984.4	4,380.5	4,223.5	156.97	27.907	
7,300.0	6,644.7	6,612.7	6,612.7	25.8	131.8	-93.24	243.5	-4,984.4	4,364.0	4,206.6	157.33	27.738	
7,381.9	6,644.6	6,612.6	6,612.6	27.7	131.8	-93.18	243.5	-4,984.4	4,282.1	4,122.9	159.21	26.897	
7,400.0	6,644.6	6,612.6	6,612.6	28.1	131.8	-93.17	243.5	-4,984.4	4,264.0	4,104.4	159.62	26.713	
7,480.3	6,644.5	6,612.5	6,612.5	30.0	131.8	-93.11	243.5	-4,984.4	4,183.7	4,022.2	161.53	25.900	
7,500.0	6,644.5	6,612.5	6,612.5	30.5	131.8	-93.09	243.5	-4,984.4	4,164.0	4,002.0	162.00	25.703	
7,578.7	6,644.4	6,612.4	6,612.4	32.4	131.8	-93.03	243.5	-4,984.4	4,085.3	3,921.4	163.93	24.921	
7,600.0	6,644.4	6,612.4	6,612.4	32.9	131.8	-93.02	243.5	-4,984.4	4,064.0	3,899.6	164.45	24.712	
7,677.1	6,644.3	6,612.3	6,612.3	34.8	131.8	-92.96	243.5	-4,984.4	3,986.9	3,820.5	166.38	23.962	
7,700.0	6,644.2	6,612.2	6,612.2	35.4	131.8	-92.94	243.5	-4,984.4	3,964.1	3,797.1	166.96	23.743	
7,775.6	6,644.1	6,612.1	6,612.1	37.3	131.8	-92.89	243.5	-4,984.4	3,888.5	3,719.6	168.88	23.025	
7,800.0	6,644.1	6,612.1	6,612.1	38.0	131.8	-92.87	243.5	-4,984.4	3,864.1	3,694.6	169.51	22.796	
7,874.0	6,644.0	6,612.0	6,612.0	39.9	131.8	-92.81	243.5	-4,984.4	3,790.1	3,618.7	171.42	22.111	
7,900.0	6,644.0	6,612.0	6,612.0	40.5	131.8	-92.79	243.5	-4,984.4	3,764.1	3,592.0	172.09	21.873	
7,972.4	6,643.9	6,611.9	6,611.9	42.4	131.8	-92.74	243.5	-4,984.4	3,691.7	3,517.7	173.98	21.219	
8,000.0	6,643.9	6,611.9	6,611.9	43.1	131.8	-92.72	243.5	-4,984.4	3,664.2	3,489.5	174.70	20.974	
8,070.8	6,643.8	6,611.8	6,611.8	45.0	131.8	-92.67	243.5	-4,984.4	3,593.3	3,416.8	176.57	20.351	
8,100.0	6,643.7	6,611.7	6,611.7	45.8	131.8	-92.65	243.5	-4,984.4	3,564.2	3,386.9	177.34	20.098	
8,169.3	6,643.7	6,611.7	6,611.7	47.6	131.8	-92.60	243.5	-4,984.4	3,494.9	3,315.8	179.18	19.506	
8,200.0	6,643.6	6,611.6	6,611.6	48.4	131.8	-92.57	243.5	-4,984.4	3,464.2	3,284.2	179.99	19.246	
8,267.7	6,643.5	6,611.5	6,611.5	50.2	131.8	-92.52	243.5	-4,984.4	3,396.6	3,214.8	181.80	18.683	
8,300.0	6,643.5	6,611.5	6,611.5	51.1	131.8	-92.50	243.5	-4,984.4	3,364.3	3,181.6	182.67	18.418	
8,366.1	6,643.4	6,611.4	6,611.4	52.9	131.8	-92.45	243.5	-4,984.4	3,298.2	3,113.7	184.44	17.882	
8,400.0	6,643.4	6,611.4	6,611.4	53.8	131.8	-92.42	243.5	-4,984.4	3,264.3	3,079.0	185.35	17.611	
8,464.5	6,643.3	6,611.3	6,611.3	55.5	131.8	-92.38	243.5	-4,984.4	3,199.8	3,012.7	187.10	17.102	
8,500.0	6,643.2	6,611.2	6,611.2	56.5	131.8	-92.35	243.5	-4,984.4	3,164.4	2,976.3	188.05	16.827	
8,563.0	6,643.2	6,611.2	6,611.2	58.2	131.8	-92.30	243.5	-4,984.4	3,101.4	2,911.7	189.76	16.344	
8,600.0	6,643.1	6,611.1	6,611.1	59.2	131.8	-92.28	243.5	-4,984.4	3,064.4	2,873.6	190.77	16.064	
8,661.4	6,643.0	6,611.0	6,611.0	60.8	131.8	-92.23	243.5	-4,984.4	3,003.0	2,810.6	192.44	15.605	
8,700.0	6,643.0	6,611.0	6,611.0	61.9	131.8	-92.20	243.5	-4,984.4	2,964.5	2,771.0	193.49	15.321	
8,759.8	6,642.9	6,610.9	6,610.9	63.5	131.8	-92.16	243.5	-4,984.4	2,904.7	2,709.5	195.12	14.887	
8,800.0	6,642.9	6,610.9	6,610.9	64.6	131.8	-92.13	243.5	-4,984.4	2,864.5	2,668.3	196.21	14.599	
8,858.2	6,642.8	6,610.8	6,610.8	66.2	131.8	-92.08	243.5	-4,984.4	2,806.3	2,608.5	197.81	14.187	
8,900.0	6,642.7	6,610.7	6,610.7	67.3	131.8	-92.05	243.5	-4,984.4	2,764.6	2,565.6	198.95	13.896	
8,956.7	6,642.7	6,610.7	6,610.7	68.9	131.8	-92.01	243.5	-4,984.4	2,707.9	2,507.4	200.50	13.506	
9,000.0	6,642.6	6,610.6	6,610.6	70.1	131.8	-91.98	243.5	-4,984.4	2,664.6	2,462.9	201.69	13.211	
9,055.1	6,642.5	6,610.5	6,610.5	71.6	131.8	-91.94	243.5	-4,984.4	2,609.6	2,406.4	203.20	12.842	
9,100.0	6,642.5	6,610.5	6,610.5	72.8	131.8	-91.90	243.5	-4,984.4	2,564.7	2,360.3	204.44	12.545	
9,153.5	6,642.4	6,610.4	6,610.4	74.3	131.8	-91.86	243.5	-4,984.4	2,511.2	2,305.3	205.91	12.196	
9,200.0	6,642.4	6,610.4	6,610.4	75.6	131.8	-91.83	243.5	-4,984.4	2,464.8	2,257.6	207.19	11.896	
9,251.9	6,642.3	6,610.3	6,610.3	77.0	131.8	-91.79	243.5	-4,984.4	2,412.9	2,204.2	208.62	11.566	
9,300.0	6,642.2	6,610.2	6,610.2	78.3	131.8	-91.76	243.5	-4,984.4	2,364.9	2,154.9	209.95	11.264	
9,350.4	6,642.2	6,610.2	6,610.2	79.7	131.8	-91.72	243.5	-4,984.4	2,314.5	2,103.2	211.34	10.952	
9,400.0	6,642.1	6,610.1	6,610.1	81.1	131.7	-91.68	243.5	-4,984.4	2,264.9	2,052.2	212.71	10.648	
9,448.8	6,642.0	6,610.0	6,610.0	82.4	131.7	-91.65	243.5	-4,984.4	2,216.2	2,002.1	214.05	10.353	
9,500.0	6,642.0	6,610.0	6,610.0	83.8	131.7	-91.61	243.5	-4,984.4	2,165.0	1,949.6	215.47	10.048	
9,547.2	6,641.9	6,609.9	6,609.9	85.1	131.7	-91.57	243.5	-4,984.4	2,117.9	1,901.1	216.78	9.770	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,609.9	6,609.9	86.6	131.7	-91.53	243.5	-4,984.4	2,065.1	1,846.9	218.24	9.463	
9,645.6	6,641.8	6,609.8	6,609.8	87.9	131.7	-91.50	243.5	-4,984.4	2,019.5	1,800.1	219.50	9.201	
9,700.0	6,641.7	6,609.7	6,609.7	89.4	131.7	-91.46	243.5	-4,984.4	1,965.3	1,744.3	221.00	8.892	
9,744.1	6,641.7	6,609.7	6,609.7	90.6	131.7	-91.43	243.5	-4,984.4	1,921.2	1,699.0	222.23	8.645	
9,800.0	6,641.6	6,609.6	6,609.6	92.1	131.7	-91.38	243.5	-4,984.4	1,865.4	1,641.6	223.78	8.336	
9,842.5	6,641.6	6,609.6	6,609.6	93.3	131.7	-91.35	243.5	-4,984.4	1,823.0	1,598.0	224.96	8.104	
9,900.0	6,641.5	6,609.5	6,609.5	94.9	131.7	-91.31	243.5	-4,984.4	1,765.5	1,539.0	226.55	7.793	
9,940.9	6,641.4	6,609.4	6,609.4	96.0	131.7	-91.28	243.5	-4,984.4	1,724.7	1,497.0	227.69	7.575	
10,000.0	6,641.4	6,609.4	6,609.4	97.7	131.7	-91.24	243.5	-4,984.4	1,665.7	1,436.4	229.33	7.263	
10,039.3	6,641.3	6,609.3	6,609.3	98.8	131.7	-91.21	243.5	-4,984.4	1,626.4	1,396.0	230.42	7.058	
10,100.0	6,641.2	6,609.2	6,609.2	100.4	131.7	-91.16	243.5	-4,984.4	1,565.9	1,333.8	232.10	6.746	
10,137.8	6,641.2	6,609.2	6,609.2	101.5	131.7	-91.13	243.5	-4,984.4	1,528.2	1,295.0	233.15	6.554	
10,200.0	6,641.1	6,609.1	6,609.1	103.2	131.7	-91.09	243.5	-4,984.4	1,466.1	1,231.2	234.88	6.242	
10,236.2	6,641.1	6,609.1	6,609.1	104.2	131.7	-91.06	243.5	-4,984.4	1,430.0	1,194.1	235.89	6.062	
10,300.0	6,641.0	6,609.0	6,609.0	106.0	131.7	-91.01	243.5	-4,984.4	1,366.3	1,128.6	237.66	5.749	
10,334.6	6,640.9	6,608.9	6,608.9	107.0	131.7	-90.99	243.5	-4,984.4	1,331.8	1,093.1	238.63	5.581	
10,400.0	6,640.9	6,608.9	6,608.9	108.8	131.7	-90.94	243.5	-4,984.4	1,266.6	1,026.1	240.45	5.268	
10,433.0	6,640.8	6,608.8	6,608.8	109.7	131.7	-90.91	243.5	-4,984.4	1,233.6	992.3	241.37	5.111	
10,500.0	6,640.7	6,608.7	6,608.7	111.6	131.7	-90.86	243.5	-4,984.4	1,166.9	923.7	243.23	4.798	
10,531.5	6,640.7	6,608.7	6,608.7	112.4	131.7	-90.84	243.5	-4,984.4	1,135.5	891.4	244.11	4.652	
10,600.0	6,640.6	6,608.6	6,608.6	114.3	131.7	-90.79	243.5	-4,984.4	1,067.3	821.3	246.02	4.338	
10,629.9	6,640.6	6,608.6	6,608.6	115.2	131.7	-90.77	243.5	-4,984.4	1,037.5	790.7	246.85	4.203	
10,700.0	6,640.5	6,608.5	6,608.5	117.1	131.7	-90.72	243.5	-4,984.4	967.7	718.9	248.80	3.890	
10,728.3	6,640.4	6,608.4	6,608.4	117.9	131.7	-90.69	243.5	-4,984.4	939.6	690.0	249.59	3.764	
10,800.0	6,640.4	6,608.4	6,608.4	119.9	131.7	-90.64	243.5	-4,984.4	868.3	616.7	251.59	3.451	
10,826.7	6,640.3	6,608.3	6,608.3	120.7	131.7	-90.62	243.5	-4,984.4	841.7	589.4	252.33	3.336	
10,900.0	6,640.2	6,608.2	6,608.2	122.7	131.7	-90.57	243.5	-4,984.4	769.0	514.6	254.37	3.023	
10,925.2	6,640.2	6,608.2	6,608.2	123.4	131.7	-90.55	243.5	-4,984.4	744.0	489.0	255.08	2.917	
11,000.0	6,640.1	6,608.1	6,608.1	125.5	131.7	-90.49	243.5	-4,984.4	669.9	412.7	257.16	2.605	
11,023.6	6,640.1	6,608.1	6,608.1	126.1	131.7	-90.48	243.5	-4,984.4	646.6	388.7	257.82	2.508	
11,100.0	6,640.0	6,608.0	6,608.0	128.3	131.7	-90.42	243.5	-4,984.4	571.1	311.2	259.95	2.197	
11,122.0	6,639.9	6,607.9	6,607.9	128.9	131.7	-90.40	243.5	-4,984.4	549.4	288.9	260.57	2.109	
11,200.0	6,639.8	6,607.8	6,607.8	131.1	131.7	-90.34	243.5	-4,984.4	472.9	210.2	262.74	1.800	
11,220.4	6,639.8	6,607.8	6,607.8	131.6	131.7	-90.33	243.5	-4,984.4	452.9	189.6	263.31	1.720	
11,300.0	6,639.7	6,607.7	6,607.7	133.9	131.7	-90.27	243.5	-4,984.4	375.6	110.0	265.53	1.414 Level 3	
11,318.9	6,639.7	6,607.7	6,607.7	134.4	131.7	-90.26	243.5	-4,984.4	357.4	91.3	266.06	1.343 Level 3	
11,400.0	6,639.6	6,607.6	6,607.6	136.7	131.7	-90.20	243.5	-4,984.4	280.1	11.8	268.32	1.044 Level 2	
11,417.3	6,639.6	6,607.6	6,607.6	137.1	131.7	-90.18	243.5	-4,984.4	264.0	-4.8	268.80	0.982 Level 1	
11,500.0	6,639.5	6,607.5	6,607.5	139.4	131.7	-90.12	243.5	-4,984.4	189.5	-81.6	271.11	0.699 Level 1	
11,515.7	6,639.5	6,607.5	6,607.5	139.9	131.7	-90.11	243.5	-4,984.4	176.1	-95.4	271.55	0.649 Level 1	
11,600.0	6,639.3	6,607.3	6,607.3	142.2	131.7	-90.05	243.5	-4,984.4	115.4	-158.5	273.90	0.421 Level 1	
11,614.1	6,639.3	6,607.3	6,607.3	142.6	131.7	-90.04	243.5	-4,984.4	108.4	-165.9	274.29	0.395 Level 1	
11,662.9	6,639.3	6,607.3	6,607.3	144.0	131.7	-90.00	243.5	-4,984.4	96.8	-178.9	275.65	0.351 Level 1, CC, ES, SF	
11,700.0	6,639.2	6,607.2	6,607.2	145.0	131.7	-89.97	243.5	-4,984.4	103.7	-173.0	276.69	0.375 Level 1	
11,712.6	6,639.2	6,607.2	6,607.2	145.4	131.7	-89.96	243.5	-4,984.4	108.8	-168.2	277.04	0.393 Level 1	
11,800.0	6,639.1	6,607.1	6,607.1	147.8	131.7	-89.90	243.5	-4,984.4	167.8	-111.6	279.48	0.601 Level 1	
11,811.0	6,639.1	6,607.1	6,607.1	148.1	131.7	-89.89	243.5	-4,984.4	176.9	-102.8	279.79	0.632 Level 1	
11,900.0	6,639.0	6,607.0	6,607.0	150.6	131.7	-89.82	243.5	-4,984.4	256.1	-26.2	282.27	0.907 Level 1	
11,909.4	6,639.0	6,607.0	6,607.0	150.9	131.7	-89.82	243.5	-4,984.4	264.9	-17.7	282.54	0.937 Level 1	
12,000.0	6,638.8	6,606.8	6,606.8	153.4	131.7	-89.75	243.5	-4,984.4	350.7	65.7	285.06	1.230 Level 2	
12,007.8	6,638.8	6,606.8	6,606.8	153.6	131.7	-89.74	243.5	-4,984.4	358.3	73.0	285.28	1.256 Level 3	
12,100.0	6,638.7	6,606.7	6,606.7	156.2	131.7	-89.68	243.5	-4,984.4	447.7	159.9	287.85	1.555	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,606.7	6,606.7	156.4	131.7	-89.67	243.5	-4,984.4	453.8	165.8	288.03	1.576	
12,200.0	6,638.6	6,606.6	6,606.6	159.0	131.7	-89.60	243.5	-4,984.4	545.8	255.1	290.65	1.878	
12,204.7	6,638.6	6,606.6	6,606.6	159.1	131.7	-89.60	243.5	-4,984.4	550.4	259.6	290.78	1.893	
12,300.0	6,638.5	6,606.5	6,606.5	161.8	131.7	-89.53	243.5	-4,984.4	644.4	351.0	293.44	2.196	
12,303.1	6,638.5	6,606.5	6,606.5	161.9	131.7	-89.52	243.5	-4,984.4	647.5	354.0	293.52	2.206	
12,400.0	6,638.3	6,606.3	6,606.3	164.6	131.7	-89.45	243.5	-4,984.4	743.4	447.2	296.23	2.510	
12,401.5	6,638.3	6,606.3	6,606.3	164.6	131.7	-89.45	243.5	-4,984.4	745.0	448.7	296.27	2.515	
12,500.0	6,638.2	6,606.2	6,606.2	167.4	131.7	-89.38	243.5	-4,984.4	842.7	543.7	299.02	2.818	
12,598.4	6,638.1	6,606.1	6,606.1	170.2	131.7	-89.30	243.5	-4,984.4	940.5	638.7	301.76	3.117	
12,600.0	6,638.1	6,606.1	6,606.1	170.2	131.7	-89.30	243.5	-4,984.4	942.1	640.3	301.81	3.122	
12,696.8	6,638.0	6,606.0	6,606.0	172.9	131.7	-89.23	243.5	-4,984.4	1,038.5	734.0	304.51	3.410	
12,700.0	6,638.0	6,606.0	6,606.0	173.0	131.7	-89.23	243.5	-4,984.4	1,041.6	737.0	304.60	3.420	
12,795.2	6,637.8	6,605.8	6,605.8	175.7	131.7	-89.16	243.5	-4,984.4	1,136.5	829.2	307.26	3.699	
12,800.0	6,637.8	6,605.8	6,605.8	175.8	131.7	-89.15	243.5	-4,984.4	1,141.2	833.8	307.39	3.713	
12,893.7	6,637.7	6,605.7	6,605.7	178.4	131.7	-89.09	243.5	-4,984.4	1,234.6	924.6	310.00	3.983	
12,900.0	6,637.7	6,605.7	6,605.7	178.6	131.7	-89.08	243.5	-4,984.4	1,240.9	930.7	310.18	4.001	
12,992.1	6,637.6	6,605.6	6,605.6	181.2	131.7	-89.01	243.5	-4,984.4	1,332.7	1,020.0	312.75	4.261	
13,000.0	6,637.6	6,605.6	6,605.6	181.4	131.7	-89.01	243.5	-4,984.4	1,340.6	1,027.6	312.97	4.284	
13,090.5	6,637.5	6,605.5	6,605.5	183.9	131.7	-88.94	243.5	-4,984.4	1,430.9	1,115.4	315.49	4.535	
13,100.0	6,637.5	6,605.5	6,605.5	184.2	131.7	-88.93	243.5	-4,984.4	1,440.4	1,124.6	315.76	4.562	
13,188.9	6,637.4	6,605.4	6,605.4	186.7	131.7	-88.87	243.5	-4,984.4	1,529.1	1,210.9	318.24	4.805	
13,200.0	6,637.3	6,605.3	6,605.3	187.0	131.7	-88.86	243.5	-4,984.4	1,540.2	1,221.6	318.55	4.835	
13,287.4	6,637.2	6,605.2	6,605.2	189.4	131.7	-88.79	243.5	-4,984.4	1,627.4	1,306.4	320.98	5.070	
13,300.0	6,637.2	6,605.2	6,605.2	189.8	131.7	-88.78	243.5	-4,984.4	1,640.0	1,318.6	321.34	5.104	
13,385.8	6,637.1	6,605.1	6,605.1	192.2	131.6	-88.72	243.5	-4,984.4	1,725.6	1,401.9	323.73	5.330	
13,400.0	6,637.1	6,605.1	6,605.1	192.6	131.6	-88.71	243.5	-4,984.4	1,739.8	1,415.7	324.12	5.368	
13,484.2	6,637.0	6,605.0	6,605.0	195.0	131.6	-88.65	243.5	-4,984.4	1,823.9	1,497.4	326.47	5.587	
13,500.0	6,637.0	6,605.0	6,605.0	195.4	131.6	-88.63	243.5	-4,984.4	1,839.7	1,512.8	326.91	5.627	
13,582.6	6,636.9	6,604.9	6,604.9	197.7	131.6	-88.57	243.5	-4,984.4	1,922.2	1,593.0	329.22	5.839	
13,600.0	6,636.8	6,604.8	6,604.8	198.2	131.6	-88.56	243.5	-4,984.4	1,939.5	1,609.8	329.70	5.883	
13,681.1	6,636.7	6,604.7	6,604.7	200.5	131.6	-88.50	243.5	-4,984.4	2,020.5	1,688.6	331.96	6.087	
13,700.0	6,636.7	6,604.7	6,604.7	201.0	131.6	-88.49	243.5	-4,984.4	2,039.4	1,706.9	332.49	6.134	
13,779.5	6,636.6	6,604.6	6,604.6	203.2	131.6	-88.43	243.5	-4,984.4	2,118.8	1,784.1	334.70	6.330	
13,800.0	6,636.6	6,604.6	6,604.6	203.8	131.6	-88.41	243.5	-4,984.4	2,139.3	1,804.0	335.27	6.381	
13,877.9	6,636.5	6,604.5	6,604.5	206.0	131.6	-88.35	243.5	-4,984.4	2,217.2	1,879.7	337.44	6.570	
13,900.0	6,636.5	6,604.5	6,604.5	206.6	131.6	-88.34	243.5	-4,984.4	2,239.2	1,901.2	338.06	6.624	
13,976.3	6,636.4	6,604.4	6,604.4	208.8	131.6	-88.28	243.5	-4,984.4	2,315.5	1,975.3	340.19	6.807	
14,000.0	6,636.3	6,604.3	6,604.3	209.4	131.6	-88.26	243.5	-4,984.4	2,339.1	1,998.3	340.84	6.863	
14,074.8	6,636.2	6,604.2	6,604.2	211.5	131.6	-88.21	243.5	-4,984.4	2,413.8	2,070.9	342.93	7.039	
14,100.0	6,636.2	6,604.2	6,604.2	212.2	131.6	-88.19	243.5	-4,984.4	2,439.0	2,095.4	343.63	7.098	
14,173.2	6,636.1	6,604.1	6,604.1	214.3	131.6	-88.13	243.5	-4,984.4	2,512.2	2,166.5	345.67	7.268	
14,200.0	6,636.1	6,604.1	6,604.1	215.0	131.6	-88.11	243.5	-4,984.4	2,539.0	2,192.5	346.41	7.329	
14,271.6	6,636.0	6,604.0	6,604.0	217.0	131.6	-88.06	243.5	-4,984.4	2,610.5	2,262.1	348.41	7.493	
14,300.0	6,636.0	6,604.0	6,604.0	217.8	131.6	-88.04	243.5	-4,984.4	2,638.9	2,289.7	349.20	7.557	
14,370.0	6,635.9	6,603.9	6,603.9	219.8	131.6	-87.99	243.5	-4,984.4	2,708.9	2,357.8	351.15	7.714	
14,400.0	6,635.8	6,603.8	6,603.8	220.6	131.6	-87.97	243.5	-4,984.4	2,738.8	2,386.8	351.98	7.781	
14,468.5	6,635.7	6,603.7	6,603.7	222.6	131.6	-87.92	243.5	-4,984.4	2,807.3	2,453.4	353.89	7.933	
14,500.0	6,635.7	6,603.7	6,603.7	223.4	131.6	-87.89	243.5	-4,984.4	2,838.8	2,484.0	354.76	8.002	
14,566.9	6,635.6	6,603.6	6,603.6	225.3	131.6	-87.84	243.5	-4,984.4	2,905.6	2,549.0	356.62	8.148	
14,600.0	6,635.6	6,603.6	6,603.6	226.2	131.6	-87.82	243.5	-4,984.4	2,938.7	2,581.2	357.54	8.219	
14,665.3	6,635.5	6,603.5	6,603.5	228.1	131.6	-87.77	243.5	-4,984.4	3,004.0	2,644.6	359.36	8.359	
14,700.0	6,635.5	6,603.5	6,603.5	229.0	131.6	-87.74	243.5	-4,984.4	3,038.7	2,678.3	360.33	8.433	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.4	6,603.4	6,603.4	230.8	131.6	-87.70	243.5	-4,984.4	3,102.4	2,740.3	362.10	8.568	
14,800.0	6,635.3	6,603.3	6,603.3	231.8	131.6	-87.67	243.5	-4,984.4	3,138.6	2,775.5	363.11	8.644	
14,862.2	6,635.2	6,603.2	6,603.2	233.6	131.6	-87.62	243.5	-4,984.4	3,200.8	2,835.9	364.83	8.773	
14,900.0	6,635.2	6,603.2	6,603.2	234.7	131.6	-87.60	243.5	-4,984.4	3,238.6	2,872.7	365.89	8.851	
14,960.6	6,635.1	6,603.1	6,603.1	236.4	131.6	-87.55	243.5	-4,984.4	3,299.1	2,931.6	367.57	8.976	
14,995.1	6,635.0	6,603.0	6,603.0	237.3	131.6	-87.52	243.5	-4,984.4	3,333.7	2,965.1	368.53	9.046	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-106.18	-1,115.2	-3,844.6	4,003.3				
98.4	98.4	63.4	63.4	0.1	0.0	-106.17	-1,115.1	-3,844.6	4,003.0	4,002.9	0.11	N/A	
100.0	100.0	65.1	65.1	0.1	0.0	-106.17	-1,115.1	-3,844.6	4,003.0	4,002.9	0.11	N/A	
176.8	176.8	136.8	136.8	0.3	0.1	-106.17	-1,114.8	-3,844.6	4,002.9	4,002.6	0.35	N/A	
196.8	196.8	153.4	153.4	0.3	0.1	-106.17	-1,114.7	-3,844.6	4,002.9	4,002.5	0.42	9,452.383	
200.0	200.0	156.0	156.0	0.3	0.1	-106.17	-1,114.7	-3,844.6	4,002.9	4,002.5	0.43	9,205.531	
295.3	295.3	246.5	246.5	0.5	0.2	-106.16	-1,114.4	-3,844.9	4,003.2	4,002.4	0.74	5,410.096	
300.0	300.0	251.8	251.8	0.5	0.2	-106.16	-1,114.4	-3,844.9	4,003.2	4,002.4	0.75	5,318.722	
393.7	393.7	346.5	346.5	0.8	0.3	-106.16	-1,114.5	-3,845.0	4,003.3	4,002.3	1.02	3,917.406	
400.0	400.0	352.3	352.3	0.8	0.3	-106.16	-1,114.5	-3,845.0	4,003.3	4,002.3	1.04	3,846.025	
492.1	492.1	442.7	442.7	1.0	0.3	-106.17	-1,114.8	-3,845.2	4,003.5	4,002.2	1.31	3,045.343	
500.0	500.0	451.0	451.0	1.0	0.3	-106.17	-1,114.9	-3,845.2	4,003.6	4,002.2	1.34	2,992.990	
590.5	590.5	545.6	545.6	1.2	0.4	-106.18	-1,115.4	-3,845.2	4,003.7	4,002.1	1.60	2,502.600	
600.0	600.0	555.5	555.4	1.2	0.4	-106.18	-1,115.5	-3,845.2	4,003.7	4,002.1	1.63	2,460.955	
689.0	689.0	651.7	651.7	1.4	0.5	-106.18	-1,115.8	-3,845.1	4,003.8	4,001.9	1.88	2,133.199	
700.0	700.0	664.0	664.0	1.4	0.5	-106.18	-1,115.8	-3,845.1	4,003.8	4,001.9	1.91	2,099.192	
787.4	787.4	756.8	756.8	1.6	0.5	-106.19	-1,116.2	-3,844.8	4,003.6	4,001.4	2.15	1,865.734	
800.0	800.0	769.7	769.7	1.7	0.5	-106.19	-1,116.2	-3,844.8	4,003.6	4,001.4	2.18	1,836.431	
885.8	885.8	849.9	849.8	1.9	0.5	-106.20	-1,116.8	-3,844.4	4,003.4	4,001.0	2.41	1,662.264	
900.0	900.0	862.4	862.4	1.9	0.6	-106.20	-1,116.9	-3,844.4	4,003.4	4,000.9	2.45	1,636.899	
921.1	921.1	881.1	881.1	1.9	0.6	-106.20	-1,117.1	-3,844.3	4,003.4	4,000.9	2.50	1,600.601	
984.2	984.2	938.5	938.5	2.1	0.6	-106.21	-1,117.6	-3,844.3	4,003.4	4,000.7	2.67	1,500.584	
1,000.0	1,000.0	953.0	953.0	2.1	0.6	-106.21	-1,117.7	-3,844.2	4,003.4	4,000.7	2.71	1,477.558	
1,082.7	1,082.7	1,032.1	1,032.1	2.3	0.6	-106.22	-1,118.2	-3,844.3	4,003.6	4,000.7	2.93	1,366.809	
1,100.0	1,100.0	1,049.7	1,049.7	2.3	0.6	-106.22	-1,118.3	-3,844.3	4,003.7	4,000.7	2.98	1,345.463	
1,181.1	1,181.1	1,139.7	1,139.7	2.5	0.7	-106.23	-1,118.9	-3,844.3	4,003.9	4,000.7	3.19	1,254.509	
1,200.0	1,200.0	1,163.6	1,163.6	2.6	0.7	-106.23	-1,119.0	-3,844.3	4,003.8	4,000.6	3.24	1,235.152	
1,279.5	1,279.5	1,256.7	1,256.7	2.7	0.7	-106.24	-1,119.3	-3,843.9	4,003.6	4,000.2	3.45	1,160.218	
1,300.0	1,300.0	1,279.6	1,279.6	2.8	0.7	-106.24	-1,119.4	-3,843.8	4,003.5	4,000.0	3.50	1,142.655	
1,318.4	1,318.4	1,300.0	1,300.0	2.8	0.7	-147.43	-1,119.5	-3,843.7	4,003.5	4,000.0	3.52	1,137.192	
1,377.9	1,377.9	1,352.9	1,352.9	3.0	0.8	-147.43	-1,119.7	-3,843.4	4,004.0	4,000.4	3.67	1,091.329	
1,400.0	1,400.0	1,372.4	1,372.4	3.0	0.8	-147.43	-1,119.7	-3,843.3	4,004.6	4,000.8	3.72	1,075.311	
1,476.4	1,476.3	1,456.4	1,456.4	3.2	0.8	-147.44	-1,119.9	-3,842.9	4,007.4	4,003.5	3.92	1,022.713	
1,500.0	1,499.8	1,485.8	1,485.8	3.2	0.8	-147.44	-1,119.9	-3,842.7	4,008.6	4,004.6	3.98	1,007.335	
1,574.8	1,574.4	1,551.8	1,551.7	3.4	0.8	-147.44	-1,120.1	-3,842.3	4,013.4	4,009.2	4.17	963.261	
1,600.0	1,599.5	1,572.3	1,572.3	3.5	0.8	-147.43	-1,120.2	-3,842.2	4,015.4	4,011.2	4.23	949.528	
1,673.2	1,672.2	1,633.1	1,633.0	3.6	0.8	-147.41	-1,120.5	-3,842.0	4,022.5	4,018.1	4.42	910.743	
1,700.0	1,698.7	1,655.6	1,655.6	3.7	0.9	-147.41	-1,120.6	-3,842.0	4,025.6	4,021.1	4.49	897.494	
1,771.6	1,769.5	1,720.1	1,720.1	3.9	0.9	-147.39	-1,120.9	-3,842.0	4,034.9	4,030.2	4.68	862.494	
1,800.0	1,797.5	1,750.4	1,750.3	4.0	0.9	-147.38	-1,121.0	-3,842.0	4,039.0	4,034.2	4.76	849.407	
1,870.1	1,866.3	1,822.2	1,822.2	4.2	0.9	-147.37	-1,121.4	-3,842.0	4,050.1	4,045.1	4.95	817.444	
1,899.9	1,895.6	1,850.6	1,850.5	4.3	0.9	-147.36	-1,121.5	-3,842.0	4,055.3	4,050.2	5.04	804.920	
1,968.5	1,962.6	1,915.8	1,915.8	4.5	1.0	-147.47	-1,121.9	-3,842.0	4,067.4	4,062.2	5.23	777.644	
2,000.0	1,993.4	1,946.2	1,946.2	4.6	1.0	-147.52	-1,122.2	-3,842.0	4,073.1	4,067.7	5.32	765.911	
2,066.9	2,058.9	2,000.0	2,000.0	4.8	1.0	-147.61	-1,122.6	-3,841.9	4,085.0	4,079.5	5.51	741.361	
2,100.0	2,091.3	2,034.1	2,034.1	4.9	1.0	-147.67	-1,122.9	-3,842.0	4,091.0	4,085.4	5.61	729.854	
2,165.3	2,155.2	2,084.4	2,084.4	5.2	1.0	-147.76	-1,123.5	-3,842.1	4,102.9	4,097.1	5.80	707.919	
2,200.0	2,189.1	2,117.5	2,117.5	5.3	1.0	-147.82	-1,124.1	-3,842.2	4,109.3	4,103.4	5.90	696.533	
2,263.8	2,251.5	2,195.2	2,195.1	5.5	1.1	-147.95	-1,125.2	-3,842.3	4,121.0	4,114.9	6.10	676.040	
2,300.0	2,286.9	2,229.5	2,229.5	5.7	1.1	-148.01	-1,125.6	-3,842.3	4,127.5	4,121.3	6.20	665.317	
2,362.2	2,347.7	2,286.4	2,286.4	5.9	1.1	-148.11	-1,126.5	-3,842.3	4,138.9	4,132.5	6.39	647.449	
2,400.0	2,384.7	2,320.9	2,320.8	6.0	1.1	-148.17	-1,127.0	-3,842.3	4,145.8	4,139.3	6.51	637.090	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,444.0	2,376.1	2,376.0	6.3	1.1	-148.27	-1,127.8	-3,842.5	4,156.9	4,150.2	6.70	620.895	
2,500.0	2,482.5	2,415.8	2,415.8	6.4	1.1	-148.33	-1,128.3	-3,842.6	4,164.2	4,157.4	6.82	610.847	
2,559.0	2,540.3	2,487.3	2,487.2	6.7	1.2	-148.46	-1,129.3	-3,842.6	4,175.0	4,168.0	7.00	596.145	
2,600.0	2,580.3	2,529.4	2,529.4	6.8	1.2	-148.53	-1,129.9	-3,842.5	4,182.4	4,175.3	7.13	586.565	
2,657.5	2,636.5	2,585.1	2,585.0	7.1	1.2	-148.62	-1,130.4	-3,842.5	4,192.8	4,185.5	7.31	573.546	
2,700.0	2,678.1	2,622.1	2,622.0	7.2	1.2	-148.68	-1,130.6	-3,842.6	4,200.6	4,193.1	7.44	564.352	
2,755.9	2,732.8	2,667.5	2,667.4	7.5	1.2	-148.75	-1,131.0	-3,842.7	4,210.8	4,203.2	7.62	552.634	
2,800.0	2,776.0	2,704.5	2,704.4	7.7	1.2	-148.81	-1,131.3	-3,842.9	4,219.0	4,211.2	7.76	543.701	
2,854.3	2,829.1	2,766.2	2,766.1	7.9	1.2	-148.90	-1,131.8	-3,843.1	4,229.1	4,221.1	7.94	532.890	
2,900.0	2,873.8	2,814.1	2,814.0	8.1	1.3	-148.98	-1,132.0	-3,843.3	4,237.5	4,229.4	8.08	524.227	
2,952.7	2,925.4	2,860.8	2,860.7	8.3	1.3	-149.05	-1,132.1	-3,843.5	4,247.2	4,238.9	8.25	514.643	
3,000.0	2,971.6	2,903.4	2,903.3	8.5	1.3	-149.11	-1,132.4	-3,843.7	4,256.0	4,247.6	8.40	506.418	
3,051.2	3,021.6	2,964.4	2,964.3	8.7	1.3	-149.20	-1,132.7	-3,844.0	4,265.4	4,256.9	8.57	497.715	
3,100.0	3,069.4	3,016.5	3,016.4	8.9	1.3	-149.28	-1,133.1	-3,844.0	4,274.3	4,265.6	8.73	489.777	
3,149.6	3,117.9	3,059.8	3,059.7	9.1	1.3	-149.35	-1,133.5	-3,844.0	4,283.4	4,274.6	8.89	482.029	
3,200.0	3,167.2	3,104.0	3,103.9	9.3	1.4	-149.42	-1,133.9	-3,844.1	4,292.8	4,283.7	9.05	474.446	
3,248.0	3,214.2	3,148.8	3,148.7	9.5	1.4	-149.49	-1,134.3	-3,844.2	4,301.7	4,292.5	9.20	467.351	
3,300.0	3,265.0	3,197.2	3,197.1	9.8	1.4	-149.56	-1,134.8	-3,844.4	4,311.4	4,302.0	9.37	459.957	
3,346.4	3,310.5	3,243.9	3,243.8	10.0	1.4	-149.63	-1,135.1	-3,844.6	4,320.0	4,310.5	9.52	453.698	
3,400.0	3,362.9	3,298.0	3,297.9	10.2	1.4	-149.71	-1,135.1	-3,845.0	4,330.0	4,320.3	9.69	446.823	
3,444.9	3,406.7	3,355.3	3,355.1	10.4	1.4	-149.78	-1,134.5	-3,845.4	4,338.3	4,328.5	9.84	440.994	
3,473.0	3,434.2	3,391.6	3,391.4	10.5	1.4	-149.82	-1,133.8	-3,845.7	4,343.4	4,333.5	9.93	437.420	
3,500.0	3,460.7	3,416.4	3,416.3	10.6	1.4	-149.89	-1,133.3	-3,845.9	4,348.2	4,338.2	10.00	434.741	
3,543.3	3,503.2	3,451.1	3,450.9	10.7	1.4	-150.00	-1,132.4	-3,846.3	4,355.5	4,345.4	10.10	431.150	
3,600.0	3,559.0	3,500.0	3,499.8	10.9	1.4	-150.12	-1,131.0	-3,847.0	4,364.3	4,354.1	10.23	426.480	
3,641.7	3,600.2	3,542.0	3,541.8	11.0	1.4	-150.21	-1,129.7	-3,847.7	4,370.2	4,359.9	10.33	423.255	
3,700.0	3,657.9	3,606.3	3,606.1	11.2	1.4	-150.31	-1,127.7	-3,848.6	4,377.5	4,367.0	10.45	418.729	
3,740.1	3,697.8	3,645.4	3,645.1	11.3	1.4	-150.37	-1,126.4	-3,849.2	4,381.9	4,371.4	10.54	415.928	
3,800.0	3,757.3	3,700.0	3,699.7	11.4	1.4	-150.44	-1,124.7	-3,849.9	4,387.6	4,376.9	10.66	411.774	
3,838.6	3,795.7	3,734.2	3,733.9	11.5	1.4	-150.47	-1,123.7	-3,850.4	4,390.7	4,380.0	10.73	409.312	
3,900.0	3,857.0	3,783.7	3,783.3	11.7	1.4	-150.52	-1,122.5	-3,851.2	4,394.9	4,384.1	10.84	405.423	
3,937.0	3,893.9	3,824.5	3,824.2	11.7	1.4	-150.54	-1,121.6	-3,851.9	4,396.9	4,386.0	10.90	403.215	
4,000.0	3,956.9	3,911.7	3,911.4	11.8	1.4	-150.56	-1,120.4	-3,852.6	4,399.1	4,388.1	11.02	399.288	
4,035.4	3,992.3	3,947.6	3,947.3	11.9	1.4	-150.57	-1,120.0	-3,852.8	4,399.8	4,388.7	11.07	397.310	
4,072.9	4,029.8	3,985.6	3,985.2	11.9	1.4	-109.38	-1,119.8	-3,852.9	4,400.0	4,387.3	12.75	345.127	
4,100.0	4,056.9	4,000.0	3,999.6	12.0	1.4	-109.38	-1,119.7	-3,853.0	4,400.1	4,387.3	12.79	344.004	
4,133.8	4,090.7	4,029.6	4,029.2	12.0	1.4	-109.38	-1,119.5	-3,853.1	4,400.2	4,387.3	12.85	342.453	
4,200.0	4,156.9	4,071.5	4,071.2	12.1	1.4	-109.37	-1,119.2	-3,853.6	4,400.7	4,387.7	12.96	339.497	
4,232.3	4,189.2	4,100.0	4,099.6	12.2	1.4	-109.37	-1,119.0	-3,854.0	4,401.1	4,388.1	13.02	338.065	
4,300.0	4,256.9	4,156.8	4,156.4	12.3	1.4	-109.35	-1,118.4	-3,855.1	4,402.0	4,388.9	13.14	335.065	
4,330.7	4,287.6	4,188.5	4,188.1	12.4	1.4	-109.34	-1,117.9	-3,855.7	4,402.4	4,389.2	13.19	333.703	
4,400.0	4,356.9	4,271.3	4,270.8	12.5	1.4	-109.32	-1,116.3	-3,857.3	4,403.3	4,390.0	13.32	330.659	
4,429.1	4,386.0	4,300.0	4,299.6	12.5	1.4	-109.31	-1,115.7	-3,857.8	4,403.6	4,390.2	13.37	329.389	
4,500.0	4,456.9	4,350.3	4,349.8	12.6	1.4	-109.29	-1,114.7	-3,858.9	4,404.4	4,391.0	13.50	326.367	
4,527.5	4,484.4	4,368.3	4,367.9	12.7	1.4	-109.29	-1,114.3	-3,859.3	4,404.9	4,391.4	13.54	325.208	
4,600.0	4,556.9	4,400.0	4,399.5	12.8	1.4	-109.27	-1,113.6	-3,860.2	4,406.4	4,392.7	13.67	322.241	
4,626.0	4,582.9	4,425.7	4,425.2	12.9	1.4	-109.26	-1,113.1	-3,861.0	4,407.0	4,393.3	13.72	321.158	
4,700.0	4,656.9	4,463.7	4,463.2	13.0	1.5	-109.25	-1,112.6	-3,862.4	4,409.3	4,395.4	13.86	318.204	
4,724.4	4,681.3	4,500.0	4,499.4	13.0	1.5	-109.24	-1,112.3	-3,864.0	4,410.3	4,396.4	13.90	317.213	
4,800.0	4,756.9	4,687.7	4,687.0	13.1	1.5	-109.24	-1,113.7	-3,868.3	4,412.7	4,398.6	14.07	313.674	
4,822.8	4,779.7	4,735.8	4,735.2	13.2	1.5	-109.25	-1,114.2	-3,868.3	4,412.7	4,398.6	14.12	312.529	
4,900.0	4,856.9	4,843.5	4,842.9	13.3	1.5	-109.26	-1,115.4	-3,867.5	4,412.4	4,398.1	14.28	308.896	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,878.1	4,866.1	4,865.4	13.4	1.5	-109.27	-1,115.6	-3,867.3	4,412.3	4,398.0	14.33	307.932		
5,000.0	4,956.9	4,942.4	4,941.8	13.5	1.6	-109.28	-1,116.3	-3,866.5	4,411.8	4,397.3	14.49	304.465		
5,019.7	4,976.6	4,960.3	4,959.6	13.5	1.6	-109.28	-1,116.4	-3,866.4	4,411.7	4,397.2	14.53	303.617		
5,100.0	5,056.9	5,048.1	5,047.5	13.7	1.6	-109.28	-1,116.5	-3,865.9	4,411.3	4,396.6	14.69	300.230		
5,118.1	5,075.0	5,072.0	5,071.3	13.7	1.6	-109.28	-1,116.4	-3,865.7	4,411.1	4,396.4	14.73	299.478		
5,200.0	5,156.9	5,163.5	5,162.8	13.8	1.6	-109.28	-1,115.9	-3,864.9	4,410.3	4,395.4	14.89	296.157		
5,216.5	5,173.4	5,180.8	5,180.1	13.9	1.6	-109.28	-1,115.8	-3,864.8	4,410.2	4,395.2	14.92	295.496		
5,300.0	5,256.9	5,250.3	5,249.7	14.0	1.6	-109.28	-1,115.6	-3,864.2	4,409.4	4,394.3	15.09	292.215		
5,314.9	5,271.8	5,261.9	5,261.2	14.1	1.6	-109.28	-1,115.5	-3,864.1	4,409.3	4,394.2	15.12	291.635		
5,400.0	5,356.9	5,334.3	5,333.6	14.2	1.6	-109.28	-1,115.5	-3,863.7	4,408.9	4,393.6	15.29	288.355		
5,413.4	5,370.3	5,347.2	5,346.5	14.2	1.6	-109.28	-1,115.5	-3,863.7	4,408.8	4,393.5	15.32	287.836		
5,500.0	5,456.9	5,447.4	5,446.8	14.4	1.6	-109.29	-1,115.9	-3,863.1	4,408.5	4,393.0	15.50	284.452		
5,511.8	5,468.7	5,465.2	5,464.5	14.4	1.6	-109.29	-1,115.9	-3,863.0	4,408.4	4,392.9	15.52	283.978		
5,600.0	5,556.9	5,591.0	5,590.3	14.6	1.6	-109.30	-1,116.0	-3,861.3	4,407.3	4,391.6	15.71	280.476		
5,610.2	5,567.1	5,604.8	5,604.1	14.6	1.6	-109.30	-1,116.1	-3,861.0	4,407.1	4,391.4	15.74	280.073		
5,700.0	5,656.9	5,718.2	5,717.5	14.7	1.6	-109.31	-1,116.1	-3,858.6	4,405.3	4,389.4	15.93	276.596		
5,708.6	5,665.5	5,729.0	5,728.2	14.8	1.6	-109.31	-1,116.1	-3,858.3	4,405.1	4,389.1	15.95	276.266		
5,800.0	5,756.9	5,835.1	5,834.3	14.9	1.6	-109.33	-1,116.2	-3,855.4	4,402.7	4,386.6	16.14	272.808		
5,807.1	5,764.0	5,842.3	5,841.5	14.9	1.6	-109.33	-1,116.2	-3,855.2	4,402.6	4,386.4	16.15	272.544		
5,900.0	5,856.9	5,940.2	5,939.4	15.1	1.7	-109.34	-1,116.4	-3,852.3	4,400.0	4,383.7	16.35	269.112		
5,905.5	5,862.4	5,946.3	5,945.5	15.1	1.7	-109.34	-1,116.4	-3,852.1	4,399.9	4,383.5	16.36	268.910		
5,971.9	5,928.8	6,034.9	6,034.0	15.3	1.7	-109.35	-1,116.3	-3,849.4	4,397.9	4,381.4	16.51	266.449		
6,000.0	5,956.9	6,089.2	6,088.3	15.3	1.7	-19.41	-1,116.3	-3,847.3	4,396.4	4,381.2	15.24	288.536		
6,003.9	5,960.8	6,096.7	6,095.8	15.3	1.7	-19.42	-1,116.3	-3,847.0	4,396.1	4,380.9	15.24	288.381		
6,050.0	6,006.7	6,152.9	6,151.9	15.4	1.7	-19.59	-1,116.3	-3,844.6	4,390.9	4,375.5	15.34	286.185		
6,100.0	6,056.2	6,210.1	6,209.1	15.4	1.7	-19.88	-1,116.5	-3,841.9	4,382.0	4,366.5	15.48	283.079		
6,102.3	6,058.5	6,212.5	6,211.5	15.4	1.7	-19.90	-1,116.5	-3,841.8	4,381.5	4,366.0	15.49	282.923		
6,150.0	6,105.1	6,259.9	6,258.8	15.4	1.7	-20.29	-1,116.6	-3,839.5	4,369.8	4,354.2	15.62	279.680		
6,200.0	6,153.0	6,309.2	6,308.1	15.5	1.7	-20.82	-1,116.6	-3,837.2	4,354.5	4,338.8	15.76	276.276		
6,200.8	6,153.8	6,310.0	6,308.9	15.5	1.7	-20.83	-1,116.6	-3,837.1	4,354.3	4,338.5	15.76	276.224		
6,250.0	6,199.9	6,360.0	6,358.8	15.5	1.7	-21.49	-1,116.5	-3,834.8	4,336.1	4,320.3	15.88	273.043		
6,299.2	6,244.8	6,400.0	6,398.8	15.5	1.7	-22.28	-1,116.2	-3,832.9	4,315.1	4,299.1	15.97	270.227		
6,300.0	6,245.5	6,400.0	6,398.8	15.5	1.7	-22.29	-1,116.2	-3,832.9	4,314.7	4,298.8	15.97	270.191		
6,350.0	6,289.6	6,433.8	6,432.5	15.5	1.7	-23.24	-1,116.0	-3,831.4	4,290.5	4,274.5	16.03	267.738		
6,397.6	6,329.9	6,459.6	6,458.4	15.4	1.7	-24.31	-1,116.0	-3,830.3	4,265.1	4,249.0	16.05	265.705		
6,400.0	6,331.8	6,460.9	6,459.6	15.4	1.7	-24.37	-1,116.0	-3,830.2	4,263.7	4,247.7	16.05	265.613		
6,450.0	6,372.2	6,500.0	6,498.7	15.4	1.8	-25.77	-1,116.0	-3,828.6	4,234.5	4,218.4	16.07	263.432		
6,496.0	6,407.4	6,500.0	6,498.7	15.4	1.8	-27.10	-1,116.0	-3,828.6	4,205.5	4,189.4	16.06	261.822		
6,500.0	6,410.3	6,500.0	6,498.7	15.4	1.8	-27.23	-1,116.0	-3,828.6	4,202.9	4,186.8	16.06	261.690		
6,550.0	6,446.1	6,500.0	6,498.7	15.4	1.8	-28.94	-1,116.0	-3,828.6	4,169.2	4,153.2	16.06	259.599		
6,594.5	6,475.9	6,500.0	6,498.7	15.4	1.8	-30.71	-1,116.0	-3,828.6	4,137.7	4,121.6	16.09	257.087		
6,600.0	6,479.4	6,500.0	6,498.7	15.4	1.8	-30.95	-1,116.0	-3,828.6	4,133.7	4,117.6	16.10	256.751		
6,650.0	6,510.0	6,540.9	6,539.6	15.5	1.8	-33.75	-1,116.2	-3,827.4	4,095.9	4,079.6	16.27	251.800		
6,692.9	6,534.0	6,549.4	6,548.1	15.7	1.8	-36.32	-1,116.3	-3,827.3	4,062.3	4,045.8	16.48	246.565		
6,700.0	6,537.8	6,550.8	6,549.4	15.7	1.8	-36.78	-1,116.3	-3,827.3	4,056.6	4,040.1	16.52	245.627		
6,750.0	6,562.6	6,559.7	6,558.3	16.2	1.8	-40.41	-1,116.3	-3,827.1	4,015.9	3,999.0	16.92	237.362		
6,791.3	6,580.8	6,566.3	6,564.9	16.6	1.8	-43.94	-1,116.4	-3,827.1	3,981.2	3,963.8	17.38	229.026		
6,800.0	6,584.3	6,567.5	6,566.2	16.7	1.8	-44.75	-1,116.4	-3,827.0	3,973.8	3,956.3	17.51	227.008		
6,850.0	6,602.9	6,600.0	6,598.7	17.3	1.8	-50.52	-1,116.7	-3,827.0	3,930.8	3,912.5	18.34	214.315		
6,889.7	6,615.2	6,600.0	6,598.7	17.9	1.8	-55.32	-1,116.7	-3,827.0	3,895.7	3,876.6	19.07	204.276		
6,900.0	6,618.1	6,600.0	6,598.7	18.0	1.8	-56.66	-1,116.7	-3,827.0	3,886.5	3,867.3	19.27	201.739		
6,950.0	6,630.0	6,600.0	6,598.7	18.8	1.8	-63.84	-1,116.7	-3,827.0	3,841.5	3,821.2	20.28	189.449		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,636.8	6,600.0	6,598.7	19.5	1.8	-70.01	-1,116.7	-3,827.0	3,806.8	3,785.7	21.05	180.806	
7,000.0	6,638.5	6,600.0	6,598.7	19.7	1.8	-72.02	-1,116.7	-3,827.0	3,796.0	3,774.7	21.28	178.370	
7,050.0	6,643.5	6,600.0	6,598.7	20.6	1.8	-80.99	-1,116.7	-3,827.0	3,750.1	3,727.9	22.23	168.715	
7,086.6	6,644.9	6,600.0	6,598.7	21.3	1.8	-87.82	-1,116.7	-3,827.0	3,716.4	3,693.5	22.96	161.862	
7,097.8	6,645.0	6,600.0	6,598.7	21.5	1.8	-89.92	-1,116.7	-3,827.0	3,706.1	3,682.9	23.21	159.704	
7,100.0	6,645.0	6,600.0	6,598.7	21.6	1.8	-89.92	-1,116.7	-3,827.0	3,704.1	3,680.8	23.25	159.328	
7,185.0	6,644.9	6,600.0	6,598.7	23.3	1.8	-89.92	-1,116.7	-3,827.0	3,626.1	3,601.1	24.97	145.191	
7,200.0	6,644.9	6,600.0	6,598.7	23.6	1.8	-89.92	-1,116.7	-3,827.0	3,612.4	3,587.1	25.28	142.902	
7,283.4	6,644.8	6,600.0	6,598.7	25.4	1.8	-89.92	-1,116.7	-3,827.0	3,536.2	3,509.1	27.10	130.505	
7,300.0	6,644.7	6,600.0	6,598.7	25.8	1.8	-89.92	-1,116.7	-3,827.0	3,521.1	3,493.6	27.46	128.243	
7,381.9	6,644.6	6,600.0	6,598.7	27.7	1.8	-89.92	-1,116.7	-3,827.0	3,446.7	3,417.4	29.33	117.507	
7,400.0	6,644.6	6,600.0	6,598.7	28.1	1.8	-89.92	-1,116.7	-3,827.0	3,430.3	3,400.6	29.75	115.315	
7,480.3	6,644.5	6,600.0	6,598.7	30.0	1.8	-89.92	-1,116.7	-3,827.0	3,357.8	3,326.1	31.66	106.068	
7,500.0	6,644.5	6,600.0	6,598.7	30.5	1.8	-89.92	-1,116.7	-3,827.0	3,340.0	3,307.9	32.13	103.969	
7,578.7	6,644.4	6,600.0	6,598.7	32.4	1.8	-89.92	-1,116.7	-3,827.0	3,269.4	3,235.3	34.05	96.013	
7,600.0	6,644.4	6,600.0	6,598.7	32.9	1.8	-89.92	-1,116.7	-3,827.0	3,250.4	3,215.8	34.57	94.016	
7,677.1	6,644.3	6,600.0	6,598.7	34.8	1.8	-89.92	-1,116.7	-3,827.0	3,181.6	3,145.1	36.50	87.162	
7,700.0	6,644.2	6,600.0	6,598.7	35.4	1.8	-89.92	-1,116.7	-3,827.0	3,161.3	3,124.2	37.07	85.271	
7,775.6	6,644.1	6,600.0	6,598.7	37.3	1.8	-89.92	-1,116.7	-3,827.0	3,094.4	3,055.4	39.00	79.352	
7,800.0	6,644.1	6,600.0	6,598.7	38.0	1.8	-89.92	-1,116.7	-3,827.0	3,072.9	3,033.3	39.62	77.563	
7,874.0	6,644.0	6,600.0	6,598.7	39.9	1.8	-89.92	-1,116.7	-3,827.0	3,007.9	2,966.4	41.53	72.434	
7,900.0	6,644.0	6,600.0	6,598.7	40.5	1.8	-89.92	-1,116.7	-3,827.0	2,985.2	2,943.0	42.20	70.744	
7,972.4	6,643.9	6,600.0	6,598.7	42.4	1.8	-89.92	-1,116.7	-3,827.0	2,922.2	2,878.1	44.09	66.283	
8,000.0	6,643.9	6,600.0	6,598.7	43.1	1.8	-89.92	-1,116.7	-3,827.0	2,898.3	2,853.5	44.81	64.686	
8,070.8	6,643.8	6,600.0	6,598.7	45.0	1.8	-89.92	-1,116.7	-3,827.0	2,837.3	2,790.7	46.67	60.793	
8,100.0	6,643.7	6,600.0	6,598.7	45.8	1.8	-89.92	-1,116.7	-3,827.0	2,812.3	2,764.9	47.44	59.283	
8,169.3	6,643.7	6,600.0	6,598.7	47.6	1.8	-89.92	-1,116.7	-3,827.0	2,753.3	2,704.1	49.28	55.875	
8,200.0	6,643.6	6,600.0	6,598.7	48.4	1.8	-89.92	-1,116.7	-3,827.0	2,727.3	2,677.2	50.09	54.446	
8,267.7	6,643.5	6,600.0	6,598.7	50.2	1.8	-89.92	-1,116.7	-3,827.0	2,670.3	2,618.4	51.90	51.452	
8,300.0	6,643.5	6,600.0	6,598.7	51.1	1.8	-89.92	-1,116.7	-3,827.0	2,643.3	2,590.6	52.76	50.099	
8,366.1	6,643.4	6,600.0	6,598.7	52.9	1.8	-89.92	-1,116.7	-3,827.0	2,588.4	2,533.9	54.54	47.462	
8,400.0	6,643.4	6,600.0	6,598.7	53.8	1.8	-89.92	-1,116.7	-3,827.0	2,560.5	2,505.0	55.45	46.180	
8,464.5	6,643.3	6,600.0	6,598.7	55.5	1.8	-89.92	-1,116.7	-3,827.0	2,507.7	2,450.5	57.19	43.851	
8,500.0	6,643.2	6,600.0	6,598.7	56.5	1.8	-89.92	-1,116.7	-3,827.0	2,478.9	2,420.7	58.14	42.635	
8,563.0	6,643.2	6,600.0	6,598.7	58.2	1.8	-89.92	-1,116.7	-3,827.0	2,428.2	2,368.4	59.85	40.574	
8,600.0	6,643.1	6,600.0	6,598.7	59.2	1.8	-89.92	-1,116.7	-3,827.0	2,398.7	2,337.9	60.85	39.420	
8,661.4	6,643.0	6,600.0	6,598.7	60.8	1.8	-89.92	-1,116.7	-3,827.0	2,350.2	2,287.7	62.52	37.593	
8,700.0	6,643.0	6,600.0	6,598.7	61.9	1.8	-89.92	-1,116.7	-3,827.0	2,320.1	2,256.5	63.57	36.499	
8,759.8	6,642.9	6,600.0	6,598.7	63.5	1.8	-89.92	-1,116.7	-3,827.0	2,273.8	2,208.6	65.20	34.877	
8,800.0	6,642.9	6,600.0	6,598.7	64.6	1.8	-89.92	-1,116.7	-3,827.0	2,243.1	2,176.8	66.29	33.838	
8,858.2	6,642.8	6,600.0	6,598.7	66.2	1.8	-89.92	-1,116.7	-3,827.0	2,199.2	2,131.3	67.88	32.397	
8,900.0	6,642.7	6,600.0	6,598.7	67.3	1.8	-89.92	-1,116.7	-3,827.0	2,168.1	2,099.0	69.02	31.411	
8,956.7	6,642.7	6,600.0	6,598.7	68.9	1.8	-89.92	-1,116.7	-3,827.0	2,126.4	2,055.9	70.57	30.131	
9,000.0	6,642.6	6,600.0	6,598.7	70.1	1.8	-89.92	-1,116.7	-3,827.0	2,095.1	2,023.3	71.76	29.196	
9,055.1	6,642.5	6,600.0	6,598.7	71.6	1.8	-89.92	-1,116.7	-3,827.0	2,055.8	1,982.6	73.27	28.058	
9,100.0	6,642.5	6,600.0	6,598.7	72.8	1.8	-89.92	-1,116.7	-3,827.0	2,024.4	1,949.9	74.50	27.172	
9,153.5	6,642.4	6,600.0	6,598.7	74.3	1.8	-89.92	-1,116.7	-3,827.0	1,987.6	1,911.7	75.97	26.162	
9,200.0	6,642.4	6,600.0	6,598.7	75.6	1.8	-89.92	-1,116.7	-3,827.0	1,956.3	1,879.1	77.25	25.324	
9,251.9	6,642.3	6,600.0	6,598.7	77.0	1.8	-89.92	-1,116.7	-3,827.0	1,922.0	1,843.4	78.68	24.428	
9,300.0	6,642.2	6,600.0	6,598.7	78.3	1.8	-89.92	-1,116.7	-3,827.0	1,891.1	1,811.0	80.01	23.637	
9,350.4	6,642.2	6,600.0	6,598.7	79.7	1.8	-89.92	-1,116.7	-3,827.0	1,859.3	1,778.0	81.39	22.844	
9,400.0	6,642.1	6,600.0	6,598.7	81.1	1.8	-89.92	-1,116.7	-3,827.0	1,828.9	1,746.2	82.76	22.099	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,600.0	6,598.7	82.4	1.8	-89.92	-1,116.7	-3,827.0	1,799.9	1,715.7	84.11	21.399	
9,500.0	6,642.0	6,600.0	6,598.7	83.8	1.8	-89.92	-1,116.7	-3,827.0	1,770.3	1,684.8	85.52	20.700	
9,547.2	6,641.9	6,600.0	6,598.7	85.1	1.8	-89.92	-1,116.7	-3,827.0	1,743.9	1,657.1	86.83	20.084	
9,600.0	6,641.9	6,600.0	6,598.7	86.6	1.8	-89.92	-1,116.7	-3,827.0	1,715.5	1,627.2	88.29	19.431	
9,645.6	6,641.8	6,600.0	6,598.7	87.9	1.8	-89.92	-1,116.7	-3,827.0	1,691.8	1,602.3	89.55	18.892	
9,700.0	6,641.7	6,600.0	6,598.7	89.4	1.8	-89.92	-1,116.7	-3,827.0	1,664.8	1,573.8	91.05	18.284	
9,744.1	6,641.7	6,600.0	6,598.7	90.6	1.8	-89.92	-1,116.7	-3,827.0	1,644.0	1,551.7	92.27	17.816	
9,800.0	6,641.6	6,600.0	6,598.7	92.1	1.8	-89.92	-1,116.7	-3,827.0	1,618.8	1,525.0	93.82	17.254	
9,842.5	6,641.6	6,600.0	6,598.7	93.3	1.8	-89.92	-1,116.7	-3,827.0	1,600.8	1,505.8	95.00	16.850	
9,900.0	6,641.5	6,600.0	6,598.7	94.9	1.8	-89.92	-1,116.7	-3,827.0	1,577.8	1,481.2	96.59	16.334	
9,940.9	6,641.4	6,600.0	6,598.7	96.0	1.8	-89.92	-1,116.7	-3,827.0	1,562.6	1,464.8	97.73	15.989	
10,000.0	6,641.4	6,600.0	6,598.7	97.7	1.8	-89.92	-1,116.7	-3,827.0	1,542.2	1,442.8	99.37	15.520	
10,039.3	6,641.3	6,600.0	6,598.7	98.8	1.8	-89.92	-1,116.7	-3,827.0	1,529.7	1,429.3	100.46	15.227	
10,100.0	6,641.2	6,589.2	6,587.8	100.4	1.8	-89.49	-1,116.6	-3,827.0	1,512.3	1,410.2	102.13	14.807	
10,137.8	6,641.2	6,589.1	6,587.8	101.5	1.8	-89.49	-1,116.6	-3,827.0	1,502.6	1,399.5	103.18	14.563	
10,200.0	6,641.1	6,589.1	6,587.7	103.2	1.8	-89.49	-1,116.6	-3,827.0	1,488.6	1,383.7	104.91	14.189	
10,236.2	6,641.1	6,589.1	6,587.7	104.2	1.8	-89.49	-1,116.6	-3,827.0	1,481.6	1,375.7	105.92	13.988	
10,300.0	6,641.0	6,589.0	6,587.7	106.0	1.8	-89.49	-1,116.6	-3,827.0	1,471.4	1,363.7	107.69	13.663	
10,334.6	6,640.9	6,588.9	6,587.6	107.0	1.8	-89.49	-1,116.6	-3,827.0	1,466.9	1,358.3	108.65	13.501	
10,400.0	6,640.9	6,588.9	6,587.6	108.8	1.8	-89.48	-1,116.6	-3,827.0	1,460.8	1,350.3	110.47	13.223	
10,433.0	6,640.8	6,588.9	6,587.5	109.7	1.8	-89.48	-1,116.6	-3,827.0	1,458.7	1,347.4	111.39	13.096	
10,500.0	6,640.7	6,588.8	6,587.5	111.6	1.8	-89.48	-1,116.6	-3,827.0	1,457.0	1,343.7	113.25	12.864	
10,505.5	6,640.7	6,588.8	6,587.5	111.7	1.8	-89.48	-1,116.6	-3,827.0	1,456.9	1,343.5	113.41	12.847 CC	
10,531.5	6,640.7	6,588.8	6,587.4	112.4	1.8	-89.48	-1,116.6	-3,827.0	1,457.2	1,343.0	114.13	12.768 ES	
10,600.0	6,640.6	6,588.7	6,587.4	114.3	1.8	-89.48	-1,116.6	-3,827.0	1,460.0	1,344.0	116.04	12.582	
10,629.9	6,640.6	6,588.7	6,587.3	115.2	1.8	-89.47	-1,116.6	-3,827.0	1,462.2	1,345.4	116.87	12.512	
10,700.0	6,640.5	6,588.6	6,587.3	117.1	1.8	-89.47	-1,116.6	-3,827.0	1,469.9	1,351.0	118.82	12.370	
10,728.3	6,640.4	6,588.6	6,587.2	117.9	1.8	-89.47	-1,116.6	-3,827.0	1,473.9	1,354.3	119.61	12.322	
10,800.0	6,640.4	6,588.5	6,587.2	119.9	1.8	-89.47	-1,116.6	-3,827.0	1,486.4	1,364.8	121.61	12.223	
10,826.7	6,640.3	6,588.5	6,587.1	120.7	1.8	-89.47	-1,116.6	-3,827.0	1,491.9	1,369.6	122.36	12.193	
10,900.0	6,640.2	6,588.4	6,587.0	122.7	1.8	-89.46	-1,116.6	-3,827.0	1,509.4	1,385.0	124.40	12.134	
10,925.2	6,640.2	6,588.3	6,587.0	123.4	1.8	-89.46	-1,116.6	-3,827.0	1,516.2	1,391.1	125.10	12.120	
11,000.0	6,640.1	6,588.2	6,586.9	125.5	1.8	-89.46	-1,116.6	-3,827.0	1,538.6	1,411.4	127.19	12.097	
11,023.6	6,640.1	6,588.2	6,586.8	126.1	1.8	-89.45	-1,116.6	-3,827.0	1,546.3	1,418.5	127.84	12.095 SF	
11,100.0	6,640.0	6,588.1	6,586.7	128.3	1.8	-89.45	-1,116.6	-3,827.0	1,573.6	1,443.6	129.98	12.107	
11,122.0	6,639.9	6,588.0	6,586.7	128.9	1.8	-89.45	-1,116.6	-3,827.0	1,582.0	1,451.4	130.59	12.114	
11,200.0	6,639.8	6,587.9	6,586.6	131.1	1.8	-89.44	-1,116.6	-3,827.0	1,614.0	1,481.2	132.77	12.157	
11,220.4	6,639.8	6,587.9	6,586.5	131.6	1.8	-89.44	-1,116.6	-3,827.0	1,622.9	1,489.6	133.34	12.172	
11,300.0	6,639.7	6,587.7	6,586.4	133.9	1.8	-89.44	-1,116.6	-3,827.0	1,659.5	1,523.9	135.56	12.242	
11,318.9	6,639.7	6,587.7	6,586.3	134.4	1.8	-89.43	-1,116.6	-3,827.0	1,668.6	1,532.5	136.08	12.262	
11,400.0	6,639.6	6,587.5	6,586.1	136.7	1.8	-89.43	-1,116.6	-3,827.0	1,709.6	1,571.3	138.35	12.357	
11,417.3	6,639.6	6,587.4	6,586.1	137.1	1.8	-89.42	-1,116.6	-3,827.0	1,718.7	1,579.9	138.83	12.380	
11,500.0	6,639.5	6,587.2	6,585.9	139.4	1.8	-89.42	-1,116.6	-3,827.0	1,764.0	1,622.9	141.14	12.498	
11,515.7	6,639.5	6,587.2	6,585.9	139.9	1.8	-89.42	-1,116.6	-3,827.0	1,772.9	1,631.3	141.58	12.522	
11,600.0	6,639.3	6,587.0	6,585.6	142.2	1.8	-89.41	-1,116.6	-3,827.0	1,822.3	1,678.3	143.93	12.660	
11,614.1	6,639.3	6,586.9	6,585.6	142.6	1.8	-89.40	-1,116.6	-3,827.0	1,830.8	1,686.5	144.33	12.685	
11,700.0	6,639.2	6,586.6	6,585.3	145.0	1.8	-89.39	-1,116.6	-3,827.0	1,884.0	1,737.3	146.73	12.840	
11,712.6	6,639.2	6,586.6	6,585.2	145.4	1.8	-89.39	-1,116.6	-3,827.0	1,892.0	1,744.9	147.08	12.864	
11,800.0	6,639.1	6,586.3	6,584.9	147.8	1.8	-89.38	-1,116.6	-3,827.0	1,949.0	1,799.4	149.52	13.035	
11,811.0	6,639.1	6,586.2	6,584.9	148.1	1.8	-89.38	-1,116.6	-3,827.0	1,956.3	1,806.4	149.83	13.057	
11,900.0	6,639.0	6,585.8	6,584.5	150.6	1.8	-89.36	-1,116.6	-3,827.0	2,016.8	1,864.4	152.32	13.241	
11,909.4	6,639.0	6,585.8	6,584.4	150.9	1.8	-89.36	-1,116.6	-3,827.0	2,023.3	1,870.7	152.58	13.260	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
12,000.0	6,638.8	6,585.3	6,583.9	153.4	1.8	-89.34	-1,116.6	-3,827.0	2,087.2	1,932.0	155.11	13.456		
12,007.8	6,638.8	6,585.2	6,583.9	153.6	1.8	-89.34	-1,116.6	-3,827.0	2,092.8	1,937.5	155.33	13.473		
12,100.0	6,638.7	6,584.6	6,583.3	156.2	1.8	-89.31	-1,116.5	-3,827.0	2,159.9	2,002.0	157.91	13.678		
12,106.3	6,638.7	6,584.6	6,583.2	156.4	1.8	-89.31	-1,116.5	-3,827.0	2,164.5	2,006.4	158.08	13.692		
12,200.0	6,638.6	6,583.8	6,582.5	159.0	1.8	-89.28	-1,116.5	-3,827.0	2,234.7	2,074.0	160.70	13.906		
12,204.7	6,638.6	6,583.8	6,582.4	159.1	1.8	-89.28	-1,116.5	-3,827.0	2,238.3	2,077.5	160.83	13.917		
12,300.0	6,638.5	6,582.8	6,581.5	161.8	1.8	-89.24	-1,116.5	-3,827.0	2,311.5	2,148.0	163.50	14.138		
12,303.1	6,638.5	6,582.8	6,581.4	161.9	1.8	-89.24	-1,116.5	-3,827.0	2,313.9	2,150.3	163.59	14.145		
12,400.0	6,638.3	6,581.4	6,580.1	164.6	1.8	-89.19	-1,116.5	-3,827.0	2,389.9	2,223.6	166.29	14.372		
12,401.5	6,638.3	6,581.4	6,580.1	164.6	1.8	-89.19	-1,116.5	-3,827.0	2,391.2	2,224.8	166.34	14.375		
12,500.0	6,638.2	6,579.6	6,578.2	167.4	1.8	-89.11	-1,116.5	-3,827.0	2,470.0	2,300.9	169.09	14.608		
12,598.4	6,638.1	6,576.8	6,575.5	170.2	1.8	-89.01	-1,116.5	-3,827.0	2,550.1	2,378.2	171.84	14.840		
12,600.0	6,638.1	6,576.8	6,575.4	170.2	1.8	-89.01	-1,116.5	-3,827.0	2,551.4	2,379.5	171.88	14.844		
12,696.8	6,638.0	6,572.5	6,571.1	172.9	1.8	-88.84	-1,116.4	-3,827.0	2,631.5	2,456.9	174.58	15.073		
12,700.0	6,638.0	6,572.3	6,570.9	173.0	1.8	-88.83	-1,116.4	-3,827.0	2,634.1	2,459.4	174.67	15.081		
12,795.2	6,637.8	6,564.2	6,562.9	175.7	1.8	-88.51	-1,116.4	-3,827.1	2,714.0	2,536.7	177.31	15.306		
12,800.0	6,637.8	6,563.7	6,562.3	175.8	1.8	-88.49	-1,116.4	-3,827.1	2,718.0	2,540.5	177.44	15.318		
12,893.7	6,637.7	6,543.3	6,541.9	178.4	1.8	-87.69	-1,116.2	-3,827.4	2,797.5	2,617.5	179.98	15.543		
12,900.0	6,637.7	6,540.7	6,539.4	178.6	1.8	-87.59	-1,116.2	-3,827.4	2,802.9	2,622.7	180.15	15.559		
12,992.1	6,637.6	6,498.4	6,497.1	181.2	1.8	-85.93	-1,116.0	-3,828.7	2,881.9	2,699.5	182.45	15.795		
13,000.0	6,637.6	6,498.1	6,496.8	181.4	1.8	-85.92	-1,116.0	-3,828.7	2,888.7	2,706.1	182.67	15.814		
13,090.5	6,637.5	6,494.3	6,493.0	183.9	1.8	-85.77	-1,116.0	-3,828.9	2,967.2	2,782.0	185.17	16.024		
13,100.0	6,637.5	6,493.9	6,492.6	184.2	1.8	-85.75	-1,116.0	-3,828.9	2,975.5	2,790.0	185.43	16.046		
13,188.9	6,637.4	6,490.1	6,488.8	186.7	1.8	-85.61	-1,116.0	-3,829.0	3,053.3	2,865.4	187.89	16.251		
13,200.0	6,637.3	6,489.6	6,488.3	187.0	1.8	-85.59	-1,116.0	-3,829.0	3,063.0	2,874.8	188.19	16.276		
13,287.4	6,637.2	6,485.9	6,484.5	189.4	1.8	-85.44	-1,116.0	-3,829.2	3,140.1	2,949.5	190.60	16.475		
13,300.0	6,637.2	6,485.3	6,484.0	189.8	1.8	-85.42	-1,116.0	-3,829.2	3,151.2	2,960.3	190.94	16.503		
13,385.8	6,637.1	6,481.5	6,480.2	192.2	1.8	-85.27	-1,116.0	-3,829.4	3,227.5	3,034.2	193.30	16.696		
13,400.0	6,637.1	6,480.9	6,479.6	192.6	1.8	-85.24	-1,116.0	-3,829.4	3,240.2	3,046.5	193.70	16.728		
13,484.2	6,637.0	6,477.1	6,475.8	195.0	1.8	-85.10	-1,116.0	-3,829.5	3,315.6	3,119.5	196.01	16.915		
13,500.0	6,637.0	6,476.4	6,475.1	195.4	1.8	-85.07	-1,116.0	-3,829.6	3,329.7	3,133.3	196.44	16.950		
13,582.6	6,636.9	6,472.6	6,471.3	197.7	1.7	-84.92	-1,116.0	-3,829.7	3,404.2	3,205.5	198.71	17.131		
13,600.0	6,636.8	6,471.8	6,470.5	198.2	1.7	-84.89	-1,116.0	-3,829.8	3,419.9	3,220.7	199.19	17.169		
13,681.1	6,636.7	6,468.0	6,466.7	200.5	1.7	-84.74	-1,116.0	-3,829.9	3,493.3	3,291.9	201.41	17.344		
13,700.0	6,636.7	6,467.1	6,465.8	201.0	1.7	-84.71	-1,116.0	-3,829.9	3,510.5	3,308.6	201.93	17.385		
13,779.5	6,636.6	6,463.4	6,462.1	203.2	1.7	-84.56	-1,116.0	-3,830.1	3,582.9	3,378.8	204.10	17.554		
13,800.0	6,636.6	6,462.4	6,461.1	203.8	1.7	-84.52	-1,116.0	-3,830.1	3,601.7	3,397.0	204.66	17.598		
13,877.9	6,636.5	6,458.6	6,457.3	206.0	1.7	-84.38	-1,116.0	-3,830.3	3,673.0	3,466.2	206.79	17.762		
13,900.0	6,636.5	6,457.5	6,456.2	206.6	1.7	-84.33	-1,116.0	-3,830.3	3,693.3	3,485.9	207.40	17.808		
13,976.3	6,636.4	6,453.7	6,452.4	208.8	1.7	-84.19	-1,116.0	-3,830.5	3,763.5	3,554.0	209.48	17.966		
14,000.0	6,636.3	6,452.6	6,451.3	209.4	1.7	-84.14	-1,116.0	-3,830.5	3,785.3	3,575.1	210.12	18.014		
14,074.8	6,636.2	6,448.8	6,447.5	211.5	1.7	-83.99	-1,116.0	-3,830.7	3,854.3	3,642.2	212.16	18.167		
14,100.0	6,636.2	6,447.5	6,446.2	212.2	1.7	-83.94	-1,116.0	-3,830.8	3,877.7	3,664.8	212.85	18.218		
14,173.2	6,636.1	6,443.7	6,442.5	214.3	1.7	-83.80	-1,116.0	-3,830.9	3,945.6	3,730.7	214.84	18.365		
14,200.0	6,636.1	6,442.4	6,441.1	215.0	1.7	-83.74	-1,116.0	-3,831.0	3,970.5	3,754.9	215.56	18.419		
14,271.6	6,636.0	6,438.6	6,437.3	217.0	1.7	-83.60	-1,116.0	-3,831.1	4,037.1	3,819.6	217.51	18.561		
14,300.0	6,636.0	6,437.1	6,435.8	217.8	1.7	-83.54	-1,116.0	-3,831.2	4,063.6	3,845.3	218.28	18.617		
14,370.0	6,635.9	6,433.3	6,432.1	219.8	1.7	-83.39	-1,116.0	-3,831.4	4,129.0	3,908.8	220.17	18.753		
14,400.0	6,635.8	6,431.7	6,430.5	220.6	1.7	-83.33	-1,116.0	-3,831.4	4,157.0	3,936.0	220.98	18.811		
14,468.5	6,635.7	6,428.0	6,426.7	222.6	1.7	-83.19	-1,116.1	-3,831.6	4,221.1	3,998.3	222.83	18.943		
14,500.0	6,635.7	6,426.3	6,425.0	223.4	1.7	-83.12	-1,116.1	-3,831.7	4,250.7	4,027.0	223.68	19.003		
14,566.9	6,635.6	6,422.5	6,421.3	225.3	1.7	-82.98	-1,116.1	-3,831.9	4,313.6	4,088.1	225.48	19.130		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,600.0	6,635.6	6,420.7	6,419.4	226.2	1.7	-82.90	-1,116.1	-3,831.9	4,344.7	4,118.3	226.38	19.192	
14,665.3	6,635.5	6,416.9	6,415.7	228.1	1.7	-82.76	-1,116.1	-3,832.1	4,406.2	4,178.1	228.13	19.314	
14,700.0	6,635.5	6,415.0	6,413.7	229.0	1.7	-82.68	-1,116.1	-3,832.2	4,438.9	4,209.9	229.06	19.379	
14,763.7	6,635.4	6,411.2	6,410.0	230.8	1.7	-82.54	-1,116.1	-3,832.4	4,499.1	4,268.4	230.77	19.496	
14,800.0	6,635.3	6,409.1	6,407.9	231.8	1.7	-82.46	-1,116.2	-3,832.5	4,533.4	4,301.7	231.74	19.563	
14,862.2	6,635.2	6,405.4	6,404.2	233.6	1.7	-82.32	-1,116.2	-3,832.6	4,592.3	4,358.9	233.40	19.675	
14,900.0	6,635.2	6,403.2	6,401.9	234.7	1.7	-82.23	-1,116.2	-3,832.7	4,628.1	4,393.7	234.41	19.744	
14,960.6	6,635.1	6,399.5	6,398.3	236.4	1.7	-82.09	-1,116.2	-3,832.9	4,685.6	4,449.6	236.03	19.852	
14,995.1	6,635.0	6,397.5	6,396.3	237.3	1.7	-82.01	-1,116.2	-3,833.0	4,718.4	4,481.5	236.95	19.913	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-80.73	724.7	-4,438.8	4,497.7				
98.4	98.4	50.8	50.8	0.1	0.0	-80.73	724.8	-4,438.8	4,497.6	4,497.5	0.10	N/A	
100.0	100.0	52.1	52.1	0.1	0.0	-80.73	724.8	-4,438.8	4,497.6	4,497.5	0.10	N/A	
196.8	196.8	143.5	143.5	0.3	0.1	-80.72	725.5	-4,439.1	4,498.0	4,497.6	0.41	N/A	
200.0	200.0	147.1	147.1	0.3	0.1	-80.72	725.6	-4,439.1	4,498.0	4,497.6	0.43	N/A	
295.3	295.3	288.9	288.9	0.5	0.3	-80.68	728.4	-4,438.6	4,498.1	4,497.2	0.82	5,462.010	
300.0	300.0	297.5	297.5	0.5	0.3	-80.68	728.7	-4,438.5	4,498.0	4,497.2	0.84	5,341.150	
393.7	393.7	405.8	405.7	0.8	0.4	-80.63	732.3	-4,436.9	4,497.2	4,496.0	1.13	3,964.438	
400.0	400.0	411.8	411.7	0.8	0.4	-80.62	732.5	-4,436.8	4,497.1	4,495.9	1.15	3,902.867	
492.1	492.1	500.0	499.8	1.0	0.4	-80.58	736.2	-4,435.3	4,496.2	4,494.8	1.41	3,178.429	
500.0	500.0	506.6	506.4	1.0	0.5	-80.57	736.5	-4,435.2	4,496.1	4,494.7	1.44	3,131.179	
590.5	590.5	599.6	599.3	1.2	0.5	-80.52	740.7	-4,433.6	4,495.2	4,493.5	1.69	2,658.689	
600.0	600.0	609.5	609.2	1.2	0.5	-80.51	741.1	-4,433.4	4,495.1	4,493.4	1.72	2,617.978	
689.0	689.0	702.7	702.2	1.4	0.6	-80.45	745.4	-4,431.7	4,494.2	4,492.2	1.96	2,288.410	
700.0	700.0	713.3	712.8	1.4	0.6	-80.45	745.9	-4,431.5	4,494.1	4,492.1	1.99	2,254.203	
787.4	787.4	797.4	796.8	1.6	0.6	-80.40	749.6	-4,429.9	4,493.2	4,490.9	2.23	2,015.328	
800.0	800.0	810.1	809.5	1.7	0.6	-80.39	750.2	-4,429.7	4,493.0	4,490.8	2.26	1,985.006	
885.8	885.8	897.7	897.0	1.9	0.7	-80.34	753.8	-4,428.2	4,492.1	4,489.6	2.50	1,800.439	
900.0	900.0	911.6	910.9	1.9	0.7	-80.33	754.4	-4,427.9	4,492.0	4,489.5	2.53	1,773.516	
984.2	984.2	993.7	992.9	2.1	0.7	-80.29	757.6	-4,426.5	4,491.1	4,488.4	2.76	1,629.015	
1,000.0	1,000.0	1,008.8	1,008.1	2.1	0.7	-80.28	758.2	-4,426.3	4,491.0	4,488.2	2.80	1,604.694	
1,082.7	1,082.7	1,087.6	1,086.8	2.3	0.7	-80.24	761.1	-4,425.0	4,490.2	4,487.2	3.02	1,488.449	
1,100.0	1,100.0	1,100.0	1,099.2	2.3	0.7	-80.23	761.6	-4,424.9	4,490.0	4,487.0	3.06	1,466.990	
1,181.1	1,181.1	1,178.5	1,177.6	2.5	0.8	-80.20	764.4	-4,423.7	4,489.4	4,486.1	3.27	1,371.287	
1,200.0	1,200.0	1,195.8	1,194.9	2.6	0.8	-80.19	765.0	-4,423.5	4,489.3	4,485.9	3.32	1,350.897	
1,279.5	1,279.5	1,265.4	1,264.4	2.7	0.8	-80.16	767.4	-4,422.7	4,488.8	4,485.3	3.53	1,272.252	
1,300.0	1,300.0	1,283.2	1,282.2	2.8	0.8	-80.15	768.1	-4,422.5	4,488.7	4,485.1	3.58	1,253.482	
1,319.4	1,319.4	1,300.1	1,299.2	2.8	0.8	-121.33	768.7	-4,422.3	4,488.7	4,485.1	3.57	1,256.391	
1,377.9	1,377.9	1,382.6	1,381.6	3.0	0.9	-121.30	771.5	-4,421.3	4,488.8	4,485.1	3.73	1,204.483	
1,400.0	1,400.0	1,414.4	1,413.4	3.0	0.9	-121.30	772.6	-4,420.8	4,489.0	4,485.2	3.78	1,186.026	
1,476.4	1,476.3	1,518.3	1,517.2	3.2	0.9	-121.30	775.3	-4,418.8	4,489.7	4,485.8	3.98	1,127.595	
1,500.0	1,499.8	1,541.3	1,540.2	3.2	0.9	-121.30	775.9	-4,418.3	4,490.2	4,486.1	4.04	1,111.453	
1,574.8	1,574.4	1,600.0	1,598.8	3.4	1.0	-121.30	777.3	-4,417.0	4,492.1	4,487.9	4.22	1,063.542	
1,600.0	1,599.5	1,630.3	1,629.2	3.5	1.0	-121.31	778.0	-4,416.4	4,493.1	4,488.8	4.29	1,047.587	
1,673.2	1,672.2	1,686.2	1,685.0	3.6	1.0	-121.30	779.2	-4,415.5	4,496.6	4,492.1	4.48	1,004.498	
1,700.0	1,698.7	1,700.0	1,698.8	3.7	1.0	-121.29	779.5	-4,415.3	4,498.2	4,493.7	4.54	990.033	
1,771.6	1,769.5	1,763.6	1,762.4	3.9	1.0	-121.29	780.8	-4,414.5	4,503.3	4,498.6	4.74	949.616	
1,800.0	1,797.5	1,786.0	1,784.7	4.0	1.0	-121.28	781.2	-4,414.3	4,505.7	4,500.8	4.82	934.682	
1,870.1	1,866.3	1,836.8	1,835.6	4.2	1.0	-121.26	782.1	-4,414.0	4,512.3	4,507.3	5.03	897.423	
1,899.9	1,895.6	1,857.8	1,856.5	4.3	1.1	-121.25	782.4	-4,414.0	4,515.5	4,510.3	5.12	882.503	
1,968.5	1,962.6	1,900.0	1,898.8	4.5	1.1	-121.34	782.9	-4,414.0	4,523.2	4,517.9	5.33	848.664	
2,000.0	1,993.4	1,932.2	1,931.0	4.6	1.1	-121.40	783.3	-4,414.1	4,526.8	4,521.4	5.43	833.510	
2,066.9	2,058.9	1,986.5	1,985.3	4.8	1.1	-121.52	783.8	-4,414.4	4,534.7	4,529.0	5.65	802.269	
2,100.0	2,091.3	2,013.0	2,011.8	4.9	1.1	-121.58	784.1	-4,414.6	4,538.6	4,532.9	5.76	787.626	
2,165.3	2,155.2	2,064.8	2,063.5	5.2	1.1	-121.69	784.5	-4,415.1	4,546.6	4,540.6	5.99	759.597	
2,200.0	2,189.1	2,100.0	2,098.8	5.3	1.1	-121.77	784.8	-4,415.5	4,550.9	4,544.8	6.11	745.216	
2,263.8	2,251.5	2,149.7	2,148.5	5.5	1.1	-121.87	785.2	-4,416.2	4,558.9	4,552.6	6.33	720.116	
2,300.0	2,286.9	2,183.1	2,181.9	5.7	1.1	-121.95	785.3	-4,416.7	4,563.5	4,557.0	6.46	706.482	
2,362.2	2,347.7	2,244.6	2,243.3	5.9	1.2	-122.08	785.5	-4,417.6	4,571.4	4,564.7	6.69	683.780	
2,400.0	2,384.7	2,283.0	2,281.8	6.0	1.2	-122.17	785.6	-4,418.2	4,576.2	4,569.4	6.82	670.695	
2,460.6	2,444.0	2,338.9	2,337.7	6.3	1.2	-122.29	785.6	-4,419.0	4,583.9	4,576.9	7.05	650.503	
2,500.0	2,482.5	2,373.8	2,372.5	6.4	1.2	-122.37	785.6	-4,419.5	4,589.0	4,581.8	7.19	638.084	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,540.3	2,427.9	2,426.6	6.7	1.2	-122.49	785.6	-4,420.5	4,596.7	4,589.3	7.41	620.072	
2,600.0	2,580.3	2,466.7	2,465.4	6.8	1.2	-122.58	785.5	-4,421.1	4,602.1	4,594.5	7.57	608.165	
2,657.5	2,636.5	2,521.7	2,520.4	7.1	1.2	-122.71	785.2	-4,422.1	4,609.6	4,601.8	7.79	592.066	
2,700.0	2,678.1	2,563.0	2,561.7	7.2	1.2	-122.80	785.0	-4,422.9	4,615.2	4,607.3	7.95	580.720	
2,755.9	2,732.8	2,618.0	2,616.7	7.5	1.2	-122.93	784.7	-4,423.9	4,622.6	4,614.4	8.16	566.354	
2,800.0	2,776.0	2,662.3	2,661.0	7.7	1.2	-123.03	784.4	-4,424.7	4,628.4	4,620.1	8.33	555.584	
2,854.3	2,829.1	2,717.9	2,716.6	7.9	1.2	-123.16	783.9	-4,425.7	4,635.6	4,627.1	8.54	542.738	
2,900.0	2,873.8	2,766.6	2,765.2	8.1	1.2	-123.27	783.4	-4,426.6	4,641.6	4,632.9	8.72	532.438	
2,952.7	2,925.4	2,821.1	2,819.8	8.3	1.2	-123.40	782.6	-4,427.5	4,648.6	4,639.6	8.92	520.982	
3,000.0	2,971.6	2,867.9	2,866.6	8.5	1.2	-123.51	781.9	-4,428.3	4,654.8	4,645.7	9.11	511.190	
3,051.2	3,021.6	2,920.0	2,918.6	8.7	1.2	-123.63	781.1	-4,429.2	4,661.5	4,652.2	9.31	500.951	
3,100.0	3,069.4	2,971.8	2,970.4	8.9	1.2	-123.76	780.3	-4,430.0	4,667.9	4,658.4	9.50	491.577	
3,149.6	3,117.9	3,030.5	3,029.1	9.1	1.2	-123.89	779.3	-4,430.8	4,674.4	4,664.7	9.69	482.377	
3,200.0	3,167.2	3,097.2	3,095.7	9.3	1.3	-124.05	778.2	-4,431.6	4,680.8	4,670.9	9.89	473.389	
3,248.0	3,214.2	3,150.1	3,148.6	9.5	1.3	-124.18	777.2	-4,432.1	4,686.8	4,676.7	10.07	465.194	
3,300.0	3,265.0	3,207.4	3,206.0	9.8	1.3	-124.31	776.0	-4,432.5	4,693.3	4,683.0	10.28	456.669	
3,346.4	3,310.5	3,263.1	3,261.6	10.0	1.3	-124.44	774.9	-4,432.9	4,699.0	4,688.5	10.46	449.292	
3,400.0	3,362.9	3,326.6	3,325.1	10.2	1.3	-124.59	773.5	-4,433.1	4,705.5	4,694.8	10.67	441.120	
3,444.9	3,406.7	3,379.1	3,377.6	10.4	1.3	-124.72	772.3	-4,433.2	4,710.8	4,700.0	10.84	434.510	
3,473.0	3,434.2	3,410.9	3,409.4	10.5	1.3	-124.79	771.6	-4,433.2	4,714.2	4,703.2	10.95	430.484	
3,500.0	3,460.7	3,439.6	3,438.1	10.6	1.3	-124.91	770.9	-4,433.2	4,717.3	4,706.2	11.04	427.271	
3,543.3	3,503.2	3,485.8	3,484.3	10.7	1.3	-125.09	769.8	-4,433.2	4,721.9	4,710.8	11.16	423.007	
3,600.0	3,559.0	3,543.4	3,541.9	10.9	1.3	-125.30	768.4	-4,433.1	4,727.5	4,716.1	11.32	417.505	
3,641.7	3,600.2	3,585.3	3,583.7	11.0	1.3	-125.43	767.4	-4,433.0	4,731.1	4,719.7	11.43	413.899	
3,700.0	3,657.9	3,644.0	3,642.4	11.2	1.3	-125.61	766.0	-4,432.9	4,735.6	4,724.1	11.58	408.911	
3,740.1	3,697.8	3,684.5	3,682.9	11.3	1.3	-125.71	764.9	-4,432.8	4,738.4	4,726.7	11.67	405.878	
3,800.0	3,757.3	3,746.0	3,744.4	11.4	1.3	-125.85	763.4	-4,432.7	4,741.8	4,730.0	11.81	401.373	
3,838.6	3,795.7	3,785.9	3,784.3	11.5	1.3	-125.93	762.3	-4,432.6	4,743.6	4,731.7	11.89	398.836	
3,900.0	3,857.0	3,853.3	3,851.6	11.7	1.3	-126.03	760.6	-4,432.3	4,745.8	4,733.8	12.02	394.774	
3,937.0	3,893.9	3,894.5	3,892.9	11.7	1.3	-126.08	759.6	-4,432.2	4,746.7	4,734.6	12.09	392.648	
4,000.0	3,956.9	3,962.6	3,960.9	11.8	1.3	-126.14	757.9	-4,431.8	4,747.6	4,735.4	12.20	389.001	
4,035.4	3,992.3	4,000.0	3,998.3	11.9	1.3	-126.15	757.0	-4,431.5	4,747.7	4,735.4	12.26	387.199	
4,072.9	4,029.8	4,036.1	4,034.4	11.9	1.3	-84.97	756.2	-4,431.3	4,747.5	4,735.9	11.58	409.954	
4,100.0	4,056.9	4,061.6	4,059.9	12.0	1.3	-84.98	755.7	-4,431.1	4,747.3	4,735.6	11.63	408.202	
4,133.8	4,090.7	4,093.6	4,091.9	12.0	1.3	-84.99	755.0	-4,430.9	4,747.0	4,735.3	11.70	405.819	
4,200.0	4,156.9	4,154.2	4,152.4	12.1	1.3	-85.00	753.8	-4,430.6	4,746.5	4,734.7	11.83	401.246	
4,232.3	4,189.2	4,183.6	4,181.9	12.2	1.4	-85.01	753.3	-4,430.4	4,746.3	4,734.4	11.89	399.039	
4,300.0	4,256.9	4,244.4	4,242.6	12.3	1.4	-85.02	752.4	-4,430.2	4,745.9	4,733.9	12.03	394.491	
4,330.7	4,287.6	4,271.8	4,270.0	12.4	1.4	-85.02	752.0	-4,430.1	4,745.8	4,733.7	12.09	392.452	
4,400.0	4,356.9	4,334.9	4,333.1	12.5	1.4	-85.03	751.2	-4,430.0	4,745.6	4,733.4	12.23	387.922	
4,429.1	4,386.0	4,361.9	4,360.1	12.5	1.4	-85.04	750.9	-4,429.9	4,745.5	4,733.2	12.29	386.034	
4,500.0	4,456.9	4,427.6	4,425.9	12.6	1.4	-85.04	750.2	-4,429.9	4,745.4	4,733.0	12.44	381.517	
4,527.5	4,484.4	4,453.2	4,451.5	12.7	1.4	-85.05	749.9	-4,429.9	4,745.4	4,732.9	12.50	379.778	
4,571.3	4,528.2	4,494.0	4,492.2	12.8	1.4	-85.05	749.5	-4,429.9	4,745.4	4,732.8	12.59	377.048	
4,600.0	4,556.9	4,519.9	4,518.1	12.8	1.4	-85.06	749.3	-4,429.9	4,745.4	4,732.7	12.64	375.283	
4,626.0	4,582.9	4,543.1	4,541.4	12.9	1.4	-85.06	749.0	-4,430.0	4,745.4	4,732.7	12.70	373.688	
4,700.0	4,656.9	4,609.7	4,607.9	13.0	1.4	-85.07	748.1	-4,430.2	4,745.6	4,732.7	12.85	369.217	
4,724.4	4,681.3	4,632.1	4,630.3	13.0	1.4	-85.08	747.7	-4,430.3	4,745.6	4,732.7	12.90	367.752	
4,800.0	4,756.9	4,702.3	4,700.5	13.1	1.4	-85.09	746.3	-4,430.7	4,745.9	4,732.8	13.06	363.284	
4,822.8	4,779.7	4,732.1	4,730.3	13.2	1.4	-85.10	745.6	-4,430.8	4,746.0	4,732.9	13.11	361.902	
4,900.0	4,856.9	4,832.1	4,830.2	13.3	1.4	-85.13	743.0	-4,431.1	4,746.0	4,732.7	13.28	357.292	
4,921.2	4,878.1	4,859.1	4,857.2	13.4	1.4	-85.14	742.2	-4,431.1	4,746.0	4,732.6	13.33	356.033	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,956.9	4,968.9	4,967.0	13.5	1.5	-85.18	739.3	-4,430.7	4,745.5	4,732.0	13.51	351.378	
5,019.7	4,976.6	4,998.0	4,996.1	13.5	1.5	-85.19	738.5	-4,430.4	4,745.3	4,731.7	13.55	350.215	
5,100.0	5,056.9	5,092.8	5,090.8	13.7	1.5	-85.21	736.4	-4,429.3	4,744.2	4,730.5	13.73	345.652	
5,118.1	5,075.0	5,113.6	5,111.7	13.7	1.5	-85.21	736.0	-4,429.1	4,743.9	4,730.2	13.77	344.636	
5,200.0	5,156.9	5,208.2	5,206.2	13.8	1.5	-85.23	734.5	-4,427.6	4,742.6	4,728.6	13.94	340.107	
5,216.5	5,173.4	5,229.9	5,228.0	13.9	1.5	-85.24	734.1	-4,427.2	4,742.3	4,728.3	13.98	339.192	
5,300.0	5,256.9	5,333.1	5,331.1	14.0	1.5	-85.25	732.6	-4,425.1	4,740.5	4,726.3	14.17	334.645	
5,314.9	5,271.8	5,349.5	5,347.5	14.1	1.5	-85.25	732.3	-4,424.8	4,740.1	4,725.9	14.20	333.847	
5,400.0	5,356.9	5,441.2	5,439.1	14.2	1.5	-85.27	730.9	-4,422.6	4,738.1	4,723.7	14.38	329.379	
5,413.4	5,370.3	5,455.3	5,453.2	14.2	1.5	-85.27	730.6	-4,422.3	4,737.7	4,723.3	14.41	328.684	
5,500.0	5,456.9	5,542.0	5,539.9	14.4	1.6	-85.29	729.1	-4,420.2	4,735.5	4,720.9	14.60	324.267	
5,511.8	5,468.7	5,553.2	5,551.1	14.4	1.6	-85.29	728.9	-4,420.0	4,735.2	4,720.6	14.63	323.674	
5,600.0	5,556.9	5,642.1	5,640.0	14.6	1.6	-85.31	727.1	-4,417.9	4,733.0	4,718.2	14.82	319.285	
5,610.2	5,567.1	5,653.2	5,651.0	14.6	1.6	-85.31	726.9	-4,417.6	4,732.8	4,717.9	14.85	318.778	
5,700.0	5,656.9	5,749.2	5,747.0	14.7	1.6	-85.34	724.6	-4,415.3	4,730.4	4,715.4	15.05	314.386	
5,708.6	5,665.5	5,758.3	5,756.1	14.8	1.6	-85.34	724.4	-4,415.1	4,730.2	4,715.1	15.07	313.968	
5,800.0	5,756.9	5,851.4	5,849.2	14.9	1.6	-85.37	721.9	-4,412.8	4,727.7	4,712.5	15.27	309.617	
5,807.1	5,764.0	5,858.4	5,856.2	14.9	1.6	-85.37	721.7	-4,412.6	4,727.5	4,712.3	15.29	309.284	
5,900.0	5,856.9	5,953.7	5,951.4	15.1	1.6	-85.40	718.8	-4,410.2	4,725.0	4,709.5	15.49	304.960	
5,905.5	5,862.4	5,959.5	5,957.2	15.1	1.6	-85.41	718.7	-4,410.1	4,724.9	4,709.4	15.51	304.706	
5,971.9	5,928.8	6,035.8	6,033.4	15.3	1.7	-85.43	716.2	-4,408.1	4,723.0	4,707.3	15.66	301.644	
6,000.0	5,956.9	6,071.6	6,069.1	15.3	1.7	4.56	715.0	-4,407.1	4,721.6	4,705.4	16.15	292.278	
6,003.9	5,960.8	6,076.6	6,074.1	15.3	1.7	4.56	714.9	-4,406.9	4,721.3	4,705.1	16.16	292.112	
6,050.0	6,006.7	6,131.1	6,128.6	15.4	1.7	4.58	713.2	-4,405.3	4,716.3	4,700.0	16.28	289.743	
6,100.0	6,056.2	6,186.8	6,184.2	15.4	1.7	4.63	711.5	-4,403.5	4,707.4	4,691.0	16.43	286.577	
6,102.3	6,058.5	6,189.4	6,186.8	15.4	1.7	4.63	711.5	-4,403.4	4,706.9	4,690.5	16.43	286.420	
6,150.0	6,105.1	6,243.4	6,240.8	15.4	1.7	4.71	710.0	-4,401.6	4,695.1	4,678.5	16.58	283.151	
6,200.0	6,153.0	6,299.4	6,296.7	15.5	1.7	4.82	708.5	-4,399.6	4,679.4	4,662.7	16.72	279.796	
6,200.8	6,153.8	6,300.3	6,297.6	15.5	1.7	4.82	708.5	-4,399.6	4,679.1	4,662.4	16.73	279.746	
6,250.0	6,199.9	6,366.2	6,363.4	15.5	1.7	4.96	706.7	-4,397.0	4,660.3	4,643.4	16.85	276.560	
6,299.2	6,244.8	6,421.2	6,418.4	15.5	1.7	5.15	705.3	-4,394.7	4,638.2	4,621.2	16.94	273.842	
6,300.0	6,245.5	6,421.9	6,419.1	15.5	1.7	5.15	705.3	-4,394.7	4,637.8	4,620.8	16.94	273.803	
6,350.0	6,289.6	6,466.1	6,463.3	15.5	1.8	5.38	704.2	-4,392.8	4,612.2	4,595.2	16.98	271.637	
6,397.6	6,329.9	6,510.6	6,507.7	15.4	1.8	5.65	703.0	-4,390.8	4,585.1	4,568.2	16.98	269.964	
6,400.0	6,331.8	6,513.8	6,510.9	15.4	1.8	5.67	702.9	-4,390.7	4,583.7	4,566.7	16.98	269.873	
6,450.0	6,372.2	6,579.3	6,576.3	15.4	1.8	6.04	701.2	-4,387.5	4,552.3	4,535.3	16.97	268.184	
6,496.0	6,407.4	6,636.0	6,632.9	15.4	1.8	6.46	699.6	-4,384.5	4,520.8	4,503.9	16.94	266.924	
6,500.0	6,410.3	6,640.7	6,637.5	15.4	1.8	6.50	699.5	-4,384.3	4,518.0	4,501.1	16.93	266.827	
6,550.0	6,446.1	6,697.4	6,694.2	15.4	1.8	7.08	697.9	-4,380.9	4,481.1	4,464.3	16.86	265.743	
6,594.5	6,475.9	6,750.9	6,747.5	15.4	1.8	7.74	696.3	-4,377.5	4,446.3	4,429.5	16.80	264.720	
6,600.0	6,479.4	6,757.2	6,753.8	15.4	1.8	7.83	696.1	-4,377.1	4,441.8	4,425.1	16.79	264.595	
6,650.0	6,510.0	6,650.0	6,775.7	15.5	1.8	8.73	695.4	-4,375.5	4,400.3	4,383.9	16.46	267.257	
6,692.9	6,534.0	6,790.0	6,786.5	15.7	1.8	9.69	695.0	-4,374.8	4,363.4	4,346.8	16.55	263.674	
6,700.0	6,537.8	6,790.0	6,786.5	15.7	1.8	9.87	695.0	-4,374.8	4,357.1	4,340.6	16.53	263.591	
6,750.0	6,562.6	6,790.0	6,786.5	16.2	1.8	11.35	695.0	-4,374.8	4,312.4	4,296.0	16.44	262.335	
6,791.3	6,580.8	6,790.0	6,786.5	16.6	1.8	12.97	695.0	-4,374.8	4,274.4	4,258.0	16.45	259.869	
6,800.0	6,584.3	6,790.0	6,786.5	16.7	1.8	13.38	695.0	-4,374.8	4,266.3	4,249.9	16.45	259.275	
6,850.0	6,602.9	6,790.0	6,786.5	17.3	1.8	16.31	695.0	-4,374.8	4,219.1	4,202.5	16.67	253.078	
6,889.7	6,615.2	6,790.0	6,786.5	17.9	1.8	19.75	695.0	-4,374.8	4,180.9	4,163.8	17.10	244.557	
6,900.0	6,618.1	6,790.0	6,786.5	18.0	1.8	20.87	695.0	-4,374.8	4,171.0	4,153.7	17.26	241.719	
6,950.0	6,630.0	6,790.0	6,786.5	18.8	1.8	28.73	695.0	-4,374.8	4,122.1	4,103.6	18.53	222.494	
6,988.2	6,636.8	6,790.0	6,786.5	19.5	1.8	39.44	695.0	-4,374.8	4,084.4	4,064.2	20.25	201.677	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.5	6,790.0	6,786.5	19.7	1.8	44.23	695.0	-4,374.8	4,072.7	4,051.8	20.92	194.704	
7,050.0	6,643.5	6,790.0	6,786.5	20.6	1.8	76.76	695.0	-4,374.8	4,023.0	4,000.1	22.81	176.367	
7,086.6	6,644.9	6,790.0	6,786.5	21.3	1.8	108.75	695.0	-4,374.8	3,986.5	3,963.7	22.77	175.040	
7,097.8	6,645.0	6,790.0	6,786.5	21.5	1.8	117.22	695.0	-4,374.8	3,975.3	3,952.7	22.60	175.939	
7,100.0	6,645.0	6,790.0	6,786.5	21.6	1.8	117.22	695.0	-4,374.8	3,973.2	3,950.5	22.63	175.550	
7,185.0	6,644.9	6,790.0	6,786.5	23.3	1.8	117.22	695.0	-4,374.8	3,888.6	3,864.4	24.18	160.848	
7,200.0	6,644.9	6,790.0	6,786.5	23.6	1.8	117.22	695.0	-4,374.8	3,873.7	3,849.2	24.45	158.452	
7,283.4	6,644.8	6,790.0	6,786.5	25.4	1.8	117.22	695.0	-4,374.8	3,790.7	3,764.6	26.07	145.384	
7,300.0	6,644.7	6,790.0	6,786.5	25.8	1.8	117.22	695.0	-4,374.8	3,774.2	3,747.8	26.40	142.984	
7,381.9	6,644.6	6,790.0	6,786.5	27.7	1.8	117.22	695.0	-4,374.8	3,692.8	3,664.8	28.08	131.528	
7,400.0	6,644.6	6,790.0	6,786.5	28.1	1.8	117.22	695.0	-4,374.8	3,674.8	3,646.4	28.45	129.176	
7,480.3	6,644.5	6,790.0	6,786.5	30.0	1.8	117.22	695.0	-4,374.8	3,595.0	3,564.8	30.16	119.198	
7,500.0	6,644.5	6,790.0	6,786.5	30.5	1.8	117.22	695.0	-4,374.8	3,575.4	3,544.8	30.58	116.922	
7,578.7	6,644.4	6,790.0	6,786.5	32.4	1.8	117.22	695.0	-4,374.8	3,497.2	3,464.9	32.31	108.251	
7,600.0	6,644.4	6,790.0	6,786.5	32.9	1.8	117.22	695.0	-4,374.8	3,476.1	3,443.3	32.77	106.065	
7,677.1	6,644.3	6,790.0	6,786.5	34.8	1.8	117.22	695.0	-4,374.8	3,399.4	3,364.9	34.50	98.525	
7,700.0	6,644.2	6,790.0	6,786.5	35.4	1.8	117.22	695.0	-4,374.8	3,376.7	3,341.7	35.02	96.436	
7,775.6	6,644.1	6,790.0	6,786.5	37.3	1.8	117.22	695.0	-4,374.8	3,301.7	3,265.0	36.74	89.867	
7,800.0	6,644.1	6,790.0	6,786.5	38.0	1.8	117.22	695.0	-4,374.8	3,277.5	3,240.2	37.30	87.874	
7,874.0	6,644.0	6,790.0	6,786.5	39.9	1.8	117.22	695.0	-4,374.8	3,204.0	3,165.0	39.01	82.135	
7,900.0	6,644.0	6,790.0	6,786.5	40.5	1.8	117.22	695.0	-4,374.8	3,178.2	3,138.6	39.61	80.237	
7,972.4	6,643.9	6,790.0	6,786.5	42.4	1.8	117.22	695.0	-4,374.8	3,106.4	3,065.1	41.30	75.206	
8,000.0	6,643.9	6,790.0	6,786.5	43.1	1.8	117.22	695.0	-4,374.8	3,079.0	3,037.1	41.95	73.398	
8,070.8	6,643.8	6,790.0	6,786.5	45.0	1.8	117.22	695.0	-4,374.8	3,008.8	2,965.2	43.62	68.973	
8,100.0	6,643.7	6,790.0	6,786.5	45.8	1.8	117.22	695.0	-4,374.8	2,979.9	2,935.6	44.31	67.250	
8,169.3	6,643.7	6,790.0	6,786.5	47.6	1.8	117.22	695.0	-4,374.8	2,911.3	2,865.3	45.96	63.345	
8,200.0	6,643.6	6,790.0	6,786.5	48.4	1.8	117.22	695.0	-4,374.8	2,880.8	2,834.2	46.69	61.702	
8,267.7	6,643.5	6,790.0	6,786.5	50.2	1.8	117.22	695.0	-4,374.8	2,813.8	2,765.5	48.31	58.244	
8,300.0	6,643.5	6,790.0	6,786.5	51.1	1.8	117.22	695.0	-4,374.8	2,781.8	2,732.8	49.08	56.675	
8,366.1	6,643.4	6,790.0	6,786.5	52.9	1.8	117.22	695.0	-4,374.8	2,716.4	2,665.7	50.68	53.604	
8,400.0	6,643.4	6,790.0	6,786.5	53.8	1.8	117.22	695.0	-4,374.8	2,682.9	2,631.4	51.49	52.105	
8,464.5	6,643.3	6,790.0	6,786.5	55.5	1.8	117.22	695.0	-4,374.8	2,619.1	2,566.1	53.05	49.369	
8,500.0	6,643.2	6,790.0	6,786.5	56.5	1.8	117.22	695.0	-4,374.8	2,584.1	2,530.2	53.91	47.934	
8,563.0	6,643.2	6,803.3	6,799.8	58.2	1.8	118.92	694.6	-4,373.8	2,521.8	2,467.0	54.86	45.972	
8,600.0	6,643.1	6,799.5	6,796.0	59.2	1.8	118.44	694.7	-4,374.1	2,485.3	2,429.4	55.91	44.450	
8,661.4	6,643.0	6,793.4	6,789.9	60.8	1.8	117.66	694.9	-4,374.6	2,424.7	2,367.1	57.68	42.039	
8,700.0	6,643.0	6,789.6	6,786.1	61.9	1.8	117.17	695.0	-4,374.8	2,386.7	2,327.9	58.79	40.595	
8,759.8	6,642.9	6,783.7	6,780.3	63.5	1.8	116.41	695.2	-4,375.2	2,327.7	2,267.2	60.53	38.454	
8,800.0	6,642.9	6,779.9	6,776.4	64.6	1.8	115.90	695.3	-4,375.5	2,288.1	2,226.4	61.70	37.082	
8,858.2	6,642.8	6,774.4	6,770.9	66.2	1.8	115.17	695.5	-4,375.9	2,230.8	2,167.3	63.41	35.178	
8,900.0	6,642.7	6,770.5	6,767.1	67.3	1.8	114.64	695.6	-4,376.2	2,189.7	2,125.0	64.64	33.873	
8,956.7	6,642.7	6,765.3	6,761.9	68.9	1.8	113.94	695.8	-4,376.5	2,133.9	2,067.6	66.32	32.176	
9,000.0	6,642.6	6,761.3	6,757.9	70.1	1.8	113.40	695.9	-4,376.8	2,091.3	2,023.7	67.61	30.934	
9,055.1	6,642.5	6,756.4	6,753.0	71.6	1.8	112.72	696.1	-4,377.1	2,037.2	1,968.0	69.25	29.419	
9,100.0	6,642.5	6,752.5	6,749.1	72.8	1.8	112.17	696.2	-4,377.4	1,993.1	1,922.6	70.59	28.236	
9,153.5	6,642.4	6,747.8	6,744.4	74.3	1.8	111.52	696.4	-4,377.7	1,940.6	1,868.5	72.19	26.882	
9,200.0	6,642.4	6,743.8	6,740.5	75.6	1.8	110.96	696.5	-4,378.0	1,895.1	1,821.5	73.58	25.754	
9,251.9	6,642.3	6,739.4	6,736.1	77.0	1.8	110.33	696.6	-4,378.3	1,844.2	1,769.1	75.15	24.542	
9,300.0	6,642.2	6,735.4	6,732.1	78.3	1.8	109.76	696.7	-4,378.5	1,797.2	1,720.7	76.59	23.465	
9,350.4	6,642.2	6,731.2	6,727.9	79.7	1.8	109.16	696.9	-4,378.8	1,748.0	1,669.9	78.11	22.379	
9,400.0	6,642.1	6,727.2	6,723.9	81.1	1.8	108.57	697.0	-4,379.1	1,699.6	1,620.0	79.61	21.350	
9,448.8	6,642.0	6,723.3	6,720.0	82.4	1.8	108.00	697.1	-4,379.3	1,652.0	1,571.0	81.08	20.375	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,719.2	6,715.9	83.8	1.8	107.41	697.2	-4,379.6	1,602.2	1,519.6	82.63	19.390		
9,547.2	6,641.9	6,715.5	6,712.2	85.1	1.8	106.86	697.3	-4,379.8	1,556.3	1,472.3	84.06	18.515		
9,600.0	6,641.9	6,711.4	6,708.2	86.6	1.8	106.26	697.5	-4,380.1	1,505.2	1,419.5	85.65	17.573		
9,645.6	6,641.8	6,708.0	6,704.7	87.9	1.8	105.74	697.6	-4,380.3	1,461.0	1,373.9	87.03	16.786		
9,700.0	6,641.7	6,703.9	6,700.6	89.4	1.8	105.13	697.7	-4,380.5	1,408.5	1,319.8	88.67	15.883		
9,744.1	6,641.7	6,700.6	6,697.4	90.6	1.8	104.63	697.8	-4,380.7	1,366.0	1,276.0	90.01	15.176		
9,800.0	6,641.6	6,696.6	6,693.4	92.1	1.8	104.03	697.9	-4,381.0	1,312.2	1,220.5	91.69	14.311		
9,842.5	6,641.6	6,693.6	6,690.4	93.3	1.8	103.57	698.0	-4,381.2	1,271.5	1,178.5	92.97	13.676		
9,900.0	6,641.5	6,689.6	6,686.3	94.9	1.8	102.96	698.1	-4,381.4	1,216.5	1,121.8	94.70	12.847		
9,940.9	6,641.4	6,686.7	6,683.5	96.0	1.8	102.52	698.2	-4,381.6	1,177.6	1,081.7	95.93	12.276		
10,000.0	6,641.4	6,682.7	6,679.5	97.7	1.8	101.90	698.3	-4,381.8	1,121.6	1,023.9	97.70	11.480		
10,039.3	6,641.3	6,680.0	6,676.8	98.8	1.8	101.49	698.4	-4,382.0	1,084.5	985.6	98.88	10.968		
10,100.0	6,641.2	6,675.9	6,672.7	100.4	1.8	100.86	698.5	-4,382.2	1,027.6	926.9	100.69	10.205		
10,137.8	6,641.2	6,673.4	6,670.2	101.5	1.8	100.47	698.6	-4,382.4	992.3	890.5	101.82	9.746		
10,200.0	6,641.1	6,669.3	6,666.1	103.2	1.8	99.83	698.7	-4,382.6	934.7	831.0	103.68	9.015		
10,236.2	6,641.1	6,666.9	6,663.8	104.2	1.8	99.46	698.8	-4,382.7	901.5	796.7	104.76	8.605		
10,300.0	6,641.0	6,662.8	6,659.6	106.0	1.8	98.82	698.9	-4,383.0	843.5	736.8	106.66	7.908		
10,334.6	6,640.9	6,660.6	6,657.4	107.0	1.8	98.47	698.9	-4,383.1	812.4	704.7	107.69	7.544		
10,400.0	6,640.9	6,656.4	6,653.3	108.8	1.8	97.82	699.1	-4,383.4	754.4	644.8	109.62	6.882		
10,433.0	6,640.8	6,654.4	6,651.2	109.7	1.8	97.49	699.1	-4,383.5	725.6	615.0	110.60	6.561		
10,500.0	6,640.7	6,650.2	6,647.0	111.6	1.8	96.83	699.2	-4,383.7	668.4	555.8	112.57	5.937		
10,531.5	6,640.7	6,648.2	6,645.1	112.4	1.8	96.53	699.3	-4,383.8	642.1	528.6	113.50	5.658		
10,600.0	6,640.6	6,644.0	6,640.9	114.3	1.8	95.87	699.4	-4,384.1	586.7	471.2	115.51	5.080		
10,629.9	6,640.6	6,642.2	6,639.1	115.2	1.8	95.58	699.5	-4,384.2	563.5	447.1	116.39	4.841		
10,700.0	6,640.5	6,638.0	6,634.9	117.1	1.8	94.91	699.6	-4,384.4	511.6	393.2	118.43	4.320		
10,728.3	6,640.4	6,636.3	6,633.2	117.9	1.8	94.65	699.6	-4,384.5	491.9	372.6	119.26	4.125		
10,800.0	6,640.4	6,632.1	6,629.0	119.9	1.8	93.98	699.7	-4,384.7	446.2	324.9	121.34	3.677		
10,826.7	6,640.3	6,630.5	6,627.4	120.7	1.8	93.73	699.8	-4,384.8	431.0	308.9	122.11	3.529		
10,900.0	6,640.2	6,626.3	6,623.2	122.7	1.8	93.05	699.9	-4,385.0	395.5	271.3	124.23	3.184		
10,925.2	6,640.2	6,624.9	6,621.8	123.4	1.8	92.82	699.9	-4,385.1	385.8	260.8	124.95	3.087		
11,000.0	6,640.1	6,620.6	6,617.5	125.5	1.8	92.15	700.1	-4,385.4	365.6	238.5	127.10	2.877		
11,023.6	6,640.1	6,619.3	6,616.2	126.1	1.8	91.94	700.1	-4,385.4	362.3	234.5	127.77	2.835		
11,064.1	6,640.0	6,617.0	6,613.9	127.3	1.8	91.58	700.2	-4,385.6	360.0	231.1	128.93	2.792 CC, ES		
11,100.0	6,640.0	6,615.0	6,611.9	128.3	1.8	91.26	700.2	-4,385.7	361.8	231.8	129.95	2.784 SF		
11,122.0	6,639.9	6,613.8	6,610.7	128.9	1.8	91.06	700.3	-4,385.7	364.6	234.0	130.57	2.792		
11,200.0	6,639.8	6,609.5	6,606.4	131.1	1.8	90.38	700.4	-4,386.0	384.7	252.0	132.78	2.898		
11,220.4	6,639.8	6,608.4	6,605.3	131.6	1.8	90.21	700.4	-4,386.0	392.4	259.0	133.36	2.942		
11,300.0	6,639.7	6,604.1	6,601.0	133.9	1.8	89.53	700.5	-4,386.2	430.2	294.6	135.59	3.173		
11,318.9	6,639.7	6,603.1	6,600.0	134.4	1.8	89.36	700.5	-4,386.3	440.8	304.7	136.12	3.239		
11,400.0	6,639.6	6,600.0	6,597.0	136.7	1.8	88.88	700.6	-4,386.5	492.0	353.7	138.38	3.556		
11,417.3	6,639.6	6,597.9	6,594.8	137.1	1.8	88.54	700.7	-4,386.6	504.0	365.1	138.86	3.629		
11,500.0	6,639.5	6,593.6	6,590.6	139.4	1.8	87.86	700.8	-4,386.8	564.9	423.7	141.15	4.002		
11,515.7	6,639.5	6,592.8	6,589.7	139.9	1.8	87.73	700.8	-4,386.8	577.0	435.5	141.58	4.076		
11,600.0	6,639.3	6,588.5	6,585.5	142.2	1.8	87.05	700.9	-4,387.1	645.0	501.1	143.89	4.482		
11,614.1	6,639.3	6,587.8	6,584.7	142.6	1.8	86.94	701.0	-4,387.1	656.7	512.5	144.28	4.552		
11,700.0	6,639.2	6,583.5	6,580.4	145.0	1.8	86.26	701.1	-4,387.3	729.9	583.3	146.61	4.979		
11,712.6	6,639.2	6,582.8	6,579.8	145.4	1.8	86.16	701.1	-4,387.4	740.9	593.9	146.95	5.042		
11,800.0	6,639.1	6,578.5	6,575.5	147.8	1.8	85.49	701.2	-4,387.6	818.3	669.0	149.31	5.481		
11,811.0	6,639.1	6,578.0	6,575.0	148.1	1.8	85.40	701.2	-4,387.6	828.2	678.6	149.60	5.536		
11,900.0	6,639.0	6,573.7	6,570.7	150.6	1.8	84.72	701.3	-4,387.8	909.0	757.1	151.98	5.981		
11,909.4	6,639.0	6,573.2	6,570.2	150.9	1.8	84.65	701.3	-4,387.8	917.7	765.5	152.23	6.028		
12,000.0	6,638.8	6,568.9	6,565.9	153.4	1.8	83.98	701.5	-4,388.1	1,001.5	846.9	154.63	6.477		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
12,007.8	6,638.8	6,568.5	6,565.5	153.6	1.8	83.92	701.5	-4,388.1	1,008.9	854.0	154.84	6.515	
12,100.0	6,638.7	6,564.2	6,561.2	156.2	1.8	83.25	701.6	-4,388.3	1,095.3	938.1	157.26	6.965	
12,106.3	6,638.7	6,563.9	6,560.9	156.4	1.8	83.20	701.6	-4,388.3	1,101.2	943.8	157.42	6.995	
12,200.0	6,638.6	6,559.6	6,556.6	159.0	1.8	82.53	701.7	-4,388.5	1,190.1	1,030.2	159.86	7.445	
12,204.7	6,638.6	6,559.4	6,556.4	159.1	1.8	82.49	701.7	-4,388.5	1,194.6	1,034.6	159.98	7.467	
12,300.0	6,638.5	6,555.0	6,552.1	161.8	1.8	81.82	701.8	-4,388.7	1,285.6	1,123.2	162.44	7.915	
12,303.1	6,638.5	6,554.9	6,551.9	161.9	1.8	81.80	701.8	-4,388.7	1,288.6	1,126.1	162.52	7.929	
12,400.0	6,638.3	6,550.6	6,547.6	164.6	1.8	81.13	702.0	-4,389.0	1,381.8	1,216.8	164.99	8.375	
12,401.5	6,638.3	6,550.5	6,547.5	164.6	1.8	81.12	702.0	-4,389.0	1,383.3	1,218.3	165.03	8.382	
12,500.0	6,638.2	6,546.2	6,543.2	167.4	1.8	80.46	702.1	-4,389.2	1,478.5	1,310.9	167.52	8.825	
12,598.4	6,638.1	6,541.9	6,538.9	170.2	1.8	79.81	702.2	-4,389.4	1,574.0	1,404.0	169.99	9.259	
12,600.0	6,638.1	6,541.8	6,538.9	170.2	1.8	79.80	702.2	-4,389.4	1,575.5	1,405.5	170.03	9.266	
12,696.8	6,638.0	6,537.7	6,534.8	172.9	1.8	79.17	702.3	-4,389.6	1,669.8	1,497.4	172.43	9.684	
12,700.0	6,638.0	6,537.6	6,534.6	173.0	1.8	79.15	702.3	-4,389.6	1,672.9	1,500.4	172.51	9.697	
12,795.2	6,637.8	6,533.6	6,530.6	175.7	1.8	78.54	702.4	-4,389.8	1,765.9	1,591.1	174.85	10.100	
12,800.0	6,637.8	6,533.4	6,530.4	175.8	1.8	78.51	702.4	-4,389.8	1,770.6	1,595.6	174.97	10.119	
12,893.7	6,637.7	6,529.5	6,526.5	178.4	1.8	77.93	702.5	-4,390.0	1,862.3	1,685.1	177.25	10.507	
12,900.0	6,637.7	6,529.2	6,526.3	178.6	1.8	77.89	702.5	-4,390.0	1,868.5	1,691.1	177.41	10.532	
12,992.1	6,637.6	6,525.5	6,522.5	181.2	1.8	77.33	702.6	-4,390.1	1,958.9	1,779.2	179.63	10.905	
13,000.0	6,637.6	6,525.1	6,522.2	181.4	1.8	77.28	702.6	-4,390.2	1,966.6	1,786.8	179.82	10.937	
13,090.5	6,637.5	6,521.5	6,518.6	183.9	1.8	76.74	702.7	-4,390.3	2,055.6	1,873.6	181.99	11.295	
13,100.0	6,637.5	6,521.1	6,518.2	184.2	1.8	76.68	702.7	-4,390.3	2,064.9	1,882.7	182.21	11.332	
13,188.9	6,637.4	6,517.6	6,514.7	186.7	1.8	76.16	702.8	-4,390.5	2,152.4	1,968.1	184.32	11.678	
13,200.0	6,637.3	6,517.2	6,514.3	187.0	1.8	76.10	702.8	-4,390.5	2,163.3	1,978.7	184.58	11.720	
13,287.4	6,637.2	6,513.8	6,510.9	189.4	1.8	75.59	702.9	-4,390.7	2,249.4	2,062.8	186.63	12.053	
13,300.0	6,637.2	6,513.3	6,510.4	189.8	1.8	75.52	702.9	-4,390.7	2,261.9	2,075.0	186.93	12.100	
13,385.8	6,637.1	6,510.0	6,507.1	192.2	1.8	75.04	703.0	-4,390.8	2,346.5	2,157.6	188.93	12.420	
13,400.0	6,637.1	6,509.4	6,506.5	192.6	1.8	74.96	703.0	-4,390.9	2,360.6	2,171.3	189.26	12.473	
13,484.2	6,637.0	6,500.0	6,497.1	195.0	1.8	73.59	703.3	-4,391.3	2,443.8	2,253.3	190.51	12.828	
13,500.0	6,637.0	6,500.0	6,497.1	195.4	1.8	73.59	703.3	-4,391.3	2,459.3	2,268.4	190.93	12.881	
13,582.6	6,636.9	6,500.0	6,497.1	197.7	1.8	73.59	703.3	-4,391.3	2,541.0	2,347.9	193.16	13.155	
13,600.0	6,636.8	6,500.0	6,497.1	198.2	1.8	73.59	703.3	-4,391.3	2,558.2	2,364.6	193.63	13.212	
13,681.1	6,636.7	6,498.7	6,495.8	200.5	1.8	73.41	703.3	-4,391.3	2,638.4	2,442.7	195.66	13.484	
13,700.0	6,636.7	6,497.9	6,495.0	201.0	1.8	73.29	703.3	-4,391.4	2,657.1	2,461.1	196.07	13.552	
13,779.5	6,636.6	6,494.4	6,491.5	203.2	1.8	72.78	703.4	-4,391.5	2,735.8	2,538.1	197.78	13.833	
13,800.0	6,636.6	6,493.5	6,490.6	203.8	1.8	72.65	703.5	-4,391.6	2,756.1	2,557.9	198.22	13.905	
13,877.9	6,636.5	6,490.0	6,487.1	206.0	1.8	72.16	703.5	-4,391.7	2,833.3	2,633.5	199.87	14.176	
13,900.0	6,636.5	6,489.0	6,486.2	206.6	1.8	72.03	703.6	-4,391.8	2,855.2	2,654.9	200.33	14.252	
13,976.3	6,636.4	6,485.7	6,482.8	208.8	1.8	71.55	703.7	-4,391.9	2,930.9	2,729.0	201.92	14.515	
14,000.0	6,636.3	6,484.6	6,481.7	209.4	1.8	71.40	703.7	-4,392.0	2,954.3	2,751.9	202.41	14.596	
14,074.8	6,636.2	6,481.3	6,478.4	211.5	1.8	70.94	703.8	-4,392.1	3,028.5	2,824.6	203.94	14.850	
14,100.0	6,636.2	6,480.2	6,477.3	212.2	1.8	70.79	703.8	-4,392.1	3,053.5	2,849.1	204.46	14.935	
14,173.2	6,636.1	6,477.0	6,474.1	214.3	1.8	70.34	703.9	-4,392.3	3,126.2	2,920.2	205.93	15.180	
14,200.0	6,636.1	6,475.8	6,472.9	215.0	1.8	70.18	703.9	-4,392.3	3,152.8	2,946.3	206.47	15.270	
14,271.6	6,636.0	6,472.6	6,469.8	217.0	1.8	69.74	704.0	-4,392.5	3,223.8	3,016.0	207.89	15.507	
14,300.0	6,636.0	6,471.4	6,468.5	217.8	1.8	69.57	704.0	-4,392.5	3,252.0	3,043.6	208.45	15.601	
14,370.0	6,635.9	6,468.3	6,465.4	219.8	1.8	69.15	704.1	-4,392.7	3,321.6	3,111.8	209.81	15.831	
14,400.0	6,635.8	6,467.0	6,464.1	220.6	1.8	68.97	704.1	-4,392.7	3,351.3	3,140.9	210.39	15.929	
14,468.5	6,635.7	6,464.0	6,461.1	222.6	1.8	68.56	704.2	-4,392.9	3,419.3	3,207.6	211.71	16.151	
14,500.0	6,635.7	6,462.6	6,459.7	223.4	1.8	68.38	704.3	-4,392.9	3,450.7	3,238.4	212.31	16.253	
14,566.9	6,635.6	6,459.6	6,456.8	225.3	1.8	67.98	704.3	-4,393.0	3,517.1	3,303.6	213.57	16.468	
14,600.0	6,635.6	6,458.2	6,455.4	226.2	1.8	67.79	704.4	-4,393.1	3,550.0	3,335.8	214.19	16.574	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,665.3	6,635.5	6,455.3	6,452.5	228.1	1.8	67.41	704.4	-4,393.2	3,615.0	3,399.6	215.40	16.782	
14,700.0	6,635.5	6,453.8	6,451.0	229.0	1.8	67.21	704.5	-4,393.3	3,649.4	3,433.4	216.04	16.892	
14,763.7	6,635.4	6,451.0	6,448.2	230.8	1.8	66.84	704.6	-4,393.4	3,712.8	3,495.6	217.20	17.094	
14,800.0	6,635.3	6,449.4	6,446.6	231.8	1.8	66.63	704.6	-4,393.5	3,748.9	3,531.0	217.86	17.208	
14,862.2	6,635.2	6,446.7	6,443.9	233.6	1.8	66.28	704.7	-4,393.6	3,810.7	3,591.7	218.97	17.403	
14,900.0	6,635.2	6,445.1	6,442.2	234.7	1.8	66.06	704.7	-4,393.7	3,848.3	3,628.7	219.64	17.521	
14,960.6	6,635.1	6,442.4	6,439.6	236.4	1.8	65.72	704.8	-4,393.8	3,908.6	3,687.9	220.71	17.709	
14,995.1	6,635.0	6,440.8	6,438.0	237.3	1.8	65.53	704.8	-4,393.9	3,942.9	3,721.6	221.31	17.816	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-89.34	43.6	-3,799.3	3,799.7				
98.4	98.4	39.5	39.5	0.1	0.0	-89.34	43.6	-3,799.4	3,799.7	3,799.6	0.11	N/A	
100.0	100.0	40.5	40.5	0.1	0.0	-89.34	43.6	-3,799.4	3,799.7	3,799.6	0.11	N/A	
196.8	196.8	106.2	106.2	0.3	0.0	-89.34	43.5	-3,800.1	3,800.7	3,800.4	0.36	N/A	
200.0	200.0	110.7	110.7	0.3	0.0	-89.34	43.4	-3,800.2	3,800.8	3,800.4	0.37	N/A	
295.3	295.3	236.7	236.7	0.5	0.2	-89.35	43.1	-3,801.3	3,801.6	3,800.8	0.78	4,882.536	
300.0	300.0	242.1	242.1	0.5	0.2	-89.35	43.0	-3,801.3	3,801.6	3,800.9	0.79	4,791.362	
393.7	393.7	348.5	348.5	0.8	0.3	-89.36	42.2	-3,801.8	3,802.0	3,800.9	1.08	3,507.787	
400.0	400.0	355.6	355.6	0.8	0.3	-89.37	42.1	-3,801.8	3,802.0	3,800.9	1.10	3,446.593	
492.1	492.1	449.0	449.0	1.0	0.4	-89.38	41.3	-3,801.9	3,802.1	3,800.8	1.37	2,771.417	
500.0	500.0	456.3	456.3	1.0	0.4	-89.38	41.3	-3,801.9	3,802.1	3,800.7	1.39	2,727.354	
590.5	590.5	542.6	542.6	1.2	0.4	-89.39	40.7	-3,802.1	3,802.4	3,800.7	1.65	2,306.408	
600.0	600.0	551.8	551.8	1.2	0.5	-89.39	40.6	-3,802.2	3,802.4	3,800.7	1.68	2,269.908	
689.0	689.0	640.2	640.2	1.4	0.5	-89.40	40.0	-3,802.4	3,802.7	3,800.7	1.92	1,976.608	
700.0	700.0	651.4	651.3	1.4	0.5	-89.40	39.9	-3,802.5	3,802.7	3,800.7	1.95	1,945.619	
787.4	787.4	741.7	741.7	1.6	0.6	-89.41	39.2	-3,802.7	3,802.9	3,800.8	2.20	1,731.273	
800.0	800.0	755.1	755.1	1.7	0.6	-89.41	39.1	-3,802.8	3,803.0	3,800.7	2.23	1,704.332	
885.8	885.8	846.8	846.8	1.9	0.6	-89.42	38.2	-3,802.9	3,803.1	3,800.6	2.47	1,541.930	
900.0	900.0	862.0	862.0	1.9	0.6	-89.43	38.1	-3,802.9	3,803.1	3,800.6	2.51	1,518.185	
984.2	984.2	955.4	955.4	2.1	0.7	-89.44	37.4	-3,802.8	3,803.0	3,800.3	2.73	1,393.257	
1,000.0	1,000.0	973.2	973.2	2.1	0.7	-89.44	37.3	-3,802.8	3,803.0	3,800.2	2.77	1,372.453	
1,082.7	1,082.7	1,059.8	1,059.8	2.3	0.7	-89.44	36.9	-3,802.5	3,802.7	3,799.7	2.99	1,273.789	
1,100.0	1,100.0	1,077.4	1,077.4	2.3	0.7	-89.45	36.8	-3,802.4	3,802.6	3,799.6	3.03	1,254.962	
1,181.1	1,181.1	1,152.7	1,152.7	2.5	0.7	-89.45	36.3	-3,802.2	3,802.4	3,799.1	3.24	1,174.361	
1,200.0	1,200.0	1,169.6	1,169.6	2.6	0.7	-89.45	36.2	-3,802.2	3,802.3	3,799.1	3.29	1,157.099	
1,279.5	1,279.5	1,251.9	1,251.9	2.7	0.8	-89.46	35.9	-3,802.0	3,802.2	3,798.7	3.49	1,088.994	
1,300.0	1,300.0	1,275.2	1,275.2	2.8	0.8	-89.46	35.8	-3,802.0	3,802.2	3,798.6	3.54	1,072.590	
1,316.7	1,316.7	1,294.2	1,294.2	2.8	0.8	-130.65	35.7	-3,801.9	3,802.1	3,798.6	3.54	1,072.650	
1,377.9	1,377.9	1,349.5	1,349.4	3.0	0.8	-130.66	35.4	-3,801.7	3,802.6	3,798.9	3.70	1,029.000	
1,400.0	1,400.0	1,368.9	1,368.9	3.0	0.8	-130.66	35.3	-3,801.7	3,803.0	3,799.3	3.75	1,014.219	
1,476.4	1,476.3	1,448.3	1,448.2	3.2	0.8	-130.68	34.9	-3,801.6	3,805.3	3,801.4	3.94	966.239	
1,500.0	1,499.8	1,476.0	1,476.0	3.2	0.9	-130.69	34.8	-3,801.5	3,806.3	3,802.3	4.00	952.248	
1,574.8	1,574.4	1,551.4	1,551.4	3.4	0.9	-130.71	34.5	-3,801.2	3,810.0	3,805.8	4.18	910.443	
1,600.0	1,599.5	1,575.2	1,575.1	3.5	0.9	-130.71	34.3	-3,801.1	3,811.6	3,807.3	4.25	897.326	
1,673.2	1,672.2	1,648.2	1,648.1	3.6	0.9	-130.74	33.7	-3,800.9	3,817.0	3,812.5	4.44	859.926	
1,700.0	1,698.7	1,675.6	1,675.6	3.7	0.9	-130.75	33.6	-3,800.8	3,819.2	3,814.7	4.51	847.037	
1,771.6	1,769.5	1,740.9	1,740.8	3.9	0.9	-130.76	33.2	-3,800.6	3,826.1	3,821.4	4.70	813.358	
1,800.0	1,797.5	1,765.1	1,765.0	4.0	1.0	-130.76	33.1	-3,800.6	3,829.2	3,824.5	4.78	800.958	
1,870.1	1,866.3	1,823.7	1,823.7	4.2	1.0	-130.76	32.8	-3,800.6	3,837.8	3,832.8	4.98	770.021	
1,899.9	1,895.6	1,848.1	1,848.1	4.3	1.0	-130.75	32.7	-3,800.6	3,841.9	3,836.8	5.07	757.805	
1,968.5	1,962.6	1,905.3	1,905.3	4.5	1.0	-130.89	32.5	-3,800.9	3,851.6	3,846.3	5.28	730.035	
2,000.0	1,993.4	1,939.6	1,939.6	4.6	1.0	-130.97	32.4	-3,801.0	3,856.1	3,850.7	5.37	717.726	
2,066.9	2,058.9	2,009.9	2,009.9	4.8	1.0	-131.14	32.2	-3,801.3	3,865.6	3,860.0	5.59	691.939	
2,100.0	2,091.3	2,038.6	2,038.5	4.9	1.0	-131.21	32.1	-3,801.4	3,870.3	3,864.6	5.69	680.264	
2,165.3	2,155.2	2,100.0	2,099.9	5.2	1.1	-131.35	32.0	-3,801.7	3,879.7	3,873.8	5.90	657.530	
2,200.0	2,189.1	2,130.8	2,130.8	5.3	1.1	-131.43	32.0	-3,801.9	3,884.7	3,878.7	6.01	645.968	
2,263.8	2,251.5	2,198.6	2,198.5	5.5	1.1	-131.58	32.2	-3,802.2	3,893.9	3,887.7	6.23	625.163	
2,300.0	2,286.9	2,239.4	2,239.4	5.7	1.1	-131.67	32.4	-3,802.3	3,899.1	3,892.8	6.35	614.011	
2,362.2	2,347.7	2,308.9	2,308.9	5.9	1.1	-131.83	32.8	-3,802.4	3,907.9	3,901.3	6.56	595.441	
2,400.0	2,384.7	2,347.8	2,347.7	6.0	1.1	-131.91	33.0	-3,802.5	3,913.2	3,906.5	6.69	584.772	
2,460.6	2,444.0	2,410.6	2,410.5	6.3	1.1	-132.05	33.3	-3,802.4	3,921.7	3,914.8	6.90	568.176	
2,500.0	2,482.5	2,453.4	2,453.3	6.4	1.1	-132.15	33.4	-3,802.4	3,927.2	3,920.2	7.04	557.929	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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		
2,559.0	2,540.3	2,514.6	2,514.6	6.7	1.1	-132.28	33.7	-3,802.2	3,935.4	3,928.2	7.25	543.163		
2,600.0	2,580.3	2,551.7	2,551.7	6.8	1.1	-132.36	33.9	-3,802.1	3,941.1	3,933.7	7.39	533.449		
2,657.5	2,636.5	2,604.5	2,604.4	7.1	1.1	-132.47	34.3	-3,802.1	3,949.2	3,941.6	7.59	520.273		
2,700.0	2,678.1	2,649.8	2,649.7	7.2	1.1	-132.57	34.7	-3,802.0	3,955.2	3,947.4	7.74	510.912		
2,755.9	2,732.8	2,707.6	2,707.5	7.5	1.1	-132.70	35.0	-3,801.9	3,963.0	3,955.0	7.94	499.049		
2,800.0	2,776.0	2,745.7	2,745.6	7.7	1.1	-132.78	35.2	-3,801.8	3,969.2	3,961.1	8.10	490.201		
2,854.3	2,829.1	2,792.7	2,792.6	7.9	1.1	-132.88	35.4	-3,801.7	3,976.9	3,968.6	8.29	479.681		
2,900.0	2,873.8	2,836.3	2,836.2	8.1	1.1	-132.97	35.6	-3,801.8	3,983.4	3,975.0	8.46	471.122		
2,952.7	2,925.4	2,887.7	2,887.6	8.3	1.1	-133.08	35.9	-3,801.8	3,991.0	3,982.4	8.65	461.585		
3,000.0	2,971.6	2,938.8	2,938.7	8.5	1.1	-133.19	36.2	-3,801.8	3,997.8	3,989.0	8.82	453.438		
3,051.2	3,021.6	2,996.1	2,996.0	8.7	1.1	-133.31	36.5	-3,801.7	4,005.1	3,996.1	9.00	444.927		
3,100.0	3,069.4	3,042.7	3,042.6	8.9	1.1	-133.41	36.7	-3,801.6	4,012.0	4,002.8	9.18	437.159		
3,149.6	3,117.9	3,089.5	3,089.4	9.1	1.1	-133.51	37.0	-3,801.5	4,019.0	4,009.7	9.36	429.533		
3,200.0	3,167.2	3,130.9	3,130.9	9.3	1.1	-133.59	37.3	-3,801.4	4,026.3	4,016.7	9.54	422.085		
3,248.0	3,214.2	3,168.8	3,168.7	9.5	1.1	-133.67	37.7	-3,801.5	4,033.3	4,023.6	9.71	415.267		
3,300.0	3,265.0	3,212.7	3,212.6	9.8	1.1	-133.76	38.1	-3,801.6	4,041.0	4,031.1	9.90	408.125		
3,346.4	3,310.5	3,260.1	3,260.0	10.0	1.2	-133.85	38.6	-3,801.8	4,047.9	4,037.9	10.07	401.886		
3,400.0	3,362.9	3,313.7	3,313.6	10.2	1.2	-133.96	39.3	-3,802.1	4,055.9	4,045.6	10.27	394.969		
3,444.9	3,406.7	3,356.3	3,356.2	10.4	1.2	-134.04	39.8	-3,802.2	4,062.6	4,052.2	10.43	389.399		
3,473.0	3,434.2	3,382.9	3,382.9	10.5	1.2	-134.09	40.1	-3,802.3	4,066.8	4,056.3	10.54	386.006		
3,500.0	3,460.7	3,408.5	3,408.4	10.6	1.2	-134.20	40.3	-3,802.4	4,070.8	4,060.2	10.62	383.364		
3,543.3	3,503.2	3,449.1	3,449.0	10.7	1.2	-134.36	40.7	-3,802.6	4,076.8	4,066.1	10.73	379.851		
3,600.0	3,559.0	3,502.6	3,502.5	10.9	1.2	-134.55	41.1	-3,802.9	4,084.0	4,073.1	10.88	375.304		
3,641.7	3,600.2	3,544.3	3,544.2	11.0	1.2	-134.68	41.5	-3,803.1	4,088.8	4,077.9	10.98	372.287		
3,700.0	3,657.9	3,600.0	3,599.9	11.2	1.2	-134.84	42.1	-3,803.4	4,094.9	4,083.8	11.12	368.104		
3,740.1	3,697.8	3,639.7	3,639.6	11.3	1.2	-134.93	42.5	-3,803.6	4,098.6	4,087.4	11.21	365.525		
3,800.0	3,757.3	3,695.4	3,695.3	11.4	1.2	-135.05	43.0	-3,804.0	4,103.4	4,092.0	11.34	361.701		
3,838.6	3,795.7	3,733.1	3,733.0	11.5	1.2	-135.12	43.3	-3,804.2	4,106.0	4,094.6	11.42	359.499		
3,900.0	3,857.0	3,793.8	3,793.6	11.7	1.2	-135.20	43.8	-3,804.7	4,109.5	4,098.0	11.54	355.961		
3,937.0	3,893.9	3,836.7	3,836.6	11.7	1.3	-135.25	44.0	-3,804.9	4,111.2	4,099.6	11.61	354.050		
4,000.0	3,956.9	3,912.2	3,912.0	11.8	1.3	-135.29	44.4	-3,805.2	4,113.0	4,101.3	11.73	350.740		
4,035.4	3,992.3	3,954.4	3,954.3	11.9	1.3	-135.31	44.6	-3,805.3	4,113.5	4,101.8	11.78	349.109		
4,072.9	4,029.8	3,999.1	3,998.9	11.9	1.3	-94.12	44.8	-3,805.3	4,113.7	4,101.7	11.97	343.614		
4,100.0	4,056.9	4,026.6	4,026.5	12.0	1.3	-94.12	44.9	-3,805.2	4,113.6	4,101.6	12.02	342.217		
4,133.8	4,090.7	4,060.8	4,060.7	12.0	1.3	-94.12	45.0	-3,805.2	4,113.6	4,101.5	12.09	340.318		
4,200.0	4,156.9	4,138.3	4,138.2	12.1	1.3	-94.11	45.2	-3,805.0	4,113.4	4,101.2	12.22	336.639		
4,232.3	4,189.2	4,183.3	4,183.2	12.2	1.3	-94.11	45.4	-3,804.7	4,113.2	4,101.0	12.28	334.834		
4,300.0	4,256.9	4,249.3	4,249.1	12.3	1.3	-94.11	45.6	-3,804.2	4,112.7	4,100.3	12.42	331.188		
4,330.7	4,287.6	4,276.4	4,276.2	12.4	1.3	-94.11	45.8	-3,804.1	4,112.5	4,100.0	12.48	329.561		
4,400.0	4,356.9	4,348.8	4,348.7	12.5	1.3	-94.10	46.1	-3,803.6	4,112.1	4,099.5	12.62	325.888		
4,429.1	4,386.0	4,382.2	4,382.1	12.5	1.3	-94.10	46.3	-3,803.4	4,111.9	4,099.2	12.68	324.340		
4,500.0	4,456.9	4,440.2	4,440.0	12.6	1.3	-94.10	46.6	-3,803.0	4,111.4	4,098.5	12.82	320.779		
4,527.5	4,484.4	4,460.1	4,460.0	12.7	1.3	-94.09	46.7	-3,802.9	4,111.2	4,098.4	12.87	319.428		
4,600.0	4,556.9	4,521.4	4,521.3	12.8	1.4	-94.09	47.0	-3,802.9	4,111.2	4,098.2	13.01	315.916		
4,626.0	4,582.9	4,553.2	4,553.1	12.9	1.4	-94.09	47.1	-3,802.9	4,111.2	4,098.1	13.07	314.633		
4,700.0	4,656.9	4,641.1	4,641.0	13.0	1.4	-94.09	47.4	-3,802.6	4,110.9	4,097.7	13.22	310.986		
4,724.4	4,681.3	4,669.1	4,668.9	13.0	1.4	-94.08	47.5	-3,802.4	4,110.7	4,097.5	13.27	309.781		
4,800.0	4,756.9	4,745.7	4,745.5	13.1	1.4	-94.08	47.8	-3,802.0	4,110.3	4,096.8	13.43	306.145		
4,822.8	4,779.7	4,767.1	4,766.9	13.2	1.4	-94.08	47.9	-3,801.8	4,110.1	4,096.6	13.47	305.065		
4,900.0	4,856.9	4,850.6	4,850.4	13.3	1.4	-94.08	48.2	-3,801.3	4,109.6	4,096.0	13.63	301.432		
4,921.2	4,878.1	4,876.1	4,876.0	13.4	1.4	-94.08	48.2	-3,801.1	4,109.5	4,095.8	13.68	300.431		
5,000.0	4,956.9	4,956.7	4,956.5	13.5	1.4	-94.07	48.5	-3,800.4	4,108.8	4,094.9	13.84	296.824		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,976.6	4,975.6	4,975.5	13.5	1.4	-94.07	48.6	-3,800.3	4,108.6	4,094.7	13.88	295.937		
5,100.0	5,056.9	5,054.8	5,054.7	13.7	1.4	-94.07	48.9	-3,799.6	4,107.9	4,093.8	14.05	292.357		
5,118.1	5,075.0	5,072.9	5,072.7	13.7	1.4	-94.07	49.0	-3,799.5	4,107.7	4,093.7	14.09	291.557		
5,200.0	5,156.9	5,160.2	5,160.0	13.8	1.5	-94.06	49.6	-3,798.7	4,107.0	4,092.8	14.26	287.957		
5,216.5	5,173.4	5,178.4	5,178.2	13.9	1.5	-94.06	49.8	-3,798.6	4,106.9	4,092.6	14.30	287.234		
5,300.0	5,256.9	5,276.4	5,276.2	14.0	1.5	-94.04	50.8	-3,797.5	4,105.9	4,091.4	14.48	283.609		
5,314.9	5,271.8	5,294.2	5,294.1	14.1	1.5	-94.04	50.9	-3,797.2	4,105.7	4,091.2	14.51	282.963		
5,400.0	5,356.9	5,372.9	5,372.7	14.2	1.5	-94.03	51.7	-3,796.2	4,104.5	4,089.8	14.69	279.421		
5,413.4	5,370.3	5,385.1	5,384.9	14.2	1.5	-94.03	51.8	-3,796.0	4,104.3	4,089.6	14.72	278.871		
5,500.0	5,456.9	5,508.7	5,508.5	14.4	1.5	-94.02	52.8	-3,794.0	4,102.9	4,088.0	14.91	275.234		
5,511.8	5,468.7	5,519.5	5,519.3	14.4	1.5	-94.02	52.8	-3,793.8	4,102.6	4,087.7	14.93	274.759		
5,600.0	5,556.9	5,600.0	5,599.8	14.6	1.6	-94.02	53.0	-3,792.2	4,100.8	4,085.7	15.12	271.268		
5,610.2	5,567.1	5,600.0	5,599.8	14.6	1.6	-94.02	53.0	-3,792.2	4,100.6	4,085.5	15.14	270.893		
5,700.0	5,656.9	5,680.2	5,680.0	14.7	1.6	-94.02	53.2	-3,790.8	4,099.1	4,083.8	15.33	267.446		
5,708.6	5,665.5	5,687.2	5,686.9	14.8	1.6	-94.02	53.2	-3,790.7	4,099.0	4,083.6	15.35	267.121		
5,800.0	5,756.9	5,788.4	5,788.2	14.9	1.6	-94.01	53.5	-3,789.2	4,097.6	4,082.1	15.54	263.664		
5,807.1	5,764.0	5,796.7	5,796.5	14.9	1.6	-94.01	53.5	-3,789.1	4,097.5	4,082.0	15.56	263.397		
5,900.0	5,856.9	5,869.2	5,868.9	15.1	1.6	-94.02	53.4	-3,788.0	4,096.1	4,080.4	15.75	260.068		
5,905.5	5,862.4	5,873.4	5,873.1	15.1	1.6	-94.02	53.4	-3,787.9	4,096.1	4,080.3	15.76	259.874		
5,971.9	5,928.8	5,933.6	5,933.3	15.3	1.6	-94.02	53.2	-3,787.3	4,095.4	4,079.5	15.90	257.544		
6,000.0	5,956.9	5,963.2	5,963.0	15.3	1.6	-4.03	53.1	-3,787.0	4,094.6	4,078.8	15.80	259.086		
6,003.9	5,960.8	5,967.4	5,967.1	15.3	1.6	-4.03	53.1	-3,787.0	4,094.4	4,078.5	15.81	258.958		
6,050.0	6,006.7	6,016.5	6,016.3	15.4	1.6	-4.06	52.9	-3,786.4	4,090.3	4,074.4	15.91	257.079		
6,100.0	6,056.2	6,070.8	6,070.5	15.4	1.6	-4.11	52.8	-3,785.7	4,082.6	4,066.5	16.04	254.474		
6,102.3	6,058.5	6,073.3	6,073.0	15.4	1.6	-4.12	52.8	-3,785.7	4,082.1	4,066.1	16.05	254.343		
6,150.0	6,105.1	6,128.4	6,128.1	15.4	1.7	-4.20	52.6	-3,785.0	4,071.4	4,055.2	16.18	251.594		
6,200.0	6,153.0	6,189.7	6,189.5	15.5	1.7	-4.32	52.1	-3,783.9	4,056.6	4,040.3	16.31	248.699		
6,200.8	6,153.8	6,190.7	6,190.4	15.5	1.7	-4.32	52.1	-3,783.9	4,056.4	4,040.0	16.31	248.656		
6,250.0	6,199.9	6,302.4	6,302.1	15.5	1.7	-4.51	50.8	-3,780.9	4,038.2	4,021.7	16.45	245.410		
6,299.2	6,244.8	6,353.4	6,353.0	15.5	1.7	-4.70	50.1	-3,779.0	4,016.5	3,999.9	16.53	243.001		
6,300.0	6,245.5	6,354.2	6,353.9	15.5	1.7	-4.71	50.1	-3,779.0	4,016.1	3,999.6	16.53	242.965		
6,350.0	6,289.6	6,405.7	6,405.3	15.5	1.7	-4.96	49.1	-3,777.0	3,990.9	3,974.3	16.57	240.910		
6,397.6	6,329.9	6,470.8	6,470.3	15.4	1.7	-5.27	47.6	-3,774.2	3,964.0	3,947.4	16.58	239.095		
6,400.0	6,331.8	6,474.0	6,473.5	15.4	1.7	-5.29	47.5	-3,774.0	3,962.5	3,946.0	16.58	239.015		
6,450.0	6,372.2	6,533.3	6,532.7	15.4	1.7	-5.69	45.9	-3,771.1	3,931.2	3,914.6	16.55	237.573		
6,496.0	6,407.4	6,581.5	6,580.8	15.4	1.7	-6.15	44.3	-3,768.4	3,899.8	3,883.3	16.48	236.618		
6,500.0	6,410.3	6,585.5	6,584.8	15.4	1.7	-6.19	44.2	-3,768.2	3,897.0	3,880.5	16.47	236.553		
6,550.0	6,446.1	6,618.1	6,617.4	15.4	1.8	-6.76	43.0	-3,766.3	3,860.3	3,844.0	16.35	236.155		
6,594.5	6,475.9	6,639.6	6,638.8	15.4	1.8	-7.37	42.2	-3,765.1	3,825.8	3,809.6	16.20	236.119		
6,600.0	6,479.4	6,642.1	6,641.3	15.4	1.8	-7.45	42.1	-3,765.0	3,821.4	3,805.3	16.18	236.133		
6,650.0	6,510.0	6,664.1	6,663.2	15.5	1.8	-8.32	41.4	-3,763.8	3,780.5	3,764.5	16.00	236.220		
6,692.9	6,534.0	6,681.2	6,680.3	15.7	1.8	-9.26	40.8	-3,762.9	3,743.9	3,728.1	15.85	236.183		
6,700.0	6,537.8	6,683.9	6,683.0	15.7	1.8	-9.43	40.7	-3,762.8	3,737.8	3,721.9	15.83	236.175		
6,750.0	6,562.6	6,700.0	6,699.0	16.2	1.8	-10.90	40.1	-3,761.9	3,693.4	3,677.7	15.67	235.646		
6,791.3	6,580.8	6,700.0	6,699.0	16.6	1.8	-12.40	40.1	-3,761.9	3,655.6	3,640.0	15.57	234.766		
6,800.0	6,584.3	6,700.0	6,699.0	16.7	1.8	-12.77	40.1	-3,761.9	3,647.6	3,632.0	15.56	234.348		
6,850.0	6,602.9	6,700.0	6,699.0	17.3	1.8	-15.44	40.1	-3,761.9	3,600.6	3,585.0	15.60	230.875		
6,889.7	6,615.2	6,700.0	6,699.0	17.9	1.8	-18.52	40.1	-3,761.9	3,562.6	3,546.8	15.81	225.338		
6,900.0	6,618.1	6,700.0	6,699.0	18.0	1.8	-19.51	40.1	-3,761.9	3,552.7	3,536.8	15.91	223.359		
6,950.0	6,630.0	6,700.0	6,699.0	18.8	1.8	-26.32	40.1	-3,761.9	3,503.9	3,487.1	16.79	208.633		
6,988.2	6,636.8	6,700.0	6,699.0	19.5	1.8	-35.30	40.1	-3,761.9	3,466.3	3,448.1	18.22	190.200		
7,000.0	6,638.5	6,700.0	6,699.0	19.7	1.8	-39.25	40.1	-3,761.9	3,454.6	3,435.8	18.85	183.269		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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		
7,050.0	6,643.5	6,700.0	6,699.0	20.6	1.8	-66.65	40.1	-3,761.9	3,405.0	3,383.0	21.96	155.065		
7,086.6	6,644.9	6,700.0	6,699.0	21.3	1.8	-98.11	40.1	-3,761.9	3,368.5	3,345.3	23.18	145.347		
7,097.8	6,645.0	6,700.0	6,699.0	21.5	1.8	-107.60	40.1	-3,761.9	3,357.3	3,333.7	23.65	141.957		
7,100.0	6,645.0	6,700.0	6,699.0	21.6	1.8	-107.60	40.1	-3,761.9	3,355.2	3,331.5	23.69	141.624		
7,185.0	6,644.9	6,700.0	6,699.0	23.3	1.8	-107.60	40.1	-3,761.9	3,270.5	3,245.2	25.34	129.083		
7,200.0	6,644.9	6,700.0	6,699.0	23.6	1.8	-107.60	40.1	-3,761.9	3,255.6	3,230.0	25.63	127.041		
7,283.4	6,644.8	6,700.0	6,699.0	25.4	1.8	-107.60	40.1	-3,761.9	3,172.6	3,145.2	27.36	115.962		
7,300.0	6,644.7	6,700.0	6,699.0	25.8	1.8	-107.60	40.1	-3,761.9	3,156.1	3,128.4	27.70	113.928		
7,381.9	6,644.6	6,700.0	6,699.0	27.7	1.8	-107.60	40.1	-3,761.9	3,074.7	3,045.2	29.49	104.259		
7,400.0	6,644.6	6,700.0	6,699.0	28.1	1.8	-107.60	40.1	-3,761.9	3,056.6	3,026.7	29.89	102.274		
7,480.3	6,644.5	6,700.0	6,699.0	30.0	1.8	-107.60	40.1	-3,761.9	2,976.8	2,945.1	31.71	93.882		
7,500.0	6,644.5	6,700.0	6,699.0	30.5	1.8	-107.60	40.1	-3,761.9	2,957.2	2,925.0	32.15	91.968		
7,578.7	6,644.4	6,700.0	6,699.0	32.4	1.8	-107.60	40.1	-3,761.9	2,878.9	2,844.9	33.99	84.695		
7,600.0	6,644.4	6,700.0	6,699.0	32.9	1.8	-107.60	40.1	-3,761.9	2,857.8	2,823.3	34.49	82.862		
7,677.1	6,644.3	6,700.0	6,699.0	34.8	1.8	-107.60	40.1	-3,761.9	2,781.1	2,744.8	36.33	76.552		
7,700.0	6,644.2	6,700.0	6,699.0	35.4	1.8	-107.60	40.1	-3,761.9	2,758.4	2,721.5	36.87	74.805		
7,775.6	6,644.1	6,700.0	6,699.0	37.3	1.8	-107.60	40.1	-3,761.9	2,683.3	2,644.6	38.71	69.319		
7,800.0	6,644.1	6,700.0	6,699.0	38.0	1.8	-107.60	40.1	-3,761.9	2,659.1	2,619.8	39.30	67.655		
7,874.0	6,644.0	6,700.0	6,699.0	39.9	1.8	-107.60	40.1	-3,761.9	2,585.6	2,544.5	41.13	62.871		
7,900.0	6,644.0	6,700.0	6,699.0	40.5	1.8	-107.60	40.1	-3,761.9	2,559.8	2,518.0	41.77	61.289		
7,972.4	6,643.9	6,700.0	6,699.0	42.4	1.8	-107.60	40.1	-3,761.9	2,487.9	2,444.4	43.57	57.102		
8,000.0	6,643.9	6,700.0	6,699.0	43.1	1.8	-107.60	40.1	-3,761.9	2,460.6	2,416.3	44.26	55.598		
8,070.8	6,643.8	6,700.0	6,699.0	45.0	1.8	-107.60	40.1	-3,761.9	2,390.3	2,344.3	46.04	51.920		
8,100.0	6,643.7	6,700.0	6,699.0	45.8	1.8	-107.60	40.1	-3,761.9	2,361.5	2,314.7	46.77	50.489		
8,169.3	6,643.7	6,700.0	6,699.0	47.6	1.8	-107.60	40.1	-3,761.9	2,292.8	2,244.3	48.53	47.248		
8,200.0	6,643.6	6,700.0	6,699.0	48.4	1.8	-107.60	40.1	-3,761.9	2,262.4	2,213.1	49.31	45.885		
8,267.7	6,643.5	6,700.0	6,699.0	50.2	1.8	-107.60	40.1	-3,761.9	2,195.4	2,144.3	51.03	43.019		
8,300.0	6,643.5	6,700.0	6,699.0	51.1	1.8	-107.60	40.1	-3,761.9	2,163.4	2,111.5	51.86	41.719		
8,366.1	6,643.4	6,700.0	6,699.0	52.9	1.8	-107.60	40.1	-3,761.9	2,098.0	2,044.5	53.55	39.177		
8,400.0	6,643.4	6,700.0	6,699.0	53.8	1.8	-107.60	40.1	-3,761.9	2,064.5	2,010.1	54.42	37.936		
8,464.5	6,643.3	6,700.0	6,699.0	55.5	1.8	-107.60	40.1	-3,761.9	2,000.7	1,944.7	56.08	35.674		
8,500.0	6,643.2	6,700.0	6,699.0	56.5	1.8	-107.60	40.1	-3,761.9	1,965.7	1,908.7	57.00	34.488		
8,563.0	6,643.2	6,692.6	6,691.6	58.2	1.8	-106.32	40.4	-3,762.3	1,903.6	1,844.8	58.83	32.356		
8,600.0	6,643.1	6,690.9	6,690.0	59.2	1.8	-106.03	40.4	-3,762.4	1,867.1	1,807.2	59.84	31.200		
8,661.4	6,643.0	6,688.1	6,687.1	60.8	1.8	-105.53	40.5	-3,762.6	1,806.6	1,745.0	61.53	29.362		
8,700.0	6,643.0	6,686.3	6,685.3	61.9	1.8	-105.22	40.6	-3,762.6	1,768.6	1,706.0	62.59	28.257		
8,759.8	6,642.9	6,683.5	6,682.5	63.5	1.8	-104.72	40.7	-3,762.8	1,709.7	1,645.5	64.24	26.613		
8,800.0	6,642.9	6,681.6	6,680.6	64.6	1.8	-104.39	40.7	-3,762.9	1,670.2	1,604.8	65.35	25.556		
8,858.2	6,642.8	6,678.8	6,677.9	66.2	1.8	-103.90	40.8	-3,763.0	1,613.0	1,546.0	66.98	24.083		
8,900.0	6,642.7	6,676.8	6,675.9	67.3	1.8	-103.54	40.9	-3,763.1	1,572.0	1,503.9	68.14	23.071		
8,956.7	6,642.7	6,674.1	6,673.2	68.9	1.8	-103.05	41.0	-3,763.3	1,516.5	1,446.8	69.72	21.750		
9,000.0	6,642.6	6,672.0	6,671.1	70.1	1.8	-102.67	41.1	-3,763.4	1,474.1	1,403.2	70.94	20.780		
9,055.1	6,642.5	6,669.3	6,668.4	71.6	1.8	-102.19	41.2	-3,763.5	1,420.2	1,347.7	72.49	19.593		
9,100.0	6,642.5	6,667.1	6,666.2	72.8	1.8	-101.78	41.3	-3,763.6	1,376.4	1,302.7	73.75	18.663		
9,153.5	6,642.4	6,664.4	6,663.5	74.3	1.8	-101.30	41.4	-3,763.8	1,324.3	1,249.0	75.26	17.595		
9,200.0	6,642.4	6,662.1	6,661.2	75.6	1.8	-100.88	41.4	-3,763.9	1,279.1	1,202.5	76.58	16.703		
9,251.9	6,642.3	6,659.5	6,658.6	77.0	1.8	-100.40	41.5	-3,764.1	1,228.7	1,150.7	78.05	15.743		
9,300.0	6,642.2	6,657.1	6,656.2	78.3	1.8	-99.95	41.6	-3,764.2	1,182.2	1,102.8	79.41	14.887		
9,350.4	6,642.2	6,654.5	6,653.6	79.7	1.8	-99.47	41.7	-3,764.3	1,133.6	1,052.7	80.84	14.022		
9,400.0	6,642.1	6,651.9	6,651.1	81.1	1.8	-99.00	41.8	-3,764.5	1,085.8	1,003.6	82.25	13.201		
9,448.8	6,642.0	6,649.4	6,648.6	82.4	1.8	-98.53	41.9	-3,764.6	1,039.1	955.4	83.64	12.423		
9,500.0	6,642.0	6,646.7	6,645.9	83.8	1.8	-98.03	42.0	-3,764.7	990.2	905.1	85.09	11.636		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,644.3	6,643.4	85.1	1.8	-97.57	42.1	-3,764.9	945.3	858.8	86.44	10.936	
9,600.0	6,641.9	6,641.5	6,640.6	86.6	1.8	-97.04	42.2	-3,765.0	895.4	807.5	87.94	10.182	
9,645.6	6,641.8	6,639.0	6,638.2	87.9	1.8	-96.59	42.3	-3,765.2	852.5	763.3	89.24	9.554	
9,700.0	6,641.7	6,636.1	6,635.3	89.4	1.8	-96.04	42.4	-3,765.3	801.9	711.1	90.78	8.833	
9,744.1	6,641.7	6,633.7	6,632.9	90.6	1.8	-95.58	42.4	-3,765.5	761.2	669.1	92.03	8.271	
9,800.0	6,641.6	6,630.7	6,629.9	92.1	1.8	-95.01	42.6	-3,765.6	710.1	616.5	93.62	7.585	
9,842.5	6,641.6	6,628.4	6,627.6	93.3	1.8	-94.56	42.6	-3,765.8	671.8	577.0	94.82	7.085	
9,900.0	6,641.5	6,625.2	6,624.4	94.9	1.8	-93.96	42.8	-3,765.9	620.8	524.3	96.45	6.437	
9,940.9	6,641.4	6,622.9	6,622.1	96.0	1.8	-93.52	42.8	-3,766.1	585.2	487.6	97.60	5.996	
10,000.0	6,641.4	6,619.6	6,618.8	97.7	1.8	-92.89	43.0	-3,766.3	535.2	435.9	99.26	5.392	
10,039.3	6,641.3	6,617.3	6,616.6	98.8	1.8	-92.46	43.0	-3,766.4	503.0	402.6	100.37	5.011	
10,100.0	6,641.2	6,613.9	6,613.1	100.4	1.8	-91.80	43.2	-3,766.6	455.5	353.4	102.07	4.463	
10,137.8	6,641.2	6,611.7	6,610.9	101.5	1.8	-91.38	43.3	-3,766.7	427.6	324.4	103.12	4.146	
10,200.0	6,641.1	6,608.1	6,607.3	103.2	1.8	-90.69	43.4	-3,766.9	385.2	280.4	104.85	3.674	
10,236.2	6,641.1	6,606.0	6,605.2	104.2	1.8	-90.28	43.5	-3,767.0	363.2	257.4	105.85	3.432	
10,300.0	6,641.0	6,602.2	6,601.5	106.0	1.8	-89.56	43.6	-3,767.3	330.6	223.0	107.61	3.072	
10,334.6	6,640.9	6,600.2	6,599.4	107.0	1.8	-89.16	43.7	-3,767.4	316.8	208.3	108.56	2.919	
10,400.0	6,640.9	6,596.4	6,595.7	108.8	1.8	-88.43	43.8	-3,767.6	300.2	189.8	110.35	2.720	
10,433.0	6,640.8	6,594.5	6,593.8	109.7	1.8	-88.06	43.9	-3,767.7	296.9	185.6	111.24	2.669	
10,446.3	6,640.8	6,593.7	6,593.0	110.1	1.7	-87.92	43.9	-3,767.7	296.6	185.0	111.60	2.658 CC, ES, SF	
10,500.0	6,640.7	6,590.7	6,590.0	111.6	1.7	-87.33	44.0	-3,767.9	301.4	188.3	113.05	2.666	
10,531.5	6,640.7	6,588.9	6,588.2	112.4	1.7	-86.98	44.1	-3,768.0	308.5	194.6	113.90	2.709	
10,600.0	6,640.6	6,585.1	6,584.3	114.3	1.7	-86.24	44.2	-3,768.2	333.9	218.2	115.73	2.885	
10,629.9	6,640.6	6,583.4	6,582.7	115.2	1.7	-85.92	44.3	-3,768.3	348.7	232.1	116.52	2.992	
10,700.0	6,640.5	6,579.5	6,578.8	117.1	1.7	-85.18	44.4	-3,768.6	390.0	271.7	118.37	3.295	
10,728.3	6,640.4	6,578.0	6,577.3	117.9	1.7	-84.88	44.5	-3,768.6	409.0	289.8	119.12	3.433	
10,800.0	6,640.4	6,574.1	6,573.4	119.9	1.7	-84.13	44.6	-3,768.9	461.2	340.2	120.99	3.812	
10,826.7	6,640.3	6,572.6	6,572.0	120.7	1.7	-83.86	44.7	-3,768.9	481.9	360.2	121.68	3.960	
10,900.0	6,640.2	6,568.7	6,568.1	122.7	1.7	-83.11	44.8	-3,769.2	541.4	417.9	123.57	4.382	
10,925.2	6,640.2	6,567.4	6,566.7	123.4	1.7	-82.85	44.8	-3,769.2	562.6	438.4	124.21	4.530	
11,000.0	6,640.1	6,563.5	6,562.8	125.5	1.7	-82.10	45.0	-3,769.5	627.4	501.2	126.11	4.975	
11,023.6	6,640.1	6,562.2	6,561.6	126.1	1.7	-81.86	45.0	-3,769.5	648.2	521.5	126.70	5.116	
11,100.0	6,640.0	6,558.3	6,557.6	128.3	1.7	-81.11	45.1	-3,769.7	716.9	588.3	128.61	5.574	
11,122.0	6,639.9	6,557.1	6,556.5	128.9	1.7	-80.90	45.2	-3,769.8	737.0	607.8	129.16	5.706	
11,200.0	6,639.8	6,553.2	6,552.5	131.1	1.7	-80.14	45.3	-3,770.0	808.9	677.8	131.08	6.171	
11,220.4	6,639.8	6,552.1	6,551.5	131.6	1.7	-79.95	45.3	-3,770.1	827.9	696.3	131.58	6.292	
11,300.0	6,639.7	6,548.1	6,547.5	133.9	1.7	-79.20	45.5	-3,770.3	902.5	769.0	133.51	6.759	
11,318.9	6,639.7	6,547.2	6,546.6	134.4	1.7	-79.02	45.5	-3,770.3	920.3	786.3	133.97	6.870	
11,400.0	6,639.6	6,543.2	6,542.6	136.7	1.7	-78.27	45.6	-3,770.6	997.3	861.4	135.91	7.338	
11,417.3	6,639.6	6,542.4	6,541.7	137.1	1.7	-78.11	45.6	-3,770.6	1,013.8	877.5	136.32	7.437	
11,500.0	6,639.5	6,538.3	6,537.7	139.4	1.7	-77.36	45.8	-3,770.8	1,093.1	954.8	138.26	7.906	
11,515.7	6,639.5	6,537.6	6,537.0	139.9	1.7	-77.22	45.8	-3,770.9	1,108.2	969.6	138.63	7.994	
11,600.0	6,639.3	6,533.5	6,532.9	142.2	1.7	-76.47	45.9	-3,771.1	1,189.5	1,048.9	140.58	8.461	
11,614.1	6,639.3	6,532.9	6,532.3	142.6	1.7	-76.34	45.9	-3,771.1	1,203.2	1,062.3	140.91	8.539	
11,700.0	6,639.2	6,528.8	6,528.2	145.0	1.7	-75.60	46.0	-3,771.3	1,286.4	1,143.6	142.87	9.005	
11,712.6	6,639.2	6,528.2	6,527.6	145.4	1.7	-75.49	46.1	-3,771.3	1,298.7	1,155.5	143.15	9.072	
11,800.0	6,639.1	6,524.2	6,523.6	147.8	1.7	-74.74	46.2	-3,771.6	1,383.8	1,238.7	145.11	9.536	
11,811.0	6,639.1	6,523.6	6,523.1	148.1	1.7	-74.65	46.2	-3,771.6	1,394.5	1,249.2	145.35	9.594	
11,900.0	6,639.0	6,519.6	6,519.0	150.6	1.7	-73.91	46.3	-3,771.8	1,481.5	1,334.2	147.32	10.056	
11,909.4	6,639.0	6,519.1	6,518.6	150.9	1.7	-73.83	46.3	-3,771.8	1,490.7	1,343.2	147.53	10.105	
12,000.0	6,638.8	6,515.1	6,514.5	153.4	1.7	-73.10	46.4	-3,772.0	1,579.5	1,430.0	149.49	10.566	
12,007.8	6,638.8	6,514.7	6,514.1	153.6	1.7	-73.03	46.4	-3,772.0	1,587.2	1,437.5	149.66	10.605	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,510.6	6,510.0	156.2	1.7	-72.30	46.6	-3,772.3	1,677.7	1,526.0	151.63	11.064	
12,106.3	6,638.7	6,510.3	6,509.8	156.4	1.7	-72.25	46.6	-3,772.3	1,683.8	1,532.1	151.76	11.095	
12,200.0	6,638.6	6,500.0	6,499.5	159.0	1.7	-70.43	46.8	-3,772.8	1,776.1	1,623.2	152.90	11.616	
12,204.7	6,638.6	6,500.0	6,499.5	159.1	1.7	-70.43	46.8	-3,772.8	1,780.7	1,627.7	153.02	11.637	
12,300.0	6,638.5	6,500.0	6,499.5	161.8	1.7	-70.43	46.8	-3,772.8	1,874.6	1,719.1	155.54	12.052	
12,303.1	6,638.5	6,500.0	6,499.5	161.9	1.7	-70.43	46.8	-3,772.8	1,877.7	1,722.1	155.63	12.065	
12,400.0	6,638.3	6,500.0	6,499.5	164.6	1.7	-70.43	46.8	-3,772.8	1,973.3	1,815.1	158.19	12.474	
12,401.5	6,638.3	6,500.0	6,499.5	164.6	1.7	-70.43	46.8	-3,772.8	1,974.8	1,816.6	158.23	12.481	
12,500.0	6,638.2	6,500.0	6,499.5	167.4	1.7	-70.43	46.8	-3,772.8	2,072.1	1,911.3	160.84	12.883	
12,598.4	6,638.1	6,489.5	6,489.0	170.2	1.7	-68.62	47.1	-3,773.3	2,169.4	2,007.6	161.83	13.405	
12,600.0	6,638.1	6,489.5	6,488.9	170.2	1.7	-68.61	47.1	-3,773.3	2,171.0	2,009.1	161.86	13.413	
12,696.8	6,638.0	6,485.6	6,485.1	172.9	1.7	-67.95	47.2	-3,773.5	2,266.8	2,103.1	163.76	13.842	
12,700.0	6,638.0	6,485.5	6,485.0	173.0	1.7	-67.93	47.2	-3,773.5	2,270.0	2,106.1	163.83	13.856	
12,795.2	6,637.8	6,481.7	6,481.2	175.7	1.7	-67.30	47.3	-3,773.7	2,364.3	2,198.6	165.67	14.271	
12,800.0	6,637.8	6,481.5	6,481.0	175.8	1.7	-67.27	47.3	-3,773.7	2,369.0	2,203.3	165.77	14.291	
12,893.7	6,637.7	6,477.9	6,477.4	178.4	1.7	-66.66	47.4	-3,773.9	2,461.9	2,294.3	167.56	14.693	
12,900.0	6,637.7	6,477.7	6,477.2	178.6	1.7	-66.62	47.4	-3,773.9	2,468.2	2,300.5	167.68	14.720	
12,992.1	6,637.6	6,474.2	6,473.7	181.2	1.7	-66.04	47.5	-3,774.0	2,559.5	2,390.1	169.42	15.107	
13,000.0	6,637.6	6,473.9	6,473.4	181.4	1.7	-65.99	47.5	-3,774.0	2,567.3	2,397.8	169.57	15.140	
13,090.5	6,637.5	6,470.5	6,470.0	183.9	1.7	-65.44	47.6	-3,774.2	2,657.2	2,485.9	171.26	15.515	
13,100.0	6,637.5	6,470.1	6,469.6	184.2	1.7	-65.38	47.6	-3,774.2	2,666.6	2,495.2	171.44	15.554	
13,188.9	6,637.4	6,466.9	6,466.4	186.7	1.7	-64.84	47.7	-3,774.4	2,754.9	2,581.8	173.08	15.917	
13,200.0	6,637.3	6,466.5	6,466.0	187.0	1.7	-64.78	47.7	-3,774.4	2,765.9	2,592.6	173.28	15.962	
13,287.4	6,637.2	6,463.3	6,462.8	189.4	1.7	-64.27	47.8	-3,774.5	2,852.7	2,677.8	174.88	16.312	
13,300.0	6,637.2	6,462.8	6,462.3	189.8	1.7	-64.20	47.8	-3,774.6	2,865.2	2,690.1	175.11	16.363	
13,385.8	6,637.1	6,459.8	6,459.3	192.2	1.7	-63.71	47.8	-3,774.7	2,950.5	2,773.8	176.66	16.702	
13,400.0	6,637.1	6,459.3	6,458.8	192.6	1.7	-63.63	47.9	-3,774.7	2,964.6	2,787.7	176.91	16.757	
13,484.2	6,637.0	6,456.3	6,455.8	195.0	1.7	-63.16	47.9	-3,774.9	3,048.3	2,869.9	178.42	17.085	
13,500.0	6,637.0	6,455.8	6,455.3	195.4	1.7	-63.07	47.9	-3,774.9	3,064.0	2,885.3	178.70	17.146	
13,582.6	6,636.9	6,452.9	6,452.4	197.7	1.7	-62.62	48.0	-3,775.0	3,146.2	2,966.0	180.16	17.463	
13,600.0	6,636.8	6,452.3	6,451.8	198.2	1.7	-62.53	48.0	-3,775.0	3,163.4	2,983.0	180.46	17.529	
13,681.1	6,636.7	6,449.5	6,449.1	200.5	1.7	-62.10	48.1	-3,775.2	3,244.1	3,062.2	181.88	17.836	
13,700.0	6,636.7	6,448.9	6,448.4	201.0	1.7	-62.00	48.1	-3,775.2	3,262.9	3,080.7	182.21	17.907	
13,779.5	6,636.6	6,446.2	6,445.8	203.2	1.7	-61.59	48.2	-3,775.3	3,342.0	3,158.4	183.59	18.203	
13,800.0	6,636.6	6,445.5	6,445.1	203.8	1.7	-61.49	48.2	-3,775.3	3,362.4	3,178.5	183.95	18.279	
13,877.9	6,636.5	6,443.0	6,442.5	206.0	1.7	-61.09	48.2	-3,775.5	3,440.0	3,254.7	185.29	18.566	
13,900.0	6,636.5	6,442.2	6,441.8	206.6	1.7	-60.98	48.3	-3,775.5	3,461.9	3,276.3	185.66	18.646	
13,976.3	6,636.4	6,439.8	6,439.3	208.8	1.7	-60.61	48.3	-3,775.6	3,537.9	3,351.0	186.96	18.923	
14,000.0	6,636.3	6,439.0	6,438.5	209.4	1.7	-60.49	48.3	-3,775.6	3,561.5	3,374.1	187.37	19.008	
14,074.8	6,636.2	6,436.6	6,436.1	211.5	1.7	-60.13	48.4	-3,775.7	3,635.9	3,447.3	188.63	19.276	
14,100.0	6,636.2	6,435.8	6,435.3	212.2	1.7	-60.01	48.4	-3,775.8	3,661.0	3,472.0	189.05	19.365	
14,173.2	6,636.1	6,433.5	6,433.0	214.3	1.7	-59.67	48.5	-3,775.9	3,733.9	3,543.7	190.28	19.624	
14,200.0	6,636.1	6,432.6	6,432.2	215.0	1.7	-59.54	48.5	-3,775.9	3,760.6	3,569.9	190.72	19.718	
14,271.6	6,636.0	6,430.4	6,430.0	217.0	1.7	-59.22	48.5	-3,776.0	3,832.0	3,640.0	191.91	19.967	
14,300.0	6,636.0	6,429.5	6,429.1	217.8	1.7	-59.09	48.6	-3,776.0	3,860.2	3,667.8	192.38	20.065	
14,370.0	6,635.9	6,427.4	6,426.9	219.8	1.7	-58.77	48.6	-3,776.1	3,930.0	3,736.5	193.54	20.306	
14,400.0	6,635.8	6,426.5	6,426.0	220.6	1.7	-58.64	48.6	-3,776.2	3,959.8	3,765.8	194.03	20.408	
14,468.5	6,635.7	6,424.4	6,424.0	222.6	1.7	-58.34	48.7	-3,776.2	4,028.1	3,832.9	195.15	20.641	
14,500.0	6,635.7	6,423.4	6,423.0	223.4	1.7	-58.20	48.7	-3,776.3	4,059.5	3,863.8	195.67	20.747	
14,566.9	6,635.6	6,421.5	6,421.0	225.3	1.7	-57.92	48.7	-3,776.4	4,126.1	3,929.4	196.75	20.971	
14,600.0	6,635.6	6,420.5	6,420.0	226.2	1.7	-57.78	48.8	-3,776.4	4,159.1	3,961.8	197.29	21.082	
14,665.3	6,635.5	6,418.6	6,418.1	228.1	1.7	-57.51	48.8	-3,776.5	4,224.2	4,025.9	198.34	21.298	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,635.5	6,417.5	6,417.1	229.0	1.7	-57.36	48.8	-3,776.5	4,258.8	4,059.9	198.90	21.412	
14,763.7	6,635.4	6,400.0	6,399.6	230.8	1.7	-54.95	49.2	-3,777.2	4,322.4	4,126.7	195.63	22.095	
14,800.0	6,635.3	6,400.0	6,399.6	231.8	1.7	-54.95	49.2	-3,777.2	4,358.5	4,162.0	196.47	22.184	
14,862.2	6,635.2	6,400.0	6,399.6	233.6	1.7	-54.95	49.2	-3,777.2	4,420.5	4,222.6	197.92	22.334	
14,900.0	6,635.2	6,400.0	6,399.6	234.7	1.7	-54.95	49.2	-3,777.2	4,458.2	4,259.4	198.81	22.425	
14,960.6	6,635.1	6,400.0	6,399.6	236.4	1.7	-54.95	49.2	-3,777.2	4,518.6	4,318.4	200.22	22.568	
14,995.1	6,635.0	6,400.0	6,399.6	237.3	1.7	-54.96	49.2	-3,777.2	4,553.0	4,352.0	201.05	22.647	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-69.81	1,356.6	-3,689.6	3,931.2				
98.4	98.4	84.4	84.4	0.1	0.0	-69.81	1,356.6	-3,689.6	3,931.1	3,931.0	0.10	N/A	
100.0	100.0	86.0	86.0	0.1	0.0	-69.81	1,356.6	-3,689.6	3,931.1	3,931.0	0.10	N/A	
196.8	196.8	182.8	182.8	0.3	1.0	-69.81	1,356.6	-3,689.6	3,931.1	3,929.8	1.31	3,005.034	
200.0	200.0	186.0	186.0	0.3	1.0	-69.81	1,356.6	-3,689.6	3,931.1	3,929.8	1.35	2,905.480	
295.3	295.3	281.3	281.3	0.5	3.1	-69.81	1,356.6	-3,689.6	3,931.1	3,927.5	3.60	1,093.254	
300.0	300.0	286.0	286.0	0.5	3.2	-69.81	1,356.6	-3,689.6	3,931.1	3,927.4	3.71	1,058.288	
393.7	393.7	379.7	379.7	0.8	5.1	-69.81	1,356.6	-3,689.6	3,931.1	3,925.2	5.90	666.047	
400.0	400.0	386.0	386.0	0.8	5.3	-69.81	1,356.6	-3,689.6	3,931.1	3,925.1	6.05	650.066	
492.1	492.1	478.1	478.1	1.0	7.2	-69.81	1,356.6	-3,689.6	3,931.1	3,923.0	8.14	482.895	
500.0	500.0	486.0	486.0	1.0	7.3	-69.81	1,356.6	-3,689.6	3,931.1	3,922.8	8.32	472.532	
590.5	590.5	576.5	576.5	1.2	9.2	-69.81	1,356.6	-3,689.6	3,931.1	3,920.8	10.36	379.381	
600.0	600.0	586.0	586.0	1.2	9.4	-69.81	1,356.6	-3,689.6	3,931.1	3,920.6	10.57	371.740	
689.0	689.0	675.0	675.0	1.4	11.2	-69.81	1,356.6	-3,689.6	3,931.1	3,918.6	12.58	312.601	
700.0	700.0	686.0	686.0	1.4	11.4	-69.81	1,356.6	-3,689.6	3,931.1	3,918.3	12.82	306.560	
787.4	787.4	773.4	773.4	1.6	13.1	-69.81	1,356.6	-3,689.6	3,931.1	3,916.4	14.79	265.884	
800.0	800.0	786.0	786.0	1.7	13.4	-69.81	1,356.6	-3,689.6	3,931.1	3,916.1	15.07	260.895	
885.8	885.8	871.8	871.8	1.9	15.1	-69.81	1,356.6	-3,689.6	3,931.1	3,914.2	16.99	231.348	
900.0	900.0	886.0	886.0	1.9	15.4	-69.81	1,356.6	-3,689.6	3,931.1	3,913.8	17.31	227.101	
984.2	984.2	970.2	970.2	2.1	17.1	-69.81	1,356.6	-3,689.6	3,931.1	3,911.9	19.20	204.769	
1,000.0	1,000.0	986.0	986.0	2.1	17.4	-69.81	1,356.6	-3,689.6	3,931.1	3,911.6	19.55	201.073	
1,082.7	1,082.7	1,068.7	1,068.7	2.3	19.1	-69.81	1,356.6	-3,689.6	3,931.1	3,909.7	21.40	183.677	
1,100.0	1,100.0	1,086.0	1,086.0	2.3	19.4	-69.81	1,356.6	-3,689.6	3,931.1	3,909.4	21.79	180.406	
1,181.1	1,181.1	1,167.1	1,167.1	2.5	21.1	-69.81	1,356.6	-3,689.6	3,931.1	3,907.5	23.61	166.530	
1,200.0	1,200.0	1,186.0	1,186.0	2.6	21.5	-69.81	1,356.6	-3,689.6	3,931.1	3,907.1	24.03	163.597	
1,279.5	1,279.5	1,265.5	1,265.5	2.7	23.1	-69.81	1,356.6	-3,689.6	3,931.1	3,905.3	25.81	152.314	
1,300.0	1,300.0	1,286.0	1,286.0	2.8	23.5	-69.81	1,356.6	-3,689.6	3,931.1	3,904.9	26.27	149.657	
1,377.9	1,377.9	1,363.9	1,363.9	3.0	25.0	-111.01	1,356.6	-3,689.6	3,931.5	3,903.5	28.01	140.373	
1,400.0	1,400.0	1,386.0	1,386.0	3.0	25.5	-111.01	1,356.6	-3,689.6	3,931.8	3,903.3	28.50	137.961	
1,476.4	1,476.3	1,462.3	1,462.3	3.2	27.0	-111.04	1,356.6	-3,689.6	3,933.1	3,902.9	30.20	130.251	
1,500.0	1,499.8	1,485.8	1,485.8	3.2	27.5	-111.05	1,356.6	-3,689.6	3,933.7	3,902.9	30.72	128.048	
1,574.8	1,574.4	1,560.4	1,560.4	3.4	29.0	-111.09	1,356.6	-3,689.6	3,935.9	3,903.5	32.38	121.560	
1,600.0	1,599.5	1,585.5	1,585.5	3.5	29.5	-111.11	1,356.6	-3,689.6	3,936.8	3,903.9	32.94	119.531	
1,673.2	1,672.2	1,658.2	1,658.2	3.6	31.0	-111.17	1,356.6	-3,689.6	3,939.9	3,905.4	34.56	114.014	
1,700.0	1,698.7	1,684.7	1,684.7	3.7	31.5	-111.19	1,356.6	-3,689.6	3,941.2	3,906.1	35.15	112.134	
1,771.6	1,769.5	1,755.5	1,755.5	3.9	32.9	-111.26	1,356.6	-3,689.6	3,945.2	3,908.5	36.73	107.398	
1,800.0	1,797.5	1,783.5	1,783.5	4.0	33.5	-111.29	1,356.6	-3,689.6	3,947.0	3,909.6	37.36	105.646	
1,870.1	1,866.3	1,852.3	1,852.3	4.2	34.9	-111.38	1,356.6	-3,689.6	3,951.8	3,912.8	38.92	101.544	
1,899.9	1,895.6	1,881.6	1,881.6	4.3	35.5	-111.42	1,356.6	-3,689.6	3,954.0	3,914.4	39.58	99.905	
1,968.5	1,962.6	1,948.6	1,948.6	4.5	36.8	-111.60	1,356.6	-3,689.6	3,959.3	3,918.2	41.13	96.260	
2,000.0	1,993.4	1,979.4	1,979.4	4.6	37.4	-111.69	1,356.6	-3,689.6	3,961.8	3,920.0	41.85	94.674	
2,066.9	2,058.9	2,044.9	2,044.9	4.8	38.7	-111.87	1,356.6	-3,689.6	3,967.1	3,923.7	43.38	91.459	
2,100.0	2,091.3	2,077.3	2,077.3	4.9	39.4	-111.96	1,356.6	-3,689.6	3,969.7	3,925.5	44.13	89.951	
2,165.3	2,155.2	2,141.2	2,141.2	5.2	40.7	-112.14	1,356.6	-3,689.6	3,974.9	3,929.2	45.63	87.106	
2,200.0	2,189.1	2,175.1	2,175.1	5.3	41.4	-112.24	1,356.6	-3,689.6	3,977.6	3,931.2	46.43	85.670	
2,263.8	2,251.5	2,237.5	2,237.5	5.5	42.6	-112.41	1,356.6	-3,689.6	3,982.8	3,934.9	47.90	83.144	
2,300.0	2,286.9	2,272.9	2,272.9	5.7	43.3	-112.51	1,356.6	-3,689.6	3,985.7	3,937.0	48.74	81.777	
2,362.2	2,347.7	2,333.7	2,333.7	5.9	44.6	-112.68	1,356.6	-3,689.6	3,990.8	3,940.6	50.18	79.529	
2,400.0	2,384.7	2,370.7	2,370.7	6.0	45.3	-112.78	1,356.6	-3,689.6	3,993.9	3,942.8	51.06	78.225	
2,460.6	2,444.0	2,430.0	2,430.0	6.3	46.5	-112.94	1,356.6	-3,689.6	3,998.9	3,946.4	52.47	76.219	
2,500.0	2,482.5	2,468.5	2,468.5	6.4	47.3	-113.05	1,356.6	-3,689.6	4,002.1	3,948.7	53.38	74.973	
2,559.0	2,540.3	2,526.3	2,526.3	6.7	48.4	-113.21	1,356.6	-3,689.6	4,007.0	3,952.3	54.76	73.179	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,566.3	2,566.3	6.8	49.2	-113.32	1,356.6	-3,689.6	4,010.4	3,954.7	55.71	71.987	
2,657.5	2,636.5	2,622.5	2,622.5	7.1	50.4	-113.47	1,356.6	-3,689.6	4,015.3	3,958.2	57.05	70.379	
2,700.0	2,678.1	2,664.1	2,664.1	7.2	51.2	-113.58	1,356.6	-3,689.6	4,018.9	3,960.8	58.04	69.238	
2,755.9	2,732.8	2,718.8	2,718.8	7.5	52.3	-113.73	1,356.6	-3,689.6	4,023.6	3,964.3	59.35	67.793	
2,800.0	2,776.0	2,762.0	2,762.0	7.7	53.2	-113.85	1,356.6	-3,689.6	4,027.4	3,967.0	60.38	66.698	
2,854.3	2,829.1	2,815.1	2,815.1	7.9	54.2	-113.99	1,356.6	-3,689.6	4,032.1	3,970.4	61.65	65.399	
2,900.0	2,873.8	2,859.8	2,859.8	8.1	55.1	-114.11	1,356.6	-3,689.6	4,036.0	3,973.3	62.72	64.347	
2,952.7	2,925.4	2,911.4	2,911.4	8.3	56.2	-114.25	1,356.6	-3,689.6	4,040.6	3,976.6	63.96	63.176	
3,000.0	2,971.6	2,957.6	2,957.6	8.5	57.1	-114.38	1,356.6	-3,689.6	4,044.7	3,979.6	65.06	62.164	
3,051.2	3,021.6	3,007.6	3,007.6	8.7	58.1	-114.51	1,356.6	-3,689.6	4,049.2	3,982.9	66.26	61.107	
3,100.0	3,069.4	3,055.4	3,055.4	8.9	59.1	-114.64	1,356.6	-3,689.6	4,053.5	3,986.1	67.41	60.133	
3,149.6	3,117.9	3,103.9	3,103.9	9.1	60.0	-114.77	1,356.6	-3,689.6	4,057.9	3,989.3	68.57	59.177	
3,200.0	3,167.2	3,153.2	3,153.2	9.3	61.0	-114.90	1,356.6	-3,689.6	4,062.3	3,992.6	69.75	58.239	
3,248.0	3,214.2	3,200.2	3,200.2	9.5	62.0	-115.03	1,356.6	-3,689.6	4,066.6	3,995.8	70.88	57.374	
3,300.0	3,265.0	3,251.0	3,251.0	9.8	63.0	-115.16	1,356.6	-3,689.6	4,071.3	3,999.2	72.10	56.468	
3,346.4	3,310.5	3,296.5	3,296.5	10.0	63.9	-115.28	1,356.6	-3,689.6	4,075.5	4,002.3	73.19	55.684	
3,400.0	3,362.9	3,348.9	3,348.9	10.2	65.0	-115.42	1,356.6	-3,689.6	4,080.3	4,005.9	74.45	54.810	
3,444.9	3,406.7	3,392.7	3,392.7	10.4	65.9	-115.54	1,356.6	-3,689.6	4,084.4	4,008.9	75.50	54.099	
3,473.0	3,434.2	3,420.2	3,420.2	10.5	66.4	-115.61	1,356.6	-3,689.6	4,087.0	4,010.8	76.16	53.665	
3,500.0	3,460.7	3,446.7	3,446.7	10.6	66.9	-115.72	1,356.6	-3,689.6	4,089.4	4,012.6	76.80	53.245	
3,543.3	3,503.2	3,489.2	3,489.2	10.7	67.8	-115.89	1,356.6	-3,689.6	4,093.1	4,015.3	77.82	52.600	
3,600.0	3,559.0	3,545.0	3,545.0	10.9	68.9	-116.09	1,356.6	-3,689.6	4,097.5	4,018.3	79.14	51.773	
3,641.7	3,600.2	3,586.2	3,586.2	11.0	69.7	-116.23	1,356.6	-3,689.6	4,100.4	4,020.3	80.11	51.185	
3,700.0	3,657.9	3,643.9	3,643.9	11.2	70.9	-116.39	1,356.6	-3,689.6	4,104.0	4,022.6	81.46	50.382	
3,740.1	3,697.8	3,683.8	3,683.8	11.3	71.7	-116.50	1,356.6	-3,689.6	4,106.2	4,023.9	82.38	49.847	
3,800.0	3,757.3	3,743.3	3,743.3	11.4	72.9	-116.62	1,356.6	-3,689.6	4,109.1	4,025.3	83.74	49.067	
3,838.6	3,795.7	3,781.7	3,781.7	11.5	73.7	-116.69	1,356.6	-3,689.6	4,110.6	4,026.0	84.61	48.582	
3,900.0	3,857.0	3,843.0	3,843.0	11.7	74.9	-116.78	1,356.6	-3,689.6	4,112.6	4,026.6	85.99	47.825	
3,937.0	3,893.9	3,879.9	3,879.9	11.7	75.7	-116.82	1,356.6	-3,689.6	4,113.5	4,026.7	86.81	47.385	
4,000.0	3,956.9	3,942.9	3,942.9	11.8	76.9	-116.87	1,356.6	-3,689.6	4,114.5	4,026.3	88.20	46.651	
4,035.4	3,992.3	3,978.3	3,978.3	11.9	77.6	-116.89	1,356.6	-3,689.6	4,114.8	4,025.9	88.96	46.252	
4,072.9	4,029.8	4,015.8	4,015.8	11.9	78.4	-75.70	1,356.6	-3,689.6	4,114.9	4,026.7	88.21	46.649	
4,100.0	4,056.9	4,042.9	4,042.9	12.0	78.9	-75.70	1,356.6	-3,689.6	4,114.9	4,026.1	88.80	46.337	
4,133.8	4,090.7	4,076.7	4,076.7	12.0	79.6	-75.70	1,356.6	-3,689.6	4,114.9	4,025.4	89.55	45.951	
4,200.0	4,156.9	4,142.9	4,142.9	12.1	80.9	-75.70	1,356.6	-3,689.6	4,114.9	4,023.9	91.01	45.214	
4,232.3	4,189.2	4,175.2	4,175.2	12.2	81.6	-75.70	1,356.6	-3,689.6	4,114.9	4,023.2	91.72	44.863	
4,300.0	4,256.9	4,242.9	4,242.9	12.3	83.0	-75.70	1,356.6	-3,689.6	4,114.9	4,021.7	93.22	44.144	
4,330.7	4,287.6	4,273.6	4,273.6	12.4	83.6	-75.70	1,356.6	-3,689.6	4,114.9	4,021.0	93.89	43.825	
4,400.0	4,356.9	4,342.9	4,342.9	12.5	85.0	-75.70	1,356.6	-3,689.6	4,114.9	4,019.5	95.42	43.122	
4,429.1	4,386.0	4,372.0	4,372.0	12.5	85.6	-75.70	1,356.6	-3,689.6	4,114.9	4,018.9	96.07	42.833	
4,500.0	4,456.9	4,442.9	4,442.9	12.6	87.0	-75.70	1,356.6	-3,689.6	4,114.9	4,017.3	97.63	42.146	
4,527.5	4,484.4	4,470.4	4,470.4	12.7	87.5	-75.70	1,356.6	-3,689.6	4,114.9	4,016.7	98.24	41.885	
4,600.0	4,556.9	4,542.9	4,542.9	12.8	89.0	-75.70	1,356.6	-3,689.6	4,114.9	4,015.1	99.84	41.213	
4,626.0	4,582.9	4,568.9	4,568.9	12.9	89.5	-75.70	1,356.6	-3,689.6	4,114.9	4,014.5	100.42	40.978	
4,700.0	4,656.9	4,642.9	4,642.9	13.0	91.0	-75.70	1,356.6	-3,689.6	4,114.9	4,012.9	102.06	40.320	
4,724.4	4,681.3	4,667.3	4,667.3	13.0	91.5	-75.70	1,356.6	-3,689.6	4,114.9	4,012.3	102.60	40.108	
4,800.0	4,756.9	4,742.9	4,742.9	13.1	93.0	-75.70	1,356.6	-3,689.6	4,114.9	4,010.7	104.27	39.465	
4,822.8	4,779.7	4,765.7	4,765.7	13.2	93.5	-75.70	1,356.6	-3,689.6	4,114.9	4,010.2	104.77	39.275	
4,900.0	4,856.9	4,842.9	4,842.9	13.3	95.0	-75.70	1,356.6	-3,689.6	4,114.9	4,008.4	106.48	38.645	
4,921.2	4,878.1	4,864.1	4,864.1	13.4	95.4	-75.70	1,356.6	-3,689.6	4,114.9	4,008.0	106.95	38.475	
5,000.0	4,956.9	4,942.9	4,942.9	13.5	97.0	-75.70	1,356.6	-3,689.6	4,114.9	4,006.2	108.70	37.857	
5,019.7	4,976.6	4,962.6	4,962.6	13.5	97.4	-75.70	1,356.6	-3,689.6	4,114.9	4,005.8	109.13	37.706	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,042.9	5,042.9	13.7	99.0	-75.70	1,356.6	-3,689.6	4,114.9	4,004.0	110.91	37.101	
5,118.1	5,075.0	5,061.0	5,061.0	13.7	99.4	-75.70	1,356.6	-3,689.6	4,114.9	4,003.6	111.31	36.968	
5,200.0	5,156.9	5,142.9	5,142.9	13.8	101.1	-75.70	1,356.6	-3,689.6	4,114.9	4,001.8	113.13	36.375	
5,216.5	5,173.4	5,159.4	5,159.4	13.9	101.4	-75.70	1,356.6	-3,689.6	4,114.9	4,001.4	113.49	36.257	
5,300.0	5,256.9	5,242.9	5,242.9	14.0	103.1	-75.70	1,356.6	-3,689.6	4,114.9	3,999.6	115.34	35.676	
5,314.9	5,271.8	5,257.8	5,257.8	14.1	103.4	-75.70	1,356.6	-3,689.6	4,114.9	3,999.3	115.67	35.574	
5,400.0	5,356.9	5,342.9	5,342.9	14.2	105.1	-75.70	1,356.6	-3,689.6	4,114.9	3,997.4	117.56	35.003	
5,413.4	5,370.3	5,356.3	5,356.3	14.2	105.3	-75.70	1,356.6	-3,689.6	4,114.9	3,997.1	117.86	34.915	
5,500.0	5,456.9	5,442.9	5,442.9	14.4	107.1	-75.70	1,356.6	-3,689.6	4,114.9	3,995.2	119.78	34.355	
5,511.8	5,468.7	5,454.7	5,454.7	14.4	107.3	-75.70	1,356.6	-3,689.6	4,114.9	3,994.9	120.04	34.280	
5,600.0	5,556.9	5,542.9	5,542.9	14.6	109.1	-75.70	1,356.6	-3,689.6	4,114.9	3,992.9	121.99	33.730	
5,610.2	5,567.1	5,553.1	5,553.1	14.6	109.3	-75.70	1,356.6	-3,689.6	4,114.9	3,992.7	122.22	33.668	
5,700.0	5,656.9	5,642.9	5,642.9	14.7	111.1	-75.70	1,356.6	-3,689.6	4,114.9	3,990.7	124.21	33.128	
5,708.6	5,665.5	5,651.5	5,651.5	14.8	111.3	-75.70	1,356.6	-3,689.6	4,114.9	3,990.5	124.40	33.077	
5,800.0	5,756.9	5,742.9	5,742.9	14.9	113.1	-75.70	1,356.6	-3,689.6	4,114.9	3,988.5	126.43	32.547	
5,807.1	5,764.0	5,750.0	5,750.0	14.9	113.3	-75.70	1,356.6	-3,689.6	4,114.9	3,988.3	126.59	32.506	
5,900.0	5,856.9	5,842.9	5,842.9	15.1	115.1	-75.70	1,356.6	-3,689.6	4,114.9	3,986.3	128.65	31.985	
5,905.5	5,862.4	5,848.4	5,848.4	15.1	115.2	-75.70	1,356.6	-3,689.6	4,114.9	3,986.2	128.77	31.955	
5,971.9	5,928.8	5,914.8	5,914.8	15.3	116.6	-75.70	1,356.6	-3,689.6	4,114.9	3,984.7	130.25	31.593	
6,000.0	5,956.9	5,942.9	5,942.9	15.3	117.1	14.31	1,356.6	-3,689.6	4,114.4	3,982.5	131.88	31.199	
6,003.9	5,960.8	5,946.8	5,946.8	15.3	117.2	14.32	1,356.6	-3,689.6	4,114.2	3,982.3	131.93	31.184	
6,050.0	6,006.7	5,992.7	5,992.7	15.4	118.1	14.40	1,356.6	-3,689.6	4,110.8	3,978.5	132.31	31.071	
6,100.0	6,056.2	6,042.2	6,042.2	15.4	119.1	14.56	1,356.6	-3,689.6	4,103.9	3,971.7	132.12	31.062	
6,102.3	6,058.5	6,044.5	6,044.5	15.4	119.2	14.57	1,356.6	-3,689.6	4,103.5	3,971.4	132.09	31.064	
6,150.0	6,105.1	6,091.1	6,091.1	15.4	120.1	14.81	1,356.6	-3,689.6	4,093.6	3,962.3	131.31	31.174	
6,200.0	6,153.0	6,139.0	6,139.0	15.5	121.1	15.15	1,356.6	-3,689.6	4,080.0	3,950.1	129.90	31.410	
6,200.8	6,153.8	6,139.8	6,139.8	15.5	121.1	15.16	1,356.6	-3,689.6	4,079.8	3,949.9	129.87	31.415	
6,250.0	6,199.9	6,185.9	6,185.9	15.5	122.0	15.59	1,356.6	-3,689.6	4,063.3	3,935.4	127.88	31.775	
6,299.2	6,244.8	6,230.8	6,230.8	15.5	122.9	16.14	1,356.6	-3,689.6	4,043.8	3,918.4	125.34	32.263	
6,300.0	6,245.5	6,231.5	6,231.5	15.5	122.9	16.15	1,356.6	-3,689.6	4,043.4	3,918.1	125.29	32.272	
6,350.0	6,289.6	6,275.6	6,275.6	15.5	123.8	16.83	1,356.6	-3,689.6	4,020.5	3,898.3	122.18	32.907	
6,397.6	6,329.9	6,315.9	6,315.9	15.4	124.6	17.61	1,356.6	-3,689.6	3,996.0	3,877.2	118.78	33.641	
6,400.0	6,331.8	6,317.8	6,317.8	15.4	124.7	17.65	1,356.6	-3,689.6	3,994.7	3,876.1	118.60	33.681	
6,450.0	6,372.2	6,358.2	6,358.2	15.4	125.5	18.65	1,356.6	-3,689.6	3,966.1	3,851.5	114.67	34.588	
6,496.0	6,407.4	6,393.4	6,393.4	15.4	126.2	19.75	1,356.6	-3,689.6	3,937.5	3,826.7	110.84	35.524	
6,500.0	6,410.3	6,396.3	6,396.3	15.4	126.3	19.86	1,356.6	-3,689.6	3,934.9	3,824.4	110.51	35.608	
6,550.0	6,446.1	6,432.1	6,432.1	15.4	127.0	21.31	1,356.6	-3,689.6	3,901.2	3,794.9	106.32	36.693	
6,594.5	6,475.9	6,461.9	6,461.9	15.4	127.6	22.87	1,356.6	-3,689.6	3,869.3	3,766.5	102.80	37.640	
6,600.0	6,479.4	6,465.4	6,465.4	15.4	127.7	23.08	1,356.6	-3,689.6	3,865.3	3,762.9	102.39	37.751	
6,650.0	6,510.0	6,496.0	6,496.0	15.5	128.3	25.24	1,356.6	-3,689.6	3,827.1	3,728.0	99.10	38.617	
6,692.9	6,534.0	6,520.0	6,520.0	15.7	128.7	27.48	1,356.6	-3,689.6	3,792.9	3,695.7	97.20	39.021	
6,700.0	6,537.8	6,523.8	6,523.8	15.7	128.8	27.89	1,356.6	-3,689.6	3,787.1	3,690.1	97.00	39.043	
6,750.0	6,562.6	6,548.6	6,548.6	16.2	129.3	31.19	1,356.6	-3,689.6	3,745.3	3,648.6	96.74	38.715	
6,791.3	6,580.8	6,566.8	6,566.8	16.6	129.7	34.54	1,356.6	-3,689.6	3,709.6	3,611.1	98.47	37.674	
6,800.0	6,584.3	6,570.3	6,570.3	16.7	129.8	35.33	1,356.6	-3,689.6	3,702.0	3,602.9	99.07	37.366	
6,850.0	6,602.9	6,588.9	6,588.9	17.3	130.1	40.56	1,356.6	-3,689.6	3,657.4	3,552.7	104.65	34.950	
6,889.7	6,615.2	6,601.2	6,601.2	17.9	130.4	45.71	1,356.6	-3,689.6	3,621.1	3,509.5	111.57	32.457	
6,900.0	6,618.1	6,604.1	6,604.1	18.0	130.4	47.20	1,356.6	-3,689.6	3,611.6	3,498.0	113.68	31.769	
6,950.0	6,630.0	6,616.0	6,616.0	18.8	130.7	55.59	1,356.6	-3,689.6	3,565.1	3,439.5	125.57	28.392	
6,988.2	6,636.8	6,622.8	6,622.8	19.5	130.8	63.30	1,356.6	-3,689.6	3,529.1	3,393.7	135.39	26.067	
7,000.0	6,638.5	6,624.5	6,624.5	19.7	130.8	65.91	1,356.6	-3,689.6	3,517.9	3,379.6	138.31	25.435	
7,050.0	6,643.5	6,629.5	6,629.5	20.6	130.9	77.93	1,356.6	-3,689.6	3,470.3	3,321.8	148.45	23.376	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,630.9	6,630.9	21.3	131.0	87.33	1,356.6	-3,689.6	3,435.3	3,283.2	152.12	22.584	
7,097.8	6,645.0	6,631.0	6,631.0	21.5	131.0	90.23	1,356.6	-3,689.6	3,424.6	3,272.2	152.44	22.466	
7,100.0	6,645.0	6,631.0	6,631.0	21.6	131.0	90.23	1,356.6	-3,689.6	3,422.5	3,270.1	152.48	22.446	
7,185.0	6,644.9	6,630.9	6,630.9	23.3	131.0	90.23	1,356.6	-3,689.6	3,341.5	3,187.3	154.20	21.669	
7,200.0	6,644.9	6,630.9	6,630.9	23.6	131.0	90.22	1,356.6	-3,689.6	3,327.2	3,172.7	154.51	21.534	
7,283.4	6,644.8	6,630.8	6,630.8	25.4	131.0	90.22	1,356.6	-3,689.6	3,247.8	3,091.5	156.32	20.777	
7,300.0	6,644.7	6,630.7	6,630.7	25.8	131.0	90.22	1,356.6	-3,689.6	3,232.1	3,075.4	156.68	20.629	
7,381.9	6,644.6	6,630.6	6,630.6	27.7	131.0	90.21	1,356.6	-3,689.6	3,154.5	2,995.9	158.56	19.895	
7,400.0	6,644.6	6,630.6	6,630.6	28.1	131.0	90.21	1,356.6	-3,689.6	3,137.3	2,978.4	158.97	19.735	
7,480.3	6,644.5	6,630.5	6,630.5	30.0	131.0	90.20	1,356.6	-3,689.6	3,061.5	2,900.6	160.88	19.030	
7,500.0	6,644.5	6,630.5	6,630.5	30.5	131.0	90.20	1,356.6	-3,689.6	3,042.9	2,881.6	161.35	18.859	
7,578.7	6,644.4	6,630.4	6,630.4	32.4	131.0	90.20	1,356.6	-3,689.6	2,968.8	2,805.6	163.27	18.183	
7,600.0	6,644.4	6,630.4	6,630.4	32.9	131.0	90.20	1,356.6	-3,689.6	2,948.8	2,785.1	163.79	18.004	
7,677.1	6,644.3	6,630.3	6,630.3	34.8	131.0	90.19	1,356.6	-3,689.6	2,876.5	2,710.8	165.72	17.358	
7,700.0	6,644.2	6,630.2	6,630.2	35.4	131.0	90.19	1,356.6	-3,689.6	2,855.2	2,688.9	166.29	17.170	
7,775.6	6,644.1	6,630.1	6,630.1	37.3	131.0	90.18	1,356.6	-3,689.6	2,784.7	2,616.5	168.21	16.555	
7,800.0	6,644.1	6,630.1	6,630.1	38.0	131.0	90.18	1,356.6	-3,689.6	2,762.0	2,593.1	168.83	16.359	
7,874.0	6,644.0	6,630.0	6,630.0	39.9	131.0	90.18	1,356.6	-3,689.6	2,693.3	2,522.5	170.74	15.774	
7,900.0	6,644.0	6,630.0	6,630.0	40.5	131.0	90.17	1,356.6	-3,689.6	2,669.2	2,497.8	171.41	15.572	
7,972.4	6,643.9	6,629.9	6,629.9	42.4	131.0	90.17	1,356.6	-3,689.6	2,602.4	2,429.1	173.30	15.017	
8,000.0	6,643.9	6,629.9	6,629.9	43.1	131.0	90.17	1,356.6	-3,689.6	2,577.0	2,403.0	174.02	14.809	
8,070.8	6,643.8	6,629.8	6,629.8	45.0	131.0	90.16	1,356.6	-3,689.6	2,512.1	2,336.2	175.88	14.283	
8,100.0	6,643.7	6,629.7	6,629.7	45.8	131.0	90.16	1,356.6	-3,689.6	2,485.5	2,308.8	176.65	14.070	
8,169.3	6,643.7	6,629.7	6,629.7	47.6	131.0	90.16	1,356.6	-3,689.6	2,422.4	2,243.9	178.48	13.572	
8,200.0	6,643.6	6,629.6	6,629.6	48.4	131.0	90.15	1,356.6	-3,689.6	2,394.5	2,215.3	179.30	13.355	
8,267.7	6,643.5	6,629.5	6,629.5	50.2	131.0	90.15	1,356.6	-3,689.6	2,333.4	2,152.3	181.10	12.885	
8,300.0	6,643.5	6,629.5	6,629.5	51.1	131.0	90.15	1,356.6	-3,689.6	2,304.4	2,122.4	181.96	12.664	
8,366.1	6,643.4	6,629.4	6,629.4	52.9	130.9	90.14	1,356.6	-3,689.6	2,245.2	2,061.5	183.74	12.220	
8,400.0	6,643.4	6,629.4	6,629.4	53.8	130.9	90.14	1,356.6	-3,689.6	2,215.1	2,030.4	184.65	11.996	
8,464.5	6,643.3	6,629.3	6,629.3	55.5	130.9	90.13	1,356.6	-3,689.6	2,157.9	1,971.5	186.38	11.578	
8,500.0	6,643.2	6,629.2	6,629.2	56.5	130.9	90.13	1,356.6	-3,689.6	2,126.7	1,939.4	187.34	11.352	
8,563.0	6,643.2	6,629.2	6,629.2	58.2	130.9	90.13	1,356.6	-3,689.6	2,071.6	1,882.6	189.04	10.958	
8,600.0	6,643.1	6,629.1	6,629.1	59.2	130.9	90.13	1,356.6	-3,689.6	2,039.4	1,849.4	190.04	10.731	
8,661.4	6,643.0	6,629.0	6,629.0	60.8	130.9	90.12	1,356.6	-3,689.6	1,986.4	1,794.7	191.71	10.362	
8,700.0	6,643.0	6,629.0	6,629.0	61.9	130.9	90.12	1,356.6	-3,689.6	1,953.4	1,760.6	192.76	10.134	
8,759.8	6,642.9	6,628.9	6,628.9	63.5	130.9	90.11	1,356.6	-3,689.6	1,902.5	1,708.2	194.39	9.787	
8,800.0	6,642.9	6,628.9	6,628.9	64.6	130.9	90.11	1,356.6	-3,689.6	1,868.7	1,673.2	195.48	9.560	
8,858.2	6,642.8	6,628.8	6,628.8	66.2	130.9	90.11	1,356.6	-3,689.6	1,820.1	1,623.0	197.07	9.236	
8,900.0	6,642.7	6,628.7	6,628.7	67.3	130.9	90.10	1,356.6	-3,689.6	1,785.6	1,587.4	198.21	9.009	
8,956.7	6,642.7	6,628.7	6,628.7	68.9	130.9	90.10	1,356.6	-3,689.6	1,739.3	1,539.6	199.76	8.707	
9,000.0	6,642.6	6,628.6	6,628.6	70.1	130.9	90.10	1,356.6	-3,689.6	1,704.3	1,503.4	200.95	8.482	
9,055.1	6,642.5	6,628.5	6,628.5	71.6	130.9	90.09	1,356.6	-3,689.6	1,660.4	1,458.0	202.46	8.201	
9,100.0	6,642.5	6,628.5	6,628.5	72.8	130.9	90.09	1,356.6	-3,689.6	1,625.2	1,421.5	203.69	7.979	
9,153.5	6,642.4	6,628.4	6,628.4	74.3	130.9	90.09	1,356.6	-3,689.6	1,583.8	1,378.6	205.16	7.720	
9,200.0	6,642.4	6,628.4	6,628.4	75.6	130.9	90.08	1,356.6	-3,689.6	1,548.4	1,342.0	206.43	7.501	
9,251.9	6,642.3	6,628.3	6,628.3	77.0	130.9	90.08	1,356.6	-3,689.6	1,509.6	1,301.7	207.86	7.262	
9,300.0	6,642.2	6,628.2	6,628.2	78.3	130.9	90.08	1,356.6	-3,689.6	1,474.4	1,265.2	209.18	7.048	
9,350.4	6,642.2	6,628.2	6,628.2	79.7	130.9	90.07	1,356.6	-3,689.6	1,438.3	1,227.8	210.57	6.831	
9,400.0	6,642.1	6,628.1	6,628.1	81.1	130.9	90.07	1,356.6	-3,689.6	1,403.7	1,191.7	211.94	6.623	
9,448.8	6,642.0	6,628.0	6,628.0	82.4	130.9	90.07	1,356.6	-3,689.6	1,370.5	1,157.2	213.28	6.425	
9,500.0	6,642.0	6,628.0	6,628.0	83.8	130.9	90.06	1,356.6	-3,689.6	1,336.6	1,121.9	214.70	6.226	
9,547.2	6,641.9	6,627.9	6,627.9	85.1	130.9	90.06	1,356.6	-3,689.6	1,306.5	1,090.5	216.00	6.048	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,627.9	6,627.9	86.6	130.9	90.05	1,356.6	-3,689.6	1,274.0	1,056.5	217.46	5.858	
9,645.6	6,641.8	6,627.8	6,627.8	87.9	130.9	90.05	1,356.6	-3,689.6	1,247.0	1,028.3	218.72	5.701	
9,700.0	6,641.7	6,627.7	6,627.7	89.4	130.9	90.05	1,356.6	-3,689.6	1,216.3	996.1	220.22	5.523	
9,744.1	6,641.7	6,627.7	6,627.7	90.6	130.9	90.04	1,356.6	-3,689.6	1,192.6	971.2	221.44	5.386	
9,800.0	6,641.6	6,627.6	6,627.6	92.1	130.9	90.04	1,356.6	-3,689.6	1,164.4	941.4	222.99	5.222	
9,842.5	6,641.6	6,627.6	6,627.6	93.3	130.9	90.04	1,356.6	-3,689.6	1,144.2	920.0	224.17	5.104	
9,900.0	6,641.5	6,627.5	6,627.5	94.9	130.9	90.03	1,356.6	-3,689.6	1,119.0	893.2	225.76	4.956	
9,940.9	6,641.4	6,627.4	6,627.4	96.0	130.9	90.03	1,356.6	-3,689.6	1,102.5	875.6	226.89	4.859	
10,000.0	6,641.4	6,627.4	6,627.4	97.7	130.9	90.03	1,356.6	-3,689.6	1,080.9	852.4	228.53	4.730	
10,039.3	6,641.3	6,627.3	6,627.3	98.8	130.9	90.02	1,356.6	-3,689.6	1,068.2	838.6	229.62	4.652	
10,100.0	6,641.2	6,627.2	6,627.2	100.4	130.9	90.02	1,356.6	-3,689.6	1,051.1	819.8	231.30	4.544	
10,137.8	6,641.2	6,627.2	6,627.2	101.5	130.9	90.02	1,356.6	-3,689.6	1,042.1	809.8	232.35	4.485	
10,200.0	6,641.1	6,627.1	6,627.1	103.2	130.9	90.01	1,356.6	-3,689.6	1,030.1	796.1	234.08	4.401	
10,236.2	6,641.1	6,627.1	6,627.1	104.2	130.9	90.01	1,356.6	-3,689.6	1,024.8	789.8	235.08	4.359	
10,300.0	6,641.0	6,627.0	6,627.0	106.0	130.9	90.00	1,356.6	-3,689.6	1,018.6	781.7	236.86	4.300	
10,334.6	6,640.9	6,626.9	6,626.9	107.0	130.9	90.00	1,356.6	-3,689.6	1,016.9	779.0	237.82	4.276	
10,368.2	6,640.9	6,626.9	6,626.9	107.9	130.9	90.00	1,356.6	-3,689.6	1,016.3	777.6	238.75	4.257 CC	
10,400.0	6,640.9	6,626.9	6,626.9	108.8	130.9	90.00	1,356.6	-3,689.6	1,016.8	777.2	239.64	4.243 ES	
10,433.0	6,640.8	6,626.8	6,626.8	109.7	130.9	90.00	1,356.6	-3,689.6	1,018.4	777.8	240.55	4.233	
10,500.0	6,640.7	6,626.7	6,626.7	111.6	130.9	89.99	1,356.6	-3,689.6	1,024.8	782.4	242.42	4.228 SF	
10,531.5	6,640.7	6,626.7	6,626.7	112.4	130.9	89.99	1,356.6	-3,689.6	1,029.4	786.1	243.29	4.231	
10,600.0	6,640.6	6,626.6	6,626.6	114.3	130.9	89.98	1,356.6	-3,689.6	1,042.4	797.2	245.20	4.251	
10,629.9	6,640.6	6,626.6	6,626.6	115.2	130.9	89.98	1,356.6	-3,689.6	1,049.5	803.4	246.03	4.266	
10,700.0	6,640.5	6,626.5	6,626.5	117.1	130.9	89.98	1,356.6	-3,689.6	1,069.1	821.1	247.98	4.311	
10,728.3	6,640.4	6,626.4	6,626.4	117.9	130.9	89.97	1,356.6	-3,689.6	1,078.2	829.5	248.77	4.334	
10,800.0	6,640.4	6,626.4	6,626.4	119.9	130.9	89.97	1,356.6	-3,689.6	1,104.3	853.5	250.77	4.404	
10,826.7	6,640.3	6,626.3	6,626.3	120.7	130.9	89.97	1,356.6	-3,689.6	1,115.0	863.5	251.51	4.433	
10,900.0	6,640.2	6,626.2	6,626.2	122.7	130.9	89.96	1,356.6	-3,689.6	1,147.1	893.5	253.55	4.524	
10,925.2	6,640.2	6,626.2	6,626.2	123.4	130.9	89.96	1,356.6	-3,689.6	1,158.9	904.7	254.25	4.558	
11,000.0	6,640.1	6,626.1	6,626.1	125.5	130.9	89.96	1,356.6	-3,689.6	1,196.7	940.4	256.34	4.668	
11,023.6	6,640.1	6,626.1	6,626.1	126.1	130.9	89.95	1,356.6	-3,689.6	1,209.3	952.3	256.99	4.706	
11,100.0	6,640.0	6,626.0	6,626.0	128.3	130.9	89.95	1,356.6	-3,689.6	1,252.4	993.3	259.12	4.833	
11,122.0	6,639.9	6,625.9	6,625.9	128.9	130.9	89.95	1,356.6	-3,689.6	1,265.4	1,005.6	259.74	4.872	
11,200.0	6,639.8	6,625.8	6,625.8	131.1	130.9	89.94	1,356.6	-3,689.6	1,313.3	1,051.4	261.91	5.014	
11,220.4	6,639.8	6,625.8	6,625.8	131.6	130.9	89.94	1,356.6	-3,689.6	1,326.4	1,063.9	262.48	5.053	
11,300.0	6,639.7	6,625.7	6,625.7	133.9	130.9	89.93	1,356.6	-3,689.6	1,378.8	1,114.1	264.70	5.209	
11,318.9	6,639.7	6,625.7	6,625.7	134.4	130.9	89.93	1,356.6	-3,689.6	1,391.7	1,126.4	265.23	5.247	
11,400.0	6,639.6	6,625.6	6,625.6	136.7	130.9	89.93	1,356.6	-3,689.6	1,448.3	1,180.8	267.49	5.414	
11,417.3	6,639.6	6,625.6	6,625.6	137.1	130.9	89.93	1,356.6	-3,689.6	1,460.7	1,192.7	267.97	5.451	
11,500.0	6,639.5	6,625.5	6,625.5	139.4	130.9	89.92	1,356.6	-3,689.6	1,521.2	1,250.9	270.28	5.628	
11,515.7	6,639.5	6,625.5	6,625.5	139.9	130.9	89.92	1,356.6	-3,689.6	1,532.9	1,262.2	270.72	5.662	
11,600.0	6,639.3	6,625.3	6,625.3	142.2	130.9	89.91	1,356.6	-3,689.6	1,597.0	1,323.9	273.07	5.848	
11,614.1	6,639.3	6,625.3	6,625.3	142.6	130.9	89.91	1,356.6	-3,689.6	1,607.9	1,334.4	273.47	5.880	
11,700.0	6,639.2	6,625.2	6,625.2	145.0	130.9	89.91	1,356.6	-3,689.6	1,675.3	1,399.4	275.87	6.073	
11,712.6	6,639.2	6,625.2	6,625.2	145.4	130.9	89.90	1,356.6	-3,689.6	1,685.3	1,409.1	276.22	6.101	
11,800.0	6,639.1	6,625.1	6,625.1	147.8	130.9	89.90	1,356.6	-3,689.6	1,755.9	1,477.2	278.66	6.301	
11,811.0	6,639.1	6,625.1	6,625.1	148.1	130.9	89.90	1,356.6	-3,689.6	1,764.8	1,485.9	278.97	6.326	
11,900.0	6,639.0	6,625.0	6,625.0	150.6	130.9	89.89	1,356.6	-3,689.6	1,838.3	1,556.9	281.45	6.532	
11,909.4	6,639.0	6,625.0	6,625.0	150.9	130.9	89.89	1,356.6	-3,689.6	1,846.2	1,564.5	281.71	6.553	
12,000.0	6,638.8	6,624.8	6,624.8	153.4	130.9	89.88	1,356.6	-3,689.6	1,922.4	1,638.2	284.25	6.763	
12,007.8	6,638.8	6,624.8	6,624.8	153.6	130.9	89.88	1,356.6	-3,689.6	1,929.1	1,644.6	284.46	6.782	
12,100.0	6,638.7	6,624.7	6,624.7	156.2	130.9	89.88	1,356.6	-3,689.6	2,008.0	1,721.0	287.04	6.996	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,624.7	6,624.7	156.4	130.9	89.88	1,356.6	-3,689.6	2,013.4	1,726.2	287.21	7.010	
12,200.0	6,638.6	6,624.6	6,624.6	159.0	130.9	89.87	1,356.6	-3,689.6	2,094.9	1,805.0	289.83	7.228	
12,204.7	6,638.6	6,624.6	6,624.6	159.1	130.9	89.87	1,356.6	-3,689.6	2,099.0	1,809.0	289.97	7.239	
12,300.0	6,638.5	6,624.5	6,624.5	161.8	130.8	89.86	1,356.6	-3,689.6	2,182.9	1,890.2	292.63	7.459	
12,303.1	6,638.5	6,624.5	6,624.5	161.9	130.8	89.86	1,356.6	-3,689.6	2,185.6	1,892.9	292.72	7.467	
12,400.0	6,638.3	6,624.3	6,624.3	164.6	130.8	89.86	1,356.6	-3,689.6	2,271.8	1,976.4	295.43	7.690	
12,401.5	6,638.3	6,624.3	6,624.3	164.6	130.8	89.86	1,356.6	-3,689.6	2,273.2	1,977.7	295.47	7.694	
12,500.0	6,638.2	6,624.2	6,624.2	167.4	130.8	89.85	1,356.6	-3,689.6	2,361.7	2,063.5	298.22	7.919	
12,598.4	6,638.1	6,624.1	6,624.1	170.2	130.8	89.84	1,356.6	-3,689.6	2,450.9	2,149.9	300.97	8.143	
12,600.0	6,638.1	6,624.1	6,624.1	170.2	130.8	89.84	1,356.6	-3,689.6	2,452.3	2,151.3	301.02	8.147	
12,696.8	6,638.0	6,624.0	6,624.0	172.9	130.8	89.84	1,356.6	-3,689.6	2,540.8	2,237.0	303.73	8.365	
12,700.0	6,638.0	6,624.0	6,624.0	173.0	130.8	89.83	1,356.6	-3,689.6	2,543.7	2,239.9	303.82	8.372	
12,795.2	6,637.8	6,623.8	6,623.8	175.7	130.8	89.83	1,356.6	-3,689.6	2,631.3	2,324.8	306.48	8.585	
12,800.0	6,637.8	6,623.8	6,623.8	175.8	130.8	89.83	1,356.6	-3,689.6	2,635.7	2,329.0	306.61	8.596	
12,893.7	6,637.7	6,623.7	6,623.7	178.4	130.8	89.82	1,356.6	-3,689.6	2,722.3	2,413.1	309.23	8.803	
12,900.0	6,637.7	6,623.7	6,623.7	178.6	130.8	89.82	1,356.6	-3,689.6	2,728.2	2,418.8	309.41	8.817	
12,992.1	6,637.6	6,623.6	6,623.6	181.2	130.8	89.81	1,356.6	-3,689.6	2,813.9	2,501.9	311.99	9.019	
13,000.0	6,637.6	6,623.6	6,623.6	181.4	130.8	89.81	1,356.6	-3,689.6	2,821.2	2,509.0	312.21	9.036	
13,090.5	6,637.5	6,623.5	6,623.5	183.9	130.8	89.81	1,356.6	-3,689.6	2,905.9	2,591.1	314.74	9.233	
13,100.0	6,637.5	6,623.5	6,623.5	184.2	130.8	89.81	1,356.6	-3,689.6	2,914.7	2,599.7	315.01	9.253	
13,188.9	6,637.4	6,623.4	6,623.4	186.7	130.8	89.80	1,356.6	-3,689.6	2,998.3	2,680.8	317.50	9.444	
13,200.0	6,637.3	6,623.3	6,623.3	187.0	130.8	89.80	1,356.6	-3,689.6	3,008.7	2,690.9	317.80	9.467	
13,287.4	6,637.2	6,623.2	6,623.2	189.4	130.8	89.79	1,356.6	-3,689.6	3,091.1	2,770.8	320.25	9.652	
13,300.0	6,637.2	6,623.2	6,623.2	189.8	130.8	89.79	1,356.6	-3,689.6	3,103.0	2,782.4	320.60	9.679	
13,385.8	6,637.1	6,623.1	6,623.1	192.2	130.8	89.79	1,356.6	-3,689.6	3,184.2	2,861.2	323.01	9.858	
13,400.0	6,637.1	6,623.1	6,623.1	192.6	130.8	89.79	1,356.6	-3,689.6	3,197.6	2,874.2	323.40	9.887	
13,484.2	6,637.0	6,623.0	6,623.0	195.0	130.8	89.78	1,356.6	-3,689.6	3,277.6	2,951.8	325.76	10.061	
13,500.0	6,637.0	6,623.0	6,623.0	195.4	130.8	89.78	1,356.6	-3,689.6	3,292.6	2,966.4	326.20	10.094	
13,582.6	6,636.9	6,622.9	6,622.9	197.7	130.8	89.77	1,356.6	-3,689.6	3,371.3	3,042.8	328.52	10.262	
13,600.0	6,636.8	6,622.8	6,622.8	198.2	130.8	89.77	1,356.6	-3,689.6	3,387.9	3,058.9	329.00	10.297	
13,681.1	6,636.7	6,622.7	6,622.7	200.5	130.8	89.77	1,356.6	-3,689.6	3,465.3	3,134.0	331.27	10.461	
13,700.0	6,636.7	6,622.7	6,622.7	201.0	130.8	89.76	1,356.6	-3,689.6	3,483.4	3,151.6	331.80	10.498	
13,779.5	6,636.6	6,622.6	6,622.6	203.2	130.8	89.76	1,356.6	-3,689.6	3,559.5	3,225.5	334.03	10.656	
13,800.0	6,636.6	6,622.6	6,622.6	203.8	130.8	89.76	1,356.6	-3,689.6	3,579.1	3,244.5	334.60	10.697	
13,877.9	6,636.5	6,622.5	6,622.5	206.0	130.8	89.75	1,356.6	-3,689.6	3,653.9	3,317.1	336.78	10.849	
13,900.0	6,636.5	6,622.5	6,622.5	206.6	130.8	89.75	1,356.6	-3,689.6	3,675.1	3,337.7	337.40	10.892	
13,976.3	6,636.4	6,622.4	6,622.4	208.8	130.8	89.74	1,356.6	-3,689.6	3,748.6	3,409.0	339.54	11.040	
14,000.0	6,636.3	6,622.3	6,622.3	209.4	130.8	89.74	1,356.6	-3,689.6	3,771.3	3,431.1	340.20	11.086	
14,074.8	6,636.2	6,622.2	6,622.2	211.5	130.8	89.74	1,356.6	-3,689.6	3,843.4	3,501.1	342.30	11.228	
14,100.0	6,636.2	6,622.2	6,622.2	212.2	130.8	89.74	1,356.6	-3,689.6	3,867.7	3,524.7	343.00	11.276	
14,173.2	6,636.1	6,622.1	6,622.1	214.3	130.8	89.73	1,356.6	-3,689.6	3,938.4	3,593.4	345.05	11.414	
14,200.0	6,636.1	6,622.1	6,622.1	215.0	130.8	89.73	1,356.6	-3,689.6	3,964.3	3,618.5	345.80	11.464	
14,271.6	6,636.0	6,622.0	6,622.0	217.0	130.8	89.72	1,356.6	-3,689.6	4,033.6	3,685.8	347.81	11.597	
14,300.0	6,636.0	6,622.0	6,622.0	217.8	130.8	89.72	1,356.6	-3,689.6	4,061.1	3,712.4	348.61	11.649	
14,370.0	6,635.9	6,621.9	6,621.9	219.8	130.8	89.72	1,356.6	-3,689.6	4,128.9	3,778.3	350.57	11.778	
14,400.0	6,635.8	6,621.8	6,621.8	220.6	130.8	89.71	1,356.6	-3,689.6	4,157.9	3,806.5	351.41	11.832	
14,468.5	6,635.7	6,621.7	6,621.7	222.6	130.8	89.71	1,356.6	-3,689.6	4,224.4	3,871.0	353.33	11.956	
14,500.0	6,635.7	6,621.7	6,621.7	223.4	130.8	89.71	1,356.6	-3,689.6	4,255.0	3,900.8	354.21	12.013	
14,566.9	6,635.6	6,621.6	6,621.6	225.3	130.8	89.70	1,356.6	-3,689.6	4,320.0	3,963.9	356.08	12.132	
14,600.0	6,635.6	6,621.6	6,621.6	226.2	130.8	89.70	1,356.6	-3,689.6	4,352.2	3,995.1	357.01	12.191	
14,665.3	6,635.5	6,621.5	6,621.5	228.1	130.8	89.70	1,356.6	-3,689.6	4,415.7	4,056.9	358.84	12.305	
14,700.0	6,635.5	6,621.5	6,621.5	229.0	130.8	89.69	1,356.6	-3,689.6	4,449.4	4,089.6	359.81	12.366	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
14,763.7	6,635.4	6,621.4	6,621.4	230.8	130.8	89.69	1,356.6	-3,689.6	4,511.5	4,149.9	361.60	12.477	
14,800.0	6,635.3	6,621.3	6,621.3	231.8	130.8	89.69	1,356.6	-3,689.6	4,546.9	4,184.2	362.61	12.539	
14,862.2	6,635.2	6,621.2	6,621.2	233.6	130.8	89.68	1,356.6	-3,689.6	4,607.5	4,243.1	364.36	12.646	
14,900.0	6,635.2	6,621.2	6,621.2	234.7	130.8	89.68	1,356.6	-3,689.6	4,644.4	4,279.0	365.42	12.710	
14,960.6	6,635.1	6,621.1	6,621.1	236.4	130.8	89.67	1,356.6	-3,689.6	4,703.5	4,336.4	367.11	12.812	
14,995.1	6,635.0	6,621.0	6,621.0	237.3	130.8	89.67	1,356.6	-3,689.6	4,737.3	4,369.2	368.08	12.870	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-88.56	60.6	-2,405.3	2,406.4				
98.4	98.4	79.9	79.9	0.1	0.0	-88.56	60.4	-2,405.0	2,405.8	2,405.7	0.11	N/A	
100.0	100.0	81.9	81.9	0.1	0.0	-88.56	60.4	-2,405.0	2,405.8	2,405.7	0.11	N/A	
196.8	196.8	165.6	165.6	0.3	0.1	-88.57	60.1	-2,404.4	2,405.2	2,404.8	0.37	6,462.301	
200.0	200.0	168.1	168.1	0.3	0.1	-88.57	60.1	-2,404.4	2,405.2	2,404.8	0.38	6,318.982	
238.0	238.0	200.0	200.0	0.4	0.1	-88.57	60.1	-2,404.4	2,405.1	2,404.6	0.48	4,976.694	
295.3	295.3	258.8	258.8	0.5	0.1	-88.57	60.0	-2,404.4	2,405.1	2,404.5	0.66	3,630.546	
300.0	300.0	263.8	263.8	0.5	0.1	-88.57	60.0	-2,404.4	2,405.1	2,404.4	0.68	3,550.531	
393.7	393.7	374.4	374.4	0.8	0.2	-88.57	59.8	-2,404.0	2,404.8	2,403.8	0.96	2,515.112	
400.0	400.0	382.2	382.2	0.8	0.2	-88.57	59.9	-2,403.9	2,404.7	2,403.8	0.97	2,468.578	
492.1	492.1	461.5	461.5	1.0	0.2	-88.56	60.2	-2,403.3	2,404.1	2,402.9	1.22	1,973.160	
500.0	500.0	467.8	467.8	1.0	0.2	-88.56	60.2	-2,403.3	2,404.1	2,402.9	1.24	1,940.359	
590.5	590.5	565.9	565.9	1.2	0.3	-88.56	60.3	-2,403.2	2,404.0	2,402.5	1.46	1,644.953	
600.0	600.0	578.4	578.4	1.2	0.3	-88.56	60.3	-2,403.1	2,403.9	2,402.4	1.48	1,620.524	
689.0	689.0	659.8	659.8	1.4	0.3	-88.57	60.0	-2,402.5	2,403.3	2,401.6	1.70	1,411.302	
700.0	700.0	668.9	668.9	1.4	0.3	-88.57	60.0	-2,402.5	2,403.3	2,401.5	1.73	1,388.821	
787.4	787.4	770.7	770.7	1.6	0.3	-88.57	60.0	-2,402.1	2,403.0	2,401.0	1.97	1,219.684	
800.0	800.0	788.7	788.7	1.7	0.3	-88.57	60.0	-2,402.0	2,402.9	2,400.9	2.01	1,197.016	
885.8	885.8	871.2	871.2	1.9	0.4	-88.57	60.0	-2,401.0	2,401.9	2,399.7	2.25	1,066.819	
900.0	900.0	884.2	884.2	1.9	0.4	-88.57	60.0	-2,400.9	2,401.8	2,399.5	2.29	1,048.073	
984.2	984.2	959.7	959.7	2.1	0.4	-88.57	59.9	-2,400.4	2,401.1	2,398.6	2.52	953.869	
1,000.0	1,000.0	973.7	973.7	2.1	0.4	-88.57	59.9	-2,400.3	2,401.1	2,398.5	2.56	938.315	
1,081.3	1,081.3	1,043.3	1,043.3	2.3	0.5	-88.57	59.7	-2,400.1	2,400.8	2,398.1	2.75	871.849	
1,082.7	1,082.7	1,044.5	1,044.4	2.3	0.5	-88.57	59.7	-2,400.1	2,400.8	2,398.1	2.76	870.866	
1,100.0	1,100.0	1,059.0	1,058.9	2.3	0.5	-88.57	59.8	-2,400.1	2,400.9	2,398.1	2.80	858.704	
1,181.1	1,181.1	1,134.7	1,134.7	2.5	0.5	-88.56	60.2	-2,400.4	2,401.1	2,398.1	2.99	801.791	
1,200.0	1,200.0	1,155.2	1,155.2	2.6	0.5	-88.56	60.4	-2,400.4	2,401.2	2,398.1	3.05	788.072	
1,279.5	1,279.5	1,235.0	1,234.9	2.7	0.5	-88.55	60.8	-2,400.6	2,401.4	2,398.1	3.25	738.673	
1,300.0	1,300.0	1,253.7	1,253.7	2.8	0.5	-88.55	60.8	-2,400.6	2,401.4	2,398.1	3.30	727.958	
1,377.9	1,377.9	1,330.0	1,330.0	3.0	0.5	-129.75	60.6	-2,401.0	2,402.5	2,399.0	3.49	688.886	
1,400.0	1,400.0	1,354.3	1,354.3	3.0	0.5	-129.76	60.5	-2,401.1	2,403.0	2,399.4	3.55	677.747	
1,476.4	1,476.3	1,442.5	1,442.5	3.2	0.5	-129.80	60.4	-2,401.2	2,405.4	2,401.7	3.73	644.510	
1,500.0	1,499.8	1,471.3	1,471.3	3.2	0.5	-129.82	60.4	-2,401.1	2,406.3	2,402.6	3.79	635.669	
1,574.8	1,574.4	1,558.8	1,558.7	3.4	0.6	-129.91	60.1	-2,400.5	2,409.8	2,405.8	3.98	605.951	
1,600.0	1,599.5	1,587.6	1,587.5	3.5	0.6	-129.95	59.8	-2,400.2	2,411.2	2,407.1	4.04	596.212	
1,673.2	1,672.2	1,653.0	1,652.9	3.6	0.6	-130.03	58.9	-2,399.6	2,416.0	2,411.8	4.24	569.376	
1,700.0	1,698.7	1,675.6	1,675.6	3.7	0.6	-130.06	58.7	-2,399.4	2,418.1	2,413.8	4.32	560.273	
1,771.6	1,769.5	1,746.5	1,746.4	3.9	0.6	-130.16	58.2	-2,399.1	2,424.8	2,420.3	4.52	536.595	
1,800.0	1,797.5	1,777.2	1,777.1	4.0	0.6	-131.01	58.2	-2,398.9	2,427.7	2,423.1	4.60	527.917	
1,870.1	1,866.3	1,844.4	1,844.4	4.2	0.7	-130.31	58.4	-2,398.4	2,435.7	2,430.9	4.81	506.029	
1,899.9	1,895.6	1,871.5	1,871.4	4.3	0.7	-130.35	58.5	-2,398.2	2,439.5	2,434.6	4.91	497.306	
1,968.5	1,962.6	1,948.9	1,948.9	4.5	0.7	-130.64	58.6	-2,397.7	2,448.4	2,443.3	5.12	477.889	
2,000.0	1,993.4	1,990.6	1,990.6	4.6	0.7	-130.79	58.6	-2,397.2	2,452.4	2,447.1	5.22	469.427	
2,066.9	2,058.9	2,048.1	2,048.0	4.8	0.7	-131.01	58.3	-2,396.4	2,460.7	2,455.2	5.44	452.410	
2,100.0	2,091.3	2,074.6	2,074.5	4.9	0.7	-131.11	58.2	-2,396.2	2,464.9	2,459.4	5.54	444.606	
2,165.3	2,155.2	2,124.6	2,124.6	5.2	0.8	-131.30	57.8	-2,395.8	2,473.6	2,467.8	5.76	429.797	
2,200.0	2,189.1	2,150.0	2,149.9	5.3	0.8	-131.40	57.6	-2,395.8	2,478.4	2,472.5	5.87	422.510	
2,263.8	2,251.5	2,200.0	2,199.9	5.5	0.8	-131.58	57.5	-2,396.0	2,487.5	2,481.4	6.07	409.767	
2,300.0	2,286.9	2,237.7	2,237.7	5.7	0.8	-131.72	57.6	-2,396.2	2,492.8	2,486.6	6.19	402.821	
2,362.2	2,347.7	2,308.3	2,308.2	5.9	0.8	-131.97	57.8	-2,396.4	2,501.6	2,495.2	6.40	391.069	
2,400.0	2,384.7	2,339.4	2,339.3	6.0	0.8	-132.07	57.9	-2,396.4	2,507.0	2,500.5	6.52	384.452	
2,460.6	2,444.0	2,389.1	2,389.0	6.3	0.8	-132.25	58.0	-2,396.7	2,515.9	2,509.2	6.72	374.197	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,482.5	2,424.4	2,424.3	6.4	0.8	-132.37	58.0	-2,396.9	2,521.8	2,514.9	6.86	367.715	
2,559.0	2,540.3	2,479.6	2,479.5	6.7	0.8	-132.57	57.9	-2,397.4	2,530.6	2,523.6	7.07	358.193	
2,600.0	2,580.3	2,521.4	2,521.3	6.8	0.8	-132.72	57.9	-2,397.8	2,536.9	2,529.6	7.21	352.019	
2,657.5	2,636.5	2,585.8	2,585.7	7.1	0.8	-132.93	58.1	-2,398.2	2,545.5	2,538.1	7.40	343.785	
2,700.0	2,678.1	2,626.0	2,625.9	7.2	0.8	-133.06	58.5	-2,398.4	2,551.8	2,544.2	7.55	337.914	
2,755.9	2,732.8	2,674.5	2,674.5	7.5	0.8	-133.22	58.8	-2,398.8	2,560.2	2,552.4	7.75	330.449	
2,800.0	2,776.0	2,717.5	2,717.4	7.7	0.8	-133.37	58.9	-2,399.2	2,566.9	2,559.0	7.90	324.835	
2,854.3	2,829.1	2,781.9	2,781.8	7.9	0.8	-133.58	59.3	-2,399.5	2,575.1	2,567.0	8.09	318.110	
2,900.0	2,873.8	2,826.3	2,826.2	8.1	0.9	-133.72	59.7	-2,399.7	2,581.9	2,573.6	8.26	312.755	
2,952.7	2,925.4	2,871.9	2,871.8	8.3	0.9	-133.87	59.9	-2,399.9	2,589.8	2,581.4	8.44	306.829	
3,000.0	2,971.6	2,920.4	2,920.3	8.5	0.9	-134.03	60.0	-2,400.3	2,597.0	2,588.4	8.61	301.794	
3,051.2	3,021.6	2,991.7	2,991.6	8.7	0.9	-134.25	60.5	-2,400.4	2,604.5	2,595.8	8.78	296.544	
3,100.0	3,069.4	3,035.2	3,035.1	8.9	0.9	-134.38	61.1	-2,400.3	2,611.6	2,602.6	8.95	291.691	
3,149.6	3,117.9	3,075.9	3,075.8	9.1	0.9	-134.51	61.4	-2,400.3	2,618.9	2,609.8	9.13	286.915	
3,200.0	3,167.2	3,126.8	3,126.7	9.3	0.9	-134.67	61.5	-2,400.4	2,626.4	2,617.1	9.30	282.268	
3,248.0	3,214.2	3,188.4	3,188.3	9.5	0.9	-134.87	62.0	-2,400.3	2,633.5	2,624.0	9.47	277.959	
3,300.0	3,265.0	3,243.0	3,242.9	9.8	0.9	-135.03	62.4	-2,400.1	2,640.9	2,631.2	9.66	273.468	
3,346.4	3,310.5	3,289.5	3,289.4	10.0	0.9	-135.18	62.6	-2,399.8	2,647.5	2,637.7	9.82	269.608	
3,400.0	3,362.9	3,339.7	3,339.5	10.2	0.9	-135.34	62.6	-2,399.5	2,655.2	2,645.2	10.01	265.255	
3,444.9	3,406.7	3,381.0	3,380.9	10.4	0.9	-135.47	62.7	-2,399.3	2,661.7	2,651.5	10.17	261.712	
3,473.0	3,434.2	3,400.0	3,399.9	10.5	0.9	-135.53	62.8	-2,399.2	2,665.8	2,655.5	10.27	259.573	
3,500.0	3,460.7	3,429.2	3,429.1	10.6	1.0	-135.67	62.9	-2,399.1	2,669.6	2,659.3	10.35	257.922	
3,543.3	3,503.2	3,465.8	3,465.7	10.7	1.0	-135.85	63.2	-2,399.1	2,675.6	2,665.1	10.46	255.801	
3,600.0	3,559.0	3,516.6	3,516.5	10.9	1.0	-136.08	63.5	-2,399.2	2,682.8	2,672.2	10.60	253.101	
3,641.7	3,600.2	3,558.9	3,558.8	11.0	1.0	-136.24	63.7	-2,399.3	2,687.6	2,676.9	10.69	251.432	
3,700.0	3,657.9	3,614.4	3,614.3	11.2	1.0	-136.44	63.6	-2,399.3	2,693.6	2,682.8	10.82	249.037	
3,740.1	3,697.8	3,646.9	3,646.8	11.3	1.0	-136.55	63.6	-2,399.4	2,697.3	2,686.4	10.90	247.504	
3,800.0	3,757.3	3,700.0	3,699.9	11.4	1.0	-136.70	63.4	-2,399.8	2,702.3	2,691.3	11.02	245.184	
3,838.6	3,795.7	3,742.3	3,742.2	11.5	1.0	-136.80	63.4	-2,400.1	2,705.1	2,694.0	11.09	243.847	
3,900.0	3,857.0	3,817.2	3,817.1	11.7	1.0	-136.92	63.5	-2,400.3	2,708.5	2,697.3	11.21	241.663	
3,937.0	3,893.9	3,855.6	3,855.4	11.7	1.0	-136.97	63.4	-2,400.3	2,710.0	2,698.7	11.26	240.577	
4,000.0	3,956.9	3,925.2	3,925.1	11.8	1.0	-137.04	62.7	-2,400.2	2,711.6	2,700.2	11.37	238.520	
4,035.4	3,992.3	3,969.7	3,969.6	11.9	1.0	-137.08	61.9	-2,400.0	2,712.0	2,700.5	11.43	237.321	
4,072.9	4,029.8	4,017.7	4,017.6	11.9	1.0	-95.92	60.8	-2,399.5	2,711.9	2,700.1	11.81	229.598	
4,100.0	4,056.9	4,053.7	4,053.5	12.0	1.0	-95.94	59.8	-2,399.0	2,711.6	2,699.7	11.86	228.566	
4,133.8	4,090.7	4,098.7	4,098.5	12.0	1.0	-95.97	58.2	-2,398.2	2,711.1	2,699.1	11.93	227.164	
4,200.0	4,156.9	4,175.8	4,175.5	12.1	1.1	-96.04	55.4	-2,396.4	2,709.8	2,697.7	12.07	224.488	
4,232.3	4,189.2	4,200.0	4,199.7	12.2	1.1	-96.06	54.4	-2,395.8	2,709.1	2,697.0	12.14	223.248	
4,300.0	4,256.9	4,263.1	4,262.7	12.3	1.1	-96.11	51.9	-2,394.3	2,707.8	2,695.6	12.27	220.655	
4,330.7	4,287.6	4,287.5	4,287.1	12.4	1.1	-96.14	51.0	-2,393.8	2,707.4	2,695.0	12.33	219.518	
4,400.0	4,356.9	4,350.9	4,350.5	12.5	1.1	-96.19	48.4	-2,392.7	2,706.5	2,694.0	12.47	216.972	
4,429.1	4,386.0	4,378.5	4,378.1	12.5	1.1	-96.22	47.3	-2,392.3	2,706.2	2,693.7	12.53	215.910	
4,500.0	4,456.9	4,449.5	4,449.0	12.6	1.1	-96.27	44.8	-2,391.3	2,705.4	2,692.7	12.68	213.367	
4,527.5	4,484.4	4,477.7	4,477.2	12.7	1.1	-96.29	44.0	-2,390.8	2,705.1	2,692.4	12.74	212.389	
4,600.0	4,556.9	4,559.1	4,558.5	12.8	1.1	-96.33	42.0	-2,389.6	2,704.2	2,691.3	12.89	209.826	
4,626.0	4,582.9	4,589.3	4,588.7	12.9	1.1	-96.35	41.4	-2,389.1	2,703.8	2,690.8	12.94	208.907	
4,700.0	4,656.9	4,654.8	4,654.2	13.0	1.2	-96.38	40.0	-2,387.9	2,702.7	2,689.6	13.09	206.391	
4,724.4	4,681.3	4,675.5	4,674.9	13.0	1.2	-96.39	39.5	-2,387.6	2,702.4	2,689.2	13.15	205.577	
4,800.0	4,756.9	4,742.2	4,741.6	13.1	1.2	-96.43	37.8	-2,386.7	2,701.6	2,688.3	13.30	203.092	
4,822.8	4,779.7	4,762.9	4,762.2	13.2	1.2	-96.44	37.4	-2,386.5	2,701.4	2,688.1	13.35	202.351	
4,900.0	4,856.9	4,830.6	4,829.9	13.3	1.2	-96.46	36.3	-2,386.0	2,701.0	2,687.5	13.51	199.910	
4,921.2	4,878.1	4,848.5	4,847.8	13.4	1.2	-96.47	36.0	-2,385.9	2,700.9	2,687.3	13.56	199.252	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	4,956.9	4,925.4	4,924.7	13.5	1.2	-96.49	34.9	-2,385.7	2,700.8	2,687.1	13.72	196.841					
5,019.7	4,976.6	4,953.6	4,952.9	13.5	1.2	-96.50	34.6	-2,385.5	2,700.7	2,687.0	13.76	196.222					
5,100.0	5,056.9	5,044.1	5,043.4	13.7	1.2	-96.52	33.9	-2,384.7	2,700.0	2,686.1	13.93	193.759					
5,118.1	5,075.0	5,060.7	5,060.1	13.7	1.2	-96.52	33.8	-2,384.5	2,699.9	2,685.9	13.97	193.218					
5,200.0	5,156.9	5,137.8	5,137.1	13.8	1.3	-96.53	33.5	-2,383.9	2,699.2	2,685.1	14.14	190.842					
5,216.5	5,173.4	5,153.7	5,153.0	13.9	1.3	-96.53	33.5	-2,383.8	2,699.1	2,685.0	14.18	190.374					
5,300.0	5,256.9	5,236.0	5,235.3	14.0	1.3	-96.52	33.7	-2,383.3	2,698.6	2,684.3	14.35	188.047					
5,314.9	5,271.8	5,251.2	5,250.5	14.1	1.3	-96.52	33.8	-2,383.2	2,698.5	2,684.2	14.38	187.634					
5,400.0	5,356.9	5,336.7	5,336.0	14.2	1.3	-96.51	34.3	-2,382.7	2,698.0	2,683.4	14.56	185.323					
5,413.4	5,370.3	5,349.9	5,349.2	14.2	1.3	-96.51	34.4	-2,382.7	2,697.9	2,683.3	14.59	184.965					
5,500.0	5,456.9	5,439.7	5,439.0	14.4	1.3	-96.49	35.4	-2,382.2	2,697.4	2,682.6	14.77	182.672					
5,511.8	5,468.7	5,452.7	5,452.0	14.4	1.3	-96.49	35.5	-2,382.1	2,697.3	2,682.5	14.79	182.360					
5,600.0	5,556.9	5,553.3	5,552.6	14.6	1.3	-96.46	36.9	-2,381.3	2,696.4	2,681.4	14.98	180.049					
5,610.2	5,567.1	5,565.3	5,564.6	14.6	1.3	-96.46	37.0	-2,381.1	2,696.3	2,681.3	15.00	179.782					
5,700.0	5,656.9	5,648.2	5,647.5	14.7	1.4	-96.45	37.5	-2,380.1	2,695.1	2,679.9	15.18	177.488					
5,708.6	5,665.5	5,655.1	5,654.4	14.8	1.4	-96.45	37.6	-2,380.0	2,695.0	2,679.8	15.20	177.272					
5,800.0	5,756.9	5,749.0	5,748.2	14.9	1.4	-96.44	38.2	-2,379.3	2,694.2	2,678.8	15.40	175.006					
5,807.1	5,764.0	5,758.8	5,758.0	14.9	1.4	-96.44	38.2	-2,379.2	2,694.2	2,678.8	15.41	174.827					
5,900.0	5,856.9	5,845.6	5,844.9	15.1	1.4	-96.43	38.7	-2,378.1	2,692.9	2,677.3	15.60	172.573					
5,905.5	5,862.4	5,849.6	5,848.9	15.1	1.4	-96.43	38.7	-2,378.0	2,692.9	2,677.3	15.62	172.445					
5,971.9	5,928.8	5,900.0	5,899.3	15.3	1.4	-96.42	39.1	-2,377.8	2,692.5	2,676.7	15.75	170.921					
6,000.0	5,956.9	5,929.6	5,928.9	15.3	1.4	-6.43	39.3	-2,377.7	2,691.9	2,676.4	15.52	173.420					
6,003.9	5,960.8	5,934.3	5,933.6	15.3	1.4	-6.43	39.3	-2,377.7	2,691.7	2,676.2	15.53	173.323					
6,050.0	6,006.7	5,989.2	5,988.5	15.4	1.4	-6.46	39.7	-2,377.4	2,687.9	2,672.3	15.64	171.850					
6,100.0	6,056.2	6,035.4	6,034.6	15.4	1.4	-6.54	40.1	-2,377.1	2,680.4	2,664.7	15.79	169.784					
6,102.3	6,058.5	6,037.4	6,036.6	15.4	1.4	-6.55	40.1	-2,377.1	2,680.0	2,664.2	15.79	169.680					
6,150.0	6,105.1	6,078.1	6,077.3	15.4	1.4	-6.66	40.5	-2,377.0	2,669.7	2,653.7	15.94	167.519					
6,200.0	6,153.0	6,127.9	6,127.2	15.5	1.4	-6.82	40.9	-2,376.9	2,655.6	2,639.5	16.07	165.235					
6,200.8	6,153.8	6,128.8	6,128.1	15.5	1.4	-6.83	40.9	-2,376.9	2,655.4	2,639.3	16.07	165.200					
6,250.0	6,199.9	6,185.0	6,184.2	15.5	1.5	-7.05	41.2	-2,376.5	2,638.1	2,621.9	16.18	163.030					
6,299.2	6,244.8	6,225.6	6,224.9	15.5	1.5	-7.33	41.3	-2,376.2	2,617.7	2,601.4	16.25	161.137					
6,300.0	6,245.5	6,226.2	6,225.4	15.5	1.5	-7.33	41.3	-2,376.2	2,617.3	2,601.1	16.25	161.109					
6,350.0	6,289.6	6,261.0	6,260.3	15.5	1.5	-7.67	41.3	-2,376.0	2,593.6	2,577.3	16.26	159.467					
6,397.6	6,329.9	6,300.0	6,299.3	15.4	1.5	-8.07	41.2	-2,375.9	2,568.4	2,552.1	16.25	158.082					
6,400.0	6,331.8	6,300.0	6,299.3	15.4	1.5	-8.09	41.2	-2,375.9	2,567.0	2,550.8	16.24	158.033					
6,450.0	6,372.2	6,340.8	6,340.0	15.4	1.5	-8.61	41.1	-2,375.9	2,537.7	2,521.5	16.19	156.777					
6,496.0	6,407.4	6,383.3	6,382.6	15.4	1.5	-9.22	41.1	-2,375.7	2,508.1	2,492.0	16.11	155.699					
6,500.0	6,410.3	6,386.9	6,386.1	15.4	1.5	-9.28	41.1	-2,375.7	2,505.4	2,489.3	16.10	155.615					
6,550.0	6,446.1	6,420.3	6,419.6	15.4	1.5	-10.06	41.0	-2,375.5	2,470.6	2,454.6	15.98	154.653					
6,594.5	6,475.9	6,444.7	6,443.9	15.4	1.5	-10.88	41.0	-2,375.4	2,437.7	2,421.8	15.84	153.850					
6,600.0	6,479.4	6,447.6	6,446.8	15.4	1.5	-11.00	41.0	-2,375.4	2,433.5	2,417.7	15.83	153.755					
6,650.0	6,510.0	6,472.8	6,472.1	15.5	1.5	-12.17	41.0	-2,375.4	2,394.2	2,378.6	15.68	152.733					
6,692.9	6,534.0	6,500.0	6,499.2	15.7	1.5	-13.48	41.0	-2,375.4	2,359.0	2,343.4	15.57	151.470					
6,700.0	6,537.8	6,500.0	6,499.2	15.7	1.5	-13.69	41.0	-2,375.4	2,353.0	2,337.5	15.55	151.301					
6,750.0	6,562.6	6,521.4	6,520.7	16.2	1.5	-15.62	41.0	-2,375.4	2,310.0	2,294.6	15.48	149.202					
6,791.3	6,580.8	6,541.0	6,540.3	16.6	1.5	-17.75	41.0	-2,375.5	2,273.3	2,257.8	15.51	146.545					
6,800.0	6,584.3	6,544.9	6,544.1	16.7	1.5	-18.27	41.0	-2,375.5	2,265.4	2,249.9	15.54	145.766					
6,850.0	6,602.9	6,564.8	6,564.0	17.3	1.5	-21.92	40.9	-2,375.5	2,219.4	2,203.6	15.82	140.304					
6,889.7	6,615.2	6,578.1	6,577.3	17.9	1.5	-25.90	40.9	-2,375.5	2,182.0	2,165.7	16.30	133.889					
6,900.0	6,618.1	6,581.1	6,580.3	18.0	1.5	-27.15	40.9	-2,375.5	2,172.3	2,155.8	16.47	131.907					
6,950.0	6,630.0	6,593.8	6,593.0	18.8	1.5	-35.02	40.8	-2,375.5	2,124.2	2,106.5	17.70	120.003					
6,988.2	6,636.8	6,600.9	6,600.2	19.5	1.5	-43.92	40.8	-2,375.5	2,087.0	2,067.8	19.14	109.029					

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.5	6,602.7	6,602.0	19.7	1.5	-47.39	40.8	-2,375.5	2,075.4	2,055.8	19.66	105.573	
7,050.0	6,643.5	6,600.0	6,599.2	20.6	1.5	-65.36	40.8	-2,375.5	2,026.2	2,004.5	21.74	93.207	
7,086.6	6,644.9	6,600.0	6,599.2	21.3	1.5	-83.14	40.8	-2,375.5	1,990.1	1,967.5	22.60	88.040	
7,097.8	6,645.0	6,600.0	6,599.2	21.5	1.5	-88.99	40.8	-2,375.5	1,979.0	1,956.1	22.84	86.638	
7,100.0	6,645.0	6,600.0	6,599.2	21.6	1.5	-88.99	40.8	-2,375.5	1,976.8	1,953.9	22.88	86.384	
7,185.0	6,644.9	6,600.0	6,599.2	23.3	1.5	-88.99	40.8	-2,375.5	1,892.8	1,868.2	24.61	76.912	
7,200.0	6,644.9	6,600.0	6,599.2	23.6	1.5	-88.99	40.8	-2,375.5	1,878.0	1,853.1	24.91	75.380	
7,283.4	6,644.8	6,600.0	6,599.2	25.4	1.5	-88.99	40.8	-2,375.5	1,795.7	1,769.0	26.73	67.176	
7,300.0	6,644.7	6,600.0	6,599.2	25.8	1.5	-88.99	40.8	-2,375.5	1,779.4	1,752.3	27.09	65.680	
7,381.9	6,644.6	6,600.0	6,599.2	27.7	1.5	-88.99	40.8	-2,375.5	1,698.7	1,669.8	28.97	58.643	
7,400.0	6,644.6	6,600.0	6,599.2	28.1	1.5	-88.99	40.8	-2,375.5	1,680.9	1,651.5	29.38	57.207	
7,480.3	6,644.5	6,600.0	6,599.2	30.0	1.5	-88.99	40.8	-2,375.5	1,601.9	1,570.7	31.29	51.193	
7,500.0	6,644.5	6,600.0	6,599.2	30.5	1.5	-88.99	40.8	-2,375.5	1,582.6	1,550.8	31.76	49.829	
7,578.7	6,644.4	6,600.0	6,599.2	32.4	1.5	-88.99	40.8	-2,375.5	1,505.4	1,471.7	33.69	44.687	
7,600.0	6,644.4	6,600.0	6,599.2	32.9	1.5	-88.99	40.8	-2,375.5	1,484.5	1,450.3	34.21	43.398	
7,677.1	6,644.3	6,600.0	6,599.2	34.8	1.5	-88.99	40.8	-2,375.5	1,409.0	1,372.9	36.14	38.992	
7,700.0	6,644.2	6,600.0	6,599.2	35.4	1.5	-88.99	40.8	-2,375.5	1,386.7	1,350.0	36.71	37.777	
