

PDC ENERGY

**WELD COUNTY, COLORADO
SW NW SEC. 10 T5N R64W 6th P.M.
WACKER 10G-212**

**ORIGINAL WELLBORE
PROPOSAL #1**

Anticollision Report

04 February, 2016



Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are 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	11,858.8	PROPOSAL #1 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offet Well - Wellbore - Design						
SW NW SEC. 10 T5N R64W 6th P.M.						
ABDN VERT BLOSKAS #13-9 - Wellbore #1 - Design #1	6,062.5	5,885.9	3,965.0	3,823.0	27.917	CC, ES, SF
ABDN VERT HEINRICH #1 - Wellbore #1 - Design #1	6,062.5	5,897.9	285.9	152.3	2.140	CC
ABDN VERT HEINRICH #1 - Wellbore #1 - Design #1	6,100.0	5,935.4	286.4	146.0	2.040	ES
ABDN VERT HEINRICH #1 - Wellbore #1 - Design #1	6,102.3	5,937.7	286.5	146.1	2.040	SF
ABDN VERT OGRADY #3 - Wellbore #1 - Design #1	6,062.5	5,923.9	2,014.8	1,879.8	14.917	CC
ABDN VERT OGRADY #3 - Wellbore #1 - Design #1	6,100.0	5,961.4	2,015.5	1,875.8	14.433	ES
ABDN VERT OGRADY #3 - Wellbore #1 - Design #1	6,200.0	6,060.6	2,023.3	1,882.6	14.380	SF
ABDN VERT PLUMB #2 - Wellbore #1 - Design #1	6,062.5	5,893.9	8,063.1	7,921.4	56.908	CC, ES
ABDN VERT PLUMB #2 - Wellbore #1 - Design #1	8,400.0	6,594.6	9,965.7	9,784.5	54.998	SF
EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellb	6,040.6	6,033.8	5,778.8	5,738.1	141.926	CC
EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellb	6,062.5	6,060.0	5,778.9	5,738.1	141.702	ES
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	10,700.0	6,761.7	9,996.4	9,870.7	79.549	SF
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	3,738.4	1,726.0	7,163.4	7,150.8	568.189	CC
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	3,740.1	1,726.0	7,163.4	7,150.8	567.959	ES
EXIST DD JURGENS PC #B8-24D - Wellbore #1 - Wellb	9,251.9	6,636.6	9,977.3	9,881.9	104.494	SF
EXIST DD JURGENS STATE #B16-30D - Wellbore #1 -	6,077.1	6,338.4	5,486.0	5,434.0	105.481	CC, ES
EXIST DD JURGENS STATE #B16-30D - Wellbore #1 -	11,400.0	7,045.5	9,987.5	9,826.2	61.919	SF
EXIST DD PETERSON B #10-24D - Wellbore #1 - Wellb	9,696.9	6,669.0	1,747.2	1,648.8	17.758	CC
EXIST DD PETERSON B #10-24D - Wellbore #1 - Wellb	9,744.1	6,669.0	1,747.9	1,648.2	17.538	ES
EXIST DD PETERSON B #10-24D - Wellbore #1 - Wellb	10,531.5	6,669.0	1,936.3	1,815.3	15.994	SF
EXIST DD PJ #8I - Wellbore #1 - Wellbore #1	6,062.5	6,110.0	8,591.6	8,549.7	204.863	ES
EXIST DD PJ #8I - Wellbore #1 - Wellbore #1	6,075.0	6,136.0	8,591.5	8,560.8	279.638	CC
EXIST DD PJ #8I - Wellbore #1 - Wellbore #1	7,874.0	6,709.5	9,987.2	9,932.4	182.058	SF
EXIST DD WACKER B #10-20D - Wellbore #1 - Wellbore	8,513.7	6,765.9	478.0	400.0	6.130	CC, ES
EXIST DD WACKER B #10-20D - Wellbore #1 - Wellbore	8,600.0	6,765.7	485.7	405.6	6.061	SF
EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore	11,820.8	6,652.3	2,009.1	1,850.6	12.673	CC
EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore	11,859.3	6,664.8	2,009.4	1,849.6	12.576	ES, SF
EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #	11,847.0	6,696.0	1,448.5	1,289.3	9.101	CC
EXIST HZ MAX #B11-64-1HN - Wellbore #1 - Wellbore #	11,859.3	6,696.0	1,448.5	1,289.0	9.082	ES, SF
EXIST HZ SEYLLOR #B10-64-1HN - Wellbore #1 - Wellbc	1,692.1	1,683.0	920.5	913.6	133.570	CC, ES
EXIST HZ SEYLLOR #B10-64-1HN - Wellbore #1 - Wellbc	11,858.8	10,758.0	1,367.6	1,106.8	5.243	SF
EXIST HZ SEYLLOR STATE #B15-79HNM - Wellbore #1	1,601.8	1,594.0	866.8	860.5	138.749	CC, ES
EXIST HZ SEYLLOR STATE #B15-79HNM - Wellbore #1	7,480.3	6,264.6	1,032.8	989.7	23.994	SF
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	5,956.7	5,732.0	1,908.4	1,887.7	91.899	CC
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	6,032.5	5,803.9	1,909.3	1,885.5	80.138	ES
EXIST VERT BAUER #9-1 - Wellbore #1 - Wellbore #1	11,858.8	6,456.5	6,943.0	6,798.3	47.981	SF
EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1	6,062.5	5,896.9	4,182.8	4,043.2	29.960	CC, ES, SF

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

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Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are 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 #12-9 - Wellbore #1 - Design #1	6,062.5	5,886.9	3,905.8	3,763.9	27.521	CC, ES, SF
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore	6,062.5	5,962.4	2,908.4	2,882.1	110.503	ES
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore	6,084.4	5,985.8	2,908.1	2,891.2	172.259	CC
EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore	11,858.8	6,600.0	8,167.8	8,022.6	56.272	SF
EXIST VERT BLOSKAS BOND #9D - Wellbore #1 - Wel	6,062.5	5,999.3	3,428.2	3,402.6	133.759	ES
EXIST VERT BLOSKAS BOND #9D - Wellbore #1 - Wel	6,088.1	6,029.1	3,427.8	3,409.8	190.849	CC
EXIST VERT BLOSKAS BOND #9D - Wellbore #1 - Wel	11,859.3	6,790.0	8,708.5	8,564.6	60.485	SF
EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1	6,062.5	5,910.4	2,696.3	2,670.0	102.226	ES
EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1	6,070.1	5,918.2	2,696.3	2,679.6	161.330	CC
EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1	11,858.8	6,700.0	8,052.5	7,910.9	56.881	SF
EXIST VERT BOND #21-9 - Wellbore #1 - Design #1	6,062.5	5,904.9	3,007.8	2,869.5	21.742	CC, ES, SF
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	6,062.5	5,884.2	1,294.6	1,268.8	50.120	ES
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	6,063.8	5,885.3	1,294.6	1,277.6	76.042	CC
EXIST VERT BOND #32-9 - Wellbore #1 - Wellbore #1	11,858.8	6,528.6	6,665.0	6,529.6	49.211	SF
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	7,776.8	6,577.6	883.9	845.9	23.291	CC
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	7,800.0	6,577.7	884.2	845.8	23.011	ES
EXIST VERT DR B #10-12 - Wellbore #1 - Wellbore #1	8,267.7	6,578.1	1,011.0	962.0	20.609	SF
EXIST VERT HECKENDORF #1 - Wellbore #1 - Design	6,062.5	5,897.9	5,542.7	5,402.7	39.591	CC, ES, SF
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	4,709.8	4,600.4	1,557.1	1,447.3	14.185	CC
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	6,550.0	6,373.6	1,574.4	1,424.6	10.509	ES
EXIST VERT HEINRICH #41-9 - Wellbore #1 - Design #1	6,750.0	6,509.6	1,585.5	1,433.5	10.427	SF
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #	6,062.5	5,936.5	5,302.0	5,275.5	199.864	ES
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #	6,069.5	5,941.9	5,302.0	5,285.7	324.444	CC
EXIST VERT JURGENS #8-1 - Wellbore #1 - Wellbore #	11,220.4	6,675.9	9,984.7	9,857.2	78.315	SF
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore	5,991.2	5,722.3	6,503.0	6,486.6	396.300	CC
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore	6,032.5	5,763.9	6,503.3	6,476.8	245.386	ES
EXIST VERT JURGENS #8-13 - Wellbore #1 - Wellbore	9,940.9	6,400.0	9,983.2	9,914.7	145.750	SF
EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore	5,979.2	5,700.0	5,443.8	5,427.1	326.067	CC
EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore	6,032.5	5,738.8	5,444.3	5,417.2	200.609	ES
EXIST VERT JURGENS #8-14 - Wellbore #1 - Wellbore	6,062.5	5,756.2	5,445.0	5,417.8	200.408	SF
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Well	5,992.5	5,731.1	6,263.8	6,247.0	372.113	CC
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Well	6,032.5	5,766.3	6,264.1	6,237.6	236.625	ES
EXIST VERT JURGENS PC #B8-23 - Wellbore #1 - Well	10,236.2	6,306.8	9,943.6	9,844.4	100.251	SF
EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - D	6,062.5	5,907.9	6,426.3	6,284.9	45.428	CC, ES
EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - D	10,039.3	6,587.5	9,965.8	9,743.9	44.914	SF
EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - W	5,994.9	5,742.7	5,915.4	5,898.7	354.650	CC
EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - W	6,032.5	5,780.4	5,915.6	5,889.0	222.019	ES
EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - W	10,531.5	6,422.5	9,974.3	9,873.7	99.180	SF
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	1,200.0	1,195.0	1,816.6	1,790.4	69.220	CC
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	7,775.6	6,622.6	1,909.1	1,740.2	11.299	ES
EXIST VERT MILLAGE #11-10 - Wellbore #1 - Design #1	8,267.7	6,616.3	1,980.4	1,800.4	11.003	SF
EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1	6,062.5	5,914.9	2,068.8	1,935.2	15.486	CC
EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1	6,100.0	5,952.4	2,069.3	1,928.6	14.710	ES
EXIST VERT OGRADY #31-9 - Wellbore #1 - Design #1	6,200.8	6,052.3	2,075.8	1,933.7	14.616	SF
EXIST VERT PAULINE #5 - Wellbore #1 - Design #1	6,062.5	5,893.9	8,046.0	7,903.8	56.561	CC, ES, SF
EXIST VERT PJ #2 - Wellbore #1 - Wellbore #1	5,982.7	5,672.4	7,749.8	7,733.8	484.956	CC
EXIST VERT PJ #2 - Wellbore #1 - Wellbore #1	6,032.5	5,708.4	7,750.2	7,723.7	291.896	ES
EXIST VERT PJ #2 - Wellbore #1 - Wellbore #1	8,700.0	6,400.0	9,976.2	9,918.5	172.954	SF
EXIST VERT PJ #5 - Wellbore #1 - Design #1	6,062.5	5,901.9	8,609.5	8,468.4	61.011	CC, ES
EXIST VERT PJ #5 - Wellbore #1 - Design #1	7,185.0	6,618.1	9,320.5	9,163.5	59.369	SF
EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbo	11,593.6	6,567.4	653.1	515.3	4.740	CC
EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbo	11,614.1	6,567.1	653.4	515.1	4.723	ES
EXIST VERT SLW RANCH #1-10 - Wellbore #1 - Wellbo	11,700.0	6,565.6	661.7	521.0	4.702	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

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 10 T5N R64W 6th P.M.						
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore	9,283.1	6,545.0	1,098.7	1,023.2	14.554	CC
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore	9,300.0	6,545.6	1,098.8	1,022.9	14.470	ES
EXIST VERT TREBOR #B10-11 - Wellbore #1 - Wellbore	9,700.0	6,561.3	1,175.0	1,088.4	13.560	SF
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbor	10,399.5	6,559.8	1,006.6	901.7	9.588	CC
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbor	10,433.0	6,559.5	1,007.2	901.3	9.511	ES
EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbor	10,629.9	6,557.8	1,032.7	921.4	9.279	SF
EXIST VERT WACKER #1 - Wellbore #1 - Wellbore #1	1,227.3	1,215.2	363.5	360.2	109.407	CC
EXIST VERT WACKER #1 - Wellbore #1 - Wellbore #1	1,279.5	1,267.5	363.6	360.2	105.356	ES
EXIST VERT WACKER #1 - Wellbore #1 - Wellbore #1	7,800.0	6,617.4	498.8	460.5	13.020	SF
EXIST VERT WACKER #10D - Wellbore #1 - Wellbore #	8,416.1	6,631.2	849.5	796.3	15.976	CC, ES
EXIST VERT WACKER #10D - Wellbore #1 - Wellbore #	8,759.8	6,621.9	916.3	854.5	14.819	SF
EXIST VERT WACKER #2 - Wellbore #1 - Design #1	9,319.7	6,599.8	1,376.6	1,170.0	6.663	CC
EXIST VERT WACKER #2 - Wellbore #1 - Design #1	9,350.4	6,599.4	1,377.0	1,169.6	6.639	ES
EXIST VERT WACKER #2 - Wellbore #1 - Design #1	9,547.2	6,596.9	1,395.3	1,182.7	6.563	SF
EXIST VERT WACKER #22-10 - Wellbore #1 - Wellbore	9,327.8	6,610.5	94.3	18.4	1.242	Level 2, CC, ES, SF
EXIST VERT WACKER #31-10 - Wellbore #1 - Design #	10,233.9	6,552.0	1,663.0	1,433.5	7.246	CC
EXIST VERT WACKER #31-10 - Wellbore #1 - Design #	10,300.0	6,551.2	1,664.4	1,433.1	7.196	ES
EXIST VERT WACKER #31-10 - Wellbore #1 - Design #	10,531.5	6,548.2	1,689.5	1,451.9	7.112	SF
EXIST VERT WACKER #32-10 - Wellbore #1 - Design #	10,223.2	6,592.2	465.2	236.6	2.035	CC
EXIST VERT WACKER #32-10 - Wellbore #1 - Design #	10,236.2	6,592.0	465.4	236.4	2.032	ES, SF
EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore	11,859.0	6,462.4	1,666.3	1,521.3	11.486	CC
EXIST VERT WACKER #41-10 - Wellbore #1 - Wellbore	11,859.3	6,462.4	1,666.3	1,521.3	11.486	ES, SF
EXIST VERT WACKER #42-10 - Wellbore #1 - Wellbore	11,731.5	6,500.0	358.4	217.9	2.552	CC, ES, SF
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	5,266.1	5,095.0	990.8	966.3	40.423	CC
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	5,314.9	5,142.6	990.8	966.1	40.044	ES
EXIST VERT WILLIAMS #1 - Wellbore #1 - Wellbore #1	11,858.8	6,573.5	5,254.4	5,109.3	36.203	SF
WACKER 10F-204 - ORIGINAL WELLBORE - PROPOS	1,000.0	1,000.0	119.9	115.6	28.260	CC, ES
WACKER 10F-204 - ORIGINAL WELLBORE - PROPOS	6,496.0	7,686.9	1,025.6	968.7	18.029	SF
WACKER 10F-232 - ORIGINAL WELLBORE - PROPOS	1,200.0	1,200.0	60.1	55.0	11.691	CC
WACKER 10F-232 - ORIGINAL WELLBORE - PROPOS	1,300.0	1,300.0	60.3	54.7	10.814	ES
WACKER 10F-232 - ORIGINAL WELLBORE - PROPOS	11,859.3	11,882.2	453.4	165.7	1.576	SF
WACKER 10F-234 - ORIGINAL WELLBORE - PROPOS	1,200.0	1,200.0	75.0	69.9	14.600	CC
WACKER 10F-234 - ORIGINAL WELLBORE - PROPOS	1,300.0	1,300.0	75.2	69.7	13.496	ES
WACKER 10F-234 - ORIGINAL WELLBORE - PROPOS	6,791.3	7,439.8	528.3	476.4	10.185	SF
WACKER 10F-302 - ORIGINAL WELLBORE - PROPOS	1,200.0	1,200.0	90.0	84.8	17.506	CC, ES
WACKER 10F-302 - ORIGINAL WELLBORE - PROPOS	11,859.3	11,987.5	699.1	413.0	2.444	SF
WACKER 10F-304 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	104.9	100.2	22.369	CC, ES
WACKER 10F-304 - ORIGINAL WELLBORE - PROPOS	6,692.9	7,605.8	783.8	731.0	14.846	SF
WACKER 10G-214 - ORIGINAL WELLBORE - PROPOS	1,200.0	1,200.0	14.9	9.8	2.906	CC
WACKER 10G-214 - ORIGINAL WELLBORE - PROPOS	7,283.2	6,959.3	50.2	3.4	1.074	Level 2, ES, SF
WACKER 10G-302 - ORIGINAL WELLBORE - PROPOS	1,000.0	1,000.0	29.9	25.6	7.045	CC, ES
WACKER 10G-302 - ORIGINAL WELLBORE - PROPOS	11,859.3	11,955.0	317.3	37.2	1.133	Level 2, SF
WACKER 10G-304 - ORIGINAL WELLBORE - PROPOS	1,100.0	1,100.0	14.9	10.2	3.185	CC, ES
WACKER 10G-304 - ORIGINAL WELLBORE - PROPOS	1,181.1	1,180.8	15.8	10.8	3.140	SF
WACKER 10G-312 - ORIGINAL WELLBORE - PROPOS	1,200.0	1,200.0	29.9	24.7	5.812	CC
WACKER 10G-312 - ORIGINAL WELLBORE - PROPOS	11,859.3	11,969.5	260.1	-17.7	0.936	Level 1, ES, SF
WACKER 10G-314 - ORIGINAL WELLBORE - PROPOS	1,200.0	1,200.0	44.8	39.7	8.717	CC
WACKER 10G-314 - ORIGINAL WELLBORE - PROPOS	1,300.0	1,300.0	45.0	39.4	8.073	ES
WACKER 10G-314 - ORIGINAL WELLBORE - PROPOS	7,500.0	6,794.8	187.0	140.0	3.976	SF

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-103.53	-1,182.8	-4,914.5	5,054.9					
98.4	98.4	65.4	65.4	0.1	0.1	-103.53	-1,182.8	-4,914.5	5,054.8	5,054.6	0.17	N/A		
100.0	100.0	67.0	67.0	0.1	0.1	-103.53	-1,182.8	-4,914.5	5,054.8	5,054.6	0.18	N/A		
196.8	196.8	163.8	163.8	0.3	1.8	-103.53	-1,182.8	-4,914.5	5,054.8	5,052.7	2.10	2,402.836		
200.0	200.0	167.0	167.0	0.3	1.9	-103.53	-1,182.8	-4,914.5	5,054.8	5,052.6	2.19	2,304.896		
295.3	295.3	262.3	262.3	0.5	4.0	-103.53	-1,182.8	-4,914.5	5,054.8	5,050.3	4.55	1,109.752		
300.0	300.0	267.0	267.0	0.5	4.1	-103.53	-1,182.8	-4,914.5	5,054.8	5,050.1	4.66	1,084.014		
393.7	393.7	360.7	360.7	0.8	6.0	-103.53	-1,182.8	-4,914.5	5,054.8	5,048.0	6.79	744.616		
400.0	400.0	367.0	367.0	0.8	6.2	-103.53	-1,182.8	-4,914.5	5,054.8	5,047.9	6.93	729.338		
492.1	492.1	459.1	459.1	1.0	8.0	-103.53	-1,182.8	-4,914.5	5,054.8	5,045.8	9.00	561.376		
500.0	500.0	467.0	467.0	1.0	8.2	-103.53	-1,182.8	-4,914.5	5,054.8	5,045.6	9.18	550.555		
590.5	590.5	557.5	557.5	1.2	10.0	-103.53	-1,182.8	-4,914.5	5,054.8	5,043.6	11.21	450.766		
600.0	600.0	567.0	567.0	1.2	10.2	-103.53	-1,182.8	-4,914.5	5,054.8	5,043.4	11.43	442.404		
689.0	689.0	656.0	656.0	1.4	12.0	-103.53	-1,182.8	-4,914.5	5,054.8	5,041.4	13.42	376.655		
700.0	700.0	667.0	667.0	1.4	12.2	-103.53	-1,182.8	-4,914.5	5,054.8	5,041.1	13.67	369.847		
787.4	787.4	754.4	754.4	1.6	14.0	-103.53	-1,182.8	-4,914.5	5,054.8	5,039.2	15.62	323.509		
800.0	800.0	767.0	767.0	1.7	14.2	-103.53	-1,182.8	-4,914.5	5,054.8	5,038.9	15.91	317.770		
885.8	885.8	852.8	852.8	1.9	16.0	-103.53	-1,182.8	-4,914.5	5,054.8	5,037.0	17.83	283.522		
900.0	900.0	867.0	867.0	1.9	16.3	-103.53	-1,182.8	-4,914.5	5,054.8	5,036.7	18.15	278.564		
984.2	984.2	951.2	951.2	2.1	17.9	-103.53	-1,182.8	-4,914.5	5,054.8	5,034.8	20.03	252.342		
1,000.0	1,000.0	967.0	967.0	2.1	18.3	-103.53	-1,182.8	-4,914.5	5,054.8	5,034.4	20.38	247.979		
1,082.7	1,082.7	1,049.7	1,049.7	2.3	19.9	-103.53	-1,182.8	-4,914.5	5,054.8	5,032.6	22.23	227.346		
1,100.0	1,100.0	1,067.0	1,067.0	2.3	20.3	-103.53	-1,182.8	-4,914.5	5,054.8	5,032.2	22.62	223.450		
1,181.1	1,181.1	1,148.1	1,148.1	2.5	21.9	-103.53	-1,182.8	-4,914.5	5,054.8	5,030.4	24.44	206.858		
1,200.0	1,200.0	1,167.0	1,167.0	2.6	22.3	-103.53	-1,182.8	-4,914.5	5,054.8	5,030.0	24.86	203.340		
1,279.5	1,279.5	1,246.5	1,246.5	2.7	23.9	-8.34	-1,182.8	-4,914.5	5,053.7	5,027.1	26.62	189.874		
1,300.0	1,300.0	1,267.0	1,267.0	2.8	24.3	-8.35	-1,182.8	-4,914.5	5,053.1	5,026.0	27.06	186.703		
1,377.9	1,377.8	1,344.8	1,344.8	2.9	25.9	-8.36	-1,182.8	-4,914.5	5,049.3	5,020.6	28.75	175.637		
1,400.0	1,399.8	1,366.8	1,366.8	3.0	26.3	-8.37	-1,182.8	-4,914.5	5,047.9	5,018.7	29.22	172.757		
1,476.4	1,475.9	1,442.9	1,442.9	3.1	27.8	-8.40	-1,182.8	-4,914.5	5,041.6	5,010.8	30.84	163.494		
1,500.0	1,499.5	1,466.5	1,466.5	3.2	28.3	-8.41	-1,182.8	-4,914.5	5,039.3	5,008.0	31.33	160.844		
1,574.8	1,573.7	1,540.7	1,540.7	3.4	29.8	-8.45	-1,182.8	-4,914.5	5,030.6	4,997.7	32.88	153.021		
1,600.0	1,598.7	1,565.7	1,565.7	3.4	30.3	-8.47	-1,182.8	-4,914.5	5,027.2	4,993.8	33.39	150.574		
1,673.2	1,671.1	1,638.1	1,638.1	3.6	31.8	-8.52	-1,182.8	-4,914.5	5,016.2	4,981.4	34.86	143.916		
1,700.0	1,697.5	1,664.5	1,664.5	3.7	32.3	-8.54	-1,182.8	-4,914.5	5,011.8	4,976.4	35.38	141.647		
1,771.6	1,767.9	1,734.9	1,734.9	3.9	33.7	-8.60	-1,182.8	-4,914.5	4,998.6	4,961.8	36.77	135.942		
1,800.0	1,795.6	1,762.6	1,762.6	4.0	34.3	-8.63	-1,182.8	-4,914.5	4,992.9	4,955.6	37.31	133.832		
1,870.1	1,864.0	1,831.0	1,831.0	4.3	35.6	-8.70	-1,182.8	-4,914.5	4,977.6	4,939.0	38.61	128.914		
1,900.0	1,893.1	1,860.1	1,860.1	4.4	36.2	-8.74	-1,182.8	-4,914.5	4,970.6	4,931.5	39.16	126.947		
1,968.5	1,959.3	1,926.3	1,926.3	4.6	37.6	-8.82	-1,182.8	-4,914.5	4,953.5	4,913.1	40.37	122.687		
1,992.4	1,982.4	1,949.4	1,949.4	4.7	38.0	-8.85	-1,182.8	-4,914.5	4,947.1	4,906.3	40.79	121.283		
2,000.0	1,989.6	1,956.6	1,956.6	4.8	38.2	-8.86	-1,182.8	-4,914.5	4,945.0	4,904.1	40.95	120.762		
2,066.9	2,054.0	2,021.0	2,021.0	5.1	39.5	-8.89	-1,182.8	-4,914.5	4,927.0	4,884.6	42.37	116.296		
2,100.0	2,085.8	2,052.8	2,052.8	5.2	40.1	-8.91	-1,182.8	-4,914.5	4,918.0	4,875.0	43.06	114.214		
2,165.3	2,148.7	2,115.7	2,115.7	5.5	41.4	-8.94	-1,182.8	-4,914.5	4,900.4	4,856.0	44.44	110.272		
2,200.0	2,182.0	2,149.0	2,149.0	5.7	42.0	-8.96	-1,182.8	-4,914.5	4,891.0	4,845.9	45.18	108.261		
2,263.8	2,243.4	2,210.4	2,210.4	6.0	43.3	-8.99	-1,182.8	-4,914.5	4,873.8	4,827.3	46.53	104.741		
2,300.0	2,278.2	2,245.2	2,245.2	6.2	44.0	-9.01	-1,182.8	-4,914.5	4,864.0	4,816.7	47.30	102.829		
2,362.2	2,338.1	2,305.1	2,305.1	6.5	45.2	-9.04	-1,182.8	-4,914.5	4,847.2	4,798.6	48.63	99.684		
2,400.0	2,374.4	2,341.4	2,341.4	6.7	45.9	-9.06	-1,182.8	-4,914.5	4,837.0	4,787.6	49.43	97.854		
2,460.6	2,432.8	2,399.8	2,399.8	7.0	47.1	-9.09	-1,182.8	-4,914.5	4,820.7	4,769.9	50.72	95.036		
2,500.0	2,470.6	2,437.6	2,437.6	7.2	47.8	-9.11	-1,182.8	-4,914.5	4,810.0	4,758.5	51.56	93.281		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,527.4	2,494.4	2,494.4	7.6	49.0	-9.14	-1,182.8	-4,914.5	4,794.1	4,741.3	52.83	90.751	
2,600.0	2,566.8	2,533.8	2,533.8	7.8	49.8	-9.16	-1,182.8	-4,914.5	4,783.1	4,729.4	53.70	89.066	
2,657.5	2,622.1	2,589.1	2,589.1	8.1	50.9	-9.19	-1,182.8	-4,914.5	4,767.5	4,712.6	54.93	86.789	
2,700.0	2,663.0	2,630.0	2,630.0	8.3	51.7	-9.21	-1,182.8	-4,914.5	4,756.1	4,700.2	55.84	85.169	
2,755.9	2,716.8	2,683.8	2,683.8	8.6	52.8	-9.24	-1,182.8	-4,914.5	4,741.0	4,683.9	57.04	83.115	
2,800.0	2,759.2	2,726.2	2,726.2	8.9	53.7	-9.26	-1,182.8	-4,914.5	4,729.1	4,671.1	57.99	81.555	
2,854.3	2,811.5	2,778.5	2,778.5	9.2	54.7	-9.29	-1,182.8	-4,914.5	4,714.4	4,655.3	59.15	79.700	
2,900.0	2,855.4	2,822.4	2,822.4	9.4	55.6	-9.32	-1,182.8	-4,914.5	4,702.1	4,642.0	60.13	78.196	
2,952.7	2,906.2	2,873.2	2,873.2	9.7	56.6	-9.35	-1,182.8	-4,914.5	4,687.9	4,626.6	61.27	76.517	
3,000.0	2,951.6	2,918.6	2,918.6	10.0	57.5	-9.37	-1,182.8	-4,914.5	4,675.1	4,612.9	62.28	75.065	
3,051.2	3,000.9	2,967.9	2,967.9	10.3	58.5	-9.40	-1,182.8	-4,914.5	4,661.3	4,598.0	63.38	73.544	
3,100.0	3,047.8	3,014.8	3,014.8	10.5	59.5	-9.43	-1,182.8	-4,914.5	4,648.2	4,583.7	64.43	72.141	
3,149.6	3,095.5	3,062.5	3,062.5	10.8	60.4	-9.45	-1,182.8	-4,914.5	4,634.8	4,569.3	65.50	70.761	
3,200.0	3,144.0	3,111.0	3,111.0	11.1	61.4	-9.48	-1,182.8	-4,914.5	4,621.2	4,554.6	66.58	69.404	
3,248.0	3,190.2	3,157.2	3,157.2	11.4	62.3	-9.51	-1,182.8	-4,914.5	4,608.2	4,540.6	67.62	68.151	
3,300.0	3,240.2	3,207.2	3,207.2	11.7	63.3	-9.54	-1,182.8	-4,914.5	4,594.2	4,525.5	68.74	66.837	
3,346.4	3,284.9	3,251.9	3,251.9	11.9	64.2	-9.56	-1,182.8	-4,914.5	4,581.7	4,512.0	69.74	65.697	
3,400.0	3,336.4	3,303.4	3,303.4	12.2	65.3	-9.59	-1,182.8	-4,914.5	4,567.3	4,496.4	70.89	64.424	
3,444.9	3,379.6	3,346.6	3,346.6	12.5	66.1	-9.62	-1,182.8	-4,914.5	4,555.2	4,483.3	71.86	63.388	
3,500.0	3,432.6	3,399.6	3,399.6	12.8	67.2	-9.65	-1,182.8	-4,914.5	4,540.3	4,467.3	73.05	62.152	
3,543.3	3,474.3	3,441.3	3,441.3	13.1	68.0	-9.68	-1,182.8	-4,914.5	4,528.7	4,454.7	73.99	61.209	
3,600.0	3,528.8	3,495.8	3,495.8	13.4	69.1	-9.71	-1,182.8	-4,914.5	4,513.4	4,438.2	75.21	60.010	
3,641.7	3,569.0	3,536.0	3,536.0	13.6	69.9	-9.73	-1,182.8	-4,914.5	4,502.1	4,426.0	76.11	59.152	
3,700.0	3,625.0	3,592.0	3,592.0	14.0	71.1	-9.77	-1,182.8	-4,914.5	4,486.4	4,409.1	77.37	57.987	
3,740.1	3,663.6	3,630.6	3,630.6	14.2	71.8	-9.79	-1,182.8	-4,914.5	4,475.6	4,397.4	78.24	57.205	
3,800.0	3,721.2	3,688.2	3,688.2	14.5	73.0	-9.83	-1,182.8	-4,914.5	4,459.5	4,380.0	79.53	56.072	
3,838.6	3,758.3	3,725.3	3,725.3	14.8	73.7	-9.85	-1,182.8	-4,914.5	4,449.1	4,368.7	80.37	55.361	
3,900.0	3,817.4	3,784.4	3,784.4	15.1	74.9	-9.89	-1,182.8	-4,914.5	4,432.6	4,350.9	81.69	54.258	
3,937.0	3,853.0	3,820.0	3,820.0	15.3	75.7	-9.91	-1,182.8	-4,914.5	4,422.6	4,340.1	82.49	53.611	
4,000.0	3,913.6	3,880.6	3,880.6	15.7	76.9	-9.95	-1,182.8	-4,914.5	4,405.6	4,321.8	83.86	52.537	
4,035.4	3,947.7	3,914.7	3,914.7	15.9	77.6	-9.97	-1,182.8	-4,914.5	4,396.1	4,311.5	84.62	51.949	
4,100.0	4,009.8	3,976.8	3,976.8	16.3	78.8	-10.01	-1,182.8	-4,914.5	4,378.7	4,292.7	86.02	50.902	
4,133.8	4,042.4	4,009.4	4,009.4	16.5	79.5	-10.03	-1,182.8	-4,914.5	4,369.6	4,282.8	86.75	50.367	
4,200.0	4,106.0	4,073.0	4,073.0	16.8	80.7	-10.07	-1,182.8	-4,914.5	4,351.8	4,263.6	88.19	49.347	
4,232.3	4,137.1	4,104.1	4,104.1	17.0	81.4	-10.09	-1,182.8	-4,914.5	4,343.1	4,254.2	88.89	48.861	
4,300.0	4,202.2	4,169.2	4,169.2	17.4	82.7	-10.14	-1,182.8	-4,914.5	4,324.9	4,234.5	90.35	47.866	
4,330.7	4,231.7	4,198.7	4,198.7	17.6	83.3	-10.16	-1,182.8	-4,914.5	4,316.6	4,225.6	91.02	47.426	
4,400.0	4,298.4	4,265.4	4,265.4	18.0	84.6	-10.20	-1,182.8	-4,914.5	4,297.9	4,205.4	92.52	46.454	
4,429.1	4,326.4	4,293.4	4,293.4	18.2	85.2	-10.22	-1,182.8	-4,914.5	4,290.1	4,197.0	93.15	46.055	
4,500.0	4,394.6	4,361.6	4,361.6	18.6	86.5	-10.27	-1,182.8	-4,914.5	4,271.0	4,176.3	94.69	45.106	
4,527.5	4,421.1	4,388.1	4,388.1	18.7	87.1	-10.28	-1,182.8	-4,914.5	4,263.6	4,168.3	95.29	44.746	
4,600.0	4,490.8	4,457.8	4,457.8	19.2	88.5	-10.33	-1,182.8	-4,914.5	4,244.1	4,147.3	96.86	43.818	
4,626.0	4,515.8	4,482.8	4,482.8	19.3	89.0	-10.35	-1,182.8	-4,914.5	4,237.1	4,139.7	97.42	43.493	
4,700.0	4,587.0	4,554.0	4,554.0	19.8	90.4	-10.40	-1,182.8	-4,914.5	4,217.2	4,118.2	99.03	42.587	
4,724.4	4,610.5	4,577.5	4,577.5	19.9	90.9	-10.41	-1,182.8	-4,914.5	4,210.7	4,111.1	99.56	42.294	
4,800.0	4,683.2	4,650.2	4,650.2	20.3	92.3	-10.47	-1,182.8	-4,914.5	4,190.3	4,089.1	101.20	41.407	
4,822.8	4,705.2	4,672.2	4,672.2	20.5	92.8	-10.48	-1,182.8	-4,914.5	4,184.2	4,082.5	101.69	41.145	
4,900.0	4,779.4	4,746.4	4,746.4	20.9	94.3	-10.53	-1,182.8	-4,914.5	4,163.5	4,060.1	103.37	40.278	
4,921.2	4,799.8	4,766.8	4,766.8	21.0	94.7	-10.55	-1,182.8	-4,914.5	4,157.7	4,053.9	103.83	40.043	
5,000.0	4,875.6	4,842.6	4,842.6	21.5	96.2	-10.60	-1,182.8	-4,914.5	4,136.6	4,031.0	105.54	39.194	
5,019.7	4,894.5	4,861.5	4,861.5	21.6	96.6	-10.62	-1,182.8	-4,914.5	4,131.3	4,025.3	105.97	38.986	
5,100.0	4,971.8	4,938.8	4,938.8	22.1	98.1	-10.67	-1,182.8	-4,914.5	4,109.7	4,002.0	107.71	38.154	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	4,989.2	4,956.2	4,956.2	22.2	98.5	-10.69	-1,182.8	-4,914.5	4,104.8	3,996.7	108.11	37.970	
5,200.0	5,068.0	5,035.0	5,035.0	22.7	100.1	-10.74	-1,182.8	-4,914.5	4,082.8	3,972.9	109.89	37.154	
5,216.5	5,083.9	5,050.9	5,050.9	22.8	100.4	-10.75	-1,182.8	-4,914.5	4,078.4	3,968.1	110.25	36.993	
5,240.0	5,106.5	5,073.5	5,073.5	22.9	100.9	-10.77	-1,182.8	-4,914.5	4,072.1	3,961.3	110.76	36.765	
5,300.0	5,164.4	5,131.4	5,131.4	23.2	102.0	-10.75	-1,182.8	-4,914.5	4,056.6	3,944.0	112.60	36.027	
5,314.9	5,178.8	5,145.8	5,145.8	23.3	102.3	-10.75	-1,182.8	-4,914.5	4,052.9	3,939.8	113.05	35.851	
5,400.0	5,261.5	5,228.5	5,228.5	23.6	104.0	-10.73	-1,182.8	-4,914.5	4,033.4	3,917.8	115.58	34.898	
5,413.4	5,274.6	5,241.6	5,241.6	23.6	104.2	-10.72	-1,182.8	-4,914.5	4,030.5	3,914.5	115.97	34.756	
5,500.0	5,359.5	5,326.5	5,326.5	23.9	105.9	-10.70	-1,182.8	-4,914.5	4,013.5	3,895.1	118.45	33.883	
5,511.8	5,371.1	5,338.1	5,338.1	24.0	106.2	-10.70	-1,182.8	-4,914.5	4,011.4	3,892.6	118.78	33.771	
5,600.0	5,458.0	5,425.0	5,425.0	24.2	107.9	-10.69	-1,182.8	-4,914.5	3,997.0	3,875.8	121.21	32.975	
5,610.2	5,468.2	5,435.2	5,435.2	24.3	108.1	-10.69	-1,182.8	-4,914.5	3,995.5	3,874.0	121.49	32.888	
5,700.0	5,557.2	5,524.2	5,524.2	24.5	109.9	-10.67	-1,182.8	-4,914.5	3,983.9	3,860.1	123.85	32.167	
5,708.6	5,565.7	5,532.7	5,532.7	24.5	110.1	-10.67	-1,182.8	-4,914.5	3,983.0	3,858.9	124.07	32.102	
5,800.0	5,656.7	5,623.7	5,623.7	24.7	111.9	-10.66	-1,182.8	-4,914.5	3,974.3	3,847.9	126.36	31.452	
5,807.1	5,663.7	5,630.7	5,630.7	24.7	112.1	-10.66	-1,182.8	-4,914.5	3,973.7	3,847.2	126.53	31.405	
5,900.0	5,756.5	5,723.5	5,723.5	24.9	113.9	-10.66	-1,182.8	-4,914.5	3,968.0	3,839.3	128.72	30.826	
5,905.5	5,761.9	5,728.9	5,728.9	24.9	114.0	-10.66	-1,182.8	-4,914.5	3,967.8	3,838.9	128.85	30.794	
6,000.0	5,856.4	5,823.4	5,823.4	25.0	115.9	-10.65	-1,182.8	-4,914.5	3,965.2	3,834.2	130.94	30.283	
6,003.9	5,860.3	5,827.3	5,827.3	25.0	116.0	-10.65	-1,182.8	-4,914.5	3,965.1	3,834.1	131.02	30.264	
6,032.5	5,888.9	5,855.9	5,855.9	25.0	116.6	-105.85	-1,182.8	-4,914.5	3,965.0	3,823.6	141.39	28.043	
6,062.5	5,918.9	5,885.9	5,885.9	25.1	117.2	-105.85	-1,182.8	-4,914.5	3,965.0	3,823.0	142.03	27.917 CC, ES, SF	
6,100.0	5,956.4	5,923.4	5,923.4	25.1	117.9	164.14	-1,182.8	-4,914.5	3,965.9	3,833.1	132.80	29.865	
6,102.3	5,958.7	5,925.7	5,925.7	25.1	118.0	164.13	-1,182.8	-4,914.5	3,966.1	3,833.2	132.82	29.861	
6,150.0	6,006.2	5,973.2	5,973.2	25.1	119.0	164.06	-1,182.8	-4,914.5	3,970.1	3,837.2	132.96	29.859	
6,200.0	6,055.6	6,022.6	6,022.6	25.1	119.9	163.92	-1,182.8	-4,914.5	3,977.7	3,845.1	132.52	30.015	
6,200.8	6,056.3	6,023.3	6,023.3	25.1	120.0	163.92	-1,182.8	-4,914.5	3,977.8	3,845.3	132.51	30.019	
6,250.0	6,104.3	6,071.3	6,071.3	25.0	120.9	163.72	-1,182.8	-4,914.5	3,988.5	3,857.0	131.47	30.337	
6,299.2	6,151.3	6,118.3	6,118.3	24.9	121.9	163.45	-1,182.8	-4,914.5	4,002.3	3,872.4	129.85	30.822	
6,300.0	6,152.1	6,119.1	6,119.1	24.9	121.9	163.45	-1,182.8	-4,914.5	4,002.5	3,872.7	129.82	30.831	
6,350.0	6,198.7	6,165.7	6,165.7	24.8	122.8	163.10	-1,182.8	-4,914.5	4,019.8	3,892.2	127.59	31.505	
6,397.6	6,241.9	6,208.9	6,208.9	24.7	123.7	162.68	-1,182.8	-4,914.5	4,039.1	3,914.2	124.96	32.323	
6,400.0	6,244.1	6,211.1	6,211.1	24.7	123.7	162.66	-1,182.8	-4,914.5	4,040.2	3,915.3	124.82	32.369	
6,450.0	6,287.8	6,254.8	6,254.8	24.5	124.6	162.12	-1,182.8	-4,914.5	4,063.5	3,942.0	121.54	33.432	
6,496.0	6,326.5	6,293.5	6,293.5	24.4	125.4	161.53	-1,182.8	-4,914.5	4,087.6	3,969.4	118.15	34.596	
6,500.0	6,329.7	6,296.7	6,296.7	24.4	125.5	161.47	-1,182.8	-4,914.5	4,089.8	3,971.9	117.85	34.704	
6,550.0	6,369.6	6,336.6	6,336.6	24.3	126.3	160.68	-1,182.8	-4,914.5	4,118.8	4,005.0	113.82	36.186	
6,594.5	6,403.3	6,370.3	6,370.3	24.2	126.9	159.83	-1,182.8	-4,914.5	4,146.8	4,036.7	110.08	37.671	
6,600.0	6,407.3	6,374.3	6,374.3	24.2	127.0	159.72	-1,182.8	-4,914.5	4,150.4	4,040.8	109.61	37.865	
6,650.0	6,442.7	6,409.7	6,409.7	24.1	127.7	158.55	-1,182.8	-4,914.5	4,184.6	4,079.2	105.40	39.702	
6,692.9	6,471.0	6,438.0	6,438.0	24.0	128.3	157.35	-1,182.8	-4,914.5	4,215.7	4,113.7	101.98	41.338	
6,700.0	6,475.5	6,442.5	6,442.5	24.0	128.4	157.13	-1,182.8	-4,914.5	4,221.0	4,119.6	101.45	41.608	
6,750.0	6,505.6	6,472.6	6,472.6	24.0	129.0	155.38	-1,182.8	-4,914.5	4,259.6	4,161.5	98.11	43.416	
6,791.3	6,528.3	6,495.3	6,495.3	24.0	129.5	153.61	-1,182.8	-4,914.5	4,293.0	4,196.9	96.16	44.643	
6,800.0	6,532.8	6,499.8	6,499.8	24.0	129.5	153.20	-1,182.8	-4,914.5	4,300.2	4,204.3	95.88	44.850	
6,850.0	6,557.0	6,524.0	6,524.0	24.1	130.0	150.44	-1,182.8	-4,914.5	4,342.5	4,247.1	95.38	45.531	
6,889.7	6,574.1	6,541.1	6,541.1	24.2	130.4	147.70	-1,182.8	-4,914.5	4,377.3	4,280.6	96.72	45.256	
6,900.0	6,578.1	6,545.1	6,545.1	24.3	130.5	146.89	-1,182.8	-4,914.5	4,386.4	4,289.0	97.37	45.047	
6,950.0	6,596.1	6,563.1	6,563.1	24.5	130.8	142.26	-1,182.8	-4,914.5	4,431.7	4,329.0	102.70	43.151	
6,988.2	6,607.5	6,574.5	6,574.5	24.7	131.0	137.71	-1,182.8	-4,914.5	4,467.0	4,357.5	109.43	40.819	
7,000.0	6,610.7	6,577.7	6,577.7	24.8	131.1	136.08	-1,182.8	-4,914.5	4,478.0	4,366.0	112.01	39.979	
7,050.0	6,621.9	6,588.9	6,588.9	25.1	131.3	127.74	-1,182.8	-4,914.5	4,525.3	4,400.0	125.30	36.116	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	6,595.0	6,595.0	25.4	131.5	119.86	-1,182.8	-4,914.5	4,560.4	4,423.6	136.70	33.359	
7,100.0	6,629.7	6,596.7	6,596.7	25.6	131.5	116.55	-1,182.8	-4,914.5	4,573.3	4,432.4	140.91	32.456	
7,150.0	6,634.1	6,601.1	6,601.1	26.0	131.6	102.23	-1,182.8	-4,914.5	4,621.7	4,467.6	154.05	30.000	
7,185.0	6,635.1	6,602.1	6,602.1	26.4	131.6	90.80	-1,182.8	-4,914.5	4,655.7	4,497.8	157.94	29.477	
7,196.6	6,635.0	6,602.0	6,602.0	26.5	131.6	86.94	-1,182.8	-4,914.5	4,666.9	4,509.1	157.86	29.564	
7,200.0	6,635.0	6,602.0	6,602.0	26.6	131.6	86.93	-1,182.8	-4,914.5	4,670.3	4,512.4	157.90	29.578	
7,283.4	6,633.9	6,600.9	6,600.9	27.6	131.6	86.88	-1,182.8	-4,914.5	4,751.5	4,592.6	158.90	29.903	
7,300.0	6,633.7	6,600.7	6,600.7	27.8	131.6	86.87	-1,182.8	-4,914.5	4,767.6	4,608.5	159.09	29.967	
7,381.9	6,632.6	6,599.6	6,599.6	29.0	131.5	86.81	-1,182.8	-4,914.5	4,847.4	4,687.1	160.25	30.248	
7,400.0	6,632.4	6,599.4	6,599.4	29.2	131.5	86.80	-1,182.8	-4,914.5	4,865.0	4,704.5	160.51	30.310	
7,480.3	6,631.4	6,598.4	6,598.4	30.5	131.5	86.74	-1,182.8	-4,914.5	4,943.3	4,781.5	161.79	30.553	
7,500.0	6,631.1	6,598.1	6,598.1	30.9	131.5	86.73	-1,182.8	-4,914.5	4,962.6	4,800.4	162.11	30.612	
7,578.7	6,630.1	6,597.1	6,597.1	32.3	131.5	86.68	-1,182.8	-4,914.5	5,039.4	4,875.9	163.50	30.823	
7,600.0	6,629.8	6,596.8	6,596.8	32.7	131.5	86.66	-1,182.8	-4,914.5	5,060.2	4,896.3	163.87	30.879	
7,677.1	6,628.9	6,595.9	6,595.9	34.1	131.5	86.61	-1,182.8	-4,914.5	5,135.6	4,970.2	165.33	31.062	
7,700.0	6,628.6	6,595.6	6,595.6	34.6	131.5	86.59	-1,182.8	-4,914.5	5,157.9	4,992.1	165.77	31.116	
7,775.6	6,627.6	6,594.6	6,594.6	36.1	131.4	86.54	-1,182.8	-4,914.5	5,231.8	5,064.5	167.28	31.275	
7,800.0	6,627.3	6,594.3	6,594.3	36.6	131.4	86.52	-1,182.8	-4,914.5	5,255.7	5,087.9	167.77	31.326	
7,874.0	6,626.3	6,593.3	6,593.3	38.2	131.4	86.47	-1,182.8	-4,914.5	5,328.1	5,158.8	169.33	31.466	
7,900.0	6,626.0	6,593.0	6,593.0	38.8	131.4	86.45	-1,182.8	-4,914.5	5,353.6	5,183.7	169.88	31.515	
7,972.4	6,625.1	6,592.1	6,592.1	40.4	131.4	86.41	-1,182.8	-4,914.5	5,424.5	5,253.1	171.46	31.638	
8,000.0	6,624.7	6,591.7	6,591.7	41.0	131.4	86.39	-1,182.8	-4,914.5	5,451.6	5,279.5	172.06	31.684	
8,070.8	6,623.8	6,590.8	6,590.8	42.6	131.4	86.34	-1,182.8	-4,914.5	5,521.0	5,347.4	173.65	31.793	
8,100.0	6,623.4	6,590.4	6,590.4	43.3	131.4	86.32	-1,182.8	-4,914.5	5,549.6	5,375.3	174.31	31.838	
8,169.3	6,622.6	6,589.6	6,589.6	44.9	131.3	86.27	-1,182.8	-4,914.5	5,617.5	5,441.6	175.91	31.935	
8,200.0	6,622.2	6,589.2	6,589.2	45.6	131.3	86.25	-1,182.8	-4,914.5	5,647.7	5,471.1	176.62	31.977	
8,267.7	6,621.3	6,588.3	6,588.3	47.3	131.3	86.20	-1,182.8	-4,914.5	5,714.1	5,535.9	178.21	32.064	
8,300.0	6,620.9	6,587.9	6,587.9	48.0	131.3	86.18	-1,182.8	-4,914.5	5,745.9	5,566.9	178.97	32.105	
8,366.1	6,620.0	6,587.0	6,587.0	49.7	131.3	86.13	-1,182.8	-4,914.5	5,810.8	5,630.3	180.56	32.183	
8,400.0	6,619.6	6,586.6	6,586.6	50.5	131.3	86.11	-1,182.8	-4,914.5	5,844.1	5,662.7	181.37	32.222	
8,464.5	6,618.8	6,585.8	6,585.8	52.1	131.3	86.07	-1,182.8	-4,914.5	5,907.5	5,724.6	182.94	32.292	
8,500.0	6,618.3	6,585.3	6,585.3	53.0	131.3	86.04	-1,182.8	-4,914.5	5,942.4	5,758.6	183.80	32.330	
8,563.0	6,617.5	6,584.5	6,584.5	54.5	131.2	86.00	-1,182.8	-4,914.5	6,004.3	5,819.0	185.35	32.394	
8,600.0	6,617.0	6,584.0	6,584.0	55.5	131.2	85.97	-1,182.8	-4,914.5	6,040.7	5,854.5	186.27	32.431	
8,661.4	6,616.3	6,583.3	6,583.3	57.0	131.2	85.93	-1,182.8	-4,914.5	6,101.1	5,913.3	187.80	32.488	
8,700.0	6,615.8	6,582.8	6,582.8	58.0	131.2	85.90	-1,182.8	-4,914.5	6,139.1	5,950.4	188.76	32.524	
8,759.8	6,615.0	6,582.0	6,582.0	59.5	131.2	85.86	-1,182.8	-4,914.5	6,198.0	6,007.8	190.26	32.576	
8,800.0	6,614.5	6,581.5	6,581.5	60.6	131.2	85.83	-1,182.8	-4,914.5	6,237.6	6,046.3	191.27	32.611	
8,858.2	6,613.7	6,580.7	6,580.7	62.1	131.2	85.80	-1,182.8	-4,914.5	6,294.9	6,102.2	192.75	32.659	
8,900.0	6,613.2	6,580.2	6,580.2	63.2	131.2	85.77	-1,182.8	-4,914.5	6,336.1	6,142.3	193.81	32.693	
8,956.7	6,612.5	6,579.5	6,579.5	64.6	131.1	85.73	-1,182.8	-4,914.5	6,391.9	6,196.7	195.25	32.737	
9,000.0	6,611.9	6,578.9	6,578.9	65.8	131.1	85.70	-1,182.8	-4,914.5	6,434.6	6,238.3	196.36	32.770	
9,055.1	6,611.2	6,578.2	6,578.2	67.2	131.1	85.66	-1,182.8	-4,914.5	6,488.9	6,291.2	197.77	32.810	
9,100.0	6,610.6	6,577.6	6,577.6	68.4	131.1	85.63	-1,182.8	-4,914.5	6,533.2	6,334.3	198.93	32.842	
9,153.5	6,609.9	6,576.9	6,576.9	69.8	131.1	85.59	-1,182.8	-4,914.5	6,586.0	6,385.7	200.31	32.879	
9,200.0	6,609.3	6,576.3	6,576.3	71.0	131.1	85.56	-1,182.8	-4,914.5	6,631.8	6,430.3	201.51	32.911	
9,251.9	6,608.7	6,575.7	6,575.7	72.4	131.1	85.52	-1,182.8	-4,914.5	6,683.1	6,480.2	202.86	32.945	
9,300.0	6,608.1	6,575.1	6,575.1	73.7	131.1	85.49	-1,182.8	-4,914.5	6,730.5	6,526.4	204.10	32.976	
9,350.4	6,607.4	6,574.4	6,574.4	75.0	131.0	85.46	-1,182.8	-4,914.5	6,780.2	6,574.8	205.41	33.008	
9,400.0	6,606.8	6,573.8	6,573.8	76.3	131.0	85.42	-1,182.8	-4,914.5	6,829.2	6,622.5	206.71	33.038	
9,448.8	6,606.1	6,573.1	6,573.1	77.6	131.0	85.39	-1,182.8	-4,914.5	6,877.4	6,669.4	207.98	33.067	
9,500.0	6,605.5	6,572.5	6,572.5	79.0	131.0	85.35	-1,182.8	-4,914.5	6,928.0	6,718.6	209.32	33.097	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
9,547.2	6,604.9	6,571.9	6,571.9	80.2	131.0	85.32	-1,182.8	-4,914.5	6,974.6	6,764.0	210.56	33.124	
9,600.0	6,604.2	6,571.2	6,571.2	81.7	131.0	85.28	-1,182.8	-4,914.5	7,026.7	6,814.8	211.95	33.154	
9,645.6	6,603.6	6,570.6	6,570.6	82.9	131.0	85.25	-1,182.8	-4,914.5	7,071.8	6,858.7	213.15	33.178	
9,700.0	6,602.9	6,569.9	6,569.9	84.3	131.0	85.21	-1,182.8	-4,914.5	7,125.6	6,911.0	214.58	33.208	
9,744.1	6,602.3	6,569.3	6,569.3	85.5	130.9	85.18	-1,182.8	-4,914.5	7,169.1	6,953.4	215.74	33.230	
9,800.0	6,601.6	6,568.6	6,568.6	87.0	130.9	85.14	-1,182.8	-4,914.5	7,224.4	7,007.2	217.21	33.259	
9,842.5	6,601.1	6,568.1	6,568.1	88.2	130.9	85.11	-1,182.8	-4,914.5	7,266.4	7,048.1	218.34	33.280	
9,900.0	6,600.3	6,567.3	6,567.3	89.7	130.9	85.07	-1,182.8	-4,914.5	7,323.3	7,103.4	219.86	33.309	
9,940.9	6,599.8	6,566.8	6,566.8	90.9	130.9	85.05	-1,182.8	-4,914.5	7,363.8	7,142.8	220.94	33.329	
10,000.0	6,599.0	6,566.0	6,566.0	92.5	130.9	85.00	-1,182.8	-4,914.5	7,422.2	7,199.7	222.51	33.357	
10,039.3	6,598.5	6,565.5	6,565.5	93.5	130.9	84.98	-1,182.8	-4,914.5	7,461.1	7,237.6	223.55	33.375	
10,100.0	6,597.7	6,564.7	6,564.7	95.2	130.8	84.93	-1,182.8	-4,914.5	7,521.1	7,296.0	225.16	33.403	
10,137.8	6,597.3	6,564.3	6,564.3	96.2	130.8	84.91	-1,182.8	-4,914.5	7,558.5	7,332.3	226.17	33.420	
10,200.0	6,596.5	6,563.5	6,563.5	97.9	130.8	84.87	-1,182.8	-4,914.5	7,620.1	7,392.3	227.82	33.447	
10,236.2	6,596.0	6,563.0	6,563.0	98.9	130.8	84.84	-1,182.8	-4,914.5	7,655.9	7,427.1	228.79	33.463	
10,300.0	6,595.2	6,562.2	6,562.2	100.6	130.8	84.80	-1,182.8	-4,914.5	7,719.1	7,488.6	230.49	33.490	
10,334.6	6,594.7	6,561.7	6,561.7	101.6	130.8	84.77	-1,182.8	-4,914.5	7,753.4	7,521.9	231.41	33.505	
10,400.0	6,593.9	6,560.9	6,560.9	103.3	130.8	84.73	-1,182.8	-4,914.5	7,818.1	7,584.9	233.15	33.532	
10,433.0	6,593.5	6,560.5	6,560.5	104.2	130.8	84.70	-1,182.8	-4,914.5	7,850.8	7,616.8	234.04	33.545	
10,500.0	6,592.6	6,559.6	6,559.6	106.1	130.7	84.66	-1,182.8	-4,914.5	7,917.1	7,681.3	235.83	33.572	
10,531.5	6,592.2	6,559.2	6,559.2	106.9	130.7	84.64	-1,182.8	-4,914.5	7,948.3	7,711.6	236.67	33.584	
10,600.0	6,591.3	6,558.3	6,558.3	108.8	130.7	84.59	-1,182.8	-4,914.5	8,016.2	7,777.7	238.50	33.611	
10,629.9	6,590.9	6,557.9	6,557.9	109.6	130.7	84.57	-1,182.8	-4,914.5	8,045.8	7,806.5	239.30	33.622	
10,700.0	6,590.0	6,557.0	6,557.0	111.6	130.7	84.52	-1,182.8	-4,914.5	8,115.3	7,874.1	241.18	33.649	
10,728.3	6,589.6	6,556.6	6,556.6	112.3	130.7	84.50	-1,182.8	-4,914.5	8,143.4	7,901.4	241.93	33.659	
10,800.0	6,588.7	6,555.7	6,555.7	114.3	130.7	84.45	-1,182.8	-4,914.5	8,214.4	7,970.5	243.85	33.686	
10,826.7	6,588.4	6,555.4	6,555.4	115.0	130.7	84.43	-1,182.8	-4,914.5	8,240.9	7,996.3	244.57	33.695	
10,900.0	6,587.4	6,554.4	6,554.4	117.0	130.6	84.38	-1,182.8	-4,914.5	8,313.5	8,067.0	246.53	33.721	
10,925.2	6,587.1	6,554.1	6,554.1	117.7	130.6	84.36	-1,182.8	-4,914.5	8,338.5	8,091.3	247.21	33.730	
11,000.0	6,586.1	6,553.1	6,553.1	119.8	130.6	84.31	-1,182.8	-4,914.5	8,412.7	8,163.5	249.22	33.756	
11,023.6	6,585.8	6,552.8	6,552.8	120.4	130.6	84.29	-1,182.8	-4,914.5	8,436.1	8,186.2	249.85	33.764	
11,100.0	6,584.8	6,551.8	6,551.8	122.5	130.6	84.24	-1,182.8	-4,914.5	8,511.8	8,259.9	251.90	33.790	
11,122.0	6,584.5	6,551.5	6,551.5	123.2	130.6	84.22	-1,182.8	-4,914.5	8,533.7	8,281.2	252.49	33.798	
11,200.0	6,583.5	6,550.5	6,550.5	125.3	130.6	84.17	-1,182.8	-4,914.5	8,611.0	8,356.4	254.59	33.823	
11,220.4	6,583.3	6,550.3	6,550.3	125.9	130.6	84.15	-1,182.8	-4,914.5	8,631.3	8,376.2	255.14	33.830	
11,300.0	6,582.2	6,549.2	6,549.2	128.1	130.5	84.10	-1,182.8	-4,914.5	8,710.2	8,453.0	257.28	33.856	
11,318.9	6,582.0	6,549.0	6,549.0	128.6	130.5	84.09	-1,182.8	-4,914.5	8,729.0	8,471.2	257.78	33.862	
11,400.0	6,580.9	6,547.9	6,547.9	130.8	130.5	84.03	-1,182.8	-4,914.5	8,809.5	8,549.5	259.96	33.887	
11,417.3	6,580.7	6,547.7	6,547.7	131.3	130.5	84.02	-1,182.8	-4,914.5	8,826.6	8,566.2	260.43	33.893	
11,500.0	6,579.7	6,546.7	6,546.7	133.6	130.5	83.96	-1,182.8	-4,914.5	8,908.7	8,646.0	262.65	33.918	
11,515.7	6,579.4	6,546.4	6,546.4	134.0	130.5	83.95	-1,182.8	-4,914.5	8,924.3	8,661.2	263.08	33.923	
11,600.0	6,578.4	6,545.4	6,545.4	136.3	130.5	83.89	-1,182.8	-4,914.5	9,008.0	8,742.6	265.34	33.948	
11,614.1	6,578.2	6,545.2	6,545.2	136.7	130.5	83.88	-1,182.8	-4,914.5	9,022.0	8,756.3	265.73	33.952	
11,700.0	6,577.1	6,544.1	6,544.1	139.1	130.4	83.82	-1,182.8	-4,914.5	9,107.2	8,839.2	268.04	33.978	
11,712.6	6,576.9	6,543.9	6,543.9	139.5	130.4	83.81	-1,182.8	-4,914.5	9,119.7	8,851.3	268.37	33.981	
11,800.0	6,575.8	6,542.8	6,542.8	141.9	130.4	83.75	-1,182.8	-4,914.5	9,206.5	8,935.8	270.73	34.007	
11,811.0	6,575.6	6,542.6	6,542.6	142.2	130.4	83.74	-1,182.8	-4,914.5	9,217.4	8,946.4	271.02	34.010	
11,858.8	6,575.0	6,542.0	6,542.0	143.5	130.4	83.71	-1,182.8	-4,914.5	9,264.9	8,992.6	272.31	34.023	
11,859.3	6,575.0	6,542.0	6,542.0	143.5	130.4	83.71	-1,182.8	-4,914.5	9,265.4	8,993.1	272.32	34.024	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-83.58	141.0	-1,253.9	1,262.0				
98.4	98.4	77.4	77.4	0.1	0.0	-83.58	141.0	-1,253.9	1,261.8	1,261.7	0.10	N/A	
100.0	100.0	79.0	79.0	0.1	0.0	-83.58	141.0	-1,253.9	1,261.8	1,261.7	0.10	N/A	
196.8	196.8	175.8	175.8	0.3	1.0	-83.58	141.0	-1,253.9	1,261.8	1,260.5	1.29	974.363	
200.0	200.0	179.0	179.0	0.3	1.0	-83.58	141.0	-1,253.9	1,261.8	1,260.5	1.34	939.706	
295.3	295.3	274.3	274.3	0.5	3.0	-83.58	141.0	-1,253.9	1,261.8	1,258.3	3.51	359.098	
300.0	300.0	279.0	279.0	0.5	3.1	-83.58	141.0	-1,253.9	1,261.8	1,258.2	3.63	347.445	
393.7	393.7	372.7	372.7	0.8	5.1	-83.58	141.0	-1,253.9	1,261.8	1,256.0	5.83	216.489	
400.0	400.0	379.0	379.0	0.8	5.2	-83.58	141.0	-1,253.9	1,261.8	1,255.8	5.97	211.235	
492.1	492.1	471.1	471.1	1.0	7.1	-83.58	141.0	-1,253.9	1,261.8	1,253.7	8.07	156.382	
500.0	500.0	479.0	479.0	1.0	7.3	-83.58	141.0	-1,253.9	1,261.8	1,253.6	8.25	152.997	
590.5	590.5	569.5	569.5	1.2	9.1	-83.58	141.0	-1,253.9	1,261.8	1,251.5	10.29	122.617	
600.0	600.0	579.0	579.0	1.2	9.3	-83.58	141.0	-1,253.9	1,261.8	1,251.3	10.50	120.131	
689.0	689.0	668.0	668.0	1.4	11.1	-83.58	141.0	-1,253.9	1,261.8	1,249.3	12.50	100.908	
700.0	700.0	679.0	679.0	1.4	11.3	-83.58	141.0	-1,253.9	1,261.8	1,249.0	12.75	98.947	
787.4	787.4	766.4	766.4	1.6	13.1	-83.58	141.0	-1,253.9	1,261.8	1,247.1	14.71	85.754	
800.0	800.0	779.0	779.0	1.7	13.3	-83.58	141.0	-1,253.9	1,261.8	1,246.8	15.00	84.137	
885.8	885.8	864.8	864.8	1.9	15.1	-83.58	141.0	-1,253.9	1,261.8	1,244.9	16.92	74.568	
900.0	900.0	879.0	879.0	1.9	15.3	-83.58	141.0	-1,253.9	1,261.8	1,244.6	17.24	73.193	
984.2	984.2	963.2	963.2	2.1	17.0	-83.58	141.0	-1,253.9	1,261.8	1,242.7	19.13	65.969	
1,000.0	1,000.0	979.0	979.0	2.1	17.4	-83.58	141.0	-1,253.9	1,261.8	1,242.3	19.48	64.774	
1,082.7	1,082.7	1,061.7	1,061.7	2.3	19.0	-83.58	141.0	-1,253.9	1,261.8	1,240.5	21.33	59.151	
1,100.0	1,100.0	1,079.0	1,079.0	2.3	19.4	-83.58	141.0	-1,253.9	1,261.8	1,240.1	21.72	58.094	
1,181.1	1,181.1	1,160.1	1,160.1	2.5	21.0	-83.58	141.0	-1,253.9	1,261.8	1,238.3	23.54	53.612	
1,200.0	1,200.0	1,179.0	1,179.0	2.6	21.4	-83.58	141.0	-1,253.9	1,261.8	1,237.8	23.96	52.665	
1,279.5	1,279.5	1,258.5	1,258.5	2.7	23.0	11.62	141.0	-1,253.9	1,260.7	1,235.0	25.72	49.022	
1,300.0	1,300.0	1,279.0	1,279.0	2.8	23.4	11.63	141.0	-1,253.9	1,260.1	1,233.9	26.17	48.156	
1,377.9	1,377.8	1,356.8	1,356.8	2.9	25.0	11.68	141.0	-1,253.9	1,256.4	1,228.5	27.85	45.107	
1,400.0	1,399.8	1,378.8	1,378.8	3.0	25.4	11.70	141.0	-1,253.9	1,255.0	1,226.6	28.33	44.305	
1,476.4	1,475.9	1,454.9	1,454.9	3.1	26.9	11.79	141.0	-1,253.9	1,248.8	1,218.8	29.95	41.699	
1,500.0	1,499.5	1,478.5	1,478.5	3.2	27.4	11.82	141.0	-1,253.9	1,246.4	1,216.0	30.44	40.945	
1,574.8	1,573.7	1,552.7	1,552.7	3.4	28.9	11.94	141.0	-1,253.9	1,237.8	1,205.8	31.99	38.691	
1,600.0	1,598.7	1,577.7	1,577.7	3.4	29.4	11.98	141.0	-1,253.9	1,234.5	1,202.0	32.51	37.976	
1,673.2	1,671.1	1,650.1	1,650.1	3.6	30.9	12.14	141.0	-1,253.9	1,223.6	1,189.6	33.98	36.005	
1,700.0	1,697.5	1,676.5	1,676.5	3.7	31.4	12.20	141.0	-1,253.9	1,219.2	1,184.7	34.52	35.324	
1,771.6	1,767.9	1,746.9	1,746.9	3.9	32.8	12.39	141.0	-1,253.9	1,206.2	1,170.3	35.92	33.584	
1,800.0	1,795.6	1,774.6	1,774.6	4.0	33.4	12.48	141.0	-1,253.9	1,200.5	1,164.1	36.46	32.930	
1,870.1	1,864.0	1,843.0	1,843.0	4.3	34.8	12.70	141.0	-1,253.9	1,185.5	1,147.7	37.78	31.380	
1,900.0	1,893.1	1,872.1	1,872.1	4.4	35.3	12.81	141.0	-1,253.9	1,178.6	1,140.2	38.33	30.748	
1,968.5	1,959.3	1,938.3	1,938.3	4.6	36.7	13.08	141.0	-1,253.9	1,161.6	1,122.0	39.57	29.355	
1,992.4	1,982.4	1,961.4	1,961.4	4.7	37.1	13.18	141.0	-1,253.9	1,155.3	1,115.3	39.99	28.887	
2,000.0	1,989.6	1,968.6	1,968.6	4.8	37.3	13.21	141.0	-1,253.9	1,153.3	1,113.2	40.16	28.722	
2,066.9	2,054.0	2,033.0	2,033.0	5.1	38.6	13.42	141.0	-1,253.9	1,135.5	1,093.9	41.58	27.306	
2,100.0	2,085.8	2,064.8	2,064.8	5.2	39.2	13.52	141.0	-1,253.9	1,126.7	1,084.4	42.28	26.645	
2,165.3	2,148.7	2,127.7	2,127.7	5.5	40.5	13.74	141.0	-1,253.9	1,109.3	1,065.6	43.68	25.398	
2,200.0	2,182.0	2,161.0	2,161.0	5.7	41.2	13.85	141.0	-1,253.9	1,100.1	1,055.7	44.42	24.764	
2,263.8	2,243.4	2,222.4	2,222.4	6.0	42.4	14.07	141.0	-1,253.9	1,083.2	1,037.4	45.79	23.653	
2,300.0	2,278.2	2,257.2	2,257.2	6.2	43.1	14.20	141.0	-1,253.9	1,073.5	1,027.0	46.57	23.051	
2,362.2	2,338.1	2,317.1	2,317.1	6.5	44.3	14.43	141.0	-1,253.9	1,057.1	1,009.1	47.91	22.061	
2,400.0	2,374.4	2,353.4	2,353.4	6.7	45.0	14.57	141.0	-1,253.9	1,047.0	998.3	48.73	21.486	
2,460.6	2,432.8	2,411.8	2,411.8	7.0	46.2	14.80	141.0	-1,253.9	1,031.0	980.9	50.04	20.602	
2,500.0	2,470.6	2,449.6	2,449.6	7.2	47.0	14.95	141.0	-1,253.9	1,020.6	969.7	50.90	20.051	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-INC													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,559.0	2,527.4	2,506.4	2,506.4	7.6	48.1	15.19	141.0	-1,253.9	1,004.9	952.8	52.18	19.259		
2,600.0	2,566.8	2,545.8	2,545.8	7.8	48.9	15.36	141.0	-1,253.9	994.1	941.1	53.07	18.732		
2,657.5	2,622.1	2,601.1	2,601.1	8.1	50.0	15.60	141.0	-1,253.9	979.0	924.6	54.33	18.021		
2,700.0	2,663.0	2,642.0	2,642.0	8.3	50.8	15.78	141.0	-1,253.9	967.8	912.5	55.25	17.515		
2,755.9	2,716.8	2,695.8	2,695.8	8.6	51.9	16.03	141.0	-1,253.9	953.0	896.6	56.48	16.874		
2,800.0	2,759.2	2,738.2	2,738.2	8.9	52.8	16.24	141.0	-1,253.9	941.4	884.0	57.44	16.388		
2,854.3	2,811.5	2,790.5	2,790.5	9.2	53.8	16.49	141.0	-1,253.9	927.2	868.5	58.64	15.811		
2,900.0	2,855.4	2,834.4	2,834.4	9.4	54.7	16.71	141.0	-1,253.9	915.2	855.5	59.64	15.344		
2,952.7	2,906.2	2,885.2	2,885.2	9.7	55.7	16.97	141.0	-1,253.9	901.3	840.5	60.81	14.823		
3,000.0	2,951.6	2,930.6	2,930.6	10.0	56.6	17.22	141.0	-1,253.9	889.0	827.1	61.85	14.372		
3,051.2	3,000.9	2,979.9	2,979.9	10.3	57.6	17.49	141.0	-1,253.9	875.6	812.6	62.98	13.901		
3,100.0	3,047.8	3,026.8	3,026.8	10.5	58.6	17.75	141.0	-1,253.9	862.8	798.7	64.07	13.467		
3,149.6	3,095.5	3,074.5	3,074.5	10.8	59.5	18.03	141.0	-1,253.9	849.9	784.7	65.17	13.041		
3,200.0	3,144.0	3,123.0	3,123.0	11.1	60.5	18.32	141.0	-1,253.9	836.8	770.5	66.30	12.622		
3,248.0	3,190.2	3,169.2	3,169.2	11.4	61.4	18.60	141.0	-1,253.9	824.3	756.9	67.37	12.235		
3,300.0	3,240.2	3,219.2	3,219.2	11.7	62.4	18.92	141.0	-1,253.9	810.8	742.2	68.53	11.830		
3,346.4	3,284.9	3,263.9	3,263.9	11.9	63.3	19.22	141.0	-1,253.9	798.7	729.2	69.58	11.480		
3,400.0	3,336.4	3,315.4	3,315.4	12.2	64.4	19.57	141.0	-1,253.9	784.9	714.1	70.78	11.089		
3,444.9	3,379.6	3,358.6	3,358.6	12.5	65.2	19.87	141.0	-1,253.9	773.3	701.5	71.80	10.771		
3,500.0	3,432.6	3,411.6	3,411.6	12.8	66.3	20.25	141.0	-1,253.9	759.1	686.1	73.05	10.392		
3,543.3	3,474.3	3,453.3	3,453.3	13.1	67.1	20.57	141.0	-1,253.9	748.0	673.9	74.03	10.103		
3,600.0	3,528.8	3,507.8	3,507.8	13.4	68.2	20.99	141.0	-1,253.9	733.4	658.1	75.32	9.737		
3,641.7	3,569.0	3,548.0	3,548.0	13.6	69.0	21.31	141.0	-1,253.9	722.7	646.5	76.28	9.475		
3,700.0	3,625.0	3,604.0	3,604.0	14.0	70.2	21.78	141.0	-1,253.9	707.9	630.2	77.62	9.120		
3,740.1	3,663.6	3,642.6	3,642.6	14.2	71.0	22.11	141.0	-1,253.9	697.6	619.1	78.54	8.882		
3,800.0	3,721.2	3,700.2	3,700.2	14.5	72.1	22.62	141.0	-1,253.9	682.4	602.5	79.93	8.538		
3,838.6	3,758.3	3,737.3	3,737.3	14.8	72.9	22.97	141.0	-1,253.9	672.7	591.8	80.83	8.322		
3,900.0	3,817.4	3,796.4	3,796.4	15.1	74.0	23.53	141.0	-1,253.9	657.2	574.9	82.26	7.989		
3,937.0	3,853.0	3,832.0	3,832.0	15.3	74.8	23.89	141.0	-1,253.9	647.9	564.7	83.13	7.793		
4,000.0	3,913.6	3,892.6	3,892.6	15.7	76.0	24.52	141.0	-1,253.9	632.1	547.4	84.62	7.470		
4,035.4	3,947.7	3,926.7	3,926.7	15.9	76.7	24.88	141.0	-1,253.9	623.2	537.8	85.46	7.293		
4,100.0	4,009.8	3,988.8	3,988.8	16.3	77.9	25.58	141.0	-1,253.9	607.2	520.2	87.00	6.979		
4,133.8	4,042.4	4,021.4	4,021.4	16.5	78.6	25.96	141.0	-1,253.9	598.8	511.0	87.81	6.819		
4,200.0	4,106.0	4,085.0	4,085.0	16.8	79.8	26.73	141.0	-1,253.9	582.5	493.1	89.41	6.514		
4,232.3	4,137.1	4,116.1	4,116.1	17.0	80.5	27.12	141.0	-1,253.9	574.5	484.3	90.20	6.370		
4,300.0	4,202.2	4,181.2	4,181.2	17.4	81.8	27.98	141.0	-1,253.9	558.0	466.2	91.86	6.075		
4,330.7	4,231.7	4,210.7	4,210.7	17.6	82.4	28.39	141.0	-1,253.9	550.6	457.9	92.61	5.945		
4,400.0	4,298.4	4,277.4	4,277.4	18.0	83.7	29.34	141.0	-1,253.9	533.8	439.5	94.34	5.659		
4,429.1	4,326.4	4,305.4	4,305.4	18.2	84.3	29.76	141.0	-1,253.9	526.9	431.8	95.07	5.542		
4,500.0	4,394.6	4,373.6	4,373.6	18.6	85.7	30.83	141.0	-1,253.9	510.0	413.1	96.87	5.265		
4,527.5	4,421.1	4,400.1	4,400.1	18.7	86.2	31.27	141.0	-1,253.9	503.5	405.9	97.57	5.160		
4,600.0	4,490.8	4,469.8	4,469.8	19.2	87.6	32.46	141.0	-1,253.9	486.5	387.0	99.45	4.892		
4,626.0	4,515.8	4,494.8	4,494.8	19.3	88.1	32.91	141.0	-1,253.9	480.5	380.3	100.12	4.799		
4,700.0	4,587.0	4,566.0	4,566.0	19.8	89.5	34.25	141.0	-1,253.9	463.4	361.3	102.08	4.540		
4,724.4	4,610.5	4,589.5	4,589.5	19.9	90.0	34.72	141.0	-1,253.9	457.9	355.1	102.73	4.457		
4,800.0	4,683.2	4,662.2	4,662.2	20.3	91.5	36.23	141.0	-1,253.9	440.8	336.0	104.78	4.207		
4,822.8	4,705.2	4,684.2	4,684.2	20.5	91.9	36.70	141.0	-1,253.9	435.7	330.3	105.40	4.134		
4,900.0	4,779.4	4,758.4	4,758.4	20.9	93.4	38.40	141.0	-1,253.9	418.8	311.2	107.55	3.894		
4,921.2	4,799.8	4,778.8	4,778.8	21.0	93.8	38.89	141.0	-1,253.9	414.2	306.0	108.14	3.830		
5,000.0	4,875.6	4,854.6	4,854.6	21.5	95.3	40.81	141.0	-1,253.9	397.4	287.0	110.39	3.600		
5,019.7	4,894.5	4,873.5	4,873.5	21.6	95.7	41.31	141.0	-1,253.9	393.3	282.3	110.96	3.544		
5,100.0	4,971.8	4,950.8	4,950.8	22.1	97.3	43.48	141.0	-1,253.9	376.8	263.5	113.33	3.325		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	4,989.2	4,968.2	4,968.2	22.2	97.6	43.99	141.0	-1,253.9	373.2	259.3	113.87	3.277	
5,200.0	5,068.0	5,047.0	5,047.0	22.7	99.2	46.43	141.0	-1,253.9	357.1	240.8	116.35	3.069	
5,216.5	5,083.9	5,062.9	5,062.9	22.8	99.5	46.95	141.0	-1,253.9	354.0	237.1	116.86	3.029	
5,240.0	5,106.5	5,085.5	5,085.5	22.9	100.0	47.71	141.0	-1,253.9	349.5	231.9	117.58	2.972	
5,300.0	5,164.4	5,143.4	5,143.4	23.2	101.1	49.47	141.0	-1,253.9	338.9	219.3	119.60	2.833	
5,314.9	5,178.8	5,157.8	5,157.8	23.3	101.4	49.91	141.0	-1,253.9	336.4	216.3	120.08	2.801	
5,400.0	5,261.5	5,240.5	5,240.5	23.6	103.1	52.35	141.0	-1,253.9	323.7	201.0	122.78	2.637	
5,413.4	5,274.6	5,253.6	5,253.6	23.6	103.4	52.72	141.0	-1,253.9	321.9	198.8	123.19	2.613	
5,500.0	5,359.5	5,338.5	5,338.5	23.9	105.1	55.05	141.0	-1,253.9	311.6	185.8	125.78	2.477	
5,511.8	5,371.1	5,350.1	5,350.1	24.0	105.3	55.35	141.0	-1,253.9	310.4	184.2	126.12	2.461	
5,600.0	5,458.0	5,437.0	5,437.0	24.2	107.0	57.47	141.0	-1,253.9	302.2	173.6	128.61	2.350	
5,610.2	5,468.2	5,447.2	5,447.2	24.3	107.2	57.70	141.0	-1,253.9	301.4	172.5	128.89	2.338	
5,700.0	5,557.2	5,536.2	5,536.2	24.5	109.0	59.51	141.0	-1,253.9	295.2	163.9	131.28	2.249	
5,708.6	5,565.7	5,544.7	5,544.7	24.5	109.2	59.67	141.0	-1,253.9	294.7	163.2	131.50	2.241	
5,800.0	5,656.7	5,635.7	5,635.7	24.7	111.0	61.10	141.0	-1,253.9	290.3	156.5	133.78	2.170	
5,807.1	5,663.7	5,642.7	5,642.7	24.7	111.2	61.19	141.0	-1,253.9	290.0	156.1	133.95	2.165	
5,900.0	5,756.5	5,735.5	5,735.5	24.9	113.0	62.15	141.0	-1,253.9	287.3	151.1	136.13	2.110	
5,905.5	5,761.9	5,740.9	5,740.9	24.9	113.2	62.19	141.0	-1,253.9	287.2	150.9	136.26	2.107	
6,000.0	5,856.4	5,835.4	5,835.4	25.0	115.1	62.64	141.0	-1,253.9	285.9	147.6	138.34	2.067	
6,003.9	5,860.3	5,839.3	5,839.3	25.0	115.1	62.64	141.0	-1,253.9	285.9	147.5	138.43	2.065	
6,032.5	5,888.9	5,867.9	5,867.9	25.0	115.7	-32.52	141.0	-1,253.9	285.9	152.9	132.93	2.150	
6,062.5	5,918.9	5,897.9	5,897.9	25.1	116.3	-32.52	141.0	-1,253.9	285.9	152.3	133.57	2.140	CC
6,100.0	5,956.4	5,935.4	5,935.4	25.1	117.1	-122.65	141.0	-1,253.9	286.4	146.0	140.36	2.040	ES
6,102.3	5,958.7	5,937.7	5,937.7	25.1	117.1	-122.67	141.0	-1,253.9	286.5	146.1	140.40	2.040	SF
6,150.0	6,006.2	5,985.2	5,985.2	25.1	118.1	-123.22	141.0	-1,253.9	288.8	147.7	141.03	2.047	
6,200.0	6,055.6	6,034.6	6,034.6	25.1	119.1	-124.20	141.0	-1,253.9	293.1	151.8	141.38	2.073	
6,200.8	6,056.3	6,035.3	6,035.3	25.1	119.1	-124.22	141.0	-1,253.9	293.2	151.8	141.38	2.074	
6,250.0	6,104.3	6,083.3	6,083.3	25.0	120.0	-125.52	141.0	-1,253.9	299.7	158.3	141.37	2.120	
6,299.2	6,151.3	6,130.3	6,130.3	24.9	121.0	-127.06	141.0	-1,253.9	308.4	167.5	140.94	2.188	
6,300.0	6,152.1	6,131.1	6,131.1	24.9	121.0	-127.09	141.0	-1,253.9	308.6	167.7	140.93	2.190	
6,350.0	6,198.7	6,177.7	6,177.7	24.8	121.9	-128.81	141.0	-1,253.9	320.1	180.1	140.03	2.286	
6,397.6	6,241.9	6,220.9	6,220.9	24.7	122.8	-130.50	141.0	-1,253.9	333.6	194.9	138.71	2.405	
6,400.0	6,244.1	6,223.1	6,223.1	24.7	122.8	-130.59	141.0	-1,253.9	334.4	195.7	138.63	2.412	
6,450.0	6,287.8	6,266.8	6,266.8	24.5	123.7	-132.32	141.0	-1,253.9	351.6	214.9	136.74	2.571	
6,496.0	6,326.5	6,305.5	6,305.5	24.4	124.5	-133.79	141.0	-1,253.9	370.2	235.6	134.59	2.750	
6,500.0	6,329.7	6,308.7	6,308.7	24.4	124.6	-133.91	141.0	-1,253.9	371.9	237.5	134.39	2.767	
6,550.0	6,369.6	6,348.6	6,348.6	24.3	125.4	-135.29	141.0	-1,253.9	395.3	263.6	131.66	3.002	
6,594.5	6,403.3	6,382.3	6,382.3	24.2	126.0	-136.29	141.0	-1,253.9	418.7	289.7	129.01	3.245	
6,600.0	6,407.3	6,386.3	6,386.3	24.2	126.1	-136.40	141.0	-1,253.9	421.8	293.1	128.67	3.278	
6,650.0	6,442.7	6,421.7	6,421.7	24.1	126.8	-137.18	141.0	-1,253.9	451.2	325.6	125.59	3.593	
6,692.9	6,471.0	6,450.0	6,450.0	24.0	127.4	-137.55	141.0	-1,253.9	478.8	355.7	123.05	3.891	
6,700.0	6,475.5	6,454.5	6,454.5	24.0	127.5	-137.58	141.0	-1,253.9	483.5	360.9	122.64	3.943	
6,750.0	6,505.6	6,484.6	6,484.6	24.0	128.1	-137.53	141.0	-1,253.9	518.5	398.4	120.10	4.318	
6,791.3	6,528.3	6,507.3	6,507.3	24.0	128.6	-137.09	141.0	-1,253.9	549.3	430.8	118.55	4.634	
6,800.0	6,532.8	6,511.8	6,511.8	24.0	128.7	-136.95	141.0	-1,253.9	556.0	437.7	118.31	4.700	
6,850.0	6,557.0	6,536.0	6,536.0	24.1	129.1	-135.74	141.0	-1,253.9	595.7	478.0	117.68	5.062	
6,889.7	6,574.1	6,553.1	6,553.1	24.2	129.5	-134.21	141.0	-1,253.9	628.7	510.4	118.34	5.313	
6,900.0	6,578.1	6,557.1	6,557.1	24.3	129.6	-133.72	141.0	-1,253.9	637.4	518.7	118.70	5.370	
6,950.0	6,596.1	6,575.1	6,575.1	24.5	129.9	-130.69	141.0	-1,253.9	680.8	559.0	121.86	5.587	
6,988.2	6,607.5	6,586.5	6,586.5	24.7	130.2	-127.49	141.0	-1,253.9	715.0	589.0	125.96	5.676	
7,000.0	6,610.7	6,589.7	6,589.7	24.8	130.2	-126.31	141.0	-1,253.9	725.7	598.2	127.54	5.690	
7,050.0	6,621.9	6,600.9	6,600.9	25.1	130.4	-120.12	141.0	-1,253.9	771.9	636.1	135.77	5.685	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	6,607.0	6,607.0	25.4	130.6	-114.13	141.0	-1,253.9	806.2	663.3	142.93	5.641	
7,100.0	6,629.7	6,608.7	6,608.7	25.6	130.6	-111.58	141.0	-1,253.9	818.9	673.3	145.61	5.624	
7,150.0	6,634.1	6,613.1	6,613.1	26.0	130.7	-100.23	141.0	-1,253.9	866.6	712.4	154.27	5.618	
7,185.0	6,635.1	6,614.1	6,614.1	26.4	130.7	-90.69	141.0	-1,253.9	900.3	743.2	157.06	5.732	
7,196.6	6,635.0	6,614.0	6,614.0	26.5	130.7	-87.33	141.0	-1,253.9	911.4	754.4	157.03	5.804	
7,200.0	6,635.0	6,614.0	6,614.0	26.6	130.7	-87.32	141.0	-1,253.9	914.7	757.7	157.06	5.824	
7,283.4	6,633.9	6,612.9	6,612.9	27.6	130.7	-87.07	141.0	-1,253.9	995.5	837.4	158.03	6.299	
7,300.0	6,633.7	6,612.7	6,612.7	27.8	130.7	-87.02	141.0	-1,253.9	1,011.5	853.3	158.23	6.393	
7,381.9	6,632.6	6,611.6	6,611.6	29.0	130.7	-86.77	141.0	-1,253.9	1,091.2	931.9	159.35	6.848	
7,400.0	6,632.4	6,611.4	6,611.4	29.2	130.7	-86.72	141.0	-1,253.9	1,108.9	949.3	159.60	6.948	
7,480.3	6,631.4	6,610.4	6,610.4	30.5	130.6	-86.47	141.0	-1,253.9	1,187.4	1,026.6	160.86	7.382	
7,500.0	6,631.1	6,610.1	6,610.1	30.9	130.6	-86.41	141.0	-1,253.9	1,206.7	1,045.5	161.17	7.487	
7,578.7	6,630.1	6,609.1	6,609.1	32.3	130.6	-86.17	141.0	-1,253.9	1,283.9	1,121.4	162.52	7.900	
7,600.0	6,629.8	6,608.8	6,608.8	32.7	130.6	-86.11	141.0	-1,253.9	1,304.8	1,142.0	162.88	8.011	
7,677.1	6,628.9	6,607.9	6,607.9	34.1	130.6	-85.88	141.0	-1,253.9	1,380.7	1,216.4	164.31	8.403	
7,700.0	6,628.6	6,607.6	6,607.6	34.6	130.6	-85.81	141.0	-1,253.9	1,403.2	1,238.5	164.73	8.519	
7,775.6	6,627.6	6,606.6	6,606.6	36.1	130.6	-85.58	141.0	-1,253.9	1,477.7	1,311.5	166.20	8.891	
7,800.0	6,627.3	6,606.3	6,606.3	36.6	130.6	-85.50	141.0	-1,253.9	1,501.8	1,335.2	166.68	9.010	
7,874.0	6,626.3	6,605.3	6,605.3	38.2	130.5	-85.28	141.0	-1,253.9	1,574.9	1,406.7	168.19	9.364	
7,900.0	6,626.0	6,605.0	6,605.0	38.8	130.5	-85.20	141.0	-1,253.9	1,600.6	1,431.9	168.72	9.487	
7,972.4	6,625.1	6,604.1	6,604.1	40.4	130.5	-84.98	141.0	-1,253.9	1,672.2	1,502.0	170.25	9.822	
8,000.0	6,624.7	6,603.7	6,603.7	41.0	130.5	-84.89	141.0	-1,253.9	1,699.5	1,528.7	170.84	9.948	
8,070.8	6,623.8	6,602.8	6,602.8	42.6	130.5	-84.68	141.0	-1,253.9	1,769.7	1,597.3	172.38	10.266	
8,100.0	6,623.4	6,602.4	6,602.4	43.3	130.5	-84.59	141.0	-1,253.9	1,798.6	1,625.6	173.01	10.396	
8,169.3	6,622.6	6,601.6	6,601.6	44.9	130.5	-84.38	141.0	-1,253.9	1,867.2	1,692.7	174.56	10.697	
8,200.0	6,622.2	6,601.2	6,601.2	45.6	130.5	-84.29	141.0	-1,253.9	1,897.7	1,722.5	175.24	10.829	
8,267.7	6,621.3	6,600.3	6,600.3	47.3	130.4	-84.08	141.0	-1,253.9	1,964.9	1,788.1	176.78	11.115	
8,300.0	6,620.9	6,599.9	6,599.9	48.0	130.4	-83.98	141.0	-1,253.9	1,996.9	1,819.4	177.51	11.250	
8,366.1	6,620.0	6,599.0	6,599.0	49.7	130.4	-83.78	141.0	-1,253.9	2,062.6	1,883.5	179.04	11.520	
8,400.0	6,619.6	6,598.6	6,598.6	50.5	130.4	-83.68	141.0	-1,253.9	2,096.2	1,916.4	179.82	11.658	
8,464.5	6,618.8	6,597.8	6,597.8	52.1	130.4	-83.49	141.0	-1,253.9	2,160.4	1,979.0	181.32	11.914	
8,500.0	6,618.3	6,597.3	6,597.3	53.0	130.4	-83.38	141.0	-1,253.9	2,195.6	2,013.4	182.15	12.054	
8,563.0	6,617.5	6,596.5	6,596.5	54.5	130.4	-83.19	141.0	-1,253.9	2,258.2	2,074.5	183.64	12.297	
8,600.0	6,617.0	6,596.0	6,596.0	55.5	130.3	-83.07	141.0	-1,253.9	2,295.0	2,110.5	184.51	12.438	
8,661.4	6,616.3	6,595.3	6,595.3	57.0	130.3	-82.89	141.0	-1,253.9	2,356.1	2,170.1	185.97	12.669	
8,700.0	6,615.8	6,594.8	6,594.8	58.0	130.3	-82.77	141.0	-1,253.9	2,394.5	2,207.6	186.89	12.812	
8,759.8	6,615.0	6,594.0	6,594.0	59.5	130.3	-82.59	141.0	-1,253.9	2,454.0	2,265.7	188.32	13.031	
8,800.0	6,614.5	6,593.5	6,593.5	60.6	130.3	-82.47	141.0	-1,253.9	2,494.0	2,304.7	189.28	13.176	
8,858.2	6,613.7	6,592.7	6,592.7	62.1	130.3	-82.29	141.0	-1,253.9	2,551.9	2,361.3	190.68	13.383	
8,900.0	6,613.2	6,592.2	6,592.2	63.2	130.3	-82.17	141.0	-1,253.9	2,593.5	2,401.8	191.68	13.530	
8,956.7	6,612.5	6,591.5	6,591.5	64.6	130.3	-82.00	141.0	-1,253.9	2,649.9	2,456.9	193.06	13.726	
9,000.0	6,611.9	6,590.9	6,590.9	65.8	130.2	-81.86	141.0	-1,253.9	2,693.1	2,499.0	194.10	13.875	
9,055.1	6,611.2	6,590.2	6,590.2	67.2	130.2	-81.70	141.0	-1,253.9	2,748.0	2,552.5	195.44	14.061	
9,100.0	6,610.6	6,589.6	6,589.6	68.4	130.2	-81.56	141.0	-1,253.9	2,792.7	2,596.2	196.52	14.210	
9,153.5	6,609.9	6,588.9	6,588.9	69.8	130.2	-81.40	141.0	-1,253.9	2,846.0	2,648.2	197.83	14.386	
9,200.0	6,609.3	6,588.3	6,588.3	71.0	130.2	-81.26	141.0	-1,253.9	2,892.3	2,693.4	198.95	14.538	
9,251.9	6,608.7	6,587.7	6,587.7	72.4	130.2	-81.11	141.0	-1,253.9	2,944.1	2,743.9	200.22	14.704	
9,300.0	6,608.1	6,587.1	6,587.1	73.7	130.2	-80.96	141.0	-1,253.9	2,992.0	2,790.6	201.39	14.857	
9,350.4	6,607.4	6,586.4	6,586.4	75.0	130.2	-80.81	141.0	-1,253.9	3,042.2	2,839.6	202.62	15.015	
9,400.0	6,606.8	6,585.8	6,585.8	76.3	130.1	-80.66	141.0	-1,253.9	3,091.6	2,887.8	203.82	15.168	
9,448.8	6,606.1	6,585.1	6,585.1	77.6	130.1	-80.51	141.0	-1,253.9	3,140.3	2,935.3	205.01	15.318	
9,500.0	6,605.5	6,584.5	6,584.5	79.0	130.1	-80.36	141.0	-1,253.9	3,191.3	2,985.1	206.26	15.473	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
9,547.2	6,604.9	6,583.9	6,583.9	80.2	130.1	-80.22	141.0	-1,253.9	3,238.4	3,031.0	207.41	15.614	
9,600.0	6,604.2	6,583.2	6,583.2	81.7	130.1	-80.06	141.0	-1,253.9	3,291.1	3,082.4	208.70	15.770	
9,645.6	6,603.6	6,582.6	6,582.6	82.9	130.1	-79.92	141.0	-1,253.9	3,336.6	3,126.8	209.81	15.903	
9,700.0	6,602.9	6,581.9	6,581.9	84.3	130.1	-79.76	141.0	-1,253.9	3,390.8	3,179.7	211.13	16.060	
9,744.1	6,602.3	6,581.3	6,581.3	85.5	130.1	-79.63	141.0	-1,253.9	3,434.8	3,222.5	212.21	16.186	
9,800.0	6,601.6	6,580.6	6,580.6	87.0	130.0	-79.46	141.0	-1,253.9	3,490.5	3,277.0	213.56	16.344	
9,842.5	6,601.1	6,580.1	6,580.1	88.2	130.0	-79.33	141.0	-1,253.9	3,532.9	3,318.3	214.60	16.463	
9,900.0	6,600.3	6,579.3	6,579.3	89.7	130.0	-79.16	141.0	-1,253.9	3,590.3	3,374.3	215.99	16.622	
9,940.9	6,599.8	6,578.8	6,578.8	90.9	130.0	-79.04	141.0	-1,253.9	3,631.1	3,414.1	216.99	16.734	
10,000.0	6,599.0	6,578.0	6,578.0	92.5	130.0	-78.86	141.0	-1,253.9	3,690.1	3,471.6	218.42	16.894	
10,039.3	6,598.5	6,577.5	6,577.5	93.5	130.0	-78.74	141.0	-1,253.9	3,729.3	3,510.0	219.38	17.000	
10,100.0	6,597.7	6,576.7	6,576.7	95.2	130.0	-78.56	141.0	-1,253.9	3,789.9	3,569.0	220.84	17.161	
10,137.8	6,597.3	6,576.3	6,576.3	96.2	130.0	-78.45	141.0	-1,253.9	3,827.6	3,605.8	221.76	17.260	
10,200.0	6,596.5	6,575.5	6,575.5	97.9	129.9	-78.26	141.0	-1,253.9	3,889.6	3,666.4	223.26	17.422	
10,236.2	6,596.0	6,575.0	6,575.0	98.9	129.9	-78.16	141.0	-1,253.9	3,925.8	3,701.6	224.13	17.515	
10,300.0	6,595.2	6,574.2	6,574.2	100.6	129.9	-77.96	141.0	-1,253.9	3,989.5	3,763.8	225.67	17.678	
10,334.6	6,594.7	6,573.7	6,573.7	101.6	129.9	-77.86	141.0	-1,253.9	4,024.0	3,797.5	226.50	17.766	
10,400.0	6,593.9	6,572.9	6,572.9	103.3	129.9	-77.67	141.0	-1,253.9	4,089.3	3,861.2	228.07	17.930	
10,433.0	6,593.5	6,572.5	6,572.5	104.2	129.9	-77.57	141.0	-1,253.9	4,122.3	3,893.4	228.87	18.011	
10,500.0	6,592.6	6,571.6	6,571.6	106.1	129.9	-77.37	141.0	-1,253.9	4,189.1	3,958.6	230.47	18.176	
10,531.5	6,592.2	6,571.2	6,571.2	106.9	129.8	-77.28	141.0	-1,253.9	4,220.5	3,989.3	231.23	18.253	
10,600.0	6,591.3	6,570.3	6,570.3	108.8	129.8	-77.07	141.0	-1,253.9	4,288.9	4,056.1	232.86	18.418	
10,629.9	6,590.9	6,569.9	6,569.9	109.6	129.8	-76.99	141.0	-1,253.9	4,318.8	4,085.2	233.58	18.490	
10,700.0	6,590.0	6,569.0	6,569.0	111.6	129.8	-76.78	141.0	-1,253.9	4,388.8	4,153.5	235.24	18.656	
10,728.3	6,589.6	6,568.6	6,568.6	112.3	129.8	-76.70	141.0	-1,253.9	4,417.0	4,181.1	235.92	18.723	
10,800.0	6,588.7	6,567.7	6,567.7	114.3	129.8	-76.48	141.0	-1,253.9	4,488.6	4,251.0	237.62	18.890	
10,826.7	6,588.4	6,567.4	6,567.4	115.0	129.8	-76.41	141.0	-1,253.9	4,515.3	4,277.1	238.25	18.952	
10,900.0	6,587.4	6,566.4	6,566.4	117.0	129.8	-76.19	141.0	-1,253.9	4,588.5	4,348.5	239.99	19.120	
10,925.2	6,587.1	6,566.1	6,566.1	117.7	129.7	-76.12	141.0	-1,253.9	4,613.6	4,373.0	240.58	19.177	
11,000.0	6,586.1	6,565.1	6,565.1	119.8	129.7	-75.89	141.0	-1,253.9	4,688.3	4,446.0	242.34	19.346	
11,023.6	6,585.8	6,564.8	6,564.8	120.4	129.7	-75.83	141.0	-1,253.9	4,711.9	4,469.0	242.90	19.399	
11,100.0	6,584.8	6,563.8	6,563.8	122.5	129.7	-75.60	141.0	-1,253.9	4,788.2	4,543.5	244.69	19.568	
11,122.0	6,584.5	6,563.5	6,563.5	123.2	129.7	-75.54	141.0	-1,253.9	4,810.2	4,565.0	245.21	19.617	
11,200.0	6,583.5	6,562.5	6,562.5	125.3	129.7	-75.31	141.0	-1,253.9	4,888.0	4,641.0	247.03	19.787	
11,220.4	6,583.3	6,562.3	6,562.3	125.9	129.7	-75.25	141.0	-1,253.9	4,908.5	4,661.0	247.51	19.832	
11,300.0	6,582.2	6,561.2	6,561.2	128.1	129.6	-75.02	141.0	-1,253.9	4,987.9	4,738.6	249.36	20.003	
11,318.9	6,582.0	6,561.0	6,561.0	128.6	129.6	-74.96	141.0	-1,253.9	5,006.8	4,757.0	249.80	20.043	
11,400.0	6,580.9	6,559.9	6,559.9	130.8	129.6	-74.72	141.0	-1,253.9	5,087.8	4,836.1	251.68	20.216	
11,417.3	6,580.7	6,559.7	6,559.7	131.3	129.6	-74.67	141.0	-1,253.9	5,105.1	4,853.0	252.08	20.252	
11,500.0	6,579.7	6,558.7	6,558.7	133.6	129.6	-74.43	141.0	-1,253.9	5,187.7	4,933.7	253.99	20.425	
11,515.7	6,579.4	6,558.4	6,558.4	134.0	129.6	-74.39	141.0	-1,253.9	5,203.4	4,949.0	254.35	20.458	
11,600.0	6,578.4	6,557.4	6,557.4	136.3	129.6	-74.14	141.0	-1,253.9	5,287.6	5,031.3	256.28	20.632	
11,614.1	6,578.2	6,557.2	6,557.2	136.7	129.6	-74.10	141.0	-1,253.9	5,301.7	5,045.1	256.61	20.661	
11,700.0	6,577.1	6,556.1	6,556.1	139.1	129.5	-73.85	141.0	-1,253.9	5,387.4	5,128.9	258.57	20.835	
11,712.6	6,576.9	6,555.9	6,555.9	139.5	129.5	-73.82	141.0	-1,253.9	5,400.0	5,141.1	258.86	20.861	
11,800.0	6,575.8	6,554.8	6,554.8	141.9	129.5	-73.56	141.0	-1,253.9	5,487.3	5,226.5	260.85	21.037	
11,811.0	6,575.6	6,554.6	6,554.6	142.2	129.5	-73.53	141.0	-1,253.9	5,498.3	5,237.2	261.10	21.058	
11,858.8	6,575.0	6,554.0	6,554.0	143.5	129.5	-73.39	141.0	-1,253.9	5,546.0	5,283.9	262.18	21.154	
11,859.3	6,575.0	6,554.0	6,554.0	143.5	129.5	-73.39	141.0	-1,253.9	5,546.6	5,284.4	262.19	21.155	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-58.65	1,452.6	-2,384.3	2,792.0				
98.4	98.4	103.4	103.4	0.1	0.0	-58.65	1,452.6	-2,384.3	2,792.0	2,791.8	0.13	N/A	
100.0	100.0	105.0	105.0	0.1	0.0	-58.65	1,452.6	-2,384.3	2,792.0	2,791.8	0.15	N/A	
196.8	196.8	201.8	201.8	0.3	1.0	-58.65	1,452.6	-2,384.3	2,792.0	2,790.7	1.30	2,140.766	
200.0	200.0	205.0	205.0	0.3	1.1	-58.65	1,452.6	-2,384.3	2,792.0	2,790.6	1.39	2,015.458	
295.3	295.3	300.3	300.3	0.5	3.3	-58.65	1,452.6	-2,384.3	2,792.0	2,788.1	3.84	727.630	
300.0	300.0	305.0	305.0	0.5	3.4	-58.65	1,452.6	-2,384.3	2,792.0	2,788.0	3.95	707.536	
393.7	393.7	398.7	398.7	0.8	5.3	-58.65	1,452.6	-2,384.3	2,792.0	2,785.9	6.11	457.169	
400.0	400.0	405.0	405.0	0.8	5.5	-58.65	1,452.6	-2,384.3	2,792.0	2,785.7	6.25	446.684	
492.1	492.1	497.1	497.1	1.0	7.4	-58.65	1,452.6	-2,384.3	2,792.0	2,783.6	8.34	334.795	
500.0	500.0	505.0	505.0	1.0	7.5	-58.65	1,452.6	-2,384.3	2,792.0	2,783.4	8.52	327.802	
590.5	590.5	595.5	595.5	1.2	9.4	-58.65	1,452.6	-2,384.3	2,792.0	2,781.4	10.56	264.439	
600.0	600.0	605.0	605.0	1.2	9.5	-58.65	1,452.6	-2,384.3	2,792.0	2,781.2	10.77	259.217	
689.0	689.0	694.0	694.0	1.4	11.3	-58.65	1,452.6	-2,384.3	2,792.0	2,779.2	12.77	218.627	
700.0	700.0	705.0	705.0	1.4	11.6	-58.65	1,452.6	-2,384.3	2,792.0	2,778.9	13.02	214.469	
787.4	787.4	792.4	792.4	1.6	13.3	-58.65	1,452.6	-2,384.3	2,792.0	2,777.0	14.98	186.389	
800.0	800.0	805.0	805.0	1.7	13.6	-58.65	1,452.6	-2,384.3	2,792.0	2,776.7	15.26	182.937	
885.8	885.8	890.8	890.8	1.9	15.3	-58.65	1,452.6	-2,384.3	2,792.0	2,774.8	17.19	162.457	
900.0	900.0	905.0	905.0	1.9	15.6	-58.65	1,452.6	-2,384.3	2,792.0	2,774.5	17.50	159.508	
984.2	984.2	989.2	989.2	2.1	17.3	-58.65	1,452.6	-2,384.3	2,792.0	2,772.6	19.39	143.981	
1,000.0	1,000.0	1,005.0	1,005.0	2.1	17.6	-58.65	1,452.6	-2,384.3	2,792.0	2,772.2	19.74	141.408	
1,082.7	1,082.7	1,087.7	1,087.7	2.3	19.3	-58.65	1,452.6	-2,384.3	2,792.0	2,770.4	21.60	129.285	
1,100.0	1,100.0	1,105.0	1,105.0	2.3	19.6	-58.65	1,452.6	-2,384.3	2,792.0	2,770.0	21.98	127.003	
1,181.1	1,181.1	1,186.1	1,186.1	2.5	21.3	-58.65	1,452.6	-2,384.3	2,792.0	2,768.2	23.80	117.314	
1,200.0	1,200.0	1,205.0	1,205.0	2.6	21.7	-58.65	1,452.6	-2,384.3	2,792.0	2,767.7	24.22	115.265	
1,279.5	1,279.5	1,284.5	1,284.5	2.7	23.3	36.57	1,452.6	-2,384.3	2,791.1	2,765.1	25.98	107.416	
1,300.0	1,300.0	1,305.0	1,305.0	2.8	23.7	36.58	1,452.6	-2,384.3	2,790.6	2,764.1	26.43	105.564	
1,377.9	1,377.8	1,382.8	1,382.8	2.9	25.2	36.67	1,452.6	-2,384.3	2,787.5	2,759.4	28.13	99.081	
1,400.0	1,399.8	1,404.8	1,404.8	3.0	25.7	36.70	1,452.6	-2,384.3	2,786.4	2,757.7	28.61	97.388	
1,476.4	1,475.9	1,480.9	1,480.9	3.1	27.2	36.84	1,452.6	-2,384.3	2,781.3	2,751.0	30.26	91.922	
1,500.0	1,499.5	1,504.5	1,504.5	3.2	27.7	36.89	1,452.6	-2,384.3	2,779.4	2,748.6	30.76	90.352	
1,574.8	1,573.7	1,578.7	1,578.7	3.4	29.2	37.08	1,452.6	-2,384.3	2,772.3	2,740.0	32.35	85.689	
1,600.0	1,598.7	1,603.7	1,603.7	3.4	29.7	37.16	1,452.6	-2,384.3	2,769.6	2,736.7	32.88	84.223	
1,673.2	1,671.1	1,676.1	1,676.1	3.6	31.1	37.41	1,452.6	-2,384.3	2,760.7	2,726.3	34.42	80.203	
1,700.0	1,697.5	1,702.5	1,702.5	3.7	31.7	37.51	1,452.6	-2,384.3	2,757.1	2,722.1	34.98	78.824	
1,771.6	1,767.9	1,772.9	1,772.9	3.9	33.1	37.81	1,452.6	-2,384.3	2,746.5	2,710.0	36.46	75.323	
1,800.0	1,795.6	1,800.6	1,800.6	4.0	33.6	37.94	1,452.6	-2,384.3	2,741.9	2,704.9	37.04	74.019	
1,870.1	1,864.0	1,869.0	1,869.0	4.3	35.0	38.29	1,452.6	-2,384.3	2,729.7	2,691.2	38.48	70.941	
1,900.0	1,893.1	1,898.1	1,898.1	4.4	35.6	38.45	1,452.6	-2,384.3	2,724.1	2,685.0	39.08	69.698	
1,968.5	1,959.3	1,964.3	1,964.3	4.6	36.9	38.85	1,452.6	-2,384.3	2,710.3	2,669.9	40.47	66.968	
1,992.4	1,982.4	1,987.4	1,987.4	4.7	37.4	39.00	1,452.6	-2,384.3	2,705.2	2,664.3	40.95	66.060	
2,000.0	1,989.6	1,994.6	1,994.6	4.8	37.5	39.03	1,452.6	-2,384.3	2,703.6	2,662.5	41.12	65.749	
2,066.9	2,054.0	2,059.0	2,059.0	5.1	38.8	39.27	1,452.6	-2,384.3	2,689.2	2,646.6	42.62	63.093	
2,100.0	2,085.8	2,090.8	2,090.8	5.2	39.5	39.39	1,452.6	-2,384.3	2,682.1	2,638.8	43.36	61.852	
2,165.3	2,148.7	2,153.7	2,153.7	5.5	40.7	39.63	1,452.6	-2,384.3	2,668.2	2,623.3	44.84	59.506	
2,200.0	2,182.0	2,187.0	2,187.0	5.7	41.4	39.76	1,452.6	-2,384.3	2,660.8	2,615.1	45.63	58.316	
2,263.8	2,243.4	2,248.4	2,248.4	6.0	42.6	39.99	1,452.6	-2,384.3	2,647.2	2,600.1	47.08	56.227	
2,300.0	2,278.2	2,283.2	2,283.2	6.2	43.3	40.13	1,452.6	-2,384.3	2,639.5	2,591.6	47.91	55.095	
2,362.2	2,338.1	2,343.1	2,343.1	6.5	44.6	40.36	1,452.6	-2,384.3	2,626.3	2,577.0	49.33	53.234	
2,400.0	2,374.4	2,379.4	2,379.4	6.7	45.3	40.51	1,452.6	-2,384.3	2,618.3	2,568.1	50.20	52.154	
2,460.6	2,432.8	2,437.8	2,437.8	7.0	46.5	40.74	1,452.6	-2,384.3	2,605.6	2,554.0	51.60	50.492	
2,500.0	2,470.6	2,475.6	2,475.6	7.2	47.2	40.89	1,452.6	-2,384.3	2,597.3	2,544.8	52.51	49.459	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,527.4	2,532.4	2,532.4	7.6	48.4	41.12	1,452.6	-2,384.3	2,584.9	2,531.0	53.88	47.972	
2,600.0	2,566.8	2,571.8	2,571.8	7.8	49.2	41.28	1,452.6	-2,384.3	2,576.4	2,521.5	54.84	46.983	
2,657.5	2,622.1	2,627.1	2,627.1	8.1	50.3	41.51	1,452.6	-2,384.3	2,564.4	2,508.2	56.18	45.650	
2,700.0	2,663.0	2,668.0	2,668.0	8.3	51.1	41.68	1,452.6	-2,384.3	2,555.6	2,498.4	57.17	44.702	
2,755.9	2,716.8	2,721.8	2,721.8	8.6	52.2	41.91	1,452.6	-2,384.3	2,544.0	2,485.5	58.48	43.503	
2,800.0	2,759.2	2,764.2	2,764.2	8.9	53.0	42.09	1,452.6	-2,384.3	2,534.9	2,475.4	59.51	42.594	
2,854.3	2,811.5	2,816.5	2,816.5	9.2	54.1	42.31	1,452.6	-2,384.3	2,523.7	2,462.9	60.79	41.515	
2,900.0	2,855.4	2,860.4	2,860.4	9.4	55.0	42.50	1,452.6	-2,384.3	2,514.3	2,452.5	61.87	40.642	
2,952.7	2,906.2	2,911.2	2,911.2	9.7	56.0	42.71	1,452.6	-2,384.3	2,503.5	2,440.4	63.11	39.669	
3,000.0	2,951.6	2,956.6	2,956.6	10.0	56.9	42.91	1,452.6	-2,384.3	2,493.9	2,429.7	64.23	38.829	
3,051.2	3,000.9	3,005.9	3,005.9	10.3	57.9	43.13	1,452.6	-2,384.3	2,483.5	2,418.1	65.44	37.950	
3,100.0	3,047.8	3,052.8	3,052.8	10.5	58.8	43.34	1,452.6	-2,384.3	2,473.6	2,407.0	66.60	37.141	
3,149.6	3,095.5	3,100.5	3,100.5	10.8	59.8	43.55	1,452.6	-2,384.3	2,463.6	2,395.8	67.78	36.347	
3,200.0	3,144.0	3,149.0	3,149.0	11.1	60.8	43.77	1,452.6	-2,384.3	2,453.5	2,384.5	68.98	35.568	
3,248.0	3,190.2	3,195.2	3,195.2	11.4	61.7	43.97	1,452.6	-2,384.3	2,443.8	2,373.7	70.13	34.849	
3,300.0	3,240.2	3,245.2	3,245.2	11.7	62.7	44.20	1,452.6	-2,384.3	2,433.5	2,362.1	71.37	34.097	
3,346.4	3,284.9	3,289.9	3,289.9	11.9	63.6	44.41	1,452.6	-2,384.3	2,424.2	2,351.7	72.48	33.446	
3,400.0	3,336.4	3,341.4	3,341.4	12.2	64.6	44.65	1,452.6	-2,384.3	2,413.6	2,339.8	73.76	32.720	
3,444.9	3,379.6	3,384.6	3,384.6	12.5	65.5	44.85	1,452.6	-2,384.3	2,404.7	2,329.9	74.84	32.130	
3,500.0	3,432.6	3,437.6	3,437.6	12.8	66.6	45.10	1,452.6	-2,384.3	2,393.9	2,317.7	76.17	31.428	
3,543.3	3,474.3	3,479.3	3,479.3	13.1	67.4	45.29	1,452.6	-2,384.3	2,385.4	2,308.2	77.21	30.893	
3,600.0	3,528.8	3,533.8	3,533.8	13.4	68.5	45.55	1,452.6	-2,384.3	2,374.3	2,295.7	78.58	30.214	
3,641.7	3,569.0	3,574.0	3,574.0	13.6	69.3	45.75	1,452.6	-2,384.3	2,366.2	2,286.6	79.59	29.729	
3,700.0	3,625.0	3,630.0	3,630.0	14.0	70.4	46.02	1,452.6	-2,384.3	2,354.9	2,273.9	81.00	29.072	
3,740.1	3,663.6	3,668.6	3,668.6	14.2	71.2	46.21	1,452.6	-2,384.3	2,347.1	2,265.1	81.98	28.632	
3,800.0	3,721.2	3,726.2	3,726.2	14.5	72.4	46.49	1,452.6	-2,384.3	2,335.6	2,252.2	83.43	27.995	
3,838.6	3,758.3	3,763.3	3,763.3	14.8	73.1	46.68	1,452.6	-2,384.3	2,328.2	2,243.8	84.37	27.596	
3,900.0	3,817.4	3,822.4	3,822.4	15.1	74.3	46.97	1,452.6	-2,384.3	2,316.5	2,230.6	85.86	26.979	
3,937.0	3,853.0	3,858.0	3,858.0	15.3	75.0	47.15	1,452.6	-2,384.3	2,309.5	2,222.7	86.77	26.617	
4,000.0	3,913.6	3,918.6	3,918.6	15.7	76.2	47.46	1,452.6	-2,384.3	2,297.6	2,209.3	88.31	26.018	
4,035.4	3,947.7	3,952.7	3,952.7	15.9	76.9	47.63	1,452.6	-2,384.3	2,290.9	2,201.7	89.17	25.690	
4,100.0	4,009.8	4,014.8	4,014.8	16.3	78.2	47.95	1,452.6	-2,384.3	2,278.8	2,188.0	90.76	25.109	
4,133.8	4,042.4	4,047.4	4,047.4	16.5	78.8	48.12	1,452.6	-2,384.3	2,272.5	2,180.9	91.59	24.812	
4,200.0	4,106.0	4,111.0	4,111.0	16.8	80.1	48.46	1,452.6	-2,384.3	2,260.2	2,167.0	93.22	24.247	
4,232.3	4,137.1	4,142.1	4,142.1	17.0	80.7	48.62	1,452.6	-2,384.3	2,254.2	2,160.2	94.01	23.979	
4,300.0	4,202.2	4,207.2	4,207.2	17.4	82.0	48.97	1,452.6	-2,384.3	2,241.8	2,146.1	95.68	23.430	
4,330.7	4,231.7	4,236.7	4,236.7	17.6	82.6	49.13	1,452.6	-2,384.3	2,236.2	2,139.7	96.44	23.187	
4,400.0	4,298.4	4,303.4	4,303.4	18.0	84.0	49.49	1,452.6	-2,384.3	2,223.6	2,125.4	98.15	22.654	
4,429.1	4,326.4	4,331.4	4,331.4	18.2	84.5	49.64	1,452.6	-2,384.3	2,218.3	2,119.4	98.88	22.435	
4,500.0	4,394.6	4,399.6	4,399.6	18.6	85.9	50.02	1,452.6	-2,384.3	2,205.5	2,104.9	100.64	21.916	
4,527.5	4,421.1	4,426.1	4,426.1	18.7	86.4	50.16	1,452.6	-2,384.3	2,200.6	2,099.3	101.32	21.719	
4,600.0	4,490.8	4,495.8	4,495.8	19.2	87.8	50.55	1,452.6	-2,384.3	2,187.7	2,084.6	103.12	21.214	
4,626.0	4,515.8	4,520.8	4,520.8	19.3	88.4	50.69	1,452.6	-2,384.3	2,183.1	2,079.3	103.77	21.037	
4,700.0	4,587.0	4,592.0	4,592.0	19.8	89.8	51.10	1,452.6	-2,384.3	2,170.0	2,064.4	105.62	20.546	
4,724.4	4,610.5	4,615.5	4,615.5	19.9	90.3	51.23	1,452.6	-2,384.3	2,165.7	2,059.5	106.23	20.387	
4,800.0	4,683.2	4,688.2	4,688.2	20.3	91.7	51.65	1,452.6	-2,384.3	2,152.6	2,044.5	108.12	19.909	
4,822.8	4,705.2	4,710.2	4,710.2	20.5	92.2	51.78	1,452.6	-2,384.3	2,148.6	2,039.9	108.69	19.767	
4,900.0	4,779.4	4,784.4	4,784.4	20.9	93.7	52.21	1,452.6	-2,384.3	2,135.3	2,024.7	110.63	19.301	
4,921.2	4,799.8	4,804.8	4,804.8	21.0	94.1	52.33	1,452.6	-2,384.3	2,131.7	2,020.5	111.17	19.175	
5,000.0	4,875.6	4,880.6	4,880.6	21.5	95.6	52.78	1,452.6	-2,384.3	2,118.3	2,005.1	113.15	18.721	
5,019.7	4,894.5	4,899.5	4,899.5	21.6	96.0	52.89	1,452.6	-2,384.3	2,115.0	2,001.3	113.65	18.610	
5,100.0	4,971.8	4,976.8	4,976.8	22.1	97.5	53.36	1,452.6	-2,384.3	2,101.5	1,985.8	115.68	18.167	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	4,989.2	4,994.2	4,994.2	22.2	97.9	53.46	1,452.6	-2,384.3	2,098.5	1,982.3	116.13	18.069	
5,200.0	5,068.0	5,073.0	5,073.0	22.7	99.5	53.95	1,452.6	-2,384.3	2,084.9	1,966.7	118.21	17.637	
5,216.5	5,083.9	5,088.9	5,088.9	22.8	99.8	54.04	1,452.6	-2,384.3	2,082.2	1,963.5	118.63	17.552	
5,240.0	5,106.5	5,111.5	5,111.5	22.9	100.2	54.18	1,452.6	-2,384.3	2,078.3	1,959.1	119.23	17.432	
5,300.0	5,164.4	5,169.4	5,169.4	23.2	101.4	54.37	1,452.6	-2,384.3	2,068.9	1,948.0	120.86	17.118	
5,314.9	5,178.8	5,183.8	5,183.8	23.3	101.7	54.42	1,452.6	-2,384.3	2,066.7	1,945.4	121.25	17.044	
5,400.0	5,261.5	5,266.5	5,266.5	23.6	103.3	54.67	1,452.6	-2,384.3	2,054.9	1,931.5	123.47	16.643	
5,413.4	5,274.6	5,279.6	5,279.6	23.6	103.6	54.70	1,452.6	-2,384.3	2,053.2	1,929.4	123.82	16.583	
5,500.0	5,359.5	5,364.5	5,364.5	23.9	105.3	54.93	1,452.6	-2,384.3	2,043.1	1,917.1	126.02	16.213	
5,511.8	5,371.1	5,376.1	5,376.1	24.0	105.6	54.96	1,452.6	-2,384.3	2,041.9	1,915.6	126.32	16.165	
5,600.0	5,458.0	5,463.0	5,463.0	24.2	107.3	55.15	1,452.6	-2,384.3	2,033.4	1,904.9	128.50	15.824	
5,610.2	5,468.2	5,473.2	5,473.2	24.3	107.5	55.17	1,452.6	-2,384.3	2,032.6	1,903.8	128.75	15.787	
5,700.0	5,557.2	5,562.2	5,562.2	24.5	109.3	55.33	1,452.6	-2,384.3	2,025.8	1,894.9	130.90	15.475	
5,708.6	5,565.7	5,570.7	5,570.7	24.5	109.5	55.35	1,452.6	-2,384.3	2,025.2	1,894.1	131.11	15.447	
5,800.0	5,656.7	5,661.7	5,661.7	24.7	111.3	55.47	1,452.6	-2,384.3	2,020.2	1,886.9	133.23	15.163	
5,807.1	5,663.7	5,668.7	5,668.7	24.7	111.4	55.48	1,452.6	-2,384.3	2,019.9	1,886.5	133.39	15.142	
5,900.0	5,756.5	5,761.5	5,761.5	24.9	113.3	55.56	1,452.6	-2,384.3	2,016.6	1,881.1	135.48	14.885	
5,905.5	5,761.9	5,766.9	5,766.9	24.9	113.4	55.56	1,452.6	-2,384.3	2,016.4	1,880.8	135.60	14.870	
6,000.0	5,856.4	5,861.4	5,861.4	25.0	115.3	55.60	1,452.6	-2,384.3	2,014.9	1,877.3	137.64	14.639	
6,003.9	5,860.3	5,865.3	5,865.3	25.0	115.4	55.60	1,452.6	-2,384.3	2,014.9	1,877.2	137.73	14.630	
6,032.5	5,888.9	5,893.9	5,893.9	25.0	116.0	-39.59	1,452.6	-2,384.3	2,014.8	1,880.4	134.43	14.988	
6,062.5	5,918.9	5,923.9	5,923.9	25.1	116.6	-39.59	1,452.6	-2,384.3	2,014.8	1,879.8	135.07	14.917	CC
6,100.0	5,956.4	5,961.4	5,961.4	25.1	117.3	-129.58	1,452.6	-2,384.3	2,015.5	1,875.8	139.65	14.433	ES
6,102.3	5,958.7	5,963.7	5,963.7	25.1	117.4	-129.57	1,452.6	-2,384.3	2,015.5	1,875.9	139.68	14.429	
6,150.0	6,006.2	6,011.2	6,011.2	25.1	118.3	-129.50	1,452.6	-2,384.3	2,018.2	1,877.9	140.31	14.384	
6,200.0	6,055.6	6,060.6	6,060.6	25.1	119.3	-129.36	1,452.6	-2,384.3	2,023.3	1,882.6	140.70	14.380	SF
6,200.8	6,056.3	6,061.3	6,061.3	25.1	119.3	-129.35	1,452.6	-2,384.3	2,023.3	1,882.6	140.70	14.380	
6,250.0	6,104.3	6,109.3	6,109.3	25.0	120.3	-129.15	1,452.6	-2,384.3	2,030.5	1,889.7	140.83	14.418	
6,299.2	6,151.3	6,156.3	6,156.3	24.9	121.2	-128.87	1,452.6	-2,384.3	2,039.8	1,899.0	140.72	14.496	
6,300.0	6,152.1	6,157.1	6,157.1	24.9	121.3	-128.86	1,452.6	-2,384.3	2,039.9	1,899.2	140.71	14.497	
6,350.0	6,198.7	6,203.7	6,203.7	24.8	122.2	-128.49	1,452.6	-2,384.3	2,051.6	1,911.2	140.39	14.614	
6,397.6	6,241.9	6,246.9	6,246.9	24.7	123.1	-128.04	1,452.6	-2,384.3	2,064.8	1,924.8	139.93	14.756	
6,400.0	6,244.1	6,249.1	6,249.1	24.7	123.1	-128.01	1,452.6	-2,384.3	2,065.5	1,925.6	139.90	14.763	
6,450.0	6,287.8	6,292.8	6,292.8	24.5	124.0	-127.43	1,452.6	-2,384.3	2,081.5	1,942.2	139.31	14.941	
6,496.0	6,326.5	6,331.5	6,331.5	24.4	124.8	-126.78	1,452.6	-2,384.3	2,098.3	1,959.5	138.74	15.124	
6,500.0	6,329.7	6,334.7	6,334.7	24.4	124.8	-126.72	1,452.6	-2,384.3	2,099.8	1,961.1	138.69	15.140	
6,550.0	6,369.6	6,374.6	6,374.6	24.3	125.6	-125.85	1,452.6	-2,384.3	2,120.1	1,982.0	138.12	15.350	
6,594.5	6,403.3	6,408.3	6,408.3	24.2	126.3	-124.94	1,452.6	-2,384.3	2,140.0	2,002.3	137.73	15.537	
6,600.0	6,407.3	6,412.3	6,412.3	24.2	126.4	-124.82	1,452.6	-2,384.3	2,142.6	2,004.9	137.70	15.560	
6,650.0	6,442.7	6,447.7	6,447.7	24.1	127.1	-123.59	1,452.6	-2,384.3	2,167.1	2,029.6	137.53	15.758	
6,692.9	6,471.0	6,476.0	6,476.0	24.0	127.7	-122.35	1,452.6	-2,384.3	2,189.7	2,052.1	137.67	15.906	
6,700.0	6,475.5	6,480.5	6,480.5	24.0	127.8	-122.13	1,452.6	-2,384.3	2,193.6	2,055.9	137.72	15.928	
6,750.0	6,505.6	6,510.6	6,510.6	24.0	128.4	-120.42	1,452.6	-2,384.3	2,222.0	2,083.6	138.36	16.060	
6,791.3	6,528.3	6,533.3	6,533.3	24.0	128.8	-118.79	1,452.6	-2,384.3	2,246.8	2,107.5	139.29	16.131	
6,800.0	6,532.8	6,537.8	6,537.8	24.0	128.9	-118.42	1,452.6	-2,384.3	2,252.2	2,112.7	139.53	16.142	
6,850.0	6,557.0	6,562.0	6,562.0	24.1	129.4	-116.09	1,452.6	-2,384.3	2,284.0	2,142.8	141.25	16.170	
6,889.7	6,574.1	6,579.1	6,579.1	24.2	129.7	-113.99	1,452.6	-2,384.3	2,310.5	2,167.5	143.02	16.156	
6,900.0	6,578.1	6,583.1	6,583.1	24.3	129.8	-113.41	1,452.6	-2,384.3	2,317.5	2,174.0	143.51	16.148	
6,950.0	6,596.1	6,601.1	6,601.1	24.5	130.2	-110.33	1,452.6	-2,384.3	2,352.3	2,206.1	146.22	16.088	
6,988.2	6,607.5	6,612.5	6,612.5	24.7	130.4	-107.69	1,452.6	-2,384.3	2,379.8	2,231.3	148.47	16.029	
7,000.0	6,610.7	6,615.7	6,615.7	24.8	130.5	-106.83	1,452.6	-2,384.3	2,388.5	2,239.3	149.17	16.011	
7,050.0	6,621.9	6,626.9	6,626.9	25.1	130.7	-102.89	1,452.6	-2,384.3	2,425.7	2,273.6	152.12	15.945	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	6,633.0	6,633.0	25.4	130.8	-99.74	1,452.6	-2,384.3	2,453.5	2,299.4	154.09	15.923	
7,100.0	6,629.7	6,634.7	6,634.7	25.6	130.9	-98.53	1,452.6	-2,384.3	2,463.8	2,309.1	154.73	15.924	
7,150.0	6,634.1	6,639.1	6,639.1	26.0	131.0	-93.78	1,452.6	-2,384.3	2,502.7	2,346.1	156.62	15.980	
7,185.0	6,635.1	6,640.1	6,640.1	26.4	131.0	-90.25	1,452.6	-2,384.3	2,530.2	2,372.9	157.33	16.082	
7,196.6	6,635.0	6,640.0	6,640.0	26.5	131.0	-89.05	1,452.6	-2,384.3	2,539.4	2,381.9	157.43	16.130	
7,200.0	6,635.0	6,640.0	6,640.0	26.6	131.0	-89.05	1,452.6	-2,384.3	2,542.1	2,384.6	157.47	16.143	
7,283.4	6,633.9	6,638.9	6,638.9	27.6	130.9	-89.01	1,452.6	-2,384.3	2,608.6	2,450.2	158.47	16.461	
7,300.0	6,633.7	6,638.7	6,638.7	27.8	130.9	-89.00	1,452.6	-2,384.3	2,622.0	2,463.3	158.67	16.524	
7,381.9	6,632.6	6,637.6	6,637.6	29.0	130.9	-88.97	1,452.6	-2,384.3	2,688.4	2,528.5	159.84	16.819	
7,400.0	6,632.4	6,637.4	6,637.4	29.2	130.9	-88.96	1,452.6	-2,384.3	2,703.2	2,543.1	160.10	16.885	
7,480.3	6,631.4	6,636.4	6,636.4	30.5	130.9	-88.92	1,452.6	-2,384.3	2,769.3	2,607.9	161.39	17.159	
7,500.0	6,631.1	6,636.1	6,636.1	30.9	130.9	-88.91	1,452.6	-2,384.3	2,785.6	2,623.9	161.71	17.226	
7,578.7	6,630.1	6,635.1	6,635.1	32.3	130.9	-88.87	1,452.6	-2,384.3	2,851.3	2,688.2	163.10	17.482	
7,600.0	6,629.8	6,634.8	6,634.8	32.7	130.9	-88.86	1,452.6	-2,384.3	2,869.2	2,705.7	163.48	17.551	
7,677.1	6,628.9	6,633.9	6,633.9	34.1	130.8	-88.83	1,452.6	-2,384.3	2,934.4	2,769.4	164.95	17.789	
7,700.0	6,628.6	6,633.6	6,633.6	34.6	130.8	-88.81	1,452.6	-2,384.3	2,953.8	2,788.4	165.39	17.860	
7,775.6	6,627.6	6,632.6	6,632.6	36.1	130.8	-88.78	1,452.6	-2,384.3	3,018.3	2,851.4	166.91	18.083	
7,800.0	6,627.3	6,632.3	6,632.3	36.6	130.8	-88.77	1,452.6	-2,384.3	3,039.3	2,871.9	167.41	18.155	
7,874.0	6,626.3	6,631.3	6,631.3	38.2	130.8	-88.73	1,452.6	-2,384.3	3,103.1	2,934.2	168.97	18.365	
7,900.0	6,626.0	6,631.0	6,631.0	38.8	130.8	-88.72	1,452.6	-2,384.3	3,125.7	2,956.1	169.52	18.438	
7,972.4	6,625.1	6,630.1	6,630.1	40.4	130.8	-88.69	1,452.6	-2,384.3	3,188.7	3,017.6	171.11	18.635	
8,000.0	6,624.7	6,629.7	6,629.7	41.0	130.8	-88.67	1,452.6	-2,384.3	3,212.8	3,041.1	171.72	18.710	
8,070.8	6,623.8	6,628.8	6,628.8	42.6	130.7	-88.64	1,452.6	-2,384.3	3,275.0	3,101.7	173.32	18.896	
8,100.0	6,623.4	6,628.4	6,628.4	43.3	130.7	-88.62	1,452.6	-2,384.3	3,300.7	3,126.8	173.98	18.972	
8,169.3	6,622.6	6,627.6	6,627.6	44.9	130.7	-88.59	1,452.6	-2,384.3	3,362.0	3,186.4	175.59	19.147	
8,200.0	6,622.2	6,627.2	6,627.2	45.6	130.7	-88.58	1,452.6	-2,384.3	3,389.3	3,213.0	176.30	19.225	
8,267.7	6,621.3	6,626.3	6,626.3	47.3	130.7	-88.54	1,452.6	-2,384.3	3,449.6	3,271.7	177.91	19.390	
8,300.0	6,620.9	6,625.9	6,625.9	48.0	130.7	-88.53	1,452.6	-2,384.3	3,478.5	3,299.8	178.67	19.469	
8,366.1	6,620.0	6,625.0	6,625.0	49.7	130.7	-88.50	1,452.6	-2,384.3	3,537.8	3,357.5	180.27	19.625	
8,400.0	6,619.6	6,624.6	6,624.6	50.5	130.7	-88.48	1,452.6	-2,384.3	3,568.2	3,387.2	181.08	19.705	
8,464.5	6,618.8	6,623.8	6,623.8	52.1	130.6	-88.45	1,452.6	-2,384.3	3,626.5	3,443.8	182.66	19.853	
8,500.0	6,618.3	6,623.3	6,623.3	53.0	130.6	-88.43	1,452.6	-2,384.3	3,658.5	3,475.0	183.53	19.934	
8,563.0	6,617.5	6,622.5	6,622.5	54.5	130.6	-88.40	1,452.6	-2,384.3	3,715.6	3,530.5	185.09	20.074	
8,600.0	6,617.0	6,622.0	6,622.0	55.5	130.6	-88.38	1,452.6	-2,384.3	3,749.3	3,563.3	186.01	20.156	
8,661.4	6,616.3	6,621.3	6,621.3	57.0	130.6	-88.36	1,452.6	-2,384.3	3,805.3	3,617.7	187.55	20.289	
8,700.0	6,615.8	6,620.8	6,620.8	58.0	130.6	-88.34	1,452.6	-2,384.3	3,840.5	3,652.0	188.52	20.372	
8,759.8	6,615.0	6,620.0	6,620.0	59.5	130.6	-88.31	1,452.6	-2,384.3	3,895.3	3,705.3	190.03	20.498	
8,800.0	6,614.5	6,619.5	6,619.5	60.6	130.6	-88.29	1,452.6	-2,384.3	3,932.2	3,741.2	191.05	20.582	
8,858.2	6,613.7	6,618.7	6,618.7	62.1	130.5	-88.26	1,452.6	-2,384.3	3,985.8	3,793.3	192.54	20.701	
8,900.0	6,613.2	6,618.2	6,618.2	63.2	130.5	-88.24	1,452.6	-2,384.3	4,024.3	3,830.7	193.60	20.786	
8,956.7	6,612.5	6,617.5	6,617.5	64.6	130.5	-88.21	1,452.6	-2,384.3	4,076.6	3,881.6	195.06	20.899	
9,000.0	6,611.9	6,616.9	6,616.9	65.8	130.5	-88.19	1,452.6	-2,384.3	4,116.7	3,920.5	196.17	20.985	
9,055.1	6,611.2	6,616.2	6,616.2	67.2	130.5	-88.17	1,452.6	-2,384.3	4,167.8	3,970.2	197.60	21.092	
9,100.0	6,610.6	6,615.6	6,615.6	68.4	130.5	-88.15	1,452.6	-2,384.3	4,209.5	4,010.7	198.76	21.179	
9,153.5	6,609.9	6,614.9	6,614.9	69.8	130.5	-88.12	1,452.6	-2,384.3	4,259.3	4,059.1	200.15	21.280	
9,200.0	6,609.3	6,614.3	6,614.3	71.0	130.5	-88.10	1,452.6	-2,384.3	4,302.6	4,101.2	201.36	21.368	
9,251.9	6,608.7	6,613.7	6,613.7	72.4	130.4	-88.07	1,452.6	-2,384.3	4,351.1	4,148.3	202.72	21.464	
9,300.0	6,608.1	6,613.1	6,613.1	73.7	130.4	-88.05	1,452.6	-2,384.3	4,396.0	4,192.0	203.97	21.552	
9,350.4	6,607.4	6,612.4	6,612.4	75.0	130.4	-88.03	1,452.6	-2,384.3	4,443.1	4,237.8	205.30	21.643	
9,400.0	6,606.8	6,611.8	6,611.8	76.3	130.4	-88.00	1,452.6	-2,384.3	4,489.7	4,283.1	206.60	21.731	
9,448.8	6,606.1	6,611.1	6,611.1	77.6	130.4	-87.98	1,452.6	-2,384.3	4,535.5	4,327.6	207.88	21.817	
9,500.0	6,605.5	6,610.5	6,610.5	79.0	130.4	-87.95	1,452.6	-2,384.3	4,583.6	4,374.4	209.23	21.907	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,604.9	6,609.9	6,609.9	80.2	130.4	-87.93	1,452.6	-2,384.3	4,628.1	4,417.6	210.48	21.988	
9,600.0	6,604.2	6,609.2	6,609.2	81.7	130.4	-87.90	1,452.6	-2,384.3	4,677.8	4,465.9	211.88	22.078	
9,645.6	6,603.6	6,608.6	6,608.6	82.9	130.3	-87.88	1,452.6	-2,384.3	4,720.9	4,507.8	213.09	22.155	
9,700.0	6,602.9	6,607.9	6,607.9	84.3	130.3	-87.86	1,452.6	-2,384.3	4,772.3	4,557.7	214.53	22.245	
9,744.1	6,602.3	6,607.3	6,607.3	85.5	130.3	-87.84	1,452.6	-2,384.3	4,814.0	4,598.2	215.70	22.317	
9,800.0	6,601.6	6,606.6	6,606.6	87.0	130.3	-87.81	1,452.6	-2,384.3	4,866.9	4,649.7	217.19	22.408	
9,842.5	6,601.1	6,606.1	6,606.1	88.2	130.3	-87.79	1,452.6	-2,384.3	4,907.2	4,688.9	218.33	22.477	
9,900.0	6,600.3	6,605.3	6,605.3	89.7	130.3	-87.76	1,452.6	-2,384.3	4,961.8	4,741.9	219.86	22.568	
9,940.9	6,599.8	6,604.8	6,604.8	90.9	130.3	-87.74	1,452.6	-2,384.3	5,000.7	4,779.7	220.95	22.632	
10,000.0	6,599.0	6,604.0	6,604.0	92.5	130.2	-87.71	1,452.6	-2,384.3	5,056.9	4,834.3	222.53	22.724	
10,039.3	6,598.5	6,603.5	6,603.5	93.5	130.2	-87.69	1,452.6	-2,384.3	5,094.3	4,870.7	223.59	22.785	
10,100.0	6,597.7	6,602.7	6,602.7	95.2	130.2	-87.66	1,452.6	-2,384.3	5,152.1	4,926.9	225.21	22.877	
10,137.8	6,597.3	6,602.3	6,602.3	96.2	130.2	-87.65	1,452.6	-2,384.3	5,188.1	4,961.9	226.23	22.933	
10,200.0	6,596.5	6,601.5	6,601.5	97.9	130.2	-87.62	1,452.6	-2,384.3	5,247.5	5,019.6	227.90	23.026	
10,236.2	6,596.0	6,601.0	6,601.0	98.9	130.2	-87.60	1,452.6	-2,384.3	5,282.1	5,053.3	228.87	23.079	
10,300.0	6,595.2	6,600.2	6,600.2	100.6	130.2	-87.57	1,452.6	-2,384.3	5,343.1	5,112.6	230.58	23.172	
10,334.6	6,594.7	6,599.7	6,599.7	101.6	130.2	-87.55	1,452.6	-2,384.3	5,376.3	5,144.8	231.52	23.222	
10,400.0	6,593.9	6,598.9	6,598.9	103.3	130.1	-87.52	1,452.6	-2,384.3	5,438.9	5,205.6	233.28	23.315	
10,433.0	6,593.5	6,598.5	6,598.5	104.2	130.1	-87.50	1,452.6	-2,384.3	5,470.6	5,236.4	234.17	23.362	
10,500.0	6,592.6	6,597.6	6,597.6	106.1	130.1	-87.47	1,452.6	-2,384.3	5,534.8	5,298.8	235.97	23.455	
10,531.5	6,592.2	6,597.2	6,597.2	106.9	130.1	-87.46	1,452.6	-2,384.3	5,565.0	5,328.2	236.82	23.498	
10,600.0	6,591.3	6,596.3	6,596.3	108.8	130.1	-87.42	1,452.6	-2,384.3	5,630.8	5,392.2	238.68	23.592	
10,629.9	6,590.9	6,595.9	6,595.9	109.6	130.1	-87.41	1,452.6	-2,384.3	5,659.6	5,420.1	239.48	23.632	
10,700.0	6,590.0	6,595.0	6,595.0	111.6	130.1	-87.37	1,452.6	-2,384.3	5,727.0	5,485.6	241.38	23.726	
10,728.3	6,589.6	6,594.6	6,594.6	112.3	130.1	-87.36	1,452.6	-2,384.3	5,754.3	5,512.1	242.15	23.764	
10,800.0	6,588.7	6,593.7	6,593.7	114.3	130.0	-87.32	1,452.6	-2,384.3	5,823.3	5,579.2	244.09	23.858	
10,826.7	6,588.4	6,593.4	6,593.4	115.0	130.0	-87.31	1,452.6	-2,384.3	5,849.1	5,604.3	244.81	23.892	
10,900.0	6,587.4	6,592.4	6,592.4	117.0	130.0	-87.28	1,452.6	-2,384.3	5,919.8	5,673.0	246.80	23.987	
10,925.2	6,587.1	6,592.1	6,592.1	117.7	130.0	-87.26	1,452.6	-2,384.3	5,944.1	5,696.6	247.48	24.019	
11,000.0	6,586.1	6,591.1	6,591.1	119.8	130.0	-87.23	1,452.6	-2,384.3	6,016.3	5,766.8	249.51	24.113	
11,023.6	6,585.8	6,590.8	6,590.8	120.4	130.0	-87.22	1,452.6	-2,384.3	6,039.1	5,789.0	250.15	24.142	
11,100.0	6,584.8	6,589.8	6,589.8	122.5	130.0	-87.18	1,452.6	-2,384.3	6,113.0	5,860.7	252.22	24.236	
11,122.0	6,584.5	6,589.5	6,589.5	123.2	130.0	-87.17	1,452.6	-2,384.3	6,134.3	5,881.5	252.82	24.263	
11,200.0	6,583.5	6,588.5	6,588.5	125.3	129.9	-87.13	1,452.6	-2,384.3	6,209.7	5,954.8	254.94	24.358	
11,220.4	6,583.3	6,588.3	6,588.3	125.9	129.9	-87.12	1,452.6	-2,384.3	6,229.5	5,974.0	255.49	24.382	
11,300.0	6,582.2	6,587.2	6,587.2	128.1	129.9	-87.08	1,452.6	-2,384.3	6,306.6	6,048.9	257.66	24.477	
11,318.9	6,582.0	6,587.0	6,587.0	128.6	129.9	-87.07	1,452.6	-2,384.3	6,324.9	6,066.7	258.17	24.499	
11,400.0	6,580.9	6,585.9	6,585.9	130.8	129.9	-87.03	1,452.6	-2,384.3	6,403.6	6,143.2	260.38	24.593	
11,417.3	6,580.7	6,585.7	6,585.7	131.3	129.9	-87.02	1,452.6	-2,384.3	6,420.3	6,159.5	260.85	24.613	
11,500.0	6,579.7	6,584.7	6,584.7	133.6	129.9	-86.98	1,452.6	-2,384.3	6,500.6	6,237.5	263.10	24.708	
11,515.7	6,579.4	6,584.4	6,584.4	134.0	129.9	-86.98	1,452.6	-2,384.3	6,515.9	6,252.4	263.53	24.726	
11,600.0	6,578.4	6,583.4	6,583.4	136.3	129.8	-86.94	1,452.6	-2,384.3	6,597.8	6,331.9	265.82	24.820	
11,614.1	6,578.2	6,583.2	6,583.2	136.7	129.8	-86.93	1,452.6	-2,384.3	6,611.5	6,345.3	266.21	24.836	
11,700.0	6,577.1	6,582.1	6,582.1	139.1	129.8	-86.89	1,452.6	-2,384.3	6,695.0	6,426.4	268.55	24.930	
11,712.6	6,576.9	6,581.9	6,581.9	139.5	129.8	-86.88	1,452.6	-2,384.3	6,707.2	6,438.3	268.89	24.944	
11,800.0	6,575.8	6,580.8	6,580.8	141.9	129.8	-86.84	1,452.6	-2,384.3	6,792.3	6,521.0	271.27	25.038	
11,811.0	6,575.6	6,580.6	6,580.6	142.2	129.8	-86.83	1,452.6	-2,384.3	6,803.0	6,531.4	271.57	25.050	
11,858.8	6,575.0	6,580.0	6,580.0	143.5	129.8	-86.81	1,452.6	-2,384.3	6,849.5	6,576.6	272.88	25.101	
11,859.3	6,575.0	6,580.0	6,580.0	143.5	129.8	-86.81	1,452.6	-2,384.3	6,850.1	6,577.2	272.89	25.102	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-81.38	1,368.2	-9,028.5	9,131.6				
98.4	98.4	73.4	73.4	0.1	0.0	-81.38	1,368.2	-9,028.5	9,131.6	9,131.5	0.11	N/A	
100.0	100.0	75.0	75.0	0.1	0.0	-81.38	1,368.2	-9,028.5	9,131.6	9,131.5	0.11	N/A	
196.8	196.8	171.8	171.8	0.3	1.9	-81.38	1,368.2	-9,028.5	9,131.6	9,129.4	2.24	4,080.550	
200.0	200.0	175.0	175.0	0.3	2.0	-81.38	1,368.2	-9,028.5	9,131.6	9,129.3	2.33	3,921.478	
295.3	295.3	270.3	270.3	0.5	4.1	-81.38	1,368.2	-9,028.5	9,131.6	9,127.0	4.65	1,962.664	
300.0	300.0	275.0	275.0	0.5	4.2	-81.38	1,368.2	-9,028.5	9,131.6	9,126.9	4.76	1,918.212	
393.7	393.7	368.7	368.7	0.8	6.1	-81.38	1,368.2	-9,028.5	9,131.6	9,124.7	6.88	1,327.356	
400.0	400.0	375.0	375.0	0.8	6.2	-81.38	1,368.2	-9,028.5	9,131.6	9,124.6	7.02	1,300.510	
492.1	492.1	467.1	467.1	1.0	8.1	-81.38	1,368.2	-9,028.5	9,131.6	9,122.5	9.09	1,004.302	
500.0	500.0	475.0	475.0	1.0	8.3	-81.38	1,368.2	-9,028.5	9,131.6	9,122.3	9.27	985.142	
590.5	590.5	565.5	565.5	1.2	10.1	-81.38	1,368.2	-9,028.5	9,131.6	9,120.3	11.30	808.083	
600.0	600.0	575.0	575.0	1.2	10.3	-81.38	1,368.2	-9,028.5	9,131.6	9,120.1	11.51	793.211	
689.0	689.0	664.0	664.0	1.4	12.1	-81.38	1,368.2	-9,028.5	9,131.6	9,118.1	13.51	676.129	
700.0	700.0	675.0	675.0	1.4	12.3	-81.38	1,368.2	-9,028.5	9,131.6	9,117.9	13.75	663.988	
787.4	787.4	762.4	762.4	1.6	14.1	-81.38	1,368.2	-9,028.5	9,131.6	9,115.9	15.71	581.272	
800.0	800.0	775.0	775.0	1.7	14.3	-81.38	1,368.2	-9,028.5	9,131.6	9,115.6	15.99	571.019	
885.8	885.8	860.8	860.8	1.9	16.0	-81.38	1,368.2	-9,028.5	9,131.6	9,113.7	17.91	509.781	
900.0	900.0	875.0	875.0	1.9	16.3	-81.38	1,368.2	-9,028.5	9,131.6	9,113.4	18.23	500.910	
984.2	984.2	959.2	959.2	2.1	18.0	-81.38	1,368.2	-9,028.5	9,131.6	9,111.5	20.12	453.963	
1,000.0	1,000.0	975.0	975.0	2.1	18.3	-81.38	1,368.2	-9,028.5	9,131.6	9,111.1	20.47	446.147	
1,082.7	1,082.7	1,057.7	1,057.7	2.3	20.0	-81.38	1,368.2	-9,028.5	9,131.6	9,109.3	22.32	409.169	
1,100.0	1,100.0	1,075.0	1,075.0	2.3	20.4	-81.38	1,368.2	-9,028.5	9,131.6	9,108.9	22.71	402.184	
1,181.1	1,181.1	1,156.1	1,156.1	2.5	22.0	-81.38	1,368.2	-9,028.5	9,131.6	9,107.1	24.52	372.426	
1,200.0	1,200.0	1,175.0	1,175.0	2.6	22.4	-81.38	1,368.2	-9,028.5	9,131.6	9,106.7	24.94	366.113	
1,279.5	1,279.5	1,254.5	1,254.5	2.7	24.0	13.82	1,368.2	-9,028.5	9,130.5	9,103.8	26.70	341.977	
1,300.0	1,300.0	1,275.0	1,275.0	2.8	24.4	13.82	1,368.2	-9,028.5	9,129.9	9,102.8	27.15	336.301	
1,377.9	1,377.8	1,352.8	1,352.8	2.9	25.9	13.84	1,368.2	-9,028.5	9,126.2	9,097.4	28.83	316.519	
1,400.0	1,399.8	1,374.8	1,374.8	3.0	26.4	13.85	1,368.2	-9,028.5	9,124.8	9,095.5	29.30	311.378	
1,476.4	1,475.9	1,450.9	1,450.9	3.1	27.9	13.89	1,368.2	-9,028.5	9,118.7	9,087.8	30.92	294.871	
1,500.0	1,499.5	1,474.5	1,474.5	3.2	28.4	13.91	1,368.2	-9,028.5	9,116.4	9,085.0	31.42	290.156	
1,574.8	1,573.7	1,548.7	1,548.7	3.4	29.9	13.96	1,368.2	-9,028.5	9,107.8	9,074.9	32.97	276.261	
1,600.0	1,598.7	1,573.7	1,573.7	3.4	30.4	13.98	1,368.2	-9,028.5	9,104.5	9,071.1	33.48	271.921	
1,673.2	1,671.1	1,646.1	1,646.1	3.6	31.8	14.05	1,368.2	-9,028.5	9,093.7	9,058.8	34.96	260.136	
1,700.0	1,697.5	1,672.5	1,672.5	3.7	32.4	14.08	1,368.2	-9,028.5	9,089.4	9,053.9	35.49	256.127	
1,771.6	1,767.9	1,742.9	1,742.9	3.9	33.8	14.17	1,368.2	-9,028.5	9,076.4	9,039.5	36.89	246.067	
1,800.0	1,795.6	1,770.6	1,770.6	4.0	34.4	14.20	1,368.2	-9,028.5	9,070.8	9,033.4	37.43	242.354	
1,870.1	1,864.0	1,839.0	1,839.0	4.3	35.7	14.30	1,368.2	-9,028.5	9,055.9	9,017.1	38.75	233.718	
1,900.0	1,893.1	1,868.1	1,868.1	4.4	36.3	14.35	1,368.2	-9,028.5	9,049.0	9,009.7	39.30	230.270	
1,968.5	1,959.3	1,934.3	1,934.3	4.6	37.6	14.46	1,368.2	-9,028.5	9,032.1	8,991.6	40.54	222.821	
1,992.4	1,982.4	1,957.4	1,957.4	4.7	38.1	14.50	1,368.2	-9,028.5	9,025.9	8,984.9	40.96	220.371	
2,000.0	1,989.6	1,964.6	1,964.6	4.8	38.3	14.51	1,368.2	-9,028.5	9,023.9	8,982.8	41.12	219.463	
2,066.9	2,054.0	2,029.0	2,029.0	5.1	39.6	14.54	1,368.2	-9,028.5	9,006.2	8,963.6	42.55	211.682	
2,100.0	2,085.8	2,060.8	2,060.8	5.2	40.2	14.55	1,368.2	-9,028.5	8,997.4	8,954.1	43.25	208.054	
2,165.3	2,148.7	2,123.7	2,123.7	5.5	41.5	14.58	1,368.2	-9,028.5	8,980.1	8,935.4	44.64	201.186	
2,200.0	2,182.0	2,157.0	2,157.0	5.7	42.1	14.60	1,368.2	-9,028.5	8,970.9	8,925.5	45.38	197.678	
2,263.8	2,243.4	2,218.4	2,218.4	6.0	43.4	14.62	1,368.2	-9,028.5	8,954.0	8,907.3	46.75	191.541	
2,300.0	2,278.2	2,253.2	2,253.2	6.2	44.1	14.64	1,368.2	-9,028.5	8,944.4	8,896.9	47.52	188.207	
2,362.2	2,338.1	2,313.1	2,313.1	6.5	45.3	14.67	1,368.2	-9,028.5	8,927.9	8,879.1	48.86	182.722	
2,400.0	2,374.4	2,349.4	2,349.4	6.7	46.0	14.68	1,368.2	-9,028.5	8,917.9	8,868.3	49.67	179.530	
2,460.6	2,432.8	2,407.8	2,407.8	7.0	47.2	14.71	1,368.2	-9,028.5	8,901.9	8,850.9	50.98	174.617	
2,500.0	2,470.6	2,445.6	2,445.6	7.2	47.9	14.73	1,368.2	-9,028.5	8,891.4	8,839.6	51.83	171.556	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,527.4	2,502.4	2,502.4	7.6	49.1	14.75	1,368.2	-9,028.5	8,875.8	8,822.7	53.10	167.144	
2,600.0	2,566.8	2,541.8	2,541.8	7.8	49.9	14.77	1,368.2	-9,028.5	8,865.0	8,811.0	53.99	164.204	
2,657.5	2,622.1	2,597.1	2,597.1	8.1	51.0	14.80	1,368.2	-9,028.5	8,849.8	8,794.5	55.23	160.233	
2,700.0	2,663.0	2,638.0	2,638.0	8.3	51.8	14.82	1,368.2	-9,028.5	8,838.5	8,782.4	56.15	157.407	
2,755.9	2,716.8	2,691.8	2,691.8	8.6	52.9	14.84	1,368.2	-9,028.5	8,823.7	8,766.3	57.36	153.826	
2,800.0	2,759.2	2,734.2	2,734.2	8.9	53.7	14.86	1,368.2	-9,028.5	8,812.0	8,753.7	58.32	151.105	
2,854.3	2,811.5	2,786.5	2,786.5	9.2	54.8	14.89	1,368.2	-9,028.5	8,797.7	8,738.2	59.50	147.870	
2,900.0	2,855.4	2,830.4	2,830.4	9.4	55.7	14.91	1,368.2	-9,028.5	8,785.6	8,725.1	60.49	145.247	
2,952.7	2,906.2	2,881.2	2,881.2	9.7	56.7	14.93	1,368.2	-9,028.5	8,771.6	8,710.0	61.63	142.320	
3,000.0	2,951.6	2,926.6	2,926.6	10.0	57.6	14.95	1,368.2	-9,028.5	8,759.1	8,696.5	62.66	139.789	
3,051.2	3,000.9	2,975.9	2,975.9	10.3	58.6	14.98	1,368.2	-9,028.5	8,745.6	8,681.8	63.77	137.137	
3,100.0	3,047.8	3,022.8	3,022.8	10.5	59.5	15.00	1,368.2	-9,028.5	8,732.7	8,667.8	64.83	134.691	
3,149.6	3,095.5	3,070.5	3,070.5	10.8	60.5	15.02	1,368.2	-9,028.5	8,719.6	8,653.6	65.91	132.286	
3,200.0	3,144.0	3,119.0	3,119.0	11.1	61.5	15.05	1,368.2	-9,028.5	8,706.2	8,639.2	67.01	129.920	
3,248.0	3,190.2	3,165.2	3,165.2	11.4	62.4	15.07	1,368.2	-9,028.5	8,693.5	8,625.5	68.06	127.736	
3,300.0	3,240.2	3,215.2	3,215.2	11.7	63.4	15.09	1,368.2	-9,028.5	8,679.8	8,610.6	69.19	125.446	
3,346.4	3,284.9	3,259.9	3,259.9	11.9	64.3	15.12	1,368.2	-9,028.5	8,667.5	8,597.3	70.20	123.461	
3,400.0	3,336.4	3,311.4	3,311.4	12.2	65.3	15.14	1,368.2	-9,028.5	8,653.4	8,582.0	71.37	121.242	
3,444.9	3,379.6	3,354.6	3,354.6	12.5	66.2	15.16	1,368.2	-9,028.5	8,641.5	8,569.2	72.35	119.437	
3,500.0	3,432.6	3,407.6	3,407.6	12.8	67.3	15.19	1,368.2	-9,028.5	8,626.9	8,553.4	73.56	117.284	
3,543.3	3,474.3	3,449.3	3,449.3	13.1	68.1	15.21	1,368.2	-9,028.5	8,615.5	8,541.0	74.50	115.642	
3,600.0	3,528.8	3,503.8	3,503.8	13.4	69.2	15.24	1,368.2	-9,028.5	8,600.5	8,524.8	75.74	113.553	
3,641.7	3,569.0	3,544.0	3,544.0	13.6	70.0	15.26	1,368.2	-9,028.5	8,589.5	8,512.8	76.65	112.058	
3,700.0	3,625.0	3,600.0	3,600.0	14.0	71.1	15.28	1,368.2	-9,028.5	8,574.1	8,496.2	77.93	110.028	
3,740.1	3,663.6	3,638.6	3,638.6	14.2	71.9	15.30	1,368.2	-9,028.5	8,563.5	8,484.7	78.80	108.667	
3,800.0	3,721.2	3,696.2	3,696.2	14.5	73.1	15.33	1,368.2	-9,028.5	8,547.7	8,467.6	80.11	106.694	
3,838.6	3,758.3	3,733.3	3,733.3	14.8	73.8	15.35	1,368.2	-9,028.5	8,537.5	8,456.5	80.96	105.456	
3,900.0	3,817.4	3,792.4	3,792.4	15.1	75.0	15.38	1,368.2	-9,028.5	8,521.3	8,439.0	82.30	103.536	
3,937.0	3,853.0	3,828.0	3,828.0	15.3	75.7	15.40	1,368.2	-9,028.5	8,511.5	8,428.4	83.11	102.409	
4,000.0	3,913.6	3,888.6	3,888.6	15.7	77.0	15.43	1,368.2	-9,028.5	8,494.9	8,410.4	84.49	100.540	
4,035.4	3,947.7	3,922.7	3,922.7	15.9	77.6	15.45	1,368.2	-9,028.5	8,485.5	8,400.3	85.27	99.515	
4,100.0	4,009.8	3,984.8	3,984.8	16.3	78.9	15.48	1,368.2	-9,028.5	8,468.5	8,381.8	86.68	97.694	
4,133.8	4,042.4	4,017.4	4,017.4	16.5	79.5	15.49	1,368.2	-9,028.5	8,459.6	8,372.1	87.43	96.763	
4,200.0	4,106.0	4,081.0	4,081.0	16.8	80.8	15.53	1,368.2	-9,028.5	8,442.1	8,353.2	88.88	94.987	
4,232.3	4,137.1	4,112.1	4,112.1	17.0	81.4	15.54	1,368.2	-9,028.5	8,433.6	8,344.0	89.58	94.142	
4,300.0	4,202.2	4,177.2	4,177.2	17.4	82.8	15.58	1,368.2	-9,028.5	8,415.7	8,324.7	91.07	92.410	
4,330.7	4,231.7	4,206.7	4,206.7	17.6	83.3	15.59	1,368.2	-9,028.5	8,407.6	8,315.9	91.74	91.643	
4,400.0	4,298.4	4,273.4	4,273.4	18.0	84.7	15.63	1,368.2	-9,028.5	8,389.4	8,296.1	93.26	89.953	
4,429.1	4,326.4	4,301.4	4,301.4	18.2	85.3	15.64	1,368.2	-9,028.5	8,381.7	8,287.8	93.90	89.258	
4,500.0	4,394.6	4,369.6	4,369.6	18.6	86.6	15.68	1,368.2	-9,028.5	8,363.0	8,267.5	95.46	87.608	
4,527.5	4,421.1	4,396.1	4,396.1	18.7	87.2	15.69	1,368.2	-9,028.5	8,355.7	8,259.7	96.06	86.980	
4,600.0	4,490.8	4,465.8	4,465.8	19.2	88.6	15.73	1,368.2	-9,028.5	8,336.6	8,239.0	97.66	85.367	
4,626.0	4,515.8	4,490.8	4,490.8	19.3	89.1	15.74	1,368.2	-9,028.5	8,329.8	8,231.5	98.23	84.802	
4,700.0	4,587.0	4,562.0	4,562.0	19.8	90.5	15.78	1,368.2	-9,028.5	8,310.3	8,210.4	99.85	83.225	
4,724.4	4,610.5	4,585.5	4,585.5	19.9	91.0	15.79	1,368.2	-9,028.5	8,303.8	8,203.4	100.39	82.716	
4,800.0	4,683.2	4,658.2	4,658.2	20.3	92.4	15.83	1,368.2	-9,028.5	8,283.9	8,181.9	102.05	81.174	
4,822.8	4,705.2	4,680.2	4,680.2	20.5	92.9	15.84	1,368.2	-9,028.5	8,277.9	8,175.3	102.55	80.718	
4,900.0	4,779.4	4,754.4	4,754.4	20.9	94.4	15.88	1,368.2	-9,028.5	8,257.6	8,153.3	104.25	79.209	
4,921.2	4,799.8	4,774.8	4,774.8	21.0	94.8	15.89	1,368.2	-9,028.5	8,252.0	8,147.3	104.72	78.802	
5,000.0	4,875.6	4,850.6	4,850.6	21.5	96.3	15.93	1,368.2	-9,028.5	8,231.2	8,124.8	106.45	77.324	
5,019.7	4,894.5	4,869.5	4,869.5	21.6	96.7	15.94	1,368.2	-9,028.5	8,226.0	8,119.2	106.88	76.963	
5,100.0	4,971.8	4,946.8	4,946.8	22.1	98.2	15.99	1,368.2	-9,028.5	8,204.9	8,096.2	108.65	75.516	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	4,989.2	4,964.2	4,964.2	22.2	98.6	15.99	1,368.2	-9,028.5	8,200.1	8,091.1	109.05	75.196	
5,200.0	5,068.0	5,043.0	5,043.0	22.7	100.2	16.04	1,368.2	-9,028.5	8,178.6	8,067.7	110.85	73.778	
5,216.5	5,083.9	5,058.9	5,058.9	22.8	100.5	16.05	1,368.2	-9,028.5	8,174.2	8,063.0	111.22	73.498	
5,240.0	5,106.5	5,081.5	5,081.5	22.9	100.9	16.06	1,368.2	-9,028.5	8,168.0	8,056.3	111.74	73.102	
5,300.0	5,164.4	5,139.4	5,139.4	23.2	102.1	16.00	1,368.2	-9,028.5	8,152.8	8,039.3	113.55	71.799	
5,314.9	5,178.8	5,153.8	5,153.8	23.3	102.4	15.99	1,368.2	-9,028.5	8,149.2	8,035.2	113.99	71.488	
5,400.0	5,261.5	5,236.5	5,236.5	23.6	104.1	15.92	1,368.2	-9,028.5	8,130.1	8,013.6	116.48	69.797	
5,413.4	5,274.6	5,249.6	5,249.6	23.6	104.3	15.91	1,368.2	-9,028.5	8,127.3	8,010.4	116.87	69.544	
5,500.0	5,359.5	5,334.5	5,334.5	23.9	106.0	15.85	1,368.2	-9,028.5	8,110.6	7,991.3	119.32	67.976	
5,511.8	5,371.1	5,346.1	5,346.1	24.0	106.3	15.84	1,368.2	-9,028.5	8,108.6	7,988.9	119.64	67.773	
5,600.0	5,458.0	5,433.0	5,433.0	24.2	108.0	15.79	1,368.2	-9,028.5	8,094.5	7,972.5	122.04	66.324	
5,610.2	5,468.2	5,443.2	5,443.2	24.3	108.2	15.79	1,368.2	-9,028.5	8,093.0	7,970.7	122.32	66.165	
5,700.0	5,557.2	5,532.2	5,532.2	24.5	110.0	15.75	1,368.2	-9,028.5	8,081.7	7,957.0	124.66	64.832	
5,708.6	5,565.7	5,540.7	5,540.7	24.5	110.2	15.75	1,368.2	-9,028.5	8,080.7	7,955.9	124.87	64.711	
5,800.0	5,656.7	5,631.7	5,631.7	24.7	112.0	15.72	1,368.2	-9,028.5	8,072.2	7,945.1	127.14	63.491	
5,807.1	5,663.7	5,638.7	5,638.7	24.7	112.1	15.71	1,368.2	-9,028.5	8,071.7	7,944.4	127.31	63.402	
5,900.0	5,756.5	5,731.5	5,731.5	24.9	114.0	15.69	1,368.2	-9,028.5	8,066.1	7,936.6	129.49	62.292	
5,905.5	5,761.9	5,736.9	5,736.9	24.9	114.1	15.69	1,368.2	-9,028.5	8,065.8	7,936.2	129.61	62.231	
6,000.0	5,856.4	5,831.4	5,831.4	25.0	116.0	15.69	1,368.2	-9,028.5	8,063.3	7,931.6	131.69	61.230	
6,003.9	5,860.3	5,835.3	5,835.3	25.0	116.1	15.69	1,368.2	-9,028.5	8,063.3	7,931.5	131.77	61.191	
6,032.5	5,888.9	5,863.9	5,863.9	25.0	116.7	-79.51	1,368.2	-9,028.5	8,063.1	7,922.1	141.05	57.164	
6,062.5	5,918.9	5,893.9	5,893.9	25.1	117.3	-79.51	1,368.2	-9,028.5	8,063.1	7,921.4	141.69	56.908 CC, ES	
6,100.0	5,956.4	5,931.4	5,931.4	25.1	118.0	-169.50	1,368.2	-9,028.5	8,064.1	7,930.6	133.54	60.388	
6,102.3	5,958.7	5,933.7	5,933.7	25.1	118.1	-169.49	1,368.2	-9,028.5	8,064.2	7,930.7	133.56	60.380	
6,150.0	6,006.2	5,981.2	5,981.2	25.1	119.0	-169.44	1,368.2	-9,028.5	8,068.4	7,934.7	133.66	60.363	
6,200.0	6,055.6	6,030.6	6,030.6	25.1	120.0	-169.33	1,368.2	-9,028.5	8,076.1	7,942.9	133.15	60.653	
6,200.8	6,056.3	6,031.3	6,031.3	25.1	120.0	-169.33	1,368.2	-9,028.5	8,076.2	7,943.1	133.14	60.660	
6,250.0	6,104.3	6,079.3	6,079.3	25.0	121.0	-169.18	1,368.2	-9,028.5	8,087.1	7,955.1	131.99	61.268	
6,299.2	6,151.3	6,126.3	6,126.3	24.9	122.0	-168.98	1,368.2	-9,028.5	8,101.2	7,971.0	130.23	62.207	
6,300.0	6,152.1	6,127.1	6,127.1	24.9	122.0	-168.97	1,368.2	-9,028.5	8,101.5	7,971.3	130.20	62.225	
6,350.0	6,198.7	6,173.7	6,173.7	24.8	122.9	-168.70	1,368.2	-9,028.5	8,119.1	7,991.4	127.77	63.546	
6,397.6	6,241.9	6,216.9	6,216.9	24.7	123.8	-168.39	1,368.2	-9,028.5	8,138.8	8,014.0	124.89	65.170	
6,400.0	6,244.1	6,219.1	6,219.1	24.7	123.8	-168.37	1,368.2	-9,028.5	8,139.9	8,015.2	124.73	65.261	
6,450.0	6,287.8	6,262.8	6,262.8	24.5	124.7	-167.96	1,368.2	-9,028.5	8,163.7	8,042.6	121.11	67.406	
6,496.0	6,326.5	6,301.5	6,301.5	24.4	125.5	-167.50	1,368.2	-9,028.5	8,188.3	8,071.0	117.31	69.800	
6,500.0	6,329.7	6,304.7	6,304.7	24.4	125.5	-167.46	1,368.2	-9,028.5	8,190.5	8,073.6	116.97	70.025	
6,550.0	6,369.6	6,344.6	6,344.6	24.3	126.3	-166.85	1,368.2	-9,028.5	8,220.1	8,107.8	112.36	73.160	
6,594.5	6,403.3	6,378.3	6,378.3	24.2	127.0	-166.20	1,368.2	-9,028.5	8,248.7	8,140.8	107.95	76.414	
6,600.0	6,407.3	6,382.3	6,382.3	24.2	127.1	-166.11	1,368.2	-9,028.5	8,252.4	8,145.0	107.38	76.850	
6,650.0	6,442.7	6,417.7	6,417.7	24.1	127.8	-165.21	1,368.2	-9,028.5	8,287.2	8,185.0	102.18	81.108	
6,692.9	6,471.0	6,446.0	6,446.0	24.0	128.4	-164.28	1,368.2	-9,028.5	8,318.9	8,221.3	97.66	85.178	
6,700.0	6,475.5	6,450.5	6,450.5	24.0	128.5	-164.11	1,368.2	-9,028.5	8,324.3	8,227.4	96.93	85.884	
6,750.0	6,505.6	6,480.6	6,480.6	24.0	129.1	-162.73	1,368.2	-9,028.5	8,363.6	8,271.7	91.91	90.993	
6,791.3	6,528.3	6,503.3	6,503.3	24.0	129.5	-161.32	1,368.2	-9,028.5	8,397.6	8,309.4	88.25	95.162	
6,800.0	6,532.8	6,507.8	6,507.8	24.0	129.6	-160.99	1,368.2	-9,028.5	8,404.9	8,317.4	87.56	95.991	
6,850.0	6,557.0	6,532.0	6,532.0	24.1	130.1	-158.75	1,368.2	-9,028.5	8,448.0	8,363.5	84.49	99.992	
6,889.7	6,574.1	6,549.1	6,549.1	24.2	130.5	-156.48	1,368.2	-9,028.5	8,483.3	8,399.8	83.56	101.519	
6,900.0	6,578.1	6,553.1	6,553.1	24.3	130.5	-155.81	1,368.2	-9,028.5	8,492.6	8,409.0	83.62	101.560	
6,950.0	6,596.1	6,571.1	6,571.1	24.5	130.9	-151.80	1,368.2	-9,028.5	8,538.6	8,452.3	86.25	98.994	
6,988.2	6,607.5	6,582.5	6,582.5	24.7	131.1	-147.68	1,368.2	-9,028.5	8,574.4	8,482.8	91.60	93.608	
7,000.0	6,610.7	6,585.7	6,585.7	24.8	131.2	-146.15	1,368.2	-9,028.5	8,585.7	8,491.7	93.97	91.370	
7,050.0	6,621.9	6,596.9	6,596.9	25.1	131.4	-137.86	1,368.2	-9,028.5	8,633.7	8,525.4	108.27	79.745	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
7,086.6	6,628.0	6,603.0	6,603.0	25.4	131.5	-129.24	1,368.2	-9,028.5	8,669.2	8,546.1	123.11	70.417	
7,100.0	6,629.7	6,604.7	6,604.7	25.6	131.6	-125.37	1,368.2	-9,028.5	8,682.3	8,553.1	129.22	67.188	
7,150.0	6,634.1	6,609.1	6,609.1	26.0	131.7	-107.03	1,368.2	-9,028.5	8,731.4	8,580.5	150.94	57.848	
7,185.0	6,635.1	6,610.1	6,610.1	26.4	131.7	-91.13	1,368.2	-9,028.5	8,765.9	8,607.9	158.01	55.477	
7,196.6	6,635.0	6,610.0	6,610.0	26.5	131.7	-85.70	1,368.2	-9,028.5	8,777.3	8,619.6	157.72	55.650	
7,200.0	6,635.0	6,610.0	6,610.0	26.6	131.7	-85.70	1,368.2	-9,028.5	8,780.7	8,622.9	157.76	55.658	
7,283.4	6,633.9	6,608.9	6,608.9	27.6	131.7	-85.65	1,368.2	-9,028.5	8,863.0	8,704.2	158.76	55.828	
7,300.0	6,633.7	6,608.7	6,608.7	27.8	131.7	-85.64	1,368.2	-9,028.5	8,879.3	8,720.3	158.95	55.861	
7,381.9	6,632.6	6,607.6	6,607.6	29.0	131.6	-85.60	1,368.2	-9,028.5	8,960.0	8,799.9	160.11	55.962	
7,400.0	6,632.4	6,607.4	6,607.4	29.2	131.6	-85.59	1,368.2	-9,028.5	8,977.9	8,817.5	160.36	55.985	
7,480.3	6,631.4	6,606.4	6,606.4	30.5	131.6	-85.55	1,368.2	-9,028.5	9,057.1	8,895.5	161.65	56.030	
7,500.0	6,631.1	6,606.1	6,606.1	30.9	131.6	-85.54	1,368.2	-9,028.5	9,076.6	8,914.6	161.96	56.041	
7,578.7	6,630.1	6,605.1	6,605.1	32.3	131.6	-85.50	1,368.2	-9,028.5	9,154.3	8,990.9	163.35	56.042	
7,600.0	6,629.8	6,604.8	6,604.8	32.7	131.6	-85.49	1,368.2	-9,028.5	9,175.3	9,011.5	163.72	56.042	
7,677.1	6,628.9	6,603.9	6,603.9	34.1	131.6	-85.45	1,368.2	-9,028.5	9,251.4	9,086.2	165.18	56.008	
7,700.0	6,628.6	6,603.6	6,603.6	34.6	131.5	-85.44	1,368.2	-9,028.5	9,274.0	9,108.4	165.61	55.998	
7,775.6	6,627.6	6,602.6	6,602.6	36.1	131.5	-85.40	1,368.2	-9,028.5	9,348.6	9,181.5	167.13	55.937	
7,800.0	6,627.3	6,602.3	6,602.3	36.6	131.5	-85.39	1,368.2	-9,028.5	9,372.7	9,205.1	167.62	55.917	
7,874.0	6,626.3	6,601.3	6,601.3	38.2	131.5	-85.35	1,368.2	-9,028.5	9,445.8	9,276.6	169.17	55.835	
7,900.0	6,626.0	6,601.0	6,601.0	38.8	131.5	-85.34	1,368.2	-9,028.5	9,471.5	9,301.8	169.72	55.807	
7,972.4	6,625.1	6,600.1	6,600.1	40.4	131.5	-85.30	1,368.2	-9,028.5	9,543.0	9,371.7	171.30	55.710	
8,000.0	6,624.7	6,599.7	6,599.7	41.0	131.5	-85.29	1,368.2	-9,028.5	9,570.3	9,398.4	171.90	55.674	
8,070.8	6,623.8	6,598.8	6,598.8	42.6	131.5	-85.25	1,368.2	-9,028.5	9,640.3	9,466.8	173.49	55.566	
8,100.0	6,623.4	6,598.4	6,598.4	43.3	131.4	-85.24	1,368.2	-9,028.5	9,669.1	9,495.0	174.15	55.523	
8,169.3	6,622.6	6,597.6	6,597.6	44.9	131.4	-85.20	1,368.2	-9,028.5	9,737.6	9,561.8	175.74	55.408	
8,200.0	6,622.2	6,597.2	6,597.2	45.6	131.4	-85.18	1,368.2	-9,028.5	9,767.9	9,591.5	176.45	55.358	
8,267.7	6,621.3	6,596.3	6,596.3	47.3	131.4	-85.15	1,368.2	-9,028.5	9,834.9	9,656.8	178.05	55.238	
8,300.0	6,620.9	6,595.9	6,595.9	48.0	131.4	-85.13	1,368.2	-9,028.5	9,866.8	9,688.0	178.81	55.182	
8,366.1	6,620.0	6,595.0	6,595.0	49.7	131.4	-85.10	1,368.2	-9,028.5	9,932.2	9,751.8	180.39	55.060	
8,400.0	6,619.6	6,594.6	6,594.6	50.5	131.4	-85.08	1,368.2	-9,028.5	9,965.7	9,784.5	181.20	54.998 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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
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	-104.39	-1,819.4	-7,091.8	7,321.5				
98.4	98.4	46.1	46.1	0.1	0.0	-104.39	-1,819.4	-7,091.8	7,321.5	7,321.4	0.11	N/A	
100.0	100.0	47.3	47.3	0.1	0.0	-104.39	-1,819.4	-7,091.8	7,321.5	7,321.4	0.12	N/A	
196.8	196.8	115.6	115.6	0.3	0.0	-104.39	-1,819.4	-7,092.2	7,322.0	7,321.6	0.36	N/A	
200.0	200.0	137.0	137.0	0.3	0.1	-104.39	-1,819.3	-7,092.3	7,322.0	7,321.7	0.37	N/A	
295.3	295.3	339.5	339.5	0.5	0.5	-104.38	-1,818.1	-7,092.7	7,322.4	7,321.4	1.02	7,189.349	
300.0	300.0	343.4	343.4	0.5	0.5	-104.38	-1,818.1	-7,092.6	7,322.3	7,321.3	1.04	7,058.880	
393.7	393.7	423.0	423.0	0.8	0.7	-104.37	-1,817.1	-7,092.1	7,321.5	7,320.1	1.42	5,166.258	
400.0	400.0	430.9	430.9	0.8	0.7	-104.37	-1,817.0	-7,092.1	7,321.4	7,320.0	1.45	5,055.936	
492.1	492.1	587.2	587.1	1.0	1.0	-104.36	-1,814.8	-7,090.7	7,320.4	7,318.4	1.99	3,676.381	
500.0	500.0	606.8	606.8	1.0	1.1	-104.35	-1,814.4	-7,090.4	7,320.2	7,318.2	2.05	3,568.064	
590.5	590.5	1,401.0	1,391.2	1.2	3.4	-103.66	-1,717.0	-7,064.0	7,317.3	7,313.1	4.20	1,742.126	
600.0	600.0	1,401.0	1,391.2	1.2	3.4	-103.66	-1,717.0	-7,064.0	7,316.3	7,312.0	4.22	1,733.107	
689.0	689.0	1,456.3	1,444.2	1.4	3.6	-103.55	-1,701.5	-7,061.5	7,306.3	7,301.7	4.57	1,597.713	
700.0	700.0	1,482.0	1,468.9	1.4	3.7	-103.49	-1,694.2	-7,060.6	7,305.2	7,300.5	4.67	1,564.846	
787.4	787.4	1,535.5	1,520.1	1.6	4.0	-103.38	-1,679.0	-7,058.7	7,296.0	7,291.0	5.01	1,456.755	
800.0	800.0	1,555.7	1,539.5	1.7	4.1	-103.34	-1,673.2	-7,058.0	7,294.6	7,289.5	5.09	1,432.852	
885.8	885.8	1,646.0	1,625.8	1.9	4.6	-103.14	-1,647.0	-7,054.7	7,285.5	7,280.0	5.54	1,315.518	
900.0	900.0	1,646.0	1,625.8	1.9	4.6	-103.14	-1,647.0	-7,054.7	7,284.0	7,278.4	5.57	1,307.726	
984.2	984.2	1,711.0	1,688.0	2.1	4.9	-103.00	-1,628.2	-7,052.4	7,275.3	7,269.4	5.93	1,226.393	
1,000.0	1,000.0	1,728.0	1,704.3	2.1	5.0	-102.96	-1,623.4	-7,051.8	7,273.7	7,267.7	6.01	1,209.693	
1,082.7	1,082.7	1,809.0	1,781.9	2.3	5.4	-102.79	-1,600.4	-7,049.0	7,265.4	7,259.0	6.41	1,133.656	
1,100.0	1,100.0	1,828.1	1,800.2	2.3	5.4	-102.75	-1,595.0	-7,048.3	7,263.6	7,257.1	6.50	1,117.685	
1,181.1	1,181.1	1,891.0	1,860.5	2.5	5.8	-102.62	-1,577.2	-7,046.1	7,255.5	7,248.7	6.85	1,059.297	
1,200.0	1,200.0	1,903.1	1,872.2	2.6	5.8	-102.59	-1,573.8	-7,045.7	7,253.7	7,246.8	6.92	1,047.726	
1,279.5	1,279.5	2,203.1	2,160.2	2.7	7.3	-6.81	-1,491.5	-7,030.8	7,244.0	7,234.2	9.75	742.935	
1,300.0	1,300.0	2,218.0	2,174.5	2.8	7.4	-6.79	-1,487.5	-7,029.8	7,240.8	7,230.9	9.86	734.312	
1,377.9	1,377.8	2,254.0	2,209.1	2.9	7.6	-6.75	-1,477.8	-7,027.4	7,227.5	7,217.3	10.17	710.800	
1,400.0	1,399.8	2,263.4	2,218.1	3.0	7.6	-6.74	-1,475.2	-7,026.9	7,223.5	7,213.2	10.25	704.750	
1,476.4	1,475.9	2,300.0	2,253.3	3.1	7.8	-6.71	-1,465.4	-7,024.8	7,208.5	7,197.9	10.55	683.214	
1,500.0	1,499.5	2,317.7	2,270.3	3.2	7.9	-6.68	-1,460.6	-7,023.8	7,203.5	7,192.8	10.68	674.799	
1,574.8	1,573.7	2,382.0	2,332.1	3.4	8.2	-6.60	-1,443.1	-7,020.3	7,186.5	7,175.4	11.11	647.002	
1,600.0	1,598.7	2,411.3	2,360.3	3.4	8.4	-6.55	-1,435.0	-7,018.7	7,180.3	7,169.0	11.30	635.693	
1,673.2	1,671.1	2,463.0	2,409.7	3.6	8.7	-6.49	-1,420.3	-7,016.2	7,161.5	7,149.8	11.67	613.723	
1,700.0	1,697.5	2,463.0	2,409.7	3.7	8.7	-6.50	-1,420.3	-7,016.2	7,154.2	7,142.5	11.71	611.103	
1,771.6	1,767.9	2,512.4	2,457.0	3.9	8.9	-6.45	-1,406.3	-7,014.0	7,133.8	7,121.7	12.05	592.019	
1,800.0	1,795.6	2,528.9	2,472.9	4.0	9.0	-6.44	-1,401.8	-7,013.3	7,125.3	7,113.1	12.17	585.592	
1,870.1	1,864.0	2,791.0	2,723.7	4.3	10.4	-5.94	-1,327.2	-6,998.3	7,101.7	7,088.1	13.58	523.131	
1,900.0	1,893.1	2,791.0	2,723.7	4.4	10.4	-5.96	-1,327.2	-6,998.3	7,091.1	7,077.5	13.61	521.039	
1,968.5	1,959.3	2,838.8	2,769.4	4.6	10.7	-5.92	-1,313.7	-6,995.1	7,065.8	7,051.9	13.91	507.884	
1,992.4	1,982.4	2,849.6	2,779.7	4.7	10.7	-5.92	-1,310.7	-6,994.4	7,056.7	7,042.7	13.99	504.503	
2,000.0	1,989.6	2,872.0	2,801.3	4.8	10.8	-5.88	-1,304.7	-6,992.9	7,053.9	7,039.8	14.11	499.928	
2,066.9	2,054.0	2,979.1	2,903.6	5.1	11.4	-5.64	-1,273.8	-6,985.7	7,027.8	7,013.0	14.81	474.430	
2,100.0	2,085.8	2,992.1	2,916.0	5.2	11.5	-5.61	-1,269.8	-6,984.9	7,014.9	7,000.0	14.96	468.976	
2,165.3	2,148.7	3,035.0	2,956.7	5.5	11.8	-5.51	-1,256.8	-6,982.3	6,989.8	6,974.4	15.34	455.615	
2,200.0	2,182.0	3,035.0	2,956.7	5.7	11.8	-5.51	-1,256.8	-6,982.3	6,976.5	6,961.0	15.43	452.027	
2,263.8	2,243.4	3,057.7	2,978.4	6.0	11.9	-5.46	-1,250.1	-6,981.0	6,952.3	6,936.6	15.71	442.581	
2,300.0	2,278.2	3,072.6	2,992.6	6.2	12.0	-5.43	-1,245.7	-6,980.2	6,938.7	6,922.8	15.88	437.066	
2,362.2	2,338.1	3,117.0	3,035.2	6.5	12.2	-5.33	-1,233.2	-6,978.0	6,915.6	6,899.4	16.26	425.416	
2,400.0	2,374.4	3,117.0	3,035.2	6.7	12.2	-5.33	-1,233.2	-6,978.0	6,901.7	6,885.3	16.36	421.986	
2,460.6	2,432.8	3,187.3	3,102.7	7.0	12.6	-5.19	-1,214.3	-6,974.4	6,879.4	6,862.5	16.85	408.375	
2,500.0	2,470.6	3,272.7	3,184.9	7.2	13.0	-5.01	-1,191.6	-6,969.5	6,864.7	6,847.4	17.36	395.546	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,527.4	3,307.9	3,218.8	7.6	13.2	-4.94	-1,182.1	-6,967.4	6,842.6	6,825.0	17.68	386.934		
2,600.0	2,566.8	3,327.7	3,237.8	7.8	13.3	-4.90	-1,176.7	-6,966.3	6,827.4	6,809.5	17.89	381.611		
2,657.5	2,622.1	3,362.0	3,270.7	8.1	13.5	-4.82	-1,167.3	-6,964.6	6,806.3	6,788.1	18.21	373.677		
2,700.0	2,663.0	3,415.3	3,321.9	8.3	13.7	-4.70	-1,152.6	-6,961.9	6,790.7	6,772.1	18.59	365.286		
2,755.9	2,716.8	3,484.7	3,388.6	8.6	14.1	-4.56	-1,133.8	-6,958.0	6,770.0	6,750.9	19.08	354.795		
2,800.0	2,759.2	3,652.7	3,549.5	8.9	15.0	-4.18	-1,086.8	-6,947.1	6,753.2	6,733.1	20.05	336.782		
2,854.3	2,811.5	3,700.7	3,595.3	9.2	15.3	-4.06	-1,072.8	-6,943.6	6,732.1	6,711.7	20.45	329.144		
2,900.0	2,855.4	3,731.0	3,624.2	9.4	15.5	-3.99	-1,063.8	-6,941.5	6,714.5	6,693.7	20.74	323.730		
2,952.7	2,906.2	3,771.0	3,662.2	9.7	15.7	-3.89	-1,051.8	-6,938.7	6,694.2	6,673.1	21.10	317.252		
3,000.0	2,951.6	3,813.1	3,702.3	10.0	16.0	-3.78	-1,039.1	-6,935.9	6,676.1	6,654.6	21.46	311.066		
3,051.2	3,000.9	3,864.0	3,750.6	10.3	16.3	-3.65	-1,023.5	-6,932.5	6,656.5	6,634.6	21.89	304.153		
3,100.0	3,047.8	3,903.8	3,788.3	10.5	16.5	-3.55	-1,011.1	-6,929.9	6,637.7	6,615.5	22.25	298.364		
3,149.6	3,095.5	3,935.0	3,817.8	10.8	16.7	-3.46	-1,001.1	-6,927.9	6,618.8	6,596.2	22.56	293.341		
3,200.0	3,144.0	3,959.0	3,840.4	11.1	16.8	-3.40	-993.5	-6,926.4	6,599.7	6,576.8	22.83	289.019		
3,248.0	3,190.2	3,977.8	3,858.3	11.4	16.9	-3.35	-987.6	-6,925.3	6,581.6	6,558.5	23.07	285.263		
3,300.0	3,240.2	4,016.0	3,894.7	11.7	17.2	-3.25	-976.2	-6,923.1	6,562.4	6,538.9	23.43	280.135		
3,346.4	3,284.9	4,098.0	3,972.8	11.9	17.6	-3.04	-951.6	-6,918.0	6,544.8	6,520.8	24.00	272.750		
3,400.0	3,336.4	4,131.4	4,004.4	12.2	17.8	-2.95	-941.3	-6,915.8	6,524.6	6,500.2	24.33	268.120		
3,444.9	3,379.6	4,143.6	4,016.1	12.5	17.9	-2.92	-937.4	-6,915.1	6,507.8	6,483.3	24.53	265.294		
3,500.0	3,432.6	4,180.0	4,050.5	12.8	18.1	-2.82	-926.0	-6,913.3	6,487.7	6,462.8	24.89	260.637		
3,543.3	3,474.3	4,180.0	4,050.5	13.1	18.1	-2.82	-926.0	-6,913.3	6,471.9	6,446.9	25.01	258.723		
3,600.0	3,528.8	4,217.9	4,086.5	13.4	18.3	-2.71	-914.1	-6,911.6	6,451.5	6,426.1	25.38	254.156		
3,641.7	3,569.0	4,283.3	4,148.7	13.6	18.7	-2.53	-894.2	-6,908.4	6,436.4	6,410.5	25.86	248.914		
3,700.0	3,625.0	4,343.0	4,205.6	14.0	19.0	-2.38	-876.5	-6,905.2	6,415.2	6,388.8	26.34	243.554		
3,740.1	3,663.6	4,375.5	4,236.6	14.2	19.2	-2.29	-867.1	-6,903.4	6,400.5	6,373.9	26.62	240.422		
3,800.0	3,721.2	4,410.0	4,269.7	14.5	19.4	-2.20	-857.2	-6,901.5	6,378.9	6,352.0	26.97	236.507		
3,838.6	3,758.3	4,507.0	4,362.5	14.8	19.9	-1.96	-829.6	-6,896.1	6,365.0	6,337.4	27.58	230.751		
3,900.0	3,817.4	4,507.0	4,362.5	15.1	19.9	-1.96	-829.6	-6,896.1	6,342.7	6,314.9	27.76	228.485		
3,937.0	3,853.0	4,543.2	4,397.1	15.3	20.1	-1.86	-819.3	-6,894.0	6,329.2	6,301.1	28.05	225.616		
4,000.0	3,913.6	4,589.0	4,441.0	15.7	20.4	-1.74	-806.5	-6,891.8	6,306.8	6,278.3	28.47	221.521		
4,035.4	3,947.7	4,589.0	4,441.0	15.9	20.4	-1.74	-806.5	-6,891.8	6,294.2	6,265.7	28.57	220.292		
4,100.0	4,009.8	4,625.5	4,476.0	16.3	20.5	-1.65	-796.4	-6,890.2	6,271.7	6,242.8	28.94	216.708		
4,133.8	4,042.4	4,665.2	4,514.3	16.5	20.7	-1.55	-785.7	-6,888.3	6,259.9	6,230.6	29.24	214.105		
4,200.0	4,106.0	4,698.6	4,546.4	16.8	20.9	-1.47	-776.8	-6,886.8	6,236.9	6,207.3	29.59	210.747		
4,232.3	4,137.1	4,713.5	4,560.8	17.0	21.0	-1.43	-772.8	-6,886.2	6,225.8	6,196.0	29.76	209.189		
4,300.0	4,202.2	4,752.0	4,597.8	17.4	21.2	-1.34	-762.5	-6,884.8	6,202.7	6,172.6	30.15	205.740		
4,330.7	4,231.7	4,765.7	4,611.0	17.6	21.3	-1.30	-758.8	-6,884.3	6,192.4	6,162.1	30.30	204.347		
4,400.0	4,298.4	4,828.3	4,671.5	18.0	21.6	-1.15	-742.9	-6,882.0	6,169.1	6,138.3	30.81	200.259		
4,429.1	4,326.4	4,861.3	4,703.6	18.2	21.7	-1.08	-735.0	-6,880.7	6,159.3	6,128.3	31.04	198.457		
4,500.0	4,394.6	4,953.4	4,793.4	18.6	22.1	-0.89	-715.4	-6,876.7	6,135.3	6,103.7	31.63	193.968		
4,527.5	4,421.1	4,993.4	4,832.5	18.7	22.3	-0.82	-707.1	-6,874.7	6,125.9	6,094.1	31.87	192.187		
4,600.0	4,490.8	5,068.9	4,906.3	19.2	22.6	-0.67	-691.3	-6,870.9	6,101.1	6,068.7	32.40	188.307		
4,626.0	4,515.8	5,079.0	4,916.1	19.3	22.7	-0.65	-689.2	-6,870.4	6,092.2	6,059.7	32.52	187.354		
4,700.0	4,587.0	5,125.7	4,961.8	19.8	22.9	-0.55	-679.8	-6,868.1	6,067.1	6,034.2	32.92	184.316		
4,724.4	4,610.5	5,138.4	4,974.3	19.9	22.9	-0.53	-677.3	-6,867.5	6,058.9	6,025.8	33.04	183.392		
4,800.0	4,683.2	5,161.0	4,996.4	20.3	23.0	-0.49	-673.0	-6,866.5	6,033.7	6,000.4	33.35	180.940		
4,822.8	4,705.2	5,186.6	5,021.5	20.5	23.1	-0.45	-668.5	-6,865.4	6,026.2	5,992.7	33.50	179.880		
4,900.0	4,779.4	5,242.0	5,076.2	20.9	23.3	-0.36	-659.7	-6,863.4	6,001.1	5,967.2	33.92	176.942		
4,921.2	4,799.8	5,242.0	5,076.2	21.0	23.3	-0.36	-659.7	-6,863.4	5,994.2	5,960.3	33.98	176.417		
5,000.0	4,875.6	5,272.8	5,106.7	21.5	23.4	-0.32	-655.4	-6,862.4	5,969.2	5,934.9	34.30	174.036		
5,019.7	4,894.5	5,283.1	5,116.9	21.6	23.4	-0.31	-654.0	-6,862.1	5,963.0	5,928.6	34.39	173.411		
5,100.0	4,971.8	5,324.0	5,157.5	22.1	23.5	-0.25	-648.8	-6,860.9	5,938.0	5,903.2	34.74	170.917		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
5,118.1	4,989.2	5,324.0	5,157.5	22.2	23.5	-0.25	-648.8	-6,860.9	5,932.4	5,897.6	34.79	170.499		
5,200.0	5,068.0	5,369.4	5,202.6	22.7	23.7	-0.20	-643.5	-6,859.9	5,907.5	5,872.4	35.15	168.056		
5,216.5	5,083.9	5,376.8	5,209.9	22.8	23.7	-0.20	-642.8	-6,859.8	5,902.6	5,867.4	35.22	167.594		
5,240.0	5,106.5	5,406.0	5,239.0	22.9	23.8	-0.17	-639.8	-6,859.4	5,895.6	5,860.3	35.36	166.712		
5,300.0	5,164.4	5,406.0	5,239.0	23.2	23.8	-0.17	-639.8	-6,859.4	5,878.5	5,842.9	35.67	164.818		
5,314.9	5,178.8	5,406.0	5,239.0	23.3	23.8	-0.16	-639.8	-6,859.4	5,874.6	5,838.8	35.74	164.388		
5,400.0	5,261.5	5,469.6	5,302.4	23.6	23.9	-0.12	-635.0	-6,858.7	5,853.4	5,817.1	36.24	161.500		
5,413.4	5,274.6	5,488.0	5,320.7	23.6	23.9	-0.11	-634.0	-6,858.6	5,850.3	5,814.0	36.34	161.004		
5,500.0	5,359.5	5,529.1	5,361.8	23.9	24.0	-0.09	-632.3	-6,858.5	5,832.3	5,795.5	36.74	158.749		
5,511.8	5,371.1	5,536.5	5,369.2	24.0	24.0	-0.09	-632.1	-6,858.4	5,830.0	5,793.2	36.79	158.457		
5,600.0	5,458.0	5,681.1	5,513.8	24.2	24.2	-0.06	-629.6	-6,857.3	5,814.7	5,777.4	37.28	155.989		
5,610.2	5,468.2	5,689.6	5,522.3	24.3	24.2	-0.06	-629.5	-6,857.2	5,813.0	5,775.7	37.32	155.774		
5,700.0	5,557.2	5,755.2	5,587.9	24.5	24.3	-0.06	-629.2	-6,856.3	5,800.0	5,762.4	37.65	154.067		
5,708.6	5,565.7	5,760.4	5,593.0	24.5	24.3	-0.06	-629.2	-6,856.3	5,798.9	5,761.3	37.67	153.925		
5,800.0	5,656.7	5,815.0	5,647.7	24.7	24.3	-0.06	-628.9	-6,855.9	5,789.4	5,751.5	37.95	152.567		
5,807.1	5,663.7	5,823.2	5,655.8	24.7	24.3	-0.06	-628.8	-6,855.9	5,788.8	5,750.9	37.97	152.459		
5,900.0	5,756.5	5,927.1	5,759.8	24.9	24.4	-0.05	-628.5	-6,855.3	5,782.5	5,744.2	38.25	151.174		
5,905.5	5,761.9	5,932.1	5,764.8	24.9	24.4	-0.05	-628.4	-6,855.3	5,782.2	5,743.9	38.26	151.113		
6,000.0	5,856.4	6,006.9	5,839.6	25.0	24.5	-0.05	-628.1	-6,854.9	5,779.1	5,740.6	38.47	150.231		
6,003.9	5,860.3	6,009.5	5,842.1	25.0	24.5	-0.05	-628.1	-6,854.9	5,779.0	5,740.6	38.48	150.202		
6,032.5	5,888.9	6,028.4	5,861.0	25.0	24.6	-95.24	-627.9	-6,854.9	5,778.8	5,738.1	40.70	141.985		
6,040.6	5,897.0	6,033.8	5,866.4	25.1	24.6	-95.24	-627.8	-6,854.9	5,778.8	5,738.1	40.72	141.926 CC		
6,062.5	5,918.9	6,060.0	5,892.6	25.1	24.6	-95.24	-627.6	-6,854.9	5,778.9	5,738.1	40.78	141.702 ES		
6,063.2	5,919.6	6,060.0	5,892.6	25.1	24.6	174.76	-627.6	-6,854.9	5,778.9	5,740.3	38.61	149.664		
6,100.0	5,956.4	6,094.8	5,927.5	25.1	24.6	174.76	-627.2	-6,855.0	5,779.9	5,741.3	38.56	149.911		
6,102.3	5,958.7	6,099.0	5,931.6	25.1	24.6	174.76	-627.2	-6,855.0	5,780.0	5,741.4	38.55	149.935		
6,150.0	6,006.2	6,159.6	5,992.2	25.1	24.7	174.74	-626.7	-6,854.8	5,784.0	5,745.7	38.34	150.876		
6,200.0	6,055.6	6,196.9	6,029.5	25.1	24.8	174.69	-626.4	-6,854.8	5,791.7	5,753.8	37.91	152.793		
6,200.8	6,056.3	6,197.5	6,030.1	25.1	24.8	174.69	-626.4	-6,854.8	5,791.9	5,754.0	37.90	152.830		
6,250.0	6,104.3	6,223.0	6,055.6	25.0	24.8	174.61	-626.1	-6,854.8	5,802.9	5,765.6	37.29	155.629		
6,299.2	6,151.3	6,264.9	6,097.5	24.9	24.8	174.51	-625.6	-6,854.9	5,817.3	5,780.8	36.54	159.219		
6,300.0	6,152.1	6,265.4	6,098.0	24.9	24.8	174.51	-625.6	-6,854.9	5,817.6	5,781.1	36.52	159.286		
6,350.0	6,198.7	6,305.0	6,137.6	24.8	24.9	174.38	-625.1	-6,855.2	5,835.7	5,800.1	35.60	163.940		
6,397.6	6,241.9	6,335.6	6,168.2	24.7	24.9	174.22	-624.6	-6,855.4	5,855.9	5,821.4	34.57	169.401		
6,400.0	6,244.1	6,337.6	6,170.3	24.7	24.9	174.22	-624.6	-6,855.5	5,857.0	5,822.5	34.51	169.696		
6,450.0	6,287.8	6,379.7	6,212.3	24.5	25.0	174.02	-623.8	-6,855.8	5,881.5	5,848.1	33.31	176.564		
6,496.0	6,326.5	6,444.0	6,276.6	24.4	25.1	173.82	-622.7	-6,856.3	5,906.5	5,874.4	32.13	183.842		
6,500.0	6,329.7	6,450.0	6,282.6	24.4	25.1	173.80	-622.6	-6,856.3	5,908.8	5,876.8	32.02	184.514		
6,550.0	6,369.6	6,520.7	6,353.3	24.3	25.2	173.54	-621.7	-6,856.4	5,938.8	5,908.1	30.64	193.839		
6,594.5	6,403.3	6,574.8	6,407.4	24.2	25.2	173.25	-620.8	-6,856.2	5,967.5	5,938.2	29.33	203.435		
6,600.0	6,407.3	6,580.8	6,413.4	24.2	25.2	173.22	-620.7	-6,856.1	5,971.2	5,942.1	29.17	204.716		
6,650.0	6,442.7	6,632.9	6,465.5	24.1	25.3	172.81	-619.7	-6,855.8	6,006.2	5,978.5	27.65	217.207		
6,692.9	6,471.0	6,673.1	6,505.6	24.0	25.4	172.39	-619.0	-6,855.5	6,038.0	6,011.7	26.35	229.178		
6,700.0	6,475.5	6,679.3	6,511.9	24.0	25.4	172.31	-618.9	-6,855.4	6,043.4	6,017.3	26.13	231.265		
6,750.0	6,505.6	6,714.0	6,546.6	24.0	25.4	171.66	-618.2	-6,855.0	6,082.8	6,058.2	24.66	246.711		
6,791.3	6,528.3	6,714.0	6,546.6	24.0	25.4	170.93	-618.2	-6,855.0	6,117.0	6,093.5	23.50	260.286		
6,800.0	6,532.8	6,714.0	6,546.6	24.0	25.4	170.75	-618.2	-6,855.0	6,124.3	6,101.1	23.27	263.141		
6,850.0	6,557.0	6,741.2	6,573.7	24.1	25.5	169.65	-617.8	-6,854.8	6,167.6	6,145.5	22.14	278.594		
6,889.7	6,574.1	6,749.3	6,581.8	24.2	25.5	168.45	-617.6	-6,854.7	6,203.3	6,181.8	21.46	289.028		
6,900.0	6,578.1	6,751.2	6,583.8	24.3	25.5	168.09	-617.6	-6,854.7	6,212.6	6,191.3	21.33	291.248		
6,950.0	6,596.1	6,759.7	6,592.2	24.5	25.5	165.89	-617.4	-6,854.7	6,259.0	6,238.0	21.04	297.414		
6,988.2	6,607.5	6,765.1	6,597.6	24.7	25.5	163.49	-617.3	-6,854.7	6,295.3	6,273.9	21.36	294.738		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,610.7	6,766.5	6,599.1	24.8	25.5	162.56	-617.3	-6,854.7	6,306.6	6,285.0	21.58	292.204	
7,050.0	6,621.9	6,771.8	6,604.3	25.1	25.5	157.08	-617.2	-6,854.7	6,355.1	6,331.6	23.55	269.871	
7,086.6	6,628.0	6,795.0	6,627.5	25.4	25.5	150.84	-616.8	-6,854.7	6,391.2	6,364.8	26.40	242.099	
7,100.0	6,629.7	6,795.0	6,627.5	25.6	25.5	147.40	-616.8	-6,854.7	6,404.4	6,376.4	28.01	228.628	
7,150.0	6,634.1	6,795.0	6,627.5	26.0	25.5	125.05	-616.8	-6,854.7	6,454.0	6,416.7	37.35	172.817	
7,185.0	6,635.1	6,795.0	6,627.5	26.4	25.5	95.22	-616.8	-6,854.7	6,488.9	6,446.0	42.90	151.272	
7,196.6	6,635.0	6,795.0	6,627.5	26.5	25.5	83.69	-616.8	-6,854.7	6,500.4	6,458.0	42.40	153.326	
7,200.0	6,635.0	6,795.0	6,627.5	26.6	25.5	83.69	-616.8	-6,854.7	6,503.8	6,461.4	42.43	153.270	
7,283.4	6,633.9	6,795.0	6,627.5	27.6	25.5	83.69	-616.8	-6,854.7	6,587.0	6,543.6	43.46	151.573	
7,300.0	6,633.7	6,795.0	6,627.5	27.8	25.5	83.68	-616.8	-6,854.7	6,603.5	6,559.9	43.66	151.247	
7,381.9	6,632.6	6,795.0	6,627.5	29.0	25.5	83.68	-616.8	-6,854.7	6,685.2	6,640.3	44.84	149.077	
7,400.0	6,632.4	6,795.0	6,627.5	29.2	25.5	83.68	-616.8	-6,854.7	6,703.2	6,658.1	45.10	148.614	
7,480.3	6,631.4	6,795.0	6,627.5	30.5	25.5	83.68	-616.8	-6,854.7	6,783.3	6,736.9	46.42	146.144	
7,500.0	6,631.1	6,795.0	6,627.5	30.9	25.5	83.68	-616.8	-6,854.7	6,802.9	6,756.2	46.74	145.560	
7,578.7	6,630.1	6,795.0	6,627.5	32.3	25.5	83.68	-616.8	-6,854.7	6,881.4	6,833.3	48.15	142.929	
7,600.0	6,629.8	6,795.0	6,627.5	32.7	25.5	83.67	-616.8	-6,854.7	6,902.6	6,854.1	48.53	142.246	
7,677.1	6,628.9	6,795.0	6,627.5	34.1	25.5	83.67	-616.8	-6,854.7	6,979.6	6,929.6	50.01	139.561	
7,700.0	6,628.6	6,795.0	6,627.5	34.6	25.5	83.67	-616.8	-6,854.7	7,002.4	6,951.9	50.45	138.798	
7,775.6	6,627.6	6,795.0	6,627.5	36.1	25.5	83.67	-616.8	-6,854.7	7,077.7	7,025.7	51.99	136.137	
7,800.0	6,627.3	6,795.0	6,627.5	36.6	25.5	83.67	-616.8	-6,854.7	7,102.1	7,049.6	52.49	135.312	
7,874.0	6,626.3	6,795.0	6,627.5	38.2	25.5	83.67	-616.8	-6,854.7	7,175.9	7,121.8	54.06	132.728	
7,900.0	6,626.0	6,795.0	6,627.5	38.8	25.5	83.66	-616.8	-6,854.7	7,201.8	7,147.2	54.62	131.857	
7,972.4	6,625.1	6,795.0	6,627.5	40.4	25.5	83.66	-616.8	-6,854.7	7,274.1	7,217.8	56.22	129.385	
8,000.0	6,624.7	6,795.0	6,627.5	41.0	25.5	83.66	-616.8	-6,854.7	7,301.6	7,244.7	56.83	128.481	
8,070.8	6,623.8	6,795.0	6,627.5	42.6	25.5	83.66	-616.8	-6,854.7	7,372.2	7,313.8	58.45	126.140	
8,100.0	6,623.4	6,795.0	6,627.5	43.3	25.5	83.66	-616.8	-6,854.7	7,401.3	7,342.2	59.11	125.214	
8,169.3	6,622.6	6,795.0	6,627.5	44.9	25.5	83.66	-616.8	-6,854.7	7,470.4	7,409.7	60.73	123.014	
8,200.0	6,622.2	6,795.0	6,627.5	45.6	25.5	83.65	-616.8	-6,854.7	7,501.1	7,439.6	61.45	122.076	
8,267.7	6,621.3	6,795.0	6,627.5	47.3	25.5	83.65	-616.8	-6,854.7	7,568.6	7,505.5	63.06	120.020	
8,300.0	6,620.9	6,795.0	6,627.5	48.0	25.5	83.65	-616.8	-6,854.7	7,600.8	7,537.0	63.83	119.077	
8,366.1	6,620.0	6,795.0	6,627.5	49.7	25.5	83.65	-616.8	-6,854.7	7,666.8	7,601.4	65.44	117.163	
8,400.0	6,619.6	6,795.0	6,627.5	50.5	25.5	83.65	-616.8	-6,854.7	7,700.6	7,634.3	66.26	116.220	
8,464.5	6,618.8	6,771.0	6,603.6	52.1	25.5	81.04	-617.2	-6,854.7	7,764.9	7,697.6	67.32	115.339	
8,500.0	6,618.3	6,770.9	6,603.4	53.0	25.5	81.02	-617.2	-6,854.7	7,800.3	7,732.1	68.19	114.397	
8,563.0	6,617.5	6,770.6	6,603.1	54.5	25.5	80.99	-617.2	-6,854.7	7,863.1	7,793.4	69.74	112.747	
8,600.0	6,617.0	6,770.4	6,602.9	55.5	25.5	80.97	-617.2	-6,854.7	7,900.1	7,829.4	70.65	111.813	
8,661.4	6,616.3	6,770.1	6,602.6	57.0	25.5	80.93	-617.2	-6,854.7	7,961.3	7,889.1	72.19	110.288	
8,700.0	6,615.8	6,769.9	6,602.5	58.0	25.5	80.91	-617.2	-6,854.7	7,999.8	7,926.7	73.15	109.363	
8,759.8	6,615.0	6,769.6	6,602.2	59.5	25.5	80.88	-617.2	-6,854.7	8,059.5	7,984.9	74.66	107.955	
8,800.0	6,614.5	6,769.4	6,602.0	60.6	25.5	80.86	-617.2	-6,854.7	8,099.6	8,024.0	75.67	107.042	
8,858.2	6,613.7	6,769.2	6,601.7	62.1	25.5	80.83	-617.3	-6,854.7	8,157.8	8,080.6	77.15	105.743	
8,900.0	6,613.2	6,769.0	6,601.5	63.2	25.5	80.80	-617.3	-6,854.7	8,199.4	8,121.2	78.21	104.844	
8,956.7	6,612.5	6,768.7	6,601.3	64.6	25.5	80.78	-617.3	-6,854.7	8,256.0	8,176.3	79.66	103.646	
9,000.0	6,611.9	6,768.5	6,601.1	65.8	25.5	80.75	-617.3	-6,854.7	8,299.2	8,218.5	80.76	102.761	
9,055.1	6,611.2	6,768.3	6,600.8	67.2	25.5	80.72	-617.3	-6,854.7	8,354.2	8,272.0	82.18	101.658	
9,100.0	6,610.6	6,768.1	6,600.6	68.4	25.5	80.70	-617.3	-6,854.7	8,399.0	8,315.7	83.33	100.788	
9,153.5	6,609.9	6,767.8	6,600.4	69.8	25.5	80.67	-617.3	-6,854.7	8,452.4	8,367.7	84.72	99.771	
9,200.0	6,609.3	6,767.6	6,600.2	71.0	25.5	80.65	-617.3	-6,854.7	8,498.8	8,412.9	85.92	98.916	
9,251.9	6,608.7	6,767.4	6,600.0	72.4	25.5	80.62	-617.3	-6,854.7	8,550.7	8,463.4	87.27	97.980	
9,300.0	6,608.1	6,767.2	6,599.8	73.7	25.5	80.60	-617.3	-6,854.7	8,598.6	8,510.1	88.52	97.140	
9,350.4	6,607.4	6,767.0	6,599.5	75.0	25.5	80.57	-617.3	-6,854.7	8,648.9	8,559.1	89.83	96.278	
9,400.0	6,606.8	6,766.8	6,599.3	76.3	25.5	80.55	-617.3	-6,854.7	8,698.5	8,607.3	91.13	95.455	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD JURGENS PC #B8-22D - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 137-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,448.8	6,606.1	6,766.6	6,599.1	77.6	25.5	80.52	-617.3	-6,854.7	8,747.2	8,654.8	92.41	94.661	
9,500.0	6,605.5	6,766.4	6,598.9	79.0	25.5	80.50	-617.3	-6,854.7	8,798.3	8,704.5	93.75	93.853	
9,547.2	6,604.9	6,766.2	6,598.7	80.2	25.5	80.48	-617.3	-6,854.7	8,845.4	8,750.4	94.99	93.122	
9,600.0	6,604.2	6,765.9	6,598.5	81.7	25.5	80.45	-617.3	-6,854.7	8,898.1	8,801.7	96.37	92.330	
9,645.6	6,603.6	6,765.8	6,598.3	82.9	25.5	80.43	-617.3	-6,854.7	8,943.7	8,846.1	97.58	91.658	
9,700.0	6,602.9	6,765.5	6,598.1	84.3	25.5	80.40	-617.3	-6,854.7	8,997.9	8,898.9	99.01	90.880	
9,744.1	6,602.3	6,765.4	6,597.9	85.5	25.5	80.38	-617.3	-6,854.7	9,041.9	8,941.8	100.17	90.262	
9,800.0	6,601.6	6,765.1	6,597.7	87.0	25.5	80.35	-617.3	-6,854.7	9,097.8	8,996.1	101.65	89.500	
9,842.5	6,601.1	6,765.0	6,597.5	88.2	25.5	80.33	-617.3	-6,854.7	9,140.2	9,037.4	102.78	88.932	
9,900.0	6,600.3	6,764.7	6,597.3	89.7	25.5	80.31	-617.3	-6,854.7	9,197.6	9,093.3	104.30	88.184	
9,940.9	6,599.8	6,764.6	6,597.1	90.9	25.5	80.29	-617.3	-6,854.7	9,238.5	9,133.1	105.39	87.662	
10,000.0	6,599.0	6,764.3	6,596.9	92.5	25.5	80.26	-617.3	-6,854.7	9,297.4	9,190.5	106.96	86.928	
10,039.3	6,598.5	6,764.2	6,596.7	93.5	25.5	80.24	-617.3	-6,854.7	9,336.7	9,228.7	108.00	86.449	
10,100.0	6,597.7	6,763.9	6,596.5	95.2	25.5	80.21	-617.3	-6,854.7	9,397.3	9,287.7	109.62	85.730	
10,137.8	6,597.3	6,763.8	6,596.4	96.2	25.5	80.20	-617.4	-6,854.7	9,435.0	9,324.4	110.62	85.290	
10,200.0	6,596.5	6,763.6	6,596.1	97.9	25.5	80.17	-617.4	-6,854.7	9,497.1	9,384.8	112.28	84.584	
10,236.2	6,596.0	6,763.4	6,596.0	98.9	25.5	80.15	-617.4	-6,854.7	9,533.3	9,420.0	113.25	84.181	
10,300.0	6,595.2	6,763.2	6,595.7	100.6	25.5	80.12	-617.4	-6,854.7	9,597.0	9,482.0	114.95	83.489	
10,334.6	6,594.7	6,763.1	6,595.6	101.6	25.5	80.11	-617.4	-6,854.7	9,631.6	9,515.7	115.88	83.120	
10,400.0	6,593.9	6,762.8	6,595.4	103.3	25.5	80.08	-617.4	-6,854.7	9,696.8	9,579.2	117.62	82.440	
10,433.0	6,593.5	6,762.7	6,595.2	104.2	25.5	80.06	-617.4	-6,854.7	9,729.8	9,611.3	118.51	82.103	
10,500.0	6,592.6	6,762.4	6,595.0	106.1	25.5	80.03	-617.4	-6,854.7	9,796.7	9,676.4	120.30	81.436	
10,531.5	6,592.2	6,762.3	6,594.9	106.9	25.5	80.02	-617.4	-6,854.7	9,828.1	9,707.0	121.14	81.128	
10,600.0	6,591.3	6,762.1	6,594.6	108.8	25.5	79.99	-617.4	-6,854.7	9,896.5	9,773.6	122.98	80.473	
10,629.9	6,590.9	6,762.0	6,594.5	109.6	25.5	79.98	-617.4	-6,854.7	9,926.4	9,802.6	123.78	80.192	
10,700.0	6,590.0	6,761.7	6,594.3	111.6	25.5	79.95	-617.4	-6,854.7	9,996.4	9,870.7	125.66	79.549 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
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	-104.74	-1,865.7	-7,091.5	7,332.8				
98.4	98.4	39.2	39.2	0.1	0.0	-104.74	-1,865.8	-7,091.6	7,333.0	7,332.9	0.10	N/A	
100.0	100.0	40.0	40.0	0.1	0.0	-104.74	-1,865.8	-7,091.6	7,333.0	7,332.9	0.10	N/A	
196.8	196.8	95.0	95.0	0.3	0.0	-104.74	-1,866.1	-7,092.0	7,333.8	7,333.5	0.33	N/A	
200.0	200.0	97.3	97.3	0.3	0.0	-104.74	-1,866.1	-7,092.0	7,333.9	7,333.5	0.34	N/A	
295.3	295.3	168.0	168.0	0.5	0.1	-104.75	-1,867.0	-7,092.7	7,335.1	7,334.5	0.62	N/A	
300.0	300.0	171.0	171.0	0.5	0.1	-104.75	-1,867.1	-7,092.8	7,335.2	7,334.5	0.64	N/A	
393.7	393.7	285.2	285.2	0.8	0.3	-104.76	-1,869.3	-7,093.6	7,336.3	7,335.2	1.09	6,757.876	
400.0	400.0	289.6	289.5	0.8	0.3	-104.76	-1,869.4	-7,093.6	7,336.4	7,335.3	1.11	6,616.057	
492.1	492.1	354.7	354.6	1.0	0.5	-104.77	-1,870.8	-7,094.2	7,337.7	7,336.2	1.45	5,049.677	
500.0	500.0	370.6	370.5	1.0	0.5	-104.78	-1,871.1	-7,094.4	7,337.8	7,336.3	1.50	4,878.605	
590.5	590.5	470.0	469.9	1.2	0.7	-104.79	-1,873.3	-7,095.1	7,338.9	7,337.0	1.91	3,832.356	
600.0	600.0	474.5	474.4	1.2	0.7	-104.79	-1,873.4	-7,095.1	7,339.0	7,337.1	1.95	3,772.128	
689.0	689.0	535.0	534.9	1.4	0.9	-104.80	-1,874.6	-7,096.0	7,340.6	7,338.3	2.27	3,232.482	
700.0	700.0	535.0	534.9	1.4	0.9	-104.80	-1,874.6	-7,096.0	7,340.8	7,338.5	2.30	3,197.680	
787.4	787.4	580.2	580.1	1.6	1.0	-104.80	-1,875.4	-7,096.9	7,342.9	7,340.3	2.59	2,836.971	
800.0	800.0	589.6	589.4	1.7	1.0	-104.80	-1,875.5	-7,097.1	7,343.2	7,340.6	2.64	2,785.248	
885.8	885.8	654.9	654.8	1.9	1.1	-104.81	-1,876.6	-7,098.7	7,345.5	7,342.6	2.97	2,473.903	
900.0	900.0	666.5	666.4	1.9	1.1	-104.81	-1,876.8	-7,099.0	7,345.9	7,342.9	3.03	2,427.443	
984.2	984.2	735.4	735.2	2.1	1.3	-104.81	-1,877.5	-7,100.9	7,348.5	7,345.1	3.36	2,183.803	
1,000.0	1,000.0	747.0	746.8	2.1	1.3	-104.81	-1,877.6	-7,101.3	7,349.0	7,345.5	3.43	2,145.275	
1,082.7	1,082.7	820.5	820.3	2.3	1.5	-104.81	-1,878.1	-7,103.6	7,351.6	7,347.8	3.77	1,948.196	
1,100.0	1,100.0	828.0	827.8	2.3	1.5	-104.81	-1,878.1	-7,103.8	7,352.2	7,348.4	3.83	1,920.169	
1,181.1	1,181.1	880.4	880.1	2.5	1.6	-104.80	-1,878.0	-7,105.8	7,355.1	7,351.0	4.13	1,781.194	
1,200.0	1,200.0	891.4	891.1	2.6	1.6	-104.80	-1,877.9	-7,106.3	7,355.8	7,351.6	4.20	1,752.805	
1,279.5	1,279.5	935.2	934.9	2.7	1.7	-9.59	-1,877.1	-7,108.3	7,358.0	7,353.6	4.44	1,657.525	
1,300.0	1,300.0	946.1	945.7	2.8	1.8	-9.59	-1,876.8	-7,108.9	7,358.3	7,353.8	4.50	1,633.536	
1,377.9	1,377.8	992.0	991.6	2.9	1.9	-9.58	-1,875.8	-7,111.5	7,358.3	7,353.6	4.75	1,547.778	
1,400.0	1,399.8	992.0	991.6	3.0	1.9	-9.58	-1,875.8	-7,111.5	7,358.0	7,353.2	4.80	1,534.148	
1,476.4	1,475.9	1,024.9	1,024.4	3.1	1.9	-9.58	-1,874.9	-7,113.5	7,356.0	7,350.9	5.02	1,466.095	
1,500.0	1,499.5	1,033.6	1,033.0	3.2	2.0	-9.58	-1,874.7	-7,114.1	7,355.0	7,349.9	5.08	1,447.375	
1,574.8	1,573.7	1,073.0	1,072.3	3.4	2.1	-9.59	-1,873.8	-7,117.0	7,351.1	7,345.8	5.31	1,383.298	
1,600.0	1,598.7	1,073.0	1,072.3	3.4	2.1	-9.59	-1,873.8	-7,117.0	7,349.5	7,344.1	5.36	1,370.381	
1,673.2	1,671.1	1,073.0	1,072.3	3.6	2.1	-9.61	-1,873.8	-7,117.0	7,343.9	7,338.4	5.51	1,332.938	
1,700.0	1,697.5	1,104.6	1,103.8	3.7	2.1	-9.62	-1,873.0	-7,119.7	7,341.4	7,335.7	5.63	1,303.823	
1,771.6	1,767.9	1,155.0	1,154.0	3.9	2.3	-9.63	-1,871.4	-7,124.5	7,334.1	7,328.2	5.88	1,246.476	
1,800.0	1,795.6	1,155.0	1,154.0	4.0	2.3	-9.64	-1,871.4	-7,124.5	7,330.7	7,324.8	5.94	1,234.129	
1,870.1	1,864.0	1,155.0	1,154.0	4.3	2.3	-9.67	-1,871.4	-7,124.5	7,321.7	7,315.6	6.08	1,203.271	
1,900.0	1,893.1	1,155.0	1,154.0	4.4	2.3	-9.69	-1,871.4	-7,124.5	7,317.6	7,311.4	6.15	1,190.695	
1,968.5	1,959.3	1,155.0	1,154.0	4.6	2.3	-9.72	-1,871.4	-7,124.5	7,307.3	7,301.1	6.29	1,161.438	
1,992.4	1,982.4	1,155.0	1,154.0	4.7	2.3	-9.74	-1,871.4	-7,124.5	7,303.5	7,297.2	6.34	1,151.669	
2,000.0	1,989.6	1,155.0	1,154.0	4.8	2.3	-9.74	-1,871.4	-7,124.5	7,302.3	7,296.0	6.36	1,148.133	
2,066.9	2,054.0	1,200.4	1,199.1	5.1	2.4	-9.73	-1,869.9	-7,129.7	7,291.2	7,284.6	6.63	1,100.287	
2,100.0	2,085.8	1,236.0	1,234.3	5.2	2.5	-9.72	-1,868.7	-7,134.5	7,286.4	7,279.6	6.78	1,074.732	
2,165.3	2,148.7	1,236.0	1,234.3	5.5	2.5	-9.72	-1,868.7	-7,134.5	7,276.3	7,269.4	6.94	1,048.223	
2,200.0	2,182.0	1,236.0	1,234.3	5.7	2.5	-9.72	-1,868.7	-7,134.5	7,271.2	7,264.2	7.04	1,033.536	
2,263.8	2,243.4	1,236.0	1,234.3	6.0	2.5	-9.72	-1,868.7	-7,134.5	7,262.3	7,255.1	7.20	1,008.460	
2,300.0	2,278.2	1,236.0	1,234.3	6.2	2.5	-9.72	-1,868.7	-7,134.5	7,257.5	7,250.2	7.30	994.622	
2,362.2	2,338.1	1,267.4	1,265.3	6.5	2.6	-9.72	-1,867.8	-7,139.3	7,249.3	7,241.8	7.53	962.496	
2,400.0	2,374.4	1,277.0	1,274.7	6.7	2.6	-9.72	-1,867.5	-7,140.8	7,244.6	7,237.0	7.65	946.504	
2,460.6	2,432.8	1,318.0	1,315.2	7.0	2.7	-9.71	-1,866.6	-7,147.7	7,237.5	7,229.6	7.91	915.062	
2,500.0	2,470.6	1,318.0	1,315.2	7.2	2.7	-9.71	-1,866.6	-7,147.7	7,232.9	7,224.9	8.02	902.303	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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-MWDD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,559.0	2,527.4	1,318.0	1,315.2	7.6	2.7	-9.71	-1,866.6	-7,147.7	7,226.4	7,218.2	8.18	883.656		
2,600.0	2,566.8	1,318.0	1,315.2	7.8	2.7	-9.71	-1,866.6	-7,147.7	7,222.1	7,213.8	8.29	871.163		
2,657.5	2,622.1	1,348.6	1,345.3	8.1	2.8	-9.71	-1,866.0	-7,153.2	7,216.3	7,207.8	8.52	846.906		
2,700.0	2,663.0	1,362.3	1,358.7	8.3	2.9	-9.71	-1,865.9	-7,155.8	7,212.2	7,203.6	8.67	831.805		
2,755.9	2,716.8	1,400.0	1,395.7	8.6	3.0	-9.70	-1,865.6	-7,163.0	7,207.2	7,198.3	8.92	808.413		
2,800.0	2,759.2	1,400.0	1,395.7	8.9	3.0	-9.70	-1,865.6	-7,163.0	7,203.3	7,194.3	9.04	796.935		
2,854.3	2,811.5	1,400.0	1,395.7	9.2	3.0	-9.70	-1,865.6	-7,163.0	7,198.9	7,189.7	9.19	783.162		
2,900.0	2,855.4	1,431.1	1,426.2	9.4	3.1	-9.70	-1,865.5	-7,169.2	7,195.3	7,185.9	9.40	765.708		
2,952.7	2,906.2	1,451.0	1,445.7	9.7	3.2	-9.70	-1,865.5	-7,173.3	7,191.5	7,181.9	9.60	749.433		
3,000.0	2,951.6	1,481.0	1,475.0	10.0	3.3	-9.70	-1,865.4	-7,179.6	7,188.2	7,178.4	9.80	733.194		
3,051.2	3,000.9	1,481.0	1,475.0	10.3	3.3	-9.70	-1,865.4	-7,179.6	7,184.9	7,175.0	9.95	722.069		
3,100.0	3,047.8	1,508.3	1,501.7	10.5	3.4	-9.69	-1,865.3	-7,185.6	7,181.9	7,171.8	10.16	706.830		
3,149.6	3,095.5	1,528.4	1,521.2	10.8	3.5	-9.69	-1,865.2	-7,190.0	7,179.1	7,168.8	10.36	693.296		
3,200.0	3,144.0	1,563.0	1,554.9	11.1	3.7	-9.69	-1,865.1	-7,197.9	7,176.5	7,165.9	10.59	677.728		
3,248.0	3,190.2	1,563.0	1,554.9	11.4	3.7	-9.69	-1,865.1	-7,197.9	7,174.2	7,163.4	10.73	668.734		
3,300.0	3,240.2	1,563.0	1,554.9	11.7	3.7	-9.69	-1,865.1	-7,197.9	7,172.0	7,161.1	10.88	659.291		
3,346.4	3,284.9	1,596.0	1,587.0	11.9	3.8	-9.68	-1,865.0	-7,205.7	7,170.1	7,159.0	11.10	645.839		
3,400.0	3,336.4	1,611.8	1,602.4	12.2	3.9	-9.68	-1,864.9	-7,209.7	7,168.3	7,157.0	11.30	634.349		
3,444.9	3,379.6	1,645.0	1,634.4	12.5	4.0	-9.67	-1,864.6	-7,218.1	7,167.1	7,155.5	11.52	622.153		
3,500.0	3,432.6	1,645.0	1,634.4	12.8	4.0	-9.67	-1,864.6	-7,218.1	7,165.6	7,154.0	11.68	613.467		
3,543.3	3,474.3	1,645.0	1,634.4	13.1	4.0	-9.67	-1,864.6	-7,218.1	7,164.8	7,153.0	11.81	606.814		
3,600.0	3,528.8	1,645.0	1,634.4	13.4	4.0	-9.67	-1,864.6	-7,218.1	7,164.1	7,152.2	11.97	598.346		
3,641.7	3,569.0	1,681.7	1,669.8	13.6	4.2	-9.66	-1,864.3	-7,227.9	7,163.6	7,151.4	12.20	587.208		
3,700.0	3,625.0	1,726.0	1,712.3	14.0	4.5	-9.65	-1,864.1	-7,240.3	7,163.5	7,151.0	12.49	573.339		
3,738.4	3,662.0	1,726.0	1,712.3	14.2	4.5	-9.65	-1,864.1	-7,240.3	7,163.4	7,150.8	12.61	568.189 CC		
3,740.1	3,663.6	1,726.0	1,712.3	14.2	4.5	-9.65	-1,864.1	-7,240.3	7,163.4	7,150.8	12.61	567.959 ES		
3,800.0	3,721.2	1,726.0	1,712.3	14.5	4.5	-9.65	-1,864.1	-7,240.3	7,163.7	7,150.9	12.79	560.153		
3,838.6	3,758.3	1,726.0	1,712.3	14.8	4.5	-9.65	-1,864.1	-7,240.3	7,164.1	7,151.2	12.90	555.244		
3,900.0	3,817.4	1,761.3	1,746.1	15.1	4.6	-9.64	-1,864.0	-7,250.6	7,165.0	7,151.8	13.19	543.147		
3,937.0	3,853.0	1,774.1	1,758.3	15.3	4.7	-9.64	-1,863.9	-7,254.4	7,165.7	7,152.4	13.34	537.249		
4,000.0	3,913.6	1,808.0	1,790.6	15.7	4.9	-9.63	-1,863.6	-7,264.8	7,167.3	7,153.6	13.62	526.193		
4,035.4	3,947.7	1,810.0	1,792.5	15.9	4.9	-9.63	-1,863.5	-7,265.4	7,168.2	7,154.5	13.73	522.021		
4,100.0	4,009.8	1,942.8	1,918.9	16.3	5.6	-9.58	-1,862.0	-7,305.9	7,169.7	7,155.5	14.30	501.509		
4,133.8	4,042.4	1,971.0	1,945.8	16.5	5.7	-9.57	-1,861.7	-7,314.4	7,170.4	7,155.9	14.48	495.339		
4,200.0	4,106.0	2,003.8	1,977.1	16.8	5.9	-9.56	-1,861.4	-7,324.3	7,171.9	7,157.2	14.77	485.574		
4,232.3	4,137.1	2,016.9	1,989.6	17.0	6.0	-9.56	-1,861.2	-7,328.4	7,172.8	7,157.9	14.91	481.231		
4,300.0	4,202.2	2,053.0	2,023.8	17.4	6.2	-9.54	-1,860.6	-7,339.7	7,174.9	7,159.7	15.21	471.576		
4,330.7	4,231.7	2,066.3	2,036.4	17.6	6.3	-9.53	-1,860.3	-7,343.9	7,176.0	7,160.6	15.35	467.589		
4,400.0	4,298.4	2,175.6	2,140.3	18.0	6.9	-9.50	-1,859.7	-7,378.0	7,178.3	7,162.4	15.88	451.992		
4,429.1	4,326.4	2,216.0	2,178.7	18.2	7.1	-9.49	-1,860.0	-7,390.3	7,179.1	7,163.0	16.09	446.297		
4,500.0	4,394.6	2,261.3	2,221.9	18.6	7.4	-9.48	-1,860.4	-7,404.1	7,181.2	7,164.7	16.43	436.978		
4,527.5	4,421.1	2,277.1	2,236.9	18.7	7.5	-9.48	-1,860.5	-7,409.0	7,182.1	7,165.5	16.56	433.606		
4,600.0	4,490.8	2,327.5	2,284.8	19.2	7.8	-9.47	-1,860.7	-7,424.7	7,184.6	7,167.7	16.94	424.244		
4,626.0	4,515.8	2,348.8	2,305.1	19.3	7.9	-9.46	-1,860.8	-7,431.4	7,185.6	7,168.5	17.08	420.717		
4,700.0	4,587.0	2,379.0	2,333.7	19.8	8.1	-9.46	-1,861.0	-7,440.9	7,188.4	7,171.0	17.40	413.246		
4,724.4	4,610.5	2,379.0	2,333.7	19.9	8.1	-9.46	-1,861.0	-7,440.9	7,189.5	7,172.1	17.47	411.581		
4,800.0	4,683.2	2,430.2	2,382.3	20.3	8.4	-9.44	-1,861.4	-7,457.2	7,192.9	7,175.1	17.86	402.829		
4,822.8	4,705.2	2,461.0	2,411.3	20.5	8.6	-9.44	-1,861.9	-7,467.3	7,194.2	7,176.2	18.02	399.188		
4,900.0	4,779.4	2,618.0	2,559.8	20.9	9.6	-9.38	-1,860.6	-7,518.3	7,198.0	7,179.2	18.75	383.811		
4,921.2	4,799.8	2,625.0	2,566.4	21.0	9.6	-9.38	-1,860.4	-7,520.6	7,198.8	7,179.9	18.84	382.101		
5,000.0	4,875.6	2,684.7	2,622.9	21.5	10.0	-9.35	-1,859.0	-7,539.9	7,201.9	7,182.6	19.27	373.679		
5,019.7	4,894.5	2,706.0	2,643.0	21.6	10.1	-9.34	-1,858.5	-7,546.8	7,202.8	7,183.4	19.40	371.228		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,971.8	2,896.7	2,823.9	22.1	11.3	-9.25	-1,854.5	-7,607.1	7,205.4	7,185.1	20.26	355.586		
5,118.1	4,989.2	2,904.0	2,830.8	22.2	11.3	-9.25	-1,854.2	-7,609.4	7,205.9	7,185.5	20.34	354.236		
5,200.0	5,068.0	2,951.0	2,875.3	22.7	11.6	-9.22	-1,852.3	-7,624.5	7,208.5	7,187.8	20.75	347.473		
5,216.5	5,083.9	2,951.0	2,875.3	22.8	11.6	-9.22	-1,852.3	-7,624.5	7,209.1	7,188.3	20.80	346.671		
5,240.0	5,106.5	3,329.9	3,237.2	22.9	13.8	-9.07	-1,844.2	-7,735.8	7,209.4	7,187.4	22.06	326.772		
5,300.0	5,164.4	3,468.4	3,370.8	23.2	14.5	-9.02	-1,840.8	-7,772.2	7,208.5	7,185.9	22.67	317.961		
5,309.9	5,173.9	3,473.8	3,376.0	23.2	14.5	-9.01	-1,840.6	-7,773.6	7,208.5	7,185.8	22.72	317.346		
5,314.9	5,178.8	3,476.6	3,378.7	23.3	14.6	-9.01	-1,840.6	-7,774.3	7,208.5	7,185.8	22.74	317.032		
5,400.0	5,261.5	3,522.0	3,422.6	23.6	14.8	-9.00	-1,839.6	-7,786.2	7,210.2	7,187.1	23.10	312.092		
5,413.4	5,274.6	3,533.3	3,433.4	23.6	14.9	-9.00	-1,839.3	-7,789.2	7,210.7	7,187.5	23.17	311.203		
5,500.0	5,359.5	3,604.0	3,501.6	23.9	15.2	-8.98	-1,837.9	-7,808.1	7,215.8	7,192.2	23.59	305.858		
5,511.8	5,371.1	3,604.0	3,501.6	24.0	15.2	-8.99	-1,837.9	-7,808.1	7,216.7	7,193.0	23.62	305.579		
5,600.0	5,458.0	3,645.2	3,541.3	24.2	15.5	-8.99	-1,837.2	-7,819.3	7,225.3	7,201.4	23.92	302.067		
5,610.2	5,468.2	3,649.9	3,545.7	24.3	15.5	-8.99	-1,837.1	-7,820.5	7,226.5	7,202.5	23.95	301.712		
5,700.0	5,557.2	3,686.0	3,580.4	24.5	15.7	-9.02	-1,836.5	-7,830.6	7,239.0	7,214.8	24.21	299.014		
5,708.6	5,565.7	3,686.0	3,580.4	24.5	15.7	-9.02	-1,836.5	-7,830.6	7,240.4	7,216.1	24.22	298.924		
5,800.0	5,656.7	3,722.2	3,615.1	24.7	15.9	-9.05	-1,836.1	-7,840.8	7,256.9	7,232.5	24.45	296.803		
5,807.1	5,663.7	5,827.9	5,680.1	24.7	22.9	-8.64	-1,831.1	-8,139.9	7,258.3	7,229.0	29.27	247.990		
5,900.0	5,756.5	5,890.0	5,742.2	24.9	22.9	-8.64	-1,832.0	-8,139.5	7,252.3	7,222.9	29.42	246.507		
5,905.5	5,761.9	5,890.0	5,742.2	24.9	22.9	-8.63	-1,832.0	-8,139.5	7,252.0	7,222.6	29.42	246.484		
6,000.0	5,856.4	5,972.0	5,824.2	25.0	23.0	-8.64	-1,833.5	-8,139.2	7,249.6	7,220.0	29.57	245.161		
6,003.9	5,860.3	5,972.0	5,824.2	25.0	23.0	-8.64	-1,833.5	-8,139.2	7,249.5	7,219.9	29.57	245.159		
6,022.8	5,879.3	5,981.9	5,834.1	25.0	23.0	-8.64	-1,833.7	-8,139.2	7,249.5	7,219.9	29.59	245.028		
6,032.5	5,888.9	5,990.4	5,842.6	25.0	23.0	-103.84	-1,833.9	-8,139.2	7,249.5	7,202.1	47.39	152.967		
6,062.5	5,918.9	6,016.8	5,869.0	25.1	23.1	-103.84	-1,834.5	-8,139.2	7,249.6	7,202.1	47.45	152.773		
6,100.0	5,956.4	6,053.0	5,905.2	25.1	23.1	166.13	-1,835.3	-8,139.1	7,250.7	7,221.2	29.53	245.502		
6,102.3	5,958.7	6,053.0	5,905.2	25.1	23.1	166.13	-1,835.3	-8,139.1	7,250.8	7,221.3	29.52	245.640		
6,150.0	6,006.2	6,078.7	5,930.8	25.1	23.1	166.04	-1,835.8	-8,139.2	7,255.2	7,226.0	29.20	248.502		
6,200.0	6,055.6	6,106.1	5,958.2	25.1	23.2	165.89	-1,836.1	-8,139.3	7,263.3	7,234.5	28.76	252.522		
6,200.8	6,056.3	6,106.5	5,958.6	25.1	23.2	165.89	-1,836.1	-8,139.4	7,263.4	7,234.7	28.76	252.593		
6,250.0	6,104.3	6,135.0	5,987.1	25.0	23.2	165.67	-1,836.2	-8,139.7	7,274.8	7,246.5	28.24	257.569		
6,299.2	6,151.3	6,192.7	6,044.8	24.9	23.3	165.41	-1,836.2	-8,140.4	7,289.3	7,261.6	27.71	263.084		
6,300.0	6,152.1	6,193.7	6,045.8	24.9	23.3	165.40	-1,836.2	-8,140.5	7,289.6	7,261.9	27.70	263.180		
6,350.0	6,198.7	6,256.6	6,108.7	24.8	23.4	165.06	-1,836.1	-8,141.2	7,307.5	7,280.4	27.09	269.713		
6,397.6	6,241.9	6,298.0	6,150.1	24.7	23.4	164.64	-1,836.3	-8,141.5	7,327.3	7,300.9	26.45	277.033		
6,400.0	6,244.1	6,298.0	6,150.1	24.7	23.4	164.62	-1,836.3	-8,141.5	7,328.4	7,302.0	26.41	277.444		
6,450.0	6,287.8	6,334.4	6,186.5	24.5	23.4	164.07	-1,836.5	-8,141.8	7,352.4	7,326.6	25.71	285.953		
6,496.0	6,326.5	6,358.3	6,210.5	24.4	23.5	163.44	-1,836.7	-8,142.0	7,377.1	7,352.0	25.07	294.273		
6,500.0	6,329.7	6,360.3	6,212.5	24.4	23.5	163.38	-1,836.7	-8,142.1	7,379.3	7,354.3	25.02	294.988		
6,550.0	6,369.6	6,467.4	6,319.5	24.3	23.6	162.70	-1,837.4	-8,143.0	7,409.0	7,384.6	24.46	302.940		
6,594.5	6,403.3	6,497.0	6,349.2	24.2	23.7	161.86	-1,837.5	-8,143.1	7,437.4	7,413.4	23.98	310.187		
6,600.0	6,407.3	6,500.6	6,352.7	24.2	23.7	161.75	-1,837.5	-8,143.1	7,441.1	7,417.2	23.93	311.011		
6,650.0	6,442.7	6,531.7	6,383.8	24.1	23.7	160.59	-1,837.5	-8,143.2	7,475.6	7,452.1	23.56	317.240		
6,692.9	6,471.0	6,543.0	6,395.1	24.0	23.7	159.35	-1,837.4	-8,143.3	7,507.1	7,483.7	23.45	320.109		
6,700.0	6,475.5	6,556.6	6,408.7	24.0	23.7	159.16	-1,837.4	-8,143.4	7,512.5	7,489.1	23.45	320.299		
6,750.0	6,505.6	6,577.1	6,429.2	24.0	23.8	157.38	-1,837.4	-8,143.6	7,551.6	7,527.9	23.69	318.700		
6,791.3	6,528.3	6,592.5	6,444.6	24.0	23.8	155.57	-1,837.4	-8,143.7	7,585.3	7,561.1	24.24	312.955		
6,800.0	6,532.8	6,595.6	6,447.7	24.0	23.8	155.15	-1,837.4	-8,143.7	7,592.6	7,568.2	24.40	311.221		
6,850.0	6,557.0	6,611.9	6,464.1	24.1	23.8	152.31	-1,837.4	-8,143.8	7,635.4	7,609.7	25.68	297.286		
6,889.7	6,574.1	6,625.0	6,477.1	24.2	23.8	149.48	-1,837.5	-8,144.0	7,670.5	7,643.3	27.22	281.829		
6,900.0	6,578.1	6,626.9	6,479.0	24.3	23.8	148.63	-1,837.5	-8,144.0	7,679.7	7,652.0	27.70	277.280		
6,950.0	6,596.1	6,646.8	6,499.0	24.5	23.8	143.85	-1,837.6	-8,144.2	7,725.3	7,694.8	30.56	252.829		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
6,988.2	6,607.5	6,660.0	6,512.1	24.7	23.9	139.10	-1,837.6	-8,144.3	7,760.9	7,727.5	33.41	232.266	
7,000.0	6,610.7	6,663.5	6,515.7	24.8	23.9	137.38	-1,837.6	-8,144.3	7,772.1	7,737.7	34.42	225.804	
7,050.0	6,621.9	6,676.3	6,528.4	25.1	23.9	128.51	-1,837.7	-8,144.4	7,819.7	7,780.4	39.30	198.958	
7,086.6	6,628.0	6,683.1	6,535.2	25.4	23.9	120.01	-1,837.7	-8,144.5	7,854.9	7,811.6	43.29	181.467	
7,100.0	6,629.7	6,685.0	6,537.1	25.6	23.9	116.42	-1,837.7	-8,144.5	7,867.9	7,823.2	44.72	175.942	
7,150.0	6,634.1	6,689.6	6,541.7	26.0	23.9	100.82	-1,837.7	-8,144.5	7,916.5	7,867.4	49.08	161.292	
7,185.0	6,635.1	6,690.4	6,542.5	26.4	23.9	88.50	-1,837.7	-8,144.6	7,950.7	7,900.4	50.24	158.261	
7,196.6	6,635.0	6,690.2	6,542.3	26.5	23.9	84.38	-1,837.7	-8,144.6	7,961.9	7,911.8	50.16	158.734	
7,200.0	6,635.0	6,690.1	6,542.2	26.6	23.9	84.38	-1,837.7	-8,144.6	7,965.3	7,915.1	50.20	158.682	
7,283.4	6,633.9	6,688.0	6,540.1	27.6	23.9	84.31	-1,837.7	-8,144.5	8,046.7	7,995.5	51.21	157.122	
7,300.0	6,633.7	6,687.6	6,539.7	27.8	23.9	84.30	-1,837.7	-8,144.5	8,062.9	8,011.5	51.41	156.820	
7,381.9	6,632.6	6,685.5	6,537.6	29.0	23.9	84.23	-1,837.7	-8,144.5	8,142.8	8,090.2	52.59	154.834	
7,400.0	6,632.4	6,685.0	6,537.1	29.2	23.9	84.21	-1,837.7	-8,144.5	8,160.5	8,107.7	52.85	154.407	
7,480.3	6,631.4	6,682.9	6,535.1	30.5	23.9	84.15	-1,837.7	-8,144.5	8,239.0	8,184.8	54.15	152.141	
7,500.0	6,631.1	6,682.4	6,534.6	30.9	23.9	84.13	-1,837.7	-8,144.5	8,258.2	8,203.8	54.47	151.602	
7,578.7	6,630.1	6,680.4	6,532.5	32.3	23.9	84.06	-1,837.7	-8,144.5	8,335.2	8,279.3	55.88	149.175	
7,600.0	6,629.8	6,679.9	6,532.0	32.7	23.9	84.04	-1,837.7	-8,144.5	8,356.0	8,299.7	56.25	148.541	
7,677.1	6,628.9	6,677.9	6,530.0	34.1	23.9	83.98	-1,837.7	-8,144.4	8,431.5	8,373.7	57.73	146.048	
7,700.0	6,628.6	6,677.3	6,529.4	34.6	23.9	83.96	-1,837.7	-8,144.4	8,453.8	8,395.6	58.17	145.334	
7,775.6	6,627.6	6,675.3	6,527.4	36.1	23.9	83.89	-1,837.7	-8,144.4	8,527.8	8,468.1	59.70	142.845	
7,800.0	6,627.3	6,674.7	6,526.8	36.6	23.9	83.87	-1,837.7	-8,144.4	8,551.7	8,491.5	60.19	142.068	
7,874.0	6,626.3	6,672.8	6,524.9	38.2	23.9	83.81	-1,837.7	-8,144.4	8,624.1	8,562.4	61.76	139.631	
7,900.0	6,626.0	6,672.1	6,524.2	38.8	23.9	83.79	-1,837.7	-8,144.4	8,649.6	8,587.3	62.31	138.805	
7,972.4	6,625.1	6,670.2	6,522.3	40.4	23.9	83.72	-1,837.7	-8,144.4	8,720.5	8,656.6	63.91	136.454	
8,000.0	6,624.7	6,669.5	6,521.6	41.0	23.9	83.70	-1,837.7	-8,144.4	8,747.5	8,683.0	64.51	135.590	
8,070.8	6,623.8	6,667.7	6,519.8	42.6	23.9	83.64	-1,837.7	-8,144.4	8,817.0	8,750.9	66.12	133.347	
8,100.0	6,623.4	6,666.9	6,519.0	43.3	23.9	83.61	-1,837.6	-8,144.3	8,845.6	8,778.8	66.78	132.456	
8,169.3	6,622.6	6,665.1	6,517.2	44.9	23.9	83.55	-1,837.6	-8,144.3	8,913.5	8,845.1	68.39	130.331	
8,200.0	6,622.2	6,664.3	6,516.4	45.6	23.9	83.53	-1,837.6	-8,144.3	8,943.6	8,874.5	69.10	129.422	
8,267.7	6,621.3	6,662.5	6,514.6	47.3	23.9	83.47	-1,837.6	-8,144.3	9,010.0	8,939.3	70.71	127.422	
8,300.0	6,620.9	6,661.7	6,513.8	48.0	23.9	83.44	-1,837.6	-8,144.3	9,041.7	8,970.2	71.48	126.500	
8,366.1	6,620.0	6,659.9	6,512.0	49.7	23.9	83.38	-1,837.6	-8,144.3	9,106.6	9,033.5	73.07	124.626	
8,400.0	6,619.6	6,659.0	6,511.2	50.5	23.9	83.35	-1,837.6	-8,144.3	9,139.8	9,065.9	73.89	123.698	
8,464.5	6,618.8	6,657.3	6,509.5	52.1	23.9	83.30	-1,837.6	-8,144.3	9,203.2	9,127.7	75.47	121.948	
8,500.0	6,618.3	6,656.4	6,508.5	53.0	23.9	83.27	-1,837.6	-8,144.2	9,238.0	9,161.7	76.34	121.018	
8,563.0	6,617.5	6,654.7	6,506.9	54.5	23.9	83.21	-1,837.6	-8,144.2	9,299.8	9,221.9	77.90	119.387	
8,600.0	6,617.0	6,653.8	6,505.9	55.5	23.8	83.18	-1,837.6	-8,144.2	9,336.2	9,257.4	78.81	118.459	
8,661.4	6,616.3	6,652.1	6,504.2	57.0	23.8	83.13	-1,837.6	-8,144.2	9,396.5	9,316.2	80.35	116.943	
8,700.0	6,615.8	6,651.1	6,503.2	58.0	23.8	83.09	-1,837.6	-8,144.2	9,434.4	9,353.1	81.32	116.019	
8,759.8	6,615.0	6,649.5	6,501.6	59.5	23.8	83.04	-1,837.6	-8,144.2	9,493.2	9,410.4	82.83	114.611	
8,800.0	6,614.5	6,648.5	6,500.6	60.6	23.8	83.00	-1,837.6	-8,144.2	9,532.7	9,448.9	83.84	113.695	
8,858.2	6,613.7	6,646.9	6,499.0	62.1	23.8	82.95	-1,837.6	-8,144.2	9,590.0	9,504.7	85.33	112.389	
8,900.0	6,613.2	6,645.8	6,497.9	63.2	23.8	82.92	-1,837.6	-8,144.2	9,631.0	9,544.7	86.39	111.481	
8,956.7	6,612.5	6,644.3	6,496.4	64.6	23.8	82.87	-1,837.6	-8,144.1	9,686.8	9,598.9	87.84	110.271	
9,000.0	6,611.9	6,643.1	6,495.2	65.8	23.8	82.83	-1,837.6	-8,144.1	9,729.4	9,640.4	88.96	109.374	
9,055.1	6,611.2	6,641.6	6,493.8	67.2	23.8	82.78	-1,837.6	-8,144.1	9,783.6	9,693.2	90.38	108.253	
9,100.0	6,610.6	6,640.5	6,492.6	68.4	23.8	82.74	-1,837.6	-8,144.1	9,827.8	9,736.2	91.53	107.366	
9,153.5	6,609.9	6,639.1	6,491.2	69.8	23.8	82.70	-1,837.6	-8,144.1	9,880.5	9,787.5	92.92	106.329	
9,200.0	6,609.3	6,637.9	6,490.0	71.0	23.8	82.66	-1,837.5	-8,144.1	9,926.2	9,832.1	94.13	105.454	
9,251.9	6,608.7	6,636.6	6,488.7	72.4	23.8	82.61	-1,837.5	-8,144.1	9,977.3	9,881.9	95.48	104.494 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-104.90	-1,887.2	-7,090.9	7,337.8				
98.4	98.4	50.9	50.9	0.1	0.0	-104.90	-1,887.2	-7,091.1	7,337.9	7,337.8	0.10	N/A	
100.0	100.0	51.9	51.9	0.1	0.0	-104.90	-1,887.2	-7,091.1	7,337.9	7,337.8	0.10	N/A	
196.8	196.8	154.0	154.0	0.3	0.1	-104.90	-1,887.4	-7,091.5	7,338.4	7,338.0	0.39	N/A	
200.0	200.0	158.0	158.0	0.3	0.1	-104.90	-1,887.4	-7,091.5	7,338.4	7,338.0	0.40	N/A	
295.3	295.3	1,115.9	1,101.1	0.5	3.5	-105.96	-2,001.9	-7,001.8	7,329.1	7,325.9	3.22	2,278.871	
300.0	300.0	1,118.0	1,103.1	0.5	3.6	-105.96	-2,002.4	-7,001.5	7,328.5	7,325.3	3.23	2,266.231	
393.7	393.7	1,602.2	1,558.9	0.8	6.6	-107.14	-2,127.2	-6,896.6	7,313.8	7,308.6	5.25	1,392.107	
400.0	400.0	1,605.9	1,562.3	0.8	6.6	-107.15	-2,128.2	-6,895.7	7,312.8	7,307.5	5.28	1,384.028	
492.1	492.1	1,662.6	1,615.1	1.0	7.0	-107.30	-2,143.6	-6,882.0	7,298.2	7,292.4	5.73	1,273.454	
500.0	500.0	1,668.0	1,620.2	1.0	7.1	-107.32	-2,145.1	-6,880.7	7,296.9	7,291.2	5.77	1,264.262	
590.5	590.5	1,726.0	1,674.0	1.2	7.5	-107.47	-2,161.6	-6,866.7	7,283.0	7,276.8	6.22	1,170.978	
600.0	600.0	1,726.0	1,674.0	1.2	7.5	-107.47	-2,161.6	-6,866.7	7,281.6	7,275.3	6.24	1,166.764	
689.0	689.0	1,768.4	1,713.3	1.4	7.8	-107.59	-2,174.0	-6,856.6	7,268.4	7,261.8	6.61	1,099.307	
700.0	700.0	1,772.9	1,717.4	1.4	7.9	-107.60	-2,175.3	-6,855.6	7,266.9	7,260.2	6.65	1,092.012	
787.4	787.4	1,808.0	1,749.9	1.6	8.1	-107.70	-2,185.8	-6,847.4	7,254.7	7,247.7	6.99	1,037.585	
800.0	800.0	1,808.0	1,749.9	1.7	8.1	-107.70	-2,185.8	-6,847.4	7,253.0	7,246.0	7.02	1,033.157	
885.8	885.8	2,097.7	2,016.0	1.9	10.3	-108.56	-2,276.0	-6,776.9	7,240.8	7,232.5	8.37	864.665	
900.0	900.0	2,103.8	2,021.6	1.9	10.4	-108.58	-2,278.0	-6,775.3	7,238.6	7,230.2	8.43	858.533	
984.2	984.2	2,216.0	2,124.4	2.1	11.2	-108.92	-2,312.2	-6,746.5	7,225.5	7,216.4	9.06	797.201	
1,000.0	1,000.0	2,216.0	2,124.4	2.1	11.2	-108.92	-2,312.2	-6,746.5	7,223.0	7,213.9	9.10	793.823	
1,082.7	1,082.7	2,216.0	2,124.4	2.3	11.2	-108.92	-2,312.2	-6,746.5	7,210.4	7,201.1	9.28	776.574	
1,100.0	1,100.0	2,216.0	2,124.4	2.3	11.2	-108.92	-2,312.2	-6,746.5	7,207.8	7,198.5	9.32	773.060	
1,181.1	1,181.1	3,061.5	2,910.4	2.5	17.0	-111.08	-2,510.3	-6,511.2	7,194.2	7,181.1	13.14	547.362	
1,200.0	1,200.0	3,075.4	2,923.3	2.6	17.1	-111.12	-2,513.1	-6,506.6	7,189.6	7,176.4	13.26	542.402	
1,279.5	1,279.5	3,114.0	2,959.0	2.7	17.4	-16.14	-2,520.6	-6,494.2	7,169.5	7,150.3	19.19	373.553	
1,300.0	1,300.0	3,114.0	2,959.0	2.8	17.4	-16.17	-2,520.6	-6,494.2	7,164.1	7,144.8	19.23	372.513	
1,377.9	1,377.8	3,157.3	2,999.3	2.9	17.7	-16.40	-2,528.8	-6,480.5	7,142.3	7,122.7	19.62	363.982	
1,400.0	1,399.8	3,164.9	3,006.4	3.0	17.8	-16.46	-2,530.2	-6,478.2	7,135.9	7,116.2	19.70	362.168	
1,476.4	1,475.9	3,196.0	3,035.5	3.1	18.0	-16.68	-2,535.9	-6,468.8	7,112.9	7,092.9	20.01	355.470	
1,500.0	1,499.5	3,196.0	3,035.5	3.2	18.0	-16.72	-2,535.9	-6,468.8	7,105.5	7,085.5	20.04	354.478	
1,574.8	1,573.7	3,230.0	3,067.3	3.4	18.2	-16.96	-2,542.2	-6,458.7	7,081.2	7,060.8	20.36	347.786	
1,600.0	1,598.7	3,240.0	3,076.7	3.4	18.3	-17.04	-2,544.2	-6,455.7	7,072.7	7,052.2	20.46	345.746	
1,673.2	1,671.1	3,277.0	3,111.3	3.6	18.5	-17.31	-2,551.4	-6,444.9	7,047.1	7,026.3	20.78	339.116	
1,700.0	1,697.5	3,683.2	3,489.9	3.7	21.4	-18.58	-2,623.9	-6,317.3	7,036.5	7,013.1	23.36	301.209	
1,771.6	1,767.9	3,726.8	3,529.7	3.9	21.7	-18.95	-2,633.0	-6,302.1	7,006.2	6,982.4	23.78	294.673	
1,800.0	1,795.6	3,743.1	3,544.6	4.0	21.9	-19.10	-2,636.6	-6,296.3	6,993.8	6,969.9	23.93	292.243	
1,870.1	1,864.0	4,025.8	3,797.7	4.3	24.4	-20.50	-2,705.4	-6,191.0	6,962.0	6,935.6	26.38	263.915	
1,900.0	1,893.1	4,058.7	3,826.7	4.4	24.7	-20.76	-2,713.7	-6,178.0	6,947.4	6,920.7	26.70	260.179	
1,968.5	1,959.3	4,116.9	3,878.3	4.6	25.3	-21.31	-2,728.2	-6,155.0	6,913.0	6,885.7	27.28	253.381	
1,992.4	1,982.4	4,132.2	3,891.9	4.7	25.4	-21.49	-2,731.7	-6,149.0	6,900.7	6,873.3	27.43	251.538	
2,000.0	1,989.6	4,137.1	3,896.2	4.8	25.5	-21.51	-2,732.8	-6,147.1	6,896.8	6,869.3	27.49	250.854	
2,066.9	2,054.0	4,176.0	3,931.2	5.1	25.8	-21.68	-2,741.3	-6,132.2	6,862.3	6,834.3	27.99	245.134	
2,100.0	2,085.8	4,176.0	3,931.2	5.2	25.8	-21.68	-2,741.3	-6,132.2	6,845.4	6,817.3	28.08	243.776	
2,165.3	2,148.7	4,176.0	3,931.2	5.5	25.8	-21.68	-2,741.3	-6,132.2	6,812.3	6,784.0	28.26	241.051	
2,200.0	2,182.0	4,208.5	3,960.5	5.7	26.1	-21.82	-2,748.1	-6,120.0	6,794.6	6,766.0	28.61	237.474	
2,263.8	2,243.4	4,223.4	3,974.0	6.0	26.2	-21.88	-2,751.3	-6,114.5	6,762.7	6,733.8	28.91	233.908	
2,300.0	2,278.2	4,257.0	4,004.4	6.2	26.5	-22.03	-2,758.7	-6,102.3	6,744.9	6,715.6	29.28	230.378	
2,362.2	2,338.1	4,257.0	4,004.4	6.5	26.5	-22.03	-2,758.7	-6,102.3	6,714.2	6,684.7	29.46	227.887	
2,400.0	2,374.4	4,257.0	4,004.4	6.7	26.5	-22.03	-2,758.7	-6,102.3	6,695.7	6,666.2	29.58	226.393	
2,460.6	2,432.8	4,285.4	4,030.1	7.0	26.7	-22.16	-2,765.1	-6,092.2	6,666.4	6,636.4	29.98	222.328	
2,500.0	2,470.6	4,306.0	4,048.8	7.2	26.9	-22.25	-2,769.8	-6,084.8	6,647.4	6,617.2	30.27	219.618	