7,775.6	6,644.1	6,600.0	6,599.2	37.3	1.5	-88.99	40.8	-2,375.5	1,313.0	1,274.4	38.63	33.989	
7,800.0	6,644.1	6,600.0	6,599.2	38.0	1.5	-88.99	40.8	-2,375.5	1,289.3	1,250.0	39.25	32.846	
7,874.0	6,644.0	6,600.0	6,599.2	39.9	1.5	-88.99	40.8	-2,375.5	1,217.4	1,176.3	41.16	29.577	
7,900.0	6,644.0	6,600.0	6,599.2	40.5	1.5	-88.99	40.8	-2,375.5	1,192.2	1,150.4	41.83	28.501	
7,972.4	6,643.9	6,600.0	6,599.2	42.4	1.5	-88.99	40.8	-2,375.5	1,122.3	1,078.6	43.72	25.669	
8,000.0	6,643.9	6,600.0	6,599.2	43.1	1.5	-88.99	40.8	-2,375.5	1,095.7	1,051.3	44.44	24.656	
8,070.8	6,643.8	6,600.0	6,599.2	45.0	1.5	-88.99	40.8	-2,375.5	1,027.8	981.5	46.31	22.195	
8,100.0	6,643.7	6,600.0	6,599.2	45.8	1.5	-88.99	40.8	-2,375.5	999.9	952.8	47.07	21.242	
8,169.3	6,643.7	6,600.0	6,599.2	47.6	1.5	-88.99	40.8	-2,375.5	934.1	885.1	48.91	19.097	
8,200.0	6,643.6	6,600.0	6,599.2	48.4	1.5	-88.99	40.8	-2,375.5	905.0	855.3	49.73	18.200	
8,267.7	6,643.5	6,600.0	6,599.2	50.2	1.5	-88.99	40.8	-2,375.5	841.4	789.9	51.53	16.328	
8,300.0	6,643.5	6,600.0	6,599.2	51.1	1.5	-88.99	40.8	-2,375.5	811.3	758.9	52.39	15.485	
8,366.1	6,643.4	6,600.0	6,599.2	52.9	1.5	-88.99	40.8	-2,375.5	750.3	696.1	54.17	13.850	
8,400.0	6,643.4	6,600.0	6,599.2	53.8	1.5	-88.99	40.8	-2,375.5	719.3	664.3	55.08	13.060	
8,464.5	6,643.3	6,600.0	6,599.2	55.5	1.5	-88.99	40.8	-2,375.5	661.2	604.4	56.82	11.637	
8,500.0	6,643.2	6,600.0	6,599.2	56.5	1.5	-88.99	40.8	-2,375.5	629.8	572.0	57.77	10.901	
8,563.0	6,643.2	6,600.0	6,599.2	58.2	1.5	-88.99	40.8	-2,375.5	575.2	515.7	59.48	9.670	
8,600.0	6,643.1	6,600.0	6,599.2	59.2	1.5	-88.99	40.8	-2,375.5	543.9	483.4	60.48	8.993	
8,661.4	6,643.0	6,600.0	6,599.2	60.8	1.5	-88.99	40.8	-2,375.5	493.8	431.7	62.15	7.946	
8,700.0	6,643.0	6,600.0	6,599.2	61.9	1.5	-88.99	40.8	-2,375.5	463.7	400.5	63.20	7.338	
8,759.8	6,642.9	6,600.0	6,599.2	63.5	1.5	-88.99	40.8	-2,375.5	419.8	355.0	64.83	6.476	
8,800.0	6,642.9	6,600.0	6,599.2	64.6	1.5	-88.99	40.8	-2,375.5	392.7	326.8	65.92	5.958	
8,858.2	6,642.8	6,600.0	6,599.2	66.2	1.5	-88.99	40.8	-2,375.5	357.8	290.3	67.51	5.300	
8,900.0	6,642.7	6,600.0	6,599.2	67.3	1.5	-88.99	40.8	-2,375.5	336.8	268.2	68.65	4.906	
8,956.7	6,642.7	6,600.0	6,599.2	68.9	1.5	-88.99	40.8	-2,375.5	315.0	244.8	70.20	4.486	
9,000.0	6,642.6	6,600.0	6,599.2	70.1	1.5	-88.99	40.8	-2,375.5	304.4	233.0	71.39	4.264	
9,054.0	6,642.5	6,600.0	6,599.2	71.6	1.5	-88.99	40.8	-2,375.5	299.6	226.7	72.87	4.111 CC	
9,055.1	6,642.5	6,600.0	6,599.2	71.6	1.5	-88.99	40.8	-2,375.5	299.6	226.7	72.90	4.109 ES	
9,100.0	6,642.5	6,600.0	6,599.2	72.8	1.5	-88.99	40.8	-2,375.5	303.1	228.9	74.13	4.088 SF	
9,153.5	6,642.4	6,600.0	6,599.2	74.3	1.5	-88.99	40.8	-2,375.5	315.7	240.1	75.60	4.175	
9,200.0	6,642.4	6,600.0	6,599.2	75.6	1.5	-88.99	40.8	-2,375.5	333.2	256.4	76.88	4.335	
9,251.9	6,642.3	6,600.0	6,599.2	77.0	1.5	-88.99	40.8	-2,375.5	359.1	280.7	78.31	4.585	
9,300.0	6,642.2	6,600.0	6,599.2	78.3	1.5	-88.99	40.8	-2,375.5	387.6	308.0	79.63	4.868	
9,350.4	6,642.2	6,600.0	6,599.2	79.7	1.5	-88.99	40.8	-2,375.5	421.4	340.4	81.02	5.201	
9,400.0	6,642.1	6,600.0	6,599.2	81.1	1.5	-88.99	40.8	-2,375.5	457.7	375.3	82.39	5.555	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,600.0	6,599.2	82.4	1.5	-88.99	40.8	-2,375.5	495.6	411.9	83.74	5.918	
9,500.0	6,642.0	6,600.0	6,599.2	83.8	1.5	-88.99	40.8	-2,375.5	537.3	452.1	85.15	6.310	
9,547.2	6,641.9	6,600.0	6,599.2	85.1	1.5	-88.99	40.8	-2,375.5	577.1	490.6	86.46	6.675	
9,600.0	6,641.9	6,600.0	6,599.2	86.6	1.5	-88.99	40.8	-2,375.5	622.8	534.9	87.91	7.084	
9,645.6	6,641.8	6,600.0	6,599.2	87.9	1.5	-88.99	40.8	-2,375.5	663.2	574.0	89.18	7.437	
9,700.0	6,641.7	6,600.0	6,599.2	89.4	1.5	-88.99	40.8	-2,375.5	712.1	621.4	90.68	7.853	
9,744.1	6,641.7	6,600.0	6,599.2	90.6	1.5	-88.99	40.8	-2,375.5	752.3	660.4	91.90	8.186	
9,800.0	6,641.6	6,600.0	6,599.2	92.1	1.5	-88.99	40.8	-2,375.5	803.9	710.5	93.45	8.603	
9,842.5	6,641.6	6,600.0	6,599.2	93.3	1.5	-88.99	40.8	-2,375.5	843.5	748.9	94.63	8.914	
9,900.0	6,641.5	6,600.0	6,599.2	94.9	1.5	-88.99	40.8	-2,375.5	897.5	801.3	96.22	9.327	
9,940.9	6,641.4	6,600.0	6,599.2	96.0	1.5	-88.99	40.8	-2,375.5	936.2	838.8	97.36	9.616	
10,000.0	6,641.4	6,600.0	6,599.2	97.7	1.5	-88.99	40.8	-2,375.5	992.3	893.3	98.99	10.024	
10,039.3	6,641.3	6,600.0	6,599.2	98.8	1.5	-88.99	40.8	-2,375.5	1,029.9	929.8	100.09	10.290	
10,100.0	6,641.2	6,600.0	6,599.2	100.4	1.5	-88.99	40.8	-2,375.5	1,088.1	986.3	101.77	10.691	
10,137.8	6,641.2	6,600.0	6,599.2	101.5	1.5	-88.99	40.8	-2,375.5	1,124.4	1,021.6	102.82	10.936	
10,200.0	6,641.1	6,600.0	6,599.2	103.2	1.5	-88.99	40.8	-2,375.5	1,184.5	1,080.0	104.55	11.330	
10,236.2	6,641.1	6,600.0	6,599.2	104.2	1.5	-88.99	40.8	-2,375.5	1,219.6	1,114.0	105.55	11.554	
10,300.0	6,641.0	6,600.0	6,599.2	106.0	1.5	-88.99	40.8	-2,375.5	1,281.5	1,174.2	107.33	11.940	
10,334.6	6,640.9	6,600.0	6,599.2	107.0	1.5	-88.99	40.8	-2,375.5	1,315.2	1,206.9	108.29	12.145	
10,400.0	6,640.9	6,600.0	6,599.2	108.8	1.5	-88.99	40.8	-2,375.5	1,378.9	1,268.8	110.11	12.524	
10,433.0	6,640.8	6,600.0	6,599.2	109.7	1.5	-88.99	40.8	-2,375.5	1,411.2	1,300.2	111.03	12.711	
10,500.0	6,640.7	6,600.0	6,599.2	111.6	1.5	-88.99	40.8	-2,375.5	1,476.7	1,363.8	112.89	13.081	
10,531.5	6,640.7	6,600.0	6,599.2	112.4	1.5	-88.99	40.8	-2,375.5	1,507.5	1,393.8	113.77	13.251	
10,600.0	6,640.6	6,600.0	6,599.2	114.3	1.5	-88.99	40.8	-2,375.5	1,574.8	1,459.1	115.67	13.614	
10,629.9	6,640.6	6,600.0	6,599.2	115.2	1.5	-88.99	40.8	-2,375.5	1,604.1	1,487.6	116.51	13.769	
10,700.0	6,640.5	6,600.0	6,599.2	117.1	1.5	-88.99	40.8	-2,375.5	1,673.0	1,554.6	118.46	14.123	
10,728.3	6,640.4	6,600.0	6,599.2	117.9	1.5	-88.99	40.8	-2,375.5	1,700.9	1,581.7	119.25	14.264	
10,800.0	6,640.4	6,600.0	6,599.2	119.9	1.5	-88.99	40.8	-2,375.5	1,771.5	1,650.3	121.25	14.611	
10,826.7	6,640.3	6,600.0	6,599.2	120.7	1.5	-88.99	40.8	-2,375.5	1,797.9	1,675.9	121.99	14.738	
10,900.0	6,640.2	6,600.0	6,599.2	122.7	1.5	-88.99	40.8	-2,375.5	1,870.2	1,746.1	124.03	15.078	
10,925.2	6,640.2	6,600.0	6,599.2	123.4	1.5	-88.99	40.8	-2,375.5	1,895.0	1,770.3	124.73	15.192	
11,000.0	6,640.1	6,600.0	6,599.2	125.5	1.5	-88.99	40.8	-2,375.5	1,968.9	1,842.1	126.82	15.525	
11,023.6	6,640.1	6,600.0	6,599.2	126.1	1.5	-88.99	40.8	-2,375.5	1,992.3	1,864.8	127.48	15.628	
11,100.0	6,640.0	6,600.0	6,599.2	128.3	1.5	-88.99	40.8	-2,375.5	2,067.8	1,938.2	129.61	15.954	
11,122.0	6,639.9	6,600.0	6,599.2	128.9	1.5	-88.99	40.8	-2,375.5	2,089.6	1,959.4	130.22	16.046	
11,200.0	6,639.8	6,600.0	6,599.2	131.1	1.5	-88.99	40.8	-2,375.5	2,166.8	2,034.4	132.40	16.366	
11,220.4	6,639.8	6,600.0	6,599.2	131.6	1.5	-88.99	40.8	-2,375.5	2,187.1	2,054.1	132.97	16.448	
11,300.0	6,639.7	6,600.0	6,599.2	133.9	1.5	-88.99	40.8	-2,375.5	2,265.9	2,130.7	135.19	16.761	
11,318.9	6,639.7	6,600.0	6,599.2	134.4	1.5	-88.99	40.8	-2,375.5	2,284.6	2,148.9	135.72	16.833	
11,400.0	6,639.6	6,600.0	6,599.2	136.7	1.5	-88.99	40.8	-2,375.5	2,365.1	2,227.1	137.98	17.140	
11,417.3	6,639.6	6,600.0	6,599.2	137.1	1.5	-88.99	40.8	-2,375.5	2,382.2	2,243.8	138.47	17.204	
11,500.0	6,639.5	6,600.0	6,599.2	139.4	1.5	-88.99	40.8	-2,375.5	2,464.3	2,323.5	140.78	17.505	
11,515.7	6,639.5	6,600.0	6,599.2	139.9	1.5	-88.99	40.8	-2,375.5	2,479.9	2,338.7	141.22	17.561	
11,600.0	6,639.3	6,600.0	6,599.2	142.2	1.5	-88.99	40.8	-2,375.5	2,563.6	2,420.0	143.57	17.856	
11,614.1	6,639.3	6,600.0	6,599.2	142.6	1.5	-88.99	40.8	-2,375.5	2,577.6	2,433.7	143.96	17.905	
11,700.0	6,639.2	6,600.0	6,599.2	145.0	1.5	-88.99	40.8	-2,375.5	2,662.9	2,516.6	146.36	18.194	
11,712.6	6,639.2	6,600.0	6,599.2	145.4	1.5	-88.99	40.8	-2,375.5	2,675.4	2,528.7	146.71	18.235	
11,800.0	6,639.1	6,600.0	6,599.2	147.8	1.5	-88.99	40.8	-2,375.5	2,762.3	2,613.1	149.16	18.519	
11,811.0	6,639.1	6,600.0	6,599.2	148.1	1.5	-88.99	40.8	-2,375.5	2,773.2	2,623.8	149.47	18.554	
11,900.0	6,639.0	6,600.0	6,599.2	150.6	1.5	-88.99	40.8	-2,375.5	2,861.7	2,709.8	151.95	18.833	
11,909.4	6,639.0	6,600.0	6,599.2	150.9	1.5	-88.99	40.8	-2,375.5	2,871.1	2,718.9	152.22	18.862	
12,000.0	6,638.8	6,600.0	6,599.2	153.4	1.5	-88.99	40.8	-2,375.5	2,961.2	2,806.5	154.75	19.136	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
12,007.8	6,638.8	6,600.0	6,599.2	153.6	1.5	-88.99	40.8	-2,375.5	2,969.0	2,814.0	154.97	19.159	
12,100.0	6,638.7	6,600.0	6,599.2	156.2	1.5	-88.99	40.8	-2,375.5	3,060.7	2,903.2	157.55	19.427	
12,106.3	6,638.7	6,600.0	6,599.2	156.4	1.5	-88.99	40.8	-2,375.5	3,067.0	2,909.2	157.72	19.445	
12,200.0	6,638.6	6,600.0	6,599.2	159.0	1.5	-88.99	40.8	-2,375.5	3,160.2	2,999.9	160.34	19.709	
12,204.7	6,638.6	6,600.0	6,599.2	159.1	1.5	-88.99	40.8	-2,375.5	3,164.9	3,004.4	160.47	19.722	
12,300.0	6,638.5	6,600.0	6,599.2	161.8	1.5	-88.99	40.8	-2,375.5	3,259.8	3,096.7	163.14	19.982	
12,303.1	6,638.5	6,600.0	6,599.2	161.9	1.5	-88.99	40.8	-2,375.5	3,262.9	3,099.7	163.23	19.990	
12,400.0	6,638.3	6,600.0	6,599.2	164.6	1.5	-88.99	40.8	-2,375.5	3,359.4	3,193.5	165.94	20.245	
12,401.5	6,638.3	6,600.0	6,599.2	164.6	1.5	-88.99	40.8	-2,375.5	3,360.9	3,195.0	165.98	20.249	
12,500.0	6,638.2	6,600.0	6,599.2	167.4	1.5	-88.99	40.8	-2,375.5	3,459.0	3,290.3	168.74	20.500	
12,598.4	6,638.1	6,600.0	6,599.2	170.2	1.5	-88.99	40.8	-2,375.5	3,557.0	3,385.6	171.49	20.742	
12,600.0	6,638.1	6,600.0	6,599.2	170.2	1.5	-88.99	40.8	-2,375.5	3,558.6	3,387.1	171.53	20.746	
12,696.8	6,638.0	6,600.0	6,599.2	172.9	1.5	-88.99	40.8	-2,375.5	3,655.1	3,480.9	174.24	20.977	
12,700.0	6,638.0	6,600.0	6,599.2	173.0	1.5	-88.99	40.8	-2,375.5	3,658.3	3,484.0	174.33	20.985	
12,795.2	6,637.8	6,600.0	6,599.2	175.7	1.5	-88.99	40.8	-2,375.5	3,753.2	3,576.2	177.00	21.205	
12,800.0	6,637.8	6,600.0	6,599.2	175.8	1.5	-88.99	40.8	-2,375.5	3,758.0	3,580.8	177.13	21.216	
12,893.7	6,637.7	6,600.0	6,599.2	178.4	1.5	-88.99	40.8	-2,375.5	3,851.4	3,671.6	179.75	21.426	
12,900.0	6,637.7	6,600.0	6,599.2	178.6	1.5	-88.99	40.8	-2,375.5	3,857.7	3,677.7	179.93	21.440	
12,992.1	6,637.6	6,600.0	6,599.2	181.2	1.5	-88.99	40.8	-2,375.5	3,949.5	3,767.0	182.51	21.640	
13,000.0	6,637.6	6,600.0	6,599.2	181.4	1.5	-88.99	40.8	-2,375.5	3,957.4	3,774.6	182.73	21.657	
13,090.5	6,637.5	6,600.0	6,599.2	183.9	1.5	-88.99	40.8	-2,375.5	4,047.6	3,862.4	185.27	21.848	
13,100.0	6,637.5	6,600.0	6,599.2	184.2	1.5	-88.99	40.8	-2,375.5	4,057.1	3,871.6	185.53	21.867	
13,188.9	6,637.4	6,600.0	6,599.2	186.7	1.5	-88.99	40.8	-2,375.5	4,145.8	3,957.8	188.02	22.049	
13,200.0	6,637.3	6,600.0	6,599.2	187.0	1.5	-88.99	40.8	-2,375.5	4,156.8	3,968.5	188.33	22.072	
13,287.4	6,637.2	6,600.0	6,599.2	189.4	1.5	-88.99	40.8	-2,375.5	4,244.0	4,053.2	190.78	22.245	
13,300.0	6,637.2	6,600.0	6,599.2	189.8	1.5	-88.99	40.8	-2,375.5	4,256.6	4,065.4	191.13	22.270	
13,385.8	6,637.1	6,600.0	6,599.2	192.2	1.5	-88.99	40.8	-2,375.5	4,342.2	4,148.6	193.54	22.436	
13,400.0	6,637.1	6,600.0	6,599.2	192.6	1.5	-88.99	40.8	-2,375.5	4,356.3	4,162.4	193.93	22.463	
13,484.2	6,637.0	6,600.0	6,599.2	195.0	1.5	-88.99	40.8	-2,375.5	4,440.4	4,244.1	196.29	22.621	
13,500.0	6,637.0	6,600.0	6,599.2	195.4	1.5	-88.99	40.8	-2,375.5	4,456.1	4,259.4	196.74	22.650	
13,582.6	6,636.9	6,600.0	6,599.2	197.7	1.5	-88.99	40.8	-2,375.5	4,538.6	4,339.5	199.05	22.801	
13,600.0	6,636.8	6,600.0	6,599.2	198.2	1.5	-88.99	40.8	-2,375.5	4,555.9	4,356.3	199.54	22.832	
13,681.1	6,636.7	6,600.0	6,599.2	200.5	1.5	-88.99	40.8	-2,375.5	4,636.8	4,435.0	201.81	22.976	
13,700.0	6,636.7	6,600.0	6,599.2	201.0	1.5	-88.99	40.8	-2,375.5	4,655.7	4,453.3	202.34	23.009	
13,779.5	6,636.6	6,600.0	6,599.2	203.2	1.5	-88.99	40.8	-2,375.5	4,735.0	4,530.4	204.57	23.146	
13,800.0	6,636.6	6,600.0	6,599.2	203.8	1.5	-88.99	40.8	-2,375.5	4,755.5	4,550.3	205.14	23.181	
13,877.9	6,636.5	6,600.0	6,599.2	206.0	1.5	-88.99	40.8	-2,375.5	4,833.2	4,625.9	207.33	23.312	
13,900.0	6,636.5	6,600.0	6,599.2	206.6	1.5	-88.99	40.8	-2,375.5	4,855.3	4,647.3	207.94	23.349	
13,976.3	6,636.4	6,600.0	6,599.2	208.8	1.5	-88.99	40.8	-2,375.5	4,931.5	4,721.4	210.08	23.474	
14,000.0	6,636.3	6,600.0	6,599.2	209.4	1.5	-88.99	40.8	-2,375.5	4,955.1	4,744.3	210.75	23.512	
14,074.8	6,636.2	6,600.0	6,599.2	211.5	1.5	-88.99	40.8	-2,375.5	5,029.7	4,816.9	212.84	23.631	
14,100.0	6,636.2	6,600.0	6,599.2	212.2	1.5	-88.99	40.8	-2,375.5	5,054.9	4,841.3	213.55	23.671	
14,173.2	6,636.1	6,600.0	6,599.2	214.3	1.5	-88.99	40.8	-2,375.5	5,128.0	4,912.4	215.60	23.784	
14,200.0	6,636.1	6,600.0	6,599.2	215.0	1.5	-88.99	40.8	-2,375.5	5,154.7	4,938.4	216.35	23.826	
14,271.6	6,636.0	6,600.0	6,599.2	217.0	1.5	-88.99	40.8	-2,375.5	5,226.2	5,007.9	218.36	23.934	
14,300.0	6,636.0	6,600.0	6,599.2	217.8	1.5	-88.99	40.8	-2,375.5	5,254.6	5,035.4	219.16	23.976	
14,370.0	6,635.9	6,600.0	6,599.2	219.8	1.5	-88.99	40.8	-2,375.5	5,324.5	5,103.4	221.12	24.080	
14,400.0	6,635.8	6,600.0	6,599.2	220.6	1.5	-88.99	40.8	-2,375.5	5,354.4	5,132.4	221.96	24.123	
14,468.5	6,635.7	6,600.0	6,599.2	222.6	1.5	-88.99	40.8	-2,375.5	5,422.8	5,198.9	223.88	24.222	
14,500.0	6,635.7	6,600.0	6,599.2	223.4	1.5	-88.99	40.8	-2,375.5	5,454.2	5,229.5	224.76	24.267	
14,566.9	6,635.6	6,600.0	6,599.2	225.3	1.5	-88.99	40.8	-2,375.5	5,521.0	5,294.4	226.64	24.361	
14,600.0	6,635.6	6,600.0	6,599.2	226.2	1.5	-88.99	40.8	-2,375.5	5,554.1	5,326.5	227.57	24.406	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,635.5	6,600.0	6,599.2	228.1	1.5	-88.99	40.8	-2,375.5	5,619.3	5,389.9	229.40	24.496	
14,700.0	6,635.5	6,600.0	6,599.2	229.0	1.5	-88.99	40.8	-2,375.5	5,654.0	5,423.6	230.37	24.543	
14,763.7	6,635.4	6,600.0	6,599.2	230.8	1.5	-88.99	40.8	-2,375.5	5,717.6	5,485.5	232.16	24.628	
14,800.0	6,635.3	6,600.0	6,599.2	231.8	1.5	-88.99	40.8	-2,375.5	5,753.8	5,520.6	233.17	24.676	
14,862.2	6,635.2	6,600.0	6,599.2	233.6	1.5	-88.99	40.8	-2,375.5	5,815.9	5,581.0	234.92	24.757	
14,900.0	6,635.2	6,600.0	6,599.2	234.7	1.5	-88.99	40.8	-2,375.5	5,853.7	5,617.7	235.98	24.806	
14,960.6	6,635.1	6,600.0	6,599.2	236.4	1.5	-88.99	40.8	-2,375.5	5,914.2	5,676.5	237.68	24.883	
14,995.1	6,635.0	6,600.0	6,599.2	237.3	1.5	-89.00	40.8	-2,375.5	5,948.7	5,710.0	238.65	24.927	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	173.45	-1,038.6	119.2	1,045.8				
98.4	98.4	68.1	68.1	0.1	0.0	173.45	-1,038.7	119.2	1,045.5	1,045.4	0.10	N/A	CC
100.0	100.0	69.6	69.6	0.1	0.0	173.45	-1,038.7	119.2	1,045.5	1,045.4	0.10	N/A	
196.8	196.8	169.3	169.3	0.3	0.0	173.45	-1,038.9	119.3	1,045.7	1,045.4	0.33	3,164.289	
200.0	200.0	172.7	172.7	0.3	0.0	173.45	-1,038.9	119.3	1,045.7	1,045.4	0.34	3,094.821	
281.0	281.0	253.0	253.0	0.5	0.1	173.46	-1,038.8	119.2	1,045.6	1,045.0	0.59	1,782.782	
295.3	295.3	266.7	266.7	0.5	0.1	173.46	-1,038.8	119.2	1,045.6	1,045.0	0.64	1,645.900	
300.0	300.0	271.2	271.2	0.5	0.1	173.46	-1,038.8	119.1	1,045.6	1,045.0	0.65	1,605.202	
393.7	393.7	363.8	363.8	0.8	0.2	173.47	-1,039.0	119.0	1,045.8	1,044.8	0.97	1,083.640	
400.0	400.0	370.1	370.1	0.8	0.2	173.47	-1,039.0	119.0	1,045.8	1,044.8	0.99	1,060.784	
492.1	492.1	462.5	462.5	1.0	0.3	173.47	-1,039.2	118.9	1,046.0	1,044.7	1.26	829.266	
500.0	500.0	470.4	470.4	1.0	0.3	173.47	-1,039.2	119.0	1,046.0	1,044.7	1.28	814.814	
590.5	590.5	560.5	560.5	1.2	0.3	173.46	-1,039.3	119.1	1,046.1	1,044.6	1.55	676.973	
600.0	600.0	569.9	569.9	1.2	0.4	173.46	-1,039.3	119.1	1,046.1	1,044.6	1.57	665.176	ES
689.0	689.0	656.6	656.6	1.4	0.4	173.45	-1,039.5	119.4	1,046.4	1,044.6	1.83	573.333	
700.0	700.0	667.2	667.2	1.4	0.4	173.44	-1,039.6	119.5	1,046.4	1,044.6	1.86	563.763	
787.4	787.4	751.3	751.2	1.6	0.5	173.42	-1,040.1	119.9	1,047.0	1,044.9	2.10	498.387	
800.0	800.0	763.3	763.3	1.7	0.5	173.42	-1,040.1	120.0	1,047.1	1,044.9	2.14	490.271	
885.8	885.8	846.4	846.4	1.9	0.5	173.39	-1,040.9	120.7	1,047.9	1,045.5	2.37	441.633	
900.0	900.0	860.2	860.2	1.9	0.5	173.38	-1,041.0	120.8	1,048.1	1,045.7	2.41	434.555	
984.2	984.2	942.4	942.4	2.1	0.6	173.34	-1,041.9	121.7	1,049.1	1,046.5	2.64	396.998	
1,000.0	1,000.0	957.8	957.8	2.1	0.6	173.33	-1,042.1	121.9	1,049.3	1,046.6	2.69	390.728	
1,082.7	1,082.7	1,040.7	1,040.7	2.3	0.6	173.28	-1,043.2	122.9	1,050.5	1,047.6	2.91	360.860	
1,100.0	1,100.0	1,058.6	1,058.6	2.3	0.6	173.27	-1,043.4	123.1	1,050.7	1,047.7	2.96	355.171	
1,181.1	1,181.1	1,140.9	1,140.9	2.5	0.7	173.22	-1,044.2	124.1	1,051.7	1,048.5	3.18	330.908	
1,200.0	1,200.0	1,159.8	1,159.7	2.6	0.7	173.22	-1,044.4	124.3	1,051.9	1,048.6	3.23	325.760	
1,279.5	1,279.5	1,240.4	1,240.3	2.7	0.7	173.18	-1,045.3	125.0	1,052.8	1,049.3	3.44	305.801	
1,300.0	1,300.0	1,261.5	1,261.4	2.8	0.7	173.17	-1,045.5	125.2	1,053.0	1,049.5	3.50	301.061	
1,377.9	1,377.9	1,342.3	1,342.2	3.0	0.7	131.99	-1,046.2	125.5	1,054.4	1,050.7	3.70	285.008	
1,400.0	1,400.0	1,365.3	1,365.2	3.0	0.7	132.01	-1,046.3	125.5	1,055.0	1,051.2	3.76	280.702	
1,476.4	1,476.3	1,443.7	1,443.7	3.2	0.8	132.13	-1,046.7	125.5	1,057.9	1,053.9	3.96	267.365	
1,500.0	1,499.8	1,467.7	1,467.6	3.2	0.8	132.18	-1,046.8	125.4	1,059.0	1,055.0	4.02	263.667	
1,574.8	1,574.4	1,545.9	1,545.8	3.4	0.8	132.41	-1,047.1	124.8	1,063.4	1,059.2	4.21	252.691	
1,600.0	1,599.5	1,572.8	1,572.7	3.5	0.8	132.50	-1,047.1	124.6	1,065.1	1,060.8	4.27	249.293	
1,673.2	1,672.2	1,645.2	1,645.1	3.6	0.8	132.77	-1,047.0	124.2	1,070.8	1,066.3	4.47	239.803	
1,700.0	1,698.7	1,670.5	1,670.4	3.7	0.8	132.88	-1,047.0	124.0	1,073.2	1,068.7	4.54	236.606	
1,771.6	1,769.5	1,739.6	1,739.5	3.9	0.8	133.19	-1,047.2	123.8	1,080.8	1,076.1	4.73	228.363	
1,800.0	1,797.5	1,767.3	1,767.3	4.0	0.8	133.32	-1,047.2	123.8	1,084.1	1,079.3	4.81	225.379	
1,870.1	1,866.3	1,834.2	1,834.1	4.2	0.9	133.66	-1,047.4	123.9	1,093.4	1,088.3	5.02	217.678	
1,899.9	1,895.6	1,861.9	1,861.8	4.3	0.9	133.81	-1,047.5	124.0	1,097.7	1,092.6	5.12	214.568	
1,968.5	1,962.6	1,926.6	1,926.5	4.5	0.9	134.30	-1,047.9	124.3	1,108.2	1,102.9	5.33	207.726	
2,000.0	1,993.4	1,957.0	1,957.0	4.6	0.9	134.53	-1,048.1	124.5	1,113.1	1,107.6	5.44	204.785	
2,066.9	2,058.9	2,022.9	2,022.8	4.8	0.9	135.00	-1,048.6	125.1	1,123.5	1,117.8	5.66	198.645	
2,100.0	2,091.3	2,056.5	2,056.4	4.9	0.9	135.23	-1,048.8	125.5	1,128.6	1,122.9	5.76	195.897	
2,165.3	2,155.2	2,121.6	2,121.5	5.2	1.0	135.68	-1,049.1	126.4	1,138.8	1,132.8	5.98	190.536	
2,200.0	2,189.1	2,154.8	2,154.7	5.3	1.0	135.90	-1,049.2	126.9	1,144.2	1,138.1	6.09	187.850	
2,263.8	2,251.5	2,216.2	2,216.1	5.5	1.0	136.30	-1,049.6	127.9	1,154.2	1,147.9	6.30	183.091	
2,300.0	2,286.9	2,251.8	2,251.7	5.7	1.0	136.52	-1,049.8	128.5	1,159.9	1,153.5	6.43	180.527	
2,362.2	2,347.7	2,312.5	2,312.4	5.9	1.0	136.90	-1,050.1	129.6	1,169.8	1,163.2	6.64	176.277	
2,400.0	2,384.7	2,348.6	2,348.5	6.0	1.0	137.12	-1,050.4	130.2	1,175.9	1,169.1	6.76	173.842	
2,460.6	2,444.0	2,406.9	2,406.7	6.3	1.0	137.48	-1,050.8	131.2	1,185.7	1,178.7	6.97	170.085	
2,500.0	2,482.5	2,446.6	2,446.4	6.4	1.1	137.72	-1,051.1	131.8	1,192.1	1,185.0	7.11	167.772	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,540.3	2,506.0	2,505.8	6.7	1.1	138.08	-1,051.4	132.6	1,201.7	1,194.3	7.31	164.425	
2,600.0	2,580.3	2,546.4	2,546.2	6.8	1.1	138.33	-1,051.6	133.1	1,208.3	1,200.8	7.45	162.243	
2,657.5	2,636.5	2,603.1	2,602.9	7.1	1.1	138.67	-1,051.9	133.9	1,217.6	1,209.9	7.64	159.287	
2,700.0	2,678.1	2,644.0	2,643.8	7.2	1.1	138.90	-1,052.1	134.5	1,224.5	1,216.7	7.79	157.206	
2,755.9	2,732.8	2,697.8	2,697.6	7.5	1.1	139.21	-1,052.4	135.3	1,233.7	1,225.7	7.98	154.574	
2,800.0	2,776.0	2,740.9	2,740.8	7.7	1.2	139.46	-1,052.7	135.9	1,240.9	1,232.8	8.13	152.590	
2,854.3	2,829.1	2,794.1	2,793.9	7.9	1.2	139.77	-1,053.0	136.4	1,249.9	1,241.6	8.32	150.239	
2,900.0	2,873.8	2,836.7	2,836.5	8.1	1.2	140.02	-1,053.3	136.8	1,257.6	1,249.1	8.48	148.352	
2,952.7	2,925.4	2,885.5	2,885.3	8.3	1.2	140.29	-1,053.7	137.4	1,266.5	1,257.8	8.66	146.257	
3,000.0	2,971.6	2,930.8	2,930.6	8.5	1.2	140.53	-1,054.2	138.1	1,274.6	1,265.8	8.82	144.467	
3,051.2	3,021.6	2,980.7	2,980.5	8.7	1.2	140.80	-1,054.7	138.8	1,283.4	1,274.4	9.00	142.600	
3,100.0	3,069.4	3,029.5	3,029.3	8.9	1.3	141.06	-1,055.3	139.3	1,291.9	1,282.7	9.17	140.912	
3,149.6	3,117.9	3,079.8	3,079.6	9.1	1.3	141.33	-1,055.7	139.9	1,300.4	1,291.1	9.34	139.258	
3,200.0	3,167.2	3,129.6	3,129.4	9.3	1.3	141.58	-1,056.1	140.6	1,309.0	1,299.5	9.51	137.648	
3,248.0	3,214.2	3,176.1	3,175.9	9.5	1.3	141.82	-1,056.5	141.2	1,317.3	1,307.6	9.67	136.172	
3,300.0	3,265.0	3,228.4	3,228.1	9.8	1.3	142.09	-1,057.0	141.9	1,326.3	1,316.4	9.85	134.651	
3,346.4	3,310.5	3,276.7	3,276.5	10.0	1.3	142.32	-1,057.3	142.7	1,334.2	1,324.2	10.01	133.332	
3,400.0	3,362.9	3,330.3	3,330.1	10.2	1.4	142.56	-1,057.6	144.0	1,343.3	1,333.1	10.19	131.865	
3,444.9	3,406.7	3,373.9	3,373.6	10.4	1.4	142.74	-1,057.9	145.2	1,351.0	1,340.6	10.34	130.677	
3,473.0	3,434.2	3,401.3	3,401.0	10.5	1.4	142.85	-1,058.0	146.1	1,355.8	1,345.3	10.43	129.952	
3,500.0	3,460.7	3,428.4	3,428.1	10.6	1.4	143.01	-1,058.2	146.9	1,360.3	1,349.8	10.51	129.485	
3,543.3	3,503.2	3,471.9	3,471.5	10.7	1.4	143.24	-1,058.5	148.4	1,367.1	1,356.5	10.60	128.956	
3,600.0	3,559.0	3,529.3	3,529.0	10.9	1.4	143.51	-1,058.8	150.3	1,375.2	1,364.4	10.73	128.203	
3,641.7	3,600.2	3,571.9	3,571.6	11.0	1.4	143.68	-1,058.9	151.8	1,380.5	1,369.7	10.81	127.675	
3,700.0	3,657.9	3,628.6	3,628.2	11.2	1.5	143.87	-1,059.1	153.7	1,387.1	1,376.2	10.93	126.863	
3,740.1	3,697.8	3,665.8	3,665.3	11.3	1.5	143.98	-1,059.3	155.0	1,391.2	1,380.2	11.01	126.338	
3,800.0	3,757.3	3,723.9	3,723.4	11.4	1.5	144.11	-1,059.8	157.0	1,396.6	1,385.4	11.13	125.490	
3,838.6	3,795.7	3,764.0	3,763.5	11.5	1.5	144.17	-1,060.1	158.5	1,399.5	1,388.3	11.20	124.961	
3,900.0	3,857.0	3,827.5	3,827.0	11.7	1.5	144.22	-1,060.4	160.9	1,403.2	1,391.8	11.31	124.035	
3,937.0	3,893.9	3,865.5	3,865.0	11.7	1.5	144.22	-1,060.6	162.4	1,404.8	1,393.4	11.38	123.500	
4,000.0	3,956.9	3,929.6	3,929.0	11.8	1.6	144.20	-1,060.9	164.9	1,406.7	1,395.2	11.48	122.498	
4,035.4	3,992.3	3,965.2	3,964.5	11.9	1.6	144.16	-1,061.0	166.3	1,407.2	1,395.7	11.54	121.948	
4,072.9	4,029.8	4,002.9	4,002.2	11.9	1.6	-174.70	-1,061.1	167.8	1,407.4	1,394.9	12.50	112.615	
4,100.0	4,056.9	4,030.5	4,029.8	12.0	1.6	-174.74	-1,061.2	168.8	1,407.4	1,394.9	12.55	112.169	
4,133.8	4,090.7	4,065.0	4,064.3	12.0	1.6	-174.79	-1,061.3	170.1	1,407.4	1,394.8	12.61	111.576	
4,200.0	4,156.9	4,134.7	4,133.9	12.1	1.6	-174.89	-1,061.4	172.5	1,407.3	1,394.5	12.74	110.422	
4,232.3	4,189.2	4,170.0	4,169.2	12.2	1.6	-174.94	-1,061.3	173.6	1,407.1	1,394.3	12.81	109.852	
4,300.0	4,256.9	4,243.3	4,242.5	12.3	1.6	-175.02	-1,060.9	175.6	1,406.6	1,393.6	12.95	108.657	
4,330.7	4,287.6	4,276.4	4,275.6	12.4	1.7	-175.05	-1,060.6	176.5	1,406.3	1,393.3	13.01	108.113	
4,400.0	4,356.9	4,352.5	4,351.6	12.5	1.7	-175.13	-1,059.8	178.5	1,405.3	1,392.2	13.15	106.890	
4,429.1	4,386.0	4,384.7	4,383.8	12.5	1.7	-175.16	-1,059.3	179.3	1,404.8	1,391.6	13.21	106.372	
4,500.0	4,456.9	4,460.1	4,459.2	12.6	1.7	-175.23	-1,057.9	181.1	1,403.4	1,390.0	13.35	105.129	
4,527.5	4,484.4	4,489.1	4,488.2	12.7	1.7	-175.25	-1,057.3	181.7	1,402.8	1,389.4	13.40	104.646	
4,600.0	4,556.9	4,562.7	4,561.8	12.8	1.7	-175.31	-1,055.7	183.4	1,401.1	1,387.5	13.55	103.398	
4,626.0	4,582.9	4,589.0	4,588.0	12.9	1.7	-175.34	-1,055.2	184.0	1,400.5	1,386.9	13.60	102.953	
4,700.0	4,656.9	4,665.8	4,664.8	13.0	1.7	-175.40	-1,053.4	185.6	1,398.7	1,384.9	13.75	101.701	
4,724.4	4,681.3	4,691.3	4,690.2	13.0	1.7	-175.42	-1,052.8	186.2	1,398.0	1,384.2	13.80	101.289	
4,800.0	4,756.9	4,768.9	4,767.9	13.1	1.7	-175.48	-1,050.8	187.8	1,396.0	1,382.0	13.96	100.029	
4,822.8	4,779.7	4,792.4	4,791.3	13.2	1.8	-175.50	-1,050.2	188.3	1,395.3	1,381.3	14.00	99.651	
4,900.0	4,856.9	4,864.9	4,863.7	13.3	1.8	-175.55	-1,048.3	189.8	1,393.2	1,379.1	14.16	98.406	
4,921.2	4,878.1	4,884.6	4,883.5	13.4	1.8	-175.57	-1,047.9	190.1	1,392.7	1,378.5	14.20	98.069	
5,000.0	4,956.9	4,954.2	4,953.0	13.5	1.8	-175.61	-1,046.5	191.4	1,391.1	1,376.7	14.36	96.858	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,976.6	4,971.3	4,970.1	13.5	1.8	-175.62	-1,046.2	191.7	1,390.8	1,376.4	14.40	96.564	
5,100.0	5,056.9	5,044.7	5,043.5	13.7	1.8	-175.67	-1,045.4	192.8	1,389.7	1,375.2	14.57	95.388	
5,118.1	5,075.0	5,061.8	5,060.6	13.7	1.8	-175.68	-1,045.2	193.0	1,389.6	1,375.0	14.61	95.126	
5,200.0	5,156.9	5,138.3	5,137.1	13.8	1.8	-175.72	-1,044.7	194.1	1,388.9	1,374.1	14.78	93.965	
5,216.5	5,173.4	5,153.5	5,152.4	13.9	1.8	-175.73	-1,044.6	194.3	1,388.8	1,374.0	14.82	93.735	
5,300.0	5,256.9	5,230.3	5,229.1	14.0	1.9	-175.77	-1,044.5	195.3	1,388.6	1,373.6	14.99	92.606	
5,302.5	5,259.4	5,232.6	5,231.4	14.0	1.9	-175.77	-1,044.5	195.3	1,388.6	1,373.6	15.00	92.572	
5,314.9	5,271.8	5,243.9	5,242.7	14.1	1.9	-175.77	-1,044.5	195.4	1,388.6	1,373.6	15.03	92.409	
5,400.0	5,356.9	5,322.9	5,321.7	14.2	1.9	-175.80	-1,044.8	196.2	1,388.9	1,373.7	15.21	91.317	
5,413.4	5,370.3	5,335.8	5,334.6	14.2	1.9	-175.81	-1,044.9	196.3	1,389.0	1,373.7	15.24	91.148	
5,500.0	5,456.9	5,419.9	5,418.7	14.4	1.9	-175.84	-1,045.5	197.0	1,389.5	1,374.1	15.43	90.081	
5,511.8	5,468.7	5,431.4	5,430.2	14.4	1.9	-175.84	-1,045.6	197.1	1,389.6	1,374.2	15.45	89.939	
5,600.0	5,556.9	5,517.2	5,516.0	14.6	1.9	-175.86	-1,046.4	197.6	1,390.3	1,374.7	15.64	88.904	
5,610.2	5,567.1	5,526.9	5,525.7	14.6	1.9	-175.87	-1,046.4	197.6	1,390.4	1,374.8	15.66	88.788	
5,700.0	5,656.9	5,612.1	5,610.9	14.7	2.0	-175.88	-1,047.4	197.9	1,391.4	1,375.6	15.85	87.794	
5,708.6	5,665.5	5,620.4	5,619.1	14.8	2.0	-175.88	-1,047.5	198.0	1,391.6	1,375.7	15.87	87.700	
5,800.0	5,756.9	5,708.0	5,706.7	14.9	2.0	-175.91	-1,048.9	198.4	1,392.9	1,376.8	16.06	86.735	
5,807.1	5,764.0	5,715.0	5,713.8	14.9	2.0	-175.91	-1,049.0	198.4	1,393.0	1,376.9	16.07	86.661	
5,900.0	5,856.9	5,808.0	5,806.8	15.1	2.0	-175.93	-1,050.5	198.8	1,394.5	1,378.2	16.27	85.703	
5,905.5	5,862.4	5,813.8	5,812.5	15.1	2.0	-175.93	-1,050.6	198.9	1,394.6	1,378.3	16.28	85.646	
5,971.9	5,928.8	5,883.2	5,882.0	15.3	2.0	-175.95	-1,051.6	199.2	1,395.5	1,379.1	16.43	84.963	
6,000.0	5,956.9	5,911.7	5,910.4	15.3	2.0	-85.95	-1,052.0	199.4	1,395.9	1,380.2	15.70	88.897	
6,003.9	5,960.8	5,915.5	5,914.2	15.3	2.0	-85.96	-1,052.1	199.4	1,395.9	1,380.2	15.71	88.863	
6,050.0	6,006.7	5,960.1	5,958.9	15.4	2.1	-86.08	-1,052.7	199.7	1,396.3	1,380.5	15.79	88.444	
6,100.0	6,056.2	6,009.0	6,007.8	15.4	2.1	-86.36	-1,053.4	200.0	1,396.6	1,380.7	15.86	88.032	
6,102.3	6,058.5	6,011.5	6,010.2	15.4	2.1	-86.38	-1,053.5	200.0	1,396.6	1,380.7	15.87	88.014	
6,150.0	6,105.1	6,061.2	6,059.9	15.4	2.1	-86.82	-1,054.2	200.2	1,396.6	1,380.7	15.94	87.635	
6,200.0	6,153.0	6,112.5	6,111.2	15.5	2.1	-87.43	-1,054.7	200.5	1,396.5	1,380.5	16.00	87.256	
6,200.8	6,153.8	6,113.3	6,112.0	15.5	2.1	-87.44	-1,054.8	200.5	1,396.5	1,380.5	16.01	87.250	
6,250.0	6,199.9	6,162.7	6,161.5	15.5	2.1	-88.17	-1,055.2	200.7	1,396.2	1,380.1	16.07	86.888	
6,299.2	6,244.8	6,210.7	6,209.4	15.5	2.1	-89.00	-1,055.5	200.9	1,396.0	1,379.9	16.13	86.527	
6,300.0	6,245.5	6,211.4	6,210.2	15.5	2.1	-89.02	-1,055.5	200.9	1,396.0	1,379.9	16.13	86.521	
6,326.0	6,268.6	6,236.0	6,234.7	15.5	2.1	-89.49	-1,055.6	201.0	1,396.0	1,379.8	16.17	86.322	
6,350.0	6,289.6	6,258.2	6,256.9	15.5	2.1	-89.93	-1,055.7	201.1	1,396.0	1,379.8	16.21	86.144	
6,397.6	6,329.9	6,300.0	6,298.7	15.4	2.1	-90.82	-1,055.8	201.3	1,396.4	1,380.1	16.29	85.744	
6,400.0	6,331.8	6,302.7	6,301.4	15.4	2.1	-90.88	-1,055.8	201.3	1,396.4	1,380.1	16.29	85.722	
6,450.0	6,372.2	6,340.9	6,339.7	15.4	2.2	-91.74	-1,055.9	201.5	1,397.4	1,381.0	16.39	85.248	
6,496.0	6,407.4	6,374.2	6,373.0	15.4	2.2	-92.49	-1,056.0	201.8	1,399.1	1,382.5	16.52	84.706	
6,500.0	6,410.3	6,377.0	6,375.7	15.4	2.2	-92.55	-1,056.0	201.8	1,399.2	1,382.7	16.53	84.663	
6,550.0	6,446.1	6,410.0	6,408.7	15.4	2.2	-93.27	-1,056.2	202.1	1,402.1	1,385.4	16.71	83.928	
6,594.5	6,475.9	6,436.2	6,434.9	15.4	2.2	-93.79	-1,056.4	202.4	1,405.7	1,388.8	16.91	83.110	
6,600.0	6,479.4	6,439.3	6,438.0	15.4	2.2	-93.84	-1,056.4	202.5	1,406.2	1,389.3	16.94	83.015	
6,650.0	6,510.0	6,466.1	6,464.9	15.5	2.2	-94.28	-1,056.7	202.7	1,411.7	1,394.4	17.24	81.896	
6,692.9	6,534.0	6,487.1	6,485.8	15.7	2.2	-94.52	-1,056.9	203.0	1,417.5	1,400.0	17.56	80.743	
6,700.0	6,537.8	6,490.4	6,489.1	15.7	2.2	-94.55	-1,056.9	203.0	1,418.6	1,401.0	17.61	80.563	
6,750.0	6,562.6	6,510.9	6,509.6	16.2	2.2	-94.59	-1,057.2	203.3	1,427.1	1,409.1	18.06	79.031	
6,791.3	6,580.8	6,525.2	6,523.9	16.6	2.2	-94.44	-1,057.5	203.4	1,435.4	1,416.9	18.50	77.602	
6,800.0	6,584.3	6,528.0	6,526.7	16.7	2.2	-94.39	-1,057.5	203.5	1,437.3	1,418.7	18.59	77.327	
6,850.0	6,602.9	6,542.5	6,541.2	17.3	2.2	-93.96	-1,057.8	203.7	1,449.2	1,430.0	19.20	75.487	
6,889.7	6,615.2	6,552.1	6,550.8	17.9	2.2	-93.45	-1,058.0	203.8	1,459.9	1,440.1	19.75	73.935	
6,900.0	6,618.1	6,554.3	6,553.0	18.0	2.2	-93.29	-1,058.0	203.8	1,462.8	1,442.9	19.89	73.559	
6,950.0	6,630.0	6,563.3	6,562.0	18.8	2.2	-92.37	-1,058.3	203.9	1,478.0	1,457.4	20.65	71.592	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,636.8	6,568.3	6,567.0	19.5	2.2	-91.50	-1,058.4	204.0	1,490.7	1,469.5	21.27	70.075	
7,000.0	6,638.5	6,569.6	6,568.3	19.7	2.2	-91.19	-1,058.4	204.0	1,494.9	1,473.4	21.47	69.632	
7,050.0	6,643.5	6,573.1	6,571.7	20.6	2.2	-89.76	-1,058.5	204.1	1,513.2	1,490.9	22.35	67.720	
7,086.6	6,644.9	6,573.8	6,572.5	21.3	2.2	-88.54	-1,058.5	204.1	1,527.5	1,504.5	23.02	66.361	
7,097.8	6,645.0	6,573.8	6,572.4	21.5	2.2	-88.14	-1,058.5	204.1	1,532.1	1,508.9	23.22	65.967	
7,100.0	6,645.0	6,573.7	6,572.4	21.6	2.2	-88.14	-1,058.5	204.1	1,533.0	1,509.7	23.27	65.886	
7,185.0	6,644.9	6,572.7	6,571.4	23.3	2.2	-88.10	-1,058.5	204.1	1,569.6	1,544.6	24.99	62.804	
7,200.0	6,644.9	6,572.5	6,571.2	23.6	2.2	-88.09	-1,058.5	204.1	1,576.4	1,551.1	25.30	62.320	
7,283.4	6,644.8	6,571.5	6,570.2	25.4	2.2	-88.05	-1,058.5	204.1	1,616.5	1,589.4	27.11	59.625	
7,300.0	6,644.7	6,571.3	6,570.0	25.8	2.2	-88.04	-1,058.4	204.1	1,624.9	1,597.4	27.47	59.148	
7,381.9	6,644.6	6,570.3	6,569.0	27.7	2.2	-88.00	-1,058.4	204.0	1,667.9	1,638.6	29.35	56.839	
7,400.0	6,644.6	6,570.1	6,568.8	28.1	2.2	-87.99	-1,058.4	204.0	1,677.9	1,648.1	29.76	56.380	
7,480.3	6,644.5	6,569.2	6,567.9	30.0	2.2	-87.96	-1,058.4	204.0	1,723.5	1,691.8	31.67	54.423	
7,500.0	6,644.5	6,568.9	6,567.6	30.5	2.2	-87.95	-1,058.4	204.0	1,735.0	1,702.9	32.14	53.991	
7,578.7	6,644.4	6,568.0	6,566.7	32.4	2.2	-87.91	-1,058.4	204.0	1,782.7	1,748.6	34.06	52.339	
7,600.0	6,644.4	6,567.8	6,566.4	32.9	2.2	-87.90	-1,058.4	204.0	1,796.0	1,761.4	34.58	51.936	
7,677.1	6,644.3	6,566.8	6,565.5	34.8	2.2	-87.86	-1,058.3	204.0	1,845.3	1,808.8	36.51	50.545	
7,700.0	6,644.2	6,566.6	6,565.3	35.4	2.2	-87.85	-1,058.3	204.0	1,860.2	1,823.2	37.08	50.170	
7,775.6	6,644.1	6,565.7	6,564.4	37.3	2.2	-87.81	-1,058.3	204.0	1,910.9	1,871.9	39.00	48.997	
7,800.0	6,644.1	6,565.4	6,564.1	38.0	2.2	-87.80	-1,058.3	204.0	1,927.6	1,888.0	39.62	48.652	
7,874.0	6,644.0	6,564.5	6,563.2	39.9	2.2	-87.77	-1,058.3	204.0	1,979.2	1,937.7	41.53	47.660	
7,900.0	6,644.0	6,564.2	6,562.9	40.5	2.2	-87.75	-1,058.3	204.0	1,997.7	1,955.5	42.20	47.341	
7,972.4	6,643.9	6,563.4	6,562.1	42.4	2.2	-87.72	-1,058.3	203.9	2,050.0	2,005.9	44.08	46.501	
8,000.0	6,643.9	6,563.1	6,561.8	43.1	2.2	-87.71	-1,058.2	203.9	2,070.2	2,025.4	44.80	46.207	
8,070.8	6,643.8	6,562.2	6,560.9	45.0	2.2	-87.67	-1,058.2	203.9	2,122.9	2,076.3	46.67	45.493	
8,100.0	6,643.7	6,561.9	6,560.6	45.8	2.2	-87.66	-1,058.2	203.9	2,144.9	2,097.5	47.43	45.222	
8,169.3	6,643.7	6,561.1	6,559.8	47.6	2.2	-87.63	-1,058.2	203.9	2,197.9	2,148.6	49.27	44.612	
8,200.0	6,643.6	6,560.8	6,559.4	48.4	2.2	-87.61	-1,058.2	203.9	2,221.7	2,171.6	50.08	44.362	
8,267.7	6,643.5	6,560.0	6,558.7	50.2	2.2	-87.58	-1,058.2	203.9	2,274.7	2,222.8	51.89	43.840	
8,300.0	6,643.5	6,559.6	6,558.3	51.1	2.2	-87.56	-1,058.2	203.9	2,300.2	2,247.5	52.75	43.608	
8,366.1	6,643.4	6,558.8	6,557.5	52.9	2.2	-87.53	-1,058.1	203.9	2,353.0	2,298.5	54.52	43.159	
8,400.0	6,643.4	6,558.5	6,557.1	53.8	2.2	-87.52	-1,058.1	203.9	2,380.3	2,324.9	55.43	42.945	
8,464.5	6,643.3	6,557.7	6,556.4	55.5	2.2	-87.49	-1,058.1	203.9	2,432.8	2,375.7	57.16	42.558	
8,500.0	6,643.2	6,557.3	6,556.0	56.5	2.2	-87.47	-1,058.1	203.9	2,461.9	2,403.8	58.12	42.360	
8,563.0	6,643.2	6,556.6	6,555.3	58.2	2.2	-87.44	-1,058.1	203.9	2,514.0	2,454.2	59.82	42.025	
8,600.0	6,643.1	6,556.2	6,554.9	59.2	2.2	-87.42	-1,058.1	203.8	2,544.8	2,484.0	60.82	41.840	
8,661.4	6,643.0	6,555.5	6,554.2	60.8	2.2	-87.40	-1,058.1	203.8	2,596.3	2,533.8	62.49	41.550	
8,700.0	6,643.0	6,555.1	6,553.7	61.9	2.2	-87.38	-1,058.1	203.8	2,628.9	2,565.4	63.53	41.378	
8,759.8	6,642.9	6,554.4	6,553.1	63.5	2.2	-87.35	-1,058.0	203.8	2,679.7	2,614.6	65.16	41.125	
8,800.0	6,642.9	6,553.9	6,552.6	64.6	2.2	-87.33	-1,058.0	203.8	2,714.1	2,647.8	66.25	40.965	
8,858.2	6,642.8	6,553.3	6,552.0	66.2	2.2	-87.31	-1,058.0	203.8	2,764.1	2,696.3	67.84	40.744	
8,900.0	6,642.7	6,552.8	6,551.5	67.3	2.2	-87.29	-1,058.0	203.8	2,800.2	2,731.2	68.98	40.595	
8,956.7	6,642.7	6,552.2	6,550.9	68.9	2.2	-87.26	-1,058.0	203.8	2,849.4	2,778.9	70.53	40.401	
9,000.0	6,642.6	6,551.7	6,550.4	70.1	2.2	-87.24	-1,058.0	203.8	2,887.3	2,815.5	71.71	40.262	
9,055.1	6,642.5	6,551.1	6,549.8	71.6	2.2	-87.22	-1,058.0	203.8	2,935.6	2,862.3	73.22	40.092	
9,100.0	6,642.5	6,550.6	6,549.3	72.8	2.2	-87.20	-1,058.0	203.8	2,975.1	2,900.7	74.45	39.961	
9,153.5	6,642.4	6,550.0	6,548.7	74.3	2.2	-87.17	-1,057.9	203.8	3,022.4	2,946.5	75.92	39.812	
9,200.0	6,642.4	6,549.5	6,548.2	75.6	2.2	-87.15	-1,057.9	203.8	3,063.7	2,986.5	77.19	39.689	
9,251.9	6,642.3	6,548.9	6,547.6	77.0	2.2	-87.13	-1,057.9	203.7	3,110.0	3,031.4	78.62	39.558	
9,300.0	6,642.2	6,548.4	6,547.1	78.3	2.2	-87.10	-1,057.9	203.7	3,153.0	3,073.1	79.94	39.442	
9,350.4	6,642.2	6,547.8	6,546.5	79.7	2.2	-87.08	-1,057.9	203.7	3,198.2	3,116.9	81.32	39.326	
9,400.0	6,642.1	6,547.3	6,546.0	81.1	2.2	-87.06	-1,057.9	203.7	3,242.9	3,160.2	82.69	39.218	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,546.7	6,545.4	82.4	2.2	-87.04	-1,057.9	203.7	3,287.0	3,202.9	84.03	39.115	
9,500.0	6,642.0	6,546.2	6,544.9	83.8	2.2	-87.02	-1,057.9	203.7	3,333.4	3,247.9	85.44	39.013	
9,547.2	6,641.9	6,545.7	6,544.4	85.1	2.2	-86.99	-1,057.9	203.7	3,376.3	3,289.5	86.75	38.922	
9,600.0	6,641.9	6,545.1	6,543.8	86.6	2.2	-86.97	-1,057.8	203.7	3,424.4	3,336.2	88.20	38.825	
9,645.6	6,641.8	6,544.6	6,543.3	87.9	2.2	-86.95	-1,057.8	203.7	3,466.1	3,376.6	89.46	38.744	
9,700.0	6,641.7	6,544.0	6,542.7	89.4	2.2	-86.93	-1,057.8	203.7	3,515.9	3,424.9	90.96	38.653	
9,744.1	6,641.7	6,543.5	6,542.2	90.6	2.2	-86.91	-1,057.8	203.7	3,556.4	3,464.2	92.18	38.582	
9,800.0	6,641.6	6,542.9	6,541.6	92.1	2.2	-86.88	-1,057.8	203.7	3,607.8	3,514.1	93.72	38.495	
9,842.5	6,641.6	6,542.5	6,541.2	93.3	2.2	-86.86	-1,057.8	203.7	3,647.0	3,552.1	94.90	38.432	
9,900.0	6,641.5	6,541.9	6,540.6	94.9	2.2	-86.84	-1,057.8	203.7	3,700.2	3,603.7	96.49	38.349	
9,940.9	6,641.4	6,541.4	6,540.1	96.0	2.2	-86.82	-1,057.8	203.7	3,738.1	3,640.5	97.62	38.293	
10,000.0	6,641.4	6,540.8	6,539.5	97.7	2.2	-86.79	-1,057.8	203.6	3,792.9	3,693.7	99.25	38.215	
10,039.3	6,641.3	6,540.4	6,539.1	98.8	2.2	-86.78	-1,057.7	203.6	3,829.5	3,729.2	100.34	38.165	
10,100.0	6,641.2	6,539.7	6,538.4	100.4	2.2	-86.75	-1,057.7	203.6	3,886.1	3,784.0	102.02	38.091	
10,137.8	6,641.2	6,539.3	6,538.0	101.5	2.2	-86.73	-1,057.7	203.6	3,921.3	3,818.3	103.07	38.046	
10,200.0	6,641.1	6,538.7	6,537.4	103.2	2.2	-86.71	-1,057.7	203.6	3,979.5	3,874.7	104.79	37.976	
10,236.2	6,641.1	6,538.3	6,537.0	104.2	2.2	-86.69	-1,057.7	203.6	4,013.4	3,907.6	105.79	37.936	
10,300.0	6,641.0	6,537.6	6,536.3	106.0	2.2	-86.66	-1,057.7	203.6	4,073.3	3,965.7	107.56	37.869	
10,334.6	6,640.9	6,537.3	6,536.0	107.0	2.2	-86.65	-1,057.7	203.6	4,105.8	3,997.3	108.52	37.834	
10,400.0	6,640.9	6,536.6	6,535.3	108.8	2.2	-86.62	-1,057.7	203.6	4,167.3	4,057.0	110.33	37.770	
10,433.0	6,640.8	6,536.2	6,534.9	109.7	2.2	-86.61	-1,057.7	203.6	4,198.5	4,087.2	111.25	37.739	
10,500.0	6,640.7	6,535.5	6,534.2	111.6	2.2	-86.58	-1,057.6	203.6	4,261.6	4,148.5	113.11	37.678	
10,531.5	6,640.7	6,535.2	6,533.9	112.4	2.2	-86.57	-1,057.6	203.6	4,291.4	4,177.4	113.98	37.650	
10,600.0	6,640.6	6,534.5	6,533.2	114.3	2.2	-86.54	-1,057.6	203.6	4,356.2	4,240.3	115.88	37.592	
10,629.9	6,640.6	6,534.2	6,532.9	115.2	2.2	-86.52	-1,057.6	203.6	4,384.5	4,267.8	116.71	37.567	
10,700.0	6,640.5	6,533.4	6,532.1	117.1	2.2	-86.49	-1,057.6	203.5	4,451.0	4,332.3	118.66	37.511	
10,728.3	6,640.4	6,533.1	6,531.8	117.9	2.2	-86.48	-1,057.6	203.5	4,477.9	4,358.5	119.44	37.489	
10,800.0	6,640.4	6,532.4	6,531.1	119.9	2.2	-86.45	-1,057.6	203.5	4,546.0	4,424.6	121.43	37.436	
10,826.7	6,640.3	6,532.1	6,530.8	120.7	2.2	-86.44	-1,057.6	203.5	4,571.5	4,449.3	122.18	37.417	
10,900.0	6,640.2	6,531.4	6,530.1	122.7	2.2	-86.41	-1,057.6	203.5	4,641.3	4,517.1	124.21	37.366	
10,925.2	6,640.2	6,531.1	6,529.8	123.4	2.2	-86.40	-1,057.6	203.5	4,665.3	4,540.4	124.91	37.349	
11,000.0	6,640.1	6,530.3	6,529.0	125.5	2.2	-86.37	-1,057.5	203.5	4,736.7	4,609.7	126.99	37.300	
11,023.6	6,640.1	6,530.1	6,528.8	126.1	2.2	-86.36	-1,057.5	203.5	4,759.3	4,631.6	127.65	37.285	
11,100.0	6,640.0	6,529.3	6,528.0	128.3	2.2	-86.33	-1,057.5	203.5	4,832.3	4,702.6	129.77	37.238	
11,122.0	6,639.9	6,529.1	6,527.8	128.9	2.2	-86.32	-1,057.5	203.5	4,853.4	4,723.0	130.38	37.225	
11,200.0	6,639.8	6,528.3	6,527.0	131.1	2.2	-86.28	-1,057.5	203.5	4,928.1	4,795.6	132.55	37.180	
11,220.4	6,639.8	6,528.1	6,526.8	131.6	2.2	-86.28	-1,057.5	203.5	4,947.7	4,814.6	133.12	37.168	
11,300.0	6,639.7	6,527.3	6,526.0	133.9	2.2	-86.24	-1,057.5	203.5	5,024.1	4,888.7	135.33	37.125	
11,318.9	6,639.7	6,527.1	6,525.8	134.4	2.2	-86.23	-1,057.5	203.5	5,042.2	4,906.3	135.85	37.115	
11,400.0	6,639.6	6,526.3	6,525.0	136.7	2.2	-86.20	-1,057.5	203.5	5,120.2	4,982.1	138.11	37.073	
11,417.3	6,639.6	6,526.1	6,524.8	137.1	2.2	-86.19	-1,057.5	203.5	5,136.8	4,998.2	138.59	37.065	
11,500.0	6,639.5	6,525.3	6,524.0	139.4	2.2	-86.16	-1,057.5	203.4	5,216.4	5,075.5	140.89	37.025	
11,515.7	6,639.5	6,525.1	6,523.8	139.9	2.2	-86.15	-1,057.5	203.4	5,231.6	5,090.3	141.33	37.017	
11,600.0	6,639.3	6,524.3	6,523.0	142.2	2.2	-86.12	-1,057.4	203.4	5,312.8	5,169.2	143.67	36.979	
11,614.1	6,639.3	6,524.1	6,522.8	142.6	2.2	-86.11	-1,057.4	203.4	5,326.5	5,182.4	144.07	36.973	
11,700.0	6,639.2	6,523.3	6,522.0	145.0	2.2	-86.08	-1,057.4	203.4	5,409.4	5,262.9	146.45	36.936	
11,712.6	6,639.2	6,523.2	6,521.9	145.4	2.2	-86.07	-1,057.4	203.4	5,421.5	5,274.7	146.80	36.930	
11,800.0	6,639.1	6,522.3	6,521.0	147.8	2.2	-86.04	-1,057.4	203.4	5,506.0	5,356.8	149.24	36.895	
11,811.0	6,639.1	6,522.2	6,520.9	148.1	2.2	-86.03	-1,057.4	203.4	5,516.6	5,367.1	149.54	36.890	
11,900.0	6,639.0	6,521.3	6,520.0	150.6	2.2	-86.00	-1,057.4	203.4	5,602.8	5,450.8	152.02	36.856	
11,909.4	6,639.0	6,521.2	6,519.9	150.9	2.2	-85.99	-1,057.4	203.4	5,611.9	5,459.6	152.28	36.852	
12,000.0	6,638.8	6,520.3	6,519.0	153.4	2.2	-85.96	-1,057.4	203.4	5,699.6	5,544.8	154.80	36.819	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
12,007.8	6,638.8	6,520.2	6,518.9	153.6	2.2	-85.95	-1,057.4	203.4	5,707.3	5,552.2	155.02	36.816		
12,100.0	6,638.7	6,519.3	6,518.0	156.2	2.2	-85.92	-1,057.4	203.4	5,796.6	5,639.0	157.58	36.784		
12,106.3	6,638.7	6,519.3	6,518.0	156.4	2.2	-85.92	-1,057.4	203.4	5,802.7	5,645.0	157.76	36.782		
12,200.0	6,638.6	6,518.3	6,517.0	159.0	2.2	-85.88	-1,057.3	203.4	5,893.7	5,733.3	160.37	36.751		
12,204.7	6,638.6	6,518.3	6,517.0	159.1	2.2	-85.88	-1,057.3	203.4	5,898.3	5,737.8	160.50	36.750		
12,300.0	6,638.5	6,517.4	6,516.1	161.8	2.2	-85.84	-1,057.3	203.3	5,990.9	5,827.7	163.15	36.720		
12,303.1	6,638.5	6,517.3	6,516.0	161.9	2.2	-85.84	-1,057.3	203.3	5,993.9	5,830.7	163.24	36.719		
12,400.0	6,638.3	6,516.4	6,515.1	164.6	2.2	-85.80	-1,057.3	203.3	6,088.2	5,922.2	165.93	36.690		
12,401.5	6,638.3	6,516.4	6,515.1	164.6	2.2	-85.80	-1,057.3	203.3	6,089.7	5,923.7	165.98	36.690		
12,500.0	6,638.2	6,515.4	6,514.1	167.4	2.2	-85.76	-1,057.3	203.3	6,185.5	6,016.8	168.72	36.662		
12,598.4	6,638.1	6,514.5	6,513.2	170.2	2.2	-85.72	-1,057.3	203.3	6,281.4	6,109.9	171.46	36.635		
12,600.0	6,638.1	6,514.5	6,513.2	170.2	2.2	-85.72	-1,057.3	203.3	6,283.0	6,111.5	171.50	36.635		
12,696.8	6,638.0	6,500.0	6,498.7	172.9	2.2	-85.13	-1,057.1	203.1	6,377.4	6,203.3	174.08	36.635		
12,700.0	6,638.0	6,500.0	6,498.7	173.0	2.2	-85.13	-1,057.1	203.1	6,380.5	6,206.3	174.17	36.635		
12,795.2	6,637.8	6,500.0	6,498.7	175.7	2.2	-85.13	-1,057.1	203.1	6,473.5	6,296.6	176.82	36.610		
12,800.0	6,637.8	6,500.0	6,498.7	175.8	2.2	-85.13	-1,057.1	203.1	6,478.1	6,301.1	176.96	36.608		
12,893.7	6,637.7	6,500.0	6,498.7	178.4	2.2	-85.13	-1,057.1	203.1	6,569.6	6,390.0	179.57	36.585		
12,900.0	6,637.7	6,500.0	6,498.7	178.6	2.2	-85.13	-1,057.1	203.1	6,575.8	6,396.0	179.75	36.583		
12,992.1	6,637.6	6,500.0	6,498.7	181.2	2.2	-85.13	-1,057.1	203.1	6,665.8	6,483.4	182.32	36.561		
13,000.0	6,637.6	6,500.0	6,498.7	181.4	2.2	-85.13	-1,057.1	203.1	6,673.5	6,491.0	182.54	36.560		
13,090.5	6,637.5	6,500.0	6,498.7	183.9	2.2	-85.13	-1,057.1	203.1	6,762.0	6,577.0	185.06	36.539		
13,100.0	6,637.5	6,500.0	6,498.7	184.2	2.2	-85.13	-1,057.1	203.1	6,771.3	6,586.0	185.33	36.537		
13,188.9	6,637.4	6,500.0	6,498.7	186.7	2.2	-85.13	-1,057.1	203.1	6,858.3	6,670.5	187.81	36.517		
13,200.0	6,637.3	6,500.0	6,498.7	187.0	2.2	-85.13	-1,057.1	203.1	6,869.2	6,681.0	188.12	36.515		
13,287.4	6,637.2	6,500.0	6,498.7	189.4	2.2	-85.13	-1,057.1	203.1	6,954.7	6,764.2	190.56	36.496		
13,300.0	6,637.2	6,500.0	6,498.7	189.8	2.2	-85.13	-1,057.1	203.1	6,967.1	6,776.2	190.91	36.494		
13,385.8	6,637.1	6,500.0	6,498.7	192.2	2.2	-85.13	-1,057.1	203.1	7,051.1	6,857.8	193.31	36.476		
13,400.0	6,637.1	6,500.0	6,498.7	192.6	2.2	-85.13	-1,057.1	203.1	7,065.1	6,871.4	193.70	36.474		
13,484.2	6,637.0	6,500.0	6,498.7	195.0	2.2	-85.13	-1,057.1	203.1	7,147.6	6,951.6	196.05	36.457		
13,500.0	6,637.0	6,500.0	6,498.7	195.4	2.2	-85.13	-1,057.1	203.1	7,163.1	6,966.6	196.50	36.454		
13,582.6	6,636.9	6,500.0	6,498.7	197.7	2.2	-85.13	-1,057.1	203.1	7,244.2	7,045.4	198.80	36.439		
13,600.0	6,636.8	6,500.0	6,498.7	198.2	2.2	-85.13	-1,057.1	203.1	7,261.2	7,061.9	199.29	36.436		
13,681.1	6,636.7	6,500.0	6,498.7	200.5	2.2	-85.13	-1,057.1	203.1	7,340.8	7,139.2	201.55	36.421		
13,700.0	6,636.7	6,500.0	6,498.7	201.0	2.2	-85.13	-1,057.1	203.1	7,359.3	7,157.2	202.08	36.418		
13,779.5	6,636.6	6,500.0	6,498.7	203.2	2.2	-85.13	-1,057.1	203.1	7,437.4	7,233.1	204.30	36.404		
13,800.0	6,636.6	6,500.0	6,498.7	203.8	2.2	-85.13	-1,057.1	203.1	7,457.5	7,252.6	204.87	36.401		
13,877.9	6,636.5	6,500.0	6,498.7	206.0	2.2	-85.13	-1,057.1	203.1	7,534.1	7,327.0	207.05	36.388		
13,900.0	6,636.5	6,500.0	6,498.7	206.6	2.2	-85.13	-1,057.1	203.1	7,555.8	7,348.1	207.67	36.384		
13,976.3	6,636.4	6,500.0	6,498.7	208.8	2.2	-85.13	-1,057.1	203.1	7,630.8	7,421.0	209.80	36.372		
14,000.0	6,636.3	6,500.0	6,498.7	209.4	2.2	-85.13	-1,057.1	203.1	7,654.0	7,443.6	210.46	36.368		
14,074.8	6,636.2	6,500.0	6,498.7	211.5	2.2	-85.13	-1,057.1	203.1	7,727.6	7,515.0	212.55	36.357		
14,100.0	6,636.2	6,500.0	6,498.7	212.2	2.2	-85.13	-1,057.1	203.1	7,752.4	7,539.1	213.25	36.353		
14,173.2	6,636.1	6,500.0	6,498.7	214.3	2.2	-85.13	-1,057.1	203.1	7,824.4	7,609.1	215.30	36.342		
14,200.0	6,636.1	6,500.0	6,498.7	215.0	2.2	-85.13	-1,057.1	203.1	7,850.7	7,634.7	216.05	36.338		
14,271.6	6,636.0	6,500.0	6,498.7	217.0	2.2	-85.13	-1,057.1	203.1	7,921.2	7,703.2	218.05	36.328		
14,300.0	6,636.0	6,500.0	6,498.7	217.8	2.2	-85.13	-1,057.1	203.1	7,949.2	7,730.3	218.84	36.324		
14,370.0	6,635.9	6,500.0	6,498.7	219.8	2.2	-85.13	-1,057.1	203.1	8,018.1	7,797.3	220.80	36.314		
14,400.0	6,635.8	6,500.0	6,498.7	220.6	2.2	-85.13	-1,057.1	203.1	8,047.6	7,826.0	221.63	36.310		
14,468.5	6,635.7	6,500.0	6,498.7	222.6	2.2	-85.13	-1,057.1	203.1	8,115.0	7,891.5	223.55	36.301		
14,500.0	6,635.7	6,500.0	6,498.7	223.4	2.2	-85.13	-1,057.1	203.1	8,146.1	7,921.7	224.43	36.297		
14,566.9	6,635.6	6,500.0	6,498.7	225.3	2.2	-85.13	-1,057.1	203.1	8,212.0	7,985.7	226.30	36.288		
14,600.0	6,635.6	6,500.0	6,498.7	226.2	2.2	-85.13	-1,057.1	203.1	8,244.6	8,017.4	227.22	36.284		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.5	6,500.0	6,498.7	228.1	2.2	-85.13	-1,057.1	203.1	8,309.0	8,080.0	229.05	36.276	
14,700.0	6,635.5	6,500.0	6,498.7	229.0	2.2	-85.13	-1,057.1	203.1	8,343.2	8,113.2	230.02	36.272	
14,763.7	6,635.4	6,500.0	6,498.7	230.8	2.2	-85.13	-1,057.1	203.1	8,406.0	8,174.2	231.80	36.264	
14,800.0	6,635.3	6,500.0	6,498.7	231.8	2.2	-85.13	-1,057.1	203.1	8,441.8	8,209.0	232.81	36.260	
14,862.2	6,635.2	6,500.0	6,498.7	233.6	2.2	-85.13	-1,057.1	203.1	8,503.1	8,268.5	234.55	36.253	
14,900.0	6,635.2	6,500.0	6,498.7	234.7	2.2	-85.13	-1,057.1	203.1	8,540.4	8,304.8	235.61	36.248	
14,960.6	6,635.1	6,500.0	6,498.7	236.4	2.2	-85.13	-1,057.1	203.1	8,600.2	8,362.9	237.30	36.242	
14,995.1	6,635.0	6,500.0	6,498.7	237.3	2.2	-85.13	-1,057.1	203.1	8,634.3	8,396.0	238.27	36.238 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-76.47	1,533.5	-6,373.8	6,555.7				
98.4	98.4	77.4	77.4	0.1	0.0	-76.47	1,533.5	-6,373.8	6,555.7	6,555.6	0.10	N/A	
100.0	100.0	79.0	79.0	0.1	0.0	-76.47	1,533.5	-6,373.8	6,555.7	6,555.6	0.10	N/A	
196.8	196.8	175.8	175.8	0.3	1.0	-76.47	1,533.5	-6,373.8	6,555.7	6,554.4	1.29	5,062.296	
200.0	200.0	179.0	179.0	0.3	1.0	-76.47	1,533.5	-6,373.8	6,555.7	6,554.3	1.34	4,882.239	
295.3	295.3	274.3	274.3	0.5	3.0	-76.47	1,533.5	-6,373.8	6,555.7	6,552.2	3.51	1,865.694	
300.0	300.0	279.0	279.0	0.5	3.1	-76.47	1,533.5	-6,373.8	6,555.7	6,552.0	3.63	1,805.148	
393.7	393.7	372.7	372.7	0.8	5.1	-76.47	1,533.5	-6,373.8	6,555.7	6,549.8	5.83	1,124.768	
400.0	400.0	379.0	379.0	0.8	5.2	-76.47	1,533.5	-6,373.8	6,555.7	6,549.7	5.97	1,097.469	
492.1	492.1	471.1	471.1	1.0	7.1	-76.47	1,533.5	-6,373.8	6,555.7	6,547.6	8.07	812.480	
500.0	500.0	479.0	479.0	1.0	7.3	-76.47	1,533.5	-6,373.8	6,555.7	6,547.4	8.25	794.897	
590.5	590.5	569.5	569.5	1.2	9.1	-76.47	1,533.5	-6,373.8	6,555.7	6,545.4	10.29	637.058	
600.0	600.0	579.0	579.0	1.2	9.3	-76.47	1,533.5	-6,373.8	6,555.7	6,545.2	10.50	624.141	
689.0	689.0	668.0	668.0	1.4	11.1	-76.47	1,533.5	-6,373.8	6,555.7	6,543.2	12.50	524.266	
700.0	700.0	679.0	679.0	1.4	11.3	-76.47	1,533.5	-6,373.8	6,555.7	6,542.9	12.75	514.079	
787.4	787.4	766.4	766.4	1.6	13.1	-76.47	1,533.5	-6,373.8	6,555.7	6,541.0	14.71	445.532	
800.0	800.0	779.0	779.0	1.7	13.3	-76.47	1,533.5	-6,373.8	6,555.7	6,540.7	15.00	437.133	
885.8	885.8	864.8	864.8	1.9	15.1	-76.47	1,533.5	-6,373.8	6,555.7	6,538.7	16.92	387.416	
900.0	900.0	879.0	879.0	1.9	15.3	-76.47	1,533.5	-6,373.8	6,555.7	6,538.4	17.24	380.275	
984.2	984.2	963.2	963.2	2.1	17.0	-76.47	1,533.5	-6,373.8	6,555.7	6,536.5	19.13	342.741	
1,000.0	1,000.0	979.0	979.0	2.1	17.4	-76.47	1,533.5	-6,373.8	6,555.7	6,536.2	19.48	336.532	
1,082.7	1,082.7	1,061.7	1,061.7	2.3	19.0	-76.47	1,533.5	-6,373.8	6,555.7	6,534.3	21.33	307.319	
1,100.0	1,100.0	1,079.0	1,079.0	2.3	19.4	-76.47	1,533.5	-6,373.8	6,555.7	6,533.9	21.72	301.829	
1,181.1	1,181.1	1,160.1	1,160.1	2.5	21.0	-76.47	1,533.5	-6,373.8	6,555.7	6,532.1	23.54	278.542	
1,200.0	1,200.0	1,179.0	1,179.0	2.6	21.4	-76.47	1,533.5	-6,373.8	6,555.7	6,531.7	23.96	273.623	
1,279.5	1,279.5	1,258.5	1,258.5	2.7	23.0	-76.47	1,533.5	-6,373.8	6,555.7	6,529.9	25.74	254.699	
1,300.0	1,300.0	1,279.0	1,279.0	2.8	23.4	-76.47	1,533.5	-6,373.8	6,555.7	6,529.5	26.20	250.244	
1,377.9	1,377.9	1,356.9	1,356.9	3.0	25.0	-117.66	1,533.5	-6,373.8	6,556.2	6,528.2	27.94	234.684	
1,400.0	1,400.0	1,379.0	1,379.0	3.0	25.4	-117.66	1,533.5	-6,373.8	6,556.5	6,528.1	28.43	230.643	
1,476.4	1,476.3	1,455.3	1,455.3	3.2	27.0	-117.66	1,533.5	-6,373.8	6,558.2	6,528.1	30.12	217.731	
1,500.0	1,499.8	1,478.8	1,478.8	3.2	27.4	-117.66	1,533.5	-6,373.8	6,558.9	6,528.3	30.64	214.043	
1,574.8	1,574.4	1,553.4	1,553.4	3.4	28.9	-117.65	1,533.5	-6,373.8	6,561.8	6,529.5	32.29	203.187	
1,600.0	1,599.5	1,578.5	1,578.5	3.5	29.4	-117.65	1,533.5	-6,373.8	6,563.0	6,530.1	32.85	199.795	
1,673.2	1,672.2	1,651.2	1,651.2	3.6	30.9	-117.65	1,533.5	-6,373.8	6,567.0	6,532.5	34.46	190.572	
1,700.0	1,698.7	1,677.7	1,677.7	3.7	31.4	-117.65	1,533.5	-6,373.8	6,568.7	6,533.6	35.05	187.431	
1,771.6	1,769.5	1,748.5	1,748.5	3.9	32.9	-117.64	1,533.5	-6,373.8	6,573.7	6,537.1	36.62	179.520	
1,800.0	1,797.5	1,776.5	1,776.5	4.0	33.4	-117.64	1,533.5	-6,373.8	6,576.0	6,538.7	37.24	176.595	
1,870.1	1,866.3	1,845.3	1,845.3	4.2	34.8	-117.63	1,533.5	-6,373.8	6,582.1	6,543.3	38.78	169.750	
1,899.9	1,895.6	1,874.6	1,874.6	4.3	35.4	-117.62	1,533.5	-6,373.8	6,585.0	6,545.5	39.43	167.015	
1,968.5	1,962.6	1,941.6	1,941.6	4.5	36.7	-117.73	1,533.5	-6,373.8	6,591.7	6,550.7	40.97	160.873	
2,000.0	1,993.4	1,972.4	1,972.4	4.6	37.4	-117.78	1,533.5	-6,373.8	6,594.8	6,553.1	41.69	158.202	
2,066.9	2,058.9	2,037.9	2,037.9	4.8	38.7	-117.88	1,533.5	-6,373.8	6,601.4	6,558.2	43.21	152.784	
2,100.0	2,091.3	2,070.3	2,070.3	4.9	39.3	-117.94	1,533.5	-6,373.8	6,604.7	6,560.7	43.96	150.244	
2,165.3	2,155.2	2,134.2	2,134.2	5.2	40.6	-118.04	1,533.5	-6,373.8	6,611.2	6,565.7	45.45	145.449	
2,200.0	2,189.1	2,168.1	2,168.1	5.3	41.3	-118.09	1,533.5	-6,373.8	6,614.6	6,568.4	46.25	143.029	
2,263.8	2,251.5	2,230.5	2,230.5	5.5	42.5	-118.19	1,533.5	-6,373.8	6,621.0	6,573.3	47.71	138.771	
2,300.0	2,286.9	2,265.9	2,265.9	5.7	43.3	-118.25	1,533.5	-6,373.8	6,624.6	6,576.1	48.54	136.466	
2,362.2	2,347.7	2,326.7	2,326.7	5.9	44.5	-118.34	1,533.5	-6,373.8	6,630.8	6,580.9	49.98	132.675	
2,400.0	2,384.7	2,363.7	2,363.7	6.0	45.2	-118.40	1,533.5	-6,373.8	6,634.6	6,583.8	50.85	130.475	
2,460.6	2,444.0	2,423.0	2,423.0	6.3	46.4	-118.50	1,533.5	-6,373.8	6,640.7	6,588.5	52.25	127.091	
2,500.0	2,482.5	2,461.5	2,461.5	6.4	47.2	-118.56	1,533.5	-6,373.8	6,644.7	6,591.6	53.16	124.989	
2,559.0	2,540.3	2,519.3	2,519.3	6.7	48.4	-118.65	1,533.5	-6,373.8	6,650.7	6,596.2	54.53	121.961	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,559.3	2,559.3	6.8	49.2	-118.71	1,533.5	-6,373.8	6,654.8	6,599.4	55.48	119.949	
2,657.5	2,636.5	2,615.5	2,615.5	7.1	50.3	-118.80	1,533.5	-6,373.8	6,660.7	6,603.9	56.82	117.233	
2,700.0	2,678.1	2,657.1	2,657.1	7.2	51.1	-118.87	1,533.5	-6,373.8	6,665.0	6,607.2	57.80	115.305	
2,755.9	2,732.8	2,711.8	2,711.8	7.5	52.2	-118.95	1,533.5	-6,373.8	6,670.7	6,611.6	59.10	112.864	
2,800.0	2,776.0	2,755.0	2,755.0	7.7	53.1	-119.02	1,533.5	-6,373.8	6,675.3	6,615.1	60.13	111.014	
2,854.3	2,829.1	2,808.1	2,808.1	7.9	54.2	-119.10	1,533.5	-6,373.8	6,680.8	6,619.4	61.40	108.816	
2,900.0	2,873.8	2,852.8	2,852.8	8.1	55.1	-119.17	1,533.5	-6,373.8	6,685.5	6,623.1	62.46	107.038	
2,952.7	2,925.4	2,904.4	2,904.4	8.3	56.1	-119.25	1,533.5	-6,373.8	6,691.0	6,627.3	63.69	105.056	
3,000.0	2,971.6	2,950.6	2,950.6	8.5	57.0	-119.33	1,533.5	-6,373.8	6,695.9	6,631.1	64.79	103.345	
3,051.2	3,021.6	3,000.6	3,000.6	8.7	58.0	-119.40	1,533.5	-6,373.8	6,701.2	6,635.2	65.99	101.555	
3,100.0	3,069.4	3,048.4	3,048.4	8.9	59.0	-119.48	1,533.5	-6,373.8	6,706.2	6,639.1	67.13	99.906	
3,149.6	3,117.9	3,096.9	3,096.9	9.1	60.0	-119.55	1,533.5	-6,373.8	6,711.4	6,643.1	68.28	98.287	
3,200.0	3,167.2	3,146.2	3,146.2	9.3	61.0	-119.63	1,533.5	-6,373.8	6,716.7	6,647.2	69.46	96.697	
3,248.0	3,214.2	3,193.2	3,193.2	9.5	61.9	-119.70	1,533.5	-6,373.8	6,721.7	6,651.1	70.58	95.231	
3,300.0	3,265.0	3,244.0	3,244.0	9.8	62.9	-119.78	1,533.5	-6,373.8	6,727.1	6,655.4	71.80	93.696	
3,346.4	3,310.5	3,289.5	3,289.5	10.0	63.8	-119.85	1,533.5	-6,373.8	6,732.0	6,659.1	72.88	92.367	
3,400.0	3,362.9	3,341.9	3,341.9	10.2	64.9	-119.93	1,533.5	-6,373.8	6,737.7	6,663.5	74.14	90.883	
3,444.9	3,406.7	3,385.7	3,385.7	10.4	65.8	-120.00	1,533.5	-6,373.8	6,742.4	6,667.2	75.19	89.678	
3,473.0	3,434.2	3,413.2	3,413.2	10.5	66.3	-120.04	1,533.5	-6,373.8	6,745.4	6,669.5	75.84	88.940	
3,500.0	3,460.7	3,439.7	3,439.7	10.6	66.9	-120.13	1,533.5	-6,373.8	6,748.2	6,671.7	76.49	88.219	
3,543.3	3,503.2	3,482.2	3,482.2	10.7	67.7	-120.26	1,533.5	-6,373.8	6,752.4	6,674.9	77.52	87.110	
3,600.0	3,559.0	3,538.0	3,538.0	10.9	68.8	-120.42	1,533.5	-6,373.8	6,757.4	6,678.6	78.86	85.694	
3,641.7	3,600.2	3,579.2	3,579.2	11.0	69.7	-120.53	1,533.5	-6,373.8	6,760.8	6,681.0	79.83	84.690	
3,700.0	3,657.9	3,636.9	3,636.9	11.2	70.8	-120.66	1,533.5	-6,373.8	6,765.0	6,683.8	81.19	83.323	
3,740.1	3,697.8	3,676.8	3,676.8	11.3	71.6	-120.74	1,533.5	-6,373.8	6,767.5	6,685.4	82.11	82.416	
3,800.0	3,757.3	3,736.3	3,736.3	11.4	72.8	-120.84	1,533.5	-6,373.8	6,770.8	6,687.3	83.49	81.097	
3,838.6	3,795.7	3,774.7	3,774.7	11.5	73.6	-120.90	1,533.5	-6,373.8	6,772.5	6,688.2	84.36	80.279	
3,900.0	3,857.0	3,836.0	3,836.0	11.7	74.8	-120.97	1,533.5	-6,373.8	6,774.8	6,689.0	85.75	79.008	
3,937.0	3,893.9	3,872.9	3,872.9	11.7	75.6	-121.00	1,533.5	-6,373.8	6,775.8	6,689.2	86.57	78.271	
4,000.0	3,956.9	3,935.9	3,935.9	11.8	76.9	-121.03	1,533.5	-6,373.8	6,777.0	6,689.0	87.96	77.046	
4,035.4	3,992.3	3,971.3	3,971.3	11.9	77.6	-121.05	1,533.5	-6,373.8	6,777.3	6,688.6	88.73	76.382	
4,072.9	4,029.8	4,008.8	4,008.8	11.9	78.3	-79.86	1,533.5	-6,373.8	6,777.4	6,689.1	88.33	76.730	
4,100.0	4,056.9	4,035.9	4,035.9	12.0	78.9	-79.86	1,533.5	-6,373.8	6,777.4	6,688.5	88.92	76.219	
4,133.8	4,090.7	4,069.7	4,069.7	12.0	79.5	-79.86	1,533.5	-6,373.8	6,777.4	6,687.8	89.67	75.585	
4,200.0	4,156.9	4,135.9	4,135.9	12.1	80.9	-79.86	1,533.5	-6,373.8	6,777.4	6,686.3	91.12	74.377	
4,232.3	4,189.2	4,168.2	4,168.2	12.2	81.5	-79.86	1,533.5	-6,373.8	6,777.4	6,685.6	91.83	73.801	
4,300.0	4,256.9	4,235.9	4,235.9	12.3	82.9	-79.86	1,533.5	-6,373.8	6,777.4	6,684.1	93.33	72.620	
4,330.7	4,287.6	4,266.6	4,266.6	12.4	83.5	-79.86	1,533.5	-6,373.8	6,777.4	6,683.4	94.00	72.097	
4,400.0	4,356.9	4,335.9	4,335.9	12.5	84.9	-79.86	1,533.5	-6,373.8	6,777.4	6,681.9	95.53	70.944	
4,429.1	4,386.0	4,365.0	4,365.0	12.5	85.5	-79.86	1,533.5	-6,373.8	6,777.4	6,681.3	96.17	70.470	
4,500.0	4,456.9	4,435.9	4,435.9	12.6	86.9	-79.86	1,533.5	-6,373.8	6,777.4	6,679.7	97.74	69.343	
4,527.5	4,484.4	4,463.4	4,463.4	12.7	87.5	-79.86	1,533.5	-6,373.8	6,777.4	6,679.1	98.35	68.914	
4,600.0	4,556.9	4,535.9	4,535.9	12.8	88.9	-79.86	1,533.5	-6,373.8	6,777.4	6,677.5	99.95	67.811	
4,626.0	4,582.9	4,561.9	4,561.9	12.9	89.4	-79.86	1,533.5	-6,373.8	6,777.4	6,676.9	100.52	67.424	
4,700.0	4,656.9	4,635.9	4,635.9	13.0	90.9	-79.86	1,533.5	-6,373.8	6,777.4	6,675.3	102.15	66.345	
4,724.4	4,681.3	4,660.3	4,660.3	13.0	91.4	-79.86	1,533.5	-6,373.8	6,777.4	6,674.8	102.69	65.997	
4,800.0	4,756.9	4,735.9	4,735.9	13.1	92.9	-79.86	1,533.5	-6,373.8	6,777.4	6,673.1	104.36	64.941	
4,822.8	4,779.7	4,758.7	4,758.7	13.2	93.4	-79.86	1,533.5	-6,373.8	6,777.4	6,672.6	104.87	64.628	
4,900.0	4,856.9	4,835.9	4,835.9	13.3	95.0	-79.86	1,533.5	-6,373.8	6,777.4	6,670.9	106.57	63.594	
4,921.2	4,878.1	4,857.1	4,857.1	13.4	95.4	-79.86	1,533.5	-6,373.8	6,777.4	6,670.4	107.04	63.315	
5,000.0	4,956.9	4,935.9	4,935.9	13.5	97.0	-79.86	1,533.5	-6,373.8	6,777.4	6,668.7	108.79	62.301	
5,019.7	4,976.6	4,955.6	4,955.6	13.5	97.4	-79.86	1,533.5	-6,373.8	6,777.4	6,668.2	109.22	62.053	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,035.9	5,035.9	13.7	99.0	-79.86	1,533.5	-6,373.8	6,777.4	6,666.5	111.00	61.059	
5,118.1	5,075.0	5,054.0	5,054.0	13.7	99.3	-79.86	1,533.5	-6,373.8	6,777.4	6,666.1	111.40	60.840	
5,200.0	5,156.9	5,135.9	5,135.9	13.8	101.0	-79.86	1,533.5	-6,373.8	6,777.4	6,664.2	113.21	59.866	
5,216.5	5,173.4	5,152.4	5,152.4	13.9	101.3	-79.86	1,533.5	-6,373.8	6,777.4	6,663.9	113.58	59.673	
5,300.0	5,256.9	5,235.9	5,235.9	14.0	103.0	-79.86	1,533.5	-6,373.8	6,777.4	6,662.0	115.42	58.718	
5,314.9	5,271.8	5,250.8	5,250.8	14.1	103.3	-79.86	1,533.5	-6,373.8	6,777.4	6,661.7	115.76	58.550	
5,400.0	5,356.9	5,335.9	5,335.9	14.2	105.0	-79.86	1,533.5	-6,373.8	6,777.4	6,659.8	117.64	57.612	
5,413.4	5,370.3	5,349.3	5,349.3	14.2	105.3	-79.86	1,533.5	-6,373.8	6,777.4	6,659.5	117.94	57.467	
5,500.0	5,456.9	5,435.9	5,435.9	14.4	107.0	-79.86	1,533.5	-6,373.8	6,777.4	6,657.6	119.85	56.547	
5,511.8	5,468.7	5,447.7	5,447.7	14.4	107.3	-79.86	1,533.5	-6,373.8	6,777.4	6,657.3	120.12	56.424	
5,600.0	5,556.9	5,535.9	5,535.9	14.6	109.0	-79.86	1,533.5	-6,373.8	6,777.4	6,655.4	122.07	55.521	
5,610.2	5,567.1	5,546.1	5,546.1	14.6	109.2	-79.86	1,533.5	-6,373.8	6,777.4	6,655.2	122.30	55.418	
5,700.0	5,656.9	5,635.9	5,635.9	14.7	111.0	-79.86	1,533.5	-6,373.8	6,777.4	6,653.2	124.29	54.531	
5,708.6	5,665.5	5,644.5	5,644.5	14.8	111.2	-79.86	1,533.5	-6,373.8	6,777.4	6,653.0	124.48	54.447	
5,800.0	5,756.9	5,735.9	5,735.9	14.9	113.0	-79.86	1,533.5	-6,373.8	6,777.4	6,650.9	126.50	53.575	
5,807.1	5,764.0	5,743.0	5,743.0	14.9	113.2	-79.86	1,533.5	-6,373.8	6,777.4	6,650.8	126.66	53.509	
5,900.0	5,856.9	5,835.9	5,835.9	15.1	115.1	-79.86	1,533.5	-6,373.8	6,777.4	6,648.7	128.72	52.652	
5,905.5	5,862.4	5,841.4	5,841.4	15.1	115.2	-79.86	1,533.5	-6,373.8	6,777.4	6,648.6	128.84	52.602	
5,971.9	5,928.8	5,907.8	5,907.8	15.3	116.5	-79.86	1,533.5	-6,373.8	6,777.4	6,647.1	130.32	52.007	
6,000.0	5,956.9	5,935.9	5,935.9	15.3	117.1	10.15	1,533.5	-6,373.8	6,776.9	6,645.2	131.67	51.468	
6,003.9	5,960.8	5,939.8	5,939.8	15.3	117.2	10.15	1,533.5	-6,373.8	6,776.7	6,645.0	131.73	51.446	
6,050.0	6,006.7	5,985.7	5,985.7	15.4	118.1	10.21	1,533.5	-6,373.8	6,773.3	6,641.2	132.08	51.282	
6,100.0	6,056.2	6,035.2	6,035.2	15.4	119.1	10.32	1,533.5	-6,373.8	6,766.2	6,634.4	131.85	51.318	
6,102.3	6,058.5	6,037.5	6,037.5	15.4	119.1	10.32	1,533.5	-6,373.8	6,765.8	6,634.0	131.82	51.325	
6,150.0	6,105.1	6,084.1	6,084.1	15.4	120.1	10.49	1,533.5	-6,373.8	6,755.8	6,624.8	130.98	51.580	
6,200.0	6,153.0	6,132.0	6,132.0	15.5	121.0	10.72	1,533.5	-6,373.8	6,742.0	6,612.5	129.46	52.077	
6,200.8	6,153.8	6,132.8	6,132.8	15.5	121.0	10.73	1,533.5	-6,373.8	6,741.8	6,612.3	129.43	52.086	
6,250.0	6,199.9	6,178.9	6,178.9	15.5	122.0	11.02	1,533.5	-6,373.8	6,725.0	6,597.7	127.31	52.823	
6,299.2	6,244.8	6,223.8	6,223.8	15.5	122.9	11.39	1,533.5	-6,373.8	6,705.1	6,580.5	124.59	53.819	
6,300.0	6,245.5	6,224.5	6,224.5	15.5	122.9	11.40	1,533.5	-6,373.8	6,704.8	6,580.2	124.54	53.837	
6,350.0	6,289.6	6,268.6	6,268.6	15.5	123.8	11.87	1,533.5	-6,373.8	6,681.5	6,560.3	121.17	55.142	
6,397.6	6,329.9	6,308.9	6,308.9	15.4	124.6	12.40	1,533.5	-6,373.8	6,656.6	6,539.1	117.44	56.678	
6,400.0	6,331.8	6,310.8	6,310.8	15.4	124.6	12.43	1,533.5	-6,373.8	6,655.3	6,538.0	117.25	56.763	
6,450.0	6,372.2	6,351.2	6,351.2	15.4	125.4	13.12	1,533.5	-6,373.8	6,626.2	6,513.3	112.83	58.726	
6,496.0	6,407.4	6,386.4	6,386.4	15.4	126.1	13.88	1,533.5	-6,373.8	6,597.0	6,488.6	108.41	60.855	
6,500.0	6,410.3	6,389.3	6,389.3	15.4	126.2	13.96	1,533.5	-6,373.8	6,594.4	6,486.4	108.01	61.052	
6,550.0	6,446.1	6,425.1	6,425.1	15.4	126.9	14.97	1,533.5	-6,373.8	6,560.1	6,457.2	102.92	63.742	
6,594.5	6,475.9	6,454.9	6,454.9	15.4	127.5	16.07	1,533.5	-6,373.8	6,527.6	6,429.3	98.30	66.403	
6,600.0	6,479.4	6,458.4	6,458.4	15.4	127.6	16.22	1,533.5	-6,373.8	6,523.4	6,425.7	97.73	66.748	
6,650.0	6,510.0	6,489.0	6,489.0	15.5	128.2	17.76	1,533.5	-6,373.8	6,484.6	6,391.8	92.75	69.918	
6,692.9	6,534.0	6,513.0	6,513.0	15.7	128.7	19.40	1,533.5	-6,373.8	6,449.7	6,360.7	88.94	72.516	
6,700.0	6,537.8	6,516.8	6,516.8	15.7	128.8	19.70	1,533.5	-6,373.8	6,443.7	6,355.4	88.38	72.908	
6,750.0	6,562.6	6,541.6	6,541.6	16.2	129.3	22.17	1,533.5	-6,373.8	6,401.1	6,315.8	85.29	75.054	
6,791.3	6,580.8	6,559.8	6,559.8	16.6	129.6	24.76	1,533.5	-6,373.8	6,364.6	6,280.3	84.35	75.452	
6,800.0	6,584.3	6,563.3	6,563.3	16.7	129.7	25.38	1,533.5	-6,373.8	6,356.9	6,272.5	84.40	75.322	
6,850.0	6,602.9	6,581.9	6,581.9	17.3	130.1	29.67	1,533.5	-6,373.8	6,311.3	6,224.3	86.94	72.593	
6,889.7	6,615.2	6,594.2	6,594.2	17.9	130.3	34.18	1,533.5	-6,373.8	6,274.2	6,181.9	92.33	67.954	
6,900.0	6,618.1	6,597.1	6,597.1	18.0	130.4	35.55	1,533.5	-6,373.8	6,264.5	6,170.2	94.28	66.443	
6,950.0	6,630.0	6,609.0	6,609.0	18.8	130.6	43.83	1,533.5	-6,373.8	6,216.9	6,109.4	107.43	57.868	
6,988.2	6,636.8	6,615.8	6,615.8	19.5	130.7	52.45	1,533.5	-6,373.8	6,180.0	6,058.9	121.14	51.014	
7,000.0	6,638.5	6,617.5	6,617.5	19.7	130.8	55.62	1,533.5	-6,373.8	6,168.5	6,042.7	125.79	49.038	
7,050.0	6,643.5	6,622.5	6,622.5	20.6	130.9	71.77	1,533.5	-6,373.8	6,119.7	5,975.4	144.35	42.395	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,623.9	6,623.9	21.3	130.9	85.88	1,533.5	-6,373.8	6,083.9	5,932.0	151.85	40.066	
7,097.8	6,645.0	6,624.0	6,624.0	21.5	130.9	90.36	1,533.5	-6,373.8	6,072.9	5,920.5	152.36	39.858	
7,100.0	6,645.0	6,624.0	6,624.0	21.6	130.9	90.36	1,533.5	-6,373.8	6,070.7	5,918.3	152.40	39.833	
7,185.0	6,644.9	6,623.9	6,623.9	23.3	130.9	90.35	1,533.5	-6,373.8	5,987.4	5,833.3	154.13	38.847	
7,200.0	6,644.9	6,623.9	6,623.9	23.6	130.9	90.35	1,533.5	-6,373.8	5,972.7	5,818.3	154.43	38.675	
7,283.4	6,644.8	6,623.8	6,623.8	25.4	130.9	90.35	1,533.5	-6,373.8	5,891.0	5,734.7	156.25	37.703	
7,300.0	6,644.7	6,623.7	6,623.7	25.8	130.9	90.35	1,533.5	-6,373.8	5,874.8	5,718.2	156.61	37.513	
7,381.9	6,644.6	6,623.6	6,623.6	27.7	130.9	90.34	1,533.5	-6,373.8	5,794.6	5,636.1	158.48	36.563	
7,400.0	6,644.6	6,623.6	6,623.6	28.1	130.9	90.34	1,533.5	-6,373.8	5,776.9	5,618.0	158.90	36.356	
7,480.3	6,644.5	6,623.5	6,623.5	30.0	130.9	90.34	1,533.5	-6,373.8	5,698.3	5,537.5	160.80	35.437	
7,500.0	6,644.5	6,623.5	6,623.5	30.5	130.9	90.33	1,533.5	-6,373.8	5,679.1	5,517.8	161.27	35.214	
7,578.7	6,644.4	6,623.4	6,623.4	32.4	130.9	90.33	1,533.5	-6,373.8	5,602.1	5,438.9	163.20	34.328	
7,600.0	6,644.4	6,623.4	6,623.4	32.9	130.9	90.33	1,533.5	-6,373.8	5,581.3	5,417.6	163.72	34.092	
7,677.1	6,644.3	6,623.3	6,623.3	34.8	130.9	90.32	1,533.5	-6,373.8	5,506.0	5,340.4	165.64	33.240	
7,700.0	6,644.2	6,623.2	6,623.2	35.4	130.9	90.32	1,533.5	-6,373.8	5,483.7	5,317.5	166.22	32.992	
7,775.6	6,644.1	6,623.1	6,623.1	37.3	130.9	90.32	1,533.5	-6,373.8	5,410.0	5,241.8	168.14	32.176	
7,800.0	6,644.1	6,623.1	6,623.1	38.0	130.9	90.32	1,533.5	-6,373.8	5,386.1	5,217.4	168.76	31.917	
7,874.0	6,644.0	6,623.0	6,623.0	39.9	130.9	90.31	1,533.5	-6,373.8	5,314.0	5,143.3	170.66	31.137	
7,900.0	6,644.0	6,623.0	6,623.0	40.5	130.9	90.31	1,533.5	-6,373.8	5,288.7	5,117.3	171.33	30.867	
7,972.4	6,643.9	6,622.9	6,622.9	42.4	130.9	90.31	1,533.5	-6,373.8	5,218.1	5,044.9	173.22	30.124	
8,000.0	6,643.9	6,622.9	6,622.9	43.1	130.9	90.30	1,533.5	-6,373.8	5,191.3	5,017.4	173.94	29.845	
8,070.8	6,643.8	6,622.8	6,622.8	45.0	130.9	90.30	1,533.5	-6,373.8	5,122.4	4,946.6	175.80	29.137	
8,100.0	6,643.7	6,622.7	6,622.7	45.8	130.9	90.30	1,533.5	-6,373.8	5,094.0	4,917.5	176.57	28.850	
8,169.3	6,643.7	6,622.7	6,622.7	47.6	130.9	90.29	1,533.5	-6,373.8	5,026.7	4,848.3	178.41	28.175	
8,200.0	6,643.6	6,622.6	6,622.6	48.4	130.9	90.29	1,533.5	-6,373.8	4,996.9	4,817.6	179.22	27.881	
8,267.7	6,643.5	6,622.5	6,622.5	50.2	130.9	90.29	1,533.5	-6,373.8	4,931.2	4,750.1	181.03	27.240	
8,300.0	6,643.5	6,622.5	6,622.5	51.1	130.9	90.29	1,533.5	-6,373.8	4,899.8	4,717.9	181.89	26.938	
8,366.1	6,643.4	6,622.4	6,622.4	52.9	130.9	90.28	1,533.5	-6,373.8	4,835.7	4,652.0	183.66	26.329	
8,400.0	6,643.4	6,622.4	6,622.4	53.8	130.9	90.28	1,533.5	-6,373.8	4,802.9	4,618.3	184.57	26.022	
8,464.5	6,643.3	6,622.3	6,622.3	55.5	130.9	90.28	1,533.5	-6,373.8	4,740.4	4,554.1	186.31	25.444	
8,500.0	6,643.2	6,622.2	6,622.2	56.5	130.9	90.27	1,533.5	-6,373.8	4,706.1	4,518.8	187.27	25.131	
8,563.0	6,643.2	6,622.2	6,622.2	58.2	130.9	90.27	1,533.5	-6,373.8	4,645.2	4,456.2	188.97	24.582	
8,600.0	6,643.1	6,622.1	6,622.1	59.2	130.9	90.27	1,533.5	-6,373.8	4,609.4	4,419.5	189.97	24.264	
8,661.4	6,643.0	6,622.0	6,622.0	60.8	130.9	90.26	1,533.5	-6,373.8	4,550.1	4,358.5	191.64	23.744	
8,700.0	6,643.0	6,622.0	6,622.0	61.9	130.9	90.26	1,533.5	-6,373.8	4,512.9	4,320.2	192.68	23.421	
8,759.8	6,642.9	6,621.9	6,621.9	63.5	130.9	90.26	1,533.5	-6,373.8	4,455.2	4,260.9	194.31	22.928	
8,800.0	6,642.9	6,621.9	6,621.9	64.6	130.9	90.26	1,533.5	-6,373.8	4,416.5	4,221.1	195.41	22.602	
8,858.2	6,642.8	6,621.8	6,621.8	66.2	130.9	90.25	1,533.5	-6,373.8	4,360.5	4,163.5	197.00	22.135	
8,900.0	6,642.7	6,621.7	6,621.7	67.3	130.9	90.25	1,533.5	-6,373.8	4,320.4	4,122.2	198.14	21.805	
8,956.7	6,642.7	6,621.7	6,621.7	68.9	130.9	90.25	1,533.5	-6,373.8	4,265.9	4,066.2	199.69	21.363	
9,000.0	6,642.6	6,621.6	6,621.6	70.1	130.9	90.24	1,533.5	-6,373.8	4,224.3	4,023.5	200.87	21.030	
9,055.1	6,642.5	6,621.5	6,621.5	71.6	130.9	90.24	1,533.5	-6,373.8	4,171.5	3,969.1	202.38	20.612	
9,100.0	6,642.5	6,621.5	6,621.5	72.8	130.9	90.24	1,533.5	-6,373.8	4,128.5	3,924.9	203.61	20.276	
9,153.5	6,642.4	6,621.4	6,621.4	74.3	130.9	90.24	1,533.5	-6,373.8	4,077.3	3,872.2	205.08	19.881	
9,200.0	6,642.4	6,621.4	6,621.4	75.6	130.9	90.23	1,533.5	-6,373.8	4,032.9	3,826.5	206.36	19.543	
9,251.9	6,642.3	6,621.3	6,621.3	77.0	130.9	90.23	1,533.5	-6,373.8	3,983.3	3,775.5	207.79	19.170	
9,300.0	6,642.2	6,621.2	6,621.2	78.3	130.9	90.23	1,533.5	-6,373.8	3,937.5	3,728.3	209.11	18.830	
9,350.4	6,642.2	6,621.2	6,621.2	79.7	130.9	90.22	1,533.5	-6,373.8	3,889.5	3,679.0	210.50	18.478	
9,400.0	6,642.1	6,621.1	6,621.1	81.1	130.9	90.22	1,533.5	-6,373.8	3,842.3	3,630.4	211.86	18.136	
9,448.8	6,642.0	6,621.0	6,621.0	82.4	130.9	90.22	1,533.5	-6,373.8	3,795.9	3,582.7	213.21	17.804	
9,500.0	6,642.0	6,621.0	6,621.0	83.8	130.8	90.21	1,533.5	-6,373.8	3,747.4	3,532.7	214.62	17.460	
9,547.2	6,641.9	6,620.9	6,620.9	85.1	130.8	90.21	1,533.5	-6,373.8	3,702.6	3,486.7	215.93	17.148	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,620.9	6,620.9	86.6	130.8	90.21	1,533.5	-6,373.8	3,652.7	3,435.3	217.38	16.803	
9,645.6	6,641.8	6,620.8	6,620.8	87.9	130.8	90.21	1,533.5	-6,373.8	3,609.6	3,390.9	218.65	16.509	
9,700.0	6,641.7	6,620.7	6,620.7	89.4	130.8	90.20	1,533.5	-6,373.8	3,558.3	3,338.2	220.15	16.163	
9,744.1	6,641.7	6,620.7	6,620.7	90.6	130.8	90.20	1,533.5	-6,373.8	3,516.8	3,295.5	221.37	15.887	
9,800.0	6,641.6	6,620.6	6,620.6	92.1	130.8	90.20	1,533.5	-6,373.8	3,464.3	3,241.4	222.91	15.541	
9,842.5	6,641.6	6,620.6	6,620.6	93.3	130.8	90.19	1,533.5	-6,373.8	3,424.4	3,200.3	224.09	15.281	
9,900.0	6,641.5	6,620.5	6,620.5	94.9	130.8	90.19	1,533.5	-6,373.8	3,370.6	3,144.9	225.68	14.935	
9,940.9	6,641.4	6,620.4	6,620.4	96.0	130.8	90.19	1,533.5	-6,373.8	3,332.3	3,105.5	226.82	14.692	
10,000.0	6,641.4	6,620.4	6,620.4	97.7	130.8	90.18	1,533.5	-6,373.8	3,277.2	3,048.8	228.46	14.345	
10,039.3	6,641.3	6,620.3	6,620.3	98.8	130.8	90.18	1,533.5	-6,373.8	3,240.6	3,011.1	229.55	14.117	
10,100.0	6,641.2	6,620.2	6,620.2	100.4	130.8	90.18	1,533.5	-6,373.8	3,184.3	2,953.1	231.23	13.771	
10,137.8	6,641.2	6,620.2	6,620.2	101.5	130.8	90.18	1,533.5	-6,373.8	3,149.3	2,917.0	232.28	13.558	
10,200.0	6,641.1	6,620.1	6,620.1	103.2	130.8	90.17	1,533.5	-6,373.8	3,091.8	2,857.8	234.01	13.213	
10,236.2	6,641.1	6,620.1	6,620.1	104.2	130.8	90.17	1,533.5	-6,373.8	3,058.5	2,823.5	235.01	13.014	
10,300.0	6,641.0	6,620.0	6,620.0	106.0	130.8	90.17	1,533.5	-6,373.8	2,999.8	2,763.0	236.78	12.669	
10,334.6	6,640.9	6,619.9	6,619.9	107.0	130.8	90.16	1,533.5	-6,373.8	2,968.1	2,730.3	237.74	12.484	
10,400.0	6,640.9	6,619.9	6,619.9	108.8	130.8	90.16	1,533.5	-6,373.8	2,908.3	2,668.8	239.56	12.140	
10,433.0	6,640.8	6,619.8	6,619.8	109.7	130.8	90.16	1,533.5	-6,373.8	2,878.2	2,637.8	240.48	11.969	
10,500.0	6,640.7	6,619.7	6,619.7	111.6	130.8	90.15	1,533.5	-6,373.8	2,817.5	2,575.1	242.34	11.626	
10,531.5	6,640.7	6,619.7	6,619.7	112.4	130.8	90.15	1,533.5	-6,373.8	2,789.0	2,545.8	243.22	11.467	
10,600.0	6,640.6	6,619.6	6,619.6	114.3	130.8	90.15	1,533.5	-6,373.8	2,727.2	2,482.1	245.12	11.126	
10,629.9	6,640.6	6,619.6	6,619.6	115.2	130.8	90.15	1,533.5	-6,373.8	2,700.3	2,454.4	245.96	10.979	
10,700.0	6,640.5	6,619.5	6,619.5	117.1	130.8	90.14	1,533.5	-6,373.8	2,637.6	2,389.7	247.91	10.640	
10,728.3	6,640.4	6,619.4	6,619.4	117.9	130.8	90.14	1,533.5	-6,373.8	2,612.4	2,363.7	248.70	10.504	
10,800.0	6,640.4	6,619.4	6,619.4	119.9	130.8	90.14	1,533.5	-6,373.8	2,548.9	2,298.2	250.69	10.167	
10,826.7	6,640.3	6,619.3	6,619.3	120.7	130.8	90.13	1,533.5	-6,373.8	2,525.2	2,273.8	251.44	10.043	
10,900.0	6,640.2	6,619.2	6,619.2	122.7	130.8	90.13	1,533.5	-6,373.8	2,460.9	2,207.5	253.48	9.709	
10,925.2	6,640.2	6,619.2	6,619.2	123.4	130.8	90.13	1,533.5	-6,373.8	2,438.9	2,184.8	254.18	9.595	
11,000.0	6,640.1	6,619.1	6,619.1	125.5	130.8	90.12	1,533.5	-6,373.8	2,374.0	2,117.7	256.26	9.264	
11,023.6	6,640.1	6,619.1	6,619.1	126.1	130.8	90.12	1,533.5	-6,373.8	2,353.6	2,096.7	256.92	9.161	
11,100.0	6,640.0	6,619.0	6,619.0	128.3	130.8	90.12	1,533.5	-6,373.8	2,288.1	2,029.0	259.05	8.833	
11,122.0	6,639.9	6,618.9	6,618.9	128.9	130.8	90.12	1,533.5	-6,373.8	2,269.3	2,009.6	259.66	8.739	
11,200.0	6,639.8	6,618.8	6,618.8	131.1	130.8	90.11	1,533.5	-6,373.8	2,203.4	1,941.5	261.84	8.415	
11,220.4	6,639.8	6,618.8	6,618.8	131.6	130.8	90.11	1,533.5	-6,373.8	2,186.2	1,923.8	262.41	8.331	
11,300.0	6,639.7	6,618.7	6,618.7	133.9	130.8	90.11	1,533.5	-6,373.8	2,120.0	1,855.4	264.63	8.011	
11,318.9	6,639.7	6,618.7	6,618.7	134.4	130.8	90.10	1,533.5	-6,373.8	2,104.4	1,839.3	265.15	7.937	
11,400.0	6,639.6	6,618.6	6,618.6	136.7	130.8	90.10	1,533.5	-6,373.8	2,038.1	1,770.7	267.42	7.621	
11,417.3	6,639.6	6,618.6	6,618.6	137.1	130.8	90.10	1,533.5	-6,373.8	2,024.1	1,756.2	267.90	7.555	
11,500.0	6,639.5	6,618.5	6,618.5	139.4	130.8	90.09	1,533.5	-6,373.8	1,957.9	1,687.7	270.21	7.246	
11,515.7	6,639.5	6,618.5	6,618.5	139.9	130.8	90.09	1,533.5	-6,373.8	1,945.5	1,674.8	270.65	7.188	
11,600.0	6,639.3	6,618.3	6,618.3	142.2	130.8	90.09	1,533.5	-6,373.8	1,879.6	1,606.6	273.00	6.885	
11,614.1	6,639.3	6,618.3	6,618.3	142.6	130.8	90.09	1,533.5	-6,373.8	1,868.7	1,595.3	273.40	6.835	
11,700.0	6,639.2	6,618.2	6,618.2	145.0	130.8	90.08	1,533.5	-6,373.8	1,803.5	1,527.7	275.79	6.539	
11,712.6	6,639.2	6,618.2	6,618.2	145.4	130.8	90.08	1,533.5	-6,373.8	1,794.0	1,517.9	276.14	6.497	
11,800.0	6,639.1	6,618.1	6,618.1	147.8	130.8	90.08	1,533.5	-6,373.8	1,729.7	1,451.2	278.58	6.209	
11,811.0	6,639.1	6,618.1	6,618.1	148.1	130.8	90.07	1,533.5	-6,373.8	1,721.8	1,442.9	278.89	6.174	
11,900.0	6,639.0	6,618.0	6,618.0	150.6	130.8	90.07	1,533.5	-6,373.8	1,658.8	1,377.4	281.38	5.895	
11,909.4	6,639.0	6,618.0	6,618.0	150.9	130.8	90.07	1,533.5	-6,373.8	1,652.2	1,370.6	281.64	5.866	
12,000.0	6,638.8	6,617.8	6,617.8	153.4	130.8	90.06	1,533.5	-6,373.8	1,590.9	1,306.8	284.17	5.598	
12,007.8	6,638.8	6,617.8	6,617.8	153.6	130.8	90.06	1,533.5	-6,373.8	1,585.8	1,301.4	284.39	5.576	
12,100.0	6,638.7	6,617.7	6,617.7	156.2	130.8	90.06	1,533.5	-6,373.8	1,526.6	1,239.7	286.97	5.320	
12,106.3	6,638.7	6,617.7	6,617.7	156.4	130.8	90.06	1,533.5	-6,373.8	1,522.7	1,235.6	287.14	5.303	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.6	6,617.6	6,617.6	159.0	130.8	90.05	1,533.5	-6,373.8	1,466.3	1,176.6	289.76	5.061	
12,204.7	6,638.6	6,617.6	6,617.6	159.1	130.8	90.05	1,533.5	-6,373.8	1,463.6	1,173.7	289.89	5.049	
12,300.0	6,638.5	6,617.5	6,617.5	161.8	130.8	90.05	1,533.5	-6,373.8	1,410.6	1,118.0	292.56	4.822	
12,303.1	6,638.5	6,617.5	6,617.5	161.9	130.8	90.05	1,533.5	-6,373.8	1,408.9	1,116.3	292.64	4.814	
12,400.0	6,638.3	6,617.3	6,617.3	164.6	130.8	90.04	1,533.5	-6,373.8	1,359.9	1,064.5	295.35	4.604	
12,401.5	6,638.3	6,617.3	6,617.3	164.6	130.8	90.04	1,533.5	-6,373.8	1,359.1	1,063.7	295.40	4.601	
12,500.0	6,638.2	6,617.2	6,617.2	167.4	130.8	90.03	1,533.5	-6,373.8	1,314.8	1,016.7	298.15	4.410	
12,598.4	6,638.1	6,617.1	6,617.1	170.2	130.8	90.03	1,533.5	-6,373.8	1,276.6	975.7	300.90	4.243	
12,600.0	6,638.1	6,617.1	6,617.1	170.2	130.8	90.03	1,533.5	-6,373.8	1,276.0	975.1	300.95	4.240	
12,696.8	6,638.0	6,617.0	6,617.0	172.9	130.8	90.02	1,533.5	-6,373.8	1,245.0	941.4	303.65	4.100	
12,700.0	6,638.0	6,617.0	6,617.0	173.0	130.8	90.02	1,533.5	-6,373.8	1,244.1	940.4	303.74	4.096	
12,795.2	6,637.8	6,616.8	6,616.8	175.7	130.8	90.02	1,533.5	-6,373.8	1,220.6	914.2	306.41	3.983	
12,800.0	6,637.8	6,616.8	6,616.8	175.8	130.8	90.02	1,533.5	-6,373.8	1,219.6	913.0	306.54	3.979	
12,893.7	6,637.7	6,616.7	6,616.7	178.4	130.8	90.01	1,533.5	-6,373.8	1,203.7	894.5	309.16	3.893	
12,900.0	6,637.7	6,616.7	6,616.7	178.6	130.8	90.01	1,533.5	-6,373.8	1,202.9	893.5	309.34	3.889	
12,992.1	6,637.6	6,616.6	6,616.6	181.2	130.8	90.00	1,533.5	-6,373.8	1,194.7	882.8	311.91	3.830	
13,000.0	6,637.6	6,616.6	6,616.6	181.4	130.8	90.00	1,533.5	-6,373.8	1,194.3	882.2	312.14	3.826	
13,052.3	6,637.5	6,616.5	6,616.5	182.9	130.8	90.00	1,533.5	-6,373.8	1,193.2	879.6	313.60	3.805 CC	
13,090.5	6,637.5	6,616.5	6,616.5	183.9	130.8	90.00	1,533.5	-6,373.8	1,193.8	879.1	314.67	3.794 ES	
13,100.0	6,637.5	6,616.5	6,616.5	184.2	130.8	90.00	1,533.5	-6,373.8	1,194.1	879.2	314.93	3.792	
13,188.9	6,637.4	6,616.4	6,616.4	186.7	130.8	89.99	1,533.5	-6,373.8	1,201.0	883.6	317.42	3.784 SF	
13,200.0	6,637.3	6,616.3	6,616.3	187.0	130.8	89.99	1,533.5	-6,373.8	1,202.3	884.6	317.73	3.784	
13,287.4	6,637.2	6,616.2	6,616.2	189.4	130.8	89.99	1,533.5	-6,373.8	1,216.1	895.9	320.18	3.798	
13,300.0	6,637.2	6,616.2	6,616.2	189.8	130.8	89.99	1,533.5	-6,373.8	1,218.6	898.1	320.53	3.802	
13,385.8	6,637.1	6,616.1	6,616.1	192.2	130.8	89.98	1,533.5	-6,373.8	1,238.9	916.0	322.93	3.836	
13,400.0	6,637.1	6,616.1	6,616.1	192.6	130.8	89.98	1,533.5	-6,373.8	1,242.8	919.5	323.33	3.844	
13,484.2	6,637.0	6,616.0	6,616.0	195.0	130.7	89.97	1,533.5	-6,373.8	1,269.0	943.3	325.69	3.896	
13,500.0	6,637.0	6,616.0	6,616.0	195.4	130.7	89.97	1,533.5	-6,373.8	1,274.4	948.3	326.13	3.908	
13,582.6	6,636.9	6,615.9	6,615.9	197.7	130.7	89.97	1,533.5	-6,373.8	1,305.7	977.3	328.44	3.976	
13,600.0	6,636.8	6,615.8	6,615.8	198.2	130.7	89.97	1,533.5	-6,373.8	1,312.9	984.0	328.93	3.991	
13,681.1	6,636.7	6,615.7	6,615.7	200.5	130.7	89.96	1,533.5	-6,373.8	1,348.7	1,017.5	331.20	4.072	
13,700.0	6,636.7	6,615.7	6,615.7	201.0	130.7	89.96	1,533.5	-6,373.8	1,357.6	1,025.9	331.73	4.093	
13,779.5	6,636.6	6,615.6	6,615.6	203.2	130.7	89.96	1,533.5	-6,373.8	1,397.3	1,063.4	333.96	4.184	
13,800.0	6,636.6	6,615.6	6,615.6	203.8	130.7	89.95	1,533.5	-6,373.8	1,408.1	1,073.6	334.53	4.209	
13,877.9	6,636.5	6,615.5	6,615.5	206.0	130.7	89.95	1,533.5	-6,373.8	1,451.0	1,114.3	336.71	4.309	
13,900.0	6,636.5	6,615.5	6,615.5	206.6	130.7	89.95	1,533.5	-6,373.8	1,463.6	1,126.3	337.33	4.339	
13,976.3	6,636.4	6,615.4	6,615.4	208.8	130.7	89.94	1,533.5	-6,373.8	1,509.1	1,169.7	339.47	4.446	
14,000.0	6,636.3	6,615.3	6,615.3	209.4	130.7	89.94	1,533.5	-6,373.8	1,523.7	1,183.6	340.13	4.480	
14,074.8	6,636.2	6,615.2	6,615.2	211.5	130.7	89.94	1,533.5	-6,373.8	1,571.3	1,229.1	342.23	4.592	
14,100.0	6,636.2	6,615.2	6,615.2	212.2	130.7	89.94	1,533.5	-6,373.8	1,587.9	1,244.9	342.93	4.630	
14,173.2	6,636.1	6,615.1	6,615.1	214.3	130.7	89.93	1,533.5	-6,373.8	1,637.1	1,292.1	344.98	4.745	
14,200.0	6,636.1	6,615.1	6,615.1	215.0	130.7	89.93	1,533.5	-6,373.8	1,655.6	1,309.8	345.73	4.789	
14,271.6	6,636.0	6,615.0	6,615.0	217.0	130.7	89.93	1,533.5	-6,373.8	1,706.0	1,358.3	347.74	4.906	
14,300.0	6,636.0	6,615.0	6,615.0	217.8	130.7	89.92	1,533.5	-6,373.8	1,726.4	1,377.9	348.53	4.953	
14,370.0	6,635.9	6,614.9	6,614.9	219.8	130.7	89.92	1,533.5	-6,373.8	1,777.7	1,427.2	350.50	5.072	
14,400.0	6,635.8	6,614.8	6,614.8	220.6	130.7	89.92	1,533.5	-6,373.8	1,800.0	1,448.6	351.34	5.123	
14,468.5	6,635.7	6,614.7	6,614.7	222.6	130.7	89.91	1,533.5	-6,373.8	1,851.8	1,498.6	353.25	5.242	
14,500.0	6,635.7	6,614.7	6,614.7	223.4	130.7	89.91	1,533.5	-6,373.8	1,876.0	1,521.9	354.14	5.297	
14,566.9	6,635.6	6,614.6	6,614.6	225.3	130.7	89.91	1,533.5	-6,373.8	1,928.1	1,572.1	356.01	5.416	
14,600.0	6,635.6	6,614.6	6,614.6	226.2	130.7	89.91	1,533.5	-6,373.8	1,954.2	1,597.3	356.94	5.475	
14,665.3	6,635.5	6,614.5	6,614.5	228.1	130.7	89.90	1,533.5	-6,373.8	2,006.4	1,647.6	358.77	5.592	
14,700.0	6,635.5	6,614.5	6,614.5	229.0	130.7	89.90	1,533.5	-6,373.8	2,034.3	1,674.6	359.74	5.655	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
14,763.7	6,635.4	6,614.4	6,614.4	230.8	130.7	89.90	1,533.5	-6,373.8	2,086.3	1,724.8	361.53	5.771	
14,800.0	6,635.3	6,614.3	6,614.3	231.8	130.7	89.89	1,533.5	-6,373.8	2,116.1	1,753.6	362.54	5.837	
14,862.2	6,635.2	6,614.2	6,614.2	233.6	130.7	89.89	1,533.5	-6,373.8	2,167.8	1,803.5	364.29	5.951	
14,900.0	6,635.2	6,614.2	6,614.2	234.7	130.7	89.89	1,533.5	-6,373.8	2,199.5	1,834.1	365.35	6.020	
14,960.6	6,635.1	6,614.1	6,614.1	236.4	130.7	89.88	1,533.5	-6,373.8	2,250.6	1,883.6	367.04	6.132	
14,995.1	6,635.0	6,614.0	6,614.0	237.3	130.7	89.88	1,533.5	-6,373.8	2,280.0	1,912.0	368.01	6.195	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-35.27	1,398.6	-989.3	1,713.1				
98.4	98.4	102.4	102.4	0.1	0.0	-35.27	1,398.6	-989.3	1,713.1	1,713.0	0.12	N/A	
100.0	100.0	104.0	104.0	0.1	0.0	-35.27	1,398.6	-989.3	1,713.1	1,713.0	0.14	N/A	
196.8	196.8	200.8	200.8	0.3	1.0	-35.27	1,398.6	-989.3	1,713.1	1,711.9	1.29	1,323.936	
200.0	200.0	204.0	204.0	0.3	1.1	-35.27	1,398.6	-989.3	1,713.1	1,711.8	1.37	1,245.960	
295.3	295.3	299.3	299.3	0.5	3.3	-35.27	1,398.6	-989.3	1,713.1	1,709.3	3.82	447.963	
300.0	300.0	304.0	304.0	0.5	3.4	-35.27	1,398.6	-989.3	1,713.1	1,709.2	3.94	435.341	
393.7	393.7	397.7	397.7	0.8	5.3	-35.27	1,398.6	-989.3	1,713.1	1,707.0	6.10	281.022	
400.0	400.0	404.0	404.0	0.8	5.5	-35.27	1,398.6	-989.3	1,713.1	1,706.9	6.24	274.549	
492.1	492.1	496.1	496.1	1.0	7.3	-35.27	1,398.6	-989.3	1,713.1	1,704.8	8.33	205.690	
500.0	500.0	504.0	504.0	1.0	7.5	-35.27	1,398.6	-989.3	1,713.1	1,704.6	8.51	201.385	
590.5	590.5	594.5	594.5	1.2	9.3	-35.27	1,398.6	-989.3	1,713.1	1,702.6	10.55	162.419	
600.0	600.0	604.0	604.0	1.2	9.5	-35.27	1,398.6	-989.3	1,713.1	1,702.4	10.76	159.208	
689.0	689.0	693.0	693.0	1.4	11.3	-35.27	1,398.6	-989.3	1,713.1	1,700.4	12.76	134.258	
700.0	700.0	704.0	704.0	1.4	11.6	-35.27	1,398.6	-989.3	1,713.1	1,700.1	13.01	131.702	
787.4	787.4	791.4	791.4	1.6	13.3	-35.27	1,398.6	-989.3	1,713.1	1,698.2	14.97	114.446	
800.0	800.0	804.0	804.0	1.7	13.6	-35.27	1,398.6	-989.3	1,713.1	1,697.9	15.25	112.325	
885.8	885.8	889.8	889.8	1.9	15.3	-35.27	1,398.6	-989.3	1,713.1	1,696.0	17.18	99.743	
900.0	900.0	904.0	904.0	1.9	15.6	-35.27	1,398.6	-989.3	1,713.1	1,695.7	17.49	97.931	
984.2	984.2	988.2	988.2	2.1	17.3	-35.27	1,398.6	-989.3	1,713.1	1,693.8	19.38	88.393	
1,000.0	1,000.0	1,004.0	1,004.0	2.1	17.6	-35.27	1,398.6	-989.3	1,713.1	1,693.4	19.73	86.813	
1,082.7	1,082.7	1,086.7	1,086.7	2.3	19.3	-35.27	1,398.6	-989.3	1,713.1	1,691.6	21.59	79.367	
1,100.0	1,100.0	1,104.0	1,104.0	2.3	19.6	-35.27	1,398.6	-989.3	1,713.1	1,691.2	21.97	77.965	
1,181.1	1,181.1	1,185.1	1,185.1	2.5	21.3	-35.27	1,398.6	-989.3	1,713.1	1,689.4	23.79	72.015	
1,200.0	1,200.0	1,204.0	1,204.0	2.6	21.6	-35.27	1,398.6	-989.3	1,713.1	1,688.9	24.21	70.756	
1,279.5	1,279.5	1,283.5	1,283.5	2.7	23.2	-35.27	1,398.6	-989.3	1,713.1	1,687.2	25.99	65.911	
1,300.0	1,300.0	1,304.0	1,304.0	2.8	23.7	-35.27	1,398.6	-989.3	1,713.1	1,686.7	26.45	64.769	
1,377.9	1,377.9	1,381.9	1,381.9	3.0	25.2	-76.50	1,398.6	-989.3	1,712.9	1,684.7	28.19	60.760	
1,400.0	1,400.0	1,404.0	1,404.0	3.0	25.7	-76.53	1,398.6	-989.3	1,712.7	1,684.1	28.68	59.712	
1,476.4	1,476.3	1,480.3	1,480.3	3.2	27.2	-76.66	1,398.6	-989.3	1,711.9	1,681.5	30.38	56.340	
1,500.0	1,499.8	1,503.8	1,503.8	3.2	27.7	-76.72	1,398.6	-989.3	1,711.5	1,680.6	30.91	55.371	
1,574.8	1,574.4	1,578.4	1,578.4	3.4	29.2	-76.95	1,398.6	-989.3	1,710.1	1,677.5	32.58	52.495	
1,600.0	1,599.5	1,603.5	1,603.5	3.5	29.7	-77.04	1,398.6	-989.3	1,709.5	1,676.4	33.14	51.590	
1,673.2	1,672.2	1,676.2	1,676.2	3.6	31.1	-77.36	1,398.6	-989.3	1,707.6	1,672.9	34.77	49.110	
1,700.0	1,698.7	1,702.7	1,702.7	3.7	31.7	-77.49	1,398.6	-989.3	1,706.8	1,671.5	35.37	48.259	
1,771.6	1,769.5	1,773.5	1,773.5	3.9	33.1	-77.89	1,398.6	-989.3	1,704.5	1,667.5	36.97	46.099	
1,800.0	1,797.5	1,801.5	1,801.5	4.0	33.7	-78.07	1,398.6	-989.3	1,703.5	1,665.9	37.61	45.293	
1,870.1	1,866.3	1,870.3	1,870.3	4.2	35.1	-78.54	1,398.6	-989.3	1,700.8	1,661.6	39.19	43.394	
1,899.9	1,895.6	1,899.6	1,899.6	4.3	35.6	-78.76	1,398.6	-989.3	1,699.6	1,659.7	39.87	42.629	
1,968.5	1,962.6	1,966.6	1,966.6	4.5	37.0	-79.22	1,398.6	-989.3	1,696.8	1,655.4	41.44	40.946	
2,000.0	1,993.4	1,997.4	1,997.4	4.6	37.6	-79.43	1,398.6	-989.3	1,695.6	1,653.4	42.16	40.214	
2,066.9	2,058.9	2,062.9	2,062.9	4.8	38.9	-79.89	1,398.6	-989.3	1,693.0	1,649.3	43.71	38.732	
2,100.0	2,091.3	2,095.3	2,095.3	4.9	39.6	-80.11	1,398.6	-989.3	1,691.8	1,647.3	44.48	38.038	
2,165.3	2,155.2	2,159.2	2,159.2	5.2	40.9	-80.56	1,398.6	-989.3	1,689.5	1,643.5	46.00	36.729	
2,200.0	2,189.1	2,193.1	2,193.1	5.3	41.5	-80.79	1,398.6	-989.3	1,688.3	1,641.5	46.81	36.070	
2,263.8	2,251.5	2,255.5	2,255.5	5.5	42.8	-81.23	1,398.6	-989.3	1,686.2	1,637.9	48.30	34.911	
2,300.0	2,286.9	2,290.9	2,290.9	5.7	43.5	-81.47	1,398.6	-989.3	1,685.0	1,635.8	49.15	34.284	
2,362.2	2,347.7	2,351.7	2,351.7	5.9	44.7	-81.90	1,398.6	-989.3	1,683.1	1,632.5	50.61	33.255	
2,400.0	2,384.7	2,388.7	2,388.7	6.0	45.5	-82.16	1,398.6	-989.3	1,682.0	1,630.5	51.50	32.659	
2,460.6	2,444.0	2,448.0	2,448.0	6.3	46.7	-82.58	1,398.6	-989.3	1,680.3	1,627.3	52.93	31.743	
2,500.0	2,482.5	2,486.5	2,486.5	6.4	47.4	-82.85	1,398.6	-989.3	1,679.2	1,625.3	53.86	31.175	
2,559.0	2,540.3	2,544.3	2,544.3	6.7	48.6	-83.25	1,398.6	-989.3	1,677.7	1,622.4	55.26	30.358	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,584.3	2,584.3	6.8	49.4	-83.54	1,398.6	-989.3	1,676.7	1,620.4	56.23	29.817	
2,657.5	2,636.5	2,640.5	2,640.5	7.1	50.5	-83.93	1,398.6	-989.3	1,675.3	1,617.8	57.60	29.087	
2,700.0	2,678.1	2,682.1	2,682.1	7.2	51.4	-84.23	1,398.6	-989.3	1,674.4	1,615.8	58.61	28.569	
2,755.9	2,732.8	2,736.8	2,736.8	7.5	52.5	-84.62	1,398.6	-989.3	1,673.3	1,613.3	59.94	27.916	
2,800.0	2,776.0	2,780.0	2,780.0	7.7	53.4	-84.92	1,398.6	-989.3	1,672.4	1,611.4	60.99	27.421	
2,854.3	2,829.1	2,833.1	2,833.1	7.9	54.4	-85.30	1,398.6	-989.3	1,671.4	1,609.1	62.28	26.835	
2,900.0	2,873.8	2,877.8	2,877.8	8.1	55.3	-85.62	1,398.6	-989.3	1,670.7	1,607.3	63.37	26.362	
2,952.7	2,925.4	2,929.4	2,929.4	8.3	56.4	-85.98	1,398.6	-989.3	1,669.8	1,605.2	64.63	25.835	
3,000.0	2,971.6	2,975.6	2,975.6	8.5	57.3	-86.31	1,398.6	-989.3	1,669.2	1,603.4	65.76	25.382	
3,051.2	3,021.6	3,025.6	3,025.6	8.7	58.3	-86.67	1,398.6	-989.3	1,668.5	1,601.5	66.99	24.908	
3,100.0	3,069.4	3,073.4	3,073.4	8.9	59.3	-87.01	1,398.6	-989.3	1,667.9	1,599.8	68.15	24.473	
3,149.6	3,117.9	3,121.9	3,121.9	9.1	60.2	-87.36	1,398.6	-989.3	1,667.4	1,598.1	69.34	24.047	
3,200.0	3,167.2	3,171.2	3,171.2	9.3	61.2	-87.71	1,398.6	-989.3	1,666.9	1,596.4	70.55	23.629	
3,248.0	3,214.2	3,218.2	3,218.2	9.5	62.2	-88.04	1,398.6	-989.3	1,666.6	1,594.9	71.70	23.245	
3,300.0	3,265.0	3,269.0	3,269.0	9.8	63.2	-88.41	1,398.6	-989.3	1,666.2	1,593.3	72.94	22.844	
3,346.4	3,310.5	3,314.5	3,314.5	10.0	64.1	-88.73	1,398.6	-989.3	1,666.0	1,591.9	74.05	22.497	
3,400.0	3,362.9	3,366.9	3,366.9	10.2	65.2	-89.11	1,398.6	-989.3	1,665.8	1,590.4	75.34	22.111	
3,444.9	3,406.7	3,410.7	3,410.7	10.4	66.0	-89.42	1,398.6	-989.3	1,665.6	1,589.2	76.41	21.798	
3,473.0	3,434.2	3,438.2	3,438.2	10.5	66.6	-89.62	1,398.6	-989.3	1,665.6	1,588.5	77.08	21.607	
3,500.0	3,460.7	3,464.7	3,464.7	10.6	67.1	-89.80	1,398.6	-989.3	1,665.6	1,587.8	77.72	21.430	
3,530.5	3,490.6	3,494.6	3,494.6	10.7	67.7	-90.00	1,398.6	-989.3	1,665.6	1,587.1	78.42	21.240	
3,543.3	3,503.2	3,507.2	3,507.2	10.7	68.0	-90.08	1,398.6	-989.3	1,665.6	1,586.8	78.71	21.161	
3,600.0	3,559.0	3,563.0	3,563.0	10.9	69.1	-90.42	1,398.6	-989.3	1,665.6	1,585.6	80.01	20.817	
3,641.7	3,600.2	3,604.2	3,604.2	11.0	69.9	-90.64	1,398.6	-989.3	1,665.7	1,584.7	80.96	20.574	
3,700.0	3,657.9	3,661.9	3,661.9	11.2	71.1	-90.92	1,398.6	-989.3	1,665.8	1,583.5	82.28	20.244	
3,740.1	3,697.8	3,701.8	3,701.8	11.3	71.9	-91.09	1,398.6	-989.3	1,665.9	1,582.7	83.18	20.026	
3,800.0	3,757.3	3,761.3	3,761.3	11.4	73.1	-91.31	1,398.6	-989.3	1,666.0	1,581.5	84.53	19.709	
3,838.6	3,795.7	3,799.7	3,799.7	11.5	73.9	-91.43	1,398.6	-989.3	1,666.1	1,580.7	85.39	19.512	
3,900.0	3,857.0	3,861.0	3,861.0	11.7	75.1	-91.58	1,398.6	-989.3	1,666.2	1,579.4	86.75	19.207	
3,937.0	3,893.9	3,897.9	3,897.9	11.7	75.8	-91.65	1,398.6	-989.3	1,666.2	1,578.7	87.56	19.030	
4,000.0	3,956.9	3,960.9	3,960.9	11.8	77.1	-91.73	1,398.6	-989.3	1,666.3	1,577.4	88.94	18.736	
4,035.4	3,992.3	3,996.3	3,996.3	11.9	77.8	-91.75	1,398.6	-989.3	1,666.3	1,576.6	89.70	18.576	
4,072.9	4,029.8	4,033.8	4,033.8	11.9	78.6	-91.75	1,398.6	-989.3	1,666.3	1,576.6	89.70	18.576	
4,100.0	4,056.9	4,060.9	4,060.9	12.0	79.1	-91.75	1,398.6	-989.3	1,666.3	1,576.6	89.70	18.576	
4,133.8	4,090.7	4,094.7	4,094.7	12.0	79.8	-91.75	1,398.6	-989.3	1,666.3	1,577.3	89.06	18.711	
4,200.0	4,156.9	4,160.9	4,160.9	12.1	81.1	-91.75	1,398.6	-989.3	1,666.3	1,575.8	90.52	18.408	
4,232.3	4,189.2	4,193.2	4,193.2	12.2	81.8	-91.75	1,398.6	-989.3	1,666.3	1,575.1	91.24	18.263	
4,300.0	4,256.9	4,260.9	4,260.9	12.3	83.1	-91.75	1,398.6	-989.3	1,666.3	1,573.6	92.74	17.967	
4,330.7	4,287.6	4,291.6	4,291.6	12.4	83.8	-91.75	1,398.6	-989.3	1,666.3	1,572.9	93.42	17.836	
4,400.0	4,356.9	4,360.9	4,360.9	12.5	85.1	-91.75	1,398.6	-989.3	1,666.3	1,571.4	94.96	17.547	
4,429.1	4,386.0	4,390.0	4,390.0	12.5	85.7	-91.75	1,398.6	-989.3	1,666.3	1,570.7	95.61	17.429	
4,500.0	4,456.9	4,460.9	4,460.9	12.6	87.2	-91.75	1,398.6	-989.3	1,666.3	1,569.2	97.18	17.146	
4,527.5	4,484.4	4,488.4	4,488.4	12.7	87.7	-91.75	1,398.6	-989.3	1,666.3	1,568.5	97.79	17.039	
4,600.0	4,556.9	4,560.9	4,560.9	12.8	89.2	-91.75	1,398.6	-989.3	1,666.3	1,566.9	99.40	16.763	
4,626.0	4,582.9	4,586.9	4,586.9	12.9	89.7	-91.75	1,398.6	-989.3	1,666.3	1,566.4	99.98	16.667	
4,700.0	4,656.9	4,660.9	4,660.9	13.0	91.2	-91.75	1,398.6	-989.3	1,666.3	1,564.7	101.63	16.397	
4,724.4	4,681.3	4,685.3	4,685.3	13.0	91.7	-91.75	1,398.6	-989.3	1,666.3	1,564.2	102.17	16.310	
4,800.0	4,756.9	4,760.9	4,760.9	13.1	93.2	-91.75	1,398.6	-989.3	1,666.3	1,562.5	103.85	16.046	
4,822.8	4,779.7	4,783.7	4,783.7	13.2	93.6	-91.75	1,398.6	-989.3	1,666.3	1,562.0	104.35	15.968	
4,900.0	4,856.9	4,860.9	4,860.9	13.3	95.2	-91.75	1,398.6	-989.3	1,666.3	1,560.3	106.07	15.710	
4,921.2	4,878.1	4,882.1	4,882.1	13.4	95.6	-91.75	1,398.6	-989.3	1,666.3	1,559.8	106.54	15.640	
5,000.0	4,956.9	4,960.9	4,960.9	13.5	97.2	-91.75	1,398.6	-989.3	1,666.3	1,558.0	108.29	15.387	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,976.6	4,980.6	4,980.6	13.5	97.6	-50.57	1,398.6	-989.3	1,666.3	1,557.6	108.73	15.325	
5,100.0	5,056.9	5,060.9	5,060.9	13.7	99.2	-50.57	1,398.6	-989.3	1,666.3	1,555.8	110.52	15.078	
5,118.1	5,075.0	5,079.0	5,079.0	13.7	99.6	-50.57	1,398.6	-989.3	1,666.3	1,555.4	110.92	15.023	
5,200.0	5,156.9	5,160.9	5,160.9	13.8	101.2	-50.57	1,398.6	-989.3	1,666.3	1,553.6	112.74	14.780	
5,216.5	5,173.4	5,177.4	5,177.4	13.9	101.6	-50.57	1,398.6	-989.3	1,666.3	1,553.2	113.11	14.732	
5,300.0	5,256.9	5,260.9	5,260.9	14.0	103.2	-50.57	1,398.6	-989.3	1,666.3	1,551.4	114.96	14.494	
5,314.9	5,271.8	5,275.8	5,275.8	14.1	103.5	-50.57	1,398.6	-989.3	1,666.3	1,551.0	115.30	14.452	
5,400.0	5,356.9	5,360.9	5,360.9	14.2	105.3	-50.57	1,398.6	-989.3	1,666.3	1,549.1	117.19	14.219	
5,413.4	5,370.3	5,374.3	5,374.3	14.2	105.5	-50.57	1,398.6	-989.3	1,666.3	1,548.9	117.49	14.183	
5,500.0	5,456.9	5,460.9	5,460.9	14.4	107.3	-50.57	1,398.6	-989.3	1,666.3	1,546.9	119.42	13.954	
5,511.8	5,468.7	5,472.7	5,472.7	14.4	107.5	-50.57	1,398.6	-989.3	1,666.3	1,546.7	119.68	13.924	
5,600.0	5,556.9	5,560.9	5,560.9	14.6	109.3	-50.57	1,398.6	-989.3	1,666.3	1,544.7	121.64	13.699	
5,610.2	5,567.1	5,571.1	5,571.1	14.6	109.5	-50.57	1,398.6	-989.3	1,666.3	1,544.5	121.87	13.673	
5,700.0	5,656.9	5,660.9	5,660.9	14.7	111.3	-50.57	1,398.6	-989.3	1,666.3	1,542.5	123.87	13.453	
5,708.6	5,665.5	5,669.5	5,669.5	14.8	111.5	-50.57	1,398.6	-989.3	1,666.3	1,542.3	124.06	13.432	
5,800.0	5,756.9	5,760.9	5,760.9	14.9	113.3	-50.57	1,398.6	-989.3	1,666.3	1,540.2	126.09	13.215	
5,807.1	5,764.0	5,768.0	5,768.0	14.9	113.4	-50.57	1,398.6	-989.3	1,666.3	1,540.1	126.25	13.199	
5,900.0	5,856.9	5,860.9	5,860.9	15.1	115.3	-50.57	1,398.6	-989.3	1,666.3	1,538.0	128.32	12.986	
5,905.5	5,862.4	5,866.4	5,866.4	15.1	115.4	-50.57	1,398.6	-989.3	1,666.3	1,537.9	128.44	12.973	
5,971.9	5,928.8	5,932.8	5,932.8	15.3	116.8	-50.57	1,398.6	-989.3	1,666.3	1,536.4	129.92	12.826	
6,000.0	5,956.9	5,960.9	5,960.9	15.3	117.3	39.46	1,398.6	-989.3	1,665.9	1,533.4	132.56	12.568	
6,003.9	5,960.8	5,964.8	5,964.8	15.3	117.4	39.47	1,398.6	-989.3	1,665.8	1,533.2	132.62	12.560	
6,050.0	6,006.7	6,010.7	6,010.7	15.4	118.3	39.69	1,398.6	-989.3	1,663.1	1,529.8	133.23	12.483	
6,100.0	6,056.2	6,060.2	6,060.2	15.4	119.3	40.13	1,398.6	-989.3	1,657.5	1,524.0	133.51	12.415	
6,102.3	6,058.5	6,062.5	6,062.5	15.4	119.4	40.16	1,398.6	-989.3	1,657.2	1,523.7	133.51	12.413	
6,150.0	6,105.1	6,109.1	6,109.1	15.4	120.3	40.80	1,398.6	-989.3	1,649.4	1,516.0	133.42	12.362	
6,200.0	6,153.0	6,157.0	6,157.0	15.5	121.3	41.69	1,398.6	-989.3	1,638.7	1,505.7	133.03	12.318	
6,200.8	6,153.8	6,157.8	6,157.8	15.5	121.3	41.71	1,398.6	-989.3	1,638.5	1,505.5	133.02	12.318	
6,250.0	6,199.9	6,203.9	6,203.9	15.5	122.2	42.82	1,398.6	-989.3	1,625.5	1,493.1	132.39	12.278	
6,299.2	6,244.8	6,248.8	6,248.8	15.5	123.1	44.18	1,398.6	-989.3	1,610.3	1,478.6	131.62	12.234	
6,300.0	6,245.5	6,249.5	6,249.5	15.5	123.1	44.20	1,398.6	-989.3	1,610.0	1,478.4	131.61	12.233	
6,350.0	6,289.6	6,293.6	6,293.6	15.5	124.0	45.84	1,398.6	-989.3	1,592.2	1,461.4	130.80	12.173	
6,397.6	6,329.9	6,333.9	6,333.9	15.4	124.8	47.65	1,398.6	-989.3	1,573.4	1,443.3	130.14	12.090	
6,400.0	6,331.8	6,335.8	6,335.8	15.4	124.9	47.75	1,398.6	-989.3	1,572.4	1,442.3	130.11	12.085	
6,450.0	6,372.2	6,376.2	6,376.2	15.4	125.7	49.93	1,398.6	-989.3	1,550.7	1,421.0	129.69	11.957	
6,496.0	6,407.4	6,411.4	6,411.4	15.4	126.4	52.19	1,398.6	-989.3	1,529.1	1,399.5	129.67	11.792	
6,500.0	6,410.3	6,414.3	6,414.3	15.4	126.4	52.40	1,398.6	-989.3	1,527.2	1,397.5	129.69	11.776	
6,550.0	6,446.1	6,450.1	6,450.1	15.4	127.2	55.13	1,398.6	-989.3	1,502.3	1,372.0	130.23	11.536	
6,594.5	6,475.9	6,479.9	6,479.9	15.4	127.8	57.79	1,398.6	-989.3	1,479.0	1,347.8	131.22	11.271	
6,600.0	6,479.4	6,483.4	6,483.4	15.4	127.8	58.13	1,398.6	-989.3	1,476.0	1,344.7	131.38	11.235	
6,650.0	6,510.0	6,514.0	6,514.0	15.5	128.4	61.35	1,398.6	-989.3	1,448.8	1,315.6	133.15	10.881	
6,692.9	6,534.0	6,538.0	6,538.0	15.7	128.9	64.27	1,398.6	-989.3	1,424.7	1,289.6	135.09	10.546	
6,700.0	6,537.8	6,541.8	6,541.8	15.7	129.0	64.76	1,398.6	-989.3	1,420.7	1,285.3	135.44	10.489	
6,750.0	6,562.6	6,566.6	6,566.6	16.2	129.5	68.30	1,398.6	-989.3	1,392.1	1,254.0	138.11	10.080	
6,791.3	6,580.8	6,584.8	6,584.8	16.6	129.9	71.26	1,398.6	-989.3	1,368.3	1,227.8	140.46	9.741	
6,800.0	6,584.3	6,588.3	6,588.3	16.7	129.9	71.89	1,398.6	-989.3	1,363.3	1,222.4	140.95	9.672	
6,850.0	6,602.9	6,606.9	6,606.9	17.3	130.3	75.45	1,398.6	-989.3	1,334.5	1,190.8	143.73	9.285	
6,889.7	6,615.2	6,619.2	6,619.2	17.9	130.6	78.20	1,398.6	-989.3	1,311.9	1,166.1	145.79	8.999	
6,900.0	6,618.1	6,622.1	6,622.1	18.0	130.6	78.89	1,398.6	-989.3	1,306.1	1,159.8	146.28	8.929	
6,950.0	6,630.0	6,634.0	6,634.0	18.8	130.9	82.14	1,398.6	-989.3	1,278.2	1,129.8	148.46	8.610	
6,988.2	6,636.8	6,640.8	6,640.8	19.5	131.0	84.46	1,398.6	-989.3	1,257.5	1,107.7	149.86	8.392	
7,000.0	6,638.5	6,642.5	6,642.5	19.7	131.0	85.14	1,398.6	-989.3	1,251.3	1,101.0	150.23	8.329	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
7,050.0	6,643.5	6,647.5	6,647.5	20.6	131.1	87.81	1,398.6	-989.3	1,225.4	1,073.8	151.61	8.083	
7,086.6	6,644.9	6,648.9	6,648.9	21.3	131.2	89.55	1,398.6	-989.3	1,207.4	1,055.0	152.41	7.922	
7,097.8	6,645.0	6,649.0	6,649.0	21.5	131.2	90.04	1,398.6	-989.3	1,202.1	1,049.4	152.62	7.876	
7,100.0	6,645.0	6,649.0	6,649.0	21.6	131.2	90.04	1,398.6	-989.3	1,201.0	1,048.4	152.66	7.867	
7,185.0	6,644.9	6,648.9	6,648.9	23.3	131.2	90.03	1,398.6	-989.3	1,163.2	1,008.9	154.39	7.535	
7,200.0	6,644.9	6,648.9	6,648.9	23.6	131.2	90.03	1,398.6	-989.3	1,157.1	1,002.4	154.69	7.480	
7,283.4	6,644.8	6,648.8	6,648.8	25.4	131.2	90.03	1,398.6	-989.3	1,126.0	969.5	156.51	7.194	
7,300.0	6,644.7	6,648.7	6,648.7	25.8	131.2	90.03	1,398.6	-989.3	1,120.4	963.6	156.87	7.142	
7,381.9	6,644.6	6,648.6	6,648.6	27.7	131.2	90.02	1,398.6	-989.3	1,096.3	937.5	158.74	6.906	
7,400.0	6,644.6	6,648.6	6,648.6	28.1	131.2	90.02	1,398.6	-989.3	1,091.7	932.5	159.16	6.859	
7,480.3	6,644.5	6,648.5	6,648.5	30.0	131.2	90.01	1,398.6	-989.3	1,074.8	913.7	161.06	6.673	
7,500.0	6,644.5	6,648.5	6,648.5	30.5	131.2	90.01	1,398.6	-989.3	1,071.5	910.0	161.53	6.634	
7,578.7	6,644.4	6,648.4	6,648.4	32.4	131.1	90.01	1,398.6	-989.3	1,062.1	898.6	163.46	6.498	
7,600.0	6,644.4	6,648.4	6,648.4	32.9	131.1	90.00	1,398.6	-989.3	1,060.5	896.5	163.98	6.467	
7,667.8	6,644.3	6,648.3	6,648.3	34.6	131.1	90.00	1,398.6	-989.3	1,058.3	892.6	165.67	6.388 CC	
7,677.1	6,644.3	6,648.3	6,648.3	34.8	131.1	90.00	1,398.6	-989.3	1,058.4	892.5	165.90	6.379	
7,700.0	6,644.2	6,648.2	6,648.2	35.4	131.1	90.00	1,398.6	-989.3	1,058.8	892.3	166.47	6.360 ES	
7,775.6	6,644.1	6,648.1	6,648.1	37.3	131.1	89.99	1,398.6	-989.3	1,063.8	895.4	168.40	6.317	
7,800.0	6,644.1	6,648.1	6,648.1	38.0	131.1	89.99	1,398.6	-989.3	1,066.5	897.5	169.02	6.310	
7,874.0	6,644.0	6,648.0	6,648.0	39.9	131.1	89.99	1,398.6	-989.3	1,078.2	907.3	170.92	6.308 SF	
7,900.0	6,644.0	6,648.0	6,648.0	40.5	131.1	89.98	1,398.6	-989.3	1,083.5	911.9	171.59	6.314	
7,972.4	6,643.9	6,647.9	6,647.9	42.4	131.1	89.98	1,398.6	-989.3	1,101.3	927.8	173.48	6.348	
8,000.0	6,643.9	6,647.9	6,647.9	43.1	131.1	89.98	1,398.6	-989.3	1,109.2	935.0	174.20	6.368	
8,070.8	6,643.8	6,647.8	6,647.8	45.0	131.1	89.97	1,398.6	-989.3	1,132.5	956.4	176.06	6.432	
8,100.0	6,643.7	6,647.7	6,647.7	45.8	131.1	89.97	1,398.6	-989.3	1,143.2	966.3	176.83	6.465	
8,169.3	6,643.7	6,647.7	6,647.7	47.6	131.1	89.97	1,398.6	-989.3	1,171.1	992.4	178.67	6.555	
8,200.0	6,643.6	6,647.6	6,647.6	48.4	131.1	89.96	1,398.6	-989.3	1,184.6	1,005.1	179.48	6.600	
8,267.7	6,643.5	6,647.5	6,647.5	50.2	131.1	89.96	1,398.6	-989.3	1,216.5	1,035.2	181.29	6.710	
8,300.0	6,643.5	6,647.5	6,647.5	51.1	131.1	89.96	1,398.6	-989.3	1,232.8	1,050.6	182.15	6.768	
8,366.1	6,643.4	6,647.4	6,647.4	52.9	131.1	89.95	1,398.6	-989.3	1,267.9	1,084.0	183.92	6.894	
8,400.0	6,643.4	6,647.4	6,647.4	53.8	131.1	89.95	1,398.6	-989.3	1,286.9	1,102.1	184.83	6.963	
8,464.5	6,643.3	6,647.3	6,647.3	55.5	131.1	89.95	1,398.6	-989.3	1,324.7	1,138.1	186.57	7.100	
8,500.0	6,643.2	6,647.2	6,647.2	56.5	131.1	89.94	1,398.6	-989.3	1,346.3	1,158.8	187.52	7.179	
8,563.0	6,643.2	6,647.2	6,647.2	58.2	131.1	89.94	1,398.6	-989.3	1,386.1	1,196.9	189.23	7.325	
8,600.0	6,643.1	6,647.1	6,647.1	59.2	131.1	89.94	1,398.6	-989.3	1,410.3	1,220.1	190.23	7.414	
8,661.4	6,643.0	6,647.0	6,647.0	60.8	131.1	89.93	1,398.6	-989.3	1,451.6	1,259.7	191.90	7.565	
8,700.0	6,643.0	6,647.0	6,647.0	61.9	131.1	89.93	1,398.6	-989.3	1,478.3	1,285.4	192.94	7.662	
8,759.8	6,642.9	6,646.9	6,646.9	63.5	131.1	89.93	1,398.6	-989.3	1,520.7	1,326.1	194.57	7.816	
8,800.0	6,642.9	6,646.9	6,646.9	64.6	131.1	89.92	1,398.6	-989.3	1,549.8	1,354.1	195.67	7.921	
8,858.2	6,642.8	6,646.8	6,646.8	66.2	131.1	89.92	1,398.6	-989.3	1,592.8	1,395.6	197.26	8.075	
8,900.0	6,642.7	6,646.7	6,646.7	67.3	131.1	89.92	1,398.6	-989.3	1,624.3	1,425.9	198.39	8.187	
8,956.7	6,642.7	6,646.7	6,646.7	68.9	131.1	89.91	1,398.6	-989.3	1,667.7	1,467.7	199.94	8.341	
9,000.0	6,642.6	6,646.6	6,646.6	70.1	131.1	89.91	1,398.6	-989.3	1,701.4	1,500.3	201.13	8.459	
9,055.1	6,642.5	6,646.5	6,646.5	71.6	131.1	89.91	1,398.6	-989.3	1,744.9	1,542.2	202.64	8.611	
9,100.0	6,642.5	6,646.5	6,646.5	72.8	131.1	89.90	1,398.6	-989.3	1,780.8	1,576.9	203.87	8.735	
9,153.5	6,642.4	6,646.4	6,646.4	74.3	131.1	89.90	1,398.6	-989.3	1,824.1	1,618.8	205.34	8.883	
9,200.0	6,642.4	6,646.4	6,646.4	75.6	131.1	89.90	1,398.6	-989.3	1,862.1	1,655.5	206.62	9.013	
9,251.9	6,642.3	6,646.3	6,646.3	77.0	131.1	89.89	1,398.6	-989.3	1,905.1	1,697.1	208.05	9.157	
9,300.0	6,642.2	6,646.2	6,646.2	78.3	131.1	89.89	1,398.6	-989.3	1,945.3	1,735.9	209.37	9.291	
9,350.4	6,642.2	6,646.2	6,646.2	79.7	131.1	89.89	1,398.6	-989.3	1,987.7	1,777.0	210.76	9.431	
9,400.0	6,642.1	6,646.1	6,646.1	81.1	131.1	89.88	1,398.6	-989.3	2,029.9	1,817.8	212.12	9.569	
9,448.8	6,642.0	6,646.0	6,646.0	82.4	131.1	89.88	1,398.6	-989.3	2,071.7	1,858.2	213.47	9.705	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,646.0	6,646.0	83.8	131.1	89.88	1,398.6	-989.3	2,115.9	1,901.0	214.88	9.847	
9,547.2	6,641.9	6,645.9	6,645.9	85.1	131.1	89.87	1,398.6	-989.3	2,156.9	1,940.7	216.18	9.977	
9,600.0	6,641.9	6,645.9	6,645.9	86.6	131.1	89.87	1,398.6	-989.3	2,203.0	1,985.4	217.64	10.122	
9,645.6	6,641.8	6,645.8	6,645.8	87.9	131.1	89.87	1,398.6	-989.3	2,243.2	2,024.3	218.90	10.247	
9,700.0	6,641.7	6,645.7	6,645.7	89.4	131.1	89.86	1,398.6	-989.3	2,291.2	2,070.8	220.41	10.396	
9,744.1	6,641.7	6,645.7	6,645.7	90.6	131.1	89.86	1,398.6	-989.3	2,330.4	2,108.8	221.63	10.515	
9,800.0	6,641.6	6,645.6	6,645.6	92.1	131.1	89.86	1,398.6	-989.3	2,380.4	2,157.2	223.17	10.666	
9,842.5	6,641.6	6,645.6	6,645.6	93.3	131.1	89.85	1,398.6	-989.3	2,418.5	2,194.2	224.35	10.780	
9,900.0	6,641.5	6,645.5	6,645.5	94.9	131.1	89.85	1,398.6	-989.3	2,470.3	2,244.4	225.94	10.934	
9,940.9	6,641.4	6,645.4	6,645.4	96.0	131.1	89.85	1,398.6	-989.3	2,507.4	2,280.3	227.08	11.042	
10,000.0	6,641.4	6,645.4	6,645.4	97.7	131.1	89.84	1,398.6	-989.3	2,561.1	2,332.3	228.71	11.198	
10,039.3	6,641.3	6,645.3	6,645.3	98.8	131.1	89.84	1,398.6	-989.3	2,596.9	2,367.1	229.80	11.301	
10,100.0	6,641.2	6,645.2	6,645.2	100.4	131.1	89.83	1,398.6	-989.3	2,652.4	2,421.0	231.49	11.458	
10,137.8	6,641.2	6,645.2	6,645.2	101.5	131.1	89.83	1,398.6	-989.3	2,687.1	2,454.6	232.54	11.556	
10,200.0	6,641.1	6,645.1	6,645.1	103.2	131.1	89.83	1,398.6	-989.3	2,744.4	2,510.2	234.26	11.715	
10,236.2	6,641.1	6,645.1	6,645.1	104.2	131.1	89.83	1,398.6	-989.3	2,777.9	2,542.6	235.27	11.807	
10,300.0	6,641.0	6,645.0	6,645.0	106.0	131.1	89.82	1,398.6	-989.3	2,837.0	2,599.9	237.04	11.968	
10,334.6	6,640.9	6,644.9	6,644.9	107.0	131.1	89.82	1,398.6	-989.3	2,869.1	2,631.1	238.00	12.055	
10,400.0	6,640.9	6,644.9	6,644.9	108.8	131.1	89.81	1,398.6	-989.3	2,930.0	2,690.2	239.82	12.217	
10,433.0	6,640.8	6,644.8	6,644.8	109.7	131.1	89.81	1,398.6	-989.3	2,960.8	2,720.1	240.74	12.299	
10,500.0	6,640.7	6,644.7	6,644.7	111.6	131.1	89.81	1,398.6	-989.3	3,023.4	2,780.8	242.60	12.463	
10,531.5	6,640.7	6,644.7	6,644.7	112.4	131.1	89.81	1,398.6	-989.3	3,052.9	2,809.5	243.47	12.539	
10,600.0	6,640.6	6,644.6	6,644.6	114.3	131.1	89.80	1,398.6	-989.3	3,117.3	2,871.9	245.38	12.704	
10,629.9	6,640.6	6,644.6	6,644.6	115.2	131.1	89.80	1,398.6	-989.3	3,145.5	2,899.2	246.21	12.775	
10,700.0	6,640.5	6,644.5	6,644.5	117.1	131.1	89.79	1,398.6	-989.3	3,211.6	2,963.4	248.16	12.941	
10,728.3	6,640.4	6,644.4	6,644.4	117.9	131.1	89.79	1,398.6	-989.3	3,238.3	2,989.4	248.95	13.008	
10,800.0	6,640.4	6,644.4	6,644.4	119.9	131.1	89.79	1,398.6	-989.3	3,306.1	3,055.2	250.95	13.175	
10,826.7	6,640.3	6,644.3	6,644.3	120.7	131.1	89.79	1,398.6	-989.3	3,331.5	3,079.8	251.69	13.236	
10,900.0	6,640.2	6,644.2	6,644.2	122.7	131.1	89.78	1,398.6	-989.3	3,401.0	3,147.3	253.73	13.404	
10,925.2	6,640.2	6,644.2	6,644.2	123.4	131.1	89.78	1,398.6	-989.3	3,425.0	3,170.5	254.43	13.461	
11,000.0	6,640.1	6,644.1	6,644.1	125.5	131.1	89.77	1,398.6	-989.3	3,496.2	3,239.7	256.52	13.629	
11,023.6	6,640.1	6,644.1	6,644.1	126.1	131.1	89.77	1,398.6	-989.3	3,518.7	3,261.5	257.18	13.682	
11,100.0	6,640.0	6,644.0	6,644.0	128.3	131.1	89.77	1,398.6	-989.3	3,591.6	3,332.3	259.31	13.851	
11,122.0	6,639.9	6,643.9	6,643.9	128.9	131.1	89.77	1,398.6	-989.3	3,612.7	3,352.8	259.92	13.899	
11,200.0	6,639.8	6,643.8	6,643.8	131.1	131.1	89.76	1,398.6	-989.3	3,687.3	3,425.2	262.09	14.069	
11,220.4	6,639.8	6,643.8	6,643.8	131.6	131.1	89.76	1,398.6	-989.3	3,706.9	3,444.2	262.67	14.113	
11,300.0	6,639.7	6,643.7	6,643.7	133.9	131.1	89.75	1,398.6	-989.3	3,783.2	3,518.3	264.88	14.283	
11,318.9	6,639.7	6,643.7	6,643.7	134.4	131.1	89.75	1,398.6	-989.3	3,801.3	3,535.9	265.41	14.322	
11,400.0	6,639.6	6,643.6	6,643.6	136.7	131.1	89.75	1,398.6	-989.3	3,879.3	3,611.6	267.67	14.493	
11,417.3	6,639.6	6,643.6	6,643.6	137.1	131.1	89.75	1,398.6	-989.3	3,896.0	3,627.8	268.16	14.529	
11,500.0	6,639.5	6,643.5	6,643.5	139.4	131.1	89.74	1,398.6	-989.3	3,975.6	3,705.2	270.46	14.699	
11,515.7	6,639.5	6,643.5	6,643.5	139.9	131.1	89.74	1,398.6	-989.3	3,990.8	3,719.9	270.90	14.731	
11,600.0	6,639.3	6,643.3	6,643.3	142.2	131.0	89.73	1,398.6	-989.3	4,072.1	3,798.8	273.26	14.902	
11,614.1	6,639.3	6,643.3	6,643.3	142.6	131.0	89.73	1,398.6	-989.3	4,085.8	3,812.1	273.65	14.931	
11,700.0	6,639.2	6,643.2	6,643.2	145.0	131.0	89.73	1,398.6	-989.3	4,168.7	3,892.7	276.05	15.102	
11,712.6	6,639.2	6,643.2	6,643.2	145.4	131.0	89.73	1,398.6	-989.3	4,180.9	3,904.5	276.40	15.126	
11,800.0	6,639.1	6,643.1	6,643.1	147.8	131.0	89.72	1,398.6	-989.3	4,265.5	3,986.7	278.84	15.297	
11,811.0	6,639.1	6,643.1	6,643.1	148.1	131.0	89.72	1,398.6	-989.3	4,276.2	3,997.1	279.15	15.319	
11,900.0	6,639.0	6,643.0	6,643.0	150.6	131.0	89.71	1,398.6	-989.3	4,362.5	4,080.9	281.63	15.490	
11,909.4	6,639.0	6,643.0	6,643.0	150.9	131.0	89.71	1,398.6	-989.3	4,371.6	4,089.7	281.90	15.508	
12,000.0	6,638.8	6,642.8	6,642.8	153.4	131.0	89.71	1,398.6	-989.3	4,459.6	4,175.1	284.43	15.679	
12,007.8	6,638.8	6,642.8	6,642.8	153.6	131.0	89.70	1,398.6	-989.3	4,467.2	4,182.5	284.65	15.694	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,642.7	6,642.7	156.2	131.0	89.70	1,398.6	-989.3	4,556.8	4,269.5	287.22	15.865	
12,106.3	6,638.7	6,642.7	6,642.7	156.4	131.0	89.70	1,398.6	-989.3	4,562.9	4,275.5	287.40	15.877	
12,200.0	6,638.6	6,642.6	6,642.6	159.0	131.0	89.69	1,398.6	-989.3	4,654.1	4,364.1	290.02	16.048	
12,204.7	6,638.6	6,642.6	6,642.6	159.1	131.0	89.69	1,398.6	-989.3	4,658.7	4,368.5	290.15	16.056	
12,300.0	6,638.5	6,642.5	6,642.5	161.8	131.0	89.69	1,398.6	-989.3	4,751.5	4,458.7	292.81	16.227	
12,303.1	6,638.5	6,642.5	6,642.5	161.9	131.0	89.68	1,398.6	-989.3	4,754.6	4,461.7	292.90	16.233	
12,400.0	6,638.3	6,642.3	6,642.3	164.6	131.0	89.68	1,398.6	-989.3	4,849.1	4,553.5	295.61	16.404	
12,401.5	6,638.3	6,642.3	6,642.3	164.6	131.0	89.68	1,398.6	-989.3	4,850.6	4,554.9	295.65	16.407	
12,500.0	6,638.2	6,642.2	6,642.2	167.4	131.0	89.67	1,398.6	-989.3	4,946.7	4,648.3	298.40	16.577	
12,598.4	6,638.1	6,642.1	6,642.1	170.2	131.0	89.66	1,398.6	-989.3	5,042.9	4,741.7	301.15	16.745	
12,600.0	6,638.1	6,642.1	6,642.1	170.2	131.0	89.66	1,398.6	-989.3	5,044.4	4,743.2	301.20	16.748	
12,696.8	6,638.0	6,642.0	6,642.0	172.9	131.0	89.66	1,398.6	-989.3	5,139.1	4,835.2	303.91	16.910	
12,700.0	6,638.0	6,642.0	6,642.0	173.0	131.0	89.66	1,398.6	-989.3	5,142.2	4,838.3	304.00	16.916	
12,795.2	6,637.8	6,641.8	6,641.8	175.7	131.0	89.65	1,398.6	-989.3	5,235.5	4,928.8	306.66	17.073	
12,800.0	6,637.8	6,641.8	6,641.8	175.8	131.0	89.65	1,398.6	-989.3	5,240.1	4,933.4	306.79	17.080	
12,893.7	6,637.7	6,641.7	6,641.7	178.4	131.0	89.64	1,398.6	-989.3	5,331.9	5,022.5	309.41	17.232	
12,900.0	6,637.7	6,641.7	6,641.7	178.6	131.0	89.64	1,398.6	-989.3	5,338.1	5,028.5	309.59	17.243	
12,992.1	6,637.6	6,641.6	6,641.6	181.2	131.0	89.64	1,398.6	-989.3	5,428.4	5,116.3	312.17	17.390	
13,000.0	6,637.6	6,641.6	6,641.6	181.4	131.0	89.64	1,398.6	-989.3	5,436.2	5,123.8	312.39	17.402	
13,090.5	6,637.5	6,641.5	6,641.5	183.9	131.0	89.63	1,398.6	-989.3	5,525.0	5,210.1	314.92	17.544	
13,100.0	6,637.5	6,641.5	6,641.5	184.2	131.0	89.63	1,398.6	-989.3	5,534.3	5,219.1	315.19	17.559	
13,188.9	6,637.4	6,641.4	6,641.4	186.7	131.0	89.62	1,398.6	-989.3	5,621.6	5,304.0	317.68	17.696	
13,200.0	6,637.3	6,641.3	6,641.3	187.0	131.0	89.62	1,398.6	-989.3	5,632.5	5,314.5	317.98	17.713	
13,287.4	6,637.2	6,641.2	6,641.2	189.4	131.0	89.62	1,398.6	-989.3	5,718.3	5,397.9	320.43	17.846	
13,300.0	6,637.2	6,641.2	6,641.2	189.8	131.0	89.62	1,398.6	-989.3	5,730.7	5,410.0	320.78	17.865	
13,385.8	6,637.1	6,641.1	6,641.1	192.2	131.0	89.61	1,398.6	-989.3	5,815.1	5,491.9	323.18	17.993	
13,400.0	6,637.1	6,641.1	6,641.1	192.6	131.0	89.61	1,398.6	-989.3	5,829.0	5,505.5	323.58	18.014	
13,484.2	6,637.0	6,641.0	6,641.0	195.0	131.0	89.60	1,398.6	-989.3	5,911.9	5,585.9	325.94	18.138	
13,500.0	6,637.0	6,641.0	6,641.0	195.4	131.0	89.60	1,398.6	-989.3	5,927.4	5,601.0	326.38	18.161	
13,582.6	6,636.9	6,640.9	6,640.9	197.7	131.0	89.60	1,398.6	-989.3	6,008.7	5,680.1	328.70	18.281	
13,600.0	6,636.8	6,640.8	6,640.8	198.2	131.0	89.60	1,398.6	-989.3	6,025.8	5,696.6	329.18	18.306	
13,681.1	6,636.7	6,640.7	6,640.7	200.5	131.0	89.59	1,398.6	-989.3	6,105.7	5,774.2	331.45	18.421	
13,700.0	6,636.7	6,640.7	6,640.7	201.0	131.0	89.59	1,398.6	-989.3	6,124.3	5,792.3	331.98	18.448	
13,779.5	6,636.6	6,640.6	6,640.6	203.2	131.0	89.58	1,398.6	-989.3	6,202.6	5,868.4	334.21	18.559	
13,800.0	6,636.6	6,640.6	6,640.6	203.8	131.0	89.58	1,398.6	-989.3	6,222.8	5,888.0	334.78	18.588	
13,877.9	6,636.5	6,640.5	6,640.5	206.0	131.0	89.58	1,398.6	-989.3	6,299.6	5,962.7	336.96	18.695	
13,900.0	6,636.5	6,640.5	6,640.5	206.6	131.0	89.58	1,398.6	-989.3	6,321.4	5,983.8	337.58	18.726	
13,976.3	6,636.4	6,640.4	6,640.4	208.8	131.0	89.57	1,398.6	-989.3	6,396.7	6,057.0	339.72	18.829	
14,000.0	6,636.3	6,640.3	6,640.3	209.4	131.0	89.57	1,398.6	-989.3	6,420.0	6,079.6	340.38	18.861	
14,074.8	6,636.2	6,640.2	6,640.2	211.5	131.0	89.56	1,398.6	-989.3	6,493.8	6,151.3	342.48	18.961	
14,100.0	6,636.2	6,640.2	6,640.2	212.2	131.0	89.56	1,398.6	-989.3	6,518.6	6,175.5	343.18	18.995	
14,173.2	6,636.1	6,640.1	6,640.1	214.3	131.0	89.56	1,398.6	-989.3	6,590.9	6,245.7	345.23	19.091	
14,200.0	6,636.1	6,640.1	6,640.1	215.0	131.0	89.56	1,398.6	-989.3	6,617.3	6,271.4	345.98	19.126	
14,271.6	6,636.0	6,640.0	6,640.0	217.0	131.0	89.55	1,398.6	-989.3	6,688.1	6,340.1	347.99	19.219	
14,300.0	6,636.0	6,640.0	6,640.0	217.8	131.0	89.55	1,398.6	-989.3	6,716.1	6,367.3	348.78	19.256	
14,370.0	6,635.9	6,639.9	6,639.9	219.8	131.0	89.54	1,398.6	-989.3	6,785.3	6,434.5	350.75	19.345	
14,400.0	6,635.8	6,639.8	6,639.8	220.6	131.0	89.54	1,398.6	-989.3	6,814.8	6,463.3	351.58	19.383	
14,468.5	6,635.7	6,639.7	6,639.7	222.6	131.0	89.54	1,398.6	-989.3	6,882.5	6,529.0	353.50	19.469	
14,500.0	6,635.7	6,639.7	6,639.7	223.4	131.0	89.54	1,398.6	-989.3	6,913.6	6,559.3	354.39	19.509	
14,566.9	6,635.6	6,639.6	6,639.6	225.3	131.0	89.53	1,398.6	-989.3	6,979.8	6,623.5	356.26	19.592	
14,600.0	6,635.6	6,639.6	6,639.6	226.2	131.0	89.53	1,398.6	-989.3	7,012.5	6,655.3	357.19	19.632	
14,665.3	6,635.5	6,639.5	6,639.5	228.1	131.0	89.52	1,398.6	-989.3	7,077.1	6,718.0	359.02	19.712	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,700.0	6,635.5	6,639.5	6,639.5	229.0	131.0	89.52	1,398.6	-989.3	7,111.4	6,751.4	359.99	19.754	
14,763.7	6,635.4	6,639.4	6,639.4	230.8	131.0	89.52	1,398.6	-989.3	7,174.4	6,812.6	361.78	19.831	
14,800.0	6,635.3	6,639.3	6,639.3	231.8	131.0	89.52	1,398.6	-989.3	7,210.3	6,847.5	362.79	19.874	
14,862.2	6,635.2	6,639.2	6,639.2	233.6	131.0	89.51	1,398.6	-989.3	7,271.8	6,907.2	364.53	19.948	
14,900.0	6,635.2	6,639.2	6,639.2	234.7	131.0	89.51	1,398.6	-989.3	7,309.2	6,943.6	365.59	19.993	
14,960.6	6,635.1	6,639.1	6,639.1	236.4	131.0	89.50	1,398.6	-989.3	7,369.2	7,001.9	367.29	20.064	
14,995.1	6,635.0	6,639.0	6,639.0	237.3	131.0	89.50	1,398.6	-989.3	7,403.3	7,035.1	368.26	20.104	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-101.94	-1,328.6	-6,282.4	6,421.4				
98.4	98.4	79.2	79.2	0.1	0.0	-101.94	-1,328.5	-6,282.3	6,421.2	6,421.1	0.11	N/A	
100.0	100.0	81.2	81.2	0.1	0.0	-101.94	-1,328.5	-6,282.3	6,421.2	6,421.1	0.11	N/A	
196.8	196.8	197.8	197.8	0.3	0.2	-101.94	-1,328.0	-6,281.9	6,420.8	6,420.3	0.52	N/A	
200.0	200.0	201.3	201.3	0.3	0.2	-101.94	-1,327.9	-6,281.9	6,420.8	6,420.3	0.54	N/A	
295.3	295.3	299.4	299.4	0.5	0.3	-101.93	-1,327.4	-6,281.4	6,420.2	6,419.4	0.84	7,657.159	
300.0	300.0	300.0	300.0	0.5	0.3	-101.93	-1,327.4	-6,281.4	6,420.2	6,419.4	0.85	7,556.245	
393.7	393.7	373.7	373.7	0.8	0.3	-101.93	-1,327.2	-6,281.1	6,419.8	6,418.7	1.11	5,806.077	
400.0	400.0	378.5	378.5	0.8	0.4	-101.93	-1,327.2	-6,281.1	6,419.8	6,418.7	1.12	5,717.681	
492.1	492.1	488.7	488.7	1.0	0.4	-101.93	-1,326.7	-6,280.9	6,419.6	6,418.2	1.40	4,595.267	
500.0	500.0	499.7	499.7	1.0	0.4	-101.93	-1,326.6	-6,280.9	6,419.5	6,418.1	1.42	4,516.424	
590.5	590.5	592.6	592.6	1.2	0.5	-101.92	-1,326.2	-6,280.4	6,419.0	6,417.4	1.68	3,824.983	
600.0	600.0	600.0	600.0	1.2	0.5	-101.92	-1,326.1	-6,280.4	6,419.0	6,417.3	1.70	3,767.674	
689.0	689.0	674.5	674.5	1.4	0.5	-101.92	-1,325.9	-6,280.1	6,418.6	6,416.6	1.94	3,302.311	
700.0	700.0	683.5	683.5	1.4	0.5	-101.92	-1,325.9	-6,280.1	6,418.5	6,416.6	1.97	3,252.719	
787.4	787.4	759.7	759.7	1.6	0.6	-101.92	-1,325.7	-6,280.0	6,418.4	6,416.2	2.20	2,911.023	
800.0	800.0	770.9	770.9	1.7	0.6	-101.92	-1,325.7	-6,280.0	6,418.4	6,416.1	2.24	2,867.776	
885.8	885.8	852.3	852.2	1.9	0.6	-101.92	-1,325.6	-6,280.0	6,418.3	6,415.9	2.47	2,600.668	
900.0	900.0	866.2	866.2	1.9	0.6	-101.92	-1,325.5	-6,280.0	6,418.3	6,415.8	2.51	2,560.914	
984.2	984.2	970.8	970.8	2.1	0.6	-101.92	-1,325.5	-6,279.8	6,418.2	6,415.5	2.73	2,349.771	
1,000.0	1,000.0	993.2	993.2	2.1	0.7	-101.92	-1,325.4	-6,279.8	6,418.2	6,415.4	2.77	2,314.347	
1,082.7	1,082.7	1,057.2	1,057.2	2.3	0.7	-101.92	-1,325.4	-6,279.5	6,417.9	6,414.9	2.97	2,163.042	
1,100.0	1,100.0	1,070.0	1,070.0	2.3	0.7	-101.92	-1,325.5	-6,279.5	6,417.9	6,414.9	3.01	2,134.051	
1,118.8	1,118.8	1,083.8	1,083.8	2.4	0.7	-101.92	-1,325.5	-6,279.5	6,417.9	6,414.8	3.05	2,103.527	
1,181.1	1,181.1	1,136.4	1,136.4	2.5	0.7	-101.92	-1,325.6	-6,279.5	6,417.9	6,414.7	3.20	2,007.910	
1,200.0	1,200.0	1,153.5	1,153.4	2.6	0.7	-101.92	-1,325.6	-6,279.6	6,418.0	6,414.7	3.24	1,980.569	
1,279.5	1,279.5	1,249.4	1,249.4	2.7	0.7	-101.92	-1,325.7	-6,279.7	6,418.1	6,414.7	3.42	1,874.388	
1,300.0	1,300.0	1,285.6	1,285.5	2.8	0.7	-101.92	-1,325.6	-6,279.6	6,418.1	6,414.6	3.47	1,849.412	
1,314.7	1,314.7	1,306.1	1,306.1	2.8	0.7	-143.11	-1,325.6	-6,279.6	6,418.0	6,414.6	3.48	1,842.333	
1,377.9	1,377.9	1,365.0	1,365.0	3.0	0.7	-143.11	-1,325.7	-6,279.3	6,418.6	6,415.0	3.65	1,760.225	
1,400.0	1,400.0	1,385.6	1,385.5	3.0	0.7	-143.11	-1,325.7	-6,279.3	6,419.1	6,415.4	3.70	1,733.315	
1,476.4	1,476.3	1,458.6	1,458.6	3.2	0.7	-143.09	-1,325.8	-6,279.0	6,421.8	6,417.9	3.90	1,646.104	
1,500.0	1,499.8	1,481.3	1,481.3	3.2	0.7	-143.09	-1,325.8	-6,278.9	6,423.0	6,419.0	3.96	1,620.879	
1,574.8	1,574.4	1,553.7	1,553.7	3.4	0.8	-143.07	-1,326.0	-6,278.7	6,427.8	6,423.6	4.16	1,545.773	
1,600.0	1,599.5	1,578.1	1,578.1	3.5	0.8	-143.06	-1,326.1	-6,278.7	6,429.7	6,425.5	4.22	1,522.236	
1,673.2	1,672.2	1,648.5	1,648.5	3.6	0.8	-143.02	-1,326.2	-6,278.5	6,436.5	6,432.1	4.41	1,460.444	
1,700.0	1,698.7	1,674.2	1,674.2	3.7	0.8	-143.00	-1,326.2	-6,278.5	6,439.3	6,434.9	4.47	1,439.905	
1,771.6	1,769.5	1,740.2	1,740.2	3.9	0.8	-142.95	-1,325.8	-6,278.5	6,447.9	6,443.3	4.66	1,382.826	
1,800.0	1,797.5	1,765.7	1,765.7	4.0	0.8	-142.93	-1,325.6	-6,278.5	6,451.8	6,447.0	4.74	1,361.318	
1,870.1	1,866.3	1,832.2	1,832.2	4.2	0.8	-142.86	-1,325.0	-6,278.6	6,462.2	6,457.2	4.94	1,307.833	
1,899.9	1,895.6	1,862.5	1,862.4	4.3	0.8	-142.83	-1,324.7	-6,278.7	6,467.0	6,462.0	5.03	1,286.519	
1,968.5	1,962.6	1,934.1	1,934.1	4.5	0.9	-142.90	-1,323.9	-6,278.8	6,478.5	6,473.2	5.23	1,239.706	
2,000.0	1,993.4	1,968.3	1,968.3	4.6	0.9	-142.94	-1,323.5	-6,278.8	6,483.7	6,478.4	5.32	1,219.550	
2,066.9	2,058.9	2,034.1	2,034.1	4.8	0.9	-143.01	-1,322.7	-6,278.9	6,494.8	6,489.2	5.52	1,177.273	
2,100.0	2,091.3	2,064.1	2,064.1	4.9	0.9	-143.03	-1,322.2	-6,279.0	6,500.3	6,494.6	5.61	1,157.973	
2,165.3	2,155.2	2,143.2	2,143.2	5.2	0.9	-143.11	-1,320.5	-6,279.2	6,511.1	6,505.3	5.82	1,119.643	
2,200.0	2,189.1	2,200.0	2,199.9	5.3	0.9	-143.16	-1,319.3	-6,279.2	6,516.7	6,510.8	5.93	1,099.529	
2,263.8	2,251.5	2,243.7	2,243.7	5.5	1.0	-143.20	-1,318.5	-6,279.1	6,527.1	6,520.9	6.12	1,066.241	
2,300.0	2,286.9	2,268.2	2,268.1	5.7	1.0	-143.23	-1,318.0	-6,279.1	6,533.0	6,526.8	6.23	1,048.275	
2,362.2	2,347.7	2,323.1	2,323.0	5.9	1.0	-143.28	-1,316.9	-6,279.3	6,543.4	6,537.0	6.43	1,017.819	
2,400.0	2,384.7	2,380.6	2,380.5	6.0	1.0	-143.33	-1,316.0	-6,279.3	6,549.6	6,543.1	6.55	999.333	
2,460.6	2,444.0	2,500.0	2,499.9	6.3	1.1	-143.45	-1,314.2	-6,278.4	6,559.1	6,552.3	6.76	970.259	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,482.5	2,541.4	2,541.3	6.4	1.1	-143.49	-1,313.4	-6,277.9	6,565.0	6,558.2	6.89	953.084	
2,559.0	2,540.3	2,577.0	2,576.8	6.7	1.1	-143.52	-1,312.7	-6,277.6	6,574.3	6,567.2	7.08	929.035	
2,600.0	2,580.3	2,600.0	2,599.9	6.8	1.1	-143.54	-1,312.1	-6,277.5	6,580.8	6,573.6	7.21	913.186	
2,657.5	2,636.5	2,651.8	2,651.7	7.1	1.1	-143.59	-1,311.0	-6,277.3	6,590.0	6,582.6	7.40	890.713	
2,700.0	2,678.1	2,688.4	2,688.3	7.2	1.1	-143.62	-1,310.4	-6,277.2	6,596.8	6,589.3	7.54	874.958	
2,755.9	2,732.8	2,768.3	2,768.1	7.5	1.1	-143.70	-1,308.9	-6,276.8	6,605.8	6,598.1	7.73	854.291	
2,800.0	2,776.0	2,838.6	2,838.4	7.7	1.2	-143.76	-1,307.3	-6,276.3	6,612.7	6,604.8	7.89	838.613	
2,854.3	2,829.1	2,915.9	2,915.6	7.9	1.2	-143.83	-1,305.4	-6,275.4	6,621.0	6,612.9	8.07	820.176	
2,900.0	2,873.8	2,962.5	2,962.2	8.1	1.2	-143.88	-1,304.5	-6,274.7	6,627.9	6,619.6	8.23	805.623	
2,952.7	2,925.4	3,017.3	3,017.1	8.3	1.2	-143.93	-1,303.8	-6,273.8	6,635.8	6,627.4	8.41	789.290	
3,000.0	2,971.6	3,068.6	3,068.3	8.5	1.2	-143.98	-1,303.4	-6,272.9	6,642.9	6,634.3	8.57	775.106	
3,051.2	3,021.6	3,115.3	3,115.0	8.7	1.3	-144.03	-1,303.3	-6,271.9	6,650.6	6,641.8	8.75	760.422	
3,100.0	3,069.4	3,149.0	3,148.7	8.9	1.3	-144.07	-1,303.2	-6,271.3	6,657.9	6,649.0	8.91	747.166	
3,149.6	3,117.9	3,183.2	3,182.9	9.1	1.3	-144.11	-1,303.0	-6,270.8	6,665.6	6,656.5	9.08	734.131	
3,200.0	3,167.2	3,200.0	3,199.7	9.3	1.3	-144.12	-1,302.9	-6,270.6	6,673.5	6,664.2	9.25	721.835	
3,248.0	3,214.2	3,243.9	3,243.6	9.5	1.3	-144.17	-1,302.7	-6,270.1	6,681.1	6,671.6	9.41	709.662	
3,300.0	3,265.0	3,274.6	3,274.3	9.8	1.3	-144.20	-1,302.6	-6,269.9	6,689.5	6,679.9	9.59	697.451	
3,346.4	3,310.5	3,300.0	3,299.7	10.0	1.3	-144.23	-1,302.6	-6,269.7	6,697.1	6,687.4	9.75	686.938	
3,400.0	3,362.9	3,329.7	3,329.5	10.2	1.3	-144.26	-1,302.5	-6,269.7	6,706.1	6,696.2	9.93	675.582	
3,444.9	3,406.7	3,353.1	3,352.8	10.4	1.3	-144.28	-1,302.5	-6,269.7	6,713.8	6,703.7	10.07	666.466	
3,473.0	3,434.2	3,367.7	3,367.4	10.5	1.3	-144.30	-1,302.4	-6,269.8	6,718.7	6,708.5	10.17	660.943	
3,500.0	3,460.7	3,400.0	3,399.7	10.6	1.3	-144.38	-1,302.4	-6,270.0	6,723.4	6,713.1	10.24	656.625	
3,543.3	3,503.2	3,400.0	3,399.7	10.7	1.3	-144.47	-1,302.4	-6,270.0	6,730.5	6,720.1	10.34	650.992	
3,600.0	3,559.0	3,441.1	3,440.8	10.9	1.3	-144.60	-1,302.4	-6,270.5	6,739.1	6,728.7	10.47	643.554	
3,641.7	3,600.2	3,467.4	3,467.2	11.0	1.3	-144.69	-1,302.5	-6,270.8	6,745.1	6,734.5	10.56	638.606	
3,700.0	3,657.9	3,507.3	3,507.0	11.2	1.3	-144.81	-1,302.8	-6,271.4	6,752.7	6,742.0	10.69	631.794	
3,740.1	3,697.8	3,550.0	3,549.7	11.3	1.3	-144.89	-1,303.2	-6,272.1	6,757.4	6,746.6	10.77	627.570	
3,800.0	3,757.3	3,600.0	3,599.7	11.4	1.3	-144.99	-1,303.6	-6,272.8	6,763.6	6,752.7	10.88	621.367	
3,838.6	3,795.7	3,632.7	3,632.4	11.5	1.3	-145.05	-1,303.9	-6,273.3	6,767.1	6,756.1	10.95	617.806	
3,900.0	3,857.0	3,671.7	3,671.4	11.7	1.3	-145.12	-1,304.2	-6,274.1	6,771.9	6,760.8	11.06	612.207	
3,937.0	3,893.9	3,700.0	3,699.7	11.7	1.3	-145.16	-1,304.4	-6,274.7	6,774.4	6,763.3	11.12	609.204	
4,000.0	3,956.9	3,780.1	3,779.8	11.8	1.3	-145.21	-1,304.8	-6,276.5	6,777.7	6,766.5	11.22	603.946	
4,035.4	3,992.3	3,821.7	3,821.4	11.9	1.3	-145.22	-1,304.8	-6,277.4	6,779.0	6,767.7	11.27	601.260	
4,072.9	4,029.8	3,859.4	3,859.0	11.9	1.3	-104.05	-1,304.8	-6,278.1	6,780.0	6,767.5	12.45	544.610	
4,100.0	4,056.9	3,886.5	3,886.2	12.0	1.3	-104.04	-1,304.8	-6,278.7	6,780.5	6,768.0	12.50	542.574	
4,133.8	4,090.7	3,929.4	3,929.0	12.0	1.4	-104.04	-1,304.7	-6,279.6	6,781.2	6,768.6	12.56	539.707	
4,200.0	4,156.9	4,042.7	4,042.3	12.1	1.4	-104.03	-1,304.1	-6,281.6	6,782.2	6,769.5	12.70	533.834	
4,232.3	4,189.2	4,112.6	4,112.1	12.2	1.4	-104.03	-1,303.7	-6,282.3	6,782.5	6,769.7	12.78	530.846	
4,300.0	4,256.9	4,201.7	4,201.3	12.3	1.4	-104.03	-1,303.6	-6,282.8	6,782.8	6,769.9	12.91	525.472	
4,330.7	4,287.6	4,231.7	4,231.3	12.4	1.4	-104.03	-1,303.6	-6,282.9	6,782.9	6,769.9	12.97	523.106	
4,400.0	4,356.9	4,300.0	4,299.6	12.5	1.4	-104.03	-1,303.6	-6,283.1	6,783.1	6,770.0	13.10	517.842	
4,429.1	4,386.0	4,328.8	4,328.3	12.5	1.4	-104.02	-1,303.5	-6,283.2	6,783.2	6,770.1	13.16	515.537	
4,500.0	4,456.9	4,400.0	4,399.6	12.6	1.4	-104.02	-1,303.4	-6,283.5	6,783.5	6,770.2	13.30	510.004	
4,527.5	4,484.4	4,421.5	4,421.1	12.7	1.4	-104.02	-1,303.3	-6,283.6	6,783.6	6,770.2	13.36	507.937	
4,600.0	4,556.9	4,476.7	4,476.3	12.8	1.4	-104.02	-1,303.2	-6,283.9	6,784.0	6,770.5	13.50	502.604	
4,626.0	4,582.9	4,500.0	4,499.6	12.9	1.4	-104.02	-1,303.2	-6,284.1	6,784.1	6,770.6	13.55	500.684	
4,700.0	4,656.9	4,572.0	4,571.6	13.0	1.4	-104.02	-1,303.0	-6,284.7	6,784.7	6,771.0	13.70	495.249	
4,724.4	4,681.3	4,597.2	4,596.8	13.0	1.5	-104.02	-1,303.0	-6,284.9	6,784.9	6,771.1	13.75	493.468	
4,800.0	4,756.9	4,638.7	4,638.3	13.1	1.5	-104.02	-1,302.9	-6,285.3	6,785.6	6,771.7	13.90	488.347	
4,822.8	4,779.7	4,650.8	4,650.4	13.2	1.5	-104.01	-1,302.9	-6,285.5	6,785.9	6,772.0	13.94	486.834	
4,900.0	4,856.9	4,700.0	4,699.6	13.3	1.5	-104.01	-1,303.0	-6,286.3	6,787.2	6,773.1	14.09	481.704	
4,921.2	4,878.1	4,707.7	4,707.2	13.4	1.5	-104.01	-1,303.0	-6,286.5	6,787.6	6,773.5	14.13	480.362	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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				
5,000.0	4,956.9	4,870.2	4,869.8	13.5	1.5	-104.02	-1,304.2	-6,288.8	6,789.0	6,774.7	14.29	475.055				
5,019.7	4,976.6	4,900.0	4,899.5	13.5	1.5	-104.02	-1,304.5	-6,288.9	6,789.1	6,774.8	14.33	473.801				
5,100.0	5,056.9	4,965.1	4,964.6	13.7	1.5	-104.02	-1,305.0	-6,289.2	6,789.6	6,775.1	14.48	468.845				
5,118.1	5,075.0	4,977.3	4,976.8	13.7	1.5	-104.03	-1,305.1	-6,289.3	6,789.8	6,775.3	14.52	467.743				
5,200.0	5,156.9	5,069.4	5,069.0	13.8	1.5	-104.03	-1,305.8	-6,290.0	6,790.6	6,775.9	14.68	462.687				
5,216.5	5,173.4	5,093.2	5,092.7	13.9	1.5	-104.03	-1,306.0	-6,290.2	6,790.7	6,776.0	14.71	461.652				
5,300.0	5,256.9	5,241.8	5,241.4	14.0	1.5	-104.04	-1,307.0	-6,290.2	6,790.8	6,776.0	14.87	456.665				
5,314.9	5,271.8	5,265.8	5,265.4	14.1	1.5	-104.04	-1,307.1	-6,290.1	6,790.8	6,775.9	14.90	455.774				
5,400.0	5,356.9	5,389.7	5,389.2	14.2	1.5	-104.04	-1,307.4	-6,289.1	6,790.2	6,775.1	15.07	450.580				
5,413.4	5,370.3	5,409.8	5,409.3	14.2	1.5	-104.05	-1,307.5	-6,288.8	6,790.0	6,774.9	15.10	449.753				
5,500.0	5,456.9	5,531.4	5,530.9	14.4	1.5	-104.05	-1,307.3	-6,287.1	6,788.8	6,773.5	15.27	444.452				
5,511.8	5,468.7	5,543.4	5,542.9	14.4	1.5	-104.05	-1,307.3	-6,286.9	6,788.6	6,773.3	15.30	443.740				
5,600.0	5,556.9	5,636.8	5,636.3	14.6	1.5	-104.05	-1,307.4	-6,285.3	6,787.2	6,771.7	15.48	438.466				
5,610.2	5,567.1	5,648.3	5,647.8	14.6	1.5	-104.05	-1,307.4	-6,285.1	6,787.0	6,771.5	15.50	437.866				
5,700.0	5,656.9	5,740.3	5,739.7	14.7	1.5	-104.06	-1,308.2	-6,283.2	6,785.4	6,769.7	15.68	432.711				
5,708.6	5,665.5	5,748.2	5,747.6	14.8	1.5	-104.06	-1,308.3	-6,283.1	6,785.3	6,769.6	15.70	432.222				
5,800.0	5,756.9	5,825.4	5,824.9	14.9	1.6	-104.08	-1,309.3	-6,281.5	6,783.7	6,767.9	15.88	427.149				
5,807.1	5,764.0	5,830.6	5,830.1	14.9	1.6	-104.08	-1,309.4	-6,281.4	6,783.6	6,767.7	15.90	426.762				
5,900.0	5,856.9	5,900.0	5,899.4	15.1	1.6	-104.09	-1,310.4	-6,280.2	6,782.4	6,766.3	16.08	421.758				
5,905.5	5,862.4	5,900.0	5,899.4	15.1	1.6	-104.09	-1,310.4	-6,280.2	6,782.4	6,766.3	16.09	421.473				
5,971.9	5,928.8	5,951.9	5,951.3	15.3	1.6	-104.10	-1,311.2	-6,279.5	6,781.7	6,765.5	16.23	417.974				
6,000.0	5,956.9	5,972.7	5,972.1	15.3	1.6	-14.11	-1,311.5	-6,279.3	6,781.0	6,765.6	15.36	441.558				
6,003.9	5,960.8	5,975.6	5,975.0	15.3	1.6	-14.12	-1,311.6	-6,279.2	6,780.8	6,765.4	15.36	441.368				
6,050.0	6,006.7	6,012.6	6,012.0	15.4	1.6	-14.20	-1,312.0	-6,278.9	6,777.0	6,761.6	15.45	438.534				
6,100.0	6,056.2	6,060.5	6,059.9	15.4	1.6	-14.37	-1,312.6	-6,278.4	6,769.8	6,754.2	15.58	434.518				
6,102.3	6,058.5	6,062.7	6,062.1	15.4	1.6	-14.38	-1,312.6	-6,278.4	6,769.4	6,753.8	15.59	434.316				
6,150.0	6,105.1	6,107.6	6,107.0	15.4	1.6	-14.61	-1,313.0	-6,278.1	6,759.2	6,743.5	15.71	430.168				
6,200.0	6,153.0	6,152.9	6,152.3	15.5	1.6	-14.93	-1,313.4	-6,277.7	6,745.4	6,729.6	15.83	425.988				
6,200.8	6,153.8	6,153.6	6,153.0	15.5	1.6	-14.94	-1,313.4	-6,277.7	6,745.2	6,729.4	15.84	425.926				
6,250.0	6,199.9	6,197.1	6,196.5	15.5	1.6	-15.35	-1,314.0	-6,277.3	6,728.4	6,712.5	15.93	422.307				
6,299.2	6,244.8	6,255.6	6,255.0	15.5	1.6	-15.89	-1,314.8	-6,276.8	6,708.6	6,692.6	16.01	419.036				
6,300.0	6,245.5	6,256.6	6,255.9	15.5	1.6	-15.90	-1,314.9	-6,276.8	6,708.3	6,692.3	16.01	418.989				
6,350.0	6,289.6	6,314.0	6,313.4	15.5	1.6	-16.57	-1,315.5	-6,276.1	6,685.0	6,669.0	16.06	416.305				
6,397.6	6,329.9	6,364.0	6,363.3	15.4	1.6	-17.34	-1,316.1	-6,275.5	6,660.1	6,644.0	16.07	414.345				
6,400.0	6,331.8	6,366.4	6,365.7	15.4	1.6	-17.38	-1,316.1	-6,275.5	6,658.8	6,642.7	16.07	414.265				
6,450.0	6,372.2	6,419.5	6,418.8	15.4	1.6	-18.37	-1,316.6	-6,274.7	6,629.7	6,613.6	16.07	412.652				
6,496.0	6,407.4	6,471.6	6,471.0	15.4	1.6	-19.48	-1,317.2	-6,273.8	6,600.5	6,584.5	16.05	411.238				
6,500.0	6,410.3	6,475.9	6,475.3	15.4	1.6	-19.58	-1,317.2	-6,273.8	6,597.9	6,581.9	16.05	411.134				
6,550.0	6,446.1	6,515.4	6,514.7	15.4	1.6	-21.01	-1,317.7	-6,273.0	6,563.6	6,547.6	16.01	409.917				
6,594.5	6,475.9	6,538.9	6,538.2	15.4	1.6	-22.51	-1,318.0	-6,272.5	6,531.2	6,515.2	15.98	408.611				
6,600.0	6,479.4	6,541.7	6,541.0	15.4	1.6	-22.71	-1,318.0	-6,272.5	6,527.0	6,511.0	15.98	408.432				
6,650.0	6,510.0	6,565.8	6,565.1	15.5	1.6	-24.79	-1,318.4	-6,272.0	6,488.4	6,472.4	16.00	405.604				
6,692.9	6,534.0	6,584.7	6,584.0	15.7	1.6	-26.95	-1,318.7	-6,271.7	6,453.7	6,437.6	16.08	401.257				
6,700.0	6,537.8	6,587.7	6,587.0	15.7	1.6	-27.35	-1,318.8	-6,271.6	6,447.8	6,431.7	16.10	400.411				
6,750.0	6,562.6	6,600.0	6,599.3	16.2	1.6	-30.50	-1,319.0	-6,271.4	6,405.6	6,389.2	16.34	391.984				
6,791.3	6,580.8	6,620.0	6,619.3	16.6	1.6	-33.81	-1,319.4	-6,271.1	6,369.5	6,352.8	16.70	381.306				
6,800.0	6,584.3	6,622.6	6,621.9	16.7	1.6	-34.59	-1,319.4	-6,271.0	6,361.8	6,345.0	16.81	378.477				
6,850.0	6,602.9	6,636.1	6,635.4	17.3	1.6	-39.75	-1,319.7	-6,270.8	6,316.8	6,299.3	17.53	360.338				
6,889.7	6,615.2	6,645.1	6,644.4	17.9	1.6	-44.90	-1,319.9	-6,270.6	6,280.3	6,262.0	18.32	342.873				
6,900.0	6,618.1	6,647.2	6,646.5	18.0	1.6	-46.41	-1,319.9	-6,270.6	6,270.8	6,252.2	18.54	338.174				
6,950.0	6,630.0	6,655.7	6,654.9	18.8	1.6	-54.99	-1,320.1	-6,270.5	6,223.8	6,204.0	19.79	314.469				
6,988.2	6,636.8	6,660.4	6,659.7	19.5	1.6	-63.05	-1,320.2	-6,270.4	6,187.6	6,166.8	20.79	297.599				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.5	6,661.5	6,660.8	19.7	1.6	-65.82	-1,320.3	-6,270.4	6,176.3	6,155.2	21.08	293.017	
7,050.0	6,643.5	6,664.8	6,664.0	20.6	1.6	-78.74	-1,320.3	-6,270.3	6,128.3	6,106.2	22.12	276.998	
7,086.6	6,644.9	6,665.4	6,664.7	21.3	1.6	-88.97	-1,320.3	-6,270.3	6,093.1	6,070.3	22.85	266.601	
7,097.8	6,645.0	6,665.4	6,664.6	21.5	1.6	-92.14	-1,320.3	-6,270.3	6,082.3	6,059.2	23.14	262.862	
7,100.0	6,645.0	6,665.3	6,664.6	21.6	1.6	-92.14	-1,320.3	-6,270.3	6,080.3	6,057.1	23.18	262.294	
7,185.0	6,644.9	6,664.2	6,663.5	23.3	1.6	-92.10	-1,320.3	-6,270.3	5,998.5	5,973.6	24.90	240.858	
7,200.0	6,644.9	6,664.0	6,663.3	23.6	1.6	-92.09	-1,320.3	-6,270.3	5,984.1	5,958.9	25.21	237.386	
7,283.4	6,644.8	6,662.9	6,662.2	25.4	1.6	-92.05	-1,320.3	-6,270.3	5,904.0	5,877.0	27.02	218.479	
7,300.0	6,644.7	6,662.7	6,662.0	25.8	1.6	-92.05	-1,320.3	-6,270.3	5,888.1	5,860.7	27.38	215.028	
7,381.9	6,644.6	6,661.6	6,660.9	27.7	1.6	-92.01	-1,320.3	-6,270.4	5,809.6	5,780.4	29.26	198.578	
7,400.0	6,644.6	6,661.4	6,660.6	28.1	1.6	-92.00	-1,320.2	-6,270.4	5,792.3	5,762.6	29.67	195.217	
7,480.3	6,644.5	6,660.3	6,659.6	30.0	1.6	-91.96	-1,320.2	-6,270.4	5,715.4	5,683.8	31.58	180.991	
7,500.0	6,644.5	6,660.0	6,659.3	30.5	1.6	-91.95	-1,320.2	-6,270.4	5,696.5	5,664.5	32.05	177.760	
7,578.7	6,644.4	6,659.0	6,658.2	32.4	1.6	-91.92	-1,320.2	-6,270.4	5,621.3	5,587.3	33.97	165.477	
7,600.0	6,644.4	6,658.7	6,658.0	32.9	1.6	-91.91	-1,320.2	-6,270.4	5,601.0	5,566.5	34.49	162.393	
7,677.1	6,644.3	6,657.6	6,656.9	34.8	1.6	-91.87	-1,320.2	-6,270.4	5,527.3	5,490.9	36.42	151.776	
7,700.0	6,644.2	6,657.3	6,656.6	35.4	1.6	-91.86	-1,320.2	-6,270.4	5,505.5	5,468.5	36.99	148.845	
7,775.6	6,644.1	6,656.3	6,655.6	37.3	1.6	-91.83	-1,320.1	-6,270.4	5,433.5	5,394.6	38.91	139.645	
7,800.0	6,644.1	6,656.0	6,655.3	38.0	1.6	-91.81	-1,320.1	-6,270.5	5,410.3	5,370.7	39.53	136.864	
7,874.0	6,644.0	6,655.0	6,654.2	39.9	1.6	-91.78	-1,320.1	-6,270.5	5,339.9	5,298.5	41.44	128.866	
7,900.0	6,644.0	6,654.6	6,653.9	40.5	1.6	-91.77	-1,320.1	-6,270.5	5,315.2	5,273.1	42.11	126.228	
7,972.4	6,643.9	6,653.6	6,652.9	42.4	1.6	-91.73	-1,320.1	-6,270.5	5,246.4	5,202.5	44.00	119.249	
8,000.0	6,643.9	6,653.2	6,652.5	43.1	1.6	-91.72	-1,320.1	-6,270.5	5,220.3	5,175.6	44.71	116.748	
8,070.8	6,643.8	6,652.3	6,651.5	45.0	1.6	-91.69	-1,320.0	-6,270.5	5,153.2	5,106.6	46.58	110.635	
8,100.0	6,643.7	6,651.9	6,651.1	45.8	1.6	-91.67	-1,320.0	-6,270.5	5,125.6	5,078.3	47.35	108.260	
8,169.3	6,643.7	6,650.9	6,650.2	47.6	1.6	-91.64	-1,320.0	-6,270.5	5,060.1	5,010.9	49.18	102.887	
8,200.0	6,643.6	6,650.5	6,649.8	48.4	1.6	-91.63	-1,320.0	-6,270.5	5,031.1	4,981.1	50.00	100.630	
8,267.7	6,643.5	6,649.5	6,648.8	50.2	1.6	-91.59	-1,320.0	-6,270.6	4,967.2	4,915.4	51.80	95.889	
8,300.0	6,643.5	6,649.1	6,648.4	51.1	1.6	-91.58	-1,320.0	-6,270.6	4,936.8	4,884.2	52.66	93.742	
8,366.1	6,643.4	6,648.2	6,647.4	52.9	1.6	-91.55	-1,320.0	-6,270.6	4,874.6	4,820.2	54.44	89.544	
8,400.0	6,643.4	6,647.7	6,647.0	53.8	1.6	-91.53	-1,319.9	-6,270.6	4,842.8	4,787.4	55.35	87.499	
8,464.5	6,643.3	6,646.8	6,646.1	55.5	1.6	-91.50	-1,319.9	-6,270.6	4,782.2	4,725.1	57.09	83.771	
8,500.0	6,643.2	6,646.3	6,645.6	56.5	1.6	-91.48	-1,319.9	-6,270.6	4,748.9	4,690.9	58.04	81.820	
8,563.0	6,643.2	6,645.4	6,644.7	58.2	1.6	-91.45	-1,319.9	-6,270.6	4,690.0	4,630.3	59.75	78.500	
8,600.0	6,643.1	6,644.9	6,644.2	59.2	1.6	-91.43	-1,319.9	-6,270.6	4,655.4	4,594.6	60.75	76.636	
8,661.4	6,643.0	6,644.0	6,643.3	60.8	1.6	-91.40	-1,319.9	-6,270.6	4,598.1	4,535.7	62.41	73.670	
8,700.0	6,643.0	6,643.4	6,642.7	61.9	1.6	-91.38	-1,319.9	-6,270.7	4,562.1	4,498.7	63.46	71.887	
8,759.8	6,642.9	6,642.6	6,641.9	63.5	1.6	-91.35	-1,319.8	-6,270.7	4,506.4	4,441.4	65.09	69.232	
8,800.0	6,642.9	6,642.0	6,641.3	64.6	1.6	-91.33	-1,319.8	-6,270.7	4,469.1	4,402.9	66.19	67.524	
8,858.2	6,642.8	6,641.2	6,640.5	66.2	1.6	-91.31	-1,319.8	-6,270.7	4,415.1	4,347.3	67.78	65.142	
8,900.0	6,642.7	6,640.6	6,639.9	67.3	1.6	-91.28	-1,319.8	-6,270.7	4,376.4	4,307.5	68.92	63.504	
8,956.7	6,642.7	6,639.8	6,639.1	68.9	1.6	-91.26	-1,319.8	-6,270.7	4,324.1	4,253.6	70.47	61.363	
9,000.0	6,642.6	6,639.1	6,638.4	70.1	1.6	-91.23	-1,319.8	-6,270.7	4,284.1	4,212.4	71.65	59.789	
9,055.1	6,642.5	6,638.3	6,637.6	71.6	1.6	-91.21	-1,319.7	-6,270.7	4,233.3	4,160.2	73.16	57.861	
9,100.0	6,642.5	6,637.7	6,637.0	72.8	1.6	-91.19	-1,319.7	-6,270.8	4,192.1	4,117.7	74.40	56.348	
9,153.5	6,642.4	6,636.9	6,636.2	74.3	1.6	-91.16	-1,319.7	-6,270.8	4,143.0	4,067.1	75.87	54.609	
9,200.0	6,642.4	6,636.2	6,635.5	75.6	1.6	-91.13	-1,319.7	-6,270.8	4,100.4	4,023.3	77.14	53.154	
9,251.9	6,642.3	6,635.5	6,634.8	77.0	1.6	-91.11	-1,319.7	-6,270.8	4,053.0	3,974.4	78.57	51.583	
9,300.0	6,642.2	6,634.8	6,634.1	78.3	1.6	-91.08	-1,319.7	-6,270.8	4,009.2	3,929.3	79.90	50.181	
9,350.4	6,642.2	6,634.0	6,633.3	79.7	1.6	-91.06	-1,319.7	-6,270.8	3,963.4	3,882.1	81.28	48.760	
9,400.0	6,642.1	6,633.3	6,632.6	81.1	1.6	-91.03	-1,319.6	-6,270.8	3,918.4	3,835.8	82.65	47.409	
9,448.8	6,642.0	6,632.6	6,631.9	82.4	1.6	-91.01	-1,319.6	-6,270.8	3,874.3	3,790.3	84.00	46.123	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,631.8	6,631.1	83.8	1.6	-90.98	-1,319.6	-6,270.9	3,828.1	3,742.7	85.41	44.819	
9,547.2	6,641.9	6,631.1	6,630.4	85.1	1.6	-90.96	-1,319.6	-6,270.9	3,785.6	3,698.9	86.72	43.655	
9,600.0	6,641.9	6,630.3	6,629.6	86.6	1.6	-90.93	-1,319.6	-6,270.9	3,738.2	3,650.0	88.17	42.396	
9,645.6	6,641.8	6,629.7	6,629.0	87.9	1.6	-90.91	-1,319.6	-6,270.9	3,697.4	3,607.9	89.44	41.340	
9,700.0	6,641.7	6,628.8	6,628.1	89.4	1.6	-90.88	-1,319.5	-6,270.9	3,648.9	3,557.9	90.94	40.124	
9,744.1	6,641.7	6,628.2	6,627.5	90.6	1.6	-90.86	-1,319.5	-6,270.9	3,609.7	3,517.5	92.16	39.167	
9,800.0	6,641.6	6,627.3	6,626.6	92.1	1.6	-90.83	-1,319.5	-6,270.9	3,560.1	3,466.4	93.71	37.991	
9,842.5	6,641.6	6,626.7	6,626.0	93.3	1.6	-90.81	-1,319.5	-6,270.9	3,522.6	3,427.7	94.89	37.124	
9,900.0	6,641.5	6,625.8	6,625.1	94.9	1.6	-90.78	-1,319.5	-6,271.0	3,472.0	3,375.5	96.48	35.986	
9,940.9	6,641.4	6,625.2	6,624.5	96.0	1.6	-90.75	-1,319.5	-6,271.0	3,436.1	3,338.5	97.62	35.200	
10,000.0	6,641.4	6,624.3	6,623.6	97.7	1.6	-90.72	-1,319.5	-6,271.0	3,384.5	3,285.2	99.25	34.099	
10,039.3	6,641.3	6,623.7	6,623.0	98.8	1.6	-90.70	-1,319.4	-6,271.0	3,350.2	3,249.9	100.35	33.387	
10,100.0	6,641.2	6,622.8	6,622.1	100.4	1.6	-90.67	-1,319.4	-6,271.0	3,297.7	3,195.7	102.03	32.321	
10,137.8	6,641.2	6,622.2	6,621.5	101.5	1.6	-90.65	-1,319.4	-6,271.0	3,265.1	3,162.0	103.08	31.676	
10,200.0	6,641.1	6,621.3	6,620.6	103.2	1.6	-90.62	-1,319.4	-6,271.0	3,211.7	3,106.9	104.81	30.644	
10,236.2	6,641.1	6,620.7	6,620.0	104.2	1.6	-90.60	-1,319.4	-6,271.0	3,180.7	3,074.9	105.81	30.060	
10,300.0	6,641.0	6,619.7	6,619.0	106.0	1.6	-90.57	-1,319.4	-6,271.1	3,126.5	3,018.9	107.59	29.060	
10,334.6	6,640.9	6,619.2	6,618.5	107.0	1.6	-90.55	-1,319.4	-6,271.1	3,097.2	2,988.7	108.55	28.533	
10,400.0	6,640.9	6,618.2	6,617.5	108.8	1.6	-90.51	-1,319.3	-6,271.1	3,042.2	2,931.8	110.37	27.565	
10,433.0	6,640.8	6,617.7	6,617.0	109.7	1.6	-90.49	-1,319.3	-6,271.1	3,014.6	2,903.3	111.29	27.088	
10,500.0	6,640.7	6,616.6	6,615.9	111.6	1.6	-90.46	-1,319.3	-6,271.1	2,958.9	2,845.8	113.15	26.151	
10,531.5	6,640.7	6,616.1	6,615.4	112.4	1.6	-90.44	-1,319.3	-6,271.1	2,932.9	2,818.9	114.02	25.722	
10,600.0	6,640.6	6,615.1	6,614.4	114.3	1.6	-90.40	-1,319.3	-6,271.1	2,876.7	2,760.7	115.93	24.813	
10,629.9	6,640.6	6,614.6	6,613.9	115.2	1.6	-90.39	-1,319.3	-6,271.1	2,852.3	2,735.5	116.76	24.428	
10,700.0	6,640.5	6,613.5	6,612.8	117.1	1.6	-90.35	-1,319.2	-6,271.2	2,795.6	2,676.9	118.72	23.548	
10,728.3	6,640.4	6,613.0	6,612.3	117.9	1.6	-90.33	-1,319.2	-6,271.2	2,772.8	2,653.3	119.51	23.202	
10,800.0	6,640.4	6,611.9	6,611.2	119.9	1.6	-90.30	-1,319.2	-6,271.2	2,715.8	2,594.3	121.50	22.351	
10,826.7	6,640.3	6,611.5	6,610.8	120.7	1.6	-90.28	-1,319.2	-6,271.2	2,694.6	2,572.4	122.25	22.042	
10,900.0	6,640.2	6,610.3	6,609.6	122.7	1.6	-90.24	-1,319.2	-6,271.2	2,637.3	2,513.0	124.29	21.219	
10,925.2	6,640.2	6,609.9	6,609.2	123.4	1.6	-90.23	-1,319.2	-6,271.2	2,617.8	2,492.8	124.99	20.944	
11,000.0	6,640.1	6,608.7	6,608.0	125.5	1.6	-90.19	-1,319.1	-6,271.3	2,560.4	2,433.3	127.08	20.148	
11,023.6	6,640.1	6,608.3	6,607.6	126.1	1.6	-90.17	-1,319.1	-6,271.3	2,542.4	2,414.7	127.74	19.904	
11,100.0	6,640.0	6,600.0	6,599.3	128.3	1.6	-89.88	-1,319.0	-6,271.4	2,485.1	2,355.2	129.86	19.136	
11,122.0	6,639.9	6,600.0	6,599.3	128.9	1.6	-89.88	-1,319.0	-6,271.4	2,468.7	2,338.2	130.48	18.921	
11,200.0	6,639.8	6,600.0	6,599.3	131.1	1.6	-89.88	-1,319.0	-6,271.4	2,411.5	2,278.9	132.65	18.179	
11,220.4	6,639.8	6,600.0	6,599.3	131.6	1.6	-89.88	-1,319.0	-6,271.4	2,396.7	2,263.5	133.22	17.990	
11,300.0	6,639.7	6,600.0	6,599.3	133.9	1.6	-89.88	-1,319.0	-6,271.4	2,340.0	2,204.5	135.44	17.276	
11,318.9	6,639.7	6,600.0	6,599.3	134.4	1.6	-89.88	-1,319.0	-6,271.4	2,326.7	2,190.7	135.97	17.112	
11,400.0	6,639.6	6,600.0	6,599.3	136.7	1.6	-89.88	-1,319.0	-6,271.4	2,270.6	2,132.3	138.24	16.425	
11,417.3	6,639.6	6,600.0	6,599.3	137.1	1.6	-89.88	-1,319.0	-6,271.4	2,258.8	2,120.1	138.72	16.283	
11,500.0	6,639.5	6,600.0	6,599.3	139.4	1.6	-89.88	-1,319.0	-6,271.4	2,203.5	2,062.5	141.03	15.625	
11,515.7	6,639.5	6,600.0	6,599.3	139.9	1.6	-89.88	-1,319.0	-6,271.4	2,193.2	2,051.8	141.47	15.503	
11,600.0	6,639.3	6,600.0	6,599.3	142.2	1.6	-89.88	-1,319.0	-6,271.4	2,139.1	1,995.2	143.82	14.873	
11,614.1	6,639.3	6,600.0	6,599.3	142.6	1.6	-89.88	-1,319.0	-6,271.4	2,130.2	1,985.9	144.22	14.770	
11,700.0	6,639.2	6,600.0	6,599.3	145.0	1.6	-89.88	-1,319.0	-6,271.4	2,077.4	1,930.8	146.62	14.169	
11,712.6	6,639.2	6,600.0	6,599.3	145.4	1.6	-89.88	-1,319.0	-6,271.4	2,069.9	1,922.9	146.97	14.084	
11,800.0	6,639.1	6,600.0	6,599.3	147.8	1.6	-89.88	-1,319.0	-6,271.4	2,018.8	1,869.4	149.41	13.512	
11,811.0	6,639.1	6,600.0	6,599.3	148.1	1.6	-89.88	-1,319.0	-6,271.4	2,012.6	1,862.8	149.72	13.442	
11,900.0	6,639.0	6,599.3	6,599.3	150.6	1.6	-89.67	-1,318.9	-6,271.5	1,963.6	1,811.4	152.20	12.901	
11,909.4	6,639.0	6,599.3	6,599.3	150.9	1.6	-89.67	-1,318.9	-6,271.5	1,958.5	1,806.1	152.47	12.846	
12,000.0	6,638.8	6,592.2	6,591.5	153.4	1.6	-89.61	-1,318.8	-6,271.5	1,912.0	1,757.0	155.00	12.335	
12,007.8	6,638.8	6,592.0	6,591.3	153.6	1.6	-89.61	-1,318.8	-6,271.6	1,908.1	1,752.8	155.22	12.293	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,590.5	6,589.8	156.2	1.6	-89.56	-1,318.8	-6,271.6	1,864.3	1,706.5	157.79	11.815	
12,106.3	6,638.7	6,590.4	6,589.7	156.4	1.6	-89.55	-1,318.8	-6,271.6	1,861.4	1,703.5	157.97	11.784	
12,200.0	6,638.6	6,588.7	6,588.1	159.0	1.6	-89.50	-1,318.8	-6,271.6	1,820.9	1,660.3	160.59	11.339	
12,204.7	6,638.6	6,588.7	6,588.0	159.1	1.6	-89.49	-1,318.8	-6,271.6	1,818.9	1,658.2	160.72	11.318	
12,300.0	6,638.5	6,587.0	6,586.3	161.8	1.6	-89.44	-1,318.8	-6,271.6	1,782.0	1,618.6	163.38	10.907	
12,303.1	6,638.5	6,587.0	6,586.3	161.9	1.6	-89.43	-1,318.8	-6,271.6	1,780.8	1,617.4	163.47	10.894	
12,400.0	6,638.3	6,585.3	6,584.6	164.6	1.6	-89.38	-1,318.7	-6,271.7	1,748.0	1,581.8	166.18	10.519	
12,401.5	6,638.3	6,585.3	6,584.6	164.6	1.6	-89.38	-1,318.7	-6,271.7	1,747.5	1,581.3	166.22	10.513	
12,500.0	6,638.2	6,583.6	6,582.9	167.4	1.6	-89.32	-1,318.7	-6,271.7	1,719.1	1,550.2	168.97	10.174	
12,598.4	6,638.1	6,581.9	6,581.2	170.2	1.6	-89.26	-1,318.7	-6,271.7	1,696.0	1,524.3	171.72	9.876	
12,600.0	6,638.1	6,581.8	6,581.2	170.2	1.6	-89.26	-1,318.7	-6,271.7	1,695.7	1,523.9	171.77	9.872	
12,696.8	6,638.0	6,580.1	6,579.5	172.9	1.6	-89.20	-1,318.6	-6,271.8	1,678.4	1,503.9	174.47	9.619	
12,700.0	6,638.0	6,580.1	6,579.4	173.0	1.6	-89.20	-1,318.6	-6,271.8	1,677.9	1,503.3	174.56	9.612	
12,795.2	6,637.8	6,578.4	6,577.7	175.7	1.6	-89.14	-1,318.6	-6,271.8	1,666.3	1,489.1	177.23	9.402	
12,800.0	6,637.8	6,578.3	6,577.7	175.8	1.6	-89.14	-1,318.6	-6,271.8	1,665.9	1,488.5	177.36	9.393	
12,893.7	6,637.7	6,576.7	6,576.0	178.4	1.6	-89.08	-1,318.6	-6,271.8	1,660.1	1,480.1	179.98	9.224	
12,900.0	6,637.7	6,576.6	6,575.9	178.6	1.6	-89.08	-1,318.6	-6,271.8	1,659.9	1,479.7	180.16	9.213	
12,950.4	6,637.6	6,575.7	6,575.0	180.0	1.6	-89.05	-1,318.6	-6,271.8	1,659.1	1,477.5	181.56	9.138 CC	
12,992.1	6,637.6	6,575.0	6,574.3	181.2	1.6	-89.02	-1,318.5	-6,271.9	1,659.6	1,476.9	182.73	9.082	
13,000.0	6,637.6	6,574.8	6,574.2	181.4	1.6	-89.02	-1,318.5	-6,271.9	1,659.8	1,476.9	182.95	9.073 ES	
13,090.5	6,637.5	6,573.2	6,572.6	183.9	1.6	-88.96	-1,318.5	-6,271.9	1,665.0	1,479.5	185.48	8.977	
13,100.0	6,637.5	6,573.1	6,572.4	184.2	1.6	-88.95	-1,318.5	-6,271.9	1,665.8	1,480.1	185.75	8.968	
13,188.9	6,637.4	6,571.5	6,570.8	186.7	1.6	-88.90	-1,318.5	-6,271.9	1,676.1	1,487.9	188.24	8.905	
13,200.0	6,637.3	6,571.3	6,570.6	187.0	1.6	-88.89	-1,318.5	-6,271.9	1,677.8	1,489.2	188.54	8.898	
13,287.4	6,637.2	6,569.7	6,569.1	189.4	1.6	-88.84	-1,318.5	-6,272.0	1,693.0	1,502.0	190.99	8.864	
13,300.0	6,637.2	6,569.5	6,568.8	189.8	1.6	-88.83	-1,318.5	-6,272.0	1,695.5	1,504.2	191.34	8.861	
13,385.8	6,637.1	6,568.0	6,567.3	192.2	1.6	-88.78	-1,318.4	-6,272.0	1,715.2	1,521.5	193.74	8.853 SF	
13,400.0	6,637.1	6,567.7	6,567.1	192.6	1.6	-88.77	-1,318.4	-6,272.0	1,718.9	1,524.8	194.14	8.854	
13,484.2	6,637.0	6,566.2	6,565.5	195.0	1.6	-88.72	-1,318.4	-6,272.0	1,742.8	1,546.3	196.49	8.870	
13,500.0	6,637.0	6,565.9	6,565.3	195.4	1.6	-88.71	-1,318.4	-6,272.0	1,747.7	1,550.8	196.93	8.875	
13,582.6	6,636.9	6,564.5	6,563.8	197.7	1.6	-88.66	-1,318.4	-6,272.1	1,775.4	1,576.2	199.24	8.911	
13,600.0	6,636.8	6,564.1	6,563.5	198.2	1.6	-88.65	-1,318.4	-6,272.1	1,781.7	1,582.0	199.73	8.921	
13,681.1	6,636.7	6,562.7	6,562.0	200.5	1.6	-88.60	-1,318.4	-6,272.1	1,812.8	1,610.8	202.00	8.974	
13,700.0	6,636.7	6,562.3	6,561.7	201.0	1.6	-88.58	-1,318.3	-6,272.1	1,820.5	1,618.0	202.52	8.989	
13,779.5	6,636.6	6,560.9	6,560.2	203.2	1.6	-88.53	-1,318.3	-6,272.1	1,854.7	1,649.9	204.75	9.058	
13,800.0	6,636.6	6,560.5	6,559.9	203.8	1.6	-88.52	-1,318.3	-6,272.1	1,863.9	1,658.6	205.32	9.078	
13,877.9	6,636.5	6,559.1	6,558.4	206.0	1.6	-88.47	-1,318.3	-6,272.2	1,900.7	1,693.2	207.50	9.160	
13,900.0	6,636.5	6,558.7	6,558.0	206.6	1.6	-88.46	-1,318.3	-6,272.2	1,911.5	1,703.4	208.12	9.185	
13,976.3	6,636.4	6,557.3	6,556.6	208.8	1.6	-88.41	-1,318.3	-6,272.2	1,950.6	1,740.3	210.25	9.277	
14,000.0	6,636.3	6,556.9	6,556.2	209.4	1.6	-88.40	-1,318.3	-6,272.2	1,963.1	1,752.2	210.91	9.308	
14,074.8	6,636.2	6,555.5	6,554.8	211.5	1.6	-88.35	-1,318.2	-6,272.2	2,004.1	1,791.1	213.00	9.409	
14,100.0	6,636.2	6,555.1	6,554.4	212.2	1.6	-88.33	-1,318.2	-6,272.2	2,018.3	1,804.6	213.71	9.444	
14,173.2	6,636.1	6,553.7	6,553.0	214.3	1.6	-88.29	-1,318.2	-6,272.3	2,060.9	1,845.1	215.75	9.552	
14,200.0	6,636.1	6,553.2	6,552.6	215.0	1.6	-88.27	-1,318.2	-6,272.3	2,076.9	1,860.4	216.50	9.593	
14,271.6	6,636.0	6,551.9	6,551.2	217.0	1.6	-88.22	-1,318.2	-6,272.3	2,120.7	1,902.2	218.50	9.706	
14,300.0	6,636.0	6,551.4	6,550.7	217.8	1.6	-88.21	-1,318.2	-6,272.3	2,138.5	1,919.2	219.30	9.752	
14,370.0	6,635.9	6,550.1	6,549.4	219.8	1.6	-88.16	-1,318.2	-6,272.3	2,183.4	1,962.1	221.26	9.868	
14,400.0	6,635.8	6,549.5	6,548.9	220.6	1.6	-88.14	-1,318.1	-6,272.3	2,203.0	1,980.9	222.09	9.919	
14,468.5	6,635.7	6,548.3	6,547.6	222.6	1.6	-88.10	-1,318.1	-6,272.4	2,248.6	2,024.6	224.01	10.038	
14,500.0	6,635.7	6,547.7	6,547.0	223.4	1.6	-88.08	-1,318.1	-6,272.4	2,270.0	2,045.1	224.89	10.094	
14,566.9	6,635.6	6,546.4	6,545.8	225.3	1.6	-88.04	-1,318.1	-6,272.4	2,316.2	2,089.4	226.76	10.214	
14,600.0	6,635.6	6,545.8	6,545.1	226.2	1.6	-88.01	-1,318.1	-6,272.4	2,339.4	2,111.7	227.68	10.275	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,665.3	6,635.5	6,544.6	6,543.9	228.1	1.6	-87.97	-1,318.1	-6,272.4	2,385.9	2,156.4	229.51	10.396	
14,700.0	6,635.5	6,544.0	6,543.3	229.0	1.6	-87.95	-1,318.1	-6,272.4	2,410.9	2,180.4	230.47	10.461	
14,763.7	6,635.4	6,542.8	6,542.1	230.8	1.6	-87.91	-1,318.1	-6,272.5	2,457.6	2,225.3	232.26	10.581	
14,800.0	6,635.3	6,542.1	6,541.4	231.8	1.6	-87.88	-1,318.0	-6,272.5	2,484.4	2,251.2	233.27	10.651	
14,862.2	6,635.2	6,540.9	6,540.2	233.6	1.6	-87.84	-1,318.0	-6,272.5	2,531.0	2,296.0	235.00	10.770	
14,900.0	6,635.2	6,540.2	6,539.5	234.7	1.6	-87.82	-1,318.0	-6,272.5	2,559.7	2,323.6	236.06	10.843	
14,960.6	6,635.1	6,539.1	6,538.4	236.4	1.6	-87.78	-1,318.0	-6,272.5	2,606.1	2,368.4	237.75	10.962	
14,995.1	6,635.0	6,538.3	6,537.7	237.3	1.6	-87.76	-1,318.0	-6,272.5	2,632.9	2,394.1	238.72	11.029	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-89.19	106.8	-7,598.8	7,599.6				
98.4	98.4	46.2	46.2	0.1	0.0	-89.20	106.7	-7,598.9	7,599.6	7,599.5	0.11	N/A	
100.0	100.0	47.3	47.3	0.1	0.0	-89.20	106.7	-7,598.9	7,599.6	7,599.5	0.11	N/A	
196.8	196.8	137.0	137.0	0.3	0.1	-89.20	106.2	-7,599.2	7,600.0	7,599.6	0.40	N/A	
200.0	200.0	141.8	141.8	0.3	0.1	-89.20	106.2	-7,599.2	7,600.0	7,599.6	0.42	N/A	
295.3	295.3	557.8	557.6	0.5	0.5	-89.23	102.3	-7,591.4	7,597.9	7,596.9	0.97	7,798.275	
300.0	300.0	563.2	563.0	0.5	0.5	-89.23	102.3	-7,591.2	7,597.7	7,596.7	0.99	7,691.750	
393.7	393.7	662.1	661.8	0.8	0.5	-89.24	101.2	-7,587.2	7,594.0	7,592.7	1.25	6,089.762	
400.0	400.0	668.4	668.2	0.8	0.5	-89.24	101.1	-7,587.0	7,593.7	7,592.5	1.26	6,006.932	
492.1	492.1	759.8	759.4	1.0	0.6	-89.24	100.0	-7,583.4	7,590.0	7,588.5	1.51	5,019.935	
500.0	500.0	767.5	767.2	1.0	0.6	-89.25	99.9	-7,583.1	7,589.7	7,588.2	1.53	4,950.807	
590.5	590.5	880.6	880.2	1.2	0.6	-89.26	98.4	-7,578.5	7,586.0	7,584.3	1.78	4,252.629	
600.0	600.0	893.9	893.5	1.2	0.6	-89.26	98.3	-7,577.9	7,585.6	7,583.8	1.81	4,189.691	
689.0	689.0	974.3	973.8	1.4	0.7	-89.26	97.4	-7,574.4	7,581.8	7,579.8	2.04	3,712.588	
700.0	700.0	984.0	983.5	1.4	0.7	-89.26	97.2	-7,574.0	7,581.4	7,579.3	2.07	3,661.131	
787.4	787.4	1,076.3	1,075.7	1.6	0.7	-89.27	95.9	-7,570.2	7,577.7	7,575.4	2.30	3,292.580	
800.0	800.0	1,090.2	1,089.6	1.7	0.7	-89.28	95.7	-7,569.6	7,577.1	7,574.8	2.33	3,245.245	
885.8	885.8	1,164.7	1,164.0	1.9	0.8	-89.28	94.6	-7,566.4	7,573.5	7,571.0	2.55	2,964.991	
900.0	900.0	1,176.6	1,175.9	1.9	0.8	-89.28	94.5	-7,566.0	7,572.9	7,570.3	2.59	2,923.453	
984.2	984.2	1,248.4	1,247.6	2.1	0.8	-89.29	93.7	-7,563.1	7,569.5	7,566.7	2.80	2,698.773	
1,000.0	1,000.0	1,261.9	1,261.1	2.1	0.8	-89.29	93.5	-7,562.5	7,568.9	7,566.1	2.84	2,660.543	
1,082.7	1,082.7	1,324.5	1,323.7	2.3	0.8	-89.30	92.9	-7,560.2	7,565.8	7,562.7	3.05	2,479.228	
1,100.0	1,100.0	1,335.6	1,334.8	2.3	0.8	-89.30	92.8	-7,559.8	7,565.1	7,562.1	3.09	2,444.995	
1,181.1	1,181.1	1,400.0	1,399.1	2.5	0.8	-89.30	91.9	-7,557.6	7,562.4	7,559.1	3.30	2,293.804	
1,200.0	1,200.0	1,400.0	1,399.1	2.6	0.8	-89.30	91.9	-7,557.6	7,561.8	7,558.5	3.34	2,264.442	
1,279.5	1,279.5	1,454.3	1,453.4	2.7	0.9	-89.31	91.2	-7,556.1	7,559.5	7,556.0	3.53	2,138.672	
1,300.0	1,300.0	1,468.4	1,467.5	2.8	0.9	-89.31	91.0	-7,555.7	7,558.9	7,555.4	3.58	2,108.506	
1,377.9	1,377.9	1,526.2	1,525.3	3.0	0.9	-130.53	90.2	-7,554.2	7,557.7	7,553.8	3.84	1,966.319	
1,400.0	1,400.0	1,544.3	1,543.3	3.0	0.9	-130.54	89.9	-7,553.8	7,557.6	7,553.7	3.90	1,938.576	
1,403.6	1,403.6	1,547.2	1,546.3	3.0	0.9	-130.54	89.9	-7,553.7	7,557.6	7,553.7	3.91	1,934.107	
1,476.4	1,476.3	1,600.0	1,599.0	3.2	0.9	-130.55	89.1	-7,552.5	7,558.2	7,554.2	4.09	1,850.096	
1,500.0	1,499.8	1,622.0	1,621.0	3.2	0.9	-130.55	88.8	-7,552.1	7,558.7	7,554.6	4.14	1,823.821	
1,574.8	1,574.4	1,673.7	1,672.7	3.4	1.0	-130.54	87.9	-7,551.1	7,561.3	7,557.0	4.33	1,746.620	
1,600.0	1,599.5	1,700.0	1,699.0	3.5	1.0	-130.54	87.4	-7,550.7	7,562.6	7,558.2	4.39	1,720.865	
1,673.2	1,672.2	1,753.6	1,752.6	3.6	1.0	-130.52	86.4	-7,549.8	7,567.0	7,562.4	4.58	1,651.435	
1,700.0	1,698.7	1,777.4	1,776.3	3.7	1.0	-130.51	85.8	-7,549.5	7,568.9	7,564.3	4.65	1,626.998	
1,771.6	1,769.5	1,831.7	1,830.7	3.9	1.0	-130.48	84.5	-7,548.7	7,575.0	7,570.2	4.85	1,563.188	
1,800.0	1,797.5	1,851.2	1,850.1	4.0	1.0	-130.46	84.1	-7,548.5	7,577.8	7,572.9	4.92	1,539.637	
1,870.1	1,866.3	1,900.0	1,898.9	4.2	1.0	-130.40	83.0	-7,548.0	7,585.6	7,580.5	5.12	1,480.411	
1,899.9	1,895.6	1,921.4	1,920.3	4.3	1.0	-130.37	82.5	-7,547.8	7,589.4	7,584.1	5.21	1,456.617	
1,968.5	1,962.6	1,972.9	1,971.8	4.5	1.1	-130.44	81.5	-7,547.5	7,598.2	7,592.8	5.42	1,402.256	
2,000.0	1,993.4	2,000.0	1,998.9	4.6	1.1	-130.48	80.9	-7,547.3	7,602.4	7,596.9	5.52	1,378.460	
2,066.9	2,058.9	2,063.5	2,062.4	4.8	1.1	-130.56	79.8	-7,547.0	7,611.2	7,605.5	5.73	1,328.376	
2,100.0	2,091.3	2,097.2	2,096.1	4.9	1.1	-130.61	79.2	-7,546.8	7,615.6	7,609.7	5.84	1,304.977	
2,165.3	2,155.2	2,149.9	2,148.8	5.2	1.1	-130.68	78.2	-7,546.6	7,624.2	7,618.2	6.05	1,260.587	
2,200.0	2,189.1	2,177.5	2,176.4	5.3	1.1	-130.71	77.8	-7,546.5	7,628.9	7,622.7	6.16	1,238.063	
2,263.8	2,251.5	2,233.2	2,232.1	5.5	1.2	-130.78	76.9	-7,546.4	7,637.5	7,631.1	6.38	1,197.805	
2,300.0	2,286.9	2,267.1	2,266.0	5.7	1.2	-130.83	76.4	-7,546.3	7,642.4	7,635.9	6.50	1,176.008	
2,362.2	2,347.7	2,322.1	2,320.9	5.9	1.2	-130.90	75.7	-7,546.2	7,650.9	7,644.1	6.71	1,139.929	
2,400.0	2,384.7	2,353.0	2,351.9	6.0	1.2	-130.94	75.3	-7,546.2	7,656.0	7,649.2	6.84	1,119.245	
2,460.6	2,444.0	2,403.2	2,402.1	6.3	1.2	-131.00	74.7	-7,546.2	7,664.4	7,657.4	7.05	1,087.100	
2,500.0	2,482.5	2,443.0	2,441.8	6.4	1.2	-131.05	74.3	-7,546.2	7,669.9	7,662.7	7.19	1,067.110	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,540.3	2,502.5	2,501.4	6.7	1.2	-131.13	73.8	-7,546.3	7,678.1	7,670.7	7.40	1,038.117	
2,600.0	2,580.3	2,542.2	2,541.1	6.8	1.2	-131.18	73.4	-7,546.3	7,683.8	7,676.3	7.54	1,019.030	
2,657.5	2,636.5	2,598.0	2,596.8	7.1	1.3	-131.25	72.7	-7,546.3	7,691.8	7,684.1	7.74	993.134	
2,700.0	2,678.1	2,641.1	2,640.0	7.2	1.3	-131.30	72.1	-7,546.3	7,697.7	7,689.8	7.90	974.803	
2,755.9	2,732.8	2,698.0	2,696.8	7.5	1.3	-131.37	71.4	-7,546.3	7,705.5	7,697.4	8.10	951.514	
2,800.0	2,776.0	2,740.0	2,738.8	7.7	1.3	-131.43	70.8	-7,546.3	7,711.7	7,703.4	8.26	934.006	
2,854.3	2,829.1	2,791.5	2,790.4	7.9	1.3	-131.49	70.1	-7,546.3	7,719.3	7,710.8	8.45	913.167	
2,900.0	2,873.8	2,833.1	2,831.9	8.1	1.3	-131.55	69.5	-7,546.4	7,725.7	7,717.0	8.62	896.438	
2,952.7	2,925.4	2,880.5	2,879.4	8.3	1.4	-131.61	68.8	-7,546.4	7,733.1	7,724.3	8.81	877.775	
3,000.0	2,971.6	2,929.5	2,928.3	8.5	1.4	-131.67	68.1	-7,546.5	7,739.8	7,730.8	8.98	861.667	
3,051.2	3,021.6	2,988.5	2,987.3	8.7	1.4	-131.74	67.1	-7,546.5	7,747.0	7,737.8	9.17	844.730	
3,100.0	3,069.4	3,044.2	3,043.0	8.9	1.4	-131.82	66.3	-7,546.4	7,753.8	7,744.4	9.35	829.192	
3,149.6	3,117.9	3,100.0	3,098.8	9.1	1.4	-131.89	65.5	-7,546.3	7,760.7	7,751.1	9.53	813.935	
3,200.0	3,167.2	3,142.1	3,140.9	9.3	1.4	-131.94	65.0	-7,546.2	7,767.7	7,757.9	9.72	799.184	
3,248.0	3,214.2	3,181.8	3,180.5	9.5	1.4	-131.99	64.6	-7,546.2	7,774.4	7,764.5	9.90	785.586	
3,300.0	3,265.0	3,235.9	3,234.7	9.8	1.5	-132.05	64.3	-7,546.2	7,781.7	7,771.6	10.08	771.719	
3,346.4	3,310.5	3,291.8	3,290.5	10.0	1.5	-132.11	64.4	-7,546.1	7,788.2	7,777.9	10.25	759.884	
3,400.0	3,362.9	3,373.5	3,372.3	10.2	1.5	-132.20	65.3	-7,545.8	7,795.6	7,785.1	10.45	745.823	
3,444.9	3,406.7	3,434.4	3,433.2	10.4	1.5	-132.26	66.2	-7,545.4	7,801.6	7,791.0	10.62	734.390	
3,473.0	3,434.2	3,468.8	3,467.6	10.5	1.5	-132.30	66.8	-7,545.2	7,805.3	7,794.6	10.73	727.446	
3,500.0	3,460.7	3,500.0	3,498.8	10.6	1.5	-132.38	67.4	-7,544.9	7,808.8	7,798.0	10.82	721.914	
3,543.3	3,503.2	3,533.8	3,532.6	10.7	1.5	-132.49	68.2	-7,544.6	7,814.1	7,803.2	10.93	714.640	
3,600.0	3,559.0	3,576.6	3,575.4	10.9	1.5	-132.62	69.1	-7,544.3	7,820.4	7,809.3	11.09	705.311	
3,641.7	3,600.2	3,617.3	3,616.0	11.0	1.5	-132.71	70.0	-7,544.1	7,824.6	7,813.4	11.19	699.045	
3,700.0	3,657.9	3,700.0	3,698.7	11.2	1.5	-132.83	71.9	-7,543.5	7,829.7	7,818.3	11.35	690.113	
3,740.1	3,697.8	3,732.0	3,730.7	11.3	1.5	-132.89	72.6	-7,543.2	7,832.7	7,821.2	11.44	684.883	
3,800.0	3,757.3	3,773.4	3,772.1	11.4	1.5	-132.96	73.5	-7,542.9	7,836.5	7,825.0	11.57	677.235	
3,838.6	3,795.7	3,800.2	3,798.9	11.5	1.5	-133.00	74.0	-7,542.8	7,838.6	7,827.0	11.65	672.896	
3,900.0	3,857.0	3,868.0	3,866.6	11.7	1.5	-133.06	75.3	-7,542.5	7,841.3	7,829.5	11.78	665.753	
3,937.0	3,893.9	3,900.0	3,898.7	11.7	1.5	-133.08	75.9	-7,542.3	7,842.4	7,830.6	11.85	662.068	
4,000.0	3,956.9	3,947.7	3,946.3	11.8	1.5	-133.10	76.7	-7,542.1	7,843.7	7,831.8	11.96	655.930	
4,035.4	3,992.3	3,971.5	3,970.1	11.9	1.5	-133.11	77.0	-7,542.1	7,844.1	7,832.1	12.01	652.915	
4,072.9	4,029.8	4,000.0	3,998.6	11.9	1.5	-91.92	77.4	-7,542.0	7,844.3	7,832.3	11.98	654.540	
4,076.8	4,033.6	4,000.0	3,998.6	12.0	1.5	-91.92	77.4	-7,542.0	7,844.3	7,832.3	11.99	654.196	
4,100.0	4,056.9	4,000.0	3,998.6	12.0	1.5	-91.92	77.4	-7,542.0	7,844.3	7,832.3	12.03	652.129	
4,133.8	4,090.7	4,000.0	3,998.6	12.0	1.5	-91.92	77.4	-7,542.0	7,844.5	7,832.4	12.09	648.831	
4,200.0	4,156.9	4,056.3	4,054.9	12.1	1.5	-91.92	77.9	-7,542.3	7,844.8	7,832.6	12.21	642.421	
4,232.3	4,189.2	4,071.2	4,069.8	12.2	1.5	-91.92	78.0	-7,542.5	7,845.1	7,832.8	12.27	639.338	
4,300.0	4,256.9	4,100.0	4,098.6	12.3	1.5	-91.92	78.1	-7,542.8	7,846.0	7,833.6	12.40	632.982	
4,330.7	4,287.6	4,100.0	4,098.6	12.4	1.5	-91.92	78.1	-7,542.8	7,846.5	7,834.1	12.45	630.145	
4,400.0	4,356.9	4,155.4	4,154.1	12.5	1.5	-91.91	78.2	-7,543.8	7,847.8	7,835.2	12.59	623.458	
4,429.1	4,386.0	4,170.8	4,169.4	12.5	1.5	-91.91	78.3	-7,544.2	7,848.5	7,835.8	12.64	620.732	
4,500.0	4,456.9	4,200.0	4,198.6	12.6	1.5	-91.91	78.3	-7,544.9	7,850.3	7,837.5	12.78	614.270	
4,527.5	4,484.4	4,200.0	4,198.6	12.7	1.5	-91.91	78.3	-7,544.9	7,851.1	7,838.3	12.83	611.863	
4,600.0	4,556.9	4,252.2	4,250.8	12.8	1.5	-91.91	78.2	-7,546.5	7,853.4	7,840.4	12.98	605.234	
4,626.0	4,582.9	4,263.9	4,262.5	12.9	1.5	-91.91	78.1	-7,546.9	7,854.3	7,841.3	13.03	602.938	
4,700.0	4,656.9	4,300.0	4,298.6	13.0	1.5	-91.92	77.9	-7,548.3	7,857.2	7,844.0	13.17	596.490	
4,724.4	4,681.3	4,300.0	4,298.6	13.0	1.5	-91.92	77.9	-7,548.3	7,858.2	7,845.0	13.22	594.477	
4,800.0	4,756.9	4,362.2	4,360.7	13.1	1.5	-91.92	77.4	-7,551.0	7,861.5	7,848.2	13.37	587.848	
4,822.8	4,779.7	4,377.2	4,375.7	13.2	1.5	-91.92	77.3	-7,551.7	7,862.6	7,849.2	13.42	585.898	
4,900.0	4,856.9	4,400.0	4,398.5	13.3	1.5	-91.92	77.1	-7,552.8	7,866.4	7,852.9	13.57	579.634	
4,921.2	4,878.1	4,431.9	4,430.3	13.4	1.5	-91.92	76.8	-7,554.4	7,867.5	7,853.8	13.62	577.718	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,956.9	4,471.1	4,469.4	13.5	1.5	-91.93	76.3	-7,556.5	7,871.8	7,858.0	13.78	571.372		
5,019.7	4,976.6	4,500.0	4,498.3	13.5	1.5	-91.93	75.8	-7,558.2	7,873.0	7,859.2	13.82	569.660		
5,100.0	5,056.9	4,539.2	4,537.4	13.7	1.5	-91.93	75.1	-7,560.6	7,877.8	7,863.8	13.98	563.363		
5,118.1	5,075.0	4,556.1	4,554.3	13.7	1.5	-91.94	74.8	-7,561.7	7,878.9	7,864.9	14.02	561.895		
5,200.0	5,156.9	4,781.3	4,779.2	13.8	1.5	-91.96	71.4	-7,573.3	7,883.1	7,868.9	14.22	554.243		
5,216.5	5,173.4	4,802.5	4,800.3	13.9	1.5	-91.96	71.2	-7,574.2	7,883.8	7,869.6	14.26	552.895		
5,300.0	5,256.9	4,900.1	4,897.8	14.0	1.5	-91.96	70.4	-7,578.3	7,887.4	7,872.9	14.44	546.269		
5,314.9	5,271.8	4,920.3	4,918.1	14.1	1.6	-91.96	70.3	-7,579.1	7,888.0	7,873.5	14.47	545.076		
5,400.0	5,356.9	5,063.2	5,060.8	14.2	1.6	-91.97	69.3	-7,584.4	7,891.2	7,876.5	14.66	538.218		
5,413.4	5,370.3	5,095.2	5,092.8	14.2	1.6	-91.97	69.1	-7,585.4	7,891.6	7,876.9	14.69	537.092		
5,500.0	5,456.9	5,215.1	5,212.7	14.4	1.6	-91.97	68.7	-7,588.8	7,894.1	7,879.2	14.88	530.437		
5,511.8	5,468.7	5,228.1	5,225.7	14.4	1.6	-91.97	68.7	-7,589.2	7,894.4	7,879.5	14.91	529.560		
5,600.0	5,556.9	5,348.0	5,345.5	14.6	1.6	-91.97	68.7	-7,592.2	7,896.6	7,881.5	15.10	523.056		
5,610.2	5,567.1	5,369.6	5,367.1	14.6	1.6	-91.97	68.8	-7,592.6	7,896.8	7,881.7	15.12	522.297		
5,700.0	5,656.9	5,501.9	5,499.4	14.7	1.6	-91.96	70.6	-7,595.1	7,898.4	7,883.1	15.31	515.988		
5,708.6	5,665.5	5,511.5	5,508.9	14.8	1.6	-91.96	70.8	-7,595.2	7,898.6	7,883.2	15.33	515.398		
5,800.0	5,756.9	5,612.3	5,609.7	14.9	1.6	-91.94	72.6	-7,596.8	7,899.9	7,884.4	15.51	509.247		
5,807.1	5,764.0	5,620.1	5,617.6	14.9	1.6	-91.94	72.7	-7,596.9	7,900.0	7,884.5	15.53	508.775		
5,900.0	5,856.9	5,721.2	5,718.6	15.1	1.6	-91.93	74.5	-7,598.3	7,901.3	7,885.5	15.72	502.651		
5,905.5	5,862.4	5,726.8	5,724.2	15.1	1.6	-91.93	74.6	-7,598.4	7,901.3	7,885.6	15.73	502.293		
5,971.9	5,928.8	5,794.3	5,791.7	15.3	1.6	-91.92	75.8	-7,599.3	7,902.2	7,886.3	15.87	497.999		
6,000.0	5,956.9	5,820.0	5,817.4	15.3	1.6	-1.92	76.3	-7,599.7	7,902.0	7,886.2	15.83	499.167		
6,003.9	5,960.8	5,823.5	5,820.9	15.3	1.6	-1.92	76.3	-7,599.7	7,901.9	7,886.1	15.84	499.006		
6,050.0	6,006.7	5,864.4	5,861.8	15.4	1.6	-1.92	77.0	-7,600.3	7,899.0	7,883.1	15.91	496.521		
6,100.0	6,056.2	5,900.0	5,897.4	15.4	1.6	-1.93	77.6	-7,600.8	7,892.5	7,876.5	16.01	493.018		
6,102.3	6,058.5	5,900.0	5,897.4	15.4	1.6	-1.93	77.6	-7,600.8	7,892.1	7,876.1	16.01	492.855		
6,150.0	6,105.1	5,935.8	5,933.2	15.4	1.6	-1.96	78.1	-7,601.4	7,882.7	7,866.6	16.11	489.252		
6,200.0	6,153.0	5,965.3	5,962.7	15.5	1.6	-1.99	78.5	-7,602.0	7,869.6	7,853.4	16.20	485.827		
6,200.8	6,153.8	5,965.8	5,963.2	15.5	1.6	-2.00	78.5	-7,602.0	7,869.4	7,853.2	16.20	485.779		
6,250.0	6,199.9	6,000.0	5,997.3	15.5	1.6	-2.04	78.9	-7,602.7	7,853.3	7,837.1	16.26	483.000		
6,299.2	6,244.8	6,071.1	6,068.4	15.5	1.6	-2.10	79.9	-7,604.2	7,834.1	7,817.8	16.31	480.336		
6,300.0	6,245.5	6,072.5	6,069.8	15.5	1.6	-2.11	79.9	-7,604.2	7,833.8	7,817.4	16.31	480.293		
6,350.0	6,289.6	6,130.8	6,128.1	15.5	1.7	-2.18	80.9	-7,605.2	7,810.8	7,794.5	16.32	478.594		
6,397.6	6,329.9	6,171.9	6,169.2	15.4	1.7	-2.27	81.6	-7,605.9	7,786.2	7,769.9	16.29	478.117		
6,400.0	6,331.8	6,173.9	6,171.2	15.4	1.7	-2.28	81.6	-7,605.9	7,784.9	7,768.6	16.28	478.117		
6,450.0	6,372.2	6,212.1	6,209.4	15.4	1.7	-2.40	82.2	-7,606.6	7,756.0	7,739.8	16.20	478.730		
6,496.0	6,407.4	6,240.9	6,238.2	15.4	1.7	-2.53	82.6	-7,607.1	7,727.0	7,710.9	16.09	480.301		
6,500.0	6,410.3	6,243.4	6,240.6	15.4	1.7	-2.54	82.6	-7,607.1	7,724.4	7,708.3	16.08	480.477		
6,550.0	6,446.1	6,272.8	6,270.1	15.4	1.7	-2.72	83.0	-7,607.6	7,690.1	7,674.2	15.92	483.131		
6,594.5	6,475.9	6,300.0	6,297.3	15.4	1.7	-2.91	83.4	-7,608.2	7,657.7	7,641.9	15.76	486.039		
6,600.0	6,479.4	6,300.5	6,297.8	15.4	1.7	-2.94	83.4	-7,608.2	7,653.5	7,637.8	15.73	486.546		
6,650.0	6,510.0	6,341.9	6,339.1	15.5	1.7	-3.22	83.9	-7,609.0	7,614.6	7,599.0	15.54	489.863		
6,692.9	6,534.0	6,374.3	6,371.6	15.7	1.7	-3.52	84.3	-7,609.5	7,579.5	7,564.1	15.38	492.892		
6,700.0	6,537.8	6,379.4	6,376.6	15.7	1.7	-3.58	84.4	-7,609.6	7,573.5	7,558.2	15.35	493.425		
6,750.0	6,562.6	6,400.0	6,397.2	16.2	1.7	-4.04	84.6	-7,610.0	7,530.6	7,515.4	15.14	497.450		
6,791.3	6,580.8	6,421.6	6,418.8	16.6	1.7	-4.54	84.9	-7,610.3	7,493.8	7,478.8	14.99	500.031		
6,800.0	6,584.3	6,424.3	6,421.6	16.7	1.7	-4.66	85.0	-7,610.4	7,485.9	7,471.0	14.96	500.496		
6,850.0	6,602.9	6,438.9	6,436.1	17.3	1.7	-5.53	85.2	-7,610.6	7,439.9	7,425.0	14.81	502.515		
6,889.7	6,615.2	6,448.8	6,446.0	17.9	1.7	-6.50	85.3	-7,610.8	7,402.3	7,387.6	14.73	502.451		
6,900.0	6,618.1	6,451.1	6,448.3	18.0	1.7	-6.81	85.3	-7,610.9	7,392.6	7,377.8	14.72	502.153		
6,950.0	6,630.0	6,460.7	6,458.0	18.8	1.7	-8.89	85.5	-7,611.1	7,344.3	7,329.5	14.76	497.601		
6,988.2	6,636.8	6,466.4	6,463.6	19.5	1.7	-11.60	85.6	-7,611.2	7,306.8	7,291.9	14.96	488.471		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,638.5	6,467.9	6,465.1	19.7	1.7	-12.81	85.6	-7,611.2	7,295.2	7,280.1	15.08	483.851	
7,050.0	6,643.5	6,472.4	6,469.6	20.6	1.7	-22.57	85.7	-7,611.3	7,245.6	7,229.1	16.48	439.788	
7,086.6	6,644.9	6,474.1	6,471.3	21.3	1.7	-46.40	85.7	-7,611.3	7,209.1	7,188.5	20.56	350.647	
7,097.8	6,645.0	6,474.3	6,471.5	21.5	1.7	-63.05	85.7	-7,611.3	7,197.9	7,175.4	22.46	320.542	
7,100.0	6,645.0	6,474.3	6,471.6	21.6	1.7	-63.05	85.7	-7,611.3	7,195.7	7,173.2	22.49	319.901	
7,185.0	6,644.9	6,475.5	6,472.8	23.3	1.7	-63.27	85.7	-7,611.3	7,110.7	7,086.7	24.06	295.563	
7,200.0	6,644.9	6,475.8	6,473.0	23.6	1.7	-63.31	85.7	-7,611.4	7,095.8	7,071.4	24.33	291.595	
7,283.4	6,644.8	6,476.9	6,474.2	25.4	1.7	-63.52	85.8	-7,611.4	7,012.4	6,986.4	25.99	269.816	
7,300.0	6,644.7	6,477.2	6,474.4	25.8	1.7	-63.56	85.8	-7,611.4	6,995.8	6,969.5	26.32	265.817	
7,381.9	6,644.6	6,478.4	6,475.6	27.7	1.7	-63.77	85.8	-7,611.4	6,914.0	6,886.0	28.03	246.632	
7,400.0	6,644.6	6,478.6	6,475.8	28.1	1.7	-63.82	85.8	-7,611.4	6,895.9	6,867.5	28.41	242.693	
7,480.3	6,644.5	6,479.8	6,477.0	30.0	1.7	-64.03	85.8	-7,611.4	6,815.7	6,785.5	30.17	225.926	
7,500.0	6,644.5	6,480.1	6,477.3	30.5	1.7	-64.08	85.8	-7,611.4	6,796.0	6,765.4	30.60	222.100	
7,578.7	6,644.4	6,481.2	6,478.4	32.4	1.7	-64.29	85.8	-7,611.5	6,717.4	6,685.0	32.37	207.490	
7,600.0	6,644.4	6,481.5	6,478.7	32.9	1.7	-64.34	85.8	-7,611.5	6,696.1	6,663.2	32.86	203.807	
7,677.1	6,644.3	6,482.7	6,479.9	34.8	1.7	-64.55	85.9	-7,611.5	6,619.0	6,584.4	34.64	191.078	
7,700.0	6,644.2	6,483.0	6,480.2	35.4	1.7	-64.61	85.9	-7,611.5	6,596.2	6,561.0	35.17	187.551	
7,775.6	6,644.1	6,484.1	6,481.3	37.3	1.7	-64.81	85.9	-7,611.5	6,520.7	6,483.7	36.96	176.444	
7,800.0	6,644.1	6,484.5	6,481.7	38.0	1.7	-64.88	85.9	-7,611.5	6,496.3	6,458.8	37.53	173.075	
7,874.0	6,644.0	6,485.6	6,482.8	39.9	1.7	-65.08	85.9	-7,611.5	6,422.4	6,383.0	39.31	163.360	
7,900.0	6,644.0	6,486.0	6,483.2	40.5	1.7	-65.15	85.9	-7,611.6	6,396.4	6,356.4	39.94	160.148	
7,972.4	6,643.9	6,487.0	6,484.3	42.4	1.7	-65.35	85.9	-7,611.6	6,324.0	6,282.3	41.71	151.625	
8,000.0	6,643.9	6,487.5	6,484.7	43.1	1.7	-65.43	85.9	-7,611.6	6,296.5	6,254.1	42.38	148.563	
8,070.8	6,643.8	6,488.5	6,485.7	45.0	1.7	-65.63	86.0	-7,611.6	6,225.7	6,181.6	44.13	141.062	
8,100.0	6,643.7	6,489.0	6,486.2	45.8	1.7	-65.71	86.0	-7,611.6	6,196.6	6,151.7	44.86	138.143	
8,169.3	6,643.7	6,500.0	6,497.2	47.6	1.7	-67.79	86.2	-7,611.8	6,127.4	6,080.4	47.01	130.343	
8,200.0	6,643.6	6,500.0	6,497.2	48.4	1.7	-67.79	86.2	-7,611.8	6,096.7	6,048.9	47.77	127.630	
8,267.7	6,643.5	6,500.0	6,497.2	50.2	1.7	-67.79	86.2	-7,611.8	6,029.1	5,979.6	49.45	121.920	
8,300.0	6,643.5	6,500.0	6,497.2	51.1	1.7	-67.79	86.2	-7,611.8	5,996.8	5,946.5	50.25	119.330	
8,366.1	6,643.4	6,500.0	6,497.2	52.9	1.7	-67.79	86.2	-7,611.8	5,930.7	5,878.8	51.91	114.259	
8,400.0	6,643.4	6,500.0	6,497.2	53.8	1.7	-67.79	86.2	-7,611.8	5,896.9	5,844.1	52.75	111.785	
8,464.5	6,643.3	6,500.0	6,497.2	55.5	1.7	-67.79	86.2	-7,611.8	5,832.4	5,778.0	54.37	107.268	
8,500.0	6,643.2	6,500.0	6,497.2	56.5	1.7	-67.79	86.2	-7,611.8	5,797.0	5,741.7	55.26	104.900	
8,563.0	6,643.2	6,500.0	6,497.2	58.2	1.7	-67.79	86.2	-7,611.8	5,734.1	5,677.3	56.85	100.865	
8,600.0	6,643.1	6,500.0	6,497.2	59.2	1.7	-67.79	86.2	-7,611.8	5,697.1	5,639.3	57.78	98.597	
8,661.4	6,643.0	6,500.0	6,497.2	60.8	1.7	-67.79	86.2	-7,611.8	5,635.8	5,576.5	59.33	94.984	
8,700.0	6,643.0	6,500.0	6,497.2	61.9	1.7	-67.79	86.2	-7,611.8	5,597.2	5,536.9	60.31	92.807	
8,759.8	6,642.9	6,500.0	6,497.2	63.5	1.7	-67.79	86.2	-7,611.8	5,537.5	5,475.7	61.83	89.564	
8,800.0	6,642.9	6,500.0	6,497.2	64.6	1.7	-67.79	86.2	-7,611.8	5,497.4	5,434.5	62.85	87.473	
8,858.2	6,642.8	6,501.5	6,498.7	66.2	1.7	-68.08	86.2	-7,611.9	5,439.2	5,374.8	64.42	84.431	
8,900.0	6,642.7	6,502.8	6,500.0	67.3	1.7	-68.33	86.2	-7,611.9	5,397.5	5,331.9	65.57	82.322	
8,956.7	6,642.7	6,504.5	6,501.7	68.9	1.7	-68.66	86.2	-7,611.9	5,340.9	5,273.8	67.12	79.567	
9,000.0	6,642.6	6,505.8	6,503.0	70.1	1.7	-68.91	86.3	-7,612.0	5,297.6	5,229.3	68.32	77.543	
9,055.1	6,642.5	6,507.4	6,504.6	71.6	1.7	-69.23	86.3	-7,612.0	5,242.6	5,172.8	69.84	75.063	
9,100.0	6,642.5	6,508.7	6,505.9	72.8	1.7	-69.49	86.3	-7,612.0	5,197.8	5,126.7	71.09	73.118	
9,153.5	6,642.4	6,510.3	6,507.5	74.3	1.7	-69.79	86.3	-7,612.1	5,144.3	5,071.7	72.58	70.883	
9,200.0	6,642.4	6,511.6	6,508.8	75.6	1.7	-70.05	86.4	-7,612.1	5,097.9	5,024.0	73.87	69.012	
9,251.9	6,642.3	6,513.1	6,510.3	77.0	1.7	-70.35	86.4	-7,612.1	5,046.0	4,970.7	75.32	66.994	
9,300.0	6,642.2	6,514.4	6,511.6	78.3	1.7	-70.61	86.4	-7,612.1	4,998.0	4,921.4	76.66	65.194	
9,350.4	6,642.2	6,515.8	6,513.0	79.7	1.7	-70.89	86.4	-7,612.2	4,947.7	4,869.7	78.08	63.369	
9,400.0	6,642.1	6,517.2	6,514.4	81.1	1.7	-71.17	86.4	-7,612.2	4,898.2	4,818.7	79.47	61.634	
9,448.8	6,642.0	6,518.5	6,515.7	82.4	1.7	-71.43	86.5	-7,612.2	4,849.5	4,768.6	80.85	59.984	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,519.9	6,517.1	83.8	1.7	-71.71	86.5	-7,612.3	4,798.3	4,716.0	82.29	58.311	
9,547.2	6,641.9	6,521.1	6,518.3	85.1	1.7	-71.97	86.5	-7,612.3	4,751.2	4,667.6	83.62	56.816	
9,600.0	6,641.9	6,522.5	6,519.7	86.6	1.7	-72.25	86.5	-7,612.3	4,698.5	4,613.4	85.12	55.201	
9,645.6	6,641.8	6,523.7	6,520.9	87.9	1.7	-72.49	86.6	-7,612.3	4,652.9	4,566.5	86.41	53.847	
9,700.0	6,641.7	6,525.1	6,522.3	89.4	1.7	-72.78	86.6	-7,612.4	4,598.7	4,510.7	87.95	52.286	
9,744.1	6,641.7	6,526.3	6,523.5	90.6	1.7	-73.01	86.6	-7,612.4	4,554.7	4,465.5	89.21	51.058	
9,800.0	6,641.6	6,527.7	6,524.9	92.1	1.7	-73.30	86.6	-7,612.4	4,498.8	4,408.0	90.80	49.549	
9,842.5	6,641.6	6,528.7	6,525.9	93.3	1.7	-73.52	86.6	-7,612.4	4,456.4	4,364.4	92.01	48.435	
9,900.0	6,641.5	6,530.2	6,527.4	94.9	1.7	-73.82	86.7	-7,612.4	4,399.0	4,305.4	93.65	46.974	
9,940.9	6,641.4	6,531.2	6,528.4	96.0	1.7	-74.03	86.7	-7,612.5	4,358.2	4,263.3	94.82	45.965	
10,000.0	6,641.4	6,532.6	6,529.8	97.7	1.7	-74.33	86.7	-7,612.5	4,299.2	4,202.7	96.50	44.549	
10,039.3	6,641.3	6,533.6	6,530.8	98.8	1.7	-74.53	86.7	-7,612.5	4,259.9	4,162.3	97.63	43.633	
10,100.0	6,641.2	6,535.0	6,532.2	100.4	1.7	-74.83	86.7	-7,612.5	4,199.4	4,100.0	99.37	42.262	
10,137.8	6,641.2	6,535.9	6,533.1	101.5	1.7	-75.02	86.7	-7,612.6	4,161.7	4,061.2	100.45	41.431	
10,200.0	6,641.1	6,537.4	6,534.6	103.2	1.7	-75.33	86.8	-7,612.6	4,099.6	3,997.3	102.23	40.100	
10,236.2	6,641.1	6,538.2	6,535.4	104.2	1.7	-75.50	86.8	-7,612.6	4,063.5	3,960.2	103.27	39.347	
10,300.0	6,641.0	6,539.7	6,536.9	106.0	1.7	-75.81	86.8	-7,612.6	3,999.8	3,894.7	105.11	38.055	
10,334.6	6,640.9	6,540.5	6,537.7	107.0	1.7	-75.98	86.8	-7,612.6	3,965.2	3,859.1	106.10	37.372	
10,400.0	6,640.9	6,542.0	6,539.2	108.8	1.7	-76.30	86.8	-7,612.7	3,900.0	3,792.0	107.98	36.118	
10,433.0	6,640.8	6,542.7	6,539.9	109.7	1.7	-76.45	86.8	-7,612.7	3,867.0	3,758.1	108.93	35.500	
10,500.0	6,640.7	6,544.2	6,541.4	111.6	1.7	-76.77	86.9	-7,612.7	3,800.2	3,689.4	110.86	34.280	
10,531.5	6,640.7	6,544.9	6,542.1	112.4	1.7	-76.92	86.9	-7,612.7	3,768.8	3,657.1	111.77	33.721	
10,600.0	6,640.6	6,546.4	6,543.6	114.3	1.7	-77.24	86.9	-7,612.7	3,700.5	3,586.7	113.74	32.534	
10,629.9	6,640.6	6,547.0	6,544.2	115.2	1.7	-77.38	86.9	-7,612.8	3,670.7	3,556.1	114.60	32.030	
10,700.0	6,640.5	6,548.5	6,545.7	117.1	1.7	-77.70	86.9	-7,612.8	3,600.7	3,484.1	116.62	30.875	
10,728.3	6,640.4	6,549.1	6,546.3	117.9	1.7	-77.83	86.9	-7,612.8	3,572.5	3,455.0	117.44	30.420	
10,800.0	6,640.4	6,550.6	6,547.8	119.9	1.7	-78.15	87.0	-7,612.8	3,501.0	3,381.5	119.51	29.295	
10,826.7	6,640.3	6,551.2	6,548.4	120.7	1.7	-78.28	87.0	-7,612.8	3,474.3	3,354.0	120.28	28.885	
10,900.0	6,640.2	6,552.7	6,549.9	122.7	1.7	-78.60	87.0	-7,612.9	3,401.3	3,278.9	122.39	27.790	
10,925.2	6,640.2	6,553.2	6,550.4	123.4	1.7	-78.72	87.0	-7,612.9	3,376.2	3,253.1	123.12	27.422	
11,000.0	6,640.1	6,554.8	6,551.9	125.5	1.7	-79.05	87.0	-7,612.9	3,301.6	3,176.3	125.28	26.353	
11,023.6	6,640.1	6,555.2	6,552.4	126.1	1.7	-79.15	87.0	-7,612.9	3,278.1	3,152.1	125.96	26.024	
11,100.0	6,640.0	6,556.8	6,553.9	128.3	1.7	-79.48	87.0	-7,612.9	3,201.9	3,073.7	128.17	24.982	
11,122.0	6,639.9	6,557.2	6,554.4	128.9	1.7	-79.58	87.1	-7,612.9	3,179.9	3,051.1	128.80	24.688	
11,200.0	6,639.8	6,558.7	6,555.9	131.1	1.7	-79.91	87.1	-7,613.0	3,102.2	2,971.2	131.06	23.671	
11,220.4	6,639.8	6,559.1	6,556.3	131.6	1.7	-80.00	87.1	-7,613.0	3,081.8	2,950.2	131.65	23.410	
11,300.0	6,639.7	6,560.7	6,557.8	133.9	1.7	-80.33	87.1	-7,613.0	3,002.6	2,868.6	133.94	22.417	
11,318.9	6,639.7	6,561.0	6,558.2	134.4	1.7	-80.41	87.1	-7,613.0	2,983.8	2,849.3	134.49	22.186	
11,400.0	6,639.6	6,562.6	6,559.7	136.7	1.7	-80.75	87.1	-7,613.0	2,903.0	2,766.1	136.83	21.216	
11,417.3	6,639.6	6,562.9	6,560.1	137.1	1.7	-80.82	87.1	-7,613.0	2,885.7	2,748.4	137.33	21.013	
11,500.0	6,639.5	6,564.4	6,561.6	139.4	1.7	-81.16	87.1	-7,613.1	2,803.4	2,663.6	139.72	20.065	
11,515.7	6,639.5	6,564.7	6,561.9	139.9	1.7	-81.23	87.2	-7,613.1	2,787.7	2,647.5	140.17	19.888	
11,600.0	6,639.3	6,566.3	6,563.4	142.2	1.7	-81.57	87.2	-7,613.1	2,703.8	2,561.2	142.60	18.961	
11,614.1	6,639.3	6,566.5	6,563.7	142.6	1.7	-81.62	87.2	-7,613.1	2,689.7	2,546.7	143.01	18.808	
11,700.0	6,639.2	6,568.1	6,565.2	145.0	1.7	-81.97	87.2	-7,613.1	2,604.3	2,458.8	145.49	17.901	
11,712.6	6,639.2	6,568.3	6,565.5	145.4	1.7	-82.02	87.2	-7,613.1	2,591.8	2,445.9	145.85	17.770	
11,800.0	6,639.1	6,569.8	6,567.0	147.8	1.7	-82.36	87.2	-7,613.1	2,504.8	2,356.4	148.37	16.882	
11,811.0	6,639.1	6,570.0	6,567.2	148.1	1.7	-82.40	87.2	-7,613.1	2,493.8	2,345.1	148.68	16.773	
11,900.0	6,639.0	6,571.6	6,568.8	150.6	1.7	-82.75	87.2	-7,613.2	2,405.3	2,254.1	151.25	15.903	
11,909.4	6,639.0	6,571.7	6,568.9	150.9	1.7	-82.79	87.2	-7,613.2	2,395.9	2,244.4	151.52	15.813	
12,000.0	6,638.8	6,573.3	6,570.5	153.4	1.7	-83.13	87.3	-7,613.2	2,305.9	2,151.8	154.13	14.961	
12,007.8	6,638.8	6,573.4	6,570.6	153.6	1.7	-83.16	87.3	-7,613.2	2,298.1	2,143.7	154.35	14.889	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,638.7	6,575.0	6,572.2	156.2	1.7	-83.51	87.3	-7,613.2	2,206.5	2,049.5	157.00	14.054		
12,106.3	6,638.7	6,575.1	6,572.3	156.4	1.7	-83.53	87.3	-7,613.2	2,200.3	2,043.1	157.18	13.998		
12,200.0	6,638.6	6,576.7	6,573.8	159.0	1.7	-83.88	87.3	-7,613.3	2,107.2	1,947.4	159.88	13.180		
12,204.7	6,638.6	6,576.7	6,573.9	159.1	1.7	-83.90	87.3	-7,613.3	2,102.6	1,942.6	160.01	13.140		
12,300.0	6,638.5	6,578.3	6,575.5	161.8	1.7	-84.25	87.3	-7,613.3	2,008.0	1,845.3	162.75	12.338		
12,303.1	6,638.5	6,578.4	6,575.5	161.9	1.7	-84.26	87.3	-7,613.3	2,004.9	1,842.1	162.84	12.312		
12,400.0	6,638.3	6,579.9	6,577.1	164.6	1.7	-84.61	87.3	-7,613.3	1,908.8	1,743.2	165.62	11.526		
12,401.5	6,638.3	6,579.9	6,577.1	164.6	1.7	-84.62	87.3	-7,613.3	1,907.3	1,741.7	165.66	11.513		
12,500.0	6,638.2	6,581.5	6,578.7	167.4	1.7	-84.97	87.4	-7,613.3	1,809.8	1,641.3	168.48	10.742		
12,598.4	6,638.1	6,583.0	6,580.2	170.2	1.7	-85.31	87.4	-7,613.4	1,712.4	1,541.1	171.30	9.996		
12,600.0	6,638.1	6,583.1	6,580.2	170.2	1.7	-85.32	87.4	-7,613.4	1,710.8	1,539.5	171.35	9.985		
12,696.8	6,638.0	6,584.6	6,581.7	172.9	1.7	-85.65	87.4	-7,613.4	1,615.1	1,441.0	174.12	9.276		
12,700.0	6,638.0	6,584.6	6,581.8	173.0	1.7	-85.66	87.4	-7,613.4	1,612.0	1,437.8	174.21	9.253		
12,795.2	6,637.8	6,586.1	6,583.2	175.7	1.7	-85.99	87.4	-7,613.4	1,518.0	1,341.1	176.93	8.580		
12,800.0	6,637.8	6,586.1	6,583.3	175.8	1.7	-86.01	87.4	-7,613.4	1,513.3	1,336.3	177.07	8.547		
12,893.7	6,637.7	6,587.5	6,584.7	178.4	1.7	-86.32	87.4	-7,613.4	1,421.1	1,241.3	179.74	7.906		
12,900.0	6,637.7	6,587.6	6,584.8	178.6	1.7	-86.34	87.4	-7,613.4	1,414.8	1,234.9	179.92	7.864		
12,992.1	6,637.6	6,589.0	6,586.2	181.2	1.7	-86.65	87.4	-7,613.4	1,324.3	1,141.8	182.55	7.255		
13,000.0	6,637.6	6,589.1	6,586.3	181.4	1.7	-86.67	87.4	-7,613.4	1,316.6	1,133.8	182.77	7.203		
13,090.5	6,637.5	6,590.4	6,587.6	183.9	1.7	-86.97	87.5	-7,613.5	1,227.9	1,042.5	185.35	6.625		
13,100.0	6,637.5	6,590.5	6,587.7	184.2	1.7	-87.00	87.5	-7,613.5	1,218.6	1,033.0	185.62	6.565		
13,188.9	6,637.4	6,591.8	6,589.0	186.7	1.7	-87.29	87.5	-7,613.5	1,131.7	943.6	188.15	6.015		
13,200.0	6,637.3	6,592.0	6,589.1	187.0	1.7	-87.32	87.5	-7,613.5	1,121.0	932.5	188.46	5.948		
13,287.4	6,637.2	6,593.2	6,590.4	189.4	1.7	-87.60	87.5	-7,613.5	1,036.0	845.1	190.94	5.426		
13,300.0	6,637.2	6,593.4	6,590.6	189.8	1.7	-87.64	87.5	-7,613.5	1,023.8	832.5	191.30	5.352		
13,385.8	6,637.1	6,594.6	6,591.7	192.2	1.7	-87.91	87.5	-7,613.5	940.9	747.2	193.74	4.857		
13,400.0	6,637.1	6,594.8	6,591.9	192.6	1.7	-87.96	87.5	-7,613.5	927.2	733.1	194.14	4.776		
13,484.2	6,637.0	6,595.9	6,593.1	195.0	1.7	-88.22	87.5	-7,613.5	846.5	650.0	196.53	4.307		
13,500.0	6,637.0	6,596.1	6,593.3	195.4	1.7	-88.27	87.5	-7,613.5	831.5	634.5	196.97	4.221		
13,582.6	6,636.9	6,597.2	6,594.4	197.7	1.7	-88.52	87.5	-7,613.6	753.2	553.8	199.31	3.779		
13,600.0	6,636.8	6,597.5	6,594.7	198.2	1.7	-88.57	87.5	-7,613.6	736.8	537.0	199.80	3.688		
13,681.1	6,636.7	6,598.6	6,595.7	200.5	1.7	-88.81	87.6	-7,613.6	661.3	459.2	202.09	3.272		
13,700.0	6,636.7	6,598.8	6,596.0	201.0	1.7	-88.87	87.6	-7,613.6	643.8	441.2	202.63	3.177		
13,779.5	6,636.6	6,599.8	6,597.0	203.2	1.7	-89.11	87.6	-7,613.6	571.6	366.7	204.87	2.790		
13,800.0	6,636.6	6,600.1	6,597.3	203.8	1.7	-89.17	87.6	-7,613.6	553.3	347.8	205.45	2.693		
13,877.9	6,636.5	6,601.2	6,598.4	206.0	1.7	-89.41	87.6	-7,613.6	485.2	277.6	207.65	2.337		
13,900.0	6,636.5	6,601.5	6,598.7	206.6	1.7	-89.48	87.6	-7,613.6	466.5	258.3	208.27	2.240		
13,976.3	6,636.4	6,602.5	6,599.7	208.8	1.7	-89.70	87.6	-7,613.6	404.5	194.1	210.42	1.922		
14,000.0	6,636.3	6,602.8	6,600.0	209.4	1.7	-89.77	87.6	-7,613.6	386.3	175.2	211.08	1.830		
14,074.8	6,636.2	6,603.8	6,600.9	211.5	1.7	-89.99	87.6	-7,613.7	333.3	120.2	213.18	1.564		
14,100.0	6,636.2	6,604.1	6,601.3	212.2	1.7	-90.07	87.6	-7,613.7	317.5	103.6	213.89	1.484	Level 3	
14,173.2	6,636.1	6,605.0	6,602.2	214.3	1.7	-90.27	87.6	-7,613.7	279.3	63.4	215.95	1.293	Level 3	
14,200.0	6,636.1	6,605.3	6,602.5	215.0	1.7	-90.35	87.6	-7,613.7	269.0	52.3	216.70	1.241	Level 2	
14,271.6	6,636.0	6,606.2	6,603.4	217.0	1.7	-90.55	87.6	-7,613.7	253.5	34.8	218.71	1.159	Level 2	
14,292.2	6,636.0	6,606.4	6,603.6	217.6	1.7	-90.60	87.6	-7,613.7	252.7	33.4	219.28	1.152	Level 2, CC	
14,300.0	6,636.0	6,606.5	6,603.7	217.8	1.7	-90.62	87.6	-7,613.7	252.8	33.3	219.50	1.152	Level 2, ES, SF	
14,370.0	6,635.9	6,607.4	6,604.6	219.8	1.7	-90.81	87.6	-7,613.7	264.4	42.9	221.46	1.194	Level 2	
14,400.0	6,635.8	6,607.7	6,604.9	220.6	1.7	-90.89	87.6	-7,613.7	274.7	52.4	222.30	1.236	Level 2	
14,468.5	6,635.7	6,608.5	6,605.7	222.6	1.7	-91.07	87.7	-7,613.7	308.1	83.9	224.21	1.374	Level 3	
14,500.0	6,635.7	6,608.9	6,606.1	223.4	1.7	-91.16	87.7	-7,613.7	327.1	102.0	225.09	1.453	Level 3	
14,566.9	6,635.6	6,609.6	6,606.8	225.3	1.7	-91.33	87.7	-7,613.7	373.2	146.3	226.96	1.644		
14,600.0	6,635.6	6,610.0	6,607.2	226.2	1.7	-91.41	87.7	-7,613.7	398.2	170.3	227.88	1.747		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,665.3	6,635.5	6,610.7	6,607.9	228.1	1.7	-91.57	87.7	-7,613.7	450.6	220.9	229.70	1.962	
14,700.0	6,635.5	6,611.1	6,608.3	229.0	1.7	-91.66	87.7	-7,613.7	479.7	249.0	230.67	2.080	
14,763.7	6,635.4	6,611.8	6,609.0	230.8	1.7	-91.82	87.7	-7,613.8	534.9	302.5	232.44	2.301	
14,800.0	6,635.3	6,612.2	6,609.4	231.8	1.7	-91.90	87.7	-7,613.8	567.1	333.7	233.45	2.429	
14,862.2	6,635.2	6,612.8	6,610.0	233.6	1.7	-92.05	87.7	-7,613.8	623.4	388.2	235.18	2.651	
14,900.0	6,635.2	6,613.2	6,610.4	234.7	1.7	-92.14	87.7	-7,613.8	658.2	421.9	236.23	2.786	
14,960.6	6,635.1	6,613.9	6,611.0	236.4	1.7	-92.28	87.7	-7,613.8	714.5	476.6	237.92	3.003	
14,995.1	6,635.0	6,614.1	6,611.3	237.3	1.7	-92.36	87.7	-7,613.8	746.9	508.0	238.87	3.127	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-90.96	-109.2	-6,520.1	6,521.1				
98.4	98.4	69.0	69.0	0.1	0.0	-90.96	-109.2	-6,520.1	6,521.0	6,520.9	0.10	N/A	
100.0	100.0	70.7	70.7	0.1	0.0	-90.96	-109.2	-6,520.1	6,521.0	6,520.9	0.11	N/A	
167.9	167.9	129.3	129.3	0.3	0.0	-90.96	-109.2	-6,520.0	6,521.0	6,520.7	0.30	N/A	
196.8	196.8	149.8	149.8	0.3	0.1	-90.96	-109.3	-6,520.1	6,521.0	6,520.6	0.39	N/A	
200.0	200.0	152.0	152.0	0.3	0.1	-90.96	-109.3	-6,520.1	6,521.0	6,520.6	0.39	N/A	
295.3	295.3	219.4	219.4	0.5	0.1	-90.96	-109.6	-6,520.3	6,521.4	6,520.7	0.69	9,504.954	
300.0	300.0	222.7	222.7	0.5	0.2	-90.96	-109.6	-6,520.3	6,521.4	6,520.7	0.70	9,309.061	
393.7	393.7	300.0	300.0	0.8	0.2	-90.97	-110.1	-6,521.0	6,522.2	6,521.2	1.00	6,525.337	
400.0	400.0	300.0	300.0	0.8	0.2	-90.97	-110.1	-6,521.0	6,522.3	6,521.2	1.01	6,434.242	
492.1	492.1	400.0	400.0	1.0	0.3	-90.97	-111.0	-6,521.9	6,523.1	6,521.8	1.30	5,004.521	
500.0	500.0	400.0	400.0	1.0	0.3	-90.97	-111.0	-6,521.9	6,523.2	6,521.9	1.32	4,937.526	
590.5	590.5	471.8	471.7	1.2	0.4	-90.98	-111.7	-6,522.6	6,524.1	6,522.5	1.57	4,145.196	
600.0	600.0	478.0	478.0	1.2	0.4	-90.98	-111.8	-6,522.7	6,524.2	6,522.6	1.60	4,079.080	
689.0	689.0	557.5	557.5	1.4	0.4	-90.99	-113.0	-6,523.8	6,525.5	6,523.7	1.85	3,527.520	
700.0	700.0	568.9	568.9	1.4	0.4	-90.99	-113.1	-6,524.0	6,525.7	6,523.8	1.88	3,468.013	
787.4	787.4	655.6	655.6	1.6	0.5	-91.01	-114.5	-6,525.2	6,526.9	6,524.8	2.13	3,067.328	
800.0	800.0	667.8	667.8	1.7	0.5	-91.01	-114.7	-6,525.4	6,527.1	6,525.0	2.16	3,017.691	
885.8	885.8	748.7	748.6	1.9	0.5	-91.02	-115.9	-6,526.6	6,528.4	6,526.0	2.40	2,721.605	
900.0	900.0	761.8	761.7	1.9	0.5	-91.02	-116.0	-6,526.8	6,528.6	6,526.2	2.44	2,678.559	
984.2	984.2	844.4	844.3	2.1	0.6	-91.03	-117.2	-6,528.1	6,530.0	6,527.3	2.67	2,447.256	
1,000.0	1,000.0	860.6	860.5	2.1	0.6	-91.03	-117.4	-6,528.4	6,530.2	6,527.5	2.71	2,408.174	
1,082.7	1,082.7	942.1	941.9	2.3	0.6	-91.04	-118.6	-6,529.6	6,531.5	6,528.6	2.95	2,214.792	
1,100.0	1,100.0	958.4	958.3	2.3	0.7	-91.04	-118.8	-6,529.9	6,531.8	6,528.8	3.00	2,176.919	
1,181.1	1,181.1	1,034.9	1,034.8	2.5	0.7	-91.05	-120.0	-6,531.1	6,533.2	6,529.9	3.24	2,015.626	
1,200.0	1,200.0	1,052.8	1,052.6	2.6	0.7	-91.06	-120.3	-6,531.4	6,533.5	6,530.2	3.30	1,981.424	
1,279.5	1,279.5	1,133.9	1,133.7	2.7	0.8	-91.07	-121.7	-6,532.8	6,534.8	6,531.3	3.53	1,853.259	
1,300.0	1,300.0	1,157.5	1,157.3	2.8	0.8	-91.07	-122.1	-6,533.2	6,535.2	6,531.6	3.58	1,824.528	
1,377.9	1,377.9	1,238.6	1,238.4	3.0	0.8	-132.25	-123.5	-6,534.4	6,537.1	6,533.4	3.76	1,738.674	
1,400.0	1,400.0	1,259.3	1,259.1	3.0	0.8	-132.25	-123.8	-6,534.8	6,537.9	6,534.1	3.82	1,710.734	
1,476.4	1,476.3	1,331.1	1,330.8	3.2	0.9	-132.22	-125.1	-6,535.9	6,541.7	6,537.6	4.03	1,621.501	
1,500.0	1,499.8	1,353.2	1,353.0	3.2	0.9	-132.21	-125.5	-6,536.3	6,543.1	6,539.0	4.10	1,595.900	
1,574.8	1,574.4	1,421.6	1,421.4	3.4	0.9	-132.18	-126.7	-6,537.4	6,548.6	6,544.3	4.30	1,521.501	
1,600.0	1,599.5	1,443.5	1,443.3	3.5	1.0	-132.17	-127.0	-6,537.8	6,550.7	6,546.4	4.37	1,499.664	
1,673.2	1,672.2	1,510.5	1,510.2	3.6	1.0	-132.12	-128.2	-6,539.1	6,557.9	6,553.3	4.56	1,437.677	
1,700.0	1,698.7	1,544.9	1,544.6	3.7	1.0	-132.11	-128.9	-6,539.7	6,560.8	6,556.2	4.63	1,415.672	
1,771.6	1,769.5	1,668.0	1,667.7	3.9	1.0	-132.13	-131.4	-6,541.5	6,569.3	6,564.4	4.84	1,356.174	
1,800.0	1,797.5	1,724.1	1,723.7	4.0	1.1	-132.15	-132.5	-6,541.9	6,572.7	6,567.8	4.93	1,334.334	
1,870.1	1,866.3	1,911.2	1,910.8	4.2	1.1	-132.27	-135.5	-6,541.4	6,581.5	6,576.4	5.14	1,280.794	
1,899.9	1,895.6	1,959.1	1,958.7	4.3	1.1	-132.29	-136.3	-6,540.7	6,585.2	6,580.0	5.22	1,260.978	
1,968.5	1,962.6	2,049.9	2,049.5	4.5	1.1	-132.42	-137.7	-6,539.1	6,593.8	6,588.3	5.42	1,215.760	
2,000.0	1,993.4	2,086.4	2,086.0	4.6	1.1	-132.48	-138.3	-6,538.4	6,597.6	6,592.1	5.52	1,196.126	
2,066.9	2,058.9	2,153.8	2,153.3	4.8	1.2	-132.58	-139.5	-6,537.0	6,605.8	6,600.1	5.74	1,150.580	
2,100.0	2,091.3	2,186.0	2,185.5	4.9	1.2	-132.63	-140.1	-6,536.4	6,609.9	6,604.0	5.85	1,129.104	
2,165.3	2,155.2	2,249.6	2,249.1	5.2	1.2	-132.72	-141.4	-6,535.1	6,617.9	6,611.8	6.08	1,087.764	
2,200.0	2,189.1	2,283.3	2,282.8	5.3	1.3	-132.78	-142.1	-6,534.4	6,622.2	6,616.0	6.21	1,066.872	
2,263.8	2,251.5	2,345.3	2,344.8	5.5	1.3	-132.87	-143.6	-6,533.1	6,630.0	6,623.6	6.44	1,029.910	
2,300.0	2,286.9	2,380.5	2,380.0	5.7	1.3	-132.93	-144.5	-6,532.4	6,634.5	6,628.0	6.57	1,010.040	
2,362.2	2,347.7	2,437.5	2,437.0	5.9	1.3	-133.01	-145.9	-6,531.3	6,642.2	6,635.5	6.78	979.326	
2,400.0	2,384.7	2,471.2	2,470.6	6.0	1.3	-133.07	-146.7	-6,530.6	6,647.0	6,640.1	6.91	962.205	
2,460.6	2,444.0	2,528.0	2,527.4	6.3	1.4	-133.15	-147.9	-6,529.5	6,654.6	6,647.5	7.11	935.499	
2,500.0	2,482.5	2,566.8	2,566.2	6.4	1.4	-133.21	-148.7	-6,528.8	6,659.5	6,652.3	7.25	918.937	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,540.3	2,620.7	2,620.1	6.7	1.4	-133.29	-149.8	-6,527.8	6,667.0	6,659.5	7.45	894.514	
2,600.0	2,580.3	2,654.1	2,653.5	6.8	1.4	-133.34	-150.5	-6,527.2	6,672.2	6,664.6	7.60	878.060	
2,657.5	2,636.5	2,701.0	2,700.3	7.1	1.4	-133.41	-151.4	-6,526.4	6,679.6	6,671.8	7.81	855.750	
2,700.0	2,678.1	2,735.6	2,734.9	7.2	1.4	-133.46	-152.1	-6,525.9	6,685.1	6,677.2	7.96	840.010	
2,755.9	2,732.8	2,781.1	2,780.4	7.5	1.4	-133.53	-152.9	-6,525.2	6,692.5	6,684.3	8.16	820.028	
2,800.0	2,776.0	2,818.2	2,817.5	7.7	1.5	-133.58	-153.6	-6,524.8	6,698.4	6,690.0	8.32	805.196	
2,854.3	2,829.1	2,865.3	2,864.6	7.9	1.5	-133.65	-154.5	-6,524.2	6,705.6	6,697.1	8.51	787.832	
2,900.0	2,873.8	2,900.0	2,899.3	8.1	1.5	-133.70	-155.2	-6,523.8	6,711.8	6,703.1	8.67	773.920	
2,952.7	2,925.4	2,944.2	2,943.5	8.3	1.5	-133.77	-156.1	-6,523.3	6,719.0	6,710.1	8.86	758.317	
3,000.0	2,971.6	2,980.0	2,979.2	8.5	1.5	-133.82	-156.8	-6,523.0	6,725.5	6,716.5	9.03	744.964	
3,051.2	3,021.6	3,000.0	2,999.2	8.7	1.5	-133.85	-157.2	-6,522.9	6,732.7	6,723.5	9.21	731.189	
3,100.0	3,069.4	3,042.4	3,041.7	8.9	1.5	-133.91	-158.0	-6,522.7	6,739.7	6,730.3	9.38	718.210	
3,149.6	3,117.9	3,071.0	3,070.3	9.1	1.5	-133.95	-158.4	-6,522.7	6,746.9	6,737.4	9.56	705.663	
3,200.0	3,167.2	3,100.0	3,099.2	9.3	1.5	-133.99	-158.8	-6,522.8	6,754.5	6,744.7	9.74	693.422	
3,248.0	3,214.2	3,146.3	3,145.5	9.5	1.6	-134.05	-159.3	-6,523.0	6,761.7	6,751.8	9.92	681.439	
3,300.0	3,265.0	3,196.3	3,195.5	9.8	1.6	-134.12	-159.7	-6,523.2	6,769.6	6,759.4	10.12	669.018	
3,346.4	3,310.5	3,240.9	3,240.2	10.0	1.6	-134.18	-160.1	-6,523.4	6,776.6	6,766.3	10.29	658.269	
3,400.0	3,362.9	3,292.5	3,291.7	10.2	1.6	-134.25	-160.4	-6,523.6	6,784.7	6,774.2	10.50	646.292	
3,444.9	3,406.7	3,335.5	3,334.7	10.4	1.6	-134.31	-160.6	-6,523.8	6,791.5	6,780.9	10.67	636.592	
3,473.0	3,434.2	3,362.5	3,361.7	10.5	1.6	-134.34	-160.7	-6,524.0	6,795.8	6,785.0	10.78	630.683	
3,500.0	3,460.7	3,388.4	3,387.6	10.6	1.7	-134.43	-160.8	-6,524.1	6,799.8	6,789.0	10.86	625.909	
3,543.3	3,503.2	3,430.1	3,429.3	10.7	1.7	-134.57	-161.0	-6,524.3	6,805.9	6,795.0	10.99	619.456	
3,600.0	3,559.0	3,484.8	3,484.0	10.9	1.7	-134.73	-161.3	-6,524.6	6,813.3	6,802.1	11.15	611.166	
3,641.7	3,600.2	3,527.1	3,526.3	11.0	1.7	-134.84	-161.4	-6,524.8	6,818.1	6,806.9	11.25	605.827	
3,700.0	3,657.9	3,588.0	3,587.2	11.2	1.7	-134.98	-161.6	-6,525.1	6,824.2	6,812.8	11.40	598.618	
3,740.1	3,697.8	3,625.1	3,624.3	11.3	1.7	-135.06	-161.7	-6,525.3	6,827.9	6,816.5	11.49	594.213	
3,800.0	3,757.3	3,677.5	3,676.7	11.4	1.7	-135.17	-161.8	-6,525.6	6,832.8	6,821.2	11.63	587.728	
3,838.6	3,795.7	3,713.0	3,712.2	11.5	1.7	-135.22	-161.8	-6,525.9	6,835.5	6,823.8	11.70	584.016	
3,900.0	3,857.0	3,775.4	3,774.6	11.7	1.8	-135.30	-161.9	-6,526.3	6,839.0	6,827.2	11.83	578.071	
3,937.0	3,893.9	3,811.4	3,810.7	11.7	1.8	-135.33	-162.0	-6,526.5	6,840.7	6,828.8	11.90	574.935	
4,000.0	3,956.9	3,868.0	3,867.2	11.8	1.8	-135.38	-162.1	-6,527.0	6,842.8	6,830.8	12.01	569.636	
4,035.4	3,992.3	3,900.0	3,899.2	11.9	1.8	-135.39	-162.2	-6,527.2	6,843.5	6,831.5	12.07	566.986	
4,072.9	4,029.8	3,936.9	3,936.1	11.9	1.8	-94.21	-162.3	-6,527.5	6,844.0	6,831.6	12.47	549.005	
4,100.0	4,056.9	3,963.8	3,963.0	12.0	1.8	-94.21	-162.4	-6,527.7	6,844.3	6,831.7	12.51	546.900	
4,133.8	4,090.7	3,997.4	3,996.6	12.0	1.8	-94.21	-162.5	-6,528.0	6,844.6	6,832.0	12.58	544.036	
4,200.0	4,156.9	4,074.7	4,073.9	12.1	1.8	-94.22	-162.8	-6,528.6	6,845.1	6,832.3	12.71	538.356	
4,232.3	4,189.2	4,109.4	4,108.6	12.2	1.8	-94.22	-163.0	-6,528.8	6,845.3	6,832.5	12.78	535.606	
4,300.0	4,256.9	4,168.7	4,167.9	12.3	1.9	-94.22	-163.5	-6,529.2	6,845.8	6,832.8	12.92	529.953	
4,330.7	4,287.6	4,200.0	4,199.2	12.4	1.9	-94.22	-163.7	-6,529.4	6,846.0	6,833.0	12.98	527.370	
4,400.0	4,356.9	4,241.0	4,240.2	12.5	1.9	-94.23	-164.1	-6,529.8	6,846.7	6,833.6	13.12	521.956	
4,429.1	4,386.0	4,259.6	4,258.7	12.5	1.9	-94.23	-164.3	-6,530.0	6,847.1	6,833.9	13.18	519.692	
4,500.0	4,456.9	4,307.5	4,306.7	12.6	1.9	-94.23	-164.8	-6,530.7	6,848.1	6,834.8	13.32	514.258	
4,527.5	4,484.4	4,335.2	4,334.4	12.7	1.9	-94.23	-165.1	-6,531.2	6,848.6	6,835.2	13.37	512.103	
4,600.0	4,556.9	4,420.5	4,419.6	12.8	1.9	-94.24	-166.0	-6,532.5	6,849.8	6,836.3	13.53	506.414	
4,626.0	4,582.9	4,486.8	4,486.0	12.9	1.9	-94.24	-166.7	-6,533.2	6,850.1	6,836.5	13.59	504.082	
4,700.0	4,656.9	4,575.3	4,574.4	13.0	2.0	-94.25	-167.4	-6,533.8	6,850.6	6,836.9	13.75	498.262	
4,724.4	4,681.3	4,601.8	4,601.0	13.0	2.0	-94.25	-167.6	-6,534.0	6,850.8	6,837.0	13.80	496.380	
4,800.0	4,756.9	4,677.9	4,677.1	13.1	2.0	-94.26	-168.3	-6,534.4	6,851.3	6,837.3	13.96	490.659	
4,822.8	4,779.7	4,700.0	4,699.1	13.2	2.0	-94.26	-168.4	-6,534.6	6,851.4	6,837.4	14.01	488.957	
4,900.0	4,856.9	4,773.2	4,772.4	13.3	2.0	-94.26	-169.1	-6,535.0	6,851.9	6,837.8	14.19	483.019	
4,921.2	4,878.1	4,793.2	4,792.3	13.4	2.0	-94.27	-169.3	-6,535.1	6,852.1	6,837.9	14.23	481.405	
5,000.0	4,956.9	4,867.0	4,866.2	13.5	2.1	-94.27	-170.1	-6,535.6	6,852.7	6,838.3	14.41	475.517	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,976.6	4,885.5	4,884.6	13.5	2.1	-94.27	-170.3	-6,535.8	6,852.9	6,838.4	14.46	474.062		
5,100.0	5,056.9	4,960.1	4,959.2	13.7	2.1	-94.28	-171.2	-6,536.4	6,853.5	6,838.9	14.64	468.266		
5,118.1	5,075.0	4,976.9	4,976.0	13.7	2.1	-94.28	-171.4	-6,536.5	6,853.7	6,839.0	14.68	466.977		
5,200.0	5,156.9	5,052.8	5,051.9	13.8	2.1	-94.29	-172.2	-6,537.2	6,854.5	6,839.6	14.86	461.236		
5,216.5	5,173.4	5,068.1	5,067.2	13.9	2.2	-94.29	-172.3	-6,537.3	6,854.7	6,839.8	14.90	460.090		
5,300.0	5,256.9	5,156.1	5,155.2	14.0	2.2	-94.30	-173.2	-6,538.2	6,855.5	6,840.4	15.08	454.502		
5,314.9	5,271.8	5,173.2	5,172.3	14.1	2.2	-94.30	-173.3	-6,538.3	6,855.7	6,840.5	15.12	453.525		
5,400.0	5,356.9	5,259.2	5,258.3	14.2	2.2	-94.30	-173.8	-6,539.0	6,856.4	6,841.1	15.30	448.145		
5,413.4	5,370.3	5,272.0	5,271.1	14.2	2.2	-94.30	-173.9	-6,539.2	6,856.6	6,841.2	15.33	447.314		
5,500.0	5,456.9	5,353.6	5,352.6	14.4	2.2	-94.30	-174.3	-6,539.9	6,857.4	6,841.9	15.51	442.111		
5,511.8	5,468.7	5,364.5	5,363.6	14.4	2.2	-94.30	-174.3	-6,540.0	6,857.5	6,842.0	15.54	441.416		
5,600.0	5,556.9	5,455.6	5,454.7	14.6	2.3	-94.30	-174.3	-6,540.9	6,858.4	6,842.7	15.72	436.243		
5,610.2	5,567.1	5,467.0	5,466.0	14.6	2.3	-94.30	-174.3	-6,541.0	6,858.5	6,842.7	15.74	435.644		
5,700.0	5,656.9	5,566.6	5,565.6	14.7	2.3	-94.30	-174.1	-6,541.9	6,859.3	6,843.3	15.94	430.450		
5,708.6	5,665.5	5,576.2	5,575.2	14.8	2.3	-94.30	-174.1	-6,542.0	6,859.3	6,843.4	15.95	429.954		
5,800.0	5,756.9	5,646.5	5,645.5	14.9	2.3	-94.30	-173.7	-6,542.7	6,860.2	6,844.0	16.14	425.089		
5,807.1	5,764.0	5,651.2	5,650.2	14.9	2.3	-94.30	-173.7	-6,542.7	6,860.2	6,844.1	16.15	424.724		
5,900.0	5,856.9	5,700.0	5,699.1	15.1	2.3	-94.29	-173.1	-6,543.4	6,861.5	6,845.2	16.34	419.998		
5,905.5	5,862.4	5,700.0	5,699.1	15.1	2.3	-94.29	-173.1	-6,543.4	6,861.6	6,845.3	16.35	419.721		
5,971.9	5,928.8	5,749.4	5,748.5	15.3	2.3	-94.28	-172.3	-6,544.4	6,862.8	6,846.4	16.48	416.438		
6,000.0	5,956.9	5,764.6	5,763.6	15.3	2.3	-4.28	-172.0	-6,544.7	6,862.9	6,846.7	16.20	423.631		
6,003.9	5,960.8	5,766.7	5,765.8	15.3	2.3	-4.28	-172.0	-6,544.8	6,862.8	6,846.6	16.20	423.521		
6,050.0	6,006.7	5,800.0	5,799.0	15.4	2.3	-4.29	-171.2	-6,545.7	6,860.5	6,844.2	16.26	422.010		
6,100.0	6,056.2	5,823.8	5,822.8	15.4	2.3	-4.32	-170.6	-6,546.4	6,854.7	6,838.4	16.31	420.209		
6,102.3	6,058.5	5,825.4	5,824.4	15.4	2.3	-4.32	-170.5	-6,546.4	6,854.3	6,838.0	16.32	420.120		
6,150.0	6,105.1	5,858.1	5,857.1	15.4	2.3	-4.37	-169.6	-6,547.5	6,845.6	6,829.2	16.36	418.328		
6,200.0	6,153.0	5,900.0	5,898.9	15.5	2.3	-4.45	-168.3	-6,548.9	6,833.2	6,816.8	16.40	416.604		
6,200.8	6,153.8	5,900.0	5,898.9	15.5	2.3	-4.45	-168.3	-6,548.9	6,832.9	6,816.5	16.40	416.586		
6,250.0	6,199.9	6,028.4	6,027.2	15.5	2.3	-4.54	-163.5	-6,552.6	6,817.1	6,800.7	16.47	413.981		
6,299.2	6,244.8	6,094.2	6,092.9	15.5	2.3	-4.67	-160.6	-6,554.1	6,797.8	6,781.4	16.48	412.425		
6,300.0	6,245.5	6,095.2	6,093.9	15.5	2.3	-4.67	-160.5	-6,554.1	6,797.5	6,781.0	16.48	412.404		
6,350.0	6,289.6	6,141.8	6,140.4	15.5	2.3	-4.84	-158.5	-6,555.0	6,774.7	6,758.2	16.45	411.746		
6,397.6	6,329.9	6,183.2	6,181.8	15.4	2.3	-5.04	-156.8	-6,555.8	6,750.1	6,733.7	16.39	411.794		
6,400.0	6,331.8	6,185.2	6,183.8	15.4	2.3	-5.05	-156.8	-6,555.9	6,748.8	6,732.4	16.39	411.815		
6,450.0	6,372.2	6,226.6	6,225.1	15.4	2.3	-5.31	-155.3	-6,556.7	6,720.0	6,703.7	16.29	412.604		
6,496.0	6,407.4	6,262.7	6,261.2	15.4	2.3	-5.61	-154.2	-6,557.3	6,691.0	6,674.8	16.16	413.944		
6,500.0	6,410.3	6,265.7	6,264.2	15.4	2.3	-5.63	-154.1	-6,557.4	6,688.4	6,672.2	16.15	414.090		
6,550.0	6,446.1	6,300.0	6,298.5	15.4	2.3	-6.03	-153.1	-6,558.0	6,654.2	6,638.2	15.99	416.271		
6,594.5	6,475.9	6,330.8	6,329.3	15.4	2.3	-6.47	-152.3	-6,558.6	6,621.7	6,605.9	15.82	418.538		
6,600.0	6,479.4	6,334.2	6,332.7	15.4	2.3	-6.53	-152.2	-6,558.7	6,617.6	6,601.8	15.80	418.863		
6,650.0	6,510.0	6,363.6	6,362.1	15.5	2.3	-7.14	-151.5	-6,559.2	6,578.7	6,563.1	15.60	421.797		
6,692.9	6,534.0	6,386.7	6,385.2	15.7	2.3	-7.81	-151.0	-6,559.7	6,543.6	6,528.2	15.42	424.245		
6,700.0	6,537.8	6,390.4	6,388.8	15.7	2.3	-7.93	-150.9	-6,559.7	6,537.7	6,522.3	15.40	424.661		
6,750.0	6,562.6	6,416.7	6,415.1	16.2	2.3	-8.95	-150.3	-6,560.2	6,494.9	6,479.6	15.22	426.821		
6,791.3	6,580.8	6,437.2	6,435.6	16.6	2.3	-10.06	-149.9	-6,560.6	6,458.2	6,443.1	15.10	427.636		
6,800.0	6,584.3	6,441.2	6,439.6	16.7	2.3	-10.33	-149.9	-6,560.7	6,450.3	6,435.3	15.09	427.487		
6,850.0	6,602.9	6,462.2	6,460.6	17.3	2.3	-12.24	-149.4	-6,561.1	6,404.4	6,389.3	15.05	425.399		
6,889.7	6,615.2	6,476.4	6,474.8	17.9	2.3	-14.37	-149.2	-6,561.3	6,366.9	6,351.8	15.15	420.267		
6,900.0	6,618.1	6,479.7	6,478.1	18.0	2.3	-15.04	-149.1	-6,561.4	6,357.2	6,342.0	15.20	418.267		
6,950.0	6,630.0	6,493.5	6,491.9	18.8	2.3	-19.50	-148.8	-6,561.6	6,308.9	6,293.2	15.70	401.881		
6,988.2	6,636.8	6,501.9	6,500.3	19.5	2.3	-25.08	-148.7	-6,561.8	6,271.6	6,255.0	16.57	378.501		
7,000.0	6,638.5	6,504.3	6,502.8	19.7	2.3	-27.46	-148.6	-6,561.8	6,260.0	6,243.0	16.98	368.633		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,643.5	6,511.9	6,510.4	20.6	2.3	-44.22	-148.5	-6,562.0	6,210.5	6,190.5	19.94	311.457			
7,086.6	6,644.9	6,514.6	6,513.1	21.3	2.3	-69.31	-148.4	-6,562.0	6,174.0	6,151.2	22.89	269.737			
7,097.8	6,645.0	6,515.0	6,513.4	21.5	2.3	-79.81	-148.4	-6,562.0	6,162.9	6,139.4	23.44	262.930			
7,100.0	6,645.0	6,515.0	6,513.5	21.6	2.3	-79.81	-148.4	-6,562.0	6,160.7	6,137.2	23.48	262.370			
7,185.0	6,644.9	6,516.8	6,515.2	23.3	2.3	-80.01	-148.4	-6,562.0	6,075.9	6,050.8	25.19	241.232			
7,200.0	6,644.9	6,517.1	6,515.5	23.6	2.3	-80.04	-148.4	-6,562.0	6,061.0	6,035.5	25.49	237.801			
7,283.4	6,644.8	6,518.7	6,517.2	25.4	2.3	-80.23	-148.3	-6,562.1	5,977.9	5,950.6	27.29	219.078			
7,300.0	6,644.7	6,519.1	6,517.5	25.8	2.3	-80.27	-148.3	-6,562.1	5,961.4	5,933.7	27.64	215.653			
7,381.9	6,644.6	6,520.7	6,519.1	27.7	2.3	-80.46	-148.3	-6,562.1	5,879.8	5,850.3	29.50	199.303			
7,400.0	6,644.6	6,521.1	6,519.5	28.1	2.3	-80.50	-148.3	-6,562.1	5,861.7	5,831.8	29.91	195.957			
7,480.3	6,644.5	6,522.7	6,521.1	30.0	2.3	-80.68	-148.3	-6,562.1	5,781.7	5,749.9	31.81	181.772			
7,500.0	6,644.5	6,523.0	6,521.5	30.5	2.3	-80.72	-148.3	-6,562.1	5,762.1	5,729.8	32.27	178.546			
7,578.7	6,644.4	6,524.6	6,523.0	32.4	2.3	-80.90	-148.2	-6,562.2	5,683.6	5,649.5	34.18	166.264			
7,600.0	6,644.4	6,525.0	6,523.4	32.9	2.3	-80.94	-148.2	-6,562.2	5,662.5	5,627.7	34.70	163.176			
7,677.1	6,644.3	6,526.5	6,524.9	34.8	2.3	-81.11	-148.2	-6,562.2	5,585.6	5,549.0	36.62	152.535			
7,700.0	6,644.2	6,526.9	6,525.3	35.4	2.3	-81.16	-148.2	-6,562.2	5,562.8	5,525.7	37.19	149.593			
7,775.6	6,644.1	6,528.4	6,526.8	37.3	2.3	-81.33	-148.2	-6,562.2	5,487.6	5,448.5	39.10	140.351			
7,800.0	6,644.1	6,528.8	6,527.3	38.0	2.3	-81.38	-148.2	-6,562.2	5,463.2	5,423.5	39.72	137.554			
7,874.0	6,644.0	6,530.2	6,528.7	39.9	2.3	-81.54	-148.1	-6,562.3	5,389.5	5,347.9	41.62	129.504			
7,900.0	6,644.0	6,530.7	6,529.2	40.5	2.3	-81.60	-148.1	-6,562.3	5,363.7	5,321.4	42.28	126.847			
7,972.4	6,643.9	6,532.1	6,530.5	42.4	2.3	-81.75	-148.1	-6,562.3	5,291.5	5,247.4	44.17	119.810			
8,000.0	6,643.9	6,532.6	6,531.0	43.1	2.3	-81.81	-148.1	-6,562.3	5,264.1	5,219.2	44.88	117.285			
8,070.8	6,643.8	6,533.9	6,532.3	45.0	2.3	-81.97	-148.1	-6,562.3	5,193.6	5,146.8	46.74	111.111			
8,100.0	6,643.7	6,534.5	6,532.9	45.8	2.3	-82.03	-148.1	-6,562.3	5,164.5	5,117.0	47.51	108.711			
8,169.3	6,643.7	6,535.7	6,534.2	47.6	2.3	-82.17	-148.0	-6,562.3	5,095.6	5,046.2	49.34	103.275			
8,200.0	6,643.6	6,536.3	6,534.7	48.4	2.3	-82.24	-148.0	-6,562.4	5,065.0	5,014.9	50.15	100.991			
8,267.7	6,643.5	6,537.5	6,536.0	50.2	2.3	-82.38	-148.0	-6,562.4	4,997.6	4,945.7	51.96	96.189			
8,300.0	6,643.5	6,538.1	6,536.5	51.1	2.3	-82.45	-148.0	-6,562.4	4,965.5	4,912.7	52.82	94.012			
8,366.1	6,643.4	6,539.3	6,537.7	52.9	2.3	-82.58	-148.0	-6,562.4	4,899.7	4,845.1	54.59	89.755			
8,400.0	6,643.4	6,539.9	6,538.3	53.8	2.3	-82.65	-148.0	-6,562.4	4,866.0	4,810.5	55.50	87.679			
8,464.5	6,643.3	6,541.1	6,539.5	55.5	2.3	-82.79	-147.9	-6,562.4	4,801.8	4,744.5	57.24	83.893			
8,500.0	6,643.2	6,541.7	6,540.1	56.5	2.3	-82.86	-147.9	-6,562.4	4,766.5	4,708.3	58.19	81.910			
8,563.0	6,643.2	6,542.8	6,541.3	58.2	2.3	-82.99	-147.9	-6,562.5	4,703.9	4,644.0	59.90	78.533			
8,600.0	6,643.1	6,543.5	6,541.9	59.2	2.3	-83.06	-147.9	-6,562.5	4,667.1	4,606.2	60.90	76.636			
8,661.4	6,643.0	6,544.6	6,543.0	60.8	2.3	-83.19	-147.9	-6,562.5	4,606.0	4,543.4	62.57	73.617			
8,700.0	6,643.0	6,545.2	6,543.7	61.9	2.3	-83.27	-147.9	-6,562.5	4,567.6	4,504.0	63.62	71.800			
8,759.8	6,642.9	6,546.3	6,544.7	63.5	2.3	-83.39	-147.8	-6,562.5	4,508.2	4,442.9	65.25	69.093			
8,800.0	6,642.9	6,547.0	6,545.4	64.6	2.3	-83.47	-147.8	-6,562.5	4,468.2	4,401.9	66.34	67.351			
8,858.2	6,642.8	6,548.0	6,546.4	66.2	2.3	-83.58	-147.8	-6,562.5	4,410.3	4,342.4	67.94	64.919			
8,900.0	6,642.7	6,548.7	6,547.1	67.3	2.3	-83.67	-147.8	-6,562.6	4,368.8	4,299.8	69.08	63.245			
8,956.7	6,642.7	6,549.7	6,548.1	68.9	2.3	-83.78	-147.8	-6,562.6	4,312.5	4,241.9	70.63	61.056			
9,000.0	6,642.6	6,550.4	6,548.8	70.1	2.3	-83.86	-147.8	-6,562.6	4,269.5	4,197.7	71.82	59.447			
9,055.1	6,642.5	6,551.3	6,549.7	71.6	2.3	-83.97	-147.8	-6,562.6	4,214.8	4,141.4	73.33	57.473			
9,100.0	6,642.5	6,552.1	6,550.5	72.8	2.3	-84.06	-147.7	-6,562.6	4,170.2	4,095.6	74.57	55.923			
9,153.5	6,642.4	6,553.0	6,551.4	74.3	2.3	-84.16	-147.7	-6,562.6	4,117.0	4,041.0	76.04	54.140			
9,200.0	6,642.4	6,553.8	6,552.2	75.6	2.3	-84.25	-147.7	-6,562.6	4,070.9	3,993.6	77.32	52.647			
9,251.9	6,642.3	6,554.6	6,553.0	77.0	2.3	-84.35	-147.7	-6,562.6	4,019.3	3,940.6	78.76	51.033			
9,300.0	6,642.2	6,555.4	6,553.8	78.3	2.3	-84.45	-147.7	-6,562.7	3,971.6	3,891.5	80.08	49.593			
9,350.4	6,642.2	6,556.2	6,554.7	79.7	2.3	-84.54	-147.7	-6,562.7	3,921.6	3,840.2	81.48	48.131			
9,400.0	6,642.1	6,557.1	6,555.5	81.1	2.3	-84.64	-147.7	-6,562.7	3,872.4	3,789.6	82.85	46.740			
9,448.8	6,642.0	6,557.8	6,556.3	82.4	2.3	-84.73	-147.6	-6,562.7	3,824.0	3,739.8	84.20	45.415			
9,500.0	6,642.0	6,558.7	6,557.1	83.8	2.3	-84.83	-147.6	-6,562.7	3,773.2	3,687.6	85.62	44.070			

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,559.4	6,557.9	85.1	2.3	-84.91	-147.6	-6,562.7	3,726.4	3,639.5	86.93	42.867	
9,600.0	6,641.9	6,560.3	6,558.7	86.6	2.3	-85.01	-147.6	-6,562.7	3,674.1	3,585.7	88.39	41.565	
9,645.6	6,641.8	6,561.0	6,559.4	87.9	2.3	-85.10	-147.6	-6,562.7	3,628.9	3,539.2	89.66	40.473	
9,700.0	6,641.7	6,561.9	6,560.3	89.4	2.3	-85.20	-147.6	-6,562.8	3,575.0	3,483.9	91.17	39.212	
9,744.1	6,641.7	6,562.6	6,561.0	90.6	2.3	-85.28	-147.6	-6,562.8	3,531.4	3,439.0	92.40	38.220	
9,800.0	6,641.6	6,563.5	6,561.9	92.1	2.3	-85.38	-147.5	-6,562.8	3,476.0	3,382.0	93.95	36.998	
9,842.5	6,641.6	6,564.1	6,562.6	93.3	2.3	-85.46	-147.5	-6,562.8	3,433.9	3,338.8	95.13	36.096	
9,900.0	6,641.5	6,565.0	6,563.5	94.9	2.3	-85.57	-147.5	-6,562.8	3,377.0	3,280.3	96.73	34.910	
9,940.9	6,641.4	6,565.7	6,564.1	96.0	2.3	-85.64	-147.5	-6,562.8	3,336.5	3,238.7	97.87	34.090	
10,000.0	6,641.4	6,566.6	6,565.0	97.7	2.3	-85.75	-147.5	-6,562.8	3,278.1	3,178.6	99.52	32.939	
10,039.3	6,641.3	6,567.2	6,565.6	98.8	2.3	-85.82	-147.5	-6,562.8	3,239.2	3,138.6	100.62	32.193	
10,100.0	6,641.2	6,568.1	6,566.6	100.4	2.3	-85.93	-147.5	-6,562.9	3,179.3	3,077.0	102.31	31.075	
10,137.8	6,641.2	6,568.7	6,567.1	101.5	2.3	-85.99	-147.5	-6,562.9	3,141.9	3,038.6	103.36	30.397	
10,200.0	6,641.1	6,569.7	6,568.1	103.2	2.3	-86.11	-147.4	-6,562.9	3,080.5	2,975.4	105.10	29.310	
10,236.2	6,641.1	6,570.2	6,568.6	104.2	2.3	-86.17	-147.4	-6,562.9	3,044.8	2,938.6	106.11	28.694	
10,300.0	6,641.0	6,571.2	6,569.6	106.0	2.3	-86.28	-147.4	-6,562.9	2,981.8	2,873.9	107.89	27.637	
10,334.6	6,640.9	6,571.7	6,570.1	107.0	2.3	-86.34	-147.4	-6,562.9	2,947.6	2,838.8	108.86	27.078	
10,400.0	6,640.9	6,572.7	6,571.1	108.8	2.3	-86.46	-147.4	-6,562.9	2,883.2	2,772.5	110.69	26.049	
10,433.0	6,640.8	6,573.2	6,571.6	109.7	2.3	-86.51	-147.4	-6,562.9	2,850.6	2,739.0	111.61	25.541	
10,500.0	6,640.7	6,574.2	6,572.6	111.6	2.3	-86.63	-147.4	-6,562.9	2,784.7	2,671.2	113.48	24.539	
10,531.5	6,640.7	6,574.6	6,573.0	112.4	2.3	-86.69	-147.4	-6,563.0	2,753.7	2,639.3	114.36	24.079	
10,600.0	6,640.6	6,575.6	6,574.1	114.3	2.3	-86.80	-147.3	-6,563.0	2,686.3	2,570.0	116.28	23.102	
10,629.9	6,640.6	6,576.1	6,574.5	115.2	2.3	-86.85	-147.3	-6,563.0	2,656.9	2,539.8	117.11	22.686	
10,700.0	6,640.5	6,577.1	6,575.5	117.1	2.3	-86.97	-147.3	-6,563.0	2,588.0	2,469.0	119.08	21.734	
10,728.3	6,640.4	6,577.5	6,575.9	117.9	2.3	-87.02	-147.3	-6,563.0	2,560.2	2,440.3	119.87	21.358	
10,800.0	6,640.4	6,578.5	6,577.0	119.9	2.3	-87.14	-147.3	-6,563.0	2,489.9	2,368.0	121.88	20.430	
10,826.7	6,640.3	6,578.9	6,577.3	120.7	2.3	-87.19	-147.3	-6,563.0	2,463.7	2,341.0	122.63	20.091	
10,900.0	6,640.2	6,580.0	6,578.4	122.7	2.3	-87.31	-147.3	-6,563.0	2,391.9	2,267.2	124.68	19.185	
10,925.2	6,640.2	6,580.3	6,578.8	123.4	2.3	-87.35	-147.3	-6,563.0	2,367.3	2,241.9	125.38	18.881	
11,000.0	6,640.1	6,581.4	6,579.8	125.5	2.3	-87.48	-147.2	-6,563.0	2,294.1	2,166.6	127.48	17.996	
11,023.6	6,640.1	6,581.7	6,580.2	126.1	2.3	-87.52	-147.2	-6,563.1	2,271.1	2,142.9	128.14	17.723	
11,100.0	6,640.0	6,582.8	6,581.2	128.3	2.3	-87.64	-147.2	-6,563.1	2,196.5	2,066.2	130.28	16.860	
11,122.0	6,639.9	6,583.1	6,581.5	128.9	2.3	-87.68	-147.2	-6,563.1	2,175.0	2,044.1	130.90	16.616	
11,200.0	6,639.8	6,584.2	6,582.6	131.1	2.3	-87.81	-147.2	-6,563.1	2,099.1	1,966.0	133.08	15.773	
11,220.4	6,639.8	6,584.5	6,582.9	131.6	2.3	-87.84	-147.2	-6,563.1	2,079.2	1,945.6	133.66	15.557	
11,300.0	6,639.7	6,585.6	6,584.0	133.9	2.3	-87.97	-147.2	-6,563.1	2,002.0	1,866.1	135.89	14.733	
11,318.9	6,639.7	6,585.9	6,584.3	134.4	2.3	-88.00	-147.2	-6,563.1	1,983.7	1,847.3	136.41	14.542	
11,400.0	6,639.6	6,587.0	6,585.4	136.7	2.3	-88.13	-147.1	-6,563.1	1,905.2	1,766.5	138.69	13.737	
11,417.3	6,639.6	6,587.2	6,585.6	137.1	2.3	-88.16	-147.1	-6,563.1	1,888.4	1,749.3	139.17	13.569	
11,500.0	6,639.5	6,588.4	6,586.8	139.4	2.3	-88.29	-147.1	-6,563.1	1,808.7	1,667.2	141.49	12.783	
11,515.7	6,639.5	6,588.6	6,587.0	139.9	2.3	-88.32	-147.1	-6,563.2	1,793.5	1,651.6	141.93	12.636	
11,600.0	6,639.3	6,589.7	6,588.1	142.2	2.3	-88.45	-147.1	-6,563.2	1,712.6	1,568.3	144.30	11.869	
11,614.1	6,639.3	6,589.9	6,588.3	142.6	2.3	-88.47	-147.1	-6,563.2	1,699.0	1,554.3	144.69	11.742	
11,700.0	6,639.2	6,591.0	6,589.5	145.0	2.3	-88.61	-147.1	-6,563.2	1,617.0	1,469.9	147.10	10.992	
11,712.6	6,639.2	6,591.2	6,589.6	145.4	2.3	-88.63	-147.1	-6,563.2	1,605.0	1,457.5	147.45	10.885	
11,800.0	6,639.1	6,592.4	6,590.8	147.8	2.3	-88.77	-147.1	-6,563.2	1,521.9	1,372.0	149.90	10.153	
11,811.0	6,639.1	6,592.5	6,590.9	148.1	2.3	-88.78	-147.1	-6,563.2	1,511.5	1,361.3	150.21	10.062	
11,900.0	6,639.0	6,593.7	6,592.1	150.6	2.3	-88.92	-147.0	-6,563.2	1,427.6	1,274.8	152.71	9.348	
11,909.4	6,639.0	6,593.8	6,592.2	150.9	2.3	-88.94	-147.0	-6,563.2	1,418.7	1,265.7	152.97	9.274	
12,000.0	6,638.8	6,595.0	6,593.4	153.4	2.3	-89.08	-147.0	-6,563.2	1,334.0	1,178.5	155.51	8.578	
12,007.8	6,638.8	6,595.1	6,593.5	153.6	2.3	-89.09	-147.0	-6,563.2	1,326.7	1,171.0	155.73	8.519	
12,100.0	6,638.7	6,596.3	6,594.7	156.2	2.3	-89.23	-147.0	-6,563.3	1,241.5	1,083.1	158.32	7.842	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
12,106.3	6,638.7	6,596.4	6,594.8	156.4	2.3	-89.24	-147.0	-6,563.3	1,235.7	1,077.2	158.49	7.796	
12,200.0	6,638.6	6,597.6	6,596.0	159.0	2.3	-89.38	-147.0	-6,563.3	1,150.1	989.0	161.12	7.138	
12,204.7	6,638.6	6,597.7	6,596.1	159.1	2.3	-89.39	-147.0	-6,563.3	1,145.9	984.6	161.25	7.106	
12,300.0	6,638.5	6,598.9	6,597.3	161.8	2.3	-89.53	-147.0	-6,563.3	1,060.4	896.5	163.92	6.469	
12,303.1	6,638.5	6,598.9	6,597.3	161.9	2.3	-89.53	-147.0	-6,563.3	1,057.6	893.6	164.01	6.449	
12,400.0	6,638.3	6,600.1	6,598.6	164.6	2.3	-89.68	-146.9	-6,563.3	972.7	806.0	166.73	5.834	
12,401.5	6,638.3	6,600.2	6,598.6	164.6	2.3	-89.68	-146.9	-6,563.3	971.3	804.6	166.77	5.824	
12,500.0	6,638.2	6,600.0	6,598.4	167.4	2.3	-89.66	-146.9	-6,563.3	887.5	718.0	169.52	5.236	
12,598.4	6,638.1	6,600.0	6,598.4	170.2	2.3	-89.66	-146.9	-6,563.3	807.1	634.8	172.28	4.685	
12,600.0	6,638.1	6,600.0	6,598.4	170.2	2.3	-89.66	-146.9	-6,563.3	805.8	633.5	172.32	4.676	
12,696.8	6,638.0	6,600.0	6,598.4	172.9	2.3	-89.66	-146.9	-6,563.3	731.1	556.0	175.03	4.177	
12,700.0	6,638.0	6,600.0	6,598.4	173.0	2.3	-89.66	-146.9	-6,563.3	728.7	553.6	175.12	4.161	
12,795.2	6,637.8	6,600.0	6,598.4	175.7	2.3	-89.66	-146.9	-6,563.3	661.0	483.2	177.79	3.718	
12,800.0	6,637.8	6,600.0	6,598.4	175.8	2.3	-89.66	-146.9	-6,563.3	657.7	479.8	177.92	3.697	
12,893.7	6,637.7	6,600.0	6,598.4	178.4	2.3	-89.66	-146.9	-6,563.3	598.9	418.3	180.55	3.317	
12,900.0	6,637.7	6,600.0	6,598.4	178.6	2.3	-89.66	-146.9	-6,563.3	595.2	414.5	180.72	3.293	
12,992.1	6,637.6	6,600.0	6,598.4	181.2	2.3	-89.66	-146.9	-6,563.3	547.5	364.2	183.30	2.987	
13,000.0	6,637.6	6,600.0	6,598.4	181.4	2.3	-89.66	-146.9	-6,563.3	544.0	360.4	183.52	2.964	
13,090.5	6,637.5	6,600.0	6,598.4	183.9	2.3	-89.66	-146.9	-6,563.3	510.2	324.1	186.06	2.742	
13,100.0	6,637.5	6,600.0	6,598.4	184.2	2.3	-89.66	-146.9	-6,563.3	507.5	321.1	186.32	2.724	
13,188.9	6,637.4	6,600.0	6,598.4	186.7	2.3	-89.66	-146.9	-6,563.3	490.1	301.3	188.82	2.596	
13,200.0	6,637.3	6,600.0	6,598.4	187.0	2.3	-89.66	-146.9	-6,563.3	489.0	299.9	189.12	2.586	
13,241.8	6,637.3	6,600.0	6,598.4	188.2	2.3	-89.66	-146.9	-6,563.3	487.2	296.9	190.30	2.560 CC, ES	
13,287.4	6,637.2	6,600.0	6,598.4	189.4	2.3	-89.66	-146.9	-6,563.3	489.4	297.8	191.57	2.554 SF	
13,300.0	6,637.2	6,600.0	6,598.4	189.8	2.3	-89.66	-146.9	-6,563.3	490.7	298.8	191.93	2.557	
13,385.8	6,637.1	6,600.0	6,598.4	192.2	2.3	-89.66	-146.9	-6,563.3	508.1	313.7	194.33	2.614	
13,400.0	6,637.1	6,600.0	6,598.4	192.6	2.3	-89.66	-146.9	-6,563.3	512.3	317.5	194.73	2.631	
13,484.2	6,637.0	6,600.0	6,598.4	195.0	2.3	-89.66	-146.9	-6,563.3	544.2	347.1	197.09	2.761	
13,500.0	6,637.0	6,600.0	6,598.4	195.4	2.3	-89.66	-146.9	-6,563.3	551.4	353.9	197.53	2.792	
13,582.6	6,636.9	6,600.0	6,598.4	197.7	2.3	-89.66	-146.9	-6,563.3	594.6	394.8	199.85	2.975	
13,600.0	6,636.8	6,600.0	6,598.4	198.2	2.3	-89.66	-146.9	-6,563.3	604.7	404.4	200.33	3.019	
13,681.1	6,636.7	6,600.0	6,598.4	200.5	2.3	-89.66	-146.9	-6,563.3	656.0	453.4	202.60	3.238	
13,700.0	6,636.7	6,600.0	6,598.4	201.0	2.3	-89.66	-146.9	-6,563.3	668.8	465.7	203.13	3.292	
13,779.5	6,636.6	6,600.0	6,598.4	203.2	2.3	-89.66	-146.9	-6,563.3	725.6	520.2	205.36	3.533	
13,800.0	6,636.6	6,600.0	6,598.4	203.8	2.3	-89.66	-146.9	-6,563.3	740.9	535.0	205.94	3.598	
13,877.9	6,636.5	6,600.0	6,598.4	206.0	2.3	-89.66	-146.9	-6,563.3	801.3	593.1	208.12	3.850	
13,900.0	6,636.5	6,600.0	6,598.4	206.6	2.3	-89.66	-146.9	-6,563.3	818.9	610.1	208.74	3.923	
13,976.3	6,636.4	6,600.0	6,598.4	208.8	2.3	-89.66	-146.9	-6,563.3	881.4	670.5	210.88	4.180	
14,000.0	6,636.3	6,600.0	6,598.4	209.4	2.3	-89.66	-146.9	-6,563.3	901.2	689.7	211.54	4.260	
14,074.8	6,636.2	6,600.0	6,598.4	211.5	2.3	-89.66	-146.9	-6,563.3	965.0	751.3	213.64	4.517	
14,100.0	6,636.2	6,600.0	6,598.4	212.2	2.3	-89.66	-146.9	-6,563.3	986.8	772.5	214.35	4.604	
14,173.2	6,636.1	6,600.0	6,598.4	214.3	2.3	-89.66	-146.9	-6,563.3	1,051.1	834.7	216.40	4.857	
14,200.0	6,636.1	6,600.0	6,598.4	215.0	2.3	-89.66	-146.9	-6,563.3	1,074.9	857.8	217.15	4.950	
14,271.6	6,636.0	6,600.0	6,598.4	217.0	2.3	-89.66	-146.9	-6,563.3	1,139.2	920.1	219.16	5.198	
14,300.0	6,636.0	6,600.0	6,598.4	217.8	2.3	-89.66	-146.9	-6,563.3	1,164.9	945.0	219.95	5.296	
14,370.0	6,635.9	6,600.0	6,598.4	219.8	2.3	-89.66	-146.9	-6,563.3	1,228.9	1,007.0	221.92	5.538	
14,400.0	6,635.8	6,600.0	6,598.4	220.6	2.3	-89.66	-146.9	-6,563.3	1,256.5	1,033.7	222.76	5.641	
14,468.5	6,635.7	6,600.0	6,598.4	222.6	2.3	-89.66	-146.9	-6,563.3	1,319.9	1,095.2	224.68	5.874	
14,500.0	6,635.7	6,600.0	6,598.4	223.4	2.3	-89.66	-146.9	-6,563.3	1,349.2	1,123.6	225.56	5.982	
14,566.9	6,635.6	6,600.0	6,598.4	225.3	2.3	-89.66	-146.9	-6,563.3	1,411.8	1,184.4	227.44	6.207	
14,600.0	6,635.6	6,600.0	6,598.4	226.2	2.3	-89.66	-146.9	-6,563.3	1,442.9	1,214.5	228.36	6.318	
14,665.3	6,635.5	6,600.0	6,598.4	228.1	2.3	-89.66	-146.9	-6,563.3	1,504.6	1,274.4	230.20	6.536	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,635.5	6,600.0	6,598.4	229.0	2.3	-89.66	-146.9	-6,563.3	1,537.4	1,306.2	231.17	6.651	
14,763.7	6,635.4	6,600.0	6,598.4	230.8	2.3	-89.66	-146.9	-6,563.3	1,598.0	1,365.0	232.96	6.860	
14,800.0	6,635.3	6,600.0	6,598.4	231.8	2.3	-89.66	-146.9	-6,563.3	1,632.6	1,398.6	233.97	6.978	
14,862.2	6,635.2	6,600.0	6,598.4	233.6	2.3	-89.66	-146.9	-6,563.3	1,692.0	1,456.3	235.72	7.178	
14,900.0	6,635.2	6,600.0	6,598.4	234.7	2.3	-89.66	-146.9	-6,563.3	1,728.3	1,491.5	236.78	7.299	
14,960.6	6,635.1	6,600.0	6,598.4	236.4	2.3	-89.66	-146.9	-6,563.3	1,786.5	1,548.0	238.48	7.491	
14,995.1	6,635.0	6,600.0	6,598.4	237.3	2.3	-89.67	-146.9	-6,563.3	1,819.7	1,580.3	239.45	7.600	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-105.13	-1,918.2	-7,092.6	7,347.5				
98.4	98.4	56.6	56.6	0.1	0.0	-105.13	-1,918.1	-7,092.7	7,347.4	7,347.3	0.10	N/A	
100.0	100.0	57.9	57.9	0.1	0.0	-105.13	-1,918.1	-7,092.7	7,347.4	7,347.3	0.10	N/A	
196.8	196.8	166.0	166.0	0.3	0.1	-105.13	-1,917.4	-7,093.0	7,347.6	7,347.1	0.46	N/A	
200.0	200.0	170.3	170.3	0.3	0.1	-105.13	-1,917.4	-7,093.0	7,347.6	7,347.1	0.47	N/A	
295.3	295.3	264.6	264.6	0.5	0.3	-105.12	-1,916.8	-7,093.1	7,347.5	7,346.7	0.80	9,200.676	
300.0	300.0	268.7	268.7	0.5	0.3	-105.12	-1,916.8	-7,093.1	7,347.5	7,346.7	0.81	9,038.468	
314.0	314.0	281.0	281.0	0.6	0.3	-105.12	-1,916.7	-7,093.1	7,347.5	7,346.6	0.86	8,590.001	
393.7	393.7	359.6	359.6	0.8	0.3	-105.12	-1,916.2	-7,093.2	7,347.5	7,346.4	1.09	6,719.769	
400.0	400.0	366.1	366.1	0.8	0.3	-105.12	-1,916.1	-7,093.2	7,347.5	7,346.4	1.11	6,606.764	
492.1	492.1	446.5	446.5	1.0	0.4	-105.11	-1,915.6	-7,093.4	7,347.6	7,346.2	1.37	5,366.124	
500.0	500.0	452.7	452.7	1.0	0.4	-105.11	-1,915.5	-7,093.5	7,347.6	7,346.2	1.39	5,284.335	
590.5	590.5	528.8	528.8	1.2	0.4	-105.11	-1,915.0	-7,093.9	7,347.9	7,346.2	1.64	4,493.296	
600.0	600.0	537.8	537.8	1.2	0.5	-105.11	-1,914.9	-7,093.9	7,347.9	7,346.2	1.66	4,423.546	
689.0	689.0	621.3	621.3	1.4	0.5	-105.10	-1,914.4	-7,094.4	7,348.3	7,346.4	1.90	3,864.131	
700.0	700.0	631.4	631.3	1.4	0.5	-105.10	-1,914.3	-7,094.5	7,348.3	7,346.4	1.93	3,805.987	
787.4	787.4	713.3	713.2	1.6	0.5	-105.10	-1,914.0	-7,095.0	7,348.8	7,346.6	2.16	3,399.661	
800.0	800.0	727.2	727.2	1.7	0.6	-105.10	-1,914.0	-7,095.1	7,348.9	7,346.7	2.20	3,347.282	
885.8	885.8	821.2	821.2	1.9	0.6	-105.09	-1,913.9	-7,095.6	7,349.3	7,346.9	2.42	3,031.004	
900.0	900.0	836.2	836.2	1.9	0.6	-105.09	-1,913.9	-7,095.7	7,349.3	7,346.9	2.46	2,985.215	
984.2	984.2	923.9	923.8	2.1	0.6	-105.09	-1,913.8	-7,096.1	7,349.7	7,347.0	2.68	2,740.615	
1,000.0	1,000.0	939.7	939.7	2.1	0.6	-105.09	-1,913.8	-7,096.1	7,349.7	7,347.0	2.72	2,699.880	
1,082.7	1,082.7	1,023.6	1,023.6	2.3	0.7	-105.09	-1,913.6	-7,096.5	7,350.0	7,347.1	2.93	2,506.463	
1,100.0	1,100.0	1,041.6	1,041.6	2.3	0.7	-105.09	-1,913.6	-7,096.6	7,350.1	7,347.1	2.98	2,470.442	
1,181.1	1,181.1	1,123.9	1,123.8	2.5	0.7	-105.09	-1,913.7	-7,096.8	7,350.4	7,347.2	3.18	2,313.140	
1,200.0	1,200.0	1,141.9	1,141.9	2.6	0.7	-105.09	-1,913.8	-7,096.9	7,350.4	7,347.2	3.23	2,278.519	
1,279.5	1,279.5	1,219.3	1,219.3	2.7	0.7	-105.09	-1,914.0	-7,097.1	7,350.7	7,347.3	3.43	2,143.305	
1,300.0	1,300.0	1,240.7	1,240.6	2.8	0.7	-105.09	-1,914.0	-7,097.2	7,350.8	7,347.3	3.48	2,110.849	
1,377.9	1,377.9	1,320.9	1,320.9	3.0	0.8	-146.27	-1,914.2	-7,097.4	7,351.9	7,348.2	3.71	1,979.077	
1,400.0	1,400.0	1,342.9	1,342.9	3.0	0.8	-146.27	-1,914.2	-7,097.5	7,352.6	7,348.8	3.77	1,949.176	
1,476.4	1,476.3	1,419.5	1,419.5	3.2	0.8	-146.25	-1,914.4	-7,097.7	7,355.9	7,351.9	3.97	1,853.049	
1,500.0	1,499.8	1,443.6	1,443.6	3.2	0.8	-146.24	-1,914.5	-7,097.7	7,357.3	7,353.2	4.03	1,825.336	
1,574.8	1,574.4	1,514.8	1,514.7	3.4	0.8	-146.21	-1,914.9	-7,097.9	7,362.6	7,358.4	4.23	1,742.620	
1,600.0	1,599.5	1,533.8	1,533.8	3.5	0.8	-146.20	-1,915.0	-7,097.9	7,364.8	7,360.6	4.29	1,717.229	
1,673.2	1,672.2	1,600.0	1,600.0	3.6	0.9	-146.15	-1,915.3	-7,098.2	7,372.4	7,367.9	4.48	1,644.522	
1,700.0	1,698.7	1,609.8	1,609.8	3.7	0.9	-146.12	-1,915.4	-7,098.3	7,375.6	7,371.0	4.55	1,621.332	
1,771.6	1,769.5	1,667.3	1,667.2	3.9	0.9	-146.05	-1,915.8	-7,098.7	7,385.2	7,380.5	4.75	1,556.220	
1,800.0	1,797.5	1,689.9	1,689.9	4.0	0.9	-146.02	-1,916.0	-7,098.9	7,389.5	7,384.7	4.82	1,532.203	
1,870.1	1,866.3	1,742.4	1,742.4	4.2	0.9	-145.93	-1,916.5	-7,099.3	7,401.1	7,396.1	5.02	1,473.474	
1,899.9	1,895.6	1,764.4	1,764.3	4.3	0.9	-145.89	-1,916.8	-7,099.5	7,406.5	7,401.4	5.11	1,450.223	
1,968.5	1,962.6	1,818.7	1,818.6	4.5	0.9	-145.95	-1,917.5	-7,100.1	7,419.4	7,414.1	5.30	1,398.714	
2,000.0	1,993.4	1,848.1	1,848.1	4.6	0.9	-145.98	-1,917.9	-7,100.5	7,425.3	7,419.9	5.40	1,376.290	
2,066.9	2,058.9	1,910.8	1,910.7	4.8	1.0	-146.04	-1,918.8	-7,101.2	7,438.0	7,432.4	5.60	1,329.090	
2,100.0	2,091.3	1,942.2	1,942.1	4.9	1.0	-146.07	-1,919.3	-7,101.6	7,444.2	7,438.5	5.69	1,307.548	
2,165.3	2,155.2	2,000.0	1,999.9	5.2	1.0	-146.13	-1,920.2	-7,102.3	7,456.6	7,450.7	5.89	1,265.784	
2,200.0	2,189.1	2,034.3	2,034.2	5.3	1.0	-146.16	-1,920.8	-7,102.7	7,463.2	7,457.2	6.00	1,244.242	
2,263.8	2,251.5	2,090.3	2,090.2	5.5	1.0	-146.22	-1,921.6	-7,103.4	7,475.3	7,469.1	6.20	1,206.477	
2,300.0	2,286.9	2,135.5	2,135.4	5.7	1.0	-146.26	-1,922.2	-7,104.1	7,482.2	7,475.9	6.31	1,185.354	
2,362.2	2,347.7	2,214.8	2,214.7	5.9	1.1	-146.34	-1,923.0	-7,105.0	7,493.9	7,487.4	6.52	1,150.118	
2,400.0	2,384.7	2,248.6	2,248.5	6.0	1.1	-146.37	-1,923.3	-7,105.4	7,501.0	7,494.4	6.63	1,130.528	
2,460.6	2,444.0	2,300.0	2,299.9	6.3	1.1	-146.42	-1,923.7	-7,106.0	7,512.4	7,505.6	6.83	1,100.178	
2,500.0	2,482.5	2,334.1	2,334.0	6.4	1.1	-146.45	-1,924.0	-7,106.5	7,519.9	7,512.9	6.95	1,081.229	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	2,540.3	2,381.4	2,381.3	6.7	1.1	-146.49	-1,924.3	-7,107.2	7,531.1	7,524.0	7.15	1,053.876		
2,600.0	2,580.3	2,420.4	2,420.3	6.8	1.1	-146.53	-1,924.5	-7,107.8	7,538.9	7,531.7	7.28	1,035.531		
2,657.5	2,636.5	2,486.4	2,486.3	7.1	1.1	-146.59	-1,925.0	-7,108.8	7,549.9	7,542.4	7.47	1,010.142		
2,700.0	2,678.1	2,535.1	2,534.9	7.2	1.2	-146.63	-1,925.4	-7,109.4	7,558.0	7,550.3	7.62	992.340		
2,755.9	2,732.8	2,598.9	2,598.7	7.5	1.2	-146.69	-1,926.0	-7,110.2	7,568.5	7,560.7	7.80	969.736		
2,800.0	2,776.0	2,641.9	2,641.8	7.7	1.2	-146.73	-1,926.5	-7,110.7	7,576.8	7,568.9	7.95	952.963		
2,854.3	2,829.1	2,694.8	2,694.6	7.9	1.2	-146.78	-1,927.1	-7,111.2	7,587.0	7,578.9	8.13	932.958		
2,900.0	2,873.8	2,744.4	2,744.2	8.1	1.2	-146.83	-1,927.7	-7,111.7	7,595.6	7,587.3	8.29	916.746		
2,952.7	2,925.4	2,802.3	2,802.1	8.3	1.2	-146.88	-1,928.5	-7,112.2	7,605.5	7,597.0	8.46	898.602		
3,000.0	2,971.6	2,849.9	2,849.7	8.5	1.3	-146.93	-1,929.2	-7,112.6	7,614.3	7,605.7	8.62	883.181		
3,051.2	3,021.6	2,900.0	2,899.8	8.7	1.3	-146.97	-1,929.9	-7,113.0	7,623.9	7,615.1	8.79	867.032		
3,100.0	3,069.4	2,945.3	2,945.1	8.9	1.3	-147.02	-1,930.5	-7,113.4	7,633.0	7,624.1	8.96	852.219		
3,149.6	3,117.9	2,990.0	2,989.8	9.1	1.3	-147.06	-1,931.1	-7,113.8	7,642.3	7,633.2	9.12	837.668		
3,200.0	3,167.2	3,075.8	3,075.6	9.3	1.3	-147.14	-1,932.0	-7,114.4	7,651.7	7,642.4	9.30	822.646		
3,248.0	3,214.2	3,262.5	3,262.3	9.5	1.4	-147.31	-1,933.6	-7,113.5	7,659.9	7,650.4	9.46	809.525		
3,300.0	3,265.0	3,330.4	3,330.1	9.8	1.4	-147.38	-1,934.3	-7,112.4	7,668.4	7,658.8	9.62	796.767		
3,346.4	3,310.5	3,380.1	3,379.8	10.0	1.4	-147.43	-1,935.0	-7,111.5	7,676.0	7,666.3	9.77	785.534		
3,400.0	3,362.9	3,453.3	3,453.0	10.2	1.4	-147.50	-1,936.1	-7,110.1	7,684.7	7,674.8	9.94	772.920		
3,444.9	3,406.7	3,512.1	3,511.8	10.4	1.4	-147.56	-1,937.1	-7,108.7	7,691.9	7,681.8	10.09	762.622		
3,473.0	3,434.2	3,536.0	3,535.7	10.5	1.4	-147.58	-1,937.5	-7,108.1	7,696.3	7,686.1	10.18	756.357		
3,500.0	3,460.7	3,559.0	3,558.7	10.6	1.4	-147.65	-1,938.0	-7,107.6	7,700.5	7,690.3	10.25	751.418		
3,543.3	3,503.2	3,600.0	3,599.7	10.7	1.4	-147.76	-1,938.8	-7,106.6	7,706.8	7,696.5	10.35	744.724		
3,600.0	3,559.0	3,666.0	3,665.6	10.9	1.4	-147.90	-1,940.3	-7,105.0	7,714.3	7,703.8	10.48	736.017		
3,641.7	3,600.2	3,714.1	3,713.7	11.0	1.4	-147.99	-1,941.3	-7,103.7	7,719.1	7,708.5	10.57	730.163		
3,700.0	3,657.9	3,769.2	3,768.8	11.2	1.4	-148.10	-1,942.6	-7,102.3	7,724.9	7,714.2	10.70	722.174		
3,740.1	3,697.8	3,800.0	3,799.5	11.3	1.4	-148.15	-1,943.3	-7,101.5	7,728.4	7,717.6	10.78	717.205		
3,800.0	3,757.3	3,841.9	3,841.4	11.4	1.4	-148.23	-1,944.2	-7,100.4	7,732.8	7,721.9	10.89	709.811		
3,838.6	3,795.7	3,865.9	3,865.4	11.5	1.4	-148.26	-1,944.8	-7,099.9	7,735.1	7,724.2	10.96	705.532		
3,900.0	3,857.0	3,900.0	3,899.5	11.7	1.4	-148.31	-1,945.6	-7,099.2	7,738.1	7,727.0	11.07	698.791		
3,937.0	3,893.9	3,929.9	3,929.4	11.7	1.4	-148.34	-1,946.4	-7,098.7	7,739.4	7,728.3	11.14	695.031		
4,000.0	3,956.9	3,973.1	3,972.6	11.8	1.4	-148.37	-1,947.5	-7,098.0	7,740.9	7,729.7	11.24	688.713		
4,035.4	3,992.3	4,000.0	3,999.4	11.9	1.4	-148.38	-1,948.3	-7,097.6	7,741.3	7,730.0	11.29	685.454		
4,072.9	4,029.8	4,030.3	4,029.7	11.9	1.5	-107.20	-1,949.1	-7,097.2	7,741.4	7,728.7	12.63	612.943		
4,100.0	4,056.9	4,054.5	4,053.9	12.0	1.5	-107.21	-1,949.7	-7,096.9	7,741.2	7,728.6	12.68	610.618		
4,133.8	4,090.7	4,084.7	4,084.1	12.0	1.5	-107.21	-1,950.5	-7,096.6	7,741.1	7,728.4	12.74	607.476		
4,200.0	4,156.9	4,167.4	4,166.8	12.1	1.5	-107.23	-1,952.3	-7,095.6	7,740.8	7,728.0	12.88	601.155		
4,232.3	4,189.2	4,208.3	4,207.7	12.2	1.5	-107.23	-1,953.0	-7,095.2	7,740.6	7,727.7	12.94	598.084		
4,300.0	4,256.9	4,274.3	4,273.7	12.3	1.5	-107.24	-1,954.0	-7,094.4	7,740.2	7,727.1	13.08	591.948		
4,330.7	4,287.6	4,300.0	4,299.3	12.4	1.5	-107.25	-1,954.4	-7,094.1	7,740.0	7,726.9	13.14	589.235		
4,400.0	4,356.9	4,367.0	4,366.4	12.5	1.5	-107.25	-1,955.3	-7,093.4	7,739.6	7,726.3	13.27	583.087		
4,429.1	4,386.0	4,393.5	4,392.9	12.5	1.5	-107.26	-1,955.7	-7,093.1	7,739.4	7,726.1	13.33	580.542		
4,500.0	4,456.9	4,441.8	4,441.2	12.6	1.5	-107.26	-1,956.3	-7,092.7	7,739.2	7,725.7	13.47	574.626		
4,527.5	4,484.4	4,459.9	4,459.3	12.7	1.5	-107.26	-1,956.5	-7,092.6	7,739.1	7,725.6	13.52	572.355		
4,550.3	4,507.2	4,474.9	4,474.2	12.7	1.5	-107.27	-1,956.7	-7,092.6	7,739.1	7,725.6	13.57	570.493		
4,600.0	4,556.9	4,500.0	4,499.3	12.8	1.6	-107.27	-1,957.0	-7,092.5	7,739.2	7,725.5	13.66	566.551		
4,626.0	4,582.9	4,529.0	4,528.3	12.9	1.6	-107.27	-1,957.4	-7,092.5	7,739.2	7,725.5	13.71	564.327		
4,700.0	4,656.9	4,586.4	4,585.7	13.0	1.6	-107.28	-1,958.1	-7,092.5	7,739.5	7,725.7	13.86	558.351		
4,724.4	4,681.3	4,606.2	4,605.5	13.0	1.6	-107.28	-1,958.4	-7,092.5	7,739.6	7,725.7	13.91	556.392		
4,800.0	4,756.9	4,674.0	4,673.3	13.1	1.6	-107.28	-1,959.3	-7,092.6	7,740.1	7,726.0	14.06	550.352		
4,822.8	4,779.7	4,694.5	4,693.8	13.2	1.6	-107.29	-1,959.5	-7,092.7	7,740.3	7,726.1	14.11	548.544		
4,900.0	4,856.9	4,764.7	4,764.0	13.3	1.6	-107.29	-1,960.4	-7,093.0	7,740.8	7,726.6	14.27	542.523		
4,921.2	4,878.1	4,784.1	4,783.4	13.4	1.6	-107.29	-1,960.6	-7,093.1	7,741.0	7,726.7	14.31	540.880		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
5,000.0	4,956.9	4,842.8	4,842.1	13.5	1.7	-107.30	-1,961.4	-7,093.4	7,741.7	7,727.2	14.47	535.023		
5,019.7	4,976.6	4,856.6	4,855.9	13.5	1.7	-107.30	-1,961.5	-7,093.5	7,741.9	7,727.4	14.51	533.584		
5,100.0	5,056.9	4,929.7	4,929.0	13.7	1.7	-107.30	-1,962.5	-7,094.2	7,742.9	7,728.3	14.67	527.658		
5,118.1	5,075.0	4,959.5	4,958.7	13.7	1.7	-107.31	-1,962.9	-7,094.4	7,743.1	7,728.4	14.71	526.227		
5,200.0	5,156.9	5,051.5	5,050.8	13.8	1.7	-107.31	-1,963.9	-7,095.0	7,743.9	7,729.0	14.89	520.201		
5,216.5	5,173.4	5,066.4	5,065.6	13.9	1.7	-107.31	-1,964.0	-7,095.1	7,744.1	7,729.1	14.92	519.029		
5,300.0	5,256.9	5,138.8	5,138.1	14.0	1.7	-107.31	-1,964.5	-7,095.7	7,744.9	7,729.8	15.09	513.252		
5,314.9	5,271.8	5,151.4	5,150.7	14.1	1.7	-107.31	-1,964.6	-7,095.8	7,745.1	7,730.0	15.12	512.236		
5,400.0	5,356.9	5,230.7	5,230.0	14.2	1.8	-107.32	-1,965.1	-7,096.7	7,746.1	7,730.8	15.29	506.498		
5,413.4	5,370.3	5,245.7	5,245.0	14.2	1.8	-107.32	-1,965.2	-7,096.9	7,746.3	7,731.0	15.32	505.592		
5,500.0	5,456.9	5,343.2	5,342.5	14.4	1.8	-107.32	-1,965.7	-7,097.8	7,747.2	7,731.7	15.50	499.828		
5,511.8	5,468.7	5,356.5	5,355.8	14.4	1.8	-107.32	-1,965.8	-7,098.0	7,747.4	7,731.8	15.52	499.055		
5,600.0	5,556.9	5,444.4	5,443.6	14.6	1.8	-107.32	-1,966.0	-7,098.8	7,748.3	7,732.5	15.70	493.395		
5,610.2	5,567.1	5,453.6	5,452.8	14.6	1.8	-107.32	-1,966.1	-7,098.9	7,748.4	7,732.6	15.72	492.748		
5,700.0	5,656.9	5,534.2	5,533.5	14.7	1.8	-107.32	-1,966.7	-7,099.6	7,749.4	7,733.4	15.91	487.088		
5,708.6	5,665.5	5,542.0	5,541.3	14.8	1.8	-107.32	-1,966.7	-7,099.7	7,749.5	7,733.5	15.93	486.540		
5,800.0	5,756.9	5,626.2	5,625.4	14.9	1.9	-107.33	-1,967.6	-7,100.5	7,750.6	7,734.5	16.12	480.813		
5,807.1	5,764.0	5,633.0	5,632.2	14.9	1.9	-107.33	-1,967.7	-7,100.6	7,750.7	7,734.5	16.13	480.370		
5,900.0	5,856.9	5,719.7	5,718.9	15.1	1.9	-107.33	-1,968.7	-7,101.5	7,751.9	7,735.5	16.33	474.638		
5,905.5	5,862.4	5,724.4	5,723.6	15.1	1.9	-107.33	-1,968.8	-7,101.5	7,752.0	7,735.6	16.34	474.304		
5,971.9	5,928.8	5,781.0	5,780.2	15.3	1.9	-107.34	-1,969.7	-7,102.1	7,752.9	7,736.4	16.48	470.303		
6,000.0	5,956.9	5,800.0	5,799.2	15.3	1.9	-17.34	-1,970.0	-7,102.3	7,752.8	7,737.3	15.51	499.913		
6,003.9	5,960.8	5,800.0	5,799.2	15.3	1.9	-17.34	-1,970.0	-7,102.3	7,752.7	7,737.2	15.51	499.780		
6,050.0	6,006.7	5,843.4	5,842.6	15.4	1.9	-17.42	-1,970.7	-7,102.8	7,750.1	7,734.5	15.58	497.528		
6,100.0	6,056.2	5,882.1	5,881.3	15.4	2.0	-17.58	-1,971.3	-7,103.3	7,744.1	7,728.5	15.66	494.582		
6,102.3	6,058.5	5,883.9	5,883.1	15.4	2.0	-17.59	-1,971.3	-7,103.3	7,743.7	7,728.1	15.66	494.434		
6,150.0	6,105.1	5,927.4	5,926.6	15.4	2.0	-17.83	-1,971.9	-7,104.0	7,734.9	7,719.2	15.74	491.324		
6,200.0	6,153.0	5,978.1	5,977.3	15.5	2.0	-18.19	-1,972.6	-7,104.8	7,722.5	7,706.6	15.82	488.099		
6,200.8	6,153.8	5,978.9	5,978.1	15.5	2.0	-18.19	-1,972.6	-7,104.8	7,722.2	7,706.4	15.82	488.050		
6,250.0	6,199.9	6,017.6	6,016.8	15.5	2.0	-18.64	-1,973.2	-7,105.4	7,706.8	7,691.0	15.88	485.423		
6,299.2	6,244.8	6,047.8	6,047.0	15.5	2.0	-19.18	-1,973.6	-7,105.9	7,688.5	7,672.6	15.90	483.508		
6,300.0	6,245.5	6,048.3	6,047.5	15.5	2.0	-19.19	-1,973.6	-7,105.9	7,688.2	7,672.3	15.90	483.483		
6,350.0	6,289.6	6,078.1	6,077.3	15.5	2.0	-19.87	-1,973.9	-7,106.5	7,666.6	7,650.7	15.90	482.215		
6,397.6	6,329.9	6,100.0	6,099.1	15.4	2.0	-20.64	-1,974.2	-7,107.0	7,643.5	7,627.6	15.87	481.698		
6,400.0	6,331.8	6,100.0	6,099.1	15.4	2.0	-20.68	-1,974.2	-7,107.0	7,642.2	7,626.4	15.86	481.716		
6,450.0	6,372.2	6,141.5	6,140.6	15.4	2.0	-21.70	-1,974.6	-7,108.0	7,615.1	7,599.3	15.83	481.144		
6,496.0	6,407.4	6,170.7	6,169.8	15.4	2.0	-22.79	-1,974.9	-7,108.7	7,587.8	7,572.0	15.78	480.873		
6,500.0	6,410.3	6,173.1	6,172.2	15.4	2.0	-22.89	-1,974.9	-7,108.7	7,585.4	7,569.6	15.77	480.865		
6,550.0	6,446.1	6,204.0	6,203.1	15.4	2.0	-24.33	-1,975.3	-7,109.5	7,553.2	7,537.4	15.73	480.163		
6,594.5	6,475.9	6,238.3	6,237.4	15.4	2.1	-25.88	-1,975.6	-7,110.4	7,522.5	7,506.8	15.73	478.288		
6,600.0	6,479.4	6,242.4	6,241.5	15.4	2.1	-26.09	-1,975.6	-7,110.5	7,518.6	7,502.9	15.73	478.017		
6,650.0	6,510.0	6,277.8	6,276.9	15.5	2.1	-28.21	-1,976.0	-7,111.4	7,481.9	7,466.1	15.79	473.843		
6,692.9	6,534.0	6,305.5	6,304.6	15.7	2.1	-30.39	-1,976.3	-7,112.1	7,448.7	7,432.8	15.93	467.712		
6,700.0	6,537.8	6,309.8	6,308.9	15.7	2.1	-30.79	-1,976.3	-7,112.2	7,443.1	7,427.2	15.95	466.548		
6,750.0	6,562.6	6,338.1	6,337.1	16.2	2.1	-33.94	-1,976.6	-7,112.9	7,402.5	7,386.3	16.27	455.056		
6,791.3	6,580.8	6,358.9	6,358.0	16.6	2.1	-37.08	-1,976.8	-7,113.4	7,367.8	7,351.1	16.67	442.061		
6,800.0	6,584.3	6,363.0	6,362.0	16.7	2.1	-37.81	-1,976.8	-7,113.5	7,360.4	7,343.6	16.78	438.655		
6,850.0	6,602.9	6,384.5	6,383.5	17.3	2.1	-42.60	-1,977.0	-7,114.0	7,316.8	7,299.3	17.53	417.432		
6,889.7	6,615.2	6,399.0	6,398.1	17.9	2.1	-47.21	-1,977.1	-7,114.3	7,281.3	7,263.0	18.30	397.781		
6,900.0	6,618.1	6,403.6	6,402.6	18.0	2.1	-48.55	-1,977.1	-7,114.5	7,272.1	7,253.5	18.53	392.524		
6,950.0	6,630.0	6,424.7	6,423.7	18.8	2.1	-55.99	-1,977.3	-7,115.0	7,226.4	7,206.6	19.74	366.048		
6,988.2	6,636.8	6,437.0	6,436.0	19.5	2.1	-62.72	-1,977.3	-7,115.2	7,191.0	7,170.2	20.74	346.771		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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)	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	
7,000.0	6,638.5	6,440.2	6,439.2	19.7	2.1	-64.99	-1,977.4	-7,115.3	7,179.9	7,158.9	21.04	341.309		
7,050.0	6,643.5	7,050.0	6,449.0	20.6	2.3	-75.42	-1,977.4	-7,115.5	7,132.9	7,110.4	22.49	317.144		
7,086.6	6,644.9	6,453.6	6,452.7	21.3	2.1	-83.70	-1,977.4	-7,115.6	7,098.5	7,075.4	23.08	307.524		
7,097.8	6,645.0	6,454.1	6,453.2	21.5	2.1	-86.29	-1,977.4	-7,115.6	7,087.9	7,064.5	23.34	303.676		
7,100.0	6,645.0	6,454.2	6,453.2	21.6	2.1	-86.29	-1,977.4	-7,115.6	7,085.8	7,062.4	23.38	303.040		
7,185.0	6,644.9	6,457.0	6,456.0	23.3	2.1	-86.36	-1,977.5	-7,115.7	7,005.5	6,980.4	25.11	279.021		
7,200.0	6,644.9	6,457.5	6,456.5	23.6	2.1	-86.37	-1,977.5	-7,115.7	6,991.4	6,966.0	25.41	275.129		
7,283.4	6,644.8	6,460.2	6,459.2	25.4	2.1	-86.44	-1,977.5	-7,115.8	6,912.8	6,885.5	27.23	253.886		
7,300.0	6,644.7	6,460.7	6,459.8	25.8	2.1	-86.45	-1,977.5	-7,115.8	6,897.2	6,869.6	27.59	250.006		
7,381.9	6,644.6	6,463.4	6,462.4	27.7	2.1	-86.51	-1,977.5	-7,115.8	6,820.1	6,790.7	29.46	231.483		
7,400.0	6,644.6	6,463.9	6,463.0	28.1	2.1	-86.53	-1,977.5	-7,115.8	6,803.1	6,773.2	29.88	227.697		
7,480.3	6,644.5	6,466.5	6,465.5	30.0	2.1	-86.59	-1,977.5	-7,115.9	6,727.7	6,695.9	31.79	211.648		
7,500.0	6,644.5	6,467.1	6,466.1	30.5	2.1	-86.61	-1,977.5	-7,115.9	6,709.2	6,676.9	32.26	208.002		
7,578.7	6,644.4	6,469.5	6,468.6	32.4	2.1	-86.67	-1,977.5	-7,116.0	6,635.4	6,601.2	34.18	194.124		
7,600.0	6,644.4	6,470.2	6,469.2	32.9	2.1	-86.68	-1,977.5	-7,116.0	6,615.5	6,580.8	34.70	190.639		
7,677.1	6,644.3	6,472.6	6,471.6	34.8	2.1	-86.74	-1,977.5	-7,116.0	6,543.3	6,506.6	36.63	178.628		
7,700.0	6,644.2	6,473.3	6,472.3	35.4	2.1	-86.76	-1,977.5	-7,116.0	6,521.9	6,484.7	37.20	175.311		
7,775.6	6,644.1	6,475.6	6,474.6	37.3	2.1	-86.81	-1,977.5	-7,116.1	6,451.3	6,412.2	39.12	164.891		
7,800.0	6,644.1	6,476.3	6,475.3	38.0	2.1	-86.83	-1,977.5	-7,116.1	6,428.6	6,388.8	39.75	161.740		
7,874.0	6,644.0	6,478.5	6,477.5	39.9	2.1	-86.89	-1,977.6	-7,116.1	6,359.6	6,318.0	41.66	152.673		
7,900.0	6,644.0	6,479.3	6,478.3	40.5	2.1	-86.91	-1,977.6	-7,116.2	6,335.4	6,293.1	42.33	149.682		
7,972.4	6,643.9	6,481.4	6,480.4	42.4	2.1	-86.96	-1,977.6	-7,116.2	6,268.1	6,223.9	44.22	141.763		
8,000.0	6,643.9	6,482.2	6,481.3	43.1	2.1	-86.98	-1,977.6	-7,116.2	6,242.5	6,197.5	44.93	138.923		
8,070.8	6,643.8	6,484.3	6,483.3	45.0	2.1	-87.03	-1,977.6	-7,116.3	6,176.8	6,130.0	46.80	131.982		
8,100.0	6,643.7	6,485.2	6,484.2	45.8	2.1	-87.05	-1,977.6	-7,116.3	6,149.7	6,102.2	47.57	129.285		
8,169.3	6,643.7	6,487.1	6,486.2	47.6	2.1	-87.10	-1,977.6	-7,116.3	6,085.7	6,036.2	49.41	123.178		
8,200.0	6,643.6	6,488.0	6,487.0	48.4	2.1	-87.12	-1,977.6	-7,116.3	6,057.3	6,007.0	50.22	120.613		
8,267.7	6,643.5	6,490.0	6,489.0	50.2	2.1	-87.17	-1,977.6	-7,116.4	5,994.8	5,942.8	52.03	115.222		
8,300.0	6,643.5	6,490.9	6,489.9	51.1	2.1	-87.19	-1,977.6	-7,116.4	5,965.0	5,912.1	52.89	112.780		
8,366.1	6,643.4	6,492.7	6,491.7	52.9	2.1	-87.24	-1,977.6	-7,116.4	5,904.2	5,849.5	54.67	108.004		
8,400.0	6,643.4	6,493.7	6,492.7	53.8	2.1	-87.26	-1,977.6	-7,116.5	5,873.0	5,817.4	55.58	105.676		
8,464.5	6,643.3	6,495.5	6,494.5	55.5	2.1	-87.30	-1,977.6	-7,116.5	5,813.8	5,756.5	57.32	101.433		
8,500.0	6,643.2	6,496.4	6,495.4	56.5	2.1	-87.33	-1,977.6	-7,116.5	5,781.3	5,723.0	58.27	99.211		
8,563.0	6,643.2	6,498.2	6,497.2	58.2	2.1	-87.37	-1,977.6	-7,116.5	5,723.7	5,663.7	59.98	95.429		
8,600.0	6,643.1	6,499.2	6,498.2	59.2	2.1	-87.40	-1,977.6	-7,116.6	5,689.8	5,628.9	60.98	93.305		
8,661.4	6,643.0	6,500.7	6,499.7	60.8	2.1	-87.43	-1,977.6	-7,116.6	5,633.8	5,571.2	62.65	89.926		
8,700.0	6,643.0	6,501.6	6,500.6	61.9	2.1	-87.46	-1,977.6	-7,116.6	5,598.7	5,535.0	63.70	87.894		
8,759.8	6,642.9	6,502.9	6,501.9	63.5	2.1	-87.49	-1,977.6	-7,116.6	5,544.3	5,479.0	65.33	84.868		
8,800.0	6,642.9	6,503.8	6,502.8	64.6	2.1	-87.51	-1,977.7	-7,116.7	5,507.8	5,441.4	66.42	82.920		
8,858.2	6,642.8	6,505.1	6,504.1	66.2	2.1	-87.54	-1,977.7	-7,116.7	5,455.1	5,387.0	68.02	80.204		
8,900.0	6,642.7	6,506.0	6,505.0	67.3	2.1	-87.57	-1,977.7	-7,116.7	5,417.3	5,348.1	69.16	78.335		
8,956.7	6,642.7	6,507.3	6,506.3	68.9	2.1	-87.60	-1,977.7	-7,116.7	5,366.1	5,295.4	70.71	75.891		
9,000.0	6,642.6	6,508.2	6,507.2	70.1	2.1	-87.62	-1,977.7	-7,116.7	5,327.1	5,255.2	71.89	74.096		
9,055.1	6,642.5	6,509.4	6,508.4	71.6	2.1	-87.65	-1,977.7	-7,116.8	5,277.6	5,204.2	73.41	71.895		
9,100.0	6,642.5	6,510.3	6,509.3	72.8	2.1	-87.67	-1,977.7	-7,116.8	5,237.3	5,162.6	74.64	70.168		
9,153.5	6,642.4	6,511.5	6,510.5	74.3	2.1	-87.70	-1,977.7	-7,116.8	5,189.3	5,113.2	76.11	68.181		
9,200.0	6,642.4	6,512.4	6,511.4	75.6	2.1	-87.72	-1,977.7	-7,116.8	5,147.8	5,070.4	77.39	66.519		
9,251.9	6,642.3	6,513.5	6,512.5	77.0	2.1	-87.75	-1,977.7	-7,116.8	5,101.5	5,022.7	78.82	64.724		
9,300.0	6,642.2	6,514.5	6,513.5	78.3	2.1	-87.77	-1,977.7	-7,116.9	5,058.7	4,978.6	80.14	63.122		
9,350.4	6,642.2	6,515.5	6,514.5	79.7	2.1	-87.80	-1,977.7	-7,116.9	5,014.0	4,932.5	81.53	61.498		
9,400.0	6,642.1	6,516.5	6,515.5	81.1	2.1	-87.82	-1,977.7	-7,116.9	4,970.1	4,887.2	82.90	59.952		
9,448.8	6,642.0	6,517.5	6,516.5	82.4	2.1	-87.85	-1,977.7	-7,116.9	4,927.0	4,842.7	84.25	58.481		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,518.5	6,517.5	83.8	2.1	-87.87	-1,977.7	-7,116.9	4,881.9	4,796.2	85.66	56.989	
9,547.2	6,641.9	6,519.4	6,518.4	85.1	2.1	-87.90	-1,977.7	-7,117.0	4,840.4	4,753.4	86.97	55.657	
9,600.0	6,641.9	6,520.5	6,519.5	86.6	2.1	-87.92	-1,977.7	-7,117.0	4,794.1	4,705.7	88.43	54.215	
9,645.6	6,641.8	6,521.3	6,520.3	87.9	2.1	-87.94	-1,977.7	-7,117.0	4,754.2	4,664.5	89.69	53.006	
9,700.0	6,641.7	6,522.4	6,521.4	89.4	2.1	-87.97	-1,977.7	-7,117.0	4,706.8	4,615.6	91.20	51.613	
9,744.1	6,641.7	6,523.2	6,522.2	90.6	2.1	-87.99	-1,977.7	-7,117.0	4,668.5	4,576.1	92.42	50.516	
9,800.0	6,641.6	6,524.3	6,523.3	92.1	2.1	-88.02	-1,977.7	-7,117.0	4,620.1	4,526.1	93.97	49.167	
9,842.5	6,641.6	6,525.0	6,524.0	93.3	2.1	-88.03	-1,977.8	-7,117.1	4,583.4	4,488.2	95.15	48.173	
9,900.0	6,641.5	6,526.1	6,525.1	94.9	2.1	-88.06	-1,977.8	-7,117.1	4,533.9	4,437.1	96.74	46.867	
9,940.9	6,641.4	6,526.9	6,525.9	96.0	2.1	-88.08	-1,977.8	-7,117.1	4,498.8	4,400.9	97.88	45.964	
10,000.0	6,641.4	6,527.9	6,526.9	97.7	2.1	-88.11	-1,977.8	-7,117.1	4,448.3	4,348.7	99.52	44.699	
10,039.3	6,641.3	6,528.6	6,527.6	98.8	2.1	-88.12	-1,977.8	-7,117.1	4,414.7	4,314.1	100.61	43.880	
10,100.0	6,641.2	6,529.7	6,528.7	100.4	2.1	-88.15	-1,977.8	-7,117.1	4,363.2	4,260.9	102.29	42.654	
10,137.8	6,641.2	6,530.4	6,529.4	101.5	2.1	-88.17	-1,977.8	-7,117.2	4,331.3	4,227.9	103.34	41.912	
10,200.0	6,641.1	6,531.5	6,530.5	103.2	2.1	-88.19	-1,977.8	-7,117.2	4,278.9	4,173.8	105.07	40.723	
10,236.2	6,641.1	6,532.1	6,531.1	104.2	2.1	-88.21	-1,977.8	-7,117.2	4,248.5	4,142.4	106.08	40.050	
10,300.0	6,641.0	6,533.2	6,532.2	106.0	2.1	-88.24	-1,977.8	-7,117.2	4,195.2	4,087.3	107.85	38.897	
10,334.6	6,640.9	6,533.8	6,532.8	107.0	2.1	-88.25	-1,977.8	-7,117.2	4,166.4	4,057.5	108.82	38.288	
10,400.0	6,640.9	6,534.9	6,533.9	108.8	2.1	-88.28	-1,977.8	-7,117.2	4,112.2	4,001.6	110.64	37.169	
10,433.0	6,640.8	6,535.5	6,534.5	109.7	2.1	-88.29	-1,977.8	-7,117.2	4,085.0	3,973.4	111.56	36.618	
10,500.0	6,640.7	6,536.6	6,535.6	111.6	2.1	-88.32	-1,977.8	-7,117.3	4,030.0	3,916.6	113.42	35.532	
10,531.5	6,640.7	6,537.1	6,536.1	112.4	2.1	-88.33	-1,977.8	-7,117.3	4,004.3	3,890.0	114.30	35.034	
10,600.0	6,640.6	6,538.2	6,537.2	114.3	2.1	-88.36	-1,977.8	-7,117.3	3,948.7	3,832.5	116.21	33.980	
10,629.9	6,640.6	6,538.7	6,537.7	115.2	2.1	-88.37	-1,977.8	-7,117.3	3,924.5	3,807.5	117.04	33.531	
10,700.0	6,640.5	6,539.9	6,538.9	117.1	2.1	-88.40	-1,977.8	-7,117.3	3,868.2	3,749.2	118.99	32.507	
10,728.3	6,640.4	6,540.3	6,539.3	117.9	2.1	-88.41	-1,977.8	-7,117.3	3,845.5	3,725.8	119.78	32.104	
10,800.0	6,640.4	6,541.5	6,540.5	119.9	2.1	-88.44	-1,977.9	-7,117.3	3,788.6	3,666.8	121.78	31.110	
10,826.7	6,640.3	6,541.9	6,540.9	120.7	2.1	-88.45	-1,977.9	-7,117.4	3,767.5	3,645.0	122.53	30.748	
10,900.0	6,640.2	6,543.0	6,542.0	122.7	2.1	-88.48	-1,977.9	-7,117.4	3,710.0	3,585.5	124.57	29.782	
10,925.2	6,640.2	6,543.4	6,542.4	123.4	2.1	-88.49	-1,977.9	-7,117.4	3,690.4	3,565.1	125.27	29.459	
11,000.0	6,640.1	6,544.6	6,543.6	125.5	2.1	-88.52	-1,977.9	-7,117.4	3,632.5	3,505.2	127.36	28.521	
11,023.6	6,640.1	6,545.0	6,544.0	126.1	2.1	-88.53	-1,977.9	-7,117.4	3,614.4	3,486.4	128.02	28.233	
11,100.0	6,640.0	6,546.1	6,545.1	128.3	2.1	-88.56	-1,977.9	-7,117.4	3,556.1	3,426.0	130.15	27.322	
11,122.0	6,639.9	6,546.5	6,545.5	128.9	2.1	-88.56	-1,977.9	-7,117.4	3,539.4	3,408.7	130.77	27.066	
11,200.0	6,639.8	6,547.6	6,546.6	131.1	2.1	-88.59	-1,977.9	-7,117.4	3,480.9	3,348.0	132.95	26.183	
11,220.4	6,639.8	6,547.9	6,546.9	131.6	2.1	-88.60	-1,977.9	-7,117.5	3,465.7	3,332.2	133.52	25.957	
11,300.0	6,639.7	6,549.1	6,548.1	133.9	2.1	-88.63	-1,977.9	-7,117.5	3,407.0	3,271.2	135.74	25.099	
11,318.9	6,639.7	6,549.4	6,548.4	134.4	2.1	-88.64	-1,977.9	-7,117.5	3,393.2	3,256.9	136.27	24.901	
11,400.0	6,639.6	6,550.6	6,549.6	136.7	2.1	-88.67	-1,977.9	-7,117.5	3,334.4	3,195.9	138.53	24.069	
11,417.3	6,639.6	6,550.8	6,549.8	137.1	2.1	-88.67	-1,977.9	-7,117.5	3,322.0	3,183.0	139.02	23.896	
11,500.0	6,639.5	6,552.0	6,551.0	139.4	2.1	-88.70	-1,977.9	-7,117.5	3,263.3	3,122.0	141.33	23.090	
11,515.7	6,639.5	6,552.2	6,551.2	139.9	2.1	-88.71	-1,977.9	-7,117.5	3,252.3	3,110.5	141.77	22.941	
11,600.0	6,639.3	6,553.4	6,552.4	142.2	2.1	-88.74	-1,977.9	-7,117.5	3,193.7	3,049.6	144.12	22.159	
11,614.1	6,639.3	6,553.6	6,552.6	142.6	2.1	-88.74	-1,978.0	-7,117.5	3,184.0	3,039.5	144.52	22.032	
11,700.0	6,639.2	6,554.8	6,553.8	145.0	2.1	-88.77	-1,978.0	-7,117.6	3,125.8	2,978.9	146.92	21.275	
11,712.6	6,639.2	6,555.0	6,554.0	145.4	2.1	-88.77	-1,978.0	-7,117.6	3,117.4	2,970.1	147.27	21.167	
11,800.0	6,639.1	6,556.2	6,555.2	147.8	2.1	-88.80	-1,978.0	-7,117.6	3,059.6	2,909.9	149.72	20.436	
11,811.0	6,639.1	6,556.3	6,555.3	148.1	2.1	-88.81	-1,978.0	-7,117.6	3,052.5	2,902.5	150.03	20.346	
11,900.0	6,639.0	6,557.5	6,556.5	150.6	2.1	-88.84	-1,978.0	-7,117.6	2,995.4	2,842.8	152.52	19.640	
11,909.4	6,639.0	6,557.7	6,556.7	150.9	2.1	-88.84	-1,978.0	-7,117.6	2,989.4	2,836.6	152.78	19.567	
12,000.0	6,638.8	6,558.9	6,557.9	153.4	2.1	-88.87	-1,978.0	-7,117.6	2,933.1	2,777.8	155.31	18.885	
12,007.8	6,638.8	6,559.0	6,558.0	153.6	2.1	-88.87	-1,978.0	-7,117.6	2,928.3	2,772.7	155.53	18.827	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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)	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	6,638.7	6,560.2	6,559.2	156.2	2.1	-88.90	-1,978.0	-7,117.6	2,872.9	2,714.8	158.11	18.170		
12,106.3	6,638.7	6,560.3	6,559.3	156.4	2.1	-88.91	-1,978.0	-7,117.6	2,869.2	2,710.9	158.29	18.127		
12,200.0	6,638.6	6,561.5	6,560.5	159.0	2.1	-88.94	-1,978.0	-7,117.7	2,815.0	2,654.1	160.91	17.494		
12,204.7	6,638.6	6,561.6	6,560.6	159.1	2.1	-88.94	-1,978.0	-7,117.7	2,812.4	2,651.3	161.04	17.464		
12,300.0	6,638.5	6,562.8	6,561.8	161.8	2.1	-88.97	-1,978.0	-7,117.7	2,759.6	2,595.9	163.71	16.856		
12,303.1	6,638.5	6,562.8	6,561.8	161.9	2.1	-88.97	-1,978.0	-7,117.7	2,757.9	2,594.1	163.80	16.837		
12,400.0	6,638.3	6,564.0	6,563.0	164.6	2.1	-89.00	-1,978.0	-7,117.7	2,706.7	2,540.1	166.51	16.255		
12,401.5	6,638.3	6,564.1	6,563.1	164.6	2.1	-89.00	-1,978.0	-7,117.7	2,705.9	2,539.3	166.55	16.246		
12,500.0	6,638.2	6,565.3	6,564.3	167.4	2.1	-89.03	-1,978.1	-7,117.7	2,656.4	2,487.1	169.31	15.690		
12,598.4	6,638.1	6,566.5	6,565.5	170.2	2.1	-89.06	-1,978.1	-7,117.7	2,609.8	2,437.8	172.07	15.168		
12,600.0	6,638.1	6,566.5	6,565.5	170.2	2.1	-89.06	-1,978.1	-7,117.7	2,609.1	2,437.0	172.11	15.159		
12,696.8	6,638.0	6,567.7	6,566.7	172.9	2.1	-89.09	-1,978.1	-7,117.8	2,566.2	2,391.3	174.82	14.679		
12,700.0	6,638.0	6,567.7	6,566.7	173.0	2.1	-89.09	-1,978.1	-7,117.8	2,564.8	2,389.9	174.91	14.663		
12,795.2	6,637.8	6,568.9	6,567.9	175.7	2.1	-89.12	-1,978.1	-7,117.8	2,525.5	2,348.0	177.58	14.222		
12,800.0	6,637.8	6,568.9	6,567.9	175.8	2.1	-89.12	-1,978.1	-7,117.8	2,523.7	2,346.0	177.71	14.201		
12,893.7	6,637.7	6,570.0	6,569.0	178.4	2.1	-89.15	-1,978.1	-7,117.8	2,488.2	2,307.8	180.34	13.797		
12,900.0	6,637.7	6,570.1	6,569.1	178.6	2.1	-89.15	-1,978.1	-7,117.8	2,485.9	2,305.4	180.51	13.771		
12,992.1	6,637.6	6,571.2	6,570.2	181.2	2.1	-89.17	-1,978.1	-7,117.8	2,454.2	2,271.1	183.10	13.404		
13,000.0	6,637.6	6,571.3	6,570.3	181.4	2.1	-89.18	-1,978.1	-7,117.8	2,451.6	2,268.3	183.32	13.374		
13,090.5	6,637.5	6,572.3	6,571.3	183.9	2.1	-89.20	-1,978.1	-7,117.8	2,423.7	2,237.9	185.85	13.041		
13,100.0	6,637.5	6,572.4	6,571.4	184.2	2.1	-89.20	-1,978.1	-7,117.8	2,421.0	2,234.8	186.12	13.008		
13,188.9	6,637.4	6,573.4	6,572.4	186.7	2.1	-89.23	-1,978.1	-7,117.8	2,396.9	2,208.3	188.61	12.708		
13,200.0	6,637.3	6,573.5	6,572.5	187.0	2.1	-89.23	-1,978.1	-7,117.8	2,394.1	2,205.2	188.92	12.673		
13,287.4	6,637.2	6,574.5	6,573.5	189.4	2.1	-89.26	-1,978.1	-7,117.9	2,373.9	2,182.5	191.37	12.404		
13,300.0	6,637.2	6,574.7	6,573.6	189.8	2.1	-89.26	-1,978.1	-7,117.9	2,371.2	2,179.5	191.72	12.368		
13,385.8	6,637.1	6,575.6	6,574.6	192.2	2.1	-89.28	-1,978.2	-7,117.9	2,354.7	2,160.6	194.13	12.130		
13,400.0	6,637.1	6,575.8	6,574.7	192.6	2.1	-89.29	-1,978.2	-7,117.9	2,352.3	2,157.8	194.53	12.092		
13,484.2	6,637.0	6,576.7	6,575.7	195.0	2.1	-89.31	-1,978.2	-7,117.9	2,339.6	2,142.7	196.89	11.883		
13,500.0	6,637.0	6,576.8	6,575.8	195.4	2.1	-89.31	-1,978.2	-7,117.9	2,337.5	2,140.2	197.33	11.846		
13,582.6	6,636.9	6,577.7	6,576.7	197.7	2.1	-89.34	-1,978.2	-7,117.9	2,328.5	2,128.8	199.65	11.663		
13,600.0	6,636.8	6,577.9	6,576.9	198.2	2.1	-89.34	-1,978.2	-7,117.9	2,326.9	2,126.8	200.14	11.627		
13,681.1	6,636.7	6,578.8	6,577.8	200.5	2.1	-89.36	-1,978.2	-7,117.9	2,321.5	2,119.1	202.41	11.469		
13,700.0	6,636.7	6,579.0	6,578.0	201.0	2.1	-89.37	-1,978.2	-7,117.9	2,320.6	2,117.7	202.94	11.435		
13,779.5	6,636.6	6,579.8	6,578.8	203.2	2.1	-89.39	-1,978.2	-7,117.9	2,318.7	2,113.5	205.17	11.301		
13,796.5	6,636.6	6,580.0	6,579.0	203.7	2.1	-89.39	-1,978.2	-7,117.9	2,318.6	2,113.0	205.64	11.275 CC		
13,800.0	6,636.6	6,580.0	6,579.0	203.8	2.1	-89.39	-1,978.2	-7,117.9	2,318.6	2,112.9	205.74	11.270		
13,877.9	6,636.5	6,580.8	6,579.8	206.0	2.1	-89.41	-1,978.2	-7,117.9	2,320.1	2,112.1	207.93	11.158 ES		
13,900.0	6,636.5	6,581.1	6,580.1	206.6	2.1	-89.42	-1,978.2	-7,117.9	2,320.9	2,112.4	208.55	11.129		
13,976.3	6,636.4	6,581.8	6,580.8	208.8	2.1	-89.44	-1,978.2	-7,118.0	2,325.6	2,114.9	210.69	11.038		
14,000.0	6,636.3	6,582.1	6,581.1	209.4	2.1	-89.44	-1,978.2	-7,118.0	2,327.5	2,116.2	211.35	11.013		
14,074.8	6,636.2	6,582.8	6,581.8	211.5	2.1	-89.46	-1,978.2	-7,118.0	2,335.3	2,121.8	213.45	10.941		
14,100.0	6,636.2	6,583.1	6,582.1	212.2	2.1	-89.47	-1,978.2	-7,118.0	2,338.4	2,124.3	214.16	10.919		
14,173.2	6,636.1	6,583.8	6,582.8	214.3	2.2	-89.49	-1,978.2	-7,118.0	2,349.0	2,132.8	216.21	10.865		
14,200.0	6,636.1	6,584.1	6,583.1	215.0	2.2	-89.49	-1,978.2	-7,118.0	2,353.5	2,136.5	216.96	10.847		
14,271.6	6,636.0	6,584.8	6,583.8	217.0	2.2	-89.51	-1,978.3	-7,118.0	2,366.8	2,147.8	218.97	10.809		
14,300.0	6,636.0	6,585.1	6,584.1	217.8	2.2	-89.52	-1,978.3	-7,118.0	2,372.7	2,152.9	219.77	10.796		
14,370.0	6,635.9	6,585.8	6,584.7	219.8	2.2	-89.53	-1,978.3	-7,118.0	2,388.5	2,166.8	221.73	10.772		
14,400.0	6,635.8	6,586.0	6,585.0	220.6	2.2	-89.54	-1,978.3	-7,118.0	2,395.9	2,173.3	222.57	10.765		
14,468.5	6,635.7	6,586.7	6,585.7	222.6	2.2	-89.56	-1,978.3	-7,118.0	2,414.0	2,189.5	224.49	10.753		
14,500.0	6,635.7	6,587.0	6,586.0	223.4	2.2	-89.57	-1,978.3	-7,118.0	2,423.0	2,197.6	225.38	10.751 SF		
14,566.9	6,635.6	6,587.6	6,586.6	225.3	2.2	-89.58	-1,978.3	-7,118.0	2,443.3	2,216.0	227.25	10.751		
14,600.0	6,635.6	6,587.9	6,586.9	226.2	2.2	-89.59	-1,978.3	-7,118.0	2,453.9	2,225.7	228.18	10.754		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,665.3	6,635.5	6,588.6	6,587.6	228.1	2.2	-89.60	-1,978.3	-7,118.0	2,476.0	2,246.0	230.01	10.765	
14,700.0	6,635.5	6,588.9	6,587.9	229.0	2.2	-89.61	-1,978.3	-7,118.1	2,488.4	2,257.4	230.99	10.773	
14,763.7	6,635.4	6,600.0	6,599.0	230.8	2.2	-89.89	-1,978.4	-7,118.2	2,512.3	2,279.5	232.79	10.792	
14,800.0	6,635.3	6,600.0	6,599.0	231.8	2.2	-89.89	-1,978.4	-7,118.2	2,526.5	2,292.7	233.80	10.806	
14,862.2	6,635.2	6,600.0	6,599.0	233.6	2.2	-89.89	-1,978.4	-7,118.2	2,551.8	2,316.3	235.55	10.833	
14,900.0	6,635.2	6,600.0	6,599.0	234.7	2.2	-89.89	-1,978.4	-7,118.2	2,567.8	2,331.2	236.61	10.853	
14,960.6	6,635.1	6,600.0	6,599.0	236.4	2.2	-89.89	-1,978.4	-7,118.2	2,594.4	2,356.1	238.31	10.887	
14,995.1	6,635.0	6,600.0	6,599.0	237.3	2.2	-89.89	-1,978.4	-7,118.2	2,610.1	2,370.8	239.28	10.908	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-99.02	-1,181.8	-7,448.0	7,541.2				
98.4	98.4	87.4	87.4	0.1	0.0	-99.02	-1,181.8	-7,448.0	7,541.2	7,541.1	0.10	N/A	
100.0	100.0	89.0	89.0	0.1	0.0	-99.02	-1,181.8	-7,448.0	7,541.2	7,541.1	0.10	N/A	
196.8	196.8	185.8	185.8	0.3	1.0	-99.02	-1,181.8	-7,448.0	7,541.2	7,539.9	1.31	5,757.309	
200.0	200.0	189.0	189.0	0.3	1.0	-99.02	-1,181.8	-7,448.0	7,541.2	7,539.8	1.35	5,571.983	
295.3	295.3	284.3	284.3	0.5	3.1	-99.02	-1,181.8	-7,448.0	7,541.2	7,537.5	3.63	2,076.265	
300.0	300.0	289.0	289.0	0.5	3.2	-99.02	-1,181.8	-7,448.0	7,541.2	7,537.4	3.75	2,010.276	
393.7	393.7	382.7	382.7	0.8	5.2	-99.02	-1,181.8	-7,448.0	7,541.2	7,535.2	5.93	1,270.820	
400.0	400.0	389.0	389.0	0.8	5.3	-99.02	-1,181.8	-7,448.0	7,541.2	7,535.1	6.08	1,240.480	
492.1	492.1	481.1	481.1	1.0	7.2	-99.02	-1,181.8	-7,448.0	7,541.2	7,533.0	8.17	922.822	
500.0	500.0	489.0	489.0	1.0	7.4	-99.02	-1,181.8	-7,448.0	7,541.2	7,532.8	8.35	903.092	
590.5	590.5	579.5	579.5	1.2	9.2	-99.02	-1,181.8	-7,448.0	7,541.2	7,530.8	10.39	725.619	
600.0	600.0	589.0	589.0	1.2	9.4	-99.02	-1,181.8	-7,448.0	7,541.2	7,530.6	10.61	711.047	
689.0	689.0	678.0	678.0	1.4	11.2	-99.02	-1,181.8	-7,448.0	7,541.2	7,528.6	12.61	598.212	
700.0	700.0	689.0	689.0	1.4	11.4	-99.02	-1,181.8	-7,448.0	7,541.2	7,528.3	12.85	586.680	
787.4	787.4	776.4	776.4	1.6	13.2	-99.02	-1,181.8	-7,448.0	7,541.2	7,526.4	14.82	508.999	
800.0	800.0	789.0	789.0	1.7	13.4	-99.02	-1,181.8	-7,448.0	7,541.2	7,526.1	15.10	499.467	
885.8	885.8	874.8	874.8	1.9	15.2	-99.02	-1,181.8	-7,448.0	7,541.2	7,524.2	17.02	443.005	
900.0	900.0	889.0	889.0	1.9	15.4	-99.02	-1,181.8	-7,448.0	7,541.2	7,523.8	17.34	434.886	
984.2	984.2	973.2	973.2	2.1	17.1	-99.02	-1,181.8	-7,448.0	7,541.2	7,521.9	19.23	392.190	
1,000.0	1,000.0	989.0	989.0	2.1	17.5	-99.02	-1,181.8	-7,448.0	7,541.2	7,521.6	19.58	385.123	
1,082.7	1,082.7	1,071.7	1,071.7	2.3	19.1	-99.02	-1,181.8	-7,448.0	7,541.2	7,519.7	21.43	351.851	
1,100.0	1,100.0	1,089.0	1,089.0	2.3	19.5	-99.02	-1,181.8	-7,448.0	7,541.2	7,519.4	21.82	345.595	
1,181.1	1,181.1	1,170.1	1,170.1	2.5	21.1	-99.02	-1,181.8	-7,448.0	7,541.2	7,517.5	23.64	319.046	
1,200.0	1,200.0	1,189.0	1,189.0	2.6	21.5	-99.02	-1,181.8	-7,448.0	7,541.2	7,517.1	24.06	313.435	
1,279.5	1,279.5	1,268.5	1,268.5	2.7	23.1	-99.02	-1,181.8	-7,448.0	7,541.2	7,515.3	25.84	291.843	
1,300.0	1,300.0	1,289.0	1,289.0	2.8	23.5	-99.02	-1,181.8	-7,448.0	7,541.2	7,514.9	26.30	286.758	
1,377.9	1,377.9	1,366.9	1,366.9	3.0	25.1	-140.20	-1,181.8	-7,448.0	7,542.0	7,514.0	28.03	269.036	
1,400.0	1,400.0	1,389.0	1,389.0	3.0	25.5	-140.20	-1,181.8	-7,448.0	7,542.5	7,514.0	28.52	264.449	
1,476.4	1,476.3	1,465.3	1,465.3	3.2	27.1	-140.18	-1,181.8	-7,448.0	7,545.3	7,515.1	30.20	249.841	
1,500.0	1,499.8	1,488.8	1,488.8	3.2	27.5	-140.17	-1,181.8	-7,448.0	7,546.5	7,515.8	30.72	245.686	
1,574.8	1,574.4	1,563.4	1,563.4	3.4	29.0	-140.14	-1,181.8	-7,448.0	7,551.3	7,519.0	32.34	233.505	
1,600.0	1,599.5	1,588.5	1,588.5	3.5	29.5	-140.13	-1,181.8	-7,448.0	7,553.2	7,520.4	32.88	229.715	
1,673.2	1,672.2	1,661.2	1,661.2	3.6	31.0	-140.08	-1,181.8	-7,448.0	7,559.8	7,525.4	34.45	219.468	
1,700.0	1,698.7	1,687.7	1,687.7	3.7	31.5	-140.07	-1,181.8	-7,448.0	7,562.6	7,527.6	35.01	215.997	
1,771.6	1,769.5	1,758.5	1,758.5	3.9	33.0	-140.01	-1,181.8	-7,448.0	7,571.0	7,534.5	36.52	207.308	
1,800.0	1,797.5	1,786.5	1,786.5	4.0	33.5	-139.98	-1,181.8	-7,448.0	7,574.7	7,537.6	37.11	204.116	
1,870.1	1,866.3	1,855.3	1,855.3	4.2	34.9	-139.92	-1,181.8	-7,448.0	7,584.7	7,546.1	38.56	196.696	
1,899.9	1,895.6	1,884.6	1,884.6	4.3	35.5	-139.89	-1,181.8	-7,448.0	7,589.4	7,550.2	39.17	193.753	
1,968.5	1,962.6	1,951.6	1,951.6	4.5	36.8	-139.95	-1,181.8	-7,448.0	7,600.4	7,559.7	40.68	186.812	
2,000.0	1,993.4	1,982.4	1,982.4	4.6	37.5	-139.99	-1,181.8	-7,448.0	7,605.4	7,564.1	41.38	183.796	
2,066.9	2,058.9	2,047.9	2,047.9	4.8	38.8	-140.05	-1,181.8	-7,448.0	7,616.2	7,573.3	42.87	177.675	
2,100.0	2,091.3	2,080.3	2,080.3	4.9	39.4	-140.09	-1,181.8	-7,448.0	7,621.5	7,577.9	43.60	174.810	
2,165.3	2,155.2	2,144.2	2,144.2	5.2	40.7	-140.15	-1,181.8	-7,448.0	7,632.0	7,587.0	45.05	169.398	
2,200.0	2,189.1	2,178.1	2,178.1	5.3	41.4	-140.18	-1,181.8	-7,448.0	7,637.6	7,591.8	45.83	166.663	
2,263.8	2,251.5	2,240.5	2,240.5	5.5	42.6	-140.25	-1,181.8	-7,448.0	7,647.9	7,600.6	47.25	161.853	
2,300.0	2,286.9	2,275.9	2,275.9	5.7	43.4	-140.28	-1,181.8	-7,448.0	7,653.7	7,605.7	48.06	159.248	
2,362.2	2,347.7	2,336.7	2,336.7	5.9	44.6	-140.34	-1,181.8	-7,448.0	7,663.8	7,614.3	49.46	154.962	
2,400.0	2,384.7	2,373.7	2,373.7	6.0	45.3	-140.38	-1,181.8	-7,448.0	7,669.9	7,619.6	50.30	152.474	
2,460.6	2,444.0	2,433.0	2,433.0	6.3	46.5	-140.44	-1,181.8	-7,448.0	7,679.7	7,628.0	51.66	148.645	
2,500.0	2,482.5	2,471.5	2,471.5	6.4	47.3	-140.48	-1,181.8	-7,448.0	7,686.1	7,633.5	52.55	146.265	
2,559.0	2,540.3	2,529.3	2,529.3	6.7	48.5	-140.54	-1,181.8	-7,448.0	7,695.6	7,641.7	53.88	142.836	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,569.3	2,569.3	6.8	49.3	-140.58	-1,181.8	-7,448.0	7,702.2	7,647.4	54.80	140.556		
2,657.5	2,636.5	2,625.5	2,625.5	7.1	50.4	-140.63	-1,181.8	-7,448.0	7,711.6	7,655.5	56.09	137.476		
2,700.0	2,678.1	2,667.1	2,667.1	7.2	51.2	-140.67	-1,181.8	-7,448.0	7,718.5	7,661.4	57.05	135.288		
2,755.9	2,732.8	2,721.8	2,721.8	7.5	52.3	-140.73	-1,181.8	-7,448.0	7,727.5	7,669.2	58.31	132.518		
2,800.0	2,776.0	2,765.0	2,765.0	7.7	53.2	-140.77	-1,181.8	-7,448.0	7,734.7	7,675.4	59.31	130.416		
2,854.3	2,829.1	2,818.1	2,818.1	7.9	54.3	-140.82	-1,181.8	-7,448.0	7,743.5	7,683.0	60.53	127.918		
2,900.0	2,873.8	2,862.8	2,862.8	8.1	55.2	-140.87	-1,181.8	-7,448.0	7,750.9	7,689.4	61.57	125.896		
2,952.7	2,925.4	2,914.4	2,914.4	8.3	56.2	-140.92	-1,181.8	-7,448.0	7,759.5	7,696.8	62.76	123.641		
3,000.0	2,971.6	2,960.6	2,960.6	8.5	57.1	-140.96	-1,181.8	-7,448.0	7,767.2	7,703.4	63.83	121.693		
3,051.2	3,021.6	3,010.6	3,010.6	8.7	58.1	-141.01	-1,181.8	-7,448.0	7,775.6	7,710.6	64.98	119.653		
3,100.0	3,069.4	3,058.4	3,058.4	8.9	59.1	-141.06	-1,181.8	-7,448.0	7,783.5	7,717.4	66.09	117.774		
3,149.6	3,117.9	3,106.9	3,106.9	9.1	60.1	-141.11	-1,181.8	-7,448.0	7,791.6	7,724.4	67.21	115.927		
3,200.0	3,167.2	3,156.2	3,156.2	9.3	61.1	-141.15	-1,181.8	-7,448.0	7,799.8	7,731.5	68.35	114.113		
3,248.0	3,214.2	3,203.2	3,203.2	9.5	62.0	-141.20	-1,181.8	-7,448.0	7,807.7	7,738.2	69.44	112.439		
3,300.0	3,265.0	3,254.0	3,254.0	9.8	63.0	-141.25	-1,181.8	-7,448.0	7,816.2	7,745.6	70.62	110.686		
3,346.4	3,310.5	3,299.5	3,299.5	10.0	64.0	-141.29	-1,181.8	-7,448.0	7,823.8	7,752.1	71.67	109.167		
3,400.0	3,362.9	3,351.9	3,351.9	10.2	65.0	-141.34	-1,181.8	-7,448.0	7,832.5	7,759.7	72.88	107.470		
3,444.9	3,406.7	3,395.7	3,395.7	10.4	65.9	-141.39	-1,181.8	-7,448.0	7,839.9	7,766.0	73.90	106.091		
3,473.0	3,434.2	3,423.2	3,423.2	10.5	66.4	-141.41	-1,181.8	-7,448.0	7,844.5	7,770.0	74.53	105.247		
3,500.0	3,460.7	3,449.7	3,449.7	10.6	67.0	-141.49	-1,181.8	-7,448.0	7,848.8	7,773.6	75.22	104.350		
3,543.3	3,503.2	3,492.2	3,492.2	10.7	67.8	-141.61	-1,181.8	-7,448.0	7,855.4	7,779.1	76.29	102.968		
3,600.0	3,559.0	3,548.0	3,548.0	10.9	68.9	-141.75	-1,181.8	-7,448.0	7,863.2	7,785.5	77.69	101.214		
3,641.7	3,600.2	3,589.2	3,589.2	11.0	69.8	-141.85	-1,181.8	-7,448.0	7,868.3	7,789.6	78.71	99.972		
3,700.0	3,657.9	3,646.9	3,646.9	11.2	70.9	-141.96	-1,181.8	-7,448.0	7,874.8	7,794.7	80.12	98.290		
3,740.1	3,697.8	3,686.8	3,686.8	11.3	71.7	-142.03	-1,181.8	-7,448.0	7,878.7	7,797.6	81.08	97.176		
3,800.0	3,757.3	3,746.3	3,746.3	11.4	72.9	-142.12	-1,181.8	-7,448.0	7,883.7	7,801.2	82.49	95.567		
3,838.6	3,795.7	3,784.7	3,784.7	11.5	73.7	-142.17	-1,181.8	-7,448.0	7,886.4	7,803.0	83.39	94.570		
3,900.0	3,857.0	3,846.0	3,846.0	11.7	74.9	-142.23	-1,181.8	-7,448.0	7,889.8	7,805.0	84.81	93.031		
3,937.0	3,893.9	3,882.9	3,882.9	11.7	75.7	-142.26	-1,181.8	-7,448.0	7,891.4	7,805.7	85.64	92.141		
4,000.0	3,956.9	3,945.9	3,945.9	11.8	77.0	-142.29	-1,181.8	-7,448.0	7,893.2	7,806.1	87.05	90.672		
4,035.4	3,992.3	3,981.3	3,981.3	11.9	77.7	-142.30	-1,181.8	-7,448.0	7,893.7	7,805.9	87.83	89.877		
4,072.9	4,029.8	4,018.8	4,018.8	11.9	78.4	-101.12	-1,181.8	-7,448.0	7,893.9	7,804.5	89.45	88.251		
4,100.0	4,056.9	4,045.9	4,045.9	12.0	79.0	-101.12	-1,181.8	-7,448.0	7,893.9	7,803.9	90.04	87.675		
4,133.8	4,090.7	4,079.7	4,079.7	12.0	79.6	-101.12	-1,181.8	-7,448.0	7,893.9	7,803.2	90.78	86.960		
4,200.0	4,156.9	4,145.9	4,145.9	12.1	81.0	-101.12	-1,181.8	-7,448.0	7,893.9	7,801.7	92.22	85.597		
4,232.3	4,189.2	4,178.2	4,178.2	12.2	81.6	-101.12	-1,181.8	-7,448.0	7,893.9	7,801.0	92.93	84.947		
4,300.0	4,256.9	4,245.9	4,245.9	12.3	83.0	-101.12	-1,181.8	-7,448.0	7,893.9	7,799.5	94.41	83.614		
4,330.7	4,287.6	4,276.6	4,276.6	12.4	83.6	-101.12	-1,181.8	-7,448.0	7,893.9	7,798.9	95.08	83.023		
4,400.0	4,356.9	4,345.9	4,345.9	12.5	85.0	-101.12	-1,181.8	-7,448.0	7,893.9	7,797.3	96.60	81.719		
4,429.1	4,386.0	4,375.0	4,375.0	12.5	85.6	-101.12	-1,181.8	-7,448.0	7,893.9	7,796.7	97.24	81.183		
4,500.0	4,456.9	4,445.9	4,445.9	12.6	87.0	-101.12	-1,181.8	-7,448.0	7,893.9	7,795.1	98.79	79.907		
4,527.5	4,484.4	4,473.4	4,473.4	12.7	87.6	-101.12	-1,181.8	-7,448.0	7,893.9	7,794.5	99.39	79.421		
4,600.0	4,556.9	4,545.9	4,545.9	12.8	89.0	-101.12	-1,181.8	-7,448.0	7,893.9	7,793.0	100.98	78.172		
4,626.0	4,582.9	4,571.9	4,571.9	12.9	89.5	-101.12	-1,181.8	-7,448.0	7,893.9	7,792.4	101.55	77.734		
4,700.0	4,656.9	4,645.9	4,645.9	13.0	91.0	-101.12	-1,181.8	-7,448.0	7,893.9	7,790.8	103.17	76.510		
4,724.4	4,681.3	4,670.3	4,670.3	13.0	91.5	-101.12	-1,181.8	-7,448.0	7,893.9	7,790.2	103.71	76.115		
4,800.0	4,756.9	4,745.9	4,745.9	13.1	93.0	-101.12	-1,181.8	-7,448.0	7,893.9	7,788.6	105.37	74.916		
4,822.8	4,779.7	4,768.7	4,768.7	13.2	93.5	-101.12	-1,181.8	-7,448.0	7,893.9	7,788.1	105.87	74.562		
4,900.0	4,856.9	4,845.9	4,845.9	13.3	95.1	-101.12	-1,181.8	-7,448.0	7,893.9	7,786.4	107.57	73.387		
4,921.2	4,878.1	4,867.1	4,867.1	13.4	95.5	-101.12	-1,181.8	-7,448.0	7,893.9	7,785.9	108.03	73.069		
5,000.0	4,956.9	4,945.9	4,945.9	13.5	97.1	-101.12	-1,181.8	-7,448.0	7,893.9	7,784.2	109.76	71.917		
5,019.7	4,976.6	4,965.6	4,965.6	13.5	97.5	-101.12	-1,181.8	-7,448.0	7,893.9	7,783.7	110.20	71.635		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,045.9	5,045.9	13.7	99.1	-101.12	-1,181.8	-7,448.0	7,893.9	7,782.0	111.96	70.505	
5,118.1	5,075.0	5,064.0	5,064.0	13.7	99.4	-101.12	-1,181.8	-7,448.0	7,893.9	7,781.6	112.36	70.255	
5,200.0	5,156.9	5,145.9	5,145.9	13.8	101.1	-101.12	-1,181.8	-7,448.0	7,893.9	7,779.8	114.16	69.146	
5,216.5	5,173.4	5,162.4	5,162.4	13.9	101.4	-101.12	-1,181.8	-7,448.0	7,893.9	7,779.4	114.53	68.927	
5,300.0	5,256.9	5,245.9	5,245.9	14.0	103.1	-101.12	-1,181.8	-7,448.0	7,893.9	7,777.6	116.36	67.838	
5,314.9	5,271.8	5,260.8	5,260.8	14.1	103.4	-101.12	-1,181.8	-7,448.0	7,893.9	7,777.2	116.69	67.647	
5,400.0	5,356.9	5,345.9	5,345.9	14.2	105.1	-101.12	-1,181.8	-7,448.0	7,893.9	7,775.4	118.57	66.578	
5,413.4	5,370.3	5,359.3	5,359.3	14.2	105.4	-101.12	-1,181.8	-7,448.0	7,893.9	7,775.1	118.86	66.413	
5,500.0	5,456.9	5,445.9	5,445.9	14.4	107.1	-101.12	-1,181.8	-7,448.0	7,893.9	7,773.2	120.77	65.364	
5,511.8	5,468.7	5,457.7	5,457.7	14.4	107.4	-101.12	-1,181.8	-7,448.0	7,893.9	7,772.9	121.03	65.223	
5,600.0	5,556.9	5,545.9	5,545.9	14.6	109.1	-101.12	-1,181.8	-7,448.0	7,893.9	7,771.0	122.97	64.192	
5,610.2	5,567.1	5,556.1	5,556.1	14.6	109.3	-101.12	-1,181.8	-7,448.0	7,893.9	7,770.7	123.20	64.075	
5,700.0	5,656.9	5,645.9	5,645.9	14.7	111.1	-101.12	-1,181.8	-7,448.0	7,893.9	7,768.8	125.18	63.061	
5,708.6	5,665.5	5,654.5	5,654.5	14.8	111.3	-101.12	-1,181.8	-7,448.0	7,893.9	7,768.6	125.37	62.965	
5,800.0	5,756.9	5,745.9	5,745.9	14.9	113.2	-101.12	-1,181.8	-7,448.0	7,893.9	7,766.5	127.38	61.969	
5,807.1	5,764.0	5,753.0	5,753.0	14.9	113.3	-101.12	-1,181.8	-7,448.0	7,893.9	7,766.4	127.54	61.893	
5,900.0	5,856.9	5,845.9	5,845.9	15.1	115.2	-101.12	-1,181.8	-7,448.0	7,893.9	7,764.3	129.59	60.914	
5,905.5	5,862.4	5,851.4	5,851.4	15.1	115.3	-101.12	-1,181.8	-7,448.0	7,893.9	7,764.2	129.71	60.857	
5,971.9	5,928.8	5,917.8	5,917.8	15.3	116.6	-101.12	-1,181.8	-7,448.0	7,893.9	7,762.8	131.18	60.177	
6,000.0	5,956.9	5,945.9	5,945.9	15.3	117.2	-11.13	-1,181.8	-7,448.0	7,893.4	7,762.4	131.01	60.251	
6,003.9	5,960.8	5,949.8	5,949.8	15.3	117.3	-11.13	-1,181.8	-7,448.0	7,893.2	7,762.2	131.06	60.225	
6,050.0	6,006.7	5,995.7	5,995.7	15.4	118.2	-11.19	-1,181.8	-7,448.0	7,889.8	7,758.4	131.41	60.040	
6,100.0	6,056.2	6,045.2	6,045.2	15.4	119.2	-11.31	-1,181.8	-7,448.0	7,882.7	7,751.5	131.18	60.092	
6,102.3	6,058.5	6,047.5	6,047.5	15.4	119.2	-11.32	-1,181.8	-7,448.0	7,882.3	7,751.2	131.15	60.101	
6,150.0	6,105.1	6,094.1	6,094.1	15.4	120.2	-11.49	-1,181.8	-7,448.0	7,872.3	7,742.0	130.31	60.411	
6,200.0	6,153.0	6,142.0	6,142.0	15.5	121.1	-11.74	-1,181.8	-7,448.0	7,858.6	7,729.8	128.81	61.009	
6,200.8	6,153.8	6,142.8	6,142.8	15.5	121.1	-11.75	-1,181.8	-7,448.0	7,858.4	7,729.6	128.78	61.020	
6,250.0	6,199.9	6,188.9	6,188.9	15.5	122.1	-12.07	-1,181.8	-7,448.0	7,841.6	7,714.9	126.68	61.901	
6,299.2	6,244.8	6,233.8	6,233.8	15.5	123.0	-12.47	-1,181.8	-7,448.0	7,821.8	7,697.9	123.99	63.086	
6,300.0	6,245.5	6,234.5	6,234.5	15.5	123.0	-12.47	-1,181.8	-7,448.0	7,821.5	7,697.6	123.94	63.108	
6,350.0	6,289.6	6,278.6	6,278.6	15.5	123.9	-12.97	-1,181.8	-7,448.0	7,798.3	7,677.7	120.61	64.655	
6,397.6	6,329.9	6,318.9	6,318.9	15.4	124.7	-13.55	-1,181.8	-7,448.0	7,773.4	7,656.5	116.95	66.470	
6,400.0	6,331.8	6,320.8	6,320.8	15.4	124.7	-13.58	-1,181.8	-7,448.0	7,772.1	7,655.4	116.75	66.570	
6,450.0	6,372.2	6,361.2	6,361.2	15.4	125.5	-14.32	-1,181.8	-7,448.0	7,743.1	7,630.7	112.42	68.879	
6,496.0	6,407.4	6,396.4	6,396.4	15.4	126.2	-15.14	-1,181.8	-7,448.0	7,714.1	7,606.0	108.09	71.368	
6,500.0	6,410.3	6,399.3	6,399.3	15.4	126.3	-15.22	-1,181.8	-7,448.0	7,711.5	7,603.8	107.71	71.598	
6,550.0	6,446.1	6,435.1	6,435.1	15.4	127.0	-16.30	-1,181.8	-7,448.0	7,677.3	7,574.5	102.76	74.713	
6,594.5	6,475.9	6,464.9	6,464.9	15.4	127.6	-17.47	-1,181.8	-7,448.0	7,644.9	7,546.6	98.32	77.755	
6,600.0	6,479.4	6,468.4	6,468.4	15.4	127.7	-17.63	-1,181.8	-7,448.0	7,640.7	7,543.0	97.77	78.146	
6,650.0	6,510.0	6,499.0	6,499.0	15.5	128.3	-19.28	-1,181.8	-7,448.0	7,602.0	7,509.0	93.06	81.687	
6,692.9	6,534.0	6,523.0	6,523.0	15.7	128.8	-21.01	-1,181.8	-7,448.0	7,567.2	7,477.6	89.58	84.478	
6,700.0	6,537.8	6,526.8	6,526.8	15.7	128.9	-21.33	-1,181.8	-7,448.0	7,561.3	7,472.2	89.07	84.889	
6,750.0	6,562.6	6,551.6	6,551.6	16.2	129.4	-23.94	-1,181.8	-7,448.0	7,518.8	7,432.3	86.47	86.955	
6,791.3	6,580.8	6,569.8	6,569.8	16.6	129.7	-26.66	-1,181.8	-7,448.0	7,482.5	7,396.5	86.00	87.006	
6,800.0	6,584.3	6,573.3	6,573.3	16.7	129.8	-27.31	-1,181.8	-7,448.0	7,474.7	7,388.5	86.17	86.744	
6,850.0	6,602.9	6,591.9	6,591.9	17.3	130.2	-31.77	-1,181.8	-7,448.0	7,429.3	7,339.9	89.33	83.163	
6,889.7	6,615.2	6,604.2	6,604.2	17.9	130.4	-36.41	-1,181.8	-7,448.0	7,392.3	7,297.2	95.11	77.720	
6,900.0	6,618.1	6,607.1	6,607.1	18.0	130.5	-37.81	-1,181.8	-7,448.0	7,382.7	7,285.5	97.14	76.003	
6,950.0	6,630.0	6,619.0	6,619.0	18.8	130.7	-46.16	-1,181.8	-7,448.0	7,335.2	7,224.9	110.27	66.520	
6,988.2	6,636.8	6,625.8	6,625.8	19.5	130.8	-54.65	-1,181.8	-7,448.0	7,298.4	7,175.0	123.42	59.136	
7,000.0	6,638.5	6,627.5	6,627.5	19.7	130.9	-57.72	-1,181.8	-7,448.0	7,287.0	7,159.2	127.78	57.028	
7,050.0	6,643.5	6,632.5	6,632.5	20.6	131.0	-73.07	-1,181.8	-7,448.0	7,238.3	7,093.5	144.86	49.969	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,633.9	6,633.9	21.3	131.0	-86.19	-1,181.8	-7,448.0	7,202.6	7,050.7	151.86	47.430	
7,097.8	6,645.0	6,634.0	6,634.0	21.5	131.0	-90.33	-1,181.8	-7,448.0	7,191.6	7,039.1	152.48	47.166	
7,100.0	6,645.0	6,634.0	6,634.0	21.6	131.0	-90.33	-1,181.8	-7,448.0	7,189.5	7,037.0	152.52	47.139	
7,185.0	6,644.9	6,633.9	6,633.9	23.3	131.0	-90.33	-1,181.8	-7,448.0	7,106.4	6,952.2	154.24	46.073	
7,200.0	6,644.9	6,633.9	6,633.9	23.6	131.0	-90.33	-1,181.8	-7,448.0	7,091.8	6,937.2	154.55	45.888	
7,283.4	6,644.8	6,633.8	6,633.8	25.4	131.0	-90.32	-1,181.8	-7,448.0	7,010.3	6,853.9	156.36	44.834	
7,300.0	6,644.7	6,633.7	6,633.7	25.8	131.0	-90.32	-1,181.8	-7,448.0	6,994.2	6,837.4	156.72	44.628	
7,381.9	6,644.6	6,633.6	6,633.6	27.7	131.0	-90.32	-1,181.8	-7,448.0	6,914.3	6,755.7	158.59	43.597	
7,400.0	6,644.6	6,633.6	6,633.6	28.1	131.0	-90.32	-1,181.8	-7,448.0	6,896.6	6,737.6	159.01	43.372	
7,480.3	6,644.5	6,633.5	6,633.5	30.0	131.0	-90.31	-1,181.8	-7,448.0	6,818.3	6,657.4	160.92	42.372	
7,500.0	6,644.5	6,633.5	6,633.5	30.5	131.0	-90.31	-1,181.8	-7,448.0	6,799.1	6,637.7	161.38	42.130	
7,578.7	6,644.4	6,633.4	6,633.4	32.4	131.0	-90.31	-1,181.8	-7,448.0	6,722.4	6,559.1	163.31	41.164	
7,600.0	6,644.4	6,633.4	6,633.4	32.9	131.0	-90.31	-1,181.8	-7,448.0	6,701.7	6,537.8	163.83	40.907	
7,677.1	6,644.3	6,633.3	6,633.3	34.8	131.0	-90.30	-1,181.8	-7,448.0	6,626.6	6,460.8	165.76	39.978	
7,700.0	6,644.2	6,633.2	6,633.2	35.4	131.0	-90.30	-1,181.8	-7,448.0	6,604.3	6,438.0	166.33	39.707	
7,775.6	6,644.1	6,633.1	6,633.1	37.3	131.0	-90.30	-1,181.8	-7,448.0	6,530.8	6,362.6	168.25	38.817	
7,800.0	6,644.1	6,633.1	6,633.1	38.0	131.0	-90.30	-1,181.8	-7,448.0	6,507.0	6,338.2	168.87	38.533	
7,874.0	6,644.0	6,633.0	6,633.0	39.9	131.0	-90.30	-1,181.8	-7,448.0	6,435.1	6,264.3	170.78	37.682	
7,900.0	6,644.0	6,633.0	6,633.0	40.5	131.0	-90.29	-1,181.8	-7,448.0	6,409.9	6,238.4	171.45	37.387	
7,972.4	6,643.9	6,632.9	6,632.9	42.4	131.0	-90.29	-1,181.8	-7,448.0	6,339.5	6,166.2	173.33	36.574	
8,000.0	6,643.9	6,632.9	6,632.9	43.1	131.0	-90.29	-1,181.8	-7,448.0	6,312.8	6,138.7	174.05	36.269	
8,070.8	6,643.8	6,632.8	6,632.8	45.0	131.0	-90.29	-1,181.8	-7,448.0	6,244.0	6,068.1	175.92	35.494	
8,100.0	6,643.7	6,632.7	6,632.7	45.8	131.0	-90.28	-1,181.8	-7,448.0	6,215.8	6,039.1	176.68	35.180	
8,169.3	6,643.7	6,632.7	6,632.7	47.6	131.0	-90.28	-1,181.8	-7,448.0	6,148.6	5,970.1	178.52	34.443	
8,200.0	6,643.6	6,632.6	6,632.6	48.4	131.0	-90.28	-1,181.8	-7,448.0	6,118.9	5,939.5	179.33	34.120	
8,267.7	6,643.5	6,632.5	6,632.5	50.2	131.0	-90.28	-1,181.8	-7,448.0	6,053.3	5,872.2	181.14	33.418	
8,300.0	6,643.5	6,632.5	6,632.5	51.1	131.0	-90.28	-1,181.8	-7,448.0	6,022.1	5,840.1	182.00	33.088	
8,366.1	6,643.4	6,632.4	6,632.4	52.9	131.0	-90.27	-1,181.8	-7,448.0	5,958.1	5,774.3	183.77	32.421	
8,400.0	6,643.4	6,632.4	6,632.4	53.8	131.0	-90.27	-1,181.8	-7,448.0	5,925.4	5,740.7	184.68	32.084	
8,464.5	6,643.3	6,632.3	6,632.3	55.5	131.0	-90.27	-1,181.8	-7,448.0	5,863.0	5,676.6	186.42	31.450	
8,500.0	6,643.2	6,632.2	6,632.2	56.5	131.0	-90.27	-1,181.8	-7,448.0	5,828.8	5,641.4	187.38	31.107	
8,563.0	6,643.2	6,632.2	6,632.2	58.2	131.0	-90.26	-1,181.8	-7,448.0	5,768.0	5,578.9	189.08	30.506	
8,600.0	6,643.1	6,632.1	6,632.1	59.2	131.0	-90.26	-1,181.8	-7,448.0	5,732.3	5,542.2	190.08	30.157	
8,661.4	6,643.0	6,632.0	6,632.0	60.8	131.0	-90.26	-1,181.8	-7,448.0	5,673.1	5,481.4	191.75	29.587	
8,700.0	6,643.0	6,632.0	6,632.0	61.9	131.0	-90.26	-1,181.8	-7,448.0	5,636.0	5,443.2	192.79	29.233	
8,759.8	6,642.9	6,631.9	6,631.9	63.5	131.0	-90.25	-1,181.8	-7,448.0	5,578.4	5,384.0	194.42	28.692	
8,800.0	6,642.9	6,631.9	6,631.9	64.6	131.0	-90.25	-1,181.8	-7,448.0	5,539.7	5,344.2	195.52	28.334	
8,858.2	6,642.8	6,631.8	6,631.8	66.2	131.0	-90.25	-1,181.8	-7,448.0	5,483.7	5,286.6	197.11	27.821	
8,900.0	6,642.7	6,631.7	6,631.7	67.3	131.0	-90.25	-1,181.8	-7,448.0	5,443.7	5,245.4	198.24	27.459	
8,956.7	6,642.7	6,631.7	6,631.7	68.9	131.0	-90.24	-1,181.8	-7,448.0	5,389.3	5,189.5	199.80	26.974	
9,000.0	6,642.6	6,631.6	6,631.6	70.1	131.0	-90.24	-1,181.8	-7,448.0	5,347.7	5,146.7	200.98	26.608	
9,055.1	6,642.5	6,631.5	6,631.5	71.6	131.0	-90.24	-1,181.8	-7,448.0	5,294.9	5,092.4	202.49	26.149	
9,100.0	6,642.5	6,631.5	6,631.5	72.8	131.0	-90.24	-1,181.8	-7,448.0	5,251.9	5,048.2	203.72	25.780	
9,153.5	6,642.4	6,631.4	6,631.4	74.3	131.0	-90.24	-1,181.8	-7,448.0	5,200.7	4,995.5	205.19	25.346	
9,200.0	6,642.4	6,631.4	6,631.4	75.6	131.0	-90.23	-1,181.8	-7,448.0	5,156.3	4,949.8	206.47	24.974	
9,251.9	6,642.3	6,631.3	6,631.3	77.0	131.0	-90.23	-1,181.8	-7,448.0	5,106.7	4,898.8	207.90	24.564	
9,300.0	6,642.2	6,631.2	6,631.2	78.3	131.0	-90.23	-1,181.8	-7,448.0	5,060.8	4,851.6	209.22	24.189	
9,350.4	6,642.2	6,631.2	6,631.2	79.7	131.0	-90.23	-1,181.8	-7,448.0	5,012.8	4,802.2	210.60	23.802	
9,400.0	6,642.1	6,631.1	6,631.1	81.1	131.0	-90.22	-1,181.8	-7,448.0	4,965.6	4,753.6	211.97	23.426	
9,448.8	6,642.0	6,631.0	6,631.0	82.4	131.0	-90.22	-1,181.8	-7,448.0	4,919.1	4,705.8	213.32	23.060	
9,500.0	6,642.0	6,631.0	6,631.0	83.8	131.0	-90.22	-1,181.8	-7,448.0	4,870.5	4,655.7	214.73	22.682	
9,547.2	6,641.9	6,630.9	6,630.9	85.1	130.9	-90.22	-1,181.8	-7,448.0	4,825.6	4,609.6	216.03	22.337	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,630.9	6,630.9	86.6	130.9	-90.21	-1,181.8	-7,448.0	4,775.6	4,558.1	217.49	21.958	
9,645.6	6,641.8	6,630.8	6,630.8	87.9	130.9	-90.21	-1,181.8	-7,448.0	4,732.3	4,513.6	218.75	21.633	
9,700.0	6,641.7	6,630.7	6,630.7	89.4	130.9	-90.21	-1,181.8	-7,448.0	4,680.9	4,460.7	220.26	21.252	
9,744.1	6,641.7	6,630.7	6,630.7	90.6	130.9	-90.21	-1,181.8	-7,448.0	4,639.3	4,417.8	221.47	20.947	
9,800.0	6,641.6	6,630.6	6,630.6	92.1	130.9	-90.20	-1,181.8	-7,448.0	4,586.5	4,363.4	223.02	20.565	
9,842.5	6,641.6	6,630.6	6,630.6	93.3	130.9	-90.20	-1,181.8	-7,448.0	4,546.4	4,322.2	224.20	20.278	
9,900.0	6,641.5	6,630.5	6,630.5	94.9	130.9	-90.20	-1,181.8	-7,448.0	4,492.2	4,266.5	225.79	19.896	
9,940.9	6,641.4	6,630.4	6,630.4	96.0	130.9	-90.20	-1,181.8	-7,448.0	4,453.8	4,226.8	226.93	19.627	
10,000.0	6,641.4	6,630.4	6,630.4	97.7	130.9	-90.20	-1,181.8	-7,448.0	4,398.3	4,169.7	228.56	19.243	
10,039.3	6,641.3	6,630.3	6,630.3	98.8	130.9	-90.19	-1,181.8	-7,448.0	4,361.4	4,131.7	229.65	18.991	
10,100.0	6,641.2	6,630.2	6,630.2	100.4	130.9	-90.19	-1,181.8	-7,448.0	4,304.6	4,073.3	231.34	18.608	
10,137.8	6,641.2	6,630.2	6,630.2	101.5	130.9	-90.19	-1,181.8	-7,448.0	4,269.3	4,036.9	232.38	18.372	
10,200.0	6,641.1	6,630.1	6,630.1	103.2	130.9	-90.19	-1,181.8	-7,448.0	4,211.2	3,977.1	234.11	17.988	
10,236.2	6,641.1	6,630.1	6,630.1	104.2	130.9	-90.18	-1,181.8	-7,448.0	4,177.5	3,942.4	235.12	17.768	
10,300.0	6,641.0	6,630.0	6,630.0	106.0	130.9	-90.18	-1,181.8	-7,448.0	4,118.1	3,881.3	236.89	17.384	
10,334.6	6,640.9	6,629.9	6,629.9	107.0	130.9	-90.18	-1,181.8	-7,448.0	4,086.0	3,848.1	237.85	17.179	
10,400.0	6,640.9	6,629.9	6,629.9	108.8	130.9	-90.18	-1,181.8	-7,448.0	4,025.4	3,785.7	239.67	16.796	
10,433.0	6,640.8	6,629.8	6,629.8	109.7	130.9	-90.17	-1,181.8	-7,448.0	3,994.8	3,754.2	240.59	16.604	
10,500.0	6,640.7	6,629.7	6,629.7	111.6	130.9	-90.17	-1,181.8	-7,448.0	3,933.0	3,690.5	242.45	16.222	
10,531.5	6,640.7	6,629.7	6,629.7	112.4	130.9	-90.17	-1,181.8	-7,448.0	3,904.0	3,660.7	243.32	16.044	
10,600.0	6,640.6	6,629.6	6,629.6	114.3	130.9	-90.17	-1,181.8	-7,448.0	3,841.0	3,595.8	245.23	15.663	
10,629.9	6,640.6	6,629.6	6,629.6	115.2	130.9	-90.17	-1,181.8	-7,448.0	3,813.6	3,567.5	246.06	15.498	
10,700.0	6,640.5	6,629.5	6,629.5	117.1	130.9	-90.16	-1,181.8	-7,448.0	3,749.4	3,501.4	248.01	15.118	
10,728.3	6,640.4	6,629.4	6,629.4	117.9	130.9	-90.16	-1,181.8	-7,448.0	3,723.5	3,474.7	248.80	14.966	
10,800.0	6,640.4	6,629.4	6,629.4	119.9	130.9	-90.16	-1,181.8	-7,448.0	3,658.2	3,407.4	250.80	14.586	
10,826.7	6,640.3	6,629.3	6,629.3	120.7	130.9	-90.16	-1,181.8	-7,448.0	3,633.9	3,382.4	251.54	14.447	
10,900.0	6,640.2	6,629.2	6,629.2	122.7	130.9	-90.15	-1,181.8	-7,448.0	3,567.5	3,313.9	253.58	14.069	
10,925.2	6,640.2	6,629.2	6,629.2	123.4	130.9	-90.15	-1,181.8	-7,448.0	3,544.8	3,290.5	254.28	13.940	
11,000.0	6,640.1	6,629.1	6,629.1	125.5	130.9	-90.15	-1,181.8	-7,448.0	3,477.3	3,221.0	256.37	13.564	
11,023.6	6,640.1	6,629.1	6,629.1	126.1	130.9	-90.15	-1,181.8	-7,448.0	3,456.1	3,199.1	257.03	13.447	
11,100.0	6,640.0	6,629.0	6,629.0	128.3	130.9	-90.14	-1,181.8	-7,448.0	3,387.7	3,128.6	259.16	13.072	
11,122.0	6,639.9	6,628.9	6,628.9	128.9	130.9	-90.14	-1,181.8	-7,448.0	3,368.1	3,108.3	259.77	12.966	
11,200.0	6,639.8	6,628.8	6,628.8	131.1	130.9	-90.14	-1,181.8	-7,448.0	3,298.7	3,036.7	261.94	12.593	
11,220.4	6,639.8	6,628.8	6,628.8	131.6	130.9	-90.14	-1,181.8	-7,448.0	3,280.6	3,018.0	262.51	12.497	
11,300.0	6,639.7	6,628.7	6,628.7	133.9	130.9	-90.13	-1,181.8	-7,448.0	3,210.3	2,945.6	264.73	12.127	
11,318.9	6,639.7	6,628.7	6,628.7	134.4	130.9	-90.13	-1,181.8	-7,448.0	3,193.7	2,928.4	265.26	12.040	
11,400.0	6,639.6	6,628.6	6,628.6	136.7	130.9	-90.13	-1,181.8	-7,448.0	3,122.6	2,855.1	267.52	11.672	
11,417.3	6,639.6	6,628.6	6,628.6	137.1	130.9	-90.13	-1,181.8	-7,448.0	3,107.5	2,839.5	268.01	11.595	
11,500.0	6,639.5	6,628.5	6,628.5	139.4	130.9	-90.12	-1,181.8	-7,448.0	3,035.7	2,765.4	270.31	11.230	
11,515.7	6,639.5	6,628.5	6,628.5	139.9	130.9	-90.12	-1,181.8	-7,448.0	3,022.1	2,751.3	270.75	11.162	
11,600.0	6,639.3	6,628.3	6,628.3	142.2	130.9	-90.12	-1,181.8	-7,448.0	2,949.6	2,676.5	273.10	10.800	
11,614.1	6,639.3	6,628.3	6,628.3	142.6	130.9	-90.12	-1,181.8	-7,448.0	2,937.5	2,664.0	273.50	10.740	
11,700.0	6,639.2	6,628.2	6,628.2	145.0	130.9	-90.11	-1,181.8	-7,448.0	2,864.4	2,588.5	275.90	10.382	
11,712.6	6,639.2	6,628.2	6,628.2	145.4	130.9	-90.11	-1,181.8	-7,448.0	2,853.8	2,577.5	276.25	10.330	
11,800.0	6,639.1	6,628.1	6,628.1	147.8	130.9	-90.11	-1,181.8	-7,448.0	2,780.2	2,501.5	278.69	9.976	
11,811.0	6,639.1	6,628.1	6,628.1	148.1	130.9	-90.11	-1,181.8	-7,448.0	2,771.0	2,492.0	279.00	9.932	
11,900.0	6,639.0	6,628.0	6,628.0	150.6	130.9	-90.11	-1,181.8	-7,448.0	2,697.1	2,415.6	281.48	9.582	
11,909.4	6,639.0	6,628.0	6,628.0	150.9	130.9	-90.10	-1,181.8	-7,448.0	2,689.3	2,407.6	281.74	9.545	
12,000.0	6,638.8	6,627.8	6,627.8	153.4	130.9	-90.10	-1,181.8	-7,448.0	2,615.1	2,330.9	284.28	9.199	
12,007.8	6,638.8	6,627.8	6,627.8	153.6	130.9	-90.10	-1,181.8	-7,448.0	2,608.7	2,324.3	284.49	9.170	
12,100.0	6,638.7	6,627.7	6,627.7	156.2	130.9	-90.10	-1,181.8	-7,448.0	2,534.5	2,247.4	287.07	8.829	
12,106.3	6,638.7	6,627.7	6,627.7	156.4	130.9	-90.10	-1,181.8	-7,448.0	2,529.5	2,242.2	287.24	8.806	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.6	6,627.6	6,627.6	159.0	130.9	-90.09	-1,181.8	-7,448.0	2,455.3	2,165.4	289.86	8.470	
12,204.7	6,638.6	6,627.6	6,627.6	159.1	130.9	-90.09	-1,181.8	-7,448.0	2,451.6	2,161.6	290.00	8.454	
12,300.0	6,638.5	6,627.5	6,627.5	161.8	130.9	-90.09	-1,181.8	-7,448.0	2,377.6	2,084.9	292.66	8.124	
12,303.1	6,638.5	6,627.5	6,627.5	161.9	130.9	-90.09	-1,181.8	-7,448.0	2,375.2	2,082.5	292.75	8.113	
12,400.0	6,638.3	6,627.3	6,627.3	164.6	130.9	-90.08	-1,181.8	-7,448.0	2,301.7	2,006.2	295.46	7.790	
12,401.5	6,638.3	6,627.3	6,627.3	164.6	130.9	-90.08	-1,181.8	-7,448.0	2,300.5	2,005.0	295.50	7.785	
12,500.0	6,638.2	6,627.2	6,627.2	167.4	130.9	-90.08	-1,181.8	-7,448.0	2,227.6	1,929.4	298.25	7.469	
12,598.4	6,638.1	6,627.1	6,627.1	170.2	130.9	-90.07	-1,181.8	-7,448.0	2,156.8	1,855.8	301.00	7.166	
12,600.0	6,638.1	6,627.1	6,627.1	170.2	130.9	-90.07	-1,181.8	-7,448.0	2,155.7	1,854.7	301.05	7.161	
12,696.8	6,638.0	6,627.0	6,627.0	172.9	130.9	-90.07	-1,181.8	-7,448.0	2,088.3	1,784.5	303.76	6.875	
12,700.0	6,638.0	6,627.0	6,627.0	173.0	130.9	-90.07	-1,181.8	-7,448.0	2,086.1	1,782.2	303.84	6.866	
12,795.2	6,637.8	6,626.8	6,626.8	175.7	130.9	-90.06	-1,181.8	-7,448.0	2,022.1	1,715.6	306.51	6.597	
12,800.0	6,637.8	6,626.8	6,626.8	175.8	130.9	-90.06	-1,181.8	-7,448.0	2,019.0	1,712.4	306.64	6.584	
12,893.7	6,637.7	6,626.7	6,626.7	178.4	130.9	-90.06	-1,181.8	-7,448.0	1,958.7	1,649.5	309.26	6.334	
12,900.0	6,637.7	6,626.7	6,626.7	178.6	130.9	-90.06	-1,181.8	-7,448.0	1,954.8	1,645.3	309.44	6.317	
12,992.1	6,637.6	6,626.6	6,626.6	181.2	130.9	-90.05	-1,181.8	-7,448.0	1,898.3	1,586.3	312.02	6.084	
13,000.0	6,637.6	6,626.6	6,626.6	181.4	130.9	-90.05	-1,181.8	-7,448.0	1,893.6	1,581.4	312.24	6.065	
13,090.5	6,637.5	6,626.5	6,626.5	183.9	130.9	-90.05	-1,181.8	-7,448.0	1,841.2	1,526.4	314.77	5.849	
13,100.0	6,637.5	6,626.5	6,626.5	184.2	130.9	-90.05	-1,181.8	-7,448.0	1,835.9	1,520.9	315.04	5.828	
13,188.9	6,637.4	6,626.4	6,626.4	186.7	130.9	-90.04	-1,181.8	-7,448.0	1,787.7	1,470.2	317.52	5.630	
13,200.0	6,637.3	6,626.3	6,626.3	187.0	130.9	-90.04	-1,181.8	-7,448.0	1,781.9	1,464.1	317.83	5.606	
13,287.4	6,637.2	6,626.2	6,626.2	189.4	130.9	-90.04	-1,181.8	-7,448.0	1,738.1	1,417.8	320.28	5.427	
13,300.0	6,637.2	6,626.2	6,626.2	189.8	130.9	-90.04	-1,181.8	-7,448.0	1,732.0	1,411.4	320.63	5.402	
13,385.8	6,637.1	6,626.1	6,626.1	192.2	130.9	-90.04	-1,181.8	-7,448.0	1,692.8	1,369.7	323.03	5.240	
13,400.0	6,637.1	6,626.1	6,626.1	192.6	130.9	-90.03	-1,181.8	-7,448.0	1,686.6	1,363.2	323.43	5.215	
13,484.2	6,637.0	6,626.0	6,626.0	195.0	130.8	-90.03	-1,181.8	-7,448.0	1,652.1	1,326.3	325.79	5.071	
13,500.0	6,637.0	6,626.0	6,626.0	195.4	130.8	-90.03	-1,181.8	-7,448.0	1,646.0	1,319.8	326.23	5.045	
13,582.6	6,636.9	6,625.9	6,625.9	197.7	130.8	-90.03	-1,181.8	-7,448.0	1,616.3	1,287.8	328.54	4.920	
13,600.0	6,636.8	6,625.8	6,625.8	198.2	130.8	-90.02	-1,181.8	-7,448.0	1,610.6	1,281.6	329.03	4.895	
13,681.1	6,636.7	6,625.7	6,625.7	200.5	130.8	-90.02	-1,181.8	-7,448.0	1,585.9	1,254.6	331.30	4.787	
13,700.0	6,636.7	6,625.7	6,625.7	201.0	130.8	-90.02	-1,181.8	-7,448.0	1,580.7	1,248.9	331.83	4.764	
13,779.5	6,636.6	6,625.6	6,625.6	203.2	130.8	-90.02	-1,181.8	-7,448.0	1,561.2	1,227.1	334.06	4.673	
13,800.0	6,636.6	6,625.6	6,625.6	203.8	130.8	-90.02	-1,181.8	-7,448.0	1,556.7	1,222.1	334.63	4.652	
13,877.9	6,636.5	6,625.5	6,625.5	206.0	130.8	-90.01	-1,181.8	-7,448.0	1,542.3	1,205.5	336.81	4.579	
13,900.0	6,636.5	6,625.5	6,625.5	206.6	130.8	-90.01	-1,181.8	-7,448.0	1,538.9	1,201.4	337.43	4.561	
13,976.3	6,636.4	6,625.4	6,625.4	208.8	130.8	-90.01	-1,181.8	-7,448.0	1,529.5	1,189.9	339.57	4.504	
14,000.0	6,636.3	6,625.3	6,625.3	209.4	130.8	-90.01	-1,181.8	-7,448.0	1,527.3	1,187.1	340.23	4.489	
14,074.8	6,636.2	6,625.2	6,625.2	211.5	130.8	-90.00	-1,181.8	-7,448.0	1,523.0	1,180.6	342.33	4.449	
14,100.0	6,636.2	6,625.2	6,625.2	212.2	130.8	-90.00	-1,181.8	-7,448.0	1,522.3	1,179.3	343.03	4.438	
14,126.5	6,636.2	6,625.2	6,625.2	213.0	130.8	-90.00	-1,181.8	-7,448.0	1,522.1	1,178.3	343.78	4.428 CC	
14,173.2	6,636.1	6,625.1	6,625.1	214.3	130.8	-90.00	-1,181.8	-7,448.0	1,522.8	1,177.7	345.08	4.413 ES	
14,200.0	6,636.1	6,625.1	6,625.1	215.0	130.8	-90.00	-1,181.8	-7,448.0	1,523.9	1,178.0	345.83	4.406	
14,271.6	6,636.0	6,625.0	6,625.0	217.0	130.8	-89.99	-1,181.8	-7,448.0	1,529.0	1,181.2	347.84	4.396	
14,300.0	6,636.0	6,625.0	6,625.0	217.8	130.8	-89.99	-1,181.8	-7,448.0	1,531.9	1,183.3	348.63	4.394 SF	
14,370.0	6,635.9	6,624.9	6,624.9	219.8	130.8	-89.99	-1,181.8	-7,448.0	1,541.5	1,190.9	350.60	4.397	
14,400.0	6,635.8	6,624.8	6,624.8	220.6	130.8	-89.99	-1,181.8	-7,448.0	1,546.5	1,195.0	351.44	4.400	
14,468.5	6,635.7	6,624.7	6,624.7	222.6	130.8	-89.98	-1,181.8	-7,448.0	1,560.0	1,206.7	353.35	4.415	
14,500.0	6,635.7	6,624.7	6,624.7	223.4	130.8	-89.98	-1,181.8	-7,448.0	1,567.2	1,213.0	354.24	4.424	
14,566.9	6,635.6	6,624.6	6,624.6	225.3	130.8	-89.98	-1,181.8	-7,448.0	1,584.5	1,228.4	356.11	4.450	
14,600.0	6,635.6	6,624.6	6,624.6	226.2	130.8	-89.98	-1,181.8	-7,448.0	1,594.0	1,237.0	357.04	4.465	
14,665.3	6,635.5	6,624.5	6,624.5	228.1	130.8	-89.97	-1,181.8	-7,448.0	1,614.6	1,255.8	358.87	4.499	
14,700.0	6,635.5	6,624.5	6,624.5	229.0	130.8	-89.97	-1,181.8	-7,448.0	1,626.5	1,266.7	359.84	4.520	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,635.4	6,624.4	6,624.4	230.8	130.8	-89.97	-1,181.8	-7,448.0	1,650.1	1,288.5	361.63	4.563	
14,800.0	6,635.3	6,624.3	6,624.3	231.8	130.8	-89.97	-1,181.8	-7,448.0	1,664.4	1,301.8	362.64	4.590	
14,862.2	6,635.2	6,624.2	6,624.2	233.6	130.8	-89.97	-1,181.8	-7,448.0	1,690.5	1,326.2	364.38	4.639	
14,900.0	6,635.2	6,624.2	6,624.2	234.7	130.8	-89.96	-1,181.8	-7,448.0	1,707.3	1,341.9	365.44	4.672	
14,960.6	6,635.1	6,624.1	6,624.1	236.4	130.8	-89.96	-1,181.8	-7,448.0	1,735.6	1,368.5	367.14	4.727	
14,995.1	6,635.0	6,624.0	6,624.0	237.3	130.8	-89.96	-1,181.8	-7,448.0	1,752.5	1,384.4	368.11	4.761	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-86.48	430.9	-7,002.0	7,015.3				
98.4	98.4	34.0	34.0	0.1	0.0	-86.48	430.8	-7,002.1	7,015.4	7,015.3	0.11	N/A	
100.0	100.0	34.9	34.9	0.1	0.0	-86.48	430.8	-7,002.1	7,015.4	7,015.3	0.11	N/A	
196.8	196.8	100.0	100.0	0.3	0.0	-86.48	430.5	-7,002.7	7,016.2	7,015.8	0.35	N/A	
200.0	200.0	100.0	100.0	0.3	0.0	-86.48	430.5	-7,002.7	7,016.2	7,015.8	0.36	N/A	
295.3	295.3	183.1	183.1	0.5	0.2	-86.49	429.9	-7,003.7	7,017.3	7,016.6	0.72	9,744.319	
300.0	300.0	188.6	188.5	0.5	0.2	-86.49	429.9	-7,003.7	7,017.3	7,016.6	0.74	9,473.496	
393.7	393.7	277.1	277.1	0.8	0.3	-86.49	429.6	-7,004.8	7,018.4	7,017.4	1.04	6,762.857	
400.0	400.0	282.9	282.9	0.8	0.3	-86.49	429.6	-7,004.8	7,018.5	7,017.4	1.06	6,640.796	
492.1	492.1	373.1	373.1	1.0	0.4	-86.49	429.7	-7,005.9	7,019.6	7,018.3	1.33	5,277.191	
500.0	500.0	381.0	380.9	1.0	0.4	-86.49	429.7	-7,006.0	7,019.7	7,018.3	1.35	5,186.643	
590.5	590.5	457.7	457.7	1.2	0.4	-86.49	429.8	-7,007.0	7,020.9	7,019.2	1.61	4,372.831	
600.0	600.0	465.3	465.3	1.2	0.4	-86.49	429.8	-7,007.1	7,021.0	7,019.4	1.63	4,303.513	
689.0	689.0	538.6	538.6	1.4	0.5	-86.49	429.7	-7,008.2	7,022.4	7,020.5	1.87	3,746.794	
700.0	700.0	547.9	547.8	1.4	0.5	-86.49	429.7	-7,008.4	7,022.6	7,020.6	1.90	3,687.923	
787.4	787.4	623.0	623.0	1.6	0.5	-86.49	429.5	-7,009.7	7,024.1	7,022.0	2.14	3,279.303	
800.0	800.0	634.5	634.5	1.7	0.5	-86.49	429.5	-7,010.0	7,024.3	7,022.2	2.18	3,227.678	
885.8	885.8	714.0	713.9	1.9	0.6	-86.50	429.1	-7,011.5	7,026.0	7,023.6	2.41	2,914.895	
900.0	900.0	728.1	728.1	1.9	0.6	-86.50	429.0	-7,011.8	7,026.3	7,023.8	2.45	2,868.807	
984.2	984.2	812.5	812.4	2.1	0.6	-86.50	428.6	-7,013.5	7,027.9	7,025.2	2.68	2,622.556	
1,000.0	1,000.0	828.5	828.4	2.1	0.6	-86.50	428.5	-7,013.8	7,028.2	7,025.5	2.72	2,581.338	
1,082.7	1,082.7	913.9	913.7	2.3	0.7	-86.51	428.0	-7,015.5	7,029.8	7,026.9	2.95	2,384.370	
1,100.0	1,100.0	933.1	933.0	2.3	0.7	-86.51	427.9	-7,015.9	7,030.2	7,027.2	3.00	2,346.577	
1,181.1	1,181.1	1,018.9	1,018.7	2.5	0.7	-86.52	427.2	-7,017.5	7,031.7	7,028.4	3.22	2,185.869	
1,200.0	1,200.0	1,036.0	1,035.8	2.6	0.7	-86.52	427.0	-7,017.8	7,032.0	7,028.7	3.27	2,152.457	
1,279.5	1,279.5	1,109.3	1,109.1	2.7	0.7	-86.52	426.3	-7,019.3	7,033.5	7,030.0	3.48	2,022.146	
1,300.0	1,300.0	1,130.5	1,130.3	2.8	0.8	-86.53	426.0	-7,019.7	7,033.9	7,030.4	3.53	1,990.652	
1,377.9	1,377.9	1,209.7	1,209.6	3.0	0.8	-127.70	425.1	-7,021.3	7,036.1	7,032.3	3.75	1,877.736	
1,400.0	1,400.0	1,229.5	1,229.3	3.0	0.8	-127.69	424.9	-7,021.7	7,036.9	7,033.1	3.80	1,849.598	
1,476.4	1,476.3	1,300.0	1,299.8	3.2	0.8	-127.66	424.1	-7,023.1	7,040.7	7,036.7	4.00	1,758.875	
1,500.0	1,499.8	1,318.0	1,317.8	3.2	0.8	-127.65	423.9	-7,023.5	7,042.1	7,038.1	4.06	1,733.347	
1,574.8	1,574.4	1,382.1	1,381.9	3.4	0.9	-127.60	423.5	-7,024.9	7,047.5	7,043.3	4.26	1,654.969	
1,600.0	1,599.5	1,409.4	1,409.1	3.5	0.9	-127.58	423.4	-7,025.6	7,049.7	7,045.3	4.33	1,629.452	
1,673.2	1,672.2	1,534.6	1,534.4	3.6	0.9	-127.58	422.9	-7,027.8	7,056.2	7,051.6	4.55	1,552.270	
1,700.0	1,698.7	1,563.9	1,563.7	3.7	0.9	-127.56	422.8	-7,028.2	7,058.8	7,054.1	4.62	1,528.117	
1,771.6	1,769.5	1,635.4	1,635.1	3.9	1.0	-127.51	422.8	-7,029.2	7,066.4	7,061.6	4.82	1,464.554	
1,800.0	1,797.5	1,661.3	1,661.0	4.0	1.0	-127.49	422.9	-7,029.6	7,069.8	7,064.9	4.91	1,441.055	
1,870.1	1,866.3	1,730.6	1,730.3	4.2	1.0	-127.43	422.9	-7,030.6	7,078.8	7,073.7	5.12	1,382.008	
1,899.9	1,895.6	1,763.7	1,763.4	4.3	1.0	-127.40	422.8	-7,031.1	7,083.0	7,077.7	5.22	1,358.102	
1,968.5	1,962.6	1,828.9	1,828.6	4.5	1.0	-127.49	422.5	-7,032.0	7,092.7	7,087.3	5.44	1,304.958	
2,000.0	1,993.4	1,854.3	1,854.0	4.6	1.0	-127.53	422.3	-7,032.4	7,097.2	7,091.7	5.53	1,282.334	
2,066.9	2,058.9	1,919.6	1,919.3	4.8	1.1	-127.62	421.7	-7,033.4	7,106.8	7,101.1	5.76	1,234.163	
2,100.0	2,091.3	1,982.7	1,982.4	4.9	1.1	-127.71	421.0	-7,034.3	7,111.5	7,105.6	5.88	1,210.054	
2,165.3	2,155.2	2,130.1	2,129.8	5.2	1.1	-127.93	419.0	-7,035.0	7,120.2	7,114.1	6.11	1,166.018	
2,200.0	2,189.1	2,188.4	2,188.0	5.3	1.1	-128.01	418.2	-7,034.9	7,124.6	7,118.4	6.22	1,144.881	
2,263.8	2,251.5	2,264.2	2,263.8	5.5	1.2	-128.12	417.3	-7,034.5	7,132.5	7,126.1	6.44	1,108.335	
2,300.0	2,286.9	2,304.4	2,304.0	5.7	1.2	-128.17	416.9	-7,034.2	7,137.0	7,130.5	6.56	1,088.669	
2,362.2	2,347.7	2,365.1	2,364.8	5.9	1.2	-128.26	416.2	-7,033.8	7,144.7	7,137.9	6.77	1,055.834	
2,400.0	2,384.7	2,402.2	2,401.8	6.0	1.2	-128.31	415.8	-7,033.6	7,149.3	7,142.4	6.90	1,036.842	
2,460.6	2,444.0	2,466.6	2,466.2	6.3	1.2	-128.40	415.1	-7,033.1	7,156.8	7,149.7	7.11	1,007.220	
2,500.0	2,482.5	2,506.8	2,506.4	6.4	1.2	-128.46	414.6	-7,032.8	7,161.6	7,154.4	7.24	988.906	
2,559.0	2,540.3	2,557.2	2,556.8	6.7	1.2	-128.53	414.0	-7,032.4	7,168.9	7,161.5	7.45	962.373	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,592.1	2,591.7	6.8	1.2	-128.58	413.6	-7,032.2	7,174.0	7,166.4	7.59	944.830	
2,657.5	2,636.5	2,636.8	2,636.4	7.1	1.2	-128.64	413.1	-7,032.0	7,181.3	7,173.5	7.80	920.874	
2,700.0	2,678.1	2,669.2	2,668.8	7.2	1.2	-128.69	412.7	-7,031.9	7,186.7	7,178.7	7.95	903.947	
2,755.9	2,732.8	2,719.0	2,718.6	7.5	1.2	-128.75	412.2	-7,031.8	7,193.9	7,185.8	8.15	882.352	
2,800.0	2,776.0	2,773.2	2,772.8	7.7	1.3	-128.83	411.5	-7,031.6	7,199.6	7,191.3	8.31	865.865	
2,854.3	2,829.1	2,829.7	2,829.3	7.9	1.3	-128.91	410.8	-7,031.3	7,206.5	7,198.0	8.51	846.419	
2,900.0	2,873.8	2,871.5	2,871.1	8.1	1.3	-128.97	410.3	-7,031.2	7,212.3	7,203.7	8.68	830.864	
2,952.7	2,925.4	2,916.3	2,915.9	8.3	1.3	-129.03	409.7	-7,031.0	7,219.1	7,210.2	8.87	813.468	
3,000.0	2,971.6	2,952.1	2,951.7	8.5	1.3	-129.08	409.2	-7,030.9	7,225.3	7,216.2	9.05	798.506	
3,051.2	3,021.6	3,000.0	2,999.6	8.7	1.3	-129.15	408.6	-7,030.9	7,232.0	7,222.8	9.24	782.760	
3,100.0	3,069.4	3,050.3	3,049.9	8.9	1.3	-129.22	407.9	-7,030.9	7,238.5	7,229.0	9.42	768.312	
3,149.6	3,117.9	3,210.9	3,210.4	9.1	1.4	-129.44	405.1	-7,029.6	7,244.8	7,235.2	9.61	753.670	
3,200.0	3,167.2	3,366.7	3,366.2	9.3	1.4	-129.67	401.2	-7,025.7	7,250.2	7,240.4	9.80	739.993	
3,248.0	3,214.2	3,438.9	3,438.3	9.5	1.4	-129.78	399.3	-7,023.3	7,255.0	7,245.0	9.97	727.401	
3,300.0	3,265.0	3,501.8	3,501.2	9.8	1.4	-129.87	397.5	-7,021.0	7,260.1	7,249.9	10.16	714.266	
3,346.4	3,310.5	3,560.3	3,559.5	10.0	1.4	-129.96	395.8	-7,018.8	7,264.6	7,254.3	10.34	702.836	
3,400.0	3,362.9	3,628.7	3,627.8	10.2	1.4	-130.06	393.9	-7,016.1	7,269.7	7,259.2	10.53	690.125	
3,444.9	3,406.7	3,687.1	3,686.2	10.4	1.4	-130.15	392.4	-7,013.7	7,273.9	7,263.2	10.70	679.796	
3,473.0	3,434.2	3,727.6	3,726.6	10.5	1.5	-130.20	391.5	-7,011.9	7,276.5	7,265.7	10.80	673.479	
3,500.0	3,460.7	3,768.5	3,767.5	10.6	1.5	-130.30	390.4	-7,010.0	7,278.8	7,267.9	10.89	668.338	
3,543.3	3,503.2	3,816.8	3,815.8	10.7	1.5	-130.41	389.2	-7,007.7	7,282.1	7,271.1	11.01	661.471	
3,600.0	3,559.0	3,859.3	3,858.1	10.9	1.5	-130.53	388.0	-7,005.8	7,286.0	7,274.8	11.16	652.682	
3,641.7	3,600.2	3,900.0	3,898.8	11.0	1.5	-130.61	386.7	-7,004.0	7,288.4	7,277.1	11.27	646.850	
3,700.0	3,657.9	3,939.4	3,938.1	11.2	1.5	-130.69	385.4	-7,002.3	7,291.2	7,279.7	11.41	638.849	
3,740.1	3,697.8	3,974.1	3,972.8	11.3	1.5	-130.75	384.3	-7,000.8	7,292.7	7,281.2	11.50	633.923	
3,800.0	3,757.3	4,019.5	4,018.2	11.4	1.5	-130.82	382.9	-6,998.9	7,294.3	7,282.7	11.64	626.674	
3,838.6	3,795.7	4,044.7	4,043.3	11.5	1.5	-130.85	382.2	-6,997.9	7,295.0	7,283.3	11.72	622.584	
3,900.0	3,857.0	4,100.0	4,098.6	11.7	1.5	-130.89	380.8	-6,995.9	7,295.6	7,283.8	11.84	616.038	
3,937.0	3,893.9	4,100.0	4,098.6	11.7	1.5	-130.89	380.8	-6,995.9	7,295.6	7,283.7	11.91	612.759	
4,000.0	3,956.9	4,158.3	4,156.8	11.8	1.5	-130.90	379.4	-6,994.0	7,295.0	7,283.0	12.02	606.887	
4,035.4	3,992.3	4,185.2	4,183.7	11.9	1.5	-130.90	378.8	-6,993.1	7,294.3	7,282.3	12.08	604.003	
4,072.9	4,029.8	4,200.0	4,198.5	11.9	1.5	-89.70	378.5	-6,992.7	7,293.4	7,281.4	12.02	607.009	
4,100.0	4,056.9	4,230.7	4,229.2	12.0	1.5	-89.70	377.9	-6,991.8	7,292.6	7,280.5	12.07	604.319	
4,133.8	4,090.7	4,253.8	4,252.2	12.0	1.6	-89.71	377.5	-6,991.1	7,291.7	7,279.5	12.14	600.878	
4,200.0	4,156.9	4,300.0	4,298.4	12.1	1.6	-89.71	376.7	-6,990.0	7,290.0	7,277.7	12.27	594.261	
4,232.3	4,189.2	4,325.1	4,323.5	12.2	1.6	-89.72	376.3	-6,989.4	7,289.2	7,276.9	12.33	591.034	
4,300.0	4,256.9	4,380.5	4,378.9	12.3	1.6	-89.72	375.4	-6,988.2	7,287.7	7,275.2	12.47	584.349	
4,330.7	4,287.6	4,400.0	4,398.4	12.4	1.6	-89.73	375.1	-6,987.8	7,287.1	7,274.5	12.53	581.413	
4,400.0	4,356.9	4,459.5	4,457.8	12.5	1.6	-89.73	374.3	-6,986.6	7,285.7	7,273.0	12.68	574.760	
4,429.1	4,386.0	4,482.2	4,480.5	12.5	1.6	-89.73	374.1	-6,986.2	7,285.2	7,272.5	12.74	572.018	
4,500.0	4,456.9	4,542.6	4,541.0	12.6	1.6	-89.74	373.5	-6,985.2	7,284.0	7,271.1	12.88	565.421	
4,527.5	4,484.4	4,567.1	4,565.4	12.7	1.6	-89.74	373.3	-6,984.8	7,283.6	7,270.6	12.94	562.877	
4,600.0	4,556.9	4,624.5	4,622.8	12.8	1.6	-89.74	372.8	-6,983.9	7,282.5	7,269.4	13.09	556.338	
4,626.0	4,582.9	4,642.4	4,640.8	12.9	1.6	-89.75	372.6	-6,983.7	7,282.1	7,269.0	13.14	554.036	
4,700.0	4,656.9	4,700.0	4,698.3	13.0	1.6	-89.75	371.9	-6,983.1	7,281.3	7,268.0	13.30	547.523	
4,724.4	4,681.3	4,700.0	4,698.3	13.0	1.6	-89.75	371.9	-6,983.1	7,281.1	7,267.8	13.35	545.591	
4,800.0	4,756.9	4,763.0	4,761.4	13.1	1.7	-89.76	371.0	-6,982.6	7,280.6	7,267.1	13.51	538.975	
4,822.8	4,779.7	4,778.9	4,777.2	13.2	1.7	-89.76	370.8	-6,982.5	7,280.5	7,266.9	13.56	537.039	
4,900.0	4,856.9	4,832.6	4,830.9	13.3	1.7	-89.77	370.0	-6,982.4	7,280.3	7,266.5	13.72	530.587	
4,921.2	4,878.1	4,847.4	4,845.7	13.4	1.7	-89.77	369.8	-6,982.4	7,280.2	7,266.5	13.77	528.828	
4,926.3	4,883.2	4,850.9	4,849.2	13.4	1.7	-89.77	369.7	-6,982.4	7,280.2	7,266.5	13.78	528.408	
5,000.0	4,956.9	4,900.0	4,898.3	13.5	1.7	-89.77	369.0	-6,982.5	7,280.4	7,266.4	13.94	522.450	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,976.6	4,920.3	4,918.6	13.5	1.7	-89.78	368.8	-6,982.5	7,280.4	7,266.4	13.98	520.793		
5,100.0	5,056.9	4,991.7	4,990.0	13.7	1.7	-89.78	367.7	-6,982.8	7,280.7	7,266.6	14.16	514.269		
5,118.1	5,075.0	5,007.8	5,006.1	13.7	1.7	-89.79	367.5	-6,982.9	7,280.8	7,266.6	14.20	512.819		
5,200.0	5,156.9	5,081.1	5,079.3	13.8	1.8	-89.79	366.6	-6,983.3	7,281.3	7,266.9	14.38	506.385		
5,216.5	5,173.4	5,100.0	5,098.3	13.9	1.8	-89.79	366.5	-6,983.4	7,281.4	7,266.9	14.42	505.061		
5,300.0	5,256.9	5,152.3	5,150.5	14.0	1.8	-89.80	366.0	-6,983.8	7,282.0	7,267.4	14.59	498.968		
5,314.9	5,271.8	5,162.2	5,160.5	14.1	1.8	-89.80	365.9	-6,983.9	7,282.2	7,267.5	14.63	497.885		
5,400.0	5,356.9	5,245.5	5,243.8	14.2	1.8	-89.81	365.1	-6,984.9	7,283.2	7,268.4	14.81	491.616		
5,413.4	5,370.3	5,267.2	5,265.5	14.2	1.8	-89.81	364.9	-6,985.1	7,283.3	7,268.5	14.85	490.572		
5,500.0	5,456.9	5,346.4	5,344.6	14.4	1.8	-89.81	364.3	-6,985.9	7,284.1	7,269.1	15.04	484.449		
5,511.8	5,468.7	5,354.6	5,352.9	14.4	1.8	-89.81	364.3	-6,986.0	7,284.3	7,269.2	15.06	483.647		
5,600.0	5,556.9	5,422.2	5,420.5	14.6	1.8	-89.81	364.0	-6,986.8	7,285.4	7,270.2	15.25	477.730		
5,610.2	5,567.1	5,432.0	5,430.3	14.6	1.8	-89.81	363.9	-6,987.0	7,285.5	7,270.3	15.27	477.046		
5,700.0	5,656.9	5,521.3	5,519.6	14.7	1.9	-89.82	363.5	-6,988.3	7,286.8	7,271.4	15.47	471.085		
5,708.6	5,665.5	5,531.1	5,529.3	14.8	1.9	-89.82	363.4	-6,988.4	7,287.0	7,271.5	15.49	470.504		
5,800.0	5,756.9	5,629.0	5,627.3	14.9	1.9	-89.82	362.7	-6,989.7	7,288.2	7,272.5	15.69	464.474		
5,807.1	5,764.0	5,635.8	5,634.0	14.9	1.9	-89.82	362.6	-6,989.8	7,288.3	7,272.6	15.71	464.016		
5,900.0	5,856.9	5,727.7	5,725.9	15.1	1.9	-89.83	362.0	-6,991.0	7,289.5	7,273.6	15.91	458.133		
5,905.5	5,862.4	5,733.5	5,731.7	15.1	1.9	-89.83	362.0	-6,991.1	7,289.6	7,273.7	15.92	457.797		
5,971.9	5,928.8	5,804.6	5,802.8	15.3	1.9	-89.83	362.0	-6,992.0	7,290.4	7,274.4	16.07	453.784		
6,000.0	5,956.9	5,836.1	5,834.4	15.3	1.9	0.17	362.1	-6,992.4	7,290.2	7,274.3	15.96	456.787		
6,003.9	5,960.8	5,840.6	5,838.8	15.3	1.9	0.17	362.1	-6,992.5	7,290.1	7,274.2	15.97	456.591		
6,050.0	6,006.7	5,892.2	5,890.5	15.4	1.9	0.17	362.4	-6,993.1	7,287.1	7,271.1	16.06	453.781		
6,100.0	6,056.2	5,944.0	5,942.2	15.4	1.9	0.18	362.7	-6,993.6	7,280.5	7,264.3	16.18	450.069		
6,102.3	6,058.5	5,946.4	5,944.6	15.4	1.9	0.18	362.7	-6,993.7	7,280.1	7,263.9	16.18	449.887		
6,150.0	6,105.1	5,994.5	5,992.7	15.4	1.9	0.19	363.2	-6,994.2	7,270.4	7,254.1	16.30	446.150		
6,200.0	6,153.0	6,041.8	6,040.0	15.5	1.9	0.19	363.7	-6,994.7	7,257.0	7,240.6	16.40	442.510		
6,200.8	6,153.8	6,042.5	6,040.7	15.5	1.9	0.19	363.7	-6,994.7	7,256.7	7,240.3	16.40	442.458		
6,250.0	6,199.9	6,087.8	6,086.0	15.5	1.9	0.20	364.3	-6,995.2	7,240.2	7,223.7	16.48	439.445		
6,299.2	6,244.8	6,126.6	6,124.8	15.5	1.9	0.22	364.9	-6,995.6	7,220.5	7,204.0	16.51	437.271		
6,300.0	6,245.5	6,127.2	6,125.4	15.5	1.9	0.22	364.9	-6,995.7	7,220.2	7,203.7	16.51	437.243		
6,350.0	6,289.6	6,163.4	6,161.5	15.5	1.9	0.23	365.5	-6,996.1	7,197.1	7,180.6	16.51	435.966		
6,397.6	6,329.9	6,200.0	6,198.2	15.4	1.9	0.25	366.2	-6,996.6	7,172.3	7,155.8	16.47	435.540		
6,400.0	6,331.8	6,200.0	6,198.2	15.4	1.9	0.25	366.2	-6,996.6	7,171.0	7,154.5	16.46	435.581		
6,450.0	6,372.2	6,243.6	6,241.7	15.4	1.9	0.27	367.0	-6,997.2	7,142.0	7,125.6	16.39	435.877		
6,496.0	6,407.4	6,283.9	6,282.0	15.4	1.9	0.30	367.9	-6,997.7	7,112.8	7,096.5	16.28	436.834		
6,500.0	6,410.3	6,287.2	6,285.4	15.4	1.9	0.30	368.0	-6,997.8	7,110.2	7,093.9	16.27	436.950		
6,550.0	6,446.1	6,325.0	6,323.1	15.4	1.9	0.33	368.8	-6,998.2	7,075.8	7,059.6	16.12	438.863		
6,594.5	6,475.9	6,355.2	6,353.3	15.4	1.9	0.36	369.6	-6,998.6	7,043.1	7,027.1	15.97	441.141		
6,600.0	6,479.4	6,358.8	6,356.9	15.4	1.9	0.37	369.6	-6,998.7	7,038.9	7,022.9	15.94	441.462		
6,650.0	6,510.0	6,390.0	6,388.1	15.5	1.9	0.42	370.4	-6,999.1	6,999.8	6,984.0	15.75	444.531		
6,692.9	6,534.0	6,415.1	6,413.2	15.7	1.9	0.47	371.1	-6,999.4	6,964.5	6,948.9	15.57	447.295		
6,700.0	6,537.8	6,419.2	6,417.2	15.7	1.9	0.47	371.2	-6,999.4	6,958.5	6,943.0	15.54	447.766		
6,750.0	6,562.6	6,445.7	6,443.8	16.2	1.9	0.55	372.0	-6,999.7	6,915.5	6,900.1	15.34	450.844		
6,791.3	6,580.8	6,465.3	6,463.3	16.6	1.9	0.63	372.6	-7,000.0	6,878.6	6,863.4	15.19	452.941		
6,800.0	6,584.3	6,469.1	6,467.1	16.7	1.9	0.65	372.7	-7,000.0	6,870.7	6,855.5	15.16	453.349		
6,850.0	6,602.9	6,489.1	6,487.1	17.3	1.9	0.79	373.3	-7,000.3	6,824.5	6,809.5	15.01	454.756		
6,889.7	6,615.2	6,500.0	6,498.0	17.9	1.9	0.95	373.6	-7,000.4	6,786.9	6,772.0	14.92	454.795		
6,900.0	6,618.1	6,504.9	6,502.9	18.0	1.9	1.00	373.8	-7,000.4	6,777.1	6,762.2	14.91	454.520		
6,950.0	6,630.0	6,516.2	6,514.2	18.8	1.9	1.34	374.2	-7,000.6	6,728.7	6,713.8	14.88	452.053		
6,988.2	6,636.8	6,522.8	6,520.8	19.5	1.9	1.78	374.4	-7,000.7	6,691.2	6,676.3	14.93	448.159		
7,000.0	6,638.5	6,524.4	6,522.5	19.7	1.9	1.99	374.4	-7,000.7	6,679.5	6,664.5	14.96	446.570		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,643.5	6,529.5	6,527.6	20.6	1.9	3.80	374.6	-7,000.7	6,629.8	6,614.6	15.21	435.748		
7,086.6	6,644.9	6,531.3	6,529.3	21.3	1.9	11.00	374.6	-7,000.8	6,593.3	6,577.0	16.25	405.712		
7,097.8	6,645.0	6,531.5	6,529.5	21.5	1.9	25.12	374.6	-7,000.8	6,582.1	6,563.2	18.82	349.812		
7,100.0	6,645.0	6,531.5	6,529.5	21.6	1.9	25.12	374.6	-7,000.8	6,579.9	6,561.1	18.84	349.312		
7,185.0	6,644.9	6,532.3	6,530.4	23.3	1.9	25.40	374.7	-7,000.8	6,494.9	6,475.2	19.69	329.896		
7,200.0	6,644.9	6,532.5	6,530.5	23.6	1.9	25.45	374.7	-7,000.8	6,479.9	6,460.1	19.84	326.618		
7,283.4	6,644.8	6,533.3	6,531.4	25.4	1.9	25.73	374.7	-7,000.8	6,396.5	6,375.7	20.75	308.262		
7,300.0	6,644.7	6,533.5	6,531.5	25.8	1.9	25.78	374.7	-7,000.8	6,379.9	6,359.0	20.93	304.779		
7,381.9	6,644.6	6,534.3	6,532.3	27.7	1.9	26.06	374.7	-7,000.8	6,298.0	6,276.1	21.89	287.697		
7,400.0	6,644.6	6,534.5	6,532.5	28.1	1.9	26.12	374.7	-7,000.8	6,279.9	6,257.8	22.11	284.083		
7,480.3	6,644.5	6,535.3	6,533.3	30.0	1.9	26.40	374.8	-7,000.8	6,199.6	6,176.5	23.10	268.355		
7,500.0	6,644.5	6,535.5	6,533.5	30.5	1.9	26.47	374.8	-7,000.8	6,179.9	6,156.6	23.35	264.669		
7,578.7	6,644.4	6,536.3	6,534.3	32.4	1.9	26.75	374.8	-7,000.8	6,101.2	6,076.8	24.38	250.292		
7,600.0	6,644.4	6,536.5	6,534.5	32.9	1.9	26.83	374.8	-7,000.8	6,079.9	6,055.3	24.66	246.580		
7,677.1	6,644.3	6,537.3	6,535.3	34.8	1.9	27.11	374.8	-7,000.8	6,002.8	5,977.1	25.71	233.498		
7,700.0	6,644.2	6,537.5	6,535.6	35.4	1.9	27.20	374.8	-7,000.8	5,979.9	5,953.9	26.02	229.795		
7,775.6	6,644.1	6,538.3	6,536.3	37.3	1.9	27.48	374.8	-7,000.9	5,904.4	5,877.3	27.09	217.926		
7,800.0	6,644.1	6,538.5	6,536.6	38.0	1.9	27.58	374.9	-7,000.9	5,879.9	5,852.5	27.44	214.257		
7,874.0	6,644.0	6,539.3	6,537.3	39.9	1.9	27.86	374.9	-7,000.9	5,805.9	5,777.4	28.53	203.506		
7,900.0	6,644.0	6,539.6	6,537.6	40.5	1.9	27.96	374.9	-7,000.9	5,779.9	5,751.0	28.92	199.891		
7,972.4	6,643.9	6,540.3	6,538.3	42.4	1.9	28.25	374.9	-7,000.9	5,707.5	5,677.5	30.01	190.161		
8,000.0	6,643.9	6,540.6	6,538.6	43.1	1.9	28.36	374.9	-7,000.9	5,680.0	5,649.5	30.44	186.612		
8,070.8	6,643.8	6,541.3	6,539.3	45.0	1.9	28.65	374.9	-7,000.9	5,609.1	5,577.6	31.55	177.807		
8,100.0	6,643.7	6,541.6	6,539.6	45.8	1.9	28.77	375.0	-7,000.9	5,580.0	5,548.0	32.01	174.334		
8,169.3	6,643.7	6,542.3	6,540.3	47.6	1.9	29.06	375.0	-7,000.9	5,510.7	5,477.6	33.12	166.365		
8,200.0	6,643.6	6,542.6	6,540.7	48.4	1.9	29.19	375.0	-7,000.9	5,480.0	5,446.3	33.62	162.974		
8,267.7	6,643.5	6,543.3	6,541.4	50.2	1.9	29.48	375.0	-7,000.9	5,412.3	5,377.5	34.75	155.760		
8,300.0	6,643.5	6,543.7	6,541.7	51.1	1.9	29.63	375.0	-7,000.9	5,380.0	5,344.7	35.29	152.453		
8,366.1	6,643.4	6,544.4	6,542.4	52.9	1.9	29.92	375.0	-7,000.9	5,313.9	5,277.4	36.42	145.918		
8,400.0	6,643.4	6,544.7	6,542.7	53.8	1.9	30.07	375.0	-7,000.9	5,280.0	5,243.0	37.00	142.699		
8,464.5	6,643.3	6,545.4	6,543.4	55.5	1.9	30.36	375.1	-7,000.9	5,215.4	5,177.3	38.13	136.776		
8,500.0	6,643.2	6,545.7	6,543.8	56.5	1.9	30.53	375.1	-7,000.9	5,180.0	5,141.2	38.76	133.645		
8,563.0	6,643.2	6,546.4	6,544.4	58.2	1.9	30.82	375.1	-7,001.0	5,117.0	5,077.1	39.89	128.272		
8,600.0	6,643.1	6,546.8	6,544.8	59.2	1.9	31.00	375.1	-7,001.0	5,080.0	5,039.4	40.57	125.229		
8,661.4	6,643.0	6,547.4	6,545.4	60.8	1.9	31.29	375.1	-7,001.0	5,018.6	4,976.9	41.70	120.353		
8,700.0	6,643.0	6,547.8	6,545.8	61.9	1.9	31.48	375.1	-7,001.0	4,980.0	4,937.6	42.42	117.397		
8,759.8	6,642.9	6,548.4	6,546.5	63.5	1.9	31.78	375.2	-7,001.0	4,920.2	4,876.6	43.55	112.968		
8,800.0	6,642.9	6,548.9	6,546.9	64.6	1.9	31.98	375.2	-7,001.0	4,880.0	4,835.7	44.32	110.099		
8,858.2	6,642.8	6,549.5	6,547.5	66.2	1.9	32.28	375.2	-7,001.0	4,821.8	4,776.3	45.46	106.075		
8,900.0	6,642.7	6,549.9	6,547.9	67.3	1.9	32.49	375.2	-7,001.0	4,780.0	4,733.8	46.28	103.290		
8,956.7	6,642.7	6,550.5	6,548.5	68.9	1.9	32.79	375.2	-7,001.0	4,723.4	4,676.0	47.41	99.631		
9,000.0	6,642.6	6,551.0	6,549.0	70.1	1.9	33.02	375.2	-7,001.0	4,680.0	4,631.8	48.28	96.929		
9,055.1	6,642.5	6,551.5	6,549.5	71.6	1.9	33.32	375.3	-7,001.0	4,625.0	4,575.5	49.41	93.602		
9,100.0	6,642.5	6,552.0	6,550.0	72.8	1.9	33.57	375.3	-7,001.0	4,580.1	4,529.7	50.34	90.981		
9,153.5	6,642.4	6,552.6	6,550.6	74.3	1.9	33.86	375.3	-7,001.0	4,526.5	4,475.1	51.46	87.954		
9,200.0	6,642.4	6,553.1	6,551.1	75.6	1.9	34.13	375.3	-7,001.0	4,480.1	4,427.6	52.45	85.412		
9,251.9	6,642.3	6,553.6	6,551.6	77.0	1.9	34.43	375.3	-7,001.0	4,428.1	4,374.5	53.57	82.658		
9,300.0	6,642.2	6,554.1	6,552.1	78.3	1.9	34.71	375.3	-7,001.0	4,380.1	4,325.5	54.62	80.193		
9,350.4	6,642.2	6,554.7	6,552.7	79.7	1.9	35.00	375.4	-7,001.1	4,329.7	4,274.0	55.73	77.687		
9,400.0	6,642.1	6,555.2	6,553.2	81.1	1.9	35.30	375.4	-7,001.1	4,280.1	4,223.2	56.84	75.296		
9,448.8	6,642.0	6,555.7	6,553.7	82.4	1.9	35.60	375.4	-7,001.1	4,231.3	4,173.3	57.95	73.017		
9,500.0	6,642.0	6,556.3	6,554.3	83.8	1.9	35.92	375.4	-7,001.1	4,180.1	4,121.0	59.13	70.699		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,556.8	6,554.8	85.1	1.9	36.21	375.4	-7,001.1	4,132.9	4,072.7	60.22	68.625		
9,600.0	6,641.9	6,557.3	6,555.3	86.6	1.9	36.55	375.4	-7,001.1	4,080.1	4,018.6	61.47	66.378		
9,645.6	6,641.8	6,557.8	6,555.8	87.9	1.9	36.85	375.5	-7,001.1	4,034.5	3,971.9	62.56	64.492		
9,700.0	6,641.7	6,558.4	6,556.4	89.4	1.9	37.21	375.5	-7,001.1	3,980.1	3,916.2	63.87	62.315		
9,744.1	6,641.7	6,558.9	6,556.9	90.6	1.9	37.50	375.5	-7,001.1	3,936.0	3,871.1	64.95	60.600		
9,800.0	6,641.6	6,559.5	6,557.5	92.1	1.9	37.88	375.5	-7,001.1	3,880.1	3,813.8	66.34	58.490		
9,842.5	6,641.6	6,559.9	6,557.9	93.3	1.9	38.17	375.5	-7,001.1	3,837.6	3,770.2	67.41	56.933		
9,900.0	6,641.5	6,560.5	6,558.6	94.9	1.9	38.58	375.5	-7,001.1	3,780.1	3,711.3	68.87	54.888		
9,940.9	6,641.4	6,561.0	6,559.0	96.0	1.9	38.87	375.5	-7,001.1	3,739.2	3,669.3	69.93	53.474		
10,000.0	6,641.4	6,561.6	6,559.6	97.7	1.9	39.30	375.6	-7,001.1	3,680.1	3,608.7	71.47	51.493		
10,039.3	6,641.3	6,562.1	6,560.1	98.8	1.9	39.59	375.6	-7,001.1	3,640.8	3,568.3	72.51	50.211		
10,100.0	6,641.2	6,562.7	6,560.7	100.4	1.9	40.04	375.6	-7,001.2	3,580.2	3,506.0	74.14	48.292		
10,137.8	6,641.2	6,563.1	6,561.1	101.5	1.9	40.33	375.6	-7,001.2	3,542.4	3,467.2	75.16	47.130		
10,200.0	6,641.1	6,563.8	6,561.8	103.2	1.9	40.81	375.6	-7,001.2	3,480.2	3,403.3	76.87	45.272		
10,236.2	6,641.1	6,564.2	6,562.2	104.2	1.9	41.09	375.6	-7,001.2	3,444.0	3,366.1	77.88	44.221		
10,300.0	6,641.0	6,564.9	6,562.9	106.0	1.9	41.60	375.7	-7,001.2	3,380.2	3,300.5	79.68	42.422		
10,334.6	6,640.9	6,565.3	6,563.3	107.0	1.9	41.88	375.7	-7,001.2	3,345.6	3,264.9	80.67	41.472		
10,400.0	6,640.9	6,566.0	6,564.0	108.8	1.9	42.42	375.7	-7,001.2	3,280.2	3,197.6	82.56	39.730		
10,433.0	6,640.8	6,566.3	6,564.4	109.7	1.9	42.70	375.7	-7,001.2	3,247.2	3,163.6	83.53	38.874		
10,500.0	6,640.7	6,567.1	6,565.1	111.6	1.9	43.27	375.7	-7,001.2	3,180.2	3,094.7	85.52	37.188		
10,531.5	6,640.7	6,567.4	6,565.4	112.4	1.9	43.54	375.7	-7,001.2	3,148.7	3,062.3	86.46	36.418		
10,600.0	6,640.6	6,568.2	6,566.2	114.3	1.9	44.14	375.8	-7,001.2	3,080.2	2,991.7	88.55	34.786		
10,629.9	6,640.6	6,568.5	6,566.5	115.2	1.9	44.41	375.8	-7,001.2	3,050.3	2,960.9	89.47	34.094		
10,700.0	6,640.5	6,569.3	6,567.3	117.1	1.9	45.04	375.8	-7,001.2	2,980.2	2,888.6	91.65	32.517		
10,728.3	6,640.4	6,569.6	6,567.6	117.9	1.9	45.31	375.8	-7,001.2	2,951.9	2,859.4	92.55	31.896		
10,800.0	6,640.4	6,570.4	6,568.4	119.9	1.9	45.98	375.8	-7,001.3	2,880.3	2,785.4	94.84	30.371		
10,826.7	6,640.3	6,570.7	6,568.7	120.7	1.9	46.23	375.8	-7,001.3	2,853.5	2,757.8	95.70	29.817		
10,900.0	6,640.2	6,571.5	6,569.5	122.7	1.9	46.94	375.9	-7,001.3	2,780.3	2,682.2	98.10	28.342		
10,925.2	6,640.2	6,571.8	6,569.8	123.4	1.9	47.19	375.9	-7,001.3	2,755.1	2,656.2	98.93	27.849		
11,000.0	6,640.1	6,572.6	6,570.6	125.5	1.9	47.94	375.9	-7,001.3	2,680.3	2,578.8	101.43	26.424		
11,023.6	6,640.1	6,572.9	6,570.9	126.1	1.9	48.18	375.9	-7,001.3	2,656.7	2,554.5	102.23	25.987		
11,100.0	6,640.0	6,573.7	6,571.7	128.3	1.9	48.97	375.9	-7,001.3	2,580.3	2,475.5	104.85	24.610		
11,122.0	6,639.9	6,574.0	6,572.0	128.9	1.9	49.21	375.9	-7,001.3	2,558.3	2,452.7	105.61	24.224		
11,200.0	6,639.8	6,574.8	6,572.8	131.1	1.9	50.04	376.0	-7,001.3	2,480.3	2,372.0	108.34	22.894		
11,220.4	6,639.8	6,575.1	6,573.1	131.6	1.9	50.26	376.0	-7,001.3	2,459.9	2,350.8	109.06	22.555		
11,300.0	6,639.7	6,576.0	6,574.0	133.9	1.9	51.14	376.0	-7,001.3	2,380.3	2,268.4	111.90	21.271		
11,318.9	6,639.7	6,576.2	6,574.2	134.4	1.9	51.35	376.0	-7,001.3	2,361.5	2,248.9	112.58	20.975		
11,400.0	6,639.6	6,577.1	6,575.1	136.7	1.9	52.28	376.0	-7,001.3	2,280.4	2,164.8	115.54	19.736		
11,417.3	6,639.6	6,577.3	6,575.3	137.1	1.9	52.48	376.0	-7,001.3	2,263.1	2,146.9	116.18	19.479		
11,500.0	6,639.5	6,578.2	6,576.2	139.4	1.9	53.45	376.1	-7,001.4	2,180.4	2,061.1	119.25	18.284		
11,515.7	6,639.5	6,578.4	6,576.4	139.9	1.9	53.64	376.1	-7,001.4	2,164.7	2,044.8	119.84	18.063		
11,600.0	6,639.3	6,579.3	6,577.3	142.2	1.9	54.67	376.1	-7,001.4	2,080.4	1,957.4	123.03	16.910		
11,614.1	6,639.3	6,579.5	6,577.5	142.6	1.9	54.84	376.1	-7,001.4	2,066.2	1,942.7	123.57	16.722		
11,700.0	6,639.2	6,580.5	6,578.5	145.0	1.9	55.92	376.1	-7,001.4	1,980.4	1,853.6	126.87	15.610		
11,712.6	6,639.2	6,580.6	6,578.6	145.4	1.9	56.08	376.1	-7,001.4	1,967.8	1,840.5	127.35	15.452		
11,800.0	6,639.1	6,581.6	6,579.6	147.8	1.9	57.21	376.2	-7,001.4	1,880.4	1,749.7	130.76	14.381		
11,811.0	6,639.1	6,581.7	6,579.7	148.1	1.9	57.35	376.2	-7,001.4	1,869.4	1,738.3	131.19	14.249		
11,900.0	6,639.0	6,582.8	6,580.8	150.6	1.9	58.54	376.2	-7,001.4	1,780.5	1,645.8	134.71	13.217		
11,909.4	6,639.0	6,582.9	6,580.9	150.9	1.9	58.67	376.2	-7,001.4	1,771.0	1,636.0	135.09	13.110		
12,000.0	6,638.8	6,583.9	6,581.9	153.4	1.9	59.91	376.2	-7,001.4	1,680.5	1,541.8	138.71	12.115		
12,007.8	6,638.8	6,584.0	6,582.0	153.6	1.9	60.02	376.2	-7,001.4	1,672.7	1,533.6	139.03	12.031		
12,100.0	6,638.7	6,585.1	6,583.1	156.2	1.9	61.32	376.3	-7,001.4	1,580.5	1,437.8	142.74	11.072		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,585.1	6,583.1	156.4	1.9	61.41	376.3	-7,001.4	1,574.3	1,431.3	143.00	11.009		
12,200.0	6,638.6	6,586.2	6,584.2	159.0	1.9	62.77	376.3	-7,001.5	1,480.6	1,333.8	146.81	10.085		
12,204.7	6,638.6	6,586.3	6,584.3	159.1	1.9	62.84	376.3	-7,001.5	1,475.9	1,328.9	147.00	10.040		
12,300.0	6,638.5	6,587.4	6,585.4	161.8	1.9	64.27	376.4	-7,001.5	1,380.6	1,229.7	150.89	9.150		
12,303.1	6,638.5	6,587.4	6,585.4	161.9	1.9	64.31	376.4	-7,001.5	1,377.5	1,226.5	151.02	9.121		
12,400.0	6,638.3	6,588.5	6,586.5	164.6	1.9	65.80	376.4	-7,001.5	1,280.7	1,125.7	154.98	8.263		
12,401.5	6,638.3	6,588.5	6,586.5	164.6	1.9	65.82	376.4	-7,001.5	1,279.1	1,124.1	155.05	8.250		
12,500.0	6,638.2	6,589.7	6,587.7	167.4	1.9	67.37	376.4	-7,001.5	1,180.7	1,021.6	159.07	7.422		
12,598.4	6,638.1	6,590.8	6,588.8	170.2	1.9	68.96	376.5	-7,001.5	1,082.4	919.3	163.08	6.637		
12,600.0	6,638.1	6,590.8	6,588.8	170.2	1.9	68.98	376.5	-7,001.5	1,080.8	917.6	163.15	6.624		
12,696.8	6,638.0	6,592.0	6,590.0	172.9	1.9	70.58	376.5	-7,001.5	984.0	816.9	167.06	5.890		
12,700.0	6,638.0	6,592.0	6,590.0	173.0	1.9	70.63	376.5	-7,001.5	980.8	813.6	167.19	5.866		
12,795.2	6,637.8	6,593.1	6,591.1	175.7	1.9	72.23	376.5	-7,001.6	885.7	714.7	171.00	5.179		
12,800.0	6,637.8	6,593.2	6,591.2	175.8	1.9	72.31	376.5	-7,001.6	880.9	709.7	171.19	5.146		
12,893.7	6,637.7	6,594.3	6,592.3	178.4	1.9	73.92	376.6	-7,001.6	787.3	612.5	174.89	4.502		
12,900.0	6,637.7	6,594.4	6,592.4	178.6	1.9	74.03	376.6	-7,001.6	781.0	605.9	175.13	4.460		
12,992.1	6,637.6	6,595.4	6,593.4	181.2	1.9	75.64	376.6	-7,001.6	689.0	510.3	178.70	3.856		
13,000.0	6,637.6	6,595.5	6,593.5	181.4	1.9	75.78	376.6	-7,001.6	681.2	502.1	179.00	3.805		
13,090.5	6,637.5	6,596.6	6,594.6	183.9	1.9	77.39	376.6	-7,001.6	590.8	408.4	182.43	3.238		
13,100.0	6,637.5	6,596.7	6,594.7	184.2	1.9	77.56	376.6	-7,001.6	581.3	398.5	182.78	3.180		
13,188.9	6,637.4	6,597.8	6,595.8	186.7	1.9	79.16	376.7	-7,001.6	492.6	306.5	186.06	2.647		
13,200.0	6,637.3	6,597.9	6,595.9	187.0	1.9	79.36	376.7	-7,001.6	481.6	295.1	186.46	2.583		
13,287.4	6,637.2	6,599.0	6,596.9	189.4	1.9	80.96	376.7	-7,001.6	394.5	204.9	189.58	2.081		
13,300.0	6,637.2	6,599.1	6,597.1	189.8	1.9	81.19	376.7	-7,001.6	381.9	191.9	190.02	2.010		
13,385.8	6,637.1	6,600.0	6,598.0	192.2	1.9	82.58	376.7	-7,001.6	296.7	103.7	192.91	1.538		
13,400.0	6,637.1	6,600.0	6,598.0	192.6	1.9	82.58	376.7	-7,001.6	282.6	89.3	193.31	1.462 Level 3		
13,484.2	6,637.0	6,601.3	6,599.3	195.0	1.9	84.59	376.8	-7,001.7	199.4	3.1	196.23	1.016 Level 2		
13,500.0	6,637.0	6,601.5	6,599.5	195.4	1.9	84.89	376.8	-7,001.7	183.9	-12.9	196.74	0.935 Level 1		
13,582.6	6,636.9	6,602.5	6,600.5	197.7	1.9	86.45	376.8	-7,001.7	104.2	-95.2	199.35	0.523 Level 1		
13,600.0	6,636.8	6,602.7	6,600.7	198.2	1.9	86.78	376.8	-7,001.7	88.2	-111.7	199.88	0.441 Level 1		
13,680.2	6,636.7	6,603.7	6,601.7	200.5	1.9	88.32	376.8	-7,001.7	36.6	-165.7	202.28	0.181 Level 1, CC, SF		
13,681.1	6,636.7	6,603.7	6,601.7	200.5	1.9	88.34	376.8	-7,001.7	36.6	-165.7	202.31	0.181 Level 1, ES		
13,700.0	6,636.7	6,603.9	6,601.9	201.0	1.9	88.70	376.8	-7,001.7	41.6	-161.3	202.86	0.205 Level 1		
13,779.5	6,636.6	6,604.9	6,602.9	203.2	1.9	90.26	376.9	-7,001.7	105.8	-99.3	205.09	0.516 Level 1		
13,800.0	6,636.6	6,605.2	6,603.2	203.8	1.9	90.66	376.9	-7,001.7	125.2	-80.4	205.65	0.609 Level 1		
13,877.9	6,636.5	6,606.2	6,604.1	206.0	1.9	92.20	376.9	-7,001.7	201.0	-6.7	207.69	0.968 Level 1		
13,900.0	6,636.5	6,606.4	6,604.4	206.6	1.9	92.64	376.9	-7,001.7	222.8	14.5	208.25	1.070 Level 2		
13,976.3	6,636.4	6,607.4	6,605.4	208.8	1.9	94.17	376.9	-7,001.7	298.4	88.3	210.09	1.420 Level 3		
14,000.0	6,636.3	6,607.7	6,605.7	209.4	1.9	94.64	377.0	-7,001.7	321.8	111.2	210.63	1.528		
14,074.8	6,636.2	6,608.7	6,606.7	211.5	1.9	96.15	377.0	-7,001.8	396.2	184.0	212.26	1.867		
14,100.0	6,636.2	6,609.0	6,607.0	212.2	1.9	96.66	377.0	-7,001.8	421.3	208.6	212.78	1.980		
14,173.2	6,636.1	6,610.0	6,608.0	214.3	1.9	98.15	377.0	-7,001.8	494.3	280.1	214.19	2.308		
14,200.0	6,636.1	6,610.4	6,608.4	215.0	1.9	98.70	377.0	-7,001.8	521.0	306.3	214.68	2.427		
14,271.6	6,636.0	6,611.3	6,609.3	217.0	1.9	100.16	377.1	-7,001.8	592.5	376.6	215.88	2.745		
14,300.0	6,636.0	6,611.7	6,609.7	217.8	1.9	100.74	377.1	-7,001.8	620.8	404.5	216.32	2.870		
14,370.0	6,635.9	6,612.7	6,610.7	219.8	1.9	102.17	377.1	-7,001.8	690.7	473.4	217.31	3.179		
14,400.0	6,635.8	6,613.1	6,611.1	220.6	1.9	102.78	377.1	-7,001.8	720.6	503.0	217.69	3.310		
14,468.5	6,635.7	6,614.1	6,612.0	222.6	1.9	104.18	377.1	-7,001.8	789.0	570.6	218.47	3.612		
14,500.0	6,635.7	6,614.5	6,612.5	223.4	1.9	104.82	377.1	-7,001.8	820.5	601.7	218.78	3.750		
14,566.9	6,635.6	6,615.5	6,613.4	225.3	1.9	106.18	377.2	-7,001.9	887.4	668.0	219.36	4.045		
14,600.0	6,635.6	6,615.9	6,613.9	226.2	1.9	106.85	377.2	-7,001.9	920.4	700.8	219.59	4.192		
14,665.3	6,635.5	6,616.9	6,614.8	228.1	1.9	108.17	377.2	-7,001.9	985.7	765.7	219.97	4.481		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.5	6,617.4	6,615.4	229.0	1.9	108.87	377.2	-7,001.9	1,020.3	800.2	220.12	4.635	
14,763.7	6,635.4	6,618.3	6,616.3	230.8	1.9	110.15	377.3	-7,001.9	1,084.1	863.7	220.32	4.920	
14,800.0	6,635.3	6,618.8	6,616.8	231.8	1.9	110.87	377.3	-7,001.9	1,120.3	899.9	220.38	5.083	
14,862.2	6,635.2	6,619.8	6,617.8	233.6	1.9	112.10	377.3	-7,001.9	1,182.4	962.0	220.40	5.365	
14,900.0	6,635.2	6,620.3	6,618.3	234.7	1.9	112.85	377.3	-7,001.9	1,220.2	999.9	220.36	5.537	
14,960.6	6,635.1	6,621.3	6,619.2	236.4	1.9	114.04	377.3	-7,001.9	1,280.8	1,060.6	220.22	5.816	
14,995.1	6,635.0	6,621.7	6,619.7	237.3	1.9	114.70	377.3	-7,001.9	1,315.3	1,095.2	220.12	5.976	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5.52	1,733.8	167.6	1,741.9				
98.4	98.4	93.4	93.4	0.1	1.1	5.52	1,733.8	167.6	1,741.9	1,740.6	1.24	1,404.358	
100.0	100.0	95.0	95.0	0.1	1.2	5.52	1,733.8	167.6	1,741.9	1,740.6	1.26	1,380.910	
196.8	196.8	191.8	191.8	0.3	3.3	5.52	1,733.8	167.6	1,741.9	1,738.2	3.64	478.796	
200.0	200.0	195.0	195.0	0.3	3.4	5.52	1,733.8	167.6	1,741.9	1,738.1	3.72	468.617	
295.3	295.3	290.3	290.3	0.5	5.4	5.52	1,733.8	167.6	1,741.9	1,735.9	5.92	294.177	
300.0	300.0	295.0	295.0	0.5	5.5	5.52	1,733.8	167.6	1,741.9	1,735.8	6.03	288.869	
393.7	393.7	388.7	388.7	0.8	7.4	5.52	1,733.8	167.6	1,741.9	1,733.7	8.16	213.575	
400.0	400.0	395.0	395.0	0.8	7.5	5.52	1,733.8	167.6	1,741.9	1,733.6	8.30	209.899	
492.1	492.1	487.1	487.1	1.0	9.4	5.52	1,733.8	167.6	1,741.9	1,731.5	10.38	167.882	
500.0	500.0	495.0	495.0	1.0	9.6	5.52	1,733.8	167.6	1,741.9	1,731.3	10.55	165.059	
590.5	590.5	585.5	585.5	1.2	11.4	5.52	1,733.8	167.6	1,741.9	1,729.3	12.59	138.370	
600.0	600.0	595.0	595.0	1.2	11.6	5.52	1,733.8	167.6	1,741.9	1,729.1	12.80	136.074	
689.0	689.0	684.0	684.0	1.4	13.4	5.52	1,733.8	167.6	1,741.9	1,727.1	14.80	117.712	
700.0	700.0	695.0	695.0	1.4	13.6	5.52	1,733.8	167.6	1,741.9	1,726.8	15.04	115.776	
787.4	787.4	782.4	782.4	1.6	15.4	5.52	1,733.8	167.6	1,741.9	1,724.8	17.00	102.435	
800.0	800.0	795.0	795.0	1.7	15.6	5.52	1,733.8	167.6	1,741.9	1,724.6	17.29	100.761	
885.8	885.8	880.8	880.8	1.9	17.3	5.52	1,733.8	167.6	1,741.9	1,722.6	19.21	90.674	
900.0	900.0	895.0	895.0	1.9	17.6	5.52	1,733.8	167.6	1,741.9	1,722.3	19.53	89.200	
984.2	984.2	979.2	979.2	2.1	19.3	5.52	1,733.8	167.6	1,741.9	1,720.4	21.41	81.340	
1,000.0	1,000.0	995.0	995.0	2.1	19.6	5.52	1,733.8	167.6	1,741.9	1,720.1	21.77	80.022	
1,082.7	1,082.7	1,077.7	1,077.7	2.3	21.3	5.52	1,733.8	167.6	1,741.9	1,718.2	23.62	73.751	
1,100.0	1,100.0	1,095.0	1,095.0	2.3	21.7	5.52	1,733.8	167.6	1,741.9	1,717.8	24.01	72.559	
1,181.1	1,181.1	1,176.1	1,176.1	2.5	23.3	5.52	1,733.8	167.6	1,741.9	1,716.0	25.82	67.458	
1,200.0	1,200.0	1,195.0	1,195.0	2.6	23.7	5.52	1,733.8	167.6	1,741.9	1,715.6	26.24	66.371	
1,279.5	1,279.5	1,274.5	1,274.5	2.7	25.3	5.52	1,733.8	167.6	1,741.9	1,713.8	28.02	62.156	
1,300.0	1,300.0	1,295.0	1,295.0	2.8	25.7	5.52	1,733.8	167.6	1,741.9	1,713.4	28.48	61.156	
1,377.9	1,377.9	1,372.9	1,372.9	3.0	27.3	-35.70	1,733.8	167.6	1,741.0	1,710.8	30.22	57.616	
1,400.0	1,400.0	1,395.0	1,395.0	3.0	27.7	-35.72	1,733.8	167.6	1,740.4	1,709.7	30.70	56.683	
1,476.4	1,476.3	1,471.3	1,471.3	3.2	29.2	-35.82	1,733.8	167.6	1,737.4	1,705.1	32.38	53.656	
1,500.0	1,499.8	1,494.8	1,494.8	3.2	29.7	-35.87	1,733.8	167.6	1,736.2	1,703.3	32.90	52.779	
1,574.8	1,574.4	1,569.4	1,569.4	3.4	31.2	-36.05	1,733.8	167.6	1,731.2	1,696.7	34.51	50.158	
1,600.0	1,599.5	1,594.5	1,594.5	3.5	31.7	-36.12	1,733.8	167.6	1,729.1	1,694.1	35.05	49.327	
1,673.2	1,672.2	1,667.2	1,667.2	3.6	33.2	-36.37	1,733.8	167.6	1,722.2	1,685.6	36.61	47.036	
1,700.0	1,698.7	1,693.7	1,693.7	3.7	33.7	-36.48	1,733.8	167.6	1,719.3	1,682.1	37.18	46.245	
1,771.6	1,769.5	1,764.5	1,764.5	3.9	35.1	-36.80	1,733.8	167.6	1,710.5	1,671.9	38.68	44.224	
1,800.0	1,797.5	1,792.5	1,792.5	4.0	35.7	-36.94	1,733.8	167.6	1,706.7	1,667.4	39.27	43.466	
1,870.1	1,866.3	1,861.3	1,861.3	4.2	37.1	-37.33	1,733.8	167.6	1,696.2	1,655.5	40.71	41.667	
1,899.9	1,895.6	1,890.6	1,890.6	4.3	37.7	-37.51	1,733.8	167.6	1,691.4	1,650.1	41.32	40.937	
1,968.5	1,962.6	1,957.6	1,957.6	4.5	39.0	-37.81	1,733.8	167.6	1,680.0	1,637.2	42.84	39.215	
2,000.0	1,993.4	1,988.4	1,988.4	4.6	39.6	-37.94	1,733.8	167.6	1,674.8	1,631.3	43.54	38.465	
2,066.9	2,058.9	2,053.9	2,053.9	4.8	41.0	-38.24	1,733.8	167.6	1,663.8	1,618.7	45.04	36.941	
2,100.0	2,091.3	2,086.3	2,086.3	4.9	41.6	-38.38	1,733.8	167.6	1,658.3	1,612.5	45.78	36.226	
2,165.3	2,155.2	2,150.2	2,150.2	5.2	42.9	-38.67	1,733.8	167.6	1,647.6	1,600.4	47.24	34.874	
2,200.0	2,189.1	2,184.1	2,184.1	5.3	43.6	-38.83	1,733.8	167.6	1,641.9	1,593.9	48.02	34.190	
2,263.8	2,251.5	2,246.5	2,246.5	5.5	44.8	-39.12	1,733.8	167.6	1,631.5	1,582.1	49.46	32.986	
2,300.0	2,286.9	2,281.9	2,281.9	5.7	45.5	-39.28	1,733.8	167.6	1,625.7	1,575.4	50.28	32.332	
2,362.2	2,347.7	2,342.7	2,342.7	5.9	46.8	-39.57	1,733.8	167.6	1,615.6	1,563.9	51.69	31.256	
2,400.0	2,384.7	2,379.7	2,379.7	6.0	47.5	-39.75	1,733.8	167.6	1,609.5	1,556.9	52.55	30.630	
2,460.6	2,444.0	2,439.0	2,439.0	6.3	48.7	-40.03	1,733.8	167.6	1,599.7	1,545.8	53.92	29.666	
2,500.0	2,482.5	2,477.5	2,477.5	6.4	49.5	-40.22	1,733.8	167.6	1,593.4	1,538.6	54.82	29.066	
2,559.0	2,540.3	2,535.3	2,535.3	6.7	50.6	-40.51	1,733.8	167.6	1,584.0	1,527.8	56.17	28.201	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,575.3	2,575.3	6.8	51.4	-40.70	1,733.8	167.6	1,577.4	1,520.3	57.10	27.625	
2,657.5	2,636.5	2,631.5	2,631.5	7.1	52.6	-40.99	1,733.8	167.6	1,568.3	1,509.9	58.42	26.846	
2,700.0	2,678.1	2,673.1	2,673.1	7.2	53.4	-41.20	1,733.8	167.6	1,561.6	1,502.2	59.39	26.293	
2,755.9	2,732.8	2,727.8	2,727.8	7.5	54.5	-41.48	1,733.8	167.6	1,552.8	1,492.1	60.68	25.591	
2,800.0	2,776.0	2,771.0	2,771.0	7.7	55.4	-41.70	1,733.8	167.6	1,545.9	1,484.2	61.69	25.059	
2,854.3	2,829.1	2,824.1	2,824.1	7.9	56.5	-41.98	1,733.8	167.6	1,537.4	1,474.4	62.94	24.426	
2,900.0	2,873.8	2,868.8	2,868.8	8.1	57.3	-42.21	1,733.8	167.6	1,530.2	1,466.3	63.99	23.912	
2,952.7	2,925.4	2,920.4	2,920.4	8.3	58.4	-42.49	1,733.8	167.6	1,522.1	1,456.8	65.21	23.340	
3,000.0	2,971.6	2,966.6	2,966.6	8.5	59.3	-42.74	1,733.8	167.6	1,514.8	1,448.5	66.30	22.846	
3,051.2	3,021.6	3,016.6	3,016.6	8.7	60.3	-43.01	1,733.8	167.6	1,506.9	1,439.4	67.49	22.328	
3,100.0	3,069.4	3,064.4	3,064.4	8.9	61.3	-43.27	1,733.8	167.6	1,499.4	1,430.8	68.62	21.850	
3,149.6	3,117.9	3,112.9	3,112.9	9.1	62.3	-43.54	1,733.8	167.6	1,491.8	1,422.1	69.77	21.381	
3,200.0	3,167.2	3,162.2	3,162.2	9.3	63.3	-43.81	1,733.8	167.6	1,484.2	1,413.2	70.94	20.920	
3,248.0	3,214.2	3,209.2	3,209.2	9.5	64.2	-44.08	1,733.8	167.6	1,476.9	1,404.8	72.06	20.495	
3,300.0	3,265.0	3,260.0	3,260.0	9.8	65.2	-44.37	1,733.8	167.6	1,469.1	1,395.8	73.27	20.049	
3,346.4	3,310.5	3,305.5	3,305.5	10.0	66.1	-44.63	1,733.8	167.6	1,462.1	1,387.8	74.36	19.663	
3,400.0	3,362.9	3,357.9	3,357.9	10.2	67.2	-44.94	1,733.8	167.6	1,454.1	1,378.5	75.61	19.232	
3,444.9	3,406.7	3,401.7	3,401.7	10.4	68.1	-45.19	1,733.8	167.6	1,447.5	1,370.8	76.66	18.881	
3,473.0	3,434.2	3,429.2	3,429.2	10.5	68.6	-45.36	1,733.8	167.6	1,443.3	1,366.0	77.32	18.667	
3,500.0	3,460.7	3,455.7	3,455.7	10.6	69.2	-45.45	1,733.8	167.6	1,439.4	1,361.4	78.00	18.453	
3,543.3	3,503.2	3,498.2	3,498.2	10.7	70.0	-45.60	1,733.8	167.6	1,433.6	1,354.5	79.07	18.129	
3,600.0	3,559.0	3,554.0	3,554.0	10.9	71.1	-45.78	1,733.8	167.6	1,426.6	1,346.1	80.47	17.729	
3,641.7	3,600.2	3,595.2	3,595.2	11.0	72.0	-45.91	1,733.8	167.6	1,422.0	1,340.5	81.48	17.452	
3,700.0	3,657.9	3,652.9	3,652.9	11.2	73.1	-46.06	1,733.8	167.6	1,416.3	1,333.4	82.89	17.088	
3,740.1	3,697.8	3,692.8	3,692.8	11.3	73.9	-46.15	1,733.8	167.6	1,412.9	1,329.0	83.84	16.853	
3,800.0	3,757.3	3,752.3	3,752.3	11.4	75.1	-46.27	1,733.8	167.6	1,408.5	1,323.3	85.25	16.523	
3,838.6	3,795.7	3,790.7	3,790.7	11.5	75.9	-46.34	1,733.8	167.6	1,406.1	1,320.0	86.14	16.324	
3,900.0	3,857.0	3,852.0	3,852.0	11.7	77.1	-46.42	1,733.8	167.6	1,403.1	1,315.6	87.55	16.027	
3,937.0	3,893.9	3,888.9	3,888.9	11.7	77.9	-46.46	1,733.8	167.6	1,401.8	1,313.4	88.38	15.861	
4,000.0	3,956.9	3,951.9	3,951.9	11.8	79.1	-46.51	1,733.8	167.6	1,400.2	1,310.4	89.78	15.596	
4,035.4	3,992.3	3,987.3	3,987.3	11.9	79.8	-46.52	1,733.8	167.6	1,399.7	1,309.2	90.55	15.457	
4,072.9	4,029.8	4,024.8	4,024.8	11.9	80.6	-5.34	1,733.8	167.6	1,399.5	1,308.4	91.11	15.362	
4,100.0	4,056.9	4,051.9	4,051.9	12.0	81.1	-5.34	1,733.8	167.6	1,399.5	1,307.8	91.69	15.263	
4,133.8	4,090.7	4,085.7	4,085.7	12.0	81.8	-5.34	1,733.8	167.6	1,399.5	1,307.1	92.44	15.141	
4,200.0	4,156.9	4,151.9	4,151.9	12.1	83.2	-5.34	1,733.8	167.6	1,399.5	1,305.7	93.88	14.907	
4,232.3	4,189.2	4,184.2	4,184.2	12.2	83.8	-5.34	1,733.8	167.6	1,399.5	1,304.9	94.59	14.796	
4,300.0	4,256.9	4,251.9	4,251.9	12.3	85.2	-5.34	1,733.8	167.6	1,399.5	1,303.5	96.08	14.567	
4,330.7	4,287.6	4,282.6	4,282.6	12.4	85.8	-5.34	1,733.8	167.6	1,399.5	1,302.8	96.75	14.466	
4,400.0	4,356.9	4,351.9	4,351.9	12.5	87.2	-5.34	1,733.8	167.6	1,399.5	1,301.3	98.27	14.242	
4,429.1	4,386.0	4,381.0	4,381.0	12.5	87.8	-5.34	1,733.8	167.6	1,399.5	1,300.6	98.91	14.150	
4,500.0	4,456.9	4,451.9	4,451.9	12.6	89.2	-5.34	1,733.8	167.6	1,399.5	1,299.1	100.46	13.931	
4,527.5	4,484.4	4,479.4	4,479.4	12.7	89.7	-5.34	1,733.8	167.6	1,399.5	1,298.5	101.07	13.847	
4,600.0	4,556.9	4,551.9	4,551.9	12.8	91.2	-5.34	1,733.8	167.6	1,399.5	1,296.9	102.66	13.633	
4,626.0	4,582.9	4,577.9	4,577.9	12.9	91.7	-5.34	1,733.8	167.6	1,399.5	1,296.3	103.23	13.557	
4,700.0	4,656.9	4,651.9	4,651.9	13.0	93.2	-5.34	1,733.8	167.6	1,399.5	1,294.7	104.86	13.347	
4,724.4	4,681.3	4,676.3	4,676.3	13.0	93.7	-5.34	1,733.8	167.6	1,399.5	1,294.1	105.39	13.279	
4,800.0	4,756.9	4,751.9	4,751.9	13.1	95.2	-5.34	1,733.8	167.6	1,399.5	1,292.5	107.06	13.073	
4,822.8	4,779.7	4,774.7	4,774.7	13.2	95.7	-5.34	1,733.8	167.6	1,399.5	1,292.0	107.56	13.012	
4,900.0	4,856.9	4,851.9	4,851.9	13.3	97.2	-5.34	1,733.8	167.6	1,399.5	1,290.3	109.26	12.810	
4,921.2	4,878.1	4,873.1	4,873.1	13.4	97.7	-5.34	1,733.8	167.6	1,399.5	1,289.8	109.72	12.755	
5,000.0	4,956.9	4,951.9	4,951.9	13.5	99.2	-5.34	1,733.8	167.6	1,399.5	1,288.1	111.46	12.557	
5,019.7	4,976.6	4,971.6	4,971.6	13.5	99.6	-5.34	1,733.8	167.6	1,399.5	1,287.6	111.89	12.508	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,051.9	5,051.9	13.7	101.3	-5.34	1,733.8	167.6	1,399.5	1,285.9	113.66	12.313	
5,118.1	5,075.0	5,070.0	5,070.0	13.7	101.6	-5.34	1,733.8	167.6	1,399.5	1,285.5	114.06	12.270	
5,200.0	5,156.9	5,151.9	5,151.9	13.8	103.3	-5.34	1,733.8	167.6	1,399.5	1,283.7	115.86	12.079	
5,216.5	5,173.4	5,168.4	5,168.4	13.9	103.6	-5.34	1,733.8	167.6	1,399.5	1,283.3	116.23	12.041	
5,300.0	5,256.9	5,251.9	5,251.9	14.0	105.3	-5.34	1,733.8	167.6	1,399.5	1,281.5	118.07	11.854	
5,314.9	5,271.8	5,266.8	5,266.8	14.1	105.6	-5.34	1,733.8	167.6	1,399.5	1,281.1	118.40	11.821	
5,400.0	5,356.9	5,351.9	5,351.9	14.2	107.3	-5.34	1,733.8	167.6	1,399.5	1,279.3	120.27	11.636	
5,413.4	5,370.3	5,365.3	5,365.3	14.2	107.6	-5.34	1,733.8	167.6	1,399.5	1,279.0	120.57	11.608	
5,500.0	5,456.9	5,451.9	5,451.9	14.4	109.3	-5.34	1,733.8	167.6	1,399.5	1,277.1	122.48	11.427	
5,511.8	5,468.7	5,463.7	5,463.7	14.4	109.5	-5.34	1,733.8	167.6	1,399.5	1,276.8	122.74	11.402	
5,600.0	5,556.9	5,551.9	5,551.9	14.6	111.3	-5.34	1,733.8	167.6	1,399.5	1,274.8	124.69	11.224	
5,610.2	5,567.1	5,562.1	5,562.1	14.6	111.5	-5.34	1,733.8	167.6	1,399.5	1,274.6	124.91	11.204	
5,700.0	5,656.9	5,651.9	5,651.9	14.7	113.3	-5.34	1,733.8	167.6	1,399.5	1,272.6	126.89	11.029	
5,708.6	5,665.5	5,660.5	5,660.5	14.8	113.5	-5.34	1,733.8	167.6	1,399.5	1,272.4	127.09	11.013	
5,800.0	5,756.9	5,751.9	5,751.9	14.9	115.3	-5.34	1,733.8	167.6	1,399.5	1,270.4	129.10	10.840	
5,807.1	5,764.0	5,759.0	5,759.0	14.9	115.5	-5.34	1,733.8	167.6	1,399.5	1,270.3	129.26	10.827	
5,900.0	5,856.9	5,851.9	5,851.9	15.1	117.3	-5.34	1,733.8	167.6	1,399.5	1,268.2	131.31	10.658	
5,905.5	5,862.4	5,857.4	5,857.4	15.1	117.5	-5.34	1,733.8	167.6	1,399.5	1,268.1	131.44	10.648	
5,971.9	5,928.8	5,923.8	5,923.8	15.3	118.8	-5.34	1,733.8	167.6	1,399.5	1,266.6	132.90	10.530	
6,000.0	5,956.9	5,951.9	5,951.9	15.3	119.4	84.69	1,733.8	167.6	1,399.5	1,265.7	133.77	10.462	
6,003.9	5,960.8	5,955.8	5,955.8	15.3	119.4	84.70	1,733.8	167.6	1,399.5	1,265.6	133.86	10.455	
6,050.0	6,006.7	6,001.7	6,001.7	15.4	120.4	84.87	1,733.8	167.6	1,399.1	1,264.3	134.83	10.377	
6,100.0	6,056.2	6,051.2	6,051.2	15.4	121.4	85.21	1,733.8	167.6	1,398.5	1,262.7	135.86	10.294	
6,102.3	6,058.5	6,053.5	6,053.5	15.4	121.4	85.23	1,733.8	167.6	1,398.5	1,262.6	135.91	10.290	
6,150.0	6,105.1	6,100.1	6,100.1	15.4	122.3	85.70	1,733.8	167.6	1,397.7	1,260.8	136.85	10.213	
6,200.0	6,153.0	6,148.0	6,148.0	15.5	123.3	86.33	1,733.8	167.6	1,396.6	1,258.8	137.81	10.135	
6,200.8	6,153.8	6,148.8	6,148.8	15.5	123.3	86.34	1,733.8	167.6	1,396.6	1,258.8	137.82	10.133	
6,250.0	6,199.9	6,194.9	6,194.9	15.5	124.2	87.08	1,733.8	167.6	1,395.6	1,256.8	138.74	10.059	
6,299.2	6,244.8	6,239.8	6,239.8	15.5	125.1	87.91	1,733.8	167.6	1,394.6	1,255.0	139.64	9.987	
6,300.0	6,245.5	6,240.5	6,240.5	15.5	125.2	87.92	1,733.8	167.6	1,394.6	1,255.0	139.66	9.986	
6,350.0	6,289.6	6,284.6	6,284.6	15.5	126.0	88.84	1,733.8	167.6	1,393.9	1,253.3	140.55	9.917	
6,397.6	6,329.9	6,324.9	6,324.9	15.4	126.9	89.75	1,733.8	167.6	1,393.5	1,252.1	141.37	9.857	
6,400.0	6,331.8	6,326.8	6,326.8	15.4	126.9	89.80	1,733.8	167.6	1,393.5	1,252.1	141.42	9.854	
6,410.6	6,340.5	6,335.5	6,335.5	15.4	127.1	90.00	1,733.8	167.6	1,393.5	1,251.9	141.60	9.841 CC	
6,450.0	6,372.2	6,367.2	6,367.2	15.4	127.7	90.76	1,733.8	167.6	1,393.7	1,251.4	142.26	9.796 ES	
6,496.0	6,407.4	6,402.4	6,402.4	15.4	128.4	91.63	1,733.8	167.6	1,394.5	1,251.5	143.03	9.750	
6,500.0	6,410.3	6,405.3	6,405.3	15.4	128.5	91.70	1,733.8	167.6	1,394.6	1,251.5	143.09	9.746	
6,550.0	6,446.1	6,441.1	6,441.1	15.4	129.2	92.58	1,733.8	167.6	1,396.4	1,252.5	143.90	9.704	
6,594.5	6,475.9	6,470.9	6,470.9	15.4	129.8	93.28	1,733.8	167.6	1,399.0	1,254.3	144.62	9.673	
6,600.0	6,479.4	6,474.4	6,474.4	15.4	129.9	93.36	1,733.8	167.6	1,399.3	1,254.6	144.71	9.670	
6,650.0	6,510.0	6,505.0	6,505.0	15.5	130.5	94.02	1,733.8	167.6	1,403.5	1,258.0	145.51	9.645	
6,692.9	6,534.0	6,529.0	6,529.0	15.7	131.0	94.46	1,733.8	167.6	1,408.2	1,262.0	146.23	9.630	
6,700.0	6,537.8	6,532.8	6,532.8	15.7	131.0	94.52	1,733.8	167.6	1,409.1	1,262.7	146.34	9.629	
6,750.0	6,562.6	6,557.6	6,557.6	16.2	131.5	94.82	1,733.8	167.6	1,416.2	1,269.0	147.21	9.620	
6,791.3	6,580.8	6,575.8	6,575.8	16.6	131.9	94.92	1,733.8	167.6	1,423.2	1,275.3	147.98	9.618 SF	
6,800.0	6,584.3	6,579.3	6,579.3	16.7	132.0	94.92	1,733.8	167.6	1,424.9	1,276.7	148.14	9.619	
6,850.0	6,602.9	6,597.9	6,597.9	17.3	132.3	94.77	1,733.8	167.6	1,435.3	1,286.2	149.13	9.624	
6,889.7	6,615.2	6,610.2	6,610.2	17.9	132.6	94.47	1,733.8	167.6	1,444.8	1,294.8	149.99	9.633	
6,900.0	6,618.1	6,613.1	6,613.1	18.0	132.7	94.36	1,733.8	167.6	1,447.4	1,297.2	150.21	9.636	
6,950.0	6,630.0	6,625.0	6,625.0	18.8	132.9	93.68	1,733.8	167.6	1,461.3	1,310.0	151.34	9.656	
6,988.2	6,636.8	6,631.8	6,631.8	19.5	133.0	92.97	1,733.8	167.6	1,473.1	1,320.8	152.23	9.677	
7,000.0	6,638.5	6,633.5	6,633.5	19.7	133.1	92.71	1,733.8	167.6	1,476.9	1,324.4	152.50	9.685	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
7,050.0	6,643.5	6,638.5	6,638.5	20.6	133.2	91.45	1,733.8	167.6	1,494.1	1,340.5	153.64	9.725	
7,086.6	6,644.9	6,639.9	6,639.9	21.3	133.2	90.34	1,733.8	167.6	1,507.7	1,353.3	154.43	9.763	
7,097.8	6,645.0	6,640.0	6,640.0	21.5	133.2	89.97	1,733.8	167.6	1,512.0	1,357.4	154.65	9.777	
7,100.0	6,645.0	6,640.0	6,640.0	21.6	133.2	89.97	1,733.8	167.6	1,512.9	1,358.2	154.70	9.780	
7,185.0	6,644.9	6,639.9	6,639.9	23.3	133.2	89.97	1,733.8	167.6	1,548.0	1,391.5	156.42	9.896	
7,200.0	6,644.9	6,639.9	6,639.9	23.6	133.2	89.96	1,733.8	167.6	1,554.5	1,397.8	156.72	9.919	
7,283.4	6,644.8	6,639.8	6,639.8	25.4	133.2	89.96	1,733.8	167.6	1,593.3	1,434.8	158.54	10.050	
7,300.0	6,644.7	6,639.7	6,639.7	25.8	133.2	89.96	1,733.8	167.6	1,601.4	1,442.5	158.90	10.078	
7,381.9	6,644.6	6,639.6	6,639.6	27.7	133.2	89.96	1,733.8	167.6	1,643.3	1,482.5	160.77	10.221	
7,400.0	6,644.6	6,639.6	6,639.6	28.1	133.2	89.95	1,733.8	167.6	1,653.0	1,491.8	161.19	10.255	
7,480.3	6,644.5	6,639.5	6,639.5	30.0	133.2	89.95	1,733.8	167.6	1,697.5	1,534.4	163.10	10.408	
7,500.0	6,644.5	6,639.5	6,639.5	30.5	133.2	89.95	1,733.8	167.6	1,708.8	1,545.3	163.56	10.447	
7,578.7	6,644.4	6,639.4	6,639.4	32.4	133.2	89.94	1,733.8	167.6	1,755.6	1,590.1	165.49	10.608	
7,600.0	6,644.4	6,639.4	6,639.4	32.9	133.2	89.94	1,733.8	167.6	1,768.6	1,602.6	166.01	10.654	
7,677.1	6,644.3	6,639.3	6,639.3	34.8	133.2	89.94	1,733.8	167.6	1,817.1	1,649.2	167.94	10.820	
7,700.0	6,644.2	6,639.2	6,639.2	35.4	133.2	89.94	1,733.8	167.6	1,831.9	1,663.4	168.51	10.871	
7,775.6	6,644.1	6,639.1	6,639.1	37.3	133.2	89.93	1,733.8	167.6	1,881.8	1,711.4	170.43	11.042	
7,800.0	6,644.1	6,639.1	6,639.1	38.0	133.2	89.93	1,733.8	167.6	1,898.3	1,727.2	171.05	11.098	
7,874.0	6,644.0	6,639.0	6,639.0	39.9	133.2	89.93	1,733.8	167.6	1,949.3	1,776.3	172.96	11.271	
7,900.0	6,644.0	6,639.0	6,639.0	40.5	133.2	89.93	1,733.8	167.6	1,967.6	1,793.9	173.63	11.332	
7,972.4	6,643.9	6,638.9	6,638.9	42.4	133.2	89.92	1,733.8	167.6	2,019.4	1,843.8	175.51	11.505	
8,000.0	6,643.9	6,638.9	6,638.9	43.1	133.2	89.92	1,733.8	167.6	2,039.4	1,863.2	176.23	11.572	
8,070.8	6,643.8	6,638.8	6,638.8	45.0	133.2	89.92	1,733.8	167.6	2,091.7	1,913.6	178.10	11.745	