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

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Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
2,559.0	2,527.4	4,339.0	4,078.7	7.6	27.1	-22.40	-2,777.4	-6,073.1	6,619.2	6,588.5	30.71	215.512	
2,600.0	2,566.8	4,339.0	4,078.7	7.8	27.1	-22.40	-2,777.4	-6,073.1	6,599.7	6,568.9	30.84	213.993	
2,657.5	2,622.1	4,365.4	4,102.7	8.1	27.4	-22.52	-2,783.6	-6,063.8	6,572.6	6,541.4	31.24	210.412	
2,700.0	2,663.0	4,377.4	4,113.5	8.3	27.5	-22.57	-2,786.4	-6,059.7	6,552.7	6,521.3	31.47	208.232	
2,755.9	2,716.8	4,393.1	4,127.7	8.6	27.6	-22.65	-2,790.2	-6,054.3	6,526.9	6,495.1	31.78	205.406	
2,800.0	2,759.2	4,420.0	4,152.2	8.9	27.8	-22.77	-2,796.9	-6,045.1	6,506.7	6,474.5	32.14	202.464	
2,854.3	2,811.5	4,420.0	4,152.2	9.2	27.8	-22.77	-2,796.9	-6,045.1	6,482.0	6,449.6	32.31	200.602	
2,900.0	2,855.4	4,420.0	4,152.2	9.4	27.8	-22.77	-2,796.9	-6,045.1	6,461.5	6,429.0	32.46	199.060	
2,952.7	2,906.2	4,451.5	4,180.8	9.7	28.1	-22.92	-2,804.8	-6,034.6	6,437.9	6,405.0	32.89	195.762	
3,000.0	2,951.6	4,466.3	4,194.3	10.0	28.2	-22.99	-2,808.5	-6,029.7	6,417.0	6,383.9	33.16	193.514	
3,051.2	3,000.9	4,502.0	4,226.9	10.3	28.5	-23.15	-2,817.3	-6,018.2	6,394.8	6,361.1	33.62	190.214	
3,100.0	3,047.8	4,502.0	4,226.9	10.5	28.5	-23.15	-2,817.3	-6,018.2	6,373.6	6,339.8	33.78	188.681	
3,149.6	3,095.5	4,571.7	4,290.8	10.8	29.0	-23.47	-2,834.4	-5,996.0	6,352.2	6,317.7	34.50	184.102	
3,200.0	3,144.0	4,584.0	4,302.0	11.1	29.1	-23.53	-2,837.3	-5,992.0	6,330.4	6,295.6	34.77	182.066	
3,248.0	3,190.2	4,616.0	4,331.3	11.4	29.4	-23.68	-2,845.1	-5,981.9	6,309.8	6,274.6	35.19	179.325	
3,300.0	3,240.2	4,634.2	4,348.0	11.7	29.5	-23.76	-2,849.5	-5,976.2	6,287.7	6,252.2	35.51	177.086	
3,346.4	3,284.9	4,665.0	4,376.4	11.9	29.8	-23.90	-2,857.0	-5,966.6	6,268.3	6,232.4	35.91	174.547	
3,400.0	3,336.4	4,665.0	4,376.4	12.2	29.8	-23.90	-2,857.0	-5,966.6	6,246.0	6,209.9	36.09	173.055	
3,444.9	3,379.6	4,665.0	4,376.4	12.5	29.8	-23.90	-2,857.0	-5,966.6	6,227.6	6,191.3	36.24	171.820	
3,500.0	3,432.6	4,705.6	4,413.8	12.8	30.1	-24.09	-2,866.7	-5,954.5	6,205.1	6,168.3	36.74	168.880	
3,543.3	3,474.3	4,721.4	4,428.5	13.1	30.2	-24.16	-2,870.4	-5,949.9	6,187.6	6,150.6	37.01	167.181	
3,600.0	3,528.8	4,747.0	4,452.3	13.4	30.4	-24.27	-2,876.3	-5,942.6	6,165.0	6,127.6	37.40	164.834	
3,641.7	3,569.0	4,803.2	4,504.8	13.6	30.8	-24.52	-2,889.1	-5,926.7	6,148.5	6,110.5	37.97	161.940	
3,700.0	3,625.0	4,863.9	4,561.3	14.0	31.2	-24.79	-2,902.6	-5,909.4	6,125.2	6,086.6	38.63	158.581	
3,740.1	3,663.6	4,895.3	4,590.6	14.2	31.4	-24.93	-2,909.5	-5,900.5	6,109.2	6,070.2	39.00	156.645	
3,800.0	3,721.2	4,910.0	4,604.3	14.5	31.5	-25.00	-2,912.7	-5,896.3	6,085.6	6,046.3	39.32	154.775	
3,838.6	3,758.3	4,910.0	4,604.3	14.8	31.5	-25.00	-2,912.7	-5,896.3	6,070.6	6,031.2	39.45	153.867	
3,900.0	3,817.4	4,949.4	4,641.3	15.1	31.8	-25.17	-2,921.0	-5,885.6	6,046.8	6,006.9	39.94	151.391	
3,937.0	3,853.0	4,959.9	4,651.2	15.3	31.8	-25.21	-2,923.1	-5,882.8	6,032.7	5,992.6	40.14	150.275	
4,000.0	3,913.6	4,992.0	4,681.7	15.7	32.0	-25.35	-2,929.4	-5,874.8	6,009.1	5,968.5	40.59	148.052	
4,035.4	3,947.7	5,107.4	4,791.3	15.9	32.7	-25.82	-2,950.8	-5,845.8	5,995.9	5,954.4	41.48	144.553	
4,100.0	4,009.8	5,155.0	4,836.6	16.3	33.0	-26.01	-2,958.9	-5,833.6	5,970.9	5,928.9	42.02	142.088	
4,133.8	4,042.4	5,183.9	4,864.1	16.5	33.2	-26.13	-2,963.7	-5,826.3	5,957.9	5,915.6	42.32	140.775	
4,200.0	4,106.0	5,208.7	4,887.8	16.8	33.3	-26.22	-2,967.7	-5,820.3	5,932.8	5,890.1	42.71	138.903	
4,232.3	4,137.1	5,237.0	4,915.0	17.0	33.5	-26.33	-2,972.2	-5,813.6	5,920.7	5,877.7	43.00	137.683	
4,300.0	4,202.2	5,237.0	4,915.0	17.4	33.5	-26.33	-2,972.2	-5,813.6	5,895.6	5,852.4	43.25	136.330	
4,330.7	4,231.7	5,237.0	4,915.0	17.6	33.5	-26.33	-2,972.2	-5,813.6	5,884.5	5,841.1	43.36	135.727	
4,400.0	4,298.4	5,283.3	4,959.6	18.0	33.7	-26.50	-2,978.8	-5,803.4	5,859.3	5,815.5	43.85	133.616	
4,429.1	4,326.4	5,294.3	4,970.3	18.2	33.8	-26.54	-2,980.2	-5,801.2	5,848.9	5,804.9	44.02	132.885	
4,500.0	4,394.6	5,318.0	4,993.4	18.6	33.9	-26.62	-2,982.9	-5,796.6	5,824.0	5,779.6	44.40	131.184	
4,527.5	4,421.1	5,318.0	4,993.4	18.7	33.9	-26.62	-2,982.9	-5,796.6	5,814.5	5,770.0	44.50	130.676	
4,600.0	4,490.8	5,318.0	4,993.4	19.2	33.9	-26.62	-2,982.9	-5,796.6	5,789.9	5,745.2	44.76	129.365	
4,626.0	4,515.8	5,349.0	5,023.8	19.3	34.0	-26.72	-2,986.2	-5,791.2	5,781.0	5,736.0	44.99	128.505	
4,700.0	4,587.0	5,366.3	5,040.7	19.8	34.1	-26.77	-2,988.1	-5,788.4	5,756.6	5,711.3	45.33	126.994	
4,724.4	4,610.5	5,400.0	5,073.9	19.9	34.2	-26.87	-2,991.6	-5,783.5	5,749.0	5,703.4	45.56	126.171	
4,800.0	4,683.2	5,400.0	5,073.9	20.3	34.2	-26.87	-2,991.6	-5,783.5	5,724.7	5,678.9	45.84	124.886	
4,822.8	4,705.2	5,400.0	5,073.9	20.5	34.2	-26.87	-2,991.6	-5,783.5	5,717.5	5,671.6	45.92	124.505	
4,900.0	4,779.4	5,430.2	5,103.6	20.9	34.3	-26.96	-2,994.6	-5,779.5	5,693.9	5,647.5	46.32	122.922	
4,921.2	4,799.8	5,441.4	5,114.7	21.0	34.3	-26.99	-2,995.8	-5,778.0	5,687.4	5,641.0	46.44	122.463	
5,000.0	4,875.6	5,482.0	5,154.8	21.5	34.5	-27.11	-2,999.7	-5,773.1	5,663.8	5,616.9	46.89	120.796	
5,019.7	4,894.5	5,482.0	5,154.8	21.6	34.5	-27.11	-2,999.7	-5,773.1	5,658.0	5,611.1	46.96	120.487	
5,100.0	4,971.8	5,528.8	5,201.1	22.1	34.6	-27.24	-3,004.0	-5,767.8	5,634.6	5,587.2	47.42	118.815	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,118.1	4,989.2	5,537.1	5,209.4	22.2	34.6	-27.26	-3,004.8	-5,766.9	5,629.4	5,581.9	47.52	118.463	
5,200.0	5,068.0	5,563.0	5,235.0	22.7	34.7	-27.33	-3,007.2	-5,764.3	5,606.3	5,558.4	47.91	117.006	
5,216.5	5,083.9	5,563.0	5,235.0	22.8	34.7	-27.33	-3,007.2	-5,764.3	5,601.8	5,553.8	47.98	116.763	
5,240.0	5,106.5	5,563.0	5,235.0	22.9	34.7	-27.33	-3,007.2	-5,764.3	5,595.4	5,547.3	48.06	116.420	
5,300.0	5,164.4	5,603.2	5,274.8	23.2	34.8	-27.28	-3,010.7	-5,760.7	5,579.6	5,531.1	48.48	115.082	
5,314.9	5,178.8	5,608.0	5,279.6	23.3	34.8	-27.26	-3,011.1	-5,760.3	5,575.9	5,527.3	48.56	114.815	
5,400.0	5,261.5	5,645.0	5,316.4	23.6	34.9	-27.16	-3,014.1	-5,757.8	5,556.7	5,507.7	49.04	113.306	
5,413.4	5,274.6	5,645.0	5,316.4	23.6	34.9	-27.14	-3,014.1	-5,757.8	5,554.0	5,504.9	49.09	113.129	
5,500.0	5,359.5	5,691.9	5,363.1	23.9	35.0	-27.08	-3,018.0	-5,755.0	5,537.9	5,488.4	49.56	111.739	
5,511.8	5,371.1	5,699.6	5,370.8	24.0	35.0	-27.08	-3,018.7	-5,754.6	5,536.0	5,486.3	49.62	111.557	
5,600.0	5,458.0	5,846.4	5,516.9	24.2	35.4	-27.21	-3,030.0	-5,745.9	5,522.1	5,471.7	50.32	109.736	
5,610.2	5,468.2	5,853.8	5,524.2	24.3	35.4	-27.21	-3,030.4	-5,745.5	5,520.6	5,470.2	50.37	109.600	
5,700.0	5,557.2	5,950.4	5,620.6	24.5	35.5	-27.23	-3,035.4	-5,740.9	5,508.9	5,458.1	50.84	108.362	
5,708.6	5,565.7	5,963.6	5,633.7	24.5	35.6	-27.24	-3,035.9	-5,740.3	5,507.9	5,457.0	50.89	108.240	
5,800.0	5,656.7	6,048.0	5,718.0	24.7	35.7	-27.23	-3,038.6	-5,737.1	5,498.6	5,447.3	51.25	107.293	
5,807.1	5,663.7	6,054.4	5,724.4	24.7	35.7	-27.23	-3,038.7	-5,736.8	5,498.0	5,446.7	51.27	107.229	
5,900.0	5,756.5	6,145.3	5,815.3	24.9	35.8	-27.23	-3,040.6	-5,734.1	5,491.5	5,439.9	51.58	106.472	
5,905.5	5,761.9	6,151.3	5,821.2	24.9	35.8	-27.23	-3,040.7	-5,733.9	5,491.2	5,439.6	51.59	106.434	
6,000.0	5,856.4	6,257.4	5,927.3	25.0	35.9	-27.24	-3,041.7	-5,731.4	5,487.4	5,435.6	51.85	105.838	
6,003.9	5,860.3	6,262.1	5,932.0	25.0	35.9	-27.24	-3,041.8	-5,731.3	5,487.3	5,435.4	51.86	105.816	
6,032.5	5,888.9	6,296.4	5,966.3	25.0	36.0	-122.43	-3,042.0	-5,730.4	5,486.7	5,443.9	42.78	128.246	
6,062.5	5,918.9	6,324.7	5,994.6	25.1	36.0	-122.44	-3,042.2	-5,729.7	5,486.2	5,443.3	42.86	128.015	
6,077.1	5,933.6	6,338.4	6,008.3	25.1	36.0	147.57	-3,042.4	-5,729.3	5,486.0	5,434.0	52.01	105.481 CC, ES	
6,100.0	5,956.4	6,359.7	6,029.6	25.1	36.1	147.55	-3,042.6	-5,728.7	5,486.3	5,434.3	52.01	105.495	
6,102.3	5,958.7	6,361.9	6,031.8	25.1	36.1	147.55	-3,042.6	-5,728.7	5,486.4	5,434.4	52.00	105.502	
6,150.0	6,006.2	6,408.3	6,078.2	25.1	36.1	147.44	-3,043.2	-5,727.4	5,489.2	5,437.3	51.91	105.745	
6,200.0	6,055.6	6,458.2	6,128.1	25.1	36.2	147.22	-3,043.8	-5,726.0	5,495.0	5,443.2	51.70	106.277	
6,200.8	6,056.3	6,459.0	6,128.9	25.1	36.2	147.22	-3,043.8	-5,726.0	5,495.1	5,443.4	51.70	106.288	
6,250.0	6,104.3	6,488.8	6,158.7	25.0	36.2	146.87	-3,044.1	-5,725.3	5,503.7	5,452.3	51.38	107.119	
6,299.2	6,151.3	6,517.4	6,187.2	24.9	36.2	146.38	-3,044.4	-5,724.6	5,515.3	5,464.3	50.97	108.197	
6,300.0	6,152.1	6,517.8	6,187.7	24.9	36.2	146.37	-3,044.4	-5,724.6	5,515.5	5,464.5	50.97	108.216	
6,350.0	6,198.7	6,552.8	6,222.6	24.8	36.3	145.75	-3,044.9	-5,724.0	5,530.3	5,479.8	50.49	109.536	
6,397.6	6,241.9	6,634.2	6,304.0	24.7	36.4	145.15	-3,045.8	-5,722.4	5,546.7	5,496.8	49.99	110.962	
6,400.0	6,244.1	6,637.6	6,307.4	24.7	36.4	145.12	-3,045.8	-5,722.3	5,547.6	5,497.7	49.96	111.038	
6,450.0	6,287.8	6,706.0	6,375.8	24.5	36.4	144.32	-3,046.2	-5,720.7	5,567.4	5,518.0	49.39	112.728	
6,496.0	6,326.5	6,742.0	6,411.7	24.4	36.5	143.37	-3,046.4	-5,719.7	5,587.9	5,539.0	48.86	114.374	
6,500.0	6,329.7	6,744.9	6,414.7	24.4	36.5	143.28	-3,046.4	-5,719.6	5,589.7	5,540.9	48.81	114.517	
6,550.0	6,369.6	6,781.2	6,451.0	24.3	36.5	142.04	-3,046.7	-5,718.6	5,614.6	5,566.3	48.27	116.321	
6,594.5	6,403.3	6,813.8	6,483.6	24.2	36.6	140.76	-3,047.1	-5,717.8	5,638.7	5,590.9	47.84	117.859	
6,600.0	6,407.3	6,817.8	6,487.5	24.2	36.6	140.58	-3,047.1	-5,717.7	5,641.8	5,594.0	47.79	118.043	
6,650.0	6,442.7	6,852.6	6,522.3	24.1	36.6	138.88	-3,047.4	-5,716.7	5,671.4	5,623.9	47.43	119.566	
6,692.9	6,471.0	6,870.0	6,539.7	24.0	36.6	137.12	-3,047.5	-5,716.3	5,698.4	5,651.2	47.26	120.564	
6,700.0	6,475.5	6,870.0	6,539.7	24.0	36.6	136.79	-3,047.5	-5,716.3	5,703.1	5,655.8	47.25	120.691	
6,750.0	6,505.6	6,899.8	6,569.6	24.0	36.7	134.44	-3,047.8	-5,715.6	5,736.8	5,689.5	47.26	121.397	
6,791.3	6,528.3	6,914.8	6,584.6	24.0	36.7	132.14	-3,048.0	-5,715.2	5,766.1	5,718.7	47.47	121.481	
6,800.0	6,532.8	6,917.8	6,587.5	24.0	36.7	131.62	-3,048.0	-5,715.2	5,772.4	5,724.9	47.53	121.451	
6,850.0	6,557.0	6,933.9	6,603.6	24.1	36.7	128.34	-3,048.2	-5,714.8	5,809.8	5,761.7	48.09	120.816	
6,889.7	6,574.1	6,951.0	6,620.7	24.2	36.7	125.42	-3,048.4	-5,714.5	5,840.5	5,791.8	48.73	119.844	
6,900.0	6,578.1	6,951.0	6,620.7	24.3	36.7	124.56	-3,048.4	-5,714.5	5,848.6	5,799.7	48.94	119.503	
6,950.0	6,596.1	6,967.8	6,637.5	24.5	36.7	120.21	-3,048.7	-5,714.2	5,888.8	5,838.7	50.08	117.580	
6,988.2	6,607.5	6,982.4	6,652.1	24.7	36.8	116.53	-3,048.8	-5,713.9	5,920.2	5,869.1	51.12	115.806	
7,000.0	6,610.7	6,986.5	6,656.2	24.8	36.8	115.31	-3,048.9	-5,713.8	5,930.1	5,878.6	51.46	115.233	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
7,050.0	6,621.9	7,001.1	6,670.7	25.1	36.8	109.74	-3,049.0	-5,713.5	5,972.2	5,919.2	53.01	112.668	
7,086.6	6,628.0	7,009.1	6,678.8	25.4	36.8	105.25	-3,049.1	-5,713.4	6,003.6	5,949.4	54.17	110.833	
7,100.0	6,629.7	7,011.5	6,681.2	25.6	36.8	103.52	-3,049.1	-5,713.3	6,015.1	5,960.6	54.57	110.220	
7,150.0	6,634.1	7,017.8	6,687.5	26.0	36.8	96.76	-3,049.2	-5,713.2	6,058.5	6,002.6	55.97	108.242	
7,185.0	6,635.1	7,019.8	6,689.5	26.4	36.8	91.79	-3,049.2	-5,713.2	6,089.1	6,032.4	56.75	107.296	
7,196.6	6,635.0	7,020.0	6,689.6	26.5	36.8	90.13	-3,049.2	-5,713.2	6,099.2	6,042.3	56.95	107.090	
7,200.0	6,635.0	7,020.0	6,689.7	26.6	36.8	90.13	-3,049.2	-5,713.2	6,102.2	6,045.2	56.99	107.072	
7,283.4	6,633.9	7,020.5	6,690.2	27.6	36.8	90.14	-3,049.2	-5,713.2	6,175.4	6,117.4	58.02	106.435	
7,300.0	6,633.7	7,020.6	6,690.3	27.8	36.8	90.14	-3,049.2	-5,713.2	6,190.0	6,131.7	58.22	106.312	
7,381.9	6,632.6	7,021.2	6,690.9	29.0	36.8	90.15	-3,049.2	-5,713.1	6,262.1	6,202.6	59.41	105.398	
7,400.0	6,632.4	7,021.3	6,691.0	29.2	36.8	90.15	-3,049.2	-5,713.1	6,278.1	6,218.4	59.68	105.202	
7,480.3	6,631.4	7,021.8	6,691.5	30.5	36.8	90.16	-3,049.2	-5,713.1	6,349.1	6,288.1	60.99	104.094	
7,500.0	6,631.1	7,021.9	6,691.6	30.9	36.8	90.16	-3,049.2	-5,713.1	6,366.5	6,305.2	61.32	103.830	
7,578.7	6,630.1	7,022.5	6,692.1	32.3	36.8	90.17	-3,049.2	-5,713.1	6,436.4	6,373.6	62.73	102.598	
7,600.0	6,629.8	7,022.6	6,692.3	32.7	36.8	90.18	-3,049.2	-5,713.1	6,455.3	6,392.2	63.12	102.275	
7,677.1	6,628.9	7,023.1	6,692.8	34.1	36.8	90.19	-3,049.2	-5,713.1	6,524.0	6,459.4	64.61	100.976	
7,700.0	6,628.6	7,023.2	6,692.9	34.6	36.8	90.19	-3,049.2	-5,713.1	6,544.4	6,479.4	65.05	100.603	
7,775.6	6,627.6	7,023.7	6,693.4	36.1	36.8	90.20	-3,049.2	-5,713.1	6,612.0	6,545.4	66.60	99.278	
7,800.0	6,627.3	7,023.9	6,693.6	36.6	36.8	90.20	-3,049.2	-5,713.1	6,633.8	6,566.7	67.10	98.864	
7,874.0	6,626.3	7,024.4	6,694.0	38.2	36.8	90.21	-3,049.2	-5,713.1	6,700.2	6,631.5	68.69	97.546	
7,900.0	6,626.0	7,024.5	6,694.2	38.8	36.8	90.21	-3,049.2	-5,713.1	6,723.6	6,654.3	69.25	97.098	
7,972.4	6,625.1	7,025.0	6,694.7	40.4	36.8	90.22	-3,049.2	-5,713.1	6,788.7	6,717.9	70.86	95.809	
8,000.0	6,624.7	7,025.2	6,694.8	41.0	36.8	90.22	-3,049.2	-5,713.1	6,813.6	6,742.1	71.47	95.334	
8,070.8	6,623.8	7,025.6	6,695.3	42.6	36.8	90.23	-3,049.2	-5,713.1	6,877.5	6,804.4	73.09	94.090	
8,100.0	6,623.4	7,025.8	6,695.5	43.3	36.8	90.23	-3,049.2	-5,713.1	6,903.8	6,830.1	73.76	93.594	
8,169.3	6,622.6	7,026.2	6,695.9	44.9	36.8	90.24	-3,049.2	-5,713.1	6,966.5	6,891.1	75.39	92.404	
8,200.0	6,622.2	7,026.4	6,696.1	45.6	36.8	90.25	-3,049.2	-5,713.1	6,994.4	6,918.3	76.11	91.893	
8,267.7	6,621.3	7,026.8	6,696.5	47.3	36.8	90.25	-3,049.2	-5,713.0	7,055.8	6,978.1	77.74	90.762	
8,300.0	6,620.9	7,027.0	6,696.7	48.0	36.8	90.26	-3,049.2	-5,713.0	7,085.2	7,006.7	78.52	90.240	
8,366.1	6,620.0	7,027.4	6,697.1	49.7	36.8	90.27	-3,049.2	-5,713.0	7,145.4	7,065.2	80.13	89.172	
8,400.0	6,619.6	7,027.7	6,697.3	50.5	36.8	90.27	-3,049.3	-5,713.0	7,176.2	7,095.3	80.96	88.642	
8,464.5	6,618.8	7,028.1	6,697.7	52.1	36.8	90.28	-3,049.3	-5,713.0	7,235.1	7,152.6	82.56	87.637	
8,500.0	6,618.3	7,028.3	6,698.0	53.0	36.8	90.28	-3,049.3	-5,713.0	7,267.5	7,184.1	83.44	87.102	
8,563.0	6,617.5	7,028.7	6,698.3	54.5	36.8	90.29	-3,049.3	-5,713.0	7,325.1	7,240.1	85.02	86.159	
8,600.0	6,617.0	7,028.9	6,698.6	55.5	36.8	90.29	-3,049.3	-5,713.0	7,359.0	7,273.1	85.95	85.622	
8,661.4	6,616.3	7,029.3	6,698.9	57.0	36.8	90.30	-3,049.3	-5,713.0	7,415.3	7,327.8	87.51	84.740	
8,700.0	6,615.8	7,029.5	6,699.2	58.0	36.8	90.30	-3,049.3	-5,713.0	7,450.7	7,362.3	88.49	84.202	
8,759.8	6,615.0	7,029.9	6,699.5	59.5	36.8	90.31	-3,049.3	-5,713.0	7,505.7	7,415.7	90.02	83.379	
8,800.0	6,614.5	7,030.1	6,699.8	60.6	36.8	90.31	-3,049.3	-5,713.0	7,542.7	7,451.6	91.05	82.842	
8,858.2	6,613.7	7,030.4	6,700.1	62.1	36.8	90.32	-3,049.3	-5,713.0	7,596.3	7,503.8	92.55	82.075	
8,900.0	6,613.2	7,030.7	6,700.4	63.2	36.8	90.33	-3,049.3	-5,713.0	7,634.8	7,541.2	93.63	81.540	
8,956.7	6,612.5	7,031.0	6,700.7	64.6	36.8	90.33	-3,049.3	-5,713.0	7,687.1	7,592.0	95.11	80.826	
9,000.0	6,611.9	7,031.3	6,701.0	65.8	36.8	90.34	-3,049.3	-5,713.0	7,727.2	7,630.9	96.23	80.295	
9,055.1	6,611.2	7,031.6	6,701.3	67.2	36.8	90.34	-3,049.3	-5,713.0	7,778.1	7,680.4	97.68	79.630	
9,100.0	6,610.6	7,031.9	6,701.6	68.4	36.8	90.35	-3,049.3	-5,713.0	7,819.7	7,720.8	98.85	79.104	
9,153.5	6,609.9	7,032.2	6,701.9	69.8	36.8	90.35	-3,049.3	-5,712.9	7,869.3	7,769.0	100.26	78.486	
9,200.0	6,609.3	7,032.5	6,702.2	71.0	36.8	90.36	-3,049.3	-5,712.9	7,912.4	7,810.9	101.49	77.965	
9,251.9	6,608.7	7,032.8	6,702.5	72.4	36.8	90.36	-3,049.3	-5,712.9	7,960.6	7,857.7	102.86	77.391	
9,300.0	6,608.1	7,033.1	6,702.7	73.7	36.8	90.37	-3,049.3	-5,712.9	8,005.3	7,901.1	104.13	76.875	
9,350.4	6,607.4	7,033.4	6,703.0	75.0	36.8	90.37	-3,049.3	-5,712.9	8,052.1	7,946.6	105.47	76.343	
9,400.0	6,606.8	7,033.7	6,703.3	76.3	36.8	90.38	-3,049.3	-5,712.9	8,098.3	7,991.5	106.79	75.833	
9,448.8	6,606.1	7,033.9	6,703.6	77.6	36.8	90.39	-3,049.3	-5,712.9	8,143.8	8,035.7	108.09	75.340	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
9,500.0	6,605.5	7,034.2	6,703.9	79.0	36.8	90.39	-3,049.3	-5,712.9	8,191.5	8,082.1	109.46	74.835	
9,547.2	6,604.9	7,034.5	6,704.2	80.2	36.8	90.40	-3,049.3	-5,712.9	8,235.6	8,124.9	110.73	74.379	
9,600.0	6,604.2	7,034.8	6,704.5	81.7	36.8	90.40	-3,049.3	-5,712.9	8,284.9	8,172.8	112.14	73.881	
9,645.6	6,603.6	7,035.1	6,704.8	82.9	36.8	90.41	-3,049.3	-5,712.9	8,327.6	8,214.2	113.37	73.458	
9,700.0	6,602.9	7,035.4	6,705.1	84.3	36.8	90.41	-3,049.3	-5,712.9	8,378.4	8,263.6	114.83	72.966	
9,744.1	6,602.3	7,035.7	6,705.4	85.5	36.8	90.42	-3,049.3	-5,712.9	8,419.7	8,303.7	116.01	72.575	
9,800.0	6,601.6	7,036.0	6,705.7	87.0	36.8	90.42	-3,049.3	-5,712.9	8,472.1	8,354.6	117.52	72.090	
9,842.5	6,601.1	7,036.3	6,705.9	88.2	36.8	90.43	-3,049.3	-5,712.9	8,511.9	8,393.3	118.67	71.729	
9,900.0	6,600.3	7,036.6	6,706.3	89.7	36.8	90.43	-3,049.3	-5,712.9	8,565.9	8,445.7	120.22	71.251	
9,940.9	6,599.8	7,036.9	6,706.5	90.9	36.8	90.44	-3,049.3	-5,712.9	8,604.3	8,483.0	121.33	70.917	
10,000.0	6,599.0	7,037.2	6,706.9	92.5	36.8	90.44	-3,049.3	-5,712.9	8,659.9	8,536.9	122.93	70.445	
10,039.3	6,598.5	7,037.4	6,707.1	93.5	36.8	90.45	-3,049.3	-5,712.9	8,696.9	8,572.9	124.00	70.137	
10,100.0	6,597.7	7,037.8	6,707.5	95.2	36.8	90.46	-3,049.3	-5,712.8	8,753.9	8,628.3	125.64	69.672	
10,137.8	6,597.3	7,038.0	6,707.7	96.2	36.8	90.46	-3,049.3	-5,712.8	8,789.5	8,662.9	126.67	69.388	
10,200.0	6,596.5	7,038.4	6,708.1	97.9	36.8	90.47	-3,049.3	-5,712.8	8,848.2	8,719.8	128.36	68.930	
10,236.2	6,596.0	7,038.6	6,708.3	98.9	36.8	90.47	-3,049.3	-5,712.8	8,882.3	8,753.0	129.35	68.669	
10,300.0	6,595.2	7,039.0	6,708.7	100.6	36.8	90.48	-3,049.3	-5,712.8	8,942.5	8,811.4	131.09	68.217	
10,334.6	6,594.7	7,039.2	6,708.9	101.6	36.8	90.48	-3,049.3	-5,712.8	8,975.2	8,843.2	132.03	67.977	
10,400.0	6,593.9	7,039.6	6,709.3	103.3	36.8	90.49	-3,049.3	-5,712.8	9,037.0	8,903.2	133.82	67.532	
10,433.0	6,593.5	7,039.8	6,709.4	104.2	36.8	90.49	-3,049.3	-5,712.8	9,068.2	8,933.5	134.72	67.311	
10,500.0	6,592.6	7,040.2	6,709.8	106.1	36.8	90.50	-3,049.3	-5,712.8	9,131.6	8,995.0	136.55	66.873	
10,531.5	6,592.2	7,040.4	6,710.0	106.9	36.8	90.50	-3,049.3	-5,712.8	9,161.4	9,023.9	137.41	66.670	
10,600.0	6,591.3	7,040.8	6,710.4	108.8	36.8	90.51	-3,049.3	-5,712.8	9,226.3	9,087.0	139.29	66.238	
10,629.9	6,590.9	7,040.9	6,710.6	109.6	36.8	90.51	-3,049.3	-5,712.8	9,254.6	9,114.5	140.11	66.053	
10,700.0	6,590.0	7,041.4	6,711.0	111.6	36.8	90.52	-3,049.3	-5,712.8	9,321.1	9,179.0	142.03	65.627	
10,728.3	6,589.6	7,041.5	6,711.2	112.3	36.8	90.52	-3,049.3	-5,712.8	9,347.9	9,205.1	142.81	65.458	
10,800.0	6,588.7	7,042.0	6,711.6	114.3	36.8	90.53	-3,049.3	-5,712.8	9,416.0	9,271.2	144.77	65.039	
10,826.7	6,588.4	7,042.1	6,711.8	115.0	36.8	90.53	-3,049.3	-5,712.8	9,441.4	9,295.9	145.51	64.885	
10,900.0	6,587.4	7,042.6	6,712.2	117.0	36.8	90.54	-3,049.3	-5,712.8	9,511.0	9,363.5	147.52	64.472	
10,925.2	6,587.1	7,042.7	6,712.4	117.7	36.8	90.54	-3,049.4	-5,712.8	9,534.9	9,386.7	148.21	64.332	
11,000.0	6,586.1	7,043.1	6,712.8	119.8	36.8	90.55	-3,049.4	-5,712.8	9,606.1	9,455.8	150.27	63.925	
11,023.6	6,585.8	7,043.3	6,713.0	120.4	36.8	90.56	-3,049.4	-5,712.7	9,628.6	9,477.7	150.92	63.798	
11,100.0	6,584.8	7,043.7	6,713.4	122.5	36.8	90.56	-3,049.4	-5,712.7	9,701.3	9,548.3	153.03	63.397	
11,122.0	6,584.5	7,043.9	6,713.6	123.2	36.8	90.57	-3,049.4	-5,712.7	9,722.3	9,568.7	153.63	63.283	
11,200.0	6,583.5	7,044.3	6,714.0	125.3	36.8	90.57	-3,049.4	-5,712.7	9,796.6	9,640.9	155.78	62.887	
11,220.4	6,583.3	7,044.5	6,714.1	125.9	36.8	90.58	-3,049.4	-5,712.7	9,816.1	9,659.8	156.34	62.785	
11,300.0	6,582.2	7,044.9	6,714.6	128.1	36.8	90.58	-3,049.4	-5,712.7	9,892.1	9,733.5	158.54	62.395	
11,318.9	6,582.0	7,045.1	6,714.7	128.6	36.8	90.59	-3,049.4	-5,712.7	9,910.1	9,751.0	159.06	62.304	
11,400.0	6,580.9	7,045.5	6,715.2	130.8	36.8	90.60	-3,049.4	-5,712.7	9,987.5	9,826.2	161.30	61.919 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	118.44	-1,090.3	2,013.3	2,289.6				
98.4	98.4	93.6	93.6	0.1	0.1	118.44	-1,090.3	2,013.3	2,289.6	2,289.4	0.18	N/A	
100.0	100.0	95.2	95.2	0.1	0.1	118.44	-1,090.3	2,013.3	2,289.6	2,289.4	0.19	N/A	
196.8	196.8	194.3	194.3	0.3	0.2	118.44	-1,090.2	2,013.2	2,289.4	2,288.9	0.50	4,610.366	
200.0	200.0	197.6	197.6	0.3	0.2	118.44	-1,090.2	2,013.2	2,289.4	2,288.9	0.51	4,518.583	
295.3	295.3	295.1	295.1	0.5	0.3	118.44	-1,090.0	2,013.0	2,289.2	2,288.4	0.81	2,820.205	
300.0	300.0	299.9	299.9	0.5	0.3	118.44	-1,090.0	2,013.0	2,289.2	2,288.3	0.83	2,768.588	
393.7	393.7	395.8	395.8	0.8	0.4	118.43	-1,089.8	2,012.7	2,288.8	2,287.7	1.13	2,031.215	
400.0	400.0	402.3	402.3	0.8	0.4	118.43	-1,089.8	2,012.7	2,288.8	2,287.7	1.15	1,995.473	
492.1	492.1	496.6	496.6	1.0	0.5	118.43	-1,089.5	2,012.4	2,288.4	2,287.0	1.44	1,587.008	
500.0	500.0	504.6	504.6	1.0	0.5	118.43	-1,089.5	2,012.3	2,288.4	2,286.9	1.47	1,559.708	
590.5	590.5	597.3	597.3	1.2	0.6	118.43	-1,089.2	2,011.9	2,287.9	2,286.1	1.76	1,302.078	
600.0	600.0	607.0	607.0	1.2	0.6	118.43	-1,089.1	2,011.9	2,287.8	2,286.0	1.79	1,280.005	
689.0	689.0	701.2	701.2	1.4	0.7	118.43	-1,088.8	2,011.3	2,287.2	2,285.1	2.10	1,090.539	
700.0	700.0	714.9	714.9	1.4	0.7	118.43	-1,088.9	2,011.2	2,287.1	2,285.0	2.15	1,063.081	
787.4	787.4	797.1	797.1	1.6	0.9	118.49	-1,090.6	2,009.2	2,286.1	2,283.6	2.52	906.174	
800.0	800.0	805.4	805.3	1.7	0.9	118.50	-1,090.9	2,008.9	2,286.0	2,283.5	2.57	890.087	
835.4	835.4	828.5	828.4	1.8	0.9	118.54	-1,092.0	2,008.3	2,286.0	2,283.3	2.70	847.826	
885.8	885.8	854.0	853.8	1.9	1.0	118.58	-1,093.5	2,007.5	2,286.2	2,283.3	2.86	798.610	
900.0	900.0	854.0	853.8	1.9	1.0	118.58	-1,093.5	2,007.5	2,286.4	2,283.5	2.89	789.888	
984.2	984.2	918.8	918.4	2.1	1.1	118.70	-1,098.4	2,006.0	2,287.8	2,284.6	3.22	710.890	
1,000.0	1,000.0	939.0	938.6	2.1	1.2	118.75	-1,100.2	2,005.7	2,288.3	2,285.0	3.29	694.778	
1,082.7	1,082.7	975.1	974.5	2.3	1.3	118.83	-1,103.9	2,005.2	2,291.2	2,287.7	3.56	644.300	
1,100.0	1,100.0	984.9	984.2	2.3	1.3	118.86	-1,104.9	2,005.2	2,292.0	2,288.4	3.62	633.909	
1,181.1	1,181.1	1,025.0	1,024.0	2.5	1.4	118.96	-1,109.6	2,005.1	2,296.5	2,292.6	3.88	591.524	
1,200.0	1,200.0	1,047.0	1,045.9	2.6	1.5	119.02	-1,112.4	2,005.1	2,297.7	2,293.7	3.98	578.032	
1,279.5	1,279.5	1,110.0	1,108.3	2.7	1.6	-145.55	-1,120.7	2,005.3	2,304.0	2,299.7	4.36	528.043	
1,300.0	1,300.0	1,110.0	1,108.3	2.8	1.6	-145.52	-1,120.7	2,005.3	2,306.1	2,301.7	4.41	523.252	
1,377.9	1,377.8	1,170.4	1,168.0	2.9	1.8	-145.27	-1,129.4	2,005.9	2,315.5	2,310.7	4.74	488.331	
1,400.0	1,399.8	1,196.0	1,193.4	3.0	1.9	-145.18	-1,133.4	2,006.4	2,318.7	2,313.8	4.86	477.048	
1,476.4	1,475.9	1,232.9	1,229.8	3.1	2.0	-144.96	-1,139.3	2,007.1	2,331.2	2,326.1	5.14	453.930	
1,500.0	1,499.5	1,248.0	1,244.6	3.2	2.1	-144.88	-1,141.9	2,007.5	2,335.6	2,330.4	5.23	446.414	
1,574.8	1,573.7	1,281.0	1,277.1	3.4	2.2	-144.63	-1,147.7	2,008.3	2,351.2	2,345.7	5.50	427.718	
1,600.0	1,598.7	1,309.6	1,305.2	3.4	2.3	-144.52	-1,153.0	2,009.2	2,356.9	2,351.2	5.65	417.353	
1,673.2	1,671.1	1,367.0	1,361.4	3.6	2.5	-144.20	-1,164.4	2,011.2	2,375.2	2,369.2	6.01	395.446	
1,700.0	1,697.5	1,367.0	1,361.4	3.7	2.5	-144.11	-1,164.4	2,011.2	2,382.4	2,376.4	6.07	392.704	
1,771.6	1,767.9	1,416.1	1,409.3	3.9	2.7	-143.79	-1,174.7	2,013.2	2,403.3	2,396.8	6.41	375.076	
1,800.0	1,795.6	1,434.8	1,427.6	4.0	2.8	-143.66	-1,178.7	2,014.1	2,412.0	2,405.5	6.54	368.784	
1,870.1	1,864.0	1,495.3	1,486.6	4.3	3.0	-143.33	-1,191.8	2,017.1	2,435.0	2,428.0	6.92	351.828	
1,900.0	1,893.1	1,524.7	1,515.3	4.4	3.1	-143.18	-1,198.2	2,018.6	2,445.1	2,438.1	7.08	345.115	
1,968.5	1,959.3	1,591.2	1,580.2	4.6	3.4	-142.86	-1,212.3	2,022.0	2,469.3	2,461.8	7.46	330.900	
1,992.4	1,982.4	1,614.3	1,602.7	4.7	3.5	-142.76	-1,217.1	2,023.2	2,478.0	2,470.4	7.59	326.381	
2,000.0	1,989.6	1,621.6	1,609.9	4.8	3.5	-142.76	-1,218.7	2,023.6	2,480.7	2,473.1	7.64	324.865	
2,066.9	2,054.0	1,706.7	1,693.0	5.1	3.8	-142.78	-1,236.5	2,027.6	2,505.0	2,496.9	8.11	308.957	
2,100.0	2,085.8	1,740.2	1,725.7	5.2	3.9	-142.78	-1,243.6	2,028.9	2,516.8	2,508.5	8.32	302.483	
2,165.3	2,148.7	1,805.5	1,789.4	5.5	4.2	-142.77	-1,257.6	2,031.2	2,540.1	2,531.3	8.75	290.173	
2,200.0	2,182.0	1,840.4	1,823.5	5.7	4.4	-142.77	-1,265.1	2,032.4	2,552.4	2,543.4	8.99	283.951	
2,263.8	2,243.4	1,907.8	1,889.4	6.0	4.6	-142.78	-1,279.1	2,034.9	2,574.9	2,565.5	9.43	273.139	
2,300.0	2,278.2	1,949.1	1,929.8	6.2	4.8	-142.79	-1,287.5	2,036.4	2,587.6	2,577.9	9.68	267.217	
2,362.2	2,338.1	2,029.2	2,008.2	6.5	5.1	-142.80	-1,303.6	2,038.8	2,609.1	2,599.0	10.17	256.658	
2,400.0	2,374.4	2,070.1	2,048.2	6.7	5.3	-142.80	-1,311.9	2,039.8	2,621.9	2,611.5	10.44	251.188	
2,460.6	2,432.8	2,123.9	2,100.9	7.0	5.5	-142.80	-1,322.8	2,041.1	2,642.6	2,631.7	10.85	243.629	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
2,500.0	2,470.6	2,163.8	2,140.0	7.2	5.6	-142.81	-1,330.8	2,042.0	2,655.9	2,644.8	11.13	238.717	
2,559.0	2,527.4	2,226.7	2,201.6	7.6	5.9	-142.82	-1,343.1	2,043.6	2,675.9	2,664.3	11.56	231.574	
2,600.0	2,566.8	2,263.4	2,237.7	7.8	6.0	-142.83	-1,350.1	2,044.6	2,689.7	2,677.9	11.83	227.411	
2,657.5	2,622.1	2,317.1	2,290.4	8.1	6.2	-142.85	-1,360.3	2,046.1	2,709.1	2,696.9	12.22	221.719	
2,700.0	2,663.0	2,367.3	2,339.6	8.3	6.4	-142.87	-1,369.6	2,047.5	2,723.4	2,710.9	12.54	217.175	
2,755.9	2,716.8	2,417.9	2,389.4	8.6	6.6	-142.90	-1,378.8	2,048.9	2,742.0	2,729.1	12.92	212.266	
2,800.0	2,759.2	2,450.0	2,420.9	8.9	6.8	-142.91	-1,384.7	2,049.9	2,756.9	2,743.7	13.19	208.975	
2,854.3	2,811.5	2,491.6	2,461.9	9.2	6.9	-142.93	-1,392.4	2,051.3	2,775.4	2,761.8	13.54	204.961	
2,900.0	2,855.4	2,531.9	2,501.4	9.4	7.1	-142.95	-1,400.1	2,052.7	2,791.0	2,777.1	13.86	201.439	
2,952.7	2,906.2	2,576.6	2,545.2	9.7	7.3	-142.96	-1,408.8	2,054.0	2,809.0	2,794.8	14.21	197.628	
3,000.0	2,951.6	2,613.0	2,580.9	10.0	7.4	-142.97	-1,416.0	2,055.2	2,825.4	2,810.8	14.52	194.535	
3,051.2	3,000.9	2,650.0	2,617.1	10.3	7.6	-142.98	-1,423.2	2,056.6	2,843.2	2,828.3	14.85	191.429	
3,100.0	3,047.8	2,695.5	2,661.7	10.5	7.7	-142.99	-1,432.2	2,058.4	2,860.2	2,845.0	15.20	188.171	
3,149.6	3,095.5	2,751.6	2,716.7	10.8	8.0	-143.01	-1,443.2	2,060.6	2,877.6	2,862.0	15.58	184.653	
3,200.0	3,144.0	2,839.8	2,803.4	11.1	8.3	-143.06	-1,459.0	2,063.5	2,894.5	2,878.4	16.06	180.206	
3,248.0	3,190.2	2,868.3	2,831.3	11.4	8.4	-143.07	-1,464.1	2,064.5	2,910.6	2,894.3	16.35	178.054	
3,300.0	3,240.2	2,906.0	2,868.4	11.7	8.6	-143.09	-1,471.3	2,065.8	2,928.4	2,911.7	16.68	175.597	
3,346.4	3,284.9	2,938.2	2,899.9	11.9	8.7	-143.10	-1,477.5	2,067.0	2,944.5	2,927.5	16.97	173.493	
3,400.0	3,336.4	2,988.1	2,948.9	12.2	8.9	-143.12	-1,487.0	2,068.9	2,963.0	2,945.7	17.35	170.749	
3,444.9	3,379.6	3,039.3	2,999.2	12.5	9.1	-143.14	-1,496.4	2,071.0	2,978.5	2,960.8	17.69	168.354	
3,500.0	3,432.6	3,135.0	3,093.4	12.8	9.4	-143.22	-1,512.6	2,074.9	2,997.2	2,979.1	18.19	164.741	
3,543.3	3,474.3	3,265.6	3,222.6	13.1	9.9	-143.34	-1,531.9	2,078.0	3,010.7	2,991.9	18.73	160.739	
3,600.0	3,528.8	3,308.8	3,265.3	13.4	10.0	-143.38	-1,538.1	2,078.6	3,027.9	3,008.8	19.09	158.651	
3,641.7	3,569.0	3,334.0	3,290.2	13.6	10.1	-143.41	-1,541.7	2,079.0	3,040.7	3,021.3	19.33	157.317	
3,700.0	3,625.0	3,362.4	3,318.3	14.0	10.2	-143.43	-1,546.0	2,079.5	3,058.9	3,039.3	19.66	155.612	
3,740.1	3,663.6	3,379.4	3,335.1	14.2	10.3	-143.44	-1,548.8	2,079.9	3,071.8	3,051.9	19.88	154.545	
3,800.0	3,721.2	3,419.0	3,374.0	14.5	10.4	-143.46	-1,555.7	2,081.1	3,091.6	3,071.4	20.25	152.691	
3,838.6	3,758.3	3,419.0	3,374.0	14.8	10.4	-143.46	-1,555.7	2,081.1	3,104.5	3,084.1	20.41	152.123	
3,900.0	3,817.4	3,464.0	3,418.2	15.1	10.6	-143.48	-1,564.1	2,082.7	3,125.6	3,104.7	20.81	150.173	
3,937.0	3,853.0	3,489.4	3,443.1	15.3	10.7	-143.48	-1,569.0	2,083.6	3,138.4	3,117.3	21.05	149.081	
4,000.0	3,913.6	3,530.5	3,483.3	15.7	10.9	-143.49	-1,577.0	2,085.3	3,160.4	3,138.9	21.45	147.310	
4,035.4	3,947.7	3,552.8	3,505.2	15.9	11.0	-143.50	-1,581.6	2,086.2	3,173.0	3,151.3	21.68	146.355	
4,100.0	4,009.8	3,590.0	3,541.5	16.3	11.1	-143.49	-1,589.5	2,087.7	3,196.1	3,174.0	22.08	144.759	
4,133.8	4,042.4	3,618.7	3,569.5	16.5	11.2	-143.49	-1,595.7	2,088.8	3,208.4	3,186.1	22.32	143.716	
4,200.0	4,106.0	3,676.0	3,625.3	16.8	11.5	-143.48	-1,608.4	2,091.4	3,232.6	3,209.8	22.81	141.725	
4,232.3	4,137.1	3,694.9	3,643.7	17.0	11.6	-143.48	-1,612.5	2,092.3	3,244.4	3,221.4	23.01	140.998	
4,300.0	4,202.2	3,760.8	3,707.9	17.4	11.9	-143.47	-1,627.1	2,095.3	3,269.3	3,245.8	23.53	138.965	
4,330.7	4,231.7	3,790.4	3,736.8	17.6	12.0	-143.47	-1,633.6	2,096.7	3,280.6	3,256.9	23.76	138.100	
4,400.0	4,298.4	3,857.9	3,802.6	18.0	12.3	-143.47	-1,648.0	2,100.0	3,306.0	3,281.7	24.27	136.210	
4,429.1	4,326.4	3,887.5	3,831.6	18.2	12.4	-143.48	-1,654.1	2,101.6	3,316.7	3,292.2	24.49	135.442	
4,500.0	4,394.6	3,951.8	3,894.5	18.6	12.7	-143.51	-1,666.4	2,105.5	3,342.5	3,317.5	24.99	133.766	
4,527.5	4,421.1	3,971.7	3,914.1	18.7	12.8	-143.52	-1,670.2	2,106.7	3,352.6	3,327.4	25.17	133.216	
4,600.0	4,490.8	4,018.0	3,959.3	19.2	13.0	-143.53	-1,679.6	2,109.5	3,379.4	3,353.8	25.62	131.914	
4,626.0	4,515.8	4,043.2	3,983.9	19.3	13.1	-143.53	-1,684.9	2,110.9	3,389.0	3,363.2	25.82	131.282	
4,700.0	4,587.0	4,103.0	4,042.1	19.8	13.3	-143.53	-1,698.2	2,114.2	3,416.8	3,390.5	26.34	129.741	
4,724.4	4,610.5	4,198.2	4,134.5	19.9	13.8	-143.48	-1,720.6	2,117.6	3,425.7	3,398.9	26.79	127.858	
4,800.0	4,683.2	4,269.5	4,203.8	20.3	14.1	-143.44	-1,737.6	2,119.1	3,452.6	3,425.2	27.38	126.086	
4,822.8	4,705.2	4,298.2	4,231.7	20.5	14.2	-143.43	-1,744.3	2,119.8	3,460.7	3,433.1	27.59	125.435	
4,900.0	4,779.4	4,434.0	4,363.8	20.9	14.8	-143.34	-1,776.0	2,121.5	3,487.5	3,459.1	28.43	122.659	
4,921.2	4,799.8	4,465.5	4,394.5	21.0	15.0	-143.34	-1,782.7	2,121.8	3,494.6	3,466.0	28.63	122.046	
5,000.0	4,875.6	4,578.4	4,505.4	21.5	15.4	-143.36	-1,803.7	2,124.0	3,520.6	3,491.2	29.33	120.027	
5,019.7	4,894.5	4,616.9	4,543.4	21.6	15.5	-143.38	-1,810.1	2,124.9	3,526.8	3,497.3	29.53	119.427	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,100.0	4,971.8	5,064.8	4,989.0	22.1	16.7	-144.00	-1,851.0	2,125.1	3,548.5	3,517.7	30.86	114.972	
5,118.1	4,989.2	5,084.1	5,008.3	22.2	16.7	-144.05	-1,851.4	2,124.7	3,552.5	3,521.5	30.97	114.712	
5,200.0	5,068.0	5,169.5	5,093.7	22.7	16.8	-144.26	-1,851.6	2,123.8	3,570.2	3,538.7	31.42	113.627	
5,216.5	5,083.9	5,186.2	5,110.4	22.8	16.8	-144.31	-1,851.5	2,123.6	3,573.7	3,542.2	31.51	113.419	
5,240.0	5,106.5	5,210.1	5,134.3	22.9	16.8	-144.37	-1,851.5	2,123.4	3,578.8	3,547.1	31.64	113.126	
5,300.0	5,164.4	5,265.8	5,190.0	23.2	16.9	-144.65	-1,851.5	2,122.8	3,591.2	3,559.2	31.99	112.268	
5,314.9	5,178.8	5,279.7	5,203.9	23.3	16.9	-144.72	-1,851.5	2,122.7	3,594.2	3,562.1	32.06	112.091	
5,400.0	5,261.5	5,344.9	5,269.1	23.6	17.0	-145.04	-1,851.7	2,122.0	3,610.0	3,577.5	32.48	111.150	
5,413.4	5,274.6	5,354.4	5,278.6	23.6	17.0	-145.08	-1,851.7	2,122.0	3,612.3	3,579.8	32.54	111.019	
5,500.0	5,359.5	5,422.5	5,346.7	23.9	17.1	-145.37	-1,851.8	2,121.9	3,626.6	3,593.7	32.92	110.151	
5,511.8	5,371.1	5,432.8	5,357.0	24.0	17.1	-145.40	-1,851.8	2,121.9	3,628.4	3,595.4	32.97	110.039	
5,600.0	5,458.0	5,523.1	5,447.3	24.2	17.2	-145.68	-1,852.0	2,122.0	3,640.7	3,607.3	33.36	109.147	
5,610.2	5,468.2	5,535.3	5,459.5	24.3	17.3	-145.71	-1,852.0	2,122.0	3,642.0	3,608.6	33.40	109.043	
5,700.0	5,557.2	5,629.4	5,553.6	24.5	17.4	-145.92	-1,852.2	2,121.9	3,651.7	3,617.9	33.76	108.177	
5,708.6	5,565.7	5,638.1	5,562.3	24.5	17.4	-145.94	-1,852.3	2,121.8	3,652.5	3,618.7	33.79	108.101	
5,800.0	5,656.7	5,744.7	5,668.9	24.7	17.5	-146.11	-1,852.3	2,121.4	3,659.6	3,625.4	34.13	107.227	
5,807.1	5,663.7	5,752.0	5,676.2	24.7	17.5	-146.12	-1,852.2	2,121.4	3,660.0	3,625.8	34.15	107.168	
5,900.0	5,756.5	5,843.2	5,767.3	24.9	17.6	-146.22	-1,851.7	2,121.1	3,664.3	3,629.9	34.43	106.417	
5,905.5	5,761.9	5,848.0	5,772.2	24.9	17.7	-146.23	-1,851.7	2,121.1	3,664.5	3,630.0	34.45	106.378	
6,000.0	5,856.4	5,929.9	5,854.1	25.0	17.8	-146.27	-1,851.3	2,121.0	3,666.4	3,631.7	34.68	105.718	
6,003.9	5,860.3	5,933.2	5,857.4	25.0	17.8	-146.27	-1,851.3	2,121.0	3,666.4	3,631.7	34.69	105.692	
6,032.5	5,888.9	5,957.2	5,881.4	25.0	17.8	118.53	-1,851.2	2,121.0	3,666.5	3,629.6	36.95	99.240	
6,062.5	5,918.9	5,985.0	5,909.2	25.1	17.8	118.53	-1,851.2	2,121.1	3,666.5	3,629.5	37.02	99.030	
6,100.0	5,956.4	6,018.6	5,942.8	25.1	17.9	28.57	-1,851.2	2,121.2	3,665.7	3,630.9	34.85	105.177	
6,102.3	5,958.7	6,020.9	5,945.1	25.1	17.9	28.57	-1,851.2	2,121.2	3,665.6	3,630.8	34.85	105.177	
6,150.0	6,006.2	6,067.2	5,991.4	25.1	17.9	28.74	-1,851.2	2,121.3	3,662.0	3,627.2	34.79	105.272	
6,200.0	6,055.6	6,114.0	6,038.2	25.1	18.0	29.06	-1,851.1	2,121.5	3,655.3	3,620.6	34.62	105.591	
6,200.8	6,056.3	6,114.7	6,038.9	25.1	18.0	29.06	-1,851.1	2,121.5	3,655.1	3,620.5	34.61	105.598	
6,250.0	6,104.3	6,160.6	6,084.8	25.0	18.1	29.53	-1,851.0	2,121.7	3,645.5	3,611.2	34.36	106.102	
6,299.2	6,151.3	6,209.7	6,133.9	24.9	18.1	30.15	-1,850.9	2,121.9	3,633.1	3,599.1	34.04	106.740	
6,300.0	6,152.1	6,210.5	6,134.7	24.9	18.1	30.16	-1,850.8	2,121.9	3,632.9	3,598.8	34.03	106.751	
6,350.0	6,198.7	6,260.8	6,185.0	24.8	18.2	30.97	-1,850.6	2,122.2	3,617.3	3,583.7	33.65	107.501	
6,397.6	6,241.9	6,309.6	6,233.8	24.7	18.3	31.93	-1,850.2	2,122.5	3,599.8	3,566.6	33.26	108.242	
6,400.0	6,244.1	6,312.0	6,236.2	24.7	18.3	31.99	-1,850.2	2,122.5	3,598.9	3,565.6	33.24	108.278	
6,450.0	6,287.8	6,354.2	6,278.4	24.5	18.3	33.18	-1,849.8	2,122.7	3,577.7	3,544.9	32.80	109.065	
6,496.0	6,326.5	6,388.8	6,313.0	24.4	18.4	34.46	-1,849.6	2,122.9	3,556.0	3,523.6	32.42	109.691	
6,500.0	6,329.7	6,391.7	6,315.9	24.4	18.4	34.58	-1,849.5	2,122.9	3,554.0	3,521.7	32.39	109.736	
6,550.0	6,369.6	6,432.0	6,356.1	24.3	18.4	36.26	-1,849.3	2,123.1	3,528.0	3,495.9	32.04	110.095	
6,594.5	6,403.3	6,470.9	6,395.1	24.2	18.5	38.03	-1,849.1	2,123.4	3,502.8	3,471.0	31.84	110.000	
6,600.0	6,407.3	6,475.6	6,399.8	24.2	18.5	38.27	-1,849.0	2,123.4	3,499.6	3,467.7	31.83	109.960	
6,650.0	6,442.7	6,511.7	6,435.9	24.1	18.5	40.56	-1,848.6	2,123.6	3,469.0	3,437.2	31.74	109.291	
6,692.9	6,471.0	6,536.0	6,460.2	24.0	18.6	42.76	-1,848.4	2,123.8	3,441.2	3,409.4	31.80	108.208	
6,700.0	6,475.5	6,539.9	6,464.1	24.0	18.6	43.15	-1,848.3	2,123.8	3,436.5	3,404.6	31.83	107.980	
6,750.0	6,505.6	6,565.9	6,490.1	24.0	18.6	46.12	-1,848.0	2,124.0	3,402.2	3,370.1	32.14	105.869	
6,791.3	6,528.3	6,584.0	6,508.2	24.0	18.6	48.87	-1,847.8	2,124.2	3,372.7	3,340.1	32.57	103.538	
6,800.0	6,532.8	6,584.0	6,508.2	24.0	18.6	49.43	-1,847.8	2,124.2	3,366.4	3,333.7	32.66	103.059	
6,850.0	6,557.0	6,609.5	6,533.7	24.1	18.7	53.34	-1,847.6	2,124.5	3,329.2	3,295.7	33.51	99.364	
6,889.7	6,574.1	6,623.8	6,547.9	24.2	18.7	56.71	-1,847.5	2,124.6	3,298.8	3,264.5	34.32	96.127	
6,900.0	6,578.1	6,627.2	6,551.4	24.3	18.7	57.63	-1,847.4	2,124.7	3,290.8	3,256.3	34.54	95.274	
6,950.0	6,596.1	6,642.2	6,566.4	24.5	18.7	62.39	-1,847.3	2,124.9	3,251.5	3,215.8	35.74	90.970	
6,988.2	6,607.5	6,651.9	6,576.1	24.7	18.7	66.31	-1,847.3	2,125.0	3,220.9	3,184.2	36.72	87.717	
7,000.0	6,610.7	6,654.6	6,578.8	24.8	18.7	67.57	-1,847.3	2,125.0	3,211.4	3,174.4	37.02	86.757	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 683-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,050.0	6,621.9	6,669.0	6,593.2	25.1	18.8	73.25	-1,847.2	2,125.2	3,170.7	3,132.5	38.27	82.846	
7,086.6	6,628.0	6,669.0	6,593.2	25.4	18.8	77.30	-1,847.2	2,125.2	3,140.7	3,101.7	39.05	80.425	
7,100.0	6,629.7	6,669.0	6,593.2	25.6	18.8	78.81	-1,847.2	2,125.2	3,129.7	3,090.4	39.30	79.629	
7,150.0	6,634.1	6,669.0	6,593.2	26.0	18.8	84.54	-1,847.2	2,125.2	3,088.6	3,048.5	40.11	77.000	
7,185.0	6,635.1	6,669.0	6,593.2	26.4	18.8	88.58	-1,847.2	2,125.2	3,059.8	3,019.3	40.52	75.522	
7,196.6	6,635.0	6,669.0	6,593.2	26.5	18.8	89.90	-1,847.2	2,125.2	3,050.3	3,009.7	40.61	75.110	
7,200.0	6,635.0	6,669.0	6,593.2	26.6	18.8	89.90	-1,847.2	2,125.2	3,047.5	3,006.9	40.65	74.971	
7,283.4	6,633.9	6,669.0	6,593.2	27.6	18.8	89.90	-1,847.2	2,125.2	2,979.5	2,937.8	41.68	71.489	
7,300.0	6,633.7	6,669.0	6,593.2	27.8	18.8	89.90	-1,847.2	2,125.2	2,966.1	2,924.2	41.88	70.822	
7,381.9	6,632.6	6,669.0	6,593.2	29.0	18.8	89.90	-1,847.2	2,125.2	2,900.4	2,857.3	43.07	67.340	
7,400.0	6,632.4	6,669.0	6,593.2	29.2	18.8	89.90	-1,847.2	2,125.2	2,885.9	2,842.6	43.33	66.598	
7,480.3	6,631.4	6,669.0	6,593.2	30.5	18.8	89.90	-1,847.2	2,125.2	2,822.4	2,777.8	44.65	63.212	
7,500.0	6,631.1	6,669.0	6,593.2	30.9	18.8	89.91	-1,847.2	2,125.2	2,807.0	2,762.0	44.97	62.415	
7,578.7	6,630.1	6,669.0	6,593.2	32.3	18.8	89.91	-1,847.2	2,125.2	2,745.8	2,699.4	46.39	59.189	
7,600.0	6,629.8	6,669.0	6,593.2	32.7	18.8	89.91	-1,847.2	2,125.2	2,729.4	2,682.7	46.77	58.355	
7,677.1	6,628.9	6,669.0	6,593.2	34.1	18.8	89.91	-1,847.2	2,125.2	2,670.6	2,622.4	48.27	55.331	
7,700.0	6,628.6	6,669.0	6,593.2	34.6	18.8	89.91	-1,847.2	2,125.2	2,653.4	2,604.7	48.71	54.475	
7,775.6	6,627.6	6,669.0	6,593.2	36.1	18.8	89.91	-1,847.2	2,125.2	2,597.0	2,546.7	50.26	51.675	
7,800.0	6,627.3	6,669.0	6,593.2	36.6	18.8	89.91	-1,847.2	2,125.2	2,579.0	2,528.2	50.76	50.810	
7,874.0	6,626.3	6,669.0	6,593.2	38.2	18.8	89.91	-1,847.2	2,125.2	2,525.0	2,472.7	52.34	48.240	
7,900.0	6,626.0	6,669.0	6,593.2	38.8	18.8	89.91	-1,847.2	2,125.2	2,506.3	2,453.4	52.90	47.378	
7,972.4	6,625.1	6,669.0	6,593.2	40.4	18.8	89.91	-1,847.2	2,125.2	2,454.9	2,400.4	54.51	45.034	
8,000.0	6,624.7	6,669.0	6,593.2	41.0	18.8	89.91	-1,847.2	2,125.2	2,435.6	2,380.5	55.13	44.183	
8,070.8	6,623.8	6,669.0	6,593.2	42.6	18.8	89.91	-1,847.2	2,125.2	2,386.8	2,330.1	56.75	42.058	
8,100.0	6,623.4	6,669.0	6,593.2	43.3	18.8	89.91	-1,847.2	2,125.2	2,367.0	2,309.6	57.42	41.224	
8,169.3	6,622.6	6,669.0	6,593.2	44.9	18.8	89.91	-1,847.2	2,125.2	2,320.9	2,261.8	59.05	39.306	
8,200.0	6,622.2	6,669.0	6,593.2	45.6	18.8	89.91	-1,847.2	2,125.2	2,300.8	2,241.0	59.77	38.494	
8,267.7	6,621.3	6,669.0	6,593.2	47.3	18.8	89.91	-1,847.2	2,125.2	2,257.3	2,195.9	61.39	36.767	
8,300.0	6,620.9	6,669.0	6,593.2	48.0	18.8	89.91	-1,847.2	2,125.2	2,237.0	2,174.8	62.17	35.982	
8,366.1	6,620.0	6,669.0	6,593.2	49.7	18.8	89.91	-1,847.2	2,125.2	2,196.3	2,132.5	63.78	34.433	
8,400.0	6,619.6	6,669.0	6,593.2	50.5	18.8	89.91	-1,847.2	2,125.2	2,176.0	2,111.3	64.61	33.677	
8,464.5	6,618.8	6,669.0	6,593.2	52.1	18.8	89.91	-1,847.2	2,125.2	2,138.1	2,071.9	66.21	32.292	
8,500.0	6,618.3	6,669.0	6,593.2	53.0	18.8	89.91	-1,847.2	2,125.2	2,117.9	2,050.8	67.09	31.567	
8,563.0	6,617.5	6,669.0	6,593.2	54.5	18.8	89.91	-1,847.2	2,125.2	2,082.9	2,014.3	68.67	30.331	
8,600.0	6,617.0	6,669.0	6,593.2	55.5	18.8	89.91	-1,847.2	2,125.2	2,063.0	1,993.4	69.60	29.640	
8,661.4	6,616.3	6,669.0	6,593.2	57.0	18.8	89.91	-1,847.2	2,125.2	2,031.0	1,959.9	71.16	28.542	
8,700.0	6,615.8	6,669.0	6,593.2	58.0	18.8	89.91	-1,847.2	2,125.2	2,011.6	1,939.5	72.14	27.885	
8,759.8	6,615.0	6,669.0	6,593.2	59.5	18.8	89.91	-1,847.2	2,125.2	1,982.7	1,909.0	73.67	26.912	
8,800.0	6,614.5	6,669.0	6,593.2	60.6	18.8	89.91	-1,847.2	2,125.2	1,964.0	1,889.3	74.70	26.291	
8,858.2	6,613.7	6,669.0	6,593.2	62.1	18.8	89.91	-1,847.2	2,125.2	1,938.1	1,861.9	76.21	25.432	
8,900.0	6,613.2	6,669.0	6,593.2	63.2	18.8	89.91	-1,847.2	2,125.2	1,920.4	1,843.1	77.29	24.848	
8,956.7	6,612.5	6,669.0	6,593.2	64.6	18.8	89.91	-1,847.2	2,125.2	1,897.6	1,818.8	78.76	24.093	
9,000.0	6,611.9	6,669.0	6,593.2	65.8	18.8	89.91	-1,847.2	2,125.2	1,881.1	1,801.2	79.89	23.547	
9,055.1	6,611.2	6,669.0	6,593.2	67.2	18.8	89.91	-1,847.2	2,125.2	1,861.4	1,780.1	81.33	22.887	
9,100.0	6,610.6	6,669.0	6,593.2	68.4	18.8	89.91	-1,847.2	2,125.2	1,846.4	1,763.9	82.51	22.379	
9,153.5	6,609.9	6,669.0	6,593.2	69.8	18.8	89.91	-1,847.2	2,125.2	1,829.8	1,745.9	83.92	21.805	
9,200.0	6,609.3	6,669.0	6,593.2	71.0	18.8	89.91	-1,847.2	2,125.2	1,816.5	1,731.4	85.14	21.336	
9,251.9	6,608.7	6,669.0	6,593.2	72.4	18.8	89.91	-1,847.2	2,125.2	1,803.0	1,716.5	86.51	20.841	
9,300.0	6,608.1	6,669.0	6,593.2	73.7	18.8	89.91	-1,847.2	2,125.2	1,791.8	1,704.0	87.79	20.410	
9,350.4	6,607.4	6,669.0	6,593.2	75.0	18.8	89.91	-1,847.2	2,125.2	1,781.3	1,692.1	89.12	19.986	
9,400.0	6,606.8	6,669.0	6,593.2	76.3	18.8	89.91	-1,847.2	2,125.2	1,772.3	1,681.8	90.44	19.595	
9,448.8	6,606.1	6,669.0	6,593.2	77.6	18.8	89.91	-1,847.2	2,125.2	1,764.8	1,673.0	91.75	19.235	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,500.0	6,605.5	6,669.0	6,593.2	79.0	18.8	89.91	-1,847.2	2,125.2	1,758.3	1,665.2	93.11	18.884	
9,547.2	6,604.9	6,669.0	6,593.2	80.2	18.8	89.91	-1,847.2	2,125.2	1,753.6	1,659.3	94.38	18.581	
9,600.0	6,604.2	6,669.0	6,593.2	81.7	18.8	89.91	-1,847.2	2,125.2	1,749.9	1,654.1	95.79	18.268	
9,645.6	6,603.6	6,669.0	6,593.2	82.9	18.8	89.91	-1,847.2	2,125.2	1,748.0	1,651.0	97.02	18.017	
9,696.9	6,602.9	6,669.0	6,593.2	84.3	18.8	89.91	-1,847.2	2,125.2	1,747.2	1,648.8	98.39	17.758 CC	
9,700.0	6,602.9	6,669.0	6,593.2	84.3	18.8	89.91	-1,847.2	2,125.2	1,747.2	1,648.8	98.48	17.743	
9,744.1	6,602.3	6,669.0	6,593.2	85.5	18.8	89.91	-1,847.2	2,125.2	1,747.9	1,648.2	99.66	17.538 ES	
9,800.0	6,601.6	6,669.0	6,593.2	87.0	18.8	89.91	-1,847.2	2,125.2	1,750.3	1,649.1	101.17	17.300	
9,842.5	6,601.1	6,669.0	6,593.2	88.2	18.8	89.91	-1,847.2	2,125.2	1,753.3	1,651.0	102.32	17.135	
9,900.0	6,600.3	6,669.0	6,593.2	89.7	18.8	89.91	-1,847.2	2,125.2	1,759.0	1,655.1	103.87	16.934	
9,940.9	6,599.8	6,669.0	6,593.2	90.9	18.8	89.91	-1,847.2	2,125.2	1,764.2	1,659.2	104.98	16.805	
10,000.0	6,599.0	6,669.0	6,593.2	92.5	18.8	89.91	-1,847.2	2,125.2	1,773.3	1,666.8	106.58	16.638	
10,039.3	6,598.5	6,669.0	6,593.2	93.5	18.8	89.91	-1,847.2	2,125.2	1,780.5	1,672.8	107.65	16.540	
10,100.0	6,597.7	6,669.0	6,593.2	95.2	18.8	89.91	-1,847.2	2,125.2	1,793.1	1,683.8	109.30	16.406	
10,137.8	6,597.3	6,669.0	6,593.2	96.2	18.8	89.91	-1,847.2	2,125.2	1,802.0	1,691.7	110.32	16.334	
10,200.0	6,596.5	6,669.0	6,593.2	97.9	18.8	89.91	-1,847.2	2,125.2	1,818.2	1,706.2	112.02	16.232	
10,236.2	6,596.0	6,669.0	6,593.2	98.9	18.8	89.91	-1,847.2	2,125.2	1,828.6	1,715.6	113.00	16.182	
10,300.0	6,595.2	6,669.0	6,593.2	100.6	18.8	89.91	-1,847.2	2,125.2	1,848.4	1,733.7	114.74	16.110	
10,334.6	6,594.7	6,669.0	6,593.2	101.6	18.8	89.91	-1,847.2	2,125.2	1,860.0	1,744.3	115.68	16.078	
10,400.0	6,593.9	6,669.0	6,593.2	103.3	18.8	89.91	-1,847.2	2,125.2	1,883.4	1,765.9	117.47	16.033	
10,433.0	6,593.5	6,669.0	6,593.2	104.2	18.8	89.91	-1,847.2	2,125.2	1,896.0	1,777.6	118.37	16.017	
10,500.0	6,592.6	6,669.0	6,593.2	106.1	18.8	89.91	-1,847.2	2,125.2	1,923.0	1,802.8	120.20	15.998	
10,531.5	6,592.2	6,669.0	6,593.2	106.9	18.8	89.91	-1,847.2	2,125.2	1,936.3	1,815.3	121.06	15.994 SF	
10,600.0	6,591.3	6,669.0	6,593.2	108.8	18.8	89.91	-1,847.2	2,125.2	1,966.8	1,843.9	122.94	15.998	
10,629.9	6,590.9	6,669.0	6,593.2	109.6	18.8	89.91	-1,847.2	2,125.2	1,980.7	1,857.0	123.76	16.005	
10,700.0	6,590.0	6,669.0	6,593.2	111.6	18.8	89.91	-1,847.2	2,125.2	2,014.7	1,889.0	125.68	16.030	
10,728.3	6,589.6	6,669.0	6,593.2	112.3	18.8	89.91	-1,847.2	2,125.2	2,029.0	1,902.5	126.46	16.045	
10,800.0	6,588.7	6,669.0	6,593.2	114.3	18.8	89.91	-1,847.2	2,125.2	2,066.3	1,937.9	128.42	16.090	
10,826.7	6,588.4	6,669.0	6,593.2	115.0	18.8	89.91	-1,847.2	2,125.2	2,080.7	1,951.6	129.16	16.110	
10,900.0	6,587.4	6,669.0	6,593.2	117.0	18.8	89.91	-1,847.2	2,125.2	2,121.4	1,990.2	131.17	16.173	
10,925.2	6,587.1	6,669.0	6,593.2	117.7	18.8	89.91	-1,847.2	2,125.2	2,135.8	2,003.9	131.86	16.197	
11,000.0	6,586.1	6,669.0	6,593.2	119.8	18.8	89.91	-1,847.2	2,125.2	2,179.7	2,045.7	133.92	16.276	
11,023.6	6,585.8	6,669.0	6,593.2	120.4	18.8	89.91	-1,847.2	2,125.2	2,193.9	2,059.3	134.57	16.302	
11,100.0	6,584.8	6,669.0	6,593.2	122.5	18.8	89.91	-1,847.2	2,125.2	2,240.9	2,104.2	136.68	16.396	
11,122.0	6,584.5	6,669.0	6,593.2	123.2	18.8	89.91	-1,847.2	2,125.2	2,254.7	2,117.5	137.28	16.424	
11,200.0	6,583.5	6,669.0	6,593.2	125.3	18.8	89.91	-1,847.2	2,125.2	2,304.8	2,165.4	139.43	16.530	
11,220.4	6,583.3	6,669.0	6,593.2	125.9	18.8	89.91	-1,847.2	2,125.2	2,318.2	2,178.2	140.00	16.559	
11,300.0	6,582.2	6,669.0	6,593.2	128.1	18.8	89.91	-1,847.2	2,125.2	2,371.2	2,229.1	142.19	16.677	
11,318.9	6,582.0	6,669.0	6,593.2	128.6	18.8	89.91	-1,847.2	2,125.2	2,384.0	2,241.3	142.71	16.705	
11,400.0	6,580.9	6,669.0	6,593.2	130.8	18.8	89.91	-1,847.2	2,125.2	2,440.0	2,295.0	144.95	16.833	
11,417.3	6,580.7	6,669.0	6,593.2	131.3	18.8	89.91	-1,847.2	2,125.2	2,452.1	2,306.6	145.43	16.861	
11,500.0	6,579.7	6,669.0	6,593.2	133.6	18.8	89.91	-1,847.2	2,125.2	2,510.8	2,363.1	147.71	16.998	
11,515.7	6,579.4	6,669.0	6,593.2	134.0	18.8	89.91	-1,847.2	2,125.2	2,522.1	2,374.0	148.15	17.024	
11,600.0	6,578.4	6,669.0	6,593.2	136.3	18.8	89.91	-1,847.2	2,125.2	2,583.5	2,433.1	150.48	17.169	
11,614.1	6,578.2	6,669.0	6,593.2	136.7	18.8	89.91	-1,847.2	2,125.2	2,594.0	2,443.1	150.87	17.194	
11,700.0	6,577.1	6,669.0	6,593.2	139.1	18.8	89.91	-1,847.2	2,125.2	2,658.1	2,504.8	153.24	17.345	
11,712.6	6,576.9	6,669.0	6,593.2	139.5	18.8	89.91	-1,847.2	2,125.2	2,667.6	2,514.0	153.59	17.368	
11,800.0	6,575.8	6,669.0	6,593.2	141.9	18.8	89.91	-1,847.2	2,125.2	2,734.2	2,578.2	156.01	17.526	
11,811.0	6,575.6	6,669.0	6,593.2	142.2	18.8	89.91	-1,847.2	2,125.2	2,742.7	2,586.4	156.32	17.546	
11,858.8	6,575.0	6,669.0	6,593.2	143.5	18.8	89.91	-1,847.2	2,125.2	2,779.7	2,622.0	157.64	17.633	
11,859.3	6,575.0	6,669.0	6,593.2	143.5	18.8	89.91	-1,847.2	2,125.2	2,780.1	2,622.5	157.65	17.635	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
2,100.0	2,085.8	3,930.7	3,885.2	5.2	11.4	4.25	-238.8	-9,957.6	9,990.3	9,976.8	13.51	739.222	
2,165.3	2,148.7	3,977.0	3,930.2	5.5	11.6	4.21	-245.9	-9,949.2	9,961.5	9,947.6	13.82	720.648	
2,200.0	2,182.0	3,982.0	3,935.1	5.7	11.6	4.20	-246.6	-9,948.3	9,946.2	9,932.2	13.93	713.896	
2,263.8	2,243.4	4,045.9	3,997.2	6.0	11.9	4.15	-256.3	-9,936.8	9,918.1	9,903.8	14.31	693.223	
2,300.0	2,278.2	4,070.0	4,020.6	6.2	12.0	4.13	-260.0	-9,932.4	9,902.1	9,887.7	14.48	683.807	
2,362.2	2,338.1	4,116.7	4,066.0	6.5	12.3	4.09	-267.1	-9,924.0	9,874.8	9,860.0	14.80	667.274	
2,400.0	2,374.4	4,140.5	4,089.1	6.7	12.4	4.07	-270.7	-9,919.8	9,858.2	9,843.2	14.98	658.215	
2,460.6	2,432.8	4,164.0	4,112.0	7.0	12.5	4.05	-274.2	-9,915.6	9,831.7	9,816.5	15.22	646.129	
2,500.0	2,470.6	4,189.7	4,137.0	7.2	12.6	4.02	-278.0	-9,911.1	9,814.6	9,799.2	15.40	637.221	
2,559.0	2,527.4	4,214.0	4,160.6	7.6	12.7	4.00	-281.6	-9,906.9	9,789.0	9,773.4	15.64	625.999	
2,600.0	2,566.8	4,230.8	4,177.0	7.8	12.8	3.99	-284.1	-9,904.0	9,771.4	9,755.6	15.80	618.401	
2,657.5	2,622.1	4,258.0	4,203.5	8.1	12.9	3.96	-288.1	-9,899.4	9,746.8	9,730.7	16.04	607.541	
2,700.0	2,663.0	4,258.0	4,203.5	8.3	12.9	3.96	-288.1	-9,899.4	9,728.7	9,712.5	16.16	602.066	
2,755.9	2,716.8	4,295.9	4,240.5	8.6	13.0	3.93	-293.7	-9,893.2	9,705.0	9,688.6	16.43	590.623	
2,800.0	2,759.2	4,314.5	4,258.6	8.9	13.1	3.92	-296.4	-9,890.2	9,686.4	9,669.8	16.61	583.109	
2,854.3	2,811.5	4,353.0	4,296.2	9.2	13.3	3.88	-302.1	-9,884.2	9,663.7	9,646.8	16.88	572.373	
2,900.0	2,855.4	4,365.6	4,308.5	9.4	13.3	3.87	-304.0	-9,882.2	9,644.6	9,627.5	17.05	565.659	
2,952.7	2,906.2	4,439.9	4,381.1	9.7	13.6	3.81	-314.5	-9,870.6	9,622.5	9,605.1	17.43	551.940	
3,000.0	2,951.6	4,474.3	4,414.8	10.0	13.8	3.78	-319.3	-9,865.1	9,602.7	9,585.1	17.68	543.293	
3,051.2	3,000.9	4,506.8	4,446.5	10.3	13.9	3.75	-323.7	-9,860.0	9,581.4	9,563.4	17.92	534.629	
3,100.0	3,047.8	4,539.0	4,478.1	10.5	14.0	3.73	-328.2	-9,855.0	9,561.0	9,542.9	18.16	526.465	
3,149.6	3,095.5	4,633.0	4,570.0	10.8	14.4	3.65	-340.8	-9,840.2	9,540.2	9,521.6	18.60	512.984	
3,200.0	3,144.0	4,676.1	4,612.2	11.1	14.6	3.62	-346.2	-9,833.2	9,519.0	9,500.2	18.87	504.368	
3,248.0	3,190.2	4,706.3	4,641.8	11.4	14.7	3.60	-350.0	-9,828.4	9,498.9	9,479.8	19.10	497.245	
3,300.0	3,240.2	4,756.4	4,690.9	11.7	14.9	3.56	-356.0	-9,820.5	9,477.1	9,457.7	19.40	488.496	
3,346.4	3,284.9	4,826.4	4,759.6	11.9	15.2	3.52	-363.4	-9,809.3	9,457.6	9,437.9	19.74	479.159	
3,400.0	3,336.4	4,892.0	4,824.0	12.2	15.5	3.48	-370.0	-9,798.7	9,435.0	9,414.9	20.08	469.852	
3,444.9	3,379.6	4,917.0	4,848.5	12.5	15.6	3.46	-372.6	-9,794.6	9,416.0	9,395.7	20.28	464.267	
3,500.0	3,432.6	4,965.5	4,896.1	12.8	15.8	3.43	-377.9	-9,786.7	9,392.7	9,372.1	20.58	456.357	
3,543.3	3,474.3	4,991.9	4,922.0	13.1	15.9	3.41	-380.8	-9,782.5	9,374.5	9,353.7	20.78	451.044	
3,600.0	3,528.8	5,011.0	4,940.7	13.4	15.9	3.40	-382.9	-9,779.5	9,350.7	9,329.7	21.00	445.217	
3,641.7	3,569.0	5,011.0	4,940.7	13.6	15.9	3.40	-382.9	-9,779.5	9,333.4	9,312.2	21.12	441.871	
3,700.0	3,625.0	5,011.0	4,940.7	14.0	15.9	3.40	-382.9	-9,779.5	9,309.4	9,288.1	21.29	437.274	
3,740.1	3,663.6	5,049.1	4,978.1	14.2	16.1	3.37	-387.0	-9,773.6	9,292.8	9,271.3	21.51	431.980	
3,800.0	3,721.2	5,062.9	4,991.8	14.5	16.1	3.37	-388.5	-9,771.6	9,268.5	9,246.7	21.72	426.660	
3,838.6	3,758.3	5,103.0	5,031.2	14.8	16.3	3.34	-392.4	-9,766.2	9,253.1	9,231.2	21.95	421.615	
3,900.0	3,817.4	5,103.0	5,031.2	15.1	16.3	3.34	-392.4	-9,766.2	9,228.4	9,206.3	22.12	417.120	
3,937.0	3,853.0	5,103.0	5,031.2	15.3	16.3	3.34	-392.4	-9,766.2	9,213.7	9,191.5	22.23	414.451	
4,000.0	3,913.6	5,103.0	5,031.2	15.7	16.3	3.34	-392.4	-9,766.2	9,189.0	9,166.5	22.41	409.976	
4,035.4	3,947.7	5,139.4	5,067.1	15.9	16.4	3.32	-395.9	-9,761.5	9,175.1	9,152.5	22.61	405.745	
4,100.0	4,009.8	5,176.1	5,103.4	16.3	16.5	3.30	-399.2	-9,756.8	9,149.9	9,127.0	22.90	399.597	
4,133.8	4,042.4	5,197.0	5,124.1	16.5	16.6	3.29	-401.1	-9,754.2	9,136.8	9,113.8	23.05	396.360	
4,200.0	4,106.0	5,226.8	5,153.5	16.8	16.7	3.27	-403.7	-9,750.6	9,111.3	9,088.0	23.32	390.667	
4,232.3	4,137.1	5,242.0	5,168.5	17.0	16.8	3.27	-405.0	-9,748.8	9,099.0	9,075.5	23.46	387.907	
4,300.0	4,202.2	5,290.0	5,216.1	17.4	16.9	3.24	-409.4	-9,743.2	9,073.2	9,049.4	23.78	381.539	
4,330.7	4,231.7	5,290.0	5,216.1	17.6	16.9	3.24	-409.4	-9,743.2	9,061.5	9,037.7	23.87	379.621	
4,400.0	4,298.4	5,371.4	5,296.6	18.0	17.2	3.20	-416.8	-9,733.8	9,035.3	9,011.0	24.29	371.954	
4,429.1	4,326.4	5,398.7	5,323.5	18.2	17.3	3.18	-419.3	-9,730.7	9,024.2	8,999.8	24.45	369.083	
4,500.0	4,394.6	5,452.2	5,376.5	18.6	17.5	3.15	-424.2	-9,724.5	8,997.3	8,972.5	24.80	362.751	
4,527.5	4,421.1	5,481.0	5,405.0	18.7	17.6	3.13	-426.9	-9,721.2	8,986.9	8,962.0	24.96	360.024	
4,600.0	4,490.8	5,481.0	5,405.0	19.2	17.6	3.13	-426.9	-9,721.2	8,959.7	8,934.6	25.17	355.917	
4,626.0	4,515.8	5,481.0	5,405.0	19.3	17.6	3.13	-426.9	-9,721.2	8,950.1	8,924.8	25.25	354.466	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
4,700.0	4,587.0	5,532.6	5,456.1	19.8	17.7	3.11	-431.6	-9,715.5	8,922.6	8,897.0	25.60	348.540		
4,724.4	4,610.5	5,540.4	5,463.8	19.9	17.7	3.10	-432.2	-9,714.7	8,913.6	8,887.9	25.69	346.948		
4,800.0	4,683.2	5,605.0	5,527.9	20.3	17.9	3.07	-437.6	-9,708.6	8,886.4	8,860.3	26.08	340.734		
4,822.8	4,705.2	5,605.0	5,527.9	20.5	17.9	3.07	-437.6	-9,708.6	8,878.1	8,851.9	26.15	339.545		
4,900.0	4,779.4	5,605.0	5,527.9	20.9	17.9	3.07	-437.6	-9,708.6	8,850.3	8,824.0	26.37	335.582		
4,921.2	4,799.8	5,605.0	5,527.9	21.0	17.9	3.07	-437.6	-9,708.6	8,842.8	8,816.4	26.44	334.506		
5,000.0	4,875.6	5,644.3	5,566.9	21.5	18.0	3.05	-440.7	-9,705.3	8,815.1	8,788.3	26.76	329.371		
5,019.7	4,894.5	5,654.6	5,577.1	21.6	18.1	3.05	-441.5	-9,704.4	8,808.2	8,781.4	26.85	328.095		
5,100.0	4,971.8	5,678.0	5,600.4	22.1	18.1	3.04	-443.4	-9,702.5	8,780.4	8,753.2	27.14	323.519		
5,118.1	4,989.2	5,678.0	5,600.4	22.2	18.1	3.04	-443.4	-9,702.5	8,774.2	8,747.0	27.19	322.658		
5,200.0	5,068.0	5,724.4	5,646.5	22.7	18.3	3.02	-446.8	-9,698.9	8,746.2	8,718.6	27.54	317.555		
5,216.5	5,083.9	5,730.1	5,652.2	22.8	18.3	3.01	-447.2	-9,698.5	8,740.6	8,713.0	27.60	316.642		
5,240.0	5,106.5	5,738.2	5,660.2	22.9	18.3	3.01	-447.7	-9,698.0	8,732.7	8,705.0	27.69	315.350		
5,300.0	5,164.4	5,773.0	5,694.9	23.2	18.4	2.98	-449.7	-9,695.7	8,713.3	8,685.3	28.04	310.720		
5,314.9	5,178.8	5,773.0	5,694.9	23.3	18.4	2.97	-449.7	-9,695.7	8,708.7	8,680.6	28.10	309.878		
5,400.0	5,261.5	5,773.0	5,694.9	23.6	18.4	2.95	-449.7	-9,695.7	8,684.1	8,655.7	28.44	305.363		
5,413.4	5,274.6	5,799.3	5,721.1	23.6	18.5	2.93	-451.1	-9,694.2	8,680.4	8,651.9	28.55	304.094		
5,500.0	5,359.5	5,854.0	5,775.7	23.9	18.6	2.89	-454.1	-9,691.4	8,658.9	8,630.0	28.97	298.883		
5,511.8	5,371.1	5,854.0	5,775.7	24.0	18.6	2.89	-454.1	-9,691.4	8,656.2	8,627.2	29.01	298.393		
5,600.0	5,458.0	5,854.0	5,775.7	24.2	18.6	2.87	-454.1	-9,691.4	8,637.7	8,608.5	29.28	294.970		
5,610.2	5,468.2	5,878.5	5,800.1	24.3	18.6	2.86	-455.3	-9,690.3	8,635.8	8,606.4	29.36	294.106		
5,700.0	5,557.2	5,925.8	5,847.4	24.5	18.7	2.84	-457.2	-9,688.3	8,620.5	8,590.8	29.70	290.247		
5,708.6	5,565.7	5,952.0	5,873.5	24.5	18.8	2.83	-458.0	-9,687.4	8,619.3	8,589.5	29.78	289.477		
5,800.0	5,656.7	5,952.0	5,873.5	24.7	18.8	2.82	-458.0	-9,687.4	8,607.4	8,577.5	29.98	287.103		
5,807.1	5,663.7	5,952.0	5,873.5	24.7	18.8	2.82	-458.0	-9,687.4	8,606.7	8,576.7	29.99	286.945		
5,900.0	5,756.5	6,033.6	5,955.0	24.9	18.9	2.80	-460.3	-9,684.9	8,598.2	8,567.8	30.32	283.605		
5,905.5	5,761.9	6,036.6	5,958.0	24.9	18.9	2.79	-460.4	-9,684.8	8,597.8	8,567.4	30.33	283.461		
6,000.0	5,856.4	6,110.0	6,031.4	25.0	19.1	2.78	-462.3	-9,683.1	8,593.0	8,562.4	30.60	280.811		
6,003.9	5,860.3	6,110.0	6,031.4	25.0	19.1	2.78	-462.3	-9,683.1	8,592.9	8,562.3	30.61	280.764		
6,032.5	5,888.9	6,110.0	6,031.4	25.0	19.1	-92.42	-462.3	-9,683.1	8,592.1	8,550.2	41.91	205.026		
6,062.5	5,918.9	6,110.0	6,031.4	25.1	19.1	-92.42	-462.3	-9,683.1	8,591.6	8,549.7	41.94	204.863 ES		
6,075.0	5,931.4	6,136.0	6,057.4	25.1	19.1	177.58	-462.9	-9,682.6	8,591.5	8,560.8	30.72	279.638 CC		
6,100.0	5,956.4	6,154.8	6,076.2	25.1	19.1	177.58	-463.3	-9,682.2	8,591.9	8,561.2	30.71	279.775		
6,102.3	5,958.7	6,156.6	6,077.9	25.1	19.1	177.57	-463.3	-9,682.2	8,592.0	8,561.3	30.71	279.811		
6,150.0	6,006.2	6,192.3	6,113.7	25.1	19.2	177.56	-464.1	-9,681.6	8,595.5	8,564.9	30.57	281.134		
6,200.0	6,055.6	6,229.6	6,150.9	25.1	19.3	177.53	-464.7	-9,681.0	8,602.6	8,572.3	30.30	283.885		
6,200.8	6,056.3	6,230.1	6,151.5	25.1	19.3	177.53	-464.7	-9,681.0	8,602.7	8,572.4	30.30	283.939		
6,250.0	6,104.3	6,266.0	6,187.4	25.0	19.3	177.49	-465.3	-9,680.5	8,613.2	8,583.3	29.90	288.081		
6,299.2	6,151.3	6,298.9	6,220.3	24.9	19.4	177.44	-465.7	-9,680.1	8,627.0	8,597.6	29.37	293.757		
6,300.0	6,152.1	6,299.5	6,220.8	24.9	19.4	177.44	-465.7	-9,680.1	8,627.2	8,597.9	29.36	293.861		
6,350.0	6,198.7	6,331.8	6,253.2	24.8	19.4	177.37	-466.1	-9,679.8	8,644.6	8,616.0	28.70	301.255		
6,397.6	6,241.9	6,361.8	6,283.1	24.7	19.5	177.30	-466.4	-9,679.5	8,664.3	8,636.4	27.96	309.904		
6,400.0	6,244.1	6,363.3	6,284.6	24.7	19.5	177.29	-466.4	-9,679.5	8,665.4	8,637.5	27.92	310.376		
6,450.0	6,287.8	6,393.5	6,314.9	24.5	19.5	177.19	-466.6	-9,679.3	8,689.3	8,662.3	27.04	321.363		
6,496.0	6,326.5	6,424.0	6,345.3	24.4	19.6	177.08	-466.8	-9,679.1	8,714.1	8,687.9	26.15	333.193		
6,500.0	6,329.7	6,424.0	6,345.3	24.4	19.6	177.07	-466.8	-9,679.1	8,716.3	8,690.2	26.07	334.340		
6,550.0	6,369.6	6,462.3	6,383.6	24.3	19.6	176.92	-467.0	-9,679.0	8,746.2	8,721.1	25.04	349.296		
6,594.5	6,403.3	6,496.4	6,417.7	24.2	19.7	176.76	-467.2	-9,678.8	8,775.1	8,751.0	24.08	364.463		
6,600.0	6,407.3	6,500.5	6,421.8	24.2	19.7	176.74	-467.2	-9,678.8	8,778.8	8,754.8	23.95	366.472		
6,650.0	6,442.7	6,536.3	6,457.6	24.1	19.7	176.52	-467.4	-9,678.6	8,813.9	8,791.1	22.84	385.949		
6,692.9	6,471.0	6,565.0	6,486.3	24.0	19.8	176.28	-467.5	-9,678.5	8,846.0	8,824.2	21.87	404.408		
6,700.0	6,475.5	6,569.5	6,490.9	24.0	19.8	176.24	-467.6	-9,678.5	8,851.5	8,829.8	21.72	407.608		

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST DD PJ #81 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 510-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,750.0	6,505.6	6,598.0	6,519.4	24.0	19.8	175.90	-467.7	-9,678.3	8,891.3	8,870.6	20.62	431.111	
6,791.3	6,528.3	6,618.6	6,540.0	24.0	19.9	175.54	-467.8	-9,678.3	8,925.7	8,905.9	19.78	451.316	
6,800.0	6,532.8	6,622.7	6,544.0	24.0	19.9	175.45	-467.8	-9,678.2	8,933.0	8,913.4	19.61	455.587	
6,850.0	6,557.0	6,644.7	6,566.0	24.1	19.9	174.87	-467.8	-9,678.2	8,976.6	8,957.9	18.72	479.525	
6,889.7	6,574.1	6,660.1	6,581.5	24.2	19.9	174.27	-467.8	-9,678.1	9,012.4	8,994.3	18.15	496.674	
6,900.0	6,578.1	6,663.8	6,585.2	24.3	19.9	174.09	-467.8	-9,678.1	9,021.8	9,003.8	18.02	500.672	
6,950.0	6,596.1	6,680.1	6,601.4	24.5	19.9	172.96	-467.8	-9,678.0	9,068.4	9,050.8	17.58	515.878	
6,988.2	6,607.5	6,690.5	6,611.8	24.7	20.0	171.72	-467.8	-9,678.0	9,104.7	9,087.3	17.48	520.764	
7,000.0	6,610.7	6,693.3	6,614.7	24.8	20.0	171.23	-467.7	-9,678.0	9,116.1	9,098.6	17.51	520.685	
7,050.0	6,621.9	6,703.6	6,624.9	25.1	20.0	168.28	-467.7	-9,678.0	9,164.8	9,146.7	18.07	507.309	
7,086.6	6,628.0	6,709.1	6,630.4	25.4	20.0	164.39	-467.7	-9,678.0	9,200.8	9,181.5	19.33	476.038	
7,100.0	6,629.7	6,710.7	6,632.0	25.6	20.0	162.23	-467.7	-9,677.9	9,214.1	9,193.9	20.16	456.966	
7,150.0	6,634.1	6,714.7	6,636.1	26.0	20.0	144.19	-467.7	-9,677.9	9,263.8	9,235.2	28.59	324.061	
7,185.0	6,635.1	6,715.7	6,637.0	26.4	20.0	98.84	-467.7	-9,677.9	9,298.8	9,254.9	43.88	211.908	
7,196.6	6,635.0	6,715.7	6,637.0	26.5	20.0	75.84	-467.7	-9,677.9	9,310.3	9,266.7	43.63	213.385	
7,200.0	6,635.0	6,715.6	6,637.0	26.6	20.0	75.83	-467.7	-9,677.9	9,313.8	9,270.1	43.67	213.286	
7,283.4	6,633.9	6,714.9	6,636.2	27.6	20.0	75.72	-467.7	-9,677.9	9,397.1	9,352.5	44.65	210.443	
7,300.0	6,633.7	6,714.7	6,636.0	27.8	20.0	75.69	-467.7	-9,677.9	9,413.7	9,368.8	44.85	209.899	
7,381.9	6,632.6	6,714.0	6,635.3	29.0	20.0	75.59	-467.7	-9,677.9	9,495.5	9,449.5	45.99	206.477	
7,400.0	6,632.4	6,713.8	6,635.1	29.2	20.0	75.56	-467.7	-9,677.9	9,513.6	9,467.4	46.24	205.747	
7,480.3	6,631.4	6,713.1	6,634.4	30.5	20.0	75.45	-467.7	-9,677.9	9,593.8	9,546.3	47.50	201.969	
7,500.0	6,631.1	6,712.9	6,634.2	30.9	20.0	75.42	-467.7	-9,677.9	9,613.5	9,565.7	47.81	201.078	
7,578.7	6,630.1	6,712.2	6,633.5	32.3	20.0	75.31	-467.7	-9,677.9	9,692.2	9,643.0	49.17	197.127	
7,600.0	6,629.8	6,712.0	6,633.3	32.7	20.0	75.28	-467.7	-9,677.9	9,713.4	9,663.9	49.53	196.101	
7,677.1	6,628.9	6,711.3	6,632.6	34.1	20.0	75.18	-467.7	-9,677.9	9,790.5	9,739.6	50.96	192.116	
7,700.0	6,628.6	6,711.1	6,632.4	34.6	20.0	75.14	-467.7	-9,677.9	9,813.4	9,762.0	51.38	190.983	
7,775.6	6,627.6	6,710.4	6,631.8	36.1	20.0	75.04	-467.7	-9,677.9	9,888.9	9,836.0	52.86	187.062	
7,800.0	6,627.3	6,710.2	6,631.5	36.6	20.0	75.01	-467.7	-9,677.9	9,913.3	9,859.9	53.34	185.847	
7,874.0	6,626.3	6,709.5	6,630.9	38.2	20.0	74.91	-467.7	-9,678.0	9,987.2	9,932.4	54.86	182.058 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	118.23	-1,091.8	2,033.4	2,308.0				
98.4	98.4	94.8	94.8	0.1	0.1	118.25	-1,092.3	2,033.0	2,307.9	2,307.7	0.16	N/A	
100.0	100.0	96.5	96.5	0.1	0.1	118.25	-1,092.3	2,033.0	2,307.9	2,307.7	0.16	N/A	
196.8	196.8	198.0	197.9	0.3	0.1	118.30	-1,094.1	2,031.7	2,307.6	2,307.1	0.44	5,217.736	
200.0	200.0	201.3	201.2	0.3	0.1	118.31	-1,094.2	2,031.6	2,307.6	2,307.1	0.45	5,111.448	
295.3	295.3	297.9	297.9	0.5	0.3	118.38	-1,096.7	2,029.8	2,307.1	2,306.3	0.82	2,809.527	
300.0	300.0	302.2	302.1	0.5	0.3	118.38	-1,096.7	2,029.7	2,307.1	2,306.3	0.84	2,745.855	
388.7	388.7	380.2	380.1	0.7	0.5	118.43	-1,098.2	2,028.7	2,306.9	2,305.7	1.20	1,929.913	
393.7	393.7	384.1	384.0	0.8	0.5	118.43	-1,098.2	2,028.7	2,306.9	2,305.7	1.21	1,899.029	
400.0	400.0	389.1	389.0	0.8	0.5	118.43	-1,098.3	2,028.7	2,306.9	2,305.7	1.24	1,861.407	
492.1	492.1	461.9	461.8	1.0	0.6	118.45	-1,099.3	2,028.6	2,307.4	2,305.8	1.60	1,442.242	
500.0	500.0	468.8	468.6	1.0	0.6	118.46	-1,099.4	2,028.6	2,307.5	2,305.9	1.63	1,413.656	
590.5	590.5	550.0	549.9	1.2	0.8	118.48	-1,100.7	2,029.1	2,308.6	2,306.6	2.01	1,148.832	
600.0	600.0	558.9	558.8	1.2	0.8	118.48	-1,100.9	2,029.1	2,308.8	2,306.7	2.05	1,126.277	
689.0	689.0	642.9	642.7	1.4	1.0	118.51	-1,102.5	2,029.7	2,310.1	2,307.7	2.43	950.774	
700.0	700.0	653.2	653.1	1.4	1.0	118.51	-1,102.7	2,029.8	2,310.3	2,307.8	2.48	932.789	
787.4	787.4	734.6	734.4	1.6	1.2	118.55	-1,104.5	2,030.5	2,311.9	2,309.0	2.85	811.771	
800.0	800.0	746.3	746.1	1.7	1.2	118.55	-1,104.8	2,030.6	2,312.1	2,309.2	2.90	796.930	
885.8	885.8	837.9	837.7	1.9	1.4	118.56	-1,105.9	2,032.0	2,313.8	2,310.5	3.29	703.448	
900.0	900.0	853.8	853.6	1.9	1.5	118.55	-1,105.9	2,032.3	2,314.0	2,310.7	3.35	689.746	
984.2	984.2	1,023.6	1,023.3	2.1	1.8	118.45	-1,101.7	2,033.6	2,313.3	2,309.4	3.89	594.092	
1,000.0	1,000.0	1,132.1	1,131.6	2.1	2.0	118.32	-1,095.1	2,032.0	2,312.5	2,308.3	4.16	556.513	
1,082.7	1,082.7	1,353.5	1,351.8	2.3	2.5	118.06	-1,076.6	2,019.6	2,305.3	2,300.5	4.83	477.003	
1,100.0	1,100.0	1,391.6	1,389.7	2.3	2.6	118.04	-1,073.5	2,015.9	2,303.2	2,298.2	4.97	463.833	
1,181.1	1,181.1	1,553.2	1,549.4	2.5	3.1	118.01	-1,061.3	1,995.4	2,291.2	2,285.6	5.59	410.175	
1,200.0	1,200.0	1,584.5	1,580.3	2.6	3.2	118.01	-1,059.0	1,990.7	2,288.1	2,282.3	5.72	399.777	
1,279.5	1,279.5	1,931.6	1,918.3	2.7	4.5	-146.85	-1,029.6	1,918.8	2,272.5	2,265.9	6.59	345.053	
1,300.0	1,300.0	2,011.8	1,994.9	2.8	4.9	-146.90	-1,020.2	1,896.8	2,266.9	2,260.1	6.84	331.606	
1,377.9	1,377.8	2,111.2	2,089.0	2.9	5.4	-147.14	-1,007.5	1,867.5	2,244.9	2,237.7	7.24	309.964	
1,400.0	1,399.8	2,130.5	2,107.3	3.0	5.5	-147.21	-1,005.1	1,861.8	2,239.0	2,231.7	7.33	305.287	
1,476.4	1,475.9	2,190.9	2,164.6	3.1	5.9	-147.45	-997.7	1,844.1	2,219.9	2,212.3	7.63	290.774	
1,500.0	1,499.5	2,209.6	2,182.3	3.2	5.9	-147.53	-995.5	1,838.6	2,214.5	2,206.7	7.73	286.596	
1,574.8	1,573.7	2,280.8	2,250.0	3.4	6.3	-147.77	-987.0	1,818.1	2,198.3	2,190.3	8.06	272.710	
1,600.0	1,598.7	2,306.0	2,273.9	3.4	6.5	-147.86	-983.9	1,810.9	2,193.3	2,185.1	8.18	268.237	
1,673.2	1,671.1	2,393.0	2,356.4	3.6	7.0	-148.15	-972.7	1,785.6	2,179.2	2,170.6	8.57	254.269	
1,700.0	1,697.5	2,421.5	2,383.5	3.7	7.1	-148.26	-969.0	1,777.2	2,174.3	2,165.6	8.71	249.770	
1,771.6	1,767.9	2,479.0	2,437.9	3.9	7.5	-148.50	-961.9	1,760.4	2,162.6	2,153.6	9.02	239.651	
1,800.0	1,795.6	2,503.8	2,461.5	4.0	7.6	-148.60	-958.9	1,753.2	2,158.5	2,149.3	9.15	235.809	
1,870.1	1,864.0	2,564.0	2,518.7	4.3	7.9	-148.85	-951.5	1,736.1	2,149.6	2,140.1	9.48	226.682	
1,900.0	1,893.1	2,586.3	2,539.9	4.4	8.1	-148.95	-948.7	1,729.8	2,146.4	2,136.8	9.61	223.256	
1,968.5	1,959.3	2,650.0	2,600.6	4.6	8.4	-149.21	-940.9	1,712.2	2,140.3	2,130.3	9.96	214.858	
1,992.4	1,982.4	2,669.4	2,619.1	4.7	8.5	-149.30	-938.5	1,706.8	2,138.6	2,128.5	10.08	212.240	
2,000.0	1,989.6	2,678.0	2,627.3	4.8	8.6	-149.33	-937.4	1,704.5	2,138.0	2,127.9	10.12	211.214	
2,066.9	2,054.0	2,747.5	2,693.5	5.1	9.0	-149.58	-928.8	1,685.2	2,133.2	2,122.7	10.52	202.726	
2,100.0	2,085.8	2,771.9	2,716.8	5.2	9.1	-149.67	-925.6	1,678.5	2,130.9	2,120.2	10.69	199.367	
2,165.3	2,148.7	2,821.0	2,763.7	5.5	9.4	-149.85	-919.3	1,665.4	2,126.8	2,115.8	11.03	192.865	
2,200.0	2,182.0	2,865.3	2,806.0	5.7	9.6	-150.03	-913.3	1,653.8	2,124.7	2,113.4	11.26	188.634	
2,263.8	2,243.4	2,939.8	2,877.1	6.0	10.1	-150.34	-902.6	1,634.1	2,120.4	2,108.7	11.68	181.575	
2,300.0	2,278.2	2,976.9	2,912.4	6.2	10.3	-150.50	-897.1	1,624.3	2,117.9	2,106.0	11.90	177.964	
2,362.2	2,338.1	3,016.7	2,950.3	6.5	10.5	-150.67	-891.3	1,613.8	2,113.9	2,101.7	12.22	173.027	
2,400.0	2,374.4	3,036.4	2,969.2	6.7	10.6	-150.75	-888.6	1,608.8	2,111.8	2,099.4	12.40	170.351	
2,460.6	2,432.8	3,077.0	3,008.2	7.0	10.9	-150.91	-883.6	1,598.7	2,109.3	2,096.6	12.71	165.923	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
2,500.0	2,470.6	3,095.9	3,026.4	7.2	10.9	-150.98	-881.5	1,594.1	2,108.0	2,095.1	12.90	163.462	
2,559.0	2,527.4	3,145.8	3,074.5	7.6	11.2	-151.17	-875.8	1,582.1	2,106.4	2,093.2	13.23	159.224	
2,600.0	2,566.8	3,196.3	3,123.3	7.8	11.5	-151.36	-870.1	1,570.1	2,105.3	2,091.8	13.50	155.909	
2,657.5	2,622.1	3,273.0	3,197.0	8.1	11.9	-151.65	-861.0	1,551.1	2,103.3	2,089.4	13.91	151.217	
2,700.0	2,663.0	3,314.5	3,236.9	8.3	12.1	-151.82	-855.8	1,540.8	2,101.6	2,087.5	14.17	148.322	
2,755.9	2,716.8	3,361.5	3,282.1	8.6	12.4	-152.01	-849.7	1,529.4	2,099.6	2,085.1	14.49	144.895	
2,800.0	2,759.2	3,395.3	3,314.6	8.9	12.5	-152.15	-845.6	1,521.2	2,098.3	2,083.5	14.73	142.406	
2,854.3	2,811.5	3,436.4	3,354.2	9.2	12.8	-152.31	-840.8	1,511.4	2,096.9	2,081.9	15.03	139.486	
2,900.0	2,855.4	3,470.3	3,387.0	9.4	12.9	-152.44	-837.0	1,503.4	2,096.0	2,080.8	15.28	137.167	
2,952.7	2,906.2	3,517.4	3,432.5	9.7	13.2	-152.61	-832.1	1,492.5	2,095.4	2,079.8	15.59	134.412	
3,000.0	2,951.6	3,608.6	3,520.4	10.0	13.7	-152.95	-822.0	1,470.4	2,094.2	2,078.2	16.00	130.918	
3,051.2	3,000.9	3,687.4	3,596.0	10.3	14.1	-153.25	-812.6	1,450.3	2,092.1	2,075.8	16.39	127.627	
3,100.0	3,047.8	3,749.2	3,655.1	10.5	14.5	-153.49	-805.1	1,433.9	2,089.7	2,073.0	16.74	124.865	
3,149.6	3,095.5	3,804.7	3,708.1	10.8	14.8	-153.69	-798.5	1,418.9	2,087.1	2,070.0	17.06	122.301	
3,200.0	3,144.0	3,859.3	3,760.3	11.1	15.1	-153.89	-792.1	1,403.9	2,084.2	2,066.8	17.39	119.822	
3,248.0	3,190.2	3,911.3	3,809.9	11.4	15.4	-154.07	-786.0	1,389.4	2,081.5	2,063.8	17.71	117.537	
3,300.0	3,240.2	3,958.8	3,855.1	11.7	15.7	-154.24	-780.5	1,376.3	2,078.4	2,060.4	18.02	115.316	
3,346.4	3,284.9	3,996.5	3,891.2	11.9	15.9	-154.38	-776.0	1,365.9	2,075.9	2,057.6	18.29	113.486	
3,400.0	3,336.4	4,073.8	3,964.9	12.2	16.4	-154.67	-766.7	1,344.8	2,073.1	2,054.4	18.69	110.889	
3,444.9	3,379.6	4,122.7	4,011.3	12.5	16.7	-154.84	-760.7	1,330.8	2,070.0	2,051.1	18.99	109.006	
3,500.0	3,432.6	4,157.9	4,044.9	12.8	16.9	-154.99	-756.1	1,321.1	2,066.7	2,047.5	19.28	107.176	
3,543.3	3,474.3	4,189.0	4,074.6	13.1	17.1	-155.12	-751.6	1,313.0	2,064.5	2,045.0	19.52	105.749	
3,600.0	3,528.8	4,270.0	4,151.7	13.4	17.6	-155.52	-738.9	1,291.9	2,061.5	2,041.6	19.95	103.336	
3,641.7	3,569.0	4,312.7	4,192.3	13.6	17.8	-155.73	-731.9	1,280.6	2,059.0	2,038.8	20.22	101.834	
3,700.0	3,625.0	4,388.5	4,264.3	14.0	18.3	-156.11	-719.5	1,260.3	2,055.5	2,034.8	20.64	99.575	
3,740.1	3,663.6	4,468.4	4,339.7	14.2	18.8	-156.46	-707.3	1,237.0	2,052.2	2,031.2	21.02	97.642	
3,800.0	3,721.2	4,531.0	4,398.7	14.5	19.2	-156.72	-698.5	1,217.9	2,046.8	2,025.4	21.41	95.588	
3,838.6	3,758.3	4,555.1	4,421.4	14.8	19.4	-156.81	-695.3	1,210.5	2,043.5	2,021.9	21.62	94.534	
3,900.0	3,817.4	4,587.6	4,452.2	15.1	19.6	-156.93	-691.2	1,200.8	2,039.0	2,017.0	21.92	92.999	
3,937.0	3,853.0	4,617.0	4,480.1	15.3	19.8	-157.04	-687.6	1,192.5	2,036.7	2,014.5	22.14	92.000	
4,000.0	3,913.6	4,651.5	4,513.0	15.7	20.0	-157.18	-683.5	1,182.9	2,033.3	2,010.8	22.45	90.555	
4,035.4	3,947.7	4,678.8	4,539.1	15.9	20.1	-157.28	-680.1	1,175.5	2,031.6	2,009.0	22.65	89.685	
4,100.0	4,009.8	4,755.5	4,612.3	16.3	20.6	-157.60	-670.2	1,154.9	2,028.7	2,005.6	23.09	87.846	
4,133.8	4,042.4	4,788.0	4,643.2	16.5	20.8	-157.74	-665.8	1,146.0	2,026.9	2,003.6	23.30	86.975	
4,200.0	4,106.0	4,823.6	4,677.2	16.8	21.0	-157.90	-661.0	1,136.5	2,024.0	2,000.4	23.63	85.638	
4,232.3	4,137.1	4,838.2	4,691.2	17.0	21.1	-157.96	-659.0	1,132.8	2,023.0	1,999.3	23.79	85.046	
4,300.0	4,202.2	4,873.0	4,724.6	17.4	21.3	-158.12	-654.4	1,124.5	2,021.9	1,997.8	24.12	83.828	
4,330.7	4,231.7	4,906.1	4,756.6	17.6	21.5	-158.27	-650.0	1,116.8	2,021.7	1,997.4	24.32	83.139	
4,400.0	4,298.4	5,044.0	4,888.6	18.0	22.3	-158.89	-631.3	1,082.0	2,019.5	1,994.6	24.95	80.943	
4,429.1	4,326.4	5,077.9	4,920.9	18.2	22.5	-159.04	-626.4	1,072.7	2,018.0	1,992.9	25.15	80.245	
4,500.0	4,394.6	5,130.0	4,970.7	18.6	22.8	-159.27	-619.7	1,058.9	2,015.3	1,989.8	25.54	78.897	
4,527.5	4,421.1	5,130.0	4,970.7	18.7	22.8	-159.27	-619.7	1,058.9	2,014.5	1,988.9	25.64	78.574	
4,600.0	4,490.8	5,185.1	5,023.6	19.2	23.1	-159.49	-613.3	1,045.0	2,013.1	1,987.0	26.04	77.313	
4,626.0	4,515.8	5,215.0	5,052.4	19.3	23.2	-159.61	-609.9	1,037.7	2,012.8	1,986.6	26.21	76.801	
4,656.6	4,545.2	5,215.0	5,052.4	19.5	23.2	-159.61	-609.9	1,037.7	2,012.6	1,986.3	26.31	76.486	
4,700.0	4,587.0	5,215.0	5,052.4	19.8	23.2	-159.61	-609.9	1,037.7	2,013.1	1,986.6	26.46	76.073	
4,713.5	4,600.0	5,243.4	5,079.9	19.8	23.4	-159.72	-606.9	1,031.2	2,012.9	1,986.4	26.58	75.727	
4,724.4	4,610.5	5,248.0	5,084.3	19.9	23.4	-159.73	-606.4	1,030.2	2,013.1	1,986.5	26.63	75.594	
4,800.0	4,683.2	5,301.0	5,136.0	20.3	23.6	-159.94	-601.3	1,019.4	2,015.5	1,988.5	27.03	74.579	
4,822.8	4,705.2	5,301.0	5,136.0	20.5	23.6	-159.94	-601.3	1,019.4	2,016.3	1,989.2	27.10	74.393	
4,900.0	4,779.4	5,326.2	5,160.6	20.9	23.7	-160.04	-599.0	1,014.8	2,020.6	1,993.2	27.43	73.670	
4,921.2	4,799.8	5,336.9	5,171.2	21.0	23.8	-160.08	-598.0	1,013.0	2,022.0	1,994.5	27.53	73.461	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,000.0	4,875.6	5,386.0	5,219.4	21.5	24.0	-160.27	-593.8	1,005.2	2,028.4	2,000.5	27.91	72.676	
5,019.7	4,894.5	5,387.0	5,220.4	21.6	24.0	-160.27	-593.7	1,005.0	2,030.2	2,002.3	27.98	72.560	
5,100.0	4,971.8	5,466.3	5,298.6	22.1	24.2	-160.58	-587.0	993.3	2,037.9	2,009.5	28.44	71.665	
5,118.1	4,989.2	5,472.0	5,304.2	22.2	24.3	-160.60	-586.5	992.5	2,039.7	2,011.2	28.51	71.539	
5,200.0	5,068.0	5,537.2	5,368.5	22.7	24.5	-160.85	-581.3	983.2	2,048.1	2,019.2	28.94	70.782	
5,216.5	5,083.9	5,557.0	5,388.1	22.8	24.6	-160.92	-579.8	980.5	2,050.0	2,021.0	29.04	70.600	
5,240.0	5,106.5	5,557.0	5,388.1	22.9	24.6	-160.92	-579.8	980.5	2,052.7	2,023.6	29.12	70.499	
5,300.0	5,164.4	5,604.5	5,435.1	23.2	24.7	-161.12	-576.6	974.4	2,059.3	2,029.9	29.42	69.991	
5,314.9	5,178.8	5,614.5	5,445.0	23.3	24.7	-161.17	-576.0	973.2	2,060.9	2,031.4	29.49	69.891	
5,400.0	5,261.5	5,676.8	5,506.7	23.6	24.9	-161.39	-572.7	965.9	2,069.0	2,039.2	29.85	69.310	
5,413.4	5,274.6	5,687.4	5,517.3	23.6	24.9	-161.42	-572.2	964.7	2,070.2	2,040.3	29.91	69.220	
5,500.0	5,359.5	5,756.6	5,586.0	23.9	25.1	-161.61	-569.6	957.0	2,076.5	2,046.3	30.25	68.646	
5,511.8	5,371.1	5,766.0	5,595.4	24.0	25.2	-161.63	-569.3	956.0	2,077.3	2,047.0	30.29	68.573	
5,600.0	5,458.0	5,831.7	5,660.6	24.2	25.3	-161.76	-567.3	949.2	2,081.7	2,051.1	30.59	68.052	
5,610.2	5,468.2	5,838.1	5,667.0	24.3	25.3	-161.77	-567.2	948.6	2,082.1	2,051.5	30.62	68.003	
5,700.0	5,557.2	5,899.0	5,727.7	24.5	25.5	-161.87	-565.8	943.2	2,085.2	2,054.3	30.87	67.555	
5,708.6	5,565.7	5,899.0	5,727.7	24.5	25.5	-161.87	-565.8	943.2	2,085.4	2,054.5	30.88	67.541	
5,800.0	5,656.7	5,972.1	5,800.5	24.7	25.6	-161.93	-564.7	937.8	2,086.9	2,055.8	31.10	67.099	
5,807.1	5,663.7	5,972.1	5,800.5	24.7	25.6	-161.93	-564.7	937.8	2,087.0	2,055.8	31.11	67.089	
5,900.0	5,756.5	6,023.4	5,851.8	24.9	25.7	-161.94	-564.5	934.7	2,086.9	2,055.7	31.25	66.791	
5,905.5	5,761.9	6,026.3	5,854.7	24.9	25.7	-161.94	-564.6	934.6	2,086.9	2,055.6	31.25	66.777	
6,000.0	5,856.4	6,070.0	5,898.3	25.0	25.8	-161.92	-565.3	932.7	2,085.8	2,054.5	31.33	66.567	
6,003.9	5,860.3	6,070.0	5,898.3	25.0	25.8	-161.92	-565.3	932.7	2,085.8	2,054.5	31.33	66.566	
6,032.5	5,888.9	6,070.0	5,898.3	25.0	25.8	102.89	-565.3	932.7	2,085.5	2,035.9	49.55	42.085	
6,062.5	5,918.9	6,104.8	5,933.1	25.1	25.8	102.92	-566.1	931.8	2,084.8	2,035.2	49.62	42.014	
6,100.0	5,966.4	6,122.4	5,950.7	25.1	25.8	12.95	-566.5	931.6	2,083.7	2,052.4	31.22	66.751	
6,102.3	5,958.7	6,123.5	5,951.8	25.1	25.8	12.96	-566.5	931.5	2,083.5	2,052.3	31.20	66.783	
6,150.0	6,006.2	6,156.0	5,984.3	25.1	25.9	13.07	-567.2	931.7	2,079.7	2,048.9	30.82	67.471	
6,200.0	6,055.6	6,182.5	6,010.8	25.1	25.9	13.23	-567.7	932.0	2,072.9	2,042.6	30.30	68.419	
6,200.8	6,056.3	6,183.2	6,011.5	25.1	25.9	13.23	-567.7	932.0	2,072.7	2,042.4	30.29	68.434	
6,250.0	6,104.3	6,229.2	6,057.5	25.0	25.9	13.49	-568.0	932.8	2,062.8	2,033.1	29.68	69.496	
6,299.2	6,151.3	6,279.4	6,107.6	24.9	26.0	13.84	-567.8	933.8	2,049.7	2,020.7	28.98	70.716	
6,300.0	6,152.1	6,280.2	6,108.4	24.9	26.0	13.85	-567.8	933.8	2,049.4	2,020.5	28.97	70.736	
6,350.0	6,198.7	6,327.0	6,155.2	24.8	26.0	14.30	-567.8	934.6	2,032.8	2,004.6	28.17	72.161	
6,397.6	6,241.9	6,367.0	6,195.3	24.7	26.0	14.84	-567.9	935.3	2,014.0	1,986.7	27.33	73.682	
6,400.0	6,244.1	6,368.8	6,197.1	24.7	26.0	14.87	-567.9	935.4	2,013.0	1,985.7	27.29	73.761	
6,450.0	6,287.8	6,412.0	6,240.2	24.5	26.1	15.59	-568.3	936.2	1,990.4	1,964.0	26.38	75.452	
6,496.0	6,326.5	6,443.8	6,272.0	24.4	26.1	16.36	-568.7	936.9	1,967.0	1,941.5	25.52	77.067	
6,500.0	6,329.7	6,447.0	6,275.2	24.4	26.1	16.44	-568.8	936.9	1,964.9	1,939.5	25.45	77.197	
6,550.0	6,369.6	6,487.3	6,315.5	24.3	26.1	17.51	-569.6	937.7	1,936.7	1,912.1	24.60	78.729	
6,594.5	6,403.3	6,522.0	6,350.2	24.2	26.1	18.66	-570.4	938.4	1,909.3	1,885.4	23.95	79.722	
6,600.0	6,407.3	6,526.2	6,354.4	24.2	26.1	18.81	-570.5	938.5	1,905.8	1,881.9	23.88	79.809	
6,650.0	6,442.7	6,563.0	6,391.2	24.1	26.2	20.41	-571.4	939.1	1,872.4	1,849.0	23.39	80.055	
6,692.9	6,471.0	6,592.4	6,420.6	24.0	26.2	22.04	-572.3	939.6	1,841.9	1,818.6	23.24	79.246	
6,700.0	6,475.5	6,597.1	6,425.2	24.0	26.2	22.34	-572.4	939.7	1,836.7	1,813.4	23.25	79.001	
6,750.0	6,505.6	6,628.3	6,456.4	24.0	26.2	24.71	-573.3	940.1	1,798.8	1,775.2	23.60	76.212	
6,791.3	6,528.3	6,651.9	6,480.0	24.0	26.2	27.07	-574.1	940.5	1,766.1	1,741.7	24.38	72.450	
6,800.0	6,532.8	6,656.6	6,484.7	24.0	26.2	27.62	-574.2	940.6	1,759.0	1,734.4	24.60	71.506	
6,850.0	6,557.0	6,682.6	6,510.7	24.1	26.2	31.24	-575.0	941.0	1,717.5	1,691.1	26.39	65.092	
6,889.7	6,574.1	6,701.5	6,529.6	24.2	26.3	34.76	-575.6	941.2	1,683.4	1,655.0	28.44	59.200	
6,900.0	6,578.1	6,706.0	6,534.1	24.3	26.3	35.78	-575.8	941.3	1,674.5	1,645.5	29.05	57.637	
6,950.0	6,596.1	6,725.9	6,554.0	24.5	26.3	41.44	-576.4	941.5	1,630.2	1,597.6	32.60	50.011	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
6,988.2	6,607.5	6,738.7	6,566.7	24.7	26.3	46.68	-576.8	941.7	1,595.7	1,559.8	35.83	44.532	
7,000.0	6,610.7	6,742.2	6,570.2	24.8	26.3	48.48	-577.0	941.7	1,584.9	1,548.0	36.90	42.950	
7,050.0	6,621.9	6,754.7	6,582.8	25.1	26.3	57.05	-577.4	941.8	1,538.7	1,497.1	41.62	36.969	
7,086.6	6,628.0	6,761.2	6,589.3	25.4	26.3	64.23	-577.6	941.9	1,504.6	1,459.6	44.97	33.454	
7,100.0	6,629.7	6,763.1	6,591.2	25.6	26.3	67.03	-577.7	941.9	1,492.0	1,445.9	46.10	32.364	
7,150.0	6,634.1	6,768.0	6,596.0	26.0	26.3	78.04	-577.8	942.0	1,445.0	1,395.5	49.53	29.176	
7,185.0	6,635.1	6,769.3	6,597.4	26.4	26.3	85.91	-577.9	942.0	1,412.1	1,361.1	50.93	27.724	
7,196.6	6,635.0	6,769.4	6,597.4	26.5	26.3	88.47	-577.9	942.0	1,401.2	1,350.0	51.19	27.371	
7,200.0	6,635.0	6,769.4	6,597.4	26.6	26.3	88.47	-577.9	942.0	1,398.0	1,346.8	51.23	27.288	
7,283.4	6,633.9	6,769.2	6,597.2	27.6	26.3	88.44	-577.9	942.0	1,319.9	1,267.6	52.26	25.257	
7,300.0	6,633.7	6,769.1	6,597.1	27.8	26.3	88.44	-577.9	942.0	1,304.5	1,252.0	52.46	24.865	
7,381.9	6,632.6	6,768.9	6,596.9	29.0	26.3	88.41	-577.9	942.0	1,228.7	1,175.0	53.65	22.902	
7,400.0	6,632.4	6,768.8	6,596.9	29.2	26.3	88.41	-577.9	942.0	1,212.0	1,158.1	53.91	22.481	
7,480.3	6,631.4	6,768.6	6,596.7	30.5	26.3	88.38	-577.8	942.0	1,138.6	1,083.4	55.23	20.617	
7,500.0	6,631.1	6,768.6	6,596.6	30.9	26.3	88.38	-577.8	942.0	1,120.8	1,065.2	55.55	20.176	
7,578.7	6,630.1	6,768.4	6,596.4	32.3	26.3	88.35	-577.8	942.0	1,050.1	993.2	56.97	18.434	
7,600.0	6,629.8	6,768.3	6,596.4	32.7	26.3	88.34	-577.8	942.0	1,031.2	973.9	57.35	17.982	
7,677.1	6,628.9	6,768.1	6,596.2	34.1	26.3	88.32	-577.8	942.0	963.5	904.7	58.84	16.376	
7,700.0	6,628.6	6,768.1	6,596.1	34.6	26.3	88.31	-577.8	942.0	943.8	884.5	59.28	15.920	
7,775.6	6,627.6	6,767.9	6,595.9	36.1	26.3	88.29	-577.8	942.0	879.4	818.6	60.83	14.458	
7,800.0	6,627.3	6,767.8	6,595.8	36.6	26.3	88.28	-577.8	942.0	859.0	797.7	61.33	14.007	
7,874.0	6,626.3	6,767.6	6,595.6	38.2	26.3	88.26	-577.8	942.0	798.6	735.7	62.91	12.694	
7,900.0	6,626.0	6,767.5	6,595.6	38.8	26.3	88.25	-577.8	942.0	777.9	714.5	63.47	12.257	
7,972.4	6,625.1	6,767.3	6,595.4	40.4	26.3	88.23	-577.8	942.0	722.2	657.1	65.08	11.097	
8,000.0	6,624.7	6,767.3	6,595.3	41.0	26.3	88.22	-577.8	942.0	701.7	636.0	65.69	10.682	
8,070.8	6,623.8	6,767.1	6,595.1	42.6	26.3	88.20	-577.8	942.0	651.7	584.3	67.31	9.681	
8,100.0	6,623.4	6,767.0	6,595.0	43.3	26.3	88.19	-577.8	942.0	632.2	564.2	67.98	9.300	
8,169.3	6,622.6	6,766.8	6,594.9	44.9	26.3	88.17	-577.8	942.0	589.2	519.6	69.61	8.465	
8,200.0	6,622.2	6,766.8	6,594.8	45.6	26.3	88.16	-577.8	942.0	571.8	501.5	70.33	8.130	
8,267.7	6,621.3	6,766.6	6,594.6	47.3	26.3	88.14	-577.8	942.0	537.6	465.7	71.95	7.472	
8,300.0	6,620.9	6,766.5	6,594.5	48.0	26.3	88.13	-577.8	942.0	523.6	450.9	72.73	7.200	
8,366.1	6,620.0	6,766.3	6,594.4	49.7	26.3	88.11	-577.8	942.0	500.3	426.0	74.34	6.730	
8,400.0	6,619.6	6,766.2	6,594.3	50.5	26.3	88.10	-577.8	942.0	491.4	416.2	75.17	6.537	
8,464.5	6,618.8	6,766.1	6,594.1	52.1	26.3	88.08	-577.8	942.0	480.6	403.8	76.76	6.260	
8,500.0	6,618.3	6,766.0	6,594.0	53.0	26.3	88.06	-577.8	942.0	478.2	400.6	77.64	6.159	
8,513.7	6,618.1	6,765.9	6,594.0	53.3	26.3	88.06	-577.8	942.0	478.0	400.0	77.99	6.130 CC, ES	
8,563.0	6,617.5	6,765.8	6,593.8	54.5	26.3	88.05	-577.8	942.0	480.6	401.3	79.22	6.066	
8,600.0	6,617.0	6,765.7	6,593.7	55.5	26.3	88.03	-577.7	941.9	485.7	405.6	80.15	6.061 SF	
8,661.4	6,616.3	6,765.6	6,593.6	57.0	26.3	88.01	-577.7	941.9	500.3	418.6	81.71	6.123	
8,700.0	6,615.8	6,765.5	6,593.5	58.0	26.3	88.00	-577.7	941.9	513.0	430.4	82.68	6.205	
8,759.8	6,615.0	6,765.3	6,593.3	59.5	26.3	87.98	-577.7	941.9	537.7	453.4	84.21	6.384	
8,800.0	6,614.5	6,765.2	6,593.2	60.6	26.3	87.97	-577.7	941.9	557.2	471.9	85.24	6.536	
8,858.2	6,613.7	6,765.1	6,593.1	62.1	26.3	87.95	-577.7	941.9	589.2	502.5	86.75	6.793	
8,900.0	6,613.2	6,764.9	6,593.0	63.2	26.3	87.94	-577.7	941.9	614.6	526.8	87.82	6.998	
8,956.7	6,612.5	6,764.8	6,592.8	64.6	26.3	87.92	-577.7	941.9	651.7	562.4	89.29	7.298	
9,000.0	6,611.9	6,764.7	6,592.7	65.8	26.3	87.91	-577.7	941.9	681.9	591.5	90.42	7.541	
9,055.1	6,611.2	6,764.5	6,592.6	67.2	26.3	87.89	-577.7	941.9	722.2	630.3	91.86	7.862	
9,100.0	6,610.6	6,764.4	6,592.5	68.4	26.3	87.88	-577.7	941.9	756.4	663.4	93.03	8.131	
9,153.5	6,609.9	6,764.3	6,592.3	69.8	26.3	87.86	-577.7	941.9	798.6	704.2	94.44	8.456	
9,200.0	6,609.3	6,764.2	6,592.2	71.0	26.3	87.85	-577.7	941.9	836.3	740.7	95.66	8.742	
9,251.9	6,608.7	6,764.0	6,592.1	72.4	26.3	87.83	-577.7	941.9	879.5	782.4	97.04	9.063	
9,300.0	6,608.1	6,763.9	6,592.0	73.7	26.3	87.82	-577.7	941.9	920.2	821.9	98.31	9.360	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,350.4	6,607.4	6,763.8	6,591.8	75.0	26.3	87.80	-577.7	941.9	963.6	863.9	99.64	9.670	
9,400.0	6,606.8	6,763.7	6,591.7	76.3	26.3	87.79	-577.7	941.9	1,007.0	906.0	100.96	9.974	
9,448.8	6,606.1	6,763.5	6,591.6	77.6	26.3	87.77	-577.7	941.9	1,050.2	947.9	102.26	10.270	
9,500.0	6,605.5	6,763.4	6,591.4	79.0	26.3	87.76	-577.7	941.9	1,096.0	992.4	103.62	10.577	
9,547.2	6,604.9	6,763.3	6,591.3	80.2	26.3	87.74	-577.7	941.9	1,138.7	1,033.8	104.89	10.856	
9,600.0	6,604.2	6,763.2	6,591.2	81.7	26.3	87.72	-577.7	941.9	1,186.8	1,080.5	106.30	11.165	
9,645.6	6,603.6	6,763.0	6,591.1	82.9	26.3	87.71	-577.7	941.9	1,228.7	1,121.2	107.52	11.428	
9,700.0	6,602.9	6,762.9	6,590.9	84.3	26.3	87.69	-577.7	941.9	1,279.0	1,170.0	108.98	11.736	
9,744.1	6,602.3	6,762.8	6,590.8	85.5	26.3	87.68	-577.6	941.9	1,319.9	1,209.8	110.16	11.982	
9,800.0	6,601.6	6,762.7	6,590.7	87.0	26.3	87.66	-577.6	941.9	1,372.2	1,260.5	111.67	12.288	
9,842.5	6,601.1	6,762.5	6,590.6	88.2	26.3	87.65	-577.6	941.9	1,412.1	1,299.3	112.81	12.517	
9,900.0	6,600.3	6,762.4	6,590.4	89.7	26.3	87.63	-577.6	941.9	1,466.4	1,352.0	114.36	12.822	
9,940.9	6,599.8	6,762.3	6,590.3	90.9	26.3	87.62	-577.6	941.9	1,505.1	1,389.6	115.47	13.035	
10,000.0	6,599.0	6,762.2	6,590.2	92.5	26.3	87.60	-577.6	941.9	1,561.2	1,444.2	117.07	13.336	
10,039.3	6,598.5	6,762.1	6,590.1	93.5	26.3	87.59	-577.6	941.9	1,598.7	1,480.6	118.13	13.533	
10,100.0	6,597.7	6,761.9	6,589.9	95.2	26.3	87.57	-577.6	941.9	1,656.7	1,536.9	119.78	13.832	
10,137.8	6,597.3	6,761.8	6,589.8	96.2	26.3	87.56	-577.6	941.9	1,692.9	1,572.1	120.80	14.014	
10,200.0	6,596.5	6,761.7	6,589.7	97.9	26.3	87.54	-577.6	941.9	1,752.7	1,630.2	122.49	14.309	
10,236.2	6,596.0	6,761.6	6,589.6	98.9	26.3	87.53	-577.6	941.9	1,787.6	1,664.1	123.47	14.477	
10,300.0	6,595.2	6,761.4	6,589.4	100.6	26.3	87.51	-577.6	941.9	1,849.1	1,723.9	125.21	14.768	
10,334.6	6,594.7	6,761.3	6,589.4	101.6	26.3	87.50	-577.6	941.9	1,882.6	1,756.4	126.15	14.923	
10,400.0	6,593.9	6,761.2	6,589.2	103.3	26.3	87.48	-577.6	941.9	1,945.9	1,818.0	127.93	15.210	
10,433.0	6,593.5	6,761.1	6,589.1	104.2	26.3	87.47	-577.6	941.9	1,977.9	1,849.1	128.83	15.353	
10,500.0	6,592.6	6,760.9	6,588.9	106.1	26.3	87.45	-577.6	941.9	2,043.0	1,912.3	130.66	15.636	
10,531.5	6,592.2	6,760.8	6,588.9	106.9	26.3	87.44	-577.6	941.9	2,073.6	1,942.1	131.52	15.767	
10,600.0	6,591.3	6,760.7	6,588.7	108.8	26.3	87.42	-577.6	941.9	2,140.3	2,006.9	133.39	16.046	
10,629.9	6,590.9	6,760.6	6,588.6	109.6	26.3	87.41	-577.6	941.9	2,169.5	2,035.3	134.21	16.165	
10,700.0	6,590.0	6,760.4	6,588.4	111.6	26.3	87.38	-577.6	941.9	2,237.9	2,101.8	136.12	16.440	
10,728.3	6,589.6	6,760.3	6,588.4	112.3	26.3	87.38	-577.6	941.9	2,265.6	2,128.7	136.90	16.549	
10,800.0	6,588.7	6,760.2	6,588.2	114.3	26.3	87.35	-577.6	941.9	2,335.7	2,196.8	138.86	16.820	
10,826.7	6,588.4	6,760.1	6,588.1	115.0	26.3	87.35	-577.6	941.9	2,361.9	2,222.3	139.59	16.920	
10,900.0	6,587.4	6,759.9	6,587.9	117.0	26.3	87.32	-577.6	941.9	2,433.7	2,292.1	141.60	17.187	
10,925.2	6,587.1	6,759.8	6,587.9	117.7	26.3	87.32	-577.6	941.9	2,458.4	2,316.1	142.29	17.277	
11,000.0	6,586.1	6,759.7	6,587.7	119.8	26.3	87.29	-577.5	941.9	2,531.8	2,387.4	144.34	17.540	
11,023.6	6,585.8	6,759.6	6,587.6	120.4	26.3	87.29	-577.5	941.9	2,555.0	2,410.0	144.99	17.621	
11,100.0	6,584.8	6,759.4	6,587.5	122.5	26.3	87.26	-577.5	941.9	2,630.1	2,483.0	147.09	17.881	
11,122.0	6,584.5	6,759.4	6,587.4	123.2	26.3	87.25	-577.5	941.9	2,651.7	2,504.0	147.70	17.954	
11,200.0	6,583.5	6,759.2	6,587.2	125.3	26.3	87.23	-577.5	941.9	2,728.5	2,578.6	149.84	18.209	
11,220.4	6,583.3	6,759.1	6,587.2	125.9	26.3	87.22	-577.5	941.9	2,748.6	2,598.2	150.40	18.275	
11,300.0	6,582.2	6,758.9	6,587.0	128.1	26.3	87.20	-577.5	941.9	2,827.0	2,674.4	152.59	18.527	
11,318.9	6,582.0	6,758.9	6,586.9	128.6	26.3	87.19	-577.5	941.9	2,845.6	2,692.5	153.11	18.585	
11,400.0	6,580.9	6,758.7	6,586.7	130.8	26.3	87.17	-577.5	941.9	2,925.6	2,770.2	155.34	18.833	
11,417.3	6,580.7	6,758.6	6,586.7	131.3	26.3	87.16	-577.5	941.9	2,942.6	2,786.8	155.82	18.885	
11,500.0	6,579.7	6,758.4	6,586.5	133.6	26.3	87.14	-577.5	941.9	3,024.3	2,866.2	158.10	19.129	
11,515.7	6,579.4	6,758.4	6,586.4	134.0	26.3	87.13	-577.5	941.9	3,039.8	2,881.3	158.53	19.175	
11,600.0	6,578.4	6,758.2	6,586.2	136.3	26.3	87.11	-577.5	941.9	3,123.1	2,962.2	160.85	19.416	
11,614.1	6,578.2	6,755.0	6,583.0	136.7	26.3	86.72	-577.4	941.8	3,137.0	2,975.9	161.18	19.463	
11,700.0	6,577.1	6,755.0	6,583.0	139.1	26.3	86.72	-577.4	941.8	3,221.9	3,058.4	163.55	19.700	
11,712.6	6,576.9	6,755.0	6,583.0	139.5	26.3	86.72	-577.4	941.8	3,234.3	3,070.4	163.90	19.734	
11,800.0	6,575.8	6,755.0	6,583.0	141.9	26.3	86.72	-577.4	941.8	3,320.8	3,154.5	166.32	19.967	
11,811.0	6,575.6	6,755.0	6,583.0	142.2	26.3	86.72	-577.4	941.8	3,331.7	3,165.1	166.62	19.996	
11,858.8	6,575.0	6,755.0	6,583.0	143.5	26.3	86.72	-577.4	941.8	3,379.0	3,211.0	167.94	20.120	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
11,859.3	6,575.0	6,755.0	6,583.0	143.5	26.3	86.72	-577.4	941.8	3,379.6	3,211.6	167.95	20.122	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
0.0	0.0	0.0	0.0	0.0	0.0	108.85	-1,322.2	3,871.9	4,091.4				
98.4	98.4	90.4	90.4	0.1	0.1	108.85	-1,322.2	3,871.9	4,091.4	4,091.2	0.18	N/A	
100.0	100.0	92.0	92.0	0.1	0.1	108.85	-1,322.2	3,871.9	4,091.4	4,091.2	0.18	N/A	
196.8	196.8	188.8	188.8	0.3	0.2	108.85	-1,322.2	3,871.9	4,091.4	4,090.9	0.49	8,347.998	
200.0	200.0	192.0	192.0	0.3	0.2	108.85	-1,322.2	3,871.9	4,091.4	4,090.9	0.50	8,181.184	
295.3	295.3	287.3	287.3	0.5	0.3	108.85	-1,322.2	3,871.9	4,091.4	4,090.6	0.80	5,099.248	
300.0	300.0	292.0	292.0	0.5	0.3	108.85	-1,322.2	3,871.9	4,091.4	4,090.6	0.82	5,005.730	
393.7	393.7	385.7	385.7	0.8	0.4	108.85	-1,322.2	3,871.9	4,091.4	4,090.3	1.11	3,670.729	
400.0	400.0	392.0	392.0	0.8	0.4	108.85	-1,322.2	3,871.9	4,091.4	4,090.3	1.13	3,606.067	
492.1	492.1	484.1	484.1	1.0	0.4	108.85	-1,322.2	3,871.9	4,091.4	4,090.0	1.43	2,867.436	
500.0	500.0	492.0	492.0	1.0	0.5	108.85	-1,322.2	3,871.9	4,091.4	4,090.0	1.45	2,818.094	
590.5	590.5	582.5	582.5	1.2	0.5	108.85	-1,322.2	3,871.9	4,091.4	4,089.7	1.74	2,352.600	
600.0	600.0	592.0	592.0	1.2	0.5	108.85	-1,322.2	3,871.9	4,091.4	4,089.7	1.77	2,312.731	
689.0	689.0	699.5	699.5	1.4	0.7	108.85	-1,322.0	3,871.9	4,091.4	4,089.2	2.13	1,923.160	
700.0	700.0	718.4	718.4	1.4	0.7	108.85	-1,321.8	3,871.8	4,091.3	4,089.1	2.19	1,864.201	
787.4	787.4	802.1	802.1	1.6	0.9	108.84	-1,321.0	3,871.4	4,090.7	4,088.1	2.56	1,596.717	
800.0	800.0	812.7	812.7	1.7	0.9	108.84	-1,321.0	3,871.4	4,090.6	4,088.0	2.61	1,566.505	
885.8	885.8	899.6	899.6	1.9	1.1	108.85	-1,321.5	3,870.8	4,090.2	4,087.2	2.97	1,377.214	
900.0	900.0	914.9	914.9	1.9	1.1	108.85	-1,321.7	3,870.6	4,090.1	4,087.1	3.03	1,349.662	
944.8	944.8	925.0	925.0	2.0	1.2	108.85	-1,321.7	3,870.6	4,090.0	4,086.9	3.15	1,298.294	
984.2	984.2	953.9	953.9	2.1	1.2	108.86	-1,322.1	3,870.4	4,090.1	4,086.8	3.30	1,240.812	
1,000.0	1,000.0	960.0	960.0	2.1	1.2	108.86	-1,322.2	3,870.4	4,090.2	4,086.8	3.34	1,223.216	
1,082.7	1,082.7	1,018.0	1,018.0	2.3	1.3	108.88	-1,323.6	3,871.1	4,091.5	4,087.9	3.64	1,122.685	
1,100.0	1,100.0	1,018.0	1,018.0	2.3	1.3	108.88	-1,323.6	3,871.1	4,091.8	4,088.1	3.68	1,110.891	
1,181.1	1,181.1	1,036.9	1,036.9	2.5	1.4	108.88	-1,324.3	3,871.5	4,094.0	4,090.1	3.90	1,048.578	
1,200.0	1,200.0	1,048.4	1,048.4	2.6	1.4	108.89	-1,324.7	3,871.8	4,094.7	4,090.7	3.97	1,031.322	
1,279.5	1,279.5	1,111.0	1,110.9	2.7	1.5	-155.86	-1,327.4	3,873.5	4,098.8	4,094.5	4.27	960.028	
1,300.0	1,300.0	1,111.0	1,110.9	2.8	1.5	-155.85	-1,327.4	3,873.5	4,100.2	4,095.9	4.31	950.668	
1,377.9	1,377.8	1,156.5	1,156.2	2.9	1.6	-155.78	-1,329.8	3,875.0	4,107.5	4,102.9	4.57	899.112	
1,400.0	1,399.8	1,169.8	1,169.5	3.0	1.7	-155.76	-1,330.6	3,875.5	4,109.9	4,105.3	4.64	885.519	
1,476.4	1,475.9	1,218.8	1,218.4	3.1	1.8	-155.66	-1,334.0	3,877.3	4,120.1	4,115.2	4.90	840.053	
1,500.0	1,499.5	1,241.7	1,241.2	3.2	1.8	-155.62	-1,335.7	3,878.2	4,123.7	4,118.7	5.00	824.111	
1,574.8	1,573.7	1,330.4	1,329.5	3.4	2.0	-155.49	-1,343.4	3,881.2	4,136.2	4,130.9	5.36	771.750	
1,600.0	1,598.7	1,401.0	1,399.6	3.4	2.2	-155.41	-1,351.4	3,882.3	4,140.6	4,135.0	5.57	742.778	
1,673.2	1,671.1	1,445.6	1,443.9	3.6	2.3	-155.26	-1,357.1	3,882.6	4,154.3	4,148.4	5.84	711.050	
1,700.0	1,697.5	1,461.5	1,459.7	3.7	2.4	-155.20	-1,359.2	3,882.8	4,159.8	4,153.9	5.94	700.455	
1,771.6	1,767.9	1,513.4	1,511.0	3.9	2.5	-155.03	-1,366.1	3,883.6	4,176.1	4,169.8	6.23	670.272	
1,800.0	1,795.6	1,546.3	1,543.6	4.0	2.6	-154.95	-1,370.6	3,884.1	4,182.9	4,176.5	6.38	655.688	
1,870.1	1,864.0	1,653.3	1,649.5	4.3	2.9	-154.73	-1,386.3	3,884.8	4,200.7	4,193.9	6.83	614.724	
1,900.0	1,893.1	1,684.0	1,679.8	4.4	3.0	-154.64	-1,391.1	3,884.6	4,208.6	4,201.6	6.99	602.490	
1,968.5	1,959.3	1,712.7	1,708.2	4.6	3.1	-154.45	-1,395.7	3,884.6	4,227.8	4,220.6	7.24	584.166	
1,992.4	1,982.4	1,721.0	1,716.3	4.7	3.1	-154.38	-1,397.1	3,884.6	4,235.0	4,227.7	7.32	578.585	
2,000.0	1,989.6	1,723.6	1,718.9	4.8	3.2	-154.38	-1,397.5	3,884.6	4,237.4	4,230.0	7.35	576.621	
2,066.9	2,054.0	1,763.0	1,757.7	5.1	3.3	-154.36	-1,404.1	3,885.2	4,258.4	4,250.7	7.66	555.856	
2,100.0	2,085.8	1,763.0	1,757.7	5.2	3.3	-154.36	-1,404.1	3,885.2	4,268.9	4,261.1	7.75	550.546	
2,165.3	2,148.7	1,790.6	1,784.9	5.5	3.4	-154.34	-1,409.0	3,885.9	4,290.1	4,282.1	8.04	533.853	
2,200.0	2,182.0	1,809.7	1,803.7	5.7	3.4	-154.33	-1,412.5	3,886.4	4,301.5	4,293.3	8.21	524.149	
2,263.8	2,243.4	1,858.0	1,851.0	6.0	3.6	-154.29	-1,422.0	3,887.6	4,322.8	4,314.3	8.56	505.058	
2,300.0	2,278.2	1,870.2	1,862.9	6.2	3.7	-154.28	-1,424.5	3,887.9	4,335.0	4,326.3	8.71	497.527	
2,362.2	2,338.1	1,934.3	1,925.6	6.5	3.9	-154.21	-1,437.7	3,889.6	4,356.0	4,346.9	9.12	477.396	
2,400.0	2,374.4	2,008.9	1,998.6	6.7	4.2	-154.14	-1,453.6	3,891.0	4,368.7	4,359.2	9.50	459.661	
2,460.6	2,432.8	2,079.1	2,066.9	7.0	4.5	-154.04	-1,469.7	3,891.3	4,388.4	4,378.4	9.96	440.684	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
2,500.0	2,470.6	2,105.8	2,092.8	7.2	4.6	-154.00	-1,475.9	3,891.3	4,401.3	4,391.1	10.19	431.944		
2,559.0	2,527.4	2,237.0	2,220.5	7.6	5.1	-153.83	-1,506.0	3,891.5	4,420.7	4,409.8	10.86	406.984		
2,600.0	2,566.8	2,267.8	2,250.5	7.8	5.3	-153.79	-1,512.9	3,891.2	4,433.5	4,422.4	11.12	398.789		
2,657.5	2,622.1	2,309.1	2,290.7	8.1	5.4	-153.73	-1,522.5	3,890.8	4,451.7	4,440.2	11.47	388.094		
2,700.0	2,663.0	2,332.0	2,312.9	8.3	5.5	-153.70	-1,528.1	3,890.6	4,465.2	4,453.5	11.70	381.537		
2,755.9	2,716.8	2,368.7	2,348.4	8.6	5.7	-153.64	-1,537.4	3,890.2	4,483.2	4,471.1	12.06	371.715		
2,800.0	2,759.2	2,392.9	2,371.7	8.9	5.8	-153.60	-1,543.7	3,890.0	4,497.5	4,485.2	12.32	364.995		
2,854.3	2,811.5	2,427.0	2,404.6	9.2	6.0	-153.53	-1,552.9	3,889.7	4,515.5	4,502.8	12.67	356.524		
2,900.0	2,855.4	2,472.6	2,448.5	9.4	6.2	-153.45	-1,565.5	3,889.4	4,530.7	4,517.6	13.02	347.858		
2,952.7	2,906.2	2,522.0	2,496.0	9.7	6.5	-153.36	-1,578.9	3,888.9	4,548.1	4,534.7	13.43	338.749		
3,000.0	2,951.6	2,566.6	2,539.0	10.0	6.7	-153.28	-1,590.8	3,888.6	4,563.7	4,549.9	13.77	331.385		
3,051.2	3,000.9	2,605.1	2,576.1	10.3	6.8	-153.21	-1,600.8	3,888.5	4,580.7	4,566.6	14.11	324.708		
3,100.0	3,047.8	2,647.8	2,617.4	10.5	7.0	-153.15	-1,611.7	3,888.6	4,597.0	4,582.6	14.45	318.106		
3,149.6	3,095.5	2,693.8	2,661.9	10.8	7.2	-153.08	-1,623.4	3,888.7	4,613.6	4,598.8	14.81	311.478		
3,200.0	3,144.0	2,734.1	2,700.9	11.1	7.4	-153.02	-1,633.6	3,888.8	4,630.5	4,615.3	15.15	305.550		
3,248.0	3,190.2	2,769.0	2,734.7	11.4	7.5	-152.97	-1,642.3	3,889.0	4,646.7	4,631.2	15.47	300.396		
3,300.0	3,240.2	2,807.2	2,771.7	11.7	7.7	-152.91	-1,651.8	3,889.4	4,664.3	4,648.5	15.81	295.017		
3,346.4	3,284.9	2,859.8	2,822.6	11.9	8.0	-152.84	-1,665.0	3,889.8	4,680.1	4,663.8	16.21	288.785		
3,400.0	3,336.4	2,921.5	2,882.1	12.2	8.3	-152.74	-1,681.1	3,889.9	4,698.1	4,681.5	16.67	281.835		
3,444.9	3,379.6	2,975.3	2,934.0	12.5	8.5	-152.66	-1,695.3	3,889.9	4,713.2	4,696.1	17.07	276.069		
3,500.0	3,432.6	3,029.7	2,986.6	12.8	8.8	-152.57	-1,709.4	3,889.8	4,731.6	4,714.1	17.51	270.260		
3,543.3	3,474.3	3,068.3	3,023.9	13.1	8.9	-152.52	-1,719.0	3,889.9	4,746.0	4,728.2	17.83	266.209		
3,600.0	3,528.8	3,117.7	3,071.9	13.4	9.2	-152.46	-1,731.0	3,890.1	4,765.0	4,746.8	18.24	261.200		
3,641.7	3,569.0	3,153.3	3,106.4	13.6	9.3	-152.41	-1,739.6	3,890.4	4,779.0	4,760.5	18.54	257.702		
3,700.0	3,625.0	3,225.5	3,176.4	14.0	9.7	-152.32	-1,757.1	3,890.9	4,798.6	4,779.5	19.06	251.739		
3,740.1	3,663.6	3,291.2	3,240.2	14.2	10.0	-152.24	-1,772.9	3,890.9	4,811.8	4,792.3	19.49	246.946		
3,800.0	3,721.2	3,341.5	3,289.2	14.5	10.2	-152.19	-1,784.5	3,891.0	4,831.4	4,811.5	19.91	242.666		
3,838.6	3,758.3	3,376.0	3,322.9	14.8	10.3	-152.15	-1,792.0	3,891.3	4,844.1	4,823.9	20.19	239.902		
3,900.0	3,817.4	3,412.3	3,358.3	15.1	10.5	-152.12	-1,799.9	3,891.7	4,864.4	4,843.8	20.56	236.570		
3,937.0	3,853.0	3,435.1	3,380.5	15.3	10.6	-152.10	-1,804.8	3,892.1	4,876.8	4,856.0	20.79	234.583		
4,000.0	3,913.6	3,475.3	3,419.8	15.7	10.8	-152.07	-1,813.7	3,892.8	4,898.0	4,876.8	21.18	231.228		
4,035.4	3,947.7	3,506.4	3,450.0	15.9	10.9	-152.04	-1,820.7	3,893.3	4,910.0	4,888.6	21.44	228.973		
4,100.0	4,009.8	3,702.0	3,639.8	16.3	11.8	-151.80	-1,868.2	3,892.8	4,931.4	4,908.9	22.53	218.870		
4,133.8	4,042.4	3,733.4	3,670.2	16.5	12.0	-151.75	-1,876.0	3,892.1	4,942.1	4,919.3	22.80	216.749		
4,200.0	4,106.0	3,783.6	3,718.8	16.8	12.2	-151.68	-1,888.6	3,891.0	4,962.9	4,939.6	23.28	213.199		
4,232.3	4,137.1	3,805.1	3,739.6	17.0	12.3	-151.65	-1,894.0	3,890.6	4,973.1	4,949.6	23.50	211.639		
4,300.0	4,202.2	3,850.0	3,783.0	17.4	12.5	-151.59	-1,905.3	3,889.9	4,994.8	4,970.8	23.96	208.474		
4,330.7	4,231.7	3,876.1	3,808.3	17.6	12.7	-151.56	-1,911.8	3,889.5	5,004.7	4,980.5	24.19	206.892		
4,400.0	4,298.4	3,934.7	3,865.1	18.0	12.9	-151.49	-1,926.2	3,888.9	5,027.1	5,002.4	24.71	203.445		
4,429.1	4,326.4	3,995.0	3,923.7	18.2	13.2	-151.42	-1,940.7	3,888.4	5,036.5	5,011.4	25.08	200.842		
4,500.0	4,394.6	4,113.4	4,038.8	18.6	13.7	-151.29	-1,967.8	3,886.4	5,058.6	5,032.7	25.84	195.781		
4,527.5	4,421.1	4,146.7	4,071.4	18.7	13.9	-151.26	-1,975.1	3,885.8	5,067.0	5,040.9	26.08	194.304		
4,600.0	4,490.8	4,223.1	4,146.0	19.2	14.2	-151.20	-1,991.1	3,884.8	5,089.2	5,062.6	26.65	190.939		
4,626.0	4,515.8	4,247.6	4,170.1	19.3	14.3	-151.18	-1,995.9	3,884.5	5,097.2	5,070.3	26.85	189.870		
4,700.0	4,587.0	4,315.0	4,236.2	19.8	14.5	-151.14	-2,008.9	3,884.0	5,119.8	5,092.4	27.38	187.005		
4,724.4	4,610.5	4,338.0	4,258.8	19.9	14.6	-151.13	-2,013.1	3,883.9	5,127.3	5,099.7	27.55	186.079		
4,800.0	4,683.2	4,411.4	4,331.0	20.3	14.9	-151.10	-2,026.4	3,883.7	5,150.4	5,122.3	28.10	183.266		
4,822.8	4,705.2	4,433.0	4,352.3	20.5	15.0	-151.09	-2,030.1	3,883.7	5,157.4	5,129.2	28.27	182.462		
4,900.0	4,779.4	4,504.8	4,423.0	20.9	15.3	-151.07	-2,042.4	3,883.8	5,181.1	5,152.2	28.81	179.859		
4,921.2	4,799.8	4,531.5	4,449.3	21.0	15.4	-151.07	-2,046.8	3,883.9	5,187.6	5,158.6	28.97	179.038		
5,000.0	4,875.6	4,650.8	4,567.3	21.5	15.8	-151.06	-2,064.3	3,884.6	5,211.2	5,181.6	29.64	175.815		
5,019.7	4,894.5	4,677.7	4,594.0	21.6	15.8	-151.07	-2,067.8	3,884.8	5,217.1	5,187.3	29.79	175.114		