8,100.0	6,643.7	6,638.7	6,638.7	45.8	133.2	89.92	1,733.8	167.6	2,113.5	1,934.7	178.86	11.816	
8,169.3	6,643.7	6,638.7	6,638.7	47.6	133.2	89.91	1,733.8	167.6	2,166.1	1,985.4	180.70	11.987	
8,200.0	6,643.6	6,638.6	6,638.6	48.4	133.2	89.91	1,733.8	167.6	2,189.7	2,008.2	181.51	12.064	
8,267.7	6,643.5	6,638.5	6,638.5	50.2	133.2	89.91	1,733.8	167.6	2,242.3	2,059.0	183.32	12.232	
8,300.0	6,643.5	6,638.5	6,638.5	51.1	133.2	89.91	1,733.8	167.6	2,267.7	2,083.6	184.18	12.313	
8,366.1	6,643.4	6,638.4	6,638.4	52.9	133.2	89.90	1,733.8	167.6	2,320.3	2,134.3	185.95	12.478	
8,400.0	6,643.4	6,638.4	6,638.4	53.8	133.2	89.90	1,733.8	167.6	2,347.4	2,160.6	186.86	12.562	
8,464.5	6,643.3	6,638.3	6,638.3	55.5	133.2	89.90	1,733.8	167.6	2,399.7	2,211.1	188.60	12.724	
8,500.0	6,643.2	6,638.2	6,638.2	56.5	133.2	89.90	1,733.8	167.6	2,428.6	2,239.1	189.56	12.812	
8,563.0	6,643.2	6,638.2	6,638.2	58.2	133.2	89.89	1,733.8	167.6	2,480.5	2,289.2	191.26	12.969	
8,600.0	6,643.1	6,638.1	6,638.1	59.2	133.2	89.89	1,733.8	167.6	2,511.2	2,318.9	192.26	13.061	
8,661.4	6,643.0	6,638.0	6,638.0	60.8	133.2	89.89	1,733.8	167.6	2,562.5	2,368.6	193.93	13.214	
8,700.0	6,643.0	6,638.0	6,638.0	61.9	133.2	89.89	1,733.8	167.6	2,595.0	2,400.0	194.97	13.309	
8,759.8	6,642.9	6,637.9	6,637.9	63.5	133.2	89.88	1,733.8	167.6	2,645.6	2,449.0	196.60	13.457	
8,800.0	6,642.9	6,637.9	6,637.9	64.6	133.1	89.88	1,733.8	167.6	2,679.9	2,482.2	197.70	13.555	
8,858.2	6,642.8	6,637.8	6,637.8	66.2	133.1	89.88	1,733.8	167.6	2,729.8	2,530.5	199.29	13.698	
8,900.0	6,642.7	6,637.7	6,637.7	67.3	133.1	89.88	1,733.8	167.6	2,765.8	2,565.4	200.43	13.799	
8,956.7	6,642.7	6,637.7	6,637.7	68.9	133.1	89.87	1,733.8	167.6	2,814.9	2,612.9	201.98	13.937	
9,000.0	6,642.6	6,637.6	6,637.6	70.1	133.1	89.87	1,733.8	167.6	2,852.6	2,649.4	203.16	14.041	
9,055.1	6,642.5	6,637.5	6,637.5	71.6	133.1	89.87	1,733.8	167.6	2,900.8	2,696.1	204.67	14.173	
9,100.0	6,642.5	6,637.5	6,637.5	72.8	133.1	89.87	1,733.8	167.6	2,940.3	2,734.4	205.90	14.280	
9,153.5	6,642.4	6,637.4	6,637.4	74.3	133.1	89.86	1,733.8	167.6	2,987.5	2,780.1	207.37	14.406	
9,200.0	6,642.4	6,637.4	6,637.4	75.6	133.1	89.86	1,733.8	167.6	3,028.7	2,820.0	208.65	14.516	
9,251.9	6,642.3	6,637.3	6,637.3	77.0	133.1	89.86	1,733.8	167.6	3,074.9	2,864.8	210.08	14.637	
9,300.0	6,642.2	6,637.2	6,637.2	78.3	133.1	89.86	1,733.8	167.6	3,117.8	2,906.4	211.40	14.749	
9,350.4	6,642.2	6,637.2	6,637.2	79.7	133.1	89.85	1,733.8	167.6	3,163.0	2,950.2	212.79	14.864	
9,400.0	6,642.1	6,637.1	6,637.1	81.1	133.1	89.85	1,733.8	167.6	3,207.6	2,993.4	214.15	14.978	
9,448.8	6,642.0	6,637.0	6,637.0	82.4	133.1	89.85	1,733.8	167.6	3,251.6	3,036.1	215.50	15.089	
9,500.0	6,642.0	6,637.0	6,637.0	83.8	133.1	89.85	1,733.8	167.6	3,297.9	3,081.0	216.91	15.204	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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		
9,547.2	6,641.9	6,636.9	6,636.9	85.1	133.1	89.84	1,733.8	167.6	3,340.8	3,122.6	218.22	15.310		
9,600.0	6,641.9	6,636.9	6,636.9	86.6	133.1	89.84	1,733.8	167.6	3,388.8	3,169.2	219.67	15.427		
9,645.6	6,641.8	6,636.8	6,636.8	87.9	133.1	89.84	1,733.8	167.6	3,430.5	3,209.6	220.93	15.527		
9,700.0	6,641.7	6,636.7	6,636.7	89.4	133.1	89.84	1,733.8	167.6	3,480.2	3,257.8	222.44	15.646		
9,744.1	6,641.7	6,636.7	6,636.7	90.6	133.1	89.83	1,733.8	167.6	3,520.7	3,297.0	223.66	15.741		
9,800.0	6,641.6	6,636.6	6,636.6	92.1	133.1	89.83	1,733.8	167.6	3,572.1	3,346.9	225.20	15.862		
9,842.5	6,641.6	6,636.6	6,636.6	93.3	133.1	89.83	1,733.8	167.6	3,611.3	3,384.9	226.38	15.952		
9,900.0	6,641.5	6,636.5	6,636.5	94.9	133.1	89.82	1,733.8	167.6	3,664.4	3,436.4	227.97	16.074		
9,940.9	6,641.4	6,636.4	6,636.4	96.0	133.1	89.82	1,733.8	167.6	3,702.3	3,473.2	229.11	16.160		
10,000.0	6,641.4	6,636.4	6,636.4	97.7	133.1	89.82	1,733.8	167.6	3,757.1	3,526.3	230.74	16.282		
10,039.3	6,641.3	6,636.3	6,636.3	98.8	133.1	89.82	1,733.8	167.6	3,793.6	3,561.8	231.84	16.363		
10,100.0	6,641.2	6,636.2	6,636.2	100.4	133.1	89.81	1,733.8	167.6	3,850.1	3,616.6	233.52	16.487		
10,137.8	6,641.2	6,636.2	6,636.2	101.5	133.1	89.81	1,733.8	167.6	3,885.3	3,650.8	234.57	16.564		
10,200.0	6,641.1	6,636.1	6,636.1	103.2	133.1	89.81	1,733.8	167.6	3,943.5	3,707.2	236.29	16.689		
10,236.2	6,641.1	6,636.1	6,636.1	104.2	133.1	89.81	1,733.8	167.6	3,977.4	3,740.1	237.30	16.761		
10,300.0	6,641.0	6,636.0	6,636.0	106.0	133.1	89.80	1,733.8	167.6	4,037.2	3,798.1	239.07	16.887		
10,334.6	6,640.9	6,635.9	6,635.9	107.0	133.1	89.80	1,733.8	167.6	4,069.7	3,829.7	240.03	16.955		
10,400.0	6,640.9	6,635.9	6,635.9	108.8	133.1	89.80	1,733.8	167.6	4,131.2	3,889.3	241.85	17.082		
10,433.0	6,640.8	6,635.8	6,635.8	109.7	133.1	89.80	1,733.8	167.6	4,162.3	3,919.6	242.77	17.145		
10,500.0	6,640.7	6,635.7	6,635.7	111.6	133.1	89.79	1,733.8	167.6	4,225.5	3,980.8	244.63	17.273		
10,531.5	6,640.7	6,635.7	6,635.7	112.4	133.1	89.79	1,733.8	167.6	4,255.2	4,009.7	245.51	17.332		
10,600.0	6,640.6	6,635.6	6,635.6	114.3	133.1	89.79	1,733.8	167.6	4,320.0	4,072.6	247.41	17.461		
10,629.9	6,640.6	6,635.6	6,635.6	115.2	133.1	89.79	1,733.8	167.6	4,348.3	4,100.1	248.24	17.516		
10,700.0	6,640.5	6,635.5	6,635.5	117.1	133.1	89.78	1,733.8	167.6	4,414.8	4,164.6	250.19	17.645		
10,728.3	6,640.4	6,635.4	6,635.4	117.9	133.1	89.78	1,733.8	167.6	4,441.7	4,190.7	250.98	17.697		
10,800.0	6,640.4	6,635.4	6,635.4	119.9	133.1	89.78	1,733.8	167.6	4,509.8	4,256.8	252.98	17.827		
10,826.7	6,640.3	6,635.3	6,635.3	120.7	133.1	89.78	1,733.8	167.6	4,535.2	4,281.5	253.72	17.875		
10,900.0	6,640.2	6,635.2	6,635.2	122.7	133.1	89.77	1,733.8	167.6	4,605.0	4,349.2	255.76	18.005		
10,925.2	6,640.2	6,635.2	6,635.2	123.4	133.1	89.77	1,733.8	167.6	4,629.0	4,372.5	256.47	18.049		
11,000.0	6,640.1	6,635.1	6,635.1	125.5	133.1	89.77	1,733.8	167.6	4,700.4	4,441.8	258.55	18.180		
11,023.6	6,640.1	6,635.1	6,635.1	126.1	133.1	89.77	1,733.8	167.6	4,722.9	4,463.7	259.21	18.221		
11,100.0	6,640.0	6,635.0	6,635.0	128.3	133.1	89.76	1,733.8	167.6	4,796.0	4,534.7	261.34	18.352		
11,122.0	6,639.9	6,634.9	6,634.9	128.9	133.1	89.76	1,733.8	167.6	4,817.1	4,555.1	261.95	18.389		
11,200.0	6,639.8	6,634.8	6,634.8	131.1	133.1	89.76	1,733.8	167.6	4,891.8	4,627.6	264.13	18.521		
11,220.4	6,639.8	6,634.8	6,634.8	131.6	133.1	89.76	1,733.8	167.6	4,911.4	4,646.7	264.70	18.555		
11,300.0	6,639.7	6,634.7	6,634.7	133.9	133.1	89.75	1,733.8	167.6	4,987.7	4,720.8	266.91	18.686		
11,318.9	6,639.7	6,634.7	6,634.7	134.4	133.1	89.75	1,733.8	167.6	5,005.8	4,738.4	267.44	18.717		
11,400.0	6,639.6	6,634.6	6,634.6	136.7	133.1	89.75	1,733.8	167.6	5,083.8	4,814.1	269.70	18.849		
11,417.3	6,639.6	6,634.6	6,634.6	137.1	133.1	89.75	1,733.8	167.6	5,100.4	4,830.2	270.19	18.877		
11,500.0	6,639.5	6,634.5	6,634.5	139.4	133.1	89.74	1,733.8	167.6	5,180.0	4,907.5	272.50	19.010		
11,515.7	6,639.5	6,634.5	6,634.5	139.9	133.1	89.74	1,733.8	167.6	5,195.2	4,922.3	272.93	19.035		
11,600.0	6,639.3	6,634.3	6,634.3	142.2	133.1	89.74	1,733.8	167.6	5,276.4	5,001.1	275.29	19.167		
11,614.1	6,639.3	6,634.3	6,634.3	142.6	133.1	89.74	1,733.8	167.6	5,290.1	5,014.4	275.68	19.189		
11,700.0	6,639.2	6,634.2	6,634.2	145.0	133.1	89.73	1,733.8	167.6	5,372.9	5,094.9	278.08	19.322		
11,712.6	6,639.2	6,634.2	6,634.2	145.4	133.1	89.73	1,733.8	167.6	5,385.1	5,106.7	278.43	19.341		
11,800.0	6,639.1	6,634.1	6,634.1	147.8	133.1	89.73	1,733.8	167.6	5,469.6	5,188.7	280.87	19.474		
11,811.0	6,639.1	6,634.1	6,634.1	148.1	133.1	89.73	1,733.8	167.6	5,480.2	5,199.0	281.18	19.490		
11,900.0	6,639.0	6,634.0	6,634.0	150.6	133.1	89.72	1,733.8	167.6	5,566.3	5,282.7	283.66	19.623		
11,909.4	6,639.0	6,634.0	6,634.0	150.9	133.1	89.72	1,733.8	167.6	5,575.5	5,291.5	283.93	19.637		
12,000.0	6,638.8	6,633.8	6,633.8	153.4	133.1	89.72	1,733.8	167.6	5,663.2	5,376.7	286.46	19.770		
12,007.8	6,638.8	6,633.8	6,633.8	153.6	133.1	89.72	1,733.8	167.6	5,670.8	5,384.1	286.68	19.781		
12,100.0	6,638.7	6,633.7	6,633.7	156.2	133.1	89.71	1,733.8	167.6	5,760.2	5,470.9	289.25	19.914		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,633.7	6,633.7	156.4	133.1	89.71	1,733.8	167.6	5,766.3	5,476.8	289.43	19.923	
12,200.0	6,638.6	6,633.6	6,633.6	159.0	133.1	89.71	1,733.8	167.6	5,857.3	5,565.2	292.05	20.056	
12,204.7	6,638.6	6,633.6	6,633.6	159.1	133.1	89.71	1,733.8	167.6	5,861.8	5,569.6	292.18	20.063	
12,300.0	6,638.5	6,633.5	6,633.5	161.8	133.1	89.70	1,733.8	167.6	5,954.4	5,659.6	294.84	20.195	
12,303.1	6,638.5	6,633.5	6,633.5	161.9	133.1	89.70	1,733.8	167.6	5,957.5	5,662.5	294.93	20.200	
12,400.0	6,638.3	6,633.3	6,633.3	164.6	133.1	89.70	1,733.8	167.6	6,051.7	5,754.1	297.64	20.332	
12,401.5	6,638.3	6,633.3	6,633.3	164.6	133.1	89.70	1,733.8	167.6	6,053.2	5,755.5	297.68	20.335	
12,500.0	6,638.2	6,633.2	6,633.2	167.4	133.1	89.69	1,733.8	167.6	6,149.1	5,848.6	300.43	20.467	
12,598.4	6,638.1	6,633.1	6,633.1	170.2	133.1	89.69	1,733.8	167.6	6,244.9	5,941.8	303.19	20.598	
12,600.0	6,638.1	6,633.1	6,633.1	170.2	133.1	89.69	1,733.8	167.6	6,246.5	5,943.3	303.23	20.600	
12,696.8	6,638.0	6,633.0	6,633.0	172.9	133.1	89.68	1,733.8	167.6	6,340.9	6,035.0	305.94	20.726	
12,700.0	6,638.0	6,633.0	6,633.0	173.0	133.1	89.68	1,733.8	167.6	6,344.0	6,038.0	306.03	20.730	
12,795.2	6,637.8	6,632.8	6,632.8	175.7	133.0	89.68	1,733.8	167.6	6,437.0	6,128.3	308.69	20.853	
12,800.0	6,637.8	6,632.8	6,632.8	175.8	133.0	89.68	1,733.8	167.6	6,441.6	6,132.8	308.82	20.859	
12,893.7	6,637.7	6,632.7	6,632.7	178.4	133.0	89.67	1,733.8	167.6	6,533.1	6,221.7	311.44	20.977	
12,900.0	6,637.7	6,632.7	6,632.7	178.6	133.0	89.67	1,733.8	167.6	6,539.3	6,227.7	311.62	20.985	
12,992.1	6,637.6	6,632.6	6,632.6	181.2	133.0	89.67	1,733.8	167.6	6,629.3	6,315.1	314.20	21.099	
13,000.0	6,637.6	6,632.6	6,632.6	181.4	133.0	89.66	1,733.8	167.6	6,637.0	6,322.6	314.42	21.109	
13,090.5	6,637.5	6,632.5	6,632.5	183.9	133.0	89.66	1,733.8	167.6	6,725.6	6,408.6	316.95	21.219	
13,100.0	6,637.5	6,632.5	6,632.5	184.2	133.0	89.66	1,733.8	167.6	6,734.8	6,417.6	317.22	21.231	
13,188.9	6,637.4	6,632.4	6,632.4	186.7	133.0	89.66	1,733.8	167.6	6,821.9	6,502.2	319.71	21.338	
13,200.0	6,637.3	6,632.3	6,632.3	187.0	133.0	89.65	1,733.8	167.6	6,832.7	6,512.7	320.02	21.351	
13,287.4	6,637.2	6,632.2	6,632.2	189.4	133.0	89.65	1,733.8	167.6	6,918.3	6,595.8	322.46	21.455	
13,300.0	6,637.2	6,632.2	6,632.2	189.8	133.0	89.65	1,733.8	167.6	6,930.6	6,607.8	322.81	21.469	
13,385.8	6,637.1	6,632.1	6,632.1	192.2	133.0	89.65	1,733.8	167.6	7,014.7	6,689.5	325.22	21.569	
13,400.0	6,637.1	6,632.1	6,632.1	192.6	133.0	89.64	1,733.8	167.6	7,028.6	6,703.0	325.61	21.586	
13,484.2	6,637.0	6,632.0	6,632.0	195.0	133.0	89.64	1,733.8	167.6	7,111.2	6,783.2	327.97	21.682	
13,500.0	6,637.0	6,632.0	6,632.0	195.4	133.0	89.64	1,733.8	167.6	7,126.6	6,798.2	328.41	21.700	
13,582.6	6,636.9	6,631.9	6,631.9	197.7	133.0	89.63	1,733.8	167.6	7,207.7	6,877.0	330.73	21.794	
13,600.0	6,636.8	6,631.8	6,631.8	198.2	133.0	89.63	1,733.8	167.6	7,224.7	6,893.5	331.21	21.813	
13,681.1	6,636.7	6,631.7	6,631.7	200.5	133.0	89.63	1,733.8	167.6	7,304.3	6,970.8	333.48	21.903	
13,700.0	6,636.7	6,631.7	6,631.7	201.0	133.0	89.63	1,733.8	167.6	7,322.9	6,988.9	334.01	21.924	
13,779.5	6,636.6	6,631.6	6,631.6	203.2	133.0	89.62	1,733.8	167.6	7,401.0	7,064.7	336.24	22.011	
13,800.0	6,636.6	6,631.6	6,631.6	203.8	133.0	89.62	1,733.8	167.6	7,421.1	7,084.3	336.81	22.033	
13,877.9	6,636.5	6,631.5	6,631.5	206.0	133.0	89.62	1,733.8	167.6	7,497.6	7,158.6	338.99	22.117	
13,900.0	6,636.5	6,631.5	6,631.5	206.6	133.0	89.62	1,733.8	167.6	7,519.3	7,179.7	339.61	22.141	
13,976.3	6,636.4	6,631.4	6,631.4	208.8	133.0	89.61	1,733.8	167.6	7,594.4	7,252.6	341.75	22.222	
14,000.0	6,636.3	6,631.3	6,631.3	209.4	133.0	89.61	1,733.8	167.6	7,617.6	7,275.2	342.41	22.247	
14,074.8	6,636.2	6,631.2	6,631.2	211.5	133.0	89.61	1,733.8	167.6	7,691.2	7,346.6	344.51	22.325	
14,100.0	6,636.2	6,631.2	6,631.2	212.2	133.0	89.61	1,733.8	167.6	7,716.0	7,370.7	345.21	22.351	
14,173.2	6,636.1	6,631.1	6,631.1	214.3	133.0	89.60	1,733.8	167.6	7,788.0	7,440.7	347.26	22.427	
14,200.0	6,636.1	6,631.1	6,631.1	215.0	133.0	89.60	1,733.8	167.6	7,814.3	7,466.3	348.01	22.454	
14,271.6	6,636.0	6,631.0	6,631.0	217.0	133.0	89.60	1,733.8	167.6	7,884.8	7,534.8	350.02	22.527	
14,300.0	6,635.9	6,630.9	6,630.9	217.8	133.0	89.60	1,733.8	167.6	7,912.8	7,561.9	350.82	22.555	
14,370.0	6,635.9	6,630.9	6,630.9	219.8	133.0	89.59	1,733.8	167.6	7,981.7	7,628.9	352.78	22.625	
14,400.0	6,635.8	6,630.8	6,630.8	220.6	133.0	89.59	1,733.8	167.6	8,011.2	7,657.6	353.62	22.655	
14,468.5	6,635.7	6,630.7	6,630.7	222.6	133.0	89.59	1,733.8	167.6	8,078.7	7,723.1	355.54	22.722	
14,500.0	6,635.7	6,630.7	6,630.7	223.4	133.0	89.59	1,733.8	167.6	8,109.7	7,753.3	356.42	22.753	
14,566.9	6,635.6	6,630.6	6,630.6	225.3	133.0	89.58	1,733.8	167.6	8,175.6	7,817.3	358.29	22.818	
14,600.0	6,635.6	6,630.6	6,630.6	226.2	133.0	89.58	1,733.8	167.6	8,208.2	7,849.0	359.22	22.850	
14,665.3	6,635.5	6,630.5	6,630.5	228.1	133.0	89.58	1,733.8	167.6	8,272.6	7,911.6	361.05	22.913	
14,700.0	6,635.5	6,630.5	6,630.5	229.0	133.0	89.58	1,733.8	167.6	8,306.8	7,944.8	362.02	22.946	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.4	6,630.4	6,630.4	230.8	133.0	89.57	1,733.8	167.6	8,369.7	8,005.8	363.81	23.006	
14,800.0	6,635.3	6,630.3	6,630.3	231.8	133.0	89.57	1,733.8	167.6	8,405.4	8,040.6	364.82	23.040	
14,862.2	6,635.2	6,630.2	6,630.2	233.6	133.0	89.57	1,733.8	167.6	8,466.7	8,100.2	366.57	23.097	
14,900.0	6,635.2	6,630.2	6,630.2	234.7	133.0	89.57	1,733.8	167.6	8,504.0	8,136.4	367.63	23.132	
14,960.6	6,635.1	6,630.1	6,630.1	236.4	133.0	89.56	1,733.8	167.6	8,563.8	8,194.5	369.32	23.188	
14,995.1	6,635.0	6,630.0	6,630.0	237.3	133.0	89.56	1,733.8	167.6	8,597.9	8,227.6	370.29	23.219	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-54.01	1,587.0	-2,184.9	2,700.5				
98.4	98.4	94.4	94.4	0.1	0.0	-54.01	1,587.0	-2,184.9	2,700.5	2,700.4	0.10	N/A	
100.0	100.0	96.0	96.0	0.1	0.0	-54.01	1,587.0	-2,184.9	2,700.5	2,700.4	0.10	N/A	
196.8	196.8	192.8	192.8	0.3	1.0	-54.01	1,587.0	-2,184.9	2,700.5	2,699.2	1.30	2,070.298	
200.0	200.0	196.0	196.0	0.3	1.0	-54.01	1,587.0	-2,184.9	2,700.5	2,699.1	1.35	2,007.759	
295.3	295.3	291.3	291.3	0.5	3.2	-54.01	1,587.0	-2,184.9	2,700.5	2,696.8	3.72	726.043	
300.0	300.0	296.0	296.0	0.5	3.3	-54.01	1,587.0	-2,184.9	2,700.5	2,696.6	3.84	703.306	
393.7	393.7	389.7	389.7	0.8	5.3	-54.01	1,587.0	-2,184.9	2,700.5	2,694.5	6.01	449.391	
400.0	400.0	396.0	396.0	0.8	5.4	-54.01	1,587.0	-2,184.9	2,700.5	2,694.3	6.15	438.787	
492.1	492.1	488.1	488.1	1.0	7.3	-54.01	1,587.0	-2,184.9	2,700.5	2,692.2	8.24	327.539	
500.0	500.0	496.0	496.0	1.0	7.4	-54.01	1,587.0	-2,184.9	2,700.5	2,692.1	8.42	320.595	
590.5	590.5	586.5	586.5	1.2	9.3	-54.01	1,587.0	-2,184.9	2,700.5	2,690.0	10.46	258.054	
600.0	600.0	596.0	596.0	1.2	9.5	-54.01	1,587.0	-2,184.9	2,700.5	2,689.8	10.68	252.906	
689.0	689.0	685.0	685.0	1.4	11.3	-54.01	1,587.0	-2,184.9	2,700.5	2,687.8	12.68	213.008	
700.0	700.0	696.0	696.0	1.4	11.5	-54.01	1,587.0	-2,184.9	2,700.5	2,687.6	12.93	208.925	
787.4	787.4	783.4	783.4	1.6	13.2	-54.01	1,587.0	-2,184.9	2,700.5	2,685.6	14.89	181.398	
800.0	800.0	796.0	796.0	1.7	13.5	-54.01	1,587.0	-2,184.9	2,700.5	2,685.3	15.17	178.017	
885.8	885.8	881.8	881.8	1.9	15.2	-54.01	1,587.0	-2,184.9	2,700.5	2,683.4	17.09	157.978	
900.0	900.0	896.0	896.0	1.9	15.5	-54.01	1,587.0	-2,184.9	2,700.5	2,683.1	17.41	155.095	
984.2	984.2	980.2	980.2	2.1	17.2	-54.01	1,587.0	-2,184.9	2,700.5	2,681.2	19.30	139.925	
1,000.0	1,000.0	996.0	996.0	2.1	17.5	-54.01	1,587.0	-2,184.9	2,700.5	2,680.8	19.65	137.413	
1,082.7	1,082.7	1,078.7	1,078.7	2.3	19.2	-54.01	1,587.0	-2,184.9	2,700.5	2,679.0	21.50	125.581	
1,100.0	1,100.0	1,096.0	1,096.0	2.3	19.5	-54.01	1,587.0	-2,184.9	2,700.5	2,678.6	21.89	123.356	
1,181.1	1,181.1	1,177.1	1,177.1	2.5	21.2	-54.01	1,587.0	-2,184.9	2,700.5	2,676.8	23.71	113.908	
1,200.0	1,200.0	1,196.0	1,196.0	2.6	21.6	-54.01	1,587.0	-2,184.9	2,700.5	2,676.3	24.13	111.911	
1,279.5	1,279.5	1,275.5	1,275.5	2.7	23.2	-54.01	1,587.0	-2,184.9	2,700.5	2,674.6	25.91	104.223	
1,300.0	1,300.0	1,296.0	1,296.0	2.8	23.6	-54.01	1,587.0	-2,184.9	2,700.5	2,674.1	26.37	102.411	
1,377.9	1,377.9	1,373.9	1,373.9	3.0	25.1	-95.22	1,587.0	-2,184.9	2,700.6	2,672.5	28.11	96.071	
1,400.0	1,400.0	1,396.0	1,396.0	3.0	25.6	-95.23	1,587.0	-2,184.9	2,700.6	2,672.0	28.60	94.420	
1,476.4	1,476.3	1,472.3	1,472.3	3.2	27.1	-95.30	1,587.0	-2,184.9	2,701.0	2,670.7	30.30	89.127	
1,500.0	1,499.8	1,495.8	1,495.8	3.2	27.6	-95.33	1,587.0	-2,184.9	2,701.1	2,670.3	30.83	87.611	
1,574.8	1,574.4	1,570.4	1,570.4	3.4	29.1	-95.45	1,587.0	-2,184.9	2,701.7	2,669.2	32.50	83.132	
1,600.0	1,599.5	1,595.5	1,595.5	3.5	29.6	-95.50	1,587.0	-2,184.9	2,701.9	2,668.9	33.06	81.728	
1,673.2	1,672.2	1,668.2	1,668.2	3.6	31.1	-95.66	1,587.0	-2,184.9	2,702.8	2,668.1	34.70	77.897	
1,700.0	1,698.7	1,694.7	1,694.7	3.7	31.6	-95.73	1,587.0	-2,184.9	2,703.1	2,667.9	35.30	76.587	
1,771.6	1,769.5	1,765.5	1,765.5	3.9	33.0	-95.93	1,587.0	-2,184.9	2,704.3	2,667.4	36.90	73.278	
1,800.0	1,797.5	1,793.5	1,793.5	4.0	33.6	-96.02	1,587.0	-2,184.9	2,704.8	2,667.2	37.54	72.049	
1,870.1	1,866.3	1,862.3	1,862.3	4.2	35.0	-96.26	1,587.0	-2,184.9	2,706.2	2,667.1	39.13	69.165	
1,899.9	1,895.6	1,891.6	1,891.6	4.3	35.6	-96.37	1,587.0	-2,184.9	2,706.9	2,667.1	39.80	68.009	
1,968.5	1,962.6	1,958.6	1,958.6	4.5	36.9	-96.67	1,587.0	-2,184.9	2,708.5	2,667.2	41.37	65.473	
2,000.0	1,993.4	1,989.4	1,989.4	4.6	37.5	-96.80	1,587.0	-2,184.9	2,709.3	2,667.2	42.09	64.369	
2,066.9	2,058.9	2,054.9	2,054.9	4.8	38.8	-97.09	1,587.0	-2,184.9	2,711.0	2,667.4	43.63	62.133	
2,100.0	2,091.3	2,087.3	2,087.3	4.9	39.5	-97.23	1,587.0	-2,184.9	2,711.9	2,667.5	44.40	61.084	
2,165.3	2,155.2	2,151.2	2,151.2	5.2	40.8	-97.51	1,587.0	-2,184.9	2,713.7	2,667.8	45.91	59.106	
2,200.0	2,189.1	2,185.1	2,185.1	5.3	41.5	-97.66	1,587.0	-2,184.9	2,714.7	2,667.9	46.72	58.108	
2,263.8	2,251.5	2,247.5	2,247.5	5.5	42.7	-97.93	1,587.0	-2,184.9	2,716.5	2,668.3	48.20	56.353	
2,300.0	2,286.9	2,282.9	2,282.9	5.7	43.4	-98.08	1,587.0	-2,184.9	2,717.6	2,668.5	49.05	55.404	
2,362.2	2,347.7	2,343.7	2,343.7	5.9	44.7	-98.34	1,587.0	-2,184.9	2,719.4	2,668.9	50.51	53.843	
2,400.0	2,384.7	2,380.7	2,380.7	6.0	45.4	-98.50	1,587.0	-2,184.9	2,720.6	2,669.2	51.39	52.938	
2,460.6	2,444.0	2,440.0	2,440.0	6.3	46.6	-98.76	1,587.0	-2,184.9	2,722.6	2,669.7	52.82	51.547	
2,500.0	2,482.5	2,478.5	2,478.5	6.4	47.4	-98.93	1,587.0	-2,184.9	2,723.8	2,670.1	53.74	50.683	
2,559.0	2,540.3	2,536.3	2,536.3	6.7	48.5	-99.18	1,587.0	-2,184.9	2,725.8	2,670.7	55.13	49.440	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,576.3	2,576.3	6.8	49.3	-99.35	1,587.0	-2,184.9	2,727.2	2,671.1	56.10	48.615	
2,657.5	2,636.5	2,632.5	2,632.5	7.1	50.5	-99.59	1,587.0	-2,184.9	2,729.2	2,671.8	57.46	47.502	
2,700.0	2,678.1	2,674.1	2,674.1	7.2	51.3	-99.77	1,587.0	-2,184.9	2,730.7	2,672.3	58.46	46.712	
2,755.9	2,732.8	2,728.8	2,728.8	7.5	52.4	-100.01	1,587.0	-2,184.9	2,732.8	2,673.0	59.78	45.713	
2,800.0	2,776.0	2,772.0	2,772.0	7.7	53.3	-100.19	1,587.0	-2,184.9	2,734.4	2,673.6	60.82	44.956	
2,854.3	2,829.1	2,825.1	2,825.1	7.9	54.3	-100.42	1,587.0	-2,184.9	2,736.5	2,674.4	62.11	44.059	
2,900.0	2,873.8	2,869.8	2,869.8	8.1	55.2	-100.61	1,587.0	-2,184.9	2,738.3	2,675.1	63.19	43.333	
2,952.7	2,925.4	2,921.4	2,921.4	8.3	56.3	-100.83	1,587.0	-2,184.9	2,740.3	2,675.9	64.44	42.524	
3,000.0	2,971.6	2,967.6	2,967.6	8.5	57.2	-101.03	1,587.0	-2,184.9	2,742.2	2,676.7	65.56	41.827	
3,051.2	3,021.6	3,017.6	3,017.6	8.7	58.2	-101.24	1,587.0	-2,184.9	2,744.3	2,677.6	66.78	41.098	
3,100.0	3,069.4	3,065.4	3,065.4	8.9	59.2	-101.45	1,587.0	-2,184.9	2,746.4	2,678.5	67.93	40.428	
3,149.6	3,117.9	3,113.9	3,113.9	9.1	60.1	-101.65	1,587.0	-2,184.9	2,748.5	2,679.4	69.11	39.770	
3,200.0	3,167.2	3,163.2	3,163.2	9.3	61.1	-101.86	1,587.0	-2,184.9	2,750.7	2,680.4	70.31	39.124	
3,248.0	3,214.2	3,210.2	3,210.2	9.5	62.1	-102.06	1,587.0	-2,184.9	2,752.8	2,681.3	71.45	38.530	
3,300.0	3,265.0	3,261.0	3,261.0	9.8	63.1	-102.28	1,587.0	-2,184.9	2,755.1	2,682.4	72.68	37.908	
3,346.4	3,310.5	3,306.5	3,306.5	10.0	64.0	-102.47	1,587.0	-2,184.9	2,757.2	2,683.4	73.78	37.369	
3,400.0	3,362.9	3,358.9	3,358.9	10.2	65.1	-102.69	1,587.0	-2,184.9	2,759.7	2,684.6	75.05	36.769	
3,444.9	3,406.7	3,402.7	3,402.7	10.4	66.0	-102.87	1,587.0	-2,184.9	2,761.8	2,685.7	76.12	36.282	
3,473.0	3,434.2	3,430.2	3,430.2	10.5	66.5	-102.99	1,587.0	-2,184.9	2,763.1	2,686.4	76.79	35.984	
3,500.0	3,460.7	3,456.7	3,456.7	10.6	67.0	-103.12	1,587.0	-2,184.9	2,764.4	2,687.0	77.42	35.705	
3,543.3	3,503.2	3,499.2	3,499.2	10.7	67.9	-103.32	1,587.0	-2,184.9	2,766.3	2,687.9	78.42	35.277	
3,600.0	3,559.0	3,555.0	3,555.0	10.9	69.0	-103.56	1,587.0	-2,184.9	2,768.7	2,688.9	79.72	34.729	
3,641.7	3,600.2	3,596.2	3,596.2	11.0	69.8	-103.73	1,587.0	-2,184.9	2,770.2	2,689.6	80.67	34.339	
3,700.0	3,657.9	3,653.9	3,653.9	11.2	71.0	-103.93	1,587.0	-2,184.9	2,772.2	2,690.2	82.00	33.806	
3,740.1	3,697.8	3,693.8	3,693.8	11.3	71.8	-104.05	1,587.0	-2,184.9	2,773.4	2,690.5	82.91	33.451	
3,800.0	3,757.3	3,753.3	3,753.3	11.4	73.0	-104.20	1,587.0	-2,184.9	2,774.9	2,690.7	84.26	32.933	
3,838.6	3,795.7	3,791.7	3,791.7	11.5	73.8	-104.29	1,587.0	-2,184.9	2,775.8	2,690.7	85.12	32.611	
3,900.0	3,857.0	3,853.0	3,853.0	11.7	75.0	-104.40	1,587.0	-2,184.9	2,776.9	2,690.4	86.49	32.107	
3,937.0	3,893.9	3,889.9	3,889.9	11.7	75.8	-104.45	1,587.0	-2,184.9	2,777.4	2,690.1	87.30	31.815	
4,000.0	3,956.9	3,952.9	3,952.9	11.8	77.0	-104.50	1,587.0	-2,184.9	2,777.9	2,689.3	88.68	31.326	
4,035.4	3,992.3	3,988.3	3,988.3	11.9	77.7	-104.52	1,587.0	-2,184.9	2,778.1	2,688.7	89.45	31.059	
4,072.9	4,029.8	4,025.8	4,025.8	11.9	78.5	-63.34	1,587.0	-2,184.9	2,778.2	2,690.3	87.86	31.622	
4,100.0	4,056.9	4,052.9	4,052.9	12.0	79.0	-63.34	1,587.0	-2,184.9	2,778.2	2,689.7	88.45	31.410	
4,133.8	4,090.7	4,086.7	4,086.7	12.0	79.7	-63.34	1,587.0	-2,184.9	2,778.2	2,689.0	89.20	31.146	
4,200.0	4,156.9	4,152.9	4,152.9	12.1	81.0	-63.34	1,587.0	-2,184.9	2,778.2	2,687.5	90.66	30.643	
4,232.3	4,189.2	4,185.2	4,185.2	12.2	81.7	-63.34	1,587.0	-2,184.9	2,778.2	2,686.8	91.38	30.403	
4,300.0	4,256.9	4,252.9	4,252.9	12.3	83.1	-63.34	1,587.0	-2,184.9	2,778.2	2,685.3	92.88	29.912	
4,330.7	4,287.6	4,283.6	4,283.6	12.4	83.7	-63.34	1,587.0	-2,184.9	2,778.2	2,684.6	93.56	29.694	
4,400.0	4,356.9	4,352.9	4,352.9	12.5	85.1	-63.34	1,587.0	-2,184.9	2,778.2	2,683.1	95.10	29.215	
4,429.1	4,386.0	4,382.0	4,382.0	12.5	85.7	-63.34	1,587.0	-2,184.9	2,778.2	2,682.4	95.74	29.018	
4,500.0	4,456.9	4,452.9	4,452.9	12.6	87.1	-63.34	1,587.0	-2,184.9	2,778.2	2,680.9	97.31	28.549	
4,527.5	4,484.4	4,480.4	4,480.4	12.7	87.6	-63.34	1,587.0	-2,184.9	2,778.2	2,680.3	97.92	28.371	
4,600.0	4,556.9	4,552.9	4,552.9	12.8	89.1	-63.34	1,587.0	-2,184.9	2,778.2	2,678.6	99.53	27.913	
4,626.0	4,582.9	4,578.9	4,578.9	12.9	89.6	-63.34	1,587.0	-2,184.9	2,778.2	2,678.1	100.11	27.752	
4,700.0	4,656.9	4,652.9	4,652.9	13.0	91.1	-63.34	1,587.0	-2,184.9	2,778.2	2,676.4	101.75	27.305	
4,724.4	4,681.3	4,677.3	4,677.3	13.0	91.6	-63.34	1,587.0	-2,184.9	2,778.2	2,675.9	102.29	27.160	
4,800.0	4,756.9	4,752.9	4,752.9	13.1	93.1	-63.34	1,587.0	-2,184.9	2,778.2	2,674.2	103.97	26.722	
4,822.8	4,779.7	4,775.7	4,775.7	13.2	93.6	-63.34	1,587.0	-2,184.9	2,778.2	2,673.7	104.47	26.592	
4,900.0	4,856.9	4,852.9	4,852.9	13.3	95.1	-63.34	1,587.0	-2,184.9	2,778.2	2,672.0	106.19	26.163	
4,921.2	4,878.1	4,874.1	4,874.1	13.4	95.5	-63.34	1,587.0	-2,184.9	2,778.2	2,671.5	106.66	26.047	
5,000.0	4,956.9	4,952.9	4,952.9	13.5	97.1	-63.34	1,587.0	-2,184.9	2,778.2	2,669.8	108.41	25.627	
5,019.7	4,976.6	4,972.6	4,972.6	13.5	97.5	-63.34	1,587.0	-2,184.9	2,778.2	2,669.3	108.84	25.524	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
5,100.0	5,056.9	5,052.9	5,052.9	13.7	99.1	-63.34	1,587.0	-2,184.9	2,778.2	2,667.6	110.63	25.113	
5,118.1	5,075.0	5,071.0	5,071.0	13.7	99.5	-63.34	1,587.0	-2,184.9	2,778.2	2,667.1	111.03	25.022	
5,200.0	5,156.9	5,152.9	5,152.9	13.8	101.2	-63.34	1,587.0	-2,184.9	2,778.2	2,665.3	112.85	24.618	
5,216.5	5,173.4	5,169.4	5,169.4	13.9	101.5	-63.34	1,587.0	-2,184.9	2,778.2	2,665.0	113.22	24.539	
5,300.0	5,256.9	5,252.9	5,252.9	14.0	103.2	-63.34	1,587.0	-2,184.9	2,778.2	2,663.1	115.07	24.143	
5,314.9	5,271.8	5,267.8	5,267.8	14.1	103.5	-63.34	1,587.0	-2,184.9	2,778.2	2,662.8	115.40	24.074	
5,400.0	5,356.9	5,352.9	5,352.9	14.2	105.2	-63.34	1,587.0	-2,184.9	2,778.2	2,660.9	117.29	23.686	
5,413.4	5,370.3	5,366.3	5,366.3	14.2	105.4	-63.34	1,587.0	-2,184.9	2,778.2	2,660.6	117.59	23.626	
5,500.0	5,456.9	5,452.9	5,452.9	14.4	107.2	-63.34	1,587.0	-2,184.9	2,778.2	2,658.7	119.52	23.245	
5,511.8	5,468.7	5,464.7	5,464.7	14.4	107.4	-63.34	1,587.0	-2,184.9	2,778.2	2,658.4	119.78	23.194	
5,600.0	5,556.9	5,552.9	5,552.9	14.6	109.2	-63.34	1,587.0	-2,184.9	2,778.2	2,656.4	121.74	22.821	
5,610.2	5,567.1	5,563.1	5,563.1	14.6	109.4	-63.34	1,587.0	-2,184.9	2,778.2	2,656.2	121.97	22.778	
5,700.0	5,656.9	5,652.9	5,652.9	14.7	111.2	-63.34	1,587.0	-2,184.9	2,778.2	2,654.2	123.96	22.411	
5,708.6	5,665.5	5,661.5	5,661.5	14.8	111.4	-63.34	1,587.0	-2,184.9	2,778.2	2,654.0	124.16	22.376	
5,800.0	5,756.9	5,752.9	5,752.9	14.9	113.2	-63.34	1,587.0	-2,184.9	2,778.2	2,652.0	126.19	22.016	
5,807.1	5,764.0	5,760.0	5,760.0	14.9	113.4	-63.34	1,587.0	-2,184.9	2,778.2	2,651.8	126.35	21.989	
5,900.0	5,856.9	5,852.9	5,852.9	15.1	115.2	-63.34	1,587.0	-2,184.9	2,778.2	2,649.8	128.41	21.635	
5,905.5	5,862.4	5,858.4	5,858.4	15.1	115.3	-63.34	1,587.0	-2,184.9	2,778.2	2,649.6	128.54	21.614	
5,971.9	5,928.8	5,924.8	5,924.8	15.3	116.7	-63.34	1,587.0	-2,184.9	2,778.2	2,648.2	130.01	21.369	
6,000.0	5,956.9	5,952.9	5,952.9	15.3	117.2	26.69	1,587.0	-2,184.9	2,777.7	2,645.4	132.30	20.995	
6,003.9	5,960.8	5,956.8	5,956.8	15.3	117.3	26.69	1,587.0	-2,184.9	2,777.5	2,645.2	132.36	20.985	
6,050.0	6,006.7	6,002.7	6,002.7	15.4	118.2	26.84	1,587.0	-2,184.9	2,774.4	2,641.5	132.83	20.887	
6,100.0	6,056.2	6,052.2	6,052.2	15.4	119.2	27.14	1,587.0	-2,184.9	2,768.0	2,635.1	132.84	20.837	
6,102.3	6,058.5	6,054.5	6,054.5	15.4	119.3	27.16	1,587.0	-2,184.9	2,767.6	2,634.8	132.83	20.836	
6,150.0	6,105.1	6,101.1	6,101.1	15.4	120.2	27.60	1,587.0	-2,184.9	2,758.5	2,626.2	132.34	20.845	
6,200.0	6,153.0	6,149.0	6,149.0	15.5	121.2	28.22	1,587.0	-2,184.9	2,746.0	2,614.7	131.35	20.906	
6,200.8	6,153.8	6,149.8	6,149.8	15.5	121.2	28.23	1,587.0	-2,184.9	2,745.8	2,614.5	131.33	20.907	
6,250.0	6,199.9	6,195.9	6,195.9	15.5	122.1	29.01	1,587.0	-2,184.9	2,730.6	2,600.7	129.93	21.016	
6,299.2	6,244.8	6,240.8	6,240.8	15.5	123.0	29.97	1,587.0	-2,184.9	2,712.7	2,584.5	128.17	21.165	
6,300.0	6,245.5	6,241.5	6,241.5	15.5	123.0	29.99	1,587.0	-2,184.9	2,712.4	2,584.3	128.14	21.168	
6,350.0	6,289.6	6,285.6	6,285.6	15.5	123.9	31.18	1,587.0	-2,184.9	2,691.4	2,565.3	126.08	21.347	
6,397.6	6,329.9	6,325.9	6,325.9	15.4	124.7	32.52	1,587.0	-2,184.9	2,669.0	2,545.0	123.98	21.527	
6,400.0	6,331.8	6,327.8	6,327.8	15.4	124.8	32.60	1,587.0	-2,184.9	2,667.8	2,543.9	123.88	21.536	
6,450.0	6,372.2	6,368.2	6,368.2	15.4	125.6	34.28	1,587.0	-2,184.9	2,641.7	2,520.0	121.71	21.705	
6,496.0	6,407.4	6,403.4	6,403.4	15.4	126.3	36.09	1,587.0	-2,184.9	2,615.6	2,495.7	119.93	21.810	
6,500.0	6,410.3	6,406.3	6,406.3	15.4	126.4	36.25	1,587.0	-2,184.9	2,613.3	2,493.5	119.79	21.816	
6,550.0	6,446.1	6,442.1	6,442.1	15.4	127.1	38.56	1,587.0	-2,184.9	2,582.7	2,464.3	118.37	21.818	
6,594.5	6,475.9	6,471.9	6,471.9	15.4	127.7	40.92	1,587.0	-2,184.9	2,553.8	2,436.0	117.76	21.686	
6,600.0	6,479.4	6,475.4	6,475.4	15.4	127.8	41.23	1,587.0	-2,184.9	2,550.1	2,432.3	117.74	21.659	
6,650.0	6,510.0	6,506.0	6,506.0	15.5	128.4	44.32	1,587.0	-2,184.9	2,515.7	2,397.5	118.17	21.289	
6,692.9	6,534.0	6,530.0	6,530.0	15.7	128.8	47.33	1,587.0	-2,184.9	2,484.9	2,365.3	119.54	20.787	
6,700.0	6,537.8	6,533.8	6,533.8	15.7	128.9	47.86	1,587.0	-2,184.9	2,479.7	2,359.8	119.86	20.687	
6,750.0	6,562.6	6,558.6	6,558.6	16.2	129.4	51.89	1,587.0	-2,184.9	2,442.2	2,319.3	122.92	19.869	
6,791.3	6,580.8	6,576.8	6,576.8	16.6	129.8	55.60	1,587.0	-2,184.9	2,410.4	2,284.0	126.42	19.067	
6,800.0	6,584.3	6,580.3	6,580.3	16.7	129.9	56.42	1,587.0	-2,184.9	2,403.6	2,276.4	127.23	18.892	
6,850.0	6,602.9	6,598.9	6,598.9	17.3	130.2	61.43	1,587.0	-2,184.9	2,364.1	2,231.6	132.47	17.846	
6,889.7	6,615.2	6,611.2	6,611.2	17.9	130.5	65.73	1,587.0	-2,184.9	2,332.1	2,195.1	136.95	17.029	
6,900.0	6,618.1	6,614.1	6,614.1	18.0	130.5	66.88	1,587.0	-2,184.9	2,323.7	2,185.7	138.09	16.827	
6,950.0	6,630.0	6,626.0	6,626.0	18.8	130.8	72.65	1,587.0	-2,184.9	2,282.9	2,139.5	143.46	15.913	
6,988.2	6,636.8	6,632.8	6,632.8	19.5	130.9	77.19	1,587.0	-2,184.9	2,251.5	2,104.6	146.99	15.318	
7,000.0	6,638.5	6,634.5	6,634.5	19.7	130.9	78.60	1,587.0	-2,184.9	2,241.8	2,093.9	147.93	15.155	
7,050.0	6,643.5	6,639.5	6,639.5	20.6	131.1	84.56	1,587.0	-2,184.9	2,200.6	2,049.6	151.03	14.571	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,640.9	6,640.9	21.3	131.1	88.82	1,587.0	-2,184.9	2,170.6	2,018.3	152.32	14.251	
7,097.8	6,645.0	6,641.0	6,641.0	21.5	131.1	90.10	1,587.0	-2,184.9	2,161.4	2,008.9	152.54	14.170	
7,100.0	6,645.0	6,641.0	6,641.0	21.6	131.1	90.10	1,587.0	-2,184.9	2,159.7	2,007.1	152.58	14.154	
7,185.0	6,644.9	6,640.9	6,640.9	23.3	131.1	90.10	1,587.0	-2,184.9	2,090.8	1,936.5	154.31	13.550	
7,200.0	6,644.9	6,640.9	6,640.9	23.6	131.1	90.10	1,587.0	-2,184.9	2,078.8	1,924.2	154.61	13.445	
7,283.4	6,644.8	6,640.8	6,640.8	25.4	131.1	90.09	1,587.0	-2,184.9	2,012.7	1,856.2	156.43	12.866	
7,300.0	6,644.7	6,640.7	6,640.7	25.8	131.1	90.09	1,587.0	-2,184.9	1,999.7	1,842.9	156.79	12.754	
7,381.9	6,644.6	6,640.6	6,640.6	27.7	131.1	90.09	1,587.0	-2,184.9	1,936.3	1,777.7	158.66	12.204	
7,400.0	6,644.6	6,640.6	6,640.6	28.1	131.1	90.08	1,587.0	-2,184.9	1,922.5	1,763.4	159.07	12.086	
7,480.3	6,644.5	6,640.5	6,640.5	30.0	131.1	90.08	1,587.0	-2,184.9	1,862.1	1,701.1	160.98	11.567	
7,500.0	6,644.5	6,640.5	6,640.5	30.5	131.1	90.08	1,587.0	-2,184.9	1,847.5	1,686.1	161.45	11.443	
7,578.7	6,644.4	6,640.4	6,640.4	32.4	131.1	90.07	1,587.0	-2,184.9	1,790.2	1,626.8	163.37	10.958	
7,600.0	6,644.4	6,640.4	6,640.4	32.9	131.1	90.07	1,587.0	-2,184.9	1,775.0	1,611.1	163.89	10.830	
7,677.1	6,644.3	6,640.3	6,640.3	34.8	131.1	90.07	1,587.0	-2,184.9	1,721.0	1,555.1	165.82	10.378	
7,700.0	6,644.2	6,640.2	6,640.2	35.4	131.1	90.07	1,587.0	-2,184.9	1,705.3	1,538.9	166.39	10.249	
7,775.6	6,644.1	6,640.1	6,640.1	37.3	131.1	90.06	1,587.0	-2,184.9	1,654.6	1,486.3	168.31	9.831	
7,800.0	6,644.1	6,640.1	6,640.1	38.0	131.1	90.06	1,587.0	-2,184.9	1,638.7	1,469.8	168.94	9.700	
7,874.0	6,644.0	6,640.0	6,640.0	39.9	131.1	90.06	1,587.0	-2,184.9	1,591.7	1,420.8	170.84	9.317	
7,900.0	6,644.0	6,640.0	6,640.0	40.5	131.1	90.06	1,587.0	-2,184.9	1,575.6	1,404.1	171.51	9.187	
7,972.4	6,643.9	6,639.9	6,639.9	42.4	131.1	90.05	1,587.0	-2,184.9	1,532.4	1,359.0	173.40	8.837	
8,000.0	6,643.9	6,639.9	6,639.9	43.1	131.1	90.05	1,587.0	-2,184.9	1,516.5	1,342.4	174.12	8.710	
8,070.8	6,643.8	6,639.8	6,639.8	45.0	131.1	90.05	1,587.0	-2,184.9	1,477.4	1,301.4	175.98	8.395	
8,100.0	6,643.7	6,639.7	6,639.7	45.8	131.1	90.04	1,587.0	-2,184.9	1,461.9	1,285.2	176.75	8.271	
8,169.3	6,643.7	6,639.7	6,639.7	47.6	131.1	90.04	1,587.0	-2,184.9	1,427.0	1,248.4	178.59	7.990	
8,200.0	6,643.6	6,639.6	6,639.6	48.4	131.1	90.04	1,587.0	-2,184.9	1,412.3	1,232.9	179.40	7.872	
8,267.7	6,643.5	6,639.5	6,639.5	50.2	131.1	90.03	1,587.0	-2,184.9	1,381.8	1,200.6	181.21	7.625	
8,300.0	6,643.5	6,639.5	6,639.5	51.1	131.1	90.03	1,587.0	-2,184.9	1,368.2	1,186.1	182.07	7.515	
8,366.1	6,643.4	6,639.4	6,639.4	52.9	131.0	90.03	1,587.0	-2,184.9	1,342.3	1,158.4	183.84	7.301	
8,400.0	6,643.4	6,639.4	6,639.4	53.8	131.0	90.03	1,587.0	-2,184.9	1,330.1	1,145.3	184.75	7.199	
8,464.5	6,643.3	6,639.3	6,639.3	55.5	131.0	90.02	1,587.0	-2,184.9	1,309.0	1,122.5	186.49	7.019	
8,500.0	6,643.2	6,639.2	6,639.2	56.5	131.0	90.02	1,587.0	-2,184.9	1,298.6	1,111.2	187.44	6.928	
8,563.0	6,643.2	6,639.2	6,639.2	58.2	131.0	90.02	1,587.0	-2,184.9	1,282.4	1,093.3	189.15	6.780	
8,600.0	6,643.1	6,639.1	6,639.1	59.2	131.0	90.02	1,587.0	-2,184.9	1,274.3	1,084.1	190.15	6.702	
8,661.4	6,643.0	6,639.0	6,639.0	60.8	131.0	90.01	1,587.0	-2,184.9	1,263.0	1,071.2	191.81	6.585	
8,700.0	6,643.0	6,639.0	6,639.0	61.9	131.0	90.01	1,587.0	-2,184.9	1,257.4	1,064.6	192.86	6.520	
8,759.8	6,642.9	6,638.9	6,638.9	63.5	131.0	90.01	1,587.0	-2,184.9	1,251.0	1,056.6	194.49	6.432	
8,800.0	6,642.9	6,638.9	6,638.9	64.6	131.0	90.00	1,587.0	-2,184.9	1,248.4	1,052.8	195.58	6.383	
8,858.2	6,642.8	6,638.8	6,638.8	66.2	131.0	90.00	1,587.0	-2,184.9	1,246.8	1,049.6	197.17	6.323	
8,863.4	6,642.8	6,638.8	6,638.8	66.3	131.0	90.00	1,587.0	-2,184.9	1,246.7	1,049.4	197.32	6.319 CC	
8,900.0	6,642.7	6,638.7	6,638.7	67.3	131.0	90.00	1,587.0	-2,184.9	1,247.3	1,049.0	198.31	6.289 ES	
8,956.7	6,642.7	6,638.7	6,638.7	68.9	131.0	89.99	1,587.0	-2,184.9	1,250.2	1,050.4	199.86	6.255	
9,000.0	6,642.6	6,638.6	6,638.6	70.1	131.0	89.99	1,587.0	-2,184.9	1,254.2	1,053.2	201.05	6.238	
9,055.1	6,642.5	6,638.5	6,638.5	71.6	131.0	89.99	1,587.0	-2,184.9	1,261.4	1,058.8	202.56	6.227	
9,100.0	6,642.5	6,638.5	6,638.5	72.8	131.0	89.99	1,587.0	-2,184.9	1,269.0	1,065.2	203.79	6.227 SF	
9,153.5	6,642.4	6,638.4	6,638.4	74.3	131.0	89.98	1,587.0	-2,184.9	1,280.0	1,074.8	205.26	6.236	
9,200.0	6,642.4	6,638.4	6,638.4	75.6	131.0	89.98	1,587.0	-2,184.9	1,291.4	1,084.8	206.54	6.253	
9,251.9	6,642.3	6,638.3	6,638.3	77.0	131.0	89.98	1,587.0	-2,184.9	1,305.9	1,097.9	207.96	6.279	
9,300.0	6,642.2	6,638.2	6,638.2	78.3	131.0	89.97	1,587.0	-2,184.9	1,321.0	1,111.7	209.29	6.312	
9,350.4	6,642.2	6,638.2	6,638.2	79.7	131.0	89.97	1,587.0	-2,184.9	1,338.5	1,127.8	210.67	6.353	
9,400.0	6,642.1	6,638.1	6,638.1	81.1	131.0	89.97	1,587.0	-2,184.9	1,357.3	1,145.3	212.04	6.401	
9,448.8	6,642.0	6,638.0	6,638.0	82.4	131.0	89.97	1,587.0	-2,184.9	1,377.3	1,163.9	213.39	6.455	
9,500.0	6,642.0	6,638.0	6,638.0	83.8	131.0	89.96	1,587.0	-2,184.9	1,399.8	1,185.0	214.80	6.517	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,637.9	6,637.9	85.1	131.0	89.96	1,587.0	-2,184.9	1,421.9	1,205.8	216.10	6.580	
9,600.0	6,641.9	6,637.9	6,637.9	86.6	131.0	89.96	1,587.0	-2,184.9	1,448.1	1,230.5	217.56	6.656	
9,645.6	6,641.8	6,637.8	6,637.8	87.9	131.0	89.95	1,587.0	-2,184.9	1,471.8	1,253.0	218.82	6.726	
9,700.0	6,641.7	6,637.7	6,637.7	89.4	131.0	89.95	1,587.0	-2,184.9	1,501.4	1,281.1	220.32	6.814	
9,744.1	6,641.7	6,637.7	6,637.7	90.6	131.0	89.95	1,587.0	-2,184.9	1,526.4	1,304.9	221.54	6.890	
9,800.0	6,641.6	6,637.6	6,637.6	92.1	131.0	89.95	1,587.0	-2,184.9	1,559.3	1,336.2	223.09	6.990	
9,842.5	6,641.6	6,637.6	6,637.6	93.3	131.0	89.94	1,587.0	-2,184.9	1,585.2	1,361.0	224.27	7.068	
9,900.0	6,641.5	6,637.5	6,637.5	94.9	131.0	89.94	1,587.0	-2,184.9	1,621.4	1,395.5	225.86	7.179	
9,940.9	6,641.4	6,637.4	6,637.4	96.0	131.0	89.94	1,587.0	-2,184.9	1,647.8	1,420.8	226.99	7.259	
10,000.0	6,641.4	6,637.4	6,637.4	97.7	131.0	89.93	1,587.0	-2,184.9	1,687.0	1,458.4	228.63	7.379	
10,039.3	6,641.3	6,637.3	6,637.3	98.8	131.0	89.93	1,587.0	-2,184.9	1,713.8	1,484.1	229.72	7.460	
10,100.0	6,641.2	6,637.2	6,637.2	100.4	131.0	89.93	1,587.0	-2,184.9	1,756.0	1,524.6	231.41	7.588	
10,137.8	6,641.2	6,637.2	6,637.2	101.5	131.0	89.93	1,587.0	-2,184.9	1,782.8	1,550.3	232.45	7.669	
10,200.0	6,641.1	6,637.1	6,637.1	103.2	131.0	89.92	1,587.0	-2,184.9	1,827.8	1,593.6	234.18	7.805	
10,236.2	6,641.1	6,637.1	6,637.1	104.2	131.0	89.92	1,587.0	-2,184.9	1,854.4	1,619.2	235.19	7.885	
10,300.0	6,641.0	6,637.0	6,637.0	106.0	131.0	89.92	1,587.0	-2,184.9	1,902.1	1,665.2	236.96	8.027	
10,334.6	6,640.9	6,636.9	6,636.9	107.0	131.0	89.92	1,587.0	-2,184.9	1,928.4	1,690.5	237.92	8.105	
10,400.0	6,640.9	6,636.9	6,636.9	108.8	131.0	89.91	1,587.0	-2,184.9	1,978.7	1,739.0	239.74	8.254	
10,433.0	6,640.8	6,636.8	6,636.8	109.7	131.0	89.91	1,587.0	-2,184.9	2,004.5	1,763.8	240.66	8.329	
10,500.0	6,640.7	6,636.7	6,636.7	111.6	131.0	89.91	1,587.0	-2,184.9	2,057.3	1,814.8	242.52	8.483	
10,531.5	6,640.7	6,636.7	6,636.7	112.4	131.0	89.90	1,587.0	-2,184.9	2,082.5	1,839.1	243.39	8.556	
10,600.0	6,640.6	6,636.6	6,636.6	114.3	131.0	89.90	1,587.0	-2,184.9	2,137.8	1,892.5	245.30	8.715	
10,629.9	6,640.6	6,636.6	6,636.6	115.2	131.0	89.90	1,587.0	-2,184.9	2,162.1	1,916.0	246.13	8.784	
10,700.0	6,640.5	6,636.5	6,636.5	117.1	131.0	89.89	1,587.0	-2,184.9	2,219.8	1,971.7	248.08	8.948	
10,728.3	6,640.4	6,636.4	6,636.4	117.9	131.0	89.89	1,587.0	-2,184.9	2,243.2	1,994.4	248.87	9.014	
10,800.0	6,640.4	6,636.4	6,636.4	119.9	131.0	89.89	1,587.0	-2,184.9	2,303.2	2,052.3	250.87	9.181	
10,826.7	6,640.3	6,636.3	6,636.3	120.7	131.0	89.89	1,587.0	-2,184.9	2,325.7	2,074.1	251.61	9.243	
10,900.0	6,640.2	6,636.2	6,636.2	122.7	131.0	89.88	1,587.0	-2,184.9	2,387.9	2,134.2	253.65	9.414	
10,925.2	6,640.2	6,636.2	6,636.2	123.4	131.0	89.88	1,587.0	-2,184.9	2,409.4	2,155.0	254.35	9.473	
11,000.0	6,640.1	6,636.1	6,636.1	125.5	131.0	89.88	1,587.0	-2,184.9	2,473.7	2,217.3	256.44	9.646	
11,023.6	6,640.1	6,636.1	6,636.1	126.1	131.0	89.88	1,587.0	-2,184.9	2,494.1	2,237.0	257.10	9.701	
11,100.0	6,640.0	6,636.0	6,636.0	128.3	131.0	89.87	1,587.0	-2,184.9	2,560.6	2,301.3	259.23	9.878	
11,122.0	6,639.9	6,635.9	6,635.9	128.9	131.0	89.87	1,587.0	-2,184.9	2,579.8	2,320.0	259.84	9.929	
11,200.0	6,639.8	6,635.8	6,635.8	131.1	131.0	89.87	1,587.0	-2,184.9	2,648.4	2,386.4	262.01	10.108	
11,220.4	6,639.8	6,635.8	6,635.8	131.6	131.0	89.86	1,587.0	-2,184.9	2,666.4	2,403.8	262.58	10.155	
11,300.0	6,639.7	6,635.7	6,635.7	133.9	131.0	89.86	1,587.0	-2,184.9	2,737.0	2,472.2	264.80	10.336	
11,318.9	6,639.7	6,635.7	6,635.7	134.4	131.0	89.86	1,587.0	-2,184.9	2,753.8	2,488.5	265.33	10.379	
11,400.0	6,639.6	6,635.6	6,635.6	136.7	131.0	89.85	1,587.0	-2,184.9	2,826.4	2,558.8	267.59	10.562	
11,417.3	6,639.6	6,635.6	6,635.6	137.1	131.0	89.85	1,587.0	-2,184.9	2,841.9	2,573.8	268.08	10.601	
11,500.0	6,639.5	6,635.5	6,635.5	139.4	131.0	89.85	1,587.0	-2,184.9	2,916.5	2,646.1	270.38	10.786	
11,515.7	6,639.5	6,635.5	6,635.5	139.9	131.0	89.85	1,587.0	-2,184.9	2,930.7	2,659.9	270.82	10.821	
11,600.0	6,639.3	6,635.3	6,635.3	142.2	131.0	89.84	1,587.0	-2,184.9	3,007.2	2,734.0	273.17	11.008	
11,614.1	6,639.3	6,635.3	6,635.3	142.6	131.0	89.84	1,587.0	-2,184.9	3,020.1	2,746.5	273.57	11.039	
11,700.0	6,639.2	6,635.2	6,635.2	145.0	131.0	89.84	1,587.0	-2,184.9	3,098.5	2,822.5	275.97	11.228	
11,712.6	6,639.2	6,635.2	6,635.2	145.4	131.0	89.84	1,587.0	-2,184.9	3,110.0	2,833.6	276.32	11.255	
11,800.0	6,639.1	6,635.1	6,635.1	147.8	131.0	89.83	1,587.0	-2,184.9	3,190.3	2,911.5	278.76	11.444	
11,811.0	6,639.1	6,635.1	6,635.1	148.1	131.0	89.83	1,587.0	-2,184.9	3,200.4	2,921.3	279.07	11.468	
11,900.0	6,639.0	6,635.0	6,635.0	150.6	131.0	89.82	1,587.0	-2,184.9	3,282.5	3,001.0	281.55	11.659	
11,909.4	6,639.0	6,635.0	6,635.0	150.9	131.0	89.82	1,587.0	-2,184.9	3,291.3	3,009.4	281.82	11.679	
12,000.0	6,638.8	6,634.8	6,634.8	153.4	131.0	89.82	1,587.0	-2,184.9	3,375.3	3,090.9	284.35	11.870	
12,007.8	6,638.8	6,634.8	6,634.8	153.6	131.0	89.82	1,587.0	-2,184.9	3,382.5	3,098.0	284.57	11.887	
12,100.0	6,638.7	6,634.7	6,634.7	156.2	131.0	89.81	1,587.0	-2,184.9	3,468.4	3,181.2	287.14	12.079	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
12,106.3	6,638.7	6,634.7	6,634.7	156.4	131.0	89.81	1,587.0	-2,184.9	3,474.2	3,186.9	287.32	12.092	
12,200.0	6,638.6	6,634.6	6,634.6	159.0	131.0	89.81	1,587.0	-2,184.9	3,561.9	3,271.9	289.94	12.285	
12,204.7	6,638.6	6,634.6	6,634.6	159.1	131.0	89.81	1,587.0	-2,184.9	3,566.3	3,276.2	290.07	12.295	
12,300.0	6,638.5	6,634.5	6,634.5	161.8	130.9	89.80	1,587.0	-2,184.9	3,655.7	3,363.0	292.73	12.488	
12,303.1	6,638.5	6,634.5	6,634.5	161.9	130.9	89.80	1,587.0	-2,184.9	3,658.7	3,365.8	292.82	12.495	
12,400.0	6,638.3	6,634.3	6,634.3	164.6	130.9	89.80	1,587.0	-2,184.9	3,749.9	3,454.3	295.53	12.689	
12,401.5	6,638.3	6,634.3	6,634.3	164.6	130.9	89.80	1,587.0	-2,184.9	3,751.3	3,455.8	295.57	12.692	
12,500.0	6,638.2	6,634.2	6,634.2	167.4	130.9	89.79	1,587.0	-2,184.9	3,844.3	3,546.0	298.32	12.886	
12,598.4	6,638.1	6,634.1	6,634.1	170.2	130.9	89.78	1,587.0	-2,184.9	3,937.5	3,636.5	301.07	13.078	
12,600.0	6,638.1	6,634.1	6,634.1	170.2	130.9	89.78	1,587.0	-2,184.9	3,939.1	3,637.9	301.12	13.081	
12,696.8	6,638.0	6,634.0	6,634.0	172.9	130.9	89.78	1,587.0	-2,184.9	4,031.0	3,727.2	303.83	13.267	
12,700.0	6,638.0	6,634.0	6,634.0	173.0	130.9	89.78	1,587.0	-2,184.9	4,034.0	3,730.1	303.92	13.274	
12,795.2	6,637.8	6,633.8	6,633.8	175.7	130.9	89.77	1,587.0	-2,184.9	4,124.7	3,818.2	306.58	13.454	
12,800.0	6,637.8	6,633.8	6,633.8	175.8	130.9	89.77	1,587.0	-2,184.9	4,129.3	3,822.5	306.71	13.463	
12,893.7	6,637.7	6,633.7	6,633.7	178.4	130.9	89.77	1,587.0	-2,184.9	4,218.7	3,909.3	309.33	13.638	
12,900.0	6,637.7	6,633.7	6,633.7	178.6	130.9	89.77	1,587.0	-2,184.9	4,224.7	3,915.2	309.51	13.650	
12,992.1	6,637.6	6,633.6	6,633.6	181.2	130.9	89.76	1,587.0	-2,184.9	4,312.8	4,000.7	312.09	13.819	
13,000.0	6,637.6	6,633.6	6,633.6	181.4	130.9	89.76	1,587.0	-2,184.9	4,320.3	4,008.0	312.31	13.834	
13,090.5	6,637.5	6,633.5	6,633.5	183.9	130.9	89.76	1,587.0	-2,184.9	4,407.1	4,092.3	314.84	13.998	
13,100.0	6,637.5	6,633.5	6,633.5	184.2	130.9	89.76	1,587.0	-2,184.9	4,416.2	4,101.1	315.11	14.015	
13,188.9	6,637.4	6,633.4	6,633.4	186.7	130.9	89.75	1,587.0	-2,184.9	4,501.6	4,184.0	317.60	14.174	
13,200.0	6,637.3	6,633.3	6,633.3	187.0	130.9	89.75	1,587.0	-2,184.9	4,512.2	4,194.3	317.91	14.194	
13,287.4	6,637.2	6,633.2	6,633.2	189.4	130.9	89.74	1,587.0	-2,184.9	4,596.2	4,275.9	320.35	14.348	
13,300.0	6,637.2	6,633.2	6,633.2	189.8	130.9	89.74	1,587.0	-2,184.9	4,608.4	4,287.7	320.70	14.370	
13,385.8	6,637.1	6,633.1	6,633.1	192.2	130.9	89.74	1,587.0	-2,184.9	4,691.1	4,368.0	323.11	14.519	
13,400.0	6,637.1	6,633.1	6,633.1	192.6	130.9	89.74	1,587.0	-2,184.9	4,704.7	4,381.2	323.50	14.543	
13,484.2	6,637.0	6,633.0	6,633.0	195.0	130.9	89.73	1,587.0	-2,184.9	4,786.0	4,460.2	325.86	14.687	
13,500.0	6,637.0	6,633.0	6,633.0	195.4	130.9	89.73	1,587.0	-2,184.9	4,801.2	4,474.9	326.30	14.714	
13,582.6	6,636.9	6,632.9	6,632.9	197.7	130.9	89.73	1,587.0	-2,184.9	4,881.1	4,552.5	328.62	14.854	
13,600.0	6,636.8	6,632.8	6,632.8	198.2	130.9	89.73	1,587.0	-2,184.9	4,897.9	4,568.8	329.10	14.883	
13,681.1	6,636.7	6,632.7	6,632.7	200.5	130.9	89.72	1,587.0	-2,184.9	4,976.3	4,645.0	331.37	15.017	
13,700.0	6,636.7	6,632.7	6,632.7	201.0	130.9	89.72	1,587.0	-2,184.9	4,994.7	4,662.8	331.90	15.049	
13,779.5	6,636.6	6,632.6	6,632.6	203.2	130.9	89.72	1,587.0	-2,184.9	5,071.7	4,737.5	334.13	15.179	
13,800.0	6,636.6	6,632.6	6,632.6	203.8	130.9	89.72	1,587.0	-2,184.9	5,091.6	4,756.8	334.70	15.212	
13,877.9	6,636.5	6,632.5	6,632.5	206.0	130.9	89.71	1,587.0	-2,184.9	5,167.1	4,830.3	336.88	15.338	
13,900.0	6,636.5	6,632.5	6,632.5	206.6	130.9	89.71	1,587.0	-2,184.9	5,188.6	4,851.1	337.50	15.373	
13,976.3	6,636.4	6,632.4	6,632.4	208.8	130.9	89.70	1,587.0	-2,184.9	5,262.7	4,923.1	339.64	15.495	
14,000.0	6,636.3	6,632.3	6,632.3	209.4	130.9	89.70	1,587.0	-2,184.9	5,285.7	4,945.4	340.30	15.532	
14,074.8	6,636.2	6,632.2	6,632.2	211.5	130.9	89.70	1,587.0	-2,184.9	5,358.4	5,016.0	342.40	15.650	
14,100.0	6,636.2	6,632.2	6,632.2	212.2	130.9	89.70	1,587.0	-2,184.9	5,382.9	5,039.8	343.10	15.689	
14,173.2	6,636.1	6,632.1	6,632.1	214.3	130.9	89.69	1,587.0	-2,184.9	5,454.2	5,109.0	345.15	15.802	
14,200.0	6,636.1	6,632.1	6,632.1	215.0	130.9	89.69	1,587.0	-2,184.9	5,480.2	5,134.3	345.90	15.843	
14,271.6	6,636.0	6,632.0	6,632.0	217.0	130.9	89.69	1,587.0	-2,184.9	5,550.0	5,202.1	347.91	15.952	
14,300.0	6,636.0	6,632.0	6,632.0	217.8	130.9	89.69	1,587.0	-2,184.9	5,577.7	5,229.0	348.71	15.995	
14,370.0	6,635.9	6,631.9	6,631.9	219.8	130.9	89.68	1,587.0	-2,184.9	5,646.0	5,295.3	350.67	16.101	
14,400.0	6,635.8	6,631.8	6,631.8	220.6	130.9	89.68	1,587.0	-2,184.9	5,675.2	5,323.7	351.51	16.145	
14,468.5	6,635.7	6,631.7	6,631.7	222.6	130.9	89.68	1,587.0	-2,184.9	5,742.0	5,388.6	353.43	16.247	
14,500.0	6,635.7	6,631.7	6,631.7	223.4	130.9	89.67	1,587.0	-2,184.9	5,772.8	5,418.5	354.31	16.293	
14,566.9	6,635.6	6,631.6	6,631.6	225.3	130.9	89.67	1,587.0	-2,184.9	5,838.1	5,481.9	356.18	16.391	
14,600.0	6,635.6	6,631.6	6,631.6	226.2	130.9	89.67	1,587.0	-2,184.9	5,870.5	5,513.4	357.11	16.439	
14,665.3	6,635.5	6,631.5	6,631.5	228.1	130.9	89.67	1,587.0	-2,184.9	5,934.3	5,575.4	358.94	16.533	
14,700.0	6,635.5	6,631.5	6,631.5	229.0	130.9	89.66	1,587.0	-2,184.9	5,968.2	5,608.3	359.91	16.582	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
14,763.7	6,635.4	6,631.4	6,631.4	230.8	130.9	89.66	1,587.0	-2,184.9	6,030.6	5,668.9	361.70	16.673	
14,800.0	6,635.3	6,631.3	6,631.3	231.8	130.9	89.66	1,587.0	-2,184.9	6,066.1	5,703.3	362.71	16.724	
14,862.2	6,635.2	6,631.2	6,631.2	233.6	130.9	89.65	1,587.0	-2,184.9	6,126.9	5,762.5	364.46	16.811	
14,900.0	6,635.2	6,631.2	6,631.2	234.7	130.9	89.65	1,587.0	-2,184.9	6,164.0	5,798.4	365.52	16.864	
14,960.6	6,635.1	6,631.1	6,631.1	236.4	130.9	89.65	1,587.0	-2,184.9	6,223.3	5,856.1	367.21	16.947	
14,995.1	6,635.0	6,631.0	6,631.0	237.3	130.9	89.65	1,587.0	-2,184.9	6,257.1	5,889.0	368.18	16.995	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-90.73	-116.0	-9,146.8	9,147.6				
98.4	98.4	73.4	73.4	0.1	0.0	-90.73	-116.0	-9,146.8	9,147.6	9,147.5	0.11	N/A	
100.0	100.0	75.0	75.0	0.1	0.0	-90.73	-116.0	-9,146.8	9,147.6	9,147.5	0.11	N/A	
196.8	196.8	171.8	171.8	0.3	1.9	-90.73	-116.0	-9,146.8	9,147.6	9,145.3	2.24	4,087.681	
200.0	200.0	175.0	175.0	0.3	2.0	-90.73	-116.0	-9,146.8	9,147.6	9,145.2	2.33	3,928.332	
295.3	295.3	270.3	270.3	0.5	4.1	-90.73	-116.0	-9,146.8	9,147.6	9,142.9	4.65	1,966.094	
300.0	300.0	275.0	275.0	0.5	4.2	-90.73	-116.0	-9,146.8	9,147.6	9,142.8	4.76	1,921.564	
393.7	393.7	368.7	368.7	0.8	6.1	-90.73	-116.0	-9,146.8	9,147.6	9,140.7	6.88	1,329.676	
400.0	400.0	375.0	375.0	0.8	6.2	-90.73	-116.0	-9,146.8	9,147.6	9,140.6	7.02	1,302.783	
492.1	492.1	467.1	467.1	1.0	8.1	-90.73	-116.0	-9,146.8	9,147.6	9,138.5	9.09	1,006.057	
500.0	500.0	475.0	475.0	1.0	8.3	-90.73	-116.0	-9,146.8	9,147.6	9,138.3	9.27	986.863	
590.5	590.5	565.5	565.5	1.2	10.1	-90.73	-116.0	-9,146.8	9,147.6	9,136.3	11.30	809.495	
600.0	600.0	575.0	575.0	1.2	10.3	-90.73	-116.0	-9,146.8	9,147.6	9,136.1	11.51	794.597	
689.0	689.0	664.0	664.0	1.4	12.1	-90.73	-116.0	-9,146.8	9,147.6	9,134.1	13.51	677.311	
700.0	700.0	675.0	675.0	1.4	12.3	-90.73	-116.0	-9,146.8	9,147.6	9,133.8	13.75	665.148	
787.4	787.4	762.4	762.4	1.6	14.1	-90.73	-116.0	-9,146.8	9,147.6	9,131.9	15.71	582.288	
800.0	800.0	775.0	775.0	1.7	14.3	-90.73	-116.0	-9,146.8	9,147.6	9,131.6	15.99	572.017	
885.8	885.8	860.8	860.8	1.9	16.0	-90.73	-116.0	-9,146.8	9,147.6	9,129.7	17.91	510.672	
900.0	900.0	875.0	875.0	1.9	16.3	-90.73	-116.0	-9,146.8	9,147.6	9,129.3	18.23	501.785	
984.2	984.2	959.2	959.2	2.1	18.0	-90.73	-116.0	-9,146.8	9,147.6	9,127.5	20.12	454.756	
1,000.0	1,000.0	975.0	975.0	2.1	18.3	-90.73	-116.0	-9,146.8	9,147.6	9,127.1	20.47	446.926	
1,082.7	1,082.7	1,057.7	1,057.7	2.3	20.0	-90.73	-116.0	-9,146.8	9,147.6	9,125.3	22.32	409.884	
1,100.0	1,100.0	1,075.0	1,075.0	2.3	20.4	-90.73	-116.0	-9,146.8	9,147.6	9,124.9	22.71	402.887	
1,181.1	1,181.1	1,156.1	1,156.1	2.5	22.0	-90.73	-116.0	-9,146.8	9,147.6	9,123.1	24.52	373.077	
1,200.0	1,200.0	1,175.0	1,175.0	2.6	22.4	-90.73	-116.0	-9,146.8	9,147.6	9,122.6	24.94	366.753	
1,279.5	1,279.5	1,254.5	1,254.5	2.7	24.0	-90.73	-116.0	-9,146.8	9,147.6	9,120.9	26.72	342.338	
1,300.0	1,300.0	1,275.0	1,275.0	2.8	24.4	-90.73	-116.0	-9,146.8	9,147.6	9,120.4	27.18	336.570	
1,377.9	1,377.9	1,352.9	1,352.9	3.0	26.0	-131.91	-116.0	-9,146.8	9,148.3	9,119.4	28.91	316.393	
1,400.0	1,400.0	1,375.0	1,375.0	3.0	26.4	-131.91	-116.0	-9,146.8	9,148.7	9,119.3	29.40	311.148	
1,476.4	1,476.3	1,451.3	1,451.3	3.2	27.9	-131.89	-116.0	-9,146.8	9,151.2	9,120.1	31.09	294.380	
1,500.0	1,499.8	1,474.8	1,474.8	3.2	28.4	-131.88	-116.0	-9,146.8	9,152.2	9,120.6	31.60	289.591	
1,574.8	1,574.4	1,549.4	1,549.4	3.4	29.9	-131.85	-116.0	-9,146.8	9,156.4	9,123.1	33.24	275.495	
1,600.0	1,599.5	1,574.5	1,574.5	3.5	30.4	-131.83	-116.0	-9,146.8	9,158.1	9,124.3	33.78	271.092	
1,673.2	1,672.2	1,647.2	1,647.2	3.6	31.9	-131.79	-116.0	-9,146.8	9,163.8	9,128.4	35.36	259.134	
1,700.0	1,698.7	1,673.7	1,673.7	3.7	32.4	-131.77	-116.0	-9,146.8	9,166.2	9,130.3	35.94	255.067	
1,771.6	1,769.5	1,744.5	1,744.5	3.9	33.8	-131.71	-116.0	-9,146.8	9,173.5	9,136.0	37.47	244.838	
1,800.0	1,797.5	1,772.5	1,772.5	4.0	34.4	-131.68	-116.0	-9,146.8	9,176.7	9,138.6	38.07	241.063	
1,870.1	1,866.3	1,841.3	1,841.3	4.2	35.8	-131.61	-116.0	-9,146.8	9,185.4	9,145.9	39.55	232.247	
1,899.9	1,895.6	1,870.6	1,870.6	4.3	36.4	-131.58	-116.0	-9,146.8	9,189.5	9,149.3	40.18	228.733	
1,968.5	1,962.6	1,937.6	1,937.6	4.5	37.7	-131.64	-116.0	-9,146.8	9,199.1	9,157.4	41.70	220.588	
2,000.0	1,993.4	1,968.4	1,968.4	4.6	38.3	-131.67	-116.0	-9,146.8	9,203.5	9,161.1	42.40	217.043	
2,066.9	2,058.9	2,033.9	2,033.9	4.8	39.6	-131.74	-116.0	-9,146.8	9,212.9	9,169.0	43.90	209.843	
2,100.0	2,091.3	2,066.3	2,066.3	4.9	40.3	-131.77	-116.0	-9,146.8	9,217.5	9,172.9	44.64	206.466	
2,165.3	2,155.2	2,130.2	2,130.2	5.2	41.6	-131.83	-116.0	-9,146.8	9,226.7	9,180.5	46.11	200.083	
2,200.0	2,189.1	2,164.1	2,164.1	5.3	42.3	-131.86	-116.0	-9,146.8	9,231.5	9,184.6	46.89	196.855	
2,263.8	2,251.5	2,226.5	2,226.5	5.5	43.5	-131.92	-116.0	-9,146.8	9,240.5	9,192.2	48.34	191.172	
2,300.0	2,286.9	2,261.9	2,261.9	5.7	44.2	-131.96	-116.0	-9,146.8	9,245.6	9,196.4	49.15	188.092	
2,362.2	2,347.7	2,322.7	2,322.7	5.9	45.5	-132.02	-116.0	-9,146.8	9,254.3	9,203.8	50.56	183.020	
2,400.0	2,384.7	2,359.7	2,359.7	6.0	46.2	-132.05	-116.0	-9,146.8	9,259.7	9,208.2	51.42	180.074	
2,460.6	2,444.0	2,419.0	2,419.0	6.3	47.4	-132.11	-116.0	-9,146.8	9,268.2	9,215.4	52.80	175.537	
2,500.0	2,482.5	2,457.5	2,457.5	6.4	48.2	-132.15	-116.0	-9,146.8	9,273.8	9,220.1	53.69	172.715	
2,559.0	2,540.3	2,515.3	2,515.3	6.7	49.3	-132.20	-116.0	-9,146.8	9,282.1	9,227.1	55.04	168.646	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	2,580.3	2,555.3	2,555.3	6.8	50.1	-132.24	-116.0	-9,146.8	9,287.9	9,231.9	55.97	165.940			
2,657.5	2,636.5	2,611.5	2,611.5	7.1	51.3	-132.29	-116.0	-9,146.8	9,296.0	9,238.8	57.28	162.283			
2,700.0	2,678.1	2,653.1	2,653.1	7.2	52.1	-132.33	-116.0	-9,146.8	9,302.1	9,243.8	58.25	159.683			
2,755.9	2,732.8	2,707.8	2,707.8	7.5	53.2	-132.39	-116.0	-9,146.8	9,310.0	9,250.5	59.53	156.390			
2,800.0	2,776.0	2,751.0	2,751.0	7.7	54.1	-132.43	-116.0	-9,146.8	9,316.2	9,255.7	60.54	153.891			
2,854.3	2,829.1	2,804.1	2,804.1	7.9	55.1	-132.48	-116.0	-9,146.8	9,324.0	9,262.2	61.78	150.920			
2,900.0	2,873.8	2,848.8	2,848.8	8.1	56.0	-132.52	-116.0	-9,146.8	9,330.4	9,267.6	62.83	148.513			
2,952.7	2,925.4	2,900.4	2,900.4	8.3	57.1	-132.57	-116.0	-9,146.8	9,338.0	9,273.9	64.03	145.829			
3,000.0	2,971.6	2,946.6	2,946.6	8.5	58.0	-132.61	-116.0	-9,146.8	9,344.7	9,279.6	65.12	143.509			
3,051.2	3,021.6	2,996.6	2,996.6	8.7	59.0	-132.66	-116.0	-9,146.8	9,352.0	9,285.7	66.29	141.080			
3,100.0	3,069.4	3,044.4	3,044.4	8.9	60.0	-132.71	-116.0	-9,146.8	9,358.9	9,291.5	67.41	138.841			
3,149.6	3,117.9	3,092.9	3,092.9	9.1	60.9	-132.75	-116.0	-9,146.8	9,366.0	9,297.5	68.55	136.640			
3,200.0	3,167.2	3,142.2	3,142.2	9.3	61.9	-132.80	-116.0	-9,146.8	9,373.2	9,303.5	69.70	134.478			
3,248.0	3,214.2	3,189.2	3,189.2	9.5	62.9	-132.84	-116.0	-9,146.8	9,380.1	9,309.3	70.80	132.481			
3,300.0	3,265.0	3,240.0	3,240.0	9.8	63.9	-132.89	-116.0	-9,146.8	9,387.5	9,315.5	72.00	130.390			
3,346.4	3,310.5	3,285.5	3,285.5	10.0	64.8	-132.93	-116.0	-9,146.8	9,394.2	9,321.1	73.06	128.578			
3,400.0	3,362.9	3,337.9	3,337.9	10.2	65.9	-132.98	-116.0	-9,146.8	9,401.8	9,327.6	74.29	126.553			
3,444.9	3,406.7	3,381.7	3,381.7	10.4	66.8	-133.02	-116.0	-9,146.8	9,408.3	9,333.0	75.32	124.907			
3,473.0	3,434.2	3,409.2	3,409.2	10.5	67.3	-133.05	-116.0	-9,146.8	9,412.3	9,336.3	75.97	123.899			
3,500.0	3,460.7	3,435.7	3,435.7	10.6	67.8	-133.13	-116.0	-9,146.8	9,416.1	9,339.5	76.64	122.865			
3,543.3	3,503.2	3,478.2	3,478.2	10.7	68.7	-133.25	-116.0	-9,146.8	9,421.8	9,344.1	77.69	121.273			
3,600.0	3,559.0	3,534.0	3,534.0	10.9	69.8	-133.39	-116.0	-9,146.8	9,428.7	9,349.6	79.07	119.248			
3,641.7	3,600.2	3,575.2	3,575.2	11.0	70.6	-133.49	-116.0	-9,146.8	9,433.2	9,353.1	80.07	117.814			
3,700.0	3,657.9	3,632.9	3,632.9	11.2	71.8	-133.61	-116.0	-9,146.8	9,438.8	9,357.4	81.46	115.869			
3,740.1	3,697.8	3,672.8	3,672.8	11.3	72.6	-133.68	-116.0	-9,146.8	9,442.3	9,359.9	82.41	114.581			
3,800.0	3,757.3	3,732.3	3,732.3	11.4	73.8	-133.77	-116.0	-9,146.8	9,446.6	9,362.8	83.81	112.717			
3,838.6	3,795.7	3,770.7	3,770.7	11.5	74.6	-133.82	-116.0	-9,146.8	9,449.0	9,364.3	84.70	111.562			
3,900.0	3,857.0	3,832.0	3,832.0	11.7	75.8	-133.88	-116.0	-9,146.8	9,452.0	9,365.9	86.10	109.777			
3,937.0	3,893.9	3,868.9	3,868.9	11.7	76.6	-133.91	-116.0	-9,146.8	9,453.4	9,366.5	86.93	108.745			
4,000.0	3,956.9	3,931.9	3,931.9	11.8	77.8	-133.94	-116.0	-9,146.8	9,455.0	9,366.7	88.33	107.037			
4,035.4	3,992.3	3,967.3	3,967.3	11.9	78.5	-133.95	-116.0	-9,146.8	9,455.5	9,366.4	89.11	106.114			
4,072.9	4,029.8	4,004.8	4,004.8	11.9	79.3	-92.77	-116.0	-9,146.8	9,455.7	9,365.7	89.93	105.150			
4,100.0	4,056.9	4,031.9	4,031.9	12.0	79.8	-92.77	-116.0	-9,146.8	9,455.7	9,365.1	90.51	104.466			
4,133.8	4,090.7	4,065.7	4,065.7	12.0	80.5	-92.77	-116.0	-9,146.8	9,455.7	9,364.4	91.26	103.617			
4,200.0	4,156.9	4,131.9	4,131.9	12.1	81.8	-92.77	-116.0	-9,146.8	9,455.7	9,362.9	92.71	101.996			
4,232.3	4,189.2	4,164.2	4,164.2	12.2	82.5	-92.77	-116.0	-9,146.8	9,455.7	9,362.2	93.41	101.224			
4,300.0	4,256.9	4,231.9	4,231.9	12.3	83.9	-92.77	-116.0	-9,146.8	9,455.7	9,360.8	94.90	99.639			
4,330.7	4,287.6	4,262.6	4,262.6	12.4	84.5	-92.77	-116.0	-9,146.8	9,455.7	9,360.1	95.57	98.936			
4,400.0	4,356.9	4,331.9	4,331.9	12.5	85.9	-92.77	-116.0	-9,146.8	9,455.7	9,358.6	97.09	97.386			
4,429.1	4,386.0	4,361.0	4,361.0	12.5	86.5	-92.77	-116.0	-9,146.8	9,455.7	9,357.9	97.73	96.749			
4,500.0	4,456.9	4,431.9	4,431.9	12.6	87.9	-92.77	-116.0	-9,146.8	9,455.7	9,356.4	99.29	95.232			
4,527.5	4,484.4	4,459.4	4,459.4	12.7	88.4	-92.77	-116.0	-9,146.8	9,455.7	9,355.8	99.90	94.655			
4,600.0	4,556.9	4,531.9	4,531.9	12.8	89.9	-92.77	-116.0	-9,146.8	9,455.7	9,354.2	101.49	93.170			
4,626.0	4,582.9	4,557.9	4,557.9	12.9	90.4	-92.77	-116.0	-9,146.8	9,455.7	9,353.6	102.06	92.648			
4,700.0	4,656.9	4,631.9	4,631.9	13.0	91.9	-92.77	-116.0	-9,146.8	9,455.7	9,352.0	103.69	91.194			
4,724.4	4,681.3	4,656.3	4,656.3	13.0	92.4	-92.77	-116.0	-9,146.8	9,455.7	9,351.4	104.22	90.724			
4,800.0	4,756.9	4,731.9	4,731.9	13.1	93.9	-92.77	-116.0	-9,146.8	9,455.7	9,349.8	105.89	89.299			
4,822.8	4,779.7	4,754.7	4,754.7	13.2	94.4	-92.77	-116.0	-9,146.8	9,455.7	9,349.3	106.39	88.877			
4,900.0	4,856.9	4,831.9	4,831.9	13.3	95.9	-92.77	-116.0	-9,146.8	9,455.7	9,347.6	108.09	87.480			
4,921.2	4,878.1	4,853.1	4,853.1	13.4	96.3	-92.77	-116.0	-9,146.8	9,455.7	9,347.1	108.56	87.103			
5,000.0	4,956.9	4,931.9	4,931.9	13.5	97.9	-92.77	-116.0	-9,146.8	9,455.7	9,345.4	110.29	85.733			
5,019.7	4,976.6	4,951.6	4,951.6	13.5	98.3	-92.77	-116.0	-9,146.8	9,455.7	9,344.9	110.73	85.397			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,031.9	5,031.9	13.7	99.9	-92.77	-116.0	-9,146.8	9,455.7	9,343.2	112.50	84.053	
5,118.1	5,075.0	5,050.0	5,050.0	13.7	100.3	-92.77	-116.0	-9,146.8	9,455.7	9,342.8	112.90	83.756	
5,200.0	5,156.9	5,131.9	5,131.9	13.8	102.0	-92.77	-116.0	-9,146.8	9,455.7	9,341.0	114.70	82.437	
5,216.5	5,173.4	5,148.4	5,148.4	13.9	102.3	-92.77	-116.0	-9,146.8	9,455.7	9,340.6	115.07	82.176	
5,300.0	5,256.9	5,231.9	5,231.9	14.0	104.0	-92.77	-116.0	-9,146.8	9,455.7	9,338.7	116.91	80.882	
5,314.9	5,271.8	5,246.8	5,246.8	14.1	104.3	-92.77	-116.0	-9,146.8	9,455.7	9,338.4	117.24	80.654	
5,400.0	5,356.9	5,331.9	5,331.9	14.2	106.0	-92.77	-116.0	-9,146.8	9,455.7	9,336.5	119.11	79.383	
5,413.4	5,370.3	5,345.3	5,345.3	14.2	106.2	-92.77	-116.0	-9,146.8	9,455.7	9,336.2	119.41	79.187	
5,500.0	5,456.9	5,431.9	5,431.9	14.4	108.0	-92.77	-116.0	-9,146.8	9,455.7	9,334.3	121.32	77.939	
5,511.8	5,468.7	5,443.7	5,443.7	14.4	108.2	-92.77	-116.0	-9,146.8	9,455.7	9,334.1	121.58	77.772	
5,600.0	5,556.9	5,531.9	5,531.9	14.6	110.0	-92.77	-116.0	-9,146.8	9,455.7	9,332.1	123.53	76.545	
5,610.2	5,567.1	5,542.1	5,542.1	14.6	110.2	-92.77	-116.0	-9,146.8	9,455.7	9,331.9	123.76	76.406	
5,700.0	5,656.9	5,631.9	5,631.9	14.7	112.0	-92.77	-116.0	-9,146.8	9,455.7	9,329.9	125.74	75.200	
5,708.6	5,665.5	5,640.5	5,640.5	14.8	112.2	-92.77	-116.0	-9,146.8	9,455.7	9,329.7	125.93	75.086	
5,800.0	5,756.9	5,731.9	5,731.9	14.9	114.0	-92.77	-116.0	-9,146.8	9,455.7	9,327.7	127.95	73.901	
5,807.1	5,764.0	5,739.0	5,739.0	14.9	114.2	-92.77	-116.0	-9,146.8	9,455.7	9,327.5	128.11	73.811	
5,900.0	5,856.9	5,831.9	5,831.9	15.1	116.0	-92.77	-116.0	-9,146.8	9,455.7	9,325.5	130.16	72.646	
5,905.5	5,862.4	5,837.4	5,837.4	15.1	116.1	-92.77	-116.0	-9,146.8	9,455.7	9,325.4	130.28	72.578	
5,971.9	5,928.8	5,903.8	5,903.8	15.3	117.5	-92.77	-116.0	-9,146.8	9,455.7	9,323.9	131.75	71.769	
6,000.0	5,956.9	5,931.9	5,931.9	15.3	118.0	-2.77	-116.0	-9,146.8	9,455.1	9,322.9	132.18	71.533	
6,003.9	5,960.8	5,935.8	5,935.8	15.3	118.1	-2.77	-116.0	-9,146.8	9,454.9	9,322.7	132.23	71.503	
6,050.0	6,006.7	5,981.7	5,981.7	15.4	119.0	-2.78	-116.0	-9,146.8	9,451.4	9,318.9	132.55	71.303	
6,100.0	6,056.2	6,031.2	6,031.2	15.4	120.0	-2.81	-116.0	-9,146.8	9,444.2	9,312.0	132.27	71.402	
6,102.3	6,058.5	6,033.5	6,033.5	15.4	120.1	-2.82	-116.0	-9,146.8	9,443.8	9,311.6	132.24	71.415	
6,150.0	6,105.1	6,080.1	6,080.1	15.4	121.0	-2.86	-116.0	-9,146.8	9,433.7	9,302.3	131.32	71.839	
6,200.0	6,153.0	6,128.0	6,128.0	15.5	122.0	-2.92	-116.0	-9,146.8	9,419.7	9,290.0	129.69	72.634	
6,200.8	6,153.8	6,128.8	6,128.8	15.5	122.0	-2.92	-116.0	-9,146.8	9,419.4	9,289.8	129.66	72.649	
6,250.0	6,199.9	6,174.9	6,174.9	15.5	122.9	-3.00	-116.0	-9,146.8	9,402.4	9,275.0	127.38	73.814	
6,299.2	6,244.8	6,219.8	6,219.8	15.5	123.8	-3.11	-116.0	-9,146.8	9,382.3	9,257.8	124.45	75.389	
6,300.0	6,245.5	6,220.5	6,220.5	15.5	123.8	-3.11	-116.0	-9,146.8	9,381.9	9,257.5	124.40	75.418	
6,350.0	6,289.6	6,264.6	6,264.6	15.5	124.7	-3.23	-116.0	-9,146.8	9,358.3	9,237.5	120.75	77.500	
6,397.6	6,329.9	6,304.9	6,304.9	15.4	125.5	-3.38	-116.0	-9,146.8	9,333.0	9,216.3	116.67	79.991	
6,400.0	6,331.8	6,306.8	6,306.8	15.4	125.6	-3.39	-116.0	-9,146.8	9,331.6	9,215.2	116.46	80.130	
6,450.0	6,372.2	6,347.2	6,347.2	15.4	126.4	-3.58	-116.0	-9,146.8	9,302.1	9,190.6	111.53	83.403	
6,496.0	6,407.4	6,382.4	6,382.4	15.4	127.1	-3.79	-116.0	-9,146.8	9,272.5	9,166.0	106.47	87.091	
6,500.0	6,410.3	6,385.3	6,385.3	15.4	127.2	-3.81	-116.0	-9,146.8	9,269.8	9,163.8	106.01	87.442	
6,550.0	6,446.1	6,421.1	6,421.1	15.4	127.9	-4.09	-116.0	-9,146.8	9,235.0	9,135.1	99.93	92.412	
6,594.5	6,475.9	6,450.9	6,450.9	15.4	128.5	-4.40	-116.0	-9,146.8	9,202.0	9,107.9	94.10	97.789	
6,600.0	6,479.4	6,454.4	6,454.4	15.4	128.5	-4.44	-116.0	-9,146.8	9,197.8	9,104.4	93.35	98.530	
6,650.0	6,510.0	6,485.0	6,485.0	15.5	129.2	-4.88	-116.0	-9,146.8	9,158.3	9,072.0	86.33	106.087	
6,692.9	6,534.0	6,509.0	6,509.0	15.7	129.6	-5.35	-116.0	-9,146.8	9,122.8	9,042.8	80.03	113.994	
6,700.0	6,537.8	6,512.8	6,512.8	15.7	129.7	-5.44	-116.0	-9,146.8	9,116.8	9,037.8	78.97	115.452	
6,750.0	6,562.6	6,537.6	6,537.6	16.2	130.2	-6.17	-116.0	-9,146.8	9,073.4	9,002.0	71.41	127.066	
6,791.3	6,580.8	6,555.8	6,555.8	16.6	130.6	-6.96	-116.0	-9,146.8	9,036.4	8,971.2	65.18	138.638	
6,800.0	6,584.3	6,559.3	6,559.3	16.7	130.7	-7.16	-116.0	-9,146.8	9,028.5	8,964.6	63.90	141.291	
6,850.0	6,602.9	6,577.9	6,577.9	17.3	131.0	-8.56	-116.0	-9,146.8	8,982.1	8,925.2	56.93	157.771	
6,889.7	6,615.2	6,590.2	6,590.2	17.9	131.3	-10.15	-116.0	-9,146.8	8,944.4	8,891.9	52.46	170.484	
6,900.0	6,618.1	6,593.1	6,593.1	18.0	131.3	-10.67	-116.0	-9,146.8	8,934.5	8,883.0	51.60	173.160	
6,950.0	6,630.0	6,605.0	6,605.0	18.8	131.6	-14.17	-116.0	-9,146.8	8,886.1	8,835.5	50.55	175.789	
6,988.2	6,636.8	6,611.8	6,611.8	19.5	131.7	-18.85	-116.0	-9,146.8	8,848.5	8,792.3	56.29	157.206	
7,000.0	6,638.5	6,613.5	6,613.5	19.7	131.7	-20.97	-116.0	-9,146.8	8,836.9	8,776.8	60.06	147.140	
7,050.0	6,643.5	6,618.5	6,618.5	20.6	131.8	-38.46	-116.0	-9,146.8	8,787.2	8,691.2	96.00	91.534	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,619.9	6,619.9	21.3	131.9	-74.57	-116.0	-9,146.8	8,750.7	8,603.2	147.45	59.346	
7,097.8	6,645.0	6,620.0	6,620.0	21.5	131.9	-91.38	-116.0	-9,146.8	8,739.5	8,586.1	153.32	57.001	
7,100.0	6,645.0	6,620.0	6,620.0	21.6	131.9	-91.38	-116.0	-9,146.8	8,737.3	8,583.9	153.36	56.971	
7,185.0	6,644.9	6,619.9	6,619.9	23.3	131.9	-91.36	-116.0	-9,146.8	8,652.4	8,497.3	155.09	55.790	
7,200.0	6,644.9	6,619.9	6,619.9	23.6	131.9	-91.36	-116.0	-9,146.8	8,637.4	8,482.0	155.39	55.585	
7,283.4	6,644.8	6,619.8	6,619.8	25.4	131.9	-91.35	-116.0	-9,146.8	8,554.1	8,396.9	157.21	54.413	
7,300.0	6,644.7	6,619.7	6,619.7	25.8	131.9	-91.34	-116.0	-9,146.8	8,537.6	8,380.0	157.57	54.184	
7,381.9	6,644.6	6,619.6	6,619.6	27.7	131.9	-91.33	-116.0	-9,146.8	8,455.8	8,296.4	159.44	53.034	
7,400.0	6,644.6	6,619.6	6,619.6	28.1	131.9	-91.33	-116.0	-9,146.8	8,437.7	8,277.9	159.86	52.783	
7,480.3	6,644.5	6,619.5	6,619.5	30.0	131.9	-91.32	-116.0	-9,146.8	8,357.5	8,195.8	161.76	51.665	
7,500.0	6,644.5	6,619.5	6,619.5	30.5	131.9	-91.31	-116.0	-9,146.8	8,337.9	8,175.6	162.23	51.395	
7,578.7	6,644.4	6,619.4	6,619.4	32.4	131.9	-91.30	-116.0	-9,146.8	8,259.3	8,095.1	164.15	50.314	
7,600.0	6,644.4	6,619.4	6,619.4	32.9	131.9	-91.30	-116.0	-9,146.8	8,238.0	8,073.3	164.67	50.026	
7,677.1	6,644.3	6,619.3	6,619.3	34.8	131.9	-91.28	-116.0	-9,146.8	8,161.0	7,994.4	166.60	48.985	
7,700.0	6,644.2	6,619.2	6,619.2	35.4	131.9	-91.28	-116.0	-9,146.8	8,138.2	7,971.0	167.17	48.681	
7,775.6	6,644.1	6,619.1	6,619.1	37.3	131.9	-91.27	-116.0	-9,146.8	8,062.7	7,893.6	169.09	47.682	
7,800.0	6,644.1	6,619.1	6,619.1	38.0	131.9	-91.27	-116.0	-9,146.8	8,038.3	7,868.6	169.72	47.364	
7,874.0	6,644.0	6,619.0	6,619.0	39.9	131.9	-91.25	-116.0	-9,146.8	7,964.4	7,792.8	171.62	46.407	
7,900.0	6,644.0	6,619.0	6,619.0	40.5	131.9	-91.25	-116.0	-9,146.8	7,938.5	7,766.2	172.29	46.076	
7,972.4	6,643.9	6,618.9	6,618.9	42.4	131.9	-91.24	-116.0	-9,146.8	7,866.2	7,692.0	174.18	45.161	
8,000.0	6,643.9	6,618.9	6,618.9	43.1	131.9	-91.23	-116.0	-9,146.8	7,838.7	7,663.8	174.90	44.818	
8,070.8	6,643.8	6,618.8	6,618.8	45.0	131.9	-91.22	-116.0	-9,146.8	7,767.9	7,591.2	176.76	43.946	
8,100.0	6,643.7	6,618.7	6,618.7	45.8	131.9	-91.22	-116.0	-9,146.8	7,738.8	7,561.3	177.53	43.592	
8,169.3	6,643.7	6,618.7	6,618.7	47.6	131.9	-91.21	-116.0	-9,146.8	7,669.7	7,490.3	179.36	42.760	
8,200.0	6,643.6	6,618.6	6,618.6	48.4	131.9	-91.20	-116.0	-9,146.8	7,639.0	7,458.8	180.18	42.397	
8,267.7	6,643.5	6,618.5	6,618.5	50.2	131.8	-91.19	-116.0	-9,146.8	7,571.4	7,389.4	181.98	41.605	
8,300.0	6,643.5	6,618.5	6,618.5	51.1	131.8	-91.19	-116.0	-9,146.8	7,539.2	7,356.3	182.85	41.232	
8,366.1	6,643.4	6,618.4	6,618.4	52.9	131.8	-91.18	-116.0	-9,146.8	7,473.2	7,288.6	184.62	40.479	
8,400.0	6,643.4	6,618.4	6,618.4	53.8	131.8	-91.17	-116.0	-9,146.8	7,439.4	7,253.8	185.53	40.098	
8,464.5	6,643.3	6,618.3	6,618.3	55.5	131.8	-91.16	-116.0	-9,146.8	7,374.9	7,187.7	187.27	39.382	
8,500.0	6,643.2	6,618.2	6,618.2	56.5	131.8	-91.16	-116.0	-9,146.8	7,339.6	7,151.3	188.22	38.994	
8,563.0	6,643.2	6,618.2	6,618.2	58.2	131.8	-91.15	-116.0	-9,146.8	7,276.7	7,086.8	189.93	38.313	
8,600.0	6,643.1	6,618.1	6,618.1	59.2	131.8	-91.14	-116.0	-9,146.8	7,239.8	7,048.8	190.93	37.919	
8,661.4	6,643.0	6,618.0	6,618.0	60.8	131.8	-91.13	-116.0	-9,146.8	7,178.5	6,985.9	192.59	37.273	
8,700.0	6,643.0	6,618.0	6,618.0	61.9	131.8	-91.12	-116.0	-9,146.8	7,140.0	6,946.3	193.64	36.872	
8,759.8	6,642.9	6,617.9	6,617.9	63.5	131.8	-91.11	-116.0	-9,146.8	7,080.3	6,885.0	195.27	36.259	
8,800.0	6,642.9	6,617.9	6,617.9	64.6	131.8	-91.11	-116.0	-9,146.8	7,040.2	6,843.8	196.36	35.853	
8,858.2	6,642.8	6,617.8	6,617.8	66.2	131.8	-91.10	-116.0	-9,146.8	6,982.0	6,784.1	197.95	35.271	
8,900.0	6,642.7	6,617.7	6,617.7	67.3	131.8	-91.09	-116.0	-9,146.8	6,940.4	6,741.3	199.09	34.860	
8,956.7	6,642.7	6,617.7	6,617.7	68.9	131.8	-91.08	-116.0	-9,146.8	6,883.8	6,683.2	200.64	34.309	
9,000.0	6,642.6	6,617.6	6,617.6	70.1	131.8	-91.08	-116.0	-9,146.8	6,840.6	6,638.8	201.83	33.893	
9,055.1	6,642.5	6,617.5	6,617.5	71.6	131.8	-91.07	-116.0	-9,146.8	6,785.6	6,582.3	203.34	33.371	
9,100.0	6,642.5	6,617.5	6,617.5	72.8	131.8	-91.06	-116.0	-9,146.8	6,740.8	6,536.3	204.57	32.951	
9,153.5	6,642.4	6,617.4	6,617.4	74.3	131.8	-91.05	-116.0	-9,146.8	6,687.4	6,481.4	206.04	32.457	
9,200.0	6,642.4	6,617.4	6,617.4	75.6	131.8	-91.04	-116.0	-9,146.8	6,641.1	6,433.7	207.32	32.033	
9,251.9	6,642.3	6,617.3	6,617.3	77.0	131.8	-91.04	-116.0	-9,146.8	6,589.2	6,380.5	208.75	31.566	
9,300.0	6,642.2	6,617.2	6,617.2	78.3	131.8	-91.03	-116.0	-9,146.8	6,541.3	6,331.2	210.07	31.139	
9,350.4	6,642.2	6,617.2	6,617.2	79.7	131.8	-91.02	-116.0	-9,146.8	6,491.0	6,279.6	211.45	30.697	
9,400.0	6,642.1	6,617.1	6,617.1	81.1	131.8	-91.01	-116.0	-9,146.8	6,441.5	6,228.7	212.82	30.267	
9,448.8	6,642.0	6,617.0	6,617.0	82.4	131.8	-91.01	-116.0	-9,146.8	6,392.9	6,178.7	214.17	29.850	
9,500.0	6,642.0	6,617.0	6,617.0	83.8	131.8	-91.00	-116.0	-9,146.8	6,341.8	6,126.2	215.58	29.417	
9,547.2	6,641.9	6,616.9	6,616.9	85.1	131.8	-90.99	-116.0	-9,146.8	6,294.7	6,077.8	216.88	29.023	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,616.9	6,616.9	86.6	131.8	-90.98	-116.0	-9,146.8	6,242.1	6,023.7	218.34	28.589	
9,645.6	6,641.8	6,616.8	6,616.8	87.9	131.8	-90.97	-116.0	-9,146.8	6,196.5	5,976.9	219.60	28.217	
9,700.0	6,641.7	6,616.7	6,616.7	89.4	131.8	-90.97	-116.0	-9,146.8	6,142.3	5,921.2	221.11	27.780	
9,744.1	6,641.7	6,616.7	6,616.7	90.6	131.8	-90.96	-116.0	-9,146.8	6,098.4	5,876.1	222.33	27.430	
9,800.0	6,641.6	6,616.6	6,616.6	92.1	131.8	-90.95	-116.0	-9,146.8	6,042.6	5,818.7	223.87	26.991	
9,842.5	6,641.6	6,616.6	6,616.6	93.3	131.8	-90.94	-116.0	-9,146.8	6,000.2	5,775.2	225.05	26.662	
9,900.0	6,641.5	6,616.5	6,616.5	94.9	131.8	-90.93	-116.0	-9,146.8	5,942.9	5,716.3	226.64	26.221	
9,940.9	6,641.4	6,616.4	6,616.4	96.0	131.8	-90.93	-116.0	-9,146.8	5,902.1	5,674.3	227.78	25.912	
10,000.0	6,641.4	6,616.4	6,616.4	97.7	131.8	-90.92	-116.0	-9,146.8	5,843.2	5,613.8	229.42	25.470	
10,039.3	6,641.3	6,616.3	6,616.3	98.8	131.8	-90.91	-116.0	-9,146.8	5,804.0	5,573.5	230.51	25.179	
10,100.0	6,641.2	6,616.2	6,616.2	100.4	131.8	-90.90	-116.0	-9,146.8	5,743.5	5,511.3	232.19	24.736	
10,137.8	6,641.2	6,616.2	6,616.2	101.5	131.8	-90.90	-116.0	-9,146.8	5,705.9	5,472.6	233.24	24.464	
10,200.0	6,641.1	6,616.1	6,616.1	103.2	131.8	-90.89	-116.0	-9,146.8	5,643.8	5,408.9	234.97	24.020	
10,236.2	6,641.1	6,616.1	6,616.1	104.2	131.8	-90.88	-116.0	-9,146.8	5,607.8	5,371.8	235.97	23.765	
10,300.0	6,641.0	6,616.0	6,616.0	106.0	131.8	-90.87	-116.0	-9,146.8	5,544.2	5,306.4	237.74	23.320	
10,334.6	6,640.9	6,615.9	6,615.9	107.0	131.8	-90.87	-116.0	-9,146.8	5,509.7	5,271.0	238.71	23.081	
10,400.0	6,640.9	6,615.9	6,615.9	108.8	131.8	-90.86	-116.0	-9,146.8	5,444.5	5,204.0	240.52	22.636	
10,433.0	6,640.8	6,615.8	6,615.8	109.7	131.8	-90.85	-116.0	-9,146.8	5,411.6	5,170.1	241.44	22.414	
10,500.0	6,640.7	6,615.7	6,615.7	111.6	131.8	-90.84	-116.0	-9,146.8	5,344.9	5,101.6	243.30	21.968	
10,531.5	6,640.7	6,615.7	6,615.7	112.4	131.8	-90.83	-116.0	-9,146.8	5,313.5	5,069.3	244.18	21.761	
10,600.0	6,640.6	6,615.6	6,615.6	114.3	131.8	-90.82	-116.0	-9,146.8	5,245.2	4,999.2	246.08	21.315	
10,629.9	6,640.6	6,615.6	6,615.6	115.2	131.8	-90.82	-116.0	-9,146.8	5,215.5	4,968.5	246.92	21.122	
10,700.0	6,640.5	6,615.5	6,615.5	117.1	131.8	-90.81	-116.0	-9,146.8	5,145.6	4,896.8	248.87	20.676	
10,728.3	6,640.4	6,615.4	6,615.4	117.9	131.8	-90.80	-116.0	-9,146.8	5,117.4	4,867.8	249.66	20.498	
10,800.0	6,640.4	6,615.4	6,615.4	119.9	131.8	-90.79	-116.0	-9,146.8	5,046.0	4,794.4	251.65	20.052	
10,826.7	6,640.3	6,615.3	6,615.3	120.7	131.8	-90.79	-116.0	-9,146.8	5,019.4	4,767.0	252.40	19.887	
10,900.0	6,640.2	6,615.2	6,615.2	122.7	131.8	-90.78	-116.0	-9,146.8	4,946.5	4,692.0	254.44	19.441	
10,925.2	6,640.2	6,615.2	6,615.2	123.4	131.8	-90.77	-116.0	-9,146.8	4,921.4	4,666.2	255.14	19.289	
11,000.0	6,640.1	6,615.1	6,615.1	125.5	131.8	-90.76	-116.0	-9,146.8	4,846.9	4,589.7	257.23	18.843	
11,023.6	6,640.1	6,615.1	6,615.1	126.1	131.8	-90.76	-116.0	-9,146.8	4,823.4	4,565.5	257.88	18.704	
11,100.0	6,640.0	6,615.0	6,615.0	128.3	131.8	-90.75	-116.0	-9,146.8	4,747.3	4,487.3	260.01	18.258	
11,122.0	6,639.9	6,614.9	6,614.9	128.9	131.8	-90.74	-116.0	-9,146.8	4,725.4	4,464.8	260.63	18.131	
11,200.0	6,639.8	6,614.8	6,614.8	131.1	131.8	-90.73	-116.0	-9,146.8	4,647.8	4,385.0	262.80	17.686	
11,220.4	6,639.8	6,614.8	6,614.8	131.6	131.8	-90.73	-116.0	-9,146.8	4,627.5	4,364.1	263.37	17.570	
11,300.0	6,639.7	6,614.7	6,614.7	133.9	131.8	-90.71	-116.0	-9,146.8	4,548.3	4,282.7	265.59	17.125	
11,318.9	6,639.7	6,614.7	6,614.7	134.4	131.8	-90.71	-116.0	-9,146.8	4,529.5	4,263.4	266.12	17.021	
11,400.0	6,639.6	6,614.6	6,614.6	136.7	131.8	-90.70	-116.0	-9,146.8	4,448.8	4,180.4	268.38	16.577	
11,417.3	6,639.6	6,614.6	6,614.6	137.1	131.8	-90.70	-116.0	-9,146.8	4,431.6	4,162.8	268.86	16.483	
11,500.0	6,639.5	6,614.5	6,614.5	139.4	131.8	-90.68	-116.0	-9,146.8	4,349.4	4,078.2	271.17	16.039	
11,515.7	6,639.5	6,614.5	6,614.5	139.9	131.8	-90.68	-116.0	-9,146.8	4,333.7	4,062.1	271.61	15.956	
11,600.0	6,639.3	6,614.3	6,614.3	142.2	131.8	-90.67	-116.0	-9,146.8	4,249.9	3,976.0	273.96	15.513	
11,614.1	6,639.3	6,614.3	6,614.3	142.6	131.8	-90.66	-116.0	-9,146.8	4,235.9	3,961.5	274.36	15.439	
11,700.0	6,639.2	6,614.2	6,614.2	145.0	131.8	-90.65	-116.0	-9,146.8	4,150.5	3,873.8	276.76	14.997	
11,712.6	6,639.2	6,614.2	6,614.2	145.4	131.8	-90.65	-116.0	-9,146.8	4,138.0	3,860.9	277.11	14.933	
11,800.0	6,639.1	6,614.1	6,614.1	147.8	131.8	-90.63	-116.0	-9,146.8	4,051.1	3,771.6	279.55	14.492	
11,811.0	6,639.1	6,614.1	6,614.1	148.1	131.8	-90.63	-116.0	-9,146.8	4,040.2	3,760.4	279.86	14.437	
11,900.0	6,639.0	6,614.0	6,614.0	150.6	131.8	-90.62	-116.0	-9,146.8	3,951.8	3,669.5	282.34	13.996	
11,909.4	6,639.0	6,614.0	6,614.0	150.9	131.8	-90.62	-116.0	-9,146.8	3,942.4	3,659.8	282.61	13.950	
12,000.0	6,638.8	6,613.8	6,613.8	153.4	131.8	-90.60	-116.0	-9,146.8	3,852.5	3,567.3	285.14	13.511	
12,007.8	6,638.8	6,613.8	6,613.8	153.6	131.8	-90.60	-116.0	-9,146.8	3,844.7	3,559.3	285.36	13.473	
12,100.0	6,638.7	6,613.7	6,613.7	156.2	131.8	-90.59	-116.0	-9,146.8	3,753.2	3,465.3	287.93	13.035	
12,106.3	6,638.7	6,613.7	6,613.7	156.4	131.8	-90.59	-116.0	-9,146.8	3,747.0	3,458.9	288.11	13.005	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.6	6,613.6	6,613.6	159.0	131.7	-90.57	-116.0	-9,146.8	3,654.0	3,363.2	290.73	12.568	
12,204.7	6,638.6	6,613.6	6,613.6	159.1	131.7	-90.57	-116.0	-9,146.8	3,649.3	3,358.4	290.86	12.547	
12,300.0	6,638.5	6,613.5	6,613.5	161.8	131.7	-90.56	-116.0	-9,146.8	3,554.8	3,261.2	293.52	12.111	
12,303.1	6,638.5	6,613.5	6,613.5	161.9	131.7	-90.56	-116.0	-9,146.8	3,551.7	3,258.1	293.61	12.097	
12,400.0	6,638.3	6,613.3	6,613.3	164.6	131.7	-90.54	-116.0	-9,146.8	3,455.6	3,159.3	296.32	11.662	
12,401.5	6,638.3	6,613.3	6,613.3	164.6	131.7	-90.54	-116.0	-9,146.8	3,454.1	3,157.7	296.36	11.655	
12,500.0	6,638.2	6,613.2	6,613.2	167.4	131.7	-90.52	-116.0	-9,146.8	3,356.5	3,057.4	299.12	11.222	
12,598.4	6,638.1	6,613.1	6,613.1	170.2	131.7	-90.51	-116.0	-9,146.8	3,259.1	2,957.2	301.87	10.796	
12,600.0	6,638.1	6,613.1	6,613.1	170.2	131.7	-90.51	-116.0	-9,146.8	3,257.5	2,955.6	301.91	10.790	
12,696.8	6,638.0	6,613.0	6,613.0	172.9	131.7	-90.49	-116.0	-9,146.8	3,161.6	2,857.0	304.62	10.379	
12,700.0	6,638.0	6,613.0	6,613.0	173.0	131.7	-90.49	-116.0	-9,146.8	3,158.5	2,853.8	304.71	10.366	
12,795.2	6,637.8	6,612.8	6,612.8	175.7	131.7	-90.48	-116.0	-9,146.8	3,064.3	2,756.9	307.37	9.969	
12,800.0	6,637.8	6,612.8	6,612.8	175.8	131.7	-90.48	-116.0	-9,146.8	3,059.6	2,752.1	307.51	9.950	
12,893.7	6,637.7	6,612.7	6,612.7	178.4	131.7	-90.46	-116.0	-9,146.8	2,967.0	2,656.9	310.13	9.567	
12,900.0	6,637.7	6,612.7	6,612.7	178.6	131.7	-90.46	-116.0	-9,146.8	2,960.7	2,650.4	310.30	9.541	
12,992.1	6,637.6	6,612.6	6,612.6	181.2	131.7	-90.45	-116.0	-9,146.8	2,869.8	2,556.9	312.88	9.172	
13,000.0	6,637.6	6,612.6	6,612.6	181.4	131.7	-90.45	-116.0	-9,146.8	2,862.0	2,548.9	313.10	9.141	
13,090.5	6,637.5	6,612.5	6,612.5	183.9	131.7	-90.43	-116.0	-9,146.8	2,772.6	2,457.0	315.64	8.784	
13,100.0	6,637.5	6,612.5	6,612.5	184.2	131.7	-90.43	-116.0	-9,146.8	2,763.3	2,447.4	315.90	8.747	
13,188.9	6,637.4	6,612.4	6,612.4	186.7	131.7	-90.42	-116.0	-9,146.8	2,675.6	2,357.2	318.39	8.404	
13,200.0	6,637.3	6,612.3	6,612.3	187.0	131.7	-90.41	-116.0	-9,146.8	2,664.7	2,346.0	318.70	8.361	
13,287.4	6,637.2	6,612.2	6,612.2	189.4	131.7	-90.40	-116.0	-9,146.8	2,578.7	2,257.5	321.15	8.030	
13,300.0	6,637.2	6,612.2	6,612.2	189.8	131.7	-90.40	-116.0	-9,146.8	2,566.3	2,244.8	321.50	7.982	
13,385.8	6,637.1	6,612.1	6,612.1	192.2	131.7	-90.38	-116.0	-9,146.8	2,481.9	2,158.0	323.90	7.662	
13,400.0	6,637.1	6,612.1	6,612.1	192.6	131.7	-90.38	-116.0	-9,146.8	2,467.9	2,143.6	324.30	7.610	
13,484.2	6,637.0	6,612.0	6,612.0	195.0	131.7	-90.37	-116.0	-9,146.8	2,385.2	2,058.5	326.66	7.302	
13,500.0	6,637.0	6,612.0	6,612.0	195.4	131.7	-90.37	-116.0	-9,146.8	2,369.7	2,042.6	327.10	7.245	
13,582.6	6,636.9	6,611.9	6,611.9	197.7	131.7	-90.35	-116.0	-9,146.8	2,288.7	1,959.2	329.41	6.948	
13,600.0	6,636.8	6,611.8	6,611.8	198.2	131.7	-90.35	-116.0	-9,146.8	2,271.7	1,941.8	329.90	6.886	
13,681.1	6,636.7	6,611.7	6,611.7	200.5	131.7	-90.34	-116.0	-9,146.8	2,192.3	1,860.1	332.17	6.600	
13,700.0	6,636.7	6,611.7	6,611.7	201.0	131.7	-90.34	-116.0	-9,146.8	2,173.8	1,841.1	332.70	6.534	
13,779.5	6,636.6	6,611.6	6,611.6	203.2	131.7	-90.32	-116.0	-9,146.8	2,096.1	1,761.2	334.92	6.259	
13,800.0	6,636.6	6,611.6	6,611.6	203.8	131.7	-90.32	-116.0	-9,146.8	2,076.1	1,740.6	335.50	6.188	
13,877.9	6,636.5	6,611.5	6,611.5	206.0	131.7	-90.31	-116.0	-9,146.8	2,000.2	1,662.5	337.68	5.923	
13,900.0	6,636.5	6,611.5	6,611.5	206.6	131.7	-90.30	-116.0	-9,146.8	1,978.7	1,640.4	338.30	5.849	
13,976.3	6,636.4	6,611.4	6,611.4	208.8	131.7	-90.29	-116.0	-9,146.8	1,904.5	1,564.0	340.44	5.594	
14,000.0	6,636.3	6,611.3	6,611.3	209.4	131.7	-90.29	-116.0	-9,146.8	1,881.5	1,540.4	341.10	5.516	
14,074.8	6,636.2	6,611.2	6,611.2	211.5	131.7	-90.28	-116.0	-9,146.8	1,809.1	1,465.9	343.19	5.271	
14,100.0	6,636.2	6,611.2	6,611.2	212.2	131.7	-90.27	-116.0	-9,146.8	1,784.7	1,440.8	343.90	5.190	
14,173.2	6,636.1	6,611.1	6,611.1	214.3	131.7	-90.26	-116.0	-9,146.8	1,714.0	1,368.1	345.95	4.954	
14,200.0	6,636.1	6,611.1	6,611.1	215.0	131.7	-90.26	-116.0	-9,146.8	1,688.2	1,341.5	346.70	4.869	
14,271.6	6,636.0	6,611.0	6,611.0	217.0	131.7	-90.25	-116.0	-9,146.8	1,619.4	1,270.6	348.71	4.644	
14,300.0	6,636.0	6,611.0	6,611.0	217.8	131.7	-90.24	-116.0	-9,146.8	1,592.1	1,242.6	349.50	4.555	
14,370.0	6,635.9	6,610.9	6,610.9	219.8	131.7	-90.23	-116.0	-9,146.8	1,525.2	1,173.7	351.47	4.339	
14,400.0	6,635.8	6,610.8	6,610.8	220.6	131.7	-90.22	-116.0	-9,146.8	1,496.6	1,144.3	352.30	4.248	
14,468.5	6,635.7	6,610.7	6,610.7	222.6	131.7	-90.21	-116.0	-9,146.8	1,431.6	1,077.3	354.22	4.041	
14,500.0	6,635.7	6,610.7	6,610.7	223.4	131.7	-90.21	-116.0	-9,146.8	1,401.7	1,046.6	355.11	3.947	
14,566.9	6,635.6	6,610.6	6,610.6	225.3	131.7	-90.20	-116.0	-9,146.8	1,338.6	981.6	356.98	3.750	
14,600.0	6,635.6	6,610.6	6,610.6	226.2	131.7	-90.19	-116.0	-9,146.8	1,307.6	949.7	357.91	3.653	
14,665.3	6,635.5	6,610.5	6,610.5	228.1	131.7	-90.18	-116.0	-9,146.8	1,246.6	886.8	359.74	3.465	
14,700.0	6,635.5	6,610.5	6,610.5	229.0	131.7	-90.18	-116.0	-9,146.8	1,214.3	853.6	360.71	3.367	
14,763.7	6,635.4	6,610.4	6,610.4	230.8	131.7	-90.17	-116.0	-9,146.8	1,155.5	793.0	362.50	3.188	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.3	6,610.3	6,610.3	231.8	131.7	-90.16	-116.0	-9,146.8	1,122.3	758.8	363.51	3.087	
14,862.2	6,635.2	6,610.2	6,610.2	233.6	131.7	-90.15	-116.0	-9,146.8	1,065.8	700.5	365.25	2.918	
14,900.0	6,635.2	6,610.2	6,610.2	234.7	131.7	-90.15	-116.0	-9,146.8	1,031.7	665.4	366.31	2.817	
14,960.6	6,635.1	6,610.1	6,610.1	236.4	131.7	-90.14	-116.0	-9,146.8	977.8	609.7	368.01	2.657	
14,995.1	6,635.0	6,610.0	6,610.0	237.3	131.7	-90.13	-116.0	-9,146.8	947.4	578.4	368.98	2.567	CC, ES, SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
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	-96.90	-1,061.1	-8,767.4	8,831.4					
98.4	98.4	108.3	108.3	0.1	0.0	-96.90	-1,061.0	-8,767.1	8,831.2	8,831.0	0.12	N/A		
100.0	100.0	109.8	109.8	0.1	0.0	-96.90	-1,061.0	-8,767.1	8,831.1	8,831.0	0.13	N/A		
196.8	196.8	200.0	200.0	0.3	0.2	-96.90	-1,061.1	-8,766.6	8,830.7	8,830.2	0.50	N/A		
200.0	200.0	200.0	200.0	0.3	0.2	-96.90	-1,061.1	-8,766.6	8,830.7	8,830.2	0.51	N/A		
295.3	295.3	282.7	282.7	0.5	0.2	-96.90	-1,061.0	-8,766.4	8,830.4	8,829.6	0.75	N/A		
300.0	300.0	286.6	286.6	0.5	0.2	-96.90	-1,061.0	-8,766.4	8,830.4	8,829.6	0.77	N/A		
366.7	366.7	333.7	333.7	0.7	0.2	-96.90	-1,060.7	-8,766.3	8,830.3	8,829.3	0.94	9,409.706		
393.7	393.7	351.9	351.9	0.8	0.3	-96.90	-1,060.6	-8,766.4	8,830.3	8,829.3	1.01	8,748.741		
400.0	400.0	356.1	356.1	0.8	0.3	-96.90	-1,060.6	-8,766.4	8,830.3	8,829.3	1.03	8,607.863		
492.1	492.1	507.9	507.8	1.0	0.3	-96.90	-1,060.3	-8,766.4	8,830.4	8,829.1	1.28	6,922.628		
500.0	500.0	515.4	515.4	1.0	0.3	-96.90	-1,060.2	-8,766.3	8,830.3	8,829.1	1.30	6,799.622		
590.5	590.5	602.4	602.4	1.2	0.4	-96.89	-1,059.9	-8,765.9	8,829.9	8,828.3	1.56	5,645.762		
600.0	600.0	611.4	611.4	1.2	0.4	-96.89	-1,059.9	-8,765.9	8,829.8	8,828.2	1.59	5,549.785		
689.0	689.0	696.7	696.7	1.4	0.4	-96.89	-1,059.5	-8,765.5	8,829.4	8,827.5	1.85	4,783.627		
700.0	700.0	707.6	707.6	1.4	0.4	-96.89	-1,059.4	-8,765.5	8,829.3	8,827.5	1.88	4,703.826		
787.4	787.4	795.3	795.3	1.6	0.5	-96.89	-1,059.0	-8,765.1	8,828.9	8,826.8	2.12	4,156.108		
800.0	800.0	800.0	800.0	1.7	0.5	-96.89	-1,059.0	-8,765.1	8,828.9	8,826.7	2.16	4,096.174		
885.8	885.8	876.2	876.2	1.9	0.5	-96.89	-1,058.9	-8,764.8	8,828.6	8,826.2	2.37	3,732.395		
900.0	900.0	887.8	887.8	1.9	0.5	-96.89	-1,058.9	-8,764.8	8,828.5	8,826.1	2.40	3,678.803		
976.0	976.0	943.0	943.0	2.1	0.5	-96.89	-1,059.0	-8,764.7	8,828.4	8,825.9	2.58	3,422.046		
984.2	984.2	948.8	948.8	2.1	0.5	-96.89	-1,059.0	-8,764.7	8,828.4	8,825.8	2.60	3,396.441		
1,000.0	1,000.0	959.9	959.9	2.1	0.5	-96.89	-1,059.1	-8,764.7	8,828.5	8,825.8	2.64	3,348.651		
1,082.7	1,082.7	1,100.0	1,100.0	2.3	0.5	-96.89	-1,059.2	-8,764.6	8,828.5	8,825.7	2.83	3,118.586		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	0.5	-96.89	-1,059.2	-8,764.6	8,828.4	8,825.6	2.87	3,076.242		
1,181.1	1,181.1	1,162.7	1,162.7	2.5	0.5	-96.89	-1,059.1	-8,764.4	8,828.2	8,825.1	3.07	2,880.102		
1,200.0	1,200.0	1,174.7	1,174.7	2.6	0.5	-96.89	-1,059.1	-8,764.4	8,828.1	8,825.0	3.11	2,838.434		
1,279.5	1,279.5	1,262.3	1,262.2	2.7	0.6	-96.89	-1,058.9	-8,764.4	8,828.1	8,824.8	3.30	2,675.543		
1,300.0	1,300.0	1,294.4	1,294.4	2.8	0.6	-96.89	-1,058.9	-8,764.3	8,828.1	8,824.7	3.35	2,636.558		
1,312.7	1,312.7	1,308.8	1,308.8	2.8	0.6	-138.08	-1,059.0	-8,764.2	8,828.0	8,824.7	3.37	2,616.155		
1,377.9	1,377.9	1,371.9	1,371.9	3.0	0.6	-138.08	-1,058.9	-8,764.0	8,828.6	8,825.1	3.53	2,498.695		
1,400.0	1,400.0	1,393.2	1,393.2	3.0	0.6	-138.07	-1,058.8	-8,764.0	8,829.0	8,825.5	3.59	2,461.257		
1,476.4	1,476.3	1,497.3	1,497.2	3.2	0.6	-138.06	-1,058.5	-8,763.6	8,831.4	8,827.7	3.79	2,333.001		
1,500.0	1,499.8	1,526.8	1,526.8	3.2	0.6	-138.06	-1,058.5	-8,763.4	8,832.4	8,828.6	3.85	2,294.485		
1,574.8	1,574.4	1,600.0	1,600.0	3.4	0.6	-138.03	-1,058.3	-8,762.8	8,836.5	8,832.4	4.05	2,182.741		
1,600.0	1,599.5	1,627.8	1,627.7	3.5	0.7	-138.01	-1,058.2	-8,762.6	8,838.2	8,834.1	4.12	2,146.354		
1,673.2	1,672.2	1,677.6	1,677.6	3.6	0.7	-137.96	-1,057.9	-8,762.4	8,844.2	8,839.9	4.31	2,050.792		
1,700.0	1,698.7	1,700.0	1,700.0	3.7	0.7	-137.94	-1,057.9	-8,762.3	8,846.7	8,842.4	4.39	2,017.338		
1,771.6	1,769.5	1,830.2	1,830.1	3.9	0.7	-137.92	-1,057.2	-8,761.3	8,854.2	8,849.6	4.61	1,919.723		
1,800.0	1,797.5	1,851.4	1,851.4	4.0	0.8	-137.89	-1,057.0	-8,761.1	8,857.5	8,852.8	4.69	1,888.650		
1,870.1	1,866.3	1,900.0	1,900.0	4.2	0.8	-137.80	-1,056.6	-8,760.7	8,866.6	8,861.7	4.89	1,812.172		
1,899.9	1,895.6	1,929.7	1,929.6	4.3	0.8	-137.77	-1,056.3	-8,760.5	8,870.9	8,865.9	4.98	1,780.324		
1,968.5	1,962.6	1,987.9	1,987.9	4.5	0.8	-137.82	-1,055.9	-8,760.1	8,881.1	8,875.9	5.19	1,711.416		
2,000.0	1,993.4	2,036.0	2,036.0	4.6	0.8	-137.86	-1,055.8	-8,759.8	8,885.7	8,880.4	5.29	1,679.231		
2,066.9	2,058.9	2,100.0	2,100.0	4.8	0.9	-137.92	-1,055.8	-8,759.1	8,895.5	8,890.0	5.50	1,616.078		
2,100.0	2,091.3	2,133.7	2,133.7	4.9	0.9	-137.95	-1,055.8	-8,758.8	8,900.3	8,894.7	5.61	1,587.508		
2,165.3	2,155.2	2,165.4	2,165.4	5.2	0.9	-137.98	-1,055.8	-8,758.6	8,910.0	8,904.2	5.81	1,534.836		
2,200.0	2,189.1	2,200.0	2,200.0	5.3	0.9	-138.01	-1,055.9	-8,758.5	8,915.3	8,909.4	5.92	1,506.752		
2,263.8	2,251.5	2,238.6	2,238.6	5.5	0.9	-138.05	-1,056.1	-8,758.4	8,925.1	8,919.0	6.12	1,458.234		
2,300.0	2,286.9	2,290.4	2,290.4	5.7	0.9	-138.10	-1,056.5	-8,758.2	8,930.7	8,924.4	6.25	1,429.891		
2,362.2	2,347.7	2,342.9	2,342.9	5.9	0.9	-138.15	-1,056.9	-8,757.9	8,940.2	8,933.7	6.45	1,385.647		
2,400.0	2,384.7	2,372.1	2,372.1	6.0	0.9	-138.17	-1,057.0	-8,757.8	8,946.0	8,939.4	6.58	1,360.313		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,444.0	2,400.0	2,399.9	6.3	0.9	-138.20	-1,057.1	-8,757.7	8,955.4	8,948.6	6.77	1,322.041	
2,500.0	2,482.5	2,435.5	2,435.5	6.4	0.9	-138.23	-1,057.1	-8,757.7	8,961.6	8,954.7	6.90	1,298.671	
2,559.0	2,540.3	2,468.3	2,468.2	6.7	0.9	-138.26	-1,057.1	-8,757.8	8,971.0	8,963.9	7.09	1,265.424	
2,600.0	2,580.3	2,500.0	2,499.9	6.8	0.9	-138.29	-1,057.2	-8,758.0	8,977.6	8,970.4	7.22	1,243.168	
2,657.5	2,636.5	2,600.0	2,599.9	7.1	0.9	-138.38	-1,057.4	-8,758.4	8,986.9	8,979.5	7.42	1,211.964	
2,700.0	2,678.1	2,638.6	2,638.6	7.2	0.9	-138.41	-1,057.4	-8,758.4	8,993.6	8,986.0	7.55	1,191.138	
2,755.9	2,732.8	2,687.4	2,687.4	7.5	0.9	-138.46	-1,057.3	-8,758.4	9,002.4	8,994.7	7.73	1,164.501	
2,800.0	2,776.0	2,722.3	2,722.2	7.7	0.9	-138.49	-1,057.1	-8,758.5	9,009.4	9,001.5	7.88	1,143.658	
2,854.3	2,829.1	2,763.1	2,763.0	7.9	0.9	-138.52	-1,056.8	-8,758.7	9,018.1	9,010.1	8.06	1,118.365	
2,900.0	2,873.8	2,800.0	2,799.9	8.1	1.0	-138.55	-1,056.2	-8,758.9	9,025.5	9,017.3	8.22	1,097.901	
2,952.7	2,925.4	2,836.7	2,836.6	8.3	1.0	-138.58	-1,055.6	-8,759.2	9,034.1	9,025.7	8.40	1,075.221	
3,000.0	2,971.6	2,871.8	2,871.7	8.5	1.0	-138.61	-1,055.1	-8,759.5	9,041.9	9,033.3	8.57	1,055.674	
3,051.2	3,021.6	3,036.1	3,036.0	8.7	1.0	-138.73	-1,052.2	-8,760.3	9,050.1	9,041.4	8.76	1,033.033	
3,100.0	3,069.4	3,100.0	3,099.9	8.9	1.0	-138.78	-1,050.8	-8,760.0	9,057.5	9,048.5	8.94	1,013.700	
3,149.6	3,117.9	3,130.7	3,130.6	9.1	1.0	-138.80	-1,050.3	-8,759.9	9,065.0	9,055.9	9.11	995.481	
3,200.0	3,167.2	3,154.7	3,154.6	9.3	1.0	-138.82	-1,049.9	-8,759.8	9,072.8	9,063.5	9.28	977.826	
3,248.0	3,214.2	3,200.0	3,199.9	9.5	1.0	-138.86	-1,049.6	-8,759.9	9,080.4	9,070.9	9.45	961.155	
3,300.0	3,265.0	3,205.3	3,205.1	9.8	1.1	-138.86	-1,049.6	-8,759.9	9,088.6	9,079.0	9.62	944.492	
3,346.4	3,310.5	3,260.0	3,259.9	10.0	1.1	-138.91	-1,049.3	-8,760.1	9,096.1	9,086.3	9.79	929.206	
3,400.0	3,362.9	3,315.2	3,315.0	10.2	1.1	-138.96	-1,049.1	-8,760.2	9,104.6	9,094.6	9.98	912.295	
3,444.9	3,406.7	3,349.9	3,349.8	10.4	1.1	-138.98	-1,048.8	-8,760.3	9,111.8	9,101.7	10.14	898.797	
3,473.0	3,434.2	3,371.7	3,371.5	10.5	1.1	-139.00	-1,048.5	-8,760.4	9,116.4	9,106.1	10.24	890.561	
3,500.0	3,460.7	3,400.0	3,399.9	10.6	1.1	-139.08	-1,048.1	-8,760.6	9,120.6	9,110.3	10.32	884.070	
3,543.3	3,503.2	3,429.3	3,429.2	10.7	1.1	-139.18	-1,047.5	-8,760.8	9,127.1	9,116.7	10.42	875.552	
3,600.0	3,559.0	3,478.6	3,478.5	10.9	1.1	-139.32	-1,046.7	-8,761.2	9,134.9	9,124.4	10.57	864.447	
3,641.7	3,600.2	3,587.9	3,587.8	11.0	1.1	-139.44	-1,044.7	-8,761.8	9,140.1	9,129.4	10.68	856.165	
3,700.0	3,657.9	3,646.0	3,645.8	11.2	1.2	-139.55	-1,043.5	-8,761.8	9,146.2	9,135.3	10.81	845.894	
3,740.1	3,697.8	3,679.1	3,678.9	11.3	1.2	-139.61	-1,043.0	-8,761.8	9,149.8	9,138.9	10.90	839.598	
3,800.0	3,757.3	3,736.8	3,736.6	11.4	1.2	-139.69	-1,042.4	-8,761.8	9,154.6	9,143.6	11.03	830.127	
3,838.6	3,795.7	3,778.0	3,777.8	11.5	1.2	-139.74	-1,042.0	-8,761.8	9,157.1	9,146.0	11.10	824.605	
3,900.0	3,857.0	3,855.5	3,855.3	11.7	1.2	-139.80	-1,041.4	-8,761.7	9,160.3	9,149.1	11.23	815.618	
3,937.0	3,893.9	3,900.0	3,899.8	11.7	1.2	-139.82	-1,041.1	-8,761.6	9,161.7	9,150.4	11.30	810.804	
4,000.0	3,956.9	3,929.7	3,929.5	11.8	1.2	-139.85	-1,041.0	-8,761.5	9,163.3	9,151.9	11.40	803.732	
4,035.4	3,992.3	3,945.4	3,945.2	11.9	1.2	-139.85	-1,040.9	-8,761.5	9,163.8	9,152.4	11.45	800.203	
4,072.9	4,029.8	3,961.9	3,961.7	11.9	1.2	-98.67	-1,040.9	-8,761.6	9,164.1	9,152.0	12.11	756.718	
4,100.0	4,056.9	4,000.0	3,999.8	12.0	1.2	-98.67	-1,040.9	-8,761.8	9,164.3	9,152.2	12.16	753.872	
4,133.8	4,090.7	4,000.0	3,999.8	12.0	1.2	-98.67	-1,040.9	-8,761.8	9,164.5	9,152.3	12.22	750.203	
4,200.0	4,156.9	4,000.0	3,999.8	12.1	1.2	-98.67	-1,040.9	-8,761.8	9,165.1	9,152.8	12.33	743.162	
4,232.3	4,189.2	4,035.3	4,035.1	12.2	1.2	-98.67	-1,041.0	-8,762.2	9,165.5	9,153.1	12.40	739.440	
4,300.0	4,256.9	4,068.0	4,067.8	12.3	1.3	-98.67	-1,041.3	-8,762.7	9,166.5	9,154.0	12.52	732.121	
4,330.7	4,287.6	4,100.0	4,099.8	12.4	1.3	-98.67	-1,041.7	-8,763.2	9,167.1	9,154.5	12.58	728.687	
4,400.0	4,356.9	4,127.4	4,127.2	12.5	1.3	-98.67	-1,042.1	-8,763.7	9,168.5	9,155.8	12.71	721.448	
4,429.1	4,386.0	4,151.1	4,150.8	12.5	1.3	-98.68	-1,042.5	-8,764.2	9,169.1	9,156.4	12.76	718.339	
4,500.0	4,456.9	4,208.9	4,208.7	12.6	1.3	-98.68	-1,043.3	-8,765.4	9,170.7	9,157.8	12.90	710.882	
4,527.5	4,484.4	4,232.0	4,231.7	12.7	1.3	-98.68	-1,043.7	-8,765.9	9,171.4	9,158.4	12.95	707.992	
4,600.0	4,556.9	4,300.0	4,299.7	12.8	1.3	-98.68	-1,044.4	-8,767.5	9,173.2	9,160.1	13.10	700.456	
4,626.0	4,582.9	4,300.0	4,299.7	12.9	1.3	-98.68	-1,044.4	-8,767.5	9,173.8	9,160.7	13.14	697.959	
4,700.0	4,656.9	4,365.8	4,365.5	13.0	1.3	-98.69	-1,044.9	-8,769.2	9,175.8	9,162.5	13.29	690.382	
4,724.4	4,681.3	4,383.5	4,383.1	13.0	1.3	-98.69	-1,045.0	-8,769.7	9,176.5	9,163.2	13.34	687.944	
4,800.0	4,756.9	4,437.8	4,437.5	13.1	1.3	-98.69	-1,045.4	-8,771.3	9,178.8	9,165.3	13.49	680.498	
4,822.8	4,779.7	4,454.2	4,453.9	13.2	1.3	-98.69	-1,045.5	-8,771.8	9,179.5	9,166.0	13.53	678.270	
4,900.0	4,856.9	4,561.4	4,561.0	13.3	1.3	-98.69	-1,046.4	-8,775.1	9,182.0	9,168.3	13.70	670.441	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,878.1	4,600.0	4,599.6	13.4	1.3	-98.69	-1,046.7	-8,776.1	9,182.6	9,168.9	13.74	668.230		
5,000.0	4,956.9	4,668.2	4,667.8	13.5	1.3	-98.69	-1,047.1	-8,777.9	9,184.7	9,170.8	13.90	660.714		
5,019.7	4,976.6	4,682.9	4,682.4	13.5	1.3	-98.69	-1,047.1	-8,778.3	9,185.3	9,171.3	13.94	658.875		
5,100.0	5,056.9	4,747.5	4,747.0	13.7	1.3	-98.69	-1,047.2	-8,780.2	9,187.6	9,173.5	14.10	651.430		
5,118.1	5,075.0	4,762.5	4,762.0	13.7	1.3	-98.69	-1,047.3	-8,780.7	9,188.2	9,174.0	14.14	649.764		
5,200.0	5,156.9	4,915.9	4,915.3	13.8	1.3	-98.69	-1,048.4	-8,784.8	9,190.5	9,176.2	14.32	641.752		
5,216.5	5,173.4	4,936.2	4,935.7	13.9	1.3	-98.69	-1,048.5	-8,785.2	9,190.9	9,176.5	14.36	640.227		
5,300.0	5,256.9	5,021.9	5,021.3	14.0	1.4	-98.69	-1,048.5	-8,787.1	9,192.7	9,178.1	14.53	632.678		
5,314.9	5,271.8	5,032.2	5,031.6	14.1	1.4	-98.69	-1,048.5	-8,787.3	9,193.0	9,178.4	14.56	631.364		
5,400.0	5,356.9	5,100.0	5,099.4	14.2	1.4	-98.69	-1,048.1	-8,789.0	9,195.0	9,180.3	14.74	623.923		
5,413.4	5,370.3	5,100.0	5,099.4	14.2	1.4	-98.69	-1,048.1	-8,789.0	9,195.4	9,180.6	14.76	622.852		
5,500.0	5,456.9	5,168.1	5,167.5	14.4	1.4	-98.68	-1,047.7	-8,791.0	9,197.7	9,182.8	14.94	615.469		
5,511.8	5,468.7	5,177.4	5,176.7	14.4	1.4	-98.68	-1,047.6	-8,791.2	9,198.0	9,183.1	14.97	614.473		
5,600.0	5,556.9	5,377.1	5,376.4	14.6	1.4	-98.66	-1,044.9	-8,795.8	9,199.7	9,184.5	15.18	605.884		
5,610.2	5,567.1	5,387.1	5,386.4	14.6	1.4	-98.66	-1,044.7	-8,796.0	9,199.8	9,184.6	15.21	605.004		
5,700.0	5,656.9	5,489.3	5,488.6	14.7	1.5	-98.65	-1,042.9	-8,797.9	9,201.2	9,185.8	15.41	597.271		
5,708.6	5,665.5	5,499.4	5,498.7	14.8	1.5	-98.65	-1,042.7	-8,798.0	9,201.4	9,185.9	15.42	596.531		
5,800.0	5,756.9	5,600.0	5,599.2	14.9	1.5	-98.63	-1,040.9	-8,799.6	9,202.5	9,186.9	15.63	588.852		
5,807.1	5,764.0	5,600.0	5,599.2	14.9	1.5	-98.63	-1,040.9	-8,799.6	9,202.6	9,187.0	15.64	588.333		
5,900.0	5,856.9	5,672.2	5,671.4	15.1	1.5	-98.62	-1,039.4	-8,800.8	9,203.9	9,188.1	15.84	580.985		
5,905.5	5,862.4	5,675.3	5,674.5	15.1	1.5	-98.62	-1,039.3	-8,800.9	9,204.0	9,188.1	15.85	580.566		
5,971.9	5,928.8	5,744.8	5,744.0	15.3	1.5	-98.61	-1,038.1	-8,802.3	9,205.2	9,189.2	16.00	575.279		
6,000.0	5,956.9	5,900.0	5,899.1	15.3	1.6	-8.59	-1,033.9	-8,804.6	9,205.0	9,189.6	15.47	595.208		
6,003.9	5,960.8	5,906.0	5,905.1	15.3	1.6	-8.59	-1,033.7	-8,804.6	9,204.9	9,189.4	15.47	594.974		
6,050.0	6,006.7	5,949.0	5,948.1	15.4	1.6	-8.63	-1,032.4	-8,805.0	9,201.5	9,186.0	15.56	591.514		
6,100.0	6,056.2	5,995.4	5,994.5	15.4	1.6	-8.71	-1,031.3	-8,805.3	9,194.6	9,178.9	15.68	586.410		
6,102.3	6,058.5	6,000.0	5,999.1	15.4	1.6	-8.72	-1,031.2	-8,805.3	9,194.2	9,178.5	15.69	586.124		
6,150.0	6,105.1	6,024.8	6,023.9	15.4	1.6	-8.84	-1,030.7	-8,805.5	9,184.3	9,168.5	15.80	581.120		
6,200.0	6,153.0	6,051.9	6,051.0	15.5	1.6	-9.02	-1,030.2	-8,805.7	9,170.8	9,154.9	15.91	576.285		
6,200.8	6,153.8	6,052.3	6,051.4	15.5	1.6	-9.02	-1,030.2	-8,805.7	9,170.5	9,154.6	15.92	576.216		
6,250.0	6,199.9	6,100.0	6,099.0	15.5	1.6	-9.26	-1,029.1	-8,806.4	9,154.1	9,138.1	16.00	571.969		
6,299.2	6,244.8	6,100.0	6,099.0	15.5	1.6	-9.53	-1,029.1	-8,806.4	9,134.6	9,118.6	16.03	569.720		
6,300.0	6,245.5	6,100.0	6,099.0	15.5	1.6	-9.54	-1,029.1	-8,806.4	9,134.3	9,118.2	16.03	569.696		
6,350.0	6,289.6	6,144.0	6,143.0	15.5	1.6	-9.90	-1,028.1	-8,807.0	9,111.4	9,095.4	16.05	567.742		
6,397.6	6,329.9	6,178.3	6,177.3	15.4	1.6	-10.32	-1,027.3	-8,807.6	9,086.9	9,070.9	16.02	567.143		
6,400.0	6,331.8	6,180.0	6,179.0	15.4	1.6	-10.35	-1,027.3	-8,807.6	9,085.6	9,069.6	16.02	567.144		
6,450.0	6,372.2	6,238.8	6,237.8	15.4	1.7	-10.90	-1,025.8	-8,808.6	9,056.9	9,040.9	15.98	566.841		
6,496.0	6,407.4	6,300.0	6,299.0	15.4	1.7	-11.53	-1,024.2	-8,809.4	9,027.9	9,012.0	15.92	566.938		
6,500.0	6,410.3	6,300.0	6,299.0	15.4	1.7	-11.58	-1,024.2	-8,809.4	9,025.3	9,009.4	15.91	567.173		
6,550.0	6,446.1	6,332.7	6,331.6	15.4	1.7	-12.39	-1,023.1	-8,809.9	8,991.1	8,975.3	15.80	569.106		
6,594.5	6,475.9	6,353.4	6,352.3	15.4	1.7	-13.26	-1,022.4	-8,810.2	8,958.7	8,943.1	15.68	571.369		
6,600.0	6,479.4	6,355.8	6,354.8	15.4	1.7	-13.38	-1,022.4	-8,810.2	8,954.6	8,938.9	15.66	571.683		
6,650.0	6,510.0	6,377.2	6,376.1	15.5	1.7	-14.60	-1,021.6	-8,810.6	8,915.9	8,900.3	15.53	573.963		
6,692.9	6,534.0	6,400.0	6,398.9	15.7	1.7	-15.90	-1,020.7	-8,811.0	8,881.0	8,865.6	15.46	574.563		
6,700.0	6,537.8	6,400.0	6,398.9	15.7	1.7	-16.13	-1,020.7	-8,811.0	8,875.1	8,859.7	15.44	574.780		
6,750.0	6,562.6	6,400.0	6,398.9	16.2	1.7	-18.04	-1,020.7	-8,811.0	8,832.6	8,817.2	15.39	573.934		
6,791.3	6,580.8	6,400.0	6,398.9	16.6	1.7	-20.04	-1,020.7	-8,811.0	8,796.2	8,780.8	15.43	569.916		
6,800.0	6,584.3	6,400.0	6,398.9	16.7	1.7	-20.52	-1,020.7	-8,811.0	8,788.4	8,773.0	15.47	568.193		
6,850.0	6,602.9	6,400.0	6,398.9	17.3	1.7	-23.85	-1,020.7	-8,811.0	8,742.9	8,727.2	15.76	554.755		
6,889.7	6,615.2	6,400.0	6,398.9	17.9	1.7	-27.38	-1,020.7	-8,811.0	8,705.9	8,689.6	16.23	536.458		
6,900.0	6,618.1	6,400.0	6,398.9	18.0	1.7	-28.46	-1,020.7	-8,811.0	8,696.2	8,679.8	16.39	530.575		
6,950.0	6,630.0	6,400.0	6,398.9	18.8	1.7	-35.15	-1,020.7	-8,811.0	8,648.5	8,631.0	17.52	493.663		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,636.8	6,400.0	6,398.9	19.5	1.7	-42.44	-1,020.7	-8,811.0	8,611.6	8,592.8	18.81	457.714	
7,000.0	6,638.5	6,400.0	6,398.9	19.7	1.7	-45.23	-1,020.7	-8,811.0	8,600.1	8,580.8	19.29	445.892	
7,050.0	6,643.5	6,400.0	6,398.9	20.6	1.7	-60.70	-1,020.7	-8,811.0	8,551.1	8,529.6	21.50	397.667	
7,086.6	6,644.9	6,400.0	6,398.9	21.3	1.7	-76.21	-1,020.7	-8,811.0	8,515.1	8,492.3	22.80	373.458	
7,097.8	6,645.0	6,400.0	6,398.9	21.5	1.7	-81.53	-1,020.7	-8,811.0	8,504.0	8,480.9	23.07	368.686	
7,100.0	6,645.0	6,400.0	6,398.9	21.6	1.7	-81.53	-1,020.7	-8,811.0	8,501.9	8,478.7	23.11	367.927	
7,185.0	6,644.9	6,400.0	6,398.9	23.3	1.7	-81.53	-1,020.7	-8,811.0	8,418.0	8,393.1	24.82	339.210	
7,200.0	6,644.9	6,400.0	6,398.9	23.6	1.7	-81.53	-1,020.7	-8,811.0	8,403.2	8,378.1	25.12	334.558	
7,283.4	6,644.8	6,400.0	6,398.9	25.4	1.7	-81.53	-1,020.7	-8,811.0	8,320.9	8,294.0	26.92	309.133	
7,300.0	6,644.7	6,400.0	6,398.9	25.8	1.7	-81.53	-1,020.7	-8,811.0	8,304.6	8,277.3	27.27	304.490	
7,381.9	6,644.6	6,400.0	6,398.9	27.7	1.7	-81.53	-1,020.7	-8,811.0	8,223.8	8,194.7	29.13	282.305	
7,400.0	6,644.6	6,400.0	6,398.9	28.1	1.7	-81.53	-1,020.7	-8,811.0	8,206.0	8,176.4	29.54	277.771	
7,480.3	6,644.5	6,400.0	6,398.9	30.0	1.7	-81.53	-1,020.7	-8,811.0	8,126.8	8,095.4	31.43	258.540	
7,500.0	6,644.5	6,400.0	6,398.9	30.5	1.7	-81.53	-1,020.7	-8,811.0	8,107.4	8,075.5	31.90	254.171	
7,578.7	6,644.4	6,400.0	6,398.9	32.4	1.7	-81.53	-1,020.7	-8,811.0	8,029.8	7,996.0	33.80	237.534	
7,600.0	6,644.4	6,400.0	6,398.9	32.9	1.7	-81.53	-1,020.7	-8,811.0	8,008.9	7,974.5	34.32	233.356	
7,677.1	6,644.3	6,400.0	6,398.9	34.8	1.7	-81.53	-1,020.7	-8,811.0	7,932.9	7,896.6	36.23	218.952	
7,700.0	6,644.2	6,400.0	6,398.9	35.4	1.7	-81.53	-1,020.7	-8,811.0	7,910.4	7,873.6	36.80	214.973	
7,775.6	6,644.1	6,400.0	6,398.9	37.3	1.7	-81.53	-1,020.7	-8,811.0	7,836.0	7,797.3	38.70	202.473	
7,800.0	6,644.1	6,400.0	6,398.9	38.0	1.7	-81.53	-1,020.7	-8,811.0	7,811.9	7,772.6	39.32	198.693	
7,874.0	6,644.0	6,400.0	6,398.9	39.9	1.7	-81.53	-1,020.7	-8,811.0	7,739.1	7,697.9	41.21	187.811	
7,900.0	6,644.0	6,400.0	6,398.9	40.5	1.7	-81.53	-1,020.7	-8,811.0	7,713.5	7,671.6	41.87	184.221	
7,972.4	6,643.9	6,400.0	6,398.9	42.4	1.7	-81.53	-1,020.7	-8,811.0	7,642.2	7,598.5	43.74	174.713	
8,000.0	6,643.9	6,400.0	6,398.9	43.1	1.7	-81.53	-1,020.7	-8,811.0	7,615.1	7,570.7	44.45	171.304	
8,070.8	6,643.8	6,400.0	6,398.9	45.0	1.7	-81.53	-1,020.7	-8,811.0	7,545.4	7,499.1	46.30	162.966	
8,100.0	6,643.7	6,400.0	6,398.9	45.8	1.7	-81.53	-1,020.7	-8,811.0	7,516.8	7,469.7	47.06	159.726	
8,169.3	6,643.7	6,400.0	6,398.9	47.6	1.7	-81.53	-1,020.7	-8,811.0	7,448.7	7,399.8	48.88	152.388	
8,200.0	6,643.6	6,400.0	6,398.9	48.4	1.7	-81.53	-1,020.7	-8,811.0	7,418.5	7,368.8	49.69	149.305	
8,267.7	6,643.5	6,400.0	6,398.9	50.2	1.7	-81.53	-1,020.7	-8,811.0	7,352.0	7,300.5	51.48	142.823	
8,300.0	6,643.5	6,400.0	6,398.9	51.1	1.7	-81.53	-1,020.7	-8,811.0	7,320.3	7,267.9	52.33	139.887	
8,366.1	6,643.4	6,400.0	6,398.9	52.9	1.7	-81.53	-1,020.7	-8,811.0	7,255.3	7,201.2	54.09	134.142	
8,400.0	6,643.4	6,400.0	6,398.9	53.8	1.7	-81.53	-1,020.7	-8,811.0	7,222.1	7,167.1	54.99	131.341	
8,464.5	6,643.3	6,400.0	6,398.9	55.5	1.7	-81.53	-1,020.7	-8,811.0	7,158.7	7,102.0	56.71	126.233	
8,500.0	6,643.2	6,400.0	6,398.9	56.5	1.7	-81.53	-1,020.7	-8,811.0	7,123.9	7,066.3	57.66	123.558	
8,563.0	6,643.2	6,400.0	6,398.9	58.2	1.7	-81.53	-1,020.7	-8,811.0	7,062.1	7,002.8	59.34	119.003	
8,600.0	6,643.1	6,400.0	6,398.9	59.2	1.7	-81.53	-1,020.7	-8,811.0	7,025.8	6,965.5	60.34	116.445	
8,661.4	6,643.0	6,400.0	6,398.9	60.8	1.7	-81.53	-1,020.7	-8,811.0	6,965.6	6,903.6	61.99	112.372	
8,700.0	6,643.0	6,400.0	6,398.9	61.9	1.7	-81.53	-1,020.7	-8,811.0	6,927.8	6,864.8	63.03	109.921	
8,759.8	6,642.9	6,400.0	6,398.9	63.5	1.7	-81.53	-1,020.7	-8,811.0	6,869.2	6,804.5	64.64	106.270	
8,800.0	6,642.9	6,400.0	6,398.9	64.6	1.7	-81.53	-1,020.7	-8,811.0	6,829.8	6,764.1	65.72	103.920	
8,858.2	6,642.8	6,400.0	6,398.9	66.2	1.7	-81.53	-1,020.7	-8,811.0	6,772.8	6,705.5	67.30	100.640	
8,900.0	6,642.7	6,400.0	6,398.9	67.3	1.7	-81.53	-1,020.7	-8,811.0	6,731.9	6,663.5	68.43	98.382	
8,956.7	6,642.7	6,400.0	6,398.9	68.9	1.7	-81.53	-1,020.7	-8,811.0	6,676.4	6,606.5	69.96	95.429	
9,000.0	6,642.6	6,400.0	6,398.9	70.1	1.7	-81.53	-1,020.7	-8,811.0	6,634.0	6,562.9	71.14	93.258	
9,055.1	6,642.5	6,400.0	6,398.9	71.6	1.7	-81.53	-1,020.7	-8,811.0	6,580.1	6,507.5	72.63	90.595	
9,100.0	6,642.5	6,400.0	6,398.9	72.8	1.7	-81.53	-1,020.7	-8,811.0	6,536.2	6,462.4	73.85	88.505	
9,153.5	6,642.4	6,400.0	6,398.9	74.3	1.7	-81.53	-1,020.7	-8,811.0	6,483.9	6,408.6	75.31	86.099	
9,200.0	6,642.4	6,400.0	6,398.9	75.6	1.7	-81.53	-1,020.7	-8,811.0	6,438.5	6,362.0	76.57	84.085	
9,251.9	6,642.3	6,400.0	6,398.9	77.0	1.7	-81.53	-1,020.7	-8,811.0	6,387.8	6,309.8	77.99	81.908	
9,300.0	6,642.2	6,400.0	6,398.9	78.3	1.7	-81.53	-1,020.7	-8,811.0	6,340.9	6,261.6	79.30	79.964	
9,350.4	6,642.2	6,400.0	6,398.9	79.7	1.7	-81.53	-1,020.7	-8,811.0	6,291.7	6,211.0	80.67	77.992	
9,400.0	6,642.1	6,400.0	6,398.9	81.1	1.7	-81.53	-1,020.7	-8,811.0	6,243.3	6,161.3	82.03	76.114	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,400.0	6,398.9	82.4	1.7	-81.53	-1,020.7	-8,811.0	6,195.7	6,112.3	83.36	74.326	
9,500.0	6,642.0	6,400.0	6,398.9	83.8	1.7	-81.53	-1,020.7	-8,811.0	6,145.8	6,061.0	84.76	72.510	
9,547.2	6,641.9	6,400.0	6,398.9	85.1	1.7	-81.53	-1,020.7	-8,811.0	6,099.8	6,013.7	86.05	70.887	
9,600.0	6,641.9	6,400.0	6,398.9	86.6	1.7	-81.53	-1,020.7	-8,811.0	6,048.4	5,960.9	87.49	69.130	
9,645.6	6,641.8	6,400.0	6,398.9	87.9	1.7	-81.53	-1,020.7	-8,811.0	6,003.9	5,915.2	88.74	67.655	
9,700.0	6,641.7	6,400.0	6,398.9	89.4	1.7	-81.53	-1,020.7	-8,811.0	5,951.0	5,860.8	90.23	65.953	
9,744.1	6,641.7	6,400.0	6,398.9	90.6	1.7	-81.53	-1,020.7	-8,811.0	5,908.2	5,816.7	91.44	64.613	
9,800.0	6,641.6	6,400.0	6,398.9	92.1	1.7	-81.53	-1,020.7	-8,811.0	5,853.8	5,760.8	92.97	62.963	
9,842.5	6,641.6	6,400.0	6,398.9	93.3	1.7	-81.53	-1,020.7	-8,811.0	5,812.5	5,718.4	94.14	61.744	
9,900.0	6,641.5	6,400.0	6,398.9	94.9	1.7	-81.53	-1,020.7	-8,811.0	5,756.6	5,660.9	95.72	60.143	
9,940.9	6,641.4	6,400.0	6,398.9	96.0	1.7	-81.53	-1,020.7	-8,811.0	5,716.9	5,620.1	96.84	59.035	
10,000.0	6,641.4	6,400.0	6,398.9	97.7	1.7	-81.53	-1,020.7	-8,811.0	5,659.6	5,561.1	98.46	57.481	
10,039.3	6,641.3	6,400.0	6,398.9	98.8	1.7	-81.53	-1,020.7	-8,811.0	5,621.4	5,521.9	99.54	56.473	
10,100.0	6,641.2	6,400.0	6,398.9	100.4	1.7	-81.53	-1,020.7	-8,811.0	5,562.6	5,461.4	101.21	54.962	
10,137.8	6,641.2	6,400.0	6,398.9	101.5	1.7	-81.53	-1,020.7	-8,811.0	5,526.0	5,423.8	102.25	54.046	
10,200.0	6,641.1	6,400.0	6,398.9	103.2	1.7	-81.53	-1,020.7	-8,811.0	5,465.8	5,361.8	103.96	52.577	
10,236.2	6,641.1	6,400.0	6,398.9	104.2	1.7	-81.53	-1,020.7	-8,811.0	5,430.8	5,325.8	104.95	51.745	
10,300.0	6,641.0	6,400.0	6,398.9	106.0	1.7	-81.53	-1,020.7	-8,811.0	5,369.1	5,262.4	106.71	50.315	
10,334.6	6,640.9	6,400.0	6,398.9	107.0	1.7	-81.53	-1,020.7	-8,811.0	5,335.6	5,228.0	107.66	49.559	
10,400.0	6,640.9	6,400.0	6,398.9	108.8	1.7	-81.53	-1,020.7	-8,811.0	5,272.5	5,163.0	109.46	48.168	
10,433.0	6,640.8	6,400.0	6,398.9	109.7	1.7	-81.53	-1,020.7	-8,811.0	5,240.6	5,130.2	110.37	47.481	
10,500.0	6,640.7	6,400.0	6,398.9	111.6	1.7	-81.53	-1,020.7	-8,811.0	5,176.0	5,063.8	112.22	46.126	
10,531.5	6,640.7	6,400.0	6,398.9	112.4	1.7	-81.53	-1,020.7	-8,811.0	5,145.7	5,032.6	113.08	45.504	
10,600.0	6,640.6	6,400.0	6,398.9	114.3	1.7	-81.53	-1,020.7	-8,811.0	5,079.7	4,964.7	114.97	44.182	
10,629.9	6,640.6	6,400.0	6,398.9	115.2	1.7	-81.53	-1,020.7	-8,811.0	5,050.9	4,935.1	115.80	43.619	
10,700.0	6,640.5	6,400.0	6,398.9	117.1	1.7	-81.53	-1,020.7	-8,811.0	4,983.5	4,865.8	117.73	42.331	
10,728.3	6,640.4	6,400.0	6,398.9	117.9	1.7	-81.53	-1,020.7	-8,811.0	4,956.3	4,837.8	118.51	41.822	
10,800.0	6,640.4	6,400.0	6,398.9	119.9	1.7	-81.53	-1,020.7	-8,811.0	4,887.5	4,767.0	120.49	40.565	
10,826.7	6,640.3	6,400.0	6,398.9	120.7	1.7	-81.53	-1,020.7	-8,811.0	4,861.8	4,740.6	121.22	40.106	
10,900.0	6,640.2	6,400.0	6,398.9	122.7	1.7	-81.53	-1,020.7	-8,811.0	4,791.6	4,668.3	123.24	38.879	
10,925.2	6,640.2	6,400.0	6,398.9	123.4	1.7	-81.53	-1,020.7	-8,811.0	4,767.5	4,643.5	123.94	38.466	
11,000.0	6,640.1	6,400.0	6,398.9	125.5	1.7	-81.53	-1,020.7	-8,811.0	4,695.9	4,569.9	126.00	37.268	
11,023.6	6,640.1	6,400.0	6,398.9	126.1	1.7	-81.53	-1,020.7	-8,811.0	4,673.3	4,546.7	126.66	36.898	
11,100.0	6,640.0	6,400.0	6,398.9	128.3	1.7	-81.53	-1,020.7	-8,811.0	4,600.4	4,471.6	128.77	35.727	
11,122.0	6,639.9	6,400.0	6,398.9	128.9	1.7	-81.53	-1,020.7	-8,811.0	4,579.4	4,450.0	129.37	35.396	
11,200.0	6,639.8	6,400.0	6,398.9	131.1	1.7	-81.53	-1,020.7	-8,811.0	4,505.1	4,373.5	131.53	34.252	
11,220.4	6,639.8	6,400.0	6,398.9	131.6	1.7	-81.53	-1,020.7	-8,811.0	4,485.6	4,353.5	132.09	33.958	
11,300.0	6,639.7	6,400.0	6,398.9	133.9	1.7	-81.53	-1,020.7	-8,811.0	4,409.9	4,275.6	134.29	32.839	
11,318.9	6,639.7	6,400.0	6,398.9	134.4	1.7	-81.53	-1,020.7	-8,811.0	4,392.0	4,257.2	134.81	32.579	
11,400.0	6,639.6	6,400.0	6,398.9	136.7	1.7	-81.53	-1,020.7	-8,811.0	4,315.0	4,178.0	137.05	31.484	
11,417.3	6,639.6	6,400.0	6,398.9	137.1	1.7	-81.53	-1,020.7	-8,811.0	4,298.7	4,161.1	137.53	31.256	
11,500.0	6,639.5	6,400.0	6,398.9	139.4	1.7	-81.53	-1,020.7	-8,811.0	4,220.4	4,080.6	139.82	30.185	
11,515.7	6,639.5	6,400.0	6,398.9	139.9	1.7	-81.53	-1,020.7	-8,811.0	4,205.5	4,065.3	140.25	29.985	
11,600.0	6,639.3	6,400.0	6,398.9	142.2	1.7	-81.53	-1,020.7	-8,811.0	4,126.0	3,983.4	142.58	28.938	
11,614.1	6,639.3	6,400.0	6,398.9	142.6	1.7	-81.53	-1,020.7	-8,811.0	4,112.6	3,969.7	142.97	28.765	
11,700.0	6,639.2	6,400.0	6,398.9	145.0	1.7	-81.53	-1,020.7	-8,811.0	4,031.8	3,886.5	145.35	27.739	
11,712.6	6,639.2	6,400.0	6,398.9	145.4	1.7	-81.53	-1,020.7	-8,811.0	4,020.0	3,874.3	145.70	27.592	
11,800.0	6,639.1	6,400.0	6,398.9	147.8	1.7	-81.53	-1,020.7	-8,811.0	3,938.0	3,789.9	148.11	26.588	
11,811.0	6,639.1	6,400.0	6,398.9	148.1	1.7	-81.53	-1,020.7	-8,811.0	3,927.7	3,779.3	148.42	26.464	
11,900.0	6,639.0	6,400.0	6,398.9	150.6	1.7	-81.53	-1,020.7	-8,811.0	3,844.5	3,693.6	150.88	25.480	
11,909.4	6,639.0	6,400.0	6,398.9	150.9	1.7	-81.53	-1,020.7	-8,811.0	3,835.7	3,684.5	151.14	25.378	
12,000.0	6,638.8	6,400.0	6,398.9	153.4	1.7	-81.53	-1,020.7	-8,811.0	3,751.3	3,597.6	153.65	24.415	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
12,007.8	6,638.8	6,400.0	6,398.9	153.6	1.7	-81.53	-1,020.7	-8,811.0	3,744.0	3,590.1	153.86	24.333	
12,100.0	6,638.7	6,400.0	6,398.9	156.2	1.7	-81.53	-1,020.7	-8,811.0	3,658.4	3,502.0	156.42	23.389	
12,106.3	6,638.7	6,400.0	6,398.9	156.4	1.7	-81.53	-1,020.7	-8,811.0	3,652.6	3,496.0	156.59	23.326	
12,200.0	6,638.6	6,400.0	6,398.9	159.0	1.7	-81.53	-1,020.7	-8,811.0	3,565.9	3,406.8	159.18	22.401	
12,204.7	6,638.6	6,400.0	6,398.9	159.1	1.7	-81.53	-1,020.7	-8,811.0	3,561.6	3,402.3	159.31	22.356	
12,300.0	6,638.5	6,400.0	6,398.9	161.8	1.7	-81.53	-1,020.7	-8,811.0	3,473.9	3,312.0	161.95	21.450	
12,303.1	6,638.5	6,400.0	6,398.9	161.9	1.7	-81.53	-1,020.7	-8,811.0	3,471.0	3,309.0	162.04	21.421	
12,400.0	6,638.3	6,400.0	6,398.9	164.6	1.7	-81.53	-1,020.7	-8,811.0	3,382.3	3,217.6	164.72	20.534	
12,401.5	6,638.3	6,400.0	6,398.9	164.6	1.7	-81.53	-1,020.7	-8,811.0	3,380.9	3,216.1	164.76	20.520	
12,500.0	6,638.2	6,400.0	6,398.9	167.4	1.7	-81.53	-1,020.7	-8,811.0	3,291.2	3,123.7	167.49	19.650	
12,598.4	6,638.1	6,400.0	6,398.9	170.2	1.7	-81.53	-1,020.7	-8,811.0	3,202.1	3,031.9	170.22	18.812	
12,600.0	6,638.1	6,400.0	6,398.9	170.2	1.7	-81.53	-1,020.7	-8,811.0	3,200.7	3,030.4	170.26	18.799	
12,696.8	6,638.0	6,400.0	6,398.9	172.9	1.7	-81.53	-1,020.7	-8,811.0	3,113.5	2,940.6	172.94	18.003	
12,700.0	6,638.0	6,400.0	6,398.9	173.0	1.7	-81.53	-1,020.7	-8,811.0	3,110.7	2,937.6	173.03	17.977	
12,795.2	6,637.8	6,400.0	6,398.9	175.7	1.7	-81.53	-1,020.7	-8,811.0	3,025.5	2,849.9	175.67	17.223	
12,800.0	6,637.8	6,400.0	6,398.9	175.8	1.7	-81.53	-1,020.7	-8,811.0	3,021.3	2,845.5	175.80	17.186	
12,893.7	6,637.7	6,400.0	6,398.9	178.4	1.7	-81.53	-1,020.7	-8,811.0	2,938.2	2,759.8	178.40	16.470	
12,900.0	6,637.7	6,400.0	6,398.9	178.6	1.7	-81.53	-1,020.7	-8,811.0	2,932.6	2,754.1	178.57	16.423	
12,992.1	6,637.6	6,400.0	6,398.9	181.2	1.7	-81.53	-1,020.7	-8,811.0	2,851.6	2,670.5	181.13	15.744	
13,000.0	6,637.6	6,400.0	6,398.9	181.4	1.7	-81.53	-1,020.7	-8,811.0	2,844.7	2,663.4	181.34	15.687	
13,090.5	6,637.5	6,400.0	6,398.9	183.9	1.7	-81.53	-1,020.7	-8,811.0	2,765.8	2,582.0	183.85	15.044	
13,100.0	6,637.5	6,400.0	6,398.9	184.2	1.7	-81.53	-1,020.7	-8,811.0	2,757.6	2,573.5	184.12	14.978	
13,188.9	6,637.4	6,400.0	6,398.9	186.7	1.7	-81.53	-1,020.7	-8,811.0	2,680.9	2,494.3	186.58	14.368	
13,200.0	6,637.3	6,400.0	6,398.9	187.0	1.7	-81.53	-1,020.7	-8,811.0	2,671.4	2,484.5	186.89	14.294	
13,287.4	6,637.2	6,400.0	6,398.9	189.4	1.7	-81.53	-1,020.7	-8,811.0	2,596.9	2,407.6	189.31	13.718	
13,300.0	6,637.2	6,400.0	6,398.9	189.8	1.7	-81.53	-1,020.7	-8,811.0	2,586.2	2,396.6	189.66	13.636	
13,385.8	6,637.1	6,400.0	6,398.9	192.2	1.7	-81.53	-1,020.7	-8,811.0	2,514.0	2,321.9	192.04	13.091	
13,400.0	6,637.1	6,400.0	6,398.9	192.6	1.7	-81.53	-1,020.7	-8,811.0	2,502.1	2,309.7	192.43	13.003	
13,484.2	6,637.0	6,400.0	6,398.9	195.0	1.7	-81.53	-1,020.7	-8,811.0	2,432.2	2,237.4	194.77	12.488	
13,500.0	6,637.0	6,400.0	6,398.9	195.4	1.7	-81.53	-1,020.7	-8,811.0	2,419.2	2,224.0	195.21	12.393	
13,582.6	6,636.9	6,400.0	6,398.9	197.7	1.7	-81.53	-1,020.7	-8,811.0	2,351.7	2,154.2	197.50	11.908	
13,600.0	6,636.8	6,400.0	6,398.9	198.2	1.7	-81.53	-1,020.7	-8,811.0	2,337.7	2,139.7	197.98	11.808	
13,681.1	6,636.7	6,400.0	6,398.9	200.5	1.7	-81.53	-1,020.7	-8,811.0	2,272.6	2,072.4	200.23	11.350	
13,700.0	6,636.7	6,400.0	6,398.9	201.0	1.7	-81.53	-1,020.7	-8,811.0	2,257.6	2,056.8	200.75	11.246	
13,779.5	6,636.6	6,400.0	6,398.9	203.2	1.7	-81.53	-1,020.7	-8,811.0	2,195.1	1,992.1	202.96	10.816	
13,800.0	6,636.6	6,400.0	6,398.9	203.8	1.7	-81.53	-1,020.7	-8,811.0	2,179.2	1,975.6	203.53	10.707	
13,877.9	6,636.5	6,400.0	6,398.9	206.0	1.7	-81.53	-1,020.7	-8,811.0	2,119.3	1,913.6	205.69	10.304	
13,900.0	6,636.5	6,400.0	6,398.9	206.6	1.7	-81.53	-1,020.7	-8,811.0	2,102.6	1,896.3	206.30	10.192	
13,976.3	6,636.4	6,400.0	6,398.9	208.8	1.7	-81.53	-1,020.7	-8,811.0	2,045.4	1,837.0	208.42	9.814	
14,000.0	6,636.3	6,400.0	6,398.9	209.4	1.7	-81.53	-1,020.7	-8,811.0	2,028.0	1,818.9	209.07	9.700	
14,074.8	6,636.2	6,400.0	6,398.9	211.5	1.7	-81.53	-1,020.7	-8,811.0	1,973.7	1,762.6	211.15	9.348	
14,100.0	6,636.2	6,400.0	6,398.9	212.2	1.7	-81.53	-1,020.7	-8,811.0	1,955.7	1,743.9	211.85	9.232	
14,173.2	6,636.1	6,400.0	6,398.9	214.3	1.7	-81.53	-1,020.7	-8,811.0	1,904.4	1,690.5	213.88	8.904	
14,200.0	6,636.1	6,400.0	6,398.9	215.0	1.7	-81.53	-1,020.7	-8,811.0	1,886.0	1,671.4	214.62	8.787	
14,271.6	6,636.0	6,400.0	6,398.9	217.0	1.7	-81.53	-1,020.7	-8,811.0	1,837.7	1,621.1	216.61	8.484	
14,300.0	6,636.0	6,400.0	6,398.9	217.8	1.7	-81.53	-1,020.7	-8,811.0	1,819.1	1,601.7	217.40	8.367	
14,370.0	6,635.9	6,400.0	6,398.9	219.8	1.7	-81.53	-1,020.7	-8,811.0	1,774.0	1,554.7	219.34	8.088	
14,400.0	6,635.8	6,400.0	6,398.9	220.6	1.7	-81.53	-1,020.7	-8,811.0	1,755.3	1,535.1	220.17	7.972	
14,468.5	6,635.7	6,400.0	6,398.9	222.6	1.7	-81.53	-1,020.7	-8,811.0	1,713.6	1,491.5	222.07	7.717	
14,500.0	6,635.7	6,400.0	6,398.9	223.4	1.7	-81.53	-1,020.7	-8,811.0	1,695.0	1,472.1	222.95	7.603	
14,566.9	6,635.6	6,400.0	6,398.9	225.3	1.7	-81.53	-1,020.7	-8,811.0	1,656.8	1,432.0	224.80	7.370	
14,600.0	6,635.6	6,400.0	6,398.9	226.2	1.7	-81.53	-1,020.7	-8,811.0	1,638.6	1,412.9	225.72	7.260	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.5	6,400.0	6,398.9	228.1	1.7	-81.53	-1,020.7	-8,811.0	1,604.1	1,376.6	227.53	7.050	
14,700.0	6,635.5	6,400.0	6,398.9	229.0	1.7	-81.53	-1,020.7	-8,811.0	1,586.6	1,358.1	228.50	6.943	
14,763.7	6,635.4	6,400.0	6,398.9	230.8	1.7	-81.53	-1,020.7	-8,811.0	1,555.8	1,325.5	230.27	6.757	
14,800.0	6,635.3	6,400.0	6,398.9	231.8	1.7	-81.53	-1,020.7	-8,811.0	1,539.2	1,308.0	231.27	6.655	
14,862.2	6,635.2	6,400.0	6,398.9	233.6	1.7	-81.53	-1,020.7	-8,811.0	1,512.4	1,279.4	233.00	6.491	
14,900.0	6,635.2	6,400.0	6,398.9	234.7	1.7	-81.53	-1,020.7	-8,811.0	1,497.1	1,263.0	234.05	6.397	
14,960.6	6,635.1	6,400.0	6,398.9	236.4	1.7	-81.53	-1,020.7	-8,811.0	1,474.3	1,238.5	235.73	6.254	
14,995.1	6,635.0	6,400.0	6,398.9	237.3	1.7	-81.54	-1,020.7	-8,811.0	1,462.2	1,225.5	236.69	6.178	CC, ES, SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-86.38	612.1	-9,674.5	9,693.9				
98.4	98.4	81.4	81.4	0.1	0.0	-86.38	612.1	-9,674.5	9,693.9				
100.0	100.0	83.0	83.0	0.1	0.0	-86.38	612.1	-9,674.5	9,693.9	9,693.8	0.10	N/A	
196.8	196.8	179.8	179.8	0.3	1.0	-86.38	612.1	-9,674.5	9,693.9	9,692.6	1.30	7,433.186	
200.0	200.0	183.0	183.0	0.3	1.0	-86.38	612.1	-9,674.5	9,693.9	9,692.5	1.35	7,179.495	
295.3	295.3	278.3	278.3	0.5	3.0	-86.38	612.1	-9,674.5	9,693.9	9,690.3	3.56	2,722.817	
300.0	300.0	283.0	283.0	0.5	3.1	-86.38	612.1	-9,674.5	9,693.9	9,690.2	3.68	2,635.185	
393.7	393.7	376.7	376.7	0.8	5.1	-86.38	612.1	-9,674.5	9,693.9	9,688.0	5.87	1,651.288	
400.0	400.0	383.0	383.0	0.8	5.2	-86.38	612.1	-9,674.5	9,693.9	9,687.8	6.02	1,611.472	
492.1	492.1	475.1	475.1	1.0	7.1	-86.38	612.1	-9,674.5	9,693.9	9,685.7	8.11	1,195.322	
500.0	500.0	483.0	483.0	1.0	7.3	-86.38	612.1	-9,674.5	9,693.9	9,685.6	8.29	1,169.578	
590.5	590.5	573.5	573.5	1.2	9.1	-86.38	612.1	-9,674.5	9,693.9	9,683.5	10.33	938.299	
600.0	600.0	583.0	583.0	1.2	9.3	-86.38	612.1	-9,674.5	9,693.9	9,683.3	10.54	919.346	
689.0	689.0	672.0	672.0	1.4	11.1	-86.38	612.1	-9,674.5	9,693.9	9,681.3	12.55	772.722	
700.0	700.0	683.0	683.0	1.4	11.3	-86.38	612.1	-9,674.5	9,693.9	9,681.1	12.79	757.755	
787.4	787.4	770.4	770.4	1.6	13.1	-86.38	612.1	-9,674.5	9,693.9	9,679.1	14.75	656.999	
800.0	800.0	783.0	783.0	1.7	13.4	-86.38	612.1	-9,674.5	9,693.9	9,678.8	15.04	644.646	
885.8	885.8	868.8	868.8	1.9	15.1	-86.38	612.1	-9,674.5	9,693.9	9,676.9	16.96	571.505	
900.0	900.0	883.0	883.0	1.9	15.4	-86.38	612.1	-9,674.5	9,693.9	9,676.6	17.28	560.995	
984.2	984.2	967.2	967.2	2.1	17.1	-86.38	612.1	-9,674.5	9,693.9	9,674.7	19.17	505.742	
1,000.0	1,000.0	983.0	983.0	2.1	17.4	-86.38	612.1	-9,674.5	9,693.9	9,674.3	19.52	496.599	
1,082.7	1,082.7	1,065.7	1,065.7	2.3	19.1	-86.38	612.1	-9,674.5	9,693.9	9,672.5	21.37	453.574	
1,100.0	1,100.0	1,083.0	1,083.0	2.3	19.4	-86.38	612.1	-9,674.5	9,693.9	9,672.1	21.76	445.486	
1,181.1	1,181.1	1,164.1	1,164.1	2.5	21.0	-86.38	612.1	-9,674.5	9,693.9	9,670.3	23.58	411.175	
1,200.0	1,200.0	1,183.0	1,183.0	2.6	21.4	-86.38	612.1	-9,674.5	9,693.9	9,669.9	24.00	403.926	
1,279.5	1,279.5	1,262.5	1,262.5	2.7	23.0	-86.38	612.1	-9,674.5	9,693.9	9,668.1	25.78	376.034	
1,300.0	1,300.0	1,283.0	1,283.0	2.8	23.4	-86.38	612.1	-9,674.5	9,693.9	9,667.6	26.24	369.466	
1,377.9	1,377.9	1,360.9	1,360.9	3.0	25.0	-127.56	612.1	-9,674.5	9,694.5	9,666.5	27.97	346.543	
1,400.0	1,400.0	1,383.0	1,383.0	3.0	25.5	-127.56	612.1	-9,674.5	9,694.9	9,666.5	28.46	340.595	
1,476.4	1,476.3	1,459.3	1,459.3	3.2	27.0	-127.54	612.1	-9,674.5	9,697.2	9,667.0	30.15	321.608	
1,500.0	1,499.8	1,482.8	1,482.8	3.2	27.5	-127.53	612.1	-9,674.5	9,698.1	9,667.4	30.67	316.192	
1,574.8	1,574.4	1,557.4	1,557.4	3.4	29.0	-127.50	612.1	-9,674.5	9,701.9	9,669.6	32.31	300.266	
1,600.0	1,599.5	1,582.5	1,582.5	3.5	29.5	-127.49	612.1	-9,674.5	9,703.4	9,670.6	32.86	295.295	
1,673.2	1,672.2	1,655.2	1,655.2	3.6	30.9	-127.45	612.1	-9,674.5	9,708.7	9,674.2	34.45	281.803	
1,700.0	1,698.7	1,681.7	1,681.7	3.7	31.5	-127.43	612.1	-9,674.5	9,710.9	9,675.9	35.03	277.215	
1,771.6	1,769.5	1,752.5	1,752.5	3.9	32.9	-127.37	612.1	-9,674.5	9,717.5	9,680.9	36.58	265.679	
1,800.0	1,797.5	1,780.5	1,780.5	4.0	33.5	-127.35	612.1	-9,674.5	9,720.5	9,683.3	37.18	261.421	
1,870.1	1,866.3	1,849.3	1,849.3	4.2	34.8	-127.28	612.1	-9,674.5	9,728.4	9,689.7	38.69	251.475	
1,899.9	1,895.6	1,878.6	1,878.6	4.3	35.4	-127.25	612.1	-9,674.5	9,732.1	9,692.8	39.32	247.509	
1,968.5	1,962.6	1,945.6	1,945.6	4.5	36.8	-127.32	612.1	-9,674.5	9,740.9	9,700.0	40.85	238.430	
2,000.0	1,993.4	1,976.4	1,976.4	4.6	37.4	-127.35	612.1	-9,674.5	9,744.9	9,703.4	41.56	234.483	
2,066.9	2,058.9	2,041.9	2,041.9	4.8	38.7	-127.41	612.1	-9,674.5	9,753.5	9,710.4	43.07	226.476	
2,100.0	2,091.3	2,074.3	2,074.3	4.9	39.4	-127.44	612.1	-9,674.5	9,757.7	9,713.9	43.81	222.723	
2,165.3	2,155.2	2,138.2	2,138.2	5.2	40.7	-127.50	612.1	-9,674.5	9,766.1	9,720.8	45.29	215.638	
2,200.0	2,189.1	2,172.1	2,172.1	5.3	41.3	-127.54	612.1	-9,674.5	9,770.6	9,724.5	46.07	212.060	
2,263.8	2,251.5	2,234.5	2,234.5	5.5	42.6	-127.60	612.1	-9,674.5	9,778.8	9,731.2	47.52	205.766	
2,300.0	2,286.9	2,269.9	2,269.9	5.7	43.3	-127.63	612.1	-9,674.5	9,783.4	9,735.1	48.35	202.357	
2,362.2	2,347.7	2,330.7	2,330.7	5.9	44.5	-127.69	612.1	-9,674.5	9,791.4	9,741.7	49.77	196.750	
2,400.0	2,384.7	2,367.7	2,367.7	6.0	45.3	-127.73	612.1	-9,674.5	9,796.3	9,745.7	50.63	193.496	
2,460.6	2,444.0	2,427.0	2,427.0	6.3	46.5	-127.78	612.1	-9,674.5	9,804.1	9,752.1	52.01	188.489	
2,500.0	2,482.5	2,465.5	2,465.5	6.4	47.2	-127.82	612.1	-9,674.5	9,809.2	9,756.3	52.91	185.378	
2,559.0	2,540.3	2,523.3	2,523.3	6.7	48.4	-127.88	612.1	-9,674.5	9,816.8	9,762.6	54.27	180.895	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,563.3	2,563.3	6.8	49.2	-127.92	612.1	-9,674.5	9,822.1	9,766.9	55.21	177.916	
2,657.5	2,636.5	2,619.5	2,619.5	7.1	50.3	-127.97	612.1	-9,674.5	9,829.6	9,773.1	56.53	173.893	
2,700.0	2,678.1	2,661.1	2,661.1	7.2	51.2	-128.01	612.1	-9,674.5	9,835.1	9,777.6	57.50	171.036	
2,755.9	2,732.8	2,715.8	2,715.8	7.5	52.3	-128.06	612.1	-9,674.5	9,842.4	9,783.6	58.79	167.419	
2,800.0	2,776.0	2,759.0	2,759.0	7.7	53.1	-128.10	612.1	-9,674.5	9,848.1	9,788.3	59.80	164.676	
2,854.3	2,829.1	2,812.1	2,812.1	7.9	54.2	-128.16	612.1	-9,674.5	9,855.2	9,794.1	61.05	161.417	
2,900.0	2,873.8	2,856.8	2,856.8	8.1	55.1	-128.20	612.1	-9,674.5	9,861.1	9,799.0	62.11	158.779	
2,952.7	2,925.4	2,908.4	2,908.4	8.3	56.1	-128.25	612.1	-9,674.5	9,868.0	9,804.7	63.32	155.838	
3,000.0	2,971.6	2,954.6	2,954.6	8.5	57.1	-128.29	612.1	-9,674.5	9,874.2	9,809.7	64.41	153.299	
3,051.2	3,021.6	3,004.6	3,004.6	8.7	58.1	-128.34	612.1	-9,674.5	9,880.8	9,815.3	65.59	150.641	
3,100.0	3,069.4	3,052.4	3,052.4	8.9	59.0	-128.39	612.1	-9,674.5	9,887.2	9,820.5	66.72	148.193	
3,149.6	3,117.9	3,100.9	3,100.9	9.1	60.0	-128.43	612.1	-9,674.5	9,893.7	9,825.9	67.86	145.788	
3,200.0	3,167.2	3,150.2	3,150.2	9.3	61.0	-128.48	612.1	-9,674.5	9,900.3	9,831.3	69.03	143.426	
3,248.0	3,214.2	3,197.2	3,197.2	9.5	62.0	-128.52	612.1	-9,674.5	9,906.6	9,836.5	70.14	141.246	
3,300.0	3,265.0	3,248.0	3,248.0	9.8	63.0	-128.57	612.1	-9,674.5	9,913.5	9,842.1	71.34	138.965	
3,346.4	3,310.5	3,293.5	3,293.5	10.0	63.9	-128.61	612.1	-9,674.5	9,919.6	9,847.1	72.41	136.988	
3,400.0	3,362.9	3,345.9	3,345.9	10.2	64.9	-128.66	612.1	-9,674.5	9,926.6	9,853.0	73.65	134.781	
3,444.9	3,406.7	3,389.7	3,389.7	10.4	65.8	-128.71	612.1	-9,674.5	9,932.5	9,857.8	74.69	132.988	
3,473.0	3,434.2	3,417.2	3,417.2	10.5	66.4	-128.73	612.1	-9,674.5	9,936.2	9,860.9	75.34	131.890	
3,500.0	3,460.7	3,443.7	3,443.7	10.6	66.9	-128.81	612.1	-9,674.5	9,939.7	9,863.7	76.00	130.784	
3,543.3	3,503.2	3,486.2	3,486.2	10.7	67.8	-128.93	612.1	-9,674.5	9,945.0	9,867.9	77.04	129.083	
3,600.0	3,559.0	3,542.0	3,542.0	10.9	68.9	-129.07	612.1	-9,674.5	9,951.2	9,872.8	78.41	126.919	
3,641.7	3,600.2	3,583.2	3,583.2	11.0	69.7	-129.17	612.1	-9,674.5	9,955.4	9,876.0	79.40	125.387	
3,700.0	3,657.9	3,640.9	3,640.9	11.2	70.9	-129.28	612.1	-9,674.5	9,960.6	9,879.8	80.78	123.308	
3,740.1	3,697.8	3,680.8	3,680.8	11.3	71.7	-129.35	612.1	-9,674.5	9,963.7	9,882.0	81.72	121.931	
3,800.0	3,757.3	3,740.3	3,740.3	11.4	72.9	-129.44	612.1	-9,674.5	9,967.7	9,884.6	83.11	119.937	
3,838.6	3,795.7	3,778.7	3,778.7	11.5	73.6	-129.49	612.1	-9,674.5	9,969.9	9,885.9	83.99	118.702	
3,900.0	3,857.0	3,840.0	3,840.0	11.7	74.9	-129.55	612.1	-9,674.5	9,972.7	9,887.3	85.39	116.791	
3,937.0	3,893.9	3,876.9	3,876.9	11.7	75.6	-129.58	612.1	-9,674.5	9,974.0	9,887.7	86.22	115.686	
4,000.0	3,956.9	3,939.9	3,939.9	11.8	76.9	-129.61	612.1	-9,674.5	9,975.4	9,887.8	87.61	113.857	
4,035.4	3,992.3	3,975.3	3,975.3	11.9	77.6	-129.62	612.1	-9,674.5	9,975.9	9,887.5	88.39	112.868	
4,072.9	4,029.8	4,012.8	4,012.8	11.9	78.4	-88.44	612.1	-9,674.5	9,976.0	9,887.2	88.78	112.364	
4,100.0	4,056.9	4,039.9	4,039.9	12.0	78.9	-88.44	612.1	-9,674.5	9,976.0	9,886.6	89.37	111.622	
4,133.8	4,090.7	4,073.7	4,073.7	12.0	79.6	-88.44	612.1	-9,674.5	9,976.0	9,885.9	90.12	110.702	
4,200.0	4,156.9	4,139.9	4,139.9	12.1	80.9	-88.44	612.1	-9,674.5	9,976.0	9,884.4	91.57	108.946	
4,232.3	4,189.2	4,172.2	4,172.2	12.2	81.6	-88.44	612.1	-9,674.5	9,976.0	9,883.7	92.28	108.109	
4,300.0	4,256.9	4,239.9	4,239.9	12.3	82.9	-88.44	612.1	-9,674.5	9,976.0	9,882.3	93.77	106.393	
4,330.7	4,287.6	4,270.6	4,270.6	12.4	83.5	-88.44	612.1	-9,674.5	9,976.0	9,881.6	94.44	105.633	
4,400.0	4,356.9	4,339.9	4,339.9	12.5	84.9	-88.44	612.1	-9,674.5	9,976.0	9,880.1	95.96	103.956	
4,429.1	4,386.0	4,369.0	4,369.0	12.5	85.5	-88.44	612.1	-9,674.5	9,976.0	9,879.4	96.60	103.267	
4,500.0	4,456.9	4,439.9	4,439.9	12.6	86.9	-88.44	612.1	-9,674.5	9,976.0	9,877.9	98.16	101.626	
4,527.5	4,484.4	4,467.4	4,467.4	12.7	87.5	-88.44	612.1	-9,674.5	9,976.0	9,877.2	98.77	101.003	
4,600.0	4,556.9	4,539.9	4,539.9	12.8	89.0	-88.44	612.1	-9,674.5	9,976.0	9,875.7	100.36	99.398	
4,626.0	4,582.9	4,565.9	4,565.9	12.9	89.5	-88.44	612.1	-9,674.5	9,976.0	9,875.1	100.94	98.834	
4,700.0	4,656.9	4,639.9	4,639.9	13.0	91.0	-88.44	612.1	-9,674.5	9,976.0	9,873.4	102.57	97.263	
4,724.4	4,681.3	4,664.3	4,664.3	13.0	91.5	-88.44	612.1	-9,674.5	9,976.0	9,872.9	103.10	96.756	
4,800.0	4,756.9	4,739.9	4,739.9	13.1	93.0	-88.44	612.1	-9,674.5	9,976.0	9,871.2	104.77	95.218	
4,822.8	4,779.7	4,762.7	4,762.7	13.2	93.4	-88.44	612.1	-9,674.5	9,976.0	9,870.7	105.27	94.763	
4,900.0	4,856.9	4,839.9	4,839.9	13.3	95.0	-88.44	612.1	-9,674.5	9,976.0	9,869.0	106.98	93.256	
4,921.2	4,878.1	4,861.1	4,861.1	13.4	95.4	-88.44	612.1	-9,674.5	9,976.0	9,868.6	107.44	92.849	
5,000.0	4,956.9	4,939.9	4,939.9	13.5	97.0	-88.44	612.1	-9,674.5	9,976.0	9,866.8	109.18	91.372	
5,019.7	4,976.6	4,959.6	4,959.6	13.5	97.4	-88.44	612.1	-9,674.5	9,976.0	9,866.4	109.61	91.010	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,039.9	5,039.9	13.7	99.0	-88.44	612.1	-9,674.5	9,976.0	9,864.6	111.39	89.561	
5,118.1	5,075.0	5,058.0	5,058.0	13.7	99.4	-88.44	612.1	-9,674.5	9,976.0	9,864.2	111.79	89.241	
5,200.0	5,156.9	5,139.9	5,139.9	13.8	101.0	-88.44	612.1	-9,674.5	9,976.0	9,862.4	113.60	87.821	
5,216.5	5,173.4	5,156.4	5,156.4	13.9	101.4	-88.44	612.1	-9,674.5	9,976.0	9,862.1	113.96	87.540	
5,300.0	5,256.9	5,239.9	5,239.9	14.0	103.0	-88.44	612.1	-9,674.5	9,976.0	9,860.2	115.80	86.146	
5,314.9	5,271.8	5,254.8	5,254.8	14.1	103.3	-88.44	612.1	-9,674.5	9,976.0	9,859.9	116.13	85.901	
5,400.0	5,356.9	5,339.9	5,339.9	14.2	105.0	-88.44	612.1	-9,674.5	9,976.0	9,858.0	118.01	84.533	
5,413.4	5,370.3	5,353.3	5,353.3	14.2	105.3	-88.44	612.1	-9,674.5	9,976.0	9,857.7	118.31	84.322	
5,500.0	5,456.9	5,439.9	5,439.9	14.4	107.1	-88.44	612.1	-9,674.5	9,976.0	9,855.8	120.22	82.979	
5,511.8	5,468.7	5,451.7	5,451.7	14.4	107.3	-88.44	612.1	-9,674.5	9,976.0	9,855.5	120.48	82.799	
5,600.0	5,556.9	5,539.9	5,539.9	14.6	109.1	-88.44	612.1	-9,674.5	9,976.0	9,853.6	122.43	81.480	
5,610.2	5,567.1	5,550.1	5,550.1	14.6	109.3	-88.44	612.1	-9,674.5	9,976.0	9,853.4	122.66	81.330	
5,700.0	5,656.9	5,639.9	5,639.9	14.7	111.1	-88.44	612.1	-9,674.5	9,976.0	9,851.4	124.65	80.034	
5,708.6	5,665.5	5,648.5	5,648.5	14.8	111.3	-88.44	612.1	-9,674.5	9,976.0	9,851.2	124.84	79.912	
5,800.0	5,756.9	5,739.9	5,739.9	14.9	113.1	-88.44	612.1	-9,674.5	9,976.0	9,849.2	126.86	78.639	
5,807.1	5,764.0	5,747.0	5,747.0	14.9	113.2	-88.44	612.1	-9,674.5	9,976.0	9,849.0	127.02	78.542	
5,900.0	5,856.9	5,839.9	5,839.9	15.1	115.1	-88.44	612.1	-9,674.5	9,976.0	9,846.9	129.07	77.290	
5,905.5	5,862.4	5,845.4	5,845.4	15.1	115.2	-88.44	612.1	-9,674.5	9,976.0	9,846.8	129.19	77.217	
5,971.9	5,928.8	5,911.8	5,911.8	15.3	116.5	-88.44	612.1	-9,674.5	9,976.0	9,845.4	130.66	76.348	
6,000.0	5,956.9	5,939.9	5,939.9	15.3	117.1	1.56	612.1	-9,674.5	9,975.5	9,844.1	131.41	75.911	
6,003.9	5,960.8	5,943.8	5,943.8	15.3	117.2	1.56	612.1	-9,674.5	9,975.3	9,843.8	131.46	75.879	
6,050.0	6,006.7	5,989.7	5,989.7	15.4	118.1	1.57	612.1	-9,674.5	9,971.8	9,840.0	131.79	75.664	
6,100.0	6,056.2	6,039.2	6,039.2	15.4	119.1	1.59	612.1	-9,674.5	9,964.6	9,833.1	131.51	75.768	
6,102.3	6,058.5	6,041.5	6,041.5	15.4	119.2	1.59	612.1	-9,674.5	9,964.2	9,832.7	131.49	75.781	
6,150.0	6,105.1	6,088.1	6,088.1	15.4	120.1	1.61	612.1	-9,674.5	9,954.0	9,823.4	130.57	76.233	
6,200.0	6,153.0	6,136.0	6,136.0	15.5	121.1	1.65	612.1	-9,674.5	9,940.0	9,811.1	128.96	77.079	
6,200.8	6,153.8	6,136.8	6,136.8	15.5	121.1	1.65	612.1	-9,674.5	9,939.8	9,810.8	128.93	77.095	
6,250.0	6,199.9	6,182.9	6,182.9	15.5	122.0	1.70	612.1	-9,674.5	9,922.7	9,796.1	126.67	78.336	
6,299.2	6,244.8	6,227.8	6,227.8	15.5	122.9	1.75	612.1	-9,674.5	9,902.6	9,778.8	123.76	80.015	
6,300.0	6,245.5	6,228.5	6,228.5	15.5	122.9	1.75	612.1	-9,674.5	9,902.2	9,778.5	123.71	80.047	
6,350.0	6,289.6	6,272.6	6,272.6	15.5	123.8	1.83	612.1	-9,674.5	9,878.6	9,758.5	120.08	82.268	
6,397.6	6,329.9	6,312.9	6,312.9	15.4	124.6	1.91	612.1	-9,674.5	9,853.2	9,737.2	116.02	84.930	
6,400.0	6,331.8	6,314.8	6,314.8	15.4	124.7	1.91	612.1	-9,674.5	9,851.9	9,736.1	115.80	85.078	
6,450.0	6,372.2	6,355.2	6,355.2	15.4	125.5	2.02	612.1	-9,674.5	9,822.3	9,711.5	110.89	88.578	
6,496.0	6,407.4	6,390.4	6,390.4	15.4	126.2	2.14	612.1	-9,674.5	9,792.7	9,686.9	105.83	92.529	
6,500.0	6,410.3	6,393.3	6,393.3	15.4	126.2	2.15	612.1	-9,674.5	9,790.1	9,684.7	105.38	92.905	
6,550.0	6,446.1	6,429.1	6,429.1	15.4	127.0	2.31	612.1	-9,674.5	9,755.2	9,655.9	99.30	98.244	
6,594.5	6,475.9	6,458.9	6,458.9	15.4	127.5	2.48	612.1	-9,674.5	9,722.1	9,628.7	93.44	104.044	
6,600.0	6,479.4	6,462.4	6,462.4	15.4	127.6	2.51	612.1	-9,674.5	9,717.9	9,625.2	92.69	104.845	
6,650.0	6,510.0	6,493.0	6,493.0	15.5	128.2	2.75	612.1	-9,674.5	9,678.4	9,592.8	85.61	113.055	
6,692.9	6,534.0	6,517.0	6,517.0	15.7	128.7	3.02	612.1	-9,674.5	9,642.9	9,563.7	79.21	121.742	
6,700.0	6,537.8	6,520.8	6,520.8	15.7	128.8	3.07	612.1	-9,674.5	9,636.9	9,558.7	78.12	123.355	
6,750.0	6,562.6	6,545.6	6,545.6	16.2	129.3	3.48	612.1	-9,674.5	9,593.5	9,523.2	70.32	136.423	
6,791.3	6,580.8	6,563.8	6,563.8	16.6	129.7	3.93	612.1	-9,674.5	9,556.4	9,492.7	63.73	149.951	
6,800.0	6,584.3	6,567.3	6,567.3	16.7	129.7	4.04	612.1	-9,674.5	9,548.5	9,486.1	62.34	153.177	
6,850.0	6,602.9	6,585.9	6,585.9	17.3	130.1	4.84	612.1	-9,674.5	9,502.1	9,447.7	54.39	174.686	
6,889.7	6,615.2	6,598.2	6,598.2	17.9	130.4	5.75	612.1	-9,674.5	9,464.3	9,415.9	48.43	195.440	
6,900.0	6,618.1	6,601.1	6,601.1	18.0	130.4	6.05	612.1	-9,674.5	9,454.5	9,407.5	47.00	201.175	
6,950.0	6,630.0	6,613.0	6,613.0	18.8	130.6	8.08	612.1	-9,674.5	9,405.9	9,364.4	41.53	226.511	
6,988.2	6,636.8	6,619.8	6,619.8	19.5	130.8	10.86	612.1	-9,674.5	9,368.4	9,327.2	41.19	227.468	
7,000.0	6,638.5	6,621.5	6,621.5	19.7	130.8	12.16	612.1	-9,674.5	9,356.7	9,314.2	42.50	220.181	
7,050.0	6,643.5	6,626.5	6,626.5	20.6	130.9	24.05	612.1	-9,674.5	9,307.0	9,240.8	66.13	140.736	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,627.9	6,627.9	21.3	130.9	63.83	612.1	-9,674.5	9,270.4	9,133.0	137.43	67.456	
7,097.8	6,645.0	6,628.0	6,628.0	21.5	131.0	92.45	612.1	-9,674.5	9,259.2	9,107.0	152.23	60.824	
7,100.0	6,645.0	6,628.0	6,628.0	21.6	131.0	92.45	612.1	-9,674.5	9,257.0	9,104.8	152.27	60.793	
7,185.0	6,644.9	6,627.9	6,627.9	23.3	130.9	92.43	612.1	-9,674.5	9,172.0	9,018.0	154.00	59.560	
7,200.0	6,644.9	6,627.9	6,627.9	23.6	130.9	92.42	612.1	-9,674.5	9,157.1	9,002.8	154.30	59.345	
7,283.4	6,644.8	6,627.8	6,627.8	25.4	130.9	92.40	612.1	-9,674.5	9,073.7	8,917.5	156.12	58.120	
7,300.0	6,644.7	6,627.7	6,627.7	25.8	130.9	92.40	612.1	-9,674.5	9,057.1	8,900.6	156.48	57.881	
7,381.9	6,644.6	6,627.6	6,627.6	27.7	130.9	92.37	612.1	-9,674.5	8,975.3	8,816.9	158.35	56.679	
7,400.0	6,644.6	6,627.6	6,627.6	28.1	130.9	92.37	612.1	-9,674.5	8,957.2	8,798.4	158.77	56.416	
7,480.3	6,644.5	6,627.5	6,627.5	30.0	130.9	92.35	612.1	-9,674.5	8,876.9	8,716.2	160.68	55.246	
7,500.0	6,644.5	6,627.5	6,627.5	30.5	130.9	92.34	612.1	-9,674.5	8,857.2	8,696.1	161.15	54.964	
7,578.7	6,644.4	6,627.4	6,627.4	32.4	130.9	92.32	612.1	-9,674.5	8,778.5	8,615.4	163.07	53.832	
7,600.0	6,644.4	6,627.4	6,627.4	32.9	130.9	92.32	612.1	-9,674.5	8,757.3	8,593.7	163.59	53.531	
7,677.1	6,644.3	6,627.3	6,627.3	34.8	130.9	92.30	612.1	-9,674.5	8,680.1	8,514.6	165.52	52.441	
7,700.0	6,644.2	6,627.2	6,627.2	35.4	130.9	92.29	612.1	-9,674.5	8,657.3	8,491.2	166.09	52.123	
7,775.6	6,644.1	6,627.1	6,627.1	37.3	130.9	92.27	612.1	-9,674.5	8,581.8	8,413.8	168.02	51.077	
7,800.0	6,644.1	6,627.1	6,627.1	38.0	130.9	92.26	612.1	-9,674.5	8,557.4	8,388.7	168.64	50.744	
7,874.0	6,644.0	6,627.0	6,627.0	39.9	130.9	92.24	612.1	-9,674.5	8,483.4	8,312.8	170.55	49.742	
7,900.0	6,644.0	6,627.0	6,627.0	40.5	130.9	92.24	612.1	-9,674.5	8,457.4	8,286.2	171.22	49.396	
7,972.4	6,643.9	6,626.9	6,626.9	42.4	130.9	92.22	612.1	-9,674.5	8,385.0	8,211.9	173.11	48.439	
8,000.0	6,643.9	6,626.9	6,626.9	43.1	130.9	92.21	612.1	-9,674.5	8,357.5	8,183.6	173.82	48.080	
8,070.8	6,643.8	6,626.8	6,626.8	45.0	130.9	92.19	612.1	-9,674.5	8,286.6	8,111.0	175.69	47.166	
8,100.0	6,643.7	6,626.7	6,626.7	45.8	130.9	92.18	612.1	-9,674.5	8,257.5	8,081.1	176.46	46.796	
8,169.3	6,643.7	6,626.7	6,626.7	47.6	130.9	92.17	612.1	-9,674.5	8,188.3	8,010.0	178.29	45.926	
8,200.0	6,643.6	6,626.6	6,626.6	48.4	130.9	92.16	612.1	-9,674.5	8,157.6	7,978.5	179.11	45.545	
8,267.7	6,643.5	6,626.5	6,626.5	50.2	130.9	92.14	612.1	-9,674.5	8,089.9	7,909.0	180.92	44.716	
8,300.0	6,643.5	6,626.5	6,626.5	51.1	130.9	92.13	612.1	-9,674.5	8,057.6	7,875.8	181.78	44.327	
8,366.1	6,643.4	6,626.4	6,626.4	52.9	130.9	92.11	612.1	-9,674.5	7,991.5	7,808.0	183.55	43.538	
8,400.0	6,643.4	6,626.4	6,626.4	53.8	130.9	92.10	612.1	-9,674.5	7,957.7	7,773.2	184.46	43.140	
8,464.5	6,643.3	6,626.3	6,626.3	55.5	130.9	92.09	612.1	-9,674.5	7,893.2	7,707.0	186.20	42.390	
8,500.0	6,643.2	6,626.2	6,626.2	56.5	130.9	92.08	612.1	-9,674.5	7,857.7	7,670.6	187.16	41.985	
8,563.0	6,643.2	6,626.2	6,626.2	58.2	130.9	92.06	612.1	-9,674.5	7,794.8	7,605.9	188.86	41.272	
8,600.0	6,643.1	6,626.1	6,626.1	59.2	130.9	92.05	612.1	-9,674.5	7,757.8	7,567.9	189.86	40.860	
8,661.4	6,643.0	6,626.0	6,626.0	60.8	130.9	92.04	612.1	-9,674.5	7,696.4	7,504.9	191.53	40.184	
8,700.0	6,643.0	6,626.0	6,626.0	61.9	130.9	92.03	612.1	-9,674.5	7,657.9	7,465.3	192.58	39.765	
8,759.8	6,642.9	6,625.9	6,625.9	63.5	130.9	92.01	612.1	-9,674.5	7,598.1	7,403.9	194.21	39.123	
8,800.0	6,642.9	6,625.9	6,625.9	64.6	130.9	92.00	612.1	-9,674.5	7,557.9	7,362.6	195.30	38.698	
8,858.2	6,642.8	6,625.8	6,625.8	66.2	130.9	91.98	612.1	-9,674.5	7,499.7	7,302.8	196.90	38.090	
8,900.0	6,642.7	6,625.7	6,625.7	67.3	130.9	91.97	612.1	-9,674.5	7,458.0	7,260.0	198.04	37.660	
8,956.7	6,642.7	6,625.7	6,625.7	68.9	130.9	91.96	612.1	-9,674.5	7,401.4	7,201.8	199.59	37.083	
9,000.0	6,642.6	6,625.6	6,625.6	70.1	130.9	91.95	612.1	-9,674.5	7,358.1	7,157.3	200.77	36.649	
9,055.1	6,642.5	6,625.5	6,625.5	71.6	130.9	91.93	612.1	-9,674.5	7,303.0	7,100.7	202.28	36.103	
9,100.0	6,642.5	6,625.5	6,625.5	72.8	130.9	91.92	612.1	-9,674.5	7,258.1	7,054.6	203.52	35.664	
9,153.5	6,642.4	6,625.4	6,625.4	74.3	130.9	91.91	612.1	-9,674.5	7,204.6	6,999.7	204.99	35.147	
9,200.0	6,642.4	6,625.4	6,625.4	75.6	130.9	91.89	612.1	-9,674.5	7,158.2	6,951.9	206.26	34.704	
9,251.9	6,642.3	6,625.3	6,625.3	77.0	130.9	91.88	612.1	-9,674.5	7,106.3	6,898.6	207.69	34.215	
9,300.0	6,642.2	6,625.2	6,625.2	78.3	130.9	91.87	612.1	-9,674.5	7,058.3	6,849.3	209.02	33.769	
9,350.4	6,642.2	6,625.2	6,625.2	79.7	130.9	91.85	612.1	-9,674.5	7,007.9	6,797.5	210.40	33.307	
9,400.0	6,642.1	6,625.1	6,625.1	81.1	130.9	91.84	612.1	-9,674.5	6,958.3	6,746.6	211.77	32.858	
9,448.8	6,642.0	6,625.0	6,625.0	82.4	130.9	91.83	612.1	-9,674.5	6,909.6	6,696.5	213.12	32.421	
9,500.0	6,642.0	6,625.0	6,625.0	83.8	130.9	91.81	612.1	-9,674.5	6,858.4	6,643.9	214.53	31.969	
9,547.2	6,641.9	6,624.9	6,624.9	85.1	130.9	91.80	612.1	-9,674.5	6,811.2	6,595.4	215.84	31.557	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,624.9	6,624.9	86.6	130.9	91.79	612.1	-9,674.5	6,758.5	6,541.2	217.30	31.103	
9,645.6	6,641.8	6,624.8	6,624.8	87.9	130.9	91.77	612.1	-9,674.5	6,712.9	6,494.3	218.56	30.714	
9,700.0	6,641.7	6,624.7	6,624.7	89.4	130.9	91.76	612.1	-9,674.5	6,658.6	6,438.5	220.06	30.258	
9,744.1	6,641.7	6,624.7	6,624.7	90.6	130.9	91.75	612.1	-9,674.5	6,614.6	6,393.3	221.28	29.892	
9,800.0	6,641.6	6,624.6	6,624.6	92.1	130.9	91.73	612.1	-9,674.5	6,558.7	6,335.8	222.83	29.433	
9,842.5	6,641.6	6,624.6	6,624.6	93.3	130.9	91.72	612.1	-9,674.5	6,516.2	6,292.2	224.01	29.089	
9,900.0	6,641.5	6,624.5	6,624.5	94.9	130.9	91.71	612.1	-9,674.5	6,458.8	6,233.2	225.60	28.629	
9,940.9	6,641.4	6,624.4	6,624.4	96.0	130.9	91.70	612.1	-9,674.5	6,417.9	6,191.1	226.74	28.305	
10,000.0	6,641.4	6,624.4	6,624.4	97.7	130.9	91.68	612.1	-9,674.5	6,358.9	6,130.5	228.38	27.844	
10,039.3	6,641.3	6,624.3	6,624.3	98.8	130.9	91.67	612.1	-9,674.5	6,319.5	6,090.1	229.47	27.540	
10,100.0	6,641.2	6,624.2	6,624.2	100.4	130.9	91.65	612.1	-9,674.5	6,258.9	6,027.8	231.15	27.077	
10,137.8	6,641.2	6,624.2	6,624.2	101.5	130.9	91.64	612.1	-9,674.5	6,221.2	5,989.0	232.20	26.792	
10,200.0	6,641.1	6,624.1	6,624.1	103.2	130.9	91.63	612.1	-9,674.5	6,159.0	5,925.1	233.93	26.328	
10,236.2	6,641.1	6,624.1	6,624.1	104.2	130.9	91.62	612.1	-9,674.5	6,122.9	5,887.9	234.94	26.062	
10,300.0	6,641.0	6,624.0	6,624.0	106.0	130.9	91.60	612.1	-9,674.5	6,059.1	5,822.4	236.71	25.597	
10,334.6	6,640.9	6,623.9	6,623.9	107.0	130.9	91.59	612.1	-9,674.5	6,024.5	5,786.9	237.67	25.348	
10,400.0	6,640.9	6,623.9	6,623.9	108.8	130.9	91.58	612.1	-9,674.5	5,959.2	5,719.8	239.49	24.883	
10,433.0	6,640.8	6,623.8	6,623.8	109.7	130.9	91.57	612.1	-9,674.5	5,926.2	5,685.8	240.41	24.650	
10,500.0	6,640.7	6,623.7	6,623.7	111.6	130.9	91.55	612.1	-9,674.5	5,859.3	5,617.1	242.27	24.185	
10,531.5	6,640.7	6,623.7	6,623.7	112.4	130.9	91.54	612.1	-9,674.5	5,827.9	5,584.8	243.15	23.968	
10,600.0	6,640.6	6,623.6	6,623.6	114.3	130.9	91.52	612.1	-9,674.5	5,759.5	5,514.4	245.06	23.502	
10,629.9	6,640.6	6,623.6	6,623.6	115.2	130.9	91.51	612.1	-9,674.5	5,729.6	5,483.7	245.89	23.301	
10,700.0	6,640.5	6,623.5	6,623.5	117.1	130.9	91.50	612.1	-9,674.5	5,659.6	5,411.7	247.84	22.835	
10,728.3	6,640.4	6,623.4	6,623.4	117.9	130.9	91.49	612.1	-9,674.5	5,631.3	5,382.6	248.63	22.649	
10,800.0	6,640.4	6,623.4	6,623.4	119.9	130.9	91.47	612.1	-9,674.5	5,559.7	5,309.1	250.63	22.183	
10,826.7	6,640.3	6,623.3	6,623.3	120.7	130.9	91.46	612.1	-9,674.5	5,533.0	5,281.6	251.38	22.011	
10,900.0	6,640.2	6,623.2	6,623.2	122.7	130.9	91.44	612.1	-9,674.5	5,459.8	5,206.4	253.42	21.545	
10,925.2	6,640.2	6,623.2	6,623.2	123.4	130.9	91.44	612.1	-9,674.5	5,434.7	5,180.5	254.12	21.386	
11,000.0	6,640.1	6,623.1	6,623.1	125.5	130.9	91.42	612.1	-9,674.5	5,359.9	5,103.7	256.21	20.920	
11,023.6	6,640.1	6,623.1	6,623.1	126.1	130.9	91.41	612.1	-9,674.5	5,336.4	5,079.5	256.86	20.775	
11,100.0	6,640.0	6,623.0	6,623.0	128.3	130.8	91.39	612.1	-9,674.5	5,260.1	5,001.1	259.00	20.309	
11,122.0	6,639.9	6,622.9	6,622.9	128.9	130.8	91.38	612.1	-9,674.5	5,238.1	4,978.5	259.61	20.177	
11,200.0	6,639.8	6,622.8	6,622.8	131.1	130.8	91.36	612.1	-9,674.5	5,160.2	4,898.4	261.79	19.712	
11,220.4	6,639.8	6,622.8	6,622.8	131.6	130.8	91.36	612.1	-9,674.5	5,139.8	4,877.4	262.36	19.591	
11,300.0	6,639.7	6,622.7	6,622.7	133.9	130.8	91.34	612.1	-9,674.5	5,060.3	4,795.8	264.58	19.126	
11,318.9	6,639.7	6,622.7	6,622.7	134.4	130.8	91.33	612.1	-9,674.5	5,041.5	4,776.4	265.10	19.017	
11,400.0	6,639.6	6,622.6	6,622.6	136.7	130.8	91.31	612.1	-9,674.5	4,960.5	4,693.1	267.37	18.553	
11,417.3	6,639.6	6,622.6	6,622.6	137.1	130.8	91.31	612.1	-9,674.5	4,943.2	4,675.4	267.85	18.455	
11,500.0	6,639.5	6,622.5	6,622.5	139.4	130.8	91.28	612.1	-9,674.5	4,860.6	4,590.5	270.16	17.992	
11,515.7	6,639.5	6,622.5	6,622.5	139.9	130.8	91.28	612.1	-9,674.5	4,844.9	4,574.3	270.60	17.904	
11,600.0	6,639.3	6,622.3	6,622.3	142.2	130.8	91.26	612.1	-9,674.5	4,760.8	4,487.8	272.96	17.442	
11,614.1	6,639.3	6,622.3	6,622.3	142.6	130.8	91.25	612.1	-9,674.5	4,746.7	4,473.3	273.35	17.365	
11,700.0	6,639.2	6,622.2	6,622.2	145.0	130.8	91.23	612.1	-9,674.5	4,661.0	4,385.2	275.75	16.903	
11,712.6	6,639.2	6,622.2	6,622.2	145.4	130.8	91.23	612.1	-9,674.5	4,648.4	4,372.3	276.10	16.836	
11,800.0	6,639.1	6,622.1	6,622.1	147.8	130.8	91.21	612.1	-9,674.5	4,561.1	4,282.6	278.55	16.375	
11,811.0	6,639.1	6,622.1	6,622.1	148.1	130.8	91.20	612.1	-9,674.5	4,550.2	4,271.3	278.85	16.317	
11,900.0	6,639.0	6,622.0	6,622.0	150.6	130.8	91.18	612.1	-9,674.5	4,461.3	4,180.0	281.34	15.857	
11,909.4	6,639.0	6,622.0	6,622.0	150.9	130.8	91.18	612.1	-9,674.5	4,451.9	4,170.3	281.61	15.809	
12,000.0	6,638.8	6,621.8	6,621.8	153.4	130.8	91.15	612.1	-9,674.5	4,361.5	4,077.4	284.14	15.350	
12,007.8	6,638.8	6,621.8	6,621.8	153.6	130.8	91.15	612.1	-9,674.5	4,353.7	4,069.3	284.36	15.311	
12,100.0	6,638.7	6,621.7	6,621.7	156.2	130.8	91.13	612.1	-9,674.5	4,261.7	3,974.8	286.93	14.853	
12,106.3	6,638.7	6,621.7	6,621.7	156.4	130.8	91.12	612.1	-9,674.5	4,255.5	3,968.3	287.11	14.822	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.6	6,621.6	6,621.6	159.0	130.8	91.10	612.1	-9,674.5	4,161.9	3,872.2	289.73	14.365		
12,204.7	6,638.6	6,621.6	6,621.6	159.1	130.8	91.10	612.1	-9,674.5	4,157.2	3,867.4	289.86	14.342		
12,300.0	6,638.5	6,621.5	6,621.5	161.8	130.8	91.07	612.1	-9,674.5	4,062.1	3,769.6	292.53	13.886		
12,303.1	6,638.5	6,621.5	6,621.5	161.9	130.8	91.07	612.1	-9,674.5	4,059.0	3,766.4	292.62	13.871		
12,400.0	6,638.3	6,621.3	6,621.3	164.6	130.8	91.05	612.1	-9,674.5	3,962.4	3,667.0	295.33	13.417		
12,401.5	6,638.3	6,621.3	6,621.3	164.6	130.8	91.05	612.1	-9,674.5	3,960.8	3,665.5	295.37	13.410		
12,500.0	6,638.2	6,621.2	6,621.2	167.4	130.8	91.02	612.1	-9,674.5	3,862.6	3,564.5	298.13	12.956		
12,598.4	6,638.1	6,621.1	6,621.1	170.2	130.8	90.99	612.1	-9,674.5	3,764.5	3,463.6	300.88	12.512		
12,600.0	6,638.1	6,621.1	6,621.1	170.2	130.8	90.99	612.1	-9,674.5	3,762.9	3,461.9	300.92	12.504		
12,696.8	6,638.0	6,621.0	6,621.0	172.9	130.8	90.97	612.1	-9,674.5	3,666.3	3,362.7	303.63	12.075		
12,700.0	6,638.0	6,621.0	6,621.0	173.0	130.8	90.97	612.1	-9,674.5	3,663.1	3,359.4	303.72	12.061		
12,795.2	6,637.8	6,620.8	6,620.8	175.7	130.8	90.94	612.1	-9,674.5	3,568.2	3,261.8	306.39	11.646		
12,800.0	6,637.8	6,620.8	6,620.8	175.8	130.8	90.94	612.1	-9,674.5	3,563.4	3,256.9	306.52	11.625		
12,893.7	6,637.7	6,620.7	6,620.7	178.4	130.8	90.92	612.1	-9,674.5	3,470.0	3,160.9	309.15	11.225		
12,900.0	6,637.7	6,620.7	6,620.7	178.6	130.8	90.91	612.1	-9,674.5	3,463.7	3,154.4	309.32	11.198		
12,992.1	6,637.6	6,620.6	6,620.6	181.2	130.8	90.89	612.1	-9,674.5	3,371.9	3,060.0	311.90	10.811		
13,000.0	6,637.6	6,620.6	6,620.6	181.4	130.8	90.89	612.1	-9,674.5	3,364.0	3,051.9	312.12	10.778		
13,090.5	6,637.5	6,620.5	6,620.5	183.9	130.8	90.86	612.1	-9,674.5	3,273.8	2,959.2	314.66	10.404		
13,100.0	6,637.5	6,620.5	6,620.5	184.2	130.8	90.86	612.1	-9,674.5	3,264.4	2,949.5	314.92	10.366		
13,188.9	6,637.4	6,620.4	6,620.4	186.7	130.8	90.84	612.1	-9,674.5	3,175.7	2,858.3	317.42	10.005		
13,200.0	6,637.3	6,620.3	6,620.3	187.0	130.8	90.83	612.1	-9,674.5	3,164.7	2,847.0	317.72	9.961		
13,287.4	6,637.2	6,620.2	6,620.2	189.4	130.8	90.81	612.1	-9,674.5	3,077.7	2,757.5	320.17	9.613		
13,300.0	6,637.2	6,620.2	6,620.2	189.8	130.8	90.81	612.1	-9,674.5	3,065.1	2,744.6	320.53	9.563		
13,385.8	6,637.1	6,620.1	6,620.1	192.2	130.8	90.79	612.1	-9,674.5	2,979.7	2,656.7	322.93	9.227		
13,400.0	6,637.1	6,620.1	6,620.1	192.6	130.8	90.78	612.1	-9,674.5	2,965.5	2,642.2	323.33	9.172		
13,484.2	6,637.0	6,620.0	6,620.0	195.0	130.8	90.76	612.1	-9,674.5	2,881.7	2,556.0	325.69	8.848		
13,500.0	6,637.0	6,620.0	6,620.0	195.4	130.8	90.76	612.1	-9,674.5	2,866.0	2,539.8	326.13	8.788		
13,582.6	6,636.9	6,619.9	6,619.9	197.7	130.8	90.73	612.1	-9,674.5	2,783.7	2,455.3	328.44	8.475		
13,600.0	6,636.8	6,619.8	6,619.8	198.2	130.8	90.73	612.1	-9,674.5	2,766.4	2,437.5	328.93	8.410		
13,681.1	6,636.7	6,619.7	6,619.7	200.5	130.8	90.71	612.1	-9,674.5	2,685.8	2,354.6	331.20	8.109		
13,700.0	6,636.7	6,619.7	6,619.7	201.0	130.8	90.70	612.1	-9,674.5	2,666.9	2,335.2	331.73	8.039		
13,779.5	6,636.6	6,619.6	6,619.6	203.2	130.8	90.68	612.1	-9,674.5	2,587.9	2,253.9	333.96	7.749		
13,800.0	6,636.6	6,619.6	6,619.6	203.8	130.8	90.68	612.1	-9,674.5	2,567.5	2,232.9	334.53	7.675		
13,877.9	6,636.5	6,619.5	6,619.5	206.0	130.8	90.66	612.1	-9,674.5	2,490.0	2,153.3	336.72	7.395		
13,900.0	6,636.5	6,619.5	6,619.5	206.6	130.8	90.65	612.1	-9,674.5	2,468.1	2,130.7	337.34	7.316		
13,976.3	6,636.4	6,619.4	6,619.4	208.8	130.8	90.63	612.1	-9,674.5	2,392.2	2,052.7	339.48	7.047		
14,000.0	6,636.3	6,619.3	6,619.3	209.4	130.8	90.62	612.1	-9,674.5	2,368.7	2,028.6	340.14	6.964		
14,074.8	6,636.2	6,619.2	6,619.2	211.5	130.8	90.60	612.1	-9,674.5	2,294.4	1,952.2	342.24	6.704		
14,100.0	6,636.2	6,619.2	6,619.2	212.2	130.8	90.60	612.1	-9,674.5	2,269.4	1,926.4	342.94	6.617		
14,173.2	6,636.1	6,619.1	6,619.1	214.3	130.8	90.58	612.1	-9,674.5	2,196.7	1,851.7	344.99	6.367		
14,200.0	6,636.1	6,619.1	6,619.1	215.0	130.8	90.57	612.1	-9,674.5	2,170.1	1,824.4	345.75	6.277		
14,271.6	6,636.0	6,619.0	6,619.0	217.0	130.8	90.55	612.1	-9,674.5	2,099.1	1,751.3	347.75	6.036		
14,300.0	6,636.0	6,619.0	6,619.0	217.8	130.8	90.54	612.1	-9,674.5	2,071.0	1,722.4	348.55	5.942		
14,370.0	6,635.9	6,618.9	6,618.9	219.8	130.8	90.52	612.1	-9,674.5	2,001.5	1,651.0	350.51	5.710		
14,400.0	6,635.8	6,618.8	6,618.8	220.6	130.8	90.52	612.1	-9,674.5	1,971.9	1,620.5	351.35	5.612		
14,468.5	6,635.7	6,618.7	6,618.7	222.6	130.8	90.50	612.1	-9,674.5	1,904.1	1,550.8	353.27	5.390		
14,500.0	6,635.7	6,618.7	6,618.7	223.4	130.8	90.49	612.1	-9,674.5	1,872.9	1,518.7	354.15	5.288		
14,566.9	6,635.6	6,618.6	6,618.6	225.3	130.8	90.47	612.1	-9,674.5	1,806.7	1,450.7	356.03	5.075		
14,600.0	6,635.6	6,618.6	6,618.6	226.2	130.8	90.46	612.1	-9,674.5	1,774.0	1,417.0	356.96	4.970		
14,665.3	6,635.5	6,618.5	6,618.5	228.1	130.8	90.45	612.1	-9,674.5	1,709.5	1,350.7	358.79	4.765		
14,700.0	6,635.5	6,618.5	6,618.5	229.0	130.8	90.44	612.1	-9,674.5	1,675.2	1,315.5	359.76	4.657		
14,763.7	6,635.4	6,618.4	6,618.4	230.8	130.8	90.42	612.1	-9,674.5	1,612.4	1,250.8	361.55	4.460		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.3	6,618.3	6,618.3	231.8	130.8	90.41	612.1	-9,674.5	1,576.7	1,214.1	362.57	4.349	
14,862.2	6,635.2	6,618.2	6,618.2	233.6	130.8	90.39	612.1	-9,674.5	1,515.4	1,151.1	364.31	4.160	
14,900.0	6,635.2	6,618.2	6,618.2	234.7	130.8	90.38	612.1	-9,674.5	1,478.2	1,112.9	365.37	4.046	
14,960.6	6,635.1	6,618.1	6,618.1	236.4	130.8	90.37	612.1	-9,674.5	1,418.7	1,051.7	367.07	3.865	
14,995.1	6,635.0	6,618.0	6,618.0	237.3	130.7	90.36	612.1	-9,674.5	1,384.8	1,016.8	368.03	3.763 CC, ES, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	101.62	-837.2	4,071.8	4,157.0				
98.4	98.4	88.9	88.9	0.1	0.0	101.62	-837.2	4,071.7	4,156.9	4,156.8	0.10	N/A	
100.0	100.0	90.5	90.5	0.1	0.0	101.62	-837.2	4,071.7	4,156.9	4,156.8	0.10	N/A	
181.7	181.7	167.7	167.7	0.3	0.1	101.62	-837.2	4,071.7	4,156.8	4,156.5	0.35	N/A	
196.8	196.8	181.8	181.8	0.3	0.1	101.62	-837.2	4,071.7	4,156.8	4,156.4	0.39	N/A	
200.0	200.0	184.7	184.7	0.3	0.1	101.62	-837.2	4,071.7	4,156.8	4,156.4	0.40	N/A	
295.3	295.3	283.2	283.2	0.5	0.2	101.62	-837.3	4,071.6	4,156.8	4,156.2	0.69	5,985.412	
300.0	300.0	288.2	288.2	0.5	0.2	101.62	-837.3	4,071.6	4,156.8	4,156.1	0.71	5,863.321	
344.9	344.9	330.9	330.9	0.6	0.2	101.62	-837.3	4,071.6	4,156.8	4,156.0	0.82	5,056.471	
393.7	393.7	375.6	375.6	0.8	0.2	101.62	-837.3	4,071.7	4,156.9	4,155.9	0.94	4,440.109	
400.0	400.0	381.4	381.4	0.8	0.2	101.62	-837.3	4,071.7	4,156.9	4,155.9	0.95	4,371.316	
492.1	492.1	476.9	476.9	1.0	0.2	101.62	-837.1	4,071.8	4,156.9	4,155.7	1.22	3,394.593	
500.0	500.0	485.4	485.4	1.0	0.3	101.62	-837.0	4,071.8	4,157.0	4,155.7	1.25	3,327.123	
590.5	590.5	567.8	567.8	1.2	0.3	101.61	-836.7	4,071.9	4,157.0	4,155.5	1.51	2,757.323	
600.0	600.0	576.1	576.1	1.2	0.3	101.61	-836.7	4,072.0	4,157.1	4,155.5	1.53	2,709.777	
689.0	689.0	663.1	663.1	1.4	0.4	101.61	-836.6	4,072.3	4,157.3	4,155.5	1.79	2,323.345	
700.0	700.0	674.3	674.3	1.4	0.4	101.61	-836.5	4,072.3	4,157.3	4,155.5	1.82	2,282.565	
787.4	787.4	760.9	760.9	1.6	0.4	101.61	-836.5	4,072.6	4,157.6	4,155.5	2.07	2,009.197	
800.0	800.0	773.2	773.2	1.7	0.4	101.61	-836.5	4,072.6	4,157.6	4,155.5	2.10	1,975.403	
885.8	885.8	860.9	860.9	1.9	0.5	101.61	-836.4	4,072.9	4,157.9	4,155.5	2.34	1,773.705	
900.0	900.0	875.6	875.6	1.9	0.5	101.61	-836.4	4,072.9	4,157.9	4,155.5	2.38	1,744.383	
984.2	984.2	960.4	960.4	2.1	0.5	101.60	-836.3	4,073.1	4,158.1	4,155.5	2.61	1,591.902	
1,000.0	1,000.0	976.0	976.0	2.1	0.5	101.60	-836.3	4,073.2	4,158.2	4,155.5	2.65	1,566.558	
1,082.7	1,082.7	1,061.8	1,061.8	2.3	0.6	101.60	-836.3	4,073.4	4,158.3	4,155.5	2.87	1,447.400	
1,100.0	1,100.0	1,080.2	1,080.2	2.3	0.6	101.60	-836.3	4,073.4	4,158.4	4,155.4	2.92	1,424.824	
1,181.1	1,181.1	1,159.3	1,159.3	2.5	0.6	101.60	-836.3	4,073.5	4,158.5	4,155.4	3.12	1,333.970	
1,200.0	1,200.0	1,177.3	1,177.3	2.6	0.6	101.60	-836.3	4,073.5	4,158.5	4,155.4	3.16	1,314.860	
1,279.5	1,279.5	1,266.6	1,266.6	2.7	0.6	101.60	-836.5	4,073.6	4,158.6	4,155.3	3.34	1,243.321	
1,300.0	1,300.0	1,291.1	1,291.1	2.8	0.6	101.60	-836.5	4,073.6	4,158.6	4,155.2	3.39	1,226.481	
1,377.9	1,377.9	1,367.0	1,367.0	3.0	0.6	60.44	-836.4	4,073.5	4,158.0	4,154.4	3.57	1,164.907	
1,400.0	1,400.0	1,388.0	1,388.0	3.0	0.6	60.45	-836.4	4,073.5	4,157.6	4,154.0	3.62	1,147.722	
1,476.4	1,476.3	1,459.0	1,459.0	3.2	0.6	60.52	-836.4	4,073.5	4,155.8	4,152.0	3.80	1,093.873	
1,500.0	1,499.8	1,480.8	1,480.8	3.2	0.6	60.55	-836.4	4,073.6	4,155.1	4,151.2	3.85	1,078.258	
1,574.8	1,574.4	1,563.6	1,563.6	3.4	0.6	60.69	-836.6	4,073.6	4,152.1	4,148.1	4.04	1,028.488	
1,600.0	1,599.5	1,593.2	1,593.2	3.5	0.6	60.75	-836.7	4,073.5	4,150.8	4,146.7	4.10	1,012.359	
1,673.2	1,672.2	1,679.3	1,679.3	3.6	0.7	60.95	-836.8	4,073.2	4,146.4	4,142.1	4.30	964.793	
1,700.0	1,698.7	1,709.5	1,709.5	3.7	0.7	61.04	-836.8	4,073.0	4,144.5	4,140.1	4.37	948.342	
1,771.6	1,769.5	1,783.6	1,783.6	3.9	0.7	61.27	-836.6	4,072.6	4,138.7	4,134.1	4.57	905.067	
1,800.0	1,797.5	1,813.2	1,813.2	4.0	0.7	61.38	-836.5	4,072.4	4,136.2	4,131.5	4.65	888.741	
1,870.1	1,866.3	1,887.4	1,887.4	4.2	0.7	61.67	-836.3	4,071.8	4,129.4	4,124.5	4.87	847.578	
1,899.9	1,895.6	1,915.4	1,915.4	4.3	0.7	61.79	-836.3	4,071.6	4,126.2	4,121.2	4.96	831.164	
1,968.5	1,962.6	1,974.4	1,974.4	4.5	0.7	61.94	-836.1	4,071.2	4,118.8	4,113.7	5.18	794.430	
2,000.0	1,993.4	2,002.0	2,002.0	4.6	0.7	62.01	-836.0	4,071.0	4,115.5	4,110.2	5.29	778.440	
2,066.9	2,058.9	2,077.6	2,077.6	4.8	0.8	62.20	-835.7	4,070.6	4,108.5	4,102.9	5.52	744.165	
2,100.0	2,091.3	2,110.8	2,110.8	4.9	0.8	62.29	-835.5	4,070.3	4,104.9	4,099.3	5.64	728.369	
2,165.3	2,155.2	2,163.9	2,163.8	5.2	0.8	62.42	-835.3	4,070.0	4,098.0	4,092.2	5.87	698.549	
2,200.0	2,189.1	2,200.0	2,200.0	5.3	0.8	62.51	-835.2	4,069.9	4,094.5	4,088.5	5.99	683.260	
2,263.8	2,251.5	2,249.1	2,249.1	5.5	0.8	62.64	-834.9	4,069.8	4,088.1	4,081.8	6.22	656.847	
2,300.0	2,286.9	2,282.1	2,282.1	5.7	0.8	62.72	-834.7	4,069.8	4,084.4	4,078.1	6.36	642.481	
2,362.2	2,347.7	2,341.7	2,341.6	5.9	0.8	62.87	-834.2	4,069.7	4,078.3	4,071.7	6.59	618.537	
2,400.0	2,384.7	2,378.6	2,378.6	6.0	0.9	62.96	-833.9	4,069.7	4,074.6	4,067.9	6.74	604.710	
2,460.6	2,444.0	2,436.0	2,436.0	6.3	0.9	63.11	-833.6	4,069.7	4,068.7	4,061.7	6.97	583.451	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,482.5	2,472.5	2,472.5	6.4	0.9	63.20	-833.3	4,069.7	4,064.9	4,057.7	7.13	570.378	
2,559.0	2,540.3	2,530.2	2,530.2	6.7	0.9	63.35	-832.9	4,069.8	4,059.2	4,051.8	7.36	551.471	
2,600.0	2,580.3	2,572.3	2,572.2	6.8	0.9	63.45	-832.6	4,069.8	4,055.3	4,047.7	7.52	538.979	
2,657.5	2,636.5	2,631.2	2,631.2	7.1	0.9	63.60	-832.1	4,069.8	4,049.7	4,042.0	7.76	522.110	
2,700.0	2,678.1	2,674.9	2,674.8	7.2	1.0	63.72	-831.8	4,069.8	4,045.6	4,037.7	7.93	510.234	
2,755.9	2,732.8	2,729.8	2,729.7	7.5	1.0	63.86	-831.4	4,069.7	4,040.3	4,032.1	8.16	495.270	
2,800.0	2,776.0	2,771.6	2,771.5	7.7	1.0	63.96	-831.1	4,069.7	4,036.0	4,027.7	8.34	484.060	
2,854.3	2,829.1	2,823.6	2,823.6	7.9	1.0	64.10	-830.7	4,069.7	4,030.9	4,022.3	8.56	470.786	
2,900.0	2,873.8	2,867.9	2,867.9	8.1	1.0	64.21	-830.4	4,069.7	4,026.6	4,017.8	8.75	460.136	
2,952.7	2,925.4	2,918.3	2,918.2	8.3	1.0	64.34	-830.1	4,069.7	4,021.6	4,012.7	8.97	448.323	
3,000.0	2,971.6	2,962.1	2,962.1	8.5	1.0	64.46	-829.8	4,069.7	4,017.2	4,008.1	9.17	438.238	
3,051.2	3,021.6	3,010.5	3,010.4	8.7	1.1	64.58	-829.6	4,069.7	4,012.5	4,003.2	9.38	427.710	
3,100.0	3,069.4	3,060.1	3,060.0	8.9	1.1	64.71	-829.4	4,069.7	4,008.1	3,998.5	9.59	418.048	
3,149.6	3,117.9	3,109.4	3,109.4	9.1	1.1	64.84	-829.2	4,069.7	4,003.5	3,993.7	9.80	408.608	
3,200.0	3,167.2	3,155.5	3,155.5	9.3	1.1	64.97	-828.9	4,069.7	3,998.9	3,988.9	10.01	399.477	
3,248.0	3,214.2	3,200.0	3,200.0	9.5	1.1	65.08	-828.7	4,069.8	3,994.6	3,984.4	10.21	391.084	
3,300.0	3,265.0	3,275.5	3,275.5	9.8	1.1	65.28	-828.3	4,069.7	3,989.9	3,979.4	10.44	382.115	
3,346.4	3,310.5	3,300.0	3,300.0	10.0	1.1	65.35	-828.1	4,069.5	3,985.5	3,974.9	10.63	374.767	
3,400.0	3,362.9	3,350.9	3,350.9	10.2	1.1	65.48	-827.8	4,069.4	3,980.6	3,969.7	10.86	366.686	
3,444.9	3,406.7	3,378.4	3,378.4	10.4	1.2	65.56	-827.7	4,069.4	3,976.7	3,965.7	11.04	360.214	
3,473.0	3,434.2	3,400.0	3,400.0	10.5	1.2	65.62	-827.7	4,069.6	3,974.4	3,963.2	11.16	356.253	
3,500.0	3,460.7	3,424.6	3,424.5	10.6	1.2	65.64	-827.6	4,069.8	3,972.2	3,961.0	11.26	352.907	
3,543.3	3,503.2	3,478.3	3,478.3	10.7	1.2	65.71	-827.5	4,070.0	3,969.0	3,957.6	11.39	348.331	
3,600.0	3,559.0	3,531.3	3,531.2	10.9	1.2	65.76	-827.2	4,070.2	3,965.0	3,953.4	11.57	342.604	
3,641.7	3,600.2	3,564.6	3,564.5	11.0	1.2	65.78	-827.0	4,070.5	3,962.5	3,950.8	11.69	338.898	
3,700.0	3,657.9	3,614.7	3,614.6	11.2	1.2	65.81	-826.8	4,070.9	3,959.5	3,947.6	11.86	333.918	
3,740.1	3,697.8	3,656.8	3,656.7	11.3	1.2	65.84	-826.7	4,071.2	3,957.8	3,945.8	11.96	330.891	
3,800.0	3,757.3	3,720.9	3,720.9	11.4	1.2	65.89	-826.7	4,071.6	3,955.5	3,943.4	12.11	326.511	
3,838.6	3,795.7	3,764.2	3,764.2	11.5	1.2	65.92	-826.7	4,071.9	3,954.3	3,942.1	12.20	324.090	
3,900.0	3,857.0	3,831.6	3,831.6	11.7	1.2	65.95	-826.4	4,072.2	3,952.8	3,940.4	12.34	320.358	
3,937.0	3,893.9	3,871.2	3,871.2	11.7	1.3	65.96	-826.4	4,072.3	3,952.1	3,939.6	12.41	318.486	
4,000.0	3,956.9	3,939.0	3,939.0	11.8	1.3	65.98	-826.4	4,072.4	3,951.2	3,938.7	12.53	315.410	
4,035.4	3,992.3	3,977.4	3,977.3	11.9	1.3	65.99	-826.5	4,072.4	3,951.0	3,938.4	12.58	313.986	
4,070.0	4,026.9	4,011.3	4,011.2	11.9	1.3	65.99	-826.7	4,072.4	3,950.9	3,938.2	12.64	312.605	
4,072.9	4,029.8	4,013.7	4,013.7	11.9	1.3	107.18	-826.7	4,072.4	3,950.9	3,939.9	10.96	360.450	
4,100.0	4,056.9	4,036.1	4,036.1	12.0	1.3	107.18	-826.9	4,072.4	3,950.9	3,939.9	11.01	358.847	
4,133.8	4,090.7	4,064.1	4,064.1	12.0	1.3	107.19	-827.1	4,072.4	3,951.0	3,939.9	11.08	356.661	
4,200.0	4,156.9	4,126.9	4,126.9	12.1	1.3	107.19	-827.7	4,072.4	3,951.3	3,940.1	11.21	352.464	
4,232.3	4,189.2	4,165.0	4,164.9	12.2	1.3	107.20	-828.2	4,072.4	3,951.4	3,940.1	11.28	350.419	
4,300.0	4,256.9	4,250.0	4,249.9	12.3	1.3	107.22	-829.7	4,072.0	3,951.4	3,940.0	11.41	346.185	
4,330.7	4,287.6	4,290.3	4,290.2	12.4	1.3	107.23	-830.4	4,071.7	3,951.3	3,939.9	11.48	344.271	
4,400.0	4,356.9	4,350.2	4,350.2	12.5	1.3	107.25	-831.4	4,071.1	3,951.1	3,939.5	11.62	340.066	
4,429.1	4,386.0	4,373.9	4,373.8	12.5	1.3	107.26	-831.9	4,071.0	3,951.1	3,939.4	11.68	338.326	
4,438.6	4,395.5	4,381.6	4,381.5	12.5	1.3	107.26	-832.0	4,070.9	3,951.1	3,939.4	11.70	337.764	
4,500.0	4,456.9	4,449.1	4,449.0	12.6	1.3	107.28	-833.4	4,070.5	3,951.1	3,939.2	11.82	334.140	
4,527.5	4,484.4	4,484.1	4,484.0	12.7	1.3	107.29	-834.1	4,070.2	3,951.0	3,939.1	11.88	332.513	
4,600.0	4,556.9	4,560.2	4,560.0	12.8	1.3	107.31	-835.3	4,069.5	3,950.7	3,938.7	12.03	328.312	
4,626.0	4,582.9	4,586.2	4,586.1	12.9	1.3	107.32	-835.8	4,069.2	3,950.6	3,938.5	12.09	326.822	
4,700.0	4,656.9	4,675.5	4,675.3	13.0	1.3	107.34	-837.0	4,068.3	3,950.1	3,937.9	12.24	322.602	
4,724.4	4,681.3	4,705.1	4,704.9	13.0	1.3	107.35	-837.3	4,067.9	3,949.9	3,937.6	12.30	321.216	
4,800.0	4,756.9	4,785.0	4,784.9	13.1	1.3	107.36	-838.0	4,066.8	3,949.2	3,936.7	12.46	316.985	
4,822.8	4,779.7	4,809.0	4,808.8	13.2	1.3	107.37	-838.3	4,066.5	3,948.9	3,936.4	12.51	315.721	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
4,900.0	4,856.9	4,889.1	4,889.0	13.3	1.3	107.38	-838.9	4,065.3	3,948.0	3,935.4	12.67	311.504		
4,921.2	4,878.1	4,911.3	4,911.1	13.4	1.3	107.38	-839.1	4,065.0	3,947.8	3,935.1	12.72	310.358		
5,000.0	4,956.9	4,993.5	4,993.3	13.5	1.3	107.39	-839.5	4,063.8	3,946.8	3,933.9	12.89	306.157		
5,019.7	4,976.6	5,014.0	5,013.8	13.5	1.3	107.40	-839.5	4,063.5	3,946.6	3,933.6	12.93	305.117		
5,100.0	5,056.9	5,097.7	5,097.4	13.7	1.4	107.41	-839.9	4,062.2	3,945.5	3,932.4	13.11	300.941		
5,118.1	5,075.0	5,116.8	5,116.6	13.7	1.4	107.41	-839.9	4,061.9	3,945.2	3,932.1	13.15	300.009		
5,200.0	5,156.9	5,207.3	5,207.0	13.8	1.4	107.42	-840.2	4,060.5	3,944.0	3,930.7	13.33	295.846		
5,216.5	5,173.4	5,244.0	5,243.8	13.9	1.4	107.42	-840.2	4,059.7	3,943.7	3,930.3	13.37	294.952		
5,300.0	5,256.9	5,409.0	5,408.7	14.0	1.4	107.43	-839.3	4,054.4	3,941.0	3,927.4	13.57	290.461		
5,314.9	5,271.8	5,427.9	5,427.6	14.1	1.4	107.43	-839.2	4,053.6	3,940.3	3,926.7	13.60	289.689		
5,400.0	5,356.9	5,538.2	5,537.7	14.2	1.5	107.44	-838.3	4,048.6	3,936.4	3,922.6	13.80	285.346		
5,413.4	5,370.3	5,556.3	5,555.9	14.2	1.5	107.44	-838.1	4,047.7	3,935.7	3,921.9	13.83	284.665		
5,500.0	5,456.9	5,657.7	5,657.1	14.4	1.5	107.45	-837.0	4,042.4	3,931.1	3,917.1	14.02	280.360		
5,511.8	5,468.7	5,670.2	5,669.6	14.4	1.5	107.45	-836.8	4,041.7	3,930.5	3,916.4	14.05	279.784		
5,600.0	5,556.9	5,752.3	5,751.5	14.6	1.5	107.46	-835.7	4,037.4	3,925.7	3,911.4	14.24	275.584		
5,610.2	5,567.1	5,761.2	5,760.4	14.6	1.5	107.46	-835.6	4,036.9	3,925.1	3,910.9	14.27	275.105		
5,700.0	5,656.9	5,828.8	5,828.0	14.7	1.5	107.46	-834.4	4,033.7	3,920.6	3,906.1	14.47	271.018		
5,708.6	5,665.5	5,834.4	5,833.5	14.8	1.5	107.45	-834.3	4,033.4	3,920.2	3,905.7	14.49	270.634		
5,800.0	5,756.9	5,900.0	5,899.1	14.9	1.5	107.45	-833.4	4,030.9	3,916.3	3,901.6	14.69	266.655		
5,807.1	5,764.0	5,900.0	5,899.1	14.9	1.5	107.45	-833.4	4,030.9	3,916.1	3,901.4	14.70	266.366		
5,900.0	5,856.9	5,961.9	5,960.9	15.1	1.5	107.45	-832.8	4,028.9	3,912.9	3,898.0	14.91	262.499		
5,905.5	5,862.4	5,965.7	5,964.8	15.1	1.5	107.45	-832.7	4,028.8	3,912.8	3,897.8	14.92	262.274		
5,971.9	5,928.8	6,014.1	6,013.1	15.3	1.6	107.45	-832.3	4,027.5	3,910.9	3,895.9	15.07	259.591		
5,990.1	5,947.0	6,029.0	6,028.0	15.3	1.6	-162.55	-832.1	4,027.2	3,910.7	3,894.3	16.46	237.653 CC, ES		
6,000.0	5,956.9	6,037.0	6,036.0	15.3	1.6	-162.55	-832.1	4,027.0	3,910.8	3,894.3	16.47	237.436		
6,003.9	5,960.8	6,040.2	6,039.2	15.3	1.6	-162.55	-832.0	4,026.9	3,910.8	3,894.4	16.48	237.357		
6,050.0	6,006.7	6,077.6	6,076.6	15.4	1.6	-162.51	-831.6	4,026.2	3,913.2	3,896.6	16.56	236.236		
6,100.0	6,056.2	6,117.3	6,116.3	15.4	1.6	-162.40	-831.2	4,025.5	3,919.0	3,902.3	16.69	234.878		
6,102.3	6,058.5	6,119.2	6,118.1	15.4	1.6	-162.39	-831.2	4,025.5	3,919.4	3,902.7	16.69	234.818		
6,150.0	6,105.1	6,155.7	6,154.7	15.4	1.6	-162.21	-830.8	4,024.9	3,928.3	3,911.5	16.81	233.648		
6,200.0	6,153.0	6,200.0	6,199.0	15.5	1.6	-161.95	-830.4	4,024.3	3,940.9	3,924.0	16.93	232.746		
6,200.8	6,153.8	6,200.0	6,199.0	15.5	1.6	-161.94	-830.4	4,024.3	3,941.2	3,924.2	16.93	232.741		
6,250.0	6,199.9	6,240.3	6,239.3	15.5	1.6	-161.60	-830.1	4,023.9	3,956.8	3,939.8	17.03	232.389		
6,299.2	6,244.8	6,287.3	6,286.3	15.5	1.6	-161.18	-829.7	4,023.3	3,975.5	3,958.4	17.10	232.550		
6,300.0	6,245.5	6,288.1	6,287.0	15.5	1.6	-161.18	-829.7	4,023.3	3,975.8	3,958.7	17.10	232.557		
6,350.0	6,289.6	6,328.9	6,327.9	15.5	1.6	-160.64	-829.4	4,022.8	3,997.8	3,980.7	17.13	233.379		
6,397.6	6,329.9	6,364.7	6,363.6	15.4	1.6	-160.01	-829.2	4,022.4	4,021.6	4,004.4	17.13	234.727		
6,400.0	6,331.8	6,366.4	6,365.4	15.4	1.6	-159.97	-829.1	4,022.4	4,022.8	4,005.7	17.13	234.806		
6,450.0	6,372.2	6,400.0	6,399.0	15.4	1.7	-159.16	-828.9	4,022.1	4,050.6	4,033.5	17.11	236.770		
6,496.0	6,407.4	6,432.8	6,431.7	15.4	1.7	-158.27	-828.7	4,021.8	4,078.7	4,061.6	17.08	238.855		
6,500.0	6,410.3	6,435.3	6,434.3	15.4	1.7	-158.18	-828.7	4,021.8	4,081.2	4,064.1	17.07	239.048		
6,550.0	6,446.1	6,466.5	6,465.5	15.4	1.7	-156.99	-828.5	4,021.5	4,114.3	4,097.3	17.04	241.509		
6,594.5	6,475.9	6,492.4	6,491.3	15.4	1.7	-155.71	-828.4	4,021.4	4,145.8	4,128.8	17.02	243.574		
6,600.0	6,479.4	6,500.0	6,498.9	15.4	1.7	-155.56	-828.4	4,021.3	4,149.8	4,132.8	17.02	243.756		
6,650.0	6,510.0	6,523.0	6,522.0	15.5	1.7	-153.76	-828.3	4,021.2	4,187.6	4,170.5	17.06	245.503		
6,692.9	6,534.0	6,544.8	6,543.7	15.7	1.7	-151.91	-828.2	4,021.1	4,221.6	4,204.4	17.16	246.042		
6,700.0	6,537.8	6,548.2	6,547.2	15.7	1.7	-151.56	-828.2	4,021.1	4,227.3	4,210.1	17.18	246.031		
6,750.0	6,562.6	6,570.7	6,569.6	16.2	1.7	-148.82	-828.1	4,021.0	4,268.9	4,251.5	17.44	244.761		
6,791.3	6,580.8	6,587.2	6,586.1	16.6	1.7	-146.00	-828.1	4,020.9	4,304.5	4,286.7	17.81	241.746		
6,800.0	6,584.3	6,590.4	6,589.3	16.7	1.7	-145.33	-828.1	4,020.9	4,312.1	4,294.3	17.89	241.099		
6,850.0	6,602.9	6,607.9	6,606.8	17.3	1.7	-140.86	-828.0	4,020.8	4,356.8	4,338.2	18.56	234.725		
6,889.7	6,615.2	6,620.3	6,619.2	17.9	1.7	-136.36	-828.0	4,020.8	4,393.1	4,373.8	19.28	227.811		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
6,900.0	6,618.1	6,623.2	6,622.1	18.0	1.7	-135.04	-828.0	4,020.8	4,402.6	4,383.1	19.49	225.898	
6,950.0	6,630.0	6,635.1	6,634.0	18.8	1.7	-127.37	-828.0	4,020.7	4,449.4	4,428.8	20.62	215.734	
6,988.2	6,636.8	6,641.9	6,640.9	19.5	1.7	-119.94	-828.0	4,020.7	4,485.6	4,464.1	21.53	208.354	
7,000.0	6,638.5	6,643.6	6,642.6	19.7	1.7	-117.33	-827.9	4,020.7	4,496.9	4,475.1	21.78	206.437	
7,050.0	6,643.5	6,648.8	6,647.7	20.6	1.7	-104.67	-827.9	4,020.7	4,544.9	4,522.3	22.62	200.934	
7,086.6	6,644.9	6,650.4	6,649.3	21.3	1.7	-94.03	-827.9	4,020.7	4,580.3	4,557.3	22.97	199.378	
7,097.8	6,645.0	6,650.5	6,649.4	21.5	1.7	-90.63	-827.9	4,020.7	4,591.1	4,568.0	23.10	198.743	
7,100.0	6,645.0	6,650.5	6,649.4	21.6	1.7	-90.63	-827.9	4,020.7	4,593.2	4,570.1	23.14	198.471	
7,185.0	6,644.9	6,650.7	6,649.6	23.3	1.7	-90.64	-827.9	4,020.7	4,675.5	4,650.6	24.87	188.003	
7,200.0	6,644.9	6,650.7	6,649.6	23.6	1.7	-90.64	-827.9	4,020.7	4,690.0	4,664.8	25.17	186.308	
7,283.4	6,644.8	6,650.9	6,649.8	25.4	1.7	-90.65	-827.9	4,020.7	4,770.9	4,743.9	26.99	176.760	
7,300.0	6,644.7	6,650.9	6,649.8	25.8	1.7	-90.65	-827.9	4,020.7	4,786.9	4,759.6	27.35	175.017	
7,381.9	6,644.6	6,651.1	6,650.0	27.7	1.7	-90.66	-827.9	4,020.7	4,866.4	4,837.1	29.23	166.504	
7,400.0	6,644.6	6,651.1	6,650.1	28.1	1.7	-90.66	-827.9	4,020.7	4,884.0	4,854.3	29.64	164.765	
7,480.3	6,644.5	6,651.3	6,650.2	30.0	1.7	-90.67	-827.9	4,020.7	4,962.0	4,930.4	31.55	157.265	
7,500.0	6,644.5	6,651.3	6,650.3	30.5	1.7	-90.67	-827.9	4,020.7	4,981.1	4,949.1	32.02	155.562	
7,578.7	6,644.4	6,651.5	6,650.4	32.4	1.7	-90.68	-827.9	4,020.7	5,057.7	5,023.7	33.95	148.991	
7,600.0	6,644.4	6,651.6	6,650.5	32.9	1.7	-90.68	-827.9	4,020.7	5,078.4	5,043.9	34.47	147.341	
7,677.1	6,644.3	6,651.7	6,650.7	34.8	1.7	-90.69	-827.9	4,020.7	5,153.5	5,117.1	36.40	141.594	
7,700.0	6,644.2	6,651.8	6,650.7	35.4	1.7	-90.69	-827.9	4,020.7	5,175.8	5,138.8	36.97	140.007	
7,775.6	6,644.1	6,651.9	6,650.9	37.3	1.7	-90.70	-827.9	4,020.7	5,249.4	5,210.5	38.89	134.979	