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST HZ KELLY #B11-63-1HN - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 655-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	4,971.8	4,893.4	4,808.5	22.1	16.4	-151.15	-2,090.7	3,884.4	5,238.9	5,208.3	30.65	170.917	
5,118.1	4,989.2	4,911.7	4,826.7	22.2	16.5	-151.16	-2,092.3	3,884.3	5,243.8	5,213.1	30.76	170.452	
5,200.0	5,068.0	4,998.0	4,912.7	22.7	16.7	-151.21	-2,099.7	3,883.9	5,265.9	5,234.7	31.28	168.357	
5,216.5	5,083.9	5,029.7	4,944.3	22.8	16.8	-151.23	-2,102.1	3,883.8	5,270.3	5,238.9	31.41	167.790	
5,240.0	5,106.5	5,074.9	4,989.4	22.9	16.9	-151.27	-2,105.3	3,883.6	5,276.6	5,245.0	31.60	166.989	
5,300.0	5,164.4	5,141.4	5,055.7	23.2	17.0	-151.46	-2,109.6	3,883.3	5,291.6	5,259.6	32.01	165.335	
5,314.9	5,178.8	5,157.0	5,071.3	23.3	17.0	-151.51	-2,110.5	3,883.2	5,295.2	5,263.1	32.10	164.985	
5,400.0	5,261.5	5,256.7	5,170.8	23.6	17.2	-151.76	-2,115.9	3,882.8	5,314.3	5,281.7	32.61	162.969	
5,413.4	5,274.6	5,272.9	5,187.1	23.6	17.3	-151.80	-2,116.7	3,882.8	5,317.0	5,284.4	32.69	162.668	
5,500.0	5,359.5	5,352.9	5,267.0	23.9	17.4	-152.01	-2,119.9	3,882.8	5,333.7	5,300.6	33.12	161.054	
5,511.8	5,371.1	5,464.0	5,378.1	24.0	17.6	-152.10	-2,122.6	3,882.5	5,335.7	5,302.4	33.33	160.089	
5,600.0	5,458.0	5,533.9	5,448.0	24.2	17.7	-152.27	-2,123.6	3,881.9	5,348.4	5,314.7	33.69	158.750	
5,610.2	5,468.2	5,540.8	5,454.8	24.3	17.7	-152.29	-2,123.7	3,881.8	5,349.8	5,316.1	33.73	158.617	
5,700.0	5,557.2	5,620.5	5,534.6	24.5	17.8	-152.43	-2,124.9	3,881.6	5,360.5	5,326.4	34.07	157.347	
5,708.6	5,565.7	5,629.1	5,543.1	24.5	17.9	-152.44	-2,125.0	3,881.5	5,361.4	5,327.3	34.10	157.230	
5,800.0	5,656.7	5,726.6	5,640.6	24.7	18.0	-152.55	-2,125.8	3,881.5	5,369.4	5,335.0	34.43	155.971	
5,807.1	5,663.7	5,734.3	5,648.4	24.7	18.0	-152.56	-2,125.8	3,881.5	5,370.0	5,335.5	34.45	155.880	
5,900.0	5,756.5	5,844.0	5,758.0	24.9	18.2	-152.63	-2,126.4	3,881.2	5,375.0	5,340.3	34.75	154.662	
5,905.5	5,761.9	5,844.0	5,758.0	24.9	18.2	-152.63	-2,126.4	3,881.2	5,375.3	5,340.5	34.76	154.636	
6,000.0	5,856.4	5,880.9	5,794.9	25.0	18.2	-152.67	-2,126.4	3,881.3	5,378.0	5,343.1	34.92	154.025	
6,003.9	5,860.3	5,882.3	5,796.3	25.0	18.2	-152.67	-2,126.4	3,881.3	5,378.1	5,343.1	34.92	154.003	
6,032.5	5,888.9	5,892.2	5,806.2	25.0	18.2	112.14	-2,126.4	3,881.4	5,378.5	5,341.7	36.80	146.166	
6,062.5	5,918.9	5,902.6	5,816.7	25.1	18.2	112.13	-2,126.4	3,881.6	5,379.0	5,342.2	36.85	145.973	
6,100.0	5,956.4	5,938.0	5,852.0	25.1	18.3	22.14	-2,126.1	3,882.7	5,379.0	5,344.0	35.00	153.684	
6,102.3	5,958.7	5,938.0	5,852.0	25.1	18.3	22.14	-2,126.1	3,882.7	5,378.9	5,343.9	34.99	153.712	
6,150.0	6,006.2	5,938.0	5,852.0	25.1	18.3	22.23	-2,126.1	3,882.7	5,376.1	5,341.3	34.81	154.459	
6,200.0	6,055.6	5,938.0	5,852.0	25.1	18.3	22.40	-2,126.1	3,882.7	5,370.4	5,335.9	34.49	155.699	
6,200.8	6,056.3	5,938.0	5,852.0	25.1	18.3	22.40	-2,126.1	3,882.7	5,370.3	5,335.8	34.49	155.723	
6,250.0	6,104.3	5,938.0	5,852.0	25.0	18.3	22.66	-2,126.1	3,882.7	5,362.0	5,327.9	34.07	157.395	
6,299.2	6,151.3	5,938.0	5,852.0	24.9	18.3	23.01	-2,126.1	3,882.7	5,351.1	5,317.5	33.55	159.491	
6,300.0	6,152.1	5,938.0	5,852.0	24.9	18.3	23.02	-2,126.1	3,882.7	5,350.9	5,317.3	33.54	159.528	
6,350.0	6,198.7	5,938.0	5,852.0	24.8	18.3	23.47	-2,126.1	3,882.7	5,337.1	5,304.1	32.93	162.072	
6,397.6	6,241.9	5,938.0	5,852.0	24.7	18.3	24.00	-2,126.1	3,882.7	5,321.5	5,289.2	32.28	164.840	
6,400.0	6,244.1	5,938.0	5,852.0	24.7	18.3	24.03	-2,126.1	3,882.7	5,320.7	5,288.4	32.25	164.985	
6,450.0	6,287.8	5,938.0	5,852.0	24.5	18.3	24.71	-2,126.1	3,882.7	5,301.7	5,270.2	31.52	168.198	
6,496.0	6,326.5	5,938.0	5,852.0	24.4	18.3	25.45	-2,126.1	3,882.7	5,282.0	5,251.1	30.83	171.338	
6,500.0	6,329.7	5,938.0	5,852.0	24.4	18.3	25.51	-2,126.1	3,882.7	5,280.2	5,249.4	30.77	171.611	
6,550.0	6,369.6	5,938.0	5,852.0	24.3	18.3	26.47	-2,126.1	3,882.7	5,256.3	5,226.2	30.02	175.071	
6,594.5	6,403.3	5,938.0	5,852.0	24.2	18.3	27.46	-2,126.1	3,882.7	5,233.0	5,203.6	29.40	178.018	
6,600.0	6,407.3	5,938.0	5,852.0	24.2	18.3	27.59	-2,126.1	3,882.7	5,230.0	5,200.7	29.32	178.368	
6,650.0	6,442.7	5,983.7	5,897.5	24.1	18.3	29.10	-2,125.0	3,886.4	5,199.6	5,170.8	28.77	180.708	
6,692.9	6,471.0	5,987.1	5,900.9	24.0	18.3	30.45	-2,124.8	3,886.9	5,173.1	5,144.7	28.36	182.380	
6,700.0	6,475.5	5,987.7	5,901.4	24.0	18.3	30.69	-2,124.8	3,886.9	5,168.6	5,140.3	28.31	182.587	
6,750.0	6,505.6	6,033.0	5,946.0	24.0	18.4	32.77	-2,122.5	3,895.1	5,137.1	5,109.0	28.11	182.717	
6,791.3	6,528.3	6,033.0	5,946.0	24.0	18.4	34.58	-2,122.5	3,895.1	5,108.1	5,080.0	28.08	181.940	
6,800.0	6,532.8	6,033.0	5,946.0	24.0	18.4	34.99	-2,122.5	3,895.1	5,101.9	5,073.8	28.09	181.634	
6,850.0	6,557.0	6,033.0	5,946.0	24.1	18.4	37.59	-2,122.5	3,895.1	5,064.9	5,036.5	28.36	178.614	
6,889.7	6,574.1	6,033.0	5,946.0	24.2	18.4	39.98	-2,122.5	3,895.1	5,034.3	5,005.5	28.81	174.724	
6,900.0	6,578.1	6,033.0	5,946.0	24.3	18.4	40.65	-2,122.5	3,895.1	5,026.3	4,997.3	28.96	173.539	
6,950.0	6,596.1	6,033.0	5,946.0	24.5	18.4	44.25	-2,122.5	3,895.1	4,986.3	4,956.3	29.94	166.552	
6,988.2	6,607.5	6,033.0	5,946.0	24.7	18.4	47.43	-2,122.5	3,895.1	4,954.9	4,923.9	30.94	160.162	
7,000.0	6,610.7	6,033.0	5,946.0	24.8	18.4	48.50	-2,122.5	3,895.1	4,945.0	4,913.7	31.28	158.080	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 655-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,050.0	6,621.9	6,033.0	5,946.0	25.1	18.4	53.48	-2,122.5	3,895.1	4,902.6	4,869.6	32.95	148.787		
7,086.6	6,628.0	6,033.0	5,946.0	25.4	18.4	57.63	-2,122.5	3,895.1	4,870.9	4,836.6	34.33	141.897		
7,100.0	6,629.7	6,033.0	5,946.0	25.6	18.4	59.27	-2,122.5	3,895.1	4,859.2	4,824.4	34.84	139.461		
7,150.0	6,634.1	6,033.0	5,946.0	26.0	18.4	65.90	-2,122.5	3,895.1	4,815.1	4,778.4	36.79	130.885		
7,185.0	6,635.1	6,033.0	5,946.0	26.4	18.4	71.02	-2,122.5	3,895.1	4,783.9	4,745.9	38.07	125.676		
7,196.6	6,635.0	6,033.0	5,946.0	26.5	18.4	72.79	-2,122.5	3,895.1	4,773.6	4,735.1	38.45	124.158		
7,200.0	6,635.0	6,033.0	5,946.0	26.6	18.4	72.79	-2,122.5	3,895.1	4,770.5	4,732.0	38.48	123.960		
7,283.4	6,633.9	6,033.0	5,946.0	27.6	18.4	72.79	-2,122.5	3,895.1	4,695.9	4,656.4	39.48	118.953		
7,300.0	6,633.7	6,033.0	5,946.0	27.8	18.4	72.79	-2,122.5	3,895.1	4,681.1	4,641.4	39.67	117.991		
7,381.9	6,632.6	6,033.0	5,946.0	29.0	18.4	72.79	-2,122.5	3,895.1	4,608.2	4,567.4	40.82	112.898		
7,400.0	6,632.4	6,033.0	5,946.0	29.2	18.4	72.79	-2,122.5	3,895.1	4,592.1	4,551.1	41.07	111.809		
7,480.3	6,631.4	6,033.0	5,946.0	30.5	18.4	72.79	-2,122.5	3,895.1	4,521.0	4,478.7	42.34	106.787		
7,500.0	6,631.1	6,033.0	5,946.0	30.9	18.4	72.79	-2,122.5	3,895.1	4,503.6	4,461.0	42.65	105.601		
7,578.7	6,630.1	6,033.0	5,946.0	32.3	18.4	72.79	-2,122.5	3,895.1	4,434.3	4,390.3	44.01	100.760		
7,600.0	6,629.8	6,033.0	5,946.0	32.7	18.4	72.79	-2,122.5	3,895.1	4,415.6	4,371.3	44.38	99.504		
7,677.1	6,628.9	6,033.0	5,946.0	34.1	18.4	72.79	-2,122.5	3,895.1	4,348.1	4,302.3	45.81	94.918		
7,700.0	6,628.6	6,033.0	5,946.0	34.6	18.4	72.79	-2,122.5	3,895.1	4,328.1	4,281.9	46.23	93.615		
7,775.6	6,627.6	6,033.0	5,946.0	36.1	18.4	72.79	-2,122.5	3,895.1	4,262.4	4,214.7	47.72	89.324		
7,800.0	6,627.3	6,033.0	5,946.0	36.6	18.4	72.79	-2,122.5	3,895.1	4,241.2	4,193.0	48.20	87.995		
7,874.0	6,626.3	6,033.0	5,946.0	38.2	18.4	72.79	-2,122.5	3,895.1	4,177.3	4,127.5	49.72	84.016		
7,900.0	6,626.0	6,033.0	5,946.0	38.8	18.4	72.79	-2,122.5	3,895.1	4,154.9	4,104.6	50.25	82.676		
7,972.4	6,625.1	6,033.0	5,946.0	40.4	18.4	72.79	-2,122.5	3,895.1	4,092.7	4,040.9	51.80	79.011		
8,000.0	6,624.7	6,033.0	5,946.0	41.0	18.4	72.79	-2,122.5	3,895.1	4,069.1	4,016.8	52.39	77.674		
8,070.8	6,623.8	6,033.0	5,946.0	42.6	18.4	72.79	-2,122.5	3,895.1	4,008.8	3,954.9	53.94	74.314		
8,100.0	6,623.4	6,033.0	5,946.0	43.3	18.4	72.79	-2,122.5	3,895.1	3,984.1	3,929.5	54.58	72.989		
8,169.3	6,622.6	6,033.0	5,946.0	44.9	18.4	72.79	-2,122.5	3,895.1	3,925.6	3,869.4	56.15	69.918		
8,200.0	6,622.2	6,033.0	5,946.0	45.6	18.4	72.79	-2,122.5	3,895.1	3,899.7	3,842.9	56.84	68.612		
8,267.7	6,621.3	6,033.0	5,946.0	47.3	18.4	72.79	-2,122.5	3,895.1	3,843.1	3,784.7	58.39	65.812		
8,300.0	6,620.9	6,033.0	5,946.0	48.0	18.4	72.79	-2,122.5	3,895.1	3,816.1	3,757.0	59.14	64.530		
8,366.1	6,620.0	6,033.0	5,946.0	49.7	18.4	72.79	-2,122.5	3,895.1	3,761.3	3,700.6	60.68	61.981		
8,400.0	6,619.6	6,033.0	5,946.0	50.5	18.4	72.79	-2,122.5	3,895.1	3,733.4	3,671.9	61.48	60.727		
8,464.5	6,618.8	6,033.0	5,946.0	52.1	18.4	72.79	-2,122.5	3,895.1	3,680.4	3,617.4	63.01	58.409		
8,500.0	6,618.3	6,033.0	5,946.0	53.0	18.4	72.79	-2,122.5	3,895.1	3,651.4	3,587.6	63.85	57.185		
8,563.0	6,617.5	6,033.0	5,946.0	54.5	18.4	72.79	-2,122.5	3,895.1	3,600.3	3,534.9	65.37	55.078		
8,600.0	6,617.0	6,033.0	5,946.0	55.5	18.4	72.80	-2,122.5	3,895.1	3,570.4	3,504.2	66.26	53.887		
8,661.4	6,616.3	6,033.0	5,946.0	57.0	18.4	72.80	-2,122.5	3,895.1	3,521.2	3,453.4	67.75	51.973		
8,700.0	6,615.8	6,033.0	5,946.0	58.0	18.4	72.80	-2,122.5	3,895.1	3,490.4	3,421.7	68.69	50.814		
8,759.8	6,615.0	6,070.5	5,982.1	59.5	18.4	73.72	-2,119.6	3,904.6	3,442.1	3,371.6	70.50	48.828		
8,800.0	6,614.5	6,073.0	5,984.5	60.6	18.4	73.78	-2,119.4	3,905.4	3,410.4	3,338.9	71.51	47.693		
8,858.2	6,613.7	6,076.8	5,988.1	62.1	18.4	73.87	-2,119.1	3,906.5	3,364.8	3,291.8	72.99	46.099		
8,900.0	6,613.2	6,079.6	5,990.8	63.2	18.4	73.94	-2,118.8	3,907.3	3,332.2	3,258.2	74.05	44.998		
8,956.7	6,612.5	6,083.6	5,994.6	64.6	18.4	74.03	-2,118.5	3,908.5	3,288.4	3,212.9	75.51	43.549		
9,000.0	6,611.9	6,086.7	5,997.5	65.8	18.4	74.11	-2,118.2	3,909.5	3,255.2	3,178.6	76.63	42.482		
9,055.1	6,611.2	6,090.9	6,001.5	67.2	18.4	74.21	-2,117.7	3,910.8	3,213.3	3,135.2	78.06	41.167		
9,100.0	6,610.6	6,129.0	6,037.0	68.4	18.4	75.13	-2,113.5	3,923.9	3,180.1	3,100.6	79.54	39.983		
9,153.5	6,609.9	6,129.0	6,037.0	69.8	18.4	75.13	-2,113.5	3,923.9	3,139.9	3,059.0	80.90	38.811		
9,200.0	6,609.3	6,129.0	6,037.0	71.0	18.4	75.13	-2,113.5	3,923.9	3,105.2	3,023.2	82.09	37.829		
9,251.9	6,608.7	6,129.0	6,037.0	72.4	18.4	75.13	-2,113.5	3,923.9	3,066.9	2,983.5	83.42	36.766		
9,300.0	6,608.1	6,129.0	6,037.0	73.7	18.4	75.13	-2,113.5	3,923.9	3,031.8	2,947.2	84.65	35.817		
9,350.4	6,607.4	6,129.0	6,037.0	75.0	18.4	75.13	-2,113.5	3,923.9	2,995.4	2,909.5	85.95	34.853		
9,400.0	6,606.8	6,129.0	6,037.0	76.3	18.4	75.13	-2,113.5	3,923.9	2,960.0	2,872.8	87.22	33.936		
9,448.8	6,606.1	6,129.0	6,037.0	77.6	18.4	75.13	-2,113.5	3,923.9	2,925.5	2,837.0	88.48	33.063		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,500.0	6,605.5	6,129.0	6,037.0	79.0	18.4	75.13	-2,113.5	3,923.9	2,889.8	2,800.0	89.81	32.178	
9,547.2	6,604.9	6,129.0	6,037.0	80.2	18.4	75.13	-2,113.5	3,923.9	2,857.3	2,766.2	91.03	31.388	
9,600.0	6,604.2	6,129.0	6,037.0	81.7	18.4	75.13	-2,113.5	3,923.9	2,821.4	2,729.0	92.40	30.535	
9,645.6	6,603.6	6,129.0	6,037.0	82.9	18.4	75.13	-2,113.5	3,923.9	2,790.8	2,697.3	93.59	29.821	
9,700.0	6,602.9	6,129.0	6,037.0	84.3	18.4	75.13	-2,113.5	3,923.9	2,755.0	2,660.0	95.00	28.999	
9,744.1	6,602.3	6,129.0	6,037.0	85.5	18.4	75.13	-2,113.5	3,923.9	2,726.3	2,630.2	96.15	28.355	
9,800.0	6,601.6	6,163.2	6,068.2	87.0	18.4	75.94	-2,109.7	3,937.3	2,689.8	2,591.9	97.98	27.452	
9,842.5	6,601.1	6,168.0	6,072.6	88.2	18.4	76.05	-2,109.2	3,939.2	2,662.9	2,563.8	99.15	26.858	
9,900.0	6,600.3	6,174.7	6,078.6	89.7	18.4	76.21	-2,108.5	3,942.0	2,627.1	2,526.4	100.73	26.080	
9,940.9	6,599.8	6,179.5	6,083.0	90.9	18.4	76.33	-2,108.0	3,944.0	2,602.1	2,500.2	101.86	25.545	
10,000.0	6,599.0	6,186.7	6,089.5	92.5	18.4	76.50	-2,107.3	3,947.0	2,566.5	2,463.1	103.50	24.798	
10,039.3	6,598.5	6,223.0	6,121.9	93.5	18.4	77.36	-2,104.1	3,963.0	2,544.0	2,439.1	104.92	24.247	
10,100.0	6,597.7	6,223.0	6,121.9	95.2	18.4	77.36	-2,104.1	3,963.0	2,508.7	2,402.1	106.53	23.549	
10,137.8	6,597.3	6,223.0	6,121.9	96.2	18.4	77.36	-2,104.1	3,963.0	2,487.2	2,379.6	107.53	23.129	
10,200.0	6,596.5	6,223.0	6,121.9	97.9	18.4	77.36	-2,104.1	3,963.0	2,452.6	2,343.4	109.19	22.463	
10,236.2	6,596.0	6,223.0	6,121.9	98.9	18.4	77.36	-2,104.1	3,963.0	2,433.0	2,322.9	110.15	22.088	
10,300.0	6,595.2	6,223.0	6,121.9	100.6	18.4	77.36	-2,104.1	3,963.0	2,399.4	2,287.6	111.85	21.452	
10,334.6	6,594.7	6,223.0	6,121.9	101.6	18.4	77.36	-2,104.1	3,963.0	2,381.7	2,268.9	112.77	21.120	
10,400.0	6,593.9	6,223.0	6,121.9	103.3	18.4	77.36	-2,104.1	3,963.0	2,349.3	2,234.8	114.52	20.515	
10,433.0	6,593.5	6,223.0	6,121.9	104.2	18.4	77.36	-2,104.1	3,963.0	2,333.4	2,218.0	115.40	20.221	
10,500.0	6,592.6	6,223.0	6,121.9	106.1	18.4	77.36	-2,104.1	3,963.0	2,302.4	2,185.2	117.19	19.647	
10,531.5	6,592.2	6,223.0	6,121.9	106.9	18.4	77.36	-2,104.1	3,963.0	2,288.3	2,170.3	118.03	19.388	
10,600.0	6,591.3	6,223.0	6,121.9	108.8	18.4	77.36	-2,104.1	3,963.0	2,259.0	2,139.1	119.86	18.847	
10,629.9	6,590.9	6,259.9	6,154.3	109.6	18.5	78.24	-2,101.8	3,980.5	2,245.4	2,124.2	121.12	18.539	
10,700.0	6,590.0	6,268.0	6,161.3	111.6	18.5	78.43	-2,101.5	3,984.6	2,217.3	2,094.2	123.10	18.012	
10,728.3	6,589.6	6,271.3	6,164.2	112.3	18.5	78.51	-2,101.3	3,986.3	2,206.4	2,082.5	123.90	17.808	
10,800.0	6,588.7	6,280.1	6,171.6	114.3	18.5	78.72	-2,101.1	3,990.8	2,180.2	2,054.3	125.94	17.312	
10,826.7	6,588.4	6,318.0	6,203.5	115.0	18.6	79.61	-2,100.9	4,011.3	2,172.0	2,044.9	127.10	17.090	
10,900.0	6,587.4	6,318.0	6,203.5	117.0	18.6	79.61	-2,100.9	4,011.3	2,147.5	2,018.4	129.08	16.637	
10,925.2	6,587.1	6,318.0	6,203.5	117.7	18.6	79.61	-2,100.9	4,011.3	2,139.5	2,009.8	129.76	16.488	
11,000.0	6,586.1	6,318.0	6,203.5	119.8	18.6	79.61	-2,100.9	4,011.3	2,117.5	1,985.8	131.78	16.068	
11,023.6	6,585.8	6,318.0	6,203.5	120.4	18.6	79.61	-2,100.9	4,011.3	2,111.1	1,978.7	132.42	15.942	
11,100.0	6,584.8	6,318.0	6,203.5	122.5	18.6	79.61	-2,100.9	4,011.3	2,092.0	1,957.5	134.49	15.554	
11,122.0	6,584.5	6,318.0	6,203.5	123.2	18.6	79.61	-2,100.9	4,011.3	2,087.0	1,951.9	135.09	15.448	
11,200.0	6,583.5	6,346.5	6,226.8	125.3	18.7	80.26	-2,101.4	4,027.7	2,070.5	1,932.9	137.58	15.049	
11,220.4	6,583.3	6,351.7	6,231.0	125.9	18.7	80.38	-2,101.6	4,030.8	2,066.6	1,928.4	138.21	14.953	
11,300.0	6,582.2	6,372.8	6,247.9	128.1	18.7	80.86	-2,102.2	4,043.4	2,053.0	1,912.3	140.64	14.598	
11,318.9	6,582.0	6,378.0	6,252.0	128.6	18.8	80.97	-2,102.4	4,046.6	2,050.1	1,908.9	141.21	14.518	
11,400.0	6,580.9	6,413.0	6,279.2	130.8	18.9	81.75	-2,103.8	4,068.7	2,039.4	1,895.6	143.85	14.178	
11,417.3	6,580.7	6,413.0	6,279.2	131.3	18.9	81.75	-2,103.8	4,068.7	2,037.4	1,893.1	144.32	14.118	
11,500.0	6,579.7	6,534.0	6,365.9	133.6	19.4	84.22	-2,104.5	4,152.8	2,027.5	1,879.4	148.11	13.690	
11,515.7	6,579.4	6,540.2	6,370.1	134.0	19.4	84.34	-2,104.4	4,157.4	2,025.8	1,877.2	148.62	13.631	
11,600.0	6,578.4	6,575.3	6,392.4	136.3	19.6	84.98	-2,104.1	4,184.4	2,018.0	1,866.6	151.39	13.330	
11,614.1	6,578.2	6,581.4	6,396.2	136.7	19.6	85.09	-2,104.0	4,189.3	2,016.9	1,865.1	151.85	13.282	
11,700.0	6,577.1	6,603.0	6,409.1	139.1	19.7	85.47	-2,104.0	4,206.6	2,011.9	1,857.4	154.48	13.023	
11,712.6	6,576.9	6,603.0	6,409.1	139.5	19.7	85.47	-2,104.0	4,206.6	2,011.4	1,856.6	154.83	12.991	
11,800.0	6,575.8	6,645.6	6,433.3	141.9	20.1	86.17	-2,104.6	4,241.7	2,009.2	1,851.3	157.87	12.727	
11,811.0	6,575.6	6,649.1	6,435.2	142.2	20.1	86.22	-2,104.8	4,244.6	2,009.1	1,850.9	158.22	12.698	
11,820.8	6,575.5	6,652.3	6,436.9	142.5	20.1	86.27	-2,104.9	4,247.2	2,009.1	1,850.6	158.54	12.673 CC	
11,858.8	6,575.0	6,664.6	6,443.5	143.5	20.2	86.47	-2,105.4	4,257.6	2,009.4	1,849.6	159.76	12.577	
11,859.3	6,575.0	6,664.8	6,443.6	143.5	20.2	86.47	-2,105.4	4,257.8	2,009.4	1,849.6	159.78	12.576 ES, SF	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
0.0	0.0	0.0	0.0	0.0	0.0	108.55	-1,299.6	3,872.2	4,084.4				
98.4	98.4	91.4	91.4	0.1	0.1	108.55	-1,299.6	3,872.2	4,084.4	4,084.3	0.18	N/A	
100.0	100.0	93.0	93.0	0.1	0.1	108.55	-1,299.6	3,872.2	4,084.4	4,084.3	0.18	N/A	
196.8	196.8	189.8	189.8	0.3	0.2	108.55	-1,299.6	3,872.2	4,084.4	4,083.9	0.49	8,333.609	
200.0	200.0	193.0	193.0	0.3	0.2	108.55	-1,299.6	3,872.2	4,084.4	4,083.9	0.50	8,167.334	
295.3	295.3	288.3	288.3	0.5	0.3	108.55	-1,299.6	3,872.2	4,084.4	4,083.6	0.80	5,093.509	
300.0	300.0	293.0	293.0	0.5	0.3	108.55	-1,299.6	3,872.2	4,084.4	4,083.6	0.82	5,000.182	
393.7	393.7	386.7	386.7	0.8	0.4	108.55	-1,299.6	3,872.2	4,084.4	4,083.3	1.11	3,667.563	
400.0	400.0	393.0	393.0	0.8	0.4	108.55	-1,299.6	3,872.2	4,084.4	4,083.3	1.13	3,603.000	
492.1	492.1	485.1	485.1	1.0	0.4	108.55	-1,299.6	3,872.2	4,084.4	4,083.0	1.43	2,865.388	
500.0	500.0	493.0	493.0	1.0	0.5	108.55	-1,299.6	3,872.2	4,084.4	4,083.0	1.45	2,816.106	
590.5	590.5	583.5	583.5	1.2	0.5	108.55	-1,299.6	3,872.2	4,084.4	4,082.7	1.74	2,351.142	
600.0	600.0	593.0	593.0	1.2	0.5	108.55	-1,299.6	3,872.2	4,084.4	4,082.7	1.77	2,311.316	
638.2	638.2	631.2	631.2	1.3	0.6	108.55	-1,299.6	3,872.2	4,084.4	4,082.5	1.89	2,163.086	
689.0	689.0	673.0	673.0	1.4	0.6	108.55	-1,299.7	3,872.2	4,084.5	4,082.4	2.07	1,972.487	
700.0	700.0	681.3	681.3	1.4	0.7	108.56	-1,299.8	3,872.2	4,084.5	4,082.4	2.11	1,933.832	
787.4	787.4	756.0	756.0	1.6	0.8	108.57	-1,301.1	3,872.1	4,084.9	4,082.5	2.46	1,661.666	
800.0	800.0	769.0	769.0	1.7	0.8	108.58	-1,301.3	3,872.1	4,085.0	4,082.5	2.51	1,625.580	
885.8	885.8	854.7	854.7	1.9	1.0	108.59	-1,302.4	3,872.3	4,085.5	4,082.6	2.88	1,418.363	
900.0	900.0	868.3	868.3	1.9	1.0	108.59	-1,302.5	3,872.3	4,085.6	4,082.7	2.94	1,389.565	
984.2	984.2	1,017.7	1,017.7	2.1	1.4	108.60	-1,303.3	3,872.0	4,085.7	4,082.2	3.44	1,188.708	
1,000.0	1,000.0	1,031.8	1,031.8	2.1	1.4	108.60	-1,303.2	3,871.9	4,085.5	4,082.0	3.50	1,166.404	
1,082.7	1,082.7	1,107.6	1,107.5	2.3	1.5	108.60	-1,302.7	3,871.4	4,084.8	4,081.0	3.85	1,060.654	
1,100.0	1,100.0	1,126.6	1,126.5	2.3	1.6	108.60	-1,302.6	3,871.3	4,084.7	4,080.8	3.93	1,039.030	
1,181.1	1,181.1	1,215.2	1,215.1	2.5	1.8	108.59	-1,301.8	3,870.7	4,083.9	4,079.6	4.31	948.576	
1,200.0	1,200.0	1,235.6	1,235.5	2.6	1.8	108.59	-1,301.6	3,870.5	4,083.8	4,079.4	4.39	929.793	
1,234.7	1,234.7	1,273.1	1,273.0	2.6	1.9	-156.23	-1,301.2	3,870.3	4,083.6	4,079.0	4.55	898.472	
1,279.5	1,279.5	1,315.2	1,315.1	2.7	2.0	-156.23	-1,300.7	3,869.9	4,083.9	4,079.2	4.73	864.034	
1,300.0	1,300.0	1,332.6	1,332.5	2.8	2.0	-156.24	-1,300.5	3,869.8	4,084.3	4,079.5	4.80	850.106	
1,377.9	1,377.8	1,399.7	1,399.6	2.9	2.2	-156.24	-1,300.0	3,869.4	4,087.1	4,082.0	5.09	802.503	
1,400.0	1,399.8	1,419.8	1,419.8	3.0	2.2	-156.23	-1,299.9	3,869.3	4,088.3	4,083.1	5.18	789.996	
1,476.4	1,475.9	1,489.7	1,489.6	3.1	2.3	-156.23	-1,299.7	3,868.9	4,093.6	4,088.2	5.46	749.145	
1,500.0	1,499.5	1,511.5	1,511.5	3.2	2.4	-156.22	-1,299.7	3,868.8	4,095.7	4,090.1	5.55	737.314	
1,574.8	1,573.7	1,580.4	1,580.4	3.4	2.5	-156.20	-1,299.6	3,868.5	4,103.4	4,097.6	5.85	702.015	
1,600.0	1,598.7	1,603.2	1,603.1	3.4	2.6	-156.20	-1,299.6	3,868.5	4,106.5	4,100.5	5.94	691.079	
1,673.2	1,671.1	1,670.0	1,669.9	3.6	2.7	-156.17	-1,299.7	3,868.3	4,116.5	4,110.3	6.23	660.709	
1,700.0	1,697.5	1,697.0	1,696.9	3.7	2.8	-156.16	-1,299.8	3,868.2	4,120.6	4,114.3	6.34	649.951	
1,771.6	1,767.9	1,764.0	1,763.9	3.9	2.9	-156.13	-1,300.1	3,868.0	4,132.7	4,126.1	6.63	623.415	
1,800.0	1,795.6	1,790.8	1,790.8	4.0	3.0	-156.11	-1,300.3	3,867.9	4,138.0	4,131.2	6.74	613.576	
1,870.1	1,864.0	1,842.9	1,842.8	4.3	3.1	-156.04	-1,301.3	3,867.6	4,152.2	4,145.2	7.01	592.493	
1,900.0	1,893.1	1,865.8	1,865.8	4.4	3.1	-156.01	-1,302.0	3,867.5	4,158.8	4,151.7	7.12	583.967	
1,968.5	1,959.3	1,923.0	1,922.9	4.6	3.2	-155.93	-1,304.0	3,867.2	4,175.2	4,167.8	7.40	563.967	
1,992.4	1,982.4	1,942.9	1,942.7	4.7	3.3	-155.90	-1,304.8	3,867.1	4,181.3	4,173.8	7.50	557.446	
2,000.0	1,989.6	1,954.0	1,953.9	4.8	3.3	-155.91	-1,305.3	3,867.0	4,183.2	4,175.7	7.54	554.474	
2,066.9	2,054.0	1,992.3	1,992.1	5.1	3.4	-155.94	-1,307.1	3,866.9	4,200.7	4,192.9	7.82	537.256	
2,100.0	2,085.8	2,012.9	2,012.7	5.2	3.4	-155.96	-1,308.3	3,866.8	4,209.5	4,201.5	7.95	529.286	
2,165.3	2,148.7	2,048.0	2,047.7	5.5	3.5	-155.99	-1,310.3	3,866.8	4,227.0	4,218.8	8.22	514.528	
2,200.0	2,182.0	2,080.9	2,080.6	5.7	3.6	-156.01	-1,312.5	3,866.8	4,236.4	4,228.0	8.39	504.727	
2,263.8	2,243.4	2,128.7	2,128.3	6.0	3.7	-156.04	-1,315.9	3,866.9	4,253.9	4,245.2	8.69	489.512	
2,300.0	2,278.2	2,144.0	2,143.5	6.2	3.7	-156.05	-1,317.0	3,867.0	4,264.0	4,255.1	8.83	482.650	
2,362.2	2,338.1	2,198.0	2,197.3	6.5	3.8	-156.08	-1,321.3	3,867.2	4,281.3	4,272.2	9.15	468.048	
2,400.0	2,374.4	2,224.0	2,223.3	6.7	3.9	-156.09	-1,323.5	3,867.4	4,292.0	4,282.7	9.32	460.349	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
2,460.6	2,432.8	2,263.7	2,262.8	7.0	4.0	-156.10	-1,327.0	3,867.8	4,309.4	4,299.7	9.61	448.611	
2,500.0	2,470.6	2,288.7	2,287.7	7.2	4.1	-156.11	-1,329.4	3,868.1	4,320.7	4,311.0	9.79	441.375	
2,559.0	2,527.4	2,333.0	2,331.7	7.6	4.2	-156.12	-1,333.9	3,868.6	4,338.0	4,328.0	10.08	430.283	
2,600.0	2,566.8	2,351.5	2,350.1	7.8	4.2	-156.13	-1,335.9	3,868.9	4,350.2	4,339.9	10.26	424.021	
2,657.5	2,622.1	2,386.5	2,384.9	8.1	4.3	-156.13	-1,340.0	3,869.5	4,367.4	4,356.9	10.53	414.669	
2,700.0	2,663.0	2,428.0	2,426.0	8.3	4.4	-156.13	-1,345.0	3,870.3	4,380.4	4,369.6	10.77	406.633	
2,755.9	2,716.8	2,449.0	2,446.9	8.6	4.5	-156.13	-1,347.8	3,870.7	4,397.5	4,386.5	11.01	399.384	
2,800.0	2,759.2	2,479.7	2,477.3	8.9	4.5	-156.12	-1,351.9	3,871.4	4,411.2	4,400.0	11.24	392.614	
2,854.3	2,811.5	2,523.0	2,520.1	9.2	4.7	-156.11	-1,357.9	3,872.3	4,428.2	4,416.7	11.53	384.133	
2,900.0	2,855.4	2,568.8	2,565.5	9.4	4.8	-156.10	-1,364.9	3,873.2	4,442.5	4,430.7	11.80	376.393	
2,952.7	2,906.2	2,634.1	2,629.7	9.7	5.0	-156.06	-1,375.8	3,874.0	4,459.0	4,446.8	12.16	366.759	
3,000.0	2,951.6	2,695.3	2,689.9	10.0	5.2	-156.00	-1,387.2	3,874.1	4,473.5	4,461.0	12.50	358.014	
3,051.2	3,000.9	2,739.1	2,732.9	10.3	5.3	-155.95	-1,395.9	3,873.9	4,489.2	4,476.4	12.80	350.786	
3,100.0	3,047.8	2,773.7	2,766.8	10.5	5.4	-155.92	-1,402.7	3,873.8	4,504.2	4,491.2	13.07	344.733	
3,149.6	3,095.5	2,814.7	2,807.0	10.8	5.5	-155.88	-1,410.7	3,873.9	4,519.7	4,506.3	13.35	338.436	
3,200.0	3,144.0	2,902.0	2,892.7	11.1	5.8	-155.79	-1,427.3	3,873.6	4,534.9	4,521.2	13.77	329.248	
3,248.0	3,190.2	2,934.3	2,924.4	11.4	5.9	-155.76	-1,433.5	3,873.4	4,549.5	4,535.4	14.04	324.021	
3,300.0	3,240.2	2,958.4	2,948.0	11.7	6.0	-155.74	-1,438.2	3,873.4	4,565.5	4,551.2	14.30	319.353	
3,346.4	3,284.9	2,997.0	2,985.8	11.9	6.1	-155.70	-1,445.9	3,873.5	4,580.1	4,565.5	14.58	314.178	
3,400.0	3,336.4	3,012.4	3,001.0	12.2	6.2	-155.68	-1,449.0	3,873.7	4,597.1	4,582.3	14.81	310.327	
3,444.9	3,379.6	3,055.1	3,042.8	12.5	6.3	-155.65	-1,457.4	3,874.1	4,611.4	4,596.3	15.10	305.317	
3,500.0	3,432.6	3,117.0	3,103.6	12.8	6.5	-155.60	-1,468.9	3,875.0	4,629.0	4,613.5	15.48	298.966	
3,543.3	3,474.3	3,183.3	3,168.8	13.1	6.7	-155.55	-1,480.7	3,875.7	4,642.6	4,626.8	15.82	293.373	
3,600.0	3,528.8	3,233.4	3,218.2	13.4	6.9	-155.52	-1,489.2	3,876.3	4,660.4	4,644.2	16.17	288.239	
3,641.7	3,569.0	3,269.1	3,253.4	13.6	7.0	-155.50	-1,495.1	3,876.8	4,673.4	4,657.0	16.42	284.655	
3,700.0	3,625.0	3,309.9	3,293.7	14.0	7.1	-155.49	-1,501.6	3,877.6	4,691.8	4,675.1	16.74	280.310	
3,740.1	3,663.6	3,335.8	3,319.3	14.2	7.2	-155.48	-1,505.3	3,878.3	4,704.6	4,687.6	16.95	277.529	
3,800.0	3,721.2	3,377.0	3,360.1	14.5	7.3	-155.48	-1,510.9	3,879.6	4,723.8	4,706.5	17.28	273.421	
3,838.6	3,758.3	3,515.6	3,497.8	14.8	7.7	-155.51	-1,526.2	3,883.6	4,735.5	4,717.8	17.75	266.803	
3,900.0	3,817.4	3,691.2	3,673.0	15.1	8.1	-155.64	-1,537.4	3,887.9	4,753.6	4,735.3	18.33	259.300	
3,937.0	3,853.0	3,754.5	3,736.2	15.3	8.2	-155.72	-1,539.1	3,889.1	4,763.8	4,745.3	18.58	256.393	
4,000.0	3,913.6	3,884.7	3,866.4	15.7	8.4	-155.90	-1,539.3	3,890.9	4,780.4	4,761.4	19.02	251.389	
4,035.4	3,947.7	3,923.0	3,904.7	15.9	8.5	-155.96	-1,539.2	3,891.3	4,789.6	4,770.4	19.20	249.405	
4,100.0	4,009.8	3,984.3	3,966.0	16.3	8.6	-156.04	-1,539.4	3,891.7	4,806.2	4,786.7	19.54	246.017	
4,133.8	4,042.4	4,014.2	3,996.0	16.5	8.7	-156.08	-1,539.5	3,891.9	4,815.0	4,795.3	19.71	244.320	
4,200.0	4,106.0	4,088.0	4,069.7	16.8	8.8	-156.18	-1,539.8	3,892.4	4,832.1	4,812.1	20.07	240.760	
4,232.3	4,137.1	4,130.4	4,112.1	17.0	8.9	-156.23	-1,540.1	3,892.5	4,840.4	4,820.1	20.26	238.927	
4,300.0	4,202.2	4,188.0	4,169.7	17.4	9.0	-156.31	-1,540.7	3,892.6	4,857.7	4,837.1	20.60	235.771	
4,330.7	4,231.7	4,213.2	4,194.9	17.6	9.1	-156.34	-1,541.0	3,892.7	4,865.6	4,844.9	20.76	234.394	
4,400.0	4,298.4	4,326.0	4,307.7	18.0	9.3	-156.47	-1,542.7	3,892.4	4,883.2	4,862.0	21.21	230.229	
4,429.1	4,326.4	4,351.1	4,332.8	18.2	9.3	-156.49	-1,543.0	3,892.2	4,890.5	4,869.1	21.36	228.948	
4,500.0	4,394.6	4,405.7	4,387.4	18.6	9.4	-156.55	-1,543.9	3,891.8	4,908.3	4,886.5	21.71	226.041	
4,527.5	4,421.1	4,428.7	4,410.4	18.7	9.5	-156.58	-1,544.3	3,891.7	4,915.2	4,893.4	21.85	224.911	
4,600.0	4,490.8	4,500.7	4,482.3	19.2	9.6	-156.67	-1,544.8	3,891.6	4,933.5	4,911.3	22.24	221.846	
4,626.0	4,515.8	4,526.4	4,508.1	19.3	9.7	-156.70	-1,544.6	3,891.7	4,940.1	4,917.7	22.38	220.784	
4,700.0	4,587.0	4,600.1	4,581.8	19.8	9.8	-156.80	-1,544.3	3,891.8	4,958.8	4,936.0	22.76	217.851	
4,724.4	4,610.5	4,708.5	4,690.1	19.9	10.0	-156.94	-1,544.2	3,890.9	4,964.8	4,941.7	23.03	215.535	
4,800.0	4,683.2	4,786.7	4,768.4	20.3	10.2	-157.03	-1,544.0	3,889.5	4,982.6	4,959.1	23.44	212.576	
4,822.8	4,705.2	4,810.8	4,792.5	20.5	10.2	-157.06	-1,544.0	3,889.0	4,987.9	4,964.4	23.56	211.689	
4,900.0	4,779.4	4,894.5	4,876.2	20.9	10.4	-157.16	-1,544.0	3,887.2	5,006.0	4,982.0	23.99	208.693	
4,921.2	4,799.8	4,912.1	4,893.7	21.0	10.4	-157.18	-1,544.1	3,886.8	5,010.9	4,986.8	24.09	207.968	
5,000.0	4,875.6	4,975.9	4,957.5	21.5	10.5	-157.25	-1,544.3	3,885.5	5,029.4	5,004.9	24.49	205.368	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 645-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,894.5	4,991.0	4,972.6	21.6	10.6	-157.27	-1,544.3	3,885.2	5,034.0	5,009.5	24.59	204.745	
5,100.0	4,971.8	5,058.3	5,039.9	22.1	10.7	-157.35	-1,544.4	3,884.1	5,053.2	5,028.2	24.99	202.205	
5,118.1	4,989.2	5,073.3	5,054.9	22.2	10.7	-157.37	-1,544.3	3,883.9	5,057.5	5,032.4	25.08	201.649	
5,200.0	5,068.0	5,122.6	5,104.2	22.7	10.8	-157.43	-1,544.1	3,883.3	5,077.3	5,051.8	25.46	199.453	
5,216.5	5,083.9	5,131.7	5,113.3	22.8	10.8	-157.44	-1,544.1	3,883.3	5,081.4	5,055.8	25.53	199.032	
5,240.0	5,106.5	5,144.6	5,126.2	22.9	10.8	-157.46	-1,544.1	3,883.2	5,087.2	5,061.6	25.64	198.440	
5,300.0	5,164.4	5,180.0	5,161.6	23.2	10.9	-157.61	-1,544.0	3,883.1	5,101.7	5,075.8	25.92	196.821	
5,314.9	5,178.8	5,180.0	5,161.6	23.3	10.9	-157.64	-1,544.0	3,883.1	5,105.2	5,079.2	25.97	196.596	
5,400.0	5,261.5	5,254.8	5,236.4	23.6	11.1	-157.86	-1,544.2	3,883.2	5,123.8	5,097.4	26.36	194.345	
5,413.4	5,274.6	5,265.3	5,246.9	23.6	11.1	-157.89	-1,544.2	3,883.2	5,126.5	5,100.1	26.42	194.031	
5,500.0	5,359.5	5,340.8	5,322.4	23.9	11.2	-158.08	-1,544.3	3,883.6	5,143.0	5,116.2	26.79	191.947	
5,511.8	5,371.1	5,351.2	5,332.8	24.0	11.2	-158.10	-1,544.2	3,883.7	5,145.1	5,118.3	26.84	191.680	
5,600.0	5,458.0	5,442.0	5,423.6	24.2	11.4	-158.28	-1,543.6	3,884.4	5,159.2	5,132.0	27.21	189.583	
5,610.2	5,468.2	5,453.0	5,434.6	24.3	11.4	-158.30	-1,543.6	3,884.5	5,160.7	5,133.4	27.25	189.350	
5,700.0	5,557.2	5,606.1	5,587.6	24.5	11.7	-158.49	-1,541.5	3,884.8	5,171.4	5,143.7	27.71	186.640	
5,708.6	5,565.7	5,616.2	5,597.8	24.5	11.7	-158.50	-1,541.4	3,884.8	5,172.3	5,144.5	27.74	186.445	
5,800.0	5,656.7	5,749.1	5,730.6	24.7	12.0	-158.62	-1,540.0	3,883.6	5,179.6	5,151.4	28.14	184.043	
5,807.1	5,663.7	5,750.0	5,731.5	24.7	12.0	-158.62	-1,540.0	3,883.6	5,180.0	5,151.8	28.16	183.979	
5,900.0	5,756.5	5,814.0	5,795.5	24.9	12.1	-158.67	-1,539.8	3,882.9	5,184.3	5,155.9	28.41	182.508	
5,905.5	5,761.9	5,817.5	5,799.0	24.9	12.1	-158.67	-1,539.8	3,882.8	5,184.4	5,156.0	28.42	182.432	
6,000.0	5,856.4	5,842.0	5,823.5	25.0	12.2	-158.69	-1,539.9	3,882.6	5,186.6	5,158.0	28.56	181.606	
6,003.9	5,860.3	5,842.0	5,823.5	25.0	12.2	-158.69	-1,539.9	3,882.6	5,186.7	5,158.1	28.56	181.588	
6,032.5	5,888.9	5,842.0	5,823.5	25.0	12.2	106.12	-1,539.9	3,882.6	5,187.0	5,151.6	35.43	146.394	
6,062.5	5,918.9	5,842.0	5,823.5	25.1	12.2	106.12	-1,539.9	3,882.6	5,187.5	5,152.0	35.46	146.273	
6,100.0	5,956.4	5,842.0	5,823.5	25.1	12.2	16.12	-1,539.9	3,882.6	5,187.3	5,158.7	28.55	181.696	
6,102.3	5,958.7	5,842.0	5,823.5	25.1	12.2	16.12	-1,539.9	3,882.6	5,187.2	5,158.7	28.54	181.743	
6,150.0	6,006.2	5,888.3	5,869.9	25.1	12.3	16.20	-1,540.1	3,883.0	5,183.6	5,155.2	28.44	182.258	
6,200.0	6,055.6	5,899.5	5,881.0	25.1	12.3	16.34	-1,540.1	3,883.3	5,177.5	5,149.4	28.17	183.821	
6,200.8	6,056.3	5,899.6	5,881.2	25.1	12.3	16.35	-1,540.1	3,883.4	5,177.4	5,149.3	28.16	183.850	
6,250.0	6,104.3	5,937.0	5,918.5	25.0	12.4	16.58	-1,540.5	3,885.0	5,168.8	5,140.9	27.86	185.557	
6,299.2	6,151.3	5,937.0	5,918.5	24.9	12.4	16.86	-1,540.5	3,885.0	5,156.9	5,129.5	27.40	188.239	
6,300.0	6,152.1	5,937.0	5,918.5	24.9	12.4	16.87	-1,540.5	3,885.0	5,156.6	5,129.3	27.39	188.286	
6,350.0	6,198.7	5,937.0	5,918.5	24.8	12.4	17.24	-1,540.5	3,885.0	5,141.7	5,114.9	26.85	191.505	
6,397.6	6,241.9	5,937.0	5,918.5	24.7	12.4	17.66	-1,540.5	3,885.0	5,125.0	5,098.7	26.28	194.984	
6,400.0	6,244.1	5,937.0	5,918.5	24.7	12.4	17.69	-1,540.5	3,885.0	5,124.1	5,097.8	26.26	195.166	
6,450.0	6,287.8	5,937.0	5,918.5	24.5	12.4	18.24	-1,540.5	3,885.0	5,103.8	5,078.2	25.62	199.189	
6,496.0	6,326.5	5,937.0	5,918.5	24.4	12.4	18.84	-1,540.5	3,885.0	5,082.8	5,057.8	25.03	203.108	
6,500.0	6,329.7	5,937.0	5,918.5	24.4	12.4	18.89	-1,540.5	3,885.0	5,080.9	5,056.0	24.97	203.448	
6,550.0	6,369.6	5,937.0	5,918.5	24.3	12.4	19.67	-1,540.5	3,885.0	5,055.5	5,031.2	24.33	207.749	
6,594.5	6,403.3	5,937.0	5,918.5	24.2	12.4	20.48	-1,540.5	3,885.0	5,030.9	5,007.1	23.80	211.387	
6,600.0	6,407.3	5,937.0	5,918.5	24.2	12.4	20.59	-1,540.5	3,885.0	5,027.7	5,004.0	23.74	211.814	
6,650.0	6,442.7	5,937.0	5,918.5	24.1	12.4	21.68	-1,540.5	3,885.0	4,997.6	4,974.3	23.22	215.263	
6,692.9	6,471.0	5,937.0	5,918.5	24.0	12.4	22.78	-1,540.5	3,885.0	4,969.9	4,947.0	22.87	217.356	
6,700.0	6,475.5	5,937.0	5,918.5	24.0	12.4	22.98	-1,540.5	3,885.0	4,965.2	4,942.4	22.82	217.607	
6,750.0	6,505.6	5,937.0	5,918.5	24.0	12.4	24.51	-1,540.5	3,885.0	4,930.7	4,908.1	22.59	218.283	
6,791.3	6,528.3	5,937.0	5,918.5	24.0	12.4	26.00	-1,540.5	3,885.0	4,900.7	4,878.1	22.57	217.153	
6,800.0	6,532.8	5,937.0	5,918.5	24.0	12.4	26.34	-1,540.5	3,885.0	4,894.2	4,871.6	22.58	216.711	
6,850.0	6,557.0	5,937.0	5,918.5	24.1	12.4	28.54	-1,540.5	3,885.0	4,855.9	4,833.0	22.86	212.411	
6,889.7	6,574.1	5,937.0	5,918.5	24.2	12.4	30.62	-1,540.5	3,885.0	4,824.2	4,800.9	23.32	206.844	
6,900.0	6,578.1	5,937.0	5,918.5	24.3	12.4	31.21	-1,540.5	3,885.0	4,815.9	4,792.4	23.48	205.132	
6,950.0	6,596.1	5,980.4	5,961.7	24.5	12.5	34.98	-1,541.3	3,889.0	4,772.5	4,747.7	24.75	192.833	
6,988.2	6,607.5	5,982.2	5,963.4	24.7	12.5	38.07	-1,541.4	3,889.3	4,739.7	4,713.8	25.87	183.203	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
7,000.0	6,610.7	5,982.7	5,964.0	24.8	12.5	39.13	-1,541.4	3,889.3	4,729.3	4,703.1	26.27	180.029	
7,050.0	6,621.9	5,984.6	5,965.9	25.1	12.5	44.28	-1,541.4	3,889.6	4,685.0	4,656.7	28.27	165.731	
7,086.6	6,628.0	5,985.8	5,967.1	25.4	12.5	48.81	-1,541.5	3,889.8	4,651.9	4,621.8	30.02	154.934	
7,100.0	6,629.7	5,986.2	5,967.5	25.6	12.5	50.66	-1,541.5	3,889.8	4,639.6	4,608.9	30.71	151.058	
7,150.0	6,634.1	5,987.5	5,968.7	26.0	12.5	58.52	-1,541.5	3,890.0	4,593.5	4,560.0	33.46	137.272	
7,185.0	6,635.1	5,988.2	5,969.4	26.4	12.5	64.97	-1,541.5	3,890.1	4,560.8	4,525.4	35.41	128.814	
7,196.6	6,635.0	5,988.4	5,969.6	26.5	12.5	67.27	-1,541.5	3,890.1	4,549.9	4,513.9	36.01	126.344	
7,200.0	6,635.0	5,988.4	5,969.6	26.6	12.5	67.27	-1,541.5	3,890.1	4,546.7	4,510.7	36.05	126.128	
7,283.4	6,633.9	5,989.7	5,970.9	27.6	12.5	67.31	-1,541.6	3,890.3	4,468.4	4,431.4	37.03	120.687	
7,300.0	6,633.7	5,989.9	5,971.1	27.8	12.5	67.32	-1,541.6	3,890.3	4,452.9	4,415.7	37.22	119.641	
7,381.9	6,632.6	6,032.0	6,012.5	29.0	12.6	68.76	-1,543.2	3,897.9	4,378.0	4,339.3	38.72	113.064	
7,400.0	6,632.4	6,032.0	6,012.5	29.2	12.6	68.76	-1,543.2	3,897.9	4,361.0	4,322.1	38.97	111.909	
7,480.3	6,631.4	6,032.0	6,012.5	30.5	12.6	68.76	-1,543.2	3,897.9	4,286.1	4,245.8	40.21	106.594	
7,500.0	6,631.1	6,032.0	6,012.5	30.9	12.6	68.76	-1,543.2	3,897.9	4,267.7	4,227.2	40.51	105.341	
7,578.7	6,630.1	6,032.0	6,012.5	32.3	12.6	68.76	-1,543.2	3,897.9	4,194.4	4,152.6	41.84	100.237	
7,600.0	6,629.8	6,032.0	6,012.5	32.7	12.6	68.76	-1,543.2	3,897.9	4,174.7	4,132.5	42.20	98.914	
7,677.1	6,628.9	6,032.0	6,012.5	34.1	12.6	68.76	-1,543.2	3,897.9	4,103.1	4,059.5	43.61	94.094	
7,700.0	6,628.6	6,032.0	6,012.5	34.6	12.6	68.76	-1,543.2	3,897.9	4,082.0	4,037.9	44.02	92.726	
7,775.6	6,627.6	6,032.0	6,012.5	36.1	12.6	68.76	-1,543.2	3,897.9	4,012.1	3,966.7	45.47	88.229	
7,800.0	6,627.3	6,032.0	6,012.5	36.6	12.6	68.76	-1,543.2	3,897.9	3,989.6	3,943.7	45.94	86.837	
7,874.0	6,626.3	6,032.0	6,012.5	38.2	12.6	68.76	-1,543.2	3,897.9	3,921.5	3,874.1	47.43	82.678	
7,900.0	6,626.0	6,032.0	6,012.5	38.8	12.6	68.76	-1,543.2	3,897.9	3,897.6	3,849.7	47.95	81.278	
7,972.4	6,625.1	6,032.0	6,012.5	40.4	12.6	68.76	-1,543.2	3,897.9	3,831.3	3,781.8	49.46	77.455	
8,000.0	6,624.7	6,032.0	6,012.5	41.0	12.6	68.76	-1,543.2	3,897.9	3,806.1	3,756.0	50.04	76.061	
8,070.8	6,623.8	6,032.0	6,012.5	42.6	12.6	68.76	-1,543.2	3,897.9	3,741.5	3,689.9	51.56	72.563	
8,100.0	6,623.4	6,032.0	6,012.5	43.3	12.6	68.76	-1,543.2	3,897.9	3,715.0	3,662.8	52.19	71.184	
8,169.3	6,622.6	6,032.0	6,012.5	44.9	12.6	68.76	-1,543.2	3,897.9	3,652.1	3,598.4	53.71	67.992	
8,200.0	6,622.2	6,032.0	6,012.5	45.6	12.6	68.77	-1,543.2	3,897.9	3,624.3	3,569.9	54.39	66.634	
8,267.7	6,621.3	6,032.0	6,012.5	47.3	12.6	68.77	-1,543.2	3,897.9	3,563.2	3,507.3	55.91	63.728	
8,300.0	6,620.9	6,032.0	6,012.5	48.0	12.6	68.77	-1,543.2	3,897.9	3,534.1	3,477.5	56.64	62.397	
8,366.1	6,620.0	6,032.0	6,012.5	49.7	12.6	68.77	-1,543.2	3,897.9	3,474.8	3,416.7	58.15	59.754	
8,400.0	6,619.6	6,032.0	6,012.5	50.5	12.6	68.77	-1,543.2	3,897.9	3,444.5	3,385.6	58.93	58.454	
8,464.5	6,618.8	6,032.0	6,012.5	52.1	12.6	68.77	-1,543.2	3,897.9	3,387.0	3,326.6	60.43	56.052	
8,500.0	6,618.3	6,032.0	6,012.5	53.0	12.6	68.77	-1,543.2	3,897.9	3,355.5	3,294.2	61.25	54.785	
8,563.0	6,617.5	6,032.0	6,012.5	54.5	12.6	68.77	-1,543.2	3,897.9	3,299.7	3,237.0	62.73	52.603	
8,600.0	6,617.0	6,032.0	6,012.5	55.5	12.6	68.77	-1,543.2	3,897.9	3,267.1	3,203.5	63.60	51.370	
8,661.4	6,616.3	6,032.0	6,012.5	57.0	12.6	68.77	-1,543.2	3,897.9	3,213.2	3,148.1	65.06	49.388	
8,700.0	6,615.8	6,032.0	6,012.5	58.0	12.6	68.77	-1,543.2	3,897.9	3,179.4	3,113.4	65.98	48.190	
8,759.8	6,615.0	6,032.0	6,012.5	59.5	12.6	68.77	-1,543.2	3,897.9	3,127.3	3,059.9	67.41	46.391	
8,800.0	6,614.5	6,032.0	6,012.5	60.6	12.6	68.77	-1,543.2	3,897.9	3,092.4	3,024.1	68.38	45.227	
8,858.2	6,613.7	6,032.0	6,012.5	62.1	12.6	68.77	-1,543.2	3,897.9	3,042.2	2,972.4	69.78	43.593	
8,900.0	6,613.2	6,032.0	6,012.5	63.2	12.6	68.77	-1,543.2	3,897.9	3,006.3	2,935.5	70.79	42.465	
8,956.7	6,612.5	6,032.0	6,012.5	64.6	12.6	68.77	-1,543.2	3,897.9	2,957.9	2,885.7	72.18	40.981	
9,000.0	6,611.9	6,032.0	6,012.5	65.8	12.6	68.77	-1,543.2	3,897.9	2,921.0	2,847.8	73.23	39.888	
9,055.1	6,611.2	6,032.0	6,012.5	67.2	12.6	68.77	-1,543.2	3,897.9	2,874.4	2,799.9	74.58	38.541	
9,100.0	6,610.6	6,032.0	6,012.5	68.4	12.6	68.77	-1,543.2	3,897.9	2,836.7	2,761.0	75.68	37.482	
9,153.5	6,609.9	6,032.0	6,012.5	69.8	12.6	68.77	-1,543.2	3,897.9	2,792.0	2,715.0	77.00	36.259	
9,200.0	6,609.3	6,032.0	6,012.5	71.0	12.6	68.77	-1,543.2	3,897.9	2,753.5	2,675.3	78.15	35.234	
9,251.9	6,608.7	6,032.0	6,012.5	72.4	12.6	68.77	-1,543.2	3,897.9	2,710.7	2,631.2	79.43	34.124	
9,300.0	6,608.1	6,032.0	6,012.5	73.7	12.6	68.77	-1,543.2	3,897.9	2,671.4	2,590.7	80.63	33.133	
9,350.4	6,607.4	6,032.0	6,012.5	75.0	12.6	68.77	-1,543.2	3,897.9	2,630.5	2,548.6	81.88	32.126	
9,400.0	6,606.8	6,059.3	6,039.0	76.3	12.6	69.71	-1,544.1	3,904.2	2,590.2	2,506.6	83.62	30.977	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,448.8	6,606.1	6,064.3	6,043.9	77.6	12.6	69.88	-1,544.2	3,905.4	2,551.1	2,466.2	84.93	30.036	
9,500.0	6,605.5	6,069.8	6,049.2	79.0	12.7	70.07	-1,544.4	3,906.8	2,510.4	2,424.1	86.32	29.081	
9,547.2	6,604.9	6,075.2	6,054.4	80.2	12.7	70.25	-1,544.4	3,908.2	2,473.2	2,385.6	87.62	28.228	
9,600.0	6,604.2	6,081.4	6,060.4	81.7	12.7	70.46	-1,544.5	3,909.8	2,432.1	2,343.0	89.07	27.306	
9,645.6	6,603.6	6,087.1	6,065.9	82.9	12.7	70.66	-1,544.6	3,911.4	2,396.8	2,306.4	90.33	26.533	
9,700.0	6,602.9	6,094.2	6,072.7	84.3	12.7	70.90	-1,544.6	3,913.3	2,355.2	2,263.3	91.85	25.642	
9,744.1	6,602.3	6,100.3	6,078.5	85.5	12.7	71.11	-1,544.6	3,915.1	2,321.8	2,228.7	93.09	24.942	
9,800.0	6,601.6	6,127.0	6,104.0	87.0	12.8	72.02	-1,544.3	3,923.1	2,280.1	2,185.1	95.01	23.998	
9,842.5	6,601.1	6,127.0	6,104.0	88.2	12.8	72.02	-1,544.3	3,923.1	2,248.6	2,152.5	96.11	23.396	
9,900.0	6,600.3	6,127.0	6,104.0	89.7	12.8	72.02	-1,544.3	3,923.1	2,206.5	2,108.9	97.59	22.610	
9,940.9	6,599.8	6,127.0	6,104.0	90.9	12.8	72.02	-1,544.3	3,923.1	2,177.0	2,078.4	98.65	22.068	
10,000.0	6,599.0	6,127.0	6,104.0	92.5	12.8	72.02	-1,544.3	3,923.1	2,135.1	2,034.9	100.17	21.314	
10,039.3	6,598.5	6,127.0	6,104.0	93.5	12.8	72.02	-1,544.3	3,923.1	2,107.6	2,006.4	101.19	20.827	
10,100.0	6,597.7	6,127.0	6,104.0	95.2	12.8	72.02	-1,544.3	3,923.1	2,066.0	1,963.2	102.76	20.104	
10,137.8	6,597.3	6,127.0	6,104.0	96.2	12.8	72.02	-1,544.3	3,923.1	2,040.6	1,936.8	103.74	19.669	
10,200.0	6,596.5	6,127.0	6,104.0	97.9	12.8	72.02	-1,544.3	3,923.1	1,999.5	1,894.2	105.36	18.979	
10,236.2	6,596.0	6,159.9	6,135.0	98.9	12.9	73.14	-1,543.7	3,934.0	1,975.4	1,868.4	106.95	18.469	
10,300.0	6,595.2	6,167.4	6,142.1	100.6	12.9	73.40	-1,543.7	3,936.6	1,934.8	1,826.0	108.77	17.788	
10,334.6	6,594.7	6,171.6	6,146.0	101.6	12.9	73.54	-1,543.6	3,938.1	1,913.2	1,803.4	109.76	17.431	
10,400.0	6,593.9	6,180.0	6,153.8	103.3	12.9	73.82	-1,543.5	3,941.2	1,873.5	1,761.9	111.64	16.782	
10,433.0	6,593.5	6,184.3	6,157.8	104.2	12.9	73.97	-1,543.5	3,942.8	1,854.0	1,741.4	112.59	16.466	
10,500.0	6,592.6	6,222.0	6,192.4	106.1	13.0	75.26	-1,543.4	3,957.8	1,816.0	1,701.0	115.08	15.781	
10,531.5	6,592.2	6,222.0	6,192.4	106.9	13.0	75.26	-1,543.4	3,957.8	1,798.3	1,682.4	115.91	15.515	
10,600.0	6,591.3	6,222.0	6,192.4	108.8	13.0	75.26	-1,543.4	3,957.8	1,761.0	1,643.3	117.73	14.958	
10,629.9	6,590.9	6,222.0	6,192.4	109.6	13.0	75.26	-1,543.4	3,957.8	1,745.3	1,626.8	118.52	14.726	
10,700.0	6,590.0	6,222.0	6,192.4	111.6	13.0	75.26	-1,543.4	3,957.8	1,710.0	1,589.6	120.38	14.205	
10,728.3	6,589.6	6,222.0	6,192.4	112.3	13.0	75.26	-1,543.4	3,957.8	1,696.4	1,575.3	121.14	14.004	
10,800.0	6,588.7	6,222.0	6,192.4	114.3	13.0	75.26	-1,543.4	3,957.8	1,663.5	1,540.5	123.04	13.520	
10,826.7	6,588.4	6,222.0	6,192.4	115.0	13.0	75.26	-1,543.4	3,957.8	1,651.9	1,528.1	123.75	13.348	
10,900.0	6,587.4	6,261.9	6,228.3	117.0	13.1	76.61	-1,543.8	3,975.1	1,620.8	1,494.3	126.50	12.813	
10,925.2	6,587.1	6,267.0	6,232.9	117.7	13.2	76.78	-1,543.9	3,977.4	1,610.8	1,483.5	127.27	12.657	
11,000.0	6,586.1	6,283.1	6,247.1	119.8	13.2	77.32	-1,544.2	3,984.9	1,583.0	1,453.4	129.58	12.216	
11,023.6	6,585.8	6,288.3	6,251.7	120.4	13.2	77.50	-1,544.3	3,987.4	1,574.7	1,444.4	130.31	12.084	
11,100.0	6,584.8	6,317.0	6,276.7	122.5	13.3	78.46	-1,545.0	4,001.4	1,550.1	1,417.2	132.88	11.665	
11,122.0	6,584.5	6,317.0	6,276.7	123.2	13.3	78.46	-1,545.0	4,001.4	1,543.4	1,410.0	133.48	11.563	
11,200.0	6,583.5	6,317.0	6,276.7	125.3	13.3	78.46	-1,545.0	4,001.4	1,522.3	1,386.7	135.59	11.227	
11,220.4	6,583.3	6,317.0	6,276.7	125.9	13.3	78.46	-1,545.0	4,001.4	1,517.3	1,381.2	136.14	11.146	
11,300.0	6,582.2	6,363.4	6,315.5	128.1	13.5	79.97	-1,546.3	4,026.7	1,499.4	1,360.3	139.13	10.777	
11,318.9	6,582.0	6,370.1	6,321.0	128.6	13.5	80.18	-1,546.5	4,030.7	1,495.7	1,356.0	139.76	10.702	
11,400.0	6,580.9	6,412.0	6,353.2	130.8	13.7	81.44	-1,547.3	4,057.4	1,481.8	1,339.2	142.62	10.390	
11,417.3	6,580.7	6,412.0	6,353.2	131.3	13.7	81.44	-1,547.3	4,057.4	1,479.2	1,336.1	143.09	10.338	
11,500.0	6,579.7	6,455.2	6,384.5	133.6	14.0	82.68	-1,547.9	4,087.2	1,468.7	1,322.7	146.05	10.056	
11,515.7	6,579.4	6,464.4	6,391.0	134.0	14.1	82.93	-1,548.1	4,093.7	1,467.1	1,320.4	146.62	10.006	
11,600.0	6,578.4	6,523.1	6,430.6	136.3	14.5	84.51	-1,548.7	4,137.0	1,459.6	1,309.8	149.80	9.744	
11,614.1	6,578.2	6,538.5	6,440.5	136.7	14.6	84.90	-1,548.8	4,148.8	1,458.6	1,308.1	150.43	9.696	
11,700.0	6,577.1	6,602.0	6,478.5	139.1	15.2	86.42	-1,548.1	4,199.6	1,452.7	1,299.0	153.69	9.452	
11,712.6	6,576.9	6,602.0	6,478.5	139.5	15.2	86.42	-1,548.1	4,199.6	1,452.1	1,298.1	154.04	9.427	
11,800.0	6,575.8	6,664.2	6,512.2	141.9	16.0	87.77	-1,547.5	4,252.0	1,448.8	1,291.4	157.41	9.204	
11,811.0	6,575.6	6,669.6	6,514.9	142.2	16.0	87.89	-1,547.6	4,256.6	1,448.7	1,290.9	157.79	9.181	
11,847.0	6,575.2	6,696.0	6,528.2	143.2	16.4	88.42	-1,548.0	4,279.4	1,448.5	1,289.3	159.16	9.101 CC	
11,858.8	6,575.0	6,696.0	6,528.2	143.5	16.4	88.42	-1,548.0	4,279.4	1,448.5	1,289.0	159.49	9.082	
11,859.3	6,575.0	6,696.0	6,528.2	143.5	16.4	88.42	-1,548.0	4,279.4	1,448.5	1,289.0	159.50	9.082 ES, SF	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
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Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	172.51	-917.3	120.6	925.3				
98.4	98.4	87.5	87.5	0.1	0.1	172.52	-917.2	120.4	925.1	924.9	0.16	5,857.240	
100.0	100.0	89.1	89.1	0.1	0.1	172.52	-917.2	120.4	925.1	924.9	0.16	5,750.688	
196.8	196.8	189.5	189.5	0.3	0.1	172.56	-916.8	119.7	924.6	924.1	0.45	2,056.438	
200.0	200.0	192.8	192.8	0.3	0.1	172.57	-916.8	119.6	924.5	924.1	0.46	2,014.314	
295.3	295.3	290.0	290.0	0.5	0.2	172.63	-916.0	118.4	923.7	922.9	0.74	1,244.887	
300.0	300.0	295.7	295.7	0.5	0.2	172.64	-916.0	118.3	923.6	922.9	0.76	1,208.770	
393.7	393.7	384.0	384.0	0.8	0.4	172.67	-915.4	117.7	923.0	921.8	1.15	801.298	
400.0	400.0	389.1	389.1	0.8	0.4	172.67	-915.4	117.7	922.9	921.8	1.18	784.375	
492.1	492.1	479.2	479.2	1.0	0.6	172.67	-915.2	117.7	922.7	921.2	1.57	587.055	
500.0	500.0	486.9	486.9	1.0	0.6	172.67	-915.2	117.7	922.7	921.1	1.61	574.699	
538.8	538.8	524.8	524.8	1.1	0.7	172.66	-915.2	117.8	922.7	920.9	1.77	520.698	
590.5	590.5	575.4	575.4	1.2	0.8	172.65	-915.2	118.0	922.7	920.8	1.99	462.765	
600.0	600.0	584.7	584.6	1.2	0.8	172.65	-915.2	118.1	922.8	920.7	2.03	453.552	
689.0	689.0	667.3	667.3	1.4	1.0	172.69	-915.7	117.5	923.2	920.8	2.41	383.313	
700.0	700.0	678.1	678.1	1.4	1.0	172.70	-915.8	117.3	923.3	920.9	2.46	375.892	
787.4	787.4	763.8	763.8	1.6	1.2	172.79	-916.8	116.0	924.1	921.3	2.84	325.942	
800.0	800.0	776.2	776.1	1.7	1.2	172.80	-916.9	115.8	924.3	921.4	2.89	319.826	
885.8	885.8	860.3	860.2	1.9	1.4	172.89	-918.1	114.6	925.3	922.0	3.26	283.645	
900.0	900.0	874.2	874.1	1.9	1.4	172.90	-918.3	114.4	925.4	922.1	3.32	278.454	
984.2	984.2	957.7	957.6	2.1	1.6	172.98	-919.6	113.2	926.6	922.9	3.69	251.078	
1,000.0	1,000.0	973.7	973.6	2.1	1.6	173.00	-919.8	113.0	926.8	923.0	3.76	246.511	
1,082.7	1,082.7	1,057.5	1,057.4	2.3	1.8	173.07	-921.0	112.0	927.9	923.7	4.12	225.040	
1,100.0	1,100.0	1,075.0	1,074.9	2.3	1.9	173.08	-921.2	111.8	928.1	923.9	4.20	221.008	
1,181.1	1,181.1	1,161.8	1,161.7	2.5	2.0	173.15	-922.3	110.7	928.9	924.3	4.56	203.605	
1,200.0	1,200.0	1,183.3	1,183.1	2.6	2.1	173.19	-922.4	110.2	929.0	924.3	4.65	199.838	
1,279.5	1,279.5	1,286.3	1,286.0	2.7	2.3	-91.44	-922.2	105.5	928.4	923.4	5.04	184.368	
1,300.0	1,300.0	1,313.1	1,312.8	2.8	2.4	-91.38	-921.7	103.6	927.9	922.8	5.14	180.661	
1,377.9	1,377.8	1,393.5	1,393.0	2.9	2.5	-91.33	-919.9	97.8	925.7	920.2	5.47	169.137	
1,400.0	1,399.8	1,414.6	1,414.0	3.0	2.6	-91.34	-919.4	96.4	925.0	919.4	5.56	166.222	
1,476.4	1,475.9	1,484.0	1,483.2	3.1	2.7	-91.44	-918.1	91.4	923.1	917.2	5.89	156.802	
1,500.0	1,499.5	1,505.8	1,504.9	3.2	2.8	-91.49	-917.8	89.8	922.6	916.7	5.99	154.074	
1,574.8	1,573.7	1,576.3	1,575.2	3.4	3.0	-91.66	-917.2	83.8	921.5	915.1	6.33	145.540	
1,600.0	1,598.7	1,599.9	1,598.7	3.4	3.0	-91.73	-917.1	81.6	921.2	914.7	6.45	142.876	
1,673.2	1,671.1	1,668.4	1,666.9	3.6	3.2	-92.02	-916.9	75.6	920.6	913.8	6.81	135.253	
1,692.1	1,689.7	1,683.0	1,681.5	3.7	3.2	-92.10	-916.9	74.4	920.5	913.6	6.89	133.570 CC, ES	
1,700.0	1,697.5	1,683.0	1,681.5	3.7	3.2	-92.10	-916.9	74.4	920.5	913.6	6.91	133.171	
1,771.6	1,767.9	1,748.2	1,746.4	3.9	3.4	-92.50	-917.6	69.0	921.1	913.8	7.29	126.358	
1,800.0	1,795.6	1,777.0	1,775.1	4.0	3.4	-92.70	-918.3	66.6	921.7	914.2	7.45	123.781	
1,870.1	1,864.0	1,832.1	1,830.0	4.3	3.6	-93.11	-920.0	61.8	923.8	915.9	7.83	117.936	
1,900.0	1,893.1	1,858.7	1,856.5	4.4	3.6	-93.33	-921.0	59.4	924.9	916.9	8.01	115.522	
1,968.5	1,959.3	1,914.9	1,912.4	4.6	3.8	-93.81	-923.5	54.3	928.1	919.6	8.43	110.095	
1,992.4	1,982.4	1,934.0	1,931.3	4.7	3.8	-93.99	-924.5	52.6	929.5	920.9	8.58	108.369	
2,000.0	1,989.6	1,940.0	1,937.3	4.8	3.9	-94.05	-924.9	52.1	929.9	921.3	8.63	107.812	
2,066.9	2,054.0	1,993.9	1,991.0	5.1	4.0	-94.65	-928.3	47.4	934.6	925.6	9.07	103.048	
2,100.0	2,085.8	2,020.9	2,017.8	5.2	4.1	-94.94	-930.2	45.1	937.3	928.0	9.29	100.884	
2,165.3	2,148.7	2,062.0	2,058.6	5.5	4.2	-95.39	-933.5	41.6	943.4	933.6	9.71	97.134	
2,200.0	2,182.0	2,098.1	2,094.4	5.7	4.3	-95.77	-936.8	38.7	946.9	936.9	9.97	94.939	
2,263.8	2,243.4	2,144.2	2,140.1	6.0	4.4	-96.27	-941.6	35.1	954.4	944.0	10.41	91.654	
2,300.0	2,278.2	2,175.3	2,171.0	6.2	4.5	-96.60	-945.3	32.8	959.2	948.6	10.68	89.853	
2,362.2	2,338.1	2,237.3	2,232.3	6.5	4.7	-97.24	-952.5	28.1	967.5	956.4	11.16	86.736	
2,400.0	2,374.4	2,275.8	2,270.4	6.7	4.8	-97.62	-957.1	24.9	972.6	961.2	11.45	84.949	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
2,460.6	2,432.8	2,338.5	2,332.4	7.0	4.9	-98.20	-964.4	19.2	980.6	968.7	11.93	82.193		
2,500.0	2,470.6	2,372.2	2,365.7	7.2	5.0	-98.49	-968.4	15.8	985.9	973.7	12.23	80.598		
2,559.0	2,527.4	2,420.8	2,413.7	7.6	5.2	-98.87	-974.7	10.7	994.3	981.7	12.69	78.374		
2,600.0	2,566.8	2,455.1	2,447.4	7.8	5.3	-99.13	-979.5	6.8	1,000.5	987.5	13.01	76.918		
2,657.5	2,622.1	2,504.1	2,495.5	8.1	5.5	-99.47	-986.6	1.2	1,009.6	996.1	13.47	74.948		
2,700.0	2,663.0	2,534.0	2,524.9	8.3	5.6	-99.68	-991.2	-2.2	1,016.6	1,002.9	13.79	73.701		
2,755.9	2,716.8	2,582.9	2,572.8	8.6	5.8	-99.99	-999.1	-8.1	1,026.4	1,012.1	14.26	71.975		
2,800.0	2,759.2	2,616.9	2,606.0	8.9	5.9	-100.19	-1,005.1	-12.2	1,034.5	1,019.9	14.61	70.793		
2,854.3	2,811.5	2,665.7	2,653.6	9.2	6.1	-100.46	-1,014.0	-18.3	1,045.0	1,029.9	15.07	69.331		
2,900.0	2,855.4	2,708.8	2,695.6	9.4	6.2	-100.70	-1,021.9	-23.5	1,053.9	1,038.4	15.46	68.146		
2,952.7	2,906.2	2,758.7	2,744.3	9.7	6.4	-100.98	-1,031.1	-29.4	1,064.2	1,048.3	15.91	66.877		
3,000.0	2,951.6	2,803.3	2,787.9	10.0	6.6	-101.24	-1,039.3	-34.4	1,073.6	1,057.3	16.31	65.815		
3,051.2	3,000.9	2,851.0	2,834.5	10.3	6.7	-101.54	-1,048.0	-39.3	1,083.8	1,067.1	16.74	64.745		
3,100.0	3,047.8	2,896.0	2,878.6	10.5	6.9	-101.83	-1,056.2	-43.7	1,093.8	1,076.6	17.15	63.790		
3,149.6	3,095.5	2,945.9	2,927.4	10.8	7.1	-102.16	-1,065.2	-48.2	1,103.9	1,086.4	17.57	62.823		
3,200.0	3,144.0	2,999.0	2,979.4	11.1	7.2	-102.50	-1,074.8	-53.3	1,114.1	1,096.1	18.01	61.856		
3,248.0	3,190.2	3,054.8	3,034.1	11.4	7.4	-102.84	-1,084.6	-58.8	1,123.6	1,105.2	18.44	60.920		
3,300.0	3,240.2	3,115.1	3,093.2	11.7	7.6	-103.23	-1,094.5	-64.6	1,133.4	1,114.5	18.91	59.940		
3,346.4	3,284.9	3,165.1	3,142.4	11.9	7.8	-103.54	-1,102.4	-69.3	1,142.0	1,122.7	19.31	59.132		
3,400.0	3,336.4	3,220.6	3,197.0	12.2	8.0	-103.90	-1,111.0	-74.6	1,151.7	1,131.9	19.77	58.246		
3,444.9	3,379.6	3,265.0	3,240.6	12.5	8.1	-104.17	-1,117.7	-79.9	1,159.8	1,139.6	20.15	57.543		
3,500.0	3,432.6	3,320.3	3,295.0	12.8	8.3	-104.51	-1,126.2	-84.3	1,169.7	1,149.1	20.63	56.697		
3,543.3	3,474.3	3,364.4	3,338.4	13.1	8.5	-104.77	-1,132.9	-88.7	1,177.5	1,156.4	21.01	56.041		
3,600.0	3,528.8	3,413.3	3,386.4	13.4	8.7	-105.03	-1,140.5	-93.9	1,187.7	1,166.2	21.49	55.272		
3,641.7	3,569.0	3,445.4	3,417.8	13.6	8.8	-105.20	-1,145.8	-97.4	1,195.6	1,173.7	21.83	54.765		
3,700.0	3,625.0	3,492.6	3,464.0	14.0	9.0	-105.42	-1,154.0	-102.7	1,207.0	1,184.7	22.32	54.085		
3,740.1	3,663.6	3,531.9	3,502.5	14.2	9.1	-105.60	-1,161.0	-107.1	1,215.1	1,192.4	22.68	53.583		
3,800.0	3,721.2	3,589.0	3,558.2	14.5	9.4	-105.85	-1,171.2	-113.5	1,227.1	1,203.9	23.21	52.876		
3,838.6	3,758.3	3,622.5	3,591.0	14.8	9.5	-106.00	-1,177.2	-117.2	1,235.0	1,211.4	23.54	52.464		
3,900.0	3,817.4	3,671.0	3,638.4	15.1	9.7	-106.20	-1,186.2	-122.7	1,247.8	1,223.7	24.05	51.879		
3,937.0	3,853.0	3,708.1	3,674.6	15.3	9.9	-106.35	-1,193.3	-126.9	1,255.7	1,231.3	24.39	51.475		
4,000.0	3,913.6	3,765.0	3,730.0	15.7	10.1	-106.58	-1,204.3	-133.1	1,269.3	1,244.4	24.95	50.870		
4,035.4	3,947.7	3,795.1	3,759.4	15.9	10.2	-106.70	-1,210.2	-136.3	1,277.1	1,251.9	25.26	50.566		
4,100.0	4,009.8	3,853.5	3,816.4	16.3	10.5	-106.94	-1,221.7	-142.3	1,291.5	1,265.7	25.82	50.012		
4,133.8	4,042.4	3,907.0	3,868.6	16.5	10.7	-107.18	-1,231.8	-147.5	1,299.0	1,272.8	26.19	49.604		
4,200.0	4,106.0	4,012.6	3,972.5	16.8	11.0	-107.74	-1,248.3	-156.8	1,311.7	1,284.9	26.88	48.804		
4,232.3	4,137.1	4,056.5	4,015.8	17.0	11.2	-107.97	-1,254.4	-161.0	1,317.4	1,290.2	27.19	48.453		
4,300.0	4,202.2	4,119.0	4,077.3	17.4	11.4	-108.29	-1,262.9	-167.0	1,329.1	1,301.3	27.76	47.873		
4,330.7	4,231.7	4,145.0	4,103.0	17.6	11.5	-108.42	-1,266.5	-169.6	1,334.4	1,306.4	28.02	47.633		
4,400.0	4,298.4	4,208.9	4,165.9	18.0	11.7	-108.72	-1,275.6	-176.1	1,346.8	1,318.2	28.62	47.065		
4,429.1	4,326.4	4,239.0	4,195.5	18.2	11.9	-108.85	-1,280.1	-179.2	1,352.1	1,323.2	28.88	46.819		
4,500.0	4,394.6	4,301.4	4,256.7	18.6	12.1	-109.11	-1,289.7	-186.1	1,365.2	1,335.7	29.49	46.287		
4,527.5	4,421.1	4,327.3	4,282.2	18.7	12.2	-109.21	-1,293.7	-189.0	1,370.3	1,340.6	29.74	46.078		
4,600.0	4,490.8	4,392.7	4,346.3	19.2	12.5	-109.44	-1,304.3	-196.7	1,384.0	1,353.6	30.38	45.550		
4,626.0	4,515.8	4,416.1	4,369.1	19.3	12.6	-109.51	-1,308.2	-199.7	1,389.0	1,358.3	30.62	45.367		
4,700.0	4,587.0	4,492.1	4,443.4	19.8	12.9	-109.74	-1,321.0	-209.2	1,403.2	1,371.9	31.30	44.823		
4,724.4	4,610.5	4,517.8	4,468.7	19.9	13.0	-109.83	-1,325.2	-212.3	1,407.8	1,376.3	31.53	44.644		
4,800.0	4,683.2	4,589.3	4,538.7	20.3	13.3	-110.07	-1,336.7	-220.6	1,422.1	1,389.9	32.21	44.154		
4,822.8	4,705.2	4,610.7	4,559.7	20.5	13.4	-110.14	-1,340.2	-223.2	1,426.5	1,394.1	32.41	44.013		
4,900.0	4,779.4	4,697.0	4,644.2	20.9	13.7	-110.41	-1,354.0	-233.4	1,441.1	1,407.9	33.15	43.477		
4,921.2	4,799.8	4,714.0	4,660.9	21.0	13.8	-110.47	-1,356.6	-235.4	1,445.0	1,411.7	33.32	43.362		
5,000.0	4,875.6	4,784.7	4,730.2	21.5	14.1	-110.70	-1,367.8	-243.8	1,459.8	1,425.8	34.01	42.921		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 290-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,019.7	4,894.5	4,808.0	4,753.0	21.6	14.1	-110.77	-1,371.6	-246.5	1,463.6	1,429.4	34.20	42.792	
5,100.0	4,971.8	4,872.5	4,816.1	22.1	14.4	-110.95	-1,382.7	-254.4	1,479.4	1,444.5	34.90	42.391	
5,118.1	4,989.2	4,888.8	4,831.9	22.2	14.5	-110.99	-1,385.5	-256.5	1,483.0	1,447.9	35.06	42.296	
5,200.0	5,068.0	4,960.8	4,902.2	22.7	14.8	-111.15	-1,398.5	-265.8	1,499.6	1,463.8	35.79	41.898	
5,216.5	5,083.9	4,975.2	4,916.3	22.8	14.9	-111.19	-1,401.1	-267.5	1,503.0	1,467.1	35.94	41.822	
5,240.0	5,106.5	4,998.0	4,938.6	22.9	15.0	-111.26	-1,405.1	-270.1	1,507.9	1,471.7	36.15	41.707	
5,300.0	5,164.4	5,052.4	4,991.9	23.2	15.2	-111.65	-1,414.5	-275.4	1,520.2	1,483.6	36.62	41.513	
5,314.9	5,178.8	5,066.6	5,005.9	23.3	15.2	-111.76	-1,416.8	-276.6	1,523.2	1,486.5	36.72	41.480	
5,400.0	5,261.5	5,158.5	5,096.5	23.6	15.5	-112.39	-1,430.6	-282.3	1,539.7	1,502.4	37.30	41.276	
5,413.4	5,274.6	5,173.8	5,111.6	23.6	15.6	-112.49	-1,432.7	-283.0	1,542.1	1,504.7	37.39	41.246	
5,500.0	5,359.5	5,268.0	5,205.1	23.9	15.8	-113.11	-1,444.4	-286.0	1,557.1	1,519.2	37.90	41.089	
5,511.8	5,371.1	5,280.8	5,217.7	24.0	15.9	-113.20	-1,445.8	-286.2	1,559.0	1,521.1	37.96	41.071	
5,600.0	5,458.0	5,406.7	5,343.1	24.2	16.2	-113.88	-1,457.7	-287.5	1,571.7	1,533.3	38.46	40.869	
5,610.2	5,468.2	5,420.7	5,357.0	24.3	16.2	-113.95	-1,458.8	-287.7	1,573.0	1,534.5	38.51	40.846	
5,700.0	5,557.2	5,577.6	5,513.6	24.5	16.5	-114.48	-1,468.8	-291.9	1,581.8	1,542.8	39.04	40.515	
5,708.6	5,565.7	5,589.4	5,525.4	24.5	16.6	-114.51	-1,469.3	-292.3	1,582.4	1,543.3	39.08	40.487	
5,800.0	5,656.7	5,709.0	5,644.9	24.7	16.8	-114.78	-1,472.7	-296.5	1,586.7	1,547.2	39.50	40.172	
5,807.1	5,663.7	5,717.8	5,653.6	24.7	16.8	-114.80	-1,472.9	-296.8	1,586.9	1,547.4	39.53	40.149	
5,900.0	5,756.5	5,809.7	5,745.5	24.9	17.0	-114.92	-1,473.9	-299.4	1,588.9	1,549.1	39.84	39.883	
5,905.5	5,761.9	5,814.4	5,750.2	24.9	17.0	-114.93	-1,473.9	-299.5	1,589.0	1,549.2	39.85	39.871	
6,000.0	5,856.4	5,887.5	5,823.2	25.0	17.1	-115.00	-1,474.5	-299.9	1,590.5	1,550.4	40.09	39.678	
6,003.9	5,860.3	5,890.2	5,826.0	25.0	17.1	-115.01	-1,474.5	-299.9	1,590.6	1,550.5	40.09	39.672	
6,032.5	5,888.9	5,910.3	5,846.1	25.0	17.1	149.79	-1,474.8	-299.7	1,591.1	1,560.7	30.39	52.361	
6,062.5	5,918.9	5,931.4	5,867.2	25.1	17.2	149.79	-1,475.1	-299.5	1,591.7	1,561.2	30.47	52.235	
6,100.0	5,956.4	5,946.0	5,881.8	25.1	17.2	59.75	-1,475.4	-299.3	1,592.3	1,552.1	40.25	39.565	
6,102.3	5,958.7	5,946.0	5,881.8	25.1	17.2	59.75	-1,475.4	-299.3	1,592.3	1,552.1	40.24	39.568	
6,150.0	6,006.2	5,980.9	5,916.6	25.1	17.2	59.82	-1,476.1	-297.7	1,592.1	1,551.8	40.22	39.582	
6,200.0	6,055.6	6,007.1	5,942.7	25.1	17.2	59.96	-1,476.4	-295.4	1,590.9	1,550.7	40.13	39.640	
6,200.8	6,056.3	6,007.5	5,943.1	25.1	17.2	59.96	-1,476.4	-295.4	1,590.8	1,550.7	40.13	39.641	
6,250.0	6,104.3	6,041.0	5,976.3	25.0	17.3	60.22	-1,476.6	-290.9	1,588.7	1,548.7	40.00	39.717	
6,299.2	6,151.3	6,041.0	5,976.3	24.9	17.3	60.43	-1,476.6	-290.9	1,585.7	1,546.0	39.79	39.851	
6,300.0	6,152.1	6,041.0	5,976.3	24.9	17.3	60.43	-1,476.6	-290.9	1,585.7	1,545.9	39.79	39.854	
6,350.0	6,198.7	6,083.7	6,018.4	24.8	17.3	60.96	-1,476.9	-283.4	1,581.4	1,541.9	39.55	39.985	
6,397.6	6,241.9	6,107.4	6,041.5	24.7	17.3	61.47	-1,477.2	-278.5	1,576.7	1,537.4	39.30	40.120	
6,400.0	6,244.1	6,108.6	6,042.7	24.7	17.3	61.50	-1,477.2	-278.3	1,576.4	1,537.1	39.29	40.126	
6,450.0	6,287.8	6,136.0	6,069.4	24.5	17.3	62.17	-1,477.8	-272.1	1,570.6	1,531.6	39.02	40.254	
6,496.0	6,326.5	6,136.0	6,069.4	24.4	17.3	62.59	-1,477.8	-272.1	1,564.8	1,526.0	38.75	40.386	
6,500.0	6,329.7	6,136.0	6,069.4	24.4	17.3	62.62	-1,477.8	-272.1	1,564.3	1,525.5	38.72	40.398	
6,550.0	6,369.6	6,173.6	6,105.6	24.3	17.3	63.60	-1,478.8	-262.2	1,556.8	1,518.4	38.46	40.484	
6,594.5	6,403.3	6,191.2	6,122.4	24.2	17.3	64.34	-1,479.3	-256.8	1,550.0	1,511.7	38.23	40.538	
6,600.0	6,407.3	6,193.3	6,124.4	24.2	17.3	64.43	-1,479.4	-256.1	1,549.1	1,510.9	38.21	40.543	
6,650.0	6,442.7	6,230.0	6,158.8	24.1	17.3	65.60	-1,480.8	-243.5	1,541.1	1,503.0	38.02	40.531	
6,692.9	6,471.0	6,230.0	6,158.8	24.0	17.3	66.17	-1,480.8	-243.5	1,533.4	1,495.6	37.87	40.493	
6,700.0	6,475.5	6,230.0	6,158.8	24.0	17.3	66.26	-1,480.8	-243.5	1,532.2	1,494.4	37.84	40.487	
6,750.0	6,505.6	6,265.4	6,191.4	24.0	17.3	67.59	-1,482.0	-229.7	1,523.0	1,485.2	37.76	40.330	
6,791.3	6,528.3	6,291.4	6,214.9	24.0	17.2	68.69	-1,482.7	-218.6	1,514.9	1,477.1	37.76	40.123	
6,800.0	6,532.8	6,296.9	6,219.8	24.0	17.2	68.93	-1,482.8	-216.1	1,513.1	1,475.4	37.76	40.074	
6,850.0	6,557.0	6,325.0	6,244.7	24.1	17.2	70.29	-1,483.2	-203.1	1,502.8	1,464.9	37.84	39.718	
6,889.7	6,574.1	6,325.0	6,244.7	24.2	17.2	70.92	-1,483.2	-203.1	1,494.6	1,456.6	37.93	39.408	
6,900.0	6,578.1	6,350.5	6,266.8	24.3	17.2	71.66	-1,483.5	-190.5	1,492.1	1,454.1	38.00	39.266	
6,950.0	6,596.1	6,372.8	6,286.0	24.5	17.1	73.02	-1,483.8	-179.0	1,481.4	1,443.1	38.25	38.730	
6,988.2	6,607.5	6,389.7	6,300.2	24.7	17.1	74.08	-1,484.1	-170.0	1,473.2	1,434.7	38.50	38.263	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 290-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,000.0	6,610.7	6,394.8	6,304.5	24.8	17.1	74.41	-1,484.2	-167.2	1,470.7	1,432.1	38.58	38.117	
7,050.0	6,621.9	6,420.0	6,325.5	25.1	17.1	75.92	-1,484.7	-153.2	1,460.2	1,421.2	39.00	37.436	
7,086.6	6,628.0	6,420.0	6,325.5	25.4	17.1	76.51	-1,484.7	-153.2	1,452.7	1,413.4	39.32	36.945	
7,100.0	6,629.7	6,420.0	6,325.5	25.6	17.1	76.72	-1,484.7	-153.2	1,450.1	1,410.6	39.44	36.770	
7,150.0	6,634.1	6,451.3	6,350.9	26.0	17.1	78.42	-1,485.5	-134.9	1,440.2	1,400.2	40.03	35.976	
7,185.0	6,635.1	6,463.0	6,360.1	26.4	17.0	79.30	-1,485.9	-127.8	1,433.7	1,393.3	40.45	35.444	
7,196.6	6,635.0	6,466.7	6,363.0	26.5	17.0	79.59	-1,486.0	-125.5	1,431.7	1,391.1	40.59	35.274	
7,200.0	6,635.0	6,467.8	6,363.9	26.6	17.0	79.62	-1,486.0	-124.8	1,431.1	1,390.5	40.63	35.223	
7,283.4	6,633.9	6,514.0	6,399.2	27.6	17.0	81.06	-1,487.9	-95.1	1,418.6	1,376.8	41.78	33.955	
7,300.0	6,633.7	6,514.0	6,399.2	27.8	17.0	81.06	-1,487.9	-95.1	1,416.4	1,374.4	41.98	33.740	
7,381.9	6,632.6	6,539.6	6,417.8	29.0	17.0	81.83	-1,489.2	-77.6	1,408.1	1,364.8	43.26	32.545	
7,400.0	6,632.4	6,549.2	6,424.7	29.2	17.0	82.12	-1,489.6	-70.8	1,406.7	1,363.1	43.56	32.289	
7,480.3	6,631.4	6,596.3	6,456.3	30.5	16.9	83.43	-1,491.7	-36.1	1,402.1	1,357.1	45.04	31.127	
7,500.0	6,631.1	6,609.0	6,464.4	30.9	16.9	83.76	-1,492.3	-26.3	1,401.4	1,356.0	45.41	30.861	
7,578.7	6,630.1	6,653.8	6,491.0	32.3	16.9	84.88	-1,494.4	9.6	1,400.0	1,352.9	47.08	29.734	
7,586.8	6,630.0	6,658.6	6,493.7	32.4	16.9	84.99	-1,494.6	13.7	1,400.0	1,352.7	47.26	29.625	
7,600.0	6,629.8	6,666.8	6,498.2	32.7	16.9	85.18	-1,495.0	20.5	1,400.0	1,352.4	47.54	29.449	
7,677.1	6,628.9	6,726.9	6,528.1	34.1	16.8	86.43	-1,498.2	72.5	1,401.2	1,351.8	49.43	28.346	
7,700.0	6,628.6	6,754.4	6,539.8	34.6	16.8	86.92	-1,499.4	97.4	1,401.8	1,351.6	50.12	27.971	
7,775.6	6,627.6	6,901.7	6,583.9	36.1	17.5	88.81	-1,502.2	237.7	1,402.9	1,349.6	53.30	26.321	
7,800.0	6,627.3	6,923.7	6,588.7	36.6	17.8	89.01	-1,501.8	259.2	1,402.3	1,348.2	54.12	25.912	
7,874.0	6,626.3	7,017.0	6,602.0	38.2	19.3	89.60	-1,499.3	351.4	1,400.2	1,343.1	57.18	24.490	
7,900.0	6,626.0	7,038.7	6,603.9	38.8	19.7	89.69	-1,498.6	373.1	1,399.3	1,341.2	58.12	24.075	
7,972.4	6,625.1	7,115.2	6,608.6	40.4	21.1	89.92	-1,496.5	449.3	1,397.3	1,336.2	61.15	22.850	
8,000.0	6,624.7	7,140.1	6,609.7	41.0	21.6	89.98	-1,495.7	474.2	1,396.4	1,334.2	62.26	22.430	
8,070.8	6,623.8	7,209.3	6,613.0	42.6	23.0	90.15	-1,493.5	543.3	1,394.2	1,328.9	65.28	21.356	
8,100.0	6,623.4	7,241.9	6,614.1	43.3	23.7	90.21	-1,492.4	575.9	1,393.2	1,326.6	66.64	20.906	
8,169.3	6,622.6	7,301.0	6,613.8	44.9	25.0	90.23	-1,490.6	634.9	1,391.1	1,321.5	69.56	19.999	
8,200.0	6,622.2	7,335.4	6,613.1	45.6	25.8	90.22	-1,489.6	669.3	1,390.2	1,319.2	71.06	19.564	
8,267.7	6,621.3	7,412.4	6,612.9	47.3	27.5	90.26	-1,487.1	746.2	1,388.0	1,313.6	74.44	18.645	
8,300.0	6,620.9	7,448.3	6,613.1	48.0	28.3	90.29	-1,485.7	782.1	1,386.8	1,310.7	76.06	18.232	
8,366.1	6,620.0	7,511.5	6,613.6	49.7	29.8	90.34	-1,483.2	845.2	1,384.2	1,305.0	79.17	17.482	
8,400.0	6,619.6	7,536.5	6,613.5	50.5	30.4	90.35	-1,482.4	870.2	1,383.0	1,302.4	80.61	17.157	
8,464.5	6,618.8	7,586.0	6,612.7	52.1	31.6	90.34	-1,481.2	919.7	1,381.5	1,298.1	83.41	16.562	
8,500.0	6,618.3	7,619.0	6,611.8	53.0	32.4	90.32	-1,480.6	952.7	1,380.9	1,295.7	85.11	16.224	
8,563.0	6,617.5	7,682.9	6,609.8	54.5	34.0	90.28	-1,479.5	1,016.6	1,379.7	1,291.5	88.29	15.628	
8,600.0	6,617.0	7,736.0	6,608.2	55.5	35.4	90.24	-1,478.2	1,069.6	1,378.9	1,288.3	90.56	15.226	
8,661.4	6,616.3	7,809.2	6,606.4	57.0	37.2	90.20	-1,475.6	1,142.8	1,376.6	1,282.6	93.97	14.649	
8,700.0	6,615.8	7,847.8	6,605.3	58.0	38.2	90.18	-1,474.1	1,181.3	1,375.1	1,279.2	95.94	14.333	
8,759.8	6,615.0	7,904.1	6,603.8	59.5	39.6	90.14	-1,472.0	1,237.6	1,372.9	1,274.0	98.92	13.878	
8,800.0	6,614.5	7,940.6	6,603.1	60.6	40.6	90.13	-1,470.7	1,274.0	1,371.5	1,270.6	100.90	13.593	
8,858.2	6,613.7	7,998.0	6,602.2	62.1	42.0	90.13	-1,468.9	1,331.4	1,369.6	1,265.7	103.90	13.183	
8,900.0	6,613.2	8,041.9	6,601.3	63.2	43.2	90.12	-1,467.4	1,375.3	1,368.2	1,262.1	106.12	12.893	
8,956.7	6,612.5	8,099.5	6,599.8	64.6	44.7	90.08	-1,465.4	1,432.8	1,366.2	1,257.1	109.11	12.522	
9,000.0	6,611.9	8,142.8	6,598.3	65.8	45.8	90.04	-1,463.9	1,476.0	1,364.7	1,253.4	111.38	12.253	
9,055.1	6,611.2	8,194.8	6,596.4	67.2	47.2	89.99	-1,462.1	1,528.0	1,362.9	1,248.7	114.20	11.934	
9,100.0	6,610.6	8,236.5	6,595.2	68.4	48.3	89.96	-1,460.8	1,569.7	1,361.4	1,245.0	116.48	11.688	
9,153.5	6,609.9	8,285.4	6,594.0	69.8	49.6	89.94	-1,459.4	1,618.6	1,359.9	1,240.7	119.19	11.409	
9,200.0	6,609.3	8,327.7	6,593.0	71.0	50.7	89.92	-1,458.3	1,660.8	1,358.7	1,237.2	121.55	11.179	
9,251.9	6,608.7	8,368.2	6,592.3	72.4	51.8	89.91	-1,457.5	1,701.3	1,357.7	1,233.7	124.01	10.948	
9,300.0	6,608.1	8,402.5	6,592.4	73.7	52.7	89.93	-1,457.1	1,735.6	1,357.2	1,231.0	126.20	10.754	
9,325.2	6,607.7	8,420.5	6,592.8	74.3	53.2	89.96	-1,457.1	1,753.6	1,357.1	1,229.7	127.35	10.656	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,350.4	6,607.4	8,438.0	6,593.4	75.0	53.7	89.99	-1,457.1	1,771.1	1,357.2	1,228.7	128.49	10.562	
9,400.0	6,606.8	8,480.7	6,595.2	76.3	54.8	90.10	-1,457.5	1,813.7	1,357.6	1,226.6	130.96	10.366	
9,448.8	6,606.1	8,522.1	6,597.5	77.6	55.9	90.21	-1,458.0	1,855.0	1,358.2	1,224.8	133.38	10.183	
9,500.0	6,605.5	8,577.9	6,601.1	79.0	57.4	90.40	-1,458.9	1,910.7	1,359.0	1,222.8	136.25	9.975	
9,547.2	6,604.9	8,628.0	6,604.6	80.2	58.8	90.57	-1,459.4	1,960.7	1,359.5	1,220.7	138.86	9.790	
9,600.0	6,604.2	8,670.5	6,607.3	81.7	59.9	90.71	-1,459.9	2,003.1	1,360.2	1,218.8	141.42	9.618	
9,645.6	6,603.6	8,704.5	6,608.6	82.9	60.9	90.78	-1,460.7	2,037.1	1,361.3	1,217.7	143.57	9.482	
9,700.0	6,602.9	8,755.2	6,609.6	84.3	62.2	90.85	-1,462.2	2,087.8	1,362.9	1,216.5	146.41	9.309	
9,744.1	6,602.3	8,803.2	6,609.6	85.5	63.6	90.87	-1,463.5	2,135.8	1,364.2	1,215.3	148.91	9.161	
9,800.0	6,601.6	8,869.4	6,608.7	87.0	65.4	90.87	-1,465.1	2,201.9	1,365.5	1,213.3	152.23	8.970	
9,842.5	6,601.1	8,913.0	6,608.1	88.2	66.6	90.87	-1,465.8	2,245.5	1,366.2	1,211.7	154.57	8.839	
9,900.0	6,600.3	8,967.7	6,606.9	89.7	68.1	90.85	-1,466.8	2,300.2	1,367.2	1,209.6	157.62	8.674	
9,940.9	6,599.8	9,007.0	6,605.4	90.9	69.1	90.81	-1,467.7	2,339.4	1,368.2	1,208.4	159.81	8.562	
10,000.0	6,599.0	9,068.9	6,602.3	92.5	70.8	90.71	-1,469.2	2,401.2	1,369.5	1,206.4	163.11	8.397	
10,039.3	6,598.5	9,114.6	6,599.6	93.5	72.1	90.62	-1,470.0	2,446.8	1,370.2	1,204.8	165.43	8.283	
10,100.0	6,597.7	9,187.8	6,596.2	95.2	74.1	90.52	-1,470.8	2,519.9	1,370.9	1,201.8	169.09	8.107	
10,137.8	6,597.3	9,230.5	6,594.8	96.2	75.3	90.48	-1,471.0	2,562.6	1,371.1	1,199.8	171.29	8.004	
10,200.0	6,596.5	9,300.0	6,592.4	97.9	77.2	90.42	-1,471.0	2,632.1	1,371.1	1,196.2	174.90	7.839	
10,236.2	6,596.0	9,341.4	6,590.8	98.9	78.3	90.37	-1,470.8	2,673.5	1,370.9	1,193.9	177.02	7.744	
10,300.0	6,595.2	9,414.5	6,587.8	100.6	80.3	90.29	-1,470.1	2,746.5	1,370.3	1,189.5	180.77	7.580	
10,334.6	6,594.7	9,454.0	6,586.4	101.6	81.4	90.25	-1,469.5	2,786.0	1,369.7	1,186.9	182.81	7.493	
10,400.0	6,593.9	9,522.7	6,584.4	103.3	83.3	90.20	-1,468.2	2,854.7	1,368.5	1,182.0	186.48	7.338	
10,433.0	6,593.5	9,555.8	6,583.6	104.2	84.2	90.19	-1,467.6	2,887.7	1,367.9	1,179.6	188.30	7.264	
10,500.0	6,592.6	9,650.9	6,581.5	106.1	86.8	90.15	-1,465.0	2,982.7	1,366.1	1,173.4	192.75	7.088	
10,531.5	6,592.2	9,671.0	6,581.0	106.9	87.3	90.14	-1,464.2	3,002.8	1,364.8	1,170.7	194.16	7.029	
10,600.0	6,591.3	9,729.2	6,579.7	108.8	88.9	90.12	-1,462.1	3,061.0	1,362.5	1,164.9	197.64	6.894	
10,629.9	6,590.9	9,749.1	6,579.4	109.6	89.5	90.12	-1,461.7	3,080.9	1,361.9	1,162.9	199.01	6.843	
10,700.0	6,590.0	9,808.6	6,578.4	111.6	91.1	90.11	-1,461.1	3,140.4	1,361.1	1,158.6	202.58	6.719	
10,728.3	6,589.6	9,835.6	6,577.9	112.3	91.9	90.10	-1,460.9	3,167.3	1,360.9	1,156.8	204.10	6.668	
10,800.0	6,588.7	9,902.8	6,576.7	114.3	93.7	90.09	-1,460.4	3,234.5	1,360.5	1,152.5	207.93	6.543	
10,826.7	6,588.4	9,927.7	6,576.5	115.0	94.4	90.09	-1,460.3	3,259.4	1,360.3	1,151.0	209.36	6.498	
10,858.4	6,588.0	9,955.0	6,576.5	115.9	95.2	90.11	-1,460.3	3,286.7	1,360.3	1,149.3	210.99	6.447	
10,900.0	6,587.4	9,985.3	6,576.5	117.0	96.0	90.12	-1,460.4	3,317.0	1,360.4	1,147.5	212.97	6.388	
10,925.2	6,587.1	10,002.6	6,576.3	117.7	96.5	90.12	-1,460.6	3,334.4	1,360.7	1,146.6	214.14	6.354	
11,000.0	6,586.1	10,057.3	6,574.9	119.8	98.0	90.09	-1,461.8	3,389.0	1,362.4	1,144.7	217.72	6.258	
11,023.6	6,585.8	10,085.0	6,573.9	120.4	98.8	90.07	-1,462.6	3,416.7	1,363.0	1,143.9	219.14	6.220	
11,100.0	6,584.8	10,169.2	6,570.7	122.5	101.1	89.98	-1,464.4	3,500.8	1,364.7	1,141.1	223.58	6.104	
11,122.0	6,584.5	10,190.2	6,569.9	123.2	101.7	89.96	-1,464.8	3,521.7	1,365.1	1,140.3	224.77	6.073	
11,200.0	6,583.5	10,289.0	6,566.4	125.3	104.5	89.87	-1,466.6	3,620.5	1,366.6	1,137.0	229.67	5.950	
11,220.4	6,583.3	10,328.1	6,565.5	125.9	105.6	89.85	-1,466.5	3,659.6	1,366.6	1,135.3	231.32	5.908	
11,300.0	6,582.2	10,421.9	6,563.2	128.1	108.2	89.80	-1,465.2	3,753.4	1,365.5	1,129.3	236.11	5.783	
11,318.9	6,582.0	10,447.8	6,562.3	128.6	108.9	89.78	-1,464.7	3,779.2	1,365.1	1,127.7	237.35	5.751	
11,400.0	6,580.9	10,552.1	6,557.6	130.8	111.7	89.64	-1,461.0	3,883.3	1,362.2	1,119.7	242.47	5.618	
11,417.3	6,580.7	10,568.5	6,556.7	131.3	112.2	89.61	-1,460.4	3,899.7	1,361.5	1,118.1	243.41	5.593	
11,500.0	6,579.7	10,648.4	6,551.9	133.6	114.4	89.45	-1,457.3	3,979.4	1,358.3	1,110.4	247.89	5.479	
11,515.7	6,579.4	10,664.0	6,550.8	134.0	114.8	89.41	-1,456.7	3,995.0	1,357.7	1,108.9	248.76	5.458	
11,600.0	6,578.4	10,747.9	6,544.1	136.3	117.1	89.17	-1,453.4	4,078.5	1,354.5	1,101.1	253.39	5.346	
11,614.1	6,578.2	10,758.0	6,543.3	136.7	117.4	89.14	-1,453.1	4,088.6	1,354.0	1,099.9	254.06	5.329	
11,660.7	6,577.6	10,758.0	6,543.3	138.0	117.4	89.14	-1,453.1	4,088.6	1,353.2	1,097.9	255.35	5.299	
11,700.0	6,577.1	10,758.0	6,543.3	139.1	117.4	89.14	-1,453.1	4,088.6	1,353.8	1,097.3	256.44	5.279	
11,712.6	6,576.9	10,758.0	6,543.3	139.5	117.4	89.14	-1,453.1	4,088.6	1,354.2	1,097.4	256.79	5.274	
11,800.0	6,575.8	10,758.0	6,543.3	141.9	117.4	89.14	-1,453.1	4,088.6	1,360.4	1,101.2	259.21	5.248	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
11,811.0	6,575.6	10,758.0	6,543.3	142.2	117.4	89.14	-1,453.1	4,088.6	1,361.5	1,102.0	259.51	5.247	
11,858.8	6,575.0	10,758.0	6,543.3	143.5	117.4	89.14	-1,453.1	4,088.6	1,367.6	1,106.8	260.83	5.243 SF	
11,859.3	6,575.0	10,758.0	6,543.3	143.5	117.4	89.14	-1,453.1	4,088.6	1,367.7	1,106.9	260.84	5.243	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	172.44	-896.2	118.9	904.2				
98.4	98.4	85.4	85.4	0.1	0.1	172.44	-896.2	118.9	904.1	903.9	0.17	5,191.082	
100.0	100.0	87.0	87.0	0.1	0.1	172.44	-896.2	118.9	904.1	903.9	0.18	5,097.105	
196.8	196.8	183.8	183.8	0.3	0.2	172.44	-896.2	118.9	904.1	903.6	0.48	1,869.211	
200.0	200.0	187.0	187.0	0.3	0.2	172.44	-896.2	118.9	904.1	903.6	0.49	1,831.488	
295.3	295.3	282.3	282.3	0.5	0.3	172.44	-896.2	118.9	904.1	903.3	0.79	1,137.281	
300.0	300.0	287.0	287.0	0.5	0.3	172.44	-896.2	118.9	904.1	903.3	0.81	1,116.297	
393.7	393.7	380.7	380.7	0.8	0.3	172.44	-896.2	118.9	904.1	903.0	1.11	817.264	
400.0	400.0	387.0	387.0	0.8	0.4	172.44	-896.2	118.9	904.1	902.9	1.13	802.805	
492.1	492.1	479.1	479.1	1.0	0.4	172.44	-896.2	118.9	904.1	902.6	1.42	637.796	
500.0	500.0	487.0	487.0	1.0	0.4	172.44	-896.2	118.9	904.1	902.6	1.44	626.783	
590.5	590.5	577.5	577.5	1.2	0.5	172.44	-896.2	118.9	904.1	902.3	1.73	522.957	
600.0	600.0	587.0	587.0	1.2	0.5	172.44	-896.2	118.9	904.1	902.3	1.76	514.070	
689.0	689.0	682.2	682.2	1.4	0.7	172.41	-895.7	119.4	903.7	901.5	2.15	419.612	
700.0	700.0	693.3	693.3	1.4	0.8	172.40	-895.6	119.5	903.6	901.4	2.20	410.325	
787.4	787.4	783.4	783.4	1.6	1.0	172.33	-894.8	120.6	902.9	900.3	2.59	348.212	
800.0	800.0	796.7	796.7	1.7	1.0	172.31	-894.6	120.7	902.8	900.1	2.65	340.633	
885.8	885.8	883.0	883.0	1.9	1.2	172.24	-893.4	121.8	901.7	898.7	3.02	298.313	
900.0	900.0	896.7	896.7	1.9	1.2	172.23	-893.3	121.9	901.6	898.5	3.08	292.515	
984.2	984.2	993.8	993.7	2.1	1.4	172.20	-891.8	122.1	900.4	896.9	3.47	259.764	
1,000.0	1,000.0	1,013.9	1,013.9	2.1	1.4	172.22	-891.3	121.8	900.0	896.4	3.54	254.085	
1,082.7	1,082.7	1,112.1	1,111.9	2.3	1.6	172.39	-887.9	118.6	896.7	892.8	3.94	227.516	
1,100.0	1,100.0	1,133.0	1,132.8	2.3	1.7	172.45	-887.0	117.5	895.9	891.9	4.03	222.443	
1,181.1	1,181.1	1,231.2	1,230.6	2.5	1.9	172.78	-881.7	111.7	890.9	886.5	4.44	200.881	
1,200.0	1,200.0	1,252.5	1,251.9	2.6	2.0	172.86	-880.3	110.3	889.6	885.0	4.53	196.460	
1,279.5	1,279.5	1,339.7	1,338.6	2.7	2.2	-91.75	-874.3	103.4	883.4	878.5	4.89	180.501	
1,300.0	1,300.0	1,361.0	1,359.8	2.8	2.2	-91.71	-872.8	101.4	881.7	876.7	4.99	176.754	
1,377.9	1,377.8	1,432.5	1,430.6	2.9	2.4	-91.59	-867.8	93.6	875.4	870.1	5.32	164.500	
1,400.0	1,399.8	1,449.6	1,447.5	3.0	2.5	-91.56	-866.8	91.4	873.9	868.5	5.41	161.531	
1,476.4	1,475.9	1,499.0	1,496.4	3.1	2.6	-91.44	-864.7	84.0	869.6	863.9	5.70	152.544	
1,500.0	1,499.5	1,523.3	1,520.3	3.2	2.7	-91.36	-864.0	80.0	868.5	862.7	5.82	149.317	
1,574.8	1,573.7	1,573.5	1,569.8	3.4	2.8	-91.24	-863.7	71.8	866.9	860.7	6.13	141.464	
1,600.0	1,598.7	1,594.0	1,590.1	3.4	2.9	-91.21	-864.0	68.4	866.8	860.6	6.24	138.857	
1,601.8	1,600.5	1,594.0	1,590.1	3.4	2.9	-91.21	-864.0	68.4	866.8	860.5	6.25	138.749 CC, ES	
1,673.2	1,671.1	1,653.3	1,648.6	3.6	3.0	-91.17	-865.4	59.0	867.4	860.8	6.60	131.494	
1,700.0	1,697.5	1,676.7	1,671.7	3.7	3.1	-91.18	-866.1	55.5	867.9	861.1	6.73	128.938	
1,771.6	1,767.9	1,737.2	1,731.5	3.9	3.3	-91.29	-868.3	46.7	869.7	862.6	7.11	122.262	
1,800.0	1,795.6	1,760.9	1,755.0	4.0	3.3	-91.37	-869.4	43.4	870.7	863.4	7.26	119.861	
1,870.1	1,864.0	1,819.1	1,812.6	4.3	3.5	-91.64	-872.6	35.9	873.8	866.1	7.67	113.941	
1,900.0	1,893.1	1,843.8	1,837.1	4.4	3.5	-91.78	-874.1	32.9	875.4	867.6	7.84	111.646	
1,968.5	1,959.3	1,908.0	1,900.7	4.6	3.7	-92.26	-878.6	25.6	879.8	871.5	8.30	106.057	
1,992.4	1,982.4	1,934.4	1,926.9	4.7	3.8	-92.49	-880.4	22.6	881.3	872.9	8.47	104.100	
2,000.0	1,989.6	1,942.7	1,935.1	4.8	3.8	-92.57	-880.9	21.6	881.8	873.3	8.52	103.471	
2,066.9	2,054.0	2,018.5	2,010.3	5.1	4.0	-93.30	-885.5	12.6	885.6	876.6	9.04	97.962	
2,100.0	2,085.8	2,056.7	2,048.0	5.2	4.1	-93.66	-887.4	7.9	887.3	878.0	9.30	95.403	
2,165.3	2,148.7	2,133.7	2,124.4	5.5	4.3	-94.39	-890.6	-1.6	890.0	880.1	9.83	90.501	
2,200.0	2,182.0	2,174.1	2,164.5	5.7	4.4	-94.78	-891.8	-6.4	891.1	881.0	10.11	88.101	
2,263.8	2,243.4	2,246.4	2,236.3	6.0	4.6	-95.51	-893.3	-14.8	892.7	882.0	10.63	83.947	
2,300.0	2,278.2	2,285.5	2,275.1	6.2	4.8	-95.91	-893.9	-19.3	893.3	882.4	10.93	81.768	
2,362.2	2,338.1	2,352.1	2,341.2	6.5	5.0	-96.55	-894.6	-27.5	894.3	882.9	11.44	78.209	
2,400.0	2,374.4	2,397.3	2,386.1	6.7	5.1	-96.97	-894.8	-33.5	894.7	882.9	11.77	76.034	
2,460.6	2,432.8	2,465.7	2,453.7	7.0	5.3	-97.56	-894.5	-43.2	894.7	882.4	12.30	72.765	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
2,500.0	2,470.6	2,505.0	2,492.6	7.2	5.5	-97.88	-894.3	-49.2	894.6	882.0	12.63	70.848	
2,559.0	2,527.4	2,565.8	2,552.6	7.6	5.7	-98.34	-894.1	-59.0	894.5	881.4	13.14	68.066	
2,600.0	2,566.8	2,609.9	2,596.0	7.8	5.8	-98.63	-893.9	-66.6	894.3	880.8	13.51	66.196	
2,657.5	2,622.1	2,668.4	2,653.5	8.1	6.0	-98.99	-893.6	-77.4	893.9	879.9	14.02	63.747	
2,700.0	2,663.0	2,710.1	2,694.5	8.3	6.2	-99.24	-893.4	-85.1	893.6	879.2	14.40	62.070	
2,755.9	2,716.8	2,762.1	2,745.5	8.6	6.4	-99.55	-893.2	-94.7	893.4	878.5	14.88	60.042	
2,768.8	2,729.2	2,773.7	2,757.0	8.7	6.4	-99.62	-893.2	-96.9	893.4	878.4	14.99	59.602	
2,800.0	2,759.2	2,801.8	2,784.6	8.9	6.5	-99.78	-893.3	-102.1	893.4	878.2	15.25	58.571	
2,854.3	2,811.5	2,851.8	2,833.8	9.2	6.7	-100.08	-893.7	-111.3	893.8	878.0	15.72	56.854	
2,900.0	2,855.4	2,894.5	2,875.7	9.4	6.8	-100.34	-894.1	-119.0	894.2	878.1	16.11	55.495	
2,952.7	2,906.2	2,942.1	2,922.6	9.7	7.0	-100.63	-894.7	-127.5	895.0	878.5	16.56	54.032	
3,000.0	2,951.6	2,983.4	2,963.2	10.0	7.2	-100.89	-895.5	-134.6	896.0	879.1	16.96	52.831	
3,051.2	3,000.9	3,028.1	3,007.3	10.3	7.3	-101.18	-896.6	-142.2	897.5	880.1	17.39	51.613	
3,100.0	3,047.8	3,071.1	3,049.7	10.5	7.5	-101.47	-897.8	-149.2	899.3	881.5	17.80	50.528	
3,149.6	3,095.5	3,116.0	3,094.1	10.8	7.6	-101.78	-899.4	-156.3	901.4	883.2	18.22	49.481	
3,200.0	3,144.0	3,169.4	3,146.7	11.1	7.8	-102.17	-901.1	-164.4	903.6	884.9	18.66	48.428	
3,248.0	3,190.2	3,219.1	3,195.9	11.4	7.9	-102.56	-902.4	-171.6	905.5	886.4	19.07	47.479	
3,300.0	3,240.2	3,270.7	3,247.0	11.7	8.1	-102.99	-903.6	-178.7	907.6	888.1	19.51	46.531	
3,346.4	3,284.9	3,320.6	3,296.4	11.9	8.3	-103.42	-904.5	-185.3	909.5	889.6	19.90	45.699	
3,400.0	3,336.4	3,384.6	3,359.8	12.2	8.5	-103.97	-905.2	-193.9	911.2	890.9	20.38	44.723	
3,444.9	3,379.6	3,434.0	3,408.8	12.5	8.6	-104.40	-905.3	-200.6	912.3	891.6	20.76	43.951	
3,500.0	3,432.6	3,493.0	3,467.3	12.8	8.8	-104.94	-905.0	-208.3	913.5	892.2	21.22	43.047	
3,543.3	3,474.3	3,534.1	3,508.1	13.1	8.9	-105.32	-904.7	-213.7	914.3	892.8	21.57	42.397	
3,600.0	3,528.8	3,588.3	3,561.8	13.4	9.1	-105.81	-904.5	-220.8	915.7	893.7	22.02	41.585	
3,641.7	3,569.0	3,629.6	3,602.7	13.6	9.2	-106.17	-904.4	-226.4	916.7	894.4	22.36	40.999	
3,700.0	3,625.0	3,687.3	3,659.9	14.0	9.4	-106.66	-904.4	-234.4	918.3	895.5	22.84	40.212	
3,740.1	3,663.6	3,726.6	3,698.8	14.2	9.5	-106.99	-904.4	-239.9	919.4	896.2	23.16	39.691	
3,800.0	3,721.2	3,784.7	3,756.3	14.5	9.7	-107.47	-904.5	-248.1	921.2	897.5	23.65	38.952	
3,838.6	3,758.3	3,820.9	3,792.2	14.8	9.8	-107.77	-904.5	-253.1	922.4	898.5	23.95	38.506	
3,900.0	3,817.4	3,883.0	3,853.7	15.1	10.0	-108.30	-904.7	-261.4	924.6	900.2	24.45	37.818	
3,937.0	3,853.0	3,930.2	3,900.5	15.3	10.2	-108.72	-904.4	-267.6	925.7	900.9	24.76	37.380	
4,000.0	3,913.6	3,995.4	3,965.1	15.7	10.4	-109.31	-903.2	-276.2	926.9	901.6	25.26	36.694	
4,035.4	3,947.7	4,026.7	3,996.1	15.9	10.5	-109.60	-902.7	-280.3	927.7	902.2	25.53	36.345	
4,100.0	4,009.8	4,091.6	4,060.4	16.3	10.7	-110.19	-902.0	-288.7	929.6	903.6	26.02	35.722	
4,133.8	4,042.4	4,129.9	4,098.4	16.5	10.8	-110.55	-901.3	-293.6	930.4	904.1	26.29	35.391	
4,200.0	4,106.0	4,196.5	4,164.5	16.8	11.0	-111.18	-899.7	-302.0	931.8	905.0	26.79	34.789	
4,232.3	4,137.1	4,227.5	4,195.2	17.0	11.1	-111.48	-898.9	-305.8	932.6	905.6	27.02	34.514	
4,300.0	4,202.2	4,295.5	4,262.7	17.4	11.3	-112.15	-897.2	-313.9	934.3	906.8	27.52	33.953	
4,330.7	4,231.7	4,326.9	4,293.8	17.6	11.4	-112.45	-896.4	-317.9	935.1	907.3	27.74	33.703	
4,400.0	4,298.4	4,391.9	4,358.2	18.0	11.6	-113.02	-895.2	-326.7	936.9	908.7	28.26	33.157	
4,429.1	4,326.4	4,418.7	4,384.8	18.2	11.7	-113.23	-894.9	-330.6	937.9	909.4	28.47	32.937	
4,500.0	4,394.6	4,479.5	4,445.0	18.6	11.9	-113.72	-894.7	-339.2	940.5	911.6	28.99	32.444	
4,527.5	4,421.1	4,502.5	4,467.7	18.7	12.0	-113.91	-894.6	-342.3	941.8	912.6	29.19	32.269	
4,600.0	4,490.8	4,570.6	4,535.3	19.2	12.2	-114.51	-894.6	-350.6	945.7	916.0	29.71	31.835	
4,626.0	4,515.8	4,597.3	4,561.9	19.3	12.2	-114.75	-894.6	-353.8	947.1	917.2	29.89	31.683	
4,700.0	4,587.0	4,674.7	4,638.7	19.8	12.5	-115.43	-894.3	-363.2	951.0	920.6	30.43	31.252	
4,724.4	4,610.5	4,700.4	4,664.2	19.9	12.6	-115.65	-894.2	-366.5	952.3	921.6	30.61	31.111	
4,800.0	4,683.2	4,772.6	4,735.8	20.3	12.8	-116.24	-894.1	-376.1	956.1	925.0	31.15	30.692	
4,822.8	4,705.2	4,793.7	4,756.7	20.5	12.8	-116.40	-894.1	-379.0	957.4	926.1	31.32	30.572	
4,900.0	4,779.4	4,880.7	4,842.7	20.9	13.1	-117.03	-894.7	-391.5	961.5	929.6	31.91	30.128	
4,921.2	4,799.8	4,906.4	4,868.1	21.0	13.2	-117.20	-894.8	-395.6	962.4	930.3	32.09	29.996	
5,000.0	4,875.6	4,982.5	4,943.2	21.5	13.5	-117.68	-895.0	-407.8	965.8	933.2	32.68	29.554	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,894.5	5,001.4	4,961.9	21.6	13.6	-117.81	-895.0	-410.8	966.7	933.9	32.83	29.449	
5,100.0	4,971.8	5,066.2	5,026.0	22.1	13.8	-118.25	-895.5	-420.4	971.0	937.7	33.39	29.086	
5,118.1	4,989.2	5,080.7	5,040.3	22.2	13.8	-118.36	-895.6	-422.4	972.2	938.7	33.51	29.013	
5,200.0	5,068.0	5,148.2	5,107.3	22.7	14.0	-118.86	-896.6	-431.1	978.3	944.2	34.06	28.721	
5,216.5	5,083.9	5,162.0	5,121.0	22.8	14.1	-118.97	-896.8	-432.7	979.6	945.4	34.17	28.670	
5,240.0	5,106.5	5,181.6	5,140.4	22.9	14.1	-119.13	-897.2	-434.9	981.6	947.3	34.32	28.599	
5,300.0	5,164.4	5,237.9	5,196.4	23.2	14.3	-119.67	-898.2	-440.8	986.8	952.1	34.66	28.473	
5,314.9	5,178.8	5,252.5	5,210.9	23.3	14.3	-119.80	-898.3	-442.2	988.0	953.3	34.73	28.452	
5,400.0	5,261.5	5,341.1	5,299.2	23.6	14.5	-120.57	-898.8	-449.9	994.1	959.0	35.12	28.310	
5,413.4	5,274.6	5,355.7	5,313.7	23.6	14.6	-120.68	-898.7	-451.2	994.9	959.7	35.17	28.286	
5,500.0	5,359.5	5,434.6	5,392.3	23.9	14.8	-121.23	-898.6	-457.9	999.4	963.9	35.53	28.127	
5,511.8	5,371.1	5,444.5	5,402.2	24.0	14.8	-121.30	-898.6	-458.7	1,000.0	964.4	35.58	28.109	
5,600.0	5,458.0	5,522.3	5,479.8	24.2	15.0	-121.74	-899.0	-464.1	1,004.3	968.4	35.91	27.967	
5,610.2	5,468.2	5,531.7	5,489.2	24.3	15.0	-121.79	-899.0	-464.7	1,004.8	968.8	35.95	27.952	
5,700.0	5,557.2	5,614.4	5,571.8	24.5	15.2	-122.15	-899.4	-469.4	1,008.3	972.0	36.26	27.806	
5,708.6	5,565.7	5,622.4	5,579.8	24.5	15.2	-122.18	-899.4	-469.8	1,008.6	972.3	36.29	27.793	
5,800.0	5,656.7	5,708.1	5,665.4	24.7	15.4	-122.46	-899.5	-473.2	1,011.1	974.6	36.58	27.646	
5,807.1	5,663.7	5,714.9	5,672.2	24.7	15.4	-122.48	-899.5	-473.5	1,011.3	974.7	36.59	27.635	
5,900.0	5,756.5	5,805.6	5,762.8	24.9	15.5	-122.70	-898.8	-475.5	1,012.6	975.7	36.85	27.479	
5,905.5	5,761.9	5,811.1	5,768.3	24.9	15.6	-122.71	-898.7	-475.6	1,012.6	975.8	36.86	27.470	
5,981.9	5,838.3	5,877.8	5,835.0	25.0	15.7	-122.81	-897.8	-476.4	1,012.6	975.5	37.04	27.338	
6,000.0	5,856.4	5,890.1	5,847.4	25.0	15.7	-122.82	-897.8	-476.5	1,012.6	975.5	37.08	27.309	
6,003.9	5,860.3	5,892.8	5,850.1	25.0	15.7	-122.82	-897.8	-476.5	1,012.6	975.5	37.09	27.304	
6,032.5	5,888.9	5,912.3	5,869.6	25.0	15.7	142.00	-898.0	-476.7	1,012.7	980.9	31.85	31.793	
6,062.5	5,918.9	5,932.8	5,890.1	25.1	15.8	142.02	-898.4	-476.9	1,013.1	981.1	31.93	31.731	
6,100.0	5,956.4	5,952.0	5,909.2	25.1	15.8	52.05	-899.1	-477.0	1,013.3	976.1	37.23	27.215	
6,102.3	5,958.7	5,952.0	5,909.2	25.1	15.8	52.05	-899.1	-477.0	1,013.3	976.1	37.23	27.218	
6,150.0	6,006.2	5,984.6	5,941.7	25.1	15.8	52.29	-900.8	-477.3	1,012.6	975.3	37.25	27.182	
6,200.0	6,055.6	6,011.5	5,968.6	25.1	15.9	52.68	-903.2	-477.6	1,010.9	973.7	37.23	27.150	
6,200.8	6,056.3	6,012.0	5,969.0	25.1	15.9	52.69	-903.2	-477.6	1,010.9	973.6	37.23	27.149	
6,250.0	6,104.3	6,046.0	6,002.8	25.0	16.0	53.37	-907.3	-478.1	1,008.3	971.1	37.25	27.072	
6,299.2	6,151.3	6,065.3	6,022.0	24.9	16.0	53.97	-910.1	-478.4	1,004.9	967.7	37.18	27.027	
6,300.0	6,152.1	6,065.8	6,022.4	24.9	16.0	53.98	-910.2	-478.4	1,004.8	967.6	37.18	27.025	
6,350.0	6,198.7	6,093.4	6,049.6	24.8	16.0	54.91	-914.8	-479.0	1,000.4	963.3	37.17	26.914	
6,397.6	6,241.9	6,118.5	6,074.3	24.7	16.1	55.91	-919.7	-479.8	995.6	958.4	37.17	26.787	
6,400.0	6,244.1	6,119.8	6,075.5	24.7	16.1	55.96	-920.0	-479.8	995.3	958.2	37.17	26.779	
6,450.0	6,287.8	6,141.0	6,096.2	24.5	16.1	57.01	-924.6	-480.6	989.7	952.5	37.14	26.649	
6,496.0	6,326.5	6,141.0	6,096.2	24.4	16.1	57.34	-924.6	-480.6	984.7	947.8	36.92	26.673	
6,500.0	6,329.7	6,141.0	6,096.2	24.4	16.1	57.37	-924.6	-480.6	984.3	947.4	36.90	26.676	
6,550.0	6,369.6	6,178.9	6,132.8	24.3	16.2	59.21	-934.3	-482.2	977.9	940.8	37.12	26.342	
6,594.5	6,403.3	6,192.8	6,146.1	24.2	16.3	60.16	-938.4	-482.9	972.7	935.6	37.12	26.204	
6,600.0	6,407.3	6,194.5	6,147.6	24.2	16.3	60.28	-938.9	-483.0	972.1	935.0	37.12	26.187	
6,650.0	6,442.7	6,208.7	6,161.1	24.1	16.3	61.31	-943.3	-483.7	966.7	929.5	37.14	26.025	
6,692.9	6,471.0	6,236.0	6,186.7	24.0	16.4	62.96	-952.7	-485.1	962.7	925.3	37.42	25.728	
6,700.0	6,475.5	6,236.0	6,186.7	24.0	16.4	63.01	-952.7	-485.1	962.0	924.6	37.40	25.720	
6,750.0	6,505.6	6,236.0	6,186.7	24.0	16.4	63.34	-952.7	-485.1	957.4	920.0	37.31	25.657	
6,791.3	6,528.3	6,236.0	6,186.7	24.0	16.4	63.56	-952.7	-485.1	954.3	917.1	37.28	25.601	
6,800.0	6,532.8	6,236.0	6,186.7	24.0	16.4	63.60	-952.7	-485.1	953.8	916.5	37.27	25.592	
6,850.0	6,557.0	6,236.0	6,186.7	24.1	16.4	63.77	-952.7	-485.1	951.3	914.0	37.27	25.523	
6,889.7	6,574.1	6,236.0	6,186.7	24.2	16.4	63.86	-952.7	-485.1	950.1	912.8	37.32	25.460	
6,900.0	6,578.1	6,236.0	6,186.7	24.3	16.4	63.88	-952.7	-485.1	949.9	912.5	37.33	25.447	
6,940.0	6,592.7	6,236.0	6,186.7	24.5	16.4	63.90	-952.7	-485.1	949.5	912.1	37.42	25.376	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST HZ SEYLOR STATE #B15-79HNM - Wellbore #1 - Wellb										Offset Site Error:		0.0 usft			
Survey Program: 597-MWD														Offset Well Error:		0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
6,950.0	6,596.1	6,236.0	6,186.7	24.5	16.4	63.90	-952.7	-485.1	949.5	912.1	37.44	25.361					
6,979.3	6,605.0	6,266.0	6,214.3	24.7	16.4	65.64	-964.2	-486.8	948.7	910.6	38.07	24.920					
6,988.2	6,607.5	6,266.7	6,215.0	24.7	16.4	65.68	-964.5	-486.8	948.8	910.7	38.11	24.893					
7,000.0	6,610.7	6,267.6	6,215.8	24.8	16.4	65.72	-964.9	-486.9	949.0	910.8	38.17	24.860					
7,050.0	6,621.9	6,270.7	6,218.6	25.1	16.4	65.78	-966.1	-487.1	950.6	912.1	38.47	24.712					
7,086.6	6,628.0	6,272.1	6,219.9	25.4	16.4	65.73	-966.7	-487.1	952.5	913.8	38.71	24.609					
7,100.0	6,629.7	6,272.4	6,220.2	25.6	16.5	65.69	-966.9	-487.1	953.4	914.6	38.79	24.578					
7,150.0	6,634.1	6,272.9	6,220.7	26.0	16.5	65.43	-967.1	-487.2	957.3	918.2	39.13	24.462					
7,185.0	6,635.1	6,272.5	6,220.3	26.4	16.5	65.15	-966.9	-487.2	960.8	921.4	39.39	24.392					
7,196.6	6,635.0	6,272.2	6,220.0	26.5	16.4	65.04	-966.8	-487.1	962.0	922.5	39.47	24.374					
7,200.0	6,635.0	6,272.1	6,220.0	26.6	16.4	65.04	-966.7	-487.1	962.4	922.9	39.50	24.363					
7,283.4	6,633.9	6,269.9	6,217.9	27.6	16.4	64.91	-965.8	-487.0	975.5	935.1	40.41	24.138					
7,300.0	6,633.7	6,269.5	6,217.5	27.8	16.4	64.88	-965.6	-487.0	978.9	938.3	40.59	24.115					
7,381.9	6,632.6	6,267.3	6,215.5	29.0	16.4	64.75	-964.7	-486.9	999.7	958.1	41.65	24.005					
7,400.0	6,632.4	6,266.8	6,215.1	29.2	16.4	64.72	-964.5	-486.8	1,005.2	963.3	41.88	24.002					
7,480.3	6,631.4	6,264.6	6,213.1	30.5	16.4	64.59	-963.7	-486.7	1,032.8	989.7	43.04	23.994 SF					
7,500.0	6,631.1	6,236.0	6,186.7	30.9	16.4	62.88	-952.7	-485.1	1,041.3	998.6	42.75	24.356					
7,578.7	6,630.1	6,236.0	6,186.7	32.3	16.4	62.88	-952.7	-485.1	1,074.6	1,030.6	44.03	24.405					
7,600.0	6,629.8	6,236.0	6,186.7	32.7	16.4	62.88	-952.7	-485.1	1,084.4	1,040.0	44.38	24.436					
7,677.1	6,628.9	6,236.0	6,186.7	34.1	16.4	62.88	-952.7	-485.1	1,122.6	1,076.9	45.72	24.553					
7,700.0	6,628.6	6,236.0	6,186.7	34.6	16.4	62.88	-952.7	-485.1	1,134.7	1,088.6	46.12	24.603					
7,775.6	6,627.6	6,236.0	6,186.7	36.1	16.4	62.88	-952.7	-485.1	1,176.9	1,129.4	47.51	24.770					
7,800.0	6,627.3	6,236.0	6,186.7	36.6	16.4	62.88	-952.7	-485.1	1,191.3	1,143.3	47.97	24.837					
7,874.0	6,626.3	6,236.0	6,186.7	38.2	16.4	62.88	-952.7	-485.1	1,236.7	1,187.3	49.39	25.039					
7,900.0	6,626.0	6,236.0	6,186.7	38.8	16.4	62.88	-952.7	-485.1	1,253.3	1,203.4	49.89	25.120					
7,972.4	6,625.1	6,236.0	6,186.7	40.4	16.4	62.88	-952.7	-485.1	1,301.2	1,249.8	51.34	25.344					
8,000.0	6,624.7	6,236.0	6,186.7	41.0	16.4	62.88	-952.7	-485.1	1,320.0	1,268.1	51.89	25.437					
8,070.8	6,623.8	6,236.0	6,186.7	42.6	16.4	62.88	-952.7	-485.1	1,369.7	1,316.4	53.35	25.673					
8,100.0	6,623.4	6,236.0	6,186.7	43.3	16.4	62.88	-952.7	-485.1	1,390.7	1,336.7	53.95	25.776					
8,169.3	6,622.6	6,236.0	6,186.7	44.9	16.4	62.88	-952.7	-485.1	1,441.7	1,386.3	55.42	26.016					
8,200.0	6,622.2	6,236.0	6,186.7	45.6	16.4	62.88	-952.7	-485.1	1,464.8	1,408.7	56.06	26.127					
8,267.7	6,621.3	6,236.0	6,186.7	47.3	16.4	62.88	-952.7	-485.1	1,516.7	1,459.1	57.52	26.366					
8,300.0	6,620.9	6,236.0	6,186.7	48.0	16.4	62.88	-952.7	-485.1	1,541.8	1,483.6	58.22	26.484					
8,366.1	6,620.0	6,236.0	6,186.7	49.7	16.4	62.88	-952.7	-485.1	1,594.2	1,534.5	59.67	26.717					
8,400.0	6,619.6	6,236.0	6,186.7	50.5	16.4	62.88	-952.7	-485.1	1,621.4	1,561.0	60.41	26.839					
8,464.5	6,618.8	6,236.0	6,186.7	52.1	16.4	62.88	-952.7	-485.1	1,673.9	1,612.0	61.85	27.065					
8,500.0	6,618.3	6,236.0	6,186.7	53.0	16.4	62.88	-952.7	-485.1	1,703.1	1,640.4	62.64	27.190					
8,563.0	6,617.5	6,236.0	6,186.7	54.5	16.4	62.88	-952.7	-485.1	1,755.5	1,691.5	64.05	27.406					
8,600.0	6,617.0	6,236.0	6,186.7	55.5	16.4	62.88	-952.7	-485.1	1,786.6	1,721.8	64.89	27.534					
8,661.4	6,616.3	6,236.0	6,186.7	57.0	16.4	62.88	-952.7	-485.1	1,838.8	1,772.5	66.29	27.740					
8,700.0	6,615.8	6,236.0	6,186.7	58.0	16.4	62.88	-952.7	-485.1	1,871.8	1,804.7	67.17	27.869					
8,759.8	6,615.0	6,236.0	6,186.7	59.5	16.4	62.88	-952.7	-485.1	1,923.5	1,854.9	68.54	28.063					
8,800.0	6,614.5	6,236.0	6,186.7	60.6	16.4	62.88	-952.7	-485.1	1,958.4	1,888.9	69.46	28.193					
8,858.2	6,613.7	6,236.0	6,186.7	62.1	16.4	62.88	-952.7	-485.1	2,009.4	1,938.6	70.81	28.376					
8,900.0	6,613.2	6,236.0	6,186.7	63.2	16.4	62.88	-952.7	-485.1	2,046.2	1,974.4	71.78	28.506					
8,956.7	6,612.5	6,236.0	6,186.7	64.6	16.4	62.88	-952.7	-485.1	2,096.5	2,023.3	73.11	28.677					
9,000.0	6,611.9	6,236.0	6,186.7	65.8	16.4	62.88	-952.7	-485.1	2,135.1	2,061.0	74.12	28.807					
9,055.1	6,611.2	6,236.0	6,186.7	67.2	16.4	62.88	-952.7	-485.1	2,184.5	2,109.0	75.41	28.968					
9,100.0	6,610.6	6,236.0	6,186.7	68.4	16.4	62.88	-952.7	-485.1	2,224.9	2,148.4	76.47	29.097					
9,153.5	6,609.9	6,236.0	6,186.7	69.8	16.4	62.88	-952.7	-485.1	2,273.3	2,195.6	77.73	29.247					
9,200.0	6,609.3	6,236.0	6,186.7	71.0	16.4	62.88	-952.7	-485.1	2,315.6	2,236.7	78.83	29.375					
9,251.9	6,608.7	6,236.0	6,186.7	72.4	16.4	62.88	-952.7	-485.1	2,362.9	2,282.9	80.06	29.515					

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
9,300.0	6,608.1	6,236.0	6,186.7	73.7	16.4	62.88	-952.7	-485.1	2,406.9	2,325.7	81.20	29.642	
9,350.4	6,607.4	6,236.0	6,186.7	75.0	16.4	62.88	-952.7	-485.1	2,453.2	2,370.8	82.40	29.772	
9,400.0	6,606.8	6,236.0	6,186.7	76.3	16.4	62.88	-952.7	-485.1	2,499.0	2,415.4	83.58	29.898	
9,448.8	6,606.1	6,236.0	6,186.7	77.6	16.4	62.88	-952.7	-485.1	2,544.1	2,459.4	84.75	30.018	
9,500.0	6,605.5	6,236.0	6,186.7	79.0	16.4	62.88	-952.7	-485.1	2,591.6	2,505.7	85.98	30.143	
9,547.2	6,604.9	6,236.0	6,186.7	80.2	16.4	62.88	-952.7	-485.1	2,635.6	2,548.5	87.11	30.255	
9,600.0	6,604.2	6,236.0	6,186.7	81.7	16.4	62.88	-952.7	-485.1	2,684.8	2,596.4	88.38	30.378	
9,645.6	6,603.6	6,236.0	6,186.7	82.9	16.4	62.88	-952.7	-485.1	2,727.5	2,638.0	89.48	30.482	
9,700.0	6,602.9	6,236.0	6,186.7	84.3	16.4	62.88	-952.7	-485.1	2,778.5	2,687.7	90.79	30.603	
9,744.1	6,602.3	6,236.0	6,186.7	85.5	16.4	62.88	-952.7	-485.1	2,819.9	2,728.0	91.85	30.699	
9,800.0	6,601.6	6,236.0	6,186.7	87.0	16.4	62.88	-952.7	-485.1	2,872.5	2,779.3	93.21	30.819	
9,842.5	6,601.1	6,204.8	6,157.5	88.2	16.3	61.04	-942.1	-483.5	2,912.2	2,819.4	92.78	31.388	
9,900.0	6,600.3	6,203.6	6,156.3	89.7	16.3	60.96	-941.7	-483.4	2,966.5	2,872.4	94.09	31.529	
9,940.9	6,599.8	6,202.7	6,155.4	90.9	16.3	60.91	-941.4	-483.4	3,005.2	2,910.2	95.02	31.626	
10,000.0	6,599.0	6,201.4	6,154.2	92.5	16.3	60.84	-941.0	-483.3	3,061.2	2,964.9	96.37	31.766	
10,039.3	6,598.5	6,200.5	6,153.4	93.5	16.3	60.79	-940.7	-483.3	3,098.6	3,001.4	97.27	31.857	
10,100.0	6,597.7	6,199.2	6,152.2	95.2	16.3	60.71	-940.3	-483.2	3,156.3	3,057.7	98.65	31.995	
10,137.8	6,597.3	6,198.4	6,151.4	96.2	16.3	60.66	-940.1	-483.2	3,192.3	3,092.8	99.51	32.079	
10,200.0	6,596.5	6,197.1	6,150.1	97.9	16.3	60.58	-939.7	-483.1	3,251.7	3,150.8	100.93	32.217	
10,236.2	6,596.0	6,196.3	6,149.4	98.9	16.3	60.54	-939.4	-483.1	3,286.3	3,184.5	101.76	32.295	
10,300.0	6,595.2	6,195.0	6,148.1	100.6	16.3	60.46	-939.0	-483.0	3,347.3	3,244.1	103.21	32.431	
10,334.6	6,594.7	6,194.2	6,147.4	101.6	16.3	60.42	-938.8	-483.0	3,380.5	3,276.5	104.00	32.504	
10,400.0	6,593.9	6,192.9	6,146.1	103.3	16.3	60.34	-938.4	-482.9	3,443.2	3,337.7	105.49	32.639	
10,433.0	6,593.5	6,192.2	6,145.5	104.2	16.3	60.30	-938.2	-482.9	3,474.9	3,368.7	106.25	32.706	
10,500.0	6,592.6	6,190.8	6,144.2	106.1	16.2	60.22	-937.8	-482.8	3,539.3	3,431.5	107.78	32.840	
10,531.5	6,592.2	6,190.2	6,143.5	106.9	16.2	60.18	-937.6	-482.8	3,569.6	3,461.1	108.49	32.901	
10,600.0	6,591.3	6,188.8	6,142.2	108.8	16.2	60.10	-937.1	-482.7	3,635.6	3,525.6	110.06	33.034	
10,629.9	6,590.9	6,188.2	6,141.6	109.6	16.2	60.06	-937.0	-482.7	3,664.5	3,553.7	110.74	33.091	
10,700.0	6,590.0	6,186.7	6,140.3	111.6	16.2	59.98	-936.6	-482.6	3,732.1	3,619.8	112.33	33.223	
10,728.3	6,589.6	6,186.2	6,139.7	112.3	16.2	59.95	-936.4	-482.6	3,759.5	3,646.5	112.98	33.276	
10,800.0	6,588.7	6,184.7	6,138.4	114.3	16.2	59.86	-936.0	-482.5	3,828.8	3,714.2	114.61	33.407	
10,826.7	6,588.4	6,184.2	6,137.8	115.0	16.2	59.83	-935.8	-482.5	3,854.7	3,739.5	115.22	33.455	
10,900.0	6,587.4	6,182.8	6,136.5	117.0	16.2	59.75	-935.4	-482.4	3,925.6	3,808.7	116.89	33.585	
10,925.2	6,587.1	6,182.3	6,136.0	117.7	16.2	59.72	-935.3	-482.4	3,950.0	3,832.6	117.46	33.628	
11,000.0	6,586.1	6,180.8	6,134.6	119.8	16.2	59.64	-934.8	-482.3	4,022.6	3,903.5	119.16	33.757	
11,023.6	6,585.8	6,180.3	6,134.1	120.4	16.2	59.61	-934.7	-482.3	4,045.5	3,925.8	119.70	33.797	
11,100.0	6,584.8	6,178.9	6,132.7	122.5	16.2	59.52	-934.3	-482.2	4,119.8	3,998.3	121.44	33.925	
11,122.0	6,584.5	6,178.4	6,132.3	123.2	16.2	59.50	-934.2	-482.2	4,141.2	4,019.2	121.94	33.962	
11,200.0	6,583.5	6,176.9	6,130.9	125.3	16.2	59.41	-933.7	-482.1	4,217.0	4,093.3	123.71	34.089	
11,220.4	6,583.3	6,176.5	6,130.5	125.9	16.2	59.39	-933.6	-482.1	4,236.9	4,112.8	124.17	34.121	
11,300.0	6,582.2	6,175.0	6,129.1	128.1	16.2	59.30	-933.2	-482.1	4,314.4	4,188.4	125.98	34.248	
11,318.9	6,582.0	6,174.7	6,128.7	128.6	16.2	59.28	-933.1	-482.0	4,332.8	4,206.4	126.41	34.277	
11,400.0	6,580.9	6,173.2	6,127.3	130.8	16.2	59.19	-932.7	-482.0	4,411.9	4,283.7	128.25	34.402	
11,417.3	6,580.7	6,141.0	6,096.2	131.3	16.1	57.39	-924.6	-480.6	4,429.1	4,302.7	126.42	35.036	
11,500.0	6,579.7	6,141.0	6,096.2	133.6	16.1	57.39	-924.6	-480.6	4,509.8	4,381.5	128.36	35.133	
11,515.7	6,579.4	6,141.0	6,096.2	134.0	16.1	57.39	-924.6	-480.6	4,525.2	4,396.5	128.73	35.152	
11,600.0	6,578.4	6,141.0	6,096.2	136.3	16.1	57.39	-924.6	-480.6	4,607.5	4,476.8	130.72	35.247	
11,614.1	6,578.2	6,141.0	6,096.2	136.7	16.1	57.39	-924.6	-480.6	4,621.3	4,490.3	131.05	35.263	
11,700.0	6,577.1	6,141.0	6,096.2	139.1	16.1	57.39	-924.6	-480.6	4,705.3	4,572.2	133.08	35.357	
11,712.6	6,576.9	6,141.0	6,096.2	139.5	16.1	57.39	-924.6	-480.6	4,717.6	4,584.2	133.37	35.371	
11,800.0	6,575.8	6,141.0	6,096.2	141.9	16.1	57.39	-924.6	-480.6	4,803.1	4,667.7	135.44	35.464	
11,811.0	6,575.6	6,141.0	6,096.2	142.2	16.1	57.39	-924.6	-480.6	4,813.9	4,678.2	135.70	35.476	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
11,858.8	6,575.0	6,141.0	6,096.2	143.5	16.1	57.39	-924.6	-480.6	4,860.7	4,723.8	136.82	35.525	
11,859.3	6,575.0	6,141.0	6,096.2	143.5	16.1	57.39	-924.6	-480.6	4,861.2	4,724.4	136.83	35.527	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-117.47	-1,303.0	-2,506.5	2,825.3				
98.4	98.4	49.6	49.6	0.1	0.0	-117.47	-1,303.2	-2,506.5	2,825.1	2,825.0	0.11	N/A	
100.0	100.0	51.0	51.0	0.1	0.0	-117.47	-1,303.2	-2,506.5	2,825.1	2,825.0	0.11	N/A	
196.8	196.8	140.9	140.9	0.3	0.1	-117.49	-1,304.1	-2,506.5	2,825.5	2,825.1	0.42	6,703.708	
200.0	200.0	144.1	144.1	0.3	0.1	-117.49	-1,304.1	-2,506.5	2,825.6	2,825.1	0.43	6,503.815	
295.3	295.3	239.4	239.4	0.5	0.2	-117.50	-1,305.1	-2,506.6	2,826.0	2,825.3	0.79	3,598.321	
300.0	300.0	244.0	244.0	0.5	0.3	-117.50	-1,305.1	-2,506.6	2,826.1	2,825.3	0.80	3,532.440	
393.7	393.7	336.9	336.9	0.8	0.3	-117.52	-1,305.9	-2,506.8	2,826.6	2,825.5	1.09	2,602.955	
400.0	400.0	343.3	343.3	0.8	0.3	-117.52	-1,305.9	-2,506.8	2,826.6	2,825.5	1.10	2,558.882	
492.1	492.1	437.0	437.0	1.0	0.4	-117.53	-1,306.6	-2,507.0	2,827.1	2,825.7	1.37	2,057.211	
500.0	500.0	444.9	444.9	1.0	0.4	-117.53	-1,306.7	-2,507.0	2,827.1	2,825.7	1.40	2,024.056	
590.5	590.5	537.9	537.9	1.2	0.5	-117.54	-1,307.4	-2,507.2	2,827.6	2,825.9	1.65	1,708.621	
600.0	600.0	548.0	548.0	1.2	0.5	-117.54	-1,307.4	-2,507.2	2,827.6	2,825.9	1.68	1,681.426	
689.0	689.0	641.5	641.5	1.4	0.5	-117.55	-1,308.0	-2,507.2	2,827.9	2,826.0	1.93	1,464.049	
700.0	700.0	652.9	652.9	1.4	0.5	-117.55	-1,308.1	-2,507.2	2,827.9	2,825.9	1.96	1,441.225	
787.4	787.4	744.9	744.9	1.6	0.6	-117.57	-1,308.8	-2,507.0	2,828.0	2,825.8	2.20	1,282.627	
800.0	800.0	758.5	758.4	1.7	0.6	-117.57	-1,308.9	-2,506.9	2,828.0	2,825.8	2.24	1,262.602	
865.0	865.0	824.0	824.0	1.8	0.6	-117.58	-1,309.3	-2,506.7	2,828.0	2,825.6	2.42	1,169.716	
885.8	885.8	843.0	843.0	1.9	0.6	-117.58	-1,309.5	-2,506.6	2,828.0	2,825.6	2.47	1,143.340	
900.0	900.0	856.0	856.0	1.9	0.6	-117.59	-1,309.6	-2,506.5	2,828.0	2,825.5	2.51	1,126.148	
984.2	984.2	937.3	937.2	2.1	0.7	-117.60	-1,310.3	-2,506.4	2,828.2	2,825.5	2.74	1,033.099	
1,000.0	1,000.0	953.5	953.5	2.1	0.7	-117.60	-1,310.4	-2,506.3	2,828.2	2,825.5	2.78	1,017.184	
1,082.7	1,082.7	1,040.5	1,040.5	2.3	0.7	-117.62	-1,311.1	-2,506.1	2,828.4	2,825.3	3.01	941.073	
1,100.0	1,100.0	1,059.2	1,059.1	2.3	0.7	-117.62	-1,311.3	-2,506.0	2,828.4	2,825.3	3.05	926.541	
1,179.6	1,179.6	1,138.7	1,138.6	2.5	0.7	-117.63	-1,311.9	-2,505.7	2,828.3	2,825.0	3.27	865.972	
1,181.1	1,181.1	1,140.0	1,140.0	2.5	0.7	-117.63	-1,311.9	-2,505.7	2,828.3	2,825.0	3.27	864.943	
1,200.0	1,200.0	1,157.6	1,157.5	2.6	0.8	-117.64	-1,312.0	-2,505.6	2,828.3	2,825.0	3.32	851.933	
1,279.5	1,279.5	1,236.9	1,236.8	2.7	0.8	-22.47	-1,312.6	-2,505.4	2,827.4	2,823.9	3.45	819.192	
1,300.0	1,300.0	1,259.2	1,259.1	2.8	0.8	-22.49	-1,312.7	-2,505.3	2,826.8	2,823.3	3.50	807.249	
1,377.9	1,377.8	1,338.2	1,338.1	2.9	0.8	-22.55	-1,313.1	-2,505.0	2,823.2	2,819.6	3.68	766.148	
1,400.0	1,399.8	1,359.0	1,359.0	3.0	0.8	-22.58	-1,313.3	-2,505.0	2,821.9	2,818.2	3.74	755.256	
1,476.4	1,475.9	1,433.6	1,433.5	3.1	0.9	-22.68	-1,313.7	-2,504.8	2,816.1	2,812.2	3.92	718.129	
1,500.0	1,499.5	1,457.7	1,457.6	3.2	0.9	-22.72	-1,313.9	-2,504.7	2,813.9	2,809.9	3.98	707.239	
1,574.8	1,573.7	1,532.7	1,532.7	3.4	0.9	-22.86	-1,314.3	-2,504.5	2,805.8	2,801.6	4.17	673.363	
1,600.0	1,598.7	1,557.5	1,557.5	3.4	0.9	-22.92	-1,314.4	-2,504.4	2,802.7	2,798.4	4.23	662.591	
1,673.2	1,671.1	1,631.2	1,631.1	3.6	0.9	-23.10	-1,314.8	-2,504.2	2,792.4	2,788.0	4.42	631.598	
1,700.0	1,697.5	1,659.0	1,659.0	3.7	1.0	-23.17	-1,315.0	-2,504.1	2,788.2	2,783.7	4.49	620.852	
1,771.6	1,767.9	1,731.3	1,731.2	3.9	1.0	-23.40	-1,315.4	-2,503.8	2,775.9	2,771.2	4.69	592.284	
1,800.0	1,795.6	1,758.9	1,758.8	4.0	1.0	-23.49	-1,315.6	-2,503.6	2,770.5	2,765.7	4.76	581.619	
1,870.1	1,864.0	1,823.7	1,823.6	4.3	1.0	-23.74	-1,316.0	-2,503.3	2,756.3	2,751.3	4.96	555.364	
1,900.0	1,893.1	1,849.2	1,849.1	4.4	1.0	-23.85	-1,316.2	-2,503.2	2,749.8	2,744.7	5.05	544.879	
1,968.5	1,959.3	1,908.0	1,908.0	4.6	1.1	-24.12	-1,316.8	-2,503.1	2,734.0	2,728.7	5.25	520.627	
1,992.4	1,982.4	1,929.9	1,929.9	4.7	1.1	-24.23	-1,317.0	-2,503.1	2,728.2	2,722.8	5.32	512.527	
2,000.0	1,989.6	1,936.8	1,936.7	4.8	1.1	-24.25	-1,317.1	-2,503.0	2,726.3	2,720.9	5.35	510.050	
2,066.9	2,054.0	2,000.0	1,999.9	5.1	1.1	-24.41	-1,317.8	-2,503.0	2,709.9	2,704.3	5.55	488.171	
2,100.0	2,085.8	2,028.0	2,027.9	5.2	1.1	-24.49	-1,318.1	-2,503.0	2,701.8	2,696.1	5.65	478.421	
2,165.3	2,148.7	2,087.3	2,087.3	5.5	1.1	-24.65	-1,318.9	-2,503.1	2,685.9	2,680.0	5.85	459.166	
2,200.0	2,182.0	2,119.3	2,119.2	5.7	1.1	-24.74	-1,319.3	-2,503.1	2,677.5	2,671.5	5.96	448.993	
2,263.8	2,243.4	2,178.6	2,178.5	6.0	1.2	-24.91	-1,320.1	-2,503.2	2,662.1	2,655.9	6.17	431.348	
2,300.0	2,278.2	2,211.9	2,211.8	6.2	1.2	-25.00	-1,320.6	-2,503.3	2,653.4	2,647.1	6.29	421.781	
2,362.2	2,338.1	2,267.9	2,267.8	6.5	1.2	-25.16	-1,321.5	-2,503.5	2,638.5	2,632.0	6.50	405.943	
2,400.0	2,374.4	2,302.2	2,302.1	6.7	1.2	-25.26	-1,322.1	-2,503.6	2,629.6	2,622.9	6.63	396.762	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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		
2,460.6	2,432.8	2,361.1	2,361.0	7.0	1.2	-25.43	-1,323.1	-2,503.8	2,615.2	2,608.4	6.84	382.426		
2,500.0	2,470.6	2,399.4	2,399.3	7.2	1.2	-25.54	-1,323.8	-2,504.0	2,605.9	2,598.9	6.98	373.539		
2,559.0	2,527.4	2,453.1	2,453.0	7.6	1.3	-25.70	-1,324.7	-2,504.2	2,591.9	2,584.8	7.19	360.727		
2,600.0	2,566.8	2,490.3	2,490.2	7.8	1.3	-25.81	-1,325.3	-2,504.4	2,582.3	2,575.0	7.33	352.249		
2,657.5	2,622.1	2,547.6	2,547.5	8.1	1.3	-25.98	-1,326.2	-2,504.8	2,568.9	2,561.3	7.54	340.656		
2,700.0	2,663.0	2,590.8	2,590.7	8.3	1.3	-26.11	-1,327.0	-2,505.0	2,558.9	2,551.2	7.70	332.430		
2,755.9	2,716.8	2,643.5	2,643.4	8.6	1.3	-26.28	-1,327.9	-2,505.2	2,545.8	2,537.9	7.90	322.054		
2,800.0	2,759.2	2,684.5	2,684.4	8.9	1.3	-26.40	-1,328.6	-2,505.4	2,535.5	2,527.4	8.07	314.228		
2,854.3	2,811.5	2,737.2	2,737.0	9.2	1.4	-26.57	-1,329.6	-2,505.6	2,522.8	2,514.5	8.27	304.896		
2,900.0	2,855.4	2,782.3	2,782.1	9.4	1.4	-26.71	-1,330.4	-2,505.8	2,512.1	2,503.7	8.45	297.360		
2,952.7	2,906.2	2,834.3	2,834.1	9.7	1.4	-26.88	-1,331.3	-2,506.0	2,499.8	2,491.2	8.65	288.948		
3,000.0	2,951.6	2,880.9	2,880.7	10.0	1.4	-27.03	-1,332.2	-2,506.2	2,488.8	2,480.0	8.83	281.709		
3,051.2	3,000.9	2,937.1	2,936.9	10.3	1.4	-27.22	-1,333.2	-2,506.3	2,476.8	2,467.8	9.04	274.027		
3,100.0	3,047.8	2,994.2	2,994.0	10.5	1.4	-27.40	-1,334.0	-2,506.2	2,465.2	2,456.0	9.24	266.934		
3,149.6	3,095.5	3,039.9	3,039.7	10.8	1.5	-27.56	-1,334.7	-2,506.1	2,453.4	2,444.0	9.43	260.161		
3,200.0	3,144.0	3,085.1	3,084.8	11.1	1.5	-27.71	-1,335.4	-2,506.0	2,441.4	2,431.8	9.63	253.548		
3,248.0	3,190.2	3,130.6	3,130.4	11.4	1.5	-27.87	-1,336.2	-2,506.0	2,430.1	2,420.3	9.82	247.439		
3,300.0	3,240.2	3,181.4	3,181.2	11.7	1.5	-28.04	-1,337.1	-2,505.9	2,417.8	2,407.8	10.03	241.067		
3,346.4	3,284.9	3,223.2	3,223.0	11.9	1.5	-28.19	-1,337.8	-2,505.8	2,406.9	2,396.7	10.22	235.606		
3,400.0	3,336.4	3,268.6	3,268.3	12.2	1.5	-28.35	-1,338.6	-2,505.8	2,394.4	2,384.0	10.43	229.563		
3,444.9	3,379.6	3,306.9	3,306.7	12.5	1.6	-28.49	-1,339.4	-2,505.9	2,384.1	2,373.5	10.61	224.663		
3,500.0	3,432.6	3,355.8	3,355.5	12.8	1.6	-28.67	-1,340.4	-2,506.0	2,371.6	2,360.7	10.84	218.838		
3,543.3	3,474.3	3,394.3	3,394.0	13.1	1.6	-28.81	-1,341.2	-2,506.2	2,361.8	2,350.8	11.01	214.420		
3,600.0	3,528.8	3,445.5	3,445.2	13.4	1.6	-28.99	-1,342.3	-2,506.6	2,349.1	2,337.8	11.25	208.796		
3,641.7	3,569.0	3,483.3	3,483.0	13.6	1.6	-29.13	-1,343.2	-2,506.9	2,339.8	2,328.4	11.43	204.787		
3,700.0	3,625.0	3,537.6	3,537.3	14.0	1.6	-29.33	-1,344.4	-2,507.4	2,326.9	2,315.2	11.67	199.349		
3,740.1	3,663.6	3,575.5	3,575.2	14.2	1.6	-29.47	-1,345.2	-2,507.7	2,318.1	2,306.2	11.84	195.709		
3,800.0	3,721.2	3,634.1	3,633.8	14.5	1.7	-29.70	-1,346.5	-2,508.3	2,304.9	2,292.8	12.10	190.421		
3,838.6	3,758.3	3,673.0	3,672.7	14.8	1.7	-29.84	-1,347.4	-2,508.6	2,296.4	2,284.2	12.27	187.097		
3,900.0	3,817.4	3,732.3	3,732.0	15.1	1.7	-30.07	-1,348.7	-2,509.1	2,282.9	2,270.4	12.54	181.992		
3,937.0	3,853.0	3,766.9	3,766.5	15.3	1.7	-30.20	-1,349.5	-2,509.4	2,274.8	2,262.1	12.71	179.020		
4,000.0	3,913.6	3,828.9	3,828.5	15.7	1.7	-30.45	-1,350.9	-2,510.0	2,261.1	2,248.1	12.99	174.080		
4,035.4	3,947.7	3,866.0	3,865.6	15.9	1.7	-30.59	-1,351.7	-2,510.3	2,253.3	2,240.2	13.15	171.355		
4,100.0	4,009.8	3,932.5	3,932.1	16.3	1.8	-30.86	-1,353.0	-2,510.8	2,239.1	2,225.7	13.45	166.532		
4,133.8	4,042.4	3,966.8	3,966.4	16.5	1.8	-30.99	-1,353.5	-2,511.0	2,231.6	2,218.0	13.60	164.077		
4,200.0	4,106.0	4,031.9	4,031.5	16.8	1.8	-31.25	-1,354.5	-2,511.6	2,217.0	2,203.1	13.91	159.424		
4,232.3	4,137.1	4,062.8	4,062.3	17.0	1.8	-31.37	-1,354.9	-2,511.8	2,209.9	2,195.8	14.05	157.233		
4,300.0	4,202.2	4,128.1	4,127.6	17.4	1.8	-31.63	-1,355.8	-2,512.4	2,195.0	2,180.6	14.37	152.793		
4,330.7	4,231.7	4,158.1	4,157.6	17.6	1.8	-31.75	-1,356.2	-2,512.7	2,188.2	2,173.7	14.51	150.821		
4,400.0	4,298.4	4,227.3	4,226.8	18.0	1.9	-32.02	-1,357.0	-2,513.4	2,173.0	2,158.1	14.84	146.462		
4,429.1	4,326.4	4,257.3	4,256.8	18.2	1.9	-32.14	-1,357.3	-2,513.7	2,166.6	2,151.6	14.98	144.670		
4,500.0	4,394.6	4,329.0	4,328.6	18.6	1.9	-32.43	-1,357.9	-2,514.3	2,150.9	2,135.5	15.32	140.434		
4,527.5	4,421.1	4,356.2	4,355.7	18.7	1.9	-32.54	-1,358.2	-2,514.5	2,144.8	2,129.3	15.45	138.836		
4,600.0	4,490.8	4,427.9	4,427.4	19.2	1.9	-32.83	-1,358.7	-2,515.1	2,128.7	2,112.9	15.80	134.741		
4,626.0	4,515.8	4,453.8	4,453.3	19.3	1.9	-32.94	-1,358.9	-2,515.3	2,122.9	2,107.0	15.93	133.309		
4,700.0	4,587.0	4,524.1	4,523.6	19.8	1.9	-33.23	-1,359.3	-2,515.9	2,106.5	2,090.3	16.28	129.365		
4,724.4	4,610.5	4,545.4	4,544.9	19.9	1.9	-33.32	-1,359.4	-2,516.1	2,101.2	2,084.8	16.40	128.116		
4,800.0	4,683.2	4,613.6	4,613.1	20.3	2.0	-33.61	-1,360.0	-2,516.8	2,084.7	2,068.0	16.77	124.335		
4,822.8	4,705.2	4,637.4	4,636.9	20.5	2.0	-33.71	-1,360.2	-2,517.0	2,079.8	2,062.9	16.88	123.197		
4,900.0	4,779.4	4,715.9	4,715.4	20.9	2.0	-34.05	-1,360.7	-2,517.8	2,063.0	2,045.7	17.27	119.454		
4,921.2	4,799.8	4,735.4	4,734.9	21.0	2.0	-34.13	-1,360.8	-2,518.0	2,058.4	2,041.0	17.38	118.462		
5,000.0	4,875.6	4,808.1	4,807.6	21.5	2.0	-34.45	-1,361.3	-2,518.8	2,041.3	2,023.6	17.77	114.881		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,894.5	4,826.9	4,826.4	21.6	2.0	-34.53	-1,361.4	-2,519.0	2,037.1	2,019.2	17.87	114.006	
5,100.0	4,971.8	4,904.1	4,903.6	22.1	2.0	-34.87	-1,361.9	-2,519.9	2,019.9	2,001.7	18.28	110.516	
5,118.1	4,989.2	4,924.1	4,923.6	22.2	2.0	-34.96	-1,362.1	-2,520.1	2,016.1	1,997.7	18.37	109.730	
5,200.0	5,068.0	5,013.5	5,013.0	22.7	2.1	-35.36	-1,362.3	-2,521.0	1,998.3	1,979.5	18.81	106.257	
5,216.5	5,083.9	5,030.4	5,029.8	22.8	2.1	-35.44	-1,362.3	-2,521.2	1,994.7	1,975.8	18.89	105.579	
5,240.0	5,106.5	5,054.3	5,053.8	22.9	2.1	-35.54	-1,362.3	-2,521.4	1,989.5	1,970.5	19.02	104.622	
5,300.0	5,164.4	5,114.9	5,114.3	23.2	2.1	-35.66	-1,362.3	-2,521.8	1,976.9	1,957.6	19.25	102.687	
5,314.9	5,178.8	5,129.5	5,129.0	23.3	2.1	-35.69	-1,362.3	-2,521.9	1,973.9	1,954.6	19.30	102.271	
5,400.0	5,261.5	5,213.0	5,212.4	23.6	2.1	-35.82	-1,362.1	-2,522.4	1,957.9	1,938.4	19.57	100.023	
5,413.4	5,274.6	5,225.7	5,225.2	23.6	2.1	-35.84	-1,362.1	-2,522.5	1,955.6	1,936.0	19.61	99.708	
5,500.0	5,359.5	5,309.0	5,308.4	23.9	2.1	-35.95	-1,362.0	-2,523.1	1,941.9	1,922.1	19.86	97.774	
5,511.8	5,371.1	5,320.5	5,320.0	24.0	2.1	-35.97	-1,362.0	-2,523.2	1,940.2	1,920.3	19.89	97.540	
5,600.0	5,458.0	5,406.2	5,405.6	24.2	2.1	-36.06	-1,361.9	-2,524.0	1,928.8	1,908.7	20.11	95.895	
5,610.2	5,468.2	5,415.2	5,414.7	24.3	2.1	-36.07	-1,361.8	-2,524.0	1,927.7	1,907.5	20.14	95.732	
5,700.0	5,557.2	5,500.0	5,499.5	24.5	2.1	-36.14	-1,361.9	-2,525.0	1,918.9	1,898.6	20.33	94.378	
5,708.6	5,565.7	5,500.0	5,499.5	24.5	2.1	-36.14	-1,361.9	-2,525.0	1,918.2	1,897.9	20.34	94.290	
5,800.0	5,656.7	5,586.1	5,585.6	24.7	2.1	-36.20	-1,362.3	-2,526.2	1,912.3	1,891.8	20.52	93.190	
5,807.1	5,663.7	5,592.6	5,592.0	24.7	2.1	-36.20	-1,362.3	-2,526.3	1,912.0	1,891.4	20.53	93.121	
5,900.0	5,756.5	5,678.9	5,678.4	24.9	2.2	-36.25	-1,363.1	-2,527.7	1,908.9	1,888.2	20.69	92.278	
5,905.5	5,761.9	5,684.0	5,683.5	24.9	2.2	-36.26	-1,363.1	-2,527.8	1,908.8	1,888.1	20.69	92.239	
5,956.7	5,813.1	5,732.0	5,731.4	25.0	2.2	-36.28	-1,363.7	-2,528.6	1,908.4	1,887.7	20.77	91.899 CC	
6,000.0	5,856.4	5,772.6	5,772.1	25.0	2.2	-36.29	-1,364.2	-2,529.4	1,908.7	1,887.9	20.83	91.644	
6,003.9	5,860.3	5,776.3	5,775.7	25.0	2.2	-36.29	-1,364.2	-2,529.5	1,908.8	1,887.9	20.83	91.625	
6,032.5	5,888.9	5,803.9	5,803.3	25.0	2.2	-131.49	-1,364.5	-2,530.1	1,909.3	1,885.5	23.83	80.138 ES	
6,062.5	5,918.9	5,838.7	5,838.1	25.1	2.2	-131.48	-1,364.9	-2,530.8	1,910.0	1,886.1	23.86	80.038	
6,100.0	5,956.4	5,882.2	5,881.6	25.1	2.2	138.47	-1,365.2	-2,531.6	1,911.4	1,890.5	20.93	91.315	
6,102.3	5,958.7	5,884.9	5,884.3	25.1	2.2	138.47	-1,365.2	-2,531.7	1,911.6	1,890.6	20.93	91.320	
6,150.0	6,006.2	5,938.3	5,937.7	25.1	2.2	138.37	-1,365.4	-2,532.6	1,915.5	1,894.5	20.95	91.433	
6,200.0	6,055.6	5,993.2	5,992.6	25.1	2.2	138.21	-1,365.4	-2,533.5	1,922.0	1,901.0	20.97	91.645	
6,200.8	6,056.3	5,994.0	5,993.4	25.1	2.2	138.21	-1,365.4	-2,533.6	1,922.1	1,901.2	20.97	91.650	
6,250.0	6,104.3	6,044.9	6,044.2	25.0	2.2	137.97	-1,365.3	-2,534.4	1,931.0	1,910.0	21.00	91.940	
6,299.2	6,151.3	6,094.4	6,093.8	24.9	2.3	137.66	-1,365.1	-2,535.1	1,942.3	1,921.3	21.04	92.301	
6,300.0	6,152.1	6,095.2	6,094.6	24.9	2.3	137.66	-1,365.1	-2,535.1	1,942.5	1,921.5	21.04	92.306	
6,350.0	6,198.7	6,142.3	6,141.7	24.8	2.3	137.23	-1,365.0	-2,535.8	1,956.5	1,935.4	21.10	92.719	
6,397.6	6,241.9	6,185.7	6,185.0	24.7	2.3	136.72	-1,364.8	-2,536.4	1,972.2	1,951.1	21.17	93.143	
6,400.0	6,244.1	6,187.8	6,187.2	24.7	2.3	136.70	-1,364.8	-2,536.4	1,973.1	1,951.9	21.18	93.164	
6,450.0	6,287.8	6,231.8	6,231.1	24.5	2.3	136.03	-1,364.7	-2,536.9	1,992.1	1,970.8	21.28	93.608	
6,496.0	6,326.5	6,270.7	6,270.0	24.4	2.3	135.29	-1,364.7	-2,537.4	2,011.7	1,990.3	21.40	93.984	
6,500.0	6,329.7	6,274.0	6,273.3	24.4	2.3	135.22	-1,364.7	-2,537.4	2,013.5	1,992.1	21.42	94.014	
6,550.0	6,369.6	6,313.8	6,313.1	24.3	2.3	134.24	-1,364.6	-2,537.8	2,037.3	2,015.7	21.60	94.331	
6,594.5	6,403.3	6,346.7	6,346.1	24.2	2.3	133.19	-1,364.5	-2,538.2	2,060.4	2,038.6	21.81	94.490	
6,600.0	6,407.3	6,350.7	6,350.0	24.2	2.3	133.05	-1,364.5	-2,538.3	2,063.4	2,041.6	21.83	94.504	
6,650.0	6,442.7	6,385.2	6,384.5	24.1	2.3	131.63	-1,364.4	-2,538.7	2,091.8	2,069.6	22.14	94.491	
6,692.9	6,471.0	6,413.2	6,412.6	24.0	2.3	130.21	-1,364.3	-2,539.1	2,117.8	2,095.3	22.46	94.298	
6,700.0	6,475.5	6,417.8	6,417.1	24.0	2.3	129.95	-1,364.3	-2,539.1	2,122.2	2,099.7	22.51	94.260	
6,750.0	6,505.6	6,448.2	6,447.6	24.0	2.3	127.97	-1,364.2	-2,539.5	2,154.6	2,131.7	22.97	93.790	
6,791.3	6,528.3	6,471.2	6,470.5	24.0	2.3	126.06	-1,364.1	-2,539.8	2,182.9	2,159.5	23.42	93.205	
6,800.0	6,532.8	6,475.8	6,475.1	24.0	2.3	125.63	-1,364.1	-2,539.8	2,188.9	2,165.4	23.52	93.079	
6,850.0	6,557.0	6,500.3	6,499.6	24.1	2.3	122.86	-1,364.0	-2,540.1	2,225.0	2,200.8	24.14	92.166	
6,889.7	6,574.1	6,519.0	6,518.3	24.2	2.3	120.36	-1,363.9	-2,540.3	2,254.7	2,230.0	24.68	91.341	
6,900.0	6,578.1	6,523.5	6,522.8	24.3	2.3	119.66	-1,363.9	-2,540.4	2,262.5	2,237.7	24.82	91.141	
6,950.0	6,596.1	6,543.1	6,542.4	24.5	2.3	115.92	-1,363.9	-2,540.5	2,301.5	2,276.0	25.55	90.075	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,607.5	6,555.7	6,555.0	24.7	2.3	112.64	-1,363.8	-2,540.6	2,332.1	2,306.0	26.12	89.287	
7,000.0	6,610.7	6,559.2	6,558.5	24.8	2.3	111.56	-1,363.8	-2,540.7	2,341.7	2,315.4	26.29	89.087	
7,050.0	6,621.9	6,571.5	6,570.8	25.1	2.3	106.54	-1,363.8	-2,540.8	2,382.9	2,355.9	26.99	88.300	
7,086.6	6,628.0	6,578.0	6,577.4	25.4	2.3	102.45	-1,363.7	-2,540.8	2,413.6	2,386.1	27.46	87.885	
7,100.0	6,629.7	6,579.9	6,579.3	25.6	2.3	100.87	-1,363.7	-2,540.8	2,424.9	2,397.3	27.62	87.798	
7,150.0	6,634.1	6,584.5	6,583.8	26.0	2.3	94.59	-1,363.7	-2,540.9	2,467.6	2,439.4	28.18	87.552	
7,185.0	6,635.1	6,585.4	6,584.7	26.4	2.3	89.90	-1,363.7	-2,540.9	2,497.7	2,469.1	28.56	87.446	
7,196.6	6,635.0	6,585.2	6,584.5	26.5	2.3	88.32	-1,363.7	-2,540.9	2,507.7	2,479.0	28.68	87.432	
7,200.0	6,635.0	6,585.1	6,584.5	26.6	2.3	88.31	-1,363.7	-2,540.9	2,510.6	2,481.9	28.72	87.419	
7,283.4	6,633.9	6,583.3	6,582.6	27.6	2.3	88.23	-1,363.7	-2,540.8	2,583.1	2,553.3	29.75	86.834	
7,300.0	6,633.7	6,582.9	6,582.3	27.8	2.3	88.21	-1,363.7	-2,540.8	2,597.5	2,567.6	29.95	86.725	
7,381.9	6,632.6	6,581.1	6,580.4	29.0	2.3	88.13	-1,363.7	-2,540.8	2,669.3	2,638.2	31.14	85.723	
7,400.0	6,632.4	6,580.7	6,580.0	29.2	2.3	88.11	-1,363.7	-2,540.8	2,685.3	2,653.9	31.40	85.514	
7,480.3	6,631.4	6,578.9	6,578.2	30.5	2.3	88.03	-1,363.7	-2,540.8	2,756.4	2,723.7	32.72	84.248	
7,500.0	6,631.1	6,578.4	6,577.7	30.9	2.3	88.01	-1,363.7	-2,540.8	2,773.9	2,740.9	33.04	83.955	
7,578.7	6,630.1	6,576.6	6,575.9	32.3	2.3	87.93	-1,363.8	-2,540.8	2,844.2	2,809.8	34.46	82.546	
7,600.0	6,629.8	6,576.1	6,575.4	32.7	2.3	87.90	-1,363.8	-2,540.8	2,863.3	2,828.5	34.84	82.187	
7,677.1	6,628.9	6,574.3	6,573.7	34.1	2.3	87.82	-1,363.8	-2,540.8	2,932.7	2,896.4	36.33	80.724	
7,700.0	6,628.6	6,573.8	6,573.1	34.6	2.3	87.80	-1,363.8	-2,540.8	2,953.4	2,916.6	36.77	80.315	
7,775.6	6,627.6	6,572.0	6,571.3	36.1	2.3	87.72	-1,363.8	-2,540.8	3,021.8	2,983.5	38.32	78.861	
7,800.0	6,627.3	6,571.4	6,570.8	36.6	2.3	87.69	-1,363.8	-2,540.8	3,044.0	3,005.2	38.82	78.418	
7,874.0	6,626.3	6,569.7	6,569.0	38.2	2.3	87.61	-1,363.8	-2,540.8	3,111.5	3,071.1	40.40	77.012	
7,900.0	6,626.0	6,569.1	6,568.4	38.8	2.3	87.58	-1,363.8	-2,540.7	3,135.3	3,094.3	40.96	76.545	
7,972.4	6,625.1	6,567.3	6,566.6	40.4	2.3	87.50	-1,363.8	-2,540.7	3,201.7	3,159.1	42.57	75.212	
8,000.0	6,624.7	6,566.6	6,566.0	41.0	2.3	87.47	-1,363.8	-2,540.7	3,227.0	3,183.8	43.18	74.733	
8,070.8	6,623.8	6,564.9	6,564.2	42.6	2.3	87.39	-1,363.8	-2,540.7	3,292.3	3,247.5	44.80	73.485	
8,100.0	6,623.4	6,564.2	6,563.5	43.3	2.3	87.36	-1,363.8	-2,540.7	3,319.2	3,273.8	45.47	72.999	
8,169.3	6,622.6	6,562.5	6,561.8	44.9	2.3	87.28	-1,363.8	-2,540.7	3,383.4	3,336.3	47.10	71.841	
8,200.0	6,622.2	6,561.7	6,561.0	45.6	2.3	87.25	-1,363.8	-2,540.7	3,411.9	3,364.1	47.82	71.355	
8,267.7	6,621.3	6,560.0	6,559.3	47.3	2.3	87.17	-1,363.8	-2,540.7	3,474.9	3,425.4	49.44	70.288	
8,300.0	6,620.9	6,559.2	6,558.5	48.0	2.3	87.13	-1,363.8	-2,540.7	3,505.0	3,454.7	50.21	69.805	
8,366.1	6,620.0	6,557.5	6,556.8	49.7	2.3	87.06	-1,363.8	-2,540.7	3,566.7	3,514.9	51.82	68.825	
8,400.0	6,619.6	6,556.7	6,556.0	50.5	2.3	87.02	-1,363.8	-2,540.7	3,598.4	3,545.7	52.65	68.348	
8,464.5	6,618.8	6,555.0	6,554.3	52.1	2.3	86.94	-1,363.8	-2,540.6	3,658.9	3,604.6	54.24	67.453	
8,500.0	6,618.3	6,554.1	6,553.4	53.0	2.3	86.90	-1,363.8	-2,540.6	3,692.2	3,637.1	55.12	66.984	
8,563.0	6,617.5	6,552.4	6,551.8	54.5	2.3	86.83	-1,363.8	-2,540.6	3,751.4	3,694.7	56.70	66.166	
8,600.0	6,617.0	6,551.5	6,550.8	55.5	2.3	86.78	-1,363.8	-2,540.6	3,786.3	3,728.6	57.62	65.707	
8,661.4	6,616.3	6,549.8	6,549.2	57.0	2.3	86.71	-1,363.8	-2,540.6	3,844.2	3,785.0	59.18	64.960	
8,700.0	6,615.8	6,548.8	6,548.1	58.0	2.3	86.66	-1,363.8	-2,540.6	3,880.7	3,820.5	60.15	64.512	
8,759.8	6,615.0	6,547.2	6,546.5	59.5	2.3	86.59	-1,363.9	-2,540.6	3,937.3	3,875.6	61.68	63.832	
8,800.0	6,614.5	6,546.1	6,545.4	60.6	2.3	86.54	-1,363.9	-2,540.6	3,975.3	3,912.6	62.71	63.395	
8,858.2	6,613.7	6,544.5	6,543.9	62.1	2.3	86.47	-1,363.9	-2,540.6	4,030.6	3,966.4	64.21	62.775	
8,900.0	6,613.2	6,543.4	6,542.7	63.2	2.3	86.42	-1,363.9	-2,540.5	4,070.2	4,005.0	65.28	62.350	
8,956.7	6,612.5	6,541.8	6,541.2	64.6	2.3	86.35	-1,363.9	-2,540.5	4,124.1	4,057.4	66.75	61.785	
9,000.0	6,611.9	6,540.6	6,540.0	65.8	2.3	86.29	-1,363.9	-2,540.5	4,165.4	4,097.5	67.87	61.371	
9,055.1	6,611.2	6,539.1	6,538.4	67.2	2.3	86.22	-1,363.9	-2,540.5	4,217.9	4,148.6	69.31	60.857	
9,100.0	6,610.6	6,537.8	6,537.2	68.4	2.3	86.16	-1,363.9	-2,540.5	4,260.8	4,190.3	70.48	60.455	
9,153.5	6,609.9	6,536.3	6,535.7	69.8	2.3	86.10	-1,363.9	-2,540.5	4,311.9	4,240.0	71.88	59.987	
9,200.0	6,609.3	6,535.0	6,534.3	71.0	2.3	86.04	-1,363.9	-2,540.5	4,356.3	4,283.2	73.10	59.595	
9,251.9	6,608.7	6,533.5	6,532.8	72.4	2.3	85.97	-1,363.9	-2,540.5	4,406.1	4,331.6	74.47	59.169	
9,300.0	6,608.1	6,532.1	6,531.5	73.7	2.3	85.91	-1,363.9	-2,540.4	4,452.1	4,376.4	75.73	58.789	
9,350.4	6,607.4	6,530.7	6,530.0	75.0	2.3	85.84	-1,363.9	-2,540.4	4,500.4	4,423.4	77.06	58.400	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,606.8	6,529.2	6,528.5	76.3	2.3	85.77	-1,363.9	-2,540.4	4,548.1	4,469.7	78.37	58.031		
9,448.8	6,606.1	6,527.8	6,527.1	77.6	2.3	85.71	-1,363.9	-2,540.4	4,595.0	4,515.3	79.67	57.676		
9,500.0	6,605.5	6,526.3	6,525.6	79.0	2.3	85.64	-1,363.9	-2,540.4	4,644.2	4,563.2	81.03	57.318		
9,547.2	6,604.9	6,524.8	6,524.2	80.2	2.3	85.57	-1,363.9	-2,540.4	4,689.6	4,607.4	82.28	56.995		
9,600.0	6,604.2	6,523.3	6,522.6	81.7	2.3	85.50	-1,363.9	-2,540.4	4,740.5	4,656.8	83.69	56.646		
9,645.6	6,603.6	6,521.9	6,521.2	82.9	2.3	85.44	-1,363.9	-2,540.3	4,784.5	4,699.6	84.90	56.352		
9,700.0	6,602.9	6,520.2	6,519.5	84.3	2.3	85.36	-1,363.9	-2,540.3	4,836.9	4,750.5	86.35	56.014		
9,744.1	6,602.3	6,518.9	6,518.2	85.5	2.3	85.30	-1,363.9	-2,540.3	4,879.4	4,791.9	87.53	55.745		
9,800.0	6,601.6	6,517.1	6,516.4	87.0	2.3	85.22	-1,363.9	-2,540.3	4,933.5	4,844.4	89.03	55.416		
9,842.5	6,601.1	6,515.8	6,515.1	88.2	2.3	85.16	-1,364.0	-2,540.3	4,974.6	4,884.4	90.16	55.172		
9,900.0	6,600.3	6,514.0	6,513.3	89.7	2.3	85.08	-1,364.0	-2,540.3	5,030.2	4,938.5	91.70	54.852		
9,940.9	6,599.8	6,512.7	6,512.0	90.9	2.3	85.02	-1,364.0	-2,540.3	5,069.8	4,977.0	92.80	54.629		
10,000.0	6,599.0	6,510.8	6,510.1	92.5	2.3	84.94	-1,364.0	-2,540.2	5,127.0	5,032.6	94.39	54.318		
10,039.3	6,598.5	6,509.5	6,508.9	93.5	2.3	84.88	-1,364.0	-2,540.2	5,165.1	5,069.7	95.45	54.116		
10,100.0	6,597.7	6,507.6	6,506.9	95.2	2.3	84.79	-1,364.0	-2,540.2	5,224.0	5,126.9	97.08	53.813		
10,137.8	6,597.3	6,506.3	6,505.7	96.2	2.3	84.74	-1,364.0	-2,540.2	5,260.6	5,162.5	98.09	53.629		
10,200.0	6,596.5	6,504.3	6,503.6	97.9	2.3	84.64	-1,364.0	-2,540.2	5,321.0	5,221.2	99.77	53.334		
10,236.2	6,596.0	6,503.1	6,502.4	98.9	2.3	84.59	-1,364.0	-2,540.1	5,356.2	5,255.4	100.74	53.167		
10,300.0	6,595.2	6,501.0	6,500.3	100.6	2.3	84.49	-1,364.0	-2,540.1	5,418.2	5,315.7	102.46	52.880		
10,334.6	6,594.7	6,499.9	6,499.2	101.6	2.3	84.44	-1,364.0	-2,540.1	5,451.8	5,348.4	103.40	52.728		
10,400.0	6,593.9	6,498.1	6,497.4	103.3	2.3	84.36	-1,364.0	-2,540.1	5,515.4	5,410.3	105.16	52.448		
10,433.0	6,593.5	6,497.2	6,496.5	104.2	2.3	84.32	-1,364.0	-2,540.1	5,547.6	5,441.5	106.05	52.309		
10,500.0	6,592.6	6,495.3	6,494.7	106.1	2.3	84.24	-1,364.0	-2,540.1	5,612.8	5,504.9	107.86	52.036		
10,531.5	6,592.2	6,494.5	6,493.8	106.9	2.3	84.20	-1,364.0	-2,540.1	5,643.5	5,534.7	108.72	51.910		
10,600.0	6,591.3	6,492.6	6,491.9	108.8	2.3	84.11	-1,364.0	-2,540.0	5,710.2	5,599.7	110.57	51.644		
10,629.9	6,590.9	6,491.8	6,491.1	109.6	2.3	84.08	-1,364.0	-2,540.0	5,739.4	5,628.0	111.38	51.530		
10,700.0	6,590.0	6,489.8	6,489.2	111.6	2.3	83.99	-1,364.0	-2,540.0	5,807.8	5,694.5	113.28	51.271		
10,728.3	6,589.6	6,489.0	6,488.4	112.3	2.3	83.95	-1,364.0	-2,540.0	5,835.4	5,721.4	114.04	51.168		
10,800.0	6,588.7	6,487.0	6,486.4	114.3	2.3	83.86	-1,364.0	-2,540.0	5,905.4	5,789.4	115.99	50.915		
10,826.7	6,588.4	6,486.3	6,485.6	115.0	2.3	83.83	-1,364.0	-2,540.0	5,931.5	5,814.8	116.71	50.822		
10,900.0	6,587.4	6,484.2	6,483.6	117.0	2.3	83.74	-1,364.0	-2,539.9	6,003.1	5,884.4	118.70	50.575		
10,925.2	6,587.1	6,483.5	6,482.9	117.7	2.3	83.71	-1,364.0	-2,539.9	6,027.7	5,908.3	119.38	50.492		
11,000.0	6,586.1	6,481.4	6,480.8	119.8	2.3	83.61	-1,364.1	-2,539.9	6,100.9	5,979.4	121.41	50.251		
11,023.6	6,585.8	6,480.8	6,480.1	120.4	2.3	83.58	-1,364.1	-2,539.9	6,123.9	6,001.9	122.05	50.177		
11,100.0	6,584.8	6,478.6	6,477.9	122.5	2.3	83.48	-1,364.1	-2,539.9	6,198.7	6,074.6	124.12	49.941		
11,122.0	6,584.5	6,478.0	6,477.3	123.2	2.3	83.45	-1,364.1	-2,539.9	6,220.2	6,095.5	124.72	49.875		
11,200.0	6,583.5	6,475.7	6,475.1	125.3	2.3	83.35	-1,364.1	-2,539.8	6,296.6	6,169.8	126.83	49.645		
11,220.4	6,583.3	6,475.1	6,474.5	125.9	2.3	83.33	-1,364.1	-2,539.8	6,316.6	6,189.2	127.39	49.586		
11,300.0	6,582.2	6,472.9	6,472.2	128.1	2.3	83.22	-1,364.1	-2,539.8	6,394.6	6,265.0	129.55	49.362		
11,318.9	6,582.0	6,472.3	6,471.7	128.6	2.3	83.20	-1,364.1	-2,539.8	6,413.1	6,283.0	130.06	49.309		
11,400.0	6,580.9	6,470.0	6,469.3	130.8	2.3	83.09	-1,364.1	-2,539.8	6,492.6	6,360.3	132.26	49.090		
11,417.3	6,580.7	6,469.5	6,468.8	131.3	2.3	83.07	-1,364.1	-2,539.8	6,509.6	6,376.8	132.73	49.044		
11,500.0	6,579.7	6,467.1	6,466.4	133.6	2.3	82.96	-1,364.1	-2,539.7	6,590.7	6,455.7	134.97	48.830		
11,515.7	6,579.4	6,466.6	6,465.9	134.0	2.3	82.94	-1,364.1	-2,539.7	6,606.1	6,470.7	135.40	48.790		
11,600.0	6,578.4	6,464.1	6,463.5	136.3	2.3	82.83	-1,364.1	-2,539.7	6,688.8	6,551.1	137.68	48.581		
11,614.1	6,578.2	6,463.7	6,463.1	136.7	2.3	82.81	-1,364.1	-2,539.7	6,702.7	6,564.6	138.07	48.546		
11,700.0	6,577.1	6,461.2	6,460.5	139.1	2.3	82.70	-1,364.1	-2,539.7	6,787.0	6,646.6	140.40	48.342		
11,712.6	6,576.9	6,460.8	6,460.2	139.5	2.3	82.68	-1,364.1	-2,539.7	6,799.4	6,658.6	140.74	48.312		
11,800.0	6,575.8	6,458.2	6,457.6	141.9	2.3	82.56	-1,364.1	-2,539.6	6,885.3	6,742.2	143.11	48.112		
11,811.0	6,575.6	6,457.9	6,457.2	142.2	2.3	82.55	-1,364.1	-2,539.6	6,896.1	6,752.7	143.41	48.087		
11,858.8	6,575.0	6,456.5	6,455.8	143.5	2.3	82.49	-1,364.1	-2,539.6	6,943.0	6,798.3	144.70	47.981 SF		
11,859.3	6,575.0	6,456.5	6,455.8	143.5	2.3	82.49	-1,364.1	-2,539.6	6,943.6	6,798.9	144.71	47.982		