7,800.0	6,644.1	6,652.0	6,650.9	38.0	1.7	-90.70	-827.9	4,020.7	5,273.2	5,233.7	39.51	133.458	
7,874.0	6,644.0	6,652.1	6,651.1	39.9	1.7	-90.71	-827.9	4,020.7	5,345.4	5,304.0	41.42	129.050	
7,900.0	6,644.0	6,652.2	6,651.1	40.5	1.7	-90.71	-827.9	4,020.7	5,370.8	5,328.7	42.09	127.597	
7,972.4	6,643.9	6,652.4	6,651.3	42.4	1.7	-90.72	-827.9	4,020.7	5,441.5	5,397.5	43.98	123.723	
8,000.0	6,643.9	6,652.4	6,651.4	43.1	1.7	-90.72	-827.9	4,020.7	5,468.4	5,423.7	44.70	122.335	
8,070.8	6,643.8	6,652.6	6,651.5	45.0	1.7	-90.73	-827.9	4,020.7	5,537.7	5,491.1	46.57	118.922	
8,100.0	6,643.7	6,652.6	6,651.6	45.8	1.7	-90.74	-827.9	4,020.7	5,566.2	5,518.8	47.33	117.596	
8,169.3	6,643.7	6,652.8	6,651.7	47.6	1.7	-90.74	-827.9	4,020.7	5,633.9	5,584.7	49.17	114.578	
8,200.0	6,643.6	6,652.8	6,651.8	48.4	1.7	-90.75	-827.9	4,020.7	5,664.0	5,614.0	49.99	113.312	
8,267.7	6,643.5	6,653.0	6,651.9	50.2	1.7	-90.75	-827.9	4,020.7	5,730.2	5,678.4	51.79	110.637	
8,300.0	6,643.5	6,653.1	6,652.0	51.1	1.7	-90.76	-827.9	4,020.7	5,761.9	5,709.2	52.66	109.426	
8,366.1	6,643.4	6,653.2	6,652.1	52.9	1.7	-90.76	-827.9	4,020.7	5,826.6	5,772.2	54.43	107.047	
8,400.0	6,643.4	6,653.3	6,652.2	53.8	1.7	-90.77	-827.9	4,020.7	5,859.8	5,804.5	55.34	105.888	
8,464.5	6,643.3	6,653.4	6,652.4	55.5	1.7	-90.77	-827.9	4,020.7	5,923.1	5,866.0	57.08	103.768	
8,500.0	6,643.2	6,653.5	6,652.4	56.5	1.7	-90.78	-827.9	4,020.7	5,957.8	5,899.8	58.04	102.658	
8,563.0	6,643.2	6,653.6	6,652.6	58.2	1.7	-90.78	-827.9	4,020.7	6,019.6	5,959.9	59.74	100.762	
8,600.0	6,643.1	6,653.7	6,652.6	59.2	1.7	-90.79	-827.9	4,020.7	6,055.9	5,995.2	60.74	99.698	
8,661.4	6,643.0	6,653.8	6,652.8	60.8	1.7	-90.79	-827.9	4,020.7	6,116.2	6,053.8	62.41	97.999	
8,700.0	6,643.0	6,653.9	6,652.9	61.9	1.7	-90.80	-827.9	4,020.7	6,154.1	6,090.6	63.46	96.977	
8,759.8	6,642.9	6,654.0	6,653.0	63.5	1.7	-90.81	-827.9	4,020.7	6,212.8	6,147.7	65.09	95.451	
8,800.0	6,642.9	6,654.1	6,653.1	64.6	1.7	-90.81	-827.9	4,020.7	6,252.3	6,186.1	66.18	94.469	
8,858.2	6,642.8	6,654.3	6,653.2	66.2	1.7	-90.82	-827.9	4,020.7	6,309.5	6,241.8	67.77	93.095	
8,900.0	6,642.7	6,654.3	6,653.3	67.3	1.7	-90.82	-827.9	4,020.7	6,350.6	6,281.6	68.92	92.150	
8,956.7	6,642.7	6,654.5	6,653.4	68.9	1.7	-90.83	-827.9	4,020.7	6,406.3	6,335.8	70.47	90.912	
9,000.0	6,642.6	6,654.6	6,653.5	70.1	1.7	-90.83	-827.9	4,020.7	6,448.9	6,377.2	71.65	90.001	
9,055.1	6,642.5	6,654.7	6,653.6	71.6	1.7	-90.84	-827.9	4,020.7	6,503.1	6,429.9	73.16	88.883	
9,100.0	6,642.5	6,654.8	6,653.7	72.8	1.7	-90.84	-827.9	4,020.7	6,547.2	6,472.9	74.40	88.005	
9,153.5	6,642.4	6,654.9	6,653.8	74.3	1.7	-90.85	-827.9	4,020.7	6,599.9	6,524.1	75.87	86.993	
9,200.0	6,642.4	6,655.0	6,653.9	75.6	1.7	-90.85	-827.9	4,020.7	6,645.7	6,568.5	77.14	86.146	
9,251.9	6,642.3	6,655.1	6,654.0	77.0	1.7	-90.86	-827.9	4,020.7	6,696.8	6,618.2	78.57	85.229	
9,300.0	6,642.2	6,655.2	6,654.1	78.3	1.7	-90.86	-827.9	4,020.7	6,744.1	6,664.2	79.90	84.410	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,350.4	6,642.2	6,655.3	6,654.3	79.7	1.7	-90.87	-827.9	4,020.7	6,793.8	6,712.5	81.29	83.578	
9,400.0	6,642.1	6,655.4	6,654.4	81.1	1.7	-90.87	-827.9	4,020.7	6,842.6	6,760.0	82.65	82.786	
9,448.8	6,642.0	6,655.5	6,654.5	82.4	1.7	-90.88	-827.9	4,020.7	6,890.7	6,806.7	84.00	82.031	
9,500.0	6,642.0	6,655.6	6,654.6	83.8	1.7	-90.88	-827.9	4,020.7	6,941.2	6,855.8	85.41	81.265	
9,547.2	6,641.9	6,655.7	6,654.7	85.1	1.7	-90.89	-827.9	4,020.7	6,987.7	6,901.0	86.72	80.579	
9,600.0	6,641.9	6,655.8	6,654.8	86.6	1.7	-90.89	-827.9	4,020.7	7,039.8	6,951.6	88.18	79.836	
9,645.6	6,641.8	6,655.9	6,654.9	87.9	1.7	-90.90	-827.9	4,020.7	7,084.8	6,995.4	89.44	79.212	
9,700.0	6,641.7	6,656.1	6,655.0	89.4	1.7	-90.90	-827.9	4,020.7	7,138.4	7,047.5	90.94	78.492	
9,744.1	6,641.7	6,656.1	6,655.1	90.6	1.7	-90.91	-827.9	4,020.7	7,181.9	7,089.7	92.16	77.925	
9,800.0	6,641.6	6,656.3	6,655.2	92.1	1.7	-90.91	-827.9	4,020.7	7,237.1	7,143.4	93.71	77.226	
9,842.5	6,641.6	6,656.4	6,655.3	93.3	1.7	-90.92	-827.9	4,020.7	7,279.0	7,184.1	94.89	76.709	
9,900.0	6,641.5	6,656.5	6,655.4	94.9	1.7	-90.92	-827.9	4,020.7	7,335.8	7,239.3	96.49	76.030	
9,940.9	6,641.4	6,656.6	6,655.5	96.0	1.7	-90.93	-827.9	4,020.7	7,376.2	7,278.6	97.62	75.560	
10,000.0	6,641.4	6,656.7	6,655.6	97.7	1.7	-90.93	-827.9	4,020.7	7,434.5	7,335.3	99.26	74.900	
10,039.3	6,641.3	6,656.8	6,655.7	98.8	1.7	-90.94	-827.9	4,020.7	7,473.4	7,373.0	100.35	74.472	
10,100.0	6,641.2	6,656.9	6,655.8	100.4	1.7	-90.95	-827.9	4,020.7	7,533.3	7,431.3	102.03	73.831	
10,137.8	6,641.2	6,657.0	6,655.9	101.5	1.7	-90.95	-827.9	4,020.7	7,570.6	7,467.5	103.08	73.441	
10,200.0	6,641.1	6,657.1	6,656.1	103.2	1.7	-90.96	-827.9	4,020.7	7,632.1	7,527.3	104.81	72.817	
10,236.2	6,641.1	6,657.2	6,656.1	104.2	1.7	-90.96	-827.9	4,020.7	7,667.9	7,562.1	105.82	72.463	
10,300.0	6,641.0	6,657.3	6,656.3	106.0	1.7	-90.97	-827.9	4,020.7	7,731.0	7,623.4	107.59	71.854	
10,334.6	6,640.9	6,657.4	6,656.3	107.0	1.7	-90.97	-827.9	4,020.7	7,765.2	7,656.6	108.55	71.532	
10,400.0	6,640.9	6,657.5	6,656.5	108.8	1.7	-90.98	-827.9	4,020.6	7,829.8	7,719.4	110.37	70.940	
10,433.0	6,640.8	6,657.6	6,656.6	109.7	1.7	-90.98	-827.9	4,020.6	7,862.5	7,751.2	111.29	70.647	
10,500.0	6,640.7	6,657.8	6,656.7	111.6	1.7	-90.99	-827.9	4,020.6	7,928.7	7,815.6	113.16	70.069	
10,531.5	6,640.7	6,657.8	6,656.8	112.4	1.7	-90.99	-827.9	4,020.6	7,959.8	7,845.8	114.03	69.804	
10,600.0	6,640.6	6,658.0	6,656.9	114.3	1.7	-91.00	-827.9	4,020.6	8,027.6	7,911.7	115.94	69.240	
10,629.9	6,640.6	6,658.0	6,657.0	115.2	1.7	-91.00	-827.9	4,020.6	8,057.2	7,940.4	116.77	69.000	
10,700.0	6,640.5	6,658.2	6,657.1	117.1	1.7	-91.01	-827.9	4,020.6	8,126.6	8,007.9	118.72	68.449	
10,728.3	6,640.4	6,658.2	6,657.2	117.9	1.7	-91.01	-827.9	4,020.6	8,154.6	8,035.1	119.51	68.232	
10,800.0	6,640.4	6,658.4	6,657.3	119.9	1.7	-91.02	-827.9	4,020.6	8,225.6	8,104.0	121.51	67.694	
10,826.7	6,640.3	6,658.4	6,657.4	120.7	1.7	-91.02	-827.9	4,020.6	8,252.0	8,129.8	122.26	67.498	
10,900.0	6,640.2	6,658.6	6,657.5	122.7	1.7	-91.03	-827.9	4,020.6	8,324.6	8,200.3	124.30	66.973	
10,925.2	6,640.2	6,658.7	6,657.6	123.4	1.7	-91.03	-827.9	4,020.6	8,349.5	8,224.5	125.00	66.796	
11,000.0	6,640.1	6,658.8	6,657.8	125.5	1.7	-91.04	-827.9	4,020.6	8,423.6	8,296.5	127.09	66.282	
11,023.6	6,640.1	6,658.9	6,657.8	126.1	1.7	-91.04	-827.9	4,020.6	8,446.9	8,319.2	127.74	66.124	
11,100.0	6,640.0	6,659.0	6,658.0	128.3	1.7	-91.05	-827.9	4,020.6	8,522.6	8,392.7	129.88	65.621	
11,122.0	6,639.9	6,659.1	6,658.0	128.9	1.7	-91.05	-827.9	4,020.6	8,544.4	8,413.9	130.49	65.480	
11,200.0	6,639.8	6,659.2	6,658.2	131.1	1.7	-91.06	-827.9	4,020.6	8,621.7	8,489.0	132.67	64.988	
11,220.4	6,639.8	6,659.3	6,658.2	131.6	1.7	-91.06	-827.9	4,020.6	8,641.9	8,508.7	133.24	64.862	
11,300.0	6,639.7	6,659.4	6,658.4	133.9	1.7	-91.07	-827.9	4,020.6	8,720.8	8,585.3	135.46	64.380	
11,318.9	6,639.7	6,659.5	6,658.4	134.4	1.7	-91.07	-827.9	4,020.6	8,739.5	8,603.5	135.98	64.268	
11,400.0	6,639.6	6,659.7	6,658.6	136.7	1.7	-91.08	-827.9	4,020.6	8,819.9	8,681.6	138.25	63.797	
11,417.3	6,639.6	6,659.7	6,658.6	137.1	1.7	-91.08	-827.9	4,020.6	8,837.0	8,698.3	138.73	63.699	
11,500.0	6,639.5	6,659.9	6,658.8	139.4	1.7	-91.09	-827.9	4,020.6	8,919.0	8,778.0	141.04	63.237	
11,515.7	6,639.5	6,659.9	6,658.8	139.9	1.7	-91.09	-827.9	4,020.6	8,934.6	8,793.1	141.48	63.151	
11,600.0	6,639.3	6,660.1	6,659.0	142.2	1.7	-91.10	-827.9	4,020.6	9,018.2	8,874.3	143.83	62.698	
11,614.1	6,639.3	6,660.1	6,659.0	142.6	1.7	-91.10	-827.9	4,020.6	9,032.2	8,888.0	144.23	62.624	
11,700.0	6,639.2	6,660.3	6,659.2	145.0	1.7	-91.11	-827.9	4,020.6	9,117.3	8,970.7	146.63	62.180	
11,712.6	6,639.2	6,660.3	6,659.3	145.4	1.7	-91.11	-827.9	4,020.6	9,129.8	8,982.8	146.98	62.116	
11,800.0	6,639.1	6,660.5	6,659.4	147.8	1.7	-91.12	-827.9	4,020.6	9,216.5	9,067.1	149.42	61.681	
11,811.0	6,639.1	6,660.5	6,659.5	148.1	1.7	-91.12	-827.9	4,020.6	9,227.4	9,077.7	149.73	61.627	
11,900.0	6,639.0	6,660.7	6,659.6	150.6	1.7	-91.13	-827.9	4,020.6	9,315.7	9,163.5	152.22	61.200	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
11,909.4	6,639.0	6,660.7	6,659.7	150.9	1.7	-91.13	-827.9	4,020.6	9,325.1	9,172.6	152.48	61.155	
12,000.0	6,638.8	6,660.9	6,659.9	153.4	1.7	-91.14	-827.9	4,020.6	9,414.9	9,259.9	155.01	60.736	
12,007.8	6,638.8	6,660.9	6,659.9	153.6	1.7	-91.14	-827.9	4,020.6	9,422.7	9,267.5	155.23	60.700	
12,100.0	6,638.7	6,661.1	6,660.1	156.2	1.7	-91.15	-827.9	4,020.6	9,514.2	9,356.4	157.81	60.289	
12,106.3	6,638.7	6,661.1	6,660.1	156.4	1.7	-91.15	-827.9	4,020.6	9,520.4	9,362.4	157.99	60.261	
12,200.0	6,638.6	6,661.3	6,660.3	159.0	1.7	-91.16	-827.9	4,020.6	9,613.4	9,452.8	160.61	59.857	
12,204.7	6,638.6	6,661.3	6,660.3	159.1	1.7	-91.16	-827.9	4,020.6	9,618.1	9,457.3	160.74	59.837	
12,300.0	6,638.5	6,661.5	6,660.5	161.8	1.7	-91.17	-827.9	4,020.6	9,712.7	9,549.3	163.40	59.440	
12,303.1	6,638.5	6,661.5	6,660.5	161.9	1.7	-91.17	-827.9	4,020.6	9,715.8	9,552.3	163.49	59.427	
12,400.0	6,638.3	6,661.7	6,660.7	164.6	1.7	-91.18	-827.9	4,020.6	9,812.0	9,645.8	166.20	59.037	
12,401.5	6,638.3	6,661.8	6,660.7	164.6	1.7	-91.18	-827.9	4,020.6	9,813.5	9,647.3	166.24	59.031	
12,500.0	6,638.2	6,662.0	6,660.9	167.4	1.7	-91.19	-827.9	4,020.6	9,911.3	9,742.3	169.00	58.647 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	125.54	-1,195.2	1,673.1	2,056.3				
98.4	98.4	77.4	77.4	0.1	0.0	125.54	-1,195.3	1,673.0	2,056.1	2,056.0	0.10	N/A	
100.0	100.0	79.0	79.0	0.1	0.0	125.54	-1,195.3	1,673.0	2,056.1	2,056.0	0.10	N/A	
163.7	163.7	141.7	141.7	0.2	0.0	125.55	-1,195.4	1,672.9	2,056.1	2,055.8	0.28	7,238.093	
196.8	196.8	173.9	173.9	0.3	0.1	125.55	-1,195.5	1,672.9	2,056.1	2,055.7	0.39	5,246.994	
200.0	200.0	176.9	176.9	0.3	0.1	125.55	-1,195.5	1,672.9	2,056.1	2,055.7	0.40	5,113.352	
295.3	295.3	261.3	261.3	0.5	0.2	125.55	-1,195.7	1,673.0	2,056.4	2,055.7	0.72	2,868.739	
300.0	300.0	265.3	265.3	0.5	0.2	125.55	-1,195.7	1,673.0	2,056.4	2,055.7	0.73	2,807.338	
393.7	393.7	356.4	356.4	0.8	0.3	125.56	-1,196.4	1,673.4	2,057.1	2,056.1	1.03	1,991.510	
400.0	400.0	363.0	363.0	0.8	0.3	125.56	-1,196.5	1,673.4	2,057.2	2,056.1	1.05	1,954.364	
492.1	492.1	454.5	454.5	1.0	0.4	125.58	-1,197.2	1,673.7	2,057.8	2,056.5	1.33	1,552.848	
500.0	500.0	462.0	462.0	1.0	0.4	125.58	-1,197.2	1,673.7	2,057.9	2,056.5	1.35	1,526.940	
590.5	590.5	548.4	548.4	1.2	0.4	125.58	-1,197.9	1,674.2	2,058.7	2,057.1	1.60	1,284.107	
600.0	600.0	557.4	557.4	1.2	0.4	125.58	-1,197.9	1,674.2	2,058.8	2,057.1	1.63	1,263.382	
689.0	689.0	646.0	646.0	1.4	0.5	125.59	-1,198.8	1,674.8	2,059.7	2,057.8	1.88	1,097.272	
700.0	700.0	657.4	657.4	1.4	0.5	125.60	-1,198.9	1,674.8	2,059.8	2,057.9	1.91	1,079.743	
787.4	787.4	746.9	746.8	1.6	0.5	125.60	-1,199.5	1,675.4	2,060.6	2,058.5	2.15	959.442	
800.0	800.0	759.6	759.6	1.7	0.5	125.60	-1,199.6	1,675.5	2,060.8	2,058.6	2.18	944.409	
885.8	885.8	846.1	846.1	1.9	0.6	125.60	-1,200.1	1,676.1	2,061.5	2,059.1	2.41	854.059	
900.0	900.0	860.4	860.3	1.9	0.6	125.61	-1,200.2	1,676.1	2,061.6	2,059.2	2.45	840.876	
984.2	984.2	944.5	944.5	2.1	0.6	125.61	-1,200.9	1,676.6	2,062.3	2,059.7	2.68	770.603	
1,000.0	1,000.0	960.2	960.1	2.1	0.6	125.61	-1,201.0	1,676.7	2,062.5	2,059.8	2.72	758.812	
1,082.7	1,082.7	1,046.3	1,046.3	2.3	0.7	125.62	-1,201.6	1,677.1	2,063.2	2,060.2	2.94	702.469	
1,100.0	1,100.0	1,065.2	1,065.1	2.3	0.7	125.62	-1,201.7	1,677.1	2,063.3	2,060.3	2.98	691.712	
1,181.1	1,181.1	1,153.3	1,153.3	2.5	0.7	125.63	-1,202.2	1,677.3	2,063.6	2,060.4	3.20	645.787	
1,200.0	1,200.0	1,173.9	1,173.9	2.6	0.7	125.63	-1,202.2	1,677.3	2,063.7	2,060.4	3.24	635.994	
1,279.5	1,279.5	1,255.7	1,255.7	2.7	0.8	125.64	-1,202.4	1,677.3	2,063.8	2,060.3	3.45	598.616	
1,300.0	1,300.0	1,276.3	1,276.2	2.8	0.8	125.64	-1,202.5	1,677.3	2,063.8	2,060.3	3.50	589.778	
1,377.9	1,377.9	1,357.0	1,356.9	3.0	0.8	84.49	-1,202.8	1,677.1	2,063.7	2,060.0	3.75	550.530	
1,400.0	1,400.0	1,380.1	1,380.0	3.0	0.8	84.51	-1,202.8	1,677.1	2,063.6	2,059.8	3.80	542.733	
1,476.4	1,476.3	1,456.9	1,456.9	3.2	0.8	84.63	-1,202.9	1,676.9	2,063.2	2,059.2	3.99	517.579	
1,500.0	1,499.8	1,480.3	1,480.3	3.2	0.8	84.68	-1,202.9	1,676.8	2,063.0	2,059.0	4.04	510.260	
1,574.8	1,574.4	1,554.6	1,554.6	3.4	0.9	84.87	-1,203.1	1,676.6	2,062.4	2,058.1	4.23	487.715	
1,600.0	1,599.5	1,579.6	1,579.6	3.5	0.9	84.94	-1,203.1	1,676.5	2,062.1	2,057.8	4.29	480.506	
1,673.2	1,672.2	1,652.2	1,652.2	3.6	0.9	85.20	-1,203.3	1,676.3	2,061.3	2,056.8	4.48	459.787	
1,700.0	1,698.7	1,678.7	1,678.7	3.7	0.9	85.31	-1,203.4	1,676.2	2,061.0	2,056.4	4.55	452.542	
1,771.6	1,769.5	1,753.5	1,753.4	3.9	0.9	85.66	-1,203.8	1,675.8	2,060.0	2,055.2	4.76	432.959	
1,800.0	1,797.5	1,783.6	1,783.6	4.0	0.9	85.82	-1,203.9	1,675.6	2,059.5	2,054.7	4.84	425.534	
1,870.1	1,866.3	1,856.8	1,856.8	4.2	0.9	86.24	-1,204.2	1,674.8	2,058.3	2,053.2	5.06	406.869	
1,899.9	1,895.6	1,887.8	1,887.7	4.3	1.0	86.43	-1,204.3	1,674.5	2,057.7	2,052.5	5.15	399.262	
1,968.5	1,962.6	1,949.7	1,949.6	4.5	1.0	86.80	-1,204.5	1,673.9	2,056.4	2,051.0	5.38	381.872	
2,000.0	1,993.4	1,977.2	1,977.2	4.6	1.0	86.97	-1,204.6	1,673.7	2,055.9	2,050.4	5.49	374.177	
2,066.9	2,058.9	2,034.7	2,034.7	4.8	1.0	87.32	-1,205.0	1,673.3	2,055.1	2,049.4	5.74	358.281	
2,100.0	2,091.3	2,062.9	2,062.8	4.9	1.0	87.49	-1,205.3	1,673.2	2,054.9	2,049.0	5.86	350.820	
2,165.3	2,155.2	2,120.2	2,120.2	5.2	1.0	87.84	-1,205.9	1,673.1	2,054.7	2,048.5	6.11	336.470	
2,200.0	2,189.1	2,152.6	2,152.5	5.3	1.0	88.03	-1,206.3	1,673.0	2,054.6	2,048.4	6.24	329.187	
2,201.4	2,190.4	2,153.9	2,153.9	5.3	1.0	88.04	-1,206.3	1,673.0	2,054.6	2,048.4	6.25	328.891 CC	
2,263.8	2,251.5	2,212.3	2,212.2	5.5	1.1	88.40	-1,207.2	1,672.9	2,054.7	2,048.2	6.50	316.271	
2,300.0	2,286.9	2,246.4	2,246.3	5.7	1.1	88.61	-1,207.7	1,672.9	2,054.8	2,048.2	6.64	309.340 ES	
2,362.2	2,347.7	2,305.3	2,305.2	5.9	1.1	88.97	-1,208.6	1,672.8	2,055.2	2,048.3	6.90	297.904	
2,400.0	2,384.7	2,342.5	2,342.4	6.0	1.1	89.19	-1,209.1	1,672.9	2,055.4	2,048.4	7.06	291.307	
2,460.6	2,444.0	2,402.2	2,402.1	6.3	1.1	89.55	-1,209.9	1,673.0	2,055.9	2,048.6	7.31	281.159	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,482.5	2,441.1	2,441.0	6.4	1.1	89.79	-1,210.3	1,673.1	2,056.2	2,048.7	7.48	274.914	
2,559.0	2,540.3	2,499.4	2,499.3	6.7	1.2	90.14	-1,211.0	1,673.2	2,056.8	2,049.0	7.73	265.943	
2,600.0	2,580.3	2,542.0	2,541.9	6.8	1.2	90.39	-1,211.5	1,673.3	2,057.2	2,049.3	7.91	260.054	
2,657.5	2,636.5	2,601.6	2,601.5	7.1	1.2	90.75	-1,212.2	1,673.2	2,057.7	2,049.6	8.16	252.128	
2,700.0	2,678.1	2,643.5	2,643.3	7.2	1.2	91.01	-1,212.7	1,673.1	2,058.1	2,049.8	8.35	246.604	
2,755.9	2,732.8	2,698.4	2,698.3	7.5	1.2	91.34	-1,213.4	1,673.0	2,058.7	2,050.1	8.59	239.647	
2,800.0	2,776.0	2,743.1	2,743.0	7.7	1.2	91.61	-1,213.9	1,672.8	2,059.2	2,050.4	8.78	234.423	
2,854.3	2,829.1	2,798.3	2,798.1	7.9	1.3	91.95	-1,214.5	1,672.7	2,059.8	2,050.8	9.02	228.252	
2,900.0	2,873.8	2,841.8	2,841.7	8.1	1.3	92.20	-1,214.8	1,672.6	2,060.4	2,051.2	9.23	223.318	
2,952.7	2,925.4	2,892.0	2,891.9	8.3	1.3	92.50	-1,215.1	1,672.7	2,061.2	2,051.7	9.46	217.857	
3,000.0	2,971.6	2,943.2	2,943.0	8.5	1.3	92.80	-1,215.4	1,672.8	2,061.8	2,052.2	9.67	213.304	
3,051.2	3,021.6	3,000.0	2,999.9	8.7	1.3	93.13	-1,215.4	1,672.8	2,062.5	2,052.6	9.89	208.587	
3,100.0	3,069.4	3,047.7	3,047.6	8.9	1.3	93.40	-1,215.4	1,672.8	2,063.1	2,053.0	10.09	204.391	
3,149.6	3,117.9	3,096.1	3,096.0	9.1	1.3	93.68	-1,215.5	1,672.8	2,063.7	2,053.4	10.30	200.285	
3,200.0	3,167.2	3,144.4	3,144.3	9.3	1.3	93.96	-1,215.6	1,672.7	2,064.4	2,053.9	10.53	196.111	
3,248.0	3,214.2	3,190.4	3,190.3	9.5	1.3	94.23	-1,215.6	1,672.7	2,065.2	2,054.5	10.74	192.275	
3,300.0	3,265.0	3,239.2	3,239.1	9.8	1.3	94.51	-1,215.7	1,672.7	2,066.1	2,055.1	10.98	188.247	
3,346.4	3,310.5	3,282.7	3,282.6	10.0	1.4	94.77	-1,215.9	1,672.7	2,067.0	2,055.8	11.19	184.776	
3,400.0	3,362.9	3,335.3	3,335.2	10.2	1.4	95.07	-1,216.1	1,672.6	2,068.2	2,056.7	11.43	180.944	
3,444.9	3,406.7	3,380.6	3,380.5	10.4	1.4	95.34	-1,216.3	1,672.6	2,069.1	2,057.5	11.63	177.853	
3,473.0	3,434.2	3,409.3	3,409.2	10.5	1.4	95.50	-1,216.4	1,672.5	2,069.8	2,058.0	11.76	175.983	
3,500.0	3,460.7	3,437.7	3,437.6	10.6	1.4	95.68	-1,216.5	1,672.5	2,070.3	2,058.5	11.87	174.441	
3,543.3	3,503.2	3,483.3	3,483.1	10.7	1.4	95.94	-1,216.7	1,672.3	2,071.2	2,059.2	12.01	172.430	
3,600.0	3,559.0	3,537.6	3,537.5	10.9	1.4	96.23	-1,216.9	1,672.0	2,072.2	2,060.0	12.20	169.876	
3,641.7	3,600.2	3,576.1	3,576.0	11.0	1.4	96.42	-1,217.1	1,671.8	2,072.9	2,060.6	12.32	168.232	
3,700.0	3,657.9	3,632.9	3,632.8	11.2	1.5	96.67	-1,217.5	1,671.5	2,074.0	2,061.5	12.50	165.970	
3,740.1	3,697.8	3,673.7	3,673.6	11.3	1.5	96.83	-1,217.7	1,671.4	2,074.6	2,062.0	12.60	164.607	
3,800.0	3,757.3	3,734.1	3,734.0	11.4	1.5	97.03	-1,217.9	1,671.2	2,075.4	2,062.7	12.76	162.617	
3,838.6	3,795.7	3,772.8	3,772.7	11.5	1.5	97.14	-1,218.0	1,671.0	2,075.9	2,063.0	12.85	161.527	
3,900.0	3,857.0	3,833.2	3,833.1	11.7	1.5	97.27	-1,218.3	1,670.8	2,076.4	2,063.5	12.99	159.814	
3,937.0	3,893.9	3,869.0	3,868.9	11.7	1.5	97.34	-1,218.5	1,670.6	2,076.7	2,063.7	13.06	158.955	
4,000.0	3,956.9	3,929.0	3,928.8	11.8	1.6	97.42	-1,218.9	1,670.4	2,077.2	2,064.0	13.19	157.498	
4,035.4	3,992.3	3,962.1	3,962.0	11.9	1.6	97.45	-1,219.2	1,670.3	2,077.4	2,064.1	13.25	156.815	
4,072.9	4,029.8	4,000.0	3,999.9	11.9	1.6	138.66	-1,219.5	1,670.2	2,077.6	2,067.0	10.63	195.504	
4,100.0	4,056.9	4,022.8	4,022.6	12.0	1.6	138.66	-1,219.7	1,670.1	2,077.7	2,067.1	10.68	194.470	
4,133.8	4,090.7	4,054.8	4,054.7	12.0	1.6	138.67	-1,220.0	1,670.1	2,078.0	2,067.2	10.76	193.071	
4,200.0	4,156.9	4,117.2	4,117.1	12.1	1.6	138.68	-1,220.7	1,670.0	2,078.5	2,067.5	10.92	190.418	
4,232.3	4,189.2	4,147.3	4,147.2	12.2	1.6	138.69	-1,221.0	1,670.1	2,078.7	2,067.8	10.99	189.156	
4,300.0	4,256.9	4,212.0	4,211.8	12.3	1.7	138.70	-1,221.9	1,670.1	2,079.5	2,068.3	11.15	186.572	
4,330.7	4,287.6	4,244.4	4,244.3	12.4	1.7	138.71	-1,222.3	1,670.2	2,079.8	2,068.6	11.22	185.406	
4,400.0	4,356.9	4,317.6	4,317.4	12.5	1.7	138.72	-1,223.2	1,670.2	2,080.4	2,069.1	11.38	182.821	
4,429.1	4,386.0	4,348.3	4,348.2	12.5	1.7	138.73	-1,223.5	1,670.2	2,080.7	2,069.2	11.45	181.742	
4,500.0	4,456.9	4,420.6	4,420.4	12.6	1.7	138.75	-1,224.3	1,670.1	2,081.2	2,069.5	11.62	179.177	
4,527.5	4,484.4	4,446.5	4,446.3	12.7	1.7	138.75	-1,224.5	1,670.1	2,081.4	2,069.7	11.68	178.206	
4,600.0	4,556.9	4,517.4	4,517.3	12.8	1.8	138.77	-1,225.4	1,670.0	2,082.0	2,070.1	11.85	175.701	
4,626.0	4,582.9	4,546.7	4,546.5	12.9	1.8	138.77	-1,225.7	1,670.0	2,082.2	2,070.3	11.91	174.799	
4,700.0	4,656.9	4,627.3	4,627.1	13.0	1.8	138.79	-1,226.3	1,669.9	2,082.6	2,070.5	12.09	172.283	
4,724.4	4,681.3	4,652.2	4,652.0	13.0	1.8	138.79	-1,226.5	1,669.9	2,082.6	2,070.5	12.15	171.474	
4,800.0	4,756.9	4,730.4	4,730.3	13.1	1.8	138.80	-1,226.8	1,669.9	2,082.9	2,070.5	12.32	169.015	
4,822.8	4,779.7	4,754.5	4,754.3	13.2	1.8	138.80	-1,226.9	1,669.8	2,082.9	2,070.5	12.38	168.281	
4,900.0	4,856.9	4,830.6	4,830.5	13.3	1.9	138.81	-1,227.2	1,669.6	2,083.0	2,070.4	12.56	165.887	
4,921.2	4,878.1	4,849.7	4,849.6	13.4	1.9	138.81	-1,227.3	1,669.6	2,083.1	2,070.4	12.61	165.253	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,956.9	4,922.1	4,921.9	13.5	1.9	138.81	-1,227.6	1,669.7	2,083.4	2,070.7	12.78	162.982	
5,019.7	4,976.6	4,941.2	4,941.0	13.5	1.9	138.81	-1,227.7	1,669.8	2,083.6	2,070.7	12.83	162.433	
5,100.0	5,056.9	5,016.9	5,016.7	13.7	1.9	138.81	-1,228.1	1,670.2	2,084.1	2,071.1	13.01	160.242	
5,118.1	5,075.0	5,032.5	5,032.3	13.7	1.9	138.81	-1,228.2	1,670.3	2,084.3	2,071.3	13.05	159.761	
5,200.0	5,156.9	5,100.0	5,099.8	13.8	1.9	138.81	-1,228.8	1,670.9	2,085.4	2,072.1	13.23	157.649	
5,216.5	5,173.4	5,118.5	5,118.4	13.9	1.9	138.81	-1,229.0	1,671.1	2,085.6	2,072.3	13.27	157.224	
5,300.0	5,256.9	5,196.1	5,195.9	14.0	1.9	138.81	-1,230.0	1,672.0	2,087.1	2,073.6	13.45	155.144	
5,314.9	5,271.8	5,210.0	5,209.8	14.1	2.0	138.81	-1,230.2	1,672.2	2,087.3	2,073.8	13.49	154.778	
5,400.0	5,356.9	5,289.3	5,289.1	14.2	2.0	138.81	-1,231.4	1,673.2	2,089.1	2,075.4	13.68	152.743	
5,413.4	5,370.3	5,300.0	5,299.8	14.2	2.0	138.81	-1,231.6	1,673.4	2,089.4	2,075.7	13.71	152.431	
5,500.0	5,456.9	5,383.0	5,382.8	14.4	2.0	138.81	-1,233.2	1,674.6	2,091.4	2,077.5	13.90	150.427	
5,511.8	5,468.7	5,394.1	5,393.9	14.4	2.0	138.81	-1,233.4	1,674.8	2,091.7	2,077.8	13.93	150.159	
5,600.0	5,556.9	5,475.6	5,475.3	14.6	2.0	138.82	-1,235.2	1,676.1	2,094.1	2,080.0	14.13	148.200	
5,610.2	5,567.1	5,485.0	5,484.8	14.6	2.0	138.82	-1,235.4	1,676.2	2,094.4	2,080.2	14.15	147.977	
5,700.0	5,656.9	5,563.7	5,563.4	14.7	2.1	138.83	-1,237.4	1,677.6	2,097.2	2,082.8	14.36	146.077	
5,708.6	5,665.5	5,571.2	5,570.9	14.8	2.1	138.83	-1,237.6	1,677.8	2,097.5	2,083.1	14.38	145.897	
5,800.0	5,756.9	5,650.4	5,650.0	14.9	2.1	138.84	-1,240.1	1,679.5	2,100.9	2,086.3	14.58	144.054	
5,807.1	5,764.0	5,656.6	5,656.2	14.9	2.1	138.84	-1,240.3	1,679.6	2,101.2	2,086.6	14.60	143.914	
5,900.0	5,856.9	5,741.6	5,741.1	15.1	2.1	138.87	-1,243.8	1,681.2	2,105.2	2,090.4	14.81	142.104	
5,905.5	5,862.4	5,746.9	5,746.4	15.1	2.1	138.87	-1,244.0	1,681.4	2,105.5	2,090.6	14.83	141.995	
5,971.9	5,928.8	5,810.8	5,810.3	15.3	2.1	138.88	-1,246.5	1,682.9	2,108.5	2,093.5	14.98	140.750	
6,000.0	5,956.9	5,836.8	5,836.2	15.3	2.1	-131.02	-1,247.4	1,683.6	2,110.1	2,092.9	17.20	122.711	
6,003.9	5,960.8	5,840.4	5,839.9	15.3	2.1	-131.01	-1,247.6	1,683.7	2,110.4	2,093.2	17.20	122.672	
6,050.0	6,006.7	5,882.9	5,882.3	15.4	2.2	-130.80	-1,249.2	1,684.9	2,114.9	2,097.6	17.30	122.252	
6,100.0	6,056.2	5,931.4	5,930.7	15.4	2.2	-130.50	-1,251.1	1,686.3	2,122.1	2,104.7	17.39	122.022	
6,102.3	6,058.5	5,933.8	5,933.1	15.4	2.2	-130.49	-1,251.2	1,686.4	2,122.5	2,105.1	17.39	122.019	
6,150.0	6,105.1	5,980.9	5,980.1	15.4	2.2	-130.14	-1,252.9	1,687.9	2,131.4	2,114.0	17.47	122.021	
6,200.0	6,153.0	6,030.3	6,029.5	15.5	2.2	-129.70	-1,254.6	1,689.6	2,143.0	2,125.5	17.53	122.257	
6,200.8	6,153.8	6,031.1	6,030.3	15.5	2.2	-129.69	-1,254.6	1,689.6	2,143.2	2,125.7	17.53	122.263	
6,250.0	6,199.9	6,079.1	6,078.3	15.5	2.2	-129.18	-1,256.2	1,691.2	2,156.8	2,139.2	17.57	122.723	
6,299.2	6,244.8	6,121.7	6,120.8	15.5	2.2	-128.54	-1,257.6	1,692.6	2,172.5	2,154.9	17.60	123.405	
6,300.0	6,245.5	6,122.3	6,121.4	15.5	2.2	-128.52	-1,257.6	1,692.7	2,172.7	2,155.1	17.60	123.418	
6,350.0	6,289.6	6,160.8	6,159.9	15.5	2.2	-127.70	-1,258.8	1,694.0	2,190.9	2,173.3	17.62	124.313	
6,397.6	6,329.9	6,200.0	6,199.0	15.4	2.2	-126.84	-1,260.1	1,695.5	2,210.3	2,192.6	17.64	125.269	
6,400.0	6,331.8	6,200.0	6,199.0	15.4	2.2	-126.76	-1,260.1	1,695.5	2,211.3	2,193.7	17.64	125.330	
6,450.0	6,372.2	6,235.4	6,234.4	15.4	2.2	-125.63	-1,261.3	1,696.9	2,233.8	2,216.2	17.67	126.403	
6,496.0	6,407.4	6,268.6	6,267.5	15.4	2.3	-124.45	-1,262.4	1,698.3	2,256.4	2,238.6	17.72	127.326	
6,500.0	6,410.3	6,271.3	6,270.2	15.4	2.3	-124.34	-1,262.5	1,698.4	2,258.4	2,240.7	17.73	127.407	
6,550.0	6,446.1	6,304.6	6,303.5	15.4	2.3	-122.84	-1,263.7	1,699.7	2,284.9	2,267.1	17.82	128.237	
6,594.5	6,475.9	6,331.1	6,329.9	15.4	2.3	-121.27	-1,264.6	1,700.8	2,310.1	2,292.1	17.95	128.714	
6,600.0	6,479.4	6,334.2	6,333.1	15.4	2.3	-121.06	-1,264.7	1,700.9	2,313.3	2,295.3	17.96	128.769	
6,650.0	6,510.0	6,361.3	6,360.0	15.5	2.3	-119.01	-1,265.6	1,702.0	2,343.5	2,325.3	18.18	128.879	
6,692.9	6,534.0	6,382.3	6,381.0	15.7	2.3	-117.00	-1,266.4	1,702.9	2,370.8	2,352.3	18.44	128.549	
6,700.0	6,537.8	6,385.5	6,384.3	15.7	2.3	-116.65	-1,266.5	1,703.0	2,375.4	2,356.9	18.49	128.484	
6,750.0	6,562.6	6,406.5	6,405.2	16.2	2.3	-113.92	-1,267.3	1,703.9	2,408.8	2,389.9	18.88	127.555	
6,791.3	6,580.8	6,421.0	6,419.6	16.6	2.3	-111.37	-1,267.8	1,704.5	2,437.5	2,418.2	19.29	126.337	
6,800.0	6,584.3	6,423.7	6,422.4	16.7	2.3	-110.80	-1,267.9	1,704.6	2,443.7	2,424.3	19.37	126.133	
6,850.0	6,602.9	6,438.1	6,436.8	17.3	2.3	-107.28	-1,268.5	1,705.3	2,479.8	2,459.9	19.95	124.312	
6,889.7	6,615.2	6,447.5	6,446.1	17.9	2.3	-104.18	-1,268.9	1,705.7	2,509.3	2,488.8	20.46	122.626	
6,900.0	6,618.1	6,449.6	6,448.2	18.0	2.3	-103.34	-1,268.9	1,705.8	2,517.0	2,496.4	20.59	122.219	
6,950.0	6,630.0	6,458.1	6,456.7	18.8	2.3	-99.00	-1,269.3	1,706.1	2,555.1	2,533.8	21.30	119.974	
6,988.2	6,636.8	6,462.5	6,461.1	19.5	2.3	-95.43	-1,269.5	1,706.3	2,584.7	2,562.8	21.87	118.174	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.5	6,463.5	6,462.2	19.7	2.3	-94.29	-1,269.5	1,706.4	2,594.0	2,571.9	22.05	117.649	
7,050.0	6,643.5	6,466.0	6,464.6	20.6	2.3	-89.27	-1,269.6	1,706.5	2,633.3	2,610.5	22.84	115.284	
7,086.6	6,644.9	6,465.9	6,464.5	21.3	2.3	-85.46	-1,269.6	1,706.5	2,662.4	2,638.9	23.44	113.560	
7,097.8	6,645.0	6,465.5	6,464.1	21.5	2.3	-84.27	-1,269.6	1,706.4	2,671.3	2,647.7	23.63	113.068	
7,100.0	6,645.0	6,465.4	6,464.1	21.6	2.3	-84.27	-1,269.6	1,706.4	2,673.0	2,649.4	23.67	112.941	
7,185.0	6,644.9	6,462.2	6,460.8	23.3	2.3	-84.15	-1,269.5	1,706.3	2,741.2	2,715.8	25.38	107.998	
7,200.0	6,644.9	6,461.6	6,460.2	23.6	2.3	-84.13	-1,269.4	1,706.3	2,753.3	2,727.6	25.68	107.200	
7,283.4	6,644.8	6,458.4	6,457.0	25.4	2.3	-84.02	-1,269.3	1,706.1	2,821.2	2,793.7	27.49	102.634	
7,300.0	6,644.7	6,457.7	6,456.3	25.8	2.3	-83.99	-1,269.3	1,706.1	2,834.8	2,806.9	27.85	101.803	
7,381.9	6,644.6	6,454.6	6,453.2	27.7	2.3	-83.88	-1,269.1	1,706.0	2,902.4	2,872.7	29.71	97.698	
7,400.0	6,644.6	6,453.9	6,452.5	28.1	2.3	-83.86	-1,269.1	1,705.9	2,917.5	2,887.3	30.12	96.862	
7,480.3	6,644.5	6,450.8	6,449.4	30.0	2.3	-83.75	-1,269.0	1,705.8	2,984.6	2,952.6	32.01	93.225	
7,500.0	6,644.5	6,450.1	6,448.7	30.5	2.3	-83.72	-1,269.0	1,705.8	3,001.2	2,968.7	32.48	92.402	
7,578.7	6,644.4	6,447.1	6,445.7	32.4	2.3	-83.62	-1,268.8	1,705.6	3,067.7	3,033.3	34.39	89.204	
7,600.0	6,644.4	6,446.3	6,444.9	32.9	2.3	-83.59	-1,268.8	1,705.6	3,085.8	3,050.9	34.91	88.403	
7,677.1	6,644.3	6,443.3	6,442.0	34.8	2.3	-83.49	-1,268.7	1,705.5	3,151.8	3,114.9	36.82	85.601	
7,700.0	6,644.2	6,442.5	6,441.1	35.4	2.3	-83.46	-1,268.7	1,705.4	3,171.4	3,134.0	37.39	84.829	
7,775.6	6,644.1	6,439.6	6,438.3	37.3	2.3	-83.36	-1,268.6	1,705.3	3,236.6	3,197.3	39.29	82.375	
7,800.0	6,644.1	6,438.7	6,437.3	38.0	2.3	-83.32	-1,268.5	1,705.3	3,257.8	3,217.9	39.91	81.634	
7,874.0	6,644.0	6,435.9	6,434.6	39.9	2.3	-83.23	-1,268.4	1,705.2	3,322.2	3,280.4	41.80	79.482	
7,900.0	6,644.0	6,434.9	6,433.6	40.5	2.3	-83.19	-1,268.4	1,705.1	3,344.9	3,302.4	42.46	78.774	
7,972.4	6,643.9	6,432.2	6,430.9	42.4	2.3	-83.10	-1,268.3	1,705.0	3,408.4	3,364.1	44.33	76.884	
8,000.0	6,643.9	6,431.2	6,429.9	43.1	2.3	-83.06	-1,268.2	1,705.0	3,432.7	3,387.7	45.04	76.208	
8,070.8	6,643.8	6,428.6	6,427.2	45.0	2.3	-82.97	-1,268.1	1,704.9	3,495.3	3,448.4	46.89	74.545	
8,100.0	6,643.7	6,427.5	6,426.1	45.8	2.3	-82.93	-1,268.1	1,704.8	3,521.2	3,473.5	47.65	73.901	
8,169.3	6,643.7	6,424.9	6,423.6	47.6	2.3	-82.84	-1,268.0	1,704.7	3,582.8	3,533.4	49.47	72.431	
8,200.0	6,643.6	6,423.8	6,422.4	48.4	2.3	-82.80	-1,267.9	1,704.6	3,610.3	3,560.0	50.27	71.816	
8,267.7	6,643.5	6,421.3	6,420.0	50.2	2.3	-82.71	-1,267.8	1,704.5	3,670.9	3,618.8	52.06	70.516	
8,300.0	6,643.5	6,420.1	6,418.8	51.1	2.3	-82.67	-1,267.8	1,704.5	3,699.9	3,647.0	52.91	69.929	
8,366.1	6,643.4	6,417.6	6,416.3	52.9	2.3	-82.58	-1,267.7	1,704.4	3,759.4	3,704.8	54.66	68.776	
8,400.0	6,643.4	6,416.4	6,415.1	53.8	2.3	-82.54	-1,267.7	1,704.3	3,790.0	3,734.5	55.56	68.215	
8,464.5	6,643.3	6,414.0	6,412.7	55.5	2.3	-82.46	-1,267.6	1,704.2	3,848.5	3,791.2	57.28	67.189	
8,500.0	6,643.2	6,412.7	6,411.4	56.5	2.3	-82.41	-1,267.5	1,704.2	3,880.6	3,822.4	58.22	66.653	
8,563.0	6,643.2	6,410.4	6,409.1	58.2	2.3	-82.33	-1,267.4	1,704.1	3,937.9	3,878.0	59.90	65.738	
8,600.0	6,643.1	6,409.1	6,407.8	59.2	2.3	-82.28	-1,267.4	1,704.0	3,971.7	3,910.8	60.89	65.226	
8,661.4	6,643.0	6,400.0	6,398.7	60.8	2.3	-81.96	-1,267.0	1,703.6	4,027.8	3,965.3	62.51	64.439	
8,700.0	6,643.0	6,400.0	6,398.7	61.9	2.3	-81.96	-1,267.0	1,703.6	4,063.2	3,999.6	63.54	63.942	
8,759.8	6,642.9	6,400.0	6,398.7	63.5	2.3	-81.96	-1,267.0	1,703.6	4,118.1	4,052.9	65.16	63.200	
8,800.0	6,642.9	6,400.0	6,398.7	64.6	2.3	-81.96	-1,267.0	1,703.6	4,155.1	4,088.8	66.24	62.723	
8,858.2	6,642.8	6,400.0	6,398.7	66.2	2.3	-81.96	-1,267.0	1,703.6	4,208.7	4,140.9	67.82	62.056	
8,900.0	6,642.7	6,400.0	6,398.7	67.3	2.3	-81.96	-1,267.0	1,703.6	4,247.3	4,178.3	68.95	61.598	
8,956.7	6,642.7	6,400.0	6,398.7	68.9	2.3	-81.96	-1,267.0	1,703.6	4,299.7	4,229.2	70.49	60.999	
9,000.0	6,642.6	6,394.2	6,392.9	70.1	2.3	-81.76	-1,266.8	1,703.4	4,339.9	4,268.2	71.63	60.584	
9,055.1	6,642.5	6,392.0	6,390.8	71.6	2.3	-81.68	-1,266.8	1,703.3	4,391.0	4,317.9	73.12	60.053	
9,100.0	6,642.5	6,390.3	6,389.0	72.8	2.3	-81.62	-1,266.7	1,703.2	4,432.7	4,358.4	74.33	59.637	
9,153.5	6,642.4	6,388.2	6,386.9	74.3	2.3	-81.55	-1,266.6	1,703.2	4,482.6	4,406.8	75.77	59.158	
9,200.0	6,642.4	6,386.4	6,385.1	75.6	2.3	-81.49	-1,266.5	1,703.1	4,525.9	4,448.9	77.03	58.758	
9,251.9	6,642.3	6,384.4	6,383.1	77.0	2.3	-81.42	-1,266.5	1,703.0	4,574.5	4,496.0	78.43	58.325	
9,300.0	6,642.2	6,382.5	6,381.2	78.3	2.3	-81.35	-1,266.4	1,702.9	4,619.4	4,539.7	79.73	57.940	
9,350.4	6,642.2	6,380.5	6,379.3	79.7	2.3	-81.28	-1,266.3	1,702.8	4,666.6	4,585.5	81.09	57.549	
9,400.0	6,642.1	6,378.6	6,377.4	81.1	2.3	-81.21	-1,266.3	1,702.8	4,713.1	4,630.7	82.43	57.177	
9,448.8	6,642.0	6,376.7	6,375.5	82.4	2.3	-81.15	-1,266.2	1,702.7	4,759.0	4,675.2	83.75	56.824	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,374.7	6,373.5	83.8	2.3	-81.08	-1,266.1	1,702.6	4,807.1	4,722.0	85.13	56.466	
9,547.2	6,641.9	6,372.9	6,371.7	85.1	2.3	-81.01	-1,266.1	1,702.5	4,851.6	4,765.2	86.41	56.145	
9,600.0	6,641.9	6,370.9	6,369.6	86.6	2.3	-80.94	-1,266.0	1,702.4	4,901.4	4,813.5	87.84	55.799	
9,645.6	6,641.8	6,369.1	6,367.9	87.9	2.3	-80.88	-1,265.9	1,702.4	4,944.4	4,855.4	89.07	55.509	
9,700.0	6,641.7	6,367.0	6,365.8	89.4	2.3	-80.81	-1,265.8	1,702.3	4,995.8	4,905.2	90.54	55.175	
9,744.1	6,641.7	6,365.3	6,364.1	90.6	2.3	-80.75	-1,265.8	1,702.2	5,037.5	4,945.7	91.74	54.912	
9,800.0	6,641.6	6,363.2	6,361.9	92.1	2.3	-80.67	-1,265.7	1,702.1	5,090.4	4,997.2	93.25	54.589	
9,842.5	6,641.6	6,361.5	6,360.3	93.3	2.3	-80.62	-1,265.6	1,702.0	5,130.7	5,036.3	94.40	54.351	
9,900.0	6,641.5	6,359.3	6,358.1	94.9	2.3	-80.54	-1,265.6	1,702.0	5,185.3	5,089.3	95.96	54.038	
9,940.9	6,641.4	6,357.8	6,356.6	96.0	2.3	-80.49	-1,265.5	1,701.9	5,224.2	5,127.1	97.06	53.822	
10,000.0	6,641.4	6,355.5	6,354.3	97.7	2.3	-80.41	-1,265.4	1,701.8	5,280.3	5,181.7	98.66	53.520	
10,039.3	6,641.3	6,354.0	6,352.8	98.8	2.3	-80.36	-1,265.4	1,701.7	5,317.8	5,218.0	99.73	53.324	
10,100.0	6,641.2	6,351.7	6,350.5	100.4	2.3	-80.27	-1,265.3	1,701.6	5,375.5	5,274.2	101.37	53.031	
10,137.8	6,641.2	6,350.3	6,349.0	101.5	2.3	-80.22	-1,265.2	1,701.6	5,411.5	5,309.2	102.39	52.853	
10,200.0	6,641.1	6,347.9	6,346.7	103.2	2.3	-80.14	-1,265.2	1,701.5	5,470.9	5,366.8	104.07	52.569	
10,236.2	6,641.1	6,346.5	6,345.3	104.2	2.3	-80.09	-1,265.1	1,701.4	5,505.5	5,400.4	105.05	52.408	
10,300.0	6,641.0	6,344.1	6,342.9	106.0	2.3	-80.01	-1,265.0	1,701.3	5,566.5	5,459.7	106.78	52.132	
10,334.6	6,640.9	6,342.8	6,341.6	107.0	2.3	-79.96	-1,265.0	1,701.3	5,599.6	5,491.9	107.71	51.987	
10,400.0	6,640.9	6,340.3	6,339.1	108.8	2.3	-79.88	-1,264.9	1,701.2	5,662.1	5,552.7	109.48	51.719	
10,433.0	6,640.8	6,339.0	6,337.9	109.7	2.3	-79.83	-1,264.9	1,701.1	5,693.8	5,583.4	110.37	51.587	
10,500.0	6,640.7	6,336.5	6,335.3	111.6	2.3	-79.75	-1,264.8	1,701.0	5,758.0	5,645.8	112.18	51.327	
10,531.5	6,640.7	6,335.3	6,334.1	112.4	2.3	-79.71	-1,264.7	1,701.0	5,788.2	5,675.1	113.03	51.208	
10,600.0	6,640.6	6,332.7	6,331.6	114.3	2.3	-79.62	-1,264.6	1,700.9	5,854.0	5,739.1	114.88	50.956	
10,629.9	6,640.6	6,331.6	6,330.4	115.2	2.3	-79.58	-1,264.6	1,700.8	5,882.7	5,767.0	115.69	50.849	
10,700.0	6,640.5	6,329.0	6,327.8	117.1	2.3	-79.48	-1,264.5	1,700.7	5,950.1	5,832.5	117.58	50.603	
10,728.3	6,640.4	6,327.9	6,326.7	117.9	2.3	-79.45	-1,264.5	1,700.7	5,977.3	5,859.0	118.35	50.507	
10,800.0	6,640.4	6,325.2	6,324.0	119.9	2.3	-79.35	-1,264.4	1,700.5	6,046.3	5,926.0	120.28	50.268	
10,826.7	6,640.3	6,324.2	6,323.0	120.7	2.3	-79.32	-1,264.3	1,700.5	6,072.0	5,951.0	121.00	50.181	
10,900.0	6,640.2	6,321.5	6,320.3	122.7	2.3	-79.22	-1,264.2	1,700.4	6,142.6	6,019.6	122.98	49.949	
10,925.2	6,640.2	6,320.5	6,319.4	123.4	2.3	-79.19	-1,264.2	1,700.4	6,166.9	6,043.2	123.66	49.871	
11,000.0	6,640.1	6,317.7	6,316.6	125.5	2.3	-79.10	-1,264.1	1,700.2	6,239.1	6,113.4	125.67	49.645	
11,023.6	6,640.1	6,316.8	6,315.7	126.1	2.3	-79.06	-1,264.1	1,700.2	6,261.9	6,135.5	126.31	49.576	
11,100.0	6,640.0	6,314.0	6,312.8	128.3	2.3	-78.97	-1,264.0	1,700.1	6,335.6	6,207.3	128.37	49.356	
11,122.0	6,639.9	6,313.2	6,312.0	128.9	2.3	-78.94	-1,264.0	1,700.1	6,356.9	6,228.0	128.96	49.294	
11,200.0	6,639.8	6,310.3	6,309.1	131.1	2.3	-78.84	-1,263.9	1,699.9	6,432.3	6,301.2	131.06	49.080	
11,220.4	6,639.8	6,309.5	6,308.4	131.6	2.3	-78.81	-1,263.8	1,699.9	6,452.1	6,320.5	131.61	49.025	
11,300.0	6,639.7	6,306.6	6,305.4	133.9	2.3	-78.71	-1,263.7	1,699.8	6,529.1	6,395.3	133.75	48.816	
11,318.9	6,639.7	6,305.9	6,304.7	134.4	2.3	-78.68	-1,263.7	1,699.8	6,547.3	6,413.1	134.26	48.768	
11,400.0	6,639.6	6,300.0	6,298.9	136.7	2.3	-78.48	-1,263.5	1,699.5	6,625.9	6,489.5	136.40	48.579	
11,417.3	6,639.6	6,300.0	6,298.9	137.1	2.3	-78.48	-1,263.5	1,699.5	6,642.7	6,505.8	136.87	48.533	
11,500.0	6,639.5	6,300.0	6,298.9	139.4	2.3	-78.48	-1,263.5	1,699.5	6,722.9	6,583.7	139.14	48.319	
11,515.7	6,639.5	6,300.0	6,298.9	139.9	2.3	-78.48	-1,263.5	1,699.5	6,738.1	6,598.6	139.57	48.279	
11,600.0	6,639.3	6,300.0	6,298.9	142.2	2.3	-78.48	-1,263.5	1,699.5	6,819.9	6,678.0	141.88	48.070	
11,614.1	6,639.3	6,294.8	6,293.7	142.6	2.3	-78.30	-1,263.3	1,699.3	6,833.6	6,691.5	142.18	48.062	
11,700.0	6,639.2	6,291.6	6,290.4	145.0	2.3	-78.19	-1,263.2	1,699.2	6,917.0	6,772.5	144.48	47.874	
11,712.6	6,639.2	6,291.1	6,290.0	145.4	2.3	-78.18	-1,263.2	1,699.2	6,929.2	6,784.4	144.82	47.847	
11,800.0	6,639.1	6,287.8	6,286.7	147.8	2.3	-78.06	-1,263.1	1,699.0	7,014.2	6,867.1	147.16	47.663	
11,811.0	6,639.1	6,287.4	6,286.3	148.1	2.3	-78.05	-1,263.1	1,699.0	7,024.9	6,877.5	147.46	47.640	
11,900.0	6,639.0	6,284.0	6,282.9	150.6	2.3	-77.93	-1,263.0	1,698.9	7,111.5	6,961.6	149.84	47.461	
11,909.4	6,639.0	6,283.7	6,282.6	150.9	2.3	-77.92	-1,263.0	1,698.9	7,120.7	6,970.6	150.09	47.442	
12,000.0	6,638.8	6,280.3	6,279.2	153.4	2.3	-77.80	-1,262.8	1,698.7	7,208.8	7,056.3	152.51	47.267	
12,007.8	6,638.8	6,280.0	6,278.9	153.6	2.3	-77.79	-1,262.8	1,698.7	7,216.5	7,063.8	152.72	47.252	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,276.5	6,275.4	156.2	2.3	-77.68	-1,262.7	1,698.6	7,306.2	7,151.1	155.18	47.081		
12,106.3	6,638.7	6,276.3	6,275.2	156.4	2.3	-77.67	-1,262.7	1,698.6	7,312.4	7,157.0	155.35	47.070		
12,200.0	6,638.6	6,272.8	6,271.7	159.0	2.3	-77.55	-1,262.6	1,698.4	7,403.7	7,245.9	157.85	46.903		
12,204.7	6,638.6	6,272.6	6,271.5	159.1	2.3	-77.54	-1,262.6	1,698.4	7,408.3	7,250.3	157.98	46.895		
12,300.0	6,638.5	6,269.1	6,268.0	161.8	2.3	-77.42	-1,262.5	1,698.3	7,501.3	7,340.7	160.52	46.732		
12,303.1	6,638.5	6,269.0	6,267.9	161.9	2.3	-77.42	-1,262.5	1,698.3	7,504.3	7,343.7	160.60	46.727		
12,400.0	6,638.3	6,265.4	6,264.3	164.6	2.3	-77.29	-1,262.3	1,698.1	7,598.9	7,435.7	163.18	46.567		
12,401.5	6,638.3	6,265.3	6,264.2	164.6	2.3	-77.29	-1,262.3	1,698.1	7,600.4	7,437.2	163.22	46.565		
12,500.0	6,638.2	6,261.7	6,260.6	167.4	2.3	-77.17	-1,262.2	1,698.0	7,696.5	7,530.7	165.84	46.409		
12,598.4	6,638.1	6,258.1	6,257.0	170.2	2.3	-77.04	-1,262.1	1,697.8	7,792.7	7,624.2	168.46	46.259		
12,600.0	6,638.1	6,258.0	6,256.9	170.2	2.3	-77.04	-1,262.1	1,697.8	7,794.3	7,625.8	168.50	46.257		
12,696.8	6,638.0	6,254.4	6,253.4	172.9	2.3	-76.92	-1,262.0	1,697.7	7,888.9	7,717.9	171.07	46.115		
12,700.0	6,638.0	6,254.3	6,253.3	173.0	2.3	-76.92	-1,262.0	1,697.7	7,892.0	7,720.9	171.16	46.110		
12,795.2	6,637.8	6,250.8	6,249.8	175.7	2.3	-76.80	-1,261.8	1,697.5	7,985.2	7,811.5	173.68	45.976		
12,800.0	6,637.8	6,250.7	6,249.6	175.8	2.3	-76.79	-1,261.8	1,697.5	7,989.9	7,816.0	173.81	45.969		
12,893.7	6,637.7	6,247.2	6,246.2	178.4	2.3	-76.67	-1,261.7	1,697.4	8,081.5	7,905.3	176.29	45.842		
12,900.0	6,637.7	6,247.0	6,245.9	178.6	2.3	-76.67	-1,261.7	1,697.4	8,087.7	7,911.3	176.46	45.834		
12,992.1	6,637.6	6,243.7	6,242.6	181.2	2.3	-76.55	-1,261.6	1,697.3	8,177.9	7,999.0	178.90	45.713		
13,000.0	6,637.6	6,243.4	6,242.3	181.4	2.3	-76.54	-1,261.6	1,697.2	8,185.7	8,006.6	179.11	45.703		
13,090.5	6,637.5	6,240.1	6,239.0	183.9	2.3	-76.43	-1,261.5	1,697.1	8,274.4	8,092.9	181.50	45.589		
13,100.0	6,637.5	6,239.7	6,238.7	184.2	2.3	-76.42	-1,261.5	1,697.1	8,283.6	8,101.9	181.75	45.577		
13,188.9	6,637.4	6,236.5	6,235.5	186.7	2.2	-76.31	-1,261.4	1,697.0	8,370.8	8,186.7	184.10	45.469		
13,200.0	6,637.3	6,236.1	6,235.1	187.0	2.2	-76.29	-1,261.3	1,697.0	8,381.7	8,197.3	184.39	45.456		
13,287.4	6,637.2	6,232.9	6,231.9	189.4	2.2	-76.19	-1,261.2	1,696.8	8,467.4	8,280.7	186.70	45.353		
13,300.0	6,637.2	6,232.5	6,231.4	189.8	2.2	-76.17	-1,261.2	1,696.8	8,479.7	8,292.7	187.03	45.338		
13,385.8	6,637.1	6,229.4	6,228.4	192.2	2.2	-76.07	-1,261.1	1,696.7	8,563.9	8,374.6	189.29	45.241		
13,400.0	6,637.1	6,228.9	6,227.8	192.6	2.2	-76.05	-1,261.1	1,696.7	8,577.9	8,388.2	189.67	45.226		
13,484.2	6,637.0	6,225.9	6,224.8	195.0	2.2	-75.95	-1,261.0	1,696.6	8,660.5	8,468.6	191.89	45.134		
13,500.0	6,637.0	6,225.3	6,224.3	195.4	2.2	-75.93	-1,261.0	1,696.5	8,676.0	8,483.7	192.30	45.117		
13,582.6	6,636.9	6,222.3	6,221.3	197.7	2.2	-75.83	-1,260.9	1,696.4	8,757.2	8,562.7	194.48	45.030		
13,600.0	6,636.8	6,221.7	6,220.7	198.2	2.2	-75.81	-1,260.9	1,696.4	8,774.2	8,579.3	194.93	45.012		
13,681.1	6,636.7	6,218.8	6,217.8	200.5	2.2	-75.71	-1,260.8	1,696.3	8,853.8	8,656.8	197.06	44.929		
13,700.0	6,636.7	6,218.1	6,217.1	201.0	2.2	-75.68	-1,260.7	1,696.2	8,872.4	8,674.9	197.56	44.910		
13,779.5	6,636.6	6,215.3	6,214.3	203.2	2.2	-75.59	-1,260.6	1,696.1	8,950.6	8,750.9	199.65	44.832		
13,800.0	6,636.6	6,214.6	6,213.5	203.8	2.2	-75.56	-1,260.6	1,696.1	8,970.7	8,770.5	200.18	44.812		
13,877.9	6,636.5	6,211.8	6,210.8	206.0	2.2	-75.47	-1,260.5	1,696.0	9,047.3	8,845.1	202.23	44.738		
13,900.0	6,636.5	6,211.0	6,210.0	206.6	2.2	-75.44	-1,260.5	1,696.0	9,069.0	8,866.2	202.81	44.718		
13,976.3	6,636.4	6,208.3	6,207.3	208.8	2.2	-75.35	-1,260.4	1,695.9	9,144.1	8,939.3	204.81	44.648		
14,000.0	6,636.3	6,207.5	6,206.5	209.4	2.2	-75.32	-1,260.4	1,695.8	9,167.3	8,961.9	205.42	44.626		
14,074.8	6,636.2	6,200.0	6,199.0	211.5	2.2	-75.07	-1,260.1	1,695.5	9,240.9	9,033.7	207.24	44.590		
14,100.0	6,636.2	6,200.0	6,199.0	212.2	2.2	-75.07	-1,260.1	1,695.5	9,265.7	9,057.8	207.93	44.562		
14,173.2	6,636.1	6,200.0	6,199.0	214.3	2.2	-75.07	-1,260.1	1,695.5	9,337.7	9,127.8	209.91	44.484		
14,200.0	6,636.1	6,200.0	6,199.0	215.0	2.2	-75.07	-1,260.1	1,695.5	9,364.1	9,153.5	210.64	44.455		
14,271.6	6,636.0	6,200.0	6,199.0	217.0	2.2	-75.07	-1,260.1	1,695.5	9,434.6	9,222.0	212.59	44.380		
14,300.0	6,636.0	6,200.0	6,199.0	217.8	2.2	-75.07	-1,260.1	1,695.5	9,462.6	9,249.2	213.36	44.351		
14,370.0	6,635.9	6,200.0	6,199.0	219.8	2.2	-75.07	-1,260.1	1,695.5	9,531.5	9,316.3	215.26	44.280		
14,400.0	6,635.8	6,200.0	6,199.0	220.6	2.2	-75.07	-1,260.1	1,695.5	9,561.0	9,345.0	216.07	44.250		
14,468.5	6,635.7	6,200.0	6,199.0	222.6	2.2	-75.07	-1,260.1	1,695.5	9,628.5	9,410.6	217.93	44.182		
14,500.0	6,635.7	6,200.0	6,199.0	223.4	2.2	-75.07	-1,260.1	1,695.5	9,659.5	9,440.8	218.78	44.151		
14,566.9	6,635.6	6,200.0	6,199.0	225.3	2.2	-75.07	-1,260.1	1,695.5	9,725.5	9,504.9	220.60	44.086		
14,600.0	6,635.6	6,200.0	6,199.0	226.2	2.2	-75.07	-1,260.1	1,695.5	9,758.1	9,536.6	221.50	44.055		
14,665.3	6,635.5	6,200.0	6,199.0	228.1	2.2	-75.07	-1,260.1	1,695.5	9,822.5	9,599.2	223.27	43.993		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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										Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,635.5	6,200.0	6,199.0	229.0	2.2	-75.07	-1,260.1	1,695.5	9,856.6	9,632.4	224.21	43.961		
14,763.7	6,635.4	6,200.0	6,199.0	230.8	2.2	-75.07	-1,260.1	1,695.5	9,919.5	9,693.5	225.95	43.902		
14,800.0	6,635.3	6,200.0	6,199.0	231.8	2.2	-75.07	-1,260.1	1,695.5	9,955.2	9,728.3	226.93	43.869 SF		

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	112.52	-1,163.1	2,805.6	3,037.2				
98.4	98.4	85.8	85.8	0.1	0.0	112.51	-1,162.9	2,805.6	3,037.1	3,037.0	0.10	N/A	
100.0	100.0	87.5	87.5	0.1	0.0	112.51	-1,162.9	2,805.6	3,037.1	3,037.0	0.10	N/A	
196.8	196.8	181.1	181.1	0.3	0.1	112.51	-1,162.6	2,805.5	3,036.9	3,036.5	0.40	7,678.402	
200.0	200.0	184.1	184.1	0.3	0.1	112.51	-1,162.6	2,805.5	3,036.9	3,036.5	0.41	7,488.255	
295.3	295.3	294.3	294.3	0.5	0.2	112.51	-1,162.4	2,805.3	3,036.7	3,035.9	0.74	4,115.200	
300.0	300.0	300.0	299.9	0.5	0.2	112.51	-1,162.3	2,805.3	3,036.6	3,035.9	0.75	4,023.825	
364.5	364.5	346.5	346.5	0.7	0.2	112.50	-1,162.2	2,805.2	3,036.4	3,035.5	0.91	3,329.602	
393.7	393.7	367.6	367.6	0.8	0.2	112.50	-1,162.1	2,805.3	3,036.5	3,035.5	0.98	3,088.333	
400.0	400.0	372.1	372.1	0.8	0.2	112.50	-1,162.1	2,805.3	3,036.5	3,035.5	1.00	3,040.838	
492.1	492.1	460.5	460.5	1.0	0.3	112.49	-1,161.6	2,806.1	3,037.0	3,035.7	1.26	2,409.977	
500.0	500.0	469.5	469.5	1.0	0.3	112.48	-1,161.5	2,806.1	3,037.0	3,035.7	1.28	2,363.580	
590.5	590.5	551.7	551.7	1.2	0.4	112.46	-1,160.6	2,806.9	3,037.4	3,035.9	1.55	1,964.647	
600.0	600.0	559.4	559.4	1.2	0.4	112.46	-1,160.5	2,807.0	3,037.5	3,035.9	1.57	1,931.992	
689.0	689.0	647.1	647.1	1.4	0.4	112.44	-1,159.9	2,808.1	3,038.3	3,036.5	1.83	1,663.901	
700.0	700.0	660.4	660.4	1.4	0.4	112.44	-1,159.8	2,808.2	3,038.4	3,036.5	1.86	1,634.737	
787.4	787.4	757.0	757.0	1.6	0.5	112.42	-1,159.0	2,809.1	3,038.8	3,036.7	2.11	1,440.543	
800.0	800.0	770.1	770.1	1.7	0.5	112.42	-1,158.9	2,809.2	3,038.9	3,036.7	2.15	1,416.729	
885.8	885.8	864.0	863.9	1.9	0.5	112.40	-1,158.3	2,809.8	3,039.1	3,036.7	2.39	1,274.232	
900.0	900.0	879.8	879.8	1.9	0.5	112.40	-1,158.2	2,809.8	3,039.1	3,036.7	2.42	1,253.472	
984.2	984.2	951.8	951.7	2.1	0.6	112.39	-1,157.7	2,810.2	3,039.3	3,036.7	2.65	1,148.357	
1,000.0	1,000.0	964.1	964.1	2.1	0.6	112.39	-1,157.6	2,810.3	3,039.4	3,036.7	2.69	1,130.924	
1,082.7	1,082.7	1,040.0	1,040.0	2.3	0.6	112.37	-1,156.9	2,811.2	3,040.1	3,037.2	2.91	1,045.372	
1,100.0	1,100.0	1,058.9	1,058.8	2.3	0.6	112.36	-1,156.7	2,811.4	3,040.2	3,037.2	2.96	1,028.511	
1,181.1	1,181.1	1,146.4	1,146.3	2.5	0.7	112.34	-1,156.0	2,812.4	3,040.7	3,037.5	3.18	956.839	
1,200.0	1,200.0	1,166.6	1,166.6	2.6	0.7	112.34	-1,155.9	2,812.5	3,040.8	3,037.6	3.23	941.653	
1,279.5	1,279.5	1,249.4	1,249.4	2.7	0.7	112.33	-1,155.6	2,813.0	3,041.2	3,037.7	3.44	883.066	
1,300.0	1,300.0	1,270.3	1,270.3	2.8	0.7	112.33	-1,155.5	2,813.2	3,041.3	3,037.8	3.50	869.202	
1,377.9	1,377.9	1,348.9	1,348.8	3.0	0.8	71.15	-1,155.1	2,813.6	3,041.2	3,037.5	3.65	832.937	
1,400.0	1,400.0	1,370.9	1,370.9	3.0	0.8	71.16	-1,155.0	2,813.8	3,041.1	3,037.4	3.71	820.249	
1,476.4	1,476.3	1,445.3	1,445.2	3.2	0.8	71.24	-1,154.7	2,814.2	3,040.2	3,036.3	3.90	779.582	
1,500.0	1,499.8	1,467.9	1,467.8	3.2	0.8	71.27	-1,154.7	2,814.3	3,039.8	3,035.8	3.96	767.832	
1,574.8	1,574.4	1,541.4	1,541.4	3.4	0.8	71.40	-1,154.6	2,814.8	3,038.2	3,034.0	4.15	731.772	
1,600.0	1,599.5	1,566.7	1,566.7	3.5	0.8	71.46	-1,154.6	2,814.9	3,037.5	3,033.3	4.22	720.249	
1,673.2	1,672.2	1,644.2	1,644.2	3.6	0.9	71.66	-1,154.5	2,815.3	3,035.1	3,030.6	4.41	687.544	
1,700.0	1,698.7	1,673.7	1,673.7	3.7	0.9	71.75	-1,154.4	2,815.4	3,034.0	3,029.5	4.49	676.217	
1,771.6	1,769.5	1,742.8	1,742.8	3.9	0.9	72.00	-1,154.2	2,815.7	3,030.7	3,026.0	4.69	646.113	
1,800.0	1,797.5	1,768.2	1,768.1	4.0	0.9	72.10	-1,154.1	2,815.8	3,029.3	3,024.6	4.77	634.837	
1,870.1	1,866.3	1,837.7	1,837.6	4.2	0.9	72.39	-1,153.8	2,816.3	3,025.6	3,020.6	4.99	606.108	
1,899.9	1,895.6	1,870.2	1,870.1	4.3	1.0	72.54	-1,153.6	2,816.4	3,023.8	3,018.7	5.09	594.372	
1,968.5	1,962.6	1,934.1	1,934.1	4.5	1.0	72.78	-1,153.4	2,816.7	3,019.7	3,014.3	5.32	567.792	
2,000.0	1,993.4	1,960.3	1,960.2	4.6	1.0	72.88	-1,153.3	2,816.8	3,017.8	3,012.4	5.42	556.352	
2,066.9	2,058.9	2,018.7	2,018.6	4.8	1.0	73.09	-1,153.3	2,817.3	3,014.1	3,008.5	5.66	532.356	
2,100.0	2,091.3	2,051.0	2,050.9	4.9	1.0	73.21	-1,153.3	2,817.5	3,012.3	3,006.6	5.78	520.900	
2,165.3	2,155.2	2,116.1	2,116.0	5.2	1.0	73.46	-1,153.3	2,818.0	3,008.8	3,002.8	6.03	498.919	
2,200.0	2,189.1	2,152.6	2,152.5	5.3	1.1	73.59	-1,153.4	2,818.3	3,007.0	3,000.8	6.16	487.822	
2,263.8	2,251.5	2,217.1	2,217.0	5.5	1.1	73.84	-1,153.5	2,818.6	3,003.6	2,997.1	6.41	468.226	
2,300.0	2,286.9	2,250.1	2,250.0	5.7	1.1	73.97	-1,153.6	2,818.8	3,001.6	2,995.1	6.56	457.816	
2,362.2	2,347.7	2,306.4	2,306.3	5.9	1.1	74.19	-1,154.0	2,819.0	2,998.5	2,991.7	6.80	440.636	
2,400.0	2,384.7	2,339.6	2,339.5	6.0	1.1	74.32	-1,154.3	2,819.2	2,996.6	2,989.7	6.96	430.790	
2,460.6	2,444.0	2,392.9	2,392.8	6.3	1.1	74.52	-1,154.6	2,819.7	2,993.8	2,986.6	7.20	415.627	
2,500.0	2,482.5	2,436.9	2,436.8	6.4	1.1	74.69	-1,154.9	2,820.0	2,992.0	2,984.6	7.37	406.133	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,540.3	2,505.6	2,505.5	6.7	1.1	74.96	-1,155.3	2,820.4	2,989.2	2,981.5	7.62	392.405		
2,600.0	2,580.3	2,548.0	2,547.9	6.8	1.1	75.13	-1,155.6	2,820.5	2,987.1	2,979.3	7.79	383.446		
2,657.5	2,636.5	2,607.1	2,607.0	7.1	1.2	75.37	-1,156.1	2,820.6	2,984.3	2,976.2	8.04	371.399		
2,700.0	2,678.1	2,649.5	2,649.4	7.2	1.2	75.53	-1,156.4	2,820.6	2,982.2	2,974.0	8.22	362.965		
2,755.9	2,732.8	2,704.7	2,704.6	7.5	1.2	75.75	-1,156.7	2,820.6	2,979.4	2,971.0	8.46	352.335		
2,800.0	2,776.0	2,744.9	2,744.8	7.7	1.2	75.91	-1,157.0	2,820.6	2,977.3	2,968.7	8.65	344.385		
2,854.3	2,829.1	2,794.5	2,794.4	7.9	1.2	76.11	-1,157.4	2,820.7	2,974.8	2,965.9	8.88	334.992		
2,900.0	2,873.8	2,838.3	2,838.2	8.1	1.2	76.29	-1,157.7	2,820.8	2,972.8	2,963.7	9.08	327.435		
2,952.7	2,925.4	2,889.2	2,889.0	8.3	1.2	76.49	-1,158.2	2,820.9	2,970.4	2,961.1	9.31	319.052		
3,000.0	2,971.6	2,937.7	2,937.6	8.5	1.2	76.69	-1,158.7	2,821.0	2,968.4	2,958.9	9.52	311.846		
3,051.2	3,021.6	2,991.4	2,991.2	8.7	1.2	76.91	-1,159.2	2,821.1	2,966.2	2,956.4	9.75	304.333		
3,100.0	3,069.4	3,036.1	3,036.0	8.9	1.2	77.09	-1,159.5	2,821.1	2,964.1	2,954.1	9.96	297.529		
3,149.6	3,117.9	3,080.2	3,080.1	9.1	1.2	77.27	-1,159.9	2,821.2	2,962.0	2,951.8	10.18	290.900		
3,200.0	3,167.2	3,131.1	3,130.9	9.3	1.2	77.47	-1,160.4	2,821.3	2,960.0	2,949.6	10.41	284.408		
3,248.0	3,214.2	3,184.0	3,183.9	9.5	1.2	77.69	-1,160.9	2,821.4	2,958.1	2,947.5	10.62	278.419		
3,300.0	3,265.0	3,233.4	3,233.3	9.8	1.3	77.89	-1,161.3	2,821.4	2,956.0	2,945.1	10.86	272.253		
3,346.4	3,310.5	3,274.9	3,274.7	10.0	1.3	78.06	-1,161.7	2,821.4	2,954.2	2,943.1	11.07	266.974		
3,400.0	3,362.9	3,323.3	3,323.2	10.2	1.3	78.26	-1,162.3	2,821.4	2,952.2	2,940.9	11.31	261.102		
3,444.9	3,406.7	3,364.6	3,364.4	10.4	1.3	78.43	-1,162.8	2,821.5	2,950.7	2,939.1	11.51	256.393		
3,473.0	3,434.2	3,390.4	3,390.2	10.5	1.3	78.54	-1,163.1	2,821.6	2,949.7	2,938.1	11.64	253.512		
3,500.0	3,460.7	3,417.5	3,417.4	10.6	1.3	78.63	-1,163.4	2,821.7	2,948.8	2,937.1	11.75	251.064		
3,543.3	3,503.2	3,463.5	3,463.3	10.7	1.3	78.78	-1,164.0	2,821.8	2,947.5	2,935.6	11.90	247.792		
3,600.0	3,559.0	3,518.9	3,518.8	10.9	1.3	78.95	-1,164.6	2,821.9	2,946.0	2,933.9	12.09	243.666		
3,641.7	3,600.2	3,554.3	3,554.1	11.0	1.3	79.04	-1,165.1	2,821.9	2,945.1	2,932.9	12.22	241.030		
3,700.0	3,657.9	3,604.6	3,604.4	11.2	1.3	79.17	-1,165.8	2,822.1	2,944.2	2,931.8	12.40	237.458		
3,740.1	3,697.8	3,646.3	3,646.1	11.3	1.3	79.27	-1,166.4	2,822.4	2,943.7	2,931.2	12.51	235.279		
3,800.0	3,757.3	3,707.7	3,707.5	11.4	1.4	79.39	-1,167.3	2,822.6	2,943.2	2,930.5	12.68	232.119		
3,838.6	3,795.7	3,743.9	3,743.7	11.5	1.4	79.46	-1,167.8	2,822.8	2,943.0	2,930.3	12.77	230.401		
3,878.5	3,835.5	3,781.4	3,781.2	11.6	1.4	79.52	-1,168.3	2,823.0	2,943.0	2,930.1	12.87	228.660 CC		
3,900.0	3,857.0	3,801.8	3,801.7	11.7	1.4	79.55	-1,168.6	2,823.1	2,943.0	2,930.1	12.92	227.737 ES		
3,937.0	3,893.9	3,841.6	3,841.4	11.7	1.4	79.60	-1,169.2	2,823.4	2,943.1	2,930.1	13.00	226.375		
4,000.0	3,956.9	3,908.9	3,908.7	11.8	1.4	79.66	-1,170.1	2,823.7	2,943.3	2,930.2	13.13	224.108		
4,035.4	3,992.3	3,945.4	3,945.2	11.9	1.4	79.68	-1,170.5	2,823.9	2,943.6	2,930.4	13.20	223.054		
4,072.9	4,029.8	3,984.1	3,983.9	11.9	1.4	120.89	-1,170.9	2,824.1	2,943.9	2,933.4	10.52	279.711		
4,100.0	4,056.9	4,013.8	4,013.6	12.0	1.4	120.89	-1,171.2	2,824.2	2,944.1	2,933.6	10.58	278.289		
4,133.8	4,090.7	4,053.6	4,053.4	12.0	1.4	120.90	-1,171.6	2,824.3	2,944.4	2,933.8	10.65	276.354		
4,200.0	4,156.9	4,127.9	4,127.7	12.1	1.5	120.91	-1,172.2	2,824.4	2,944.7	2,933.9	10.80	272.656		
4,232.3	4,189.2	4,161.6	4,161.4	12.2	1.5	120.91	-1,172.5	2,824.4	2,944.8	2,934.0	10.87	270.882		
4,300.0	4,256.9	4,226.1	4,225.9	12.3	1.5	120.92	-1,173.1	2,824.3	2,945.1	2,934.0	11.02	267.270		
4,330.7	4,287.6	4,251.9	4,251.7	12.4	1.5	120.93	-1,173.3	2,824.3	2,945.2	2,934.1	11.09	265.675		
4,400.0	4,356.9	4,312.9	4,312.6	12.5	1.5	120.93	-1,173.9	2,824.5	2,945.8	2,934.5	11.24	262.151		
4,429.1	4,386.0	4,343.3	4,343.1	12.5	1.5	120.94	-1,174.1	2,824.7	2,946.0	2,934.7	11.30	260.658		
4,500.0	4,456.9	4,418.2	4,418.0	12.6	1.5	120.94	-1,174.6	2,825.0	2,946.6	2,935.1	11.46	257.105		
4,527.5	4,484.4	4,448.1	4,447.9	12.7	1.5	120.94	-1,174.9	2,825.1	2,946.8	2,935.2	11.52	255.746		
4,600.0	4,556.9	4,523.5	4,523.2	12.8	1.5	120.95	-1,175.5	2,825.2	2,947.2	2,935.5	11.68	252.246		
4,626.0	4,582.9	4,548.2	4,548.0	12.9	1.6	120.96	-1,175.7	2,825.2	2,947.3	2,935.6	11.74	251.012		
4,700.0	4,656.9	4,622.3	4,622.0	13.0	1.6	120.96	-1,176.3	2,825.4	2,947.8	2,935.8	11.91	247.559		
4,724.4	4,681.3	4,650.1	4,649.8	13.0	1.6	120.97	-1,176.5	2,825.5	2,947.9	2,935.9	11.96	246.423		
4,800.0	4,756.9	4,726.5	4,726.2	13.1	1.6	120.97	-1,176.9	2,825.5	2,948.1	2,936.0	12.13	242.989		
4,822.8	4,779.7	4,745.5	4,745.3	13.2	1.6	120.98	-1,177.1	2,825.5	2,948.3	2,936.1	12.18	241.979		
4,900.0	4,856.9	4,812.3	4,812.1	13.3	1.6	120.99	-1,177.9	2,825.6	2,948.8	2,936.5	12.36	238.643		
4,921.2	4,878.1	4,834.6	4,834.4	13.4	1.6	120.99	-1,178.2	2,825.7	2,949.0	2,936.6	12.41	237.726		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,956.9	4,916.4	4,916.1	13.5	1.6	121.01	-1,179.4	2,825.8	2,949.7	2,937.1	12.58	234.391	
5,019.7	4,976.6	4,935.9	4,935.7	13.5	1.6	121.02	-1,179.7	2,825.8	2,949.8	2,937.2	12.63	233.571	
5,100.0	5,056.9	5,019.8	5,019.5	13.7	1.7	121.04	-1,180.8	2,825.8	2,950.4	2,937.6	12.81	230.275	
5,118.1	5,075.0	5,042.3	5,042.0	13.7	1.7	121.04	-1,181.1	2,825.8	2,950.6	2,937.7	12.85	229.531	
5,200.0	5,156.9	5,140.6	5,140.4	13.8	1.7	121.06	-1,182.0	2,825.5	2,950.7	2,937.7	13.04	226.242	
5,216.5	5,173.4	5,159.6	5,159.4	13.9	1.7	121.06	-1,182.0	2,825.5	2,950.7	2,937.6	13.08	225.594	
5,300.0	5,256.9	5,247.9	5,247.6	14.0	1.7	121.06	-1,182.1	2,825.2	2,950.5	2,937.2	13.27	222.347	
5,314.9	5,271.8	5,262.7	5,262.4	14.1	1.7	121.06	-1,182.1	2,825.1	2,950.4	2,937.1	13.30	221.770	
5,400.0	5,356.9	5,347.1	5,346.8	14.2	1.7	121.07	-1,182.1	2,824.8	2,950.2	2,936.6	13.49	218.616	
5,413.4	5,370.3	5,360.4	5,360.1	14.2	1.7	121.07	-1,182.0	2,824.8	2,950.2	2,936.6	13.52	218.135	
5,500.0	5,456.9	5,443.4	5,443.1	14.4	1.7	121.06	-1,181.7	2,824.8	2,950.0	2,936.2	13.72	215.061	
5,511.8	5,468.7	5,454.3	5,454.0	14.4	1.7	121.06	-1,181.7	2,824.8	2,949.9	2,936.2	13.74	214.647	
5,600.0	5,556.9	5,544.3	5,544.0	14.6	1.7	121.05	-1,181.2	2,825.0	2,949.9	2,935.9	13.94	211.587	
5,610.2	5,567.1	5,555.9	5,555.6	14.6	1.7	121.05	-1,181.2	2,825.0	2,949.9	2,935.9	13.97	211.232	
5,700.0	5,656.9	5,651.6	5,651.4	14.7	1.7	121.03	-1,180.3	2,825.1	2,949.5	2,935.4	14.17	208.163	
5,708.6	5,665.5	5,660.4	5,660.1	14.8	1.7	121.03	-1,180.2	2,825.1	2,949.5	2,935.3	14.19	207.871	
5,800.0	5,756.9	5,760.5	5,760.2	14.9	1.7	121.02	-1,179.4	2,825.0	2,949.0	2,934.6	14.40	204.830	
5,807.1	5,764.0	5,768.7	5,768.4	14.9	1.7	121.02	-1,179.3	2,825.0	2,949.0	2,934.6	14.41	204.596	
5,900.0	5,856.9	5,858.3	5,858.0	15.1	1.7	121.01	-1,178.6	2,824.6	2,948.2	2,933.6	14.62	201.609	
5,905.5	5,862.4	5,863.1	5,862.9	15.1	1.7	121.01	-1,178.6	2,824.6	2,948.2	2,933.6	14.64	201.436	
5,971.9	5,928.8	5,928.8	5,928.5	15.3	1.7	121.00	-1,177.8	2,824.6	2,947.8	2,933.0	14.79	199.354	
5,977.2	5,934.1	5,935.0	5,934.7	15.3	1.7	-149.00	-1,177.8	2,824.6	2,947.8	2,930.9	16.87	174.723	
6,000.0	5,956.9	5,961.5	5,961.2	15.3	1.7	-149.00	-1,177.4	2,824.6	2,948.1	2,931.2	16.91	174.311	
6,003.9	5,960.8	5,966.1	5,965.8	15.3	1.7	-149.00	-1,177.4	2,824.6	2,948.2	2,931.3	16.92	174.251	
6,050.0	6,006.7	6,012.7	6,012.4	15.4	1.7	-148.93	-1,176.8	2,824.4	2,950.9	2,933.9	17.01	173.507	
6,100.0	6,056.2	6,050.1	6,049.9	15.4	1.7	-148.75	-1,176.4	2,824.4	2,956.7	2,939.6	17.11	172.824	
6,102.3	6,058.5	6,051.9	6,051.6	15.4	1.7	-148.74	-1,176.4	2,824.4	2,957.1	2,940.0	17.11	172.799	
6,150.0	6,105.1	6,087.1	6,086.8	15.4	1.7	-148.45	-1,176.2	2,824.5	2,965.7	2,948.5	17.21	172.363	
6,200.0	6,153.0	6,125.1	6,124.9	15.5	1.7	-148.05	-1,176.0	2,824.7	2,977.8	2,960.6	17.29	172.193	
6,200.8	6,153.8	6,125.7	6,125.5	15.5	1.7	-148.04	-1,176.0	2,824.7	2,978.1	2,960.8	17.29	172.194	
6,250.0	6,199.9	6,163.4	6,163.1	15.5	1.7	-147.51	-1,176.0	2,824.9	2,993.0	2,975.6	17.36	172.379	
6,299.2	6,244.8	6,200.0	6,199.7	15.5	1.7	-146.85	-1,176.3	2,825.0	3,010.7	2,993.3	17.41	172.944	
6,300.0	6,245.5	6,200.0	6,199.7	15.5	1.7	-146.83	-1,176.3	2,825.0	3,011.0	2,993.6	17.41	172.959	
6,350.0	6,289.6	6,242.1	6,241.9	15.5	1.7	-146.04	-1,176.8	2,825.2	3,031.9	3,014.5	17.44	173.856	
6,397.6	6,329.9	6,280.1	6,279.8	15.4	1.7	-145.13	-1,177.3	2,825.3	3,054.3	3,036.8	17.45	175.008	
6,400.0	6,331.8	6,282.0	6,281.7	15.4	1.7	-145.08	-1,177.4	2,825.3	3,055.5	3,038.0	17.45	175.071	
6,450.0	6,372.2	6,320.6	6,320.3	15.4	1.7	-143.94	-1,177.9	2,825.5	3,081.6	3,064.1	17.46	176.502	
6,496.0	6,407.4	6,354.8	6,354.5	15.4	1.8	-142.70	-1,178.5	2,825.6	3,107.8	3,090.3	17.47	177.880	
6,500.0	6,410.3	6,357.6	6,357.3	15.4	1.8	-142.59	-1,178.5	2,825.6	3,110.2	3,092.7	17.47	178.000	
6,550.0	6,446.1	6,392.4	6,392.1	15.4	1.8	-140.98	-1,179.0	2,825.8	3,141.0	3,123.5	17.51	179.368	
6,594.5	6,475.9	6,420.7	6,420.4	15.4	1.8	-139.30	-1,179.5	2,825.9	3,170.4	3,152.8	17.59	180.266	
6,600.0	6,479.4	6,424.0	6,423.7	15.4	1.8	-139.07	-1,179.5	2,826.0	3,174.1	3,156.5	17.60	180.361	
6,650.0	6,510.0	6,452.8	6,452.5	15.5	1.8	-136.81	-1,179.9	2,826.1	3,209.2	3,191.5	17.76	180.702	
6,692.9	6,534.0	6,475.4	6,475.1	15.7	1.8	-134.52	-1,180.3	2,826.3	3,240.9	3,222.9	17.98	180.259	
6,700.0	6,537.8	6,478.9	6,478.6	15.7	1.8	-134.11	-1,180.3	2,826.3	3,246.2	3,228.2	18.02	180.135	
6,750.0	6,562.6	6,502.5	6,502.2	16.2	1.8	-130.92	-1,180.7	2,826.5	3,285.0	3,266.6	18.40	178.487	
6,791.3	6,580.8	6,523.0	6,522.7	16.6	1.8	-127.89	-1,181.0	2,826.6	3,318.1	3,299.3	18.84	176.162	
6,800.0	6,584.3	6,527.0	6,526.7	16.7	1.8	-127.20	-1,181.0	2,826.6	3,325.2	3,306.3	18.92	175.742	
6,850.0	6,602.9	6,548.0	6,547.7	17.3	1.8	-122.78	-1,181.4	2,826.7	3,366.8	3,347.2	19.56	172.123	
6,889.7	6,615.2	6,562.0	6,561.7	17.9	1.8	-118.70	-1,181.6	2,826.8	3,400.6	3,380.5	20.14	168.841	
6,900.0	6,618.1	6,565.3	6,565.0	18.0	1.8	-117.56	-1,181.6	2,826.8	3,409.5	3,389.2	20.29	168.042	
6,950.0	6,630.0	6,578.8	6,578.5	18.8	1.8	-111.47	-1,181.9	2,826.8	3,453.1	3,432.0	21.05	164.055	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,636.8	6,586.5	6,586.2	19.5	1.8	-106.20	-1,182.0	2,826.8	3,486.9	3,465.3	21.61	161.369	
7,000.0	6,638.5	6,588.5	6,588.1	19.7	1.8	-104.47	-1,182.0	2,826.8	3,497.5	3,475.7	21.77	160.685	
7,050.0	6,643.5	6,594.2	6,593.8	20.6	1.8	-96.66	-1,182.1	2,826.8	3,542.4	3,519.9	22.42	157.992	
7,086.6	6,644.9	6,595.8	6,595.5	21.3	1.8	-90.57	-1,182.2	2,826.8	3,575.4	3,552.5	22.94	155.872	
7,097.8	6,645.0	6,595.9	6,595.5	21.5	1.8	-88.66	-1,182.2	2,826.8	3,585.6	3,562.5	23.11	155.133	
7,100.0	6,645.0	6,595.9	6,595.5	21.6	1.8	-88.66	-1,182.2	2,826.8	3,587.5	3,564.4	23.16	154.936	
7,185.0	6,644.9	6,595.6	6,595.2	23.3	1.8	-88.65	-1,182.2	2,826.8	3,664.7	3,639.8	24.88	147.291	
7,200.0	6,644.9	6,595.5	6,595.2	23.6	1.8	-88.65	-1,182.2	2,826.8	3,678.3	3,653.1	25.18	146.054	
7,283.4	6,644.8	6,595.2	6,594.9	25.4	1.8	-88.64	-1,182.1	2,826.8	3,754.5	3,727.5	27.00	139.046	
7,300.0	6,644.7	6,595.2	6,594.9	25.8	1.8	-88.64	-1,182.1	2,826.8	3,769.6	3,742.2	27.36	137.768	
7,381.9	6,644.6	6,594.9	6,594.6	27.7	1.8	-88.63	-1,182.1	2,826.8	3,844.6	3,815.4	29.24	131.499	
7,400.0	6,644.6	6,594.8	6,594.5	28.1	1.8	-88.62	-1,182.1	2,826.8	3,861.3	3,831.6	29.65	130.220	
7,480.3	6,644.5	6,594.6	6,594.2	30.0	1.8	-88.61	-1,182.1	2,826.8	3,935.2	3,903.6	31.56	124.685	
7,500.0	6,644.5	6,594.5	6,594.2	30.5	1.8	-88.61	-1,182.1	2,826.8	3,953.4	3,921.3	32.03	123.429	
7,578.7	6,644.4	6,594.2	6,593.9	32.4	1.8	-88.60	-1,182.1	2,826.8	4,026.1	3,992.2	33.96	118.572	
7,600.0	6,644.4	6,594.1	6,593.8	32.9	1.8	-88.60	-1,182.1	2,826.8	4,045.8	4,011.4	34.48	117.354	
7,677.1	6,644.3	6,593.9	6,593.5	34.8	1.8	-88.59	-1,182.1	2,826.8	4,117.4	4,081.0	36.40	113.102	
7,700.0	6,644.2	6,593.8	6,593.5	35.4	1.8	-88.58	-1,182.1	2,826.8	4,138.6	4,101.7	36.98	111.929	
7,775.6	6,644.1	6,593.5	6,593.2	37.3	1.8	-88.57	-1,182.1	2,826.8	4,209.0	4,170.1	38.90	108.206	
7,800.0	6,644.1	6,593.4	6,593.1	38.0	1.8	-88.57	-1,182.1	2,826.8	4,231.8	4,192.3	39.52	107.082	
7,874.0	6,644.0	6,593.2	6,592.8	39.9	1.8	-88.56	-1,182.1	2,826.8	4,300.9	4,259.5	41.43	103.818	
7,900.0	6,644.0	6,593.1	6,592.7	40.5	1.8	-88.56	-1,182.1	2,826.8	4,325.2	4,283.1	42.10	102.742	
7,972.4	6,643.9	6,592.8	6,592.5	42.4	1.8	-88.55	-1,182.1	2,826.8	4,393.1	4,349.1	43.99	99.873	
8,000.0	6,643.9	6,592.7	6,592.4	43.1	1.8	-88.54	-1,182.1	2,826.8	4,419.0	4,374.3	44.71	98.846	
8,070.8	6,643.8	6,592.4	6,592.1	45.0	1.8	-88.53	-1,182.1	2,826.8	4,485.6	4,439.0	46.57	96.318	
8,100.0	6,643.7	6,592.3	6,592.0	45.8	1.8	-88.53	-1,182.1	2,826.8	4,513.0	4,465.6	47.34	95.336	
8,169.3	6,643.7	6,592.1	6,591.7	47.6	1.8	-88.52	-1,182.1	2,826.8	4,578.3	4,529.1	49.17	93.102	
8,200.0	6,643.6	6,591.9	6,591.6	48.4	1.8	-88.51	-1,182.1	2,826.8	4,607.2	4,557.3	49.99	92.165	
8,267.7	6,643.5	6,591.7	6,591.3	50.2	1.8	-88.50	-1,182.1	2,826.8	4,671.2	4,619.4	51.80	90.185	
8,300.0	6,643.5	6,591.5	6,591.2	51.1	1.8	-88.50	-1,182.1	2,826.8	4,701.7	4,649.1	52.66	89.289	
8,366.1	6,643.4	6,591.3	6,591.0	52.9	1.8	-88.49	-1,182.1	2,826.8	4,764.3	4,709.9	54.43	87.529	
8,400.0	6,643.4	6,591.2	6,590.8	53.8	1.8	-88.49	-1,182.1	2,826.8	4,796.5	4,741.1	55.34	86.672	
8,464.5	6,643.3	6,590.9	6,590.6	55.5	1.8	-88.48	-1,182.1	2,826.8	4,857.7	4,800.6	57.08	85.103	
8,500.0	6,643.2	6,590.8	6,590.4	56.5	1.8	-88.47	-1,182.1	2,826.8	4,891.4	4,833.3	58.04	84.282	
8,563.0	6,643.2	6,590.5	6,590.2	58.2	1.8	-88.46	-1,182.1	2,826.8	4,951.3	4,891.5	59.74	82.881	
8,600.0	6,643.1	6,590.3	6,590.0	59.2	1.8	-88.46	-1,182.1	2,826.8	4,986.5	4,925.8	60.74	82.094	
8,661.4	6,643.0	6,590.1	6,589.8	60.8	1.8	-88.45	-1,182.1	2,826.8	5,045.0	4,982.6	62.41	80.838	
8,700.0	6,643.0	6,589.9	6,589.6	61.9	1.8	-88.44	-1,182.1	2,826.8	5,081.8	5,018.4	63.46	80.084	
8,759.8	6,642.9	6,589.7	6,589.4	63.5	1.8	-88.43	-1,182.1	2,826.8	5,138.9	5,073.8	65.09	78.957	
8,800.0	6,642.9	6,589.5	6,589.2	64.6	1.8	-88.42	-1,182.0	2,826.8	5,177.3	5,111.1	66.18	78.231	
8,858.2	6,642.8	6,589.3	6,588.9	66.2	1.8	-88.41	-1,182.0	2,826.8	5,233.0	5,165.2	67.77	77.218	
8,900.0	6,642.7	6,589.1	6,588.8	67.3	1.8	-88.41	-1,182.0	2,826.8	5,273.0	5,204.1	68.91	76.520	
8,956.7	6,642.7	6,588.9	6,588.5	68.9	1.8	-88.40	-1,182.0	2,826.8	5,327.3	5,256.8	70.46	75.606	
9,000.0	6,642.6	6,588.7	6,588.3	70.1	1.8	-88.39	-1,182.0	2,826.8	5,368.8	5,297.1	71.65	74.935	
9,055.1	6,642.5	6,588.4	6,588.1	71.6	1.8	-88.38	-1,182.0	2,826.8	5,421.6	5,348.5	73.16	74.110	
9,100.0	6,642.5	6,588.2	6,587.9	72.8	1.8	-88.38	-1,182.0	2,826.8	5,464.8	5,390.4	74.39	73.463	
9,153.5	6,642.4	6,588.0	6,587.7	74.3	1.8	-88.37	-1,182.0	2,826.8	5,516.2	5,440.3	75.86	72.717	
9,200.0	6,642.4	6,587.8	6,587.5	75.6	1.8	-88.36	-1,182.0	2,826.8	5,560.9	5,483.7	77.13	72.093	
9,251.9	6,642.3	6,587.6	6,587.2	77.0	1.8	-88.35	-1,182.0	2,826.8	5,610.8	5,532.3	78.56	71.418	
9,300.0	6,642.2	6,587.3	6,587.0	78.3	1.8	-88.34	-1,182.0	2,826.8	5,657.1	5,577.2	79.89	70.815	
9,350.4	6,642.2	6,587.1	6,586.8	79.7	1.8	-88.33	-1,182.0	2,826.8	5,705.6	5,624.4	81.27	70.203	
9,400.0	6,642.1	6,586.9	6,586.6	81.1	1.8	-88.32	-1,182.0	2,826.8	5,753.5	5,670.8	82.64	69.621	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,586.7	6,586.3	82.4	1.8	-88.32	-1,182.0	2,826.8	5,800.6	5,716.6	83.99	69.065	
9,500.0	6,642.0	6,586.4	6,586.1	83.8	1.8	-88.31	-1,182.0	2,826.8	5,850.0	5,764.6	85.40	68.502	
9,547.2	6,641.9	6,586.2	6,585.9	85.1	1.8	-88.30	-1,182.0	2,826.8	5,895.6	5,808.9	86.70	67.997	
9,600.0	6,641.9	6,585.9	6,585.6	86.6	1.8	-88.29	-1,182.0	2,826.8	5,946.6	5,858.4	88.16	67.452	
9,645.6	6,641.8	6,585.7	6,585.4	87.9	1.8	-88.28	-1,182.0	2,826.8	5,990.7	5,901.3	89.42	66.993	
9,700.0	6,641.7	6,585.5	6,585.1	89.4	1.8	-88.27	-1,182.0	2,826.8	6,043.3	5,952.4	90.92	66.465	
9,744.1	6,641.7	6,585.3	6,584.9	90.6	1.8	-88.26	-1,182.0	2,826.8	6,086.0	5,993.8	92.14	66.048	
9,800.0	6,641.6	6,585.0	6,584.7	92.1	1.8	-88.25	-1,182.0	2,826.8	6,140.1	6,046.4	93.69	65.535	
9,842.5	6,641.6	6,584.8	6,584.4	93.3	1.8	-88.25	-1,182.0	2,826.8	6,181.3	6,086.4	94.87	65.156	
9,900.0	6,641.5	6,584.5	6,584.2	94.9	1.8	-88.23	-1,182.0	2,826.8	6,237.0	6,140.6	96.46	64.658	
9,940.9	6,641.4	6,584.3	6,584.0	96.0	1.8	-88.23	-1,182.0	2,826.8	6,276.7	6,179.1	97.60	64.314	
10,000.0	6,641.4	6,584.0	6,583.7	97.7	1.8	-88.22	-1,182.0	2,826.8	6,334.1	6,234.8	99.23	63.830	
10,039.3	6,641.3	6,583.8	6,583.5	98.8	1.8	-88.21	-1,182.0	2,826.8	6,372.3	6,271.9	100.32	63.516	
10,100.0	6,641.2	6,583.5	6,583.1	100.4	1.8	-88.20	-1,181.9	2,826.8	6,431.2	6,329.2	102.01	63.047	
10,137.8	6,641.2	6,583.3	6,582.9	101.5	1.8	-88.19	-1,181.9	2,826.8	6,467.9	6,364.8	103.06	62.761	
10,200.0	6,641.1	6,583.0	6,582.6	103.2	1.8	-88.18	-1,181.9	2,826.8	6,528.4	6,423.6	104.78	62.304	
10,236.2	6,641.1	6,582.8	6,582.4	104.2	1.8	-88.17	-1,181.9	2,826.8	6,563.6	6,457.8	105.79	62.045	
10,300.0	6,641.0	6,582.4	6,582.1	106.0	1.8	-88.16	-1,181.9	2,826.8	6,625.7	6,518.1	107.56	61.600	
10,334.6	6,640.9	6,582.2	6,581.9	107.0	1.8	-88.15	-1,181.9	2,826.8	6,659.4	6,550.8	108.52	61.364	
10,400.0	6,640.9	6,581.9	6,581.6	108.8	1.8	-88.14	-1,181.9	2,826.8	6,723.0	6,612.7	110.34	60.931	
10,433.0	6,640.8	6,581.7	6,581.4	109.7	1.8	-88.13	-1,181.9	2,826.8	6,755.2	6,644.0	111.26	60.717	
10,500.0	6,640.7	6,581.3	6,581.0	111.6	1.8	-88.12	-1,181.9	2,826.8	6,820.5	6,707.3	113.12	60.295	
10,531.5	6,640.7	6,581.2	6,580.8	112.4	1.8	-88.11	-1,181.9	2,826.8	6,851.1	6,737.1	113.99	60.101	
10,600.0	6,640.6	6,580.8	6,580.5	114.3	1.8	-88.10	-1,181.9	2,826.8	6,918.0	6,802.1	115.90	59.690	
10,629.9	6,640.6	6,580.6	6,580.3	115.2	1.8	-88.09	-1,181.9	2,826.8	6,947.1	6,830.4	116.73	59.514	
10,700.0	6,640.5	6,580.2	6,579.9	117.1	1.8	-88.07	-1,181.9	2,826.8	7,015.5	6,896.9	118.68	59.112	
10,728.3	6,640.4	6,580.1	6,579.7	117.9	1.8	-88.07	-1,181.9	2,826.8	7,043.2	6,923.7	119.47	58.954	
10,800.0	6,640.4	6,579.7	6,579.3	119.9	1.8	-88.05	-1,181.9	2,826.8	7,113.2	6,991.7	121.47	58.562	
10,826.7	6,640.3	6,579.5	6,579.2	120.7	1.8	-88.05	-1,181.9	2,826.8	7,139.3	7,017.1	122.21	58.419	
10,900.0	6,640.2	6,579.1	6,578.7	122.7	1.8	-88.03	-1,181.9	2,826.8	7,210.9	7,086.7	124.25	58.036	
10,925.2	6,640.2	6,578.9	6,578.6	123.4	1.8	-88.03	-1,181.9	2,826.8	7,235.5	7,110.6	124.95	57.907	
11,000.0	6,640.1	6,578.5	6,578.1	125.5	1.8	-88.01	-1,181.9	2,826.8	7,308.7	7,181.6	127.03	57.533	
11,023.6	6,640.1	6,578.3	6,578.0	126.1	1.8	-88.00	-1,181.9	2,826.8	7,331.8	7,204.1	127.69	57.417	
11,100.0	6,640.0	6,577.9	6,577.5	128.3	1.8	-87.99	-1,181.9	2,826.8	7,406.5	7,276.7	129.82	57.052	
11,122.0	6,639.9	6,577.7	6,577.4	128.9	1.8	-87.98	-1,181.8	2,826.8	7,428.1	7,297.6	130.44	56.948	
11,200.0	6,639.8	6,577.2	6,576.9	131.1	1.8	-87.96	-1,181.8	2,826.8	7,504.4	7,371.8	132.61	56.591	
11,220.4	6,639.8	6,577.1	6,576.8	131.6	1.8	-87.96	-1,181.8	2,826.8	7,524.4	7,391.3	133.18	56.499	
11,300.0	6,639.7	6,576.6	6,576.3	133.9	1.8	-87.94	-1,181.8	2,826.8	7,602.4	7,467.0	135.40	56.149	
11,318.9	6,639.7	6,576.5	6,576.2	134.4	1.8	-87.93	-1,181.8	2,826.8	7,620.8	7,484.9	135.92	56.068	
11,400.0	6,639.6	6,576.0	6,575.6	136.7	1.8	-87.91	-1,181.8	2,826.8	7,700.4	7,562.2	138.18	55.725	
11,417.3	6,639.6	6,575.9	6,575.5	137.1	1.8	-87.91	-1,181.8	2,826.8	7,717.3	7,578.6	138.67	55.654	
11,500.0	6,639.5	6,575.3	6,575.0	139.4	1.8	-87.89	-1,181.8	2,826.8	7,798.4	7,657.4	140.97	55.318	
11,515.7	6,639.5	6,575.2	6,574.9	139.9	1.8	-87.89	-1,181.8	2,826.8	7,813.8	7,672.4	141.41	55.256	
11,600.0	6,639.3	6,574.7	6,574.3	142.2	1.8	-87.87	-1,181.8	2,826.8	7,896.5	7,752.7	143.76	54.927	
11,614.1	6,639.3	6,574.6	6,574.2	142.6	1.8	-87.86	-1,181.8	2,826.8	7,910.4	7,766.2	144.16	54.873	
11,700.0	6,639.2	6,574.0	6,573.7	145.0	1.8	-87.84	-1,181.8	2,826.8	7,994.6	7,848.1	146.55	54.551	
11,712.6	6,639.2	6,573.9	6,573.6	145.4	1.8	-87.84	-1,181.8	2,826.8	8,007.0	7,860.1	146.90	54.505	
11,800.0	6,639.1	6,573.3	6,573.0	147.8	1.8	-87.81	-1,181.8	2,826.8	8,092.8	7,943.5	149.34	54.189	
11,811.0	6,639.1	6,573.2	6,572.9	148.1	1.8	-87.81	-1,181.8	2,826.8	8,103.6	7,954.0	149.65	54.150	
11,900.0	6,639.0	6,572.6	6,572.3	150.6	1.8	-87.79	-1,181.8	2,826.8	8,191.1	8,038.9	152.13	53.841	
11,909.4	6,639.0	6,572.5	6,572.2	150.9	1.8	-87.78	-1,181.8	2,826.8	8,200.3	8,047.9	152.40	53.809	
12,000.0	6,638.8	6,571.9	6,571.5	153.4	1.8	-87.76	-1,181.8	2,826.8	8,289.3	8,134.4	154.93	53.505	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,638.8	6,571.8	6,571.5	153.6	1.8	-87.76	-1,181.7	2,826.8	8,297.1	8,141.9	155.14	53.479	
12,100.0	6,638.7	6,571.1	6,570.8	156.2	1.8	-87.73	-1,181.7	2,826.8	8,387.7	8,229.9	157.72	53.182	
12,106.3	6,638.7	6,571.1	6,570.8	156.4	1.8	-87.73	-1,181.7	2,826.8	8,393.8	8,235.9	157.89	53.162	
12,200.0	6,638.6	6,570.4	6,570.1	159.0	1.8	-87.70	-1,181.7	2,826.8	8,486.0	8,325.5	160.51	52.869	
12,204.7	6,638.6	6,570.4	6,570.0	159.1	1.8	-87.70	-1,181.7	2,826.8	8,490.6	8,330.0	160.64	52.855	
12,300.0	6,638.5	6,569.6	6,569.3	161.8	1.8	-87.68	-1,181.7	2,826.8	8,584.4	8,421.1	163.30	52.568	
12,303.1	6,638.5	6,569.6	6,569.3	161.9	1.8	-87.68	-1,181.7	2,826.8	8,587.5	8,424.1	163.39	52.559	
12,400.0	6,638.3	6,568.9	6,568.5	164.6	1.8	-87.65	-1,181.7	2,826.8	8,682.8	8,516.8	166.09	52.277	
12,401.5	6,638.3	6,568.9	6,568.5	164.6	1.8	-87.65	-1,181.7	2,826.8	8,684.4	8,518.2	166.14	52.272	
12,500.0	6,638.2	6,568.1	6,567.7	167.4	1.8	-87.62	-1,181.7	2,826.8	8,781.3	8,612.4	168.89	51.995	
12,598.4	6,638.1	6,567.3	6,567.0	170.2	1.8	-87.59	-1,181.7	2,826.8	8,878.2	8,706.6	171.64	51.727	
12,600.0	6,638.1	6,567.3	6,566.9	170.2	1.8	-87.59	-1,181.7	2,826.8	8,879.8	8,708.1	171.68	51.723	
12,696.8	6,638.0	6,566.5	6,566.1	172.9	1.8	-87.56	-1,181.7	2,826.8	8,975.2	8,800.8	174.38	51.468	
12,700.0	6,638.0	6,566.4	6,566.1	173.0	1.8	-87.56	-1,181.7	2,826.8	8,978.3	8,803.9	174.47	51.460	
12,795.2	6,637.8	6,565.6	6,565.3	175.7	1.8	-87.53	-1,181.6	2,826.8	9,072.2	8,895.1	177.13	51.217	
12,800.0	6,637.8	6,565.6	6,565.3	175.8	1.8	-87.52	-1,181.6	2,826.8	9,076.9	8,899.6	177.27	51.205	
12,893.7	6,637.7	6,564.8	6,564.5	178.4	1.8	-87.49	-1,181.6	2,826.8	9,169.3	8,989.4	179.88	50.974	
12,900.0	6,637.7	6,564.7	6,564.4	178.6	1.8	-87.49	-1,181.6	2,826.8	9,175.5	8,995.5	180.06	50.958	
12,992.1	6,637.6	6,563.9	6,563.6	181.2	1.8	-87.46	-1,181.6	2,826.8	9,266.3	9,083.7	182.63	50.738	
13,000.0	6,637.6	6,563.9	6,563.5	181.4	1.8	-87.46	-1,181.6	2,826.8	9,274.1	9,091.3	182.85	50.719	
13,090.5	6,637.5	6,563.1	6,562.7	183.9	1.8	-87.43	-1,181.6	2,826.8	9,363.4	9,178.1	185.38	50.509	
13,100.0	6,637.5	6,563.0	6,562.6	184.2	1.8	-87.43	-1,181.6	2,826.8	9,372.8	9,187.1	185.65	50.488	
13,188.9	6,637.4	6,562.1	6,561.8	186.7	1.8	-87.39	-1,181.6	2,826.8	9,460.6	9,272.4	188.13	50.287	
13,200.0	6,637.3	6,562.0	6,561.7	187.0	1.8	-87.39	-1,181.6	2,826.8	9,471.5	9,283.0	188.44	50.263	
13,287.4	6,637.2	6,561.2	6,560.9	189.4	1.8	-87.36	-1,181.6	2,826.8	9,557.7	9,366.8	190.88	50.072	
13,300.0	6,637.2	6,561.1	6,560.8	189.8	1.8	-87.36	-1,181.6	2,826.8	9,570.2	9,379.0	191.23	50.045	
13,385.8	6,637.1	6,560.3	6,560.0	192.2	1.8	-87.32	-1,181.6	2,826.8	9,654.9	9,461.3	193.63	49.863	
13,400.0	6,637.1	6,560.1	6,559.8	192.6	1.8	-87.32	-1,181.6	2,826.8	9,668.9	9,474.9	194.03	49.833	
13,484.2	6,637.0	6,559.3	6,559.0	195.0	1.8	-87.29	-1,181.5	2,826.8	9,752.1	9,555.7	196.38	49.660	
13,500.0	6,637.0	6,559.2	6,558.8	195.4	1.8	-87.28	-1,181.5	2,826.8	9,767.7	9,570.9	196.82	49.628	
13,582.6	6,636.9	6,558.3	6,558.0	197.7	1.8	-87.25	-1,181.5	2,826.7	9,849.3	9,650.2	199.13	49.463	
13,600.0	6,636.8	6,558.2	6,557.8	198.2	1.8	-87.24	-1,181.5	2,826.7	9,866.5	9,666.9	199.61	49.428	
13,681.1	6,636.7	6,557.3	6,557.0	200.5	1.8	-87.21	-1,181.5	2,826.7	9,946.6	9,744.7	201.88	49.271	
13,700.0	6,636.7	6,557.1	6,556.8	201.0	1.8	-87.21	-1,181.5	2,826.7	9,965.3	9,762.9	202.40	49.234 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	11.69	286.7	59.3	293.1				
98.4	98.4	86.4	86.4	0.1	0.0	11.68	286.6	59.2	292.6	292.6	0.10	3,048.315	
100.0	100.0	88.0	88.0	0.1	0.0	11.68	286.6	59.2	292.6	292.5	0.10	2,993.076	
196.8	196.8	185.1	185.1	0.3	0.1	11.64	286.2	59.0	292.3	291.9	0.39	740.038	
200.0	200.0	188.2	188.2	0.3	0.1	11.64	286.2	59.0	292.2	291.8	0.40	721.683	
295.3	295.3	283.4	283.4	0.5	0.2	11.60	285.9	58.7	291.9	291.1	0.74	392.394	
300.0	300.0	288.1	288.1	0.5	0.2	11.60	285.9	58.7	291.8	291.1	0.76	383.576	
393.7	393.7	381.3	381.3	0.8	0.3	11.54	285.7	58.4	291.6	290.5	1.05	278.400	
400.0	400.0	387.6	387.6	0.8	0.3	11.54	285.7	58.3	291.6	290.5	1.07	273.493	
492.1	492.1	479.8	479.8	1.0	0.4	11.46	285.6	57.9	291.4	290.0	1.33	218.408	
500.0	500.0	487.7	487.7	1.0	0.4	11.45	285.6	57.8	291.4	290.0	1.36	214.719	
590.5	590.5	578.4	578.4	1.2	0.4	11.36	285.4	57.4	291.1	289.5	1.61	180.656	
600.0	600.0	587.9	587.9	1.2	0.4	11.36	285.4	57.3	291.1	289.5	1.64	177.724	
689.0	689.0	676.6	676.6	1.4	0.5	11.29	285.2	56.9	290.9	289.0	1.88	154.566	
700.0	700.0	687.6	687.6	1.4	0.5	11.28	285.2	56.9	290.8	288.9	1.91	152.119	
787.4	787.4	775.2	775.2	1.6	0.5	11.22	285.1	56.5	290.6	288.5	2.15	135.333	
800.0	800.0	787.8	787.8	1.7	0.5	11.21	285.1	56.5	290.6	288.4	2.18	133.214	
885.8	885.8	873.5	873.5	1.9	0.6	11.14	284.9	56.1	290.4	288.0	2.41	120.514	
900.0	900.0	887.6	887.6	1.9	0.6	11.13	284.9	56.0	290.4	287.9	2.45	118.651	
984.2	984.2	972.2	972.1	2.1	0.6	11.05	284.8	55.6	290.2	287.5	2.67	108.731	
1,000.0	1,000.0	988.0	988.0	2.1	0.6	11.04	284.7	55.5	290.1	287.4	2.71	107.055	
1,082.7	1,082.7	1,070.7	1,070.7	2.3	0.7	10.98	284.5	55.2	289.8	286.9	2.93	99.073	
1,100.0	1,100.0	1,088.0	1,088.0	2.3	0.7	10.97	284.5	55.1	289.8	286.8	2.97	97.550	
1,181.1	1,181.1	1,168.9	1,168.9	2.5	0.7	10.92	284.3	54.8	289.5	286.3	3.18	91.053	
1,200.0	1,200.0	1,187.7	1,187.7	2.6	0.7	10.90	284.2	54.7	289.5	286.2	3.23	89.666	
1,279.5	1,279.5	1,267.4	1,267.3	2.7	0.8	10.84	284.1	54.4	289.3	285.8	3.43	84.261	
1,300.0	1,300.0	1,287.9	1,287.9	2.8	0.8	10.82	284.0	54.3	289.2	285.7	3.49	82.970	
1,377.9	1,377.9	1,366.1	1,366.1	3.0	0.8	-30.55	283.8	53.9	288.0	284.3	3.72	77.387	
1,400.0	1,400.0	1,388.2	1,388.2	3.0	0.8	-30.64	283.8	53.8	287.3	283.6	3.78	76.029	
1,476.4	1,476.3	1,464.1	1,464.1	3.2	0.8	-31.09	283.5	53.6	283.9	279.9	3.98	71.408	
1,500.0	1,499.8	1,487.5	1,487.5	3.2	0.9	-31.26	283.5	53.6	282.5	278.5	4.04	69.995	
1,574.8	1,574.4	1,561.2	1,561.2	3.4	0.9	-31.95	283.4	53.7	277.2	272.9	4.22	65.666	
1,600.0	1,599.5	1,586.0	1,586.0	3.5	0.9	-32.22	283.4	53.8	275.0	270.8	4.28	64.232	
1,673.2	1,672.2	1,658.1	1,658.1	3.6	0.9	-33.18	283.5	54.3	268.0	263.6	4.47	59.958	
1,700.0	1,698.7	1,684.5	1,684.4	3.7	0.9	-33.60	283.6	54.5	265.1	260.6	4.54	58.416	
1,771.6	1,769.5	1,754.9	1,754.9	3.9	0.9	-34.90	284.0	55.1	256.5	251.8	4.73	54.221	
1,800.0	1,797.5	1,782.8	1,782.8	4.0	0.9	-35.50	284.1	55.4	252.8	248.0	4.81	52.583	
1,870.1	1,866.3	1,851.1	1,851.0	4.2	0.9	-37.20	284.6	56.2	242.8	237.8	5.01	48.480	
1,899.9	1,895.6	1,880.1	1,880.0	4.3	0.9	-38.02	284.8	56.6	238.2	233.2	5.09	46.770	
1,968.5	1,962.6	1,947.0	1,946.9	4.5	0.9	-39.94	285.6	57.7	227.9	222.6	5.30	43.007	
2,000.0	1,993.4	1,977.8	1,977.7	4.6	0.9	-40.88	285.9	58.2	223.2	217.8	5.39	41.384	
2,066.9	2,058.9	2,043.3	2,043.2	4.8	0.9	-42.97	286.7	59.4	213.6	208.0	5.61	38.071	
2,100.0	2,091.3	2,075.7	2,075.6	4.9	0.9	-44.05	287.2	60.1	208.9	203.2	5.72	36.546	
2,165.3	2,155.2	2,139.9	2,139.8	5.2	0.9	-46.28	288.0	61.6	200.1	194.1	5.94	33.663	
2,200.0	2,189.1	2,174.0	2,173.9	5.3	0.9	-47.53	288.5	62.5	195.5	189.4	6.07	32.219	
2,263.8	2,251.5	2,237.1	2,237.0	5.5	1.0	-49.96	289.3	64.3	187.2	180.9	6.31	29.695	
2,300.0	2,286.9	2,273.1	2,272.9	5.7	1.0	-51.43	289.7	65.3	182.7	176.2	6.45	28.337	
2,362.2	2,347.7	2,334.7	2,334.5	5.9	1.0	-54.12	290.3	67.1	174.9	168.2	6.70	26.121	
2,400.0	2,384.7	2,372.1	2,371.9	6.0	1.0	-55.88	290.6	68.2	170.3	163.5	6.85	24.856	
2,460.6	2,444.0	2,431.8	2,431.5	6.3	1.0	-58.93	290.9	69.9	163.3	156.2	7.11	22.954	
2,500.0	2,482.5	2,470.4	2,470.2	6.4	1.0	-61.07	291.0	70.8	159.0	151.7	7.29	21.816	
2,559.0	2,540.3	2,528.2	2,527.9	6.7	1.0	-64.55	291.2	72.1	153.0	145.5	7.56	20.249	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,568.2	2,567.9	6.8	1.0	-67.14	291.4	72.9	149.3	141.5	7.75	19.274	
2,657.5	2,636.5	2,624.4	2,624.1	7.1	1.0	-71.00	291.7	73.9	144.7	136.7	8.02	18.053	
2,700.0	2,678.1	2,666.2	2,665.9	7.2	1.0	-74.03	291.9	74.7	141.8	133.6	8.22	17.257	
2,755.9	2,732.8	2,720.9	2,720.6	7.5	1.0	-78.20	292.2	75.6	138.6	130.2	8.48	16.344	
2,800.0	2,776.0	2,764.0	2,763.7	7.7	1.0	-81.61	292.4	76.2	136.7	128.1	8.69	15.742	
2,854.3	2,829.1	2,817.1	2,816.8	7.9	1.1	-85.96	292.7	76.9	135.2	126.3	8.93	15.138	
2,900.0	2,873.8	2,861.9	2,861.6	8.1	1.1	-89.73	292.8	77.4	134.6	125.5	9.13	14.743	
2,923.9	2,897.2	2,885.3	2,885.0	8.2	1.1	-91.72	292.9	77.6	134.5	125.3	9.23	14.575	
2,952.7	2,925.4	2,913.6	2,913.3	8.3	1.1	-94.13	292.9	77.9	134.6	125.3	9.34	14.408	
3,000.0	2,971.6	2,960.0	2,959.7	8.5	1.1	-98.07	293.0	78.4	135.4	125.8	9.52	14.213	
3,051.2	3,021.6	3,010.2	3,009.9	8.7	1.1	-102.27	293.0	78.9	136.8	127.1	9.70	14.104	
3,100.0	3,069.4	3,057.9	3,057.6	8.9	1.1	-106.19	293.0	79.4	138.9	129.1	9.86	14.098	
3,149.6	3,117.9	3,106.4	3,106.1	9.1	1.1	-110.08	292.9	79.8	141.8	131.8	10.00	14.182	
3,200.0	3,167.2	3,155.8	3,155.5	9.3	1.1	-113.89	292.8	80.2	145.3	135.2	10.13	14.352	
3,248.0	3,214.2	3,202.8	3,202.5	9.5	1.1	-117.35	292.7	80.6	149.3	139.1	10.24	14.582	
3,300.0	3,265.0	3,253.6	3,253.3	9.8	1.2	-120.87	292.5	81.0	154.2	143.9	10.35	14.898	
3,346.4	3,310.5	3,299.0	3,298.7	10.0	1.2	-123.83	292.4	81.3	159.1	148.6	10.44	15.232	
3,400.0	3,362.9	3,351.5	3,351.1	10.2	1.2	-127.04	292.2	81.7	165.2	154.7	10.55	15.667	
3,444.9	3,406.7	3,395.4	3,395.0	10.4	1.2	-129.55	292.0	82.0	170.7	160.1	10.63	16.066	
3,473.0	3,434.2	3,422.9	3,422.6	10.5	1.2	-131.05	291.9	82.3	174.3	163.7	10.68	16.330	
3,500.0	3,460.7	3,449.5	3,449.2	10.6	1.2	-132.46	291.8	82.5	177.8	167.1	10.71	16.604	
3,543.3	3,503.2	3,492.2	3,491.8	10.7	1.2	-134.49	291.7	82.8	183.2	172.5	10.75	17.045	
3,600.0	3,559.0	3,548.0	3,547.6	10.9	1.2	-136.74	291.5	83.3	189.8	179.0	10.81	17.561	
3,641.7	3,600.2	3,589.1	3,588.8	11.0	1.2	-138.15	291.5	83.7	194.3	183.5	10.85	17.907	
3,700.0	3,657.9	3,647.0	3,646.6	11.2	1.3	-139.80	291.4	84.2	200.0	189.1	10.92	18.311	
3,740.1	3,697.8	3,686.9	3,686.6	11.3	1.3	-140.75	291.4	84.5	203.5	192.5	10.97	18.546	
3,800.0	3,757.3	3,746.5	3,746.1	11.4	1.3	-141.93	291.4	85.1	207.9	196.8	11.05	18.808	
3,838.6	3,795.7	3,784.9	3,784.5	11.5	1.3	-142.55	291.4	85.4	210.3	199.2	11.10	18.935	
3,900.0	3,857.0	3,846.2	3,845.9	11.7	1.3	-143.33	291.4	86.0	213.2	202.0	11.19	19.047	
3,937.0	3,893.9	3,883.3	3,882.9	11.7	1.3	-143.68	291.4	86.3	214.5	203.2	11.25	19.072	
4,000.0	3,956.9	3,946.4	3,946.0	11.8	1.3	-144.07	291.5	86.9	215.7	204.4	11.34	19.016	
4,035.4	3,992.3	3,981.9	3,981.6	11.9	1.3	-144.19	291.5	87.3	215.9	204.5	11.40	18.941	
4,072.9	4,029.8	4,019.5	4,019.1	11.9	1.3	-103.05	291.6	87.7	215.7	203.3	12.41	17.378	
4,100.0	4,056.9	4,046.6	4,046.2	12.0	1.4	-103.06	291.6	88.0	215.4	203.0	12.46	17.289	
4,133.8	4,090.7	4,080.4	4,080.1	12.0	1.4	-103.08	291.6	88.3	215.1	202.5	12.53	17.169	
4,200.0	4,156.9	4,146.5	4,146.1	12.1	1.4	-103.12	291.6	89.1	214.3	201.7	12.65	16.939	
4,232.3	4,189.2	4,178.6	4,178.3	12.2	1.4	-103.15	291.6	89.4	214.0	201.3	12.72	16.829	
4,300.0	4,256.9	4,246.2	4,245.8	12.3	1.4	-103.22	291.5	90.1	213.4	200.5	12.85	16.603	
4,330.7	4,287.6	4,276.8	4,276.5	12.4	1.4	-103.25	291.5	90.4	213.1	200.2	12.91	16.503	
4,400.0	4,356.9	4,346.3	4,346.0	12.5	1.4	-103.33	291.3	91.1	212.5	199.4	13.05	16.280	
4,429.1	4,386.0	4,375.6	4,375.3	12.5	1.4	-103.36	291.3	91.4	212.2	199.1	13.11	16.185	
4,500.0	4,456.9	4,446.4	4,446.0	12.6	1.5	-103.45	291.1	92.2	211.4	198.2	13.25	15.952	
4,527.5	4,484.4	4,473.8	4,473.4	12.7	1.5	-103.48	291.1	92.5	211.2	197.8	13.31	15.865	
4,600.0	4,556.9	4,546.1	4,545.7	12.8	1.5	-103.53	291.1	93.1	210.5	197.1	13.45	15.648	
4,626.0	4,582.9	4,572.1	4,571.7	12.9	1.5	-103.53	291.1	93.4	210.3	196.8	13.50	15.572	
4,700.0	4,656.9	4,646.0	4,645.6	13.0	1.5	-103.49	291.4	94.0	209.6	196.0	13.65	15.362	
4,724.4	4,681.3	4,670.3	4,670.0	13.0	1.5	-103.46	291.5	94.1	209.4	195.7	13.69	15.295	
4,800.0	4,756.9	4,745.9	4,745.5	13.1	1.5	-103.37	292.0	94.6	208.8	195.0	13.84	15.094	
4,822.8	4,779.7	4,768.8	4,768.4	13.2	1.5	-103.33	292.2	94.8	208.7	194.8	13.88	15.034	
4,900.0	4,856.9	4,846.0	4,845.6	13.3	1.6	-103.19	292.8	95.3	208.0	194.0	14.03	14.832	
4,921.2	4,878.1	4,867.3	4,866.9	13.4	1.6	-103.14	293.0	95.4	207.9	193.8	14.07	14.778	
5,000.0	4,956.9	4,946.0	4,945.5	13.5	1.6	-102.95	293.9	95.9	207.2	193.0	14.21	14.578	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,976.6	4,965.6	4,965.2	13.5	1.6	-102.90	294.1	96.0	207.0	192.8	14.25	14.529	
5,100.0	5,056.9	5,046.2	5,045.8	13.7	1.6	-102.66	295.1	96.4	206.4	192.0	14.40	14.333	
5,118.1	5,075.0	5,064.4	5,064.0	13.7	1.6	-102.60	295.3	96.6	206.2	191.8	14.43	14.287	
5,200.0	5,156.9	5,146.6	5,146.2	13.8	1.6	-102.35	296.4	97.2	205.3	190.8	14.59	14.075	
5,216.5	5,173.4	5,163.1	5,162.7	13.9	1.6	-102.30	296.6	97.4	205.2	190.5	14.62	14.032	
5,300.0	5,256.9	5,246.5	5,246.0	14.0	1.6	-102.02	297.8	98.0	204.2	189.5	14.78	13.819	
5,314.9	5,271.8	5,261.4	5,260.9	14.1	1.6	-101.97	298.0	98.2	204.1	189.3	14.81	13.782	
5,400.0	5,356.9	5,346.0	5,345.6	14.2	1.7	-101.73	299.0	98.8	203.3	188.3	14.97	13.577	
5,413.4	5,370.3	5,359.3	5,358.9	14.2	1.7	-101.69	299.1	98.9	203.2	188.2	15.00	13.546	
5,500.0	5,456.9	5,445.8	5,445.4	14.4	1.7	-101.41	300.2	99.3	202.5	187.4	15.17	13.355	
5,511.8	5,468.7	5,457.7	5,457.2	14.4	1.7	-101.37	300.4	99.3	202.5	187.3	15.19	13.329	
5,600.0	5,556.9	5,546.0	5,545.5	14.6	1.7	-101.06	301.6	99.8	201.8	186.4	15.36	13.134	
5,610.2	5,567.1	5,556.2	5,555.7	14.6	1.7	-101.02	301.7	99.9	201.7	186.3	15.38	13.112	
5,700.0	5,656.9	5,645.7	5,645.2	14.7	1.7	-100.68	303.0	100.3	201.0	185.4	15.56	12.920	
5,708.6	5,665.5	5,654.3	5,653.8	14.8	1.7	-100.65	303.2	100.3	200.9	185.4	15.57	12.902	
5,800.0	5,756.9	5,745.6	5,745.1	14.9	1.7	-100.35	304.3	100.7	200.4	184.7	15.75	12.720	
5,807.1	5,764.0	5,752.7	5,752.2	14.9	1.7	-100.33	304.4	100.7	200.4	184.6	15.77	12.706	
5,900.0	5,856.9	5,845.4	5,844.9	15.1	1.8	-100.07	305.4	101.1	199.8	183.8	15.96	12.520	
5,905.5	5,862.4	5,850.8	5,850.3	15.1	1.8	-100.06	305.4	101.1	199.8	183.8	15.97	12.510	
5,971.9	5,928.8	5,916.8	5,916.3	15.3	1.8	-99.90	306.0	101.2	199.5	183.4	16.10	12.391	
6,000.0	5,956.9	5,944.8	5,944.3	15.3	1.8	-9.87	306.2	101.3	198.9	183.2	15.77	12.618	
6,003.9	5,960.8	5,948.7	5,948.2	15.3	1.8	-9.88	306.2	101.3	198.8	183.0	15.77	12.602	
6,050.0	6,006.7	5,994.5	5,994.0	15.4	1.8	-10.00	306.6	101.3	195.2	179.4	15.85	12.313	
6,100.0	6,056.2	6,044.0	6,043.5	15.4	1.8	-10.38	306.9	101.3	188.1	172.1	15.95	11.791	
6,102.3	6,058.5	6,046.3	6,045.8	15.4	1.8	-10.41	307.0	101.3	187.7	171.7	15.96	11.761	
6,150.0	6,105.1	6,092.9	6,092.4	15.4	1.8	-11.07	307.2	101.3	177.6	161.5	16.04	11.068	
6,200.0	6,153.0	6,140.7	6,140.2	15.5	1.8	-12.15	307.5	101.3	163.8	147.6	16.11	10.165	
6,200.8	6,153.8	6,141.4	6,140.9	15.5	1.8	-12.17	307.5	101.3	163.5	147.4	16.11	10.149	
6,250.0	6,199.9	6,187.3	6,186.8	15.5	1.8	-13.80	307.7	101.3	146.8	130.7	16.14	9.098	
6,299.2	6,244.8	6,232.3	6,231.8	15.5	1.8	-16.32	307.9	101.2	127.3	111.2	16.12	7.894	
6,300.0	6,245.5	6,233.0	6,232.5	15.5	1.8	-16.37	307.9	101.2	126.9	110.8	16.12	7.873	
6,350.0	6,289.6	6,277.2	6,276.7	15.5	1.8	-20.61	308.1	101.2	104.2	88.2	16.05	6.492	
6,397.6	6,329.9	6,317.5	6,317.0	15.4	1.8	-27.71	308.2	101.2	80.4	64.5	15.95	5.041	
6,400.0	6,331.8	6,319.5	6,319.0	15.4	1.8	-28.19	308.2	101.2	79.2	63.3	15.95	4.966	
6,450.0	6,372.2	6,359.7	6,359.2	15.4	1.8	-43.56	308.3	101.2	53.5	37.5	15.95	3.351	
6,496.0	6,407.4	6,394.9	6,394.4	15.4	1.8	-72.92	308.3	101.2	34.6	18.4	16.20	2.134	
6,500.0	6,410.3	6,397.8	6,397.3	15.4	1.8	-76.26	308.3	101.2	33.7	17.4	16.22	2.075	
6,515.4	6,421.6	6,409.1	6,408.6	15.4	1.8	-89.86	308.3	101.2	32.0	15.6	16.40	1.950 CC, ES, SF	
6,550.0	6,446.1	6,433.5	6,433.0	15.4	1.8	-117.68	308.3	101.3	40.2	22.8	17.39	2.312	
6,594.5	6,475.9	6,463.1	6,462.6	15.4	1.9	-139.03	308.3	101.3	65.8	48.3	17.58	3.745	
6,600.0	6,479.4	6,466.6	6,466.1	15.4	1.9	-140.76	308.2	101.4	69.6	52.0	17.55	3.965	
6,650.0	6,510.0	6,496.9	6,496.4	15.5	1.9	-151.30	308.2	101.5	106.4	89.2	17.20	6.186	
6,692.9	6,534.0	6,520.7	6,520.1	15.7	1.9	-156.05	308.1	101.6	140.8	123.9	16.93	8.320	
6,700.0	6,537.8	6,524.4	6,523.9	15.7	1.9	-156.61	308.1	101.6	146.7	129.8	16.89	8.688	
6,750.0	6,562.6	6,549.0	6,548.4	16.2	1.9	-159.37	308.0	101.8	189.5	172.8	16.67	11.363	
6,791.3	6,580.8	6,566.9	6,566.4	16.6	1.9	-160.48	307.9	101.9	226.2	209.6	16.59	13.639	
6,800.0	6,584.3	6,570.4	6,569.9	16.7	1.9	-160.60	307.9	101.9	234.1	217.5	16.57	14.129	
6,850.0	6,602.9	6,588.7	6,588.2	17.3	1.9	-160.64	307.8	102.0	280.2	263.6	16.61	16.875	
6,889.7	6,615.2	6,600.9	6,600.4	17.9	1.9	-159.78	307.8	102.1	317.9	301.1	16.79	18.928	
6,900.0	6,618.1	6,603.7	6,603.2	18.0	1.9	-159.41	307.7	102.1	327.7	310.8	16.87	19.427	
6,950.0	6,630.0	6,615.4	6,614.9	18.8	1.9	-156.29	307.7	102.2	376.1	358.6	17.50	21.485	
6,988.2	6,636.8	6,622.0	6,621.5	19.5	1.9	-151.51	307.7	102.2	413.6	395.1	18.47	22.394	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.5	6,623.7	6,623.2	19.7	1.9	-149.28	307.7	102.2	425.2	406.3	18.90	22.502	
7,050.0	6,643.5	6,628.5	6,628.0	20.6	1.9	-131.13	307.6	102.2	474.9	453.1	21.78	21.807	
7,086.6	6,644.9	6,629.8	6,629.3	21.3	1.9	-98.16	307.6	102.2	511.4	488.2	23.15	22.092	
7,097.8	6,645.0	6,629.8	6,629.3	21.5	1.9	-84.09	307.6	102.2	522.6	499.5	23.09	22.636	
7,100.0	6,645.0	6,629.8	6,629.3	21.6	1.9	-84.07	307.6	102.2	524.7	501.6	23.13	22.688	
7,185.0	6,644.9	6,629.2	6,628.7	23.3	1.9	-83.14	307.6	102.2	609.6	584.8	24.84	24.542	
7,200.0	6,644.9	6,629.1	6,628.6	23.6	1.9	-82.98	307.6	102.2	624.6	599.4	25.14	24.844	
7,283.4	6,644.8	6,628.6	6,628.1	25.4	1.9	-82.07	307.6	102.2	707.9	681.0	26.93	26.283	
7,300.0	6,644.7	6,628.5	6,628.0	25.8	1.9	-81.89	307.6	102.2	724.4	697.2	27.29	26.547	
7,381.9	6,644.6	6,628.0	6,627.5	27.7	1.9	-80.99	307.6	102.2	806.2	777.1	29.13	27.676	
7,400.0	6,644.6	6,627.9	6,627.4	28.1	1.9	-80.80	307.6	102.2	824.3	794.8	29.54	27.908	
7,480.3	6,644.5	6,627.4	6,626.9	30.0	1.9	-79.92	307.6	102.2	904.6	873.2	31.40	28.807	
7,500.0	6,644.5	6,627.2	6,626.7	30.5	1.9	-79.71	307.6	102.2	924.3	892.4	31.86	29.013	
7,578.7	6,644.4	6,626.7	6,626.2	32.4	1.9	-78.85	307.6	102.2	1,003.0	969.2	33.72	29.742	
7,600.0	6,644.4	6,626.6	6,626.1	32.9	1.9	-78.62	307.6	102.2	1,024.2	990.0	34.22	29.927	
7,677.1	6,644.3	6,626.1	6,625.6	34.8	1.9	-77.79	307.6	102.2	1,101.3	1,065.3	36.08	30.528	
7,700.0	6,644.2	6,626.0	6,625.4	35.4	1.9	-77.54	307.6	102.2	1,124.2	1,087.6	36.62	30.697	
7,775.6	6,644.1	6,625.5	6,625.0	37.3	1.9	-76.73	307.6	102.2	1,199.7	1,161.3	38.45	31.204	
7,800.0	6,644.1	6,625.3	6,624.8	38.0	1.9	-76.47	307.6	102.2	1,224.1	1,185.1	39.03	31.360	
7,874.0	6,644.0	6,624.8	6,624.3	39.9	1.9	-75.67	307.7	102.2	1,298.1	1,257.3	40.83	31.795	
7,900.0	6,644.0	6,624.7	6,624.1	40.5	1.9	-75.40	307.7	102.2	1,324.1	1,282.6	41.45	31.942	
7,972.4	6,643.9	6,624.2	6,623.7	42.4	1.9	-74.62	307.7	102.2	1,396.5	1,353.3	43.21	32.322	
8,000.0	6,643.9	6,624.0	6,623.5	43.1	1.9	-74.33	307.7	102.2	1,424.1	1,380.2	43.87	32.463	
8,070.8	6,643.8	6,623.5	6,623.0	45.0	1.9	-73.58	307.7	102.2	1,494.9	1,449.3	45.57	32.801	
8,100.0	6,643.7	6,623.4	6,622.8	45.8	1.9	-73.27	307.7	102.2	1,524.0	1,477.8	46.27	32.937	
8,169.3	6,643.7	6,622.9	6,622.4	47.6	1.9	-72.55	307.7	102.2	1,593.3	1,545.4	47.93	33.243	
8,200.0	6,643.6	6,622.7	6,622.2	48.4	1.9	-72.22	307.7	102.2	1,624.0	1,575.4	48.66	33.376	
8,267.7	6,643.5	6,622.3	6,621.7	50.2	1.9	-71.52	307.7	102.2	1,691.7	1,641.4	50.26	33.658	
8,300.0	6,643.5	6,622.0	6,621.5	51.1	1.9	-71.18	307.7	102.2	1,724.0	1,673.0	51.02	33.790	
8,366.1	6,643.4	6,621.6	6,621.1	52.9	1.9	-70.50	307.7	102.2	1,790.1	1,737.5	52.57	34.051	
8,400.0	6,643.4	6,621.4	6,620.9	53.8	1.9	-70.15	307.7	102.2	1,824.0	1,770.6	53.36	34.184	
8,464.5	6,643.3	6,621.0	6,620.4	55.5	1.9	-69.48	307.7	102.2	1,888.5	1,833.7	54.85	34.430	
8,500.0	6,643.2	6,620.7	6,620.2	56.5	1.9	-69.12	307.7	102.2	1,924.0	1,868.3	55.66	34.564	
8,563.0	6,643.2	6,620.3	6,619.8	58.2	1.9	-68.48	307.7	102.2	1,986.9	1,929.8	57.10	34.797	
8,600.0	6,643.1	6,620.1	6,619.5	59.2	1.9	-68.11	307.7	102.2	2,023.9	1,966.0	57.94	34.934	
8,661.4	6,643.0	6,619.6	6,619.1	60.8	1.9	-67.49	307.7	102.2	2,085.3	2,026.0	59.31	35.158	
8,700.0	6,643.0	6,619.4	6,618.9	61.9	1.9	-67.10	307.7	102.2	2,123.9	2,063.8	60.17	35.298	
8,759.8	6,642.9	6,619.0	6,618.5	63.5	1.9	-66.51	307.7	102.2	2,183.7	2,122.3	61.49	35.513	
8,800.0	6,642.9	6,618.7	6,618.2	64.6	1.9	-66.11	307.7	102.2	2,223.9	2,161.5	62.37	35.658	
8,858.2	6,642.8	6,618.3	6,617.8	66.2	1.9	-65.53	307.7	102.2	2,282.2	2,218.5	63.63	35.866	
8,900.0	6,642.7	6,618.0	6,617.5	67.3	1.9	-65.12	307.7	102.2	2,323.9	2,259.4	64.52	36.016	
8,956.7	6,642.7	6,617.7	6,617.1	68.9	1.9	-64.57	307.7	102.2	2,380.6	2,314.8	65.73	36.219	
9,000.0	6,642.6	6,617.4	6,616.9	70.1	1.9	-64.15	307.7	102.2	2,423.9	2,357.3	66.64	36.374	
9,055.1	6,642.5	6,617.0	6,616.5	71.6	1.9	-63.62	307.7	102.2	2,479.0	2,411.2	67.78	36.572	
9,100.0	6,642.5	6,616.7	6,616.2	72.8	1.9	-63.19	307.7	102.2	2,523.9	2,455.2	68.71	36.734	
9,153.5	6,642.4	6,616.3	6,615.8	74.3	1.9	-62.68	307.7	102.2	2,577.4	2,507.6	69.80	36.927	
9,200.0	6,642.4	6,616.0	6,615.5	75.6	1.9	-62.24	307.7	102.2	2,623.9	2,553.1	70.73	37.095	
9,251.9	6,642.3	6,615.6	6,615.1	77.0	1.9	-61.75	307.7	102.2	2,675.8	2,604.0	71.77	37.284	
9,300.0	6,642.2	6,615.3	6,614.8	78.3	1.9	-61.31	307.7	102.2	2,723.9	2,651.1	72.71	37.460	
9,350.4	6,642.2	6,615.0	6,614.5	79.7	1.9	-60.84	307.7	102.2	2,774.2	2,700.5	73.69	37.645	
9,400.0	6,642.1	6,614.6	6,614.1	81.1	1.9	-60.38	307.7	102.1	2,823.9	2,749.2	74.65	37.829	
9,448.8	6,642.0	6,614.3	6,613.8	82.4	1.9	-59.94	307.7	102.1	2,872.6	2,797.1	75.57	38.011	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,613.9	6,613.4	83.8	1.9	-59.47	307.7	102.1	2,923.8	2,847.3	76.54	38.202	
9,547.2	6,641.9	6,613.6	6,613.1	85.1	1.9	-59.05	307.7	102.1	2,971.1	2,893.7	77.41	38.380	
9,600.0	6,641.9	6,613.2	6,612.7	86.6	1.9	-58.58	307.7	102.1	3,023.8	2,945.5	78.38	38.581	
9,645.6	6,641.8	6,612.9	6,612.4	87.9	1.9	-58.17	307.7	102.1	3,069.5	2,990.3	79.20	38.755	
9,700.0	6,641.7	6,612.6	6,612.0	89.4	1.9	-57.69	307.7	102.1	3,123.8	3,043.7	80.17	38.964	
9,744.1	6,641.7	6,612.2	6,611.7	90.6	1.9	-57.31	307.7	102.1	3,167.9	3,086.9	80.95	39.135	
9,800.0	6,641.6	6,611.9	6,611.3	92.1	1.9	-56.82	307.7	102.1	3,223.8	3,141.9	81.92	39.353	
9,842.5	6,641.6	6,611.6	6,611.0	93.3	1.9	-56.45	307.7	102.1	3,266.3	3,183.7	82.65	39.520	
9,900.0	6,641.5	6,611.2	6,610.6	94.9	1.9	-55.96	307.7	102.1	3,323.8	3,240.2	83.62	39.747	
9,940.9	6,641.4	6,610.9	6,610.4	96.0	1.9	-55.62	307.7	102.1	3,364.7	3,280.4	84.31	39.910	
10,000.0	6,641.4	6,610.4	6,609.9	97.7	1.9	-55.12	307.7	102.1	3,423.8	3,338.5	85.28	40.147	
10,039.3	6,641.3	6,610.2	6,609.7	98.8	1.9	-54.79	307.7	102.1	3,463.2	3,377.2	85.92	40.306	
10,100.0	6,641.2	6,609.7	6,609.2	100.4	1.9	-54.29	307.7	102.1	3,523.8	3,436.9	86.89	40.554	
10,137.8	6,641.2	6,609.5	6,609.0	101.5	1.9	-53.98	307.7	102.1	3,561.6	3,474.1	87.49	40.708	
10,200.0	6,641.1	6,609.0	6,608.5	103.2	1.9	-53.47	307.7	102.1	3,623.8	3,535.3	88.46	40.966	
10,236.2	6,641.1	6,608.8	6,608.3	104.2	1.9	-53.18	307.7	102.1	3,660.0	3,571.0	89.02	41.116	
10,300.0	6,641.0	6,608.3	6,607.8	106.0	1.9	-52.67	307.7	102.1	3,723.8	3,633.8	89.98	41.383	
10,334.6	6,640.9	6,608.1	6,607.6	107.0	1.9	-52.39	307.7	102.1	3,758.4	3,667.9	90.50	41.529	
10,400.0	6,640.9	6,607.6	6,607.1	108.8	1.9	-51.88	307.7	102.1	3,823.8	3,732.3	91.46	41.807	
10,433.0	6,640.8	6,607.4	6,606.9	109.7	1.9	-51.62	307.7	102.1	3,856.8	3,764.9	91.94	41.948	
10,500.0	6,640.7	6,606.9	6,606.4	111.6	1.9	-51.10	307.7	102.1	3,923.8	3,830.9	92.90	42.237	
10,531.5	6,640.7	6,606.7	6,606.1	112.4	1.9	-50.86	307.7	102.1	3,955.2	3,861.9	93.34	42.373	
10,600.0	6,640.6	6,606.2	6,605.6	114.3	1.9	-50.34	307.7	102.1	4,023.8	3,929.5	94.30	42.672	
10,629.9	6,640.6	6,605.9	6,605.4	115.2	1.9	-50.11	307.7	102.1	4,053.7	3,959.0	94.70	42.803	
10,700.0	6,640.5	6,605.4	6,604.9	117.1	1.9	-49.59	307.7	102.1	4,123.8	4,028.1	95.65	43.113	
10,728.3	6,640.4	6,605.2	6,604.7	117.9	1.9	-49.38	307.7	102.1	4,152.1	4,056.1	96.03	43.239	
10,800.0	6,640.4	6,604.7	6,604.2	119.9	1.9	-48.85	307.7	102.1	4,223.8	4,126.8	96.96	43.560	
10,826.7	6,640.3	6,604.5	6,604.0	120.7	1.9	-48.65	307.7	102.1	4,250.5	4,153.2	97.31	43.680	
10,900.0	6,640.2	6,604.0	6,603.5	122.7	1.9	-48.13	307.7	102.1	4,323.8	4,225.5	98.24	44.012	
10,925.2	6,640.2	6,603.8	6,603.3	123.4	1.9	-47.95	307.7	102.1	4,348.9	4,250.4	98.56	44.126	
11,000.0	6,640.1	6,603.2	6,602.7	125.5	1.9	-47.42	307.7	102.1	4,423.7	4,324.3	99.48	44.469	
11,023.6	6,640.1	6,603.1	6,602.6	126.1	1.9	-47.25	307.7	102.1	4,447.3	4,347.6	99.77	44.578	
11,100.0	6,640.0	6,602.5	6,602.0	128.3	1.9	-46.72	307.7	102.1	4,523.7	4,423.1	100.68	44.932	
11,122.0	6,639.9	6,602.3	6,601.8	128.9	1.9	-46.57	307.7	102.1	4,545.8	4,444.8	100.94	45.034	
11,200.0	6,639.8	6,601.8	6,601.3	131.1	1.9	-46.03	307.7	102.1	4,623.7	4,521.9	101.85	45.399	
11,220.4	6,639.8	6,601.6	6,601.1	131.6	1.9	-45.89	307.7	102.1	4,644.2	4,542.1	102.08	45.496	
11,300.0	6,639.7	6,601.0	6,600.5	133.9	1.9	-45.36	307.7	102.1	4,723.7	4,620.8	102.98	45.872	
11,318.9	6,639.7	6,600.9	6,600.4	134.4	1.9	-45.23	307.8	102.1	4,742.6	4,639.4	103.19	45.962	
11,400.0	6,639.6	6,600.3	6,599.8	136.7	1.9	-44.70	307.8	102.1	4,823.7	4,719.7	104.07	46.350	
11,417.3	6,639.6	6,600.1	6,599.6	137.1	1.9	-44.59	307.8	102.1	4,841.0	4,736.8	104.26	46.433	
11,500.0	6,639.5	6,599.6	6,599.1	139.4	1.9	-44.09	307.8	102.1	4,923.7	4,818.5	105.19	46.807	
11,515.7	6,639.5	6,599.5	6,599.0	139.9	1.9	-44.00	307.8	102.1	4,939.4	4,834.1	105.37	46.877	
11,600.0	6,639.3	6,598.9	6,598.4	142.2	1.9	-43.51	307.8	102.1	5,023.7	4,917.4	106.32	47.253	
11,614.1	6,639.3	6,598.8	6,598.3	142.6	1.9	-43.43	307.8	102.1	5,037.9	4,931.4	106.47	47.316	
11,700.0	6,639.2	6,598.2	6,597.7	145.0	1.9	-42.95	307.8	102.1	5,123.7	5,016.3	107.41	47.700	
11,712.6	6,639.2	6,598.1	6,597.6	145.4	1.9	-42.88	307.8	102.1	5,136.3	5,028.7	107.55	47.757	
11,800.0	6,639.1	6,597.5	6,597.0	147.8	1.9	-42.39	307.8	102.1	5,223.7	5,115.2	108.49	48.150	
11,811.0	6,639.1	6,597.5	6,596.9	148.1	1.9	-42.33	307.8	102.1	5,234.7	5,126.1	108.61	48.199	
11,900.0	6,639.0	6,596.8	6,596.3	150.6	1.9	-41.85	307.8	102.1	5,323.7	5,214.2	109.54	48.601	
11,909.4	6,639.0	6,596.8	6,596.3	150.9	1.9	-41.80	307.8	102.1	5,333.1	5,223.5	109.64	48.643	
12,000.0	6,638.8	6,596.2	6,595.6	153.4	1.9	-41.32	307.8	102.0	5,423.7	5,313.1	110.57	49.053	
12,007.8	6,638.8	6,596.1	6,595.6	153.6	1.9	-41.28	307.8	102.0	5,431.6	5,320.9	110.65	49.089	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,595.5	6,595.0	156.2	1.9	-40.80	307.8	102.0	5,523.7	5,412.1	111.57	49.507		
12,106.3	6,638.7	6,595.4	6,594.9	156.4	1.9	-40.76	307.8	102.0	5,530.0	5,418.3	111.64	49.536		
12,200.0	6,638.6	6,594.8	6,594.3	159.0	1.9	-40.29	307.8	102.0	5,623.7	5,511.1	112.56	49.963		
12,204.7	6,638.6	6,594.8	6,594.3	159.1	1.9	-40.26	307.8	102.0	5,628.4	5,515.8	112.60	49.984		
12,300.0	6,638.5	6,594.1	6,593.6	161.8	1.9	-39.79	307.8	102.0	5,723.7	5,610.2	113.52	50.419		
12,303.1	6,638.5	6,594.1	6,593.6	161.9	1.9	-39.77	307.8	102.0	5,726.8	5,613.3	113.55	50.433		
12,400.0	6,638.3	6,593.4	6,592.9	164.6	1.9	-39.30	307.8	102.0	5,823.7	5,709.2	114.47	50.876		
12,401.5	6,638.3	6,593.4	6,592.9	164.6	1.9	-39.29	307.8	102.0	5,825.2	5,710.8	114.48	50.883		
12,500.0	6,638.2	6,592.8	6,592.2	167.4	1.9	-38.82	307.8	102.0	5,923.7	5,808.3	115.39	51.335		
12,598.4	6,638.1	6,592.1	6,591.6	170.2	1.9	-38.35	307.8	102.0	6,022.1	5,905.8	116.29	51.786		
12,600.0	6,638.1	6,592.1	6,591.6	170.2	1.9	-38.35	307.8	102.0	6,023.7	5,907.4	116.30	51.794		
12,696.8	6,638.0	6,591.4	6,590.9	172.9	1.9	-37.90	307.8	102.0	6,120.5	6,003.3	117.16	52.239		
12,700.0	6,638.0	6,591.4	6,590.9	173.0	1.9	-37.89	307.8	102.0	6,123.7	6,006.5	117.19	52.253		
12,795.2	6,637.8	6,590.7	6,590.2	175.7	1.9	-37.46	307.8	102.0	6,218.9	6,100.9	118.02	52.692		
12,800.0	6,637.8	6,590.7	6,590.2	175.8	1.9	-37.43	307.8	102.0	6,223.7	6,105.6	118.07	52.714		
12,893.7	6,637.7	6,590.1	6,589.6	178.4	1.9	-37.02	307.8	102.0	6,317.3	6,198.5	118.87	53.145		
12,900.0	6,637.7	6,590.0	6,589.5	178.6	1.9	-36.99	307.8	102.0	6,323.7	6,204.7	118.92	53.174		
12,992.1	6,637.6	6,589.4	6,588.9	181.2	1.9	-36.59	307.8	102.0	6,415.8	6,296.1	119.70	53.599		
13,000.0	6,637.6	6,589.3	6,588.8	181.4	1.9	-36.56	307.8	102.0	6,423.7	6,303.9	119.77	53.635		
13,090.5	6,637.5	6,588.7	6,588.2	183.9	1.9	-36.17	307.8	102.0	6,514.2	6,393.7	120.52	54.053		
13,100.0	6,637.5	6,588.7	6,588.1	184.2	1.9	-36.13	307.8	102.0	6,523.7	6,403.1	120.59	54.096		
13,188.9	6,637.4	6,588.0	6,587.5	186.7	1.9	-35.76	307.8	102.0	6,612.6	6,491.3	121.32	54.506		
13,200.0	6,637.3	6,588.0	6,587.5	187.0	1.9	-35.72	307.8	102.0	6,623.7	6,502.2	121.41	54.557		
13,287.4	6,637.2	6,587.4	6,586.9	189.4	1.9	-35.36	307.8	102.0	6,711.0	6,588.9	122.11	54.960		
13,300.0	6,637.2	6,587.3	6,586.8	189.8	1.9	-35.31	307.8	102.0	6,723.7	6,601.4	122.21	55.019		
13,385.8	6,637.1	6,586.7	6,586.2	192.2	1.9	-34.96	307.8	102.0	6,809.4	6,686.6	122.88	55.414		
13,400.0	6,637.1	6,586.6	6,586.1	192.6	1.9	-34.91	307.8	102.0	6,823.6	6,700.7	122.99	55.480		
13,484.2	6,637.0	6,586.0	6,585.5	195.0	1.9	-34.58	307.8	102.0	6,907.9	6,784.2	123.65	55.868		
13,500.0	6,637.0	6,585.9	6,585.4	195.4	1.9	-34.51	307.8	102.0	6,923.6	6,799.9	123.77	55.941		
13,582.6	6,636.9	6,585.4	6,584.8	197.7	1.9	-34.19	307.8	102.0	7,006.3	6,881.9	124.40	56.321		
13,600.0	6,636.8	6,585.2	6,584.7	198.2	1.9	-34.13	307.8	102.0	7,023.6	6,899.1	124.53	56.401		
13,681.1	6,636.7	6,584.7	6,584.2	200.5	1.9	-33.82	307.8	102.0	7,104.7	6,979.6	125.14	56.774		
13,700.0	6,636.7	6,584.6	6,584.0	201.0	1.9	-33.75	307.8	102.0	7,123.6	6,998.4	125.28	56.861		
13,779.5	6,636.6	6,584.0	6,583.5	203.2	1.9	-33.45	307.8	102.0	7,203.1	7,077.3	125.87	57.227		
13,800.0	6,636.6	6,583.9	6,583.4	203.8	1.9	-33.38	307.8	102.0	7,223.6	7,097.6	126.02	57.321		
13,877.9	6,636.5	6,583.3	6,582.8	206.0	1.9	-33.10	307.8	102.0	7,301.6	7,175.0	126.59	57.679		
13,900.0	6,636.5	6,583.2	6,582.7	206.6	1.9	-33.02	307.8	102.0	7,323.6	7,196.9	126.75	57.780		
13,976.3	6,636.4	6,582.7	6,582.2	208.8	1.9	-32.74	307.8	102.0	7,400.0	7,272.7	127.30	58.130		
14,000.0	6,636.3	6,582.5	6,582.0	209.4	1.9	-32.66	307.8	102.0	7,423.6	7,296.2	127.47	58.239		
14,074.8	6,636.2	6,582.0	6,581.5	211.5	1.9	-32.40	307.8	102.0	7,498.4	7,370.4	128.00	58.581		
14,100.0	6,636.2	6,581.8	6,581.3	212.2	1.9	-32.31	307.8	102.0	7,523.6	7,395.4	128.18	58.697		
14,173.2	6,636.1	6,581.3	6,580.8	214.3	1.9	-32.06	307.8	102.0	7,596.8	7,468.1	128.69	59.031		
14,200.0	6,636.1	6,581.1	6,580.6	215.0	1.9	-31.96	307.8	102.0	7,623.6	7,494.7	128.88	59.154		
14,271.6	6,636.0	6,580.6	6,580.1	217.0	1.9	-31.72	307.8	102.0	7,695.2	7,565.9	129.37	59.481		
14,300.0	6,636.0	6,580.5	6,579.9	217.8	1.9	-31.63	307.8	102.0	7,723.6	7,594.0	129.57	59.610		
14,370.0	6,635.9	6,580.0	6,579.5	219.8	1.9	-31.39	307.8	102.0	7,793.7	7,663.6	130.05	59.929		
14,400.0	6,635.8	6,579.8	6,579.3	220.6	1.9	-31.30	307.8	102.0	7,823.6	7,693.4	130.25	60.065		
14,468.5	6,635.7	6,579.3	6,578.8	222.6	1.9	-31.07	307.8	102.0	7,892.1	7,761.4	130.71	60.376		
14,500.0	6,635.7	6,579.1	6,578.6	223.4	1.9	-30.97	307.8	102.0	7,923.6	7,792.7	130.93	60.520		
14,566.9	6,635.6	6,578.6	6,578.1	225.3	1.9	-30.76	307.8	102.0	7,990.5	7,859.1	131.37	60.823		
14,600.0	6,635.6	6,578.4	6,577.9	226.2	1.9	-30.65	307.8	101.9	8,023.6	7,892.0	131.59	60.973		
14,665.3	6,635.5	6,578.0	6,577.4	228.1	1.9	-30.45	307.8	101.9	8,088.9	7,956.9	132.03	61.268		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,635.5	6,577.7	6,577.2	229.0	1.9	-30.34	307.8	101.9	8,123.6	7,991.4	132.25	61.425	
14,763.7	6,635.4	6,577.3	6,576.8	230.8	1.9	-30.14	307.8	101.9	8,187.4	8,054.7	132.67	61.712	
14,800.0	6,635.3	6,577.0	6,576.5	231.8	1.9	-30.03	307.8	101.9	8,223.6	8,090.7	132.91	61.876	
14,862.2	6,635.2	6,576.6	6,576.1	233.6	1.9	-29.84	307.9	101.9	8,285.8	8,152.5	133.31	62.155	
14,900.0	6,635.2	6,576.3	6,575.8	234.7	1.9	-29.73	307.9	101.9	8,323.6	8,190.0	133.55	62.325	
14,960.6	6,635.1	6,575.9	6,575.4	236.4	1.9	-29.55	307.9	101.9	8,384.2	8,250.3	133.94	62.597	
14,995.1	6,635.0	6,575.6	6,575.1	237.3	1.9	-29.45	307.9	101.9	8,418.7	8,284.6	134.16	62.753	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	50.50	739.2	896.9	1,162.3				
98.4	98.4	87.9	87.9	0.1	0.0	50.51	739.1	896.8	1,162.2	1,162.1	0.10	N/A	
100.0	100.0	89.5	89.5	0.1	0.0	50.51	739.1	896.8	1,162.2	1,162.1	0.10	N/A	
196.8	196.8	186.1	186.1	0.3	0.1	50.51	739.0	896.7	1,161.9	1,161.5	0.40	2,930.400	
200.0	200.0	189.3	189.3	0.3	0.1	50.51	739.0	896.7	1,161.9	1,161.5	0.41	2,858.119	
295.3	295.3	284.8	284.8	0.5	0.2	50.51	738.8	896.5	1,161.7	1,161.0	0.75	1,552.477	
300.0	300.0	289.5	289.5	0.5	0.2	50.51	738.8	896.5	1,161.7	1,161.0	0.77	1,517.592	
393.7	393.7	387.6	387.6	0.8	0.3	50.51	738.5	896.3	1,161.4	1,160.3	1.07	1,089.800	
400.0	400.0	394.2	394.2	0.8	0.3	50.51	738.5	896.3	1,161.3	1,160.3	1.09	1,069.846	
492.1	492.1	486.4	486.4	1.0	0.4	50.52	737.9	896.0	1,160.8	1,159.4	1.36	854.869	
500.0	500.0	494.2	494.2	1.0	0.4	50.53	737.9	895.9	1,160.7	1,159.3	1.38	840.484	
590.5	590.5	585.0	585.0	1.2	0.4	50.54	737.4	895.6	1,160.1	1,158.5	1.64	707.224	
600.0	600.0	594.4	594.4	1.2	0.5	50.54	737.3	895.6	1,160.1	1,158.4	1.67	695.725	
689.0	689.0	683.6	683.6	1.4	0.5	50.55	736.8	895.3	1,159.5	1,157.6	1.92	604.834	
700.0	700.0	694.6	694.6	1.4	0.5	50.55	736.7	895.2	1,159.4	1,157.5	1.95	595.205	
787.4	787.4	782.1	782.1	1.6	0.6	50.55	736.3	894.9	1,158.8	1,156.7	2.19	529.285	
800.0	800.0	794.7	794.7	1.7	0.6	50.56	736.2	894.8	1,158.8	1,156.5	2.22	520.969	
885.8	885.8	880.8	880.8	1.9	0.6	50.56	735.7	894.4	1,158.2	1,155.7	2.46	471.191	
900.0	900.0	895.1	895.1	1.9	0.6	50.56	735.7	894.4	1,158.1	1,155.6	2.50	463.871	
984.2	984.2	980.2	980.1	2.1	0.7	50.56	735.3	893.9	1,157.5	1,154.7	2.72	424.943	
1,000.0	1,000.0	996.1	996.0	2.1	0.7	50.56	735.2	893.8	1,157.3	1,154.6	2.77	418.375	
1,082.7	1,082.7	1,078.7	1,078.7	2.3	0.7	50.56	734.8	893.3	1,156.7	1,153.7	2.99	387.178	
1,100.0	1,100.0	1,096.0	1,096.0	2.3	0.7	50.56	734.7	893.2	1,156.6	1,153.5	3.03	381.219	
1,181.1	1,181.1	1,175.8	1,175.8	2.5	0.7	50.57	734.2	892.8	1,156.0	1,152.7	3.25	355.708	
1,200.0	1,200.0	1,194.4	1,194.4	2.6	0.7	50.57	734.1	892.7	1,155.9	1,152.6	3.30	350.247	
1,279.5	1,279.5	1,272.3	1,272.3	2.7	0.8	50.57	733.8	892.4	1,155.4	1,151.9	3.51	329.117	
1,300.0	1,300.0	1,292.4	1,292.4	2.8	0.8	50.57	733.7	892.4	1,155.3	1,151.7	3.56	324.088	
1,377.9	1,377.9	1,370.8	1,370.7	3.0	0.8	9.40	733.5	892.1	1,153.9	1,150.1	3.79	304.332	
1,400.0	1,400.0	1,393.0	1,393.0	3.0	0.8	9.40	733.4	892.0	1,153.1	1,149.2	3.85	299.452	
1,476.4	1,476.3	1,469.7	1,469.6	3.2	0.9	9.45	733.1	891.7	1,149.1	1,145.0	4.05	283.433	
1,500.0	1,499.8	1,493.4	1,493.3	3.2	0.9	9.47	733.0	891.6	1,147.4	1,143.3	4.12	278.704	
1,574.8	1,574.4	1,568.1	1,568.0	3.4	0.9	9.55	732.7	891.4	1,140.9	1,136.5	4.32	264.203	
1,600.0	1,599.5	1,593.2	1,593.2	3.5	0.9	9.58	732.6	891.3	1,138.2	1,133.8	4.39	259.543	
1,673.2	1,672.2	1,669.6	1,669.6	3.6	0.9	9.69	732.2	890.9	1,129.2	1,124.6	4.59	246.159	
1,700.0	1,698.7	1,697.6	1,697.6	3.7	1.0	9.74	731.9	890.7	1,125.4	1,120.7	4.66	241.494	
1,771.6	1,769.5	1,771.1	1,771.1	3.9	1.0	9.88	731.3	890.1	1,113.9	1,109.0	4.86	229.155	
1,800.0	1,797.5	1,800.1	1,800.1	4.0	1.0	9.94	731.0	889.8	1,108.8	1,103.8	4.94	224.502	
1,870.1	1,866.3	1,872.4	1,872.4	4.2	1.0	10.13	730.1	889.0	1,094.9	1,089.7	5.14	213.087	
1,899.9	1,895.6	1,903.1	1,903.0	4.3	1.0	10.22	729.6	888.7	1,088.4	1,083.1	5.22	208.454	
1,968.5	1,962.6	1,971.6	1,971.5	4.5	1.1	10.39	728.4	888.0	1,073.0	1,067.6	5.41	198.347	
2,000.0	1,993.4	2,003.0	2,002.9	4.6	1.1	10.48	727.7	887.7	1,065.9	1,060.4	5.49	194.002	
2,066.9	2,058.9	2,069.2	2,069.1	4.8	1.1	10.66	726.2	887.1	1,050.8	1,045.2	5.68	184.958	
2,100.0	2,091.3	2,101.9	2,101.7	4.9	1.1	10.75	725.4	886.8	1,043.4	1,037.6	5.77	180.823	
2,165.3	2,155.2	2,163.8	2,163.7	5.2	1.1	10.93	724.1	886.1	1,028.6	1,022.7	5.95	172.879	
2,200.0	2,189.1	2,196.7	2,196.6	5.3	1.2	11.01	723.5	885.7	1,020.8	1,014.8	6.05	168.826	
2,263.8	2,251.5	2,260.7	2,260.5	5.5	1.2	11.18	722.5	884.8	1,006.5	1,000.3	6.23	161.620	
2,300.0	2,286.9	2,297.1	2,296.9	5.7	1.2	11.27	721.9	884.2	998.3	992.0	6.33	157.702	
2,362.2	2,347.7	2,357.3	2,357.1	5.9	1.2	11.41	721.2	883.1	984.2	977.7	6.51	151.205	
2,400.0	2,384.7	2,393.8	2,393.6	6.0	1.2	11.49	720.7	882.3	975.7	969.1	6.62	147.439	
2,460.6	2,444.0	2,453.8	2,453.6	6.3	1.2	11.63	720.0	881.1	962.0	955.2	6.79	141.591	
2,500.0	2,482.5	2,492.8	2,492.6	6.4	1.3	11.73	719.6	880.3	953.0	946.1	6.91	137.957	
2,559.0	2,540.3	2,549.1	2,548.8	6.7	1.3	11.86	718.9	879.2	939.6	932.6	7.08	132.714	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,587.9	2,587.7	6.8	1.3	11.96	718.5	878.4	930.4	923.2	7.20	129.242	
2,657.5	2,636.5	2,643.7	2,643.5	7.1	1.3	12.09	718.1	877.2	917.5	910.1	7.37	124.530	
2,700.0	2,678.1	2,685.2	2,685.0	7.2	1.3	12.18	717.8	876.3	907.9	900.4	7.49	121.184	
2,755.9	2,732.8	2,739.9	2,739.7	7.5	1.4	12.31	717.4	875.1	895.4	887.7	7.66	116.915	
2,800.0	2,776.0	2,783.1	2,782.8	7.7	1.4	12.42	717.0	874.1	885.4	877.7	7.79	113.674	
2,854.3	2,829.1	2,836.4	2,836.1	7.9	1.4	12.57	716.5	873.0	873.2	865.2	7.95	109.802	
2,900.0	2,873.8	2,881.3	2,881.0	8.1	1.4	12.69	716.1	872.0	862.9	854.8	8.09	106.666	
2,952.7	2,925.4	2,932.3	2,932.0	8.3	1.4	12.84	715.5	871.0	851.0	842.7	8.25	103.162	
3,000.0	2,971.6	2,977.7	2,977.3	8.5	1.4	12.98	714.9	870.1	840.3	831.9	8.39	100.145	
3,051.2	3,021.6	3,026.4	3,026.0	8.7	1.5	13.15	714.2	869.3	828.9	820.3	8.55	96.990	
3,100.0	3,069.4	3,072.6	3,072.2	8.9	1.5	13.32	713.5	868.7	818.0	809.3	8.69	94.099	
3,149.6	3,117.9	3,119.8	3,119.4	9.1	1.5	13.51	712.8	868.1	807.1	798.2	8.84	91.257	
3,200.0	3,167.2	3,168.0	3,167.6	9.3	1.5	13.70	712.0	867.6	796.0	787.0	9.00	88.475	
3,248.0	3,214.2	3,213.8	3,213.4	9.5	1.5	13.90	711.3	867.2	785.6	776.4	9.14	85.910	
3,300.0	3,265.0	3,263.2	3,262.8	9.8	1.5	14.12	710.6	866.9	774.3	765.0	9.30	83.237	
3,346.4	3,310.5	3,307.4	3,307.0	10.0	1.6	14.32	709.9	866.6	764.3	754.9	9.44	80.925	
3,400.0	3,362.9	3,358.5	3,358.1	10.2	1.6	14.57	709.1	866.5	752.9	743.3	9.61	78.359	
3,444.9	3,406.7	3,401.4	3,401.0	10.4	1.6	14.78	708.4	866.4	743.4	733.7	9.75	76.274	
3,473.0	3,434.2	3,428.8	3,428.4	10.5	1.6	14.92	708.0	866.3	737.5	727.7	9.83	74.997	
3,500.0	3,460.7	3,455.2	3,454.8	10.6	1.6	15.03	707.7	866.3	731.9	722.0	9.91	73.880	
3,543.3	3,503.2	3,497.6	3,497.1	10.7	1.6	15.18	707.1	866.2	723.5	713.5	10.01	72.270	
3,600.0	3,559.0	3,553.7	3,553.3	10.9	1.6	15.38	706.3	866.0	713.4	703.3	10.15	70.305	
3,641.7	3,600.2	3,595.2	3,594.8	11.0	1.6	15.52	705.7	865.9	706.7	696.4	10.24	68.988	
3,700.0	3,657.9	3,652.4	3,651.9	11.2	1.7	15.70	704.9	865.7	698.2	687.9	10.38	67.295	
3,740.1	3,697.8	3,691.8	3,691.4	11.3	1.7	15.81	704.4	865.6	693.1	682.6	10.46	66.250	
3,800.0	3,757.3	3,752.0	3,751.6	11.4	1.7	15.96	703.7	865.3	686.4	675.8	10.59	64.820	
3,838.6	3,795.7	3,791.0	3,790.5	11.5	1.7	16.04	703.2	865.1	682.7	672.0	10.67	63.999	
3,900.0	3,857.0	3,852.1	3,851.7	11.7	1.7	16.16	702.5	864.8	677.8	667.0	10.79	62.821	
3,937.0	3,893.9	3,888.9	3,888.5	11.7	1.7	16.22	702.0	864.6	675.5	664.6	10.86	62.208	
4,000.0	3,956.9	3,951.2	3,950.7	11.8	1.8	16.30	701.2	864.3	672.6	661.6	10.97	61.289	
4,035.4	3,992.3	3,986.2	3,985.7	11.9	1.8	16.32	700.9	864.1	671.6	660.6	11.04	60.858	
4,072.9	4,029.8	4,023.8	4,023.4	11.9	1.8	57.53	700.5	863.9	671.0	657.9	13.13	51.092	
4,100.0	4,056.9	4,051.3	4,050.8	12.0	1.8	57.54	700.3	863.7	670.7	657.6	13.18	50.896	
4,133.8	4,090.7	4,085.6	4,085.1	12.0	1.8	57.55	700.0	863.4	670.4	657.1	13.24	50.632	
4,200.0	4,156.9	4,153.7	4,153.2	12.1	1.8	57.56	699.4	862.8	669.6	656.2	13.36	50.116	
4,232.3	4,189.2	4,187.1	4,186.6	12.2	1.8	57.57	699.0	862.5	669.1	655.7	13.42	49.860	
4,300.0	4,256.9	4,256.7	4,256.2	12.3	1.9	57.58	698.3	861.5	667.9	654.4	13.54	49.322	
4,330.7	4,287.6	4,288.2	4,287.7	12.4	1.9	57.58	698.0	861.0	667.3	653.7	13.60	49.076	
4,400.0	4,356.9	4,357.7	4,357.2	12.5	1.9	57.56	697.5	859.7	665.9	652.2	13.72	48.525	
4,429.1	4,386.0	4,386.7	4,386.2	12.5	1.9	57.54	697.3	859.1	665.4	651.6	13.78	48.295	
4,500.0	4,456.9	4,457.1	4,456.6	12.6	1.9	57.51	696.9	857.7	664.0	650.1	13.91	47.748	
4,527.5	4,484.4	4,484.4	4,483.9	12.7	1.9	57.49	696.8	857.2	663.5	649.5	13.96	47.538	
4,600.0	4,556.9	4,553.1	4,552.5	12.8	2.0	57.45	696.6	856.0	662.3	648.2	14.09	47.007	
4,626.0	4,582.9	4,577.4	4,576.8	12.9	2.0	57.44	696.6	855.7	662.0	647.8	14.14	46.826	
4,700.0	4,656.9	4,646.9	4,646.3	13.0	2.0	57.43	696.3	855.2	661.4	647.2	14.27	46.350	
4,724.4	4,681.3	4,669.9	4,669.3	13.0	2.0	57.44	696.2	855.3	661.4	647.1	14.31	46.202	
4,741.7	4,698.6	4,686.2	4,685.6	13.0	2.0	57.45	696.1	855.3	661.4	647.0	14.35	46.101	
4,800.0	4,756.9	4,743.6	4,743.0	13.1	2.0	57.50	695.7	855.6	661.4	647.0	14.46	45.746	
4,822.8	4,779.7	4,766.4	4,765.9	13.2	2.0	57.52	695.5	855.8	661.5	647.0	14.50	45.606	
4,900.0	4,856.9	4,844.9	4,844.4	13.3	2.0	57.58	694.9	856.2	661.5	646.9	14.66	45.132	
4,921.2	4,878.1	4,866.8	4,866.3	13.4	2.0	57.60	694.8	856.3	661.5	646.8	14.70	45.000	
5,000.0	4,956.9	4,946.4	4,945.8	13.5	2.0	57.66	694.1	856.5	661.3	646.4	14.86	44.508	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,976.6	4,966.0	4,965.4	13.5	2.0	57.67	693.9	856.5	661.2	646.3	14.90	44.385	
5,100.0	5,056.9	5,046.6	5,046.0	13.7	2.1	57.72	693.3	856.6	661.0	645.9	15.06	43.892	
5,118.1	5,075.0	5,064.8	5,064.3	13.7	2.1	57.74	693.1	856.7	660.9	645.8	15.10	43.781	
5,200.0	5,156.9	5,147.4	5,146.8	13.8	2.1	57.80	692.4	856.8	660.6	645.3	15.26	43.282	
5,216.5	5,173.4	5,164.0	5,163.4	13.9	2.1	57.81	692.2	856.8	660.5	645.2	15.30	43.181	
5,300.0	5,256.9	5,248.8	5,248.2	14.0	2.1	57.88	691.2	856.9	660.1	644.6	15.47	42.677	
5,314.9	5,271.8	5,264.1	5,263.5	14.1	2.1	57.89	691.1	856.8	660.0	644.5	15.50	42.586	
5,400.0	5,356.9	5,349.9	5,349.3	14.2	2.2	57.95	690.1	856.6	659.3	643.6	15.67	42.071	
5,413.4	5,370.3	5,363.2	5,362.6	14.2	2.2	57.96	690.0	856.5	659.2	643.5	15.70	41.991	
5,500.0	5,456.9	5,450.5	5,449.9	14.4	2.2	58.01	689.1	856.2	658.5	642.6	15.87	41.480	
5,511.8	5,468.7	5,462.4	5,461.9	14.4	2.2	58.01	689.0	856.2	658.4	642.5	15.90	41.410	
5,600.0	5,556.9	5,551.9	5,551.3	14.6	2.2	58.04	688.3	855.5	657.4	641.4	16.08	40.894	
5,610.2	5,567.1	5,562.3	5,561.7	14.6	2.2	58.04	688.2	855.5	657.3	641.2	16.10	40.835	
5,700.0	5,656.9	5,651.8	5,651.2	14.7	2.3	58.06	687.5	854.7	656.3	640.0	16.28	40.318	
5,708.6	5,665.5	5,660.3	5,659.7	14.8	2.3	58.06	687.4	854.6	656.2	639.9	16.29	40.269	
5,800.0	5,756.9	5,751.5	5,750.9	14.9	2.3	58.05	687.0	853.7	655.2	638.7	16.48	39.766	
5,807.1	5,764.0	5,758.6	5,758.0	14.9	2.3	58.05	686.9	853.7	655.1	638.6	16.49	39.727	
5,900.0	5,856.9	5,851.9	5,851.3	15.1	2.3	58.05	686.5	852.7	654.1	637.4	16.68	39.221	
5,905.5	5,862.4	5,857.5	5,856.8	15.1	2.3	58.05	686.4	852.7	654.0	637.3	16.69	39.191	
5,971.9	5,928.8	5,924.0	5,923.4	15.3	2.3	58.05	685.9	852.1	653.3	636.4	16.82	38.833 ES, SF	
5,981.7	5,938.6	5,933.9	5,933.2	15.3	2.3	148.06	685.9	852.0	653.2	637.6	15.56	41.967 CC	
6,000.0	5,956.9	5,952.1	5,951.5	15.3	2.4	148.08	685.7	851.8	653.4	637.8	15.59	41.920	
6,003.9	5,960.8	5,956.1	5,955.5	15.3	2.4	148.08	685.7	851.8	653.5	637.9	15.59	41.914	
6,050.0	6,006.7	6,002.2	6,001.6	15.4	2.4	148.15	685.3	851.4	656.0	640.3	15.65	41.919	
6,100.0	6,056.2	6,052.8	6,052.2	15.4	2.4	148.26	684.9	850.9	661.4	645.7	15.72	42.080	
6,102.3	6,058.5	6,055.2	6,054.6	15.4	2.4	148.27	684.9	850.9	661.8	646.1	15.72	42.091	
6,150.0	6,105.1	6,102.9	6,102.3	15.4	2.4	148.40	684.4	850.3	669.8	654.0	15.79	42.407	
6,200.0	6,153.0	6,151.9	6,151.2	15.5	2.4	148.56	683.9	849.7	681.1	665.2	15.87	42.914	
6,200.8	6,153.8	6,152.6	6,152.0	15.5	2.4	148.56	683.9	849.7	681.3	665.4	15.87	42.923	
6,250.0	6,199.9	6,199.7	6,199.1	15.5	2.4	148.71	683.3	849.2	695.3	679.3	15.94	43.612	
6,299.2	6,244.8	6,244.8	6,244.1	15.5	2.4	148.82	682.6	848.7	712.1	696.1	16.00	44.498	
6,300.0	6,245.5	6,245.5	6,244.8	15.5	2.4	148.82	682.6	848.6	712.4	696.4	16.00	44.514	
6,350.0	6,289.6	6,289.7	6,289.0	15.5	2.5	148.89	681.9	848.2	732.5	716.4	16.05	45.625	
6,397.6	6,329.9	6,330.5	6,329.9	15.4	2.5	148.88	681.2	847.7	754.3	738.2	16.09	46.874	
6,400.0	6,331.8	6,332.5	6,331.8	15.4	2.5	148.87	681.2	847.7	755.5	739.4	16.09	46.942	
6,450.0	6,372.2	6,373.5	6,372.8	15.4	2.5	148.76	680.4	847.3	781.3	765.1	16.12	48.454	
6,496.0	6,407.4	6,409.4	6,408.8	15.4	2.5	148.53	679.7	846.9	807.4	791.3	16.15	49.997	
6,500.0	6,410.3	6,412.5	6,411.8	15.4	2.5	148.50	679.7	846.9	809.8	793.6	16.15	50.138	
6,550.0	6,446.1	6,449.4	6,448.7	15.4	2.5	148.08	678.9	846.5	840.9	824.7	16.19	51.953	
6,594.5	6,475.9	6,480.1	6,479.4	15.4	2.5	147.50	678.2	846.2	870.7	854.5	16.24	53.622	
6,600.0	6,479.4	6,483.7	6,483.0	15.4	2.5	147.42	678.1	846.1	874.6	858.3	16.24	53.838	
6,650.0	6,510.0	6,516.3	6,515.6	15.5	2.5	146.50	677.3	845.8	910.6	894.2	16.35	55.704	
6,692.9	6,534.0	6,542.8	6,542.1	15.7	2.5	145.47	676.6	845.4	943.2	926.7	16.49	57.189	
6,700.0	6,537.8	6,547.0	6,546.3	15.7	2.6	145.27	676.5	845.4	948.7	932.2	16.52	57.435	
6,750.0	6,562.6	6,574.7	6,573.9	16.2	2.6	143.58	675.7	845.0	988.8	972.0	16.79	58.885	
6,791.3	6,580.8	6,595.2	6,594.4	16.6	2.6	141.72	675.1	844.6	1,023.3	1,006.2	17.12	59.782	
6,800.0	6,584.3	6,599.2	6,598.4	16.7	2.6	141.27	675.0	844.6	1,030.7	1,013.5	17.21	59.892	
6,850.0	6,602.9	6,616.5	6,615.7	17.3	2.6	137.86	674.5	844.3	1,074.2	1,056.4	17.84	60.231	
6,889.7	6,615.2	6,628.0	6,627.2	17.9	2.6	134.30	674.2	844.1	1,109.9	1,091.4	18.51	59.973	
6,900.0	6,618.1	6,630.7	6,629.9	18.0	2.6	133.23	674.1	844.1	1,119.2	1,100.5	18.70	59.849	
6,950.0	6,630.0	6,641.7	6,640.9	18.8	2.6	126.95	673.8	843.9	1,165.4	1,145.6	19.82	58.797	
6,988.2	6,636.8	6,648.1	6,647.3	19.5	2.6	120.69	673.6	843.8	1,201.3	1,180.5	20.82	57.691	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.5	6,649.7	6,648.9	19.7	2.6	118.44	673.6	843.8	1,212.5	1,191.4	21.14	57.353	
7,050.0	6,643.5	6,654.6	6,653.8	20.6	2.6	107.16	673.4	843.7	1,260.3	1,237.8	22.49	56.043	
7,086.6	6,644.9	6,656.2	6,655.4	21.3	2.6	97.11	673.4	843.7	1,295.6	1,272.2	23.41	55.353	
7,097.8	6,645.0	6,656.4	6,655.6	21.5	2.6	93.79	673.4	843.7	1,306.4	1,282.7	23.69	55.157	
7,100.0	6,645.0	6,656.4	6,655.6	21.6	2.6	93.79	673.4	843.7	1,308.5	1,284.8	23.73	55.148	
7,185.0	6,644.9	6,657.2	6,656.4	23.3	2.6	93.92	673.4	843.7	1,390.9	1,365.5	25.45	54.657	
7,200.0	6,644.9	6,657.3	6,656.5	23.6	2.6	93.94	673.3	843.7	1,405.4	1,379.7	25.75	54.579	
7,283.4	6,644.8	6,658.0	6,657.2	25.4	2.6	94.06	673.3	843.7	1,486.6	1,459.1	27.56	53.939	
7,300.0	6,644.7	6,658.2	6,657.4	25.8	2.6	94.09	673.3	843.7	1,502.8	1,474.8	27.92	53.823	
7,381.9	6,644.6	6,658.9	6,658.1	27.7	2.6	94.21	673.3	843.7	1,582.7	1,552.9	29.79	53.130	
7,400.0	6,644.6	6,659.0	6,658.2	28.1	2.6	94.23	673.3	843.7	1,600.4	1,570.2	30.20	52.990	
7,480.3	6,644.5	6,659.7	6,658.9	30.0	2.6	94.35	673.3	843.7	1,679.0	1,646.9	32.10	52.299	
7,500.0	6,644.5	6,659.9	6,659.1	30.5	2.6	94.38	673.3	843.7	1,698.3	1,665.8	32.57	52.143	
7,578.7	6,644.4	6,660.5	6,659.7	32.4	2.6	94.49	673.3	843.7	1,775.6	1,741.1	34.49	51.483	
7,600.0	6,644.4	6,660.7	6,659.9	32.9	2.6	94.52	673.3	843.7	1,796.5	1,761.5	35.01	51.318	
7,677.1	6,644.3	6,661.3	6,660.5	34.8	2.6	94.62	673.2	843.7	1,872.4	1,835.4	36.93	50.703	
7,700.0	6,644.2	6,661.5	6,660.7	35.4	2.6	94.65	673.2	843.7	1,894.8	1,857.4	37.50	50.534	
7,775.6	6,644.1	6,662.1	6,661.3	37.3	2.6	94.76	673.2	843.7	1,969.3	1,929.9	39.41	49.969	
7,800.0	6,644.1	6,662.3	6,661.5	38.0	2.6	94.79	673.2	843.7	1,993.4	1,953.3	40.03	49.799	
7,874.0	6,644.0	6,662.9	6,662.1	39.9	2.6	94.89	673.2	843.6	2,066.4	2,024.4	41.93	49.284	
7,900.0	6,644.0	6,663.1	6,662.3	40.5	2.6	94.92	673.2	843.6	2,092.0	2,049.4	42.59	49.115	
7,972.4	6,643.9	6,663.6	6,662.8	42.4	2.6	95.02	673.2	843.6	2,163.5	2,119.1	44.47	48.648	
8,000.0	6,643.9	6,663.8	6,663.0	43.1	2.6	95.05	673.2	843.6	2,190.8	2,145.6	45.19	48.481	
8,070.8	6,643.8	6,664.4	6,663.6	45.0	2.6	95.14	673.2	843.6	2,260.8	2,213.8	47.04	48.060	
8,100.0	6,643.7	6,664.6	6,663.8	45.8	2.6	95.18	673.2	843.6	2,289.7	2,241.9	47.80	47.896	
8,169.3	6,643.7	6,665.1	6,664.3	47.6	2.6	95.27	673.1	843.6	2,358.2	2,308.6	49.63	47.515	
8,200.0	6,643.6	6,665.3	6,664.5	48.4	2.6	95.31	673.1	843.6	2,388.6	2,338.2	50.44	47.356	
8,267.7	6,643.5	6,665.8	6,665.0	50.2	2.6	95.39	673.1	843.6	2,455.7	2,403.5	52.24	47.012	
8,300.0	6,643.5	6,666.0	6,665.2	51.1	2.6	95.43	673.1	843.6	2,487.7	2,434.6	53.09	46.856	
8,366.1	6,643.4	6,666.5	6,665.7	52.9	2.6	95.51	673.1	843.6	2,553.2	2,498.4	54.85	46.546	
8,400.0	6,643.4	6,666.7	6,665.9	53.8	2.6	95.55	673.1	843.6	2,586.8	2,531.1	55.76	46.395	
8,464.5	6,643.3	6,667.2	6,666.4	55.5	2.6	95.63	673.1	843.6	2,650.8	2,593.4	57.48	46.114	
8,500.0	6,643.2	6,667.4	6,666.6	56.5	2.6	95.67	673.1	843.6	2,686.0	2,627.6	58.43	45.968	
8,563.0	6,643.2	6,667.9	6,667.1	58.2	2.6	95.75	673.1	843.6	2,748.5	2,688.4	60.12	45.714	
8,600.0	6,643.1	6,668.1	6,667.3	59.2	2.6	95.79	673.1	843.6	2,785.3	2,724.1	61.12	45.572	
8,661.4	6,643.0	6,668.6	6,667.7	60.8	2.6	95.86	673.0	843.6	2,846.2	2,783.5	62.77	45.342	
8,700.0	6,643.0	6,668.8	6,668.0	61.9	2.6	95.91	673.0	843.6	2,884.6	2,820.8	63.81	45.204	
8,759.8	6,642.9	6,669.2	6,668.4	63.5	2.6	95.97	673.0	843.6	2,944.0	2,878.6	65.43	44.996	
8,800.0	6,642.9	6,669.5	6,668.7	64.6	2.6	96.02	673.0	843.6	2,983.9	2,917.4	66.51	44.862	
8,858.2	6,642.8	6,669.9	6,669.1	66.2	2.6	96.09	673.0	843.6	3,041.8	2,973.7	68.09	44.674	
8,900.0	6,642.7	6,670.1	6,669.3	67.3	2.6	96.13	673.0	843.6	3,083.3	3,014.1	69.22	44.544	
8,956.7	6,642.7	6,670.5	6,669.7	68.9	2.6	96.19	673.0	843.6	3,139.7	3,068.9	70.76	44.373	
9,000.0	6,642.6	6,670.8	6,670.0	70.1	2.6	96.24	673.0	843.6	3,182.7	3,110.8	71.93	44.247	
9,055.1	6,642.5	6,671.1	6,670.3	71.6	2.6	96.30	673.0	843.6	3,237.5	3,164.1	73.43	44.091	
9,100.0	6,642.5	6,671.4	6,670.6	72.8	2.6	96.35	673.0	843.6	3,282.2	3,207.5	74.65	43.969	
9,153.5	6,642.4	6,671.7	6,670.9	74.3	2.6	96.41	673.0	843.6	3,335.4	3,259.3	76.10	43.828	
9,200.0	6,642.4	6,672.0	6,671.2	75.6	2.6	96.46	673.0	843.6	3,381.7	3,304.3	77.37	43.709	
9,251.9	6,642.3	6,672.4	6,671.6	77.0	2.6	96.51	672.9	843.6	3,433.4	3,354.6	78.78	43.580	
9,300.0	6,642.2	6,672.7	6,671.8	78.3	2.6	96.56	672.9	843.5	3,481.2	3,401.1	80.09	43.465	
9,350.4	6,642.2	6,673.0	6,672.2	79.7	2.6	96.61	672.9	843.5	3,531.4	3,449.9	81.47	43.348	
9,400.0	6,642.1	6,673.3	6,672.5	81.1	2.6	96.67	672.9	843.5	3,580.8	3,497.9	82.82	43.237	
9,448.8	6,642.0	6,673.6	6,672.7	82.4	2.6	96.71	672.9	843.5	3,629.4	3,545.2	84.15	43.130	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	6,673.9	6,673.1	83.8	2.6	96.77	672.9	843.5	3,680.3	3,594.8	85.55	43.021		
9,547.2	6,641.9	6,674.1	6,673.3	85.1	2.6	96.81	672.9	843.5	3,727.4	3,640.5	86.84	42.924		
9,600.0	6,641.9	6,674.4	6,673.6	86.6	2.6	96.87	672.9	843.5	3,779.9	3,691.7	88.28	42.819		
9,645.6	6,641.8	6,674.7	6,673.9	87.9	2.6	96.91	672.9	843.5	3,825.4	3,735.9	89.53	42.730		
9,700.0	6,641.7	6,675.0	6,674.2	89.4	2.6	96.97	672.9	843.5	3,879.5	3,788.5	91.01	42.627		
9,744.1	6,641.7	6,675.3	6,674.5	90.6	2.6	97.01	672.9	843.5	3,923.5	3,831.2	92.22	42.546		
9,800.0	6,641.6	6,675.6	6,674.8	92.1	2.6	97.06	672.9	843.5	3,979.2	3,885.4	93.75	42.447		
9,842.5	6,641.6	6,675.8	6,675.0	93.3	2.6	97.10	672.9	843.5	4,021.5	3,926.6	94.91	42.373		
9,900.0	6,641.5	6,676.1	6,675.3	94.9	2.6	97.16	672.8	843.5	4,078.8	3,982.4	96.48	42.276		
9,940.9	6,641.4	6,676.4	6,675.6	96.0	2.6	97.20	672.8	843.5	4,119.6	4,022.0	97.60	42.209		
10,000.0	6,641.4	6,676.7	6,675.9	97.7	2.6	97.25	672.8	843.5	4,178.5	4,079.3	99.22	42.114		
10,039.3	6,641.3	6,676.9	6,676.1	98.8	2.6	97.29	672.8	843.5	4,217.7	4,117.4	100.30	42.053		
10,100.0	6,641.2	6,677.2	6,676.4	100.4	2.6	97.34	672.8	843.5	4,278.2	4,176.2	101.96	41.961		
10,137.8	6,641.2	6,677.5	6,676.6	101.5	2.6	97.38	672.8	843.5	4,315.9	4,212.9	102.99	41.905		
10,200.0	6,641.1	6,677.8	6,677.0	103.2	2.6	97.43	672.8	843.5	4,377.9	4,273.2	104.70	41.815		
10,236.2	6,641.1	6,678.0	6,677.2	104.2	2.6	97.47	672.8	843.5	4,414.0	4,308.3	105.69	41.764		
10,300.0	6,641.0	6,678.3	6,677.5	106.0	2.6	97.52	672.8	843.5	4,477.6	4,370.2	107.44	41.677		
10,334.6	6,640.9	6,678.5	6,677.7	107.0	2.6	97.56	672.8	843.5	4,512.1	4,403.7	108.38	41.631		
10,400.0	6,640.9	6,678.8	6,678.0	108.8	2.6	97.61	672.8	843.5	4,577.3	4,467.2	110.18	41.546		
10,433.0	6,640.8	6,679.0	6,678.2	109.7	2.6	97.64	672.8	843.5	4,610.3	4,499.2	111.08	41.504		
10,500.0	6,640.7	6,679.3	6,678.5	111.6	2.6	97.70	672.8	843.5	4,677.1	4,564.1	112.92	41.421		
10,531.5	6,640.7	6,679.5	6,678.7	112.4	2.6	97.73	672.8	843.5	4,708.5	4,594.7	113.78	41.382		
10,600.0	6,640.6	6,679.9	6,679.0	114.3	2.6	97.79	672.7	843.5	4,776.8	4,661.2	115.66	41.301		
10,629.9	6,640.6	6,680.0	6,679.2	115.2	2.6	97.81	672.7	843.5	4,806.6	4,690.2	116.48	41.267		
10,700.0	6,640.5	6,680.4	6,679.5	117.1	2.6	97.87	672.7	843.5	4,876.6	4,758.2	118.40	41.188		
10,728.3	6,640.4	6,680.5	6,679.7	117.9	2.6	97.89	672.7	843.5	4,904.8	4,785.7	119.18	41.156		
10,800.0	6,640.4	6,680.8	6,680.0	119.9	2.6	97.95	672.7	843.5	4,976.3	4,855.2	121.14	41.079		
10,826.7	6,640.3	6,681.0	6,680.2	120.7	2.6	97.98	672.7	843.5	5,003.0	4,881.2	121.87	41.051		
10,900.0	6,640.2	6,681.3	6,680.5	122.7	2.6	98.04	672.7	843.5	5,076.1	4,952.2	123.88	40.975		
10,925.2	6,640.2	6,681.4	6,680.6	123.4	2.6	98.06	672.7	843.5	5,101.2	4,976.7	124.57	40.950		
11,000.0	6,640.1	6,700.0	6,699.2	125.5	2.6	101.18	672.2	843.3	5,176.0	5,050.3	125.69	41.181		
11,023.6	6,640.1	6,700.0	6,699.2	126.1	2.6	101.18	672.2	843.3	5,199.5	5,073.2	126.33	41.157		
11,100.0	6,640.0	6,700.0	6,699.2	128.3	2.6	101.18	672.2	843.3	5,275.7	5,147.3	128.43	41.080		
11,122.0	6,639.9	6,700.0	6,699.2	128.9	2.6	101.18	672.2	843.3	5,297.7	5,168.7	129.03	41.058		
11,200.0	6,639.8	6,700.0	6,699.2	131.1	2.6	101.18	672.2	843.3	5,375.5	5,244.4	131.17	40.982		
11,220.4	6,639.8	6,700.0	6,699.2	131.6	2.6	101.18	672.2	843.3	5,395.9	5,264.2	131.73	40.963		
11,300.0	6,639.7	6,700.0	6,699.2	133.9	2.6	101.18	672.2	843.3	5,475.3	5,341.4	133.91	40.888		
11,318.9	6,639.7	6,700.0	6,699.2	134.4	2.6	101.18	672.2	843.3	5,494.2	5,359.8	134.43	40.871		
11,400.0	6,639.6	6,700.0	6,699.2	136.7	2.6	101.18	672.2	843.3	5,575.2	5,438.5	136.65	40.798		
11,417.3	6,639.6	6,700.0	6,699.2	137.1	2.6	101.18	672.2	843.3	5,592.4	5,455.3	137.13	40.783		
11,500.0	6,639.5	6,700.0	6,699.2	139.4	2.6	101.18	672.2	843.3	5,675.0	5,535.6	139.39	40.712		
11,515.7	6,639.5	6,700.0	6,699.2	139.9	2.6	101.18	672.2	843.3	5,690.7	5,550.8	139.83	40.698		
11,600.0	6,639.3	6,700.0	6,699.2	142.2	2.6	101.18	672.2	843.3	5,774.8	5,632.7	142.14	40.628		
11,614.1	6,639.3	6,700.0	6,699.2	142.6	2.6	101.18	672.2	843.3	5,788.9	5,646.4	142.53	40.617		
11,700.0	6,639.2	6,700.0	6,699.2	145.0	2.6	101.18	672.2	843.3	5,874.6	5,729.8	144.88	40.548		
11,712.6	6,639.2	6,700.0	6,699.2	145.4	2.6	101.18	672.2	843.3	5,887.2	5,742.0	145.23	40.538		
11,800.0	6,639.1	6,700.0	6,699.2	147.8	2.6	101.18	672.2	843.3	5,974.5	5,826.8	147.63	40.470		
11,811.0	6,639.1	6,700.0	6,699.2	148.1	2.6	101.18	672.2	843.3	5,985.5	5,837.5	147.93	40.462		
11,900.0	6,639.0	6,700.0	6,699.2	150.6	2.6	101.18	672.2	843.3	6,074.3	5,923.9	150.37	40.395		
11,909.4	6,639.0	6,700.0	6,699.2	150.9	2.6	101.18	672.2	843.3	6,083.7	5,933.1	150.63	40.388		
12,000.0	6,638.8	6,700.0	6,699.2	153.4	2.6	101.18	672.2	843.3	6,174.2	6,021.0	153.12	40.323		
12,007.8	6,638.8	6,700.0	6,699.2	153.6	2.6	101.18	672.2	843.3	6,182.0	6,028.7	153.33	40.317		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,638.7	6,700.0	6,699.2	156.2	2.6	101.18	672.2	843.3	6,274.0	6,118.1	155.87	40.253			
12,106.3	6,638.7	6,700.0	6,699.2	156.4	2.6	101.18	672.2	843.3	6,280.3	6,124.2	156.04	40.249			
12,200.0	6,638.6	6,700.0	6,699.2	159.0	2.6	101.18	672.2	843.3	6,373.9	6,215.3	158.61	40.185			
12,204.7	6,638.6	6,700.0	6,699.2	159.1	2.6	101.18	672.2	843.3	6,378.6	6,219.8	158.74	40.182			
12,300.0	6,638.5	6,700.0	6,699.2	161.8	2.6	101.18	672.2	843.3	6,473.7	6,312.4	161.36	40.120			
12,303.1	6,638.5	6,700.0	6,699.2	161.9	2.6	101.18	672.2	843.3	6,476.8	6,315.4	161.45	40.118			
12,400.0	6,638.3	6,700.0	6,699.2	164.6	2.6	101.18	672.2	843.3	6,573.6	6,409.5	164.11	40.057			
12,401.5	6,638.3	6,700.0	6,699.2	164.6	2.6	101.18	672.2	843.3	6,575.1	6,411.0	164.15	40.056			
12,500.0	6,638.2	6,700.0	6,699.2	167.4	2.6	101.18	672.2	843.3	6,673.5	6,506.6	166.86	39.995			
12,598.4	6,638.1	6,700.0	6,699.2	170.2	2.6	101.18	672.2	843.3	6,771.7	6,602.2	169.56	39.937			
12,600.0	6,638.1	6,700.0	6,699.2	170.2	2.6	101.18	672.2	843.3	6,773.3	6,603.7	169.60	39.936			
12,696.8	6,638.0	6,700.0	6,699.2	172.9	2.6	101.18	672.2	843.3	6,870.0	6,697.8	172.27	39.880			
12,700.0	6,638.0	6,700.0	6,699.2	173.0	2.6	101.18	672.2	843.3	6,873.2	6,700.9	172.35	39.879			
12,795.2	6,637.8	6,700.0	6,699.2	175.7	2.6	101.18	672.2	843.3	6,968.4	6,793.4	174.97	39.825			
12,800.0	6,637.8	6,700.0	6,699.2	175.8	2.6	101.18	672.2	843.3	6,973.1	6,798.0	175.10	39.823			
12,893.7	6,637.7	6,700.0	6,699.2	178.4	2.6	101.18	672.2	843.3	7,066.7	6,889.0	177.68	39.772			
12,900.0	6,637.7	6,700.0	6,699.2	178.6	2.6	101.18	672.2	843.3	7,073.0	6,895.1	177.85	39.769			
12,992.1	6,637.6	6,700.0	6,699.2	181.2	2.6	101.18	672.2	843.3	7,165.0	6,984.6	180.39	39.720			
13,000.0	6,637.6	6,700.0	6,699.2	181.4	2.6	101.18	672.2	843.3	7,172.9	6,992.3	180.60	39.716			
13,090.5	6,637.5	6,700.0	6,699.2	183.9	2.6	101.18	672.2	843.3	7,263.3	7,080.2	183.09	39.670			
13,100.0	6,637.5	6,700.0	6,699.2	184.2	2.6	101.18	672.2	843.3	7,272.8	7,089.4	183.35	39.665			
13,188.9	6,637.4	6,700.0	6,699.2	186.7	2.6	101.18	672.2	843.3	7,361.6	7,175.8	185.80	39.621			
13,200.0	6,637.3	6,700.0	6,699.2	187.0	2.6	101.18	672.2	843.3	7,372.6	7,186.5	186.10	39.616			
13,287.4	6,637.2	6,700.0	6,699.2	189.4	2.6	101.18	672.2	843.3	7,459.9	7,271.4	188.51	39.574			
13,300.0	6,637.2	6,700.0	6,699.2	189.8	2.6	101.18	672.2	843.3	7,472.5	7,283.7	188.85	39.568			
13,385.8	6,637.1	6,700.0	6,699.2	192.2	2.6	101.18	672.2	843.3	7,558.3	7,367.0	191.22	39.527			
13,400.0	6,637.1	6,700.0	6,699.2	192.6	2.6	101.18	672.2	843.3	7,572.4	7,380.8	191.61	39.521			
13,484.2	6,637.0	6,700.0	6,699.2	195.0	2.6	101.18	672.2	843.3	7,656.6	7,462.7	193.92	39.483			
13,500.0	6,637.0	6,700.0	6,699.2	195.4	2.6	101.18	672.2	843.3	7,672.3	7,478.0	194.36	39.475			
13,582.6	6,636.9	6,700.0	6,699.2	197.7	2.6	101.18	672.2	843.3	7,754.9	7,558.3	196.63	39.439			
13,600.0	6,636.8	6,700.0	6,699.2	198.2	2.6	101.18	672.2	843.3	7,772.2	7,575.1	197.11	39.431			
13,681.1	6,636.7	6,700.0	6,699.2	200.5	2.6	101.18	672.2	843.3	7,853.2	7,653.9	199.34	39.396			
13,700.0	6,636.7	6,700.0	6,699.2	201.0	2.6	101.18	672.2	843.3	7,872.2	7,672.3	199.86	39.388			
13,779.5	6,636.6	6,700.0	6,699.2	203.2	2.6	101.18	672.2	843.3	7,951.6	7,749.5	202.05	39.355			
13,800.0	6,636.6	6,700.0	6,699.2	203.8	2.6	101.18	672.2	843.3	7,972.1	7,769.5	202.61	39.346			
13,877.9	6,636.5	6,700.0	6,699.2	206.0	2.6	101.18	672.2	843.3	8,049.9	7,845.2	204.76	39.314			
13,900.0	6,636.5	6,700.0	6,699.2	206.6	2.6	101.18	672.2	843.3	8,072.0	7,866.6	205.37	39.305			
13,976.3	6,636.4	6,700.0	6,699.2	208.8	2.6	101.18	672.2	843.3	8,148.3	7,940.8	207.47	39.275			
14,000.0	6,636.3	6,700.0	6,699.2	209.4	2.6	101.18	672.2	843.3	8,171.9	7,963.8	208.12	39.266			
14,074.8	6,636.2	6,700.0	6,699.2	211.5	2.6	101.18	672.2	843.3	8,246.6	8,036.4	210.18	39.236			
14,100.0	6,636.2	6,700.0	6,699.2	212.2	2.6	101.18	672.2	843.3	8,271.8	8,060.9	210.87	39.227			
14,173.2	6,636.1	6,700.0	6,699.2	214.3	2.6	101.18	672.2	843.3	8,344.9	8,132.1	212.89	39.199			
14,200.0	6,636.1	6,700.0	6,699.2	215.0	2.6	101.18	672.2	843.3	8,371.7	8,158.1	213.62	39.189			
14,271.6	6,636.0	6,700.0	6,699.2	217.0	2.6	101.18	672.2	843.3	8,443.3	8,227.7	215.60	39.163			
14,300.0	6,636.0	6,700.0	6,699.2	217.8	2.6	101.18	672.2	843.3	8,471.6	8,255.3	216.38	39.152			
14,370.0	6,635.9	6,700.0	6,699.2	219.8	2.6	101.18	672.2	843.3	8,541.6	8,323.3	218.31	39.127			
14,400.0	6,635.8	6,700.0	6,699.2	220.6	2.6	101.18	672.2	843.3	8,571.6	8,352.4	219.13	39.116			
14,468.5	6,635.7	6,700.0	6,699.2	222.6	2.6	101.18	672.2	843.3	8,640.0	8,419.0	221.02	39.092			
14,500.0	6,635.7	6,700.0	6,699.2	223.4	2.6	101.18	672.2	843.3	8,671.5	8,449.6	221.88	39.081			
14,566.9	6,635.6	6,700.0	6,699.2	225.3	2.6	101.18	672.2	843.3	8,738.3	8,514.6	223.73	39.058			
14,600.0	6,635.6	6,700.0	6,699.2	226.2	2.6	101.18	672.2	843.3	8,771.4	8,546.8	224.64	39.047			
14,665.3	6,635.5	6,700.0	6,699.2	228.1	2.6	101.18	672.2	843.3	8,836.7	8,610.2	226.44	39.025			

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,700.0	6,635.5	6,700.0	6,699.2	229.0	2.6	101.18	672.2	843.3	8,871.3	8,643.9	227.39	39.013	
14,763.7	6,635.4	6,700.0	6,699.2	230.8	2.6	101.18	672.2	843.3	8,935.0	8,705.9	229.15	38.992	
14,800.0	6,635.3	6,700.0	6,699.2	231.8	2.6	101.18	672.2	843.3	8,971.3	8,741.1	230.15	38.981	
14,862.2	6,635.2	6,700.0	6,699.2	233.6	2.6	101.18	672.2	843.3	9,033.4	8,801.5	231.86	38.961	
14,900.0	6,635.2	6,700.0	6,699.2	234.7	2.6	101.18	672.2	843.3	9,071.2	8,838.3	232.90	38.949	
14,960.6	6,635.1	6,700.0	6,699.2	236.4	2.6	101.18	672.2	843.3	9,131.8	8,897.2	234.57	38.930	
14,995.1	6,635.0	6,700.0	6,699.2	237.3	2.6	101.19	672.2	843.3	9,166.3	8,930.8	235.51	38.921	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	55.48	1,201.6	1,747.2	2,120.5				
98.4	98.4	90.4	90.4	0.1	1.1	55.48	1,201.6	1,747.2	2,120.5	2,119.3	1.24	1,710.527	
100.0	100.0	92.0	92.0	0.1	1.2	55.48	1,201.6	1,747.2	2,120.5	2,119.3	1.26	1,681.113	
196.8	196.8	188.8	188.8	0.3	3.3	55.48	1,201.6	1,747.2	2,120.5	2,116.9	3.60	588.748	
200.0	200.0	192.0	192.0	0.3	3.4	55.48	1,201.6	1,747.2	2,120.5	2,116.8	3.68	576.151	
295.3	295.3	287.3	287.3	0.5	5.4	55.48	1,201.6	1,747.2	2,120.5	2,114.6	5.89	360.058	
300.0	300.0	292.0	292.0	0.5	5.5	55.48	1,201.6	1,747.2	2,120.5	2,114.5	6.00	353.529	
393.7	393.7	385.7	385.7	0.8	7.4	55.48	1,201.6	1,747.2	2,120.5	2,112.4	8.12	260.994	
400.0	400.0	392.0	392.0	0.8	7.5	55.48	1,201.6	1,747.2	2,120.5	2,112.3	8.27	256.487	
492.1	492.1	484.1	484.1	1.0	9.4	55.48	1,201.6	1,747.2	2,120.5	2,110.2	10.34	204.984	
500.0	500.0	492.0	492.0	1.0	9.5	55.48	1,201.6	1,747.2	2,120.5	2,110.0	10.52	201.527	
590.5	590.5	582.5	582.5	1.2	11.4	55.48	1,201.6	1,747.2	2,120.5	2,108.0	12.56	168.860	
600.0	600.0	592.0	592.0	1.2	11.5	55.48	1,201.6	1,747.2	2,120.5	2,107.8	12.77	166.051	
689.0	689.0	681.0	681.0	1.4	13.3	55.48	1,201.6	1,747.2	2,120.5	2,105.8	14.77	143.597	
700.0	700.0	692.0	692.0	1.4	13.6	55.48	1,201.6	1,747.2	2,120.5	2,105.5	15.01	141.231	
787.4	787.4	779.4	779.4	1.6	15.3	55.48	1,201.6	1,747.2	2,120.5	2,103.5	16.97	124.926	
800.0	800.0	792.0	792.0	1.7	15.6	55.48	1,201.6	1,747.2	2,120.5	2,103.3	17.26	122.882	
885.8	885.8	877.8	877.8	1.9	17.3	55.48	1,201.6	1,747.2	2,120.5	2,101.3	19.18	110.561	
900.0	900.0	892.0	892.0	1.9	17.6	55.48	1,201.6	1,747.2	2,120.5	2,101.0	19.50	108.760	
984.2	984.2	976.2	976.2	2.1	19.3	55.48	1,201.6	1,747.2	2,120.5	2,099.1	21.38	99.163	
1,000.0	1,000.0	992.0	992.0	2.1	19.6	55.48	1,201.6	1,747.2	2,120.5	2,098.8	21.74	97.554	
1,082.7	1,082.7	1,074.7	1,074.7	2.3	21.3	55.48	1,201.6	1,747.2	2,120.5	2,096.9	23.59	89.899	
1,100.0	1,100.0	1,092.0	1,092.0	2.3	21.6	55.48	1,201.6	1,747.2	2,120.5	2,096.5	23.98	88.445	
1,181.1	1,181.1	1,173.1	1,173.1	2.5	23.3	55.48	1,201.6	1,747.2	2,120.5	2,094.7	25.79	82.219	
1,200.0	1,200.0	1,192.0	1,192.0	2.6	23.6	55.48	1,201.6	1,747.2	2,120.5	2,094.3	26.21	80.893	
1,279.5	1,279.5	1,271.5	1,271.5	2.7	25.2	55.48	1,201.6	1,747.2	2,120.5	2,092.5	27.99	75.750	
1,300.0	1,300.0	1,292.0	1,292.0	2.8	25.7	55.48	1,201.6	1,747.2	2,120.5	2,092.1	28.45	74.530	
1,377.9	1,377.9	1,369.9	1,369.9	3.0	27.2	14.31	1,201.6	1,747.2	2,119.5	2,089.3	30.18	70.221	
1,400.0	1,400.0	1,392.0	1,392.0	3.0	27.7	14.31	1,201.6	1,747.2	2,118.8	2,088.2	30.67	69.088	
1,476.4	1,476.3	1,468.3	1,468.3	3.2	29.2	14.36	1,201.6	1,747.2	2,115.3	2,082.9	32.33	65.424	
1,500.0	1,499.8	1,491.8	1,491.8	3.2	29.7	14.37	1,201.6	1,747.2	2,113.8	2,080.9	32.84	64.365	
1,574.8	1,574.4	1,566.4	1,566.4	3.4	31.2	14.45	1,201.6	1,747.2	2,107.8	2,073.3	34.43	61.213	
1,600.0	1,599.5	1,591.5	1,591.5	3.5	31.7	14.48	1,201.6	1,747.2	2,105.3	2,070.4	34.96	60.217	
1,673.2	1,672.2	1,664.2	1,664.2	3.6	33.1	14.58	1,201.6	1,747.2	2,097.0	2,060.5	36.48	57.483	
1,700.0	1,698.7	1,690.7	1,690.7	3.7	33.7	14.62	1,201.6	1,747.2	2,093.5	2,056.5	37.03	56.542	
1,771.6	1,769.5	1,761.5	1,761.5	3.9	35.1	14.75	1,201.6	1,747.2	2,083.0	2,044.5	38.47	54.151	
1,800.0	1,797.5	1,789.5	1,789.5	4.0	35.7	14.81	1,201.6	1,747.2	2,078.4	2,039.4	39.02	53.258	
1,870.1	1,866.3	1,858.3	1,858.3	4.2	37.1	14.96	1,201.6	1,747.2	2,065.8	2,025.4	40.39	51.152	
1,899.9	1,895.6	1,887.6	1,887.6	4.3	37.6	15.04	1,201.6	1,747.2	2,059.9	2,019.0	40.95	50.301	
1,968.5	1,962.6	1,954.6	1,954.6	4.5	39.0	15.14	1,201.6	1,747.2	2,046.1	2,003.7	42.44	48.214	
2,000.0	1,993.4	1,985.4	1,985.4	4.6	39.6	15.19	1,201.6	1,747.2	2,039.8	1,996.7	43.12	47.306	
2,066.9	2,058.9	2,050.9	2,050.9	4.8	40.9	15.29	1,201.6	1,747.2	2,026.4	1,981.8	44.58	45.459	
2,100.0	2,091.3	2,083.3	2,083.3	4.9	41.6	15.34	1,201.6	1,747.2	2,019.7	1,974.4	45.29	44.593	
2,165.3	2,155.2	2,147.2	2,147.2	5.2	42.9	15.45	1,201.6	1,747.2	2,006.6	1,959.9	46.71	42.955	
2,200.0	2,189.1	2,181.1	2,181.1	5.3	43.5	15.50	1,201.6	1,747.2	1,999.7	1,952.2	47.47	42.125	
2,263.8	2,251.5	2,243.5	2,243.5	5.5	44.8	15.60	1,201.6	1,747.2	1,986.9	1,938.0	48.86	40.664	
2,300.0	2,286.9	2,278.9	2,278.9	5.7	45.5	15.66	1,201.6	1,747.2	1,979.6	1,930.0	49.65	39.870	
2,362.2	2,347.7	2,339.7	2,339.7	5.9	46.7	15.76	1,201.6	1,747.2	1,967.1	1,916.1	51.01	38.563	
2,400.0	2,384.7	2,376.7	2,376.7	6.0	47.5	15.83	1,201.6	1,747.2	1,959.6	1,907.7	51.84	37.803	
2,460.6	2,444.0	2,436.0	2,436.0	6.3	48.7	15.93	1,201.6	1,747.2	1,947.4	1,894.3	53.16	36.630	
2,500.0	2,482.5	2,474.5	2,474.5	6.4	49.4	15.99	1,201.6	1,747.2	1,939.5	1,885.5	54.03	35.900	
2,559.0	2,540.3	2,532.3	2,532.3	6.7	50.6	16.09	1,201.6	1,747.2	1,927.7	1,872.4	55.32	34.847	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,572.3	2,572.3	6.8	51.4	16.16	1,201.6	1,747.2	1,919.5	1,863.3	56.22	34.145	
2,657.5	2,636.5	2,628.5	2,628.5	7.1	52.5	16.26	1,201.6	1,747.2	1,908.0	1,850.6	57.48	33.195	
2,700.0	2,678.1	2,670.1	2,670.1	7.2	53.4	16.34	1,201.6	1,747.2	1,899.5	1,841.1	58.41	32.519	
2,755.9	2,732.8	2,724.8	2,724.8	7.5	54.5	16.44	1,201.6	1,747.2	1,888.4	1,828.7	59.64	31.662	
2,800.0	2,776.0	2,768.0	2,768.0	7.7	55.4	16.52	1,201.6	1,747.2	1,879.6	1,818.9	60.61	31.011	
2,854.3	2,829.1	2,821.1	2,821.1	7.9	56.4	16.61	1,201.6	1,747.2	1,868.7	1,806.9	61.81	30.235	
2,900.0	2,873.8	2,865.8	2,865.8	8.1	57.3	16.70	1,201.6	1,747.2	1,859.6	1,796.8	62.81	29.607	
2,952.7	2,925.4	2,917.4	2,917.4	8.3	58.4	16.80	1,201.6	1,747.2	1,849.1	1,785.1	63.97	28.904	
3,000.0	2,971.6	2,963.6	2,963.6	8.5	59.3	16.88	1,201.6	1,747.2	1,839.7	1,774.6	65.01	28.297	
3,051.2	3,021.6	3,013.6	3,013.6	8.7	60.3	16.98	1,201.6	1,747.2	1,829.5	1,763.3	66.14	27.660	
3,100.0	3,069.4	3,061.4	3,061.4	8.9	61.3	17.07	1,201.6	1,747.2	1,819.7	1,752.5	67.22	27.072	
3,149.6	3,117.9	3,109.9	3,109.9	9.1	62.2	17.17	1,201.6	1,747.2	1,809.9	1,741.6	68.31	26.494	
3,200.0	3,167.2	3,159.2	3,159.2	9.3	63.2	17.27	1,201.6	1,747.2	1,799.8	1,730.4	69.42	25.925	
3,248.0	3,214.2	3,206.2	3,206.2	9.5	64.2	17.36	1,201.6	1,747.2	1,790.3	1,719.8	70.49	25.399	
3,300.0	3,265.0	3,257.0	3,257.0	9.8	65.2	17.47	1,201.6	1,747.2	1,780.0	1,708.3	71.63	24.848	
3,346.4	3,310.5	3,302.5	3,302.5	10.0	66.1	17.56	1,201.6	1,747.2	1,770.7	1,698.1	72.66	24.370	
3,400.0	3,362.9	3,354.9	3,354.9	10.2	67.2	17.67	1,201.6	1,747.2	1,760.1	1,686.3	73.85	23.835	
3,444.9	3,406.7	3,398.7	3,398.7	10.4	68.0	17.76	1,201.6	1,747.2	1,751.2	1,676.4	74.84	23.400	
3,473.0	3,434.2	3,426.2	3,426.2	10.5	68.6	17.82	1,201.6	1,747.2	1,745.6	1,670.2	75.46	23.133	
3,500.0	3,460.7	3,452.7	3,452.7	10.6	69.1	17.84	1,201.6	1,747.2	1,740.4	1,664.2	76.18	22.847	
3,543.3	3,503.2	3,495.2	3,495.2	10.7	70.0	17.88	1,201.6	1,747.2	1,732.5	1,655.2	77.30	22.412	
3,600.0	3,559.0	3,551.0	3,551.0	10.9	71.1	17.92	1,201.6	1,747.2	1,723.1	1,644.3	78.76	21.877	
3,641.7	3,600.2	3,592.2	3,592.2	11.0	71.9	17.95	1,201.6	1,747.2	1,716.8	1,637.0	79.82	21.508	
3,700.0	3,657.9	3,649.9	3,649.9	11.2	73.1	17.98	1,201.6	1,747.2	1,709.1	1,627.8	81.29	21.025	
3,740.1	3,697.8	3,689.8	3,689.8	11.3	73.9	18.00	1,201.6	1,747.2	1,704.4	1,622.1	82.28	20.714	
3,800.0	3,757.3	3,749.3	3,749.3	11.4	75.1	18.03	1,201.6	1,747.2	1,698.4	1,614.6	83.74	20.282	
3,838.6	3,795.7	3,787.7	3,787.7	11.5	75.9	18.05	1,201.6	1,747.2	1,695.1	1,610.5	84.66	20.022	
3,900.0	3,857.0	3,849.0	3,849.0	11.7	77.1	18.07	1,201.6	1,747.2	1,691.0	1,604.9	86.11	19.638	
3,937.0	3,893.9	3,885.9	3,885.9	11.7	77.8	18.08	1,201.6	1,747.2	1,689.1	1,602.1	86.96	19.424	
4,000.0	3,956.9	3,948.9	3,948.9	11.8	79.1	18.09	1,201.6	1,747.2	1,686.9	1,598.5	88.38	19.087	
4,035.4	3,992.3	3,984.3	3,984.3	11.9	79.8	18.09	1,201.6	1,747.2	1,686.3	1,597.1	89.16	18.912	
4,072.9	4,029.8	4,021.8	4,021.8	11.9	80.6	59.28	1,201.6	1,747.2	1,686.0	1,593.7	92.30	18.266	
4,100.0	4,056.9	4,048.9	4,048.9	12.0	81.1	59.28	1,201.6	1,747.2	1,686.0	1,593.1	92.89	18.151	
4,133.8	4,090.7	4,082.7	4,082.7	12.0	81.8	59.28	1,201.6	1,747.2	1,686.0	1,592.4	93.63	18.008	
4,200.0	4,156.9	4,148.9	4,148.9	12.1	83.1	59.28	1,201.6	1,747.2	1,686.0	1,591.0	95.06	17.736	
4,232.3	4,189.2	4,181.2	4,181.2	12.2	83.8	59.28	1,201.6	1,747.2	1,686.0	1,590.3	95.77	17.606	
4,300.0	4,256.9	4,248.9	4,248.9	12.3	85.1	59.28	1,201.6	1,747.2	1,686.0	1,588.8	97.24	17.339	
4,330.7	4,287.6	4,279.6	4,279.6	12.4	85.8	59.28	1,201.6	1,747.2	1,686.0	1,588.1	97.91	17.220	
4,400.0	4,356.9	4,348.9	4,348.9	12.5	87.1	59.28	1,201.6	1,747.2	1,686.0	1,586.6	99.42	16.959	
4,429.1	4,386.0	4,378.0	4,378.0	12.5	87.7	59.28	1,201.6	1,747.2	1,686.0	1,586.0	100.05	16.851	
4,500.0	4,456.9	4,448.9	4,448.9	12.6	89.2	59.28	1,201.6	1,747.2	1,686.0	1,584.4	101.60	16.595	
4,527.5	4,484.4	4,476.4	4,476.4	12.7	89.7	59.28	1,201.6	1,747.2	1,686.0	1,583.8	102.20	16.497	
4,600.0	4,556.9	4,548.9	4,548.9	12.8	91.2	59.28	1,201.6	1,747.2	1,686.0	1,582.2	103.78	16.246	
4,626.0	4,582.9	4,574.9	4,574.9	12.9	91.7	59.28	1,201.6	1,747.2	1,686.0	1,581.7	104.35	16.157	
4,700.0	4,656.9	4,648.9	4,648.9	13.0	93.2	59.28	1,201.6	1,747.2	1,686.0	1,580.1	105.97	15.911	
4,724.4	4,681.3	4,673.3	4,673.3	13.0	93.7	59.28	1,201.6	1,747.2	1,686.0	1,579.5	106.50	15.831	
4,800.0	4,756.9	4,748.9	4,748.9	13.1	95.2	59.28	1,201.6	1,747.2	1,686.0	1,577.9	108.15	15.589	
4,822.8	4,779.7	4,771.7	4,771.7	13.2	95.7	59.28	1,201.6	1,747.2	1,686.0	1,577.4	108.65	15.518	
4,900.0	4,856.9	4,848.9	4,848.9	13.3	97.2	59.28	1,201.6	1,747.2	1,686.0	1,575.7	110.34	15.280	
4,921.2	4,878.1	4,870.1	4,870.1	13.4	97.6	59.28	1,201.6	1,747.2	1,686.0	1,575.2	110.80	15.216	
5,000.0	4,956.9	4,948.9	4,948.9	13.5	99.2	59.28	1,201.6	1,747.2	1,686.0	1,573.5	112.53	14.983	
5,019.7	4,976.6	4,968.6	4,968.6	13.5	99.6	59.28	1,201.6	1,747.2	1,686.0	1,573.1	112.96	14.926	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,048.9	5,048.9	13.7	101.2	59.28	1,201.6	1,747.2	1,686.0	1,571.3	114.72	14.697	
5,118.1	5,075.0	5,067.0	5,067.0	13.7	101.6	59.28	1,201.6	1,747.2	1,686.0	1,570.9	115.11	14.647	
5,200.0	5,156.9	5,148.9	5,148.9	13.8	103.2	59.28	1,201.6	1,747.2	1,686.0	1,569.1	116.91	14.422	
5,216.5	5,173.4	5,165.4	5,165.4	13.9	103.6	59.28	1,201.6	1,747.2	1,686.0	1,568.7	117.27	14.377	
5,300.0	5,256.9	5,248.9	5,248.9	14.0	105.2	59.28	1,201.6	1,747.2	1,686.0	1,566.9	119.10	14.156	
5,314.9	5,271.8	5,263.8	5,263.8	14.1	105.5	59.28	1,201.6	1,747.2	1,686.0	1,566.6	119.43	14.117	
5,400.0	5,356.9	5,348.9	5,348.9	14.2	107.3	59.28	1,201.6	1,747.2	1,686.0	1,564.7	121.29	13.900	
5,413.4	5,370.3	5,362.3	5,362.3	14.2	107.5	59.28	1,201.6	1,747.2	1,686.0	1,564.4	121.59	13.867	
5,500.0	5,456.9	5,448.9	5,448.9	14.4	109.3	59.28	1,201.6	1,747.2	1,686.0	1,562.5	123.49	13.653	
5,511.8	5,468.7	5,460.7	5,460.7	14.4	109.5	59.28	1,201.6	1,747.2	1,686.0	1,562.3	123.75	13.625	
5,600.0	5,556.9	5,548.9	5,548.9	14.6	111.3	59.28	1,201.6	1,747.2	1,686.0	1,560.3	125.68	13.415	
5,610.2	5,567.1	5,559.1	5,559.1	14.6	111.5	59.28	1,201.6	1,747.2	1,686.0	1,560.1	125.91	13.391	
5,700.0	5,656.9	5,648.9	5,648.9	14.7	113.3	59.28	1,201.6	1,747.2	1,686.0	1,558.1	127.88	13.184	
5,708.6	5,665.5	5,657.5	5,657.5	14.8	113.5	59.28	1,201.6	1,747.2	1,686.0	1,557.9	128.07	13.165	
5,800.0	5,756.9	5,748.9	5,748.9	14.9	115.3	59.28	1,201.6	1,747.2	1,686.0	1,555.9	130.08	12.961	
5,807.1	5,764.0	5,756.0	5,756.0	14.9	115.4	59.28	1,201.6	1,747.2	1,686.0	1,555.8	130.24	12.946	
5,900.0	5,856.9	5,848.9	5,848.9	15.1	117.3	59.28	1,201.6	1,747.2	1,686.0	1,553.7	132.28	12.746	
5,905.5	5,862.4	5,854.4	5,854.4	15.1	117.4	59.28	1,201.6	1,747.2	1,686.0	1,553.6	132.40	12.734	
5,971.9	5,928.8	5,920.8	5,920.8	15.3	118.8	59.28	1,201.6	1,747.2	1,686.0	1,552.2	133.86	12.595 CC, ES, SF	
6,000.0	5,956.9	5,948.9	5,948.9	15.3	119.3	149.27	1,201.6	1,747.2	1,686.0	1,553.9	132.60	12.718	
6,003.9	5,960.8	5,952.8	5,952.8	15.3	119.4	149.27	1,201.6	1,747.2	1,686.0	1,554.0	132.66	12.714	
6,050.0	6,006.7	5,998.7	5,998.7	15.4	120.3	149.20	1,201.6	1,747.2	1,689.7	1,556.5	133.15	12.690	
6,100.0	6,056.2	6,048.2	6,048.2	15.4	121.3	149.07	1,201.6	1,747.2	1,695.8	1,562.6	133.21	12.731	
6,102.3	6,058.5	6,050.5	6,050.5	15.4	121.4	149.07	1,201.6	1,747.2	1,696.2	1,563.0	133.20	12.735	
6,150.0	6,105.1	6,097.1	6,097.1	15.4	122.3	148.87	1,201.6	1,747.2	1,705.0	1,572.2	132.79	12.840	
6,200.0	6,153.0	6,145.0	6,145.0	15.5	123.3	148.60	1,201.6	1,747.2	1,717.1	1,585.2	131.90	13.018	
6,200.8	6,153.8	6,145.8	6,145.8	15.5	123.3	148.59	1,201.6	1,747.2	1,717.3	1,585.4	131.88	13.022	
6,250.0	6,199.9	6,191.9	6,191.9	15.5	124.2	148.23	1,201.6	1,747.2	1,732.1	1,601.5	130.57	13.266	
6,299.2	6,244.8	6,236.8	6,236.8	15.5	125.1	147.78	1,201.6	1,747.2	1,749.6	1,620.7	128.87	13.577	
6,300.0	6,245.5	6,237.5	6,237.5	15.5	125.1	147.77	1,201.6	1,747.2	1,749.9	1,621.1	128.84	13.582	
6,350.0	6,289.6	6,281.6	6,281.6	15.5	126.0	147.20	1,201.6	1,747.2	1,770.5	1,643.8	126.77	13.966	
6,397.6	6,329.9	6,321.9	6,321.9	15.4	126.8	146.53	1,201.6	1,747.2	1,792.7	1,668.2	124.56	14.392	
6,400.0	6,331.8	6,323.8	6,323.8	15.4	126.9	146.49	1,201.6	1,747.2	1,793.9	1,669.4	124.45	14.415	
6,450.0	6,372.2	6,364.2	6,364.2	15.4	127.7	145.63	1,201.6	1,747.2	1,819.9	1,697.9	121.99	14.918	
6,496.0	6,407.4	6,399.4	6,399.4	15.4	128.4	144.66	1,201.6	1,747.2	1,846.0	1,726.3	119.73	15.419	
6,500.0	6,410.3	6,402.3	6,402.3	15.4	128.4	144.57	1,201.6	1,747.2	1,848.4	1,728.8	119.54	15.463	
6,550.0	6,446.1	6,438.1	6,438.1	15.4	129.2	143.29	1,201.6	1,747.2	1,879.3	1,762.0	117.28	16.024	
6,594.5	6,475.9	6,467.9	6,467.9	15.4	129.8	141.92	1,201.6	1,747.2	1,908.8	1,793.1	115.64	16.506	
6,600.0	6,479.4	6,471.4	6,471.4	15.4	129.8	141.74	1,201.6	1,747.2	1,912.5	1,797.1	115.47	16.563	
6,650.0	6,510.0	6,502.0	6,502.0	15.5	130.4	139.85	1,201.6	1,747.2	1,947.9	1,833.5	114.37	17.031	
6,692.9	6,534.0	6,526.0	6,526.0	15.7	130.9	137.90	1,201.6	1,747.2	1,979.9	1,865.6	114.25	17.329	
6,700.0	6,537.8	6,529.8	6,529.8	15.7	131.0	137.54	1,201.6	1,747.2	1,985.3	1,871.0	114.31	17.367	
6,750.0	6,562.6	6,554.6	6,554.6	16.2	131.5	134.73	1,201.6	1,747.2	2,024.5	1,908.9	115.61	17.510	
6,791.3	6,580.8	6,572.8	6,572.8	16.6	131.9	131.93	1,201.6	1,747.2	2,058.1	1,940.2	117.92	17.454	
6,800.0	6,584.3	6,576.3	6,576.3	16.7	131.9	131.28	1,201.6	1,747.2	2,065.3	1,946.7	118.56	17.419	
6,850.0	6,602.9	6,594.9	6,594.9	17.3	132.3	127.05	1,201.6	1,747.2	2,107.6	1,984.3	123.31	17.092	
6,889.7	6,615.2	6,607.2	6,607.2	17.9	132.6	123.01	1,201.6	1,747.2	2,142.1	2,013.8	128.32	16.694	
6,900.0	6,618.1	6,610.1	6,610.1	18.0	132.6	121.86	1,201.6	1,747.2	2,151.1	2,021.4	129.76	16.578	
6,950.0	6,630.0	6,622.0	6,622.0	18.8	132.9	115.53	1,201.6	1,747.2	2,195.7	2,058.3	137.42	15.978	
6,988.2	6,636.8	6,628.8	6,628.8	19.5	133.0	109.87	1,201.6	1,747.2	2,230.3	2,086.8	143.47	15.546	
7,000.0	6,638.5	6,630.5	6,630.5	19.7	133.0	107.96	1,201.6	1,747.2	2,241.1	2,095.9	145.25	15.429	
7,050.0	6,643.5	6,635.5	6,635.5	20.6	133.1	99.15	1,201.6	1,747.2	2,287.1	2,135.5	151.62	15.084	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,636.9	6,636.9	21.3	133.2	92.07	1,201.6	1,747.2	2,321.0	2,166.8	154.27	15.045	
7,097.8	6,645.0	6,637.0	6,637.0	21.5	133.2	89.82	1,201.6	1,747.2	2,331.5	2,176.8	154.63	15.078	
7,100.0	6,645.0	6,637.0	6,637.0	21.6	133.2	89.82	1,201.6	1,747.2	2,333.5	2,178.8	154.67	15.087	
7,185.0	6,644.9	6,636.9	6,636.9	23.3	133.2	89.81	1,201.6	1,747.2	2,412.7	2,256.3	156.39	15.427	
7,200.0	6,644.9	6,636.9	6,636.9	23.6	133.2	89.81	1,201.6	1,747.2	2,426.7	2,270.0	156.70	15.487	
7,283.4	6,644.8	6,636.8	6,636.8	25.4	133.2	89.80	1,201.6	1,747.2	2,504.9	2,346.4	158.51	15.803	
7,300.0	6,644.7	6,636.7	6,636.7	25.8	133.2	89.80	1,201.6	1,747.2	2,520.4	2,361.6	158.87	15.865	
7,381.9	6,644.6	6,636.6	6,636.6	27.7	133.2	89.80	1,201.6	1,747.2	2,597.5	2,436.8	160.75	16.159	
7,400.0	6,644.6	6,636.6	6,636.6	28.1	133.2	89.79	1,201.6	1,747.2	2,614.6	2,453.5	161.16	16.224	
7,480.3	6,644.5	6,636.5	6,636.5	30.0	133.2	89.79	1,201.6	1,747.2	2,690.6	2,527.5	163.07	16.500	
7,500.0	6,644.5	6,636.5	6,636.5	30.5	133.2	89.79	1,201.6	1,747.2	2,709.3	2,545.7	163.54	16.567	
7,578.7	6,644.4	6,636.4	6,636.4	32.4	133.2	89.78	1,201.6	1,747.2	2,784.0	2,618.6	165.46	16.826	
7,600.0	6,644.4	6,636.4	6,636.4	32.9	133.1	89.78	1,201.6	1,747.2	2,804.3	2,638.3	165.98	16.895	
7,677.1	6,644.3	6,636.3	6,636.3	34.8	133.1	89.77	1,201.6	1,747.2	2,877.8	2,709.9	167.91	17.139	
7,700.0	6,644.2	6,636.2	6,636.2	35.4	133.1	89.77	1,201.6	1,747.2	2,899.6	2,731.1	168.48	17.210	
7,775.6	6,644.1	6,636.1	6,636.1	37.3	133.1	89.76	1,201.6	1,747.2	2,971.8	2,801.4	170.40	17.440	
7,800.0	6,644.1	6,636.1	6,636.1	38.0	133.1	89.76	1,201.6	1,747.2	2,995.2	2,824.2	171.02	17.514	
7,874.0	6,644.0	6,636.0	6,636.0	39.9	133.1	89.75	1,201.6	1,747.2	3,066.2	2,893.2	172.93	17.731	
7,900.0	6,644.0	6,636.0	6,636.0	40.5	133.1	89.75	1,201.6	1,747.2	3,091.1	2,917.5	173.60	17.806	
7,972.4	6,643.9	6,635.9	6,635.9	42.4	133.1	89.75	1,201.6	1,747.2	3,160.7	2,985.3	175.49	18.011	
8,000.0	6,643.9	6,635.9	6,635.9	43.1	133.1	89.74	1,201.6	1,747.2	3,187.3	3,011.1	176.20	18.089	
8,070.8	6,643.8	6,635.8	6,635.8	45.0	133.1	89.74	1,201.6	1,747.2	3,255.6	3,077.5	178.07	18.283	
8,100.0	6,643.7	6,635.7	6,635.7	45.8	133.1	89.74	1,201.6	1,747.2	3,283.7	3,104.8	178.83	18.362	
8,169.3	6,643.7	6,635.7	6,635.7	47.6	133.1	89.73	1,201.6	1,747.2	3,350.6	3,169.9	180.67	18.545	
8,200.0	6,643.6	6,635.6	6,635.6	48.4	133.1	89.73	1,201.6	1,747.2	3,380.3	3,198.8	181.48	18.626	
8,267.7	6,643.5	6,635.5	6,635.5	50.2	133.1	89.72	1,201.6	1,747.2	3,445.8	3,262.5	183.29	18.800	
8,300.0	6,643.5	6,635.5	6,635.5	51.1	133.1	89.72	1,201.6	1,747.2	3,477.1	3,292.9	184.15	18.882	
8,366.1	6,643.4	6,635.4	6,635.4	52.9	133.1	89.71	1,201.6	1,747.2	3,541.2	3,355.2	185.92	19.046	
8,400.0	6,643.4	6,635.4	6,635.4	53.8	133.1	89.71	1,201.6	1,747.2	3,574.0	3,387.2	186.83	19.130	
8,464.5	6,643.3	6,635.3	6,635.3	55.5	133.1	89.70	1,201.6	1,747.2	3,636.7	3,448.1	188.57	19.286	
8,500.0	6,643.2	6,635.2	6,635.2	56.5	133.1	89.70	1,201.6	1,747.2	3,671.2	3,481.6	189.53	19.370	
8,563.0	6,643.2	6,635.2	6,635.2	58.2	133.1	89.70	1,201.6	1,747.2	3,732.4	3,541.2	191.23	19.518	
8,600.0	6,643.1	6,635.1	6,635.1	59.2	133.1	89.69	1,201.6	1,747.2	3,768.5	3,576.2	192.23	19.604	
8,661.4	6,643.0	6,635.0	6,635.0	60.8	133.1	89.69	1,201.6	1,747.2	3,828.3	3,634.4	193.90	19.744	
8,700.0	6,643.0	6,635.0	6,635.0	61.9	133.1	89.69	1,201.6	1,747.2	3,865.9	3,670.9	194.95	19.831	
8,759.8	6,642.9	6,634.9	6,634.9	63.5	133.1	89.68	1,201.6	1,747.2	3,924.2	3,727.6	196.57	19.963	
8,800.0	6,642.9	6,634.9	6,634.9	64.6	133.1	89.68	1,201.6	1,747.2	3,963.4	3,765.8	197.67	20.051	
8,858.2	6,642.8	6,634.8	6,634.8	66.2	133.1	89.67	1,201.6	1,747.2	4,020.3	3,821.0	199.26	20.176	
8,900.0	6,642.7	6,634.7	6,634.7	67.3	133.1	89.67	1,201.6	1,747.2	4,061.1	3,860.7	200.40	20.265	
8,956.7	6,642.7	6,634.7	6,634.7	68.9	133.1	89.66	1,201.6	1,747.2	4,116.5	3,914.5	201.95	20.384	
9,000.0	6,642.6	6,634.6	6,634.6	70.1	133.1	89.66	1,201.6	1,747.2	4,158.9	3,955.7	203.13	20.474	
9,055.1	6,642.5	6,634.5	6,634.5	71.6	133.1	89.66	1,201.6	1,747.2	4,212.8	4,008.2	204.64	20.586	
9,100.0	6,642.5	6,634.5	6,634.5	72.8	133.1	89.65	1,201.6	1,747.2	4,256.8	4,050.9	205.87	20.677	
9,153.5	6,642.4	6,634.4	6,634.4	74.3	133.1	89.65	1,201.6	1,747.2	4,309.2	4,101.8	207.34	20.783	
9,200.0	6,642.4	6,634.4	6,634.4	75.6	133.1	89.64	1,201.6	1,747.2	4,354.7	4,146.1	208.62	20.874	
9,251.9	6,642.3	6,634.3	6,634.3	77.0	133.1	89.64	1,201.6	1,747.2	4,405.7	4,195.6	210.05	20.975	
9,300.0	6,642.2	6,634.2	6,634.2	78.3	133.1	89.64	1,201.6	1,747.2	4,452.8	4,241.4	211.37	21.067	
9,350.4	6,642.2	6,634.2	6,634.2	79.7	133.1	89.63	1,201.6	1,747.2	4,502.2	4,289.5	212.76	21.161	
9,400.0	6,642.1	6,634.1	6,634.1	81.1	133.1	89.63	1,201.6	1,747.2	4,551.0	4,336.8	214.12	21.254	
9,448.8	6,642.0	6,634.0	6,634.0	82.4	133.1	89.62	1,201.6	1,747.2	4,598.9	4,383.4	215.47	21.344	
9,500.0	6,642.0	6,634.0	6,634.0	83.8	133.1	89.62	1,201.6	1,747.2	4,649.2	4,432.3	216.88	21.437	
9,547.2	6,641.9	6,633.9	6,633.9	85.1	133.1	89.61	1,201.6	1,747.2	4,695.6	4,477.4	218.18	21.521	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,633.9	6,633.9	86.6	133.1	89.61	1,201.6	1,747.2	4,747.5	4,527.8	219.64	21.615	
9,645.6	6,641.8	6,633.8	6,633.8	87.9	133.1	89.61	1,201.6	1,747.2	4,792.4	4,571.5	220.90	21.694	
9,700.0	6,641.7	6,633.7	6,633.7	89.4	133.1	89.60	1,201.6	1,747.2	4,845.9	4,623.5	222.41	21.788	
9,744.1	6,641.7	6,633.7	6,633.7	90.6	133.1	89.60	1,201.6	1,747.2	4,889.2	4,665.6	223.63	21.864	
9,800.0	6,641.6	6,633.6	6,633.6	92.1	133.1	89.59	1,201.6	1,747.2	4,944.3	4,719.1	225.17	21.958	
9,842.5	6,641.6	6,633.6	6,633.6	93.3	133.1	89.59	1,201.6	1,747.2	4,986.2	4,759.8	226.35	22.029	
9,900.0	6,641.5	6,633.5	6,633.5	94.9	133.1	89.58	1,201.6	1,747.2	5,042.8	4,814.9	227.94	22.123	
9,940.9	6,641.4	6,633.4	6,633.4	96.0	133.1	89.58	1,201.6	1,747.2	5,083.1	4,854.1	229.08	22.190	
10,000.0	6,641.4	6,633.4	6,633.4	97.7	133.1	89.58	1,201.6	1,747.2	5,141.4	4,910.7	230.71	22.285	
10,039.3	6,641.3	6,633.3	6,633.3	98.8	133.1	89.57	1,201.6	1,747.2	5,180.2	4,948.4	231.80	22.347	
10,100.0	6,641.2	6,633.2	6,633.2	100.4	133.1	89.57	1,201.6	1,747.2	5,240.0	5,006.5	233.49	22.442	
10,137.8	6,641.2	6,633.2	6,633.2	101.5	133.1	89.57	1,201.6	1,747.2	5,277.2	5,042.7	234.54	22.501	
10,200.0	6,641.1	6,633.1	6,633.1	103.2	133.1	89.56	1,201.6	1,747.2	5,338.6	5,102.4	236.26	22.596	
10,236.2	6,641.1	6,633.1	6,633.1	104.2	133.1	89.56	1,201.6	1,747.2	5,374.4	5,137.1	237.27	22.651	
10,300.0	6,641.0	6,633.0	6,633.0	106.0	133.1	89.55	1,201.6	1,747.2	5,437.4	5,198.3	239.04	22.747	
10,334.6	6,640.9	6,632.9	6,632.9	107.0	133.1	89.55	1,201.6	1,747.2	5,471.5	5,231.5	240.00	22.798	
10,400.0	6,640.9	6,632.9	6,632.9	108.8	133.1	89.54	1,201.6	1,747.2	5,536.1	5,294.3	241.82	22.894	
10,433.0	6,640.8	6,632.8	6,632.8	109.7	133.1	89.54	1,201.6	1,747.2	5,568.8	5,326.0	242.74	22.942	
10,500.0	6,640.7	6,632.7	6,632.7	111.6	133.1	89.53	1,201.6	1,747.2	5,634.9	5,390.3	244.60	23.037	
10,531.5	6,640.7	6,632.7	6,632.7	112.4	133.1	89.53	1,201.6	1,747.2	5,666.0	5,420.6	245.47	23.082	
10,600.0	6,640.6	6,632.6	6,632.6	114.3	133.1	89.53	1,201.6	1,747.2	5,733.8	5,486.4	247.38	23.178	
10,629.9	6,640.6	6,632.6	6,632.6	115.2	133.1	89.52	1,201.6	1,747.2	5,763.3	5,515.1	248.21	23.219	
10,700.0	6,640.5	6,632.5	6,632.5	117.1	133.1	89.52	1,201.6	1,747.2	5,832.7	5,582.5	250.16	23.315	
10,728.3	6,640.4	6,632.4	6,632.4	117.9	133.1	89.52	1,201.6	1,747.2	5,860.7	5,609.7	250.95	23.354	
10,800.0	6,640.4	6,632.4	6,632.4	119.9	133.1	89.51	1,201.6	1,747.2	5,931.6	5,678.6	252.95	23.450	
10,826.7	6,640.3	6,632.3	6,632.3	120.7	133.1	89.51	1,201.6	1,747.2	5,958.0	5,704.4	253.69	23.485	
10,900.0	6,640.2	6,632.2	6,632.2	122.7	133.1	89.50	1,201.6	1,747.2	6,030.5	5,774.8	255.73	23.582	
10,925.2	6,640.2	6,632.2	6,632.2	123.4	133.1	89.50	1,201.6	1,747.2	6,055.4	5,799.0	256.43	23.614	
11,000.0	6,640.1	6,632.1	6,632.1	125.5	133.1	89.49	1,201.6	1,747.2	6,129.5	5,871.0	258.52	23.710	
11,023.6	6,640.1	6,632.1	6,632.1	126.1	133.1	89.49	1,201.6	1,747.2	6,152.9	5,893.7	259.17	23.740	
11,100.0	6,640.0	6,632.0	6,632.0	128.3	133.1	89.48	1,201.6	1,747.2	6,228.5	5,967.2	261.30	23.836	
11,122.0	6,639.9	6,631.9	6,631.9	128.9	133.1	89.48	1,201.6	1,747.2	6,250.4	5,988.4	261.92	23.864	
11,200.0	6,639.8	6,631.8	6,631.8	131.1	133.1	89.48	1,201.6	1,747.2	6,327.6	6,063.5	264.09	23.960	
11,220.4	6,639.8	6,631.8	6,631.8	131.6	133.1	89.47	1,201.6	1,747.2	6,347.9	6,083.2	264.66	23.985	
11,300.0	6,639.7	6,631.7	6,631.7	133.9	133.1	89.47	1,201.6	1,747.2	6,426.7	6,159.8	266.88	24.081	
11,318.9	6,639.7	6,631.7	6,631.7	134.4	133.1	89.47	1,201.6	1,747.2	6,445.4	6,178.0	267.41	24.103	
11,400.0	6,639.6	6,631.6	6,631.6	136.7	133.1	89.46	1,201.6	1,747.2	6,525.8	6,256.1	269.67	24.199	
11,417.3	6,639.6	6,631.6	6,631.6	137.1	133.1	89.46	1,201.6	1,747.2	6,542.9	6,272.8	270.15	24.219	
11,500.0	6,639.5	6,631.5	6,631.5	139.4	133.1	89.45	1,201.6	1,747.2	6,624.9	6,352.5	272.46	24.315	
11,515.7	6,639.5	6,631.5	6,631.5	139.9	133.1	89.45	1,201.6	1,747.2	6,640.5	6,367.6	272.90	24.333	
11,600.0	6,639.3	6,631.3	6,631.3	142.2	133.0	89.44	1,201.6	1,747.2	6,724.1	6,448.8	275.25	24.429	
11,614.1	6,639.3	6,631.3	6,631.3	142.6	133.0	89.44	1,201.6	1,747.2	6,738.1	6,462.5	275.65	24.445	
11,700.0	6,639.2	6,631.2	6,631.2	145.0	133.0	89.43	1,201.6	1,747.2	6,823.3	6,545.2	278.04	24.540	
11,712.6	6,639.2	6,631.2	6,631.2	145.4	133.0	89.43	1,201.6	1,747.2	6,835.8	6,557.4	278.39	24.554	
11,800.0	6,639.1	6,631.1	6,631.1	147.8	133.0	89.43	1,201.6	1,747.2	6,922.5	6,641.7	280.84	24.650	
11,811.0	6,639.1	6,631.1	6,631.1	148.1	133.0	89.43	1,201.6	1,747.2	6,933.4	6,652.3	281.14	24.662	
11,900.0	6,639.0	6,631.0	6,631.0	150.6	133.0	89.42	1,201.6	1,747.2	7,021.7	6,738.1	283.63	24.757	
11,909.4	6,639.0	6,631.0	6,631.0	150.9	133.0	89.42	1,201.6	1,747.2	7,031.1	6,747.2	283.89	24.767	
12,000.0	6,638.8	6,630.8	6,630.8	153.4	133.0	89.41	1,201.6	1,747.2	7,121.0	6,834.6	286.42	24.862	
12,007.8	6,638.8	6,630.8	6,630.8	153.6	133.0	89.41	1,201.6	1,747.2	7,128.8	6,842.1	286.64	24.870	
12,100.0	6,638.7	6,630.7	6,630.7	156.2	133.0	89.40	1,201.6	1,747.2	7,220.3	6,931.0	289.22	24.965	
12,106.3	6,638.7	6,630.7	6,630.7	156.4	133.0	89.40	1,201.6	1,747.2	7,226.5	6,937.1	289.39	24.971	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.6	6,630.6	6,630.6	159.0	133.0	89.39	1,201.6	1,747.2	7,319.6	7,027.5	292.01	25.066		
12,204.7	6,638.6	6,630.6	6,630.6	159.1	133.0	89.39	1,201.6	1,747.2	7,324.2	7,032.1	292.14	25.071		
12,300.0	6,638.5	6,630.5	6,630.5	161.8	133.0	89.38	1,201.6	1,747.2	7,418.9	7,124.1	294.80	25.165		
12,303.1	6,638.5	6,630.5	6,630.5	161.9	133.0	89.38	1,201.6	1,747.2	7,422.0	7,127.1	294.89	25.168		
12,400.0	6,638.3	6,630.3	6,630.3	164.6	133.0	89.38	1,201.6	1,747.2	7,518.2	7,220.6	297.60	25.263		
12,401.5	6,638.3	6,630.3	6,630.3	164.6	133.0	89.38	1,201.6	1,747.2	7,519.7	7,222.1	297.64	25.264		
12,500.0	6,638.2	6,630.2	6,630.2	167.4	133.0	89.37	1,201.6	1,747.2	7,617.6	7,317.2	300.40	25.358		
12,598.4	6,638.1	6,630.1	6,630.1	170.2	133.0	89.36	1,201.6	1,747.2	7,715.3	7,412.2	303.15	25.451		
12,600.0	6,638.1	6,630.1	6,630.1	170.2	133.0	89.36	1,201.6	1,747.2	7,716.9	7,413.7	303.19	25.452		
12,696.8	6,638.0	6,630.0	6,630.0	172.9	133.0	89.35	1,201.6	1,747.2	7,813.2	7,507.3	305.90	25.542		
12,700.0	6,638.0	6,630.0	6,630.0	173.0	133.0	89.35	1,201.6	1,747.2	7,816.3	7,510.3	305.99	25.544		
12,795.2	6,637.8	6,629.8	6,629.8	175.7	133.0	89.34	1,201.6	1,747.2	7,911.0	7,602.3	308.65	25.631		
12,800.0	6,637.8	6,629.8	6,629.8	175.8	133.0	89.34	1,201.6	1,747.2	7,915.7	7,606.9	308.79	25.635		
12,893.7	6,637.7	6,629.7	6,629.7	178.4	133.0	89.33	1,201.6	1,747.2	8,008.8	7,697.4	311.41	25.718		
12,900.0	6,637.7	6,629.7	6,629.7	178.6	133.0	89.33	1,201.6	1,747.2	8,015.1	7,703.5	311.58	25.724		
12,992.1	6,637.6	6,629.6	6,629.6	181.2	133.0	89.33	1,201.6	1,747.2	8,106.7	7,792.5	314.16	25.804		
13,000.0	6,637.6	6,629.6	6,629.6	181.4	133.0	89.33	1,201.6	1,747.2	8,114.5	7,800.2	314.38	25.811		
13,090.5	6,637.5	6,629.5	6,629.5	183.9	133.0	89.32	1,201.6	1,747.2	8,204.6	7,887.7	316.91	25.889		
13,100.0	6,637.5	6,629.5	6,629.5	184.2	133.0	89.32	1,201.6	1,747.2	8,214.0	7,896.8	317.18	25.897		
13,188.9	6,637.4	6,629.4	6,629.4	186.7	133.0	89.31	1,201.6	1,747.2	8,302.5	7,982.8	319.67	25.972		
13,200.0	6,637.3	6,629.3	6,629.3	187.0	133.0	89.31	1,201.6	1,747.2	8,313.4	7,993.5	319.98	25.981		
13,287.4	6,637.2	6,629.2	6,629.2	189.4	133.0	89.30	1,201.6	1,747.2	8,400.4	8,077.9	322.42	26.054		
13,300.0	6,637.2	6,629.2	6,629.2	189.8	133.0	89.30	1,201.6	1,747.2	8,412.9	8,090.1	322.77	26.064		
13,385.8	6,637.1	6,629.1	6,629.1	192.2	133.0	89.29	1,201.6	1,747.2	8,498.3	8,173.1	325.18	26.134		
13,400.0	6,637.1	6,629.1	6,629.1	192.6	133.0	89.29	1,201.6	1,747.2	8,512.4	8,186.8	325.57	26.146		
13,484.2	6,637.0	6,629.0	6,629.0	195.0	133.0	89.29	1,201.6	1,747.2	8,596.2	8,268.3	327.93	26.214		
13,500.0	6,637.0	6,629.0	6,629.0	195.4	133.0	89.28	1,201.6	1,747.2	8,611.9	8,283.5	328.37	26.226		
13,582.6	6,636.9	6,628.9	6,628.9	197.7	133.0	89.28	1,201.6	1,747.2	8,694.1	8,363.4	330.68	26.291		
13,600.0	6,636.8	6,628.8	6,628.8	198.2	133.0	89.28	1,201.6	1,747.2	8,711.4	8,380.2	331.17	26.305		
13,681.1	6,636.7	6,628.7	6,628.7	200.5	133.0	89.27	1,201.6	1,747.2	8,792.1	8,458.6	333.44	26.368		
13,700.0	6,636.7	6,628.7	6,628.7	201.0	133.0	89.27	1,201.6	1,747.2	8,810.9	8,476.9	333.97	26.382		
13,779.5	6,636.6	6,628.6	6,628.6	203.2	133.0	89.26	1,201.6	1,747.2	8,890.0	8,553.8	336.20	26.443		
13,800.0	6,636.6	6,628.6	6,628.6	203.8	133.0	89.26	1,201.6	1,747.2	8,910.4	8,573.7	336.77	26.459		
13,877.9	6,636.5	6,628.5	6,628.5	206.0	133.0	89.25	1,201.6	1,747.2	8,988.0	8,649.0	338.95	26.517		
13,900.0	6,636.5	6,628.5	6,628.5	206.6	133.0	89.25	1,201.6	1,747.2	9,010.0	8,670.4	339.57	26.534		
13,976.3	6,636.4	6,628.4	6,628.4	208.8	133.0	89.24	1,201.6	1,747.2	9,086.0	8,744.3	341.71	26.590		
14,000.0	6,636.3	6,628.3	6,628.3	209.4	133.0	89.24	1,201.6	1,747.2	9,109.5	8,767.1	342.37	26.607		
14,074.8	6,636.2	6,628.2	6,628.2	211.5	133.0	89.24	1,201.6	1,747.2	9,184.0	8,839.5	344.46	26.662		
14,100.0	6,636.2	6,628.2	6,628.2	212.2	133.0	89.23	1,201.6	1,747.2	9,209.1	8,863.9	345.17	26.680		
14,173.2	6,636.1	6,628.1	6,628.1	214.3	133.0	89.23	1,201.6	1,747.2	9,282.0	8,934.7	347.22	26.732		
14,200.0	6,636.1	6,628.1	6,628.1	215.0	133.0	89.23	1,201.6	1,747.2	9,308.6	8,960.7	347.97	26.751		
14,271.6	6,636.0	6,628.0	6,628.0	217.0	133.0	89.22	1,201.6	1,747.2	9,380.0	9,030.0	349.98	26.802		
14,300.0	6,636.0	6,628.0	6,628.0	217.8	133.0	89.22	1,201.6	1,747.2	9,408.2	9,057.4	350.77	26.822		
14,370.0	6,635.9	6,627.9	6,627.9	219.8	133.0	89.21	1,201.6	1,747.2	9,478.0	9,125.2	352.73	26.870		
14,400.0	6,635.8	6,627.8	6,627.8	220.6	133.0	89.21	1,201.6	1,747.2	9,507.8	9,154.2	353.57	26.891		
14,468.5	6,635.7	6,627.7	6,627.7	222.6	133.0	89.20	1,201.6	1,747.2	9,576.0	9,220.5	355.49	26.938		
14,500.0	6,635.7	6,627.7	6,627.7	223.4	133.0	89.20	1,201.6	1,747.2	9,607.4	9,251.0	356.37	26.959		
14,566.9	6,635.6	6,627.6	6,627.6	225.3	133.0	89.20	1,201.6	1,747.2	9,674.0	9,315.8	358.25	27.004		
14,600.0	6,635.6	6,627.6	6,627.6	226.2	133.0	89.19	1,201.6	1,747.2	9,707.0	9,347.8	359.17	27.026		
14,665.3	6,635.5	6,627.5	6,627.5	228.1	133.0	89.19	1,201.6	1,747.2	9,772.1	9,411.1	361.00	27.069		
14,700.0	6,635.5	6,627.5	6,627.5	229.0	133.0	89.18	1,201.6	1,747.2	9,806.6	9,444.6	361.97	27.092		
14,763.7	6,635.4	6,627.4	6,627.4	230.8	133.0	89.18	1,201.6	1,747.2	9,870.1	9,506.3	363.76	27.134		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.3	6,627.3	6,627.3	231.8	133.0	89.18	1,201.6	1,747.2	9,906.2	9,541.4	364.78	27.157	
14,862.2	6,635.2	6,627.2	6,627.2	233.6	133.0	89.17	1,201.6	1,747.2	9,968.2	9,601.6	366.52	27.197	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	91.24	-36.4	1,683.6	1,684.0				
98.4	98.4	85.9	85.9	0.1	0.0	91.24	-36.5	1,683.6	1,684.0	1,684.0	0.10	N/A	
100.0	100.0	87.4	87.4	0.1	0.0	91.24	-36.5	1,683.6	1,684.0	1,684.0	0.10	N/A	
196.8	196.8	183.6	183.6	0.3	0.1	91.25	-36.8	1,683.9	1,684.3	1,683.9	0.39	4,319.932	
200.0	200.0	186.7	186.7	0.3	0.1	91.25	-36.8	1,683.9	1,684.3	1,683.9	0.40	4,213.202	
295.3	295.3	282.1	282.1	0.5	0.2	91.26	-37.1	1,684.1	1,684.5	1,683.8	0.74	2,278.007	
300.0	300.0	286.8	286.8	0.5	0.2	91.26	-37.1	1,684.1	1,684.5	1,683.8	0.76	2,226.314	
393.7	393.7	376.8	376.8	0.8	0.3	91.28	-37.6	1,684.4	1,684.9	1,683.8	1.05	1,609.366	
400.0	400.0	382.8	382.8	0.8	0.3	91.28	-37.6	1,684.5	1,684.9	1,683.8	1.07	1,580.775	
492.1	492.1	473.7	473.7	1.0	0.4	91.31	-38.6	1,684.9	1,685.4	1,684.1	1.33	1,262.978	
500.0	500.0	481.5	481.5	1.0	0.4	91.32	-38.7	1,685.0	1,685.4	1,684.1	1.36	1,241.817	
590.5	590.5	573.0	573.0	1.2	0.4	91.35	-39.8	1,685.4	1,685.9	1,684.3	1.61	1,045.250	
600.0	600.0	582.6	582.5	1.2	0.4	91.36	-40.0	1,685.5	1,686.0	1,684.3	1.64	1,028.374	
689.0	689.0	670.0	669.9	1.4	0.5	91.40	-41.3	1,685.9	1,686.5	1,684.6	1.88	895.354	
700.0	700.0	680.7	680.7	1.4	0.5	91.41	-41.5	1,686.0	1,686.5	1,684.6	1.91	881.316	
787.4	787.4	768.0	768.0	1.6	0.5	91.46	-42.9	1,686.5	1,687.1	1,684.9	2.15	784.637	
800.0	800.0	780.7	780.6	1.7	0.6	91.46	-43.1	1,686.6	1,687.2	1,685.0	2.18	772.456	
885.8	885.8	865.9	865.9	1.9	0.6	91.51	-44.5	1,687.1	1,687.7	1,685.3	2.41	699.377	
900.0	900.0	880.0	879.9	1.9	0.6	91.52	-44.7	1,687.2	1,687.8	1,685.3	2.45	688.659	
984.2	984.2	963.5	963.4	2.1	0.6	91.57	-46.1	1,687.7	1,688.4	1,685.7	2.67	631.596	
1,000.0	1,000.0	979.1	979.1	2.1	0.6	91.57	-46.4	1,687.8	1,688.5	1,685.7	2.71	621.991	
1,082.7	1,082.7	1,061.9	1,061.8	2.3	0.7	91.62	-47.7	1,688.3	1,689.1	1,686.1	2.93	576.245	
1,100.0	1,100.0	1,079.3	1,079.2	2.3	0.7	91.63	-48.0	1,688.4	1,689.2	1,686.2	2.98	567.518	
1,181.1	1,181.1	1,159.0	1,158.9	2.5	0.7	91.67	-49.2	1,689.0	1,689.8	1,686.6	3.19	530.282	
1,200.0	1,200.0	1,177.4	1,177.3	2.6	0.7	91.68	-49.5	1,689.1	1,689.9	1,686.7	3.24	522.329	
1,279.5	1,279.5	1,253.5	1,253.4	2.7	0.8	91.71	-50.6	1,689.8	1,690.6	1,687.2	3.44	491.607	
1,300.0	1,300.0	1,272.9	1,272.8	2.8	0.8	91.72	-50.9	1,690.0	1,690.8	1,687.3	3.49	484.313	
1,377.9	1,377.9	1,348.6	1,348.4	3.0	0.8	50.59	-51.9	1,690.8	1,691.1	1,687.4	3.71	456.226	
1,400.0	1,400.0	1,370.2	1,370.1	3.0	0.8	50.62	-52.2	1,691.1	1,690.9	1,687.1	3.76	449.352	
1,476.4	1,476.3	1,446.0	1,445.9	3.2	0.9	50.78	-53.3	1,692.0	1,689.5	1,685.6	3.96	427.004	
1,500.0	1,499.8	1,469.6	1,469.4	3.2	0.9	50.84	-53.7	1,692.3	1,688.9	1,684.8	4.02	420.461	
1,574.8	1,574.4	1,544.6	1,544.4	3.4	0.9	51.08	-54.8	1,693.2	1,685.9	1,681.7	4.21	400.443	
1,600.0	1,599.5	1,569.9	1,569.7	3.5	0.9	51.18	-55.1	1,693.5	1,684.6	1,680.3	4.28	394.037	
1,673.2	1,672.2	1,646.4	1,646.2	3.6	0.9	51.53	-56.2	1,694.3	1,680.1	1,675.6	4.47	375.665	
1,700.0	1,698.7	1,675.0	1,674.8	3.7	0.9	51.68	-56.6	1,694.6	1,678.1	1,673.5	4.54	369.238	
1,771.6	1,769.5	1,749.3	1,749.1	3.9	1.0	52.11	-57.6	1,695.1	1,671.9	1,667.1	4.75	352.113	
1,800.0	1,797.5	1,778.2	1,778.0	4.0	1.0	52.30	-57.9	1,695.3	1,669.1	1,664.3	4.83	345.663	
1,870.1	1,866.3	1,849.6	1,849.4	4.2	1.0	52.81	-58.8	1,695.6	1,661.5	1,656.5	5.04	329.532	
1,899.9	1,895.6	1,880.0	1,879.7	4.3	1.0	53.05	-59.1	1,695.7	1,657.9	1,652.8	5.13	322.982	
1,968.5	1,962.6	1,950.3	1,950.1	4.5	1.1	53.49	-59.9	1,695.9	1,649.5	1,644.2	5.35	308.217	
2,000.0	1,993.4	1,982.8	1,982.6	4.6	1.1	53.69	-60.2	1,695.9	1,645.6	1,640.2	5.45	301.811	
2,066.9	2,058.9	2,053.9	2,053.7	4.8	1.1	54.13	-60.8	1,695.9	1,637.3	1,631.6	5.67	288.595	
2,100.0	2,091.3	2,089.4	2,089.2	4.9	1.1	54.35	-61.0	1,695.7	1,633.1	1,627.3	5.78	282.419	
2,165.3	2,155.2	2,161.0	2,160.8	5.2	1.1	54.79	-61.3	1,695.2	1,624.7	1,618.7	6.00	270.605	
2,200.0	2,189.1	2,199.1	2,198.9	5.3	1.1	55.02	-61.3	1,694.8	1,620.1	1,614.0	6.12	264.599	
2,263.8	2,251.5	2,268.9	2,268.7	5.5	1.1	55.45	-61.1	1,693.9	1,611.5	1,605.2	6.35	253.839	
2,300.0	2,286.9	2,307.8	2,307.6	5.7	1.1	55.68	-60.9	1,693.2	1,606.6	1,600.1	6.48	248.011	
2,362.2	2,347.7	2,370.1	2,369.8	5.9	1.1	56.06	-60.6	1,692.1	1,598.0	1,591.3	6.70	238.392	
2,400.0	2,384.7	2,407.6	2,407.4	6.0	1.1	56.29	-60.4	1,691.3	1,592.8	1,586.0	6.84	232.836	
2,460.6	2,444.0	2,466.2	2,465.9	6.3	1.1	56.65	-60.0	1,690.2	1,584.6	1,577.5	7.07	224.275	
2,500.0	2,482.5	2,504.1	2,503.9	6.4	1.1	56.89	-59.7	1,689.5	1,579.2	1,572.0	7.21	218.985	
2,559.0	2,540.3	2,559.9	2,559.7	6.7	1.2	57.24	-59.3	1,688.5	1,571.4	1,563.9	7.43	211.354	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,600.0	2,599.7	6.8	1.2	57.49	-59.0	1,687.8	1,566.0	1,558.4	7.59	206.305	
2,657.5	2,636.5	2,655.0	2,654.7	7.1	1.2	57.84	-58.6	1,686.9	1,558.5	1,550.6	7.81	199.473	
2,700.0	2,678.1	2,696.8	2,696.5	7.2	1.2	58.10	-58.3	1,686.2	1,552.9	1,545.0	7.98	194.641	
2,755.9	2,732.8	2,749.1	2,748.8	7.5	1.2	58.44	-57.9	1,685.4	1,545.8	1,537.6	8.20	188.541	
2,800.0	2,776.0	2,790.2	2,789.9	7.7	1.2	58.70	-57.6	1,684.8	1,540.2	1,531.9	8.37	183.949	
2,854.3	2,829.1	2,840.8	2,840.5	7.9	1.2	59.03	-57.2	1,684.2	1,533.5	1,524.9	8.59	178.516	
2,900.0	2,873.8	2,883.3	2,883.0	8.1	1.2	59.31	-56.9	1,683.7	1,528.0	1,519.2	8.77	174.151	
2,952.7	2,925.4	2,931.4	2,931.0	8.3	1.2	59.62	-56.5	1,683.2	1,521.8	1,512.8	8.99	169.322	
3,000.0	2,971.6	2,973.9	2,973.6	8.5	1.2	59.91	-56.3	1,682.9	1,516.3	1,507.1	9.18	165.181	
3,051.2	3,021.6	3,019.5	3,019.1	8.7	1.2	60.21	-56.0	1,682.7	1,510.6	1,501.2	9.39	160.892	
3,100.0	3,069.4	3,062.2	3,061.9	8.9	1.2	60.50	-55.8	1,682.6	1,505.4	1,495.8	9.59	157.015	
3,149.6	3,117.9	3,100.0	3,099.7	9.1	1.2	60.75	-55.6	1,682.6	1,500.3	1,490.5	9.79	153.252	
3,200.0	3,167.2	3,147.7	3,147.4	9.3	1.2	61.07	-55.3	1,682.9	1,495.4	1,485.4	10.00	149.504	
3,248.0	3,214.2	3,188.1	3,187.7	9.5	1.2	61.34	-54.9	1,683.4	1,490.9	1,480.7	10.20	146.123	
3,300.0	3,265.0	3,234.0	3,233.7	9.8	1.2	61.64	-54.5	1,684.1	1,486.4	1,476.0	10.42	142.603	
3,346.4	3,310.5	3,275.9	3,275.5	10.0	1.2	61.91	-54.0	1,684.9	1,482.5	1,471.9	10.62	139.568	
3,400.0	3,362.9	3,323.8	3,323.4	10.2	1.2	62.23	-53.5	1,686.0	1,478.2	1,467.4	10.85	136.213	
3,444.9	3,406.7	3,363.6	3,363.2	10.4	1.2	62.48	-53.0	1,687.0	1,474.8	1,463.8	11.05	133.510	
3,473.0	3,434.2	3,388.6	3,388.2	10.5	1.2	62.65	-52.7	1,687.7	1,472.8	1,461.6	11.17	131.870	
3,500.0	3,460.7	3,413.6	3,413.2	10.6	1.2	62.77	-52.3	1,688.5	1,470.9	1,459.7	11.27	130.489	
3,543.3	3,503.2	3,455.3	3,454.8	10.7	1.2	62.97	-51.7	1,689.7	1,468.3	1,456.8	11.42	128.611	
3,600.0	3,559.0	3,510.2	3,509.8	10.9	1.3	63.20	-50.9	1,691.5	1,465.3	1,453.7	11.60	126.269	
3,641.7	3,600.2	3,551.7	3,551.2	11.0	1.3	63.36	-50.3	1,692.8	1,463.5	1,451.7	11.73	124.746	
3,700.0	3,657.9	3,609.6	3,609.1	11.2	1.3	63.55	-49.3	1,694.7	1,461.4	1,449.5	11.91	122.720	
3,740.1	3,697.8	3,648.9	3,648.3	11.3	1.3	63.66	-48.7	1,696.0	1,460.3	1,448.3	12.02	121.516	
3,800.0	3,757.3	3,708.2	3,707.5	11.4	1.3	63.80	-47.7	1,698.0	1,459.2	1,447.0	12.18	119.810	
3,838.6	3,795.7	3,748.9	3,748.3	11.5	1.3	63.88	-47.0	1,699.3	1,458.7	1,446.4	12.27	118.870	
3,900.0	3,857.0	3,815.8	3,815.1	11.7	1.3	63.98	-45.9	1,701.3	1,458.3	1,445.9	12.42	117.436	
3,937.0	3,893.9	3,860.4	3,859.7	11.7	1.3	64.03	-45.2	1,702.4	1,458.2	1,445.7	12.49	116.703	
3,999.9	3,956.8	3,932.2	3,931.5	11.8	1.3	64.07	-44.3	1,703.7	1,458.0	1,445.4	12.62	115.508 CC	
4,000.0	3,956.9	3,932.4	3,931.6	11.8	1.3	64.07	-44.3	1,703.7	1,458.0	1,445.4	12.62	115.505 ES	
4,035.4	3,992.3	3,970.4	3,969.7	11.9	1.3	64.07	-43.8	1,704.2	1,458.1	1,445.4	12.68	114.956	
4,072.9	4,029.8	4,010.3	4,009.5	11.9	1.3	105.25	-43.4	1,704.7	1,458.3	1,447.2	11.08	131.575	
4,100.0	4,056.9	4,038.1	4,037.3	12.0	1.3	105.24	-43.1	1,705.0	1,458.5	1,447.4	11.14	130.980	
4,133.8	4,090.7	4,072.8	4,072.1	12.0	1.3	105.22	-42.7	1,705.3	1,458.8	1,447.5	11.21	130.167	
4,200.0	4,156.9	4,139.9	4,139.2	12.1	1.4	105.19	-42.0	1,706.0	1,459.2	1,447.8	11.35	128.607	
4,232.3	4,189.2	4,172.4	4,171.7	12.2	1.4	105.18	-41.7	1,706.2	1,459.4	1,447.9	11.41	127.853	
4,300.0	4,256.9	4,241.5	4,240.8	12.3	1.4	105.15	-41.1	1,706.8	1,459.7	1,448.2	11.56	126.298	
4,330.7	4,287.6	4,273.2	4,272.4	12.4	1.4	105.13	-40.8	1,707.0	1,459.9	1,448.2	11.62	125.598	
4,400.0	4,356.9	4,342.8	4,342.1	12.5	1.4	105.11	-40.2	1,707.5	1,460.1	1,448.4	11.77	124.046	
4,429.1	4,386.0	4,371.6	4,370.9	12.5	1.4	105.09	-40.0	1,707.7	1,460.2	1,448.4	11.83	123.402	
4,500.0	4,456.9	4,441.7	4,441.0	12.6	1.4	105.07	-39.4	1,708.1	1,460.6	1,448.6	11.99	121.865	
4,527.5	4,484.4	4,469.0	4,468.2	12.7	1.4	105.06	-39.2	1,708.3	1,460.7	1,448.7	12.04	121.275	
4,600.0	4,556.9	4,538.6	4,537.8	12.8	1.4	105.04	-38.8	1,708.8	1,461.1	1,448.9	12.20	119.760	
4,626.0	4,582.9	4,563.0	4,562.2	12.9	1.4	105.03	-38.6	1,709.1	1,461.3	1,449.0	12.26	119.229	
4,700.0	4,656.9	4,630.6	4,629.9	13.0	1.4	105.01	-38.4	1,709.8	1,462.0	1,449.6	12.42	117.758	
4,724.4	4,681.3	4,652.2	4,651.4	13.0	1.5	105.01	-38.3	1,710.1	1,462.3	1,449.9	12.47	117.287	
4,800.0	4,756.9	4,720.1	4,719.3	13.1	1.5	104.99	-38.3	1,711.3	1,463.6	1,451.0	12.63	115.874	
4,822.8	4,779.7	4,741.5	4,740.7	13.2	1.5	104.99	-38.3	1,711.8	1,464.1	1,451.4	12.68	115.455	
4,900.0	4,856.9	4,814.9	4,814.1	13.3	1.5	104.98	-38.5	1,713.4	1,465.8	1,453.0	12.85	114.078	
4,921.2	4,878.1	4,836.6	4,835.8	13.4	1.5	104.98	-38.5	1,713.9	1,466.3	1,453.4	12.90	113.703	
5,000.0	4,956.9	4,917.4	4,916.6	13.5	1.5	104.97	-38.9	1,715.7	1,468.0	1,455.0	13.07	112.335	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,976.6	4,938.0	4,937.2	13.5	1.5	104.98	-39.1	1,716.1	1,468.5	1,455.3	13.11	111.995		
5,100.0	5,056.9	5,022.2	5,021.3	13.7	1.5	104.99	-39.7	1,717.6	1,470.0	1,456.7	13.29	110.626		
5,118.1	5,075.0	5,041.3	5,040.4	13.7	1.6	104.99	-39.9	1,717.9	1,470.3	1,457.0	13.33	110.320		
5,200.0	5,156.9	5,126.4	5,125.6	13.8	1.6	105.02	-41.0	1,719.0	1,471.6	1,458.1	13.51	108.949		
5,216.5	5,173.4	5,143.0	5,142.1	13.9	1.6	105.02	-41.2	1,719.2	1,471.9	1,458.3	13.54	108.676		
5,300.0	5,256.9	5,226.1	5,225.2	14.0	1.6	105.06	-42.5	1,720.2	1,473.2	1,459.4	13.73	107.318		
5,314.9	5,271.8	5,240.8	5,239.9	14.1	1.6	105.07	-42.7	1,720.3	1,473.4	1,459.6	13.76	107.078		
5,400.0	5,356.9	5,325.3	5,324.4	14.2	1.6	105.12	-44.3	1,721.3	1,474.7	1,460.8	13.95	105.739		
5,413.4	5,370.3	5,339.0	5,338.1	14.2	1.6	105.13	-44.6	1,721.5	1,475.0	1,461.0	13.98	105.530		
5,500.0	5,456.9	5,427.0	5,426.1	14.4	1.6	105.18	-46.2	1,722.4	1,476.3	1,462.1	14.17	104.197		
5,511.8	5,468.7	5,438.8	5,437.9	14.4	1.6	105.19	-46.4	1,722.5	1,476.4	1,462.2	14.19	104.017		
5,600.0	5,556.9	5,525.4	5,524.4	14.6	1.7	105.23	-47.8	1,723.5	1,477.8	1,463.4	14.39	102.699		
5,610.2	5,567.1	5,535.1	5,534.1	14.6	1.7	105.23	-47.9	1,723.6	1,477.9	1,463.5	14.41	102.549		
5,700.0	5,656.9	5,620.3	5,619.3	14.7	1.7	105.25	-48.9	1,724.9	1,479.5	1,464.9	14.61	101.263		
5,708.6	5,665.5	5,628.5	5,627.6	14.8	1.7	105.26	-49.0	1,725.1	1,479.7	1,465.1	14.63	101.142		
5,800.0	5,756.9	5,715.6	5,714.7	14.9	1.7	105.27	-49.9	1,726.7	1,481.6	1,466.8	14.83	99.887		
5,807.1	5,764.0	5,722.2	5,721.2	14.9	1.7	105.27	-49.9	1,726.9	1,481.8	1,466.9	14.85	99.792		
5,900.0	5,856.9	5,809.8	5,808.8	15.1	1.7	105.27	-50.4	1,729.0	1,484.1	1,469.0	15.06	98.576		
5,905.5	5,862.4	5,815.5	5,814.5	15.1	1.7	105.27	-50.4	1,729.1	1,484.2	1,469.1	15.07	98.505		
5,971.9	5,928.8	5,884.2	5,883.2	15.3	1.8	105.26	-50.6	1,730.9	1,485.9	1,470.7	15.22	97.651		
6,000.0	5,956.9	5,912.9	5,911.8	15.3	1.8	-164.73	-50.6	1,731.6	1,487.1	1,470.5	16.64	89.382		
6,003.9	5,960.8	5,916.8	5,915.8	15.3	1.8	-164.73	-50.6	1,731.7	1,487.4	1,470.7	16.65	89.355		
6,050.0	6,006.7	5,962.8	5,961.8	15.4	1.8	-164.67	-50.7	1,732.8	1,491.9	1,475.1	16.75	89.071		
6,100.0	6,056.2	6,012.1	6,011.0	15.4	1.8	-164.58	-50.8	1,734.0	1,500.0	1,483.1	16.87	88.917		
6,102.3	6,058.5	6,014.3	6,013.2	15.4	1.8	-164.58	-50.8	1,734.1	1,500.5	1,483.6	16.88	88.916		
6,150.0	6,105.1	6,059.8	6,058.7	15.4	1.8	-164.44	-51.1	1,735.2	1,511.4	1,494.4	16.99	88.983		
6,200.0	6,153.0	6,106.3	6,105.2	15.5	1.8	-164.23	-51.7	1,736.2	1,526.1	1,509.1	17.08	89.327		
6,200.8	6,153.8	6,107.0	6,105.9	15.5	1.8	-164.23	-51.7	1,736.2	1,526.4	1,509.3	17.09	89.335		
6,250.0	6,199.9	6,149.9	6,148.8	15.5	1.8	-163.95	-52.5	1,737.2	1,544.1	1,526.9	17.16	89.994		
6,299.2	6,244.8	6,191.5	6,190.4	15.5	1.8	-163.60	-53.5	1,738.1	1,564.9	1,547.7	17.20	90.987		
6,300.0	6,245.5	6,192.2	6,191.1	15.5	1.8	-163.60	-53.6	1,738.1	1,565.2	1,548.0	17.20	91.006		
6,350.0	6,289.6	6,230.5	6,229.3	15.5	1.9	-163.14	-54.7	1,739.1	1,589.5	1,572.3	17.21	92.376		
6,397.6	6,329.9	6,264.9	6,263.6	15.4	1.9	-162.60	-56.0	1,739.9	1,615.4	1,598.2	17.18	94.010		
6,400.0	6,331.8	6,266.5	6,265.3	15.4	1.9	-162.57	-56.0	1,740.0	1,616.7	1,599.6	17.18	94.099		
6,450.0	6,372.2	6,300.0	6,298.7	15.4	1.9	-161.86	-57.4	1,740.9	1,646.9	1,629.8	17.13	96.153		
6,496.0	6,407.4	6,326.6	6,325.3	15.4	1.9	-161.05	-58.6	1,741.7	1,677.1	1,660.0	17.06	98.296		
6,500.0	6,410.3	6,328.8	6,327.5	15.4	1.9	-160.97	-58.7	1,741.8	1,679.8	1,662.7	17.06	98.490		
6,550.0	6,446.1	6,354.9	6,353.6	15.4	1.9	-159.85	-60.2	1,742.7	1,715.3	1,698.3	16.98	101.028		
6,594.5	6,475.9	6,376.3	6,374.9	15.4	1.9	-158.63	-61.5	1,743.5	1,748.9	1,732.0	16.92	103.340		
6,600.0	6,479.4	6,378.9	6,377.5	15.4	1.9	-158.46	-61.6	1,743.6	1,753.2	1,736.3	16.92	103.626		
6,650.0	6,510.0	6,400.0	6,398.5	15.5	1.9	-156.69	-63.0	1,744.5	1,793.3	1,776.4	16.91	106.076		
6,692.9	6,534.0	6,418.7	6,417.2	15.7	1.9	-154.83	-64.4	1,745.3	1,829.3	1,812.4	16.97	107.815		
6,700.0	6,537.8	6,421.5	6,420.0	15.7	1.9	-154.47	-64.6	1,745.4	1,835.4	1,818.4	16.99	108.059		
6,750.0	6,562.6	6,439.9	6,438.2	16.2	1.9	-151.58	-66.0	1,746.2	1,879.2	1,862.0	17.21	109.198		
6,791.3	6,580.8	6,453.0	6,451.3	16.6	1.9	-148.47	-67.0	1,746.8	1,916.5	1,898.9	17.57	109.098		
6,800.0	6,584.3	6,455.5	6,453.8	16.7	1.9	-147.71	-67.2	1,746.9	1,924.4	1,906.8	17.65	109.039		
6,850.0	6,602.9	6,468.5	6,466.7	17.3	1.9	-142.41	-68.2	1,747.6	1,970.9	1,952.5	18.38	107.211		
6,889.7	6,615.2	6,476.9	6,475.1	17.9	1.9	-136.68	-68.9	1,748.0	2,008.6	1,989.4	19.22	104.514		
6,900.0	6,618.1	6,478.7	6,476.9	18.0	1.9	-134.92	-69.1	1,748.1	2,018.4	1,998.9	19.46	103.710		
6,950.0	6,630.0	6,486.2	6,484.4	18.8	1.9	-124.13	-69.7	1,748.4	2,066.6	2,045.8	20.79	99.412		
6,988.2	6,636.8	6,500.0	6,498.1	19.5	1.9	-114.02	-70.9	1,749.1	2,103.9	2,082.2	21.69	96.989		
7,000.0	6,638.5	6,500.0	6,498.1	19.7	1.9	-109.95	-70.9	1,749.1	2,115.4	2,093.5	21.90	96.616		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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
7,050.0	6,643.5	6,500.0	6,498.1	20.6	1.9	-90.38	-70.9	1,749.1	2,164.4	2,142.2	22.29	97.105	
7,086.6	6,644.9	6,500.0	6,498.1	21.3	1.9	-75.45	-70.9	1,749.1	2,200.4	2,177.6	22.74	96.771	
7,097.8	6,645.0	6,500.0	6,498.1	21.5	1.9	-71.12	-70.9	1,749.1	2,211.4	2,188.6	22.82	96.921	
7,100.0	6,645.0	6,500.0	6,498.1	21.6	1.9	-71.12	-70.9	1,749.1	2,213.5	2,190.7	22.86	96.844	
7,185.0	6,644.9	6,488.7	6,486.8	23.3	1.9	-69.68	-70.0	1,748.6	2,296.9	2,272.5	24.42	94.056	
7,200.0	6,644.9	6,488.1	6,486.2	23.6	1.9	-69.61	-69.9	1,748.5	2,311.6	2,286.9	24.70	93.579	
7,283.4	6,644.8	6,484.8	6,482.9	25.4	1.9	-69.19	-69.6	1,748.4	2,393.6	2,367.2	26.38	90.722	
7,300.0	6,644.7	6,484.1	6,482.3	25.8	1.9	-69.11	-69.6	1,748.3	2,409.9	2,383.2	26.72	90.202	
7,381.9	6,644.6	6,480.9	6,479.1	27.7	1.9	-68.71	-69.3	1,748.2	2,490.4	2,462.0	28.44	87.558	
7,400.0	6,644.6	6,480.2	6,478.4	28.1	1.9	-68.62	-69.2	1,748.1	2,508.3	2,479.4	28.82	87.021	
7,480.3	6,644.5	6,477.1	6,475.3	30.0	1.9	-68.24	-69.0	1,748.0	2,587.4	2,556.8	30.57	84.631	
7,500.0	6,644.5	6,476.4	6,474.6	30.5	1.9	-68.14	-68.9	1,747.9	2,606.8	2,575.8	31.00	84.091	
7,578.7	6,644.4	6,473.4	6,471.6	32.4	1.9	-67.77	-68.7	1,747.8	2,684.4	2,651.6	32.75	81.959	
7,600.0	6,644.4	6,472.6	6,470.8	32.9	1.9	-67.67	-68.6	1,747.8	2,705.4	2,672.2	33.22	81.426	
7,677.1	6,644.3	6,469.7	6,467.9	34.8	1.9	-67.32	-68.3	1,747.6	2,781.5	2,746.6	34.97	79.538	
7,700.0	6,644.2	6,468.8	6,467.1	35.4	1.9	-67.21	-68.3	1,747.6	2,804.1	2,768.6	35.49	79.019	
7,775.6	6,644.1	6,466.0	6,464.3	37.3	1.9	-66.87	-68.0	1,747.4	2,878.7	2,841.5	37.22	77.353	
7,800.0	6,644.1	6,465.1	6,463.4	38.0	1.9	-66.76	-68.0	1,747.4	2,902.9	2,865.1	37.77	76.852	
7,874.0	6,644.0	6,462.4	6,460.7	39.9	1.9	-66.43	-67.7	1,747.3	2,976.0	2,936.5	39.48	75.383	
7,900.0	6,644.0	6,461.5	6,459.8	40.5	1.9	-66.31	-67.7	1,747.2	3,001.7	2,961.6	40.08	74.901	
7,972.4	6,643.9	6,458.9	6,457.2	42.4	1.9	-66.00	-67.5	1,747.1	3,073.4	3,031.6	41.75	73.606	
8,000.0	6,643.9	6,457.9	6,456.2	43.1	1.9	-65.88	-67.4	1,747.1	3,100.6	3,058.3	42.39	73.144	
8,070.8	6,643.8	6,455.4	6,453.7	45.0	1.9	-65.58	-67.2	1,746.9	3,170.8	3,126.7	44.04	72.002	
8,100.0	6,643.7	6,454.3	6,452.6	45.8	1.9	-65.45	-67.1	1,746.9	3,199.6	3,154.9	44.71	71.560	
8,169.3	6,643.7	6,451.9	6,450.2	47.6	1.9	-65.16	-66.9	1,746.8	3,268.2	3,221.9	46.32	70.551	
8,200.0	6,643.6	6,450.8	6,449.2	48.4	1.9	-65.03	-66.8	1,746.7	3,298.7	3,251.6	47.04	70.129	
8,267.7	6,643.5	6,448.5	6,446.8	50.2	1.9	-64.75	-66.6	1,746.6	3,365.8	3,317.1	48.61	69.236	
8,300.0	6,643.5	6,447.4	6,445.7	51.1	1.9	-64.62	-66.5	1,746.6	3,397.8	3,348.4	49.36	68.834	
8,366.1	6,643.4	6,445.1	6,443.5	52.9	1.9	-64.35	-66.4	1,746.5	3,463.3	3,412.4	50.90	68.042	
8,400.0	6,643.4	6,444.0	6,442.3	53.8	1.9	-64.22	-66.3	1,746.4	3,496.9	3,445.2	51.68	67.659	
8,464.5	6,643.3	6,441.8	6,440.1	55.5	1.9	-63.96	-66.1	1,746.3	3,560.9	3,507.7	53.18	66.956	
8,500.0	6,643.2	6,440.6	6,439.0	56.5	1.9	-63.82	-66.0	1,746.3	3,596.1	3,542.1	54.00	66.590	
8,563.0	6,643.2	6,438.5	6,436.9	58.2	1.9	-63.57	-65.9	1,746.2	3,658.6	3,603.1	55.46	65.966	
8,600.0	6,643.1	6,437.3	6,435.6	59.2	1.9	-63.43	-65.8	1,746.1	3,695.3	3,639.0	56.32	65.617	
8,661.4	6,643.0	6,435.2	6,433.6	60.8	1.9	-63.19	-65.6	1,746.0	3,756.3	3,698.5	57.73	65.061	
8,700.0	6,643.0	6,434.0	6,432.4	61.9	1.9	-63.05	-65.5	1,746.0	3,794.6	3,736.0	58.62	64.728	
8,759.8	6,642.9	6,432.0	6,430.4	63.5	1.9	-62.82	-65.4	1,745.9	3,854.0	3,794.0	60.00	64.232	
8,800.0	6,642.9	6,430.7	6,429.1	64.6	1.9	-62.67	-65.3	1,745.8	3,893.9	3,833.0	60.92	63.915	
8,858.2	6,642.8	6,428.9	6,427.3	66.2	1.9	-62.46	-65.1	1,745.7	3,951.7	3,889.5	62.26	63.473	
8,900.0	6,642.7	6,427.5	6,426.0	67.3	1.9	-62.30	-65.0	1,745.7	3,993.2	3,930.0	63.21	63.170	
8,956.7	6,642.7	6,425.7	6,424.2	68.9	1.9	-62.10	-64.9	1,745.6	4,049.5	3,985.0	64.51	62.775	
9,000.0	6,642.6	6,424.4	6,422.8	70.1	1.9	-61.94	-64.8	1,745.5	4,092.6	4,027.1	65.50	62.486	
9,055.1	6,642.5	6,422.7	6,421.1	71.6	1.9	-61.75	-64.7	1,745.4	4,147.3	4,080.6	66.75	62.133	
9,100.0	6,642.5	6,421.3	6,419.7	72.8	1.9	-61.59	-64.6	1,745.4	4,191.9	4,124.2	67.77	61.857	
9,153.5	6,642.4	6,419.6	6,418.0	74.3	1.9	-61.40	-64.4	1,745.3	4,245.1	4,176.2	68.98	61.541	
9,200.0	6,642.4	6,418.2	6,416.6	75.6	1.9	-61.24	-64.3	1,745.3	4,291.3	4,221.3	70.03	61.278	
9,251.9	6,642.3	6,416.6	6,415.0	77.0	1.9	-61.06	-64.2	1,745.2	4,343.0	4,271.8	71.20	60.994	
9,300.0	6,642.2	6,400.0	6,398.5	78.3	1.9	-59.22	-63.0	1,744.5	4,390.8	4,319.5	71.36	61.529	
9,350.4	6,642.2	6,400.0	6,398.5	79.7	1.9	-59.22	-63.0	1,744.5	4,440.9	4,368.3	72.57	61.197	
9,400.0	6,642.1	6,400.0	6,398.5	81.1	1.9	-59.22	-63.0	1,744.5	4,490.3	4,416.5	73.76	60.880	
9,448.8	6,642.0	6,400.0	6,398.5	82.4	1.9	-59.22	-63.0	1,744.5	4,538.8	4,463.9	74.93	60.577	
9,500.0	6,642.0	6,400.0	6,398.5	83.8	1.9	-59.22	-63.0	1,744.5	4,589.7	4,513.6	76.15	60.269	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,400.0	6,398.5	85.1	1.9	-59.22	-63.0	1,744.5	4,636.7	4,559.4	77.29	59.992	
9,600.0	6,641.9	6,400.0	6,398.5	86.6	1.9	-59.22	-63.0	1,744.5	4,689.2	4,610.7	78.56	59.693	
9,645.6	6,641.8	6,400.0	6,398.5	87.9	1.9	-59.22	-63.0	1,744.5	4,734.6	4,655.0	79.65	59.441	
9,700.0	6,641.7	6,400.0	6,398.5	89.4	1.9	-59.22	-63.0	1,744.5	4,788.7	4,707.8	80.96	59.150	
9,744.1	6,641.7	6,400.0	6,398.5	90.6	1.9	-59.22	-63.0	1,744.5	4,832.6	4,750.6	82.02	58.921	
9,800.0	6,641.6	6,400.0	6,398.5	92.1	1.9	-59.22	-63.0	1,744.5	4,888.2	4,804.9	83.36	58.637	
9,842.5	6,641.6	6,400.0	6,398.5	93.3	1.9	-59.22	-63.0	1,744.5	4,930.5	4,846.2	84.39	58.428	
9,900.0	6,641.5	6,400.0	6,398.5	94.9	1.9	-59.22	-63.0	1,744.5	4,987.8	4,902.0	85.77	58.152	
9,940.9	6,641.4	6,400.0	6,398.5	96.0	1.9	-59.22	-63.0	1,744.5	5,028.5	4,941.8	86.76	57.961	
10,000.0	6,641.4	6,400.0	6,398.5	97.7	1.9	-59.22	-63.0	1,744.5	5,087.4	4,999.2	88.18	57.692	
10,039.3	6,641.3	6,400.0	6,398.5	98.8	1.9	-59.22	-63.0	1,744.5	5,126.5	5,037.4	89.13	57.517	
10,100.0	6,641.2	6,400.0	6,398.5	100.4	1.9	-59.22	-63.0	1,744.5	5,186.9	5,096.3	90.59	57.256	
10,137.8	6,641.2	6,400.0	6,398.5	101.5	1.9	-59.22	-63.0	1,744.5	5,224.6	5,133.1	91.50	57.096	
10,200.0	6,641.1	6,400.0	6,398.5	103.2	1.9	-59.22	-63.0	1,744.5	5,286.5	5,193.5	93.01	56.841	
10,236.2	6,641.1	6,400.0	6,398.5	104.2	1.9	-59.22	-63.0	1,744.5	5,322.6	5,228.7	93.88	56.696	
10,300.0	6,641.0	6,400.0	6,398.5	106.0	1.9	-59.22	-63.0	1,744.5	5,386.1	5,290.7	95.42	56.447	
10,334.6	6,640.9	6,400.0	6,398.5	107.0	1.9	-59.22	-63.0	1,744.5	5,420.6	5,324.4	96.26	56.314	
10,400.0	6,640.9	6,400.0	6,398.5	108.8	1.9	-59.22	-63.0	1,744.5	5,485.8	5,387.9	97.84	56.071	
10,433.0	6,640.8	6,400.0	6,398.5	109.7	1.9	-59.22	-63.0	1,744.5	5,518.7	5,420.1	98.64	55.951	
10,500.0	6,640.7	6,400.0	6,398.5	111.6	1.9	-59.22	-63.0	1,744.5	5,585.4	5,485.2	100.25	55.713	
10,531.5	6,640.7	6,400.0	6,398.5	112.4	1.9	-59.22	-63.0	1,744.5	5,616.8	5,515.8	101.01	55.604	
10,600.0	6,640.6	6,400.0	6,398.5	114.3	1.9	-59.22	-63.0	1,744.5	5,685.1	5,582.4	102.67	55.371	
10,629.9	6,640.6	6,400.0	6,398.5	115.2	1.9	-59.22	-63.0	1,744.5	5,714.9	5,611.5	103.40	55.272	
10,700.0	6,640.5	6,400.0	6,398.5	117.1	1.9	-59.22	-63.0	1,744.5	5,784.7	5,679.6	105.09	55.045	
10,728.3	6,640.4	6,400.0	6,398.5	117.9	1.9	-59.22	-63.0	1,744.5	5,813.0	5,707.2	105.78	54.955	
10,800.0	6,640.4	6,400.0	6,398.5	119.9	1.9	-59.22	-63.0	1,744.5	5,884.4	5,776.9	107.51	54.733	
10,826.7	6,640.3	6,400.0	6,398.5	120.7	1.9	-59.22	-63.0	1,744.5	5,911.1	5,802.9	108.16	54.651	
10,900.0	6,640.2	6,375.1	6,373.7	122.7	1.9	-56.59	-61.4	1,743.5	5,984.0	5,876.6	107.37	55.734	
10,925.2	6,640.2	6,374.6	6,373.2	123.4	1.9	-56.53	-61.4	1,743.4	6,009.1	5,901.2	107.90	55.689	
11,000.0	6,640.1	6,373.0	6,371.6	125.5	1.9	-56.37	-61.3	1,743.4	6,083.7	5,974.2	109.50	55.558	
11,023.6	6,640.1	6,372.5	6,371.1	126.1	1.9	-56.32	-61.2	1,743.4	6,107.2	5,997.2	110.00	55.518	
11,100.0	6,640.0	6,370.9	6,369.5	128.3	1.9	-56.16	-61.1	1,743.3	6,183.4	6,071.7	111.63	55.393	
11,122.0	6,639.9	6,370.5	6,369.1	128.9	1.9	-56.11	-61.1	1,743.3	6,205.3	6,093.2	112.09	55.358	
11,200.0	6,639.8	6,368.9	6,367.5	131.1	1.9	-55.95	-61.0	1,743.2	6,283.1	6,169.3	113.75	55.237	
11,220.4	6,639.8	6,368.5	6,367.1	131.6	1.9	-55.90	-61.0	1,743.2	6,303.5	6,189.3	114.18	55.206	
11,300.0	6,639.7	6,366.9	6,365.5	133.9	1.9	-55.74	-60.9	1,743.2	6,382.8	6,266.9	115.86	55.090	
11,318.9	6,639.7	6,366.5	6,365.1	134.4	1.9	-55.70	-60.9	1,743.1	6,401.6	6,285.3	116.26	55.063	
11,400.0	6,639.6	6,364.9	6,363.5	136.7	1.9	-55.54	-60.8	1,743.1	6,482.5	6,364.5	117.97	54.952	
11,417.3	6,639.6	6,364.5	6,363.1	137.1	1.9	-55.50	-60.7	1,743.1	6,499.7	6,381.4	118.33	54.929	
11,500.0	6,639.5	6,362.9	6,361.5	139.4	1.9	-55.34	-60.6	1,743.0	6,582.2	6,462.1	120.07	54.821	
11,515.7	6,639.5	6,362.6	6,361.2	139.9	1.9	-55.31	-60.6	1,743.0	6,597.9	6,477.5	120.40	54.801	
11,600.0	6,639.3	6,361.0	6,359.6	142.2	1.9	-55.15	-60.5	1,742.9	6,681.9	6,559.8	122.16	54.698	
11,614.1	6,639.3	6,360.7	6,359.3	142.6	1.9	-55.12	-60.5	1,742.9	6,696.0	6,573.6	122.46	54.681	
11,700.0	6,639.2	6,359.0	6,357.7	145.0	1.9	-54.95	-60.4	1,742.9	6,781.7	6,657.4	124.25	54.582	
11,712.6	6,639.2	6,358.8	6,357.4	145.4	1.9	-54.93	-60.4	1,742.9	6,794.2	6,669.7	124.51	54.568	
11,800.0	6,639.1	6,357.1	6,355.8	147.8	1.9	-54.77	-60.3	1,742.8	6,881.4	6,755.1	126.33	54.473	
11,811.0	6,639.1	6,356.9	6,355.6	148.1	1.9	-54.75	-60.3	1,742.8	6,892.4	6,765.8	126.56	54.461	
11,900.0	6,639.0	6,355.3	6,353.9	150.6	1.9	-54.58	-60.2	1,742.7	6,981.2	6,852.8	128.40	54.369	
11,909.4	6,639.0	6,355.1	6,353.7	150.9	1.9	-54.56	-60.2	1,742.7	6,990.6	6,862.0	128.60	54.360	
12,000.0	6,638.8	6,353.4	6,352.1	153.4	1.9	-54.40	-60.1	1,742.7	7,080.9	6,950.4	130.47	54.272	
12,007.8	6,638.8	6,353.3	6,351.9	153.6	1.9	-54.39	-60.1	1,742.7	7,088.7	6,958.1	130.63	54.265	
12,100.0	6,638.7	6,351.6	6,350.3	156.2	1.9	-54.22	-60.0	1,742.6	7,180.7	7,048.1	132.53	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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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
12,106.3	6,638.7	6,351.5	6,350.1	156.4	1.9	-54.21	-60.0	1,742.6	7,186.9	7,054.3	132.66	54.174	
12,200.0	6,638.6	6,349.8	6,348.5	159.0	1.9	-54.05	-59.9	1,742.5	7,280.4	7,145.9	134.59	54.093	
12,204.7	6,638.6	6,349.7	6,348.4	159.1	1.9	-54.04	-59.9	1,742.5	7,285.1	7,150.4	134.69	54.089	
12,300.0	6,638.5	6,348.0	6,346.7	161.8	1.9	-53.87	-59.8	1,742.5	7,380.2	7,243.6	136.64	54.011	
12,303.1	6,638.5	6,348.0	6,346.6	161.9	1.9	-53.87	-59.8	1,742.5	7,383.3	7,246.6	136.71	54.009	
12,400.0	6,638.3	6,346.3	6,344.9	164.6	1.9	-53.70	-59.7	1,742.4	7,480.0	7,341.3	138.69	53.934	
12,401.5	6,638.3	6,346.3	6,344.9	164.6	1.9	-53.70	-59.7	1,742.4	7,481.5	7,342.8	138.72	53.933	
12,500.0	6,638.2	6,344.6	6,343.2	167.4	1.9	-53.54	-59.6	1,742.3	7,579.8	7,439.0	140.73	53.861	
12,598.4	6,638.1	6,342.9	6,341.5	170.2	1.9	-53.38	-59.5	1,742.3	7,678.0	7,535.2	142.73	53.794	
12,600.0	6,638.1	6,342.8	6,341.5	170.2	1.9	-53.37	-59.5	1,742.3	7,679.6	7,536.8	142.76	53.792	
12,696.8	6,638.0	6,341.2	6,339.9	172.9	1.9	-53.22	-59.4	1,742.2	7,776.2	7,631.5	144.73	53.730	
12,700.0	6,638.0	6,341.2	6,339.8	173.0	1.9	-53.21	-59.4	1,742.2	7,779.4	7,634.6	144.79	53.728	
12,795.2	6,637.8	6,339.6	6,338.2	175.7	1.9	-53.06	-59.3	1,742.2	7,874.4	7,727.7	146.72	53.669	
12,800.0	6,637.8	6,339.5	6,338.2	175.8	1.9	-53.05	-59.3	1,742.2	7,879.1	7,732.3	146.82	53.666	
12,893.7	6,637.7	6,337.9	6,336.6	178.4	1.9	-52.91	-59.2	1,742.1	7,972.6	7,823.9	148.71	53.612	
12,900.0	6,637.7	6,337.8	6,336.5	178.6	1.9	-52.90	-59.2	1,742.1	7,978.9	7,830.1	148.84	53.609	
12,992.1	6,637.6	6,336.3	6,335.0	181.2	1.9	-52.75	-59.1	1,742.1	8,070.9	7,920.2	150.69	53.559	
13,000.0	6,637.6	6,336.2	6,334.9	181.4	1.9	-52.74	-59.1	1,742.1	8,078.8	7,927.9	150.85	53.554	
13,090.5	6,637.5	6,334.8	6,333.4	183.9	1.9	-52.60	-59.1	1,742.0	8,169.1	8,016.4	152.67	53.508	
13,100.0	6,637.5	6,334.6	6,333.3	184.2	1.9	-52.59	-59.0	1,742.0	8,178.6	8,025.7	152.86	53.503	
13,188.9	6,637.4	6,333.2	6,331.9	186.7	1.9	-52.46	-59.0	1,742.0	8,267.3	8,112.7	154.64	53.460	
13,200.0	6,637.3	6,333.0	6,331.7	187.0	1.9	-52.44	-59.0	1,741.9	8,278.4	8,123.5	154.87	53.455	
13,287.4	6,637.2	6,331.6	6,330.3	189.4	1.9	-52.31	-58.9	1,741.9	8,365.6	8,209.0	156.61	53.415	
13,300.0	6,637.2	6,331.4	6,330.1	189.8	1.9	-52.29	-58.9	1,741.9	8,378.2	8,221.3	156.87	53.410	
13,385.8	6,637.1	6,330.1	6,328.8	192.2	1.9	-52.17	-58.8	1,741.9	8,463.8	8,305.3	158.58	53.373	
13,400.0	6,637.1	6,329.9	6,328.6	192.6	1.9	-52.15	-58.8	1,741.8	8,478.0	8,319.1	158.86	53.367	
13,484.2	6,637.0	6,328.6	6,327.3	195.0	1.9	-52.03	-58.7	1,741.8	8,562.1	8,401.5	160.54	53.333	
13,500.0	6,637.0	6,328.4	6,327.1	195.4	1.9	-52.01	-58.7	1,741.8	8,577.8	8,417.0	160.85	53.327 SF	
13,582.6	6,636.9	6,300.0	6,298.7	197.7	1.9	-49.47	-57.4	1,740.9	8,660.4	8,502.6	157.84	54.870	
13,600.0	6,636.8	6,300.0	6,298.7	198.2	1.9	-49.47	-57.4	1,740.9	8,677.8	8,519.5	158.21	54.848	
13,681.1	6,636.7	6,300.0	6,298.7	200.5	1.9	-49.47	-57.4	1,740.9	8,758.7	8,598.7	159.98	54.749	
13,700.0	6,636.7	6,300.0	6,298.7	201.0	1.9	-49.47	-57.4	1,740.9	8,777.6	8,617.2	160.39	54.726	
13,779.5	6,636.6	6,300.0	6,298.7	203.2	1.9	-49.47	-57.4	1,740.9	8,856.9	8,694.8	162.12	54.630	
13,800.0	6,636.6	6,300.0	6,298.7	203.8	1.9	-49.47	-57.4	1,740.9	8,877.4	8,714.8	162.57	54.606	
13,877.9	6,636.5	6,300.0	6,298.7	206.0	1.9	-49.47	-57.4	1,740.9	8,955.2	8,790.9	164.27	54.515	
13,900.0	6,636.5	6,300.0	6,298.7	206.6	1.9	-49.47	-57.4	1,740.9	8,977.2	8,812.5	164.75	54.490	
13,976.3	6,636.4	6,300.0	6,298.7	208.8	1.9	-49.47	-57.4	1,740.9	9,053.5	8,887.0	166.42	54.403	
14,000.0	6,636.3	6,300.0	6,298.7	209.4	1.9	-49.47	-57.4	1,740.9	9,077.1	8,910.1	166.93	54.376	
14,074.8	6,636.2	6,300.0	6,298.7	211.5	1.9	-49.47	-57.4	1,740.9	9,151.7	8,983.2	168.56	54.293	
14,100.0	6,636.2	6,300.0	6,298.7	212.2	1.9	-49.47	-57.4	1,740.9	9,176.9	9,007.8	169.11	54.266	
14,173.2	6,636.1	6,300.0	6,298.7	214.3	1.9	-49.47	-57.4	1,740.9	9,250.0	9,079.3	170.71	54.187	
14,200.0	6,636.1	6,300.0	6,298.7	215.0	1.9	-49.47	-57.4	1,740.9	9,276.7	9,105.4	171.29	54.158	
14,271.6	6,636.0	6,300.0	6,298.7	217.0	1.9	-49.47	-57.4	1,740.9	9,348.2	9,175.4	172.85	54.083	
14,300.0	6,635.9	6,300.0	6,298.7	217.8	1.9	-49.47	-57.4	1,740.9	9,376.6	9,203.1	173.47	54.053	
14,370.0	6,635.9	6,300.0	6,298.7	219.8	1.9	-49.47	-57.4	1,740.9	9,446.5	9,271.5	175.00	53.981	
14,400.0	6,635.8	6,300.0	6,298.7	220.6	1.9	-49.47	-57.4	1,740.9	9,476.4	9,300.8	175.65	53.951	
14,468.5	6,635.7	6,300.0	6,298.7	222.6	1.9	-49.47	-57.4	1,740.9	9,544.8	9,367.7	177.14	53.882	
14,500.0	6,635.7	6,300.0	6,298.7	223.4	1.9	-49.47	-57.4	1,740.9	9,576.3	9,398.4	177.83	53.851	
14,566.9	6,635.6	6,300.0	6,298.7	225.3	1.9	-49.47	-57.4	1,740.9	9,643.1	9,463.8	179.29	53.785	
14,600.0	6,635.6	6,300.0	6,298.7	226.2	1.9	-49.47	-57.4	1,740.9	9,676.1	9,496.1	180.01	53.753	
14,665.3	6,635.5	6,300.0	6,298.7	228.1	1.9	-49.47	-57.4	1,740.9	9,741.4	9,559.9	181.44	53.690	
14,700.0	6,635.5	6,300.0	6,298.7	229.0	1.9	-49.47	-57.4	1,740.9	9,776.0	9,593.8	182.19	53.658	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,635.4	6,300.0	6,298.7	230.8	1.9	-49.47	-57.4	1,740.9	9,839.6	9,656.1	183.58	53.598	
14,800.0	6,635.3	6,300.0	6,298.7	231.8	1.9	-49.47	-57.4	1,740.9	9,875.8	9,691.5	184.37	53.565	
14,862.2	6,635.2	6,300.0	6,298.7	233.6	1.9	-49.47	-57.4	1,740.9	9,937.9	9,752.2	185.73	53.508	
14,900.0	6,635.2	6,300.0	6,298.7	234.7	1.9	-49.47	-57.4	1,740.9	9,975.7	9,789.1	186.55	53.474	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	60.79	1,488.0	2,661.3	3,049.4				
98.4	98.4	54.4	54.4	0.1	0.1	60.79	1,488.0	2,661.3	3,049.1	3,048.8	0.24	N/A	
100.0	100.0	56.0	56.0	0.1	0.1	60.79	1,488.0	2,661.3	3,049.1	3,048.8	0.25	N/A	
196.8	196.8	152.8	152.8	0.3	1.6	60.79	1,488.0	2,661.3	3,049.1	3,047.1	1.93	1,577.383	
200.0	200.0	156.0	156.0	0.3	1.7	60.79	1,488.0	2,661.3	3,049.1	3,047.1	2.02	1,508.984	
295.3	295.3	251.3	251.3	0.5	3.9	60.79	1,488.0	2,661.3	3,049.1	3,044.7	4.42	689.543	
300.0	300.0	256.0	256.0	0.5	4.0	60.79	1,488.0	2,661.3	3,049.1	3,044.5	4.53	673.029	
393.7	393.7	349.7	349.7	0.8	5.9	60.79	1,488.0	2,661.3	3,049.1	3,042.4	6.66	457.527	
400.0	400.0	356.0	356.0	0.8	6.0	60.79	1,488.0	2,661.3	3,049.1	3,042.3	6.81	447.954	
492.1	492.1	448.1	448.1	1.0	7.9	60.79	1,488.0	2,661.3	3,049.1	3,040.2	8.88	343.214	
500.0	500.0	456.0	456.0	1.0	8.1	60.79	1,488.0	2,661.3	3,049.1	3,040.0	9.06	336.505	
590.5	590.5	546.5	546.5	1.2	9.9	60.79	1,488.0	2,661.3	3,049.1	3,038.0	11.10	274.803	
600.0	600.0	556.0	556.0	1.2	10.1	60.79	1,488.0	2,661.3	3,049.1	3,037.8	11.31	269.649	
689.0	689.0	645.0	645.0	1.4	11.9	60.79	1,488.0	2,661.3	3,049.1	3,035.8	13.30	229.197	
700.0	700.0	656.0	656.0	1.4	12.1	60.79	1,488.0	2,661.3	3,049.1	3,035.5	13.55	225.017	
787.4	787.4	743.4	743.4	1.6	13.9	60.79	1,488.0	2,661.3	3,049.1	3,033.6	15.51	196.601	
800.0	800.0	756.0	756.0	1.7	14.1	60.79	1,488.0	2,661.3	3,049.1	3,033.3	15.79	193.087	
885.8	885.8	841.8	841.8	1.9	15.8	60.79	1,488.0	2,661.3	3,049.1	3,031.4	17.71	172.135	
900.0	900.0	856.0	856.0	1.9	16.1	60.79	1,488.0	2,661.3	3,049.1	3,031.0	18.03	169.105	
984.2	984.2	940.2	940.2	2.1	17.8	60.79	1,488.0	2,661.3	3,049.1	3,029.2	19.92	153.091	
1,000.0	1,000.0	956.0	956.0	2.1	18.1	60.79	1,488.0	2,661.3	3,049.1	3,028.8	20.27	150.428	
1,082.7	1,082.7	1,038.7	1,038.7	2.3	19.8	60.79	1,488.0	2,661.3	3,049.1	3,027.0	22.12	137.844	
1,100.0	1,100.0	1,056.0	1,056.0	2.3	20.2	60.79	1,488.0	2,661.3	3,049.1	3,026.6	22.51	135.470	
1,181.1	1,181.1	1,137.1	1,137.1	2.5	21.8	60.79	1,488.0	2,661.3	3,049.1	3,024.8	24.32	125.362	
1,200.0	1,200.0	1,156.0	1,156.0	2.6	22.2	60.79	1,488.0	2,661.3	3,049.1	3,024.3	24.75	123.220	
1,279.5	1,279.5	1,235.5	1,235.5	2.7	23.8	60.79	1,488.0	2,661.3	3,049.1	3,022.6	26.52	114.954	
1,300.0	1,300.0	1,256.0	1,256.0	2.8	24.2	60.79	1,488.0	2,661.3	3,049.1	3,022.1	26.98	113.003	
1,377.9	1,377.9	1,333.9	1,333.9	3.0	25.8	19.61	1,488.0	2,661.3	3,048.1	3,019.4	28.71	106.153	
1,400.0	1,400.0	1,356.0	1,356.0	3.0	26.2	19.62	1,488.0	2,661.3	3,047.4	3,018.2	29.20	104.364	
1,476.4	1,476.3	1,432.3	1,432.3	3.2	27.7	19.67	1,488.0	2,661.3	3,044.0	3,013.1	30.87	98.617	
1,500.0	1,499.8	1,455.8	1,455.8	3.2	28.2	19.69	1,488.0	2,661.3	3,042.5	3,011.1	31.38	96.967	
1,574.8	1,574.4	1,530.4	1,530.4	3.4	29.7	19.77	1,488.0	2,661.3	3,036.7	3,003.7	32.98	92.088	
1,600.0	1,599.5	1,555.5	1,555.5	3.5	30.2	19.80	1,488.0	2,661.3	3,034.3	3,000.8	33.51	90.556	
1,673.2	1,672.2	1,628.2	1,628.2	3.6	31.7	19.91	1,488.0	2,661.3	3,026.2	2,991.2	35.04	86.374	
1,700.0	1,698.7	1,654.7	1,654.7	3.7	32.2	19.96	1,488.0	2,661.3	3,022.8	2,987.2	35.59	84.945	
1,771.6	1,769.5	1,725.5	1,725.5	3.9	33.6	20.10	1,488.0	2,661.3	3,012.6	2,975.6	37.04	81.333	
1,800.0	1,797.5	1,753.5	1,753.5	4.0	34.2	20.16	1,488.0	2,661.3	3,008.1	2,970.5	37.61	79.991	
1,870.1	1,866.3	1,822.3	1,822.3	4.2	35.6	20.33	1,488.0	2,661.3	2,995.9	2,956.9	38.99	76.847	
1,899.9	1,895.6	1,851.6	1,851.6	4.3	36.2	20.41	1,488.0	2,661.3	2,990.2	2,950.6	39.56	75.585	
1,968.5	1,962.6	1,918.6	1,918.6	4.5	37.5	20.51	1,488.0	2,661.3	2,976.8	2,935.7	41.05	72.514	
2,000.0	1,993.4	1,949.4	1,949.4	4.6	38.1	20.55	1,488.0	2,661.3	2,970.7	2,928.9	41.74	71.179	
2,066.9	2,058.9	2,014.9	2,014.9	4.8	39.5	20.65	1,488.0	2,661.3	2,957.6	2,914.4	43.20	68.469	
2,100.0	2,091.3	2,047.3	2,047.3	4.9	40.1	20.69	1,488.0	2,661.3	2,951.1	2,907.2	43.92	67.201	
2,165.3	2,155.2	2,111.2	2,111.2	5.2	41.4	20.79	1,488.0	2,661.3	2,938.4	2,893.1	45.34	64.804	
2,200.0	2,189.1	2,145.1	2,145.1	5.3	42.1	20.84	1,488.0	2,661.3	2,931.7	2,885.5	46.10	63.592	
2,263.8	2,251.5	2,207.5	2,207.5	5.5	43.3	20.93	1,488.0	2,661.3	2,919.2	2,871.7	47.50	61.459	
2,300.0	2,286.9	2,242.9	2,242.9	5.7	44.0	20.98	1,488.0	2,661.3	2,912.2	2,863.9	48.29	60.303	
2,362.2	2,347.7	2,303.7	2,303.7	5.9	45.3	21.07	1,488.0	2,661.3	2,900.1	2,850.4	49.66	58.401	
2,400.0	2,384.7	2,340.7	2,340.7	6.0	46.0	21.13	1,488.0	2,661.3	2,892.7	2,842.2	50.49	57.295	
2,460.6	2,444.0	2,400.0	2,400.0	6.3	47.2	21.22	1,488.0	2,661.3	2,880.9	2,829.1	51.82	55.593	
2,500.0	2,482.5	2,438.5	2,438.5	6.4	48.0	21.28	1,488.0	2,661.3	2,873.3	2,820.6	52.69	54.534	
2,559.0	2,540.3	2,496.3	2,496.3	6.7	49.1	21.37	1,488.0	2,661.3	2,861.8	2,807.8	53.99	53.008	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,536.3	2,536.3	6.8	49.9	21.43	1,488.0	2,661.3	2,853.9	2,799.0	54.89	51.992	
2,657.5	2,636.5	2,592.5	2,592.5	7.1	51.1	21.52	1,488.0	2,661.3	2,842.7	2,786.6	56.16	50.619	
2,700.0	2,678.1	2,634.1	2,634.1	7.2	51.9	21.58	1,488.0	2,661.3	2,834.5	2,777.4	57.10	49.643	
2,755.9	2,732.8	2,688.8	2,688.8	7.5	53.0	21.67	1,488.0	2,661.3	2,823.6	2,765.3	58.33	48.406	
2,800.0	2,776.0	2,732.0	2,732.0	7.7	53.9	21.74	1,488.0	2,661.3	2,815.1	2,755.8	59.31	47.466	
2,854.3	2,829.1	2,785.1	2,785.1	7.9	54.9	21.82	1,488.0	2,661.3	2,804.6	2,744.1	60.51	46.349	
2,900.0	2,873.8	2,829.8	2,829.8	8.1	55.8	21.89	1,488.0	2,661.3	2,795.7	2,734.2	61.52	45.444	
2,952.7	2,925.4	2,881.4	2,881.4	8.3	56.9	21.98	1,488.0	2,661.3	2,785.5	2,722.8	62.69	44.435	
3,000.0	2,971.6	2,927.6	2,927.6	8.5	57.8	22.05	1,488.0	2,661.3	2,776.4	2,712.7	63.73	43.562	
3,051.2	3,021.6	2,977.6	2,977.6	8.7	58.8	22.14	1,488.0	2,661.3	2,766.5	2,701.6	64.87	42.647	
3,100.0	3,069.4	3,025.4	3,025.4	8.9	59.8	22.22	1,488.0	2,661.3	2,757.1	2,691.1	65.95	41.804	
3,149.6	3,117.9	3,073.9	3,073.9	9.1	60.8	22.30	1,488.0	2,661.3	2,747.5	2,680.4	67.05	40.975	
3,200.0	3,167.2	3,123.2	3,123.2	9.3	61.7	22.38	1,488.0	2,661.3	2,737.8	2,669.6	68.17	40.160	
3,248.0	3,214.2	3,170.2	3,170.2	9.5	62.7	22.46	1,488.0	2,661.3	2,728.5	2,659.3	69.24	39.407	
3,300.0	3,265.0	3,221.0	3,221.0	9.8	63.7	22.55	1,488.0	2,661.3	2,718.5	2,648.1	70.40	38.618	
3,346.4	3,310.5	3,266.5	3,266.5	10.0	64.6	22.62	1,488.0	2,661.3	2,709.6	2,638.1	71.43	37.934	
3,400.0	3,362.9	3,318.9	3,318.9	10.2	65.7	22.71	1,488.0	2,661.3	2,699.3	2,626.6	72.62	37.170	
3,444.9	3,406.7	3,362.7	3,362.7	10.4	66.6	22.79	1,488.0	2,661.3	2,690.6	2,617.0	73.62	36.548	
3,473.0	3,434.2	3,390.2	3,390.2	10.5	67.1	22.84	1,488.0	2,661.3	2,685.2	2,611.0	74.24	36.167	
3,500.0	3,460.7	3,416.7	3,416.7	10.6	67.6	22.84	1,488.0	2,661.3	2,680.1	2,605.2	74.95	35.758	
3,543.3	3,503.2	3,459.2	3,459.2	10.7	68.5	22.85	1,488.0	2,661.3	2,672.5	2,596.4	76.07	35.134	
3,600.0	3,559.0	3,515.0	3,515.0	10.9	69.6	22.86	1,488.0	2,661.3	2,663.4	2,585.9	77.51	34.360	
3,641.7	3,600.2	3,556.2	3,556.2	11.0	70.5	22.87	1,488.0	2,661.3	2,657.3	2,578.8	78.56	33.824	
3,700.0	3,657.9	3,613.9	3,613.9	11.2	71.6	22.88	1,488.0	2,661.3	2,649.8	2,569.8	80.02	33.116	
3,740.1	3,697.8	3,653.8	3,653.8	11.3	72.4	22.89	1,488.0	2,661.3	2,645.3	2,564.3	81.00	32.657	
3,800.0	3,757.3	3,713.3	3,713.3	11.4	73.6	22.89	1,488.0	2,661.3	2,639.4	2,557.0	82.45	32.013	
3,838.6	3,795.7	3,751.7	3,751.7	11.5	74.4	22.90	1,488.0	2,661.3	2,636.3	2,552.9	83.37	31.623	
3,900.0	3,857.0	3,813.0	3,813.0	11.7	75.6	22.90	1,488.0	2,661.3	2,632.3	2,547.5	84.80	31.039	
3,937.0	3,893.9	3,849.9	3,849.9	11.7	76.4	22.91	1,488.0	2,661.3	2,630.4	2,544.8	85.65	30.710	
4,000.0	3,956.9	3,912.9	3,912.9	11.8	77.6	22.91	1,488.0	2,661.3	2,628.3	2,541.2	87.07	30.185	
4,035.4	3,992.3	3,948.3	3,948.3	11.9	78.3	22.91	1,488.0	2,661.3	2,627.7	2,539.8	87.85	29.910	
4,072.9	4,029.8	3,985.8	3,985.8	11.9	79.1	64.10	1,488.0	2,661.3	2,627.5	2,536.8	90.70	28.970	
4,100.0	4,056.9	4,012.9	4,012.9	12.0	79.6	64.10	1,488.0	2,661.3	2,627.5	2,536.2	91.28	28.784	
4,133.8	4,090.7	4,046.7	4,046.7	12.0	80.3	64.10	1,488.0	2,661.3	2,627.5	2,535.4	92.02	28.554	
4,200.0	4,156.9	4,112.9	4,112.9	12.1	81.6	64.10	1,488.0	2,661.3	2,627.5	2,534.0	93.46	28.114	
4,232.3	4,189.2	4,145.2	4,145.2	12.2	82.3	64.10	1,488.0	2,661.3	2,627.5	2,533.3	94.16	27.904	
4,300.0	4,256.9	4,212.9	4,212.9	12.3	83.7	64.10	1,488.0	2,661.3	2,627.5	2,531.8	95.64	27.473	
4,330.7	4,287.6	4,243.6	4,243.6	12.4	84.3	64.10	1,488.0	2,661.3	2,627.5	2,531.2	96.31	27.283	
4,400.0	4,356.9	4,312.9	4,312.9	12.5	85.7	64.10	1,488.0	2,661.3	2,627.5	2,529.6	97.82	26.861	
4,429.1	4,386.0	4,342.0	4,342.0	12.5	86.3	64.10	1,488.0	2,661.3	2,627.5	2,529.0	98.45	26.688	
4,500.0	4,456.9	4,412.9	4,412.9	12.6	87.7	64.10	1,488.0	2,661.3	2,627.5	2,527.5	100.00	26.275	
4,527.5	4,484.4	4,440.4	4,440.4	12.7	88.2	64.10	1,488.0	2,661.3	2,627.5	2,526.9	100.60	26.118	
4,600.0	4,556.9	4,512.9	4,512.9	12.8	89.7	64.10	1,488.0	2,661.3	2,627.5	2,525.3	102.18	25.713	
4,626.0	4,582.9	4,538.9	4,538.9	12.9	90.2	64.10	1,488.0	2,661.3	2,627.5	2,524.7	102.75	25.571	
4,700.0	4,656.9	4,612.9	4,612.9	13.0	91.7	64.10	1,488.0	2,661.3	2,627.5	2,523.1	104.37	25.175	
4,724.4	4,681.3	4,637.3	4,637.3	13.0	92.2	64.10	1,488.0	2,661.3	2,627.5	2,522.6	104.90	25.047	
4,800.0	4,756.9	4,712.9	4,712.9	13.1	93.7	64.10	1,488.0	2,661.3	2,627.5	2,520.9	106.56	24.658	
4,822.8	4,779.7	4,735.7	4,735.7	13.2	94.2	64.10	1,488.0	2,661.3	2,627.5	2,520.4	107.06	24.543	
4,900.0	4,856.9	4,812.9	4,812.9	13.3	95.7	64.10	1,488.0	2,661.3	2,627.5	2,518.7	108.74	24.162	
4,921.2	4,878.1	4,834.1	4,834.1	13.4	96.2	64.10	1,488.0	2,661.3	2,627.5	2,518.3	109.21	24.059	
5,000.0	4,956.9	4,912.9	4,912.9	13.5	97.7	64.10	1,488.0	2,661.3	2,627.5	2,516.5	110.93	23.685	
5,019.7	4,976.6	4,932.6	4,932.6	13.5	98.1	64.10	1,488.0	2,661.3	2,627.5	2,516.1	111.37	23.593	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,012.9	5,012.9	13.7	99.7	64.10	1,488.0	2,661.3	2,627.5	2,514.3	113.13	23.226	
5,118.1	5,075.0	5,031.0	5,031.0	13.7	100.1	64.10	1,488.0	2,661.3	2,627.5	2,513.9	113.52	23.145	
5,200.0	5,156.9	5,112.9	5,112.9	13.8	101.8	64.10	1,488.0	2,661.3	2,627.5	2,512.1	115.32	22.784	
5,216.5	5,173.4	5,129.4	5,129.4	13.9	102.1	64.10	1,488.0	2,661.3	2,627.5	2,511.8	115.68	22.713	
5,300.0	5,256.9	5,212.9	5,212.9	14.0	103.8	64.10	1,488.0	2,661.3	2,627.5	2,509.9	117.51	22.359	
5,314.9	5,271.8	5,227.8	5,227.8	14.1	104.1	64.10	1,488.0	2,661.3	2,627.5	2,509.6	117.84	22.297	
5,400.0	5,356.9	5,312.9	5,312.9	14.2	105.8	64.10	1,488.0	2,661.3	2,627.5	2,507.8	119.71	21.949	
5,413.4	5,370.3	5,326.3	5,326.3	14.2	106.1	64.10	1,488.0	2,661.3	2,627.5	2,507.5	120.00	21.895	
5,500.0	5,456.9	5,412.9	5,412.9	14.4	107.8	64.10	1,488.0	2,661.3	2,627.5	2,505.6	121.90	21.553	
5,511.8	5,468.7	5,424.7	5,424.7	14.4	108.0	64.10	1,488.0	2,661.3	2,627.5	2,505.3	122.16	21.508	
5,600.0	5,556.9	5,512.9	5,512.9	14.6	109.8	64.10	1,488.0	2,661.3	2,627.5	2,503.4	124.10	21.172	
5,610.2	5,567.1	5,523.1	5,523.1	14.6	110.0	64.10	1,488.0	2,661.3	2,627.5	2,503.1	124.33	21.133	
5,700.0	5,656.9	5,612.9	5,612.9	14.7	111.8	64.10	1,488.0	2,661.3	2,627.5	2,501.2	126.30	20.803	
5,708.6	5,665.5	5,621.5	5,621.5	14.8	112.0	64.10	1,488.0	2,661.3	2,627.5	2,501.0	126.49	20.772	
5,800.0	5,756.9	5,712.9	5,712.9	14.9	113.8	64.10	1,488.0	2,661.3	2,627.5	2,499.0	128.50	20.447	
5,807.1	5,764.0	5,720.0	5,720.0	14.9	114.0	64.10	1,488.0	2,661.3	2,627.5	2,498.8	128.66	20.422	
5,900.0	5,856.9	5,812.9	5,812.9	15.1	115.8	64.10	1,488.0	2,661.3	2,627.5	2,496.8	130.70	20.103	
5,905.5	5,862.4	5,818.4	5,818.4	15.1	115.9	64.10	1,488.0	2,661.3	2,627.5	2,496.6	130.82	20.084	
5,971.9	5,928.8	5,884.8	5,884.8	15.3	117.3	64.10	1,488.0	2,661.3	2,627.5	2,495.2	132.28	19.862	CC, ES, SF
6,000.0	5,956.9	5,912.9	5,912.9	15.3	117.8	154.09	1,488.0	2,661.3	2,628.0	2,496.7	131.23	20.025	
6,003.9	5,960.8	5,916.8	5,916.8	15.3	117.9	154.08	1,488.0	2,661.3	2,628.1	2,496.8	131.29	20.017	
6,050.0	6,006.7	5,962.7	5,962.7	15.4	118.9	154.01	1,488.0	2,661.3	2,631.3	2,499.6	131.73	19.974	
6,100.0	6,056.2	6,012.2	6,012.2	15.4	119.8	153.85	1,488.0	2,661.3	2,637.7	2,506.0	131.71	20.027	
6,102.3	6,058.5	6,014.5	6,014.5	15.4	119.9	153.84	1,488.0	2,661.3	2,638.1	2,506.4	131.69	20.032	
6,150.0	6,105.1	6,061.1	6,061.1	15.4	120.8	153.60	1,488.0	2,661.3	2,647.3	2,516.1	131.16	20.184	
6,200.0	6,153.0	6,109.0	6,109.0	15.5	121.8	153.27	1,488.0	2,661.3	2,659.9	2,529.8	130.10	20.445	
6,200.8	6,153.8	6,109.8	6,109.8	15.5	121.8	153.26	1,488.0	2,661.3	2,660.1	2,530.0	130.08	20.449	
6,250.0	6,199.9	6,155.9	6,155.9	15.5	122.7	152.84	1,488.0	2,661.3	2,675.5	2,547.0	128.56	20.811	
6,299.2	6,244.8	6,200.8	6,200.8	15.5	123.6	152.31	1,488.0	2,661.3	2,693.8	2,567.1	126.61	21.276	
6,300.0	6,245.5	6,201.5	6,201.5	15.5	123.7	152.30	1,488.0	2,661.3	2,694.1	2,567.5	126.58	21.284	
6,350.0	6,289.6	6,245.6	6,245.6	15.5	124.5	151.64	1,488.0	2,661.3	2,715.5	2,591.3	124.21	21.862	
6,397.6	6,329.9	6,285.9	6,285.9	15.4	125.3	150.88	1,488.0	2,661.3	2,738.5	2,616.8	121.68	22.505	
6,400.0	6,331.8	6,287.8	6,287.8	15.4	125.4	150.83	1,488.0	2,661.3	2,739.7	2,618.1	121.55	22.539	
6,450.0	6,372.2	6,328.2	6,328.2	15.4	126.2	149.86	1,488.0	2,661.3	2,766.6	2,647.8	118.71	23.305	
6,496.0	6,407.4	6,363.4	6,363.4	15.4	126.9	148.80	1,488.0	2,661.3	2,793.6	2,677.5	116.07	24.068	
6,500.0	6,410.3	6,366.3	6,366.3	15.4	127.0	148.70	1,488.0	2,661.3	2,796.0	2,680.1	115.85	24.135	
6,550.0	6,446.1	6,402.1	6,402.1	15.4	127.7	147.29	1,488.0	2,661.3	2,827.8	2,714.7	113.16	24.989	
6,594.5	6,475.9	6,431.9	6,431.9	15.4	128.3	145.81	1,488.0	2,661.3	2,858.1	2,746.9	111.13	25.717	
6,600.0	6,479.4	6,435.4	6,435.4	15.4	128.4	145.61	1,488.0	2,661.3	2,861.9	2,751.0	110.91	25.803	
6,650.0	6,510.0	6,466.0	6,466.0	15.5	129.0	143.57	1,488.0	2,661.3	2,898.2	2,788.8	109.42	26.488	
6,692.9	6,534.0	6,490.0	6,490.0	15.7	129.5	141.48	1,488.0	2,661.3	2,930.9	2,821.9	109.02	26.885	
6,700.0	6,537.8	6,493.8	6,493.8	15.7	129.5	141.10	1,488.0	2,661.3	2,936.4	2,827.4	109.04	26.929	
6,750.0	6,562.6	6,518.6	6,518.6	16.2	130.0	138.09	1,488.0	2,661.3	2,976.4	2,866.2	110.18	27.015	
6,791.3	6,580.8	6,536.8	6,536.8	16.6	130.4	135.11	1,488.0	2,661.3	3,010.7	2,898.2	112.50	26.760	
6,800.0	6,584.3	6,540.3	6,540.3	16.7	130.5	134.41	1,488.0	2,661.3	3,018.0	2,904.8	113.18	26.666	
6,850.0	6,602.9	6,558.9	6,558.9	17.3	130.8	129.88	1,488.0	2,661.3	3,061.0	2,942.7	118.26	25.884	
6,889.7	6,615.2	6,571.2	6,571.2	17.9	131.1	125.55	1,488.0	2,661.3	3,096.0	2,972.3	123.75	25.018	
6,900.0	6,618.1	6,574.1	6,574.1	18.0	131.1	124.32	1,488.0	2,661.3	3,105.2	2,979.8	125.35	24.772	
6,950.0	6,630.0	6,586.0	6,586.0	18.8	131.4	117.51	1,488.0	2,661.3	3,150.3	3,016.4	133.91	23.526	
6,988.2	6,636.8	6,592.8	6,592.8	19.5	131.5	111.39	1,488.0	2,661.3	3,185.4	3,044.6	140.71	22.637	
7,000.0	6,638.5	6,594.5	6,594.5	19.7	131.6	109.32	1,488.0	2,661.3	3,196.3	3,053.6	142.72	22.395	
7,050.0	6,643.5	6,599.5	6,599.5	20.6	131.7	99.82	1,488.0	2,661.3	3,242.7	3,092.9	149.87	21.637	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,600.9	6,600.9	21.3	131.7	92.21	1,488.0	2,661.3	3,277.0	3,124.2	152.78	21.449	
7,097.8	6,645.0	6,601.0	6,601.0	21.5	131.7	89.81	1,488.0	2,661.3	3,287.5	3,134.3	153.15	21.466	
7,100.0	6,645.0	6,601.0	6,601.0	21.6	131.7	89.81	1,488.0	2,661.3	3,289.5	3,136.3	153.19	21.473	
7,185.0	6,644.9	6,600.9	6,600.9	23.3	131.7	89.80	1,488.0	2,661.3	3,369.3	3,214.4	154.92	21.749	
7,200.0	6,644.9	6,600.9	6,600.9	23.6	131.7	89.80	1,488.0	2,661.3	3,383.4	3,228.2	155.22	21.798	
7,283.4	6,644.8	6,600.8	6,600.8	25.4	131.7	89.80	1,488.0	2,661.3	3,462.0	3,305.0	157.04	22.046	
7,300.0	6,644.7	6,600.7	6,600.7	25.8	131.7	89.79	1,488.0	2,661.3	3,477.7	3,320.3	157.40	22.095	
7,381.9	6,644.6	6,600.6	6,600.6	27.7	131.7	89.79	1,488.0	2,661.3	3,555.0	3,395.8	159.27	22.321	
7,400.0	6,644.6	6,600.6	6,600.6	28.1	131.7	89.79	1,488.0	2,661.3	3,572.2	3,412.5	159.68	22.371	
7,480.3	6,644.5	6,600.5	6,600.5	30.0	131.7	89.78	1,488.0	2,661.3	3,648.3	3,486.8	161.59	22.578	
7,500.0	6,644.5	6,600.5	6,600.5	30.5	131.7	89.78	1,488.0	2,661.3	3,667.0	3,505.0	162.06	22.628	
7,578.7	6,644.4	6,600.4	6,600.4	32.4	131.7	89.78	1,488.0	2,661.3	3,741.9	3,577.9	163.98	22.819	
7,600.0	6,644.4	6,600.4	6,600.4	32.9	131.7	89.78	1,488.0	2,661.3	3,762.2	3,597.7	164.50	22.870	
7,677.1	6,644.3	6,600.3	6,600.3	34.8	131.7	89.77	1,488.0	2,661.3	3,835.7	3,669.3	166.43	23.047	
7,700.0	6,644.2	6,600.2	6,600.2	35.4	131.7	89.77	1,488.0	2,661.3	3,857.5	3,690.5	167.00	23.099	
7,775.6	6,644.1	6,600.1	6,600.1	37.3	131.7	89.76	1,488.0	2,661.3	3,929.7	3,760.8	168.92	23.263	
7,800.0	6,644.1	6,600.1	6,600.1	38.0	131.7	89.76	1,488.0	2,661.3	3,953.1	3,783.5	169.54	23.316	
7,874.0	6,644.0	6,600.0	6,600.0	39.9	131.7	89.76	1,488.0	2,661.3	4,024.0	3,852.5	171.45	23.470	
7,900.0	6,644.0	6,600.0	6,600.0	40.5	131.7	89.76	1,488.0	2,661.3	4,048.9	3,876.8	172.12	23.523	
7,972.4	6,643.9	6,599.9	6,599.9	42.4	131.7	89.75	1,488.0	2,661.3	4,118.4	3,944.4	174.01	23.668	
8,000.0	6,643.9	6,599.9	6,599.9	43.1	131.7	89.75	1,488.0	2,661.3	4,144.9	3,970.2	174.73	23.722	
8,070.8	6,643.8	6,599.8	6,599.8	45.0	131.7	89.75	1,488.0	2,661.3	4,213.0	4,036.4	176.59	23.857	
8,100.0	6,643.7	6,599.7	6,599.7	45.8	131.7	89.74	1,488.0	2,661.3	4,241.1	4,063.7	177.36	23.912	
8,169.3	6,643.7	6,599.7	6,599.7	47.6	131.7	89.74	1,488.0	2,661.3	4,307.8	4,128.6	179.19	24.040	
8,200.0	6,643.6	6,599.6	6,599.6	48.4	131.7	89.74	1,488.0	2,661.3	4,337.4	4,157.4	180.01	24.096	
8,267.7	6,643.5	6,599.5	6,599.5	50.2	131.7	89.73	1,488.0	2,661.3	4,402.7	4,220.9	181.81	24.216	
8,300.0	6,643.5	6,599.5	6,599.5	51.1	131.7	89.73	1,488.0	2,661.3	4,433.9	4,251.3	182.68	24.272	
8,366.1	6,643.4	6,599.4	6,599.4	52.9	131.7	89.73	1,488.0	2,661.3	4,497.8	4,313.4	184.45	24.385	
8,400.0	6,643.4	6,599.4	6,599.4	53.8	131.7	89.73	1,488.0	2,661.3	4,530.6	4,345.2	185.36	24.443	
8,464.5	6,643.3	6,599.3	6,599.3	55.5	131.7	89.72	1,488.0	2,661.3	4,593.1	4,406.0	187.10	24.549	
8,500.0	6,643.2	6,599.2	6,599.2	56.5	131.7	89.72	1,488.0	2,661.3	4,627.4	4,439.4	188.05	24.607	
8,563.0	6,643.2	6,599.2	6,599.2	58.2	131.6	89.72	1,488.0	2,661.3	4,688.4	4,498.7	189.75	24.708	
8,600.0	6,643.1	6,599.1	6,599.1	59.2	131.6	89.71	1,488.0	2,661.3	4,724.3	4,533.6	190.76	24.767	
8,661.4	6,643.0	6,599.0	6,599.0	60.8	131.6	89.71	1,488.0	2,661.3	4,783.9	4,591.5	192.42	24.862	
8,700.0	6,643.0	6,599.0	6,599.0	61.9	131.6	89.71	1,488.0	2,661.3	4,821.4	4,627.9	193.47	24.921	
8,759.8	6,642.9	6,598.9	6,598.9	63.5	131.6	89.70	1,488.0	2,661.3	4,879.5	4,684.4	195.10	25.011	
8,800.0	6,642.9	6,598.9	6,598.9	64.6	131.6	89.70	1,488.0	2,661.3	4,918.6	4,722.4	196.19	25.070	
8,858.2	6,642.8	6,598.8	6,598.8	66.2	131.6	89.70	1,488.0	2,661.3	4,975.3	4,777.5	197.78	25.155	
8,900.0	6,642.7	6,598.7	6,598.7	67.3	131.6	89.69	1,488.0	2,661.3	5,015.9	4,817.0	198.92	25.216	
8,956.7	6,642.7	6,598.7	6,598.7	68.9	131.6	89.69	1,488.0	2,661.3	5,071.1	4,870.6	200.47	25.296	
9,000.0	6,642.6	6,598.6	6,598.6	70.1	131.6	89.69	1,488.0	2,661.3	5,113.3	4,911.6	201.66	25.357	
9,055.1	6,642.5	6,598.5	6,598.5	71.6	131.6	89.68	1,488.0	2,661.3	5,167.0	4,963.8	203.17	25.432	
9,100.0	6,642.5	6,598.5	6,598.5	72.8	131.6	89.68	1,488.0	2,661.3	5,210.8	5,006.4	204.40	25.493	
9,153.5	6,642.4	6,598.4	6,598.4	74.3	131.6	89.68	1,488.0	2,661.3	5,263.0	5,057.1	205.87	25.565	
9,200.0	6,642.4	6,598.4	6,598.4	75.6	131.6	89.68	1,488.0	2,661.3	5,308.4	5,101.2	207.14	25.627	
9,251.9	6,642.3	6,598.3	6,598.3	77.0	131.6	89.67	1,488.0	2,661.3	5,359.1	5,150.5	208.57	25.694	
9,300.0	6,642.2	6,598.2	6,598.2	78.3	131.6	89.67	1,488.0	2,661.3	5,406.0	5,196.2	209.89	25.756	
9,350.4	6,642.2	6,598.2	6,598.2	79.7	131.6	89.67	1,488.0	2,661.3	5,455.3	5,244.0	211.28	25.820	
9,400.0	6,642.1	6,598.1	6,598.1	81.1	131.6	89.66	1,488.0	2,661.3	5,503.8	5,291.2	212.65	25.882	
9,448.8	6,642.0	6,598.0	6,598.0	82.4	131.6	89.66	1,488.0	2,661.3	5,551.5	5,337.6	213.99	25.943	
9,500.0	6,642.0	6,598.0	6,598.0	83.8	131.6	89.66	1,488.0	2,661.3	5,601.7	5,386.2	215.41	26.005	
9,547.2	6,641.9	6,597.9	6,597.9	85.1	131.6	89.65	1,488.0	2,661.3	5,647.9	5,431.2	216.71	26.062	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,597.9	6,597.9	86.6	131.6	89.65	1,488.0	2,661.3	5,699.6	5,481.4	218.17	26.125		
9,645.6	6,641.8	6,597.8	6,597.8	87.9	131.6	89.65	1,488.0	2,661.3	5,744.3	5,524.9	219.43	26.178		
9,700.0	6,641.7	6,597.7	6,597.7	89.4	131.6	89.64	1,488.0	2,661.3	5,797.6	5,576.6	220.93	26.242		
9,744.1	6,641.7	6,597.7	6,597.7	90.6	131.6	89.64	1,488.0	2,661.3	5,840.8	5,618.6	222.15	26.292		
9,800.0	6,641.6	6,597.6	6,597.6	92.1	131.6	89.64	1,488.0	2,661.3	5,895.6	5,671.9	223.70	26.355		
9,842.5	6,641.6	6,597.6	6,597.6	93.3	131.6	89.63	1,488.0	2,661.3	5,937.3	5,712.4	224.87	26.403		
9,900.0	6,641.5	6,597.5	6,597.5	94.9	131.6	89.63	1,488.0	2,661.3	5,993.7	5,767.3	226.47	26.466		
9,940.9	6,641.4	6,597.4	6,597.4	96.0	131.6	89.63	1,488.0	2,661.3	6,033.9	5,806.3	227.60	26.511		
10,000.0	6,641.4	6,597.4	6,597.4	97.7	131.6	89.62	1,488.0	2,661.3	6,091.9	5,862.7	229.24	26.575		
10,039.3	6,641.3	6,597.3	6,597.3	98.8	131.6	89.62	1,488.0	2,661.3	6,130.6	5,900.2	230.33	26.617		
10,100.0	6,641.2	6,597.2	6,597.2	100.4	131.6	89.62	1,488.0	2,661.3	6,190.1	5,958.1	232.01	26.680		
10,137.8	6,641.2	6,597.2	6,597.2	101.5	131.6	89.62	1,488.0	2,661.3	6,227.3	5,994.2	233.06	26.720		
10,200.0	6,641.1	6,597.1	6,597.1	103.2	131.6	89.61	1,488.0	2,661.3	6,288.4	6,053.6	234.79	26.784		
10,236.2	6,641.1	6,597.1	6,597.1	104.2	131.6	89.61	1,488.0	2,661.3	6,324.0	6,088.2	235.79	26.820		
10,300.0	6,641.0	6,597.0	6,597.0	106.0	131.6	89.61	1,488.0	2,661.3	6,386.8	6,149.2	237.56	26.885		
10,334.6	6,640.9	6,596.9	6,596.9	107.0	131.6	89.60	1,488.0	2,661.3	6,420.8	6,182.3	238.53	26.919		
10,400.0	6,640.9	6,596.9	6,596.9	108.8	131.6	89.60	1,488.0	2,661.3	6,485.2	6,244.8	240.34	26.983		
10,433.0	6,640.8	6,596.8	6,596.8	109.7	131.6	89.60	1,488.0	2,661.3	6,517.7	6,276.4	241.26	27.015		
10,500.0	6,640.7	6,596.7	6,596.7	111.6	131.6	89.59	1,488.0	2,661.3	6,583.6	6,340.5	243.12	27.079		
10,531.5	6,640.7	6,596.7	6,596.7	112.4	131.6	89.59	1,488.0	2,661.3	6,614.6	6,370.6	244.00	27.109		
10,600.0	6,640.6	6,596.6	6,596.6	114.3	131.6	89.59	1,488.0	2,661.3	6,682.1	6,436.2	245.90	27.174		
10,629.9	6,640.6	6,596.6	6,596.6	115.2	131.6	89.59	1,488.0	2,661.3	6,711.6	6,464.8	246.74	27.201		
10,700.0	6,640.5	6,596.5	6,596.5	117.1	131.6	89.58	1,488.0	2,661.3	6,780.7	6,532.0	248.69	27.266		
10,728.3	6,640.4	6,596.4	6,596.4	117.9	131.6	89.58	1,488.0	2,661.3	6,808.6	6,559.1	249.48	27.292		
10,800.0	6,640.4	6,596.4	6,596.4	119.9	131.6	89.57	1,488.0	2,661.3	6,879.2	6,627.8	251.47	27.356		
10,826.7	6,640.3	6,596.3	6,596.3	120.7	131.6	89.57	1,488.0	2,661.3	6,905.6	6,653.4	252.22	27.380		
10,900.0	6,640.2	6,596.2	6,596.2	122.7	131.6	89.57	1,488.0	2,661.3	6,977.8	6,723.6	254.26	27.444		
10,925.2	6,640.2	6,596.2	6,596.2	123.4	131.6	89.57	1,488.0	2,661.3	7,002.7	6,747.7	254.96	27.466		
11,000.0	6,640.1	6,596.1	6,596.1	125.5	131.6	89.56	1,488.0	2,661.3	7,076.5	6,819.5	257.04	27.531		
11,023.6	6,640.1	6,596.1	6,596.1	126.1	131.6	89.56	1,488.0	2,661.3	7,099.8	6,842.1	257.70	27.551		
11,100.0	6,640.0	6,596.0	6,596.0	128.3	131.6	89.56	1,488.0	2,661.3	7,175.2	6,915.4	259.83	27.615		
11,122.0	6,639.9	6,595.9	6,595.9	128.9	131.6	89.55	1,488.0	2,661.3	7,196.9	6,936.5	260.44	27.633		
11,200.0	6,639.8	6,595.8	6,595.8	131.1	131.6	89.55	1,488.0	2,661.3	7,273.9	7,011.3	262.62	27.698		
11,220.4	6,639.8	6,595.8	6,595.8	131.6	131.6	89.55	1,488.0	2,661.3	7,294.1	7,030.9	263.19	27.715		
11,300.0	6,639.7	6,595.7	6,595.7	133.9	131.6	89.54	1,488.0	2,661.3	7,372.7	7,107.3	265.41	27.779		
11,318.9	6,639.7	6,595.7	6,595.7	134.4	131.6	89.54	1,488.0	2,661.3	7,391.3	7,125.4	265.93	27.794		
11,400.0	6,639.6	6,595.6	6,595.6	136.7	131.6	89.54	1,488.0	2,661.3	7,471.5	7,203.3	268.20	27.858		
11,417.3	6,639.6	6,595.6	6,595.6	137.1	131.6	89.54	1,488.0	2,661.3	7,488.6	7,219.9	268.68	27.872		
11,500.0	6,639.5	6,595.5	6,595.5	139.4	131.6	89.53	1,488.0	2,661.3	7,570.3	7,299.3	270.99	27.936		
11,515.7	6,639.5	6,595.5	6,595.5	139.9	131.6	89.53	1,488.0	2,661.3	7,585.9	7,314.4	271.43	27.948		
11,600.0	6,639.3	6,595.3	6,595.3	142.2	131.6	89.52	1,488.0	2,661.3	7,669.2	7,395.4	273.78	28.012		
11,614.1	6,639.3	6,595.3	6,595.3	142.6	131.6	89.52	1,488.0	2,661.3	7,683.2	7,409.0	274.17	28.023		
11,700.0	6,639.2	6,595.2	6,595.2	145.0	131.6	89.52	1,488.0	2,661.3	7,768.1	7,491.5	276.57	28.087		
11,712.6	6,639.2	6,595.2	6,595.2	145.4	131.6	89.52	1,488.0	2,661.3	7,780.5	7,503.6	276.92	28.097		
11,800.0	6,639.1	6,595.1	6,595.1	147.8	131.6	89.51	1,488.0	2,661.3	7,867.0	7,587.6	279.36	28.161		
11,811.0	6,639.1	6,595.1	6,595.1	148.1	131.6	89.51	1,488.0	2,661.3	7,877.9	7,598.2	279.67	28.169		
11,900.0	6,639.0	6,595.0	6,595.0	150.6	131.6	89.51	1,488.0	2,661.3	7,965.9	7,683.8	282.15	28.232		
11,909.4	6,639.0	6,595.0	6,595.0	150.9	131.6	89.51	1,488.0	2,661.3	7,975.3	7,692.8	282.42	28.239		
12,000.0	6,638.8	6,594.8	6,594.8	153.4	131.6	89.50	1,488.0	2,661.3	8,064.9	7,779.9	284.95	28.303		
12,007.8	6,638.8	6,594.8	6,594.8	153.6	131.6	89.50	1,488.0	2,661.3	8,072.7	7,787.5	285.17	28.309		
12,100.0	6,638.7	6,594.7	6,594.7	156.2	131.6	89.49	1,488.0	2,661.3	8,163.9	7,876.1	287.74	28.372		
12,106.3	6,638.7	6,594.7	6,594.7	156.4	131.6	89.49	1,488.0	2,661.3	8,170.1	7,882.2	287.92	28.377		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.6	6,594.6	6,594.6	159.0	131.6	89.49	1,488.0	2,661.3	8,262.9	7,972.4	290.54	28.440	
12,204.7	6,638.6	6,594.6	6,594.6	159.1	131.6	89.49	1,488.0	2,661.3	8,267.6	7,976.9	290.67	28.443	
12,300.0	6,638.5	6,594.5	6,594.5	161.8	131.6	89.48	1,488.0	2,661.3	8,362.0	8,068.6	293.33	28.507	
12,303.1	6,638.5	6,594.5	6,594.5	161.9	131.6	89.48	1,488.0	2,661.3	8,365.0	8,071.6	293.42	28.509	
12,400.0	6,638.3	6,594.3	6,594.3	164.6	131.6	89.47	1,488.0	2,661.3	8,461.0	8,164.9	296.13	28.572	
12,401.5	6,638.3	6,594.3	6,594.3	164.6	131.6	89.47	1,488.0	2,661.3	8,462.6	8,166.4	296.17	28.573	
12,500.0	6,638.2	6,594.2	6,594.2	167.4	131.5	89.47	1,488.0	2,661.3	8,560.1	8,261.2	298.92	28.636	
12,598.4	6,638.1	6,594.1	6,594.1	170.2	131.5	89.46	1,488.0	2,661.3	8,657.6	8,355.9	301.67	28.699	
12,600.0	6,638.1	6,594.1	6,594.1	170.2	131.5	89.46	1,488.0	2,661.3	8,659.2	8,357.5	301.72	28.700	
12,696.8	6,638.0	6,594.0	6,594.0	172.9	131.5	89.46	1,488.0	2,661.3	8,755.2	8,450.8	304.43	28.760	
12,700.0	6,638.0	6,594.0	6,594.0	173.0	131.5	89.46	1,488.0	2,661.3	8,758.3	8,453.8	304.52	28.762	
12,795.2	6,637.8	6,593.8	6,593.8	175.7	131.5	89.45	1,488.0	2,661.3	8,852.8	8,545.6	307.18	28.820	
12,800.0	6,637.8	6,593.8	6,593.8	175.8	131.5	89.45	1,488.0	2,661.3	8,857.5	8,550.2	307.31	28.822	
12,893.7	6,637.7	6,593.7	6,593.7	178.4	131.5	89.44	1,488.0	2,661.3	8,950.4	8,640.4	309.93	28.878	
12,900.0	6,637.7	6,593.7	6,593.7	178.6	131.5	89.44	1,488.0	2,661.3	8,956.7	8,646.5	310.11	28.882	
12,992.1	6,637.6	6,593.6	6,593.6	181.2	131.5	89.44	1,488.0	2,661.3	9,048.0	8,735.3	312.69	28.936	
13,000.0	6,637.6	6,593.6	6,593.6	181.4	131.5	89.44	1,488.0	2,661.3	9,055.8	8,742.9	312.91	28.941	
13,090.5	6,637.5	6,593.5	6,593.5	183.9	131.5	89.43	1,488.0	2,661.3	9,145.6	8,830.2	315.44	28.993	
13,100.0	6,637.5	6,593.5	6,593.5	184.2	131.5	89.43	1,488.0	2,661.3	9,155.0	8,839.3	315.71	28.999	
13,188.9	6,637.4	6,593.4	6,593.4	186.7	131.5	89.43	1,488.0	2,661.3	9,243.3	8,925.1	318.19	29.049	
13,200.0	6,637.3	6,593.3	6,593.3	187.0	131.5	89.42	1,488.0	2,661.3	9,254.3	8,935.8	318.50	29.055	
13,287.4	6,637.2	6,593.2	6,593.2	189.4	131.5	89.42	1,488.0	2,661.3	9,341.0	9,020.0	320.95	29.104	
13,300.0	6,637.2	6,593.2	6,593.2	189.8	131.5	89.42	1,488.0	2,661.3	9,353.5	9,032.2	321.30	29.111	
13,385.8	6,637.1	6,593.1	6,593.1	192.2	131.5	89.41	1,488.0	2,661.3	9,438.7	9,114.9	323.70	29.158	
13,400.0	6,637.1	6,593.1	6,593.1	192.6	131.5	89.41	1,488.0	2,661.3	9,452.7	9,128.6	324.10	29.166	
13,484.2	6,637.0	6,593.0	6,593.0	195.0	131.5	89.41	1,488.0	2,661.3	9,536.4	9,209.9	326.46	29.211	
13,500.0	6,637.0	6,593.0	6,593.0	195.4	131.5	89.41	1,488.0	2,661.3	9,552.0	9,225.1	326.90	29.220	
13,582.6	6,636.9	6,592.9	6,592.9	197.7	131.5	89.40	1,488.0	2,661.3	9,634.1	9,304.9	329.21	29.264	
13,600.0	6,636.8	6,592.8	6,592.8	198.2	131.5	89.40	1,488.0	2,661.3	9,651.3	9,321.6	329.70	29.273	
13,681.1	6,636.7	6,592.7	6,592.7	200.5	131.5	89.39	1,488.0	2,661.3	9,731.8	9,399.8	331.97	29.315	
13,700.0	6,636.7	6,592.7	6,592.7	201.0	131.5	89.39	1,488.0	2,661.3	9,750.6	9,418.1	332.50	29.325	
13,779.5	6,636.6	6,592.6	6,592.6	203.2	131.5	89.39	1,488.0	2,661.3	9,829.5	9,494.8	334.73	29.366	
13,800.0	6,636.6	6,592.6	6,592.6	203.8	131.5	89.39	1,488.0	2,661.3	9,849.9	9,514.6	335.30	29.376	
13,877.9	6,636.5	6,592.5	6,592.5	206.0	131.5	89.38	1,488.0	2,661.3	9,927.3	9,589.8	337.48	29.416	
13,900.0	6,636.5	6,592.5	6,592.5	206.6	131.5	89.38	1,488.0	2,661.3	9,949.2	9,611.1	338.10	29.427	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	83.75	290.1	2,650.6	2,666.4				
98.4	98.4	94.4	94.4	0.1	0.0	83.75	290.1	2,650.6	2,666.4	2,666.3	0.10	N/A	
100.0	100.0	96.0	96.0	0.1	0.0	83.75	290.1	2,650.6	2,666.4	2,666.3	0.10	N/A	
196.8	196.8	192.8	192.8	0.3	1.0	83.75	290.1	2,650.6	2,666.4	2,665.1	1.30	2,044.205	
200.0	200.0	196.0	196.0	0.3	1.0	83.75	290.1	2,650.6	2,666.4	2,665.1	1.35	1,982.454	
295.3	295.3	291.3	291.3	0.5	3.2	83.75	290.1	2,650.6	2,666.4	2,662.7	3.72	716.892	
300.0	300.0	296.0	296.0	0.5	3.3	83.75	290.1	2,650.6	2,666.4	2,662.6	3.84	694.442	
393.7	393.7	389.7	389.7	0.8	5.3	83.75	290.1	2,650.6	2,666.4	2,660.4	6.01	443.727	
400.0	400.0	396.0	396.0	0.8	5.4	83.75	290.1	2,650.6	2,666.4	2,660.3	6.15	433.257	
492.1	492.1	488.1	488.1	1.0	7.3	83.75	290.1	2,650.6	2,666.4	2,658.2	8.24	323.410	
500.0	500.0	496.0	496.0	1.0	7.4	83.75	290.1	2,650.6	2,666.4	2,658.0	8.42	316.555	
590.5	590.5	586.5	586.5	1.2	9.3	83.75	290.1	2,650.6	2,666.4	2,656.0	10.46	254.801	
600.0	600.0	596.0	596.0	1.2	9.5	83.75	290.1	2,650.6	2,666.4	2,655.8	10.68	249.718	
689.0	689.0	685.0	685.0	1.4	11.3	83.75	290.1	2,650.6	2,666.4	2,653.8	12.68	210.323	
700.0	700.0	696.0	696.0	1.4	11.5	83.75	290.1	2,650.6	2,666.4	2,653.5	12.93	206.291	
787.4	787.4	783.4	783.4	1.6	13.2	83.75	290.1	2,650.6	2,666.4	2,651.6	14.89	179.112	
800.0	800.0	796.0	796.0	1.7	13.5	83.75	290.1	2,650.6	2,666.4	2,651.3	15.17	175.773	
885.8	885.8	881.8	881.8	1.9	15.2	83.75	290.1	2,650.6	2,666.4	2,649.4	17.09	155.987	
900.0	900.0	896.0	896.0	1.9	15.5	83.75	290.1	2,650.6	2,666.4	2,649.0	17.41	153.140	
984.2	984.2	980.2	980.2	2.1	17.2	83.75	290.1	2,650.6	2,666.4	2,647.1	19.30	138.162	
1,000.0	1,000.0	996.0	996.0	2.1	17.5	83.75	290.1	2,650.6	2,666.4	2,646.8	19.65	135.681	
1,082.7	1,082.7	1,078.7	1,078.7	2.3	19.2	83.75	290.1	2,650.6	2,666.4	2,644.9	21.50	123.998	
1,100.0	1,100.0	1,096.0	1,096.0	2.3	19.5	83.75	290.1	2,650.6	2,666.4	2,644.6	21.89	121.801	
1,181.1	1,181.1	1,177.1	1,177.1	2.5	21.2	83.75	290.1	2,650.6	2,666.4	2,642.7	23.71	112.472	
1,200.0	1,200.0	1,196.0	1,196.0	2.6	21.6	83.75	290.1	2,650.6	2,666.4	2,642.3	24.13	110.500	
1,279.5	1,279.5	1,275.5	1,275.5	2.7	23.2	83.75	290.1	2,650.6	2,666.4	2,640.5	25.91	102.909	
1,300.0	1,300.0	1,296.0	1,296.0	2.8	23.6	83.75	290.1	2,650.6	2,666.4	2,640.1	26.37	101.121	
1,377.9	1,377.9	1,373.9	1,373.9	3.0	25.1	42.59	290.1	2,650.6	2,665.7	2,637.6	28.10	94.848	
1,400.0	1,400.0	1,396.0	1,396.0	3.0	25.6	42.61	290.1	2,650.6	2,665.2	2,636.6	28.59	93.210	
1,476.4	1,476.3	1,472.3	1,472.3	3.2	27.1	42.70	290.1	2,650.6	2,662.4	2,632.2	30.27	87.945	
1,500.0	1,499.8	1,495.8	1,495.8	3.2	27.6	42.73	290.1	2,650.6	2,661.3	2,630.5	30.79	86.433	
1,574.8	1,574.4	1,570.4	1,570.4	3.4	29.1	42.89	290.1	2,650.6	2,656.8	2,624.3	32.42	81.955	
1,600.0	1,599.5	1,595.5	1,595.5	3.5	29.6	42.95	290.1	2,650.6	2,654.9	2,621.9	32.96	80.547	
1,673.2	1,672.2	1,668.2	1,668.2	3.6	31.1	43.16	290.1	2,650.6	2,648.6	2,614.1	34.53	76.697	
1,700.0	1,698.7	1,694.7	1,694.7	3.7	31.6	43.25	290.1	2,650.6	2,646.0	2,610.9	35.10	75.377	
1,771.6	1,769.5	1,765.5	1,765.5	3.9	33.0	43.52	290.1	2,650.6	2,638.0	2,601.4	36.62	72.033	
1,800.0	1,797.5	1,793.5	1,793.5	4.0	33.6	43.64	290.1	2,650.6	2,634.6	2,597.3	37.22	70.787	
1,870.1	1,866.3	1,862.3	1,862.3	4.2	35.0	43.97	290.1	2,650.6	2,625.1	2,586.4	38.69	67.854	
1,899.9	1,895.6	1,891.6	1,891.6	4.3	35.6	44.12	290.1	2,650.6	2,620.7	2,581.4	39.31	66.673	
1,968.5	1,962.6	1,958.6	1,958.6	4.5	36.9	44.34	290.1	2,650.6	2,610.4	2,569.5	40.83	63.929	
2,000.0	1,993.4	1,989.4	1,989.4	4.6	37.5	44.44	290.1	2,650.6	2,605.6	2,564.1	41.53	62.736	
2,066.9	2,058.9	2,054.9	2,054.9	4.8	38.8	44.65	290.1	2,650.6	2,595.6	2,552.6	43.03	60.317	
2,100.0	2,091.3	2,087.3	2,087.3	4.9	39.5	44.76	290.1	2,650.6	2,590.7	2,546.9	43.77	59.184	
2,165.3	2,155.2	2,151.2	2,151.2	5.2	40.8	44.97	290.1	2,650.6	2,580.9	2,535.7	45.24	57.046	
2,200.0	2,189.1	2,185.1	2,185.1	5.3	41.5	45.08	290.1	2,650.6	2,575.8	2,529.8	46.02	55.965	
2,263.8	2,251.5	2,247.5	2,247.5	5.5	42.7	45.28	290.1	2,650.6	2,566.3	2,518.9	47.47	54.066	
2,300.0	2,286.9	2,282.9	2,282.9	5.7	43.4	45.40	290.1	2,650.6	2,561.0	2,512.7	48.29	53.037	
2,362.2	2,347.7	2,343.7	2,343.7	5.9	44.7	45.61	290.1	2,650.6	2,551.8	2,502.1	49.70	51.345	
2,400.0	2,384.7	2,380.7	2,380.7	6.0	45.4	45.73	290.1	2,650.6	2,546.3	2,495.7	50.56	50.362	
2,460.6	2,444.0	2,440.0	2,440.0	6.3	46.6	45.93	290.1	2,650.6	2,537.4	2,485.4	51.94	48.851	
2,500.0	2,482.5	2,478.5	2,478.5	6.4	47.4	46.07	290.1	2,650.6	2,531.6	2,478.8	52.84	47.912	
2,559.0	2,540.3	2,536.3	2,536.3	6.7	48.5	46.26	290.1	2,650.6	2,523.0	2,468.8	54.19	46.559	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,576.3	2,576.3	6.8	49.3	46.40	290.1	2,650.6	2,517.1	2,462.0	55.13	45.660	
2,657.5	2,636.5	2,632.5	2,632.5	7.1	50.5	46.60	290.1	2,650.6	2,508.8	2,452.3	56.45	44.446	
2,700.0	2,678.1	2,674.1	2,674.1	7.2	51.3	46.74	290.1	2,650.6	2,502.6	2,445.2	57.42	43.583	
2,755.9	2,732.8	2,728.8	2,728.8	7.5	52.4	46.94	290.1	2,650.6	2,494.6	2,435.9	58.71	42.491	
2,800.0	2,776.0	2,772.0	2,772.0	7.7	53.3	47.09	290.1	2,650.6	2,488.3	2,428.5	59.72	41.663	
2,854.3	2,829.1	2,825.1	2,825.1	7.9	54.3	47.28	290.1	2,650.6	2,480.5	2,419.5	60.98	40.680	
2,900.0	2,873.8	2,869.8	2,869.8	8.1	55.2	47.44	290.1	2,650.6	2,474.0	2,412.0	62.03	39.883	
2,952.7	2,925.4	2,921.4	2,921.4	8.3	56.3	47.62	290.1	2,650.6	2,466.5	2,403.2	63.25	38.996	
3,000.0	2,971.6	2,967.6	2,967.6	8.5	57.2	47.79	290.1	2,650.6	2,459.8	2,395.5	64.34	38.229	
3,051.2	3,021.6	3,017.6	3,017.6	8.7	58.2	47.97	290.1	2,650.6	2,452.6	2,387.1	65.53	37.427	
3,100.0	3,069.4	3,065.4	3,065.4	8.9	59.2	48.14	290.1	2,650.6	2,445.7	2,379.1	66.66	36.689	
3,149.6	3,117.9	3,113.9	3,113.9	9.1	60.1	48.32	290.1	2,650.6	2,438.8	2,371.0	67.81	35.963	
3,200.0	3,167.2	3,163.2	3,163.2	9.3	61.1	48.51	290.1	2,650.6	2,431.7	2,362.7	68.98	35.250	
3,248.0	3,214.2	3,210.2	3,210.2	9.5	62.1	48.68	290.1	2,650.6	2,425.0	2,354.9	70.10	34.593	
3,300.0	3,265.0	3,261.0	3,261.0	9.8	63.1	48.87	290.1	2,650.6	2,417.8	2,346.5	71.31	33.905	
3,346.4	3,310.5	3,306.5	3,306.5	10.0	64.0	49.04	290.1	2,650.6	2,411.4	2,339.0	72.40	33.309	
3,400.0	3,362.9	3,358.9	3,358.9	10.2	65.1	49.24	290.1	2,650.6	2,404.0	2,330.4	73.64	32.644	
3,444.9	3,406.7	3,402.7	3,402.7	10.4	66.0	49.40	290.1	2,650.6	2,397.9	2,323.2	74.69	32.103	
3,473.0	3,434.2	3,430.2	3,430.2	10.5	66.5	49.51	290.1	2,650.6	2,394.0	2,318.7	75.35	31.772	
3,500.0	3,460.7	3,456.7	3,456.7	10.6	67.0	49.55	290.1	2,650.6	2,390.4	2,314.4	76.02	31.443	
3,543.3	3,503.2	3,499.2	3,499.2	10.7	67.9	49.62	290.1	2,650.6	2,385.0	2,307.9	77.08	30.941	
3,600.0	3,559.0	3,555.0	3,555.0	10.9	69.0	49.70	290.1	2,650.6	2,378.6	2,300.1	78.46	30.315	
3,641.7	3,600.2	3,596.2	3,596.2	11.0	69.8	49.75	290.1	2,650.6	2,374.3	2,294.8	79.46	29.878	
3,700.0	3,657.9	3,653.9	3,653.9	11.2	71.0	49.82	290.1	2,650.6	2,369.0	2,288.1	80.86	29.298	
3,740.1	3,697.8	3,693.8	3,693.8	11.3	71.8	49.86	290.1	2,650.6	2,365.8	2,284.0	81.80	28.920	
3,800.0	3,757.3	3,753.3	3,753.3	11.4	73.0	49.92	290.1	2,650.6	2,361.7	2,278.5	83.21	28.384	
3,838.6	3,795.7	3,791.7	3,791.7	11.5	73.8	49.95	290.1	2,650.6	2,359.5	2,275.4	84.09	28.058	
3,900.0	3,857.0	3,853.0	3,853.0	11.7	75.0	49.99	290.1	2,650.6	2,356.7	2,271.2	85.50	27.565	
3,937.0	3,893.9	3,889.9	3,889.9	11.7	75.8	50.00	290.1	2,650.6	2,355.4	2,269.1	86.33	27.285	
4,000.0	3,956.9	3,952.9	3,952.9	11.8	77.0	50.02	290.1	2,650.6	2,353.9	2,266.2	87.73	26.833	
4,035.4	3,992.3	3,988.3	3,988.3	11.9	77.7	50.03	290.1	2,650.6	2,353.5	2,265.0	88.50	26.593	
4,072.9	4,029.8	4,025.8	4,025.8	11.9	78.5	91.22	290.1	2,650.6	2,353.3	2,264.4	88.93	26.463	
4,100.0	4,056.9	4,052.9	4,052.9	12.0	79.0	91.22	290.1	2,650.6	2,353.3	2,263.8	89.52	26.288	
4,133.8	4,090.7	4,086.7	4,086.7	12.0	79.7	91.22	290.1	2,650.6	2,353.3	2,263.1	90.26	26.072	
4,200.0	4,156.9	4,152.9	4,152.9	12.1	81.0	91.22	290.1	2,650.6	2,353.3	2,261.6	91.72	25.659	
4,232.3	4,189.2	4,185.2	4,185.2	12.2	81.7	91.22	290.1	2,650.6	2,353.3	2,260.9	92.42	25.462	
4,300.0	4,256.9	4,252.9	4,252.9	12.3	83.1	91.22	290.1	2,650.6	2,353.3	2,259.4	93.91	25.059	
4,330.7	4,287.6	4,283.6	4,283.6	12.4	83.7	91.22	290.1	2,650.6	2,353.3	2,258.8	94.59	24.880	
4,400.0	4,356.9	4,352.9	4,352.9	12.5	85.1	91.22	290.1	2,650.6	2,353.3	2,257.2	96.11	24.486	
4,429.1	4,386.0	4,382.0	4,382.0	12.5	85.7	91.22	290.1	2,650.6	2,353.3	2,256.6	96.75	24.324	
4,500.0	4,456.9	4,452.9	4,452.9	12.6	87.1	91.22	290.1	2,650.6	2,353.3	2,255.0	98.31	23.938	
4,527.5	4,484.4	4,480.4	4,480.4	12.7	87.6	91.22	290.1	2,650.6	2,353.3	2,254.4	98.92	23.791	
4,600.0	4,556.9	4,552.9	4,552.9	12.8	89.1	91.22	290.1	2,650.6	2,353.3	2,252.8	100.51	23.414	
4,626.0	4,582.9	4,578.9	4,578.9	12.9	89.6	91.22	290.1	2,650.6	2,353.3	2,252.3	101.08	23.281	
4,700.0	4,656.9	4,652.9	4,652.9	13.0	91.1	91.22	290.1	2,650.6	2,353.3	2,250.6	102.71	22.912	
4,724.4	4,681.3	4,677.3	4,677.3	13.0	91.6	91.22	290.1	2,650.6	2,353.3	2,250.1	103.25	22.793	
4,800.0	4,756.9	4,752.9	4,752.9	13.1	93.1	91.22	290.1	2,650.6	2,353.3	2,248.4	104.92	22.431	
4,822.8	4,779.7	4,775.7	4,775.7	13.2	93.6	91.22	290.1	2,650.6	2,353.3	2,247.9	105.42	22.324	
4,900.0	4,856.9	4,852.9	4,852.9	13.3	95.1	91.22	290.1	2,650.6	2,353.3	2,246.2	107.12	21.969	
4,921.2	4,878.1	4,874.1	4,874.1	13.4	95.5	91.22	290.1	2,650.6	2,353.3	2,245.8	107.59	21.873	
5,000.0	4,956.9	4,952.9	4,952.9	13.5	97.1	91.22	290.1	2,650.6	2,353.3	2,244.0	109.33	21.526	
5,019.7	4,976.6	4,972.6	4,972.6	13.5	97.5	91.22	290.1	2,650.6	2,353.3	2,243.6	109.76	21.441	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,052.9	5,052.9	13.7	99.1	91.22	290.1	2,650.6	2,353.3	2,241.8	111.53	21.100	
5,118.1	5,075.0	5,071.0	5,071.0	13.7	99.5	91.22	290.1	2,650.6	2,353.3	2,241.4	111.93	21.025	
5,200.0	5,156.9	5,152.9	5,152.9	13.8	101.2	91.22	290.1	2,650.6	2,353.3	2,239.6	113.74	20.691	
5,216.5	5,173.4	5,169.4	5,169.4	13.9	101.5	91.22	290.1	2,650.6	2,353.3	2,239.2	114.10	20.624	
5,300.0	5,256.9	5,252.9	5,252.9	14.0	103.2	91.22	290.1	2,650.6	2,353.3	2,237.4	115.95	20.297	
5,314.9	5,271.8	5,267.8	5,267.8	14.1	103.5	91.22	290.1	2,650.6	2,353.3	2,237.1	116.28	20.239	
5,400.0	5,356.9	5,352.9	5,352.9	14.2	105.2	91.22	290.1	2,650.6	2,353.3	2,235.2	118.16	19.917	
5,413.4	5,370.3	5,366.3	5,366.3	14.2	105.4	91.22	290.1	2,650.6	2,353.3	2,234.9	118.45	19.867	
5,500.0	5,456.9	5,452.9	5,452.9	14.4	107.2	91.22	290.1	2,650.6	2,353.3	2,233.0	120.37	19.551	
5,511.8	5,468.7	5,464.7	5,464.7	14.4	107.4	91.22	290.1	2,650.6	2,353.3	2,232.7	120.63	19.509	
5,600.0	5,556.9	5,552.9	5,552.9	14.6	109.2	91.22	290.1	2,650.6	2,353.3	2,230.8	122.58	19.199	
5,610.2	5,567.1	5,563.1	5,563.1	14.6	109.4	91.22	290.1	2,650.6	2,353.3	2,230.5	122.80	19.163	
5,700.0	5,656.9	5,652.9	5,652.9	14.7	111.2	91.22	290.1	2,650.6	2,353.3	2,228.6	124.79	18.858	
5,708.6	5,665.5	5,661.5	5,661.5	14.8	111.4	91.22	290.1	2,650.6	2,353.3	2,228.4	124.98	18.830	
5,800.0	5,756.9	5,752.9	5,752.9	14.9	113.2	91.22	290.1	2,650.6	2,353.3	2,226.3	127.00	18.530	
5,807.1	5,764.0	5,760.0	5,760.0	14.9	113.4	91.22	290.1	2,650.6	2,353.3	2,226.2	127.16	18.507	
5,900.0	5,856.9	5,852.9	5,852.9	15.1	115.2	91.22	290.1	2,650.6	2,353.3	2,224.1	129.22	18.213	
5,905.5	5,862.4	5,858.4	5,858.4	15.1	115.3	91.22	290.1	2,650.6	2,353.3	2,224.0	129.34	18.195	
5,971.9	5,928.8	5,924.8	5,924.8	15.3	116.7	91.22	290.1	2,650.6	2,353.3	2,222.5	130.81	17.991 CC	
6,000.0	5,956.9	5,952.9	5,952.9	15.3	117.2	-178.78	290.1	2,650.6	2,353.9	2,222.4	131.53	17.896 ES	
6,003.9	5,960.8	5,956.8	5,956.8	15.3	117.3	-178.78	290.1	2,650.6	2,354.1	2,222.5	131.58	17.891	
6,050.0	6,006.7	6,002.7	6,002.7	15.4	118.2	-178.77	290.1	2,650.6	2,357.6	2,225.7	131.91	17.873 SF	
6,100.0	6,056.2	6,052.2	6,052.2	15.4	119.2	-178.76	290.1	2,650.6	2,364.8	2,233.1	131.63	17.965	
6,102.3	6,058.5	6,054.5	6,054.5	15.4	119.3	-178.76	290.1	2,650.6	2,365.2	2,233.6	131.60	17.972	
6,150.0	6,105.1	6,101.1	6,101.1	15.4	120.2	-178.75	290.1	2,650.6	2,375.4	2,244.7	130.69	18.176	
6,200.0	6,153.0	6,149.0	6,149.0	15.5	121.2	-178.73	290.1	2,650.6	2,389.4	2,260.3	129.07	18.512	
6,200.8	6,153.8	6,149.8	6,149.8	15.5	121.2	-178.73	290.1	2,650.6	2,389.6	2,260.6	129.04	18.519	
6,250.0	6,199.9	6,195.9	6,195.9	15.5	122.1	-178.71	290.1	2,650.6	2,406.6	2,279.9	126.77	18.984	
6,299.2	6,244.8	6,240.8	6,240.8	15.5	123.0	-178.68	290.1	2,650.6	2,426.8	2,303.0	123.86	19.594	
6,300.0	6,245.5	6,241.5	6,241.5	15.5	123.0	-178.68	290.1	2,650.6	2,427.2	2,303.4	123.80	19.605	
6,350.0	6,289.6	6,285.6	6,285.6	15.5	123.9	-178.64	290.1	2,650.6	2,450.8	2,330.7	120.17	20.395	
6,397.6	6,329.9	6,325.9	6,325.9	15.4	124.7	-178.60	290.1	2,650.6	2,476.2	2,360.1	116.10	21.329	
6,400.0	6,331.8	6,327.8	6,327.8	15.4	124.8	-178.60	290.1	2,650.6	2,477.5	2,361.6	115.88	21.380	
6,450.0	6,372.2	6,368.2	6,368.2	15.4	125.6	-178.54	290.1	2,650.6	2,507.0	2,396.1	110.96	22.595	
6,496.0	6,407.4	6,403.4	6,403.4	15.4	126.3	-178.48	290.1	2,650.6	2,536.7	2,430.8	105.89	23.957	
6,500.0	6,410.3	6,406.3	6,406.3	15.4	126.4	-178.47	290.1	2,650.6	2,539.3	2,433.9	105.43	24.086	
6,550.0	6,446.1	6,442.1	6,442.1	15.4	127.1	-178.39	290.1	2,650.6	2,574.2	2,474.9	99.32	25.917	
6,594.5	6,475.9	6,471.9	6,471.9	15.4	127.7	-178.29	290.1	2,650.6	2,607.3	2,513.8	93.45	27.901	
6,600.0	6,479.4	6,475.4	6,475.4	15.4	127.8	-178.28	290.1	2,650.6	2,611.5	2,518.8	92.69	28.175	
6,650.0	6,510.0	6,506.0	6,506.0	15.5	128.4	-178.14	290.1	2,650.6	2,651.0	2,565.4	85.56	30.983	
6,692.9	6,534.0	6,530.0	6,530.0	15.7	128.8	-178.00	290.1	2,650.6	2,686.5	2,607.4	79.11	33.961	
6,700.0	6,537.8	6,533.8	6,533.8	15.7	128.9	-177.97	290.1	2,650.6	2,692.6	2,614.6	78.01	34.515	
6,750.0	6,562.6	6,558.6	6,558.6	16.2	129.4	-177.75	290.1	2,650.6	2,736.0	2,665.9	70.10	39.029	
6,791.3	6,580.8	6,576.8	6,576.8	16.6	129.8	-177.50	290.1	2,650.6	2,773.1	2,709.7	63.36	43.767	
6,800.0	6,584.3	6,580.3	6,580.3	16.7	129.9	-177.44	290.1	2,650.6	2,781.0	2,719.0	61.92	44.910	
6,850.0	6,602.9	6,598.9	6,598.9	17.3	130.2	-176.99	290.1	2,650.6	2,827.4	2,773.8	53.61	52.740	
6,889.7	6,615.2	6,611.2	6,611.2	17.9	130.5	-176.49	290.1	2,650.6	2,865.2	2,818.1	47.06	60.888	
6,900.0	6,618.1	6,614.1	6,614.1	18.0	130.5	-176.32	290.1	2,650.6	2,875.0	2,829.6	45.40	63.326	
6,950.0	6,630.0	6,626.0	6,626.0	18.8	130.8	-175.18	290.1	2,650.6	2,923.5	2,885.6	37.91	77.112	
6,988.2	6,636.8	6,632.8	6,632.8	19.5	130.9	-173.61	290.1	2,650.6	2,961.1	2,927.2	33.95	87.212	
7,000.0	6,638.5	6,634.5	6,634.5	19.7	130.9	-172.87	290.1	2,650.6	2,972.8	2,939.3	33.49	88.775	
7,050.0	6,643.5	6,639.5	6,639.5	20.6	131.1	-165.77	290.1	2,650.6	3,022.5	2,978.8	43.78	69.032	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	6,640.9	6,640.9	21.3	131.1	-131.32	290.1	2,650.6	3,059.1	2,943.0	116.07	26.357	
7,097.8	6,645.0	6,641.0	6,641.0	21.5	131.1	-85.60	290.1	2,650.6	3,070.3	2,918.3	152.02	20.197	
7,100.0	6,645.0	6,641.0	6,641.0	21.6	131.1	-85.60	290.1	2,650.6	3,072.5	2,920.4	152.06	20.205	
7,185.0	6,644.9	6,640.9	6,640.9	23.3	131.1	-85.48	290.1	2,650.6	3,157.5	3,003.8	153.76	20.536	
7,200.0	6,644.9	6,640.9	6,640.9	23.6	131.1	-85.46	290.1	2,650.6	3,172.5	3,018.4	154.05	20.593	
7,283.4	6,644.8	6,640.8	6,640.8	25.4	131.1	-85.34	290.1	2,650.6	3,255.9	3,100.1	155.84	20.893	
7,300.0	6,644.7	6,640.7	6,640.7	25.8	131.1	-85.32	290.1	2,650.6	3,272.5	3,116.3	156.19	20.952	
7,381.9	6,644.6	6,640.6	6,640.6	27.7	131.1	-85.20	290.1	2,650.6	3,354.3	3,196.3	158.03	21.226	
7,400.0	6,644.6	6,640.6	6,640.6	28.1	131.1	-85.17	290.1	2,650.6	3,372.5	3,214.0	158.44	21.286	
7,480.3	6,644.5	6,640.5	6,640.5	30.0	131.1	-85.06	290.1	2,650.6	3,452.8	3,292.4	160.31	21.538	
7,500.0	6,644.5	6,640.5	6,640.5	30.5	131.1	-85.03	290.1	2,650.6	3,472.4	3,311.7	160.77	21.599	
7,578.7	6,644.4	6,640.4	6,640.4	32.4	131.1	-84.92	290.1	2,650.6	3,551.2	3,388.5	162.66	21.832	
7,600.0	6,644.4	6,640.4	6,640.4	32.9	131.1	-84.89	290.1	2,650.6	3,572.4	3,409.3	163.17	21.894	
7,677.1	6,644.3	6,640.3	6,640.3	34.8	131.1	-84.78	290.1	2,650.6	3,649.6	3,484.5	165.06	22.111	
7,700.0	6,644.2	6,640.2	6,640.2	35.4	131.1	-84.75	290.1	2,650.6	3,672.4	3,506.8	165.62	22.174	
7,775.6	6,644.1	6,640.1	6,640.1	37.3	131.1	-84.64	290.1	2,650.6	3,748.0	3,580.5	167.50	22.376	
7,800.0	6,644.1	6,640.1	6,640.1	38.0	131.1	-84.61	290.1	2,650.6	3,772.4	3,604.3	168.11	22.440	
7,874.0	6,644.0	6,640.0	6,640.0	39.9	131.1	-84.50	290.1	2,650.6	3,846.4	3,676.4	169.98	22.628	
7,900.0	6,644.0	6,640.0	6,640.0	40.5	131.1	-84.46	290.1	2,650.6	3,872.4	3,701.8	170.64	22.694	
7,972.4	6,643.9	6,639.9	6,639.9	42.4	131.1	-84.36	290.1	2,650.6	3,944.8	3,772.3	172.49	22.870	
8,000.0	6,643.9	6,639.9	6,639.9	43.1	131.1	-84.32	290.1	2,650.6	3,972.4	3,799.2	173.19	22.937	
8,070.8	6,643.8	6,639.8	6,639.8	45.0	131.1	-84.22	290.1	2,650.6	4,043.2	3,868.2	175.01	23.103	
8,100.0	6,643.7	6,639.7	6,639.7	45.8	131.1	-84.18	290.1	2,650.6	4,072.4	3,896.6	175.76	23.170	
8,169.3	6,643.7	6,639.7	6,639.7	47.6	131.1	-84.08	290.1	2,650.6	4,141.7	3,964.1	177.56	23.326	
8,200.0	6,643.6	6,639.6	6,639.6	48.4	131.1	-84.04	290.1	2,650.6	4,172.4	3,994.0	178.35	23.394	
8,267.7	6,643.5	6,639.5	6,639.5	50.2	131.1	-83.94	290.1	2,650.6	4,240.1	4,060.0	180.12	23.541	
8,300.0	6,643.5	6,639.5	6,639.5	51.1	131.1	-83.90	290.1	2,650.6	4,272.4	4,091.4	180.96	23.610	
8,366.1	6,643.4	6,639.4	6,639.4	52.9	131.0	-83.80	290.1	2,650.6	4,338.5	4,155.8	182.69	23.748	
8,400.0	6,643.4	6,639.4	6,639.4	53.8	131.0	-83.75	290.1	2,650.6	4,372.4	4,188.8	183.58	23.818	
8,464.5	6,643.3	6,639.3	6,639.3	55.5	131.0	-83.66	290.1	2,650.6	4,436.9	4,251.6	185.27	23.948	
8,500.0	6,643.2	6,639.2	6,639.2	56.5	131.0	-83.61	290.1	2,650.6	4,472.4	4,286.2	186.20	24.019	
8,563.0	6,643.2	6,639.2	6,639.2	58.2	131.0	-83.52	290.1	2,650.6	4,535.3	4,347.5	187.86	24.142	
8,600.0	6,643.1	6,639.1	6,639.1	59.2	131.0	-83.47	290.1	2,650.6	4,572.4	4,383.5	188.84	24.213	
8,661.4	6,643.0	6,639.0	6,639.0	60.8	131.0	-83.38	290.1	2,650.6	4,633.8	4,443.3	190.46	24.329	
8,700.0	6,643.0	6,639.0	6,639.0	61.9	131.0	-83.33	290.1	2,650.6	4,672.4	4,480.9	191.48	24.401	
8,759.8	6,642.9	6,638.9	6,638.9	63.5	131.0	-83.24	290.1	2,650.6	4,732.2	4,539.1	193.07	24.511	
8,800.0	6,642.9	6,638.9	6,638.9	64.6	131.0	-83.19	290.1	2,650.6	4,772.4	4,578.2	194.13	24.583	
8,858.2	6,642.8	6,638.8	6,638.8	66.2	131.0	-83.10	290.1	2,650.6	4,830.6	4,634.9	195.67	24.687	
8,900.0	6,642.7	6,638.7	6,638.7	67.3	131.0	-83.05	290.1	2,650.6	4,872.3	4,675.6	196.78	24.760	
8,956.7	6,642.7	6,638.7	6,638.7	68.9	131.0	-82.97	290.1	2,650.6	4,929.0	4,730.7	198.29	24.858	
9,000.0	6,642.6	6,638.6	6,638.6	70.1	131.0	-82.90	290.1	2,650.6	4,972.3	4,772.9	199.44	24.932	
9,055.1	6,642.5	6,638.5	6,638.5	71.6	131.0	-82.83	290.1	2,650.6	5,027.4	4,826.5	200.90	25.024	
9,100.0	6,642.5	6,638.5	6,638.5	72.8	131.0	-82.76	290.1	2,650.6	5,072.3	4,870.2	202.10	25.099	
9,153.5	6,642.4	6,638.4	6,638.4	74.3	131.0	-82.69	290.1	2,650.6	5,125.9	4,922.3	203.52	25.186	
9,200.0	6,642.4	6,638.4	6,638.4	75.6	131.0	-82.62	290.1	2,650.6	5,172.3	4,967.6	204.76	25.261	
9,251.9	6,642.3	6,638.3	6,638.3	77.0	131.0	-82.55	290.1	2,650.6	5,224.3	5,018.1	206.14	25.343	
9,300.0	6,642.2	6,638.2	6,638.2	78.3	131.0	-82.48	290.1	2,650.6	5,272.3	5,064.9	207.42	25.419	
9,350.4	6,642.2	6,638.2	6,638.2	79.7	131.0	-82.41	290.1	2,650.6	5,322.7	5,113.9	208.76	25.497	
9,400.0	6,642.1	6,638.1	6,638.1	81.1	131.0	-82.34	290.1	2,650.6	5,372.3	5,162.2	210.08	25.573	
9,448.8	6,642.0	6,638.0	6,638.0	82.4	131.0	-82.27	290.1	2,650.6	5,421.1	5,209.7	211.38	25.646	
9,500.0	6,642.0	6,638.0	6,638.0	83.8	131.0	-82.20	290.1	2,650.6	5,472.3	5,259.6	212.74	25.722	
9,547.2	6,641.9	6,637.9	6,637.9	85.1	131.0	-82.13	290.1	2,650.6	5,519.5	5,305.5	214.00	25.792	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,637.9	6,637.9	86.6	131.0	-82.06	290.1	2,650.6	5,572.3	5,356.9	215.41	25.869	
9,645.6	6,641.8	6,637.8	6,637.8	87.9	131.0	-81.99	290.1	2,650.6	5,618.0	5,401.3	216.63	25.934	
9,700.0	6,641.7	6,637.7	6,637.7	89.4	131.0	-81.92	290.1	2,650.6	5,672.3	5,454.2	218.07	26.011	
9,744.1	6,641.7	6,637.7	6,637.7	90.6	131.0	-81.86	290.1	2,650.6	5,716.4	5,497.1	219.25	26.073	
9,800.0	6,641.6	6,637.6	6,637.6	92.1	131.0	-81.78	290.1	2,650.6	5,772.3	5,551.6	220.74	26.150	
9,842.5	6,641.6	6,637.6	6,637.6	93.3	131.0	-81.72	290.1	2,650.6	5,814.8	5,592.9	221.87	26.208	
9,900.0	6,641.5	6,637.5	6,637.5	94.9	131.0	-81.64	290.1	2,650.6	5,872.3	5,648.9	223.40	26.286	
9,940.9	6,641.4	6,637.4	6,637.4	96.0	131.0	-81.58	290.1	2,650.6	5,913.2	5,688.7	224.49	26.341	
10,000.0	6,641.4	6,637.4	6,637.4	97.7	131.0	-81.50	290.1	2,650.6	5,972.3	5,746.2	226.06	26.419	
10,039.3	6,641.3	6,637.3	6,637.3	98.8	131.0	-81.44	290.1	2,650.6	6,011.6	5,784.5	227.11	26.470	
10,100.0	6,641.2	6,637.2	6,637.2	100.4	131.0	-81.36	290.1	2,650.6	6,072.3	5,843.6	228.72	26.549	
10,137.8	6,641.2	6,637.2	6,637.2	101.5	131.0	-81.30	290.1	2,650.6	6,110.1	5,880.3	229.73	26.597	
10,200.0	6,641.1	6,637.1	6,637.1	103.2	131.0	-81.22	290.1	2,650.6	6,172.3	5,940.9	231.38	26.676	
10,236.2	6,641.1	6,637.1	6,637.1	104.2	131.0	-81.17	290.1	2,650.6	6,208.5	5,976.1	232.34	26.721	
10,300.0	6,641.0	6,637.0	6,637.0	106.0	131.0	-81.08	290.1	2,650.6	6,272.3	6,038.2	234.04	26.800	
10,334.6	6,640.9	6,636.9	6,636.9	107.0	131.0	-81.03	290.1	2,650.6	6,306.9	6,071.9	234.96	26.842	
10,400.0	6,640.9	6,636.9	6,636.9	108.8	131.0	-80.94	290.1	2,650.6	6,372.3	6,135.6	236.70	26.922	
10,433.0	6,640.8	6,636.8	6,636.8	109.7	131.0	-80.89	290.1	2,650.6	6,405.3	6,167.8	237.57	26.961	
10,500.0	6,640.7	6,636.7	6,636.7	111.6	131.0	-80.80	290.1	2,650.6	6,472.3	6,232.9	239.35	27.041	
10,531.5	6,640.7	6,636.7	6,636.7	112.4	131.0	-80.75	290.1	2,650.6	6,503.8	6,263.6	240.19	27.078	
10,600.0	6,640.6	6,636.6	6,636.6	114.3	131.0	-80.66	290.1	2,650.6	6,572.3	6,330.3	242.00	27.158	
10,629.9	6,640.6	6,636.6	6,636.6	115.2	131.0	-80.61	290.1	2,650.6	6,602.2	6,359.4	242.80	27.192	
10,700.0	6,640.5	6,636.5	6,636.5	117.1	131.0	-80.52	290.1	2,650.6	6,672.3	6,427.6	244.65	27.272	
10,728.3	6,640.4	6,636.4	6,636.4	117.9	131.0	-80.48	290.1	2,650.6	6,700.6	6,455.2	245.40	27.304	
10,800.0	6,640.4	6,636.4	6,636.4	119.9	131.0	-80.38	290.1	2,650.6	6,772.3	6,525.0	247.30	27.385	
10,826.7	6,640.3	6,636.3	6,636.3	120.7	131.0	-80.34	290.1	2,650.6	6,799.0	6,551.0	248.01	27.414	
10,900.0	6,640.2	6,636.2	6,636.2	122.7	131.0	-80.24	290.1	2,650.6	6,872.3	6,622.3	249.95	27.495	
10,925.2	6,640.2	6,636.2	6,636.2	123.4	131.0	-80.20	290.1	2,650.6	6,897.4	6,646.8	250.61	27.522	
11,000.0	6,640.1	6,636.1	6,636.1	125.5	131.0	-80.10	290.1	2,650.6	6,972.3	6,719.7	252.59	27.603	
11,023.6	6,640.1	6,636.1	6,636.1	126.1	131.0	-80.07	290.1	2,650.6	6,995.9	6,742.7	253.21	27.628	
11,100.0	6,640.0	6,636.0	6,636.0	128.3	131.0	-79.96	290.1	2,650.6	7,072.3	6,817.0	255.23	27.709	
11,122.0	6,639.9	6,635.9	6,635.9	128.9	131.0	-79.93	290.1	2,650.6	7,094.3	6,838.5	255.81	27.732	
11,200.0	6,639.8	6,635.8	6,635.8	131.1	131.0	-79.82	290.1	2,650.6	7,172.3	6,914.4	257.87	27.814	
11,220.4	6,639.8	6,635.8	6,635.8	131.6	131.0	-79.79	290.1	2,650.6	7,192.7	6,934.3	258.41	27.835	
11,300.0	6,639.7	6,635.7	6,635.7	133.9	131.0	-79.68	290.1	2,650.6	7,272.3	7,011.8	260.50	27.916	
11,318.9	6,639.7	6,635.7	6,635.7	134.4	131.0	-79.66	290.1	2,650.6	7,291.1	7,030.1	261.00	27.935	
11,400.0	6,639.6	6,635.6	6,635.6	136.7	131.0	-79.54	290.1	2,650.6	7,372.3	7,109.1	263.14	28.017	
11,417.3	6,639.6	6,635.6	6,635.6	137.1	131.0	-79.52	290.1	2,650.6	7,389.6	7,126.0	263.59	28.034	
11,500.0	6,639.5	6,635.5	6,635.5	139.4	131.0	-79.40	290.1	2,650.6	7,472.3	7,206.5	265.77	28.116	
11,515.7	6,639.5	6,635.5	6,635.5	139.9	131.0	-79.38	290.1	2,650.6	7,488.0	7,221.8	266.18	28.131	
11,600.0	6,639.3	6,635.3	6,635.3	142.2	131.0	-79.27	290.1	2,650.6	7,572.3	7,303.9	268.39	28.213	
11,614.1	6,639.3	6,635.3	6,635.3	142.6	131.0	-79.25	290.1	2,650.6	7,586.4	7,317.6	268.76	28.227	
11,700.0	6,639.2	6,635.2	6,635.2	145.0	131.0	-79.13	290.1	2,650.6	7,672.2	7,401.2	271.02	28.309	
11,712.6	6,639.2	6,635.2	6,635.2	145.4	131.0	-79.11	290.1	2,650.6	7,684.8	7,413.5	271.35	28.321	
11,800.0	6,639.1	6,635.1	6,635.1	147.8	131.0	-78.99	290.1	2,650.6	7,772.2	7,498.6	273.64	28.404	
11,811.0	6,639.1	6,635.1	6,635.1	148.1	131.0	-78.97	290.1	2,650.6	7,783.2	7,509.3	273.92	28.414	
11,900.0	6,639.0	6,635.0	6,635.0	150.6	131.0	-78.85	290.1	2,650.6	7,872.2	7,596.0	276.25	28.496	
11,909.4	6,639.0	6,635.0	6,635.0	150.9	131.0	-78.84	290.1	2,650.6	7,881.7	7,605.2	276.50	28.505	
12,000.0	6,638.8	6,634.8	6,634.8	153.4	131.0	-78.71	290.1	2,650.6	7,972.2	7,693.4	278.87	28.588	
12,007.8	6,638.8	6,634.8	6,634.8	153.6	131.0	-78.70	290.1	2,650.6	7,980.1	7,701.0	279.07	28.595	
12,100.0	6,638.7	6,634.7	6,634.7	156.2	131.0	-78.57	290.1	2,650.6	8,072.2	7,790.8	281.48	28.678	
12,106.3	6,638.7	6,634.7	6,634.7	156.4	131.0	-78.57	290.1	2,650.6	8,078.5	7,796.9	281.64	28.684	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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 #32-10 - 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	6,638.6	6,634.6	6,634.6	159.0	131.0	-78.44	290.1	2,650.6	8,172.2	7,888.2	284.08	28.767	
12,204.7	6,638.6	6,634.6	6,634.6	159.1	131.0	-78.43	290.1	2,650.6	8,176.9	7,892.7	284.21	28.771	
12,300.0	6,638.5	6,634.5	6,634.5	161.8	130.9	-78.30	290.1	2,650.6	8,272.2	7,985.5	286.69	28.855	
12,303.1	6,638.5	6,634.5	6,634.5	161.9	130.9	-78.30	290.1	2,650.6	8,275.4	7,988.6	286.77	28.857	
12,400.0	6,638.3	6,634.3	6,634.3	164.6	130.9	-78.16	290.1	2,650.6	8,372.2	8,082.9	289.29	28.941	
12,401.5	6,638.3	6,634.3	6,634.3	164.6	130.9	-78.16	290.1	2,650.6	8,373.8	8,084.5	289.33	28.942	
12,500.0	6,638.2	6,634.2	6,634.2	167.4	130.9	-78.02	290.1	2,650.6	8,472.2	8,180.3	291.88	29.026	
12,598.4	6,638.1	6,634.1	6,634.1	170.2	130.9	-77.89	290.1	2,650.6	8,570.6	8,276.2	294.43	29.109	
12,600.0	6,638.1	6,634.1	6,634.1	170.2	130.9	-77.89	290.1	2,650.6	8,572.2	8,277.8	294.48	29.110	
12,696.8	6,638.0	6,634.0	6,634.0	172.9	130.9	-77.75	290.1	2,650.6	8,669.1	8,372.1	296.98	29.191	
12,700.0	6,638.0	6,634.0	6,634.0	173.0	130.9	-77.75	290.1	2,650.6	8,672.2	8,375.2	297.06	29.193	
12,795.2	6,637.8	6,633.8	6,633.8	175.7	130.9	-77.62	290.1	2,650.6	8,767.5	8,468.0	299.53	29.271	
12,800.0	6,637.8	6,633.8	6,633.8	175.8	130.9	-77.61	290.1	2,650.6	8,772.2	8,472.6	299.65	29.275	
12,893.7	6,637.7	6,633.7	6,633.7	178.4	130.9	-77.49	290.1	2,650.6	8,865.9	8,563.8	302.07	29.351	
12,900.0	6,637.7	6,633.7	6,633.7	178.6	130.9	-77.48	290.1	2,650.6	8,872.2	8,570.0	302.23	29.356	
12,992.1	6,637.6	6,633.6	6,633.6	181.2	130.9	-77.35	290.1	2,650.6	8,964.3	8,659.7	304.60	29.429	
13,000.0	6,637.6	6,633.6	6,633.6	181.4	130.9	-77.34	290.1	2,650.6	8,972.2	8,667.4	304.81	29.436	
13,090.5	6,637.5	6,633.5	6,633.5	183.9	130.9	-77.22	290.1	2,650.6	9,062.7	8,755.6	307.14	29.507	
13,100.0	6,637.5	6,633.5	6,633.5	184.2	130.9	-77.20	290.1	2,650.6	9,072.2	8,764.8	307.38	29.515	
13,188.9	6,637.4	6,633.4	6,633.4	186.7	130.9	-77.08	290.1	2,650.6	9,161.2	8,851.5	309.67	29.584	
13,200.0	6,637.3	6,633.3	6,633.3	187.0	130.9	-77.07	290.1	2,650.6	9,172.2	8,862.3	309.95	29.593	
13,287.4	6,637.2	6,633.2	6,633.2	189.4	130.9	-76.95	290.1	2,650.6	9,259.6	8,947.4	312.19	29.660	
13,300.0	6,637.2	6,633.2	6,633.2	189.8	130.9	-76.93	290.1	2,650.6	9,272.2	8,959.7	312.52	29.670	
13,385.8	6,637.1	6,633.1	6,633.1	192.2	130.9	-76.81	290.1	2,650.6	9,358.0	9,043.3	314.71	29.735	
13,400.0	6,637.1	6,633.1	6,633.1	192.6	130.9	-76.79	290.1	2,650.6	9,372.2	9,057.1	315.08	29.746	
13,484.2	6,637.0	6,633.0	6,633.0	195.0	130.9	-76.68	290.1	2,650.6	9,456.4	9,139.2	317.23	29.809	
13,500.0	6,637.0	6,633.0	6,633.0	195.4	130.9	-76.66	290.1	2,650.6	9,472.2	9,154.6	317.63	29.821	
13,582.6	6,636.9	6,632.9	6,632.9	197.7	130.9	-76.55	290.1	2,650.6	9,554.9	9,235.1	319.74	29.883	
13,600.0	6,636.8	6,632.8	6,632.8	198.2	130.9	-76.52	290.1	2,650.6	9,572.2	9,252.0	320.19	29.896	
13,681.1	6,636.7	6,632.7	6,632.7	200.5	130.9	-76.41	290.1	2,650.6	9,653.3	9,331.0	322.25	29.956	
13,700.0	6,636.7	6,632.7	6,632.7	201.0	130.9	-76.39	290.1	2,650.6	9,672.2	9,349.5	322.74	29.969	
13,779.5	6,636.6	6,632.6	6,632.6	203.2	130.9	-76.28	290.1	2,650.6	9,751.7	9,427.0	324.76	30.028	
13,800.0	6,636.6	6,632.6	6,632.6	203.8	130.9	-76.25	290.1	2,650.6	9,772.2	9,446.9	325.28	30.042	
13,877.9	6,636.5	6,632.5	6,632.5	206.0	130.9	-76.15	290.1	2,650.6	9,850.1	9,522.9	327.26	30.099	
13,900.0	6,636.5	6,632.5	6,632.5	206.6	130.9	-76.12	290.1	2,650.6	9,872.2	9,544.4	327.82	30.115	
13,976.3	6,636.4	6,632.4	6,632.4	208.8	130.9	-76.01	290.1	2,650.6	9,948.6	9,618.8	329.76	30.169	
14,000.0	6,636.3	6,632.3	6,632.3	209.4	130.9	-75.98	290.1	2,650.6	9,972.2	9,641.9	330.36	30.186	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	71.79	1,419.7	4,316.7	4,544.2				
98.4	98.4	77.9	77.9	0.1	0.0	71.79	1,420.0	4,316.6	4,544.2	4,544.1	0.10	N/A	
100.0	100.0	79.4	79.4	0.1	0.0	71.79	1,420.0	4,316.6	4,544.2	4,544.1	0.10	N/A	
196.8	196.8	182.5	182.5	0.3	0.1	71.78	1,420.8	4,316.3	4,544.1	4,543.7	0.40	N/A	
200.0	200.0	185.9	185.9	0.3	0.1	71.78	1,420.8	4,316.3	4,544.1	4,543.7	0.41	N/A	
295.3	295.3	291.7	291.7	0.5	0.2	71.77	1,421.3	4,315.9	4,543.9	4,543.1	0.76	5,999.569	
300.0	300.0	297.0	297.0	0.5	0.2	71.77	1,421.3	4,315.8	4,543.9	4,543.1	0.77	5,864.005	
370.0	370.0	350.0	350.0	0.7	0.3	71.77	1,421.6	4,315.6	4,543.7	4,542.8	0.97	4,685.181	
393.7	393.7	367.6	367.6	0.8	0.3	71.77	1,421.7	4,315.6	4,543.8	4,542.7	1.04	4,389.690	
400.0	400.0	372.3	372.3	0.8	0.3	71.77	1,421.8	4,315.6	4,543.8	4,542.7	1.05	4,317.459	
492.1	492.1	459.4	459.4	1.0	0.3	71.76	1,422.6	4,315.6	4,544.1	4,542.7	1.32	3,443.362	
500.0	500.0	467.9	467.9	1.0	0.4	71.75	1,422.7	4,315.6	4,544.1	4,542.7	1.34	3,382.734	
590.5	590.5	558.0	558.0	1.2	0.4	71.75	1,423.3	4,315.6	4,544.3	4,542.7	1.60	2,846.874	
600.0	600.0	567.0	567.0	1.2	0.4	71.75	1,423.3	4,315.6	4,544.3	4,542.7	1.62	2,802.270	
689.0	689.0	690.6	690.6	1.4	0.4	71.74	1,423.7	4,315.6	4,544.4	4,542.5	1.85	2,456.409	
700.0	700.0	700.0	700.0	1.4	0.4	71.74	1,423.7	4,315.5	4,544.3	4,542.5	1.88	2,422.169	
787.4	787.4	769.7	769.7	1.6	0.5	71.74	1,424.0	4,315.2	4,544.1	4,542.0	2.10	2,163.928	
796.5	796.5	776.6	776.5	1.7	0.5	71.74	1,424.0	4,315.2	4,544.1	4,542.0	2.12	2,140.246	
800.0	800.0	779.2	779.1	1.7	0.5	71.74	1,424.1	4,315.2	4,544.1	4,541.9	2.13	2,131.433	
885.8	885.8	862.9	862.9	1.9	0.5	71.73	1,424.6	4,315.1	4,544.2	4,541.8	2.36	1,921.812	
900.0	900.0	878.3	878.3	1.9	0.5	71.73	1,424.6	4,315.1	4,544.2	4,541.8	2.40	1,890.188	
984.2	984.2	983.2	983.2	2.1	0.6	71.72	1,424.9	4,314.8	4,544.0	4,541.4	2.63	1,727.799	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	0.6	71.72	1,425.0	4,314.7	4,544.0	4,541.3	2.67	1,701.548	
1,082.7	1,082.7	1,066.6	1,066.6	2.3	0.6	71.72	1,425.1	4,314.5	4,543.7	4,540.9	2.87	1,581.634	
1,100.0	1,100.0	1,080.1	1,080.1	2.3	0.6	71.72	1,425.1	4,314.4	4,543.7	4,540.8	2.92	1,558.697	
1,100.4	1,100.4	1,080.4	1,080.4	2.3	0.6	71.72	1,425.1	4,314.4	4,543.7	4,540.8	2.92	1,558.174	
1,181.1	1,181.1	1,148.6	1,148.5	2.5	0.6	71.72	1,425.4	4,314.5	4,543.9	4,540.7	3.12	1,455.662	
1,200.0	1,200.0	1,165.1	1,165.1	2.6	0.6	71.72	1,425.5	4,314.5	4,543.9	4,540.7	3.17	1,433.176	
1,279.5	1,279.5	1,239.7	1,239.7	2.7	0.7	71.71	1,425.7	4,314.7	4,544.2	4,540.9	3.38	1,344.114	
1,300.0	1,300.0	1,260.2	1,260.2	2.8	0.7	71.71	1,425.8	4,314.8	4,544.3	4,540.9	3.44	1,322.562	
1,377.9	1,377.9	1,336.0	1,336.0	3.0	0.7	30.53	1,426.1	4,315.1	4,543.8	4,540.2	3.60	1,260.556	
1,400.0	1,400.0	1,356.7	1,356.7	3.0	0.7	30.54	1,426.1	4,315.2	4,543.3	4,539.6	3.66	1,240.931	
1,476.4	1,476.3	1,432.1	1,432.0	3.2	0.7	30.59	1,426.3	4,315.6	4,540.5	4,536.7	3.86	1,176.895	
1,500.0	1,499.8	1,457.1	1,457.1	3.2	0.7	30.62	1,426.4	4,315.7	4,539.3	4,535.4	3.92	1,158.128	
1,574.8	1,574.4	1,528.5	1,528.5	3.4	0.8	30.70	1,426.6	4,315.9	4,534.4	4,530.2	4.11	1,102.369	
1,600.0	1,599.5	1,549.4	1,549.4	3.5	0.8	30.74	1,426.7	4,316.1	4,532.3	4,528.2	4.18	1,085.016	
1,673.2	1,672.2	1,611.6	1,611.6	3.6	0.8	30.85	1,426.9	4,316.5	4,525.5	4,521.2	4.37	1,035.476	
1,700.0	1,698.7	1,637.4	1,637.3	3.7	0.8	30.91	1,427.0	4,316.7	4,522.7	4,518.2	4.44	1,018.400	
1,771.6	1,769.5	1,707.9	1,707.9	3.9	0.8	31.06	1,427.5	4,317.3	4,514.0	4,509.4	4.64	973.286	
1,800.0	1,797.5	1,743.0	1,742.9	4.0	0.8	31.14	1,427.8	4,317.5	4,510.1	4,505.4	4.72	956.043	
1,870.1	1,866.3	1,820.4	1,820.4	4.2	0.9	31.34	1,428.7	4,317.7	4,499.4	4,494.5	4.92	914.250	
1,899.9	1,895.6	1,846.0	1,846.0	4.3	0.9	31.42	1,429.0	4,317.8	4,494.4	4,489.3	5.01	897.968	
1,968.5	1,962.6	1,905.9	1,905.9	4.5	0.9	31.50	1,429.8	4,318.0	4,482.6	4,477.4	5.20	862.382	
2,000.0	1,993.4	1,939.6	1,939.5	4.6	0.9	31.54	1,430.3	4,318.1	4,477.3	4,472.0	5.29	846.905	
2,066.9	2,058.9	2,012.2	2,012.2	4.8	0.9	31.63	1,431.7	4,318.2	4,465.8	4,460.3	5.49	814.157	
2,100.0	2,091.3	2,051.2	2,051.1	4.9	1.0	31.67	1,432.4	4,318.2	4,460.1	4,454.5	5.58	798.933	
2,165.3	2,155.2	2,116.7	2,116.6	5.2	1.0	31.75	1,433.4	4,318.1	4,448.7	4,442.9	5.78	770.109	
2,200.0	2,189.1	2,140.9	2,140.8	5.3	1.0	31.78	1,433.8	4,318.1	4,442.7	4,436.8	5.88	755.835	
2,263.8	2,251.5	2,185.5	2,185.4	5.5	1.0	31.84	1,434.7	4,318.2	4,431.9	4,425.8	6.07	730.606	
2,300.0	2,286.9	2,215.6	2,215.5	5.7	1.0	31.87	1,435.3	4,318.4	4,425.9	4,419.7	6.17	716.864	
2,362.2	2,347.7	2,278.1	2,278.0	5.9	1.0	31.95	1,436.6	4,318.7	4,415.5	4,409.2	6.37	693.609	
2,400.0	2,384.7	2,312.7	2,312.6	6.0	1.1	31.99	1,437.4	4,318.9	4,409.2	4,402.8	6.48	680.238	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,444.0	2,360.8	2,360.7	6.3	1.1	32.05	1,438.5	4,319.2	4,399.3	4,392.6	6.67	659.580	
2,500.0	2,482.5	2,400.0	2,399.8	6.4	1.1	32.09	1,439.4	4,319.5	4,392.9	4,386.1	6.79	646.601	
2,559.0	2,540.3	2,443.6	2,443.5	6.7	1.1	32.14	1,440.5	4,320.0	4,383.4	4,376.4	6.98	628.132	
2,600.0	2,580.3	2,480.1	2,479.9	6.8	1.1	32.19	1,441.4	4,320.4	4,376.9	4,369.8	7.11	615.767	
2,657.5	2,636.5	2,530.6	2,530.4	7.1	1.1	32.25	1,442.8	4,320.9	4,367.8	4,360.5	7.29	598.954	
2,700.0	2,678.1	2,567.6	2,567.4	7.2	1.2	32.29	1,443.9	4,321.4	4,361.1	4,353.7	7.43	587.059	
2,755.9	2,732.8	2,621.0	2,620.8	7.5	1.2	32.35	1,445.4	4,322.1	4,352.4	4,344.8	7.61	571.797	
2,800.0	2,776.0	2,670.6	2,670.3	7.7	1.2	32.41	1,446.8	4,322.8	4,345.6	4,337.8	7.76	560.071	
2,854.3	2,829.1	2,718.1	2,717.8	7.9	1.2	32.47	1,448.2	4,323.3	4,337.0	4,329.1	7.94	546.413	
2,900.0	2,873.8	2,747.6	2,747.3	8.1	1.2	32.50	1,449.1	4,323.8	4,330.0	4,321.9	8.08	535.659	
2,952.7	2,925.4	2,781.6	2,781.3	8.3	1.2	32.54	1,450.2	4,324.4	4,322.1	4,313.8	8.25	523.645	
3,000.0	2,971.6	2,813.9	2,813.5	8.5	1.2	32.58	1,451.3	4,325.1	4,315.2	4,306.8	8.41	513.309	
3,051.2	3,021.6	2,851.6	2,851.2	8.7	1.3	32.62	1,452.7	4,326.0	4,307.9	4,299.3	8.57	502.460	
3,100.0	3,069.4	2,900.0	2,899.5	8.9	1.3	32.67	1,454.8	4,327.2	4,301.0	4,292.3	8.74	492.351	
3,149.6	3,117.9	2,935.6	2,935.1	9.1	1.3	32.70	1,456.5	4,328.1	4,294.2	4,285.3	8.90	482.500	
3,200.0	3,167.2	2,990.2	2,989.6	9.3	1.3	32.76	1,459.1	4,329.5	4,287.2	4,278.1	9.07	472.564	
3,248.0	3,214.2	3,054.4	3,053.7	9.5	1.3	32.83	1,461.9	4,331.0	4,280.4	4,271.2	9.24	463.082	
3,300.0	3,265.0	3,141.2	3,140.4	9.8	1.4	32.92	1,465.4	4,332.6	4,272.8	4,263.4	9.44	452.797	
3,346.4	3,310.5	3,222.0	3,221.2	10.0	1.4	33.02	1,467.5	4,333.7	4,265.5	4,255.9	9.61	443.743	
3,400.0	3,362.9	3,284.2	3,283.4	10.2	1.4	33.11	1,468.6	4,334.3	4,256.9	4,247.1	9.80	434.197	
3,444.9	3,406.7	3,338.7	3,337.9	10.4	1.4	33.18	1,469.2	4,334.9	4,249.6	4,239.7	9.97	426.416	
3,473.0	3,434.2	3,373.4	3,372.6	10.5	1.4	33.24	1,469.4	4,335.2	4,245.0	4,235.0	10.07	421.655	
3,500.0	3,460.7	3,407.0	3,406.2	10.6	1.5	33.24	1,469.6	4,335.5	4,240.6	4,230.5	10.15	417.726	
3,543.3	3,503.2	3,462.0	3,461.2	10.7	1.5	33.24	1,469.7	4,335.8	4,234.0	4,223.7	10.27	412.184	
3,600.0	3,559.0	3,533.5	3,532.6	10.9	1.5	33.25	1,469.8	4,336.0	4,225.9	4,215.4	10.42	405.523	
3,641.7	3,600.2	3,585.5	3,584.7	11.0	1.5	33.25	1,469.7	4,336.0	4,220.4	4,209.8	10.52	401.313	
3,700.0	3,657.9	3,641.8	3,641.0	11.2	1.5	33.23	1,469.5	4,336.0	4,213.5	4,202.8	10.65	395.677	
3,740.1	3,697.8	3,678.0	3,677.1	11.3	1.5	33.22	1,469.4	4,336.0	4,209.3	4,198.6	10.73	392.195	
3,800.0	3,757.3	3,738.6	3,737.8	11.4	1.5	33.21	1,469.3	4,336.1	4,204.0	4,193.2	10.85	387.350	
3,838.6	3,795.7	3,780.7	3,779.9	11.5	1.5	33.21	1,469.3	4,336.1	4,201.2	4,190.2	10.92	384.645	
3,900.0	3,857.0	3,845.0	3,844.2	11.7	1.5	33.20	1,469.3	4,336.0	4,197.4	4,186.4	11.03	380.462	
3,937.0	3,893.9	3,883.1	3,882.3	11.7	1.5	33.20	1,469.2	4,335.9	4,195.7	4,184.6	11.09	378.246	
4,000.0	3,956.9	3,947.7	3,946.8	11.8	1.5	33.20	1,469.0	4,335.8	4,193.6	4,182.4	11.20	374.534	
4,035.4	3,992.3	3,983.9	3,983.1	11.9	1.5	33.20	1,468.9	4,335.8	4,193.0	4,181.7	11.25	372.677	
4,072.9	4,029.8	4,016.2	4,015.3	11.9	1.5	74.39	1,468.8	4,335.7	4,192.7	4,180.0	12.62	332.244	
4,094.3	4,051.2	4,032.0	4,031.2	12.0	1.5	74.39	1,468.8	4,335.7	4,192.7	4,180.0	12.65	331.389	
4,100.0	4,056.9	4,036.2	4,035.4	12.0	1.5	74.39	1,468.8	4,335.7	4,192.7	4,180.0	12.66	331.163	
4,133.8	4,090.7	4,061.3	4,060.5	12.0	1.5	74.39	1,468.7	4,335.8	4,192.7	4,180.0	12.72	329.684	
4,200.0	4,156.9	4,118.4	4,117.6	12.1	1.5	74.39	1,468.6	4,336.1	4,193.0	4,180.2	12.83	326.800	
4,232.3	4,189.2	4,161.1	4,160.3	12.2	1.5	74.39	1,468.6	4,336.2	4,193.1	4,180.2	12.89	325.316	
4,300.0	4,256.9	4,240.0	4,239.2	12.3	1.5	74.39	1,468.7	4,336.2	4,193.1	4,180.1	13.02	322.034	
4,330.7	4,287.6	4,272.1	4,271.3	12.4	1.5	74.39	1,468.7	4,336.2	4,193.1	4,180.0	13.08	320.489	
4,378.4	4,335.3	4,316.1	4,315.3	12.4	1.5	74.39	1,468.8	4,336.1	4,193.0	4,179.9	13.18	318.229	
4,400.0	4,356.9	4,332.6	4,331.8	12.5	1.5	74.39	1,468.8	4,336.1	4,193.1	4,179.8	13.22	317.280	
4,429.1	4,386.0	4,355.0	4,354.2	12.5	1.5	74.39	1,468.8	4,336.2	4,193.1	4,179.8	13.27	316.004	
4,500.0	4,456.9	4,423.1	4,422.3	12.6	1.5	74.39	1,469.0	4,336.5	4,193.4	4,180.0	13.40	312.931	
4,527.5	4,484.4	4,475.5	4,474.7	12.7	1.5	74.38	1,469.1	4,336.5	4,193.5	4,180.0	13.45	311.692	
4,600.0	4,556.9	4,600.0	4,599.2	12.8	1.5	74.37	1,469.7	4,335.1	4,192.8	4,179.2	13.61	308.030	
4,626.0	4,582.9	4,624.3	4,623.5	12.9	1.5	74.37	1,469.9	4,334.7	4,192.4	4,178.7	13.66	306.854	
4,700.0	4,656.9	4,685.6	4,684.7	13.0	1.5	74.36	1,470.0	4,333.8	4,191.4	4,177.6	13.81	303.598	
4,724.4	4,681.3	4,707.6	4,706.8	13.0	1.5	74.36	1,469.9	4,333.6	4,191.1	4,177.3	13.85	302.534	
4,800.0	4,756.9	4,790.4	4,789.5	13.1	1.5	74.36	1,469.6	4,332.7	4,190.3	4,176.3	14.00	299.251	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
4,822.8	4,779.7	4,814.3	4,813.5	13.2	1.5	74.36	1,469.6	4,332.4	4,190.0	4,175.9	14.05	298.265	
4,900.0	4,856.9	4,893.1	4,892.3	13.3	1.6	74.36	1,469.3	4,331.4	4,189.0	4,174.8	14.20	294.978	
4,921.2	4,878.1	4,913.1	4,912.2	13.4	1.6	74.36	1,469.3	4,331.1	4,188.7	4,174.4	14.24	294.092	
5,000.0	4,956.9	4,984.2	4,983.3	13.5	1.6	74.36	1,469.0	4,330.3	4,187.7	4,173.3	14.40	290.881	
5,019.7	4,976.6	5,002.2	5,001.3	13.5	1.6	74.36	1,468.9	4,330.1	4,187.5	4,173.1	14.44	290.088	
5,100.0	5,056.9	5,081.3	5,080.4	13.7	1.6	74.37	1,468.5	4,329.4	4,186.7	4,172.1	14.59	286.912	
5,118.1	5,075.0	5,099.1	5,098.2	13.7	1.6	74.37	1,468.4	4,329.2	4,186.5	4,171.9	14.63	286.204	
5,200.0	5,156.9	5,168.4	5,167.5	13.8	1.6	74.37	1,467.9	4,328.7	4,185.8	4,171.0	14.78	283.137	
5,216.5	5,173.4	5,182.3	5,181.5	13.9	1.6	74.37	1,467.8	4,328.7	4,185.7	4,170.8	14.82	282.525	
5,300.0	5,256.9	5,287.9	5,287.0	14.0	1.6	74.38	1,467.0	4,327.9	4,185.0	4,170.0	14.98	279.425	
5,314.9	5,271.8	5,311.2	5,310.3	14.1	1.6	74.38	1,466.8	4,327.7	4,184.8	4,169.8	15.01	278.845	
5,400.0	5,356.9	5,431.9	5,431.0	14.2	1.6	74.39	1,465.6	4,325.5	4,183.0	4,167.9	15.18	275.561	
5,413.4	5,370.3	5,444.2	5,443.3	14.2	1.6	74.39	1,465.5	4,325.3	4,182.7	4,167.5	15.21	275.058	
5,500.0	5,456.9	5,528.9	5,528.0	14.4	1.6	74.39	1,464.7	4,323.6	4,180.9	4,165.5	15.38	271.822	
5,511.8	5,468.7	5,542.2	5,541.3	14.4	1.6	74.40	1,464.6	4,323.3	4,180.6	4,165.2	15.40	271.381	
5,600.0	5,556.9	5,634.2	5,633.2	14.6	1.6	74.40	1,463.7	4,321.4	4,178.6	4,163.0	15.58	268.129	
5,610.2	5,567.1	5,643.6	5,642.7	14.6	1.6	74.40	1,463.6	4,321.2	4,178.3	4,162.7	15.60	267.757	
5,700.0	5,656.9	5,730.4	5,729.5	14.7	1.6	74.40	1,463.0	4,319.3	4,176.3	4,160.6	15.79	264.515	
5,708.6	5,665.5	5,739.5	5,738.5	14.8	1.6	74.40	1,463.0	4,319.1	4,176.2	4,160.3	15.81	264.202	
5,800.0	5,756.9	5,837.2	5,836.2	14.9	1.6	74.40	1,462.5	4,316.9	4,174.1	4,158.1	16.00	260.918	
5,807.1	5,764.0	5,845.0	5,844.0	14.9	1.6	74.40	1,462.5	4,316.8	4,173.9	4,157.9	16.01	260.663	
5,900.0	5,856.9	5,960.3	5,959.2	15.1	1.6	74.38	1,462.7	4,313.6	4,171.5	4,155.3	16.21	257.278	
5,905.5	5,862.4	5,968.0	5,966.9	15.1	1.6	74.38	1,462.7	4,313.3	4,171.3	4,155.1	16.23	257.074	
5,971.9	5,928.8	6,039.3	6,038.2	15.3	1.7	74.36	1,463.7	4,310.8	4,169.2	4,152.9	16.37	254.654 ES	
5,994.6	5,951.5	6,059.8	6,058.6	15.3	1.7	164.36	1,464.1	4,310.0	4,168.9	4,153.6	15.26	273.157 CC	
6,000.0	5,956.9	6,064.6	6,063.5	15.3	1.7	164.36	1,464.2	4,309.8	4,168.9	4,153.6	15.27	273.020	
6,003.9	5,960.8	6,068.2	6,067.0	15.3	1.7	164.36	1,464.3	4,309.7	4,169.0	4,153.7	15.28	272.922	
6,050.0	6,006.7	6,154.0	6,152.7	15.4	1.7	164.29	1,467.4	4,305.9	4,170.9	4,155.6	15.37	271.385	
6,100.0	6,056.2	6,242.1	6,240.5	15.4	1.7	164.14	1,473.1	4,300.0	4,175.5	4,160.0	15.51	269.282	
6,102.3	6,058.5	6,244.6	6,242.9	15.4	1.7	164.13	1,473.3	4,299.9	4,175.8	4,160.2	15.51	269.184	
6,150.0	6,105.1	6,293.4	6,291.4	15.4	1.7	163.94	1,477.0	4,296.3	4,183.3	4,167.6	15.65	267.279	
6,200.0	6,153.0	6,335.5	6,333.3	15.5	1.7	163.67	1,480.3	4,293.3	4,194.4	4,178.6	15.79	265.624	
6,200.8	6,153.8	6,336.1	6,333.9	15.5	1.7	163.67	1,480.3	4,293.2	4,194.6	4,178.8	15.79	265.603	
6,250.0	6,199.9	6,375.6	6,373.2	15.5	1.8	163.34	1,483.1	4,290.5	4,208.8	4,192.9	15.91	264.546	
6,299.2	6,244.8	6,414.9	6,412.3	15.5	1.8	162.93	1,485.7	4,288.0	4,226.2	4,210.2	16.00	264.145	
6,300.0	6,245.5	6,415.5	6,412.9	15.5	1.8	162.92	1,485.8	4,287.9	4,226.5	4,210.5	16.00	264.144	
6,350.0	6,289.6	6,455.5	6,452.8	15.5	1.8	162.41	1,488.2	4,285.4	4,247.3	4,231.2	16.06	264.442	
6,397.6	6,329.9	6,492.2	6,489.3	15.4	1.8	161.83	1,490.2	4,283.3	4,270.0	4,253.9	16.09	265.378	
6,400.0	6,331.8	6,493.9	6,491.1	15.4	1.8	161.80	1,490.3	4,283.1	4,271.2	4,255.1	16.09	265.444	
6,450.0	6,372.2	6,523.3	6,520.4	15.4	1.8	161.05	1,491.8	4,281.5	4,298.0	4,281.9	16.09	267.189	
6,496.0	6,407.4	6,547.6	6,544.6	15.4	1.8	160.22	1,492.9	4,280.2	4,325.2	4,309.1	16.06	269.280	
6,500.0	6,410.3	6,549.6	6,546.7	15.4	1.8	160.14	1,493.0	4,280.1	4,327.6	4,311.6	16.06	269.486	
6,550.0	6,446.1	6,574.4	6,571.3	15.4	1.8	159.03	1,494.1	4,278.9	4,360.0	4,344.0	16.02	272.104	
6,594.5	6,475.9	6,600.0	6,596.9	15.4	1.8	157.87	1,495.1	4,277.8	4,390.9	4,374.9	16.01	274.323	
6,600.0	6,479.4	6,600.0	6,596.9	15.4	1.8	157.70	1,495.1	4,277.8	4,394.9	4,378.9	16.00	274.668	
6,650.0	6,510.0	6,620.4	6,617.3	15.5	1.8	156.06	1,495.9	4,277.0	4,432.1	4,416.1	16.01	276.809	
6,692.9	6,534.0	6,638.8	6,635.6	15.7	1.8	154.35	1,496.5	4,276.3	4,465.7	4,449.7	16.08	277.688	
6,700.0	6,537.8	6,641.6	6,638.5	15.7	1.8	154.04	1,496.6	4,276.2	4,471.4	4,455.3	16.10	277.783	
6,750.0	6,562.6	6,660.6	6,657.5	16.2	1.8	151.51	1,497.3	4,275.5	4,512.7	4,496.4	16.30	276.852	
6,791.3	6,580.8	6,674.6	6,671.5	16.6	1.8	148.92	1,497.8	4,275.0	4,548.1	4,531.5	16.59	274.158	
6,800.0	6,584.3	6,677.4	6,674.2	16.7	1.8	148.31	1,497.9	4,274.9	4,555.7	4,539.0	16.68	273.150	
6,850.0	6,602.9	6,700.0	6,696.8	17.3	1.8	144.29	1,498.7	4,274.1	4,600.2	4,582.9	17.29	265.987	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
6,889.7	6,615.2	6,700.0	6,696.8	17.9	1.8	139.94	1,498.7	4,274.1	4,636.4	4,618.4	18.00	257.584	
6,900.0	6,618.1	6,704.4	6,701.2	18.0	1.8	138.74	1,498.9	4,274.0	4,645.9	4,627.7	18.21	255.157	
6,950.0	6,630.0	6,715.7	6,712.5	18.8	1.8	131.53	1,499.3	4,273.6	4,692.7	4,673.2	19.43	241.479	
6,988.2	6,636.8	6,722.4	6,719.1	19.5	1.8	124.43	1,499.5	4,273.4	4,728.9	4,708.4	20.53	230.287	
7,000.0	6,638.5	6,724.1	6,720.9	19.7	1.8	121.90	1,499.5	4,273.4	4,740.2	4,719.3	20.88	227.009	
7,050.0	6,643.5	6,730.0	6,726.8	20.6	1.8	109.35	1,499.7	4,273.2	4,788.3	4,766.1	22.26	215.121	
7,086.6	6,644.9	6,730.0	6,726.8	21.3	1.8	98.31	1,499.7	4,273.2	4,823.8	4,800.8	23.03	209.474	
7,097.8	6,645.0	6,730.0	6,726.8	21.5	1.8	94.73	1,499.7	4,273.2	4,834.7	4,811.4	23.24	208.031	
7,100.0	6,645.0	6,730.0	6,726.8	21.6	1.8	94.73	1,499.7	4,273.2	4,836.8	4,813.5	23.28	207.745	
7,185.0	6,644.9	6,730.0	6,726.8	23.3	1.8	94.73	1,499.7	4,273.2	4,919.4	4,894.4	25.00	196.748	
7,200.0	6,644.9	6,730.0	6,726.8	23.6	1.8	94.73	1,499.7	4,273.2	4,933.9	4,908.6	25.31	194.966	
7,283.4	6,644.8	6,730.0	6,726.8	25.4	1.8	94.73	1,499.7	4,273.2	5,015.1	4,987.9	27.12	184.930	
7,300.0	6,644.7	6,730.0	6,726.8	25.8	1.8	94.73	1,499.7	4,273.2	5,031.2	5,003.7	27.48	183.098	
7,381.9	6,644.6	6,730.0	6,726.8	27.7	1.8	94.73	1,499.7	4,273.2	5,110.8	5,081.5	29.35	174.145	
7,400.0	6,644.6	6,730.0	6,726.8	28.1	1.8	94.73	1,499.7	4,273.2	5,128.5	5,098.7	29.76	172.315	
7,480.3	6,644.5	6,730.0	6,726.8	30.0	1.8	94.73	1,499.7	4,273.2	5,206.7	5,175.1	31.67	164.423	
7,500.0	6,644.5	6,730.0	6,726.8	30.5	1.8	94.73	1,499.7	4,273.2	5,225.9	5,193.8	32.13	162.631	
7,578.7	6,644.4	6,730.0	6,726.8	32.4	1.8	94.73	1,499.7	4,273.2	5,302.7	5,268.7	34.05	155.713	
7,600.0	6,644.4	6,730.0	6,726.8	32.9	1.8	94.73	1,499.7	4,273.2	5,323.5	5,288.9	34.57	153.975	
7,677.1	6,644.3	6,730.0	6,726.8	34.8	1.8	94.73	1,499.7	4,273.2	5,398.8	5,362.3	36.50	147.922	
7,700.0	6,644.2	6,730.0	6,726.8	35.4	1.8	94.73	1,499.7	4,273.2	5,421.1	5,384.0	37.07	146.250	
7,775.6	6,644.1	6,730.0	6,726.8	37.3	1.8	94.73	1,499.7	4,273.2	5,494.9	5,456.0	38.98	140.951	
7,800.0	6,644.1	6,730.0	6,726.8	38.0	1.8	94.73	1,499.7	4,273.2	5,518.8	5,479.2	39.60	139.349	
7,874.0	6,644.0	6,730.0	6,726.8	39.9	1.8	94.73	1,499.7	4,273.2	5,591.2	5,549.7	41.51	134.702	
7,900.0	6,644.0	6,730.0	6,726.8	40.5	1.8	94.73	1,499.7	4,273.2	5,616.6	5,574.4	42.18	133.169	
7,972.4	6,643.9	6,730.0	6,726.8	42.4	1.8	94.73	1,499.7	4,273.2	5,687.5	5,643.4	44.06	129.084	
8,000.0	6,643.9	6,730.0	6,726.8	43.1	1.8	94.73	1,499.7	4,273.2	5,714.5	5,669.7	44.78	127.619	
8,070.8	6,643.8	6,730.0	6,726.8	45.0	1.8	94.73	1,499.7	4,273.2	5,783.9	5,737.2	46.64	124.018	
8,100.0	6,643.7	6,730.0	6,726.8	45.8	1.8	94.73	1,499.7	4,273.2	5,812.4	5,765.0	47.40	122.619	
8,169.3	6,643.7	6,730.0	6,726.8	47.6	1.8	94.73	1,499.7	4,273.2	5,880.3	5,831.1	49.23	119.435	
8,200.0	6,643.6	6,730.0	6,726.8	48.4	1.8	94.73	1,499.7	4,273.2	5,910.4	5,860.4	50.05	118.097	
8,267.7	6,643.5	6,730.0	6,726.8	50.2	1.8	94.73	1,499.7	4,273.2	5,976.8	5,925.0	51.85	115.274	
8,300.0	6,643.5	6,730.0	6,726.8	51.1	1.8	94.73	1,499.7	4,273.2	6,008.5	5,955.8	52.71	113.995	
8,366.1	6,643.4	6,730.0	6,726.8	52.9	1.8	94.73	1,499.7	4,273.2	6,073.4	6,018.9	54.48	111.483	
8,400.0	6,643.4	6,730.0	6,726.8	53.8	1.8	94.73	1,499.7	4,273.2	6,106.6	6,051.3	55.38	110.259	
8,464.5	6,643.3	6,730.0	6,726.8	55.5	1.8	94.73	1,499.7	4,273.2	6,170.0	6,112.9	57.12	108.019	
8,500.0	6,643.2	6,730.0	6,726.8	56.5	1.8	94.73	1,499.7	4,273.2	6,204.8	6,146.8	58.07	106.846	
8,563.0	6,643.2	6,730.0	6,726.8	58.2	1.8	94.73	1,499.7	4,273.2	6,266.7	6,206.9	59.77	104.843	
8,600.0	6,643.1	6,730.0	6,726.8	59.2	1.8	94.73	1,499.7	4,273.2	6,303.1	6,242.3	60.77	103.718	
8,661.4	6,643.0	6,730.0	6,726.8	60.8	1.8	94.73	1,499.7	4,273.2	6,363.5	6,301.0	62.43	101.923	
8,700.0	6,643.0	6,730.0	6,726.8	61.9	1.8	94.73	1,499.7	4,273.2	6,401.4	6,337.9	63.48	100.842	
8,759.8	6,642.9	6,730.0	6,726.8	63.5	1.8	94.73	1,499.7	4,273.2	6,460.2	6,395.1	65.10	99.229	
8,800.0	6,642.9	6,730.0	6,726.8	64.6	1.8	94.73	1,499.7	4,273.2	6,499.8	6,433.6	66.20	98.191	
8,858.2	6,642.8	6,730.0	6,726.8	66.2	1.8	94.73	1,499.7	4,273.2	6,557.1	6,489.3	67.78	96.738	
8,900.0	6,642.7	6,730.0	6,726.8	67.3	1.8	94.73	1,499.7	4,273.2	6,598.2	6,529.3	68.92	95.739	
8,956.7	6,642.7	6,730.0	6,726.8	68.9	1.8	94.73	1,499.7	4,273.2	6,654.0	6,583.5	70.47	94.429	
9,000.0	6,642.6	6,730.0	6,726.8	70.1	1.8	94.73	1,499.7	4,273.2	6,696.6	6,625.0	71.65	93.466	
9,055.1	6,642.5	6,730.0	6,726.8	71.6	1.8	94.73	1,499.7	4,273.2	6,750.9	6,677.7	73.15	92.283	
9,100.0	6,642.5	6,730.0	6,726.8	72.8	1.8	94.73	1,499.7	4,273.2	6,795.1	6,720.7	74.38	91.354	
9,153.5	6,642.4	6,730.0	6,726.8	74.3	1.8	94.73	1,499.7	4,273.2	6,847.9	6,772.0	75.85	90.283	
9,200.0	6,642.4	6,730.0	6,726.8	75.6	1.8	94.73	1,499.7	4,273.2	6,893.7	6,816.6	77.12	89.386	
9,251.9	6,642.3	6,730.0	6,726.8	77.0	1.8	94.73	1,499.7	4,273.2	6,944.9	6,866.3	78.55	88.416	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,300.0	6,642.2	6,730.0	6,726.8	78.3	1.8	94.73	1,499.7	4,273.2	6,992.3	6,912.4	79.87	87.550	
9,350.4	6,642.2	6,730.0	6,726.8	79.7	1.8	94.73	1,499.7	4,273.2	7,041.9	6,960.7	81.25	86.669	
9,400.0	6,642.1	6,730.0	6,726.8	81.1	1.8	94.73	1,499.7	4,273.2	7,090.9	7,008.3	82.61	85.831	
9,448.8	6,642.0	6,730.0	6,726.8	82.4	1.8	94.73	1,499.7	4,273.2	7,139.0	7,055.1	83.96	85.032	
9,500.0	6,642.0	6,730.0	6,726.8	83.8	1.8	94.73	1,499.7	4,273.2	7,189.6	7,104.2	85.37	84.220	
9,547.2	6,641.9	6,730.0	6,726.8	85.1	1.8	94.73	1,499.7	4,273.2	7,236.2	7,149.5	86.67	83.494	
9,600.0	6,641.9	6,730.0	6,726.8	86.6	1.8	94.73	1,499.7	4,273.2	7,288.3	7,200.1	88.12	82.707	
9,645.6	6,641.8	6,730.0	6,726.8	87.9	1.8	94.73	1,499.7	4,273.2	7,333.3	7,243.9	89.38	82.047	
9,700.0	6,641.7	6,730.0	6,726.8	89.4	1.8	94.73	1,499.7	4,273.2	7,387.0	7,296.1	90.88	81.284	
9,744.1	6,641.7	6,730.0	6,726.8	90.6	1.8	94.73	1,499.7	4,273.2	7,430.5	7,338.4	92.10	80.683	
9,800.0	6,641.6	6,730.0	6,726.8	92.1	1.8	94.73	1,499.7	4,273.2	7,485.8	7,392.1	93.64	79.943	
9,842.5	6,641.6	6,730.0	6,726.8	93.3	1.8	94.73	1,499.7	4,273.2	7,527.7	7,432.9	94.81	79.395	
9,900.0	6,641.5	6,730.0	6,726.8	94.9	1.8	94.73	1,499.7	4,273.2	7,584.6	7,488.2	96.40	78.676	
9,940.9	6,641.4	6,730.0	6,726.8	96.0	1.8	94.73	1,499.7	4,273.2	7,625.0	7,527.5	97.53	78.178	
10,000.0	6,641.4	6,730.0	6,726.8	97.7	1.8	94.73	1,499.7	4,273.2	7,683.4	7,584.2	99.17	77.479	
10,039.3	6,641.3	6,730.0	6,726.8	98.8	1.8	94.73	1,499.7	4,273.2	7,722.3	7,622.0	100.26	77.026	
10,100.0	6,641.2	6,730.0	6,726.8	100.4	1.8	94.73	1,499.7	4,273.2	7,782.2	7,680.3	101.93	76.346	
10,137.8	6,641.2	6,730.0	6,726.8	101.5	1.8	94.73	1,499.7	4,273.2	7,819.6	7,716.6	102.98	75.933	
10,200.0	6,641.1	6,730.0	6,726.8	103.2	1.8	94.73	1,499.7	4,273.2	7,881.1	7,776.4	104.70	75.271	
10,236.2	6,641.1	6,730.0	6,726.8	104.2	1.8	94.73	1,499.7	4,273.2	7,916.9	7,811.2	105.71	74.896	
10,300.0	6,641.0	6,730.0	6,726.8	106.0	1.8	94.73	1,499.7	4,273.2	7,980.1	7,872.6	107.47	74.251	
10,334.6	6,640.9	6,730.0	6,726.8	107.0	1.8	94.73	1,499.7	4,273.2	8,014.3	7,905.9	108.43	73.910	
10,400.0	6,640.9	6,730.0	6,726.8	108.8	1.8	94.73	1,499.7	4,273.2	8,079.0	7,968.8	110.25	73.282	
10,433.0	6,640.8	6,730.0	6,726.8	109.7	1.8	94.73	1,499.7	4,273.2	8,111.7	8,000.5	111.16	72.971	
10,500.0	6,640.7	6,730.0	6,726.8	111.6	1.8	94.73	1,499.7	4,273.2	8,178.0	8,065.0	113.02	72.359	
10,531.5	6,640.7	6,730.0	6,726.8	112.4	1.8	94.73	1,499.7	4,273.2	8,209.1	8,095.2	113.89	72.077	
10,600.0	6,640.6	6,730.0	6,726.8	114.3	1.8	94.73	1,499.7	4,273.2	8,277.0	8,161.2	115.79	71.480	
10,629.9	6,640.6	6,730.0	6,726.8	115.2	1.8	94.73	1,499.7	4,273.2	8,306.6	8,189.9	116.63	71.225	
10,700.0	6,640.5	6,730.0	6,726.8	117.1	1.8	94.73	1,499.7	4,273.2	8,376.0	8,257.4	118.57	70.641	
10,728.3	6,640.4	6,730.0	6,726.8	117.9	1.8	94.73	1,499.7	4,273.2	8,404.0	8,284.7	119.36	70.410	
10,800.0	6,640.4	6,730.0	6,726.8	119.9	1.8	94.73	1,499.7	4,273.2	8,475.0	8,353.7	121.35	69.840	
10,826.7	6,640.3	6,730.0	6,726.8	120.7	1.8	94.73	1,499.7	4,273.2	8,501.5	8,379.4	122.09	69.632	
10,900.0	6,640.2	6,730.0	6,726.8	122.7	1.8	94.73	1,499.7	4,273.2	8,574.1	8,450.0	124.13	69.075	
10,925.2	6,640.2	6,730.0	6,726.8	123.4	1.8	94.73	1,499.7	4,273.2	8,599.0	8,474.2	124.83	68.887	
11,000.0	6,640.1	6,730.0	6,726.8	125.5	1.8	94.73	1,499.7	4,273.2	8,673.2	8,546.3	126.91	68.343	
11,023.6	6,640.1	6,730.0	6,726.8	126.1	1.8	94.73	1,499.7	4,273.2	8,696.6	8,569.0	127.56	68.174	
11,100.0	6,640.0	6,730.0	6,726.8	128.3	1.8	94.73	1,499.7	4,273.2	8,772.3	8,642.6	129.69	67.642	
11,122.0	6,639.9	6,730.0	6,726.8	128.9	1.8	94.73	1,499.7	4,273.2	8,794.1	8,663.8	130.30	67.491	
11,200.0	6,639.8	6,730.0	6,726.8	131.1	1.8	94.73	1,499.7	4,273.2	8,871.4	8,738.9	132.47	66.970	
11,220.4	6,639.8	6,730.0	6,726.8	131.6	1.8	94.73	1,499.7	4,273.2	8,891.7	8,758.6	133.04	66.835	
11,300.0	6,639.7	6,730.0	6,726.8	133.9	1.8	94.73	1,499.7	4,273.2	8,970.6	8,835.3	135.25	66.325	
11,318.9	6,639.7	6,730.0	6,726.8	134.4	1.8	94.73	1,499.7	4,273.2	8,989.3	8,853.5	135.78	66.206	
11,400.0	6,639.6	6,730.0	6,726.8	136.7	1.8	94.73	1,499.7	4,273.2	9,069.7	8,931.7	138.03	65.706	
11,417.3	6,639.6	6,730.0	6,726.8	137.1	1.8	94.73	1,499.7	4,273.2	9,086.9	8,948.4	138.52	65.601	
11,500.0	6,639.5	6,730.0	6,726.8	139.4	1.8	94.73	1,499.7	4,273.2	9,168.9	9,028.1	140.82	65.111	
11,515.7	6,639.5	6,730.0	6,726.8	139.9	1.8	94.73	1,499.7	4,273.2	9,184.5	9,043.2	141.26	65.020	
11,600.0	6,639.3	6,730.0	6,726.8	142.2	1.8	94.73	1,499.7	4,273.2	9,268.1	9,124.5	143.60	64.540	
11,614.1	6,639.3	6,730.0	6,726.8	142.6	1.8	94.73	1,499.7	4,273.2	9,282.1	9,138.1	144.00	64.460	
11,700.0	6,639.2	6,730.0	6,726.8	145.0	1.8	94.73	1,499.7	4,273.2	9,367.3	9,220.9	146.39	63.989	
11,712.6	6,639.2	6,730.0	6,726.8	145.4	1.8	94.73	1,499.7	4,273.2	9,379.8	9,233.1	146.74	63.922	
11,800.0	6,639.1	6,730.0	6,726.8	147.8	1.8	94.73	1,499.7	4,273.2	9,466.6	9,317.4	149.17	63.460	
11,811.0	6,639.1	6,730.0	6,726.8	148.1	1.8	94.73	1,499.7	4,273.2	9,477.5	9,328.0	149.48	63.402	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
11,900.0	6,639.0	6,730.0	6,726.8	150.6	1.8	94.73	1,499.7	4,273.2	9,565.8	9,413.8	151.96	62.949	
11,909.4	6,639.0	6,730.0	6,726.8	150.9	1.8	94.73	1,499.7	4,273.2	9,575.2	9,422.9	152.22	62.902	
12,000.0	6,638.8	6,730.0	6,726.8	153.4	1.8	94.73	1,499.7	4,273.2	9,665.1	9,510.3	154.75	62.457	
12,007.8	6,638.8	6,730.0	6,726.8	153.6	1.8	94.73	1,499.7	4,273.2	9,672.9	9,517.9	154.97	62.419	
12,100.0	6,638.7	6,730.0	6,726.8	156.2	1.8	94.73	1,499.7	4,273.2	9,764.4	9,606.8	157.54	61.982	
12,106.3	6,638.7	6,730.0	6,726.8	156.4	1.8	94.73	1,499.7	4,273.2	9,770.6	9,612.9	157.71	61.953	
12,200.0	6,638.6	6,730.0	6,726.8	159.0	1.8	94.73	1,499.7	4,273.2	9,863.6	9,703.3	160.32	61.523	
12,204.7	6,638.6	6,730.0	6,726.8	159.1	1.8	94.73	1,499.7	4,273.2	9,868.3	9,707.9	160.45	61.502	
12,300.0	6,638.5	6,730.0	6,726.8	161.8	1.8	94.73	1,499.7	4,273.2	9,963.0	9,799.8	163.11	61.080	
12,303.1	6,638.5	6,730.0	6,726.8	161.9	1.8	94.73	1,499.7	4,273.2	9,966.1	9,802.9	163.20	61.067 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	87.18	204.7	4,151.2	4,156.3				
98.4	98.4	80.4	80.4	0.1	0.0	87.18	204.7	4,151.2	4,156.3	4,156.2	0.10	N/A	
100.0	100.0	82.0	82.0	0.1	0.0	87.18	204.7	4,151.2	4,156.3	4,156.2	0.10	N/A	
107.2	107.2	89.2	89.2	0.1	0.0	87.18	204.7	4,151.2	4,156.3	4,156.2	0.11	N/A	
196.8	196.8	178.1	178.1	0.3	0.1	87.18	204.5	4,151.2	4,156.3	4,155.9	0.39	N/A	
200.0	200.0	181.3	181.3	0.3	0.1	87.18	204.5	4,151.2	4,156.3	4,155.9	0.40	N/A	
295.3	295.3	275.6	275.6	0.5	0.2	87.18	204.3	4,151.3	4,156.3	4,155.6	0.74	5,649.184	
300.0	300.0	280.3	280.3	0.5	0.2	87.18	204.3	4,151.3	4,156.3	4,155.5	0.75	5,522.980	
393.7	393.7	373.9	373.9	0.8	0.3	87.18	204.1	4,151.3	4,156.3	4,155.3	1.05	3,958.847	
400.0	400.0	380.2	380.2	0.8	0.3	87.18	204.1	4,151.3	4,156.3	4,155.3	1.07	3,887.282	
492.1	492.1	471.7	471.7	1.0	0.4	87.19	203.9	4,151.4	4,156.4	4,155.1	1.34	3,103.279	
500.0	500.0	479.5	479.5	1.0	0.4	87.19	203.9	4,151.4	4,156.4	4,155.0	1.36	3,051.348	
590.5	590.5	569.8	569.8	1.2	0.4	87.19	203.6	4,151.5	4,156.5	4,154.8	1.62	2,568.131	
600.0	600.0	579.2	579.2	1.2	0.4	87.19	203.5	4,151.5	4,156.5	4,154.8	1.65	2,526.659	
689.0	689.0	671.2	671.2	1.4	0.5	87.20	203.2	4,151.5	4,156.5	4,154.6	1.89	2,196.237	
700.0	700.0	682.7	682.7	1.4	0.5	87.20	203.2	4,151.5	4,156.5	4,154.6	1.92	2,161.326	
787.4	787.4	772.0	772.0	1.6	0.5	87.20	202.7	4,151.5	4,156.5	4,154.3	2.16	1,921.786	
800.0	800.0	784.8	784.8	1.7	0.6	87.21	202.6	4,151.5	4,156.4	4,154.3	2.20	1,891.638	
885.8	885.8	878.9	878.9	1.9	0.6	87.21	202.1	4,151.4	4,156.3	4,153.9	2.43	1,708.175	
900.0	900.0	894.7	894.7	1.9	0.6	87.21	202.0	4,151.3	4,156.3	4,153.8	2.47	1,681.216	
984.2	984.2	978.0	978.0	2.1	0.6	87.22	201.3	4,151.1	4,156.0	4,153.3	2.70	1,540.114	
1,000.0	1,000.0	993.5	993.4	2.1	0.7	87.23	201.2	4,151.1	4,156.0	4,153.2	2.74	1,516.375	
1,082.7	1,082.7	1,077.2	1,077.2	2.3	0.7	87.23	200.5	4,150.9	4,155.7	4,152.8	2.96	1,402.887	
1,100.0	1,100.0	1,094.9	1,094.8	2.3	0.7	87.24	200.3	4,150.8	4,155.7	4,152.7	3.01	1,381.245	
1,181.1	1,181.1	1,169.3	1,169.3	2.5	0.7	87.25	199.7	4,150.7	4,155.5	4,152.3	3.22	1,290.236	
1,200.0	1,200.0	1,186.6	1,186.5	2.6	0.7	87.25	199.5	4,150.7	4,155.5	4,152.2	3.27	1,270.768	
1,258.6	1,258.6	1,240.6	1,240.6	2.7	0.8	87.25	199.1	4,150.7	4,155.4	4,152.0	3.42	1,214.392	
1,279.5	1,279.5	1,260.0	1,260.0	2.7	0.8	87.26	199.0	4,150.7	4,155.4	4,152.0	3.48	1,195.457	
1,300.0	1,300.0	1,279.0	1,278.9	2.8	0.8	87.26	198.8	4,150.7	4,155.5	4,151.9	3.53	1,177.527	
1,377.9	1,377.9	1,348.7	1,348.7	3.0	0.8	46.09	198.4	4,150.8	4,154.9	4,151.2	3.68	1,129.044	
1,400.0	1,400.0	1,368.2	1,368.2	3.0	0.8	46.11	198.3	4,150.9	4,154.4	4,150.7	3.73	1,112.528	
1,476.4	1,476.3	1,439.1	1,439.0	3.2	0.8	46.18	198.1	4,151.2	4,152.2	4,148.3	3.92	1,058.415	
1,500.0	1,499.8	1,461.9	1,461.9	3.2	0.8	46.21	198.0	4,151.3	4,151.2	4,147.3	3.98	1,042.488	
1,574.8	1,574.4	1,547.7	1,547.7	3.4	0.9	46.34	197.8	4,151.7	4,147.3	4,143.1	4.17	994.529	
1,600.0	1,599.5	1,581.6	1,581.6	3.5	0.9	46.40	197.7	4,151.7	4,145.6	4,141.3	4.23	979.415	
1,673.2	1,672.2	1,670.7	1,670.7	3.6	0.9	46.60	197.4	4,151.5	4,139.5	4,135.0	4.43	934.883	
1,700.0	1,698.7	1,702.1	1,702.1	3.7	0.9	46.68	197.3	4,151.4	4,136.9	4,132.4	4.50	919.223	
1,771.6	1,769.5	1,774.9	1,774.9	3.9	0.9	46.91	196.9	4,151.0	4,129.0	4,124.3	4.70	878.631	
1,800.0	1,797.5	1,803.6	1,803.6	4.0	1.0	47.01	196.7	4,150.9	4,125.5	4,120.8	4.78	863.438	
1,870.1	1,866.3	1,873.8	1,873.7	4.2	1.0	47.29	196.2	4,150.5	4,116.2	4,111.2	4.99	825.684	
1,899.9	1,895.6	1,903.5	1,903.5	4.3	1.0	47.42	196.0	4,150.3	4,111.8	4,106.8	5.07	810.479	
1,968.5	1,962.6	1,970.6	1,970.5	4.5	1.0	47.58	195.4	4,149.9	4,101.7	4,096.4	5.28	776.611	
2,000.0	1,993.4	2,001.5	2,001.4	4.6	1.0	47.65	195.0	4,149.7	4,097.0	4,091.6	5.38	761.933	
2,066.9	2,058.9	2,070.1	2,070.1	4.8	1.1	47.81	194.1	4,149.3	4,087.1	4,081.5	5.59	731.000	
2,100.0	2,091.3	2,103.8	2,103.7	4.9	1.1	47.89	193.6	4,149.0	4,082.2	4,076.5	5.70	716.639	
2,165.3	2,155.2	2,166.1	2,166.0	5.2	1.1	48.04	192.6	4,148.6	4,072.5	4,066.6	5.91	689.054	
2,200.0	2,189.1	2,200.0	2,199.9	5.3	1.1	48.12	192.1	4,148.4	4,067.4	4,061.3	6.03	675.030	
2,263.8	2,251.5	2,260.3	2,260.2	5.5	1.1	48.26	191.5	4,148.0	4,058.0	4,051.8	6.24	650.613	
2,300.0	2,286.9	2,295.1	2,295.1	5.7	1.1	48.34	191.4	4,147.8	4,052.7	4,046.3	6.36	637.409	
2,362.2	2,347.7	2,365.5	2,365.4	5.9	1.1	48.49	191.7	4,147.2	4,043.5	4,036.9	6.58	614.937	
2,400.0	2,384.7	2,408.1	2,408.1	6.0	1.1	48.58	192.3	4,146.8	4,037.9	4,031.2	6.71	601.911	
2,460.6	2,444.0	2,471.9	2,471.8	6.3	1.1	48.71	193.3	4,146.1	4,028.8	4,021.9	6.93	581.647	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	2,482.5	2,512.7	2,512.6	6.4	1.1	48.79	194.2	4,145.6	4,022.9	4,015.8	7.07	569.155	
2,559.0	2,540.3	2,572.0	2,571.9	6.7	1.1	48.90	195.5	4,144.9	4,014.0	4,006.7	7.28	551.162	
2,600.0	2,580.3	2,612.1	2,611.9	6.8	1.2	48.98	196.4	4,144.4	4,007.8	4,000.4	7.43	539.306	
2,657.5	2,636.5	2,665.3	2,665.1	7.1	1.2	49.09	197.6	4,143.7	3,999.2	3,991.5	7.64	523.344	
2,700.0	2,678.1	2,704.6	2,704.4	7.2	1.2	49.16	198.4	4,143.3	3,992.8	3,985.0	7.80	512.077	
2,755.9	2,732.8	2,755.8	2,755.7	7.5	1.2	49.27	199.3	4,142.7	3,984.6	3,976.6	8.00	497.817	
2,800.0	2,776.0	2,796.2	2,796.1	7.7	1.2	49.35	199.9	4,142.3	3,978.1	3,969.9	8.17	487.064	
2,854.3	2,829.1	2,840.4	2,840.2	7.9	1.2	49.44	200.5	4,141.9	3,970.2	3,961.8	8.37	474.406	
2,900.0	2,873.8	2,877.1	2,876.9	8.1	1.2	49.52	200.9	4,141.7	3,963.6	3,955.1	8.54	464.227	
2,952.7	2,925.4	2,917.1	2,916.9	8.3	1.2	49.61	201.1	4,141.5	3,956.2	3,947.5	8.73	453.065	
3,000.0	2,971.6	2,950.4	2,950.2	8.5	1.2	49.69	201.3	4,141.5	3,949.7	3,940.8	8.90	443.652	
3,051.2	3,021.6	3,000.0	2,999.8	8.7	1.2	49.80	201.6	4,141.7	3,942.9	3,933.8	9.09	433.677	
3,100.0	3,069.4	3,020.0	3,019.8	8.9	1.2	49.84	201.6	4,141.8	3,936.6	3,927.3	9.27	424.646	
3,149.6	3,117.9	3,053.4	3,053.2	9.1	1.2	49.92	201.8	4,142.1	3,930.3	3,920.9	9.46	415.676	
3,200.0	3,167.2	3,100.0	3,099.8	9.3	1.2	50.02	202.1	4,142.8	3,924.2	3,914.6	9.64	406.963	
3,248.0	3,214.2	3,124.6	3,124.4	9.5	1.2	50.08	202.4	4,143.3	3,918.5	3,908.7	9.82	398.976	
3,300.0	3,265.0	3,168.3	3,168.0	9.8	1.2	50.18	202.8	4,144.1	3,912.5	3,902.5	10.02	390.524	
3,346.4	3,310.5	3,200.0	3,199.8	10.0	1.2	50.24	203.1	4,144.8	3,907.3	3,897.1	10.19	383.283	
3,400.0	3,362.9	3,250.8	3,250.6	10.2	1.2	50.35	203.8	4,146.0	3,901.3	3,890.9	10.40	375.075	
3,444.9	3,406.7	3,287.6	3,287.3	10.4	1.2	50.43	204.3	4,146.9	3,896.4	3,885.8	10.57	368.479	
3,473.0	3,434.2	3,313.2	3,312.9	10.5	1.2	50.49	204.7	4,147.6	3,893.4	3,882.7	10.68	364.427	
3,500.0	3,460.7	3,340.7	3,340.4	10.6	1.2	50.50	205.1	4,148.3	3,890.6	3,879.8	10.78	361.061	
3,543.3	3,503.2	3,385.0	3,384.7	10.7	1.2	50.52	205.7	4,149.5	3,886.4	3,875.5	10.90	356.483	
3,600.0	3,559.0	3,435.7	3,435.3	10.9	1.2	50.54	206.5	4,150.8	3,881.5	3,870.5	11.07	350.761	
3,641.7	3,600.2	3,471.2	3,470.8	11.0	1.2	50.55	207.1	4,151.9	3,878.5	3,867.3	11.18	347.024	
3,700.0	3,657.9	3,524.2	3,523.8	11.2	1.2	50.56	208.0	4,153.4	3,875.0	3,863.7	11.33	341.965	
3,740.1	3,697.8	3,563.9	3,563.5	11.3	1.2	50.58	208.6	4,154.7	3,873.1	3,861.7	11.43	338.875	
3,800.0	3,757.3	3,626.7	3,626.2	11.4	1.2	50.61	209.6	4,156.6	3,870.9	3,859.3	11.58	334.394	
3,838.6	3,795.7	3,670.7	3,670.2	11.5	1.3	50.62	210.3	4,157.8	3,869.8	3,858.1	11.66	331.859	
3,900.0	3,857.0	3,734.1	3,733.6	11.7	1.3	50.64	211.3	4,159.6	3,868.7	3,856.9	11.80	327.987	
3,937.0	3,893.9	3,769.4	3,768.9	11.7	1.3	50.65	211.8	4,160.6	3,868.4	3,856.6	11.87	326.016	
3,947.3	3,904.2	3,779.2	3,778.7	11.7	1.3	50.66	211.9	4,160.9	3,868.4	3,856.5	11.89	325.476	
4,000.0	3,956.9	3,849.0	3,848.5	11.8	1.3	50.68	212.5	4,162.7	3,868.7	3,856.7	11.99	322.652	
4,035.4	3,992.3	3,905.6	3,905.1	11.9	1.3	50.69	212.7	4,163.9	3,869.0	3,856.9	12.05	320.962	
4,072.9	4,029.8	3,969.6	3,969.0	11.9	1.3	91.89	212.6	4,164.8	3,869.4	3,857.7	11.71	330.528	
4,100.0	4,056.9	4,012.9	4,012.4	12.0	1.3	91.90	212.3	4,165.2	3,869.6	3,857.8	11.76	329.072	
4,133.8	4,090.7	4,060.4	4,059.8	12.0	1.3	91.90	211.8	4,165.4	3,869.8	3,857.9	11.83	327.068	
4,200.0	4,156.9	4,144.4	4,143.8	12.1	1.3	91.92	211.0	4,165.4	3,869.8	3,857.8	11.97	323.236	
4,232.3	4,189.2	4,182.3	4,181.7	12.2	1.3	91.92	210.7	4,165.4	3,869.7	3,857.7	12.04	321.389	
4,300.0	4,256.9	4,275.1	4,274.5	12.3	1.4	91.93	210.3	4,164.8	3,869.4	3,857.2	12.18	317.570	
4,330.7	4,287.6	4,312.7	4,312.1	12.4	1.4	91.93	210.2	4,164.4	3,869.0	3,856.8	12.25	315.872	
4,400.0	4,356.9	4,378.9	4,378.3	12.5	1.4	91.93	209.9	4,163.7	3,868.3	3,855.9	12.39	312.185	
4,429.1	4,386.0	4,411.8	4,411.2	12.5	1.4	91.93	209.7	4,163.4	3,868.0	3,855.6	12.45	310.620	
4,500.0	4,456.9	4,517.4	4,516.8	12.6	1.4	91.96	208.1	4,161.6	3,866.8	3,854.2	12.61	306.664	
4,527.5	4,484.4	4,543.7	4,543.0	12.7	1.4	91.97	207.5	4,161.0	3,866.3	3,853.6	12.67	305.207	
4,600.0	4,556.9	4,612.2	4,611.6	12.8	1.4	92.00	205.6	4,159.6	3,864.9	3,852.0	12.82	301.454	
4,626.0	4,582.9	4,635.9	4,635.2	12.9	1.4	92.01	205.0	4,159.2	3,864.4	3,851.5	12.88	300.137	
4,700.0	4,656.9	4,700.0	4,699.3	13.0	1.5	92.02	203.9	4,158.0	3,863.1	3,850.1	13.03	296.462	
4,724.4	4,681.3	4,719.5	4,718.8	13.0	1.5	92.03	203.6	4,157.7	3,862.7	3,849.6	13.08	295.283	
4,800.0	4,756.9	4,772.2	4,771.5	13.1	1.5	92.03	203.2	4,157.1	3,861.9	3,848.6	13.24	291.741	
4,822.8	4,779.7	4,800.0	4,799.3	13.2	1.5	92.04	203.1	4,156.9	3,861.7	3,848.4	13.29	290.638	
4,892.7	4,849.5	4,832.3	4,831.5	13.3	1.5	92.04	203.0	4,156.8	3,861.4	3,848.0	13.43	287.608	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
4,900.0	4,856.9	4,836.7	4,836.0	13.3	1.5	92.04	203.0	4,156.8	3,861.4	3,848.0	13.44	287.293	
4,921.2	4,878.1	4,849.8	4,849.0	13.4	1.5	92.04	202.9	4,156.8	3,861.5	3,848.0	13.48	286.383	
5,000.0	4,956.9	4,900.0	4,899.3	13.5	1.5	92.05	202.4	4,157.2	3,862.0	3,848.4	13.64	283.085	
5,019.7	4,976.6	4,939.9	4,939.1	13.5	1.5	92.06	201.8	4,157.5	3,862.2	3,848.5	13.69	282.124	
5,100.0	5,056.9	5,052.2	5,051.5	13.7	1.5	92.09	199.6	4,157.2	3,862.0	3,848.1	13.87	278.381	
5,118.1	5,075.0	5,069.2	5,068.5	13.7	1.5	92.09	199.3	4,157.1	3,861.9	3,848.0	13.91	277.577	
5,193.0	5,149.9	5,132.6	5,131.9	13.8	1.5	92.11	198.0	4,157.0	3,861.8	3,847.7	14.08	274.345	
5,200.0	5,156.9	5,138.1	5,137.3	13.8	1.5	92.11	197.8	4,157.0	3,861.8	3,847.7	14.09	274.049	
5,216.5	5,173.4	5,150.9	5,150.1	13.9	1.5	92.12	197.6	4,157.0	3,861.8	3,847.7	14.13	273.354	
5,300.0	5,256.9	5,227.1	5,226.3	14.0	1.6	92.14	195.8	4,157.2	3,862.1	3,847.8	14.31	269.854	
5,314.9	5,271.8	5,247.2	5,246.4	14.1	1.6	92.15	195.3	4,157.2	3,862.1	3,847.8	14.35	269.202	
5,400.0	5,356.9	5,358.6	5,357.7	14.2	1.6	92.19	192.7	4,156.9	3,862.0	3,847.5	14.54	265.553	
5,413.4	5,370.3	5,375.7	5,374.9	14.2	1.6	92.20	192.4	4,156.8	3,861.9	3,847.3	14.57	264.985	
5,500.0	5,456.9	5,453.9	5,453.1	14.4	1.6	92.21	191.3	4,156.3	3,861.4	3,846.7	14.77	261.498	
5,511.8	5,468.7	5,463.3	5,462.5	14.4	1.6	92.21	191.2	4,156.3	3,861.4	3,846.6	14.79	261.035	
5,600.0	5,556.9	5,559.0	5,558.2	14.6	1.7	92.23	190.2	4,156.0	3,861.2	3,846.2	14.99	257.517	
5,610.2	5,567.1	5,573.3	5,572.5	14.6	1.7	92.23	190.0	4,155.9	3,861.1	3,846.1	15.02	257.097	
5,700.0	5,656.9	5,654.6	5,653.7	14.7	1.7	92.25	188.7	4,155.4	3,860.6	3,845.4	15.22	253.656	
5,708.6	5,665.5	5,661.2	5,660.4	14.8	1.7	92.25	188.6	4,155.3	3,860.5	3,845.3	15.24	253.335	
5,770.5	5,727.4	5,710.3	5,709.4	14.9	1.7	92.26	188.0	4,155.2	3,860.5	3,845.1	15.38	251.065 CC	
5,800.0	5,756.9	5,736.2	5,735.3	14.9	1.7	92.26	187.8	4,155.2	3,860.5	3,845.0	15.44	250.001	
5,807.1	5,764.0	5,742.4	5,741.6	14.9	1.7	92.27	187.7	4,155.3	3,860.5	3,845.0	15.46	249.746 ES	
5,900.0	5,856.9	5,825.6	5,824.7	15.1	1.7	92.27	187.3	4,155.4	3,860.7	3,845.0	15.67	246.447	
5,905.5	5,862.4	5,830.7	5,829.8	15.1	1.7	92.27	187.3	4,155.5	3,860.7	3,845.0	15.68	246.253	
5,971.9	5,928.8	5,892.5	5,891.6	15.3	1.7	92.28	186.9	4,155.7	3,861.0	3,845.2	15.83	243.941	
6,000.0	5,956.9	5,933.1	5,932.3	15.3	1.7	-177.72	186.6	4,155.9	3,861.7	3,845.7	15.97	241.784	
6,003.9	5,960.8	5,939.6	5,938.8	15.3	1.7	-177.72	186.6	4,155.9	3,861.8	3,845.9	15.98	241.691	
6,050.0	6,006.7	6,000.0	5,999.1	15.4	1.8	-177.70	186.0	4,155.7	3,865.3	3,849.2	16.08	240.435	
6,100.0	6,056.2	6,043.6	6,042.7	15.4	1.8	-177.67	185.5	4,155.6	3,872.3	3,856.1	16.21	238.948	
6,102.3	6,058.5	6,045.3	6,044.4	15.4	1.8	-177.67	185.5	4,155.6	3,872.7	3,856.5	16.21	238.883	
6,150.0	6,105.1	6,079.6	6,078.7	15.4	1.8	-177.63	185.1	4,155.6	3,882.9	3,866.6	16.34	237.680	
6,200.0	6,153.0	6,117.9	6,117.1	15.5	1.8	-177.58	184.5	4,155.7	3,897.0	3,880.6	16.45	236.848	
6,200.8	6,153.8	6,118.6	6,117.7	15.5	1.8	-177.58	184.5	4,155.7	3,897.3	3,880.8	16.46	236.839	
6,250.0	6,199.9	6,159.4	6,158.5	15.5	1.8	-177.52	183.9	4,155.9	3,914.6	3,898.0	16.55	236.594	
6,299.2	6,244.8	6,200.0	6,199.1	15.5	1.8	-177.44	183.3	4,156.1	3,935.0	3,918.4	16.60	237.034	
6,300.0	6,245.5	6,200.0	6,199.1	15.5	1.8	-177.44	183.3	4,156.1	3,935.4	3,918.8	16.60	237.054	
6,350.0	6,289.6	6,244.8	6,243.9	15.5	1.8	-177.35	182.6	4,156.4	3,959.4	3,942.7	16.62	238.239	
6,397.6	6,329.9	6,286.3	6,285.4	15.4	1.8	-177.24	181.9	4,156.7	3,984.9	3,968.3	16.60	240.085	
6,400.0	6,331.8	6,288.3	6,287.4	15.4	1.8	-177.23	181.9	4,156.7	3,986.3	3,969.7	16.60	240.195	
6,450.0	6,372.2	6,327.0	6,326.1	15.4	1.8	-177.10	181.3	4,156.9	4,016.1	3,999.6	16.53	242.963	
6,496.0	6,407.4	6,359.8	6,358.9	15.4	1.9	-176.94	180.7	4,157.1	4,046.0	4,029.5	16.43	246.200	
6,500.0	6,410.3	6,362.5	6,361.6	15.4	1.9	-176.93	180.7	4,157.2	4,048.6	4,032.2	16.42	246.508	
6,550.0	6,446.1	6,395.8	6,394.9	15.4	1.9	-176.72	180.1	4,157.4	4,083.8	4,067.5	16.28	250.773	
6,594.5	6,475.9	6,427.3	6,426.4	15.4	1.9	-176.50	179.5	4,157.6	4,117.0	4,100.9	16.14	255.020	
6,600.0	6,479.4	6,431.2	6,430.3	15.4	1.9	-176.47	179.5	4,157.7	4,121.3	4,105.2	16.13	255.580	
6,650.0	6,510.0	6,464.4	6,463.4	15.5	1.9	-176.16	178.9	4,157.9	4,161.0	4,145.1	15.95	260.870	
6,692.9	6,534.0	6,490.4	6,489.5	15.7	1.9	-175.83	178.5	4,158.0	4,196.7	4,180.9	15.80	265.655	
6,700.0	6,537.8	6,494.5	6,493.5	15.7	1.9	-175.77	178.4	4,158.0	4,202.7	4,187.0	15.77	266.463	
6,750.0	6,562.6	6,500.0	6,499.1	16.2	1.9	-175.22	178.3	4,158.1	4,246.3	4,230.7	15.58	272.579	
6,791.3	6,580.8	6,500.0	6,499.1	16.6	1.9	-174.60	178.3	4,158.1	4,283.6	4,268.2	15.44	277.346	
6,800.0	6,584.3	6,500.0	6,499.1	16.7	1.9	-174.45	178.3	4,158.1	4,291.6	4,276.2	15.42	278.353	
6,850.0	6,602.9	6,500.0	6,499.1	17.3	1.9	-173.33	178.3	4,158.1	4,338.3	4,323.0	15.34	282.898	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
6,889.7	6,615.2	6,500.0	6,499.1	17.9	1.9	-172.00	178.3	4,158.1	4,376.3	4,360.9	15.37	284.784	
6,900.0	6,618.1	6,500.0	6,499.1	18.0	1.9	-171.57	178.3	4,158.1	4,386.2	4,370.8	15.39	284.929	
6,950.0	6,630.0	6,500.0	6,499.1	18.8	1.9	-168.44	178.3	4,158.1	4,435.0	4,419.2	15.74	281.770	
6,988.2	6,636.8	6,500.0	6,499.1	19.5	1.9	-163.80	178.3	4,158.1	4,472.7	4,456.2	16.47	271.566	
7,000.0	6,638.5	6,500.0	6,499.1	19.7	1.9	-161.50	178.3	4,158.1	4,484.4	4,467.5	16.87	265.810	
7,050.0	6,643.5	6,500.0	6,499.1	20.6	1.9	-136.46	178.3	4,158.1	4,534.2	4,513.1	21.14	214.526	
7,086.6	6,644.9	6,500.0	6,499.1	21.3	1.9	-69.05	178.3	4,158.1	4,570.8	4,548.1	22.67	201.583	
7,097.8	6,645.0	6,500.0	6,499.1	21.5	1.9	-50.47	178.3	4,158.1	4,582.0	4,560.8	21.27	215.403	
7,100.0	6,645.0	6,500.0	6,499.1	21.6	1.9	-50.47	178.3	4,158.1	4,584.2	4,562.9	21.30	215.173	
7,185.0	6,644.9	6,500.0	6,499.1	23.3	1.9	-50.47	178.3	4,158.1	4,669.1	4,646.5	22.65	206.137	
7,200.0	6,644.9	6,500.0	6,499.1	23.6	1.9	-50.47	178.3	4,158.1	4,684.1	4,661.2	22.89	204.656	
7,283.4	6,644.8	6,500.0	6,499.1	25.4	1.9	-50.47	178.3	4,158.1	4,767.5	4,743.2	24.31	196.120	
7,300.0	6,644.7	6,500.0	6,499.1	25.8	1.9	-50.47	178.3	4,158.1	4,784.0	4,759.4	24.59	194.545	
7,381.9	6,644.6	6,500.0	6,499.1	27.7	1.9	-50.47	178.3	4,158.1	4,865.8	4,839.7	26.06	186.712	
7,400.0	6,644.6	6,500.0	6,499.1	28.1	1.9	-50.47	178.3	4,158.1	4,883.9	4,857.5	26.39	185.097	
7,480.3	6,644.5	6,500.0	6,499.1	30.0	1.9	-50.47	178.3	4,158.1	4,964.1	4,936.2	27.88	178.026	
7,500.0	6,644.5	6,500.0	6,499.1	30.5	1.9	-50.47	178.3	4,158.1	4,983.8	4,955.6	28.25	176.407	
7,578.7	6,644.4	6,500.0	6,499.1	32.4	1.9	-50.47	178.3	4,158.1	5,062.5	5,032.7	29.76	170.082	
7,600.0	6,644.4	6,500.0	6,499.1	32.9	1.9	-50.47	178.3	4,158.1	5,083.7	5,053.6	30.17	168.483	
7,677.1	6,644.3	6,500.0	6,499.1	34.8	1.9	-50.47	178.3	4,158.1	5,160.8	5,129.1	31.69	162.853	
7,700.0	6,644.2	6,500.0	6,499.1	35.4	1.9	-50.47	178.3	4,158.1	5,183.6	5,151.5	32.14	161.288	
7,775.6	6,644.1	6,500.0	6,499.1	37.3	1.9	-50.47	178.3	4,158.1	5,259.2	5,225.5	33.65	156.284	
7,800.0	6,644.1	6,500.0	6,499.1	38.0	1.9	-50.47	178.3	4,158.1	5,283.6	5,249.4	34.14	154.762	
7,874.0	6,644.0	6,500.0	6,499.1	39.9	1.9	-50.47	178.3	4,158.1	5,357.5	5,321.9	35.64	150.316	
7,900.0	6,644.0	6,500.0	6,499.1	40.5	1.9	-50.47	178.3	4,158.1	5,383.5	5,347.3	36.17	148.842	
7,972.4	6,643.9	6,500.0	6,499.1	42.4	1.9	-50.47	178.3	4,158.1	5,455.9	5,418.2	37.66	144.887	
8,000.0	6,643.9	6,500.0	6,499.1	43.1	1.9	-50.47	178.3	4,158.1	5,483.4	5,445.2	38.22	143.463	
8,070.8	6,643.8	6,500.0	6,499.1	45.0	1.9	-50.47	178.3	4,158.1	5,554.2	5,514.5	39.69	139.940	
8,100.0	6,643.7	6,500.0	6,499.1	45.8	1.9	-50.47	178.3	4,158.1	5,583.3	5,543.0	40.29	138.566	
8,169.3	6,643.7	6,500.0	6,499.1	47.6	1.9	-50.47	178.3	4,158.1	5,652.6	5,610.8	41.74	135.422	
8,200.0	6,643.6	6,500.0	6,499.1	48.4	1.9	-50.47	178.3	4,158.1	5,683.3	5,640.9	42.38	134.097	
8,267.7	6,643.5	6,500.0	6,499.1	50.2	1.9	-50.47	178.3	4,158.1	5,750.9	5,707.1	43.80	131.286	
8,300.0	6,643.5	6,500.0	6,499.1	51.1	1.9	-50.47	178.3	4,158.1	5,783.2	5,738.7	44.48	130.008	
8,366.1	6,643.4	6,500.0	6,499.1	52.9	1.9	-50.47	178.3	4,158.1	5,849.3	5,803.4	45.88	127.489	
8,400.0	6,643.4	6,500.0	6,499.1	53.8	1.9	-50.47	178.3	4,158.1	5,883.1	5,836.5	46.60	126.257	
8,464.5	6,643.3	6,500.0	6,499.1	55.5	1.9	-50.47	178.3	4,158.1	5,947.6	5,899.7	47.97	123.994	
8,500.0	6,643.2	6,500.0	6,499.1	56.5	1.9	-50.47	178.3	4,158.1	5,983.1	5,934.4	48.72	122.806	
8,563.0	6,643.2	6,500.0	6,499.1	58.2	1.9	-50.47	178.3	4,158.1	6,046.0	5,996.0	50.06	120.770	
8,600.0	6,643.1	6,500.0	6,499.1	59.2	1.9	-50.47	178.3	4,158.1	6,083.0	6,032.2	50.85	119.623	
8,661.4	6,643.0	6,500.0	6,499.1	60.8	1.9	-50.47	178.3	4,158.1	6,144.4	6,092.2	52.16	117.788	
8,700.0	6,643.0	6,500.0	6,499.1	61.9	1.9	-50.47	178.3	4,158.1	6,183.0	6,130.0	52.99	116.681	
8,759.8	6,642.9	6,500.0	6,499.1	63.5	1.9	-50.47	178.3	4,158.1	6,242.7	6,188.5	54.27	115.023	
8,800.0	6,642.9	6,500.0	6,499.1	64.6	1.9	-50.47	178.3	4,158.1	6,282.9	6,227.8	55.14	113.953	
8,858.2	6,642.8	6,500.0	6,499.1	66.2	1.9	-50.47	178.3	4,158.1	6,341.1	6,284.7	56.39	112.453	
8,900.0	6,642.7	6,500.0	6,499.1	67.3	1.9	-50.47	178.3	4,158.1	6,382.8	6,325.6	57.29	111.418	
8,956.7	6,642.7	6,500.0	6,499.1	68.9	1.9	-50.47	178.3	4,158.1	6,439.5	6,381.0	58.51	110.059	
9,000.0	6,642.6	6,500.0	6,499.1	70.1	1.9	-50.47	178.3	4,158.1	6,482.8	6,423.3	59.44	109.058	
9,055.1	6,642.5	6,500.0	6,499.1	71.6	1.9	-50.47	178.3	4,158.1	6,537.9	6,477.2	60.63	107.825	
9,100.0	6,642.5	6,500.0	6,499.1	72.8	1.9	-50.47	178.3	4,158.1	6,582.7	6,521.1	61.60	106.855	
9,153.5	6,642.4	6,500.0	6,499.1	74.3	1.9	-50.47	178.3	4,158.1	6,636.2	6,573.5	62.76	105.735	
9,200.0	6,642.4	6,500.0	6,499.1	75.6	1.9	-50.47	178.3	4,158.1	6,682.7	6,618.9	63.77	104.796	
9,251.9	6,642.3	6,500.0	6,499.1	77.0	1.9	-50.47	178.3	4,158.1	6,734.6	6,669.7	64.90	103.777	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,300.0	6,642.2	6,500.0	6,499.1	78.3	1.9	-50.47	178.3	4,158.1	6,782.6	6,716.7	65.94	102.866	
9,350.4	6,642.2	6,500.0	6,499.1	79.7	1.9	-50.47	178.3	4,158.1	6,833.0	6,766.0	67.03	101.938	
9,400.0	6,642.1	6,500.0	6,499.1	81.1	1.9	-50.47	178.3	4,158.1	6,882.6	6,814.5	68.11	101.054	
9,448.8	6,642.0	6,500.0	6,499.1	82.4	1.9	-50.47	178.3	4,158.1	6,931.4	6,862.2	69.17	100.209	
9,500.0	6,642.0	6,500.0	6,499.1	83.8	1.9	-50.47	178.3	4,158.1	6,982.5	6,912.3	70.28	99.350	
9,547.2	6,641.9	6,500.0	6,499.1	85.1	1.9	-50.47	178.3	4,158.1	7,029.8	6,958.4	71.31	98.579	
9,600.0	6,641.9	6,500.0	6,499.1	86.6	1.9	-50.47	178.3	4,158.1	7,082.5	7,010.0	72.46	97.745	
9,645.6	6,641.8	6,500.0	6,499.1	87.9	1.9	-50.47	178.3	4,158.1	7,128.1	7,054.7	73.45	97.042	
9,700.0	6,641.7	6,500.0	6,499.1	89.4	1.9	-50.47	178.3	4,158.1	7,182.5	7,107.8	74.64	96.230	
9,744.1	6,641.7	6,500.0	6,499.1	90.6	1.9	-50.47	178.3	4,158.1	7,226.5	7,150.9	75.60	95.589	
9,800.0	6,641.6	6,500.0	6,499.1	92.1	1.9	-50.47	178.3	4,158.1	7,282.4	7,205.6	76.82	94.799	
9,842.5	6,641.6	6,500.0	6,499.1	93.3	1.9	-50.47	178.3	4,158.1	7,324.9	7,247.2	77.75	94.214	
9,900.0	6,641.5	6,500.0	6,499.1	94.9	1.9	-50.47	178.3	4,158.1	7,382.4	7,303.4	79.00	93.444	
9,940.9	6,641.4	6,500.0	6,499.1	96.0	1.9	-50.47	178.3	4,158.1	7,423.3	7,343.4	79.90	92.910	
10,000.0	6,641.4	6,500.0	6,499.1	97.7	1.9	-50.47	178.3	4,158.1	7,482.3	7,401.1	81.19	92.161	
10,039.3	6,641.3	6,500.0	6,499.1	98.8	1.9	-50.47	178.3	4,158.1	7,521.7	7,439.6	82.05	91.674	
10,100.0	6,641.2	6,500.0	6,499.1	100.4	1.9	-50.47	178.3	4,158.1	7,582.3	7,498.9	83.37	90.942	
10,137.8	6,641.2	6,500.0	6,499.1	101.5	1.9	-50.47	178.3	4,158.1	7,620.1	7,535.9	84.20	90.498	
10,200.0	6,641.1	6,500.0	6,499.1	103.2	1.9	-50.47	178.3	4,158.1	7,682.3	7,596.7	85.56	89.785	
10,236.2	6,641.1	6,500.0	6,499.1	104.2	1.9	-50.47	178.3	4,158.1	7,718.4	7,632.1	86.36	89.380	
10,300.0	6,641.0	6,500.0	6,499.1	106.0	1.9	-50.47	178.3	4,158.1	7,782.2	7,694.5	87.75	88.684	
10,334.6	6,640.9	6,500.0	6,499.1	107.0	1.9	-50.47	178.3	4,158.1	7,816.8	7,728.3	88.51	88.315	
10,400.0	6,640.9	6,500.0	6,499.1	108.8	1.9	-50.47	178.3	4,158.1	7,882.2	7,792.2	89.94	87.635	
10,433.0	6,640.8	6,500.0	6,499.1	109.7	1.9	-50.47	178.3	4,158.1	7,915.2	7,824.6	90.67	87.299	
10,500.0	6,640.7	6,500.0	6,499.1	111.6	1.9	-50.47	178.3	4,158.1	7,982.2	7,890.0	92.14	86.635	
10,531.5	6,640.7	6,500.0	6,499.1	112.4	1.9	-50.47	178.3	4,158.1	8,013.6	7,920.8	92.83	86.330	
10,600.0	6,640.6	6,500.0	6,499.1	114.3	1.9	-50.47	178.3	4,158.1	8,082.1	7,987.8	94.33	85.681	
10,629.9	6,640.6	6,500.0	6,499.1	115.2	1.9	-50.47	178.3	4,158.1	8,112.0	8,017.0	94.98	85.404	
10,700.0	6,640.5	6,500.0	6,499.1	117.1	1.9	-50.47	178.3	4,158.1	8,182.1	8,085.6	96.52	84.769	
10,728.3	6,640.4	6,500.0	6,499.1	117.9	1.9	-50.47	178.3	4,158.1	8,210.4	8,113.3	97.14	84.518	
10,800.0	6,640.4	6,500.0	6,499.1	119.9	1.9	-50.47	178.3	4,158.1	8,282.1	8,183.3	98.72	83.897	
10,826.7	6,640.3	6,500.0	6,499.1	120.7	1.9	-50.47	178.3	4,158.1	8,308.8	8,209.5	99.30	83.670	
10,900.0	6,640.2	6,500.0	6,499.1	122.7	1.9	-50.47	178.3	4,158.1	8,382.0	8,281.1	100.91	83.062	
10,925.2	6,640.2	6,500.0	6,499.1	123.4	1.9	-50.47	178.3	4,158.1	8,407.2	8,305.7	101.47	82.857	
11,000.0	6,640.1	6,500.0	6,499.1	125.5	1.9	-50.47	178.3	4,158.1	8,482.0	8,378.9	103.11	82.262	
11,023.6	6,640.1	6,500.0	6,499.1	126.1	1.9	-50.47	178.3	4,158.1	8,505.6	8,402.0	103.63	82.078	
11,100.0	6,640.0	6,500.0	6,499.1	128.3	1.9	-50.47	178.3	4,158.1	8,582.0	8,476.7	105.31	81.494	
11,122.0	6,639.9	6,500.0	6,499.1	128.9	1.9	-50.47	178.3	4,158.1	8,604.0	8,498.2	105.79	81.330	
11,200.0	6,639.8	6,500.0	6,499.1	131.1	1.9	-50.47	178.3	4,158.1	8,681.9	8,574.4	107.51	80.758	
11,220.4	6,639.8	6,500.0	6,499.1	131.6	1.9	-50.47	178.3	4,158.1	8,702.4	8,594.4	107.96	80.611	
11,300.0	6,639.7	6,500.0	6,499.1	133.9	1.9	-50.47	178.3	4,158.1	8,781.9	8,672.2	109.70	80.051	
11,318.9	6,639.7	6,500.0	6,499.1	134.4	1.9	-50.47	178.3	4,158.1	8,800.8	8,690.7	110.12	79.920	
11,400.0	6,639.6	6,500.0	6,499.1	136.7	1.9	-50.47	178.3	4,158.1	8,881.9	8,770.0	111.90	79.371	
11,417.3	6,639.6	6,500.0	6,499.1	137.1	1.9	-50.47	178.3	4,158.1	8,899.2	8,786.9	112.28	79.256	
11,500.0	6,639.5	6,500.0	6,499.1	139.4	1.9	-50.47	178.3	4,158.1	8,981.8	8,867.7	114.10	78.716	
11,515.7	6,639.5	6,500.0	6,499.1	139.9	1.9	-50.47	178.3	4,158.1	8,997.6	8,883.1	114.45	78.616	
11,600.0	6,639.3	6,500.0	6,499.1	142.2	1.9	-50.47	178.3	4,158.1	9,081.8	8,965.5	116.30	78.086	
11,614.1	6,639.3	6,500.0	6,499.1	142.6	1.9	-50.47	178.3	4,158.1	9,096.0	8,979.3	116.62	77.999	
11,700.0	6,639.2	6,500.0	6,499.1	145.0	1.9	-50.47	178.3	4,158.1	9,181.8	9,063.3	118.51	77.480	
11,712.6	6,639.2	6,500.0	6,499.1	145.4	1.9	-50.47	178.3	4,158.1	9,194.4	9,075.6	118.78	77.405	
11,800.0	6,639.1	6,500.0	6,499.1	147.8	1.9	-50.47	178.3	4,158.1	9,281.8	9,161.1	120.71	76.895	
11,811.0	6,639.1	6,500.0	6,499.1	148.1	1.9	-50.47	178.3	4,158.1	9,292.8	9,171.8	120.95	76.832	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
11,900.0	6,639.0	6,500.0	6,499.1	150.6	1.9	-50.47	178.3	4,158.1	9,381.7	9,258.8	122.91	76.330	
11,909.4	6,639.0	6,500.0	6,499.1	150.9	1.9	-50.47	178.3	4,158.1	9,391.2	9,268.0	123.12	76.278	
12,000.0	6,638.8	6,500.0	6,499.1	153.4	1.9	-50.47	178.3	4,158.1	9,481.7	9,356.6	125.11	75.786	
12,007.8	6,638.8	6,500.0	6,499.1	153.6	1.9	-50.47	178.3	4,158.1	9,489.6	9,364.3	125.29	75.744	
12,100.0	6,638.7	6,500.0	6,499.1	156.2	1.9	-50.47	178.3	4,158.1	9,581.7	9,454.4	127.32	75.260	
12,106.3	6,638.7	6,500.0	6,499.1	156.4	1.9	-50.47	178.3	4,158.1	9,588.0	9,460.5	127.45	75.227	
12,200.0	6,638.6	6,500.0	6,499.1	159.0	1.9	-50.47	178.3	4,158.1	9,681.7	9,552.1	129.52	74.751	
12,204.7	6,638.6	6,500.0	6,499.1	159.1	1.9	-50.47	178.3	4,158.1	9,686.4	9,556.7	129.62	74.728	
12,300.0	6,638.5	6,500.0	6,499.1	161.8	1.9	-50.47	178.3	4,158.1	9,781.6	9,649.9	131.72	74.259	
12,303.1	6,638.5	6,500.0	6,499.1	161.9	1.9	-50.47	178.3	4,158.1	9,784.8	9,653.0	131.79	74.244	
12,400.0	6,638.3	6,500.0	6,499.1	164.6	1.9	-50.47	178.3	4,158.1	9,881.6	9,747.7	133.93	73.784	
12,401.5	6,638.3	6,500.0	6,499.1	164.6	1.9	-50.47	178.3	4,158.1	9,883.2	9,749.2	133.96	73.777	
12,500.0	6,638.2	6,500.0	6,499.1	167.4	1.9	-50.47	178.3	4,158.1	9,981.6	9,845.5	136.13	73.323 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-140.66	-1,156.3	-947.6	1,495.5				
98.4	98.4	60.3	60.3	0.1	0.0	-140.66	-1,156.2	-947.7	1,495.0	1,494.9	0.11	N/A	
100.0	100.0	61.9	61.9	0.1	0.0	-140.66	-1,156.2	-947.7	1,495.0	1,494.9	0.11	N/A	
196.6	196.6	156.6	156.6	0.3	0.0	-140.66	-1,156.0	-947.7	1,494.8	1,494.5	0.34	4,459.718	
196.8	196.8	156.8	156.8	0.3	0.0	-140.66	-1,156.0	-947.7	1,494.8	1,494.5	0.34	4,451.816	
200.0	200.0	159.8	159.8	0.3	0.0	-140.66	-1,156.0	-947.7	1,494.8	1,494.5	0.34	4,358.876	
295.3	295.3	253.8	253.8	0.5	0.1	-140.66	-1,156.3	-947.6	1,495.0	1,494.3	0.66	2,268.820	
300.0	300.0	258.6	258.6	0.5	0.1	-140.66	-1,156.3	-947.6	1,495.0	1,494.3	0.68	2,203.221	
393.7	393.7	361.1	361.1	0.8	0.3	-140.68	-1,156.4	-947.2	1,494.9	1,493.9	1.01	1,484.079	
400.0	400.0	368.4	368.4	0.8	0.3	-140.68	-1,156.4	-947.2	1,494.8	1,493.8	1.03	1,456.577	
492.1	492.1	465.5	465.5	1.0	0.3	-140.70	-1,156.2	-946.3	1,494.1	1,492.8	1.30	1,149.040	
500.0	500.0	473.5	473.5	1.0	0.3	-140.70	-1,156.1	-946.2	1,494.0	1,492.7	1.32	1,128.770	
590.5	590.5	571.4	571.4	1.2	0.4	-140.72	-1,155.6	-945.2	1,493.0	1,491.4	1.59	941.774	
600.0	600.0	581.8	581.8	1.2	0.4	-140.72	-1,155.5	-945.0	1,492.9	1,491.3	1.61	925.875	
689.0	689.0	665.5	665.5	1.4	0.4	-140.73	-1,154.7	-944.1	1,491.7	1,489.8	1.85	804.388	
700.0	700.0	675.5	675.5	1.4	0.5	-140.73	-1,154.7	-944.0	1,491.5	1,489.7	1.88	791.680	
787.4	787.4	760.1	760.1	1.6	0.5	-140.75	-1,154.4	-943.2	1,490.8	1,488.6	2.12	703.081	
800.0	800.0	772.7	772.6	1.7	0.5	-140.75	-1,154.3	-943.1	1,490.7	1,488.5	2.15	691.880	
885.8	885.8	859.1	859.0	1.9	0.6	-140.77	-1,154.1	-942.2	1,489.9	1,487.5	2.39	624.684	
900.0	900.0	873.4	873.4	1.9	0.6	-140.78	-1,154.1	-942.0	1,489.8	1,487.4	2.42	614.857	
984.2	984.2	955.0	955.0	2.1	0.6	-140.81	-1,154.1	-941.0	1,489.1	1,486.4	2.64	563.000	
1,000.0	1,000.0	970.0	969.9	2.1	0.6	-140.81	-1,154.1	-940.8	1,489.0	1,486.3	2.69	554.325	
1,082.7	1,082.7	1,051.8	1,051.7	2.3	0.6	-140.84	-1,154.2	-939.8	1,488.5	1,485.6	2.90	512.816	
1,100.0	1,100.0	1,069.4	1,069.3	2.3	0.7	-140.85	-1,154.2	-939.7	1,488.4	1,485.4	2.95	504.884	
1,181.1	1,181.1	1,145.9	1,145.8	2.5	0.7	-140.88	-1,154.4	-938.8	1,487.9	1,484.8	3.16	471.510	
1,200.0	1,200.0	1,162.9	1,162.9	2.6	0.7	-140.89	-1,154.4	-938.7	1,487.9	1,484.7	3.20	464.467	
1,229.0	1,229.0	1,189.1	1,189.0	2.6	0.7	-140.90	-1,154.6	-938.4	1,487.9	1,484.6	3.28	454.072 CC	
1,279.5	1,279.5	1,238.3	1,238.2	2.7	0.7	-140.92	-1,155.0	-938.0	1,487.9	1,484.5	3.41	436.773	
1,300.0	1,300.0	1,258.7	1,258.6	2.8	0.7	-140.93	-1,155.1	-937.9	1,487.9	1,484.5	3.46	430.104	
1,377.9	1,377.9	1,336.6	1,336.6	3.0	0.8	177.86	-1,155.6	-937.3	1,489.1	1,485.4	3.68	404.158	
1,400.0	1,400.0	1,358.7	1,358.7	3.0	0.8	177.85	-1,155.8	-937.2	1,489.8	1,486.0	3.74	398.244	
1,476.4	1,476.3	1,433.1	1,433.0	3.2	0.8	177.83	-1,156.2	-936.8	1,493.5	1,489.6	3.94	379.537	
1,500.0	1,499.8	1,455.3	1,455.2	3.2	0.8	177.82	-1,156.4	-936.7	1,495.1	1,491.1	3.99	374.268	
1,574.8	1,574.4	1,527.0	1,527.0	3.4	0.8	177.80	-1,157.0	-936.4	1,501.6	1,497.5	4.19	358.581	
1,600.0	1,599.5	1,552.1	1,552.0	3.5	0.8	177.80	-1,157.2	-936.4	1,504.3	1,500.0	4.25	353.716	
1,673.2	1,672.2	1,625.4	1,625.3	3.6	0.9	177.78	-1,157.9	-936.1	1,513.2	1,508.8	4.45	340.360	
1,700.0	1,698.7	1,652.6	1,652.6	3.7	0.9	177.78	-1,158.1	-936.0	1,516.9	1,512.4	4.52	335.952	
1,771.6	1,769.5	1,724.1	1,724.0	3.9	0.9	177.76	-1,158.6	-935.8	1,528.0	1,523.3	4.71	324.665	
1,800.0	1,797.5	1,751.2	1,751.2	4.0	0.9	177.76	-1,158.8	-935.7	1,532.9	1,528.1	4.78	320.652	
1,870.1	1,866.3	1,819.8	1,819.8	4.2	0.9	177.75	-1,159.4	-935.5	1,546.2	1,541.3	4.97	311.065	
1,899.9	1,895.6	1,850.9	1,850.8	4.3	0.9	177.75	-1,159.6	-935.5	1,552.4	1,547.4	5.05	307.398	
1,968.5	1,962.6	1,921.2	1,921.2	4.5	1.0	177.75	-1,159.9	-935.2	1,566.8	1,561.5	5.23	299.739	
2,000.0	1,993.4	1,952.7	1,952.6	4.6	1.0	177.76	-1,160.1	-935.1	1,573.3	1,568.0	5.31	296.507	
2,066.9	2,058.9	2,019.1	2,019.0	4.8	1.0	177.76	-1,160.3	-934.8	1,587.2	1,581.8	5.48	289.475	
2,100.0	2,091.3	2,051.4	2,051.4	4.9	1.0	177.76	-1,160.4	-934.6	1,594.1	1,588.6	5.57	286.358	
2,165.3	2,155.2	2,116.5	2,116.4	5.2	1.0	177.77	-1,160.7	-934.3	1,607.7	1,601.9	5.74	280.130	
2,200.0	2,189.1	2,152.7	2,152.6	5.3	1.1	177.77	-1,160.8	-934.0	1,614.8	1,609.0	5.83	276.911	
2,263.8	2,251.5	2,219.2	2,219.1	5.5	1.1	177.77	-1,161.0	-933.4	1,627.9	1,621.9	6.00	271.215	
2,300.0	2,286.9	2,256.9	2,256.8	5.7	1.1	177.76	-1,161.1	-933.0	1,635.2	1,629.1	6.10	268.131	
2,362.2	2,347.7	2,319.1	2,319.0	5.9	1.1	177.76	-1,161.1	-932.4	1,647.7	1,641.4	6.27	262.932	
2,400.0	2,384.7	2,353.9	2,353.8	6.0	1.1	177.76	-1,161.1	-932.0	1,655.3	1,649.0	6.37	259.930	
2,460.6	2,444.0	2,410.2	2,410.1	6.3	1.1	177.76	-1,161.3	-931.4	1,667.7	1,661.1	6.53	255.227	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,482.5	2,448.3	2,448.2	6.4	1.2	177.76	-1,161.4	-931.1	1,675.7	1,669.1	6.64	252.283	
2,559.0	2,540.3	2,505.4	2,505.3	6.7	1.2	177.76	-1,161.4	-930.7	1,687.8	1,681.0	6.81	247.982	
2,600.0	2,580.3	2,545.1	2,545.0	6.8	1.2	177.77	-1,161.5	-930.5	1,696.2	1,689.3	6.92	245.160	
2,657.5	2,636.5	2,600.9	2,600.8	7.1	1.2	177.77	-1,161.6	-930.1	1,708.0	1,700.9	7.08	241.297	
2,700.0	2,678.1	2,644.6	2,644.5	7.2	1.2	177.77	-1,161.7	-929.7	1,716.7	1,709.5	7.20	238.564	
2,755.9	2,732.8	2,702.1	2,701.9	7.5	1.2	177.77	-1,161.9	-929.1	1,728.0	1,720.7	7.35	235.052	
2,800.0	2,776.0	2,745.3	2,745.2	7.7	1.3	177.76	-1,162.0	-928.6	1,737.0	1,729.5	7.47	232.404	
2,854.3	2,829.1	2,798.5	2,798.4	7.9	1.3	177.76	-1,162.0	-928.1	1,748.0	1,740.3	7.63	229.221	
2,900.0	2,873.8	2,844.4	2,844.3	8.1	1.3	177.76	-1,162.0	-927.7	1,757.2	1,749.5	7.75	226.627	
2,952.7	2,925.4	2,897.4	2,897.3	8.3	1.3	177.76	-1,162.0	-927.1	1,767.8	1,759.9	7.90	223.698	
3,000.0	2,971.6	2,940.3	2,940.1	8.5	1.3	177.76	-1,162.1	-926.7	1,777.4	1,769.4	8.03	221.214	
3,051.2	3,021.6	2,986.3	2,986.2	8.7	1.3	177.76	-1,162.2	-926.3	1,787.8	1,779.7	8.18	218.602	
3,100.0	3,069.4	3,033.5	3,033.4	8.9	1.4	177.76	-1,162.4	-925.9	1,797.9	1,789.6	8.32	216.193	
3,149.6	3,117.9	3,082.9	3,082.8	9.1	1.4	177.76	-1,162.6	-925.4	1,808.1	1,799.6	8.46	213.794	
3,200.0	3,167.2	3,133.0	3,132.9	9.3	1.4	177.75	-1,162.9	-924.8	1,818.4	1,809.8	8.60	211.459	
3,248.0	3,214.2	3,180.8	3,180.7	9.5	1.4	177.74	-1,163.2	-924.3	1,828.2	1,819.5	8.74	209.297	
3,300.0	3,265.0	3,232.4	3,232.2	9.8	1.4	177.74	-1,163.4	-923.7	1,838.8	1,829.9	8.88	207.030	
3,346.4	3,310.5	3,278.4	3,278.2	10.0	1.4	177.73	-1,163.6	-923.2	1,848.3	1,839.3	9.01	205.050	
3,400.0	3,362.9	3,331.6	3,331.4	10.2	1.5	177.73	-1,163.7	-922.6	1,859.2	1,850.0	9.17	202.837	
3,444.9	3,406.7	3,376.2	3,376.1	10.4	1.5	177.73	-1,163.8	-922.1	1,868.3	1,859.0	9.29	201.025	
3,473.0	3,434.2	3,404.0	3,403.9	10.5	1.5	177.73	-1,163.9	-921.8	1,874.0	1,864.6	9.37	199.917	
3,500.0	3,460.7	3,429.9	3,429.7	10.6	1.5	177.73	-1,164.0	-921.5	1,879.3	1,869.9	9.44	199.146	
3,543.3	3,503.2	3,471.5	3,471.3	10.7	1.5	177.73	-1,164.2	-921.0	1,887.4	1,877.9	9.53	198.149	
3,600.0	3,559.0	3,526.9	3,526.7	10.9	1.5	177.73	-1,164.3	-920.4	1,897.1	1,887.4	9.64	196.797	
3,641.7	3,600.2	3,568.4	3,568.3	11.0	1.6	177.73	-1,164.5	-920.0	1,903.4	1,893.7	9.72	195.810	
3,700.0	3,657.9	3,628.2	3,628.0	11.2	1.6	177.73	-1,164.7	-919.3	1,911.3	1,901.5	9.83	194.377	
3,740.1	3,697.8	3,670.7	3,670.5	11.3	1.6	177.72	-1,164.7	-918.8	1,916.0	1,906.1	9.91	193.391	
3,800.0	3,757.3	3,734.3	3,734.1	11.4	1.6	177.72	-1,164.8	-918.0	1,921.9	1,911.8	10.02	191.843	
3,838.6	3,795.7	3,775.5	3,775.3	11.5	1.6	177.71	-1,164.7	-917.4	1,924.9	1,914.8	10.09	190.840	
3,900.0	3,857.0	3,837.4	3,837.2	11.7	1.6	177.70	-1,164.6	-916.5	1,928.6	1,918.4	10.19	189.176	
3,937.0	3,893.9	3,873.4	3,873.2	11.7	1.7	177.69	-1,164.6	-915.9	1,930.2	1,920.0	10.26	188.182	
4,000.0	3,956.9	3,938.9	3,938.7	11.8	1.7	177.67	-1,164.6	-914.9	1,931.9	1,921.5	10.36	186.399	
4,035.4	3,992.3	3,977.4	3,977.2	11.9	1.7	177.66	-1,164.5	-914.3	1,932.1	1,921.7	10.42	185.373	
4,072.9	4,029.8	4,018.8	4,018.6	11.9	1.7	-141.16	-1,164.3	-913.6	1,931.9	1,918.3	13.59	142.103	
4,100.0	4,056.9	4,049.2	4,049.0	12.0	1.7	-141.17	-1,164.1	-913.0	1,931.4	1,917.8	13.64	141.581	
4,133.8	4,090.7	4,087.2	4,086.9	12.0	1.7	-141.18	-1,163.9	-912.3	1,930.8	1,917.1	13.71	140.882	
4,200.0	4,156.9	4,158.4	4,158.2	12.1	1.7	-141.20	-1,163.2	-910.8	1,929.5	1,915.7	13.83	139.558	
4,232.3	4,189.2	4,192.9	4,192.6	12.2	1.8	-141.21	-1,162.7	-910.2	1,928.8	1,914.9	13.88	138.914	
4,300.0	4,256.9	4,263.7	4,263.4	12.3	1.8	-141.22	-1,161.6	-908.9	1,927.2	1,913.2	14.01	137.598	
4,330.7	4,287.6	4,295.7	4,295.5	12.4	1.8	-141.22	-1,161.1	-908.4	1,926.5	1,912.4	14.06	137.002	
4,400.0	4,356.9	4,366.7	4,366.4	12.5	1.8	-141.23	-1,159.8	-907.1	1,924.7	1,910.5	14.19	135.682	
4,429.1	4,386.0	4,396.5	4,396.2	12.5	1.8	-141.23	-1,159.2	-906.6	1,923.9	1,909.7	14.24	135.128	
4,500.0	4,456.9	4,463.7	4,463.4	12.6	1.8	-141.23	-1,158.0	-905.4	1,922.2	1,907.8	14.36	133.809	
4,527.5	4,484.4	4,489.7	4,489.4	12.7	1.8	-141.23	-1,157.5	-905.0	1,921.5	1,907.1	14.41	133.301	
4,600.0	4,556.9	4,558.7	4,558.4	12.8	1.8	-141.24	-1,156.4	-903.9	1,919.9	1,905.3	14.55	131.992	
4,626.0	4,582.9	4,583.5	4,583.2	12.9	1.8	-141.24	-1,156.0	-903.6	1,919.3	1,904.7	14.59	131.527	
4,700.0	4,656.9	4,654.9	4,654.6	13.0	1.9	-141.24	-1,154.9	-902.7	1,917.8	1,903.1	14.73	130.220	
4,724.4	4,681.3	4,678.6	4,678.2	13.0	1.9	-141.24	-1,154.5	-902.3	1,917.3	1,902.6	14.77	129.792	
4,800.0	4,756.9	4,749.8	4,749.4	13.1	1.9	-141.25	-1,153.7	-901.3	1,916.0	1,901.1	14.91	128.479	
4,822.8	4,779.7	4,771.1	4,770.7	13.2	1.9	-141.25	-1,153.4	-901.1	1,915.6	1,900.6	14.96	128.087	
4,900.0	4,856.9	4,841.0	4,840.6	13.3	1.9	-141.25	-1,152.7	-900.3	1,914.5	1,899.4	15.10	126.801	
4,921.2	4,878.1	4,859.9	4,859.5	13.4	1.9	-141.25	-1,152.6	-900.2	1,914.2	1,899.1	15.14	126.455	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,956.9	4,931.0	4,930.6	13.5	1.9	-141.25	-1,152.1	-899.8	1,913.5	1,898.2	15.28	125.201	
5,019.7	4,976.6	4,949.2	4,948.8	13.5	1.9	-141.25	-1,152.0	-899.7	1,913.4	1,898.1	15.32	124.891	
5,100.0	5,056.9	5,025.5	5,025.1	13.7	2.0	-141.26	-1,151.7	-899.4	1,913.0	1,897.5	15.47	123.643	
5,118.1	5,075.0	5,043.7	5,043.3	13.7	2.0	-141.26	-1,151.6	-899.4	1,912.9	1,897.4	15.51	123.361	
5,200.0	5,156.9	5,124.7	5,124.2	13.8	2.0	-141.26	-1,151.4	-899.1	1,912.5	1,896.9	15.66	122.131	
5,216.5	5,173.4	5,140.4	5,139.9	13.9	2.0	-141.26	-1,151.3	-899.1	1,912.5	1,896.8	15.69	121.898	
5,300.0	5,256.9	5,218.8	5,218.4	14.0	2.0	-141.25	-1,151.1	-899.2	1,912.3	1,896.5	15.84	120.752	
5,314.9	5,271.8	5,232.3	5,231.9	14.1	2.0	-141.25	-1,151.0	-899.2	1,912.3	1,896.4	15.86	120.555	
5,315.9	5,272.8	5,233.2	5,232.8	14.1	2.0	-141.25	-1,151.0	-899.2	1,912.3	1,896.4	15.86	120.542	
5,400.0	5,356.9	5,310.9	5,310.4	14.2	2.0	-141.24	-1,151.0	-899.4	1,912.5	1,896.4	16.01	119.444	
5,413.4	5,370.3	5,324.8	5,324.4	14.2	2.0	-141.24	-1,151.1	-899.5	1,912.5	1,896.5	16.04	119.256	
5,500.0	5,456.9	5,414.1	5,413.6	14.4	2.0	-141.25	-1,151.3	-899.5	1,912.7	1,896.5	16.21	118.026	
5,511.8	5,468.7	5,425.6	5,425.2	14.4	2.0	-141.25	-1,151.3	-899.5	1,912.7	1,896.5	16.23	117.846	
5,600.0	5,556.9	5,513.4	5,513.0	14.6	2.0	-141.28	-1,152.2	-898.7	1,912.9	1,896.5	16.42	116.514	
5,610.2	5,567.1	5,524.8	5,524.4	14.6	2.0	-141.29	-1,152.4	-898.5	1,912.9	1,896.5	16.44	116.357	
5,700.0	5,656.9	5,622.1	5,621.7	14.7	2.0	-141.37	-1,154.0	-896.3	1,912.8	1,896.2	16.64	114.977	
5,708.6	5,665.5	5,630.7	5,630.2	14.8	2.0	-141.38	-1,154.2	-896.1	1,912.8	1,896.2	16.66	114.846	
5,800.0	5,756.9	5,723.7	5,723.1	14.9	2.1	-141.49	-1,156.3	-893.1	1,912.6	1,895.7	16.85	113.476	
5,807.1	5,764.0	5,731.7	5,731.1	14.9	2.1	-141.50	-1,156.5	-892.8	1,912.6	1,895.7	16.87	113.368	
5,900.0	5,856.9	5,834.3	5,833.7	15.1	2.1	-141.64	-1,158.9	-888.7	1,912.0	1,894.9	17.08	111.965	
5,905.5	5,862.4	5,840.1	5,839.5	15.1	2.1	-141.65	-1,159.0	-888.4	1,911.9	1,894.8	17.09	111.883	
5,971.9	5,928.8	5,909.4	5,908.6	15.3	2.1	-141.74	-1,160.4	-885.6	1,911.3	1,894.0	17.23	110.898	
6,000.0	5,956.9	5,935.8	5,935.0	15.3	2.1	-51.82	-1,160.8	-884.6	1,910.6	1,895.7	14.93	127.995	
6,003.9	5,960.8	5,939.4	5,938.7	15.3	2.1	-51.84	-1,160.9	-884.5	1,910.5	1,895.6	14.93	127.937	
6,050.0	6,006.7	5,982.6	5,981.8	15.4	2.1	-52.13	-1,161.6	-883.0	1,907.9	1,892.9	15.01	127.136	
6,100.0	6,056.2	6,029.2	6,028.4	15.4	2.2	-52.64	-1,162.3	-881.6	1,903.2	1,888.1	15.10	126.068	
6,102.3	6,058.5	6,031.4	6,030.6	15.4	2.2	-52.67	-1,162.3	-881.5	1,902.9	1,887.8	15.10	126.014	
6,150.0	6,105.1	6,075.4	6,074.5	15.4	2.2	-53.35	-1,162.9	-880.3	1,896.4	1,881.2	15.19	124.820	
6,200.0	6,153.0	6,116.9	6,116.1	15.5	2.2	-54.24	-1,163.4	-879.4	1,887.7	1,872.4	15.29	123.436	
6,200.8	6,153.8	6,117.5	6,116.7	15.5	2.2	-54.26	-1,163.4	-879.4	1,887.6	1,872.3	15.29	123.414	
6,250.0	6,199.9	6,153.2	6,152.3	15.5	2.2	-55.28	-1,164.0	-878.7	1,877.4	1,862.0	15.39	121.951	
6,299.2	6,244.8	6,187.9	6,187.0	15.5	2.2	-56.47	-1,164.7	-878.1	1,865.7	1,850.2	15.50	120.375	
6,300.0	6,245.5	6,188.5	6,187.6	15.5	2.2	-56.49	-1,164.7	-878.1	1,865.5	1,850.0	15.50	120.349	
6,350.0	6,289.6	6,229.6	6,228.7	15.5	2.2	-57.98	-1,165.7	-877.6	1,852.1	1,836.5	15.62	118.595	
6,397.6	6,329.9	6,270.5	6,269.6	15.4	2.2	-59.63	-1,166.6	-877.0	1,837.9	1,822.2	15.74	116.749	
6,400.0	6,331.8	6,272.5	6,271.5	15.4	2.2	-59.72	-1,166.7	-877.0	1,837.2	1,821.4	15.75	116.656	
6,450.0	6,372.2	6,312.4	6,311.5	15.4	2.2	-61.63	-1,167.6	-876.5	1,820.9	1,805.0	15.90	114.506	
6,496.0	6,407.4	6,345.7	6,344.7	15.4	2.2	-63.51	-1,168.4	-876.0	1,804.9	1,788.8	16.07	112.300	
6,500.0	6,410.3	6,348.5	6,347.5	15.4	2.2	-63.67	-1,168.4	-875.9	1,803.4	1,787.4	16.09	112.114	
6,550.0	6,446.1	6,382.1	6,381.2	15.4	2.3	-65.86	-1,169.3	-875.4	1,785.1	1,768.8	16.31	109.454	
6,594.5	6,475.9	6,411.0	6,410.1	15.4	2.3	-67.92	-1,170.1	-875.0	1,768.1	1,751.5	16.55	106.822	
6,600.0	6,479.4	6,414.7	6,413.7	15.4	2.3	-68.19	-1,170.2	-874.9	1,765.9	1,749.4	16.58	106.504	
6,650.0	6,510.0	6,446.1	6,445.1	15.5	2.3	-70.64	-1,171.0	-874.4	1,746.2	1,729.3	16.91	103.262	
6,692.9	6,534.0	6,470.7	6,469.7	15.7	2.3	-72.77	-1,171.7	-873.9	1,729.1	1,711.8	17.25	100.234	
6,700.0	6,537.8	6,474.5	6,473.5	15.7	2.3	-73.12	-1,171.8	-873.9	1,726.2	1,708.9	17.30	99.753	
6,750.0	6,562.6	6,499.7	6,498.7	16.2	2.3	-75.60	-1,172.4	-873.4	1,706.1	1,688.3	17.77	96.010	
6,791.3	6,580.8	6,516.5	6,515.5	16.6	2.3	-77.56	-1,172.8	-873.1	1,689.5	1,671.3	18.21	92.760	
6,800.0	6,584.3	6,519.8	6,518.8	16.7	2.3	-77.96	-1,172.9	-873.1	1,686.1	1,667.7	18.31	92.081	
6,850.0	6,602.9	6,536.9	6,535.8	17.3	2.3	-80.22	-1,173.3	-872.8	1,666.4	1,647.5	18.93	88.022	
6,889.7	6,615.2	6,548.3	6,547.2	17.9	2.3	-81.93	-1,173.6	-872.6	1,651.2	1,631.7	19.49	84.720	
6,900.0	6,618.1	6,550.9	6,549.9	18.0	2.3	-82.35	-1,173.7	-872.6	1,647.3	1,627.7	19.63	83.901	
6,950.0	6,630.0	6,561.8	6,560.7	18.8	2.3	-84.31	-1,173.9	-872.5	1,629.0	1,608.6	20.42	79.789	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,636.8	6,567.9	6,566.9	19.5	2.3	-85.67	-1,174.1	-872.4	1,615.7	1,594.6	21.07	76.683	
7,000.0	6,638.5	6,569.4	6,568.4	19.7	2.3	-86.07	-1,174.1	-872.4	1,611.7	1,590.4	21.27	75.762	
7,050.0	6,643.5	6,573.7	6,572.7	20.6	2.3	-87.60	-1,174.2	-872.3	1,595.5	1,573.3	22.19	71.890	
7,086.6	6,644.9	6,574.7	6,573.7	21.3	2.3	-88.56	-1,174.3	-872.3	1,584.4	1,561.5	22.90	69.180	
7,097.8	6,645.0	6,574.7	6,573.6	21.5	2.3	-88.83	-1,174.3	-872.3	1,581.2	1,558.0	23.12	68.388	
7,100.0	6,645.0	6,574.6	6,573.6	21.6	2.3	-88.83	-1,174.3	-872.3	1,580.5	1,557.4	23.16	68.236	
7,185.0	6,644.9	6,573.5	6,572.5	23.3	2.3	-88.79	-1,174.2	-872.3	1,558.4	1,533.5	24.89	62.618	
7,200.0	6,644.9	6,573.3	6,572.3	23.6	2.3	-88.78	-1,174.2	-872.3	1,555.0	1,529.8	25.19	61.726	
7,283.4	6,644.8	6,572.2	6,571.2	25.4	2.3	-88.74	-1,174.2	-872.3	1,538.3	1,511.3	27.01	56.957	