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-74.33	1,403.8	-5,003.3	5,196.6				
98.4	98.4	76.4	76.4	0.1	0.0	-74.33	1,403.8	-5,003.3	5,196.6	5,196.5	0.10	N/A	
100.0	100.0	78.0	78.0	0.1	0.0	-74.33	1,403.8	-5,003.3	5,196.6	5,196.5	0.10	N/A	
196.8	196.8	174.8	174.8	0.3	1.0	-74.33	1,403.8	-5,003.3	5,196.6	5,195.3	1.29	4,021.949	
200.0	200.0	178.0	178.0	0.3	1.0	-74.33	1,403.8	-5,003.3	5,196.6	5,195.2	1.34	3,877.366	
295.3	295.3	273.3	273.3	0.5	3.0	-74.33	1,403.8	-5,003.3	5,196.6	5,193.1	3.50	1,483.729	
300.0	300.0	278.0	278.0	0.5	3.1	-74.33	1,403.8	-5,003.3	5,196.6	5,192.9	3.62	1,435.479	
393.7	393.7	371.7	371.7	0.8	5.1	-74.33	1,403.8	-5,003.3	5,196.6	5,190.7	5.82	893.185	
400.0	400.0	378.0	378.0	0.8	5.2	-74.33	1,403.8	-5,003.3	5,196.6	5,190.6	5.96	871.471	
492.1	492.1	470.1	470.1	1.0	7.1	-74.33	1,403.8	-5,003.3	5,196.6	5,188.5	8.06	644.857	
500.0	500.0	478.0	478.0	1.0	7.2	-74.33	1,403.8	-5,003.3	5,196.6	5,188.3	8.24	630.885	
590.5	590.5	568.5	568.5	1.2	9.1	-74.33	1,403.8	-5,003.3	5,196.6	5,186.3	10.28	505.484	
600.0	600.0	578.0	578.0	1.2	9.3	-74.33	1,403.8	-5,003.3	5,196.6	5,186.1	10.49	495.225	
689.0	689.0	667.0	667.0	1.4	11.1	-74.33	1,403.8	-5,003.3	5,196.6	5,184.1	12.49	415.913	
700.0	700.0	678.0	678.0	1.4	11.3	-74.33	1,403.8	-5,003.3	5,196.6	5,183.8	12.74	407.826	
787.4	787.4	765.4	765.4	1.6	13.1	-74.33	1,403.8	-5,003.3	5,196.6	5,181.9	14.70	353.408	
800.0	800.0	778.0	778.0	1.7	13.3	-74.33	1,403.8	-5,003.3	5,196.6	5,181.6	14.99	346.741	
885.8	885.8	863.8	863.8	1.9	15.0	-74.33	1,403.8	-5,003.3	5,196.6	5,179.6	16.91	307.281	
900.0	900.0	878.0	878.0	1.9	15.3	-74.33	1,403.8	-5,003.3	5,196.6	5,179.3	17.23	301.613	
984.2	984.2	962.2	962.2	2.1	17.0	-74.33	1,403.8	-5,003.3	5,196.6	5,177.4	19.12	271.828	
1,000.0	1,000.0	978.0	978.0	2.1	17.3	-74.33	1,403.8	-5,003.3	5,196.6	5,177.1	19.47	266.901	
1,082.7	1,082.7	1,060.7	1,060.7	2.3	19.0	-74.33	1,403.8	-5,003.3	5,196.6	5,175.2	21.32	243.721	
1,100.0	1,100.0	1,078.0	1,078.0	2.3	19.4	-74.33	1,403.8	-5,003.3	5,196.6	5,174.9	21.71	239.366	
1,181.1	1,181.1	1,159.1	1,159.1	2.5	21.0	-74.33	1,403.8	-5,003.3	5,196.6	5,173.0	23.53	220.890	
1,200.0	1,200.0	1,178.0	1,178.0	2.6	21.4	-74.33	1,403.8	-5,003.3	5,196.6	5,172.6	23.95	216.987	
1,279.5	1,279.5	1,257.5	1,257.5	2.7	23.0	20.88	1,403.8	-5,003.3	5,195.5	5,169.8	25.71	202.096	
1,300.0	1,300.0	1,278.0	1,278.0	2.8	23.4	20.89	1,403.8	-5,003.3	5,194.9	5,168.8	26.16	198.598	
1,377.9	1,377.8	1,355.8	1,355.8	2.9	25.0	20.93	1,403.8	-5,003.3	5,191.4	5,163.5	27.85	186.418	
1,400.0	1,399.8	1,377.8	1,377.8	3.0	25.4	20.94	1,403.8	-5,003.3	5,190.0	5,161.7	28.32	183.254	
1,476.4	1,475.9	1,453.9	1,453.9	3.1	26.9	21.01	1,403.8	-5,003.3	5,184.1	5,154.2	29.95	173.094	
1,500.0	1,499.5	1,477.5	1,477.5	3.2	27.4	21.03	1,403.8	-5,003.3	5,181.9	5,151.5	30.45	170.191	
1,574.8	1,573.7	1,551.7	1,551.7	3.4	28.9	21.13	1,403.8	-5,003.3	5,173.7	5,141.7	32.01	161.628	
1,600.0	1,598.7	1,576.7	1,576.7	3.4	29.4	21.16	1,403.8	-5,003.3	5,170.5	5,138.0	32.53	158.951	
1,673.2	1,671.1	1,649.1	1,649.1	3.6	30.9	21.29	1,403.8	-5,003.3	5,160.1	5,126.1	34.02	151.668	
1,700.0	1,697.5	1,675.5	1,675.5	3.7	31.4	21.33	1,403.8	-5,003.3	5,155.9	5,121.4	34.56	149.187	
1,771.6	1,767.9	1,745.9	1,745.9	3.9	32.8	21.48	1,403.8	-5,003.3	5,143.5	5,107.5	35.98	142.943	
1,800.0	1,795.6	1,773.6	1,773.6	4.0	33.4	21.54	1,403.8	-5,003.3	5,138.1	5,101.6	36.54	140.632	
1,870.1	1,864.0	1,842.0	1,842.0	4.3	34.7	21.72	1,403.8	-5,003.3	5,123.7	5,085.9	37.89	135.238	
1,900.0	1,893.1	1,871.1	1,871.1	4.4	35.3	21.80	1,403.8	-5,003.3	5,117.1	5,078.7	38.45	133.077	
1,968.5	1,959.3	1,937.3	1,937.3	4.6	36.7	21.99	1,403.8	-5,003.3	5,100.9	5,061.2	39.73	128.386	
1,992.4	1,982.4	1,960.4	1,960.4	4.7	37.1	22.07	1,403.8	-5,003.3	5,094.9	5,054.8	40.17	126.837	
2,000.0	1,989.6	1,967.6	1,967.6	4.8	37.3	22.07	1,403.8	-5,003.3	5,093.0	5,052.7	40.33	126.279	
2,066.9	2,054.0	2,032.0	2,032.0	5.1	38.6	22.15	1,403.8	-5,003.3	5,076.0	5,034.2	41.78	121.501	
2,100.0	2,085.8	2,063.8	2,063.8	5.2	39.2	22.19	1,403.8	-5,003.3	5,067.6	5,025.1	42.49	119.274	
2,165.3	2,148.7	2,126.7	2,126.7	5.5	40.5	22.27	1,403.8	-5,003.3	5,051.0	5,007.1	43.90	115.062	
2,200.0	2,182.0	2,160.0	2,160.0	5.7	41.1	22.31	1,403.8	-5,003.3	5,042.2	4,997.5	44.65	112.917	
2,263.8	2,243.4	2,221.4	2,221.4	6.0	42.4	22.38	1,403.8	-5,003.3	5,026.0	4,979.9	46.04	109.164	
2,300.0	2,278.2	2,256.2	2,256.2	6.2	43.1	22.42	1,403.8	-5,003.3	5,016.8	4,970.0	46.83	107.127	
2,362.2	2,338.1	2,316.1	2,316.1	6.5	44.3	22.50	1,403.8	-5,003.3	5,001.0	4,952.8	48.19	103.780	
2,400.0	2,374.4	2,352.4	2,352.4	6.7	45.0	22.54	1,403.8	-5,003.3	4,991.4	4,942.4	49.02	101.834	
2,460.6	2,432.8	2,410.8	2,410.8	7.0	46.2	22.62	1,403.8	-5,003.3	4,976.0	4,925.7	50.34	98.842	
2,500.0	2,470.6	2,448.6	2,448.6	7.2	46.9	22.66	1,403.8	-5,003.3	4,966.1	4,914.9	51.21	96.980	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,527.4	2,505.4	2,505.4	7.6	48.1	22.73	1,403.8	-5,003.3	4,951.1	4,898.6	52.51	94.297	
2,600.0	2,566.8	2,544.8	2,544.8	7.8	48.9	22.78	1,403.8	-5,003.3	4,940.7	4,887.3	53.41	92.513	
2,657.5	2,622.1	2,600.1	2,600.1	8.1	50.0	22.85	1,403.8	-5,003.3	4,926.2	4,871.5	54.67	90.104	
2,700.0	2,663.0	2,641.0	2,641.0	8.3	50.8	22.91	1,403.8	-5,003.3	4,915.4	4,859.8	55.61	88.391	
2,755.9	2,716.8	2,694.8	2,694.8	8.6	51.9	22.98	1,403.8	-5,003.3	4,901.3	4,844.4	56.84	86.222	
2,800.0	2,759.2	2,737.2	2,737.2	8.9	52.8	23.03	1,403.8	-5,003.3	4,890.1	4,832.3	57.82	84.576	
2,854.3	2,811.5	2,789.5	2,789.5	9.2	53.8	23.10	1,403.8	-5,003.3	4,876.4	4,817.4	59.02	82.620	
2,900.0	2,855.4	2,833.4	2,833.4	9.4	54.7	23.16	1,403.8	-5,003.3	4,864.9	4,804.8	60.03	81.036	
2,952.7	2,906.2	2,884.2	2,884.2	9.7	55.7	23.22	1,403.8	-5,003.3	4,851.5	4,790.3	61.20	79.269	
3,000.0	2,951.6	2,929.6	2,929.6	10.0	56.6	23.28	1,403.8	-5,003.3	4,839.6	4,777.4	62.25	77.742	
3,051.2	3,000.9	2,978.9	2,978.9	10.3	57.6	23.35	1,403.8	-5,003.3	4,826.7	4,763.3	63.39	76.144	
3,100.0	3,047.8	3,025.8	3,025.8	10.5	58.6	23.41	1,403.8	-5,003.3	4,814.4	4,749.9	64.47	74.671	
3,149.6	3,095.5	3,073.5	3,073.5	10.8	59.5	23.47	1,403.8	-5,003.3	4,801.9	4,736.3	65.58	73.224	
3,200.0	3,144.0	3,122.0	3,122.0	11.1	60.5	23.54	1,403.8	-5,003.3	4,789.2	4,722.5	66.70	71.802	
3,248.0	3,190.2	3,168.2	3,168.2	11.4	61.4	23.60	1,403.8	-5,003.3	4,777.1	4,709.3	67.77	70.489	
3,300.0	3,240.2	3,218.2	3,218.2	11.7	62.4	23.67	1,403.8	-5,003.3	4,764.0	4,695.1	68.93	69.114	
3,346.4	3,284.9	3,262.9	3,262.9	11.9	63.3	23.73	1,403.8	-5,003.3	4,752.3	4,682.4	69.97	67.923	
3,400.0	3,336.4	3,314.4	3,314.4	12.2	64.4	23.80	1,403.8	-5,003.3	4,738.9	4,667.7	71.16	66.592	
3,444.9	3,379.6	3,357.6	3,357.6	12.5	65.2	23.86	1,403.8	-5,003.3	4,727.6	4,655.4	72.17	65.510	
3,500.0	3,432.6	3,410.6	3,410.6	12.8	66.3	23.93	1,403.8	-5,003.3	4,713.7	4,640.3	73.40	64.221	
3,543.3	3,474.3	3,452.3	3,452.3	13.1	67.1	23.99	1,403.8	-5,003.3	4,702.9	4,628.5	74.37	63.238	
3,600.0	3,528.8	3,506.8	3,506.8	13.4	68.2	24.07	1,403.8	-5,003.3	4,688.6	4,613.0	75.64	61.988	
3,641.7	3,569.0	3,547.0	3,547.0	13.6	69.0	24.12	1,403.8	-5,003.3	4,678.2	4,601.6	76.57	61.094	
3,700.0	3,625.0	3,603.0	3,603.0	14.0	70.2	24.20	1,403.8	-5,003.3	4,663.6	4,585.7	77.88	59.882	
3,740.1	3,663.6	3,641.6	3,641.6	14.2	70.9	24.26	1,403.8	-5,003.3	4,653.5	4,574.7	78.78	59.069	
3,800.0	3,721.2	3,699.2	3,699.2	14.5	72.1	24.34	1,403.8	-5,003.3	4,638.5	4,558.4	80.12	57.891	
3,838.6	3,758.3	3,736.3	3,736.3	14.8	72.8	24.40	1,403.8	-5,003.3	4,628.8	4,547.8	80.99	57.153	
3,900.0	3,817.4	3,795.4	3,795.4	15.1	74.0	24.48	1,403.8	-5,003.3	4,613.5	4,531.1	82.37	56.008	
3,937.0	3,853.0	3,831.0	3,831.0	15.3	74.8	24.53	1,403.8	-5,003.3	4,604.2	4,521.0	83.20	55.337	
4,000.0	3,913.6	3,891.6	3,891.6	15.7	76.0	24.62	1,403.8	-5,003.3	4,588.5	4,503.8	84.62	54.223	
4,035.4	3,947.7	3,925.7	3,925.7	15.9	76.7	24.67	1,403.8	-5,003.3	4,579.6	4,494.2	85.42	53.613	
4,100.0	4,009.8	3,987.8	3,987.8	16.3	77.9	24.76	1,403.8	-5,003.3	4,563.5	4,476.6	86.87	52.530	
4,133.8	4,042.4	4,020.4	4,020.4	16.5	78.6	24.81	1,403.8	-5,003.3	4,555.0	4,467.4	87.64	51.976	
4,200.0	4,106.0	4,084.0	4,084.0	16.8	79.8	24.91	1,403.8	-5,003.3	4,538.5	4,449.4	89.13	50.920	
4,232.3	4,137.1	4,115.1	4,115.1	17.0	80.5	24.95	1,403.8	-5,003.3	4,530.5	4,440.6	89.86	50.418	
4,300.0	4,202.2	4,180.2	4,180.2	17.4	81.8	25.05	1,403.8	-5,003.3	4,513.6	4,422.2	91.39	49.390	
4,330.7	4,231.7	4,209.7	4,209.7	17.6	82.4	25.10	1,403.8	-5,003.3	4,506.0	4,413.9	92.08	48.934	
4,400.0	4,298.4	4,276.4	4,276.4	18.0	83.7	25.20	1,403.8	-5,003.3	4,488.7	4,395.1	93.65	47.931	
4,429.1	4,326.4	4,304.4	4,304.4	18.2	84.3	25.24	1,403.8	-5,003.3	4,481.5	4,387.2	94.31	47.520	
4,500.0	4,394.6	4,372.6	4,372.6	18.6	85.6	25.35	1,403.8	-5,003.3	4,463.9	4,367.9	95.91	46.541	
4,527.5	4,421.1	4,399.1	4,399.1	18.7	86.2	25.39	1,403.8	-5,003.3	4,457.0	4,360.5	96.54	46.169	
4,600.0	4,490.8	4,468.8	4,468.8	19.2	87.6	25.50	1,403.8	-5,003.3	4,439.0	4,340.8	98.18	45.214	
4,626.0	4,515.8	4,493.8	4,493.8	19.3	88.1	25.54	1,403.8	-5,003.3	4,432.6	4,333.8	98.77	44.879	
4,700.0	4,587.0	4,565.0	4,565.0	19.8	89.5	25.65	1,403.8	-5,003.3	4,414.2	4,313.8	100.45	43.946	
4,724.4	4,610.5	4,588.5	4,588.5	19.9	90.0	25.68	1,403.8	-5,003.3	4,408.2	4,307.2	101.00	43.645	
4,800.0	4,683.2	4,661.2	4,661.2	20.3	91.4	25.80	1,403.8	-5,003.3	4,389.4	4,286.7	102.72	42.733	
4,822.8	4,705.2	4,683.2	4,683.2	20.5	91.9	25.84	1,403.8	-5,003.3	4,383.8	4,280.5	103.24	42.464	
4,900.0	4,779.4	4,757.4	4,757.4	20.9	93.4	25.96	1,403.8	-5,003.3	4,364.7	4,259.7	104.99	41.572	
4,921.2	4,799.8	4,777.8	4,777.8	21.0	93.8	25.99	1,403.8	-5,003.3	4,359.4	4,254.0	105.47	41.332	
5,000.0	4,875.6	4,853.6	4,853.6	21.5	95.3	26.11	1,403.8	-5,003.3	4,340.0	4,232.7	107.27	40.459	
5,019.7	4,894.5	4,872.5	4,872.5	21.6	95.7	26.14	1,403.8	-5,003.3	4,335.1	4,227.4	107.72	40.246	
5,100.0	4,971.8	4,949.8	4,949.8	22.1	97.3	26.27	1,403.8	-5,003.3	4,315.3	4,205.7	109.55	39.392	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	4,989.2	4,967.2	4,967.2	22.2	97.6	26.30	1,403.8	-5,003.3	4,310.8	4,200.9	109.96	39.204	
5,200.0	5,068.0	5,046.0	5,046.0	22.7	99.2	26.43	1,403.8	-5,003.3	4,290.6	4,178.8	111.83	38.368	
5,216.5	5,083.9	5,061.9	5,061.9	22.8	99.5	26.46	1,403.8	-5,003.3	4,286.6	4,174.4	112.21	38.203	
5,240.0	5,106.5	5,084.5	5,084.5	22.9	100.0	26.50	1,403.8	-5,003.3	4,280.8	4,168.0	112.74	37.969	
5,300.0	5,164.4	5,142.4	5,142.4	23.2	101.1	26.46	1,403.8	-5,003.3	4,266.6	4,152.0	114.51	37.260	
5,314.9	5,178.8	5,156.8	5,156.8	23.3	101.4	26.45	1,403.8	-5,003.3	4,263.2	4,148.2	114.94	37.091	
5,400.0	5,261.5	5,239.5	5,239.5	23.6	103.1	26.41	1,403.8	-5,003.3	4,245.3	4,127.9	117.35	36.176	
5,413.4	5,274.6	5,252.6	5,252.6	23.6	103.3	26.40	1,403.8	-5,003.3	4,242.7	4,125.0	117.73	36.039	
5,500.0	5,359.5	5,337.5	5,337.5	23.9	105.0	26.36	1,403.8	-5,003.3	4,227.1	4,107.0	120.11	35.193	
5,511.8	5,371.1	5,349.1	5,349.1	24.0	105.3	26.36	1,403.8	-5,003.3	4,225.2	4,104.8	120.43	35.084	
5,600.0	5,458.0	5,436.0	5,436.0	24.2	107.0	26.33	1,403.8	-5,003.3	4,212.1	4,089.3	122.78	34.307	
5,610.2	5,468.2	5,446.2	5,446.2	24.3	107.2	26.33	1,403.8	-5,003.3	4,210.7	4,087.7	123.04	34.222	
5,700.0	5,557.2	5,535.2	5,535.2	24.5	109.0	26.30	1,403.8	-5,003.3	4,200.1	4,074.8	125.33	33.511	
5,708.6	5,565.7	5,543.7	5,543.7	24.5	109.2	26.30	1,403.8	-5,003.3	4,199.2	4,073.7	125.55	33.447	
5,800.0	5,656.7	5,634.7	5,634.7	24.7	111.0	26.28	1,403.8	-5,003.3	4,191.3	4,063.5	127.78	32.801	
5,807.1	5,663.7	5,641.7	5,641.7	24.7	111.2	26.28	1,403.8	-5,003.3	4,190.8	4,062.8	127.95	32.754	
5,900.0	5,756.5	5,734.5	5,734.5	24.9	113.0	26.27	1,403.8	-5,003.3	4,185.6	4,055.5	130.10	32.172	
5,905.5	5,761.9	5,739.9	5,739.9	24.9	113.1	26.27	1,403.8	-5,003.3	4,185.4	4,055.1	130.23	32.139	
6,000.0	5,856.4	5,834.4	5,834.4	25.0	115.0	26.26	1,403.8	-5,003.3	4,183.0	4,050.7	132.29	31.619	
6,003.9	5,860.3	5,838.3	5,838.3	25.0	115.1	26.26	1,403.8	-5,003.3	4,183.0	4,050.6	132.38	31.599	
6,032.5	5,888.9	5,866.9	5,866.9	25.0	115.7	-68.93	1,403.8	-5,003.3	4,182.8	4,043.9	138.98	30.097	
6,062.5	5,918.9	5,896.9	5,896.9	25.1	116.3	-68.93	1,403.8	-5,003.3	4,182.8	4,043.2	139.62	29.960 CC, ES, SF	
6,100.0	5,956.4	5,934.4	5,934.4	25.1	117.1	-158.91	1,403.8	-5,003.3	4,183.7	4,049.6	134.17	31.181	
6,102.3	5,958.7	5,936.7	5,936.7	25.1	117.1	-158.90	1,403.8	-5,003.3	4,183.9	4,049.7	134.20	31.177	
6,150.0	6,006.2	5,984.2	5,984.2	25.1	118.1	-158.81	1,403.8	-5,003.3	4,187.8	4,053.4	134.42	31.155	
6,200.0	6,055.6	6,033.6	6,033.6	25.1	119.0	-158.64	1,403.8	-5,003.3	4,195.1	4,061.0	134.10	31.284	
6,200.8	6,056.3	6,034.3	6,034.3	25.1	119.1	-158.63	1,403.8	-5,003.3	4,195.3	4,061.2	134.09	31.287	
6,250.0	6,104.3	6,082.3	6,082.3	25.0	120.0	-158.38	1,403.8	-5,003.3	4,205.6	4,072.4	133.23	31.567	
6,299.2	6,151.3	6,129.3	6,129.3	24.9	121.0	-158.03	1,403.8	-5,003.3	4,219.0	4,087.2	131.84	32.001	
6,300.0	6,152.1	6,130.1	6,130.1	24.9	121.0	-158.03	1,403.8	-5,003.3	4,219.3	4,087.5	131.81	32.009	
6,350.0	6,198.7	6,176.7	6,176.7	24.8	121.9	-157.58	1,403.8	-5,003.3	4,236.0	4,106.1	129.89	32.612	
6,397.6	6,241.9	6,219.9	6,219.9	24.7	122.8	-157.05	1,403.8	-5,003.3	4,254.8	4,127.1	127.62	33.338	
6,400.0	6,244.1	6,222.1	6,222.1	24.7	122.8	-157.03	1,403.8	-5,003.3	4,255.8	4,128.3	127.50	33.378	
6,450.0	6,287.8	6,265.8	6,265.8	24.5	123.7	-156.35	1,403.8	-5,003.3	4,278.5	4,153.7	124.71	34.307	
6,496.0	6,326.5	6,304.5	6,304.5	24.4	124.5	-155.59	1,403.8	-5,003.3	4,301.8	4,180.0	121.86	35.301	
6,500.0	6,329.7	6,307.7	6,307.7	24.4	124.6	-155.52	1,403.8	-5,003.3	4,304.0	4,182.3	121.61	35.392	
6,550.0	6,369.6	6,347.6	6,347.6	24.3	125.4	-154.53	1,403.8	-5,003.3	4,332.2	4,213.8	118.32	36.615	
6,594.5	6,403.3	6,381.3	6,381.3	24.2	126.0	-153.48	1,403.8	-5,003.3	4,359.4	4,244.0	115.36	37.789	
6,600.0	6,407.3	6,385.3	6,385.3	24.2	126.1	-153.34	1,403.8	-5,003.3	4,362.9	4,247.9	115.00	37.938	
6,650.0	6,442.7	6,420.7	6,420.7	24.1	126.8	-151.91	1,403.8	-5,003.3	4,396.1	4,284.3	111.88	39.294	
6,692.9	6,471.0	6,449.0	6,449.0	24.0	127.4	-150.44	1,403.8	-5,003.3	4,426.4	4,316.9	109.56	40.401	
6,700.0	6,475.5	6,453.5	6,453.5	24.0	127.5	-150.18	1,403.8	-5,003.3	4,431.6	4,322.4	109.23	40.573	
6,750.0	6,505.6	6,483.6	6,483.6	24.0	128.1	-148.08	1,403.8	-5,003.3	4,469.2	4,361.8	107.41	41.609	
6,791.3	6,528.3	6,506.3	6,506.3	24.0	128.6	-145.99	1,403.8	-5,003.3	4,501.7	4,394.9	106.85	42.133	
6,800.0	6,532.8	6,510.8	6,510.8	24.0	128.6	-145.51	1,403.8	-5,003.3	4,508.7	4,401.8	106.86	42.193	
6,850.0	6,557.0	6,535.0	6,535.0	24.1	129.1	-142.35	1,403.8	-5,003.3	4,549.9	4,441.9	108.07	42.103	
6,889.7	6,574.1	6,552.1	6,552.1	24.2	129.5	-139.30	1,403.8	-5,003.3	4,583.8	4,473.2	110.60	41.445	
6,900.0	6,578.1	6,556.1	6,556.1	24.3	129.6	-138.42	1,403.8	-5,003.3	4,592.7	4,481.2	111.50	41.189	
6,950.0	6,596.1	6,574.1	6,574.1	24.5	129.9	-133.51	1,403.8	-5,003.3	4,636.8	4,519.3	117.50	39.464	
6,988.2	6,607.5	6,585.5	6,585.5	24.7	130.1	-128.93	1,403.8	-5,003.3	4,671.3	4,547.5	123.80	37.731	
7,000.0	6,610.7	6,588.7	6,588.7	24.8	130.2	-127.34	1,403.8	-5,003.3	4,682.1	4,556.1	126.02	37.153	
7,050.0	6,621.9	6,599.9	6,599.9	25.1	130.4	-119.62	1,403.8	-5,003.3	4,728.2	4,591.8	136.40	34.664	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	6,606.0	6,606.0	25.4	130.6	-112.86	1,403.8	-5,003.3	4,762.5	4,618.2	144.24	33.017	
7,100.0	6,629.7	6,607.7	6,607.7	25.6	130.6	-110.15	1,403.8	-5,003.3	4,775.1	4,628.2	146.93	32.499	
7,150.0	6,634.1	6,612.1	6,612.1	26.0	130.7	-99.04	1,403.8	-5,003.3	4,822.4	4,667.6	154.79	31.155	
7,185.0	6,635.1	6,613.1	6,613.1	26.4	130.7	-90.59	1,403.8	-5,003.3	4,855.6	4,698.6	157.05	30.917	
7,196.6	6,635.0	6,613.0	6,613.0	26.5	130.7	-87.75	1,403.8	-5,003.3	4,866.6	4,709.6	157.06	30.985	
7,200.0	6,635.0	6,613.0	6,613.0	26.6	130.7	-87.75	1,403.8	-5,003.3	4,869.9	4,712.8	157.10	30.999	
7,283.4	6,633.9	6,611.9	6,611.9	27.6	130.7	-87.71	1,403.8	-5,003.3	4,949.3	4,791.2	158.10	31.305	
7,300.0	6,633.7	6,611.7	6,611.7	27.8	130.7	-87.70	1,403.8	-5,003.3	4,965.1	4,806.8	158.30	31.365	
7,381.9	6,632.6	6,610.6	6,610.6	29.0	130.7	-87.66	1,403.8	-5,003.3	5,043.2	4,883.7	159.46	31.626	
7,400.0	6,632.4	6,610.4	6,610.4	29.2	130.6	-87.65	1,403.8	-5,003.3	5,060.5	4,900.8	159.72	31.683	
7,480.3	6,631.4	6,609.4	6,609.4	30.5	130.6	-87.61	1,403.8	-5,003.3	5,137.2	4,976.2	161.01	31.906	
7,500.0	6,631.1	6,609.1	6,609.1	30.9	130.6	-87.60	1,403.8	-5,003.3	5,156.0	4,994.7	161.33	31.960	
7,578.7	6,630.1	6,608.1	6,608.1	32.3	130.6	-87.56	1,403.8	-5,003.3	5,231.4	5,068.7	162.72	32.150	
7,600.0	6,629.8	6,607.8	6,607.8	32.7	130.6	-87.55	1,403.8	-5,003.3	5,251.8	5,088.7	163.09	32.201	
7,677.1	6,628.9	6,606.9	6,606.9	34.1	130.6	-87.51	1,403.8	-5,003.3	5,325.7	5,161.2	164.56	32.363	
7,700.0	6,628.6	6,606.6	6,606.6	34.6	130.6	-87.50	1,403.8	-5,003.3	5,347.6	5,182.6	165.00	32.411	
7,775.6	6,627.6	6,605.6	6,605.6	36.1	130.6	-87.46	1,403.8	-5,003.3	5,420.2	5,253.7	166.52	32.550	
7,800.0	6,627.3	6,605.3	6,605.3	36.6	130.5	-87.45	1,403.8	-5,003.3	5,443.7	5,276.7	167.01	32.595	
7,874.0	6,626.3	6,604.3	6,604.3	38.2	130.5	-87.42	1,403.8	-5,003.3	5,514.8	5,346.2	168.57	32.715	
7,900.0	6,626.0	6,604.0	6,604.0	38.8	130.5	-87.40	1,403.8	-5,003.3	5,539.8	5,370.7	169.12	32.757	
7,972.4	6,625.1	6,603.1	6,603.1	40.4	130.5	-87.37	1,403.8	-5,003.3	5,609.6	5,438.9	170.71	32.861	
8,000.0	6,624.7	6,602.7	6,602.7	41.0	130.5	-87.35	1,403.8	-5,003.3	5,636.1	5,464.8	171.31	32.900	
8,070.8	6,623.8	6,601.8	6,601.8	42.6	130.5	-87.32	1,403.8	-5,003.3	5,704.4	5,531.5	172.91	32.991	
8,100.0	6,623.4	6,601.4	6,601.4	43.3	130.5	-87.30	1,403.8	-5,003.3	5,732.6	5,559.0	173.57	33.028	
8,169.3	6,622.6	6,600.6	6,600.6	44.9	130.4	-87.27	1,403.8	-5,003.3	5,799.4	5,624.3	175.17	33.107	
8,200.0	6,622.2	6,600.2	6,600.2	45.6	130.4	-87.25	1,403.8	-5,003.3	5,829.1	5,653.2	175.88	33.142	
8,267.7	6,621.3	6,599.3	6,599.3	47.3	130.4	-87.22	1,403.8	-5,003.3	5,894.5	5,717.1	177.49	33.211	
8,300.0	6,620.9	6,598.9	6,598.9	48.0	130.4	-87.20	1,403.8	-5,003.3	5,925.8	5,747.5	178.25	33.244	
8,366.1	6,620.0	6,598.0	6,598.0	49.7	130.4	-87.17	1,403.8	-5,003.3	5,989.8	5,809.9	179.84	33.306	
8,400.0	6,619.6	6,597.6	6,597.6	50.5	130.4	-87.15	1,403.8	-5,003.3	6,022.6	5,841.9	180.66	33.337	
8,464.5	6,618.8	6,596.8	6,596.8	52.1	130.4	-87.12	1,403.8	-5,003.3	6,085.1	5,902.8	182.23	33.392	
8,500.0	6,618.3	6,596.3	6,596.3	53.0	130.4	-87.10	1,403.8	-5,003.3	6,119.4	5,936.3	183.10	33.421	
8,563.0	6,617.5	6,595.5	6,595.5	54.5	130.3	-87.07	1,403.8	-5,003.3	6,180.5	5,995.8	184.66	33.470	
8,600.0	6,617.0	6,595.0	6,595.0	55.5	130.3	-87.05	1,403.8	-5,003.3	6,216.4	6,030.8	185.57	33.498	
8,661.4	6,616.3	6,594.3	6,594.3	57.0	130.3	-87.02	1,403.8	-5,003.3	6,276.0	6,088.9	187.11	33.542	
8,700.0	6,615.8	6,593.8	6,593.8	58.0	130.3	-87.00	1,403.8	-5,003.3	6,313.5	6,125.4	188.07	33.569	
8,759.8	6,615.0	6,593.0	6,593.0	59.5	130.3	-86.98	1,403.8	-5,003.3	6,371.6	6,182.0	189.59	33.608	
8,800.0	6,614.5	6,592.5	6,592.5	60.6	130.3	-86.96	1,403.8	-5,003.3	6,410.6	6,220.0	190.60	33.634	
8,858.2	6,613.7	6,591.7	6,591.7	62.1	130.3	-86.93	1,403.8	-5,003.3	6,467.3	6,275.2	192.08	33.669	
8,900.0	6,613.2	6,591.2	6,591.2	63.2	130.3	-86.91	1,403.8	-5,003.3	6,507.9	6,314.7	193.15	33.694	
8,956.7	6,612.5	6,590.5	6,590.5	64.6	130.2	-86.88	1,403.8	-5,003.3	6,563.0	6,368.4	194.60	33.726	
9,000.0	6,611.9	6,589.9	6,589.9	65.8	130.2	-86.86	1,403.8	-5,003.3	6,605.2	6,409.5	195.71	33.750	
9,055.1	6,611.2	6,589.2	6,589.2	67.2	130.2	-86.83	1,403.8	-5,003.3	6,658.9	6,461.7	197.13	33.779	
9,100.0	6,610.6	6,588.6	6,588.6	68.4	130.2	-86.81	1,403.8	-5,003.3	6,702.6	6,504.3	198.29	33.802	
9,153.5	6,609.9	6,587.9	6,587.9	69.8	130.2	-86.78	1,403.8	-5,003.3	6,754.8	6,555.1	199.68	33.828	
9,200.0	6,609.3	6,587.3	6,587.3	71.0	130.2	-86.76	1,403.8	-5,003.3	6,800.1	6,599.2	200.88	33.851	
9,251.9	6,608.7	6,586.7	6,586.7	72.4	130.2	-86.73	1,403.8	-5,003.3	6,850.7	6,648.5	202.24	33.875	
9,300.0	6,608.1	6,586.1	6,586.1	73.7	130.2	-86.71	1,403.8	-5,003.3	6,897.6	6,694.1	203.49	33.897	
9,350.4	6,607.4	6,585.4	6,585.4	75.0	130.1	-86.68	1,403.8	-5,003.3	6,946.8	6,742.0	204.81	33.918	
9,400.0	6,606.8	6,584.8	6,584.8	76.3	130.1	-86.66	1,403.8	-5,003.3	6,995.3	6,789.1	206.11	33.940	
9,448.8	6,606.1	6,584.1	6,584.1	77.6	130.1	-86.63	1,403.8	-5,003.3	7,042.9	6,835.5	207.39	33.959	
9,500.0	6,605.5	6,583.5	6,583.5	79.0	130.1	-86.61	1,403.8	-5,003.3	7,092.9	6,884.2	208.74	33.980	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BLOSKAS #1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,604.9	6,582.9	6,582.9	80.2	130.1	-86.58	1,403.8	-5,003.3	7,139.1	6,929.1	209.98	33.998	
9,600.0	6,604.2	6,582.2	6,582.2	81.7	130.1	-86.56	1,403.8	-5,003.3	7,190.7	6,979.3	211.38	34.019	
9,645.6	6,603.6	6,581.6	6,581.6	82.9	130.1	-86.53	1,403.8	-5,003.3	7,235.3	7,022.7	212.58	34.035	
9,700.0	6,602.9	6,580.9	6,580.9	84.3	130.1	-86.51	1,403.8	-5,003.3	7,288.5	7,074.5	214.02	34.055	
9,744.1	6,602.3	6,580.3	6,580.3	85.5	130.0	-86.48	1,403.8	-5,003.3	7,331.6	7,116.4	215.19	34.070	
9,800.0	6,601.6	6,579.6	6,579.6	87.0	130.0	-86.46	1,403.8	-5,003.3	7,386.4	7,169.7	216.67	34.090	
9,842.5	6,601.1	6,579.1	6,579.1	88.2	130.0	-86.43	1,403.8	-5,003.3	7,428.0	7,210.2	217.80	34.104	
9,900.0	6,600.3	6,578.3	6,578.3	89.7	130.0	-86.41	1,403.8	-5,003.3	7,484.3	7,265.0	219.33	34.123	
9,940.9	6,599.8	6,577.8	6,577.8	90.9	130.0	-86.39	1,403.8	-5,003.3	7,524.4	7,304.0	220.43	34.136	
10,000.0	6,599.0	6,577.0	6,577.0	92.5	130.0	-86.36	1,403.8	-5,003.3	7,582.3	7,360.3	222.00	34.154	
10,039.3	6,598.5	6,576.5	6,576.5	93.5	130.0	-86.34	1,403.8	-5,003.3	7,620.8	7,397.8	223.05	34.166	
10,100.0	6,597.7	6,575.7	6,575.7	95.2	129.9	-86.30	1,403.8	-5,003.3	7,680.3	7,455.6	224.67	34.185	
10,137.8	6,597.3	6,575.3	6,575.3	96.2	129.9	-86.29	1,403.8	-5,003.3	7,717.3	7,491.7	225.68	34.196	
10,200.0	6,596.5	6,574.5	6,574.5	97.9	129.9	-86.25	1,403.8	-5,003.3	7,778.4	7,551.0	227.35	34.214	
10,236.2	6,596.0	6,574.0	6,574.0	98.9	129.9	-86.24	1,403.8	-5,003.3	7,813.9	7,585.6	228.32	34.224	
10,300.0	6,595.2	6,573.2	6,573.2	100.6	129.9	-86.20	1,403.8	-5,003.3	7,876.5	7,646.5	230.03	34.241	
10,334.6	6,594.7	6,572.7	6,572.7	101.6	129.9	-86.19	1,403.8	-5,003.3	7,910.5	7,679.5	230.96	34.251	
10,400.0	6,593.9	6,571.9	6,571.9	103.3	129.9	-86.15	1,403.8	-5,003.3	7,974.7	7,742.0	232.71	34.268	
10,433.0	6,593.5	6,571.5	6,571.5	104.2	129.9	-86.14	1,403.8	-5,003.3	8,007.1	7,773.5	233.60	34.277	
10,500.0	6,592.6	6,570.6	6,570.6	106.1	129.8	-86.10	1,403.8	-5,003.3	8,072.9	7,837.5	235.40	34.294	
10,531.5	6,592.2	6,570.2	6,570.2	106.9	129.8	-86.09	1,403.8	-5,003.3	8,103.8	7,867.6	236.25	34.302	
10,600.0	6,591.3	6,569.3	6,569.3	108.8	129.8	-86.05	1,403.8	-5,003.3	8,171.2	7,933.1	238.09	34.319	
10,629.9	6,590.9	6,568.9	6,568.9	109.6	129.8	-86.04	1,403.8	-5,003.3	8,200.6	7,961.7	238.90	34.326	
10,700.0	6,590.0	6,568.0	6,568.0	111.6	129.8	-86.00	1,403.8	-5,003.3	8,269.5	8,028.7	240.79	34.343	
10,728.3	6,589.6	6,567.6	6,567.6	112.3	129.8	-85.99	1,403.8	-5,003.3	8,297.3	8,055.8	241.55	34.350	
10,800.0	6,588.7	6,566.7	6,566.7	114.3	129.8	-85.95	1,403.8	-5,003.3	8,367.8	8,124.3	243.49	34.366	
10,826.7	6,588.4	6,566.4	6,566.4	115.0	129.8	-85.94	1,403.8	-5,003.3	8,394.1	8,149.9	244.21	34.373	
10,900.0	6,587.4	6,565.4	6,565.4	117.0	129.7	-85.90	1,403.8	-5,003.3	8,466.2	8,220.0	246.19	34.389	
10,925.2	6,587.1	6,565.1	6,565.1	117.7	129.7	-85.89	1,403.8	-5,003.3	8,491.0	8,244.1	246.87	34.395	
11,000.0	6,586.1	6,564.1	6,564.1	119.8	129.7	-85.85	1,403.8	-5,003.3	8,564.6	8,315.7	248.89	34.411	
11,023.6	6,585.8	6,563.8	6,563.8	120.4	129.7	-85.84	1,403.8	-5,003.3	8,587.9	8,338.3	249.53	34.416	
11,100.0	6,584.8	6,562.8	6,562.8	122.5	129.7	-85.80	1,403.8	-5,003.3	8,663.1	8,411.5	251.60	34.432	
11,122.0	6,584.5	6,562.5	6,562.5	123.2	129.7	-85.79	1,403.8	-5,003.3	8,684.8	8,432.6	252.19	34.437	
11,200.0	6,583.5	6,561.5	6,561.5	125.3	129.7	-85.75	1,403.8	-5,003.3	8,761.6	8,507.3	254.30	34.453	
11,220.4	6,583.3	6,561.3	6,561.3	125.9	129.7	-85.74	1,403.8	-5,003.3	8,781.7	8,526.9	254.86	34.457	
11,300.0	6,582.2	6,560.2	6,560.2	128.1	129.6	-85.70	1,403.8	-5,003.3	8,860.1	8,603.1	257.01	34.473	
11,318.9	6,582.0	6,560.0	6,560.0	128.6	129.6	-85.69	1,403.8	-5,003.3	8,878.7	8,621.2	257.53	34.477	
11,400.0	6,580.9	6,558.9	6,558.9	130.8	129.6	-85.65	1,403.8	-5,003.3	8,958.6	8,698.9	259.73	34.493	
11,417.3	6,580.7	6,558.7	6,558.7	131.3	129.6	-85.64	1,403.8	-5,003.3	8,975.7	8,715.5	260.19	34.496	
11,500.0	6,579.7	6,557.7	6,557.7	133.6	129.6	-85.60	1,403.8	-5,003.3	9,057.2	8,794.8	262.44	34.512	
11,515.7	6,579.4	6,557.4	6,557.4	134.0	129.6	-85.59	1,403.8	-5,003.3	9,072.7	8,809.9	262.86	34.515	
11,600.0	6,578.4	6,556.4	6,556.4	136.3	129.6	-85.55	1,403.8	-5,003.3	9,155.9	8,890.7	265.15	34.531	
11,614.1	6,578.2	6,556.2	6,556.2	136.7	129.6	-85.54	1,403.8	-5,003.3	9,169.8	8,904.3	265.54	34.533	
11,700.0	6,577.1	6,555.1	6,555.1	139.1	129.5	-85.50	1,403.8	-5,003.3	9,254.5	8,986.6	267.87	34.549	
11,712.6	6,576.9	6,554.9	6,554.9	139.5	129.5	-85.49	1,403.8	-5,003.3	9,266.9	8,998.7	268.21	34.551	
11,800.0	6,575.8	6,553.8	6,553.8	141.9	129.5	-85.45	1,403.8	-5,003.3	9,353.2	9,082.6	270.58	34.567	
11,811.0	6,575.6	6,553.6	6,553.6	142.2	129.5	-85.44	1,403.8	-5,003.3	9,364.0	9,093.2	270.88	34.569	
11,858.8	6,575.0	6,553.0	6,553.0	143.5	129.5	-85.42	1,403.8	-5,003.3	9,411.2	9,139.0	272.18	34.577	
11,859.3	6,575.0	6,553.0	6,553.0	143.5	129.5	-85.42	1,403.8	-5,003.3	9,411.7	9,139.5	272.19	34.578	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-86.34	318.5	-4,983.5	4,993.8				
98.4	98.4	66.4	66.4	0.1	0.1	-86.34	318.5	-4,983.5	4,993.7	4,993.5	0.17	N/A	
100.0	100.0	68.0	68.0	0.1	0.1	-86.34	318.5	-4,983.5	4,993.7	4,993.5	0.17	N/A	
196.8	196.8	164.8	164.8	0.3	1.8	-86.34	318.5	-4,983.5	4,993.7	4,991.6	2.12	2,355.543	
200.0	200.0	168.0	168.0	0.3	1.9	-86.34	318.5	-4,983.5	4,993.7	4,991.5	2.21	2,260.066	
295.3	295.3	263.3	263.3	0.5	4.0	-86.34	318.5	-4,983.5	4,993.7	4,989.1	4.57	1,093.409	
300.0	300.0	268.0	268.0	0.5	4.1	-86.34	318.5	-4,983.5	4,993.7	4,989.0	4.68	1,068.125	
393.7	393.7	361.7	361.7	0.8	6.0	-86.34	318.5	-4,983.5	4,993.7	4,986.9	6.80	734.384	
400.0	400.0	368.0	368.0	0.8	6.2	-86.34	318.5	-4,983.5	4,993.7	4,986.7	6.94	719.343	
492.1	492.1	460.1	460.1	1.0	8.0	-86.34	318.5	-4,983.5	4,993.7	4,984.7	9.02	553.911	
500.0	500.0	468.0	468.0	1.0	8.2	-86.34	318.5	-4,983.5	4,993.7	4,984.5	9.19	543.248	
590.5	590.5	558.5	558.5	1.2	10.0	-86.34	318.5	-4,983.5	4,993.7	4,982.5	11.22	444.887	
600.0	600.0	568.0	568.0	1.2	10.2	-86.34	318.5	-4,983.5	4,993.7	4,982.3	11.44	436.642	
689.0	689.0	657.0	657.0	1.4	12.0	-86.34	318.5	-4,983.5	4,993.7	4,980.3	13.43	371.805	
700.0	700.0	668.0	668.0	1.4	12.2	-86.34	318.5	-4,983.5	4,993.7	4,980.0	13.68	365.090	
787.4	787.4	755.4	755.4	1.6	14.0	-86.34	318.5	-4,983.5	4,993.7	4,978.1	15.64	319.380	
800.0	800.0	768.0	768.0	1.7	14.2	-86.34	318.5	-4,983.5	4,993.7	4,977.8	15.92	313.719	
885.8	885.8	853.8	853.8	1.9	16.0	-86.34	318.5	-4,983.5	4,993.7	4,975.8	17.84	279.929	
900.0	900.0	868.0	868.0	1.9	16.3	-86.34	318.5	-4,983.5	4,993.7	4,975.5	18.16	275.037	
984.2	984.2	952.2	952.2	2.1	18.0	-86.34	318.5	-4,983.5	4,993.7	4,973.6	20.04	249.161	
1,000.0	1,000.0	968.0	968.0	2.1	18.3	-86.34	318.5	-4,983.5	4,993.7	4,973.3	20.39	244.855	
1,082.7	1,082.7	1,050.7	1,050.7	2.3	19.9	-86.34	318.5	-4,983.5	4,993.7	4,971.4	22.24	224.491	
1,100.0	1,100.0	1,068.0	1,068.0	2.3	20.3	-86.34	318.5	-4,983.5	4,993.7	4,971.1	22.63	220.646	
1,181.1	1,181.1	1,149.1	1,149.1	2.5	21.9	-86.34	318.5	-4,983.5	4,993.7	4,969.2	24.45	204.270	
1,200.0	1,200.0	1,168.0	1,168.0	2.6	22.3	-86.34	318.5	-4,983.5	4,993.7	4,968.8	24.87	200.797	
1,279.5	1,279.5	1,247.5	1,247.5	2.7	23.9	8.86	318.5	-4,983.5	4,992.6	4,966.0	26.63	187.505	
1,300.0	1,300.0	1,268.0	1,268.0	2.8	24.3	8.86	318.5	-4,983.5	4,992.0	4,964.9	27.08	184.375	
1,377.9	1,377.8	1,345.8	1,345.8	2.9	25.9	8.88	318.5	-4,983.5	4,988.2	4,959.5	28.76	173.449	
1,400.0	1,399.8	1,367.8	1,367.8	3.0	26.3	8.88	318.5	-4,983.5	4,986.8	4,957.6	29.23	170.605	
1,476.4	1,475.9	1,443.9	1,443.9	3.1	27.9	8.92	318.5	-4,983.5	4,980.5	4,949.7	30.85	161.458	
1,500.0	1,499.5	1,467.5	1,467.5	3.2	28.3	8.93	318.5	-4,983.5	4,978.2	4,946.8	31.34	158.840	
1,574.8	1,573.7	1,541.7	1,541.7	3.4	29.8	8.97	318.5	-4,983.5	4,969.5	4,936.6	32.89	151.113	
1,600.0	1,598.7	1,566.7	1,566.7	3.4	30.3	8.99	318.5	-4,983.5	4,966.1	4,932.7	33.40	148.694	
1,673.2	1,671.1	1,639.1	1,639.1	3.6	31.8	9.04	318.5	-4,983.5	4,955.2	4,920.3	34.87	142.114	
1,700.0	1,697.5	1,665.5	1,665.5	3.7	32.3	9.06	318.5	-4,983.5	4,950.7	4,915.3	35.39	139.871	
1,771.6	1,767.9	1,735.9	1,735.9	3.9	33.7	9.13	318.5	-4,983.5	4,937.5	4,900.7	36.78	134.230	
1,800.0	1,795.6	1,763.6	1,763.6	4.0	34.3	9.16	318.5	-4,983.5	4,931.8	4,894.5	37.32	132.143	
1,870.1	1,864.0	1,832.0	1,832.0	4.3	35.7	9.24	318.5	-4,983.5	4,916.6	4,878.0	38.63	127.278	
1,900.0	1,893.1	1,861.1	1,861.1	4.4	36.2	9.27	318.5	-4,983.5	4,909.6	4,870.4	39.17	125.331	
1,968.5	1,959.3	1,927.3	1,927.3	4.6	37.6	9.36	318.5	-4,983.5	4,892.5	4,852.1	40.40	121.114	
1,992.4	1,982.4	1,950.4	1,950.4	4.7	38.0	9.40	318.5	-4,983.5	4,886.1	4,845.3	40.81	119.723	
2,000.0	1,989.6	1,957.6	1,957.6	4.8	38.2	9.40	318.5	-4,983.5	4,884.1	4,843.1	40.97	119.207	
2,066.9	2,054.0	2,022.0	2,022.0	5.1	39.5	9.44	318.5	-4,983.5	4,866.0	4,823.6	42.39	114.789	
2,100.0	2,085.8	2,053.8	2,053.8	5.2	40.1	9.46	318.5	-4,983.5	4,857.1	4,814.0	43.09	112.729	
2,165.3	2,148.7	2,116.7	2,116.7	5.5	41.4	9.49	318.5	-4,983.5	4,839.5	4,795.0	44.47	108.830	
2,200.0	2,182.0	2,150.0	2,150.0	5.7	42.1	9.51	318.5	-4,983.5	4,830.1	4,784.9	45.21	106.840	
2,263.8	2,243.4	2,211.4	2,211.4	6.0	43.3	9.54	318.5	-4,983.5	4,812.9	4,766.4	46.57	103.357	
2,300.0	2,278.2	2,246.2	2,246.2	6.2	44.0	9.56	318.5	-4,983.5	4,803.2	4,755.8	47.34	101.465	
2,362.2	2,338.1	2,306.1	2,306.1	6.5	45.2	9.60	318.5	-4,983.5	4,786.4	4,737.7	48.67	98.354	
2,400.0	2,374.4	2,342.4	2,342.4	6.7	45.9	9.62	318.5	-4,983.5	4,776.2	4,726.7	49.47	96.543	
2,460.6	2,432.8	2,400.8	2,400.8	7.0	47.1	9.65	318.5	-4,983.5	4,759.9	4,709.1	50.77	93.756	
2,500.0	2,470.6	2,438.6	2,438.6	7.2	47.9	9.67	318.5	-4,983.5	4,749.3	4,697.7	51.61	92.020	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,527.4	2,495.4	2,495.4	7.6	49.0	9.70	318.5	-4,983.5	4,733.4	4,680.5	52.88	89.517	
2,600.0	2,566.8	2,534.8	2,534.8	7.8	49.8	9.73	318.5	-4,983.5	4,722.3	4,668.6	53.75	87.850	
2,657.5	2,622.1	2,590.1	2,590.1	8.1	50.9	9.76	318.5	-4,983.5	4,706.8	4,651.8	54.99	85.597	
2,700.0	2,663.0	2,631.0	2,631.0	8.3	51.7	9.78	318.5	-4,983.5	4,695.4	4,639.5	55.90	83.994	
2,755.9	2,716.8	2,684.8	2,684.8	8.6	52.8	9.82	318.5	-4,983.5	4,680.3	4,623.2	57.10	81.963	
2,800.0	2,759.2	2,727.2	2,727.2	8.9	53.7	9.84	318.5	-4,983.5	4,668.4	4,610.4	58.05	80.419	
2,854.3	2,811.5	2,779.5	2,779.5	9.2	54.7	9.87	318.5	-4,983.5	4,653.8	4,594.6	59.22	78.584	
2,900.0	2,855.4	2,823.4	2,823.4	9.4	55.6	9.90	318.5	-4,983.5	4,641.5	4,581.3	60.20	77.097	
2,952.7	2,906.2	2,874.2	2,874.2	9.7	56.6	9.93	318.5	-4,983.5	4,627.3	4,566.0	61.34	75.436	
3,000.0	2,951.6	2,919.6	2,919.6	10.0	57.5	9.96	318.5	-4,983.5	4,614.6	4,552.2	62.36	74.000	
3,051.2	3,000.9	2,968.9	2,968.9	10.3	58.5	9.99	318.5	-4,983.5	4,600.8	4,537.3	63.46	72.496	
3,100.0	3,047.8	3,015.8	3,015.8	10.5	59.5	10.01	318.5	-4,983.5	4,587.6	4,523.1	64.52	71.108	
3,149.6	3,095.5	3,063.5	3,063.5	10.8	60.4	10.04	318.5	-4,983.5	4,574.3	4,508.7	65.59	69.743	
3,200.0	3,144.0	3,112.0	3,112.0	11.1	61.4	10.07	318.5	-4,983.5	4,560.7	4,494.0	66.68	68.401	
3,248.0	3,190.2	3,158.2	3,158.2	11.4	62.3	10.10	318.5	-4,983.5	4,547.8	4,480.1	67.71	67.162	
3,300.0	3,240.2	3,208.2	3,208.2	11.7	63.3	10.13	318.5	-4,983.5	4,533.8	4,465.0	68.84	65.862	
3,346.4	3,284.9	3,252.9	3,252.9	11.9	64.2	10.16	318.5	-4,983.5	4,521.3	4,451.5	69.84	64.736	
3,400.0	3,336.4	3,304.4	3,304.4	12.2	65.3	10.20	318.5	-4,983.5	4,506.9	4,435.9	71.00	63.477	
3,444.9	3,379.6	3,347.6	3,347.6	12.5	66.1	10.22	318.5	-4,983.5	4,494.8	4,422.8	71.97	62.452	
3,500.0	3,432.6	3,400.6	3,400.6	12.8	67.2	10.26	318.5	-4,983.5	4,480.0	4,406.8	73.17	61.231	
3,543.3	3,474.3	3,442.3	3,442.3	13.1	68.0	10.28	318.5	-4,983.5	4,468.3	4,394.2	74.10	60.299	
3,600.0	3,528.8	3,496.8	3,496.8	13.4	69.1	10.32	318.5	-4,983.5	4,453.1	4,377.7	75.33	59.113	
3,641.7	3,569.0	3,537.0	3,537.0	13.6	69.9	10.35	318.5	-4,983.5	4,441.9	4,365.6	76.24	58.264	
3,700.0	3,625.0	3,593.0	3,593.0	14.0	71.1	10.38	318.5	-4,983.5	4,426.2	4,348.7	77.50	57.112	
3,740.1	3,663.6	3,631.6	3,631.6	14.2	71.9	10.41	318.5	-4,983.5	4,415.4	4,337.0	78.37	56.340	
3,800.0	3,721.2	3,689.2	3,689.2	14.5	73.0	10.45	318.5	-4,983.5	4,399.3	4,319.6	79.67	55.220	
3,838.6	3,758.3	3,726.3	3,726.3	14.8	73.8	10.47	318.5	-4,983.5	4,388.9	4,308.4	80.51	54.517	
3,900.0	3,817.4	3,785.4	3,785.4	15.1	74.9	10.51	318.5	-4,983.5	4,372.4	4,290.6	81.84	53.427	
3,937.0	3,853.0	3,821.0	3,821.0	15.3	75.7	10.54	318.5	-4,983.5	4,362.5	4,279.8	82.64	52.787	
4,000.0	3,913.6	3,881.6	3,881.6	15.7	76.9	10.58	318.5	-4,983.5	4,345.5	4,261.5	84.01	51.726	
4,035.4	3,947.7	3,915.7	3,915.7	15.9	77.6	10.60	318.5	-4,983.5	4,336.0	4,251.2	84.78	51.144	
4,100.0	4,009.8	3,977.8	3,977.8	16.3	78.8	10.64	318.5	-4,983.5	4,318.6	4,232.5	86.18	50.110	
4,133.8	4,042.4	4,010.4	4,010.4	16.5	79.5	10.67	318.5	-4,983.5	4,309.5	4,222.6	86.92	49.581	
4,200.0	4,106.0	4,074.0	4,074.0	16.8	80.7	10.71	318.5	-4,983.5	4,291.8	4,203.4	88.36	48.573	
4,232.3	4,137.1	4,105.1	4,105.1	17.0	81.4	10.73	318.5	-4,983.5	4,283.1	4,194.0	89.06	48.092	
4,300.0	4,202.2	4,170.2	4,170.2	17.4	82.7	10.78	318.5	-4,983.5	4,264.9	4,174.4	90.53	47.109	
4,330.7	4,231.7	4,199.7	4,199.7	17.6	83.3	10.80	318.5	-4,983.5	4,256.7	4,165.5	91.20	46.673	
4,400.0	4,298.4	4,266.4	4,266.4	18.0	84.6	10.85	318.5	-4,983.5	4,238.0	4,145.3	92.71	45.713	
4,429.1	4,326.4	4,294.4	4,294.4	18.2	85.2	10.87	318.5	-4,983.5	4,230.2	4,136.9	93.34	45.319	
4,500.0	4,394.6	4,362.6	4,362.6	18.6	86.6	10.92	318.5	-4,983.5	4,211.2	4,116.3	94.89	44.382	
4,527.5	4,421.1	4,389.1	4,389.1	18.7	87.1	10.94	318.5	-4,983.5	4,203.8	4,108.3	95.49	44.025	
4,600.0	4,490.8	4,458.8	4,458.8	19.2	88.5	10.99	318.5	-4,983.5	4,184.3	4,087.3	97.06	43.109	
4,626.0	4,515.8	4,483.8	4,483.8	19.3	89.0	11.01	318.5	-4,983.5	4,177.4	4,079.7	97.63	42.788	
4,700.0	4,587.0	4,555.0	4,555.0	19.8	90.4	11.06	318.5	-4,983.5	4,157.5	4,058.3	99.24	41.892	
4,724.4	4,610.5	4,578.5	4,578.5	19.9	90.9	11.08	318.5	-4,983.5	4,150.9	4,051.2	99.78	41.603	
4,800.0	4,683.2	4,651.2	4,651.2	20.3	92.4	11.13	318.5	-4,983.5	4,130.7	4,029.2	101.42	40.727	
4,822.8	4,705.2	4,673.2	4,673.2	20.5	92.8	11.15	318.5	-4,983.5	4,124.5	4,022.6	101.92	40.468	
4,900.0	4,779.4	4,747.4	4,747.4	20.9	94.3	11.21	318.5	-4,983.5	4,103.8	4,000.2	103.60	39.610	
4,921.2	4,799.8	4,767.8	4,767.8	21.0	94.7	11.22	318.5	-4,983.5	4,098.1	3,994.1	104.07	39.379	
5,000.0	4,875.6	4,843.6	4,843.6	21.5	96.2	11.28	318.5	-4,983.5	4,077.0	3,971.2	105.79	38.540	
5,019.7	4,894.5	4,862.5	4,862.5	21.6	96.6	11.30	318.5	-4,983.5	4,071.7	3,965.5	106.22	38.334	
5,100.0	4,971.8	4,939.8	4,939.8	22.1	98.2	11.36	318.5	-4,983.5	4,050.2	3,942.2	107.97	37.512	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	4,989.2	4,957.2	4,957.2	22.2	98.5	11.37	318.5	-4,983.5	4,045.3	3,937.0	108.37	37.330	
5,200.0	5,068.0	5,036.0	5,036.0	22.7	100.1	11.43	318.5	-4,983.5	4,023.4	3,913.2	110.15	36.525	
5,216.5	5,083.9	5,051.9	5,051.9	22.8	100.4	11.45	318.5	-4,983.5	4,018.9	3,908.4	110.52	36.366	
5,240.0	5,106.5	5,074.5	5,074.5	22.9	100.9	11.46	318.5	-4,983.5	4,012.6	3,901.6	111.03	36.140	
5,300.0	5,164.4	5,132.4	5,132.4	23.2	102.0	11.45	318.5	-4,983.5	3,997.2	3,884.3	112.87	35.415	
5,314.9	5,178.8	5,146.8	5,146.8	23.3	102.3	11.44	318.5	-4,983.5	3,993.5	3,880.2	113.31	35.243	
5,400.0	5,261.5	5,229.5	5,229.5	23.6	104.0	11.42	318.5	-4,983.5	3,974.0	3,858.2	115.83	34.309	
5,413.4	5,274.6	5,242.6	5,242.6	23.6	104.2	11.41	318.5	-4,983.5	3,971.2	3,854.9	116.22	34.170	
5,500.0	5,359.5	5,327.5	5,327.5	23.9	106.0	11.40	318.5	-4,983.5	3,954.2	3,835.5	118.69	33.315	
5,511.8	5,371.1	5,339.1	5,339.1	24.0	106.2	11.39	318.5	-4,983.5	3,952.1	3,833.1	119.02	33.205	
5,600.0	5,458.0	5,426.0	5,426.0	24.2	107.9	11.38	318.5	-4,983.5	3,937.8	3,816.3	121.44	32.424	
5,610.2	5,468.2	5,436.2	5,436.2	24.3	108.1	11.38	318.5	-4,983.5	3,936.3	3,814.6	121.72	32.339	
5,700.0	5,557.2	5,525.2	5,525.2	24.5	109.9	11.36	318.5	-4,983.5	3,924.7	3,800.6	124.07	31.632	
5,708.6	5,565.7	5,533.7	5,533.7	24.5	110.1	11.36	318.5	-4,983.5	3,923.7	3,799.4	124.30	31.568	
5,800.0	5,656.7	5,624.7	5,624.7	24.7	111.9	11.35	318.5	-4,983.5	3,915.1	3,788.5	126.57	30.931	
5,807.1	5,663.7	5,631.7	5,631.7	24.7	112.1	11.35	318.5	-4,983.5	3,914.5	3,787.8	126.74	30.885	
5,900.0	5,756.5	5,724.5	5,724.5	24.9	113.9	11.35	318.5	-4,983.5	3,908.8	3,779.9	128.93	30.317	
5,905.5	5,761.9	5,729.9	5,729.9	24.9	114.0	11.35	318.5	-4,983.5	3,908.6	3,779.5	129.05	30.286	
6,000.0	5,856.4	5,824.4	5,824.4	25.0	115.9	11.35	318.5	-4,983.5	3,906.0	3,774.9	131.14	29.786	
6,003.9	5,860.3	5,828.3	5,828.3	25.0	116.0	11.35	318.5	-4,983.5	3,905.9	3,774.7	131.22	29.767	
6,032.5	5,888.9	5,856.9	5,856.9	25.0	116.6	-83.85	318.5	-4,983.5	3,905.8	3,764.5	141.29	27.645	
6,062.5	5,918.9	5,886.9	5,886.9	25.1	117.2	-83.85	318.5	-4,983.5	3,905.8	3,763.9	141.92	27.521 CC, ES, SF	
6,100.0	5,956.4	5,924.4	5,924.4	25.1	118.0	-173.84	318.5	-4,983.5	3,906.8	3,773.8	132.98	29.380	
6,102.3	5,958.7	5,926.7	5,926.7	25.1	118.0	-173.84	318.5	-4,983.5	3,906.9	3,773.9	132.99	29.377	
6,150.0	6,006.2	5,974.2	5,974.2	25.1	119.0	-173.81	318.5	-4,983.5	3,911.1	3,778.0	133.07	29.391	
6,200.0	6,055.6	6,023.6	6,023.6	25.1	120.0	-173.76	318.5	-4,983.5	3,918.9	3,786.4	132.51	29.573	
6,200.8	6,056.3	6,024.3	6,024.3	25.1	120.0	-173.75	318.5	-4,983.5	3,919.0	3,786.5	132.50	29.578	
6,250.0	6,104.3	6,072.3	6,072.3	25.0	120.9	-173.67	318.5	-4,983.5	3,930.1	3,798.8	131.29	29.935	
6,299.2	6,151.3	6,119.3	6,119.3	24.9	121.9	-173.56	318.5	-4,983.5	3,944.4	3,814.9	129.43	30.475	
6,300.0	6,152.1	6,120.1	6,120.1	24.9	121.9	-173.56	318.5	-4,983.5	3,944.6	3,815.2	129.39	30.486	
6,350.0	6,198.7	6,166.7	6,166.7	24.8	122.8	-173.42	318.5	-4,983.5	3,962.4	3,835.6	126.83	31.241	
6,397.6	6,241.9	6,209.9	6,209.9	24.7	123.7	-173.25	318.5	-4,983.5	3,982.4	3,858.6	123.79	32.171	
6,400.0	6,244.1	6,212.1	6,212.1	24.7	123.7	-173.24	318.5	-4,983.5	3,983.4	3,859.8	123.62	32.223	
6,450.0	6,287.8	6,255.8	6,255.8	24.5	124.6	-173.02	318.5	-4,983.5	4,007.5	3,887.8	119.77	33.459	
6,496.0	6,326.5	6,294.5	6,294.5	24.4	125.4	-172.77	318.5	-4,983.5	4,032.4	3,916.7	115.69	34.854	
6,500.0	6,329.7	6,297.7	6,297.7	24.4	125.5	-172.74	318.5	-4,983.5	4,034.6	3,919.3	115.32	34.986	
6,550.0	6,369.6	6,337.6	6,337.6	24.3	126.3	-172.41	318.5	-4,983.5	4,064.5	3,954.2	110.31	36.848	
6,594.5	6,403.3	6,371.3	6,371.3	24.2	126.9	-172.06	318.5	-4,983.5	4,093.4	3,988.0	105.41	38.832	
6,600.0	6,407.3	6,375.3	6,375.3	24.2	127.0	-172.01	318.5	-4,983.5	4,097.2	3,992.4	104.78	39.102	
6,650.0	6,442.7	6,410.7	6,410.7	24.1	127.7	-171.51	318.5	-4,983.5	4,132.3	4,033.5	98.82	41.816	
6,692.9	6,471.0	6,439.0	6,439.0	24.0	128.3	-170.99	318.5	-4,983.5	4,164.4	4,071.0	93.44	44.567	
6,700.0	6,475.5	6,443.5	6,443.5	24.0	128.4	-170.89	318.5	-4,983.5	4,169.9	4,077.3	92.53	45.064	
6,750.0	6,505.6	6,473.6	6,473.6	24.0	129.0	-170.12	318.5	-4,983.5	4,209.6	4,123.5	86.06	48.914	
6,791.3	6,528.3	6,496.3	6,496.3	24.0	129.5	-169.32	318.5	-4,983.5	4,243.9	4,163.2	80.73	52.568	
6,800.0	6,532.8	6,500.8	6,500.8	24.0	129.6	-169.13	318.5	-4,983.5	4,251.3	4,171.7	79.63	53.386	
6,850.0	6,557.0	6,525.0	6,525.0	24.1	130.0	-167.83	318.5	-4,983.5	4,294.8	4,221.2	73.60	58.350	
6,889.7	6,574.1	6,542.1	6,542.1	24.2	130.4	-166.48	318.5	-4,983.5	4,330.6	4,261.1	69.49	62.317	
6,900.0	6,578.1	6,546.1	6,546.1	24.3	130.5	-166.07	318.5	-4,983.5	4,339.9	4,271.3	68.59	63.274	
6,950.0	6,596.1	6,564.1	6,564.1	24.5	130.8	-163.59	318.5	-4,983.5	4,386.4	4,320.7	65.70	66.766	
6,988.2	6,607.5	6,575.5	6,575.5	24.7	131.1	-160.91	318.5	-4,983.5	4,422.6	4,356.5	66.13	66.881	
7,000.0	6,610.7	6,578.7	6,578.7	24.8	131.1	-159.87	318.5	-4,983.5	4,434.0	4,367.0	66.95	66.228	
7,050.0	6,621.9	6,589.9	6,589.9	25.1	131.3	-153.82	318.5	-4,983.5	4,482.5	4,406.7	75.81	59.130	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	6,596.0	6,596.0	25.4	131.5	-146.46	318.5	-4,983.5	4,518.4	4,428.2	90.23	50.076	
7,100.0	6,629.7	6,597.7	6,597.7	25.6	131.5	-142.70	318.5	-4,983.5	4,531.6	4,433.8	97.82	46.324	
7,150.0	6,634.1	6,602.1	6,602.1	26.0	131.6	-119.66	318.5	-4,983.5	4,581.2	4,443.7	137.51	33.316	
7,185.0	6,635.1	6,603.1	6,603.1	26.4	131.6	-92.11	318.5	-4,983.5	4,616.1	4,458.2	157.87	29.241	
7,196.6	6,635.0	6,603.0	6,603.0	26.5	131.6	-82.00	318.5	-4,983.5	4,627.6	4,471.0	156.58	29.553	
7,200.0	6,635.0	6,603.0	6,603.0	26.6	131.6	-81.99	318.5	-4,983.5	4,631.0	4,474.4	156.62	29.569	
7,283.4	6,633.9	6,601.9	6,601.9	27.6	131.6	-81.85	318.5	-4,983.5	4,714.1	4,556.5	157.56	29.919	
7,300.0	6,633.7	6,601.7	6,601.7	27.8	131.6	-81.82	318.5	-4,983.5	4,730.6	4,572.8	157.75	29.988	
7,381.9	6,632.6	6,600.6	6,600.6	29.0	131.6	-81.68	318.5	-4,983.5	4,812.1	4,653.3	158.85	30.294	
7,400.0	6,632.4	6,600.4	6,600.4	29.2	131.6	-81.65	318.5	-4,983.5	4,830.2	4,671.1	159.09	30.361	
7,480.3	6,631.4	6,599.4	6,599.4	30.5	131.5	-81.51	318.5	-4,983.5	4,910.2	4,749.9	160.32	30.628	
7,500.0	6,631.1	6,599.1	6,599.1	30.9	131.5	-81.47	318.5	-4,983.5	4,929.8	4,769.2	160.62	30.693	
7,578.7	6,630.1	6,598.1	6,598.1	32.3	131.5	-81.34	318.5	-4,983.5	5,008.3	4,846.3	161.95	30.926	
7,600.0	6,629.8	6,597.8	6,597.8	32.7	131.5	-81.30	318.5	-4,983.5	5,029.5	4,867.2	162.30	30.988	
7,677.1	6,628.9	6,596.9	6,596.9	34.1	131.5	-81.17	318.5	-4,983.5	5,106.3	4,942.6	163.70	31.193	
7,700.0	6,628.6	6,596.6	6,596.6	34.6	131.5	-81.12	318.5	-4,983.5	5,129.1	4,965.0	164.12	31.253	
7,775.6	6,627.6	6,595.6	6,595.6	36.1	131.5	-80.99	318.5	-4,983.5	5,204.4	5,038.9	165.57	31.433	
7,800.0	6,627.3	6,595.3	6,595.3	36.6	131.5	-80.95	318.5	-4,983.5	5,228.8	5,062.7	166.04	31.491	
7,874.0	6,626.3	6,594.3	6,594.3	38.2	131.4	-80.82	318.5	-4,983.5	5,302.5	5,135.0	167.53	31.651	
7,900.0	6,626.0	6,594.0	6,594.0	38.8	131.4	-80.78	318.5	-4,983.5	5,328.5	5,160.4	168.05	31.707	
7,972.4	6,625.1	6,593.1	6,593.1	40.4	131.4	-80.65	318.5	-4,983.5	5,400.6	5,231.1	169.57	31.849	
8,000.0	6,624.7	6,592.7	6,592.7	41.0	131.4	-80.60	318.5	-4,983.5	5,428.1	5,258.0	170.15	31.903	
8,070.8	6,623.8	6,591.8	6,591.8	42.6	131.4	-80.48	318.5	-4,983.5	5,498.8	5,327.1	171.67	32.030	
8,100.0	6,623.4	6,591.4	6,591.4	43.3	131.4	-80.43	318.5	-4,983.5	5,527.8	5,355.5	172.30	32.083	
8,169.3	6,622.6	6,590.6	6,590.6	44.9	131.4	-80.31	318.5	-4,983.5	5,596.9	5,423.1	173.83	32.197	
8,200.0	6,622.2	6,590.2	6,590.2	45.6	131.3	-80.25	318.5	-4,983.5	5,627.5	5,453.0	174.51	32.248	
8,267.7	6,621.3	6,589.3	6,589.3	47.3	131.3	-80.14	318.5	-4,983.5	5,695.1	5,519.0	176.04	32.352	
8,300.0	6,620.9	6,588.9	6,588.9	48.0	131.3	-80.08	318.5	-4,983.5	5,727.3	5,550.5	176.76	32.401	
8,366.1	6,620.0	6,588.0	6,588.0	49.7	131.3	-79.97	318.5	-4,983.5	5,793.2	5,614.9	178.28	32.495	
8,400.0	6,619.6	6,587.6	6,587.6	50.5	131.3	-79.91	318.5	-4,983.5	5,827.0	5,647.9	179.05	32.543	
8,464.5	6,618.8	6,586.8	6,586.8	52.1	131.3	-79.80	318.5	-4,983.5	5,891.4	5,710.8	180.55	32.629	
8,500.0	6,618.3	6,586.3	6,586.3	53.0	131.3	-79.73	318.5	-4,983.5	5,926.7	5,745.4	181.38	32.676	
8,563.0	6,617.5	6,585.5	6,585.5	54.5	131.3	-79.63	318.5	-4,983.5	5,989.5	5,806.7	182.86	32.755	
8,600.0	6,617.0	6,585.0	6,585.0	55.5	131.2	-79.56	318.5	-4,983.5	6,026.5	5,842.8	183.73	32.801	
8,661.4	6,616.3	6,584.3	6,584.3	57.0	131.2	-79.46	318.5	-4,983.5	6,087.7	5,902.5	185.19	32.874	
8,700.0	6,615.8	6,583.8	6,583.8	58.0	131.2	-79.39	318.5	-4,983.5	6,126.2	5,940.1	186.10	32.919	
8,759.8	6,615.0	6,583.0	6,583.0	59.5	131.2	-79.29	318.5	-4,983.5	6,185.9	5,998.4	187.53	32.986	
8,800.0	6,614.5	6,582.5	6,582.5	60.6	131.2	-79.21	318.5	-4,983.5	6,226.0	6,037.5	188.49	33.030	
8,858.2	6,613.7	6,581.7	6,581.7	62.1	131.2	-79.11	318.5	-4,983.5	6,284.1	6,094.2	189.90	33.092	
8,900.0	6,613.2	6,581.2	6,581.2	63.2	131.2	-79.04	318.5	-4,983.5	6,325.8	6,134.9	190.90	33.136	
8,956.7	6,612.5	6,580.5	6,580.5	64.6	131.2	-78.94	318.5	-4,983.5	6,382.3	6,190.0	192.28	33.193	
9,000.0	6,611.9	6,579.9	6,579.9	65.8	131.1	-78.87	318.5	-4,983.5	6,425.5	6,232.2	193.33	33.237	
9,055.1	6,611.2	6,579.2	6,579.2	67.2	131.1	-78.77	318.5	-4,983.5	6,480.5	6,285.9	194.67	33.290	
9,100.0	6,610.6	6,578.6	6,578.6	68.4	131.1	-78.69	318.5	-4,983.5	6,525.3	6,329.6	195.76	33.333	
9,153.5	6,609.9	6,577.9	6,577.9	69.8	131.1	-78.60	318.5	-4,983.5	6,578.7	6,381.7	197.07	33.382	
9,200.0	6,609.3	6,577.3	6,577.3	71.0	131.1	-78.52	318.5	-4,983.5	6,625.1	6,426.9	198.21	33.425	
9,251.9	6,608.7	6,576.7	6,576.7	72.4	131.1	-78.43	318.5	-4,983.5	6,677.0	6,477.5	199.48	33.471	
9,300.0	6,608.1	6,576.1	6,576.1	73.7	131.1	-78.35	318.5	-4,983.5	6,724.9	6,524.3	200.66	33.514	
9,350.4	6,607.4	6,575.4	6,575.4	75.0	131.1	-78.26	318.5	-4,983.5	6,775.2	6,573.3	201.90	33.557	
9,400.0	6,606.8	6,574.8	6,574.8	76.3	131.0	-78.18	318.5	-4,983.5	6,824.7	6,621.6	203.12	33.599	
9,448.8	6,606.1	6,574.1	6,574.1	77.6	131.0	-78.09	318.5	-4,983.5	6,873.4	6,669.1	204.32	33.640	
9,500.0	6,605.5	6,573.5	6,573.5	79.0	131.0	-78.00	318.5	-4,983.5	6,924.5	6,718.9	205.59	33.682	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,604.9	6,572.9	6,572.9	80.2	131.0	-77.92	318.5	-4,983.5	6,971.7	6,764.9	206.75	33.720	
9,600.0	6,604.2	6,572.2	6,572.2	81.7	131.0	-77.83	318.5	-4,983.5	7,024.3	6,816.3	208.06	33.762	
9,645.6	6,603.6	6,571.6	6,571.6	82.9	131.0	-77.75	318.5	-4,983.5	7,069.9	6,860.7	209.19	33.797	
9,700.0	6,602.9	6,570.9	6,570.9	84.3	131.0	-77.66	318.5	-4,983.5	7,124.1	6,913.6	210.53	33.839	
9,744.1	6,602.3	6,570.3	6,570.3	85.5	130.9	-77.58	318.5	-4,983.5	7,168.1	6,956.5	211.62	33.872	
9,800.0	6,601.6	6,569.6	6,569.6	87.0	130.9	-77.49	318.5	-4,983.5	7,224.0	7,011.0	213.01	33.914	
9,842.5	6,601.1	6,569.1	6,569.1	88.2	130.9	-77.41	318.5	-4,983.5	7,266.4	7,052.3	214.06	33.945	
9,900.0	6,600.3	6,568.3	6,568.3	89.7	130.9	-77.31	318.5	-4,983.5	7,323.8	7,108.3	215.49	33.987	
9,940.9	6,599.8	6,567.8	6,567.8	90.9	130.9	-77.24	318.5	-4,983.5	7,364.6	7,148.1	216.50	34.016	
10,000.0	6,599.0	6,567.0	6,567.0	92.5	130.9	-77.14	318.5	-4,983.5	7,423.6	7,205.7	217.97	34.059	
10,039.3	6,598.5	6,566.5	6,566.5	93.5	130.9	-77.08	318.5	-4,983.5	7,462.9	7,244.0	218.94	34.086	
10,100.0	6,597.7	6,565.7	6,565.7	95.2	130.9	-76.97	318.5	-4,983.5	7,523.5	7,303.0	220.45	34.128	
10,137.8	6,597.3	6,565.3	6,565.3	96.2	130.8	-76.91	318.5	-4,983.5	7,561.2	7,339.8	221.39	34.154	
10,200.0	6,596.5	6,564.5	6,564.5	97.9	130.8	-76.80	318.5	-4,983.5	7,623.3	7,400.4	222.93	34.196	
10,236.2	6,596.0	6,564.0	6,564.0	98.9	130.8	-76.74	318.5	-4,983.5	7,659.4	7,435.6	223.83	34.220	
10,300.0	6,595.2	6,563.2	6,563.2	100.6	130.8	-76.63	318.5	-4,983.5	7,723.1	7,497.7	225.41	34.263	
10,334.6	6,594.7	6,562.7	6,562.7	101.6	130.8	-76.57	318.5	-4,983.5	7,757.7	7,531.4	226.27	34.285	
10,400.0	6,593.9	6,561.9	6,561.9	103.3	130.8	-76.45	318.5	-4,983.5	7,823.0	7,595.1	227.89	34.328	
10,433.0	6,593.5	6,561.5	6,561.5	104.2	130.8	-76.40	318.5	-4,983.5	7,856.0	7,627.3	228.71	34.349	
10,500.0	6,592.6	6,560.6	6,560.6	106.1	130.8	-76.28	318.5	-4,983.5	7,922.8	7,692.5	230.37	34.392	
10,531.5	6,592.2	6,560.2	6,560.2	106.9	130.7	-76.23	318.5	-4,983.5	7,954.3	7,723.1	231.15	34.412	
10,600.0	6,591.3	6,559.3	6,559.3	108.8	130.7	-76.11	318.5	-4,983.5	8,022.7	7,789.8	232.84	34.455	
10,629.9	6,590.9	6,558.9	6,558.9	109.6	130.7	-76.06	318.5	-4,983.5	8,052.5	7,819.0	233.59	34.474	
10,700.0	6,590.0	6,558.0	6,558.0	111.6	130.7	-75.94	318.5	-4,983.5	8,122.5	7,887.2	235.32	34.517	
10,728.3	6,589.6	6,557.6	6,557.6	112.3	130.7	-75.89	318.5	-4,983.5	8,150.8	7,914.8	236.02	34.534	
10,800.0	6,588.7	6,556.7	6,556.7	114.3	130.7	-75.77	318.5	-4,983.5	8,222.4	7,984.6	237.79	34.578	
10,826.7	6,588.4	6,556.4	6,556.4	115.0	130.7	-75.72	318.5	-4,983.5	8,249.1	8,010.7	238.45	34.594	
10,900.0	6,587.4	6,555.4	6,555.4	117.0	130.6	-75.60	318.5	-4,983.5	8,322.3	8,082.0	240.26	34.638	
10,925.2	6,587.1	6,555.1	6,555.1	117.7	130.6	-75.56	318.5	-4,983.5	8,347.4	8,106.5	240.88	34.653	
11,000.0	6,586.1	6,554.1	6,554.1	119.8	130.6	-75.43	318.5	-4,983.5	8,422.1	8,179.4	242.73	34.698	
11,023.6	6,585.8	6,553.8	6,553.8	120.4	130.6	-75.39	318.5	-4,983.5	8,445.7	8,202.4	243.31	34.711	
11,100.0	6,584.8	6,552.8	6,552.8	122.5	130.6	-75.26	318.5	-4,983.5	8,522.0	8,276.8	245.19	34.756	
11,122.0	6,584.5	6,552.5	6,552.5	123.2	130.6	-75.22	318.5	-4,983.5	8,544.0	8,298.3	245.74	34.769	
11,200.0	6,583.5	6,551.5	6,551.5	125.3	130.6	-75.09	318.5	-4,983.5	8,621.9	8,374.2	247.66	34.814	
11,220.4	6,583.3	6,551.3	6,551.3	125.9	130.6	-75.05	318.5	-4,983.5	8,642.3	8,394.1	248.16	34.826	
11,300.0	6,582.2	6,550.2	6,550.2	128.1	130.5	-74.92	318.5	-4,983.5	8,721.8	8,471.6	250.11	34.871	
11,318.9	6,582.0	6,550.0	6,550.0	128.6	130.5	-74.88	318.5	-4,983.5	8,740.6	8,490.0	250.58	34.882	
11,400.0	6,580.9	6,548.9	6,548.9	130.8	130.5	-74.75	318.5	-4,983.5	8,821.6	8,569.1	252.57	34.928	
11,417.3	6,580.7	6,548.7	6,548.7	131.3	130.5	-74.72	318.5	-4,983.5	8,838.9	8,585.9	252.99	34.937	
11,500.0	6,579.7	6,547.7	6,547.7	133.6	130.5	-74.58	318.5	-4,983.5	8,921.5	8,666.5	255.02	34.984	
11,515.7	6,579.4	6,547.4	6,547.4	134.0	130.5	-74.55	318.5	-4,983.5	8,937.2	8,681.8	255.40	34.992	
11,600.0	6,578.4	6,546.4	6,546.4	136.3	130.5	-74.41	318.5	-4,983.5	9,021.4	8,763.9	257.46	35.039	
11,614.1	6,578.2	6,546.2	6,546.2	136.7	130.5	-74.38	318.5	-4,983.5	9,035.5	8,777.7	257.81	35.047	
11,700.0	6,577.1	6,545.1	6,545.1	139.1	130.4	-74.24	318.5	-4,983.5	9,121.3	8,861.4	259.91	35.094	
11,712.6	6,576.9	6,544.9	6,544.9	139.5	130.4	-74.22	318.5	-4,983.5	9,133.8	8,873.6	260.21	35.101	
11,800.0	6,575.8	6,543.8	6,543.8	141.9	130.4	-74.07	318.5	-4,983.5	9,221.2	8,958.8	262.34	35.149	
11,811.0	6,575.6	6,543.6	6,543.6	142.2	130.4	-74.05	318.5	-4,983.5	9,232.2	8,969.5	262.61	35.155	
11,858.8	6,575.0	6,543.0	6,543.0	143.5	130.4	-73.97	318.5	-4,983.5	9,279.9	9,016.1	263.77	35.181	
11,859.3	6,575.0	6,543.0	6,543.0	143.5	130.4	-73.97	318.5	-4,983.5	9,280.4	9,016.6	263.78	35.182	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-105.14	-1,040.2	-3,843.7	3,982.2					
98.4	98.4	63.1	63.1	0.1	0.0	-105.14	-1,040.1	-3,843.7	3,982.0	3,981.8	0.11	N/A		
100.0	100.0	64.8	64.8	0.1	0.0	-105.14	-1,040.1	-3,843.7	3,982.0	3,981.8	0.11	N/A		
175.1	175.1	135.1	135.1	0.3	0.1	-105.14	-1,039.7	-3,843.7	3,981.9	3,981.5	0.35	N/A		
196.8	196.8	153.1	153.1	0.3	0.1	-105.13	-1,039.6	-3,843.8	3,981.9	3,981.5	0.42	9,384.826		
200.0	200.0	155.7	155.7	0.3	0.1	-105.13	-1,039.6	-3,843.8	3,981.9	3,981.4	0.44	9,139.504		
295.3	295.3	246.5	246.5	0.5	0.2	-105.13	-1,039.4	-3,844.1	3,982.1	3,981.4	0.74	5,369.297		
300.0	300.0	251.7	251.7	0.5	0.2	-105.13	-1,039.4	-3,844.1	3,982.1	3,981.4	0.75	5,278.785		
393.7	393.7	346.7	346.7	0.8	0.3	-105.13	-1,039.5	-3,844.2	3,982.3	3,981.2	1.02	3,898.031		
400.0	400.0	352.5	352.5	0.8	0.3	-105.13	-1,039.5	-3,844.2	3,982.3	3,981.2	1.04	3,827.286		
492.1	492.1	443.1	443.1	1.0	0.3	-105.13	-1,039.8	-3,844.3	3,982.5	3,981.2	1.31	3,034.145		
500.0	500.0	451.4	451.4	1.0	0.3	-105.14	-1,039.8	-3,844.4	3,982.5	3,981.2	1.34	2,982.317		
590.5	590.5	546.0	546.0	1.2	0.4	-105.14	-1,040.4	-3,844.4	3,982.7	3,981.1	1.60	2,495.653		
600.0	600.0	555.8	555.8	1.2	0.4	-105.14	-1,040.4	-3,844.4	3,982.7	3,981.0	1.62	2,454.153		
689.0	689.0	651.9	651.9	1.4	0.5	-105.15	-1,040.8	-3,844.3	3,982.7	3,980.8	1.87	2,126.034		
700.0	700.0	664.3	664.3	1.4	0.5	-105.15	-1,040.8	-3,844.3	3,982.7	3,980.8	1.90	2,091.836		
787.4	787.4	757.2	757.2	1.6	0.5	-105.15	-1,041.1	-3,844.0	3,982.5	3,980.4	2.15	1,856.117		
800.0	800.0	770.2	770.2	1.7	0.5	-105.16	-1,041.2	-3,843.9	3,982.5	3,980.3	2.18	1,826.526		
885.8	885.8	850.4	850.4	1.9	0.5	-105.17	-1,041.8	-3,843.6	3,982.3	3,979.9	2.41	1,651.249		
900.0	900.0	863.0	863.0	1.9	0.6	-105.17	-1,041.9	-3,843.6	3,982.3	3,979.8	2.45	1,625.796		
926.2	926.2	886.2	886.2	2.0	0.6	-105.17	-1,042.1	-3,843.5	3,982.3	3,979.8	2.52	1,580.723		
984.2	984.2	939.1	939.1	2.1	0.6	-105.18	-1,042.6	-3,843.4	3,982.3	3,979.6	2.67	1,489.555		
1,000.0	1,000.0	953.5	953.5	2.1	0.6	-105.18	-1,042.7	-3,843.4	3,982.3	3,979.6	2.72	1,466.611		
1,082.7	1,082.7	1,032.6	1,032.6	2.3	0.6	-105.19	-1,043.2	-3,843.5	3,982.5	3,979.6	2.94	1,356.356		
1,100.0	1,100.0	1,050.1	1,050.1	2.3	0.6	-105.19	-1,043.3	-3,843.5	3,982.6	3,979.6	2.98	1,335.141		
1,181.1	1,181.1	1,140.2	1,140.2	2.5	0.7	-105.19	-1,043.8	-3,843.5	3,982.7	3,979.5	3.20	1,243.983		
1,200.0	1,200.0	1,164.0	1,164.0	2.6	0.7	-105.20	-1,044.0	-3,843.5	3,982.7	3,979.5	3.25	1,224.519		
1,279.5	1,279.5	1,257.0	1,256.9	2.7	0.7	-10.02	-1,044.3	-3,843.1	3,981.4	3,978.0	3.41	1,167.015		
1,300.0	1,300.0	1,279.8	1,279.8	2.8	0.7	-10.02	-1,044.4	-3,842.9	3,980.7	3,977.2	3.46	1,149.551		
1,377.9	1,377.8	1,352.9	1,352.9	2.9	0.8	-10.05	-1,044.6	-3,842.5	3,976.6	3,972.9	3.65	1,090.432		
1,400.0	1,399.8	1,372.4	1,372.4	3.0	0.8	-10.06	-1,044.7	-3,842.4	3,975.1	3,971.4	3.70	1,074.792		
1,476.4	1,475.9	1,456.0	1,456.0	3.1	0.8	-10.10	-1,044.8	-3,842.1	3,968.6	3,964.7	3.89	1,020.718		
1,500.0	1,499.5	1,485.4	1,485.3	3.2	0.8	-10.12	-1,044.9	-3,841.9	3,966.1	3,962.1	3.95	1,004.712		
1,574.8	1,573.7	1,551.3	1,551.3	3.4	0.8	-10.18	-1,045.0	-3,841.5	3,957.0	3,952.9	4.13	957.651		
1,600.0	1,598.7	1,571.8	1,571.8	3.4	0.8	-10.20	-1,045.1	-3,841.3	3,953.6	3,949.4	4.19	942.809		
1,673.2	1,671.1	1,632.5	1,632.4	3.6	0.8	-10.27	-1,045.4	-3,841.2	3,942.5	3,938.1	4.38	901.002		
1,700.0	1,697.5	1,655.0	1,654.9	3.7	0.9	-10.30	-1,045.6	-3,841.1	3,938.0	3,933.6	4.44	886.638		
1,771.6	1,767.9	1,719.0	1,719.0	3.9	0.9	-10.38	-1,045.9	-3,841.2	3,925.0	3,920.4	4.63	848.420		
1,800.0	1,795.6	1,749.0	1,748.9	4.0	0.9	-10.42	-1,046.0	-3,841.2	3,919.4	3,914.7	4.70	833.726		
1,870.1	1,864.0	1,820.5	1,820.5	4.3	0.9	-10.52	-1,046.3	-3,841.2	3,904.4	3,899.5	4.89	797.855		
1,900.0	1,893.1	1,848.8	1,848.8	4.4	0.9	-10.57	-1,046.5	-3,841.2	3,897.4	3,892.4	4.97	783.419		
1,968.5	1,959.3	1,913.5	1,913.4	4.6	1.0	-10.69	-1,046.9	-3,841.1	3,880.4	3,875.2	5.17	750.700		
1,992.4	1,982.4	1,936.3	1,936.2	4.7	1.0	-10.73	-1,047.1	-3,841.1	3,874.1	3,868.9	5.24	739.891		
2,000.0	1,989.6	1,943.5	1,943.4	4.8	1.0	-10.74	-1,047.1	-3,841.1	3,872.1	3,866.8	5.26	736.656		
2,066.9	2,054.0	2,000.0	2,000.0	5.1	1.0	-10.79	-1,047.5	-3,841.1	3,854.2	3,848.8	5.44	708.327		
2,100.0	2,085.8	2,031.4	2,031.3	5.2	1.0	-10.82	-1,047.8	-3,841.1	3,845.4	3,839.9	5.53	695.836		
2,165.3	2,148.7	2,082.0	2,081.9	5.5	1.0	-10.87	-1,048.5	-3,841.2	3,828.2	3,822.5	5.70	671.656		
2,200.0	2,182.0	2,113.4	2,113.4	5.7	1.0	-10.90	-1,048.9	-3,841.3	3,819.2	3,813.4	5.80	658.455		
2,263.8	2,243.4	2,188.5	2,188.4	6.0	1.1	-10.97	-1,050.0	-3,841.5	3,802.4	3,796.4	5.99	635.297		
2,300.0	2,278.2	2,224.1	2,224.0	6.2	1.1	-11.01	-1,050.5	-3,841.5	3,792.8	3,786.7	6.09	622.720		
2,362.2	2,338.1	2,280.6	2,280.6	6.5	1.1	-11.07	-1,051.4	-3,841.5	3,776.4	3,770.1	6.27	602.034		
2,400.0	2,374.4	2,314.9	2,314.8	6.7	1.1	-11.11	-1,051.9	-3,841.5	3,766.4	3,760.0	6.38	590.049		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design		SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BLOSKAS #9-23 - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
2,460.6	2,432.8	2,369.4	2,369.3	7.0	1.1	-11.16	-1,052.7	-3,841.6	3,750.5	3,743.9	6.56	571.597			
2,500.0	2,470.6	2,406.3	2,406.2	7.2	1.1	-11.20	-1,053.2	-3,841.7	3,740.1	3,733.5	6.68	560.095			
2,559.0	2,527.4	2,475.4	2,475.4	7.6	1.2	-11.27	-1,054.1	-3,841.8	3,724.6	3,717.7	6.86	542.972			
2,600.0	2,566.8	2,518.8	2,518.7	7.8	1.2	-11.32	-1,054.7	-3,841.7	3,713.7	3,706.7	6.99	531.654			
2,657.5	2,622.1	2,573.0	2,572.9	8.1	1.2	-11.38	-1,055.3	-3,841.7	3,698.4	3,691.2	7.16	516.461			
2,700.0	2,663.0	2,611.4	2,611.3	8.3	1.2	-11.41	-1,055.5	-3,841.7	3,687.1	3,679.8	7.29	505.715			
2,755.9	2,716.8	2,657.3	2,657.2	8.6	1.2	-11.46	-1,055.8	-3,841.9	3,672.4	3,664.9	7.46	492.183			
2,800.0	2,759.2	2,700.0	2,699.9	8.9	1.2	-11.50	-1,056.2	-3,842.0	3,660.8	3,653.2	7.60	481.952			
2,854.3	2,811.5	2,750.5	2,750.4	9.2	1.2	-11.55	-1,056.6	-3,842.2	3,646.6	3,638.8	7.76	469.630			
2,900.0	2,855.4	2,800.0	2,799.9	9.4	1.3	-11.60	-1,056.9	-3,842.4	3,634.6	3,626.7	7.91	459.554			
2,952.7	2,906.2	2,846.8	2,846.7	9.7	1.3	-11.64	-1,057.0	-3,842.6	3,620.7	3,612.6	8.08	448.374			
3,000.0	2,951.6	2,888.7	2,888.6	10.0	1.3	-11.68	-1,057.2	-3,842.8	3,608.3	3,600.1	8.22	438.748			
3,051.2	3,000.9	2,943.9	2,943.8	10.3	1.3	-11.73	-1,057.5	-3,843.1	3,594.9	3,586.5	8.39	428.550			
3,100.0	3,047.8	2,999.6	2,999.5	10.5	1.3	-11.79	-1,057.9	-3,843.2	3,582.0	3,573.4	8.55	419.140			
3,149.6	3,095.5	3,043.2	3,043.1	10.8	1.3	-11.84	-1,058.3	-3,843.2	3,568.8	3,560.1	8.70	410.016			
3,200.0	3,144.0	3,087.4	3,087.3	11.1	1.3	-11.89	-1,058.7	-3,843.3	3,555.5	3,546.7	8.86	401.084			
3,248.0	3,190.2	3,131.1	3,131.0	11.4	1.4	-11.93	-1,059.1	-3,843.4	3,542.9	3,533.9	9.02	392.834			
3,300.0	3,240.2	3,179.3	3,179.2	11.7	1.4	-11.99	-1,059.6	-3,843.5	3,529.3	3,520.1	9.19	384.216			
3,346.4	3,284.9	3,223.3	3,223.2	11.9	1.4	-12.03	-1,060.0	-3,843.7	3,517.2	3,507.8	9.34	376.770			
3,400.0	3,336.4	3,275.2	3,275.1	12.2	1.4	-12.08	-1,060.1	-3,844.0	3,503.1	3,493.6	9.50	368.568			
3,444.9	3,379.6	3,322.4	3,322.3	12.5	1.4	-12.12	-1,059.8	-3,844.3	3,491.4	3,481.8	9.65	361.823			
3,500.0	3,432.6	3,386.6	3,386.4	12.8	1.4	-12.17	-1,058.9	-3,844.8	3,476.8	3,467.0	9.83	353.606			
3,543.3	3,474.3	3,425.6	3,425.5	13.1	1.4	-12.19	-1,058.0	-3,845.2	3,465.3	3,455.4	9.97	347.443			
3,600.0	3,528.8	3,471.4	3,471.2	13.4	1.4	-12.21	-1,056.8	-3,845.7	3,450.4	3,440.2	10.16	339.743			
3,641.7	3,569.0	3,506.7	3,506.5	13.6	1.4	-12.23	-1,055.8	-3,846.3	3,439.5	3,429.2	10.29	334.232			
3,700.0	3,625.0	3,568.4	3,568.2	14.0	1.4	-12.25	-1,053.8	-3,847.2	3,424.2	3,413.7	10.48	326.677			
3,740.1	3,663.6	3,609.8	3,609.5	14.2	1.4	-12.27	-1,052.5	-3,847.8	3,413.6	3,403.0	10.61	321.616			
3,800.0	3,721.2	3,666.7	3,666.4	14.5	1.4	-12.29	-1,050.7	-3,848.6	3,397.9	3,387.1	10.81	314.303			
3,838.6	3,758.3	3,700.0	3,699.7	14.8	1.4	-12.31	-1,049.7	-3,849.1	3,387.8	3,376.8	10.94	309.749			
3,900.0	3,817.4	3,753.5	3,753.1	15.1	1.4	-12.33	-1,048.2	-3,849.9	3,371.7	3,360.5	11.14	302.750			
3,937.0	3,853.0	3,783.9	3,783.6	15.3	1.4	-12.35	-1,047.4	-3,850.4	3,362.1	3,350.8	11.26	298.663			
4,000.0	3,913.6	3,856.9	3,856.5	15.7	1.4	-12.40	-1,046.0	-3,851.4	3,345.7	3,334.3	11.47	291.685			
4,035.4	3,947.7	3,902.3	3,901.9	15.9	1.4	-12.43	-1,045.4	-3,851.7	3,336.4	3,324.8	11.59	287.797			
4,100.0	4,009.8	3,965.6	3,965.2	16.3	1.4	-12.49	-1,044.9	-3,852.0	3,319.2	3,307.4	11.81	281.014			
4,133.8	4,042.4	3,998.7	3,998.4	16.5	1.4	-12.52	-1,044.7	-3,852.1	3,310.2	3,298.3	11.93	277.552			
4,200.0	4,106.0	4,043.3	4,042.9	16.8	1.4	-12.56	-1,044.4	-3,852.4	3,292.8	3,280.7	12.14	271.223			
4,232.3	4,137.1	4,064.9	4,064.5	17.0	1.4	-12.58	-1,044.3	-3,852.6	3,284.5	3,272.2	12.25	268.226			
4,300.0	4,202.2	4,115.1	4,114.7	17.4	1.4	-12.62	-1,043.8	-3,853.4	3,267.2	3,254.8	12.47	262.089			
4,330.7	4,231.7	4,145.1	4,144.7	17.6	1.4	-12.65	-1,043.5	-3,854.0	3,259.5	3,246.9	12.57	259.324			
4,400.0	4,298.4	4,214.7	4,214.3	18.0	1.4	-12.69	-1,042.4	-3,855.4	3,241.9	3,229.1	12.80	253.223			
4,429.1	4,326.4	4,247.2	4,246.8	18.2	1.4	-12.72	-1,041.8	-3,856.0	3,234.5	3,221.6	12.90	250.667			
4,500.0	4,394.6	4,316.4	4,315.9	18.6	1.4	-12.76	-1,040.3	-3,857.3	3,216.3	3,203.2	13.15	244.680			
4,527.5	4,421.1	4,335.6	4,335.2	18.7	1.4	-12.77	-1,039.9	-3,857.7	3,209.3	3,196.1	13.24	242.475			
4,600.0	4,490.8	4,400.0	4,399.5	19.2	1.4	-12.81	-1,038.6	-3,859.3	3,191.3	3,177.8	13.48	236.765			
4,626.0	4,515.8	4,400.0	4,399.5	19.3	1.4	-12.81	-1,038.6	-3,859.3	3,184.8	3,171.3	13.56	234.898			
4,700.0	4,587.0	4,446.6	4,446.0	19.8	1.5	-12.84	-1,037.8	-3,860.9	3,167.1	3,153.3	13.80	229.535			
4,724.4	4,610.5	4,460.7	4,460.2	19.9	1.5	-12.85	-1,037.6	-3,861.5	3,161.3	3,147.5	13.88	227.822			
4,800.0	4,683.2	4,523.3	4,522.7	20.3	1.5	-12.90	-1,037.1	-3,864.2	3,144.0	3,129.9	14.13	222.548			
4,822.8	4,705.2	4,589.0	4,588.4	20.5	1.5	-12.97	-1,037.4	-3,866.3	3,138.7	3,124.4	14.22	220.648			
4,900.0	4,779.4	4,738.6	4,737.9	20.9	1.5	-13.17	-1,039.2	-3,867.5	3,118.8	3,104.3	14.54	214.441			
4,921.2	4,799.8	4,768.2	4,767.5	21.0	1.5	-13.21	-1,039.6	-3,867.3	3,113.1	3,098.5	14.62	212.871			
5,000.0	4,875.6	4,855.8	4,855.1	21.5	1.5	-13.34	-1,040.5	-3,866.5	3,091.8	3,076.8	14.91	207.381			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,894.5	4,875.4	4,874.8	21.6	1.5	-13.37	-1,040.7	-3,866.3	3,086.4	3,071.4	14.98	206.059	
5,100.0	4,971.8	4,949.7	4,949.0	22.1	1.6	-13.47	-1,041.3	-3,865.7	3,064.5	3,049.3	15.26	200.855	
5,118.1	4,989.2	4,965.9	4,965.2	22.2	1.6	-13.49	-1,041.3	-3,865.5	3,059.6	3,044.3	15.32	199.717	
5,200.0	5,068.0	5,050.0	5,049.4	22.7	1.6	-13.60	-1,041.4	-3,865.0	3,037.4	3,021.8	15.61	194.637	
5,216.5	5,083.9	5,069.0	5,068.3	22.8	1.6	-13.63	-1,041.4	-3,864.9	3,032.9	3,017.2	15.66	193.623	
5,240.0	5,106.5	5,095.9	5,095.2	22.9	1.6	-13.66	-1,041.3	-3,864.7	3,026.4	3,010.7	15.75	192.190	
5,300.0	5,164.4	5,156.1	5,155.4	23.2	1.6	-13.65	-1,040.9	-3,864.2	3,010.5	2,994.6	15.89	189.451	
5,314.9	5,178.8	5,171.0	5,170.3	23.3	1.6	-13.65	-1,040.8	-3,864.0	3,006.7	2,990.8	15.92	188.850	
5,400.0	5,261.5	5,245.4	5,244.7	23.6	1.6	-13.63	-1,040.5	-3,863.4	2,986.6	2,970.5	16.08	185.681	
5,413.4	5,274.6	5,256.3	5,255.6	23.6	1.6	-13.63	-1,040.5	-3,863.3	2,983.7	2,967.6	16.11	185.239	
5,500.0	5,359.5	5,331.6	5,330.9	23.9	1.6	-13.62	-1,040.5	-3,862.9	2,966.4	2,950.2	16.25	182.540	
5,511.8	5,371.1	5,342.9	5,342.2	24.0	1.6	-13.62	-1,040.5	-3,862.9	2,964.3	2,948.0	16.27	182.212	
5,600.0	5,458.0	5,436.4	5,435.8	24.2	1.6	-13.63	-1,040.8	-3,862.4	2,949.7	2,933.3	16.40	179.862	
5,610.2	5,468.2	5,449.4	5,448.7	24.3	1.6	-13.63	-1,040.9	-3,862.3	2,948.2	2,931.8	16.41	179.614	
5,700.0	5,557.2	5,561.3	5,560.6	24.5	1.6	-13.65	-1,040.9	-3,860.9	2,935.7	2,919.2	16.54	177.538	
5,708.6	5,565.7	5,571.9	5,571.2	24.5	1.6	-13.65	-1,040.9	-3,860.8	2,934.6	2,918.1	16.55	177.363	
5,800.0	5,656.7	5,679.0	5,678.3	24.7	1.6	-13.67	-1,041.1	-3,858.6	2,924.4	2,907.7	16.65	175.634	
5,807.1	5,663.7	5,687.1	5,686.4	24.7	1.6	-13.67	-1,041.1	-3,858.4	2,923.7	2,907.0	16.66	175.517	
5,900.0	5,756.5	5,794.0	5,793.3	24.9	1.6	-13.68	-1,041.1	-3,855.8	2,915.8	2,899.0	16.75	174.082	
5,905.5	5,761.9	5,800.3	5,799.6	24.9	1.6	-13.68	-1,041.1	-3,855.6	2,915.4	2,898.7	16.75	174.013	
6,000.0	5,856.4	5,895.9	5,895.1	25.0	1.7	-13.69	-1,041.3	-3,852.8	2,910.3	2,893.5	16.84	172.872	
6,003.9	5,860.3	5,899.8	5,899.0	25.0	1.7	-13.69	-1,041.3	-3,852.7	2,910.2	2,893.3	16.84	172.831	
6,032.5	5,888.9	5,930.3	5,929.5	25.0	1.7	-108.89	-1,041.3	-3,851.8	2,909.3	2,883.0	26.28	110.688	
6,062.5	5,918.9	5,962.4	5,961.6	25.1	1.7	-108.89	-1,041.3	-3,850.8	2,908.4	2,882.1	26.32	110.503 ES	
6,084.4	5,940.8	5,985.8	5,985.0	25.1	1.7	161.11	-1,041.3	-3,850.1	2,908.1	2,891.2	16.88	172.259 CC	
6,100.0	5,956.4	6,003.4	6,002.6	25.1	1.7	161.11	-1,041.3	-3,849.6	2,908.3	2,891.4	16.86	172.450	
6,102.3	5,958.7	6,006.9	6,006.0	25.1	1.7	161.11	-1,041.3	-3,849.5	2,908.3	2,891.4	16.86	172.484	
6,150.0	6,006.2	6,076.9	6,076.1	25.1	1.7	161.07	-1,041.2	-3,847.0	2,910.7	2,893.9	16.82	173.013	
6,200.0	6,055.6	6,138.3	6,137.4	25.1	1.7	160.98	-1,041.2	-3,844.4	2,916.1	2,899.3	16.81	173.497	
6,200.8	6,056.3	6,139.2	6,138.2	25.1	1.7	160.97	-1,041.2	-3,844.3	2,916.2	2,899.4	16.81	173.506	
6,250.0	6,104.3	6,193.8	6,192.8	25.0	1.7	160.81	-1,041.4	-3,841.8	2,924.7	2,907.8	16.80	174.050	
6,299.2	6,151.3	6,242.9	6,241.9	24.9	1.7	160.58	-1,041.5	-3,839.5	2,936.1	2,919.3	16.80	174.764	
6,300.0	6,152.1	6,243.7	6,242.7	24.9	1.7	160.57	-1,041.5	-3,839.4	2,936.4	2,919.6	16.80	174.777	
6,350.0	6,198.7	6,292.1	6,290.9	24.8	1.7	160.26	-1,041.6	-3,837.1	2,951.2	2,934.4	16.79	175.750	
6,397.6	6,241.9	6,338.6	6,337.4	24.7	1.7	159.88	-1,041.5	-3,834.9	2,968.3	2,951.5	16.78	176.897	
6,400.0	6,244.1	6,340.9	6,339.7	24.7	1.7	159.86	-1,041.5	-3,834.8	2,969.2	2,952.4	16.78	176.956	
6,450.0	6,287.8	6,388.6	6,387.4	24.5	1.7	159.38	-1,041.3	-3,832.6	2,990.1	2,973.4	16.77	178.342	
6,496.0	6,326.5	6,421.4	6,420.2	24.4	1.7	158.80	-1,041.0	-3,831.1	3,012.1	2,995.3	16.76	179.672	
6,500.0	6,329.7	6,423.9	6,422.6	24.4	1.7	158.74	-1,041.0	-3,831.0	3,014.0	2,997.3	16.77	179.782	
6,550.0	6,369.6	6,454.3	6,453.0	24.3	1.7	157.95	-1,040.9	-3,829.6	3,040.9	3,024.1	16.79	181.070	
6,594.5	6,403.3	6,479.9	6,478.6	24.2	1.8	157.09	-1,040.9	-3,828.6	3,067.2	3,050.4	16.86	181.872	
6,600.0	6,407.3	6,483.0	6,481.7	24.2	1.8	156.97	-1,040.9	-3,828.5	3,070.6	3,053.8	16.88	181.941	
6,650.0	6,442.7	6,500.0	6,498.7	24.1	1.8	155.72	-1,041.0	-3,827.8	3,103.0	3,086.0	17.05	182.039	
6,692.9	6,471.0	6,500.0	6,498.7	24.0	1.8	154.30	-1,041.0	-3,827.8	3,133.0	3,115.7	17.30	181.139	
6,700.0	6,475.5	6,500.0	6,498.7	24.0	1.8	154.04	-1,041.0	-3,827.8	3,138.2	3,120.8	17.35	180.898	
6,750.0	6,505.6	6,533.5	6,532.1	24.0	1.8	152.31	-1,041.1	-3,826.8	3,175.4	3,157.6	17.79	178.519	
6,791.3	6,528.3	6,543.3	6,542.0	24.0	1.8	150.40	-1,041.2	-3,826.6	3,207.9	3,189.6	18.31	175.207	
6,800.0	6,532.8	6,545.3	6,543.9	24.0	1.8	149.95	-1,041.2	-3,826.5	3,215.0	3,196.5	18.44	174.389	
6,850.0	6,557.0	6,555.7	6,554.4	24.1	1.8	146.98	-1,041.3	-3,826.3	3,256.4	3,237.1	19.31	168.601	
6,889.7	6,574.1	6,563.0	6,561.6	24.2	1.8	144.06	-1,041.3	-3,826.3	3,290.7	3,270.5	20.20	162.915	
6,900.0	6,578.1	6,564.7	6,563.3	24.3	1.8	143.21	-1,041.3	-3,826.2	3,299.6	3,279.2	20.45	161.354	
6,950.0	6,596.1	6,600.0	6,598.7	24.5	1.8	139.04	-1,041.6	-3,826.1	3,344.6	3,322.8	21.74	153.855	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,988.2	6,607.5	6,600.0	6,598.7	24.7	1.8	134.37	-1,041.6	-3,826.1	3,379.4	3,356.4	22.98	147.078	
7,000.0	6,610.7	6,600.0	6,598.7	24.8	1.8	132.73	-1,041.6	-3,826.1	3,390.3	3,366.9	23.38	145.025	
7,050.0	6,621.9	6,600.0	6,598.7	25.1	1.8	124.49	-1,041.6	-3,826.1	3,437.1	3,411.9	25.13	136.747	
7,086.6	6,628.0	6,600.0	6,598.7	25.4	1.8	116.99	-1,041.6	-3,826.1	3,471.8	3,445.4	26.34	131.804	
7,100.0	6,629.7	6,600.0	6,598.7	25.6	1.8	113.91	-1,041.6	-3,826.1	3,484.5	3,457.8	26.72	130.417	
7,150.0	6,634.1	6,600.0	6,598.7	26.0	1.8	100.96	-1,041.6	-3,826.1	3,532.5	3,504.8	27.72	127.438	
7,185.0	6,635.1	6,600.0	6,598.7	26.4	1.8	90.92	-1,041.6	-3,826.1	3,566.3	3,538.2	28.11	126.881	
7,196.6	6,635.0	6,600.0	6,598.7	26.5	1.8	87.54	-1,041.6	-3,826.1	3,577.4	3,549.2	28.23	126.702	
7,200.0	6,635.0	6,600.0	6,598.7	26.6	1.8	87.54	-1,041.6	-3,826.1	3,580.7	3,552.4	28.27	126.649	
7,283.4	6,633.9	6,600.0	6,598.7	27.6	1.8	87.54	-1,041.6	-3,826.1	3,661.3	3,632.0	29.30	124.956	
7,300.0	6,633.7	6,600.0	6,598.7	27.8	1.8	87.54	-1,041.6	-3,826.1	3,677.3	3,647.8	29.50	124.634	
7,381.9	6,632.6	6,600.0	6,598.7	29.0	1.8	87.54	-1,041.6	-3,826.1	3,756.5	3,725.8	30.69	122.391	
7,400.0	6,632.4	6,600.0	6,598.7	29.2	1.8	87.54	-1,041.6	-3,826.1	3,774.0	3,743.1	30.96	121.919	
7,480.3	6,631.4	6,600.0	6,598.7	30.5	1.8	87.54	-1,041.6	-3,826.1	3,851.8	3,819.6	32.27	119.358	
7,500.0	6,631.1	6,600.0	6,598.7	30.9	1.8	87.54	-1,041.6	-3,826.1	3,870.9	3,838.3	32.59	118.762	
7,578.7	6,630.1	6,600.0	6,598.7	32.3	1.8	87.54	-1,041.6	-3,826.1	3,947.3	3,913.3	34.01	116.064	
7,600.0	6,629.8	6,600.0	6,598.7	32.7	1.8	87.54	-1,041.6	-3,826.1	3,968.0	3,933.6	34.39	115.374	
7,677.1	6,628.9	6,600.0	6,598.7	34.1	1.8	87.54	-1,041.6	-3,826.1	4,043.0	4,007.1	35.88	112.667	
7,700.0	6,628.6	6,600.0	6,598.7	34.6	1.8	87.54	-1,041.6	-3,826.1	4,065.2	4,028.9	36.33	111.909	
7,775.6	6,627.6	6,600.0	6,598.7	36.1	1.8	87.54	-1,041.6	-3,826.1	4,138.8	4,100.9	37.87	109.280	
7,800.0	6,627.3	6,600.0	6,598.7	36.6	1.8	87.54	-1,041.6	-3,826.1	4,162.5	4,124.2	38.37	108.476	
7,874.0	6,626.3	6,600.0	6,598.7	38.2	1.8	87.54	-1,041.6	-3,826.1	4,234.7	4,194.7	39.96	105.977	
7,900.0	6,626.0	6,600.0	6,598.7	38.8	1.8	87.54	-1,041.6	-3,826.1	4,260.0	4,219.5	40.52	105.146	
7,972.4	6,625.1	6,600.0	6,598.7	40.4	1.8	87.54	-1,041.6	-3,826.1	4,330.7	4,288.5	42.12	102.805	
8,000.0	6,624.7	6,600.0	6,598.7	41.0	1.8	87.53	-1,041.6	-3,826.1	4,357.6	4,314.9	42.74	101.961	
8,070.8	6,623.8	6,600.0	6,598.7	42.6	1.8	87.53	-1,041.6	-3,826.1	4,426.8	4,382.4	44.36	99.790	
8,100.0	6,623.4	6,600.0	6,598.7	43.3	1.8	87.53	-1,041.6	-3,826.1	4,455.3	4,410.2	45.03	98.943	
8,169.3	6,622.6	6,600.0	6,598.7	44.9	1.8	87.53	-1,041.6	-3,826.1	4,523.0	4,476.3	46.66	96.944	
8,200.0	6,622.2	6,600.0	6,598.7	45.6	1.8	87.53	-1,041.6	-3,826.1	4,553.1	4,505.7	47.38	96.102	
8,267.7	6,621.3	6,600.0	6,598.7	47.3	1.8	87.53	-1,041.6	-3,826.1	4,619.3	4,570.3	49.00	94.270	
8,300.0	6,620.9	6,600.0	6,598.7	48.0	1.8	87.53	-1,041.6	-3,826.1	4,650.9	4,601.2	49.78	93.438	
8,366.1	6,620.0	6,600.0	6,598.7	49.7	1.8	87.53	-1,041.6	-3,826.1	4,715.7	4,664.3	51.39	91.765	
8,400.0	6,619.6	6,600.0	6,598.7	50.5	1.8	87.53	-1,041.6	-3,826.1	4,748.9	4,696.7	52.22	90.948	
8,464.5	6,618.8	6,600.0	6,598.7	52.1	1.8	87.53	-1,041.6	-3,826.1	4,812.2	4,758.4	53.81	89.422	
8,500.0	6,618.3	6,600.0	6,598.7	53.0	1.8	87.53	-1,041.6	-3,826.1	4,847.0	4,792.3	54.69	88.622	
8,563.0	6,617.5	6,600.0	6,598.7	54.5	1.8	87.53	-1,041.6	-3,826.1	4,908.7	4,852.5	56.27	87.232	
8,600.0	6,617.0	6,600.0	6,598.7	55.5	1.8	87.53	-1,041.6	-3,826.1	4,945.1	4,887.9	57.20	86.451	
8,661.4	6,616.3	6,600.0	6,598.7	57.0	1.8	87.53	-1,041.6	-3,826.1	5,005.4	4,946.6	58.76	85.186	
8,700.0	6,615.8	6,600.0	6,598.7	58.0	1.8	87.53	-1,041.6	-3,826.1	5,043.3	4,983.6	59.74	84.425	
8,759.8	6,615.0	6,600.0	6,598.7	59.5	1.8	87.53	-1,041.6	-3,826.1	5,102.1	5,040.8	61.27	83.274	
8,800.0	6,614.5	6,600.0	6,598.7	60.6	1.8	87.52	-1,041.6	-3,826.1	5,141.6	5,079.3	62.30	82.534	
8,858.2	6,613.7	6,600.0	6,598.7	62.1	1.8	87.52	-1,041.6	-3,826.1	5,198.8	5,135.0	63.80	81.486	
8,900.0	6,613.2	6,600.0	6,598.7	63.2	1.8	87.52	-1,041.6	-3,826.1	5,239.9	5,175.0	64.88	80.766	
8,956.7	6,612.5	6,600.0	6,598.7	64.6	1.8	87.52	-1,041.6	-3,826.1	5,295.7	5,229.3	66.35	79.813	
9,000.0	6,611.9	6,600.0	6,598.7	65.8	1.8	87.52	-1,041.6	-3,826.1	5,338.3	5,270.8	67.48	79.113	
9,055.1	6,611.2	6,600.0	6,598.7	67.2	1.8	87.52	-1,041.6	-3,826.1	5,392.5	5,323.6	68.92	78.245	
9,100.0	6,610.6	6,600.0	6,598.7	68.4	1.8	87.52	-1,041.6	-3,826.1	5,436.8	5,366.7	70.09	77.565	
9,153.5	6,609.9	6,600.0	6,598.7	69.8	1.8	87.52	-1,041.6	-3,826.1	5,489.5	5,418.0	71.50	76.775	
9,200.0	6,609.3	6,600.0	6,598.7	71.0	1.8	87.52	-1,041.6	-3,826.1	5,535.3	5,462.5	72.72	76.114	
9,251.9	6,608.7	6,600.0	6,598.7	72.4	1.8	87.52	-1,041.6	-3,826.1	5,586.5	5,512.4	74.10	75.394	
9,300.0	6,608.1	6,600.0	6,598.7	73.7	1.8	87.52	-1,041.6	-3,826.1	5,633.8	5,558.5	75.37	74.752	
9,350.4	6,607.4	6,600.0	6,598.7	75.0	1.8	87.52	-1,041.6	-3,826.1	5,683.5	5,606.8	76.71	74.095	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,400.0	6,606.8	6,600.0	6,598.7	76.3	1.8	87.52	-1,041.6	-3,826.1	5,732.5	5,654.4	78.02	73.471		
9,448.8	6,606.1	6,600.0	6,598.7	77.6	1.8	87.52	-1,041.6	-3,826.1	5,780.6	5,701.3	79.32	72.873		
9,500.0	6,605.5	6,600.0	6,598.7	79.0	1.8	87.51	-1,041.6	-3,826.1	5,831.1	5,750.4	80.69	72.267		
9,547.2	6,604.9	6,600.0	6,598.7	80.2	1.8	87.51	-1,041.6	-3,826.1	5,877.7	5,795.8	81.95	71.721		
9,600.0	6,604.2	6,600.0	6,598.7	81.7	1.8	87.51	-1,041.6	-3,826.1	5,929.8	5,846.5	83.36	71.131		
9,645.6	6,603.6	6,600.0	6,598.7	82.9	1.8	87.51	-1,041.6	-3,826.1	5,974.9	5,890.3	84.59	70.634		
9,700.0	6,602.9	6,600.0	6,598.7	84.3	1.8	87.51	-1,041.6	-3,826.1	6,028.6	5,942.5	86.05	70.060		
9,744.1	6,602.3	6,600.0	6,598.7	85.5	1.8	87.51	-1,041.6	-3,826.1	6,072.1	5,984.9	87.23	69.606		
9,800.0	6,601.6	6,600.0	6,598.7	87.0	1.8	87.51	-1,041.6	-3,826.1	6,127.4	6,038.6	88.74	69.048		
9,842.5	6,601.1	6,600.0	6,598.7	88.2	1.8	87.51	-1,041.6	-3,826.1	6,169.4	6,079.5	89.89	68.634		
9,900.0	6,600.3	6,600.0	6,598.7	89.7	1.8	87.51	-1,041.6	-3,826.1	6,226.2	6,134.7	91.44	68.091		
9,940.9	6,599.8	6,600.0	6,598.7	90.9	1.8	87.51	-1,041.6	-3,826.1	6,266.6	6,174.1	92.55	67.713		
10,000.0	6,599.0	6,600.0	6,598.7	92.5	1.8	87.51	-1,041.6	-3,826.1	6,325.1	6,230.9	94.14	67.184		
10,039.3	6,598.5	6,600.0	6,598.7	93.5	1.8	87.51	-1,041.6	-3,826.1	6,364.0	6,268.8	95.21	66.840		
10,100.0	6,597.7	6,600.0	6,598.7	95.2	1.8	87.50	-1,041.6	-3,826.1	6,424.0	6,327.1	96.86	66.325		
10,137.8	6,597.3	6,600.0	6,598.7	96.2	1.8	87.50	-1,041.6	-3,826.1	6,461.3	6,363.4	97.88	66.011		
10,200.0	6,596.5	6,600.0	6,598.7	97.9	1.8	87.50	-1,041.6	-3,826.1	6,522.9	6,423.3	99.57	65.509		
10,236.2	6,596.0	6,600.0	6,598.7	98.9	1.8	87.50	-1,041.6	-3,826.1	6,558.7	6,458.2	100.56	65.223		
10,300.0	6,595.2	6,600.0	6,598.7	100.6	1.8	87.50	-1,041.6	-3,826.1	6,621.9	6,519.6	102.29	64.733		
10,334.6	6,594.7	6,600.0	6,598.7	101.6	1.8	87.50	-1,041.6	-3,826.1	6,656.1	6,552.9	103.24	64.473		
10,400.0	6,593.9	6,600.0	6,598.7	103.3	1.8	87.50	-1,041.6	-3,826.1	6,720.9	6,615.8	105.02	63.995		
10,433.0	6,593.5	6,600.0	6,598.7	104.2	1.8	87.50	-1,041.6	-3,826.1	6,753.6	6,647.7	105.92	63.759		
10,500.0	6,592.6	6,600.0	6,598.7	106.1	1.8	87.50	-1,041.6	-3,826.1	6,819.9	6,712.1	107.75	63.292		
10,531.5	6,592.2	6,600.0	6,598.7	106.9	1.8	87.50	-1,041.6	-3,826.1	6,851.1	6,742.4	108.61	63.078		
10,600.0	6,591.3	6,600.0	6,598.7	108.8	1.8	87.50	-1,041.6	-3,826.1	6,918.9	6,808.4	110.49	62.622		
10,629.9	6,590.9	6,600.0	6,598.7	109.6	1.8	87.50	-1,041.6	-3,826.1	6,948.6	6,837.3	111.31	62.428		
10,700.0	6,590.0	6,600.0	6,598.7	111.6	1.8	87.49	-1,041.6	-3,826.1	7,018.0	6,904.8	113.22	61.983		
10,728.3	6,589.6	6,600.0	6,598.7	112.3	1.8	87.49	-1,041.6	-3,826.1	7,046.1	6,932.1	114.00	61.807		
10,800.0	6,588.7	6,600.0	6,598.7	114.3	1.8	87.49	-1,041.6	-3,826.1	7,117.1	7,001.2	115.97	61.372		
10,826.7	6,588.4	6,600.0	6,598.7	115.0	1.8	87.49	-1,041.6	-3,826.1	7,143.6	7,026.9	116.70	61.214		
10,900.0	6,587.4	6,600.0	6,598.7	117.0	1.8	87.49	-1,041.6	-3,826.1	7,216.3	7,097.5	118.71	60.789		
10,925.2	6,587.1	6,600.0	6,598.7	117.7	1.8	87.49	-1,041.6	-3,826.1	7,241.2	7,121.8	119.40	60.645		
11,000.0	6,586.1	6,600.0	6,598.7	119.8	1.8	87.49	-1,041.6	-3,826.1	7,315.4	7,193.9	121.46	60.230		
11,023.6	6,585.8	6,600.0	6,598.7	120.4	1.8	87.49	-1,041.6	-3,826.1	7,338.8	7,216.7	122.11	60.101		
11,100.0	6,584.8	6,600.0	6,598.7	122.5	1.8	87.49	-1,041.6	-3,826.1	7,414.6	7,290.4	124.21	59.695		
11,122.0	6,584.5	6,600.0	6,598.7	123.2	1.8	87.49	-1,041.6	-3,826.1	7,436.4	7,311.6	124.81	59.580		
11,200.0	6,583.5	6,600.0	6,598.7	125.3	1.8	87.48	-1,041.6	-3,826.1	7,513.8	7,386.8	126.96	59.182		
11,220.4	6,583.3	6,600.0	6,598.7	125.9	1.8	87.48	-1,041.6	-3,826.1	7,534.1	7,406.5	127.52	59.079		
11,300.0	6,582.2	6,600.0	6,598.7	128.1	1.8	87.48	-1,041.6	-3,826.1	7,613.0	7,483.3	129.72	58.690		
11,318.9	6,582.0	6,600.0	6,598.7	128.6	1.8	87.48	-1,041.6	-3,826.1	7,631.7	7,501.5	130.24	58.599		
11,400.0	6,580.9	6,600.0	6,598.7	130.8	1.8	87.48	-1,041.6	-3,826.1	7,712.2	7,579.8	132.47	58.217		
11,417.3	6,580.7	6,600.0	6,598.7	131.3	1.8	87.48	-1,041.6	-3,826.1	7,729.4	7,596.5	132.95	58.137		
11,500.0	6,579.7	6,600.0	6,598.7	133.6	1.8	87.48	-1,041.6	-3,826.1	7,811.5	7,676.3	135.23	57.763		
11,515.7	6,579.4	6,600.0	6,598.7	134.0	1.8	87.48	-1,041.6	-3,826.1	7,827.1	7,691.4	135.67	57.693		
11,600.0	6,578.4	6,600.0	6,598.7	136.3	1.8	87.48	-1,041.6	-3,826.1	7,910.8	7,772.8	137.99	57.327		
11,614.1	6,578.2	6,600.0	6,598.7	136.7	1.8	87.48	-1,041.6	-3,826.1	7,924.8	7,786.4	138.39	57.266		
11,700.0	6,577.1	6,600.0	6,598.7	139.1	1.8	87.47	-1,041.6	-3,826.1	8,010.1	7,869.3	140.76	56.907		
11,712.6	6,576.9	6,600.0	6,598.7	139.5	1.8	87.47	-1,041.6	-3,826.1	8,022.6	7,881.5	141.11	56.855		
11,800.0	6,575.8	6,600.0	6,598.7	141.9	1.8	87.47	-1,041.6	-3,826.1	8,109.4	7,965.9	143.52	56.502		
11,811.0	6,575.6	6,600.0	6,598.7	142.2	1.8	87.47	-1,041.6	-3,826.1	8,120.3	7,976.5	143.83	56.459		
11,858.8	6,575.0	6,600.0	6,598.7	143.5	1.8	87.47	-1,041.6	-3,826.1	8,167.8	8,022.6	145.15	56.272 SF		
11,859.3	6,575.0	6,600.0	6,598.7	143.5	1.8	87.47	-1,041.6	-3,826.1	8,168.3	8,023.2	145.16	56.272		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-79.79	799.7	-4,437.9	4,509.6				
98.4	98.4	50.5	50.5	0.1	0.0	-79.78	799.8	-4,438.0	4,509.5	4,509.4	0.11	N/A	
100.0	100.0	51.8	51.8	0.1	0.0	-79.78	799.8	-4,438.0	4,509.5	4,509.4	0.11	N/A	
196.8	196.8	142.4	142.4	0.3	0.1	-79.78	800.6	-4,438.2	4,509.9	4,509.5	0.42	N/A	
200.0	200.0	146.0	146.0	0.3	0.1	-79.77	800.6	-4,438.3	4,509.9	4,509.5	0.43	N/A	
295.3	295.3	285.1	285.1	0.5	0.3	-79.74	803.4	-4,437.8	4,510.0	4,509.2	0.83	5,458.617	
300.0	300.0	293.5	293.5	0.5	0.3	-79.74	803.6	-4,437.7	4,510.0	4,509.1	0.84	5,337.833	
393.7	393.7	403.2	403.1	0.8	0.4	-79.69	807.2	-4,436.1	4,509.2	4,508.0	1.14	3,948.800	
400.0	400.0	409.1	409.0	0.8	0.4	-79.68	807.5	-4,436.0	4,509.1	4,507.9	1.16	3,887.217	
492.1	492.1	495.4	495.2	1.0	0.4	-79.64	811.0	-4,434.5	4,508.2	4,506.8	1.42	3,165.257	
500.0	500.0	503.1	502.9	1.0	0.5	-79.63	811.3	-4,434.4	4,508.2	4,506.7	1.45	3,115.908	
590.5	590.5	596.0	595.7	1.2	0.5	-79.58	815.5	-4,432.8	4,507.4	4,505.7	1.70	2,643.813	
600.0	600.0	605.9	605.5	1.2	0.5	-79.57	816.0	-4,432.6	4,507.3	4,505.5	1.73	2,603.037	
689.0	689.0	699.3	698.8	1.4	0.6	-79.51	820.3	-4,430.9	4,506.4	4,504.4	1.98	2,274.791	
700.0	700.0	710.0	709.5	1.4	0.6	-79.51	820.7	-4,430.7	4,506.3	4,504.3	2.01	2,240.685	
787.4	787.4	794.2	793.6	1.6	0.6	-79.45	824.5	-4,429.2	4,505.5	4,503.2	2.25	2,002.989	
800.0	800.0	806.7	806.2	1.7	0.6	-79.45	825.1	-4,428.9	4,505.3	4,503.1	2.28	1,972.802	
885.8	885.8	894.6	893.9	1.9	0.7	-79.40	828.8	-4,427.4	4,504.5	4,502.0	2.52	1,789.031	
900.0	900.0	908.7	908.0	1.9	0.7	-79.39	829.3	-4,427.2	4,504.4	4,501.8	2.56	1,762.148	
984.2	984.2	990.9	990.1	2.1	0.7	-79.35	832.5	-4,425.8	4,503.6	4,500.8	2.78	1,618.334	
1,000.0	1,000.0	1,006.1	1,005.3	2.1	0.7	-79.34	833.1	-4,425.5	4,503.4	4,500.6	2.83	1,594.077	
1,082.7	1,082.7	1,084.9	1,084.1	2.3	0.7	-79.30	836.1	-4,424.2	4,502.7	4,499.7	3.05	1,478.237	
1,100.0	1,100.0	1,100.0	1,099.2	2.3	0.7	-79.29	836.6	-4,424.0	4,502.6	4,499.5	3.09	1,456.362	
1,181.1	1,181.1	1,176.0	1,175.1	2.5	0.8	-79.25	839.3	-4,422.9	4,502.0	4,498.7	3.31	1,361.381	
1,200.0	1,200.0	1,193.4	1,192.5	2.6	0.8	-79.25	840.0	-4,422.7	4,501.8	4,498.5	3.36	1,341.056	
1,279.5	1,279.5	1,263.0	1,262.0	2.7	0.8	15.99	842.4	-4,421.9	4,500.4	4,496.9	3.46	1,299.677	
1,300.0	1,300.0	1,280.8	1,279.8	2.8	0.8	16.01	843.0	-4,421.7	4,499.7	4,496.2	3.51	1,281.188	
1,377.9	1,377.8	1,378.8	1,377.7	2.9	0.9	16.09	846.5	-4,420.5	4,495.7	4,492.0	3.70	1,214.146	
1,400.0	1,399.8	1,410.4	1,409.4	3.0	0.9	16.12	847.5	-4,420.0	4,494.1	4,490.3	3.76	1,195.833	
1,476.4	1,475.9	1,515.8	1,514.7	3.1	0.9	16.23	850.3	-4,418.0	4,486.9	4,482.9	3.96	1,133.959	
1,500.0	1,499.5	1,538.6	1,537.5	3.2	0.9	16.26	850.9	-4,417.5	4,484.2	4,480.2	4.02	1,116.853	
1,574.8	1,573.7	1,600.0	1,598.8	3.4	1.0	16.37	852.3	-4,416.2	4,474.6	4,470.4	4.20	1,064.819	
1,600.0	1,598.7	1,627.6	1,626.4	3.4	1.0	16.41	853.0	-4,415.6	4,470.9	4,466.7	4.27	1,048.164	
1,673.2	1,671.1	1,683.1	1,681.9	3.6	1.0	16.52	854.2	-4,414.7	4,459.4	4,454.9	4.45	1,002.134	
1,700.0	1,697.5	1,700.0	1,698.8	3.7	1.0	16.57	854.6	-4,414.5	4,454.8	4,450.3	4.52	986.340	
1,771.6	1,767.9	1,760.0	1,758.7	3.9	1.0	16.70	855.8	-4,413.7	4,441.5	4,436.8	4.70	944.412	
1,800.0	1,795.6	1,782.3	1,781.0	4.0	1.0	16.76	856.2	-4,413.5	4,435.8	4,431.0	4.78	928.698	
1,870.1	1,864.0	1,833.5	1,832.2	4.3	1.0	16.90	857.0	-4,413.2	4,420.8	4,415.8	4.96	890.664	
1,900.0	1,893.1	1,854.5	1,853.3	4.4	1.1	16.97	857.4	-4,413.1	4,414.0	4,409.0	5.04	875.281	
1,968.5	1,959.3	1,900.0	1,898.8	4.6	1.1	17.12	857.9	-4,413.2	4,397.5	4,392.3	5.24	839.997	
1,992.4	1,982.4	1,922.2	1,921.0	4.7	1.1	17.18	858.2	-4,413.2	4,391.5	4,386.2	5.30	828.162	
2,000.0	1,989.6	1,928.3	1,927.1	4.8	1.1	17.19	858.3	-4,413.3	4,389.6	4,384.2	5.32	824.559	
2,066.9	2,054.0	1,982.2	1,981.0	5.1	1.1	17.26	858.8	-4,413.5	4,372.5	4,367.0	5.51	792.865	
2,100.0	2,085.8	2,000.0	1,998.8	5.2	1.1	17.28	859.0	-4,413.7	4,364.2	4,358.6	5.60	779.271	
2,165.3	2,148.7	2,060.3	2,059.1	5.5	1.1	17.35	859.5	-4,414.2	4,347.8	4,342.0	5.79	751.434	
2,200.0	2,182.0	2,087.7	2,086.5	5.7	1.1	17.38	859.8	-4,414.5	4,339.1	4,333.2	5.89	736.507	
2,263.8	2,243.4	2,144.7	2,143.4	6.0	1.1	17.45	860.2	-4,415.3	4,323.4	4,317.3	6.08	710.753	
2,300.0	2,278.2	2,178.2	2,176.9	6.2	1.1	17.49	860.3	-4,415.8	4,314.4	4,308.2	6.19	696.632	
2,362.2	2,338.1	2,238.9	2,237.6	6.5	1.2	17.56	860.5	-4,416.7	4,299.1	4,292.7	6.39	673.023	
2,400.0	2,374.4	2,276.9	2,275.6	6.7	1.2	17.60	860.6	-4,417.2	4,289.7	4,283.2	6.51	659.175	
2,460.6	2,432.8	2,333.5	2,332.2	7.0	1.2	17.66	860.7	-4,418.1	4,274.8	4,268.1	6.70	637.876	
2,500.0	2,470.6	2,368.6	2,367.3	7.2	1.2	17.70	860.7	-4,418.6	4,265.1	4,258.3	6.83	624.672	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,527.4	2,422.6	2,421.3	7.6	1.2	17.76	860.6	-4,419.5	4,250.6	4,243.6	7.02	605.546	
2,600.0	2,566.8	2,461.6	2,460.3	7.8	1.2	17.80	860.5	-4,420.2	4,240.6	4,233.4	7.15	592.820	
2,657.5	2,622.1	2,516.5	2,515.2	8.1	1.2	17.86	860.3	-4,421.2	4,226.5	4,219.2	7.34	575.542	
2,700.0	2,663.0	2,557.6	2,556.3	8.3	1.2	17.90	860.1	-4,422.0	4,216.1	4,208.6	7.49	563.240	
2,755.9	2,716.8	2,612.1	2,610.8	8.6	1.2	17.96	859.8	-4,422.9	4,202.4	4,194.8	7.67	547.635	
2,800.0	2,759.2	2,656.5	2,655.2	8.9	1.2	18.01	859.5	-4,423.8	4,191.7	4,183.8	7.82	535.810	
2,854.3	2,811.5	2,712.0	2,710.6	9.2	1.2	18.06	859.0	-4,424.8	4,178.3	4,170.3	8.01	521.666	
2,900.0	2,855.4	2,760.8	2,759.5	9.4	1.2	18.11	858.5	-4,425.6	4,167.1	4,158.9	8.17	510.198	
2,952.7	2,906.2	2,815.9	2,814.6	9.7	1.2	18.17	857.7	-4,426.6	4,154.1	4,145.7	8.35	497.426	
3,000.0	2,951.6	2,862.6	2,861.2	10.0	1.2	18.21	857.1	-4,427.4	4,142.4	4,133.9	8.51	486.488	
3,051.2	3,000.9	2,913.8	2,912.5	10.3	1.2	18.26	856.3	-4,428.2	4,129.7	4,121.0	8.69	475.031	
3,100.0	3,047.8	2,964.8	2,963.4	10.5	1.2	18.31	855.4	-4,429.0	4,117.6	4,108.7	8.86	464.482	
3,149.6	3,095.5	3,020.1	3,018.6	10.8	1.2	18.36	854.6	-4,429.9	4,105.2	4,096.2	9.04	454.042	
3,200.0	3,144.0	3,084.0	3,082.6	11.1	1.3	18.42	853.5	-4,430.6	4,092.5	4,083.3	9.22	443.658	
3,248.0	3,190.2	3,137.9	3,136.4	11.4	1.3	18.48	852.4	-4,431.1	4,080.2	4,070.8	9.40	434.195	
3,300.0	3,240.2	3,193.4	3,192.0	11.7	1.3	18.53	851.4	-4,431.6	4,066.9	4,057.3	9.58	424.361	
3,346.4	3,284.9	3,246.9	3,245.4	11.9	1.3	18.58	850.3	-4,432.0	4,054.9	4,045.2	9.75	415.821	
3,400.0	3,336.4	3,308.8	3,307.3	12.2	1.3	18.64	848.9	-4,432.2	4,041.0	4,031.0	9.95	406.311	
3,444.9	3,379.6	3,359.1	3,357.6	12.5	1.3	18.69	847.8	-4,432.4	4,029.2	4,019.1	10.11	398.601	
3,500.0	3,432.6	3,419.3	3,417.8	12.8	1.3	18.75	846.4	-4,432.4	4,014.7	4,004.4	10.31	389.471	
3,543.3	3,474.3	3,464.4	3,462.8	13.1	1.3	18.79	845.4	-4,432.4	4,003.2	3,992.7	10.46	382.555	
3,600.0	3,528.8	3,522.0	3,520.5	13.4	1.3	18.85	844.0	-4,432.3	3,988.1	3,977.4	10.67	373.828	
3,641.7	3,569.0	3,563.0	3,561.4	13.6	1.3	18.89	843.0	-4,432.2	3,977.0	3,966.2	10.82	367.619	
3,700.0	3,625.0	3,620.1	3,618.6	14.0	1.3	18.94	841.6	-4,432.1	3,961.5	3,950.4	11.03	359.205	
3,740.1	3,663.6	3,659.4	3,657.9	14.2	1.3	18.98	840.6	-4,432.0	3,950.8	3,939.6	11.17	353.582	
3,800.0	3,721.2	3,718.4	3,716.8	14.5	1.3	19.04	839.1	-4,431.9	3,934.8	3,923.4	11.39	345.450	
3,838.6	3,758.3	3,756.9	3,755.3	14.8	1.3	19.07	838.1	-4,431.8	3,924.5	3,913.0	11.53	340.346	
3,900.0	3,817.4	3,819.1	3,817.4	15.1	1.3	19.14	836.5	-4,431.6	3,908.1	3,896.3	11.76	332.448	
3,937.0	3,853.0	3,857.7	3,856.0	15.3	1.3	19.17	835.5	-4,431.5	3,898.1	3,886.2	11.89	327.801	
4,000.0	3,913.6	3,922.6	3,921.0	15.7	1.3	19.24	833.9	-4,431.2	3,881.2	3,869.0	12.12	320.117	
4,035.4	3,947.7	3,958.4	3,956.7	15.9	1.3	19.28	833.1	-4,431.0	3,871.6	3,859.3	12.26	315.916	
4,100.0	4,009.8	4,021.0	4,019.3	16.3	1.3	19.35	831.6	-4,430.5	3,854.1	3,841.7	12.49	308.496	
4,133.8	4,042.4	4,051.6	4,049.9	16.5	1.3	19.38	830.9	-4,430.3	3,845.0	3,832.4	12.62	304.734	
4,200.0	4,106.0	4,111.0	4,109.3	16.8	1.3	19.45	829.7	-4,430.0	3,827.2	3,814.3	12.86	297.592	
4,232.3	4,137.1	4,139.3	4,137.6	17.0	1.3	19.48	829.2	-4,429.8	3,818.6	3,805.6	12.98	294.209	
4,300.0	4,202.2	4,200.0	4,198.3	17.4	1.4	19.55	828.1	-4,429.5	3,800.5	3,787.2	13.23	287.290	
4,330.7	4,231.7	4,225.1	4,223.4	17.6	1.4	19.58	827.7	-4,429.4	3,792.3	3,779.0	13.34	284.253	
4,400.0	4,298.4	4,284.7	4,282.9	18.0	1.4	19.65	826.9	-4,429.2	3,774.0	3,760.4	13.60	277.556	
4,429.1	4,326.4	4,310.2	4,308.4	18.2	1.4	19.69	826.5	-4,429.2	3,766.3	3,752.6	13.71	274.807	
4,500.0	4,394.6	4,373.8	4,372.1	18.6	1.4	19.77	825.8	-4,429.1	3,747.7	3,733.8	13.97	268.272	
4,527.5	4,421.1	4,400.0	4,398.2	18.7	1.4	19.80	825.5	-4,429.1	3,740.5	3,726.4	14.07	265.782	
4,600.0	4,490.8	4,463.9	4,462.2	19.2	1.4	19.89	824.9	-4,429.0	3,721.7	3,707.3	14.35	259.429	
4,626.0	4,515.8	4,487.4	4,485.6	19.3	1.4	19.92	824.6	-4,429.1	3,714.9	3,700.5	14.44	257.196	
4,700.0	4,587.0	4,555.1	4,553.4	19.8	1.4	20.01	823.9	-4,429.2	3,695.7	3,681.0	14.72	250.986	
4,724.4	4,610.5	4,577.5	4,575.8	19.9	1.4	20.04	823.6	-4,429.2	3,689.4	3,674.6	14.82	248.991	
4,800.0	4,683.2	4,647.9	4,646.2	20.3	1.4	20.12	822.5	-4,429.5	3,670.0	3,654.9	15.11	242.951	
4,822.8	4,705.2	4,669.3	4,667.6	20.5	1.4	20.15	822.0	-4,429.6	3,664.1	3,648.9	15.19	241.169	
4,900.0	4,779.4	4,754.1	4,752.3	20.9	1.4	20.25	820.1	-4,430.1	3,644.2	3,628.7	15.50	235.186	
4,921.2	4,799.8	4,779.9	4,778.1	21.0	1.4	20.27	819.4	-4,430.2	3,638.7	3,623.1	15.58	233.551	
5,000.0	4,875.6	4,871.0	4,869.2	21.5	1.5	20.38	817.0	-4,430.2	3,617.9	3,602.0	15.89	227.632	
5,019.7	4,894.5	4,893.5	4,891.6	21.6	1.5	20.40	816.3	-4,430.2	3,612.7	3,596.7	15.97	226.189	
5,100.0	4,971.8	4,993.4	4,991.5	22.1	1.5	20.52	813.7	-4,429.6	3,591.1	3,574.8	16.30	220.338	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
5,118.1	4,989.2	5,013.0	5,011.1	22.2	1.5	20.54	813.2	-4,429.4	3,586.2	3,569.8	16.37	219.059		
5,200.0	5,068.0	5,096.4	5,094.5	22.7	1.5	20.65	811.4	-4,428.5	3,563.8	3,547.1	16.70	213.441		
5,216.5	5,083.9	5,113.5	5,111.5	22.8	1.5	20.68	811.1	-4,428.2	3,559.3	3,542.5	16.76	212.329		
5,240.0	5,106.5	5,137.9	5,135.9	22.9	1.5	20.71	810.6	-4,427.9	3,552.8	3,536.0	16.86	210.759		
5,300.0	5,164.4	5,200.2	5,198.3	23.2	1.5	20.68	809.6	-4,426.9	3,536.9	3,519.9	17.01	207.913		
5,314.9	5,178.8	5,217.6	5,215.6	23.3	1.5	20.67	809.4	-4,426.6	3,533.1	3,516.1	17.04	207.299		
5,400.0	5,261.5	5,314.8	5,312.8	23.6	1.5	20.64	807.9	-4,424.7	3,512.6	3,495.3	17.22	203.991		
5,413.4	5,274.6	5,328.8	5,326.8	23.6	1.5	20.64	807.7	-4,424.4	3,509.5	3,492.3	17.24	203.529		
5,500.0	5,359.5	5,419.3	5,417.3	23.9	1.5	20.60	806.3	-4,422.3	3,491.1	3,473.7	17.39	200.694		
5,511.8	5,371.1	5,431.4	5,429.4	24.0	1.5	20.59	806.1	-4,422.0	3,488.7	3,471.3	17.41	200.354		
5,600.0	5,458.0	5,520.7	5,518.6	24.2	1.6	20.55	804.5	-4,419.9	3,472.6	3,455.1	17.54	197.951		
5,610.2	5,468.2	5,530.6	5,528.5	24.3	1.6	20.54	804.4	-4,419.7	3,470.9	3,453.4	17.56	197.710		
5,700.0	5,557.2	5,619.4	5,617.3	24.5	1.6	20.49	802.6	-4,417.6	3,457.4	3,439.7	17.67	195.708		
5,708.6	5,565.7	5,628.7	5,626.6	24.5	1.6	20.49	802.4	-4,417.4	3,456.2	3,438.6	17.68	195.540		
5,800.0	5,656.7	5,726.2	5,724.1	24.7	1.6	20.44	800.2	-4,415.0	3,445.3	3,427.5	17.77	193.867		
5,807.1	5,663.7	5,733.7	5,731.5	24.7	1.6	20.44	800.0	-4,414.9	3,444.6	3,426.8	17.78	193.758		
5,900.0	5,756.5	5,830.5	5,828.2	24.9	1.6	20.39	797.5	-4,412.5	3,436.3	3,418.4	17.86	192.412		
5,905.5	5,761.9	5,836.0	5,833.8	24.9	1.6	20.38	797.4	-4,412.3	3,435.9	3,418.0	17.86	192.347		
6,000.0	5,856.4	5,933.0	5,930.7	25.0	1.6	20.33	794.5	-4,409.9	3,430.4	3,412.5	17.93	191.298		
6,003.9	5,860.3	5,937.2	5,934.9	25.0	1.6	20.32	794.4	-4,409.8	3,430.2	3,412.3	17.94	191.259		
6,032.5	5,888.9	5,967.5	5,965.1	25.0	1.6	-74.89	793.4	-4,409.0	3,429.2	3,403.6	25.59	134.001		
6,062.5	5,918.9	5,999.3	5,996.9	25.1	1.7	-74.90	792.4	-4,408.2	3,428.2	3,402.6	25.63	133.759 ES		
6,088.1	5,944.5	6,029.1	6,026.7	25.1	1.7	-164.93	791.4	-4,407.4	3,427.8	3,409.8	17.96	190.849 CC		
6,100.0	5,956.4	6,043.0	6,040.6	25.1	1.7	-164.93	791.0	-4,407.1	3,427.9	3,409.9	17.94	191.030		
6,102.3	5,958.7	6,045.8	6,043.4	25.1	1.7	-164.93	790.9	-4,407.0	3,427.9	3,410.0	17.94	191.073		
6,150.0	6,006.2	6,101.2	6,098.7	25.1	1.7	-164.93	789.1	-4,405.4	3,430.2	3,412.4	17.89	191.785		
6,200.0	6,055.6	6,153.7	6,151.2	25.1	1.7	-164.86	787.5	-4,403.7	3,435.9	3,418.1	17.85	192.460		
6,200.8	6,056.3	6,154.5	6,152.0	25.1	1.7	-164.86	787.5	-4,403.7	3,436.0	3,418.2	17.85	192.472		
6,250.0	6,104.3	6,205.9	6,203.3	25.0	1.7	-164.74	786.1	-4,402.1	3,444.9	3,427.1	17.83	193.207		
6,299.2	6,151.3	6,258.9	6,256.2	24.9	1.7	-164.56	784.6	-4,400.2	3,456.9	3,439.1	17.81	194.138		
6,300.0	6,152.1	6,259.7	6,257.1	24.9	1.7	-164.56	784.6	-4,400.2	3,457.1	3,439.3	17.81	194.154		
6,350.0	6,198.7	6,314.3	6,311.6	24.8	1.7	-164.32	783.1	-4,398.2	3,472.5	3,454.7	17.77	195.388		
6,397.6	6,241.9	6,370.6	6,367.9	24.7	1.7	-164.04	781.7	-4,396.0	3,489.9	3,472.2	17.73	196.842		
6,400.0	6,244.1	6,373.4	6,370.6	24.7	1.7	-164.03	781.6	-4,395.9	3,490.9	3,473.1	17.73	196.919		
6,450.0	6,287.8	6,424.5	6,421.8	24.5	1.7	-163.64	780.3	-4,393.7	3,512.2	3,494.5	17.67	198.736		
6,496.0	6,326.5	6,465.2	6,462.4	24.4	1.8	-163.18	779.2	-4,392.0	3,534.5	3,516.8	17.62	200.602		
6,500.0	6,329.7	6,468.6	6,465.8	24.4	1.8	-163.14	779.1	-4,391.8	3,536.5	3,518.9	17.62	200.764		
6,550.0	6,369.6	6,515.4	6,512.5	24.3	1.8	-162.55	777.9	-4,389.8	3,563.6	3,546.1	17.57	202.842		
6,594.5	6,403.3	6,566.5	6,563.5	24.2	1.8	-161.97	776.6	-4,387.3	3,590.0	3,572.5	17.55	204.559		
6,600.0	6,407.3	6,572.7	6,569.7	24.2	1.8	-161.89	776.4	-4,387.0	3,593.4	3,575.9	17.55	204.758		
6,650.0	6,442.7	6,627.8	6,624.7	24.1	1.8	-161.09	774.9	-4,384.1	3,625.6	3,608.0	17.57	206.300		
6,692.9	6,471.0	6,673.1	6,669.9	24.0	1.8	-160.28	773.6	-4,381.5	3,655.1	3,637.4	17.65	207.094		
6,700.0	6,475.5	6,680.3	6,677.1	24.0	1.8	-160.13	773.4	-4,381.1	3,660.1	3,642.4	17.67	207.171		
6,750.0	6,505.6	6,732.9	6,729.6	24.0	1.8	-158.97	771.9	-4,377.8	3,696.8	3,678.9	17.85	207.049		
6,791.3	6,528.3	6,775.3	6,771.9	24.0	1.8	-157.83	770.5	-4,375.0	3,728.6	3,710.5	18.10	205.961		
6,800.0	6,532.8	6,783.9	6,780.4	24.0	1.8	-157.57	770.3	-4,374.4	3,735.4	3,717.3	18.17	205.622		
6,850.0	6,557.0	6,790.0	6,786.5	24.1	1.8	-155.40	770.1	-4,374.0	3,776.0	3,757.4	18.69	202.088		
6,889.7	6,574.1	6,790.0	6,786.5	24.2	1.8	-153.19	770.1	-4,374.0	3,809.8	3,790.5	19.27	197.689		
6,900.0	6,578.1	6,790.0	6,786.5	24.3	1.8	-152.54	770.1	-4,374.0	3,818.6	3,799.2	19.45	196.362		
6,950.0	6,596.1	6,790.0	6,786.5	24.5	1.8	-148.81	770.1	-4,374.0	3,862.9	3,842.4	20.49	188.485		
6,988.2	6,607.5	6,790.0	6,786.5	24.7	1.8	-145.13	770.1	-4,374.0	3,897.7	3,876.1	21.52	181.138		
7,000.0	6,610.7	6,790.0	6,786.5	24.8	1.8	-143.81	770.1	-4,374.0	3,908.6	3,886.7	21.87	178.710		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,621.9	6,790.0	6,786.5	25.1	1.8	-136.96	770.1	-4,374.0	3,955.4	3,931.8	23.59	167.667	
7,086.6	6,628.0	6,790.0	6,786.5	25.4	1.8	-130.32	770.1	-4,374.0	3,990.3	3,965.3	25.02	159.466	
7,100.0	6,629.7	6,790.0	6,786.5	25.6	1.8	-127.46	770.1	-4,374.0	4,003.2	3,977.6	25.55	156.665	
7,150.0	6,634.1	6,790.0	6,786.5	26.0	1.8	-114.40	770.1	-4,374.0	4,051.5	4,024.2	27.34	148.171	
7,185.0	6,635.1	6,790.0	6,786.5	26.4	1.8	-103.00	770.1	-4,374.0	4,085.6	4,057.5	28.11	145.351	
7,196.6	6,635.0	6,790.0	6,786.5	26.5	1.8	-98.91	770.1	-4,374.0	4,096.9	4,068.7	28.25	145.014	
7,200.0	6,635.0	6,790.0	6,786.5	26.6	1.8	-98.91	770.1	-4,374.0	4,100.3	4,072.0	28.29	144.940	
7,283.4	6,633.9	6,790.0	6,786.5	27.6	1.8	-98.91	770.1	-4,374.0	4,181.8	4,152.5	29.31	142.682	
7,300.0	6,633.7	6,790.0	6,786.5	27.8	1.8	-98.91	770.1	-4,374.0	4,198.0	4,168.5	29.51	142.253	
7,381.9	6,632.6	6,790.0	6,786.5	29.0	1.8	-98.91	770.1	-4,374.0	4,278.1	4,247.4	30.69	139.407	
7,400.0	6,632.4	6,790.0	6,786.5	29.2	1.8	-98.91	770.1	-4,374.0	4,295.8	4,264.9	30.95	138.806	
7,480.3	6,631.4	6,790.0	6,786.5	30.5	1.8	-98.91	770.1	-4,374.0	4,374.4	4,342.2	32.25	135.634	
7,500.0	6,631.1	6,790.0	6,786.5	30.9	1.8	-98.91	770.1	-4,374.0	4,393.7	4,361.2	32.57	134.895	
7,578.7	6,630.1	6,790.0	6,786.5	32.3	1.8	-98.91	770.1	-4,374.0	4,470.9	4,436.9	33.97	131.599	
7,600.0	6,629.8	6,790.0	6,786.5	32.7	1.8	-98.91	770.1	-4,374.0	4,491.7	4,457.4	34.35	130.755	
7,677.1	6,628.9	6,790.0	6,786.5	34.1	1.8	-98.91	770.1	-4,374.0	4,567.4	4,531.6	35.83	127.478	
7,700.0	6,628.6	6,790.0	6,786.5	34.6	1.8	-98.91	770.1	-4,374.0	4,589.8	4,553.6	36.27	126.559	
7,775.6	6,627.6	6,790.0	6,786.5	36.1	1.8	-98.91	770.1	-4,374.0	4,664.0	4,626.2	37.80	123.395	
7,800.0	6,627.3	6,790.0	6,786.5	36.6	1.8	-98.91	770.1	-4,374.0	4,688.0	4,649.7	38.29	122.427	
7,874.0	6,626.3	6,790.0	6,786.5	38.2	1.8	-98.91	770.1	-4,374.0	4,760.7	4,720.9	39.86	119.432	
7,900.0	6,626.0	6,790.0	6,786.5	38.8	1.8	-98.90	770.1	-4,374.0	4,786.3	4,745.9	40.41	118.435	
7,972.4	6,625.1	6,790.0	6,786.5	40.4	1.8	-98.90	770.1	-4,374.0	4,857.5	4,815.5	42.01	115.638	
8,000.0	6,624.7	6,790.0	6,786.5	41.0	1.8	-98.90	770.1	-4,374.0	4,884.6	4,842.0	42.61	114.628	
8,070.8	6,623.8	6,790.0	6,786.5	42.6	1.8	-98.90	770.1	-4,374.0	4,954.3	4,910.1	44.22	112.041	
8,100.0	6,623.4	6,790.0	6,786.5	43.3	1.8	-98.90	770.1	-4,374.0	4,983.0	4,938.1	44.88	111.030	
8,169.3	6,622.6	6,790.0	6,786.5	44.9	1.8	-98.90	770.1	-4,374.0	5,051.2	5,004.7	46.49	108.652	
8,200.0	6,622.2	6,790.0	6,786.5	45.6	1.8	-98.90	770.1	-4,374.0	5,081.5	5,034.3	47.20	107.649	
8,267.7	6,621.3	6,790.0	6,786.5	47.3	1.8	-98.90	770.1	-4,374.0	5,148.1	5,099.3	48.81	105.472	
8,300.0	6,620.9	6,790.0	6,786.5	48.0	1.8	-98.90	770.1	-4,374.0	5,180.0	5,130.4	49.58	104.483	
8,366.1	6,620.0	6,790.0	6,786.5	49.7	1.8	-98.90	770.1	-4,374.0	5,245.2	5,194.0	51.17	102.497	
8,400.0	6,619.6	6,790.0	6,786.5	50.5	1.8	-98.90	770.1	-4,374.0	5,278.5	5,226.6	51.99	101.526	
8,464.5	6,618.8	6,790.0	6,786.5	52.1	1.8	-98.90	770.1	-4,374.0	5,342.2	5,288.6	53.57	99.717	
8,500.0	6,618.3	6,790.0	6,786.5	53.0	1.8	-98.90	770.1	-4,374.0	5,377.2	5,322.7	54.44	98.767	
8,563.0	6,617.5	6,790.0	6,786.5	54.5	1.8	-98.90	770.1	-4,374.0	5,439.3	5,383.3	56.01	97.120	
8,600.0	6,617.0	6,790.0	6,786.5	55.5	1.8	-98.89	770.1	-4,374.0	5,475.8	5,418.9	56.92	96.194	
8,661.4	6,616.3	6,790.0	6,786.5	57.0	1.8	-98.89	770.1	-4,374.0	5,536.5	5,478.0	58.47	94.696	
8,700.0	6,615.8	6,790.0	6,786.5	58.0	1.8	-98.89	770.1	-4,374.0	5,574.6	5,515.1	59.43	93.794	
8,759.8	6,615.0	6,790.0	6,786.5	59.5	1.8	-98.89	770.1	-4,374.0	5,633.6	5,572.7	60.95	92.432	
8,800.0	6,614.5	6,790.0	6,786.5	60.6	1.8	-98.89	770.1	-4,374.0	5,673.3	5,611.4	61.97	91.554	
8,858.2	6,613.7	6,790.0	6,786.5	62.1	1.8	-98.89	770.1	-4,374.0	5,730.9	5,667.4	63.45	90.315	
8,900.0	6,613.2	6,790.0	6,786.5	63.2	1.8	-98.89	770.1	-4,374.0	5,772.1	5,707.6	64.52	89.461	
8,956.7	6,612.5	6,790.0	6,786.5	64.6	1.8	-98.89	770.1	-4,374.0	5,828.2	5,762.2	65.98	88.334	
9,000.0	6,611.9	6,790.0	6,786.5	65.8	1.8	-98.89	770.1	-4,374.0	5,871.0	5,803.9	67.09	87.505	
9,055.1	6,611.2	6,790.0	6,786.5	67.2	1.8	-98.89	770.1	-4,374.0	5,925.5	5,857.0	68.52	86.478	
9,100.0	6,610.6	6,790.0	6,786.5	68.4	1.8	-98.89	770.1	-4,374.0	5,969.9	5,900.2	69.68	85.673	
9,153.5	6,609.9	6,790.0	6,786.5	69.8	1.8	-98.89	770.1	-4,374.0	6,022.8	5,951.7	71.08	84.739	
9,200.0	6,609.3	6,790.0	6,786.5	71.0	1.8	-98.88	770.1	-4,374.0	6,068.8	5,996.5	72.29	83.956	
9,251.9	6,608.7	6,790.0	6,786.5	72.4	1.8	-98.88	770.1	-4,374.0	6,120.2	6,046.6	73.64	83.105	
9,300.0	6,608.1	6,790.0	6,786.5	73.7	1.8	-98.88	770.1	-4,374.0	6,167.8	6,092.9	74.90	82.345	
9,350.4	6,607.4	6,790.0	6,786.5	75.0	1.8	-98.88	770.1	-4,374.0	6,217.6	6,141.4	76.23	81.569	
9,400.0	6,606.8	6,790.0	6,786.5	76.3	1.8	-98.88	770.1	-4,374.0	6,266.8	6,189.2	77.53	80.831	
9,448.8	6,606.1	6,790.0	6,786.5	77.6	1.8	-98.88	770.1	-4,374.0	6,315.1	6,236.3	78.82	80.124	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,605.5	6,790.0	6,786.5	79.0	1.8	-98.88	770.1	-4,374.0	6,365.8	6,285.6	80.17	79.406	
9,547.2	6,604.9	6,790.0	6,786.5	80.2	1.8	-98.88	770.1	-4,374.0	6,412.6	6,331.1	81.42	78.761	
9,600.0	6,604.2	6,790.0	6,786.5	81.7	1.8	-98.88	770.1	-4,374.0	6,464.8	6,382.0	82.82	78.063	
9,645.6	6,603.6	6,790.0	6,786.5	82.9	1.8	-98.88	770.1	-4,374.0	6,510.1	6,426.0	84.03	77.475	
9,700.0	6,602.9	6,790.0	6,786.5	84.3	1.8	-98.87	770.1	-4,374.0	6,563.9	6,478.4	85.47	76.797	
9,744.1	6,602.3	6,790.0	6,786.5	85.5	1.8	-98.87	770.1	-4,374.0	6,607.6	6,520.9	86.65	76.260	
9,800.0	6,601.6	6,790.0	6,786.5	87.0	1.8	-98.87	770.1	-4,374.0	6,663.0	6,574.9	88.14	75.600	
9,842.5	6,601.1	6,790.0	6,786.5	88.2	1.8	-98.87	770.1	-4,374.0	6,705.2	6,615.9	89.27	75.111	
9,900.0	6,600.3	6,790.0	6,786.5	89.7	1.8	-98.87	770.1	-4,374.0	6,762.2	6,671.4	90.81	74.468	
9,940.9	6,599.8	6,790.0	6,786.5	90.9	1.8	-98.87	770.1	-4,374.0	6,802.7	6,710.8	91.90	74.022	
10,000.0	6,599.0	6,790.0	6,786.5	92.5	1.8	-98.87	770.1	-4,374.0	6,861.3	6,767.8	93.48	73.396	
10,039.3	6,598.5	6,790.0	6,786.5	93.5	1.8	-98.87	770.1	-4,374.0	6,900.3	6,805.8	94.54	72.989	
10,100.0	6,597.7	6,790.0	6,786.5	95.2	1.8	-98.87	770.1	-4,374.0	6,960.5	6,864.3	96.17	72.379	
10,137.8	6,597.3	6,790.0	6,786.5	96.2	1.8	-98.87	770.1	-4,374.0	6,998.0	6,900.8	97.18	72.008	
10,200.0	6,596.5	6,790.0	6,786.5	97.9	1.8	-98.87	770.1	-4,374.0	7,059.7	6,960.9	98.86	71.414	
10,236.2	6,596.0	6,790.0	6,786.5	98.9	1.8	-98.87	770.1	-4,374.0	7,095.6	6,995.8	99.83	71.076	
10,300.0	6,595.2	6,790.0	6,786.5	100.6	1.8	-98.86	770.1	-4,374.0	7,158.9	7,057.4	101.55	70.497	
10,334.6	6,594.7	6,790.0	6,786.5	101.6	1.8	-98.86	770.1	-4,374.0	7,193.3	7,090.8	102.48	70.190	
10,400.0	6,593.9	6,790.0	6,786.5	103.3	1.8	-98.86	770.1	-4,374.0	7,258.2	7,153.9	104.25	69.624	
10,433.0	6,593.5	6,790.0	6,786.5	104.2	1.8	-98.86	770.1	-4,374.0	7,291.0	7,185.9	105.14	69.345	
10,500.0	6,592.6	6,790.0	6,786.5	106.1	1.8	-98.86	770.1	-4,374.0	7,357.5	7,250.5	106.95	68.793	
10,531.5	6,592.2	6,790.0	6,786.5	106.9	1.8	-98.86	770.1	-4,374.0	7,388.7	7,280.9	107.80	68.539	
10,600.0	6,591.3	6,790.0	6,786.5	108.8	1.8	-98.86	770.1	-4,374.0	7,456.8	7,347.1	109.66	68.001	
10,629.9	6,590.9	6,790.0	6,786.5	109.6	1.8	-98.86	770.1	-4,374.0	7,486.4	7,376.0	110.47	67.771	
10,700.0	6,590.0	6,790.0	6,786.5	111.6	1.8	-98.85	770.1	-4,374.0	7,556.1	7,443.7	112.37	67.244	
10,728.3	6,589.6	6,790.0	6,786.5	112.3	1.8	-98.85	770.1	-4,374.0	7,584.2	7,471.1	113.14	67.036	
10,800.0	6,588.7	6,790.0	6,786.5	114.3	1.8	-98.85	770.1	-4,374.0	7,655.4	7,540.3	115.08	66.522	
10,826.7	6,588.4	6,790.0	6,786.5	115.0	1.8	-98.85	770.1	-4,374.0	7,682.0	7,566.2	115.81	66.334	
10,900.0	6,587.4	6,790.0	6,786.5	117.0	1.8	-98.85	770.1	-4,374.0	7,754.7	7,636.9	117.80	65.831	
10,925.2	6,587.1	6,790.0	6,786.5	117.7	1.8	-98.85	770.1	-4,374.0	7,779.7	7,661.3	118.48	65.662	
11,000.0	6,586.1	6,790.0	6,786.5	119.8	1.8	-98.85	770.1	-4,374.0	7,854.1	7,733.6	120.52	65.170	
11,023.6	6,585.8	6,790.0	6,786.5	120.4	1.8	-98.85	770.1	-4,374.0	7,877.5	7,756.4	121.16	65.018	
11,100.0	6,584.8	6,790.0	6,786.5	122.5	1.8	-98.85	770.1	-4,374.0	7,953.5	7,830.2	123.24	64.537	
11,122.0	6,584.5	6,790.0	6,786.5	123.2	1.8	-98.85	770.1	-4,374.0	7,975.4	7,851.5	123.84	64.401	
11,200.0	6,583.5	6,790.0	6,786.5	125.3	1.8	-98.84	770.1	-4,374.0	8,052.9	7,926.9	125.96	63.930	
11,220.4	6,583.3	6,790.0	6,786.5	125.9	1.8	-98.84	770.1	-4,374.0	8,073.2	7,946.7	126.52	63.809	
11,300.0	6,582.2	6,790.0	6,786.5	128.1	1.8	-98.84	770.1	-4,374.0	8,152.3	8,023.6	128.69	63.348	
11,318.9	6,582.0	6,790.0	6,786.5	128.6	1.8	-98.84	770.1	-4,374.0	8,171.0	8,041.8	129.21	63.240	
11,400.0	6,580.9	6,790.0	6,786.5	130.8	1.8	-98.84	770.1	-4,374.0	8,251.7	8,120.3	131.42	62.788	
11,417.3	6,580.7	6,790.0	6,786.5	131.3	1.8	-98.84	770.1	-4,374.0	8,268.9	8,137.0	131.89	62.694	
11,500.0	6,579.7	6,790.0	6,786.5	133.6	1.8	-98.84	770.1	-4,374.0	8,351.1	8,217.0	134.15	62.251	
11,515.7	6,579.4	6,790.0	6,786.5	134.0	1.8	-98.84	770.1	-4,374.0	8,366.8	8,232.2	134.58	62.168	
11,600.0	6,578.4	6,790.0	6,786.5	136.3	1.8	-98.83	770.1	-4,374.0	8,450.6	8,313.7	136.89	61.734	
11,614.1	6,578.2	6,790.0	6,786.5	136.7	1.8	-98.83	770.1	-4,374.0	8,464.7	8,327.4	137.27	61.663	
11,700.0	6,577.1	6,790.0	6,786.5	139.1	1.8	-98.83	770.1	-4,374.0	8,550.0	8,410.4	139.62	61.237	
11,712.6	6,576.9	6,790.0	6,786.5	139.5	1.8	-98.83	770.1	-4,374.0	8,562.6	8,422.6	139.97	61.176	
11,800.0	6,575.8	6,790.0	6,786.5	141.9	1.8	-98.83	770.1	-4,374.0	8,649.5	8,507.2	142.36	60.759	
11,811.0	6,575.6	6,790.0	6,786.5	142.2	1.8	-98.83	770.1	-4,374.0	8,660.5	8,517.8	142.66	60.707	
11,858.8	6,575.0	6,790.0	6,786.5	143.5	1.8	-98.83	770.1	-4,374.0	8,708.0	8,564.0	143.97	60.486	
11,859.3	6,575.0	6,790.0	6,786.5	143.5	1.8	-98.83	770.1	-4,374.0	8,708.5	8,564.6	143.98	60.485 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-88.21	118.7	-3,798.4	3,800.5					
98.4	98.4	39.6	39.6	0.1	0.0	-88.21	118.7	-3,798.6	3,800.5	3,800.4	0.10	N/A		
100.0	100.0	40.6	40.6	0.1	0.0	-88.21	118.7	-3,798.6	3,800.5	3,800.4	0.11	N/A		
196.8	196.8	106.6	106.6	0.3	0.0	-88.21	118.5	-3,799.3	3,801.5	3,801.1	0.35	N/A		
200.0	200.0	111.1	111.1	0.3	0.1	-88.21	118.5	-3,799.3	3,801.5	3,801.2	0.36	N/A		
295.3	295.3	237.1	237.1	0.5	0.2	-88.22	118.1	-3,800.5	3,802.4	3,801.6	0.78	4,903.646		
300.0	300.0	242.5	242.5	0.5	0.2	-88.22	118.1	-3,800.5	3,802.4	3,801.6	0.79	4,812.056		
393.7	393.7	349.3	349.3	0.8	0.3	-88.23	117.2	-3,800.9	3,802.7	3,801.7	1.08	3,520.461		
400.0	400.0	356.4	356.4	0.8	0.3	-88.23	117.2	-3,800.9	3,802.8	3,801.7	1.10	3,458.728		
492.1	492.1	449.6	449.5	1.0	0.4	-88.25	116.4	-3,801.1	3,802.8	3,801.5	1.37	2,778.684		
500.0	500.0	456.9	456.8	1.0	0.4	-88.25	116.3	-3,801.1	3,802.9	3,801.5	1.39	2,734.320		
590.5	590.5	543.1	543.1	1.2	0.4	-88.26	115.7	-3,801.3	3,803.1	3,801.4	1.65	2,311.083		
600.0	600.0	552.3	552.3	1.2	0.5	-88.26	115.7	-3,801.3	3,803.1	3,801.4	1.67	2,274.435		
689.0	689.0	640.8	640.7	1.4	0.5	-88.27	115.0	-3,801.6	3,803.4	3,801.4	1.92	1,979.958		
700.0	700.0	651.9	651.9	1.4	0.5	-88.27	115.0	-3,801.6	3,803.4	3,801.4	1.95	1,948.837		
787.4	787.4	742.4	742.4	1.6	0.6	-88.28	114.3	-3,801.9	3,803.6	3,801.4	2.19	1,733.181		
800.0	800.0	755.8	755.8	1.7	0.6	-88.28	114.2	-3,801.9	3,803.7	3,801.4	2.23	1,706.008		
885.8	885.8	847.5	847.5	1.9	0.6	-88.29	113.3	-3,802.1	3,803.8	3,801.3	2.47	1,541.797		
900.0	900.0	862.8	862.7	1.9	0.6	-88.30	113.1	-3,802.1	3,803.8	3,801.2	2.51	1,517.728		
984.2	984.2	955.9	955.8	2.1	0.7	-88.31	112.4	-3,802.0	3,803.7	3,800.9	2.74	1,390.445		
1,000.0	1,000.0	973.6	973.6	2.1	0.7	-88.31	112.3	-3,802.0	3,803.6	3,800.9	2.78	1,369.177		
1,082.7	1,082.7	1,060.3	1,060.2	2.3	0.7	-88.31	111.9	-3,801.7	3,803.3	3,800.3	3.00	1,268.229		
1,100.0	1,100.0	1,077.9	1,077.8	2.3	0.7	-88.32	111.8	-3,801.6	3,803.3	3,800.2	3.05	1,248.994		
1,181.1	1,181.1	1,153.0	1,153.0	2.5	0.7	-88.32	111.4	-3,801.4	3,803.0	3,799.7	3.26	1,167.165		
1,200.0	1,200.0	1,169.9	1,169.9	2.6	0.7	-88.32	111.3	-3,801.3	3,803.0	3,799.7	3.31	1,149.698		
1,279.5	1,279.5	1,252.3	1,252.2	2.7	0.8	6.87	111.0	-3,801.2	3,801.7	3,798.3	3.44	1,105.262		
1,300.0	1,300.0	1,275.6	1,275.5	2.8	0.8	6.87	110.9	-3,801.1	3,801.0	3,797.6	3.49	1,088.994		
1,377.9	1,377.8	1,349.7	1,349.7	2.9	0.8	6.88	110.5	-3,800.9	3,797.0	3,793.4	3.67	1,034.044		
1,400.0	1,399.8	1,369.1	1,369.1	3.0	0.8	6.89	110.4	-3,800.9	3,795.5	3,791.8	3.72	1,019.514		
1,476.4	1,475.9	1,448.3	1,448.2	3.1	0.8	6.91	110.0	-3,800.8	3,789.1	3,785.2	3.91	969.808		
1,500.0	1,499.5	1,475.9	1,475.8	3.2	0.9	6.92	109.9	-3,800.7	3,786.7	3,782.8	3.96	955.117		
1,574.8	1,573.7	1,551.2	1,551.1	3.4	0.9	6.95	109.5	-3,800.4	3,777.7	3,773.5	4.15	910.091		
1,600.0	1,598.7	1,575.0	1,574.9	3.4	0.9	6.96	109.3	-3,800.3	3,774.2	3,770.0	4.21	895.752		
1,673.2	1,671.1	1,647.5	1,647.5	3.6	0.9	7.00	108.8	-3,800.1	3,762.9	3,758.5	4.40	854.917		
1,700.0	1,697.5	1,674.7	1,674.7	3.7	0.9	7.02	108.6	-3,800.0	3,758.4	3,753.9	4.47	840.746		
1,771.6	1,767.9	1,739.8	1,739.7	3.9	0.9	7.07	108.3	-3,799.8	3,744.9	3,740.2	4.66	804.205		
1,800.0	1,795.6	1,763.9	1,763.8	4.0	1.0	7.09	108.1	-3,799.7	3,739.1	3,734.4	4.73	790.606		
1,870.1	1,864.0	1,822.4	1,822.3	4.3	1.0	7.15	107.9	-3,799.7	3,723.8	3,718.9	4.91	757.818		
1,900.0	1,893.1	1,846.7	1,846.7	4.4	1.0	7.18	107.7	-3,799.8	3,716.8	3,711.8	4.99	744.559		
1,968.5	1,959.3	1,903.0	1,903.0	4.6	1.0	7.25	107.6	-3,800.0	3,699.9	3,694.7	5.18	714.818		
1,992.4	1,982.4	1,928.7	1,928.6	4.7	1.0	7.28	107.5	-3,800.1	3,693.6	3,688.3	5.24	704.506		
2,000.0	1,989.6	1,936.8	1,936.7	4.8	1.0	7.28	107.5	-3,800.2	3,691.6	3,686.3	5.26	701.424		
2,066.9	2,054.0	2,006.6	2,006.6	5.1	1.0	7.32	107.2	-3,800.4	3,673.6	3,668.2	5.45	674.310		
2,100.0	2,085.8	2,034.9	2,034.8	5.2	1.0	7.33	107.1	-3,800.5	3,664.8	3,659.3	5.53	662.526		
2,165.3	2,148.7	2,090.7	2,090.7	5.5	1.1	7.36	107.0	-3,800.8	3,647.4	3,641.7	5.70	639.440		
2,200.0	2,182.0	2,124.5	2,124.5	5.7	1.1	7.38	107.0	-3,801.0	3,638.2	3,632.4	5.81	626.724		
2,263.8	2,243.4	2,190.3	2,190.3	6.0	1.1	7.42	107.2	-3,801.3	3,621.2	3,615.2	5.98	605.062		
2,300.0	2,278.2	2,229.4	2,229.3	6.2	1.1	7.45	107.4	-3,801.5	3,611.5	3,605.4	6.09	593.024		
2,362.2	2,338.1	2,297.4	2,297.3	6.5	1.1	7.49	107.7	-3,801.6	3,594.8	3,588.5	6.27	573.093		
2,400.0	2,374.4	2,335.8	2,335.8	6.7	1.1	7.52	108.0	-3,801.6	3,584.6	3,578.2	6.38	561.472		
2,460.6	2,432.8	2,397.1	2,397.1	7.0	1.1	7.56	108.3	-3,801.6	3,568.2	3,561.6	6.56	543.587		
2,500.0	2,470.6	2,438.5	2,438.4	7.2	1.1	7.59	108.4	-3,801.6	3,557.5	3,550.8	6.68	532.479		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,527.4	2,500.0	2,499.9	7.6	1.1	7.63	108.7	-3,801.4	3,541.4	3,534.5	6.86	516.321	
2,600.0	2,566.8	2,536.9	2,536.9	7.8	1.1	7.66	108.9	-3,801.3	3,530.2	3,523.2	6.98	505.752	
2,657.5	2,622.1	2,588.1	2,588.0	8.1	1.1	7.69	109.2	-3,801.2	3,514.5	3,507.4	7.15	491.443	
2,700.0	2,663.0	2,630.4	2,630.4	8.3	1.1	7.73	109.6	-3,801.2	3,503.0	3,495.7	7.28	481.198	
2,755.9	2,716.8	2,688.8	2,688.8	8.6	1.1	7.77	109.9	-3,801.1	3,487.7	3,480.3	7.45	468.137	
2,800.0	2,759.2	2,728.8	2,728.7	8.9	1.1	7.80	110.1	-3,801.0	3,475.7	3,468.1	7.58	458.333	
2,854.3	2,811.5	2,775.7	2,775.6	9.2	1.1	7.83	110.4	-3,800.9	3,460.9	3,453.2	7.75	446.701	
2,900.0	2,855.4	2,816.7	2,816.6	9.4	1.1	7.86	110.5	-3,800.9	3,448.6	3,440.7	7.89	437.283	
2,952.7	2,906.2	2,866.9	2,866.8	9.7	1.1	7.90	110.8	-3,800.9	3,434.3	3,426.3	8.05	426.681	
3,000.0	2,951.6	2,913.6	2,913.5	10.0	1.1	7.93	111.1	-3,800.9	3,421.6	3,413.4	8.20	417.503	
3,051.2	3,000.9	2,969.2	2,969.1	10.3	1.1	7.98	111.4	-3,800.9	3,407.7	3,399.3	8.36	407.804	
3,100.0	3,047.8	3,018.8	3,018.7	10.5	1.1	8.01	111.7	-3,800.8	3,394.4	3,385.9	8.51	398.880	
3,149.6	3,095.5	3,064.5	3,064.5	10.8	1.1	8.05	111.9	-3,800.7	3,380.8	3,372.2	8.67	390.161	
3,200.0	3,144.0	3,109.5	3,109.4	11.1	1.1	8.08	112.2	-3,800.6	3,367.1	3,358.3	8.82	381.662	
3,248.0	3,190.2	3,147.7	3,147.7	11.4	1.1	8.12	112.5	-3,800.6	3,354.2	3,345.2	8.97	373.927	
3,300.0	3,240.2	3,189.2	3,189.1	11.7	1.1	8.15	112.9	-3,800.7	3,340.3	3,331.1	9.13	365.825	
3,346.4	3,284.9	3,232.2	3,232.1	11.9	1.2	8.19	113.3	-3,800.9	3,327.9	3,318.6	9.28	358.744	
3,400.0	3,336.4	3,284.5	3,284.4	12.2	1.2	8.24	113.9	-3,801.1	3,313.7	3,304.2	9.45	350.799	
3,444.9	3,379.6	3,327.8	3,327.7	12.5	1.2	8.28	114.5	-3,801.3	3,301.7	3,292.1	9.59	344.308	
3,500.0	3,432.6	3,380.6	3,380.5	12.8	1.2	8.32	115.1	-3,801.5	3,287.0	3,277.3	9.77	336.571	
3,543.3	3,474.3	3,421.5	3,421.4	13.1	1.2	8.36	115.5	-3,801.7	3,275.5	3,265.6	9.91	330.678	
3,600.0	3,528.8	3,474.2	3,474.1	13.4	1.2	8.41	115.9	-3,801.9	3,260.5	3,250.4	10.09	323.213	
3,641.7	3,569.0	3,513.4	3,513.3	13.6	1.2	8.44	116.2	-3,802.1	3,249.4	3,239.2	10.22	317.874	
3,700.0	3,625.0	3,569.0	3,568.9	14.0	1.2	8.49	116.8	-3,802.4	3,234.0	3,223.6	10.41	310.631	
3,740.1	3,663.6	3,607.2	3,607.0	14.2	1.2	8.53	117.2	-3,802.6	3,223.4	3,212.8	10.54	305.780	
3,800.0	3,721.2	3,662.8	3,662.7	14.5	1.2	8.58	117.8	-3,802.9	3,207.6	3,196.8	10.74	298.772	
3,838.6	3,758.3	3,700.0	3,699.9	14.8	1.2	8.61	118.1	-3,803.2	3,197.4	3,186.5	10.86	294.370	
3,900.0	3,817.4	3,757.5	3,757.4	15.1	1.2	8.66	118.6	-3,803.6	3,181.2	3,170.2	11.06	287.560	
3,937.0	3,853.0	3,793.0	3,792.9	15.3	1.2	8.70	118.8	-3,803.8	3,171.5	3,160.3	11.18	283.562	
4,000.0	3,913.6	3,862.2	3,862.1	15.7	1.3	8.76	119.2	-3,804.2	3,154.8	3,143.4	11.40	276.831	
4,035.4	3,947.7	3,901.7	3,901.6	15.9	1.3	8.79	119.4	-3,804.4	3,145.4	3,133.9	11.52	273.135	
4,100.0	4,009.8	3,973.0	3,972.8	16.3	1.3	8.85	119.7	-3,804.4	3,128.0	3,116.3	11.73	266.603	
4,133.8	4,042.4	4,009.0	4,008.9	16.5	1.3	8.89	119.8	-3,804.4	3,118.9	3,107.0	11.85	263.276	
4,200.0	4,106.0	4,073.1	4,072.9	16.8	1.3	8.94	120.1	-3,804.3	3,100.9	3,088.9	12.07	256.989	
4,232.3	4,137.1	4,105.4	4,105.3	17.0	1.3	8.97	120.2	-3,804.3	3,092.2	3,080.0	12.17	253.996	
4,300.0	4,202.2	4,188.2	4,188.1	17.4	1.3	9.05	120.5	-3,803.9	3,073.6	3,061.2	12.40	247.776	
4,330.7	4,231.7	4,218.3	4,218.2	17.6	1.3	9.07	120.6	-3,803.6	3,065.1	3,052.6	12.51	245.055	
4,400.0	4,298.4	4,278.5	4,278.3	18.0	1.3	9.13	120.8	-3,803.2	3,045.9	3,033.2	12.74	239.140	
4,429.1	4,326.4	4,304.6	4,304.5	18.2	1.3	9.15	120.9	-3,803.1	3,037.9	3,025.1	12.83	236.710	
4,500.0	4,394.6	4,379.4	4,379.3	18.6	1.3	9.23	121.3	-3,802.6	3,018.4	3,005.3	13.07	230.877	
4,527.5	4,421.1	4,400.0	4,399.9	18.7	1.3	9.25	121.5	-3,802.4	3,010.8	2,997.6	13.16	228.710	
4,600.0	4,490.8	4,460.9	4,460.8	19.2	1.3	9.31	121.8	-3,802.1	2,990.9	2,977.5	13.40	223.172	
4,626.0	4,515.8	4,480.6	4,480.5	19.3	1.3	9.33	121.9	-3,802.1	2,983.8	2,970.3	13.49	221.247	
4,700.0	4,587.0	4,554.1	4,554.0	19.8	1.4	9.40	122.2	-3,802.0	2,963.9	2,950.1	13.73	215.809	
4,724.4	4,610.5	4,581.3	4,581.2	19.9	1.4	9.42	122.2	-3,802.0	2,957.2	2,943.4	13.82	214.036	
4,800.0	4,683.2	4,661.6	4,661.5	20.3	1.4	9.50	122.5	-3,801.6	2,936.6	2,922.5	14.08	208.608	
4,822.8	4,705.2	4,685.5	4,685.4	20.5	1.4	9.53	122.6	-3,801.5	2,930.3	2,916.1	14.16	206.995	
4,900.0	4,779.4	4,758.6	4,758.4	20.9	1.4	9.60	122.9	-3,801.0	2,909.0	2,894.6	14.42	201.728	
4,921.2	4,799.8	4,778.2	4,778.1	21.0	1.4	9.62	123.0	-3,800.9	2,903.2	2,888.7	14.49	200.314	
5,000.0	4,875.6	4,860.0	4,859.9	21.5	1.4	9.70	123.2	-3,800.4	2,881.5	2,866.8	14.77	195.135	
5,019.7	4,894.5	4,881.4	4,881.2	21.6	1.4	9.73	123.3	-3,800.3	2,876.1	2,861.2	14.84	193.860	
5,100.0	4,971.8	4,958.9	4,958.7	22.1	1.4	9.81	123.6	-3,799.6	2,853.8	2,838.7	15.11	188.810	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,118.1	4,989.2	4,975.8	4,975.6	22.2	1.4	9.82	123.6	-3,799.4	2,848.7	2,833.6	15.18	187.700	
5,200.0	5,068.0	5,052.9	5,052.8	22.7	1.4	9.91	123.9	-3,798.8	2,826.1	2,810.6	15.46	182.785	
5,216.5	5,083.9	5,068.6	5,068.4	22.8	1.4	9.93	124.0	-3,798.7	2,821.5	2,806.0	15.52	181.815	
5,240.0	5,106.5	5,090.8	5,090.7	22.9	1.5	9.95	124.2	-3,798.5	2,815.0	2,799.4	15.60	180.445	
5,300.0	5,164.4	5,150.8	5,150.7	23.2	1.5	9.96	124.6	-3,798.0	2,799.0	2,783.2	15.74	177.822	
5,314.9	5,178.8	5,165.9	5,165.8	23.3	1.5	9.96	124.7	-3,797.8	2,795.2	2,779.4	15.77	177.250	
5,400.0	5,261.5	5,256.5	5,256.4	23.6	1.5	9.99	125.6	-3,796.9	2,774.8	2,758.9	15.93	174.150	
5,413.4	5,274.6	5,271.3	5,271.1	23.6	1.5	9.99	125.8	-3,796.7	2,771.8	2,755.8	15.96	173.705	
5,500.0	5,359.5	5,355.1	5,354.9	23.9	1.5	10.01	126.6	-3,795.6	2,753.7	2,737.6	16.10	171.047	
5,511.8	5,371.1	5,365.9	5,365.7	24.0	1.5	10.01	126.7	-3,795.4	2,751.4	2,735.3	16.12	170.727	
5,600.0	5,458.0	5,470.4	5,470.2	24.2	1.5	10.04	127.6	-3,794.0	2,735.9	2,719.7	16.25	168.389	
5,610.2	5,468.2	5,484.5	5,484.3	24.3	1.5	10.05	127.7	-3,793.7	2,734.2	2,718.0	16.26	168.140	
5,700.0	5,557.2	5,574.2	5,574.0	24.5	1.6	10.05	128.0	-3,791.8	2,720.8	2,704.4	16.37	166.185	
5,708.6	5,565.7	5,582.4	5,582.1	24.5	1.6	10.05	128.0	-3,791.7	2,719.6	2,703.3	16.38	166.022	
5,800.0	5,656.7	5,661.5	5,661.2	24.7	1.6	10.05	128.2	-3,790.2	2,709.3	2,692.8	16.47	164.471	
5,807.1	5,663.7	5,667.5	5,667.2	24.7	1.6	10.05	128.2	-3,790.2	2,708.7	2,692.2	16.48	164.370	
5,900.0	5,756.5	5,761.3	5,761.0	24.9	1.6	10.06	128.5	-3,788.8	2,701.6	2,685.1	16.56	163.097	
5,905.5	5,761.9	5,767.4	5,767.2	24.9	1.6	10.06	128.5	-3,788.7	2,701.3	2,684.7	16.57	163.032	
6,000.0	5,856.4	5,855.6	5,855.3	25.0	1.6	10.06	128.5	-3,787.3	2,697.3	2,680.6	16.65	162.031	
6,003.9	5,860.3	5,858.9	5,858.6	25.0	1.6	10.06	128.5	-3,787.3	2,697.2	2,680.5	16.65	161.995	
6,032.5	5,888.9	5,883.1	5,882.9	25.0	1.6	-85.14	128.4	-3,787.0	2,696.7	2,670.3	26.34	102.372	
6,062.5	5,918.9	5,910.4	5,910.2	25.1	1.6	-85.14	128.3	-3,786.7	2,696.3	2,670.0	26.38	102.226 ES	
6,070.1	5,926.5	5,918.2	5,918.0	25.1	1.6	-175.14	128.3	-3,786.6	2,696.3	2,679.6	16.71	161.330 CC	
6,100.0	5,956.4	5,949.0	5,948.7	25.1	1.6	-175.14	128.2	-3,786.3	2,696.9	2,680.3	16.66	161.834	
6,102.3	5,958.7	5,951.4	5,951.1	25.1	1.6	-175.14	128.1	-3,786.3	2,697.0	2,680.4	16.66	161.878	
6,150.0	6,006.2	6,000.3	6,000.0	25.1	1.6	-175.13	128.0	-3,785.8	2,700.7	2,684.1	16.60	162.689	
6,200.0	6,055.6	6,052.9	6,052.7	25.1	1.6	-175.09	127.9	-3,785.1	2,707.9	2,691.4	16.55	163.608	
6,200.8	6,056.3	6,053.8	6,053.5	25.1	1.6	-175.09	127.9	-3,785.1	2,708.0	2,691.5	16.55	163.625	
6,250.0	6,104.3	6,105.7	6,105.4	25.0	1.7	-175.04	127.7	-3,784.4	2,718.5	2,702.0	16.50	164.764	
6,299.2	6,151.3	6,163.4	6,163.1	24.9	1.7	-174.98	127.4	-3,783.5	2,732.0	2,715.6	16.43	166.258	
6,300.0	6,152.1	6,164.3	6,164.0	24.9	1.7	-174.98	127.4	-3,783.5	2,732.3	2,715.8	16.43	166.285	
6,350.0	6,198.7	6,231.6	6,231.3	24.8	1.7	-174.92	126.7	-3,782.2	2,749.2	2,732.8	16.34	168.246	
6,397.6	6,241.9	6,306.3	6,306.0	24.7	1.7	-174.85	125.8	-3,779.9	2,767.8	2,751.6	16.23	170.528	
6,400.0	6,244.1	6,308.8	6,308.4	24.7	1.7	-174.85	125.8	-3,779.8	2,768.8	2,752.6	16.22	170.657	
6,450.0	6,287.8	6,360.1	6,359.7	24.5	1.7	-174.73	125.0	-3,777.9	2,791.3	2,775.2	16.07	173.722	
6,496.0	6,326.5	6,407.2	6,406.8	24.4	1.7	-174.60	124.1	-3,776.1	2,814.6	2,798.7	15.90	177.029	
6,500.0	6,329.7	6,412.0	6,411.5	24.4	1.7	-174.59	124.0	-3,775.9	2,816.7	2,800.8	15.88	177.323	
6,550.0	6,369.6	6,471.2	6,470.7	24.3	1.7	-174.44	122.6	-3,773.3	2,844.8	2,829.2	15.69	181.326	
6,594.5	6,403.3	6,520.7	6,520.1	24.2	1.7	-174.28	121.3	-3,770.9	2,872.0	2,856.5	15.51	185.222	
6,600.0	6,407.3	6,526.5	6,525.9	24.2	1.7	-174.26	121.2	-3,770.6	2,875.6	2,860.1	15.48	185.722	
6,650.0	6,442.7	6,577.7	6,577.0	24.1	1.7	-174.03	119.5	-3,767.8	2,908.8	2,893.5	15.28	190.363	
6,692.9	6,471.0	6,611.2	6,610.4	24.0	1.8	-173.77	118.3	-3,765.9	2,939.1	2,924.0	15.12	194.420	
6,700.0	6,475.5	6,615.1	6,614.3	24.0	1.8	-173.72	118.2	-3,765.7	2,944.3	2,929.2	15.09	195.092	
6,750.0	6,505.6	6,641.1	6,640.3	24.0	1.8	-173.28	117.2	-3,764.2	2,982.3	2,967.4	14.95	199.551	
6,791.3	6,528.3	6,660.8	6,659.9	24.0	1.8	-172.83	116.5	-3,763.1	3,015.4	3,000.5	14.88	202.636	
6,800.0	6,532.8	6,664.8	6,663.9	24.0	1.8	-172.72	116.4	-3,762.9	3,022.5	3,007.7	14.88	203.194	
6,850.0	6,557.0	6,686.0	6,685.1	24.1	1.8	-171.99	115.6	-3,761.8	3,064.8	3,049.8	14.92	205.465	
6,889.7	6,574.1	6,700.0	6,699.0	24.2	1.8	-171.23	115.2	-3,761.1	3,099.6	3,084.6	15.05	205.896	
6,900.0	6,578.1	6,700.0	6,699.0	24.3	1.8	-170.98	115.2	-3,761.1	3,108.8	3,093.7	15.11	205.800	
6,950.0	6,596.1	6,700.0	6,699.0	24.5	1.8	-169.45	115.2	-3,761.1	3,154.4	3,138.9	15.50	203.536	
6,988.2	6,607.5	6,700.0	6,699.0	24.7	1.8	-167.82	115.2	-3,761.1	3,190.2	3,174.2	15.99	199.563	
7,000.0	6,610.7	6,700.0	6,699.0	24.8	1.8	-167.20	115.2	-3,761.1	3,201.5	3,185.3	16.18	197.904	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,621.9	6,700.0	6,699.0	25.1	1.8	-163.58	115.2	-3,761.1	3,249.6	3,232.3	17.30	187.851		
7,086.6	6,628.0	6,700.0	6,699.0	25.4	1.8	-159.21	115.2	-3,761.1	3,285.4	3,266.8	18.62	176.446		
7,100.0	6,629.7	6,700.0	6,699.0	25.6	1.8	-156.97	115.2	-3,761.1	3,298.6	3,279.3	19.28	171.128		
7,150.0	6,634.1	6,700.0	6,699.0	26.0	1.8	-142.09	115.2	-3,761.1	3,348.1	3,324.9	23.23	144.119		
7,185.0	6,635.1	6,700.0	6,699.0	26.4	1.8	-117.57	115.2	-3,761.1	3,383.0	3,355.6	27.40	123.468		
7,196.6	6,635.0	6,700.0	6,699.0	26.5	1.8	-105.04	115.2	-3,761.1	3,394.5	3,366.4	28.15	120.593		
7,200.0	6,635.0	6,700.0	6,699.0	26.6	1.8	-105.04	115.2	-3,761.1	3,398.0	3,369.8	28.19	120.556		
7,283.4	6,633.9	6,700.0	6,699.0	27.6	1.8	-105.04	115.2	-3,761.1	3,481.2	3,452.1	29.19	119.274		
7,300.0	6,633.7	6,700.0	6,699.0	27.8	1.8	-105.04	115.2	-3,761.1	3,497.8	3,468.4	29.39	119.030		
7,381.9	6,632.6	6,700.0	6,699.0	29.0	1.8	-105.04	115.2	-3,761.1	3,579.5	3,548.9	30.54	117.205		
7,400.0	6,632.4	6,700.0	6,699.0	29.2	1.8	-105.03	115.2	-3,761.1	3,597.6	3,566.8	30.80	116.819		
7,480.3	6,631.4	6,700.0	6,699.0	30.5	1.8	-105.03	115.2	-3,761.1	3,677.7	3,645.6	32.07	114.663		
7,500.0	6,631.1	6,700.0	6,699.0	30.9	1.8	-105.03	115.2	-3,761.1	3,697.4	3,665.0	32.39	114.159		
7,578.7	6,630.1	6,700.0	6,699.0	32.3	1.8	-105.03	115.2	-3,761.1	3,776.0	3,742.2	33.76	111.841		
7,600.0	6,629.8	6,700.0	6,699.0	32.7	1.8	-105.02	115.2	-3,761.1	3,797.2	3,763.1	34.13	111.245		
7,677.1	6,628.9	6,700.0	6,699.0	34.1	1.8	-105.02	115.2	-3,761.1	3,874.2	3,838.6	35.58	108.886		
7,700.0	6,628.6	6,700.0	6,699.0	34.6	1.8	-105.02	115.2	-3,761.1	3,897.0	3,861.0	36.01	108.224		
7,775.6	6,627.6	6,700.0	6,699.0	36.1	1.8	-105.02	115.2	-3,761.1	3,972.5	3,935.0	37.51	105.907		
7,800.0	6,627.3	6,700.0	6,699.0	36.6	1.8	-105.02	115.2	-3,761.1	3,996.9	3,958.9	37.99	105.197		
7,874.0	6,626.3	6,700.0	6,699.0	38.2	1.8	-105.02	115.2	-3,761.1	4,070.8	4,031.2	39.53	102.977		
7,900.0	6,626.0	6,700.0	6,699.0	38.8	1.8	-105.01	115.2	-3,761.1	4,096.7	4,056.6	40.07	102.236		
7,972.4	6,625.1	6,700.0	6,699.0	40.4	1.8	-105.01	115.2	-3,761.1	4,169.0	4,127.4	41.63	100.142		
8,000.0	6,624.7	6,700.0	6,699.0	41.0	1.8	-105.01	115.2	-3,761.1	4,196.6	4,154.3	42.23	99.384		
8,070.8	6,623.8	6,700.0	6,699.0	42.6	1.8	-105.01	115.2	-3,761.1	4,267.3	4,223.5	43.80	97.430		
8,100.0	6,623.4	6,700.0	6,699.0	43.3	1.8	-105.00	115.2	-3,761.1	4,296.4	4,252.0	44.45	96.666		
8,169.3	6,622.6	6,700.0	6,699.0	44.9	1.8	-105.00	115.2	-3,761.1	4,365.6	4,319.6	46.02	94.857		
8,200.0	6,622.2	6,700.0	6,699.0	45.6	1.8	-105.00	115.2	-3,761.1	4,396.3	4,349.6	46.72	94.093		
8,267.7	6,621.3	6,700.0	6,699.0	47.3	1.8	-105.00	115.2	-3,761.1	4,463.9	4,415.6	48.30	92.428		
8,300.0	6,620.9	6,700.0	6,699.0	48.0	1.8	-104.99	115.2	-3,761.1	4,496.2	4,447.1	49.05	91.671		
8,366.1	6,620.0	6,700.0	6,699.0	49.7	1.8	-104.99	115.2	-3,761.1	4,562.2	4,511.6	50.61	90.144		
8,400.0	6,619.6	6,700.0	6,699.0	50.5	1.8	-104.99	115.2	-3,761.1	4,596.1	4,544.6	51.41	89.396		
8,464.5	6,618.8	6,700.0	6,699.0	52.1	1.8	-104.99	115.2	-3,761.1	4,660.5	4,607.6	52.96	87.999		
8,500.0	6,618.3	6,700.0	6,699.0	53.0	1.8	-104.98	115.2	-3,761.1	4,695.9	4,642.1	53.81	87.265		
8,563.0	6,617.5	6,700.0	6,699.0	54.5	1.8	-104.98	115.2	-3,761.1	4,758.8	4,703.5	55.34	85.988		
8,600.0	6,617.0	6,700.0	6,699.0	55.5	1.8	-104.98	115.2	-3,761.1	4,795.8	4,739.6	56.24	85.269		
8,661.4	6,616.3	6,700.0	6,699.0	57.0	1.8	-104.98	115.2	-3,761.1	4,857.2	4,799.4	57.75	84.104		
8,700.0	6,615.8	6,700.0	6,699.0	58.0	1.8	-104.97	115.2	-3,761.1	4,895.7	4,837.0	58.70	83.401		
8,759.8	6,615.0	6,700.0	6,699.0	59.5	1.8	-104.97	115.2	-3,761.1	4,955.5	4,895.3	60.19	82.338		
8,800.0	6,614.5	6,700.0	6,699.0	60.6	1.8	-104.97	115.2	-3,761.1	4,995.6	4,934.4	61.18	81.651		
8,858.2	6,613.7	6,700.0	6,699.0	62.1	1.8	-104.97	115.2	-3,761.1	5,053.8	4,991.2	62.64	80.682		
8,900.0	6,613.2	6,700.0	6,699.0	63.2	1.8	-104.96	115.2	-3,761.1	5,095.5	5,031.8	63.68	80.013		
8,956.7	6,612.5	6,700.0	6,699.0	64.6	1.8	-104.96	115.2	-3,761.1	5,152.1	5,087.0	65.11	79.128		
9,000.0	6,611.9	6,700.0	6,699.0	65.8	1.8	-104.95	115.2	-3,761.1	5,195.4	5,129.2	66.20	78.477		
9,055.1	6,611.2	6,700.0	6,699.0	67.2	1.8	-104.95	115.2	-3,761.1	5,250.5	5,182.9	67.60	77.670		
9,100.0	6,610.6	6,700.0	6,699.0	68.4	1.8	-104.95	115.2	-3,761.1	5,295.3	5,226.6	68.74	77.035		
9,153.5	6,609.9	6,700.0	6,699.0	69.8	1.8	-104.95	115.2	-3,761.1	5,348.8	5,278.7	70.10	76.299		
9,200.0	6,609.3	6,700.0	6,699.0	71.0	1.8	-104.94	115.2	-3,761.1	5,395.3	5,324.0	71.29	75.681		
9,251.9	6,608.7	6,700.0	6,699.0	72.4	1.8	-104.94	115.2	-3,761.1	5,447.2	5,374.5	72.62	75.009		
9,300.0	6,608.1	6,700.0	6,699.0	73.7	1.8	-104.94	115.2	-3,761.1	5,495.2	5,421.3	73.85	74.407		
9,350.4	6,607.4	6,700.0	6,699.0	75.0	1.8	-104.94	115.2	-3,761.1	5,545.5	5,470.4	75.15	73.793		
9,400.0	6,606.8	6,700.0	6,699.0	76.3	1.8	-104.93	115.2	-3,761.1	5,595.1	5,518.7	76.43	73.208		
9,448.8	6,606.1	6,700.0	6,699.0	77.6	1.8	-104.93	115.2	-3,761.1	5,643.9	5,566.2	77.69	72.648		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT BOND #1 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	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	6,605.5	6,700.0	6,699.0	79.0	1.8	-104.92	115.2	-3,761.1	5,695.0	5,616.0	79.01	72.078		
9,547.2	6,604.9	6,700.0	6,699.0	80.2	1.8	-104.92	115.2	-3,761.1	5,742.2	5,662.0	80.24	71.566		
9,600.0	6,604.2	6,700.0	6,699.0	81.7	1.8	-104.92	115.2	-3,761.1	5,794.9	5,713.3	81.61	71.011		
9,645.6	6,603.6	6,700.0	6,699.0	82.9	1.8	-104.92	115.2	-3,761.1	5,840.6	5,757.8	82.79	70.544		
9,700.0	6,602.9	6,700.0	6,699.0	84.3	1.8	-104.91	115.2	-3,761.1	5,894.9	5,810.7	84.21	70.003		
9,744.1	6,602.3	6,700.0	6,699.0	85.5	1.8	-104.91	115.2	-3,761.1	5,938.9	5,853.6	85.36	69.576		
9,800.0	6,601.6	6,700.0	6,699.0	87.0	1.8	-104.90	115.2	-3,761.1	5,994.8	5,908.0	86.82	69.049		
9,842.5	6,601.1	6,700.0	6,699.0	88.2	1.8	-104.90	115.2	-3,761.1	6,037.3	5,949.3	87.93	68.659		
9,900.0	6,600.3	6,700.0	6,699.0	89.7	1.8	-104.90	115.2	-3,761.1	6,094.7	6,005.3	89.44	68.146		
9,940.9	6,599.8	6,700.0	6,699.0	90.9	1.8	-104.90	115.2	-3,761.1	6,135.6	6,045.1	90.51	67.790		
10,000.0	6,599.0	6,700.0	6,699.0	92.5	1.8	-104.89	115.2	-3,761.1	6,194.7	6,102.6	92.06	67.289		
10,039.3	6,598.5	6,700.0	6,699.0	93.5	1.8	-104.89	115.2	-3,761.1	6,234.0	6,140.9	93.09	66.964		
10,100.0	6,597.7	6,700.0	6,699.0	95.2	1.8	-104.88	115.2	-3,761.1	6,294.6	6,199.9	94.69	66.475		
10,137.8	6,597.3	6,700.0	6,699.0	96.2	1.8	-104.88	115.2	-3,761.1	6,332.4	6,236.7	95.69	66.179		
10,200.0	6,596.5	6,700.0	6,699.0	97.9	1.8	-104.88	115.2	-3,761.1	6,394.5	6,297.2	97.33	65.702		
10,236.2	6,596.0	6,700.0	6,699.0	98.9	1.8	-104.88	115.2	-3,761.1	6,430.7	6,332.4	98.28	65.432		
10,300.0	6,595.2	6,700.0	6,699.0	100.6	1.8	-104.87	115.2	-3,761.1	6,494.5	6,394.5	99.97	64.966		
10,334.6	6,594.7	6,700.0	6,699.0	101.6	1.8	-104.87	115.2	-3,761.1	6,529.1	6,428.2	100.88	64.720		
10,400.0	6,593.9	6,700.0	6,699.0	103.3	1.8	-104.86	115.2	-3,761.1	6,594.4	6,491.8	102.61	64.266		
10,433.0	6,593.5	6,700.0	6,699.0	104.2	1.8	-104.86	115.2	-3,761.1	6,627.5	6,524.0	103.49	64.042		
10,500.0	6,592.6	6,700.0	6,699.0	106.1	1.8	-104.86	115.2	-3,761.1	6,694.4	6,589.1	105.26	63.598		
10,531.5	6,592.2	6,700.0	6,699.0	106.9	1.8	-104.86	115.2	-3,761.1	6,725.8	6,619.7	106.10	63.394		
10,600.0	6,591.3	6,700.0	6,699.0	108.8	1.8	-104.85	115.2	-3,761.1	6,794.3	6,686.4	107.91	62.960		
10,629.9	6,590.9	6,700.0	6,699.0	109.6	1.8	-104.85	115.2	-3,761.1	6,824.2	6,715.5	108.71	62.775		
10,700.0	6,590.0	6,700.0	6,699.0	111.6	1.8	-104.84	115.2	-3,761.1	6,894.3	6,783.7	110.57	62.351		
10,728.3	6,589.6	6,700.0	6,699.0	112.3	1.8	-104.84	115.2	-3,761.1	6,922.6	6,811.2	111.32	62.184		
10,800.0	6,588.7	6,700.0	6,699.0	114.3	1.8	-104.83	115.2	-3,761.1	6,994.2	6,881.0	113.23	61.769		
10,826.7	6,588.4	6,700.0	6,699.0	115.0	1.8	-104.83	115.2	-3,761.1	7,020.9	6,907.0	113.94	61.617		
10,900.0	6,587.4	6,700.0	6,699.0	117.0	1.8	-104.82	115.2	-3,761.1	7,094.2	6,978.3	115.90	61.211		
10,925.2	6,587.1	6,700.0	6,699.0	117.7	1.8	-104.82	115.2	-3,761.1	7,119.3	7,002.8	116.57	61.075		
11,000.0	6,586.1	6,700.0	6,699.0	119.8	1.8	-104.82	115.2	-3,761.1	7,194.1	7,075.5	118.56	60.677		
11,023.6	6,585.8	6,700.0	6,699.0	120.4	1.8	-104.82	115.2	-3,761.1	7,217.7	7,098.5	119.19	60.555		
11,100.0	6,584.8	6,700.0	6,699.0	122.5	1.8	-104.81	115.2	-3,761.1	7,294.1	7,172.8	121.23	60.166		
11,122.0	6,584.5	6,700.0	6,699.0	123.2	1.8	-104.81	115.2	-3,761.1	7,316.1	7,194.3	121.82	60.056		
11,200.0	6,583.5	6,700.0	6,699.0	125.3	1.8	-104.80	115.2	-3,761.1	7,394.0	7,270.1	123.91	59.675		
11,220.4	6,583.3	6,700.0	6,699.0	125.9	1.8	-104.80	115.2	-3,761.1	7,414.5	7,290.0	124.45	59.577		
11,300.0	6,582.2	6,700.0	6,699.0	128.1	1.8	-104.79	115.2	-3,761.1	7,494.0	7,367.4	126.58	59.203		
11,318.9	6,582.0	6,700.0	6,699.0	128.6	1.8	-104.79	115.2	-3,761.1	7,512.8	7,385.8	127.09	59.117		
11,400.0	6,580.9	6,700.0	6,699.0	130.8	1.8	-104.78	115.2	-3,761.1	7,593.9	7,464.7	129.26	58.750		
11,417.3	6,580.7	6,700.0	6,699.0	131.3	1.8	-104.78	115.2	-3,761.1	7,611.2	7,481.5	129.72	58.674		
11,500.0	6,579.7	6,700.0	6,699.0	133.6	1.8	-104.77	115.2	-3,761.1	7,693.9	7,561.9	131.94	58.314		
11,515.7	6,579.4	6,700.0	6,699.0	134.0	1.8	-104.77	115.2	-3,761.1	7,709.6	7,577.2	132.36	58.248		
11,600.0	6,578.4	6,700.0	6,699.0	136.3	1.8	-104.77	115.2	-3,761.1	7,793.8	7,659.2	134.62	57.895		
11,614.1	6,578.2	6,700.0	6,699.0	136.7	1.8	-104.77	115.2	-3,761.1	7,808.0	7,673.0	135.00	57.837		
11,700.0	6,577.1	6,700.0	6,699.0	139.1	1.8	-104.76	115.2	-3,761.1	7,893.8	7,756.5	137.30	57.492		
11,712.6	6,576.9	6,700.0	6,699.0	139.5	1.8	-104.76	115.2	-3,761.1	7,906.4	7,768.7	137.64	57.442		
11,800.0	6,575.8	6,700.0	6,699.0	141.9	1.8	-104.75	115.2	-3,761.1	7,993.8	7,853.8	139.99	57.103		
11,811.0	6,575.6	6,700.0	6,699.0	142.2	1.8	-104.75	115.2	-3,761.1	8,004.8	7,864.5	140.28	57.061		
11,858.8	6,575.0	6,700.0	6,699.0	143.5	1.8	-104.74	115.2	-3,761.1	8,052.5	7,910.9	141.57	56.881 SF		
11,859.3	6,575.0	6,700.0	6,699.0	143.5	1.8	-104.74	115.2	-3,761.1	8,053.1	7,911.5	141.58	56.881		