7,300.0	6,644.7	6,572.0	6,571.0	25.8	2.3	-88.73	-1,174.2	-872.3	1,535.5	1,508.1	27.37	56.106	
7,381.9	6,644.6	6,570.9	6,569.9	27.7	2.3	-88.69	-1,174.2	-872.4	1,524.3	1,495.0	29.24	52.125	
7,400.0	6,644.6	6,570.7	6,569.6	28.1	2.3	-88.68	-1,174.2	-872.4	1,522.4	1,492.7	29.66	51.332	
7,480.3	6,644.5	6,569.6	6,568.5	30.0	2.3	-88.64	-1,174.1	-872.4	1,516.5	1,484.9	31.57	48.043	
7,500.0	6,644.5	6,569.3	6,568.3	30.5	2.3	-88.63	-1,174.1	-872.4	1,515.7	1,483.7	32.03	47.316	
7,551.0	6,644.4	6,568.6	6,567.6	31.7	2.3	-88.61	-1,174.1	-872.4	1,514.9	1,481.6	33.28	45.519	
7,578.7	6,644.4	6,568.2	6,567.2	32.4	2.3	-88.59	-1,174.1	-872.4	1,515.1	1,481.2	33.96	44.617 ES	
7,600.0	6,644.4	6,567.9	6,566.9	32.9	2.3	-88.58	-1,174.1	-872.4	1,515.7	1,481.2	34.48	43.959	
7,677.1	6,644.3	6,566.8	6,565.8	34.8	2.3	-88.54	-1,174.1	-872.4	1,520.1	1,483.7	36.41	41.753	
7,700.0	6,644.2	6,566.5	6,565.5	35.4	2.3	-88.53	-1,174.1	-872.4	1,522.2	1,485.2	36.98	41.165	
7,775.6	6,644.1	6,565.4	6,564.4	37.3	2.3	-88.48	-1,174.0	-872.4	1,531.4	1,492.5	38.90	39.369	
7,800.0	6,644.1	6,565.1	6,564.0	38.0	2.3	-88.47	-1,174.0	-872.4	1,535.2	1,495.7	39.52	38.846	
7,874.0	6,644.0	6,564.0	6,562.9	39.9	2.3	-88.43	-1,174.0	-872.4	1,548.9	1,507.5	41.43	37.389	
7,900.0	6,644.0	6,563.6	6,562.6	40.5	2.3	-88.42	-1,174.0	-872.4	1,554.5	1,512.5	42.10	36.927	
7,972.4	6,643.9	6,562.5	6,561.5	42.4	2.3	-88.38	-1,174.0	-872.5	1,572.4	1,528.4	43.99	35.748	
8,000.0	6,643.9	6,562.1	6,561.1	43.1	2.3	-88.36	-1,174.0	-872.5	1,580.0	1,535.3	44.70	35.344	
8,070.8	6,643.8	6,561.1	6,560.0	45.0	2.3	-88.32	-1,173.9	-872.5	1,601.6	1,555.0	46.57	34.393	
8,100.0	6,643.7	6,560.6	6,559.6	45.8	2.3	-88.30	-1,173.9	-872.5	1,611.3	1,563.9	47.33	34.040	
8,169.3	6,643.7	6,559.5	6,558.5	47.6	2.3	-88.26	-1,173.9	-872.5	1,636.2	1,587.0	49.17	33.276	
8,200.0	6,643.6	6,559.1	6,558.0	48.4	2.3	-88.24	-1,173.9	-872.5	1,648.0	1,598.0	49.98	32.971	
8,267.7	6,643.5	6,558.0	6,557.0	50.2	2.3	-88.20	-1,173.9	-872.5	1,675.8	1,624.0	51.79	32.359	
8,300.0	6,643.5	6,557.5	6,556.4	51.1	2.3	-88.18	-1,173.8	-872.5	1,689.9	1,637.3	52.65	32.097	
8,366.1	6,643.4	6,556.4	6,555.4	52.9	2.3	-88.15	-1,173.8	-872.5	1,720.2	1,665.8	54.42	31.608	
8,400.0	6,643.4	6,555.9	6,554.8	53.8	2.3	-88.12	-1,173.8	-872.5	1,736.5	1,681.2	55.33	31.384	
8,464.5	6,643.3	6,554.8	6,553.8	55.5	2.3	-88.08	-1,173.8	-872.6	1,769.0	1,711.9	57.07	30.997	
8,500.0	6,643.2	6,554.3	6,553.2	56.5	2.3	-88.06	-1,173.8	-872.6	1,787.5	1,729.5	58.02	30.807	
8,563.0	6,643.2	6,553.2	6,552.2	58.2	2.3	-88.02	-1,173.7	-872.6	1,821.8	1,762.0	59.73	30.502	
8,600.0	6,643.1	6,552.6	6,551.6	59.2	2.3	-88.00	-1,173.7	-872.6	1,842.6	1,781.8	60.73	30.342	
8,661.4	6,643.0	6,551.6	6,550.5	60.8	2.3	-87.96	-1,173.7	-872.6	1,878.2	1,815.8	62.39	30.103	
8,700.0	6,643.0	6,550.9	6,549.9	61.9	2.3	-87.94	-1,173.7	-872.6	1,901.3	1,837.8	63.44	29.970	
8,759.8	6,642.9	6,549.9	6,548.8	63.5	2.3	-87.90	-1,173.7	-872.6	1,938.0	1,872.9	65.07	29.785	
8,800.0	6,642.9	6,549.2	6,548.1	64.6	2.3	-87.87	-1,173.6	-872.6	1,963.3	1,897.2	66.16	29.675	
8,858.2	6,642.8	6,548.2	6,547.1	66.2	2.3	-87.83	-1,173.6	-872.7	2,000.9	1,933.1	67.75	29.534	
8,900.0	6,642.7	6,547.4	6,546.4	67.3	2.3	-87.80	-1,173.6	-872.7	2,028.4	1,959.5	68.89	29.445	
8,956.7	6,642.7	6,546.4	6,545.4	68.9	2.3	-87.77	-1,173.6	-872.7	2,066.5	1,996.1	70.44	29.339	
9,000.0	6,642.6	6,545.6	6,544.6	70.1	2.3	-87.74	-1,173.6	-872.7	2,096.2	2,024.6	71.62	29.269	
9,055.1	6,642.5	6,544.6	6,543.6	71.6	2.3	-87.70	-1,173.5	-872.7	2,134.7	2,061.5	73.13	29.191	
9,100.0	6,642.5	6,543.8	6,542.8	72.8	2.3	-87.67	-1,173.5	-872.7	2,166.5	2,092.2	74.36	29.137	
9,153.5	6,642.4	6,542.8	6,541.8	74.3	2.3	-87.63	-1,173.5	-872.7	2,205.1	2,129.3	75.82	29.082	
9,200.0	6,642.4	6,541.9	6,540.9	75.6	2.3	-87.60	-1,173.5	-872.7	2,239.1	2,162.0	77.10	29.042	
9,251.9	6,642.3	6,541.0	6,539.9	77.0	2.3	-87.56	-1,173.4	-872.8	2,277.6	2,199.1	78.53	29.005	
9,300.0	6,642.2	6,540.0	6,539.0	78.3	2.3	-87.52	-1,173.4	-872.8	2,313.7	2,233.9	79.85	28.977	
9,350.4	6,642.2	6,539.1	6,538.0	79.7	2.3	-87.49	-1,173.4	-872.8	2,352.0	2,270.8	81.23	28.955	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.1	6,538.1	6,537.1	81.1	2.3	-87.45	-1,173.4	-872.8	2,390.2	2,307.6	82.60	28.938	
9,448.8	6,642.0	6,537.1	6,536.1	82.4	2.3	-87.42	-1,173.3	-872.8	2,428.1	2,344.2	83.94	28.927	
9,500.0	6,642.0	6,536.1	6,535.1	83.8	2.3	-87.38	-1,173.3	-872.8	2,468.3	2,383.0	85.35	28.921	
9,547.2	6,641.9	6,535.2	6,534.1	85.1	2.3	-87.34	-1,173.3	-872.8	2,505.8	2,419.1	86.65	28.918 SF	
9,600.0	6,641.9	6,534.1	6,533.1	86.6	2.3	-87.30	-1,173.3	-872.9	2,548.0	2,459.9	88.10	28.920	
9,645.6	6,641.8	6,533.2	6,532.1	87.9	2.3	-87.26	-1,173.2	-872.9	2,584.9	2,495.5	89.36	28.925	
9,700.0	6,641.7	6,532.0	6,531.0	89.4	2.3	-87.22	-1,173.2	-872.9	2,629.1	2,538.2	90.86	28.935	
9,744.1	6,641.7	6,531.1	6,530.1	90.6	2.3	-87.19	-1,173.2	-872.9	2,665.2	2,573.2	92.08	28.945	
9,800.0	6,641.6	6,529.9	6,528.9	92.1	2.3	-87.14	-1,173.2	-872.9	2,711.4	2,617.8	93.62	28.961	
9,842.5	6,641.6	6,529.0	6,528.0	93.3	2.3	-87.11	-1,173.1	-872.9	2,746.8	2,652.0	94.80	28.975	
9,900.0	6,641.5	6,527.8	6,526.7	94.9	2.3	-87.06	-1,173.1	-873.0	2,794.9	2,698.5	96.39	28.997	
9,940.9	6,641.4	6,526.9	6,525.8	96.0	2.3	-87.03	-1,173.1	-873.0	2,829.4	2,731.9	97.52	29.015	
10,000.0	6,641.4	6,525.6	6,524.5	97.7	2.3	-86.98	-1,173.1	-873.0	2,879.4	2,780.3	99.15	29.042	
10,039.3	6,641.3	6,524.7	6,523.7	98.8	2.3	-86.94	-1,173.0	-873.0	2,913.0	2,812.7	100.24	29.061	
10,100.0	6,641.2	6,523.3	6,522.3	100.4	2.3	-86.89	-1,173.0	-873.0	2,964.9	2,863.0	101.91	29.093	
10,137.8	6,641.2	6,522.5	6,521.4	101.5	2.3	-86.86	-1,173.0	-873.0	2,997.5	2,894.5	102.96	29.113	
10,200.0	6,641.1	6,521.0	6,520.0	103.2	2.3	-86.81	-1,172.9	-873.1	3,051.3	2,946.6	104.68	29.149	
10,236.2	6,641.1	6,520.2	6,519.2	104.2	2.3	-86.77	-1,172.9	-873.1	3,082.8	2,977.1	105.68	29.171	
10,300.0	6,641.0	6,518.7	6,517.6	106.0	2.3	-86.72	-1,172.9	-873.1	3,138.5	3,031.1	107.45	29.210	
10,334.6	6,640.9	6,517.9	6,516.8	107.0	2.3	-86.69	-1,172.9	-873.1	3,168.9	3,060.5	108.41	29.232	
10,400.0	6,640.9	6,516.3	6,515.2	108.8	2.3	-86.63	-1,172.8	-873.1	3,226.4	3,116.2	110.21	29.274	
10,433.0	6,640.8	6,515.5	6,514.4	109.7	2.3	-86.60	-1,172.8	-873.2	3,255.6	3,144.5	111.13	29.296	
10,500.0	6,640.7	6,513.8	6,512.8	111.6	2.3	-86.53	-1,172.8	-873.2	3,315.0	3,202.1	112.98	29.341	
10,531.5	6,640.7	6,513.0	6,512.0	112.4	2.3	-86.50	-1,172.7	-873.2	3,343.1	3,229.2	113.85	29.363	
10,600.0	6,640.6	6,511.3	6,510.3	114.3	2.3	-86.44	-1,172.7	-873.2	3,404.3	3,288.5	115.75	29.410	
10,629.9	6,640.6	6,510.5	6,509.5	115.2	2.3	-86.41	-1,172.7	-873.2	3,431.1	3,314.5	116.58	29.431	
10,700.0	6,640.5	6,508.7	6,507.7	117.1	2.3	-86.34	-1,172.6	-873.3	3,494.1	3,375.6	118.52	29.481	
10,728.3	6,640.4	6,508.0	6,507.0	117.9	2.3	-86.31	-1,172.6	-873.3	3,519.6	3,400.3	119.31	29.501	
10,800.0	6,640.4	6,506.1	6,505.1	119.9	2.3	-86.24	-1,172.6	-873.3	3,584.5	3,463.2	121.29	29.553	
10,826.7	6,640.3	6,505.4	6,504.4	120.7	2.3	-86.22	-1,172.5	-873.3	3,608.7	3,486.7	122.03	29.572	
10,900.0	6,640.2	6,503.4	6,502.4	122.7	2.3	-86.14	-1,172.5	-873.4	3,675.3	3,551.3	124.06	29.626	
10,925.2	6,640.2	6,502.7	6,501.7	123.4	2.3	-86.11	-1,172.5	-873.4	3,698.3	3,573.5	124.76	29.644	
11,000.0	6,640.1	6,500.6	6,499.6	125.5	2.3	-86.04	-1,172.4	-873.4	3,766.6	3,639.8	126.83	29.699	
11,023.6	6,640.1	6,500.0	6,499.0	126.1	2.3	-86.01	-1,172.4	-873.4	3,788.3	3,660.8	127.48	29.716	
11,100.0	6,640.0	6,500.0	6,499.0	128.3	2.3	-86.01	-1,172.4	-873.4	3,858.4	3,728.8	129.61	29.770	
11,122.0	6,639.9	6,498.1	6,497.1	128.9	2.3	-85.94	-1,172.4	-873.5	3,878.6	3,748.4	130.21	29.787	
11,200.0	6,639.8	6,496.7	6,495.7	131.1	2.3	-85.89	-1,172.3	-873.5	3,950.5	3,818.2	132.37	29.844	
11,220.4	6,639.8	6,496.3	6,495.3	131.6	2.3	-85.87	-1,172.3	-873.5	3,969.4	3,836.5	132.94	29.858	
11,300.0	6,639.7	6,494.8	6,493.8	133.9	2.3	-85.82	-1,172.3	-873.5	4,043.1	3,907.9	135.15	29.916	
11,318.9	6,639.7	6,494.5	6,493.5	134.4	2.3	-85.80	-1,172.3	-873.5	4,060.6	3,924.9	135.67	29.929	
11,400.0	6,639.6	6,493.0	6,492.0	136.7	2.3	-85.75	-1,172.2	-873.6	4,135.9	3,998.0	137.92	29.987	
11,417.3	6,639.6	6,492.7	6,491.6	137.1	2.3	-85.74	-1,172.2	-873.6	4,152.0	4,013.6	138.40	30.000	
11,500.0	6,639.5	6,491.1	6,490.1	139.4	2.3	-85.68	-1,172.2	-873.6	4,229.1	4,088.4	140.70	30.058	
11,515.7	6,639.5	6,490.8	6,489.8	139.9	2.3	-85.67	-1,172.2	-873.6	4,243.8	4,102.7	141.13	30.069	
11,600.0	6,639.3	6,489.3	6,488.3	142.2	2.3	-85.61	-1,172.1	-873.6	4,322.6	4,179.1	143.47	30.129	
11,614.1	6,639.3	6,489.0	6,488.0	142.6	2.3	-85.60	-1,172.1	-873.6	4,335.9	4,192.0	143.86	30.139	
11,700.0	6,639.2	6,487.5	6,486.5	145.0	2.3	-85.54	-1,172.1	-873.7	4,416.4	4,270.1	146.25	30.198	
11,712.6	6,639.2	6,487.2	6,486.2	145.4	2.3	-85.53	-1,172.1	-873.7	4,428.2	4,281.6	146.59	30.207	
11,800.0	6,639.1	6,485.6	6,484.6	147.8	2.3	-85.47	-1,172.0	-873.7	4,510.4	4,361.4	149.02	30.267	
11,811.0	6,639.1	6,485.4	6,484.4	148.1	2.3	-85.46	-1,172.0	-873.7	4,520.8	4,371.5	149.33	30.275	
11,900.0	6,639.0	6,483.8	6,482.8	150.6	2.3	-85.40	-1,172.0	-873.7	4,604.7	4,452.9	151.80	30.335	
11,909.4	6,639.0	6,483.7	6,482.6	150.9	2.3	-85.40	-1,172.0	-873.7	4,613.6	4,461.6	152.06	30.342	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
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
12,000.0	6,638.8	6,482.0	6,481.0	153.4	2.3	-85.33	-1,172.0	-873.7	4,699.3	4,544.7	154.57	30.402	
12,007.8	6,638.8	6,481.9	6,480.9	153.6	2.3	-85.33	-1,172.0	-873.8	4,706.7	4,551.9	154.79	30.407	
12,100.0	6,638.7	6,480.2	6,479.2	156.2	2.3	-85.27	-1,171.9	-873.8	4,794.0	4,636.7	157.34	30.468	
12,106.3	6,638.7	6,480.1	6,479.1	156.4	2.3	-85.26	-1,171.9	-873.8	4,800.0	4,642.4	157.52	30.472	
12,200.0	6,638.6	6,478.4	6,477.4	159.0	2.3	-85.20	-1,171.9	-873.8	4,889.0	4,728.9	160.12	30.534	
12,204.7	6,638.6	6,478.3	6,477.3	159.1	2.3	-85.20	-1,171.9	-873.8	4,893.4	4,733.2	160.25	30.537	
12,300.0	6,638.5	6,476.6	6,475.6	161.8	2.3	-85.13	-1,171.8	-873.8	4,984.1	4,821.2	162.89	30.598	
12,303.1	6,638.5	6,476.6	6,475.6	161.9	2.3	-85.13	-1,171.8	-873.8	4,987.1	4,824.1	162.98	30.600	
12,400.0	6,638.3	6,474.8	6,473.8	164.6	2.3	-85.06	-1,171.8	-873.9	5,079.5	4,913.8	165.67	30.661	
12,401.5	6,638.3	6,474.8	6,473.8	164.6	2.3	-85.06	-1,171.8	-873.9	5,081.0	4,915.2	165.71	30.662	
12,500.0	6,638.2	6,473.1	6,472.1	167.4	2.3	-85.00	-1,171.7	-873.9	5,175.0	5,006.6	168.44	30.723	
12,598.4	6,638.1	6,471.3	6,470.3	170.2	2.3	-84.93	-1,171.7	-873.9	5,269.1	5,098.0	171.17	30.783	
12,600.0	6,638.1	6,471.3	6,470.3	170.2	2.3	-84.93	-1,171.7	-873.9	5,270.7	5,099.5	171.21	30.784	
12,696.8	6,638.0	6,469.6	6,468.6	172.9	2.3	-84.87	-1,171.6	-874.0	5,363.5	5,189.6	173.90	30.843	
12,700.0	6,638.0	6,469.5	6,468.5	173.0	2.3	-84.86	-1,171.6	-874.0	5,366.5	5,192.5	173.99	30.845	
12,795.2	6,637.8	6,467.8	6,466.8	175.7	2.3	-84.80	-1,171.6	-874.0	5,457.9	5,281.3	176.63	30.901	
12,800.0	6,637.8	6,467.8	6,466.8	175.8	2.3	-84.80	-1,171.6	-874.0	5,462.5	5,285.7	176.76	30.904	
12,893.7	6,637.7	6,466.1	6,465.1	178.4	2.3	-84.74	-1,171.5	-874.0	5,552.5	5,373.2	179.36	30.958	
12,900.0	6,637.7	6,466.0	6,465.0	178.6	2.3	-84.73	-1,171.5	-874.0	5,558.6	5,379.1	179.53	30.962	
12,992.1	6,637.6	6,464.4	6,463.4	181.2	2.3	-84.67	-1,171.5	-874.1	5,647.3	5,465.2	182.08	31.015	
13,000.0	6,637.6	6,464.3	6,463.3	181.4	2.3	-84.67	-1,171.5	-874.1	5,654.9	5,472.6	182.30	31.019	
13,090.5	6,637.5	6,462.7	6,461.7	183.9	2.3	-84.61	-1,171.5	-874.1	5,742.1	5,557.3	184.81	31.070	
13,100.0	6,637.5	6,462.5	6,461.5	184.2	2.3	-84.60	-1,171.5	-874.1	5,751.3	5,566.2	185.07	31.075	
13,188.9	6,637.4	6,461.0	6,460.0	186.7	2.3	-84.54	-1,171.4	-874.1	5,837.1	5,649.6	187.54	31.125	
13,200.0	6,637.3	6,460.8	6,459.8	187.0	2.3	-84.53	-1,171.4	-874.1	5,847.8	5,660.0	187.85	31.131	
13,287.4	6,637.2	6,459.3	6,458.3	189.4	2.3	-84.48	-1,171.4	-874.1	5,932.2	5,742.0	190.27	31.178	
13,300.0	6,637.2	6,459.0	6,458.1	189.8	2.3	-84.47	-1,171.4	-874.2	5,944.4	5,753.8	190.62	31.185	
13,385.8	6,637.1	6,457.6	6,456.6	192.2	2.3	-84.41	-1,171.3	-874.2	6,027.4	5,834.4	192.99	31.231	
13,400.0	6,637.1	6,457.3	6,456.3	192.6	2.3	-84.40	-1,171.3	-874.2	6,041.2	5,847.8	193.39	31.239	
13,484.2	6,637.0	6,455.9	6,454.9	195.0	2.3	-84.35	-1,171.3	-874.2	6,122.7	5,927.0	195.72	31.283	
13,500.0	6,637.0	6,455.6	6,454.6	195.4	2.3	-84.34	-1,171.3	-874.2	6,138.0	5,941.8	196.16	31.291	
13,582.6	6,636.9	6,454.2	6,453.2	197.7	2.3	-84.29	-1,171.2	-874.2	6,218.1	6,019.7	198.45	31.334	
13,600.0	6,636.8	6,453.9	6,452.9	198.2	2.3	-84.28	-1,171.2	-874.2	6,234.9	6,036.0	198.93	31.343	
13,681.1	6,636.7	6,452.5	6,451.5	200.5	2.3	-84.22	-1,171.2	-874.3	6,313.6	6,112.4	201.17	31.384	
13,700.0	6,636.7	6,452.2	6,451.2	201.0	2.3	-84.21	-1,171.2	-874.3	6,332.0	6,130.3	201.70	31.394	
13,779.5	6,636.6	6,450.8	6,449.8	203.2	2.3	-84.16	-1,171.1	-874.3	6,409.2	6,205.3	203.90	31.433	
13,800.0	6,636.6	6,450.5	6,449.5	203.8	2.3	-84.15	-1,171.1	-874.3	6,429.1	6,224.6	204.46	31.444	
13,877.9	6,636.5	6,449.2	6,448.2	206.0	2.3	-84.10	-1,171.1	-874.3	6,504.8	6,298.2	206.62	31.482	
13,900.0	6,636.5	6,448.8	6,447.8	206.6	2.3	-84.08	-1,171.1	-874.3	6,526.3	6,319.1	207.23	31.493	
13,976.3	6,636.4	6,447.5	6,446.5	208.8	2.3	-84.04	-1,171.1	-874.4	6,600.6	6,391.2	209.34	31.530	
14,000.0	6,636.3	6,447.1	6,446.1	209.4	2.3	-84.02	-1,171.0	-874.4	6,623.6	6,413.6	210.00	31.541	
14,074.8	6,636.2	6,445.9	6,444.9	211.5	2.3	-83.97	-1,171.0	-874.4	6,696.4	6,484.3	212.07	31.577	
14,100.0	6,636.2	6,445.4	6,444.4	212.2	2.3	-83.96	-1,171.0	-874.4	6,721.0	6,508.2	212.77	31.589	
14,173.2	6,636.1	6,444.2	6,443.2	214.3	2.3	-83.91	-1,171.0	-874.4	6,792.3	6,577.5	214.79	31.623	
14,200.0	6,636.1	6,443.8	6,442.8	215.0	2.3	-83.89	-1,171.0	-874.4	6,818.4	6,602.9	215.53	31.635	
14,271.6	6,636.0	6,442.6	6,441.6	217.0	2.3	-83.85	-1,170.9	-874.4	6,888.3	6,670.7	217.51	31.668	
14,300.0	6,636.0	6,442.1	6,441.1	217.8	2.3	-83.83	-1,170.9	-874.4	6,915.9	6,697.6	218.30	31.681	
14,370.0	6,635.9	6,440.9	6,439.9	219.8	2.3	-83.79	-1,170.9	-874.5	6,984.3	6,764.1	220.24	31.713	
14,400.0	6,635.8	6,440.4	6,439.4	220.6	2.3	-83.77	-1,170.9	-874.5	7,013.5	6,792.5	221.06	31.726	
14,468.5	6,635.7	6,439.3	6,438.3	222.6	2.3	-83.73	-1,170.8	-874.5	7,080.4	6,857.4	222.96	31.757	
14,500.0	6,635.7	6,438.8	6,437.8	223.4	2.3	-83.71	-1,170.8	-874.5	7,111.2	6,887.3	223.83	31.771	
14,566.9	6,635.6	6,437.7	6,436.7	225.3	2.3	-83.66	-1,170.8	-874.5	7,176.5	6,950.9	225.68	31.800	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,600.0	6,635.6	6,437.1	6,436.1	226.2	2.3	-83.64	-1,170.8	-874.5	7,208.9	6,982.3	226.59	31.814	
14,665.3	6,635.5	6,436.0	6,435.0	228.1	2.3	-83.60	-1,170.8	-874.5	7,272.8	7,044.4	228.40	31.843	
14,700.0	6,635.5	6,435.5	6,434.5	229.0	2.3	-83.58	-1,170.7	-874.6	7,306.7	7,077.3	229.36	31.857	
14,763.7	6,635.4	6,434.4	6,433.4	230.8	2.3	-83.54	-1,170.7	-874.6	7,369.0	7,137.9	231.12	31.885	
14,800.0	6,635.3	6,433.8	6,432.8	231.8	2.3	-83.52	-1,170.7	-874.6	7,404.5	7,172.4	232.12	31.900	
14,862.2	6,635.2	6,432.8	6,431.8	233.6	2.3	-83.48	-1,170.7	-874.6	7,465.4	7,231.5	233.84	31.926	
14,900.0	6,635.2	6,432.2	6,431.2	234.7	2.3	-83.46	-1,170.7	-874.6	7,502.4	7,267.5	234.88	31.941	
14,960.6	6,635.1	6,431.2	6,430.2	236.4	2.3	-83.42	-1,170.6	-874.6	7,561.8	7,325.2	236.55	31.966	
14,995.1	6,635.0	6,430.6	6,429.6	237.3	2.3	-83.40	-1,170.6	-874.6	7,595.6	7,358.1	237.51	31.980	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	0.36	44.8	0.3	44.8				
98.4	98.4	98.4	98.4	0.1	0.1	0.36	44.8	0.3	44.8	44.6	0.19	233.105	
100.0	100.0	100.0	100.0	0.1	0.1	0.36	44.8	0.3	44.8	44.6	0.20	229.159	
196.8	196.8	196.8	196.8	0.3	0.3	0.36	44.8	0.3	44.8	44.2	0.63	71.025	
200.0	200.0	200.0	200.0	0.3	0.3	0.36	44.8	0.3	44.8	44.2	0.65	69.466	
295.3	295.3	295.3	295.3	0.5	0.5	0.36	44.8	0.3	44.8	43.7	1.07	41.748	
300.0	300.0	300.0	300.0	0.5	0.5	0.36	44.8	0.3	44.8	43.7	1.09	40.938	
393.7	393.7	393.7	393.7	0.8	0.8	0.36	44.8	0.3	44.8	43.3	1.52	29.562	
400.0	400.0	400.0	400.0	0.8	0.8	0.36	44.8	0.3	44.8	43.3	1.54	29.020	
492.1	492.1	492.1	492.1	1.0	1.0	0.36	44.8	0.3	44.8	42.9	1.96	22.883	
500.0	500.0	500.0	500.0	1.0	1.0	0.36	44.8	0.3	44.8	42.8	1.99	22.477	
590.5	590.5	590.5	590.5	1.2	1.2	0.36	44.8	0.3	44.8	42.4	2.40	18.666	
600.0	600.0	600.0	600.0	1.2	1.2	0.36	44.8	0.3	44.8	42.4	2.44	18.341	
689.0	689.0	689.0	689.0	1.4	1.4	0.36	44.8	0.3	44.8	42.0	2.84	15.761	
700.0	700.0	700.0	700.0	1.4	1.4	0.36	44.8	0.3	44.8	41.9	2.89	15.491	
787.4	787.4	787.4	787.4	1.6	1.6	0.36	44.8	0.3	44.8	41.5	3.29	13.639	
800.0	800.0	800.0	800.0	1.7	1.7	0.36	44.8	0.3	44.8	41.5	3.34	13.407	
885.8	885.8	885.8	885.8	1.9	1.9	0.36	44.8	0.3	44.8	41.1	3.73	12.020	
900.0	900.0	900.0	900.0	1.9	1.9	0.36	44.8	0.3	44.8	41.0	3.79	11.818	
984.2	984.2	984.2	984.2	2.1	2.1	0.36	44.8	0.3	44.8	40.6	4.17	10.745	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.36	44.8	0.3	44.8	40.6	4.24	10.565 CC	
1,082.7	1,082.7	1,081.5	1,081.5	2.3	2.3	1.01	45.8	0.8	45.9	41.3	4.61	9.951	
1,100.0	1,100.0	1,098.6	1,098.6	2.3	2.3	1.30	46.3	1.0	46.4	41.7	4.69	9.892	
1,181.1	1,181.1	1,178.4	1,178.3	2.5	2.5	3.22	49.8	2.8	49.9	44.9	5.05	9.891	
1,200.0	1,200.0	1,196.9	1,196.8	2.6	2.6	3.77	50.8	3.4	51.1	45.9	5.13	9.950	
1,279.5	1,279.5	1,274.8	1,274.4	2.7	2.7	6.32	56.5	6.3	57.1	51.6	5.49	10.406	
1,300.0	1,300.0	1,294.8	1,294.3	2.8	2.8	7.00	58.3	7.2	59.0	53.4	5.58	10.576	
1,377.9	1,377.9	1,370.8	1,369.7	3.0	3.0	-32.01	66.2	11.2	66.7	60.8	5.93	11.249	
1,400.0	1,400.0	1,392.2	1,391.0	3.0	3.0	-31.55	68.7	12.4	68.9	62.9	6.03	11.435	
1,476.4	1,476.3	1,466.4	1,464.3	3.2	3.2	-30.38	78.6	17.5	76.7	70.3	6.36	12.052	
1,500.0	1,499.8	1,489.3	1,486.9	3.2	3.3	-30.14	81.9	19.2	79.1	72.7	6.47	12.237	
1,574.8	1,574.4	1,561.7	1,558.1	3.4	3.5	-29.63	93.7	25.2	87.0	80.2	6.80	12.786	
1,600.0	1,599.5	1,586.0	1,581.9	3.5	3.6	-29.54	98.0	27.4	89.6	82.7	6.91	12.965	
1,673.2	1,672.2	1,658.4	1,652.8	3.6	3.8	-29.57	111.4	34.2	96.9	89.6	7.25	13.366	
1,700.0	1,698.7	1,685.1	1,678.9	3.7	3.9	-29.72	116.4	36.7	99.1	91.8	7.37	13.451	
1,771.6	1,769.5	1,756.6	1,748.8	3.9	4.2	-30.42	129.6	43.5	104.1	96.4	7.71	13.506	
1,800.0	1,797.5	1,784.9	1,776.4	4.0	4.3	-30.82	134.8	46.1	105.7	97.8	7.84	13.473	
1,870.1	1,866.3	1,854.8	1,844.9	4.2	4.5	-32.09	147.8	52.8	108.5	100.3	8.19	13.246	
1,899.9	1,895.6	1,884.7	1,874.1	4.3	4.6	-32.77	153.3	55.6	109.3	101.0	8.34	13.102	
1,968.5	1,962.6	1,953.1	1,941.0	4.5	4.9	-34.40	166.0	62.0	110.9	102.2	8.73	12.705	
2,000.0	1,993.4	1,984.6	1,971.8	4.6	5.0	-35.14	171.8	65.0	111.7	102.8	8.91	12.534	
2,066.9	2,058.9	2,051.4	2,037.2	4.8	5.3	-36.67	184.2	71.3	113.3	104.0	9.30	12.179	
2,100.0	2,091.3	2,084.5	2,069.5	4.9	5.4	-37.41	190.3	74.4	114.2	104.7	9.50	12.017	
2,165.3	2,155.2	2,149.7	2,133.3	5.2	5.7	-38.83	202.4	80.6	115.9	106.0	9.90	11.703	
2,200.0	2,189.1	2,184.3	2,167.2	5.3	5.8	-39.57	208.8	83.9	116.9	106.7	10.12	11.545	
2,263.8	2,251.5	2,248.0	2,229.5	5.5	6.1	-40.90	220.6	89.9	118.7	108.1	10.54	11.264	
2,300.0	2,286.9	2,284.2	2,264.9	5.7	6.2	-41.64	227.3	93.3	119.7	108.9	10.77	11.113	
2,362.2	2,347.7	2,346.3	2,325.6	5.9	6.5	-42.88	238.8	99.1	121.6	110.4	11.19	10.863	
2,400.0	2,384.7	2,384.1	2,362.5	6.0	6.6	-43.61	245.8	102.7	122.7	111.3	11.45	10.719	
2,460.6	2,444.0	2,444.6	2,421.8	6.3	6.9	-44.76	257.1	108.4	124.6	112.7	11.87	10.496	
2,500.0	2,482.5	2,483.9	2,460.2	6.4	7.0	-45.48	264.3	112.1	125.9	113.7	12.15	10.359	
2,559.0	2,540.3	2,542.9	2,517.9	6.7	7.3	-46.55	275.3	117.7	127.8	115.2	12.57	10.161	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,583.0	2,557.2	6.8	7.4	-47.32	282.8	121.3	129.2	116.4	12.87	10.044	
2,657.5	2,636.5	2,639.4	2,612.3	7.1	7.7	-48.73	293.7	125.5	131.8	118.5	13.29	9.921	
2,700.0	2,678.1	2,681.5	2,653.5	7.2	7.8	-49.90	302.0	128.3	134.0	120.4	13.61	9.842	
2,755.9	2,732.8	2,737.2	2,708.0	7.5	8.1	-51.40	313.0	132.0	136.9	122.8	14.05	9.741	
2,800.0	2,776.0	2,781.2	2,751.0	7.7	8.2	-52.53	321.7	134.9	139.3	124.8	14.41	9.666	
2,854.3	2,829.1	2,835.3	2,803.9	7.9	8.5	-53.87	332.4	138.4	142.2	127.4	14.85	9.579	
2,900.0	2,873.8	2,880.8	2,848.5	8.1	8.7	-54.96	341.3	141.4	144.8	129.6	15.23	9.511	
2,952.7	2,925.4	2,933.4	2,899.9	8.3	8.9	-56.17	351.7	144.9	147.9	132.2	15.66	9.439	
3,000.0	2,971.6	2,980.5	2,945.9	8.5	9.1	-57.21	361.0	147.9	150.6	134.6	16.06	9.379	
3,051.2	3,021.6	3,031.5	2,995.8	8.7	9.3	-58.29	371.1	151.3	153.7	137.2	16.49	9.319	
3,100.0	3,069.4	3,080.1	3,043.4	8.9	9.5	-59.28	380.7	154.5	156.6	139.7	16.91	9.266	
3,149.6	3,117.9	3,129.6	3,091.8	9.1	9.7	-60.26	390.4	157.7	159.7	142.4	17.33	9.216	
3,200.0	3,167.2	3,179.8	3,140.9	9.3	9.9	-61.21	400.3	161.0	162.9	145.1	17.76	9.169	
3,248.0	3,214.2	3,227.7	3,187.7	9.5	10.1	-62.08	409.8	164.2	165.9	147.7	18.18	9.127	
3,300.0	3,265.0	3,279.5	3,238.4	9.8	10.4	-62.99	420.0	167.6	169.2	150.6	18.63	9.086	
3,346.4	3,310.5	3,325.8	3,283.7	10.0	10.6	-63.77	429.1	170.6	172.2	153.2	19.03	9.051	
3,400.0	3,362.9	3,379.1	3,335.9	10.2	10.8	-64.64	439.6	174.1	175.8	156.3	19.50	9.015	
3,444.9	3,406.7	3,423.9	3,379.6	10.4	11.0	-65.34	448.5	177.1	178.7	158.8	19.89	8.986	
3,473.0	3,434.2	3,451.9	3,407.0	10.5	11.1	-65.76	454.0	178.9	180.6	160.5	20.14	8.970	
3,500.0	3,460.7	3,478.8	3,433.4	10.6	11.2	-66.16	459.3	180.7	182.5	162.1	20.36	8.963	
3,543.3	3,503.2	3,522.0	3,475.6	10.7	11.4	-66.64	467.8	183.5	185.7	165.0	20.68	8.980	
3,600.0	3,559.0	3,578.5	3,530.9	10.9	11.7	-66.98	478.9	187.2	190.3	169.2	21.07	9.030	
3,641.7	3,600.2	3,620.0	3,571.5	11.0	11.8	-67.03	487.1	190.0	194.0	172.6	21.34	9.091	
3,700.0	3,657.9	3,678.0	3,628.2	11.2	12.1	-66.84	498.6	193.8	199.5	177.8	21.68	9.201	
3,740.1	3,697.8	3,718.0	3,667.3	11.3	12.3	-66.55	506.5	196.4	203.6	181.7	21.89	9.298	
3,800.0	3,757.3	3,777.4	3,725.4	11.4	12.5	-65.88	518.2	200.3	210.1	187.9	22.19	9.470	
3,838.6	3,795.7	3,815.6	3,762.8	11.5	12.7	-65.32	525.7	202.8	214.6	192.3	22.35	9.603	
3,900.0	3,857.0	3,876.4	3,822.3	11.7	13.0	-64.24	537.7	206.8	222.3	199.7	22.58	9.845	
3,937.0	3,893.9	3,912.9	3,858.0	11.7	13.1	-63.49	544.9	209.2	227.2	204.5	22.69	10.013	
4,000.0	3,956.9	3,974.9	3,918.7	11.8	13.4	-62.08	557.2	213.3	236.3	213.4	22.87	10.333	
4,035.4	3,992.3	4,009.7	3,952.7	11.9	13.5	-61.21	564.0	215.6	241.7	218.8	22.94	10.537	
4,072.9	4,029.8	4,046.4	3,988.6	11.9	13.7	-19.07	571.3	218.0	247.8	225.9	21.89	11.323	
4,100.0	4,056.9	4,072.9	4,014.5	12.0	13.8	-18.29	576.5	219.7	252.3	230.2	22.12	11.408	
4,133.8	4,090.7	4,106.0	4,046.9	12.0	14.0	-17.37	583.0	221.9	258.1	235.6	22.42	11.512	
4,200.0	4,156.9	4,170.7	4,110.2	12.1	14.2	-15.67	595.8	226.1	269.4	246.4	22.98	11.722	
4,232.3	4,189.2	4,202.3	4,141.1	12.2	14.4	-14.89	602.0	228.2	275.0	251.8	23.26	11.826	
4,300.0	4,256.9	4,268.5	4,205.8	12.3	14.7	-13.36	615.1	232.6	287.0	263.2	23.82	12.048	
4,330.7	4,287.6	4,298.6	4,235.2	12.4	14.8	-12.70	621.0	234.5	292.5	268.4	24.07	12.150	
4,400.0	4,356.9	4,366.4	4,301.5	12.5	15.1	-11.31	634.4	239.0	305.0	280.3	24.63	12.381	
4,429.1	4,386.0	4,394.8	4,329.4	12.5	15.2	-10.76	640.0	240.9	310.3	285.4	24.86	12.478	
4,500.0	4,456.9	4,464.2	4,397.2	12.6	15.5	-9.49	653.7	245.4	323.3	297.8	25.42	12.717	
4,527.5	4,484.4	4,491.1	4,423.6	12.7	15.6	-9.02	659.0	247.2	328.4	302.7	25.63	12.809	
4,600.0	4,556.9	4,562.0	4,492.9	12.8	16.0	-7.87	673.0	251.8	341.9	315.7	26.19	13.053	
4,626.0	4,582.9	4,587.4	4,517.7	12.9	16.1	-7.47	678.0	253.5	346.7	320.3	26.39	13.139	
4,700.0	4,656.9	4,659.8	4,588.6	13.0	16.4	-6.41	692.3	258.3	360.7	333.7	26.94	13.386	
4,724.4	4,681.3	4,683.7	4,611.9	13.0	16.5	-6.08	697.0	259.8	365.3	338.2	27.13	13.467	
4,800.0	4,756.9	4,757.6	4,684.2	13.1	16.8	-5.10	711.5	264.7	379.7	352.0	27.68	13.717	
4,822.8	4,779.7	4,779.9	4,706.1	13.2	16.9	-4.81	716.0	266.2	384.1	356.3	27.85	13.791	
4,900.0	4,856.9	4,855.4	4,779.9	13.3	17.2	-3.91	730.8	271.1	398.9	370.5	28.41	14.042	
4,921.2	4,878.1	4,876.2	4,800.2	13.4	17.3	-3.67	734.9	272.5	403.0	374.5	28.56	14.110	
5,000.0	4,956.9	4,960.9	4,883.2	13.5	17.7	-2.78	751.1	277.9	417.9	388.7	29.13	14.344	
5,019.7	4,976.6	4,983.3	4,905.2	13.5	17.8	-2.57	755.1	279.2	421.3	392.0	29.27	14.391	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,075.4	4,996.0	13.7	18.0	-1.84	769.5	284.0	433.7	403.9	29.78	14.564	
5,118.1	5,075.0	5,096.3	5,016.7	13.7	18.1	-1.70	772.4	285.0	436.2	406.3	29.89	14.594	
5,200.0	5,156.9	5,191.3	5,111.0	13.8	18.3	-1.17	783.7	288.7	445.9	415.5	30.34	14.696	
5,216.5	5,173.4	5,210.6	5,130.1	13.9	18.4	-1.08	785.7	289.4	447.5	417.1	30.43	14.709	
5,300.0	5,256.9	5,308.3	5,227.4	14.0	18.6	-0.73	793.6	292.0	454.3	423.5	30.83	14.736	
5,314.9	5,271.8	5,325.8	5,245.0	14.1	18.6	-0.68	794.7	292.4	455.2	424.3	30.89	14.735	
5,400.0	5,356.9	5,425.9	5,344.9	14.2	18.8	-0.50	799.0	293.8	458.8	427.6	31.24	14.686	
5,413.4	5,370.3	5,441.6	5,360.7	14.2	18.8	-0.48	799.3	293.9	459.1	427.9	31.29	14.673	
5,500.0	5,456.9	5,537.9	5,456.9	14.4	18.9	-0.45	800.0	294.2	459.7	428.1	31.59	14.551	
5,511.8	5,468.7	5,549.7	5,468.7	14.4	19.0	-0.45	800.0	294.2	459.7	428.1	31.63	14.533	
5,600.0	5,556.9	5,637.9	5,556.9	14.6	19.1	-0.45	800.0	294.2	459.7	427.8	31.92	14.402	
5,610.2	5,567.1	5,648.1	5,567.1	14.6	19.1	-0.45	800.0	294.2	459.7	427.7	31.95	14.386	
5,700.0	5,656.9	5,737.9	5,656.9	14.7	19.2	-0.45	800.0	294.2	459.7	427.4	32.26	14.252	
5,708.6	5,665.5	5,746.5	5,665.5	14.8	19.2	-0.45	800.0	294.2	459.7	427.4	32.29	14.239	
5,800.0	5,756.9	5,837.9	5,756.9	14.9	19.3	-0.45	800.0	294.2	459.7	427.1	32.59	14.104	
5,807.1	5,764.0	5,844.9	5,764.0	14.9	19.4	-0.45	800.0	294.2	459.7	427.1	32.62	14.093	
5,900.0	5,856.9	5,937.9	5,856.9	15.1	19.5	-0.45	800.0	294.2	459.7	426.8	32.94	13.958	
5,905.5	5,862.4	5,943.4	5,862.4	15.1	19.5	-0.45	800.0	294.2	459.7	426.8	32.95	13.950	
5,949.8	5,906.7	5,987.6	5,906.7	15.2	19.6	-0.45	800.0	294.2	459.7	426.6	33.11	13.886	
5,971.9	5,928.8	6,009.8	5,928.8	15.3	19.6	-0.45	800.0	294.2	459.7	426.5	33.18	13.854	
6,000.0	5,956.9	6,037.7	5,956.7	15.3	19.6	89.55	800.0	293.6	459.7	430.5	29.23	15.729	
6,003.9	5,960.8	6,041.6	5,960.6	15.3	19.6	89.55	800.0	293.4	459.7	430.5	29.24	15.723	
6,050.0	6,006.7	6,087.5	6,006.3	15.4	19.7	89.55	800.0	289.9	459.7	430.3	29.36	15.657	
6,100.0	6,056.2	6,137.2	6,055.6	15.4	19.7	89.55	800.0	282.8	459.7	430.2	29.46	15.604	
6,102.3	6,058.5	6,139.5	6,057.9	15.4	19.7	89.55	800.0	282.4	459.7	430.2	29.46	15.602	
6,150.0	6,105.1	6,187.0	6,104.2	15.4	19.7	89.56	800.0	272.3	459.7	430.2	29.53	15.567	
6,200.0	6,153.0	6,236.7	6,152.0	15.5	19.7	89.57	800.0	258.5	459.7	430.1	29.58	15.543	
6,200.8	6,153.8	6,237.5	6,152.7	15.5	19.7	89.57	800.0	258.3	459.7	430.1	29.58	15.543	
6,250.0	6,199.9	6,286.5	6,198.7	15.5	19.7	89.58	800.0	241.4	459.7	430.1	29.61	15.527	
6,299.2	6,244.8	6,335.4	6,243.4	15.5	19.7	89.59	800.0	221.4	459.7	430.1	29.63	15.513	
6,300.0	6,245.5	6,336.2	6,244.1	15.5	19.7	89.59	800.0	221.0	459.7	430.1	29.63	15.512	
6,350.0	6,289.6	6,386.0	6,288.0	15.5	19.7	89.61	800.0	197.6	459.7	430.0	29.67	15.491	
6,397.6	6,329.9	6,433.4	6,328.2	15.4	19.7	89.62	800.0	172.5	459.7	430.0	29.74	15.457	
6,400.0	6,331.8	6,435.8	6,330.1	15.4	19.7	89.62	800.0	171.1	459.7	430.0	29.74	15.455	
6,450.0	6,372.2	6,485.6	6,370.4	15.4	19.7	89.64	800.0	141.8	459.7	429.8	29.86	15.394	
6,496.0	6,407.4	6,531.5	6,405.6	15.4	19.7	89.66	800.0	112.4	459.7	429.7	30.04	15.305	
6,500.0	6,410.3	6,535.4	6,408.5	15.4	19.7	89.66	800.0	109.8	459.7	429.7	30.05	15.297	
6,532.4	6,433.8	6,567.7	6,432.0	15.4	19.6	89.68	800.0	87.6	459.7	429.5	30.23	15.206	
6,550.0	6,446.1	6,585.2	6,444.3	15.4	19.6	89.69	800.0	75.1	459.7	429.4	30.34	15.154	
6,594.5	6,475.9	6,629.5	6,474.1	15.4	19.6	89.71	800.0	42.3	459.7	429.0	30.69	14.979	
6,600.0	6,479.4	6,635.0	6,477.6	15.4	19.6	89.71	800.0	38.1	459.7	429.0	30.74	14.956	
6,650.0	6,510.0	6,684.9	6,508.3	15.5	19.6	89.73	800.0	-1.2	459.7	428.4	31.27	14.699	
6,692.9	6,534.0	6,727.7	6,532.4	15.7	19.6	89.76	800.0	-36.5	459.7	427.8	31.86	14.427	
6,700.0	6,537.8	6,734.7	6,536.2	15.7	19.6	89.76	800.0	-42.5	459.7	427.7	31.97	14.381	
6,750.0	6,562.6	6,784.6	6,561.1	16.2	19.7	89.79	800.0	-85.7	459.7	426.9	32.83	14.004	
6,791.3	6,580.8	6,825.9	6,579.4	16.6	19.7	89.81	800.0	-122.6	459.7	426.0	33.67	13.652	
6,800.0	6,584.3	6,834.5	6,583.0	16.7	19.7	89.82	800.0	-130.5	459.7	425.8	33.86	13.578	
6,850.0	6,602.9	6,884.4	6,601.7	17.3	19.9	89.85	800.0	-176.8	459.7	424.6	35.06	13.112	
6,889.7	6,615.2	6,924.1	6,614.2	17.9	20.1	89.87	800.0	-214.4	459.7	423.6	36.14	12.719	
6,900.0	6,618.1	6,934.3	6,617.1	18.0	20.1	89.88	800.0	-224.2	459.7	423.3	36.43	12.619	
6,950.0	6,630.0	6,984.3	6,629.2	18.8	20.5	89.91	800.0	-272.6	459.7	421.8	37.95	12.113	
6,988.2	6,636.8	7,022.4	6,636.2	19.5	21.0	89.93	800.0	-310.1	459.7	420.5	39.21	11.723	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
7,000.0	6,638.5	7,034.2	6,638.0	19.7	21.1	89.94	800.0	-321.8	459.7	420.1	39.61	11.606		
7,050.0	6,643.5	7,084.2	6,643.2	20.6	21.9	89.97	800.0	-371.5	459.7	418.3	41.38	11.108		
7,086.6	6,644.9	7,120.8	6,644.9	21.3	22.5	89.99	800.0	-408.1	459.7	417.0	42.75	10.755		
7,097.8	6,645.0	7,132.0	6,645.0	21.5	22.7	90.00	800.0	-419.3	459.7	416.5	43.17	10.650		
7,100.0	6,645.0	7,134.2	6,645.0	21.6	22.7	90.00	800.0	-421.5	459.7	416.5	43.25	10.629		
7,185.0	6,644.9	7,219.2	6,644.9	23.3	24.3	90.00	800.0	-506.5	459.7	413.1	46.65	9.854		
7,200.0	6,644.9	7,234.2	6,644.9	23.6	24.6	90.00	800.0	-521.5	459.7	412.4	47.27	9.726		
7,283.4	6,644.8	7,317.6	6,644.8	25.4	26.3	90.00	800.0	-604.9	459.7	408.9	50.84	9.043		
7,300.0	6,644.7	7,334.2	6,644.8	25.8	26.7	90.00	800.0	-621.5	459.7	408.2	51.56	8.916		
7,381.9	6,644.6	7,416.1	6,644.7	27.7	28.4	90.00	800.0	-703.3	459.7	404.5	55.26	8.319		
7,400.0	6,644.6	7,434.2	6,644.6	28.1	28.8	90.00	800.0	-721.5	459.7	403.6	56.09	8.196		
7,480.3	6,644.5	7,514.5	6,644.5	30.0	30.7	90.00	800.0	-801.8	459.7	399.8	59.87	7.678		
7,500.0	6,644.5	7,534.2	6,644.5	30.5	31.1	90.00	800.0	-821.5	459.7	398.9	60.81	7.560		
7,578.7	6,644.4	7,612.9	6,644.4	32.4	33.0	90.00	800.0	-900.2	459.7	395.1	64.63	7.113		
7,600.0	6,644.4	7,634.2	6,644.4	32.9	33.5	90.00	800.0	-921.5	459.7	394.0	65.68	7.000		
7,677.1	6,644.3	7,711.3	6,644.3	34.8	35.4	90.00	800.0	-998.6	459.7	390.2	69.51	6.614		
7,700.0	6,644.2	7,734.2	6,644.3	35.4	36.0	90.00	800.0	-1,021.5	459.7	389.1	70.65	6.507		
7,775.6	6,644.1	7,809.8	6,644.2	37.3	37.8	90.00	800.0	-1,097.0	459.7	385.3	74.47	6.173		
7,800.0	6,644.1	7,834.2	6,644.1	38.0	38.4	90.00	800.0	-1,121.5	459.7	384.0	75.72	6.072		
7,874.0	6,644.0	7,908.2	6,644.1	39.9	40.3	90.00	800.0	-1,195.5	459.7	380.2	79.51	5.782		
7,900.0	6,644.0	7,934.2	6,644.0	40.5	41.0	90.00	800.0	-1,221.5	459.7	378.9	80.86	5.686		
7,972.4	6,643.9	8,006.6	6,643.9	42.4	42.8	90.00	800.0	-1,293.9	459.7	375.1	84.62	5.433		
8,000.0	6,643.9	8,034.2	6,643.9	43.1	43.5	90.00	800.0	-1,321.5	459.7	373.7	86.06	5.342		
8,070.8	6,643.8	8,105.0	6,643.8	45.0	45.4	90.00	800.0	-1,392.3	459.7	370.0	89.77	5.121		
8,100.0	6,643.7	8,134.2	6,643.8	45.8	46.1	90.00	800.0	-1,421.5	459.7	368.4	91.31	5.035		
8,169.3	6,643.7	8,203.5	6,643.7	47.6	47.9	90.00	800.0	-1,490.7	459.7	364.8	94.97	4.841		
8,200.0	6,643.6	8,234.2	6,643.7	48.4	48.7	90.00	800.0	-1,521.5	459.7	363.1	96.60	4.759		
8,267.7	6,643.5	8,301.9	6,643.6	50.2	50.5	90.00	800.0	-1,589.2	459.7	359.5	100.20	4.588		
8,300.0	6,643.5	8,334.2	6,643.5	51.1	51.4	90.00	800.0	-1,621.5	459.7	357.8	101.92	4.511		
8,366.1	6,643.4	8,400.3	6,643.4	52.9	53.1	90.01	800.0	-1,687.6	459.7	354.3	105.46	4.359		
8,400.0	6,643.4	8,434.2	6,643.4	53.8	54.0	90.01	800.0	-1,721.5	459.7	352.5	107.28	4.285		
8,464.5	6,643.3	8,498.7	6,643.3	55.5	55.8	90.01	800.0	-1,786.0	459.7	349.0	110.75	4.151		
8,500.0	6,643.2	8,534.2	6,643.3	56.5	56.7	90.01	800.0	-1,821.5	459.7	347.1	112.66	4.081		
8,563.0	6,643.2	8,597.2	6,643.2	58.2	58.4	90.01	800.0	-1,884.4	459.7	343.7	116.07	3.961		
8,600.0	6,643.1	8,634.2	6,643.2	59.2	59.4	90.01	800.0	-1,921.5	459.7	341.7	118.07	3.894		
8,661.4	6,643.0	8,695.6	6,643.1	60.8	61.0	90.01	800.0	-1,982.9	459.7	338.3	121.40	3.787		
8,700.0	6,643.0	8,734.2	6,643.0	61.9	62.1	90.01	800.0	-2,021.5	459.7	336.3	123.49	3.723		
8,759.8	6,642.9	8,794.0	6,643.0	63.5	63.7	90.01	800.0	-2,081.3	459.7	333.0	126.75	3.627		
8,800.0	6,642.9	8,834.2	6,642.9	64.6	64.8	90.01	800.0	-2,121.5	459.7	330.8	128.94	3.566		
8,858.2	6,642.8	8,892.4	6,642.8	66.2	66.4	90.01	800.0	-2,179.7	459.7	327.6	132.11	3.480		
8,900.0	6,642.7	8,934.2	6,642.8	67.3	67.5	90.01	800.0	-2,221.5	459.7	325.4	134.39	3.421		
8,956.7	6,642.7	8,990.9	6,642.7	68.9	69.0	90.01	800.0	-2,278.1	459.8	322.3	137.49	3.344		
9,000.0	6,642.6	9,034.2	6,642.7	70.1	70.2	90.01	800.1	-2,321.5	459.8	319.9	139.86	3.287		
9,055.1	6,642.5	9,089.3	6,642.6	71.6	71.7	90.01	800.1	-2,376.6	459.8	316.9	142.88	3.218		
9,100.0	6,642.5	9,134.2	6,642.5	72.8	72.9	90.01	800.1	-2,421.5	459.8	314.4	145.34	3.163		
9,153.5	6,642.4	9,187.7	6,642.5	74.3	74.4	90.01	800.1	-2,475.0	459.8	311.5	148.28	3.101		
9,200.0	6,642.4	9,234.2	6,642.4	75.6	75.7	90.01	800.1	-2,521.5	459.8	308.9	150.84	3.048		
9,251.9	6,642.3	9,286.2	6,642.3	77.0	77.1	90.01	800.1	-2,573.4	459.8	306.1	153.69	2.991		
9,300.0	6,642.2	9,334.2	6,642.3	78.3	78.4	90.01	800.1	-2,621.5	459.8	303.4	156.34	2.941		
9,350.4	6,642.2	9,384.6	6,642.2	79.7	79.8	90.01	800.1	-2,671.8	459.8	300.6	159.11	2.890		
9,400.0	6,642.1	9,434.2	6,642.2	81.1	81.2	90.01	800.1	-2,721.5	459.8	297.9	161.85	2.841		
9,448.8	6,642.0	9,483.0	6,642.1	82.4	82.5	90.01	800.1	-2,770.3	459.8	295.2	164.54	2.794		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,642.0	9,534.2	6,642.0	83.8	83.9	90.01	800.1	-2,821.5	459.8	292.4	167.36	2.747	
9,547.2	6,641.9	9,581.4	6,642.0	85.1	85.2	90.01	800.1	-2,868.7	459.8	289.8	169.97	2.705	
9,600.0	6,641.9	9,634.2	6,641.9	86.6	86.6	90.01	800.1	-2,921.5	459.8	286.9	172.89	2.659	
9,645.6	6,641.8	9,679.9	6,641.9	87.9	87.9	90.01	800.1	-2,967.1	459.8	284.3	175.41	2.621	
9,700.0	6,641.7	9,734.2	6,641.8	89.4	89.4	90.01	800.1	-3,021.5	459.8	281.3	178.42	2.577	
9,744.1	6,641.7	9,778.3	6,641.7	90.6	90.6	90.01	800.1	-3,065.5	459.8	278.9	180.86	2.542	
9,800.0	6,641.6	9,834.2	6,641.7	92.1	92.2	90.01	800.1	-3,121.5	459.8	275.8	183.95	2.499	
9,842.5	6,641.6	9,876.7	6,641.6	93.3	93.3	90.01	800.1	-3,164.0	459.8	273.5	186.31	2.468	
9,900.0	6,641.5	9,934.2	6,641.5	94.9	94.9	90.01	800.1	-3,221.5	459.8	270.3	189.49	2.426	
9,940.9	6,641.4	9,975.1	6,641.5	96.0	96.1	90.01	800.1	-3,262.4	459.8	268.0	191.76	2.398	
10,000.0	6,641.4	10,034.2	6,641.4	97.7	97.7	90.01	800.1	-3,321.5	459.8	264.7	195.04	2.357	
10,039.3	6,641.3	10,073.6	6,641.4	98.8	98.8	90.01	800.1	-3,360.8	459.8	262.5	197.22	2.331	
10,100.0	6,641.2	10,134.2	6,641.3	100.4	100.5	90.01	800.1	-3,421.5	459.8	259.2	200.59	2.292	
10,137.8	6,641.2	10,172.0	6,641.2	101.5	101.5	90.01	800.1	-3,459.2	459.8	257.1	202.68	2.268	
10,200.0	6,641.1	10,234.2	6,641.2	103.2	103.2	90.01	800.1	-3,521.5	459.8	253.6	206.14	2.230	
10,236.2	6,641.1	10,270.4	6,641.1	104.2	104.2	90.01	800.1	-3,557.7	459.8	251.6	208.15	2.209	
10,300.0	6,641.0	10,334.2	6,641.0	106.0	106.0	90.01	800.1	-3,621.5	459.8	248.1	211.70	2.172	
10,334.6	6,640.9	10,368.8	6,641.0	107.0	107.0	90.01	800.1	-3,656.1	459.8	246.1	213.62	2.152	
10,400.0	6,640.9	10,434.2	6,640.9	108.8	108.8	90.01	800.1	-3,721.5	459.8	242.5	217.26	2.116	
10,433.0	6,640.8	10,467.3	6,640.9	109.7	109.7	90.01	800.1	-3,754.5	459.8	240.7	219.09	2.098	
10,500.0	6,640.7	10,534.2	6,640.8	111.6	111.5	90.01	800.1	-3,821.5	459.8	236.9	222.82	2.063	
10,531.5	6,640.7	10,565.7	6,640.7	112.4	112.4	90.01	800.1	-3,852.9	459.8	235.2	224.57	2.047	
10,600.0	6,640.6	10,634.2	6,640.7	114.3	114.3	90.01	800.1	-3,921.5	459.8	231.4	228.39	2.013	
10,629.9	6,640.6	10,664.1	6,640.6	115.2	115.1	90.01	800.1	-3,951.4	459.8	229.7	230.05	1.999	
10,700.0	6,640.5	10,734.2	6,640.5	117.1	117.1	90.01	800.1	-4,021.5	459.8	225.8	233.95	1.965	
10,728.3	6,640.4	10,762.5	6,640.5	117.9	117.9	90.01	800.1	-4,049.8	459.8	224.2	235.53	1.952	
10,800.0	6,640.4	10,834.2	6,640.4	119.9	119.9	90.01	800.1	-4,121.5	459.8	220.2	239.53	1.919	
10,826.7	6,640.3	10,861.0	6,640.4	120.7	120.6	90.01	800.1	-4,148.2	459.8	218.7	241.02	1.908	
10,900.0	6,640.2	10,934.2	6,640.3	122.7	122.7	90.01	800.1	-4,221.5	459.8	214.7	245.10	1.876	
10,925.2	6,640.2	10,959.4	6,640.3	123.4	123.4	90.01	800.1	-4,246.6	459.8	213.3	246.50	1.865	
11,000.0	6,640.1	11,034.2	6,640.2	125.5	125.4	90.01	800.1	-4,321.5	459.8	209.1	250.68	1.834	
11,023.6	6,640.1	11,057.8	6,640.1	126.1	126.1	90.01	800.1	-4,345.1	459.8	207.8	251.99	1.825	
11,100.0	6,640.0	11,134.2	6,640.0	128.3	128.2	90.01	800.1	-4,421.5	459.8	203.5	256.25	1.794	
11,122.0	6,639.9	11,156.2	6,640.0	128.9	128.8	90.01	800.1	-4,443.5	459.8	202.3	257.48	1.786	
11,200.0	6,639.8	11,234.2	6,639.9	131.1	131.0	90.01	800.1	-4,521.5	459.8	197.9	261.83	1.756	
11,220.4	6,639.8	11,254.7	6,639.9	131.6	131.6	90.01	800.1	-4,541.9	459.8	196.8	262.97	1.748	
11,300.0	6,639.7	11,334.2	6,639.8	133.9	133.8	90.01	800.1	-4,621.5	459.8	192.3	267.41	1.719	
11,318.9	6,639.7	11,353.1	6,639.8	134.4	134.3	90.01	800.1	-4,640.3	459.8	191.3	268.47	1.713	
11,400.0	6,639.6	11,434.2	6,639.6	136.7	136.6	90.01	800.1	-4,721.5	459.8	186.8	273.00	1.684	
11,417.3	6,639.6	11,451.5	6,639.6	137.1	137.1	90.01	800.1	-4,738.8	459.8	185.8	273.96	1.678	
11,500.0	6,639.5	11,534.2	6,639.5	139.4	139.4	90.01	800.1	-4,821.5	459.8	181.2	278.58	1.650	
11,515.7	6,639.5	11,549.9	6,639.5	139.9	139.8	90.01	800.1	-4,837.2	459.8	180.3	279.46	1.645	
11,600.0	6,639.3	11,634.2	6,639.4	142.2	142.2	90.01	800.1	-4,921.5	459.8	175.6	284.17	1.618	
11,614.1	6,639.3	11,648.4	6,639.4	142.6	142.6	90.01	800.1	-4,935.6	459.8	174.8	284.96	1.613	
11,700.0	6,639.2	11,734.2	6,639.3	145.0	144.9	90.01	800.1	-5,021.5	459.8	170.0	289.76	1.587	
11,712.6	6,639.2	11,746.8	6,639.3	145.4	145.3	90.01	800.1	-5,034.1	459.8	169.3	290.46	1.583	
11,800.0	6,639.1	11,834.2	6,639.1	147.8	147.7	90.01	800.1	-5,121.5	459.8	164.4	295.35	1.557	
11,811.0	6,639.1	11,845.2	6,639.1	148.1	148.0	90.01	800.1	-5,132.5	459.8	163.8	295.96	1.553	
11,900.0	6,639.0	11,934.2	6,639.0	150.6	150.5	90.01	800.1	-5,221.5	459.8	158.8	300.94	1.528	
11,909.4	6,639.0	11,943.6	6,639.0	150.9	150.8	90.01	800.1	-5,230.9	459.8	158.3	301.46	1.525	
12,000.0	6,638.8	12,034.2	6,638.9	153.4	153.3	90.01	800.1	-5,321.5	459.8	153.2	306.53	1.500 Level 3	
12,007.8	6,638.8	12,042.1	6,638.9	153.6	153.5	90.01	800.1	-5,329.3	459.8	152.8	306.97	1.498 Level 3	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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		
12,100.0	6,638.7	12,134.2	6,638.8	156.2	156.1	90.00	800.1	-5,421.5	459.8	147.6	312.12	1.473	Level 3	
12,106.3	6,638.7	12,140.5	6,638.7	156.4	156.3	90.00	800.1	-5,427.8	459.8	147.3	312.47	1.471	Level 3	
12,200.0	6,638.6	12,234.2	6,638.6	159.0	158.9	90.00	800.1	-5,521.5	459.8	142.0	317.71	1.447	Level 3	
12,204.7	6,638.6	12,238.9	6,638.6	159.1	159.0	90.00	800.1	-5,526.2	459.8	141.8	317.98	1.446	Level 3	
12,300.0	6,638.5	12,334.2	6,638.5	161.8	161.7	90.00	800.1	-5,621.5	459.8	136.4	323.31	1.422	Level 3	
12,303.1	6,638.5	12,337.3	6,638.5	161.9	161.8	90.00	800.1	-5,624.6	459.8	136.3	323.48	1.421	Level 3	
12,400.0	6,638.3	12,434.2	6,638.4	164.6	164.5	90.00	800.1	-5,721.5	459.8	130.8	328.90	1.398	Level 3	
12,401.5	6,638.3	12,435.8	6,638.4	164.6	164.5	90.00	800.1	-5,723.0	459.8	130.8	328.99	1.397	Level 3	
12,500.0	6,638.2	12,534.2	6,638.2	167.4	167.3	90.00	800.0	-5,821.5	459.7	125.2	334.50	1.374	Level 3	
12,598.4	6,638.1	12,632.6	6,638.1	170.2	170.0	90.00	800.0	-5,919.9	459.7	119.7	340.01	1.352	Level 3	
12,600.0	6,638.1	12,634.2	6,638.1	170.2	170.1	90.00	800.0	-5,921.5	459.7	119.7	340.10	1.352	Level 3	
12,696.8	6,638.0	12,731.0	6,638.0	172.9	172.8	90.00	800.0	-6,018.3	459.7	114.2	345.52	1.331	Level 3	
12,700.0	6,638.0	12,734.2	6,638.0	173.0	172.9	90.00	800.0	-6,021.5	459.7	114.1	345.69	1.330	Level 3	
12,795.2	6,637.8	12,829.5	6,637.9	175.7	175.5	90.00	800.0	-6,116.7	459.7	108.7	351.03	1.310	Level 3	
12,800.0	6,637.8	12,834.2	6,637.9	175.8	175.7	90.00	800.0	-6,121.5	459.7	108.5	351.29	1.309	Level 3	
12,893.7	6,637.7	12,927.9	6,637.7	178.4	178.3	90.00	800.0	-6,215.2	459.7	103.2	356.54	1.289	Level 3	
12,900.0	6,637.7	12,934.2	6,637.7	178.6	178.5	90.00	800.0	-6,221.5	459.7	102.9	356.89	1.288	Level 3	
12,992.1	6,637.6	13,026.3	6,637.6	181.2	181.0	90.00	800.0	-6,313.6	459.7	97.7	362.05	1.270	Level 3	
13,000.0	6,637.6	13,034.2	6,637.6	181.4	181.3	90.00	800.0	-6,321.5	459.7	97.2	362.49	1.268	Level 3	
13,090.5	6,637.5	13,124.7	6,637.5	183.9	183.8	90.00	800.0	-6,412.0	459.7	92.2	367.56	1.251	Level 3	
13,100.0	6,637.5	13,134.2	6,637.5	184.2	184.1	90.00	800.0	-6,421.5	459.7	91.6	368.09	1.249	Level 2	
13,188.9	6,637.4	13,223.2	6,637.4	186.7	186.6	90.00	800.0	-6,510.4	459.7	86.7	373.08	1.232	Level 2	
13,200.0	6,637.3	13,234.2	6,637.3	187.0	186.9	90.00	800.0	-6,521.5	459.7	86.0	373.69	1.230	Level 2	
13,287.4	6,637.2	13,321.6	6,637.2	189.4	189.3	90.00	800.0	-6,608.9	459.7	81.1	378.59	1.214	Level 2	
13,300.0	6,637.2	13,334.2	6,637.2	189.8	189.7	90.00	800.0	-6,621.5	459.7	80.4	379.30	1.212	Level 2	
13,385.8	6,637.1	13,420.0	6,637.1	192.2	192.1	90.00	800.0	-6,707.3	459.7	75.6	384.10	1.197	Level 2	
13,400.0	6,637.1	13,434.2	6,637.1	192.6	192.5	90.00	800.0	-6,721.5	459.7	74.8	384.90	1.194	Level 2	
13,484.2	6,637.0	13,518.4	6,637.0	195.0	194.8	90.00	800.0	-6,805.7	459.7	70.1	389.62	1.180	Level 2	
13,500.0	6,637.0	13,534.2	6,637.0	195.4	195.3	90.00	800.0	-6,821.5	459.7	69.2	390.50	1.177	Level 2	
13,582.6	6,636.9	13,616.9	6,636.8	197.7	197.6	90.00	800.0	-6,904.1	459.7	64.6	395.13	1.163	Level 2	
13,600.0	6,636.8	13,634.2	6,636.8	198.2	198.1	90.00	800.0	-6,921.5	459.7	63.6	396.11	1.161	Level 2	
13,681.1	6,636.7	13,715.3	6,636.7	200.5	200.3	90.00	800.0	-7,002.6	459.7	59.1	400.65	1.147	Level 2	
13,700.0	6,636.7	13,734.2	6,636.7	201.0	200.9	90.00	800.0	-7,021.5	459.7	58.0	401.71	1.144	Level 2	
13,779.5	6,636.6	13,813.7	6,636.6	203.2	203.1	90.00	800.0	-7,101.0	459.7	53.6	406.17	1.132	Level 2	
13,800.0	6,636.6	13,834.2	6,636.6	203.8	203.7	90.00	800.0	-7,121.5	459.7	52.4	407.31	1.129	Level 2	
13,877.9	6,636.5	13,912.1	6,636.5	206.0	205.8	90.00	800.0	-7,199.4	459.7	48.0	411.68	1.117	Level 2	
13,900.0	6,636.5	13,934.2	6,636.4	206.6	206.5	90.00	800.0	-7,221.5	459.7	46.8	412.92	1.113	Level 2	
13,976.3	6,636.4	14,010.6	6,636.3	208.8	208.6	90.00	800.0	-7,297.8	459.7	42.5	417.20	1.102	Level 2	
14,000.0	6,636.3	14,034.2	6,636.3	209.4	209.3	90.00	800.0	-7,321.5	459.7	41.2	418.53	1.098	Level 2	
14,074.8	6,636.2	14,109.0	6,636.2	211.5	211.4	90.00	800.0	-7,396.3	459.7	37.0	422.72	1.088	Level 2	
14,100.0	6,636.2	14,134.2	6,636.2	212.2	212.1	90.00	800.0	-7,421.5	459.7	35.6	424.13	1.084	Level 2	
14,173.2	6,636.1	14,207.4	6,636.1	214.3	214.1	90.00	800.0	-7,494.7	459.7	31.5	428.24	1.074	Level 2	
14,200.0	6,636.1	14,234.2	6,636.0	215.0	214.9	90.00	800.0	-7,521.5	459.7	30.0	429.74	1.070	Level 2	
14,271.6	6,636.0	14,305.8	6,636.0	217.0	216.9	90.00	800.0	-7,593.1	459.7	26.0	433.75	1.060	Level 2	
14,300.0	6,636.0	14,334.2	6,635.9	217.8	217.7	89.99	800.0	-7,621.5	459.7	24.4	435.35	1.056	Level 2	
14,370.0	6,635.9	14,404.3	6,635.8	219.8	219.6	89.99	800.0	-7,691.5	459.7	20.4	439.27	1.047	Level 2	
14,400.0	6,635.8	14,434.2	6,635.8	220.6	220.5	89.99	800.0	-7,721.5	459.7	18.8	440.95	1.043	Level 2	
14,468.5	6,635.7	14,502.7	6,635.7	222.6	222.4	89.99	800.0	-7,790.0	459.7	14.9	444.79	1.034	Level 2	
14,500.0	6,635.7	14,534.2	6,635.7	223.4	223.3	89.99	800.0	-7,821.5	459.7	13.1	446.56	1.029	Level 2	
14,566.9	6,635.6	14,601.1	6,635.6	225.3	225.1	89.99	800.0	-7,888.4	459.7	9.4	450.31	1.021	Level 2	
14,600.0	6,635.6	14,634.2	6,635.5	226.2	226.1	89.99	800.0	-7,921.5	459.7	7.5	452.17	1.017	Level 2	
14,665.3	6,635.5	14,699.5	6,635.4	228.1	227.9	89.99	800.0	-7,986.8	459.7	3.9	455.83	1.008	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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,700.0	6,635.5	14,734.2	6,635.4	229.0	228.9	89.99	800.0	-8,021.5	459.7	1.9	457.78	1.004	Level 2
14,763.7	6,635.4	14,798.0	6,635.3	230.8	230.7	89.99	800.0	-8,085.2	459.7	-1.7	461.35	0.996	Level 1
14,800.0	6,635.3	14,834.2	6,635.3	231.8	231.7	89.99	800.0	-8,121.5	459.7	-3.7	463.39	0.992	Level 1
14,862.2	6,635.2	14,896.4	6,635.2	233.6	233.4	89.99	800.0	-8,183.7	459.7	-7.2	466.87	0.985	Level 1
14,900.0	6,635.2	14,934.2	6,635.1	234.7	234.5	89.99	800.0	-8,221.5	459.7	-9.3	468.99	0.980	Level 1
14,960.6	6,635.1	14,994.8	6,635.1	236.4	236.2	89.99	800.0	-8,282.1	459.7	-12.7	472.39	0.973	Level 1
14,995.1	6,635.0	15,029.4	6,635.0	237.3	237.1	90.00	800.0	-8,316.6	459.7	-14.6	474.33	0.969	Level 1, ES, SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	15.0				
98.4	98.4	98.4	98.4	0.1	0.1	-178.93	-14.9	-0.3	15.0	14.8	0.19	77.777	
100.0	100.0	100.0	100.0	0.1	0.1	-178.93	-14.9	-0.3	15.0	14.8	0.20	76.461	
196.8	196.8	196.8	196.8	0.3	0.3	-178.93	-14.9	-0.3	15.0	14.3	0.63	23.698	
200.0	200.0	200.0	200.0	0.3	0.3	-178.93	-14.9	-0.3	15.0	14.3	0.65	23.178	
295.3	295.3	295.3	295.3	0.5	0.5	-178.93	-14.9	-0.3	15.0	13.9	1.07	13.930	
300.0	300.0	300.0	300.0	0.5	0.5	-178.93	-14.9	-0.3	15.0	13.9	1.09	13.659	
393.7	393.7	393.7	393.7	0.8	0.8	-178.93	-14.9	-0.3	15.0	13.4	1.52	9.864	
400.0	400.0	400.0	400.0	0.8	0.8	-178.93	-14.9	-0.3	15.0	13.4	1.54	9.683	
492.1	492.1	492.1	492.1	1.0	1.0	-178.93	-14.9	-0.3	15.0	13.0	1.96	7.635	
500.0	500.0	500.0	500.0	1.0	1.0	-178.93	-14.9	-0.3	15.0	13.0	1.99	7.500	
590.5	590.5	590.5	590.5	1.2	1.2	-178.93	-14.9	-0.3	15.0	12.6	2.40	6.228	
600.0	600.0	600.0	600.0	1.2	1.2	-178.93	-14.9	-0.3	15.0	12.5	2.44	6.120	
689.0	689.0	689.0	689.0	1.4	1.4	-178.93	-14.9	-0.3	15.0	12.1	2.84	5.259	
700.0	700.0	700.0	700.0	1.4	1.4	-178.93	-14.9	-0.3	15.0	12.1	2.89	5.169	
787.4	787.4	787.4	787.4	1.6	1.6	-178.93	-14.9	-0.3	15.0	11.7	3.29	4.551	
800.0	800.0	800.0	800.0	1.7	1.7	-178.93	-14.9	-0.3	15.0	11.6	3.34	4.473	
885.8	885.8	885.8	885.8	1.9	1.9	-178.93	-14.9	-0.3	15.0	11.2	3.73	4.011	
900.0	900.0	900.0	900.0	1.9	1.9	-178.93	-14.9	-0.3	15.0	11.2	3.79	3.943	
984.2	984.2	984.2	984.2	2.1	2.1	-178.93	-14.9	-0.3	15.0	10.8	4.17	3.585	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-178.93	-14.9	-0.3	15.0	10.7	4.24	3.525	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-178.93	-14.9	-0.3	15.0	10.3	4.61	3.241	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-178.93	-14.9	-0.3	15.0	10.3	4.69	3.187	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	-178.93	-14.9	-0.3	15.0	9.9	5.06	2.958	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-178.93	-14.9	-0.3	15.0	9.8	5.14	2.909	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	-178.93	-14.9	-0.3	15.0	9.5	5.50	2.720	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-178.93	-14.9	-0.3	15.0	9.4	5.59	2.675 CC, ES	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	142.35	-14.9	-0.3	15.8	9.8	5.94	2.657	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	143.81	-14.9	-0.3	16.3	10.3	6.04	2.705	
1,476.4	1,476.3	1,476.3	1,476.3	3.2	3.2	153.21	-14.7	-1.3	19.4	13.0	6.36	3.046	
1,500.0	1,499.8	1,499.8	1,499.8	3.2	3.2	157.11	-14.5	-2.0	20.8	14.3	6.46	3.220	
1,574.8	1,574.4	1,574.0	1,573.9	3.4	3.4	169.63	-13.6	-5.4	27.4	20.6	6.78	4.043	
1,600.0	1,599.5	1,598.9	1,598.7	3.5	3.4	173.43	-13.2	-6.9	30.4	23.5	6.88	4.419	
1,673.2	1,672.2	1,670.7	1,670.3	3.6	3.6	-177.45	-11.7	-12.6	41.5	34.3	7.18	5.772	
1,700.0	1,698.7	1,696.7	1,696.2	3.7	3.7	-174.80	-11.0	-15.1	46.4	39.1	7.29	6.359	
1,771.6	1,769.5	1,765.8	1,764.8	3.9	3.8	-169.17	-9.0	-22.8	61.7	54.1	7.59	8.131	
1,800.0	1,797.5	1,792.8	1,791.6	4.0	3.9	-167.42	-8.0	-26.3	68.7	61.0	7.71	8.909	
1,870.1	1,866.3	1,858.9	1,856.9	4.2	4.1	-163.94	-5.5	-35.7	87.9	79.9	8.01	10.975	
1,899.9	1,895.6	1,886.7	1,884.3	4.3	4.1	-162.74	-4.4	-40.1	96.9	88.8	8.13	11.919	
1,968.5	1,962.6	1,949.8	1,946.5	4.5	4.3	-160.48	-1.4	-51.1	118.8	110.4	8.45	14.056	
2,000.0	1,993.4	1,978.6	1,974.7	4.6	4.4	-159.54	0.0	-56.6	129.3	120.7	8.60	15.031	
2,066.9	2,058.9	2,039.1	2,033.8	4.8	4.6	-157.74	3.3	-68.9	152.3	143.4	8.93	17.059	
2,100.0	2,091.3	2,068.7	2,062.6	4.9	4.7	-156.92	5.0	-75.4	164.1	155.0	9.09	18.056	
2,165.3	2,155.2	2,126.6	2,118.8	5.2	4.9	-155.42	8.6	-88.9	188.2	178.8	9.42	19.986	
2,200.0	2,189.1	2,156.9	2,148.1	5.3	5.0	-154.69	10.6	-96.4	201.4	191.8	9.59	20.992	
2,263.8	2,251.5	2,212.2	2,201.3	5.5	5.3	-153.41	14.4	-110.8	226.5	216.5	9.92	22.818	
2,300.0	2,286.9	2,243.2	2,231.0	5.7	5.4	-152.74	16.7	-119.3	241.1	231.0	10.11	23.838	
2,362.2	2,347.7	2,296.9	2,282.4	5.9	5.6	-151.62	20.8	-134.8	267.0	256.5	10.45	25.544	
2,400.0	2,384.7	2,331.1	2,315.0	6.0	5.8	-151.00	23.4	-144.8	282.9	272.2	10.66	26.527	
2,460.6	2,444.0	2,386.0	2,367.2	6.3	6.1	-150.13	27.7	-160.9	308.4	297.4	11.00	28.038	
2,500.0	2,482.5	2,421.6	2,401.2	6.4	6.3	-149.64	30.5	-171.3	325.0	313.8	11.22	28.971	
2,559.0	2,540.3	2,475.0	2,452.1	6.7	6.5	-148.99	34.6	-186.9	350.0	338.4	11.55	30.288	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,512.0	2,487.4	6.8	6.7	-148.59	37.5	-197.7	367.3	355.5	11.79	31.158	
2,657.5	2,636.5	2,564.0	2,536.9	7.1	7.0	-148.09	41.5	-212.9	391.6	379.5	12.12	32.309	
2,700.0	2,678.1	2,602.5	2,573.6	7.2	7.2	-147.75	44.5	-224.1	409.6	397.3	12.37	33.122	
2,755.9	2,732.8	2,653.0	2,621.8	7.5	7.5	-147.36	48.4	-238.9	433.3	420.6	12.70	34.130	
2,800.0	2,776.0	2,692.9	2,659.8	7.7	7.7	-147.07	51.5	-250.6	452.0	439.1	12.96	34.890	
2,854.3	2,829.1	2,742.1	2,706.7	7.9	8.0	-146.76	55.3	-264.9	475.1	461.8	13.28	35.776	
2,900.0	2,873.8	2,783.4	2,746.0	8.1	8.3	-146.51	58.5	-277.0	494.5	480.9	13.55	36.487	
2,952.7	2,925.4	2,831.1	2,791.5	8.3	8.5	-146.25	62.2	-290.9	516.9	503.0	13.87	37.267	
3,000.0	2,971.6	2,873.8	2,832.3	8.5	8.8	-146.04	65.6	-303.4	536.9	522.8	14.15	37.934	
3,051.2	3,021.6	2,920.1	2,876.4	8.7	9.1	-145.83	69.2	-317.0	558.7	544.2	14.47	38.621	
3,100.0	3,069.4	2,964.3	2,918.5	8.9	9.3	-145.64	72.6	-329.9	579.4	564.7	14.76	39.248	
3,149.6	3,117.9	3,009.1	2,961.2	9.1	9.6	-145.46	76.1	-343.0	600.5	585.5	15.07	39.856	
3,200.0	3,167.2	3,054.7	3,004.7	9.3	9.8	-145.29	79.6	-356.3	622.0	606.6	15.38	40.445	
3,248.0	3,214.2	3,098.2	3,046.1	9.5	10.1	-145.14	83.0	-369.0	642.4	626.7	15.67	40.983	
3,300.0	3,265.0	3,145.2	3,090.9	9.8	10.4	-144.98	86.6	-382.7	664.5	648.5	16.00	41.540	
3,346.4	3,310.5	3,187.2	3,130.9	10.0	10.6	-144.86	89.9	-395.0	684.3	668.0	16.29	42.016	
3,400.0	3,362.9	3,235.6	3,177.1	10.2	10.9	-144.72	93.6	-409.2	707.0	690.4	16.62	42.543	
3,444.9	3,406.7	3,276.2	3,215.8	10.4	11.2	-144.61	96.8	-421.0	726.1	709.2	16.90	42.965	
3,473.0	3,434.2	3,301.6	3,240.0	10.5	11.3	-144.54	98.8	-428.5	738.1	721.0	17.08	43.223	
3,500.0	3,460.7	3,326.1	3,263.4	10.6	11.5	-144.62	100.7	-435.6	749.5	732.2	17.26	43.420	
3,543.3	3,503.2	3,365.5	3,300.9	10.7	11.7	-144.72	103.7	-447.1	767.4	749.9	17.54	43.745	
3,600.0	3,559.0	3,417.4	3,350.4	10.9	12.0	-144.80	107.8	-462.3	790.1	772.2	17.91	44.115	
3,641.7	3,600.2	3,455.8	3,387.0	11.0	12.3	-144.82	110.7	-473.5	806.3	788.1	18.17	44.367	
3,700.0	3,657.9	3,509.7	3,438.4	11.2	12.6	-144.81	114.9	-489.3	828.1	809.5	18.54	44.670	
3,740.1	3,697.8	3,547.0	3,474.0	11.3	12.8	-144.78	117.8	-500.2	842.6	823.8	18.78	44.863	
3,800.0	3,757.3	3,602.9	3,527.2	11.4	13.2	-144.69	122.2	-516.5	863.5	844.3	19.14	45.110	
3,838.6	3,795.7	3,639.1	3,561.7	11.5	13.4	-144.61	125.0	-527.1	876.4	857.1	19.37	45.258	
3,900.0	3,857.0	3,696.9	3,616.8	11.7	13.8	-144.45	129.4	-544.0	896.3	876.6	19.72	45.457	
3,937.0	3,893.9	3,731.9	3,650.1	11.7	14.0	-144.32	132.2	-554.2	907.8	887.8	19.92	45.571	
4,000.0	3,956.9	3,791.6	3,707.0	11.8	14.4	-144.08	136.8	-571.6	926.5	906.2	20.26	45.732	
4,035.4	3,992.3	3,825.2	3,739.1	11.9	14.6	-143.92	139.4	-581.5	936.6	916.2	20.44	45.817	
4,072.9	4,029.8	3,860.9	3,773.1	11.9	14.8	-102.55	142.2	-591.9	946.9	922.0	24.98	37.909	
4,100.0	4,056.9	3,886.7	3,797.8	12.0	15.0	-102.33	144.2	-599.4	954.3	929.1	25.18	37.906	
4,133.8	4,090.7	3,919.0	3,828.5	12.0	15.2	-102.05	146.7	-608.9	963.5	938.1	25.43	37.894	
4,200.0	4,156.9	3,982.1	3,888.6	12.1	15.6	-101.53	151.6	-627.3	981.5	955.6	25.92	37.870	
4,232.3	4,189.2	4,012.8	3,917.9	12.2	15.8	-101.28	154.0	-636.3	990.4	964.2	26.16	37.858	
4,300.0	4,256.9	4,077.4	3,979.5	12.3	16.2	-100.77	159.0	-655.2	1,008.9	982.3	26.67	37.833	
4,330.7	4,287.6	4,106.6	4,007.4	12.4	16.3	-100.55	161.3	-663.7	1,017.4	990.5	26.90	37.822	
4,400.0	4,356.9	4,172.7	4,070.3	12.5	16.8	-100.06	166.4	-683.0	1,036.5	1,009.1	27.42	37.795	
4,429.1	4,386.0	4,200.5	4,096.8	12.5	16.9	-99.85	168.5	-691.1	1,044.6	1,016.9	27.65	37.784	
4,500.0	4,456.9	4,268.0	4,161.2	12.6	17.4	-99.37	173.8	-710.9	1,064.2	1,036.0	28.19	37.757	
4,527.5	4,484.4	4,294.3	4,186.2	12.7	17.5	-99.19	175.8	-718.6	1,071.9	1,043.5	28.40	37.746	
4,600.0	4,556.9	4,363.3	4,252.0	12.8	18.0	-98.73	181.2	-738.7	1,092.1	1,063.1	28.95	37.718	
4,626.0	4,582.9	4,388.1	4,275.6	12.9	18.1	-98.56	183.1	-746.0	1,099.3	1,070.2	29.15	37.708	
4,700.0	4,656.9	4,458.7	4,342.9	13.0	18.6	-98.11	188.6	-766.6	1,120.1	1,090.3	29.73	37.679	
4,724.4	4,681.3	4,481.9	4,365.1	13.0	18.7	-97.97	190.4	-773.4	1,126.9	1,097.0	29.92	37.669	
4,800.0	4,756.9	4,554.0	4,433.8	13.1	19.2	-97.53	196.0	-794.4	1,148.1	1,117.6	30.50	37.640	
4,822.8	4,779.7	4,575.7	4,454.5	13.2	19.3	-97.40	197.7	-800.8	1,154.6	1,123.9	30.68	37.631	
4,900.0	4,856.9	4,649.3	4,524.6	13.3	19.8	-96.97	203.4	-822.3	1,176.3	1,145.1	31.28	37.602	
4,921.2	4,878.1	4,669.5	4,543.9	13.4	19.9	-96.85	204.9	-828.2	1,182.3	1,150.9	31.45	37.594	
5,000.0	4,956.9	4,744.6	4,615.5	13.5	20.4	-96.44	210.8	-850.2	1,204.6	1,172.6	32.07	37.564	
5,019.7	4,976.6	4,763.4	4,633.3	13.5	20.5	-96.34	212.2	-855.6	1,210.2	1,178.0	32.22	37.557	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	4,839.9	4,706.3	13.7	21.0	-95.93	218.2	-878.0	1,233.0	1,200.2	32.86	37.527	
5,118.1	5,075.0	4,857.2	4,722.8	13.7	21.1	-95.84	219.5	-883.1	1,238.2	1,205.2	33.00	37.521	
5,200.0	5,156.9	4,935.2	4,797.2	13.8	21.6	-95.44	225.6	-905.9	1,261.5	1,227.8	33.65	37.491	
5,216.5	5,173.4	4,951.0	4,812.2	13.9	21.7	-95.37	226.8	-910.5	1,266.2	1,232.4	33.78	37.485	
5,300.0	5,256.9	5,030.6	4,888.0	14.0	22.2	-94.98	233.0	-933.7	1,290.1	1,255.6	34.44	37.456	
5,314.9	5,271.8	5,044.8	4,901.6	14.1	22.3	-94.91	234.1	-937.9	1,294.3	1,259.8	34.56	37.450	
5,400.0	5,356.9	7,909.3	6,626.1	14.2	39.1	165.31	278.4	314.0	1,270.9	1,239.7	31.15	40.793	
5,413.4	5,370.3	7,909.1	6,626.1	14.2	39.1	165.46	278.4	313.9	1,257.5	1,226.4	31.14	40.385	
5,500.0	5,456.9	7,908.0	6,626.2	14.4	39.1	166.42	278.4	312.8	1,171.0	1,140.0	31.04	37.728	
5,511.8	5,468.7	7,907.9	6,626.2	14.4	39.1	166.56	278.4	312.6	1,159.2	1,128.2	31.03	37.363	
5,600.0	5,556.9	7,906.8	6,626.2	14.6	39.1	167.55	278.4	311.5	1,071.2	1,040.2	30.94	34.624	
5,610.2	5,567.1	7,906.6	6,626.2	14.6	39.1	167.66	278.4	311.4	1,061.0	1,030.0	30.93	34.305	
5,700.0	5,656.9	7,905.5	6,626.2	14.7	39.0	168.68	278.4	310.2	971.4	940.5	30.85	31.484	
5,708.6	5,665.5	7,905.4	6,626.2	14.8	39.0	168.78	278.4	310.1	962.7	931.9	30.85	31.211	
5,800.0	5,756.9	7,904.2	6,626.2	14.9	39.0	169.82	278.4	308.9	871.6	840.8	30.79	28.311	
5,807.1	5,764.0	7,904.1	6,626.2	14.9	39.0	169.90	278.4	308.8	864.5	833.8	30.78	28.085	
5,900.0	5,856.9	7,902.9	6,626.2	15.1	39.0	170.97	278.4	307.6	771.9	741.2	30.74	25.109	
5,905.5	5,862.4	7,902.8	6,626.2	15.1	39.0	171.03	278.4	307.6	766.4	735.7	30.74	24.932	
5,971.9	5,928.8	7,902.0	6,626.2	15.3	39.0	171.80	278.4	306.7	700.2	669.5	30.72	22.791	
6,000.0	5,956.9	7,901.1	6,626.2	15.3	38.9	-119.32	278.4	305.8	672.3	622.8	49.52	13.577	
6,003.9	5,960.8	7,900.9	6,626.2	15.3	38.9	-121.68	278.4	305.6	668.4	619.5	48.88	13.675	
6,050.0	6,006.7	7,896.7	6,626.3	15.4	38.9	-140.55	278.4	301.5	622.7	580.3	42.39	14.689	
6,100.0	6,056.2	7,888.9	6,626.4	15.4	38.7	-150.30	278.4	293.7	573.6	535.1	38.52	14.891	
6,102.3	6,058.5	7,888.5	6,626.4	15.4	38.7	-150.61	278.4	293.2	571.3	532.9	38.40	14.879	
6,150.0	6,105.1	7,877.7	6,626.5	15.4	38.4	-155.32	278.4	282.4	525.2	488.6	36.55	14.369	
6,200.0	6,153.0	7,863.1	6,626.7	15.5	38.1	-158.10	278.4	267.8	477.8	442.3	35.44	13.480	
6,200.8	6,153.8	7,862.9	6,626.7	15.5	38.1	-158.13	278.4	267.6	477.0	441.6	35.43	13.464	
6,250.0	6,199.9	7,845.2	6,627.0	15.5	37.8	-159.62	278.4	250.0	431.5	396.8	34.73	12.425	
6,299.2	6,244.8	7,824.5	6,627.2	15.5	37.3	-160.31	278.4	229.2	387.4	353.2	34.21	11.325	
6,300.0	6,245.5	7,824.1	6,627.2	15.5	37.3	-160.32	278.4	228.8	386.7	352.5	34.20	11.307	
6,350.0	6,289.6	7,799.9	6,627.5	15.5	36.8	-160.40	278.4	204.6	343.6	309.9	33.77	10.175	
6,397.6	6,329.9	7,774.0	6,627.9	15.4	36.3	-159.98	278.4	178.8	304.4	271.0	33.43	9.105	
6,400.0	6,331.8	7,772.7	6,627.9	15.4	36.2	-159.95	278.4	177.4	302.5	269.1	33.42	9.052	
6,450.0	6,372.2	7,742.6	6,628.3	15.4	35.6	-158.97	278.4	147.3	263.5	230.4	33.13	7.954	
6,496.0	6,407.4	7,712.5	6,628.7	15.4	35.0	-157.55	278.4	117.3	229.8	196.8	32.97	6.970	
6,500.0	6,410.3	7,709.8	6,628.7	15.4	35.0	-157.41	278.4	114.6	227.0	194.0	32.96	6.887	
6,550.0	6,446.1	7,674.5	6,629.1	15.4	34.3	-155.16	278.4	79.2	193.2	160.2	33.00	5.856	
6,594.5	6,475.9	7,641.1	6,629.6	15.4	33.7	-152.44	278.4	45.8	165.7	132.4	33.30	4.977	
6,600.0	6,479.4	7,636.8	6,629.6	15.4	33.6	-152.04	278.4	41.5	162.5	129.1	33.36	4.871	
6,650.0	6,510.0	7,596.9	6,630.1	15.5	32.8	-147.80	278.4	1.6	135.2	100.9	34.22	3.950	
6,692.9	6,534.0	7,561.0	6,630.6	15.7	32.2	-143.02	278.4	-34.2	114.7	79.2	35.52	3.230	
6,700.0	6,537.8	7,554.9	6,630.7	15.7	32.1	-142.11	278.4	-40.3	111.6	75.8	35.79	3.119	
6,750.0	6,562.6	7,511.2	6,631.2	16.2	31.3	-134.62	278.4	-84.0	92.5	54.3	38.18	2.422	
6,791.3	6,580.8	7,473.9	6,631.7	16.6	30.7	-126.97	278.4	-121.3	80.2	39.5	40.68	1.971	
6,800.0	6,584.3	7,465.9	6,631.8	16.7	30.6	-125.20	278.4	-129.3	78.1	36.8	41.22	1.894	
6,850.0	6,602.9	7,419.3	6,632.4	17.3	29.8	-114.27	278.4	-176.0	68.6	24.4	44.21	1.552	
6,889.7	6,615.2	7,381.4	6,632.9	17.9	29.3	-105.32	278.4	-213.9	64.4	18.4	45.98	1.401 Level 3	
6,900.0	6,618.1	7,371.5	6,633.0	18.0	29.1	-103.09	278.4	-223.8	63.7	17.4	46.30	1.376 Level 3	
6,950.0	6,630.0	7,322.8	6,633.6	18.8	28.4	-93.31	278.4	-272.5	62.1	14.9	47.12	1.317 Level 3	
6,970.6	6,633.9	7,302.5	6,633.9	19.2	28.2	-90.00	278.4	-292.8	61.9	14.8	47.16	1.314 Level 3, SF	
6,988.2	6,636.8	7,285.1	6,634.1	19.5	27.9	-87.58	278.4	-310.1	62.0	14.9	47.14	1.315 Level 3	
7,000.0	6,638.5	7,273.4	6,634.3	19.7	27.8	-86.16	278.4	-321.8	62.1	15.0	47.10	1.318 Level 3	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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
7,050.0	6,643.5	7,223.6	6,634.9	20.6	27.2	-82.14	278.4	-371.6	62.5	15.6	46.96	1.332 Level 3	
7,086.6	6,644.9	7,187.4	6,634.8	21.3	26.8	-80.72	278.4	-407.8	62.8	15.8	47.02	1.335 Level 3	
7,097.8	6,645.0	7,176.4	6,634.4	21.5	26.7	-80.30	278.4	-418.9	62.8	15.8	47.04	1.336 Level 3	
7,100.0	6,645.0	7,174.2	6,634.3	21.6	26.7	-80.22	278.4	-421.0	62.9	15.8	47.04	1.336 Level 3	
7,185.0	6,644.9	7,091.3	6,625.8	23.3	26.0	-72.85	278.4	-503.4	64.9	18.5	46.43	1.398 Level 3	
7,200.0	6,644.9	7,077.0	6,623.3	23.6	25.8	-70.82	278.4	-517.5	65.7	19.6	46.07	1.426 Level 3	
7,283.4	6,644.8	7,000.0	6,605.4	25.4	25.3	-57.57	278.4	-592.4	74.5	32.0	42.49	1.752	
7,300.0	6,644.7	6,984.3	6,600.8	25.8	25.2	-54.63	278.4	-607.4	77.3	35.9	41.40	1.866	
7,381.9	6,644.6	6,913.6	6,575.9	27.7	24.9	-42.00	278.4	-673.5	97.2	61.3	35.97	2.704	
7,400.0	6,644.6	6,900.0	6,570.4	28.1	24.9	-39.82	278.4	-685.9	103.0	68.1	34.93	2.950	
7,480.3	6,644.5	6,836.0	6,541.2	30.0	24.7	-30.93	278.4	-742.9	134.1	103.6	30.49	4.398	
7,500.0	6,644.5	6,821.4	6,533.9	30.5	24.7	-29.23	278.4	-755.5	142.9	113.3	29.64	4.823	
7,578.7	6,644.4	6,766.8	6,504.1	32.4	24.7	-23.81	278.4	-801.3	182.5	155.5	27.04	6.748	
7,600.0	6,644.4	6,750.0	6,494.3	32.9	24.7	-22.41	278.4	-814.9	194.2	167.9	26.37	7.367	
7,677.1	6,644.3	6,700.0	6,463.1	34.8	24.7	-18.86	278.4	-854.0	240.0	215.1	24.90	9.636	
7,700.0	6,644.2	6,692.9	6,458.5	35.4	24.7	-18.42	278.4	-859.4	254.2	229.4	24.85	10.231	
7,775.6	6,644.1	6,650.0	6,429.3	37.3	24.8	-16.07	278.4	-890.8	304.2	280.1	24.10	12.620	
7,800.0	6,644.1	6,640.5	6,422.6	38.0	24.8	-15.60	278.4	-897.6	321.0	297.0	24.04	13.353	
7,874.0	6,644.0	6,600.0	6,393.0	39.9	24.9	-13.85	278.4	-925.2	374.0	350.4	23.64	15.820	
7,900.0	6,644.0	6,600.0	6,393.0	40.5	24.9	-13.85	278.4	-925.2	393.2	369.3	23.86	16.478	
7,972.4	6,643.9	6,565.4	6,366.5	42.4	24.9	-12.57	278.4	-947.5	448.1	424.4	23.73	18.884	
8,000.0	6,643.9	6,550.0	6,354.4	43.1	25.0	-12.06	278.4	-957.0	469.6	445.9	23.66	19.844	
8,070.8	6,643.8	6,529.7	6,338.2	45.0	25.0	-11.44	278.4	-969.1	525.7	501.8	23.89	22.011	
8,100.0	6,643.7	6,520.0	6,330.2	45.8	25.0	-11.16	278.4	-974.7	549.3	525.3	23.96	22.925	
8,169.3	6,643.7	6,500.0	6,313.7	47.6	25.1	-10.61	278.4	-986.0	606.2	582.0	24.21	25.044	
8,200.0	6,643.6	6,500.0	6,313.7	48.4	25.1	-10.61	278.4	-986.0	632.0	607.6	24.45	25.848	
8,267.7	6,643.5	6,470.7	6,288.9	50.2	25.2	-9.89	278.4	-1,001.6	689.1	664.5	24.58	28.036	
8,300.0	6,643.5	6,450.0	6,271.1	51.1	25.2	-9.43	278.4	-1,012.0	716.9	692.3	24.57	29.178	
8,366.1	6,643.4	6,450.0	6,271.1	52.9	25.2	-9.43	278.4	-1,012.0	773.9	748.8	25.09	30.847	
8,400.0	6,643.4	6,450.0	6,271.1	53.8	25.2	-9.43	278.4	-1,012.0	803.6	778.2	25.35	31.696	
8,464.5	6,643.3	6,424.3	6,248.5	55.5	25.3	-8.90	278.4	-1,024.3	860.2	834.7	25.55	33.663	
8,500.0	6,643.2	6,417.0	6,242.0	56.5	25.3	-8.75	278.4	-1,027.6	891.7	865.9	25.75	34.632	
8,563.0	6,643.2	6,400.0	6,226.7	58.2	25.4	-8.44	278.4	-1,035.1	948.0	921.9	26.06	36.384	
8,600.0	6,643.1	6,400.0	6,226.7	59.2	25.4	-8.44	278.4	-1,035.1	981.3	954.9	26.34	37.253	
8,661.4	6,643.0	6,400.0	6,226.7	60.8	25.4	-8.44	278.4	-1,035.1	1,037.0	1,010.2	26.82	38.670	
8,700.0	6,643.0	6,380.7	6,209.2	61.9	25.4	-8.10	278.4	-1,043.1	1,072.0	1,045.1	26.92	39.824	
8,759.8	6,642.9	6,371.3	6,200.5	63.5	25.4	-7.95	278.4	-1,046.9	1,126.7	1,099.4	27.29	41.291	
8,800.0	6,642.9	6,350.0	6,180.9	64.6	25.5	-7.62	278.4	-1,055.0	1,163.9	1,136.5	27.40	42.480	
8,858.2	6,642.8	6,350.0	6,180.9	66.2	25.5	-7.62	278.4	-1,055.0	1,217.5	1,189.6	27.85	43.721	
8,900.0	6,642.7	6,350.0	6,180.9	67.3	25.5	-7.62	278.4	-1,055.0	1,256.1	1,228.0	28.17	44.596	
8,956.7	6,642.7	6,350.0	6,180.9	68.9	25.5	-7.62	278.4	-1,055.0	1,308.9	1,280.3	28.60	45.760	
9,000.0	6,642.6	6,350.0	6,180.9	70.1	25.5	-7.62	278.4	-1,055.0	1,349.5	1,320.5	28.94	46.633	
9,055.1	6,642.5	6,331.8	6,163.8	71.6	25.5	-7.35	278.4	-1,061.4	1,400.9	1,371.7	29.20	47.984	
9,100.0	6,642.5	6,326.7	6,159.0	72.8	25.5	-7.28	278.4	-1,063.2	1,443.1	1,413.6	29.50	48.927	
9,153.5	6,642.4	6,320.9	6,153.5	74.3	25.5	-7.20	278.4	-1,065.1	1,493.6	1,463.7	29.86	50.026	
9,200.0	6,642.4	6,300.0	6,133.7	75.6	25.6	-6.92	278.4	-1,071.6	1,537.7	1,507.7	30.04	51.195	
9,251.9	6,642.3	6,300.0	6,133.7	77.0	25.6	-6.92	278.4	-1,071.6	1,586.8	1,556.3	30.43	52.138	
9,300.0	6,642.2	6,300.0	6,133.7	78.3	25.6	-6.92	278.4	-1,071.6	1,632.3	1,601.5	30.80	52.993	
9,350.4	6,642.2	6,300.0	6,133.7	79.7	25.6	-6.92	278.4	-1,071.6	1,680.2	1,649.0	31.19	53.871	
9,400.0	6,642.1	6,300.0	6,133.7	81.1	25.6	-6.92	278.4	-1,071.6	1,727.5	1,695.9	31.57	54.720	
9,448.8	6,642.0	6,300.0	6,133.7	82.4	25.6	-6.92	278.4	-1,071.6	1,774.1	1,742.2	31.95	55.536	
9,500.0	6,642.0	6,300.0	6,133.7	83.8	25.6	-6.92	278.4	-1,071.6	1,823.2	1,790.9	32.34	56.376	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,300.0	6,133.7	85.1	25.6	-6.92	278.4	-1,071.6	1,868.6	1,835.9	32.70	57.135		
9,600.0	6,641.9	6,280.9	6,115.5	86.6	25.6	-6.68	278.4	-1,077.1	1,919.0	1,886.1	32.95	58.248		
9,645.6	6,641.8	6,277.6	6,112.2	87.9	25.6	-6.64	278.4	-1,078.0	1,962.9	1,929.6	33.27	59.002		
9,700.0	6,641.7	6,273.7	6,108.5	89.4	25.6	-6.60	278.4	-1,079.1	2,015.2	1,981.6	33.65	59.882		
9,744.1	6,641.7	6,270.7	6,105.6	90.6	25.6	-6.56	278.4	-1,079.9	2,057.7	2,023.8	33.97	60.580		
9,800.0	6,641.6	6,250.0	6,085.5	92.1	25.7	-6.33	278.4	-1,085.0	2,112.0	2,077.7	34.23	61.699		
9,842.5	6,641.6	6,250.0	6,085.5	93.3	25.7	-6.33	278.4	-1,085.0	2,153.0	2,118.4	34.56	62.305		
9,900.0	6,641.5	6,250.0	6,085.5	94.9	25.7	-6.33	278.4	-1,085.0	2,208.5	2,173.5	35.00	63.108		
9,940.9	6,641.4	6,250.0	6,085.5	96.0	25.7	-6.33	278.4	-1,085.0	2,248.1	2,212.8	35.31	63.669		
10,000.0	6,641.4	6,250.0	6,085.5	97.7	25.7	-6.33	278.4	-1,085.0	2,305.4	2,269.6	35.76	64.463		
10,039.3	6,641.3	6,250.0	6,085.5	98.8	25.7	-6.33	278.4	-1,085.0	2,343.6	2,307.5	36.07	64.981		
10,100.0	6,641.2	6,250.0	6,085.5	100.4	25.7	-6.33	278.4	-1,085.0	2,402.5	2,366.0	36.53	65.766		
10,137.8	6,641.2	6,250.0	6,085.5	101.5	25.7	-6.33	278.4	-1,085.0	2,439.2	2,402.4	36.82	66.244		
10,200.0	6,641.1	6,250.0	6,085.5	103.2	25.7	-6.33	278.4	-1,085.0	2,499.8	2,462.5	37.30	67.019		
10,236.2	6,641.1	6,250.0	6,085.5	104.2	25.7	-6.33	278.4	-1,085.0	2,535.1	2,497.5	37.58	67.460		
10,300.0	6,641.0	6,250.0	6,085.5	106.0	25.7	-6.33	278.4	-1,085.0	2,597.4	2,559.3	38.07	68.225		
10,334.6	6,640.9	6,250.0	6,085.5	107.0	25.7	-6.33	278.4	-1,085.0	2,631.2	2,592.8	38.34	68.631		
10,400.0	6,640.9	6,250.0	6,085.5	108.8	25.7	-6.33	278.4	-1,085.0	2,695.1	2,656.2	38.84	69.385		
10,433.0	6,640.8	6,250.0	6,085.5	109.7	25.7	-6.33	278.4	-1,085.0	2,727.4	2,688.3	39.10	69.759		
10,500.0	6,640.7	6,250.0	6,085.5	111.6	25.7	-6.33	278.4	-1,085.0	2,793.0	2,753.3	39.61	70.504		
10,531.5	6,640.7	6,228.9	6,065.0	112.4	25.7	-6.11	278.4	-1,089.6	2,823.4	2,783.7	39.67	71.169		
10,600.0	6,640.6	6,226.1	6,062.2	114.3	25.7	-6.08	278.4	-1,090.1	2,890.5	2,850.3	40.18	71.947		
10,629.9	6,640.6	6,224.9	6,061.1	115.2	25.7	-6.06	278.4	-1,090.4	2,919.8	2,879.4	40.40	72.280		
10,700.0	6,640.5	6,222.2	6,058.4	117.1	25.7	-6.04	278.4	-1,090.9	2,988.5	2,947.6	40.91	73.047		
10,728.3	6,640.4	6,221.2	6,057.4	117.9	25.7	-6.03	278.4	-1,091.1	3,016.2	2,975.1	41.12	73.351		
10,800.0	6,640.4	6,200.0	6,036.5	119.9	25.7	-5.82	278.4	-1,094.9	3,086.9	3,045.4	41.50	74.388		
10,826.7	6,640.3	6,200.0	6,036.5	120.7	25.7	-5.82	278.4	-1,094.9	3,113.1	3,071.4	41.70	74.651		
10,900.0	6,640.2	6,200.0	6,036.5	122.7	25.7	-5.82	278.4	-1,094.9	3,184.9	3,142.7	42.26	75.359		
10,925.2	6,640.2	6,200.0	6,036.5	123.4	25.7	-5.82	278.4	-1,094.9	3,209.6	3,167.2	42.46	75.598		
11,000.0	6,640.1	6,200.0	6,036.5	125.5	25.7	-5.82	278.4	-1,094.9	3,283.1	3,240.1	43.03	76.297		
11,023.6	6,640.1	6,200.0	6,036.5	126.1	25.7	-5.82	278.4	-1,094.9	3,306.3	3,263.1	43.21	76.514		
11,100.0	6,640.0	6,200.0	6,036.5	128.3	25.7	-5.82	278.4	-1,094.9	3,381.4	3,337.6	43.80	77.204		
11,122.0	6,639.9	6,200.0	6,036.5	128.9	25.7	-5.82	278.4	-1,094.9	3,403.1	3,359.1	43.97	77.400		
11,200.0	6,639.8	6,200.0	6,036.5	131.1	25.7	-5.82	278.4	-1,094.9	3,479.8	3,435.3	44.57	78.081		
11,220.4	6,639.8	6,200.0	6,036.5	131.6	25.7	-5.82	278.4	-1,094.9	3,500.0	3,455.3	44.72	78.257		
11,300.0	6,639.7	6,200.0	6,036.5	133.9	25.7	-5.82	278.4	-1,094.9	3,578.3	3,533.0	45.34	78.929		
11,318.9	6,639.7	6,200.0	6,036.5	134.4	25.7	-5.82	278.4	-1,094.9	3,596.9	3,551.5	45.48	79.086		
11,400.0	6,639.6	6,200.0	6,036.5	136.7	25.7	-5.82	278.4	-1,094.9	3,676.9	3,630.8	46.11	79.750		
11,417.3	6,639.6	6,200.0	6,036.5	137.1	25.7	-5.82	278.4	-1,094.9	3,694.0	3,647.7	46.24	79.889		
11,500.0	6,639.5	6,200.0	6,036.5	139.4	25.7	-5.82	278.4	-1,094.9	3,775.6	3,728.7	46.88	80.545		
11,515.7	6,639.5	6,200.0	6,036.5	139.9	25.7	-5.82	278.4	-1,094.9	3,791.1	3,744.1	47.00	80.667		
11,600.0	6,639.3	6,200.0	6,036.5	142.2	25.7	-5.82	278.4	-1,094.9	3,874.3	3,826.6	47.65	81.314		
11,614.1	6,639.3	6,200.0	6,036.5	142.6	25.7	-5.82	278.4	-1,094.9	3,888.2	3,840.5	47.75	81.421		
11,700.0	6,639.2	6,200.0	6,036.5	145.0	25.7	-5.82	278.4	-1,094.9	3,973.1	3,924.6	48.42	82.060		
11,712.6	6,639.2	6,200.0	6,036.5	145.4	25.7	-5.82	278.4	-1,094.9	3,985.5	3,937.0	48.51	82.152		
11,800.0	6,639.1	6,200.0	6,036.5	147.8	25.7	-5.82	278.4	-1,094.9	4,071.9	4,022.7	49.19	82.783		
11,811.0	6,639.1	6,200.0	6,036.5	148.1	25.7	-5.82	278.4	-1,094.9	4,082.8	4,033.5	49.27	82.861		
11,900.0	6,639.0	6,200.0	6,036.5	150.6	25.7	-5.82	278.4	-1,094.9	4,170.8	4,120.8	49.96	83.484		
11,909.4	6,639.0	6,200.0	6,036.5	150.9	25.7	-5.82	278.4	-1,094.9	4,180.1	4,130.1	50.03	83.549		
12,000.0	6,638.8	6,200.0	6,036.5	153.4	25.7	-5.82	278.4	-1,094.9	4,269.7	4,219.0	50.73	84.164		
12,007.8	6,638.8	6,200.0	6,036.5	153.6	25.7	-5.82	278.4	-1,094.9	4,277.5	4,226.7	50.79	84.217		
12,100.0	6,638.7	6,200.0	6,036.5	156.2	25.7	-5.82	278.4	-1,094.9	4,368.7	4,317.2	51.50	84.824		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,200.0	6,036.5	156.4	25.7	-5.82	278.4	-1,094.9	4,374.9	4,323.4	51.55	84.865	
12,200.0	6,638.6	6,200.0	6,036.5	159.0	25.7	-5.82	278.4	-1,094.9	4,467.8	4,415.5	52.28	85.465	
12,204.7	6,638.6	6,200.0	6,036.5	159.1	25.7	-5.82	278.4	-1,094.9	4,472.4	4,420.1	52.31	85.495	
12,300.0	6,638.5	6,200.0	6,036.5	161.8	25.7	-5.82	278.4	-1,094.9	4,566.9	4,513.8	53.05	86.088	
12,303.1	6,638.5	6,200.0	6,036.5	161.9	25.7	-5.82	278.4	-1,094.9	4,569.9	4,516.9	53.07	86.107	
12,400.0	6,638.3	6,177.9	6,014.6	164.6	25.7	-5.62	278.4	-1,098.2	4,665.6	4,612.0	53.60	87.045	
12,401.5	6,638.3	6,177.8	6,014.6	164.6	25.7	-5.62	278.4	-1,098.2	4,667.1	4,613.5	53.61	87.054	
12,500.0	6,638.2	6,176.1	6,012.9	167.4	25.7	-5.60	278.4	-1,098.4	4,764.7	4,710.3	54.35	87.662	
12,598.4	6,638.1	6,174.4	6,011.2	170.2	25.7	-5.59	278.4	-1,098.6	4,862.2	4,807.1	55.09	88.252	
12,600.0	6,638.1	6,174.4	6,011.2	170.2	25.7	-5.59	278.4	-1,098.6	4,863.8	4,808.7	55.11	88.262	
12,696.8	6,638.0	6,172.8	6,009.6	172.9	25.7	-5.58	278.4	-1,098.8	4,959.8	4,904.0	55.84	88.827	
12,700.0	6,638.0	6,172.7	6,009.6	173.0	25.7	-5.58	278.4	-1,098.8	4,963.0	4,907.1	55.86	88.845	
12,795.2	6,637.8	6,150.0	5,987.0	175.7	25.7	-5.39	278.4	-1,101.4	5,057.8	5,001.4	56.38	89.712	
12,800.0	6,637.8	6,150.0	5,987.0	175.8	25.7	-5.39	278.4	-1,101.4	5,062.5	5,006.1	56.41	89.738	
12,893.7	6,637.7	6,150.0	5,987.0	178.4	25.7	-5.39	278.4	-1,101.4	5,155.4	5,098.3	57.13	90.235	
12,900.0	6,637.7	6,150.0	5,987.0	178.6	25.7	-5.39	278.4	-1,101.4	5,161.7	5,104.5	57.18	90.268	
12,992.1	6,637.6	6,150.0	5,987.0	181.2	25.7	-5.39	278.4	-1,101.4	5,253.0	5,195.1	57.89	90.743	
13,000.0	6,637.6	6,150.0	5,987.0	181.4	25.7	-5.39	278.4	-1,101.4	5,260.9	5,202.9	57.95	90.784	
13,090.5	6,637.5	6,150.0	5,987.0	183.9	25.7	-5.39	278.4	-1,101.4	5,350.7	5,292.0	58.64	91.239	
13,100.0	6,637.5	6,150.0	5,987.0	184.2	25.7	-5.39	278.4	-1,101.4	5,360.1	5,301.4	58.72	91.286	
13,188.9	6,637.4	6,150.0	5,987.0	186.7	25.7	-5.39	278.4	-1,101.4	5,448.4	5,389.0	59.40	91.723	
13,200.0	6,637.3	6,150.0	5,987.0	187.0	25.7	-5.39	278.4	-1,101.4	5,459.3	5,399.8	59.49	91.776	
13,287.4	6,637.2	6,150.0	5,987.0	189.4	25.7	-5.39	278.4	-1,101.4	5,546.1	5,485.9	60.16	92.194	
13,300.0	6,637.2	6,150.0	5,987.0	189.8	25.7	-5.39	278.4	-1,101.4	5,558.6	5,498.4	60.25	92.254	
13,385.8	6,637.1	6,150.0	5,987.0	192.2	25.7	-5.39	278.4	-1,101.4	5,643.8	5,582.9	60.91	92.654	
13,400.0	6,637.1	6,150.0	5,987.0	192.6	25.7	-5.39	278.4	-1,101.4	5,657.9	5,596.9	61.02	92.719	
13,484.2	6,637.0	6,150.0	5,987.0	195.0	25.7	-5.39	278.4	-1,101.4	5,741.6	5,679.9	61.67	93.103	
13,500.0	6,637.0	6,150.0	5,987.0	195.4	25.7	-5.39	278.4	-1,101.4	5,757.2	5,695.5	61.79	93.173	
13,582.6	6,636.9	6,150.0	5,987.0	197.7	25.7	-5.39	278.4	-1,101.4	5,839.4	5,776.9	62.43	93.540	
13,600.0	6,636.8	6,150.0	5,987.0	198.2	25.7	-5.39	278.4	-1,101.4	5,856.6	5,794.0	62.56	93.617	
13,681.1	6,636.7	6,150.0	5,987.0	200.5	25.7	-5.39	278.4	-1,101.4	5,937.2	5,874.0	63.18	93.968	
13,700.0	6,636.7	6,150.0	5,987.0	201.0	25.7	-5.39	278.4	-1,101.4	5,956.0	5,892.6	63.33	94.049	
13,779.5	6,636.6	6,150.0	5,987.0	203.2	25.7	-5.39	278.4	-1,101.4	6,035.0	5,971.0	63.94	94.386	
13,800.0	6,636.6	6,150.0	5,987.0	203.8	25.7	-5.39	278.4	-1,101.4	6,055.4	5,991.3	64.10	94.471	
13,877.9	6,636.5	6,150.0	5,987.0	206.0	25.7	-5.39	278.4	-1,101.4	6,132.8	6,068.1	64.70	94.793	
13,900.0	6,636.5	6,150.0	5,987.0	206.6	25.7	-5.39	278.4	-1,101.4	6,154.8	6,089.9	64.87	94.884	
13,976.3	6,636.4	6,150.0	5,987.0	208.8	25.7	-5.39	278.4	-1,101.4	6,230.7	6,165.2	65.45	95.192	
14,000.0	6,636.3	6,150.0	5,987.0	209.4	25.7	-5.39	278.4	-1,101.4	6,254.2	6,188.6	65.64	95.286	
14,074.8	6,636.2	6,150.0	5,987.0	211.5	25.7	-5.39	278.4	-1,101.4	6,328.6	6,262.4	66.21	95.581	
14,100.0	6,636.2	6,150.0	5,987.0	212.2	25.7	-5.39	278.4	-1,101.4	6,353.7	6,287.3	66.41	95.680	
14,173.2	6,636.1	6,150.0	5,987.0	214.3	25.7	-5.39	278.4	-1,101.4	6,426.5	6,359.5	66.97	95.962	
14,200.0	6,636.1	6,150.0	5,987.0	215.0	25.7	-5.39	278.4	-1,101.4	6,453.1	6,386.0	67.18	96.064	
14,271.6	6,636.0	6,150.0	5,987.0	217.0	25.7	-5.39	278.4	-1,101.4	6,524.4	6,456.7	67.73	96.334	
14,300.0	6,636.0	6,150.0	5,987.0	217.8	25.7	-5.39	278.4	-1,101.4	6,552.6	6,484.7	67.94	96.440	
14,370.0	6,635.9	6,150.0	5,987.0	219.8	25.7	-5.39	278.4	-1,101.4	6,622.3	6,553.8	68.48	96.698	
14,400.0	6,635.8	6,150.0	5,987.0	220.6	25.7	-5.39	278.4	-1,101.4	6,652.1	6,583.4	68.71	96.808	
14,468.5	6,635.7	6,150.0	5,987.0	222.6	25.7	-5.39	278.4	-1,101.4	6,720.2	6,651.0	69.24	97.055	
14,500.0	6,635.7	6,150.0	5,987.0	223.4	25.7	-5.39	278.4	-1,101.4	6,751.6	6,682.1	69.48	97.167	
14,566.9	6,635.6	6,150.0	5,987.0	225.3	25.7	-5.39	278.4	-1,101.4	6,818.2	6,748.2	70.00	97.403	
14,600.0	6,635.6	6,150.0	5,987.0	226.2	25.7	-5.39	278.4	-1,101.4	6,851.2	6,780.9	70.25	97.519	
14,665.3	6,635.5	6,150.0	5,987.0	228.1	25.7	-5.39	278.4	-1,101.4	6,916.2	6,845.4	70.76	97.744	
14,700.0	6,635.5	6,150.0	5,987.0	229.0	25.7	-5.39	278.4	-1,101.4	6,950.7	6,879.7	71.03	97.863	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.4	6,150.0	5,987.0	230.8	25.7	-5.39	278.4	-1,101.4	7,014.2	6,942.6	71.52	98.078	
14,800.0	6,635.3	6,150.0	5,987.0	231.8	25.7	-5.39	278.4	-1,101.4	7,050.2	6,978.5	71.80	98.199	
14,862.2	6,635.2	6,150.0	5,987.0	233.6	25.7	-5.39	278.4	-1,101.4	7,112.2	7,039.9	72.27	98.405	
14,900.0	6,635.2	6,150.0	5,987.0	234.7	25.7	-5.39	278.4	-1,101.4	7,149.8	7,077.2	72.57	98.529	
14,960.6	6,635.1	6,150.0	5,987.0	236.4	25.7	-5.39	278.4	-1,101.4	7,210.2	7,137.1	73.03	98.725	
14,995.1	6,635.0	6,150.0	5,987.0	237.3	25.7	-5.39	278.4	-1,101.4	7,244.5	7,171.2	73.30	98.835	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	77.721	
100.0	100.0	100.0	100.0	0.1	0.1	0.00	14.9	0.0	14.9	14.7	0.20	76.406	
196.8	196.8	196.8	196.8	0.3	0.3	0.00	14.9	0.0	14.9	14.3	0.63	23.681	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	14.9	0.0	14.9	14.3	0.65	23.161	
295.3	295.3	295.3	295.3	0.5	0.5	0.00	14.9	0.0	14.9	13.9	1.07	13.920	
300.0	300.0	300.0	300.0	0.5	0.5	0.00	14.9	0.0	14.9	13.8	1.09	13.649	
393.7	393.7	393.7	393.7	0.8	0.8	0.00	14.9	0.0	14.9	13.4	1.52	9.857	
400.0	400.0	400.0	400.0	0.8	0.8	0.00	14.9	0.0	14.9	13.4	1.54	9.676	
492.1	492.1	492.1	492.1	1.0	1.0	0.00	14.9	0.0	14.9	13.0	1.96	7.630	
500.0	500.0	500.0	500.0	1.0	1.0	0.00	14.9	0.0	14.9	12.9	1.99	7.494	
590.5	590.5	590.5	590.5	1.2	1.2	0.00	14.9	0.0	14.9	12.5	2.40	6.223	
600.0	600.0	600.0	600.0	1.2	1.2	0.00	14.9	0.0	14.9	12.5	2.44	6.115	
689.0	689.0	689.0	689.0	1.4	1.4	0.00	14.9	0.0	14.9	12.1	2.84	5.255	
700.0	700.0	700.0	700.0	1.4	1.4	0.00	14.9	0.0	14.9	12.0	2.89	5.165	
787.4	787.4	787.4	787.4	1.6	1.6	0.00	14.9	0.0	14.9	11.7	3.29	4.547	
800.0	800.0	800.0	800.0	1.7	1.7	0.00	14.9	0.0	14.9	11.6	3.34	4.470	
885.8	885.8	885.8	885.8	1.9	1.9	0.00	14.9	0.0	14.9	11.2	3.73	4.008	
900.0	900.0	900.0	900.0	1.9	1.9	0.00	14.9	0.0	14.9	11.1	3.79	3.940	
984.2	984.2	984.2	984.2	2.1	2.1	0.00	14.9	0.0	14.9	10.8	4.17	3.582	
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	3.523	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	0.00	14.9	0.0	14.9	10.3	4.61	3.239	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	0.00	14.9	0.0	14.9	10.3	4.69	3.185	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	0.00	14.9	0.0	14.9	9.9	5.06	2.955	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.00	14.9	0.0	14.9	9.8	5.14	2.907 CC, ES	
1,279.5	1,279.5	1,279.3	1,279.3	2.7	2.7	-3.71	15.4	-1.0	15.4	9.9	5.49	2.810 SF	
1,300.0	1,300.0	1,299.7	1,299.7	2.8	2.8	-5.76	15.7	-1.6	15.7	10.2	5.58	2.820	
1,377.9	1,377.9	1,377.3	1,377.2	3.0	3.0	-60.25	17.2	-5.0	17.4	11.5	5.92	2.937	
1,400.0	1,400.0	1,399.2	1,399.0	3.0	3.0	-65.40	17.8	-6.3	18.1	12.1	6.02	3.013	
1,476.4	1,476.3	1,474.7	1,474.3	3.2	3.2	-84.51	20.4	-12.0	22.6	16.3	6.35	3.564	
1,500.0	1,499.8	1,497.9	1,497.4	3.2	3.2	-90.01	21.4	-14.1	24.8	18.3	6.45	3.843	
1,574.8	1,574.4	1,571.0	1,570.0	3.4	3.4	-104.27	24.9	-21.8	34.3	27.5	6.78	5.056	
1,600.0	1,599.5	1,595.4	1,594.2	3.5	3.5	-107.97	26.2	-24.8	38.3	31.5	6.89	5.567	
1,673.2	1,672.2	1,665.9	1,663.8	3.6	3.6	-116.14	30.6	-34.4	52.5	45.3	7.21	7.286	
1,700.0	1,698.7	1,691.4	1,689.0	3.7	3.7	-118.38	32.4	-38.2	58.6	51.2	7.33	7.991	
1,771.6	1,769.5	1,758.9	1,755.4	3.9	3.9	-123.00	37.5	-49.5	76.7	69.1	7.65	10.026	
1,800.0	1,797.5	1,785.3	1,781.2	4.0	4.0	-124.40	39.7	-54.2	84.7	77.0	7.78	10.889	
1,870.1	1,866.3	1,849.8	1,844.2	4.2	4.2	-127.13	45.4	-66.8	106.4	98.2	8.11	13.112	
1,899.9	1,895.6	1,876.9	1,870.6	4.3	4.3	-128.05	48.0	-72.4	116.4	108.1	8.25	14.104	
1,968.5	1,962.6	1,938.4	1,930.2	4.5	4.6	-129.89	54.2	-86.1	140.5	131.9	8.59	16.353	
2,000.0	1,993.4	1,966.4	1,957.3	4.6	4.7	-130.47	57.2	-92.7	152.1	143.4	8.75	17.376	
2,066.9	2,058.9	2,025.2	2,013.8	4.8	4.9	-131.30	63.9	-107.4	177.5	168.4	9.11	19.500	
2,100.0	2,091.3	2,053.9	2,041.3	4.9	5.1	-131.56	67.3	-115.0	190.5	181.3	9.28	20.532	
2,165.3	2,155.2	2,113.0	2,097.8	5.2	5.3	-131.93	74.6	-130.9	216.7	207.1	9.64	22.479	
2,200.0	2,189.1	2,144.8	2,128.1	5.3	5.5	-132.10	78.6	-139.6	230.6	220.8	9.84	23.445	
2,263.8	2,251.5	2,203.2	2,183.8	5.5	5.8	-132.36	85.8	-155.4	256.2	246.0	10.19	25.130	
2,300.0	2,286.9	2,236.4	2,215.5	5.7	6.0	-132.48	89.9	-164.4	270.7	260.3	10.40	26.023	
2,362.2	2,347.7	2,293.3	2,269.9	5.9	6.3	-132.66	96.9	-179.8	295.6	284.9	10.76	27.466	
2,400.0	2,384.7	2,328.0	2,302.9	6.0	6.5	-132.76	101.2	-189.2	310.8	299.8	10.99	28.288	
2,460.6	2,444.0	2,383.5	2,356.0	6.3	6.8	-132.90	108.1	-204.3	335.1	323.8	11.35	29.528	
2,500.0	2,482.5	2,419.6	2,390.4	6.4	7.0	-132.98	112.5	-214.0	350.9	339.3	11.59	30.288	
2,559.0	2,540.3	2,473.7	2,442.0	6.7	7.3	-133.09	119.2	-228.7	374.6	362.7	11.95	31.356	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,511.2	2,477.8	6.8	7.5	-133.15	123.8	-238.9	391.0	378.8	12.20	32.058	
2,657.5	2,636.5	2,563.8	2,528.1	7.1	7.8	-133.24	130.3	-253.1	414.1	401.5	12.56	32.982	
2,700.0	2,678.1	2,602.8	2,565.3	7.2	8.0	-133.29	135.2	-263.7	431.2	418.3	12.82	33.633	
2,755.9	2,732.8	2,654.0	2,614.1	7.5	8.3	-133.36	141.5	-277.6	453.6	440.4	13.17	34.434	
2,800.0	2,776.0	2,694.4	2,652.7	7.7	8.5	-133.41	146.5	-288.5	471.3	457.8	13.45	35.037	
2,854.3	2,829.1	2,744.1	2,700.2	7.9	8.8	-133.47	152.6	-302.0	493.1	479.3	13.80	35.736	
2,900.0	2,873.8	2,785.9	2,740.1	8.1	9.1	-133.51	157.8	-313.4	511.4	497.3	14.09	36.295	
2,952.7	2,925.4	2,834.3	2,786.2	8.3	9.4	-133.56	163.8	-326.5	532.6	518.1	14.43	36.906	
3,000.0	2,971.6	2,877.5	2,827.6	8.5	9.6	-133.59	169.1	-338.2	551.5	536.8	14.74	37.428	
3,051.2	3,021.6	2,924.4	2,872.3	8.7	9.9	-133.63	174.9	-350.9	572.1	557.0	15.07	37.963	
3,100.0	3,069.4	2,969.1	2,915.0	8.9	10.2	-133.67	180.4	-363.0	591.6	576.3	15.39	38.450	
3,149.6	3,117.9	3,014.6	2,958.4	9.1	10.4	-133.70	186.0	-375.3	611.5	595.8	15.71	38.921	
3,200.0	3,167.2	3,060.7	3,002.4	9.3	10.7	-133.73	191.7	-387.9	631.8	615.7	16.04	39.377	
3,248.0	3,214.2	3,104.7	3,044.4	9.5	11.0	-133.76	197.2	-399.8	651.0	634.7	16.36	39.791	
3,300.0	3,265.0	3,152.3	3,089.9	9.8	11.3	-133.79	203.1	-412.7	671.9	655.2	16.71	40.219	
3,346.4	3,310.5	3,194.9	3,130.5	10.0	11.5	-133.81	208.3	-424.2	690.5	673.5	17.01	40.585	
3,400.0	3,362.9	3,243.9	3,177.3	10.2	11.8	-133.84	214.4	-437.5	712.0	694.6	17.37	40.988	
3,444.9	3,406.7	3,285.0	3,216.5	10.4	12.1	-133.86	219.5	-448.7	730.0	712.3	17.67	41.312	
3,473.0	3,434.2	3,310.8	3,241.1	10.5	12.2	-133.87	222.6	-455.6	741.3	723.4	17.86	41.508	
3,500.0	3,460.7	3,335.6	3,264.8	10.6	12.4	-134.04	225.7	-462.3	752.1	734.0	18.05	41.657	
3,543.3	3,503.2	3,375.4	3,302.8	10.7	12.6	-134.28	230.6	-473.2	769.0	750.6	18.35	41.914	
3,600.0	3,559.0	3,427.9	3,352.9	10.9	12.9	-134.53	237.1	-487.4	790.5	771.7	18.73	42.205	
3,641.7	3,600.2	3,466.6	3,389.9	11.0	13.2	-134.66	241.9	-497.9	805.8	786.8	19.00	42.407	
3,700.0	3,657.9	3,521.0	3,441.8	11.2	13.5	-134.79	248.6	-512.6	826.6	807.2	19.38	42.650	
3,740.1	3,697.8	3,558.6	3,477.7	11.3	13.7	-134.84	253.3	-522.8	840.5	820.8	19.63	42.812	
3,800.0	3,757.3	3,614.9	3,531.5	11.4	14.1	-134.86	260.2	-538.1	860.5	840.5	20.00	43.017	
3,838.6	3,795.7	3,651.3	3,566.2	11.5	14.3	-134.84	264.7	-547.9	872.9	852.7	20.23	43.147	
3,900.0	3,857.0	3,709.4	3,621.7	11.7	14.7	-134.76	271.9	-563.7	892.1	871.5	20.59	43.324	
3,937.0	3,893.9	3,744.5	3,655.2	11.7	14.9	-134.68	276.2	-573.2	903.2	882.4	20.80	43.431	
4,000.0	3,956.9	3,804.4	3,712.3	11.8	15.3	-134.50	283.7	-589.4	921.4	900.3	21.14	43.587	
4,035.4	3,992.3	3,838.2	3,744.6	11.9	15.5	-134.38	287.8	-598.6	931.3	910.0	21.32	43.675	
4,072.9	4,029.8	3,873.9	3,778.7	11.9	15.7	-93.04	292.2	-608.3	941.5	916.1	25.32	37.179	
4,100.0	4,056.9	3,899.8	3,803.4	12.0	15.8	-92.81	295.4	-615.3	948.7	923.2	25.52	37.176	
4,133.8	4,090.7	3,932.1	3,834.2	12.0	16.0	-92.54	299.4	-624.1	957.8	932.0	25.77	37.163	
4,200.0	4,156.9	3,995.2	3,894.5	12.1	16.4	-92.02	307.2	-641.2	975.5	949.2	26.27	37.139	
4,232.3	4,189.2	4,026.1	3,923.9	12.2	16.6	-91.77	311.0	-649.5	984.2	957.7	26.51	37.126	
4,300.0	4,256.9	4,090.7	3,985.6	12.3	17.0	-91.26	319.0	-667.1	1,002.5	975.5	27.02	37.101	
4,330.7	4,287.6	4,120.0	4,013.6	12.4	17.2	-91.04	322.7	-675.0	1,010.8	983.5	27.25	37.089	
4,400.0	4,356.9	4,186.2	4,076.8	12.5	17.6	-90.55	330.8	-692.9	1,029.6	1,001.8	27.78	37.063	
4,429.1	4,386.0	4,214.0	4,103.3	12.5	17.8	-90.35	334.3	-700.5	1,037.5	1,009.5	28.00	37.052	
4,500.0	4,456.9	4,281.6	4,167.9	12.6	18.2	-89.87	342.6	-718.8	1,056.9	1,028.3	28.54	37.026	
4,527.5	4,484.4	4,307.9	4,193.0	12.7	18.4	-89.69	345.9	-725.9	1,064.4	1,035.7	28.76	37.015	
4,600.0	4,556.9	4,377.1	4,259.0	12.8	18.8	-89.22	354.4	-744.7	1,084.3	1,055.0	29.31	36.988	
4,626.0	4,582.9	4,401.9	4,282.7	12.9	19.0	-89.06	357.5	-751.4	1,091.4	1,061.9	29.52	36.979	
4,700.0	4,656.9	4,472.5	4,350.1	13.0	19.4	-88.61	366.2	-770.6	1,111.8	1,081.7	30.09	36.952	
4,724.4	4,681.3	4,495.8	4,372.4	13.0	19.6	-88.47	369.1	-776.9	1,118.6	1,088.3	30.28	36.943	
4,800.0	4,756.9	4,568.0	4,441.3	13.1	20.0	-88.03	378.0	-796.4	1,139.5	1,108.6	30.87	36.916	
4,822.8	4,779.7	4,589.8	4,462.1	13.2	20.1	-87.90	380.7	-802.4	1,145.8	1,114.8	31.04	36.908	
4,900.0	4,856.9	4,663.5	4,532.4	13.3	20.6	-87.47	389.8	-822.3	1,167.2	1,135.6	31.65	36.881	
4,921.2	4,878.1	4,683.7	4,551.7	13.4	20.7	-87.35	392.3	-827.8	1,173.1	1,141.3	31.81	36.874	
5,000.0	4,956.9	4,758.9	4,623.5	13.5	21.2	-86.94	401.6	-848.2	1,195.1	1,162.6	32.43	36.847	
5,019.7	4,976.6	4,777.7	4,641.4	13.5	21.3	-86.84	403.9	-853.3	1,200.6	1,168.0	32.59	36.841	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	4,854.4	4,714.6	13.7	21.8	-86.43	413.4	-874.1	1,223.0	1,189.8	33.22	36.814	
5,118.1	5,075.0	4,871.7	4,731.1	13.7	21.9	-86.34	415.5	-878.8	1,228.1	1,194.7	33.36	36.809	
5,200.0	5,156.9	4,949.8	4,805.8	13.8	22.4	-85.95	425.2	-900.0	1,251.0	1,217.0	34.01	36.783	
5,216.5	5,173.4	4,965.6	4,820.8	13.9	22.5	-85.87	427.1	-904.2	1,255.7	1,221.5	34.14	36.777	
5,300.0	5,256.9	5,045.3	4,896.9	14.0	23.0	-85.48	437.0	-925.8	1,279.1	1,244.3	34.81	36.752	
5,314.9	5,271.8	5,059.6	4,910.5	14.1	23.1	-85.41	438.8	-929.7	1,283.4	1,248.4	34.92	36.747	
5,400.0	5,356.9	5,140.8	4,988.0	14.2	23.6	-85.04	448.8	-951.7	1,307.3	1,271.7	35.60	36.722	
5,413.4	5,370.3	5,153.5	5,000.2	14.2	23.7	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
5,500.0	5,456.9	5,018.6	4,918.6	14.4	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
5,511.8	5,468.7	5,018.4	4,918.4	14.4	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
5,600.0	5,556.9	5,016.9	4,916.9	14.6	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
5,610.2	5,567.1	5,016.7	4,916.7	14.6	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
5,700.0	5,656.9	5,015.2	4,915.2	14.7	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
5,708.6	5,665.5	5,015.0	4,915.0	14.8	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
5,800.0	5,756.9	5,013.5	4,913.5	14.9	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
5,807.1	5,764.0	5,013.4	4,913.4	14.9	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
5,900.0	5,856.9	5,011.8	4,911.8	15.1	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
5,905.5	5,862.4	5,011.7	4,911.7	15.1	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
5,971.9	5,928.8	5,010.5	4,910.5	15.3	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,000.0	5,956.9	5,009.5	4,909.5	15.3	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,003.9	5,960.8	5,009.3	4,909.3	15.3	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,050.0	6,006.7	5,005.0	4,913.3	15.4	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,100.0	6,056.2	5,006.9	4,914.4	15.4	23.8	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,102.3	6,058.5	5,006.5	4,914.4	15.4	23.8	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,150.0	6,105.1	5,005.5	4,913.6	15.4	23.8	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,200.0	6,153.0	5,007.7	4,913.9	15.5	23.8	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,200.8	6,153.8	5,007.4	4,913.9	15.5	23.8	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,250.0	6,199.9	5,002.6	4,914.2	15.5	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,299.2	6,244.8	5,001.7	4,914.6	15.5	23.7	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,300.0	6,245.5	5,001.3	4,914.6	15.5	23.7	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,350.0	6,289.6	5,006.9	4,915.0	15.5	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,397.6	6,329.9	5,008.9	4,915.4	15.4	23.6	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,400.0	6,331.8	5,007.5	4,915.4	15.4	23.6	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,450.0	6,372.2	5,004.3	4,916.0	15.4	23.8	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,496.0	6,407.4	5,009.0	4,916.5	15.4	23.2	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,500.0	6,410.3	5,006.3	4,916.5	15.4	23.1	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,550.0	6,446.1	5,008.0	4,917.1	15.4	23.5	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,594.5	6,475.9	5,007.3	4,917.7	15.4	23.8	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,600.0	6,479.4	5,007.0	4,917.8	15.4	23.8	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,650.0	6,510.0	5,002.9	4,918.5	15.5	23.0	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,692.9	6,534.0	5,007.0	4,919.1	15.7	23.4	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,700.0	6,537.8	5,006.9	4,919.2	15.7	23.3	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,750.0	6,562.6	5,017.1	4,919.9	16.2	23.6	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,791.3	6,580.8	5,079.7	4,920.6	16.6	23.0	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,800.0	6,584.3	5,071.7	4,920.7	16.7	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,850.0	6,602.9	5,025.0	4,921.5	17.3	23.0	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,889.7	6,615.2	5,087.0	4,922.1	17.9	23.6	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,900.0	6,618.1	5,077.1	4,922.3	18.0	23.5	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,950.0	6,630.0	5,028.4	4,923.1	18.8	23.9	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
6,988.2	6,636.8	5,090.7	4,923.8	19.5	23.4	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
7,000.0	6,638.5	5,078.9	4,924.0	19.7	23.3	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	
7,050.0	6,643.5	5,029.1	4,924.8	20.6	27.8	-84.98	450.4	-955.2	1,311.1	1,275.4	35.71	36.718	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	7,289.3	6,724.9	21.3	27.4	113.92	520.5	-410.0	197.2	153.7	43.46	4.537	
7,097.8	6,645.0	7,276.6	6,724.5	21.5	27.3	113.80	520.5	-422.6	197.0	153.5	43.54	4.525	
7,100.0	6,645.0	7,274.2	6,724.4	21.6	27.3	113.77	520.5	-425.0	197.0	153.4	43.56	4.522	
7,185.0	6,644.9	7,179.8	6,713.9	23.3	26.6	110.97	520.5	-518.8	193.4	148.2	45.25	4.274	
7,200.0	6,644.9	7,163.5	6,710.9	23.6	26.5	110.12	520.5	-534.8	192.4	146.8	45.67	4.214	
7,283.4	6,644.8	7,075.8	6,688.3	25.4	26.1	103.59	520.5	-619.5	186.0	137.4	48.56	3.830	
7,300.0	6,644.7	7,059.2	6,682.9	25.8	26.1	101.95	520.5	-635.2	184.7	135.6	49.18	3.757	
7,381.9	6,644.6	6,981.0	6,652.5	27.7	25.9	92.49	520.5	-707.2	180.5	128.4	52.07	3.466	
7,400.0	6,644.6	6,964.7	6,645.1	28.1	25.9	90.17	520.5	-721.7	180.2	127.7	52.57	3.428	
7,401.3	6,644.6	6,963.6	6,644.6	28.1	25.9	90.00	520.5	-722.8	180.2	127.6	52.61	3.426	
7,480.3	6,644.5	6,897.0	6,611.2	30.0	25.8	79.53	520.5	-780.4	184.5	130.6	53.97	3.419	
7,500.0	6,644.5	6,881.5	6,602.7	30.5	25.9	76.94	520.5	-793.3	187.2	133.1	54.07	3.461	
7,578.7	6,644.4	6,823.9	6,568.6	32.4	25.9	67.18	520.5	-839.7	204.7	151.0	53.64	3.816	
7,600.0	6,644.4	6,809.4	6,559.5	32.9	25.9	64.77	520.5	-850.9	211.3	158.0	53.33	3.963	
7,677.1	6,644.3	6,761.0	6,527.3	34.8	26.0	56.98	520.5	-887.1	242.1	190.2	51.88	4.667	
7,700.0	6,644.2	6,750.0	6,519.7	35.4	26.0	55.31	520.5	-895.0	253.0	201.5	51.56	4.907	
7,775.6	6,644.1	6,707.0	6,488.6	37.3	26.1	49.17	520.5	-924.7	293.9	244.1	49.79	5.902	
7,800.0	6,644.1	6,700.0	6,483.4	38.0	26.1	48.23	520.5	-929.4	308.6	258.9	49.71	6.208	
7,874.0	6,644.0	6,660.8	6,453.3	39.9	26.2	43.34	520.5	-954.5	356.2	308.3	47.97	7.426	
7,900.0	6,644.0	6,650.0	6,444.8	40.5	26.3	42.10	520.5	-961.2	374.1	326.5	47.58	7.862	
7,972.4	6,643.9	6,621.0	6,421.5	42.4	26.4	38.97	520.5	-978.3	426.1	379.5	46.58	9.147	
8,000.0	6,643.9	6,610.9	6,413.2	43.1	26.4	37.95	520.5	-984.1	446.7	400.4	46.27	9.654	
8,070.8	6,643.8	6,586.7	6,392.9	45.0	26.4	35.64	520.5	-997.4	501.3	455.7	45.62	10.990	
8,100.0	6,643.7	6,577.4	6,385.1	45.8	26.5	34.81	520.5	-1,002.4	524.5	479.1	45.40	11.552	
8,169.3	6,643.7	6,550.0	6,361.5	47.6	26.5	32.51	520.5	-1,016.3	580.7	536.2	44.53	13.040	
8,200.0	6,643.6	6,550.0	6,361.5	48.4	26.5	32.51	520.5	-1,016.3	606.0	561.0	45.00	13.468	
8,267.7	6,643.5	6,530.7	6,344.5	50.2	26.6	31.02	520.5	-1,025.6	663.0	618.3	44.69	14.836	
8,300.0	6,643.5	6,522.8	6,337.6	51.1	26.6	30.45	520.5	-1,029.2	690.5	645.9	44.63	15.472	
8,366.1	6,643.4	6,500.0	6,317.1	52.9	26.7	28.86	520.5	-1,039.4	747.8	703.7	44.09	16.958	
8,400.0	6,643.4	6,500.0	6,317.1	53.8	26.7	28.86	520.5	-1,039.4	777.3	732.7	44.57	17.439	
8,464.5	6,643.3	6,500.0	6,317.1	55.5	26.7	28.86	520.5	-1,039.4	834.5	789.0	45.49	18.344	
8,500.0	6,643.2	6,480.6	6,299.6	56.5	26.7	27.61	520.5	-1,047.5	865.8	821.1	44.74	19.353	
8,563.0	6,643.2	6,469.3	6,289.2	58.2	26.7	26.92	520.5	-1,052.0	922.4	877.5	44.90	20.543	
8,600.0	6,643.1	6,450.0	6,271.3	59.2	26.8	25.80	520.5	-1,059.3	956.1	911.8	44.24	21.612	
8,661.4	6,643.0	6,450.0	6,271.3	60.8	26.8	25.80	520.5	-1,059.3	1,011.8	966.7	45.05	22.457	
8,700.0	6,643.0	6,450.0	6,271.3	61.9	26.8	25.80	520.5	-1,059.3	1,047.1	1,001.5	45.57	22.980	
8,759.8	6,642.9	6,450.0	6,271.3	63.5	26.8	25.80	520.5	-1,059.3	1,102.3	1,055.9	46.36	23.775	
8,800.0	6,642.9	6,433.1	6,255.5	64.6	26.8	24.88	520.5	-1,065.3	1,139.3	1,093.4	45.87	24.835	
8,858.2	6,642.8	6,425.5	6,248.4	66.2	26.8	24.48	520.5	-1,067.9	1,193.4	1,147.2	46.18	25.840	
8,900.0	6,642.7	6,420.3	6,243.5	67.3	26.8	24.22	520.5	-1,069.6	1,232.4	1,185.9	46.42	26.548	
8,956.7	6,642.7	6,400.0	6,224.2	68.9	26.9	23.23	520.5	-1,076.0	1,285.6	1,239.6	45.99	27.955	
9,000.0	6,642.6	6,400.0	6,224.2	70.1	26.9	23.23	520.5	-1,076.0	1,326.2	1,279.7	46.53	28.502	
9,055.1	6,642.5	6,400.0	6,224.2	71.6	26.9	23.23	520.5	-1,076.0	1,378.1	1,330.8	47.22	29.183	
9,100.0	6,642.5	6,400.0	6,224.2	72.8	26.9	23.23	520.5	-1,076.0	1,420.5	1,372.7	47.79	29.727	
9,153.5	6,642.4	6,400.0	6,224.2	74.3	26.9	23.23	520.5	-1,076.0	1,471.3	1,422.8	48.46	30.362	
9,200.0	6,642.4	6,400.0	6,224.2	75.6	26.9	23.23	520.5	-1,076.0	1,515.5	1,466.5	49.04	30.902	
9,251.9	6,642.3	6,400.0	6,224.2	77.0	26.9	23.23	520.5	-1,076.0	1,565.1	1,515.4	49.70	31.493	
9,300.0	6,642.2	6,379.7	6,204.7	78.3	26.9	22.30	520.5	-1,081.8	1,610.7	1,561.6	49.11	32.799	
9,350.4	6,642.2	6,375.5	6,200.7	79.7	26.9	22.12	520.5	-1,083.0	1,658.9	1,609.4	49.49	33.521	
9,400.0	6,642.1	6,371.5	6,196.8	81.1	26.9	21.95	520.5	-1,084.0	1,706.5	1,656.6	49.87	34.217	
9,448.8	6,642.0	6,367.8	6,193.2	82.4	26.9	21.79	520.5	-1,085.0	1,753.3	1,703.1	50.25	34.889	
9,500.0	6,642.0	6,350.0	6,176.0	83.8	27.0	21.06	520.5	-1,089.3	1,802.8	1,752.9	49.89	36.134	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,350.0	6,176.0	85.1	27.0	21.06	520.5	-1,089.3	1,848.2	1,797.7	50.45	36.632		
9,600.0	6,641.9	6,350.0	6,176.0	86.6	27.0	21.06	520.5	-1,089.3	1,899.0	1,847.9	51.08	37.176		
9,645.6	6,641.8	6,350.0	6,176.0	87.9	27.0	21.06	520.5	-1,089.3	1,943.1	1,891.5	51.63	37.638		
9,700.0	6,641.7	6,350.0	6,176.0	89.4	27.0	21.06	520.5	-1,089.3	1,995.6	1,943.4	52.27	38.176		
9,744.1	6,641.7	6,350.0	6,176.0	90.6	27.0	21.06	520.5	-1,089.3	2,038.3	1,985.5	52.80	38.604		
9,800.0	6,641.6	6,350.0	6,176.0	92.1	27.0	21.06	520.5	-1,089.3	2,092.6	2,039.1	53.47	39.136		
9,842.5	6,641.6	6,350.0	6,176.0	93.3	27.0	21.06	520.5	-1,089.3	2,133.9	2,079.9	53.98	39.532		
9,900.0	6,641.5	6,350.0	6,176.0	94.9	27.0	21.06	520.5	-1,089.3	2,189.8	2,135.1	54.67	40.057		
9,940.9	6,641.4	6,350.0	6,176.0	96.0	27.0	21.06	520.5	-1,089.3	2,229.6	2,174.5	55.16	40.424		
10,000.0	6,641.4	6,350.0	6,176.0	97.7	27.0	21.06	520.5	-1,089.3	2,287.2	2,231.4	55.86	40.943		
10,039.3	6,641.3	6,350.0	6,176.0	98.8	27.0	21.06	520.5	-1,089.3	2,325.7	2,269.3	56.34	41.281		
10,100.0	6,641.2	6,328.8	6,155.3	100.4	27.0	20.24	520.5	-1,094.0	2,384.5	2,328.7	55.79	42.741		
10,137.8	6,641.2	6,327.0	6,153.5	101.5	27.0	20.17	520.5	-1,094.3	2,421.4	2,365.2	56.13	43.139		
10,200.0	6,641.1	6,324.1	6,150.8	103.2	27.0	20.07	520.5	-1,094.9	2,482.2	2,425.5	56.69	43.784		
10,236.2	6,641.1	6,322.5	6,149.2	104.2	27.0	20.01	520.5	-1,095.2	2,517.6	2,460.5	57.02	44.152		
10,300.0	6,641.0	6,319.8	6,146.5	106.0	27.0	19.91	520.5	-1,095.8	2,580.0	2,522.4	57.60	44.789		
10,334.6	6,640.9	6,300.0	6,127.0	107.0	27.0	19.22	520.5	-1,099.3	2,614.2	2,557.3	56.88	45.960		
10,400.0	6,640.9	6,300.0	6,127.0	108.8	27.0	19.22	520.5	-1,099.3	2,678.1	2,620.5	57.62	46.476		
10,433.0	6,640.8	6,300.0	6,127.0	109.7	27.0	19.22	520.5	-1,099.3	2,710.5	2,652.5	58.00	46.733		
10,500.0	6,640.7	6,300.0	6,127.0	111.6	27.0	19.22	520.5	-1,099.3	2,776.1	2,717.3	58.76	47.242		
10,531.5	6,640.7	6,300.0	6,127.0	112.4	27.0	19.22	520.5	-1,099.3	2,806.9	2,747.8	59.12	47.477		
10,600.0	6,640.6	6,300.0	6,127.0	114.3	27.0	19.22	520.5	-1,099.3	2,874.2	2,814.3	59.90	47.980		
10,629.9	6,640.6	6,300.0	6,127.0	115.2	27.0	19.22	520.5	-1,099.3	2,903.5	2,843.3	60.25	48.195		
10,700.0	6,640.5	6,300.0	6,127.0	117.1	27.0	19.22	520.5	-1,099.3	2,972.4	2,911.4	61.05	48.691		
10,728.3	6,640.4	6,300.0	6,127.0	117.9	27.0	19.22	520.5	-1,099.3	3,000.3	2,938.9	61.37	48.888		
10,800.0	6,640.4	6,300.0	6,127.0	119.9	27.0	19.22	520.5	-1,099.3	3,070.8	3,008.6	62.19	49.378		
10,826.7	6,640.3	6,300.0	6,127.0	120.7	27.0	19.22	520.5	-1,099.3	3,097.1	3,034.6	62.49	49.558		
10,900.0	6,640.2	6,300.0	6,127.0	122.7	27.0	19.22	520.5	-1,099.3	3,169.2	3,105.9	63.33	50.041		
10,925.2	6,640.2	6,300.0	6,127.0	123.4	27.0	19.22	520.5	-1,099.3	3,194.0	3,130.4	63.62	50.204		
11,000.0	6,640.1	6,300.0	6,127.0	125.5	27.0	19.22	520.5	-1,099.3	3,267.7	3,203.3	64.48	50.682		
11,023.6	6,640.1	6,300.0	6,127.0	126.1	27.0	19.22	520.5	-1,099.3	3,291.0	3,226.3	64.75	50.830		
11,100.0	6,640.0	6,300.0	6,127.0	128.3	27.0	19.22	520.5	-1,099.3	3,366.4	3,300.8	65.62	51.300		
11,122.0	6,639.9	6,300.0	6,127.0	128.9	27.0	19.22	520.5	-1,099.3	3,388.1	3,322.2	65.87	51.434		
11,200.0	6,639.8	6,300.0	6,127.0	131.1	27.0	19.22	520.5	-1,099.3	3,465.1	3,398.3	66.77	51.899		
11,220.4	6,639.8	6,300.0	6,127.0	131.6	27.0	19.22	520.5	-1,099.3	3,485.3	3,418.3	67.00	52.019		
11,300.0	6,639.7	6,300.0	6,127.0	133.9	27.0	19.22	520.5	-1,099.3	3,563.9	3,495.9	67.91	52.478		
11,318.9	6,639.7	6,300.0	6,127.0	134.4	27.0	19.22	520.5	-1,099.3	3,582.5	3,514.4	68.13	52.585		
11,400.0	6,639.6	6,300.0	6,127.0	136.7	27.0	19.22	520.5	-1,099.3	3,662.7	3,593.6	69.06	53.038		
11,417.3	6,639.6	6,300.0	6,127.0	137.1	27.0	19.22	520.5	-1,099.3	3,679.8	3,610.6	69.26	53.133		
11,500.0	6,639.5	6,300.0	6,127.0	139.4	27.0	19.22	520.5	-1,099.3	3,761.6	3,691.4	70.21	53.580		
11,515.7	6,639.5	6,300.0	6,127.0	139.9	27.0	19.22	520.5	-1,099.3	3,777.2	3,706.8	70.39	53.664		
11,600.0	6,639.3	6,300.0	6,127.0	142.2	27.0	19.22	520.5	-1,099.3	3,860.6	3,789.2	71.35	54.105		
11,614.1	6,639.3	6,300.0	6,127.0	142.6	27.0	19.22	520.5	-1,099.3	3,874.6	3,803.1	71.52	54.178		
11,700.0	6,639.2	6,278.3	6,105.5	145.0	27.0	18.50	520.5	-1,102.5	3,959.2	3,888.2	71.02	55.751		
11,712.6	6,639.2	6,278.0	6,105.3	145.4	27.0	18.49	520.5	-1,102.6	3,971.6	3,900.5	71.14	55.829		
11,800.0	6,639.1	6,276.2	6,103.5	147.8	27.0	18.44	520.5	-1,102.8	4,058.2	3,986.2	72.00	56.361		
11,811.0	6,639.1	6,276.0	6,103.3	148.1	27.0	18.43	520.5	-1,102.9	4,069.1	3,997.0	72.11	56.427		
11,900.0	6,639.0	6,274.3	6,101.6	150.6	27.0	18.38	520.5	-1,103.1	4,157.2	4,084.2	72.99	56.953		
11,909.4	6,639.0	6,274.1	6,101.4	150.9	27.0	18.37	520.5	-1,103.1	4,166.6	4,093.5	73.09	57.008		
12,000.0	6,638.8	6,272.4	6,099.7	153.4	27.0	18.32	520.5	-1,103.3	4,256.3	4,182.3	73.99	57.528		
12,007.8	6,638.8	6,272.2	6,099.6	153.6	27.0	18.31	520.5	-1,103.3	4,264.1	4,190.0	74.06	57.573		
12,100.0	6,638.7	6,250.0	6,077.4	156.2	27.0	17.64	520.5	-1,105.8	4,355.7	4,282.1	73.62	59.161		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,250.0	6,077.4	156.4	27.0	17.64	520.5	-1,105.8	4,362.0	4,288.3	73.69	59.190		
12,200.0	6,638.6	6,250.0	6,077.4	159.0	27.0	17.64	520.5	-1,105.8	4,454.8	4,380.1	74.72	59.619		
12,204.7	6,638.6	6,250.0	6,077.4	159.1	27.0	17.64	520.5	-1,105.8	4,459.5	4,384.7	74.77	59.641		
12,300.0	6,638.5	6,250.0	6,077.4	161.8	27.0	17.64	520.5	-1,105.8	4,553.9	4,478.1	75.82	60.064		
12,303.1	6,638.5	6,250.0	6,077.4	161.9	27.0	17.64	520.5	-1,105.8	4,557.0	4,481.2	75.85	60.078		
12,400.0	6,638.3	6,250.0	6,077.4	164.6	27.0	17.64	520.5	-1,105.8	4,653.1	4,576.2	76.91	60.497		
12,401.5	6,638.3	6,250.0	6,077.4	164.6	27.0	17.64	520.5	-1,105.8	4,654.6	4,577.7	76.93	60.504		
12,500.0	6,638.2	6,250.0	6,077.4	167.4	27.0	17.64	520.5	-1,105.8	4,752.3	4,674.3	78.01	60.918		
12,598.4	6,638.1	6,250.0	6,077.4	170.2	27.0	17.64	520.5	-1,105.8	4,849.9	4,770.9	79.09	61.320		
12,600.0	6,638.1	6,250.0	6,077.4	170.2	27.0	17.64	520.5	-1,105.8	4,851.5	4,772.4	79.11	61.327		
12,696.8	6,638.0	6,250.0	6,077.4	172.9	27.0	17.64	520.5	-1,105.8	4,947.6	4,867.5	80.17	61.713		
12,700.0	6,638.0	6,250.0	6,077.4	173.0	27.0	17.64	520.5	-1,105.8	4,950.8	4,870.6	80.21	61.725		
12,795.2	6,637.8	6,250.0	6,077.4	175.7	27.0	17.64	520.5	-1,105.8	5,045.4	4,964.1	81.25	62.095		
12,800.0	6,637.8	6,250.0	6,077.4	175.8	27.0	17.64	520.5	-1,105.8	5,050.1	4,968.8	81.31	62.113		
12,893.7	6,637.7	6,250.0	6,077.4	178.4	27.0	17.64	520.5	-1,105.8	5,143.1	5,060.8	82.33	62.467		
12,900.0	6,637.7	6,250.0	6,077.4	178.6	27.0	17.64	520.5	-1,105.8	5,149.4	5,067.0	82.40	62.490		
12,992.1	6,637.6	6,250.0	6,077.4	181.2	27.0	17.64	520.5	-1,105.8	5,240.9	5,157.5	83.42	62.829		
13,000.0	6,637.6	6,250.0	6,077.4	181.4	27.0	17.64	520.5	-1,105.8	5,248.7	5,165.2	83.50	62.858		
13,090.5	6,637.5	6,250.0	6,077.4	183.9	27.0	17.64	520.5	-1,105.8	5,338.7	5,254.2	84.50	63.182		
13,100.0	6,637.5	6,250.0	6,077.4	184.2	27.0	17.64	520.5	-1,105.8	5,348.1	5,263.5	84.60	63.216		
13,188.9	6,637.4	6,250.0	6,077.4	186.7	27.0	17.64	520.5	-1,105.8	5,436.5	5,350.9	85.58	63.527		
13,200.0	6,637.3	6,250.0	6,077.4	187.0	27.0	17.64	520.5	-1,105.8	5,447.5	5,361.8	85.70	63.565		
13,287.4	6,637.2	6,250.0	6,077.4	189.4	27.0	17.64	520.5	-1,105.8	5,534.4	5,447.7	86.66	63.863		
13,300.0	6,637.2	6,250.0	6,077.4	189.8	27.0	17.64	520.5	-1,105.8	5,546.9	5,460.1	86.80	63.905		
13,385.8	6,637.1	6,250.0	6,077.4	192.2	27.0	17.64	520.5	-1,105.8	5,632.2	5,544.5	87.74	64.191		
13,400.0	6,637.1	6,250.0	6,077.4	192.6	27.0	17.64	520.5	-1,105.8	5,646.4	5,558.5	87.90	64.237		
13,484.2	6,637.0	6,250.0	6,077.4	195.0	27.0	17.64	520.5	-1,105.8	5,730.1	5,641.3	88.82	64.511		
13,500.0	6,637.0	6,250.0	6,077.4	195.4	27.0	17.64	520.5	-1,105.8	5,745.8	5,656.8	89.00	64.561		
13,582.6	6,636.9	6,250.0	6,077.4	197.7	27.0	17.64	520.5	-1,105.8	5,828.0	5,738.1	89.91	64.823		
13,600.0	6,636.8	6,250.0	6,077.4	198.2	27.0	17.64	520.5	-1,105.8	5,845.3	5,755.2	90.10	64.877		
13,681.1	6,636.7	6,250.0	6,077.4	200.5	27.0	17.64	520.5	-1,105.8	5,925.9	5,834.9	90.99	65.128		
13,700.0	6,636.7	6,250.0	6,077.4	201.0	27.0	17.64	520.5	-1,105.8	5,944.8	5,853.6	91.20	65.186		
13,779.5	6,636.6	6,250.0	6,077.4	203.2	27.0	17.64	520.5	-1,105.8	6,023.9	5,931.8	92.07	65.426		
13,800.0	6,636.6	6,250.0	6,077.4	203.8	27.0	17.64	520.5	-1,105.8	6,044.3	5,952.0	92.30	65.487		
13,877.9	6,636.5	6,250.0	6,077.4	206.0	27.0	17.64	520.5	-1,105.8	6,121.8	6,028.7	93.15	65.717		
13,900.0	6,636.5	6,250.0	6,077.4	206.6	27.0	17.64	520.5	-1,105.8	6,143.8	6,050.4	93.40	65.781		
13,976.3	6,636.4	6,250.0	6,077.4	208.8	27.0	17.64	520.5	-1,105.8	6,219.8	6,125.6	94.24	66.001		
14,000.0	6,636.3	6,250.0	6,077.4	209.4	27.0	17.64	520.5	-1,105.8	6,243.3	6,148.8	94.50	66.068		
14,074.8	6,636.2	6,250.0	6,077.4	211.5	27.0	17.64	520.5	-1,105.8	6,317.8	6,222.5	95.32	66.279		
14,100.0	6,636.2	6,250.0	6,077.4	212.2	27.0	17.64	520.5	-1,105.8	6,342.9	6,247.3	95.60	66.349		
14,173.2	6,636.1	6,250.0	6,077.4	214.3	27.0	17.64	520.5	-1,105.8	6,415.8	6,319.4	96.40	66.551		
14,200.0	6,636.1	6,250.0	6,077.4	215.0	27.0	17.64	520.5	-1,105.8	6,442.5	6,345.8	96.70	66.623		
14,271.6	6,636.0	6,250.0	6,077.4	217.0	27.0	17.64	520.5	-1,105.8	6,513.8	6,416.3	97.49	66.816		
14,300.0	6,636.0	6,250.0	6,077.4	217.8	27.0	17.64	520.5	-1,105.8	6,542.0	6,444.2	97.80	66.892		
14,370.0	6,635.9	6,250.0	6,077.4	219.8	27.0	17.64	520.5	-1,105.8	6,611.8	6,513.2	98.57	67.076		
14,400.0	6,635.8	6,250.0	6,077.4	220.6	27.0	17.64	520.5	-1,105.8	6,641.6	6,542.7	98.90	67.154		
14,468.5	6,635.7	6,250.0	6,077.4	222.6	27.0	17.64	520.5	-1,105.8	6,709.8	6,610.2	99.66	67.330		
14,500.0	6,635.7	6,250.0	6,077.4	223.4	27.0	17.64	520.5	-1,105.8	6,741.2	6,641.2	100.00	67.411		
14,566.9	6,635.6	6,250.0	6,077.4	225.3	27.0	17.64	520.5	-1,105.8	6,807.9	6,707.1	100.74	67.579		
14,600.0	6,635.6	6,250.0	6,077.4	226.2	27.0	17.64	520.5	-1,105.8	6,840.8	6,739.7	101.10	67.662		
14,665.3	6,635.5	6,250.0	6,077.4	228.1	27.0	17.64	520.5	-1,105.8	6,905.9	6,804.1	101.82	67.823		
14,700.0	6,635.5	6,250.0	6,077.4	229.0	27.0	17.64	520.5	-1,105.8	6,940.5	6,838.3	102.20	67.908		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.4	6,250.0	6,077.4	230.8	27.0	17.64	520.5	-1,105.8	7,004.0	6,901.1	102.91	68.061	
14,800.0	6,635.3	6,250.0	6,077.4	231.8	27.0	17.64	520.5	-1,105.8	7,040.1	6,936.8	103.31	68.148	
14,862.2	6,635.2	6,250.0	6,077.4	233.6	27.0	17.64	520.5	-1,105.8	7,102.1	6,998.1	103.99	68.295	
14,900.0	6,635.2	6,250.0	6,077.4	234.7	27.0	17.64	520.5	-1,105.8	7,139.8	7,035.4	104.41	68.383	
14,960.6	6,635.1	6,250.0	6,077.4	236.4	27.0	17.64	520.5	-1,105.8	7,200.1	7,095.1	105.08	68.524	
14,995.1	6,635.0	6,250.0	6,077.4	237.3	27.0	17.65	520.5	-1,105.8	7,234.6	7,129.1	105.46	68.598	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	0.53	29.9	0.3	29.9					
98.4	98.4	98.4	98.4	0.1	0.1	0.53	29.9	0.3	29.9	29.7	0.19	155.428		
100.0	100.0	100.0	100.0	0.1	0.1	0.53	29.9	0.3	29.9	29.7	0.20	152.797		
196.8	196.8	196.8	196.8	0.3	0.3	0.53	29.9	0.3	29.9	29.2	0.63	47.358		
200.0	200.0	200.0	200.0	0.3	0.3	0.53	29.9	0.3	29.9	29.2	0.65	46.318		
295.3	295.3	295.3	295.3	0.5	0.5	0.53	29.9	0.3	29.9	28.8	1.07	27.837		
300.0	300.0	300.0	300.0	0.5	0.5	0.53	29.9	0.3	29.9	28.8	1.09	27.296		
393.7	393.7	393.7	393.7	0.8	0.8	0.53	29.9	0.3	29.9	28.4	1.52	19.711		
400.0	400.0	400.0	400.0	0.8	0.8	0.53	29.9	0.3	29.9	28.3	1.54	19.350		
492.1	492.1	492.1	492.1	1.0	1.0	0.53	29.9	0.3	29.9	27.9	1.96	15.258		
500.0	500.0	500.0	500.0	1.0	1.0	0.53	29.9	0.3	29.9	27.9	1.99	14.987		
590.5	590.5	590.5	590.5	1.2	1.2	0.53	29.9	0.3	29.9	27.5	2.40	12.446		
600.0	600.0	600.0	600.0	1.2	1.2	0.53	29.9	0.3	29.9	27.4	2.44	12.229		
689.0	689.0	689.0	689.0	1.4	1.4	0.53	29.9	0.3	29.9	27.0	2.84	10.509		
700.0	700.0	700.0	700.0	1.4	1.4	0.53	29.9	0.3	29.9	27.0	2.89	10.329		
787.4	787.4	787.4	787.4	1.6	1.6	0.53	29.9	0.3	29.9	26.6	3.29	9.094		
800.0	800.0	800.0	800.0	1.7	1.7	0.53	29.9	0.3	29.9	26.5	3.34	8.940		
885.8	885.8	885.8	885.8	1.9	1.9	0.53	29.9	0.3	29.9	26.2	3.73	8.015		
900.0	900.0	900.0	900.0	1.9	1.9	0.53	29.9	0.3	29.9	26.1	3.79	7.880		
984.2	984.2	984.2	984.2	2.1	2.1	0.53	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	0.53	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	0.53	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	0.53	29.9	0.3	29.9	25.2	4.69	6.370 CC		
1,181.1	1,181.1	1,180.3	1,180.3	2.5	2.5	1.52	30.9	0.8	30.9	25.8	5.05	6.113		
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	2.01	31.4	1.1	31.4	26.3	5.14	6.116		
1,279.5	1,279.5	1,277.7	1,277.5	2.7	2.7	4.82	34.7	2.9	34.9	29.4	5.49	6.354		
1,300.0	1,300.0	1,297.9	1,297.7	2.8	2.8	5.67	35.9	3.6	36.1	30.5	5.58	6.470		
1,377.9	1,377.9	1,374.7	1,374.2	3.0	3.0	-32.85	41.4	6.6	41.2	35.3	5.93	6.949		
1,400.0	1,400.0	1,396.4	1,395.8	3.0	3.0	-32.31	43.3	7.6	42.7	36.7	6.03	7.084		
1,476.4	1,476.3	1,471.4	1,470.4	3.2	3.2	-31.02	51.0	11.8	48.0	41.6	6.36	7.538		
1,500.0	1,499.8	1,494.6	1,493.4	3.2	3.3	-30.77	53.7	13.3	49.6	43.2	6.47	7.675		
1,574.8	1,574.4	1,568.0	1,565.9	3.4	3.4	-30.33	63.3	18.6	55.0	48.2	6.80	8.089		
1,600.0	1,599.5	1,592.6	1,590.2	3.5	3.5	-30.29	66.9	20.6	56.8	49.9	6.91	8.226		
1,673.2	1,672.2	1,664.2	1,660.6	3.6	3.7	-30.41	78.4	26.9	62.2	55.0	7.24	8.599		
1,700.0	1,698.7	1,690.4	1,686.2	3.7	3.8	-30.53	83.0	29.4	64.3	56.9	7.36	8.733		
1,771.6	1,769.5	1,761.7	1,755.9	3.9	4.0	-31.20	96.0	36.5	69.1	61.4	7.69	8.983		
1,800.0	1,797.5	1,790.0	1,783.6	4.0	4.1	-31.64	101.2	39.4	70.6	62.8	7.83	9.023		
1,870.1	1,866.3	1,859.9	1,852.1	4.2	4.4	-33.19	113.9	46.4	73.4	65.2	8.18	8.973		
1,899.9	1,895.6	1,889.8	1,881.3	4.3	4.5	-34.04	119.4	49.3	74.1	65.8	8.33	8.901		
1,968.5	1,962.6	1,958.3	1,948.3	4.5	4.7	-36.11	131.9	56.2	75.6	66.9	8.71	8.679		
2,000.0	1,993.4	1,989.7	1,979.0	4.6	4.8	-37.03	137.6	59.3	76.4	67.5	8.90	8.583		
2,066.9	2,058.9	2,056.6	2,044.4	4.8	5.1	-38.93	149.8	66.0	78.0	68.7	9.30	8.382		
2,100.0	2,091.3	2,089.6	2,076.7	4.9	5.2	-39.84	155.8	69.3	78.8	69.3	9.50	8.291		
2,165.3	2,155.2	2,154.9	2,140.6	5.2	5.5	-41.59	167.7	75.8	80.5	70.5	9.92	8.115		
2,200.0	2,189.1	2,189.5	2,174.5	5.3	5.6	-42.48	174.0	79.3	81.4	71.2	10.14	8.026		
2,263.8	2,251.5	2,253.2	2,236.8	5.5	5.9	-44.08	185.7	85.7	83.1	72.6	10.56	7.869		
2,300.0	2,286.9	2,289.4	2,272.2	5.7	6.0	-44.95	192.3	89.3	84.1	73.3	10.81	7.785		
2,362.2	2,347.7	2,351.6	2,333.0	5.9	6.3	-46.41	203.6	95.5	85.9	74.7	11.24	7.645		
2,400.0	2,384.7	2,389.3	2,369.9	6.0	6.4	-47.26	210.5	99.3	87.1	75.5	11.51	7.565		
2,460.6	2,444.0	2,449.9	2,429.1	6.3	6.7	-48.59	221.5	105.3	88.9	76.9	11.95	7.441		
2,500.0	2,482.5	2,489.2	2,467.6	6.4	6.8	-49.42	228.7	109.3	90.1	77.9	12.23	7.365		
2,559.0	2,540.3	2,548.2	2,525.3	6.7	7.1	-50.62	239.5	115.2	91.9	79.3	12.67	7.255		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,589.1	2,565.3	6.8	7.2	-51.43	246.9	119.2	93.3	80.3	12.98	7.183		
2,657.5	2,636.5	2,646.5	2,621.5	7.1	7.5	-52.53	257.4	125.0	95.1	81.7	13.42	7.086		
2,700.0	2,678.1	2,689.0	2,663.0	7.2	7.6	-53.31	265.1	129.2	96.5	82.8	13.75	7.019		
2,755.9	2,732.8	2,744.9	2,717.7	7.5	7.9	-54.31	275.3	134.8	98.4	84.2	14.19	6.933		
2,800.0	2,776.0	2,788.9	2,760.7	7.7	8.1	-55.06	283.4	139.2	99.9	85.3	14.54	6.870		
2,854.3	2,829.1	2,843.2	2,813.8	7.9	8.3	-55.97	293.3	144.6	101.8	86.8	14.98	6.794		
2,900.0	2,873.8	2,888.8	2,858.5	8.1	8.5	-56.70	301.6	149.2	103.3	88.0	15.34	6.734		
2,952.7	2,925.4	2,941.5	2,910.0	8.3	8.7	-57.52	311.2	154.5	105.2	89.4	15.77	6.668		
3,000.0	2,971.6	2,988.7	2,956.2	8.5	8.9	-58.23	319.8	159.2	106.9	90.7	16.16	6.612		
3,051.2	3,021.6	3,039.8	3,006.2	8.7	9.1	-58.98	329.1	164.3	108.7	92.1	16.59	6.554		
3,100.0	3,069.4	3,088.6	3,053.9	8.9	9.3	-59.67	338.0	169.2	110.5	93.5	16.99	6.501		
3,149.6	3,117.9	3,138.2	3,102.4	9.1	9.6	-60.34	347.0	174.1	112.3	94.9	17.41	6.450		
3,200.0	3,167.2	3,188.5	3,151.6	9.3	9.8	-61.01	356.2	179.2	114.1	96.3	17.83	6.401		
3,248.0	3,214.2	3,236.5	3,198.5	9.5	10.0	-61.62	365.0	184.0	115.9	97.7	18.24	6.356		
3,300.0	3,265.0	3,288.4	3,249.3	9.8	10.2	-62.27	374.4	189.1	117.9	99.2	18.68	6.309		
3,346.4	3,310.5	3,334.8	3,294.7	10.0	10.4	-62.82	382.9	193.8	119.6	100.5	19.08	6.270		
3,400.0	3,362.9	3,388.3	3,347.0	10.2	10.6	-63.45	392.7	199.1	121.6	102.1	19.54	6.226		
3,444.9	3,406.7	3,433.1	3,390.9	10.4	10.8	-63.95	400.8	203.6	123.4	103.4	19.92	6.192		
3,473.0	3,434.2	3,461.2	3,418.3	10.5	10.9	-64.26	406.0	206.4	124.4	104.3	20.17	6.171		
3,500.0	3,460.7	3,488.2	3,444.7	10.6	11.1	-64.52	410.9	209.1	125.5	105.1	20.38	6.158		
3,543.3	3,503.2	3,531.5	3,487.0	10.7	11.3	-64.72	418.8	213.4	127.5	106.8	20.69	6.163		
3,600.0	3,559.0	3,588.1	3,542.4	10.9	11.5	-64.58	429.1	219.1	130.5	109.5	21.06	6.198		
3,641.7	3,600.2	3,629.7	3,583.2	11.0	11.7	-64.21	436.7	223.3	133.1	111.8	21.30	6.247		
3,700.0	3,657.9	3,687.8	3,640.0	11.2	11.9	-63.35	447.3	229.1	137.1	115.5	21.60	6.346		
3,740.1	3,697.8	3,727.8	3,679.1	11.3	12.1	-62.54	454.6	233.1	140.2	118.4	21.77	6.437		
3,800.0	3,757.3	3,787.3	3,737.3	11.4	12.4	-61.06	465.4	239.0	145.3	123.3	22.00	6.606		
3,838.6	3,795.7	3,825.6	3,774.7	11.5	12.5	-59.95	472.4	242.8	149.0	126.9	22.11	6.741		
3,900.0	3,857.0	3,886.4	3,834.2	11.7	12.8	-57.97	483.5	248.9	155.7	133.4	22.26	6.993		
3,937.0	3,893.9	3,922.9	3,869.9	11.7	13.0	-56.68	490.2	252.6	160.1	137.8	22.32	7.173		
4,000.0	3,956.9	3,985.0	3,930.6	11.8	13.2	-54.36	501.5	258.8	168.4	146.0	22.39	7.523		
4,035.4	3,992.3	4,019.8	3,964.7	11.9	13.4	-53.01	507.8	262.2	173.6	151.2	22.41	7.748		
4,072.9	4,029.8	4,056.5	4,000.6	11.9	13.5	-10.37	514.5	265.9	179.5	157.2	22.33	8.038		
4,100.0	4,056.9	4,084.2	4,027.7	12.0	13.7	-9.24	519.5	268.6	183.9	161.3	22.60	8.136		
4,133.8	4,090.7	4,119.2	4,062.1	12.0	13.8	-7.96	525.4	271.9	189.1	166.2	22.91	8.254		
4,200.0	4,156.9	4,188.2	4,129.9	12.1	14.0	-5.85	536.1	277.7	198.6	175.2	23.46	8.465		
4,232.3	4,189.2	4,222.0	4,163.4	12.2	14.1	-4.99	540.8	280.3	202.9	179.2	23.71	8.557		
4,300.0	4,256.9	4,293.4	4,234.0	12.3	14.3	-3.47	549.5	285.1	210.8	186.7	24.18	8.719		
4,330.7	4,287.6	4,325.9	4,266.3	12.4	14.4	-2.90	553.0	287.0	214.0	189.7	24.38	8.781		
4,400.0	4,356.9	4,399.6	4,339.6	12.5	14.5	-1.86	559.7	290.7	220.2	195.4	24.78	8.885		
4,429.1	4,386.0	4,430.7	4,370.6	12.5	14.6	-1.51	562.0	292.0	222.3	197.4	24.93	8.917		
4,500.0	4,456.9	4,506.6	4,446.3	12.6	14.8	-0.86	566.5	294.4	226.4	201.2	25.28	8.958		
4,527.5	4,484.4	4,536.2	4,475.8	12.7	14.8	-0.68	567.7	295.1	227.6	202.2	25.40	8.962		
4,600.0	4,556.9	4,614.0	4,553.7	12.8	14.9	-0.40	569.8	296.2	229.5	203.8	25.68	8.935		
4,626.0	4,582.9	4,641.9	4,581.6	12.9	15.0	-0.36	570.0	296.4	229.7	204.0	25.77	8.913		
4,700.0	4,656.9	4,717.2	4,656.9	13.0	15.1	-0.35	570.1	296.4	229.8	203.8	26.02	8.831		
4,724.4	4,681.3	4,741.6	4,681.3	13.0	15.1	-0.35	570.1	296.4	229.8	203.7	26.10	8.804		
4,800.0	4,756.9	4,817.2	4,756.9	13.1	15.2	-0.35	570.1	296.4	229.8	203.4	26.36	8.718		
4,822.8	4,779.7	4,840.1	4,779.7	13.2	15.3	-0.35	570.1	296.4	229.8	203.3	26.43	8.693		
4,900.0	4,856.9	4,917.2	4,856.9	13.3	15.4	-0.35	570.1	296.4	229.8	203.1	26.70	8.607		
4,921.2	4,878.1	4,938.5	4,878.1	13.4	15.4	-0.35	570.1	296.4	229.8	203.0	26.77	8.584		
5,000.0	4,956.9	5,017.2	4,956.9	13.5	15.5	-0.35	570.1	296.4	229.8	202.7	27.04	8.498		
5,019.7	4,976.6	5,036.9	4,976.6	13.5	15.5	-0.35	570.1	296.4	229.8	202.7	27.11	8.476		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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-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							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	5,056.9	5,117.2	5,056.9	13.7	15.7	-0.35	570.1	296.4	229.8	202.4	27.39	8.390		
5,118.1	5,075.0	5,135.3	5,075.0	13.7	15.7	-0.35	570.1	296.4	229.8	202.3	27.45	8.371		
5,200.0	5,156.9	5,217.2	5,156.9	13.8	15.8	-0.35	570.1	296.4	229.8	202.0	27.74	8.284		
5,216.5	5,173.4	5,233.8	5,173.4	13.9	15.8	-0.35	570.1	296.4	229.8	202.0	27.80	8.267		
5,300.0	5,256.9	5,317.2	5,256.9	14.0	16.0	-0.35	570.1	296.4	229.8	201.7	28.09	8.180		
5,314.9	5,271.8	5,332.2	5,271.8	14.1	16.0	-0.35	570.1	296.4	229.8	201.6	28.14	8.165		
5,400.0	5,356.9	5,417.2	5,356.9	14.2	16.1	-0.35	570.1	296.4	229.8	201.3	28.45	8.078		
5,413.4	5,370.3	5,430.6	5,370.3	14.2	16.2	-0.35	570.1	296.4	229.8	201.3	28.49	8.065		
5,500.0	5,456.9	5,517.2	5,456.9	14.4	16.3	-0.35	570.1	296.4	229.8	201.0	28.80	7.978		
5,511.8	5,468.7	5,529.0	5,468.7	14.4	16.3	-0.35	570.1	296.4	229.8	200.9	28.85	7.966		
5,600.0	5,556.9	5,617.2	5,556.9	14.6	16.4	-0.35	570.1	296.4	229.8	200.6	29.16	7.879		
5,610.2	5,567.1	5,627.5	5,567.1	14.6	16.5	-0.35	570.1	296.4	229.8	200.6	29.20	7.869		
5,700.0	5,656.9	5,717.2	5,656.9	14.7	16.6	-0.35	570.1	296.4	229.8	200.3	29.53	7.782		
5,708.6	5,665.5	5,725.9	5,665.5	14.8	16.6	-0.35	570.1	296.4	229.8	200.2	29.56	7.774		
5,800.0	5,756.9	5,817.2	5,756.9	14.9	16.8	-0.35	570.1	296.4	229.8	199.9	29.89	7.687		
5,807.1	5,764.0	5,824.3	5,764.0	14.9	16.8	-0.35	570.1	296.4	229.8	199.9	29.92	7.681		
5,900.0	5,856.9	5,917.2	5,856.9	15.1	16.9	-0.35	570.1	296.4	229.8	199.5	30.26	7.594		
5,905.5	5,862.4	5,922.7	5,862.4	15.1	16.9	-0.35	570.1	296.4	229.8	199.5	30.28	7.589		
5,971.9	5,928.8	5,989.2	5,928.8	15.3	17.1	-0.35	570.1	296.4	229.8	199.3	30.52	7.528		
6,000.0	5,956.9	6,017.2	5,956.9	15.3	17.1	89.78	570.1	296.4	229.8	201.0	28.76	7.989		
6,003.9	5,960.8	6,021.1	5,960.8	15.3	17.1	89.82	570.1	296.4	229.8	201.0	28.77	7.987		
6,017.1	5,973.9	6,034.3	5,973.9	15.3	17.1	90.00	570.1	296.4	229.8	201.0	28.80	7.979		
6,050.0	6,006.7	6,067.1	6,006.8	15.4	17.2	90.69	570.1	296.3	229.8	201.0	28.84	7.967		
6,100.0	6,056.2	6,117.2	6,056.8	15.4	17.2	91.90	570.1	294.0	229.9	201.0	28.86	7.967		
6,102.3	6,058.5	6,119.6	6,059.2	15.4	17.2	91.96	570.1	293.8	229.9	201.1	28.86	7.967		
6,150.0	6,105.1	6,167.7	6,106.9	15.4	17.3	93.11	570.1	288.2	230.1	201.3	28.84	7.978		
6,200.0	6,153.0	6,218.5	6,156.9	15.5	17.3	94.30	570.1	278.7	230.4	201.6	28.81	7.998		
6,200.8	6,153.8	6,219.3	6,157.6	15.5	17.3	94.32	570.1	278.5	230.4	201.6	28.81	7.999		
6,250.0	6,199.9	6,269.7	6,206.4	15.5	17.3	95.47	570.1	265.6	230.8	202.1	28.77	8.025		
6,299.2	6,244.8	6,320.4	6,254.3	15.5	17.4	96.60	570.1	249.2	231.3	202.6	28.72	8.054		
6,300.0	6,245.5	6,321.3	6,255.1	15.5	17.4	96.61	570.1	248.9	231.3	202.6	28.72	8.054		
6,350.0	6,289.6	6,373.2	6,302.8	15.5	17.3	97.72	570.1	228.6	231.9	203.2	28.69	8.083		
6,397.6	6,329.9	6,422.9	6,347.1	15.4	17.3	98.75	570.1	206.0	232.5	203.8	28.68	8.105		
6,400.0	6,331.8	6,425.4	6,349.3	15.4	17.3	98.80	570.1	204.7	232.5	203.8	28.68	8.107		
6,450.0	6,372.2	6,478.0	6,394.2	15.4	17.3	99.82	570.1	177.3	233.2	204.5	28.72	8.119		
6,496.0	6,407.4	6,526.8	6,433.9	15.4	17.3	100.72	570.1	149.1	233.9	205.1	28.82	8.115		
6,500.0	6,410.3	6,531.0	6,437.2	15.4	17.3	100.79	570.1	146.5	233.9	205.1	28.83	8.115		
6,550.0	6,446.1	6,584.2	6,478.1	15.4	17.3	101.71	570.1	112.4	234.7	205.7	29.02	8.088		
6,594.5	6,475.9	6,631.9	6,512.4	15.4	17.2	102.47	570.1	79.3	235.4	206.1	29.28	8.039		
6,600.0	6,479.4	6,637.8	6,516.5	15.4	17.2	102.56	570.1	75.1	235.4	206.1	29.31	8.032		
6,650.0	6,510.0	6,691.7	6,552.2	15.5	17.2	103.35	570.1	34.8	236.2	206.5	29.73	7.944		
6,692.9	6,534.0	6,738.1	6,580.5	15.7	17.2	103.97	570.1	-2.1	236.8	206.6	30.22	7.836		
6,700.0	6,537.8	6,745.8	6,585.0	15.7	17.2	104.07	570.1	-8.3	236.9	206.6	30.30	7.819		
6,750.0	6,562.6	6,800.2	6,614.5	16.2	17.2	104.71	570.1	-54.0	237.6	206.6	31.03	7.657		
6,791.3	6,580.8	6,845.4	6,636.4	16.6	17.2	105.19	570.1	-93.5	238.1	206.3	31.76	7.496		
6,800.0	6,584.3	6,854.9	6,640.6	16.7	17.2	105.28	570.1	-102.0	238.2	206.3	31.93	7.460		
6,850.0	6,602.9	6,909.7	6,663.1	17.3	17.6	105.77	570.1	-152.1	238.8	205.8	33.02	7.232		
6,889.7	6,615.2	6,953.5	6,678.2	17.9	18.1	106.10	570.1	-193.1	239.2	205.2	34.00	7.034		
6,900.0	6,618.1	6,964.8	6,681.7	18.0	18.2	106.17	570.1	-203.8	239.3	205.0	34.27	6.981		
6,950.0	6,630.0	7,019.9	6,696.3	18.8	19.0	106.49	570.1	-257.0	239.6	204.0	35.69	6.715		
6,988.2	6,636.8	7,062.1	6,704.6	19.5	19.7	106.68	570.1	-298.4	239.9	203.0	36.88	6.505		
7,000.0	6,638.5	7,075.2	6,706.7	19.7	19.9	106.73	570.1	-311.3	239.9	202.7	37.26	6.440		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
7,050.0	6,643.5	7,130.6	6,713.0	20.6	20.9	106.88	570.1	-366.3	240.1	201.2	38.96	6.163	
7,086.6	6,644.9	7,171.1	6,714.9	21.3	21.7	106.94	570.1	-406.8	240.2	199.9	40.28	5.963	
7,097.8	6,645.0	7,183.6	6,715.0	21.5	21.9	106.94	570.1	-419.2	240.2	199.5	40.69	5.903	
7,100.0	6,645.0	7,186.0	6,715.0	21.6	22.0	106.94	570.1	-421.6	240.2	199.4	40.77	5.891	
7,185.0	6,644.9	7,271.0	6,714.8	23.3	23.7	106.93	570.1	-506.6	240.2	196.1	44.06	5.451	
7,200.0	6,644.9	7,286.0	6,714.8	23.6	24.0	106.93	570.1	-521.6	240.2	195.5	44.64	5.380	
7,283.4	6,644.8	7,369.4	6,714.6	25.4	25.7	106.91	570.1	-605.1	240.2	192.1	48.09	4.994	
7,300.0	6,644.7	7,385.9	6,714.6	25.8	26.1	106.91	570.1	-621.6	240.2	191.4	48.78	4.923	
7,381.9	6,644.6	7,467.8	6,714.4	27.7	27.9	106.90	570.1	-703.5	240.1	187.8	52.35	4.587	
7,400.0	6,644.6	7,485.9	6,714.4	28.1	28.3	106.90	570.1	-721.6	240.1	187.0	53.15	4.519	
7,480.3	6,644.5	7,566.2	6,714.3	30.0	30.2	106.88	570.1	-801.9	240.1	183.3	56.79	4.228	
7,500.0	6,644.5	7,585.9	6,714.2	30.5	30.7	106.88	570.1	-821.6	240.1	182.4	57.69	4.162	
7,578.7	6,644.4	7,664.7	6,714.1	32.4	32.6	106.87	570.1	-900.3	240.1	178.7	61.37	3.913	
7,600.0	6,644.4	7,685.9	6,714.0	32.9	33.1	106.86	570.1	-921.6	240.1	177.7	62.37	3.850	
7,677.1	6,644.3	7,763.1	6,713.9	34.8	35.0	106.85	570.1	-998.8	240.1	174.0	66.06	3.635	
7,700.0	6,644.2	7,785.9	6,713.8	35.4	35.6	106.85	570.1	-1,021.6	240.1	172.9	67.15	3.575	
7,775.6	6,644.1	7,861.5	6,713.7	37.3	37.5	106.84	570.1	-1,097.2	240.1	169.2	70.84	3.389	
7,800.0	6,644.1	7,885.9	6,713.6	38.0	38.1	106.83	570.1	-1,121.6	240.1	168.0	72.03	3.333	
7,874.0	6,644.0	7,959.9	6,713.5	39.9	40.0	106.82	570.1	-1,195.6	240.0	164.4	75.69	3.172	
7,900.0	6,644.0	7,985.9	6,713.4	40.5	40.6	106.82	570.1	-1,221.6	240.0	163.1	76.97	3.118	
7,972.4	6,643.9	8,058.4	6,713.3	42.4	42.5	106.81	570.1	-1,294.0	240.0	159.4	80.60	2.978	
8,000.0	6,643.9	8,085.9	6,713.2	43.1	43.2	106.80	570.1	-1,321.6	240.0	158.0	81.98	2.928	
8,070.8	6,643.8	8,156.8	6,713.1	45.0	45.0	106.79	570.1	-1,392.5	240.0	154.5	85.56	2.805	
8,100.0	6,643.7	8,185.9	6,713.1	45.8	45.8	106.79	570.1	-1,421.6	240.0	153.0	87.03	2.758	
8,169.3	6,643.7	8,255.2	6,712.9	47.6	47.6	106.77	570.1	-1,490.9	240.0	149.4	90.56	2.650	
8,200.0	6,643.6	8,285.9	6,712.9	48.4	48.4	106.77	570.1	-1,521.6	240.0	147.9	92.12	2.605	
8,267.7	6,643.5	8,353.6	6,712.7	50.2	50.2	106.76	570.1	-1,589.3	240.0	144.4	95.59	2.510	
8,300.0	6,643.5	8,385.9	6,712.7	51.1	51.1	106.75	570.1	-1,621.6	240.0	142.7	97.25	2.467	
8,366.1	6,643.4	8,452.1	6,712.5	52.9	52.9	106.74	570.1	-1,687.7	240.0	139.3	100.66	2.384	
8,400.0	6,643.4	8,485.9	6,712.5	53.8	53.8	106.74	570.1	-1,721.6	239.9	137.5	102.41	2.343	
8,464.5	6,643.3	8,550.5	6,712.3	55.5	55.5	106.73	570.1	-1,786.2	239.9	134.2	105.75	2.269	
8,500.0	6,643.2	8,585.9	6,712.3	56.5	56.4	106.72	570.1	-1,821.6	239.9	132.3	107.59	2.230	
8,563.0	6,643.2	8,648.9	6,712.2	58.2	58.1	106.71	570.1	-1,884.6	239.9	129.0	110.86	2.164	
8,600.0	6,643.1	8,685.9	6,712.1	59.2	59.1	106.71	570.1	-1,921.6	239.9	127.1	112.79	2.127	
8,661.4	6,643.0	8,747.3	6,712.0	60.8	60.8	106.70	570.1	-1,983.0	239.9	123.9	116.00	2.068	
8,700.0	6,643.0	8,785.9	6,711.9	61.9	61.8	106.69	570.1	-2,021.6	239.9	121.9	118.01	2.033	
8,759.8	6,642.9	8,845.8	6,711.8	63.5	63.5	106.68	570.1	-2,081.4	239.9	118.7	121.15	1.980	
8,800.0	6,642.9	8,885.9	6,711.7	64.6	64.5	106.68	570.1	-2,121.6	239.9	116.6	123.25	1.946	
8,858.2	6,642.8	8,944.2	6,711.6	66.2	66.1	106.67	570.1	-2,179.9	239.9	113.5	126.31	1.899	
8,900.0	6,642.7	8,985.9	6,711.5	67.3	67.3	106.66	570.1	-2,221.6	239.8	111.3	128.51	1.866	
8,956.7	6,642.7	9,042.6	6,711.4	68.9	68.8	106.65	570.1	-2,278.3	239.8	108.3	131.49	1.824	
9,000.0	6,642.6	9,085.9	6,711.3	70.1	70.0	106.65	570.1	-2,321.6	239.8	106.1	133.77	1.793	
9,055.1	6,642.5	9,141.0	6,711.2	71.6	71.5	106.64	570.1	-2,376.7	239.8	103.1	136.68	1.755	
9,100.0	6,642.5	9,185.9	6,711.1	72.8	72.7	106.63	570.1	-2,421.6	239.8	100.8	139.05	1.725	
9,153.5	6,642.4	9,239.5	6,711.0	74.3	74.2	106.62	570.1	-2,475.1	239.8	97.9	141.88	1.690	
9,200.0	6,642.4	9,285.9	6,710.9	75.6	75.5	106.62	570.1	-2,521.6	239.8	95.5	144.34	1.661	
9,251.9	6,642.3	9,337.9	6,710.8	77.0	76.9	106.61	570.1	-2,573.6	239.8	92.7	147.09	1.630	
9,300.0	6,642.2	9,385.9	6,710.7	78.3	78.2	106.60	570.1	-2,621.6	239.8	90.1	149.64	1.602	
9,350.4	6,642.2	9,436.3	6,710.6	79.7	79.6	106.59	570.1	-2,672.0	239.8	87.5	152.31	1.574	
9,400.0	6,642.1	9,485.9	6,710.5	81.1	80.9	106.58	570.1	-2,721.6	239.8	84.8	154.95	1.547	
9,448.8	6,642.0	9,534.7	6,710.4	82.4	82.3	106.58	570.1	-2,770.4	239.7	82.2	157.54	1.522	
9,500.0	6,642.0	9,585.9	6,710.4	83.8	83.7	106.57	570.1	-2,821.6	239.7	79.5	160.26	1.496 Level 3	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	9,633.2	6,710.3	85.1	85.0	106.56	570.1	-2,868.8	239.7	77.0	162.77	1.473	Level 3
9,600.0	6,641.9	9,685.9	6,710.2	86.6	86.5	106.55	570.1	-2,921.6	239.7	74.1	165.58	1.448	Level 3
9,645.6	6,641.8	9,731.6	6,710.1	87.9	87.7	106.55	570.1	-2,967.3	239.7	71.7	168.02	1.427	Level 3
9,700.0	6,641.7	9,785.9	6,710.0	89.4	89.2	106.54	570.1	-3,021.6	239.7	68.8	170.91	1.402	Level 3
9,744.1	6,641.7	9,830.0	6,709.9	90.6	90.4	106.53	570.1	-3,065.7	239.7	66.4	173.26	1.383	Level 3
9,800.0	6,641.6	9,885.9	6,709.8	92.1	92.0	106.52	570.1	-3,121.6	239.7	63.4	176.25	1.360	Level 3
9,842.5	6,641.6	9,928.4	6,709.7	93.3	93.2	106.52	570.1	-3,164.1	239.7	61.2	178.52	1.343	Level 3
9,900.0	6,641.5	9,985.9	6,709.6	94.9	94.7	106.51	570.1	-3,221.6	239.7	58.1	181.59	1.320	Level 3
9,940.9	6,641.4	10,026.9	6,709.5	96.0	95.9	106.50	570.1	-3,262.5	239.7	55.9	183.77	1.304	Level 3
10,000.0	6,641.4	10,085.9	6,709.4	97.7	97.5	106.49	570.1	-3,321.6	239.6	52.7	186.93	1.282	Level 3
10,039.3	6,641.3	10,125.3	6,709.3	98.8	98.6	106.49	570.1	-3,361.0	239.6	50.6	189.04	1.268	Level 3
10,100.0	6,641.2	10,185.9	6,709.2	100.4	100.3	106.48	570.1	-3,421.6	239.6	47.3	192.28	1.246	Level 2
10,137.8	6,641.2	10,223.7	6,709.1	101.5	101.3	106.47	570.1	-3,459.4	239.6	45.3	194.30	1.233	Level 2
10,200.0	6,641.1	10,285.9	6,709.0	103.2	103.1	106.46	570.1	-3,521.6	239.6	42.0	197.64	1.212	Level 2
10,236.2	6,641.1	10,322.1	6,708.9	104.2	104.1	106.46	570.1	-3,557.8	239.6	40.0	199.58	1.201	Level 2
10,300.0	6,641.0	10,385.9	6,708.8	106.0	105.8	106.45	570.1	-3,621.6	239.6	36.6	203.00	1.180	Level 2
10,334.6	6,640.9	10,420.6	6,708.8	107.0	106.8	106.44	570.1	-3,656.2	239.6	34.7	204.85	1.170	Level 2
10,400.0	6,640.9	10,485.9	6,708.6	108.8	108.6	106.43	570.1	-3,721.6	239.6	31.2	208.36	1.150	Level 2
10,433.0	6,640.8	10,519.0	6,708.6	109.7	109.5	106.43	570.1	-3,754.7	239.6	29.4	210.13	1.140	Level 2
10,500.0	6,640.7	10,585.9	6,708.4	111.6	111.4	106.42	570.1	-3,821.6	239.6	25.8	213.72	1.121	Level 2
10,531.5	6,640.7	10,617.4	6,708.4	112.4	112.3	106.41	570.1	-3,853.1	239.5	24.1	215.41	1.112	Level 2
10,600.0	6,640.6	10,685.9	6,708.2	114.3	114.2	106.40	570.1	-3,921.6	239.5	20.4	219.09	1.093	Level 2
10,629.9	6,640.6	10,715.8	6,708.2	115.2	115.0	106.40	570.1	-3,951.5	239.5	18.8	220.70	1.085	Level 2
10,700.0	6,640.5	10,785.9	6,708.1	117.1	116.9	106.39	570.1	-4,021.6	239.5	15.0	224.47	1.067	Level 2
10,728.3	6,640.4	10,814.3	6,708.0	117.9	117.7	106.38	570.1	-4,049.9	239.5	13.5	225.99	1.060	Level 2
10,800.0	6,640.4	10,885.9	6,707.9	119.9	119.7	106.37	570.1	-4,121.6	239.5	9.7	229.84	1.042	Level 2
10,826.7	6,640.3	10,912.7	6,707.8	120.7	120.5	106.37	570.1	-4,148.4	239.5	8.2	231.28	1.036	Level 2
10,900.0	6,640.2	10,985.9	6,707.7	122.7	122.5	106.36	570.1	-4,221.6	239.5	4.3	235.22	1.018	Level 2
10,925.2	6,640.2	11,011.1	6,707.6	123.4	123.2	106.36	570.1	-4,246.8	239.5	2.9	236.57	1.012	Level 2
11,000.0	6,640.1	11,085.9	6,707.5	125.5	125.3	106.34	570.1	-4,321.6	239.5	-1.1	240.60	0.995	Level 1
11,023.6	6,640.1	11,109.5	6,707.4	126.1	126.0	106.34	570.1	-4,345.2	239.5	-2.4	241.87	0.990	Level 1
11,100.0	6,640.0	11,185.9	6,707.3	128.3	128.1	106.33	570.1	-4,421.6	239.4	-6.5	245.99	0.973	Level 1
11,122.0	6,639.9	11,208.0	6,707.3	128.9	128.7	106.33	570.1	-4,443.6	239.4	-7.7	247.17	0.969	Level 1
11,200.0	6,639.8	11,285.9	6,707.1	131.1	130.9	106.31	570.1	-4,521.6	239.4	-11.9	251.37	0.952	Level 1
11,220.4	6,639.8	11,306.4	6,707.1	131.6	131.4	106.31	570.1	-4,542.0	239.4	-13.1	252.47	0.948	Level 1
11,300.0	6,639.7	11,385.9	6,706.9	133.9	133.7	106.30	570.1	-4,621.6	239.4	-17.4	256.76	0.932	Level 1
11,318.9	6,639.7	11,404.8	6,706.9	134.4	134.2	106.30	570.1	-4,640.5	239.4	-18.4	257.78	0.929	Level 1
11,400.0	6,639.6	11,485.9	6,706.7	136.7	136.4	106.29	570.1	-4,721.6	239.4	-22.8	262.15	0.913	Level 1
11,417.3	6,639.6	11,503.2	6,706.7	137.1	136.9	106.28	570.1	-4,738.9	239.4	-23.7	263.08	0.910	Level 1
11,500.0	6,639.5	11,585.9	6,706.5	139.4	139.2	106.27	570.1	-4,821.6	239.4	-28.2	267.55	0.895	Level 1
11,515.7	6,639.5	11,601.7	6,706.5	139.9	139.7	106.27	570.1	-4,837.3	239.4	-29.0	268.39	0.892	Level 1
11,600.0	6,639.3	11,685.9	6,706.3	142.2	142.0	106.26	570.1	-4,921.6	239.4	-33.6	272.94	0.877	Level 1
11,614.1	6,639.3	11,700.1	6,706.3	142.6	142.4	106.25	570.1	-4,935.7	239.4	-34.4	273.70	0.874	Level 1
11,700.0	6,639.2	11,785.9	6,706.2	145.0	144.8	106.24	570.1	-5,021.6	239.3	-39.0	278.34	0.860	Level 1
11,712.6	6,639.2	11,798.5	6,706.1	145.4	145.2	106.24	570.1	-5,034.2	239.3	-39.7	279.02	0.858	Level 1
11,800.0	6,639.1	11,885.9	6,706.0	147.8	147.6	106.23	570.1	-5,121.6	239.3	-44.4	283.74	0.843	Level 1
11,811.0	6,639.1	11,896.9	6,705.9	148.1	147.9	106.23	570.1	-5,132.6	239.3	-45.0	284.33	0.842	Level 1
11,900.0	6,639.0	11,985.9	6,705.8	150.6	150.4	106.21	570.1	-5,221.6	239.3	-49.8	289.14	0.828	Level 1
11,909.4	6,639.0	11,995.4	6,705.8	150.9	150.7	106.21	570.1	-5,231.0	239.3	-50.3	289.65	0.826	Level 1
12,000.0	6,638.8	12,085.9	6,705.6	153.4	153.2	106.20	570.1	-5,321.6	239.3	-55.3	294.54	0.812	Level 1
12,007.8	6,638.8	12,093.8	6,705.6	153.6	153.4	106.20	570.1	-5,329.4	239.3	-55.7	294.96	0.811	Level 1
12,100.0	6,638.7	12,185.9	6,705.4	156.2	156.0	106.18	570.1	-5,421.6	239.3	-60.7	299.95	0.798	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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	12,192.2	6,705.4	156.4	156.2	106.18	570.1	-5,427.9	239.3	-61.0	300.28	0.797	Level 1
12,200.0	6,638.6	12,285.9	6,705.2	159.0	158.8	106.17	570.1	-5,521.6	239.3	-66.1	305.35	0.784	Level 1
12,204.7	6,638.6	12,290.6	6,705.2	159.1	158.9	106.17	570.1	-5,526.3	239.3	-66.4	305.61	0.783	Level 1
12,300.0	6,638.5	12,385.9	6,705.0	161.8	161.6	106.15	570.1	-5,621.6	239.2	-71.5	310.76	0.770	Level 1
12,303.1	6,638.5	12,389.1	6,705.0	161.9	161.7	106.15	570.1	-5,624.7	239.2	-71.7	310.93	0.769	Level 1
12,400.0	6,638.3	12,485.9	6,704.8	164.6	164.4	106.14	570.1	-5,721.6	239.2	-77.0	316.17	0.757	Level 1
12,401.5	6,638.3	12,487.5	6,704.8	164.6	164.4	106.14	570.1	-5,723.1	239.2	-77.0	316.25	0.756	Level 1
12,500.0	6,638.2	12,585.9	6,704.7	167.4	167.2	106.13	570.1	-5,821.6	239.2	-82.4	321.58	0.744	Level 1
12,598.4	6,638.1	12,684.3	6,704.5	170.2	169.9	106.11	570.1	-5,920.0	239.2	-87.7	326.91	0.732	Level 1
12,600.0	6,638.1	12,685.9	6,704.5	170.2	170.0	106.11	570.1	-5,921.6	239.2	-87.8	326.99	0.731	Level 1
12,696.8	6,638.0	12,782.8	6,704.3	172.9	172.7	106.10	570.1	-6,018.4	239.2	-93.1	332.23	0.720	Level 1
12,700.0	6,638.0	12,785.9	6,704.3	173.0	172.8	106.10	570.1	-6,021.6	239.2	-93.2	332.41	0.720	Level 1
12,795.2	6,637.8	12,881.2	6,704.1	175.7	175.4	106.08	570.1	-6,116.8	239.2	-98.4	337.56	0.708	Level 1
12,800.0	6,637.8	12,885.9	6,704.1	175.8	175.6	106.08	570.1	-6,121.6	239.2	-98.7	337.82	0.708	Level 1
12,893.7	6,637.7	12,979.6	6,703.9	178.4	178.2	106.07	570.1	-6,215.3	239.1	-103.8	342.89	0.697	Level 1
12,900.0	6,637.7	12,985.9	6,703.9	178.6	178.4	106.07	570.1	-6,221.6	239.1	-104.1	343.24	0.697	Level 1
12,992.1	6,637.6	13,078.0	6,703.7	181.2	180.9	106.05	570.1	-6,313.7	239.1	-109.1	348.23	0.687	Level 1
13,000.0	6,637.6	13,085.9	6,703.7	181.4	181.2	106.05	570.1	-6,321.6	239.1	-109.5	348.65	0.686	Level 1
13,090.5	6,637.5	13,176.5	6,703.5	183.9	183.7	106.04	570.1	-6,412.1	239.1	-114.5	353.56	0.676	Level 1
13,100.0	6,637.5	13,185.9	6,703.5	184.2	184.0	106.04	570.1	-6,421.6	239.1	-115.0	354.07	0.675	Level 1
13,188.9	6,637.4	13,274.9	6,703.4	186.7	186.5	106.03	570.1	-6,510.5	239.1	-119.8	358.90	0.666	Level 1
13,200.0	6,637.3	13,285.9	6,703.3	187.0	186.8	106.03	570.1	-6,521.6	239.1	-120.4	359.49	0.665	Level 1
13,287.4	6,637.2	13,373.3	6,703.2	189.4	189.2	106.01	570.1	-6,609.0	239.1	-125.2	364.23	0.656	Level 1
13,300.0	6,637.2	13,385.9	6,703.2	189.8	189.6	106.01	570.1	-6,621.6	239.1	-125.8	364.92	0.655	Level 1
13,385.8	6,637.1	13,471.7	6,703.0	192.2	192.0	106.00	570.1	-6,707.4	239.1	-130.5	369.57	0.647	Level 1
13,400.0	6,637.1	13,485.9	6,703.0	192.6	192.4	106.00	570.1	-6,721.6	239.1	-131.3	370.34	0.645	Level 1
13,484.2	6,637.0	13,570.2	6,702.8	195.0	194.7	105.99	570.1	-6,805.8	239.0	-135.9	374.91	0.638	Level 1
13,500.0	6,637.0	13,585.9	6,702.8	195.4	195.2	105.98	570.1	-6,821.6	239.0	-136.7	375.76	0.636	Level 1
13,582.6	6,636.9	13,668.6	6,702.6	197.7	197.5	105.97	570.1	-6,904.2	239.0	-141.2	380.25	0.629	Level 1
13,600.0	6,636.8	13,685.9	6,702.6	198.2	198.0	105.97	570.1	-6,921.6	239.0	-142.2	381.19	0.627	Level 1
13,681.1	6,636.7	13,767.0	6,702.4	200.5	200.2	105.96	570.1	-7,002.7	239.0	-146.6	385.59	0.620	Level 1
13,700.0	6,636.7	13,785.9	6,702.4	201.0	200.8	105.95	570.1	-7,021.6	239.0	-147.6	386.61	0.618	Level 1
13,779.5	6,636.6	13,865.4	6,702.3	203.2	203.0	105.94	570.1	-7,101.1	239.0	-151.9	390.93	0.611	Level 1
13,800.0	6,636.6	13,885.9	6,702.2	203.8	203.6	105.94	570.1	-7,121.6	239.0	-153.1	392.04	0.610	Level 1
13,877.9	6,636.5	13,963.9	6,702.1	206.0	205.7	105.93	570.1	-7,199.5	239.0	-157.3	396.27	0.603	Level 1
13,900.0	6,636.5	13,985.9	6,702.0	206.6	206.4	105.93	570.1	-7,221.6	239.0	-158.5	397.47	0.601	Level 1
13,976.3	6,636.4	14,062.3	6,701.9	208.8	208.5	105.92	570.1	-7,297.9	239.0	-162.7	401.61	0.595	Level 1
14,000.0	6,636.3	14,085.9	6,701.8	209.4	209.2	105.91	570.1	-7,321.6	239.0	-163.9	402.90	0.593	Level 1
14,074.8	6,636.2	14,160.7	6,701.7	211.5	211.3	105.90	570.1	-7,396.4	238.9	-168.0	406.96	0.587	Level 1
14,100.0	6,636.2	14,185.9	6,701.7	212.2	212.0	105.90	570.1	-7,421.6	238.9	-169.4	408.33	0.585	Level 1
14,173.2	6,636.1	14,259.1	6,701.5	214.3	214.0	105.89	570.1	-7,494.8	238.9	-173.4	412.30	0.579	Level 1
14,200.0	6,636.1	14,285.9	6,701.5	215.0	214.8	105.88	570.1	-7,521.6	238.9	-174.8	413.76	0.577	Level 1
14,271.6	6,636.0	14,357.6	6,701.3	217.0	216.8	105.87	570.1	-7,593.2	238.9	-178.7	417.65	0.572	Level 1
14,300.0	6,635.9	14,385.9	6,701.3	217.8	217.6	105.87	570.1	-7,621.6	238.9	-180.3	419.19	0.570	Level 1
14,370.0	6,635.9	14,456.0	6,701.2	219.8	219.5	105.86	570.1	-7,691.6	238.9	-184.1	423.00	0.565	Level 1
14,400.0	6,635.8	14,485.9	6,701.1	220.6	220.4	105.86	570.1	-7,721.6	238.9	-185.7	424.63	0.563	Level 1
14,468.5	6,635.7	14,554.4	6,701.0	222.6	222.3	105.85	570.1	-7,790.1	238.9	-189.5	428.35	0.558	Level 1
14,500.0	6,635.7	14,585.9	6,700.9	223.4	223.2	105.84	570.1	-7,821.6	238.9	-191.2	430.06	0.555	Level 1
14,566.9	6,635.6	14,652.8	6,700.8	225.3	225.1	105.83	570.1	-7,888.5	238.9	-194.8	433.70	0.551	Level 1
14,600.0	6,635.6	14,685.9	6,700.7	226.2	226.0	105.83	570.1	-7,921.6	238.9	-196.6	435.50	0.548	Level 1
14,665.3	6,635.5	14,751.3	6,700.6	228.1	227.8	105.82	570.1	-7,986.9	238.9	-200.2	439.05	0.544	Level 1
14,700.0	6,635.5	14,785.9	6,700.5	229.0	228.8	105.82	570.1	-8,021.6	238.8	-202.1	440.93	0.542	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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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-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
14,763.7	6,635.4	14,849.7	6,700.4	230.8	230.6	105.81	570.1	-8,085.3	238.8	-205.6	444.40	0.537	Level 1
14,800.0	6,635.3	14,885.9	6,700.4	231.8	231.6	105.80	570.1	-8,121.6	238.8	-207.5	446.37	0.535	Level 1
14,862.2	6,635.2	14,948.1	6,700.2	233.6	233.3	105.79	570.1	-8,183.8	238.8	-210.9	449.75	0.531	Level 1
14,900.0	6,635.2	14,985.9	6,700.2	234.7	234.4	105.79	570.1	-8,221.6	238.8	-213.0	451.81	0.529	Level 1
14,960.6	6,635.1	15,046.5	6,700.1	236.4	236.1	105.78	570.1	-8,282.2	238.8	-216.3	455.10	0.525	Level 1
14,967.0	6,635.1	15,053.0	6,700.1	236.5	236.3	105.78	570.1	-8,288.6	238.8	-216.6	455.45	0.524	Level 1
14,995.1	6,635.0	15,081.1	6,700.0	237.3	237.1	105.79	570.1	-8,316.7	238.8	-218.1	456.94	0.523	Level 1, ES, SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-179.36	-75.0	-0.8	75.0				
98.4	98.4	98.4	98.4	0.1	0.1	-179.36	-75.0	-0.8	75.0	74.9	0.19	390.398	
100.0	100.0	100.0	100.0	0.1	0.1	-179.36	-75.0	-0.8	75.0	74.9	0.20	383.790	
196.8	196.8	196.8	196.8	0.3	0.3	-179.36	-75.0	-0.8	75.0	74.4	0.63	118.952	
200.0	200.0	200.0	200.0	0.3	0.3	-179.36	-75.0	-0.8	75.0	74.4	0.65	116.341	
295.3	295.3	295.3	295.3	0.5	0.5	-179.36	-75.0	-0.8	75.0	74.0	1.07	69.919	
300.0	300.0	300.0	300.0	0.5	0.5	-179.36	-75.0	-0.8	75.0	74.0	1.09	68.562	
393.7	393.7	393.7	393.7	0.8	0.8	-179.36	-75.0	-0.8	75.0	73.5	1.52	49.510	
400.0	400.0	400.0	400.0	0.8	0.8	-179.36	-75.0	-0.8	75.0	73.5	1.54	48.602	
492.1	492.1	492.1	492.1	1.0	1.0	-179.36	-75.0	-0.8	75.0	73.1	1.96	38.324	
500.0	500.0	500.0	500.0	1.0	1.0	-179.36	-75.0	-0.8	75.0	73.1	1.99	37.644	
590.5	590.5	590.5	590.5	1.2	1.2	-179.36	-75.0	-0.8	75.0	72.6	2.40	31.261	
600.0	600.0	600.0	600.0	1.2	1.2	-179.36	-75.0	-0.8	75.0	72.6	2.44	30.717	
689.0	689.0	689.0	689.0	1.4	1.4	-179.36	-75.0	-0.8	75.0	72.2	2.84	26.396	
700.0	700.0	700.0	700.0	1.4	1.4	-179.36	-75.0	-0.8	75.0	72.2	2.89	25.944	
787.4	787.4	787.4	787.4	1.6	1.6	-179.36	-75.0	-0.8	75.0	71.8	3.29	22.842	
800.0	800.0	800.0	800.0	1.7	1.7	-179.36	-75.0	-0.8	75.0	71.7	3.34	22.454	
885.8	885.8	885.8	885.8	1.9	1.9	-179.36	-75.0	-0.8	75.0	71.3	3.73	20.131	
900.0	900.0	900.0	900.0	1.9	1.9	-179.36	-75.0	-0.8	75.0	71.3	3.79	19.792	
984.2	984.2	984.2	984.2	2.1	2.1	-179.36	-75.0	-0.8	75.0	70.9	4.17	17.995	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.36	-75.0	-0.8	75.0	70.8	4.24	17.695	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-179.36	-75.0	-0.8	75.0	70.4	4.61	16.269	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-179.36	-75.0	-0.8	75.0	70.4	4.69	15.999	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	-179.36	-75.0	-0.8	75.0	70.0	5.06	14.845	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-179.36	-75.0	-0.8	75.0	69.9	5.14	14.600 CC	
1,279.5	1,279.5	1,279.3	1,279.3	2.7	2.7	-178.53	-75.1	-1.9	75.2	69.7	5.49	13.703	
1,300.0	1,300.0	1,299.7	1,299.7	2.8	2.8	-178.05	-75.2	-2.6	75.2	69.7	5.57	13.498 ES	
1,377.9	1,377.9	1,377.2	1,377.1	3.0	2.9	144.02	-75.5	-6.3	76.7	70.8	5.90	12.983	
1,400.0	1,400.0	1,399.0	1,398.9	3.0	3.0	145.35	-75.7	-7.7	77.5	71.5	6.00	12.922	
1,476.4	1,476.3	1,474.3	1,473.9	3.2	3.1	150.99	-76.2	-13.9	82.2	75.9	6.32	13.001	
1,500.0	1,499.8	1,497.4	1,496.9	3.2	3.2	152.97	-76.4	-16.2	84.3	77.9	6.42	13.129	
1,574.8	1,574.4	1,570.1	1,569.0	3.4	3.4	159.52	-77.2	-24.6	93.4	86.7	6.75	13.835	
1,600.0	1,599.5	1,594.3	1,593.1	3.5	3.4	161.73	-77.5	-27.8	97.3	90.5	6.86	14.190	
1,673.2	1,672.2	1,664.0	1,661.9	3.6	3.6	167.81	-78.4	-38.2	111.3	104.1	7.18	15.504	
1,700.0	1,698.7	1,689.1	1,686.7	3.7	3.7	169.87	-78.8	-42.3	117.4	110.1	7.29	16.100	
1,771.6	1,769.5	1,755.5	1,752.0	3.9	3.9	174.83	-79.9	-54.3	136.3	128.7	7.60	17.925	
1,800.0	1,797.5	1,781.3	1,777.3	4.0	3.9	176.57	-80.4	-59.4	144.7	137.0	7.72	18.749	
1,870.1	1,866.3	1,844.1	1,838.7	4.2	4.2	-179.65	-81.6	-72.7	168.0	160.0	8.02	20.959	
1,899.9	1,895.6	1,870.4	1,864.3	4.3	4.3	-178.25	-82.1	-78.6	179.0	170.8	8.14	21.987	
1,968.5	1,962.6	1,929.9	1,922.1	4.5	4.5	-175.44	-83.4	-92.9	205.4	197.0	8.46	24.296	
2,000.0	1,993.4	1,956.9	1,948.1	4.6	4.6	-174.30	-84.0	-99.8	218.1	209.5	8.60	25.359	
2,066.9	2,058.9	2,015.0	2,004.1	4.8	4.8	-172.12	-85.5	-115.4	245.8	236.9	8.92	27.562	
2,100.0	2,091.3	2,044.8	2,032.7	4.9	5.0	-171.16	-86.2	-123.5	259.7	250.6	9.07	28.628	
2,165.3	2,155.2	2,103.6	2,089.3	5.2	5.2	-169.53	-87.6	-139.5	287.3	277.9	9.38	30.613	
2,200.0	2,189.1	2,134.7	2,119.3	5.3	5.4	-168.79	-88.4	-148.0	302.0	292.4	9.56	31.601	
2,263.8	2,251.5	2,192.1	2,174.5	5.5	5.7	-167.59	-89.8	-163.6	329.2	319.3	9.86	33.367	
2,300.0	2,286.9	2,224.7	2,205.8	5.7	5.8	-167.00	-90.6	-172.5	344.6	334.6	10.04	34.318	
2,362.2	2,347.7	2,280.7	2,259.7	5.9	6.1	-166.09	-92.0	-187.7	371.3	360.9	10.35	35.866	
2,400.0	2,384.7	2,314.7	2,292.4	6.0	6.3	-165.60	-92.9	-196.9	387.5	377.0	10.54	36.765	
2,460.6	2,444.0	2,369.3	2,344.9	6.3	6.6	-164.89	-94.2	-211.8	413.6	402.7	10.85	38.129	
2,500.0	2,482.5	2,404.7	2,379.0	6.4	6.7	-164.47	-95.1	-221.4	430.5	419.5	11.04	38.979	
2,559.0	2,540.3	2,457.8	2,430.1	6.7	7.0	-163.91	-96.4	-235.9	456.0	444.6	11.35	40.181	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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
2,600.0	2,580.3	2,494.7	2,465.5	6.8	7.2	-163.55	-97.3	-245.9	473.6	462.1	11.56	40.982	
2,657.5	2,636.5	2,546.4	2,515.3	7.1	7.5	-163.10	-98.6	-260.0	498.4	486.6	11.86	42.045	
2,700.0	2,678.1	2,584.7	2,552.1	7.2	7.7	-162.79	-99.5	-270.4	516.8	504.8	12.08	42.800	
2,755.9	2,732.8	2,635.0	2,600.5	7.5	8.0	-162.41	-100.8	-284.0	541.0	528.6	12.37	43.742	
2,800.0	2,776.0	2,674.7	2,638.7	7.7	8.2	-162.14	-101.8	-294.8	560.1	547.5	12.60	44.454	
2,854.3	2,829.1	2,723.5	2,685.7	7.9	8.4	-161.83	-103.0	-308.1	583.6	570.7	12.89	45.290	
2,900.0	2,873.8	2,764.6	2,725.2	8.1	8.7	-161.58	-104.0	-319.3	603.4	590.3	13.13	45.964	
2,952.7	2,925.4	2,812.1	2,770.9	8.3	8.9	-161.32	-105.2	-332.2	626.3	612.9	13.41	46.707	
3,000.0	2,971.6	2,854.6	2,811.8	8.5	9.2	-161.10	-106.2	-343.8	646.8	633.1	13.66	47.345	
3,051.2	3,021.6	2,900.7	2,856.1	8.7	9.4	-160.88	-107.4	-356.3	669.0	655.0	13.94	48.006	
3,100.0	3,069.4	2,944.6	2,898.4	8.9	9.7	-160.68	-108.4	-368.3	690.2	676.0	14.20	48.611	
3,149.6	3,117.9	2,989.3	2,941.3	9.1	9.9	-160.49	-109.5	-380.4	711.7	697.2	14.47	49.200	
3,200.0	3,167.2	3,034.6	2,984.9	9.3	10.2	-160.31	-110.7	-392.7	733.6	718.8	14.74	49.774	
3,248.0	3,214.2	3,077.8	3,026.5	9.5	10.4	-160.14	-111.7	-404.5	754.4	739.4	15.00	50.300	
3,300.0	3,265.0	3,124.6	3,071.5	9.8	10.7	-159.98	-112.9	-417.2	777.0	761.7	15.28	50.847	
3,346.4	3,310.5	3,166.4	3,111.7	10.0	10.9	-159.84	-113.9	-428.6	797.2	781.7	15.54	51.316	
3,400.0	3,362.9	3,214.6	3,158.1	10.2	11.2	-159.68	-115.1	-441.7	820.5	804.7	15.83	51.838	
3,444.9	3,406.7	3,255.0	3,196.9	10.4	11.4	-159.56	-116.1	-452.7	840.0	823.9	16.07	52.257	
3,473.0	3,434.2	3,280.2	3,221.2	10.5	11.6	-159.49	-116.7	-459.6	852.2	836.0	16.23	52.513	
3,500.0	3,460.7	3,304.6	3,244.7	10.6	11.7	-159.50	-117.3	-466.2	863.9	847.5	16.40	52.680	
3,543.3	3,503.2	3,343.9	3,282.4	10.7	11.9	-159.52	-118.3	-476.9	882.1	865.4	16.66	52.954	
3,600.0	3,559.0	3,395.6	3,332.2	10.9	12.2	-159.51	-119.6	-490.9	905.1	888.1	16.99	53.258	
3,641.7	3,600.2	3,434.0	3,369.1	11.0	12.4	-159.49	-120.5	-501.4	921.4	904.1	17.24	53.455	
3,700.0	3,657.9	3,487.9	3,420.9	11.2	12.7	-159.44	-121.9	-516.0	943.3	925.7	17.57	53.681	
3,740.1	3,697.8	3,525.2	3,456.9	11.3	13.0	-159.39	-122.8	-526.2	957.8	940.0	17.80	53.816	
3,800.0	3,757.3	3,581.2	3,510.8	11.4	13.3	-159.30	-124.2	-541.4	978.5	960.4	18.13	53.972	
3,838.6	3,795.7	3,617.5	3,545.7	11.5	13.5	-159.22	-125.1	-551.3	991.3	973.0	18.34	54.058	
3,900.0	3,857.0	3,675.6	3,601.5	11.7	13.8	-159.08	-126.5	-567.1	1,010.7	992.1	18.66	54.152	
3,937.0	3,893.9	3,710.7	3,635.3	11.7	14.0	-158.99	-127.4	-576.6	1,021.9	1,003.0	18.85	54.198	
4,000.0	3,956.9	3,770.8	3,693.2	11.8	14.4	-158.80	-128.9	-593.0	1,039.9	1,020.7	19.17	54.237	
4,035.4	3,992.3	3,804.8	3,725.8	11.9	14.6	-158.69	-129.7	-602.2	1,049.5	1,030.2	19.35	54.249	
4,072.9	4,029.8	3,840.8	3,760.5	11.9	14.8	-117.36	-130.6	-612.0	1,059.3	1,033.5	25.80	41.057	
4,100.0	4,056.9	3,866.9	3,785.5	12.0	14.9	-117.22	-131.2	-619.1	1,066.2	1,040.2	25.99	41.027	
4,133.8	4,090.7	3,899.4	3,816.9	12.0	15.1	-117.03	-132.0	-628.0	1,074.8	1,048.5	26.23	40.981	
4,200.0	4,156.9	3,963.1	3,878.1	12.1	15.5	-116.68	-133.6	-645.3	1,091.6	1,065.0	26.69	40.894	
4,232.3	4,189.2	3,994.1	3,907.9	12.2	15.7	-116.51	-134.4	-653.7	1,099.9	1,073.0	26.92	40.852	
4,300.0	4,256.9	4,059.2	3,970.6	12.3	16.0	-116.17	-136.0	-671.4	1,117.2	1,089.8	27.41	40.765	
4,330.7	4,287.6	4,088.8	3,999.0	12.4	16.2	-116.02	-136.7	-679.5	1,125.1	1,097.5	27.63	40.726	
4,400.0	4,356.9	4,155.4	4,063.2	12.5	16.6	-115.68	-138.4	-697.6	1,142.9	1,114.8	28.12	40.640	
4,429.1	4,386.0	4,183.5	4,090.1	12.5	16.7	-115.54	-139.1	-705.2	1,150.4	1,122.0	28.33	40.603	
4,500.0	4,456.9	4,251.6	4,155.7	12.6	17.1	-115.22	-140.8	-723.8	1,168.6	1,139.8	28.84	40.517	
4,527.5	4,484.4	4,278.1	4,181.2	12.7	17.3	-115.09	-141.4	-731.0	1,175.7	1,146.7	29.04	40.484	
4,600.0	4,556.9	4,347.8	4,248.2	12.8	17.7	-114.77	-143.1	-749.9	1,194.4	1,164.9	29.57	40.399	
4,626.0	4,582.9	4,372.8	4,272.3	12.9	17.8	-114.66	-143.7	-756.7	1,201.1	1,171.4	29.75	40.369	
4,700.0	4,656.9	4,444.0	4,340.8	13.0	18.3	-114.34	-145.5	-776.1	1,220.3	1,190.0	30.29	40.284	
4,724.4	4,681.3	4,467.5	4,363.4	13.0	18.4	-114.24	-146.1	-782.5	1,226.6	1,196.2	30.47	40.256	
4,800.0	4,756.9	4,540.2	4,433.3	13.1	18.8	-113.93	-147.9	-802.2	1,246.2	1,215.2	31.02	40.172	
4,822.8	4,779.7	4,562.2	4,454.4	13.2	19.0	-113.84	-148.4	-808.2	1,252.2	1,221.0	31.19	40.147	
4,900.0	4,856.9	4,636.4	4,525.9	13.3	19.4	-113.54	-150.3	-828.4	1,272.2	1,240.5	31.76	40.064	
4,921.2	4,878.1	4,656.9	4,545.5	13.4	19.5	-113.46	-150.8	-834.0	1,277.8	1,245.9	31.91	40.041	
5,000.0	4,956.9	4,732.6	4,618.4	13.5	19.9	-113.16	-152.6	-854.6	1,298.3	1,265.8	32.49	39.958	
5,019.7	4,976.6	4,751.6	4,636.6	13.5	20.1	-113.09	-153.1	-859.7	1,303.4	1,270.8	32.64	39.938	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	4,828.8	4,710.9	13.7	20.5	-112.80	-155.0	-880.7	1,324.4	1,291.1	33.23	39.856	
5,118.1	5,075.0	4,846.2	4,727.7	13.7	20.6	-112.73	-155.5	-885.5	1,329.1	1,295.7	33.36	39.838	
5,200.0	5,156.9	4,925.0	4,803.5	13.8	21.1	-112.45	-157.4	-906.9	1,350.5	1,316.5	33.97	39.757	
5,216.5	5,173.4	4,940.9	4,818.8	13.9	21.2	-112.39	-157.8	-911.2	1,354.8	1,320.8	34.09	39.741	
5,300.0	5,256.9	5,021.2	4,896.0	14.0	21.6	-112.11	-159.8	-933.1	1,376.7	1,342.0	34.71	39.661	
5,314.9	5,271.8	5,035.6	4,909.9	14.1	21.7	-112.06	-160.1	-937.0	1,380.6	1,345.8	34.82	39.647	
5,400.0	5,356.9	7,886.4	6,626.2	14.2	38.5	178.19	-175.0	314.0	1,370.0	1,342.2	27.86	49.174	
5,413.4	5,370.3	7,886.2	6,626.2	14.2	38.5	178.21	-175.0	313.9	1,357.6	1,329.8	27.89	48.683	
5,500.0	5,456.9	7,885.1	6,626.2	14.4	38.5	178.34	-175.0	312.8	1,277.9	1,249.9	28.06	45.548	
5,511.8	5,468.7	7,885.0	6,626.2	14.4	38.5	178.35	-175.0	312.6	1,267.1	1,239.1	28.08	45.126	
5,600.0	5,556.9	7,883.8	6,626.2	14.6	38.4	178.48	-175.0	311.5	1,187.1	1,158.9	28.25	42.016	
5,610.2	5,567.1	7,883.7	6,626.2	14.6	38.4	178.49	-175.0	311.4	1,177.9	1,149.6	28.27	41.661	
5,700.0	5,656.9	7,882.6	6,626.2	14.7	38.4	178.62	-175.0	310.2	1,097.9	1,069.4	28.45	38.587	
5,708.6	5,665.5	7,882.5	6,626.2	14.8	38.4	178.63	-175.0	310.1	1,090.3	1,061.8	28.47	38.296	
5,800.0	5,756.9	7,881.3	6,626.2	14.9	38.4	178.76	-175.0	308.9	1,010.7	982.0	28.65	35.275	
5,807.1	5,764.0	7,881.2	6,626.3	14.9	38.4	178.77	-175.0	308.8	1,004.6	976.0	28.67	35.045	
5,900.0	5,856.9	7,880.0	6,626.3	15.1	38.3	178.91	-175.0	307.6	926.1	897.2	28.85	32.097	
5,905.5	5,862.4	7,879.9	6,626.3	15.1	38.3	178.91	-175.0	307.6	921.5	892.7	28.86	31.926	
5,971.9	5,928.8	7,879.1	6,626.3	15.3	38.3	179.01	-175.0	306.7	867.3	838.3	29.00	29.907	
6,000.0	5,956.9	7,878.2	6,626.3	15.3	38.3	-93.86	-175.0	305.8	844.8	792.2	52.63	16.051	
6,003.9	5,960.8	7,878.0	6,626.3	15.3	38.3	-94.24	-175.0	305.6	841.7	789.1	52.64	15.992	
6,050.0	6,006.7	7,873.8	6,626.3	15.4	38.2	-98.31	-175.0	301.5	806.0	753.4	52.55	15.338	
6,100.0	6,056.2	7,866.0	6,626.4	15.4	38.0	-101.90	-175.0	293.7	768.6	716.4	52.23	14.715	
6,102.3	6,058.5	7,865.6	6,626.4	15.4	38.0	-102.05	-175.0	293.2	766.9	714.7	52.22	14.688	
6,150.0	6,105.1	7,854.8	6,626.6	15.4	37.8	-104.66	-175.0	282.4	733.2	681.4	51.79	14.158	
6,200.0	6,153.0	7,840.2	6,626.8	15.5	37.5	-106.65	-175.0	267.9	700.0	648.8	51.27	13.653	
6,200.8	6,153.8	7,840.0	6,626.8	15.5	37.5	-106.67	-175.0	267.6	699.5	648.3	51.26	13.645	
6,250.0	6,199.9	7,822.3	6,627.0	15.5	37.1	-107.93	-175.0	250.0	669.3	618.6	50.73	13.194	
6,299.2	6,244.8	7,801.6	6,627.3	15.5	36.7	-108.57	-175.0	229.2	641.8	591.6	50.19	12.787	
6,300.0	6,245.5	7,801.2	6,627.3	15.5	36.7	-108.58	-175.0	228.8	641.4	591.2	50.18	12.781	
6,350.0	6,289.6	7,777.0	6,627.6	15.5	36.2	-108.66	-175.0	204.6	616.3	566.7	49.66	12.410	
6,397.6	6,329.9	7,751.1	6,627.9	15.4	35.6	-108.26	-175.0	178.8	595.3	546.1	49.19	12.103	
6,400.0	6,331.8	7,749.8	6,627.9	15.4	35.6	-108.23	-175.0	177.4	594.4	545.2	49.17	12.089	
6,450.0	6,372.2	7,719.7	6,628.3	15.4	35.0	-107.36	-175.0	147.3	575.5	526.8	48.69	11.820	
6,496.0	6,407.4	7,689.6	6,628.7	15.4	34.4	-106.23	-175.0	117.3	560.9	512.6	48.29	11.616	
6,500.0	6,410.3	7,686.9	6,628.7	15.4	34.3	-106.12	-175.0	114.6	559.7	511.5	48.25	11.600	
6,550.0	6,446.1	7,651.6	6,629.2	15.4	33.7	-104.56	-175.0	79.2	546.9	499.0	47.86	11.427	
6,594.5	6,475.9	7,618.1	6,629.6	15.4	33.0	-102.97	-175.0	45.8	537.8	490.3	47.54	11.313	
6,600.0	6,479.4	7,613.9	6,629.7	15.4	32.9	-102.76	-175.0	41.5	536.8	489.3	47.50	11.302	
6,650.0	6,510.0	7,574.0	6,630.2	15.5	32.2	-100.81	-175.0	1.6	529.2	482.0	47.19	11.213	
6,692.9	6,534.0	7,538.1	6,630.6	15.7	31.5	-99.07	-175.0	-34.2	524.3	477.4	46.97	11.163	
6,700.0	6,537.8	7,532.0	6,630.7	15.7	31.4	-98.78	-175.0	-40.3	523.7	476.7	46.93	11.159	
6,750.0	6,562.6	7,488.3	6,631.3	16.2	30.7	-96.77	-175.0	-84.0	519.9	473.2	46.71	11.130	
6,791.3	6,580.8	7,451.0	6,631.8	16.6	30.1	-95.17	-175.0	-121.3	517.9	471.3	46.60	11.113	
6,800.0	6,584.3	7,443.0	6,631.9	16.7	29.9	-94.85	-175.0	-129.3	517.5	471.0	46.57	11.113	
6,850.0	6,602.9	7,396.4	6,632.4	17.3	29.2	-93.11	-175.0	-176.0	516.2	469.7	46.47	11.108	
6,889.7	6,615.2	7,358.4	6,632.9	17.9	28.6	-91.89	-175.0	-213.9	515.6	469.2	46.49	11.092	
6,900.0	6,618.1	7,348.6	6,633.1	18.0	28.5	-91.61	-175.0	-223.8	515.6	469.1	46.49	11.090	
6,950.0	6,630.0	7,299.9	6,633.7	18.8	27.8	-90.40	-175.0	-272.5	515.4	468.8	46.56	11.070	
6,970.9	6,633.9	7,279.3	6,633.9	19.2	27.5	-90.00	-175.0	-293.0	515.3	468.7	46.65	11.047	
6,988.2	6,636.8	7,262.2	6,634.2	19.5	27.3	-89.71	-175.0	-310.1	515.4	468.6	46.73	11.029	
7,000.0	6,638.5	7,250.5	6,634.3	19.7	27.2	-89.54	-175.0	-321.8	515.4	468.6	46.78	11.017	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
7,050.0	6,643.5	7,200.7	6,634.9	20.6	26.6	-89.05	-175.0	-371.6	515.4	468.4	47.06	10.952	
7,086.6	6,644.9	7,164.6	6,634.7	21.3	26.2	-88.86	-175.0	-407.7	515.4	468.1	47.36	10.883	
7,097.8	6,645.0	7,153.5	6,634.3	21.5	26.1	-88.81	-175.0	-418.8	515.5	468.0	47.46	10.861	
7,100.0	6,645.0	7,151.4	6,634.2	21.6	26.1	-88.79	-175.0	-420.9	515.5	468.0	47.48	10.857	
7,185.0	6,644.9	7,068.6	6,625.2	23.3	25.3	-87.81	-175.0	-503.2	515.7	467.3	48.40	10.655	
7,200.0	6,644.9	7,054.2	6,622.7	23.6	25.2	-87.54	-175.0	-517.3	515.8	467.3	48.57	10.620	
7,283.4	6,644.8	6,976.6	6,604.3	25.4	24.7	-85.50	-175.0	-592.6	517.1	467.4	49.72	10.399	
7,300.0	6,644.7	6,961.8	6,599.8	25.8	24.6	-85.01	-175.0	-606.8	517.5	467.6	49.95	10.360	
7,381.9	6,644.6	6,891.3	6,574.7	27.7	24.3	-82.27	-175.0	-672.7	521.0	469.8	51.21	10.173	
7,400.0	6,644.6	6,876.4	6,568.6	28.1	24.2	-81.60	-175.0	-686.2	522.1	470.6	51.49	10.141	
7,480.3	6,644.5	6,814.0	6,539.9	30.0	24.1	-78.51	-175.0	-741.6	529.3	476.6	52.73	10.038	
7,500.0	6,644.5	6,800.0	6,532.8	30.5	24.0	-77.76	-175.0	-753.7	531.7	478.6	53.02	10.028 SF	
7,578.7	6,644.4	6,750.0	6,505.6	32.4	24.0	-74.91	-175.0	-795.6	543.9	489.6	54.23	10.030	
7,600.0	6,644.4	6,731.3	6,494.7	32.9	24.0	-73.79	-175.0	-810.8	547.9	493.5	54.45	10.064	
7,677.1	6,644.3	6,684.5	6,465.6	34.8	24.0	-70.86	-175.0	-847.5	566.0	510.5	55.47	10.204	
7,700.0	6,644.2	6,671.6	6,457.2	35.4	24.0	-70.03	-175.0	-857.3	572.3	516.6	55.75	10.265	
7,775.6	6,644.1	6,631.5	6,429.9	37.3	24.1	-67.40	-175.0	-886.7	596.5	539.8	56.67	10.526	
7,800.0	6,644.1	6,619.4	6,421.3	38.0	24.1	-66.60	-175.0	-895.2	605.3	548.4	56.95	10.630	
7,874.0	6,644.0	6,585.1	6,396.4	39.9	24.2	-64.30	-175.0	-918.6	635.3	577.5	57.78	10.994	
7,900.0	6,644.0	6,573.9	6,387.9	40.5	24.2	-63.55	-175.0	-926.1	646.8	588.8	58.07	11.139	
7,972.4	6,643.9	6,550.0	6,369.6	42.4	24.3	-61.94	-175.0	-941.4	682.0	622.9	59.03	11.552	
8,000.0	6,643.9	6,534.2	6,357.3	43.1	24.3	-60.88	-175.0	-951.2	696.3	637.1	59.16	11.770	
8,070.8	6,643.8	6,500.0	6,329.7	45.0	24.4	-58.60	-175.0	-971.5	735.7	676.1	59.60	12.344	
8,100.0	6,643.7	6,500.0	6,329.7	45.8	24.4	-58.60	-175.0	-971.5	752.8	692.5	60.26	12.491	
8,169.3	6,643.7	6,478.0	6,311.5	47.6	24.5	-57.14	-175.0	-983.9	795.5	734.5	61.01	13.039	
8,200.0	6,643.6	6,469.0	6,303.9	48.4	24.5	-56.56	-175.0	-988.7	815.3	754.0	61.35	13.289	
8,267.7	6,643.5	6,450.0	6,287.8	50.2	24.5	-55.33	-175.0	-998.7	860.7	798.6	62.10	13.859	
8,300.0	6,643.5	6,450.0	6,287.8	51.1	24.5	-55.33	-175.0	-998.7	883.1	820.3	62.82	14.057	
8,366.1	6,643.4	6,426.0	6,267.0	52.9	24.6	-53.79	-175.0	-1,010.8	930.3	867.0	63.26	14.704	
8,400.0	6,643.4	6,418.2	6,260.2	53.8	24.6	-53.30	-175.0	-1,014.5	955.1	891.4	63.67	15.002	
8,464.5	6,643.3	6,400.0	6,244.1	55.5	24.7	-52.17	-175.0	-1,023.0	1,003.6	939.4	64.25	15.620	
8,500.0	6,643.2	6,400.0	6,244.1	56.5	24.7	-52.17	-175.0	-1,023.0	1,030.8	965.8	65.02	15.853	
8,563.0	6,643.2	6,384.7	6,230.4	58.2	24.7	-51.23	-175.0	-1,029.8	1,080.0	1,014.4	65.66	16.448	
8,600.0	6,643.1	6,377.9	6,224.2	59.2	24.7	-50.82	-175.0	-1,032.7	1,109.5	1,043.4	66.13	16.778	
8,661.4	6,643.0	6,367.2	6,214.5	60.8	24.7	-50.18	-175.0	-1,037.2	1,159.1	1,092.2	66.92	17.322	
8,700.0	6,643.0	6,350.0	6,198.7	61.9	24.8	-49.16	-175.0	-1,044.1	1,190.9	1,124.0	66.87	17.809	
8,759.8	6,642.9	6,350.0	6,198.7	63.5	24.8	-49.16	-175.0	-1,044.1	1,240.4	1,172.3	68.13	18.206	
8,800.0	6,642.9	6,350.0	6,198.7	64.6	24.8	-49.16	-175.0	-1,044.1	1,274.2	1,205.2	68.98	18.472	
8,858.2	6,642.8	6,350.0	6,198.7	66.2	24.8	-49.16	-175.0	-1,044.1	1,323.8	1,253.6	70.21	18.854	
8,900.0	6,642.7	6,331.4	6,181.5	67.3	24.8	-48.08	-175.0	-1,051.2	1,359.4	1,289.3	70.09	19.395	
8,956.7	6,642.7	6,324.0	6,174.6	68.9	24.9	-47.66	-175.0	-1,053.8	1,408.4	1,337.5	70.87	19.873	
9,000.0	6,642.6	6,318.6	6,169.6	70.1	24.9	-47.36	-175.0	-1,055.7	1,446.2	1,374.7	71.47	20.234	
9,055.1	6,642.5	6,300.0	6,152.1	71.6	24.9	-46.32	-175.0	-1,062.0	1,494.7	1,423.2	71.57	20.885	
9,100.0	6,642.5	6,300.0	6,152.1	72.8	24.9	-46.32	-175.0	-1,062.0	1,534.3	1,461.9	72.49	21.167	
9,153.5	6,642.4	6,300.0	6,152.1	74.3	24.9	-46.32	-175.0	-1,062.0	1,581.9	1,508.4	73.58	21.499	
9,200.0	6,642.4	6,300.0	6,152.1	75.6	24.9	-46.32	-175.0	-1,062.0	1,623.6	1,549.0	74.53	21.784	
9,251.9	6,642.3	6,300.0	6,152.1	77.0	24.9	-46.32	-175.0	-1,062.0	1,670.4	1,594.8	75.59	22.097	
9,300.0	6,642.2	6,300.0	6,152.1	78.3	24.9	-46.32	-175.0	-1,062.0	1,714.0	1,637.4	76.58	22.382	
9,350.4	6,642.2	6,281.9	6,134.8	79.7	24.9	-45.34	-175.0	-1,067.7	1,759.6	1,683.1	76.51	22.999	
9,400.0	6,642.1	6,277.5	6,130.6	81.1	24.9	-45.10	-175.0	-1,069.0	1,804.9	1,727.7	77.24	23.367	
9,448.8	6,642.0	6,273.3	6,126.7	82.4	25.0	-44.88	-175.0	-1,070.2	1,849.7	1,771.7	77.97	23.723	
9,500.0	6,642.0	6,269.1	6,122.6	83.8	25.0	-44.66	-175.0	-1,071.4	1,896.8	1,818.1	78.73	24.091	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,250.0	6,104.3	85.1	25.0	-43.67	-175.0	-1,076.6	1,940.7	1,862.2	78.48	24.727	
9,600.0	6,641.9	6,250.0	6,104.3	86.6	25.0	-43.67	-175.0	-1,076.6	1,989.5	1,910.0	79.52	25.018	
9,645.6	6,641.8	6,250.0	6,104.3	87.9	25.0	-43.67	-175.0	-1,076.6	2,031.9	1,951.4	80.43	25.264	
9,700.0	6,641.7	6,250.0	6,104.3	89.4	25.0	-43.67	-175.0	-1,076.6	2,082.5	2,001.0	81.50	25.553	
9,744.1	6,641.7	6,250.0	6,104.3	90.6	25.0	-43.67	-175.0	-1,076.6	2,123.7	2,041.3	82.37	25.782	
9,800.0	6,641.6	6,250.0	6,104.3	92.1	25.0	-43.67	-175.0	-1,076.6	2,176.2	2,092.7	83.48	26.069	
9,842.5	6,641.6	6,250.0	6,104.3	93.3	25.0	-43.67	-175.0	-1,076.6	2,216.1	2,131.8	84.32	26.283	
9,900.0	6,641.5	6,250.0	6,104.3	94.9	25.0	-43.67	-175.0	-1,076.6	2,270.4	2,184.9	85.46	26.568	
9,940.9	6,641.4	6,250.0	6,104.3	96.0	25.0	-43.67	-175.0	-1,076.6	2,309.0	2,222.8	86.27	26.766	
10,000.0	6,641.4	6,250.0	6,104.3	97.7	25.0	-43.67	-175.0	-1,076.6	2,365.0	2,277.6	87.44	27.048	
10,039.3	6,641.3	6,250.0	6,104.3	98.8	25.0	-43.67	-175.0	-1,076.6	2,402.4	2,314.2	88.22	27.233	
10,100.0	6,641.2	6,229.7	6,084.6	100.4	25.0	-42.65	-175.0	-1,081.6	2,459.8	2,371.8	87.98	27.958	
10,137.8	6,641.2	6,227.7	6,082.7	101.5	25.0	-42.55	-175.0	-1,082.1	2,495.7	2,407.1	88.57	28.176	
10,200.0	6,641.1	6,224.6	6,079.6	103.2	25.0	-42.39	-175.0	-1,082.8	2,555.0	2,465.5	89.56	28.529	
10,236.2	6,641.1	6,222.8	6,077.8	104.2	25.0	-42.30	-175.0	-1,083.2	2,589.6	2,499.4	90.13	28.731	
10,300.0	6,641.0	6,219.7	6,074.8	106.0	25.0	-42.15	-175.0	-1,083.9	2,650.6	2,559.4	91.15	29.081	
10,334.6	6,640.9	6,200.0	6,055.6	107.0	25.1	-41.20	-175.0	-1,087.9	2,684.0	2,593.6	90.38	29.696	
10,400.0	6,640.9	6,200.0	6,055.6	108.8	25.1	-41.20	-175.0	-1,087.9	2,746.6	2,655.0	91.63	29.976	
10,433.0	6,640.8	6,200.0	6,055.6	109.7	25.1	-41.20	-175.0	-1,087.9	2,778.3	2,686.1	92.26	30.114	
10,500.0	6,640.7	6,200.0	6,055.6	111.6	25.1	-41.20	-175.0	-1,087.9	2,842.6	2,749.1	93.54	30.391	
10,531.5	6,640.7	6,200.0	6,055.6	112.4	25.1	-41.20	-175.0	-1,087.9	2,872.9	2,778.8	94.14	30.518	
10,600.0	6,640.6	6,200.0	6,055.6	114.3	25.1	-41.20	-175.0	-1,087.9	2,938.9	2,843.5	95.45	30.791	
10,629.9	6,640.6	6,200.0	6,055.6	115.2	25.1	-41.20	-175.0	-1,087.9	2,967.7	2,871.7	96.02	30.908	
10,700.0	6,640.5	6,200.0	6,055.6	117.1	25.1	-41.20	-175.0	-1,087.9	3,035.4	2,938.1	97.36	31.178	
10,728.3	6,640.4	6,200.0	6,055.6	117.9	25.1	-41.20	-175.0	-1,087.9	3,062.8	2,964.9	97.90	31.286	
10,800.0	6,640.4	6,200.0	6,055.6	119.9	25.1	-41.20	-175.0	-1,087.9	3,132.1	3,032.9	99.27	31.553	
10,826.7	6,640.3	6,200.0	6,055.6	120.7	25.1	-41.20	-175.0	-1,087.9	3,158.0	3,058.3	99.78	31.651	
10,900.0	6,640.2	6,200.0	6,055.6	122.7	25.1	-41.20	-175.0	-1,087.9	3,229.1	3,127.9	101.18	31.915	
10,925.2	6,640.2	6,200.0	6,055.6	123.4	25.1	-41.20	-175.0	-1,087.9	3,253.5	3,151.8	101.66	32.004	
11,000.0	6,640.1	6,200.0	6,055.6	125.5	25.1	-41.20	-175.0	-1,087.9	3,326.2	3,223.1	103.09	32.265	
11,023.6	6,640.1	6,200.0	6,055.6	126.1	25.1	-41.20	-175.0	-1,087.9	3,349.1	3,245.6	103.54	32.345	
11,100.0	6,640.0	6,200.0	6,055.6	128.3	25.1	-41.20	-175.0	-1,087.9	3,423.4	3,318.4	105.00	32.603	
11,122.0	6,639.9	6,200.0	6,055.6	128.9	25.1	-41.20	-175.0	-1,087.9	3,444.9	3,339.5	105.43	32.676	
11,200.0	6,639.8	6,200.0	6,055.6	131.1	25.1	-41.20	-175.0	-1,087.9	3,520.9	3,414.0	106.92	32.931	
11,220.4	6,639.8	6,200.0	6,055.6	131.6	25.1	-41.20	-175.0	-1,087.9	3,540.8	3,433.5	107.31	32.997	
11,300.0	6,639.7	6,200.0	6,055.6	133.9	25.1	-41.20	-175.0	-1,087.9	3,618.4	3,509.6	108.83	33.248	
11,318.9	6,639.7	6,200.0	6,055.6	134.4	25.1	-41.20	-175.0	-1,087.9	3,636.9	3,527.7	109.19	33.307	
11,400.0	6,639.6	6,200.0	6,055.6	136.7	25.1	-41.20	-175.0	-1,087.9	3,716.1	3,605.4	110.75	33.555	
11,417.3	6,639.6	6,200.0	6,055.6	137.1	25.1	-41.20	-175.0	-1,087.9	3,733.1	3,622.0	111.08	33.608	
11,500.0	6,639.5	6,177.8	6,033.7	139.4	25.1	-40.17	-175.0	-1,091.8	3,813.6	3,702.9	110.67	34.458	
11,515.7	6,639.5	6,177.4	6,033.3	139.9	25.1	-40.15	-175.0	-1,091.8	3,828.9	3,718.0	110.93	34.516	
11,600.0	6,639.3	6,175.3	6,031.2	142.2	25.1	-40.06	-175.0	-1,092.2	3,911.4	3,799.1	112.33	34.821	
11,614.1	6,639.3	6,174.9	6,030.9	142.6	25.1	-40.04	-175.0	-1,092.2	3,925.2	3,812.7	112.56	34.872	
11,700.0	6,639.2	6,172.9	6,028.8	145.0	25.1	-39.95	-175.0	-1,092.5	4,009.3	3,895.3	113.99	35.174	
11,712.6	6,639.2	6,172.6	6,028.5	145.4	25.1	-39.93	-175.0	-1,092.6	4,021.6	3,907.4	114.19	35.217	
11,800.0	6,639.1	6,150.0	6,006.2	147.8	25.1	-38.93	-175.0	-1,095.7	4,107.7	3,993.9	113.77	36.104	
11,811.0	6,639.1	6,150.0	6,006.2	148.1	25.1	-38.93	-175.0	-1,095.7	4,118.5	4,004.5	113.98	36.135	
11,900.0	6,639.0	6,150.0	6,006.2	150.6	25.1	-38.93	-175.0	-1,095.7	4,205.7	4,090.1	115.61	36.377	
11,909.4	6,639.0	6,150.0	6,006.2	150.9	25.1	-38.93	-175.0	-1,095.7	4,215.0	4,099.2	115.79	36.403	
12,000.0	6,638.8	6,150.0	6,006.2	153.4	25.1	-38.93	-175.0	-1,095.7	4,303.8	4,186.4	117.46	36.642	
12,007.8	6,638.8	6,150.0	6,006.2	153.6	25.1	-38.93	-175.0	-1,095.7	4,311.5	4,193.9	117.60	36.663	
12,100.0	6,638.7	6,150.0	6,006.2	156.2	25.1	-38.93	-175.0	-1,095.7	4,402.0	4,282.7	119.30	36.900	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,150.0	6,006.2	156.4	25.1	-38.93	-175.0	-1,095.7	4,408.2	4,288.8	119.41	36.915		
12,200.0	6,638.6	6,150.0	6,006.2	159.0	25.1	-38.93	-175.0	-1,095.7	4,500.3	4,379.2	121.14	37.150		
12,204.7	6,638.6	6,150.0	6,006.2	159.1	25.1	-38.93	-175.0	-1,095.7	4,505.0	4,383.7	121.23	37.161		
12,300.0	6,638.5	6,150.0	6,006.2	161.8	25.1	-38.93	-175.0	-1,095.7	4,598.7	4,475.7	122.98	37.393		
12,303.1	6,638.5	6,150.0	6,006.2	161.9	25.1	-38.93	-175.0	-1,095.7	4,601.8	4,478.7	123.04	37.400		
12,400.0	6,638.3	6,150.0	6,006.2	164.6	25.1	-38.93	-175.0	-1,095.7	4,697.1	4,572.3	124.83	37.629		
12,401.5	6,638.3	6,150.0	6,006.2	164.6	25.1	-38.93	-175.0	-1,095.7	4,698.7	4,573.8	124.86	37.633		
12,500.0	6,638.2	6,150.0	6,006.2	167.4	25.1	-38.93	-175.0	-1,095.7	4,795.6	4,669.0	126.67	37.859		
12,598.4	6,638.1	6,150.0	6,006.2	170.2	25.1	-38.93	-175.0	-1,095.7	4,892.6	4,764.1	128.48	38.079		
12,600.0	6,638.1	6,150.0	6,006.2	170.2	25.1	-38.93	-175.0	-1,095.7	4,894.2	4,765.7	128.51	38.083		
12,696.8	6,638.0	6,150.0	6,006.2	172.9	25.1	-38.93	-175.0	-1,095.7	4,989.7	4,859.4	130.30	38.294		
12,700.0	6,638.0	6,150.0	6,006.2	173.0	25.1	-38.93	-175.0	-1,095.7	4,992.8	4,862.4	130.36	38.301		
12,795.2	6,637.8	6,150.0	6,006.2	175.7	25.1	-38.93	-175.0	-1,095.7	5,086.8	4,954.7	132.12	38.503		
12,800.0	6,637.8	6,150.0	6,006.2	175.8	25.1	-38.93	-175.0	-1,095.7	5,091.5	4,959.3	132.20	38.513		
12,893.7	6,637.7	6,150.0	6,006.2	178.4	25.1	-38.93	-175.0	-1,095.7	5,183.9	5,050.0	133.93	38.706		
12,900.0	6,637.7	6,150.0	6,006.2	178.6	25.1	-38.93	-175.0	-1,095.7	5,190.2	5,056.1	134.05	38.719		
12,992.1	6,637.6	6,150.0	6,006.2	181.2	25.1	-38.93	-175.0	-1,095.7	5,281.1	5,145.4	135.75	38.904		
13,000.0	6,637.6	6,150.0	6,006.2	181.4	25.1	-38.93	-175.0	-1,095.7	5,288.9	5,153.1	135.89	38.920		
13,090.5	6,637.5	6,150.0	6,006.2	183.9	25.1	-38.93	-175.0	-1,095.7	5,378.4	5,240.8	137.56	39.098		
13,100.0	6,637.5	6,150.0	6,006.2	184.2	25.1	-38.93	-175.0	-1,095.7	5,387.8	5,250.0	137.74	39.116		
13,188.9	6,637.4	6,150.0	6,006.2	186.7	25.1	-38.93	-175.0	-1,095.7	5,475.7	5,336.3	139.38	39.286		
13,200.0	6,637.3	6,150.0	6,006.2	187.0	25.1	-38.93	-175.0	-1,095.7	5,486.6	5,347.0	139.58	39.307		
13,287.4	6,637.2	6,150.0	6,006.2	189.4	25.1	-38.93	-175.0	-1,095.7	5,573.0	5,431.8	141.20	39.470		
13,300.0	6,637.2	6,150.0	6,006.2	189.8	25.1	-38.93	-175.0	-1,095.7	5,585.5	5,444.1	141.43	39.494		
13,385.8	6,637.1	6,150.0	6,006.2	192.2	25.1	-38.93	-175.0	-1,095.7	5,670.4	5,527.4	143.01	39.650		
13,400.0	6,637.1	6,150.0	6,006.2	192.6	25.1	-38.93	-175.0	-1,095.7	5,684.4	5,541.2	143.27	39.675		
13,484.2	6,637.0	6,150.0	6,006.2	195.0	25.1	-38.93	-175.0	-1,095.7	5,767.8	5,623.0	144.83	39.825		
13,500.0	6,637.0	6,150.0	6,006.2	195.4	25.1	-38.93	-175.0	-1,095.7	5,783.4	5,638.3	145.12	39.853		
13,582.6	6,636.9	6,150.0	6,006.2	197.7	25.1	-38.93	-175.0	-1,095.7	5,865.2	5,718.6	146.65	39.996		
13,600.0	6,636.8	6,150.0	6,006.2	198.2	25.1	-38.93	-175.0	-1,095.7	5,882.4	5,735.5	146.97	40.026		
13,681.1	6,636.7	6,150.0	6,006.2	200.5	25.1	-38.93	-175.0	-1,095.7	5,962.7	5,814.3	148.46	40.163		
13,700.0	6,636.7	6,150.0	6,006.2	201.0	25.1	-38.93	-175.0	-1,095.7	5,981.5	5,832.7	148.81	40.195		
13,779.5	6,636.6	6,150.0	6,006.2	203.2	25.1	-38.93	-175.0	-1,095.7	6,060.2	5,909.9	150.28	40.326		
13,800.0	6,636.6	6,150.0	6,006.2	203.8	25.1	-38.93	-175.0	-1,095.7	6,080.5	5,929.9	150.66	40.360		
13,877.9	6,636.5	6,150.0	6,006.2	206.0	25.1	-38.93	-175.0	-1,095.7	6,157.8	6,005.7	152.10	40.486		
13,900.0	6,636.5	6,150.0	6,006.2	206.6	25.1	-38.93	-175.0	-1,095.7	6,179.6	6,027.1	152.50	40.521		
13,976.3	6,636.4	6,150.0	6,006.2	208.8	25.1	-38.93	-175.0	-1,095.7	6,255.3	6,101.4	153.91	40.641		
14,000.0	6,636.3	6,150.0	6,006.2	209.4	25.1	-38.93	-175.0	-1,095.7	6,278.8	6,124.4	154.35	40.678		
14,074.8	6,636.2	6,150.0	6,006.2	211.5	25.1	-38.93	-175.0	-1,095.7	6,352.9	6,197.2	155.73	40.794		
14,100.0	6,636.2	6,150.0	6,006.2	212.2	25.1	-38.93	-175.0	-1,095.7	6,377.9	6,221.7	156.20	40.832		
14,173.2	6,636.1	6,150.0	6,006.2	214.3	25.1	-38.93	-175.0	-1,095.7	6,450.5	6,293.0	157.55	40.943		
14,200.0	6,636.1	6,150.0	6,006.2	215.0	25.1	-38.93	-175.0	-1,095.7	6,477.1	6,319.1	158.05	40.983		
14,271.6	6,636.0	6,150.0	6,006.2	217.0	25.1	-38.93	-175.0	-1,095.7	6,548.2	6,388.8	159.37	41.088		
14,300.0	6,636.0	6,150.0	6,006.2	217.8	25.1	-38.93	-175.0	-1,095.7	6,576.3	6,416.4	159.89	41.130		
14,370.0	6,635.9	6,150.0	6,006.2	219.8	25.1	-38.93	-175.0	-1,095.7	6,645.8	6,484.6	161.19	41.231		
14,400.0	6,635.8	6,150.0	6,006.2	220.6	25.1	-38.93	-175.0	-1,095.7	6,675.5	6,513.8	161.74	41.273		
14,468.5	6,635.7	6,150.0	6,006.2	222.6	25.1	-38.93	-175.0	-1,095.7	6,743.5	6,580.5	163.00	41.370		
14,500.0	6,635.7	6,150.0	6,006.2	223.4	25.1	-38.93	-175.0	-1,095.7	6,774.8	6,611.2	163.59	41.414		
14,566.9	6,635.6	6,150.0	6,006.2	225.3	25.1	-38.93	-175.0	-1,095.7	6,841.2	6,676.4	164.82	41.506		
14,600.0	6,635.6	6,150.0	6,006.2	226.2	25.1	-38.93	-175.0	-1,095.7	6,874.1	6,708.6	165.43	41.552		
14,665.3	6,635.5	6,150.0	6,006.2	228.1	25.1	-38.93	-175.0	-1,095.7	6,938.9	6,772.3	166.64	41.640		
14,700.0	6,635.5	6,150.0	6,006.2	229.0	25.1	-38.93	-175.0	-1,095.7	6,973.4	6,806.1	167.28	41.686		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,763.7	6,635.4	6,150.0	6,006.2	230.8	25.1	-38.93	-175.0	-1,095.7	7,036.7	6,868.2	168.46	41.771	
14,800.0	6,635.3	6,150.0	6,006.2	231.8	25.1	-38.93	-175.0	-1,095.7	7,072.7	6,903.6	169.13	41.818	
14,862.2	6,635.2	6,150.0	6,006.2	233.6	25.1	-38.93	-175.0	-1,095.7	7,134.4	6,964.2	170.28	41.899	
14,900.0	6,635.2	6,150.0	6,006.2	234.7	25.1	-38.93	-175.0	-1,095.7	7,172.0	7,001.0	170.98	41.947	
14,960.6	6,635.1	6,150.0	6,006.2	236.4	25.1	-38.93	-175.0	-1,095.7	7,232.2	7,060.1	172.10	42.024	
14,995.1	6,635.0	6,127.0	5,983.3	237.3	25.1	-37.95	-175.0	-1,098.1	7,266.1	7,096.5	169.62	42.837	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	312.704	
100.0	100.0	100.0	100.0	0.1	0.1	-179.20	-60.1	-0.8	60.1	59.9	0.20	307.411	
196.8	196.8	196.8	196.8	0.3	0.3	-179.20	-60.1	-0.8	60.1	59.5	0.63	95.279	
200.0	200.0	200.0	200.0	0.3	0.3	-179.20	-60.1	-0.8	60.1	59.5	0.65	93.187	
295.3	295.3	295.3	295.3	0.5	0.5	-179.20	-60.1	-0.8	60.1	59.0	1.07	56.004	
300.0	300.0	300.0	300.0	0.5	0.5	-179.20	-60.1	-0.8	60.1	59.0	1.09	54.917	
393.7	393.7	393.7	393.7	0.8	0.8	-179.20	-60.1	-0.8	60.1	58.6	1.52	39.657	
400.0	400.0	400.0	400.0	0.8	0.8	-179.20	-60.1	-0.8	60.1	58.6	1.54	38.930	
492.1	492.1	492.1	492.1	1.0	1.0	-179.20	-60.1	-0.8	60.1	58.2	1.96	30.697	
500.0	500.0	500.0	500.0	1.0	1.0	-179.20	-60.1	-0.8	60.1	58.1	1.99	30.152	
590.5	590.5	590.5	590.5	1.2	1.2	-179.20	-60.1	-0.8	60.1	57.7	2.40	25.040	
600.0	600.0	600.0	600.0	1.2	1.2	-179.20	-60.1	-0.8	60.1	57.7	2.44	24.604	
689.0	689.0	689.0	689.0	1.4	1.4	-179.20	-60.1	-0.8	60.1	57.3	2.84	21.143	
700.0	700.0	700.0	700.0	1.4	1.4	-179.20	-60.1	-0.8	60.1	57.2	2.89	20.781	
787.4	787.4	787.4	787.4	1.6	1.6	-179.20	-60.1	-0.8	60.1	56.8	3.29	18.296	
800.0	800.0	800.0	800.0	1.7	1.7	-179.20	-60.1	-0.8	60.1	56.8	3.34	17.986	
885.8	885.8	885.8	885.8	1.9	1.9	-179.20	-60.1	-0.8	60.1	56.4	3.73	16.124	
900.0	900.0	900.0	900.0	1.9	1.9	-179.20	-60.1	-0.8	60.1	56.3	3.79	15.853	
984.2	984.2	984.2	984.2	2.1	2.1	-179.20	-60.1	-0.8	60.1	55.9	4.17	14.414	
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	14.173	
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	13.031	
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	12.815	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	-179.20	-60.1	-0.8	60.1	55.1	5.06	11.891	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-179.20	-60.1	-0.8	60.1	55.0	5.14	11.694	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	-179.20	-60.1	-0.8	60.1	54.6	5.50	10.934	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-179.20	-60.1	-0.8	60.1	54.5	5.59	10.754 CC, ES	
1,377.9	1,377.9	1,377.2	1,377.2	3.0	3.0	139.37	-60.6	0.1	61.4	55.5	5.92	10.373	
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	139.22	-60.9	0.7	62.3	56.2	6.01	10.352	
1,476.4	1,476.3	1,474.4	1,474.3	3.2	3.1	138.48	-62.7	3.8	66.8	60.4	6.33	10.555	
1,500.0	1,499.8	1,497.7	1,497.5	3.2	3.2	138.19	-63.4	5.1	68.7	62.2	6.42	10.694	
1,574.8	1,574.4	1,571.2	1,570.8	3.4	3.3	137.19	-66.3	10.4	76.3	69.5	6.74	11.323	
1,600.0	1,599.5	1,595.8	1,595.3	3.5	3.4	136.83	-67.4	12.6	79.4	72.5	6.84	11.602	
1,673.2	1,672.2	1,667.2	1,666.2	3.6	3.5	135.79	-71.4	19.8	89.9	82.8	7.16	12.552	
1,700.0	1,698.7	1,693.2	1,691.9	3.7	3.6	135.42	-73.0	22.8	94.4	87.1	7.28	12.958	
1,771.6	1,769.5	1,762.3	1,760.3	3.9	3.8	134.46	-77.9	31.8	107.7	100.1	7.62	14.138	
1,800.0	1,797.5	1,789.4	1,787.1	4.0	3.8	134.11	-80.1	35.8	113.6	105.8	7.75	14.654	
1,870.1	1,866.3	1,856.1	1,852.6	4.2	4.0	133.28	-85.9	46.4	129.5	121.4	8.10	15.982	
1,899.9	1,895.6	1,884.3	1,880.3	4.3	4.1	132.95	-88.6	51.3	136.9	128.7	8.25	16.588	
1,968.5	1,962.6	1,950.1	1,944.7	4.5	4.3	132.41	-95.1	63.3	154.5	145.9	8.64	17.890	
2,000.0	1,993.4	1,980.6	1,974.4	4.6	4.4	132.19	-98.2	68.8	162.6	153.8	8.82	18.447	
2,066.9	2,058.9	2,045.2	2,037.7	4.8	4.7	131.80	-104.6	80.6	179.9	170.6	9.21	19.527	
2,100.0	2,091.3	2,077.2	2,068.9	4.9	4.8	131.63	-107.8	86.4	188.4	179.0	9.41	20.028	
2,165.3	2,155.2	2,140.3	2,130.7	5.2	5.0	131.34	-114.1	98.0	205.2	195.4	9.80	20.930	
2,200.0	2,189.1	2,173.8	2,163.4	5.3	5.1	131.21	-117.4	104.1	214.1	204.1	10.02	21.374	
2,263.8	2,251.5	2,235.4	2,223.7	5.5	5.4	130.99	-123.6	115.3	230.6	220.1	10.42	22.126	
2,300.0	2,286.9	2,270.4	2,257.9	5.7	5.5	130.87	-127.1	121.7	239.9	229.2	10.65	22.523	
2,362.2	2,347.7	2,330.5	2,316.7	5.9	5.7	130.70	-133.1	132.7	255.9	244.9	11.05	23.154	
2,400.0	2,384.7	2,367.0	2,352.5	6.0	5.9	130.60	-136.7	139.3	265.7	254.4	11.30	23.511	
2,460.6	2,444.0	2,425.6	2,409.7	6.3	6.1	130.47	-142.5	150.0	281.3	269.6	11.70	24.042	
2,500.0	2,482.5	2,463.7	2,447.0	6.4	6.3	130.38	-146.3	157.0	291.4	279.5	11.96	24.363	
2,559.0	2,540.3	2,520.7	2,502.8	6.7	6.5	130.27	-152.0	167.4	306.7	294.3	12.36	24.812	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,560.3	2,541.5	6.8	6.6	130.20	-156.0	174.6	317.2	304.6	12.64	25.103	
2,657.5	2,636.5	2,615.8	2,595.8	7.1	6.9	130.10	-161.5	184.8	332.0	319.0	13.03	25.485	
2,700.0	2,678.1	2,656.9	2,636.0	7.2	7.1	130.04	-165.6	192.3	343.0	329.7	13.32	25.749	
2,755.9	2,732.8	2,710.9	2,688.8	7.5	7.3	129.96	-171.0	202.1	357.4	343.7	13.71	26.075	
2,800.0	2,776.0	2,753.5	2,730.5	7.7	7.5	129.90	-175.2	209.9	368.8	354.8	14.01	26.316	
2,854.3	2,829.1	2,806.0	2,781.8	7.9	7.7	129.84	-180.5	219.5	382.8	368.4	14.39	26.596	
2,900.0	2,873.8	2,850.1	2,825.0	8.1	7.9	129.79	-184.9	227.5	394.6	379.9	14.71	26.817	
2,952.7	2,925.4	2,901.1	2,874.8	8.3	8.1	129.73	-189.9	236.8	408.2	393.1	15.09	27.058	
3,000.0	2,971.6	2,946.7	2,919.5	8.5	8.3	129.68	-194.5	245.2	420.4	404.9	15.42	27.261	
3,051.2	3,021.6	3,000.4	2,972.0	8.7	8.5	129.67	-199.7	254.6	433.4	417.6	15.78	27.461	
3,100.0	3,069.4	3,052.5	3,023.3	8.9	8.7	129.76	-204.2	263.0	445.2	429.1	16.10	27.652	
3,149.6	3,117.9	3,105.7	3,075.7	9.1	8.8	129.95	-208.4	270.7	456.8	440.3	16.43	27.805	
3,200.0	3,167.2	3,160.0	3,129.4	9.3	9.0	130.24	-212.3	277.7	468.0	451.2	16.75	27.939	
3,248.0	3,214.2	3,211.9	3,180.9	9.5	9.1	130.60	-215.4	283.5	478.1	461.1	17.05	28.036	
3,300.0	3,265.0	3,268.2	3,236.9	9.8	9.3	131.07	-218.4	288.9	488.6	471.2	17.37	28.123	
3,346.4	3,310.5	3,318.7	3,287.1	10.0	9.4	131.56	-220.6	292.9	497.4	479.8	17.65	28.180	
3,400.0	3,362.9	3,376.9	3,345.2	10.2	9.5	132.21	-222.6	296.6	507.2	489.2	17.96	28.231	
3,444.9	3,406.7	3,425.7	3,393.9	10.4	9.6	132.82	-223.8	298.9	514.9	496.7	18.22	28.262	
3,473.0	3,434.2	3,456.3	3,424.5	10.5	9.7	133.23	-224.4	299.9	519.5	501.1	18.37	28.278	
3,500.0	3,460.7	3,485.7	3,453.9	10.6	9.7	133.70	-224.8	300.7	523.8	505.2	18.52	28.282	
3,543.3	3,503.2	3,532.9	3,501.1	10.7	9.8	134.43	-225.2	301.3	529.9	511.2	18.72	28.304	
3,600.0	3,559.0	3,590.8	3,559.0	10.9	9.9	135.30	-225.2	301.4	537.0	518.0	18.98	28.298	
3,641.7	3,600.2	3,632.0	3,600.2	11.0	9.9	135.85	-225.2	301.4	541.7	522.6	19.15	28.281	
3,700.0	3,657.9	3,689.7	3,657.9	11.2	10.0	136.52	-225.2	301.4	547.6	528.2	19.40	28.224	
3,740.1	3,697.8	3,729.6	3,697.8	11.3	10.1	136.93	-225.2	301.4	551.2	531.7	19.56	28.175	
3,800.0	3,757.3	3,789.1	3,757.3	11.4	10.2	137.43	-225.2	301.4	555.9	536.1	19.80	28.069	
3,838.6	3,795.7	3,827.5	3,795.7	11.5	10.3	137.70	-225.2	301.4	558.4	538.4	19.95	27.991	
3,900.0	3,857.0	3,888.8	3,857.0	11.7	10.4	138.04	-225.2	301.4	561.6	541.4	20.18	27.832	
3,937.0	3,893.9	3,925.7	3,893.9	11.7	10.4	138.20	-225.2	301.4	563.1	542.8	20.31	27.727	
4,000.0	3,956.9	3,988.7	3,956.9	11.8	10.5	138.38	-225.2	301.4	564.8	544.3	20.53	27.513	
4,035.4	3,992.3	4,024.1	3,992.3	11.9	10.6	138.43	-225.2	301.4	565.3	544.7	20.65	27.383	
4,072.9	4,029.8	4,061.6	4,029.8	11.9	10.7	179.64	-225.2	301.4	565.5	545.5	19.97	28.317	
4,100.0	4,056.9	4,088.7	4,056.9	12.0	10.7	179.64	-225.2	301.4	565.5	545.5	20.07	28.180	
4,133.8	4,090.7	4,122.5	4,090.7	12.0	10.8	179.64	-225.2	301.4	565.5	545.3	20.19	28.005	
4,200.0	4,156.9	4,188.7	4,156.9	12.1	10.9	179.64	-225.2	301.4	565.5	545.1	20.44	27.668	
4,232.3	4,189.2	4,221.0	4,189.2	12.2	10.9	179.64	-225.2	301.4	565.5	545.0	20.56	27.505	
4,300.0	4,256.9	4,288.7	4,256.9	12.3	11.1	179.64	-225.2	301.4	565.5	544.7	20.81	27.170	
4,330.7	4,287.6	4,319.4	4,287.6	12.4	11.1	179.64	-225.2	301.4	565.5	544.6	20.93	27.020	
4,400.0	4,356.9	4,388.7	4,356.9	12.5	11.2	179.64	-225.2	301.4	565.5	544.3	21.19	26.686	
4,429.1	4,386.0	4,417.8	4,386.0	12.5	11.3	179.64	-225.2	301.4	565.5	544.2	21.30	26.547	
4,500.0	4,456.9	4,488.7	4,456.9	12.6	11.4	179.64	-225.2	301.4	565.5	543.9	21.57	26.216	
4,527.5	4,484.4	4,516.2	4,484.4	12.7	11.5	179.64	-225.2	301.4	565.5	543.8	21.68	26.088	
4,600.0	4,556.9	4,588.7	4,556.9	12.8	11.6	179.64	-225.2	301.4	565.5	543.6	21.95	25.758	
4,626.0	4,582.9	4,614.7	4,582.9	12.9	11.7	179.64	-225.2	301.4	565.5	543.5	22.05	25.642	
4,700.0	4,656.9	4,688.7	4,656.9	13.0	11.8	179.64	-225.2	301.4	565.5	543.2	22.34	25.314	
4,724.4	4,681.3	4,713.1	4,681.3	13.0	11.8	179.64	-225.2	301.4	565.5	543.1	22.43	25.208	
4,800.0	4,756.9	4,788.7	4,756.9	13.1	12.0	179.64	-225.2	301.4	565.5	542.8	22.73	24.883	
4,822.8	4,779.7	4,811.5	4,779.7	13.2	12.0	179.64	-225.2	301.4	565.5	542.7	22.82	24.786	
4,900.0	4,856.9	4,888.7	4,856.9	13.3	12.2	179.64	-225.2	301.4	565.5	542.4	23.12	24.463	
4,921.2	4,878.1	4,909.9	4,878.1	13.4	12.2	179.64	-225.2	301.4	565.5	542.3	23.20	24.375	
5,000.0	4,956.9	4,988.7	4,956.9	13.5	12.3	179.64	-225.2	301.4	565.5	542.0	23.51	24.055	
5,019.7	4,976.6	5,008.4	4,976.6	13.5	12.4	179.64	-225.2	301.4	565.5	541.9	23.59	23.976	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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			
5,100.0	5,056.9	5,088.7	5,056.9	13.7	12.5	179.64	-225.2	301.4	565.5	541.6	23.90	23.659			
5,118.1	5,075.0	5,106.8	5,075.0	13.7	12.6	179.64	-225.2	301.4	565.5	541.5	23.97	23.588			
5,200.0	5,156.9	5,188.7	5,156.9	13.8	12.7	179.64	-225.2	301.4	565.5	541.2	24.30	23.274			
5,216.5	5,173.4	5,205.2	5,173.4	13.9	12.8	179.64	-225.2	301.4	565.5	541.2	24.36	23.211			
5,300.0	5,256.9	5,288.7	5,256.9	14.0	12.9	179.64	-225.2	301.4	565.5	540.8	24.70	22.899			
5,314.9	5,271.8	5,303.6	5,271.8	14.1	12.9	179.64	-225.2	301.4	565.5	540.8	24.76	22.844			
5,400.0	5,356.9	5,388.7	5,356.9	14.2	13.1	179.64	-225.2	301.4	565.5	540.4	25.10	22.535			
5,413.4	5,370.3	5,402.1	5,370.3	14.2	13.1	179.64	-225.2	301.4	565.5	540.4	25.15	22.487			
5,500.0	5,456.9	5,488.7	5,456.9	14.4	13.3	179.64	-225.2	301.4	565.5	540.0	25.50	22.180			
5,511.8	5,468.7	5,500.5	5,468.7	14.4	13.3	179.64	-225.2	301.4	565.5	540.0	25.54	22.139			
5,600.0	5,556.9	5,588.7	5,556.9	14.6	13.5	179.64	-225.2	301.4	565.5	539.6	25.90	21.836			
5,610.2	5,567.1	5,598.9	5,567.1	14.6	13.5	179.64	-225.2	301.4	565.5	539.6	25.94	21.801			
5,700.0	5,656.9	5,688.7	5,656.9	14.7	13.7	179.64	-225.2	301.4	565.5	539.2	26.30	21.500			
5,708.6	5,665.5	5,697.3	5,665.5	14.8	13.7	179.64	-225.2	301.4	565.5	539.2	26.34	21.472			
5,800.0	5,756.9	5,788.7	5,756.9	14.9	13.9	179.64	-225.2	301.4	565.5	538.8	26.71	21.174			
5,807.1	5,764.0	5,795.8	5,764.0	14.9	13.9	179.64	-225.2	301.4	565.5	538.8	26.74	21.151			
5,900.0	5,856.9	5,888.7	5,856.9	15.1	14.1	179.64	-225.2	301.4	565.5	538.4	27.11	20.856			
5,905.5	5,862.4	5,894.2	5,862.4	15.1	14.1	179.64	-225.2	301.4	565.5	538.4	27.14	20.839			
5,971.9	5,928.8	5,960.6	5,928.8	15.3	14.2	179.64	-225.2	301.4	565.5	538.1	27.41	20.633			
6,000.0	5,956.9	5,988.8	5,957.0	15.3	14.3	-90.36	-225.2	300.8	565.5	537.3	28.20	20.055			
6,003.9	5,960.8	5,992.8	5,961.0	15.3	14.3	-90.36	-225.2	300.6	565.5	537.3	28.21	20.046			
6,050.0	6,006.7	6,039.1	6,007.1	15.4	14.3	-90.36	-225.2	297.1	565.5	537.2	28.34	19.956			
6,100.0	6,056.2	6,089.3	6,056.8	15.4	14.4	-90.36	-225.2	289.8	565.5	537.1	28.44	19.882			
6,102.3	6,058.5	6,091.7	6,059.2	15.4	14.4	-90.36	-225.2	289.4	565.5	537.1	28.45	19.879			
6,150.0	6,105.1	6,139.6	6,105.9	15.4	14.4	-90.35	-225.2	279.1	565.5	537.0	28.52	19.829			
6,200.0	6,153.0	6,189.8	6,154.1	15.5	14.5	-90.35	-225.2	265.0	565.5	536.9	28.58	19.790			
6,200.8	6,153.8	6,190.6	6,154.9	15.5	14.5	-90.35	-225.2	264.8	565.5	536.9	28.58	19.790			
6,250.0	6,199.9	6,240.0	6,201.2	15.5	14.5	-90.34	-225.2	247.6	565.5	536.9	28.62	19.760			
6,299.2	6,244.8	6,289.5	6,246.2	15.5	14.5	-90.33	-225.2	227.2	565.5	536.9	28.66	19.730			
6,300.0	6,245.5	6,290.3	6,247.0	15.5	14.5	-90.33	-225.2	226.9	565.5	536.9	28.66	19.730			
6,350.0	6,289.6	6,340.5	6,291.1	15.5	14.5	-90.32	-225.2	203.0	565.5	536.8	28.72	19.687			
6,397.6	6,329.9	6,388.3	6,331.6	15.4	14.5	-90.30	-225.2	177.4	565.5	536.7	28.82	19.625			
6,400.0	6,331.8	6,390.7	6,333.5	15.4	14.5	-90.30	-225.2	176.1	565.5	536.7	28.82	19.622			
6,450.0	6,372.2	6,440.9	6,373.9	15.4	14.6	-90.29	-225.2	146.3	565.5	536.5	28.97	19.519			
6,496.0	6,407.4	6,487.1	6,409.2	15.4	14.7	-90.27	-225.2	116.4	565.5	536.3	29.18	19.378			
6,500.0	6,410.3	6,491.1	6,412.1	15.4	14.7	-90.27	-225.2	113.8	565.5	536.3	29.20	19.365			
6,550.0	6,446.1	6,541.3	6,447.9	15.4	14.8	-90.25	-225.2	78.6	565.5	536.0	29.53	19.148			
6,594.5	6,475.9	6,585.9	6,477.7	15.4	15.0	-90.24	-225.2	45.3	565.5	535.6	29.94	18.890			
6,600.0	6,479.4	6,591.5	6,481.2	15.4	15.0	-90.23	-225.2	41.1	565.5	535.5	29.99	18.857			
6,650.0	6,510.0	6,641.6	6,511.7	15.5	15.3	-90.21	-225.2	1.3	565.5	534.9	30.59	18.488			
6,692.9	6,534.0	6,684.6	6,535.7	15.7	15.6	-90.20	-225.2	-34.4	565.5	534.3	31.24	18.104			
6,700.0	6,537.8	6,691.7	6,539.4	15.7	15.7	-90.19	-225.2	-40.5	565.5	534.2	31.35	18.040			
6,750.0	6,562.6	6,741.9	6,564.1	16.2	16.1	-90.17	-225.2	-84.1	565.5	533.2	32.28	17.521			
6,791.3	6,580.8	6,783.3	6,582.2	16.6	16.6	-90.15	-225.2	-121.4	565.5	532.3	33.19	17.041			
6,800.0	6,584.3	6,792.0	6,585.7	16.7	16.7	-90.15	-225.2	-129.3	565.5	532.1	33.38	16.942			
6,850.0	6,602.9	6,842.1	6,604.0	17.3	17.3	-90.12	-225.2	-175.9	565.5	530.9	34.65	16.318			
6,889.7	6,615.2	6,881.9	6,616.2	17.9	17.9	-90.10	-225.2	-213.8	565.5	529.7	35.80	15.798			
6,900.0	6,618.1	6,892.2	6,619.0	18.0	18.1	-90.10	-225.2	-223.7	565.5	529.4	36.09	15.668			
6,950.0	6,630.0	6,942.2	6,630.7	18.8	18.9	-90.07	-225.2	-272.4	565.5	527.8	37.68	15.007			
6,988.2	6,636.8	6,980.4	6,637.3	19.5	19.5	-90.06	-225.2	-310.0	565.5	526.5	38.99	14.503			
7,000.0	6,638.5	6,992.3	6,638.9	19.7	19.8	-90.05	-225.2	-321.7	565.5	526.1	39.40	14.352			
7,050.0	6,643.5	7,042.3	6,643.7	20.6	20.7	-90.02	-225.2	-371.5	565.5	524.3	41.23	13.715			

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	7,078.9	6,645.0	21.3	21.4	-90.00	-225.2	-408.1	565.5	522.9	42.63	13.265	
7,097.8	6,645.0	7,090.1	6,645.0	21.5	21.6	-90.00	-225.2	-419.3	565.5	522.4	43.06	13.132	
7,100.0	6,645.0	7,092.3	6,645.0	21.6	21.6	-90.00	-225.2	-421.5	565.5	522.4	43.15	13.106	
7,185.0	6,644.9	7,177.3	6,644.9	23.3	23.4	-90.00	-225.2	-506.5	565.5	518.9	46.63	12.128	
7,200.0	6,644.9	7,192.3	6,644.9	23.6	23.7	-90.00	-225.2	-521.5	565.5	518.3	47.24	11.970	
7,283.4	6,644.8	7,275.7	6,644.7	25.4	25.5	-90.00	-225.2	-604.9	565.5	514.6	50.89	11.112	
7,300.0	6,644.7	7,292.3	6,644.7	25.8	25.9	-90.00	-225.2	-621.5	565.5	513.9	51.62	10.956	
7,381.9	6,644.6	7,374.2	6,644.6	27.7	27.8	-90.00	-225.2	-703.4	565.5	510.1	55.38	10.211	
7,400.0	6,644.6	7,392.3	6,644.6	28.1	28.2	-90.00	-225.2	-721.5	565.5	509.3	56.21	10.060	
7,480.3	6,644.5	7,472.6	6,644.5	30.0	30.1	-89.99	-225.2	-801.8	565.5	505.5	60.04	9.418	
7,500.0	6,644.5	7,492.3	6,644.4	30.5	30.6	-89.99	-225.2	-821.5	565.5	504.5	60.98	9.273	
7,578.7	6,644.4	7,571.0	6,644.3	32.4	32.5	-89.99	-225.2	-900.2	565.5	500.7	64.84	8.721	
7,600.0	6,644.4	7,592.3	6,644.3	32.9	33.1	-89.99	-225.2	-921.5	565.5	499.6	65.89	8.583	
7,677.1	6,644.3	7,669.4	6,644.2	34.8	35.0	-89.99	-225.2	-998.6	565.5	495.8	69.75	8.107	
7,700.0	6,644.2	7,692.3	6,644.2	35.4	35.6	-89.99	-225.2	-1,021.5	565.5	494.6	70.90	7.976	
7,775.6	6,644.1	7,767.9	6,644.1	37.3	37.5	-89.99	-225.2	-1,097.1	565.5	490.8	74.75	7.565	
7,800.0	6,644.1	7,792.3	6,644.0	38.0	38.1	-89.99	-225.2	-1,121.5	565.5	489.5	76.00	7.441	
7,874.0	6,644.0	7,866.3	6,643.9	39.9	40.0	-89.99	-225.2	-1,195.5	565.5	485.7	79.82	7.085	
7,900.0	6,644.0	7,892.3	6,643.9	40.5	40.7	-89.99	-225.2	-1,221.5	565.5	484.3	81.16	6.968	
7,972.4	6,643.9	7,964.7	6,643.8	42.4	42.6	-89.99	-225.2	-1,293.9	565.5	480.6	84.94	6.657	
8,000.0	6,643.9	7,992.3	6,643.7	43.1	43.3	-89.99	-225.2	-1,321.5	565.5	479.1	86.38	6.546	
8,070.8	6,643.8	8,063.1	6,643.7	45.0	45.2	-89.99	-225.2	-1,392.3	565.5	475.4	90.12	6.275	
8,100.0	6,643.7	8,092.3	6,643.6	45.8	46.0	-89.99	-225.2	-1,421.5	565.5	473.9	91.65	6.170	
8,169.3	6,643.7	8,161.6	6,643.5	47.6	47.8	-89.99	-225.2	-1,490.7	565.5	470.2	95.33	5.932	
8,200.0	6,643.6	8,192.3	6,643.5	48.4	48.6	-89.99	-225.2	-1,521.5	565.5	468.5	96.96	5.832	
8,267.7	6,643.5	8,260.0	6,643.4	50.2	50.4	-89.99	-225.2	-1,589.2	565.5	464.9	100.58	5.622	
8,300.0	6,643.5	8,292.3	6,643.3	51.1	51.3	-89.98	-225.2	-1,621.5	565.5	463.2	102.31	5.528	
8,366.1	6,643.4	8,358.4	6,643.3	52.9	53.1	-89.98	-225.2	-1,687.6	565.5	459.6	105.86	5.342	
8,400.0	6,643.4	8,392.3	6,643.2	53.8	54.0	-89.98	-225.2	-1,721.5	565.5	457.8	107.68	5.252	
8,464.5	6,643.3	8,456.8	6,643.1	55.5	55.7	-89.98	-225.2	-1,786.0	565.5	454.3	111.16	5.087	
8,500.0	6,643.2	8,492.3	6,643.1	56.5	56.7	-89.98	-225.2	-1,821.5	565.5	452.4	113.07	5.001	
8,563.0	6,643.2	8,555.3	6,643.0	58.2	58.4	-89.98	-225.2	-1,884.4	565.5	449.0	116.49	4.855	
8,600.0	6,643.1	8,592.3	6,642.9	59.2	59.4	-89.98	-225.2	-1,921.5	565.5	447.0	118.49	4.773	
8,661.4	6,643.0	8,653.7	6,642.9	60.8	61.1	-89.98	-225.2	-1,982.9	565.5	443.7	121.83	4.642	
8,700.0	6,643.0	8,692.3	6,642.8	61.9	62.1	-89.98	-225.2	-2,021.5	565.5	441.6	123.93	4.563	
8,759.8	6,642.9	8,752.1	6,642.7	63.5	63.7	-89.98	-225.2	-2,081.3	565.5	438.3	127.19	4.446	
8,800.0	6,642.9	8,792.3	6,642.7	64.6	64.8	-89.98	-225.2	-2,121.5	565.5	436.1	129.38	4.371	
8,858.2	6,642.8	8,850.5	6,642.6	66.2	66.4	-89.98	-225.2	-2,179.7	565.5	432.9	132.56	4.266	
8,900.0	6,642.7	8,892.3	6,642.5	67.3	67.6	-89.98	-225.2	-2,221.5	565.5	430.7	134.84	4.194	
8,956.7	6,642.7	8,949.0	6,642.5	68.9	69.1	-89.98	-225.2	-2,278.1	565.5	427.6	137.95	4.099	
9,000.0	6,642.6	8,992.3	6,642.4	70.1	70.3	-89.98	-225.2	-2,321.5	565.5	425.2	140.32	4.030	
9,055.1	6,642.5	9,047.4	6,642.3	71.6	71.8	-89.98	-225.2	-2,376.6	565.5	422.2	143.34	3.945	
9,100.0	6,642.5	9,092.3	6,642.3	72.8	73.1	-89.98	-225.2	-2,421.5	565.5	419.7	145.81	3.878	
9,153.5	6,642.4	9,145.8	6,642.2	74.3	74.5	-89.98	-225.2	-2,475.0	565.5	416.8	148.75	3.802	
9,200.0	6,642.4	9,192.3	6,642.1	75.6	75.8	-89.98	-225.2	-2,521.5	565.5	414.2	151.31	3.737	
9,251.9	6,642.3	9,244.2	6,642.1	77.0	77.2	-89.98	-225.2	-2,573.4	565.5	411.3	154.17	3.668	
9,300.0	6,642.2	9,292.3	6,642.0	78.3	78.6	-89.98	-225.2	-2,621.5	565.5	408.7	156.81	3.606	
9,350.4	6,642.2	9,342.7	6,641.9	79.7	80.0	-89.98	-225.2	-2,671.8	565.5	405.9	159.59	3.543	
9,400.0	6,642.1	9,392.3	6,641.9	81.1	81.3	-89.98	-225.2	-2,721.5	565.5	403.2	162.33	3.484	
9,448.8	6,642.0	9,441.1	6,641.8	82.4	82.7	-89.98	-225.2	-2,770.3	565.5	400.5	165.02	3.427	
9,500.0	6,642.0	9,492.3	6,641.7	83.8	84.1	-89.98	-225.2	-2,821.5	565.5	397.7	167.85	3.369	
9,547.2	6,641.9	9,539.5	6,641.7	85.1	85.4	-89.97	-225.2	-2,868.7	565.5	395.0	170.46	3.317	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,600.0	6,641.9	9,592.3	6,641.6	86.6	86.8	-89.97	-225.2	-2,921.5	565.5	392.1	173.38	3.262	
9,645.6	6,641.8	9,637.9	6,641.5	87.9	88.1	-89.97	-225.2	-2,967.1	565.5	389.6	175.91	3.215	
9,700.0	6,641.7	9,692.3	6,641.5	89.4	89.6	-89.97	-225.2	-3,021.5	565.5	386.6	178.91	3.161	
9,744.1	6,641.7	9,736.4	6,641.4	90.6	90.8	-89.97	-225.2	-3,065.5	565.5	384.2	181.36	3.118	
9,800.0	6,641.6	9,792.3	6,641.3	92.1	92.4	-89.97	-225.2	-3,121.5	565.5	381.1	184.45	3.066	
9,842.5	6,641.6	9,834.8	6,641.3	93.3	93.6	-89.97	-225.2	-3,164.0	565.5	378.7	186.81	3.027	
9,900.0	6,641.5	9,892.3	6,641.2	94.9	95.2	-89.97	-225.2	-3,221.5	565.5	375.5	190.00	2.976	
9,940.9	6,641.4	9,933.2	6,641.2	96.0	96.3	-89.97	-225.2	-3,262.4	565.5	373.2	192.27	2.941	
10,000.0	6,641.4	9,992.3	6,641.1	97.7	97.9	-89.97	-225.2	-3,321.5	565.5	370.0	195.55	2.892	
10,039.3	6,641.3	10,031.6	6,641.0	98.8	99.0	-89.97	-225.2	-3,360.8	565.5	367.8	197.73	2.860	
10,100.0	6,641.2	10,092.3	6,641.0	100.4	100.7	-89.97	-225.2	-3,421.5	565.5	364.4	201.10	2.812	
10,137.8	6,641.2	10,130.1	6,640.9	101.5	101.8	-89.97	-225.2	-3,459.2	565.5	362.3	203.20	2.783	
10,200.0	6,641.1	10,192.3	6,640.8	103.2	103.5	-89.97	-225.2	-3,521.5	565.5	358.8	206.66	2.736	
10,236.2	6,641.1	10,228.5	6,640.8	104.2	104.5	-89.97	-225.2	-3,557.7	565.5	356.8	208.67	2.710	
10,300.0	6,641.0	10,292.3	6,640.7	106.0	106.3	-89.97	-225.2	-3,621.5	565.5	353.3	212.22	2.665	
10,334.6	6,640.9	10,326.9	6,640.6	107.0	107.2	-89.97	-225.2	-3,656.1	565.5	351.4	214.14	2.641	
10,400.0	6,640.9	10,392.3	6,640.6	108.8	109.0	-89.97	-225.2	-3,721.5	565.5	347.7	217.78	2.597	
10,433.0	6,640.8	10,425.3	6,640.5	109.7	110.0	-89.97	-225.2	-3,754.5	565.5	345.9	219.62	2.575	
10,500.0	6,640.7	10,492.3	6,640.4	111.6	111.8	-89.97	-225.2	-3,821.5	565.5	342.2	223.35	2.532	
10,531.5	6,640.7	10,523.8	6,640.4	112.4	112.7	-89.97	-225.2	-3,852.9	565.5	340.4	225.10	2.512	
10,600.0	6,640.6	10,592.3	6,640.3	114.3	114.6	-89.97	-225.2	-3,921.5	565.5	336.6	228.91	2.470	
10,629.9	6,640.6	10,622.2	6,640.3	115.2	115.4	-89.97	-225.2	-3,951.4	565.5	334.9	230.58	2.453	
10,700.0	6,640.5	10,692.3	6,640.2	117.1	117.4	-89.97	-225.2	-4,021.5	565.5	331.0	234.49	2.412	
10,728.3	6,640.4	10,720.6	6,640.1	117.9	118.2	-89.97	-225.2	-4,049.8	565.5	329.4	236.07	2.396	
10,800.0	6,640.4	10,792.3	6,640.1	119.9	120.2	-89.97	-225.2	-4,121.5	565.5	325.4	240.06	2.356	
10,826.7	6,640.3	10,819.0	6,640.0	120.7	120.9	-89.97	-225.2	-4,148.2	565.5	324.0	241.55	2.341	
10,900.0	6,640.2	10,892.3	6,639.9	122.7	123.0	-89.97	-225.2	-4,221.5	565.5	319.9	245.64	2.302	
10,925.2	6,640.2	10,917.5	6,639.9	123.4	123.7	-89.97	-225.2	-4,246.6	565.5	318.5	247.04	2.289	
11,000.0	6,640.1	10,992.3	6,639.8	125.5	125.8	-89.97	-225.2	-4,321.5	565.5	314.3	251.21	2.251	
11,023.6	6,640.1	11,015.9	6,639.8	126.1	126.4	-89.97	-225.2	-4,345.1	565.5	313.0	252.53	2.239	
11,100.0	6,640.0	11,092.3	6,639.7	128.3	128.6	-89.97	-225.2	-4,421.5	565.5	308.7	256.79	2.202	
11,122.0	6,639.9	11,114.3	6,639.6	128.9	129.2	-89.97	-225.2	-4,443.5	565.5	307.5	258.02	2.192	
11,200.0	6,639.8	11,192.3	6,639.5	131.1	131.3	-89.97	-225.2	-4,521.5	565.5	303.1	262.38	2.155	
11,220.4	6,639.8	11,212.7	6,639.5	131.6	131.9	-89.97	-225.2	-4,541.9	565.5	302.0	263.52	2.146	
11,300.0	6,639.7	11,292.3	6,639.4	133.9	134.1	-89.97	-225.2	-4,621.5	565.5	297.5	267.96	2.110	
11,318.9	6,639.7	11,311.2	6,639.4	134.4	134.7	-89.97	-225.2	-4,640.3	565.5	296.5	269.01	2.102	
11,400.0	6,639.6	11,392.3	6,639.3	136.7	136.9	-89.97	-225.2	-4,721.5	565.5	292.0	273.54	2.067	
11,417.3	6,639.6	11,409.6	6,639.3	137.1	137.4	-89.97	-225.2	-4,738.8	565.5	291.0	274.51	2.060	
11,500.0	6,639.5	11,492.3	6,639.2	139.4	139.7	-89.97	-225.2	-4,821.5	565.5	286.4	279.13	2.026	
11,515.7	6,639.5	11,508.0	6,639.1	139.9	140.2	-89.97	-225.2	-4,837.2	565.5	285.5	280.01	2.020	
11,600.0	6,639.3	11,592.3	6,639.0	142.2	142.5	-89.97	-225.2	-4,921.5	565.5	280.8	284.72	1.986	
11,614.1	6,639.3	11,606.4	6,639.0	142.6	142.9	-89.97	-225.2	-4,935.6	565.5	280.0	285.51	1.981	
11,700.0	6,639.2	11,692.3	6,638.9	145.0	145.3	-89.97	-225.2	-5,021.5	565.5	275.2	290.31	1.948	
11,712.6	6,639.2	11,704.9	6,638.9	145.4	145.7	-89.97	-225.2	-5,034.0	565.5	274.5	291.01	1.943	
11,800.0	6,639.1	11,792.3	6,638.8	147.8	148.1	-89.97	-225.2	-5,121.5	565.5	269.6	295.90	1.911	
11,811.0	6,639.1	11,803.3	6,638.8	148.1	148.4	-89.97	-225.2	-5,132.5	565.5	269.0	296.51	1.907	
11,900.0	6,639.0	11,892.3	6,638.7	150.6	150.9	-89.97	-225.2	-5,221.5	565.5	264.0	301.49	1.876	
11,909.4	6,639.0	11,901.7	6,638.7	150.9	151.2	-89.97	-225.2	-5,230.9	565.5	263.5	302.02	1.872	
12,000.0	6,638.8	11,992.3	6,638.5	153.4	153.7	-89.97	-225.2	-5,321.5	565.5	258.4	307.08	1.842	
12,007.8	6,638.8	12,000.1	6,638.5	153.6	153.9	-89.97	-225.2	-5,329.3	565.5	258.0	307.52	1.839	
12,100.0	6,638.7	12,092.3	6,638.4	156.2	156.5	-89.97	-225.2	-5,421.5	565.5	252.8	312.68	1.809	
12,106.3	6,638.7	12,098.6	6,638.4	156.4	156.7	-89.97	-225.2	-5,427.7	565.5	252.5	313.03	1.807	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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		
12,200.0	6,638.6	12,192.3	6,638.3	159.0	159.3	-89.97	-225.2	-5,521.5	565.5	247.2	318.27	1.777		
12,204.7	6,638.6	12,197.0	6,638.3	159.1	159.4	-89.97	-225.2	-5,526.2	565.5	247.0	318.53	1.775		
12,300.0	6,638.5	12,292.3	6,638.2	161.8	162.1	-89.97	-225.2	-5,621.5	565.5	241.6	323.87	1.746		
12,303.1	6,638.5	12,295.4	6,638.2	161.9	162.2	-89.97	-225.2	-5,624.6	565.5	241.5	324.04	1.745		
12,400.0	6,638.3	12,392.3	6,638.1	164.6	164.9	-89.97	-225.2	-5,721.5	565.5	236.0	329.46	1.716		
12,401.5	6,638.3	12,393.8	6,638.1	164.6	164.9	-89.97	-225.2	-5,723.0	565.5	235.9	329.55	1.716		
12,500.0	6,638.2	12,492.3	6,637.9	167.4	167.7	-89.97	-225.2	-5,821.5	565.5	230.4	335.06	1.688		
12,598.4	6,638.1	12,590.7	6,637.8	170.2	170.4	-89.97	-225.2	-5,919.9	565.5	224.9	340.57	1.660		
12,600.0	6,638.1	12,592.3	6,637.8	170.2	170.5	-89.97	-225.2	-5,921.5	565.5	224.8	340.66	1.660		
12,696.8	6,638.0	12,689.1	6,637.7	172.9	173.2	-89.97	-225.2	-6,018.3	565.5	219.4	346.08	1.634		
12,700.0	6,638.0	12,692.3	6,637.7	173.0	173.3	-89.97	-225.2	-6,021.5	565.5	219.2	346.26	1.633		
12,795.2	6,637.8	12,787.5	6,637.6	175.7	176.0	-89.97	-225.2	-6,116.7	565.5	213.9	351.59	1.608		
12,800.0	6,637.8	12,792.3	6,637.6	175.8	176.1	-89.97	-225.2	-6,121.5	565.5	213.6	351.86	1.607		
12,893.7	6,637.7	12,886.0	6,637.5	178.4	178.7	-89.97	-225.2	-6,215.1	565.5	208.4	357.11	1.584		
12,900.0	6,637.7	12,892.3	6,637.4	178.6	178.9	-89.97	-225.2	-6,221.5	565.5	208.0	357.46	1.582		
12,992.1	6,637.6	12,984.4	6,637.3	181.2	181.5	-89.97	-225.2	-6,313.6	565.5	202.9	362.62	1.559		
13,000.0	6,637.6	12,992.3	6,637.3	181.4	181.7	-89.97	-225.2	-6,321.5	565.5	202.4	363.06	1.558		
13,090.5	6,637.5	13,082.8	6,637.2	183.9	184.2	-89.97	-225.2	-6,412.0	565.5	197.4	368.13	1.536		
13,100.0	6,637.5	13,092.3	6,637.2	184.2	184.5	-89.97	-225.2	-6,421.5	565.5	196.8	368.66	1.534		
13,188.9	6,637.4	13,181.2	6,637.1	186.7	187.0	-89.97	-225.2	-6,510.4	565.5	191.9	373.65	1.513		
13,200.0	6,637.3	13,192.3	6,637.1	187.0	187.3	-89.97	-225.2	-6,521.5	565.5	191.2	374.26	1.511		
13,287.4	6,637.2	13,279.7	6,637.0	189.4	189.7	-89.98	-225.2	-6,608.8	565.5	186.3	379.16	1.491 Level 3		
13,300.0	6,637.2	13,292.3	6,637.0	189.8	190.1	-89.98	-225.2	-6,621.5	565.5	185.6	379.87	1.489 Level 3		
13,385.8	6,637.1	13,378.1	6,636.9	192.2	192.5	-89.98	-225.2	-6,707.3	565.5	180.8	384.68	1.470 Level 3		
13,400.0	6,637.1	13,392.3	6,636.9	192.6	192.9	-89.98	-225.2	-6,721.5	565.5	180.0	385.47	1.467 Level 3		
13,484.2	6,637.0	13,476.5	6,636.8	195.0	195.3	-89.98	-225.2	-6,805.7	565.5	175.3	390.19	1.449 Level 3		
13,500.0	6,637.0	13,492.3	6,636.7	195.4	195.7	-89.98	-225.2	-6,821.5	565.5	174.4	391.08	1.446 Level 3		
13,582.6	6,636.9	13,574.9	6,636.6	197.7	198.0	-89.98	-225.2	-6,904.1	565.5	169.8	395.71	1.429 Level 3		
13,600.0	6,636.8	13,592.3	6,636.6	198.2	198.5	-89.98	-225.2	-6,921.5	565.5	168.8	396.68	1.426 Level 3		
13,681.1	6,636.7	13,673.4	6,636.5	200.5	200.8	-89.98	-225.2	-7,002.5	565.5	164.3	401.22	1.409 Level 3		
13,700.0	6,636.7	13,692.3	6,636.5	201.0	201.3	-89.98	-225.2	-7,021.5	565.5	163.2	402.28	1.406 Level 3		
13,779.5	6,636.6	13,771.8	6,636.4	203.2	203.5	-89.98	-225.2	-7,101.0	565.5	158.8	406.74	1.390 Level 3		
13,800.0	6,636.6	13,792.3	6,636.4	203.8	204.1	-89.98	-225.2	-7,121.5	565.5	157.6	407.89	1.386 Level 3		
13,877.9	6,636.5	13,870.2	6,636.3	206.0	206.3	-89.98	-225.2	-7,199.4	565.5	153.2	412.26	1.372 Level 3		
13,900.0	6,636.5	13,892.3	6,636.3	206.6	206.9	-89.98	-225.2	-7,221.5	565.5	152.0	413.50	1.368 Level 3		
13,976.3	6,636.4	13,968.6	6,636.2	208.8	209.0	-89.98	-225.2	-7,297.8	565.5	147.7	417.78	1.354 Level 3		
14,000.0	6,636.3	13,992.3	6,636.1	209.4	209.7	-89.98	-225.2	-7,321.5	565.5	146.4	419.10	1.349 Level 3		
14,074.8	6,636.2	14,067.1	6,636.0	211.5	211.8	-89.98	-225.2	-7,396.2	565.5	142.2	423.30	1.336 Level 3		
14,100.0	6,636.2	14,092.3	6,636.0	212.2	212.5	-89.98	-225.2	-7,421.5	565.5	140.8	424.71	1.331 Level 3		
14,173.2	6,636.1	14,165.5	6,635.9	214.3	214.6	-89.98	-225.2	-7,494.7	565.5	136.7	428.81	1.319 Level 3		
14,200.0	6,636.1	14,192.3	6,635.9	215.0	215.3	-89.98	-225.2	-7,521.5	565.5	135.2	430.32	1.314 Level 3		
14,271.6	6,636.0	14,263.9	6,635.8	217.0	217.3	-89.98	-225.2	-7,593.1	565.5	131.2	434.33	1.302 Level 3		
14,300.0	6,636.0	14,292.3	6,635.8	217.8	218.1	-89.98	-225.2	-7,621.5	565.5	129.6	435.92	1.297 Level 3		
14,370.0	6,635.9	14,362.3	6,635.7	219.8	220.1	-89.98	-225.2	-7,691.5	565.5	125.6	439.85	1.286 Level 3		
14,400.0	6,635.8	14,392.3	6,635.7	220.6	220.9	-89.98	-225.2	-7,721.5	565.5	124.0	441.53	1.281 Level 3		
14,468.5	6,635.7	14,460.8	6,635.6	222.6	222.8	-89.99	-225.2	-7,789.9	565.5	120.1	445.37	1.270 Level 3		
14,500.0	6,635.7	14,492.3	6,635.6	223.4	223.7	-89.99	-225.2	-7,821.5	565.5	118.4	447.14	1.265 Level 3		
14,566.9	6,635.6	14,559.2	6,635.5	225.3	225.6	-89.99	-225.2	-7,888.4	565.5	114.6	450.89	1.254 Level 3		
14,600.0	6,635.6	14,592.3	6,635.4	226.2	226.5	-89.99	-225.2	-7,921.5	565.5	112.7	452.75	1.249 Level 2		
14,665.3	6,635.5	14,657.6	6,635.4	228.1	228.4	-89.99	-225.2	-7,986.8	565.5	109.1	456.41	1.239 Level 2		
14,700.0	6,635.5	14,692.3	6,635.3	229.0	229.3	-89.99	-225.2	-8,021.5	565.5	107.1	458.36	1.234 Level 2		
14,763.7	6,635.4	14,756.0	6,635.3	230.8	231.1	-89.99	-225.2	-8,085.2	565.5	103.6	461.93	1.224 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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,800.0	6,635.3	14,792.3	6,635.2	231.8	232.1	-89.99	-225.2	-8,121.5	565.5	101.5	463.97	1.219	Level 2
14,862.2	6,635.2	14,854.5	6,635.1	233.6	233.9	-89.99	-225.2	-8,183.6	565.5	98.0	467.46	1.210	Level 2
14,900.0	6,635.2	14,892.3	6,635.1	234.7	234.9	-89.99	-225.2	-8,221.5	565.5	95.9	469.58	1.204	Level 2
14,960.6	6,635.1	14,952.9	6,635.0	236.4	236.6	-89.99	-225.2	-8,282.1	565.5	92.5	472.98	1.196	Level 2
14,986.9	6,635.1	14,979.2	6,635.0	237.1	237.4	-89.99	-225.2	-8,308.4	565.5	91.0	474.45	1.192	Level 2
14,995.1	6,635.0	14,982.9	6,635.0	237.3	237.5	-90.00	-225.2	-8,312.1	565.5	90.7	474.79	1.191	Level 2, SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-179.24	-104.9	-1.4	104.9				
98.4	98.4	98.4	98.4	0.1	0.1	-179.24	-104.9	-1.4	104.9	104.7	0.19	545.822	
100.0	100.0	100.0	100.0	0.1	0.1	-179.24	-104.9	-1.4	104.9	104.7	0.20	536.583	
196.8	196.8	196.8	196.8	0.3	0.3	-179.24	-104.9	-1.4	104.9	104.3	0.63	166.309	
200.0	200.0	200.0	200.0	0.3	0.3	-179.24	-104.9	-1.4	104.9	104.3	0.65	162.658	
295.3	295.3	295.3	295.3	0.5	0.5	-179.24	-104.9	-1.4	104.9	103.9	1.07	97.755	
300.0	300.0	300.0	300.0	0.5	0.5	-179.24	-104.9	-1.4	104.9	103.8	1.09	95.858	
393.7	393.7	393.7	393.7	0.8	0.8	-179.24	-104.9	-1.4	104.9	103.4	1.52	69.221	
400.0	400.0	400.0	400.0	0.8	0.8	-179.24	-104.9	-1.4	104.9	103.4	1.54	67.952	
492.1	492.1	492.1	492.1	1.0	1.0	-179.24	-104.9	-1.4	104.9	103.0	1.96	53.581	
500.0	500.0	500.0	500.0	1.0	1.0	-179.24	-104.9	-1.4	104.9	102.9	1.99	52.630	
590.5	590.5	590.5	590.5	1.2	1.2	-179.24	-104.9	-1.4	104.9	102.5	2.40	43.706	
600.0	600.0	600.0	600.0	1.2	1.2	-179.24	-104.9	-1.4	104.9	102.5	2.44	42.946	
689.0	689.0	689.0	689.0	1.4	1.4	-179.24	-104.9	-1.4	104.9	102.1	2.84	36.905	
700.0	700.0	700.0	700.0	1.4	1.4	-179.24	-104.9	-1.4	104.9	102.0	2.89	36.273	
787.4	787.4	787.4	787.4	1.6	1.6	-179.24	-104.9	-1.4	104.9	101.6	3.29	31.935	
800.0	800.0	800.0	800.0	1.7	1.7	-179.24	-104.9	-1.4	104.9	101.6	3.34	31.394	
885.8	885.8	885.8	885.8	1.9	1.9	-179.24	-104.9	-1.4	104.9	101.2	3.73	28.145	
900.0	900.0	900.0	900.0	1.9	1.9	-179.24	-104.9	-1.4	104.9	101.1	3.79	27.672	
984.2	984.2	984.2	984.2	2.1	2.1	-179.24	-104.9	-1.4	104.9	100.8	4.17	25.159	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.24	-104.9	-1.4	104.9	100.7	4.24	24.739 CC, ES	
1,082.7	1,082.7	1,081.6	1,081.6	2.3	2.3	-178.64	-105.3	-2.5	105.3	100.7	4.60	22.918	
1,100.0	1,100.0	1,098.7	1,098.7	2.3	2.3	-178.37	-105.5	-3.0	105.5	100.9	4.67	22.595	
1,181.1	1,181.1	1,178.7	1,178.5	2.5	2.5	-176.43	-106.7	-6.7	107.0	102.0	5.01	21.353	
1,200.0	1,200.0	1,197.2	1,197.1	2.6	2.5	-175.83	-107.1	-7.8	107.5	102.4	5.09	21.116	
1,279.5	1,279.5	1,275.3	1,274.8	2.7	2.7	-172.76	-109.2	-13.9	110.2	104.8	5.43	20.288	
1,300.0	1,300.0	1,295.3	1,294.8	2.8	2.7	-171.83	-109.9	-15.8	111.1	105.6	5.52	20.127	
1,377.9	1,377.9	1,371.1	1,370.1	3.0	2.9	151.06	-112.7	-24.1	116.5	110.6	5.87	19.844	
1,400.0	1,400.0	1,392.4	1,391.2	3.0	3.0	152.37	-113.7	-26.8	118.6	112.7	5.97	19.884	
1,476.4	1,476.3	1,465.5	1,463.5	3.2	3.2	157.16	-117.2	-37.1	128.6	122.3	6.31	20.365	
1,500.0	1,499.8	1,487.9	1,485.6	3.2	3.2	158.67	-118.4	-40.6	132.4	126.0	6.42	20.637	
1,574.8	1,574.4	1,558.0	1,554.4	3.4	3.4	163.34	-122.6	-52.6	147.3	140.6	6.76	21.797	
1,600.0	1,599.5	1,581.2	1,577.3	3.5	3.5	164.84	-124.1	-56.9	153.2	146.4	6.87	22.307	
1,673.2	1,672.2	1,647.9	1,642.4	3.6	3.7	168.90	-128.7	-70.4	173.0	165.8	7.20	24.040	
1,700.0	1,698.7	1,671.8	1,665.7	3.7	3.8	170.26	-130.5	-75.5	181.2	173.9	7.31	24.781	
1,771.6	1,769.5	1,734.8	1,726.8	3.9	4.1	173.56	-135.5	-90.0	205.6	198.0	7.62	26.969	
1,800.0	1,797.5	1,759.3	1,750.4	4.0	4.2	174.73	-137.5	-96.0	216.2	208.5	7.74	27.925	
1,870.1	1,866.3	1,821.6	1,810.5	4.2	4.4	177.39	-142.9	-111.7	244.3	236.3	8.04	30.382	
1,899.9	1,895.6	1,848.4	1,836.3	4.3	4.6	178.38	-145.3	-118.4	256.9	248.8	8.16	31.475	
1,968.5	1,962.6	1,909.7	1,895.4	4.5	4.9	-179.65	-150.6	-133.9	286.4	277.9	8.47	33.804	
2,000.0	1,993.4	1,937.9	1,922.6	4.6	5.0	-178.87	-153.1	-141.0	300.0	291.4	8.62	34.822	
2,066.9	2,058.9	1,997.8	1,980.2	4.8	5.3	-177.43	-158.3	-156.2	329.1	320.2	8.92	36.889	
2,100.0	2,091.3	2,027.3	2,008.7	4.9	5.4	-176.81	-160.9	-163.6	343.5	334.4	9.07	37.872	
2,165.3	2,155.2	2,085.8	2,065.1	5.2	5.7	-175.72	-166.0	-178.4	372.1	362.7	9.37	39.703	
2,200.0	2,189.1	2,116.8	2,094.9	5.3	5.9	-175.21	-168.7	-186.2	387.3	377.7	9.53	40.625	
2,263.8	2,251.5	2,173.8	2,149.9	5.5	6.2	-174.36	-173.6	-200.6	415.3	405.5	9.83	42.238	
2,300.0	2,286.9	2,206.2	2,181.1	5.7	6.4	-173.93	-176.4	-208.8	431.2	421.2	10.00	43.118	
2,362.2	2,347.7	2,261.8	2,234.7	5.9	6.6	-173.26	-181.3	-222.9	458.7	448.4	10.30	44.540	
2,400.0	2,384.7	2,295.7	2,267.3	6.0	6.8	-172.89	-184.2	-231.4	475.3	464.9	10.48	45.373	
2,460.6	2,444.0	2,349.9	2,319.6	6.3	7.1	-172.34	-189.0	-245.1	502.1	491.4	10.77	46.631	
2,500.0	2,482.5	2,385.1	2,353.5	6.4	7.3	-172.02	-192.0	-254.0	519.6	508.6	10.96	47.418	
2,559.0	2,540.3	2,437.9	2,404.4	6.7	7.6	-171.57	-196.6	-267.3	545.7	534.5	11.24	48.535	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,474.5	2,439.7	6.8	7.8	-171.29	-199.8	-276.6	563.9	552.4	11.44	49.278	
2,657.5	2,636.5	2,525.9	2,489.2	7.1	8.1	-170.92	-204.3	-289.6	589.4	577.6	11.72	50.270	
2,700.0	2,678.1	2,564.0	2,525.9	7.2	8.3	-170.66	-207.6	-299.2	608.2	596.3	11.93	50.974	
2,755.9	2,732.8	2,614.0	2,574.0	7.5	8.5	-170.35	-212.0	-311.8	633.0	620.8	12.21	51.857	
2,800.0	2,776.0	2,653.4	2,612.1	7.7	8.8	-170.12	-215.4	-321.8	652.6	640.2	12.43	52.524	
2,854.3	2,829.1	2,702.0	2,658.9	7.9	9.0	-169.86	-219.6	-334.0	676.8	664.1	12.70	53.311	
2,900.0	2,873.8	2,742.8	2,698.2	8.1	9.3	-169.65	-223.2	-344.4	697.1	684.2	12.92	53.944	
2,952.7	2,925.4	2,790.0	2,743.7	8.3	9.5	-169.43	-227.3	-356.3	720.6	707.4	13.19	54.645	
3,000.0	2,971.6	2,832.3	2,784.4	8.5	9.7	-169.24	-231.0	-367.0	741.6	728.2	13.42	55.248	
3,051.2	3,021.6	2,878.1	2,828.5	8.7	10.0	-169.04	-235.0	-378.5	764.4	750.7	13.68	55.873	
3,100.0	3,069.4	2,921.7	2,870.6	8.9	10.2	-168.87	-238.8	-389.5	786.1	772.2	13.93	56.448	
3,149.6	3,117.9	2,966.1	2,913.4	9.1	10.5	-168.70	-242.6	-400.8	808.2	794.0	14.18	57.007	
3,200.0	3,167.2	3,011.2	2,956.8	9.3	10.7	-168.54	-246.6	-412.1	830.6	816.2	14.43	57.556	
3,248.0	3,214.2	3,054.1	2,998.2	9.5	11.0	-168.39	-250.3	-423.0	852.0	837.3	14.68	58.056	
3,300.0	3,265.0	3,100.6	3,043.0	9.8	11.2	-168.24	-254.4	-434.7	875.2	860.2	14.94	58.580	
3,346.4	3,310.5	3,142.1	3,083.0	10.0	11.5	-168.12	-258.0	-445.2	895.9	880.7	15.18	59.028	
3,400.0	3,362.9	3,190.0	3,129.2	10.2	11.8	-167.98	-262.1	-457.3	919.8	904.3	15.45	59.530	
3,444.9	3,406.7	3,230.2	3,167.8	10.4	12.0	-167.86	-265.6	-467.5	939.8	924.1	15.68	59.932	
3,473.0	3,434.2	3,255.3	3,192.1	10.5	12.1	-167.80	-267.8	-473.8	952.3	936.5	15.82	60.179	
3,500.0	3,460.7	3,279.5	3,215.4	10.6	12.3	-167.79	-269.9	-479.9	964.2	948.3	15.99	60.316	
3,543.3	3,503.2	3,318.6	3,253.0	10.7	12.5	-167.77	-273.3	-489.8	982.9	966.7	16.23	60.548	
3,600.0	3,559.0	3,370.1	3,302.7	10.9	12.8	-167.73	-277.8	-502.8	1,006.5	989.9	16.55	60.796	
3,641.7	3,600.2	3,408.3	3,339.5	11.0	13.0	-167.69	-281.2	-512.4	1,023.2	1,006.4	16.79	60.951	
3,700.0	3,657.9	3,462.0	3,391.2	11.2	13.3	-167.63	-285.8	-526.0	1,045.6	1,028.5	17.11	61.116	
3,740.1	3,697.8	3,499.2	3,427.1	11.3	13.5	-167.58	-289.1	-535.4	1,060.4	1,043.1	17.32	61.210	
3,800.0	3,757.3	3,555.1	3,481.0	11.4	13.8	-167.49	-293.9	-549.5	1,081.6	1,064.0	17.64	61.300	
3,838.6	3,795.7	3,591.3	3,515.9	11.5	14.0	-167.43	-297.1	-558.7	1,094.7	1,076.8	17.84	61.343	
3,900.0	3,857.0	3,649.4	3,571.8	11.7	14.4	-167.31	-302.2	-573.4	1,114.4	1,096.3	18.16	61.366	
3,937.0	3,893.9	3,684.5	3,605.7	11.7	14.6	-167.24	-305.2	-582.2	1,125.8	1,107.4	18.35	61.367	
4,000.0	3,956.9	3,744.7	3,663.6	11.8	14.9	-167.10	-310.5	-597.4	1,144.1	1,125.4	18.65	61.329	
4,035.4	3,992.3	3,778.6	3,696.4	11.9	15.1	-167.02	-313.4	-606.0	1,153.8	1,135.0	18.82	61.295	
4,072.9	4,029.8	3,814.7	3,731.1	11.9	15.3	-125.74	-316.6	-615.1	1,163.6	1,136.9	26.76	43.488	
4,100.0	4,056.9	3,840.8	3,756.3	12.0	15.4	-125.63	-318.8	-621.7	1,170.6	1,143.7	26.95	43.444	
4,133.8	4,090.7	3,873.4	3,787.7	12.0	15.6	-125.51	-321.7	-629.9	1,179.3	1,152.1	27.18	43.382	
4,200.0	4,156.9	3,937.2	3,849.1	12.1	16.0	-125.27	-327.2	-646.0	1,196.3	1,168.7	27.65	43.263	
4,232.3	4,189.2	3,968.3	3,879.1	12.2	16.2	-125.16	-329.9	-653.9	1,204.6	1,176.7	27.88	43.206	
4,300.0	4,256.9	4,033.5	3,942.0	12.3	16.5	-124.92	-335.6	-670.4	1,222.1	1,193.7	28.36	43.088	
4,330.7	4,287.6	4,063.1	3,970.5	12.4	16.7	-124.82	-338.2	-677.9	1,230.0	1,201.4	28.58	43.036	
4,400.0	4,356.9	4,129.9	4,034.9	12.5	17.1	-124.58	-344.0	-694.7	1,247.8	1,218.8	29.07	42.919	
4,429.1	4,386.0	4,158.0	4,061.9	12.5	17.3	-124.49	-346.5	-701.8	1,255.4	1,226.1	29.28	42.871	
4,500.0	4,456.9	4,226.3	4,127.7	12.6	17.6	-124.26	-352.4	-719.1	1,273.7	1,243.9	29.79	42.755	
4,527.5	4,484.4	4,252.8	4,153.3	12.7	17.8	-124.18	-354.7	-725.8	1,280.8	1,250.8	29.99	42.711	
4,600.0	4,556.9	4,322.6	4,220.6	12.8	18.2	-123.95	-360.8	-743.4	1,299.5	1,269.0	30.51	42.596	
4,626.0	4,582.9	4,347.6	4,244.7	12.9	18.3	-123.88	-363.0	-749.7	1,306.2	1,275.6	30.70	42.556	
4,700.0	4,656.9	4,419.0	4,313.4	13.0	18.7	-123.66	-369.2	-767.8	1,325.4	1,294.2	31.23	42.442	
4,724.4	4,681.3	4,442.5	4,336.1	13.0	18.9	-123.59	-371.2	-773.7	1,331.7	1,300.3	31.41	42.405	
4,800.0	4,756.9	4,515.3	4,406.3	13.1	19.3	-123.37	-377.6	-792.1	1,351.3	1,319.4	31.95	42.293	
4,822.8	4,779.7	4,537.3	4,427.5	13.2	19.4	-123.31	-379.5	-797.7	1,357.3	1,325.2	32.12	42.260	
4,900.0	4,856.9	4,611.7	4,499.2	13.3	19.8	-123.10	-386.0	-816.4	1,377.3	1,344.6	32.68	42.156	
4,921.2	4,878.1	4,632.2	4,518.9	13.4	20.0	-123.04	-387.8	-821.6	1,382.8	1,350.0	32.83	42.119	
5,000.0	4,956.9	4,708.1	4,592.0	13.5	20.4	-122.83	-394.4	-840.8	1,403.3	1,369.9	33.40	42.009	
5,019.7	4,976.6	4,727.0	4,610.3	13.5	20.5	-122.78	-396.0	-845.6	1,408.4	1,374.9	33.55	41.982	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	4,804.4	4,684.9	13.7	21.0	-122.58	-402.8	-865.1	1,429.3	1,395.2	34.13	41.873	
5,118.1	5,075.0	4,821.9	4,701.7	13.7	21.1	-122.53	-404.3	-869.5	1,434.0	1,399.8	34.27	41.849	
5,200.0	5,156.9	4,900.8	4,777.7	13.8	21.5	-122.33	-411.2	-889.5	1,455.3	1,420.5	34.87	41.741	
5,216.5	5,173.4	4,916.7	4,793.1	13.9	21.6	-122.29	-412.6	-893.5	1,459.7	1,424.7	34.99	41.720	
5,300.0	5,256.9	4,997.2	4,870.6	14.0	22.1	-122.09	-419.6	-913.8	1,481.4	1,445.8	35.60	41.614	
5,314.9	5,271.8	5,011.6	4,884.5	14.1	22.1	-122.06	-420.8	-917.4	1,485.3	1,449.6	35.71	41.595	
5,400.0	5,356.9	5,093.5	4,963.5	14.2	22.6	-121.86	-428.0	-938.1	1,507.5	1,471.2	36.33	41.490	
5,413.4	5,370.3	5,106.4	4,975.9	14.2	22.7	-121.83	-429.1	-941.4	1,511.0	1,474.6	36.43	41.473	
5,500.0	5,456.9	7,988.1	6,713.2	14.4	38.3	178.51	-484.5	319.2	1,503.0	1,473.1	29.90	50.272	
5,511.8	5,468.7	7,987.9	6,713.2	14.4	38.3	178.53	-484.5	319.0	1,493.2	1,463.3	29.92	49.903	
5,600.0	5,556.9	7,986.4	6,713.2	14.6	38.3	178.63	-484.5	317.5	1,420.5	1,390.4	30.10	47.195	
5,610.2	5,567.1	7,986.2	6,713.2	14.6	38.2	178.64	-484.5	317.4	1,412.2	1,382.1	30.12	46.887	
5,700.0	5,656.9	7,984.7	6,713.2	14.7	38.2	178.75	-484.5	315.8	1,340.4	1,310.1	30.30	44.235	
5,708.6	5,665.5	7,984.5	6,713.2	14.8	38.2	178.76	-484.5	315.7	1,333.6	1,303.2	30.32	43.985	
5,800.0	5,756.9	7,983.0	6,713.3	14.9	38.2	178.87	-484.5	314.1	1,263.0	1,232.5	30.50	41.406	
5,807.1	5,764.0	7,982.9	6,713.3	14.9	38.2	178.88	-484.5	314.0	1,257.7	1,227.2	30.52	41.212	
5,900.0	5,856.9	7,981.3	6,713.3	15.1	38.1	178.99	-484.5	312.4	1,189.1	1,158.4	30.71	38.724	
5,905.5	5,862.4	7,981.2	6,713.3	15.1	38.1	178.99	-484.5	312.3	1,185.2	1,154.4	30.72	38.581	
5,971.9	5,928.8	7,980.0	6,713.3	15.3	38.1	179.07	-484.5	311.2	1,138.4	1,107.6	30.86	36.895	
6,000.0	5,956.9	7,979.0	6,713.3	15.3	38.1	-92.95	-484.5	310.2	1,119.3	1,066.8	52.42	21.350	
6,003.9	5,960.8	7,978.8	6,713.3	15.3	38.1	-93.22	-484.5	309.9	1,116.6	1,064.2	52.43	21.296	
6,050.0	6,006.7	7,974.5	6,713.4	15.4	38.0	-96.15	-484.5	305.6	1,086.2	1,033.8	52.44	20.712	
6,100.0	6,056.2	7,966.4	6,713.6	15.4	37.8	-98.82	-484.5	297.6	1,054.8	1,002.5	52.28	20.174	
6,102.3	6,058.5	7,966.0	6,713.6	15.4	37.8	-98.93	-484.5	297.1	1,053.4	1,001.1	52.27	20.151	
6,150.0	6,105.1	7,955.0	6,713.7	15.4	37.6	-100.97	-484.5	286.2	1,025.2	973.2	51.99	19.720	
6,200.0	6,153.0	7,940.2	6,714.0	15.5	37.3	-102.62	-484.5	271.4	997.6	946.0	51.59	19.338	
6,200.8	6,153.8	7,940.0	6,714.0	15.5	37.3	-102.65	-484.5	271.1	997.1	945.6	51.58	19.332	
6,250.0	6,199.9	7,922.1	6,714.3	15.5	36.9	-103.82	-484.5	253.3	972.1	921.0	51.11	19.020	
6,299.2	6,244.8	7,901.2	6,714.7	15.5	36.4	-104.58	-484.5	232.3	949.3	898.7	50.59	18.765	
6,300.0	6,245.5	7,900.8	6,714.7	15.5	36.4	-104.59	-484.5	232.0	948.9	898.4	50.58	18.761	
6,350.0	6,289.6	7,876.4	6,715.1	15.5	35.9	-104.97	-484.5	207.6	928.2	878.1	50.03	18.550	
6,397.6	6,329.9	7,850.4	6,715.5	15.4	35.4	-105.03	-484.5	181.5	910.6	861.1	49.50	18.397	
6,400.0	6,331.8	7,849.0	6,715.6	15.4	35.4	-105.02	-484.5	180.2	909.7	860.3	49.47	18.390	
6,450.0	6,372.2	7,818.8	6,716.1	15.4	34.8	-104.77	-484.5	149.9	893.7	844.8	48.89	18.277	
6,496.0	6,407.4	7,788.5	6,716.6	15.4	34.2	-104.32	-484.5	119.7	880.9	832.5	48.38	18.206	
6,500.0	6,410.3	7,785.8	6,716.6	15.4	34.1	-104.27	-484.5	117.0	879.9	831.5	48.34	18.202	
6,550.0	6,446.1	7,750.3	6,717.2	15.4	33.5	-103.57	-484.5	81.5	868.3	820.4	47.83	18.154	
6,594.5	6,475.9	7,716.8	6,717.8	15.4	32.8	-102.80	-484.5	48.0	859.6	812.2	47.40	18.136	
6,600.0	6,479.4	7,712.5	6,717.9	15.4	32.8	-102.70	-484.5	43.7	858.6	811.3	47.34	18.137	
6,650.0	6,510.0	7,672.4	6,718.6	15.5	32.0	-101.73	-484.5	3.6	850.8	803.9	46.93	18.129	
6,692.9	6,534.0	7,636.5	6,719.2	15.7	31.4	-100.85	-484.5	-32.3	845.4	798.7	46.64	18.126	
6,700.0	6,537.8	7,630.4	6,719.3	15.7	31.3	-100.71	-484.5	-38.4	844.6	798.0	46.59	18.129	
6,750.0	6,562.6	7,586.6	6,720.0	16.2	30.6	-99.67	-484.5	-82.2	839.7	793.4	46.32	18.129	
6,791.3	6,580.8	7,549.2	6,720.7	16.6	30.0	-98.84	-484.5	-119.6	836.6	790.4	46.19	18.112	
6,800.0	6,584.3	7,541.2	6,720.8	16.7	29.9	-98.68	-484.5	-127.6	836.0	789.9	46.16	18.113	
6,850.0	6,602.9	7,494.5	6,721.6	17.3	29.2	-97.76	-484.5	-174.3	833.3	787.3	46.07	18.090	
6,889.7	6,615.2	7,456.5	6,722.2	17.9	28.7	-97.12	-484.5	-212.3	831.7	785.6	46.11	18.040	
6,900.0	6,618.1	7,446.6	6,722.4	18.0	28.5	-96.97	-484.5	-222.2	831.4	785.3	46.11	18.029	
6,950.0	6,630.0	7,397.8	6,723.2	18.8	27.9	-96.34	-484.5	-270.9	830.1	783.9	46.22	17.960	
6,988.2	6,636.8	7,360.2	6,723.9	19.5	27.5	-95.98	-484.5	-308.6	829.4	783.0	46.42	17.868	
7,000.0	6,638.5	7,348.4	6,724.1	19.7	27.3	-95.89	-484.5	-320.3	829.3	782.8	46.48	17.842	
7,050.0	6,643.5	7,298.6	6,724.9	20.6	26.8	-95.64	-484.5	-370.1	828.8	782.1	46.78	17.718	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	7,257.9	6,724.7	21.3	26.4	-95.52	-484.5	-410.9	828.7	781.6	47.05	17.613	
7,097.8	6,645.0	7,245.3	6,724.1	21.5	26.3	-95.48	-484.5	-423.5	828.6	781.5	47.13	17.580	
7,100.0	6,645.0	7,242.8	6,724.0	21.6	26.3	-95.47	-484.5	-425.9	828.6	781.4	47.16	17.572	
7,185.0	6,644.9	7,148.6	6,712.6	23.3	25.6	-94.69	-484.5	-519.3	827.7	779.6	48.11	17.203	
7,200.0	6,644.9	7,132.4	6,709.4	23.6	25.5	-94.47	-484.5	-535.2	827.4	779.1	48.32	17.125	
7,283.4	6,644.8	7,045.3	6,686.1	25.4	25.2	-92.87	-484.5	-619.2	826.0	776.3	49.68	16.625	
7,300.0	6,644.7	7,028.7	6,680.5	25.8	25.1	-92.48	-484.5	-634.7	825.7	775.7	49.99	16.518	
7,381.9	6,644.6	6,951.2	6,649.7	27.7	24.9	-90.35	-484.5	-705.9	824.8	773.2	51.63	15.975	
7,394.4	6,644.6	6,940.0	6,644.6	28.0	24.9	-90.00	-484.5	-715.8	824.8	772.9	51.90	15.893	
7,400.0	6,644.6	6,935.0	6,642.3	28.1	24.9	-89.84	-484.5	-720.3	824.8	772.8	52.02	15.857	
7,480.3	6,644.5	6,867.9	6,608.2	30.0	24.9	-87.48	-484.5	-778.0	826.0	772.2	53.79	15.354	
7,500.0	6,644.5	6,852.5	6,599.7	30.5	24.9	-86.89	-484.5	-790.8	826.6	772.4	54.23	15.243	
7,578.7	6,644.4	6,795.5	6,565.6	32.4	25.0	-84.54	-484.5	-836.5	831.0	775.0	56.01	14.836	
7,600.0	6,644.4	6,781.3	6,556.6	32.9	25.0	-83.92	-484.5	-847.5	832.8	776.3	56.49	14.742	
7,677.1	6,644.3	6,733.3	6,524.4	34.8	25.1	-81.72	-484.5	-883.1	841.4	783.2	58.22	14.454	
7,700.0	6,644.2	6,720.2	6,515.2	35.4	25.1	-81.10	-484.5	-892.4	844.7	786.0	58.72	14.387	
7,775.6	6,644.1	6,680.0	6,486.0	37.3	25.2	-79.13	-484.5	-920.1	858.3	797.9	60.37	14.218	
7,800.0	6,644.1	6,668.0	6,477.0	38.0	25.3	-78.53	-484.5	-928.0	863.5	802.6	60.89	14.182	
7,874.0	6,644.0	6,634.3	6,451.0	39.9	25.3	-76.81	-484.5	-949.4	882.1	819.7	62.46	14.122	
7,900.0	6,644.0	6,623.3	6,442.3	40.5	25.4	-76.24	-484.5	-956.1	889.6	826.6	63.01	14.119 SF	
7,972.4	6,643.9	6,600.0	6,423.5	42.4	25.4	-75.01	-484.5	-969.9	913.2	848.6	64.58	14.140	
8,000.0	6,643.9	6,584.9	6,411.1	43.1	25.5	-74.21	-484.5	-978.5	923.1	858.0	65.08	14.183	
8,070.8	6,643.8	6,560.9	6,391.0	45.0	25.6	-72.93	-484.5	-991.7	951.2	884.6	66.54	14.294	
8,100.0	6,643.7	6,550.0	6,381.8	45.8	25.6	-72.35	-484.5	-997.4	963.7	896.6	67.11	14.360	
8,169.3	6,643.7	6,531.3	6,365.7	47.6	25.6	-71.34	-484.5	-1,006.9	995.8	927.3	68.55	14.527	
8,200.0	6,643.6	6,522.9	6,358.3	48.4	25.7	-70.88	-484.5	-1,011.1	1,011.0	941.9	69.17	14.616	
8,267.7	6,643.5	6,500.0	6,338.2	50.2	25.7	-69.64	-484.5	-1,021.9	1,046.6	976.1	70.44	14.857	
8,300.0	6,643.5	6,500.0	6,338.2	51.1	25.7	-69.64	-484.5	-1,021.9	1,064.4	993.1	71.26	14.938	
8,366.1	6,643.4	6,482.7	6,322.7	52.9	25.8	-68.70	-484.5	-1,029.7	1,102.7	1,030.1	72.55	15.199	
8,400.0	6,643.4	6,475.4	6,316.2	53.8	25.8	-68.31	-484.5	-1,032.8	1,123.2	1,049.9	73.24	15.335	
8,464.5	6,643.3	6,450.0	6,293.0	55.5	25.9	-66.94	-484.5	-1,043.4	1,163.8	1,089.6	74.25	15.674	
8,500.0	6,643.2	6,450.0	6,293.0	56.5	25.9	-66.94	-484.5	-1,043.4	1,186.8	1,111.6	75.14	15.795	
8,563.0	6,643.2	6,450.0	6,293.0	58.2	25.9	-66.94	-484.5	-1,043.4	1,229.0	1,152.2	76.71	16.020	
8,600.0	6,643.1	6,450.0	6,293.0	59.2	25.9	-66.94	-484.5	-1,043.4	1,254.6	1,176.9	77.64	16.159	
8,661.4	6,643.0	6,428.5	6,273.2	60.8	25.9	-65.78	-484.5	-1,051.6	1,297.8	1,219.2	78.59	16.514	
8,700.0	6,643.0	6,422.7	6,267.8	61.9	25.9	-65.47	-484.5	-1,053.7	1,325.8	1,246.4	79.39	16.700	
8,759.8	6,642.9	6,400.0	6,246.5	63.5	26.0	-64.26	-484.5	-1,061.6	1,370.1	1,289.9	80.19	17.085	
8,800.0	6,642.9	6,400.0	6,246.5	64.6	26.0	-64.26	-484.5	-1,061.6	1,400.3	1,319.1	81.19	17.247	
8,858.2	6,642.8	6,400.0	6,246.5	66.2	26.0	-64.26	-484.5	-1,061.6	1,444.9	1,362.2	82.63	17.485	
8,900.0	6,642.7	6,400.0	6,246.5	67.3	26.0	-64.26	-484.5	-1,061.6	1,477.4	1,393.7	83.67	17.658	
8,956.7	6,642.7	6,400.0	6,246.5	68.9	26.0	-64.26	-484.5	-1,061.6	1,522.3	1,437.2	85.07	17.893	
9,000.0	6,642.6	6,400.0	6,246.5	70.1	26.0	-64.26	-484.5	-1,061.6	1,557.1	1,470.9	86.15	18.074	
9,055.1	6,642.5	6,378.5	6,226.1	71.6	26.0	-63.12	-484.5	-1,068.4	1,601.6	1,514.8	86.78	18.456	
9,100.0	6,642.5	6,373.9	6,221.8	72.8	26.0	-62.88	-484.5	-1,069.8	1,638.4	1,550.7	87.72	18.678	
9,153.5	6,642.4	6,368.7	6,216.7	74.3	26.0	-62.61	-484.5	-1,071.3	1,682.8	1,594.0	88.85	18.940	
9,200.0	6,642.4	6,350.0	6,198.8	75.6	26.1	-61.63	-484.5	-1,076.5	1,721.9	1,632.6	89.29	19.285	
9,251.9	6,642.3	6,350.0	6,198.8	77.0	26.1	-61.63	-484.5	-1,076.5	1,765.7	1,675.2	90.56	19.498	
9,300.0	6,642.2	6,350.0	6,198.8	78.3	26.1	-61.63	-484.5	-1,076.5	1,806.6	1,714.9	91.73	19.695	
9,350.4	6,642.2	6,350.0	6,198.8	79.7	26.1	-61.63	-484.5	-1,076.5	1,849.9	1,756.9	92.97	19.899	
9,400.0	6,642.1	6,350.0	6,198.8	81.1	26.1	-61.63	-484.5	-1,076.5	1,892.8	1,798.6	94.18	20.098	
9,448.8	6,642.0	6,350.0	6,198.8	82.4	26.1	-61.63	-484.5	-1,076.5	1,935.4	1,840.0	95.38	20.292	
9,500.0	6,642.0	6,350.0	6,198.8	83.8	26.1	-61.63	-484.5	-1,076.5	1,980.3	1,883.7	96.63	20.494	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,350.0	6,198.8	85.1	26.1	-61.63	-484.5	-1,076.5	2,022.0	1,924.2	97.79	20.677	
9,600.0	6,641.9	6,350.0	6,198.8	86.6	26.1	-61.63	-484.5	-1,076.5	2,068.9	1,969.9	99.08	20.881	
9,645.6	6,641.8	6,330.0	6,179.5	87.9	26.1	-60.60	-484.5	-1,081.5	2,109.4	2,010.1	99.33	21.236	
9,700.0	6,641.7	6,326.6	6,176.1	89.4	26.1	-60.43	-484.5	-1,082.3	2,158.1	2,057.6	100.50	21.474	
9,744.1	6,641.7	6,323.9	6,173.5	90.6	26.1	-60.29	-484.5	-1,083.0	2,197.8	2,096.3	101.45	21.664	
9,800.0	6,641.6	6,320.6	6,170.3	92.1	26.1	-60.12	-484.5	-1,083.7	2,248.3	2,145.7	102.65	21.902	
9,842.5	6,641.6	6,300.0	6,150.2	93.3	26.1	-59.08	-484.5	-1,088.1	2,287.2	2,184.5	102.71	22.269	
9,900.0	6,641.5	6,300.0	6,150.2	94.9	26.1	-59.08	-484.5	-1,088.1	2,339.5	2,235.4	104.09	22.475	
9,940.9	6,641.4	6,300.0	6,150.2	96.0	26.1	-59.08	-484.5	-1,088.1	2,376.8	2,271.8	105.08	22.620	
10,000.0	6,641.4	6,300.0	6,150.2	97.7	26.1	-59.08	-484.5	-1,088.1	2,431.0	2,324.5	106.50	22.827	
10,039.3	6,641.3	6,300.0	6,150.2	98.8	26.1	-59.08	-484.5	-1,088.1	2,467.2	2,359.7	107.45	22.962	
10,100.0	6,641.2	6,300.0	6,150.2	100.4	26.1	-59.08	-484.5	-1,088.1	2,523.1	2,414.2	108.91	23.168	
10,137.8	6,641.2	6,300.0	6,150.2	101.5	26.1	-59.08	-484.5	-1,088.1	2,558.1	2,448.3	109.82	23.294	
10,200.0	6,641.1	6,300.0	6,150.2	103.2	26.1	-59.08	-484.5	-1,088.1	2,615.9	2,504.6	111.32	23.500	
10,236.2	6,641.1	6,300.0	6,150.2	104.2	26.1	-59.08	-484.5	-1,088.1	2,649.6	2,537.4	112.19	23.617	
10,300.0	6,641.0	6,300.0	6,150.2	106.0	26.1	-59.08	-484.5	-1,088.1	2,709.1	2,595.4	113.73	23.821	
10,334.6	6,640.9	6,300.0	6,150.2	107.0	26.1	-59.08	-484.5	-1,088.1	2,741.5	2,627.0	114.56	23.930	
10,400.0	6,640.9	6,300.0	6,150.2	108.8	26.1	-59.08	-484.5	-1,088.1	2,802.8	2,686.7	116.14	24.133	
10,433.0	6,640.8	6,300.0	6,150.2	109.7	26.1	-59.08	-484.5	-1,088.1	2,833.9	2,717.0	116.94	24.234	
10,500.0	6,640.7	6,300.0	6,150.2	111.6	26.1	-59.08	-484.5	-1,088.1	2,897.0	2,778.4	118.55	24.436	
10,531.5	6,640.7	6,300.0	6,150.2	112.4	26.1	-59.08	-484.5	-1,088.1	2,926.7	2,807.4	119.31	24.529	
10,600.0	6,640.6	6,300.0	6,150.2	114.3	26.1	-59.08	-484.5	-1,088.1	2,991.5	2,870.5	120.97	24.730	
10,629.9	6,640.6	6,300.0	6,150.2	115.2	26.1	-59.08	-484.5	-1,088.1	3,019.8	2,898.1	121.69	24.816	
10,700.0	6,640.5	6,300.0	6,150.2	117.1	26.1	-59.08	-484.5	-1,088.1	3,086.4	2,963.0	123.38	25.014	
10,728.3	6,640.4	6,300.0	6,150.2	117.9	26.1	-59.08	-484.5	-1,088.1	3,113.3	2,989.2	124.07	25.093	
10,800.0	6,640.4	6,277.7	6,128.3	119.9	26.2	-57.98	-484.5	-1,092.1	3,181.1	3,056.6	124.47	25.557	
10,826.7	6,640.3	6,276.9	6,127.4	120.7	26.2	-57.93	-484.5	-1,092.3	3,206.6	3,081.5	125.06	25.640	
10,900.0	6,640.2	6,274.7	6,125.2	122.7	26.2	-57.82	-484.5	-1,092.6	3,276.5	3,149.8	126.68	25.865	
10,925.2	6,640.2	6,273.9	6,124.5	123.4	26.2	-57.79	-484.5	-1,092.7	3,300.5	3,173.3	127.23	25.941	
11,000.0	6,640.1	6,271.7	6,122.3	125.5	26.2	-57.68	-484.5	-1,093.1	3,372.1	3,243.2	128.88	26.164	
11,023.6	6,640.1	6,271.0	6,121.7	126.1	26.2	-57.65	-484.5	-1,093.2	3,394.7	3,265.3	129.40	26.233	
11,100.0	6,640.0	6,250.0	6,100.8	128.3	26.2	-56.63	-484.5	-1,096.2	3,468.2	3,338.3	129.88	26.704	
11,122.0	6,639.9	6,250.0	6,100.8	128.9	26.2	-56.63	-484.5	-1,096.2	3,489.3	3,358.9	130.40	26.759	
11,200.0	6,639.8	6,250.0	6,100.8	131.1	26.2	-56.63	-484.5	-1,096.2	3,564.2	3,431.9	132.24	26.952	
11,220.4	6,639.8	6,250.0	6,100.8	131.6	26.2	-56.63	-484.5	-1,096.2	3,583.8	3,451.1	132.72	27.002	
11,300.0	6,639.7	6,250.0	6,100.8	133.9	26.2	-56.63	-484.5	-1,096.2	3,660.4	3,525.8	134.60	27.194	
11,318.9	6,639.7	6,250.0	6,100.8	134.4	26.2	-56.63	-484.5	-1,096.2	3,678.5	3,543.5	135.05	27.239	
11,400.0	6,639.6	6,250.0	6,100.8	136.7	26.2	-56.63	-484.5	-1,096.2	3,756.7	3,619.8	136.97	27.428	
11,417.3	6,639.6	6,250.0	6,100.8	137.1	26.2	-56.63	-484.5	-1,096.2	3,773.4	3,636.1	137.37	27.468	
11,500.0	6,639.5	6,250.0	6,100.8	139.4	26.2	-56.63	-484.5	-1,096.2	3,853.3	3,714.0	139.33	27.656	
11,515.7	6,639.5	6,250.0	6,100.8	139.9	26.2	-56.63	-484.5	-1,096.2	3,868.5	3,728.8	139.70	27.691	
11,600.0	6,639.3	6,250.0	6,100.8	142.2	26.2	-56.63	-484.5	-1,096.2	3,950.1	3,808.4	141.69	27.877	
11,614.1	6,639.3	6,250.0	6,100.8	142.6	26.2	-56.63	-484.5	-1,096.2	3,963.8	3,821.7	142.03	27.908	
11,700.0	6,639.2	6,250.0	6,100.8	145.0	26.2	-56.63	-484.5	-1,096.2	4,047.0	3,902.9	144.06	28.092	
11,712.6	6,639.2	6,250.0	6,100.8	145.4	26.2	-56.63	-484.5	-1,096.2	4,059.2	3,914.8	144.36	28.119	
11,800.0	6,639.1	6,250.0	6,100.8	147.8	26.2	-56.63	-484.5	-1,096.2	4,144.0	3,997.6	146.42	28.301	
11,811.0	6,639.1	6,250.0	6,100.8	148.1	26.2	-56.63	-484.5	-1,096.2	4,154.7	4,008.0	146.68	28.324	
11,900.0	6,639.0	6,250.0	6,100.8	150.6	26.2	-56.63	-484.5	-1,096.2	4,241.2	4,092.4	148.79	28.504	
11,909.4	6,639.0	6,250.0	6,100.8	150.9	26.2	-56.63	-484.5	-1,096.2	4,250.4	4,101.3	149.01	28.523	
12,000.0	6,638.8	6,250.0	6,100.8	153.4	26.2	-56.63	-484.5	-1,096.2	4,338.5	4,187.3	151.16	28.702	
12,007.8	6,638.8	6,250.0	6,100.8	153.6	26.2	-56.63	-484.5	-1,096.2	4,346.1	4,194.8	151.34	28.717	
12,100.0	6,638.7	6,250.0	6,100.8	156.2	26.2	-56.63	-484.5	-1,096.2	4,435.9	4,282.4	153.52	28.894	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,250.0	6,100.8	156.4	26.2	-56.63	-484.5	-1,096.2	4,442.1	4,288.4	153.67	28.906		
12,200.0	6,638.6	6,250.0	6,100.8	159.0	26.2	-56.63	-484.5	-1,096.2	4,533.5	4,377.6	155.89	29.081		
12,204.7	6,638.6	6,250.0	6,100.8	159.1	26.2	-56.63	-484.5	-1,096.2	4,538.1	4,382.1	156.00	29.090		
12,300.0	6,638.5	6,250.0	6,100.8	161.8	26.2	-56.63	-484.5	-1,096.2	4,631.1	4,472.9	158.26	29.263		
12,303.1	6,638.5	6,250.0	6,100.8	161.9	26.2	-56.63	-484.5	-1,096.2	4,634.2	4,475.8	158.33	29.269		
12,400.0	6,638.3	6,250.0	6,100.8	164.6	26.2	-56.63	-484.5	-1,096.2	4,728.9	4,568.2	160.63	29.440		
12,401.5	6,638.3	6,250.0	6,100.8	164.6	26.2	-56.63	-484.5	-1,096.2	4,730.4	4,569.7	160.66	29.443		
12,500.0	6,638.2	6,250.0	6,100.8	167.4	26.2	-56.63	-484.5	-1,096.2	4,826.7	4,663.7	163.00	29.612		
12,598.4	6,638.1	6,250.0	6,100.8	170.2	26.2	-56.63	-484.5	-1,096.2	4,923.1	4,757.7	165.33	29.778		
12,600.0	6,638.1	6,250.0	6,100.8	170.2	26.2	-56.63	-484.5	-1,096.2	4,924.6	4,759.3	165.36	29.780		
12,696.8	6,638.0	6,250.0	6,100.8	172.9	26.2	-56.63	-484.5	-1,096.2	5,019.5	4,851.9	167.66	29.939		
12,700.0	6,638.0	6,250.0	6,100.8	173.0	26.2	-56.63	-484.5	-1,096.2	5,022.6	4,854.9	167.73	29.944		
12,795.2	6,637.8	6,250.0	6,100.8	175.7	26.2	-56.63	-484.5	-1,096.2	5,116.1	4,946.1	169.99	30.096		
12,800.0	6,637.8	6,250.0	6,100.8	175.8	26.2	-56.63	-484.5	-1,096.2	5,120.7	4,950.6	170.10	30.104		
12,893.7	6,637.7	6,250.0	6,100.8	178.4	26.2	-56.63	-484.5	-1,096.2	5,212.7	5,040.4	172.32	30.249		
12,900.0	6,637.7	6,250.0	6,100.8	178.6	26.2	-56.63	-484.5	-1,096.2	5,218.9	5,046.4	172.47	30.259		
12,992.1	6,637.6	6,250.0	6,100.8	181.2	26.2	-56.63	-484.5	-1,096.2	5,309.4	5,134.7	174.66	30.399		
13,000.0	6,637.6	6,250.0	6,100.8	181.4	26.2	-56.63	-484.5	-1,096.2	5,317.1	5,142.3	174.84	30.411		
13,090.5	6,637.5	6,250.0	6,100.8	183.9	26.2	-56.63	-484.5	-1,096.2	5,406.1	5,229.1	176.99	30.545		
13,100.0	6,637.5	6,250.0	6,100.8	184.2	26.2	-56.63	-484.5	-1,096.2	5,415.4	5,238.2	177.21	30.559		
13,188.9	6,637.4	6,250.0	6,100.8	186.7	26.2	-56.63	-484.5	-1,096.2	5,502.9	5,323.6	179.32	30.687		
13,200.0	6,637.3	6,250.0	6,100.8	187.0	26.2	-56.63	-484.5	-1,096.2	5,513.8	5,334.2	179.58	30.703		
13,287.4	6,637.2	6,250.0	6,100.8	189.4	26.2	-56.63	-484.5	-1,096.2	5,599.7	5,418.1	181.66	30.826		
13,300.0	6,637.2	6,250.0	6,100.8	189.8	26.2	-56.63	-484.5	-1,096.2	5,612.2	5,430.2	181.96	30.844		
13,385.8	6,637.1	6,250.0	6,100.8	192.2	26.2	-56.63	-484.5	-1,096.2	5,696.7	5,512.7	183.99	30.962		
13,400.0	6,637.1	6,250.0	6,100.8	192.6	26.2	-56.63	-484.5	-1,096.2	5,710.6	5,526.3	184.33	30.981		
13,484.2	6,637.0	6,227.7	6,078.6	195.0	26.2	-55.56	-484.5	-1,098.7	5,793.2	5,609.0	184.24	31.445		
13,500.0	6,637.0	6,227.5	6,078.5	195.4	26.2	-55.56	-484.5	-1,098.7	5,808.8	5,624.2	184.59	31.469		
13,582.6	6,636.9	6,226.6	6,077.6	197.7	26.2	-55.51	-484.5	-1,098.8	5,890.2	5,703.8	186.44	31.593		
13,600.0	6,636.8	6,226.4	6,077.4	198.2	26.2	-55.51	-484.5	-1,098.9	5,907.3	5,720.5	186.83	31.618		
13,681.1	6,636.7	6,225.6	6,076.6	200.5	26.2	-55.47	-484.5	-1,098.9	5,987.2	5,798.6	188.65	31.737		
13,700.0	6,636.7	6,225.4	6,076.4	201.0	26.2	-55.46	-484.5	-1,099.0	6,005.9	5,816.8	189.08	31.764		
13,779.5	6,636.6	6,224.6	6,075.6	203.2	26.2	-55.42	-484.5	-1,099.0	6,084.3	5,893.4	190.86	31.878		
13,800.0	6,636.6	6,224.4	6,075.4	203.8	26.2	-55.41	-484.5	-1,099.0	6,104.5	5,913.2	191.32	31.907		
13,877.9	6,636.5	6,223.6	6,074.6	206.0	26.2	-55.37	-484.5	-1,099.1	6,181.4	5,988.3	193.07	32.017		
13,900.0	6,636.5	6,223.4	6,074.4	206.6	26.2	-55.36	-484.5	-1,099.1	6,203.2	6,009.6	193.56	32.047		
13,976.3	6,636.4	6,222.7	6,073.7	208.8	26.2	-55.33	-484.5	-1,099.2	6,278.5	6,083.2	195.28	32.152		
14,000.0	6,636.3	6,222.4	6,073.4	209.4	26.2	-55.32	-484.5	-1,099.2	6,301.9	6,106.1	195.81	32.184		
14,074.8	6,636.2	6,200.0	6,051.1	211.5	26.2	-54.28	-484.5	-1,100.9	6,376.1	6,180.8	195.29	32.649		
14,100.0	6,636.2	6,200.0	6,051.1	212.2	26.2	-54.28	-484.5	-1,100.9	6,401.0	6,205.1	195.88	32.678		
14,173.2	6,636.1	6,200.0	6,051.1	214.3	26.2	-54.28	-484.5	-1,100.9	6,473.3	6,275.7	197.57	32.764		
14,200.0	6,636.1	6,200.0	6,051.1	215.0	26.2	-54.28	-484.5	-1,100.9	6,499.7	6,301.5	198.19	32.795		
14,271.6	6,636.0	6,200.0	6,051.1	217.0	26.2	-54.28	-484.5	-1,100.9	6,570.5	6,370.6	199.85	32.878		
14,300.0	6,636.0	6,200.0	6,051.1	217.8	26.2	-54.28	-484.5	-1,100.9	6,598.5	6,398.0	200.50	32.910		
14,370.0	6,635.9	6,200.0	6,051.1	219.8	26.2	-54.28	-484.5	-1,100.9	6,667.7	6,465.6	202.12	32.988		
14,400.0	6,635.8	6,200.0	6,051.1	220.6	26.2	-54.28	-484.5	-1,100.9	6,697.3	6,494.5	202.82	33.022		
14,468.5	6,635.7	6,200.0	6,051.1	222.6	26.2	-54.28	-484.5	-1,100.9	6,765.0	6,560.6	204.40	33.097		
14,500.0	6,635.7	6,200.0	6,051.1	223.4	26.2	-54.28	-484.5	-1,100.9	6,796.2	6,591.1	205.13	33.131		
14,566.9	6,635.6	6,200.0	6,051.1	225.3	26.2	-54.28	-484.5	-1,100.9	6,862.4	6,655.7	206.68	33.203		
14,600.0	6,635.6	6,200.0	6,051.1	226.2	26.2	-54.28	-484.5	-1,100.9	6,895.1	6,687.6	207.44	33.238		
14,665.3	6,635.5	6,200.0	6,051.1	228.1	26.2	-54.28	-484.5	-1,100.9	6,959.7	6,750.8	208.95	33.307		
14,700.0	6,635.5	6,200.0	6,051.1	229.0	26.2	-54.28	-484.5	-1,100.9	6,994.0	6,784.3	209.76	33.343		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	6,635.4	6,200.0	6,051.1	230.8	26.2	-54.28	-484.5	-1,100.9	7,057.1	6,845.9	211.23	33.409	
14,800.0	6,635.3	6,200.0	6,051.1	231.8	26.2	-54.28	-484.5	-1,100.9	7,093.0	6,880.9	212.07	33.446	
14,862.2	6,635.2	6,200.0	6,051.1	233.6	26.2	-54.28	-484.5	-1,100.9	7,154.5	6,941.0	213.51	33.509	
14,900.0	6,635.2	6,200.0	6,051.1	234.7	26.2	-54.28	-484.5	-1,100.9	7,191.9	6,977.6	214.38	33.547	
14,960.6	6,635.1	6,200.0	6,051.1	236.4	26.2	-54.28	-484.5	-1,100.9	7,251.9	7,036.2	215.79	33.607	
14,995.1	6,635.0	6,200.0	6,051.1	237.3	26.2	-54.29	-484.5	-1,100.9	7,286.1	7,069.5	216.59	33.640	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	468.110	
100.0	100.0	100.0	100.0	0.1	0.1	-179.29	-90.0	-1.1	90.0	89.8	0.20	460.187	
196.8	196.8	196.8	196.8	0.3	0.3	-179.29	-90.0	-1.1	90.0	89.4	0.63	142.630	
200.0	200.0	200.0	200.0	0.3	0.3	-179.29	-90.0	-1.1	90.0	89.3	0.65	139.499	
295.3	295.3	295.3	295.3	0.5	0.5	-179.29	-90.0	-1.1	90.0	88.9	1.07	83.837	
300.0	300.0	300.0	300.0	0.5	0.5	-179.29	-90.0	-1.1	90.0	88.9	1.09	82.210	
393.7	393.7	393.7	393.7	0.8	0.8	-179.29	-90.0	-1.1	90.0	88.5	1.52	59.366	
400.0	400.0	400.0	400.0	0.8	0.8	-179.29	-90.0	-1.1	90.0	88.4	1.54	58.277	
492.1	492.1	492.1	492.1	1.0	1.0	-179.29	-90.0	-1.1	90.0	88.0	1.96	45.953	
500.0	500.0	500.0	500.0	1.0	1.0	-179.29	-90.0	-1.1	90.0	88.0	1.99	45.137	
590.5	590.5	590.5	590.5	1.2	1.2	-179.29	-90.0	-1.1	90.0	87.6	2.40	37.484	
600.0	600.0	600.0	600.0	1.2	1.2	-179.29	-90.0	-1.1	90.0	87.5	2.44	36.832	
689.0	689.0	689.0	689.0	1.4	1.4	-179.29	-90.0	-1.1	90.0	87.1	2.84	31.650	
700.0	700.0	700.0	700.0	1.4	1.4	-179.29	-90.0	-1.1	90.0	87.1	2.89	31.108	
787.4	787.4	787.4	787.4	1.6	1.6	-179.29	-90.0	-1.1	90.0	86.7	3.29	27.388	
800.0	800.0	800.0	800.0	1.7	1.7	-179.29	-90.0	-1.1	90.0	86.6	3.34	26.924	
885.8	885.8	885.8	885.8	1.9	1.9	-179.29	-90.0	-1.1	90.0	86.3	3.73	24.138	
900.0	900.0	900.0	900.0	1.9	1.9	-179.29	-90.0	-1.1	90.0	86.2	3.79	23.732	
984.2	984.2	984.2	984.2	2.1	2.1	-179.29	-90.0	-1.1	90.0	85.8	4.17	21.577	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.29	-90.0	-1.1	90.0	85.7	4.24	21.217	
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	19.184 CC, ES	
1,181.1	1,181.1	1,179.2	1,179.2	2.5	2.5	-179.75	-90.8	-0.4	90.8	85.8	5.03	18.051	
1,200.0	1,200.0	1,197.7	1,197.7	2.6	2.5	-179.99	-91.2	0.0	91.3	86.2	5.11	17.856	
1,279.5	1,279.5	1,275.2	1,275.1	2.7	2.7	178.54	-94.0	2.4	94.2	88.7	5.43	17.331	
1,300.0	1,300.0	1,295.1	1,295.0	2.8	2.7	178.04	-95.0	3.2	95.2	89.7	5.52	17.258	
1,377.9	1,377.9	1,370.7	1,370.3	3.0	2.9	134.97	-99.6	7.3	100.9	95.1	5.84	17.284	
1,400.0	1,400.0	1,392.1	1,391.6	3.0	2.9	134.49	-101.2	8.6	103.1	97.2	5.93	17.392	
1,476.4	1,476.3	1,465.6	1,464.6	3.2	3.1	133.07	-107.6	14.2	112.8	106.5	6.25	18.035	
1,500.0	1,499.8	1,488.2	1,487.0	3.2	3.1	132.70	-109.8	16.1	116.3	110.0	6.35	18.318	
1,574.8	1,574.4	1,559.3	1,557.3	3.4	3.3	131.73	-117.7	23.0	129.5	122.9	6.68	19.405	
1,600.0	1,599.5	1,583.0	1,580.7	3.5	3.4	131.48	-120.6	25.5	134.6	127.8	6.78	19.843	
1,673.2	1,672.2	1,651.5	1,648.1	3.6	3.6	130.88	-129.9	33.6	151.2	144.0	7.12	21.245	
1,700.0	1,698.7	1,676.3	1,672.4	3.7	3.6	130.71	-133.6	36.8	157.9	150.6	7.24	21.817	
1,771.6	1,769.5	1,744.2	1,738.9	3.9	3.9	130.42	-144.2	46.0	177.2	169.6	7.58	23.390	
1,800.0	1,797.5	1,771.4	1,765.5	4.0	3.9	130.41	-148.4	49.7	185.2	177.5	7.71	24.016	
1,870.1	1,866.3	1,838.4	1,831.0	4.2	4.2	130.61	-158.9	58.8	205.7	197.6	8.06	25.521	
1,899.9	1,895.6	1,866.8	1,858.8	4.3	4.3	130.77	-163.4	62.7	214.8	206.6	8.21	26.165	
1,968.5	1,962.6	1,932.0	1,922.6	4.5	4.5	131.44	-173.6	71.6	235.9	227.3	8.58	27.498	
2,000.0	1,993.4	1,962.0	1,951.9	4.6	4.6	131.71	-178.3	75.7	245.5	236.8	8.75	28.068	
2,066.9	2,058.9	2,025.6	2,014.1	4.8	4.9	132.22	-188.3	84.4	266.1	257.0	9.12	29.167	
2,100.0	2,091.3	2,057.0	2,044.9	4.9	5.0	132.44	-193.3	88.7	276.3	267.0	9.31	29.676	
2,165.3	2,155.2	2,119.2	2,105.6	5.2	5.2	132.84	-203.0	97.1	296.5	286.8	9.69	30.608	
2,200.0	2,189.1	2,152.1	2,137.9	5.3	5.4	133.03	-208.2	101.6	307.2	297.3	9.89	31.062	
2,263.8	2,251.5	2,212.8	2,197.2	5.5	5.6	133.34	-217.7	109.9	326.8	316.6	10.26	31.839	
2,300.0	2,286.9	2,247.2	2,230.9	5.7	5.8	133.51	-223.1	114.6	338.0	327.5	10.48	32.248	
2,362.2	2,347.7	2,306.4	2,288.7	5.9	6.0	133.76	-232.4	122.7	357.2	346.3	10.86	32.902	
2,400.0	2,384.7	2,342.3	2,323.9	6.0	6.2	133.91	-238.0	127.6	368.9	357.8	11.09	33.272	
2,460.6	2,444.0	2,400.0	2,380.3	6.3	6.4	134.12	-247.1	135.4	387.6	376.1	11.46	33.826	
2,500.0	2,482.5	2,437.4	2,416.9	6.4	6.6	134.24	-253.0	140.6	399.7	388.0	11.70	34.161	
2,559.0	2,540.3	2,493.6	2,471.8	6.7	6.8	134.42	-261.8	148.2	418.0	405.9	12.07	34.632	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,532.5	2,509.9	6.8	7.0	134.53	-267.9	153.5	430.6	418.3	12.33	34.938	
2,657.5	2,636.5	2,587.1	2,563.4	7.1	7.2	134.68	-276.5	161.0	448.4	435.7	12.69	35.340	
2,700.0	2,678.1	2,627.6	2,602.9	7.2	7.4	134.78	-282.8	166.5	461.5	448.6	12.96	35.620	
2,755.9	2,732.8	2,680.7	2,654.9	7.5	7.6	134.91	-291.2	173.8	478.8	465.5	13.31	35.965	
2,800.0	2,776.0	2,722.7	2,695.9	7.7	7.8	135.00	-297.7	179.5	492.4	478.8	13.59	36.223	
2,854.3	2,829.1	2,774.3	2,746.5	7.9	8.0	135.11	-305.8	186.5	509.2	495.3	13.94	36.520	
2,900.0	2,873.8	2,817.8	2,788.9	8.1	8.2	135.20	-312.7	192.4	523.3	509.1	14.24	36.758	
2,952.7	2,925.4	2,867.9	2,838.0	8.3	8.4	135.29	-320.5	199.3	539.6	525.1	14.58	37.015	
3,000.0	2,971.6	2,912.8	2,882.0	8.5	8.6	135.37	-327.6	205.4	554.3	539.4	14.89	37.234	
3,051.2	3,021.6	2,961.5	2,929.6	8.7	8.9	135.45	-335.2	212.1	570.1	554.9	15.22	37.458	
3,100.0	3,069.4	3,007.9	2,975.0	8.9	9.1	135.52	-342.5	218.4	585.2	569.6	15.54	37.662	
3,149.6	3,117.9	3,055.1	3,021.1	9.1	9.3	135.59	-349.9	224.8	600.5	584.6	15.86	37.856	
3,200.0	3,167.2	3,103.0	3,068.0	9.3	9.5	135.66	-357.4	231.4	616.1	599.9	16.19	38.046	
3,248.0	3,214.2	3,148.7	3,112.6	9.5	9.7	135.72	-364.6	237.6	630.9	614.4	16.51	38.216	
3,300.0	3,265.0	3,198.1	3,161.0	9.8	9.9	135.78	-372.4	244.3	647.0	630.2	16.85	38.393	
3,346.4	3,310.5	3,242.3	3,204.2	10.0	10.1	135.84	-379.3	250.4	661.4	644.2	17.16	38.542	
3,400.0	3,362.9	3,293.2	3,254.0	10.2	10.3	135.90	-387.3	257.3	678.0	660.4	17.51	38.708	
3,444.9	3,406.7	3,337.4	3,297.3	10.4	10.5	135.95	-394.2	263.3	691.8	674.0	17.81	38.835	
3,473.0	3,434.2	3,370.4	3,329.6	10.5	10.7	136.00	-399.2	267.6	700.3	682.3	18.01	38.886	
3,500.0	3,460.7	3,402.3	3,360.9	10.6	10.8	136.17	-403.7	271.6	708.2	690.0	18.20	38.905	
3,543.3	3,503.2	3,453.8	3,411.6	10.7	10.9	136.43	-410.5	277.5	720.0	701.5	18.47	38.979	
3,600.0	3,559.0	3,522.1	3,479.1	10.9	11.1	136.75	-418.4	284.3	733.8	715.0	18.82	38.997	
3,641.7	3,600.2	3,572.9	3,529.5	11.0	11.3	136.97	-423.5	288.8	742.9	723.8	19.06	38.979	
3,700.0	3,657.9	3,644.5	3,600.6	11.2	11.5	137.25	-429.5	294.0	753.9	734.5	19.39	38.887	
3,740.1	3,697.8	3,694.2	3,650.1	11.3	11.6	137.44	-432.9	297.0	760.3	740.7	19.60	38.793	
3,800.0	3,757.3	3,768.7	3,724.4	11.4	11.7	137.70	-436.8	300.3	768.1	748.2	19.90	38.600	
3,838.6	3,795.7	3,817.0	3,772.6	11.5	11.8	137.85	-438.5	301.8	772.0	751.9	20.08	38.450	
3,900.0	3,857.0	3,894.1	3,849.7	11.7	11.9	138.09	-440.0	303.1	776.5	756.1	20.35	38.153	
3,937.0	3,893.9	3,938.3	3,893.9	11.7	12.0	138.22	-440.2	303.3	778.1	757.6	20.50	37.961	
4,000.0	3,956.9	4,001.3	3,956.9	11.8	12.1	138.35	-440.2	303.3	779.8	759.1	20.72	37.635	
4,035.4	3,992.3	4,036.7	3,992.3	11.9	12.1	138.39	-440.2	303.3	780.3	759.5	20.84	37.448	
4,072.9	4,029.8	4,074.2	4,029.8	11.9	12.2	179.60	-440.2	303.3	780.5	758.8	21.69	35.985	
4,100.0	4,056.9	4,101.3	4,056.9	12.0	12.2	179.60	-440.2	303.3	780.5	758.7	21.78	35.844	
4,133.8	4,090.7	4,135.1	4,090.7	12.0	12.3	179.60	-440.2	303.3	780.5	758.6	21.89	35.660	
4,200.0	4,156.9	4,201.3	4,156.9	12.1	12.4	179.60	-440.2	303.3	780.5	758.4	22.11	35.305	
4,232.3	4,189.2	4,233.5	4,189.2	12.2	12.4	179.60	-440.2	303.3	780.5	758.3	22.22	35.133	
4,300.0	4,256.9	4,301.3	4,256.9	12.3	12.5	179.60	-440.2	303.3	780.5	758.1	22.44	34.776	
4,330.7	4,287.6	4,332.0	4,287.6	12.4	12.6	179.60	-440.2	303.3	780.5	758.0	22.55	34.615	
4,400.0	4,356.9	4,401.3	4,356.9	12.5	12.7	179.60	-440.2	303.3	780.5	757.7	22.78	34.257	
4,429.1	4,386.0	4,430.4	4,386.0	12.5	12.7	179.60	-440.2	303.3	780.5	757.6	22.88	34.107	
4,500.0	4,456.9	4,501.3	4,456.9	12.6	12.8	179.60	-440.2	303.3	780.5	757.4	23.13	33.748	
4,527.5	4,484.4	4,528.8	4,484.4	12.7	12.9	179.60	-440.2	303.3	780.5	757.3	23.22	33.609	
4,600.0	4,556.9	4,601.3	4,556.9	12.8	13.0	179.60	-440.2	303.3	780.5	757.0	23.47	33.249	
4,626.0	4,582.9	4,627.2	4,582.9	12.9	13.0	179.60	-440.2	303.3	780.5	756.9	23.57	33.120	
4,700.0	4,656.9	4,701.3	4,656.9	13.0	13.1	179.60	-440.2	303.3	780.5	756.7	23.83	32.759	
4,724.4	4,681.3	4,725.7	4,681.3	13.0	13.2	179.60	-440.2	303.3	780.5	756.6	23.91	32.641	
4,800.0	4,756.9	4,801.3	4,756.9	13.1	13.3	179.60	-440.2	303.3	780.5	756.3	24.18	32.279	
4,822.8	4,779.7	4,824.1	4,779.7	13.2	13.3	179.60	-440.2	303.3	780.5	756.2	24.26	32.171	
4,900.0	4,856.9	4,901.3	4,856.9	13.3	13.4	179.60	-440.2	303.3	780.5	756.0	24.54	31.810	
4,921.2	4,878.1	4,922.5	4,878.1	13.4	13.5	179.60	-440.2	303.3	780.5	755.9	24.61	31.711	
5,000.0	4,956.9	5,001.3	4,956.9	13.5	13.6	179.60	-440.2	303.3	780.5	755.6	24.90	31.349	
5,019.7	4,976.6	5,020.9	4,976.6	13.5	13.6	179.60	-440.2	303.3	780.5	755.5	24.97	31.260	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,101.3	5,056.9	13.7	13.8	179.60	-440.2	303.3	780.5	755.2	25.26	30.899	
5,118.1	5,075.0	5,119.4	5,075.0	13.7	13.8	179.60	-440.2	303.3	780.5	755.2	25.33	30.818	
5,200.0	5,156.9	5,201.3	5,156.9	13.8	13.9	179.60	-440.2	303.3	780.5	754.9	25.63	30.458	
5,216.5	5,173.4	5,217.8	5,173.4	13.9	14.0	179.60	-440.2	303.3	780.5	754.8	25.69	30.386	
5,300.0	5,256.9	5,301.3	5,256.9	14.0	14.1	179.60	-440.2	303.3	780.5	754.5	25.99	30.026	
5,314.9	5,271.8	5,316.2	5,271.8	14.1	14.1	179.60	-440.2	303.3	780.5	754.5	26.05	29.962	
5,400.0	5,356.9	5,401.3	5,356.9	14.2	14.3	179.60	-440.2	303.3	780.5	754.1	26.36	29.604	
5,413.4	5,370.3	5,414.6	5,370.3	14.2	14.3	179.60	-440.2	303.3	780.5	754.1	26.41	29.548	
5,500.0	5,456.9	5,501.3	5,456.9	14.4	14.4	179.60	-440.2	303.3	780.5	753.8	26.74	29.191	
5,511.8	5,468.7	5,513.1	5,468.7	14.4	14.5	179.60	-440.2	303.3	780.5	753.7	26.78	29.142	
5,600.0	5,556.9	5,601.3	5,556.9	14.6	14.6	179.60	-440.2	303.3	780.5	753.4	27.11	28.786	
5,610.2	5,567.1	5,611.5	5,567.1	14.6	14.6	179.60	-440.2	303.3	780.5	753.3	27.15	28.745	
5,700.0	5,656.9	5,701.3	5,656.9	14.7	14.8	179.60	-440.2	303.3	780.5	753.0	27.49	28.391	
5,708.6	5,665.5	5,709.9	5,665.5	14.8	14.8	179.60	-440.2	303.3	780.5	753.0	27.52	28.357	
5,800.0	5,756.9	5,801.3	5,756.9	14.9	15.0	179.60	-440.2	303.3	780.5	752.6	27.87	28.004	
5,807.1	5,764.0	5,808.3	5,764.0	14.9	15.0	179.60	-440.2	303.3	780.5	752.6	27.90	27.977	
5,900.0	5,856.9	5,901.3	5,856.9	15.1	15.1	179.60	-440.2	303.3	780.5	752.2	28.25	27.625	
5,905.5	5,862.4	5,906.8	5,862.4	15.1	15.1	179.60	-440.2	303.3	780.5	752.2	28.27	27.605	
5,971.9	5,928.8	5,973.2	5,928.8	15.3	15.3	179.60	-440.2	303.3	780.5	752.0	28.53	27.358	
6,000.0	5,956.9	6,001.2	5,956.9	15.3	15.3	-90.44	-440.2	303.3	780.5	752.3	28.22	27.662	
6,003.9	5,960.8	6,005.2	5,960.8	15.3	15.3	-90.45	-440.2	303.3	780.5	752.3	28.23	27.649	
6,050.0	6,006.7	6,051.2	6,006.8	15.4	15.4	-90.71	-440.2	303.2	780.5	752.2	28.38	27.504	
6,100.0	6,056.2	6,101.8	6,057.4	15.4	15.5	-91.06	-440.2	300.9	780.6	752.1	28.51	27.385	
6,102.3	6,058.5	6,104.2	6,059.8	15.4	15.5	-91.08	-440.2	300.7	780.6	752.1	28.51	27.381	
6,150.0	6,105.1	6,152.8	6,108.0	15.4	15.5	-91.41	-440.2	294.9	780.7	752.1	28.60	27.300	
6,200.0	6,153.0	6,204.1	6,158.4	15.5	15.5	-91.76	-440.2	285.3	780.9	752.2	28.66	27.244	
6,200.8	6,153.8	6,204.9	6,159.2	15.5	15.5	-91.77	-440.2	285.1	780.9	752.2	28.66	27.243	
6,250.0	6,199.9	6,255.8	6,208.3	15.5	15.6	-92.10	-440.2	271.9	781.0	752.3	28.71	27.207	
6,299.2	6,244.8	6,307.0	6,256.7	15.5	15.6	-92.42	-440.2	255.2	781.2	752.4	28.74	27.181	
6,300.0	6,245.5	6,307.9	6,257.5	15.5	15.6	-92.43	-440.2	254.9	781.2	752.4	28.74	27.181	
6,350.0	6,289.6	6,360.3	6,305.6	15.5	15.6	-92.74	-440.2	234.2	781.4	752.6	28.78	27.150	
6,397.6	6,329.9	6,410.5	6,350.2	15.4	15.6	-93.03	-440.2	211.1	781.6	752.7	28.84	27.102	
6,400.0	6,331.8	6,413.0	6,352.4	15.4	15.6	-93.05	-440.2	209.9	781.6	752.8	28.84	27.099	
6,450.0	6,372.2	6,466.1	6,397.6	15.4	15.6	-93.34	-440.2	182.0	781.8	752.9	28.95	27.008	
6,496.0	6,407.4	6,515.3	6,437.5	15.4	15.6	-93.59	-440.2	153.2	782.0	752.9	29.10	26.870	
6,500.0	6,410.3	6,519.5	6,440.8	15.4	15.6	-93.61	-440.2	150.6	782.0	752.9	29.12	26.857	
6,550.0	6,446.1	6,573.2	6,481.8	15.4	15.6	-93.87	-440.2	115.9	782.3	752.9	29.38	26.622	
6,594.5	6,475.9	6,621.3	6,516.1	15.4	15.6	-94.08	-440.2	82.4	782.5	752.7	29.72	26.326	
6,600.0	6,479.4	6,627.2	6,520.2	15.4	15.6	-94.10	-440.2	78.0	782.5	752.7	29.77	26.286	
6,650.0	6,510.0	6,681.5	6,555.9	15.5	15.6	-94.32	-440.2	37.2	782.7	752.4	30.30	25.835	
6,692.9	6,534.0	6,728.3	6,584.1	15.7	15.7	-94.48	-440.2	-0.2	782.9	752.0	30.89	25.346	
6,700.0	6,537.8	6,736.0	6,588.5	15.7	15.7	-94.51	-440.2	-6.5	782.9	751.9	30.99	25.263	
6,750.0	6,562.6	6,790.8	6,617.8	16.2	15.9	-94.68	-440.2	-52.7	783.1	751.2	31.87	24.573	
6,791.3	6,580.8	6,836.2	6,639.4	16.6	16.3	-94.80	-440.2	-92.7	783.2	750.5	32.75	23.916	
6,800.0	6,584.3	6,845.7	6,643.6	16.7	16.4	-94.82	-440.2	-101.2	783.3	750.3	32.94	23.781	
6,850.0	6,602.9	6,900.8	6,665.7	17.3	17.0	-94.94	-440.2	-151.7	783.4	749.2	34.20	22.906	
6,889.7	6,615.2	6,944.7	6,680.4	17.9	17.6	-95.01	-440.2	-193.1	783.5	748.1	35.35	22.163	
6,900.0	6,618.1	6,956.1	6,683.8	18.0	17.7	-95.03	-440.2	-203.9	783.5	747.8	35.66	21.974	
6,950.0	6,630.0	7,011.4	6,697.9	18.8	18.6	-95.09	-440.2	-257.4	783.6	746.3	37.29	21.015	
6,988.2	6,636.8	7,053.7	6,705.9	19.5	19.3	-95.13	-440.2	-298.9	783.6	745.0	38.63	20.283	
7,000.0	6,638.5	7,066.8	6,707.8	19.7	19.5	-95.13	-440.2	-311.9	783.6	744.6	39.07	20.059	
7,050.0	6,643.5	7,122.2	6,713.5	20.6	20.6	-95.14	-440.2	-367.0	783.6	742.7	40.97	19.125	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	7,162.8	6,715.0	21.3	21.3	-95.13	-440.2	-407.6	783.6	741.2	42.44	18.466		
7,097.8	6,645.0	7,174.7	6,715.0	21.5	21.6	-95.12	-440.2	-419.4	783.6	740.7	42.88	18.275		
7,100.0	6,645.0	7,176.9	6,715.0	21.6	21.6	-95.12	-440.2	-421.6	783.6	740.6	42.96	18.239		
7,185.0	6,644.9	7,261.9	6,714.8	23.3	23.4	-95.12	-440.2	-506.6	783.6	737.2	46.43	16.879		
7,200.0	6,644.9	7,276.9	6,714.8	23.6	23.7	-95.12	-440.2	-521.6	783.6	736.6	47.04	16.659		
7,283.4	6,644.8	7,360.3	6,714.6	25.4	25.5	-95.11	-440.2	-605.1	783.6	732.9	50.67	15.466		
7,300.0	6,644.7	7,376.9	6,714.6	25.8	25.9	-95.11	-440.2	-621.6	783.6	732.2	51.39	15.248		
7,381.9	6,644.6	7,458.7	6,714.4	27.7	27.8	-95.11	-440.2	-703.5	783.6	728.5	55.13	14.213		
7,400.0	6,644.6	7,476.9	6,714.4	28.1	28.2	-95.11	-440.2	-721.6	783.6	727.6	55.97	14.001		
7,480.3	6,644.5	7,557.2	6,714.2	30.0	30.1	-95.10	-440.2	-801.9	783.6	723.8	59.78	13.109		
7,500.0	6,644.5	7,576.9	6,714.2	30.5	30.6	-95.10	-440.2	-821.6	783.6	722.9	60.71	12.906		
7,578.7	6,644.4	7,655.6	6,714.1	32.4	32.5	-95.10	-440.2	-900.3	783.6	719.0	64.56	12.138		
7,600.0	6,644.4	7,676.9	6,714.0	32.9	33.0	-95.10	-440.2	-921.6	783.6	718.0	65.60	11.945		
7,677.1	6,644.3	7,754.0	6,713.9	34.8	35.0	-95.10	-440.2	-998.8	783.6	714.1	69.45	11.283		
7,700.0	6,644.2	7,776.9	6,713.8	35.4	35.6	-95.09	-440.2	-1,021.6	783.6	713.0	70.59	11.101		
7,775.6	6,644.1	7,852.4	6,713.7	37.3	37.5	-95.09	-440.2	-1,097.2	783.6	709.1	74.42	10.529		
7,800.0	6,644.1	7,876.9	6,713.6	38.0	38.1	-95.09	-440.2	-1,121.6	783.6	707.9	75.66	10.356		
7,874.0	6,644.0	7,950.9	6,713.5	39.9	40.0	-95.09	-440.2	-1,195.6	783.6	704.1	79.47	9.860		
7,900.0	6,644.0	7,976.9	6,713.4	40.5	40.7	-95.08	-440.2	-1,221.6	783.6	702.8	80.81	9.696		
7,972.4	6,643.9	8,049.3	6,713.3	42.4	42.6	-95.08	-440.2	-1,294.0	783.6	699.0	84.58	9.264		
8,000.0	6,643.9	8,076.9	6,713.2	43.1	43.3	-95.08	-440.2	-1,321.6	783.6	697.5	86.01	9.110		
8,070.8	6,643.8	8,147.7	6,713.1	45.0	45.2	-95.08	-440.2	-1,392.5	783.6	693.8	89.73	8.732		
8,100.0	6,643.7	8,176.9	6,713.0	45.8	45.9	-95.07	-440.2	-1,421.6	783.6	692.3	91.26	8.585		
8,169.3	6,643.7	8,246.1	6,712.9	47.6	47.8	-95.07	-440.2	-1,490.9	783.5	688.6	94.93	8.254		
8,200.0	6,643.6	8,276.9	6,712.8	48.4	48.6	-95.07	-440.2	-1,521.6	783.5	687.0	96.56	8.115		
8,267.7	6,643.5	8,344.6	6,712.7	50.2	50.4	-95.07	-440.2	-1,589.3	783.5	683.4	100.16	7.823		
8,300.0	6,643.5	8,376.9	6,712.7	51.1	51.3	-95.06	-440.2	-1,621.6	783.5	681.7	101.88	7.691		
8,366.1	6,643.4	8,443.0	6,712.5	52.9	53.0	-95.06	-440.2	-1,687.7	783.5	678.1	105.42	7.433		
8,400.0	6,643.4	8,476.9	6,712.5	53.8	53.9	-95.06	-440.2	-1,721.6	783.5	676.3	107.23	7.307		
8,464.5	6,643.3	8,541.4	6,712.3	55.5	55.7	-95.06	-440.2	-1,786.2	783.5	672.8	110.70	7.078		
8,500.0	6,643.2	8,576.9	6,712.3	56.5	56.6	-95.05	-440.2	-1,821.6	783.5	670.9	112.61	6.958		
8,563.0	6,643.2	8,639.8	6,712.1	58.2	58.3	-95.05	-440.2	-1,884.6	783.5	667.5	116.01	6.754		
8,600.0	6,643.1	8,676.9	6,712.1	59.2	59.3	-95.05	-440.2	-1,921.6	783.5	665.5	118.01	6.640		
8,661.4	6,643.0	8,738.3	6,712.0	60.8	61.0	-95.05	-440.2	-1,983.0	783.5	662.2	121.33	6.458		
8,700.0	6,643.0	8,776.9	6,711.9	61.9	62.1	-95.04	-440.2	-2,021.6	783.5	660.1	123.42	6.348		
8,759.8	6,642.9	8,836.7	6,711.8	63.5	63.7	-95.04	-440.2	-2,081.4	783.5	656.8	126.67	6.185		
8,800.0	6,642.9	8,876.9	6,711.7	64.6	64.8	-95.04	-440.2	-2,121.6	783.5	654.7	128.86	6.080		
8,858.2	6,642.8	8,935.1	6,711.6	66.2	66.4	-95.04	-440.2	-2,179.9	783.5	651.5	132.03	5.934		
8,900.0	6,642.7	8,976.9	6,711.5	67.3	67.5	-95.03	-440.2	-2,221.6	783.5	649.2	134.30	5.834		
8,956.7	6,642.7	9,033.5	6,711.4	68.9	69.1	-95.03	-440.2	-2,278.3	783.5	646.1	137.40	5.702		
9,000.0	6,642.6	9,076.9	6,711.3	70.1	70.3	-95.03	-440.2	-2,321.6	783.5	643.7	139.76	5.606		
9,055.1	6,642.5	9,132.0	6,711.2	71.6	71.8	-95.03	-440.2	-2,376.7	783.5	640.7	142.78	5.488		
9,100.0	6,642.5	9,176.9	6,711.1	72.8	73.0	-95.02	-440.2	-2,421.6	783.5	638.3	145.23	5.395		
9,153.5	6,642.4	9,230.4	6,711.0	74.3	74.5	-95.02	-440.2	-2,475.1	783.5	635.3	148.17	5.288		
9,200.0	6,642.4	9,276.9	6,710.9	75.6	75.8	-95.02	-440.2	-2,521.6	783.5	632.8	150.71	5.199		
9,251.9	6,642.3	9,328.8	6,710.8	77.0	77.2	-95.02	-440.2	-2,573.6	783.5	629.9	153.56	5.102		
9,300.0	6,642.2	9,376.9	6,710.7	78.3	78.5	-95.01	-440.2	-2,621.6	783.5	627.3	156.20	5.016		
9,350.4	6,642.2	9,427.2	6,710.6	79.7	79.9	-95.01	-440.2	-2,672.0	783.5	624.5	158.97	4.928		
9,400.0	6,642.1	9,476.9	6,710.5	81.1	81.3	-95.01	-440.2	-2,721.6	783.5	621.8	161.70	4.845		
9,448.8	6,642.0	9,525.7	6,710.4	82.4	82.6	-95.01	-440.2	-2,770.4	783.5	619.1	164.38	4.766		
9,500.0	6,642.0	9,576.9	6,710.3	83.8	84.0	-95.01	-440.2	-2,821.6	783.5	616.3	167.20	4.686		
9,547.2	6,641.9	9,624.1	6,710.2	85.1	85.3	-95.00	-440.2	-2,868.8	783.5	613.7	169.80	4.614		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,600.0	6,641.9	9,676.9	6,710.1	86.6	86.8	-95.00	-440.2	-2,921.6	783.5	610.7	172.71	4.536	
9,645.6	6,641.8	9,722.5	6,710.1	87.9	88.1	-95.00	-440.2	-2,967.3	783.5	608.2	175.23	4.471	
9,700.0	6,641.7	9,776.9	6,710.0	89.4	89.6	-95.00	-440.2	-3,021.6	783.5	605.2	178.23	4.396	
9,744.1	6,641.7	9,820.9	6,709.9	90.6	90.8	-94.99	-440.2	-3,065.7	783.4	602.8	180.66	4.337	
9,800.0	6,641.6	9,876.9	6,709.8	92.1	92.3	-94.99	-440.2	-3,121.6	783.4	599.7	183.75	4.264	
9,842.5	6,641.6	9,919.4	6,709.7	93.3	93.5	-94.99	-440.2	-3,164.1	783.4	597.3	186.10	4.210	
9,900.0	6,641.5	9,976.9	6,709.6	94.9	95.1	-94.99	-440.2	-3,221.6	783.4	594.2	189.28	4.139	
9,940.9	6,641.4	10,017.8	6,709.5	96.0	96.2	-94.98	-440.2	-3,262.5	783.4	591.9	191.54	4.090	
10,000.0	6,641.4	10,076.9	6,709.4	97.7	97.9	-94.98	-440.2	-3,321.6	783.4	588.6	194.81	4.022	
10,039.3	6,641.3	10,116.2	6,709.3	98.8	99.0	-94.98	-440.2	-3,361.0	783.4	586.4	196.99	3.977	
10,100.0	6,641.2	10,176.9	6,709.2	100.4	100.6	-94.98	-440.2	-3,421.6	783.4	583.1	200.35	3.910	
10,137.8	6,641.2	10,214.6	6,709.1	101.5	101.7	-94.97	-440.2	-3,459.4	783.4	581.0	202.44	3.870	
10,200.0	6,641.1	10,276.9	6,709.0	103.2	103.4	-94.97	-440.2	-3,521.6	783.4	577.5	205.88	3.805	
10,236.2	6,641.1	10,313.1	6,708.9	104.2	104.4	-94.97	-440.2	-3,557.8	783.4	575.5	207.89	3.768	
10,300.0	6,641.0	10,376.9	6,708.8	106.0	106.2	-94.97	-440.2	-3,621.6	783.4	572.0	211.43	3.705	
10,334.6	6,640.9	10,411.5	6,708.7	107.0	107.2	-94.97	-440.2	-3,656.2	783.4	570.1	213.35	3.672	
10,400.0	6,640.9	10,476.9	6,708.6	108.8	109.0	-94.96	-440.2	-3,721.6	783.4	566.4	216.97	3.611	
10,433.0	6,640.8	10,509.9	6,708.6	109.7	109.9	-94.96	-440.2	-3,754.7	783.4	564.6	218.81	3.580	
10,500.0	6,640.7	10,576.9	6,708.4	111.6	111.8	-94.96	-440.2	-3,821.6	783.4	560.9	222.52	3.521	
10,531.5	6,640.7	10,608.3	6,708.4	112.4	112.6	-94.96	-440.2	-3,853.1	783.4	559.1	224.27	3.493	
10,600.0	6,640.6	10,676.9	6,708.2	114.3	114.6	-94.95	-440.2	-3,921.6	783.4	555.3	228.07	3.435	
10,629.9	6,640.6	10,706.8	6,708.2	115.2	115.4	-94.95	-440.2	-3,951.5	783.4	553.7	229.73	3.410	
10,700.0	6,640.5	10,776.9	6,708.0	117.1	117.3	-94.95	-440.2	-4,021.6	783.4	549.8	233.63	3.353	
10,728.3	6,640.4	10,805.2	6,708.0	117.9	118.1	-94.95	-440.2	-4,049.9	783.4	548.2	235.20	3.331	
10,800.0	6,640.4	10,876.9	6,707.9	119.9	120.1	-94.94	-440.2	-4,121.6	783.4	544.2	239.19	3.275	
10,826.7	6,640.3	10,903.6	6,707.8	120.7	120.9	-94.94	-440.2	-4,148.4	783.4	542.7	240.67	3.255	
10,900.0	6,640.2	10,976.9	6,707.7	122.7	122.9	-94.94	-440.2	-4,221.6	783.4	538.6	244.74	3.201	
10,925.2	6,640.2	11,002.0	6,707.6	123.4	123.6	-94.94	-440.2	-4,246.8	783.4	537.2	246.14	3.183	
11,000.0	6,640.1	11,076.9	6,707.5	125.5	125.7	-94.93	-440.2	-4,321.6	783.4	533.1	250.31	3.130	
11,023.6	6,640.1	11,100.5	6,707.4	126.1	126.4	-94.93	-440.2	-4,345.2	783.4	531.8	251.62	3.113	
11,100.0	6,640.0	11,176.9	6,707.3	128.3	128.5	-94.93	-440.2	-4,421.6	783.4	527.5	255.87	3.062	
11,122.0	6,639.9	11,198.9	6,707.2	128.9	129.1	-94.93	-440.2	-4,443.6	783.4	526.3	257.09	3.047	
11,200.0	6,639.8	11,276.9	6,707.1	131.1	131.3	-94.92	-440.2	-4,521.6	783.4	521.9	261.43	2.996	
11,220.4	6,639.8	11,297.3	6,707.1	131.6	131.8	-94.92	-440.2	-4,542.1	783.4	520.8	262.57	2.983	
11,300.0	6,639.7	11,376.9	6,706.9	133.9	134.1	-94.92	-440.2	-4,621.6	783.4	516.4	267.00	2.934	
11,318.9	6,639.7	11,395.7	6,706.9	134.4	134.6	-94.92	-440.2	-4,640.5	783.4	515.3	268.05	2.922	
11,400.0	6,639.6	11,476.9	6,706.7	136.7	136.9	-94.92	-440.2	-4,721.6	783.3	510.8	272.57	2.874	
11,417.3	6,639.6	11,494.2	6,706.7	137.1	137.3	-94.91	-440.2	-4,738.9	783.3	509.8	273.53	2.864	
11,500.0	6,639.5	11,576.9	6,706.5	139.4	139.7	-94.91	-440.2	-4,821.6	783.3	505.2	278.14	2.816	
11,515.7	6,639.5	11,592.6	6,706.5	139.9	140.1	-94.91	-440.2	-4,837.3	783.3	504.3	279.01	2.808	
11,600.0	6,639.3	11,676.9	6,706.3	142.2	142.4	-94.91	-440.2	-4,921.6	783.3	499.6	283.71	2.761	
11,614.1	6,639.3	11,691.0	6,706.3	142.6	142.8	-94.91	-440.2	-4,935.8	783.3	498.8	284.50	2.753	
11,700.0	6,639.2	11,776.9	6,706.1	145.0	145.2	-94.90	-440.2	-5,021.6	783.3	494.0	289.28	2.708	
11,712.6	6,639.2	11,789.4	6,706.1	145.4	145.6	-94.90	-440.2	-5,034.2	783.3	493.3	289.98	2.701	
11,800.0	6,639.1	11,876.9	6,706.0	147.8	148.0	-94.90	-440.2	-5,121.6	783.3	488.5	294.86	2.657	
11,811.0	6,639.1	11,887.9	6,705.9	148.1	148.3	-94.90	-440.2	-5,132.6	783.3	487.9	295.47	2.651	
11,900.0	6,639.0	11,976.9	6,705.8	150.6	150.8	-94.89	-440.2	-5,221.6	783.3	482.9	300.43	2.607	
11,909.4	6,639.0	11,986.3	6,705.7	150.9	151.1	-94.89	-440.2	-5,231.0	783.3	482.4	300.96	2.603	
12,000.0	6,638.8	12,076.9	6,705.6	153.4	153.6	-94.89	-440.2	-5,321.6	783.3	477.3	306.01	2.560	
12,007.8	6,638.8	12,084.7	6,705.6	153.6	153.8	-94.89	-440.2	-5,329.5	783.3	476.9	306.45	2.556	
12,100.0	6,638.7	12,176.9	6,705.4	156.2	156.4	-94.88	-440.2	-5,421.6	783.3	471.7	311.59	2.514	
12,106.3	6,638.7	12,183.1	6,705.4	156.4	156.6	-94.88	-440.2	-5,427.9	783.3	471.4	311.94	2.511	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,638.6	12,276.9	6,705.2	159.0	159.2	-94.88	-440.2	-5,521.6	783.3	466.1	317.17	2.470		
12,204.7	6,638.6	12,281.6	6,705.2	159.1	159.4	-94.88	-440.2	-5,526.3	783.3	465.9	317.43	2.468		
12,300.0	6,638.5	12,376.9	6,705.0	161.8	162.0	-94.87	-440.2	-5,621.6	783.3	460.5	322.75	2.427		
12,303.1	6,638.5	12,380.0	6,705.0	161.9	162.1	-94.87	-440.2	-5,624.7	783.3	460.4	322.92	2.426		
12,400.0	6,638.3	12,476.9	6,704.8	164.6	164.8	-94.87	-440.2	-5,721.6	783.3	455.0	328.33	2.386		
12,401.5	6,638.3	12,478.4	6,704.8	164.6	164.9	-94.87	-440.2	-5,723.2	783.3	454.9	328.41	2.385		
12,500.0	6,638.2	12,576.9	6,704.6	167.4	167.6	-94.86	-440.2	-5,821.6	783.3	449.4	333.91	2.346		
12,598.4	6,638.1	12,675.3	6,704.5	170.2	170.4	-94.86	-440.2	-5,920.0	783.3	443.9	339.40	2.308		
12,600.0	6,638.1	12,676.9	6,704.4	170.2	170.4	-94.86	-440.2	-5,921.6	783.3	443.8	339.49	2.307		
12,696.8	6,638.0	12,773.7	6,704.3	172.9	173.1	-94.86	-440.2	-6,018.4	783.3	438.4	344.90	2.271		
12,700.0	6,638.0	12,776.9	6,704.3	173.0	173.2	-94.86	-440.2	-6,021.6	783.3	438.2	345.07	2.270		
12,795.2	6,637.8	12,872.1	6,704.1	175.7	175.9	-94.85	-440.2	-6,116.9	783.3	432.9	350.39	2.235		
12,800.0	6,637.8	12,876.9	6,704.1	175.8	176.0	-94.85	-440.2	-6,121.6	783.3	432.6	350.66	2.234		
12,893.7	6,637.7	12,970.5	6,703.9	178.4	178.6	-94.85	-440.2	-6,215.3	783.3	427.4	355.89	2.201		
12,900.0	6,637.7	12,976.9	6,703.9	178.6	178.8	-94.85	-440.2	-6,221.6	783.3	427.0	356.24	2.199		
12,992.1	6,637.6	13,069.0	6,703.7	181.2	181.4	-94.84	-440.2	-6,313.7	783.3	421.9	361.39	2.167		
13,000.0	6,637.6	13,076.9	6,703.7	181.4	181.6	-94.84	-440.2	-6,321.6	783.3	421.4	361.83	2.165		
13,090.5	6,637.5	13,167.4	6,703.5	183.9	184.2	-94.84	-440.2	-6,412.1	783.2	416.4	366.88	2.135		
13,100.0	6,637.5	13,176.9	6,703.5	184.2	184.4	-94.84	-440.2	-6,421.6	783.2	415.8	367.41	2.132		
13,188.9	6,637.4	13,265.8	6,703.3	186.7	186.9	-94.83	-440.2	-6,510.6	783.2	410.9	372.38	2.103		
13,200.0	6,637.3	13,276.9	6,703.3	187.0	187.2	-94.83	-440.2	-6,521.6	783.2	410.2	373.00	2.100		
13,287.4	6,637.2	13,364.2	6,703.2	189.4	189.7	-94.83	-440.2	-6,609.0	783.2	405.4	377.88	2.073		
13,300.0	6,637.2	13,376.9	6,703.1	189.8	190.0	-94.83	-440.2	-6,621.6	783.2	404.6	378.59	2.069		
13,385.8	6,637.1	13,462.7	6,703.0	192.2	192.4	-94.82	-440.2	-6,707.4	783.2	399.8	383.38	2.043		
13,400.0	6,637.1	13,476.9	6,703.0	192.6	192.8	-94.82	-440.2	-6,721.6	783.2	399.1	384.18	2.039		
13,484.2	6,637.0	13,561.1	6,702.8	195.0	195.2	-94.82	-440.2	-6,805.8	783.2	394.3	388.88	2.014		
13,500.0	6,637.0	13,576.9	6,702.8	195.4	195.6	-94.82	-440.2	-6,821.6	783.2	393.5	389.76	2.009		
13,582.6	6,636.9	13,659.5	6,702.6	197.7	197.9	-94.82	-440.2	-6,904.3	783.2	388.8	394.38	1.986		
13,600.0	6,636.8	13,676.9	6,702.6	198.2	198.4	-94.82	-440.2	-6,921.6	783.2	387.9	395.35	1.981		
13,681.1	6,636.7	13,757.9	6,702.4	200.5	200.7	-94.81	-440.1	-7,002.7	783.2	383.3	399.89	1.959		
13,700.0	6,636.7	13,776.9	6,702.4	201.0	201.2	-94.81	-440.1	-7,021.6	783.2	382.3	400.94	1.953		
13,779.5	6,636.6	13,856.4	6,702.2	203.2	203.5	-94.81	-440.1	-7,101.1	783.2	377.8	405.39	1.932		
13,800.0	6,636.6	13,876.9	6,702.2	203.8	204.0	-94.81	-440.1	-7,121.6	783.2	376.7	406.53	1.927		
13,877.9	6,636.5	13,954.8	6,702.1	206.0	206.2	-94.80	-440.1	-7,199.5	783.2	372.3	410.89	1.906		
13,900.0	6,636.5	13,976.9	6,702.0	206.6	206.8	-94.80	-440.1	-7,221.6	783.2	371.1	412.13	1.900		
13,976.3	6,636.4	14,053.2	6,701.9	208.8	209.0	-94.80	-440.1	-7,297.9	783.2	366.8	416.39	1.881		
14,000.0	6,636.3	14,076.9	6,701.8	209.4	209.6	-94.80	-440.1	-7,321.6	783.2	365.5	417.72	1.875		
14,074.8	6,636.2	14,151.6	6,701.7	211.5	211.7	-94.79	-440.1	-7,396.4	783.2	361.3	421.90	1.856		
14,100.0	6,636.2	14,176.9	6,701.6	212.2	212.4	-94.79	-440.1	-7,421.6	783.2	359.9	423.31	1.850		
14,173.2	6,636.1	14,250.1	6,701.5	214.3	214.5	-94.79	-440.1	-7,494.8	783.2	355.8	427.40	1.832		
14,200.0	6,636.1	14,276.9	6,701.5	215.0	215.2	-94.79	-440.1	-7,521.6	783.2	354.3	428.90	1.826		
14,271.6	6,636.0	14,348.5	6,701.3	217.0	217.2	-94.79	-440.1	-7,593.2	783.2	350.3	432.91	1.809		
14,300.0	6,636.0	14,376.9	6,701.3	217.8	218.0	-94.78	-440.1	-7,621.6	783.2	348.7	434.49	1.802		
14,370.0	6,635.9	14,446.9	6,701.1	219.8	220.0	-94.78	-440.1	-7,691.6	783.2	344.8	438.41	1.786		
14,400.0	6,635.8	14,476.9	6,701.1	220.6	220.8	-94.78	-440.1	-7,721.6	783.2	343.1	440.09	1.780		
14,468.5	6,635.7	14,545.3	6,701.0	222.6	222.8	-94.78	-440.1	-7,790.1	783.2	339.2	443.92	1.764		
14,500.0	6,635.7	14,576.9	6,700.9	223.4	223.7	-94.78	-440.1	-7,821.6	783.2	337.5	445.68	1.757		
14,566.9	6,635.6	14,643.8	6,700.8	225.3	225.5	-94.77	-440.1	-7,888.5	783.2	333.7	449.42	1.743		
14,600.0	6,635.6	14,676.9	6,700.7	226.2	226.5	-94.77	-440.1	-7,921.6	783.2	331.9	451.27	1.735		
14,665.3	6,635.5	14,742.2	6,700.6	228.1	228.3	-94.77	-440.1	-7,986.9	783.1	328.2	454.93	1.721		
14,700.0	6,635.5	14,776.9	6,700.5	229.0	229.3	-94.77	-440.1	-8,021.6	783.1	326.3	456.87	1.714		
14,763.7	6,635.4	14,840.6	6,700.4	230.8	231.0	-94.76	-440.1	-8,085.3	783.1	322.7	460.44	1.701		

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,800.0	6,635.3	14,876.9	6,700.3	231.8	232.1	-94.76	-440.1	-8,121.6	783.1	320.7	462.46	1.693	
14,862.2	6,635.2	14,939.0	6,700.2	233.6	233.8	-94.76	-440.1	-8,183.8	783.1	317.2	465.94	1.681	
14,900.0	6,635.2	14,976.9	6,700.2	234.7	234.9	-94.76	-440.1	-8,221.6	783.1	315.1	468.06	1.673	
14,960.6	6,635.1	15,037.5	6,700.1	236.4	236.2	-94.76	-440.1	-8,282.2	783.1	312.1	471.08	1.662	
14,985.4	6,635.1	15,062.2	6,700.0	237.0	236.6	-94.75	-440.1	-8,307.0	783.1	310.9	472.22	1.658	
14,995.1	6,635.0	15,065.7	6,700.0	237.3	236.7	-94.76	-440.1	-8,310.5	783.2	310.6	472.55	1.657 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-45.2	-0.6	45.2				
98.4	98.4	98.4	98.4	0.1	0.1	-179.29	-45.2	-0.6	45.2	45.0	0.19	234.992	
100.0	100.0	100.0	100.0	0.1	0.1	-179.29	-45.2	-0.6	45.2	45.0	0.20	231.014	
196.8	196.8	196.8	196.8	0.3	0.3	-179.29	-45.2	-0.6	45.2	44.5	0.63	71.601	
200.0	200.0	200.0	200.0	0.3	0.3	-179.29	-45.2	-0.6	45.2	44.5	0.65	70.029	
295.3	295.3	295.3	295.3	0.5	0.5	-179.29	-45.2	-0.6	45.2	44.1	1.07	42.086	
300.0	300.0	300.0	300.0	0.5	0.5	-179.29	-45.2	-0.6	45.2	44.1	1.09	41.270	
393.7	393.7	393.7	393.7	0.8	0.8	-179.29	-45.2	-0.6	45.2	43.7	1.52	29.802	
400.0	400.0	400.0	400.0	0.8	0.8	-179.29	-45.2	-0.6	45.2	43.6	1.54	29.255	
492.1	492.1	492.1	492.1	1.0	1.0	-179.29	-45.2	-0.6	45.2	43.2	1.96	23.068	
500.0	500.0	500.0	500.0	1.0	1.0	-179.29	-45.2	-0.6	45.2	43.2	1.99	22.659	
590.5	590.5	590.5	590.5	1.2	1.2	-179.29	-45.2	-0.6	45.2	42.8	2.40	18.817	
600.0	600.0	600.0	600.0	1.2	1.2	-179.29	-45.2	-0.6	45.2	42.7	2.44	18.490	
689.0	689.0	689.0	689.0	1.4	1.4	-179.29	-45.2	-0.6	45.2	42.3	2.84	15.889	
700.0	700.0	700.0	700.0	1.4	1.4	-179.29	-45.2	-0.6	45.2	42.3	2.89	15.616	
787.4	787.4	787.4	787.4	1.6	1.6	-179.29	-45.2	-0.6	45.2	41.9	3.29	13.749	
800.0	800.0	800.0	800.0	1.7	1.7	-179.29	-45.2	-0.6	45.2	41.8	3.34	13.516	
885.8	885.8	885.8	885.8	1.9	1.9	-179.29	-45.2	-0.6	45.2	41.4	3.73	12.117	
900.0	900.0	900.0	900.0	1.9	1.9	-179.29	-45.2	-0.6	45.2	41.4	3.79	11.914	
984.2	984.2	984.2	984.2	2.1	2.1	-179.29	-45.2	-0.6	45.2	41.0	4.17	10.832	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-179.29	-45.2	-0.6	45.2	40.9	4.24	10.651	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-179.29	-45.2	-0.6	45.2	40.6	4.61	9.793	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-179.29	-45.2	-0.6	45.2	40.5	4.69	9.630	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	-179.29	-45.2	-0.6	45.2	40.1	5.06	8.936	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-179.29	-45.2	-0.6	45.2	40.0	5.14	8.788	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	-179.29	-45.2	-0.6	45.2	39.7	5.50	8.217	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-179.29	-45.2	-0.6	45.2	39.6	5.59	8.081 CC, ES	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	140.36	-45.2	-0.6	46.0	40.0	5.94	7.745	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	140.90	-45.2	-0.6	46.5	40.5	6.04	7.707	
1,476.4	1,476.3	1,476.3	1,476.3	3.2	3.2	143.55	-45.2	-0.6	49.4	43.1	6.37	7.757	
1,500.0	1,499.8	1,499.8	1,499.8	3.2	3.2	144.58	-45.2	-0.6	50.7	44.2	6.48	7.827	
1,574.8	1,574.4	1,574.4	1,574.4	3.4	3.4	148.20	-45.2	-0.6	55.8	49.0	6.80	8.210	
1,600.0	1,599.5	1,599.5	1,599.5	3.5	3.5	149.49	-45.2	-0.6	58.0	51.1	6.91	8.393	
1,673.2	1,672.2	1,671.9	1,671.9	3.6	3.6	154.00	-45.1	-1.5	65.7	58.5	7.22	9.100	
1,700.0	1,698.7	1,698.3	1,698.2	3.7	3.7	155.92	-45.0	-2.2	69.1	61.8	7.33	9.429	
1,771.6	1,769.5	1,768.3	1,768.2	3.9	3.8	161.30	-44.6	-5.5	80.0	72.4	7.62	10.508	
1,800.0	1,797.5	1,795.8	1,795.6	4.0	3.9	163.43	-44.4	-7.2	85.1	77.4	7.73	11.019	
1,870.1	1,866.3	1,863.0	1,862.6	4.2	4.0	168.45	-43.9	-12.5	99.8	91.8	8.00	12.466	
1,899.9	1,895.6	1,891.3	1,890.8	4.3	4.1	170.44	-43.6	-15.3	106.9	98.8	8.12	13.172	
1,968.5	1,962.6	1,955.8	1,954.9	4.5	4.2	174.63	-42.8	-22.5	124.6	116.2	8.42	14.803	
2,000.0	1,993.4	1,985.2	1,984.1	4.6	4.3	176.36	-42.4	-26.3	133.2	124.6	8.55	15.570	
2,066.9	2,058.9	2,047.1	2,045.3	4.8	4.5	179.69	-41.4	-35.2	152.2	143.4	8.85	17.196	
2,100.0	2,091.3	2,077.5	2,075.3	4.9	4.5	-178.81	-40.9	-40.0	162.1	153.1	9.00	18.018	
2,165.3	2,155.2	2,136.8	2,133.7	5.2	4.7	-176.09	-39.7	-50.4	182.5	173.2	9.30	19.635	
2,200.0	2,189.1	2,168.0	2,164.3	5.3	4.8	-174.77	-39.1	-56.3	193.8	184.3	9.46	20.494	
2,263.8	2,251.5	2,224.8	2,219.8	5.5	5.0	-172.52	-37.8	-68.0	215.4	205.7	9.76	22.079	
2,300.0	2,286.9	2,256.7	2,250.9	5.7	5.1	-171.34	-37.0	-75.0	228.2	218.3	9.93	22.980	
2,362.2	2,347.7	2,310.8	2,303.6	5.9	5.3	-169.46	-35.7	-87.8	250.9	240.7	10.23	24.526	
2,400.0	2,384.7	2,343.4	2,335.1	6.0	5.4	-168.40	-34.8	-95.9	265.3	254.8	10.42	25.459	
2,460.6	2,444.0	2,394.9	2,384.8	6.3	5.6	-166.80	-33.3	-109.5	289.0	278.3	10.72	26.958	
2,500.0	2,482.5	2,428.0	2,416.5	6.4	5.7	-165.84	-32.3	-118.7	304.9	294.0	10.92	27.925	
2,559.0	2,540.3	2,477.0	2,463.4	6.7	5.9	-164.48	-30.7	-133.0	329.5	318.3	11.22	29.362	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,513.1	2,497.8	6.8	6.1	-163.55	-29.5	-143.9	347.0	335.5	11.44	30.321	
2,657.5	2,636.5	2,564.6	2,546.8	7.1	6.4	-162.37	-27.8	-159.4	371.6	359.9	11.75	31.616	
2,700.0	2,678.1	2,602.7	2,583.1	7.2	6.5	-161.59	-26.6	-170.9	389.9	377.9	11.98	32.543	
2,755.9	2,732.8	2,652.7	2,630.8	7.5	6.8	-160.67	-24.9	-186.0	414.1	401.8	12.29	33.693	
2,800.0	2,776.0	2,692.2	2,668.4	7.7	7.0	-160.02	-23.6	-197.9	433.2	420.6	12.53	34.568	
2,854.3	2,829.1	2,740.9	2,714.8	7.9	7.3	-159.28	-22.0	-212.6	456.8	443.9	12.83	35.591	
2,900.0	2,873.8	2,781.8	2,753.8	8.1	7.5	-158.72	-20.7	-225.0	476.6	463.6	13.09	36.418	
2,952.7	2,925.4	2,829.1	2,798.8	8.3	7.7	-158.13	-19.1	-239.2	499.6	486.3	13.39	37.328	
3,000.0	2,971.6	2,871.4	2,839.1	8.5	8.0	-157.64	-17.7	-252.0	520.3	506.6	13.65	38.110	
3,051.2	3,021.6	2,917.2	2,882.8	8.7	8.2	-157.16	-16.2	-265.9	542.7	528.7	13.94	38.920	
3,100.0	3,069.4	2,961.0	2,924.5	8.9	8.5	-156.73	-14.8	-279.1	564.0	549.8	14.22	39.660	
3,149.6	3,117.9	3,005.4	2,966.8	9.1	8.7	-156.33	-13.3	-292.5	585.8	571.3	14.51	40.381	
3,200.0	3,167.2	3,050.6	3,009.8	9.3	9.0	-155.95	-11.8	-306.1	607.9	593.1	14.80	41.082	
3,248.0	3,214.2	3,093.6	3,050.8	9.5	9.2	-155.61	-10.4	-319.1	629.0	613.9	15.08	41.725	
3,300.0	3,265.0	3,140.1	3,095.2	9.8	9.5	-155.27	-8.9	-333.2	651.8	636.5	15.38	42.390	
3,346.4	3,310.5	3,181.7	3,134.8	10.0	9.7	-154.99	-7.5	-345.7	672.3	656.6	15.65	42.962	
3,400.0	3,362.9	3,229.7	3,180.5	10.2	10.0	-154.68	-5.9	-360.2	695.9	679.9	15.96	43.596	
3,444.9	3,406.7	3,269.9	3,218.8	10.4	10.3	-154.44	-4.6	-372.3	715.6	699.4	16.23	44.105	
3,473.0	3,434.2	3,295.1	3,242.8	10.5	10.4	-154.30	-3.8	-379.9	728.0	711.6	16.39	44.417	
3,500.0	3,460.7	3,319.3	3,265.9	10.6	10.6	-154.27	-3.0	-387.3	739.8	723.2	16.57	44.659	
3,543.3	3,503.2	3,358.4	3,303.1	10.7	10.8	-154.21	-1.7	-399.1	758.3	741.5	16.83	45.048	
3,600.0	3,559.0	3,409.9	3,352.2	10.9	11.1	-154.11	0.0	-414.6	781.7	764.6	17.18	45.496	
3,641.7	3,600.2	3,448.0	3,388.5	11.0	11.3	-154.02	1.3	-426.1	798.4	781.0	17.43	45.795	
3,700.0	3,657.9	3,501.5	3,439.5	11.2	11.7	-153.87	3.0	-442.3	820.9	803.1	17.78	46.159	
3,740.1	3,697.8	3,538.6	3,474.9	11.3	11.9	-153.75	4.3	-453.5	835.8	817.8	18.02	46.386	
3,800.0	3,757.3	3,594.2	3,527.8	11.4	12.2	-153.54	6.1	-470.3	857.2	838.8	18.36	46.677	
3,838.6	3,795.7	3,630.3	3,562.2	11.5	12.4	-153.39	7.3	-481.1	870.4	851.9	18.58	46.847	
3,900.0	3,857.0	3,687.9	3,617.1	11.7	12.8	-153.14	9.2	-498.5	890.7	871.8	18.92	47.074	
3,937.0	3,893.9	3,722.7	3,650.3	11.7	13.0	-152.97	10.3	-509.1	902.4	883.2	19.12	47.198	
4,000.0	3,956.9	3,782.3	3,707.0	11.8	13.4	-152.65	12.3	-527.0	921.4	901.9	19.45	47.371	
4,035.4	3,992.3	3,815.9	3,739.1	11.9	13.6	-152.46	13.4	-537.2	931.6	911.9	19.63	47.457	
4,072.9	4,029.8	3,851.6	3,773.1	11.9	13.8	-111.06	14.6	-548.0	942.0	917.5	24.45	38.534	
4,100.0	4,056.9	3,877.4	3,797.6	12.0	14.0	-110.84	15.4	-555.8	949.4	924.7	24.64	38.531	
4,133.8	4,090.7	3,909.7	3,828.4	12.0	14.2	-110.56	16.5	-565.5	958.6	933.7	24.89	38.520	
4,200.0	4,156.9	3,972.7	3,888.4	12.1	14.6	-110.04	18.6	-584.5	976.8	951.4	25.37	38.497	
4,232.3	4,189.2	4,003.4	3,917.7	12.2	14.8	-109.79	19.6	-593.8	985.6	960.0	25.61	38.486	
4,300.0	4,256.9	4,068.0	3,979.2	12.3	15.2	-109.27	21.7	-613.3	1,004.3	978.2	26.11	38.460	
4,330.7	4,287.6	4,097.2	4,007.1	12.4	15.3	-109.05	22.7	-622.1	1,012.8	986.5	26.34	38.449	
4,400.0	4,356.9	4,163.3	4,070.0	12.5	15.8	-108.55	24.8	-642.0	1,032.1	1,005.2	26.86	38.421	
4,429.1	4,386.0	4,191.0	4,096.4	12.5	15.9	-108.35	25.7	-650.4	1,040.2	1,013.1	27.08	38.410	
4,500.0	4,456.9	4,258.5	4,160.8	12.6	16.4	-107.87	28.0	-670.8	1,059.9	1,032.3	27.62	38.381	
4,527.5	4,484.4	4,284.8	4,185.8	12.7	16.5	-107.69	28.8	-678.7	1,067.6	1,039.8	27.83	38.369	
4,600.0	4,556.9	4,353.8	4,251.5	12.8	17.0	-107.22	31.1	-699.6	1,087.9	1,059.6	28.38	38.339	
4,626.0	4,582.9	4,378.6	4,275.1	12.9	17.1	-107.06	31.9	-707.0	1,095.2	1,066.7	28.57	38.328	
4,700.0	4,656.9	4,449.1	4,342.3	13.0	17.6	-106.61	34.2	-728.3	1,116.1	1,086.9	29.14	38.297	
4,724.4	4,681.3	4,472.3	4,364.5	13.0	17.7	-106.46	35.0	-735.4	1,122.9	1,093.6	29.33	38.287	
4,800.0	4,756.9	4,544.4	4,433.1	13.1	18.2	-106.02	37.4	-757.1	1,144.3	1,114.4	29.91	38.255	
4,822.8	4,779.7	4,566.1	4,453.8	13.2	18.3	-105.89	38.1	-763.7	1,150.8	1,120.7	30.09	38.245	
4,900.0	4,856.9	4,639.6	4,523.9	13.3	18.8	-105.46	40.5	-785.9	1,172.7	1,142.0	30.69	38.212	
4,921.2	4,878.1	4,659.9	4,543.1	13.4	18.9	-105.35	41.2	-792.0	1,178.7	1,147.8	30.85	38.203	
5,000.0	4,956.9	4,734.9	4,614.6	13.5	19.4	-104.93	43.7	-814.6	1,201.1	1,169.6	31.47	38.170	
5,019.7	4,976.6	4,753.7	4,632.5	13.5	19.5	-104.83	44.3	-820.3	1,206.7	1,175.1	31.62	38.162	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	4,830.2	4,705.4	13.7	20.0	-104.42	46.8	-843.4	1,229.6	1,197.4	32.25	38.128	
5,118.1	5,075.0	4,847.4	4,721.8	13.7	20.1	-104.33	47.4	-848.6	1,234.8	1,202.4	32.39	38.121	
5,200.0	5,156.9	4,925.5	4,796.2	13.8	20.6	-103.94	49.9	-872.2	1,258.3	1,225.2	33.04	38.087	
5,216.5	5,173.4	4,941.2	4,811.2	13.9	20.7	-103.86	50.5	-876.9	1,263.0	1,229.8	33.17	38.080	
5,300.0	5,256.9	5,020.7	4,887.0	14.0	21.2	-103.47	53.1	-900.9	1,287.0	1,253.1	33.83	38.046	
5,314.9	5,271.8	5,035.0	4,900.5	14.1	21.3	-103.41	53.5	-905.2	1,291.3	1,257.3	33.95	38.040	
5,400.0	5,356.9	5,116.0	4,977.7	14.2	21.8	-103.03	56.2	-929.7	1,315.7	1,281.1	34.62	38.006	
5,413.4	5,370.3	5,128.8	4,989.9	14.2	21.9	-102.97	56.6	-933.5	1,319.6	1,284.9	34.73	38.001	
5,500.0	5,456.9	5,001.5	4,913.1	14.4	39.4	175.37	75.4	319.2	1,284.0	1,255.6	28.45	45.134	
5,511.8	5,468.7	5,001.3	4,913.1	14.4	39.3	175.41	75.4	319.0	1,272.5	1,244.0	28.47	44.698	
5,600.0	5,556.9	5,099.8	4,913.2	14.6	39.3	175.74	75.4	317.5	1,186.4	1,157.8	28.61	41.465	
5,610.2	5,567.1	5,099.7	4,913.2	14.6	39.3	175.78	75.4	317.4	1,176.4	1,147.8	28.63	41.093	
5,700.0	5,656.9	5,198.1	4,913.2	14.7	39.3	176.11	75.4	315.8	1,089.2	1,060.4	28.78	37.848	
5,708.6	5,665.5	5,198.0	4,913.2	14.8	39.3	176.14	75.4	315.7	1,080.8	1,052.0	28.79	37.537	
5,800.0	5,756.9	5,296.4	4,913.2	14.9	39.2	176.47	75.4	314.1	992.5	963.5	28.95	34.286	
5,807.1	5,764.0	5,296.3	4,913.2	14.9	39.2	176.50	75.4	314.0	985.7	956.7	28.96	34.036	
5,900.0	5,856.9	5,394.7	4,913.2	15.1	39.2	176.84	75.4	312.4	896.5	867.4	29.12	30.786	
5,905.5	5,862.4	5,394.6	4,913.2	15.1	39.2	176.86	75.4	312.3	891.3	862.1	29.13	30.595	
5,971.9	5,928.8	5,493.5	4,913.3	15.3	39.2	177.11	75.4	311.2	828.1	798.8	29.25	28.312	
6,000.0	5,956.9	5,592.5	4,913.3	15.3	39.2	-99.13	75.4	310.2	801.5	748.3	53.25	15.054	
6,003.9	5,960.8	5,592.2	4,913.3	15.3	39.2	-99.95	75.4	309.9	797.8	744.7	53.19	14.999	
6,050.0	6,006.7	5,697.9	4,913.4	15.4	39.1	-108.55	75.4	305.6	754.7	702.5	52.20	14.458	
6,100.0	6,056.2	5,797.9	4,913.5	15.4	38.9	-115.79	75.4	297.6	708.7	658.0	50.73	13.972	
6,102.3	6,058.5	5,797.4	4,913.5	15.4	38.9	-116.08	75.4	297.1	706.6	656.0	50.65	13.950	
6,150.0	6,105.1	5,898.5	4,913.7	15.4	38.6	-121.11	75.4	286.2	663.9	614.6	49.23	13.485	
6,200.0	6,153.0	5,953.7	4,913.9	15.5	38.3	-124.89	75.4	271.4	620.4	572.5	47.89	12.955	
6,200.8	6,153.8	5,953.4	4,913.9	15.5	38.3	-124.94	75.4	271.1	619.7	571.8	47.87	12.947	
6,250.0	6,199.9	6,035.6	4,914.2	15.5	37.9	-127.44	75.4	253.3	578.6	531.8	46.75	12.376	
6,299.2	6,244.8	6,084.6	4,914.6	15.5	37.5	-129.00	75.4	232.3	539.4	493.6	45.82	11.771	
6,300.0	6,245.5	6,084.3	4,914.6	15.5	37.5	-129.02	75.4	232.0	538.8	493.0	45.81	11.761	
6,350.0	6,289.6	6,129.8	4,915.0	15.5	37.0	-129.79	75.4	207.6	501.2	456.2	45.05	11.126	
6,397.6	6,329.9	6,163.8	4,915.5	15.4	36.4	-129.89	75.4	181.5	467.9	423.4	44.48	10.518	
6,400.0	6,331.8	6,162.5	4,915.5	15.4	36.4	-129.88	75.4	180.2	466.3	421.8	44.45	10.488	
6,450.0	6,372.2	6,182.2	4,916.0	15.4	35.8	-129.39	75.4	149.9	434.1	390.1	43.99	9.867	
6,496.0	6,407.4	6,202.0	4,916.5	15.4	35.2	-128.48	75.4	119.7	407.1	363.5	43.68	9.321	
6,500.0	6,410.3	6,199.3	4,916.6	15.4	35.1	-128.38	75.4	117.0	404.9	361.3	43.66	9.276	
6,550.0	6,446.1	6,163.8	4,917.2	15.4	34.4	-126.92	75.4	81.5	379.0	335.5	43.47	8.718	
6,594.5	6,475.9	6,130.2	4,917.8	15.4	33.8	-125.28	75.4	48.0	358.7	315.3	43.41	8.263	
6,600.0	6,479.4	6,125.9	4,917.8	15.4	33.7	-125.06	75.4	43.7	356.4	313.0	43.41	8.210	
6,650.0	6,510.0	6,185.9	4,918.5	15.5	32.9	-122.89	75.4	3.6	337.1	293.6	43.47	7.755	
6,692.9	6,534.0	6,149.9	4,919.1	15.7	32.3	-120.83	75.4	-32.3	323.1	279.5	43.63	7.407	
6,700.0	6,537.8	6,143.9	4,919.2	15.7	32.2	-120.48	75.4	-38.4	321.1	277.4	43.65	7.355	
6,750.0	6,562.6	6,100.0	4,920.0	16.2	31.4	-117.95	75.4	-82.2	308.1	264.2	43.92	7.016	
6,791.3	6,580.8	6,062.6	4,920.6	16.6	30.8	-115.84	75.4	-119.6	299.5	255.3	44.23	6.772	
6,800.0	6,584.3	6,054.7	4,920.7	16.7	30.7	-115.40	75.4	-127.6	297.9	253.7	44.28	6.728	
6,850.0	6,602.9	6,007.9	4,921.5	17.3	29.9	-112.99	75.4	-174.3	290.3	245.6	44.66	6.499	
6,889.7	6,615.2	6,069.9	4,922.2	17.9	29.3	-111.25	75.4	-212.3	285.7	240.6	45.01	6.346	
6,900.0	6,618.1	6,060.1	4,922.4	18.0	29.2	-110.84	75.4	-222.2	284.7	239.6	45.10	6.312	
6,950.0	6,630.0	6,111.3	4,923.2	18.8	28.5	-109.07	75.4	-270.9	280.8	235.3	45.51	6.170	
6,988.2	6,636.8	6,103.6	4,923.8	19.5	28.0	-108.04	75.4	-308.6	278.8	233.0	45.85	6.081	
7,000.0	6,638.5	6,101.9	4,924.0	19.7	27.8	-107.79	75.4	-320.3	278.4	232.4	45.95	6.057	
7,050.0	6,643.5	6,101.1	4,924.9	20.6	27.2	-107.07	75.4	-370.1	277.1	230.7	46.37	5.976	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	7,271.8	6,724.8	21.3	26.8	-106.77	75.4	-410.4	276.7	230.0	46.67	5.927	
7,097.8	6,645.0	7,259.2	6,724.3	21.5	26.6	-106.67	75.4	-423.0	276.5	229.7	46.77	5.912	
7,100.0	6,645.0	7,256.7	6,724.2	21.6	26.6	-106.65	75.4	-425.5	276.5	229.7	46.79	5.909	
7,185.0	6,644.9	7,162.4	6,713.3	23.3	25.7	-104.48	75.4	-519.1	273.8	225.9	47.95	5.711	
7,200.0	6,644.9	7,146.2	6,710.2	23.6	25.6	-103.85	75.4	-535.0	273.1	224.9	48.21	5.666	
7,283.4	6,644.8	7,058.8	6,687.2	25.4	25.0	-99.12	75.4	-619.3	268.6	218.7	49.98	5.375	
7,300.0	6,644.7	7,042.2	6,681.7	25.8	24.9	-97.96	75.4	-635.0	267.8	217.4	50.34	5.319	
7,381.9	6,644.6	6,964.3	6,651.1	27.7	24.6	-91.40	75.4	-706.6	265.0	212.8	52.13	5.083	
7,397.9	6,644.6	6,949.9	6,644.6	28.0	24.5	-90.00	75.4	-719.4	264.9	212.4	52.42	5.053	
7,400.0	6,644.6	6,948.0	6,643.8	28.1	24.5	-89.82	75.4	-721.0	264.9	212.4	52.46	5.049	
7,480.3	6,644.5	6,880.6	6,609.8	30.0	24.4	-82.53	75.4	-779.3	268.1	214.4	53.65	4.997 SF	
7,500.0	6,644.5	6,865.2	6,601.3	30.5	24.4	-80.72	75.4	-792.1	270.0	216.1	53.83	5.015	
7,578.7	6,644.4	6,807.9	6,567.2	32.4	24.4	-73.73	75.4	-838.2	282.8	228.6	54.19	5.218	
7,600.0	6,644.4	6,793.5	6,558.1	32.9	24.4	-71.94	75.4	-849.3	287.8	233.6	54.18	5.311	
7,677.1	6,644.3	6,745.3	6,525.9	34.8	24.4	-65.90	75.4	-885.2	311.5	257.6	53.94	5.775	
7,700.0	6,644.2	6,732.1	6,516.7	35.4	24.4	-64.26	75.4	-894.6	320.2	266.4	53.81	5.951	
7,775.6	6,644.1	6,691.6	6,487.4	37.3	24.5	-59.35	75.4	-922.5	353.8	300.6	53.29	6.640	
7,800.0	6,644.1	6,679.6	6,478.3	38.0	24.5	-57.92	75.4	-930.5	366.2	313.1	53.11	6.896	
7,874.0	6,644.0	6,650.0	6,455.6	39.9	24.6	-54.53	75.4	-949.4	407.7	354.8	52.86	7.713	
7,900.0	6,644.0	6,634.6	6,443.5	40.5	24.6	-52.83	75.4	-958.8	423.5	371.1	52.41	8.080	
7,972.4	6,643.9	6,600.0	6,415.5	42.4	24.7	-49.18	75.4	-979.2	470.5	418.9	51.58	9.122	
8,000.0	6,643.9	6,600.0	6,415.5	43.1	24.7	-49.18	75.4	-979.2	489.4	437.2	52.14	9.387	
8,070.8	6,643.8	6,571.9	6,392.0	45.0	24.8	-46.40	75.4	-994.7	540.1	488.5	51.60	10.466	
8,100.0	6,643.7	6,562.6	6,384.2	45.8	24.8	-45.52	75.4	-999.6	561.7	510.2	51.52	10.903	
8,169.3	6,643.7	6,550.0	6,373.4	47.6	24.8	-44.35	75.4	-1,006.1	614.9	562.9	51.97	11.833	
8,200.0	6,643.6	6,533.7	6,359.2	48.4	24.9	-42.90	75.4	-1,014.2	639.0	587.6	51.39	12.434	
8,267.7	6,643.5	6,516.1	6,343.8	50.2	24.9	-41.40	75.4	-1,022.6	693.5	642.1	51.41	13.489	
8,300.0	6,643.5	6,500.0	6,329.5	51.1	25.0	-40.08	75.4	-1,030.0	720.1	669.3	50.87	14.156	
8,366.1	6,643.4	6,500.0	6,329.5	52.9	25.0	-40.08	75.4	-1,030.0	775.3	723.3	52.06	14.892	
8,400.0	6,643.4	6,486.0	6,316.9	53.8	25.0	-38.98	75.4	-1,036.1	804.0	752.3	51.68	15.558	
8,464.5	6,643.3	6,473.0	6,305.1	55.5	25.0	-37.99	75.4	-1,041.6	859.4	807.5	51.90	16.560	
8,500.0	6,643.2	6,466.3	6,299.0	56.5	25.0	-37.50	75.4	-1,044.4	890.2	838.2	52.04	17.106	
8,563.0	6,643.2	6,450.0	6,284.0	58.2	25.1	-36.33	75.4	-1,050.8	945.6	893.6	51.98	18.189	
8,600.0	6,643.1	6,450.0	6,284.0	59.2	25.1	-36.33	75.4	-1,050.8	978.3	925.7	52.61	18.596	
8,661.4	6,643.0	6,450.0	6,284.0	60.8	25.1	-36.33	75.4	-1,050.8	1,033.3	979.7	53.65	19.259	
8,700.0	6,643.0	6,433.1	6,268.3	61.9	25.1	-35.17	75.4	-1,057.1	1,067.9	1,014.8	53.10	20.111	
8,759.8	6,642.9	6,424.4	6,260.2	63.5	25.1	-34.60	75.4	-1,060.2	1,122.2	1,068.7	53.49	20.979	
8,800.0	6,642.9	6,419.0	6,255.1	64.6	25.1	-34.24	75.4	-1,062.1	1,158.8	1,105.0	53.76	21.553	
8,858.2	6,642.8	6,400.0	6,237.2	66.2	25.2	-33.06	75.4	-1,068.4	1,212.3	1,158.9	53.40	22.703	
8,900.0	6,642.7	6,400.0	6,237.2	67.3	25.2	-33.06	75.4	-1,068.4	1,250.7	1,196.6	54.07	23.133	
8,956.7	6,642.7	6,400.0	6,237.2	68.9	25.2	-33.06	75.4	-1,068.4	1,303.1	1,248.1	54.97	23.705	
9,000.0	6,642.6	6,400.0	6,237.2	70.1	25.2	-33.06	75.4	-1,068.4	1,343.4	1,287.7	55.67	24.134	
9,055.1	6,642.5	6,400.0	6,237.2	71.6	25.2	-33.06	75.4	-1,068.4	1,394.9	1,338.4	56.55	24.667	
9,100.0	6,642.5	6,400.0	6,237.2	72.8	25.2	-33.06	75.4	-1,068.4	1,437.1	1,379.8	57.27	25.094	
9,153.5	6,642.4	6,378.9	6,217.1	74.3	25.2	-31.81	75.4	-1,074.8	1,487.1	1,430.5	56.59	26.277	
9,200.0	6,642.4	6,374.5	6,212.9	75.6	25.2	-31.56	75.4	-1,076.1	1,530.9	1,473.9	57.01	26.854	
9,251.9	6,642.3	6,369.8	6,208.4	77.0	25.2	-31.29	75.4	-1,077.4	1,580.0	1,522.5	57.48	27.486	
9,300.0	6,642.2	6,350.0	6,189.3	78.3	25.3	-30.21	75.4	-1,082.7	1,625.8	1,569.0	56.84	28.604	
9,350.4	6,642.2	6,350.0	6,189.3	79.7	25.3	-30.21	75.4	-1,082.7	1,673.5	1,615.9	57.60	29.055	
9,400.0	6,642.1	6,350.0	6,189.3	81.1	25.3	-30.21	75.4	-1,082.7	1,720.7	1,662.4	58.35	29.490	
9,448.8	6,642.0	6,350.0	6,189.3	82.4	25.3	-30.21	75.4	-1,082.7	1,767.2	1,708.2	59.09	29.909	
9,500.0	6,642.0	6,350.0	6,189.3	83.8	25.3	-30.21	75.4	-1,082.7	1,816.2	1,756.3	59.86	30.339	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,641.9	6,350.0	6,189.3	85.1	25.3	-30.21	75.4	-1,082.7	1,861.4	1,800.9	60.58	30.728	
9,600.0	6,641.9	6,350.0	6,189.3	86.6	25.3	-30.21	75.4	-1,082.7	1,912.1	1,850.7	61.38	31.153	
9,645.6	6,641.8	6,350.0	6,189.3	87.9	25.3	-30.21	75.4	-1,082.7	1,956.0	1,894.0	62.07	31.513	
9,700.0	6,641.7	6,350.0	6,189.3	89.4	25.3	-30.21	75.4	-1,082.7	2,008.4	1,945.5	62.90	31.933	
9,744.1	6,641.7	6,350.0	6,189.3	90.6	25.3	-30.21	75.4	-1,082.7	2,051.0	1,987.4	63.57	32.266	
9,800.0	6,641.6	6,330.6	6,170.5	92.1	25.3	-29.21	75.4	-1,087.3	2,104.8	2,041.8	62.94	33.439	
9,842.5	6,641.6	6,328.2	6,168.1	93.3	25.3	-29.09	75.4	-1,087.8	2,145.8	2,082.5	63.39	33.850	
9,900.0	6,641.5	6,325.0	6,165.0	94.9	25.3	-28.93	75.4	-1,088.5	2,201.5	2,137.5	64.01	34.395	
9,940.9	6,641.4	6,322.9	6,162.9	96.0	25.3	-28.83	75.4	-1,089.0	2,241.2	2,176.7	64.45	34.776	
10,000.0	6,641.4	6,319.8	6,159.9	97.7	25.3	-28.68	75.4	-1,089.7	2,298.5	2,233.4	65.08	35.315	
10,039.3	6,641.3	6,300.0	6,140.5	98.8	25.3	-27.74	75.4	-1,093.6	2,337.0	2,272.8	64.19	36.404	
10,100.0	6,641.2	6,300.0	6,140.5	100.4	25.3	-27.74	75.4	-1,093.6	2,395.8	2,330.8	65.06	36.822	
10,137.8	6,641.2	6,300.0	6,140.5	101.5	25.3	-27.74	75.4	-1,093.6	2,432.6	2,366.9	65.61	37.078	
10,200.0	6,641.1	6,300.0	6,140.5	103.2	25.3	-27.74	75.4	-1,093.6	2,493.1	2,426.6	66.50	37.490	
10,236.2	6,641.1	6,300.0	6,140.5	104.2	25.3	-27.74	75.4	-1,093.6	2,528.4	2,461.3	67.02	37.725	
10,300.0	6,641.0	6,300.0	6,140.5	106.0	25.3	-27.74	75.4	-1,093.6	2,590.6	2,522.6	67.94	38.132	
10,334.6	6,640.9	6,300.0	6,140.5	107.0	25.3	-27.74	75.4	-1,093.6	2,624.3	2,555.9	68.44	38.348	
10,400.0	6,640.9	6,300.0	6,140.5	108.8	25.3	-27.74	75.4	-1,093.6	2,688.2	2,618.8	69.37	38.749	
10,433.0	6,640.8	6,300.0	6,140.5	109.7	25.3	-27.74	75.4	-1,093.6	2,720.5	2,650.7	69.85	38.948	
10,500.0	6,640.7	6,300.0	6,140.5	111.6	25.3	-27.74	75.4	-1,093.6	2,786.0	2,715.2	70.81	39.343	
10,531.5	6,640.7	6,300.0	6,140.5	112.4	25.3	-27.74	75.4	-1,093.6	2,816.8	2,745.6	71.27	39.525	
10,600.0	6,640.6	6,300.0	6,140.5	114.3	25.3	-27.74	75.4	-1,093.6	2,884.0	2,811.7	72.25	39.915	
10,629.9	6,640.6	6,300.0	6,140.5	115.2	25.3	-27.74	75.4	-1,093.6	2,913.3	2,840.6	72.68	40.082	
10,700.0	6,640.5	6,300.0	6,140.5	117.1	25.3	-27.74	75.4	-1,093.6	2,982.1	2,908.4	73.69	40.466	
10,728.3	6,640.4	6,300.0	6,140.5	117.9	25.3	-27.74	75.4	-1,093.6	3,009.9	2,935.8	74.10	40.618	
10,800.0	6,640.4	6,300.0	6,140.5	119.9	25.3	-27.74	75.4	-1,093.6	3,080.3	3,005.2	75.13	40.997	
10,826.7	6,640.3	6,300.0	6,140.5	120.7	25.3	-27.74	75.4	-1,093.6	3,106.6	3,031.1	75.52	41.136	
10,900.0	6,640.2	6,300.0	6,140.5	122.7	25.3	-27.74	75.4	-1,093.6	3,178.6	3,102.1	76.58	41.509	
10,925.2	6,640.2	6,300.0	6,140.5	123.4	25.3	-27.74	75.4	-1,093.6	3,203.4	3,126.5	76.94	41.635	
11,000.0	6,640.1	6,300.0	6,140.5	125.5	25.3	-27.74	75.4	-1,093.6	3,277.1	3,199.0	78.02	42.003	
11,023.6	6,640.1	6,300.0	6,140.5	126.1	25.3	-27.74	75.4	-1,093.6	3,300.3	3,222.0	78.36	42.118	
11,100.0	6,640.0	6,278.8	6,119.7	128.3	25.3	-26.79	75.4	-1,097.1	3,375.2	3,297.6	77.61	43.488	
11,122.0	6,639.9	6,278.2	6,119.1	128.9	25.3	-26.77	75.4	-1,097.2	3,396.9	3,319.0	77.87	43.622	
11,200.0	6,639.8	6,276.2	6,117.0	131.1	25.3	-26.68	75.4	-1,097.6	3,473.7	3,394.9	78.79	44.087	
11,220.4	6,639.8	6,275.6	6,116.5	131.6	25.3	-26.66	75.4	-1,097.6	3,493.9	3,414.8	79.03	44.207	
11,300.0	6,639.7	6,273.6	6,114.5	133.9	25.3	-26.57	75.4	-1,097.9	3,572.3	3,492.3	79.98	44.667	
11,318.9	6,639.7	6,273.2	6,114.0	134.4	25.3	-26.55	75.4	-1,098.0	3,590.9	3,510.7	80.20	44.775	
11,400.0	6,639.6	6,271.2	6,112.1	136.7	25.3	-26.47	75.4	-1,098.3	3,671.0	3,589.8	81.16	45.229	
11,417.3	6,639.6	6,250.0	6,091.1	137.1	25.4	-25.59	75.4	-1,101.0	3,688.4	3,608.8	79.60	46.337	
11,500.0	6,639.5	6,250.0	6,091.1	139.4	25.4	-25.59	75.4	-1,101.0	3,770.0	3,689.2	80.73	46.699	
11,515.7	6,639.5	6,250.0	6,091.1	139.9	25.4	-25.59	75.4	-1,101.0	3,785.5	3,704.5	80.94	46.766	
11,600.0	6,639.3	6,250.0	6,091.1	142.2	25.4	-25.59	75.4	-1,101.0	3,868.7	3,786.6	82.10	47.123	
11,614.1	6,639.3	6,250.0	6,091.1	142.6	25.4	-25.59	75.4	-1,101.0	3,882.6	3,800.3	82.29	47.182	
11,700.0	6,639.2	6,250.0	6,091.1	145.0	25.4	-25.59	75.4	-1,101.0	3,967.4	3,884.0	83.47	47.534	
11,712.6	6,639.2	6,250.0	6,091.1	145.4	25.4	-25.59	75.4	-1,101.0	3,979.9	3,896.2	83.64	47.585	
11,800.0	6,639.1	6,250.0	6,091.1	147.8	25.4	-25.59	75.4	-1,101.0	4,066.3	3,981.4	84.83	47.932	
11,811.0	6,639.1	6,250.0	6,091.1	148.1	25.4	-25.59	75.4	-1,101.0	4,077.1	3,992.1	84.98	47.975	
11,900.0	6,639.0	6,250.0	6,091.1	150.6	25.4	-25.59	75.4	-1,101.0	4,165.1	4,078.9	86.20	48.318	
11,909.4	6,639.0	6,250.0	6,091.1	150.9	25.4	-25.59	75.4	-1,101.0	4,174.5	4,088.1	86.33	48.354	
12,000.0	6,638.8	6,250.0	6,091.1	153.4	25.4	-25.59	75.4	-1,101.0	4,264.1	4,176.5	87.57	48.692	
12,007.8	6,638.8	6,250.0	6,091.1	153.6	25.4	-25.59	75.4	-1,101.0	4,271.8	4,184.2	87.68	48.721	
12,100.0	6,638.7	6,250.0	6,091.1	156.2	25.4	-25.59	75.4	-1,101.0	4,363.1	4,274.1	88.94	49.055	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,638.7	6,250.0	6,091.1	156.4	25.4	-25.59	75.4	-1,101.0	4,369.3	4,280.2	89.03	49.078	
12,200.0	6,638.6	6,250.0	6,091.1	159.0	25.4	-25.59	75.4	-1,101.0	4,462.1	4,371.8	90.31	49.408	
12,204.7	6,638.6	6,250.0	6,091.1	159.1	25.4	-25.59	75.4	-1,101.0	4,466.7	4,376.4	90.38	49.424	
12,300.0	6,638.5	6,250.0	6,091.1	161.8	25.4	-25.59	75.4	-1,101.0	4,561.2	4,469.5	91.68	49.750	
12,303.1	6,638.5	6,250.0	6,091.1	161.9	25.4	-25.59	75.4	-1,101.0	4,564.3	4,472.5	91.72	49.760	
12,400.0	6,638.3	6,250.0	6,091.1	164.6	25.4	-25.59	75.4	-1,101.0	4,660.3	4,567.2	93.05	50.082	
12,401.5	6,638.3	6,250.0	6,091.1	164.6	25.4	-25.59	75.4	-1,101.0	4,661.8	4,568.7	93.07	50.087	
12,500.0	6,638.2	6,250.0	6,091.1	167.4	25.4	-25.59	75.4	-1,101.0	4,759.4	4,665.0	94.42	50.405	
12,598.4	6,638.1	6,250.0	6,091.1	170.2	25.4	-25.59	75.4	-1,101.0	4,857.0	4,761.2	95.77	50.714	
12,600.0	6,638.1	6,250.0	6,091.1	170.2	25.4	-25.59	75.4	-1,101.0	4,858.6	4,762.8	95.79	50.719	
12,696.8	6,638.0	6,250.0	6,091.1	172.9	25.4	-25.59	75.4	-1,101.0	4,954.7	4,857.6	97.12	51.015	
12,700.0	6,638.0	6,250.0	6,091.1	173.0	25.4	-25.59	75.4	-1,101.0	4,957.8	4,860.7	97.17	51.025	
12,795.2	6,637.8	6,250.0	6,091.1	175.7	25.4	-25.59	75.4	-1,101.0	5,052.4	4,953.9	98.47	51.308	
12,800.0	6,637.8	6,250.0	6,091.1	175.8	25.4	-25.59	75.4	-1,101.0	5,057.1	4,958.5	98.54	51.322	
12,893.7	6,637.7	6,250.0	6,091.1	178.4	25.4	-25.59	75.4	-1,101.0	5,150.1	5,050.2	99.82	51.593	
12,900.0	6,637.7	6,250.0	6,091.1	178.6	25.4	-25.59	75.4	-1,101.0	5,156.3	5,056.4	99.91	51.611	
12,992.1	6,637.6	6,250.0	6,091.1	181.2	25.4	-25.59	75.4	-1,101.0	5,247.8	5,146.6	101.17	51.870	
13,000.0	6,637.6	6,250.0	6,091.1	181.4	25.4	-25.59	75.4	-1,101.0	5,255.7	5,154.4	101.28	51.892	
13,090.5	6,637.5	6,250.0	6,091.1	183.9	25.4	-25.59	75.4	-1,101.0	5,345.6	5,243.0	102.52	52.141	
13,100.0	6,637.5	6,250.0	6,091.1	184.2	25.4	-25.59	75.4	-1,101.0	5,355.0	5,252.3	102.65	52.166	
13,188.9	6,637.4	6,250.0	6,091.1	186.7	25.4	-25.59	75.4	-1,101.0	5,443.4	5,339.5	103.87	52.404	
13,200.0	6,637.3	6,250.0	6,091.1	187.0	25.4	-25.59	75.4	-1,101.0	5,454.3	5,350.3	104.02	52.433	
13,287.4	6,637.2	6,250.0	6,091.1	189.4	25.4	-25.59	75.4	-1,101.0	5,541.2	5,435.9	105.22	52.661	
13,300.0	6,637.2	6,250.0	6,091.1	189.8	25.4	-25.59	75.4	-1,101.0	5,553.7	5,448.3	105.40	52.693	
13,385.8	6,637.1	6,250.0	6,091.1	192.2	25.4	-25.59	75.4	-1,101.0	5,639.0	5,532.4	106.57	52.911	
13,400.0	6,637.1	6,250.0	6,091.1	192.6	25.4	-25.59	75.4	-1,101.0	5,653.1	5,546.3	106.77	52.947	
13,484.2	6,637.0	6,250.0	6,091.1	195.0	25.4	-25.59	75.4	-1,101.0	5,736.8	5,628.9	107.93	53.156	
13,500.0	6,637.0	6,250.0	6,091.1	195.4	25.4	-25.59	75.4	-1,101.0	5,752.5	5,644.4	108.14	53.194	
13,582.6	6,636.9	6,250.0	6,091.1	197.7	25.4	-25.59	75.4	-1,101.0	5,834.7	5,725.4	109.28	53.394	
13,600.0	6,636.8	6,250.0	6,091.1	198.2	25.4	-25.59	75.4	-1,101.0	5,852.0	5,742.5	109.52	53.435	
13,681.1	6,636.7	6,250.0	6,091.1	200.5	25.4	-25.59	75.4	-1,101.0	5,932.6	5,822.0	110.63	53.626	
13,700.0	6,636.7	6,250.0	6,091.1	201.0	25.4	-25.59	75.4	-1,101.0	5,951.4	5,840.5	110.89	53.671	
13,779.5	6,636.6	6,250.0	6,091.1	203.2	25.4	-25.59	75.4	-1,101.0	6,030.5	5,918.5	111.98	53.853	
13,800.0	6,636.6	6,250.0	6,091.1	203.8	25.4	-25.59	75.4	-1,101.0	6,050.9	5,938.6	112.26	53.900	
13,877.9	6,636.5	6,250.0	6,091.1	206.0	25.4	-25.59	75.4	-1,101.0	6,128.4	6,015.1	113.33	54.075	
13,900.0	6,636.5	6,250.0	6,091.1	206.6	25.4	-25.59	75.4	-1,101.0	6,150.4	6,036.8	113.63	54.124	
13,976.3	6,636.4	6,250.0	6,091.1	208.8	25.4	-25.59	75.4	-1,101.0	6,226.4	6,111.7	114.68	54.292	
14,000.0	6,636.3	6,250.0	6,091.1	209.4	25.4	-25.59	75.4	-1,101.0	6,249.9	6,134.9	115.01	54.343	
14,074.8	6,636.2	6,250.0	6,091.1	211.5	25.4	-25.59	75.4	-1,101.0	6,324.3	6,208.3	116.04	54.503	
14,100.0	6,636.2	6,250.0	6,091.1	212.2	25.4	-25.59	75.4	-1,101.0	6,349.4	6,233.1	116.38	54.557	
14,173.2	6,636.1	6,250.0	6,091.1	214.3	25.4	-25.59	75.4	-1,101.0	6,422.3	6,304.9	117.39	54.710	
14,200.0	6,636.1	6,250.0	6,091.1	215.0	25.4	-25.59	75.4	-1,101.0	6,449.0	6,331.2	117.76	54.766	
14,271.6	6,636.0	6,250.0	6,091.1	217.0	25.4	-25.59	75.4	-1,101.0	6,520.3	6,401.5	118.74	54.912	
14,300.0	6,636.0	6,250.0	6,091.1	217.8	25.4	-25.59	75.4	-1,101.0	6,548.5	6,429.4	119.13	54.970	
14,370.0	6,635.9	6,250.0	6,091.1	219.8	25.4	-25.59	75.4	-1,101.0	6,618.3	6,498.2	120.09	55.110	
14,400.0	6,635.8	6,250.0	6,091.1	220.6	25.4	-25.59	75.4	-1,101.0	6,648.1	6,527.6	120.50	55.169	
14,468.5	6,635.7	6,250.0	6,091.1	222.6	25.4	-25.59	75.4	-1,101.0	6,716.3	6,594.8	121.44	55.303	
14,500.0	6,635.7	6,250.0	6,091.1	223.4	25.4	-25.59	75.4	-1,101.0	6,747.7	6,625.8	121.88	55.364	
14,566.9	6,635.6	6,227.4	6,068.5	225.3	25.4	-24.71	75.4	-1,103.3	6,813.9	6,693.9	119.97	56.795	
14,600.0	6,635.6	6,227.1	6,068.3	226.2	25.4	-24.70	75.4	-1,103.3	6,846.9	6,726.5	120.39	56.874	
14,665.3	6,635.5	6,226.6	6,067.8	228.1	25.4	-24.68	75.4	-1,103.3	6,911.9	6,790.7	121.20	57.029	
14,700.0	6,635.5	6,226.3	6,067.5	229.0	25.4	-24.67	75.4	-1,103.4	6,946.4	6,824.8	121.63	57.110	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,763.7	6,635.4	6,225.8	6,067.0	230.8	25.4	-24.65	75.4	-1,103.4	7,009.9	6,887.5	122.43	57.258	
14,800.0	6,635.3	6,225.5	6,066.7	231.8	25.4	-24.64	75.4	-1,103.4	7,046.0	6,923.1	122.88	57.341	
14,862.2	6,635.2	6,225.1	6,066.3	233.6	25.4	-24.62	75.4	-1,103.5	7,108.0	6,984.3	123.65	57.483	
14,900.0	6,635.2	6,224.8	6,066.0	234.7	25.4	-24.61	75.4	-1,103.5	7,145.6	7,021.5	124.13	57.568	
14,960.6	6,635.1	6,224.3	6,065.5	236.4	25.4	-24.60	75.4	-1,103.5	7,206.0	7,081.1	124.88	57.702	
14,995.1	6,635.0	6,224.1	6,065.3	237.3	25.4	-24.59	75.4	-1,103.5	7,240.4	7,115.1	125.32	57.774	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-178.94	-30.2	-0.6	30.2				
98.4	98.4	98.4	98.4	0.1	0.1	-178.94	-30.2	-0.6	30.2	30.0	0.19	157.301	
100.0	100.0	100.0	100.0	0.1	0.1	-178.94	-30.2	-0.6	30.2	30.0	0.20	154.638	
196.8	196.8	196.8	196.8	0.3	0.3	-178.94	-30.2	-0.6	30.2	29.6	0.63	47.928	
200.0	200.0	200.0	200.0	0.3	0.3	-178.94	-30.2	-0.6	30.2	29.6	0.65	46.876	
295.3	295.3	295.3	295.3	0.5	0.5	-178.94	-30.2	-0.6	30.2	29.2	1.07	28.172	
300.0	300.0	300.0	300.0	0.5	0.5	-178.94	-30.2	-0.6	30.2	29.1	1.09	27.625	
393.7	393.7	393.7	393.7	0.8	0.8	-178.94	-30.2	-0.6	30.2	28.7	1.52	19.949	
400.0	400.0	400.0	400.0	0.8	0.8	-178.94	-30.2	-0.6	30.2	28.7	1.54	19.583	
492.1	492.1	492.1	492.1	1.0	1.0	-178.94	-30.2	-0.6	30.2	28.3	1.96	15.442	
500.0	500.0	500.0	500.0	1.0	1.0	-178.94	-30.2	-0.6	30.2	28.2	1.99	15.167	
590.5	590.5	590.5	590.5	1.2	1.2	-178.94	-30.2	-0.6	30.2	27.8	2.40	12.596	
600.0	600.0	600.0	600.0	1.2	1.2	-178.94	-30.2	-0.6	30.2	27.8	2.44	12.377	
689.0	689.0	689.0	689.0	1.4	1.4	-178.94	-30.2	-0.6	30.2	27.4	2.84	10.636	
700.0	700.0	700.0	700.0	1.4	1.4	-178.94	-30.2	-0.6	30.2	27.3	2.89	10.453	
787.4	787.4	787.4	787.4	1.6	1.6	-178.94	-30.2	-0.6	30.2	27.0	3.29	9.203	
800.0	800.0	800.0	800.0	1.7	1.7	-178.94	-30.2	-0.6	30.2	26.9	3.34	9.047	
885.8	885.8	885.8	885.8	1.9	1.9	-178.94	-30.2	-0.6	30.2	26.5	3.73	8.111	
900.0	900.0	900.0	900.0	1.9	1.9	-178.94	-30.2	-0.6	30.2	26.4	3.79	7.975	
984.2	984.2	984.2	984.2	2.1	2.1	-178.94	-30.2	-0.6	30.2	26.1	4.17	7.251	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-178.94	-30.2	-0.6	30.2	26.0	4.24	7.130	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-178.94	-30.2	-0.6	30.2	25.6	4.61	6.555	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-178.94	-30.2	-0.6	30.2	25.5	4.69	6.446	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	-178.94	-30.2	-0.6	30.2	25.2	5.06	5.981	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-178.94	-30.2	-0.6	30.2	25.1	5.14	5.883	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	-178.94	-30.2	-0.6	30.2	24.7	5.50	5.500	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-178.94	-30.2	-0.6	30.2	24.6	5.59	5.410 CC	
1,377.9	1,377.9	1,377.9	1,377.9	3.0	3.0	141.12	-30.2	-0.6	31.1	25.1	5.94	5.231	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	141.89	-30.2	-0.6	31.6	25.6	6.04	5.235	
1,476.4	1,476.3	1,476.3	1,476.3	3.2	3.2	145.62	-30.2	-0.6	34.6	28.2	6.37	5.425	
1,500.0	1,499.8	1,499.8	1,499.8	3.2	3.2	147.01	-30.2	-0.6	35.9	29.4	6.47	5.538	
1,574.8	1,574.4	1,574.7	1,574.7	3.4	3.4	150.39	-30.1	0.4	40.9	34.1	6.79	6.013	
1,600.0	1,599.5	1,600.0	1,600.0	3.5	3.5	151.08	-30.0	1.2	42.8	35.9	6.90	6.202	
1,673.2	1,672.2	1,673.4	1,673.3	3.6	3.6	152.05	-29.5	4.6	49.1	41.9	7.21	6.815	
1,700.0	1,698.7	1,700.2	1,700.0	3.7	3.7	152.10	-29.3	6.4	51.7	44.4	7.32	7.061	
1,771.6	1,769.5	1,771.9	1,771.5	3.9	3.8	151.64	-28.4	12.2	59.1	51.5	7.63	7.754	
1,800.0	1,797.5	1,800.3	1,799.8	4.0	3.9	151.27	-28.0	15.0	62.4	54.6	7.75	8.048	
1,870.1	1,866.3	1,870.4	1,869.4	4.2	4.0	150.04	-26.9	23.1	70.9	62.9	8.07	8.791	
1,899.9	1,895.6	1,900.3	1,899.0	4.3	4.1	149.42	-26.4	27.1	74.9	66.7	8.21	9.126	
1,968.5	1,962.6	1,968.8	1,966.7	4.5	4.3	147.66	-24.9	37.3	83.9	75.3	8.57	9.791	
2,000.0	1,993.4	2,000.3	1,997.7	4.6	4.4	146.63	-24.2	42.6	87.9	79.2	8.74	10.061	
2,066.9	2,058.9	2,067.1	2,063.4	4.8	4.6	144.05	-22.5	54.8	96.2	87.1	9.14	10.534	
2,100.0	2,091.3	2,100.1	2,095.7	4.9	4.7	142.62	-21.5	61.5	100.3	91.0	9.33	10.745	
2,165.3	2,155.2	2,164.8	2,159.0	5.2	4.9	139.93	-19.7	74.8	108.4	98.6	9.76	11.111	
2,200.0	2,189.1	2,199.0	2,192.5	5.3	5.0	138.67	-18.7	81.8	112.8	102.8	9.98	11.297	
2,263.8	2,251.5	2,262.1	2,254.2	5.5	5.2	136.57	-16.9	94.8	121.0	110.5	10.42	11.612	
2,300.0	2,286.9	2,298.0	2,289.3	5.7	5.3	135.51	-15.8	102.2	125.7	115.0	10.67	11.784	
2,362.2	2,347.7	2,359.5	2,349.5	5.9	5.5	133.85	-14.0	114.9	133.9	122.8	11.11	12.053	
2,400.0	2,384.7	2,396.9	2,386.1	6.0	5.7	132.94	-13.0	122.6	138.9	127.5	11.38	12.209	
2,460.6	2,444.0	2,456.9	2,444.7	6.3	5.9	131.61	-11.2	134.9	147.0	135.2	11.82	12.439	
2,500.0	2,482.5	2,495.9	2,482.9	6.4	6.0	130.82	-10.1	142.9	152.3	140.2	12.11	12.581	
2,559.0	2,540.3	2,554.3	2,540.0	6.7	6.3	129.74	-8.4	155.0	160.4	147.8	12.55	12.776	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,580.3	2,594.8	2,579.6	6.8	6.4	129.05	-7.2	163.3	166.0	153.1	12.86	12.906	
2,657.5	2,636.5	2,651.7	2,635.3	7.1	6.6	128.16	-5.6	175.0	173.8	160.5	13.30	13.072	
2,700.0	2,678.1	2,693.8	2,676.4	7.2	6.8	127.55	-4.4	183.7	179.7	166.1	13.62	13.190	
2,755.9	2,732.8	2,749.1	2,730.5	7.5	7.0	126.80	-2.8	195.1	187.4	173.4	14.06	13.333	
2,800.0	2,776.0	2,792.7	2,773.2	7.7	7.2	126.26	-1.5	204.1	193.6	179.2	14.40	13.440	
2,854.3	2,829.1	2,846.5	2,825.8	7.9	7.4	125.63	0.0	215.1	201.1	186.3	14.83	13.563	
2,900.0	2,873.8	2,891.7	2,870.0	8.1	7.6	125.14	1.3	224.4	207.5	192.3	15.19	13.661	
2,952.7	2,925.4	2,943.9	2,921.1	8.3	7.8	124.61	2.8	235.2	214.9	199.3	15.61	13.768	
3,000.0	2,971.6	2,990.9	2,967.1	8.5	8.0	124.21	4.2	244.7	221.5	205.5	15.97	13.871	
3,051.2	3,021.6	3,042.0	3,017.3	8.7	8.2	124.01	5.5	254.2	228.6	212.2	16.32	14.002	
3,100.0	3,069.4	3,090.8	3,065.3	8.9	8.3	124.03	6.7	262.5	235.2	218.6	16.65	14.125	
3,149.6	3,117.9	3,140.3	3,114.3	9.1	8.4	124.26	7.7	270.0	241.9	224.9	16.97	14.251	
3,200.0	3,167.2	3,190.7	3,164.2	9.3	8.6	124.69	8.7	276.9	248.6	231.3	17.29	14.376	
3,248.0	3,214.2	3,238.6	3,211.8	9.5	8.7	125.25	9.5	282.5	254.9	237.4	17.58	14.500	
3,300.0	3,265.0	3,290.4	3,263.3	9.8	8.8	126.03	10.2	287.8	261.7	243.9	17.88	14.636	
3,346.4	3,310.5	3,336.6	3,309.3	10.0	8.9	126.86	10.8	291.7	267.8	249.7	18.14	14.767	
3,400.0	3,362.9	3,389.6	3,362.2	10.2	9.1	127.97	11.3	295.3	274.9	256.4	18.42	14.925	
3,444.9	3,406.7	3,434.0	3,406.5	10.4	9.1	129.00	11.6	297.5	280.8	262.2	18.63	15.072	
3,473.0	3,434.2	3,461.6	3,434.1	10.5	9.2	129.69	11.7	298.6	284.6	265.8	18.76	15.168	
3,500.0	3,460.7	3,488.2	3,460.7	10.6	9.2	130.43	11.8	299.4	288.2	269.3	18.88	15.265	
3,543.3	3,503.2	3,530.8	3,503.3	10.7	9.3	131.58	11.9	300.1	293.6	274.6	19.03	15.432	
3,600.0	3,559.0	3,586.5	3,559.0	10.9	9.4	133.05	12.0	300.2	300.3	281.1	19.22	15.628	
3,641.7	3,600.2	3,627.7	3,600.2	11.0	9.5	134.01	12.0	300.2	304.9	285.5	19.36	15.752	
3,700.0	3,657.9	3,685.4	3,657.9	11.2	9.6	135.17	12.0	300.2	310.6	291.1	19.55	15.886	
3,740.1	3,697.8	3,725.3	3,697.8	11.3	9.7	135.85	12.0	300.2	314.2	294.5	19.69	15.960	
3,800.0	3,757.3	3,784.8	3,757.3	11.4	9.8	136.70	12.0	300.2	318.7	298.9	19.89	16.028	
3,838.6	3,795.7	3,823.2	3,795.7	11.5	9.8	137.15	12.0	300.2	321.2	301.2	20.01	16.053	
3,900.0	3,857.0	3,884.5	3,857.0	11.7	9.9	137.72	12.0	300.2	324.5	304.2	20.21	16.051	
3,937.0	3,893.9	3,921.4	3,893.9	11.7	10.0	137.98	12.0	300.2	325.9	305.6	20.33	16.031	
4,000.0	3,956.9	3,984.4	3,956.9	11.8	10.1	138.27	12.0	300.2	327.6	307.1	20.54	15.955	
4,035.4	3,992.3	4,019.8	3,992.3	11.9	10.2	138.35	12.0	300.2	328.2	307.5	20.65	15.893	
4,072.9	4,029.8	4,057.3	4,029.8	11.9	10.3	179.57	12.0	300.2	328.3	308.8	19.52	16.822	
4,100.0	4,056.9	4,084.4	4,056.9	12.0	10.3	179.57	12.0	300.2	328.3	308.7	19.62	16.735	
4,133.8	4,090.7	4,118.2	4,090.7	12.0	10.4	179.57	12.0	300.2	328.3	308.6	19.75	16.624	
4,200.0	4,156.9	4,184.4	4,156.9	12.1	10.5	179.57	12.0	300.2	328.3	308.3	20.01	16.410	
4,232.3	4,189.2	4,216.7	4,189.2	12.2	10.6	179.57	12.0	300.2	328.3	308.2	20.13	16.308	
4,300.0	4,256.9	4,284.4	4,256.9	12.3	10.7	179.57	12.0	300.2	328.3	307.9	20.40	16.096	
4,330.7	4,287.6	4,315.1	4,287.6	12.4	10.7	179.57	12.0	300.2	328.3	307.8	20.52	16.002	
4,400.0	4,356.9	4,384.4	4,356.9	12.5	10.9	179.57	12.0	300.2	328.3	307.6	20.79	15.793	
4,429.1	4,386.0	4,413.5	4,386.0	12.5	10.9	179.57	12.0	300.2	328.3	307.4	20.91	15.706	
4,500.0	4,456.9	4,484.4	4,456.9	12.6	11.1	179.57	12.0	300.2	328.3	307.2	21.19	15.499	
4,527.5	4,484.4	4,511.9	4,484.4	12.7	11.1	179.57	12.0	300.2	328.3	307.0	21.29	15.419	
4,600.0	4,556.9	4,584.4	4,556.9	12.8	11.3	179.57	12.0	300.2	328.3	306.8	21.58	15.214	
4,626.0	4,582.9	4,610.4	4,582.9	12.9	11.3	179.57	12.0	300.2	328.3	306.7	21.69	15.141	
4,700.0	4,656.9	4,684.4	4,656.9	13.0	11.5	179.57	12.0	300.2	328.3	306.4	21.98	14.938	
4,724.4	4,681.3	4,708.8	4,681.3	13.0	11.5	179.57	12.0	300.2	328.3	306.3	22.08	14.872	
4,800.0	4,756.9	4,784.4	4,756.9	13.1	11.6	179.57	12.0	300.2	328.3	306.0	22.38	14.671	
4,822.8	4,779.7	4,807.2	4,779.7	13.2	11.7	179.57	12.0	300.2	328.3	305.9	22.47	14.611	
4,900.0	4,856.9	4,884.4	4,856.9	13.3	11.8	179.57	12.0	300.2	328.3	305.6	22.78	14.412	
4,921.2	4,878.1	4,905.6	4,878.1	13.4	11.9	179.57	12.0	300.2	328.3	305.5	22.87	14.358	
5,000.0	4,956.9	4,984.4	4,956.9	13.5	12.0	179.57	12.0	300.2	328.3	305.2	23.19	14.161	
5,019.7	4,976.6	5,004.1	4,976.6	13.5	12.1	179.57	12.0	300.2	328.3	305.1	23.27	14.113	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	5,056.9	5,084.4	5,056.9	13.7	12.2	179.57	12.0	300.2	328.3	304.8	23.59	13.918		
5,118.1	5,075.0	5,102.5	5,075.0	13.7	12.3	179.57	12.0	300.2	328.3	304.7	23.66	13.875		
5,200.0	5,156.9	5,184.4	5,156.9	13.8	12.4	179.57	12.0	300.2	328.3	304.3	24.00	13.682		
5,216.5	5,173.4	5,200.9	5,173.4	13.9	12.5	179.57	12.0	300.2	328.3	304.3	24.07	13.644		
5,300.0	5,256.9	5,284.4	5,256.9	14.0	12.6	179.57	12.0	300.2	328.3	303.9	24.41	13.453		
5,314.9	5,271.8	5,299.3	5,271.8	14.1	12.7	179.57	12.0	300.2	328.3	303.9	24.47	13.420		
5,400.0	5,356.9	5,384.4	5,356.9	14.2	12.8	179.57	12.0	300.2	328.3	303.5	24.82	13.231		
5,413.4	5,370.3	5,397.8	5,370.3	14.2	12.9	179.57	12.0	300.2	328.3	303.5	24.87	13.202		
5,500.0	5,456.9	5,484.4	5,456.9	14.4	13.0	179.57	12.0	300.2	328.3	303.1	25.23	13.016		
5,511.8	5,468.7	5,496.2	5,468.7	14.4	13.1	179.57	12.0	300.2	328.3	303.1	25.27	12.991		
5,600.0	5,556.9	5,584.4	5,556.9	14.6	13.2	179.57	12.0	300.2	328.3	302.7	25.64	12.807		
5,610.2	5,567.1	5,594.6	5,567.1	14.6	13.3	179.57	12.0	300.2	328.3	302.7	25.68	12.786		
5,700.0	5,656.9	5,684.4	5,656.9	14.7	13.4	179.57	12.0	300.2	328.3	302.3	26.05	12.604		
5,708.6	5,665.5	5,693.0	5,665.5	14.8	13.5	179.57	12.0	300.2	328.3	302.3	26.09	12.586		
5,800.0	5,756.9	5,784.4	5,756.9	14.9	13.6	179.57	12.0	300.2	328.3	301.9	26.47	12.406		
5,807.1	5,764.0	5,791.5	5,764.0	14.9	13.7	179.57	12.0	300.2	328.3	301.8	26.49	12.393		
5,900.0	5,856.9	5,884.4	5,856.9	15.1	13.8	179.57	12.0	300.2	328.3	301.5	26.88	12.215		
5,905.5	5,862.4	5,889.9	5,862.4	15.1	13.9	179.57	12.0	300.2	328.3	301.4	26.90	12.204		
5,971.9	5,928.8	5,956.3	5,928.8	15.3	14.0	179.57	12.0	300.2	328.3	301.2	27.18	12.080		
6,000.0	5,956.9	5,984.4	5,956.9	15.3	14.1	-90.52	12.0	300.2	328.3	300.1	28.28	11.609		
6,003.9	5,960.8	5,988.3	5,960.8	15.3	14.1	-90.55	12.0	300.2	328.3	300.0	28.30	11.603		
6,050.0	6,006.7	6,034.3	6,006.8	15.4	14.2	-91.15	12.0	300.2	328.4	299.9	28.48	11.531		
6,100.0	6,056.2	6,084.7	6,057.1	15.4	14.2	-92.00	12.0	297.9	328.5	299.9	28.65	11.469		
6,102.3	6,058.5	6,087.1	6,059.5	15.4	14.2	-92.04	12.0	297.7	328.5	299.9	28.65	11.467		
6,150.0	6,105.1	6,135.5	6,107.5	15.4	14.3	-92.84	12.0	291.9	328.7	300.0	28.77	11.425		
6,200.0	6,153.0	6,186.6	6,157.7	15.5	14.3	-93.66	12.0	282.4	329.0	300.1	28.87	11.396		
6,200.8	6,153.8	6,187.4	6,158.5	15.5	14.3	-93.68	12.0	282.2	329.0	300.1	28.87	11.395		
6,250.0	6,199.9	6,238.1	6,207.5	15.5	14.4	-94.47	12.0	269.2	329.3	300.4	28.94	11.379		
6,299.2	6,244.8	6,289.0	6,255.7	15.5	14.4	-95.25	12.0	252.6	329.7	300.7	29.00	11.370		
6,300.0	6,245.5	6,289.9	6,256.4	15.5	14.4	-95.26	12.0	252.3	329.7	300.7	29.00	11.370		
6,350.0	6,289.6	6,342.1	6,304.4	15.5	14.4	-96.03	12.0	231.8	330.2	301.1	29.06	11.363		
6,397.6	6,329.9	6,392.1	6,348.9	15.4	14.5	-96.73	12.0	208.9	330.6	301.5	29.12	11.354		
6,400.0	6,331.8	6,394.6	6,351.0	15.4	14.5	-96.76	12.0	207.6	330.6	301.5	29.12	11.353		
6,450.0	6,372.2	6,447.4	6,396.1	15.4	14.5	-97.46	12.0	180.0	331.2	301.9	29.22	11.332		
6,496.0	6,407.4	6,496.4	6,435.9	15.4	14.6	-98.07	12.0	151.4	331.6	302.3	29.37	11.292		
6,500.0	6,410.3	6,500.6	6,439.2	15.4	14.6	-98.12	12.0	148.8	331.7	302.3	29.38	11.289		
6,550.0	6,446.1	6,554.2	6,480.1	15.4	14.7	-98.74	12.0	114.4	332.2	302.6	29.62	11.214		
6,594.5	6,475.9	6,602.0	6,514.5	15.4	14.9	-99.26	12.0	81.1	332.7	302.8	29.93	11.114		
6,600.0	6,479.4	6,608.0	6,518.6	15.4	14.9	-99.32	12.0	76.7	332.7	302.8	29.98	11.099		
6,650.0	6,510.0	6,662.1	6,554.3	15.5	15.2	-99.85	12.0	36.1	333.3	302.8	30.47	10.937		
6,692.9	6,534.0	6,708.7	6,582.5	15.7	15.5	-100.26	12.0	-1.0	333.7	302.7	31.02	10.757		
6,700.0	6,537.8	6,716.4	6,587.0	15.7	15.5	-100.32	12.0	-7.3	333.8	302.6	31.12	10.724		
6,750.0	6,562.6	6,771.0	6,616.4	16.2	16.0	-100.75	12.0	-53.3	334.2	302.3	31.95	10.460		
6,791.3	6,580.8	6,816.3	6,638.1	16.6	16.4	-101.05	12.0	-93.1	334.5	301.8	32.79	10.203		
6,800.0	6,584.3	6,825.9	6,642.3	16.7	16.5	-101.11	12.0	-101.6	334.6	301.6	32.97	10.149		
6,850.0	6,602.9	6,880.9	6,664.5	17.3	17.2	-101.42	12.0	-151.9	335.0	300.8	34.18	9.799		
6,889.7	6,615.2	6,924.7	6,679.4	17.9	17.8	-101.62	12.0	-193.1	335.2	299.9	35.29	9.498		
6,900.0	6,618.1	6,936.0	6,682.9	18.0	17.9	-101.67	12.0	-203.9	335.3	299.7	35.59	9.421		
6,950.0	6,630.0	6,991.3	6,697.2	18.8	18.8	-101.85	12.0	-257.2	335.5	298.3	37.17	9.027		
6,988.2	6,636.8	7,033.5	6,705.3	19.5	19.5	-101.95	12.0	-298.7	335.6	297.1	38.49	8.720		
7,000.0	6,638.5	7,046.6	6,707.4	19.7	19.7	-101.98	12.0	-311.6	335.6	296.7	38.90	8.627		
7,050.0	6,643.5	7,102.0	6,713.3	20.6	20.7	-102.04	12.0	-366.7	335.7	294.9	40.78	8.232		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,644.9	7,142.6	6,714.9	21.3	21.5	-102.04	12.0	-407.2	335.7	293.5	42.23	7.949	
7,097.8	6,645.0	7,154.8	6,715.0	21.5	21.8	-102.03	12.0	-419.4	335.7	293.0	42.68	7.866	
7,100.0	6,645.0	7,157.0	6,715.0	21.6	21.8	-102.03	12.0	-421.6	335.7	292.9	42.76	7.851	
7,185.0	6,644.9	7,242.0	6,714.8	23.3	23.5	-102.02	12.0	-506.6	335.7	289.5	46.16	7.273	
7,200.0	6,644.9	7,257.0	6,714.8	23.6	23.9	-102.02	12.0	-521.6	335.7	288.9	46.77	7.178	
7,283.4	6,644.8	7,340.4	6,714.6	25.4	25.7	-102.01	12.0	-605.1	335.7	285.4	50.31	6.672	
7,300.0	6,644.7	7,357.0	6,714.6	25.8	26.0	-102.01	12.0	-621.6	335.7	284.7	51.03	6.578	
7,381.9	6,644.6	7,438.9	6,714.4	27.7	27.9	-102.00	12.0	-703.5	335.7	281.0	54.69	6.137	
7,400.0	6,644.6	7,457.0	6,714.4	28.1	28.3	-102.00	12.0	-721.6	335.7	280.2	55.51	6.047	
7,480.3	6,644.5	7,537.3	6,714.2	30.0	30.2	-101.99	12.0	-801.9	335.7	276.4	59.24	5.666	
7,500.0	6,644.5	7,557.0	6,714.2	30.5	30.7	-101.99	12.0	-821.6	335.7	275.5	60.17	5.579	
7,578.7	6,644.4	7,635.7	6,714.1	32.4	32.6	-101.98	12.0	-900.3	335.6	271.7	63.93	5.250	
7,600.0	6,644.4	7,657.0	6,714.0	32.9	33.2	-101.98	12.0	-921.6	335.6	270.7	64.96	5.167	
7,677.1	6,644.3	7,734.1	6,713.9	34.8	35.1	-101.97	12.0	-998.8	335.6	266.9	68.73	4.883	
7,700.0	6,644.2	7,757.0	6,713.8	35.4	35.7	-101.96	12.0	-1,021.6	335.6	265.8	69.85	4.805	
7,775.6	6,644.1	7,832.6	6,713.7	37.3	37.6	-101.96	12.0	-1,097.2	335.6	262.0	73.61	4.559	
7,800.0	6,644.1	7,857.0	6,713.6	38.0	38.2	-101.95	12.0	-1,121.6	335.6	260.8	74.84	4.485	
7,874.0	6,644.0	7,931.0	6,713.5	39.9	40.1	-101.94	12.0	-1,195.6	335.6	257.0	78.57	4.271	
7,900.0	6,644.0	7,957.0	6,713.4	40.5	40.8	-101.94	12.0	-1,221.6	335.6	255.7	79.89	4.201	
7,972.4	6,643.9	8,029.4	6,713.3	42.4	42.7	-101.93	12.0	-1,294.0	335.6	252.0	83.59	4.015	
8,000.0	6,643.9	8,057.0	6,713.2	43.1	43.4	-101.93	12.0	-1,321.6	335.6	250.6	85.00	3.948	
8,070.8	6,643.8	8,127.8	6,713.1	45.0	45.2	-101.92	12.0	-1,392.5	335.6	246.9	88.65	3.785	
8,100.0	6,643.7	8,157.0	6,713.0	45.8	46.0	-101.92	12.0	-1,421.6	335.6	245.4	90.16	3.722	
8,169.3	6,643.7	8,226.3	6,712.9	47.6	47.8	-101.91	12.0	-1,490.9	335.6	241.8	93.76	3.579	
8,200.0	6,643.6	8,257.0	6,712.9	48.4	48.7	-101.91	12.0	-1,521.6	335.6	240.2	95.36	3.519	
8,267.7	6,643.5	8,324.7	6,712.7	50.2	50.5	-101.90	12.0	-1,589.3	335.5	236.6	98.90	3.393	
8,300.0	6,643.5	8,357.0	6,712.7	51.1	51.3	-101.90	12.0	-1,621.6	335.5	234.9	100.59	3.336	
8,366.1	6,643.4	8,423.1	6,712.5	52.9	53.1	-101.89	12.0	-1,687.7	335.5	231.5	104.07	3.224	
8,400.0	6,643.4	8,457.0	6,712.5	53.8	54.0	-101.88	12.0	-1,721.6	335.5	229.7	105.85	3.170	
8,464.5	6,643.3	8,521.5	6,712.3	55.5	55.8	-101.88	12.0	-1,786.2	335.5	226.3	109.26	3.071	
8,500.0	6,643.2	8,557.0	6,712.3	56.5	56.7	-101.87	12.0	-1,821.6	335.5	224.4	111.14	3.019	
8,563.0	6,643.2	8,620.0	6,712.1	58.2	58.4	-101.87	12.0	-1,884.6	335.5	221.0	114.48	2.931	
8,600.0	6,643.1	8,657.0	6,712.1	59.2	59.4	-101.86	12.0	-1,921.6	335.5	219.0	116.45	2.881	
8,661.4	6,643.0	8,718.4	6,712.0	60.8	61.1	-101.86	12.0	-1,983.0	335.5	215.8	119.72	2.802	
8,700.0	6,643.0	8,757.0	6,711.9	61.9	62.1	-101.85	12.0	-2,021.6	335.5	213.7	121.78	2.755	
8,759.8	6,642.9	8,816.8	6,711.8	63.5	63.8	-101.84	12.0	-2,081.4	335.5	210.5	124.97	2.684	
8,800.0	6,642.9	8,857.0	6,711.7	64.6	64.9	-101.84	12.0	-2,121.6	335.5	208.3	127.12	2.639	
8,858.2	6,642.8	8,915.2	6,711.6	66.2	66.4	-101.83	12.0	-2,179.9	335.5	205.2	130.24	2.576	
8,900.0	6,642.7	8,957.0	6,711.5	67.3	67.6	-101.83	12.0	-2,221.6	335.5	203.0	132.48	2.532	
8,956.7	6,642.7	9,013.7	6,711.4	68.9	69.1	-101.82	12.0	-2,278.3	335.4	199.9	135.52	2.475	
9,000.0	6,642.6	9,057.0	6,711.3	70.1	70.3	-101.82	12.0	-2,321.6	335.4	197.6	137.85	2.433	
9,055.1	6,642.5	9,112.1	6,711.2	71.6	71.8	-101.81	12.0	-2,376.7	335.4	194.6	140.82	2.382	
9,100.0	6,642.5	9,157.0	6,711.1	72.8	73.1	-101.81	12.0	-2,421.6	335.4	192.2	143.23	2.342	
9,153.5	6,642.4	9,210.5	6,711.0	74.3	74.5	-101.80	12.0	-2,475.1	335.4	189.3	146.12	2.296	
9,200.0	6,642.4	9,257.0	6,710.9	75.6	75.8	-101.79	12.0	-2,521.6	335.4	186.8	148.63	2.257	
9,251.9	6,642.3	9,308.9	6,710.8	77.0	77.2	-101.79	12.0	-2,573.6	335.4	184.0	151.43	2.215	
9,300.0	6,642.2	9,357.0	6,710.7	78.3	78.6	-101.78	12.0	-2,621.6	335.4	181.4	154.03	2.177	
9,350.4	6,642.2	9,407.4	6,710.6	79.7	80.0	-101.78	12.0	-2,672.0	335.4	178.6	156.76	2.140	
9,400.0	6,642.1	9,457.0	6,710.5	81.1	81.3	-101.77	12.0	-2,721.6	335.4	175.9	159.44	2.104	
9,448.8	6,642.0	9,505.8	6,710.4	82.4	82.7	-101.77	12.0	-2,770.4	335.4	173.3	162.09	2.069	
9,500.0	6,642.0	9,557.0	6,710.3	83.8	84.1	-101.76	12.0	-2,821.6	335.4	170.5	164.86	2.034	
9,547.2	6,641.9	9,604.2	6,710.3	85.1	85.4	-101.76	12.0	-2,868.8	335.4	167.9	167.42	2.003	

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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,641.9	9,657.0	6,710.2	86.6	86.8	-101.75	12.0	-2,921.6	335.4	165.1	170.29	1.969					
9,645.6	6,641.8	9,702.6	6,710.1	87.9	88.1	-101.75	12.0	-2,967.3	335.4	162.6	172.77	1.941					
9,700.0	6,641.7	9,757.0	6,710.0	89.4	89.6	-101.74	12.0	-3,021.6	335.3	159.6	175.72	1.908					
9,744.1	6,641.7	9,801.0	6,709.9	90.6	90.8	-101.73	12.0	-3,065.7	335.3	157.2	178.11	1.883					
9,800.0	6,641.6	9,857.0	6,709.8	92.1	92.4	-101.73	12.0	-3,121.6	335.3	154.2	181.16	1.851					
9,842.5	6,641.6	9,899.5	6,709.7	93.3	93.6	-101.72	12.0	-3,164.1	335.3	151.9	183.47	1.828					
9,900.0	6,641.5	9,957.0	6,709.6	94.9	95.2	-101.72	12.0	-3,221.6	335.3	148.7	186.60	1.797					
9,940.9	6,641.4	9,997.9	6,709.5	96.0	96.3	-101.71	12.0	-3,262.5	335.3	146.5	188.83	1.776					
10,000.0	6,641.4	10,057.0	6,709.4	97.7	97.9	-101.71	12.0	-3,321.6	335.3	143.3	192.05	1.746					
10,039.3	6,641.3	10,096.3	6,709.3	98.8	99.0	-101.70	12.0	-3,361.0	335.3	141.1	194.19	1.727					
10,100.0	6,641.2	10,157.0	6,709.2	100.4	100.7	-101.70	12.0	-3,421.6	335.3	137.8	197.50	1.698					
10,137.8	6,641.2	10,194.7	6,709.1	101.5	101.7	-101.69	12.0	-3,459.4	335.3	135.7	199.56	1.680					
10,200.0	6,641.1	10,257.0	6,709.0	103.2	103.5	-101.68	12.0	-3,521.6	335.3	132.3	202.96	1.652					
10,236.2	6,641.1	10,293.2	6,708.9	104.2	104.5	-101.68	12.0	-3,557.8	335.3	130.3	204.93	1.636					
10,300.0	6,641.0	10,357.0	6,708.8	106.0	106.3	-101.67	12.0	-3,621.6	335.3	126.9	208.42	1.609					
10,334.6	6,640.9	10,391.6	6,708.7	107.0	107.2	-101.67	12.0	-3,656.2	335.3	125.0	210.31	1.594					
10,400.0	6,640.9	10,457.0	6,708.6	108.8	109.0	-101.66	12.0	-3,721.6	335.3	121.4	213.88	1.567					
10,433.0	6,640.8	10,490.0	6,708.6	109.7	110.0	-101.66	12.0	-3,754.7	335.2	119.6	215.69	1.554					
10,500.0	6,640.7	10,557.0	6,708.4	111.6	111.8	-101.65	12.0	-3,821.6	335.2	115.9	219.35	1.528					
10,531.5	6,640.7	10,588.4	6,708.4	112.4	112.7	-101.65	12.0	-3,853.1	335.2	114.2	221.07	1.516					
10,600.0	6,640.6	10,657.0	6,708.2	114.3	114.6	-101.64	12.0	-3,921.6	335.2	110.4	224.82	1.491 Level 3					
10,629.9	6,640.6	10,686.9	6,708.2	115.2	115.4	-101.64	12.0	-3,951.5	335.2	108.8	226.45	1.480 Level 3					
10,700.0	6,640.5	10,757.0	6,708.0	117.1	117.4	-101.63	12.0	-4,021.6	335.2	104.9	230.29	1.456 Level 3					
10,728.3	6,640.4	10,785.3	6,708.0	117.9	118.2	-101.63	12.0	-4,049.9	335.2	103.4	231.84	1.446 Level 3					
10,800.0	6,640.4	10,857.0	6,707.9	119.9	120.2	-101.62	12.0	-4,121.6	335.2	99.4	235.77	1.422 Level 3					
10,826.7	6,640.3	10,883.7	6,707.8	120.7	120.9	-101.62	12.0	-4,148.4	335.2	98.0	237.23	1.413 Level 3					
10,900.0	6,640.2	10,957.0	6,707.7	122.7	123.0	-101.61	12.0	-4,221.6	335.2	93.9	241.24	1.389 Level 3					
10,925.2	6,640.2	10,982.1	6,707.6	123.4	123.7	-101.61	12.0	-4,246.8	335.2	92.6	242.62	1.381 Level 3					
11,000.0	6,640.1	11,057.0	6,707.5	125.5	125.8	-101.60	12.0	-4,321.6	335.2	88.4	246.73	1.358 Level 3					
11,023.6	6,640.1	11,080.6	6,707.4	126.1	126.4	-101.59	12.0	-4,345.2	335.2	87.2	248.02	1.351 Level 3					
11,100.0	6,640.0	11,157.0	6,707.3	128.3	128.5	-101.59	12.0	-4,421.6	335.2	83.0	252.21	1.329 Level 3					
11,122.0	6,639.9	11,179.0	6,707.2	128.9	129.2	-101.58	12.0	-4,443.6	335.2	81.7	253.42	1.323 Level 3					
11,200.0	6,639.8	11,257.0	6,707.1	131.1	131.3	-101.58	12.0	-4,521.6	335.1	77.5	257.70	1.301 Level 3					
11,220.4	6,639.8	11,277.4	6,707.1	131.6	131.9	-101.57	12.0	-4,542.1	335.1	76.3	258.82	1.295 Level 3					
11,300.0	6,639.7	11,357.0	6,706.9	133.9	134.1	-101.56	12.0	-4,621.6	335.1	72.0	263.18	1.273 Level 3					
11,318.9	6,639.7	11,375.8	6,706.9	134.4	134.6	-101.56	12.0	-4,640.5	335.1	70.9	264.22	1.268 Level 3					
11,400.0	6,639.6	11,457.0	6,706.7	136.7	136.9	-101.55	12.0	-4,721.6	335.1	66.4	268.67	1.247 Level 2					
11,417.3	6,639.6	11,474.3	6,706.7	137.1	137.4	-101.55	12.0	-4,738.9	335.1	65.5	269.62	1.243 Level 2					
11,500.0	6,639.5	11,557.0	6,706.5	139.4	139.7	-101.54	12.0	-4,821.6	335.1	60.9	274.16	1.222 Level 2					
11,515.7	6,639.5	11,572.7	6,706.5	139.9	140.1	-101.54	12.0	-4,837.3	335.1	60.1	275.03	1.218 Level 2					
11,600.0	6,639.3	11,657.0	6,706.3	142.2	142.5	-101.53	12.0	-4,921.6	335.1	55.4	279.66	1.198 Level 2					
11,614.1	6,639.3	11,671.1	6,706.3	142.6	142.9	-101.53	12.0	-4,935.7	335.1	54.7	280.43	1.195 Level 2					
11,700.0	6,639.2	11,757.0	6,706.2	145.0	145.3	-101.52	12.0	-5,021.6	335.1	49.9	285.15	1.175 Level 2					
11,712.6	6,639.2	11,769.5	6,706.1	145.4	145.6	-101.52	12.0	-5,034.2	335.1	49.2	285.84	1.172 Level 2					
11,800.0	6,639.1	11,857.0	6,706.0	147.8	148.1	-101.51	12.0	-5,121.6	335.1	44.4	290.65	1.153 Level 2					
11,811.0	6,639.1	11,868.0	6,705.9	148.1	148.4	-101.51	12.0	-5,132.6	335.1	43.8	291.25	1.150 Level 2					
11,900.0	6,639.0	11,957.0	6,705.8	150.6	150.9	-101.50	12.0	-5,221.6	335.1	38.9	296.15	1.131 Level 2					
11,909.4	6,639.0	11,966.4	6,705.8	150.9	151.1	-101.50	12.0	-5,231.0	335.1	38.4	296.67	1.129 Level 2					
12,000.0	6,638.8	12,057.0	6,705.6	153.4	153.7	-101.49	12.0	-5,321.6	335.0	33.4	301.65	1.111 Level 2					
12,007.8	6,638.8	12,064.8	6,705.6	153.6	153.9	-101.49	12.0	-5,329.4	335.0	33.0	302.08	1.109 Level 2					
12,100.0	6,638.7	12,157.0	6,705.4	156.2	156.5	-101.48	12.0	-5,421.6	335.0	27.9	307.15	1.091 Level 2					
12,106.3	6,638.7	12,163.2	6,705.4	156.4	156.7	-101.48	12.0	-5,427.9	335.0	27.5	307.49	1.090 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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
12,200.0	6,638.6	12,257.0	6,705.2	159.0	159.3	-101.47	12.0	-5,521.6	335.0	22.4	312.65	1.072	Level 2
12,204.7	6,638.6	12,261.7	6,705.2	159.1	159.4	-101.47	12.0	-5,526.3	335.0	22.1	312.91	1.071	Level 2
12,300.0	6,638.5	12,357.0	6,705.0	161.8	162.1	-101.46	12.0	-5,621.6	335.0	16.9	318.15	1.053	Level 2
12,303.1	6,638.5	12,360.1	6,705.0	161.9	162.2	-101.46	12.0	-5,624.7	335.0	16.7	318.33	1.052	Level 2
12,400.0	6,638.3	12,457.0	6,704.8	164.6	164.9	-101.45	12.0	-5,721.6	335.0	11.3	323.66	1.035	Level 2
12,401.5	6,638.3	12,458.5	6,704.8	164.6	164.9	-101.45	12.0	-5,723.1	335.0	11.3	323.74	1.035	Level 2
12,500.0	6,638.2	12,557.0	6,704.6	167.4	167.7	-101.44	12.0	-5,821.6	335.0	5.8	329.16	1.018	Level 2
12,598.4	6,638.1	12,655.4	6,704.5	170.2	170.4	-101.43	12.0	-5,920.0	335.0	0.4	334.58	1.001	Level 2
12,600.0	6,638.1	12,657.0	6,704.5	170.2	170.5	-101.43	12.0	-5,921.6	335.0	0.3	334.67	1.001	Level 2
12,696.8	6,638.0	12,753.8	6,704.3	172.9	173.2	-101.42	12.0	-6,018.4	335.0	-5.0	340.01	0.985	Level 1
12,700.0	6,638.0	12,757.0	6,704.3	173.0	173.3	-101.42	12.0	-6,021.6	335.0	-5.2	340.18	0.985	Level 1
12,795.2	6,637.8	12,852.2	6,704.1	175.7	175.9	-101.41	12.0	-6,116.8	334.9	-10.5	345.43	0.970	Level 1
12,800.0	6,637.8	12,857.0	6,704.1	175.8	176.1	-101.41	12.0	-6,121.6	334.9	-10.7	345.69	0.969	Level 1
12,893.7	6,637.7	12,950.6	6,703.9	178.4	178.7	-101.40	12.0	-6,215.3	334.9	-15.9	350.85	0.955	Level 1
12,900.0	6,637.7	12,957.0	6,703.9	178.6	178.9	-101.40	12.0	-6,221.6	334.9	-16.3	351.20	0.954	Level 1
12,992.1	6,637.6	13,049.1	6,703.7	181.2	181.4	-101.39	12.0	-6,313.7	334.9	-21.4	356.28	0.940	Level 1
13,000.0	6,637.6	13,057.0	6,703.7	181.4	181.7	-101.39	12.0	-6,321.6	334.9	-21.8	356.71	0.939	Level 1
13,090.5	6,637.5	13,147.5	6,703.5	183.9	184.2	-101.38	12.0	-6,412.1	334.9	-26.8	361.70	0.926	Level 1
13,100.0	6,637.5	13,157.0	6,703.5	184.2	184.5	-101.38	12.0	-6,421.6	334.9	-27.3	362.22	0.925	Level 1
13,188.9	6,637.4	13,245.9	6,703.4	186.7	187.0	-101.37	12.0	-6,510.5	334.9	-32.2	367.13	0.912	Level 1
13,200.0	6,637.3	13,257.0	6,703.3	187.0	187.3	-101.37	12.0	-6,521.6	334.9	-32.8	367.74	0.911	Level 1
13,287.4	6,637.2	13,344.3	6,703.2	189.4	189.7	-101.36	12.0	-6,609.0	334.9	-37.7	372.56	0.899	Level 1
13,300.0	6,637.2	13,357.0	6,703.1	189.8	190.1	-101.35	12.0	-6,621.6	334.9	-38.4	373.25	0.897	Level 1
13,385.8	6,637.1	13,442.8	6,703.0	192.2	192.5	-101.35	12.0	-6,707.4	334.9	-43.1	377.98	0.886	Level 1
13,400.0	6,637.1	13,457.0	6,703.0	192.6	192.9	-101.34	12.0	-6,721.6	334.9	-43.9	378.77	0.884	Level 1
13,484.2	6,637.0	13,541.2	6,702.8	195.0	195.2	-101.34	12.0	-6,805.8	334.9	-48.6	383.41	0.873	Level 1
13,500.0	6,637.0	13,557.0	6,702.8	195.4	195.7	-101.33	12.0	-6,821.6	334.9	-49.4	384.28	0.871	Level 1
13,582.6	6,636.9	13,639.6	6,702.6	197.7	198.0	-101.33	12.0	-6,904.2	334.8	-54.0	388.84	0.861	Level 1
13,600.0	6,636.8	13,657.0	6,702.6	198.2	198.5	-101.32	12.0	-6,921.6	334.8	-55.0	389.80	0.859	Level 1
13,681.1	6,636.7	13,738.0	6,702.4	200.5	200.7	-101.32	12.0	-7,002.7	334.8	-59.4	394.27	0.849	Level 1
13,700.0	6,636.7	13,757.0	6,702.4	201.0	201.3	-101.31	12.0	-7,021.6	334.8	-60.5	395.32	0.847	Level 1
13,779.5	6,636.6	13,836.5	6,702.2	203.2	203.5	-101.31	12.0	-7,101.1	334.8	-64.9	399.70	0.838	Level 1
13,800.0	6,636.6	13,857.0	6,702.2	203.8	204.1	-101.30	12.0	-7,121.6	334.8	-66.0	400.84	0.835	Level 1
13,877.9	6,636.5	13,934.9	6,702.1	206.0	206.3	-101.30	12.0	-7,199.5	334.8	-70.3	405.14	0.826	Level 1
13,900.0	6,636.5	13,957.0	6,702.0	206.6	206.9	-101.29	12.0	-7,221.6	334.8	-71.5	406.36	0.824	Level 1
13,976.3	6,636.4	14,033.3	6,701.9	208.8	209.0	-101.29	12.0	-7,297.9	334.8	-75.8	410.57	0.815	Level 1
14,000.0	6,636.3	14,057.0	6,701.8	209.4	209.7	-101.28	12.0	-7,321.6	334.8	-77.1	411.88	0.813	Level 1
14,074.8	6,636.2	14,131.7	6,701.7	211.5	211.8	-101.28	12.0	-7,396.4	334.8	-81.2	416.00	0.805	Level 1
14,100.0	6,636.2	14,157.0	6,701.7	212.2	212.5	-101.27	12.0	-7,421.6	334.8	-82.6	417.40	0.802	Level 1
14,173.2	6,636.1	14,230.2	6,701.5	214.3	214.5	-101.27	12.0	-7,494.8	334.8	-86.7	421.44	0.794	Level 1
14,200.0	6,636.1	14,257.0	6,701.5	215.0	215.3	-101.26	12.0	-7,521.6	334.8	-88.1	422.92	0.792	Level 1
14,271.6	6,636.0	14,328.6	6,701.3	217.0	217.3	-101.26	12.0	-7,593.2	334.8	-92.1	426.87	0.784	Level 1
14,300.0	6,636.0	14,357.0	6,701.3	217.8	218.1	-101.25	12.0	-7,621.6	334.8	-93.7	428.44	0.781	Level 1
14,370.0	6,635.9	14,427.0	6,701.2	219.8	220.1	-101.25	12.0	-7,691.6	334.8	-97.6	432.31	0.774	Level 1
14,400.0	6,635.8	14,457.0	6,701.1	220.6	220.9	-101.24	12.0	-7,721.6	334.7	-99.2	433.96	0.771	Level 1
14,468.5	6,635.7	14,525.4	6,701.0	222.6	222.8	-101.24	12.0	-7,790.1	334.7	-103.0	437.75	0.765	Level 1
14,500.0	6,635.7	14,557.0	6,700.9	223.4	223.7	-101.23	12.0	-7,821.6	334.7	-104.7	439.49	0.762	Level 1
14,566.9	6,635.6	14,623.9	6,700.8	225.3	225.6	-101.23	12.0	-7,888.5	334.7	-108.5	443.18	0.755	Level 1
14,600.0	6,635.6	14,657.0	6,700.7	226.2	226.5	-101.22	12.0	-7,921.6	334.7	-110.3	445.01	0.752	Level 1
14,665.3	6,635.5	14,722.3	6,700.6	228.1	228.3	-101.22	12.0	-7,986.9	334.7	-113.9	448.62	0.746	Level 1
14,700.0	6,635.5	14,757.0	6,700.5	229.0	229.3	-101.21	12.0	-8,021.6	334.7	-115.8	450.54	0.743	Level 1
14,763.7	6,635.4	14,820.7	6,700.4	230.8	231.1	-101.21	12.0	-8,085.3	334.7	-119.4	454.06	0.737	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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
14,800.0	6,635.3	14,857.0	6,700.4	231.8	232.1	-101.20	12.0	-8,121.6	334.7	-121.4	456.06	0.734	Level 1
14,862.2	6,635.2	14,919.1	6,700.2	233.6	233.9	-101.20	12.0	-8,183.8	334.7	-124.8	459.50	0.728	Level 1
14,900.0	6,635.2	14,957.0	6,700.2	234.7	234.9	-101.19	12.0	-8,221.6	334.7	-126.9	461.59	0.725	Level 1
14,960.6	6,635.1	15,017.6	6,700.1	236.4	236.6	-101.19	12.0	-8,282.2	334.7	-130.3	464.94	0.720	Level 1
14,986.2	6,635.1	15,043.2	6,700.0	237.1	237.3	-101.18	12.0	-8,307.8	334.7	-131.7	466.35	0.718	Level 1
14,995.1	6,635.0	15,049.3	6,700.0	237.3	237.5	-101.20	12.0	-8,313.9	334.7	-132.0	466.75	0.717	Level 1, ES, SF

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10F-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are 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-234

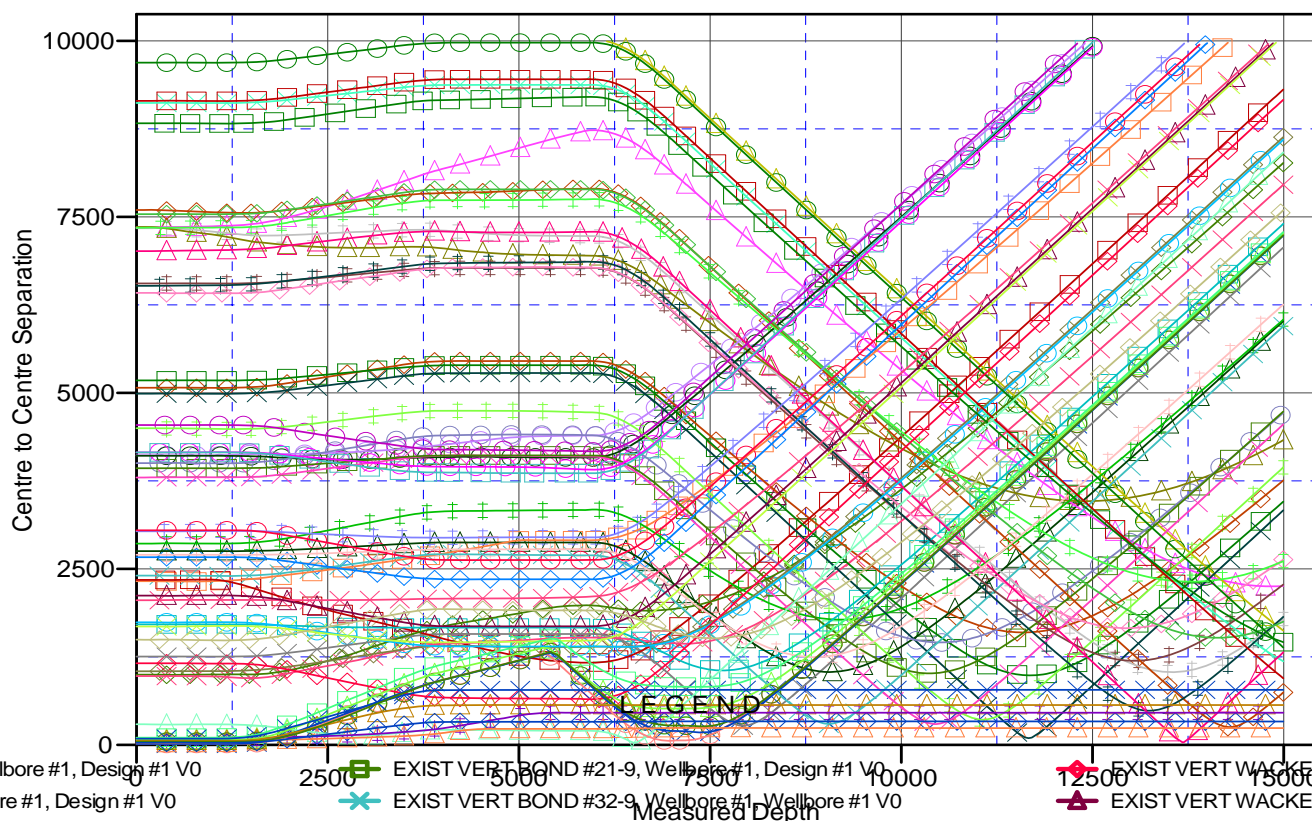
Offset Depths are relative to Offset Datum

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-302, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT MILLAGE #11-10, Wellbore #1, Design #1 V0	WACKER 10F-304, 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-234
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10F-234	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are 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-234

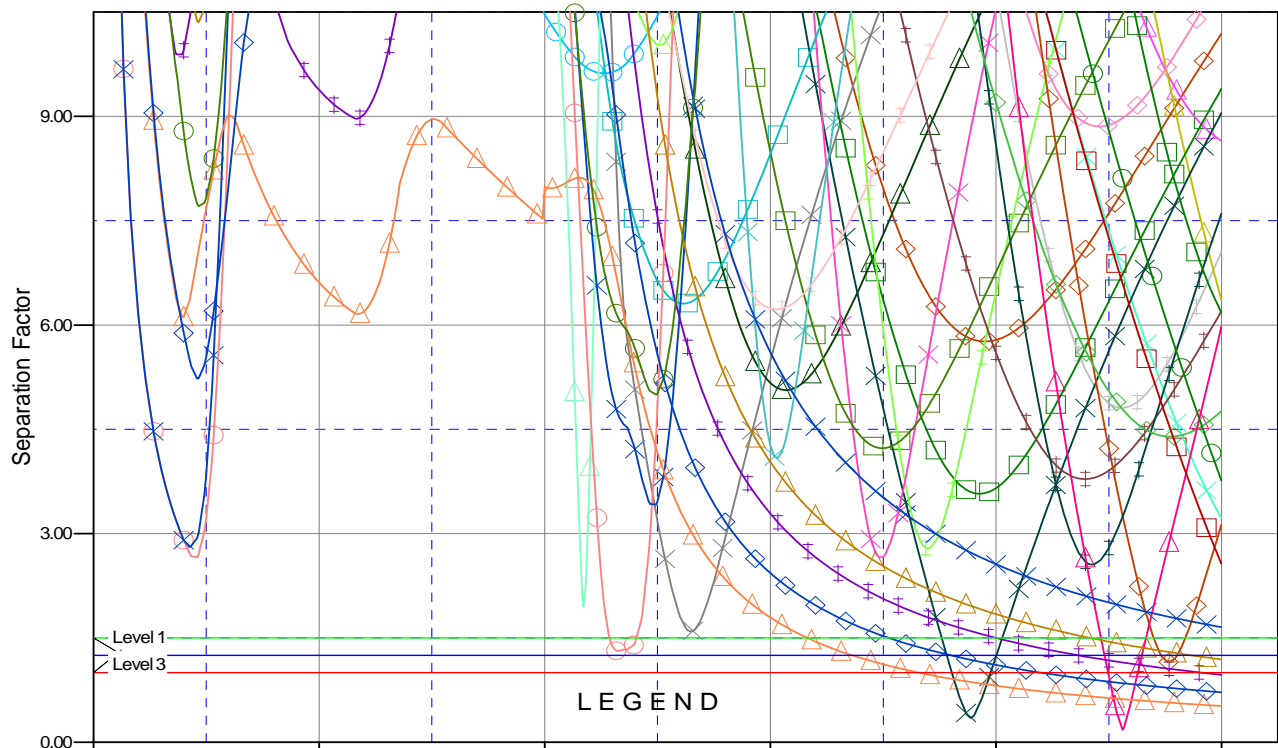
Offset Depths are relative to Offset Datum

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, Design #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, Design #1 V0	EXIST VERT WACKER #41-10, V
Wellbore #1, Design #1 V0	EXIST VERT JURGENS #8-13, Wellbore #1, Design #1 V0	EXIST VERT WACKER #42-10, V
Wellbore #1, Design #1 V0	EXIST VERT JURGENS #8-14, Wellbore #1, Design #1 V0	EXIST VERT WILLIAMS #1, Wel
Wellbore #1, Design #1 V0	EXIST VERT JURGENS PC #B8-23, Wellbore #1, Design #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, Design #1 V0	WACKER 10F-302, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT MILLAGE #11-10, Wellbore #1, Design #1 V0	WACKER 10F-304, 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