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-68.79	1,431.7	-3,688.8	3,956.9				
98.4	98.4	84.4	84.4	0.1	0.0	-68.79	1,431.7	-3,688.8	3,956.9	3,956.8	0.10	N/A	
100.0	100.0	86.0	86.0	0.1	0.0	-68.79	1,431.7	-3,688.8	3,956.9	3,956.8	0.10	N/A	
196.8	196.8	182.8	182.8	0.3	1.0	-68.79	1,431.7	-3,688.8	3,956.9	3,955.6	1.31	3,024.715	
200.0	200.0	186.0	186.0	0.3	1.0	-68.79	1,431.7	-3,688.8	3,956.9	3,955.5	1.35	2,924.508	
295.3	295.3	281.3	281.3	0.5	3.1	-68.79	1,431.7	-3,688.8	3,956.9	3,953.3	3.60	1,100.413	
300.0	300.0	286.0	286.0	0.5	3.2	-68.79	1,431.7	-3,688.8	3,956.9	3,953.2	3.71	1,065.219	
393.7	393.7	379.7	379.7	0.8	5.1	-68.79	1,431.7	-3,688.8	3,956.9	3,951.0	5.90	670.409	
400.0	400.0	386.0	386.0	0.8	5.3	-68.79	1,431.7	-3,688.8	3,956.9	3,950.8	6.05	654.323	
492.1	492.1	478.1	478.1	1.0	7.2	-68.79	1,431.7	-3,688.8	3,956.9	3,948.7	8.14	486.057	
500.0	500.0	486.0	486.0	1.0	7.3	-68.79	1,431.7	-3,688.8	3,956.9	3,948.6	8.32	475.627	
590.5	590.5	576.5	576.5	1.2	9.2	-68.79	1,431.7	-3,688.8	3,956.9	3,946.5	10.36	381.866	
600.0	600.0	586.0	586.0	1.2	9.4	-68.79	1,431.7	-3,688.8	3,956.9	3,946.3	10.57	374.175	
689.0	689.0	675.0	675.0	1.4	11.2	-68.79	1,431.7	-3,688.8	3,956.9	3,944.3	12.58	314.648	
700.0	700.0	686.0	686.0	1.4	11.4	-68.79	1,431.7	-3,688.8	3,956.9	3,944.1	12.82	308.568	
787.4	787.4	773.4	773.4	1.6	13.1	-68.79	1,431.7	-3,688.8	3,956.9	3,942.1	14.79	267.625	
800.0	800.0	786.0	786.0	1.7	13.4	-68.79	1,431.7	-3,688.8	3,956.9	3,941.8	15.07	262.603	
885.8	885.8	871.8	871.8	1.9	15.1	-68.79	1,431.7	-3,688.8	3,956.9	3,939.9	16.99	232.863	
900.0	900.0	886.0	886.0	1.9	15.4	-68.79	1,431.7	-3,688.8	3,956.9	3,939.6	17.31	228.588	
984.2	984.2	970.2	970.2	2.1	17.1	-68.79	1,431.7	-3,688.8	3,956.9	3,937.7	19.20	206.110	
1,000.0	1,000.0	986.0	986.0	2.1	17.4	-68.79	1,431.7	-3,688.8	3,956.9	3,937.3	19.55	202.390	
1,082.7	1,082.7	1,068.7	1,068.7	2.3	19.1	-68.79	1,431.7	-3,688.8	3,956.9	3,935.5	21.40	184.880	
1,100.0	1,100.0	1,086.0	1,086.0	2.3	19.4	-68.79	1,431.7	-3,688.8	3,956.9	3,935.1	21.79	181.588	
1,181.1	1,181.1	1,167.1	1,167.1	2.5	21.1	-68.79	1,431.7	-3,688.8	3,956.9	3,933.3	23.61	167.620	
1,200.0	1,200.0	1,186.0	1,186.0	2.6	21.5	-68.79	1,431.7	-3,688.8	3,956.9	3,932.9	24.03	164.669	
1,279.5	1,279.5	1,265.5	1,265.5	2.7	23.1	26.42	1,431.7	-3,688.8	3,955.9	3,930.1	25.79	153.391	
1,300.0	1,300.0	1,286.0	1,286.0	2.8	23.5	26.43	1,431.7	-3,688.8	3,955.3	3,929.1	26.24	150.738	
1,377.9	1,377.8	1,363.8	1,363.8	2.9	25.0	26.48	1,431.7	-3,688.8	3,951.9	3,924.0	27.93	141.481	
1,400.0	1,399.8	1,385.8	1,385.8	3.0	25.5	26.51	1,431.7	-3,688.8	3,950.6	3,922.2	28.41	139.072	
1,476.4	1,475.9	1,461.9	1,461.9	3.1	27.0	26.60	1,431.7	-3,688.8	3,945.0	3,914.9	30.04	131.320	
1,500.0	1,499.5	1,485.5	1,485.5	3.2	27.5	26.63	1,431.7	-3,688.8	3,942.8	3,912.3	30.54	129.100	
1,574.8	1,573.7	1,559.7	1,559.7	3.4	29.0	26.76	1,431.7	-3,688.8	3,935.0	3,902.9	32.11	122.537	
1,600.0	1,598.7	1,584.7	1,584.7	3.4	29.5	26.81	1,431.7	-3,688.8	3,931.9	3,899.3	32.64	120.481	
1,673.2	1,671.1	1,657.1	1,657.1	3.6	30.9	26.97	1,431.7	-3,688.8	3,922.0	3,887.9	34.14	114.871	
1,700.0	1,697.5	1,683.5	1,683.5	3.7	31.5	27.04	1,431.7	-3,688.8	3,918.0	3,883.3	34.69	112.955	
1,771.6	1,767.9	1,753.9	1,753.9	3.9	32.9	27.24	1,431.7	-3,688.8	3,906.1	3,869.9	36.13	108.116	
1,800.0	1,795.6	1,781.6	1,781.6	4.0	33.4	27.33	1,431.7	-3,688.8	3,900.9	3,864.2	36.69	106.321	
1,870.1	1,864.0	1,850.0	1,850.0	4.3	34.8	27.56	1,431.7	-3,688.8	3,887.2	3,849.1	38.07	102.113	
1,900.0	1,893.1	1,879.1	1,879.1	4.4	35.4	27.67	1,431.7	-3,688.8	3,880.9	3,842.2	38.65	100.422	
1,968.5	1,959.3	1,945.3	1,945.3	4.6	36.7	27.94	1,431.7	-3,688.8	3,865.4	3,825.4	39.96	96.733	
1,992.4	1,982.4	1,968.4	1,968.4	4.7	37.2	28.04	1,431.7	-3,688.8	3,859.7	3,819.2	40.41	95.511	
2,000.0	1,989.6	1,975.6	1,975.6	4.8	37.4	28.05	1,431.7	-3,688.8	3,857.8	3,817.2	40.57	95.079	
2,066.9	2,054.0	2,040.0	2,040.0	5.1	38.6	28.18	1,431.7	-3,688.8	3,841.6	3,799.5	42.04	91.381	
2,100.0	2,085.8	2,071.8	2,071.8	5.2	39.3	28.24	1,431.7	-3,688.8	3,833.5	3,790.8	42.76	89.656	
2,165.3	2,148.7	2,134.7	2,134.7	5.5	40.6	28.37	1,431.7	-3,688.8	3,817.7	3,773.5	44.19	86.394	
2,200.0	2,182.0	2,168.0	2,168.0	5.7	41.2	28.43	1,431.7	-3,688.8	3,809.3	3,764.3	44.96	84.734	
2,263.8	2,243.4	2,229.4	2,229.4	6.0	42.5	28.56	1,431.7	-3,688.8	3,793.9	3,747.5	46.36	81.828	
2,300.0	2,278.2	2,264.2	2,264.2	6.2	43.2	28.63	1,431.7	-3,688.8	3,785.1	3,737.9	47.17	80.251	
2,362.2	2,338.1	2,324.1	2,324.1	6.5	44.4	28.75	1,431.7	-3,688.8	3,770.1	3,721.5	48.55	77.660	
2,400.0	2,374.4	2,360.4	2,360.4	6.7	45.1	28.83	1,431.7	-3,688.8	3,760.9	3,711.5	49.39	76.154	
2,460.6	2,432.8	2,418.8	2,418.8	7.0	46.3	28.95	1,431.7	-3,688.8	3,746.3	3,695.6	50.74	73.837	
2,500.0	2,470.6	2,456.6	2,456.6	7.2	47.0	29.03	1,431.7	-3,688.8	3,736.8	3,685.2	51.62	72.397	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,527.4	2,513.4	2,513.4	7.6	48.2	29.14	1,431.7	-3,688.8	3,722.6	3,669.7	52.94	70.321	
2,600.0	2,566.8	2,552.8	2,552.8	7.8	49.0	29.23	1,431.7	-3,688.8	3,712.7	3,658.9	53.85	68.941	
2,657.5	2,622.1	2,608.1	2,608.1	8.1	50.1	29.35	1,431.7	-3,688.8	3,698.9	3,643.8	55.14	67.077	
2,700.0	2,663.0	2,649.0	2,649.0	8.3	50.9	29.43	1,431.7	-3,688.8	3,688.7	3,632.6	56.10	65.753	
2,755.9	2,716.8	2,702.8	2,702.8	8.6	52.0	29.55	1,431.7	-3,688.8	3,675.3	3,618.0	57.36	64.076	
2,800.0	2,759.2	2,745.2	2,745.2	8.9	52.8	29.64	1,431.7	-3,688.8	3,664.7	3,606.4	58.35	62.803	
2,854.3	2,811.5	2,797.5	2,797.5	9.2	53.9	29.76	1,431.7	-3,688.8	3,651.7	3,592.2	59.58	61.292	
2,900.0	2,855.4	2,841.4	2,841.4	9.4	54.8	29.85	1,431.7	-3,688.8	3,640.8	3,580.2	60.61	60.068	
2,952.7	2,906.2	2,892.2	2,892.2	9.7	55.8	29.96	1,431.7	-3,688.8	3,628.2	3,566.4	61.81	58.703	
3,000.0	2,951.6	2,937.6	2,937.6	10.0	56.7	30.07	1,431.7	-3,688.8	3,616.9	3,554.0	62.88	57.524	
3,051.2	3,000.9	2,986.9	2,986.9	10.3	57.7	30.18	1,431.7	-3,688.8	3,604.7	3,540.7	64.04	56.290	
3,100.0	3,047.8	3,033.8	3,033.8	10.5	58.6	30.28	1,431.7	-3,688.8	3,593.1	3,527.9	65.15	55.153	
3,149.6	3,095.5	3,081.5	3,081.5	10.8	59.6	30.39	1,431.7	-3,688.8	3,581.3	3,515.0	66.28	54.036	
3,200.0	3,144.0	3,130.0	3,130.0	11.1	60.6	30.50	1,431.7	-3,688.8	3,569.3	3,501.9	67.42	52.938	
3,248.0	3,190.2	3,176.2	3,176.2	11.4	61.5	30.61	1,431.7	-3,688.8	3,557.9	3,489.4	68.52	51.926	
3,300.0	3,240.2	3,226.2	3,226.2	11.7	62.5	30.72	1,431.7	-3,688.8	3,545.6	3,475.9	69.70	50.865	
3,346.4	3,284.9	3,270.9	3,270.9	11.9	63.4	30.83	1,431.7	-3,688.8	3,534.6	3,463.8	70.77	49.947	
3,400.0	3,336.4	3,322.4	3,322.4	12.2	64.4	30.95	1,431.7	-3,688.8	3,521.9	3,449.9	71.99	48.921	
3,444.9	3,379.6	3,365.6	3,365.6	12.5	65.3	31.05	1,431.7	-3,688.8	3,511.3	3,438.3	73.02	48.087	
3,500.0	3,432.6	3,418.6	3,418.6	12.8	66.4	31.17	1,431.7	-3,688.8	3,498.3	3,424.0	74.28	47.094	
3,543.3	3,474.3	3,460.3	3,460.3	13.1	67.2	31.27	1,431.7	-3,688.8	3,488.0	3,412.8	75.28	46.337	
3,600.0	3,528.8	3,514.8	3,514.8	13.4	68.3	31.41	1,431.7	-3,688.8	3,474.7	3,398.1	76.58	45.375	
3,641.7	3,569.0	3,555.0	3,555.0	13.6	69.1	31.50	1,431.7	-3,688.8	3,464.9	3,387.3	77.54	44.687	
3,700.0	3,625.0	3,611.0	3,611.0	14.0	70.2	31.64	1,431.7	-3,688.8	3,451.2	3,372.3	78.88	43.753	
3,740.1	3,663.6	3,649.6	3,649.6	14.2	71.0	31.73	1,431.7	-3,688.8	3,441.7	3,361.9	79.80	43.128	
3,800.0	3,721.2	3,707.2	3,707.2	14.5	72.2	31.88	1,431.7	-3,688.8	3,427.7	3,346.5	81.18	42.222	
3,838.6	3,758.3	3,744.3	3,744.3	14.8	72.9	31.97	1,431.7	-3,688.8	3,418.7	3,336.6	82.07	41.654	
3,900.0	3,817.4	3,803.4	3,803.4	15.1	74.1	32.12	1,431.7	-3,688.8	3,404.3	3,320.8	83.49	40.774	
3,937.0	3,853.0	3,839.0	3,839.0	15.3	74.8	32.21	1,431.7	-3,688.8	3,395.6	3,311.3	84.35	40.258	
4,000.0	3,913.6	3,899.6	3,899.6	15.7	76.1	32.36	1,431.7	-3,688.8	3,380.9	3,295.1	85.81	39.402	
4,035.4	3,947.7	3,933.7	3,933.7	15.9	76.7	32.45	1,431.7	-3,688.8	3,372.7	3,286.1	86.63	38.934	
4,100.0	4,009.8	3,995.8	3,995.8	16.3	78.0	32.61	1,431.7	-3,688.8	3,357.6	3,269.5	88.12	38.101	
4,133.8	4,042.4	4,028.4	4,028.4	16.5	78.6	32.69	1,431.7	-3,688.8	3,349.8	3,260.9	88.91	37.676	
4,200.0	4,106.0	4,092.0	4,092.0	16.8	79.9	32.86	1,431.7	-3,688.8	3,334.4	3,244.0	90.45	36.866	
4,232.3	4,137.1	4,123.1	4,123.1	17.0	80.5	32.94	1,431.7	-3,688.8	3,326.9	3,235.7	91.20	36.481	
4,300.0	4,202.2	4,188.2	4,188.2	17.4	81.9	33.11	1,431.7	-3,688.8	3,311.3	3,218.5	92.77	35.692	
4,330.7	4,231.7	4,217.7	4,217.7	17.6	82.4	33.19	1,431.7	-3,688.8	3,304.2	3,210.7	93.49	35.342	
4,400.0	4,298.4	4,284.4	4,284.4	18.0	83.8	33.37	1,431.7	-3,688.8	3,288.1	3,193.0	95.11	34.573	
4,429.1	4,326.4	4,312.4	4,312.4	18.2	84.4	33.44	1,431.7	-3,688.8	3,281.4	3,185.6	95.79	34.258	
4,500.0	4,394.6	4,380.6	4,380.6	18.6	85.7	33.63	1,431.7	-3,688.8	3,265.1	3,167.7	97.44	33.508	
4,527.5	4,421.1	4,407.1	4,407.1	18.7	86.3	33.70	1,431.7	-3,688.8	3,258.8	3,160.7	98.09	33.223	
4,600.0	4,490.8	4,476.8	4,476.8	19.2	87.7	33.89	1,431.7	-3,688.8	3,242.1	3,142.4	99.78	32.492	
4,626.0	4,515.8	4,501.8	4,501.8	19.3	88.2	33.96	1,431.7	-3,688.8	3,236.2	3,135.8	100.39	32.235	
4,700.0	4,587.0	4,573.0	4,573.0	19.8	89.6	34.16	1,431.7	-3,688.8	3,219.2	3,117.1	102.13	31.521	
4,724.4	4,610.5	4,596.5	4,596.5	19.9	90.1	34.23	1,431.7	-3,688.8	3,213.7	3,111.0	102.70	31.291	
4,800.0	4,683.2	4,669.2	4,669.2	20.3	91.5	34.43	1,431.7	-3,688.8	3,196.4	3,091.9	104.48	30.594	
4,822.8	4,705.2	4,691.2	4,691.2	20.5	92.0	34.49	1,431.7	-3,688.8	3,191.2	3,086.2	105.02	30.388	
4,900.0	4,779.4	4,765.4	4,765.4	20.9	93.5	34.71	1,431.7	-3,688.8	3,173.6	3,066.8	106.83	29.706	
4,921.2	4,799.8	4,785.8	4,785.8	21.0	93.9	34.77	1,431.7	-3,688.8	3,168.8	3,061.5	107.34	29.522	
5,000.0	4,875.6	4,861.6	4,861.6	21.5	95.4	34.99	1,431.7	-3,688.8	3,150.9	3,041.8	109.19	28.856	
5,019.7	4,894.5	4,880.5	4,880.5	21.6	95.8	35.04	1,431.7	-3,688.8	3,146.5	3,036.8	109.66	28.693	
5,100.0	4,971.8	4,957.8	4,957.8	22.1	97.3	35.27	1,431.7	-3,688.8	3,128.3	3,016.8	111.56	28.042	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-INC													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,118.1	4,989.2	4,975.2	4,975.2	22.2	97.7	35.32	1,431.7	-3,688.8	3,124.2	3,012.3	111.99	27.898		
5,200.0	5,068.0	5,054.0	5,054.0	22.7	99.3	35.56	1,431.7	-3,688.8	3,105.8	2,991.9	113.93	27.261		
5,216.5	5,083.9	5,069.9	5,069.9	22.8	99.6	35.60	1,431.7	-3,688.8	3,102.1	2,987.7	114.32	27.135		
5,240.0	5,106.5	5,092.5	5,092.5	22.9	100.0	35.67	1,431.7	-3,688.8	3,096.8	2,981.9	114.88	26.957		
5,300.0	5,164.4	5,150.4	5,150.4	23.2	101.2	35.69	1,431.7	-3,688.8	3,083.8	2,967.2	116.60	26.447		
5,314.9	5,178.8	5,164.8	5,164.8	23.3	101.5	35.69	1,431.7	-3,688.8	3,080.7	2,963.7	117.02	26.327		
5,400.0	5,261.5	5,247.5	5,247.5	23.6	103.2	35.71	1,431.7	-3,688.8	3,064.5	2,945.1	119.37	25.672		
5,413.4	5,274.6	5,260.6	5,260.6	23.6	103.4	35.71	1,431.7	-3,688.8	3,062.1	2,942.4	119.73	25.574		
5,500.0	5,359.5	5,345.5	5,345.5	23.9	105.1	35.73	1,431.7	-3,688.8	3,048.0	2,925.9	122.06	24.971		
5,511.8	5,371.1	5,357.1	5,357.1	24.0	105.4	35.74	1,431.7	-3,688.8	3,046.2	2,923.8	122.37	24.893		
5,600.0	5,458.0	5,444.0	5,444.0	24.2	107.1	35.76	1,431.7	-3,688.8	3,034.3	2,909.6	124.67	24.339		
5,610.2	5,468.2	5,454.2	5,454.2	24.3	107.3	35.76	1,431.7	-3,688.8	3,033.1	2,908.1	124.93	24.279		
5,700.0	5,557.2	5,543.2	5,543.2	24.5	109.1	35.78	1,431.7	-3,688.8	3,023.5	2,896.3	127.18	23.774		
5,708.6	5,565.7	5,551.7	5,551.7	24.5	109.3	35.78	1,431.7	-3,688.8	3,022.7	2,895.3	127.39	23.728		
5,800.0	5,656.7	5,642.7	5,642.7	24.7	111.1	35.79	1,431.7	-3,688.8	3,015.5	2,885.9	129.59	23.270		
5,807.1	5,663.7	5,649.7	5,649.7	24.7	111.2	35.79	1,431.7	-3,688.8	3,015.0	2,885.2	129.75	23.237		
5,900.0	5,756.5	5,742.5	5,742.5	24.9	113.1	35.80	1,431.7	-3,688.8	3,010.3	2,878.4	131.88	22.825		
5,905.5	5,761.9	5,747.9	5,747.9	24.9	113.2	35.80	1,431.7	-3,688.8	3,010.1	2,878.1	132.01	22.803		
6,000.0	5,856.4	5,842.4	5,842.4	25.0	115.1	35.81	1,431.7	-3,688.8	3,008.0	2,873.9	134.07	22.436		
6,003.9	5,860.3	5,846.3	5,846.3	25.0	115.2	35.81	1,431.7	-3,688.8	3,007.9	2,873.8	134.15	22.422		
6,032.5	5,888.9	5,874.9	5,874.9	25.0	115.8	-59.39	1,431.7	-3,688.8	3,007.8	2,870.1	137.70	21.843		
6,062.5	5,918.9	5,904.9	5,904.9	25.1	116.4	-59.39	1,431.7	-3,688.8	3,007.8	2,869.5	138.34	21.742 CC, ES, SF		
6,100.0	5,956.4	5,942.4	5,942.4	25.1	117.1	-149.36	1,431.7	-3,688.8	3,008.6	2,872.7	135.99	22.125		
6,102.3	5,958.7	5,944.7	5,944.7	25.1	117.2	-149.36	1,431.7	-3,688.8	3,008.8	2,872.7	136.01	22.121		
6,150.0	6,006.2	5,992.2	5,992.2	25.1	118.1	-149.25	1,431.7	-3,688.8	3,012.4	2,876.0	136.36	22.092		
6,200.0	6,055.6	6,041.6	6,041.6	25.1	119.1	-149.05	1,431.7	-3,688.8	3,019.1	2,882.9	136.26	22.157		
6,200.8	6,056.3	6,042.3	6,042.3	25.1	119.1	-149.04	1,431.7	-3,688.8	3,019.3	2,883.0	136.25	22.159		
6,250.0	6,104.3	6,090.3	6,090.3	25.0	120.1	-148.75	1,431.7	-3,688.8	3,028.8	2,893.1	135.70	22.320		
6,299.2	6,151.3	6,137.3	6,137.3	24.9	121.1	-148.35	1,431.7	-3,688.8	3,041.2	2,906.5	134.73	22.573		
6,300.0	6,152.1	6,138.1	6,138.1	24.9	121.1	-148.35	1,431.7	-3,688.8	3,041.5	2,906.7	134.71	22.578		
6,350.0	6,198.7	6,184.7	6,184.7	24.8	122.0	-147.83	1,431.7	-3,688.8	3,056.9	2,923.6	133.32	22.930		
6,397.6	6,241.9	6,227.9	6,227.9	24.7	122.9	-147.23	1,431.7	-3,688.8	3,074.3	2,942.6	131.68	23.346		
6,400.0	6,244.1	6,230.1	6,230.1	24.7	122.9	-147.19	1,431.7	-3,688.8	3,075.3	2,943.7	131.59	23.369		
6,450.0	6,287.8	6,273.8	6,273.8	24.5	123.8	-146.41	1,431.7	-3,688.8	3,096.3	2,966.7	129.61	23.889		
6,496.0	6,326.5	6,312.5	6,312.5	24.4	124.6	-145.56	1,431.7	-3,688.8	3,118.0	2,990.4	127.65	24.426		
6,500.0	6,329.7	6,315.7	6,315.7	24.4	124.6	-145.48	1,431.7	-3,688.8	3,120.0	2,992.5	127.48	24.475		
6,550.0	6,369.6	6,355.6	6,355.6	24.3	125.4	-144.35	1,431.7	-3,688.8	3,146.2	3,020.9	125.33	25.104		
6,594.5	6,403.3	6,389.3	6,389.3	24.2	126.1	-143.18	1,431.7	-3,688.8	3,171.6	3,048.1	123.53	25.674		
6,600.0	6,407.3	6,393.3	6,393.3	24.2	126.2	-143.02	1,431.7	-3,688.8	3,174.9	3,051.6	123.33	25.744		
6,650.0	6,442.7	6,428.7	6,428.7	24.1	126.9	-141.43	1,431.7	-3,688.8	3,205.9	3,084.2	121.68	26.347		
6,692.9	6,471.0	6,457.0	6,457.0	24.0	127.5	-139.83	1,431.7	-3,688.8	3,234.3	3,113.5	120.73	26.789		
6,700.0	6,475.5	6,461.5	6,461.5	24.0	127.6	-139.54	1,431.7	-3,688.8	3,239.1	3,118.5	120.63	26.852		
6,750.0	6,505.6	6,491.6	6,491.6	24.0	128.2	-137.30	1,431.7	-3,688.8	3,274.4	3,153.9	120.43	27.189		
6,791.3	6,528.3	6,514.3	6,514.3	24.0	128.6	-135.13	1,431.7	-3,688.8	3,304.9	3,183.8	121.10	27.290		
6,800.0	6,532.8	6,518.8	6,518.8	24.0	128.7	-134.63	1,431.7	-3,688.8	3,311.5	3,190.1	121.35	27.289		
6,850.0	6,557.0	6,543.0	6,543.0	24.1	129.2	-131.45	1,431.7	-3,688.8	3,350.3	3,226.7	123.61	27.104		
6,889.7	6,574.1	6,560.1	6,560.1	24.2	129.6	-128.49	1,431.7	-3,688.8	3,382.3	3,255.8	126.46	26.747		
6,900.0	6,578.1	6,564.1	6,564.1	24.3	129.6	-127.65	1,431.7	-3,688.8	3,390.7	3,263.3	127.34	26.628		
6,950.0	6,596.1	6,582.1	6,582.1	24.5	130.0	-123.13	1,431.7	-3,688.8	3,432.4	3,299.9	132.48	25.909		
6,988.2	6,607.5	6,593.5	6,593.5	24.7	130.2	-119.13	1,431.7	-3,688.8	3,465.0	3,327.8	137.17	25.260		
7,000.0	6,610.7	6,596.7	6,596.7	24.8	130.3	-117.79	1,431.7	-3,688.8	3,475.2	3,336.5	138.72	25.053		
7,050.0	6,621.9	6,607.9	6,607.9	25.1	130.5	-111.53	1,431.7	-3,688.8	3,519.0	3,373.6	145.40	24.202		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	6,614.0	6,614.0	25.4	130.6	-106.36	1,431.7	-3,688.8	3,551.5	3,401.5	150.01	23.675	
7,100.0	6,629.7	6,615.7	6,615.7	25.6	130.7	-104.35	1,431.7	-3,688.8	3,563.5	3,412.0	151.52	23.519	
7,150.0	6,634.1	6,620.1	6,620.1	26.0	130.8	-96.36	1,431.7	-3,688.8	3,608.5	3,452.7	155.82	23.158	
7,185.0	6,635.1	6,621.1	6,621.1	26.4	130.8	-90.41	1,431.7	-3,688.8	3,640.3	3,483.1	157.14	23.166	
7,196.6	6,635.0	6,621.0	6,621.0	26.5	130.8	-88.42	1,431.7	-3,688.8	3,650.8	3,493.5	157.20	23.223	
7,200.0	6,635.0	6,621.0	6,621.0	26.6	130.8	-88.42	1,431.7	-3,688.8	3,653.9	3,496.6	157.24	23.237	
7,283.4	6,633.9	6,619.9	6,619.9	27.6	130.8	-88.38	1,431.7	-3,688.8	3,729.8	3,571.5	158.24	23.570	
7,300.0	6,633.7	6,619.7	6,619.7	27.8	130.8	-88.37	1,431.7	-3,688.8	3,744.9	3,586.4	158.44	23.635	
7,381.9	6,632.6	6,618.6	6,618.6	29.0	130.7	-88.33	1,431.7	-3,688.8	3,819.7	3,660.1	159.61	23.932	
7,400.0	6,632.4	6,618.4	6,618.4	29.2	130.7	-88.32	1,431.7	-3,688.8	3,836.3	3,676.5	159.86	23.997	
7,480.3	6,631.4	6,617.4	6,617.4	30.5	130.7	-88.28	1,431.7	-3,688.8	3,910.1	3,748.9	161.16	24.263	
7,500.0	6,631.1	6,617.1	6,617.1	30.9	130.7	-88.27	1,431.7	-3,688.8	3,928.2	3,766.7	161.47	24.327	
7,578.7	6,630.1	6,616.1	6,616.1	32.3	130.7	-88.23	1,431.7	-3,688.8	4,000.8	3,838.0	162.87	24.565	
7,600.0	6,629.8	6,615.8	6,615.8	32.7	130.7	-88.22	1,431.7	-3,688.8	4,020.5	3,857.2	163.24	24.629	
7,677.1	6,628.9	6,614.9	6,614.9	34.1	130.7	-88.19	1,431.7	-3,688.8	4,091.9	3,927.2	164.71	24.843	
7,700.0	6,628.6	6,614.6	6,614.6	34.6	130.7	-88.17	1,431.7	-3,688.8	4,113.1	3,948.0	165.15	24.906	
7,775.6	6,627.6	6,613.6	6,613.6	36.1	130.6	-88.14	1,431.7	-3,688.8	4,183.3	4,016.7	166.67	25.099	
7,800.0	6,627.3	6,613.3	6,613.3	36.6	130.6	-88.13	1,431.7	-3,688.8	4,206.1	4,038.9	167.16	25.161	
7,874.0	6,626.3	6,612.3	6,612.3	38.2	130.6	-88.09	1,431.7	-3,688.8	4,275.1	4,106.4	168.73	25.337	
7,900.0	6,626.0	6,612.0	6,612.0	38.8	130.6	-88.08	1,431.7	-3,688.8	4,299.4	4,130.1	169.28	25.398	
7,972.4	6,625.1	6,611.1	6,611.1	40.4	130.6	-88.04	1,431.7	-3,688.8	4,367.1	4,196.2	170.87	25.559	
8,000.0	6,624.7	6,610.7	6,610.7	41.0	130.6	-88.03	1,431.7	-3,688.8	4,392.9	4,221.5	171.47	25.619	
8,070.8	6,623.8	6,609.8	6,609.8	42.6	130.6	-88.00	1,431.7	-3,688.8	4,459.4	4,286.3	173.07	25.766	
8,100.0	6,623.4	6,609.4	6,609.4	43.3	130.5	-87.98	1,431.7	-3,688.8	4,486.8	4,313.1	173.73	25.826	
8,169.3	6,622.6	6,608.6	6,608.6	44.9	130.5	-87.95	1,431.7	-3,688.8	4,552.0	4,376.6	175.34	25.961	
8,200.0	6,622.2	6,608.2	6,608.2	45.6	130.5	-87.93	1,431.7	-3,688.8	4,580.9	4,404.9	176.05	26.020	
8,267.7	6,621.3	6,607.3	6,607.3	47.3	130.5	-87.90	1,431.7	-3,688.8	4,644.8	4,467.1	177.65	26.145	
8,300.0	6,620.9	6,606.9	6,606.9	48.0	130.5	-87.88	1,431.7	-3,688.8	4,675.3	4,496.8	178.42	26.204	
8,366.1	6,620.0	6,606.0	6,606.0	49.7	130.5	-87.85	1,431.7	-3,688.8	4,737.8	4,557.8	180.01	26.319	
8,400.0	6,619.6	6,605.6	6,605.6	50.5	130.5	-87.83	1,431.7	-3,688.8	4,769.8	4,589.0	180.83	26.378	
8,464.5	6,618.8	6,604.8	6,604.8	52.1	130.5	-87.80	1,431.7	-3,688.8	4,831.0	4,648.6	182.41	26.485	
8,500.0	6,618.3	6,604.3	6,604.3	53.0	130.4	-87.79	1,431.7	-3,688.8	4,864.6	4,681.4	183.27	26.543	
8,563.0	6,617.5	6,603.5	6,603.5	54.5	130.4	-87.76	1,431.7	-3,688.8	4,924.5	4,739.6	184.83	26.643	
8,600.0	6,617.0	6,603.0	6,603.0	55.5	130.4	-87.74	1,431.7	-3,688.8	4,959.7	4,773.9	185.75	26.701	
8,661.4	6,616.3	6,602.3	6,602.3	57.0	130.4	-87.71	1,431.7	-3,688.8	5,018.1	4,830.8	187.29	26.793	
8,700.0	6,615.8	6,601.8	6,601.8	58.0	130.4	-87.69	1,431.7	-3,688.8	5,054.9	4,866.6	188.26	26.851	
8,759.8	6,615.0	6,601.0	6,601.0	59.5	130.4	-87.66	1,431.7	-3,688.8	5,111.9	4,922.1	189.77	26.938	
8,800.0	6,614.5	6,600.5	6,600.5	60.6	130.4	-87.64	1,431.7	-3,688.8	5,150.2	4,959.4	190.78	26.995	
8,858.2	6,613.7	6,599.7	6,599.7	62.1	130.4	-87.61	1,431.7	-3,688.8	5,205.9	5,013.6	192.27	27.076	
8,900.0	6,613.2	6,599.2	6,599.2	63.2	130.3	-87.59	1,431.7	-3,688.8	5,245.8	5,052.5	193.33	27.133	
8,956.7	6,612.5	6,598.5	6,598.5	64.6	130.3	-87.56	1,431.7	-3,688.8	5,300.0	5,105.2	194.79	27.209	
9,000.0	6,611.9	6,597.9	6,597.9	65.8	130.3	-87.54	1,431.7	-3,688.8	5,341.5	5,145.6	195.90	27.266	
9,055.1	6,611.2	6,597.2	6,597.2	67.2	130.3	-87.52	1,431.7	-3,688.8	5,394.3	5,197.0	197.32	27.337	
9,100.0	6,610.6	6,596.6	6,596.6	68.4	130.3	-87.49	1,431.7	-3,688.8	5,437.4	5,238.9	198.48	27.394	
9,153.5	6,609.9	6,595.9	6,595.9	69.8	130.3	-87.47	1,431.7	-3,688.8	5,488.7	5,288.9	199.87	27.461	
9,200.0	6,609.3	6,595.3	6,595.3	71.0	130.3	-87.44	1,431.7	-3,688.8	5,533.4	5,332.3	201.08	27.518	
9,251.9	6,608.7	6,594.7	6,594.7	72.4	130.2	-87.42	1,431.7	-3,688.8	5,583.3	5,380.9	202.44	27.580	
9,300.0	6,608.1	6,594.1	6,594.1	73.7	130.2	-87.40	1,431.7	-3,688.8	5,629.5	5,425.8	203.69	27.637	
9,350.4	6,607.4	6,593.4	6,593.4	75.0	130.2	-87.37	1,431.7	-3,688.8	5,678.0	5,473.0	205.01	27.696	
9,400.0	6,606.8	6,592.8	6,592.8	76.3	130.2	-87.35	1,431.7	-3,688.8	5,725.8	5,519.5	206.32	27.753	
9,448.8	6,606.1	6,592.1	6,592.1	77.6	130.2	-87.32	1,431.7	-3,688.8	5,772.9	5,565.3	207.60	27.808	
9,500.0	6,605.5	6,591.5	6,591.5	79.0	130.2	-87.30	1,431.7	-3,688.8	5,822.2	5,613.3	208.95	27.865	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,604.9	6,590.9	6,590.9	80.2	130.2	-87.28	1,431.7	-3,688.8	5,867.8	5,657.6	210.19	27.916	
9,600.0	6,604.2	6,590.2	6,590.2	81.7	130.2	-87.25	1,431.7	-3,688.8	5,918.8	5,707.2	211.59	27.973	
9,645.6	6,603.6	6,589.6	6,589.6	82.9	130.1	-87.23	1,431.7	-3,688.8	5,962.9	5,750.1	212.80	28.021	
9,700.0	6,602.9	6,588.9	6,588.9	84.3	130.1	-87.20	1,431.7	-3,688.8	6,015.4	5,801.2	214.24	28.078	
9,744.1	6,602.3	6,588.3	6,588.3	85.5	130.1	-87.18	1,431.7	-3,688.8	6,058.0	5,842.6	215.41	28.123	
9,800.0	6,601.6	6,587.6	6,587.6	87.0	130.1	-87.15	1,431.7	-3,688.8	6,112.1	5,895.3	216.90	28.180	
9,842.5	6,601.1	6,587.1	6,587.1	88.2	130.1	-87.13	1,431.7	-3,688.8	6,153.3	5,935.3	218.03	28.223	
9,900.0	6,600.3	6,586.3	6,586.3	89.7	130.1	-87.10	1,431.7	-3,688.8	6,209.0	5,989.4	219.56	28.279	
9,940.9	6,599.8	6,585.8	6,585.8	90.9	130.1	-87.08	1,431.7	-3,688.8	6,248.7	6,028.0	220.65	28.319	
10,000.0	6,599.0	6,585.0	6,585.0	92.5	130.1	-87.05	1,431.7	-3,688.8	6,305.9	6,083.7	222.23	28.376	
10,039.3	6,598.5	6,584.5	6,584.5	93.5	130.0	-87.03	1,431.7	-3,688.8	6,344.1	6,120.8	223.28	28.413	
10,100.0	6,597.7	6,583.7	6,583.7	95.2	130.0	-87.00	1,431.7	-3,688.8	6,403.0	6,178.1	224.91	28.470	
10,137.8	6,597.3	6,583.3	6,583.3	96.2	130.0	-86.99	1,431.7	-3,688.8	6,439.7	6,213.8	225.92	28.505	
10,200.0	6,596.5	6,582.5	6,582.5	97.9	130.0	-86.95	1,431.7	-3,688.8	6,500.1	6,272.5	227.59	28.561	
10,236.2	6,596.0	6,582.0	6,582.0	98.9	130.0	-86.94	1,431.7	-3,688.8	6,535.3	6,306.8	228.56	28.594	
10,300.0	6,595.2	6,581.2	6,581.2	100.6	130.0	-86.91	1,431.7	-3,688.8	6,597.3	6,367.1	230.27	28.650	
10,334.6	6,594.7	6,580.7	6,580.7	101.6	130.0	-86.89	1,431.7	-3,688.8	6,631.0	6,399.8	231.20	28.681	
10,400.0	6,593.9	6,579.9	6,579.9	103.3	130.0	-86.86	1,431.7	-3,688.8	6,694.6	6,461.7	232.96	28.737	
10,433.0	6,593.5	6,579.5	6,579.5	104.2	129.9	-86.84	1,431.7	-3,688.8	6,726.8	6,493.0	233.85	28.765	
10,500.0	6,592.6	6,578.6	6,578.6	106.1	129.9	-86.81	1,431.7	-3,688.8	6,792.0	6,556.4	235.65	28.822	
10,531.5	6,592.2	6,578.2	6,578.2	106.9	129.9	-86.79	1,431.7	-3,688.8	6,822.7	6,586.2	236.50	28.848	
10,600.0	6,591.3	6,577.3	6,577.3	108.8	129.9	-86.76	1,431.7	-3,688.8	6,889.5	6,651.1	238.35	28.905	
10,629.9	6,590.9	6,576.9	6,576.9	109.6	129.9	-86.74	1,431.7	-3,688.8	6,918.6	6,679.5	239.16	28.929	
10,700.0	6,590.0	6,576.0	6,576.0	111.6	129.9	-86.71	1,431.7	-3,688.8	6,987.0	6,745.9	241.05	28.986	
10,728.3	6,589.6	6,575.6	6,575.6	112.3	129.9	-86.69	1,431.7	-3,688.8	7,014.6	6,772.8	241.82	29.008	
10,800.0	6,588.7	6,574.7	6,574.7	114.3	129.8	-86.66	1,431.7	-3,688.8	7,084.6	6,840.8	243.75	29.065	
10,826.7	6,588.4	6,574.4	6,574.4	115.0	129.8	-86.65	1,431.7	-3,688.8	7,110.7	6,866.2	244.48	29.085	
10,900.0	6,587.4	6,573.4	6,573.4	117.0	129.8	-86.61	1,431.7	-3,688.8	7,182.3	6,935.8	246.46	29.142	
10,925.2	6,587.1	6,573.1	6,573.1	117.7	129.8	-86.60	1,431.7	-3,688.8	7,206.8	6,959.7	247.14	29.161	
11,000.0	6,586.1	6,572.1	6,572.1	119.8	129.8	-86.56	1,431.7	-3,688.8	7,280.0	7,030.8	249.17	29.217	
11,023.6	6,585.8	6,571.8	6,571.8	120.4	129.8	-86.55	1,431.7	-3,688.8	7,303.0	7,053.2	249.81	29.235	
11,100.0	6,584.8	6,570.8	6,570.8	122.5	129.8	-86.51	1,431.7	-3,688.8	7,377.8	7,125.9	251.88	29.291	
11,122.0	6,584.5	6,570.5	6,570.5	123.2	129.8	-86.50	1,431.7	-3,688.8	7,399.3	7,146.8	252.47	29.307	
11,200.0	6,583.5	6,569.5	6,569.5	125.3	129.7	-86.46	1,431.7	-3,688.8	7,475.6	7,221.0	254.59	29.363	
11,220.4	6,583.3	6,569.3	6,569.3	125.9	129.7	-86.45	1,431.7	-3,688.8	7,495.6	7,240.5	255.14	29.378	
11,300.0	6,582.2	6,568.2	6,568.2	128.1	129.7	-86.41	1,431.7	-3,688.8	7,573.5	7,316.2	257.30	29.434	
11,318.9	6,582.0	6,568.0	6,568.0	128.6	129.7	-86.40	1,431.7	-3,688.8	7,592.0	7,334.2	257.82	29.447	
11,400.0	6,580.9	6,566.9	6,566.9	130.8	129.7	-86.36	1,431.7	-3,688.8	7,671.4	7,411.4	260.02	29.503	
11,417.3	6,580.7	6,566.7	6,566.7	131.3	129.7	-86.35	1,431.7	-3,688.8	7,688.4	7,427.9	260.49	29.515	
11,500.0	6,579.7	6,565.7	6,565.7	133.6	129.7	-86.31	1,431.7	-3,688.8	7,769.5	7,506.7	262.74	29.571	
11,515.7	6,579.4	6,565.4	6,565.4	134.0	129.7	-86.31	1,431.7	-3,688.8	7,784.9	7,521.7	263.17	29.582	
11,600.0	6,578.4	6,564.4	6,564.4	136.3	129.6	-86.26	1,431.7	-3,688.8	7,867.5	7,602.1	265.46	29.638	
11,614.1	6,578.2	6,564.2	6,564.2	136.7	129.6	-86.26	1,431.7	-3,688.8	7,881.4	7,615.5	265.84	29.647	
11,700.0	6,577.1	6,563.1	6,563.1	139.1	129.6	-86.21	1,431.7	-3,688.8	7,965.6	7,697.4	268.18	29.703	
11,712.6	6,576.9	6,562.9	6,562.9	139.5	129.6	-86.21	1,431.7	-3,688.8	7,977.9	7,709.4	268.52	29.711	
11,800.0	6,575.8	6,561.8	6,561.8	141.9	129.6	-86.16	1,431.7	-3,688.8	8,063.8	7,792.9	270.90	29.767	
11,811.0	6,575.6	6,561.6	6,561.6	142.2	129.6	-86.16	1,431.7	-3,688.8	8,074.6	7,803.4	271.20	29.774	
11,858.8	6,575.0	6,561.0	6,561.0	143.5	129.6	-86.13	1,431.7	-3,688.8	8,121.4	7,848.9	272.50	29.804	
11,859.3	6,575.0	6,561.0	6,561.0	143.5	129.6	-86.13	1,431.7	-3,688.8	8,122.0	7,849.5	272.51	29.805	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-86.77	135.6	-2,404.5	2,408.6				
98.4	98.4	80.2	80.2	0.1	0.0	-86.77	135.5	-2,404.2	2,408.1	2,407.9	0.11	N/A	
100.0	100.0	82.3	82.3	0.1	0.0	-86.77	135.5	-2,404.1	2,408.0	2,407.9	0.11	N/A	
196.8	196.8	165.8	165.8	0.3	0.1	-86.78	135.2	-2,403.6	2,407.4	2,407.0	0.37	6,481.474	
200.0	200.0	168.2	168.2	0.3	0.1	-86.78	135.2	-2,403.6	2,407.4	2,407.0	0.38	6,336.092	
238.0	238.0	200.0	200.0	0.4	0.1	-86.78	135.1	-2,403.5	2,407.3	2,406.8	0.48	4,976.471	
295.3	295.3	259.0	259.0	0.5	0.1	-86.78	135.1	-2,403.5	2,407.3	2,406.7	0.66	3,629.100	
300.0	300.0	264.1	264.1	0.5	0.1	-86.78	135.0	-2,403.5	2,407.3	2,406.7	0.68	3,548.919	
393.7	393.7	374.1	374.1	0.8	0.2	-86.79	134.9	-2,403.1	2,407.0	2,406.0	0.96	2,513.850	
400.0	400.0	381.8	381.8	0.8	0.2	-86.79	134.9	-2,403.1	2,406.9	2,406.0	0.98	2,467.226	
492.1	492.1	461.3	461.3	1.0	0.2	-86.78	135.3	-2,402.5	2,406.3	2,405.1	1.22	1,974.012	
500.0	500.0	467.6	467.6	1.0	0.2	-86.78	135.3	-2,402.5	2,406.3	2,405.1	1.24	1,941.393	
590.5	590.5	566.2	566.2	1.2	0.3	-86.78	135.3	-2,402.3	2,406.2	2,404.7	1.46	1,646.703	
600.0	600.0	578.8	578.8	1.2	0.3	-86.78	135.3	-2,402.2	2,406.1	2,404.6	1.48	1,622.273	
689.0	689.0	659.9	659.9	1.4	0.3	-86.78	135.0	-2,401.7	2,405.5	2,403.8	1.70	1,413.529	
700.0	700.0	669.0	669.0	1.4	0.3	-86.78	135.0	-2,401.7	2,405.5	2,403.8	1.73	1,391.105	
787.4	787.4	770.6	770.6	1.6	0.3	-86.78	135.0	-2,401.3	2,405.2	2,403.2	1.97	1,222.847	
800.0	800.0	788.6	788.6	1.7	0.3	-86.78	135.0	-2,401.1	2,405.1	2,403.1	2.00	1,200.445	
885.8	885.8	871.2	871.2	1.9	0.4	-86.78	135.1	-2,400.2	2,404.1	2,401.9	2.24	1,071.131	
900.0	900.0	884.2	884.2	1.9	0.4	-86.78	135.1	-2,400.1	2,404.0	2,401.7	2.28	1,052.476	
984.2	984.2	959.8	959.8	2.1	0.4	-86.78	135.0	-2,399.5	2,403.4	2,400.8	2.51	958.187	
1,000.0	1,000.0	973.9	973.9	2.1	0.4	-86.78	134.9	-2,399.5	2,403.3	2,400.7	2.55	942.610	
1,081.0	1,081.0	1,043.0	1,043.0	2.3	0.5	-86.78	134.8	-2,399.3	2,403.1	2,400.3	2.74	876.135	
1,082.7	1,082.7	1,044.4	1,044.4	2.3	0.5	-86.78	134.8	-2,399.3	2,403.1	2,400.3	2.75	874.898	
1,100.0	1,100.0	1,058.8	1,058.8	2.3	0.5	-86.78	134.8	-2,399.3	2,403.1	2,400.3	2.79	862.653	
1,181.1	1,181.1	1,134.1	1,134.1	2.5	0.5	-86.77	135.3	-2,399.5	2,403.4	2,400.4	2.98	805.234	
1,200.0	1,200.0	1,154.7	1,154.7	2.6	0.5	-86.77	135.4	-2,399.6	2,403.4	2,400.4	3.04	791.343	
1,279.5	1,279.5	1,234.8	1,234.8	2.7	0.5	8.44	135.8	-2,399.7	2,402.5	2,399.3	3.24	741.186	
1,300.0	1,300.0	1,253.7	1,253.6	2.8	0.5	8.44	135.8	-2,399.8	2,401.9	2,398.6	3.29	730.648	
1,377.9	1,377.8	1,330.2	1,330.2	2.9	0.5	8.46	135.6	-2,400.2	2,398.5	2,395.1	3.47	692.040	
1,400.0	1,399.8	1,354.4	1,354.3	3.0	0.5	8.47	135.6	-2,400.2	2,397.2	2,393.7	3.52	680.812	
1,476.4	1,475.9	1,442.1	1,442.1	3.1	0.5	8.51	135.5	-2,400.3	2,391.0	2,387.3	3.71	644.511	
1,500.0	1,499.5	1,470.8	1,470.8	3.2	0.5	8.53	135.5	-2,400.3	2,388.6	2,384.8	3.76	634.580	
1,574.8	1,573.7	1,558.6	1,558.6	3.4	0.6	8.59	135.1	-2,399.7	2,379.4	2,375.4	3.97	600.023	
1,600.0	1,598.7	1,587.6	1,587.6	3.4	0.6	8.60	134.8	-2,399.4	2,375.8	2,371.7	4.04	588.510	
1,673.2	1,671.1	1,652.6	1,652.5	3.6	0.6	8.65	133.9	-2,398.8	2,364.0	2,359.8	4.24	557.810	
1,700.0	1,697.5	1,675.1	1,675.0	3.7	0.6	8.68	133.7	-2,398.6	2,359.3	2,355.0	4.31	547.341	
1,771.6	1,767.9	1,744.4	1,744.4	3.9	0.6	8.76	133.3	-2,398.3	2,345.8	2,341.3	4.51	520.437	
1,800.0	1,795.6	1,774.4	1,774.3	4.0	0.6	8.80	133.2	-2,398.1	2,339.9	2,335.3	4.58	510.438	
1,870.1	1,864.0	1,841.2	1,841.2	4.3	0.7	8.91	133.4	-2,397.6	2,324.2	2,319.4	4.78	485.748	
1,900.0	1,893.1	1,868.1	1,868.1	4.4	0.7	8.96	133.5	-2,397.4	2,317.0	2,312.1	4.87	475.682	
1,968.5	1,959.3	1,942.5	1,942.4	4.6	0.7	9.10	133.7	-2,396.9	2,299.4	2,294.3	5.08	452.624	
1,992.4	1,982.4	1,973.2	1,973.1	4.7	0.7	9.16	133.7	-2,396.6	2,292.8	2,287.6	5.15	444.785	
2,000.0	1,989.6	1,982.8	1,982.8	4.8	0.7	9.17	133.6	-2,396.5	2,290.7	2,285.5	5.18	442.486	
2,066.9	2,054.0	2,043.0	2,042.9	5.1	0.7	9.23	133.4	-2,395.6	2,271.7	2,266.4	5.37	423.194	
2,100.0	2,085.8	2,069.6	2,069.5	5.2	0.7	9.26	133.3	-2,395.4	2,262.5	2,257.0	5.46	414.744	
2,165.3	2,148.7	2,120.1	2,120.0	5.5	0.8	9.31	132.9	-2,395.0	2,244.4	2,238.8	5.62	399.026	
2,200.0	2,182.0	2,145.3	2,145.3	5.7	0.8	9.33	132.7	-2,395.0	2,234.9	2,229.2	5.72	390.926	
2,263.8	2,243.4	2,200.0	2,199.9	6.0	0.8	9.39	132.6	-2,395.2	2,217.9	2,212.1	5.88	376.890	
2,300.0	2,278.2	2,228.6	2,228.6	6.2	0.8	9.43	132.6	-2,395.3	2,208.4	2,202.4	5.99	368.979	
2,362.2	2,338.1	2,299.3	2,299.2	6.5	0.8	9.52	132.8	-2,395.5	2,191.8	2,185.6	6.16	355.883	
2,400.0	2,374.4	2,330.9	2,330.8	6.7	0.8	9.56	132.9	-2,395.6	2,181.6	2,175.4	6.27	348.176	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,432.8	2,381.3	2,381.3	7.0	0.8	9.63	133.0	-2,395.8	2,165.5	2,159.1	6.44	336.281		
2,500.0	2,470.6	2,415.8	2,415.8	7.2	0.8	9.67	133.0	-2,396.0	2,155.2	2,148.7	6.55	328.838		
2,559.0	2,527.4	2,471.0	2,470.9	7.6	0.8	9.74	133.0	-2,396.5	2,139.8	2,133.0	6.73	318.032		
2,600.0	2,566.8	2,510.3	2,510.3	7.8	0.8	9.79	132.9	-2,396.9	2,129.1	2,122.2	6.85	310.837		
2,657.5	2,622.1	2,570.4	2,570.3	8.1	0.8	9.87	133.1	-2,397.3	2,114.0	2,107.0	7.02	300.986		
2,700.0	2,663.0	2,612.6	2,612.5	8.3	0.8	9.93	133.4	-2,397.5	2,102.8	2,095.7	7.15	293.987		
2,755.9	2,716.8	2,662.2	2,662.1	8.6	0.8	10.01	133.8	-2,397.8	2,088.1	2,080.8	7.32	285.108		
2,800.0	2,759.2	2,701.7	2,701.6	8.9	0.8	10.07	133.9	-2,398.2	2,076.6	2,069.2	7.46	278.389		
2,854.3	2,811.5	2,761.5	2,761.4	9.2	0.8	10.15	134.2	-2,398.6	2,062.4	2,054.8	7.63	270.260		
2,900.0	2,855.4	2,809.4	2,809.4	9.4	0.9	10.23	134.6	-2,398.8	2,050.3	2,042.5	7.78	263.692		
2,952.7	2,906.2	2,856.4	2,856.3	9.7	0.9	10.31	134.9	-2,399.0	2,036.4	2,028.4	7.94	256.449		
3,000.0	2,951.6	2,900.0	2,899.9	10.0	0.9	10.37	135.0	-2,399.3	2,024.0	2,015.9	8.09	250.205		
3,051.2	3,000.9	2,959.1	2,959.0	10.3	0.9	10.46	135.2	-2,399.5	2,010.4	2,002.2	8.25	243.581		
3,100.0	3,047.8	3,012.4	3,012.3	10.5	0.9	10.56	135.9	-2,399.5	1,997.3	1,988.9	8.41	237.466		
3,149.6	3,095.5	3,055.4	3,055.3	10.8	0.9	10.64	136.3	-2,399.4	1,984.0	1,975.4	8.57	231.512		
3,200.0	3,144.0	3,100.0	3,099.9	11.1	0.9	10.71	136.5	-2,399.5	1,970.5	1,961.8	8.73	225.710		
3,248.0	3,190.2	3,152.9	3,152.8	11.4	0.9	10.80	136.7	-2,399.6	1,957.7	1,948.8	8.89	220.294		
3,300.0	3,240.2	3,210.2	3,210.1	11.7	0.9	10.91	137.2	-2,399.4	1,943.6	1,934.6	9.06	214.587		
3,346.4	3,284.9	3,257.5	3,257.4	11.9	0.9	10.99	137.6	-2,399.2	1,931.0	1,921.7	9.21	209.607		
3,400.0	3,336.4	3,310.7	3,310.6	12.2	0.9	11.08	137.6	-2,398.8	1,916.3	1,906.9	9.39	204.060		
3,444.9	3,379.6	3,351.1	3,351.0	12.5	0.9	11.15	137.6	-2,398.6	1,904.0	1,894.4	9.54	199.621		
3,500.0	3,432.6	3,400.0	3,399.9	12.8	0.9	11.24	137.8	-2,398.4	1,889.0	1,879.3	9.72	194.355		
3,543.3	3,474.3	3,437.7	3,437.6	13.1	1.0	11.31	138.0	-2,398.3	1,877.3	1,867.4	9.86	190.393		
3,600.0	3,528.8	3,486.2	3,486.0	13.4	1.0	11.40	138.4	-2,398.3	1,862.1	1,852.1	10.05	185.372		
3,641.7	3,569.0	3,526.2	3,526.1	13.6	1.0	11.48	138.6	-2,398.4	1,851.1	1,840.9	10.18	181.814		
3,700.0	3,625.0	3,585.8	3,585.7	14.0	1.0	11.59	138.8	-2,398.5	1,835.5	1,825.2	10.37	176.988		
3,740.1	3,663.6	3,621.8	3,621.7	14.2	1.0	11.65	138.7	-2,398.5	1,824.8	1,814.3	10.50	173.743		
3,800.0	3,721.2	3,671.6	3,671.5	14.5	1.0	11.73	138.5	-2,398.7	1,809.0	1,798.3	10.70	169.064		
3,838.6	3,758.3	3,705.1	3,705.0	14.8	1.0	11.79	138.5	-2,399.0	1,799.0	1,788.2	10.83	166.138		
3,900.0	3,817.4	3,773.6	3,773.5	15.1	1.0	11.92	138.5	-2,399.4	1,782.9	1,771.9	11.04	161.496		
3,937.0	3,853.0	3,813.8	3,813.7	15.3	1.0	12.00	138.5	-2,399.5	1,773.1	1,761.9	11.17	158.761		
4,000.0	3,913.6	3,878.9	3,878.8	15.7	1.0	12.11	138.3	-2,399.5	1,756.2	1,744.8	11.38	154.289		
4,035.4	3,947.7	3,917.8	3,917.6	15.9	1.0	12.17	137.9	-2,399.4	1,746.6	1,735.1	11.51	151.797		
4,100.0	4,009.8	3,993.7	3,993.6	16.3	1.0	12.28	136.5	-2,398.9	1,728.8	1,717.1	11.74	147.235		
4,133.8	4,042.4	4,034.2	4,034.1	16.5	1.0	12.33	135.4	-2,398.4	1,719.3	1,707.4	11.87	144.881		
4,200.0	4,106.0	4,111.9	4,111.7	16.8	1.0	12.40	132.8	-2,397.0	1,700.2	1,688.1	12.11	140.383		
4,232.3	4,137.1	4,146.0	4,145.8	17.0	1.0	12.43	131.5	-2,396.3	1,690.8	1,678.5	12.23	138.272		
4,300.0	4,202.2	4,213.8	4,213.5	17.4	1.1	12.49	128.9	-2,394.6	1,670.8	1,658.3	12.47	133.983		
4,330.7	4,231.7	4,239.4	4,239.0	17.6	1.1	12.51	127.9	-2,394.0	1,661.7	1,649.1	12.58	132.142		
4,400.0	4,298.4	4,300.0	4,299.6	18.0	1.1	12.56	125.5	-2,392.8	1,641.6	1,628.8	12.81	128.105		
4,429.1	4,326.4	4,323.6	4,323.2	18.2	1.1	12.58	124.5	-2,392.4	1,633.2	1,620.3	12.91	126.473		
4,500.0	4,394.6	4,388.8	4,388.3	18.6	1.1	12.63	122.0	-2,391.3	1,612.9	1,599.7	13.16	122.580		
4,527.5	4,421.1	4,414.2	4,413.7	18.7	1.1	12.65	121.0	-2,390.9	1,605.0	1,591.7	13.25	121.100		
4,600.0	4,490.8	4,481.2	4,480.7	19.2	1.1	12.73	118.9	-2,390.0	1,584.4	1,570.9	13.51	117.292		
4,626.0	4,515.8	4,505.8	4,505.3	19.3	1.1	12.76	118.3	-2,389.6	1,577.0	1,563.4	13.60	115.953		
4,700.0	4,587.0	4,581.5	4,580.9	19.8	1.1	12.88	116.6	-2,388.4	1,555.9	1,542.0	13.87	112.180		
4,724.4	4,610.5	4,605.6	4,605.0	19.9	1.1	12.92	116.1	-2,387.9	1,548.9	1,534.9	13.96	110.964		
4,800.0	4,683.2	4,673.0	4,672.4	20.3	1.2	13.03	114.6	-2,386.8	1,527.3	1,513.1	14.23	107.333		
4,822.8	4,705.2	4,693.4	4,692.8	20.5	1.2	13.06	114.1	-2,386.5	1,520.9	1,506.6	14.31	106.267		
4,900.0	4,779.4	4,760.9	4,760.3	20.9	1.2	13.17	112.5	-2,385.7	1,499.2	1,484.6	14.59	102.781		
4,921.2	4,799.8	4,779.5	4,778.8	21.0	1.2	13.20	112.1	-2,385.5	1,493.3	1,478.6	14.66	101.845		
5,000.0	4,875.6	4,847.9	4,847.3	21.5	1.2	13.33	111.0	-2,385.1	1,471.6	1,456.7	14.94	98.473		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,894.5	4,865.0	4,864.3	21.6	1.2	13.36	110.8	-2,385.0	1,466.3	1,451.3	15.02	97.653	
5,100.0	4,971.8	4,944.7	4,944.1	22.1	1.2	13.53	109.7	-2,384.8	1,444.6	1,429.3	15.31	94.337	
5,118.1	4,989.2	4,964.9	4,964.2	22.2	1.2	13.58	109.5	-2,384.6	1,439.6	1,424.2	15.38	93.589	
5,200.0	5,068.0	5,045.5	5,044.8	22.7	1.2	13.77	108.9	-2,383.8	1,416.9	1,401.3	15.69	90.284	
5,216.5	5,083.9	5,060.4	5,059.7	22.8	1.2	13.81	108.8	-2,383.7	1,412.4	1,396.6	15.76	89.635	
5,240.0	5,106.5	5,081.6	5,081.0	22.9	1.2	13.87	108.7	-2,383.5	1,405.9	1,390.1	15.85	88.720	
5,300.0	5,164.4	5,136.7	5,136.0	23.2	1.3	13.93	108.6	-2,383.1	1,390.1	1,374.1	15.99	86.926	
5,314.9	5,178.8	5,150.6	5,149.9	23.3	1.3	13.95	108.6	-2,383.0	1,386.4	1,370.4	16.02	86.531	
5,400.0	5,261.5	5,231.1	5,230.4	23.6	1.3	14.06	108.8	-2,382.5	1,366.7	1,350.5	16.19	84.422	
5,413.4	5,274.6	5,244.1	5,243.4	23.6	1.3	14.07	108.8	-2,382.4	1,363.8	1,347.6	16.21	84.120	
5,500.0	5,359.5	5,328.1	5,327.4	23.9	1.3	14.19	109.3	-2,381.9	1,346.6	1,330.2	16.36	82.293	
5,511.8	5,371.1	5,339.4	5,338.7	24.0	1.3	14.20	109.4	-2,381.9	1,344.4	1,328.0	16.38	82.071	
5,600.0	5,458.0	5,425.5	5,424.9	24.2	1.3	14.32	110.2	-2,381.4	1,330.0	1,313.4	16.52	80.529	
5,610.2	5,468.2	5,436.0	5,435.3	24.3	1.3	14.34	110.4	-2,381.4	1,328.4	1,311.9	16.53	80.370	
5,700.0	5,557.2	5,530.2	5,529.5	24.5	1.3	14.48	111.7	-2,380.7	1,316.5	1,299.9	16.65	79.064	
5,708.6	5,565.7	5,539.8	5,539.1	24.5	1.3	14.49	111.8	-2,380.6	1,315.5	1,298.9	16.66	78.952	
5,800.0	5,656.7	5,632.9	5,632.2	24.7	1.4	14.58	112.5	-2,379.4	1,305.9	1,289.1	16.77	77.888	
5,807.1	5,663.7	5,639.1	5,638.4	24.7	1.4	14.58	112.5	-2,379.3	1,305.3	1,288.5	16.77	77.821	
5,900.0	5,756.5	5,728.1	5,727.4	24.9	1.4	14.64	113.1	-2,378.6	1,299.1	1,282.2	16.86	77.041	
5,905.5	5,761.9	5,734.6	5,733.8	24.9	1.4	14.65	113.1	-2,378.6	1,298.8	1,281.9	16.87	77.002	
6,000.0	5,856.4	5,832.1	5,831.3	25.0	1.4	14.69	113.6	-2,377.4	1,295.1	1,278.2	16.95	76.417	
6,003.9	5,860.3	5,835.3	5,834.6	25.0	1.4	14.69	113.7	-2,377.3	1,295.1	1,278.1	16.95	76.399	
6,032.5	5,888.9	5,859.2	5,858.5	25.0	1.4	-80.49	113.8	-2,377.1	1,294.7	1,268.9	25.80	50.190	
6,062.5	5,918.9	5,884.2	5,883.5	25.1	1.4	-80.49	114.0	-2,377.0	1,294.6	1,268.8	25.83	50.120 ES	
6,063.8	5,920.2	5,885.3	5,884.6	25.1	1.4	-170.49	114.0	-2,377.0	1,294.6	1,277.6	17.02	76.042 CC	
6,100.0	5,956.4	5,920.3	5,919.6	25.1	1.4	-170.47	114.3	-2,376.9	1,295.5	1,278.6	16.97	76.340	
6,102.3	5,958.7	5,922.9	5,922.2	25.1	1.4	-170.47	114.3	-2,376.9	1,295.7	1,278.7	16.97	76.362	
6,150.0	6,006.2	5,974.7	5,974.0	25.1	1.4	-170.43	114.7	-2,376.7	1,299.7	1,282.8	16.93	76.781	
6,200.0	6,055.6	6,024.3	6,023.5	25.1	1.4	-170.37	115.0	-2,376.4	1,307.2	1,290.2	16.91	77.321	
6,200.8	6,056.3	6,025.0	6,024.2	25.1	1.4	-170.36	115.0	-2,376.4	1,307.3	1,290.4	16.91	77.331	
6,250.0	6,104.3	6,069.3	6,068.5	25.0	1.4	-170.27	115.4	-2,376.2	1,318.1	1,301.2	16.88	78.073	
6,299.2	6,151.3	6,115.7	6,115.0	24.9	1.4	-170.16	115.9	-2,376.1	1,332.2	1,315.4	16.84	79.090	
6,300.0	6,152.1	6,116.6	6,115.8	24.9	1.4	-170.15	115.9	-2,376.1	1,332.5	1,315.6	16.84	79.109	
6,350.0	6,198.7	6,170.1	6,169.3	24.8	1.4	-170.03	116.2	-2,375.8	1,350.0	1,333.2	16.78	80.456	
6,397.6	6,241.9	6,215.3	6,214.6	24.7	1.5	-169.88	116.3	-2,375.4	1,369.4	1,352.8	16.69	82.057	
6,400.0	6,244.1	6,217.2	6,216.5	24.7	1.5	-169.87	116.3	-2,375.4	1,370.5	1,353.8	16.68	82.145	
6,450.0	6,287.8	6,256.1	6,255.4	24.5	1.5	-169.64	116.3	-2,375.2	1,394.2	1,377.6	16.56	84.189	
6,496.0	6,326.5	6,290.4	6,289.6	24.4	1.5	-169.38	116.3	-2,375.1	1,418.8	1,402.3	16.43	86.369	
6,500.0	6,329.7	6,293.3	6,292.5	24.4	1.5	-169.36	116.3	-2,375.1	1,421.0	1,404.6	16.41	86.567	
6,550.0	6,369.6	6,335.9	6,335.1	24.3	1.5	-169.05	116.2	-2,375.1	1,450.7	1,434.4	16.26	89.216	
6,594.5	6,403.3	6,373.5	6,372.7	24.2	1.5	-168.71	116.1	-2,374.9	1,479.3	1,463.2	16.12	91.744	
6,600.0	6,407.3	6,378.0	6,377.3	24.2	1.5	-168.67	116.1	-2,374.9	1,483.0	1,466.9	16.11	92.065	
6,650.0	6,442.7	6,413.9	6,413.1	24.1	1.5	-168.16	116.1	-2,374.7	1,517.7	1,501.8	15.98	94.996	
6,692.9	6,471.0	6,438.7	6,437.9	24.0	1.5	-167.58	116.0	-2,374.6	1,549.5	1,533.6	15.90	97.439	
6,700.0	6,475.5	6,442.6	6,441.8	24.0	1.5	-167.47	116.0	-2,374.6	1,555.0	1,539.1	15.89	97.828	
6,750.0	6,505.6	6,468.8	6,468.0	24.0	1.5	-166.59	116.0	-2,374.5	1,594.5	1,578.6	15.89	100.319	
6,791.3	6,528.3	6,488.5	6,487.7	24.0	1.5	-165.67	116.0	-2,374.5	1,628.7	1,612.7	15.98	101.893	
6,800.0	6,532.8	6,492.4	6,491.6	24.0	1.5	-165.45	116.0	-2,374.5	1,636.0	1,620.0	16.02	102.156	
6,850.0	6,557.0	6,516.6	6,515.9	24.1	1.5	-163.99	116.1	-2,374.6	1,679.4	1,663.1	16.30	103.032	
6,889.7	6,574.1	6,535.1	6,534.4	24.2	1.5	-162.51	116.0	-2,374.6	1,715.1	1,698.4	16.68	102.807	
6,900.0	6,578.1	6,539.6	6,538.8	24.3	1.5	-162.06	116.0	-2,374.6	1,724.4	1,707.6	16.81	102.605	
6,950.0	6,596.1	6,559.1	6,558.3	24.5	1.5	-159.32	116.0	-2,374.6	1,770.7	1,753.1	17.62	100.504	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,607.5	6,571.6	6,570.9	24.7	1.5	-156.39	116.0	-2,374.6	1,806.9	1,788.3	18.52	97.542	
7,000.0	6,610.7	6,575.1	6,574.3	24.8	1.5	-155.26	115.9	-2,374.6	1,818.2	1,799.3	18.87	96.377	
7,050.0	6,621.9	6,587.4	6,586.7	25.1	1.5	-148.79	115.9	-2,374.6	1,866.5	1,845.8	20.77	89.877	
7,086.6	6,628.0	6,594.1	6,593.4	25.4	1.5	-141.21	115.9	-2,374.6	1,902.4	1,879.6	22.76	83.575	
7,100.0	6,629.7	6,596.1	6,595.3	25.6	1.5	-137.47	115.9	-2,374.6	1,915.6	1,891.9	23.63	81.058	
7,150.0	6,634.1	6,600.9	6,600.2	26.0	1.5	-116.19	115.8	-2,374.6	1,965.1	1,938.0	27.02	72.738	
7,185.0	6,635.1	6,602.1	6,601.3	26.4	1.5	-92.90	115.8	-2,374.6	1,999.9	1,972.1	27.77	72.013	
7,196.6	6,635.0	6,602.0	6,601.3	26.5	1.5	-84.38	115.8	-2,374.6	2,011.3	1,983.4	27.93	72.006	
7,200.0	6,635.0	6,602.0	6,601.2	26.6	1.5	-84.37	115.8	-2,374.6	2,014.7	1,986.8	27.97	72.031	
7,283.4	6,633.9	6,600.9	6,600.2	27.6	1.5	-84.09	115.8	-2,374.6	2,097.7	2,068.7	29.00	72.342	
7,300.0	6,633.7	6,600.7	6,600.0	27.8	1.5	-84.04	115.8	-2,374.6	2,114.2	2,085.0	29.20	72.402	
7,381.9	6,632.6	6,599.7	6,599.0	29.0	1.5	-83.77	115.8	-2,374.6	2,195.6	2,165.3	30.39	72.260	
7,400.0	6,632.4	6,599.5	6,598.7	29.2	1.5	-83.70	115.8	-2,374.6	2,213.7	2,183.0	30.65	72.230	
7,480.3	6,631.4	6,598.5	6,597.7	30.5	1.5	-83.44	115.8	-2,374.6	2,293.6	2,261.7	31.96	71.768	
7,500.0	6,631.1	6,598.2	6,597.5	30.9	1.5	-83.37	115.8	-2,374.6	2,313.2	2,280.9	32.28	71.661	
7,578.7	6,630.1	6,597.2	6,596.5	32.3	1.5	-83.11	115.8	-2,374.6	2,391.6	2,357.9	33.69	70.991	
7,600.0	6,629.8	6,596.9	6,596.2	32.7	1.5	-83.03	115.9	-2,374.6	2,412.8	2,378.7	34.07	70.820	
7,677.1	6,628.9	6,595.9	6,595.2	34.1	1.5	-82.77	115.9	-2,374.6	2,489.6	2,454.1	35.55	70.030	
7,700.0	6,628.6	6,595.6	6,594.9	34.6	1.5	-82.69	115.9	-2,374.6	2,512.4	2,476.4	35.99	69.809	
7,775.6	6,627.6	6,594.7	6,593.9	36.1	1.5	-82.43	115.9	-2,374.6	2,587.7	2,550.2	37.52	68.961	
7,800.0	6,627.3	6,594.3	6,593.6	36.6	1.5	-82.35	115.9	-2,374.6	2,612.0	2,574.0	38.02	68.702	
7,874.0	6,626.3	6,593.4	6,592.6	38.2	1.5	-82.09	115.9	-2,374.6	2,685.8	2,646.2	39.59	67.840	
7,900.0	6,626.0	6,593.0	6,592.3	38.8	1.5	-82.00	115.9	-2,374.6	2,711.7	2,671.6	40.14	67.554	
7,972.4	6,625.1	6,592.1	6,591.3	40.4	1.5	-81.75	115.9	-2,374.6	2,783.9	2,742.2	41.73	66.707	
8,000.0	6,624.7	6,591.7	6,590.9	41.0	1.5	-81.65	115.9	-2,374.6	2,811.4	2,769.1	42.34	66.403	
8,070.8	6,623.8	6,590.7	6,590.0	42.6	1.5	-81.41	115.9	-2,374.6	2,882.0	2,838.1	43.94	65.590	
8,100.0	6,623.4	6,590.3	6,589.6	43.3	1.5	-81.30	115.9	-2,374.6	2,911.1	2,866.5	44.60	65.273	
8,169.3	6,622.6	6,589.4	6,588.7	44.9	1.5	-81.06	115.9	-2,374.6	2,980.2	2,934.0	46.20	64.504	
8,200.0	6,622.2	6,589.0	6,588.2	45.6	1.5	-80.95	115.9	-2,374.6	3,010.8	2,963.9	46.91	64.181	
8,267.7	6,621.3	6,588.1	6,587.3	47.3	1.5	-80.71	115.9	-2,374.6	3,078.4	3,029.9	48.51	63.462	
8,300.0	6,620.9	6,587.6	6,586.9	48.0	1.5	-80.59	115.9	-2,374.6	3,110.6	3,061.3	49.27	63.136	
8,366.1	6,620.0	6,586.7	6,586.0	49.7	1.5	-80.35	115.9	-2,374.6	3,176.5	3,125.7	50.85	62.468	
8,400.0	6,619.6	6,586.2	6,585.5	50.5	1.5	-80.23	115.9	-2,374.6	3,210.3	3,158.7	51.66	62.143	
8,464.5	6,618.8	6,585.3	6,584.6	52.1	1.5	-80.00	115.9	-2,374.6	3,274.7	3,221.5	53.22	61.527	
8,500.0	6,618.3	6,584.8	6,584.1	53.0	1.5	-79.87	115.9	-2,374.6	3,310.1	3,256.0	54.08	61.205	
8,563.0	6,617.5	6,584.0	6,583.2	54.5	1.5	-79.64	115.9	-2,374.6	3,372.9	3,317.3	55.62	60.639	
8,600.0	6,617.0	6,583.4	6,582.7	55.5	1.5	-79.50	115.9	-2,374.6	3,409.9	3,353.4	56.53	60.321	
8,661.4	6,616.3	6,582.6	6,581.8	57.0	1.5	-79.28	115.9	-2,374.6	3,471.2	3,413.1	58.04	59.802	
8,700.0	6,615.8	6,582.0	6,581.3	58.0	1.5	-79.13	115.9	-2,374.6	3,509.7	3,450.7	59.00	59.491	
8,759.8	6,615.0	6,581.2	6,580.4	59.5	1.5	-78.91	115.9	-2,374.6	3,569.4	3,508.9	60.48	59.016	
8,800.0	6,614.5	6,580.6	6,579.8	60.6	1.5	-78.76	115.9	-2,374.6	3,609.5	3,548.0	61.48	58.712	
8,858.2	6,613.7	6,579.7	6,579.0	62.1	1.5	-78.55	115.9	-2,374.6	3,667.6	3,604.7	62.93	58.279	
8,900.0	6,613.2	6,579.1	6,578.4	63.2	1.5	-78.39	115.9	-2,374.6	3,709.3	3,645.3	63.97	57.983	
8,956.7	6,612.5	6,578.3	6,577.5	64.6	1.5	-78.18	115.9	-2,374.6	3,765.9	3,700.5	65.39	57.588	
9,000.0	6,611.9	6,577.7	6,576.9	65.8	1.5	-78.01	115.9	-2,374.6	3,809.1	3,742.7	66.48	57.300	
9,055.1	6,611.2	6,576.8	6,576.1	67.2	1.5	-77.81	115.9	-2,374.6	3,864.2	3,796.3	67.86	56.940	
9,100.0	6,610.6	6,576.2	6,575.4	68.4	1.5	-77.63	115.9	-2,374.6	3,909.0	3,840.0	68.99	56.661	
9,153.5	6,609.9	6,575.4	6,574.6	69.8	1.5	-77.43	115.9	-2,374.6	3,962.4	3,892.1	70.34	56.334	
9,200.0	6,609.3	6,574.7	6,573.9	71.0	1.5	-77.25	116.0	-2,374.6	4,008.8	3,937.3	71.51	56.063	
9,251.9	6,608.7	6,573.9	6,573.1	72.4	1.5	-77.05	116.0	-2,374.6	4,060.7	3,987.9	72.82	55.766	
9,300.0	6,608.1	6,573.2	6,572.4	73.7	1.5	-76.87	116.0	-2,374.6	4,108.7	4,034.7	74.03	55.503	
9,350.4	6,607.4	6,572.4	6,571.7	75.0	1.5	-76.67	116.0	-2,374.6	4,159.0	4,083.7	75.30	55.235	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,606.8	6,571.6	6,570.9	76.3	1.5	-76.48	116.0	-2,374.6	4,208.5	4,132.0	76.55	54.980		
9,448.8	6,606.1	6,570.9	6,570.1	77.6	1.5	-76.29	116.0	-2,374.6	4,257.3	4,179.5	77.78	54.737		
9,500.0	6,605.5	6,570.1	6,569.4	79.0	1.5	-76.09	116.0	-2,374.6	4,308.4	4,229.3	79.07	54.491		
9,547.2	6,604.9	6,569.4	6,568.6	80.2	1.5	-75.90	116.0	-2,374.6	4,355.6	4,275.3	80.26	54.271		
9,600.0	6,604.2	6,568.5	6,567.8	81.7	1.5	-75.69	116.0	-2,374.6	4,408.3	4,326.7	81.58	54.034		
9,645.6	6,603.6	6,567.8	6,567.1	82.9	1.5	-75.52	116.0	-2,374.6	4,453.9	4,371.1	82.73	53.835		
9,700.0	6,602.9	6,567.0	6,566.2	84.3	1.5	-75.30	116.0	-2,374.6	4,508.1	4,424.0	84.10	53.607		
9,744.1	6,602.3	6,566.3	6,565.5	85.5	1.5	-75.13	116.0	-2,374.6	4,552.2	4,467.0	85.20	53.427		
9,800.0	6,601.6	6,565.4	6,564.6	87.0	1.5	-74.90	116.0	-2,374.6	4,608.0	4,521.4	86.60	53.208		
9,842.5	6,601.1	6,564.7	6,564.0	88.2	1.5	-74.73	116.0	-2,374.6	4,650.5	4,562.8	87.67	53.045		
9,900.0	6,600.3	6,563.8	6,563.0	89.7	1.5	-74.50	116.0	-2,374.6	4,707.9	4,618.8	89.11	52.835		
9,940.9	6,599.8	6,563.1	6,562.4	90.9	1.5	-74.34	116.0	-2,374.6	4,748.8	4,658.7	90.13	52.688		
10,000.0	6,599.0	6,562.2	6,561.4	92.5	1.5	-74.10	116.0	-2,374.6	4,807.8	4,716.2	91.60	52.486		
10,039.3	6,598.5	6,561.5	6,560.8	93.5	1.5	-73.94	116.0	-2,374.6	4,847.1	4,754.5	92.58	52.355		
10,100.0	6,597.7	6,560.5	6,559.8	95.2	1.5	-73.69	116.0	-2,374.6	4,907.7	4,813.6	94.09	52.161		
10,137.8	6,597.3	6,559.9	6,559.1	96.2	1.5	-73.54	116.0	-2,374.6	4,945.4	4,850.4	95.03	52.043		
10,200.0	6,596.5	6,558.9	6,558.1	97.9	1.5	-73.28	116.0	-2,374.6	5,007.6	4,911.0	96.56	51.858		
10,236.2	6,596.0	6,558.3	6,557.5	98.9	1.5	-73.13	116.0	-2,374.6	5,043.8	4,946.3	97.46	51.753		
10,300.0	6,595.2	6,557.2	6,556.4	100.6	1.5	-72.87	116.0	-2,374.6	5,107.5	5,008.5	99.03	51.576		
10,334.6	6,594.7	6,556.6	6,555.9	101.6	1.5	-72.73	116.0	-2,374.6	5,142.1	5,042.2	99.88	51.482		
10,400.0	6,593.9	6,555.5	6,554.7	103.3	1.5	-72.45	116.0	-2,374.6	5,207.4	5,105.9	101.48	51.313		
10,433.0	6,593.5	6,554.9	6,554.2	104.2	1.5	-72.32	116.0	-2,374.6	5,240.4	5,138.1	102.29	51.229		
10,500.0	6,592.6	6,553.8	6,553.0	106.1	1.5	-72.04	116.0	-2,374.6	5,307.3	5,203.4	103.92	51.069		
10,531.5	6,592.2	6,553.2	6,552.5	106.9	1.5	-71.91	116.0	-2,374.6	5,338.7	5,234.1	104.69	50.995		
10,600.0	6,591.3	6,552.1	6,551.3	108.8	1.5	-71.62	116.0	-2,374.6	5,407.2	5,300.9	106.35	50.842		
10,629.9	6,590.9	6,551.5	6,550.8	109.6	1.5	-71.49	116.0	-2,374.6	5,437.1	5,330.0	107.08	50.777		
10,700.0	6,590.0	6,550.3	6,549.6	111.6	1.5	-71.20	116.0	-2,374.6	5,507.1	5,398.4	108.77	50.632		
10,728.3	6,589.6	6,549.8	6,549.1	112.3	1.5	-71.08	116.0	-2,374.6	5,535.4	5,426.0	109.45	50.575		
10,800.0	6,588.7	6,548.5	6,547.8	114.3	1.5	-70.77	116.0	-2,374.6	5,607.0	5,495.9	111.17	50.438		
10,826.7	6,588.4	6,548.1	6,547.3	115.0	1.5	-70.66	116.0	-2,374.6	5,633.8	5,522.0	111.81	50.389		
10,900.0	6,587.4	6,546.8	6,546.0	117.0	1.5	-70.35	116.0	-2,374.6	5,707.0	5,593.4	113.55	50.260		
10,925.2	6,587.1	6,546.3	6,545.6	117.7	1.5	-70.24	116.0	-2,374.6	5,732.1	5,618.0	114.15	50.217		
11,000.0	6,586.1	6,545.0	6,544.2	119.8	1.5	-69.92	116.0	-2,374.6	5,806.9	5,691.0	115.92	50.096		
11,023.6	6,585.8	6,544.5	6,543.8	120.4	1.5	-69.82	116.0	-2,374.6	5,830.5	5,714.0	116.47	50.059		
11,100.0	6,584.8	6,543.1	6,542.4	122.5	1.5	-69.49	116.0	-2,374.6	5,906.8	5,788.5	118.26	49.946		
11,122.0	6,584.5	6,542.7	6,542.0	123.2	1.5	-69.39	116.0	-2,374.6	5,928.8	5,810.0	118.78	49.914		
11,200.0	6,583.5	6,541.3	6,540.5	125.3	1.5	-69.05	116.0	-2,374.6	6,006.7	5,886.1	120.59	49.809		
11,220.4	6,583.3	6,540.9	6,540.2	125.9	1.5	-68.96	116.0	-2,374.6	6,027.2	5,906.1	121.07	49.783		
11,300.0	6,582.2	6,539.4	6,538.7	128.1	1.5	-68.62	116.0	-2,374.6	6,106.6	5,983.7	122.91	49.686		
11,318.9	6,582.0	6,539.1	6,538.3	128.6	1.5	-68.53	116.0	-2,374.6	6,125.5	6,002.2	123.34	49.663		
11,400.0	6,580.9	6,537.5	6,536.8	130.8	1.5	-68.18	116.0	-2,374.6	6,206.6	6,081.4	125.20	49.574		
11,417.3	6,580.7	6,537.2	6,536.5	131.3	1.5	-68.10	116.0	-2,374.6	6,223.9	6,098.3	125.59	49.556		
11,500.0	6,579.7	6,535.6	6,534.9	133.6	1.5	-67.74	116.0	-2,374.6	6,306.5	6,179.0	127.47	49.475		
11,515.7	6,579.4	6,535.3	6,534.6	134.0	1.5	-67.67	116.0	-2,374.6	6,322.2	6,194.4	127.82	49.460		
11,600.0	6,578.4	6,533.7	6,532.9	136.3	1.5	-67.29	116.1	-2,374.6	6,406.4	6,276.7	129.72	49.387		
11,614.1	6,578.2	6,533.4	6,532.7	136.7	1.5	-67.23	116.1	-2,374.6	6,420.6	6,290.5	130.04	49.375		
11,700.0	6,577.1	6,531.7	6,531.0	139.1	1.5	-66.85	116.1	-2,374.6	6,506.4	6,374.4	131.95	49.311		
11,712.6	6,576.9	6,531.5	6,530.8	139.5	1.5	-66.79	116.1	-2,374.6	6,518.9	6,386.7	132.23	49.302		
11,800.0	6,575.8	6,529.8	6,529.0	141.9	1.5	-66.40	116.1	-2,374.6	6,606.3	6,472.2	134.15	49.245		
11,811.0	6,575.6	6,529.6	6,528.8	142.2	1.5	-66.35	116.1	-2,374.6	6,617.3	6,482.9	134.39	49.238		
11,858.8	6,575.0	6,528.6	6,527.9	143.5	1.5	-66.14	116.1	-2,374.6	6,665.0	6,529.6	135.44	49.211 SF		
11,859.3	6,575.0	6,528.6	6,527.8	143.5	1.5	-66.14	116.1	-2,374.6	6,665.6	6,530.2	135.44	49.213		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	172.90	-963.6	120.0	971.5				
98.4	98.4	68.2	68.2	0.1	0.0	172.90	-963.7	120.1	971.1	971.0	0.10	9,743.841	
100.0	100.0	69.8	69.8	0.1	0.0	172.90	-963.7	120.1	971.1	971.0	0.10	9,566.124	
196.8	196.8	169.3	169.3	0.3	0.0	172.90	-963.9	120.1	971.3	971.0	0.33	2,950.838	
200.0	200.0	172.6	172.6	0.3	0.0	172.90	-963.9	120.1	971.3	971.0	0.34	2,885.294	
281.3	281.3	253.3	253.3	0.5	0.1	172.90	-963.8	120.0	971.2	970.6	0.59	1,652.383	
295.3	295.3	266.7	266.7	0.5	0.1	172.90	-963.8	120.0	971.2	970.6	0.64	1,527.653	
300.0	300.0	271.3	271.3	0.5	0.1	172.90	-963.8	120.0	971.2	970.6	0.65	1,489.733	
393.7	393.7	363.9	363.9	0.8	0.2	172.91	-964.0	119.8	971.4	970.4	0.97	1,004.551	
400.0	400.0	370.2	370.2	0.8	0.2	172.92	-964.0	119.8	971.4	970.4	0.99	983.208	
492.1	492.1	462.6	462.6	1.0	0.3	172.92	-964.1	119.8	971.5	970.3	1.26	768.911	
500.0	500.0	470.6	470.6	1.0	0.3	172.92	-964.1	119.8	971.6	970.3	1.29	755.603	
590.5	590.5	560.6	560.6	1.2	0.3	172.91	-964.3	119.9	971.7	970.2	1.54	629.315	
600.0	600.0	570.0	570.0	1.2	0.4	172.91	-964.3	120.0	971.7	970.2	1.57	618.485	
689.0	689.0	656.8	656.8	1.4	0.4	172.89	-964.5	120.3	972.0	970.2	1.82	533.793	
700.0	700.0	667.5	667.5	1.4	0.4	172.89	-964.5	120.3	972.0	970.2	1.85	524.995	
787.4	787.4	751.8	751.8	1.6	0.5	172.87	-965.0	120.8	972.6	970.5	2.09	464.965	
800.0	800.0	763.9	763.9	1.7	0.5	172.86	-965.1	120.9	972.7	970.5	2.13	457.488	
885.8	885.8	847.1	847.1	1.9	0.5	172.83	-965.8	121.5	973.5	971.2	2.36	412.663	
900.0	900.0	860.9	860.9	1.9	0.5	172.82	-966.0	121.6	973.7	971.3	2.40	406.136	
984.2	984.2	943.3	943.3	2.1	0.6	172.78	-966.9	122.5	974.7	972.1	2.62	371.479	
1,000.0	1,000.0	958.7	958.7	2.1	0.6	172.77	-967.1	122.7	974.9	972.3	2.67	365.687	
1,082.7	1,082.7	1,041.7	1,041.6	2.3	0.6	172.72	-968.1	123.7	976.1	973.2	2.89	338.088	
1,100.0	1,100.0	1,059.5	1,059.5	2.3	0.6	172.71	-968.3	124.0	976.3	973.4	2.93	332.829	
1,181.1	1,181.1	1,141.7	1,141.7	2.5	0.7	172.66	-969.2	124.9	977.3	974.1	3.15	310.375	
1,200.0	1,200.0	1,160.6	1,160.5	2.6	0.7	172.65	-969.4	125.1	977.5	974.3	3.20	305.605	
1,279.5	1,279.5	1,241.1	1,241.1	2.7	0.7	-92.24	-970.2	125.9	978.5	975.0	3.43	285.586	
1,300.0	1,300.0	1,262.2	1,262.1	2.8	0.7	-92.29	-970.4	126.0	978.7	975.2	3.48	281.401	
1,377.9	1,377.8	1,342.7	1,342.6	2.9	0.7	-92.51	-971.1	126.3	979.6	975.9	3.67	266.961	
1,400.0	1,399.8	1,365.6	1,365.5	3.0	0.8	-92.60	-971.3	126.4	979.8	976.0	3.72	263.135	
1,476.4	1,475.9	1,443.9	1,443.8	3.1	0.8	-92.96	-971.7	126.4	980.5	976.6	3.92	250.430	
1,500.0	1,499.5	1,467.8	1,467.7	3.2	0.8	-93.09	-971.8	126.3	980.7	976.7	3.97	246.834	
1,574.8	1,573.7	1,545.6	1,545.5	3.4	0.8	-93.57	-972.1	125.7	981.4	977.2	4.17	235.384	
1,600.0	1,598.7	1,572.3	1,572.2	3.4	0.8	-93.76	-972.1	125.5	981.6	977.4	4.23	231.784	
1,673.2	1,671.1	1,644.4	1,644.4	3.6	0.8	-94.36	-972.0	125.0	982.2	977.8	4.45	220.958	
1,700.0	1,697.5	1,669.7	1,669.6	3.7	0.8	-94.60	-972.0	124.9	982.6	978.0	4.52	217.286	
1,771.6	1,767.9	1,738.3	1,738.2	3.9	0.8	-95.30	-972.1	124.6	983.8	979.0	4.75	207.043	
1,800.0	1,795.6	1,765.7	1,765.6	4.0	0.8	-95.61	-972.2	124.6	984.4	979.6	4.84	203.318	
1,870.1	1,864.0	1,832.0	1,831.9	4.3	0.9	-96.42	-972.3	124.8	986.3	981.2	5.10	193.203	
1,900.0	1,893.1	1,859.7	1,859.6	4.4	0.9	-96.78	-972.4	124.9	987.3	982.0	5.22	189.119	
1,968.5	1,959.3	1,923.4	1,923.3	4.6	0.9	-97.67	-972.8	125.1	990.0	984.5	5.52	179.295	
1,992.4	1,982.4	1,946.0	1,945.9	4.7	0.9	-98.00	-973.0	125.3	991.1	985.5	5.63	176.136	
2,000.0	1,989.6	1,953.1	1,953.0	4.8	0.9	-98.11	-973.0	125.3	991.5	985.8	5.66	175.101	
2,066.9	2,054.0	2,016.8	2,016.7	5.1	0.9	-99.13	-973.5	125.9	995.0	989.0	5.99	166.234	
2,100.0	2,085.8	2,049.3	2,049.2	5.2	0.9	-99.65	-973.7	126.3	996.8	990.7	6.14	162.249	
2,165.3	2,148.7	2,112.8	2,112.7	5.5	1.0	-100.67	-974.0	127.1	1,000.6	994.2	6.47	154.635	
2,200.0	2,182.0	2,145.1	2,145.1	5.7	1.0	-101.19	-974.1	127.6	1,002.8	996.2	6.64	150.942	
2,263.8	2,243.4	2,204.8	2,204.7	6.0	1.0	-102.15	-974.5	128.5	1,007.1	1,000.1	6.97	144.461	
2,300.0	2,278.2	2,239.3	2,239.2	6.2	1.0	-102.70	-974.7	129.1	1,009.7	1,002.6	7.16	141.076	
2,362.2	2,338.1	2,298.5	2,298.4	6.5	1.0	-103.64	-975.0	130.2	1,014.5	1,007.0	7.48	135.559	
2,400.0	2,374.4	2,334.3	2,334.2	6.7	1.0	-104.21	-975.2	130.8	1,017.5	1,009.8	7.68	132.473	
2,460.6	2,432.8	2,391.8	2,391.7	7.0	1.0	-105.11	-975.6	131.8	1,022.6	1,014.6	8.00	127.792	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,470.6	2,430.4	2,430.3	7.2	1.1	-105.70	-975.9	132.4	1,026.1	1,017.9	8.21	124.981	
2,559.0	2,527.4	2,488.9	2,488.8	7.6	1.1	-106.59	-976.3	133.2	1,031.4	1,022.9	8.52	120.990	
2,600.0	2,566.8	2,528.6	2,528.4	7.8	1.1	-107.19	-976.5	133.7	1,035.2	1,026.5	8.74	118.426	
2,657.5	2,622.1	2,583.8	2,583.7	8.1	1.1	-108.02	-976.8	134.5	1,040.7	1,031.7	9.05	115.034	
2,700.0	2,663.0	2,624.2	2,624.0	8.3	1.1	-108.62	-977.0	135.1	1,045.0	1,035.7	9.27	112.699	
2,755.9	2,716.8	2,676.8	2,676.7	8.6	1.1	-109.40	-977.2	135.8	1,050.7	1,041.2	9.57	109.806	
2,800.0	2,759.2	2,719.3	2,719.2	8.9	1.2	-110.02	-977.5	136.4	1,055.5	1,045.7	9.80	107.681	
2,854.3	2,811.5	2,773.3	2,773.1	9.2	1.2	-110.79	-977.8	137.1	1,061.4	1,051.3	10.09	105.203	
2,900.0	2,855.4	2,816.6	2,816.5	9.4	1.2	-111.40	-978.1	137.4	1,066.5	1,056.2	10.33	103.246	
2,952.7	2,906.2	2,863.3	2,863.1	9.7	1.2	-112.06	-978.5	138.0	1,072.7	1,062.1	10.61	101.118	
3,000.0	2,951.6	2,905.5	2,905.3	10.0	1.2	-112.65	-978.9	138.6	1,078.5	1,067.7	10.86	99.348	
3,051.2	3,000.9	2,956.1	2,955.9	10.3	1.2	-113.35	-979.4	139.3	1,085.0	1,073.9	11.12	97.540	
3,100.0	3,047.8	3,004.3	3,004.1	10.5	1.3	-114.00	-980.0	139.8	1,091.3	1,079.9	11.38	95.918	
3,149.6	3,095.5	3,052.1	3,051.9	10.8	1.3	-114.64	-980.4	140.4	1,097.8	1,086.2	11.63	94.367	
3,200.0	3,144.0	3,100.7	3,100.5	11.1	1.3	-115.28	-980.9	141.0	1,104.5	1,092.6	11.89	92.888	
3,248.0	3,190.2	3,146.7	3,146.5	11.4	1.3	-115.89	-981.2	141.6	1,111.1	1,098.9	12.14	91.554	
3,300.0	3,240.2	3,196.5	3,196.3	11.7	1.3	-116.54	-981.7	142.3	1,118.3	1,105.9	12.40	90.197	
3,346.4	3,284.9	3,239.8	3,239.5	11.9	1.3	-117.10	-982.0	142.9	1,124.9	1,112.2	12.63	89.054	
3,400.0	3,336.4	3,289.4	3,289.1	12.2	1.3	-117.75	-982.3	143.9	1,132.7	1,119.8	12.90	87.822	
3,444.9	3,379.6	3,329.8	3,329.6	12.5	1.4	-118.28	-982.6	144.8	1,139.5	1,126.3	13.12	86.852	
3,500.0	3,432.6	3,379.0	3,378.7	12.8	1.4	-118.93	-982.8	146.2	1,148.1	1,134.7	13.39	85.740	
3,543.3	3,474.3	3,418.8	3,418.5	13.1	1.4	-119.45	-983.1	147.5	1,155.0	1,141.4	13.60	84.926	
3,600.0	3,528.8	3,472.7	3,472.4	13.4	1.4	-120.15	-983.4	149.2	1,164.4	1,150.5	13.87	83.933	
3,641.7	3,569.0	3,512.7	3,512.3	13.6	1.4	-120.66	-983.6	150.6	1,171.3	1,157.3	14.07	83.246	
3,700.0	3,625.0	3,569.3	3,568.9	14.0	1.4	-121.38	-983.9	152.5	1,181.2	1,166.9	14.34	82.352	
3,740.1	3,663.6	3,607.7	3,607.3	14.2	1.4	-121.87	-984.0	153.8	1,188.1	1,173.5	14.53	81.765	
3,800.0	3,721.2	3,661.8	3,661.4	14.5	1.5	-122.54	-984.3	155.7	1,198.6	1,183.8	14.81	80.934	
3,838.6	3,758.3	3,696.7	3,696.2	14.8	1.5	-122.96	-984.5	156.9	1,205.5	1,190.5	14.99	80.432	
3,900.0	3,817.4	3,754.7	3,754.2	15.1	1.5	-123.66	-984.9	158.9	1,216.7	1,201.5	15.27	79.687	
3,937.0	3,853.0	3,789.6	3,789.1	15.3	1.5	-124.08	-985.2	160.3	1,223.6	1,208.2	15.44	79.265	
4,000.0	3,913.6	3,849.6	3,849.1	15.7	1.5	-124.79	-985.5	162.6	1,235.5	1,219.8	15.72	78.599	
4,035.4	3,947.7	3,883.4	3,882.8	15.9	1.5	-125.19	-985.6	163.9	1,242.2	1,226.3	15.88	78.247	
4,100.0	4,009.8	3,945.7	3,945.0	16.3	1.6	-125.91	-985.9	166.4	1,254.7	1,238.5	16.16	77.648	
4,133.8	4,042.4	3,978.4	3,977.8	16.5	1.6	-126.29	-986.0	167.7	1,261.2	1,244.9	16.31	77.352	
4,200.0	4,106.0	4,043.9	4,043.2	16.8	1.6	-127.03	-986.2	170.2	1,274.2	1,257.6	16.59	76.812	
4,232.3	4,137.1	4,076.3	4,075.5	17.0	1.6	-127.38	-986.3	171.3	1,280.5	1,263.8	16.73	76.562	
4,300.0	4,202.2	4,148.0	4,147.2	17.4	1.6	-128.16	-986.3	173.8	1,293.8	1,276.8	17.00	76.082	
4,330.7	4,231.7	4,181.5	4,180.7	17.6	1.6	-128.52	-986.2	174.8	1,299.7	1,282.6	17.13	75.875	
4,400.0	4,298.4	4,253.4	4,252.5	18.0	1.6	-129.27	-985.8	176.7	1,312.9	1,295.5	17.41	75.417	
4,429.1	4,326.4	4,283.1	4,282.2	18.2	1.7	-129.58	-985.5	177.5	1,318.5	1,300.9	17.53	75.231	
4,500.0	4,394.6	4,356.5	4,355.6	18.6	1.7	-130.34	-984.7	179.4	1,331.9	1,314.1	17.80	74.812	
4,527.5	4,421.1	4,385.2	4,384.3	18.7	1.7	-130.64	-984.2	180.1	1,337.1	1,319.2	17.91	74.657	
4,600.0	4,490.8	4,458.4	4,457.5	19.2	1.7	-131.38	-982.9	181.8	1,350.8	1,332.6	18.19	74.267	
4,626.0	4,515.8	4,484.4	4,483.5	19.3	1.7	-131.65	-982.4	182.4	1,355.6	1,337.4	18.29	74.134	
4,700.0	4,587.0	4,556.5	4,555.6	19.8	1.7	-132.37	-980.8	184.1	1,369.7	1,351.1	18.57	73.766	
4,724.4	4,610.5	4,580.1	4,579.1	19.9	1.7	-132.60	-980.3	184.6	1,374.3	1,355.7	18.66	73.651	
4,800.0	4,683.2	4,654.8	4,653.8	20.3	1.7	-133.33	-978.6	186.2	1,388.8	1,369.9	18.94	73.325	
4,822.8	4,705.2	4,677.6	4,676.6	20.5	1.7	-133.55	-978.1	186.7	1,393.2	1,374.2	19.02	73.232	
4,900.0	4,779.4	4,753.0	4,751.9	20.9	1.7	-134.27	-976.2	188.3	1,408.1	1,388.8	19.31	72.934	
4,921.2	4,799.8	4,773.5	4,772.5	21.0	1.7	-134.46	-975.6	188.7	1,412.2	1,392.9	19.38	72.856	
5,000.0	4,875.6	4,848.4	4,847.3	21.5	1.8	-135.16	-973.7	190.3	1,427.7	1,408.0	19.67	72.581	
5,019.7	4,894.5	4,866.9	4,865.8	21.6	1.8	-135.33	-973.2	190.6	1,431.6	1,411.8	19.74	72.515	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,100.0	4,971.8	4,940.8	4,939.6	22.1	1.8	-135.98	-971.7	192.0	1,447.7	1,427.6	20.04	72.250	
5,118.1	4,989.2	4,957.1	4,956.0	22.2	1.8	-136.12	-971.4	192.3	1,451.3	1,431.2	20.10	72.192	
5,200.0	5,068.0	5,032.4	5,031.2	22.7	1.8	-136.75	-970.5	193.4	1,468.3	1,447.9	20.41	71.948	
5,216.5	5,083.9	5,048.0	5,046.8	22.8	1.8	-136.87	-970.3	193.7	1,471.7	1,451.2	20.47	71.902	
5,240.0	5,106.5	5,070.1	5,069.0	22.9	1.8	-137.05	-970.1	194.0	1,476.6	1,456.1	20.56	71.838	
5,300.0	5,164.4	5,126.3	5,125.1	23.2	1.8	-137.64	-969.7	194.8	1,488.8	1,468.1	20.69	71.965	
5,314.9	5,178.8	5,140.2	5,139.1	23.3	1.8	-137.78	-969.7	195.0	1,491.8	1,471.0	20.71	72.028	
5,400.0	5,261.5	5,220.2	5,219.0	23.6	1.8	-138.51	-969.5	196.0	1,507.5	1,486.6	20.84	72.320	
5,413.4	5,274.6	5,233.0	5,231.8	23.6	1.9	-138.61	-969.5	196.1	1,509.8	1,488.9	20.86	72.367	
5,500.0	5,359.5	5,316.4	5,315.2	23.9	1.9	-139.23	-969.8	197.0	1,523.8	1,502.9	20.99	72.599	
5,511.8	5,371.1	5,328.0	5,326.8	24.0	1.9	-139.31	-969.8	197.1	1,525.6	1,504.6	21.01	72.631	
5,600.0	5,458.0	5,415.0	5,413.8	24.2	1.9	-139.81	-970.4	197.8	1,537.7	1,516.6	21.12	72.797	
5,610.2	5,468.2	5,425.4	5,424.2	24.3	1.9	-139.87	-970.5	197.9	1,539.0	1,517.9	21.14	72.818	
5,700.0	5,557.2	5,516.2	5,515.0	24.5	1.9	-140.27	-971.3	198.4	1,548.9	1,527.7	21.25	72.909	
5,708.6	5,565.7	5,524.7	5,523.5	24.5	1.9	-140.30	-971.4	198.4	1,549.8	1,528.5	21.25	72.918	
5,800.0	5,656.7	5,613.6	5,612.3	24.7	2.0	-140.58	-972.4	198.8	1,557.5	1,536.2	21.36	72.927	
5,807.1	5,663.7	5,620.2	5,619.0	24.7	2.0	-140.59	-972.5	198.8	1,558.0	1,536.7	21.36	72.928	
5,900.0	5,756.5	5,708.7	5,707.5	24.9	2.0	-140.76	-973.8	199.2	1,563.7	1,542.2	21.46	72.857	
5,905.5	5,761.9	5,714.2	5,713.0	24.9	2.0	-140.77	-973.9	199.2	1,563.9	1,542.4	21.47	72.852	
6,000.0	5,856.4	5,809.3	5,808.0	25.0	2.0	-140.83	-975.5	199.7	1,567.2	1,545.6	21.56	72.682	
6,003.9	5,860.3	5,813.2	5,812.0	25.0	2.0	-140.84	-975.5	199.7	1,567.3	1,545.7	21.57	72.672	
6,032.5	5,888.9	5,842.1	5,840.9	25.0	2.0	123.97	-976.0	199.8	1,567.8	1,544.8	22.94	68.356	
6,062.5	5,918.9	5,872.4	5,871.2	25.1	2.0	123.98	-976.4	200.0	1,568.1	1,545.2	22.97	68.261	
6,100.0	5,956.4	5,910.1	5,908.8	25.1	2.0	34.03	-977.0	200.2	1,567.8	1,546.2	21.63	72.483	
6,102.3	5,958.7	5,912.4	5,911.2	25.1	2.0	34.04	-977.0	200.2	1,567.7	1,546.1	21.63	72.483	
6,150.0	6,006.2	5,959.2	5,958.0	25.1	2.1	34.27	-977.7	200.5	1,564.8	1,543.2	21.63	72.342	
6,200.0	6,055.6	6,008.6	6,007.3	25.1	2.1	34.71	-978.4	200.8	1,559.0	1,537.3	21.66	71.961	
6,200.8	6,056.3	6,009.4	6,008.1	25.1	2.1	34.72	-978.4	200.8	1,558.9	1,537.2	21.67	71.953	
6,250.0	6,104.3	6,060.0	6,058.8	25.0	2.1	35.38	-979.1	201.1	1,550.3	1,528.6	21.74	71.328	
6,299.2	6,151.3	6,109.7	6,108.5	24.9	2.1	36.26	-979.7	201.3	1,539.0	1,517.2	21.84	70.476	
6,300.0	6,152.1	6,110.5	6,109.2	24.9	2.1	36.28	-979.7	201.3	1,538.8	1,517.0	21.84	70.459	
6,350.0	6,198.7	6,159.7	6,158.4	24.8	2.1	37.41	-980.1	201.5	1,524.5	1,502.6	21.98	69.365	
6,397.6	6,241.9	6,205.2	6,203.9	24.7	2.1	38.73	-980.4	201.7	1,508.5	1,486.4	22.14	68.122	
6,400.0	6,244.1	6,207.4	6,206.1	24.7	2.1	38.80	-980.4	201.7	1,507.7	1,485.5	22.15	68.054	
6,450.0	6,287.8	6,252.7	6,251.5	24.5	2.1	40.46	-980.6	201.9	1,488.3	1,466.0	22.37	66.541	
6,496.0	6,326.5	6,292.9	6,291.6	24.4	2.1	42.24	-980.8	202.1	1,468.5	1,445.9	22.60	64.971	
6,500.0	6,329.7	6,296.3	6,295.0	24.4	2.1	42.40	-980.8	202.1	1,466.7	1,444.1	22.62	64.829	
6,550.0	6,369.6	6,333.2	6,331.9	24.3	2.2	44.57	-980.8	202.3	1,443.0	1,420.1	22.91	62.988	
6,594.5	6,403.3	6,364.1	6,362.8	24.2	2.2	46.74	-980.9	202.5	1,420.3	1,397.1	23.20	61.223	
6,600.0	6,407.3	6,367.8	6,366.5	24.2	2.2	47.03	-981.0	202.6	1,417.4	1,394.2	23.24	60.998	
6,650.0	6,442.7	6,400.0	6,398.7	24.1	2.2	49.78	-981.1	202.9	1,390.3	1,366.7	23.61	58.890	
6,692.9	6,471.0	6,426.7	6,425.4	24.0	2.2	52.42	-981.3	203.1	1,365.8	1,341.9	23.96	57.000	
6,700.0	6,475.5	6,430.8	6,429.6	24.0	2.2	52.88	-981.3	203.2	1,361.7	1,337.7	24.02	56.689	
6,750.0	6,505.6	6,458.8	6,457.5	24.0	2.2	56.25	-981.5	203.5	1,331.9	1,307.5	24.46	54.461	
6,791.3	6,528.3	6,480.0	6,478.7	24.0	2.2	59.24	-981.8	203.7	1,306.6	1,281.8	24.83	52.624	
6,800.0	6,532.8	6,484.2	6,483.0	24.0	2.2	59.89	-981.8	203.8	1,301.2	1,276.3	24.90	52.251	
6,850.0	6,557.0	6,500.0	6,498.7	24.1	2.2	63.41	-982.0	204.0	1,269.9	1,244.6	25.32	50.163	
6,889.7	6,574.1	6,521.4	6,520.1	24.2	2.2	66.81	-982.3	204.2	1,244.6	1,219.0	25.68	48.465	
6,900.0	6,578.1	6,525.0	6,523.7	24.3	2.2	67.61	-982.4	204.3	1,238.1	1,212.4	25.76	48.063	
6,950.0	6,596.1	6,540.8	6,539.5	24.5	2.2	71.56	-982.7	204.5	1,206.3	1,180.1	26.16	46.117	
6,988.2	6,607.5	6,551.1	6,549.8	24.7	2.2	74.53	-982.9	204.6	1,182.0	1,155.6	26.45	44.682	
7,000.0	6,610.7	6,553.9	6,552.6	24.8	2.2	75.44	-983.0	204.7	1,174.6	1,148.0	26.54	44.259	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,621.9	6,564.1	6,562.8	25.1	2.2	79.17	-983.2	204.8	1,143.4	1,116.4	26.92	42.468	
7,086.6	6,628.0	6,569.7	6,568.4	25.4	2.2	81.76	-983.4	204.9	1,121.0	1,093.8	27.23	41.173	
7,100.0	6,629.7	6,571.4	6,570.1	25.6	2.2	82.66	-983.4	204.9	1,112.9	1,085.6	27.33	40.714	
7,150.0	6,634.1	6,575.7	6,574.4	26.0	2.2	85.83	-983.5	204.9	1,083.5	1,055.7	27.80	38.980	
7,185.0	6,635.1	6,577.0	6,575.7	26.4	2.2	87.84	-983.5	205.0	1,063.7	1,035.5	28.16	37.773	
7,196.6	6,635.0	6,577.1	6,575.7	26.5	2.2	88.45	-983.6	205.0	1,057.3	1,029.0	28.28	37.385	
7,200.0	6,635.0	6,577.1	6,575.8	26.6	2.2	88.45	-983.6	205.0	1,055.4	1,027.1	28.32	37.269	
7,283.4	6,633.9	6,577.2	6,575.8	27.6	2.2	88.46	-983.6	205.0	1,012.2	982.9	29.35	34.491	
7,300.0	6,633.7	6,577.2	6,575.9	27.8	2.2	88.46	-983.6	205.0	1,004.3	974.7	29.55	33.984	
7,381.9	6,632.6	6,577.2	6,575.9	29.0	2.2	88.47	-983.6	205.0	968.1	937.3	30.74	31.493	
7,400.0	6,632.4	6,577.3	6,575.9	29.2	2.2	88.47	-983.6	205.0	960.8	929.8	31.00	30.992	
7,480.3	6,631.4	6,577.3	6,576.0	30.5	2.2	88.47	-983.6	205.0	932.3	900.0	32.32	28.846	
7,500.0	6,631.1	6,577.4	6,576.0	30.9	2.2	88.47	-983.6	205.0	926.2	893.6	32.64	28.374	
7,578.7	6,630.1	6,577.4	6,576.1	32.3	2.2	88.48	-983.6	205.0	905.8	871.7	34.06	26.595	
7,600.0	6,629.8	6,577.5	6,576.1	32.7	2.2	88.48	-983.6	205.0	901.4	866.9	34.44	26.171	
7,677.1	6,628.9	6,577.5	6,576.2	34.1	2.2	88.49	-983.6	205.0	889.5	853.5	35.93	24.753	
7,700.0	6,628.6	6,577.6	6,576.2	34.6	2.2	88.49	-983.6	205.0	887.2	850.8	36.38	24.390	
7,775.6	6,627.6	6,577.6	6,576.3	36.1	2.2	88.49	-983.6	205.0	883.9	845.9	37.92	23.306	
7,776.8	6,627.6	6,577.6	6,576.3	36.2	2.2	88.49	-983.6	205.0	883.9	845.9	37.95	23.291 CC	
7,800.0	6,627.3	6,577.7	6,576.3	36.6	2.2	88.49	-983.6	205.0	884.2	845.8	38.42	23.011 ES	
7,874.0	6,626.3	6,577.7	6,576.4	38.2	2.2	88.50	-983.6	205.0	889.2	849.2	40.01	22.224	
7,900.0	6,626.0	6,577.8	6,576.4	38.8	2.2	88.50	-983.6	205.0	892.4	851.9	40.57	21.998	
7,972.4	6,625.1	6,577.8	6,576.5	40.4	2.2	88.50	-983.6	205.0	905.3	863.1	42.18	21.463	
8,000.0	6,624.7	6,577.9	6,576.5	41.0	2.2	88.51	-983.6	205.0	911.6	868.8	42.79	21.304	
8,070.8	6,623.8	6,577.9	6,576.6	42.6	2.2	88.51	-983.6	205.0	931.5	887.1	44.42	20.972	
8,100.0	6,623.4	6,578.0	6,576.6	43.3	2.2	88.51	-983.6	205.0	941.1	896.0	45.08	20.875	
8,169.3	6,622.6	6,578.0	6,576.7	44.9	2.2	88.52	-983.6	205.0	967.1	920.4	46.71	20.703	
8,200.0	6,622.2	6,578.1	6,576.7	45.6	2.2	88.52	-983.6	205.0	980.0	932.5	47.43	20.660	
8,267.7	6,621.3	6,578.1	6,576.8	47.3	2.2	88.52	-983.6	205.0	1,011.0	962.0	49.06	20.609 SF	
8,300.0	6,620.9	6,578.2	6,576.8	48.0	2.2	88.53	-983.6	205.0	1,027.1	977.3	49.83	20.611	
8,366.1	6,620.0	6,578.2	6,576.9	49.7	2.2	88.53	-983.6	205.0	1,062.3	1,010.9	51.45	20.648	
8,400.0	6,619.6	6,578.3	6,576.9	50.5	2.2	88.53	-983.6	205.0	1,081.5	1,029.2	52.28	20.688	
8,464.5	6,618.8	6,578.3	6,577.0	52.1	2.2	88.54	-983.6	205.0	1,119.9	1,066.1	53.88	20.787	
8,500.0	6,618.3	6,578.4	6,577.0	53.0	2.2	88.54	-983.6	205.0	1,142.0	1,087.3	54.75	20.858	
8,563.0	6,617.5	6,578.4	6,577.1	54.5	2.2	88.54	-983.6	205.0	1,182.9	1,126.6	56.33	20.998	
8,600.0	6,617.0	6,578.5	6,577.1	55.5	2.2	88.54	-983.6	205.0	1,207.9	1,150.6	57.26	21.093	
8,661.4	6,616.3	6,578.5	6,577.2	57.0	2.2	88.55	-983.6	205.0	1,250.5	1,191.7	58.82	21.259	
8,700.0	6,615.8	6,578.6	6,577.2	58.0	2.2	88.55	-983.6	205.0	1,278.1	1,218.3	59.80	21.372	
8,759.8	6,615.0	6,578.6	6,577.3	59.5	2.2	88.55	-983.6	205.0	1,322.0	1,260.6	61.33	21.554	
8,800.0	6,614.5	6,578.7	6,577.3	60.6	2.2	88.56	-983.6	205.0	1,352.1	1,289.7	62.36	21.681	
8,858.2	6,613.7	6,578.7	6,577.4	62.1	2.2	88.56	-983.6	205.0	1,396.7	1,332.8	63.87	21.869	
8,900.0	6,613.2	6,578.8	6,577.4	63.2	2.2	88.56	-983.6	205.0	1,429.3	1,364.3	64.95	22.007	
8,956.7	6,612.5	6,578.8	6,577.5	64.6	2.2	88.57	-983.6	205.0	1,474.2	1,407.8	66.42	22.196	
9,000.0	6,611.9	6,578.9	6,577.5	65.8	2.2	88.57	-983.6	205.0	1,509.1	1,441.6	67.55	22.342	
9,055.1	6,611.2	6,578.9	6,577.6	67.2	2.2	88.57	-983.6	205.0	1,554.1	1,485.1	68.99	22.527	
9,100.0	6,610.6	6,579.0	6,577.6	68.4	2.2	88.57	-983.6	205.0	1,591.3	1,521.1	70.16	22.679	
9,153.5	6,609.9	6,579.0	6,577.7	69.8	2.2	88.58	-983.6	205.0	1,636.0	1,564.5	71.57	22.858	
9,200.0	6,609.3	6,579.1	6,577.7	71.0	2.2	88.58	-983.6	205.0	1,675.3	1,602.5	72.80	23.014	
9,251.9	6,608.7	6,579.1	6,577.8	72.4	2.2	88.58	-983.6	205.0	1,719.7	1,645.5	74.17	23.185	
9,300.0	6,608.1	6,579.2	6,577.8	73.7	2.2	88.59	-983.6	205.0	1,761.1	1,685.6	75.44	23.343	
9,350.4	6,607.4	6,579.2	6,577.9	75.0	2.2	88.59	-983.6	205.0	1,804.8	1,728.0	76.78	23.506	
9,400.0	6,606.8	6,579.3	6,577.9	76.3	2.2	88.59	-983.6	205.0	1,848.3	1,770.2	78.10	23.665	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,606.1	6,579.3	6,578.0	77.6	2.2	88.60	-983.6	205.0	1,891.3	1,811.9	79.40	23.819	
9,500.0	6,605.5	6,579.4	6,578.0	79.0	2.2	88.60	-983.6	205.0	1,936.7	1,855.9	80.77	23.978	
9,547.2	6,604.9	6,579.4	6,578.1	80.2	2.2	88.60	-983.6	205.0	1,978.8	1,896.8	82.03	24.122	
9,600.0	6,604.2	6,579.5	6,578.1	81.7	2.2	88.61	-983.6	205.0	2,026.2	1,942.7	83.45	24.281	
9,645.6	6,603.6	6,579.5	6,578.2	82.9	2.2	88.61	-983.6	205.0	2,067.3	1,982.7	84.67	24.416	
9,700.0	6,602.9	6,579.6	6,578.3	84.3	2.2	88.61	-983.6	205.0	2,116.6	2,030.5	86.13	24.574	
9,744.1	6,602.3	6,579.6	6,578.3	85.5	2.2	88.61	-983.6	205.0	2,156.7	2,069.4	87.32	24.699	
9,800.0	6,601.6	6,579.7	6,578.4	87.0	2.2	88.62	-983.6	205.0	2,207.8	2,119.0	88.82	24.856	
9,842.5	6,601.1	6,579.7	6,578.4	88.2	2.2	88.62	-983.6	205.0	2,246.9	2,156.9	89.97	24.973	
9,900.0	6,600.3	6,579.8	6,578.5	89.7	2.2	88.62	-983.6	205.0	2,299.8	2,208.3	91.53	25.128	
9,940.9	6,599.8	6,579.8	6,578.5	90.9	2.2	88.63	-983.6	205.0	2,337.7	2,245.0	92.63	25.236	
10,000.0	6,599.0	6,579.9	6,578.6	92.5	2.2	88.63	-983.6	205.0	2,392.5	2,298.2	94.23	25.389	
10,039.3	6,598.5	6,579.9	6,578.6	93.5	2.2	88.63	-983.6	205.0	2,429.1	2,333.8	95.30	25.488	
10,100.0	6,597.7	6,580.0	6,578.7	95.2	2.2	88.64	-983.6	205.0	2,485.7	2,388.7	96.95	25.639	
10,137.8	6,597.3	6,580.0	6,578.7	96.2	2.2	88.64	-983.6	205.0	2,521.0	2,423.0	97.97	25.731	
10,200.0	6,596.5	6,580.1	6,578.8	97.9	2.2	88.64	-983.6	205.0	2,579.4	2,479.7	99.67	25.880	
10,236.2	6,596.0	6,580.1	6,578.8	98.9	2.2	88.64	-983.6	205.0	2,613.4	2,512.8	100.65	25.965	
10,300.0	6,595.2	6,580.2	6,578.9	100.6	2.2	88.65	-983.6	205.0	2,673.5	2,571.1	102.39	26.111	
10,334.6	6,594.7	6,580.2	6,578.9	101.6	2.2	88.65	-983.6	205.0	2,706.2	2,602.9	103.33	26.189	
10,400.0	6,593.9	6,580.3	6,579.0	103.3	2.2	88.65	-983.6	205.0	2,768.1	2,663.0	105.12	26.333	
10,433.0	6,593.5	6,580.3	6,579.0	104.2	2.2	88.65	-983.6	205.0	2,799.5	2,693.4	106.02	26.405	
10,500.0	6,592.6	6,580.4	6,579.1	106.1	2.2	88.66	-983.6	205.0	2,863.1	2,755.2	107.85	26.546	
10,531.5	6,592.2	6,580.4	6,579.1	106.9	2.2	88.66	-983.6	205.0	2,893.0	2,784.3	108.71	26.612	
10,600.0	6,591.3	6,580.5	6,579.2	108.8	2.2	88.66	-983.6	205.0	2,958.3	2,847.7	110.59	26.751	
10,629.9	6,590.9	6,580.5	6,579.2	109.6	2.2	88.67	-983.6	205.0	2,986.9	2,875.5	111.41	26.811	
10,700.0	6,590.0	6,580.6	6,579.3	111.6	2.2	88.67	-983.6	205.0	3,053.9	2,940.6	113.33	26.948	
10,728.3	6,589.6	6,580.6	6,579.3	112.3	2.2	88.67	-983.6	205.0	3,081.0	2,966.9	114.11	27.002	
10,800.0	6,588.7	6,580.7	6,579.4	114.3	2.2	88.68	-983.6	205.0	3,149.8	3,033.7	116.07	27.136	
10,826.7	6,588.4	6,580.7	6,579.4	115.0	2.2	88.68	-983.6	205.0	3,175.4	3,058.6	116.81	27.186	
10,900.0	6,587.4	6,580.8	6,579.5	117.0	2.2	88.68	-983.7	205.0	3,245.9	3,127.0	118.82	27.318	
10,925.2	6,587.1	6,580.8	6,579.5	117.7	2.2	88.68	-983.7	205.0	3,270.1	3,150.6	119.51	27.362	
11,000.0	6,586.1	6,580.9	6,579.6	119.8	2.2	88.69	-983.7	205.0	3,342.2	3,220.6	121.57	27.492	
11,023.6	6,585.8	6,580.9	6,579.6	120.4	2.2	88.69	-983.7	205.0	3,365.0	3,242.7	122.22	27.532	
11,100.0	6,584.8	6,581.0	6,579.7	122.5	2.2	88.69	-983.7	205.0	3,438.7	3,314.4	124.32	27.660	
11,122.0	6,584.5	6,581.0	6,579.7	123.2	2.2	88.69	-983.7	205.0	3,460.0	3,335.1	124.93	27.696	
11,200.0	6,583.5	6,581.1	6,579.8	125.3	2.2	88.70	-983.7	205.0	3,535.5	3,408.4	127.08	27.822	
11,220.4	6,583.3	6,581.1	6,579.8	125.9	2.2	88.70	-983.7	205.0	3,555.3	3,427.6	127.64	27.854	
11,300.0	6,582.2	6,581.2	6,579.9	128.1	2.2	88.70	-983.7	205.0	3,632.4	3,502.5	129.83	27.977	
11,318.9	6,582.0	6,581.2	6,579.9	128.6	2.2	88.71	-983.7	205.0	3,650.7	3,520.3	130.35	28.006	
11,400.0	6,580.9	6,581.3	6,580.0	130.8	2.2	88.71	-983.7	205.0	3,729.5	3,596.9	132.59	28.127	
11,417.3	6,580.7	6,581.3	6,580.0	131.3	2.2	88.71	-983.7	205.0	3,746.3	3,613.2	133.07	28.152	
11,500.0	6,579.7	6,581.4	6,580.1	133.6	2.2	88.72	-983.7	205.0	3,826.7	3,691.3	135.36	28.271	
11,515.7	6,579.4	6,581.4	6,580.1	134.0	2.2	88.72	-983.7	205.0	3,842.0	3,706.2	135.79	28.294	
11,600.0	6,578.4	6,581.5	6,580.2	136.3	2.2	88.72	-983.7	205.0	3,924.0	3,785.9	138.12	28.411	
11,614.1	6,578.2	6,581.5	6,580.2	136.7	2.2	88.72	-983.7	205.0	3,937.8	3,799.3	138.51	28.430	
11,700.0	6,577.1	6,581.6	6,580.3	139.1	2.2	88.73	-983.7	205.0	4,021.5	3,880.7	140.88	28.545	
11,712.6	6,576.9	6,581.6	6,580.3	139.5	2.2	88.73	-983.7	205.0	4,033.8	3,892.6	141.23	28.561	
11,800.0	6,575.8	6,581.7	6,580.4	141.9	2.2	88.73	-983.7	205.0	4,119.2	3,975.5	143.65	28.674	
11,811.0	6,575.6	6,581.7	6,580.4	142.2	2.2	88.73	-983.7	205.0	4,129.9	3,985.9	143.96	28.688	
11,858.8	6,575.0	6,581.8	6,580.5	143.5	2.2	88.74	-983.7	205.0	4,176.6	4,031.3	145.28	28.749	
11,859.3	6,575.0	6,581.8	6,580.5	143.5	2.2	88.74	-983.7	205.0	4,177.1	4,031.8	145.29	28.750	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-75.83	1,608.5	-6,373.0	6,572.9				
98.4	98.4	77.4	77.4	0.1	0.0	-75.83	1,608.5	-6,373.0	6,572.8	6,572.7	0.10	N/A	
100.0	100.0	79.0	79.0	0.1	0.0	-75.83	1,608.5	-6,373.0	6,572.8	6,572.7	0.10	N/A	
196.8	196.8	175.8	175.8	0.3	1.0	-75.83	1,608.5	-6,373.0	6,572.8	6,571.5	1.29	5,075.539	
200.0	200.0	179.0	179.0	0.3	1.0	-75.83	1,608.5	-6,373.0	6,572.8	6,571.5	1.34	4,895.010	
295.3	295.3	274.3	274.3	0.5	3.0	-75.83	1,608.5	-6,373.0	6,572.8	6,569.3	3.51	1,870.575	
300.0	300.0	279.0	279.0	0.5	3.1	-75.83	1,608.5	-6,373.0	6,572.8	6,569.2	3.63	1,809.870	
393.7	393.7	372.7	372.7	0.8	5.1	-75.83	1,608.5	-6,373.0	6,572.8	6,567.0	5.83	1,127.710	
400.0	400.0	379.0	379.0	0.8	5.2	-75.83	1,608.5	-6,373.0	6,572.8	6,566.8	5.97	1,100.340	
492.1	492.1	471.1	471.1	1.0	7.1	-75.83	1,608.5	-6,373.0	6,572.8	6,564.7	8.07	814.605	
500.0	500.0	479.0	479.0	1.0	7.3	-75.83	1,608.5	-6,373.0	6,572.8	6,564.6	8.25	796.976	
590.5	590.5	569.5	569.5	1.2	9.1	-75.83	1,608.5	-6,373.0	6,572.8	6,562.5	10.29	638.724	
600.0	600.0	579.0	579.0	1.2	9.3	-75.83	1,608.5	-6,373.0	6,572.8	6,562.3	10.50	625.774	
689.0	689.0	668.0	668.0	1.4	11.1	-75.83	1,608.5	-6,373.0	6,572.8	6,560.3	12.50	525.638	
700.0	700.0	679.0	679.0	1.4	11.3	-75.83	1,608.5	-6,373.0	6,572.8	6,560.1	12.75	515.424	
787.4	787.4	766.4	766.4	1.6	13.1	-75.83	1,608.5	-6,373.0	6,572.8	6,558.1	14.71	446.698	
800.0	800.0	779.0	779.0	1.7	13.3	-75.83	1,608.5	-6,373.0	6,572.8	6,557.8	15.00	438.276	
885.8	885.8	864.8	864.8	1.9	15.1	-75.83	1,608.5	-6,373.0	6,572.8	6,555.9	16.92	388.430	
900.0	900.0	879.0	879.0	1.9	15.3	-75.83	1,608.5	-6,373.0	6,572.8	6,555.6	17.24	381.269	
984.2	984.2	963.2	963.2	2.1	17.0	-75.83	1,608.5	-6,373.0	6,572.8	6,553.7	19.13	343.637	
1,000.0	1,000.0	979.0	979.0	2.1	17.4	-75.83	1,608.5	-6,373.0	6,572.8	6,553.3	19.48	337.412	
1,082.7	1,082.7	1,061.7	1,061.7	2.3	19.0	-75.83	1,608.5	-6,373.0	6,572.8	6,551.5	21.33	308.123	
1,100.0	1,100.0	1,079.0	1,079.0	2.3	19.4	-75.83	1,608.5	-6,373.0	6,572.8	6,551.1	21.72	302.619	
1,181.1	1,181.1	1,160.1	1,160.1	2.5	21.0	-75.83	1,608.5	-6,373.0	6,572.8	6,549.3	23.54	279.271	
1,200.0	1,200.0	1,179.0	1,179.0	2.6	21.4	-75.83	1,608.5	-6,373.0	6,572.8	6,548.9	23.96	274.339	
1,279.5	1,279.5	1,258.5	1,258.5	2.7	23.0	19.37	1,608.5	-6,373.0	6,571.8	6,546.1	25.72	255.530	
1,300.0	1,300.0	1,279.0	1,279.0	2.8	23.4	19.38	1,608.5	-6,373.0	6,571.2	6,545.0	26.17	251.117	
1,377.9	1,377.8	1,356.8	1,356.8	2.9	25.0	19.41	1,608.5	-6,373.0	6,567.6	6,539.7	27.86	235.759	
1,400.0	1,399.8	1,378.8	1,378.8	3.0	25.4	19.42	1,608.5	-6,373.0	6,566.2	6,537.9	28.33	231.773	
1,476.4	1,475.9	1,454.9	1,454.9	3.1	26.9	19.48	1,608.5	-6,373.0	6,560.3	6,530.3	29.96	218.988	
1,500.0	1,499.5	1,478.5	1,478.5	3.2	27.4	19.50	1,608.5	-6,373.0	6,558.0	6,527.6	30.45	215.338	
1,574.8	1,573.7	1,552.7	1,552.7	3.4	28.9	19.58	1,608.5	-6,373.0	6,549.7	6,517.7	32.01	204.586	
1,600.0	1,598.7	1,577.7	1,577.7	3.4	29.4	19.62	1,608.5	-6,373.0	6,546.5	6,514.0	32.53	201.229	
1,673.2	1,671.1	1,650.1	1,650.1	3.6	30.9	19.72	1,608.5	-6,373.0	6,536.0	6,502.0	34.02	192.108	
1,700.0	1,697.5	1,676.5	1,676.5	3.7	31.4	19.76	1,608.5	-6,373.0	6,531.8	6,497.2	34.56	189.005	
1,771.6	1,767.9	1,746.9	1,746.9	3.9	32.8	19.89	1,608.5	-6,373.0	6,519.2	6,483.2	35.98	181.207	
1,800.0	1,795.6	1,774.6	1,774.6	4.0	33.4	19.94	1,608.5	-6,373.0	6,513.8	6,477.3	36.53	178.326	
1,870.1	1,864.0	1,843.0	1,843.0	4.3	34.8	20.09	1,608.5	-6,373.0	6,499.3	6,461.4	37.87	171.613	
1,900.0	1,893.1	1,872.1	1,872.1	4.4	35.3	20.16	1,608.5	-6,373.0	6,492.6	6,454.2	38.43	168.929	
1,968.5	1,959.3	1,938.3	1,938.3	4.6	36.7	20.33	1,608.5	-6,373.0	6,476.2	6,436.5	39.70	163.113	
1,992.4	1,982.4	1,961.4	1,961.4	4.7	37.1	20.39	1,608.5	-6,373.0	6,470.2	6,430.0	40.14	161.196	
2,000.0	1,989.6	1,968.6	1,968.6	4.8	37.3	20.40	1,608.5	-6,373.0	6,468.2	6,427.9	40.30	160.501	
2,066.9	2,054.0	2,033.0	2,033.0	5.1	38.6	20.46	1,608.5	-6,373.0	6,451.0	6,409.3	41.74	154.547	
2,100.0	2,085.8	2,064.8	2,064.8	5.2	39.2	20.48	1,608.5	-6,373.0	6,442.5	6,400.1	42.45	151.773	
2,165.3	2,148.7	2,127.7	2,127.7	5.5	40.5	20.54	1,608.5	-6,373.0	6,425.7	6,381.9	43.85	146.526	
2,200.0	2,182.0	2,161.0	2,161.0	5.7	41.2	20.57	1,608.5	-6,373.0	6,416.8	6,372.2	44.61	143.852	
2,263.8	2,243.4	2,222.4	2,222.4	6.0	42.4	20.62	1,608.5	-6,373.0	6,400.4	6,354.5	45.99	139.175	
2,300.0	2,278.2	2,257.2	2,257.2	6.2	43.1	20.65	1,608.5	-6,373.0	6,391.1	6,344.4	46.77	136.637	
2,362.2	2,338.1	2,317.1	2,317.1	6.5	44.3	20.71	1,608.5	-6,373.0	6,375.2	6,327.1	48.13	132.465	
2,400.0	2,374.4	2,353.4	2,353.4	6.7	45.0	20.74	1,608.5	-6,373.0	6,365.5	6,316.5	48.95	130.040	
2,460.6	2,432.8	2,411.8	2,411.8	7.0	46.2	20.79	1,608.5	-6,373.0	6,349.9	6,299.7	50.27	126.311	
2,500.0	2,470.6	2,449.6	2,449.6	7.2	47.0	20.83	1,608.5	-6,373.0	6,339.8	6,288.7	51.13	123.990	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,527.4	2,506.4	2,506.4	7.6	48.1	20.88	1,608.5	-6,373.0	6,324.7	6,272.3	52.42	120.646	
2,600.0	2,566.8	2,545.8	2,545.8	7.8	48.9	20.92	1,608.5	-6,373.0	6,314.2	6,260.9	53.32	118.421	
2,657.5	2,622.1	2,601.1	2,601.1	8.1	50.0	20.97	1,608.5	-6,373.0	6,299.5	6,244.9	54.58	115.418	
2,700.0	2,663.0	2,642.0	2,642.0	8.3	50.8	21.00	1,608.5	-6,373.0	6,288.6	6,233.0	55.51	113.282	
2,755.9	2,716.8	2,695.8	2,695.8	8.6	51.9	21.05	1,608.5	-6,373.0	6,274.2	6,217.5	56.74	110.578	
2,800.0	2,759.2	2,738.2	2,738.2	8.9	52.8	21.09	1,608.5	-6,373.0	6,262.9	6,205.2	57.71	108.525	
2,854.3	2,811.5	2,790.5	2,790.5	9.2	53.8	21.14	1,608.5	-6,373.0	6,249.0	6,190.1	58.91	106.086	
2,900.0	2,855.4	2,834.4	2,834.4	9.4	54.7	21.18	1,608.5	-6,373.0	6,237.4	6,177.4	59.91	104.110	
2,952.7	2,906.2	2,885.2	2,885.2	9.7	55.7	21.23	1,608.5	-6,373.0	6,223.9	6,162.8	61.07	101.907	
3,000.0	2,951.6	2,930.6	2,930.6	10.0	56.6	21.27	1,608.5	-6,373.0	6,211.8	6,149.7	62.12	100.002	
3,051.2	3,000.9	2,979.9	2,979.9	10.3	57.6	21.32	1,608.5	-6,373.0	6,198.7	6,135.4	63.25	98.009	
3,100.0	3,047.8	3,026.8	3,026.8	10.5	58.6	21.36	1,608.5	-6,373.0	6,186.2	6,121.9	64.32	96.171	
3,149.6	3,095.5	3,074.5	3,074.5	10.8	59.5	21.41	1,608.5	-6,373.0	6,173.5	6,108.1	65.42	94.365	
3,200.0	3,144.0	3,123.0	3,123.0	11.1	60.5	21.46	1,608.5	-6,373.0	6,160.6	6,094.1	66.54	92.591	
3,248.0	3,190.2	3,169.2	3,169.2	11.4	61.4	21.50	1,608.5	-6,373.0	6,148.4	6,080.8	67.60	90.953	
3,300.0	3,240.2	3,219.2	3,219.2	11.7	62.4	21.55	1,608.5	-6,373.0	6,135.1	6,066.4	68.75	89.237	
3,346.4	3,284.9	3,263.9	3,263.9	11.9	63.3	21.59	1,608.5	-6,373.0	6,123.3	6,053.5	69.78	87.750	
3,400.0	3,336.4	3,315.4	3,315.4	12.2	64.4	21.64	1,608.5	-6,373.0	6,109.6	6,038.6	70.97	86.089	
3,444.9	3,379.6	3,358.6	3,358.6	12.5	65.2	21.69	1,608.5	-6,373.0	6,098.1	6,026.2	71.96	84.739	
3,500.0	3,432.6	3,411.6	3,411.6	12.8	66.3	21.74	1,608.5	-6,373.0	6,084.1	6,010.9	73.19	83.130	
3,543.3	3,474.3	3,453.3	3,453.3	13.1	67.1	21.78	1,608.5	-6,373.0	6,073.0	5,998.9	74.15	81.902	
3,600.0	3,528.8	3,507.8	3,507.8	13.4	68.2	21.83	1,608.5	-6,373.0	6,058.6	5,983.2	75.41	80.342	
3,641.7	3,569.0	3,548.0	3,548.0	13.6	69.0	21.87	1,608.5	-6,373.0	6,048.0	5,971.6	76.34	79.226	
3,700.0	3,625.0	3,604.0	3,604.0	14.0	70.2	21.93	1,608.5	-6,373.0	6,033.1	5,955.5	77.63	77.712	
3,740.1	3,663.6	3,642.6	3,642.6	14.2	71.0	21.97	1,608.5	-6,373.0	6,022.9	5,944.4	78.53	76.697	
3,800.0	3,721.2	3,700.2	3,700.2	14.5	72.1	22.03	1,608.5	-6,373.0	6,007.7	5,927.8	79.86	75.227	
3,838.6	3,758.3	3,737.3	3,737.3	14.8	72.9	22.06	1,608.5	-6,373.0	5,997.8	5,917.1	80.72	74.304	
3,900.0	3,817.4	3,796.4	3,796.4	15.1	74.0	22.12	1,608.5	-6,373.0	5,982.2	5,900.1	82.09	72.874	
3,937.0	3,853.0	3,832.0	3,832.0	15.3	74.8	22.16	1,608.5	-6,373.0	5,972.8	5,889.9	82.91	72.036	
4,000.0	3,913.6	3,892.6	3,892.6	15.7	76.0	22.22	1,608.5	-6,373.0	5,956.8	5,872.5	84.32	70.645	
4,035.4	3,947.7	3,926.7	3,926.7	15.9	76.7	22.26	1,608.5	-6,373.0	5,947.8	5,862.7	85.11	69.883	
4,100.0	4,009.8	3,988.8	3,988.8	16.3	77.9	22.32	1,608.5	-6,373.0	5,931.4	5,844.8	86.55	68.529	
4,133.8	4,042.4	4,021.4	4,021.4	16.5	78.6	22.35	1,608.5	-6,373.0	5,922.8	5,835.5	87.31	67.837	
4,200.0	4,106.0	4,085.0	4,085.0	16.8	79.8	22.42	1,608.5	-6,373.0	5,906.0	5,817.2	88.79	66.518	
4,232.3	4,137.1	4,116.1	4,116.1	17.0	80.5	22.45	1,608.5	-6,373.0	5,897.8	5,808.3	89.51	65.890	
4,300.0	4,202.2	4,181.2	4,181.2	17.4	81.8	22.52	1,608.5	-6,373.0	5,880.6	5,789.6	91.02	64.605	
4,330.7	4,231.7	4,210.7	4,210.7	17.6	82.4	22.55	1,608.5	-6,373.0	5,872.8	5,781.1	91.71	64.036	
4,400.0	4,298.4	4,277.4	4,277.4	18.0	83.7	22.62	1,608.5	-6,373.0	5,855.3	5,762.0	93.26	62.782	
4,429.1	4,326.4	4,305.4	4,305.4	18.2	84.3	22.65	1,608.5	-6,373.0	5,847.9	5,754.0	93.91	62.268	
4,500.0	4,394.6	4,373.6	4,373.6	18.6	85.7	22.73	1,608.5	-6,373.0	5,829.9	5,734.4	95.50	61.044	
4,527.5	4,421.1	4,400.1	4,400.1	18.7	86.2	22.75	1,608.5	-6,373.0	5,822.9	5,726.8	96.12	60.580	
4,600.0	4,490.8	4,469.8	4,469.8	19.2	87.6	22.83	1,608.5	-6,373.0	5,804.6	5,706.8	97.74	59.385	
4,626.0	4,515.8	4,494.8	4,494.8	19.3	88.1	22.86	1,608.5	-6,373.0	5,798.0	5,699.7	98.33	58.966	
4,700.0	4,587.0	4,566.0	4,566.0	19.8	89.5	22.93	1,608.5	-6,373.0	5,779.3	5,679.3	99.99	57.799	
4,724.4	4,610.5	4,589.5	4,589.5	19.9	90.0	22.96	1,608.5	-6,373.0	5,773.1	5,672.6	100.54	57.423	
4,800.0	4,683.2	4,662.2	4,662.2	20.3	91.5	23.04	1,608.5	-6,373.0	5,754.0	5,651.8	102.23	56.282	
4,822.8	4,705.2	4,684.2	4,684.2	20.5	91.9	23.06	1,608.5	-6,373.0	5,748.2	5,645.5	102.75	55.945	
4,900.0	4,779.4	4,758.4	4,758.4	20.9	93.4	23.15	1,608.5	-6,373.0	5,728.7	5,624.3	104.48	54.830	
4,921.2	4,799.8	4,778.8	4,778.8	21.0	93.8	23.17	1,608.5	-6,373.0	5,723.4	5,618.4	104.96	54.529	
5,000.0	4,875.6	4,854.6	4,854.6	21.5	95.3	23.25	1,608.5	-6,373.0	5,703.5	5,596.8	106.73	53.438	
5,019.7	4,894.5	4,873.5	4,873.5	21.6	95.7	23.27	1,608.5	-6,373.0	5,698.5	5,591.3	107.17	53.171	
5,100.0	4,971.8	4,950.8	4,950.8	22.1	97.3	23.36	1,608.5	-6,373.0	5,678.3	5,569.3	108.98	52.103	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	4,989.2	4,968.2	4,968.2	22.2	97.6	23.38	1,608.5	-6,373.0	5,673.7	5,564.3	109.39	51.867	
5,200.0	5,068.0	5,047.0	5,047.0	22.7	99.2	23.47	1,608.5	-6,373.0	5,653.0	5,541.8	111.23	50.821	
5,216.5	5,083.9	5,062.9	5,062.9	22.8	99.5	23.49	1,608.5	-6,373.0	5,648.9	5,537.3	111.61	50.614	
5,240.0	5,106.5	5,085.5	5,085.5	22.9	100.0	23.51	1,608.5	-6,373.0	5,643.0	5,530.8	112.14	50.322	
5,300.0	5,164.4	5,143.4	5,143.4	23.2	101.1	23.46	1,608.5	-6,373.0	5,628.4	5,514.5	113.92	49.409	
5,314.9	5,178.8	5,157.8	5,157.8	23.3	101.4	23.45	1,608.5	-6,373.0	5,625.0	5,510.6	114.35	49.192	
5,400.0	5,261.5	5,240.5	5,240.5	23.6	103.1	23.38	1,608.5	-6,373.0	5,606.7	5,489.9	116.78	48.010	
5,413.4	5,274.6	5,253.6	5,253.6	23.6	103.4	23.37	1,608.5	-6,373.0	5,604.0	5,486.8	117.16	47.833	
5,500.0	5,359.5	5,338.5	5,338.5	23.9	105.1	23.31	1,608.5	-6,373.0	5,588.1	5,468.5	119.56	46.739	
5,511.8	5,371.1	5,350.1	5,350.1	24.0	105.3	23.30	1,608.5	-6,373.0	5,586.1	5,466.2	119.88	46.597	
5,600.0	5,458.0	5,437.0	5,437.0	24.2	107.0	23.25	1,608.5	-6,373.0	5,572.6	5,450.4	122.24	45.588	
5,610.2	5,468.2	5,447.2	5,447.2	24.3	107.2	23.25	1,608.5	-6,373.0	5,571.2	5,448.7	122.51	45.477	
5,700.0	5,557.2	5,536.2	5,536.2	24.5	109.0	23.21	1,608.5	-6,373.0	5,560.4	5,435.6	124.81	44.550	
5,708.6	5,565.7	5,544.7	5,544.7	24.5	109.2	23.21	1,608.5	-6,373.0	5,559.5	5,434.4	125.03	44.465	
5,800.0	5,656.7	5,635.7	5,635.7	24.7	111.0	23.18	1,608.5	-6,373.0	5,551.3	5,424.1	127.27	43.619	
5,807.1	5,663.7	5,642.7	5,642.7	24.7	111.2	23.18	1,608.5	-6,373.0	5,550.8	5,423.4	127.44	43.558	
5,900.0	5,756.5	5,735.5	5,735.5	24.9	113.0	23.16	1,608.5	-6,373.0	5,545.5	5,415.9	129.60	42.790	
5,905.5	5,761.9	5,740.9	5,740.9	24.9	113.2	23.16	1,608.5	-6,373.0	5,545.2	5,415.5	129.72	42.748	
6,000.0	5,856.4	5,835.4	5,835.4	25.0	115.1	23.15	1,608.5	-6,373.0	5,542.8	5,411.0	131.79	42.058	
6,003.9	5,860.3	5,839.3	5,839.3	25.0	115.1	23.15	1,608.5	-6,373.0	5,542.8	5,410.9	131.87	42.031	
6,032.5	5,888.9	5,867.9	5,867.9	25.0	115.7	-72.05	1,608.5	-6,373.0	5,542.7	5,403.3	139.36	39.772	
6,062.5	5,918.9	5,897.9	5,897.9	25.1	116.3	-72.05	1,608.5	-6,373.0	5,542.7	5,402.7	140.00	39.591	CC, ES, SF
6,100.0	5,956.4	5,935.4	5,935.4	25.1	117.1	-162.03	1,608.5	-6,373.0	5,543.6	5,409.9	133.66	41.475	
6,102.3	5,958.7	5,937.7	5,937.7	25.1	117.1	-162.02	1,608.5	-6,373.0	5,543.7	5,410.0	133.68	41.469	
6,150.0	6,006.2	5,985.2	5,985.2	25.1	118.1	-161.94	1,608.5	-6,373.0	5,547.7	5,413.9	133.87	41.442	
6,200.0	6,055.6	6,034.6	6,034.6	25.1	119.1	-161.77	1,608.5	-6,373.0	5,555.2	5,421.7	133.49	41.616	
6,200.8	6,056.3	6,035.3	6,035.3	25.1	119.1	-161.77	1,608.5	-6,373.0	5,555.3	5,421.8	133.48	41.620	
6,250.0	6,104.3	6,083.3	6,083.3	25.0	120.0	-161.53	1,608.5	-6,373.0	5,565.9	5,433.4	132.52	41.999	
6,299.2	6,151.3	6,130.3	6,130.3	24.9	121.0	-161.22	1,608.5	-6,373.0	5,579.5	5,448.5	131.02	42.586	
6,300.0	6,152.1	6,131.1	6,131.1	24.9	121.0	-161.21	1,608.5	-6,373.0	5,579.8	5,448.8	130.99	42.597	
6,350.0	6,198.7	6,177.7	6,177.7	24.8	121.9	-160.80	1,608.5	-6,373.0	5,596.9	5,467.9	128.91	43.417	
6,397.6	6,241.9	6,220.9	6,220.9	24.7	122.8	-160.31	1,608.5	-6,373.0	5,616.0	5,489.5	126.45	44.411	
6,400.0	6,244.1	6,223.1	6,223.1	24.7	122.8	-160.28	1,608.5	-6,373.0	5,617.0	5,490.7	126.32	44.466	
6,450.0	6,287.8	6,266.8	6,266.8	24.5	123.7	-159.65	1,608.5	-6,373.0	5,640.1	5,516.8	123.28	45.750	
6,496.0	6,326.5	6,305.5	6,305.5	24.4	124.5	-158.95	1,608.5	-6,373.0	5,663.9	5,543.7	120.15	47.140	
6,500.0	6,329.7	6,308.7	6,308.7	24.4	124.6	-158.89	1,608.5	-6,373.0	5,666.0	5,546.2	119.87	47.268	
6,550.0	6,369.6	6,348.6	6,348.6	24.3	125.4	-157.97	1,608.5	-6,373.0	5,694.7	5,578.5	116.20	49.009	
6,594.5	6,403.3	6,382.3	6,382.3	24.2	126.0	-156.99	1,608.5	-6,373.0	5,722.4	5,609.6	112.84	50.714	
6,600.0	6,407.3	6,386.3	6,386.3	24.2	126.1	-156.85	1,608.5	-6,373.0	5,726.0	5,613.6	112.42	50.934	
6,650.0	6,442.7	6,421.7	6,421.7	24.1	126.8	-155.51	1,608.5	-6,373.0	5,759.8	5,651.0	108.74	52.968	
6,692.9	6,471.0	6,450.0	6,450.0	24.0	127.4	-154.14	1,608.5	-6,373.0	5,790.6	5,684.7	105.87	54.695	
6,700.0	6,475.5	6,454.5	6,454.5	24.0	127.5	-153.88	1,608.5	-6,373.0	5,795.8	5,690.4	105.44	54.970	
6,750.0	6,505.6	6,484.6	6,484.6	24.0	128.1	-151.90	1,608.5	-6,373.0	5,834.0	5,731.1	102.88	56.707	
6,791.3	6,528.3	6,507.3	6,507.3	24.0	128.6	-149.91	1,608.5	-6,373.0	5,867.0	5,765.3	101.67	57.708	
6,800.0	6,532.8	6,511.8	6,511.8	24.0	128.7	-149.45	1,608.5	-6,373.0	5,874.1	5,772.5	101.55	57.847	
6,850.0	6,557.0	6,536.0	6,536.0	24.1	129.1	-146.39	1,608.5	-6,373.0	5,915.9	5,813.9	102.01	57.992	
6,889.7	6,574.1	6,553.1	6,553.1	24.2	129.5	-143.41	1,608.5	-6,373.0	5,950.3	5,846.2	104.09	57.164	
6,900.0	6,578.1	6,557.1	6,557.1	24.3	129.6	-142.55	1,608.5	-6,373.0	5,959.3	5,854.4	104.91	56.803	
6,950.0	6,596.1	6,575.1	6,575.1	24.5	129.9	-137.64	1,608.5	-6,373.0	6,004.0	5,893.2	110.79	54.191	
6,988.2	6,607.5	6,586.5	6,586.5	24.7	130.2	-132.96	1,608.5	-6,373.0	6,038.9	5,921.5	117.46	51.411	
7,000.0	6,610.7	6,589.7	6,589.7	24.8	130.2	-131.31	1,608.5	-6,373.0	6,049.9	5,930.0	119.89	50.461	
7,050.0	6,621.9	6,600.9	6,600.9	25.1	130.4	-123.16	1,608.5	-6,373.0	6,096.6	5,964.9	131.71	46.288	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	6,607.0	6,607.0	25.4	130.6	-115.81	1,608.5	-6,373.0	6,131.3	5,990.2	141.08	43.458	
7,100.0	6,629.7	6,608.7	6,608.7	25.6	130.6	-112.81	1,608.5	-6,373.0	6,144.0	5,999.7	144.38	42.554	
7,150.0	6,634.1	6,613.1	6,613.1	26.0	130.7	-100.31	1,608.5	-6,373.0	6,191.9	6,037.7	154.23	40.147	
7,185.0	6,635.1	6,614.1	6,614.1	26.4	130.7	-90.67	1,608.5	-6,373.0	6,225.5	6,068.5	157.06	39.638	
7,196.6	6,635.0	6,614.0	6,614.0	26.5	130.7	-87.43	1,608.5	-6,373.0	6,236.6	6,079.6	157.04	39.714	
7,200.0	6,635.0	6,614.0	6,614.0	26.6	130.7	-87.43	1,608.5	-6,373.0	6,239.9	6,082.9	157.07	39.726	
7,283.4	6,633.9	6,612.9	6,612.9	27.6	130.7	-87.40	1,608.5	-6,373.0	6,320.2	6,162.2	158.08	39.982	
7,300.0	6,633.7	6,612.7	6,612.7	27.8	130.7	-87.39	1,608.5	-6,373.0	6,336.2	6,177.9	158.27	40.033	
7,381.9	6,632.6	6,611.6	6,611.6	29.0	130.7	-87.35	1,608.5	-6,373.0	6,415.0	6,255.6	159.44	40.236	
7,400.0	6,632.4	6,611.4	6,611.4	29.2	130.7	-87.35	1,608.5	-6,373.0	6,432.5	6,272.8	159.69	40.280	
7,480.3	6,631.4	6,610.4	6,610.4	30.5	130.6	-87.31	1,608.5	-6,373.0	6,510.0	6,349.0	160.98	40.439	
7,500.0	6,631.1	6,610.1	6,610.1	30.9	130.6	-87.30	1,608.5	-6,373.0	6,529.0	6,367.7	161.30	40.477	
7,578.7	6,630.1	6,609.1	6,609.1	32.3	130.6	-87.27	1,608.5	-6,373.0	6,605.0	6,442.3	162.69	40.598	
7,600.0	6,629.8	6,608.8	6,608.8	32.7	130.6	-87.26	1,608.5	-6,373.0	6,625.5	6,462.5	163.07	40.631	
7,677.1	6,628.9	6,607.9	6,607.9	34.1	130.6	-87.22	1,608.5	-6,373.0	6,700.1	6,535.6	164.53	40.722	
7,700.0	6,628.6	6,607.6	6,607.6	34.6	130.6	-87.21	1,608.5	-6,373.0	6,722.2	6,557.2	164.97	40.748	
7,775.6	6,627.6	6,606.6	6,606.6	36.1	130.6	-87.18	1,608.5	-6,373.0	6,795.3	6,628.8	166.49	40.815	
7,800.0	6,627.3	6,606.3	6,606.3	36.6	130.6	-87.17	1,608.5	-6,373.0	6,818.9	6,652.0	166.98	40.836	
7,874.0	6,626.3	6,605.3	6,605.3	38.2	130.5	-87.14	1,608.5	-6,373.0	6,890.6	6,722.1	168.54	40.883	
7,900.0	6,626.0	6,605.0	6,605.0	38.8	130.5	-87.13	1,608.5	-6,373.0	6,915.8	6,746.7	169.09	40.900	
7,972.4	6,625.1	6,604.1	6,604.1	40.4	130.5	-87.10	1,608.5	-6,373.0	6,986.0	6,815.3	170.68	40.931	
8,000.0	6,624.7	6,603.7	6,603.7	41.0	130.5	-87.08	1,608.5	-6,373.0	7,012.7	6,841.4	171.28	40.943	
8,070.8	6,623.8	6,602.8	6,602.8	42.6	130.5	-87.05	1,608.5	-6,373.0	7,081.5	6,908.6	172.88	40.961	
8,100.0	6,623.4	6,602.4	6,602.4	43.3	130.5	-87.04	1,608.5	-6,373.0	7,109.7	6,936.2	173.54	40.969	
8,169.3	6,622.6	6,601.6	6,601.6	44.9	130.5	-87.01	1,608.5	-6,373.0	7,177.0	7,001.9	175.14	40.978	
8,200.0	6,622.2	6,601.2	6,601.2	45.6	130.5	-87.00	1,608.5	-6,373.0	7,206.9	7,031.0	175.86	40.982	
8,267.7	6,621.3	6,600.3	6,600.3	47.3	130.4	-86.97	1,608.5	-6,373.0	7,272.6	7,095.2	177.46	40.983	
8,300.0	6,620.9	6,599.9	6,599.9	48.0	130.4	-86.95	1,608.5	-6,373.0	7,304.0	7,125.8	178.22	40.983	
8,366.1	6,620.0	6,599.0	6,599.0	49.7	130.4	-86.92	1,608.5	-6,373.0	7,368.3	7,188.5	179.81	40.978	
8,400.0	6,619.6	6,598.6	6,598.6	50.5	130.4	-86.91	1,608.5	-6,373.0	7,401.3	7,220.7	180.63	40.976	
8,464.5	6,618.8	6,597.8	6,597.8	52.1	130.4	-86.88	1,608.5	-6,373.0	7,464.1	7,281.9	182.20	40.966	
8,500.0	6,618.3	6,597.3	6,597.3	53.0	130.4	-86.86	1,608.5	-6,373.0	7,498.6	7,315.5	183.07	40.960	
8,563.0	6,617.5	6,596.5	6,596.5	54.5	130.4	-86.84	1,608.5	-6,373.0	7,559.9	7,375.3	184.63	40.947	
8,600.0	6,617.0	6,596.0	6,596.0	55.5	130.3	-86.82	1,608.5	-6,373.0	7,596.0	7,410.5	185.54	40.939	
8,661.4	6,616.3	6,595.3	6,595.3	57.0	130.3	-86.79	1,608.5	-6,373.0	7,655.8	7,468.8	187.08	40.923	
8,700.0	6,615.8	6,594.8	6,594.8	58.0	130.3	-86.78	1,608.5	-6,373.0	7,693.5	7,505.4	188.05	40.913	
8,759.8	6,615.0	6,594.0	6,594.0	59.5	130.3	-86.75	1,608.5	-6,373.0	7,751.8	7,562.3	189.56	40.895	
8,800.0	6,614.5	6,593.5	6,593.5	60.6	130.3	-86.73	1,608.5	-6,373.0	7,791.0	7,600.4	190.57	40.883	
8,858.2	6,613.7	6,592.7	6,592.7	62.1	130.3	-86.71	1,608.5	-6,373.0	7,847.8	7,655.8	192.05	40.863	
8,900.0	6,613.2	6,592.2	6,592.2	63.2	130.3	-86.69	1,608.5	-6,373.0	7,888.6	7,695.5	193.12	40.849	
8,956.7	6,612.5	6,591.5	6,591.5	64.6	130.3	-86.66	1,608.5	-6,373.0	7,943.9	7,749.4	194.57	40.828	
9,000.0	6,611.9	6,590.9	6,590.9	65.8	130.2	-86.64	1,608.5	-6,373.0	7,986.2	7,790.6	195.68	40.813	
9,055.1	6,611.2	6,590.2	6,590.2	67.2	130.2	-86.62	1,608.5	-6,373.0	8,040.1	7,843.0	197.10	40.791	
9,100.0	6,610.6	6,589.6	6,589.6	68.4	130.2	-86.60	1,608.5	-6,373.0	8,083.9	7,885.7	198.26	40.774	
9,153.5	6,609.9	6,588.9	6,588.9	69.8	130.2	-86.58	1,608.5	-6,373.0	8,136.3	7,936.6	199.65	40.753	
9,200.0	6,609.3	6,588.3	6,588.3	71.0	130.2	-86.55	1,608.5	-6,373.0	8,181.7	7,980.8	200.85	40.735	
9,251.9	6,608.7	6,587.7	6,587.7	72.4	130.2	-86.53	1,608.5	-6,373.0	8,232.5	8,030.3	202.21	40.713	
9,300.0	6,608.1	6,587.1	6,587.1	73.7	130.2	-86.51	1,608.5	-6,373.0	8,279.5	8,076.1	203.46	40.693	
9,350.4	6,607.4	6,586.4	6,586.4	75.0	130.2	-86.49	1,608.5	-6,373.0	8,328.8	8,124.0	204.78	40.672	
9,400.0	6,606.8	6,585.8	6,585.8	76.3	130.1	-86.47	1,608.5	-6,373.0	8,377.4	8,171.3	206.08	40.651	
9,448.8	6,606.1	6,585.1	6,585.1	77.6	130.1	-86.45	1,608.5	-6,373.0	8,425.2	8,217.8	207.36	40.630	
9,500.0	6,605.5	6,584.5	6,584.5	79.0	130.1	-86.42	1,608.5	-6,373.0	8,475.3	8,266.6	208.71	40.608	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT HECKENDORF #1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,604.9	6,583.9	6,583.9	80.2	130.1	-86.40	1,608.5	-6,373.0	8,521.5	8,311.6	209.95	40.588	
9,600.0	6,604.2	6,583.2	6,583.2	81.7	130.1	-86.38	1,608.5	-6,373.0	8,573.3	8,361.9	211.35	40.565	
9,645.6	6,603.6	6,582.6	6,582.6	82.9	130.1	-86.36	1,608.5	-6,373.0	8,618.0	8,405.4	212.55	40.545	
9,700.0	6,602.9	6,581.9	6,581.9	84.3	130.1	-86.33	1,608.5	-6,373.0	8,671.3	8,457.3	213.99	40.521	
9,744.1	6,602.3	6,581.3	6,581.3	85.5	130.1	-86.31	1,608.5	-6,373.0	8,714.5	8,499.3	215.16	40.502	
9,800.0	6,601.6	6,580.6	6,580.6	87.0	130.0	-86.29	1,608.5	-6,373.0	8,769.3	8,552.7	216.65	40.478	
9,842.5	6,601.1	6,580.1	6,580.1	88.2	130.0	-86.27	1,608.5	-6,373.0	8,811.0	8,593.2	217.78	40.459	
9,900.0	6,600.3	6,579.3	6,579.3	89.7	130.0	-86.25	1,608.5	-6,373.0	8,867.4	8,648.1	219.31	40.434	
9,940.9	6,599.8	6,578.8	6,578.8	90.9	130.0	-86.23	1,608.5	-6,373.0	8,907.6	8,687.2	220.40	40.416	
10,000.0	6,599.0	6,578.0	6,578.0	92.5	130.0	-86.20	1,608.5	-6,373.0	8,965.6	8,743.6	221.97	40.390	
10,039.3	6,598.5	6,577.5	6,577.5	93.5	130.0	-86.18	1,608.5	-6,373.0	9,004.2	8,781.2	223.02	40.373	
10,100.0	6,597.7	6,576.7	6,576.7	95.2	130.0	-86.16	1,608.5	-6,373.0	9,063.7	8,839.1	224.64	40.347	
10,137.8	6,597.3	6,576.3	6,576.3	96.2	130.0	-86.14	1,608.5	-6,373.0	9,100.8	8,875.2	225.66	40.331	
10,200.0	6,596.5	6,575.5	6,575.5	97.9	129.9	-86.11	1,608.5	-6,373.0	9,161.9	8,934.6	227.32	40.304	
10,236.2	6,596.0	6,575.0	6,575.0	98.9	129.9	-86.10	1,608.5	-6,373.0	9,197.5	8,969.2	228.29	40.288	
10,300.0	6,595.2	6,574.2	6,574.2	100.6	129.9	-86.07	1,608.5	-6,373.0	9,260.2	9,030.2	230.00	40.261	
10,334.6	6,594.7	6,573.7	6,573.7	101.6	129.9	-86.05	1,608.5	-6,373.0	9,294.2	9,063.3	230.93	40.246	
10,400.0	6,593.9	6,572.9	6,572.9	103.3	129.9	-86.02	1,608.5	-6,373.0	9,358.5	9,125.8	232.69	40.219	
10,433.0	6,593.5	6,572.5	6,572.5	104.2	129.9	-86.01	1,608.5	-6,373.0	9,391.0	9,157.4	233.58	40.205	
10,500.0	6,592.6	6,571.6	6,571.6	106.1	129.9	-85.98	1,608.5	-6,373.0	9,456.8	9,221.5	235.38	40.177	
10,531.5	6,592.2	6,571.2	6,571.2	106.9	129.8	-85.97	1,608.5	-6,373.0	9,487.8	9,251.6	236.23	40.164	
10,600.0	6,591.3	6,570.3	6,570.3	108.8	129.8	-85.93	1,608.5	-6,373.0	9,555.2	9,317.1	238.07	40.136	
10,629.9	6,590.9	6,569.9	6,569.9	109.6	129.8	-85.92	1,608.5	-6,373.0	9,584.6	9,345.7	238.88	40.124	
10,700.0	6,590.0	6,569.0	6,569.0	111.6	129.8	-85.89	1,608.5	-6,373.0	9,653.6	9,412.8	240.77	40.095	
10,728.3	6,589.6	6,568.6	6,568.6	112.3	129.8	-85.88	1,608.5	-6,373.0	9,681.5	9,439.9	241.53	40.084	
10,800.0	6,588.7	6,567.7	6,567.7	114.3	129.8	-85.85	1,608.5	-6,373.0	9,752.0	9,508.6	243.47	40.055	
10,826.7	6,588.4	6,567.4	6,567.4	115.0	129.8	-85.83	1,608.5	-6,373.0	9,778.4	9,534.2	244.19	40.044	
10,900.0	6,587.4	6,566.4	6,566.4	117.0	129.8	-85.80	1,608.5	-6,373.0	9,850.5	9,604.3	246.17	40.015	
10,925.2	6,587.1	6,566.1	6,566.1	117.7	129.7	-85.79	1,608.5	-6,373.0	9,875.3	9,628.4	246.85	40.005	
11,000.0	6,586.1	6,565.1	6,565.1	119.8	129.7	-85.76	1,608.5	-6,373.0	9,949.0	9,700.1	248.87	39.976	
11,023.6	6,585.8	6,564.8	6,564.8	120.4	129.7	-85.75	1,608.5	-6,373.0	9,972.2	9,722.7	249.51	39.967	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-33.85	1,473.7	-988.5	1,774.5				
98.4	98.4	102.4	102.4	0.1	0.0	-33.85	1,473.7	-988.5	1,774.5	1,774.4	0.12	N/A	
100.0	100.0	104.0	104.0	0.1	0.0	-33.85	1,473.7	-988.5	1,774.5	1,774.3	0.14	N/A	
196.8	196.8	200.8	200.8	0.3	1.0	-33.85	1,473.7	-988.5	1,774.5	1,773.2	1.29	1,371.332	
200.0	200.0	204.0	204.0	0.3	1.1	-33.85	1,473.7	-988.5	1,774.5	1,773.1	1.37	1,290.565	
295.3	295.3	299.3	299.3	0.5	3.3	-33.85	1,473.7	-988.5	1,774.5	1,770.7	3.82	464.000	
300.0	300.0	304.0	304.0	0.5	3.4	-33.85	1,473.7	-988.5	1,774.5	1,770.5	3.94	450.926	
393.7	393.7	397.7	397.7	0.8	5.3	-33.85	1,473.7	-988.5	1,774.5	1,768.4	6.10	291.083	
400.0	400.0	404.0	404.0	0.8	5.5	-33.85	1,473.7	-988.5	1,774.5	1,768.2	6.24	284.377	
492.1	492.1	496.1	496.1	1.0	7.3	-33.85	1,473.7	-988.5	1,774.5	1,766.1	8.33	213.053	
500.0	500.0	504.0	504.0	1.0	7.5	-33.85	1,473.7	-988.5	1,774.5	1,766.0	8.51	208.595	
590.5	590.5	594.5	594.5	1.2	9.3	-33.85	1,473.7	-988.5	1,774.5	1,763.9	10.55	168.234	
600.0	600.0	604.0	604.0	1.2	9.5	-33.85	1,473.7	-988.5	1,774.5	1,763.7	10.76	164.908	
689.0	689.0	693.0	693.0	1.4	11.3	-33.85	1,473.7	-988.5	1,774.5	1,761.7	12.76	139.064	
700.0	700.0	704.0	704.0	1.4	11.6	-33.85	1,473.7	-988.5	1,774.5	1,761.5	13.01	136.417	
787.4	787.4	791.4	791.4	1.6	13.3	-33.85	1,473.7	-988.5	1,774.5	1,759.5	14.97	118.544	
800.0	800.0	804.0	804.0	1.7	13.6	-33.85	1,473.7	-988.5	1,774.5	1,759.2	15.25	116.347	
885.8	885.8	889.8	889.8	1.9	15.3	-33.85	1,473.7	-988.5	1,774.5	1,757.3	17.18	103.313	
900.0	900.0	904.0	904.0	1.9	15.6	-33.85	1,473.7	-988.5	1,774.5	1,757.0	17.49	101.437	
984.2	984.2	988.2	988.2	2.1	17.3	-33.85	1,473.7	-988.5	1,774.5	1,755.1	19.38	91.558	
1,000.0	1,000.0	1,004.0	1,004.0	2.1	17.6	-33.85	1,473.7	-988.5	1,774.5	1,754.7	19.73	89.921	
1,082.7	1,082.7	1,086.7	1,086.7	2.3	19.3	-33.85	1,473.7	-988.5	1,774.5	1,752.9	21.59	82.208	
1,100.0	1,100.0	1,104.0	1,104.0	2.3	19.6	-33.85	1,473.7	-988.5	1,774.5	1,752.5	21.97	80.756	
1,181.1	1,181.1	1,185.1	1,185.1	2.5	21.3	-33.85	1,473.7	-988.5	1,774.5	1,750.7	23.79	74.593	
1,200.0	1,200.0	1,204.0	1,204.0	2.6	21.6	-33.85	1,473.7	-988.5	1,774.5	1,750.3	24.21	73.289	
1,279.5	1,279.5	1,283.5	1,283.5	2.7	23.2	61.38	1,473.7	-988.5	1,773.9	1,748.0	25.98	68.287	
1,300.0	1,300.0	1,304.0	1,304.0	2.8	23.7	61.41	1,473.7	-988.5	1,773.6	1,747.2	26.43	67.103	
1,377.9	1,377.8	1,381.8	1,381.8	2.9	25.2	61.54	1,473.7	-988.5	1,771.8	1,743.7	28.15	62.948	
1,400.0	1,399.8	1,403.8	1,403.8	3.0	25.7	61.60	1,473.7	-988.5	1,771.1	1,742.5	28.63	61.860	
1,476.4	1,475.9	1,479.9	1,479.9	3.1	27.2	61.83	1,473.7	-988.5	1,768.1	1,737.8	30.31	58.334	
1,500.0	1,499.5	1,503.5	1,503.5	3.2	27.7	61.92	1,473.7	-988.5	1,767.0	1,736.2	30.83	57.318	
1,574.8	1,573.7	1,577.7	1,577.7	3.4	29.2	62.24	1,473.7	-988.5	1,762.9	1,730.4	32.47	54.287	
1,600.0	1,598.7	1,602.7	1,602.7	3.4	29.7	62.37	1,473.7	-988.5	1,761.3	1,728.2	33.03	53.331	
1,673.2	1,671.1	1,675.1	1,675.1	3.6	31.1	62.78	1,473.7	-988.5	1,756.1	1,721.5	34.64	50.695	
1,700.0	1,697.5	1,701.5	1,701.5	3.7	31.7	62.95	1,473.7	-988.5	1,754.0	1,718.8	35.23	49.789	
1,771.6	1,767.9	1,771.9	1,771.9	3.9	33.1	63.44	1,473.7	-988.5	1,747.9	1,711.1	36.82	47.472	
1,800.0	1,795.6	1,799.6	1,799.6	4.0	33.6	63.65	1,473.7	-988.5	1,745.3	1,707.9	37.45	46.608	
1,870.1	1,864.0	1,868.0	1,868.0	4.3	35.0	64.22	1,473.7	-988.5	1,738.4	1,699.4	39.02	44.552	
1,900.0	1,893.1	1,897.1	1,897.1	4.4	35.6	64.49	1,473.7	-988.5	1,735.3	1,695.6	39.69	43.722	
1,968.5	1,959.3	1,963.3	1,963.3	4.6	36.9	65.13	1,473.7	-988.5	1,727.7	1,686.4	41.25	41.886	
1,992.4	1,982.4	1,986.4	1,986.4	4.7	37.4	65.37	1,473.7	-988.5	1,724.9	1,683.1	41.79	41.274	
2,000.0	1,989.6	1,993.6	1,993.6	4.8	37.5	65.43	1,473.7	-988.5	1,724.0	1,682.0	41.97	41.078	
2,066.9	2,054.0	2,058.0	2,058.0	5.1	38.8	65.97	1,473.7	-988.5	1,716.2	1,672.7	43.55	39.404	
2,100.0	2,085.8	2,089.8	2,089.8	5.2	39.5	66.23	1,473.7	-988.5	1,712.5	1,668.1	44.34	38.622	
2,165.3	2,148.7	2,152.7	2,152.7	5.5	40.7	66.77	1,473.7	-988.5	1,705.1	1,659.2	45.90	37.145	
2,200.0	2,182.0	2,186.0	2,186.0	5.7	41.4	67.05	1,473.7	-988.5	1,701.3	1,654.5	46.74	36.401	
2,263.8	2,243.4	2,247.4	2,247.4	6.0	42.6	67.57	1,473.7	-988.5	1,694.3	1,646.1	48.28	35.093	
2,300.0	2,278.2	2,282.2	2,282.2	6.2	43.3	67.87	1,473.7	-988.5	1,690.5	1,641.3	49.16	34.387	
2,362.2	2,338.1	2,342.1	2,342.1	6.5	44.5	68.39	1,473.7	-988.5	1,683.9	1,633.2	50.68	33.229	
2,400.0	2,374.4	2,378.4	2,378.4	6.7	45.3	68.71	1,473.7	-988.5	1,680.0	1,628.4	51.60	32.558	
2,460.6	2,432.8	2,436.8	2,436.8	7.0	46.4	69.22	1,473.7	-988.5	1,673.9	1,620.8	53.09	31.529	
2,500.0	2,470.6	2,474.6	2,474.6	7.2	47.2	69.55	1,473.7	-988.5	1,670.0	1,615.9	54.06	30.892	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,527.4	2,531.4	2,531.4	7.6	48.4	70.05	1,473.7	-988.5	1,664.2	1,608.7	55.52	29.977	
2,600.0	2,566.8	2,570.8	2,570.8	7.8	49.1	70.41	1,473.7	-988.5	1,660.3	1,603.7	56.53	29.371	
2,657.5	2,622.1	2,626.1	2,626.1	8.1	50.3	70.90	1,473.7	-988.5	1,654.9	1,596.9	57.96	28.555	
2,700.0	2,663.0	2,667.0	2,667.0	8.3	51.1	71.27	1,473.7	-988.5	1,651.0	1,592.0	59.01	27.978	
2,755.9	2,716.8	2,720.8	2,720.8	8.6	52.2	71.75	1,473.7	-988.5	1,646.0	1,585.6	60.40	27.249	
2,800.0	2,759.2	2,763.2	2,763.2	8.9	53.0	72.14	1,473.7	-988.5	1,642.1	1,580.6	61.50	26.699	
2,854.3	2,811.5	2,815.5	2,815.5	9.2	54.1	72.62	1,473.7	-988.5	1,637.5	1,574.6	62.86	26.048	
2,900.0	2,855.4	2,859.4	2,859.4	9.4	54.9	73.02	1,473.7	-988.5	1,633.7	1,569.6	64.01	25.523	
2,952.7	2,906.2	2,910.2	2,910.2	9.7	56.0	73.49	1,473.7	-988.5	1,629.4	1,564.0	65.33	24.940	
3,000.0	2,951.6	2,955.6	2,955.6	10.0	56.9	73.91	1,473.7	-988.5	1,625.6	1,559.1	66.52	24.439	
3,051.2	3,000.9	3,004.9	3,004.9	10.3	57.9	74.37	1,473.7	-988.5	1,621.6	1,553.8	67.80	23.917	
3,100.0	3,047.8	3,051.8	3,051.8	10.5	58.8	74.80	1,473.7	-988.5	1,618.0	1,548.9	69.03	23.438	
3,149.6	3,095.5	3,099.5	3,099.5	10.8	59.8	75.25	1,473.7	-988.5	1,614.3	1,544.1	70.28	22.969	
3,200.0	3,144.0	3,148.0	3,148.0	11.1	60.8	75.71	1,473.7	-988.5	1,610.8	1,539.2	71.55	22.511	
3,248.0	3,190.2	3,194.2	3,194.2	11.4	61.7	76.15	1,473.7	-988.5	1,607.5	1,534.7	72.77	22.090	
3,300.0	3,240.2	3,244.2	3,244.2	11.7	62.7	76.62	1,473.7	-988.5	1,604.0	1,529.9	74.08	21.652	
3,346.4	3,284.9	3,288.9	3,288.9	11.9	63.6	77.05	1,473.7	-988.5	1,601.0	1,525.7	75.26	21.274	
3,400.0	3,336.4	3,340.4	3,340.4	12.2	64.6	77.54	1,473.7	-988.5	1,597.6	1,521.0	76.61	20.854	
3,444.9	3,379.6	3,383.6	3,383.6	12.5	65.5	77.95	1,473.7	-988.5	1,594.9	1,517.2	77.75	20.515	
3,500.0	3,432.6	3,436.6	3,436.6	12.8	66.6	78.46	1,473.7	-988.5	1,591.8	1,512.6	79.14	20.112	
3,543.3	3,474.3	3,478.3	3,478.3	13.1	67.4	78.87	1,473.7	-988.5	1,589.3	1,509.1	80.24	19.807	
3,600.0	3,528.8	3,532.8	3,532.8	13.4	68.5	79.39	1,473.7	-988.5	1,586.3	1,504.6	81.68	19.421	
3,641.7	3,569.0	3,573.0	3,573.0	13.6	69.3	79.78	1,473.7	-988.5	1,584.2	1,501.4	82.74	19.147	
3,700.0	3,625.0	3,629.0	3,629.0	14.0	70.4	80.33	1,473.7	-988.5	1,581.3	1,497.1	84.22	18.777	
3,740.1	3,663.6	3,667.6	3,667.6	14.2	71.2	80.71	1,473.7	-988.5	1,579.4	1,494.2	85.24	18.530	
3,800.0	3,721.2	3,725.2	3,725.2	14.5	72.4	81.27	1,473.7	-988.5	1,576.8	1,490.0	86.75	18.175	
3,838.6	3,758.3	3,762.3	3,762.3	14.8	73.1	81.64	1,473.7	-988.5	1,575.2	1,487.4	87.73	17.954	
3,900.0	3,817.4	3,821.4	3,821.4	15.1	74.3	82.22	1,473.7	-988.5	1,572.7	1,483.4	89.29	17.613	
3,937.0	3,853.0	3,857.0	3,857.0	15.3	75.0	82.57	1,473.7	-988.5	1,571.3	1,481.1	90.23	17.414	
4,000.0	3,913.6	3,917.6	3,917.6	15.7	76.2	83.17	1,473.7	-988.5	1,569.1	1,477.3	91.83	17.087	
4,035.4	3,947.7	3,951.7	3,951.7	15.9	76.9	83.51	1,473.7	-988.5	1,567.9	1,475.2	92.73	16.909	
4,100.0	4,009.8	4,013.8	4,013.8	16.3	78.2	84.13	1,473.7	-988.5	1,566.0	1,471.6	94.37	16.595	
4,133.8	4,042.4	4,046.4	4,046.4	16.5	78.8	84.45	1,473.7	-988.5	1,565.0	1,469.8	95.22	16.435	
4,200.0	4,106.0	4,110.0	4,110.0	16.8	80.1	85.08	1,473.7	-988.5	1,563.3	1,466.4	96.90	16.133	
4,232.3	4,137.1	4,141.1	4,141.1	17.0	80.7	85.39	1,473.7	-988.5	1,562.5	1,464.8	97.72	15.990	
4,300.0	4,202.2	4,206.2	4,206.2	17.4	82.0	86.04	1,473.7	-988.5	1,561.1	1,461.7	99.43	15.700	
4,330.7	4,231.7	4,235.7	4,235.7	17.6	82.6	86.34	1,473.7	-988.5	1,560.5	1,460.3	100.21	15.572	
4,400.0	4,298.4	4,302.4	4,302.4	18.0	84.0	87.01	1,473.7	-988.5	1,559.4	1,457.4	101.96	15.294	
4,429.1	4,326.4	4,330.4	4,330.4	18.2	84.5	87.29	1,473.7	-988.5	1,559.0	1,456.3	102.70	15.180	
4,500.0	4,394.6	4,398.6	4,398.6	18.6	85.9	87.97	1,473.7	-988.5	1,558.1	1,453.7	104.49	14.912	
4,527.5	4,421.1	4,425.1	4,425.1	18.7	86.4	88.24	1,473.7	-988.5	1,557.9	1,452.7	105.18	14.811	
4,600.0	4,490.8	4,494.8	4,494.8	19.2	87.8	88.94	1,473.7	-988.5	1,557.4	1,450.4	107.01	14.554	
4,626.0	4,515.8	4,519.8	4,519.8	19.3	88.3	89.19	1,473.7	-988.5	1,557.3	1,449.6	107.66	14.464	
4,700.0	4,587.0	4,591.0	4,591.0	19.8	89.8	89.91	1,473.7	-988.5	1,557.1	1,447.6	109.53	14.217	
4,709.8	4,596.4	4,600.4	4,600.4	19.8	90.0	90.00	1,473.7	-988.5	1,557.1	1,447.3	109.77	14.185 CC	
4,724.4	4,610.5	4,614.5	4,614.5	19.9	90.2	90.14	1,473.7	-988.5	1,557.1	1,447.0	110.14	14.137	
4,800.0	4,683.2	4,687.2	4,687.2	20.3	91.7	90.87	1,473.7	-988.5	1,557.3	1,445.2	112.04	13.900	
4,822.8	4,705.2	4,709.2	4,709.2	20.5	92.2	91.09	1,473.7	-988.5	1,557.4	1,444.8	112.61	13.830	
4,900.0	4,779.4	4,783.4	4,783.4	20.9	93.6	91.84	1,473.7	-988.5	1,558.0	1,443.4	114.54	13.601	
4,921.2	4,799.8	4,803.8	4,803.8	21.0	94.1	92.04	1,473.7	-988.5	1,558.2	1,443.1	115.07	13.540	
5,000.0	4,875.6	4,879.6	4,879.6	21.5	95.6	92.80	1,473.7	-988.5	1,559.1	1,442.1	117.04	13.321	
5,019.7	4,894.5	4,898.5	4,898.5	21.6	96.0	92.99	1,473.7	-988.5	1,559.4	1,441.9	117.53	13.268	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	4,971.8	4,975.8	4,975.8	22.1	97.5	93.77	1,473.7	-988.5	1,560.7	1,441.2	119.53	13.057	
5,118.1	4,989.2	4,993.2	4,993.2	22.2	97.9	93.94	1,473.7	-988.5	1,561.1	1,441.1	119.98	13.011	
5,200.0	5,068.0	5,072.0	5,072.0	22.7	99.4	94.73	1,473.7	-988.5	1,562.8	1,440.8	122.02	12.808	
5,216.5	5,083.9	5,087.9	5,087.9	22.8	99.8	94.89	1,473.7	-988.5	1,563.2	1,440.8	122.43	12.768	
5,240.0	5,106.5	5,110.5	5,110.5	22.9	100.2	95.11	1,473.7	-988.5	1,563.8	1,440.8	123.01	12.713	
5,300.0	5,164.4	5,168.4	5,168.4	23.2	101.4	95.70	1,473.7	-988.5	1,565.3	1,440.9	124.45	12.578	
5,314.9	5,178.8	5,182.8	5,182.8	23.3	101.7	95.84	1,473.7	-988.5	1,565.7	1,440.9	124.80	12.546	
5,400.0	5,261.5	5,265.5	5,265.5	23.6	103.3	96.58	1,473.7	-988.5	1,567.9	1,441.2	126.77	12.368	
5,413.4	5,274.6	5,278.6	5,278.6	23.6	103.6	96.69	1,473.7	-988.5	1,568.3	1,441.2	127.08	12.341	
5,500.0	5,359.5	5,363.5	5,363.5	23.9	105.3	97.35	1,473.7	-988.5	1,570.4	1,441.4	129.06	12.168	
5,511.8	5,371.1	5,375.1	5,375.1	24.0	105.5	97.43	1,473.7	-988.5	1,570.7	1,441.4	129.33	12.145	
5,600.0	5,458.0	5,462.0	5,462.0	24.2	107.3	97.99	1,473.7	-988.5	1,572.7	1,441.4	131.33	11.976	
5,610.2	5,468.2	5,472.2	5,472.2	24.3	107.5	98.05	1,473.7	-988.5	1,572.9	1,441.4	131.55	11.957	
5,700.0	5,557.2	5,561.2	5,561.2	24.5	109.3	98.51	1,473.7	-988.5	1,574.6	1,441.1	133.56	11.790	
5,708.6	5,565.7	5,569.7	5,569.7	24.5	109.5	98.54	1,473.7	-988.5	1,574.8	1,441.0	133.75	11.774	
5,800.0	5,656.7	5,660.7	5,660.7	24.7	111.3	98.89	1,473.7	-988.5	1,576.1	1,440.4	135.76	11.609	
5,807.1	5,663.7	5,667.7	5,667.7	24.7	111.4	98.91	1,473.7	-988.5	1,576.2	1,440.3	135.92	11.597	
5,900.0	5,756.5	5,760.5	5,760.5	24.9	113.3	99.14	1,473.7	-988.5	1,577.1	1,439.2	137.93	11.434	
5,905.5	5,761.9	5,765.9	5,765.9	24.9	113.4	99.14	1,473.7	-988.5	1,577.2	1,439.1	138.05	11.425	
6,000.0	5,856.4	5,860.4	5,860.4	25.0	115.3	99.25	1,473.7	-988.5	1,577.6	1,437.5	140.07	11.263	
6,003.9	5,860.3	5,864.3	5,864.3	25.0	115.4	99.25	1,473.7	-988.5	1,577.6	1,437.5	140.15	11.256	
6,032.5	5,888.9	5,892.9	5,892.9	25.0	116.0	4.06	1,473.7	-988.5	1,577.6	1,446.6	130.99	12.044	
6,062.5	5,918.9	5,922.9	5,922.9	25.1	116.6	4.06	1,473.7	-988.5	1,577.6	1,446.0	131.64	11.984	
6,100.0	5,956.4	5,960.4	5,960.4	25.1	117.3	-85.98	1,473.7	-988.5	1,577.6	1,435.4	142.17	11.096	
6,102.3	5,958.7	5,962.7	5,962.7	25.1	117.4	-85.99	1,473.7	-988.5	1,577.5	1,435.3	142.22	11.092	
6,150.0	6,006.2	6,010.2	6,010.2	25.1	118.3	-86.16	1,473.7	-988.5	1,577.3	1,434.1	143.18	11.016	
6,200.0	6,055.6	6,059.6	6,059.6	25.1	119.3	-86.48	1,473.7	-988.5	1,576.7	1,432.6	144.14	10.939	
6,200.8	6,056.3	6,060.3	6,060.3	25.1	119.3	-86.49	1,473.7	-988.5	1,576.7	1,432.6	144.16	10.937	
6,250.0	6,104.3	6,108.3	6,108.3	25.0	120.3	-86.93	1,473.7	-988.5	1,576.1	1,431.0	145.08	10.864	
6,299.2	6,151.3	6,155.3	6,155.3	24.9	121.2	-87.49	1,473.7	-988.5	1,575.4	1,429.4	145.96	10.793	
6,300.0	6,152.1	6,156.1	6,156.1	24.9	121.2	-87.50	1,473.7	-988.5	1,575.3	1,429.4	145.97	10.792	
6,350.0	6,198.7	6,202.7	6,202.7	24.8	122.2	-88.16	1,473.7	-988.5	1,574.6	1,427.8	146.82	10.724	
6,397.6	6,241.9	6,245.9	6,245.9	24.7	123.1	-88.87	1,473.7	-988.5	1,574.0	1,426.4	147.60	10.664	
6,400.0	6,244.1	6,248.1	6,248.1	24.7	123.1	-88.91	1,473.7	-988.5	1,574.0	1,426.4	147.64	10.661	
6,450.0	6,287.8	6,291.8	6,291.8	24.5	124.0	-89.71	1,473.7	-988.5	1,573.7	1,425.3	148.41	10.604	
6,467.9	6,303.0	6,307.0	6,307.0	24.5	124.3	-90.00	1,473.7	-988.5	1,573.7	1,425.0	148.68	10.584	
6,496.0	6,326.5	6,330.5	6,330.5	24.4	124.8	-90.47	1,473.7	-988.5	1,573.7	1,424.7	149.08	10.556	
6,500.0	6,329.7	6,333.7	6,333.7	24.4	124.8	-90.53	1,473.7	-988.5	1,573.8	1,424.6	149.14	10.553	
6,550.0	6,369.6	6,373.6	6,373.6	24.3	125.6	-91.35	1,473.7	-988.5	1,574.4	1,424.6	149.81	10.509 ES	
6,594.5	6,403.3	6,407.3	6,407.3	24.2	126.3	-92.06	1,473.7	-988.5	1,575.5	1,425.2	150.37	10.478	
6,600.0	6,407.3	6,411.3	6,411.3	24.2	126.4	-92.15	1,473.7	-988.5	1,575.7	1,425.3	150.43	10.475	
6,650.0	6,442.7	6,446.7	6,446.7	24.1	127.1	-92.88	1,473.7	-988.5	1,577.9	1,426.9	151.01	10.449	
6,692.9	6,471.0	6,475.0	6,475.0	24.0	127.7	-93.43	1,473.7	-988.5	1,580.6	1,429.2	151.48	10.435	
6,700.0	6,475.5	6,479.5	6,479.5	24.0	127.8	-93.52	1,473.7	-988.5	1,581.2	1,429.6	151.55	10.433	
6,750.0	6,505.6	6,509.6	6,509.6	24.0	128.4	-94.04	1,473.7	-988.5	1,585.5	1,433.5	152.07	10.427 SF	
6,791.3	6,528.3	6,532.3	6,532.3	24.0	128.8	-94.36	1,473.7	-988.5	1,590.1	1,437.6	152.49	10.428	
6,800.0	6,532.8	6,536.8	6,536.8	24.0	128.9	-94.41	1,473.7	-988.5	1,591.2	1,438.6	152.57	10.429	
6,850.0	6,557.0	6,561.0	6,561.0	24.1	129.4	-94.61	1,473.7	-988.5	1,598.3	1,445.2	153.09	10.440	
6,889.7	6,574.1	6,578.1	6,578.1	24.2	129.7	-94.62	1,473.7	-988.5	1,604.9	1,451.4	153.53	10.453	
6,900.0	6,578.1	6,582.1	6,582.1	24.3	129.8	-94.61	1,473.7	-988.5	1,606.8	1,453.2	153.65	10.458	
6,950.0	6,596.1	6,600.1	6,600.1	24.5	130.2	-94.39	1,473.7	-988.5	1,616.9	1,462.6	154.24	10.483	
6,988.2	6,607.5	6,611.5	6,611.5	24.7	130.4	-94.07	1,473.7	-988.5	1,625.6	1,470.9	154.73	10.506	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
7,000.0	6,610.7	6,614.7	6,614.7	24.8	130.5	-93.94	1,473.7	-988.5	1,628.5	1,473.6	154.88	10.515	
7,050.0	6,621.9	6,625.9	6,625.9	25.1	130.7	-93.25	1,473.7	-988.5	1,641.7	1,486.2	155.56	10.554	
7,086.6	6,628.0	6,632.0	6,632.0	25.4	130.8	-92.57	1,473.7	-988.5	1,652.4	1,496.3	156.07	10.587	
7,100.0	6,629.7	6,633.7	6,633.7	25.6	130.9	-92.29	1,473.7	-988.5	1,656.5	1,500.2	156.25	10.601	
7,150.0	6,634.1	6,638.1	6,638.1	26.0	130.9	-91.08	1,473.7	-988.5	1,672.7	1,515.8	156.91	10.660	
7,185.0	6,635.1	6,639.1	6,639.1	26.4	131.0	-90.07	1,473.7	-988.5	1,684.9	1,527.6	157.32	10.710	
7,196.6	6,635.0	6,639.0	6,639.0	26.5	131.0	-89.71	1,473.7	-988.5	1,689.0	1,531.6	157.44	10.728	
7,200.0	6,635.0	6,639.0	6,639.0	26.6	131.0	-89.71	1,473.7	-988.5	1,690.3	1,532.8	157.48	10.733	
7,283.4	6,633.9	6,637.9	6,637.9	27.6	130.9	-89.67	1,473.7	-988.5	1,722.5	1,564.0	158.49	10.869	
7,300.0	6,633.7	6,637.7	6,637.7	27.8	130.9	-89.67	1,473.7	-988.5	1,729.3	1,570.6	158.69	10.898	
7,381.9	6,632.6	6,636.6	6,636.6	29.0	130.9	-89.63	1,473.7	-988.5	1,764.8	1,605.0	159.85	11.040	
7,400.0	6,632.4	6,636.4	6,636.4	29.2	130.9	-89.62	1,473.7	-988.5	1,773.1	1,613.0	160.11	11.074	
7,480.3	6,631.4	6,635.4	6,635.4	30.5	130.9	-89.58	1,473.7	-988.5	1,811.5	1,650.1	161.41	11.223	
7,500.0	6,631.1	6,635.1	6,635.1	30.9	130.9	-89.57	1,473.7	-988.5	1,821.3	1,659.6	161.72	11.262	
7,578.7	6,630.1	6,634.1	6,634.1	32.3	130.9	-89.54	1,473.7	-988.5	1,862.2	1,699.1	163.12	11.416	
7,600.0	6,629.8	6,633.8	6,633.8	32.7	130.9	-89.53	1,473.7	-988.5	1,873.7	1,710.2	163.50	11.460	
7,677.1	6,628.9	6,632.9	6,632.9	34.1	130.8	-89.49	1,473.7	-988.5	1,916.6	1,751.7	164.97	11.618	
7,700.0	6,628.6	6,632.6	6,632.6	34.6	130.8	-89.48	1,473.7	-988.5	1,929.8	1,764.4	165.40	11.667	
7,775.6	6,627.6	6,631.6	6,631.6	36.1	130.8	-89.44	1,473.7	-988.5	1,974.5	1,807.5	166.93	11.828	
7,800.0	6,627.3	6,631.3	6,631.3	36.6	130.8	-89.43	1,473.7	-988.5	1,989.3	1,821.9	167.43	11.882	
7,874.0	6,626.3	6,630.3	6,630.3	38.2	130.8	-89.40	1,473.7	-988.5	2,035.4	1,866.4	168.99	12.044	
7,900.0	6,626.0	6,630.0	6,630.0	38.8	130.8	-89.39	1,473.7	-988.5	2,052.0	1,882.5	169.54	12.103	
7,972.4	6,625.1	6,629.1	6,629.1	40.4	130.8	-89.35	1,473.7	-988.5	2,099.2	1,928.1	171.13	12.267	
8,000.0	6,624.7	6,628.7	6,628.7	41.0	130.8	-89.34	1,473.7	-988.5	2,117.6	1,945.8	171.74	12.330	
8,070.8	6,623.8	6,627.8	6,627.8	42.6	130.7	-89.31	1,473.7	-988.5	2,165.6	1,992.3	173.35	12.493	
8,100.0	6,623.4	6,627.4	6,627.4	43.3	130.7	-89.29	1,473.7	-988.5	2,185.7	2,011.7	174.01	12.561	
8,169.3	6,622.6	6,626.6	6,626.6	44.9	130.7	-89.26	1,473.7	-988.5	2,234.4	2,058.8	175.62	12.723	
8,200.0	6,622.2	6,626.2	6,626.2	45.6	130.7	-89.25	1,473.7	-988.5	2,256.3	2,080.0	176.33	12.796	
8,267.7	6,621.3	6,625.3	6,625.3	47.3	130.7	-89.21	1,473.7	-988.5	2,305.3	2,127.3	177.94	12.956	
8,300.0	6,620.9	6,624.9	6,624.9	48.0	130.7	-89.20	1,473.7	-988.5	2,329.0	2,150.3	178.70	13.033	
8,366.1	6,620.0	6,624.0	6,624.0	49.7	130.7	-89.17	1,473.7	-988.5	2,378.2	2,197.9	180.30	13.190	
8,400.0	6,619.6	6,623.6	6,623.6	50.5	130.7	-89.15	1,473.7	-988.5	2,403.7	2,222.5	181.12	13.271	
8,464.5	6,618.8	6,622.8	6,622.8	52.1	130.6	-89.12	1,473.7	-988.5	2,452.8	2,270.1	182.70	13.425	
8,500.0	6,618.3	6,622.3	6,622.3	53.0	130.6	-89.11	1,473.7	-988.5	2,480.1	2,296.5	183.57	13.511	
8,563.0	6,617.5	6,621.5	6,621.5	54.5	130.6	-89.08	1,473.7	-988.5	2,529.1	2,344.0	185.13	13.661	
8,600.0	6,617.0	6,621.0	6,621.0	55.5	130.6	-89.06	1,473.7	-988.5	2,558.2	2,372.1	186.05	13.750	
8,661.4	6,616.3	6,620.3	6,620.3	57.0	130.6	-89.03	1,473.7	-988.5	2,606.8	2,419.3	187.59	13.897	
8,700.0	6,615.8	6,619.8	6,619.8	58.0	130.6	-89.01	1,473.7	-988.5	2,637.7	2,449.2	188.56	13.989	
8,759.8	6,615.0	6,619.0	6,619.0	59.5	130.6	-88.98	1,473.7	-988.5	2,686.0	2,495.9	190.07	14.131	
8,800.0	6,614.5	6,618.5	6,618.5	60.6	130.5	-88.96	1,473.7	-988.5	2,718.6	2,527.5	191.09	14.227	
8,858.2	6,613.7	6,617.7	6,617.7	62.1	130.5	-88.94	1,473.7	-988.5	2,766.3	2,573.7	192.58	14.365	
8,900.0	6,613.2	6,617.2	6,617.2	63.2	130.5	-88.92	1,473.7	-988.5	2,800.8	2,607.1	193.65	14.463	
8,956.7	6,612.5	6,616.5	6,616.5	64.6	130.5	-88.89	1,473.7	-988.5	2,847.8	2,652.7	195.10	14.596	
9,000.0	6,611.9	6,615.9	6,615.9	65.8	130.5	-88.87	1,473.7	-988.5	2,884.0	2,687.8	196.22	14.698	
9,055.1	6,611.2	6,615.2	6,615.2	67.2	130.5	-88.84	1,473.7	-988.5	2,930.3	2,732.7	197.65	14.826	
9,100.0	6,610.6	6,614.6	6,614.6	68.4	130.5	-88.82	1,473.7	-988.5	2,968.3	2,769.5	198.81	14.931	
9,153.5	6,609.9	6,613.9	6,613.9	69.8	130.5	-88.80	1,473.7	-988.5	3,013.8	2,813.6	200.20	15.054	
9,200.0	6,609.3	6,613.3	6,613.3	71.0	130.4	-88.78	1,473.7	-988.5	3,053.6	2,852.1	201.41	15.161	
9,251.9	6,608.7	6,612.7	6,612.7	72.4	130.4	-88.75	1,473.7	-988.5	3,098.2	2,895.4	202.77	15.279	
9,300.0	6,608.1	6,612.1	6,612.1	73.7	130.4	-88.73	1,473.7	-988.5	3,139.7	2,935.6	204.03	15.388	
9,350.4	6,607.4	6,611.4	6,611.4	75.0	130.4	-88.70	1,473.7	-988.5	3,183.4	2,978.0	205.35	15.502	
9,400.0	6,606.8	6,610.8	6,610.8	76.3	130.4	-88.68	1,473.7	-988.5	3,226.6	3,019.9	206.66	15.613	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
9,448.8	6,606.1	6,610.1	6,610.1	77.6	130.4	-88.66	1,473.7	-988.5	3,269.3	3,061.3	207.94	15.722	
9,500.0	6,605.5	6,609.5	6,609.5	79.0	130.4	-88.63	1,473.7	-988.5	3,314.2	3,104.9	209.29	15.835	
9,547.2	6,604.9	6,608.9	6,608.9	80.2	130.4	-88.61	1,473.7	-988.5	3,355.9	3,145.3	210.55	15.939	
9,600.0	6,604.2	6,608.2	6,608.2	81.7	130.3	-88.59	1,473.7	-988.5	3,402.6	3,190.6	211.94	16.054	
9,645.6	6,603.6	6,607.6	6,607.6	82.9	130.3	-88.56	1,473.7	-988.5	3,443.1	3,230.0	213.15	16.153	
9,700.0	6,602.9	6,606.9	6,606.9	84.3	130.3	-88.54	1,473.7	-988.5	3,491.5	3,276.9	214.60	16.270	
9,744.1	6,602.3	6,606.3	6,606.3	85.5	130.3	-88.52	1,473.7	-988.5	3,530.9	3,315.2	215.77	16.364	
9,800.0	6,601.6	6,605.6	6,605.6	87.0	130.3	-88.49	1,473.7	-988.5	3,581.1	3,363.8	217.26	16.483	
9,842.5	6,601.1	6,605.1	6,605.1	88.2	130.3	-88.47	1,473.7	-988.5	3,619.3	3,400.9	218.40	16.572	
9,900.0	6,600.3	6,604.3	6,604.3	89.7	130.3	-88.44	1,473.7	-988.5	3,671.2	3,451.2	219.93	16.692	
9,940.9	6,599.8	6,603.8	6,603.8	90.9	130.3	-88.43	1,473.7	-988.5	3,708.2	3,487.1	221.03	16.777	
10,000.0	6,599.0	6,603.0	6,603.0	92.5	130.2	-88.40	1,473.7	-988.5	3,761.7	3,539.1	222.61	16.898	
10,039.3	6,598.5	6,602.5	6,602.5	93.5	130.2	-88.38	1,473.7	-988.5	3,797.5	3,573.9	223.66	16.979	
10,100.0	6,597.7	6,601.7	6,601.7	95.2	130.2	-88.35	1,473.7	-988.5	3,852.8	3,627.5	225.29	17.101	
10,137.8	6,597.3	6,601.3	6,601.3	96.2	130.2	-88.33	1,473.7	-988.5	3,887.3	3,661.0	226.31	17.177	
10,200.0	6,596.5	6,600.5	6,600.5	97.9	130.2	-88.30	1,473.7	-988.5	3,944.3	3,716.3	227.98	17.301	
10,236.2	6,596.0	6,600.0	6,600.0	98.9	130.2	-88.28	1,473.7	-988.5	3,977.5	3,748.5	228.95	17.373	
10,300.0	6,595.2	6,599.2	6,599.2	100.6	130.2	-88.25	1,473.7	-988.5	4,036.2	3,805.5	230.67	17.497	
10,334.6	6,594.7	6,598.7	6,598.7	101.6	130.2	-88.24	1,473.7	-988.5	4,068.1	3,836.5	231.60	17.565	
10,400.0	6,593.9	6,597.9	6,597.9	103.3	130.1	-88.21	1,473.7	-988.5	4,128.4	3,895.1	233.37	17.691	
10,433.0	6,593.5	6,597.5	6,597.5	104.2	130.1	-88.19	1,473.7	-988.5	4,159.0	3,924.7	234.26	17.754	
10,500.0	6,592.6	6,596.6	6,596.6	106.1	130.1	-88.16	1,473.7	-988.5	4,221.0	3,985.0	236.07	17.881	
10,531.5	6,592.2	6,596.2	6,596.2	106.9	130.1	-88.14	1,473.7	-988.5	4,250.3	4,013.3	236.92	17.940	
10,600.0	6,591.3	6,595.3	6,595.3	108.8	130.1	-88.11	1,473.7	-988.5	4,314.0	4,075.2	238.77	18.067	
10,629.9	6,590.9	6,594.9	6,594.9	109.6	130.1	-88.10	1,473.7	-988.5	4,341.8	4,102.3	239.58	18.123	
10,700.0	6,590.0	6,594.0	6,594.0	111.6	130.1	-88.06	1,473.7	-988.5	4,407.2	4,165.8	241.48	18.251	
10,728.3	6,589.6	6,593.6	6,593.6	112.3	130.0	-88.05	1,473.7	-988.5	4,433.7	4,191.5	242.25	18.302	
10,800.0	6,588.7	6,592.7	6,592.7	114.3	130.0	-88.02	1,473.7	-988.5	4,500.8	4,256.6	244.19	18.431	
10,826.7	6,588.4	6,592.4	6,592.4	115.0	130.0	-88.00	1,473.7	-988.5	4,525.8	4,280.9	244.92	18.479	
10,900.0	6,587.4	6,591.4	6,591.4	117.0	130.0	-87.97	1,473.7	-988.5	4,594.6	4,347.7	246.90	18.609	
10,925.2	6,587.1	6,591.1	6,591.1	117.7	130.0	-87.96	1,473.7	-988.5	4,618.2	4,370.7	247.59	18.653	
11,000.0	6,586.1	6,590.1	6,590.1	119.8	130.0	-87.92	1,473.7	-988.5	4,688.7	4,439.0	249.62	18.783	
11,023.6	6,585.8	6,589.8	6,589.8	120.4	130.0	-87.91	1,473.7	-988.5	4,710.9	4,460.6	250.26	18.824	
11,100.0	6,584.8	6,588.8	6,588.8	122.5	130.0	-87.87	1,473.7	-988.5	4,783.0	4,530.6	252.34	18.955	
11,122.0	6,584.5	6,588.5	6,588.5	123.2	129.9	-87.86	1,473.7	-988.5	4,803.8	4,550.8	252.94	18.992	
11,200.0	6,583.5	6,587.5	6,587.5	125.3	129.9	-87.83	1,473.7	-988.5	4,877.5	4,622.4	255.06	19.123	
11,220.4	6,583.3	6,587.3	6,587.3	125.9	129.9	-87.82	1,473.7	-988.5	4,896.9	4,641.2	255.61	19.157	
11,300.0	6,582.2	6,586.2	6,586.2	128.1	129.9	-87.78	1,473.7	-988.5	4,972.3	4,714.5	257.78	19.289	
11,318.9	6,582.0	6,586.0	6,586.0	128.6	129.9	-87.77	1,473.7	-988.5	4,990.2	4,731.9	258.29	19.320	
11,400.0	6,580.9	6,584.9	6,584.9	130.8	129.9	-87.73	1,473.7	-988.5	5,067.2	4,806.7	260.50	19.451	
11,417.3	6,580.7	6,584.7	6,584.7	131.3	129.9	-87.72	1,473.7	-988.5	5,083.6	4,822.7	260.98	19.479	
11,500.0	6,579.7	6,583.7	6,583.7	133.6	129.8	-87.68	1,473.7	-988.5	5,162.3	4,899.1	263.23	19.611	
11,515.7	6,579.4	6,583.4	6,583.4	134.0	129.8	-87.67	1,473.7	-988.5	5,177.3	4,913.7	263.66	19.636	
11,600.0	6,578.4	6,582.4	6,582.4	136.3	129.8	-87.63	1,473.7	-988.5	5,257.7	4,991.7	265.96	19.769	
11,614.1	6,578.2	6,582.2	6,582.2	136.7	129.8	-87.63	1,473.7	-988.5	5,271.2	5,004.8	266.34	19.791	
11,700.0	6,577.1	6,581.1	6,581.1	139.1	129.8	-87.59	1,473.7	-988.5	5,353.2	5,084.5	268.69	19.923	
11,712.6	6,576.9	6,580.9	6,580.9	139.5	129.8	-87.58	1,473.7	-988.5	5,365.2	5,096.1	269.03	19.943	
11,800.0	6,575.8	6,579.8	6,579.8	141.9	129.8	-87.54	1,473.7	-988.5	5,448.8	5,177.4	271.42	20.075	
11,811.0	6,575.6	6,579.6	6,579.6	142.2	129.8	-87.53	1,473.7	-988.5	5,459.3	5,187.6	271.72	20.092	
11,858.8	6,575.0	6,579.0	6,579.0	143.5	129.8	-87.51	1,473.7	-988.5	5,505.1	5,232.1	273.02	20.163	
11,859.3	6,575.0	6,579.0	6,579.0	143.5	129.8	-87.51	1,473.7	-988.5	5,505.6	5,232.6	273.03	20.165	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-101.29	-1,253.5	-6,281.5	6,405.5				
98.4	98.4	79.0	79.0	0.1	0.0	-101.28	-1,253.4	-6,281.4	6,405.3	6,405.2	0.11	N/A	
100.0	100.0	80.9	80.9	0.1	0.0	-101.28	-1,253.4	-6,281.4	6,405.3	6,405.2	0.11	N/A	
196.8	196.8	197.2	197.2	0.3	0.2	-101.28	-1,252.9	-6,281.1	6,404.9	6,404.4	0.52	N/A	
200.0	200.0	200.8	200.8	0.3	0.2	-101.28	-1,252.9	-6,281.0	6,404.9	6,404.3	0.53	N/A	
295.3	295.3	299.1	299.1	0.5	0.3	-101.28	-1,252.4	-6,280.6	6,404.3	6,403.5	0.83	7,679.334	
300.0	300.0	300.0	300.0	0.5	0.3	-101.28	-1,252.4	-6,280.6	6,404.3	6,403.5	0.85	7,575.412	
393.7	393.7	373.5	373.5	0.8	0.3	-101.28	-1,252.1	-6,280.3	6,403.9	6,402.8	1.10	5,822.650	
400.0	400.0	378.3	378.3	0.8	0.4	-101.28	-1,252.1	-6,280.3	6,403.9	6,402.8	1.12	5,734.057	
492.1	492.1	488.1	488.1	1.0	0.4	-101.27	-1,251.6	-6,280.1	6,403.7	6,402.3	1.39	4,610.453	
500.0	500.0	499.1	499.1	1.0	0.4	-101.27	-1,251.6	-6,280.0	6,403.6	6,402.2	1.41	4,531.528	
590.5	590.5	592.3	592.3	1.2	0.5	-101.27	-1,251.1	-6,279.6	6,403.1	6,401.5	1.67	3,843.057	
600.0	600.0	600.0	600.0	1.2	0.5	-101.27	-1,251.1	-6,279.6	6,403.1	6,401.4	1.69	3,785.465	
689.0	689.0	674.3	674.3	1.4	0.5	-101.27	-1,250.9	-6,279.3	6,402.7	6,400.8	1.93	3,321.400	
700.0	700.0	683.3	683.3	1.4	0.5	-101.27	-1,250.9	-6,279.2	6,402.6	6,400.7	1.96	3,271.869	
787.4	787.4	759.6	759.5	1.6	0.6	-101.26	-1,250.7	-6,279.1	6,402.5	6,400.3	2.19	2,928.284	
800.0	800.0	770.8	770.7	1.7	0.6	-101.26	-1,250.7	-6,279.1	6,402.5	6,400.2	2.22	2,884.716	
885.8	885.8	852.1	852.1	1.9	0.6	-101.26	-1,250.5	-6,279.1	6,402.4	6,400.0	2.45	2,613.714	
900.0	900.0	866.1	866.1	1.9	0.6	-101.26	-1,250.5	-6,279.1	6,402.4	6,399.9	2.49	2,573.226	
984.2	984.2	970.8	970.7	2.1	0.6	-101.26	-1,250.4	-6,279.0	6,402.3	6,399.6	2.71	2,361.346	
1,000.0	1,000.0	993.1	993.1	2.1	0.7	-101.26	-1,250.4	-6,278.9	6,402.3	6,399.5	2.75	2,326.173	
1,082.7	1,082.7	1,057.3	1,057.3	2.3	0.7	-101.26	-1,250.4	-6,278.7	6,402.0	6,399.1	2.94	2,174.629	
1,100.0	1,100.0	1,070.1	1,070.1	2.3	0.7	-101.26	-1,250.4	-6,278.7	6,402.0	6,399.0	2.98	2,145.571	
1,119.2	1,119.2	1,084.2	1,084.2	2.4	0.7	-101.26	-1,250.4	-6,278.7	6,402.0	6,399.0	3.03	2,114.292	
1,181.1	1,181.1	1,136.5	1,136.5	2.5	0.7	-101.26	-1,250.6	-6,278.7	6,402.0	6,398.9	3.17	2,017.068	
1,200.0	1,200.0	1,153.5	1,153.5	2.6	0.7	-101.26	-1,250.6	-6,278.7	6,402.1	6,398.9	3.22	1,988.804	
1,279.5	1,279.5	1,249.4	1,249.4	2.7	0.7	-6.07	-1,250.6	-6,278.9	6,401.1	6,397.7	3.39	1,886.819	
1,300.0	1,300.0	1,285.4	1,285.4	2.8	0.7	-6.08	-1,250.6	-6,278.8	6,400.4	6,397.0	3.44	1,862.349	
1,377.9	1,377.8	1,365.0	1,365.0	2.9	0.7	-6.09	-1,250.6	-6,278.5	6,396.4	6,392.8	3.62	1,765.141	
1,400.0	1,399.8	1,385.5	1,385.5	3.0	0.7	-6.09	-1,250.6	-6,278.4	6,394.9	6,391.2	3.68	1,738.831	
1,476.4	1,475.9	1,458.4	1,458.4	3.1	0.7	-6.12	-1,250.8	-6,278.2	6,388.3	6,384.5	3.87	1,650.468	
1,500.0	1,499.5	1,481.0	1,481.0	3.2	0.7	-6.12	-1,250.8	-6,278.1	6,385.9	6,382.0	3.93	1,624.854	
1,574.8	1,573.7	1,553.2	1,553.2	3.4	0.8	-6.15	-1,250.9	-6,277.9	6,377.0	6,372.9	4.12	1,547.017	
1,600.0	1,598.7	1,577.6	1,577.6	3.4	0.8	-6.16	-1,251.0	-6,277.8	6,373.6	6,369.4	4.19	1,522.452	
1,673.2	1,671.1	1,647.3	1,647.3	3.6	0.8	-6.20	-1,251.2	-6,277.7	6,362.4	6,358.0	4.37	1,456.935	
1,700.0	1,697.5	1,672.6	1,672.6	3.7	0.8	-6.21	-1,251.1	-6,277.6	6,357.8	6,353.4	4.43	1,434.934	
1,771.6	1,767.9	1,738.0	1,738.0	3.9	0.8	-6.25	-1,250.7	-6,277.6	6,344.5	6,339.9	4.61	1,374.983	
1,800.0	1,795.6	1,763.2	1,763.2	4.0	0.8	-6.27	-1,250.5	-6,277.6	6,338.7	6,334.1	4.69	1,351.846	
1,870.1	1,864.0	1,828.8	1,828.8	4.3	0.8	-6.31	-1,249.9	-6,277.8	6,323.4	6,318.5	4.88	1,295.822	
1,900.0	1,893.1	1,858.8	1,858.7	4.4	0.8	-6.33	-1,249.6	-6,277.8	6,316.4	6,311.4	4.96	1,273.186	
1,968.5	1,959.3	1,929.0	1,929.0	4.6	0.9	-6.38	-1,248.9	-6,277.9	6,299.1	6,293.9	5.16	1,221.911	
1,992.4	1,982.4	1,954.4	1,954.4	4.7	0.9	-6.40	-1,248.6	-6,278.0	6,292.7	6,287.4	5.22	1,204.840	
2,000.0	1,989.6	1,962.4	1,962.4	4.8	0.9	-6.40	-1,248.5	-6,278.0	6,290.6	6,285.4	5.24	1,199.774	
2,066.9	2,054.0	2,027.7	2,027.7	5.1	0.9	-6.42	-1,247.7	-6,278.0	6,272.3	6,266.9	5.43	1,155.450	
2,100.0	2,085.8	2,056.8	2,056.8	5.2	0.9	-6.42	-1,247.3	-6,278.1	6,263.3	6,257.8	5.51	1,136.213	
2,165.3	2,148.7	2,126.4	2,126.4	5.5	0.9	-6.43	-1,245.8	-6,278.3	6,245.5	6,239.8	5.69	1,097.639	
2,200.0	2,182.0	2,182.4	2,182.4	5.7	0.9	-6.43	-1,244.6	-6,278.4	6,236.0	6,230.2	5.80	1,075.491	
2,263.8	2,243.4	2,235.5	2,235.4	6.0	1.0	-6.44	-1,243.6	-6,278.3	6,218.3	6,212.3	5.98	1,040.679	
2,300.0	2,278.2	2,259.8	2,259.7	6.2	1.0	-6.44	-1,243.1	-6,278.3	6,208.4	6,202.3	6.08	1,021.936	
2,362.2	2,338.1	2,303.5	2,303.4	6.5	1.0	-6.44	-1,242.2	-6,278.4	6,191.4	6,185.2	6.25	990.873	
2,400.0	2,374.4	2,359.3	2,359.2	6.7	1.0	-6.45	-1,241.2	-6,278.5	6,181.1	6,174.7	6.36	971.686	
2,460.6	2,432.8	2,500.0	2,499.9	7.0	1.1	-6.48	-1,239.1	-6,277.5	6,164.1	6,157.5	6.57	938.100	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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		
2,500.0	2,470.6	2,528.7	2,528.6	7.2	1.1	-6.48	-1,238.6	-6,277.2	6,152.8	6,146.1	6.68	920.511		
2,559.0	2,527.4	2,564.0	2,563.9	7.6	1.1	-6.48	-1,237.9	-6,276.8	6,136.0	6,129.1	6.85	895.331		
2,600.0	2,566.8	2,600.0	2,599.9	7.8	1.1	-6.49	-1,237.1	-6,276.6	6,124.5	6,117.5	6.97	878.154		
2,657.5	2,622.1	2,633.0	2,632.8	8.1	1.1	-6.49	-1,236.4	-6,276.5	6,108.4	6,101.3	7.14	855.857		
2,700.0	2,663.0	2,669.5	2,669.4	8.3	1.1	-6.50	-1,235.7	-6,276.4	6,096.6	6,089.3	7.26	839.669		
2,755.9	2,716.8	2,730.1	2,729.9	8.6	1.1	-6.50	-1,234.6	-6,276.2	6,081.0	6,073.6	7.43	818.445		
2,800.0	2,759.2	2,794.9	2,794.7	8.9	1.2	-6.51	-1,233.3	-6,275.8	6,068.7	6,061.1	7.57	801.579		
2,854.3	2,811.5	2,874.8	2,874.5	9.2	1.2	-6.52	-1,231.4	-6,275.1	6,053.2	6,045.4	7.75	781.115		
2,900.0	2,855.4	2,928.9	2,928.7	9.4	1.2	-6.52	-1,230.1	-6,274.4	6,040.0	6,032.1	7.90	765.037		
2,952.7	2,906.2	2,982.5	2,982.3	9.7	1.2	-6.53	-1,229.2	-6,273.5	6,024.8	6,016.7	8.06	747.415		
3,000.0	2,951.6	3,032.1	3,031.8	10.0	1.2	-6.55	-1,228.6	-6,272.7	6,011.1	6,002.9	8.21	732.185		
3,051.2	3,000.9	3,086.7	3,086.5	10.3	1.2	-6.56	-1,228.3	-6,271.7	5,996.2	5,987.9	8.37	716.184		
3,100.0	3,047.8	3,125.1	3,124.8	10.5	1.3	-6.57	-1,228.2	-6,270.9	5,982.1	5,973.5	8.52	701.919		
3,149.6	3,095.5	3,159.3	3,159.0	10.8	1.3	-6.58	-1,228.1	-6,270.3	5,967.8	5,959.1	8.67	688.037		
3,200.0	3,144.0	3,200.0	3,199.7	11.1	1.3	-6.60	-1,227.9	-6,269.8	5,953.3	5,944.5	8.83	674.278		
3,248.0	3,190.2	3,223.9	3,223.7	11.4	1.3	-6.60	-1,227.8	-6,269.5	5,939.7	5,930.7	8.97	662.029		
3,300.0	3,240.2	3,255.5	3,255.2	11.7	1.3	-6.61	-1,227.6	-6,269.2	5,925.1	5,916.0	9.13	649.097		
3,346.4	3,284.9	3,300.0	3,299.7	11.9	1.3	-6.63	-1,227.5	-6,268.9	5,912.2	5,902.9	9.27	637.556		
3,400.0	3,336.4	3,300.0	3,299.7	12.2	1.3	-6.63	-1,227.5	-6,268.9	5,897.5	5,888.0	9.43	625.654		
3,444.9	3,379.6	3,338.8	3,338.5	12.5	1.3	-6.64	-1,227.5	-6,268.9	5,885.2	5,875.7	9.55	616.103		
3,500.0	3,432.6	3,368.7	3,368.4	12.8	1.3	-6.65	-1,227.4	-6,269.0	5,870.4	5,860.7	9.71	604.465		
3,543.3	3,474.3	3,400.0	3,399.7	13.1	1.3	-6.66	-1,227.3	-6,269.2	5,859.0	5,849.1	9.84	595.456		
3,600.0	3,528.8	3,427.9	3,427.7	13.4	1.3	-6.66	-1,227.3	-6,269.5	5,844.1	5,834.1	10.00	584.129		
3,641.7	3,569.0	3,455.5	3,455.2	13.6	1.3	-6.67	-1,227.4	-6,269.8	5,833.3	5,823.1	10.13	576.027		
3,700.0	3,625.0	3,500.0	3,499.7	14.0	1.3	-6.69	-1,227.7	-6,270.5	5,818.3	5,808.0	10.30	565.108		
3,740.1	3,663.6	3,532.0	3,531.7	14.2	1.3	-6.70	-1,228.0	-6,271.0	5,808.1	5,797.6	10.42	557.573		
3,800.0	3,721.2	3,593.5	3,593.2	14.5	1.3	-6.72	-1,228.5	-6,271.9	5,792.8	5,782.2	10.60	546.549		
3,838.6	3,758.3	3,620.8	3,620.5	14.8	1.3	-6.74	-1,228.8	-6,272.3	5,782.9	5,772.2	10.71	539.721		
3,900.0	3,817.4	3,660.5	3,660.2	15.1	1.3	-6.75	-1,229.1	-6,273.0	5,767.4	5,756.5	10.90	529.182		
3,937.0	3,853.0	3,700.0	3,699.7	15.3	1.3	-6.76	-1,229.4	-6,273.9	5,758.2	5,747.2	11.01	522.897		
4,000.0	3,913.6	3,750.5	3,750.2	15.7	1.3	-6.78	-1,229.6	-6,275.0	5,742.5	5,731.3	11.20	512.535		
4,035.4	3,947.7	3,796.3	3,795.9	15.9	1.3	-6.80	-1,229.7	-6,276.0	5,733.6	5,722.3	11.32	506.719		
4,100.0	4,009.8	3,859.4	3,859.1	16.3	1.3	-6.81	-1,229.8	-6,277.3	5,717.4	5,705.8	11.52	496.417		
4,133.8	4,042.4	3,892.0	3,891.6	16.5	1.3	-6.82	-1,229.7	-6,278.0	5,708.8	5,697.2	11.62	491.148		
4,200.0	4,106.0	3,974.6	3,974.2	16.8	1.4	-6.84	-1,229.4	-6,279.6	5,692.1	5,680.3	11.84	480.904		
4,232.3	4,137.1	4,024.7	4,024.3	17.0	1.4	-6.86	-1,229.1	-6,280.5	5,683.8	5,671.9	11.94	475.866		
4,300.0	4,202.2	4,136.6	4,136.1	17.4	1.4	-6.89	-1,228.6	-6,281.6	5,666.0	5,653.8	12.17	465.386		
4,330.7	4,231.7	4,174.6	4,174.2	17.6	1.4	-6.90	-1,228.5	-6,281.8	5,657.8	5,645.6	12.28	460.912		
4,400.0	4,298.4	4,245.6	4,245.2	18.0	1.4	-6.92	-1,228.6	-6,282.1	5,639.2	5,626.8	12.50	451.255		
4,429.1	4,326.4	4,272.9	4,272.5	18.2	1.4	-6.93	-1,228.6	-6,282.2	5,631.4	5,618.9	12.59	447.322		
4,500.0	4,394.6	4,340.8	4,340.4	18.6	1.4	-6.95	-1,228.4	-6,282.4	5,612.5	5,599.6	12.82	437.944		
4,527.5	4,421.1	4,367.7	4,367.3	18.7	1.4	-6.96	-1,228.4	-6,282.5	5,605.1	5,592.2	12.90	434.370		
4,600.0	4,490.8	4,430.0	4,429.6	19.2	1.4	-6.98	-1,228.3	-6,282.8	5,585.7	5,572.5	13.13	425.286		
4,626.0	4,515.8	4,449.9	4,449.5	19.3	1.4	-6.99	-1,228.2	-6,282.9	5,578.8	5,565.5	13.22	422.132		
4,700.0	4,587.0	4,508.6	4,508.2	19.8	1.4	-7.01	-1,228.1	-6,283.3	5,559.2	5,545.7	13.45	413.340		
4,724.4	4,610.5	4,532.8	4,532.4	19.9	1.4	-7.02	-1,228.1	-6,283.5	5,552.7	5,539.2	13.53	410.465		
4,800.0	4,683.2	4,600.0	4,599.6	20.3	1.5	-7.04	-1,227.9	-6,284.1	5,532.8	5,519.0	13.77	401.812		
4,822.8	4,705.2	4,600.0	4,599.6	20.5	1.5	-7.04	-1,227.9	-6,284.1	5,526.8	5,513.0	13.84	399.425		
4,900.0	4,779.4	4,660.7	4,660.3	20.9	1.5	-7.06	-1,227.9	-6,284.8	5,506.8	5,492.7	14.08	391.102		
4,921.2	4,799.8	4,672.7	4,672.3	21.0	1.5	-7.06	-1,227.9	-6,285.0	5,501.4	5,487.2	14.15	388.898		
5,000.0	4,875.6	4,737.4	4,737.0	21.5	1.5	-7.08	-1,228.1	-6,286.2	5,481.5	5,467.1	14.40	380.781		
5,019.7	4,894.5	4,761.6	4,761.1	21.6	1.5	-7.09	-1,228.2	-6,286.7	5,476.5	5,462.0	14.46	378.731		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
5,100.0	4,971.8	4,900.0	4,899.5	22.1	1.5	-7.15	-1,229.5	-6,288.1	5,455.6	5,440.9	14.75	369.972		
5,118.1	4,989.2	4,925.3	4,924.8	22.2	1.5	-7.17	-1,229.7	-6,288.2	5,450.8	5,435.9	14.81	368.083		
5,200.0	5,068.0	4,982.2	4,981.7	22.7	1.5	-7.19	-1,230.1	-6,288.5	5,429.1	5,414.1	15.07	360.233		
5,216.5	5,083.9	5,000.0	4,999.5	22.8	1.5	-7.20	-1,230.3	-6,288.6	5,424.8	5,409.7	15.13	358.632		
5,240.0	5,106.5	5,018.3	5,017.8	22.9	1.5	-7.21	-1,230.4	-6,288.8	5,418.7	5,403.5	15.20	356.436		
5,300.0	5,164.4	5,094.6	5,094.2	23.2	1.5	-7.20	-1,230.9	-6,289.3	5,403.5	5,388.2	15.34	352.178		
5,314.9	5,178.8	5,116.9	5,116.5	23.3	1.5	-7.20	-1,231.1	-6,289.4	5,399.9	5,384.5	15.37	351.213		
5,400.0	5,261.5	5,244.1	5,243.6	23.6	1.5	-7.20	-1,232.0	-6,289.3	5,380.2	5,364.7	15.55	346.010		
5,413.4	5,274.6	5,262.4	5,261.9	23.6	1.5	-7.20	-1,232.1	-6,289.2	5,377.3	5,361.7	15.57	345.290		
5,500.0	5,359.5	5,376.1	5,375.6	23.9	1.5	-7.19	-1,232.3	-6,288.4	5,359.5	5,343.8	15.72	340.861		
5,511.8	5,371.1	5,391.3	5,390.8	24.0	1.5	-7.19	-1,232.4	-6,288.2	5,357.3	5,341.5	15.74	340.325		
5,600.0	5,458.0	5,508.9	5,508.4	24.2	1.5	-7.18	-1,232.4	-6,286.6	5,341.6	5,325.7	15.87	336.508		
5,610.2	5,468.2	5,519.2	5,518.7	24.3	1.5	-7.18	-1,232.3	-6,286.5	5,339.9	5,324.1	15.89	336.132		
5,700.0	5,557.2	5,611.1	5,610.6	24.5	1.5	-7.16	-1,232.2	-6,285.0	5,326.8	5,310.8	15.99	333.040		
5,708.6	5,565.7	5,620.7	5,620.2	24.5	1.5	-7.16	-1,232.3	-6,284.8	5,325.7	5,309.7	16.00	332.779		
5,800.0	5,656.7	5,718.5	5,718.0	24.7	1.5	-7.16	-1,233.0	-6,282.9	5,315.3	5,299.2	16.10	330.132		
5,807.1	5,663.7	5,725.1	5,724.6	24.7	1.5	-7.16	-1,233.0	-6,282.7	5,314.6	5,298.5	16.11	329.959		
5,900.0	5,756.5	5,800.0	5,799.5	24.9	1.6	-7.16	-1,233.9	-6,281.2	5,307.2	5,291.0	16.19	327.816		
5,905.5	5,761.9	5,814.1	5,813.6	24.9	1.6	-7.16	-1,234.1	-6,280.9	5,306.9	5,290.7	16.20	327.671		
6,000.0	5,856.4	5,887.7	5,887.2	25.0	1.6	-7.17	-1,235.2	-6,279.6	5,302.9	5,286.6	16.27	325.874		
6,003.9	5,860.3	5,900.0	5,899.4	25.0	1.6	-7.17	-1,235.4	-6,279.4	5,302.8	5,286.6	16.28	325.772		
6,032.5	5,888.9	5,913.1	5,912.5	25.0	1.6	-102.37	-1,235.6	-6,279.2	5,302.4	5,275.9	26.50	200.118		
6,062.5	5,918.9	5,936.5	5,935.9	25.1	1.6	-102.37	-1,236.0	-6,278.9	5,302.0	5,275.5	26.53	199.864 ES		
6,069.5	5,925.9	5,941.9	5,941.4	25.1	1.6	167.63	-1,236.0	-6,278.8	5,302.0	5,285.7	16.34	324.444 CC		
6,100.0	5,956.4	5,965.8	5,965.2	25.1	1.6	167.61	-1,236.4	-6,278.5	5,302.7	5,286.4	16.30	325.365		
6,102.3	5,958.7	5,967.6	5,967.0	25.1	1.6	167.61	-1,236.4	-6,278.5	5,302.8	5,286.5	16.29	325.439		
6,150.0	6,006.2	6,005.8	6,005.2	25.1	1.6	167.55	-1,236.9	-6,278.1	5,306.6	5,290.3	16.25	326.611		
6,200.0	6,055.6	6,053.6	6,053.0	25.1	1.6	167.43	-1,237.4	-6,277.7	5,313.9	5,297.7	16.22	327.628		
6,200.8	6,056.3	6,054.4	6,053.8	25.1	1.6	167.43	-1,237.5	-6,277.7	5,314.0	5,297.8	16.22	327.647		
6,250.0	6,104.3	6,100.0	6,099.4	25.0	1.6	167.26	-1,237.9	-6,277.3	5,324.6	5,308.4	16.19	328.816		
6,299.2	6,151.3	6,146.6	6,146.0	24.9	1.6	167.03	-1,238.3	-6,276.9	5,338.3	5,322.2	16.16	330.418		
6,300.0	6,152.1	6,147.3	6,146.7	24.9	1.6	167.03	-1,238.3	-6,276.9	5,338.6	5,322.4	16.16	330.446		
6,350.0	6,198.7	6,192.7	6,192.1	24.8	1.6	166.73	-1,238.9	-6,276.5	5,355.8	5,339.7	16.10	332.678		
6,397.6	6,241.9	6,244.5	6,243.9	24.7	1.6	166.38	-1,239.6	-6,276.1	5,375.2	5,359.1	16.03	335.272		
6,400.0	6,244.1	6,247.1	6,246.5	24.7	1.6	166.36	-1,239.7	-6,276.0	5,376.2	5,360.2	16.03	335.408		
6,450.0	6,287.8	6,301.7	6,301.1	24.5	1.6	165.93	-1,240.4	-6,275.4	5,399.6	5,383.6	15.95	338.619		
6,496.0	6,326.5	6,348.1	6,347.5	24.4	1.6	165.44	-1,240.9	-6,274.9	5,423.6	5,407.7	15.86	341.884		
6,500.0	6,329.7	6,352.0	6,351.4	24.4	1.6	165.39	-1,240.9	-6,274.8	5,425.8	5,409.9	15.86	342.165		
6,550.0	6,369.6	6,400.0	6,399.4	24.3	1.6	164.75	-1,241.4	-6,274.2	5,454.7	5,439.0	15.78	345.693		
6,594.5	6,403.3	6,447.6	6,446.9	24.2	1.6	164.08	-1,241.9	-6,273.4	5,482.7	5,467.0	15.74	348.300		
6,600.0	6,407.3	6,453.3	6,452.7	24.2	1.6	163.99	-1,241.9	-6,273.3	5,486.3	5,470.6	15.74	348.576		
6,650.0	6,442.7	6,500.0	6,499.3	24.1	1.6	163.05	-1,242.5	-6,272.5	5,520.3	5,504.6	15.76	350.365		
6,692.9	6,471.0	6,526.6	6,526.0	24.0	1.6	162.06	-1,242.8	-6,271.9	5,551.4	5,535.5	15.84	350.484		
6,700.0	6,475.5	6,530.5	6,529.8	24.0	1.6	161.87	-1,242.8	-6,271.9	5,556.7	5,540.8	15.86	350.342		
6,750.0	6,505.6	6,556.5	6,555.9	24.0	1.6	160.40	-1,243.2	-6,271.4	5,595.3	5,579.2	16.10	347.431		
6,791.3	6,528.3	6,576.2	6,575.5	24.0	1.6	158.91	-1,243.5	-6,271.0	5,628.7	5,612.3	16.45	342.194		
6,800.0	6,532.8	6,580.1	6,579.4	24.0	1.6	158.56	-1,243.6	-6,270.9	5,635.9	5,619.4	16.54	340.773		
6,850.0	6,557.0	6,600.0	6,599.3	24.1	1.6	156.20	-1,243.9	-6,270.6	5,678.4	5,661.2	17.21	329.852		
6,889.7	6,574.1	6,615.2	6,614.5	24.2	1.6	153.84	-1,244.2	-6,270.3	5,713.3	5,695.4	17.96	318.038		
6,900.0	6,578.1	6,618.6	6,617.9	24.3	1.6	153.14	-1,244.3	-6,270.2	5,722.5	5,704.3	18.19	314.626		
6,950.0	6,596.1	6,633.4	6,632.7	24.5	1.6	149.04	-1,244.6	-6,270.0	5,768.0	5,748.5	19.51	295.580		
6,988.2	6,607.5	6,643.0	6,642.3	24.7	1.6	144.91	-1,244.8	-6,269.8	5,803.6	5,782.8	20.80	279.008		

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,610.7	6,645.7	6,644.9	24.8	1.6	143.41	-1,244.9	-6,269.8	5,814.7	5,793.4	21.24	273.700	
7,050.0	6,621.9	6,655.2	6,654.5	25.1	1.6	135.44	-1,245.1	-6,269.6	5,862.3	5,838.9	23.39	250.669	
7,086.6	6,628.0	6,660.4	6,659.7	25.4	1.6	127.47	-1,245.2	-6,269.5	5,897.6	5,872.5	25.12	234.762	
7,100.0	6,629.7	6,662.0	6,661.3	25.6	1.6	123.99	-1,245.2	-6,269.5	5,910.7	5,884.9	25.74	229.641	
7,150.0	6,634.1	6,666.1	6,665.4	26.0	1.6	107.98	-1,245.3	-6,269.5	5,959.5	5,931.9	27.55	216.352	
7,185.0	6,635.1	6,667.3	6,666.6	26.4	1.6	94.31	-1,245.3	-6,269.4	5,993.8	5,965.8	28.01	214.005	
7,196.6	6,635.0	6,667.4	6,666.7	26.5	1.6	89.57	-1,245.3	-6,269.4	6,005.1	5,977.0	28.11	213.634	
7,200.0	6,635.0	6,667.4	6,666.7	26.6	1.6	89.57	-1,245.3	-6,269.4	6,008.5	5,980.4	28.15	213.466	
7,283.4	6,633.9	6,667.6	6,666.9	27.6	1.6	89.58	-1,245.3	-6,269.4	6,090.5	6,061.3	29.18	208.750	
7,300.0	6,633.7	6,667.6	6,666.9	27.8	1.6	89.58	-1,245.3	-6,269.4	6,106.7	6,077.3	29.38	207.854	
7,381.9	6,632.6	6,667.8	6,667.1	29.0	1.6	89.59	-1,245.4	-6,269.4	6,187.1	6,156.6	30.57	202.404	
7,400.0	6,632.4	6,667.9	6,667.2	29.2	1.6	89.59	-1,245.4	-6,269.4	6,205.0	6,174.1	30.83	201.254	
7,480.3	6,631.4	6,668.1	6,667.3	30.5	1.6	89.60	-1,245.4	-6,269.4	6,283.9	6,251.8	32.15	195.465	
7,500.0	6,631.1	6,668.1	6,667.4	30.9	1.6	89.60	-1,245.4	-6,269.4	6,303.3	6,270.8	32.47	194.117	
7,578.7	6,630.1	6,668.3	6,667.6	32.3	1.6	89.61	-1,245.4	-6,269.4	6,380.7	6,346.8	33.89	188.285	
7,600.0	6,629.8	6,668.3	6,667.6	32.7	1.6	89.61	-1,245.4	-6,269.4	6,401.6	6,367.4	34.27	186.792	
7,677.1	6,628.9	6,668.5	6,667.8	34.1	1.6	89.62	-1,245.4	-6,269.4	6,477.6	6,441.8	35.76	181.118	
7,700.0	6,628.6	6,668.6	6,667.9	34.6	1.6	89.62	-1,245.4	-6,269.4	6,500.0	6,463.8	36.21	179.528	
7,775.6	6,627.6	6,668.7	6,668.0	36.1	1.6	89.63	-1,245.4	-6,269.4	6,574.4	6,536.7	37.75	174.137	
7,800.0	6,627.3	6,668.8	6,668.1	36.6	1.6	89.63	-1,245.4	-6,269.4	6,598.5	6,560.2	38.25	172.488	
7,874.0	6,626.3	6,669.0	6,668.3	38.2	1.6	89.64	-1,245.4	-6,269.4	6,671.4	6,631.5	39.84	167.448	
7,900.0	6,626.0	6,669.0	6,668.3	38.8	1.6	89.64	-1,245.4	-6,269.4	6,697.0	6,656.6	40.40	165.771	
7,972.4	6,625.1	6,669.2	6,668.5	40.4	1.6	89.65	-1,245.4	-6,269.4	6,768.4	6,726.4	42.01	161.112	
8,000.0	6,624.7	6,669.3	6,668.5	41.0	1.6	89.65	-1,245.4	-6,269.4	6,795.6	6,752.9	42.62	159.431	
8,070.8	6,623.8	6,669.4	6,668.7	42.6	1.6	89.66	-1,245.4	-6,269.4	6,865.4	6,821.2	44.25	155.156	
8,100.0	6,623.4	6,669.5	6,668.8	43.3	1.6	89.66	-1,245.4	-6,269.4	6,894.1	6,849.2	44.92	153.487	
8,169.3	6,622.6	6,669.6	6,668.9	44.9	1.6	89.67	-1,245.4	-6,269.4	6,962.5	6,915.9	46.55	149.585	
8,200.0	6,622.2	6,669.7	6,669.0	45.6	1.6	89.67	-1,245.4	-6,269.4	6,992.8	6,945.5	47.27	147.940	
8,267.7	6,621.3	6,669.9	6,669.2	47.3	1.6	89.68	-1,245.4	-6,269.4	7,059.6	7,010.7	48.89	144.390	
8,300.0	6,620.9	6,669.9	6,669.2	48.0	1.6	89.68	-1,245.4	-6,269.4	7,091.4	7,041.8	49.67	142.777	
8,366.1	6,620.0	6,670.1	6,669.4	49.7	1.6	89.69	-1,245.4	-6,269.4	7,156.7	7,105.4	51.28	139.553	
8,400.0	6,619.6	6,670.2	6,669.5	50.5	1.6	89.69	-1,245.4	-6,269.4	7,190.1	7,138.0	52.11	137.979	
8,464.5	6,618.8	6,670.3	6,669.6	52.1	1.6	89.70	-1,245.4	-6,269.4	7,253.9	7,200.2	53.71	135.055	
8,500.0	6,618.3	6,670.4	6,669.7	53.0	1.6	89.70	-1,245.4	-6,269.4	7,288.9	7,234.3	54.59	133.522	
8,563.0	6,617.5	6,670.5	6,669.8	54.5	1.6	89.71	-1,245.4	-6,269.4	7,351.1	7,294.9	56.17	130.871	
8,600.0	6,617.0	6,670.6	6,669.9	55.5	1.6	89.71	-1,245.4	-6,269.4	7,387.7	7,330.6	57.10	129.381	
8,661.4	6,616.3	6,670.7	6,670.0	57.0	1.6	89.72	-1,245.4	-6,269.4	7,448.3	7,389.7	58.66	126.977	
8,700.0	6,615.8	6,670.8	6,670.1	58.0	1.6	89.72	-1,245.4	-6,269.4	7,486.5	7,426.8	59.64	125.531	
8,759.8	6,615.0	6,671.0	6,670.2	59.5	1.6	89.73	-1,245.4	-6,269.4	7,545.6	7,484.4	61.17	123.352	
8,800.0	6,614.5	6,671.0	6,670.3	60.6	1.6	89.73	-1,245.4	-6,269.4	7,585.3	7,523.1	62.20	121.949	
8,858.2	6,613.7	6,671.2	6,670.5	62.1	1.6	89.74	-1,245.4	-6,269.4	7,642.9	7,579.2	63.71	119.972	
8,900.0	6,613.2	6,671.3	6,670.5	63.2	1.6	89.74	-1,245.4	-6,269.4	7,684.2	7,619.4	64.78	118.612	
8,956.7	6,612.5	6,671.4	6,670.7	64.6	1.6	89.75	-1,245.4	-6,269.4	7,740.2	7,674.0	66.26	116.818	
9,000.0	6,611.9	6,671.5	6,670.8	65.8	1.6	89.75	-1,245.4	-6,269.4	7,783.1	7,715.7	67.39	115.500	
9,055.1	6,611.2	6,671.6	6,670.9	67.2	1.6	89.75	-1,245.4	-6,269.4	7,837.6	7,768.7	68.83	113.870	
9,100.0	6,610.6	6,671.7	6,671.0	68.4	1.6	89.76	-1,245.4	-6,269.4	7,882.0	7,812.0	70.00	112.592	
9,153.5	6,609.9	6,671.8	6,671.1	69.8	1.6	89.76	-1,245.4	-6,269.4	7,935.0	7,863.5	71.41	111.112	
9,200.0	6,609.3	6,671.9	6,671.2	71.0	1.6	89.77	-1,245.4	-6,269.4	7,980.9	7,908.3	72.64	109.873	
9,251.9	6,608.7	6,672.0	6,671.3	72.4	1.6	89.77	-1,245.5	-6,269.4	8,032.4	7,958.4	74.01	108.527	
9,300.0	6,608.1	6,672.1	6,671.4	73.7	1.6	89.77	-1,245.5	-6,269.4	8,079.9	8,004.6	75.28	107.326	
9,350.4	6,607.4	6,672.2	6,671.5	75.0	1.6	89.78	-1,245.5	-6,269.4	8,129.8	8,053.2	76.62	106.101	
9,400.0	6,606.8	6,672.3	6,671.6	76.3	1.6	89.78	-1,245.5	-6,269.4	8,178.9	8,101.0	77.94	104.936	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
9,448.8	6,606.1	6,672.4	6,671.7	77.6	1.6	89.79	-1,245.5	-6,269.4	8,227.2	8,148.0	79.24	103.821	
9,500.0	6,605.5	6,672.5	6,671.8	79.0	1.6	89.79	-1,245.5	-6,269.4	8,278.0	8,197.3	80.61	102.690	
9,547.2	6,604.9	6,672.6	6,671.9	80.2	1.6	89.80	-1,245.5	-6,269.4	8,324.7	8,242.9	81.88	101.675	
9,600.0	6,604.2	6,672.7	6,672.0	81.7	1.6	89.80	-1,245.5	-6,269.4	8,377.0	8,293.7	83.29	100.577	
9,645.6	6,603.6	6,672.8	6,672.1	82.9	1.6	89.81	-1,245.5	-6,269.3	8,422.2	8,337.7	84.52	99.653	
9,700.0	6,602.9	6,672.9	6,672.2	84.3	1.6	89.81	-1,245.5	-6,269.3	8,476.1	8,390.1	85.98	98.587	
9,744.1	6,602.3	6,673.0	6,672.3	85.5	1.6	89.81	-1,245.5	-6,269.3	8,519.7	8,432.6	87.16	97.744	
9,800.0	6,601.6	6,673.2	6,672.4	87.0	1.6	89.82	-1,245.5	-6,269.3	8,575.2	8,486.5	88.67	96.708	
9,842.5	6,601.1	6,673.2	6,672.5	88.2	1.6	89.82	-1,245.5	-6,269.3	8,617.3	8,527.5	89.82	95.941	
9,900.0	6,600.3	6,673.4	6,672.6	89.7	1.6	89.83	-1,245.5	-6,269.3	8,674.3	8,582.9	91.37	94.934	
9,940.9	6,599.8	6,673.4	6,672.7	90.9	1.6	89.83	-1,245.5	-6,269.3	8,714.8	8,622.4	92.48	94.235	
10,000.0	6,599.0	6,673.6	6,672.8	92.5	1.6	89.83	-1,245.5	-6,269.3	8,773.4	8,679.3	94.08	93.255	
10,039.3	6,598.5	6,673.6	6,672.9	93.5	1.6	89.84	-1,245.5	-6,269.3	8,812.4	8,717.3	95.15	92.618	
10,100.0	6,597.7	6,673.8	6,673.0	95.2	1.6	89.84	-1,245.5	-6,269.3	8,872.6	8,775.8	96.79	91.664	
10,137.8	6,597.3	6,673.8	6,673.1	96.2	1.6	89.85	-1,245.5	-6,269.3	8,910.0	8,812.2	97.82	91.084	
10,200.0	6,596.5	6,674.0	6,673.2	97.9	1.6	89.85	-1,245.5	-6,269.3	8,971.7	8,872.2	99.51	90.156	
10,236.2	6,596.0	6,674.0	6,673.3	98.9	1.6	89.85	-1,245.5	-6,269.3	9,007.6	8,907.1	100.50	89.628	
10,300.0	6,595.2	6,674.2	6,673.4	100.6	1.6	89.86	-1,245.5	-6,269.3	9,070.9	8,968.7	102.24	88.723	
10,334.6	6,594.7	6,674.2	6,673.5	101.6	1.6	89.86	-1,245.5	-6,269.3	9,105.3	9,002.1	103.18	88.244	
10,400.0	6,593.9	6,674.4	6,673.6	103.3	1.6	89.87	-1,245.5	-6,269.3	9,170.1	9,065.2	104.97	87.362	
10,433.0	6,593.5	6,674.4	6,673.7	104.2	1.6	89.87	-1,245.5	-6,269.3	9,202.9	9,097.1	105.87	86.926	
10,500.0	6,592.6	6,674.5	6,673.8	106.1	1.6	89.87	-1,245.5	-6,269.3	9,269.4	9,161.7	107.70	86.066	
10,531.5	6,592.2	6,674.6	6,673.9	106.9	1.6	89.88	-1,245.5	-6,269.3	9,300.6	9,192.0	108.56	85.670	
10,600.0	6,591.3	6,674.7	6,674.0	108.8	1.6	89.88	-1,245.5	-6,269.3	9,368.6	9,258.2	110.44	84.831	
10,629.9	6,590.9	6,674.8	6,674.1	109.6	1.6	89.88	-1,245.5	-6,269.3	9,398.3	9,287.0	111.26	84.473	
10,700.0	6,590.0	6,674.9	6,674.2	111.6	1.6	89.89	-1,245.5	-6,269.3	9,467.9	9,354.7	113.18	83.654	
10,728.3	6,589.6	6,675.0	6,674.3	112.3	1.6	89.89	-1,245.5	-6,269.3	9,496.0	9,382.0	113.96	83.330	
10,800.0	6,588.7	6,675.1	6,674.4	114.3	1.6	89.90	-1,245.5	-6,269.3	9,567.1	9,451.2	115.92	82.529	
10,826.7	6,588.4	6,675.2	6,674.5	115.0	1.6	89.90	-1,245.5	-6,269.3	9,593.7	9,477.0	116.66	82.237	
10,900.0	6,587.4	6,675.3	6,674.6	117.0	1.6	89.90	-1,245.5	-6,269.3	9,666.4	9,547.8	118.67	81.455	
10,925.2	6,587.1	6,675.4	6,674.6	117.7	1.6	89.91	-1,245.5	-6,269.3	9,691.4	9,572.1	119.36	81.192	
11,000.0	6,586.1	6,675.5	6,674.8	119.8	1.6	89.91	-1,245.5	-6,269.3	9,765.7	9,644.3	121.42	80.428	
11,023.6	6,585.8	6,675.6	6,674.8	120.4	1.6	89.91	-1,245.5	-6,269.3	9,789.2	9,667.1	122.07	80.192	
11,100.0	6,584.8	6,675.7	6,675.0	122.5	1.6	89.92	-1,245.5	-6,269.3	9,865.0	9,740.9	124.17	79.445	
11,122.0	6,584.5	6,675.7	6,675.0	123.2	1.6	89.92	-1,245.5	-6,269.3	9,886.9	9,762.1	124.78	79.234	
11,200.0	6,583.5	6,675.9	6,675.2	125.3	1.6	89.92	-1,245.5	-6,269.3	9,964.4	9,837.4	126.93	78.502	
11,220.4	6,583.3	6,675.9	6,675.2	125.9	1.6	89.93	-1,245.5	-6,269.3	9,984.7	9,857.2	127.49	78.315 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-88.63	181.9	-7,598.0	7,600.2				
98.4	98.4	46.3	46.3	0.1	0.0	-88.63	181.8	-7,598.0	7,600.2	7,600.1	0.11	N/A	
100.0	100.0	47.5	47.5	0.1	0.0	-88.63	181.8	-7,598.0	7,600.2	7,600.1	0.11	N/A	
196.8	196.8	137.8	137.8	0.3	0.1	-88.63	181.2	-7,598.4	7,600.6	7,600.2	0.41	N/A	
200.0	200.0	142.5	142.5	0.3	0.1	-88.63	181.2	-7,598.4	7,600.6	7,600.2	0.42	N/A	
295.3	295.3	558.7	558.6	0.5	0.5	-88.66	177.4	-7,590.5	7,598.4	7,597.5	0.98	7,760.869	
300.0	300.0	564.1	564.0	0.5	0.5	-88.66	177.3	-7,590.3	7,598.2	7,597.3	0.99	7,655.444	
393.7	393.7	662.9	662.6	0.8	0.5	-88.67	176.2	-7,586.4	7,594.5	7,593.3	1.25	6,067.939	
400.0	400.0	669.2	669.0	0.8	0.5	-88.67	176.1	-7,586.1	7,594.3	7,593.0	1.27	5,985.704	
492.1	492.1	760.7	760.4	1.0	0.6	-88.68	175.0	-7,582.5	7,590.6	7,589.1	1.52	5,004.563	
500.0	500.0	768.5	768.2	1.0	0.6	-88.68	174.9	-7,582.2	7,590.3	7,588.7	1.54	4,935.761	
590.5	590.5	881.8	881.3	1.2	0.6	-88.69	173.4	-7,577.6	7,586.6	7,584.8	1.79	4,243.314	
600.0	600.0	895.0	894.5	1.2	0.6	-88.69	173.3	-7,577.0	7,586.1	7,584.3	1.81	4,181.031	
689.0	689.0	975.1	974.6	1.4	0.7	-88.70	172.4	-7,573.6	7,582.3	7,580.3	2.04	3,708.250	
700.0	700.0	984.8	984.3	1.4	0.7	-88.70	172.3	-7,573.2	7,581.9	7,579.8	2.07	3,657.167	
787.4	787.4	1,077.6	1,077.0	1.6	0.7	-88.71	171.0	-7,569.3	7,578.2	7,575.9	2.30	3,289.968	
800.0	800.0	1,091.5	1,090.9	1.7	0.7	-88.71	170.7	-7,568.7	7,577.6	7,575.3	2.34	3,242.760	
885.8	885.8	1,165.4	1,164.7	1.9	0.8	-88.72	169.7	-7,565.6	7,574.0	7,571.4	2.56	2,964.373	
900.0	900.0	1,177.3	1,176.6	1.9	0.8	-88.72	169.5	-7,565.1	7,573.4	7,570.8	2.59	2,923.078	
984.2	984.2	1,249.0	1,248.3	2.1	0.8	-88.72	168.7	-7,562.2	7,570.0	7,567.2	2.80	2,700.030	
1,000.0	1,000.0	1,262.6	1,261.8	2.1	0.8	-88.72	168.6	-7,561.7	7,569.4	7,566.5	2.84	2,662.089	
1,082.7	1,082.7	1,325.0	1,324.2	2.3	0.8	-88.73	168.0	-7,559.3	7,566.2	7,563.2	3.05	2,481.552	
1,100.0	1,100.0	1,336.2	1,335.3	2.3	0.8	-88.73	167.8	-7,558.9	7,565.6	7,562.5	3.09	2,447.320	
1,181.1	1,181.1	1,400.0	1,399.1	2.5	0.8	-88.73	167.0	-7,556.8	7,562.9	7,559.6	3.29	2,296.318	
1,200.0	1,200.0	1,400.0	1,399.1	2.6	0.8	-88.73	167.0	-7,556.8	7,562.3	7,558.9	3.34	2,266.894	
1,279.5	1,279.5	1,455.0	1,454.1	2.7	0.9	6.46	166.2	-7,555.2	7,558.8	7,555.2	3.60	2,101.885	
1,300.0	1,300.0	1,469.1	1,468.1	2.8	0.9	6.46	166.0	-7,554.8	7,557.6	7,554.0	3.65	2,072.783	
1,377.9	1,377.8	1,526.9	1,525.9	2.9	0.9	6.47	165.2	-7,553.4	7,551.9	7,548.1	3.83	1,971.848	
1,400.0	1,399.8	1,544.9	1,543.9	3.0	0.9	6.48	165.0	-7,552.9	7,549.9	7,546.1	3.88	1,944.799	
1,476.4	1,475.9	1,600.0	1,599.0	3.1	0.9	6.49	164.2	-7,551.7	7,541.9	7,537.8	4.07	1,855.014	
1,500.0	1,499.5	1,622.3	1,621.4	3.2	0.9	6.50	163.8	-7,551.2	7,539.0	7,534.9	4.12	1,828.332	
1,574.8	1,573.7	1,673.9	1,672.9	3.4	1.0	6.52	163.0	-7,550.3	7,528.9	7,524.6	4.31	1,748.785	
1,600.0	1,598.7	1,700.0	1,699.0	3.4	1.0	6.53	162.5	-7,549.8	7,525.1	7,520.7	4.37	1,722.446	
1,673.2	1,671.1	1,753.7	1,752.7	3.6	1.0	6.56	161.4	-7,549.0	7,512.9	7,508.3	4.55	1,650.814	
1,700.0	1,697.5	1,777.5	1,776.4	3.7	1.0	6.57	160.9	-7,548.6	7,508.0	7,503.3	4.62	1,625.633	
1,771.6	1,767.9	1,831.6	1,830.6	3.9	1.0	6.60	159.6	-7,547.9	7,493.7	7,488.9	4.80	1,560.794	
1,800.0	1,795.6	1,851.0	1,849.9	4.0	1.0	6.61	159.1	-7,547.7	7,487.7	7,482.8	4.87	1,536.724	
1,870.1	1,864.0	1,900.0	1,898.9	4.3	1.0	6.65	158.0	-7,547.2	7,471.6	7,466.6	5.06	1,477.993	
1,900.0	1,893.1	1,920.9	1,919.8	4.4	1.0	6.67	157.6	-7,547.0	7,464.3	7,459.2	5.13	1,454.470	
1,968.5	1,959.3	1,971.7	1,970.7	4.6	1.1	6.72	156.5	-7,546.6	7,446.6	7,441.3	5.32	1,400.941	
1,992.4	1,982.4	2,000.0	1,998.9	4.7	1.1	6.74	156.0	-7,546.5	7,440.1	7,434.7	5.38	1,382.596	
2,000.0	1,989.6	2,000.0	1,998.9	4.8	1.1	6.74	156.0	-7,546.5	7,438.0	7,432.6	5.40	1,377.494	
2,066.9	2,054.0	2,060.5	2,059.4	5.1	1.1	6.74	154.9	-7,546.2	7,419.5	7,413.9	5.58	1,328.732	
2,100.0	2,085.8	2,093.7	2,092.6	5.2	1.1	6.75	154.3	-7,546.0	7,410.3	7,404.6	5.67	1,307.096	
2,165.3	2,148.7	2,146.4	2,145.3	5.5	1.1	6.75	153.3	-7,545.8	7,392.3	7,386.4	5.84	1,265.282	
2,200.0	2,182.0	2,173.6	2,172.5	5.7	1.1	6.76	152.9	-7,545.7	7,382.7	7,376.8	5.94	1,242.364	
2,263.8	2,243.4	2,227.7	2,226.6	6.0	1.1	6.76	152.0	-7,545.6	7,365.3	7,359.1	6.12	1,203.490	
2,300.0	2,278.2	2,261.0	2,259.9	6.2	1.2	6.77	151.5	-7,545.5	7,355.3	7,349.1	6.22	1,182.098	
2,362.2	2,338.1	2,315.9	2,314.8	6.5	1.2	6.78	150.8	-7,545.4	7,338.3	7,332.0	6.40	1,146.852	
2,400.0	2,374.4	2,346.5	2,345.4	6.7	1.2	6.78	150.4	-7,545.4	7,328.0	7,321.5	6.51	1,126.406	
2,460.6	2,432.8	2,400.0	2,398.9	7.0	1.2	6.79	149.8	-7,545.4	7,311.6	7,304.9	6.68	1,094.566	
2,500.0	2,470.6	2,433.5	2,432.3	7.2	1.2	6.80	149.5	-7,545.4	7,300.9	7,294.1	6.79	1,074.751	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,527.4	2,491.9	2,490.7	7.6	1.2	6.81	148.9	-7,545.4	7,284.9	7,278.0	6.97	1,045.753	
2,600.0	2,566.8	2,531.6	2,530.5	7.8	1.2	6.82	148.5	-7,545.5	7,273.8	7,266.7	7.09	1,026.364	
2,657.5	2,622.1	2,587.2	2,586.1	8.1	1.3	6.83	147.9	-7,545.5	7,258.2	7,251.0	7.26	1,000.032	
2,700.0	2,663.0	2,629.3	2,628.1	8.3	1.3	6.83	147.3	-7,545.5	7,246.7	7,239.3	7.39	981.250	
2,755.9	2,716.8	2,685.1	2,684.0	8.6	1.3	6.84	146.6	-7,545.5	7,231.5	7,224.0	7.55	957.339	
2,800.0	2,759.2	2,727.5	2,726.3	8.9	1.3	6.85	146.0	-7,545.5	7,219.5	7,211.9	7.69	939.234	
2,854.3	2,811.5	2,778.6	2,777.5	9.2	1.3	6.86	145.3	-7,545.5	7,204.8	7,196.9	7.85	917.679	
2,900.0	2,855.4	2,820.6	2,819.4	9.4	1.3	6.86	144.7	-7,545.5	7,192.4	7,184.4	7.99	900.278	
2,952.7	2,906.2	2,867.7	2,866.6	9.7	1.3	6.87	144.0	-7,545.6	7,178.1	7,170.0	8.15	880.877	
3,000.0	2,951.6	2,912.6	2,911.4	10.0	1.4	6.88	143.4	-7,545.6	7,165.3	7,157.0	8.29	864.039	
3,051.2	3,000.9	2,970.3	2,969.1	10.3	1.4	6.88	142.5	-7,545.6	7,151.5	7,143.0	8.45	846.091	
3,100.0	3,047.8	3,024.5	3,023.3	10.5	1.4	6.89	141.6	-7,545.6	7,138.2	7,129.6	8.61	829.519	
3,149.6	3,095.5	3,078.8	3,077.6	10.8	1.4	6.90	140.8	-7,545.5	7,124.6	7,115.9	8.76	813.137	
3,200.0	3,144.0	3,125.1	3,123.9	11.1	1.4	6.91	140.2	-7,545.4	7,110.8	7,101.9	8.92	797.326	
3,248.0	3,190.2	3,164.1	3,162.9	11.4	1.4	6.91	139.8	-7,545.4	7,097.7	7,088.7	9.07	782.873	
3,300.0	3,240.2	3,208.3	3,207.1	11.7	1.5	6.92	139.4	-7,545.4	7,083.6	7,074.4	9.23	767.797	
3,346.4	3,284.9	3,258.5	3,257.3	11.9	1.5	6.94	139.3	-7,545.3	7,071.0	7,061.6	9.37	754.954	
3,400.0	3,336.4	3,321.3	3,320.1	12.2	1.5	6.96	139.7	-7,545.2	7,056.4	7,046.8	9.53	740.238	
3,444.9	3,379.6	3,364.4	3,363.2	12.5	1.5	6.98	140.4	-7,544.9	7,044.0	7,034.3	9.68	727.496	
3,500.0	3,432.6	3,450.0	3,448.7	12.8	1.5	7.01	141.5	-7,544.5	7,028.7	7,018.9	9.86	712.567	
3,543.3	3,474.3	3,499.0	3,497.8	13.1	1.5	7.03	142.5	-7,544.1	7,016.7	7,006.6	10.01	701.213	
3,600.0	3,528.8	3,541.7	3,540.5	13.4	1.5	7.05	143.4	-7,543.7	7,000.9	6,990.7	10.18	687.435	
3,641.7	3,569.0	3,572.9	3,571.7	13.6	1.5	7.07	144.1	-7,543.5	6,989.3	6,979.0	10.32	677.585	
3,700.0	3,625.0	3,631.9	3,630.6	14.0	1.5	7.09	145.4	-7,543.2	6,973.2	6,962.7	10.50	663.933	
3,740.1	3,663.6	3,689.7	3,688.4	14.2	1.5	7.12	146.7	-7,542.7	6,962.1	6,951.4	10.64	654.440	
3,800.0	3,721.2	3,736.8	3,735.5	14.5	1.5	7.15	147.8	-7,542.3	6,945.4	6,934.5	10.83	641.418	
3,838.6	3,758.3	3,763.8	3,762.5	14.8	1.5	7.16	148.4	-7,542.1	6,934.7	6,923.7	10.95	633.313	
3,900.0	3,817.4	3,810.1	3,808.8	15.1	1.5	7.18	149.2	-7,541.9	6,917.7	6,906.6	11.14	620.732	
3,937.0	3,853.0	3,848.9	3,847.5	15.3	1.5	7.20	150.0	-7,541.7	6,907.6	6,896.3	11.26	613.207	
4,000.0	3,913.6	3,900.0	3,898.7	15.7	1.5	7.22	150.9	-7,541.5	6,890.2	6,878.8	11.47	600.966	
4,035.4	3,947.7	3,934.1	3,932.8	15.9	1.5	7.24	151.5	-7,541.3	6,880.5	6,868.9	11.58	594.210	
4,100.0	4,009.8	3,978.6	3,977.3	16.3	1.5	7.26	152.2	-7,541.2	6,862.9	6,851.1	11.78	582.473	
4,133.8	4,042.4	4,000.0	3,998.6	16.5	1.5	7.26	152.4	-7,541.2	6,853.7	6,841.8	11.89	576.502	
4,200.0	4,106.0	4,033.5	4,032.1	16.8	1.5	7.28	152.8	-7,541.3	6,836.0	6,823.9	12.09	565.551	
4,232.3	4,137.1	4,049.2	4,047.8	17.0	1.5	7.28	152.9	-7,541.4	6,827.5	6,815.3	12.18	560.328	
4,300.0	4,202.2	4,100.0	4,098.6	17.4	1.5	7.30	153.1	-7,542.0	6,809.8	6,797.4	12.39	549.529	
4,330.7	4,231.7	4,100.0	4,098.6	17.6	1.5	7.30	153.1	-7,542.0	6,801.9	6,789.4	12.48	544.868	
4,400.0	4,298.4	4,134.8	4,133.4	18.0	1.5	7.31	153.2	-7,542.6	6,784.2	6,771.5	12.70	534.400	
4,429.1	4,326.4	4,150.8	4,149.4	18.2	1.5	7.32	153.3	-7,542.9	6,776.9	6,764.1	12.78	530.101	
4,500.0	4,394.6	4,200.0	4,198.6	18.6	1.5	7.33	153.3	-7,544.1	6,759.3	6,746.3	13.00	520.077	
4,527.5	4,421.1	4,200.0	4,198.6	18.7	1.5	7.33	153.3	-7,544.1	6,752.5	6,739.4	13.08	516.287	
4,600.0	4,490.8	4,239.3	4,237.9	19.2	1.5	7.34	153.3	-7,545.2	6,734.9	6,721.6	13.30	506.404	
4,626.0	4,515.8	4,251.9	4,250.5	19.3	1.5	7.35	153.2	-7,545.7	6,728.7	6,715.4	13.38	502.954	
4,700.0	4,587.0	4,300.0	4,298.6	19.8	1.5	7.36	153.0	-7,547.5	6,711.3	6,697.7	13.60	493.346	
4,724.4	4,610.5	4,300.0	4,298.6	19.9	1.5	7.36	153.0	-7,547.5	6,705.7	6,692.0	13.68	490.294	
4,800.0	4,683.2	4,351.0	4,349.5	20.3	1.5	7.37	152.6	-7,549.7	6,688.3	6,674.4	13.91	480.845	
4,822.8	4,705.2	4,366.5	4,365.0	20.5	1.5	7.37	152.5	-7,550.4	6,683.1	6,669.2	13.98	478.057	
4,900.0	4,779.4	4,400.0	4,398.5	20.9	1.5	7.38	152.2	-7,552.0	6,665.8	6,651.6	14.22	468.927	
4,921.2	4,799.8	4,426.6	4,425.0	21.0	1.5	7.39	151.9	-7,553.3	6,661.1	6,646.8	14.28	466.377	
5,000.0	4,875.6	4,469.0	4,467.4	21.5	1.5	7.39	151.3	-7,555.6	6,643.8	6,629.3	14.52	457.413	
5,019.7	4,894.5	4,500.0	4,498.3	21.6	1.5	7.40	150.8	-7,557.4	6,639.6	6,625.0	14.59	455.145	
5,100.0	4,971.8	4,539.6	4,537.9	22.1	1.5	7.40	150.1	-7,559.8	6,622.4	6,607.6	14.84	446.383	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
5,118.1	4,989.2	4,556.4	4,554.6	22.2	1.5	7.41	149.8	-7,560.8	6,618.6	6,603.7	14.89	444.411		
5,200.0	5,068.0	4,746.7	4,744.6	22.7	1.5	7.43	146.7	-7,570.9	6,600.6	6,585.4	15.19	434.624		
5,216.5	5,083.9	4,765.8	4,763.7	22.8	1.5	7.44	146.5	-7,571.8	6,596.8	6,581.6	15.24	432.795		
5,240.0	5,106.5	4,793.1	4,791.0	22.9	1.5	7.44	146.3	-7,573.0	6,591.4	6,576.1	15.32	430.212		
5,300.0	5,164.4	4,860.0	4,857.8	23.2	1.5	7.42	145.8	-7,575.8	6,578.2	6,562.8	15.46	425.435		
5,314.9	5,178.8	4,876.6	4,874.4	23.3	1.5	7.42	145.7	-7,576.5	6,575.1	6,559.6	15.49	424.423		
5,400.0	5,261.5	4,980.4	4,978.1	23.6	1.6	7.40	144.9	-7,580.6	6,558.7	6,543.1	15.66	418.899		
5,413.4	5,274.6	4,997.2	4,994.9	23.6	1.6	7.39	144.8	-7,581.2	6,556.3	6,540.7	15.68	418.118		
5,500.0	5,359.5	5,139.4	5,137.0	23.9	1.6	7.38	144.0	-7,585.9	6,541.9	6,526.1	15.84	413.062		
5,511.8	5,371.1	5,154.6	5,152.2	24.0	1.6	7.38	144.0	-7,586.3	6,540.1	6,524.3	15.86	412.472		
5,600.0	5,458.0	5,256.5	5,254.0	24.2	1.6	7.36	143.7	-7,589.1	6,527.9	6,512.0	15.99	408.373		
5,610.2	5,468.2	5,267.4	5,264.9	24.3	1.6	7.36	143.7	-7,589.3	6,526.7	6,510.7	16.00	407.962		
5,700.0	5,557.2	5,393.3	5,390.8	24.5	1.6	7.36	144.1	-7,592.3	6,517.1	6,501.0	16.12	404.405		
5,708.6	5,565.7	5,405.5	5,403.0	24.5	1.6	7.36	144.3	-7,592.5	6,516.3	6,500.2	16.13	404.103		
5,800.0	5,656.7	5,516.7	5,514.1	24.7	1.6	7.37	145.9	-7,594.5	6,509.2	6,492.9	16.23	401.085		
5,807.1	5,663.7	5,524.2	5,521.6	24.7	1.6	7.37	146.0	-7,594.6	6,508.7	6,492.5	16.24	400.888		
5,900.0	5,756.5	5,623.8	5,621.3	24.9	1.6	7.38	147.9	-7,596.1	6,504.4	6,488.1	16.33	398.380		
5,905.5	5,761.9	5,629.9	5,627.3	24.9	1.6	7.38	148.0	-7,596.2	6,504.3	6,487.9	16.33	398.252		
5,991.2	5,847.6	5,722.3	5,719.7	25.0	1.6	7.39	149.6	-7,597.5	6,503.0	6,486.6	16.41	396.300 CC		
6,000.0	5,856.4	5,731.1	5,728.6	25.0	1.6	7.39	149.7	-7,597.6	6,503.1	6,486.6	16.42	396.104		
6,003.9	5,860.3	5,735.1	5,732.5	25.0	1.6	7.39	149.8	-7,597.7	6,503.1	6,486.6	16.42	396.020		
6,032.5	5,888.9	5,763.9	5,761.3	25.0	1.6	-87.79	150.3	-7,598.1	6,503.3	6,476.8	26.50	245.386 ES		
6,062.5	5,918.9	5,794.1	5,791.5	25.1	1.6	-87.79	150.8	-7,598.5	6,503.8	6,477.2	26.54	245.100		
6,100.0	5,956.4	5,829.0	5,826.4	25.1	1.6	-177.78	151.5	-7,598.9	6,505.3	6,488.8	16.45	395.468		
6,102.3	5,958.7	5,831.1	5,828.5	25.1	1.6	-177.78	151.5	-7,599.0	6,505.4	6,489.0	16.45	395.558		
6,150.0	6,006.2	5,874.6	5,871.9	25.1	1.6	-177.76	152.2	-7,599.6	6,510.4	6,494.0	16.39	397.157		
6,200.0	6,055.6	5,900.0	5,897.4	25.1	1.6	-177.73	152.6	-7,600.0	6,519.0	6,502.7	16.34	399.059		
6,200.8	6,056.3	5,900.0	5,897.4	25.1	1.6	-177.73	152.6	-7,600.0	6,519.2	6,502.8	16.33	399.097		
6,250.0	6,104.3	5,946.5	5,943.8	25.0	1.6	-177.69	153.3	-7,600.8	6,531.1	6,514.8	16.27	401.302		
6,299.2	6,151.3	5,977.5	5,974.8	24.9	1.6	-177.63	153.7	-7,601.4	6,546.4	6,530.2	16.18	404.505		
6,300.0	6,152.1	5,978.0	5,975.3	24.9	1.6	-177.63	153.7	-7,601.4	6,546.7	6,530.5	16.18	404.564		
6,350.0	6,198.7	6,021.3	6,018.6	24.8	1.6	-177.57	154.2	-7,602.3	6,565.6	6,549.6	16.06	408.783		
6,397.6	6,241.9	6,091.2	6,088.5	24.7	1.6	-177.49	155.3	-7,603.7	6,586.5	6,570.6	15.93	413.398		
6,400.0	6,244.1	6,094.6	6,091.9	24.7	1.6	-177.48	155.3	-7,603.8	6,587.6	6,571.7	15.93	413.648		
6,450.0	6,287.8	6,140.8	6,138.1	24.5	1.7	-177.38	156.1	-7,604.5	6,612.6	6,596.9	15.74	420.149		
6,496.0	6,326.5	6,179.8	6,177.1	24.4	1.7	-177.27	156.7	-7,605.2	6,638.2	6,622.7	15.54	427.274		
6,500.0	6,329.7	6,183.1	6,180.4	24.4	1.7	-177.26	156.8	-7,605.2	6,640.5	6,625.0	15.52	427.924		
6,550.0	6,369.6	6,219.1	6,216.4	24.3	1.7	-177.11	157.3	-7,605.8	6,671.3	6,656.0	15.27	436.924		
6,594.5	6,403.3	6,246.8	6,244.1	24.2	1.7	-176.96	157.7	-7,606.3	6,700.9	6,685.9	15.03	445.801		
6,600.0	6,407.3	6,250.2	6,247.4	24.2	1.7	-176.94	157.7	-7,606.4	6,704.7	6,689.7	15.00	446.942		
6,650.0	6,442.7	6,279.1	6,276.4	24.1	1.7	-176.71	158.1	-7,606.9	6,740.7	6,726.0	14.73	457.557		
6,692.9	6,471.0	6,303.4	6,300.7	24.0	1.7	-176.48	158.4	-7,607.4	6,773.5	6,759.0	14.51	466.659		
6,700.0	6,475.5	6,309.0	6,306.3	24.0	1.7	-176.44	158.5	-7,607.5	6,779.1	6,764.6	14.48	468.067		
6,750.0	6,505.6	6,346.4	6,343.6	24.0	1.7	-176.10	159.0	-7,608.2	6,819.5	6,805.3	14.29	477.306		
6,791.3	6,528.3	6,374.6	6,371.8	24.0	1.7	-175.76	159.4	-7,608.7	6,854.4	6,840.3	14.18	483.506		
6,800.0	6,532.8	6,380.2	6,377.5	24.0	1.7	-175.67	159.4	-7,608.8	6,861.9	6,847.8	14.16	484.594		
6,850.0	6,557.0	6,400.0	6,397.2	24.1	1.7	-175.09	159.7	-7,609.1	6,906.0	6,891.9	14.12	489.105		
6,889.7	6,574.1	6,418.4	6,415.6	24.2	1.7	-174.48	159.9	-7,609.4	6,942.2	6,928.0	14.19	489.175		
6,900.0	6,578.1	6,421.3	6,418.6	24.3	1.7	-174.29	160.0	-7,609.5	6,951.7	6,937.4	14.22	488.745		
6,950.0	6,596.1	6,434.2	6,431.4	24.5	1.7	-173.11	160.1	-7,609.7	6,998.6	6,984.1	14.50	482.624		
6,988.2	6,607.5	6,442.3	6,439.5	24.7	1.7	-171.78	160.3	-7,609.9	7,035.2	7,020.3	14.88	472.876		
7,000.0	6,610.7	6,444.5	6,441.7	24.8	1.7	-171.26	160.3	-7,609.9	7,046.7	7,031.6	15.03	468.843		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
7,050.0	6,621.9	6,452.2	6,449.4	25.1	1.7	-167.92	160.4	-7,610.1	7,095.5	7,079.6	15.99	443.757	
7,086.6	6,628.0	6,456.2	6,453.4	25.4	1.7	-163.18	160.5	-7,610.1	7,131.7	7,114.4	17.32	411.737	
7,100.0	6,629.7	6,457.3	6,454.6	25.6	1.7	-160.37	160.5	-7,610.2	7,145.0	7,126.9	18.10	394.733	
7,150.0	6,634.1	6,459.9	6,457.1	26.0	1.7	-131.90	160.5	-7,610.2	7,194.9	7,169.9	25.00	287.772	
7,185.0	6,635.1	6,460.1	6,457.3	26.4	1.7	-65.55	160.5	-7,610.2	7,229.9	7,202.4	27.47	263.226	
7,196.6	6,635.0	6,459.9	6,457.1	26.5	1.7	-47.92	160.5	-7,610.2	7,241.4	7,216.1	25.33	285.938	
7,200.0	6,635.0	6,459.8	6,457.0	26.6	1.7	-47.91	160.5	-7,610.2	7,244.8	7,219.5	25.35	285.755	
7,283.4	6,633.9	6,457.8	6,455.1	27.6	1.7	-47.67	160.5	-7,610.2	7,328.2	7,302.1	26.11	280.614	
7,300.0	6,633.7	6,457.4	6,454.7	27.8	1.7	-47.62	160.5	-7,610.2	7,344.7	7,318.4	26.26	279.644	
7,381.9	6,632.6	6,455.5	6,452.7	29.0	1.7	-47.38	160.5	-7,610.1	7,426.5	7,399.4	27.14	273.657	
7,400.0	6,632.4	6,455.1	6,452.3	29.2	1.7	-47.33	160.4	-7,610.1	7,444.6	7,417.3	27.33	272.399	
7,480.3	6,631.4	6,453.2	6,450.4	30.5	1.7	-47.10	160.4	-7,610.1	7,524.8	7,496.5	28.29	265.984	
7,500.0	6,631.1	6,452.8	6,450.0	30.9	1.7	-47.04	160.4	-7,610.1	7,544.5	7,516.0	28.52	264.493	
7,578.7	6,630.1	6,450.9	6,448.2	32.3	1.7	-46.83	160.4	-7,610.0	7,623.1	7,593.6	29.55	257.968	
7,600.0	6,629.8	6,450.4	6,447.7	32.7	1.7	-46.76	160.4	-7,610.0	7,644.4	7,614.5	29.83	256.299	
7,677.1	6,628.9	6,448.7	6,445.9	34.1	1.7	-46.55	160.4	-7,610.0	7,721.4	7,690.5	30.90	249.889	
7,700.0	6,628.6	6,448.1	6,445.4	34.6	1.7	-46.49	160.3	-7,610.0	7,744.3	7,713.1	31.22	248.092	
7,775.6	6,627.6	6,446.4	6,443.6	36.1	1.7	-46.29	160.3	-7,610.0	7,819.8	7,787.4	32.32	241.940	
7,800.0	6,627.3	6,445.8	6,443.1	36.6	1.7	-46.22	160.3	-7,609.9	7,844.2	7,811.5	32.68	240.059	
7,874.0	6,626.3	6,444.2	6,441.4	38.2	1.7	-46.02	160.3	-7,609.9	7,918.1	7,884.3	33.80	234.252	
7,900.0	6,626.0	6,443.6	6,440.8	38.8	1.7	-45.95	160.3	-7,609.9	7,944.1	7,909.9	34.19	232.321	
7,972.4	6,625.1	6,441.9	6,439.1	40.4	1.7	-45.76	160.2	-7,609.9	8,016.4	7,981.1	35.33	226.903	
8,000.0	6,624.7	6,441.3	6,438.5	41.0	1.7	-45.69	160.2	-7,609.9	8,044.0	8,008.2	35.76	224.949	
8,070.8	6,623.8	6,439.7	6,436.9	42.6	1.7	-45.50	160.2	-7,609.8	8,114.7	8,077.8	36.90	219.935	
8,100.0	6,623.4	6,439.1	6,436.3	43.3	1.7	-45.43	160.2	-7,609.8	8,143.9	8,106.5	37.36	217.979	
8,169.3	6,622.6	6,437.5	6,434.7	44.9	1.7	-45.25	160.2	-7,609.8	8,213.1	8,174.6	38.49	213.365	
8,200.0	6,622.2	6,436.8	6,434.0	45.6	1.7	-45.17	160.2	-7,609.8	8,243.8	8,204.8	38.99	211.423	
8,267.7	6,621.3	6,435.3	6,432.5	47.3	1.7	-45.00	160.2	-7,609.7	8,311.4	8,271.3	40.11	207.193	
8,300.0	6,620.9	6,434.6	6,431.8	48.0	1.7	-44.92	160.1	-7,609.7	8,343.7	8,303.0	40.65	205.276	
8,366.1	6,620.0	6,433.1	6,430.4	49.7	1.7	-44.76	160.1	-7,609.7	8,409.7	8,368.0	41.75	201.410	
8,400.0	6,619.6	6,432.4	6,429.6	50.5	1.7	-44.67	160.1	-7,609.7	8,443.6	8,401.2	42.32	199.526	
8,464.5	6,618.8	6,431.0	6,428.2	52.1	1.7	-44.51	160.1	-7,609.7	8,508.0	8,464.6	43.41	195.997	
8,500.0	6,618.3	6,430.2	6,427.4	53.0	1.7	-44.42	160.1	-7,609.7	8,543.5	8,499.5	44.00	194.152	
8,563.0	6,617.5	6,428.8	6,426.1	54.5	1.7	-44.27	160.1	-7,609.6	8,606.4	8,561.3	45.07	190.936	
8,600.0	6,617.0	6,428.0	6,425.3	55.5	1.7	-44.18	160.0	-7,609.6	8,643.4	8,597.7	45.70	189.133	
8,661.4	6,616.3	6,426.7	6,423.9	57.0	1.7	-44.04	160.0	-7,609.6	8,704.7	8,658.0	46.75	186.203	
8,700.0	6,615.8	6,425.9	6,423.1	58.0	1.7	-43.94	160.0	-7,609.6	8,743.3	8,695.9	47.40	184.445	
8,759.8	6,615.0	6,424.6	6,421.8	59.5	1.7	-43.81	160.0	-7,609.6	8,803.0	8,754.6	48.43	181.777	
8,800.0	6,614.5	6,423.7	6,420.9	60.6	1.7	-43.71	160.0	-7,609.5	8,843.2	8,794.1	49.11	180.065	
8,858.2	6,613.7	6,422.5	6,419.7	62.1	1.7	-43.58	160.0	-7,609.5	8,901.4	8,851.3	50.11	177.635	
8,900.0	6,613.2	6,421.6	6,418.8	63.2	1.7	-43.48	160.0	-7,609.5	8,943.1	8,892.3	50.82	175.969	
8,956.7	6,612.5	6,420.4	6,417.6	64.6	1.7	-43.35	159.9	-7,609.5	8,999.7	8,947.9	51.80	173.756	
9,000.0	6,611.9	6,419.5	6,416.7	65.8	1.7	-43.25	159.9	-7,609.5	9,043.0	8,990.5	52.53	172.137	
9,055.1	6,611.2	6,418.3	6,415.5	67.2	1.7	-43.13	159.9	-7,609.4	9,098.1	9,044.6	53.48	170.121	
9,100.0	6,610.6	6,417.4	6,414.6	68.4	1.7	-43.03	159.9	-7,609.4	9,142.9	9,088.7	54.25	168.547	
9,153.5	6,609.9	6,416.2	6,413.5	69.8	1.7	-42.91	159.9	-7,609.4	9,196.4	9,141.2	55.16	166.710	
9,200.0	6,609.3	6,415.3	6,412.5	71.0	1.7	-42.81	159.9	-7,609.4	9,242.8	9,186.9	55.96	165.182	
9,251.9	6,608.7	6,400.0	6,397.2	72.4	1.7	-41.28	159.7	-7,609.1	9,294.8	9,239.0	55.79	166.590	
9,300.0	6,608.1	6,400.0	6,397.2	73.7	1.7	-41.27	159.7	-7,609.1	9,342.8	9,286.1	56.67	164.871	
9,350.4	6,607.4	6,400.0	6,397.2	75.0	1.7	-41.27	159.7	-7,609.1	9,393.1	9,335.5	57.59	163.106	
9,400.0	6,606.8	6,400.0	6,397.2	76.3	1.7	-41.27	159.7	-7,609.1	9,442.7	9,384.2	58.50	161.425	
9,448.8	6,606.1	6,400.0	6,397.2	77.6	1.7	-41.27	159.7	-7,609.1	9,491.4	9,432.0	59.39	159.807	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
9,500.0	6,605.5	6,400.0	6,397.2	79.0	1.7	-41.26	159.7	-7,609.1	9,542.6	9,482.3	60.33	158.169	
9,547.2	6,604.9	6,400.0	6,397.2	80.2	1.7	-41.26	159.7	-7,609.1	9,589.8	9,528.6	61.20	156.688	
9,600.0	6,604.2	6,400.0	6,397.2	81.7	1.7	-41.26	159.7	-7,609.1	9,642.5	9,580.3	62.17	155.090	
9,645.6	6,603.6	6,400.0	6,397.2	82.9	1.7	-41.26	159.7	-7,609.1	9,688.1	9,625.1	63.02	153.734	
9,700.0	6,602.9	6,400.0	6,397.2	84.3	1.7	-41.26	159.7	-7,609.1	9,742.4	9,678.4	64.02	152.175	
9,744.1	6,602.3	6,400.0	6,397.2	85.5	1.7	-41.26	159.7	-7,609.1	9,786.5	9,721.6	64.84	150.933	
9,800.0	6,601.6	6,400.0	6,397.2	87.0	1.7	-41.25	159.7	-7,609.1	9,842.3	9,776.5	65.87	149.411	
9,842.5	6,601.1	6,400.0	6,397.2	88.2	1.7	-41.25	159.7	-7,609.1	9,884.8	9,818.1	66.67	148.276	
9,900.0	6,600.3	6,400.0	6,397.2	89.7	1.7	-41.25	159.7	-7,609.1	9,942.3	9,874.5	67.73	146.789	
9,940.9	6,599.8	6,400.0	6,397.2	90.9	1.7	-41.25	159.7	-7,609.1	9,983.2	9,914.7	68.49	145.750 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-90.30	-34.1	-6,519.3	6,519.5					
98.4	98.4	69.1	69.1	0.1	0.0	-90.30	-34.1	-6,519.3	6,519.3	6,519.2	0.10	N/A		
100.0	100.0	70.8	70.8	0.1	0.0	-90.30	-34.1	-6,519.3	6,519.3	6,519.2	0.11	N/A		
167.5	167.5	129.1	129.1	0.2	0.0	-90.30	-34.2	-6,519.2	6,519.3	6,519.0	0.30	N/A		
196.8	196.8	149.9	149.9	0.3	0.1	-90.30	-34.3	-6,519.2	6,519.3	6,518.9	0.39	N/A		
200.0	200.0	152.2	152.2	0.3	0.1	-90.30	-34.3	-6,519.2	6,519.3	6,518.9	0.40	N/A		
295.3	295.3	219.7	219.7	0.5	0.1	-90.30	-34.5	-6,519.5	6,519.7	6,519.0	0.69	9,486.629		
300.0	300.0	223.0	223.0	0.5	0.2	-90.30	-34.6	-6,519.5	6,519.7	6,519.0	0.70	9,290.980		
393.7	393.7	300.0	300.0	0.8	0.2	-90.31	-35.1	-6,520.2	6,520.5	6,519.5	1.00	6,514.272		
400.0	400.0	300.0	300.0	0.8	0.2	-90.31	-35.1	-6,520.2	6,520.6	6,519.6	1.02	6,423.460		
492.1	492.1	400.0	400.0	1.0	0.3	-90.32	-35.9	-6,521.1	6,521.4	6,520.1	1.30	5,001.815		
500.0	500.0	400.0	400.0	1.0	0.3	-90.32	-35.9	-6,521.1	6,521.5	6,520.2	1.32	4,934.876		
590.5	590.5	472.4	472.4	1.2	0.4	-90.32	-36.7	-6,521.8	6,522.4	6,520.8	1.57	4,144.262		
600.0	600.0	478.7	478.7	1.2	0.4	-90.32	-36.8	-6,521.9	6,522.5	6,520.9	1.60	4,078.341		
689.0	689.0	558.7	558.7	1.4	0.4	-90.33	-37.9	-6,523.0	6,523.8	6,522.0	1.85	3,529.264		
700.0	700.0	570.1	570.1	1.4	0.4	-90.33	-38.1	-6,523.2	6,524.0	6,522.1	1.88	3,470.148		
787.4	787.4	656.7	656.7	1.6	0.5	-90.35	-39.4	-6,524.4	6,525.2	6,523.1	2.12	3,071.782		
800.0	800.0	669.0	668.9	1.7	0.5	-90.35	-39.6	-6,524.6	6,525.4	6,523.2	2.16	3,022.359		
885.8	885.8	749.7	749.6	1.9	0.5	-90.36	-40.8	-6,525.8	6,526.7	6,524.3	2.39	2,727.918		
900.0	900.0	762.8	762.7	1.9	0.5	-90.36	-41.0	-6,526.0	6,526.9	6,524.5	2.43	2,685.113		
984.2	984.2	845.4	845.3	2.1	0.6	-90.37	-42.2	-6,527.3	6,528.2	6,525.6	2.66	2,455.184		
1,000.0	1,000.0	861.7	861.6	2.1	0.6	-90.37	-42.4	-6,527.5	6,528.5	6,525.8	2.70	2,416.354		
1,082.7	1,082.7	943.1	943.0	2.3	0.6	-90.38	-43.5	-6,528.8	6,529.8	6,526.8	2.94	2,223.406		
1,100.0	1,100.0	959.5	959.4	2.3	0.7	-90.38	-43.8	-6,529.1	6,530.0	6,527.1	2.99	2,185.556		
1,181.1	1,181.1	1,036.1	1,036.0	2.5	0.7	-90.39	-45.0	-6,530.3	6,531.4	6,528.1	3.23	2,024.292		
1,200.0	1,200.0	1,054.0	1,053.8	2.6	0.7	-90.40	-45.3	-6,530.6	6,531.7	6,528.4	3.28	1,990.083		
1,279.5	1,279.5	1,135.4	1,135.3	2.7	0.8	4.78	-46.7	-6,532.0	6,531.9	6,528.5	3.48	1,877.490		
1,300.0	1,300.0	1,159.0	1,158.8	2.8	0.8	4.78	-47.1	-6,532.4	6,531.6	6,528.1	3.53	1,850.094		
1,377.9	1,377.8	1,239.8	1,239.6	2.9	0.8	4.78	-48.5	-6,533.6	6,529.1	6,525.4	3.73	1,752.407		
1,400.0	1,399.8	1,260.6	1,260.3	3.0	0.8	4.78	-48.8	-6,533.9	6,528.0	6,524.2	3.78	1,725.826		
1,476.4	1,475.9	1,332.3	1,332.1	3.1	0.9	4.78	-50.1	-6,535.1	6,522.9	6,518.9	3.98	1,637.061		
1,500.0	1,499.5	1,354.5	1,354.3	3.2	0.9	4.78	-50.4	-6,535.5	6,520.9	6,516.9	4.05	1,611.365		
1,574.8	1,573.7	1,422.9	1,422.7	3.4	0.9	4.79	-51.6	-6,536.6	6,513.4	6,509.2	4.24	1,535.658		
1,600.0	1,598.7	1,444.9	1,444.6	3.4	1.0	4.79	-52.0	-6,537.0	6,510.5	6,506.2	4.30	1,513.292		
1,673.2	1,671.1	1,512.7	1,512.4	3.6	1.0	4.81	-53.2	-6,538.3	6,500.8	6,496.3	4.49	1,449.419		
1,700.0	1,697.5	1,547.2	1,546.9	3.7	1.0	4.81	-53.9	-6,538.9	6,496.8	6,492.2	4.55	1,426.331		
1,771.6	1,767.9	1,671.2	1,670.9	3.9	1.0	4.83	-56.4	-6,540.7	6,484.5	6,479.8	4.76	1,362.750		
1,800.0	1,795.6	1,725.3	1,725.0	4.0	1.1	4.84	-57.5	-6,541.0	6,479.0	6,474.1	4.84	1,338.420		
1,870.1	1,864.0	1,908.1	1,907.7	4.3	1.1	4.87	-60.4	-6,540.6	6,463.6	6,458.6	5.06	1,277.536		
1,900.0	1,893.1	1,955.2	1,954.8	4.4	1.1	4.88	-61.1	-6,539.9	6,456.2	6,451.0	5.14	1,255.298		
1,968.5	1,959.3	2,045.3	2,044.9	4.6	1.1	4.92	-62.6	-6,538.4	6,437.7	6,432.4	5.34	1,206.322		
1,992.4	1,982.4	2,072.3	2,071.9	4.7	1.1	4.93	-63.1	-6,537.8	6,430.8	6,425.4	5.40	1,190.460		
2,000.0	1,989.6	2,080.9	2,080.4	4.8	1.1	4.93	-63.2	-6,537.7	6,428.6	6,423.2	5.42	1,185.650		
2,066.9	2,054.0	2,147.9	2,147.4	5.1	1.2	4.94	-64.4	-6,536.3	6,409.1	6,403.5	5.62	1,140.911		
2,100.0	2,085.8	2,179.5	2,179.1	5.2	1.2	4.94	-64.9	-6,535.7	6,399.5	6,393.8	5.71	1,120.846		
2,165.3	2,148.7	2,242.1	2,241.7	5.5	1.2	4.94	-66.2	-6,534.4	6,380.4	6,374.5	5.90	1,081.673		
2,200.0	2,182.0	2,275.3	2,274.8	5.7	1.3	4.94	-66.9	-6,533.7	6,370.3	6,364.3	6.01	1,060.394		
2,263.8	2,243.4	2,336.4	2,335.9	6.0	1.3	4.94	-68.3	-6,532.5	6,351.7	6,345.5	6.20	1,024.393		
2,300.0	2,278.2	2,371.1	2,370.6	6.2	1.3	4.94	-69.2	-6,531.8	6,341.2	6,334.9	6.31	1,004.725		
2,362.2	2,338.1	2,427.8	2,427.2	6.5	1.3	4.94	-70.6	-6,530.6	6,323.0	6,316.5	6.49	973.826		
2,400.0	2,374.4	2,460.6	2,460.0	6.7	1.3	4.94	-71.4	-6,530.0	6,312.0	6,305.4	6.60	956.612		
2,460.6	2,432.8	2,514.7	2,514.1	7.0	1.4	4.94	-72.6	-6,528.9	6,294.4	6,287.7	6.77	929.873		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,470.6	2,552.7	2,552.1	7.2	1.4	4.94	-73.3	-6,528.2	6,283.0	6,276.1	6.88	913.075	
2,559.0	2,527.4	2,600.0	2,599.4	7.6	1.4	4.94	-74.3	-6,527.3	6,265.9	6,258.8	7.05	888.917	
2,600.0	2,566.8	2,641.1	2,640.5	7.8	1.4	4.94	-75.2	-6,526.6	6,254.0	6,246.9	7.17	871.921	
2,657.5	2,622.1	2,687.4	2,686.7	8.1	1.4	4.95	-76.1	-6,525.8	6,237.5	6,230.1	7.34	849.301	
2,700.0	2,663.0	2,721.7	2,721.0	8.3	1.4	4.95	-76.7	-6,525.2	6,225.3	6,217.8	7.47	833.210	
2,755.9	2,716.8	2,766.8	2,766.1	8.6	1.4	4.95	-77.6	-6,524.6	6,209.3	6,201.6	7.64	812.752	
2,800.0	2,759.2	2,800.0	2,799.3	8.9	1.5	4.95	-78.2	-6,524.1	6,196.7	6,188.9	7.77	797.301	
2,854.3	2,811.5	2,849.4	2,848.6	9.2	1.5	4.95	-79.2	-6,523.5	6,181.3	6,173.3	7.93	779.367	
2,900.0	2,855.4	2,888.7	2,888.0	9.4	1.5	4.95	-79.9	-6,523.1	6,168.3	6,160.3	8.06	764.850	
2,952.7	2,906.2	2,930.1	2,929.3	9.7	1.5	4.95	-80.8	-6,522.6	6,153.5	6,145.2	8.22	748.623	
3,000.0	2,951.6	2,965.9	2,965.2	10.0	1.5	4.96	-81.5	-6,522.3	6,140.2	6,131.8	8.36	734.601	
3,051.2	3,000.9	3,000.0	2,999.2	10.3	1.5	4.96	-82.1	-6,522.1	6,125.9	6,117.4	8.51	719.940	
3,100.0	3,047.8	3,032.0	3,031.2	10.5	1.5	4.96	-82.7	-6,521.9	6,112.4	6,103.8	8.65	706.598	
3,149.6	3,095.5	3,060.8	3,060.1	10.8	1.5	4.96	-83.2	-6,521.8	6,098.8	6,090.0	8.79	693.447	
3,200.0	3,144.0	3,100.0	3,099.2	11.1	1.5	4.97	-83.7	-6,521.9	6,085.2	6,076.3	8.94	680.380	
3,248.0	3,190.2	3,129.4	3,128.6	11.4	1.6	4.97	-84.0	-6,522.0	6,072.3	6,063.2	9.09	668.039	
3,300.0	3,240.2	3,178.2	3,177.4	11.7	1.6	4.98	-84.5	-6,522.3	6,058.4	6,049.1	9.25	654.674	
3,346.4	3,284.9	3,221.9	3,221.1	11.9	1.6	4.98	-84.9	-6,522.4	6,045.9	6,036.5	9.40	643.052	
3,400.0	3,336.4	3,272.2	3,271.4	12.2	1.6	4.99	-85.2	-6,522.7	6,031.6	6,022.0	9.57	630.164	
3,444.9	3,379.6	3,314.5	3,313.7	12.5	1.6	5.00	-85.4	-6,522.9	6,019.6	6,009.9	9.71	619.672	
3,500.0	3,432.6	3,366.7	3,365.9	12.8	1.6	5.01	-85.7	-6,523.1	6,004.9	5,995.0	9.89	607.060	
3,543.3	3,474.3	3,407.7	3,406.9	13.1	1.7	5.02	-85.9	-6,523.4	5,993.3	5,983.3	10.03	597.443	
3,600.0	3,528.8	3,461.4	3,460.6	13.4	1.7	5.03	-86.1	-6,523.6	5,978.2	5,967.9	10.21	585.246	
3,641.7	3,569.0	3,500.9	3,500.1	13.6	1.7	5.03	-86.3	-6,523.9	5,967.0	5,956.7	10.35	576.531	
3,700.0	3,625.0	3,559.3	3,558.5	14.0	1.7	5.05	-86.5	-6,524.2	5,951.5	5,940.9	10.53	565.008	
3,740.1	3,663.6	3,599.4	3,598.7	14.2	1.7	5.05	-86.6	-6,524.4	5,940.7	5,930.1	10.66	557.281	
3,800.0	3,721.2	3,650.9	3,650.1	14.5	1.7	5.07	-86.7	-6,524.6	5,924.8	5,913.9	10.85	546.193	
3,838.6	3,758.3	3,684.0	3,683.2	14.8	1.7	5.07	-86.7	-6,524.9	5,914.5	5,903.5	10.97	539.236	
3,900.0	3,817.4	3,742.1	3,741.4	15.1	1.8	5.09	-86.8	-6,525.2	5,898.2	5,887.0	11.16	528.387	
3,937.0	3,853.0	3,778.6	3,777.8	15.3	1.8	5.10	-86.8	-6,525.5	5,888.4	5,877.1	11.28	521.999	
4,000.0	3,913.6	3,836.3	3,835.5	15.7	1.8	5.11	-87.0	-6,525.9	5,871.6	5,860.1	11.48	511.458	
4,035.4	3,947.7	3,867.5	3,866.7	15.9	1.8	5.12	-87.1	-6,526.1	5,862.2	5,850.6	11.59	505.694	
4,100.0	4,009.8	3,926.5	3,925.7	16.3	1.8	5.13	-87.2	-6,526.6	5,845.2	5,833.4	11.80	495.438	
4,133.8	4,042.4	3,958.9	3,958.1	16.5	1.8	5.14	-87.3	-6,526.9	5,836.2	5,824.3	11.91	490.174	
4,200.0	4,106.0	4,026.1	4,025.3	16.8	1.8	5.15	-87.5	-6,527.4	5,818.8	5,806.6	12.12	480.104	
4,232.3	4,137.1	4,062.4	4,061.5	17.0	1.8	5.16	-87.7	-6,527.7	5,810.2	5,798.0	12.23	475.263	
4,300.0	4,202.2	4,129.8	4,129.0	17.4	1.8	5.17	-88.1	-6,528.1	5,792.2	5,779.7	12.44	465.466	
4,330.7	4,231.7	4,156.5	4,155.7	17.6	1.9	5.17	-88.3	-6,528.3	5,784.0	5,771.5	12.54	461.176	
4,400.0	4,298.4	4,200.0	4,199.2	18.0	1.9	5.18	-88.7	-6,528.6	5,765.7	5,752.9	12.76	451.915	
4,429.1	4,326.4	4,231.7	4,230.9	18.2	1.9	5.19	-89.0	-6,528.9	5,758.0	5,745.2	12.85	448.007	
4,500.0	4,394.6	4,278.1	4,277.3	18.6	1.9	5.19	-89.5	-6,529.4	5,739.6	5,726.5	13.07	439.029	
4,527.5	4,421.1	4,300.0	4,299.2	18.7	1.9	5.20	-89.7	-6,529.8	5,732.5	5,719.3	13.16	435.592	
4,600.0	4,490.8	4,364.7	4,363.9	19.2	1.9	5.21	-90.4	-6,530.8	5,713.9	5,700.5	13.39	426.657	
4,626.0	4,515.8	4,390.0	4,389.1	19.3	1.9	5.21	-90.7	-6,531.2	5,707.2	5,693.7	13.48	423.508	
4,700.0	4,587.0	4,511.8	4,511.0	19.8	1.9	5.23	-91.8	-6,532.6	5,687.9	5,674.2	13.74	414.083	
4,724.4	4,610.5	4,537.3	4,536.4	19.9	2.0	5.23	-92.0	-6,532.8	5,681.4	5,667.6	13.82	411.186	
4,800.0	4,683.2	4,615.0	4,614.1	20.3	2.0	5.25	-92.7	-6,533.2	5,661.3	5,647.2	14.07	402.445	
4,822.8	4,705.2	4,637.1	4,636.2	20.5	2.0	5.25	-92.9	-6,533.4	5,655.2	5,641.1	14.14	399.891	
4,900.0	4,779.4	4,711.3	4,710.4	20.9	2.0	5.26	-93.5	-6,533.8	5,634.7	5,620.3	14.40	391.424	
4,921.2	4,799.8	4,730.8	4,730.0	21.0	2.0	5.27	-93.7	-6,533.9	5,629.0	5,614.5	14.47	389.107	
5,000.0	4,875.6	4,803.3	4,802.4	21.5	2.0	5.28	-94.4	-6,534.4	5,608.1	5,593.3	14.73	380.721	
5,019.7	4,894.5	4,821.3	4,820.5	21.6	2.1	5.28	-94.6	-6,534.5	5,602.8	5,588.0	14.80	378.671	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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		
5,100.0	4,971.8	4,895.3	4,894.4	22.1	2.1	5.29	-95.4	-6,535.0	5,581.5	5,566.5	15.07	370.491		
5,118.1	4,989.2	4,911.7	4,910.8	22.2	2.1	5.30	-95.6	-6,535.1	5,576.7	5,561.6	15.13	368.688		
5,200.0	5,068.0	4,985.6	4,984.7	22.7	2.1	5.31	-96.4	-6,535.7	5,555.1	5,539.7	15.40	360.713		
5,216.5	5,083.9	5,000.6	4,999.7	22.8	2.1	5.31	-96.6	-6,535.9	5,550.7	5,535.3	15.46	359.138		
5,240.0	5,106.5	5,021.8	5,020.9	22.9	2.1	5.31	-96.8	-6,536.1	5,544.5	5,529.0	15.53	356.915		
5,300.0	5,164.4	5,076.1	5,075.2	23.2	2.2	5.29	-97.4	-6,536.6	5,529.4	5,513.7	15.68	352.556		
5,314.9	5,178.8	5,089.7	5,088.8	23.3	2.2	5.29	-97.5	-6,536.7	5,525.8	5,510.1	15.72	351.609		
5,400.0	5,261.5	5,178.7	5,177.8	23.6	2.2	5.26	-98.3	-6,537.5	5,506.8	5,490.9	15.89	346.527		
5,413.4	5,274.6	5,193.0	5,192.1	23.6	2.2	5.26	-98.4	-6,537.6	5,504.0	5,488.1	15.92	345.804		
5,500.0	5,359.5	5,275.9	5,275.0	23.9	2.2	5.24	-98.9	-6,538.3	5,487.5	5,471.4	16.07	341.407		
5,511.8	5,371.1	5,287.1	5,286.2	24.0	2.2	5.24	-98.9	-6,538.4	5,485.5	5,469.4	16.09	340.871		
5,600.0	5,458.0	5,368.2	5,367.3	24.2	2.2	5.22	-99.3	-6,539.2	5,471.7	5,455.5	16.23	337.092		
5,610.2	5,468.2	5,377.6	5,376.7	24.3	2.2	5.22	-99.3	-6,539.3	5,470.3	5,454.1	16.25	336.704		
5,700.0	5,557.2	5,469.9	5,468.9	24.5	2.3	5.21	-99.3	-6,540.2	5,459.5	5,443.1	16.38	333.263		
5,708.6	5,565.7	5,479.1	5,478.2	24.5	2.3	5.21	-99.2	-6,540.3	5,458.6	5,442.2	16.39	332.963		
5,800.0	5,656.7	5,577.0	5,576.1	24.7	2.3	5.21	-99.0	-6,541.2	5,450.6	5,434.0	16.52	329.943		
5,807.1	5,663.7	5,584.6	5,583.7	24.7	2.3	5.21	-99.0	-6,541.2	5,450.1	5,433.5	16.53	329.738		
5,900.0	5,756.5	5,654.5	5,653.6	24.9	2.3	5.21	-98.6	-6,541.9	5,445.2	5,428.6	16.63	327.508		
5,905.5	5,761.9	5,658.3	5,657.4	24.9	2.3	5.21	-98.5	-6,542.0	5,445.0	5,428.4	16.63	327.401		
5,979.2	5,835.6	5,700.0	5,699.1	25.0	2.3	5.21	-98.1	-6,542.6	5,443.8	5,427.1	16.70	326.067 CC		
6,000.0	5,856.4	5,700.0	5,699.1	25.0	2.3	5.21	-98.1	-6,542.6	5,443.9	5,427.2	16.71	325.765		
6,002.0	5,858.4	5,721.1	5,720.2	25.0	2.3	5.22	-97.8	-6,542.9	5,443.9	5,427.1	16.72	325.644		
6,003.9	5,860.3	5,722.2	5,721.3	25.0	2.3	5.22	-97.7	-6,543.0	5,443.9	5,427.2	16.72	325.613		
6,032.5	5,888.9	5,738.8	5,737.9	25.0	2.3	-89.97	-97.5	-6,543.3	5,444.3	5,417.2	27.14	200.609 ES		
6,062.5	5,918.9	5,756.2	5,755.3	25.1	2.3	-89.97	-97.1	-6,543.7	5,445.0	5,417.8	27.17	200.408 SF		
6,100.0	5,956.4	5,778.0	5,777.0	25.1	2.3	-179.96	-96.7	-6,544.2	5,446.9	5,430.2	16.73	325.545		
6,102.3	5,958.7	5,800.0	5,799.0	25.1	2.3	-179.96	-96.1	-6,544.8	5,447.1	5,430.4	16.73	325.549		
6,150.0	6,006.2	5,800.0	5,799.0	25.1	2.3	-179.96	-96.1	-6,544.8	5,452.7	5,436.0	16.63	327.807		
6,200.0	6,055.6	5,844.1	5,843.1	25.1	2.3	-179.95	-95.0	-6,546.2	5,462.0	5,445.5	16.54	330.329		
6,200.8	6,056.3	5,844.7	5,843.6	25.1	2.3	-179.95	-95.0	-6,546.2	5,462.2	5,445.6	16.53	330.375		
6,250.0	6,104.3	5,879.1	5,878.1	25.0	2.3	-179.93	-93.9	-6,547.4	5,474.9	5,458.5	16.42	333.489		
6,299.2	6,151.3	5,949.7	5,948.6	24.9	2.3	-179.91	-91.5	-6,549.7	5,490.8	5,474.6	16.29	337.004		
6,300.0	6,152.1	5,951.8	5,950.7	24.9	2.3	-179.90	-91.5	-6,549.8	5,491.1	5,474.8	16.29	337.055		
6,350.0	6,198.7	6,037.5	6,036.3	24.8	2.3	-179.86	-88.0	-6,552.0	5,510.2	5,494.1	16.15	341.268		
6,397.6	6,241.9	6,092.8	6,091.5	24.7	2.3	-179.83	-85.6	-6,553.2	5,531.2	5,515.2	15.97	346.428		
6,400.0	6,244.1	6,095.6	6,094.3	24.7	2.3	-179.83	-85.5	-6,553.3	5,532.3	5,516.4	15.96	346.704		
6,450.0	6,287.8	6,142.3	6,140.9	24.5	2.3	-179.80	-83.4	-6,554.2	5,557.4	5,541.7	15.73	353.260		
6,496.0	6,326.5	6,182.9	6,181.5	24.4	2.3	-179.77	-81.8	-6,555.0	5,583.2	5,567.7	15.50	360.263		
6,500.0	6,329.7	6,186.3	6,184.9	24.4	2.3	-179.77	-81.7	-6,555.1	5,585.5	5,570.0	15.48	360.900		
6,550.0	6,369.6	6,227.6	6,226.2	24.3	2.3	-179.74	-80.2	-6,555.8	5,616.3	5,601.1	15.20	369.561		
6,594.5	6,403.3	6,262.2	6,260.7	24.2	2.3	-179.71	-79.1	-6,556.5	5,646.0	5,631.1	14.94	378.025		
6,600.0	6,407.3	6,266.3	6,264.9	24.2	2.3	-179.70	-79.0	-6,556.6	5,649.8	5,634.9	14.90	379.114		
6,650.0	6,442.7	6,302.4	6,300.9	24.1	2.3	-179.67	-78.0	-6,557.2	5,685.8	5,671.2	14.61	389.308		
6,692.9	6,471.0	6,329.4	6,327.9	24.0	2.3	-179.63	-77.3	-6,557.8	5,718.6	5,704.2	14.36	398.284		
6,700.0	6,475.5	6,333.6	6,332.1	24.0	2.3	-179.63	-77.2	-6,557.8	5,724.2	5,709.9	14.32	399.763		
6,750.0	6,505.6	6,362.2	6,360.7	24.0	2.3	-179.58	-76.5	-6,558.4	5,764.7	5,750.6	14.07	409.800		
6,791.3	6,528.3	6,383.7	6,382.2	24.0	2.3	-179.53	-76.0	-6,558.8	5,799.6	5,785.7	13.90	417.161		
6,800.0	6,532.8	6,388.0	6,386.5	24.0	2.3	-179.52	-75.9	-6,558.9	5,807.1	5,793.2	13.87	418.560		
6,850.0	6,557.0	6,412.0	6,410.5	24.1	2.3	-179.45	-75.4	-6,559.3	5,851.3	5,837.5	13.77	424.963		
6,889.7	6,574.1	6,429.7	6,428.2	24.2	2.3	-179.37	-75.0	-6,559.6	5,887.5	5,873.7	13.77	427.680		
6,900.0	6,578.1	6,434.0	6,432.4	24.3	2.3	-179.35	-75.0	-6,559.7	5,897.0	5,883.2	13.78	428.031		
6,950.0	6,596.1	6,452.5	6,450.9	24.5	2.3	-179.20	-74.6	-6,560.1	5,944.0	5,930.1	13.91	427.179		

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,607.5	6,464.2	6,462.6	24.7	2.3	-179.04	-74.4	-6,560.3	5,980.6	5,966.5	14.11	423.774	
7,000.0	6,610.7	6,467.4	6,465.8	24.8	2.3	-178.98	-74.3	-6,560.3	5,992.0	5,977.8	14.19	422.315	
7,050.0	6,621.9	6,478.6	6,477.1	25.1	2.3	-178.58	-74.1	-6,560.5	6,040.9	6,026.3	14.59	413.909	
7,086.6	6,628.0	6,484.5	6,483.0	25.4	2.3	-178.00	-74.0	-6,560.6	6,077.1	6,062.2	14.98	405.813	
7,100.0	6,629.7	6,486.2	6,484.6	25.6	2.3	-177.64	-73.9	-6,560.7	6,090.4	6,075.3	15.13	402.456	
7,150.0	6,634.1	6,489.9	6,488.4	26.0	2.3	-172.94	-73.8	-6,560.7	6,140.3	6,124.2	16.13	380.761	
7,185.0	6,635.1	6,490.3	6,488.8	26.4	2.3	-16.28	-73.8	-6,560.7	6,175.3	6,157.2	18.10	341.142	
7,196.6	6,635.0	6,490.0	6,488.5	26.5	2.3	-7.86	-73.8	-6,560.7	6,186.9	6,170.1	16.74	369.485	
7,200.0	6,635.0	6,489.9	6,488.4	26.6	2.3	-7.85	-73.8	-6,560.7	6,190.3	6,173.5	16.76	369.324	
7,283.4	6,633.9	6,487.2	6,485.6	27.6	2.3	-7.73	-73.9	-6,560.7	6,273.7	6,256.5	17.18	365.154	
7,300.0	6,633.7	6,486.6	6,485.0	27.8	2.3	-7.70	-73.9	-6,560.7	6,290.3	6,273.0	17.26	364.354	
7,381.9	6,632.6	6,483.9	6,482.3	29.0	2.3	-7.58	-74.0	-6,560.6	6,372.1	6,354.4	17.70	359.910	
7,400.0	6,632.4	6,483.3	6,481.7	29.2	2.3	-7.55	-74.0	-6,560.6	6,390.2	6,372.4	17.80	358.960	
7,480.3	6,631.4	6,480.6	6,479.0	30.5	2.3	-7.43	-74.0	-6,560.6	6,470.5	6,452.2	18.26	354.403	
7,500.0	6,631.1	6,479.9	6,478.3	30.9	2.3	-7.41	-74.0	-6,560.6	6,490.2	6,471.8	18.37	353.324	
7,578.7	6,630.1	6,477.3	6,475.7	32.3	2.3	-7.30	-74.1	-6,560.5	6,568.8	6,550.0	18.83	348.773	
7,600.0	6,629.8	6,476.5	6,475.0	32.7	2.3	-7.27	-74.1	-6,560.5	6,590.1	6,571.1	18.96	347.587	
7,677.1	6,628.9	6,473.9	6,472.4	34.1	2.3	-7.16	-74.2	-6,560.4	6,667.2	6,647.8	19.43	343.124	
7,700.0	6,628.6	6,473.2	6,471.6	34.6	2.3	-7.13	-74.2	-6,560.4	6,690.1	6,670.5	19.57	341.849	
7,775.6	6,627.6	6,470.6	6,469.1	36.1	2.3	-7.03	-74.2	-6,560.4	6,765.6	6,745.6	20.04	337.532	
7,800.0	6,627.3	6,469.8	6,468.2	36.6	2.3	-7.00	-74.2	-6,560.4	6,790.0	6,769.8	20.20	336.186	
7,874.0	6,626.3	6,467.3	6,465.7	38.2	2.3	-6.90	-74.3	-6,560.3	6,864.0	6,843.3	20.67	332.050	
7,900.0	6,626.0	6,466.4	6,464.8	38.8	2.3	-6.87	-74.3	-6,560.3	6,890.0	6,869.1	20.84	330.649	
7,972.4	6,625.1	6,463.9	6,462.4	40.4	2.3	-6.78	-74.4	-6,560.3	6,962.4	6,941.0	21.31	326.715	
8,000.0	6,624.7	6,463.0	6,461.4	41.0	2.3	-6.74	-74.4	-6,560.2	6,989.9	6,968.4	21.49	325.270	
8,070.8	6,623.8	6,460.6	6,459.0	42.6	2.3	-6.66	-74.4	-6,560.2	7,060.7	7,038.8	21.96	321.551	
8,100.0	6,623.4	6,459.6	6,458.0	43.3	2.3	-6.62	-74.4	-6,560.2	7,089.9	7,067.7	22.15	320.073	
8,169.3	6,622.6	6,457.2	6,455.7	44.9	2.3	-6.54	-74.5	-6,560.1	7,159.1	7,136.5	22.61	316.570	
8,200.0	6,622.2	6,456.2	6,454.6	45.6	2.3	-6.50	-74.5	-6,560.1	7,189.8	7,167.0	22.82	315.069	
8,267.7	6,621.3	6,453.8	6,452.3	47.3	2.3	-6.42	-74.6	-6,560.1	7,257.5	7,234.2	23.28	311.780	
8,300.0	6,620.9	6,452.7	6,451.2	48.0	2.3	-6.39	-74.6	-6,560.1	7,289.8	7,266.3	23.50	310.263	
8,366.1	6,620.0	6,450.4	6,448.9	49.7	2.3	-6.31	-74.6	-6,560.0	7,355.9	7,331.9	23.95	307.184	
8,400.0	6,619.6	6,449.3	6,447.7	50.5	2.3	-6.27	-74.6	-6,560.0	7,389.7	7,365.5	24.18	305.657	
8,464.5	6,618.8	6,447.0	6,445.5	52.1	2.3	-6.20	-74.7	-6,560.0	7,454.2	7,429.6	24.62	302.778	
8,500.0	6,618.3	6,445.8	6,444.3	53.0	2.3	-6.16	-74.7	-6,559.9	7,489.7	7,464.8	24.86	301.248	
8,563.0	6,617.5	6,443.6	6,442.1	54.5	2.3	-6.10	-74.8	-6,559.9	7,552.6	7,527.3	25.30	298.561	
8,600.0	6,617.0	6,442.4	6,440.8	55.5	2.3	-6.06	-74.8	-6,559.9	7,589.6	7,564.1	25.55	297.030	
8,661.4	6,616.3	6,440.2	6,438.7	57.0	2.3	-5.99	-74.8	-6,559.8	7,651.0	7,625.0	25.98	294.524	
8,700.0	6,615.8	6,438.9	6,437.3	58.0	2.3	-5.95	-74.9	-6,559.8	7,689.6	7,663.3	26.24	292.997	
8,759.8	6,615.0	6,436.8	6,435.2	59.5	2.3	-5.89	-74.9	-6,559.8	7,749.4	7,722.7	26.66	290.663	
8,800.0	6,614.5	6,435.4	6,433.8	60.6	2.3	-5.85	-74.9	-6,559.7	7,789.5	7,762.6	26.94	289.143	
8,858.2	6,613.7	6,433.3	6,431.8	62.1	2.3	-5.80	-75.0	-6,559.7	7,847.7	7,820.4	27.35	286.970	
8,900.0	6,613.2	6,431.9	6,430.3	63.2	2.3	-5.75	-75.0	-6,559.7	7,889.5	7,861.8	27.64	285.458	
8,956.7	6,612.5	6,429.9	6,428.4	64.6	2.3	-5.70	-75.0	-6,559.6	7,946.1	7,918.1	28.03	283.437	
9,000.0	6,611.9	6,428.4	6,426.8	65.8	2.3	-5.66	-75.1	-6,559.6	7,989.4	7,961.1	28.34	281.935	
9,055.1	6,611.2	6,426.4	6,424.9	67.2	2.3	-5.61	-75.1	-6,559.6	8,044.5	8,015.8	28.72	280.055	
9,100.0	6,610.6	6,424.9	6,423.3	68.4	2.3	-5.56	-75.1	-6,559.5	8,089.4	8,060.3	29.04	278.566	
9,153.5	6,609.9	6,423.0	6,421.4	69.8	2.3	-5.51	-75.2	-6,559.5	8,142.9	8,113.5	29.42	276.819	
9,200.0	6,609.3	6,421.3	6,419.8	71.0	2.3	-5.47	-75.2	-6,559.5	8,189.3	8,159.6	29.74	275.343	
9,251.9	6,608.7	6,419.5	6,418.0	72.4	2.3	-5.43	-75.2	-6,559.4	8,241.2	8,211.1	30.11	273.718	
9,300.0	6,608.1	6,417.8	6,416.3	73.7	2.3	-5.38	-75.3	-6,559.4	8,289.3	8,258.8	30.45	272.258	
9,350.4	6,607.4	6,416.0	6,414.5	75.0	2.3	-5.34	-75.3	-6,559.4	8,339.6	8,308.8	30.80	270.755	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
9,400.0	6,606.8	6,414.2	6,412.7	76.3	2.3	-5.29	-75.4	-6,559.3	8,389.2	8,358.1	31.15	269.304	
9,448.8	6,606.1	6,412.5	6,411.0	77.6	2.3	-5.25	-75.4	-6,559.3	8,438.0	8,406.5	31.50	267.905	
9,500.0	6,605.5	6,410.7	6,409.1	79.0	2.3	-5.21	-75.4	-6,559.3	8,489.2	8,457.3	31.86	266.473	
9,547.2	6,604.9	6,409.0	6,407.5	80.2	2.3	-5.17	-75.5	-6,559.2	8,536.4	8,504.2	32.19	265.175	
9,600.0	6,604.2	6,407.1	6,405.6	81.7	2.3	-5.13	-75.5	-6,559.2	8,589.1	8,556.6	32.56	263.759	
9,645.6	6,603.6	6,405.5	6,403.9	82.9	2.3	-5.09	-75.5	-6,559.2	8,634.7	8,601.9	32.89	262.555	
9,700.0	6,602.9	6,403.5	6,402.0	84.3	2.3	-5.04	-75.6	-6,559.1	8,689.1	8,655.8	33.27	261.156	
9,744.1	6,602.3	6,401.9	6,400.4	85.5	2.3	-5.01	-75.6	-6,559.1	8,733.1	8,699.5	33.58	260.039	
9,800.0	6,601.6	6,400.0	6,398.5	87.0	2.3	-4.97	-75.6	-6,559.1	8,789.0	8,755.0	33.98	258.650	
9,842.5	6,601.1	6,400.0	6,398.5	88.2	2.3	-4.97	-75.6	-6,559.1	8,831.5	8,797.2	34.30	257.503	
9,900.0	6,600.3	6,396.9	6,395.3	89.7	2.3	-4.90	-75.7	-6,559.0	8,889.0	8,854.3	34.69	256.215	
9,940.9	6,599.8	6,395.6	6,394.1	90.9	2.3	-4.87	-75.7	-6,559.0	8,929.9	8,894.9	34.99	255.242	
10,000.0	6,599.0	6,393.8	6,392.3	92.5	2.3	-4.83	-75.8	-6,559.0	8,988.9	8,953.5	35.41	253.870	
10,039.3	6,598.5	6,392.6	6,391.1	93.5	2.3	-4.81	-75.8	-6,558.9	9,028.2	8,992.6	35.69	252.970	
10,100.0	6,597.7	6,390.7	6,389.2	95.2	2.3	-4.77	-75.8	-6,558.9	9,088.9	9,052.7	36.12	251.614	
10,137.8	6,597.3	6,389.6	6,388.1	96.2	2.3	-4.74	-75.9	-6,558.9	9,126.6	9,090.2	36.39	250.783	
10,200.0	6,596.5	6,387.7	6,386.2	97.9	2.3	-4.71	-75.9	-6,558.8	9,188.8	9,152.0	36.84	249.444	
10,236.2	6,596.0	6,386.6	6,385.1	98.9	2.3	-4.68	-75.9	-6,558.8	9,225.0	9,187.9	37.10	248.677	
10,300.0	6,595.2	6,384.6	6,383.1	100.6	2.3	-4.64	-76.0	-6,558.8	9,288.8	9,251.2	37.55	247.354	
10,334.6	6,594.7	6,383.6	6,382.1	101.6	2.3	-4.62	-76.0	-6,558.8	9,323.4	9,285.6	37.80	246.648	
10,400.0	6,593.9	6,381.6	6,380.1	103.3	2.3	-4.58	-76.0	-6,558.7	9,388.7	9,350.4	38.27	245.342	
10,433.0	6,593.5	6,380.6	6,379.1	104.2	2.3	-4.56	-76.1	-6,558.7	9,421.7	9,383.2	38.50	244.691	
10,500.0	6,592.6	6,378.6	6,377.0	106.1	2.3	-4.52	-76.1	-6,558.7	9,488.7	9,449.7	38.98	243.401	
10,531.5	6,592.2	6,377.6	6,376.1	106.9	2.3	-4.51	-76.1	-6,558.7	9,520.1	9,480.9	39.21	242.804	
10,600.0	6,591.3	6,375.5	6,374.0	108.8	2.3	-4.47	-76.2	-6,558.6	9,588.6	9,548.9	39.70	241.530	
10,629.9	6,590.9	6,374.6	6,373.1	109.6	2.3	-4.45	-76.2	-6,558.6	9,618.5	9,578.6	39.91	240.982	
10,700.0	6,590.0	6,372.5	6,371.0	111.6	2.3	-4.41	-76.2	-6,558.6	9,688.6	9,648.1	40.42	239.724	
10,728.3	6,589.6	6,371.6	6,370.1	112.3	2.3	-4.39	-76.3	-6,558.5	9,716.9	9,676.2	40.62	239.223	
10,800.0	6,588.7	6,369.4	6,367.9	114.3	2.3	-4.35	-76.3	-6,558.5	9,788.5	9,747.4	41.13	237.980	
10,826.7	6,588.4	6,368.6	6,367.1	115.0	2.3	-4.34	-76.3	-6,558.5	9,815.2	9,773.9	41.32	237.523	
10,900.0	6,587.4	6,366.4	6,364.9	117.0	2.3	-4.30	-76.4	-6,558.4	9,888.5	9,846.6	41.85	236.295	
10,925.2	6,587.1	6,365.6	6,364.1	117.7	2.3	-4.28	-76.4	-6,558.4	9,913.6	9,871.6	42.03	235.879	
11,000.0	6,586.1	6,363.4	6,361.9	119.8	2.3	-4.24	-76.4	-6,558.4	9,988.4	9,945.8	42.56	234.667	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-104.57	-1,843.1	-7,091.8	7,327.4				
98.4	98.4	56.3	56.3	0.1	0.0	-104.57	-1,843.0	-7,091.8	7,327.4	7,327.3	0.11	N/A	
100.0	100.0	57.7	57.7	0.1	0.0	-104.57	-1,843.0	-7,091.8	7,327.4	7,327.3	0.11	N/A	
196.8	196.8	165.3	165.3	0.3	0.1	-104.56	-1,842.4	-7,092.1	7,327.5	7,327.1	0.46	N/A	
200.0	200.0	169.6	169.6	0.3	0.1	-104.56	-1,842.4	-7,092.1	7,327.5	7,327.1	0.47	N/A	
295.3	295.3	264.2	264.2	0.5	0.3	-104.56	-1,841.7	-7,092.2	7,327.5	7,326.7	0.80	9,141.668	
300.0	300.0	268.3	268.3	0.5	0.3	-104.56	-1,841.7	-7,092.2	7,327.5	7,326.6	0.82	8,980.034	
310.8	310.8	277.8	277.8	0.6	0.3	-104.56	-1,841.7	-7,092.2	7,327.5	7,326.6	0.85	8,632.610	
393.7	393.7	359.1	359.1	0.8	0.3	-104.55	-1,841.2	-7,092.4	7,327.5	7,326.4	1.10	6,666.287	
400.0	400.0	365.6	365.6	0.8	0.3	-104.55	-1,841.1	-7,092.4	7,327.5	7,326.4	1.12	6,553.473	
492.1	492.1	446.1	446.1	1.0	0.4	-104.55	-1,840.5	-7,092.6	7,327.5	7,326.2	1.38	5,315.066	
500.0	500.0	452.2	452.2	1.0	0.4	-104.55	-1,840.5	-7,092.6	7,327.6	7,326.2	1.40	5,233.530	
590.5	590.5	528.3	528.3	1.2	0.4	-104.54	-1,839.9	-7,093.0	7,327.8	7,326.2	1.65	4,444.574	
600.0	600.0	537.3	537.3	1.2	0.5	-104.54	-1,839.9	-7,093.1	7,327.9	7,326.2	1.68	4,374.854	
689.0	689.0	620.9	620.9	1.4	0.5	-104.54	-1,839.3	-7,093.6	7,328.3	7,326.4	1.92	3,816.212	
700.0	700.0	631.0	631.0	1.4	0.5	-104.54	-1,839.3	-7,093.7	7,328.3	7,326.4	1.95	3,758.291	
787.4	787.4	713.1	713.0	1.6	0.5	-104.53	-1,839.0	-7,094.2	7,328.8	7,326.6	2.19	3,353.757	
800.0	800.0	727.0	727.0	1.7	0.6	-104.53	-1,839.0	-7,094.3	7,328.9	7,326.6	2.22	3,301.721	
885.8	885.8	821.2	821.1	1.9	0.6	-104.53	-1,838.8	-7,094.8	7,329.3	7,326.8	2.45	2,988.026	
900.0	900.0	836.1	836.1	1.9	0.6	-104.53	-1,838.8	-7,094.9	7,329.3	7,326.9	2.49	2,942.887	
984.2	984.2	923.8	923.8	2.1	0.6	-104.53	-1,838.8	-7,095.2	7,329.7	7,327.0	2.71	2,701.602	
1,000.0	1,000.0	939.6	939.6	2.1	0.6	-104.53	-1,838.8	-7,095.3	7,329.7	7,327.0	2.75	2,661.370	
1,082.7	1,082.7	1,023.4	1,023.4	2.3	0.7	-104.53	-1,838.6	-7,095.7	7,330.0	7,327.1	2.97	2,470.790	
1,100.0	1,100.0	1,041.6	1,041.5	2.3	0.7	-104.53	-1,838.6	-7,095.7	7,330.1	7,327.1	3.01	2,435.564	
1,181.1	1,181.1	1,124.0	1,124.0	2.5	0.7	-104.53	-1,838.7	-7,096.0	7,330.4	7,327.2	3.21	2,282.765	
1,200.0	1,200.0	1,142.1	1,142.0	2.6	0.7	-104.53	-1,838.7	-7,096.0	7,330.4	7,327.2	3.26	2,249.661	
1,279.5	1,279.5	1,219.5	1,219.5	2.7	0.7	-9.34	-1,838.9	-7,096.3	7,329.6	7,326.2	3.45	2,126.924	
1,300.0	1,300.0	1,240.8	1,240.8	2.8	0.7	-9.34	-1,839.0	-7,096.3	7,329.1	7,325.6	3.50	2,095.202	
1,377.9	1,377.8	1,321.0	1,320.9	2.9	0.8	-9.36	-1,839.1	-7,096.6	7,325.6	7,321.9	3.69	1,986.274	
1,400.0	1,399.8	1,343.0	1,342.9	3.0	0.8	-9.36	-1,839.2	-7,096.6	7,324.2	7,320.5	3.74	1,957.738	
1,476.4	1,475.9	1,419.6	1,419.5	3.1	0.8	-9.39	-1,839.4	-7,096.8	7,318.2	7,314.3	3.93	1,861.776	
1,500.0	1,499.5	1,443.6	1,443.6	3.2	0.8	-9.41	-1,839.5	-7,096.9	7,316.0	7,312.0	3.99	1,833.936	
1,574.8	1,573.7	1,514.7	1,514.6	3.4	0.8	-9.45	-1,839.8	-7,097.0	7,307.5	7,303.3	4.18	1,749.178	
1,600.0	1,598.7	1,533.7	1,533.7	3.4	0.8	-9.46	-1,839.9	-7,097.1	7,304.3	7,300.0	4.24	1,723.093	
1,673.2	1,671.1	1,600.0	1,600.0	3.6	0.9	-9.51	-1,840.3	-7,097.4	7,293.7	7,289.3	4.43	1,647.932	
1,700.0	1,697.5	1,609.6	1,609.6	3.7	0.9	-9.53	-1,840.3	-7,097.4	7,289.4	7,284.9	4.49	1,623.536	
1,771.6	1,767.9	1,667.2	1,667.1	3.9	0.9	-9.59	-1,840.8	-7,097.8	7,276.9	7,272.2	4.68	1,556.147	
1,800.0	1,795.6	1,689.9	1,689.9	4.0	0.9	-9.61	-1,841.0	-7,098.0	7,271.5	7,266.7	4.75	1,531.085	
1,870.1	1,864.0	1,742.5	1,742.5	4.3	0.9	-9.68	-1,841.5	-7,098.5	7,257.0	7,252.1	4.94	1,470.301	
1,900.0	1,893.1	1,764.7	1,764.6	4.4	0.9	-9.71	-1,841.8	-7,098.7	7,250.4	7,245.4	5.01	1,445.904	
1,968.5	1,959.3	1,819.1	1,819.0	4.6	0.9	-9.79	-1,842.5	-7,099.3	7,234.2	7,229.0	5.20	1,390.206	
1,992.4	1,982.4	1,841.3	1,841.3	4.7	0.9	-9.82	-1,842.8	-7,099.6	7,228.2	7,222.9	5.27	1,371.526	
2,000.0	1,989.6	1,848.3	1,848.3	4.8	0.9	-9.83	-1,842.9	-7,099.7	7,226.3	7,221.0	5.29	1,365.872	
2,066.9	2,054.0	1,910.6	1,910.6	5.1	1.0	-9.86	-1,843.8	-7,100.4	7,209.2	7,203.8	5.48	1,315.856	
2,100.0	2,085.8	1,941.8	1,941.8	5.2	1.0	-9.87	-1,844.2	-7,100.8	7,200.8	7,195.3	5.57	1,293.687	
2,165.3	2,148.7	2,000.0	1,999.9	5.5	1.0	-9.90	-1,845.2	-7,101.5	7,184.2	7,178.5	5.75	1,250.274	
2,200.0	2,182.0	2,033.4	2,033.3	5.7	1.0	-9.92	-1,845.7	-7,101.9	7,175.4	7,169.5	5.85	1,226.570	
2,263.8	2,243.4	2,089.0	2,088.9	6.0	1.0	-9.94	-1,846.6	-7,102.6	7,159.2	7,153.2	6.03	1,186.642	
2,300.0	2,278.2	2,132.1	2,131.9	6.2	1.0	-9.96	-1,847.1	-7,103.2	7,150.1	7,143.9	6.14	1,163.953	
2,362.2	2,338.1	2,210.8	2,210.7	6.5	1.1	-10.00	-1,847.9	-7,104.1	7,134.2	7,127.8	6.34	1,126.076	
2,400.0	2,374.4	2,244.5	2,244.4	6.7	1.1	-10.01	-1,848.2	-7,104.5	7,124.5	7,118.0	6.45	1,104.855	
2,460.6	2,432.8	2,300.0	2,299.9	7.0	1.1	-10.04	-1,848.7	-7,105.2	7,109.0	7,102.4	6.63	1,071.934	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,470.6	2,330.0	2,329.9	7.2	1.1	-10.05	-1,848.9	-7,105.6	7,098.9	7,092.2	6.75	1,051.951		
2,559.0	2,527.4	2,377.2	2,377.0	7.6	1.1	-10.07	-1,849.2	-7,106.3	7,084.0	7,077.0	6.93	1,022.891		
2,600.0	2,566.8	2,414.0	2,413.9	7.8	1.1	-10.09	-1,849.4	-7,106.9	7,073.6	7,066.5	7.05	1,003.339		
2,657.5	2,622.1	2,479.2	2,479.0	8.1	1.1	-10.11	-1,849.9	-7,107.9	7,059.0	7,051.8	7.23	976.113		
2,700.0	2,663.0	2,527.0	2,526.9	8.3	1.2	-10.14	-1,850.3	-7,108.5	7,048.2	7,040.8	7.37	956.729		
2,755.9	2,716.8	2,589.6	2,589.4	8.6	1.2	-10.16	-1,850.9	-7,109.2	7,033.9	7,026.4	7.55	932.067		
2,800.0	2,759.2	2,633.7	2,633.5	8.9	1.2	-10.18	-1,851.3	-7,109.7	7,022.6	7,014.9	7.69	913.695		
2,854.3	2,811.5	2,686.2	2,686.0	9.2	1.2	-10.21	-1,851.9	-7,110.3	7,008.7	7,000.8	7.86	891.909		
2,900.0	2,855.4	2,734.0	2,733.9	9.4	1.2	-10.23	-1,852.5	-7,110.8	6,997.0	6,989.0	8.00	874.211		
2,952.7	2,906.2	2,791.2	2,791.0	9.7	1.2	-10.26	-1,853.3	-7,111.3	6,983.4	6,975.2	8.17	854.395		
3,000.0	2,951.6	2,838.9	2,838.7	10.0	1.3	-10.29	-1,854.0	-7,111.7	6,971.2	6,962.9	8.32	837.446		
3,051.2	3,000.9	2,889.7	2,889.5	10.3	1.3	-10.31	-1,854.7	-7,112.1	6,958.0	6,949.5	8.49	819.704		
3,100.0	3,047.8	2,934.4	2,934.2	10.5	1.3	-10.33	-1,855.3	-7,112.4	6,945.4	6,936.8	8.64	803.526		
3,149.6	3,095.5	2,978.8	2,978.6	10.8	1.3	-10.36	-1,855.9	-7,112.8	6,932.6	6,923.8	8.80	787.640		
3,200.0	3,144.0	3,046.6	3,046.3	11.1	1.3	-10.39	-1,856.7	-7,113.4	6,919.6	6,910.7	8.97	771.348		
3,248.0	3,190.2	3,216.2	3,216.0	11.4	1.4	-10.48	-1,858.2	-7,113.2	6,906.9	6,897.7	9.16	754.082		
3,300.0	3,240.2	3,293.4	3,293.1	11.7	1.4	-10.52	-1,858.9	-7,112.2	6,892.4	6,883.0	9.33	738.809		
3,346.4	3,284.9	3,343.9	3,343.7	11.9	1.4	-10.55	-1,859.5	-7,111.3	6,879.3	6,869.8	9.47	726.050		
3,400.0	3,336.4	3,399.9	3,399.6	12.2	1.4	-10.58	-1,860.2	-7,110.3	6,864.2	6,854.6	9.64	711.880		
3,444.9	3,379.6	3,463.7	3,463.4	12.5	1.4	-10.62	-1,861.2	-7,109.0	6,851.5	6,841.7	9.79	700.056		
3,500.0	3,432.6	3,525.1	3,524.7	12.8	1.4	-10.66	-1,862.3	-7,107.6	6,835.7	6,825.7	9.96	686.210		
3,543.3	3,474.3	3,561.8	3,561.4	13.1	1.4	-10.68	-1,863.0	-7,106.7	6,823.3	6,813.2	10.10	675.798		
3,600.0	3,528.8	3,613.9	3,613.6	13.4	1.4	-10.72	-1,864.1	-7,105.5	6,807.1	6,796.8	10.27	662.514		
3,641.7	3,569.0	3,663.8	3,663.5	13.6	1.4	-10.75	-1,865.2	-7,104.2	6,795.2	6,784.8	10.41	652.836		
3,700.0	3,625.0	3,725.7	3,725.2	14.0	1.4	-10.80	-1,866.6	-7,102.6	6,778.4	6,767.8	10.59	639.794		
3,740.1	3,663.6	3,762.4	3,762.0	14.2	1.4	-10.82	-1,867.4	-7,101.6	6,766.9	6,756.2	10.72	631.108		
3,800.0	3,721.2	3,800.0	3,799.5	14.5	1.4	-10.85	-1,868.2	-7,100.6	6,749.7	6,738.8	10.91	618.754		
3,838.6	3,758.3	3,836.0	3,835.5	14.8	1.4	-10.87	-1,869.0	-7,099.7	6,738.7	6,727.7	11.03	610.911		
3,900.0	3,817.4	3,874.6	3,874.1	15.1	1.4	-10.90	-1,870.0	-7,098.9	6,721.4	6,710.1	11.22	598.979		
3,937.0	3,853.0	3,900.0	3,899.5	15.3	1.4	-10.92	-1,870.6	-7,098.4	6,711.0	6,699.6	11.34	591.955		
4,000.0	3,913.6	3,941.1	3,940.5	15.7	1.4	-10.95	-1,871.6	-7,097.7	6,693.4	6,681.9	11.53	580.342		
4,035.4	3,947.7	3,965.5	3,964.9	15.9	1.4	-10.97	-1,872.3	-7,097.3	6,683.6	6,672.0	11.64	573.961		
4,100.0	4,009.8	4,012.5	4,011.9	16.3	1.5	-11.00	-1,873.6	-7,096.6	6,665.9	6,654.1	11.85	562.590		
4,133.8	4,042.4	4,041.7	4,041.2	16.5	1.5	-11.02	-1,874.4	-7,096.2	6,656.7	6,644.7	11.96	556.689		
4,200.0	4,106.0	4,100.0	4,099.4	16.8	1.5	-11.06	-1,875.8	-7,095.6	6,638.6	6,626.5	12.17	545.446		
4,232.3	4,137.1	4,138.3	4,137.7	17.0	1.5	-11.09	-1,876.7	-7,095.1	6,629.8	6,617.6	12.28	539.930		
4,300.0	4,202.2	4,216.5	4,215.9	17.4	1.5	-11.14	-1,878.1	-7,094.2	6,611.3	6,598.7	12.51	528.677		
4,330.7	4,231.7	4,245.3	4,244.6	17.6	1.5	-11.16	-1,878.5	-7,093.9	6,602.8	6,590.2	12.61	523.779		
4,400.0	4,298.4	4,309.6	4,308.9	18.0	1.5	-11.20	-1,879.5	-7,093.1	6,583.8	6,570.9	12.83	513.014		
4,429.1	4,326.4	4,335.2	4,334.6	18.2	1.5	-11.22	-1,879.9	-7,092.9	6,575.8	6,562.8	12.93	508.624		
4,500.0	4,394.6	4,400.0	4,399.3	18.6	1.5	-11.26	-1,880.7	-7,092.2	6,556.4	6,543.2	13.16	498.180		
4,527.5	4,421.1	4,416.6	4,415.9	18.7	1.5	-11.27	-1,880.9	-7,092.1	6,548.8	6,535.6	13.25	494.309		
4,600.0	4,490.8	4,464.8	4,464.1	19.2	1.5	-11.30	-1,881.5	-7,091.8	6,529.2	6,515.7	13.48	484.330		
4,626.0	4,515.8	4,482.0	4,481.4	19.3	1.5	-11.31	-1,881.7	-7,091.7	6,522.2	6,508.7	13.56	480.835		
4,700.0	4,587.0	4,536.4	4,535.7	19.8	1.6	-11.34	-1,882.4	-7,091.6	6,502.5	6,488.7	13.80	471.030		
4,724.4	4,610.5	4,555.3	4,554.6	19.9	1.6	-11.35	-1,882.7	-7,091.6	6,496.0	6,482.2	13.88	467.854		
4,800.0	4,683.2	4,615.7	4,615.0	20.3	1.6	-11.39	-1,883.5	-7,091.7	6,476.1	6,462.0	14.13	458.200		
4,822.8	4,705.2	4,635.7	4,635.0	20.5	1.6	-11.40	-1,883.8	-7,091.7	6,470.1	6,455.9	14.21	455.313		
4,900.0	4,779.4	4,700.0	4,699.3	20.9	1.6	-11.44	-1,884.6	-7,091.9	6,449.9	6,435.4	14.47	445.809		
4,921.2	4,799.8	4,722.4	4,721.7	21.0	1.6	-11.45	-1,884.8	-7,092.0	6,444.3	6,429.8	14.54	443.184		
5,000.0	4,875.6	4,792.6	4,791.9	21.5	1.6	-11.49	-1,885.7	-7,092.3	6,423.8	6,409.0	14.81	433.817		
5,019.7	4,894.5	4,800.0	4,799.3	21.6	1.6	-11.50	-1,885.8	-7,092.3	6,418.7	6,403.8	14.87	431.640		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,100.0	4,971.8	4,865.1	4,864.4	22.1	1.7	-11.54	-1,886.6	-7,092.7	6,397.9	6,382.8	15.14	422.591	
5,118.1	4,989.2	4,878.0	4,877.2	22.2	1.7	-11.55	-1,886.8	-7,092.8	6,393.3	6,378.1	15.20	420.605	
5,200.0	5,068.0	4,972.3	4,971.6	22.7	1.7	-11.60	-1,888.0	-7,093.7	6,372.3	6,356.8	15.49	411.399	
5,216.5	5,083.9	4,995.7	4,995.0	22.8	1.7	-11.62	-1,888.3	-7,093.8	6,368.0	6,352.5	15.55	409.529	
5,240.0	5,106.5	5,018.0	5,017.3	22.9	1.7	-11.63	-1,888.5	-7,093.9	6,361.9	6,346.3	15.63	406.999	
5,300.0	5,164.4	5,070.9	5,070.2	23.2	1.7	-11.60	-1,889.0	-7,094.3	6,347.0	6,331.2	15.78	402.257	
5,314.9	5,178.8	5,084.2	5,083.5	23.3	1.7	-11.59	-1,889.1	-7,094.4	6,343.5	6,327.7	15.81	401.225	
5,400.0	5,261.5	5,156.8	5,156.0	23.6	1.7	-11.55	-1,889.6	-7,095.1	6,324.9	6,308.9	15.99	395.660	
5,413.4	5,274.6	5,168.1	5,167.3	23.6	1.7	-11.54	-1,889.7	-7,095.2	6,322.2	6,306.2	16.01	394.875	
5,500.0	5,359.5	5,253.0	5,252.2	23.9	1.8	-11.51	-1,890.2	-7,096.1	6,306.3	6,290.1	16.17	389.904	
5,511.8	5,371.1	5,265.8	5,265.0	24.0	1.8	-11.51	-1,890.3	-7,096.2	6,304.3	6,288.1	16.19	389.286	
5,600.0	5,458.0	5,361.4	5,360.6	24.2	1.8	-11.48	-1,890.8	-7,097.2	6,290.9	6,274.6	16.35	384.866	
5,610.2	5,468.2	5,372.5	5,371.7	24.3	1.8	-11.48	-1,890.8	-7,097.3	6,289.5	6,273.2	16.36	384.412	
5,700.0	5,557.2	5,458.7	5,458.0	24.5	1.8	-11.46	-1,891.0	-7,098.1	6,278.9	6,262.4	16.49	380.696	
5,708.6	5,565.7	5,466.6	5,465.9	24.5	1.8	-11.46	-1,891.1	-7,098.2	6,278.0	6,261.5	16.50	380.386	
5,800.0	5,656.7	5,550.3	5,549.6	24.7	1.8	-11.45	-1,891.8	-7,099.0	6,270.3	6,253.7	16.62	377.240	
5,807.1	5,663.7	5,556.9	5,556.1	24.7	1.9	-11.44	-1,891.8	-7,099.0	6,269.8	6,253.2	16.63	377.029	
5,900.0	5,756.5	5,644.6	5,643.9	24.9	1.9	-11.44	-1,892.8	-7,099.9	6,265.3	6,248.6	16.74	374.340	
5,905.5	5,761.9	5,650.0	5,649.2	24.9	1.9	-11.44	-1,892.8	-7,099.9	6,265.1	6,248.4	16.74	374.203	
5,992.5	5,849.0	5,731.1	5,730.4	25.0	1.9	-11.45	-1,893.8	-7,100.7	6,263.8	6,247.0	16.83	372.113 CC	
6,000.0	5,856.4	5,737.7	5,736.9	25.0	1.9	-11.45	-1,893.9	-7,100.8	6,263.8	6,247.0	16.84	371.941	
6,003.9	5,860.3	5,741.2	5,740.4	25.0	1.9	-11.45	-1,894.0	-7,100.8	6,263.8	6,247.0	16.84	371.856	
6,032.5	5,888.9	5,766.3	5,765.5	25.0	1.9	-106.65	-1,894.4	-7,101.1	6,264.1	6,237.6	26.47	236.625 ES	
6,062.5	5,918.9	5,792.7	5,791.9	25.1	1.9	-106.65	-1,894.8	-7,101.4	6,264.5	6,238.0	26.51	236.315	
6,100.0	5,956.4	5,823.6	5,822.8	25.1	1.9	163.31	-1,895.4	-7,101.7	6,266.0	6,249.2	16.88	371.107	
6,102.3	5,958.7	5,825.5	5,824.7	25.1	1.9	163.31	-1,895.4	-7,101.7	6,266.2	6,249.3	16.88	371.183	
6,150.0	6,006.2	5,864.0	5,863.2	25.1	1.9	163.20	-1,896.0	-7,102.2	6,271.1	6,254.2	16.83	372.505	
6,200.0	6,055.6	5,905.0	5,904.2	25.1	2.0	163.02	-1,896.5	-7,102.8	6,279.4	6,262.7	16.80	373.866	
6,200.8	6,056.3	5,905.8	5,905.0	25.1	2.0	163.01	-1,896.6	-7,102.9	6,279.6	6,262.8	16.80	373.889	
6,250.0	6,104.3	5,955.7	5,954.9	25.0	2.0	162.76	-1,897.2	-7,103.6	6,291.1	6,274.4	16.76	375.290	
6,299.2	6,151.3	6,000.0	5,999.2	24.9	2.0	162.43	-1,897.9	-7,104.3	6,305.8	6,289.0	16.73	377.016	
6,300.0	6,152.1	6,000.0	5,999.2	24.9	2.0	162.42	-1,897.9	-7,104.3	6,306.0	6,289.3	16.72	377.051	
6,350.0	6,198.7	6,036.5	6,035.6	24.8	2.0	161.98	-1,898.4	-7,104.9	6,324.1	6,307.4	16.68	379.231	
6,397.6	6,241.9	6,066.7	6,065.9	24.7	2.0	161.46	-1,898.8	-7,105.4	6,344.3	6,327.6	16.62	381.646	
6,400.0	6,244.1	6,068.2	6,067.3	24.7	2.0	161.43	-1,898.8	-7,105.5	6,345.3	6,328.7	16.62	381.767	
6,450.0	6,287.8	6,100.0	6,099.1	24.5	2.0	160.76	-1,899.1	-7,106.1	6,369.6	6,353.0	16.57	384.403	
6,496.0	6,326.5	6,130.3	6,129.4	24.4	2.0	160.02	-1,899.5	-7,106.8	6,394.5	6,378.0	16.54	386.590	
6,500.0	6,329.7	6,132.9	6,132.1	24.4	2.0	159.95	-1,899.5	-7,106.9	6,396.8	6,380.2	16.54	386.752	
6,550.0	6,369.6	6,165.6	6,164.8	24.3	2.0	158.98	-1,899.8	-7,107.7	6,426.7	6,410.1	16.55	388.349	
6,594.5	6,403.3	6,200.0	6,199.1	24.2	2.0	157.97	-1,900.2	-7,108.6	6,455.5	6,438.9	16.61	388.551	
6,600.0	6,407.3	6,200.0	6,199.1	24.2	2.0	157.82	-1,900.2	-7,108.6	6,459.2	6,442.6	16.62	388.528	
6,650.0	6,442.7	6,233.2	6,232.3	24.1	2.1	156.41	-1,900.5	-7,109.4	6,494.1	6,477.3	16.80	386.578	
6,692.9	6,471.0	6,263.6	6,262.7	24.0	2.1	154.98	-1,900.8	-7,110.2	6,525.8	6,508.8	17.06	382.593	
6,700.0	6,475.5	6,268.4	6,267.5	24.0	2.1	154.72	-1,900.9	-7,110.3	6,531.2	6,514.1	17.11	381.725	
6,750.0	6,505.6	6,300.5	6,299.6	24.0	2.1	152.64	-1,901.2	-7,111.1	6,570.4	6,552.8	17.60	373.409	
6,791.3	6,528.3	6,324.0	6,323.0	24.0	2.1	150.55	-1,901.4	-7,111.7	6,604.2	6,586.0	18.16	363.650	
6,800.0	6,532.8	6,328.6	6,327.7	24.0	2.1	150.06	-1,901.5	-7,111.8	6,611.4	6,593.1	18.30	361.323	
6,850.0	6,557.0	6,353.4	6,352.5	24.1	2.1	146.80	-1,901.7	-7,112.4	6,654.1	6,634.9	19.25	345.620	
6,889.7	6,574.1	6,370.8	6,369.8	24.2	2.1	143.60	-1,901.8	-7,112.8	6,689.1	6,668.9	20.21	330.920	
6,900.0	6,578.1	6,374.9	6,374.0	24.3	2.1	142.66	-1,901.9	-7,112.9	6,698.3	6,677.8	20.49	326.955	
6,950.0	6,596.1	6,392.9	6,391.9	24.5	2.1	137.30	-1,902.0	-7,113.4	6,743.7	6,721.7	22.00	306.472	
6,988.2	6,607.5	6,406.1	6,405.1	24.7	2.1	132.15	-1,902.1	-7,113.7	6,779.1	6,755.7	23.33	290.608	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,000.0	6,610.7	6,410.5	6,409.5	24.8	2.1	130.35	-1,902.1	-7,113.8	6,790.1	6,766.4	23.75	285.917	
7,050.0	6,621.9	6,426.1	6,425.1	25.1	2.1	121.32	-1,902.2	-7,114.2	6,837.4	6,811.8	25.55	267.558	
7,086.6	6,628.0	6,434.1	6,433.2	25.4	2.1	113.14	-1,902.3	-7,114.3	6,872.3	6,845.6	26.73	257.115	
7,100.0	6,629.7	6,436.4	6,435.4	25.6	2.1	109.80	-1,902.3	-7,114.4	6,885.2	6,858.1	27.08	254.280	
7,150.0	6,634.1	6,441.4	6,440.4	26.0	2.1	95.99	-1,902.3	-7,114.5	6,933.3	6,905.4	27.94	248.110	
7,185.0	6,635.1	6,441.7	6,440.7	26.4	2.1	85.60	-1,902.3	-7,114.5	6,967.2	6,938.9	28.30	246.215	
7,196.6	6,635.0	6,441.2	6,440.2	26.5	2.1	82.17	-1,902.3	-7,114.5	6,978.3	6,949.9	28.39	245.805	
7,200.0	6,635.0	6,441.0	6,440.0	26.6	2.1	82.17	-1,902.3	-7,114.5	6,981.6	6,953.2	28.43	245.596	
7,283.4	6,633.9	6,436.4	6,435.4	27.6	2.1	82.02	-1,902.3	-7,114.4	7,062.2	7,032.8	29.45	239.839	
7,300.0	6,633.7	6,435.5	6,434.5	27.8	2.1	81.99	-1,902.3	-7,114.4	7,078.2	7,048.6	29.65	238.746	
7,381.9	6,632.6	6,430.9	6,429.9	29.0	2.1	81.85	-1,902.3	-7,114.3	7,157.4	7,126.5	30.82	232.207	
7,400.0	6,632.4	6,429.9	6,428.9	29.2	2.1	81.82	-1,902.3	-7,114.2	7,174.9	7,143.8	31.08	230.827	
7,480.3	6,631.4	6,425.3	6,424.3	30.5	2.1	81.67	-1,902.2	-7,114.1	7,252.6	7,220.2	32.38	223.950	
7,500.0	6,631.1	6,424.2	6,423.2	30.9	2.1	81.64	-1,902.2	-7,114.1	7,271.7	7,239.0	32.70	222.348	
7,578.7	6,630.1	6,419.6	6,418.7	32.3	2.1	81.50	-1,902.2	-7,114.0	7,347.9	7,313.8	34.10	215.461	
7,600.0	6,629.8	6,418.4	6,417.4	32.7	2.1	81.46	-1,902.2	-7,114.0	7,368.5	7,334.0	34.48	213.698	
7,677.1	6,628.9	6,413.9	6,412.9	34.1	2.1	81.32	-1,902.2	-7,113.9	7,443.3	7,407.3	35.95	207.025	
7,700.0	6,628.6	6,412.6	6,411.6	34.6	2.1	81.27	-1,902.2	-7,113.8	7,465.4	7,429.1	36.39	205.154	
7,775.6	6,627.6	6,408.1	6,407.1	36.1	2.1	81.14	-1,902.1	-7,113.7	7,538.8	7,500.8	37.92	198.833	
7,800.0	6,627.3	6,406.6	6,405.6	36.6	2.1	81.09	-1,902.1	-7,113.7	7,562.5	7,524.0	38.41	196.899	
7,874.0	6,626.3	6,402.2	6,401.2	38.2	2.1	80.95	-1,902.1	-7,113.6	7,634.3	7,594.3	39.97	191.002	
7,900.0	6,626.0	6,400.6	6,399.6	38.8	2.1	80.90	-1,902.1	-7,113.6	7,659.5	7,619.0	40.52	189.039	
7,972.4	6,625.1	6,397.5	6,396.5	40.4	2.1	80.81	-1,902.0	-7,113.5	7,729.9	7,687.8	42.11	183.586	
8,000.0	6,624.7	6,396.4	6,395.4	41.0	2.1	80.77	-1,902.0	-7,113.4	7,756.7	7,714.0	42.71	181.617	
8,070.8	6,623.8	6,393.6	6,392.6	42.6	2.1	80.68	-1,902.0	-7,113.4	7,825.6	7,781.3	44.31	176.616	
8,100.0	6,623.4	6,392.4	6,391.5	43.3	2.1	80.65	-1,902.0	-7,113.4	7,853.9	7,809.0	44.97	174.663	
8,169.3	6,622.6	6,389.7	6,388.7	44.9	2.1	80.56	-1,902.0	-7,113.3	7,921.3	7,874.7	46.57	170.102	
8,200.0	6,622.2	6,388.4	6,387.5	45.6	2.1	80.52	-1,902.0	-7,113.3	7,951.2	7,903.9	47.28	168.179	
8,267.7	6,621.3	6,385.7	6,384.8	47.3	2.1	80.44	-1,902.0	-7,113.2	8,017.1	7,968.2	48.88	164.031	
8,300.0	6,620.9	6,384.4	6,383.5	48.0	2.1	80.40	-1,901.9	-7,113.2	8,048.6	7,998.9	49.64	162.147	
8,366.1	6,620.0	6,381.8	6,380.8	49.7	2.1	80.32	-1,901.9	-7,113.1	8,113.0	8,061.8	51.22	158.382	
8,400.0	6,619.6	6,380.4	6,379.5	50.5	2.1	80.27	-1,901.9	-7,113.1	8,146.0	8,093.9	52.04	156.544	
8,464.5	6,618.8	6,377.9	6,376.9	52.1	2.1	80.19	-1,901.9	-7,113.0	8,208.9	8,155.3	53.61	153.130	
8,500.0	6,618.3	6,376.4	6,375.5	53.0	2.1	80.15	-1,901.9	-7,113.0	8,243.5	8,189.0	54.47	151.340	
8,563.0	6,617.5	6,373.9	6,373.0	54.5	2.1	80.07	-1,901.9	-7,112.9	8,304.9	8,248.9	56.02	148.247	
8,600.0	6,617.0	6,372.4	6,371.5	55.5	2.1	80.02	-1,901.9	-7,112.9	8,341.0	8,284.1	56.93	146.508	
8,661.4	6,616.3	6,370.0	6,369.0	57.0	2.1	79.95	-1,901.8	-7,112.8	8,400.9	8,342.5	58.46	143.704	
8,700.0	6,615.8	6,368.5	6,367.5	58.0	2.1	79.90	-1,901.8	-7,112.8	8,438.6	8,379.2	59.42	142.017	
8,759.8	6,615.0	6,366.1	6,365.1	59.5	2.1	79.82	-1,901.8	-7,112.7	8,497.0	8,436.1	60.92	139.476	
8,800.0	6,614.5	6,364.4	6,363.5	60.6	2.1	79.77	-1,901.8	-7,112.7	8,536.2	8,474.3	61.93	137.840	
8,858.2	6,613.7	6,362.1	6,361.2	62.1	2.1	79.70	-1,901.8	-7,112.6	8,593.1	8,529.7	63.40	135.536	
8,900.0	6,613.2	6,360.4	6,359.5	63.2	2.1	79.65	-1,901.8	-7,112.6	8,633.9	8,569.5	64.46	133.950	
8,956.7	6,612.5	6,358.2	6,357.2	64.6	2.1	79.58	-1,901.7	-7,112.5	8,689.3	8,623.4	65.90	131.859	
9,000.0	6,611.9	6,356.4	6,355.5	65.8	2.1	79.53	-1,901.7	-7,112.5	8,731.7	8,664.7	67.00	130.323	
9,055.1	6,611.2	6,354.2	6,353.3	67.2	2.1	79.46	-1,901.7	-7,112.4	8,785.6	8,717.2	68.41	128.425	
9,100.0	6,610.6	6,352.4	6,351.5	68.4	2.1	79.40	-1,901.7	-7,112.4	8,829.5	8,759.9	69.56	126.936	
9,153.5	6,609.9	6,350.3	6,349.3	69.8	2.1	79.33	-1,901.7	-7,112.3	8,881.8	8,810.9	70.93	125.212	
9,200.0	6,609.3	6,348.4	6,347.5	71.0	2.1	79.28	-1,901.7	-7,112.3	8,927.3	8,855.2	72.13	123.769	
9,251.9	6,608.7	6,346.3	6,345.4	72.4	2.1	79.21	-1,901.6	-7,112.2	8,978.2	8,904.7	73.47	122.202	
9,300.0	6,608.1	6,344.4	6,343.5	73.7	2.1	79.15	-1,901.6	-7,112.2	9,025.2	8,950.5	74.71	120.804	
9,350.4	6,607.4	6,342.4	6,341.4	75.0	2.1	79.09	-1,901.6	-7,112.1	9,074.5	8,998.5	76.01	119.378	
9,400.0	6,606.8	6,340.4	6,339.5	76.3	2.1	79.03	-1,901.6	-7,112.1	9,123.2	9,045.9	77.30	118.023	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
9,448.8	6,606.1	6,338.4	6,337.5	77.6	2.1	78.97	-1,901.6	-7,112.0	9,171.0	9,092.4	78.57	116.727	
9,500.0	6,605.5	6,336.4	6,335.4	79.0	2.1	78.90	-1,901.5	-7,112.0	9,221.1	9,141.2	79.90	115.412	
9,547.2	6,604.9	6,334.5	6,333.5	80.2	2.1	78.85	-1,901.5	-7,111.9	9,267.4	9,186.3	81.13	114.231	
9,600.0	6,604.2	6,332.4	6,331.4	81.7	2.1	78.78	-1,901.5	-7,111.9	9,319.1	9,236.6	82.50	112.956	
9,645.6	6,603.6	6,330.5	6,329.6	82.9	2.1	78.72	-1,901.5	-7,111.8	9,363.9	9,280.2	83.70	111.881	
9,700.0	6,602.9	6,328.4	6,327.4	84.3	2.1	78.65	-1,901.5	-7,111.8	9,417.2	9,332.1	85.11	110.643	
9,744.1	6,602.3	6,326.6	6,325.6	85.5	2.1	78.60	-1,901.5	-7,111.7	9,460.4	9,374.2	86.27	109.664	
9,800.0	6,601.6	6,324.3	6,323.4	87.0	2.1	78.53	-1,901.4	-7,111.7	9,515.3	9,427.6	87.73	108.461	
9,842.5	6,601.1	6,322.6	6,321.7	88.2	2.1	78.48	-1,901.4	-7,111.7	9,557.0	9,468.2	88.84	107.570	
9,900.0	6,600.3	6,320.3	6,319.4	89.7	2.1	78.41	-1,901.4	-7,111.6	9,613.4	9,523.1	90.35	106.401	
9,940.9	6,599.8	6,318.7	6,317.7	90.9	2.1	78.36	-1,901.4	-7,111.6	9,653.6	9,562.2	91.43	105.590	
10,000.0	6,599.0	6,316.3	6,315.4	92.5	2.1	78.28	-1,901.4	-7,111.5	9,711.6	9,618.6	92.98	104.454	
10,039.3	6,598.5	6,314.7	6,313.8	93.5	2.1	78.23	-1,901.3	-7,111.5	9,750.3	9,656.2	94.01	103.715	
10,100.0	6,597.7	6,312.3	6,311.3	95.2	2.1	78.16	-1,901.3	-7,111.4	9,809.8	9,714.2	95.60	102.610	
10,137.8	6,597.3	6,310.7	6,309.8	96.2	2.1	78.11	-1,901.3	-7,111.4	9,846.9	9,750.3	96.60	101.938	
10,200.0	6,596.5	6,308.2	6,307.3	97.9	2.1	78.03	-1,901.3	-7,111.3	9,908.1	9,809.8	98.23	100.862	
10,236.2	6,596.0	6,306.8	6,305.8	98.9	2.1	77.99	-1,901.3	-7,111.3	9,943.6	9,844.4	99.19	100.251 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-98.45	-1,106.8	-7,447.2	7,529.0				
98.4	98.4	87.4	87.4	0.1	0.0	-98.45	-1,106.8	-7,447.2	7,529.0	7,528.9	0.10	N/A	
100.0	100.0	89.0	89.0	0.1	0.0	-98.45	-1,106.8	-7,447.2	7,529.0	7,528.9	0.10	N/A	
196.8	196.8	185.8	185.8	0.3	1.0	-98.45	-1,106.8	-7,447.2	7,529.0	7,527.6	1.31	5,747.978	
200.0	200.0	189.0	189.0	0.3	1.0	-98.45	-1,106.8	-7,447.2	7,529.0	7,527.6	1.35	5,562.952	
295.3	295.3	284.3	284.3	0.5	3.1	-98.45	-1,106.8	-7,447.2	7,529.0	7,525.3	3.63	2,072.900	
300.0	300.0	289.0	289.0	0.5	3.2	-98.45	-1,106.8	-7,447.2	7,529.0	7,525.2	3.75	2,007.018	
393.7	393.7	382.7	382.7	0.8	5.2	-98.45	-1,106.8	-7,447.2	7,529.0	7,523.0	5.93	1,268.760	
400.0	400.0	389.0	389.0	0.8	5.3	-98.45	-1,106.8	-7,447.2	7,529.0	7,522.9	6.08	1,238.469	
492.1	492.1	481.1	481.1	1.0	7.2	-98.45	-1,106.8	-7,447.2	7,529.0	7,520.8	8.17	921.327	
500.0	500.0	489.0	489.0	1.0	7.4	-98.45	-1,106.8	-7,447.2	7,529.0	7,520.6	8.35	901.628	
590.5	590.5	579.5	579.5	1.2	9.2	-98.45	-1,106.8	-7,447.2	7,529.0	7,518.6	10.39	724.443	
600.0	600.0	589.0	589.0	1.2	9.4	-98.45	-1,106.8	-7,447.2	7,529.0	7,518.3	10.61	709.895	
689.0	689.0	678.0	678.0	1.4	11.2	-98.45	-1,106.8	-7,447.2	7,529.0	7,516.3	12.61	597.242	
700.0	700.0	689.0	689.0	1.4	11.4	-98.45	-1,106.8	-7,447.2	7,529.0	7,516.1	12.85	585.729	
787.4	787.4	776.4	776.4	1.6	13.2	-98.45	-1,106.8	-7,447.2	7,529.0	7,514.1	14.82	508.174	
800.0	800.0	789.0	789.0	1.7	13.4	-98.45	-1,106.8	-7,447.2	7,529.0	7,513.9	15.10	498.658	
885.8	885.8	874.8	874.8	1.9	15.2	-98.45	-1,106.8	-7,447.2	7,529.0	7,511.9	17.02	442.287	
900.0	900.0	889.0	889.0	1.9	15.4	-98.45	-1,106.8	-7,447.2	7,529.0	7,511.6	17.34	434.181	
984.2	984.2	973.2	973.2	2.1	17.1	-98.45	-1,106.8	-7,447.2	7,529.0	7,509.7	19.23	391.555	
1,000.0	1,000.0	989.0	989.0	2.1	17.5	-98.45	-1,106.8	-7,447.2	7,529.0	7,509.4	19.58	384.498	
1,082.7	1,082.7	1,071.7	1,071.7	2.3	19.1	-98.45	-1,106.8	-7,447.2	7,529.0	7,507.5	21.43	351.281	
1,100.0	1,100.0	1,089.0	1,089.0	2.3	19.5	-98.45	-1,106.8	-7,447.2	7,529.0	7,507.1	21.82	345.035	
1,181.1	1,181.1	1,170.1	1,170.1	2.5	21.1	-98.45	-1,106.8	-7,447.2	7,529.0	7,505.3	23.64	318.529	
1,200.0	1,200.0	1,189.0	1,189.0	2.6	21.5	-98.45	-1,106.8	-7,447.2	7,529.0	7,504.9	24.06	312.927	
1,279.5	1,279.5	1,268.5	1,268.5	2.7	23.1	-3.26	-1,106.8	-7,447.2	7,527.9	7,502.0	25.82	291.573	
1,300.0	1,300.0	1,289.0	1,289.0	2.8	23.5	-3.26	-1,106.8	-7,447.2	7,527.2	7,500.9	26.27	286.565	
1,377.9	1,377.8	1,366.8	1,366.8	2.9	25.1	-3.27	-1,106.8	-7,447.2	7,523.4	7,495.5	27.95	269.154	
1,400.0	1,399.8	1,388.8	1,388.8	3.0	25.5	-3.27	-1,106.8	-7,447.2	7,522.0	7,493.6	28.42	264.640	
1,476.4	1,475.9	1,464.9	1,464.9	3.1	27.0	-3.28	-1,106.8	-7,447.2	7,515.7	7,485.6	30.04	250.175	
1,500.0	1,499.5	1,488.5	1,488.5	3.2	27.5	-3.28	-1,106.8	-7,447.2	7,513.3	7,482.8	30.54	246.052	
1,574.8	1,573.7	1,562.7	1,562.7	3.4	29.0	-3.30	-1,106.8	-7,447.2	7,504.5	7,472.4	32.08	233.925	
1,600.0	1,598.7	1,587.7	1,587.7	3.4	29.5	-3.30	-1,106.8	-7,447.2	7,501.1	7,468.5	32.59	230.144	
1,673.2	1,671.1	1,660.1	1,660.1	3.6	31.0	-3.32	-1,106.8	-7,447.2	7,490.0	7,456.0	34.06	219.898	
1,700.0	1,697.5	1,686.5	1,686.5	3.7	31.5	-3.33	-1,106.8	-7,447.2	7,485.5	7,450.9	34.59	216.418	
1,771.6	1,767.9	1,756.9	1,756.9	3.9	32.9	-3.35	-1,106.8	-7,447.2	7,472.2	7,436.2	35.98	207.703	
1,800.0	1,795.6	1,784.6	1,784.6	4.0	33.5	-3.36	-1,106.8	-7,447.2	7,466.5	7,429.9	36.51	204.492	
1,870.1	1,864.0	1,853.0	1,853.0	4.3	34.9	-3.39	-1,106.8	-7,447.2	7,451.1	7,413.3	37.82	197.040	
1,900.0	1,893.1	1,882.1	1,882.1	4.4	35.4	-3.40	-1,106.8	-7,447.2	7,444.0	7,405.6	38.36	194.069	
1,968.5	1,959.3	1,948.3	1,948.3	4.6	36.8	-3.43	-1,106.8	-7,447.2	7,426.7	7,387.1	39.57	187.668	
1,992.4	1,982.4	1,971.4	1,971.4	4.7	37.2	-3.44	-1,106.8	-7,447.2	7,420.2	7,380.2	39.99	185.567	
2,000.0	1,989.6	1,978.6	1,978.6	4.8	37.4	-3.44	-1,106.8	-7,447.2	7,418.2	7,378.0	40.15	184.782	
2,066.9	2,054.0	2,043.0	2,043.0	5.1	38.7	-3.45	-1,106.8	-7,447.2	7,399.9	7,358.4	41.56	178.057	
2,100.0	2,085.8	2,074.8	2,074.8	5.2	39.3	-3.45	-1,106.8	-7,447.2	7,390.9	7,348.7	42.25	174.928	
2,165.3	2,148.7	2,137.7	2,137.7	5.5	40.6	-3.46	-1,106.8	-7,447.2	7,373.1	7,329.5	43.63	169.007	
2,200.0	2,182.0	2,171.0	2,171.0	5.7	41.3	-3.46	-1,106.8	-7,447.2	7,363.6	7,319.3	44.36	165.986	
2,263.8	2,243.4	2,232.4	2,232.4	6.0	42.5	-3.47	-1,106.8	-7,447.2	7,346.3	7,300.5	45.71	160.705	
2,300.0	2,278.2	2,267.2	2,267.2	6.2	43.2	-3.48	-1,106.8	-7,447.2	7,336.4	7,289.9	46.48	157.838	
2,362.2	2,338.1	2,327.1	2,327.1	6.5	44.4	-3.49	-1,106.8	-7,447.2	7,319.4	7,271.6	47.80	153.127	
2,400.0	2,374.4	2,363.4	2,363.4	6.7	45.1	-3.49	-1,106.8	-7,447.2	7,309.1	7,260.5	48.60	150.387	
2,460.6	2,432.8	2,421.8	2,421.8	7.0	46.3	-3.50	-1,106.8	-7,447.2	7,292.6	7,242.7	49.89	146.172	
2,500.0	2,470.6	2,459.6	2,459.6	7.2	47.1	-3.50	-1,106.8	-7,447.2	7,281.8	7,231.1	50.73	143.548	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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				
2,559.0	2,527.4	2,516.4	2,516.4	7.6	48.2	-3.51	-1,106.8	-7,447.2	7,265.8	7,213.8	51.98	139.768				
2,600.0	2,566.8	2,555.8	2,555.8	7.8	49.0	-3.52	-1,106.8	-7,447.2	7,254.6	7,201.7	52.86	137.251				
2,657.5	2,622.1	2,611.1	2,611.1	8.1	50.1	-3.52	-1,106.8	-7,447.2	7,238.9	7,184.8	54.08	133.852				
2,700.0	2,663.0	2,652.0	2,652.0	8.3	50.9	-3.53	-1,106.8	-7,447.2	7,227.3	7,172.3	54.99	131.434				
2,755.9	2,716.8	2,705.8	2,705.8	8.6	52.0	-3.54	-1,106.8	-7,447.2	7,212.1	7,155.9	56.18	128.372				
2,800.0	2,759.2	2,748.2	2,748.2	8.9	52.9	-3.54	-1,106.8	-7,447.2	7,200.1	7,142.9	57.12	126.046				
2,854.3	2,811.5	2,800.5	2,800.5	9.2	53.9	-3.55	-1,106.8	-7,447.2	7,185.3	7,127.0	58.28	123.282				
2,900.0	2,855.4	2,844.4	2,844.4	9.4	54.8	-3.56	-1,106.8	-7,447.2	7,172.8	7,113.5	59.26	121.042				
2,952.7	2,906.2	2,895.2	2,895.2	9.7	55.8	-3.56	-1,106.8	-7,447.2	7,158.4	7,098.0	60.39	118.543				
3,000.0	2,951.6	2,940.6	2,940.6	10.0	56.7	-3.57	-1,106.8	-7,447.2	7,145.5	7,084.1	61.40	116.382				
3,051.2	3,000.9	2,989.9	2,989.9	10.3	57.7	-3.58	-1,106.8	-7,447.2	7,131.6	7,069.1	62.49	114.119				
3,100.0	3,047.8	3,036.8	3,036.8	10.5	58.7	-3.58	-1,106.8	-7,447.2	7,118.3	7,054.7	63.54	112.033				
3,149.6	3,095.5	3,084.5	3,084.5	10.8	59.6	-3.59	-1,106.8	-7,447.2	7,104.8	7,040.2	64.60	109.981				
3,200.0	3,144.0	3,133.0	3,133.0	11.1	60.6	-3.60	-1,106.8	-7,447.2	7,091.0	7,025.3	65.68	107.965				
3,248.0	3,190.2	3,179.2	3,179.2	11.4	61.5	-3.60	-1,106.8	-7,447.2	7,077.9	7,011.2	66.71	106.103				
3,300.0	3,240.2	3,229.2	3,229.2	11.7	62.5	-3.61	-1,106.8	-7,447.2	7,063.8	6,995.9	67.82	104.151				
3,346.4	3,284.9	3,273.9	3,273.9	11.9	63.4	-3.62	-1,106.8	-7,447.2	7,051.1	6,982.3	68.82	102.460				
3,400.0	3,336.4	3,325.4	3,325.4	12.2	64.5	-3.63	-1,106.8	-7,447.2	7,036.5	6,966.5	69.97	100.570				
3,444.9	3,379.6	3,368.6	3,368.6	12.5	65.3	-3.63	-1,106.8	-7,447.2	7,024.3	6,953.3	70.93	99.032				
3,500.0	3,432.6	3,421.6	3,421.6	12.8	66.4	-3.64	-1,106.8	-7,447.2	7,009.2	6,937.1	72.11	97.200				
3,543.3	3,474.3	3,463.3	3,463.3	13.1	67.2	-3.65	-1,106.8	-7,447.2	6,997.4	6,924.4	73.04	95.801				
3,600.0	3,528.8	3,517.8	3,517.8	13.4	68.3	-3.65	-1,106.8	-7,447.2	6,982.0	6,907.7	74.26	94.023				
3,641.7	3,569.0	3,558.0	3,558.0	13.6	69.1	-3.66	-1,106.8	-7,447.2	6,970.6	6,895.5	75.15	92.751				
3,700.0	3,625.0	3,614.0	3,614.0	14.0	70.3	-3.67	-1,106.8	-7,447.2	6,954.7	6,878.3	76.41	91.024				
3,740.1	3,663.6	3,652.6	3,652.6	14.2	71.1	-3.67	-1,106.8	-7,447.2	6,943.8	6,866.5	77.27	89.867				
3,800.0	3,721.2	3,710.2	3,710.2	14.5	72.2	-3.68	-1,106.8	-7,447.2	6,927.5	6,848.9	78.55	88.188				
3,838.6	3,758.3	3,747.3	3,747.3	14.8	73.0	-3.69	-1,106.8	-7,447.2	6,916.9	6,837.6	79.38	87.135				
3,900.0	3,817.4	3,806.4	3,806.4	15.1	74.1	-3.70	-1,106.8	-7,447.2	6,900.2	6,819.5	80.70	85.502				
3,937.0	3,853.0	3,842.0	3,842.0	15.3	74.9	-3.70	-1,106.8	-7,447.2	6,890.1	6,808.6	81.50	84.544				
4,000.0	3,913.6	3,902.6	3,902.6	15.7	76.1	-3.71	-1,106.8	-7,447.2	6,872.9	6,790.1	82.85	82.955				
4,035.4	3,947.7	3,936.7	3,936.7	15.9	76.8	-3.72	-1,106.8	-7,447.2	6,863.3	6,779.7	83.61	82.084				
4,100.0	4,009.8	3,998.8	3,998.8	16.3	78.0	-3.73	-1,106.8	-7,447.2	6,845.7	6,760.7	85.00	80.536				
4,133.8	4,042.4	4,031.4	4,031.4	16.5	78.7	-3.73	-1,106.8	-7,447.2	6,836.5	6,750.7	85.73	79.744				
4,200.0	4,106.0	4,095.0	4,095.0	16.8	80.0	-3.74	-1,106.8	-7,447.2	6,818.4	6,731.3	87.15	78.236				
4,232.3	4,137.1	4,126.1	4,126.1	17.0	80.6	-3.75	-1,106.8	-7,447.2	6,809.6	6,721.8	87.85	77.517				
4,300.0	4,202.2	4,191.2	4,191.2	17.4	81.9	-3.76	-1,106.8	-7,447.2	6,791.2	6,701.9	89.30	76.046				
4,330.7	4,231.7	4,220.7	4,220.7	17.6	82.5	-3.76	-1,106.8	-7,447.2	6,782.8	6,692.8	89.96	75.395				
4,400.0	4,298.4	4,287.4	4,287.4	18.0	83.8	-3.77	-1,106.8	-7,447.2	6,763.9	6,672.5	91.46	73.959				
4,429.1	4,326.4	4,315.4	4,315.4	18.2	84.4	-3.78	-1,106.8	-7,447.2	6,756.0	6,663.9	92.08	73.369				
4,500.0	4,394.6	4,383.6	4,383.6	18.6	85.8	-3.79	-1,106.8	-7,447.2	6,736.7	6,643.1	93.61	71.967				
4,527.5	4,421.1	4,410.1	4,410.1	18.7	86.3	-3.79	-1,106.8	-7,447.2	6,729.2	6,635.0	94.20	71.434				
4,600.0	4,490.8	4,479.8	4,479.8	19.2	87.7	-3.80	-1,106.8	-7,447.2	6,709.4	6,613.7	95.76	70.065				
4,626.0	4,515.8	4,504.8	4,504.8	19.3	88.2	-3.81	-1,106.8	-7,447.2	6,702.3	6,606.0	96.32	69.584				
4,700.0	4,587.0	4,576.0	4,576.0	19.8	89.6	-3.82	-1,106.8	-7,447.2	6,682.2	6,584.2	97.91	68.246				
4,724.4	4,610.5	4,599.5	4,599.5	19.9	90.1	-3.82	-1,106.8	-7,447.2	6,675.5	6,577.1	98.44	67.814				
4,800.0	4,683.2	4,672.2	4,672.2	20.3	91.6	-3.83	-1,106.8	-7,447.2	6,654.9	6,554.8	100.07	66.505				
4,822.8	4,705.2	4,694.2	4,694.2	20.5	92.0	-3.84	-1,106.8	-7,447.2	6,648.7	6,548.1	100.56	66.118				
4,900.0	4,779.4	4,768.4	4,768.4	20.9	93.5	-3.85	-1,106.8	-7,447.2	6,627.7	6,525.4	102.22	64.837				
4,921.2	4,799.8	4,788.8	4,788.8	21.0	93.9	-3.85	-1,106.8	-7,447.2	6,621.9	6,519.2	102.68	64.491				
5,000.0	4,875.6	4,864.6	4,864.6	21.5	95.4	-3.87	-1,106.8	-7,447.2	6,600.4	6,496.0	104.37	63.238				
5,019.7	4,894.5	4,883.5	4,883.5	21.6	95.8	-3.87	-1,106.8	-7,447.2	6,595.0	6,490.2	104.80	62.931				
5,100.0	4,971.8	4,960.8	4,960.8	22.1	97.4	-3.88	-1,106.8	-7,447.2	6,573.1	6,466.6	106.53	61.703				

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	4,989.2	4,978.2	4,978.2	22.2	97.7	-3.88	-1,106.8	-7,447.2	6,568.2	6,461.3	106.92	61.432	
5,200.0	5,068.0	5,057.0	5,057.0	22.7	99.3	-3.90	-1,106.8	-7,447.2	6,545.9	6,437.2	108.68	60.229	
5,216.5	5,083.9	5,072.9	5,072.9	22.8	99.6	-3.90	-1,106.8	-7,447.2	6,541.4	6,432.3	109.04	59.991	
5,240.0	5,106.5	5,095.5	5,095.5	22.9	100.1	-3.90	-1,106.8	-7,447.2	6,535.0	6,425.4	109.55	59.655	
5,300.0	5,164.4	5,153.4	5,153.4	23.2	101.2	-3.89	-1,106.8	-7,447.2	6,519.2	6,407.9	111.39	58.524	
5,314.9	5,178.8	5,167.8	5,167.8	23.3	101.5	-3.89	-1,106.8	-7,447.2	6,515.5	6,403.7	111.85	58.254	
5,400.0	5,261.5	5,250.5	5,250.5	23.6	103.2	-3.87	-1,106.8	-7,447.2	6,495.7	6,381.3	114.38	56.789	
5,413.4	5,274.6	5,263.6	5,263.6	23.6	103.5	-3.87	-1,106.8	-7,447.2	6,492.8	6,378.0	114.77	56.570	
5,500.0	5,359.5	5,348.5	5,348.5	23.9	105.2	-3.86	-1,106.8	-7,447.2	6,475.6	6,358.3	117.27	55.220	
5,511.8	5,371.1	5,360.1	5,360.1	24.0	105.4	-3.86	-1,106.8	-7,447.2	6,473.4	6,355.8	117.60	55.046	
5,600.0	5,458.0	5,447.0	5,447.0	24.2	107.1	-3.84	-1,106.8	-7,447.2	6,458.8	6,338.8	120.04	53.806	
5,610.2	5,468.2	5,457.2	5,457.2	24.3	107.3	-3.84	-1,106.8	-7,447.2	6,457.3	6,337.0	120.31	53.670	
5,700.0	5,557.2	5,546.2	5,546.2	24.5	109.1	-3.83	-1,106.8	-7,447.2	6,445.5	6,322.9	122.68	52.537	
5,708.6	5,565.7	5,554.7	5,554.7	24.5	109.3	-3.83	-1,106.8	-7,447.2	6,444.6	6,321.7	122.91	52.434	
5,800.0	5,656.7	5,645.7	5,645.7	24.7	111.1	-3.83	-1,106.8	-7,447.2	6,435.7	6,310.5	125.20	51.405	
5,807.1	5,663.7	5,652.7	5,652.7	24.7	111.3	-3.83	-1,106.8	-7,447.2	6,435.2	6,309.8	125.37	51.330	
5,900.0	5,756.5	5,745.5	5,745.5	24.9	113.1	-3.82	-1,106.8	-7,447.2	6,429.4	6,301.8	127.56	50.402	
5,905.5	5,761.9	5,750.9	5,750.9	24.9	113.3	-3.82	-1,106.8	-7,447.2	6,429.1	6,301.4	127.69	50.350	
6,000.0	5,856.4	5,845.4	5,845.4	25.0	115.2	-3.82	-1,106.8	-7,447.2	6,426.5	6,296.7	129.77	49.520	
6,003.9	5,860.3	5,849.3	5,849.3	25.0	115.2	-3.82	-1,106.8	-7,447.2	6,426.5	6,296.6	129.86	49.488	
6,032.5	5,888.9	5,877.9	5,877.9	25.0	115.8	-99.01	-1,106.8	-7,447.2	6,426.3	6,285.5	140.83	45.632	
6,062.5	5,918.9	5,907.9	5,907.9	25.1	116.4	-99.01	-1,106.8	-7,447.2	6,426.3	6,284.9	141.46	45.428 CC, ES	
6,100.0	5,956.4	5,945.4	5,945.4	25.1	117.2	170.98	-1,106.8	-7,447.2	6,427.3	6,295.7	131.62	48.833	
6,102.3	5,958.7	5,947.7	5,947.7	25.1	117.2	170.97	-1,106.8	-7,447.2	6,427.4	6,295.8	131.64	48.826	
6,150.0	6,006.2	5,995.2	5,995.2	25.1	118.2	170.93	-1,106.8	-7,447.2	6,431.6	6,299.9	131.73	48.824	
6,200.0	6,055.6	6,044.6	6,044.6	25.1	119.2	170.84	-1,106.8	-7,447.2	6,439.3	6,308.1	131.20	49.081	
6,200.8	6,056.3	6,045.3	6,045.3	25.1	119.2	170.84	-1,106.8	-7,447.2	6,439.5	6,308.3	131.18	49.087	
6,250.0	6,104.3	6,093.3	6,093.3	25.0	120.1	170.71	-1,106.8	-7,447.2	6,450.4	6,320.4	130.01	49.614	
6,299.2	6,151.3	6,140.3	6,140.3	24.9	121.1	170.54	-1,106.8	-7,447.2	6,464.6	6,336.4	128.21	50.422	
6,300.0	6,152.1	6,141.1	6,141.1	24.9	121.1	170.53	-1,106.8	-7,447.2	6,464.9	6,336.7	128.18	50.437	
6,350.0	6,198.7	6,187.7	6,187.7	24.8	122.0	170.31	-1,106.8	-7,447.2	6,482.6	6,356.9	125.70	51.573	
6,397.6	6,241.9	6,230.9	6,230.9	24.7	122.9	170.04	-1,106.8	-7,447.2	6,502.4	6,379.6	122.75	52.972	
6,400.0	6,244.1	6,233.1	6,233.1	24.7	122.9	170.03	-1,106.8	-7,447.2	6,503.4	6,380.8	122.59	53.050	
6,450.0	6,287.8	6,276.8	6,276.8	24.5	123.8	169.68	-1,106.8	-7,447.2	6,527.4	6,408.5	118.89	54.904	
6,496.0	6,326.5	6,315.5	6,315.5	24.4	124.6	169.29	-1,106.8	-7,447.2	6,552.0	6,437.1	114.98	56.984	
6,500.0	6,329.7	6,318.7	6,318.7	24.4	124.7	169.25	-1,106.8	-7,447.2	6,554.3	6,439.7	114.62	57.180	
6,550.0	6,369.6	6,358.6	6,358.6	24.3	125.5	168.74	-1,106.8	-7,447.2	6,584.0	6,474.1	109.86	59.929	
6,594.5	6,403.3	6,392.3	6,392.3	24.2	126.1	168.19	-1,106.8	-7,447.2	6,612.7	6,507.4	105.27	62.814	
6,600.0	6,407.3	6,396.3	6,396.3	24.2	126.2	168.11	-1,106.8	-7,447.2	6,616.4	6,511.7	104.68	63.203	
6,650.0	6,442.7	6,431.7	6,431.7	24.1	126.9	167.34	-1,106.8	-7,447.2	6,651.4	6,552.2	99.20	67.047	
6,692.9	6,471.0	6,460.0	6,460.0	24.0	127.5	166.55	-1,106.8	-7,447.2	6,683.2	6,588.8	94.39	70.807	
6,700.0	6,475.5	6,464.5	6,464.5	24.0	127.6	166.40	-1,106.8	-7,447.2	6,688.7	6,595.1	93.59	71.469	
6,750.0	6,505.6	6,494.6	6,494.6	24.0	128.2	165.22	-1,106.8	-7,447.2	6,728.1	6,640.1	88.08	76.388	
6,791.3	6,528.3	6,517.3	6,517.3	24.0	128.7	164.01	-1,106.8	-7,447.2	6,762.3	6,678.4	83.86	80.638	
6,800.0	6,532.8	6,521.8	6,521.8	24.0	128.8	163.72	-1,106.8	-7,447.2	6,769.6	6,686.6	83.04	81.523	
6,850.0	6,557.0	6,546.0	6,546.0	24.1	129.2	161.78	-1,106.8	-7,447.2	6,812.8	6,733.8	79.03	86.206	
6,889.7	6,574.1	6,563.1	6,563.1	24.2	129.6	159.79	-1,106.8	-7,447.2	6,848.3	6,771.2	77.15	88.769	
6,900.0	6,578.1	6,567.1	6,567.1	24.3	129.7	159.20	-1,106.8	-7,447.2	6,857.6	6,780.7	76.93	89.144	
6,950.0	6,596.1	6,585.1	6,585.1	24.5	130.0	155.64	-1,106.8	-7,447.2	6,903.8	6,825.7	78.07	88.433	
6,988.2	6,607.5	6,596.5	6,596.5	24.7	130.3	151.91	-1,106.8	-7,447.2	6,939.8	6,857.6	82.27	84.356	
7,000.0	6,610.7	6,599.7	6,599.7	24.8	130.3	150.50	-1,106.8	-7,447.2	6,951.1	6,866.8	84.32	82.433	
7,050.0	6,621.9	6,610.9	6,610.9	25.1	130.5	142.69	-1,106.8	-7,447.2	6,999.3	6,901.4	97.96	71.451	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	6,617.0	6,617.0	25.4	130.7	134.14	-1,106.8	-7,447.2	7,035.0	6,921.3	113.69	61.879	
7,100.0	6,629.7	6,618.7	6,618.7	25.6	130.7	130.16	-1,106.8	-7,447.2	7,048.2	6,927.6	120.60	58.441	
7,150.0	6,634.1	6,623.1	6,623.1	26.0	130.8	110.03	-1,106.8	-7,447.2	7,097.5	6,950.0	147.49	48.121	
7,185.0	6,635.1	6,624.1	6,624.1	26.4	130.8	91.35	-1,106.8	-7,447.2	7,132.1	6,975.0	157.13	45.390	
7,196.6	6,635.0	6,624.0	6,624.0	26.5	130.8	84.88	-1,106.8	-7,447.2	7,143.6	6,986.9	156.68	45.593	
7,200.0	6,635.0	6,624.0	6,624.0	26.6	130.8	84.87	-1,106.8	-7,447.2	7,147.0	6,990.2	156.72	45.604	
7,283.4	6,633.9	6,622.9	6,622.9	27.6	130.8	84.81	-1,106.8	-7,447.2	7,229.6	7,071.9	157.71	45.841	
7,300.0	6,633.7	6,622.7	6,622.7	27.8	130.8	84.80	-1,106.8	-7,447.2	7,246.0	7,088.1	157.90	45.888	
7,381.9	6,632.6	6,621.6	6,621.6	29.0	130.8	84.74	-1,106.8	-7,447.2	7,327.0	7,168.0	159.05	46.067	
7,400.0	6,632.4	6,621.4	6,621.4	29.2	130.8	84.73	-1,106.8	-7,447.2	7,345.0	7,185.7	159.31	46.106	
7,480.3	6,631.4	6,620.4	6,620.4	30.5	130.7	84.67	-1,106.8	-7,447.2	7,424.5	7,264.0	160.58	46.234	
7,500.0	6,631.1	6,620.1	6,620.1	30.9	130.7	84.65	-1,106.8	-7,447.2	7,444.1	7,283.2	160.90	46.266	
7,578.7	6,630.1	6,619.1	6,619.1	32.3	130.7	84.59	-1,106.8	-7,447.2	7,522.1	7,359.8	162.27	46.354	
7,600.0	6,629.8	6,618.8	6,618.8	32.7	130.7	84.58	-1,106.8	-7,447.2	7,543.1	7,380.5	162.65	46.378	
7,677.1	6,628.9	6,617.9	6,617.9	34.1	130.7	84.52	-1,106.8	-7,447.2	7,619.6	7,455.5	164.10	46.433	
7,700.0	6,628.6	6,617.6	6,617.6	34.6	130.7	84.50	-1,106.8	-7,447.2	7,642.3	7,477.7	164.53	46.450	
7,775.6	6,627.6	6,616.6	6,616.6	36.1	130.7	84.45	-1,106.8	-7,447.2	7,717.2	7,551.1	166.04	46.479	
7,800.0	6,627.3	6,616.3	6,616.3	36.6	130.7	84.43	-1,106.8	-7,447.2	7,741.4	7,574.9	166.52	46.489	
7,874.0	6,626.3	6,615.3	6,615.3	38.2	130.6	84.38	-1,106.8	-7,447.2	7,814.8	7,646.7	168.07	46.498	
7,900.0	6,626.0	6,615.0	6,615.0	38.8	130.6	84.36	-1,106.8	-7,447.2	7,840.5	7,671.9	168.61	46.501	
7,972.4	6,625.1	6,614.1	6,614.1	40.4	130.6	84.30	-1,106.8	-7,447.2	7,912.4	7,742.2	170.18	46.494	
8,000.0	6,624.7	6,613.7	6,613.7	41.0	130.6	84.28	-1,106.8	-7,447.2	7,939.7	7,768.9	170.78	46.491	
8,070.8	6,623.8	6,612.8	6,612.8	42.6	130.6	84.23	-1,106.8	-7,447.2	8,010.0	7,837.6	172.36	46.472	
8,100.0	6,623.4	6,612.4	6,612.4	43.3	130.6	84.21	-1,106.8	-7,447.2	8,038.9	7,865.9	173.01	46.464	
8,169.3	6,622.6	6,611.6	6,611.6	44.9	130.6	84.16	-1,106.8	-7,447.2	8,107.6	7,933.0	174.60	46.435	
8,200.0	6,622.2	6,611.2	6,611.2	45.6	130.6	84.13	-1,106.8	-7,447.2	8,138.1	7,962.8	175.30	46.423	
8,267.7	6,621.3	6,610.3	6,610.3	47.3	130.5	84.08	-1,106.8	-7,447.2	8,205.3	8,028.4	176.89	46.387	
8,300.0	6,620.9	6,609.9	6,609.9	48.0	130.5	84.06	-1,106.8	-7,447.2	8,237.4	8,059.7	177.64	46.370	
8,366.1	6,620.0	6,609.0	6,609.0	49.7	130.5	84.01	-1,106.8	-7,447.2	8,303.0	8,123.8	179.22	46.329	
8,400.0	6,619.6	6,608.6	6,608.6	50.5	130.5	83.98	-1,106.8	-7,447.2	8,336.6	8,156.6	180.02	46.308	
8,464.5	6,618.8	6,607.8	6,607.8	52.1	130.5	83.94	-1,106.8	-7,447.2	8,400.7	8,219.1	181.59	46.263	
8,500.0	6,618.3	6,607.3	6,607.3	53.0	130.5	83.91	-1,106.8	-7,447.2	8,435.9	8,253.4	182.44	46.239	
8,563.0	6,617.5	6,606.5	6,606.5	54.5	130.5	83.87	-1,106.8	-7,447.2	8,498.4	8,314.4	183.98	46.191	
8,600.0	6,617.0	6,606.0	6,606.0	55.5	130.4	83.84	-1,106.8	-7,447.2	8,535.2	8,350.3	184.89	46.164	
8,661.4	6,616.3	6,605.3	6,605.3	57.0	130.4	83.79	-1,106.8	-7,447.2	8,596.1	8,409.7	186.41	46.115	
8,700.0	6,615.8	6,604.8	6,604.8	58.0	130.4	83.76	-1,106.8	-7,447.2	8,634.5	8,447.1	187.36	46.085	
8,759.8	6,615.0	6,604.0	6,604.0	59.5	130.4	83.72	-1,106.8	-7,447.2	8,693.9	8,505.0	188.85	46.035	
8,800.0	6,614.5	6,603.5	6,603.5	60.6	130.4	83.69	-1,106.8	-7,447.2	8,733.8	8,543.9	189.86	46.002	
8,858.2	6,613.7	6,602.7	6,602.7	62.1	130.4	83.65	-1,106.8	-7,447.2	8,791.6	8,600.3	191.32	45.952	
8,900.0	6,613.2	6,602.2	6,602.2	63.2	130.4	83.61	-1,106.8	-7,447.2	8,833.1	8,640.7	192.37	45.917	
8,956.7	6,612.5	6,601.5	6,601.5	64.6	130.4	83.57	-1,106.8	-7,447.2	8,889.4	8,695.6	193.81	45.867	
9,000.0	6,611.9	6,600.9	6,600.9	65.8	130.3	83.54	-1,106.8	-7,447.2	8,932.5	8,737.6	194.91	45.830	
9,055.1	6,611.2	6,600.2	6,600.2	67.2	130.3	83.50	-1,106.8	-7,447.2	8,987.2	8,790.9	196.31	45.780	
9,100.0	6,610.6	6,599.6	6,599.6	68.4	130.3	83.46	-1,106.8	-7,447.2	9,031.8	8,834.4	197.45	45.741	
9,153.5	6,609.9	6,598.9	6,598.9	69.8	130.3	83.43	-1,106.8	-7,447.2	9,085.0	8,886.2	198.83	45.693	
9,200.0	6,609.3	6,598.3	6,598.3	71.0	130.3	83.39	-1,106.8	-7,447.2	9,131.2	8,931.2	200.02	45.652	
9,251.9	6,608.7	6,597.7	6,597.7	72.4	130.3	83.35	-1,106.8	-7,447.2	9,182.8	8,981.5	201.35	45.605	
9,300.0	6,608.1	6,597.1	6,597.1	73.7	130.3	83.32	-1,106.8	-7,447.2	9,230.6	9,028.0	202.59	45.563	
9,350.4	6,607.4	6,596.4	6,596.4	75.0	130.3	83.28	-1,106.8	-7,447.2	9,280.7	9,076.8	203.89	45.517	
9,400.0	6,606.8	6,595.8	6,595.8	76.3	130.2	83.24	-1,106.8	-7,447.2	9,330.0	9,124.8	205.18	45.473	
9,448.8	6,606.1	6,595.1	6,595.1	77.6	130.2	83.21	-1,106.8	-7,447.2	9,378.5	9,172.1	206.44	45.429	
9,500.0	6,605.5	6,594.5	6,594.5	79.0	130.2	83.17	-1,106.8	-7,447.2	9,429.4	9,221.6	207.77	45.384	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT JURGENS PM B #B8-10 - Wellbore #1 - Design #												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,547.2	6,604.9	6,593.9	6,593.9	80.2	130.2	83.13	-1,106.8	-7,447.2	9,476.4	9,267.4	209.00	45.342	
9,600.0	6,604.2	6,593.2	6,593.2	81.7	130.2	83.09	-1,106.8	-7,447.2	9,528.8	9,318.5	210.37	45.295	
9,645.6	6,603.6	6,592.6	6,592.6	82.9	130.2	83.06	-1,106.8	-7,447.2	9,574.2	9,362.7	211.56	45.255	
9,700.0	6,602.9	6,591.9	6,591.9	84.3	130.2	83.02	-1,106.8	-7,447.2	9,628.3	9,415.3	212.98	45.207	
9,744.1	6,602.3	6,591.3	6,591.3	85.5	130.2	82.99	-1,106.8	-7,447.2	9,672.1	9,458.0	214.14	45.168	
9,800.0	6,601.6	6,590.6	6,590.6	87.0	130.1	82.94	-1,106.8	-7,447.2	9,727.7	9,512.1	215.60	45.120	
9,842.5	6,601.1	6,590.1	6,590.1	88.2	130.1	82.91	-1,106.8	-7,447.2	9,770.0	9,553.3	216.71	45.083	
9,900.0	6,600.3	6,589.3	6,589.3	89.7	130.1	82.87	-1,106.8	-7,447.2	9,827.2	9,609.0	218.22	45.033	
9,940.9	6,599.8	6,588.8	6,588.8	90.9	130.1	82.84	-1,106.8	-7,447.2	9,867.9	9,648.6	219.30	44.998	
10,000.0	6,599.0	6,588.0	6,588.0	92.5	130.1	82.79	-1,106.8	-7,447.2	9,926.6	9,705.8	220.85	44.948	
10,039.3	6,598.5	6,587.5	6,587.5	93.5	130.1	82.76	-1,106.8	-7,447.2	9,965.8	9,743.9	221.88	44.914 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-85.87	505.9	-7,001.2	7,019.5				
98.4	98.4	34.2	34.2	0.1	0.0	-85.87	505.9	-7,001.2	7,019.5	7,019.4	0.10	N/A	
100.0	100.0	35.0	35.0	0.1	0.0	-85.87	505.9	-7,001.2	7,019.6	7,019.4	0.11	N/A	
196.8	196.8	100.0	100.0	0.3	0.0	-85.87	505.5	-7,001.8	7,020.3	7,020.0	0.34	N/A	
200.0	200.0	100.0	100.0	0.3	0.0	-85.87	505.5	-7,001.8	7,020.4	7,020.0	0.35	N/A	
295.3	295.3	183.6	183.6	0.5	0.2	-85.88	504.9	-7,002.8	7,021.5	7,020.7	0.72	9,790.387	
300.0	300.0	189.0	189.0	0.5	0.2	-85.88	504.9	-7,002.9	7,021.5	7,020.8	0.74	9,513.612	
393.7	393.7	277.1	277.1	0.8	0.3	-85.88	504.7	-7,003.9	7,022.6	7,021.5	1.03	6,798.515	
400.0	400.0	282.9	282.9	0.8	0.3	-85.88	504.7	-7,004.0	7,022.6	7,021.6	1.05	6,676.287	
492.1	492.1	373.0	373.0	1.0	0.4	-85.88	504.7	-7,005.1	7,023.7	7,022.4	1.32	5,312.385	
500.0	500.0	380.9	380.8	1.0	0.4	-85.88	504.8	-7,005.2	7,023.8	7,022.5	1.35	5,221.761	
590.5	590.5	457.7	457.6	1.2	0.4	-85.88	504.8	-7,006.2	7,025.0	7,023.4	1.59	4,406.996	
600.0	600.0	465.3	465.3	1.2	0.4	-85.88	504.8	-7,006.3	7,025.1	7,023.5	1.62	4,337.543	
689.0	689.0	538.7	538.7	1.4	0.5	-85.88	504.8	-7,007.4	7,026.5	7,024.7	1.86	3,780.250	
700.0	700.0	548.0	548.0	1.4	0.5	-85.88	504.8	-7,007.6	7,026.7	7,024.8	1.89	3,721.365	
787.4	787.4	623.3	623.2	1.6	0.5	-85.88	504.6	-7,008.9	7,028.3	7,026.1	2.12	3,312.537	
800.0	800.0	634.8	634.7	1.7	0.5	-85.88	504.5	-7,009.1	7,028.5	7,026.3	2.16	3,260.936	
885.8	885.8	714.4	714.3	1.9	0.6	-85.89	504.2	-7,010.7	7,030.1	7,027.8	2.38	2,948.099	
900.0	900.0	728.5	728.5	1.9	0.6	-85.89	504.1	-7,011.0	7,030.4	7,028.0	2.42	2,902.055	
984.2	984.2	812.9	812.8	2.1	0.6	-85.89	503.6	-7,012.7	7,032.1	7,029.4	2.65	2,655.833	
1,000.0	1,000.0	829.0	828.9	2.1	0.6	-85.89	503.6	-7,013.0	7,032.4	7,029.7	2.69	2,614.627	
1,082.7	1,082.7	914.4	914.3	2.3	0.7	-85.90	503.1	-7,014.7	7,034.0	7,031.1	2.91	2,417.581	
1,100.0	1,100.0	933.7	933.6	2.3	0.7	-85.90	502.9	-7,015.1	7,034.3	7,031.4	2.96	2,379.818	
1,181.1	1,181.1	1,019.5	1,019.4	2.5	0.7	-85.91	502.2	-7,016.7	7,035.8	7,032.6	3.17	2,218.966	
1,200.0	1,200.0	1,036.7	1,036.5	2.6	0.7	-85.91	502.1	-7,017.0	7,036.1	7,032.9	3.22	2,185.383	
1,279.5	1,279.5	1,110.2	1,110.0	2.7	0.7	9.28	501.3	-7,018.5	7,036.5	7,033.1	3.47	2,027.158	
1,300.0	1,300.0	1,131.4	1,131.2	2.8	0.8	9.28	501.1	-7,018.9	7,036.3	7,032.8	3.52	1,997.397	
1,377.9	1,377.8	1,210.6	1,210.4	2.9	0.8	9.28	500.1	-7,020.4	7,034.1	7,030.3	3.71	1,895.103	
1,400.0	1,399.8	1,230.3	1,230.1	3.0	0.8	9.29	499.9	-7,020.8	7,033.0	7,029.3	3.76	1,868.563	
1,476.4	1,475.9	1,300.0	1,299.8	3.1	0.8	9.30	499.1	-7,022.3	7,028.3	7,024.3	3.95	1,778.880	
1,500.0	1,499.5	1,318.7	1,318.5	3.2	0.8	9.31	498.9	-7,022.7	7,026.4	7,022.4	4.01	1,753.331	
1,574.8	1,573.7	1,382.5	1,382.3	3.4	0.9	9.34	498.5	-7,024.1	7,019.4	7,015.2	4.19	1,673.964	
1,600.0	1,598.7	1,410.1	1,409.9	3.4	0.9	9.35	498.5	-7,024.7	7,016.6	7,012.3	4.26	1,647.731	
1,673.2	1,671.1	1,534.7	1,534.5	3.6	0.9	9.40	497.9	-7,027.0	7,006.8	7,002.4	4.47	1,566.597	
1,700.0	1,697.5	1,563.7	1,563.5	3.7	0.9	9.42	497.9	-7,027.4	7,002.8	6,998.2	4.54	1,540.965	
1,771.6	1,767.9	1,634.9	1,634.6	3.9	1.0	9.48	497.9	-7,028.4	6,990.6	6,985.9	4.74	1,475.174	
1,800.0	1,795.6	1,660.8	1,660.5	4.0	1.0	9.50	497.9	-7,028.8	6,985.3	6,980.5	4.81	1,450.945	
1,870.1	1,864.0	1,730.1	1,729.8	4.3	1.0	9.57	497.9	-7,029.8	6,971.1	6,966.1	5.01	1,391.682	
1,900.0	1,893.1	1,763.3	1,763.0	4.4	1.0	9.60	497.8	-7,030.3	6,964.5	6,959.4	5.09	1,367.497	
1,968.5	1,959.3	1,828.7	1,828.4	4.6	1.0	9.68	497.5	-7,031.2	6,948.3	6,943.0	5.29	1,314.007	
1,992.4	1,982.4	1,848.1	1,847.8	4.7	1.0	9.71	497.4	-7,031.4	6,942.3	6,936.9	5.35	1,296.627	
2,000.0	1,989.6	1,854.2	1,853.9	4.8	1.0	9.71	497.3	-7,031.5	6,940.3	6,935.0	5.37	1,291.280	
2,066.9	2,054.0	1,919.2	1,918.9	5.1	1.1	9.73	496.7	-7,032.6	6,923.3	6,917.7	5.57	1,243.234	
2,100.0	2,085.8	1,980.4	1,980.0	5.2	1.1	9.75	496.1	-7,033.4	6,914.8	6,909.1	5.67	1,219.979	
2,165.3	2,148.7	2,123.5	2,123.1	5.5	1.1	9.79	494.1	-7,034.2	6,897.5	6,891.6	5.88	1,173.472	
2,200.0	2,182.0	2,178.8	2,178.4	5.7	1.1	9.80	493.4	-7,034.1	6,888.0	6,882.0	5.99	1,150.833	
2,263.8	2,243.4	2,255.5	2,255.2	6.0	1.2	9.83	492.5	-7,033.7	6,870.5	6,864.3	6.17	1,113.874	
2,300.0	2,278.2	2,295.4	2,295.0	6.2	1.2	9.84	492.0	-7,033.4	6,860.5	6,854.2	6.27	1,093.772	
2,362.2	2,338.1	2,355.8	2,355.4	6.5	1.2	9.86	491.4	-7,033.0	6,843.3	6,836.8	6.45	1,061.116	
2,400.0	2,374.4	2,392.2	2,391.8	6.7	1.2	9.87	491.0	-7,032.8	6,832.8	6,826.3	6.56	1,042.038	
2,460.6	2,432.8	2,454.4	2,454.1	7.0	1.2	9.89	490.2	-7,032.4	6,816.0	6,809.3	6.73	1,012.384	
2,500.0	2,470.6	2,495.3	2,494.9	7.2	1.2	9.90	489.8	-7,032.1	6,805.1	6,798.3	6.85	993.852	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,527.4	2,546.1	2,545.7	7.6	1.2	9.92	489.2	-7,031.7	6,788.7	6,781.7	7.02	967.198	
2,600.0	2,566.8	2,580.7	2,580.3	7.8	1.2	9.93	488.8	-7,031.5	6,777.4	6,770.3	7.14	949.431	
2,657.5	2,622.1	2,626.3	2,625.9	8.1	1.2	9.94	488.3	-7,031.2	6,761.6	6,754.3	7.31	925.367	
2,700.0	2,663.0	2,658.6	2,658.3	8.3	1.2	9.95	487.9	-7,031.1	6,749.9	6,742.5	7.43	908.252	
2,755.9	2,716.8	2,701.8	2,701.4	8.6	1.2	9.97	487.4	-7,031.0	6,734.7	6,727.1	7.60	886.430	
2,800.0	2,759.2	2,754.4	2,754.0	8.9	1.3	9.98	486.8	-7,030.8	6,722.7	6,714.9	7.73	869.350	
2,854.3	2,811.5	2,814.6	2,814.2	9.2	1.3	10.00	486.1	-7,030.6	6,707.8	6,699.9	7.90	849.048	
2,900.0	2,855.4	2,856.0	2,855.6	9.4	1.3	10.02	485.5	-7,030.4	6,695.2	6,687.2	8.04	832.739	
2,952.7	2,906.2	2,900.0	2,899.6	9.7	1.3	10.03	485.0	-7,030.2	6,680.8	6,672.6	8.20	814.571	
3,000.0	2,951.6	2,939.0	2,938.6	10.0	1.3	10.04	484.5	-7,030.1	6,667.9	6,659.6	8.35	798.981	
3,051.2	3,000.9	2,978.0	2,977.6	10.3	1.3	10.05	484.0	-7,030.1	6,654.0	6,645.5	8.50	782.630	
3,100.0	3,047.8	3,026.1	3,025.7	10.5	1.3	10.07	483.3	-7,030.0	6,640.8	6,632.1	8.65	767.312	
3,149.6	3,095.5	3,091.1	3,090.7	10.8	1.3	10.09	482.4	-7,029.9	6,627.3	6,618.5	8.81	751.880	
3,200.0	3,144.0	3,298.6	3,298.1	11.1	1.4	10.14	478.1	-7,026.8	6,612.9	6,603.9	9.02	733.034	
3,248.0	3,190.2	3,389.5	3,389.0	11.4	1.4	10.16	475.7	-7,024.1	6,598.5	6,589.3	9.19	718.128	
3,300.0	3,240.2	3,454.0	3,453.3	11.7	1.4	10.18	473.9	-7,021.9	6,582.7	6,573.4	9.36	703.402	
3,346.4	3,284.9	3,508.1	3,507.4	11.9	1.4	10.19	472.3	-7,019.9	6,568.5	6,559.0	9.51	690.729	
3,400.0	3,336.4	3,571.2	3,570.5	12.2	1.4	10.20	470.5	-7,017.5	6,552.0	6,542.4	9.68	676.630	
3,444.9	3,379.6	3,624.6	3,623.8	12.5	1.4	10.21	469.1	-7,015.4	6,538.2	6,528.3	9.83	665.128	
3,500.0	3,432.6	3,690.9	3,690.0	12.8	1.4	10.23	467.4	-7,012.7	6,521.0	6,511.0	10.01	651.401	
3,543.3	3,474.3	3,749.7	3,748.7	13.1	1.5	10.24	466.0	-7,010.1	6,507.5	6,497.3	10.16	640.750	
3,600.0	3,528.8	3,815.6	3,814.6	13.4	1.5	10.26	464.3	-7,007.0	6,489.6	6,479.2	10.34	627.415	
3,641.7	3,569.0	3,847.5	3,846.4	13.6	1.5	10.27	463.4	-7,005.5	6,476.4	6,465.9	10.48	618.179	
3,700.0	3,625.0	3,900.0	3,898.8	14.0	1.5	10.28	461.8	-7,003.1	6,458.1	6,447.4	10.66	605.557	
3,740.1	3,663.6	3,924.7	3,923.5	14.2	1.5	10.28	460.9	-7,002.1	6,445.5	6,434.7	10.79	597.290	
3,800.0	3,721.2	3,974.4	3,973.1	14.5	1.5	10.29	459.4	-6,999.9	6,426.8	6,415.8	10.98	585.164	
3,838.6	3,758.3	4,000.0	3,998.7	14.8	1.5	10.30	458.6	-6,998.9	6,414.8	6,403.7	11.11	577.634	
3,900.0	3,817.4	4,044.3	4,042.9	15.1	1.5	10.31	457.3	-6,997.1	6,395.8	6,384.5	11.30	565.964	
3,937.0	3,853.0	4,068.0	4,066.6	15.3	1.5	10.31	456.6	-6,996.2	6,384.5	6,373.0	11.42	559.152	
4,000.0	3,913.6	4,100.0	4,098.6	15.7	1.5	10.32	455.8	-6,995.1	6,365.3	6,353.6	11.62	547.970	
4,035.4	3,947.7	4,135.6	4,134.1	15.9	1.5	10.33	454.9	-6,993.9	6,354.5	6,342.8	11.73	541.661	
4,100.0	4,009.8	4,182.8	4,181.3	16.3	1.5	10.34	453.9	-6,992.4	6,335.1	6,323.1	11.94	530.654	
4,133.8	4,042.4	4,200.0	4,198.5	16.5	1.5	10.35	453.6	-6,991.8	6,324.9	6,312.9	12.05	525.105	
4,200.0	4,106.0	4,251.7	4,250.2	16.8	1.6	10.36	452.6	-6,990.4	6,305.3	6,293.0	12.26	514.341	
4,232.3	4,137.1	4,273.6	4,272.0	17.0	1.6	10.37	452.2	-6,989.8	6,295.7	6,283.4	12.36	509.256	
4,300.0	4,202.2	4,322.8	4,321.2	17.4	1.6	10.39	451.4	-6,988.6	6,275.8	6,263.3	12.58	498.816	
4,330.7	4,231.7	4,347.2	4,345.6	17.6	1.6	10.40	451.0	-6,988.1	6,266.9	6,254.2	12.68	494.170	
4,400.0	4,298.4	4,400.0	4,398.4	18.0	1.6	10.41	450.2	-6,986.9	6,246.7	6,233.8	12.91	483.971	
4,429.1	4,326.4	4,424.2	4,422.6	18.2	1.6	10.42	449.8	-6,986.4	6,238.3	6,225.3	13.00	479.752	
4,500.0	4,394.6	4,477.8	4,476.2	18.6	1.6	10.44	449.2	-6,985.4	6,217.9	6,204.7	13.24	469.795	
4,527.5	4,421.1	4,500.0	4,498.4	18.7	1.6	10.45	449.0	-6,985.0	6,210.0	6,196.7	13.33	466.003	
4,600.0	4,490.8	4,560.9	4,559.3	19.2	1.6	10.48	448.4	-6,984.0	6,189.3	6,175.8	13.57	456.214	
4,626.0	4,515.8	4,583.3	4,581.7	19.3	1.6	10.48	448.2	-6,983.7	6,181.9	6,168.3	13.65	452.781	
4,700.0	4,587.0	4,638.8	4,637.1	19.8	1.6	10.51	447.7	-6,982.9	6,161.0	6,147.1	13.90	443.318	
4,724.4	4,610.5	4,656.1	4,654.4	19.9	1.6	10.51	447.5	-6,982.7	6,154.1	6,140.1	13.98	440.282	
4,800.0	4,683.2	4,700.0	4,698.3	20.3	1.6	10.53	446.9	-6,982.2	6,133.0	6,118.8	14.22	431.191	
4,822.8	4,705.2	4,725.8	4,724.1	20.5	1.7	10.54	446.6	-6,982.0	6,126.6	6,112.3	14.30	428.400	
4,900.0	4,779.4	4,780.2	4,778.6	20.9	1.7	10.56	445.8	-6,981.7	6,105.4	6,090.8	14.55	419.473	
4,921.2	4,799.8	4,800.0	4,798.3	21.0	1.7	10.57	445.5	-6,981.6	6,099.5	6,084.9	14.63	417.029	
5,000.0	4,875.6	4,850.7	4,849.0	21.5	1.7	10.58	444.8	-6,981.5	6,078.2	6,063.3	14.88	408.371	
5,019.7	4,894.5	4,864.5	4,862.8	21.6	1.7	10.59	444.6	-6,981.5	6,072.9	6,057.9	14.95	406.244	
5,100.0	4,971.8	4,926.2	4,924.5	22.1	1.7	10.61	443.7	-6,981.7	6,051.4	6,036.1	15.22	397.704	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,118.1	4,989.2	4,942.0	4,940.3	22.2	1.7	10.62	443.5	-6,981.8	6,046.5	6,031.3	15.28	395.800		
5,200.0	5,068.0	5,013.3	5,011.6	22.7	1.7	10.64	442.5	-6,982.1	6,024.8	6,009.2	15.55	387.367		
5,216.5	5,083.9	5,027.5	5,025.8	22.8	1.7	10.65	442.3	-6,982.1	6,020.4	6,004.8	15.61	385.698		
5,240.0	5,106.5	5,047.7	5,046.0	22.9	1.7	10.65	442.1	-6,982.2	6,014.2	5,998.5	15.69	383.343		
5,300.0	5,164.4	5,100.0	5,098.3	23.2	1.8	10.61	441.5	-6,982.6	5,998.9	5,983.1	15.82	379.139		
5,314.9	5,178.8	5,100.0	5,098.3	23.3	1.8	10.60	441.5	-6,982.6	5,995.3	5,979.5	15.85	378.354		
5,400.0	5,261.5	5,168.4	5,166.7	23.6	1.8	10.55	440.8	-6,983.2	5,976.5	5,960.5	15.99	373.647		
5,413.4	5,274.6	5,177.6	5,175.9	23.6	1.8	10.54	440.8	-6,983.3	5,973.8	5,957.7	16.02	372.995		
5,500.0	5,359.5	5,276.6	5,274.9	23.9	1.8	10.51	439.9	-6,984.4	5,957.7	5,941.5	16.16	368.733		
5,511.8	5,371.1	5,293.3	5,291.5	24.0	1.8	10.51	439.7	-6,984.5	5,955.6	5,939.5	16.18	368.198		
5,600.0	5,458.0	5,360.1	5,358.4	24.2	1.8	10.47	439.3	-6,985.2	5,942.1	5,925.8	16.29	364.735		
5,610.2	5,468.2	5,367.5	5,365.8	24.3	1.8	10.47	439.3	-6,985.3	5,940.7	5,924.4	16.30	364.388		
5,700.0	5,557.2	5,443.4	5,441.7	24.5	1.8	10.44	438.9	-6,986.3	5,930.2	5,913.8	16.41	361.447		
5,708.6	5,565.7	5,451.8	5,450.0	24.5	1.8	10.44	438.9	-6,986.4	5,929.4	5,913.0	16.42	361.199		
5,800.0	5,656.7	5,546.8	5,545.0	24.7	1.9	10.42	438.4	-6,987.8	5,921.9	5,905.4	16.51	358.664		
5,807.1	5,663.7	5,554.7	5,553.0	24.7	1.9	10.42	438.3	-6,987.9	5,921.5	5,905.0	16.52	358.494		
5,900.0	5,756.5	5,650.2	5,648.4	24.9	1.9	10.41	437.5	-6,989.2	5,916.9	5,900.3	16.60	356.387		
5,905.5	5,761.9	5,655.4	5,653.7	24.9	1.9	10.41	437.5	-6,989.2	5,916.7	5,900.1	16.61	356.284		
5,994.9	5,851.3	5,742.7	5,740.9	25.0	1.9	10.40	437.0	-6,990.4	5,915.4	5,898.7	16.68	354.650 CC		
6,000.0	5,856.4	5,747.8	5,746.1	25.0	1.9	10.40	437.0	-6,990.5	5,915.4	5,898.7	16.68	354.557		
6,003.9	5,860.3	5,751.8	5,750.0	25.0	1.9	10.40	437.0	-6,990.5	5,915.4	5,898.7	16.69	354.490		
6,032.5	5,888.9	5,780.4	5,778.6	25.0	1.9	-84.79	437.0	-6,990.9	5,915.6	5,889.0	26.64	222.019 ES		
6,062.5	5,918.9	5,811.2	5,809.5	25.1	1.9	-84.79	437.0	-6,991.3	5,916.0	5,889.3	26.68	221.747		
6,100.0	5,956.4	5,851.6	5,849.8	25.1	1.9	-174.78	437.2	-6,991.8	5,917.4	5,900.7	16.70	354.266		
6,102.3	5,958.7	5,854.1	5,852.3	25.1	1.9	-174.78	437.2	-6,991.8	5,917.6	5,900.9	16.70	354.359		
6,150.0	6,006.2	5,904.8	5,903.0	25.1	1.9	-174.75	437.5	-6,992.4	5,922.4	5,905.7	16.64	356.003		
6,200.0	6,055.6	5,954.2	5,952.4	25.1	1.9	-174.69	437.9	-6,992.9	5,930.7	5,914.2	16.58	357.713		
6,200.8	6,056.3	5,955.0	5,953.2	25.1	1.9	-174.69	437.9	-6,992.9	5,930.9	5,914.3	16.58	357.743		
6,250.0	6,104.3	6,002.8	6,001.0	25.0	1.9	-174.60	438.3	-6,993.5	5,942.5	5,926.0	16.52	359.728		
6,299.2	6,151.3	6,047.9	6,046.1	24.9	1.9	-174.49	438.8	-6,993.9	5,957.4	5,940.9	16.44	362.317		
6,300.0	6,152.1	6,048.7	6,046.9	24.9	1.9	-174.49	438.9	-6,993.9	5,957.6	5,941.2	16.44	362.363		
6,350.0	6,198.7	6,093.4	6,091.5	24.8	1.9	-174.35	439.4	-6,994.4	5,976.0	5,959.7	16.34	365.823		
6,397.6	6,241.9	6,129.8	6,127.9	24.7	1.9	-174.18	440.0	-6,994.9	5,996.5	5,980.3	16.20	370.051		
6,400.0	6,244.1	6,131.5	6,129.7	24.7	1.9	-174.17	440.0	-6,994.9	5,997.6	5,981.4	16.20	370.281		
6,450.0	6,287.8	6,167.3	6,165.5	24.5	1.9	-173.94	440.6	-6,995.3	6,022.4	6,006.4	16.03	375.738		
6,496.0	6,326.5	6,200.0	6,198.2	24.4	1.9	-173.70	441.2	-6,995.8	6,047.8	6,032.0	15.85	381.576		
6,500.0	6,329.7	6,202.1	6,200.3	24.4	1.9	-173.67	441.3	-6,995.8	6,050.1	6,034.3	15.83	382.116		
6,550.0	6,369.6	6,245.1	6,243.3	24.3	1.9	-173.35	442.1	-6,996.4	6,080.7	6,065.1	15.63	389.021		
6,594.5	6,403.3	6,281.4	6,279.6	24.2	1.9	-173.00	442.9	-6,996.9	6,110.2	6,094.7	15.45	395.555		
6,600.0	6,407.3	6,285.8	6,283.9	24.2	1.9	-172.95	443.0	-6,996.9	6,114.0	6,098.5	15.42	396.374		
6,650.0	6,442.7	6,321.4	6,319.6	24.1	1.9	-172.47	443.8	-6,997.4	6,149.7	6,134.4	15.23	403.789		
6,692.9	6,471.0	6,348.7	6,346.9	24.0	1.9	-171.96	444.4	-6,997.7	6,182.2	6,167.1	15.09	409.685		
6,700.0	6,475.5	6,353.1	6,351.2	24.0	1.9	-171.86	444.5	-6,997.8	6,187.7	6,172.7	15.07	410.584		
6,750.0	6,505.6	6,382.1	6,380.2	24.0	1.9	-171.10	445.3	-6,998.1	6,227.9	6,213.0	14.98	415.803		
6,791.3	6,528.3	6,404.0	6,402.1	24.0	1.9	-170.32	445.9	-6,998.4	6,262.7	6,247.7	14.98	418.069		
6,800.0	6,532.8	6,408.5	6,406.6	24.0	1.9	-170.13	446.0	-6,998.5	6,270.1	6,255.1	14.99	418.251		
6,850.0	6,557.0	6,432.5	6,430.6	24.1	1.9	-168.85	446.6	-6,998.7	6,314.0	6,298.9	15.16	416.534		
6,889.7	6,574.1	6,449.4	6,447.5	24.2	1.9	-167.51	447.1	-6,999.0	6,350.0	6,334.6	15.44	411.218		
6,900.0	6,578.1	6,453.4	6,451.5	24.3	1.9	-167.10	447.3	-6,999.0	6,359.5	6,343.9	15.54	409.229		
6,950.0	6,596.1	6,471.0	6,469.1	24.5	1.9	-164.61	447.8	-6,999.2	6,406.2	6,390.0	16.22	394.843		
6,988.2	6,607.5	6,482.2	6,480.3	24.7	1.9	-161.86	448.1	-6,999.3	6,442.6	6,425.6	17.04	377.992		
7,000.0	6,610.7	6,485.3	6,483.4	24.8	1.9	-160.79	448.2	-6,999.4	6,454.0	6,436.7	17.37	371.642		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,621.9	6,496.1	6,494.2	25.1	1.9	-154.38	448.6	-6,999.5	6,502.7	6,483.5	19.28	337.194		
7,086.6	6,628.0	6,500.0	6,498.0	25.4	1.9	-146.19	448.7	-6,999.6	6,538.8	6,517.2	21.56	303.227		
7,100.0	6,629.7	6,500.0	6,498.0	25.6	1.9	-141.83	448.7	-6,999.6	6,552.0	6,529.4	22.66	289.121		
7,150.0	6,634.1	6,506.6	6,504.7	26.0	1.9	-114.35	448.9	-6,999.6	6,601.7	6,574.4	27.30	241.845		
7,185.0	6,635.1	6,507.1	6,505.2	26.4	1.9	-82.36	448.9	-6,999.6	6,636.6	6,608.4	28.24	235.005		
7,196.6	6,635.0	6,507.0	6,505.0	26.5	1.9	-71.79	448.9	-6,999.6	6,648.1	6,620.0	28.13	236.355		
7,200.0	6,635.0	6,506.9	6,504.9	26.6	1.9	-71.79	448.9	-6,999.6	6,651.5	6,623.4	28.16	236.174		
7,283.4	6,633.9	6,505.0	6,503.0	27.6	1.9	-71.61	448.8	-6,999.6	6,734.7	6,705.5	29.14	231.134		
7,300.0	6,633.7	6,504.6	6,502.7	27.8	1.9	-71.57	448.8	-6,999.6	6,751.2	6,721.8	29.33	230.178		
7,381.9	6,632.6	6,500.0	6,498.0	29.0	1.9	-71.13	448.7	-6,999.6	6,832.8	6,802.3	30.44	224.488		
7,400.0	6,632.4	6,500.0	6,498.0	29.2	1.9	-71.13	448.7	-6,999.6	6,850.8	6,820.1	30.69	223.244		
7,480.3	6,631.4	6,500.0	6,498.0	30.5	1.9	-71.13	448.7	-6,999.6	6,930.8	6,898.9	31.94	216.989		
7,500.0	6,631.1	6,500.0	6,498.0	30.9	1.9	-71.12	448.7	-6,999.6	6,950.5	6,918.2	32.25	215.530		
7,578.7	6,630.1	6,498.2	6,496.2	32.3	1.9	-70.95	448.6	-6,999.5	7,028.9	6,995.3	33.58	209.305		
7,600.0	6,629.8	6,497.6	6,495.7	32.7	1.9	-70.90	448.6	-6,999.5	7,050.1	7,016.2	33.94	207.712		
7,677.1	6,628.9	6,495.7	6,493.8	34.1	1.9	-70.72	448.5	-6,999.5	7,127.0	7,091.7	35.34	201.653		
7,700.0	6,628.6	6,495.1	6,493.2	34.6	1.9	-70.66	448.5	-6,999.5	7,149.8	7,114.0	35.76	199.954		
7,775.6	6,627.6	6,493.2	6,491.3	36.1	1.9	-70.48	448.5	-6,999.5	7,225.1	7,187.9	37.21	194.188		
7,800.0	6,627.3	6,492.6	6,490.7	36.6	1.9	-70.42	448.4	-6,999.5	7,249.5	7,211.8	37.67	192.424		
7,874.0	6,626.3	6,490.8	6,488.8	38.2	1.9	-70.25	448.4	-6,999.4	7,323.2	7,284.1	39.16	187.025		
7,900.0	6,626.0	6,490.1	6,488.2	38.8	1.9	-70.18	448.4	-6,999.4	7,349.1	7,309.5	39.68	185.228		
7,972.4	6,625.1	6,488.3	6,486.3	40.4	1.9	-70.01	448.3	-6,999.4	7,421.3	7,380.2	41.18	180.228		
8,000.0	6,624.7	6,487.6	6,485.6	41.0	1.9	-69.95	448.3	-6,999.4	7,448.8	7,407.1	41.75	178.425		
8,070.8	6,623.8	6,485.8	6,483.9	42.6	1.9	-69.78	448.2	-6,999.4	7,519.5	7,476.2	43.26	173.830		
8,100.0	6,623.4	6,485.1	6,483.1	43.3	1.9	-69.71	448.2	-6,999.4	7,548.5	7,504.6	43.88	172.038		
8,169.3	6,622.6	6,483.3	6,481.4	44.9	1.9	-69.54	448.2	-6,999.4	7,617.6	7,572.2	45.39	167.838		
8,200.0	6,622.2	6,482.5	6,480.6	45.6	1.9	-69.47	448.1	-6,999.4	7,648.2	7,602.2	46.05	166.069		
8,267.7	6,621.3	6,480.8	6,478.9	47.3	1.9	-69.31	448.1	-6,999.3	7,715.7	7,668.2	47.56	162.244		
8,300.0	6,620.9	6,480.0	6,478.1	48.0	1.9	-69.23	448.1	-6,999.3	7,747.9	7,699.7	48.27	160.508		
8,366.1	6,620.0	6,478.3	6,476.4	49.7	1.9	-69.08	448.0	-6,999.3	7,813.9	7,764.1	49.76	157.032		
8,400.0	6,619.6	6,477.5	6,475.5	50.5	1.9	-69.00	448.0	-6,999.3	7,847.6	7,797.1	50.52	155.336		
8,464.5	6,618.8	6,475.8	6,473.9	52.1	1.9	-68.84	447.9	-6,999.3	7,912.0	7,860.0	51.99	152.180		
8,500.0	6,618.3	6,474.9	6,473.0	53.0	1.9	-68.76	447.9	-6,999.3	7,947.4	7,894.6	52.80	150.528		
8,563.0	6,617.5	6,473.3	6,471.4	54.5	1.9	-68.61	447.9	-6,999.2	8,010.2	7,955.9	54.25	147.665		
8,600.0	6,617.0	6,472.4	6,470.5	55.5	1.9	-68.52	447.8	-6,999.2	8,047.1	7,992.0	55.10	146.058		
8,661.4	6,616.3	6,470.8	6,468.9	57.0	1.9	-68.38	447.8	-6,999.2	8,108.3	8,051.8	56.52	143.463		
8,700.0	6,615.8	6,469.9	6,467.9	58.0	1.9	-68.29	447.7	-6,999.2	8,146.8	8,089.4	57.41	141.903		
8,759.8	6,615.0	6,468.3	6,466.4	59.5	1.9	-68.15	447.7	-6,999.2	8,206.5	8,147.7	58.81	139.549		
8,800.0	6,614.5	6,467.3	6,465.4	60.6	1.9	-68.05	447.7	-6,999.2	8,246.6	8,186.8	59.74	138.036		
8,858.2	6,613.7	6,465.8	6,463.9	62.1	1.9	-67.91	447.6	-6,999.2	8,304.7	8,243.6	61.11	135.901		
8,900.0	6,613.2	6,464.7	6,462.8	63.2	1.9	-67.81	447.6	-6,999.1	8,346.3	8,284.2	62.08	134.435		
8,956.7	6,612.5	6,463.3	6,461.4	64.6	1.9	-67.68	447.5	-6,999.1	8,402.9	8,339.4	63.42	132.497		
9,000.0	6,611.9	6,462.2	6,460.3	65.8	1.9	-67.58	447.5	-6,999.1	8,446.1	8,381.6	64.44	131.076		
9,055.1	6,611.2	6,460.8	6,458.8	67.2	1.9	-67.45	447.5	-6,999.1	8,501.0	8,435.3	65.74	129.318		
9,100.0	6,610.6	6,459.6	6,457.7	68.4	1.9	-67.34	447.4	-6,999.1	8,545.8	8,479.0	66.79	127.941		
9,153.5	6,609.9	6,458.2	6,456.3	69.8	1.9	-67.22	447.4	-6,999.1	8,599.2	8,531.2	68.06	126.344		
9,200.0	6,609.3	6,457.1	6,455.1	71.0	1.9	-67.11	447.4	-6,999.0	8,645.6	8,576.4	69.16	125.011		
9,251.9	6,608.7	6,455.7	6,453.8	72.4	1.9	-66.99	447.3	-6,999.0	8,697.4	8,627.0	70.39	123.559		
9,300.0	6,608.1	6,454.5	6,452.6	73.7	1.9	-66.88	447.3	-6,999.0	8,745.4	8,673.8	71.53	122.268		
9,350.4	6,607.4	6,453.2	6,451.3	75.0	1.9	-66.76	447.2	-6,999.0	8,795.6	8,722.9	72.72	120.950		
9,400.0	6,606.8	6,451.9	6,450.0	76.3	1.9	-66.64	447.2	-6,999.0	8,845.1	8,771.2	73.90	119.697		
9,448.8	6,606.1	6,450.6	6,448.7	77.6	1.9	-66.53	447.2	-6,999.0	8,893.8	8,818.8	75.05	118.499		

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT LOWER LATHAM #8-15 - Wellbore #1 - Wellbore												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis			Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,605.5	6,449.3	6,447.4	79.0	1.9	-66.41	447.1	-6,999.0	8,944.9	8,868.6	76.27	117.285	
9,547.2	6,604.9	6,448.1	6,446.2	80.2	1.9	-66.30	447.1	-6,998.9	8,992.0	8,914.6	77.39	116.195	
9,600.0	6,604.2	6,446.7	6,444.8	81.7	1.9	-66.17	447.1	-6,998.9	9,044.7	8,966.0	78.64	115.019	
9,645.6	6,603.6	6,445.6	6,443.6	82.9	1.9	-66.07	447.0	-6,998.9	9,090.2	9,010.5	79.72	114.027	
9,700.0	6,602.9	6,444.1	6,442.2	84.3	1.9	-65.94	447.0	-6,998.9	9,144.5	9,063.5	81.01	112.887	
9,744.1	6,602.3	6,443.0	6,441.1	85.5	1.9	-65.84	446.9	-6,998.9	9,188.4	9,106.4	82.05	111.985	
9,800.0	6,601.6	6,441.6	6,439.6	87.0	1.9	-65.71	446.9	-6,998.9	9,244.3	9,160.9	83.37	110.879	
9,842.5	6,601.1	6,440.5	6,438.5	88.2	1.9	-65.61	446.9	-6,998.8	9,286.7	9,202.3	84.38	110.058	
9,900.0	6,600.3	6,439.0	6,437.0	89.7	1.9	-65.48	446.8	-6,998.8	9,344.0	9,258.3	85.74	108.985	
9,940.9	6,599.8	6,437.9	6,436.0	90.9	1.9	-65.38	446.8	-6,998.8	9,384.9	9,298.2	86.71	108.239	
10,000.0	6,599.0	6,436.4	6,434.4	92.5	1.9	-65.25	446.8	-6,998.8	9,443.8	9,355.7	88.10	107.197	
10,039.3	6,598.5	6,435.3	6,433.4	93.5	1.9	-65.16	446.7	-6,998.8	9,483.1	9,394.1	89.03	106.519	
10,100.0	6,597.7	6,433.7	6,431.8	95.2	1.9	-65.01	446.7	-6,998.8	9,543.6	9,453.2	90.46	105.507	
10,137.8	6,597.3	6,432.8	6,430.8	96.2	1.9	-64.93	446.7	-6,998.8	9,581.3	9,490.0	91.35	104.891	
10,200.0	6,596.5	6,431.1	6,429.2	97.9	1.9	-64.78	446.6	-6,998.7	9,643.4	9,550.6	92.81	103.908	
10,236.2	6,596.0	6,430.2	6,428.3	98.9	1.9	-64.70	446.6	-6,998.7	9,679.6	9,585.9	93.66	103.349	
10,300.0	6,595.2	6,428.5	6,426.6	100.6	1.9	-64.55	446.5	-6,998.7	9,743.2	9,648.1	95.15	102.394	
10,334.6	6,594.7	6,427.6	6,425.7	101.6	1.9	-64.47	446.5	-6,998.7	9,777.8	9,681.8	95.97	101.887	
10,400.0	6,593.9	6,425.9	6,424.0	103.3	1.9	-64.32	446.5	-6,998.7	9,843.1	9,745.6	97.50	100.958	
10,433.0	6,593.5	6,425.0	6,423.1	104.2	1.9	-64.25	446.4	-6,998.7	9,876.0	9,777.8	98.27	100.499	
10,500.0	6,592.6	6,423.3	6,421.4	106.1	1.9	-64.09	446.4	-6,998.6	9,942.9	9,843.0	99.83	99.596	
10,531.5	6,592.2	6,422.5	6,420.5	106.9	1.9	-64.02	446.4	-6,998.6	9,974.3	9,873.7	100.57	99.180 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	5.32	1,808.8	168.5	1,816.6				
98.4	98.4	93.4	93.4	0.1	1.1	5.32	1,808.8	168.5	1,816.6	1,815.4	1.24	1,464.655	
100.0	100.0	95.0	95.0	0.1	1.2	5.32	1,808.8	168.5	1,816.6	1,815.4	1.26	1,440.200	
196.8	196.8	191.8	191.8	0.3	3.3	5.32	1,808.8	168.5	1,816.6	1,813.0	3.64	499.353	
200.0	200.0	195.0	195.0	0.3	3.4	5.32	1,808.8	168.5	1,816.6	1,812.9	3.72	488.738	
295.3	295.3	290.3	290.3	0.5	5.4	5.32	1,808.8	168.5	1,816.6	1,810.7	5.92	306.808	
300.0	300.0	295.0	295.0	0.5	5.5	5.32	1,808.8	168.5	1,816.6	1,810.6	6.03	301.272	
393.7	393.7	388.7	388.7	0.8	7.4	5.32	1,808.8	168.5	1,816.6	1,808.5	8.16	222.745	
400.0	400.0	395.0	395.0	0.8	7.5	5.32	1,808.8	168.5	1,816.6	1,808.3	8.30	218.912	
492.1	492.1	487.1	487.1	1.0	9.4	5.32	1,808.8	168.5	1,816.6	1,806.3	10.38	175.090	
500.0	500.0	495.0	495.0	1.0	9.6	5.32	1,808.8	168.5	1,816.6	1,806.1	10.55	172.145	
590.5	590.5	585.5	585.5	1.2	11.4	5.32	1,808.8	168.5	1,816.6	1,804.1	12.59	144.311	
600.0	600.0	595.0	595.0	1.2	11.6	5.32	1,808.8	168.5	1,816.6	1,803.8	12.80	141.916	
689.0	689.0	684.0	684.0	1.4	13.4	5.32	1,808.8	168.5	1,816.6	1,801.8	14.80	122.766	
700.0	700.0	695.0	695.0	1.4	13.6	5.32	1,808.8	168.5	1,816.6	1,801.6	15.04	120.747	
787.4	787.4	782.4	782.4	1.6	15.4	5.32	1,808.8	168.5	1,816.6	1,799.6	17.00	106.833	
800.0	800.0	795.0	795.0	1.7	15.6	5.32	1,808.8	168.5	1,816.6	1,799.4	17.29	105.087	
885.8	885.8	880.8	880.8	1.9	17.3	5.32	1,808.8	168.5	1,816.6	1,797.4	19.21	94.567	
900.0	900.0	895.0	895.0	1.9	17.6	5.32	1,808.8	168.5	1,816.6	1,797.1	19.53	93.029	
984.2	984.2	979.2	979.2	2.1	19.3	5.32	1,808.8	168.5	1,816.6	1,795.2	21.41	84.833	
1,000.0	1,000.0	995.0	995.0	2.1	19.6	5.32	1,808.8	168.5	1,816.6	1,794.9	21.77	83.458	
1,082.7	1,082.7	1,077.7	1,077.7	2.3	21.3	5.32	1,808.8	168.5	1,816.6	1,793.0	23.62	76.917	
1,100.0	1,100.0	1,095.0	1,095.0	2.3	21.7	5.32	1,808.8	168.5	1,816.6	1,792.6	24.01	75.674	
1,181.1	1,181.1	1,176.1	1,176.1	2.5	23.3	5.32	1,808.8	168.5	1,816.6	1,790.8	25.82	70.354	
1,200.0	1,200.0	1,195.0	1,195.0	2.6	23.7	5.32	1,808.8	168.5	1,816.6	1,790.4	26.24	69.220 CC	
1,279.5	1,279.5	1,274.5	1,274.5	2.7	25.3	100.54	1,808.8	168.5	1,816.8	1,788.8	28.01	64.859	
1,300.0	1,300.0	1,295.0	1,295.0	2.8	25.7	100.56	1,808.8	168.5	1,817.0	1,788.5	28.47	63.827	
1,377.9	1,377.8	1,372.8	1,372.8	2.9	27.3	100.67	1,808.8	168.5	1,817.7	1,787.5	30.19	60.206	
1,400.0	1,399.8	1,394.8	1,394.8	3.0	27.7	100.70	1,808.8	168.5	1,817.9	1,787.2	30.68	59.259	
1,476.4	1,475.9	1,470.9	1,470.9	3.1	29.2	100.88	1,808.8	168.5	1,819.1	1,786.7	32.37	56.196	
1,500.0	1,499.5	1,494.5	1,494.5	3.2	29.7	100.94	1,808.8	168.5	1,819.6	1,786.7	32.89	55.316	
1,574.8	1,573.7	1,568.7	1,568.7	3.4	31.2	101.18	1,808.8	168.5	1,821.3	1,786.7	34.56	52.699	
1,600.0	1,598.7	1,593.7	1,593.7	3.4	31.7	101.27	1,808.8	168.5	1,821.9	1,786.8	35.12	51.878	
1,673.2	1,671.1	1,666.1	1,666.1	3.6	33.2	101.56	1,808.8	168.5	1,824.2	1,787.4	36.76	49.621	
1,700.0	1,697.5	1,692.5	1,692.5	3.7	33.7	101.68	1,808.8	168.5	1,825.1	1,787.7	37.36	48.851	
1,771.6	1,767.9	1,762.9	1,762.9	3.9	35.1	102.03	1,808.8	168.5	1,827.9	1,788.9	38.98	46.891	
1,800.0	1,795.6	1,790.6	1,790.6	4.0	35.7	102.18	1,808.8	168.5	1,829.1	1,789.5	39.62	46.166	
1,870.1	1,864.0	1,859.0	1,859.0	4.3	37.0	102.57	1,808.8	168.5	1,832.5	1,791.3	41.22	44.452	
1,900.0	1,893.1	1,888.1	1,888.1	4.4	37.6	102.75	1,808.8	168.5	1,834.1	1,792.2	41.90	43.768	
1,968.5	1,959.3	1,954.3	1,954.3	4.6	39.0	103.18	1,808.8	168.5	1,838.1	1,794.6	43.49	42.264	
1,992.4	1,982.4	1,977.4	1,977.4	4.7	39.4	103.34	1,808.8	168.5	1,839.6	1,795.6	44.04	41.770	
2,000.0	1,989.6	1,984.6	1,984.6	4.8	39.6	103.40	1,808.8	168.5	1,840.1	1,795.9	44.22	41.614	
2,066.9	2,054.0	2,049.0	2,049.0	5.1	40.9	103.94	1,808.8	168.5	1,844.6	1,798.8	45.80	40.277	
2,100.0	2,085.8	2,080.8	2,080.8	5.2	41.5	104.20	1,808.8	168.5	1,846.9	1,800.3	46.58	39.652	
2,165.3	2,148.7	2,143.7	2,143.7	5.5	42.8	104.72	1,808.8	168.5	1,851.5	1,803.4	48.13	38.467	
2,200.0	2,182.0	2,177.0	2,177.0	5.7	43.4	104.99	1,808.8	168.5	1,854.0	1,805.1	48.96	37.871	
2,263.8	2,243.4	2,238.4	2,238.4	6.0	44.7	105.49	1,808.8	168.5	1,858.8	1,808.3	50.48	36.820	
2,300.0	2,278.2	2,273.2	2,273.2	6.2	45.4	105.77	1,808.8	168.5	1,861.5	1,810.2	51.35	36.253	
2,362.2	2,338.1	2,333.1	2,333.1	6.5	46.6	106.26	1,808.8	168.5	1,866.4	1,813.5	52.84	35.319	
2,400.0	2,374.4	2,369.4	2,369.4	6.7	47.3	106.55	1,808.8	168.5	1,869.4	1,815.7	53.75	34.779	
2,460.6	2,432.8	2,427.8	2,427.8	7.0	48.5	107.02	1,808.8	168.5	1,874.4	1,819.1	55.21	33.949	
2,500.0	2,470.6	2,465.6	2,465.6	7.2	49.2	107.32	1,808.8	168.5	1,877.6	1,821.5	56.16	33.435	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,527.4	2,522.4	2,522.4	7.6	50.4	107.77	1,808.8	168.5	1,882.7	1,825.1	57.58	32.695	
2,600.0	2,566.8	2,561.8	2,561.8	7.8	51.2	108.08	1,808.8	168.5	1,886.2	1,827.7	58.57	32.205	
2,657.5	2,622.1	2,617.1	2,617.1	8.1	52.3	108.52	1,808.8	168.5	1,891.3	1,831.4	59.96	31.545	
2,700.0	2,663.0	2,658.0	2,658.0	8.3	53.1	108.84	1,808.8	168.5	1,895.2	1,834.2	60.98	31.077	
2,755.9	2,716.8	2,711.8	2,711.8	8.6	54.2	109.26	1,808.8	168.5	1,900.4	1,838.0	62.33	30.487	
2,800.0	2,759.2	2,754.2	2,754.2	8.9	55.0	109.59	1,808.8	168.5	1,904.5	1,841.1	63.40	30.041	
2,854.3	2,811.5	2,806.5	2,806.5	9.2	56.1	110.00	1,808.8	168.5	1,909.7	1,845.0	64.71	29.513	
2,900.0	2,855.4	2,850.4	2,850.4	9.4	57.0	110.34	1,808.8	168.5	1,914.2	1,848.3	65.81	29.086	
2,952.7	2,906.2	2,901.2	2,901.2	9.7	58.0	110.73	1,808.8	168.5	1,919.4	1,852.3	67.08	28.613	
3,000.0	2,951.6	2,946.6	2,946.6	10.0	58.9	111.08	1,808.8	168.5	1,924.1	1,855.9	68.22	28.205	
3,051.2	3,000.9	2,995.9	2,995.9	10.3	59.9	111.45	1,808.8	168.5	1,929.4	1,859.9	69.45	27.780	
3,100.0	3,047.8	3,042.8	3,042.8	10.5	60.8	111.81	1,808.8	168.5	1,934.5	1,863.8	70.63	27.390	
3,149.6	3,095.5	3,090.5	3,090.5	10.8	61.8	112.17	1,808.8	168.5	1,939.7	1,867.9	71.82	27.008	
3,200.0	3,144.0	3,139.0	3,139.0	11.1	62.8	112.53	1,808.8	168.5	1,945.1	1,872.1	73.03	26.634	
3,248.0	3,190.2	3,185.2	3,185.2	11.4	63.7	112.87	1,808.8	168.5	1,950.3	1,876.2	74.19	26.290	
3,300.0	3,240.2	3,235.2	3,235.2	11.7	64.7	113.24	1,808.8	168.5	1,956.1	1,880.7	75.43	25.932	
3,346.4	3,284.9	3,279.9	3,279.9	11.9	65.6	113.57	1,808.8	168.5	1,961.3	1,884.8	76.55	25.623	
3,400.0	3,336.4	3,331.4	3,331.4	12.2	66.7	113.95	1,808.8	168.5	1,967.4	1,889.6	77.83	25.279	
3,444.9	3,379.6	3,374.6	3,374.6	12.5	67.5	114.27	1,808.8	168.5	1,972.6	1,893.7	78.90	25.000	
3,500.0	3,432.6	3,427.6	3,427.6	12.8	68.6	114.65	1,808.8	168.5	1,979.0	1,898.8	80.22	24.670	
3,543.3	3,474.3	3,469.3	3,469.3	13.1	69.4	114.95	1,808.8	168.5	1,984.1	1,902.9	81.25	24.419	
3,600.0	3,528.8	3,523.8	3,523.8	13.4	70.5	115.34	1,808.8	168.5	1,990.9	1,908.3	82.61	24.101	
3,641.7	3,569.0	3,564.0	3,564.0	13.6	71.3	115.63	1,808.8	168.5	1,996.0	1,912.4	83.60	23.875	
3,700.0	3,625.0	3,620.0	3,620.0	14.0	72.5	116.03	1,808.8	168.5	2,003.1	1,918.1	84.99	23.569	
3,740.1	3,663.6	3,658.6	3,658.6	14.2	73.2	116.30	1,808.8	168.5	2,008.1	1,922.2	85.94	23.366	
3,800.0	3,721.2	3,716.2	3,716.2	14.5	74.4	116.71	1,808.8	168.5	2,015.6	1,928.3	87.36	23.072	
3,838.6	3,758.3	3,753.3	3,753.3	14.8	75.1	116.96	1,808.8	168.5	2,020.5	1,932.2	88.28	22.888	
3,900.0	3,817.4	3,812.4	3,812.4	15.1	76.3	117.37	1,808.8	168.5	2,028.4	1,938.7	89.73	22.605	
3,937.0	3,853.0	3,848.0	3,848.0	15.3	77.0	117.62	1,808.8	168.5	2,033.2	1,942.6	90.61	22.439	
4,000.0	3,913.6	3,908.6	3,908.6	15.7	78.3	118.03	1,808.8	168.5	2,041.5	1,949.4	92.10	22.166	
4,035.4	3,947.7	3,942.7	3,942.7	15.9	78.9	118.27	1,808.8	168.5	2,046.2	1,953.3	92.94	22.017	
4,100.0	4,009.8	4,004.8	4,004.8	16.3	80.2	118.69	1,808.8	168.5	2,054.9	1,960.4	94.46	21.754	
4,133.8	4,042.4	4,037.4	4,037.4	16.5	80.9	118.91	1,808.8	168.5	2,059.5	1,964.2	95.26	21.620	
4,200.0	4,106.0	4,101.0	4,101.0	16.8	82.1	119.33	1,808.8	168.5	2,068.5	1,971.7	96.81	21.366	
4,232.3	4,137.1	4,132.1	4,132.1	17.0	82.8	119.54	1,808.8	168.5	2,073.0	1,975.4	97.57	21.246	
4,300.0	4,202.2	4,197.2	4,197.2	17.4	84.1	119.97	1,808.8	168.5	2,082.4	1,983.3	99.16	21.000	
4,330.7	4,231.7	4,226.7	4,226.7	17.6	84.7	120.16	1,808.8	168.5	2,086.7	1,986.9	99.88	20.892	
4,400.0	4,298.4	4,293.4	4,293.4	18.0	86.0	120.60	1,808.8	168.5	2,096.6	1,995.1	101.50	20.655	
4,429.1	4,326.4	4,321.4	4,321.4	18.2	86.6	120.78	1,808.8	168.5	2,100.8	1,998.6	102.19	20.558	
4,500.0	4,394.6	4,389.6	4,389.6	18.6	87.9	121.22	1,808.8	168.5	2,111.0	2,007.2	103.84	20.329	
4,527.5	4,421.1	4,416.1	4,416.1	18.7	88.5	121.39	1,808.8	168.5	2,115.0	2,010.6	104.48	20.243	
4,600.0	4,490.8	4,485.8	4,485.8	19.2	89.9	121.83	1,808.8	168.5	2,125.7	2,019.5	106.17	20.021	
4,626.0	4,515.8	4,510.8	4,510.8	19.3	90.4	121.99	1,808.8	168.5	2,129.6	2,022.8	106.78	19.944	
4,700.0	4,587.0	4,582.0	4,582.0	19.8	91.8	122.43	1,808.8	168.5	2,140.6	2,032.1	108.50	19.730	
4,724.4	4,610.5	4,605.5	4,605.5	19.9	92.3	122.58	1,808.8	168.5	2,144.3	2,035.2	109.06	19.661	
4,800.0	4,683.2	4,678.2	4,678.2	20.3	93.7	123.03	1,808.8	168.5	2,155.8	2,045.0	110.82	19.454	
4,822.8	4,705.2	4,700.2	4,700.2	20.5	94.2	123.16	1,808.8	168.5	2,159.3	2,048.0	111.35	19.393	
4,900.0	4,779.4	4,774.4	4,774.4	20.9	95.7	123.62	1,808.8	168.5	2,171.2	2,058.1	113.13	19.192	
4,921.2	4,799.8	4,794.8	4,794.8	21.0	96.1	123.74	1,808.8	168.5	2,174.5	2,060.9	113.62	19.138	
5,000.0	4,875.6	4,870.6	4,870.6	21.5	97.6	124.20	1,808.8	168.5	2,186.9	2,071.4	115.44	18.944	
5,019.7	4,894.5	4,889.5	4,889.5	21.6	98.0	124.31	1,808.8	168.5	2,190.0	2,074.1	115.89	18.896	
5,100.0	4,971.8	4,966.8	4,966.8	22.1	99.5	124.77	1,808.8	168.5	2,202.7	2,085.0	117.74	18.708	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	4,989.2	4,984.2	4,984.2	22.2	99.9	124.87	1,808.8	168.5	2,205.6	2,087.5	118.16	18.666	
5,200.0	5,068.0	5,063.0	5,063.0	22.7	101.5	125.34	1,808.8	168.5	2,218.8	2,098.8	120.04	18.484	
5,216.5	5,083.9	5,078.9	5,078.9	22.8	101.8	125.43	1,808.8	168.5	2,221.5	2,101.1	120.42	18.448	
5,240.0	5,106.5	5,101.5	5,101.5	22.9	102.3	125.56	1,808.8	168.5	2,225.3	2,104.4	120.96	18.397	
5,300.0	5,164.4	5,159.4	5,159.4	23.2	103.4	126.04	1,808.8	168.5	2,234.8	2,112.3	122.46	18.248	
5,314.9	5,178.8	5,173.8	5,173.8	23.3	103.7	126.15	1,808.8	168.5	2,237.0	2,114.2	122.83	18.213	
5,400.0	5,261.5	5,256.5	5,256.5	23.6	105.4	126.74	1,808.8	168.5	2,249.0	2,124.1	124.91	18.005	
5,413.4	5,274.6	5,269.6	5,269.6	23.6	105.6	126.83	1,808.8	168.5	2,250.8	2,125.6	125.23	17.973	
5,500.0	5,359.5	5,354.5	5,354.5	23.9	107.3	127.35	1,808.8	168.5	2,261.4	2,134.0	127.33	17.759	
5,511.8	5,371.1	5,366.1	5,366.1	24.0	107.6	127.41	1,808.8	168.5	2,262.7	2,135.1	127.62	17.730	
5,600.0	5,458.0	5,453.0	5,453.0	24.2	109.3	127.84	1,808.8	168.5	2,271.7	2,142.0	129.72	17.512	
5,610.2	5,468.2	5,463.2	5,463.2	24.3	109.5	127.89	1,808.8	168.5	2,272.6	2,142.7	129.96	17.487	
5,700.0	5,557.2	5,552.2	5,552.2	24.5	111.3	128.24	1,808.8	168.5	2,279.9	2,147.9	132.07	17.263	
5,708.6	5,565.7	5,560.7	5,560.7	24.5	111.5	128.27	1,808.8	168.5	2,280.5	2,148.3	132.27	17.242	
5,800.0	5,656.7	5,651.7	5,651.7	24.7	113.3	128.53	1,808.8	168.5	2,286.1	2,151.7	134.36	17.015	
5,807.1	5,663.7	5,658.7	5,658.7	24.7	113.5	128.54	1,808.8	168.5	2,286.4	2,151.9	134.52	16.997	
5,900.0	5,756.5	5,751.5	5,751.5	24.9	115.3	128.71	1,808.8	168.5	2,290.0	2,153.4	136.59	16.766	
5,905.5	5,761.9	5,756.9	5,756.9	24.9	115.4	128.72	1,808.8	168.5	2,290.2	2,153.5	136.71	16.753	
6,000.0	5,856.4	5,851.4	5,851.4	25.0	117.3	128.80	1,808.8	168.5	2,291.8	2,153.1	138.75	16.518	
6,003.9	5,860.3	5,855.3	5,855.3	25.0	117.4	128.80	1,808.8	168.5	2,291.9	2,153.0	138.83	16.509	
6,032.5	5,888.9	5,883.9	5,883.9	25.0	118.0	33.61	1,808.8	168.5	2,292.0	2,154.4	137.51	16.668	
6,062.5	5,918.9	5,913.9	5,913.9	25.1	118.6	33.61	1,808.8	168.5	2,292.0	2,153.8	138.15	16.590	
6,100.0	5,956.4	5,951.4	5,951.4	25.1	119.3	-56.45	1,808.8	168.5	2,291.4	2,150.6	140.79	16.276	
6,102.3	5,958.7	5,953.7	5,953.7	25.1	119.4	-56.45	1,808.8	168.5	2,291.3	2,150.5	140.83	16.271	
6,150.0	6,006.2	6,001.2	6,001.2	25.1	120.3	-56.70	1,808.8	168.5	2,289.0	2,147.4	141.57	16.168	
6,200.0	6,055.6	6,050.6	6,050.6	25.1	121.3	-57.15	1,808.8	168.5	2,284.7	2,142.5	142.19	16.068	
6,200.8	6,056.3	6,051.3	6,051.3	25.1	121.4	-57.16	1,808.8	168.5	2,284.6	2,142.4	142.20	16.066	
6,250.0	6,104.3	6,099.3	6,099.3	25.0	122.3	-57.80	1,808.8	168.5	2,278.5	2,135.9	142.66	15.971	
6,299.2	6,151.3	6,146.3	6,146.3	24.9	123.3	-58.64	1,808.8	168.5	2,270.7	2,127.7	143.03	15.876	
6,300.0	6,152.1	6,147.1	6,147.1	24.9	123.3	-58.66	1,808.8	168.5	2,270.6	2,127.6	143.03	15.875	
6,350.0	6,198.7	6,193.7	6,193.7	24.8	124.2	-59.70	1,808.8	168.5	2,260.9	2,117.6	143.35	15.772	
6,397.6	6,241.9	6,236.9	6,236.9	24.7	125.1	-60.87	1,808.8	168.5	2,250.2	2,106.6	143.66	15.664	
6,400.0	6,244.1	6,239.1	6,239.1	24.7	125.1	-60.94	1,808.8	168.5	2,249.7	2,106.0	143.67	15.658	
6,450.0	6,287.8	6,282.8	6,282.8	24.5	126.0	-62.36	1,808.8	168.5	2,236.9	2,092.9	144.06	15.528	
6,496.0	6,326.5	6,321.5	6,321.5	24.4	126.8	-63.82	1,808.8	168.5	2,224.0	2,079.5	144.53	15.388	
6,500.0	6,329.7	6,324.7	6,324.7	24.4	126.9	-63.95	1,808.8	168.5	2,222.9	2,078.3	144.58	15.375	
6,550.0	6,369.6	6,364.6	6,364.6	24.3	127.7	-65.70	1,808.8	168.5	2,207.6	2,062.4	145.25	15.198	
6,594.5	6,403.3	6,398.3	6,398.3	24.2	128.3	-67.38	1,808.8	168.5	2,193.2	2,047.1	146.02	15.020	
6,600.0	6,407.3	6,402.3	6,402.3	24.2	128.4	-67.59	1,808.8	168.5	2,191.3	2,045.2	146.12	14.996	
6,650.0	6,442.7	6,437.7	6,437.7	24.1	129.1	-69.60	1,808.8	168.5	2,174.2	2,027.0	147.19	14.771	
6,692.9	6,471.0	6,466.0	6,466.0	24.0	129.7	-71.40	1,808.8	168.5	2,158.9	2,010.7	148.24	14.564	
6,700.0	6,475.5	6,470.5	6,470.5	24.0	129.8	-71.70	1,808.8	168.5	2,156.4	2,007.9	148.42	14.528	
6,750.0	6,505.6	6,500.6	6,500.6	24.0	130.4	-73.86	1,808.8	168.5	2,138.1	1,988.3	149.79	14.274	
6,791.3	6,528.3	6,523.3	6,523.3	24.0	130.8	-75.66	1,808.8	168.5	2,122.8	1,971.8	150.98	14.060	
6,800.0	6,532.8	6,527.8	6,527.8	24.0	130.9	-76.04	1,808.8	168.5	2,119.5	1,968.3	151.23	14.015	
6,850.0	6,557.0	6,552.0	6,552.0	24.1	131.4	-78.21	1,808.8	168.5	2,100.9	1,948.2	152.67	13.761	
6,889.7	6,574.1	6,569.1	6,569.1	24.2	131.8	-79.90	1,808.8	168.5	2,086.1	1,932.4	153.78	13.565	
6,900.0	6,578.1	6,573.1	6,573.1	24.3	131.8	-80.33	1,808.8	168.5	2,082.4	1,928.3	154.05	13.517	
6,950.0	6,596.1	6,591.1	6,591.1	24.5	132.2	-82.37	1,808.8	168.5	2,064.2	1,908.8	155.33	13.289	
6,988.2	6,607.5	6,602.5	6,602.5	24.7	132.4	-83.85	1,808.8	168.5	2,050.6	1,894.4	156.22	13.127	
7,000.0	6,610.7	6,605.7	6,605.7	24.8	132.5	-84.29	1,808.8	168.5	2,046.4	1,890.0	156.46	13.079	
7,050.0	6,621.9	6,616.9	6,616.9	25.1	132.7	-86.06	1,808.8	168.5	2,029.4	1,871.9	157.44	12.890	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	6,623.0	6,623.0	25.4	132.9	-87.25	1,808.8	168.5	2,017.4	1,859.4	158.06	12.764	
7,100.0	6,629.7	6,624.7	6,624.7	25.6	132.9	-87.66	1,808.8	168.5	2,013.2	1,854.9	158.26	12.721	
7,150.0	6,634.1	6,629.1	6,629.1	26.0	133.0	-89.08	1,808.8	168.5	1,997.9	1,838.9	158.94	12.570	
7,185.0	6,635.1	6,630.1	6,630.1	26.4	133.0	-89.94	1,808.8	168.5	1,987.8	1,828.5	159.35	12.474	
7,196.6	6,635.0	6,630.0	6,630.0	26.5	133.0	-90.21	1,808.8	168.5	1,984.6	1,825.2	159.47	12.445	
7,200.0	6,635.0	6,630.0	6,630.0	26.6	133.0	-90.21	1,808.8	168.5	1,983.7	1,824.2	159.51	12.436	
7,283.4	6,633.9	6,628.9	6,628.9	27.6	133.0	-90.17	1,808.8	168.5	1,962.6	1,802.1	160.52	12.227	
7,300.0	6,633.7	6,628.7	6,628.7	27.8	133.0	-90.17	1,808.8	168.5	1,958.9	1,798.1	160.72	12.188	
7,381.9	6,632.6	6,627.6	6,627.6	29.0	132.9	-90.14	1,808.8	168.5	1,942.1	1,780.2	161.89	11.997	
7,400.0	6,632.4	6,627.4	6,627.4	29.2	132.9	-90.13	1,808.8	168.5	1,938.8	1,776.7	162.14	11.958	
7,480.3	6,631.4	6,626.4	6,626.4	30.5	132.9	-90.10	1,808.8	168.5	1,926.4	1,763.0	163.44	11.786	
7,500.0	6,631.1	6,626.1	6,626.1	30.9	132.9	-90.09	1,808.8	168.5	1,923.8	1,760.1	163.76	11.748	
7,578.7	6,630.1	6,625.1	6,625.1	32.3	132.9	-90.06	1,808.8	168.5	1,915.6	1,750.5	165.16	11.599	
7,600.0	6,629.8	6,624.8	6,624.8	32.7	132.9	-90.05	1,808.8	168.5	1,913.9	1,748.4	165.53	11.562	
7,677.1	6,628.9	6,623.9	6,623.9	34.1	132.9	-90.02	1,808.8	168.5	1,909.8	1,742.8	167.01	11.436	
7,700.0	6,628.6	6,623.6	6,623.6	34.6	132.9	-90.02	1,808.8	168.5	1,909.2	1,741.8	167.44	11.402	
7,740.0	6,628.1	6,623.1	6,623.1	35.4	132.9	-90.00	1,808.8	168.5	1,908.8	1,740.6	168.25	11.345	
7,775.6	6,627.6	6,622.6	6,622.6	36.1	132.8	-89.99	1,808.8	168.5	1,909.1	1,740.2	168.97	11.299 ES	
7,800.0	6,627.3	6,622.3	6,622.3	36.6	132.8	-89.98	1,808.8	168.5	1,909.8	1,740.3	169.47	11.269	
7,874.0	6,626.3	6,621.3	6,621.3	38.2	132.8	-89.95	1,808.8	168.5	1,913.5	1,742.5	171.03	11.188	
7,900.0	6,626.0	6,621.0	6,621.0	38.8	132.8	-89.94	1,808.8	168.5	1,915.5	1,743.9	171.58	11.164	
7,972.4	6,625.1	6,620.1	6,620.1	40.4	132.8	-89.91	1,808.8	168.5	1,922.9	1,749.7	173.18	11.104	
8,000.0	6,624.7	6,619.7	6,619.7	41.0	132.8	-89.90	1,808.8	168.5	1,926.4	1,752.7	173.78	11.085	
8,070.8	6,623.8	6,618.8	6,618.8	42.6	132.8	-89.87	1,808.8	168.5	1,937.3	1,761.9	175.39	11.046	
8,100.0	6,623.4	6,618.4	6,618.4	43.3	132.8	-89.86	1,808.8	168.5	1,942.5	1,766.4	176.05	11.034	
8,169.3	6,622.6	6,617.6	6,617.6	44.9	132.7	-89.84	1,808.8	168.5	1,956.5	1,778.8	177.66	11.013	
8,200.0	6,622.2	6,617.2	6,617.2	45.6	132.7	-89.82	1,808.8	168.5	1,963.5	1,785.1	178.37	11.008	
8,267.7	6,621.3	6,616.3	6,616.3	47.3	132.7	-89.80	1,808.8	168.5	1,980.4	1,800.4	179.98	11.003 SF	
8,300.0	6,620.9	6,615.9	6,615.9	48.0	132.7	-89.78	1,808.8	168.5	1,989.3	1,808.5	180.75	11.006	
8,366.1	6,620.0	6,615.0	6,615.0	49.7	132.7	-89.76	1,808.8	168.5	2,008.9	1,826.5	182.35	11.017	
8,400.0	6,619.6	6,614.6	6,614.6	50.5	132.7	-89.75	1,808.8	168.5	2,019.7	1,836.5	183.16	11.027	
8,464.5	6,618.8	6,613.8	6,613.8	52.1	132.7	-89.72	1,808.8	168.5	2,041.7	1,856.9	184.75	11.051	
8,500.0	6,618.3	6,613.3	6,613.3	53.0	132.7	-89.71	1,808.8	168.5	2,054.5	1,868.9	185.62	11.069	
8,563.0	6,617.5	6,612.5	6,612.5	54.5	132.6	-89.68	1,808.8	168.5	2,078.7	1,891.5	187.18	11.105	
8,600.0	6,617.0	6,612.0	6,612.0	55.5	132.6	-89.67	1,808.8	168.5	2,093.6	1,905.5	188.10	11.130	
8,661.4	6,616.3	6,611.3	6,611.3	57.0	132.6	-89.65	1,808.8	168.5	2,119.5	1,929.9	189.64	11.176	
8,700.0	6,615.8	6,610.8	6,610.8	58.0	132.6	-89.63	1,808.8	168.5	2,136.6	1,946.0	190.61	11.209	
8,759.8	6,615.0	6,610.0	6,610.0	59.5	132.6	-89.61	1,808.8	168.5	2,164.1	1,972.0	192.13	11.264	
8,800.0	6,614.5	6,609.5	6,609.5	60.6	132.6	-89.59	1,808.8	168.5	2,183.4	1,990.2	193.15	11.304	
8,858.2	6,613.7	6,608.7	6,608.7	62.1	132.6	-89.57	1,808.8	168.5	2,212.2	2,017.6	194.64	11.366	
8,900.0	6,613.2	6,608.2	6,608.2	63.2	132.6	-89.55	1,808.8	168.5	2,233.6	2,037.9	195.71	11.413	
8,956.7	6,612.5	6,607.5	6,607.5	64.6	132.5	-89.53	1,808.8	168.5	2,263.6	2,066.4	197.16	11.481	
9,000.0	6,611.9	6,606.9	6,606.9	65.8	132.5	-89.51	1,808.8	168.5	2,287.1	2,088.9	198.28	11.535	
9,055.1	6,611.2	6,606.2	6,606.2	67.2	132.5	-89.49	1,808.8	168.5	2,317.9	2,118.2	199.71	11.607	
9,100.0	6,610.6	6,605.6	6,605.6	68.4	132.5	-89.48	1,808.8	168.5	2,343.7	2,142.8	200.87	11.668	
9,153.5	6,609.9	6,604.9	6,604.9	69.8	132.5	-89.45	1,808.8	168.5	2,375.2	2,172.9	202.27	11.743	
9,200.0	6,609.3	6,604.3	6,604.3	71.0	132.5	-89.44	1,808.8	168.5	2,403.1	2,199.6	203.48	11.810	
9,251.9	6,608.7	6,603.7	6,603.7	72.4	132.5	-89.42	1,808.8	168.5	2,435.0	2,230.2	204.84	11.887	
9,300.0	6,608.1	6,603.1	6,603.1	73.7	132.4	-89.40	1,808.8	168.5	2,465.1	2,259.0	206.10	11.961	
9,350.4	6,607.4	6,602.4	6,602.4	75.0	132.4	-89.38	1,808.8	168.5	2,497.3	2,289.9	207.42	12.040	
9,400.0	6,606.8	6,601.8	6,601.8	76.3	132.4	-89.36	1,808.8	168.5	2,529.6	2,320.9	208.73	12.119	
9,448.8	6,606.1	6,601.1	6,601.1	77.6	132.4	-89.34	1,808.8	168.5	2,561.9	2,351.9	210.02	12.198	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,605.5	6,600.5	6,600.5	79.0	132.4	-89.32	1,808.8	168.5	2,596.3	2,384.9	211.37	12.283	
9,547.2	6,604.9	6,599.9	6,599.9	80.2	132.4	-89.30	1,808.8	168.5	2,628.5	2,415.9	212.62	12.363	
9,600.0	6,604.2	6,599.2	6,599.2	81.7	132.4	-89.28	1,808.8	168.5	2,665.1	2,451.1	214.02	12.453	
9,645.6	6,603.6	6,598.6	6,598.6	82.9	132.4	-89.26	1,808.8	168.5	2,697.1	2,481.9	215.23	12.531	
9,700.0	6,602.9	6,597.9	6,597.9	84.3	132.3	-89.24	1,808.8	168.5	2,735.8	2,519.1	216.68	12.626	
9,744.1	6,602.3	6,597.3	6,597.3	85.5	132.3	-89.23	1,808.8	168.5	2,767.5	2,549.7	217.85	12.704	
9,800.0	6,601.6	6,596.6	6,596.6	87.0	132.3	-89.20	1,808.8	168.5	2,808.3	2,589.0	219.34	12.803	
9,842.5	6,601.1	6,596.1	6,596.1	88.2	132.3	-89.19	1,808.8	168.5	2,839.6	2,619.1	220.48	12.879	
9,900.0	6,600.3	6,595.3	6,595.3	89.7	132.3	-89.16	1,808.8	168.5	2,882.4	2,660.4	222.02	12.983	
9,940.9	6,599.8	6,594.8	6,594.8	90.9	132.3	-89.15	1,808.8	168.5	2,913.2	2,690.1	223.11	13.057	
10,000.0	6,599.0	6,594.0	6,594.0	92.5	132.3	-89.13	1,808.8	168.5	2,958.1	2,733.4	224.70	13.165	
10,039.3	6,598.5	6,593.5	6,593.5	93.5	132.3	-89.11	1,808.8	168.5	2,988.3	2,762.5	225.75	13.237	
10,100.0	6,597.7	6,592.7	6,592.7	95.2	132.2	-89.09	1,808.8	168.5	3,035.2	2,807.8	227.38	13.348	
10,137.8	6,597.3	6,592.3	6,592.3	96.2	132.2	-89.07	1,808.8	168.5	3,064.6	2,836.2	228.40	13.418	
10,200.0	6,596.5	6,591.5	6,591.5	97.9	132.2	-89.05	1,808.8	168.5	3,113.6	2,883.5	230.07	13.533	
10,236.2	6,596.0	6,591.0	6,591.0	98.9	132.2	-89.03	1,808.8	168.5	3,142.2	2,911.2	231.05	13.600	
10,300.0	6,595.2	6,590.2	6,590.2	100.6	132.2	-89.01	1,808.8	168.5	3,193.2	2,960.4	232.77	13.718	
10,334.6	6,594.7	6,589.7	6,589.7	101.6	132.2	-89.00	1,808.8	168.5	3,221.0	2,987.3	233.71	13.782	
10,400.0	6,593.9	6,588.9	6,588.9	103.3	132.2	-88.97	1,808.8	168.5	3,273.9	3,038.4	235.47	13.903	
10,433.0	6,593.5	6,588.5	6,588.5	104.2	132.2	-88.96	1,808.8	168.5	3,300.8	3,064.4	236.36	13.965	
10,500.0	6,592.6	6,587.6	6,587.6	106.1	132.1	-88.93	1,808.8	168.5	3,355.6	3,117.4	238.17	14.089	
10,531.5	6,592.2	6,587.2	6,587.2	106.9	132.1	-88.92	1,808.8	168.5	3,381.5	3,142.5	239.03	14.147	
10,600.0	6,591.3	6,586.3	6,586.3	108.8	132.1	-88.89	1,808.8	168.5	3,438.3	3,197.4	240.88	14.274	
10,629.9	6,590.9	6,585.9	6,585.9	109.6	132.1	-88.88	1,808.8	168.5	3,463.2	3,221.5	241.69	14.329	
10,700.0	6,590.0	6,585.0	6,585.0	111.6	132.1	-88.85	1,808.8	168.5	3,521.9	3,278.3	243.59	14.458	
10,728.3	6,589.6	6,584.6	6,584.6	112.3	132.1	-88.84	1,808.8	168.5	3,545.7	3,301.4	244.36	14.510	
10,800.0	6,588.7	6,583.7	6,583.7	114.3	132.1	-88.81	1,808.8	168.5	3,606.4	3,360.0	246.31	14.642	
10,826.7	6,588.4	6,583.4	6,583.4	115.0	132.1	-88.80	1,808.8	168.5	3,629.1	3,382.0	247.04	14.690	
10,900.0	6,587.4	6,582.4	6,582.4	117.0	132.0	-88.77	1,808.8	168.5	3,691.6	3,442.5	249.03	14.824	
10,925.2	6,587.1	6,582.1	6,582.1	117.7	132.0	-88.76	1,808.8	168.5	3,713.1	3,463.4	249.71	14.870	
11,000.0	6,586.1	6,581.1	6,581.1	119.8	132.0	-88.73	1,808.8	168.5	3,777.5	3,525.8	251.75	15.005	
11,023.6	6,585.8	6,580.8	6,580.8	120.4	132.0	-88.73	1,808.8	168.5	3,797.9	3,545.5	252.39	15.048	
11,100.0	6,584.8	6,579.8	6,579.8	122.5	132.0	-88.70	1,808.8	168.5	3,864.1	3,609.7	254.47	15.185	
11,122.0	6,584.5	6,579.5	6,579.5	123.2	132.0	-88.69	1,808.8	168.5	3,883.3	3,628.2	255.07	15.224	
11,200.0	6,583.5	6,578.5	6,578.5	125.3	132.0	-88.66	1,808.8	168.5	3,951.4	3,694.2	257.20	15.363	
11,220.4	6,583.3	6,578.3	6,578.3	125.9	132.0	-88.65	1,808.8	168.5	3,969.3	3,711.5	257.75	15.400	
11,300.0	6,582.2	6,577.2	6,577.2	128.1	131.9	-88.62	1,808.8	168.5	4,039.2	3,779.3	259.92	15.540	
11,318.9	6,582.0	6,577.0	6,577.0	128.6	131.9	-88.61	1,808.8	168.5	4,055.9	3,795.4	260.44	15.573	
11,400.0	6,580.9	6,575.9	6,575.9	130.8	131.9	-88.58	1,808.8	168.5	4,127.6	3,865.0	262.65	15.715	
11,417.3	6,580.7	6,575.7	6,575.7	131.3	131.9	-88.57	1,808.8	168.5	4,143.0	3,879.8	263.12	15.745	
11,500.0	6,579.7	6,574.7	6,574.7	133.6	131.9	-88.54	1,808.8	168.5	4,216.5	3,951.1	265.38	15.888	
11,515.7	6,579.4	6,574.4	6,574.4	134.0	131.9	-88.53	1,808.8	168.5	4,230.5	3,964.7	265.81	15.915	
11,600.0	6,578.4	6,573.4	6,573.4	136.3	131.9	-88.50	1,808.8	168.5	4,305.9	4,037.8	268.12	16.060	
11,614.1	6,578.2	6,573.2	6,573.2	136.7	131.8	-88.49	1,808.8	168.5	4,318.6	4,050.1	268.50	16.084	
11,700.0	6,577.1	6,572.1	6,572.1	139.1	131.8	-88.46	1,808.8	168.5	4,395.8	4,124.9	270.85	16.229	
11,712.6	6,576.9	6,571.9	6,571.9	139.5	131.8	-88.45	1,808.8	168.5	4,407.1	4,135.9	271.20	16.251	
11,800.0	6,575.8	6,570.8	6,570.8	141.9	131.8	-88.42	1,808.8	168.5	4,486.1	4,212.5	273.59	16.397	
11,811.0	6,575.6	6,570.6	6,570.6	142.2	131.8	-88.42	1,808.8	168.5	4,496.0	4,222.1	273.89	16.415	
11,858.8	6,575.0	6,570.0	6,570.0	143.5	131.8	-88.40	1,808.8	168.5	4,539.3	4,264.1	275.20	16.495	
11,859.3	6,575.0	6,570.0	6,570.0	143.5	131.8	-88.40	1,808.8	168.5	4,539.8	4,264.6	275.21	16.496	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-52.73	1,662.1	-2,184.1	2,744.6				
98.4	98.4	94.4	94.4	0.1	0.0	-52.73	1,662.1	-2,184.1	2,744.6	2,744.5	0.10	N/A	
100.0	100.0	96.0	96.0	0.1	0.0	-52.73	1,662.1	-2,184.1	2,744.6	2,744.5	0.10	N/A	
196.8	196.8	192.8	192.8	0.3	1.0	-52.73	1,662.1	-2,184.1	2,744.6	2,743.3	1.30	2,104.114	
200.0	200.0	196.0	196.0	0.3	1.0	-52.73	1,662.1	-2,184.1	2,744.6	2,743.2	1.35	2,040.553	
295.3	295.3	291.3	291.3	0.5	3.2	-52.73	1,662.1	-2,184.1	2,744.6	2,740.9	3.72	737.902	
300.0	300.0	296.0	296.0	0.5	3.3	-52.73	1,662.1	-2,184.1	2,744.6	2,740.8	3.84	714.794	
393.7	393.7	389.7	389.7	0.8	5.3	-52.73	1,662.1	-2,184.1	2,744.6	2,738.6	6.01	456.731	
400.0	400.0	396.0	396.0	0.8	5.4	-52.73	1,662.1	-2,184.1	2,744.6	2,738.4	6.15	445.954	
492.1	492.1	488.1	488.1	1.0	7.3	-52.73	1,662.1	-2,184.1	2,744.6	2,736.3	8.24	332.889	
500.0	500.0	496.0	496.0	1.0	7.4	-52.73	1,662.1	-2,184.1	2,744.6	2,736.2	8.42	325.832	
590.5	590.5	586.5	586.5	1.2	9.3	-52.73	1,662.1	-2,184.1	2,744.6	2,734.1	10.46	262.269	
600.0	600.0	596.0	596.0	1.2	9.5	-52.73	1,662.1	-2,184.1	2,744.6	2,733.9	10.68	257.037	
689.0	689.0	685.0	685.0	1.4	11.3	-52.73	1,662.1	-2,184.1	2,744.6	2,731.9	12.68	216.487	
700.0	700.0	696.0	696.0	1.4	11.5	-52.73	1,662.1	-2,184.1	2,744.6	2,731.7	12.93	212.337	
787.4	787.4	783.4	783.4	1.6	13.2	-52.73	1,662.1	-2,184.1	2,744.6	2,729.7	14.89	184.361	
800.0	800.0	796.0	796.0	1.7	13.5	-52.73	1,662.1	-2,184.1	2,744.6	2,729.4	15.17	180.925	
885.8	885.8	881.8	881.8	1.9	15.2	-52.73	1,662.1	-2,184.1	2,744.6	2,727.5	17.09	160.559	
900.0	900.0	896.0	896.0	1.9	15.5	-52.73	1,662.1	-2,184.1	2,744.6	2,727.2	17.41	157.628	
984.2	984.2	980.2	980.2	2.1	17.2	-52.73	1,662.1	-2,184.1	2,744.6	2,725.3	19.30	142.211	
1,000.0	1,000.0	996.0	996.0	2.1	17.5	-52.73	1,662.1	-2,184.1	2,744.6	2,724.9	19.65	139.657	
1,082.7	1,082.7	1,078.7	1,078.7	2.3	19.2	-52.73	1,662.1	-2,184.1	2,744.6	2,723.1	21.50	127.633	
1,100.0	1,100.0	1,096.0	1,096.0	2.3	19.5	-52.73	1,662.1	-2,184.1	2,744.6	2,722.7	21.89	125.370	
1,181.1	1,181.1	1,177.1	1,177.1	2.5	21.2	-52.73	1,662.1	-2,184.1	2,744.6	2,720.9	23.71	115.769	
1,200.0	1,200.0	1,196.0	1,196.0	2.6	21.6	-52.73	1,662.1	-2,184.1	2,744.6	2,720.5	24.13	113.739	
1,279.5	1,279.5	1,275.5	1,275.5	2.7	23.2	42.49	1,662.1	-2,184.1	2,743.8	2,717.9	25.89	105.964	
1,300.0	1,300.0	1,296.0	1,296.0	2.8	23.6	42.51	1,662.1	-2,184.1	2,743.3	2,717.0	26.35	104.129	
1,377.9	1,377.8	1,373.8	1,373.8	2.9	25.1	42.60	1,662.1	-2,184.1	2,740.5	2,712.5	28.05	97.707	
1,400.0	1,399.8	1,395.8	1,395.8	3.0	25.6	42.63	1,662.1	-2,184.1	2,739.4	2,710.9	28.53	96.030	
1,476.4	1,475.9	1,471.9	1,471.9	3.1	27.1	42.79	1,662.1	-2,184.1	2,734.8	2,704.6	30.18	90.612	
1,500.0	1,499.5	1,495.5	1,495.5	3.2	27.6	42.84	1,662.1	-2,184.1	2,733.0	2,702.3	30.69	89.055	
1,574.8	1,573.7	1,569.7	1,569.7	3.4	29.1	43.06	1,662.1	-2,184.1	2,726.6	2,694.3	32.29	84.429	
1,600.0	1,598.7	1,594.7	1,594.7	3.4	29.6	43.14	1,662.1	-2,184.1	2,724.1	2,691.3	32.83	82.974	
1,673.2	1,671.1	1,667.1	1,667.1	3.6	31.0	43.41	1,662.1	-2,184.1	2,716.0	2,681.6	34.39	78.980	
1,700.0	1,697.5	1,693.5	1,693.5	3.7	31.6	43.52	1,662.1	-2,184.1	2,712.6	2,677.7	34.95	77.611	
1,771.6	1,767.9	1,763.9	1,763.9	3.9	33.0	43.85	1,662.1	-2,184.1	2,702.9	2,666.5	36.46	74.127	
1,800.0	1,795.6	1,791.6	1,791.6	4.0	33.5	43.99	1,662.1	-2,184.1	2,698.7	2,661.7	37.06	72.829	
1,870.1	1,864.0	1,860.0	1,860.0	4.3	34.9	44.38	1,662.1	-2,184.1	2,687.6	2,649.0	38.53	69.760	
1,900.0	1,893.1	1,889.1	1,889.1	4.4	35.5	44.56	1,662.1	-2,184.1	2,682.4	2,643.3	39.15	68.521	
1,968.5	1,959.3	1,955.3	1,955.3	4.6	36.8	44.99	1,662.1	-2,184.1	2,669.9	2,629.3	40.58	65.794	
1,992.4	1,982.4	1,978.4	1,978.4	4.7	37.3	45.16	1,662.1	-2,184.1	2,665.3	2,624.2	41.08	64.887	
2,000.0	1,989.6	1,985.6	1,985.6	4.8	37.5	45.19	1,662.1	-2,184.1	2,663.8	2,622.5	41.25	64.582	
2,066.9	2,054.0	2,050.0	2,050.0	5.1	38.7	45.46	1,662.1	-2,184.1	2,650.7	2,607.9	42.77	61.974	
2,100.0	2,085.8	2,081.8	2,081.8	5.2	39.4	45.60	1,662.1	-2,184.1	2,644.2	2,600.7	43.52	60.755	
2,165.3	2,148.7	2,144.7	2,144.7	5.5	40.7	45.87	1,662.1	-2,184.1	2,631.5	2,586.5	45.02	58.451	
2,200.0	2,182.0	2,178.0	2,178.0	5.7	41.3	46.02	1,662.1	-2,184.1	2,624.8	2,579.0	45.82	57.284	
2,263.8	2,243.4	2,239.4	2,239.4	6.0	42.6	46.29	1,662.1	-2,184.1	2,612.5	2,565.2	47.30	55.235	
2,300.0	2,278.2	2,274.2	2,274.2	6.2	43.3	46.44	1,662.1	-2,184.1	2,605.5	2,557.4	48.14	54.126	
2,362.2	2,338.1	2,334.1	2,334.1	6.5	44.5	46.71	1,662.1	-2,184.1	2,593.6	2,544.0	49.59	52.302	
2,400.0	2,374.4	2,370.4	2,370.4	6.7	45.2	46.87	1,662.1	-2,184.1	2,586.4	2,535.9	50.47	51.243	
2,460.6	2,432.8	2,428.8	2,428.8	7.0	46.4	47.13	1,662.1	-2,184.1	2,574.9	2,523.0	51.90	49.616	
2,500.0	2,470.6	2,466.6	2,466.6	7.2	47.1	47.30	1,662.1	-2,184.1	2,567.4	2,514.6	52.82	48.605	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,527.4	2,523.4	2,523.4	7.6	48.3	47.56	1,662.1	-2,184.1	2,556.3	2,502.1	54.22	47.150	
2,600.0	2,566.8	2,562.8	2,562.8	7.8	49.1	47.75	1,662.1	-2,184.1	2,548.6	2,493.4	55.19	46.183	
2,657.5	2,622.1	2,618.1	2,618.1	8.1	50.2	48.00	1,662.1	-2,184.1	2,537.9	2,481.3	56.55	44.879	
2,700.0	2,663.0	2,659.0	2,659.0	8.3	51.0	48.19	1,662.1	-2,184.1	2,529.9	2,472.4	57.56	43.954	
2,755.9	2,716.8	2,712.8	2,712.8	8.6	52.1	48.45	1,662.1	-2,184.1	2,519.6	2,460.7	58.89	42.783	
2,800.0	2,759.2	2,755.2	2,755.2	8.9	52.9	48.65	1,662.1	-2,184.1	2,511.4	2,451.5	59.94	41.896	
2,854.3	2,811.5	2,807.5	2,807.5	9.2	54.0	48.90	1,662.1	-2,184.1	2,501.4	2,440.2	61.25	40.843	
2,900.0	2,855.4	2,851.4	2,851.4	9.4	54.9	49.11	1,662.1	-2,184.1	2,493.1	2,430.7	62.34	39.992	
2,952.7	2,906.2	2,902.2	2,902.2	9.7	55.9	49.36	1,662.1	-2,184.1	2,483.5	2,419.9	63.61	39.043	
3,000.0	2,951.6	2,947.6	2,947.6	10.0	56.8	49.58	1,662.1	-2,184.1	2,474.9	2,410.1	64.75	38.225	
3,051.2	3,000.9	2,996.9	2,996.9	10.3	57.8	49.82	1,662.1	-2,184.1	2,465.6	2,399.7	65.98	37.370	
3,100.0	3,047.8	3,043.8	3,043.8	10.5	58.7	50.05	1,662.1	-2,184.1	2,456.9	2,389.7	67.16	36.583	
3,149.6	3,095.5	3,091.5	3,091.5	10.8	59.7	50.29	1,662.1	-2,184.1	2,448.0	2,379.6	68.36	35.810	
3,200.0	3,144.0	3,140.0	3,140.0	11.1	60.7	50.53	1,662.1	-2,184.1	2,439.0	2,369.4	69.58	35.053	
3,248.0	3,190.2	3,186.2	3,186.2	11.4	61.6	50.77	1,662.1	-2,184.1	2,430.5	2,359.8	70.75	34.354	
3,300.0	3,240.2	3,236.2	3,236.2	11.7	62.6	51.02	1,662.1	-2,184.1	2,421.4	2,349.3	72.01	33.624	
3,346.4	3,284.9	3,280.9	3,280.9	11.9	63.5	51.25	1,662.1	-2,184.1	2,413.2	2,340.1	73.15	32.992	
3,400.0	3,336.4	3,332.4	3,332.4	12.2	64.5	51.51	1,662.1	-2,184.1	2,403.9	2,329.4	74.45	32.287	
3,444.9	3,379.6	3,375.6	3,375.6	12.5	65.4	51.74	1,662.1	-2,184.1	2,396.1	2,320.5	75.55	31.715	
3,500.0	3,432.6	3,428.6	3,428.6	12.8	66.5	52.02	1,662.1	-2,184.1	2,386.6	2,309.7	76.90	31.035	
3,543.3	3,474.3	3,470.3	3,470.3	13.1	67.3	52.24	1,662.1	-2,184.1	2,379.1	2,301.2	77.96	30.517	
3,600.0	3,528.8	3,524.8	3,524.8	13.4	68.4	52.52	1,662.1	-2,184.1	2,369.4	2,290.1	79.35	29.859	
3,641.7	3,569.0	3,565.0	3,565.0	13.6	69.2	52.74	1,662.1	-2,184.1	2,362.4	2,282.0	80.38	29.390	
3,700.0	3,625.0	3,621.0	3,621.0	14.0	70.3	53.04	1,662.1	-2,184.1	2,352.5	2,270.7	81.82	28.754	
3,740.1	3,663.6	3,659.6	3,659.6	14.2	71.1	53.25	1,662.1	-2,184.1	2,345.8	2,263.0	82.81	28.328	
3,800.0	3,721.2	3,717.2	3,717.2	14.5	72.3	53.56	1,662.1	-2,184.1	2,335.8	2,251.5	84.29	27.713	
3,838.6	3,758.3	3,754.3	3,754.3	14.8	73.0	53.76	1,662.1	-2,184.1	2,329.4	2,244.1	85.24	27.327	
3,900.0	3,817.4	3,813.4	3,813.4	15.1	74.2	54.09	1,662.1	-2,184.1	2,319.3	2,232.5	86.76	26.731	
3,937.0	3,853.0	3,849.0	3,849.0	15.3	74.9	54.29	1,662.1	-2,184.1	2,313.2	2,225.5	87.68	26.382	
4,000.0	3,913.6	3,909.6	3,909.6	15.7	76.2	54.63	1,662.1	-2,184.1	2,302.9	2,213.7	89.25	25.804	
4,035.4	3,947.7	3,943.7	3,943.7	15.9	76.8	54.82	1,662.1	-2,184.1	2,297.2	2,207.1	90.13	25.488	
4,100.0	4,009.8	4,005.8	4,005.8	16.3	78.1	55.17	1,662.1	-2,184.1	2,286.8	2,195.1	91.74	24.928	
4,133.8	4,042.4	4,038.4	4,038.4	16.5	78.7	55.36	1,662.1	-2,184.1	2,281.4	2,188.8	92.58	24.642	
4,200.0	4,106.0	4,102.0	4,102.0	16.8	80.0	55.72	1,662.1	-2,184.1	2,270.9	2,176.7	94.23	24.099	
4,232.3	4,137.1	4,133.1	4,133.1	17.0	80.6	55.90	1,662.1	-2,184.1	2,265.8	2,170.8	95.04	23.841	
4,300.0	4,202.2	4,198.2	4,198.2	17.4	82.0	56.28	1,662.1	-2,184.1	2,255.3	2,158.5	96.74	23.313	
4,330.7	4,231.7	4,227.7	4,227.7	17.6	82.5	56.45	1,662.1	-2,184.1	2,250.5	2,153.0	97.51	23.080	
4,400.0	4,298.4	4,294.4	4,294.4	18.0	83.9	56.85	1,662.1	-2,184.1	2,239.8	2,140.6	99.25	22.567	
4,429.1	4,326.4	4,322.4	4,322.4	18.2	84.5	57.01	1,662.1	-2,184.1	2,235.3	2,135.4	99.98	22.358	
4,500.0	4,394.6	4,390.6	4,390.6	18.6	85.8	57.42	1,662.1	-2,184.1	2,224.6	2,122.8	101.77	21.860	
4,527.5	4,421.1	4,417.1	4,417.1	18.7	86.4	57.58	1,662.1	-2,184.1	2,220.4	2,118.0	102.46	21.671	
4,600.0	4,490.8	4,486.8	4,486.8	19.2	87.8	58.00	1,662.1	-2,184.1	2,209.6	2,105.3	104.29	21.187	
4,626.0	4,515.8	4,511.8	4,511.8	19.3	88.3	58.15	1,662.1	-2,184.1	2,205.7	2,100.8	104.95	21.018	
4,700.0	4,587.0	4,583.0	4,583.0	19.8	89.7	58.59	1,662.1	-2,184.1	2,194.8	2,088.0	106.82	20.547	
4,724.4	4,610.5	4,606.5	4,606.5	19.9	90.2	58.73	1,662.1	-2,184.1	2,191.3	2,083.8	107.44	20.395	
4,800.0	4,683.2	4,679.2	4,679.2	20.3	91.6	59.18	1,662.1	-2,184.1	2,180.3	2,070.9	109.36	19.938	
4,822.8	4,705.2	4,701.2	4,701.2	20.5	92.1	59.32	1,662.1	-2,184.1	2,177.0	2,067.1	109.94	19.803	
4,900.0	4,779.4	4,775.4	4,775.4	20.9	93.6	59.79	1,662.1	-2,184.1	2,166.0	2,054.1	111.90	19.357	
4,921.2	4,799.8	4,795.8	4,795.8	21.0	94.0	59.92	1,662.1	-2,184.1	2,163.0	2,050.6	112.44	19.237	
5,000.0	4,875.6	4,871.6	4,871.6	21.5	95.5	60.40	1,662.1	-2,184.1	2,152.0	2,037.6	114.45	18.804	
5,019.7	4,894.5	4,890.5	4,890.5	21.6	95.9	60.52	1,662.1	-2,184.1	2,149.3	2,034.3	114.95	18.698	
5,100.0	4,971.8	4,967.8	4,967.8	22.1	97.4	61.01	1,662.1	-2,184.1	2,138.3	2,021.3	117.00	18.276	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
5,118.1	4,989.2	4,985.2	4,985.2	22.2	97.8	61.13	1,662.1	-2,184.1	2,135.8	2,018.3	117.46	18.183	
5,200.0	5,068.0	5,064.0	5,064.0	22.7	99.4	61.64	1,662.1	-2,184.1	2,124.8	2,005.2	119.56	17.772	
5,216.5	5,083.9	5,079.9	5,079.9	22.8	99.7	61.74	1,662.1	-2,184.1	2,122.6	2,002.6	119.98	17.691	
5,240.0	5,106.5	5,102.5	5,102.5	22.9	100.1	61.89	1,662.1	-2,184.1	2,119.4	1,998.8	120.58	17.576	
5,300.0	5,164.4	5,160.4	5,160.4	23.2	101.3	62.12	1,662.1	-2,184.1	2,111.8	1,989.7	122.17	17.286	
5,314.9	5,178.8	5,174.8	5,174.8	23.3	101.6	62.18	1,662.1	-2,184.1	2,110.0	1,987.5	122.55	17.217	
5,400.0	5,261.5	5,257.5	5,257.5	23.6	103.3	62.48	1,662.1	-2,184.1	2,100.6	1,975.9	124.71	16.844	
5,413.4	5,274.6	5,270.6	5,270.6	23.6	103.5	62.52	1,662.1	-2,184.1	2,099.2	1,974.2	125.04	16.788	
5,500.0	5,359.5	5,355.5	5,355.5	23.9	105.2	62.79	1,662.1	-2,184.1	2,091.2	1,964.0	127.19	16.442	
5,511.8	5,371.1	5,367.1	5,367.1	24.0	105.5	62.83	1,662.1	-2,184.1	2,090.2	1,962.7	127.48	16.397	
5,600.0	5,458.0	5,454.0	5,454.0	24.2	107.2	63.06	1,662.1	-2,184.1	2,083.5	1,953.8	129.61	16.075	
5,610.2	5,468.2	5,464.2	5,464.2	24.3	107.4	63.08	1,662.1	-2,184.1	2,082.8	1,952.9	129.85	16.040	
5,700.0	5,557.2	5,553.2	5,553.2	24.5	109.2	63.28	1,662.1	-2,184.1	2,077.4	1,945.4	131.96	15.742	
5,708.6	5,565.7	5,561.7	5,561.7	24.5	109.4	63.29	1,662.1	-2,184.1	2,077.0	1,944.8	132.16	15.715	
5,800.0	5,656.7	5,652.7	5,652.7	24.7	111.2	63.44	1,662.1	-2,184.1	2,073.0	1,938.7	134.26	15.441	
5,807.1	5,663.7	5,659.7	5,659.7	24.7	111.3	63.45	1,662.1	-2,184.1	2,072.7	1,938.3	134.41	15.420	
5,900.0	5,756.5	5,752.5	5,752.5	24.9	113.2	63.55	1,662.1	-2,184.1	2,070.1	1,933.6	136.48	15.168	
5,905.5	5,761.9	5,757.9	5,757.9	24.9	113.3	63.55	1,662.1	-2,184.1	2,070.0	1,933.4	136.60	15.154	
6,000.0	5,856.4	5,852.4	5,852.4	25.0	115.2	63.59	1,662.1	-2,184.1	2,068.8	1,930.2	138.63	14.923	
6,003.9	5,860.3	5,856.3	5,856.3	25.0	115.3	63.59	1,662.1	-2,184.1	2,068.8	1,930.1	138.72	14.914	
6,032.5	5,888.9	5,884.9	5,884.9	25.0	115.9	-31.60	1,662.1	-2,184.1	2,068.8	1,935.8	132.94	15.561	
6,062.5	5,918.9	5,914.9	5,914.9	25.1	116.5	-31.60	1,662.1	-2,184.1	2,068.8	1,935.2	133.59	15.486 CC	
6,100.0	5,956.4	5,952.4	5,952.4	25.1	117.2	-121.58	1,662.1	-2,184.1	2,069.3	1,928.6	140.67	14.710 ES	
6,102.3	5,958.7	5,954.7	5,954.7	25.1	117.3	-121.58	1,662.1	-2,184.1	2,069.3	1,928.6	140.71	14.707	
6,150.0	6,006.2	6,002.2	6,002.2	25.1	118.2	-121.53	1,662.1	-2,184.1	2,071.6	1,930.1	141.44	14.646	
6,200.0	6,055.6	6,051.6	6,051.6	25.1	119.2	-121.43	1,662.1	-2,184.1	2,075.7	1,933.7	142.01	14.616	
6,200.8	6,056.3	6,052.3	6,052.3	25.1	119.2	-121.43	1,662.1	-2,184.1	2,075.8	1,933.7	142.02	14.616 SF	
6,250.0	6,104.3	6,100.3	6,100.3	25.0	120.2	-121.28	1,662.1	-2,184.1	2,081.7	1,939.3	142.39	14.619	
6,299.2	6,151.3	6,147.3	6,147.3	24.9	121.2	-121.07	1,662.1	-2,184.1	2,089.3	1,946.7	142.59	14.653	
6,300.0	6,152.1	6,148.1	6,148.1	24.9	121.2	-121.07	1,662.1	-2,184.1	2,089.5	1,946.9	142.59	14.653	
6,350.0	6,198.7	6,194.7	6,194.7	24.8	122.1	-120.79	1,662.1	-2,184.1	2,099.2	1,956.5	142.64	14.716	
6,397.6	6,241.9	6,237.9	6,237.9	24.7	123.0	-120.45	1,662.1	-2,184.1	2,110.1	1,967.5	142.58	14.800	
6,400.0	6,244.1	6,240.1	6,240.1	24.7	123.0	-120.44	1,662.1	-2,184.1	2,110.7	1,968.1	142.57	14.805	
6,450.0	6,287.8	6,283.8	6,283.8	24.5	123.9	-119.99	1,662.1	-2,184.1	2,124.1	1,981.7	142.42	14.915	
6,496.0	6,326.5	6,322.5	6,322.5	24.4	124.7	-119.47	1,662.1	-2,184.1	2,138.2	1,995.9	142.26	15.030	
6,500.0	6,329.7	6,325.7	6,325.7	24.4	124.7	-119.43	1,662.1	-2,184.1	2,139.5	1,997.2	142.24	15.041	
6,550.0	6,369.6	6,365.6	6,365.6	24.3	125.5	-118.74	1,662.1	-2,184.1	2,156.7	2,014.6	142.10	15.177	
6,594.5	6,403.3	6,399.3	6,399.3	24.2	126.2	-118.01	1,662.1	-2,184.1	2,173.6	2,031.5	142.05	15.301	
6,600.0	6,407.3	6,403.3	6,403.3	24.2	126.3	-117.91	1,662.1	-2,184.1	2,175.8	2,033.7	142.06	15.316	
6,650.0	6,442.7	6,438.7	6,438.7	24.1	127.0	-116.91	1,662.1	-2,184.1	2,196.7	2,054.5	142.18	15.450	
6,692.9	6,471.0	6,467.0	6,467.0	24.0	127.6	-115.91	1,662.1	-2,184.1	2,216.1	2,073.6	142.48	15.553	
6,700.0	6,475.5	6,471.5	6,471.5	24.0	127.7	-115.73	1,662.1	-2,184.1	2,219.4	2,076.9	142.55	15.570	
6,750.0	6,505.6	6,501.6	6,501.6	24.0	128.3	-114.33	1,662.1	-2,184.1	2,243.9	2,100.7	143.21	15.668	
6,791.3	6,528.3	6,524.3	6,524.3	24.0	128.7	-113.00	1,662.1	-2,184.1	2,265.4	2,121.4	144.02	15.730	
6,800.0	6,532.8	6,528.8	6,528.8	24.0	128.8	-112.70	1,662.1	-2,184.1	2,270.1	2,125.9	144.22	15.741	
6,850.0	6,557.0	6,553.0	6,553.0	24.1	129.3	-110.80	1,662.1	-2,184.1	2,297.9	2,152.3	145.58	15.784	
6,889.7	6,574.1	6,570.1	6,570.1	24.2	129.7	-109.10	1,662.1	-2,184.1	2,321.1	2,174.2	146.91	15.800	
6,900.0	6,578.1	6,574.1	6,574.1	24.3	129.7	-108.63	1,662.1	-2,184.1	2,327.3	2,180.0	147.28	15.802	
6,950.0	6,596.1	6,592.1	6,592.1	24.5	130.1	-106.14	1,662.1	-2,184.1	2,358.0	2,208.8	149.23	15.801	
6,988.2	6,607.5	6,603.5	6,603.5	24.7	130.3	-104.03	1,662.1	-2,184.1	2,382.4	2,231.5	150.84	15.794	
7,000.0	6,610.7	6,606.7	6,606.7	24.8	130.4	-103.34	1,662.1	-2,184.1	2,390.1	2,238.7	151.34	15.793	
7,050.0	6,621.9	6,617.9	6,617.9	25.1	130.6	-100.21	1,662.1	-2,184.1	2,423.2	2,269.8	153.41	15.796	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	6,624.0	6,624.0	25.4	130.7	-97.71	1,662.1	-2,184.1	2,448.1	2,293.3	154.80	15.814	
7,100.0	6,629.7	6,625.7	6,625.7	25.6	130.8	-96.75	1,662.1	-2,184.1	2,457.4	2,302.1	155.26	15.828	
7,150.0	6,634.1	6,630.1	6,630.1	26.0	130.9	-92.99	1,662.1	-2,184.1	2,492.4	2,335.7	156.65	15.910	
7,185.0	6,635.1	6,631.1	6,631.1	26.4	130.9	-90.20	1,662.1	-2,184.1	2,517.2	2,360.0	157.24	16.009	
7,196.6	6,635.0	6,631.0	6,631.0	26.5	130.9	-89.25	1,662.1	-2,184.1	2,525.5	2,368.1	157.35	16.050	
7,200.0	6,635.0	6,631.0	6,631.0	26.6	130.9	-89.25	1,662.1	-2,184.1	2,527.9	2,370.6	157.39	16.062	
7,283.4	6,633.9	6,629.9	6,629.9	27.6	130.9	-89.21	1,662.1	-2,184.1	2,588.4	2,430.0	158.39	16.342	
7,300.0	6,633.7	6,629.7	6,629.7	27.8	130.9	-89.21	1,662.1	-2,184.1	2,600.6	2,442.0	158.59	16.398	
7,381.9	6,632.6	6,628.6	6,628.6	29.0	130.8	-89.17	1,662.1	-2,184.1	2,661.4	2,501.6	159.76	16.659	
7,400.0	6,632.4	6,628.4	6,628.4	29.2	130.8	-89.16	1,662.1	-2,184.1	2,675.0	2,515.0	160.02	16.717	
7,480.3	6,631.4	6,627.4	6,627.4	30.5	130.8	-89.13	1,662.1	-2,184.1	2,735.9	2,574.6	161.31	16.960	
7,500.0	6,631.1	6,627.1	6,627.1	30.9	130.8	-89.12	1,662.1	-2,184.1	2,751.0	2,589.4	161.63	17.020	
7,578.7	6,630.1	6,626.1	6,626.1	32.3	130.8	-89.09	1,662.1	-2,184.1	2,811.9	2,648.9	163.02	17.248	
7,600.0	6,629.8	6,625.8	6,625.8	32.7	130.8	-89.08	1,662.1	-2,184.1	2,828.5	2,665.1	163.40	17.310	
7,677.1	6,628.9	6,624.9	6,624.9	34.1	130.8	-89.05	1,662.1	-2,184.1	2,889.3	2,724.4	164.87	17.524	
7,700.0	6,628.6	6,624.6	6,624.6	34.6	130.8	-89.04	1,662.1	-2,184.1	2,907.4	2,742.1	165.31	17.588	
7,775.6	6,627.6	6,623.6	6,623.6	36.1	130.7	-89.01	1,662.1	-2,184.1	2,967.9	2,801.0	166.83	17.789	
7,800.0	6,627.3	6,623.3	6,623.3	36.6	130.7	-89.00	1,662.1	-2,184.1	2,987.5	2,820.2	167.33	17.854	
7,874.0	6,626.3	6,622.3	6,622.3	38.2	130.7	-88.97	1,662.1	-2,184.1	3,047.6	2,878.7	168.89	18.045	
7,900.0	6,626.0	6,622.0	6,622.0	38.8	130.7	-88.95	1,662.1	-2,184.1	3,068.9	2,899.4	169.44	18.111	
7,972.4	6,625.1	6,621.1	6,621.1	40.4	130.7	-88.92	1,662.1	-2,184.1	3,128.4	2,957.4	171.03	18.291	
8,000.0	6,624.7	6,620.7	6,620.7	41.0	130.7	-88.91	1,662.1	-2,184.1	3,151.2	2,979.6	171.64	18.360	
8,070.8	6,623.8	6,619.8	6,619.8	42.6	130.7	-88.88	1,662.1	-2,184.1	3,210.2	3,037.0	173.24	18.530	
8,100.0	6,623.4	6,619.4	6,619.4	43.3	130.6	-88.87	1,662.1	-2,184.1	3,234.6	3,060.7	173.90	18.600	
8,169.3	6,622.6	6,618.6	6,618.6	44.9	130.6	-88.84	1,662.1	-2,184.1	3,292.9	3,117.4	175.51	18.762	
8,200.0	6,622.2	6,618.2	6,618.2	45.6	130.6	-88.83	1,662.1	-2,184.1	3,318.9	3,142.7	176.23	18.833	
8,267.7	6,621.3	6,617.3	6,617.3	47.3	130.6	-88.80	1,662.1	-2,184.1	3,376.5	3,198.7	177.83	18.987	
8,300.0	6,620.9	6,616.9	6,616.9	48.0	130.6	-88.79	1,662.1	-2,184.1	3,404.1	3,225.5	178.60	19.060	
8,366.1	6,620.0	6,616.0	6,616.0	49.7	130.6	-88.76	1,662.1	-2,184.1	3,460.8	3,280.6	180.19	19.206	
8,400.0	6,619.6	6,615.6	6,615.6	50.5	130.6	-88.74	1,662.1	-2,184.1	3,490.0	3,309.0	181.01	19.281	
8,464.5	6,618.8	6,614.8	6,614.8	52.1	130.6	-88.72	1,662.1	-2,184.1	3,545.9	3,363.3	182.59	19.420	
8,500.0	6,618.3	6,614.3	6,614.3	53.0	130.5	-88.70	1,662.1	-2,184.1	3,576.7	3,393.2	183.46	19.495	
8,563.0	6,617.5	6,613.5	6,613.5	54.5	130.5	-88.68	1,662.1	-2,184.1	3,631.6	3,446.6	185.02	19.628	
8,600.0	6,617.0	6,613.0	6,613.0	55.5	130.5	-88.66	1,662.1	-2,184.1	3,664.0	3,478.1	185.94	19.705	
8,661.4	6,616.3	6,612.3	6,612.3	57.0	130.5	-88.63	1,662.1	-2,184.1	3,718.0	3,530.5	187.48	19.831	
8,700.0	6,615.8	6,611.8	6,611.8	58.0	130.5	-88.62	1,662.1	-2,184.1	3,752.0	3,563.6	188.45	19.910	
8,759.8	6,615.0	6,611.0	6,611.0	59.5	130.5	-88.59	1,662.1	-2,184.1	3,804.9	3,615.0	189.97	20.029	
8,800.0	6,614.5	6,610.5	6,610.5	60.6	130.5	-88.58	1,662.1	-2,184.1	3,840.6	3,649.6	190.98	20.109	
8,858.2	6,613.7	6,609.7	6,609.7	62.1	130.5	-88.55	1,662.1	-2,184.1	3,892.4	3,699.9	192.47	20.223	
8,900.0	6,613.2	6,609.2	6,609.2	63.2	130.4	-88.53	1,662.1	-2,184.1	3,929.7	3,736.1	193.54	20.304	
8,956.7	6,612.5	6,608.5	6,608.5	64.6	130.4	-88.51	1,662.1	-2,184.1	3,980.4	3,785.4	195.00	20.413	
9,000.0	6,611.9	6,607.9	6,607.9	65.8	130.4	-88.49	1,662.1	-2,184.1	4,019.3	3,823.2	196.11	20.495	
9,055.1	6,611.2	6,607.2	6,607.2	67.2	130.4	-88.47	1,662.1	-2,184.1	4,068.9	3,871.4	197.54	20.598	
9,100.0	6,610.6	6,606.6	6,606.6	68.4	130.4	-88.45	1,662.1	-2,184.1	4,109.4	3,910.7	198.70	20.682	
9,153.5	6,609.9	6,605.9	6,605.9	69.8	130.4	-88.43	1,662.1	-2,184.1	4,157.8	3,957.7	200.09	20.780	
9,200.0	6,609.3	6,605.3	6,605.3	71.0	130.4	-88.41	1,662.1	-2,184.1	4,200.0	3,998.7	201.30	20.864	
9,251.9	6,608.7	6,604.7	6,604.7	72.4	130.4	-88.39	1,662.1	-2,184.1	4,247.2	4,044.5	202.66	20.957	
9,300.0	6,608.1	6,604.1	6,604.1	73.7	130.3	-88.36	1,662.1	-2,184.1	4,290.9	4,087.0	203.92	21.043	
9,350.4	6,607.4	6,603.4	6,603.4	75.0	130.3	-88.34	1,662.1	-2,184.1	4,336.9	4,131.7	205.24	21.131	
9,400.0	6,606.8	6,602.8	6,602.8	76.3	130.3	-88.32	1,662.1	-2,184.1	4,382.3	4,175.8	206.54	21.217	
9,448.8	6,606.1	6,602.1	6,602.1	77.6	130.3	-88.30	1,662.1	-2,184.1	4,427.0	4,219.2	207.83	21.301	
9,500.0	6,605.5	6,601.5	6,601.5	79.0	130.3	-88.28	1,662.1	-2,184.1	4,474.0	4,264.9	209.18	21.388	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,604.9	6,600.9	6,600.9	80.2	130.3	-88.26	1,662.1	-2,184.1	4,517.5	4,307.0	210.43	21.468	
9,600.0	6,604.2	6,600.2	6,600.2	81.7	130.3	-88.24	1,662.1	-2,184.1	4,566.1	4,354.3	211.83	21.556	
9,645.6	6,603.6	6,599.6	6,599.6	82.9	130.2	-88.22	1,662.1	-2,184.1	4,608.3	4,395.2	213.04	21.631	
9,700.0	6,602.9	6,598.9	6,598.9	84.3	130.2	-88.19	1,662.1	-2,184.1	4,658.5	4,444.0	214.48	21.720	
9,744.1	6,602.3	6,598.3	6,598.3	85.5	130.2	-88.18	1,662.1	-2,184.1	4,699.3	4,483.7	215.66	21.791	
9,800.0	6,601.6	6,597.6	6,597.6	87.0	130.2	-88.15	1,662.1	-2,184.1	4,751.2	4,534.1	217.15	21.880	
9,842.5	6,601.1	6,597.1	6,597.1	88.2	130.2	-88.13	1,662.1	-2,184.1	4,790.7	4,572.4	218.28	21.948	
9,900.0	6,600.3	6,596.3	6,596.3	89.7	130.2	-88.11	1,662.1	-2,184.1	4,844.2	4,624.4	219.81	22.038	
9,940.9	6,599.8	6,595.8	6,595.8	90.9	130.2	-88.09	1,662.1	-2,184.1	4,882.4	4,661.5	220.91	22.101	
10,000.0	6,599.0	6,595.0	6,595.0	92.5	130.2	-88.07	1,662.1	-2,184.1	4,937.5	4,715.0	222.49	22.192	
10,039.3	6,598.5	6,594.5	6,594.5	93.5	130.1	-88.05	1,662.1	-2,184.1	4,974.3	4,750.7	223.55	22.252	
10,100.0	6,597.7	6,593.7	6,593.7	95.2	130.1	-88.02	1,662.1	-2,184.1	5,031.0	4,805.9	225.17	22.343	
10,137.8	6,597.3	6,593.3	6,593.3	96.2	130.1	-88.01	1,662.1	-2,184.1	5,066.4	4,840.3	226.19	22.399	
10,200.0	6,596.5	6,592.5	6,592.5	97.9	130.1	-87.98	1,662.1	-2,184.1	5,124.8	4,897.0	227.86	22.491	
10,236.2	6,596.0	6,592.0	6,592.0	98.9	130.1	-87.97	1,662.1	-2,184.1	5,158.8	4,930.0	228.83	22.544	
10,300.0	6,595.2	6,591.2	6,591.2	100.6	130.1	-87.94	1,662.1	-2,184.1	5,218.8	4,988.3	230.55	22.636	
10,334.6	6,594.7	6,590.7	6,590.7	101.6	130.1	-87.93	1,662.1	-2,184.1	5,251.4	5,020.0	231.48	22.686	
10,400.0	6,593.9	6,589.9	6,589.9	103.3	130.1	-87.90	1,662.1	-2,184.1	5,313.1	5,079.8	233.25	22.779	
10,433.0	6,593.5	6,589.5	6,589.5	104.2	130.0	-87.88	1,662.1	-2,184.1	5,344.2	5,110.1	234.14	22.825	
10,500.0	6,592.6	6,588.6	6,588.6	106.1	130.0	-87.85	1,662.1	-2,184.1	5,407.5	5,171.5	235.95	22.918	
10,531.5	6,592.2	6,588.2	6,588.2	106.9	130.0	-87.84	1,662.1	-2,184.1	5,437.3	5,200.5	236.80	22.962	
10,600.0	6,591.3	6,587.3	6,587.3	108.8	130.0	-87.81	1,662.1	-2,184.1	5,502.1	5,263.5	238.65	23.055	
10,629.9	6,590.9	6,586.9	6,586.9	109.6	130.0	-87.80	1,662.1	-2,184.1	5,530.5	5,291.0	239.46	23.096	
10,700.0	6,590.0	6,586.0	6,586.0	111.6	130.0	-87.77	1,662.1	-2,184.1	5,596.9	5,355.6	241.36	23.190	
10,728.3	6,589.6	6,585.6	6,585.6	112.3	130.0	-87.76	1,662.1	-2,184.1	5,623.8	5,381.7	242.12	23.227	
10,800.0	6,588.7	6,584.7	6,584.7	114.3	129.9	-87.73	1,662.1	-2,184.1	5,691.9	5,447.9	244.07	23.321	
10,826.7	6,588.4	6,584.4	6,584.4	115.0	129.9	-87.72	1,662.1	-2,184.1	5,717.4	5,472.6	244.79	23.356	
10,900.0	6,587.4	6,583.4	6,583.4	117.0	129.9	-87.68	1,662.1	-2,184.1	5,787.1	5,540.3	246.78	23.451	
10,925.2	6,587.1	6,583.1	6,583.1	117.7	129.9	-87.67	1,662.1	-2,184.1	5,811.1	5,563.6	247.46	23.483	
11,000.0	6,586.1	6,582.1	6,582.1	119.8	129.9	-87.64	1,662.1	-2,184.1	5,882.4	5,632.9	249.49	23.577	
11,023.6	6,585.8	6,581.8	6,581.8	120.4	129.9	-87.63	1,662.1	-2,184.1	5,904.9	5,654.8	250.13	23.607	
11,100.0	6,584.8	6,580.8	6,580.8	122.5	129.9	-87.60	1,662.1	-2,184.1	5,977.9	5,725.7	252.21	23.702	
11,122.0	6,584.5	6,580.5	6,580.5	123.2	129.9	-87.59	1,662.1	-2,184.1	5,998.9	5,746.1	252.81	23.729	
11,200.0	6,583.5	6,579.5	6,579.5	125.3	129.8	-87.56	1,662.1	-2,184.1	6,073.5	5,818.6	254.93	23.824	
11,220.4	6,583.3	6,579.3	6,579.3	125.9	129.8	-87.55	1,662.1	-2,184.1	6,093.1	5,837.6	255.49	23.849	
11,300.0	6,582.2	6,578.2	6,578.2	128.1	129.8	-87.51	1,662.1	-2,184.1	6,169.3	5,911.6	257.65	23.944	
11,318.9	6,582.0	6,578.0	6,578.0	128.6	129.8	-87.50	1,662.1	-2,184.1	6,187.4	5,929.2	258.17	23.966	
11,400.0	6,580.9	6,576.9	6,576.9	130.8	129.8	-87.47	1,662.1	-2,184.1	6,265.2	6,004.8	260.38	24.062	
11,417.3	6,580.7	6,576.7	6,576.7	131.3	129.8	-87.46	1,662.1	-2,184.1	6,281.8	6,020.9	260.85	24.082	
11,500.0	6,579.7	6,575.7	6,575.7	133.6	129.8	-87.43	1,662.1	-2,184.1	6,361.2	6,098.1	263.10	24.178	
11,515.7	6,579.4	6,575.4	6,575.4	134.0	129.8	-87.42	1,662.1	-2,184.1	6,376.3	6,112.8	263.53	24.196	
11,600.0	6,578.4	6,574.4	6,574.4	136.3	129.7	-87.38	1,662.1	-2,184.1	6,457.3	6,191.5	265.83	24.291	
11,614.1	6,578.2	6,574.2	6,574.2	136.7	129.7	-87.38	1,662.1	-2,184.1	6,470.9	6,204.7	266.22	24.307	
11,700.0	6,577.1	6,573.1	6,573.1	139.1	129.7	-87.34	1,662.1	-2,184.1	6,553.6	6,285.0	268.56	24.403	
11,712.6	6,576.9	6,572.9	6,572.9	139.5	129.7	-87.34	1,662.1	-2,184.1	6,565.7	6,296.8	268.90	24.417	
11,800.0	6,575.8	6,571.8	6,571.8	141.9	129.7	-87.30	1,662.1	-2,184.1	6,649.9	6,378.6	271.29	24.512	
11,811.0	6,575.6	6,571.6	6,571.6	142.2	129.7	-87.29	1,662.1	-2,184.1	6,660.5	6,389.0	271.59	24.524	
11,858.8	6,575.0	6,571.0	6,571.0	143.5	129.7	-87.27	1,662.1	-2,184.1	6,706.6	6,433.7	272.89	24.576	
11,859.3	6,575.0	6,571.0	6,571.0	143.5	129.7	-87.27	1,662.1	-2,184.1	6,707.2	6,434.3	272.90	24.577	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-90.26	-40.9	-9,146.0	9,146.1				
98.4	98.4	73.4	73.4	0.1	0.0	-90.26	-40.9	-9,146.0	9,146.1	9,146.0	0.11	N/A	
100.0	100.0	75.0	75.0	0.1	0.0	-90.26	-40.9	-9,146.0	9,146.1	9,146.0	0.11	N/A	
196.8	196.8	171.8	171.8	0.3	1.9	-90.26	-40.9	-9,146.0	9,146.1	9,143.9	2.24	4,087.020	
200.0	200.0	175.0	175.0	0.3	2.0	-90.26	-40.9	-9,146.0	9,146.1	9,143.8	2.33	3,927.697	
295.3	295.3	270.3	270.3	0.5	4.1	-90.26	-40.9	-9,146.0	9,146.1	9,141.4	4.65	1,965.776	
300.0	300.0	275.0	275.0	0.5	4.2	-90.26	-40.9	-9,146.0	9,146.1	9,141.3	4.76	1,921.254	
393.7	393.7	368.7	368.7	0.8	6.1	-90.26	-40.9	-9,146.0	9,146.1	9,139.2	6.88	1,329.461	
400.0	400.0	375.0	375.0	0.8	6.2	-90.26	-40.9	-9,146.0	9,146.1	9,139.1	7.02	1,302.573	
492.1	492.1	467.1	467.1	1.0	8.1	-90.26	-40.9	-9,146.0	9,146.1	9,137.0	9.09	1,005.895	
500.0	500.0	475.0	475.0	1.0	8.3	-90.26	-40.9	-9,146.0	9,146.1	9,136.8	9.27	986.704	
590.5	590.5	565.5	565.5	1.2	10.1	-90.26	-40.9	-9,146.0	9,146.1	9,134.8	11.30	809.364	
600.0	600.0	575.0	575.0	1.2	10.3	-90.26	-40.9	-9,146.0	9,146.1	9,134.6	11.51	794.469	
689.0	689.0	664.0	664.0	1.4	12.1	-90.26	-40.9	-9,146.0	9,146.1	9,132.6	13.51	677.201	
700.0	700.0	675.0	675.0	1.4	12.3	-90.26	-40.9	-9,146.0	9,146.1	9,132.3	13.75	665.041	
787.4	787.4	762.4	762.4	1.6	14.1	-90.26	-40.9	-9,146.0	9,146.1	9,130.4	15.71	582.194	
800.0	800.0	775.0	775.0	1.7	14.3	-90.26	-40.9	-9,146.0	9,146.1	9,130.1	15.99	571.924	
885.8	885.8	860.8	860.8	1.9	16.0	-90.26	-40.9	-9,146.0	9,146.1	9,128.2	17.91	510.590	
900.0	900.0	875.0	875.0	1.9	16.3	-90.26	-40.9	-9,146.0	9,146.1	9,127.9	18.23	501.704	
984.2	984.2	959.2	959.2	2.1	18.0	-90.26	-40.9	-9,146.0	9,146.1	9,126.0	20.12	454.683	
1,000.0	1,000.0	975.0	975.0	2.1	18.3	-90.26	-40.9	-9,146.0	9,146.1	9,125.6	20.47	446.854	
1,082.7	1,082.7	1,057.7	1,057.7	2.3	20.0	-90.26	-40.9	-9,146.0	9,146.1	9,123.8	22.32	409.818	
1,100.0	1,100.0	1,075.0	1,075.0	2.3	20.4	-90.26	-40.9	-9,146.0	9,146.1	9,123.4	22.71	402.822	
1,181.1	1,181.1	1,156.1	1,156.1	2.5	22.0	-90.26	-40.9	-9,146.0	9,146.1	9,121.6	24.52	373.017	
1,200.0	1,200.0	1,175.0	1,175.0	2.6	22.4	-90.26	-40.9	-9,146.0	9,146.1	9,121.2	24.94	366.694	
1,279.5	1,279.5	1,254.5	1,254.5	2.7	24.0	4.94	-40.9	-9,146.0	9,145.0	9,118.3	26.70	342.524	
1,300.0	1,300.0	1,275.0	1,275.0	2.8	24.4	4.94	-40.9	-9,146.0	9,144.4	9,117.2	27.15	336.842	
1,377.9	1,377.8	1,352.8	1,352.8	2.9	25.9	4.95	-40.9	-9,146.0	9,140.6	9,111.8	28.83	317.047	
1,400.0	1,399.8	1,374.8	1,374.8	3.0	26.4	4.95	-40.9	-9,146.0	9,139.1	9,109.8	29.30	311.905	
1,476.4	1,475.9	1,450.9	1,450.9	3.1	27.9	4.97	-40.9	-9,146.0	9,132.8	9,101.9	30.92	295.402	
1,500.0	1,499.5	1,474.5	1,474.5	3.2	28.4	4.97	-40.9	-9,146.0	9,130.5	9,099.0	31.41	290.691	
1,574.8	1,573.7	1,548.7	1,548.7	3.4	29.9	4.99	-40.9	-9,146.0	9,121.7	9,088.8	32.95	276.816	
1,600.0	1,598.7	1,573.7	1,573.7	3.4	30.4	5.00	-40.9	-9,146.0	9,118.3	9,084.9	33.46	272.485	
1,673.2	1,671.1	1,646.1	1,646.1	3.6	31.8	5.03	-40.9	-9,146.0	9,107.2	9,072.3	34.93	260.737	
1,700.0	1,697.5	1,672.5	1,672.5	3.7	32.4	5.04	-40.9	-9,146.0	9,102.7	9,067.3	35.45	256.744	
1,771.6	1,767.9	1,742.9	1,742.9	3.9	33.8	5.07	-40.9	-9,146.0	9,089.5	9,052.6	36.84	246.737	
1,800.0	1,795.6	1,770.6	1,770.6	4.0	34.4	5.08	-40.9	-9,146.0	9,083.7	9,046.4	37.37	243.048	
1,870.1	1,864.0	1,839.0	1,839.0	4.3	35.7	5.12	-40.9	-9,146.0	9,068.4	9,029.7	38.67	234.481	
1,900.0	1,893.1	1,868.1	1,868.1	4.4	36.3	5.14	-40.9	-9,146.0	9,061.3	9,022.1	39.22	231.066	
1,968.5	1,959.3	1,934.3	1,934.3	4.6	37.6	5.18	-40.9	-9,146.0	9,044.0	9,003.6	40.43	223.705	
1,992.4	1,982.4	1,957.4	1,957.4	4.7	38.1	5.19	-40.9	-9,146.0	9,037.6	8,996.8	40.84	221.288	
2,000.0	1,989.6	1,964.6	1,964.6	4.8	38.3	5.19	-40.9	-9,146.0	9,035.5	8,994.5	41.00	220.380	
2,066.9	2,054.0	2,029.0	2,029.0	5.1	39.6	5.20	-40.9	-9,146.0	9,017.3	8,974.9	42.41	212.598	
2,100.0	2,085.8	2,060.8	2,060.8	5.2	40.2	5.21	-40.9	-9,146.0	9,008.3	8,965.2	43.11	208.972	
2,165.3	2,148.7	2,123.7	2,123.7	5.5	41.5	5.22	-40.9	-9,146.0	8,990.6	8,946.1	44.48	202.106	
2,200.0	2,182.0	2,157.0	2,157.0	5.7	42.1	5.23	-40.9	-9,146.0	8,981.1	8,935.9	45.22	198.598	
2,263.8	2,243.4	2,218.4	2,218.4	6.0	43.4	5.24	-40.9	-9,146.0	8,963.8	8,917.2	46.57	192.463	
2,300.0	2,278.2	2,253.2	2,253.2	6.2	44.1	5.24	-40.9	-9,146.0	8,953.9	8,906.6	47.34	189.129	
2,362.2	2,338.1	2,313.1	2,313.1	6.5	45.3	5.25	-40.9	-9,146.0	8,937.0	8,888.3	48.66	183.646	
2,400.0	2,374.4	2,349.4	2,349.4	6.7	46.0	5.26	-40.9	-9,146.0	8,926.7	8,877.3	49.47	180.455	
2,460.6	2,432.8	2,407.8	2,407.8	7.0	47.2	5.27	-40.9	-9,146.0	8,910.2	8,859.5	50.76	175.542	
2,500.0	2,470.6	2,445.6	2,445.6	7.2	47.9	5.27	-40.9	-9,146.0	8,899.5	8,847.9	51.60	172.481	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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			
2,559.0	2,527.4	2,502.4	2,502.4	7.6	49.1	5.28	-40.9	-9,146.0	8,883.5	8,830.6	52.86	168.068			
2,600.0	2,566.8	2,541.8	2,541.8	7.8	49.9	5.29	-40.9	-9,146.0	8,872.3	8,818.6	53.73	165.129			
2,657.5	2,622.1	2,597.1	2,597.1	8.1	51.0	5.30	-40.9	-9,146.0	8,856.7	8,801.7	54.96	161.156			
2,700.0	2,663.0	2,638.0	2,638.0	8.3	51.8	5.31	-40.9	-9,146.0	8,845.1	8,789.2	55.87	158.329			
2,755.9	2,716.8	2,691.8	2,691.8	8.6	52.9	5.32	-40.9	-9,146.0	8,829.9	8,772.8	57.06	154.746			
2,800.0	2,759.2	2,734.2	2,734.2	8.9	53.7	5.32	-40.9	-9,146.0	8,817.9	8,759.9	58.00	152.023			
2,854.3	2,811.5	2,786.5	2,786.5	9.2	54.8	5.33	-40.9	-9,146.0	8,803.1	8,744.0	59.17	148.785			
2,900.0	2,855.4	2,830.4	2,830.4	9.4	55.7	5.34	-40.9	-9,146.0	8,790.7	8,730.6	60.14	146.159			
2,952.7	2,906.2	2,881.2	2,881.2	9.7	56.7	5.35	-40.9	-9,146.0	8,776.4	8,715.1	61.27	143.229			
3,000.0	2,951.6	2,926.6	2,926.6	10.0	57.6	5.36	-40.9	-9,146.0	8,763.5	8,701.2	62.29	140.694			
3,051.2	3,000.9	2,975.9	2,975.9	10.3	58.6	5.36	-40.9	-9,146.0	8,749.6	8,686.2	63.39	138.039			
3,100.0	3,047.8	3,022.8	3,022.8	10.5	59.5	5.37	-40.9	-9,146.0	8,736.3	8,671.9	64.43	135.589			
3,149.6	3,095.5	3,070.5	3,070.5	10.8	60.5	5.38	-40.9	-9,146.0	8,722.8	8,657.3	65.50	133.179			
3,200.0	3,144.0	3,119.0	3,119.0	11.1	61.5	5.39	-40.9	-9,146.0	8,709.1	8,642.5	66.58	130.810			
3,248.0	3,190.2	3,165.2	3,165.2	11.4	62.4	5.40	-40.9	-9,146.0	8,696.1	8,628.4	67.61	128.621			
3,300.0	3,240.2	3,215.2	3,215.2	11.7	63.4	5.41	-40.9	-9,146.0	8,681.9	8,613.2	68.73	126.326			
3,346.4	3,284.9	3,259.9	3,259.9	11.9	64.3	5.41	-40.9	-9,146.0	8,669.3	8,599.6	69.72	124.336			
3,400.0	3,336.4	3,311.4	3,311.4	12.2	65.3	5.42	-40.9	-9,146.0	8,654.7	8,583.8	70.88	122.112			
3,444.9	3,379.6	3,354.6	3,354.6	12.5	66.2	5.43	-40.9	-9,146.0	8,642.5	8,570.7	71.84	120.302			
3,500.0	3,432.6	3,407.6	3,407.6	12.8	67.3	5.44	-40.9	-9,146.0	8,627.5	8,554.5	73.03	118.144			
3,543.3	3,474.3	3,449.3	3,449.3	13.1	68.1	5.45	-40.9	-9,146.0	8,615.7	8,541.8	73.96	116.496			
3,600.0	3,528.8	3,503.8	3,503.8	13.4	69.2	5.46	-40.9	-9,146.0	8,600.3	8,525.1	75.18	114.401			
3,641.7	3,569.0	3,544.0	3,544.0	13.6	70.0	5.46	-40.9	-9,146.0	8,589.0	8,512.9	76.08	112.901			
3,700.0	3,625.0	3,600.0	3,600.0	14.0	71.1	5.47	-40.9	-9,146.0	8,573.1	8,495.8	77.33	110.865			
3,740.1	3,663.6	3,638.6	3,638.6	14.2	71.9	5.48	-40.9	-9,146.0	8,562.2	8,484.0	78.19	109.500			
3,800.0	3,721.2	3,696.2	3,696.2	14.5	73.1	5.49	-40.9	-9,146.0	8,545.9	8,466.5	79.48	107.519			
3,838.6	3,758.3	3,733.3	3,733.3	14.8	73.8	5.50	-40.9	-9,146.0	8,535.4	8,455.1	80.31	106.276			
3,900.0	3,817.4	3,792.4	3,792.4	15.1	75.0	5.51	-40.9	-9,146.0	8,518.7	8,437.1	81.64	104.349			
3,937.0	3,853.0	3,828.0	3,828.0	15.3	75.7	5.52	-40.9	-9,146.0	8,508.7	8,426.2	82.43	103.218			
4,000.0	3,913.6	3,888.6	3,888.6	15.7	77.0	5.53	-40.9	-9,146.0	8,491.5	8,407.8	83.79	101.341			
4,035.4	3,947.7	3,922.7	3,922.7	15.9	77.6	5.53	-40.9	-9,146.0	8,481.9	8,397.4	84.56	100.312			
4,100.0	4,009.8	3,984.8	3,984.8	16.3	78.9	5.55	-40.9	-9,146.0	8,464.4	8,378.4	85.95	98.483			
4,133.8	4,042.4	4,017.4	4,017.4	16.5	79.5	5.55	-40.9	-9,146.0	8,455.2	8,368.5	86.68	97.548			
4,200.0	4,106.0	4,081.0	4,081.0	16.8	80.8	5.56	-40.9	-9,146.0	8,437.2	8,349.1	88.10	95.764			
4,232.3	4,137.1	4,112.1	4,112.1	17.0	81.4	5.57	-40.9	-9,146.0	8,428.4	8,339.6	88.80	94.915			
4,300.0	4,202.2	4,177.2	4,177.2	17.4	82.8	5.58	-40.9	-9,146.0	8,410.0	8,319.7	90.26	93.175			
4,330.7	4,231.7	4,206.7	4,206.7	17.6	83.3	5.59	-40.9	-9,146.0	8,401.6	8,310.7	90.92	92.404			
4,400.0	4,298.4	4,273.4	4,273.4	18.0	84.7	5.60	-40.9	-9,146.0	8,382.8	8,290.4	92.42	90.706			
4,429.1	4,326.4	4,301.4	4,301.4	18.2	85.3	5.60	-40.9	-9,146.0	8,374.9	8,281.8	93.05	90.008			
4,500.0	4,394.6	4,369.6	4,369.6	18.6	86.6	5.62	-40.9	-9,146.0	8,355.6	8,261.0	94.58	88.349			
4,527.5	4,421.1	4,396.1	4,396.1	18.7	87.2	5.62	-40.9	-9,146.0	8,348.1	8,252.9	95.17	87.718			
4,600.0	4,490.8	4,465.8	4,465.8	19.2	88.6	5.64	-40.9	-9,146.0	8,328.4	8,231.7	96.73	86.096			
4,626.0	4,515.8	4,490.8	4,490.8	19.3	89.1	5.64	-40.9	-9,146.0	8,321.3	8,224.1	97.29	85.527			
4,700.0	4,587.0	4,562.0	4,562.0	19.8	90.5	5.65	-40.9	-9,146.0	8,301.2	8,202.3	98.89	83.942			
4,724.4	4,610.5	4,585.5	4,585.5	19.9	91.0	5.66	-40.9	-9,146.0	8,294.6	8,195.2	99.42	83.430			
4,800.0	4,683.2	4,658.2	4,658.2	20.3	92.4	5.67	-40.9	-9,146.0	8,274.0	8,173.0	101.05	81.879			
4,822.8	4,705.2	4,680.2	4,680.2	20.5	92.9	5.68	-40.9	-9,146.0	8,267.8	8,166.3	101.54	81.421			
4,900.0	4,779.4	4,754.4	4,754.4	20.9	94.4	5.69	-40.9	-9,146.0	8,246.8	8,143.6	103.21	79.902			
4,921.2	4,799.8	4,774.8	4,774.8	21.0	94.8	5.70	-40.9	-9,146.0	8,241.1	8,137.4	103.67	79.493			
5,000.0	4,875.6	4,850.6	4,850.6	21.5	96.3	5.71	-40.9	-9,146.0	8,219.7	8,114.3	105.37	78.006			
5,019.7	4,894.5	4,869.5	4,869.5	21.6	96.7	5.71	-40.9	-9,146.0	8,214.3	8,108.5	105.80	77.643			
5,100.0	4,971.8	4,946.8	4,946.8	22.1	98.2	5.73	-40.9	-9,146.0	8,192.5	8,084.9	107.53	76.186			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	4,989.2	4,964.2	4,964.2	22.2	98.6	5.73	-40.9	-9,146.0	8,187.6	8,079.6	107.92	75.865	
5,200.0	5,068.0	5,043.0	5,043.0	22.7	100.2	5.75	-40.9	-9,146.0	8,165.3	8,055.6	109.69	74.438	
5,216.5	5,083.9	5,058.9	5,058.9	22.8	100.5	5.75	-40.9	-9,146.0	8,160.8	8,050.8	110.05	74.155	
5,240.0	5,106.5	5,081.5	5,081.5	22.9	100.9	5.76	-40.9	-9,146.0	8,154.4	8,043.9	110.56	73.757	
5,300.0	5,164.4	5,139.4	5,139.4	23.2	102.1	5.74	-40.9	-9,146.0	8,138.7	8,026.3	112.41	72.404	
5,314.9	5,178.8	5,153.8	5,153.8	23.3	102.4	5.73	-40.9	-9,146.0	8,135.0	8,022.1	112.86	72.081	
5,400.0	5,261.5	5,236.5	5,236.5	23.6	104.1	5.70	-40.9	-9,146.0	8,115.2	7,999.8	115.39	70.327	
5,413.4	5,274.6	5,249.6	5,249.6	23.6	104.3	5.70	-40.9	-9,146.0	8,112.3	7,996.6	115.78	70.064	
5,500.0	5,359.5	5,334.5	5,334.5	23.9	106.0	5.68	-40.9	-9,146.0	8,095.1	7,976.9	118.28	68.443	
5,511.8	5,371.1	5,346.1	5,346.1	24.0	106.3	5.67	-40.9	-9,146.0	8,093.0	7,974.4	118.61	68.233	
5,600.0	5,458.0	5,433.0	5,433.0	24.2	108.0	5.66	-40.9	-9,146.0	8,078.4	7,957.4	121.04	66.739	
5,610.2	5,468.2	5,443.2	5,443.2	24.3	108.2	5.65	-40.9	-9,146.0	8,076.9	7,955.6	121.32	66.575	
5,700.0	5,557.2	5,532.2	5,532.2	24.5	110.0	5.64	-40.9	-9,146.0	8,065.2	7,941.5	123.69	65.205	
5,708.6	5,565.7	5,540.7	5,540.7	24.5	110.2	5.64	-40.9	-9,146.0	8,064.2	7,940.3	123.91	65.081	
5,800.0	5,656.7	5,631.7	5,631.7	24.7	112.0	5.63	-40.9	-9,146.0	8,055.4	7,929.2	126.20	63.831	
5,807.1	5,663.7	5,638.7	5,638.7	24.7	112.1	5.63	-40.9	-9,146.0	8,054.8	7,928.5	126.37	63.740	
5,900.0	5,756.5	5,731.5	5,731.5	24.9	114.0	5.62	-40.9	-9,146.0	8,049.1	7,920.5	128.56	62.608	
5,905.5	5,761.9	5,736.9	5,736.9	24.9	114.1	5.62	-40.9	-9,146.0	8,048.8	7,920.1	128.69	62.545	
6,000.0	5,856.4	5,831.4	5,831.4	25.0	116.0	5.61	-40.9	-9,146.0	8,046.2	7,915.4	130.77	61.528	
6,003.9	5,860.3	5,835.3	5,835.3	25.0	116.1	5.61	-40.9	-9,146.0	8,046.2	7,915.3	130.86	61.489	
6,032.5	5,888.9	5,863.9	5,863.9	25.0	116.7	-89.58	-40.9	-9,146.0	8,046.0	7,904.4	141.62	56.814	
6,062.5	5,918.9	5,893.9	5,893.9	25.1	117.3	-89.58	-40.9	-9,146.0	8,046.0	7,903.8	142.25	56.561 CC, ES, SF	
6,100.0	5,956.4	5,931.4	5,931.4	25.1	118.0	-179.58	-40.9	-9,146.0	8,047.0	7,914.4	132.61	60.683	
6,102.3	5,958.7	5,933.7	5,933.7	25.1	118.1	-179.58	-40.9	-9,146.0	8,047.1	7,914.5	132.63	60.676	
6,150.0	6,006.2	5,981.2	5,981.2	25.1	119.0	-179.58	-40.9	-9,146.0	8,051.4	7,918.7	132.69	60.679	
6,200.0	6,055.6	6,030.6	6,030.6	25.1	120.0	-179.57	-40.9	-9,146.0	8,059.2	7,927.1	132.10	61.009	
6,200.8	6,056.3	6,031.3	6,031.3	25.1	120.0	-179.57	-40.9	-9,146.0	8,059.3	7,927.2	132.08	61.017	
6,250.0	6,104.3	6,079.3	6,079.3	25.0	121.0	-179.57	-40.9	-9,146.0	8,070.4	7,939.6	130.83	61.686	
6,299.2	6,151.3	6,126.3	6,126.3	24.9	122.0	-179.56	-40.9	-9,146.0	8,084.8	7,955.9	128.92	62.714	
6,300.0	6,152.1	6,127.1	6,127.1	24.9	122.0	-179.56	-40.9	-9,146.0	8,085.0	7,956.2	128.88	62.734	
6,350.0	6,198.7	6,173.7	6,173.7	24.8	122.9	-179.55	-40.9	-9,146.0	8,103.0	7,976.7	126.24	64.185	
6,397.6	6,241.9	6,216.9	6,216.9	24.7	123.8	-179.53	-40.9	-9,146.0	8,123.0	7,999.9	123.11	65.984	
6,400.0	6,244.1	6,219.1	6,219.1	24.7	123.8	-179.53	-40.9	-9,146.0	8,124.1	8,001.2	122.93	66.085	
6,450.0	6,287.8	6,262.8	6,262.8	24.5	124.7	-179.52	-40.9	-9,146.0	8,148.3	8,029.4	118.96	68.497	
6,496.0	6,326.5	6,301.5	6,301.5	24.4	125.5	-179.50	-40.9	-9,146.0	8,173.3	8,058.6	114.73	71.242	
6,500.0	6,329.7	6,304.7	6,304.7	24.4	125.5	-179.49	-40.9	-9,146.0	8,175.6	8,061.2	114.34	71.503	
6,550.0	6,369.6	6,344.6	6,344.6	24.3	126.3	-179.47	-40.9	-9,146.0	8,205.6	8,096.5	109.10	75.213	
6,594.5	6,403.3	6,378.3	6,378.3	24.2	127.0	-179.44	-40.9	-9,146.0	8,234.7	8,130.7	103.94	79.222	
6,600.0	6,407.3	6,382.3	6,382.3	24.2	127.1	-179.44	-40.9	-9,146.0	8,238.4	8,135.2	103.27	79.773	
6,650.0	6,442.7	6,417.7	6,417.7	24.1	127.8	-179.40	-40.9	-9,146.0	8,273.8	8,176.9	96.90	85.382	
6,692.9	6,471.0	6,446.0	6,446.0	24.0	128.4	-179.36	-40.9	-9,146.0	8,306.0	8,215.0	91.04	91.234	
6,700.0	6,475.5	6,450.5	6,450.5	24.0	128.5	-179.35	-40.9	-9,146.0	8,311.5	8,221.5	90.04	92.311	
6,750.0	6,505.6	6,480.6	6,480.6	24.0	129.1	-179.29	-40.9	-9,146.0	8,351.4	8,268.7	82.74	100.939	
6,791.3	6,528.3	6,503.3	6,503.3	24.0	129.5	-179.23	-40.9	-9,146.0	8,386.0	8,309.5	76.42	109.730	
6,800.0	6,532.8	6,507.8	6,507.8	24.0	129.6	-179.22	-40.9	-9,146.0	8,393.4	8,318.3	75.07	111.808	
6,850.0	6,557.0	6,532.0	6,532.0	24.1	130.1	-179.12	-40.9	-9,146.0	8,437.1	8,370.0	67.11	125.718	
6,889.7	6,574.1	6,549.1	6,549.1	24.2	130.5	-179.01	-40.9	-9,146.0	8,473.0	8,412.4	60.63	139.743	
6,900.0	6,578.1	6,553.1	6,553.1	24.3	130.5	-178.98	-40.9	-9,146.0	8,482.4	8,423.4	58.95	143.903	
6,950.0	6,596.1	6,571.1	6,571.1	24.5	130.9	-178.78	-40.9	-9,146.0	8,529.1	8,478.4	50.66	168.349	
6,988.2	6,607.5	6,582.5	6,582.5	24.7	131.1	-178.56	-40.9	-9,146.0	8,565.5	8,521.1	44.33	193.217	
7,000.0	6,610.7	6,585.7	6,585.7	24.8	131.2	-178.48	-40.9	-9,146.0	8,576.9	8,534.5	42.38	202.388	
7,050.0	6,621.9	6,596.9	6,596.9	25.1	131.4	-177.94	-40.9	-9,146.0	8,625.6	8,591.3	34.31	251.390	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
7,086.6	6,628.0	6,603.0	6,603.0	25.4	131.5	-177.22	-40.9	-9,146.0	8,661.7	8,632.7	28.96	299.084	
7,100.0	6,629.7	6,604.7	6,604.7	25.6	131.6	-176.80	-40.9	-9,146.0	8,674.9	8,647.6	27.33	317.380	
7,150.0	6,634.1	6,609.1	6,609.1	26.0	131.7	-172.62	-40.9	-9,146.0	8,724.7	8,695.8	28.91	301.758	
7,185.0	6,635.1	6,610.1	6,610.1	26.4	131.7	-116.48	-40.9	-9,146.0	8,759.8	8,617.9	141.88	61.741	
7,196.6	6,635.0	6,610.0	6,610.0	26.5	131.7	-27.82	-40.9	-9,146.0	8,771.3	8,694.7	76.64	114.450	
7,200.0	6,635.0	6,610.0	6,610.0	26.6	131.7	-27.81	-40.9	-9,146.0	8,774.7	8,698.1	76.64	114.493	
7,283.4	6,633.9	6,608.9	6,608.9	27.6	131.7	-27.58	-40.9	-9,146.0	8,858.2	8,781.5	76.71	115.470	
7,300.0	6,633.7	6,608.7	6,608.7	27.8	131.7	-27.53	-40.9	-9,146.0	8,874.7	8,798.0	76.71	115.693	
7,381.9	6,632.6	6,607.6	6,607.6	29.0	131.6	-27.32	-40.9	-9,146.0	8,956.6	8,879.7	76.86	116.524	
7,400.0	6,632.4	6,607.4	6,607.4	29.2	131.6	-27.26	-40.9	-9,146.0	8,974.7	8,897.8	76.88	116.736	
7,480.3	6,631.4	6,606.4	6,606.4	30.5	131.6	-27.05	-40.9	-9,146.0	9,055.0	8,977.9	77.10	117.443	
7,500.0	6,631.1	6,606.1	6,606.1	30.9	131.6	-26.99	-40.9	-9,146.0	9,074.7	8,997.6	77.14	117.646	
7,578.7	6,630.1	6,605.1	6,605.1	32.3	131.6	-26.79	-40.9	-9,146.0	9,153.4	9,076.0	77.41	118.249	
7,600.0	6,629.8	6,604.8	6,604.8	32.7	131.6	-26.73	-40.9	-9,146.0	9,174.7	9,097.2	77.46	118.442	
7,677.1	6,628.9	6,603.9	6,603.9	34.1	131.6	-26.54	-40.9	-9,146.0	9,251.8	9,174.1	77.77	118.960	
7,700.0	6,628.6	6,603.6	6,603.6	34.6	131.5	-26.48	-40.9	-9,146.0	9,274.7	9,196.8	77.85	119.142	
7,775.6	6,627.6	6,602.6	6,602.6	36.1	131.5	-26.29	-40.9	-9,146.0	9,350.2	9,272.1	78.19	119.590	
7,800.0	6,627.3	6,602.3	6,602.3	36.6	131.5	-26.22	-40.9	-9,146.0	9,374.7	9,296.4	78.28	119.764	
7,874.0	6,626.3	6,601.3	6,601.3	38.2	131.5	-26.05	-40.9	-9,146.0	9,448.7	9,370.0	78.64	120.153	
7,900.0	6,626.0	6,601.0	6,601.0	38.8	131.5	-25.98	-40.9	-9,146.0	9,474.7	9,395.9	78.75	120.319	
7,972.4	6,625.1	6,600.1	6,600.1	40.4	131.5	-25.80	-40.9	-9,146.0	9,547.1	9,468.0	79.12	120.660	
8,000.0	6,624.7	6,599.7	6,599.7	41.0	131.5	-25.73	-40.9	-9,146.0	9,574.6	9,495.4	79.25	120.819	
8,070.8	6,623.8	6,598.8	6,598.8	42.6	131.5	-25.57	-40.9	-9,146.0	9,645.5	9,565.9	79.64	121.120	
8,100.0	6,623.4	6,598.4	6,598.4	43.3	131.4	-25.49	-40.9	-9,146.0	9,674.6	9,594.9	79.78	121.274	
8,169.3	6,622.6	6,597.6	6,597.6	44.9	131.4	-25.33	-40.9	-9,146.0	9,743.9	9,663.7	80.17	121.541	
8,200.0	6,622.2	6,597.2	6,597.2	45.6	131.4	-25.26	-40.9	-9,146.0	9,774.6	9,694.3	80.32	121.690	
8,267.7	6,621.3	6,596.3	6,596.3	47.3	131.4	-25.10	-40.9	-9,146.0	9,842.3	9,761.6	80.72	121.930	
8,300.0	6,620.9	6,595.9	6,595.9	48.0	131.4	-25.02	-40.9	-9,146.0	9,874.6	9,793.7	80.89	122.075	
8,366.1	6,620.0	6,595.0	6,595.0	49.7	131.4	-24.88	-40.9	-9,146.0	9,940.7	9,859.4	81.29	122.292	
8,400.0	6,619.6	6,594.6	6,594.6	50.5	131.4	-24.80	-40.9	-9,146.0	9,974.6	9,893.1	81.47	122.433	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	-96.42	-986.1	-8,766.5	8,821.9					
98.4	98.4	108.2	108.2	0.1	0.0	-96.42	-986.0	-8,766.2	8,821.6	8,821.5	0.12	N/A		
100.0	100.0	109.7	109.7	0.1	0.0	-96.42	-986.0	-8,766.2	8,821.6	8,821.5	0.13	N/A		
196.8	196.8	200.0	200.0	0.3	0.2	-96.42	-986.1	-8,765.8	8,821.2	8,820.7	0.50	N/A		
200.0	200.0	200.0	200.0	0.3	0.2	-96.42	-986.1	-8,765.8	8,821.2	8,820.6	0.51	N/A		
295.3	295.3	282.4	282.4	0.5	0.2	-96.42	-986.0	-8,765.5	8,820.8	8,820.1	0.75	N/A		
300.0	300.0	286.2	286.2	0.5	0.2	-96.42	-985.9	-8,765.5	8,820.8	8,820.1	0.76	N/A		
365.9	365.9	332.9	332.9	0.7	0.2	-96.42	-985.7	-8,765.5	8,820.7	8,819.8	0.93	9,445.326		
393.7	393.7	351.7	351.6	0.8	0.3	-96.42	-985.6	-8,765.5	8,820.8	8,819.8	1.01	8,760.167		
400.0	400.0	355.9	355.9	0.8	0.3	-96.42	-985.5	-8,765.5	8,820.8	8,819.7	1.02	8,618.383		
492.1	492.1	507.7	507.7	1.0	0.3	-96.41	-985.2	-8,765.5	8,820.9	8,819.6	1.27	6,927.763		
500.0	500.0	515.2	515.2	1.0	0.3	-96.41	-985.2	-8,765.5	8,820.8	8,819.5	1.30	6,805.790		
590.5	590.5	600.0	600.0	1.2	0.4	-96.41	-984.9	-8,765.1	8,820.3	8,818.8	1.56	5,664.980		
600.0	600.0	611.1	611.1	1.2	0.4	-96.41	-984.8	-8,765.0	8,820.3	8,818.7	1.59	5,564.808		
689.0	689.0	696.4	696.3	1.4	0.4	-96.41	-984.4	-8,764.7	8,819.9	8,818.0	1.84	4,801.078		
700.0	700.0	707.2	707.2	1.4	0.4	-96.41	-984.4	-8,764.6	8,819.8	8,818.0	1.87	4,721.498		
787.4	787.4	794.9	794.9	1.6	0.5	-96.41	-984.0	-8,764.3	8,819.4	8,817.3	2.11	4,175.424		
800.0	800.0	800.0	800.0	1.7	0.5	-96.41	-983.9	-8,764.2	8,819.4	8,817.2	2.14	4,114.821		
885.8	885.8	876.3	876.3	1.9	0.5	-96.40	-983.8	-8,764.0	8,819.1	8,816.7	2.35	3,752.360		
900.0	900.0	887.9	887.9	1.9	0.5	-96.41	-983.8	-8,764.0	8,819.0	8,816.6	2.38	3,698.846		
976.4	976.4	943.4	943.4	2.1	0.5	-96.41	-984.0	-8,763.9	8,818.9	8,816.4	2.57	3,437.110		
984.2	984.2	949.0	948.9	2.1	0.5	-96.41	-984.0	-8,763.9	8,818.9	8,816.3	2.58	3,412.473		
1,000.0	1,000.0	960.1	960.0	2.1	0.5	-96.41	-984.0	-8,763.9	8,818.9	8,816.3	2.62	3,363.899		
1,082.7	1,082.7	1,100.0	1,100.0	2.3	0.5	-96.41	-984.2	-8,763.8	8,819.0	8,816.2	2.82	3,130.879		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	0.5	-96.41	-984.2	-8,763.8	8,818.9	8,816.1	2.86	3,088.158		
1,181.1	1,181.1	1,162.6	1,162.6	2.5	0.5	-96.41	-984.1	-8,763.5	8,818.6	8,815.6	3.05	2,891.920		
1,200.0	1,200.0	1,174.6	1,174.6	2.6	0.5	-96.41	-984.1	-8,763.5	8,818.6	8,815.5	3.09	2,850.169		
1,279.5	1,279.5	1,262.2	1,262.2	2.7	0.6	-1.21	-983.9	-8,763.5	8,817.5	8,814.2	3.29	2,682.743		
1,300.0	1,300.0	1,294.6	1,294.6	2.8	0.6	-1.21	-983.9	-8,763.4	8,816.8	8,813.5	3.33	2,644.754		
1,377.9	1,377.8	1,371.5	1,371.5	2.9	0.6	-1.22	-983.8	-8,763.2	8,812.8	8,809.3	3.51	2,507.667		
1,400.0	1,399.8	1,392.6	1,392.6	3.0	0.6	-1.22	-983.7	-8,763.1	8,811.2	8,807.7	3.57	2,470.916		
1,476.4	1,475.9	1,496.8	1,496.8	3.1	0.6	-1.22	-983.4	-8,762.7	8,804.6	8,800.8	3.76	2,339.334		
1,500.0	1,499.5	1,526.1	1,526.1	3.2	0.6	-1.22	-983.5	-8,762.5	8,802.1	8,798.2	3.83	2,299.652		
1,574.8	1,573.7	1,600.0	1,600.0	3.4	0.6	-1.22	-983.3	-8,762.0	8,792.7	8,788.7	4.03	2,182.185		
1,600.0	1,598.7	1,626.8	1,626.8	3.4	0.7	-1.23	-983.1	-8,761.8	8,789.1	8,785.0	4.10	2,145.111		
1,673.2	1,671.1	1,676.5	1,676.5	3.6	0.7	-1.23	-982.9	-8,761.5	8,777.6	8,773.3	4.29	2,046.271		
1,700.0	1,697.5	1,700.0	1,700.0	3.7	0.7	-1.23	-982.8	-8,761.5	8,773.0	8,768.6	4.36	2,011.465		
1,771.6	1,767.9	1,827.7	1,827.7	3.9	0.7	-1.24	-982.2	-8,760.5	8,759.0	8,754.4	4.58	1,910.697		
1,800.0	1,795.6	1,848.6	1,848.6	4.0	0.8	-1.24	-982.0	-8,760.3	8,753.0	8,748.3	4.66	1,878.066		
1,870.1	1,864.0	1,900.0	1,900.0	4.3	0.8	-1.25	-981.5	-8,759.9	8,737.0	8,732.1	4.86	1,799.369		
1,900.0	1,893.1	1,925.7	1,925.7	4.4	0.8	-1.25	-981.2	-8,759.7	8,729.7	8,724.7	4.94	1,768.052		
1,968.5	1,959.3	1,983.8	1,983.7	4.6	0.8	-1.26	-980.9	-8,759.3	8,711.8	8,706.7	5.13	1,697.867		
1,992.4	1,982.4	2,009.5	2,009.4	4.7	0.8	-1.26	-980.8	-8,759.2	8,705.2	8,700.0	5.20	1,673.964		
2,000.0	1,989.6	2,024.7	2,024.6	4.8	0.8	-1.26	-980.8	-8,759.1	8,703.1	8,697.9	5.22	1,665.963		
2,066.9	2,054.0	2,100.0	2,100.0	5.1	0.9	-1.26	-980.7	-8,758.3	8,684.2	8,678.8	5.42	1,602.344		
2,100.0	2,085.8	2,130.2	2,130.1	5.2	0.9	-1.27	-980.7	-8,758.0	8,674.8	8,669.3	5.50	1,576.627		
2,165.3	2,148.7	2,161.7	2,161.7	5.5	0.9	-1.27	-980.8	-8,757.8	8,656.5	8,650.9	5.67	1,527.628		
2,200.0	2,182.0	2,200.0	2,200.0	5.7	0.9	-1.27	-980.9	-8,757.6	8,647.0	8,641.2	5.77	1,499.410		
2,263.8	2,243.4	2,227.3	2,227.2	6.0	0.9	-1.27	-981.0	-8,757.6	8,629.4	8,623.5	5.93	1,454.001		
2,300.0	2,278.2	2,278.3	2,278.2	6.2	0.9	-1.28	-981.3	-8,757.4	8,619.4	8,613.4	6.04	1,427.102		
2,362.2	2,338.1	2,335.3	2,335.3	6.5	0.9	-1.28	-981.8	-8,757.1	8,602.2	8,596.0	6.22	1,383.808		
2,400.0	2,374.4	2,363.9	2,363.8	6.7	0.9	-1.29	-982.0	-8,757.0	8,591.7	8,585.4	6.32	1,358.775		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,432.8	2,400.0	2,399.9	7.0	0.9	-1.29	-982.0	-8,756.9	8,575.1	8,568.6	6.49	1,320.632	
2,500.0	2,470.6	2,429.1	2,429.1	7.2	0.9	-1.29	-982.1	-8,756.9	8,564.3	8,557.7	6.60	1,298.431	
2,559.0	2,527.4	2,462.0	2,462.0	7.6	0.9	-1.29	-982.1	-8,757.0	8,548.3	8,541.6	6.75	1,265.532	
2,600.0	2,566.8	2,500.0	2,499.9	7.8	0.9	-1.29	-982.2	-8,757.2	8,537.4	8,530.5	6.86	1,243.662	
2,657.5	2,622.1	2,570.2	2,570.1	8.1	0.9	-1.30	-982.3	-8,757.5	8,522.0	8,514.9	7.03	1,212.562	
2,700.0	2,663.0	2,625.3	2,625.3	8.3	0.9	-1.30	-982.3	-8,757.5	8,510.4	8,503.2	7.15	1,190.401	
2,755.9	2,716.8	2,673.2	2,673.2	8.6	0.9	-1.30	-982.3	-8,757.6	8,495.2	8,487.9	7.31	1,162.815	
2,800.0	2,759.2	2,700.0	2,699.9	8.9	0.9	-1.30	-982.2	-8,757.6	8,483.2	8,475.8	7.43	1,142.042	
2,854.3	2,811.5	2,749.1	2,749.0	9.2	0.9	-1.30	-981.9	-8,757.8	8,468.5	8,460.9	7.59	1,116.247	
2,900.0	2,855.4	2,782.5	2,782.4	9.4	1.0	-1.30	-981.5	-8,758.0	8,456.2	8,448.5	7.72	1,095.649	
2,952.7	2,906.2	2,821.5	2,821.4	9.7	1.0	-1.30	-980.8	-8,758.3	8,442.1	8,434.2	7.87	1,072.608	
3,000.0	2,951.6	2,856.8	2,856.7	10.0	1.0	-1.29	-980.3	-8,758.6	8,429.5	8,421.5	8.01	1,052.708	
3,051.2	3,000.9	2,900.0	2,899.9	10.3	1.0	-1.29	-979.6	-8,759.0	8,415.9	8,407.8	8.16	1,031.734	
3,100.0	3,047.8	3,068.0	3,067.8	10.5	1.0	-1.28	-976.5	-8,759.3	8,402.5	8,394.1	8.35	1,006.853	
3,149.6	3,095.5	3,100.0	3,099.9	10.8	1.0	-1.27	-975.8	-8,759.2	8,388.6	8,380.1	8.50	987.316	
3,200.0	3,144.0	3,140.3	3,140.2	11.1	1.0	-1.27	-975.1	-8,759.0	8,374.6	8,365.9	8.64	968.774	
3,248.0	3,190.2	3,164.1	3,164.0	11.4	1.0	-1.27	-974.8	-8,759.0	8,361.4	8,352.6	8.78	951.921	
3,300.0	3,240.2	3,200.0	3,199.9	11.7	1.0	-1.27	-974.5	-8,759.1	8,347.2	8,338.3	8.94	934.075	
3,346.4	3,284.9	3,230.0	3,229.9	11.9	1.1	-1.27	-974.4	-8,759.2	8,334.7	8,325.6	9.07	918.703	
3,400.0	3,336.4	3,291.2	3,291.0	12.2	1.1	-1.27	-974.2	-8,759.3	8,320.1	8,310.9	9.23	900.978	
3,444.9	3,379.6	3,327.8	3,327.7	12.5	1.1	-1.27	-974.0	-8,759.4	8,308.0	8,298.6	9.37	886.712	
3,500.0	3,432.6	3,369.1	3,368.9	12.8	1.1	-1.27	-973.5	-8,759.6	8,293.1	8,283.5	9.54	869.728	
3,543.3	3,474.3	3,400.0	3,399.9	13.1	1.1	-1.26	-973.0	-8,759.8	8,281.4	8,271.8	9.67	856.800	
3,600.0	3,528.8	3,450.7	3,450.6	13.4	1.1	-1.26	-972.1	-8,760.1	8,266.2	8,256.4	9.84	840.230	
3,641.7	3,569.0	3,486.7	3,486.6	13.6	1.1	-1.26	-971.5	-8,760.4	8,255.1	8,245.1	9.96	828.411	
3,700.0	3,625.0	3,611.1	3,610.9	14.0	1.2	-1.25	-969.2	-8,760.9	8,239.3	8,229.1	10.17	810.355	
3,740.1	3,663.6	3,644.5	3,644.3	14.2	1.2	-1.24	-968.5	-8,760.9	8,228.2	8,217.9	10.29	799.390	
3,800.0	3,721.2	3,700.0	3,699.8	14.5	1.2	-1.24	-967.7	-8,761.0	8,211.8	8,201.3	10.48	783.478	
3,838.6	3,758.3	3,733.0	3,732.8	14.8	1.2	-1.24	-967.3	-8,761.0	8,201.3	8,190.7	10.60	773.619	
3,900.0	3,817.4	3,796.9	3,796.7	15.1	1.2	-1.24	-966.8	-8,761.0	8,184.4	8,173.6	10.80	758.145	
3,937.0	3,853.0	3,843.1	3,843.0	15.3	1.2	-1.24	-966.5	-8,760.9	8,174.2	8,163.3	10.92	748.817	
4,000.0	3,913.6	3,900.0	3,899.8	15.7	1.2	-1.24	-966.1	-8,760.7	8,156.8	8,145.7	11.12	733.793	
4,035.4	3,947.7	3,900.0	3,899.8	15.9	1.2	-1.24	-966.1	-8,760.7	8,147.1	8,135.9	11.22	726.272	
4,100.0	4,009.8	3,954.0	3,953.8	16.3	1.2	-1.24	-965.9	-8,760.7	8,129.5	8,118.1	11.41	712.507	
4,133.8	4,042.4	3,969.5	3,969.3	16.5	1.2	-1.24	-965.8	-8,760.8	8,120.4	8,108.9	11.51	705.546	
4,200.0	4,106.0	4,000.0	3,999.8	16.8	1.2	-1.24	-965.9	-8,761.0	8,102.7	8,091.0	11.70	692.374	
4,232.3	4,137.1	4,000.0	3,999.8	17.0	1.2	-1.24	-965.9	-8,761.0	8,094.3	8,082.5	11.80	686.192	
4,300.0	4,202.2	4,050.5	4,050.3	17.4	1.2	-1.24	-966.1	-8,761.6	8,076.6	8,064.6	12.00	673.172	
4,330.7	4,231.7	4,066.0	4,065.8	17.6	1.3	-1.24	-966.2	-8,761.8	8,068.7	8,056.6	12.09	667.480	
4,400.0	4,298.4	4,100.0	4,099.8	18.0	1.3	-1.25	-966.7	-8,762.4	8,051.0	8,038.7	12.29	654.998	
4,429.1	4,326.4	4,125.3	4,125.1	18.2	1.3	-1.25	-967.0	-8,762.9	8,043.6	8,031.2	12.38	649.688	
4,500.0	4,394.6	4,182.5	4,182.2	18.6	1.3	-1.26	-967.9	-8,764.0	8,025.7	8,013.1	12.60	637.149	
4,527.5	4,421.1	4,200.0	4,199.8	18.7	1.3	-1.26	-968.2	-8,764.4	8,018.8	8,006.1	12.68	632.436	
4,600.0	4,490.8	4,263.5	4,263.3	19.2	1.3	-1.27	-969.0	-8,765.8	8,000.7	7,987.8	12.90	620.036	
4,626.0	4,515.8	4,284.6	4,284.4	19.3	1.3	-1.27	-969.2	-8,766.3	7,994.2	7,981.2	12.98	615.711	
4,700.0	4,587.0	4,339.8	4,339.5	19.8	1.3	-1.28	-969.7	-8,767.7	7,975.8	7,962.6	13.21	603.725	
4,724.4	4,610.5	4,357.4	4,357.1	19.9	1.3	-1.28	-969.8	-8,768.1	7,969.8	7,956.5	13.29	599.869	
4,800.0	4,683.2	4,400.0	4,399.7	20.3	1.3	-1.28	-970.1	-8,769.3	7,951.3	7,937.8	13.52	588.324	
4,822.8	4,705.2	4,428.7	4,428.3	20.5	1.3	-1.28	-970.3	-8,770.2	7,945.7	7,932.1	13.59	584.752	
4,900.0	4,779.4	4,484.7	4,484.4	20.9	1.3	-1.29	-970.7	-8,771.9	7,927.0	7,913.2	13.83	573.362	
4,921.2	4,799.8	4,500.8	4,500.4	21.0	1.3	-1.29	-970.9	-8,772.4	7,921.9	7,908.0	13.89	570.286	
5,000.0	4,875.6	4,633.5	4,633.1	21.5	1.3	-1.30	-971.9	-8,776.1	7,902.5	7,888.3	14.16	558.094	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,894.5	4,647.9	4,647.5	21.6	1.3	-1.30	-972.0	-8,776.5	7,897.6	7,883.4	14.22	555.331		
5,100.0	4,971.8	4,708.0	4,707.6	22.1	1.3	-1.30	-972.1	-8,778.2	7,877.9	7,863.4	14.47	544.300		
5,118.1	4,989.2	4,723.2	4,722.7	22.2	1.3	-1.30	-972.1	-8,778.6	7,873.5	7,858.9	14.53	541.863		
5,200.0	5,068.0	4,791.7	4,791.2	22.7	1.3	-1.31	-972.4	-8,780.7	7,853.5	7,838.7	14.79	531.074		
5,216.5	5,083.9	4,818.9	4,818.4	22.8	1.3	-1.31	-972.6	-8,781.5	7,849.5	7,834.6	14.84	528.772		
5,240.0	5,106.5	4,885.9	4,885.3	22.9	1.3	-1.31	-973.1	-8,783.3	7,843.7	7,828.7	14.94	525.158		
5,300.0	5,164.4	4,961.1	4,960.5	23.2	1.3	-1.31	-973.6	-8,784.9	7,829.2	7,814.1	15.08	519.296		
5,314.9	5,178.8	4,977.8	4,977.2	23.3	1.3	-1.31	-973.6	-8,785.3	7,825.8	7,810.7	15.11	518.058		
5,400.0	5,261.5	5,045.7	5,045.2	23.6	1.4	-1.30	-973.4	-8,786.8	7,807.8	7,792.5	15.26	511.719		
5,413.4	5,274.6	5,055.1	5,054.6	23.6	1.4	-1.30	-973.3	-8,787.1	7,805.2	7,789.9	15.28	510.840		
5,500.0	5,359.5	5,118.5	5,117.9	23.9	1.4	-1.29	-973.0	-8,788.7	7,790.0	7,774.6	15.41	505.428		
5,511.8	5,371.1	5,127.9	5,127.3	24.0	1.4	-1.29	-972.9	-8,789.0	7,788.2	7,772.8	15.43	504.768		
5,600.0	5,458.0	5,200.0	5,199.4	24.2	1.4	-1.28	-972.5	-8,791.1	7,776.1	7,760.5	15.55	500.076		
5,610.2	5,468.2	5,307.0	5,306.3	24.3	1.4	-1.27	-971.2	-8,793.6	7,774.7	7,759.1	15.59	498.809		
5,700.0	5,557.2	5,393.2	5,392.5	24.5	1.4	-1.26	-969.6	-8,795.3	7,764.4	7,748.7	15.70	494.609		
5,708.6	5,565.7	5,401.8	5,401.1	24.5	1.4	-1.25	-969.4	-8,795.4	7,763.6	7,747.9	15.71	494.255		
5,800.0	5,656.7	5,509.5	5,508.8	24.7	1.5	-1.24	-967.6	-8,797.4	7,756.2	7,740.4	15.81	490.581		
5,807.1	5,663.7	5,519.2	5,518.5	24.7	1.5	-1.24	-967.4	-8,797.5	7,755.7	7,739.9	15.82	490.325		
5,900.0	5,756.5	5,621.1	5,620.3	24.9	1.5	-1.22	-965.4	-8,799.1	7,751.1	7,735.2	15.91	487.176		
5,905.5	5,761.9	5,624.5	5,623.7	24.9	1.5	-1.22	-965.3	-8,799.1	7,750.9	7,735.0	15.91	487.028		
5,982.7	5,839.1	5,672.4	5,671.6	25.0	1.5	-1.21	-964.4	-8,800.0	7,749.8	7,733.8	15.98	484.956 CC		
6,000.0	5,856.4	5,700.0	5,699.2	25.0	1.5	-1.21	-963.9	-8,800.6	7,749.8	7,733.8	16.00	484.403		
6,003.9	5,860.3	5,700.0	5,699.2	25.0	1.5	-1.21	-963.9	-8,800.6	7,749.9	7,733.9	16.00	484.313		
6,032.5	5,888.9	5,708.4	5,707.6	25.0	1.5	-96.40	-963.8	-8,800.7	7,750.2	7,723.7	26.55	291.896 ES		
6,062.5	5,918.9	5,756.9	5,756.1	25.1	1.5	-96.39	-962.9	-8,801.7	7,750.8	7,724.2	26.59	291.453		
6,100.0	5,956.4	5,866.7	5,865.8	25.1	1.6	173.62	-960.0	-8,803.5	7,752.3	7,736.3	16.05	483.013		
6,102.3	5,958.7	5,881.2	5,880.3	25.1	1.6	173.62	-959.5	-8,803.6	7,752.4	7,736.4	16.05	483.051		
6,150.0	6,006.2	5,944.1	5,943.2	25.1	1.6	173.60	-957.5	-8,804.1	7,756.8	7,740.8	16.01	484.469		
6,200.0	6,055.6	5,993.1	5,992.2	25.1	1.6	173.55	-956.3	-8,804.4	7,764.8	7,748.8	15.98	485.937		
6,200.8	6,056.3	5,993.9	5,993.0	25.1	1.6	173.54	-956.3	-8,804.4	7,764.9	7,749.0	15.98	485.965		
6,250.0	6,104.3	6,025.0	6,024.0	25.0	1.6	173.45	-955.7	-8,804.6	7,776.2	7,760.3	15.93	488.032		
6,299.2	6,151.3	6,053.0	6,052.0	24.9	1.6	173.32	-955.1	-8,804.9	7,790.8	7,775.0	15.86	491.150		
6,300.0	6,152.1	6,053.4	6,052.5	24.9	1.6	173.32	-955.1	-8,804.9	7,791.1	7,775.2	15.86	491.208		
6,350.0	6,198.7	6,100.0	6,099.0	24.8	1.6	173.16	-954.1	-8,805.5	7,809.4	7,793.6	15.76	495.379		
6,397.6	6,241.9	6,109.7	6,108.8	24.7	1.6	172.95	-953.9	-8,805.7	7,829.8	7,814.2	15.62	501.389		
6,400.0	6,244.1	6,111.5	6,110.6	24.7	1.6	172.94	-953.8	-8,805.7	7,830.9	7,815.3	15.61	501.689		
6,450.0	6,287.8	6,148.8	6,147.8	24.5	1.6	172.68	-953.0	-8,806.3	7,855.6	7,840.1	15.44	508.882		
6,496.0	6,326.5	6,181.6	6,180.6	24.4	1.6	172.39	-952.2	-8,806.8	7,880.9	7,865.7	15.25	516.686		
6,500.0	6,329.7	6,184.4	6,183.4	24.4	1.6	172.36	-952.1	-8,806.9	7,883.2	7,868.0	15.24	517.393		
6,550.0	6,369.6	6,240.1	6,239.1	24.3	1.7	172.00	-950.8	-8,807.8	7,913.7	7,898.6	15.04	526.253		
6,594.5	6,403.3	6,300.0	6,299.0	24.2	1.7	171.63	-949.1	-8,808.6	7,942.9	7,928.0	14.87	534.096		
6,600.0	6,407.3	6,300.0	6,299.0	24.2	1.7	171.57	-949.1	-8,808.6	7,946.7	7,931.8	14.84	535.323		
6,650.0	6,442.7	6,328.0	6,327.0	24.1	1.7	170.99	-948.2	-8,809.0	7,982.2	7,967.5	14.64	545.141		
6,692.9	6,471.0	6,347.2	6,346.1	24.0	1.7	170.39	-947.6	-8,809.3	8,014.5	8,000.0	14.50	552.659		
6,700.0	6,475.5	6,350.2	6,349.2	24.0	1.7	170.28	-947.5	-8,809.3	8,020.0	8,005.6	14.48	553.753		
6,750.0	6,505.6	6,370.5	6,369.4	24.0	1.7	169.37	-946.8	-8,809.6	8,060.1	8,045.7	14.41	559.375		
6,791.3	6,528.3	6,400.0	6,398.9	24.0	1.7	168.47	-945.7	-8,810.1	8,094.8	8,080.3	14.46	559.751		
6,800.0	6,532.8	6,400.0	6,398.9	24.0	1.7	168.24	-945.7	-8,810.1	8,102.2	8,087.7	14.48	559.539		
6,850.0	6,557.0	6,400.0	6,398.9	24.1	1.7	166.66	-945.7	-8,810.1	8,146.0	8,131.3	14.72	553.292		
6,889.7	6,574.1	6,400.0	6,398.9	24.2	1.7	165.00	-945.7	-8,810.1	8,182.0	8,166.9	15.11	541.349		
6,900.0	6,578.1	6,400.0	6,398.9	24.3	1.7	164.49	-945.7	-8,810.1	8,191.4	8,176.2	15.25	537.219		
6,950.0	6,596.1	6,400.0	6,398.9	24.5	1.7	161.39	-945.7	-8,810.1	8,238.2	8,222.0	16.17	509.585		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
6,988.2	6,607.5	6,400.0	6,398.9	24.7	1.7	157.98	-945.7	-8,810.1	8,274.6	8,257.4	17.24	479.868	
7,000.0	6,610.7	6,400.0	6,398.9	24.8	1.7	156.66	-945.7	-8,810.1	8,286.0	8,268.4	17.66	469.181	
7,050.0	6,621.9	6,400.0	6,398.9	25.1	1.7	148.77	-945.7	-8,810.1	8,334.7	8,314.6	20.06	415.443	
7,086.6	6,628.0	6,400.0	6,398.9	25.4	1.7	139.04	-945.7	-8,810.1	8,370.7	8,348.1	22.67	369.269	
7,100.0	6,629.7	6,400.0	6,398.9	25.6	1.7	134.09	-945.7	-8,810.1	8,384.0	8,360.2	23.80	352.258	
7,150.0	6,634.1	6,400.0	6,398.9	26.0	1.7	105.61	-945.7	-8,810.1	8,433.6	8,406.2	27.48	306.923	
7,185.0	6,635.1	6,400.0	6,398.9	26.4	1.7	78.32	-945.7	-8,810.1	8,468.5	8,440.4	28.06	301.759	
7,196.6	6,635.0	6,400.0	6,398.9	26.5	1.7	69.82	-945.7	-8,810.1	8,480.0	8,452.0	27.93	303.665	
7,200.0	6,635.0	6,400.0	6,398.9	26.6	1.7	69.82	-945.7	-8,810.1	8,483.4	8,455.4	27.96	303.393	
7,283.4	6,633.9	6,400.0	6,398.9	27.6	1.7	69.82	-945.7	-8,810.1	8,566.4	8,537.4	28.94	296.002	
7,300.0	6,633.7	6,400.0	6,398.9	27.8	1.7	69.82	-945.7	-8,810.1	8,582.8	8,553.7	29.13	294.596	
7,381.9	6,632.6	6,400.0	6,398.9	29.0	1.7	69.82	-945.7	-8,810.1	8,664.2	8,634.0	30.26	286.310	
7,400.0	6,632.4	6,400.0	6,398.9	29.2	1.7	69.82	-945.7	-8,810.1	8,682.3	8,651.8	30.51	284.560	
7,480.3	6,631.4	6,400.0	6,398.9	30.5	1.7	69.82	-945.7	-8,810.1	8,762.1	8,730.4	31.76	275.902	
7,500.0	6,631.1	6,400.0	6,398.9	30.9	1.7	69.82	-945.7	-8,810.1	8,781.7	8,749.7	32.06	273.882	
7,578.7	6,630.1	6,400.0	6,398.9	32.3	1.7	69.82	-945.7	-8,810.1	8,860.0	8,826.6	33.40	265.241	
7,600.0	6,629.8	6,400.0	6,398.9	32.7	1.7	69.81	-945.7	-8,810.1	8,881.2	8,847.4	33.77	263.025	
7,677.1	6,628.9	6,400.0	6,398.9	34.1	1.7	69.81	-945.7	-8,810.1	8,958.0	8,922.8	35.18	254.662	
7,700.0	6,628.6	6,400.0	6,398.9	34.6	1.7	69.81	-945.7	-8,810.1	8,980.7	8,945.1	35.59	252.314	
7,775.6	6,627.6	6,400.0	6,398.9	36.1	1.7	69.81	-945.7	-8,810.1	9,055.9	9,018.8	37.05	244.392	
7,800.0	6,627.3	6,400.0	6,398.9	36.6	1.7	69.81	-945.7	-8,810.1	9,080.2	9,042.7	37.53	241.965	
7,874.0	6,626.3	6,400.0	6,398.9	38.2	1.7	69.81	-945.7	-8,810.1	9,153.8	9,114.8	39.02	234.569	
7,900.0	6,626.0	6,400.0	6,398.9	38.8	1.7	69.81	-945.7	-8,810.1	9,179.7	9,140.2	39.55	232.105	
7,972.4	6,625.1	6,400.0	6,398.9	40.4	1.7	69.81	-945.7	-8,810.1	9,251.8	9,210.7	41.07	225.271	
8,000.0	6,624.7	6,400.0	6,398.9	41.0	1.7	69.80	-945.7	-8,810.1	9,279.2	9,237.6	41.65	222.802	
8,070.8	6,623.8	6,400.0	6,398.9	42.6	1.7	69.80	-945.7	-8,810.1	9,349.8	9,306.6	43.18	216.531	
8,100.0	6,623.4	6,400.0	6,398.9	43.3	1.7	69.80	-945.7	-8,810.1	9,378.8	9,335.0	43.81	214.080	
8,169.3	6,622.6	6,400.0	6,398.9	44.9	1.7	69.80	-945.7	-8,810.1	9,447.7	9,402.4	45.34	208.353	
8,200.0	6,622.2	6,400.0	6,398.9	45.6	1.7	69.80	-945.7	-8,810.1	9,478.3	9,432.3	46.03	205.936	
8,267.7	6,621.3	6,400.0	6,398.9	47.3	1.7	69.80	-945.7	-8,810.1	9,545.7	9,498.1	47.56	200.721	
8,300.0	6,620.9	6,400.0	6,398.9	48.0	1.7	69.80	-945.7	-8,810.1	9,577.9	9,529.6	48.29	198.351	
8,366.1	6,620.0	6,400.0	6,398.9	49.7	1.7	69.80	-945.7	-8,810.1	9,643.7	9,593.9	49.81	193.611	
8,400.0	6,619.6	6,400.0	6,398.9	50.5	1.7	69.79	-945.7	-8,810.1	9,677.4	9,626.8	50.59	191.295	
8,464.5	6,618.8	6,400.0	6,398.9	52.1	1.7	69.79	-945.7	-8,810.1	9,741.7	9,689.6	52.10	186.991	
8,500.0	6,618.3	6,400.0	6,398.9	53.0	1.7	69.79	-945.7	-8,810.1	9,777.0	9,724.1	52.92	184.734	
8,563.0	6,617.5	6,400.0	6,398.9	54.5	1.7	69.79	-945.7	-8,810.1	9,839.7	9,785.3	54.41	180.829	
8,600.0	6,617.0	6,400.0	6,398.9	55.5	1.7	69.79	-945.7	-8,810.1	9,876.6	9,821.3	55.29	178.632	
8,661.4	6,616.3	6,400.0	6,398.9	57.0	1.7	69.79	-945.7	-8,810.1	9,937.7	9,881.0	56.76	175.088	
8,700.0	6,615.8	6,400.0	6,398.9	58.0	1.7	69.79	-945.7	-8,810.1	9,976.2	9,918.5	57.68	172.954 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-85.94	687.2	-9,673.7	9,698.1				
98.4	98.4	81.4	81.4	0.1	0.0	-85.94	687.2	-9,673.7	9,698.1				
100.0	100.0	83.0	83.0	0.1	0.0	-85.94	687.2	-9,673.7	9,698.1	9,698.0	0.10	N/A	
196.8	196.8	179.8	179.8	0.3	1.0	-85.94	687.2	-9,673.7	9,698.1	9,696.7	1.30	7,436.403	
200.0	200.0	183.0	183.0	0.3	1.0	-85.94	687.2	-9,673.7	9,698.1	9,696.7	1.35	7,182.601	
295.3	295.3	278.3	278.3	0.5	3.0	-85.94	687.2	-9,673.7	9,698.1	9,694.5	3.56	2,723.995	
300.0	300.0	283.0	283.0	0.5	3.1	-85.94	687.2	-9,673.7	9,698.1	9,694.4	3.68	2,636.325	
393.7	393.7	376.7	376.7	0.8	5.1	-85.94	687.2	-9,673.7	9,698.1	9,692.2	5.87	1,652.002	
400.0	400.0	383.0	383.0	0.8	5.2	-85.94	687.2	-9,673.7	9,698.1	9,692.0	6.02	1,612.169	
492.1	492.1	475.1	475.1	1.0	7.1	-85.94	687.2	-9,673.7	9,698.1	9,689.9	8.11	1,195.839	
500.0	500.0	483.0	483.0	1.0	7.3	-85.94	687.2	-9,673.7	9,698.1	9,689.8	8.29	1,170.084	
590.5	590.5	573.5	573.5	1.2	9.1	-85.94	687.2	-9,673.7	9,698.1	9,687.7	10.33	938.705	
600.0	600.0	583.0	583.0	1.2	9.3	-85.94	687.2	-9,673.7	9,698.1	9,687.5	10.54	919.744	
689.0	689.0	672.0	672.0	1.4	11.1	-85.94	687.2	-9,673.7	9,698.1	9,685.5	12.55	773.056	
700.0	700.0	683.0	683.0	1.4	11.3	-85.94	687.2	-9,673.7	9,698.1	9,685.3	12.79	758.083	
787.4	787.4	770.4	770.4	1.6	13.1	-85.94	687.2	-9,673.7	9,698.1	9,683.3	14.75	657.284	
800.0	800.0	783.0	783.0	1.7	13.4	-85.94	687.2	-9,673.7	9,698.1	9,683.0	15.04	644.925	
885.8	885.8	868.8	868.8	1.9	15.1	-85.94	687.2	-9,673.7	9,698.1	9,681.1	16.96	571.753	
900.0	900.0	883.0	883.0	1.9	15.4	-85.94	687.2	-9,673.7	9,698.1	9,680.8	17.28	561.238	
984.2	984.2	967.2	967.2	2.1	17.1	-85.94	687.2	-9,673.7	9,698.1	9,678.9	19.17	505.960	
1,000.0	1,000.0	983.0	983.0	2.1	17.4	-85.94	687.2	-9,673.7	9,698.1	9,678.5	19.52	496.814	
1,082.7	1,082.7	1,065.7	1,065.7	2.3	19.1	-85.94	687.2	-9,673.7	9,698.1	9,676.7	21.37	453.770	
1,100.0	1,100.0	1,083.0	1,083.0	2.3	19.4	-85.94	687.2	-9,673.7	9,698.1	9,676.3	21.76	445.679	
1,181.1	1,181.1	1,164.1	1,164.1	2.5	21.0	-85.94	687.2	-9,673.7	9,698.1	9,674.5	23.58	411.353	
1,200.0	1,200.0	1,183.0	1,183.0	2.6	21.4	-85.94	687.2	-9,673.7	9,698.1	9,674.1	24.00	404.101	
1,279.5	1,279.5	1,262.5	1,262.5	2.7	23.0	9.26	687.2	-9,673.7	9,697.0	9,671.2	25.76	376.469	
1,300.0	1,300.0	1,283.0	1,283.0	2.8	23.4	9.26	687.2	-9,673.7	9,696.3	9,670.1	26.21	369.993	
1,377.9	1,377.8	1,360.8	1,360.8	2.9	25.0	9.28	687.2	-9,673.7	9,692.6	9,664.7	27.89	347.494	
1,400.0	1,399.8	1,382.8	1,382.8	3.0	25.5	9.29	687.2	-9,673.7	9,691.2	9,662.8	28.36	341.664	
1,476.4	1,475.9	1,458.9	1,458.9	3.1	27.0	9.31	687.2	-9,673.7	9,684.9	9,654.9	29.98	322.996	
1,500.0	1,499.5	1,482.5	1,482.5	3.2	27.5	9.32	687.2	-9,673.7	9,682.6	9,652.1	30.48	317.679	
1,574.8	1,573.7	1,556.7	1,556.7	3.4	29.0	9.36	687.2	-9,673.7	9,673.9	9,641.9	32.03	302.046	
1,600.0	1,598.7	1,581.7	1,581.7	3.4	29.5	9.37	687.2	-9,673.7	9,670.5	9,638.0	32.54	297.175	
1,673.2	1,671.1	1,654.1	1,654.1	3.6	30.9	9.42	687.2	-9,673.7	9,659.6	9,625.6	34.01	283.981	
1,700.0	1,697.5	1,680.5	1,680.5	3.7	31.4	9.44	687.2	-9,673.7	9,655.1	9,620.6	34.54	279.504	
1,771.6	1,767.9	1,750.9	1,750.9	3.9	32.9	9.50	687.2	-9,673.7	9,642.0	9,606.0	35.94	268.294	
1,800.0	1,795.6	1,778.6	1,778.6	4.0	33.4	9.52	687.2	-9,673.7	9,636.3	9,599.8	36.48	264.166	
1,870.1	1,864.0	1,847.0	1,847.0	4.3	34.8	9.59	687.2	-9,673.7	9,621.1	9,583.3	37.79	254.589	
1,900.0	1,893.1	1,876.1	1,876.1	4.4	35.4	9.62	687.2	-9,673.7	9,614.1	9,575.7	38.34	250.775	
1,968.5	1,959.3	1,942.3	1,942.3	4.6	36.7	9.70	687.2	-9,673.7	9,596.9	9,557.4	39.57	242.556	
1,992.4	1,982.4	1,965.4	1,965.4	4.7	37.2	9.72	687.2	-9,673.7	9,590.6	9,550.6	39.98	239.858	
2,000.0	1,989.6	1,972.6	1,972.6	4.8	37.3	9.73	687.2	-9,673.7	9,588.5	9,548.4	40.14	238.855	
2,066.9	2,054.0	2,037.0	2,037.0	5.1	38.6	9.74	687.2	-9,673.7	9,570.5	9,528.9	41.56	230.259	
2,100.0	2,085.8	2,068.8	2,068.8	5.2	39.3	9.75	687.2	-9,673.7	9,561.6	9,519.3	42.26	226.258	
2,165.3	2,148.7	2,131.7	2,131.7	5.5	40.5	9.77	687.2	-9,673.7	9,544.0	9,500.4	43.64	218.689	
2,200.0	2,182.0	2,165.0	2,165.0	5.7	41.2	9.78	687.2	-9,673.7	9,534.7	9,490.3	44.38	214.827	
2,263.8	2,243.4	2,226.4	2,226.4	6.0	42.4	9.80	687.2	-9,673.7	9,517.5	9,471.7	45.74	208.076	
2,300.0	2,278.2	2,261.2	2,261.2	6.2	43.1	9.81	687.2	-9,673.7	9,507.7	9,461.2	46.51	204.412	
2,362.2	2,338.1	2,321.1	2,321.1	6.5	44.3	9.83	687.2	-9,673.7	9,491.0	9,443.1	47.84	198.390	
2,400.0	2,374.4	2,357.4	2,357.4	6.7	45.1	9.84	687.2	-9,673.7	9,480.8	9,432.1	48.65	194.888	
2,460.6	2,432.8	2,415.8	2,415.8	7.0	46.2	9.85	687.2	-9,673.7	9,464.4	9,414.5	49.94	189.502	
2,500.0	2,470.6	2,453.6	2,453.6	7.2	47.0	9.87	687.2	-9,673.7	9,453.8	9,403.1	50.79	186.149	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	2,527.4	2,510.4	2,510.4	7.6	48.1	9.88	687.2	-9,673.7	9,437.9	9,385.9	52.05	181.318			
2,600.0	2,566.8	2,549.8	2,549.8	7.8	48.9	9.89	687.2	-9,673.7	9,426.9	9,374.0	52.93	178.103			
2,657.5	2,622.1	2,605.1	2,605.1	8.1	50.0	9.91	687.2	-9,673.7	9,411.4	9,357.3	54.16	173.761			
2,700.0	2,663.0	2,646.0	2,646.0	8.3	50.9	9.92	687.2	-9,673.7	9,400.0	9,344.9	55.08	170.672			
2,755.9	2,716.8	2,699.8	2,699.8	8.6	51.9	9.94	687.2	-9,673.7	9,384.9	9,328.6	56.28	166.761			
2,800.0	2,759.2	2,742.2	2,742.2	8.9	52.8	9.95	687.2	-9,673.7	9,373.0	9,315.8	57.23	163.791			
2,854.3	2,811.5	2,794.5	2,794.5	9.2	53.9	9.97	687.2	-9,673.7	9,358.4	9,300.0	58.39	160.261			
2,900.0	2,855.4	2,838.4	2,838.4	9.4	54.7	9.98	687.2	-9,673.7	9,346.1	9,286.7	59.38	157.400			
2,952.7	2,906.2	2,889.2	2,889.2	9.7	55.8	10.00	687.2	-9,673.7	9,331.9	9,271.4	60.51	154.210			
3,000.0	2,951.6	2,934.6	2,934.6	10.0	56.7	10.01	687.2	-9,673.7	9,319.2	9,257.7	61.53	151.452			
3,051.2	3,000.9	2,983.9	2,983.9	10.3	57.7	10.02	687.2	-9,673.7	9,305.4	9,242.8	62.64	148.563			
3,100.0	3,047.8	3,030.8	3,030.8	10.5	58.6	10.04	687.2	-9,673.7	9,292.3	9,228.6	63.69	145.900			
3,149.6	3,095.5	3,078.5	3,078.5	10.8	59.6	10.05	687.2	-9,673.7	9,278.9	9,214.2	64.76	143.282			
3,200.0	3,144.0	3,127.0	3,127.0	11.1	60.5	10.07	687.2	-9,673.7	9,265.3	9,199.5	65.85	140.709			
3,248.0	3,190.2	3,173.2	3,173.2	11.4	61.5	10.08	687.2	-9,673.7	9,252.4	9,185.5	66.88	138.334			
3,300.0	3,240.2	3,223.2	3,223.2	11.7	62.5	10.10	687.2	-9,673.7	9,238.4	9,170.4	68.01	135.844			
3,346.4	3,284.9	3,267.9	3,267.9	11.9	63.4	10.11	687.2	-9,673.7	9,225.9	9,156.9	69.01	133.686			
3,400.0	3,336.4	3,319.4	3,319.4	12.2	64.4	10.13	687.2	-9,673.7	9,211.5	9,141.3	70.17	131.275			
3,444.9	3,379.6	3,362.6	3,362.6	12.5	65.3	10.14	687.2	-9,673.7	9,199.4	9,128.3	71.14	129.315			
3,500.0	3,432.6	3,415.6	3,415.6	12.8	66.3	10.16	687.2	-9,673.7	9,184.6	9,112.3	72.33	126.978			
3,543.3	3,474.3	3,457.3	3,457.3	13.1	67.2	10.17	687.2	-9,673.7	9,172.9	9,099.7	73.27	125.195			
3,600.0	3,528.8	3,511.8	3,511.8	13.4	68.3	10.19	687.2	-9,673.7	9,157.7	9,083.2	74.50	122.927			
3,641.7	3,569.0	3,552.0	3,552.0	13.6	69.1	10.20	687.2	-9,673.7	9,146.5	9,071.1	75.40	121.306			
3,700.0	3,625.0	3,608.0	3,608.0	14.0	70.2	10.22	687.2	-9,673.7	9,130.8	9,054.1	76.66	119.104			
3,740.1	3,663.6	3,646.6	3,646.6	14.2	71.0	10.23	687.2	-9,673.7	9,120.0	9,042.4	77.53	117.629			
3,800.0	3,721.2	3,704.2	3,704.2	14.5	72.2	10.25	687.2	-9,673.7	9,103.9	9,025.0	78.83	115.489			
3,838.6	3,758.3	3,741.3	3,741.3	14.8	72.9	10.26	687.2	-9,673.7	9,093.5	9,013.8	79.66	114.147			
3,900.0	3,817.4	3,800.4	3,800.4	15.1	74.1	10.28	687.2	-9,673.7	9,077.0	8,996.0	81.00	112.066			
3,937.0	3,853.0	3,836.0	3,836.0	15.3	74.8	10.29	687.2	-9,673.7	9,067.0	8,985.2	81.80	110.846			
4,000.0	3,913.6	3,896.6	3,896.6	15.7	76.0	10.31	687.2	-9,673.7	9,050.1	8,966.9	83.16	108.821			
4,035.4	3,947.7	3,930.7	3,930.7	15.9	76.7	10.32	687.2	-9,673.7	9,040.5	8,956.6	83.93	107.711			
4,100.0	4,009.8	3,992.8	3,992.8	16.3	78.0	10.34	687.2	-9,673.7	9,023.2	8,937.8	85.33	105.739			
4,133.8	4,042.4	4,025.4	4,025.4	16.5	78.6	10.35	687.2	-9,673.7	9,014.1	8,928.0	86.07	104.731			
4,200.0	4,106.0	4,089.0	4,089.0	16.8	79.9	10.37	687.2	-9,673.7	8,996.3	8,908.8	87.50	102.809			
4,232.3	4,137.1	4,120.1	4,120.1	17.0	80.5	10.38	687.2	-9,673.7	8,987.6	8,899.4	88.20	101.894			
4,300.0	4,202.2	4,185.2	4,185.2	17.4	81.8	10.40	687.2	-9,673.7	8,969.4	8,879.7	89.68	100.021			
4,330.7	4,231.7	4,214.7	4,214.7	17.6	82.4	10.41	687.2	-9,673.7	8,961.1	8,870.8	90.34	99.191			
4,400.0	4,298.4	4,281.4	4,281.4	18.0	83.8	10.44	687.2	-9,673.7	8,942.5	8,850.6	91.85	97.363			
4,429.1	4,326.4	4,309.4	4,309.4	18.2	84.3	10.44	687.2	-9,673.7	8,934.6	8,842.2	92.48	96.612			
4,500.0	4,394.6	4,377.6	4,377.6	18.6	85.7	10.47	687.2	-9,673.7	8,915.6	8,821.6	94.02	94.827			
4,527.5	4,421.1	4,404.1	4,404.1	18.7	86.2	10.48	687.2	-9,673.7	8,908.2	8,813.6	94.62	94.149			
4,600.0	4,490.8	4,473.8	4,473.8	19.2	87.6	10.50	687.2	-9,673.7	8,888.7	8,792.5	96.19	92.406			
4,626.0	4,515.8	4,498.8	4,498.8	19.3	88.1	10.51	687.2	-9,673.7	8,881.7	8,785.0	96.76	91.794			
4,700.0	4,587.0	4,570.0	4,570.0	19.8	89.6	10.53	687.2	-9,673.7	8,861.8	8,763.4	98.37	90.090			
4,724.4	4,610.5	4,593.5	4,593.5	19.9	90.0	10.54	687.2	-9,673.7	8,855.2	8,756.4	98.90	89.541			
4,800.0	4,683.2	4,666.2	4,666.2	20.3	91.5	10.56	687.2	-9,673.7	8,834.9	8,734.4	100.54	87.875			
4,822.8	4,705.2	4,688.2	4,688.2	20.5	91.9	10.57	687.2	-9,673.7	8,828.8	8,727.8	101.04	87.382			
4,900.0	4,779.4	4,762.4	4,762.4	20.9	93.4	10.60	687.2	-9,673.7	8,808.0	8,705.3	102.71	85.752			
4,921.2	4,799.8	4,782.8	4,782.8	21.0	93.8	10.60	687.2	-9,673.7	8,802.3	8,699.2	103.18	85.313			
5,000.0	4,875.6	4,858.6	4,858.6	21.5	95.4	10.63	687.2	-9,673.7	8,781.2	8,676.3	104.89	83.718			
5,019.7	4,894.5	4,877.5	4,877.5	21.6	95.7	10.63	687.2	-9,673.7	8,775.9	8,670.6	105.32	83.327			
5,100.0	4,971.8	4,954.8	4,954.8	22.1	97.3	10.66	687.2	-9,673.7	8,754.3	8,647.2	107.07	81.765			

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	4,989.2	4,972.2	4,972.2	22.2	97.7	10.67	687.2	-9,673.7	8,749.4	8,642.0	107.46	81.420	
5,200.0	5,068.0	5,051.0	5,051.0	22.7	99.2	10.69	687.2	-9,673.7	8,727.4	8,618.2	109.24	79.890	
5,216.5	5,083.9	5,066.9	5,066.9	22.8	99.6	10.70	687.2	-9,673.7	8,723.0	8,613.4	109.60	79.587	
5,240.0	5,106.5	5,089.5	5,089.5	22.9	100.0	10.71	687.2	-9,673.7	8,716.7	8,606.5	110.11	79.160	
5,300.0	5,164.4	5,147.4	5,147.4	23.2	101.2	10.67	687.2	-9,673.7	8,701.1	8,589.2	111.95	77.727	
5,314.9	5,178.8	5,161.8	5,161.8	23.3	101.5	10.66	687.2	-9,673.7	8,697.5	8,585.1	112.39	77.384	
5,400.0	5,261.5	5,244.5	5,244.5	23.6	103.1	10.61	687.2	-9,673.7	8,677.9	8,563.0	114.90	75.524	
5,413.4	5,274.6	5,257.6	5,257.6	23.6	103.4	10.60	687.2	-9,673.7	8,675.1	8,559.8	115.29	75.245	
5,500.0	5,359.5	5,342.5	5,342.5	23.9	105.1	10.56	687.2	-9,673.7	8,658.1	8,540.3	117.76	73.522	
5,511.8	5,371.1	5,354.1	5,354.1	24.0	105.3	10.55	687.2	-9,673.7	8,655.9	8,537.9	118.09	73.299	
5,600.0	5,458.0	5,441.0	5,441.0	24.2	107.1	10.52	687.2	-9,673.7	8,641.6	8,521.1	120.51	71.709	
5,610.2	5,468.2	5,451.2	5,451.2	24.3	107.3	10.51	687.2	-9,673.7	8,640.1	8,519.3	120.78	71.534	
5,700.0	5,557.2	5,540.2	5,540.2	24.5	109.1	10.49	687.2	-9,673.7	8,628.5	8,505.4	123.14	70.073	
5,708.6	5,565.7	5,548.7	5,548.7	24.5	109.2	10.48	687.2	-9,673.7	8,627.5	8,504.2	123.36	69.940	
5,800.0	5,656.7	5,639.7	5,639.7	24.7	111.1	10.46	687.2	-9,673.7	8,618.8	8,493.2	125.63	68.603	
5,807.1	5,663.7	5,646.7	5,646.7	24.7	111.2	10.46	687.2	-9,673.7	8,618.3	8,492.5	125.80	68.506	
5,900.0	5,756.5	5,739.5	5,739.5	24.9	113.1	10.45	687.2	-9,673.7	8,612.5	8,484.6	127.99	67.292	
5,905.5	5,761.9	5,744.9	5,744.9	24.9	113.2	10.45	687.2	-9,673.7	8,612.3	8,484.2	128.11	67.224	
6,000.0	5,856.4	5,839.4	5,839.4	25.0	115.1	10.44	687.2	-9,673.7	8,609.7	8,479.5	130.19	66.130	
6,003.9	5,860.3	5,843.3	5,843.3	25.0	115.2	10.44	687.2	-9,673.7	8,609.7	8,479.4	130.28	66.088	
6,032.5	5,888.9	5,871.9	5,871.9	25.0	115.7	-84.75	687.2	-9,673.7	8,609.5	8,469.1	140.48	61.286	
6,062.5	5,918.9	5,901.9	5,901.9	25.1	116.3	-84.75	687.2	-9,673.7	8,609.5	8,468.4	141.12	61.011 CC, ES	
6,100.0	5,956.4	5,939.4	5,939.4	25.1	117.1	-174.75	687.2	-9,673.7	8,610.5	8,478.5	132.03	65.215	
6,102.3	5,958.7	5,941.7	5,941.7	25.1	117.1	-174.75	687.2	-9,673.7	8,610.6	8,478.6	132.05	65.206	
6,150.0	6,006.2	5,989.2	5,989.2	25.1	118.1	-174.72	687.2	-9,673.7	8,614.9	8,482.7	132.13	65.198	
6,200.0	6,055.6	6,038.6	6,038.6	25.1	119.1	-174.66	687.2	-9,673.7	8,622.6	8,491.1	131.58	65.534	
6,200.8	6,056.3	6,039.3	6,039.3	25.1	119.1	-174.66	687.2	-9,673.7	8,622.8	8,491.2	131.56	65.542	
6,250.0	6,104.3	6,087.3	6,087.3	25.0	120.1	-174.59	687.2	-9,673.7	8,633.8	8,503.5	130.35	66.234	
6,299.2	6,151.3	6,134.3	6,134.3	24.9	121.0	-174.48	687.2	-9,673.7	8,648.1	8,519.6	128.50	67.302	
6,300.0	6,152.1	6,135.1	6,135.1	24.9	121.0	-174.48	687.2	-9,673.7	8,648.4	8,519.9	128.46	67.322	
6,350.0	6,198.7	6,181.7	6,181.7	24.8	122.0	-174.34	687.2	-9,673.7	8,666.2	8,540.3	125.91	68.830	
6,397.6	6,241.9	6,224.9	6,224.9	24.7	122.8	-174.18	687.2	-9,673.7	8,686.2	8,563.3	122.87	70.696	
6,400.0	6,244.1	6,227.1	6,227.1	24.7	122.9	-174.17	687.2	-9,673.7	8,687.3	8,564.6	122.70	70.801	
6,450.0	6,287.8	6,270.8	6,270.8	24.5	123.8	-173.96	687.2	-9,673.7	8,711.4	8,592.6	118.85	73.295	
6,496.0	6,326.5	6,309.5	6,309.5	24.4	124.5	-173.72	687.2	-9,673.7	8,736.3	8,621.5	114.77	76.117	
6,500.0	6,329.7	6,312.7	6,312.7	24.4	124.6	-173.70	687.2	-9,673.7	8,738.5	8,624.1	114.40	76.385	
6,550.0	6,369.6	6,352.6	6,352.6	24.3	125.4	-173.38	687.2	-9,673.7	8,768.5	8,659.1	109.38	80.169	
6,594.5	6,403.3	6,386.3	6,386.3	24.2	126.1	-173.05	687.2	-9,673.7	8,797.4	8,693.0	104.47	84.214	
6,600.0	6,407.3	6,390.3	6,390.3	24.2	126.2	-173.00	687.2	-9,673.7	8,801.2	8,697.3	103.83	84.766	
6,650.0	6,442.7	6,425.7	6,425.7	24.1	126.9	-172.53	687.2	-9,673.7	8,836.4	8,738.5	97.83	90.321	
6,692.9	6,471.0	6,454.0	6,454.0	24.0	127.5	-172.04	687.2	-9,673.7	8,868.5	8,776.1	92.40	95.978	
6,700.0	6,475.5	6,458.5	6,458.5	24.0	127.5	-171.94	687.2	-9,673.7	8,874.0	8,782.5	91.48	97.002	
6,750.0	6,505.6	6,488.6	6,488.6	24.0	128.1	-171.21	687.2	-9,673.7	8,913.7	8,828.8	84.91	104.977	
6,791.3	6,528.3	6,511.3	6,511.3	24.0	128.6	-170.46	687.2	-9,673.7	8,948.1	8,868.7	79.46	112.618	
6,800.0	6,532.8	6,515.8	6,515.8	24.0	128.7	-170.28	687.2	-9,673.7	8,955.5	8,877.2	78.32	114.341	
6,850.0	6,557.0	6,540.0	6,540.0	24.1	129.2	-169.05	687.2	-9,673.7	8,999.0	8,927.0	72.04	124.917	
6,889.7	6,574.1	6,557.1	6,557.1	24.2	129.5	-167.78	687.2	-9,673.7	9,034.8	8,967.2	67.62	133.603	
6,900.0	6,578.1	6,561.1	6,561.1	24.3	129.6	-167.39	687.2	-9,673.7	9,044.2	8,977.6	66.62	135.750	
6,950.0	6,596.1	6,579.1	6,579.1	24.5	130.0	-165.05	687.2	-9,673.7	9,090.7	9,027.6	63.12	144.029	
6,988.2	6,607.5	6,590.5	6,590.5	24.7	130.2	-162.51	687.2	-9,673.7	9,126.9	9,064.0	62.90	145.096	
7,000.0	6,610.7	6,593.7	6,593.7	24.8	130.3	-161.52	687.2	-9,673.7	9,138.3	9,074.8	63.50	143.912	
7,050.0	6,621.9	6,604.9	6,604.9	25.1	130.5	-155.73	687.2	-9,673.7	9,186.8	9,115.5	71.34	128.771	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
7,086.6	6,628.0	6,611.0	6,611.0	25.4	130.6	-148.60	687.2	-9,673.7	9,222.8	9,137.6	85.19	108.259	
7,100.0	6,629.7	6,612.7	6,612.7	25.6	130.6	-144.92	687.2	-9,673.7	9,236.0	9,143.3	92.72	99.612	
7,150.0	6,634.1	6,617.1	6,617.1	26.0	130.7	-121.55	687.2	-9,673.7	9,285.6	9,151.4	134.20	69.193	
7,185.0	6,635.1	6,618.1	6,618.1	26.4	130.8	-92.27	687.2	-9,673.7	9,320.5	9,163.5	156.99	59.369 SF	
7,196.6	6,635.0	6,618.0	6,618.0	26.5	130.7	-81.42	687.2	-9,673.7	9,332.0	9,176.5	155.51	60.008	
7,200.0	6,635.0	6,618.0	6,618.0	26.6	130.7	-81.42	687.2	-9,673.7	9,335.4	9,179.9	155.55	60.016	
7,283.4	6,633.9	6,616.9	6,616.9	27.6	130.7	-81.35	687.2	-9,673.7	9,418.6	9,262.1	156.51	60.177	
7,300.0	6,633.7	6,616.7	6,616.7	27.8	130.7	-81.33	687.2	-9,673.7	9,435.1	9,278.4	156.70	60.210	
7,381.9	6,632.6	6,615.6	6,615.6	29.0	130.7	-81.25	687.2	-9,673.7	9,516.7	9,358.8	157.83	60.297	
7,400.0	6,632.4	6,615.4	6,615.4	29.2	130.7	-81.23	687.2	-9,673.7	9,534.7	9,376.7	158.08	60.317	
7,480.3	6,631.4	6,614.4	6,614.4	30.5	130.7	-81.16	687.2	-9,673.7	9,614.8	9,455.4	159.33	60.346	
7,500.0	6,631.1	6,614.1	6,614.1	30.9	130.7	-81.14	687.2	-9,673.7	9,634.4	9,474.8	159.63	60.353	
7,578.7	6,630.1	6,613.1	6,613.1	32.3	130.7	-81.07	687.2	-9,673.7	9,712.8	9,551.9	160.98	60.334	
7,600.0	6,629.8	6,612.8	6,612.8	32.7	130.6	-81.05	687.2	-9,673.7	9,734.1	9,572.7	161.35	60.329	
7,677.1	6,628.9	6,611.9	6,611.9	34.1	130.6	-80.98	687.2	-9,673.7	9,810.9	9,648.2	162.77	60.273	
7,700.0	6,628.6	6,611.6	6,611.6	34.6	130.6	-80.95	687.2	-9,673.7	9,833.7	9,670.5	163.20	60.257	
7,775.6	6,627.6	6,610.6	6,610.6	36.1	130.6	-80.88	687.2	-9,673.7	9,909.0	9,744.4	164.68	60.173	
7,800.0	6,627.3	6,610.3	6,610.3	36.6	130.6	-80.86	687.2	-9,673.7	9,933.4	9,768.2	165.15	60.147	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	100.60	-762.2	4,072.6	4,143.3				
98.4	98.4	88.8	88.8	0.1	0.0	100.60	-762.2	4,072.5	4,143.2	4,143.2	0.10	N/A	
100.0	100.0	90.5	90.5	0.1	0.0	100.60	-762.2	4,072.5	4,143.2	4,143.1	0.10	N/A	
182.6	182.6	168.6	168.6	0.3	0.1	100.60	-762.2	4,072.5	4,143.2	4,142.8	0.35	N/A	
196.8	196.8	181.9	181.9	0.3	0.1	100.60	-762.2	4,072.5	4,143.2	4,142.8	0.39	N/A	
200.0	200.0	184.8	184.8	0.3	0.1	100.60	-762.2	4,072.5	4,143.2	4,142.8	0.40	N/A	
295.3	295.3	283.2	283.2	0.5	0.2	100.60	-762.3	4,072.5	4,143.2	4,142.5	0.70	5,953.490	
300.0	300.0	288.2	288.2	0.5	0.2	100.60	-762.3	4,072.5	4,143.2	4,142.5	0.71	5,832.202	
344.6	344.6	330.6	330.6	0.6	0.2	100.60	-762.3	4,072.5	4,143.2	4,142.4	0.82	5,037.704	
393.7	393.7	375.6	375.6	0.8	0.2	100.60	-762.2	4,072.5	4,143.2	4,142.3	0.94	4,422.717	
400.0	400.0	381.3	381.3	0.8	0.2	100.60	-762.2	4,072.5	4,143.2	4,142.3	0.95	4,354.539	
492.1	492.1	476.6	476.6	1.0	0.2	100.60	-762.0	4,072.6	4,143.3	4,142.1	1.22	3,383.690	
500.0	500.0	485.1	485.1	1.0	0.3	100.60	-762.0	4,072.6	4,143.3	4,142.1	1.25	3,316.568	
590.5	590.5	567.6	567.6	1.2	0.3	100.59	-761.7	4,072.8	4,143.4	4,141.9	1.51	2,748.221	
600.0	600.0	575.9	575.9	1.2	0.3	100.59	-761.7	4,072.8	4,143.4	4,141.9	1.53	2,700.815	
689.0	689.0	663.0	663.0	1.4	0.4	100.59	-761.5	4,073.1	4,143.7	4,141.9	1.79	2,317.069	
700.0	700.0	674.2	674.2	1.4	0.4	100.59	-761.5	4,073.1	4,143.7	4,141.9	1.82	2,276.629	
787.4	787.4	760.9	760.9	1.6	0.4	100.59	-761.4	4,073.4	4,144.0	4,141.9	2.07	2,006.262	
800.0	800.0	773.2	773.2	1.7	0.4	100.59	-761.4	4,073.4	4,144.0	4,141.9	2.10	1,972.852	
885.8	885.8	860.8	860.8	1.9	0.5	100.59	-761.4	4,073.7	4,144.3	4,141.9	2.34	1,773.564	
900.0	900.0	875.5	875.5	1.9	0.5	100.59	-761.4	4,073.7	4,144.3	4,141.9	2.38	1,744.582	
984.2	984.2	960.4	960.4	2.1	0.5	100.58	-761.3	4,074.0	4,144.5	4,141.9	2.60	1,593.920	
1,000.0	1,000.0	976.0	976.0	2.1	0.5	100.58	-761.3	4,074.0	4,144.5	4,141.9	2.64	1,568.863	
1,082.7	1,082.7	1,061.8	1,061.8	2.3	0.6	100.58	-761.3	4,074.2	4,144.7	4,141.9	2.86	1,450.987	
1,100.0	1,100.0	1,080.0	1,080.0	2.3	0.6	100.58	-761.3	4,074.2	4,144.7	4,141.8	2.90	1,428.634	
1,181.1	1,181.1	1,159.4	1,159.4	2.5	0.6	100.58	-761.2	4,074.3	4,144.9	4,141.8	3.10	1,338.344	
1,200.0	1,200.0	1,177.4	1,177.4	2.6	0.6	100.58	-761.3	4,074.4	4,144.9	4,141.8	3.14	1,319.324	
1,279.5	1,279.5	1,266.6	1,266.5	2.7	0.6	-164.22	-761.4	4,074.5	4,146.1	4,142.7	3.33	1,245.501	
1,300.0	1,300.0	1,290.9	1,290.9	2.8	0.6	-164.22	-761.4	4,074.5	4,146.7	4,143.3	3.37	1,229.408	
1,377.9	1,377.8	1,366.9	1,366.9	2.9	0.6	-164.22	-761.3	4,074.4	4,150.2	4,146.7	3.55	1,169.688	
1,400.0	1,399.8	1,387.8	1,387.8	3.0	0.6	-164.21	-761.3	4,074.4	4,151.6	4,148.0	3.60	1,153.799	
1,476.4	1,475.9	1,458.8	1,458.8	3.1	0.6	-164.20	-761.3	4,074.4	4,157.7	4,153.9	3.77	1,101.594	
1,500.0	1,499.5	1,480.6	1,480.6	3.2	0.6	-164.20	-761.4	4,074.4	4,160.0	4,156.2	3.83	1,086.506	
1,574.8	1,573.7	1,563.0	1,563.0	3.4	0.6	-164.18	-761.6	4,074.4	4,168.5	4,164.5	4.01	1,038.381	
1,600.0	1,598.7	1,592.6	1,592.6	3.4	0.6	-164.18	-761.6	4,074.4	4,171.8	4,167.7	4.08	1,023.079	
1,673.2	1,671.1	1,678.4	1,678.4	3.6	0.7	-164.17	-761.7	4,074.0	4,182.2	4,178.0	4.27	979.179	
1,700.0	1,697.5	1,708.6	1,708.6	3.7	0.7	-164.17	-761.7	4,073.9	4,186.4	4,182.1	4.34	964.330	
1,771.6	1,767.9	1,782.0	1,782.0	3.9	0.7	-164.15	-761.6	4,073.4	4,198.8	4,194.3	4.54	925.707	
1,800.0	1,795.6	1,811.4	1,811.4	4.0	0.7	-164.14	-761.5	4,073.2	4,204.2	4,199.6	4.61	911.391	
1,870.1	1,864.0	1,885.7	1,885.6	4.3	0.7	-164.13	-761.3	4,072.7	4,218.5	4,213.7	4.81	876.313	
1,900.0	1,893.1	1,913.9	1,913.9	4.4	0.7	-164.11	-761.2	4,072.4	4,225.1	4,220.2	4.90	862.417	
1,968.5	1,959.3	1,971.8	1,971.8	4.6	0.7	-164.08	-761.1	4,072.0	4,241.3	4,236.2	5.10	831.202	
1,992.4	1,982.4	1,992.0	1,991.9	4.7	0.7	-164.07	-761.0	4,071.9	4,247.4	4,242.2	5.17	820.995	
2,000.0	1,989.6	2,000.0	2,000.0	4.8	0.7	-164.08	-761.0	4,071.9	4,249.4	4,244.2	5.19	817.977	
2,066.9	2,054.0	2,072.7	2,072.7	5.1	0.8	-164.15	-760.7	4,071.5	4,266.6	4,261.2	5.39	790.999	
2,100.0	2,085.8	2,100.0	2,100.0	5.2	0.8	-164.18	-760.6	4,071.3	4,275.0	4,269.5	5.48	779.544	
2,165.3	2,148.7	2,158.8	2,158.8	5.5	0.8	-164.25	-760.3	4,070.9	4,291.8	4,286.1	5.67	756.719	
2,200.0	2,182.0	2,186.2	2,186.2	5.7	0.8	-164.28	-760.2	4,070.8	4,300.8	4,295.0	5.78	744.306	
2,263.8	2,243.4	2,241.0	2,241.0	6.0	0.8	-164.34	-759.9	4,070.6	4,317.4	4,311.4	5.97	723.077	
2,300.0	2,278.2	2,273.0	2,273.0	6.2	0.8	-164.37	-759.7	4,070.6	4,326.8	4,320.8	6.08	711.460	
2,362.2	2,338.1	2,330.5	2,330.4	6.5	0.8	-164.43	-759.2	4,070.6	4,343.2	4,336.9	6.27	692.302	
2,400.0	2,374.4	2,366.9	2,366.9	6.7	0.9	-164.47	-759.0	4,070.6	4,353.1	4,346.7	6.39	681.132	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,432.8	2,423.9	2,423.8	7.0	0.9	-164.54	-758.6	4,070.6	4,369.0	4,362.4	6.58	663.924	
2,500.0	2,470.6	2,459.5	2,459.5	7.2	0.9	-164.57	-758.3	4,070.6	4,379.3	4,372.6	6.70	653.286	
2,559.0	2,527.4	2,514.4	2,514.4	7.6	0.9	-164.63	-758.0	4,070.6	4,394.9	4,388.0	6.89	637.881	
2,600.0	2,566.8	2,555.9	2,555.8	7.8	0.9	-164.68	-757.6	4,070.6	4,405.7	4,398.7	7.02	627.590	
2,657.5	2,622.1	2,614.0	2,614.0	8.1	0.9	-164.74	-757.2	4,070.7	4,420.8	4,413.6	7.20	613.666	
2,700.0	2,663.0	2,657.1	2,657.1	8.3	0.9	-164.79	-756.9	4,070.7	4,432.0	4,424.7	7.34	603.795	
2,755.9	2,716.8	2,712.7	2,712.7	8.6	1.0	-164.85	-756.5	4,070.6	4,446.7	4,439.1	7.52	591.327	
2,800.0	2,759.2	2,753.7	2,753.7	8.9	1.0	-164.89	-756.2	4,070.6	4,458.2	4,450.6	7.66	581.892	
2,854.3	2,811.5	2,804.3	2,804.2	9.2	1.0	-164.94	-755.8	4,070.5	4,472.5	4,464.7	7.84	570.663	
2,900.0	2,855.4	2,847.8	2,847.7	9.4	1.0	-164.99	-755.5	4,070.5	4,484.5	4,476.5	7.99	561.561	
2,952.7	2,906.2	2,898.0	2,897.9	9.7	1.0	-165.04	-755.2	4,070.5	4,498.4	4,490.2	8.16	551.407	
3,000.0	2,951.6	2,941.4	2,941.4	10.0	1.0	-165.08	-754.9	4,070.5	4,510.9	4,502.5	8.31	542.687	
3,051.2	3,000.9	2,988.3	2,988.3	10.3	1.1	-165.13	-754.6	4,070.5	4,524.4	4,515.9	8.48	533.559	
3,100.0	3,047.8	3,036.0	3,036.0	10.5	1.1	-165.17	-754.5	4,070.5	4,537.3	4,528.6	8.64	525.147	
3,149.6	3,095.5	3,085.6	3,085.5	10.8	1.1	-165.22	-754.2	4,070.5	4,550.4	4,541.6	8.80	516.867	
3,200.0	3,144.0	3,132.0	3,131.9	11.1	1.1	-165.27	-754.0	4,070.5	4,563.7	4,554.7	8.97	508.810	
3,248.0	3,190.2	3,174.7	3,174.7	11.4	1.1	-165.31	-753.8	4,070.6	4,576.4	4,567.3	9.13	501.413	
3,300.0	3,240.2	3,236.5	3,236.5	11.7	1.1	-165.37	-753.5	4,070.6	4,590.2	4,580.9	9.30	493.578	
3,346.4	3,284.9	3,300.0	3,300.0	11.9	1.1	-165.43	-753.1	4,070.4	4,602.2	4,592.8	9.45	486.867	
3,400.0	3,336.4	3,333.9	3,333.8	12.2	1.1	-165.46	-752.9	4,070.2	4,616.2	4,606.5	9.62	479.648	
3,444.9	3,379.6	3,359.5	3,359.5	12.5	1.2	-165.48	-752.8	4,070.2	4,628.0	4,618.3	9.77	473.834	
3,500.0	3,432.6	3,400.0	3,400.0	12.8	1.2	-165.52	-752.6	4,070.4	4,642.9	4,632.9	9.94	466.919	
3,543.3	3,474.3	3,434.1	3,434.0	13.1	1.2	-165.55	-752.6	4,070.6	4,654.6	4,644.5	10.09	461.512	
3,600.0	3,528.8	3,500.0	3,500.0	13.4	1.2	-165.61	-752.3	4,071.0	4,669.8	4,659.6	10.28	454.297	
3,641.7	3,569.0	3,534.0	3,534.0	13.6	1.2	-165.65	-752.1	4,071.1	4,681.0	4,670.6	10.42	449.365	
3,700.0	3,625.0	3,577.5	3,577.5	14.0	1.2	-165.69	-751.9	4,071.4	4,696.8	4,686.2	10.61	442.747	
3,740.1	3,663.6	3,610.7	3,610.6	14.2	1.2	-165.72	-751.8	4,071.7	4,707.8	4,697.0	10.74	438.303	
3,800.0	3,721.2	3,675.0	3,674.9	14.5	1.2	-165.77	-751.7	4,072.2	4,724.1	4,713.2	10.94	431.713	
3,838.6	3,758.3	3,716.2	3,716.2	14.8	1.2	-165.81	-751.7	4,072.4	4,734.6	4,723.5	11.07	427.613	
3,900.0	3,817.4	3,781.3	3,781.3	15.1	1.2	-165.87	-751.6	4,072.8	4,751.2	4,739.9	11.28	421.350	
3,937.0	3,853.0	3,821.2	3,821.2	15.3	1.2	-165.90	-751.4	4,073.0	4,761.2	4,749.8	11.40	417.676	
4,000.0	3,913.6	3,890.3	3,890.3	15.7	1.3	-165.96	-751.3	4,073.2	4,778.1	4,766.4	11.61	411.584	
4,035.4	3,947.7	3,929.5	3,929.5	15.9	1.3	-165.99	-751.3	4,073.3	4,787.5	4,775.8	11.73	408.276	
4,100.0	4,009.8	4,000.0	3,999.9	16.3	1.3	-166.05	-751.6	4,073.2	4,804.7	4,792.7	11.94	402.395	
4,133.8	4,042.4	4,027.4	4,027.4	16.5	1.3	-166.07	-751.8	4,073.2	4,813.6	4,801.6	12.05	399.360	
4,200.0	4,106.0	4,079.2	4,079.1	16.8	1.3	-166.10	-752.2	4,073.2	4,831.3	4,819.0	12.27	393.606	
4,232.3	4,137.1	4,107.3	4,107.2	17.0	1.3	-166.12	-752.5	4,073.3	4,840.0	4,827.6	12.38	390.849	
4,300.0	4,202.2	4,194.9	4,194.9	17.4	1.3	-166.18	-753.7	4,073.2	4,858.0	4,845.4	12.62	384.994	
4,330.7	4,231.7	4,236.7	4,236.7	17.6	1.3	-166.20	-754.4	4,073.0	4,866.1	4,853.4	12.72	382.410	
4,400.0	4,298.4	4,317.8	4,317.7	18.0	1.3	-166.25	-755.8	4,072.3	4,884.1	4,871.2	12.96	376.851	
4,429.1	4,326.4	4,340.0	4,339.9	18.2	1.3	-166.26	-756.2	4,072.1	4,891.7	4,878.6	13.06	374.610	
4,500.0	4,394.6	4,400.0	4,399.9	18.6	1.3	-166.29	-757.4	4,071.6	4,910.2	4,896.9	13.30	369.266	
4,527.5	4,421.1	4,425.2	4,425.1	18.7	1.3	-166.31	-757.9	4,071.5	4,917.5	4,904.1	13.39	367.219	
4,600.0	4,490.8	4,513.1	4,513.0	19.2	1.3	-166.35	-759.5	4,070.8	4,936.3	4,922.7	13.64	361.817	
4,626.0	4,515.8	4,538.1	4,538.0	19.3	1.3	-166.37	-759.9	4,070.5	4,943.1	4,929.3	13.73	359.978	
4,700.0	4,587.0	4,611.6	4,611.5	19.8	1.3	-166.41	-761.1	4,069.8	4,962.2	4,948.2	13.98	354.857	
4,724.4	4,610.5	4,641.1	4,640.9	19.9	1.3	-166.43	-761.5	4,069.5	4,968.5	4,954.5	14.07	353.174	
4,800.0	4,683.2	4,728.2	4,728.1	20.3	1.3	-166.48	-762.4	4,068.4	4,987.9	4,973.5	14.33	348.104	
4,822.8	4,705.2	4,752.3	4,752.2	20.5	1.3	-166.50	-762.7	4,068.1	4,993.7	4,979.3	14.41	346.618	
4,900.0	4,779.4	4,831.3	4,831.1	20.9	1.3	-166.54	-763.4	4,067.0	5,013.3	4,998.6	14.67	341.710	
4,921.2	4,799.8	4,852.1	4,851.9	21.0	1.3	-166.56	-763.6	4,066.7	5,018.6	5,003.9	14.74	340.390	
5,000.0	4,875.6	4,929.8	4,929.6	21.5	1.3	-166.61	-764.1	4,065.6	5,038.6	5,023.6	15.01	335.595	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,894.5	4,949.5	4,949.3	21.6	1.3	-166.62	-764.2	4,065.3	5,043.6	5,028.5	15.08	334.419		
5,100.0	4,971.8	5,030.6	5,030.4	22.1	1.4	-166.68	-764.5	4,064.1	5,063.9	5,048.5	15.36	329.719		
5,118.1	4,989.2	5,049.1	5,048.9	22.2	1.4	-166.69	-764.6	4,063.8	5,068.4	5,053.0	15.42	328.679		
5,200.0	5,068.0	5,133.2	5,133.0	22.7	1.4	-166.74	-765.0	4,062.5	5,089.1	5,073.4	15.70	324.070		
5,216.5	5,083.9	5,150.1	5,149.9	22.8	1.4	-166.75	-765.0	4,062.2	5,093.2	5,077.4	15.76	323.159		
5,240.0	5,106.5	5,174.3	5,174.0	22.9	1.4	-166.77	-765.1	4,061.8	5,099.1	5,083.3	15.84	321.873		
5,300.0	5,164.4	5,299.8	5,299.6	23.2	1.4	-166.92	-765.0	4,059.2	5,113.3	5,097.3	15.98	319.894		
5,314.9	5,178.8	5,342.3	5,342.1	23.3	1.4	-166.96	-764.7	4,057.8	5,116.5	5,100.5	16.01	319.491		
5,400.0	5,261.5	5,486.7	5,486.3	23.6	1.4	-167.13	-763.7	4,051.9	5,132.3	5,116.2	16.16	317.502		
5,413.4	5,274.6	5,505.2	5,504.7	23.6	1.4	-167.15	-763.5	4,051.0	5,134.5	5,118.3	16.19	317.235		
5,500.0	5,359.5	5,624.4	5,623.8	23.9	1.5	-167.27	-762.3	4,045.0	5,147.0	5,130.7	16.32	315.419		
5,511.8	5,371.1	5,636.9	5,636.3	24.0	1.5	-167.28	-762.2	4,044.3	5,148.5	5,132.1	16.33	315.210		
5,600.0	5,458.0	5,722.7	5,722.0	24.2	1.5	-167.36	-761.1	4,039.7	5,158.0	5,141.5	16.45	313.611		
5,610.2	5,468.2	5,730.8	5,730.1	24.3	1.5	-167.37	-761.0	4,039.3	5,158.9	5,142.4	16.46	313.451		
5,700.0	5,557.2	5,800.0	5,799.2	24.5	1.5	-167.43	-759.9	4,035.8	5,165.8	5,149.2	16.56	311.968		
5,708.6	5,565.7	5,800.0	5,799.2	24.5	1.5	-167.43	-759.9	4,035.8	5,166.3	5,149.8	16.57	311.866		
5,800.0	5,656.7	5,859.9	5,859.0	24.7	1.5	-167.47	-758.9	4,033.2	5,170.8	5,154.2	16.66	310.408		
5,807.1	5,663.7	5,864.1	5,863.1	24.7	1.5	-167.47	-758.8	4,033.0	5,171.1	5,154.4	16.66	310.307		
5,900.0	5,756.5	5,920.2	5,919.3	24.9	1.5	-167.50	-758.2	4,031.0	5,173.3	5,156.5	16.75	308.826		
5,905.5	5,761.9	5,923.7	5,922.7	24.9	1.5	-167.50	-758.1	4,030.9	5,173.3	5,156.6	16.76	308.743		
6,000.0	5,856.4	6,000.0	5,999.0	25.0	1.6	-167.51	-757.4	4,028.7	5,173.1	5,156.2	16.85	307.091		
6,003.9	5,860.3	6,000.0	5,999.0	25.0	1.6	-167.51	-757.4	4,028.7	5,173.0	5,156.1	16.85	307.030		
6,032.5	5,888.9	6,000.0	5,999.0	25.0	1.6	97.30	-757.4	4,028.7	5,172.3	5,146.2	26.11	198.076		
6,062.5	5,918.9	6,027.6	6,026.6	25.1	1.6	97.30	-757.1	4,028.1	5,171.6	5,145.5	26.15	197.777		
6,100.0	5,956.4	6,055.6	6,054.6	25.1	1.6	7.32	-756.8	4,027.5	5,169.8	5,152.9	16.89	306.085		
6,102.3	5,958.7	6,057.3	6,056.3	25.1	1.6	7.32	-756.8	4,027.4	5,169.6	5,152.7	16.89	306.113		
6,150.0	6,006.2	6,100.0	6,099.0	25.1	1.6	7.38	-756.3	4,026.6	5,164.5	5,147.6	16.87	306.213		
6,200.0	6,055.6	6,129.4	6,128.4	25.1	1.6	7.47	-756.0	4,026.1	5,155.8	5,139.0	16.85	305.970		
6,200.8	6,056.3	6,130.0	6,129.0	25.1	1.6	7.47	-756.0	4,026.1	5,155.6	5,138.8	16.85	305.966		
6,250.0	6,104.3	6,165.6	6,164.5	25.0	1.6	7.61	-755.7	4,025.6	5,143.9	5,127.1	16.83	305.615		
6,299.2	6,151.3	6,200.7	6,199.6	24.9	1.6	7.79	-755.3	4,025.2	5,129.0	5,112.2	16.79	305.444		
6,300.0	6,152.1	6,201.5	6,200.4	24.9	1.6	7.79	-755.3	4,025.2	5,128.8	5,112.0	16.79	305.439		
6,350.0	6,198.7	6,250.9	6,249.8	24.8	1.6	8.04	-755.0	4,024.6	5,110.4	5,093.7	16.73	305.379		
6,397.6	6,241.9	6,296.5	6,295.4	24.7	1.6	8.32	-754.6	4,024.0	5,090.0	5,073.3	16.66	305.608		
6,400.0	6,244.1	6,298.7	6,297.7	24.7	1.6	8.34	-754.6	4,024.0	5,088.9	5,072.2	16.65	305.622		
6,450.0	6,287.8	6,336.0	6,334.9	24.5	1.6	8.71	-754.3	4,023.6	5,064.3	5,047.7	16.54	306.271		
6,496.0	6,326.5	6,368.8	6,367.7	24.4	1.6	9.12	-754.1	4,023.2	5,039.1	5,022.7	16.41	307.047		
6,500.0	6,329.7	6,371.5	6,370.5	24.4	1.6	9.15	-754.1	4,023.2	5,036.8	5,020.4	16.40	307.112		
6,550.0	6,369.6	6,400.0	6,399.0	24.3	1.7	9.69	-753.9	4,022.9	5,006.6	4,990.3	16.25	308.063		
6,594.5	6,403.3	6,433.8	6,432.7	24.2	1.7	10.28	-753.7	4,022.6	4,977.5	4,961.3	16.14	308.414		
6,600.0	6,407.3	6,437.2	6,436.1	24.2	1.7	10.36	-753.6	4,022.6	4,973.7	4,957.6	16.13	308.439		
6,650.0	6,442.7	6,467.1	6,466.0	24.1	1.7	11.17	-753.5	4,022.4	4,938.4	4,922.4	16.02	308.175		
6,692.9	6,471.0	6,491.0	6,490.0	24.0	1.7	12.01	-753.4	4,022.2	4,906.2	4,890.2	15.99	306.897		
6,700.0	6,475.5	6,500.0	6,498.9	24.0	1.7	12.18	-753.3	4,022.2	4,900.8	4,884.8	16.00	306.389		
6,750.0	6,505.6	6,521.2	6,520.1	24.0	1.7	13.41	-753.3	4,022.0	4,861.0	4,844.9	16.05	302.864		
6,791.3	6,528.3	6,541.3	6,540.3	24.0	1.7	14.70	-753.2	4,021.9	4,826.7	4,810.5	16.21	297.672		
6,800.0	6,532.8	6,545.3	6,544.3	24.0	1.7	15.00	-753.2	4,021.9	4,819.3	4,803.0	16.26	296.316		
6,850.0	6,557.0	6,566.8	6,565.7	24.1	1.7	17.07	-753.1	4,021.8	4,775.9	4,759.2	16.69	286.208		
6,889.7	6,574.1	6,581.9	6,580.8	24.2	1.7	19.19	-753.1	4,021.8	4,740.2	4,723.0	17.22	275.246		
6,900.0	6,578.1	6,585.5	6,584.4	24.3	1.7	19.82	-753.0	4,021.7	4,730.9	4,713.5	17.39	272.018		
6,950.0	6,596.1	6,601.5	6,600.4	24.5	1.7	23.63	-753.0	4,021.7	4,684.6	4,666.1	18.48	253.545		
6,988.2	6,607.5	6,612.7	6,611.6	24.7	1.7	27.65	-753.0	4,021.6	4,648.5	4,628.9	19.65	236.590		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,610.7	6,615.7	6,614.7	24.8	1.7	29.16	-753.0	4,021.6	4,637.2	4,617.1	20.08	230.955		
7,050.0	6,621.9	6,626.7	6,625.6	25.1	1.7	37.57	-752.9	4,021.6	4,588.9	4,566.6	22.34	205.375		
7,086.6	6,628.0	6,632.5	6,631.5	25.4	1.7	46.71	-752.9	4,021.6	4,553.2	4,528.8	24.43	186.376		
7,100.0	6,629.7	6,634.2	6,633.2	25.6	1.7	50.94	-752.9	4,021.6	4,540.1	4,514.8	25.23	179.953		
7,150.0	6,634.1	6,638.3	6,637.3	26.0	1.7	71.78	-752.9	4,021.6	4,490.8	4,463.2	27.58	162.800		
7,185.0	6,635.1	6,639.2	6,638.1	26.4	1.7	90.20	-752.9	4,021.5	4,456.1	4,428.1	27.99	159.224		
7,196.6	6,635.0	6,639.1	6,638.0	26.5	1.7	96.39	-752.9	4,021.5	4,444.7	4,416.6	28.13	158.005		
7,200.0	6,635.0	6,639.0	6,638.0	26.6	1.7	96.39	-752.9	4,021.5	4,441.3	4,413.1	28.17	157.673		
7,283.4	6,633.9	6,637.7	6,636.6	27.6	1.7	96.27	-752.9	4,021.6	4,358.8	4,329.6	29.19	149.328		
7,300.0	6,633.7	6,637.4	6,636.4	27.8	1.7	96.25	-752.9	4,021.6	4,342.4	4,313.0	29.39	147.742		
7,381.9	6,632.6	6,636.1	6,635.1	29.0	1.7	96.14	-752.9	4,021.6	4,261.5	4,230.9	30.57	139.387		
7,400.0	6,632.4	6,635.8	6,634.8	29.2	1.7	96.11	-752.9	4,021.6	4,243.6	4,212.8	30.83	137.623		
7,480.3	6,631.4	6,634.5	6,633.5	30.5	1.7	96.00	-752.9	4,021.6	4,164.3	4,132.2	32.14	129.548		
7,500.0	6,631.1	6,634.2	6,633.2	30.9	1.7	95.97	-752.9	4,021.6	4,144.8	4,112.4	32.47	127.667		
7,578.7	6,630.1	6,632.9	6,631.9	32.3	1.7	95.86	-752.9	4,021.6	4,067.1	4,033.3	33.88	120.059		
7,600.0	6,629.8	6,632.6	6,631.5	32.7	1.7	95.84	-752.9	4,021.6	4,046.1	4,011.9	34.26	118.110		
7,677.1	6,628.9	6,631.4	6,630.3	34.1	1.7	95.73	-752.9	4,021.6	3,970.0	3,934.3	35.74	111.070		
7,700.0	6,628.6	6,631.0	6,629.9	34.6	1.7	95.70	-752.9	4,021.6	3,947.5	3,911.3	36.18	109.096		
7,775.6	6,627.6	6,629.8	6,628.7	36.1	1.7	95.59	-752.9	4,021.6	3,873.0	3,835.3	37.73	102.662		
7,800.0	6,627.3	6,629.4	6,628.3	36.6	1.7	95.56	-752.9	4,021.6	3,848.9	3,810.7	38.22	100.694		
7,874.0	6,626.3	6,628.2	6,627.1	38.2	1.7	95.46	-752.9	4,021.6	3,776.0	3,736.2	39.80	94.863		
7,900.0	6,626.0	6,627.8	6,626.7	38.8	1.7	95.42	-752.9	4,021.6	3,750.4	3,710.1	40.36	92.923		
7,972.4	6,625.1	6,626.6	6,625.5	40.4	1.7	95.32	-752.9	4,021.6	3,679.1	3,637.2	41.97	87.668		
8,000.0	6,624.7	6,626.1	6,625.1	41.0	1.7	95.28	-752.9	4,021.6	3,652.0	3,609.4	42.58	85.772		
8,070.8	6,623.8	6,625.0	6,623.9	42.6	1.7	95.18	-752.9	4,021.6	3,582.3	3,538.1	44.20	81.052		
8,100.0	6,623.4	6,624.5	6,623.5	43.3	1.7	95.14	-753.0	4,021.6	3,553.7	3,508.8	44.86	79.209		
8,169.3	6,622.6	6,623.4	6,622.3	44.9	1.7	95.04	-753.0	4,021.6	3,485.6	3,439.1	46.49	74.977		
8,200.0	6,622.2	6,622.9	6,621.8	45.6	1.7	95.00	-753.0	4,021.6	3,455.4	3,408.2	47.21	73.194		
8,267.7	6,621.3	6,621.8	6,620.8	47.3	1.7	94.91	-753.0	4,021.6	3,389.0	3,340.2	48.83	69.403		
8,300.0	6,620.9	6,621.3	6,620.2	48.0	1.7	94.86	-753.0	4,021.6	3,357.3	3,307.7	49.60	67.681		
8,366.1	6,620.0	6,620.2	6,619.2	49.7	1.7	94.77	-753.0	4,021.6	3,292.5	3,241.3	51.22	64.285		
8,400.0	6,619.6	6,619.7	6,618.6	50.5	1.7	94.72	-753.0	4,021.6	3,259.3	3,207.2	52.04	62.627		
8,464.5	6,618.8	6,618.6	6,617.6	52.1	1.7	94.63	-753.0	4,021.6	3,196.1	3,142.4	53.64	59.583		
8,500.0	6,618.3	6,618.0	6,617.0	53.0	1.7	94.58	-753.0	4,021.6	3,161.4	3,106.9	54.52	57.988		
8,563.0	6,617.5	6,617.0	6,616.0	54.5	1.7	94.49	-753.0	4,021.6	3,099.8	3,043.7	56.10	55.258		
8,600.0	6,617.0	6,616.4	6,615.4	55.5	1.7	94.44	-753.0	4,021.6	3,063.6	3,006.6	57.03	53.724		
8,661.4	6,616.3	6,615.4	6,614.4	57.0	1.7	94.35	-753.0	4,021.6	3,003.7	2,945.1	58.58	51.272		
8,700.0	6,615.8	6,614.8	6,613.7	58.0	1.7	94.30	-753.0	4,021.6	2,966.0	2,906.5	59.56	49.798		
8,759.8	6,615.0	6,613.8	6,612.8	59.5	1.7	94.21	-753.0	4,021.6	2,907.7	2,846.6	61.09	47.594		
8,800.0	6,614.5	6,613.2	6,612.1	60.6	1.7	94.16	-753.0	4,021.6	2,868.6	2,806.5	62.12	46.176		
8,858.2	6,613.7	6,612.2	6,611.1	62.1	1.7	94.08	-753.0	4,021.6	2,811.9	2,748.3	63.63	44.194		
8,900.0	6,613.2	6,611.5	6,610.5	63.2	1.7	94.02	-753.0	4,021.6	2,771.3	2,706.6	64.70	42.830		
8,956.7	6,612.5	6,610.6	6,609.5	64.6	1.7	93.94	-753.0	4,021.6	2,716.3	2,650.1	66.18	41.044		
9,000.0	6,611.9	6,609.9	6,608.8	65.8	1.7	93.88	-753.0	4,021.7	2,674.2	2,606.9	67.31	39.733		
9,055.1	6,611.2	6,609.0	6,607.9	67.2	1.7	93.80	-753.0	4,021.7	2,620.9	2,552.1	68.75	38.122		
9,100.0	6,610.6	6,608.3	6,607.2	68.4	1.7	93.73	-753.0	4,021.7	2,577.4	2,507.5	69.92	36.860		
9,153.5	6,609.9	6,607.4	6,606.3	69.8	1.7	93.66	-753.0	4,021.7	2,525.7	2,454.3	71.33	35.406		
9,200.0	6,609.3	6,606.6	6,605.6	71.0	1.7	93.59	-753.0	4,021.7	2,480.8	2,408.2	72.56	34.190		
9,251.9	6,608.7	6,605.8	6,604.7	72.4	1.7	93.52	-753.0	4,021.7	2,430.7	2,356.8	73.93	32.877		
9,300.0	6,608.1	6,605.0	6,603.9	73.7	1.7	93.45	-753.0	4,021.7	2,384.5	2,309.3	75.21	31.706		
9,350.4	6,607.4	6,604.2	6,603.1	75.0	1.7	93.38	-753.0	4,021.7	2,336.1	2,259.5	76.55	30.519		
9,400.0	6,606.8	6,603.3	6,602.3	76.3	1.7	93.31	-753.0	4,021.7	2,288.5	2,210.6	77.87	29.390		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	6,606.1	6,602.5	6,601.5	77.6	1.7	93.24	-753.0	4,021.7	2,241.8	2,162.6	79.17	28.316				
9,500.0	6,605.5	6,601.7	6,600.6	79.0	1.7	93.16	-753.0	4,021.7	2,192.8	2,112.3	80.54	27.228				
9,547.2	6,604.9	6,600.9	6,599.9	80.2	1.7	93.10	-753.0	4,021.7	2,147.8	2,066.0	81.80	26.256				
9,600.0	6,604.2	6,600.0	6,598.9	81.7	1.7	93.02	-753.0	4,021.7	2,097.6	2,014.4	83.22	25.207				
9,645.6	6,603.6	6,600.0	6,598.9	82.9	1.7	93.02	-753.0	4,021.7	2,054.3	1,969.8	84.44	24.328				
9,700.0	6,602.9	6,600.0	6,598.9	84.3	1.7	93.02	-753.0	4,021.7	2,002.8	1,916.9	85.90	23.316				
9,744.1	6,602.3	6,600.0	6,598.9	85.5	1.7	93.02	-753.0	4,021.7	1,961.2	1,874.1	87.09	22.521				
9,800.0	6,601.6	6,596.9	6,595.9	87.0	1.7	92.75	-753.0	4,021.7	1,908.6	1,820.0	88.60	21.541				
9,842.5	6,601.1	6,596.2	6,595.2	88.2	1.7	92.69	-753.0	4,021.7	1,868.7	1,779.0	89.75	20.821				
9,900.0	6,600.3	6,595.3	6,594.3	89.7	1.7	92.61	-753.0	4,021.7	1,815.0	1,723.7	91.31	19.877				
9,940.9	6,599.8	6,594.7	6,593.6	90.9	1.7	92.55	-753.0	4,021.7	1,776.9	1,684.4	92.42	19.226				
10,000.0	6,599.0	6,593.7	6,592.7	92.5	1.7	92.47	-753.0	4,021.7	1,722.1	1,628.0	94.02	18.316				
10,039.3	6,598.5	6,593.1	6,592.1	93.5	1.7	92.42	-753.0	4,021.7	1,685.7	1,590.6	95.09	17.728				
10,100.0	6,597.7	6,592.2	6,591.1	95.2	1.7	92.33	-753.0	4,021.7	1,630.0	1,533.2	96.74	16.850				
10,137.8	6,597.3	6,591.5	6,590.5	96.2	1.7	92.28	-753.0	4,021.7	1,595.4	1,497.7	97.77	16.319				
10,200.0	6,596.5	6,590.6	6,589.5	97.9	1.7	92.19	-753.0	4,021.7	1,538.9	1,439.4	99.46	15.472				
10,236.2	6,596.0	6,590.0	6,588.9	98.9	1.7	92.14	-753.0	4,021.7	1,506.2	1,405.7	100.45	14.995				
10,300.0	6,595.2	6,588.9	6,587.9	100.6	1.7	92.05	-753.0	4,021.7	1,449.0	1,346.8	102.19	14.179				
10,334.6	6,594.7	6,588.4	6,587.3	101.6	1.7	92.00	-753.0	4,021.7	1,418.2	1,315.0	103.13	13.751				
10,400.0	6,593.9	6,587.3	6,586.3	103.3	1.7	91.91	-753.0	4,021.7	1,360.5	1,255.6	104.92	12.967				
10,433.0	6,593.5	6,586.8	6,585.7	104.2	1.7	91.86	-753.0	4,021.7	1,331.6	1,225.8	105.83	12.583				
10,500.0	6,592.6	6,585.7	6,584.6	106.1	1.7	91.77	-753.0	4,021.7	1,273.7	1,166.0	107.66	11.831				
10,531.5	6,592.2	6,585.2	6,584.1	106.9	1.7	91.72	-753.0	4,021.7	1,246.8	1,138.2	108.52	11.489				
10,600.0	6,591.3	6,584.1	6,583.0	108.8	1.7	91.63	-753.1	4,021.7	1,188.9	1,078.5	110.40	10.769				
10,629.9	6,590.9	6,583.6	6,582.5	109.6	1.7	91.58	-753.1	4,021.8	1,164.1	1,052.8	111.22	10.466				
10,700.0	6,590.0	6,582.4	6,581.4	111.6	1.7	91.48	-753.1	4,021.8	1,106.7	993.6	113.14	9.782				
10,728.3	6,589.6	6,582.0	6,580.9	112.3	1.7	91.44	-753.1	4,021.8	1,084.0	970.1	113.92	9.515				
10,800.0	6,588.7	6,580.8	6,579.7	114.3	1.7	91.34	-753.1	4,021.8	1,027.7	911.8	115.89	8.868				
10,826.7	6,588.4	6,580.3	6,579.3	115.0	1.7	91.30	-753.1	4,021.8	1,007.2	890.6	116.63	8.636				
10,900.0	6,587.4	6,579.1	6,578.1	117.0	1.7	91.19	-753.1	4,021.8	952.6	834.0	118.64	8.029				
10,925.2	6,587.1	6,578.7	6,577.6	117.7	1.7	91.16	-753.1	4,021.8	934.5	815.1	119.34	7.831				
11,000.0	6,586.1	6,577.5	6,576.4	119.8	1.7	91.05	-753.1	4,021.8	882.5	761.1	121.40	7.270				
11,023.6	6,585.8	6,577.1	6,576.0	120.4	1.7	91.01	-753.1	4,021.8	866.8	744.8	122.05	7.102				
11,100.0	6,584.8	6,575.8	6,574.7	122.5	1.7	90.90	-753.1	4,021.8	818.6	694.5	124.15	6.594				
11,122.0	6,584.5	6,575.4	6,574.4	123.2	1.7	90.87	-753.1	4,021.8	805.5	680.8	124.76	6.457				
11,200.0	6,583.5	6,574.1	6,573.1	125.3	1.7	90.76	-753.1	4,021.8	762.5	635.6	126.91	6.008				
11,220.4	6,583.3	6,573.8	6,572.7	125.9	1.7	90.73	-753.1	4,021.8	752.2	624.7	127.48	5.901				
11,300.0	6,582.2	6,572.4	6,571.4	128.1	1.7	90.61	-753.1	4,021.8	716.1	586.4	129.67	5.522				
11,318.9	6,582.0	6,572.1	6,571.0	128.6	1.7	90.58	-753.1	4,021.8	708.5	578.3	130.19	5.442				
11,400.0	6,580.9	6,570.7	6,569.7	130.8	1.7	90.46	-753.1	4,021.8	681.2	548.8	132.43	5.144				
11,417.3	6,580.7	6,570.4	6,569.4	131.3	1.7	90.43	-753.1	4,021.8	676.5	543.6	132.91	5.090				
11,500.0	6,579.7	6,569.0	6,568.0	133.6	1.7	90.31	-753.1	4,021.8	659.8	524.6	135.20	4.880				
11,515.7	6,579.4	6,568.8	6,567.7	134.0	1.7	90.29	-753.1	4,021.8	657.7	522.1	135.63	4.849				
11,593.6	6,578.4	6,567.4	6,566.4	136.2	1.7	90.17	-753.1	4,021.8	653.1	515.3	137.79	4.740 CC				
11,600.0	6,578.4	6,567.3	6,566.3	136.3	1.7	90.16	-753.1	4,021.8	653.1	515.2	137.96	4.734				
11,614.1	6,578.2	6,567.1	6,566.0	136.7	1.7	90.14	-753.1	4,021.8	653.4	515.1	138.35	4.723 ES				
11,700.0	6,577.1	6,565.6	6,564.5	139.1	1.7	90.01	-753.1	4,021.8	661.7	521.0	140.73	4.702 SF				
11,712.6	6,576.9	6,565.4	6,564.3	139.5	1.7	89.99	-753.1	4,021.8	663.8	522.8	141.08	4.706				
11,800.0	6,575.8	6,563.9	6,562.8	141.9	1.7	89.86	-753.1	4,021.8	684.9	541.4	143.49	4.773				
11,811.0	6,575.6	6,563.7	6,562.6	142.2	1.7	89.84	-753.1	4,021.8	688.3	544.5	143.80	4.787				
11,858.8	6,575.0	6,562.8	6,561.8	143.5	1.7	89.77	-753.1	4,021.8	704.8	559.7	145.12	4.857				
11,859.3	6,575.0	6,562.8	6,561.8	143.5	1.7	89.77	-753.1	4,021.8	705.1	559.9	145.13	4.858				

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	123.79	-1,120.2	1,673.9	2,014.3				
98.4	98.4	77.5	77.5	0.1	0.0	123.79	-1,120.3	1,673.8	2,014.1	2,014.0	0.10	N/A	
100.0	100.0	79.1	79.1	0.1	0.0	123.79	-1,120.3	1,673.8	2,014.1	2,014.0	0.10	N/A	
167.0	167.0	145.0	145.0	0.2	0.0	123.80	-1,120.4	1,673.7	2,014.1	2,013.8	0.29	6,839.939	
196.8	196.8	173.9	173.9	0.3	0.1	123.80	-1,120.4	1,673.7	2,014.1	2,013.7	0.39	5,146.702	
200.0	200.0	177.0	177.0	0.3	0.1	123.80	-1,120.4	1,673.7	2,014.1	2,013.7	0.40	5,015.793	
295.3	295.3	261.7	261.7	0.5	0.2	123.80	-1,120.6	1,673.8	2,014.4	2,013.6	0.72	2,814.798	
300.0	300.0	265.7	265.7	0.5	0.2	123.80	-1,120.6	1,673.8	2,014.4	2,013.7	0.73	2,754.575	
393.7	393.7	357.0	357.0	0.8	0.3	123.81	-1,121.4	1,674.2	2,015.1	2,014.1	1.03	1,953.978	
400.0	400.0	363.7	363.6	0.8	0.3	123.82	-1,121.4	1,674.2	2,015.2	2,014.1	1.05	1,917.488	
492.1	492.1	455.0	455.0	1.0	0.4	123.83	-1,122.1	1,674.5	2,015.8	2,014.5	1.32	1,523.573	
500.0	500.0	462.5	462.5	1.0	0.4	123.83	-1,122.2	1,674.5	2,015.8	2,014.5	1.35	1,498.159	
590.5	590.5	549.0	549.0	1.2	0.4	123.84	-1,122.8	1,675.0	2,016.6	2,015.0	1.60	1,260.232	
600.0	600.0	558.1	558.0	1.2	0.4	123.84	-1,122.9	1,675.1	2,016.7	2,015.1	1.63	1,239.940	
689.0	689.0	646.7	646.7	1.4	0.5	123.85	-1,123.7	1,675.6	2,017.6	2,015.8	1.87	1,077.389	
700.0	700.0	658.1	658.1	1.4	0.5	123.85	-1,123.8	1,675.7	2,017.8	2,015.9	1.90	1,060.242	
787.4	787.4	747.3	747.3	1.6	0.5	123.86	-1,124.5	1,676.2	2,018.6	2,016.4	2.14	942.853	
800.0	800.0	760.1	760.0	1.7	0.5	123.86	-1,124.6	1,676.3	2,018.7	2,016.5	2.17	928.211	
885.8	885.8	846.6	846.6	1.9	0.6	123.86	-1,125.1	1,676.9	2,019.4	2,017.0	2.40	840.073	
900.0	900.0	860.9	860.9	1.9	0.6	123.86	-1,125.2	1,677.0	2,019.5	2,017.1	2.44	827.193	
984.2	984.2	945.1	945.1	2.1	0.6	123.87	-1,125.8	1,677.4	2,020.3	2,017.6	2.66	758.361	
1,000.0	1,000.0	960.7	960.7	2.1	0.6	123.87	-1,125.9	1,677.5	2,020.4	2,017.7	2.71	746.786	
1,082.7	1,082.7	1,046.9	1,046.8	2.3	0.7	123.88	-1,126.6	1,677.9	2,021.1	2,018.1	2.92	691.330	
1,100.0	1,100.0	1,065.7	1,065.6	2.3	0.7	123.88	-1,126.7	1,678.0	2,021.2	2,018.2	2.97	680.717	
1,181.1	1,181.1	1,153.6	1,153.6	2.5	0.7	123.89	-1,127.1	1,678.1	2,021.5	2,018.4	3.18	635.072	
1,200.0	1,200.0	1,174.1	1,174.1	2.6	0.7	123.89	-1,127.2	1,678.2	2,021.6	2,018.4	3.23	625.295	
1,279.5	1,279.5	1,255.9	1,255.9	2.7	0.8	-140.92	-1,127.4	1,678.1	2,022.5	2,019.0	3.49	579.336	
1,300.0	1,300.0	1,276.5	1,276.5	2.8	0.8	-140.92	-1,127.4	1,678.1	2,023.0	2,019.5	3.54	571.271	
1,377.9	1,377.8	1,357.1	1,357.0	2.9	0.8	-140.95	-1,127.7	1,678.0	2,026.0	2,022.3	3.72	544.653	
1,400.0	1,399.8	1,380.1	1,380.0	3.0	0.8	-140.96	-1,127.8	1,677.9	2,027.1	2,023.3	3.77	537.752	
1,476.4	1,475.9	1,456.8	1,456.7	3.1	0.8	-141.01	-1,127.9	1,677.7	2,031.9	2,028.0	3.95	514.565	
1,500.0	1,499.5	1,480.2	1,480.1	3.2	0.8	-141.02	-1,127.9	1,677.6	2,033.7	2,029.7	4.00	507.865	
1,574.8	1,573.7	1,554.2	1,554.2	3.4	0.9	-141.09	-1,128.1	1,677.4	2,040.5	2,036.3	4.19	486.907	
1,600.0	1,598.7	1,579.1	1,579.1	3.4	0.9	-141.11	-1,128.1	1,677.4	2,043.1	2,038.9	4.25	480.294	
1,673.2	1,671.1	1,651.6	1,651.6	3.6	0.9	-141.19	-1,128.3	1,677.2	2,051.7	2,047.3	4.45	461.162	
1,700.0	1,697.5	1,678.1	1,678.1	3.7	0.9	-141.22	-1,128.4	1,677.0	2,055.3	2,050.7	4.52	454.627	
1,771.6	1,767.9	1,752.9	1,752.9	3.9	0.9	-141.32	-1,128.7	1,676.6	2,065.6	2,060.9	4.73	437.027	
1,800.0	1,795.6	1,783.2	1,783.1	4.0	0.9	-141.36	-1,128.9	1,676.4	2,070.0	2,065.2	4.81	430.534	
1,870.1	1,864.0	1,856.0	1,855.9	4.3	0.9	-141.48	-1,129.2	1,675.7	2,081.8	2,076.7	5.02	414.373	
1,900.0	1,893.1	1,886.8	1,886.7	4.4	1.0	-141.53	-1,129.3	1,675.4	2,087.2	2,082.0	5.12	407.944	
1,968.5	1,959.3	1,948.4	1,948.4	4.6	1.0	-141.62	-1,129.4	1,674.8	2,100.5	2,095.1	5.35	392.829	
1,992.4	1,982.4	1,969.2	1,969.2	4.7	1.0	-141.65	-1,129.5	1,674.6	2,105.5	2,100.1	5.43	387.809	
2,000.0	1,989.6	1,975.7	1,975.7	4.8	1.0	-141.67	-1,129.6	1,674.6	2,107.1	2,101.6	5.45	386.271	
2,066.9	2,054.0	2,032.6	2,032.5	5.1	1.0	-141.93	-1,130.0	1,674.2	2,121.5	2,115.8	5.69	372.656	
2,100.0	2,085.8	2,060.2	2,060.2	5.2	1.0	-142.05	-1,130.2	1,674.0	2,128.8	2,123.0	5.81	366.541	
2,165.3	2,148.7	2,116.5	2,116.4	5.5	1.0	-142.29	-1,130.8	1,673.9	2,143.3	2,137.3	6.05	354.551	
2,200.0	2,182.0	2,148.6	2,148.5	5.7	1.0	-142.43	-1,131.2	1,673.8	2,151.1	2,144.9	6.18	348.212	
2,263.8	2,243.4	2,207.7	2,207.6	6.0	1.1	-142.67	-1,132.0	1,673.7	2,165.5	2,159.0	6.42	337.300	
2,300.0	2,278.2	2,241.3	2,241.2	6.2	1.1	-142.81	-1,132.6	1,673.7	2,173.7	2,167.1	6.56	331.470	
2,362.2	2,338.1	2,300.0	2,299.9	6.5	1.1	-143.05	-1,133.4	1,673.7	2,187.9	2,181.1	6.80	321.851	
2,400.0	2,374.4	2,334.9	2,334.8	6.7	1.1	-143.19	-1,134.0	1,673.7	2,196.5	2,189.6	6.94	316.331	
2,460.6	2,432.8	2,392.7	2,392.6	7.0	1.1	-143.43	-1,134.7	1,673.8	2,210.5	2,203.3	7.18	307.836	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,470.6	2,431.0	2,430.9	7.2	1.1	-143.59	-1,135.1	1,673.9	2,219.6	2,212.2	7.33	302.610	
2,559.0	2,527.4	2,488.7	2,488.6	7.6	1.2	-143.82	-1,135.8	1,674.0	2,233.2	2,225.6	7.57	295.096	
2,600.0	2,566.8	2,530.5	2,530.4	7.8	1.2	-143.99	-1,136.3	1,674.1	2,242.6	2,234.9	7.73	290.202	
2,657.5	2,622.1	2,590.1	2,590.0	8.1	1.2	-144.22	-1,137.0	1,674.1	2,255.8	2,247.9	7.95	283.581	
2,700.0	2,663.0	2,632.6	2,632.5	8.3	1.2	-144.39	-1,137.5	1,674.0	2,265.6	2,257.4	8.12	278.935	
2,755.9	2,716.8	2,687.8	2,687.6	8.6	1.2	-144.59	-1,138.2	1,673.8	2,278.3	2,270.0	8.34	273.109	
2,800.0	2,759.2	2,731.0	2,730.9	8.9	1.2	-144.76	-1,138.7	1,673.7	2,288.4	2,279.9	8.52	268.728	
2,854.3	2,811.5	2,784.1	2,784.0	9.2	1.3	-144.96	-1,139.3	1,673.5	2,300.8	2,292.1	8.73	263.540	
2,900.0	2,855.4	2,826.7	2,826.6	9.4	1.3	-145.12	-1,139.6	1,673.5	2,311.3	2,302.4	8.91	259.364	
2,952.7	2,906.2	2,874.5	2,874.4	9.7	1.3	-145.30	-1,140.0	1,673.5	2,323.5	2,314.3	9.12	254.745	
3,000.0	2,951.6	2,920.7	2,920.6	10.0	1.3	-145.48	-1,140.2	1,673.6	2,334.4	2,325.1	9.30	250.887	
3,051.2	3,000.9	2,976.1	2,976.0	10.3	1.3	-145.69	-1,140.4	1,673.6	2,346.2	2,336.7	9.50	246.956	
3,100.0	3,047.8	3,026.3	3,026.2	10.5	1.3	-145.88	-1,140.4	1,673.7	2,357.4	2,347.7	9.68	243.421	
3,149.6	3,095.5	3,075.1	3,074.9	10.8	1.3	-146.07	-1,140.4	1,673.6	2,368.7	2,358.9	9.87	239.988	
3,200.0	3,144.0	3,123.2	3,123.1	11.1	1.3	-146.25	-1,140.5	1,673.5	2,380.3	2,370.2	10.06	236.551	
3,248.0	3,190.2	3,167.7	3,167.6	11.4	1.3	-146.41	-1,140.6	1,673.5	2,391.3	2,381.1	10.25	233.299	
3,300.0	3,240.2	3,216.1	3,216.0	11.7	1.3	-146.59	-1,140.6	1,673.5	2,403.3	2,392.9	10.45	229.907	
3,346.4	3,284.9	3,259.8	3,259.7	11.9	1.3	-146.75	-1,140.7	1,673.5	2,414.1	2,403.4	10.64	226.943	
3,400.0	3,336.4	3,310.7	3,310.6	12.2	1.4	-146.93	-1,141.0	1,673.5	2,426.5	2,415.7	10.85	223.670	
3,444.9	3,379.6	3,355.2	3,355.1	12.5	1.4	-147.08	-1,141.2	1,673.4	2,437.0	2,426.0	11.02	221.044	
3,500.0	3,432.6	3,410.7	3,410.6	12.8	1.4	-147.27	-1,141.4	1,673.4	2,449.8	2,438.6	11.24	217.958	
3,543.3	3,474.3	3,457.5	3,457.4	13.1	1.4	-147.43	-1,141.6	1,673.2	2,459.8	2,448.4	11.41	215.663	
3,600.0	3,528.8	3,515.5	3,515.4	13.4	1.4	-147.63	-1,141.8	1,672.9	2,472.9	2,461.2	11.62	212.754	
3,641.7	3,569.0	3,552.9	3,552.7	13.6	1.4	-147.75	-1,142.0	1,672.7	2,482.5	2,470.7	11.78	210.663	
3,700.0	3,625.0	3,605.4	3,605.3	14.0	1.5	-147.93	-1,142.3	1,672.5	2,496.0	2,484.0	12.01	207.852	
3,740.1	3,663.6	3,644.3	3,644.2	14.2	1.5	-148.05	-1,142.5	1,672.3	2,505.4	2,493.2	12.16	205.960	
3,800.0	3,721.2	3,702.4	3,702.2	14.5	1.5	-148.24	-1,142.7	1,672.1	2,519.3	2,506.9	12.40	203.246	
3,838.6	3,758.3	3,740.2	3,740.1	14.8	1.5	-148.36	-1,142.9	1,672.0	2,528.3	2,515.8	12.54	201.563	
3,900.0	3,817.4	3,800.0	3,799.9	15.1	1.5	-148.55	-1,143.1	1,671.8	2,542.7	2,529.9	12.78	198.975	
3,937.0	3,853.0	3,835.5	3,835.4	15.3	1.5	-148.67	-1,143.3	1,671.6	2,551.3	2,538.4	12.92	197.456	
4,000.0	3,913.6	3,895.2	3,895.1	15.7	1.5	-148.85	-1,143.6	1,671.4	2,566.1	2,552.9	13.16	194.957	
4,035.4	3,947.7	3,927.2	3,927.0	15.9	1.6	-148.95	-1,143.8	1,671.2	2,574.4	2,561.1	13.30	193.580	
4,100.0	4,009.8	3,984.8	3,984.7	16.3	1.6	-149.12	-1,144.3	1,671.0	2,589.7	2,576.2	13.55	191.152	
4,133.8	4,042.4	4,015.1	4,015.0	16.5	1.6	-149.21	-1,144.6	1,671.0	2,597.8	2,584.1	13.68	189.913	
4,200.0	4,106.0	4,074.5	4,074.4	16.8	1.6	-149.39	-1,145.2	1,670.9	2,613.7	2,599.7	13.93	187.562	
4,232.3	4,137.1	4,103.5	4,103.3	17.0	1.6	-149.47	-1,145.5	1,670.9	2,621.5	2,607.4	14.06	186.451	
4,300.0	4,202.2	4,164.4	4,164.2	17.4	1.6	-149.65	-1,146.2	1,670.9	2,637.9	2,623.6	14.32	184.184	
4,330.7	4,231.7	4,192.0	4,191.8	17.6	1.6	-149.73	-1,146.5	1,670.9	2,645.4	2,631.0	14.44	183.189	
4,400.0	4,298.4	4,261.4	4,261.2	18.0	1.7	-149.92	-1,147.5	1,671.0	2,662.4	2,647.7	14.71	181.022	
4,429.1	4,326.4	4,291.0	4,290.9	18.2	1.7	-150.00	-1,147.8	1,671.0	2,669.5	2,654.7	14.82	180.136	
4,500.0	4,394.6	4,364.0	4,363.9	18.6	1.7	-150.21	-1,148.6	1,671.0	2,686.7	2,671.6	15.09	178.062	
4,527.5	4,421.1	4,392.5	4,392.3	18.7	1.7	-150.28	-1,148.9	1,671.0	2,693.4	2,678.2	15.19	177.278	
4,600.0	4,490.8	4,458.4	4,458.3	19.2	1.7	-150.46	-1,149.6	1,670.9	2,711.0	2,695.5	15.47	175.251	
4,626.0	4,515.8	4,481.7	4,481.5	19.3	1.7	-150.53	-1,149.9	1,670.9	2,717.3	2,701.7	15.57	174.544	
4,700.0	4,587.0	4,557.9	4,557.7	19.8	1.8	-150.73	-1,150.7	1,670.8	2,735.4	2,719.5	15.85	172.599	
4,724.4	4,610.5	4,584.3	4,584.1	19.9	1.8	-150.80	-1,151.0	1,670.8	2,741.3	2,725.3	15.94	171.974	
4,800.0	4,683.2	4,657.3	4,657.1	20.3	1.8	-151.00	-1,151.4	1,670.7	2,759.6	2,743.4	16.22	170.089	
4,822.8	4,705.2	4,678.7	4,678.5	20.5	1.8	-151.06	-1,151.5	1,670.7	2,765.1	2,748.8	16.31	169.535	
4,900.0	4,779.4	4,758.9	4,758.7	20.9	1.8	-151.28	-1,151.8	1,670.7	2,783.8	2,767.2	16.60	167.740	
4,921.2	4,799.8	4,781.9	4,781.7	21.0	1.8	-151.34	-1,151.9	1,670.6	2,788.9	2,772.3	16.67	167.258	
5,000.0	4,875.6	4,849.9	4,849.7	21.5	1.9	-151.52	-1,152.2	1,670.4	2,807.9	2,791.0	16.97	165.488	
5,019.7	4,894.5	4,865.7	4,865.6	21.6	1.9	-151.56	-1,152.3	1,670.4	2,812.7	2,795.7	17.04	165.058	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,100.0	4,971.8	4,933.9	4,933.8	22.1	1.9	-151.74	-1,152.6	1,670.6	2,832.6	2,815.2	17.34	163.322	
5,118.1	4,989.2	4,950.3	4,950.1	22.2	1.9	-151.79	-1,152.7	1,670.7	2,837.0	2,819.6	17.41	162.937	
5,200.0	5,068.0	5,021.8	5,021.7	22.7	1.9	-151.97	-1,153.1	1,671.1	2,857.5	2,839.8	17.72	161.239	
5,216.5	5,083.9	5,035.4	5,035.2	22.8	1.9	-152.01	-1,153.1	1,671.2	2,861.7	2,843.9	17.78	160.904	
5,240.0	5,106.5	5,054.6	5,054.4	22.9	1.9	-152.06	-1,153.3	1,671.3	2,867.6	2,849.7	17.87	160.433	
5,300.0	5,164.4	5,100.0	5,099.8	23.2	1.9	-152.31	-1,153.8	1,671.7	2,882.4	2,864.4	18.01	160.056	
5,314.9	5,178.8	5,116.9	5,116.7	23.3	1.9	-152.38	-1,154.0	1,671.9	2,885.9	2,867.9	18.03	160.029	
5,400.0	5,261.5	5,190.8	5,190.6	23.6	1.9	-152.71	-1,154.9	1,672.8	2,904.9	2,886.7	18.18	159.823	
5,413.4	5,274.6	5,200.0	5,199.8	23.6	1.9	-152.75	-1,155.0	1,672.9	2,907.7	2,889.5	18.20	159.807	
5,500.0	5,359.5	5,282.5	5,282.3	23.9	2.0	-153.05	-1,156.3	1,674.0	2,924.7	2,906.4	18.32	159.619	
5,511.8	5,371.1	5,293.5	5,293.2	24.0	2.0	-153.08	-1,156.5	1,674.1	2,926.9	2,908.5	18.34	159.605	
5,600.0	5,458.0	5,374.2	5,373.9	24.2	2.0	-153.32	-1,157.9	1,675.3	2,941.7	2,923.3	18.45	159.417	
5,610.2	5,468.2	5,383.5	5,383.3	24.3	2.0	-153.34	-1,158.1	1,675.4	2,943.3	2,924.8	18.46	159.404	
5,700.0	5,557.2	5,466.3	5,466.0	24.5	2.0	-153.53	-1,159.9	1,676.7	2,955.8	2,937.3	18.57	159.193	
5,708.6	5,565.7	5,474.3	5,474.0	24.5	2.0	-153.54	-1,160.1	1,676.9	2,956.9	2,938.4	18.58	159.179	
5,800.0	5,656.7	5,552.0	5,551.7	24.7	2.1	-153.67	-1,162.1	1,678.2	2,967.2	2,948.5	18.67	158.933	
5,807.1	5,663.7	5,557.8	5,557.5	24.7	2.1	-153.68	-1,162.2	1,678.3	2,967.9	2,949.2	18.68	158.919	
5,900.0	5,756.5	5,640.4	5,640.0	24.9	2.1	-153.77	-1,164.7	1,680.1	2,975.9	2,957.2	18.76	158.616	
5,905.5	5,761.9	5,645.8	5,645.4	24.9	2.1	-153.77	-1,164.9	1,680.2	2,976.3	2,957.6	18.77	158.599	
6,000.0	5,856.4	5,733.5	5,733.0	25.0	2.1	-153.79	-1,168.4	1,681.9	2,981.8	2,962.9	18.85	158.183	
6,003.9	5,860.3	5,736.9	5,736.4	25.0	2.1	-153.79	-1,168.5	1,682.0	2,981.9	2,963.1	18.85	158.165	
6,032.5	5,888.9	5,761.4	5,761.0	25.0	2.1	111.02	-1,169.5	1,682.5	2,983.1	2,957.7	25.34	117.729	
6,062.5	5,918.9	5,787.3	5,786.7	25.1	2.1	111.04	-1,170.5	1,683.1	2,984.1	2,958.8	25.38	117.598	
6,100.0	5,956.4	5,820.2	5,819.6	25.1	2.1	21.05	-1,171.8	1,684.0	2,984.6	2,965.8	18.88	158.047	
6,102.3	5,958.7	5,822.3	5,821.7	25.1	2.1	21.05	-1,171.8	1,684.0	2,984.6	2,965.7	18.88	158.069	
6,150.0	6,006.2	5,864.5	5,863.9	25.1	2.1	21.16	-1,173.5	1,685.2	2,982.5	2,963.7	18.85	158.239	
6,200.0	6,055.6	5,909.1	5,908.4	25.1	2.2	21.38	-1,175.2	1,686.5	2,977.3	2,958.4	18.84	158.021	
6,200.8	6,056.3	5,909.8	5,909.2	25.1	2.2	21.38	-1,175.2	1,686.5	2,977.2	2,958.3	18.84	158.016	
6,250.0	6,104.3	5,955.5	5,954.8	25.0	2.2	21.73	-1,177.0	1,687.9	2,968.9	2,950.0	18.85	157.463	
6,299.2	6,151.3	6,000.5	5,999.7	24.9	2.2	22.19	-1,178.6	1,689.4	2,957.6	2,938.7	18.88	156.660	
6,300.0	6,152.1	6,001.3	6,000.5	24.9	2.2	22.20	-1,178.6	1,689.4	2,957.4	2,938.5	18.88	156.644	
6,350.0	6,198.7	6,050.1	6,049.3	24.8	2.2	22.82	-1,180.2	1,691.1	2,942.7	2,923.8	18.92	155.545	
6,397.6	6,241.9	6,095.4	6,094.6	24.7	2.2	23.56	-1,181.7	1,692.6	2,926.0	2,907.0	18.97	154.260	
6,400.0	6,244.1	6,097.7	6,096.8	24.7	2.2	23.60	-1,181.8	1,692.7	2,925.1	2,906.1	18.97	154.187	
6,450.0	6,287.8	6,136.0	6,135.0	24.5	2.2	24.52	-1,183.0	1,694.0	2,904.5	2,885.5	19.03	152.631	
6,496.0	6,326.5	6,169.7	6,168.7	24.4	2.2	25.52	-1,184.1	1,695.2	2,883.2	2,864.0	19.11	150.890	
6,500.0	6,329.7	6,172.5	6,171.5	24.4	2.2	25.61	-1,184.2	1,695.3	2,881.2	2,862.1	19.12	150.723	
6,550.0	6,369.6	6,208.4	6,207.4	24.3	2.2	26.92	-1,185.4	1,696.7	2,855.3	2,836.1	19.25	148.337	
6,594.5	6,403.3	6,241.8	6,240.8	24.2	2.3	28.31	-1,186.5	1,698.0	2,830.2	2,810.8	19.43	145.672	
6,600.0	6,407.3	6,245.8	6,244.8	24.2	2.3	28.50	-1,186.6	1,698.2	2,826.9	2,807.5	19.45	145.307	
6,650.0	6,442.7	6,281.1	6,280.0	24.1	2.3	30.36	-1,187.8	1,699.6	2,796.1	2,776.4	19.75	141.589	
6,692.9	6,471.0	6,309.3	6,308.1	24.0	2.3	32.23	-1,188.8	1,700.7	2,768.0	2,747.9	20.09	137.795	
6,700.0	6,475.5	6,313.7	6,312.6	24.0	2.3	32.56	-1,188.9	1,700.9	2,763.1	2,743.0	20.15	137.123	
6,750.0	6,505.6	6,343.4	6,342.2	24.0	2.3	35.15	-1,190.0	1,702.1	2,728.1	2,707.4	20.68	131.912	
6,791.3	6,528.3	6,366.0	6,364.8	24.0	2.3	37.64	-1,190.8	1,703.1	2,697.7	2,676.5	21.23	127.076	
6,800.0	6,532.8	6,370.6	6,369.3	24.0	2.3	38.20	-1,190.9	1,703.3	2,691.2	2,669.8	21.35	126.027	
6,850.0	6,557.0	6,395.0	6,393.7	24.1	2.3	41.79	-1,191.8	1,704.3	2,652.6	2,630.5	22.17	119.634	
6,889.7	6,574.1	6,411.7	6,410.4	24.2	2.3	45.07	-1,192.4	1,705.0	2,620.9	2,598.0	22.92	114.352	
6,900.0	6,578.1	6,415.6	6,414.3	24.3	2.3	45.98	-1,192.6	1,705.1	2,612.6	2,589.5	23.12	113.005	
6,950.0	6,596.1	6,433.3	6,431.9	24.5	2.3	50.83	-1,193.3	1,705.9	2,571.4	2,547.2	24.17	106.404	
6,988.2	6,607.5	6,444.8	6,443.4	24.7	2.3	55.04	-1,193.7	1,706.4	2,539.2	2,514.2	25.01	101.545	
7,000.0	6,610.7	6,448.0	6,446.7	24.8	2.3	56.43	-1,193.8	1,706.5	2,529.1	2,503.8	25.26	100.124	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,621.9	6,459.8	6,458.5	25.1	2.3	62.75	-1,194.3	1,707.0	2,486.0	2,459.6	26.32	94.436	
7,086.6	6,628.0	6,466.6	6,465.2	25.4	2.3	67.79	-1,194.6	1,707.3	2,454.0	2,427.0	27.05	90.735	
7,100.0	6,629.7	6,468.7	6,467.3	25.6	2.3	69.71	-1,194.7	1,707.4	2,442.3	2,415.0	27.28	89.514	
7,150.0	6,634.1	6,474.5	6,473.1	26.0	2.3	77.14	-1,194.9	1,707.7	2,398.2	2,370.1	28.09	85.366	
7,185.0	6,635.1	6,476.7	6,475.3	26.4	2.3	82.47	-1,195.0	1,707.8	2,367.2	2,338.6	28.59	82.807	
7,196.6	6,635.0	6,477.1	6,475.7	26.5	2.3	84.23	-1,195.0	1,707.8	2,357.0	2,328.3	28.74	82.021	
7,200.0	6,635.0	6,477.2	6,475.8	26.6	2.3	84.23	-1,195.0	1,707.8	2,354.0	2,325.2	28.77	81.808	
7,283.4	6,633.9	6,479.6	6,478.1	27.6	2.3	84.35	-1,195.1	1,707.9	2,280.6	2,250.8	29.80	76.524	
7,300.0	6,633.7	6,480.0	6,478.6	27.8	2.3	84.38	-1,195.1	1,707.9	2,266.1	2,236.1	30.01	75.521	
7,381.9	6,632.6	6,482.3	6,480.9	29.0	2.3	84.50	-1,195.2	1,708.0	2,194.9	2,163.7	31.19	70.365	
7,400.0	6,632.4	6,482.8	6,481.4	29.2	2.3	84.52	-1,195.3	1,708.0	2,179.2	2,147.7	31.46	69.279	
7,480.3	6,631.4	6,485.1	6,483.6	30.5	2.3	84.64	-1,195.4	1,708.1	2,110.3	2,077.5	32.77	64.396	
7,500.0	6,631.1	6,485.6	6,484.2	30.9	2.3	84.67	-1,195.4	1,708.2	2,093.5	2,060.4	33.09	63.261	
7,578.7	6,630.1	6,487.8	6,486.4	32.3	2.3	84.79	-1,195.5	1,708.3	2,026.9	1,992.4	34.51	58.738	
7,600.0	6,629.8	6,488.4	6,487.0	32.7	2.3	84.82	-1,195.5	1,708.3	2,009.1	1,974.2	34.89	57.583	
7,677.1	6,628.9	6,490.6	6,489.2	34.1	2.3	84.93	-1,195.6	1,708.4	1,945.0	1,908.6	36.38	53.462	
7,700.0	6,628.6	6,491.3	6,489.8	34.6	2.3	84.97	-1,195.6	1,708.4	1,926.2	1,889.4	36.82	52.310	
7,775.6	6,627.6	6,493.4	6,492.0	36.1	2.3	85.08	-1,195.7	1,708.5	1,864.6	1,826.3	38.37	48.598	
7,800.0	6,627.3	6,494.1	6,492.7	36.6	2.3	85.11	-1,195.7	1,708.5	1,845.0	1,806.1	38.87	47.467	
7,874.0	6,626.3	6,500.0	6,498.5	38.2	2.3	85.42	-1,196.0	1,708.8	1,786.1	1,745.6	40.46	44.145	
7,900.0	6,626.0	6,500.0	6,498.5	38.8	2.3	85.42	-1,196.0	1,708.8	1,765.7	1,724.7	41.02	43.049	
7,972.4	6,625.1	6,500.0	6,498.5	40.4	2.3	85.42	-1,196.0	1,708.8	1,709.6	1,667.0	42.62	40.111	
8,000.0	6,624.7	6,500.0	6,498.5	41.0	2.3	85.42	-1,196.0	1,708.8	1,688.6	1,645.4	43.23	39.057	
8,070.8	6,623.8	6,502.1	6,500.7	42.6	2.3	85.53	-1,196.1	1,708.9	1,635.5	1,590.6	44.86	36.459	
8,100.0	6,623.4	6,503.1	6,501.6	43.3	2.3	85.58	-1,196.1	1,708.9	1,614.0	1,568.5	45.53	35.453	
8,169.3	6,622.6	6,505.4	6,503.9	44.9	2.3	85.70	-1,196.2	1,709.0	1,564.0	1,516.8	47.15	33.168	
8,200.0	6,622.2	6,506.4	6,504.9	45.6	2.3	85.75	-1,196.3	1,709.1	1,542.3	1,494.4	47.88	32.214	
8,267.7	6,621.3	6,508.7	6,507.2	47.3	2.3	85.87	-1,196.4	1,709.2	1,495.6	1,446.1	49.50	30.213	
8,300.0	6,620.9	6,509.7	6,508.3	48.0	2.3	85.93	-1,196.4	1,709.2	1,473.9	1,423.6	50.28	29.315	
8,366.1	6,620.0	6,512.0	6,510.5	49.7	2.3	86.05	-1,196.5	1,709.3	1,430.7	1,378.8	51.89	27.569	
8,400.0	6,619.6	6,513.1	6,511.7	50.5	2.3	86.11	-1,196.6	1,709.4	1,409.2	1,356.5	52.72	26.729	
8,464.5	6,618.8	6,515.4	6,513.9	52.1	2.3	86.22	-1,196.6	1,709.5	1,369.7	1,315.4	54.32	25.215	
8,500.0	6,618.3	6,516.6	6,515.1	53.0	2.3	86.28	-1,196.7	1,709.5	1,348.9	1,293.7	55.20	24.435	
8,563.0	6,617.5	6,518.8	6,517.3	54.5	2.3	86.40	-1,196.8	1,709.6	1,313.4	1,256.6	56.79	23.128	
8,600.0	6,617.0	6,520.0	6,518.6	55.5	2.3	86.47	-1,196.8	1,709.7	1,293.5	1,235.8	57.72	22.411	
8,661.4	6,616.3	6,522.2	6,520.7	57.0	2.3	86.58	-1,196.9	1,709.8	1,262.2	1,202.9	59.28	21.292	
8,700.0	6,615.8	6,523.6	6,522.1	58.0	2.3	86.65	-1,197.0	1,709.9	1,243.6	1,183.4	60.26	20.638	
8,759.8	6,615.0	6,525.7	6,524.2	59.5	2.3	86.76	-1,197.1	1,710.0	1,216.8	1,155.0	61.79	19.691	
8,800.0	6,614.5	6,527.1	6,525.6	60.6	2.3	86.84	-1,197.1	1,710.0	1,200.1	1,137.2	62.83	19.101	
8,858.2	6,613.7	6,529.2	6,527.7	62.1	2.3	86.94	-1,197.2	1,710.1	1,177.8	1,113.5	64.33	18.309	
8,900.0	6,613.2	6,530.7	6,529.2	63.2	2.3	87.02	-1,197.3	1,710.2	1,163.5	1,098.0	65.41	17.786	
8,956.7	6,612.5	6,532.8	6,531.3	64.6	2.3	87.13	-1,197.4	1,710.3	1,146.1	1,079.2	66.89	17.133	
9,000.0	6,611.9	6,534.4	6,532.9	65.8	2.3	87.21	-1,197.4	1,710.4	1,134.5	1,066.5	68.02	16.679	
9,055.1	6,611.2	6,536.4	6,534.9	67.2	2.3	87.32	-1,197.5	1,710.5	1,122.0	1,052.6	69.47	16.152	
9,100.0	6,610.6	6,538.1	6,536.6	68.4	2.3	87.41	-1,197.6	1,710.5	1,113.8	1,043.2	70.65	15.766	
9,153.5	6,609.9	6,540.1	6,538.6	69.8	2.3	87.51	-1,197.7	1,710.6	1,106.3	1,034.2	72.06	15.353	
9,200.0	6,609.3	6,541.8	6,540.3	71.0	2.3	87.60	-1,197.7	1,710.7	1,101.8	1,028.5	73.28	15.035	
9,251.9	6,608.7	6,543.8	6,542.3	72.4	2.3	87.70	-1,197.8	1,710.8	1,099.1	1,024.5	74.66	14.721	
9,283.1	6,608.3	6,545.0	6,543.5	73.2	2.3	87.77	-1,197.8	1,710.9	1,098.7	1,023.2	75.49	14.554 CC	
9,300.0	6,608.1	6,545.6	6,544.1	73.7	2.3	87.80	-1,197.9	1,710.9	1,098.8	1,022.9	75.94	14.470 ES	
9,350.4	6,607.4	6,547.6	6,546.0	75.0	2.3	87.90	-1,197.9	1,711.0	1,100.7	1,023.5	77.28	14.244	
9,400.0	6,606.8	6,549.5	6,547.9	76.3	2.3	88.00	-1,198.0	1,711.1	1,104.9	1,026.3	78.60	14.057	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,606.1	6,551.4	6,549.8	77.6	2.3	88.10	-1,198.1	1,711.2	1,111.1	1,031.2	79.91	13.905	
9,500.0	6,605.5	6,553.4	6,551.8	79.0	2.3	88.20	-1,198.2	1,711.3	1,119.9	1,038.6	81.28	13.778	
9,547.2	6,604.9	6,555.2	6,553.7	80.2	2.3	88.30	-1,198.2	1,711.3	1,130.0	1,047.4	82.55	13.689	
9,600.0	6,604.2	6,557.3	6,555.8	81.7	2.3	88.41	-1,198.3	1,711.4	1,143.4	1,059.5	83.96	13.618	
9,645.6	6,603.6	6,559.2	6,557.6	82.9	2.3	88.50	-1,198.4	1,711.5	1,156.9	1,071.7	85.19	13.580	
9,700.0	6,602.9	6,561.3	6,559.8	84.3	2.3	88.62	-1,198.5	1,711.6	1,175.0	1,088.4	86.66	13.560 SF	
9,744.1	6,602.3	6,563.1	6,561.6	85.5	2.3	88.71	-1,198.5	1,711.7	1,191.4	1,103.5	87.85	13.562	
9,800.0	6,601.6	6,565.4	6,563.8	87.0	2.3	88.83	-1,198.6	1,711.8	1,214.1	1,124.7	89.36	13.587	
9,842.5	6,601.1	6,567.1	6,565.6	88.2	2.3	88.92	-1,198.7	1,711.9	1,232.7	1,142.2	90.51	13.620	
9,900.0	6,600.3	6,569.5	6,567.9	89.7	2.3	89.04	-1,198.8	1,712.0	1,259.8	1,167.8	92.06	13.684	
9,940.9	6,599.8	6,571.2	6,569.6	90.9	2.3	89.13	-1,198.8	1,712.1	1,280.3	1,187.2	93.18	13.741	
10,000.0	6,599.0	6,573.7	6,572.1	92.5	2.3	89.26	-1,198.9	1,712.2	1,311.6	1,216.9	94.78	13.839	
10,039.3	6,598.5	6,575.3	6,573.7	93.5	2.3	89.35	-1,199.0	1,712.3	1,333.5	1,237.7	95.85	13.913	
10,100.0	6,597.7	6,577.9	6,576.3	95.2	2.3	89.48	-1,199.1	1,712.4	1,368.8	1,271.3	97.50	14.039	
10,137.8	6,597.3	6,579.5	6,577.9	96.2	2.3	89.56	-1,199.1	1,712.5	1,391.6	1,293.1	98.53	14.124	
10,200.0	6,596.5	6,582.2	6,580.6	97.9	2.3	89.70	-1,199.2	1,712.7	1,430.6	1,330.4	100.22	14.275	
10,236.2	6,596.0	6,583.8	6,582.1	98.9	2.3	89.78	-1,199.3	1,712.7	1,454.1	1,352.9	101.21	14.367	
10,300.0	6,595.2	6,586.5	6,584.9	100.6	2.3	89.93	-1,199.4	1,712.9	1,496.6	1,393.7	102.95	14.537	
10,334.6	6,594.7	6,588.0	6,586.4	101.6	2.3	90.01	-1,199.4	1,712.9	1,520.3	1,416.4	103.90	14.633	
10,400.0	6,593.9	6,590.9	6,589.3	103.3	2.3	90.16	-1,199.5	1,713.1	1,566.2	1,460.5	105.68	14.820	
10,433.0	6,593.5	6,592.4	6,590.8	104.2	2.3	90.23	-1,199.6	1,713.2	1,589.9	1,483.3	106.58	14.917	
10,500.0	6,592.6	6,595.4	6,593.8	106.1	2.3	90.39	-1,199.7	1,713.3	1,638.9	1,530.5	108.42	15.117	
10,531.5	6,592.2	6,596.8	6,595.2	106.9	2.3	90.46	-1,199.7	1,713.4	1,662.4	1,553.1	109.28	15.212	
10,600.0	6,591.3	6,599.9	6,598.3	108.8	2.3	90.63	-1,199.8	1,713.5	1,714.3	1,603.2	111.15	15.423	
10,629.9	6,590.9	6,601.2	6,599.5	109.6	2.4	90.69	-1,199.9	1,713.6	1,737.4	1,625.4	111.97	15.516	
10,700.0	6,590.0	6,604.1	6,602.5	111.6	2.4	90.84	-1,200.0	1,713.8	1,792.2	1,678.3	113.89	15.736	
10,728.3	6,589.6	6,605.3	6,603.7	112.3	2.4	90.91	-1,200.0	1,713.8	1,814.6	1,700.0	114.67	15.825	
10,800.0	6,588.7	6,608.4	6,606.7	114.3	2.4	91.06	-1,200.1	1,714.0	1,872.1	1,755.5	116.63	16.051	
10,826.7	6,588.4	6,609.5	6,607.9	115.0	2.4	91.12	-1,200.2	1,714.0	1,893.8	1,776.5	117.37	16.136	
10,900.0	6,587.4	6,612.7	6,611.0	117.0	2.4	91.29	-1,200.3	1,714.2	1,953.9	1,834.5	119.38	16.368	
10,925.2	6,587.1	6,613.8	6,612.1	117.7	2.4	91.34	-1,200.3	1,714.2	1,974.8	1,854.7	120.07	16.447	
11,000.0	6,586.1	6,617.1	6,615.4	119.8	2.4	91.51	-1,200.4	1,714.4	2,037.3	1,915.2	122.12	16.683	
11,023.6	6,585.8	6,618.1	6,616.4	120.4	2.4	91.57	-1,200.5	1,714.5	2,057.2	1,934.5	122.77	16.757	
11,100.0	6,584.8	6,621.5	6,619.8	122.5	2.4	91.74	-1,200.6	1,714.6	2,122.2	1,997.3	124.86	16.996	
11,122.0	6,584.5	6,622.5	6,620.8	123.2	2.4	91.79	-1,200.6	1,714.7	2,141.0	2,015.5	125.47	17.064	
11,200.0	6,583.5	6,626.0	6,624.3	125.3	2.4	91.98	-1,200.7	1,714.9	2,208.2	2,080.6	127.61	17.305	
11,220.4	6,583.3	6,626.9	6,625.2	125.9	2.4	92.02	-1,200.7	1,714.9	2,226.0	2,097.8	128.17	17.367	
11,300.0	6,582.2	6,630.5	6,628.8	128.1	2.4	92.21	-1,200.9	1,715.1	2,295.5	2,165.1	130.35	17.609	
11,318.9	6,582.0	6,631.4	6,629.7	128.6	2.4	92.25	-1,200.9	1,715.2	2,312.0	2,181.2	130.87	17.666	
11,400.0	6,580.9	6,635.1	6,633.4	130.8	2.4	92.45	-1,201.0	1,715.3	2,383.7	2,250.6	133.10	17.909	
11,417.3	6,580.7	6,635.9	6,634.2	131.3	2.4	92.49	-1,201.0	1,715.4	2,399.0	2,265.4	133.57	17.960	
11,500.0	6,579.7	6,639.8	6,638.1	133.6	2.4	92.69	-1,201.2	1,715.6	2,472.8	2,336.9	135.84	18.203	
11,515.7	6,579.4	6,640.5	6,638.8	134.0	2.4	92.73	-1,201.2	1,715.6	2,486.9	2,350.6	136.27	18.249	
11,600.0	6,578.4	6,644.5	6,642.8	136.3	2.4	92.93	-1,201.3	1,715.8	2,562.7	2,424.1	138.58	18.492	
11,614.1	6,578.2	6,645.2	6,643.5	136.7	2.4	92.97	-1,201.4	1,715.9	2,575.4	2,436.5	138.97	18.532	
11,700.0	6,577.1	6,649.3	6,647.6	139.1	2.4	93.18	-1,201.5	1,716.1	2,653.3	2,511.9	141.33	18.774	
11,712.6	6,576.9	6,649.9	6,648.2	139.5	2.4	93.21	-1,201.5	1,716.1	2,664.7	2,523.0	141.67	18.809	
11,800.0	6,575.8	6,654.2	6,652.4	141.9	2.4	93.43	-1,201.6	1,716.4	2,744.5	2,600.5	144.07	19.051	
11,811.0	6,575.6	6,654.7	6,653.0	142.2	2.4	93.46	-1,201.7	1,716.4	2,754.6	2,610.2	144.37	19.081	
11,858.8	6,575.0	6,657.1	6,655.3	143.5	2.4	93.58	-1,201.7	1,716.5	2,798.4	2,652.8	145.67	19.210	
11,859.3	6,575.0	6,657.1	6,655.3	143.5	2.4	93.58	-1,201.7	1,716.5	2,799.0	2,653.3	145.68	19.213	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	111.19	-1,088.0	2,806.4	3,010.0				
98.4	98.4	85.5	85.5	0.1	0.0	111.19	-1,087.9	2,806.4	3,009.9	3,009.8	0.10	N/A	
100.0	100.0	87.2	87.2	0.1	0.0	111.19	-1,087.9	2,806.4	3,009.9	3,009.8	0.10	N/A	
196.8	196.8	181.0	181.0	0.3	0.1	111.18	-1,087.6	2,806.4	3,009.8	3,009.4	0.40	7,598.357	
200.0	200.0	184.0	184.0	0.3	0.1	111.18	-1,087.6	2,806.4	3,009.8	3,009.4	0.41	7,409.876	
295.3	295.3	294.0	294.0	0.5	0.2	111.18	-1,087.3	2,806.2	3,009.5	3,008.8	0.74	4,066.749	
300.0	300.0	299.6	299.6	0.5	0.2	111.18	-1,087.3	2,806.1	3,009.5	3,008.7	0.76	3,976.320	
363.7	363.7	345.7	345.7	0.7	0.2	111.18	-1,087.1	2,806.1	3,009.3	3,008.4	0.91	3,293.905	
393.7	393.7	367.3	367.3	0.8	0.2	111.18	-1,087.0	2,806.1	3,009.3	3,008.4	0.99	3,048.406	
400.0	400.0	371.9	371.9	0.8	0.2	111.18	-1,087.0	2,806.2	3,009.4	3,008.4	1.00	3,001.414	
492.1	492.1	459.8	459.8	1.0	0.3	111.16	-1,086.5	2,806.9	3,009.9	3,008.6	1.27	2,378.493	
500.0	500.0	468.6	468.6	1.0	0.3	111.16	-1,086.4	2,807.0	3,009.9	3,008.6	1.29	2,332.635	
590.5	590.5	551.1	551.1	1.2	0.4	111.14	-1,085.5	2,807.7	3,010.3	3,008.8	1.55	1,938.021	
600.0	600.0	558.9	558.8	1.2	0.4	111.14	-1,085.5	2,807.8	3,010.4	3,008.8	1.58	1,905.799	
689.0	689.0	646.4	646.4	1.4	0.4	111.12	-1,084.9	2,808.9	3,011.2	3,009.4	1.83	1,641.762	
700.0	700.0	659.7	659.7	1.4	0.4	111.11	-1,084.8	2,809.1	3,011.3	3,009.5	1.87	1,613.083	
787.4	787.4	756.4	756.4	1.6	0.5	111.09	-1,084.0	2,809.9	3,011.8	3,009.7	2.12	1,421.355	
800.0	800.0	769.5	769.5	1.7	0.5	111.09	-1,083.9	2,810.0	3,011.8	3,009.7	2.15	1,397.799	
885.8	885.8	863.4	863.4	1.9	0.5	111.08	-1,083.2	2,810.6	3,012.1	3,009.7	2.40	1,256.429	
900.0	900.0	879.3	879.2	1.9	0.5	111.07	-1,083.1	2,810.6	3,012.1	3,009.7	2.44	1,235.811	
984.2	984.2	951.3	951.3	2.1	0.6	111.06	-1,082.6	2,811.0	3,012.3	3,009.6	2.66	1,131.898	
1,000.0	1,000.0	963.6	963.6	2.1	0.6	111.06	-1,082.5	2,811.1	3,012.4	3,009.7	2.70	1,114.701	
1,082.7	1,082.7	1,039.3	1,039.2	2.3	0.6	111.04	-1,081.9	2,812.0	3,013.1	3,010.2	2.92	1,030.560	
1,100.0	1,100.0	1,058.1	1,058.1	2.3	0.6	111.04	-1,081.7	2,812.3	3,013.2	3,010.3	2.97	1,014.018	
1,181.1	1,181.1	1,145.9	1,145.8	2.5	0.7	111.02	-1,080.9	2,813.2	3,013.8	3,010.6	3.19	943.723	
1,200.0	1,200.0	1,166.2	1,166.2	2.6	0.7	111.02	-1,080.8	2,813.4	3,013.9	3,010.6	3.24	928.836	
1,279.5	1,279.5	1,249.1	1,249.0	2.7	0.7	-153.80	-1,080.5	2,813.9	3,015.2	3,011.8	3.39	889.501	
1,300.0	1,300.0	1,270.0	1,269.9	2.8	0.7	-153.80	-1,080.4	2,814.0	3,015.9	3,012.4	3.44	876.390	
1,377.9	1,377.8	1,348.4	1,348.3	2.9	0.8	-153.81	-1,080.1	2,814.5	3,019.6	3,015.9	3.63	831.858	
1,400.0	1,399.8	1,370.4	1,370.3	3.0	0.8	-153.81	-1,080.0	2,814.6	3,021.0	3,017.3	3.68	820.205	
1,476.4	1,475.9	1,444.6	1,444.6	3.1	0.8	-153.82	-1,079.7	2,815.0	3,027.0	3,023.1	3.87	781.464	
1,500.0	1,499.5	1,467.2	1,467.1	3.2	0.8	-153.82	-1,079.6	2,815.2	3,029.2	3,025.3	3.93	770.334	
1,574.8	1,573.7	1,540.5	1,540.4	3.4	0.8	-153.82	-1,079.5	2,815.6	3,037.5	3,033.4	4.13	736.018	
1,600.0	1,598.7	1,565.7	1,565.6	3.4	0.8	-153.82	-1,079.5	2,815.7	3,040.7	3,036.5	4.19	725.195	
1,673.2	1,671.1	1,642.6	1,642.5	3.6	0.9	-153.83	-1,079.5	2,816.1	3,051.0	3,046.6	4.39	694.877	
1,700.0	1,697.5	1,671.8	1,671.7	3.7	0.9	-153.84	-1,079.4	2,816.2	3,055.1	3,050.7	4.46	684.641	
1,771.6	1,767.9	1,740.6	1,740.5	3.9	0.9	-153.84	-1,079.2	2,816.5	3,067.3	3,062.6	4.66	657.766	
1,800.0	1,795.6	1,765.6	1,765.5	4.0	0.9	-153.84	-1,079.1	2,816.6	3,072.6	3,067.8	4.74	647.881	
1,870.1	1,864.0	1,833.7	1,833.6	4.3	0.9	-153.85	-1,078.8	2,817.1	3,086.8	3,081.8	4.95	623.380	
1,900.0	1,893.1	1,866.1	1,866.0	4.4	1.0	-153.86	-1,078.6	2,817.2	3,093.3	3,088.2	5.04	613.523	
1,968.5	1,959.3	1,930.3	1,930.3	4.6	1.0	-153.85	-1,078.3	2,817.5	3,109.1	3,103.9	5.26	591.258	
1,992.4	1,982.4	1,949.8	1,949.8	4.7	1.0	-153.85	-1,078.3	2,817.6	3,115.1	3,109.7	5.33	584.071	
2,000.0	1,989.6	1,956.0	1,955.9	4.8	1.0	-153.86	-1,078.3	2,817.6	3,117.0	3,111.6	5.36	581.911	
2,066.9	2,054.0	2,012.3	2,012.2	5.1	1.0	-153.99	-1,078.2	2,818.1	3,133.9	3,128.4	5.57	562.637	
2,100.0	2,085.8	2,044.0	2,043.9	5.2	1.0	-154.07	-1,078.3	2,818.3	3,142.4	3,136.7	5.67	553.838	
2,165.3	2,148.7	2,107.3	2,107.2	5.5	1.0	-154.21	-1,078.3	2,818.8	3,159.0	3,153.1	5.89	536.632	
2,200.0	2,182.0	2,143.5	2,143.5	5.7	1.1	-154.29	-1,078.3	2,819.1	3,167.8	3,161.8	6.01	527.447	
2,263.8	2,243.4	2,209.0	2,208.9	6.0	1.1	-154.44	-1,078.4	2,819.4	3,184.0	3,177.8	6.22	511.799	
2,300.0	2,278.2	2,241.7	2,241.6	6.2	1.1	-154.51	-1,078.5	2,819.6	3,193.2	3,186.8	6.34	503.394	
2,362.2	2,338.1	2,300.0	2,299.9	6.5	1.1	-154.63	-1,078.9	2,819.8	3,209.0	3,202.5	6.56	489.453	
2,400.0	2,374.4	2,330.0	2,330.0	6.7	1.1	-154.69	-1,079.2	2,820.0	3,218.7	3,212.0	6.69	481.400	
2,460.6	2,432.8	2,381.2	2,381.1	7.0	1.1	-154.80	-1,079.5	2,820.4	3,234.3	3,227.4	6.90	468.911	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,470.6	2,420.4	2,420.3	7.2	1.1	-154.88	-1,079.7	2,820.8	3,244.5	3,237.5	7.04	461.140	
2,559.0	2,527.4	2,491.3	2,491.2	7.6	1.1	-155.02	-1,080.2	2,821.2	3,259.7	3,252.4	7.25	449.818	
2,600.0	2,566.8	2,534.7	2,534.6	7.8	1.1	-155.11	-1,080.5	2,821.3	3,270.1	3,262.7	7.39	442.503	
2,657.5	2,622.1	2,594.0	2,593.9	8.1	1.2	-155.22	-1,080.9	2,821.4	3,284.6	3,277.0	7.59	432.625	
2,700.0	2,663.0	2,635.8	2,635.7	8.3	1.2	-155.30	-1,081.2	2,821.4	3,295.4	3,287.6	7.74	425.622	
2,755.9	2,716.8	2,690.4	2,690.3	8.6	1.2	-155.41	-1,081.6	2,821.4	3,309.5	3,301.5	7.94	416.754	
2,800.0	2,759.2	2,730.6	2,730.5	8.9	1.2	-155.49	-1,081.9	2,821.5	3,320.6	3,312.5	8.10	410.044	
2,854.3	2,811.5	2,779.2	2,779.1	9.2	1.2	-155.58	-1,082.2	2,821.5	3,334.4	3,326.1	8.29	402.079	
2,900.0	2,855.4	2,821.6	2,821.5	9.4	1.2	-155.66	-1,082.5	2,821.6	3,346.1	3,337.6	8.46	395.649	
2,952.7	2,906.2	2,872.5	2,872.4	9.7	1.2	-155.75	-1,083.0	2,821.7	3,359.5	3,350.9	8.65	388.465	
3,000.0	2,951.6	2,919.1	2,919.0	10.0	1.2	-155.84	-1,083.5	2,821.8	3,371.6	3,362.8	8.82	382.307	
3,051.2	3,000.9	2,971.2	2,971.1	10.3	1.2	-155.93	-1,084.0	2,821.9	3,384.6	3,375.6	9.00	375.889	
3,100.0	3,047.8	3,018.0	3,017.9	10.5	1.2	-156.02	-1,084.3	2,821.9	3,397.0	3,387.8	9.18	370.020	
3,149.6	3,095.5	3,061.5	3,061.4	10.8	1.2	-156.10	-1,084.6	2,822.0	3,409.7	3,400.3	9.36	364.273	
3,200.0	3,144.0	3,107.2	3,107.1	11.1	1.2	-156.18	-1,085.1	2,822.1	3,422.6	3,413.1	9.54	358.663	
3,248.0	3,190.2	3,160.3	3,160.1	11.4	1.2	-156.27	-1,085.6	2,822.2	3,434.9	3,425.2	9.72	353.460	
3,300.0	3,240.2	3,214.1	3,214.0	11.7	1.3	-156.36	-1,086.1	2,822.2	3,448.1	3,438.2	9.91	348.063	
3,346.4	3,284.9	3,254.8	3,254.7	11.9	1.3	-156.43	-1,086.5	2,822.2	3,459.9	3,449.9	10.07	343.443	
3,400.0	3,336.4	3,300.0	3,299.9	12.2	1.3	-156.51	-1,086.9	2,822.2	3,473.6	3,463.4	10.27	338.336	
3,444.9	3,379.6	3,342.0	3,341.9	12.5	1.3	-156.58	-1,087.4	2,822.3	3,485.2	3,474.7	10.43	334.093	
3,500.0	3,432.6	3,391.4	3,391.3	12.8	1.3	-156.66	-1,088.0	2,822.4	3,499.4	3,488.8	10.63	329.123	
3,543.3	3,474.3	3,435.9	3,435.8	13.1	1.3	-156.74	-1,088.6	2,822.6	3,510.6	3,499.8	10.79	325.324	
3,600.0	3,528.8	3,496.2	3,496.1	13.4	1.3	-156.83	-1,089.3	2,822.7	3,525.2	3,514.2	11.00	320.507	
3,641.7	3,569.0	3,530.9	3,530.7	13.6	1.3	-156.89	-1,089.8	2,822.7	3,535.9	3,524.8	11.15	317.109	
3,700.0	3,625.0	3,577.9	3,577.8	14.0	1.3	-156.96	-1,090.4	2,822.9	3,551.1	3,539.7	11.36	312.532	
3,740.1	3,663.6	3,612.9	3,612.7	14.2	1.3	-157.02	-1,090.9	2,823.0	3,561.6	3,550.0	11.51	309.456	
3,800.0	3,721.2	3,673.3	3,673.1	14.5	1.3	-157.11	-1,091.8	2,823.3	3,577.2	3,565.5	11.73	304.958	
3,838.6	3,758.3	3,710.8	3,710.7	14.8	1.4	-157.17	-1,092.3	2,823.5	3,587.3	3,575.4	11.87	302.151	
3,900.0	3,817.4	3,765.9	3,765.7	15.1	1.4	-157.26	-1,093.1	2,823.8	3,603.4	3,591.3	12.10	297.865	
3,937.0	3,853.0	3,800.0	3,799.8	15.3	1.4	-157.31	-1,093.6	2,824.0	3,613.1	3,600.8	12.23	295.354	
4,000.0	3,913.6	3,864.0	3,863.8	15.7	1.4	-157.41	-1,094.5	2,824.3	3,629.6	3,617.2	12.47	291.181	
4,035.4	3,947.7	3,900.6	3,900.4	15.9	1.4	-157.46	-1,094.9	2,824.5	3,638.9	3,626.3	12.60	288.896	
4,100.0	4,009.8	3,964.0	3,963.8	16.3	1.4	-157.56	-1,095.6	2,824.8	3,655.8	3,642.9	12.83	284.881	
4,133.8	4,042.4	3,997.2	3,997.0	16.5	1.4	-157.61	-1,096.0	2,825.0	3,664.6	3,651.7	12.96	282.834	
4,200.0	4,106.0	4,074.3	4,074.1	16.8	1.4	-157.73	-1,096.7	2,825.2	3,681.8	3,668.6	13.20	278.950	
4,232.3	4,137.1	4,111.0	4,110.8	17.0	1.4	-157.79	-1,097.0	2,825.2	3,690.1	3,676.8	13.32	277.114	
4,300.0	4,202.2	4,182.2	4,182.0	17.4	1.5	-157.90	-1,097.6	2,825.2	3,707.4	3,693.8	13.56	273.419	
4,330.7	4,231.7	4,200.0	4,199.8	17.6	1.5	-157.92	-1,097.8	2,825.1	3,715.2	3,701.6	13.67	271.813	
4,400.0	4,298.4	4,262.7	4,262.5	18.0	1.5	-158.02	-1,098.4	2,825.1	3,733.0	3,719.1	13.92	268.182	
4,429.1	4,326.4	4,284.6	4,284.4	18.2	1.5	-158.05	-1,098.6	2,825.2	3,740.6	3,726.6	14.02	266.714	
4,500.0	4,394.6	4,350.4	4,350.2	18.6	1.5	-158.15	-1,099.1	2,825.5	3,759.2	3,744.9	14.29	263.146	
4,527.5	4,421.1	4,378.0	4,377.8	18.7	1.5	-158.19	-1,099.3	2,825.7	3,766.4	3,752.0	14.39	261.778	
4,600.0	4,490.8	4,456.8	4,456.6	19.2	1.5	-158.31	-1,099.9	2,826.0	3,785.3	3,770.6	14.65	258.325	
4,626.0	4,515.8	4,486.1	4,485.9	19.3	1.5	-158.35	-1,100.1	2,826.0	3,792.0	3,777.2	14.75	257.120	
4,700.0	4,587.0	4,554.1	4,553.9	19.8	1.6	-158.45	-1,100.7	2,826.1	3,811.1	3,796.1	15.02	253.800	
4,724.4	4,610.5	4,575.5	4,575.3	19.9	1.6	-158.48	-1,100.9	2,826.1	3,817.4	3,802.3	15.10	252.736	
4,800.0	4,683.2	4,653.7	4,653.5	20.3	1.6	-158.59	-1,101.5	2,826.3	3,837.1	3,821.7	15.38	249.494	
4,822.8	4,705.2	4,679.5	4,679.3	20.5	1.6	-158.63	-1,101.6	2,826.3	3,842.9	3,827.5	15.46	248.532	
4,900.0	4,779.4	4,748.1	4,747.8	20.9	1.6	-158.73	-1,102.1	2,826.4	3,862.8	3,847.1	15.74	245.395	
4,921.2	4,799.8	4,765.4	4,765.2	21.0	1.6	-158.75	-1,102.3	2,826.4	3,868.4	3,852.5	15.82	244.555	
5,000.0	4,875.6	4,837.4	4,837.2	21.5	1.6	-158.85	-1,103.2	2,826.5	3,888.9	3,872.8	16.10	241.490	
5,019.7	4,894.5	4,857.7	4,857.5	21.6	1.6	-158.88	-1,103.5	2,826.6	3,894.1	3,877.9	16.18	240.733	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,100.0	4,971.8	4,937.3	4,937.1	22.1	1.6	-158.98	-1,104.6	2,826.6	3,915.0	3,898.5	16.47	237.729	
5,118.1	4,989.2	4,954.5	4,954.2	22.2	1.6	-159.00	-1,104.9	2,826.6	3,919.7	3,903.1	16.53	237.071	
5,200.0	5,068.0	5,042.6	5,042.3	22.7	1.7	-159.11	-1,106.0	2,826.7	3,941.0	3,924.1	16.83	234.168	
5,216.5	5,083.9	5,063.4	5,063.1	22.8	1.7	-159.14	-1,106.3	2,826.6	3,945.2	3,928.3	16.89	233.595	
5,240.0	5,106.5	5,093.0	5,092.7	22.9	1.7	-159.18	-1,106.6	2,826.5	3,951.3	3,934.3	16.97	232.784	
5,300.0	5,164.4	5,156.9	5,156.6	23.2	1.7	-159.37	-1,107.0	2,826.3	3,966.0	3,948.9	17.10	231.902	
5,314.9	5,178.8	5,172.6	5,172.3	23.3	1.7	-159.41	-1,107.0	2,826.2	3,969.4	3,952.3	17.13	231.778	
5,400.0	5,261.5	5,256.9	5,256.7	23.6	1.7	-159.65	-1,107.1	2,826.0	3,987.8	3,970.6	17.26	231.032	
5,413.4	5,274.6	5,269.9	5,269.6	23.6	1.7	-159.68	-1,107.1	2,825.9	3,990.5	3,973.2	17.28	230.939	
5,500.0	5,359.5	5,351.3	5,351.0	23.9	1.7	-159.87	-1,107.0	2,825.7	4,006.5	3,989.1	17.40	230.285	
5,511.8	5,371.1	5,362.2	5,361.9	24.0	1.7	-159.90	-1,107.0	2,825.7	4,008.5	3,991.1	17.41	230.217	
5,600.0	5,458.0	5,441.5	5,441.2	24.2	1.7	-160.06	-1,106.7	2,825.6	4,022.1	4,004.6	17.52	229.579	
5,610.2	5,468.2	5,450.4	5,450.2	24.3	1.7	-160.08	-1,106.7	2,825.6	4,023.6	4,006.0	17.53	229.515	
5,700.0	5,557.2	5,537.5	5,537.3	24.5	1.7	-160.22	-1,106.2	2,825.8	4,034.8	4,017.1	17.63	228.853	
5,708.6	5,565.7	5,547.3	5,547.0	24.5	1.7	-160.23	-1,106.2	2,825.8	4,035.7	4,018.1	17.64	228.798	
5,800.0	5,656.7	5,645.8	5,645.5	24.7	1.7	-160.34	-1,105.3	2,826.0	4,043.9	4,026.2	17.73	228.135	
5,807.1	5,663.7	5,653.1	5,652.8	24.7	1.7	-160.35	-1,105.2	2,826.0	4,044.5	4,026.7	17.73	228.092	
5,900.0	5,756.5	5,761.8	5,761.5	24.9	1.7	-160.43	-1,104.3	2,825.8	4,049.7	4,031.8	17.81	227.444	
5,905.5	5,761.9	5,769.0	5,768.7	24.9	1.7	-160.43	-1,104.3	2,825.8	4,049.9	4,032.0	17.81	227.410	
6,000.0	5,856.4	5,855.9	5,855.6	25.0	1.7	-160.46	-1,103.6	2,825.4	4,051.7	4,033.9	17.87	226.678	
6,003.9	5,860.3	5,859.0	5,858.8	25.0	1.7	-160.47	-1,103.6	2,825.4	4,051.8	4,033.9	17.88	226.645	
6,032.5	5,888.9	5,881.6	5,881.3	25.0	1.7	104.34	-1,103.3	2,825.4	4,051.8	4,026.2	25.58	158.377	
6,062.5	5,918.9	5,908.5	5,908.2	25.1	1.7	104.33	-1,103.0	2,825.4	4,051.7	4,026.1	25.62	158.162	
6,100.0	5,956.4	5,956.0	5,955.7	25.1	1.7	14.35	-1,102.5	2,825.4	4,050.7	4,032.8	17.89	226.365	
6,102.3	5,958.7	5,959.0	5,958.7	25.1	1.7	14.35	-1,102.4	2,825.4	4,050.5	4,032.6	17.89	226.397	
6,150.0	6,006.2	6,000.0	5,999.7	25.1	1.7	14.45	-1,101.9	2,825.3	4,046.2	4,028.3	17.85	226.705	
6,200.0	6,055.6	6,045.6	6,045.3	25.1	1.7	14.62	-1,101.4	2,825.2	4,038.4	4,020.6	17.82	226.569	
6,200.8	6,056.3	6,046.2	6,045.9	25.1	1.7	14.62	-1,101.4	2,825.2	4,038.3	4,020.4	17.82	226.566	
6,250.0	6,104.3	6,080.1	6,079.9	25.0	1.7	14.87	-1,101.2	2,825.3	4,027.5	4,009.7	17.81	226.190	
6,299.2	6,151.3	6,117.0	6,116.8	24.9	1.7	15.21	-1,101.0	2,825.5	4,013.8	3,996.0	17.79	225.666	
6,300.0	6,152.1	6,117.7	6,117.4	24.9	1.7	15.22	-1,101.0	2,825.5	4,013.5	3,995.7	17.79	225.655	
6,350.0	6,198.7	6,159.4	6,159.1	24.8	1.7	15.66	-1,101.0	2,825.7	3,996.4	3,978.6	17.76	224.993	
6,397.6	6,241.9	6,200.0	6,199.7	24.7	1.7	16.20	-1,101.3	2,825.8	3,977.2	3,959.5	17.74	224.244	
6,400.0	6,244.1	6,200.0	6,199.7	24.7	1.7	16.23	-1,101.3	2,825.8	3,976.2	3,958.5	17.73	224.224	
6,450.0	6,287.8	6,242.1	6,241.8	24.5	1.7	16.93	-1,101.8	2,826.0	3,953.1	3,935.3	17.71	223.188	
6,496.0	6,326.5	6,279.5	6,279.2	24.4	1.7	17.70	-1,102.3	2,826.2	3,929.2	3,911.5	17.70	221.960	
6,500.0	6,329.7	6,282.6	6,282.3	24.4	1.7	17.77	-1,102.3	2,826.2	3,927.0	3,909.3	17.70	221.835	
6,550.0	6,369.6	6,321.3	6,321.0	24.3	1.7	18.80	-1,102.9	2,826.3	3,898.2	3,880.5	17.72	219.958	
6,594.5	6,403.3	6,354.0	6,353.7	24.2	1.8	19.88	-1,103.4	2,826.5	3,870.5	3,852.7	17.78	217.645	
6,600.0	6,407.3	6,357.9	6,357.6	24.2	1.8	20.03	-1,103.5	2,826.5	3,866.9	3,849.1	17.79	217.306	
6,650.0	6,442.7	6,392.3	6,392.0	24.1	1.8	21.52	-1,104.0	2,826.6	3,833.0	3,815.1	17.95	213.595	
6,692.9	6,471.0	6,419.0	6,418.7	24.0	1.8	23.04	-1,104.4	2,826.8	3,802.2	3,784.0	18.16	209.353	
6,700.0	6,475.5	6,423.2	6,422.9	24.0	1.8	23.31	-1,104.4	2,826.8	3,796.9	3,778.7	18.21	208.554	
6,750.0	6,505.6	6,451.4	6,451.1	24.0	1.8	25.50	-1,104.9	2,827.0	3,758.7	3,740.1	18.61	201.929	
6,791.3	6,528.3	6,472.7	6,472.4	24.0	1.8	27.67	-1,105.2	2,827.1	3,725.7	3,706.6	19.09	195.147	
6,800.0	6,532.8	6,477.0	6,476.7	24.0	1.8	28.18	-1,105.2	2,827.1	3,718.6	3,699.4	19.21	193.596	
6,850.0	6,557.0	6,500.0	6,499.7	24.1	1.8	31.51	-1,105.6	2,827.3	3,676.8	3,656.8	20.02	183.626	
6,889.7	6,574.1	6,520.6	6,520.3	24.2	1.8	34.82	-1,105.9	2,827.4	3,642.5	3,621.6	20.87	174.518	
6,900.0	6,578.1	6,525.6	6,525.3	24.3	1.8	35.78	-1,106.0	2,827.4	3,633.5	3,612.3	21.11	172.097	
6,950.0	6,596.1	6,547.4	6,547.1	24.5	1.8	41.18	-1,106.3	2,827.5	3,588.8	3,566.3	22.45	159.850	
6,988.2	6,607.5	6,561.3	6,561.0	24.7	1.8	46.25	-1,106.5	2,827.6	3,554.0	3,530.3	23.61	150.507	
7,000.0	6,610.7	6,565.2	6,564.8	24.8	1.8	48.02	-1,106.6	2,827.6	3,543.1	3,519.1	23.98	147.734	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,621.9	6,578.8	6,578.4	25.1	1.8	56.61	-1,106.8	2,827.6	3,496.5	3,470.9	25.56	136.816	
7,086.6	6,628.0	6,586.1	6,585.7	25.4	1.8	64.11	-1,106.9	2,827.7	3,462.0	3,435.4	26.58	130.250	
7,100.0	6,629.7	6,588.2	6,587.9	25.6	1.8	67.10	-1,107.0	2,827.7	3,449.3	3,422.4	26.89	128.284	
7,150.0	6,634.1	6,593.5	6,593.1	26.0	1.8	79.17	-1,107.1	2,827.7	3,401.7	3,374.0	27.69	122.853	
7,185.0	6,635.1	6,594.7	6,594.4	26.4	1.8	88.10	-1,107.1	2,827.7	3,368.3	3,340.3	28.04	120.134	
7,196.6	6,635.0	6,594.7	6,594.3	26.5	1.8	91.04	-1,107.1	2,827.7	3,357.3	3,329.1	28.16	119.204	
7,200.0	6,635.0	6,594.6	6,594.3	26.6	1.8	91.03	-1,107.1	2,827.7	3,354.0	3,325.8	28.20	118.928	
7,283.4	6,633.9	6,593.5	6,593.2	27.6	1.8	90.97	-1,107.1	2,827.7	3,274.5	3,245.3	29.23	112.026	
7,300.0	6,633.7	6,593.3	6,593.0	27.8	1.8	90.96	-1,107.1	2,827.7	3,258.8	3,229.3	29.43	110.716	
7,381.9	6,632.6	6,592.3	6,591.9	29.0	1.8	90.90	-1,107.1	2,827.7	3,181.0	3,150.4	30.62	103.881	
7,400.0	6,632.4	6,592.0	6,591.7	29.2	1.8	90.89	-1,107.0	2,827.7	3,163.8	3,132.9	30.88	102.440	
7,480.3	6,631.4	6,591.0	6,590.7	30.5	1.8	90.83	-1,107.0	2,827.7	3,087.8	3,055.6	32.20	95.892	
7,500.0	6,631.1	6,590.8	6,590.4	30.9	1.8	90.82	-1,107.0	2,827.7	3,069.2	3,036.6	32.52	94.367	
7,578.7	6,630.1	6,589.8	6,589.4	32.3	1.8	90.76	-1,107.0	2,827.7	2,994.9	2,961.0	33.94	88.241	
7,600.0	6,629.8	6,589.5	6,589.2	32.7	1.8	90.75	-1,107.0	2,827.7	2,974.9	2,940.6	34.32	86.673	
7,677.1	6,628.9	6,588.5	6,588.2	34.1	1.8	90.69	-1,107.0	2,827.7	2,902.4	2,866.6	35.82	81.038	
7,700.0	6,628.6	6,588.3	6,587.9	34.6	1.8	90.68	-1,107.0	2,827.7	2,881.0	2,844.7	36.26	79.459	
7,775.6	6,627.6	6,587.3	6,587.0	36.1	1.8	90.62	-1,107.0	2,827.7	2,810.3	2,772.5	37.81	74.336	
7,800.0	6,627.3	6,587.0	6,586.7	36.6	1.8	90.61	-1,107.0	2,827.7	2,787.5	2,749.2	38.31	72.770	
7,874.0	6,626.3	6,586.1	6,585.8	38.2	1.8	90.56	-1,106.9	2,827.7	2,718.6	2,678.8	39.89	68.150	
7,900.0	6,626.0	6,585.8	6,585.5	38.8	1.8	90.54	-1,106.9	2,827.7	2,694.5	2,654.1	40.45	66.614	
7,972.4	6,625.1	6,585.0	6,584.6	40.4	1.8	90.49	-1,106.9	2,827.7	2,627.5	2,585.4	42.06	62.469	
8,000.0	6,624.7	6,584.6	6,584.3	41.0	1.8	90.47	-1,106.9	2,827.7	2,602.0	2,559.4	42.67	60.975	
8,070.8	6,623.8	6,583.8	6,583.5	42.6	1.8	90.42	-1,106.9	2,827.7	2,536.8	2,492.5	44.30	57.268	
8,100.0	6,623.4	6,583.5	6,583.1	43.3	1.8	90.41	-1,106.9	2,827.7	2,510.1	2,465.2	44.97	55.822	
8,169.3	6,622.6	6,582.7	6,582.3	44.9	1.8	90.36	-1,106.9	2,827.7	2,446.8	2,400.2	46.59	52.513	
8,200.0	6,622.2	6,582.3	6,582.0	45.6	1.8	90.34	-1,106.9	2,827.7	2,418.8	2,371.5	47.32	51.120	
8,267.7	6,621.3	6,581.5	6,581.2	47.3	1.8	90.30	-1,106.9	2,827.7	2,357.5	2,308.5	48.94	48.169	
8,300.0	6,620.9	6,581.1	6,580.8	48.0	1.8	90.27	-1,106.9	2,827.7	2,328.3	2,278.6	49.72	46.831	
8,366.1	6,620.0	6,580.4	6,580.1	49.7	1.8	90.23	-1,106.8	2,827.7	2,268.9	2,217.5	51.33	44.200	
8,400.0	6,619.6	6,580.0	6,579.7	50.5	1.8	90.21	-1,106.8	2,827.7	2,238.5	2,186.4	52.16	42.918	
8,464.5	6,618.8	6,579.3	6,578.9	52.1	1.8	90.17	-1,106.8	2,827.6	2,181.1	2,127.3	53.76	40.571	
8,500.0	6,618.3	6,578.9	6,578.6	53.0	1.8	90.15	-1,106.8	2,827.6	2,149.7	2,095.1	54.64	39.344	
8,563.0	6,617.5	6,578.2	6,577.9	54.5	1.8	90.11	-1,106.8	2,827.6	2,094.3	2,038.1	56.22	37.252	
8,600.0	6,617.0	6,577.8	6,577.4	55.5	1.8	90.08	-1,106.8	2,827.6	2,061.9	2,004.7	57.15	36.079	
8,661.4	6,616.3	6,577.1	6,576.8	57.0	1.8	90.05	-1,106.8	2,827.6	2,008.5	1,949.8	58.71	34.213	
8,700.0	6,615.8	6,576.7	6,576.3	58.0	1.8	90.02	-1,106.8	2,827.6	1,975.2	1,915.5	59.69	33.093	
8,759.8	6,615.0	6,576.0	6,575.7	59.5	1.8	89.99	-1,106.8	2,827.6	1,924.0	1,862.8	61.22	31.428	
8,800.0	6,614.5	6,575.6	6,575.3	60.6	1.8	89.96	-1,106.8	2,827.6	1,889.9	1,827.6	62.25	30.360	
8,858.2	6,613.7	6,575.0	6,574.6	62.1	1.8	89.93	-1,106.8	2,827.6	1,840.8	1,777.1	63.75	28.875	
8,900.0	6,613.2	6,574.5	6,574.2	63.2	1.8	89.90	-1,106.8	2,827.6	1,806.0	1,741.2	64.83	27.857	
8,956.7	6,612.5	6,573.9	6,573.6	64.6	1.8	89.87	-1,106.7	2,827.6	1,759.3	1,693.0	66.31	26.533	
9,000.0	6,611.9	6,573.5	6,573.1	65.8	1.8	89.84	-1,106.7	2,827.6	1,723.9	1,656.5	67.43	25.565	
9,055.1	6,611.2	6,572.9	6,572.6	67.2	1.8	89.81	-1,106.7	2,827.6	1,679.5	1,610.6	68.88	24.384	
9,100.0	6,610.6	6,572.4	6,572.1	68.4	1.8	89.78	-1,106.7	2,827.6	1,643.8	1,573.7	70.05	23.465	
9,153.5	6,609.9	6,571.9	6,571.5	69.8	1.8	89.75	-1,106.7	2,827.6	1,601.8	1,530.3	71.46	22.415	
9,200.0	6,609.3	6,571.4	6,571.0	71.0	1.8	89.72	-1,106.7	2,827.6	1,565.9	1,493.2	72.68	21.544	
9,251.9	6,608.7	6,570.8	6,570.5	72.4	1.8	89.69	-1,106.7	2,827.6	1,526.5	1,452.4	74.06	20.612	
9,300.0	6,608.1	6,570.4	6,570.0	73.7	1.8	89.66	-1,106.7	2,827.6	1,490.7	1,415.4	75.33	19.789	
9,350.4	6,607.4	6,569.8	6,569.5	75.0	1.8	89.64	-1,106.7	2,827.6	1,453.9	1,377.3	76.67	18.964	
9,400.0	6,606.8	6,569.3	6,569.0	76.3	1.8	89.61	-1,106.7	2,827.6	1,418.6	1,340.6	77.99	18.190	
9,448.8	6,606.1	6,568.9	6,568.5	77.6	1.8	89.58	-1,106.7	2,827.6	1,384.6	1,305.3	79.29	17.463	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT TREBOR B #10-10 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,500.0	6,605.5	6,568.3	6,568.0	79.0	1.8	89.55	-1,106.6	2,827.6	1,350.0	1,269.3	80.65	16.738		
9,547.2	6,604.9	6,567.9	6,567.5	80.2	1.8	89.52	-1,106.6	2,827.6	1,319.0	1,237.1	81.92	16.101		
9,600.0	6,604.2	6,567.4	6,567.0	81.7	1.8	89.49	-1,106.6	2,827.6	1,285.5	1,202.2	83.33	15.426		
9,645.6	6,603.6	6,566.9	6,566.6	82.9	1.8	89.47	-1,106.6	2,827.6	1,257.6	1,173.1	84.56	14.873		
9,700.0	6,602.9	6,566.4	6,566.0	84.3	1.8	89.44	-1,106.6	2,827.6	1,225.8	1,139.8	86.02	14.251		
9,744.1	6,602.3	6,565.9	6,565.6	85.5	1.8	89.41	-1,106.6	2,827.6	1,201.2	1,114.0	87.20	13.775		
9,800.0	6,601.6	6,565.4	6,565.1	87.0	1.8	89.38	-1,106.6	2,827.6	1,171.6	1,082.9	88.71	13.207		
9,842.5	6,601.1	6,565.0	6,564.7	88.2	1.8	89.36	-1,106.6	2,827.6	1,150.5	1,060.6	89.86	12.803		
9,900.0	6,600.3	6,564.4	6,564.1	89.7	1.8	89.33	-1,106.6	2,827.6	1,123.8	1,032.4	91.41	12.293		
9,940.9	6,599.8	6,564.1	6,563.7	90.9	1.8	89.31	-1,106.6	2,827.6	1,106.2	1,013.7	92.52	11.956		
10,000.0	6,599.0	6,563.5	6,563.2	92.5	1.8	89.28	-1,106.6	2,827.6	1,083.0	988.9	94.12	11.507		
10,039.3	6,598.5	6,563.1	6,562.8	93.5	1.8	89.26	-1,106.6	2,827.6	1,069.1	973.9	95.19	11.232		
10,100.0	6,597.7	6,562.6	6,562.2	95.2	1.8	89.22	-1,106.6	2,827.6	1,050.3	953.4	96.83	10.846		
10,137.8	6,597.3	6,562.2	6,561.9	96.2	1.8	89.20	-1,106.5	2,827.6	1,040.1	942.3	97.86	10.629		
10,200.0	6,596.5	6,561.6	6,561.3	97.9	1.8	89.17	-1,106.5	2,827.6	1,026.2	926.7	99.55	10.309		
10,236.2	6,596.0	6,561.3	6,561.0	98.9	1.8	89.15	-1,106.5	2,827.6	1,019.8	919.3	100.53	10.144		
10,300.0	6,595.2	6,560.7	6,560.4	100.6	1.8	89.12	-1,106.5	2,827.6	1,011.6	909.3	102.27	9.891		
10,334.6	6,594.7	6,560.4	6,560.1	101.6	1.8	89.10	-1,106.5	2,827.6	1,008.7	905.5	103.22	9.773		
10,399.5	6,593.9	6,559.8	6,559.5	103.3	1.8	89.07	-1,106.5	2,827.6	1,006.6	901.7	104.99	9.588 CC		
10,400.0	6,593.9	6,559.8	6,559.5	103.3	1.8	89.07	-1,106.5	2,827.6	1,006.6	901.6	105.00	9.587		
10,433.0	6,593.5	6,559.5	6,559.2	104.2	1.8	89.05	-1,106.5	2,827.6	1,007.2	901.3	105.90	9.511 ES		
10,500.0	6,592.6	6,558.9	6,558.6	106.1	1.8	89.02	-1,106.5	2,827.6	1,011.6	903.9	107.73	9.390		
10,531.5	6,592.2	6,558.6	6,558.3	106.9	1.8	89.00	-1,106.5	2,827.6	1,015.3	906.7	108.59	9.349		
10,600.0	6,591.3	6,558.0	6,557.7	108.8	1.8	88.96	-1,106.5	2,827.6	1,026.4	915.9	110.47	9.292		
10,629.9	6,590.9	6,557.8	6,557.4	109.6	1.8	88.95	-1,106.5	2,827.6	1,032.7	921.4	111.29	9.279 SF		
10,700.0	6,590.0	6,557.1	6,556.8	111.6	1.8	88.91	-1,106.5	2,827.6	1,050.5	937.3	113.21	9.280		
10,728.3	6,589.6	6,556.9	6,556.6	112.3	1.8	88.90	-1,106.5	2,827.6	1,059.0	945.0	113.98	9.291		
10,800.0	6,588.7	6,556.3	6,555.9	114.3	1.8	88.86	-1,106.5	2,827.6	1,083.4	967.4	115.95	9.344		
10,826.7	6,588.4	6,556.0	6,555.7	115.0	1.8	88.85	-1,106.4	2,827.6	1,093.5	976.9	116.68	9.372		
10,900.0	6,587.4	6,555.4	6,555.1	117.0	1.8	88.82	-1,106.4	2,827.6	1,124.2	1,005.5	118.69	9.471		
10,925.2	6,587.1	6,555.2	6,554.9	117.7	1.8	88.80	-1,106.4	2,827.6	1,135.6	1,016.2	119.38	9.512		
11,000.0	6,586.1	6,554.6	6,554.2	119.8	1.8	88.77	-1,106.4	2,827.6	1,172.1	1,050.7	121.44	9.652		
11,023.6	6,585.8	6,554.4	6,554.0	120.4	1.8	88.76	-1,106.4	2,827.6	1,184.4	1,062.3	122.09	9.701		
11,100.0	6,584.8	6,553.7	6,553.4	122.5	1.8	88.72	-1,106.4	2,827.6	1,226.4	1,102.2	124.19	9.875		
11,122.0	6,584.5	6,553.5	6,553.2	123.2	1.8	88.71	-1,106.4	2,827.6	1,239.1	1,114.3	124.80	9.929		
11,200.0	6,583.5	6,552.9	6,552.6	125.3	1.8	88.67	-1,106.4	2,827.6	1,286.1	1,159.1	126.94	10.131		
11,220.4	6,583.3	6,552.7	6,552.4	125.9	1.8	88.66	-1,106.4	2,827.6	1,298.9	1,171.4	127.51	10.187		
11,300.0	6,582.2	6,552.1	6,551.7	128.1	1.8	88.62	-1,106.4	2,827.6	1,350.6	1,220.9	129.70	10.413		
11,318.9	6,582.0	6,551.9	6,551.6	128.6	1.8	88.61	-1,106.4	2,827.6	1,363.2	1,233.0	130.22	10.469		
11,400.0	6,580.9	6,551.2	6,550.9	130.8	1.8	88.58	-1,106.4	2,827.6	1,419.2	1,286.8	132.46	10.715		
11,417.3	6,580.7	6,551.1	6,550.8	131.3	1.8	88.57	-1,106.4	2,827.6	1,431.5	1,298.5	132.93	10.768		
11,500.0	6,579.7	6,550.4	6,550.1	133.6	1.8	88.53	-1,106.4	2,827.6	1,491.4	1,356.2	135.21	11.030		
11,515.7	6,579.4	6,550.3	6,550.0	134.0	1.8	88.52	-1,106.4	2,827.6	1,503.0	1,367.4	135.65	11.080		
11,600.0	6,578.4	6,549.6	6,549.3	136.3	1.8	88.48	-1,106.3	2,827.5	1,566.6	1,428.7	137.98	11.354		
11,614.1	6,578.2	6,549.5	6,549.2	136.7	1.8	88.48	-1,106.3	2,827.5	1,577.5	1,439.1	138.37	11.401		
11,700.0	6,577.1	6,548.8	6,548.5	139.1	1.8	88.44	-1,106.3	2,827.5	1,644.5	1,503.8	140.74	11.685		
11,712.6	6,576.9	6,548.7	6,548.4	139.5	1.8	88.43	-1,106.3	2,827.5	1,654.5	1,513.4	141.09	11.727		
11,800.0	6,575.8	6,548.0	6,547.7	141.9	1.8	88.39	-1,106.3	2,827.5	1,724.7	1,581.2	143.50	12.018		
11,811.0	6,575.6	6,548.0	6,547.6	142.2	1.8	88.39	-1,106.3	2,827.5	1,733.6	1,589.8	143.81	12.055		
11,858.8	6,575.0	6,547.6	6,547.3	143.5	1.8	88.37	-1,106.3	2,827.5	1,772.7	1,627.6	145.13	12.215		
11,859.3	6,575.0	6,547.6	6,547.2	143.5	1.8	88.37	-1,106.3	2,827.5	1,773.2	1,628.0	145.14	12.217		

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	9.44	361.8	60.1	367.0				
98.4	98.4	86.6	86.6	0.1	0.0	9.43	361.6	60.1	366.6	366.5	0.10	3,818.512	
100.0	100.0	88.2	88.2	0.1	0.0	9.43	361.6	60.1	366.6	366.5	0.10	3,749.331	
196.8	196.8	185.3	185.3	0.3	0.1	9.40	361.3	59.8	366.2	365.8	0.40	926.329	
200.0	200.0	188.5	188.5	0.3	0.1	9.40	361.3	59.8	366.2	365.8	0.41	903.371	
295.3	295.3	283.6	283.6	0.5	0.2	9.36	360.9	59.5	365.8	365.1	0.74	491.294	
300.0	300.0	288.3	288.3	0.5	0.2	9.36	360.9	59.5	365.8	365.0	0.76	480.263	
393.7	393.7	381.4	381.4	0.8	0.3	9.32	360.7	59.2	365.5	364.5	1.05	348.173	
400.0	400.0	387.6	387.6	0.8	0.3	9.31	360.7	59.2	365.5	364.5	1.07	342.008	
492.1	492.1	479.9	479.9	1.0	0.4	9.25	360.6	58.7	365.4	364.0	1.34	272.505	
500.0	500.0	487.8	487.8	1.0	0.4	9.24	360.6	58.7	365.3	364.0	1.36	267.859	
590.5	590.5	578.6	578.6	1.2	0.4	9.17	360.5	58.2	365.1	363.5	1.62	225.021	
600.0	600.0	588.0	588.0	1.2	0.4	9.16	360.4	58.2	365.1	363.4	1.65	221.340	
689.0	689.0	676.7	676.7	1.4	0.5	9.11	360.3	57.8	364.9	363.0	1.90	192.264	
700.0	700.0	687.7	687.7	1.4	0.5	9.10	360.3	57.7	364.9	362.9	1.93	189.194	
787.4	787.4	775.3	775.3	1.6	0.5	9.05	360.1	57.4	364.7	362.5	2.17	168.119	
800.0	800.0	788.0	788.0	1.7	0.5	9.04	360.1	57.3	364.6	362.4	2.20	165.462	
885.8	885.8	873.6	873.6	1.9	0.6	8.99	360.0	56.9	364.4	362.0	2.44	149.531	
900.0	900.0	887.7	887.7	1.9	0.6	8.98	359.9	56.9	364.4	361.9	2.48	147.195	
984.2	984.2	972.3	972.3	2.1	0.6	8.92	359.8	56.5	364.2	361.5	2.70	134.764	
1,000.0	1,000.0	988.2	988.2	2.1	0.6	8.91	359.8	56.4	364.2	361.4	2.75	132.666	
1,082.7	1,082.7	1,070.9	1,070.9	2.3	0.7	8.86	359.6	56.0	363.9	360.9	2.97	122.729	
1,100.0	1,100.0	1,088.2	1,088.2	2.3	0.7	8.85	359.5	56.0	363.8	360.8	3.01	120.834	
1,181.1	1,181.1	1,169.0	1,169.0	2.5	0.7	8.81	359.3	55.7	363.6	360.4	3.23	112.737	
1,200.0	1,200.0	1,187.9	1,187.8	2.6	0.7	8.79	359.3	55.6	363.5	360.3	3.28	111.007	
1,227.3	1,227.3	1,215.2	1,215.2	2.6	0.7	103.99	359.2	55.5	363.5	360.2	3.32	109.407 CC	
1,279.5	1,279.5	1,267.5	1,267.5	2.7	0.8	104.10	359.1	55.2	363.6	360.2	3.45	105.356 ES	
1,300.0	1,300.0	1,288.0	1,288.0	2.8	0.8	104.19	359.1	55.1	363.7	360.2	3.50	103.862	
1,377.9	1,377.8	1,366.2	1,366.2	2.9	0.8	104.70	358.9	54.8	364.4	360.7	3.69	98.792	
1,400.0	1,399.8	1,388.4	1,388.3	3.0	0.8	104.90	358.8	54.7	364.7	361.0	3.74	97.470	
1,476.4	1,475.9	1,464.0	1,464.0	3.1	0.8	105.80	358.6	54.5	366.1	362.2	3.93	93.104	
1,500.0	1,499.5	1,487.3	1,487.3	3.2	0.9	106.14	358.5	54.5	366.7	362.7	3.99	91.881	
1,574.8	1,573.7	1,560.4	1,560.4	3.4	0.9	107.39	358.4	54.6	369.2	365.0	4.18	88.271	
1,600.0	1,598.7	1,584.9	1,584.9	3.4	0.9	107.88	358.4	54.7	370.3	366.0	4.25	87.199	
1,673.2	1,671.1	1,656.3	1,656.3	3.6	0.9	109.45	358.6	55.1	374.1	369.7	4.45	83.999	
1,700.0	1,697.5	1,682.4	1,682.4	3.7	0.9	110.07	358.7	55.3	375.8	371.3	4.53	82.960	
1,771.6	1,767.9	1,751.9	1,751.9	3.9	0.9	111.88	359.0	55.9	381.1	376.4	4.76	80.119	
1,800.0	1,795.6	1,779.4	1,779.3	4.0	0.9	112.64	359.1	56.2	383.6	378.7	4.85	79.155	
1,870.1	1,864.0	1,846.2	1,846.2	4.3	0.9	114.60	359.6	56.9	390.6	385.5	5.09	76.684	
1,900.0	1,893.1	1,874.5	1,874.5	4.4	0.9	115.47	359.8	57.3	394.1	388.9	5.20	75.811	
1,968.5	1,959.3	1,939.5	1,939.5	4.6	0.9	117.55	360.5	58.4	403.1	397.7	5.47	73.752	
1,992.4	1,982.4	1,962.3	1,962.2	4.7	0.9	118.29	360.8	58.8	406.7	401.1	5.56	73.166	
2,000.0	1,989.6	1,969.5	1,969.4	4.8	0.9	118.55	360.9	58.9	407.8	402.2	5.59	72.976	
2,066.9	2,054.0	2,032.6	2,032.6	5.1	0.9	120.75	361.6	60.0	418.4	412.6	5.86	71.392	
2,100.0	2,085.8	2,063.7	2,063.6	5.2	0.9	121.80	362.0	60.7	423.9	418.0	5.99	70.771	
2,165.3	2,148.7	2,125.2	2,125.1	5.5	0.9	123.82	362.9	62.1	435.4	429.2	6.25	69.622	
2,200.0	2,182.0	2,158.0	2,157.9	5.7	0.9	124.87	363.3	62.9	441.8	435.4	6.39	69.112	
2,263.8	2,243.4	2,218.8	2,218.6	6.0	0.9	126.75	364.2	64.6	453.9	447.2	6.65	68.287	
2,300.0	2,278.2	2,253.7	2,253.5	6.2	1.0	127.79	364.6	65.6	461.0	454.2	6.79	67.919	
2,362.2	2,338.1	2,313.8	2,313.6	6.5	1.0	129.53	365.2	67.3	473.4	466.4	7.03	67.358	
2,400.0	2,374.4	2,350.6	2,350.4	6.7	1.0	130.56	365.5	68.4	481.1	473.9	7.17	67.098	
2,460.6	2,432.8	2,409.7	2,409.4	7.0	1.0	132.15	365.8	70.1	493.6	486.2	7.40	66.727	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,470.6	2,448.2	2,448.0	7.2	1.0	133.14	366.0	71.1	501.8	494.3	7.54	66.546	
2,559.0	2,527.4	2,506.0	2,505.7	7.6	1.0	134.55	366.2	72.5	514.3	506.5	7.76	66.306	
2,600.0	2,566.8	2,545.3	2,545.1	7.8	1.0	135.47	366.4	73.3	523.0	515.1	7.90	66.179	
2,657.5	2,622.1	2,600.6	2,600.4	8.1	1.0	136.69	366.6	74.3	535.5	527.4	8.11	66.036	
2,700.0	2,663.0	2,641.7	2,641.4	8.3	1.0	137.56	366.9	75.1	544.8	536.6	8.26	65.967	
2,755.9	2,716.8	2,695.7	2,695.4	8.6	1.0	138.66	367.1	76.0	557.2	548.8	8.46	65.902	
2,800.0	2,759.2	2,738.6	2,738.3	8.9	1.0	139.50	367.3	76.7	567.1	558.5	8.61	65.888	
2,854.3	2,811.5	2,791.6	2,791.3	9.2	1.1	140.49	367.6	77.4	579.4	570.6	8.79	65.882	
2,900.0	2,855.4	2,836.4	2,836.1	9.4	1.1	141.29	367.8	78.0	589.7	580.8	8.95	65.904	
2,952.7	2,906.2	2,888.3	2,888.0	9.7	1.1	142.18	367.9	78.5	601.7	592.6	9.13	65.939	
3,000.0	2,951.6	2,933.8	2,933.5	10.0	1.1	142.93	368.0	78.9	612.5	603.2	9.28	65.980	
3,051.2	3,000.9	2,982.7	2,982.4	10.3	1.1	143.72	368.1	79.4	624.3	614.8	9.45	66.039	
3,100.0	3,047.8	3,030.4	3,030.0	10.5	1.1	144.46	368.1	79.9	635.6	626.0	9.61	66.122	
3,149.6	3,095.5	3,079.4	3,079.0	10.8	1.1	145.20	368.0	80.4	647.2	637.4	9.77	66.213	
3,200.0	3,144.0	3,128.3	3,128.0	11.1	1.1	145.91	367.9	80.8	658.9	649.0	9.94	66.310	
3,248.0	3,190.2	3,174.4	3,174.1	11.4	1.1	146.56	367.8	81.2	670.2	660.1	10.09	66.408	
3,300.0	3,240.2	3,224.3	3,224.0	11.7	1.1	147.24	367.6	81.6	682.4	672.2	10.26	66.530	
3,346.4	3,284.9	3,269.1	3,268.8	11.9	1.2	147.83	367.5	81.9	693.5	683.0	10.41	66.642	
3,400.0	3,336.4	3,320.7	3,320.4	12.2	1.2	148.49	367.3	82.3	706.2	695.7	10.58	66.782	
3,444.9	3,379.6	3,364.0	3,363.7	12.5	1.2	149.02	367.2	82.6	717.0	706.3	10.72	66.904	
3,500.0	3,432.6	3,416.9	3,416.6	12.8	1.2	149.66	367.0	83.0	730.3	719.4	10.89	67.061	
3,543.3	3,474.3	3,457.9	3,457.6	13.1	1.2	150.13	366.8	83.4	740.8	729.8	11.03	67.187	
3,600.0	3,528.8	3,511.7	3,511.4	13.4	1.2	150.74	366.6	83.9	754.7	743.5	11.20	67.364	
3,641.7	3,569.0	3,551.6	3,551.3	13.6	1.2	151.17	366.5	84.2	765.0	753.7	11.33	67.495	
3,700.0	3,625.0	3,607.2	3,606.9	14.0	1.2	151.75	366.5	84.7	779.5	768.0	11.52	67.684	
3,740.1	3,663.6	3,645.3	3,645.0	14.2	1.3	152.13	366.5	85.0	789.5	777.9	11.64	67.814	
3,800.0	3,721.2	3,702.2	3,701.8	14.5	1.3	152.69	366.5	85.5	804.6	792.7	11.83	68.012	
3,838.6	3,758.3	3,739.4	3,739.0	14.8	1.3	153.04	366.5	85.8	814.3	802.3	11.95	68.143	
3,900.0	3,817.4	3,798.6	3,798.3	15.1	1.3	153.58	366.5	86.4	829.9	817.7	12.14	68.355	
3,937.0	3,853.0	3,833.8	3,833.5	15.3	1.3	153.90	366.5	86.7	839.3	827.0	12.26	68.480	
4,000.0	3,913.6	3,893.7	3,893.3	15.7	1.3	154.41	366.5	87.2	855.4	842.9	12.45	68.696	
4,035.4	3,947.7	3,927.3	3,926.9	15.9	1.3	154.69	366.5	87.5	864.5	851.9	12.56	68.815	
4,100.0	4,009.8	3,988.4	3,988.1	16.3	1.3	155.19	366.6	88.2	881.1	868.4	12.76	69.035	
4,133.8	4,042.4	4,020.8	4,020.4	16.5	1.3	155.44	366.6	88.5	889.9	877.0	12.87	69.152	
4,200.0	4,106.0	4,084.4	4,084.0	16.8	1.4	155.94	366.7	89.2	907.1	894.1	13.07	69.383	
4,232.3	4,137.1	4,115.6	4,115.2	17.0	1.4	156.17	366.7	89.6	915.5	902.4	13.17	69.496	
4,300.0	4,202.2	4,181.5	4,181.1	17.4	1.4	156.66	366.6	90.3	933.2	919.8	13.38	69.733	
4,330.7	4,231.7	4,211.3	4,210.9	17.6	1.4	156.87	366.6	90.6	941.2	927.7	13.48	69.838	
4,400.0	4,298.4	4,278.5	4,278.1	18.0	1.4	157.34	366.5	91.2	959.3	945.6	13.69	70.071	
4,429.1	4,326.4	4,306.5	4,306.1	18.2	1.4	157.53	366.5	91.5	966.9	953.1	13.78	70.165	
4,500.0	4,394.6	4,373.0	4,372.6	18.6	1.4	157.98	366.3	92.2	985.5	971.5	14.00	70.392	
4,527.5	4,421.1	4,398.8	4,398.4	18.7	1.4	158.15	366.3	92.5	992.7	978.6	14.08	70.482	
4,600.0	4,490.8	4,469.6	4,469.2	19.2	1.5	158.60	366.1	93.3	1,011.9	997.6	14.31	70.716	
4,626.0	4,515.8	4,495.0	4,494.6	19.3	1.5	158.75	366.1	93.5	1,018.7	1,004.3	14.39	70.796	
4,700.0	4,587.0	4,565.3	4,564.9	19.8	1.5	159.16	366.1	94.1	1,038.3	1,023.6	14.62	71.016	
4,724.4	4,610.5	4,588.4	4,588.0	19.9	1.5	159.29	366.2	94.3	1,044.7	1,030.0	14.70	71.087	
4,800.0	4,683.2	4,661.4	4,661.0	20.3	1.5	159.68	366.5	94.9	1,064.8	1,049.9	14.94	71.295	
4,822.8	4,705.2	4,683.5	4,683.2	20.5	1.5	159.80	366.7	95.1	1,070.9	1,055.9	15.01	71.355	
4,900.0	4,779.4	4,757.1	4,756.7	20.9	1.5	160.16	367.1	95.5	1,091.4	1,076.2	15.25	71.553	
4,921.2	4,799.8	4,777.3	4,776.9	21.0	1.5	160.26	367.3	95.7	1,097.1	1,081.8	15.32	71.607	
5,000.0	4,875.6	4,852.2	4,851.8	21.5	1.6	160.60	367.9	96.1	1,118.1	1,102.6	15.57	71.802	
5,019.7	4,894.5	4,871.0	4,870.6	21.6	1.6	160.69	368.1	96.3	1,123.4	1,107.8	15.64	71.850	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,100.0	4,971.8	4,948.2	4,947.7	22.1	1.6	161.02	368.9	96.7	1,145.0	1,129.1	15.89	72.043	
5,118.1	4,989.2	4,965.6	4,965.2	22.2	1.6	161.10	369.1	96.8	1,149.9	1,133.9	15.95	72.085	
5,200.0	5,068.0	5,042.8	5,042.4	22.7	1.6	161.41	370.1	97.2	1,171.9	1,155.7	16.22	72.267	
5,216.5	5,083.9	5,058.0	5,057.6	22.8	1.6	161.47	370.3	97.3	1,176.4	1,160.1	16.27	72.306	
5,240.0	5,106.5	5,079.8	5,079.3	22.9	1.6	161.55	370.5	97.5	1,182.7	1,166.4	16.34	72.363	
5,300.0	5,164.4	5,136.3	5,135.9	23.2	1.6	161.86	371.3	98.0	1,198.5	1,182.0	16.47	72.770	
5,314.9	5,178.8	5,150.6	5,150.2	23.3	1.6	161.93	371.5	98.1	1,202.3	1,185.8	16.50	72.882	
5,400.0	5,261.5	5,233.5	5,233.0	23.6	1.6	162.31	372.6	98.8	1,222.3	1,205.6	16.64	73.434	
5,413.4	5,274.6	5,246.8	5,246.4	23.6	1.6	162.37	372.8	98.9	1,225.2	1,208.6	16.67	73.518	
5,500.0	5,359.5	5,333.9	5,333.5	23.9	1.7	162.69	373.9	99.5	1,242.7	1,225.9	16.80	73.972	
5,511.8	5,371.1	5,345.9	5,345.4	24.0	1.7	162.72	374.0	99.6	1,244.9	1,228.1	16.82	74.030	
5,600.0	5,458.0	5,433.9	5,433.4	24.2	1.7	162.97	375.1	100.0	1,259.7	1,242.8	16.94	74.368	
5,610.2	5,468.2	5,443.8	5,443.3	24.3	1.7	163.00	375.2	100.1	1,261.2	1,244.3	16.95	74.405	
5,700.0	5,557.2	5,531.5	5,531.0	24.5	1.7	163.18	376.4	100.6	1,273.4	1,256.4	17.06	74.630	
5,708.6	5,565.7	5,540.1	5,539.6	24.5	1.7	163.19	376.6	100.6	1,274.5	1,257.4	17.07	74.649	
5,800.0	5,656.7	5,632.0	5,631.5	24.7	1.7	163.32	377.9	101.1	1,283.9	1,266.7	17.18	74.749	
5,807.1	5,663.7	5,639.4	5,638.9	24.7	1.7	163.32	378.0	101.1	1,284.5	1,267.3	17.18	74.754	
5,900.0	5,756.5	5,733.9	5,733.4	24.9	1.7	163.39	379.2	101.4	1,290.8	1,273.5	17.28	74.706	
5,905.5	5,761.9	5,739.3	5,738.8	24.9	1.7	163.39	379.3	101.5	1,291.1	1,273.8	17.28	74.701	
6,000.0	5,856.4	5,834.6	5,834.1	25.0	1.8	163.41	380.3	101.9	1,294.4	1,277.0	17.37	74.502	
6,003.9	5,860.3	5,838.8	5,838.3	25.0	1.8	163.41	380.4	101.9	1,294.4	1,277.0	17.38	74.490	
6,032.5	5,888.9	5,869.2	5,868.7	25.0	1.8	68.21	380.6	102.0	1,294.7	1,268.8	25.98	49.827	
6,062.5	5,918.9	5,901.2	5,900.7	25.1	1.8	68.20	380.9	102.1	1,294.9	1,268.9	26.02	49.767	
6,100.0	5,956.4	5,939.3	5,938.8	25.1	1.8	-21.85	381.2	102.1	1,294.1	1,276.7	17.42	74.302	
6,102.3	5,958.7	5,941.7	5,941.2	25.1	1.8	-21.86	381.2	102.1	1,294.0	1,276.6	17.41	74.307	
6,150.0	6,006.2	5,990.0	5,989.5	25.1	1.8	-22.06	381.6	102.1	1,290.2	1,272.8	17.39	74.214	
6,200.0	6,055.6	6,039.3	6,038.8	25.1	1.8	-22.42	382.0	102.1	1,283.1	1,265.7	17.39	73.802	
6,200.8	6,056.3	6,040.1	6,039.5	25.1	1.8	-22.43	382.0	102.1	1,283.0	1,265.6	17.39	73.794	
6,250.0	6,104.3	6,087.7	6,087.2	25.0	1.8	-22.95	382.3	102.2	1,272.9	1,255.4	17.41	73.094	
6,299.2	6,151.3	6,136.4	6,135.9	24.9	1.8	-23.66	382.5	102.2	1,259.7	1,242.2	17.47	72.119	
6,300.0	6,152.1	6,137.2	6,136.7	24.9	1.8	-23.67	382.5	102.2	1,259.5	1,242.0	17.47	72.101	
6,350.0	6,198.7	6,186.1	6,185.6	24.8	1.8	-24.60	382.8	102.1	1,243.0	1,225.4	17.55	70.818	
6,397.6	6,241.9	6,229.1	6,228.6	24.7	1.8	-25.68	383.0	102.1	1,224.5	1,206.9	17.66	69.333	
6,400.0	6,244.1	6,231.1	6,230.6	24.7	1.8	-25.74	383.0	102.1	1,223.5	1,205.9	17.67	69.252	
6,450.0	6,287.8	6,273.7	6,273.2	24.5	1.8	-27.11	383.1	102.0	1,201.4	1,183.5	17.83	67.369	
6,496.0	6,326.5	6,312.0	6,311.4	24.4	1.8	-28.64	383.3	102.0	1,178.6	1,160.6	18.05	65.308	
6,500.0	6,329.7	6,315.3	6,314.8	24.4	1.8	-28.78	383.3	102.0	1,176.5	1,158.5	18.07	65.114	
6,550.0	6,369.6	6,356.2	6,355.7	24.3	1.8	-30.80	383.4	102.1	1,149.2	1,130.8	18.41	62.437	
6,594.5	6,403.3	6,390.7	6,390.2	24.2	1.8	-32.92	383.4	102.1	1,123.0	1,104.1	18.81	59.699	
6,600.0	6,407.3	6,394.8	6,394.3	24.2	1.8	-33.21	383.4	102.1	1,119.6	1,100.7	18.87	59.338	
6,650.0	6,442.7	6,429.2	6,428.7	24.1	1.8	-36.00	383.4	102.1	1,087.8	1,068.3	19.46	55.893	
6,692.9	6,471.0	6,456.5	6,456.0	24.0	1.9	-38.77	383.3	102.2	1,059.1	1,039.0	20.09	52.705	
6,700.0	6,475.5	6,460.9	6,460.4	24.0	1.9	-39.27	383.3	102.2	1,054.2	1,034.0	20.21	52.167	
6,750.0	6,505.6	6,490.1	6,489.6	24.0	1.9	-43.07	383.2	102.3	1,018.9	997.8	21.10	48.290	
6,791.3	6,528.3	6,512.7	6,512.2	24.0	1.9	-46.67	383.1	102.4	988.8	966.8	21.94	45.072	
6,800.0	6,532.8	6,517.3	6,516.8	24.0	1.9	-47.48	383.1	102.4	982.3	960.2	22.12	44.413	
6,850.0	6,557.0	6,541.9	6,541.4	24.1	1.9	-52.49	383.0	102.6	944.6	921.4	23.20	40.712	
6,889.7	6,574.1	6,559.2	6,558.7	24.2	1.9	-56.84	383.0	102.7	913.9	889.9	24.06	37.988	
6,900.0	6,578.1	6,563.3	6,562.8	24.3	1.9	-58.02	382.9	102.7	906.0	881.7	24.27	37.333	
6,950.0	6,596.1	6,581.6	6,581.1	24.5	1.9	-63.93	382.9	102.8	866.9	841.7	25.23	34.355	
6,988.2	6,607.5	6,593.3	6,592.8	24.7	1.9	-68.58	382.8	102.9	836.9	811.1	25.87	32.353	
7,000.0	6,610.7	6,596.5	6,596.0	24.8	1.9	-70.02	382.8	102.9	827.6	801.6	26.04	31.788	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,621.9	6,608.1	6,607.6	25.1	1.9	-76.01	382.8	102.9	788.6	761.9	26.67	29.573	
7,086.6	6,628.0	6,614.4	6,613.9	25.4	1.9	-80.18	382.7	103.0	760.4	733.4	27.05	28.109	
7,100.0	6,629.7	6,616.2	6,615.7	25.6	1.9	-81.64	382.7	103.0	750.2	723.0	27.18	27.604	
7,150.0	6,634.1	6,620.9	6,620.4	26.0	1.9	-86.67	382.7	103.0	712.8	685.1	27.67	25.764	
7,185.0	6,635.1	6,622.0	6,621.5	26.4	1.9	-89.74	382.7	103.0	687.4	659.4	28.04	24.516	
7,196.6	6,635.0	6,622.0	6,621.5	26.5	1.9	-90.67	382.7	103.0	679.3	651.1	28.17	24.117	
7,200.0	6,635.0	6,622.0	6,621.5	26.6	1.9	-90.66	382.7	103.0	676.9	648.7	28.20	24.000	
7,283.4	6,633.9	6,621.4	6,620.9	27.6	1.9	-90.59	382.7	103.0	621.2	592.0	29.23	21.252	
7,300.0	6,633.7	6,621.2	6,620.7	27.8	1.9	-90.57	382.7	103.0	610.9	581.5	29.44	20.756	
7,381.9	6,632.6	6,620.6	6,620.1	29.0	1.9	-90.50	382.7	103.0	564.5	533.9	30.62	18.433	
7,400.0	6,632.4	6,620.5	6,620.0	29.2	1.9	-90.48	382.7	103.0	555.3	524.4	30.89	17.979	
7,480.3	6,631.4	6,619.9	6,619.4	30.5	1.9	-90.41	382.7	103.0	520.3	488.1	32.20	16.157	
7,500.0	6,631.1	6,619.7	6,619.2	30.9	1.9	-90.39	382.7	103.0	513.3	480.8	32.53	15.781	
7,578.7	6,630.1	6,619.1	6,618.6	32.3	1.9	-90.32	382.7	103.0	492.1	458.2	33.94	14.499	
7,600.0	6,629.8	6,619.0	6,618.4	32.7	1.9	-90.30	382.7	103.0	488.4	454.1	34.33	14.229	
7,674.5	6,628.9	6,618.4	6,617.9	34.1	1.9	-90.24	382.7	103.0	482.7	447.0	35.77	13.496	
7,677.1	6,628.9	6,618.4	6,617.9	34.1	1.9	-90.23	382.7	103.0	482.7	446.9	35.82	13.477	
7,700.0	6,628.6	6,618.2	6,617.7	34.6	1.9	-90.21	382.7	103.0	483.4	447.1	36.26	13.331	
7,775.6	6,627.6	6,617.6	6,617.1	36.1	1.9	-90.15	382.7	103.0	493.2	455.4	37.81	13.045	
7,800.0	6,627.3	6,617.4	6,616.9	36.6	1.9	-90.12	382.7	103.0	498.8	460.5	38.31	13.020 SF	
7,874.0	6,626.3	6,616.9	6,616.4	38.2	1.9	-90.06	382.7	103.0	522.3	482.4	39.90	13.092	
7,900.0	6,626.0	6,616.7	6,616.2	38.8	1.9	-90.03	382.7	103.0	532.8	492.3	40.45	13.171	
7,972.4	6,625.1	6,616.1	6,615.6	40.4	1.9	-89.97	382.7	103.0	567.3	525.2	42.06	13.486	
8,000.0	6,624.7	6,615.9	6,615.4	41.0	1.9	-89.94	382.7	103.0	582.2	539.5	42.68	13.642	
8,070.8	6,623.8	6,615.4	6,614.9	42.6	1.9	-89.88	382.7	103.0	624.6	580.3	44.30	14.099	
8,100.0	6,623.4	6,615.2	6,614.7	43.3	1.9	-89.86	382.7	103.0	643.5	598.5	44.97	14.309	
8,169.3	6,622.6	6,614.7	6,614.2	44.9	1.9	-89.79	382.7	103.0	691.2	644.6	46.60	14.834	
8,200.0	6,622.2	6,614.4	6,613.9	45.6	1.9	-89.77	382.7	103.0	713.6	666.2	47.32	15.079	
8,267.7	6,621.3	6,613.9	6,613.4	47.3	1.9	-89.71	382.7	103.0	764.8	715.8	48.95	15.625	
8,300.0	6,620.9	6,613.7	6,613.2	48.0	1.9	-89.68	382.7	103.0	790.1	740.4	49.72	15.891	
8,366.1	6,620.0	6,613.2	6,612.7	49.7	1.9	-89.62	382.7	103.0	843.4	792.1	51.34	16.430	
8,400.0	6,619.6	6,613.0	6,612.5	50.5	1.9	-89.59	382.7	103.0	871.4	819.3	52.16	16.706	
8,464.5	6,618.8	6,612.5	6,612.0	52.1	1.9	-89.53	382.7	103.0	925.8	872.1	53.76	17.221	
8,500.0	6,618.3	6,612.2	6,611.7	53.0	1.9	-89.50	382.7	103.0	956.3	901.6	54.64	17.501	
8,563.0	6,617.5	6,611.8	6,611.2	54.5	1.9	-89.45	382.7	103.0	1,011.1	954.9	56.22	17.985	
8,600.0	6,617.0	6,611.5	6,611.0	55.5	1.9	-89.41	382.8	103.0	1,043.8	986.7	57.15	18.264	
8,661.4	6,616.3	6,611.0	6,610.5	57.0	1.9	-89.36	382.8	103.0	1,098.6	1,039.9	58.71	18.713	
8,700.0	6,615.8	6,610.8	6,610.2	58.0	1.9	-89.33	382.8	103.0	1,133.4	1,073.7	59.69	18.989	
8,759.8	6,615.0	6,610.3	6,609.8	59.5	1.9	-89.27	382.8	103.0	1,187.8	1,126.6	61.22	19.402	
8,800.0	6,614.5	6,610.0	6,609.5	60.6	1.9	-89.24	382.8	103.0	1,224.6	1,162.4	62.25	19.673	
8,858.2	6,613.7	6,609.6	6,609.1	62.1	1.9	-89.19	382.8	103.0	1,278.4	1,214.6	63.75	20.052	
8,900.0	6,613.2	6,609.3	6,608.8	63.2	1.9	-89.15	382.8	103.0	1,317.1	1,252.3	64.83	20.316	
8,956.7	6,612.5	6,608.9	6,608.4	64.6	1.9	-89.10	382.8	103.0	1,370.0	1,303.7	66.31	20.662	
9,000.0	6,611.9	6,608.6	6,608.1	65.8	1.9	-89.06	382.8	103.0	1,410.6	1,343.2	67.43	20.919	
9,055.1	6,611.2	6,608.2	6,607.7	67.2	1.9	-89.02	382.8	102.9	1,462.5	1,393.7	68.88	21.235	
9,100.0	6,610.6	6,607.8	6,607.3	68.4	1.9	-88.98	382.8	102.9	1,505.0	1,434.9	70.05	21.484	
9,153.5	6,609.9	6,607.5	6,606.9	69.8	1.9	-88.93	382.8	102.9	1,555.8	1,484.3	71.46	21.772	
9,200.0	6,609.3	6,607.1	6,606.6	71.0	1.9	-88.89	382.8	102.9	1,600.0	1,527.3	72.68	22.014	
9,251.9	6,608.7	6,606.7	6,606.2	72.4	1.9	-88.85	382.8	102.9	1,649.6	1,575.6	74.06	22.275	
9,300.0	6,608.1	6,606.4	6,605.9	73.7	1.9	-88.81	382.8	102.9	1,695.6	1,620.3	75.33	22.510	
9,350.4	6,607.4	6,606.0	6,605.5	75.0	1.9	-88.76	382.8	102.9	1,744.0	1,667.3	76.66	22.748	
9,400.0	6,606.8	6,605.7	6,605.2	76.3	1.9	-88.72	382.8	102.9	1,791.7	1,713.7	77.98	22.976	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,448.8	6,606.1	6,605.3	6,604.8	77.6	1.9	-88.68	382.8	102.9	1,838.8	1,759.5	79.28	23.192	
9,500.0	6,605.5	6,605.0	6,604.5	79.0	1.9	-88.63	382.8	102.9	1,888.2	1,807.6	80.65	23.413	
9,547.2	6,604.9	6,604.6	6,604.1	80.2	1.9	-88.59	382.8	102.9	1,933.9	1,852.0	81.91	23.609	
9,600.0	6,604.2	6,604.2	6,603.7	81.7	1.9	-88.55	382.8	102.9	1,985.0	1,901.7	83.32	23.823	
9,645.6	6,603.6	6,603.9	6,603.4	82.9	1.9	-88.51	382.8	102.9	2,029.4	1,944.8	84.55	24.002	
9,700.0	6,602.9	6,603.5	6,603.0	84.3	1.9	-88.46	382.8	102.9	2,082.2	1,996.2	86.01	24.209	
9,744.1	6,602.3	6,603.2	6,602.7	85.5	1.9	-88.43	382.8	102.9	2,125.1	2,037.9	87.19	24.372	
9,800.0	6,601.6	6,602.8	6,602.3	87.0	1.9	-88.38	382.8	102.9	2,179.6	2,090.9	88.70	24.572	
9,842.5	6,601.1	6,602.5	6,602.0	88.2	1.9	-88.34	382.8	102.9	2,221.0	2,131.2	89.85	24.720	
9,900.0	6,600.3	6,600.0	6,599.5	89.7	1.9	-88.04	382.8	102.9	2,277.2	2,185.8	91.39	24.917	
9,940.9	6,599.8	6,600.0	6,599.5	90.9	1.9	-88.04	382.8	102.9	2,317.2	2,224.7	92.50	25.051	
10,000.0	6,599.0	6,600.0	6,599.5	92.5	1.9	-88.04	382.8	102.9	2,375.0	2,280.9	94.10	25.240	
10,039.3	6,598.5	6,600.0	6,599.5	93.5	1.9	-88.04	382.8	102.9	2,413.6	2,318.4	95.16	25.362	
10,100.0	6,597.7	6,600.0	6,599.5	95.2	1.9	-88.04	382.8	102.9	2,473.0	2,376.2	96.81	25.545	
10,137.8	6,597.3	6,600.0	6,599.5	96.2	1.9	-88.04	382.8	102.9	2,510.1	2,412.2	97.84	25.656	
10,200.0	6,596.5	6,600.0	6,599.5	97.9	1.9	-88.04	382.8	102.9	2,571.2	2,471.6	99.53	25.834	
10,236.2	6,596.0	6,599.7	6,599.2	98.9	1.9	-88.01	382.8	102.9	2,606.7	2,506.2	100.51	25.934	
10,300.0	6,595.2	6,599.3	6,598.8	100.6	1.9	-87.95	382.8	102.9	2,669.4	2,567.2	102.25	26.108	
10,334.6	6,594.7	6,599.0	6,598.5	101.6	1.9	-87.92	382.8	102.9	2,703.5	2,600.3	103.19	26.199	
10,400.0	6,593.9	6,598.5	6,598.0	103.3	1.9	-87.86	382.8	102.9	2,767.9	2,662.9	104.97	26.368	
10,433.0	6,593.5	6,598.3	6,597.8	104.2	1.9	-87.83	382.8	102.9	2,800.4	2,694.5	105.87	26.451	
10,500.0	6,592.6	6,597.8	6,597.3	106.1	1.9	-87.77	382.8	102.9	2,866.4	2,758.7	107.70	26.615	
10,531.5	6,592.2	6,597.6	6,597.1	106.9	1.9	-87.74	382.8	102.9	2,897.4	2,788.8	108.56	26.690	
10,600.0	6,591.3	6,597.1	6,596.5	108.8	1.9	-87.68	382.8	102.9	2,965.0	2,854.6	110.43	26.849	
10,629.9	6,590.9	6,596.8	6,596.3	109.6	1.9	-87.66	382.8	102.9	2,994.5	2,883.2	111.25	26.917	
10,700.0	6,590.0	6,596.3	6,595.8	111.6	1.9	-87.59	382.8	102.9	3,063.7	2,950.5	113.16	27.073	
10,728.3	6,589.6	6,596.1	6,595.6	112.3	1.9	-87.57	382.8	102.9	3,091.7	2,977.7	113.94	27.134	
10,800.0	6,588.7	6,595.6	6,595.1	114.3	1.9	-87.50	382.8	102.9	3,162.5	3,046.6	115.90	27.286	
10,826.7	6,588.4	6,595.4	6,594.9	115.0	1.9	-87.48	382.8	102.9	3,188.9	3,072.3	116.63	27.341	
10,900.0	6,587.4	6,594.8	6,594.3	117.0	1.9	-87.42	382.8	102.9	3,261.3	3,142.7	118.64	27.489	
10,925.2	6,587.1	6,594.7	6,594.1	117.7	1.9	-87.39	382.8	102.9	3,286.2	3,166.9	119.33	27.539	
11,000.0	6,586.1	6,594.1	6,593.6	119.8	1.9	-87.33	382.8	102.9	3,360.3	3,238.9	121.38	27.683	
11,023.6	6,585.8	6,593.9	6,593.4	120.4	1.9	-87.31	382.8	102.9	3,383.6	3,261.6	122.03	27.728	
11,100.0	6,584.8	6,593.4	6,592.8	122.5	1.9	-87.24	382.8	102.9	3,459.3	3,335.1	124.13	27.869	
11,122.0	6,584.5	6,593.2	6,592.7	123.2	1.9	-87.22	382.8	102.9	3,481.1	3,356.3	124.73	27.908	
11,200.0	6,583.5	6,592.6	6,592.1	125.3	1.9	-87.15	382.8	102.9	3,558.3	3,431.4	126.87	28.046	
11,220.4	6,583.3	6,592.5	6,592.0	125.9	1.9	-87.13	382.8	102.9	3,578.6	3,451.1	127.44	28.081	
11,300.0	6,582.2	6,591.9	6,591.4	128.1	1.9	-87.06	382.8	102.9	3,657.4	3,527.8	129.62	28.216	
11,318.9	6,582.0	6,591.7	6,591.2	128.6	1.9	-87.04	382.8	102.9	3,676.1	3,546.0	130.14	28.247	
11,400.0	6,580.9	6,591.1	6,590.6	130.8	1.9	-86.97	382.8	102.9	3,756.6	3,624.2	132.37	28.379	
11,417.3	6,580.7	6,591.0	6,590.5	131.3	1.9	-86.95	382.8	102.9	3,773.7	3,640.9	132.85	28.406	
11,500.0	6,579.7	6,590.4	6,589.9	133.6	1.9	-86.88	382.8	102.9	3,855.7	3,720.6	135.12	28.535	
11,515.7	6,579.4	6,590.3	6,589.8	134.0	1.9	-86.86	382.8	102.9	3,871.3	3,735.8	135.55	28.559	
11,600.0	6,578.4	6,589.7	6,589.1	136.3	1.9	-86.79	382.8	102.8	3,955.0	3,817.1	137.87	28.685	
11,614.1	6,578.2	6,589.5	6,589.0	136.7	1.9	-86.78	382.8	102.8	3,969.0	3,830.8	138.26	28.706	
11,700.0	6,577.1	6,588.9	6,588.4	139.1	1.9	-86.70	382.8	102.8	4,054.2	3,913.6	140.63	28.830	
11,712.6	6,576.9	6,588.8	6,588.3	139.5	1.9	-86.69	382.8	102.8	4,066.7	3,925.8	140.97	28.847	
11,800.0	6,575.8	6,588.2	6,587.7	141.9	1.9	-86.61	382.8	102.8	4,153.5	4,010.2	143.38	28.968	
11,811.0	6,575.6	6,588.1	6,587.6	142.2	1.9	-86.60	382.8	102.8	4,164.5	4,020.8	143.69	28.983	
11,858.8	6,575.0	6,587.7	6,587.2	143.5	1.9	-86.56	382.8	102.8	4,211.9	4,066.9	145.00	29.047	
11,859.3	6,575.0	6,587.7	6,587.2	143.5	1.9	-86.55	382.9	102.8	4,212.5	4,067.5	145.01	29.049	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	47.79	814.3	897.7	1,212.1				
98.4	98.4	88.0	88.0	0.1	0.0	47.79	814.2	897.7	1,211.9	1,211.8	0.10	N/A	
100.0	100.0	89.7	89.7	0.1	0.0	47.79	814.2	897.7	1,211.9	1,211.8	0.10	N/A	
196.8	196.8	186.3	186.3	0.3	0.1	47.79	814.0	897.5	1,211.7	1,211.3	0.40	3,060.652	
200.0	200.0	189.4	189.4	0.3	0.1	47.79	814.0	897.5	1,211.7	1,211.3	0.41	2,985.241	
295.3	295.3	284.9	284.9	0.5	0.2	47.79	813.9	897.4	1,211.5	1,210.7	0.75	1,625.107	
300.0	300.0	289.7	289.7	0.5	0.2	47.79	813.9	897.4	1,211.5	1,210.7	0.76	1,588.710	
393.7	393.7	388.0	388.0	0.8	0.3	47.80	813.5	897.1	1,211.1	1,210.0	1.06	1,143.514	
400.0	400.0	394.7	394.7	0.8	0.3	47.80	813.5	897.1	1,211.1	1,210.0	1.08	1,122.720	
492.1	492.1	486.8	486.8	1.0	0.4	47.81	813.0	896.8	1,210.5	1,209.1	1.35	899.007	
500.0	500.0	494.7	494.7	1.0	0.4	47.81	812.9	896.8	1,210.4	1,209.0	1.37	884.008	
590.5	590.5	585.4	585.4	1.2	0.4	47.82	812.4	896.5	1,209.8	1,208.2	1.62	745.103	
600.0	600.0	594.9	594.9	1.2	0.5	47.82	812.4	896.4	1,209.8	1,208.1	1.65	733.100	
689.0	689.0	684.0	684.0	1.4	0.5	47.82	811.8	896.1	1,209.2	1,207.3	1.89	638.270	
700.0	700.0	695.0	695.0	1.4	0.5	47.83	811.8	896.1	1,209.1	1,207.2	1.92	628.212	
787.4	787.4	782.5	782.5	1.6	0.6	47.83	811.3	895.7	1,208.5	1,206.4	2.16	559.366	
800.0	800.0	795.1	795.1	1.7	0.6	47.83	811.2	895.7	1,208.5	1,206.3	2.19	550.672	
885.8	885.8	881.2	881.2	1.9	0.6	47.83	810.8	895.3	1,207.9	1,205.4	2.42	498.612	
900.0	900.0	895.4	895.4	1.9	0.6	47.83	810.7	895.2	1,207.8	1,205.3	2.46	490.951	
984.2	984.2	980.5	980.5	2.1	0.7	47.83	810.3	894.7	1,207.2	1,204.5	2.68	450.152	
1,000.0	1,000.0	996.4	996.4	2.1	0.7	47.83	810.2	894.6	1,207.0	1,204.3	2.72	443.266	
1,082.7	1,082.7	1,079.1	1,079.1	2.3	0.7	47.83	809.8	894.1	1,206.4	1,203.4	2.94	410.564	
1,100.0	1,100.0	1,096.5	1,096.4	2.3	0.7	47.83	809.7	894.0	1,206.2	1,203.3	2.98	404.314	
1,181.1	1,181.1	1,176.2	1,176.2	2.5	0.7	47.84	809.3	893.6	1,205.7	1,202.5	3.19	377.581	
1,200.0	1,200.0	1,194.8	1,194.8	2.6	0.7	47.84	809.2	893.6	1,205.5	1,202.3	3.24	371.856	
1,221.8	1,221.8	1,216.1	1,216.1	2.6	0.8	143.03	809.1	893.5	1,205.5	1,202.1	3.37	357.449	
1,279.5	1,279.5	1,272.6	1,272.6	2.7	0.8	143.06	808.8	893.3	1,206.0	1,202.4	3.52	342.720	
1,300.0	1,300.0	1,292.6	1,292.6	2.8	0.8	143.07	808.8	893.2	1,206.4	1,202.8	3.57	337.840	
1,377.9	1,377.8	1,370.9	1,370.9	2.9	0.8	143.15	808.5	892.9	1,209.0	1,205.3	3.76	321.321	
1,400.0	1,399.8	1,393.1	1,393.1	3.0	0.8	143.18	808.5	892.8	1,210.1	1,206.3	3.82	317.031	
1,476.4	1,475.9	1,469.8	1,469.7	3.1	0.9	143.30	808.2	892.5	1,214.8	1,210.7	4.01	302.897	
1,500.0	1,499.5	1,493.4	1,493.4	3.2	0.9	143.35	808.1	892.5	1,216.5	1,212.5	4.07	298.904	
1,574.8	1,573.7	1,567.9	1,567.9	3.4	0.9	143.52	807.7	892.2	1,223.2	1,218.9	4.27	286.650	
1,600.0	1,598.7	1,593.0	1,592.9	3.4	0.9	143.58	807.6	892.1	1,225.8	1,221.4	4.33	282.878	
1,673.2	1,671.1	1,669.6	1,669.5	3.6	0.9	143.81	807.2	891.7	1,234.2	1,229.7	4.54	272.064	
1,700.0	1,697.5	1,697.6	1,697.6	3.7	1.0	143.90	807.0	891.5	1,237.6	1,233.0	4.61	268.452	
1,771.6	1,767.9	1,771.3	1,771.2	3.9	1.0	144.16	806.3	890.9	1,247.6	1,242.8	4.82	258.886	
1,800.0	1,795.6	1,800.3	1,800.3	4.0	1.0	144.27	806.1	890.6	1,251.9	1,247.0	4.90	255.448	
1,870.1	1,864.0	1,873.2	1,873.2	4.3	1.0	144.57	805.2	889.9	1,263.5	1,258.4	5.12	246.835	
1,900.0	1,893.1	1,904.1	1,904.0	4.4	1.0	144.71	804.7	889.5	1,268.8	1,263.6	5.21	243.504	
1,968.5	1,959.3	1,972.7	1,972.6	4.6	1.1	145.05	803.4	888.9	1,281.8	1,276.4	5.44	235.762	
1,992.4	1,982.4	1,996.6	1,996.5	4.7	1.1	145.17	802.9	888.6	1,286.6	1,281.1	5.51	233.306	
2,000.0	1,989.6	2,004.1	2,004.0	4.8	1.1	145.22	802.7	888.6	1,288.2	1,282.7	5.54	232.530	
2,066.9	2,054.0	2,070.0	2,069.9	5.1	1.1	145.72	801.2	887.9	1,302.0	1,296.2	5.77	225.649	
2,100.0	2,085.8	2,102.4	2,102.3	5.2	1.1	145.96	800.4	887.6	1,308.8	1,303.0	5.88	222.641	
2,165.3	2,148.7	2,163.5	2,163.4	5.5	1.1	146.40	799.1	887.0	1,322.4	1,316.3	6.10	216.655	
2,200.0	2,182.0	2,195.9	2,195.8	5.7	1.2	146.63	798.5	886.6	1,329.7	1,323.5	6.23	213.525	
2,263.8	2,243.4	2,260.0	2,259.8	6.0	1.2	147.06	797.5	885.7	1,343.2	1,336.7	6.46	208.075	
2,300.0	2,278.2	2,296.6	2,296.4	6.2	1.2	147.30	797.0	885.0	1,350.8	1,344.2	6.58	205.152	
2,362.2	2,338.1	2,356.3	2,356.2	6.5	1.2	147.67	796.2	883.9	1,363.8	1,357.0	6.81	200.316	
2,400.0	2,374.4	2,392.6	2,392.4	6.7	1.2	147.89	795.8	883.2	1,371.8	1,364.9	6.94	197.552	
2,460.6	2,432.8	2,452.5	2,452.3	7.0	1.2	148.26	795.1	882.0	1,384.6	1,377.5	7.16	193.253	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,470.6	2,491.6	2,491.4	7.2	1.3	148.49	794.6	881.2	1,393.0	1,385.7	7.31	190.615	
2,559.0	2,527.4	2,547.2	2,546.9	7.6	1.3	148.81	794.0	880.0	1,405.5	1,398.0	7.52	186.813	
2,600.0	2,566.8	2,585.4	2,585.1	7.8	1.3	149.03	793.6	879.2	1,414.3	1,406.6	7.67	184.327	
2,657.5	2,622.1	2,640.6	2,640.4	8.1	1.3	149.34	793.2	878.1	1,426.6	1,418.8	7.88	180.960	
2,700.0	2,663.0	2,682.0	2,681.8	8.3	1.3	149.56	792.9	877.2	1,435.8	1,427.8	8.04	178.597	
2,755.9	2,716.8	2,736.5	2,736.2	8.6	1.3	149.85	792.5	876.0	1,447.9	1,439.7	8.24	175.616	
2,800.0	2,759.2	2,779.5	2,779.3	8.9	1.4	150.08	792.1	875.0	1,457.5	1,449.1	8.41	173.388	
2,854.3	2,811.5	2,832.7	2,832.4	9.2	1.4	150.36	791.6	873.9	1,469.2	1,460.6	8.60	170.745	
2,900.0	2,855.4	2,877.6	2,877.3	9.4	1.4	150.60	791.2	872.9	1,479.1	1,470.4	8.77	168.631	
2,952.7	2,906.2	2,928.1	2,927.8	9.7	1.4	150.86	790.6	871.9	1,490.6	1,481.6	8.96	166.279	
3,000.0	2,951.6	2,972.5	2,972.2	10.0	1.4	151.09	790.0	871.0	1,500.9	1,491.8	9.14	164.280	
3,051.2	3,000.9	3,020.0	3,019.7	10.3	1.4	151.34	789.4	870.3	1,512.2	1,502.9	9.32	162.200	
3,100.0	3,047.8	3,064.7	3,064.3	10.5	1.5	151.57	788.7	869.6	1,523.0	1,513.5	9.50	160.315	
3,149.6	3,095.5	3,110.2	3,109.8	10.8	1.5	151.81	788.0	869.1	1,534.2	1,524.5	9.68	158.482	
3,200.0	3,144.0	3,157.1	3,156.7	11.1	1.5	152.05	787.3	868.6	1,545.6	1,535.7	9.86	156.713	
3,248.0	3,190.2	3,200.0	3,199.6	11.4	1.5	152.27	786.6	868.2	1,556.5	1,546.5	10.04	155.098	
3,300.0	3,240.2	3,249.4	3,249.0	11.7	1.5	152.53	785.8	867.8	1,568.4	1,558.2	10.22	153.445	
3,346.4	3,284.9	3,291.8	3,291.4	11.9	1.5	152.74	785.2	867.5	1,579.2	1,568.8	10.39	152.031	
3,400.0	3,336.4	3,341.1	3,340.7	12.2	1.6	152.99	784.4	867.4	1,591.7	1,581.1	10.58	150.490	
3,444.9	3,379.6	3,382.4	3,382.0	12.5	1.6	153.20	783.7	867.2	1,602.3	1,591.5	10.74	149.253	
3,500.0	3,432.6	3,434.7	3,434.3	12.8	1.6	153.46	783.0	867.1	1,615.3	1,604.4	10.93	147.806	
3,543.3	3,474.3	3,476.5	3,476.0	13.1	1.6	153.66	782.4	867.0	1,625.6	1,614.5	11.08	146.710	
3,600.0	3,528.8	3,531.6	3,531.2	13.4	1.6	153.92	781.7	866.9	1,639.1	1,627.8	11.28	145.333	
3,641.7	3,569.0	3,572.5	3,572.1	13.6	1.6	154.11	781.1	866.8	1,649.0	1,637.6	11.42	144.355	
3,700.0	3,625.0	3,628.6	3,628.2	14.0	1.7	154.37	780.3	866.6	1,662.9	1,651.3	11.63	143.039	
3,740.1	3,663.6	3,666.6	3,666.2	14.2	1.7	154.54	779.8	866.5	1,672.5	1,660.7	11.76	142.159	
3,800.0	3,721.2	3,724.7	3,724.2	14.5	1.7	154.79	779.1	866.3	1,686.8	1,674.8	11.97	140.893	
3,838.6	3,758.3	3,763.4	3,762.9	14.8	1.7	154.96	778.6	866.1	1,696.0	1,683.9	12.11	140.098	
3,900.0	3,817.4	3,823.7	3,823.3	15.1	1.7	155.22	777.9	865.8	1,710.7	1,698.4	12.32	138.872	
3,937.0	3,853.0	3,859.0	3,858.5	15.3	1.7	155.37	777.4	865.6	1,719.6	1,707.1	12.45	138.156	
4,000.0	3,913.6	3,918.8	3,918.3	15.7	1.8	155.62	776.6	865.3	1,734.7	1,722.0	12.66	136.978	
4,035.4	3,947.7	3,952.1	3,951.6	15.9	1.8	155.75	776.2	865.1	1,743.2	1,730.4	12.79	136.330	
4,100.0	4,009.8	4,013.7	4,013.2	16.3	1.8	156.00	775.7	864.8	1,758.8	1,745.8	13.01	135.187	
4,133.8	4,042.4	4,047.5	4,047.1	16.5	1.8	156.13	775.4	864.6	1,767.0	1,753.9	13.13	134.600	
4,200.0	4,106.0	4,114.5	4,114.0	16.8	1.8	156.38	774.8	864.0	1,782.9	1,769.6	13.36	133.486	
4,232.3	4,137.1	4,148.6	4,148.2	17.0	1.8	156.51	774.5	863.7	1,790.7	1,777.2	13.47	132.956	
4,300.0	4,202.2	4,220.1	4,219.6	17.4	1.9	156.77	773.7	862.9	1,806.7	1,793.0	13.70	131.870	
4,330.7	4,231.7	4,252.4	4,251.9	17.6	1.9	156.89	773.4	862.4	1,814.0	1,800.2	13.81	131.384	
4,400.0	4,298.4	4,323.1	4,322.6	18.0	1.9	157.13	772.8	861.2	1,830.2	1,816.1	14.05	130.303	
4,429.1	4,326.4	4,351.2	4,350.7	18.2	1.9	157.22	772.6	860.7	1,837.0	1,822.8	14.15	129.854	
4,500.0	4,394.6	4,419.3	4,418.8	18.6	1.9	157.45	772.2	859.3	1,853.5	1,839.1	14.39	128.790	
4,527.5	4,421.1	4,445.5	4,444.9	18.7	1.9	157.53	772.0	858.8	1,860.0	1,845.5	14.49	128.384	
4,600.0	4,490.8	4,512.1	4,511.5	19.2	2.0	157.73	771.8	857.5	1,877.0	1,862.3	14.74	127.347	
4,626.0	4,515.8	4,532.9	4,532.3	19.3	2.0	157.80	771.7	857.1	1,883.2	1,868.3	14.83	126.985	
4,700.0	4,587.0	4,600.0	4,599.4	19.8	2.0	158.01	771.6	856.3	1,901.1	1,886.0	15.09	126.005	
4,724.4	4,610.5	4,611.6	4,611.0	19.9	2.0	158.04	771.5	856.2	1,907.1	1,892.0	15.17	125.716	
4,800.0	4,683.2	4,672.0	4,671.5	20.3	2.0	158.24	771.2	856.1	1,926.1	1,910.7	15.42	124.890	
4,822.8	4,705.2	4,690.2	4,689.7	20.5	2.0	158.30	771.1	856.2	1,931.9	1,916.4	15.50	124.656	
4,900.0	4,779.4	4,762.3	4,761.8	20.9	2.0	158.54	770.6	856.6	1,951.8	1,936.0	15.75	123.941	
4,921.2	4,799.8	4,782.7	4,782.2	21.0	2.0	158.61	770.5	856.7	1,957.3	1,941.5	15.82	123.753	
5,000.0	4,875.6	4,864.2	4,863.6	21.5	2.0	158.87	769.8	857.1	1,977.5	1,961.4	16.07	123.074	
5,019.7	4,894.5	4,885.0	4,884.5	21.6	2.0	158.94	769.6	857.2	1,982.5	1,966.4	16.13	122.906	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,100.0	4,971.8	4,963.1	4,962.6	22.1	2.0	159.19	769.0	857.4	2,003.0	1,986.6	16.39	122.199	
5,118.1	4,989.2	4,980.4	4,979.8	22.2	2.0	159.24	768.8	857.4	2,007.6	1,991.1	16.45	122.041	
5,200.0	5,068.0	5,060.4	5,059.9	22.7	2.1	159.49	768.2	857.5	2,028.4	2,011.7	16.72	121.337	
5,216.5	5,083.9	5,076.7	5,076.1	22.8	2.1	159.53	768.1	857.5	2,032.7	2,015.9	16.77	121.198	
5,240.0	5,106.5	5,099.9	5,099.3	22.9	2.1	159.60	767.9	857.5	2,038.6	2,021.8	16.85	121.001	
5,300.0	5,164.4	5,158.5	5,158.0	23.2	2.1	159.88	767.3	857.6	2,053.3	2,036.3	16.98	120.905	
5,314.9	5,178.8	5,173.2	5,172.6	23.3	2.1	159.94	767.1	857.6	2,056.8	2,039.8	17.01	120.911	
5,400.0	5,261.5	5,261.2	5,260.6	23.6	2.1	160.30	766.1	857.7	2,075.2	2,058.0	17.17	120.859	
5,413.4	5,274.6	5,275.4	5,274.9	23.6	2.1	160.35	766.0	857.6	2,077.8	2,060.6	17.19	120.854	
5,500.0	5,359.5	5,361.9	5,361.3	23.9	2.2	160.64	765.1	857.4	2,093.6	2,076.2	17.34	120.717	
5,511.8	5,371.1	5,373.4	5,372.9	24.0	2.2	160.67	764.9	857.4	2,095.5	2,078.2	17.36	120.702	
5,600.0	5,458.0	5,464.0	5,463.4	24.2	2.2	160.91	764.1	857.0	2,108.7	2,091.2	17.50	120.489	
5,610.2	5,468.2	5,474.8	5,474.2	24.3	2.2	160.94	764.0	856.9	2,110.0	2,092.5	17.52	120.465	
5,700.0	5,557.2	5,568.4	5,567.8	24.5	2.2	161.13	763.2	856.2	2,120.3	2,102.6	17.65	120.144	
5,708.6	5,565.7	5,577.4	5,576.8	24.5	2.2	161.14	763.1	856.2	2,121.1	2,103.5	17.66	120.114	
5,800.0	5,656.7	5,667.0	5,666.4	24.7	2.3	161.27	762.4	855.4	2,128.5	2,110.7	17.78	119.695	
5,807.1	5,663.7	5,673.8	5,673.2	24.7	2.3	161.28	762.4	855.3	2,128.9	2,111.1	17.79	119.664	
5,900.0	5,756.5	5,767.4	5,766.8	24.9	2.3	161.36	761.9	854.4	2,133.5	2,115.6	17.91	119.133	
5,905.5	5,761.9	5,773.0	5,772.4	24.9	2.3	161.37	761.9	854.4	2,133.6	2,115.7	17.91	119.102	
6,000.0	5,856.4	5,867.9	5,867.3	25.0	2.3	161.40	761.4	853.4	2,135.1	2,117.0	18.02	118.452	
6,003.9	5,860.3	5,871.8	5,871.2	25.0	2.3	161.40	761.4	853.4	2,135.1	2,117.0	18.03	118.423	
6,032.5	5,888.9	5,900.3	5,899.7	25.0	2.3	66.21	761.2	853.1	2,134.9	2,108.8	26.05	81.968	
6,062.5	5,918.9	5,930.5	5,929.9	25.1	2.3	66.21	760.9	852.9	2,134.5	2,108.5	26.08	81.839	
6,100.0	5,956.4	5,968.2	5,967.6	25.1	2.4	-23.84	760.6	852.5	2,133.2	2,115.1	18.09	117.899	
6,102.3	5,958.7	5,970.6	5,970.0	25.1	2.4	-23.84	760.6	852.5	2,133.1	2,115.0	18.09	117.902	
6,150.0	6,006.2	6,019.6	6,019.0	25.1	2.4	-24.03	760.2	852.1	2,128.7	2,110.6	18.08	117.759	
6,200.0	6,055.6	6,072.7	6,072.1	25.1	2.4	-24.38	759.8	851.5	2,120.9	2,102.8	18.08	117.287	
6,200.8	6,056.3	6,073.5	6,072.9	25.1	2.4	-24.38	759.7	851.5	2,120.7	2,102.6	18.08	117.278	
6,250.0	6,104.3	6,124.2	6,123.6	25.0	2.4	-24.88	759.2	850.9	2,109.9	2,091.8	18.11	116.503	
6,299.2	6,151.3	6,173.1	6,172.4	24.9	2.4	-25.54	758.7	850.3	2,096.0	2,077.9	18.16	115.439	
6,300.0	6,152.1	6,173.9	6,173.2	24.9	2.4	-25.55	758.7	850.3	2,095.8	2,077.6	18.16	115.418	
6,350.0	6,198.7	6,221.2	6,220.5	24.8	2.4	-26.39	758.0	849.8	2,078.7	2,060.4	18.23	114.026	
6,397.6	6,241.9	6,263.8	6,263.1	24.7	2.5	-27.38	757.3	849.3	2,059.7	2,041.4	18.33	112.389	
6,400.0	6,244.1	6,265.9	6,265.2	24.7	2.5	-27.43	757.3	849.2	2,058.7	2,040.4	18.33	112.297	
6,450.0	6,287.8	6,309.2	6,308.6	24.5	2.5	-28.69	756.6	848.8	2,036.0	2,017.5	18.48	110.157	
6,496.0	6,326.5	6,348.5	6,347.8	24.4	2.5	-30.08	755.9	848.4	2,012.7	1,994.0	18.68	107.751	
6,500.0	6,329.7	6,351.8	6,351.1	24.4	2.5	-30.21	755.9	848.3	2,010.6	1,991.9	18.70	107.524	
6,550.0	6,369.6	6,392.3	6,391.6	24.3	2.5	-32.01	755.1	847.9	1,982.7	1,963.7	19.00	104.343	
6,594.5	6,403.3	6,427.2	6,426.5	24.2	2.5	-33.91	754.4	847.6	1,955.9	1,936.6	19.37	100.999	
6,600.0	6,407.3	6,431.4	6,430.7	24.2	2.5	-34.16	754.3	847.5	1,952.5	1,933.1	19.42	100.553	
6,650.0	6,442.7	6,468.2	6,467.5	24.1	2.5	-36.70	753.5	847.1	1,920.1	1,900.1	19.96	96.178	
6,692.9	6,471.0	6,497.6	6,496.9	24.0	2.5	-39.23	752.8	846.8	1,890.7	1,870.2	20.55	92.015	
6,700.0	6,475.5	6,502.6	6,501.9	24.0	2.5	-39.69	752.7	846.8	1,885.7	1,865.1	20.65	91.296	
6,750.0	6,505.6	6,537.8	6,537.1	24.0	2.5	-43.27	751.8	846.3	1,849.5	1,828.0	21.51	85.971	
6,791.3	6,528.3	6,564.1	6,563.4	24.0	2.6	-46.67	751.1	846.0	1,818.4	1,796.1	22.32	81.459	
6,800.0	6,532.8	6,569.3	6,568.6	24.0	2.6	-47.44	750.9	845.9	1,811.7	1,789.2	22.50	80.528	
6,850.0	6,557.0	6,597.1	6,596.3	24.1	2.6	-52.22	750.1	845.4	1,772.6	1,749.0	23.57	75.221	
6,889.7	6,574.1	6,611.6	6,610.8	24.2	2.6	-56.26	749.7	845.2	1,740.7	1,716.3	24.40	71.340	
6,900.0	6,578.1	6,614.8	6,614.1	24.3	2.6	-57.35	749.6	845.1	1,732.4	1,707.8	24.61	70.404	
6,950.0	6,596.1	6,629.2	6,628.4	24.5	2.6	-62.98	749.2	844.9	1,691.4	1,665.8	25.60	66.079	
6,988.2	6,607.5	6,638.3	6,637.5	24.7	2.6	-67.59	748.9	844.8	1,659.7	1,633.4	26.29	63.140	
7,000.0	6,610.7	6,640.8	6,640.1	24.8	2.6	-69.05	748.8	844.7	1,649.8	1,623.4	26.48	62.317	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,621.9	6,649.8	6,649.0	25.1	2.6	-75.40	748.6	844.6	1,608.0	1,580.8	27.20	59.114	
7,086.6	6,628.0	6,654.5	6,653.7	25.4	2.6	-80.10	748.5	844.6	1,577.3	1,549.7	27.65	57.050	
7,100.0	6,629.7	6,655.9	6,655.1	25.6	2.6	-81.81	748.4	844.6	1,566.1	1,538.3	27.79	56.357	
7,150.0	6,634.1	6,659.1	6,658.3	26.0	2.6	-88.04	748.3	844.5	1,524.4	1,496.1	28.30	53.859	
7,185.0	6,635.1	6,659.6	6,658.8	26.4	2.6	-92.20	748.3	844.5	1,495.4	1,466.8	28.66	52.177	
7,196.6	6,635.0	6,659.4	6,658.6	26.5	2.6	-93.52	748.3	844.5	1,485.9	1,457.2	28.77	51.642	
7,200.0	6,635.0	6,659.4	6,658.6	26.6	2.6	-93.52	748.3	844.5	1,483.1	1,454.3	28.81	51.476	
7,283.4	6,633.9	6,657.6	6,656.8	27.6	2.6	-93.40	748.4	844.5	1,415.5	1,385.7	29.84	47.439	
7,300.0	6,633.7	6,657.3	6,656.5	27.8	2.6	-93.38	748.4	844.5	1,402.3	1,372.3	30.04	46.677	
7,381.9	6,632.6	6,655.6	6,654.8	29.0	2.6	-93.26	748.4	844.6	1,338.1	1,306.9	31.23	42.847	
7,400.0	6,632.4	6,655.2	6,654.4	29.2	2.6	-93.24	748.5	844.6	1,324.2	1,292.7	31.49	42.046	
7,480.3	6,631.4	6,653.5	6,652.7	30.5	2.6	-93.12	748.5	844.6	1,263.7	1,230.8	32.81	38.515	
7,500.0	6,631.1	6,653.0	6,652.2	30.9	2.6	-93.09	748.5	844.6	1,249.1	1,216.0	33.13	37.701	
7,578.7	6,630.1	6,651.3	6,650.5	32.3	2.6	-92.98	748.6	844.6	1,192.6	1,158.1	34.55	34.521	
7,600.0	6,629.8	6,650.8	6,650.1	32.7	2.6	-92.94	748.6	844.6	1,177.8	1,142.9	34.93	33.718	
7,677.1	6,628.9	6,649.1	6,648.3	34.1	2.6	-92.83	748.6	844.6	1,125.8	1,089.3	36.42	30.908	
7,700.0	6,628.6	6,648.6	6,647.8	34.6	2.6	-92.79	748.6	844.6	1,110.9	1,074.0	36.87	30.134	
7,775.6	6,627.6	6,646.9	6,646.1	36.1	2.6	-92.68	748.7	844.7	1,063.8	1,025.4	38.41	27.694	
7,800.0	6,627.3	6,646.3	6,645.5	36.6	2.6	-92.64	748.7	844.7	1,049.3	1,010.4	38.91	26.965	
7,874.0	6,626.3	6,644.6	6,643.8	38.2	2.6	-92.52	748.7	844.7	1,007.6	967.1	40.50	24.880	
7,900.0	6,626.0	6,644.0	6,643.2	38.8	2.6	-92.48	748.8	844.7	993.9	952.8	41.06	24.208	
7,972.4	6,625.1	6,642.3	6,641.5	40.4	2.6	-92.37	748.8	844.7	958.3	915.6	42.67	22.460	
8,000.0	6,624.7	6,641.6	6,640.9	41.0	2.6	-92.32	748.8	844.7	945.9	902.6	43.28	21.854	
8,070.8	6,623.8	6,639.9	6,639.1	42.6	2.6	-92.21	748.9	844.8	916.9	872.0	44.91	20.419	
8,100.0	6,623.4	6,639.2	6,638.4	43.3	2.6	-92.16	748.9	844.8	906.3	860.8	45.57	19.887	
8,169.3	6,622.6	6,637.5	6,636.7	44.9	2.6	-92.05	748.9	844.8	884.6	837.4	47.20	18.740	
8,200.0	6,622.2	6,636.8	6,636.0	45.6	2.6	-91.99	749.0	844.8	876.5	828.6	47.93	18.289	
8,267.7	6,621.3	6,635.1	6,634.3	47.3	2.6	-91.88	749.0	844.8	862.3	812.8	49.55	17.403	
8,300.0	6,620.9	6,634.2	6,633.5	48.0	2.6	-91.83	749.0	844.8	857.4	807.0	50.33	17.036	
8,366.1	6,620.0	6,632.5	6,631.8	49.7	2.6	-91.71	749.1	844.9	850.9	799.0	51.94	16.382	
8,400.0	6,619.6	6,631.7	6,630.9	50.5	2.6	-91.65	749.1	844.9	849.6	796.8	52.77	16.100	
8,416.1	6,619.4	6,631.2	6,630.5	50.9	2.6	-91.62	749.1	844.9	849.5	796.3	53.17	15.976 CC, ES	
8,464.5	6,618.8	6,630.0	6,629.2	52.1	2.6	-91.54	749.2	844.9	850.8	796.5	54.37	15.649	
8,500.0	6,618.3	6,629.0	6,628.3	53.0	2.6	-91.47	749.2	844.9	853.6	798.3	55.25	15.450	
8,563.0	6,617.5	6,627.4	6,626.6	54.5	2.6	-91.36	749.2	844.9	862.0	805.2	56.83	15.168	
8,600.0	6,617.0	6,626.4	6,625.6	55.5	2.6	-91.29	749.3	845.0	869.1	811.4	57.76	15.047	
8,661.4	6,616.3	6,624.7	6,623.9	57.0	2.6	-91.18	749.3	845.0	884.1	824.8	59.32	14.904	
8,700.0	6,615.8	6,623.6	6,622.8	58.0	2.6	-91.11	749.3	845.0	895.6	835.3	60.30	14.852	
8,759.8	6,615.0	6,621.9	6,621.2	59.5	2.6	-91.00	749.4	845.0	916.3	854.5	61.83	14.819 SF	
8,800.0	6,614.5	6,620.8	6,620.0	60.6	2.6	-90.92	749.4	845.0	932.1	869.2	62.86	14.827	
8,858.2	6,613.7	6,619.1	6,618.4	62.1	2.6	-90.81	749.5	845.1	957.5	893.2	64.37	14.876	
8,900.0	6,613.2	6,617.9	6,617.2	63.2	2.6	-90.73	749.5	845.1	977.5	912.1	65.45	14.935	
8,956.7	6,612.5	6,616.3	6,615.5	64.6	2.6	-90.61	749.5	845.1	1,006.7	939.8	66.92	15.043	
9,000.0	6,611.9	6,615.0	6,614.2	65.8	2.6	-90.53	749.6	845.1	1,030.6	962.6	68.05	15.145	
9,055.1	6,611.2	6,613.4	6,612.6	67.2	2.6	-90.42	749.6	845.2	1,062.8	993.3	69.50	15.293	
9,100.0	6,610.6	6,612.0	6,611.2	68.4	2.6	-90.33	749.7	845.2	1,090.4	1,019.7	70.67	15.428	
9,153.5	6,609.9	6,610.4	6,609.6	69.8	2.6	-90.22	749.7	845.2	1,124.7	1,052.6	72.08	15.603	
9,200.0	6,609.3	6,608.9	6,608.2	71.0	2.6	-90.12	749.8	845.2	1,155.7	1,082.3	73.31	15.765	
9,251.9	6,608.7	6,607.3	6,606.5	72.4	2.6	-90.01	749.8	845.3	1,191.5	1,116.8	74.68	15.954	
9,300.0	6,608.1	6,605.8	6,605.0	73.7	2.6	-89.91	749.9	845.3	1,225.6	1,149.7	75.95	16.137	
9,350.4	6,607.4	6,604.2	6,603.4	75.0	2.6	-89.80	749.9	845.3	1,262.4	1,185.1	77.29	16.333	
9,400.0	6,606.8	6,602.6	6,601.8	76.3	2.6	-89.69	749.9	845.3	1,299.5	1,220.9	78.61	16.532	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,606.1	6,601.0	6,600.2	77.6	2.6	-89.58	750.0	845.4	1,336.8	1,256.9	79.91	16.729	
9,500.0	6,605.5	6,600.0	6,599.2	79.0	2.6	-89.52	750.0	845.4	1,376.7	1,295.5	81.28	16.939	
9,547.2	6,604.9	6,598.0	6,597.2	80.2	2.6	-89.38	750.1	845.4	1,414.2	1,331.6	82.54	17.133	
9,600.0	6,604.2	6,596.4	6,595.7	81.7	2.6	-89.28	750.1	845.4	1,456.7	1,372.7	83.95	17.352	
9,645.6	6,603.6	6,595.1	6,594.4	82.9	2.6	-89.19	750.2	845.5	1,494.0	1,408.8	85.18	17.540	
9,700.0	6,602.9	6,593.6	6,592.8	84.3	2.6	-89.08	750.2	845.5	1,539.0	1,452.4	86.64	17.764	
9,744.1	6,602.3	6,592.3	6,591.5	85.5	2.6	-89.00	750.3	845.5	1,575.9	1,488.1	87.82	17.945	
9,800.0	6,601.6	6,590.7	6,589.9	87.0	2.6	-88.89	750.3	845.5	1,623.3	1,534.0	89.33	18.173	
9,842.5	6,601.1	6,589.5	6,588.7	88.2	2.6	-88.81	750.3	845.6	1,659.6	1,569.2	90.47	18.344	
9,900.0	6,600.3	6,587.9	6,587.1	89.7	2.6	-88.70	750.4	845.6	1,709.3	1,617.2	92.02	18.574	
9,940.9	6,599.8	6,586.7	6,586.0	90.9	2.6	-88.62	750.4	845.6	1,744.9	1,651.8	93.13	18.736	
10,000.0	6,599.0	6,585.1	6,584.3	92.5	2.6	-88.51	750.5	845.6	1,796.7	1,702.0	94.73	18.967	
10,039.3	6,598.5	6,584.0	6,583.3	93.5	2.6	-88.44	750.5	845.7	1,831.4	1,735.7	95.79	19.119	
10,100.0	6,597.7	6,582.4	6,581.6	95.2	2.6	-88.33	750.5	845.7	1,885.4	1,787.9	97.43	19.350	
10,137.8	6,597.3	6,581.3	6,580.6	96.2	2.6	-88.26	750.6	845.7	1,919.1	1,820.7	98.46	19.492	
10,200.0	6,596.5	6,579.6	6,578.9	97.9	2.6	-88.14	750.6	845.7	1,975.1	1,875.0	100.14	19.723	
10,236.2	6,596.0	6,578.7	6,577.9	98.9	2.6	-88.08	750.6	845.7	2,007.8	1,906.7	101.13	19.854	
10,300.0	6,595.2	6,577.0	6,576.2	100.6	2.6	-87.96	750.7	845.8	2,065.8	1,962.9	102.86	20.084	
10,334.6	6,594.7	6,576.1	6,575.3	101.6	2.6	-87.90	750.7	845.8	2,097.4	1,993.6	103.80	20.206	
10,400.0	6,593.9	6,574.3	6,573.6	103.3	2.6	-87.79	750.8	845.8	2,157.3	2,051.7	105.58	20.433	
10,433.0	6,593.5	6,573.5	6,572.7	104.2	2.6	-87.73	750.8	845.8	2,187.7	2,081.2	106.48	20.546	
10,500.0	6,592.6	6,571.7	6,571.0	106.1	2.6	-87.61	750.8	845.9	2,249.5	2,141.2	108.30	20.771	
10,531.5	6,592.2	6,570.9	6,570.2	106.9	2.6	-87.56	750.9	845.9	2,278.7	2,169.5	109.16	20.875	
10,600.0	6,591.3	6,569.1	6,568.4	108.8	2.6	-87.44	750.9	845.9	2,342.4	2,231.4	111.03	21.098	
10,629.9	6,590.9	6,568.4	6,567.6	109.6	2.6	-87.39	750.9	845.9	2,370.3	2,258.4	111.84	21.193	
10,700.0	6,590.0	6,566.6	6,565.8	111.6	2.6	-87.27	751.0	845.9	2,435.8	2,322.1	113.75	21.413	
10,728.3	6,589.6	6,565.9	6,565.1	112.3	2.6	-87.22	751.0	845.9	2,462.4	2,347.9	114.53	21.501	
10,800.0	6,588.7	6,564.1	6,563.3	114.3	2.6	-87.10	751.1	846.0	2,529.7	2,413.3	116.48	21.718	
10,826.7	6,588.4	6,563.4	6,562.7	115.0	2.6	-87.05	751.1	846.0	2,554.9	2,437.7	117.21	21.797	
10,900.0	6,587.4	6,561.6	6,560.9	117.0	2.6	-86.93	751.1	846.0	2,624.1	2,504.9	119.21	22.012	
10,925.2	6,587.1	6,561.0	6,560.2	117.7	2.6	-86.89	751.1	846.0	2,647.9	2,528.0	119.90	22.084	
11,000.0	6,586.1	6,559.2	6,558.4	119.8	2.6	-86.76	751.2	846.0	2,718.9	2,596.9	121.95	22.296	
11,023.6	6,585.8	6,558.6	6,557.8	120.4	2.6	-86.73	751.2	846.1	2,741.3	2,618.7	122.59	22.361	
11,100.0	6,584.8	6,556.7	6,556.0	122.5	2.6	-86.60	751.3	846.1	2,814.0	2,689.3	124.68	22.570	
11,122.0	6,584.5	6,556.2	6,555.5	123.2	2.6	-86.57	751.3	846.1	2,835.0	2,709.7	125.28	22.629	
11,200.0	6,583.5	6,554.3	6,553.6	125.3	2.6	-86.44	751.3	846.1	2,909.5	2,782.1	127.42	22.835	
11,220.4	6,583.3	6,553.9	6,553.1	125.9	2.6	-86.41	751.3	846.1	2,929.0	2,801.1	127.97	22.888	
11,300.0	6,582.2	6,552.0	6,551.2	128.1	2.6	-86.28	751.4	846.1	3,005.2	2,875.1	130.15	23.090	
11,318.9	6,582.0	6,551.5	6,550.8	128.6	2.6	-86.25	751.4	846.2	3,023.3	2,892.7	130.67	23.137	
11,400.0	6,580.9	6,549.6	6,548.9	130.8	2.6	-86.12	751.5	846.2	3,101.2	2,968.3	132.89	23.337	
11,417.3	6,580.7	6,549.2	6,548.5	131.3	2.6	-86.10	751.5	846.2	3,117.9	2,984.5	133.36	23.379	
11,500.0	6,579.7	6,547.3	6,546.6	133.6	2.6	-85.97	751.5	846.2	3,197.5	3,061.9	135.63	23.576	
11,515.7	6,579.4	6,547.0	6,546.2	134.0	2.6	-85.95	751.5	846.2	3,212.6	3,076.6	136.06	23.613	
11,600.0	6,578.4	6,545.0	6,544.3	136.3	2.6	-85.82	751.6	846.2	3,294.0	3,155.6	138.36	23.807	
11,614.1	6,578.2	6,544.7	6,544.0	136.7	2.6	-85.79	751.6	846.2	3,307.6	3,168.9	138.75	23.839	
11,700.0	6,577.1	6,542.8	6,542.1	139.1	2.5	-85.66	751.6	846.3	3,390.6	3,249.5	141.10	24.030	
11,712.6	6,576.9	6,542.5	6,541.8	139.5	2.5	-85.65	751.6	846.3	3,402.8	3,261.4	141.45	24.057	
11,800.0	6,575.8	6,540.6	6,539.8	141.9	2.5	-85.52	751.7	846.3	3,487.5	3,343.7	143.84	24.246	
11,811.0	6,575.6	6,540.3	6,539.6	142.2	2.5	-85.50	751.7	846.3	3,498.2	3,354.0	144.14	24.269	
11,858.8	6,575.0	6,539.3	6,538.5	143.5	2.5	-85.43	751.7	846.3	3,544.5	3,399.1	145.45	24.369	
11,859.3	6,575.0	6,539.3	6,538.5	143.5	2.5	-85.43	751.7	846.3	3,545.1	3,399.6	145.46	24.371	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	53.86	1,276.6	1,748.1	2,164.6				
98.4	98.4	90.4	90.4	0.1	1.1	53.86	1,276.6	1,748.1	2,164.6	2,163.4	1.24	1,746.085	
100.0	100.0	92.0	92.0	0.1	1.2	53.86	1,276.6	1,748.1	2,164.6	2,163.3	1.26	1,716.060	
196.8	196.8	188.8	188.8	0.3	3.3	53.86	1,276.6	1,748.1	2,164.6	2,161.0	3.60	600.987	
200.0	200.0	192.0	192.0	0.3	3.4	53.86	1,276.6	1,748.1	2,164.6	2,160.9	3.68	588.128	
295.3	295.3	287.3	287.3	0.5	5.4	53.86	1,276.6	1,748.1	2,164.6	2,158.7	5.89	367.542	
300.0	300.0	292.0	292.0	0.5	5.5	53.86	1,276.6	1,748.1	2,164.6	2,158.6	6.00	360.878	
393.7	393.7	385.7	385.7	0.8	7.4	53.86	1,276.6	1,748.1	2,164.6	2,156.5	8.12	266.420	
400.0	400.0	392.0	392.0	0.8	7.5	53.86	1,276.6	1,748.1	2,164.6	2,156.3	8.27	261.818	
492.1	492.1	484.1	484.1	1.0	9.4	53.86	1,276.6	1,748.1	2,164.6	2,154.3	10.34	209.245	
500.0	500.0	492.0	492.0	1.0	9.5	53.86	1,276.6	1,748.1	2,164.6	2,154.1	10.52	205.716	
590.5	590.5	582.5	582.5	1.2	11.4	53.86	1,276.6	1,748.1	2,164.6	2,152.0	12.56	172.370	
600.0	600.0	592.0	592.0	1.2	11.5	53.86	1,276.6	1,748.1	2,164.6	2,151.8	12.77	169.503	
689.0	689.0	681.0	681.0	1.4	13.3	53.86	1,276.6	1,748.1	2,164.6	2,149.8	14.77	146.582	
700.0	700.0	692.0	692.0	1.4	13.6	53.86	1,276.6	1,748.1	2,164.6	2,149.6	15.01	144.167	
787.4	787.4	779.4	779.4	1.6	15.3	53.86	1,276.6	1,748.1	2,164.6	2,147.6	16.97	127.523	
800.0	800.0	792.0	792.0	1.7	15.6	53.86	1,276.6	1,748.1	2,164.6	2,147.3	17.26	125.436	
885.8	885.8	877.8	877.8	1.9	17.3	53.86	1,276.6	1,748.1	2,164.6	2,145.4	19.18	112.859	
900.0	900.0	892.0	892.0	1.9	17.6	53.86	1,276.6	1,748.1	2,164.6	2,145.1	19.50	111.021	
984.2	984.2	976.2	976.2	2.1	19.3	53.86	1,276.6	1,748.1	2,164.6	2,143.2	21.38	101.225	
1,000.0	1,000.0	992.0	992.0	2.1	19.6	53.86	1,276.6	1,748.1	2,164.6	2,142.9	21.74	99.582	
1,082.7	1,082.7	1,074.7	1,074.7	2.3	21.3	53.86	1,276.6	1,748.1	2,164.6	2,141.0	23.59	91.768	
1,100.0	1,100.0	1,092.0	1,092.0	2.3	21.6	53.86	1,276.6	1,748.1	2,164.6	2,140.6	23.98	90.283	
1,181.1	1,181.1	1,173.1	1,173.1	2.5	23.3	53.86	1,276.6	1,748.1	2,164.6	2,138.8	25.79	83.929	
1,200.0	1,200.0	1,192.0	1,192.0	2.6	23.6	53.86	1,276.6	1,748.1	2,164.6	2,138.4	26.21	82.574	
1,279.5	1,279.5	1,271.5	1,271.5	2.7	25.2	149.06	1,276.6	1,748.1	2,165.6	2,137.6	27.97	77.413	
1,300.0	1,300.0	1,292.0	1,292.0	2.8	25.7	149.06	1,276.6	1,748.1	2,166.1	2,137.7	28.42	76.206	
1,377.9	1,377.8	1,369.8	1,369.8	2.9	27.2	149.08	1,276.6	1,748.1	2,169.3	2,139.2	30.12	72.029	
1,400.0	1,399.8	1,391.8	1,391.8	3.0	27.7	149.09	1,276.6	1,748.1	2,170.6	2,140.0	30.59	70.952	
1,476.4	1,475.9	1,467.9	1,467.9	3.1	29.2	149.12	1,276.6	1,748.1	2,176.0	2,143.8	32.23	67.521	
1,500.0	1,499.5	1,491.5	1,491.5	3.2	29.7	149.13	1,276.6	1,748.1	2,178.1	2,145.4	32.73	66.552	
1,574.8	1,573.7	1,565.7	1,565.7	3.4	31.2	149.17	1,276.6	1,748.1	2,185.6	2,151.3	34.30	63.720	
1,600.0	1,598.7	1,590.7	1,590.7	3.4	31.7	149.18	1,276.6	1,748.1	2,188.6	2,153.7	34.82	62.846	
1,673.2	1,671.1	1,663.1	1,663.1	3.6	33.1	149.23	1,276.6	1,748.1	2,198.1	2,161.8	36.33	60.500	
1,700.0	1,697.5	1,689.5	1,689.5	3.7	33.7	149.25	1,276.6	1,748.1	2,202.0	2,165.2	36.88	59.714	
1,771.6	1,767.9	1,759.9	1,759.9	3.9	35.1	149.31	1,276.6	1,748.1	2,213.5	2,175.2	38.32	57.766	
1,800.0	1,795.6	1,787.6	1,787.6	4.0	35.6	149.33	1,276.6	1,748.1	2,218.5	2,179.6	38.88	57.060	
1,870.1	1,864.0	1,856.0	1,856.0	4.3	37.0	149.39	1,276.6	1,748.1	2,231.9	2,191.6	40.26	55.441	
1,900.0	1,893.1	1,885.1	1,885.1	4.4	37.6	149.42	1,276.6	1,748.1	2,238.0	2,197.2	40.83	54.809	
1,968.5	1,959.3	1,951.3	1,951.3	4.6	38.9	149.49	1,276.6	1,748.1	2,253.1	2,211.0	42.14	53.466	
1,992.4	1,982.4	1,974.4	1,974.4	4.7	39.4	149.51	1,276.6	1,748.1	2,258.7	2,216.1	42.59	53.035	
2,000.0	1,989.6	1,981.6	1,981.6	4.8	39.5	149.54	1,276.6	1,748.1	2,260.5	2,217.7	42.75	52.875	
2,066.9	2,054.0	2,046.0	2,046.0	5.1	40.8	149.77	1,276.6	1,748.1	2,276.4	2,232.2	44.21	51.495	
2,100.0	2,085.8	2,077.8	2,077.8	5.2	41.5	149.88	1,276.6	1,748.1	2,284.3	2,239.4	44.92	50.853	
2,165.3	2,148.7	2,140.7	2,140.7	5.5	42.7	150.10	1,276.6	1,748.1	2,299.9	2,253.6	46.34	49.632	
2,200.0	2,182.0	2,174.0	2,174.0	5.7	43.4	150.22	1,276.6	1,748.1	2,308.2	2,261.1	47.10	49.010	
2,263.8	2,243.4	2,235.4	2,235.4	6.0	44.6	150.43	1,276.6	1,748.1	2,323.5	2,275.0	48.49	47.917	
2,300.0	2,278.2	2,270.2	2,270.2	6.2	45.3	150.55	1,276.6	1,748.1	2,332.2	2,282.9	49.28	47.324	
2,362.2	2,338.1	2,330.1	2,330.1	6.5	46.5	150.75	1,276.6	1,748.1	2,347.1	2,296.5	50.64	46.346	
2,400.0	2,374.4	2,366.4	2,366.4	6.7	47.3	150.87	1,276.6	1,748.1	2,356.2	2,304.7	51.47	45.778	
2,460.6	2,432.8	2,424.8	2,424.8	7.0	48.4	151.07	1,276.6	1,748.1	2,370.8	2,318.0	52.80	44.901	
2,500.0	2,470.6	2,462.6	2,462.6	7.2	49.2	151.19	1,276.6	1,748.1	2,380.3	2,326.6	53.66	44.356	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,527.4	2,519.4	2,519.4	7.6	50.4	151.37	1,276.6	1,748.1	2,394.6	2,339.6	54.96	43.569	
2,600.0	2,566.8	2,558.8	2,558.8	7.8	51.1	151.50	1,276.6	1,748.1	2,404.5	2,348.6	55.86	43.045	
2,657.5	2,622.1	2,614.1	2,614.1	8.1	52.3	151.68	1,276.6	1,748.1	2,418.4	2,361.3	57.12	42.337	
2,700.0	2,663.0	2,655.0	2,655.0	8.3	53.1	151.81	1,276.6	1,748.1	2,428.7	2,370.6	58.06	41.833	
2,755.9	2,716.8	2,708.8	2,708.8	8.6	54.2	151.97	1,276.6	1,748.1	2,442.3	2,383.0	59.29	41.194	
2,800.0	2,759.2	2,751.2	2,751.2	8.9	55.0	152.11	1,276.6	1,748.1	2,453.0	2,392.8	60.26	40.710	
2,854.3	2,811.5	2,803.5	2,803.5	9.2	56.1	152.27	1,276.6	1,748.1	2,466.2	2,404.8	61.45	40.133	
2,900.0	2,855.4	2,847.4	2,847.4	9.4	56.9	152.40	1,276.6	1,748.1	2,477.4	2,414.9	62.46	39.666	
2,952.7	2,906.2	2,898.2	2,898.2	9.7	58.0	152.55	1,276.6	1,748.1	2,490.3	2,426.6	63.62	39.145	
3,000.0	2,951.6	2,943.6	2,943.6	10.0	58.9	152.69	1,276.6	1,748.1	2,501.8	2,437.2	64.66	38.694	
3,051.2	3,000.9	2,992.9	2,992.9	10.3	59.9	152.83	1,276.6	1,748.1	2,514.3	2,448.5	65.78	38.222	
3,100.0	3,047.8	3,039.8	3,039.8	10.5	60.8	152.97	1,276.6	1,748.1	2,526.3	2,459.4	66.86	37.787	
3,149.6	3,095.5	3,087.5	3,087.5	10.8	61.8	153.11	1,276.6	1,748.1	2,538.5	2,470.5	67.95	37.359	
3,200.0	3,144.0	3,136.0	3,136.0	11.1	62.8	153.24	1,276.6	1,748.1	2,550.8	2,481.8	69.06	36.939	
3,248.0	3,190.2	3,182.2	3,182.2	11.4	63.7	153.38	1,276.6	1,748.1	2,562.6	2,492.5	70.11	36.551	
3,300.0	3,240.2	3,232.2	3,232.2	11.7	64.7	153.52	1,276.6	1,748.1	2,575.4	2,504.2	71.25	36.144	
3,346.4	3,284.9	3,276.9	3,276.9	11.9	65.6	153.64	1,276.6	1,748.1	2,586.9	2,514.6	72.28	35.792	
3,400.0	3,336.4	3,328.4	3,328.4	12.2	66.6	153.78	1,276.6	1,748.1	2,600.1	2,526.6	73.45	35.398	
3,444.9	3,379.6	3,371.6	3,371.6	12.5	67.5	153.90	1,276.6	1,748.1	2,611.2	2,536.7	74.44	35.078	
3,500.0	3,432.6	3,424.6	3,424.6	12.8	68.6	154.04	1,276.6	1,748.1	2,624.8	2,549.1	75.65	34.696	
3,543.3	3,474.3	3,466.3	3,466.3	13.1	69.4	154.16	1,276.6	1,748.1	2,635.5	2,558.9	76.60	34.405	
3,600.0	3,528.8	3,520.8	3,520.8	13.4	70.5	154.30	1,276.6	1,748.1	2,649.6	2,571.7	77.85	34.035	
3,641.7	3,569.0	3,561.0	3,561.0	13.6	71.3	154.41	1,276.6	1,748.1	2,659.9	2,581.1	78.76	33.770	
3,700.0	3,625.0	3,617.0	3,617.0	14.0	72.4	154.55	1,276.6	1,748.1	2,674.4	2,594.3	80.04	33.411	
3,740.1	3,663.6	3,655.6	3,655.6	14.2	73.2	154.65	1,276.6	1,748.1	2,684.3	2,603.4	80.92	33.171	
3,800.0	3,721.2	3,713.2	3,713.2	14.5	74.4	154.80	1,276.6	1,748.1	2,699.2	2,617.0	82.24	32.822	
3,838.6	3,758.3	3,750.3	3,750.3	14.8	75.1	154.89	1,276.6	1,748.1	2,708.8	2,625.7	83.08	32.603	
3,900.0	3,817.4	3,809.4	3,809.4	15.1	76.3	155.04	1,276.6	1,748.1	2,724.1	2,639.7	84.43	32.264	
3,937.0	3,853.0	3,845.0	3,845.0	15.3	77.0	155.13	1,276.6	1,748.1	2,733.4	2,648.1	85.24	32.065	
4,000.0	3,913.6	3,905.6	3,905.6	15.7	78.2	155.28	1,276.6	1,748.1	2,749.1	2,662.4	86.62	31.735	
4,035.4	3,947.7	3,939.7	3,939.7	15.9	78.9	155.36	1,276.6	1,748.1	2,757.9	2,670.5	87.40	31.555	
4,100.0	4,009.8	4,001.8	4,001.8	16.3	80.2	155.52	1,276.6	1,748.1	2,774.1	2,685.3	88.82	31.234	
4,133.8	4,042.4	4,034.4	4,034.4	16.5	80.8	155.59	1,276.6	1,748.1	2,782.5	2,693.0	89.56	31.070	
4,200.0	4,106.0	4,098.0	4,098.0	16.8	82.1	155.75	1,276.6	1,748.1	2,799.1	2,708.1	91.01	30.757	
4,232.3	4,137.1	4,129.1	4,129.1	17.0	82.7	155.82	1,276.6	1,748.1	2,807.2	2,715.5	91.71	30.608	
4,300.0	4,202.2	4,194.2	4,194.2	17.4	84.0	155.97	1,276.6	1,748.1	2,824.2	2,731.0	93.20	30.304	
4,330.7	4,231.7	4,223.7	4,223.7	17.6	84.6	156.04	1,276.6	1,748.1	2,831.9	2,738.0	93.87	30.169	
4,400.0	4,298.4	4,290.4	4,290.4	18.0	86.0	156.19	1,276.6	1,748.1	2,849.3	2,753.9	95.38	29.872	
4,429.1	4,326.4	4,318.4	4,318.4	18.2	86.5	156.26	1,276.6	1,748.1	2,856.6	2,760.6	96.02	29.750	
4,500.0	4,394.6	4,386.6	4,386.6	18.6	87.9	156.41	1,276.6	1,748.1	2,874.5	2,776.9	97.57	29.460	
4,527.5	4,421.1	4,413.1	4,413.1	18.7	88.4	156.47	1,276.6	1,748.1	2,881.4	2,783.2	98.17	29.350	
4,600.0	4,490.8	4,482.8	4,482.8	19.2	89.8	156.63	1,276.6	1,748.1	2,899.7	2,799.9	99.76	29.067	
4,626.0	4,515.8	4,507.8	4,507.8	19.3	90.3	156.68	1,276.6	1,748.1	2,906.2	2,805.9	100.33	28.968	
4,700.0	4,587.0	4,579.0	4,579.0	19.8	91.8	156.84	1,276.6	1,748.1	2,924.9	2,823.0	101.94	28.692	
4,724.4	4,610.5	4,602.5	4,602.5	19.9	92.2	156.89	1,276.6	1,748.1	2,931.1	2,828.6	102.48	28.602	
4,800.0	4,683.2	4,675.2	4,675.2	20.3	93.7	157.05	1,276.6	1,748.1	2,950.2	2,846.0	104.13	28.333	
4,822.8	4,705.2	4,697.2	4,697.2	20.5	94.2	157.09	1,276.6	1,748.1	2,955.9	2,851.3	104.63	28.253	
4,900.0	4,779.4	4,771.4	4,771.4	20.9	95.6	157.25	1,276.6	1,748.1	2,975.5	2,869.2	106.31	27.989	
4,921.2	4,799.8	4,791.8	4,791.8	21.0	96.1	157.29	1,276.6	1,748.1	2,980.9	2,874.1	106.77	27.918	
5,000.0	4,875.6	4,867.6	4,867.6	21.5	97.6	157.45	1,276.6	1,748.1	3,000.8	2,892.3	108.49	27.660	
5,019.7	4,894.5	4,886.5	4,886.5	21.6	98.0	157.49	1,276.6	1,748.1	3,005.8	2,896.9	108.92	27.596	
5,100.0	4,971.8	4,963.8	4,963.8	22.1	99.5	157.65	1,276.6	1,748.1	3,026.2	2,915.5	110.67	27.344	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	4,989.2	4,981.2	4,981.2	22.2	99.9	157.68	1,276.6	1,748.1	3,030.8	2,919.7	111.07	27.288	
5,200.0	5,068.0	5,060.0	5,060.0	22.7	101.4	157.84	1,276.6	1,748.1	3,051.6	2,938.8	112.85	27.041	
5,216.5	5,083.9	5,075.9	5,075.9	22.8	101.8	157.87	1,276.6	1,748.1	3,055.8	2,942.6	113.21	26.992	
5,240.0	5,106.5	5,098.5	5,098.5	22.9	102.2	157.92	1,276.6	1,748.1	3,061.8	2,948.1	113.73	26.923	
5,300.0	5,164.4	5,156.4	5,156.4	23.2	103.4	158.14	1,276.6	1,748.1	3,076.5	2,961.0	115.49	26.638	
5,314.9	5,178.8	5,170.8	5,170.8	23.3	103.7	158.19	1,276.6	1,748.1	3,080.0	2,964.1	115.93	26.569	
5,400.0	5,261.5	5,253.5	5,253.5	23.6	105.3	158.47	1,276.6	1,748.1	3,098.5	2,980.1	118.36	26.178	
5,413.4	5,274.6	5,266.6	5,266.6	23.6	105.6	158.51	1,276.6	1,748.1	3,101.2	2,982.5	118.74	26.118	
5,500.0	5,359.5	5,351.5	5,351.5	23.9	107.3	158.75	1,276.6	1,748.1	3,117.4	2,996.2	121.15	25.731	
5,511.8	5,371.1	5,363.1	5,363.1	24.0	107.5	158.77	1,276.6	1,748.1	3,119.4	2,997.9	121.47	25.680	
5,600.0	5,458.0	5,450.0	5,450.0	24.2	109.3	158.97	1,276.6	1,748.1	3,133.0	3,009.2	123.84	25.299	
5,610.2	5,468.2	5,460.2	5,460.2	24.3	109.5	158.99	1,276.6	1,748.1	3,134.4	3,010.3	124.11	25.255	
5,700.0	5,557.2	5,549.2	5,549.2	24.5	111.3	159.15	1,276.6	1,748.1	3,145.5	3,019.0	126.43	24.880	
5,708.6	5,565.7	5,557.7	5,557.7	24.5	111.5	159.16	1,276.6	1,748.1	3,146.4	3,019.7	126.64	24.844	
5,800.0	5,656.7	5,648.7	5,648.7	24.7	113.3	159.28	1,276.6	1,748.1	3,154.7	3,025.8	128.90	24.475	
5,807.1	5,663.7	5,655.7	5,655.7	24.7	113.4	159.28	1,276.6	1,748.1	3,155.2	3,026.1	129.06	24.447	
5,900.0	5,756.5	5,748.5	5,748.5	24.9	115.3	159.36	1,276.6	1,748.1	3,160.6	3,029.4	131.24	24.084	
5,905.5	5,761.9	5,753.9	5,753.9	24.9	115.4	159.36	1,276.6	1,748.1	3,160.9	3,029.5	131.36	24.062	
6,000.0	5,856.4	5,848.4	5,848.4	25.0	117.3	159.40	1,276.6	1,748.1	3,163.3	3,029.9	133.44	23.706	
6,003.9	5,860.3	5,852.3	5,852.3	25.0	117.4	159.40	1,276.6	1,748.1	3,163.4	3,029.8	133.52	23.691	
6,032.5	5,888.9	5,880.9	5,880.9	25.0	118.0	64.20	1,276.6	1,748.1	3,163.5	3,021.5	142.03	22.274	
6,062.5	5,918.9	5,910.9	5,910.9	25.1	118.6	64.20	1,276.6	1,748.1	3,163.5	3,020.8	142.66	22.175	
6,100.0	5,956.4	5,948.4	5,948.4	25.1	119.3	-25.83	1,276.6	1,748.1	3,162.6	3,027.3	135.34	23.368	
6,102.3	5,958.7	5,950.7	5,950.7	25.1	119.4	-25.84	1,276.6	1,748.1	3,162.5	3,027.1	135.37	23.363	
6,150.0	6,006.2	5,998.2	5,998.2	25.1	120.3	-26.01	1,276.6	1,748.1	3,158.7	3,023.1	135.64	23.287	
6,200.0	6,055.6	6,047.6	6,047.6	25.1	121.3	-26.32	1,276.6	1,748.1	3,151.7	3,016.2	135.43	23.272	
6,200.8	6,056.3	6,048.3	6,048.3	25.1	121.3	-26.33	1,276.6	1,748.1	3,151.5	3,016.1	135.42	23.272	
6,250.0	6,104.3	6,096.3	6,096.3	25.0	122.3	-26.78	1,276.6	1,748.1	3,141.5	3,006.8	134.72	23.318	
6,299.2	6,151.3	6,143.3	6,143.3	24.9	123.2	-27.39	1,276.6	1,748.1	3,128.6	2,995.1	133.58	23.421	
6,300.0	6,152.1	6,144.1	6,144.1	24.9	123.2	-27.40	1,276.6	1,748.1	3,128.4	2,994.9	133.56	23.423	
6,350.0	6,198.7	6,190.7	6,190.7	24.8	124.2	-28.18	1,276.6	1,748.1	3,112.3	2,980.3	131.99	23.579	
6,397.6	6,241.9	6,233.9	6,233.9	24.7	125.1	-29.10	1,276.6	1,748.1	3,094.4	2,964.2	130.20	23.766	
6,400.0	6,244.1	6,236.1	6,236.1	24.7	125.1	-29.15	1,276.6	1,748.1	3,093.4	2,963.3	130.10	23.776	
6,450.0	6,287.8	6,279.8	6,279.8	24.5	126.0	-30.32	1,276.6	1,748.1	3,071.7	2,943.7	128.00	23.997	
6,496.0	6,326.5	6,318.5	6,318.5	24.4	126.8	-31.60	1,276.6	1,748.1	3,049.4	2,923.4	126.00	24.202	
6,500.0	6,329.7	6,321.7	6,321.7	24.4	126.8	-31.72	1,276.6	1,748.1	3,047.4	2,921.6	125.83	24.218	
6,550.0	6,369.6	6,361.6	6,361.6	24.3	127.6	-33.38	1,276.6	1,748.1	3,020.6	2,896.8	123.77	24.405	
6,594.5	6,403.3	6,395.3	6,395.3	24.2	128.3	-35.10	1,276.6	1,748.1	2,994.8	2,872.5	122.22	24.503	
6,600.0	6,407.3	6,399.3	6,399.3	24.2	128.4	-35.33	1,276.6	1,748.1	2,991.4	2,869.4	122.05	24.509	
6,650.0	6,442.7	6,434.7	6,434.7	24.1	129.1	-37.61	1,276.6	1,748.1	2,960.1	2,839.1	120.94	24.476	
6,692.9	6,471.0	6,463.0	6,463.0	24.0	129.7	-39.86	1,276.6	1,748.1	2,931.6	2,810.9	120.68	24.292	
6,700.0	6,475.5	6,467.5	6,467.5	24.0	129.8	-40.26	1,276.6	1,748.1	2,926.7	2,806.0	120.71	24.245	
6,750.0	6,505.6	6,497.6	6,497.6	24.0	130.4	-43.35	1,276.6	1,748.1	2,891.6	2,769.9	121.65	23.770	
6,791.3	6,528.3	6,520.3	6,520.3	24.0	130.8	-46.25	1,276.6	1,748.1	2,861.3	2,737.8	123.45	23.178	
6,800.0	6,532.8	6,524.8	6,524.8	24.0	130.9	-46.91	1,276.6	1,748.1	2,854.8	2,730.8	123.95	23.032	
6,850.0	6,557.0	6,549.0	6,549.0	24.1	131.4	-50.98	1,276.6	1,748.1	2,816.5	2,688.9	127.68	22.059	
6,889.7	6,574.1	6,566.1	6,566.1	24.2	131.7	-54.62	1,276.6	1,748.1	2,785.3	2,653.7	131.60	21.165	
6,900.0	6,578.1	6,570.1	6,570.1	24.3	131.8	-55.61	1,276.6	1,748.1	2,777.1	2,644.4	132.72	20.924	
6,950.0	6,596.1	6,588.1	6,588.1	24.5	132.2	-60.78	1,276.6	1,748.1	2,736.7	2,598.0	138.68	19.734	
6,988.2	6,607.5	6,599.5	6,599.5	24.7	132.4	-65.08	1,276.6	1,748.1	2,705.3	2,561.8	143.49	18.854	
7,000.0	6,610.7	6,602.7	6,602.7	24.8	132.5	-66.46	1,276.6	1,748.1	2,695.5	2,550.5	144.96	18.595	
7,050.0	6,621.9	6,613.9	6,613.9	25.1	132.7	-72.55	1,276.6	1,748.1	2,653.7	2,502.9	150.79	17.598	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	6,620.0	6,620.0	25.4	132.8	-77.18	1,276.6	1,748.1	2,622.9	2,468.5	154.36	16.992	
7,100.0	6,629.7	6,621.7	6,621.7	25.6	132.9	-78.89	1,276.6	1,748.1	2,611.6	2,456.2	155.45	16.800	
7,150.0	6,634.1	6,626.1	6,626.1	26.0	132.9	-85.29	1,276.6	1,748.1	2,569.4	2,411.0	158.40	16.221	
7,185.0	6,635.1	6,627.1	6,627.1	26.4	133.0	-89.70	1,276.6	1,748.1	2,539.9	2,380.6	159.32	15.942	
7,196.6	6,635.0	6,627.0	6,627.0	26.5	133.0	-91.13	1,276.6	1,748.1	2,530.2	2,370.8	159.42	15.872	
7,200.0	6,635.0	6,627.0	6,627.0	26.6	133.0	-91.13	1,276.6	1,748.1	2,527.4	2,367.9	159.45	15.850	
7,283.4	6,633.9	6,625.9	6,625.9	27.6	132.9	-91.08	1,276.6	1,748.1	2,457.8	2,297.3	160.46	15.317	
7,300.0	6,633.7	6,625.7	6,625.7	27.8	132.9	-91.07	1,276.6	1,748.1	2,444.1	2,283.4	160.66	15.213	
7,381.9	6,632.6	6,624.6	6,624.6	29.0	132.9	-91.03	1,276.6	1,748.1	2,376.9	2,215.1	161.83	14.688	
7,400.0	6,632.4	6,624.4	6,624.4	29.2	132.9	-91.02	1,276.6	1,748.1	2,362.2	2,200.1	162.09	14.573	
7,480.3	6,631.4	6,623.4	6,623.4	30.5	132.9	-90.98	1,276.6	1,748.1	2,297.4	2,134.0	163.39	14.061	
7,500.0	6,631.1	6,623.1	6,623.1	30.9	132.9	-90.97	1,276.6	1,748.1	2,281.6	2,117.9	163.71	13.937	
7,578.7	6,630.1	6,622.1	6,622.1	32.3	132.9	-90.93	1,276.6	1,748.1	2,219.4	2,054.3	165.11	13.442	
7,600.0	6,629.8	6,621.8	6,621.8	32.7	132.9	-90.91	1,276.6	1,748.1	2,202.7	2,037.2	165.48	13.311	
7,677.1	6,628.9	6,620.9	6,620.9	34.1	132.8	-90.87	1,276.6	1,748.1	2,143.0	1,976.1	166.96	12.836	
7,700.0	6,628.6	6,620.6	6,620.6	34.6	132.8	-90.86	1,276.6	1,748.1	2,125.6	1,958.2	167.39	12.698	
7,775.6	6,627.6	6,619.6	6,619.6	36.1	132.8	-90.82	1,276.6	1,748.1	2,068.6	1,899.7	168.93	12.246	
7,800.0	6,627.3	6,619.3	6,619.3	36.6	132.8	-90.81	1,276.6	1,748.1	2,050.4	1,881.0	169.42	12.103	
7,874.0	6,626.3	6,618.3	6,618.3	38.2	132.8	-90.77	1,276.6	1,748.1	1,996.2	1,825.2	170.99	11.674	
7,900.0	6,626.0	6,618.0	6,618.0	38.8	132.8	-90.76	1,276.6	1,748.1	1,977.5	1,805.9	171.54	11.528	
7,972.4	6,625.1	6,617.1	6,617.1	40.4	132.8	-90.72	1,276.6	1,748.1	1,926.1	1,753.0	173.13	11.125	
8,000.0	6,624.7	6,616.7	6,616.7	41.0	132.8	-90.70	1,276.6	1,748.1	1,906.9	1,733.2	173.74	10.976	
8,070.8	6,623.8	6,615.8	6,615.8	42.6	132.7	-90.67	1,276.6	1,748.1	1,858.6	1,683.3	175.35	10.600	
8,100.0	6,623.4	6,615.4	6,615.4	43.3	132.7	-90.65	1,276.6	1,748.1	1,839.2	1,663.2	176.01	10.449	
8,169.3	6,622.6	6,614.6	6,614.6	44.9	132.7	-90.61	1,276.6	1,748.1	1,794.0	1,616.4	177.62	10.100	
8,200.0	6,622.2	6,614.2	6,614.2	45.6	132.7	-90.60	1,276.6	1,748.1	1,774.4	1,596.1	178.34	9.950	
8,267.7	6,621.3	6,613.3	6,613.3	47.3	132.7	-90.56	1,276.6	1,748.1	1,732.5	1,552.6	179.94	9.628	
8,300.0	6,620.9	6,612.9	6,612.9	48.0	132.7	-90.54	1,276.6	1,748.1	1,713.1	1,532.4	180.71	9.480	
8,366.1	6,620.0	6,612.0	6,612.0	49.7	132.7	-90.51	1,276.6	1,748.1	1,674.6	1,492.3	182.31	9.185	
8,400.0	6,619.6	6,611.6	6,611.6	50.5	132.7	-90.49	1,276.6	1,748.1	1,655.5	1,472.4	183.13	9.040	
8,464.5	6,618.8	6,610.8	6,610.8	52.1	132.6	-90.46	1,276.6	1,748.1	1,620.6	1,435.9	184.71	8.773	
8,500.0	6,618.3	6,610.3	6,610.3	53.0	132.6	-90.44	1,276.6	1,748.1	1,602.2	1,416.6	185.58	8.633	
8,563.0	6,617.5	6,609.5	6,609.5	54.5	132.6	-90.40	1,276.6	1,748.1	1,570.9	1,383.7	187.15	8.394	
8,600.0	6,617.0	6,609.0	6,609.0	55.5	132.6	-90.38	1,276.6	1,748.1	1,553.4	1,365.3	188.07	8.260	
8,661.4	6,616.3	6,608.3	6,608.3	57.0	132.6	-90.35	1,276.6	1,748.1	1,525.9	1,336.3	189.61	8.047	
8,700.0	6,615.8	6,607.8	6,607.8	58.0	132.6	-90.33	1,276.6	1,748.1	1,509.7	1,319.1	190.58	7.921	
8,759.8	6,615.0	6,607.0	6,607.0	59.5	132.6	-90.30	1,276.6	1,748.1	1,486.1	1,294.0	192.10	7.736	
8,800.0	6,614.5	6,606.5	6,606.5	60.6	132.5	-90.28	1,276.6	1,748.1	1,471.4	1,278.3	193.12	7.619	
8,858.2	6,613.7	6,605.7	6,605.7	62.1	132.5	-90.25	1,276.6	1,748.1	1,451.9	1,257.3	194.61	7.460	
8,900.0	6,613.2	6,605.2	6,605.2	63.2	132.5	-90.22	1,276.6	1,748.1	1,439.2	1,243.5	195.68	7.355	
8,956.7	6,612.5	6,604.5	6,604.5	64.6	132.5	-90.19	1,276.6	1,748.1	1,423.7	1,226.5	197.14	7.222	
9,000.0	6,611.9	6,603.9	6,603.9	65.8	132.5	-90.17	1,276.6	1,748.1	1,413.2	1,215.0	198.26	7.128	
9,055.1	6,611.2	6,603.2	6,603.2	67.2	132.5	-90.14	1,276.6	1,748.1	1,401.8	1,202.1	199.69	7.020	
9,100.0	6,610.6	6,602.6	6,602.6	68.4	132.5	-90.12	1,276.6	1,748.1	1,394.0	1,193.2	200.85	6.941	
9,153.5	6,609.9	6,601.9	6,601.9	69.8	132.5	-90.09	1,276.6	1,748.1	1,386.6	1,184.4	202.25	6.856	
9,200.0	6,609.3	6,601.3	6,601.3	71.0	132.4	-90.06	1,276.6	1,748.1	1,381.8	1,178.4	203.46	6.792	
9,251.9	6,608.7	6,600.7	6,600.7	72.4	132.4	-90.04	1,276.6	1,748.1	1,378.3	1,173.5	204.82	6.729	
9,300.0	6,608.1	6,600.1	6,600.1	73.7	132.4	-90.01	1,276.6	1,748.1	1,376.8	1,170.7	206.08	6.681	
9,319.7	6,607.8	6,599.8	6,599.8	74.2	132.4	-90.00	1,276.6	1,748.1	1,376.6	1,170.0	206.60	6.663 CC	
9,350.4	6,607.4	6,599.4	6,599.4	75.0	132.4	-89.98	1,276.6	1,748.1	1,377.0	1,169.6	207.40	6.639 ES	
9,400.0	6,606.8	6,598.8	6,598.8	76.3	132.4	-89.96	1,276.6	1,748.1	1,379.0	1,170.2	208.71	6.607	
9,448.8	6,606.1	6,598.1	6,598.1	77.6	132.4	-89.93	1,276.6	1,748.1	1,382.6	1,172.7	210.00	6.584	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,605.5	6,597.5	6,597.5	79.0	132.4	-89.90	1,276.6	1,748.1	1,388.4	1,177.0	211.35	6.569	
9,547.2	6,604.9	6,596.9	6,596.9	80.2	132.4	-89.88	1,276.6	1,748.1	1,395.3	1,182.7	212.60	6.563 SF	
9,600.0	6,604.2	6,596.2	6,596.2	81.7	132.3	-89.85	1,276.6	1,748.1	1,404.9	1,190.8	214.00	6.565	
9,645.6	6,603.6	6,595.6	6,595.6	82.9	132.3	-89.83	1,276.6	1,748.1	1,414.7	1,199.4	215.22	6.573	
9,700.0	6,602.9	6,594.9	6,594.9	84.3	132.3	-89.80	1,276.6	1,748.1	1,428.2	1,211.5	216.66	6.592	
9,744.1	6,602.3	6,594.3	6,594.3	85.5	132.3	-89.77	1,276.6	1,748.1	1,440.5	1,222.7	217.84	6.613	
9,800.0	6,601.6	6,593.6	6,593.6	87.0	132.3	-89.74	1,276.6	1,748.1	1,458.0	1,238.6	219.33	6.647	
9,842.5	6,601.1	6,593.1	6,593.1	88.2	132.3	-89.72	1,276.6	1,748.1	1,472.5	1,252.1	220.47	6.679	
9,900.0	6,600.3	6,592.3	6,592.3	89.7	132.3	-89.69	1,276.6	1,748.1	1,493.9	1,271.9	222.01	6.729	
9,940.9	6,599.8	6,591.8	6,591.8	90.9	132.3	-89.67	1,276.6	1,748.1	1,510.3	1,287.2	223.10	6.769	
10,000.0	6,599.0	6,591.0	6,591.0	92.5	132.2	-89.64	1,276.6	1,748.1	1,535.5	1,310.8	224.69	6.834	
10,039.3	6,598.5	6,590.5	6,590.5	93.5	132.2	-89.61	1,276.6	1,748.1	1,553.3	1,327.6	225.75	6.881	
10,100.0	6,597.7	6,589.7	6,589.7	95.2	132.2	-89.58	1,276.6	1,748.1	1,582.3	1,355.0	227.38	6.959	
10,137.8	6,597.3	6,589.3	6,589.3	96.2	132.2	-89.56	1,276.6	1,748.1	1,601.3	1,372.9	228.39	7.011	
10,200.0	6,596.5	6,588.5	6,588.5	97.9	132.2	-89.53	1,276.6	1,748.1	1,634.0	1,403.9	230.07	7.102	
10,236.2	6,596.0	6,588.0	6,588.0	98.9	132.2	-89.51	1,276.6	1,748.1	1,653.7	1,422.7	231.04	7.158	
10,300.0	6,595.2	6,587.2	6,587.2	100.6	132.2	-89.47	1,276.6	1,748.1	1,689.9	1,457.2	232.76	7.260	
10,334.6	6,594.7	6,586.7	6,586.7	101.6	132.2	-89.45	1,276.6	1,748.1	1,710.2	1,476.5	233.70	7.318	
10,400.0	6,593.9	6,585.9	6,585.9	103.3	132.1	-89.42	1,276.6	1,748.1	1,749.8	1,514.4	235.46	7.431	
10,433.0	6,593.5	6,585.5	6,585.5	104.2	132.1	-89.40	1,276.6	1,748.1	1,770.4	1,534.1	236.36	7.490	
10,500.0	6,592.6	6,584.6	6,584.6	106.1	132.1	-89.37	1,276.6	1,748.1	1,813.3	1,575.1	238.17	7.613	
10,531.5	6,592.2	6,584.2	6,584.2	106.9	132.1	-89.35	1,276.6	1,748.1	1,833.9	1,594.9	239.02	7.672	
10,600.0	6,591.3	6,583.3	6,583.3	108.8	132.1	-89.31	1,276.6	1,748.1	1,879.9	1,639.0	240.88	7.804	
10,629.9	6,590.9	6,582.9	6,582.9	109.6	132.1	-89.30	1,276.6	1,748.1	1,900.4	1,658.7	241.69	7.863	
10,700.0	6,590.0	6,582.0	6,582.0	111.6	132.1	-89.26	1,276.6	1,748.1	1,949.3	1,705.7	243.59	8.002	
10,728.3	6,589.6	6,581.6	6,581.6	112.3	132.0	-89.24	1,276.6	1,748.1	1,969.5	1,725.1	244.36	8.060	
10,800.0	6,588.7	6,580.7	6,580.7	114.3	132.0	-89.20	1,276.6	1,748.1	2,021.4	1,775.1	246.31	8.207	
10,826.7	6,588.4	6,580.4	6,580.4	115.0	132.0	-89.19	1,276.6	1,748.1	2,041.0	1,794.0	247.03	8.262	
10,900.0	6,587.4	6,579.4	6,579.4	117.0	132.0	-89.15	1,276.6	1,748.1	2,095.7	1,846.7	249.02	8.416	
10,925.2	6,587.1	6,579.1	6,579.1	117.7	132.0	-89.14	1,276.6	1,748.1	2,114.7	1,865.0	249.71	8.469	
11,000.0	6,586.1	6,578.1	6,578.1	119.8	132.0	-89.10	1,276.6	1,748.1	2,172.1	1,920.3	251.75	8.628	
11,023.6	6,585.8	6,577.8	6,577.8	120.4	132.0	-89.08	1,276.6	1,748.1	2,190.4	1,938.0	252.39	8.679	
11,100.0	6,584.8	6,576.8	6,576.8	122.5	132.0	-89.04	1,276.6	1,748.1	2,250.3	1,995.8	254.47	8.843	
11,122.0	6,584.5	6,576.5	6,576.5	123.2	131.9	-89.03	1,276.6	1,748.1	2,267.8	2,012.7	255.07	8.891	
11,200.0	6,583.5	6,575.5	6,575.5	125.3	131.9	-88.99	1,276.6	1,748.1	2,330.2	2,073.0	257.19	9.060	
11,220.4	6,583.3	6,575.3	6,575.3	125.9	131.9	-88.98	1,276.6	1,748.1	2,346.7	2,089.0	257.75	9.105	
11,300.0	6,582.2	6,574.2	6,574.2	128.1	131.9	-88.93	1,276.6	1,748.1	2,411.6	2,151.7	259.92	9.278	
11,318.9	6,582.0	6,574.0	6,574.0	128.6	131.9	-88.92	1,276.6	1,748.1	2,427.1	2,166.7	260.44	9.320	
11,400.0	6,580.9	6,572.9	6,572.9	130.8	131.9	-88.88	1,276.6	1,748.1	2,494.4	2,231.7	262.65	9.497	
11,417.3	6,580.7	6,572.7	6,572.7	131.3	131.9	-88.87	1,276.6	1,748.1	2,508.8	2,245.7	263.12	9.535	
11,500.0	6,579.7	6,571.7	6,571.7	133.6	131.8	-88.82	1,276.6	1,748.1	2,578.3	2,313.0	265.38	9.716	
11,515.7	6,579.4	6,571.4	6,571.4	134.0	131.8	-88.82	1,276.6	1,748.1	2,591.7	2,325.8	265.81	9.750	
11,600.0	6,578.4	6,570.4	6,570.4	136.3	131.8	-88.77	1,276.6	1,748.1	2,663.4	2,395.3	268.11	9.934	
11,614.1	6,578.2	6,570.2	6,570.2	136.7	131.8	-88.76	1,276.6	1,748.1	2,675.6	2,407.1	268.50	9.965	
11,700.0	6,577.1	6,569.1	6,569.1	139.1	131.8	-88.72	1,276.6	1,748.1	2,749.5	2,478.7	270.85	10.151	
11,712.6	6,576.9	6,568.9	6,568.9	139.5	131.8	-88.71	1,276.6	1,748.1	2,760.4	2,489.2	271.19	10.179	
11,800.0	6,575.8	6,567.8	6,567.8	141.9	131.8	-88.66	1,276.6	1,748.1	2,836.5	2,562.9	273.59	10.368	
11,811.0	6,575.6	6,567.6	6,567.6	142.2	131.8	-88.66	1,276.6	1,748.1	2,846.1	2,572.3	273.89	10.392	
11,858.8	6,575.0	6,567.0	6,567.0	143.5	131.8	-88.63	1,276.6	1,748.1	2,888.0	2,612.8	275.19	10.495	
11,859.3	6,575.0	6,567.0	6,567.0	143.5	131.8	-88.63	1,276.6	1,748.1	2,888.5	2,613.3	275.20	10.496	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	88.68	38.7	1,684.4	1,684.9				
98.4	98.4	86.2	86.2	0.1	0.0	88.69	38.5	1,684.5	1,684.9	1,684.8	0.10	N/A	
100.0	100.0	87.7	87.7	0.1	0.0	88.69	38.5	1,684.5	1,684.9	1,684.8	0.10	N/A	
196.8	196.8	183.8	183.8	0.3	0.1	88.70	38.2	1,684.7	1,685.2	1,684.8	0.39	4,314.618	
200.0	200.0	186.9	186.9	0.3	0.1	88.70	38.2	1,684.7	1,685.2	1,684.8	0.40	4,208.033	
295.3	295.3	282.3	282.3	0.5	0.2	88.71	38.0	1,685.0	1,685.4	1,684.6	0.74	2,272.682	
300.0	300.0	287.0	287.0	0.5	0.2	88.71	37.9	1,685.0	1,685.4	1,684.6	0.76	2,221.038	
393.7	393.7	377.4	377.4	0.8	0.3	88.73	37.5	1,685.3	1,685.7	1,684.6	1.05	1,602.078	
400.0	400.0	383.4	383.4	0.8	0.3	88.73	37.4	1,685.3	1,685.7	1,684.7	1.07	1,573.399	
492.1	492.1	474.5	474.5	1.0	0.4	88.76	36.4	1,685.8	1,686.2	1,684.8	1.34	1,254.434	
500.0	500.0	482.4	482.3	1.0	0.4	88.77	36.3	1,685.8	1,686.2	1,684.9	1.37	1,233.215	
590.5	590.5	574.1	574.0	1.2	0.4	88.80	35.2	1,686.3	1,686.7	1,685.0	1.63	1,036.088	
600.0	600.0	583.7	583.6	1.2	0.4	88.81	35.1	1,686.3	1,686.7	1,685.1	1.65	1,019.180	
689.0	689.0	671.1	671.1	1.4	0.5	88.85	33.7	1,686.8	1,687.1	1,685.2	1.90	885.995	
700.0	700.0	681.9	681.8	1.4	0.5	88.86	33.6	1,686.8	1,687.2	1,685.2	1.93	871.952	
787.4	787.4	769.2	769.2	1.6	0.5	88.91	32.2	1,687.3	1,687.7	1,685.5	2.18	775.245	
800.0	800.0	781.9	781.9	1.7	0.6	88.92	32.0	1,687.4	1,687.7	1,685.5	2.21	763.071	
885.8	885.8	867.2	867.1	1.9	0.6	88.96	30.5	1,687.9	1,688.2	1,685.8	2.45	690.056	
900.0	900.0	881.2	881.1	1.9	0.6	88.97	30.3	1,688.0	1,688.3	1,685.8	2.49	679.356	
984.2	984.2	964.7	964.7	2.1	0.6	89.02	28.9	1,688.5	1,688.8	1,686.1	2.71	622.399	
1,000.0	1,000.0	980.4	980.3	2.1	0.7	89.03	28.6	1,688.6	1,688.9	1,686.1	2.76	612.818	
1,082.7	1,082.7	1,063.1	1,063.0	2.3	0.7	89.07	27.3	1,689.2	1,689.4	1,686.5	2.98	567.195	
1,100.0	1,100.0	1,080.5	1,080.4	2.3	0.7	89.08	27.0	1,689.3	1,689.5	1,686.5	3.03	558.496	
1,181.1	1,181.1	1,160.1	1,160.0	2.5	0.7	89.12	25.8	1,689.8	1,690.1	1,686.8	3.24	521.412	
1,200.0	1,200.0	1,178.5	1,178.4	2.6	0.7	89.13	25.6	1,690.0	1,690.2	1,686.9	3.29	513.496	
1,279.5	1,279.5	1,254.5	1,254.4	2.7	0.8	-175.64	24.5	1,690.6	1,692.0	1,688.5	3.44	491.288	
1,300.0	1,300.0	1,273.9	1,273.8	2.8	0.8	-175.63	24.2	1,690.8	1,692.8	1,689.3	3.50	484.331	
1,377.9	1,377.8	1,349.5	1,349.3	2.9	0.8	-175.59	23.1	1,691.7	1,697.5	1,693.8	3.68	460.721	
1,400.0	1,399.8	1,371.1	1,370.9	3.0	0.8	-175.58	22.8	1,691.9	1,699.2	1,695.4	3.74	454.562	
1,476.4	1,475.9	1,446.7	1,446.5	3.1	0.9	-175.55	21.7	1,692.8	1,706.4	1,702.5	3.93	434.284	
1,500.0	1,499.5	1,470.1	1,470.0	3.2	0.9	-175.54	21.4	1,693.1	1,709.0	1,705.0	3.99	428.526	
1,574.8	1,573.7	1,544.8	1,544.6	3.4	0.9	-175.51	20.3	1,694.0	1,718.7	1,714.5	4.18	411.214	
1,600.0	1,598.7	1,570.0	1,569.8	3.4	0.9	-175.50	19.9	1,694.3	1,722.4	1,718.1	4.24	405.861	
1,673.2	1,671.1	1,646.1	1,645.9	3.6	0.9	-175.48	18.8	1,695.2	1,734.2	1,729.8	4.43	391.073	
1,700.0	1,697.5	1,674.6	1,674.4	3.7	0.9	-175.47	18.4	1,695.4	1,739.0	1,734.5	4.50	386.109	
1,771.6	1,767.9	1,748.5	1,748.3	3.9	1.0	-175.45	17.5	1,695.9	1,752.7	1,748.0	4.69	373.483	
1,800.0	1,795.6	1,777.2	1,777.0	4.0	1.0	-175.44	17.1	1,696.1	1,758.6	1,753.9	4.77	368.912	
1,870.1	1,864.0	1,848.2	1,848.0	4.3	1.0	-175.43	16.3	1,696.5	1,774.3	1,769.4	4.96	358.004	
1,900.0	1,893.1	1,878.5	1,878.3	4.4	1.0	-175.43	15.9	1,696.6	1,781.5	1,776.4	5.04	353.729	
1,968.5	1,959.3	1,948.1	1,947.9	4.6	1.1	-175.42	15.1	1,696.7	1,798.9	1,793.7	5.23	344.288	
1,992.4	1,982.4	1,972.4	1,972.2	4.7	1.1	-175.42	14.9	1,696.8	1,805.4	1,800.1	5.29	341.257	
2,000.0	1,989.6	1,980.1	1,979.9	4.8	1.1	-175.42	14.8	1,696.8	1,807.5	1,802.1	5.31	340.370	
2,066.9	2,054.0	2,050.3	2,050.1	5.1	1.1	-175.45	14.3	1,696.7	1,825.6	1,820.1	5.49	332.529	
2,100.0	2,085.8	2,085.5	2,085.3	5.2	1.1	-175.47	14.1	1,696.6	1,834.5	1,828.9	5.57	329.272	
2,165.3	2,148.7	2,156.4	2,156.2	5.5	1.1	-175.51	13.8	1,696.1	1,851.9	1,846.1	5.74	322.826	
2,200.0	2,182.0	2,194.3	2,194.1	5.7	1.1	-175.54	13.8	1,695.7	1,861.0	1,855.1	5.83	319.108	
2,263.8	2,243.4	2,263.9	2,263.7	6.0	1.1	-175.59	13.9	1,694.8	1,877.5	1,871.5	6.00	312.803	
2,300.0	2,278.2	2,303.2	2,303.0	6.2	1.1	-175.62	14.1	1,694.1	1,886.8	1,880.7	6.10	309.304	
2,362.2	2,338.1	2,365.0	2,364.8	6.5	1.1	-175.67	14.4	1,693.0	1,902.6	1,896.4	6.27	303.376	
2,400.0	2,374.4	2,402.5	2,402.3	6.7	1.1	-175.70	14.6	1,692.3	1,912.2	1,905.9	6.38	299.893	
2,460.6	2,432.8	2,460.1	2,459.9	7.0	1.1	-175.75	15.0	1,691.2	1,927.6	1,921.1	6.55	294.368	
2,500.0	2,470.6	2,497.6	2,497.3	7.2	1.1	-175.78	15.3	1,690.5	1,937.7	1,931.0	6.66	290.917	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,527.4	2,552.4	2,552.1	7.6	1.2	-175.83	15.7	1,689.5	1,952.7	1,945.9	6.83	285.846	
2,600.0	2,566.8	2,590.3	2,590.1	7.8	1.2	-175.86	15.9	1,688.8	1,963.2	1,956.3	6.95	282.469	
2,657.5	2,622.1	2,645.8	2,645.5	8.1	1.2	-175.91	16.4	1,687.9	1,978.0	1,970.9	7.12	277.852	
2,700.0	2,663.0	2,687.1	2,686.8	8.3	1.2	-175.94	16.7	1,687.2	1,988.9	1,981.7	7.24	274.561	
2,755.9	2,716.8	2,738.7	2,738.4	8.6	1.2	-175.98	17.1	1,686.4	2,003.3	1,995.9	7.41	270.370	
2,800.0	2,759.2	2,778.7	2,778.4	8.9	1.2	-176.01	17.4	1,685.8	2,014.7	2,007.1	7.54	267.197	
2,854.3	2,811.5	2,828.0	2,827.6	9.2	1.2	-176.05	17.8	1,685.2	2,028.8	2,021.1	7.70	263.385	
2,900.0	2,855.4	2,869.4	2,869.0	9.4	1.2	-176.08	18.1	1,684.7	2,040.7	2,032.9	7.84	260.292	
2,952.7	2,906.2	2,916.5	2,916.1	9.7	1.2	-176.12	18.4	1,684.2	2,054.6	2,046.6	8.00	256.831	
3,000.0	2,951.6	2,957.5	2,957.2	10.0	1.2	-176.15	18.7	1,683.8	2,067.1	2,058.9	8.14	253.848	
3,051.2	3,000.9	3,000.0	2,999.7	10.3	1.2	-176.18	18.9	1,683.6	2,080.7	2,072.4	8.30	250.750	
3,100.0	3,047.8	3,042.1	3,041.8	10.5	1.2	-176.21	19.2	1,683.4	2,093.9	2,085.4	8.45	247.908	
3,149.6	3,095.5	3,083.0	3,082.7	10.8	1.2	-176.23	19.4	1,683.4	2,107.4	2,098.8	8.60	245.160	
3,200.0	3,144.0	3,122.6	3,122.2	11.1	1.2	-176.26	19.6	1,683.6	2,121.3	2,112.6	8.75	242.452	
3,248.0	3,190.2	3,159.0	3,158.6	11.4	1.2	-176.29	19.8	1,683.9	2,134.8	2,125.9	8.90	239.987	
3,300.0	3,240.2	3,200.0	3,199.7	11.7	1.2	-176.32	20.2	1,684.4	2,149.6	2,140.6	9.06	237.285	
3,346.4	3,284.9	3,236.9	3,236.5	11.9	1.2	-176.34	20.6	1,685.0	2,163.0	2,153.8	9.20	235.016	
3,400.0	3,336.4	3,281.6	3,281.2	12.2	1.2	-176.38	21.1	1,685.9	2,178.6	2,169.3	9.37	232.470	
3,444.9	3,379.6	3,318.6	3,318.2	12.5	1.2	-176.41	21.5	1,686.7	2,191.8	2,182.3	9.51	230.417	
3,500.0	3,432.6	3,363.4	3,363.0	12.8	1.2	-176.44	22.1	1,687.8	2,208.2	2,198.5	9.68	228.012	
3,543.3	3,474.3	3,400.0	3,399.6	13.1	1.2	-176.47	22.5	1,688.9	2,221.2	2,211.4	9.82	226.173	
3,600.0	3,528.8	3,449.7	3,449.2	13.4	1.2	-176.51	23.2	1,690.4	2,238.4	2,228.4	10.00	223.859	
3,641.7	3,569.0	3,487.4	3,487.0	13.6	1.3	-176.54	23.8	1,691.6	2,251.0	2,240.9	10.13	222.195	
3,700.0	3,625.0	3,542.0	3,541.5	14.0	1.3	-176.58	24.6	1,693.3	2,268.7	2,258.4	10.31	219.962	
3,740.1	3,663.6	3,580.0	3,579.5	14.2	1.3	-176.62	25.2	1,694.6	2,281.0	2,270.5	10.44	218.468	
3,800.0	3,721.2	3,635.7	3,635.2	14.5	1.3	-176.66	26.1	1,696.4	2,299.2	2,288.5	10.63	216.310	
3,838.6	3,758.3	3,671.3	3,670.8	14.8	1.3	-176.69	26.7	1,697.6	2,310.9	2,300.2	10.75	214.958	
3,900.0	3,817.4	3,731.9	3,731.2	15.1	1.3	-176.74	27.8	1,699.6	2,329.7	2,318.7	10.95	212.854	
3,937.0	3,853.0	3,770.7	3,770.1	15.3	1.3	-176.77	28.4	1,700.8	2,340.9	2,329.9	11.06	211.604	
4,000.0	3,913.6	3,849.0	3,848.3	15.7	1.3	-176.83	29.7	1,703.0	2,359.8	2,348.6	11.26	209.516	
4,035.4	3,947.7	3,898.6	3,897.9	15.9	1.3	-176.87	30.4	1,704.0	2,370.2	2,358.8	11.38	208.339	
4,100.0	4,009.8	3,970.0	3,969.3	16.3	1.3	-176.91	31.2	1,705.1	2,388.8	2,377.2	11.58	206.304	
4,133.8	4,042.4	4,006.7	4,006.0	16.5	1.3	-176.94	31.6	1,705.5	2,398.4	2,386.7	11.69	205.246	
4,200.0	4,106.0	4,073.5	4,072.7	16.8	1.3	-176.98	32.3	1,706.2	2,417.1	2,405.2	11.90	203.199	
4,232.3	4,137.1	4,105.9	4,105.1	17.0	1.4	-177.00	32.7	1,706.5	2,426.2	2,414.2	12.00	202.218	
4,300.0	4,202.2	4,172.0	4,171.3	17.4	1.4	-177.04	33.3	1,707.1	2,445.3	2,433.1	12.21	200.197	
4,330.7	4,231.7	4,202.1	4,201.4	17.6	1.4	-177.05	33.6	1,707.3	2,453.9	2,441.6	12.31	199.300	
4,400.0	4,298.4	4,272.4	4,271.7	18.0	1.4	-177.09	34.2	1,707.9	2,473.4	2,460.8	12.54	197.310	
4,429.1	4,326.4	4,301.9	4,301.1	18.2	1.4	-177.11	34.5	1,708.0	2,481.5	2,468.9	12.63	196.490	
4,500.0	4,394.6	4,369.3	4,368.5	18.6	1.4	-177.14	35.1	1,708.5	2,501.3	2,488.4	12.86	194.553	
4,527.5	4,421.1	4,395.5	4,394.7	18.7	1.4	-177.16	35.3	1,708.6	2,509.0	2,496.0	12.95	193.818	
4,600.0	4,490.8	4,464.1	4,463.3	19.2	1.4	-177.19	35.8	1,709.1	2,529.2	2,516.1	13.18	191.912	
4,626.0	4,515.8	4,488.7	4,487.9	19.3	1.4	-177.20	35.9	1,709.3	2,536.5	2,523.2	13.26	191.244	
4,700.0	4,587.0	4,554.5	4,553.7	19.8	1.4	-177.23	36.4	1,709.8	2,557.3	2,543.8	13.50	189.392	
4,724.4	4,610.5	4,575.9	4,575.1	19.9	1.4	-177.24	36.5	1,710.0	2,564.2	2,550.6	13.58	188.797	
4,800.0	4,683.2	4,638.2	4,637.4	20.3	1.5	-177.26	36.7	1,710.8	2,585.7	2,571.8	13.83	187.002	
4,822.8	4,705.2	4,656.3	4,655.5	20.5	1.5	-177.27	36.7	1,711.0	2,592.2	2,578.3	13.90	186.475	
4,900.0	4,779.4	4,719.0	4,718.2	20.9	1.5	-177.29	36.8	1,712.2	2,614.6	2,600.5	14.15	184.736	
4,921.2	4,799.8	4,737.3	4,736.6	21.0	1.5	-177.29	36.7	1,712.5	2,620.8	2,606.6	14.22	184.262	
5,000.0	4,875.6	4,806.3	4,805.5	21.5	1.5	-177.31	36.6	1,714.1	2,644.0	2,629.5	14.48	182.550	
5,019.7	4,894.5	4,826.5	4,825.6	21.6	1.5	-177.31	36.6	1,714.5	2,649.8	2,635.2	14.55	182.124	
5,100.0	4,971.8	4,909.3	4,908.4	22.1	1.5	-177.32	36.1	1,716.3	2,673.4	2,658.5	14.82	180.418	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,118.1	4,989.2	4,928.5	4,927.7	22.2	1.5	-177.33	36.0	1,716.7	2,678.6	2,663.8	14.88	180.043	
5,200.0	5,068.0	5,016.3	5,015.5	22.7	1.5	-177.33	35.4	1,718.3	2,702.4	2,687.3	15.15	178.369	
5,216.5	5,083.9	5,034.8	5,033.9	22.8	1.6	-177.34	35.2	1,718.6	2,707.2	2,692.0	15.21	178.035	
5,240.0	5,106.5	5,061.1	5,060.2	22.9	1.6	-177.34	34.9	1,719.0	2,713.9	2,698.6	15.28	177.562	
5,300.0	5,164.4	5,125.1	5,124.3	23.2	1.6	-177.35	34.1	1,719.8	2,730.4	2,714.9	15.42	177.032	
5,314.9	5,178.8	5,140.1	5,139.2	23.3	1.6	-177.35	33.9	1,720.0	2,734.3	2,718.8	15.45	176.950	
5,400.0	5,261.5	5,224.3	5,223.4	23.6	1.6	-177.36	32.6	1,721.0	2,755.0	2,739.4	15.61	176.454	
5,413.4	5,274.6	5,237.2	5,236.3	23.6	1.6	-177.36	32.4	1,721.1	2,758.0	2,742.4	15.64	176.390	
5,500.0	5,359.5	5,322.2	5,321.3	23.9	1.6	-177.36	30.8	1,722.1	2,776.2	2,760.4	15.78	175.933	
5,511.8	5,371.1	5,334.3	5,333.4	24.0	1.6	-177.36	30.6	1,722.3	2,778.5	2,762.7	15.80	175.880	
5,600.0	5,458.0	5,423.2	5,422.3	24.2	1.6	-177.36	28.9	1,723.2	2,793.9	2,778.0	15.93	175.440	
5,610.2	5,468.2	5,432.9	5,432.0	24.3	1.6	-177.36	28.7	1,723.3	2,795.5	2,779.6	15.94	175.398	
5,700.0	5,557.2	5,516.5	5,515.5	24.5	1.7	-177.35	27.4	1,724.2	2,808.2	2,792.2	16.05	174.974	
5,708.6	5,565.7	5,523.9	5,523.0	24.5	1.7	-177.35	27.3	1,724.3	2,809.3	2,793.3	16.06	174.939	
5,800.0	5,656.7	5,600.0	5,599.0	24.7	1.7	-177.35	26.4	1,725.4	2,819.5	2,803.3	16.16	174.509	
5,807.1	5,663.7	5,609.4	5,608.4	24.7	1.7	-177.35	26.3	1,725.6	2,820.1	2,804.0	16.16	174.468	
5,900.0	5,756.5	5,694.7	5,693.7	24.9	1.7	-177.34	25.4	1,727.1	2,827.6	2,811.3	16.25	173.951	
5,905.5	5,761.9	5,700.0	5,699.0	24.9	1.7	-177.34	25.3	1,727.2	2,827.9	2,811.7	16.26	173.922	
6,000.0	5,856.4	5,777.9	5,776.9	25.0	1.7	-177.33	24.8	1,729.0	2,832.6	2,816.3	16.34	173.352	
6,003.9	5,860.3	5,781.1	5,780.1	25.0	1.7	-177.33	24.7	1,729.1	2,832.8	2,816.4	16.34	173.326	
6,032.5	5,888.9	5,806.1	5,805.1	25.0	1.7	87.48	24.7	1,729.7	2,833.7	2,807.0	26.62	106.452	
6,062.5	5,918.9	5,837.8	5,836.7	25.1	1.8	87.48	24.6	1,730.6	2,834.4	2,807.8	26.65	106.340	
6,100.0	5,956.4	5,877.4	5,876.4	25.1	1.8	-2.52	24.5	1,731.6	2,834.4	2,818.1	16.35	173.307	
6,102.3	5,958.7	5,879.9	5,878.8	25.1	1.8	-2.52	24.5	1,731.6	2,834.3	2,818.0	16.35	173.353	
6,150.0	6,006.2	5,928.8	5,927.8	25.1	1.8	-2.53	24.4	1,732.8	2,831.3	2,815.0	16.27	174.069	
6,200.0	6,055.6	5,978.9	5,977.8	25.1	1.8	-2.56	24.3	1,734.1	2,824.7	2,808.5	16.18	174.549	
6,200.8	6,056.3	5,979.7	5,978.6	25.1	1.8	-2.56	24.3	1,734.1	2,824.6	2,808.4	16.18	174.556	
6,250.0	6,104.3	6,030.5	6,029.4	25.0	1.8	-2.60	24.1	1,735.3	2,814.6	2,798.5	16.09	174.882	
6,299.2	6,151.3	6,081.8	6,080.7	24.9	1.8	-2.66	23.7	1,736.5	2,801.4	2,785.4	15.99	175.193	
6,300.0	6,152.1	6,082.6	6,081.5	24.9	1.8	-2.66	23.7	1,736.5	2,801.1	2,785.1	15.99	175.197	
6,350.0	6,198.7	6,131.0	6,129.8	24.8	1.8	-2.72	22.9	1,737.6	2,784.2	2,768.4	15.85	175.625	
6,397.6	6,241.9	6,174.5	6,173.4	24.7	1.8	-2.80	22.0	1,738.6	2,765.1	2,749.4	15.69	176.196	
6,400.0	6,244.1	6,176.6	6,175.5	24.7	1.8	-2.81	21.9	1,738.6	2,764.1	2,748.4	15.68	176.227	
6,450.0	6,287.8	6,218.1	6,216.9	24.5	1.9	-2.91	20.7	1,739.6	2,740.8	2,725.4	15.48	177.048	
6,496.0	6,326.5	6,252.2	6,251.0	24.4	1.9	-3.02	19.6	1,740.4	2,716.8	2,701.5	15.26	178.005	
6,500.0	6,329.7	6,255.1	6,253.9	24.4	1.9	-3.03	19.5	1,740.5	2,714.6	2,699.4	15.24	178.090	
6,550.0	6,369.6	6,290.5	6,289.3	24.3	1.9	-3.17	18.1	1,741.5	2,685.6	2,670.6	14.98	179.272	
6,594.5	6,403.3	6,317.9	6,316.6	24.2	1.9	-3.33	16.8	1,742.3	2,657.5	2,642.8	14.73	180.400	
6,600.0	6,407.3	6,321.1	6,319.8	24.2	1.9	-3.35	16.7	1,742.4	2,653.9	2,639.2	14.70	180.538	
6,650.0	6,442.7	6,348.8	6,347.4	24.1	1.9	-3.57	15.2	1,743.3	2,619.7	2,605.3	14.42	181.704	
6,692.9	6,471.0	6,371.2	6,369.8	24.0	1.9	-3.79	13.9	1,744.2	2,588.5	2,574.3	14.19	182.426	
6,700.0	6,475.5	6,374.8	6,373.4	24.0	1.9	-3.84	13.7	1,744.3	2,583.2	2,569.0	14.15	182.508	
6,750.0	6,505.6	6,400.0	6,398.5	24.0	1.9	-4.17	12.0	1,745.3	2,544.4	2,530.5	13.93	182.600	
6,791.3	6,528.3	6,418.9	6,417.3	24.0	1.9	-4.51	10.7	1,746.1	2,510.9	2,497.1	13.81	181.850	
6,800.0	6,532.8	6,422.9	6,421.3	24.0	1.9	-4.59	10.4	1,746.3	2,503.7	2,489.9	13.79	181.577	
6,850.0	6,557.0	6,444.6	6,442.9	24.1	1.9	-5.14	8.7	1,747.3	2,461.0	2,447.3	13.75	178.965	
6,889.7	6,574.1	6,460.1	6,458.4	24.2	1.9	-5.71	7.5	1,748.0	2,426.0	2,412.1	13.82	175.481	
6,900.0	6,578.1	6,463.8	6,462.1	24.3	1.9	-5.88	7.2	1,748.2	2,416.7	2,402.9	13.86	174.378	
6,950.0	6,596.1	6,480.6	6,478.8	24.5	1.9	-6.91	5.8	1,749.0	2,371.0	2,356.8	14.15	167.569	
6,988.2	6,607.5	6,491.7	6,489.8	24.7	1.9	-8.01	4.8	1,749.5	2,335.2	2,320.6	14.52	160.798	
7,000.0	6,610.7	6,500.0	6,498.1	24.8	1.9	-8.46	4.1	1,750.0	2,323.9	2,309.3	14.68	158.325	
7,050.0	6,621.9	6,500.0	6,498.1	25.1	1.9	-10.80	4.1	1,750.0	2,275.9	2,260.4	15.48	147.023	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,086.6	6,628.0	6,512.6	6,510.6	25.4	1.9	-13.75	3.0	1,750.6	2,240.1	2,223.7	16.44	136.260	
7,100.0	6,629.7	6,514.6	6,512.6	25.6	1.9	-15.22	2.8	1,750.7	2,227.0	2,210.1	16.90	131.782	
7,150.0	6,634.1	6,520.3	6,518.3	26.0	1.9	-24.92	2.3	1,751.0	2,177.5	2,157.7	19.79	110.054	
7,185.0	6,635.1	6,522.6	6,520.6	26.4	1.9	-42.18	2.1	1,751.1	2,142.6	2,118.4	24.25	88.370	
7,196.6	6,635.0	6,523.1	6,521.0	26.5	1.9	-52.67	2.0	1,751.2	2,131.1	2,104.8	26.27	81.111	
7,200.0	6,635.0	6,523.2	6,521.2	26.6	1.9	-52.71	2.0	1,751.2	2,127.7	2,101.4	26.31	80.865	
7,283.4	6,633.9	6,526.0	6,524.0	27.6	1.9	-53.65	1.8	1,751.3	2,044.4	2,017.1	27.32	74.838	
7,300.0	6,633.7	6,526.6	6,524.5	27.8	1.9	-53.85	1.7	1,751.4	2,027.9	2,000.3	27.52	73.688	
7,381.9	6,632.6	6,529.4	6,527.3	29.0	1.9	-54.82	1.5	1,751.5	1,946.2	1,917.5	28.67	67.873	
7,400.0	6,632.4	6,530.0	6,528.0	29.2	1.9	-55.05	1.4	1,751.5	1,928.1	1,899.1	28.93	66.641	
7,480.3	6,631.4	6,532.8	6,530.8	30.5	2.0	-56.06	1.1	1,751.7	1,847.9	1,817.7	30.21	61.162	
7,500.0	6,631.1	6,533.5	6,531.4	30.9	2.0	-56.32	1.1	1,751.7	1,828.3	1,797.8	30.53	59.881	
7,578.7	6,630.1	6,536.3	6,534.2	32.3	2.0	-57.36	0.8	1,751.9	1,749.7	1,717.8	31.92	54.812	
7,600.0	6,629.8	6,537.1	6,535.0	32.7	2.0	-57.65	0.8	1,751.9	1,728.5	1,696.2	32.30	53.510	
7,677.1	6,628.9	6,539.9	6,537.8	34.1	2.0	-58.73	0.5	1,752.1	1,651.6	1,617.8	33.78	48.885	
7,700.0	6,628.6	6,540.7	6,538.6	34.6	2.0	-59.06	0.4	1,752.1	1,628.8	1,594.5	34.23	47.584	
7,775.6	6,627.6	6,543.5	6,541.4	36.1	2.0	-60.18	0.2	1,752.3	1,553.4	1,517.6	35.79	43.407	
7,800.0	6,627.3	6,544.4	6,542.3	36.6	2.0	-60.55	0.1	1,752.3	1,529.0	1,492.7	36.30	42.126	
7,874.0	6,626.3	6,547.2	6,545.1	38.2	2.0	-61.71	-0.2	1,752.5	1,455.2	1,417.3	37.92	38.380	
7,900.0	6,626.0	6,548.2	6,546.0	38.8	2.0	-62.13	-0.3	1,752.5	1,429.3	1,390.8	38.49	37.133	
7,972.4	6,625.1	6,551.0	6,548.8	40.4	2.0	-63.32	-0.5	1,752.7	1,357.1	1,317.0	40.16	33.791	
8,000.0	6,624.7	6,552.1	6,549.8	41.0	2.0	-63.79	-0.6	1,752.8	1,329.7	1,288.9	40.81	32.585	
8,070.8	6,623.8	6,554.8	6,552.6	42.6	2.0	-65.02	-0.9	1,752.9	1,259.1	1,216.5	42.51	29.616	
8,100.0	6,623.4	6,556.0	6,553.7	43.3	2.0	-65.54	-1.0	1,753.0	1,230.0	1,186.8	43.22	28.458	
8,169.3	6,622.6	6,558.7	6,556.5	44.9	2.0	-66.81	-1.2	1,753.1	1,161.0	1,116.1	44.96	25.825	
8,200.0	6,622.2	6,559.9	6,557.7	45.6	2.0	-67.39	-1.4	1,753.2	1,130.4	1,084.7	45.73	24.718	
8,267.7	6,621.3	6,562.7	6,560.4	47.3	2.0	-68.70	-1.6	1,753.4	1,063.1	1,015.6	47.48	22.388	
8,300.0	6,620.9	6,564.0	6,561.7	48.0	2.0	-69.35	-1.7	1,753.4	1,030.9	982.6	48.33	21.333	
8,366.1	6,620.0	6,566.7	6,564.4	49.7	2.0	-70.70	-2.0	1,753.6	965.2	915.1	50.08	19.272	
8,400.0	6,619.6	6,568.1	6,565.8	50.5	2.0	-71.41	-2.1	1,753.7	931.5	880.5	50.98	18.270	
8,464.5	6,618.8	6,570.8	6,568.5	52.1	2.0	-72.79	-2.4	1,753.8	867.4	814.6	52.73	16.448	
8,500.0	6,618.3	6,572.3	6,570.0	53.0	2.0	-73.57	-2.5	1,753.9	832.2	778.5	53.70	15.498	
8,563.0	6,617.5	6,575.0	6,572.7	54.5	2.0	-74.99	-2.8	1,754.1	769.7	714.3	55.43	13.887	
8,600.0	6,617.0	6,576.6	6,574.3	55.5	2.0	-75.85	-2.9	1,754.2	733.0	676.6	56.45	12.986	
8,661.4	6,616.3	6,579.3	6,576.9	57.0	2.0	-77.30	-3.2	1,754.3	672.2	614.1	58.15	11.561	
8,700.0	6,615.8	6,581.0	6,578.6	58.0	2.0	-78.24	-3.3	1,754.4	634.1	574.9	59.21	10.708	
8,759.8	6,615.0	6,583.6	6,581.2	59.5	2.0	-79.72	-3.6	1,754.6	575.0	514.2	60.88	9.446	
8,800.0	6,614.5	6,585.4	6,583.0	60.6	2.0	-80.74	-3.8	1,754.7	535.5	473.5	61.99	8.639	
8,858.2	6,613.7	6,588.1	6,585.6	62.1	2.0	-82.25	-4.0	1,754.9	478.3	414.7	63.60	7.521	
8,900.0	6,613.2	6,590.0	6,587.5	63.2	2.0	-83.35	-4.2	1,755.0	437.5	372.8	64.74	6.758	
8,956.7	6,612.5	6,592.6	6,590.1	64.6	2.0	-84.88	-4.5	1,755.1	382.4	316.2	66.29	5.769	
9,000.0	6,611.9	6,594.6	6,592.1	65.8	2.0	-86.07	-4.6	1,755.3	340.7	273.2	67.46	5.050	
9,055.1	6,611.2	6,597.2	6,594.7	67.2	2.0	-87.60	-4.9	1,755.4	288.2	219.2	68.95	4.180	
9,100.0	6,610.6	6,600.0	6,597.5	68.4	2.0	-89.27	-5.2	1,755.6	246.2	176.1	70.14	3.511	
9,153.5	6,609.9	6,601.9	6,599.4	69.8	2.0	-90.44	-5.4	1,755.7	197.9	126.4	71.54	2.767	
9,200.0	6,609.3	6,604.2	6,601.7	71.0	2.0	-91.81	-5.6	1,755.8	158.6	85.9	72.73	2.181	
9,251.9	6,608.7	6,606.8	6,604.2	72.4	2.0	-93.35	-5.8	1,756.0	120.9	46.9	74.05	1.633	
9,300.0	6,608.1	6,609.1	6,606.6	73.7	2.0	-94.79	-6.1	1,756.1	98.3	23.0	75.23	1.306 Level 3	
9,327.8	6,607.7	6,610.5	6,607.9	74.4	2.0	-95.63	-6.2	1,756.2	94.3	18.4	75.91	1.242 Level 2, CC, ES, SF	
9,350.4	6,607.4	6,611.6	6,609.1	75.0	2.0	-96.31	-6.3	1,756.3	96.9	20.5	76.45	1.268 Level 3	
9,400.0	6,606.8	6,614.1	6,611.5	76.3	2.0	-97.81	-6.5	1,756.5	118.7	41.1	77.60	1.530	
9,448.8	6,606.1	6,616.6	6,614.0	77.6	2.0	-99.30	-6.8	1,756.6	153.3	74.6	78.70	1.948	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
9,500.0	6,605.5	6,619.2	6,616.5	79.0	2.0	-100.86	-7.0	1,756.8	196.2	116.4	79.81	2.458	
9,547.2	6,604.9	6,621.6	6,618.9	80.2	2.0	-102.31	-7.3	1,756.9	238.6	157.8	80.78	2.954	
9,600.0	6,604.2	6,624.3	6,621.6	81.7	2.0	-103.92	-7.5	1,757.1	287.8	206.0	81.81	3.518	
9,645.6	6,603.6	6,626.6	6,623.9	82.9	2.0	-105.31	-7.8	1,757.2	331.2	248.5	82.65	4.007	
9,700.0	6,602.9	6,629.4	6,626.7	84.3	2.0	-106.96	-8.1	1,757.4	383.5	299.9	83.59	4.588	
9,744.1	6,602.3	6,631.7	6,629.0	85.5	2.0	-108.30	-8.3	1,757.6	426.3	342.0	84.30	5.058	
9,800.0	6,601.6	6,634.7	6,631.9	87.0	2.0	-109.98	-8.6	1,757.7	481.0	395.8	85.12	5.650	
9,842.5	6,601.1	6,636.9	6,634.1	88.2	2.0	-111.25	-8.8	1,757.9	522.7	437.0	85.70	6.099	
9,900.0	6,600.3	6,639.9	6,637.2	89.7	2.0	-112.95	-9.1	1,758.1	579.2	492.8	86.40	6.704	
9,940.9	6,599.8	6,642.1	6,639.3	90.9	2.0	-114.15	-9.3	1,758.2	619.6	532.7	86.85	7.134	
10,000.0	6,599.0	6,645.3	6,642.5	92.5	2.0	-115.87	-9.7	1,758.4	678.0	590.5	87.43	7.755	
10,039.3	6,598.5	6,647.4	6,644.6	93.5	2.0	-117.00	-9.9	1,758.6	716.9	629.1	87.76	8.169	
10,100.0	6,597.7	6,650.7	6,647.9	95.2	2.0	-118.72	-10.2	1,758.8	777.0	688.8	88.20	8.809	
10,137.8	6,597.3	6,652.8	6,649.9	96.2	2.0	-119.77	-10.4	1,758.9	814.4	726.0	88.43	9.210	
10,200.0	6,596.5	6,656.2	6,653.3	97.9	2.0	-121.48	-10.8	1,759.1	876.2	787.5	88.74	9.874	
10,236.2	6,596.0	6,658.2	6,655.3	98.9	2.0	-122.46	-11.0	1,759.3	912.1	823.3	88.88	10.263	
10,300.0	6,595.2	6,661.8	6,658.8	100.6	2.0	-124.16	-11.4	1,759.5	975.5	886.5	89.06	10.954	
10,334.6	6,594.7	6,663.7	6,660.8	101.6	2.0	-125.07	-11.6	1,759.6	1,010.0	920.8	89.12	11.333	
10,400.0	6,593.9	6,667.4	6,664.4	103.3	2.0	-126.74	-11.9	1,759.9	1,075.0	985.8	89.17	12.055	
10,433.0	6,593.5	6,669.3	6,666.3	104.2	2.0	-127.57	-12.1	1,760.0	1,107.9	1,018.7	89.17	12.424	
10,500.0	6,592.6	6,673.1	6,670.1	106.1	2.0	-129.22	-12.5	1,760.2	1,174.5	1,085.4	89.11	13.180	
10,531.5	6,592.2	6,674.9	6,671.9	106.9	2.0	-129.98	-12.7	1,760.3	1,205.8	1,116.8	89.06	13.540	
10,600.0	6,591.3	6,678.9	6,675.8	108.8	2.0	-131.60	-13.1	1,760.6	1,274.0	1,185.2	88.89	14.332	
10,629.9	6,590.9	6,680.6	6,677.5	109.6	2.0	-132.29	-13.3	1,760.7	1,303.8	1,215.0	88.80	14.683	
10,700.0	6,590.0	6,684.7	6,681.6	111.6	2.0	-133.88	-13.8	1,761.0	1,373.7	1,285.1	88.54	15.515	
10,728.3	6,589.6	6,686.4	6,683.3	112.3	2.0	-134.50	-13.9	1,761.1	1,401.9	1,313.5	88.42	15.855	
10,800.0	6,588.7	6,690.6	6,687.5	114.3	2.0	-136.05	-14.4	1,761.4	1,473.3	1,385.2	88.07	16.728	
10,826.7	6,588.4	6,692.2	6,689.1	115.0	2.0	-136.61	-14.6	1,761.5	1,499.9	1,412.0	87.93	17.058	
10,900.0	6,587.4	6,696.6	6,693.4	117.0	2.0	-138.11	-15.0	1,761.8	1,572.9	1,485.4	87.52	17.973	
10,925.2	6,587.1	6,698.2	6,694.9	117.7	2.0	-138.62	-15.2	1,761.9	1,598.0	1,510.7	87.36	18.292	
11,000.0	6,586.1	6,702.7	6,699.5	119.8	2.0	-140.08	-15.7	1,762.2	1,672.6	1,585.7	86.89	19.251	
11,023.6	6,585.8	6,704.2	6,700.9	120.4	2.0	-140.53	-15.8	1,762.3	1,696.2	1,609.4	86.73	19.557	
11,100.0	6,584.8	6,700.0	6,696.8	122.5	2.0	-139.21	-15.4	1,762.0	1,772.3	1,682.5	89.89	19.718	
11,122.0	6,584.5	6,700.0	6,696.8	123.2	2.0	-139.21	-15.4	1,762.0	1,794.3	1,704.0	90.30	19.871	
11,200.0	6,583.5	6,700.0	6,696.8	125.3	2.0	-139.21	-15.4	1,762.0	1,872.1	1,780.3	91.77	20.401	
11,220.4	6,583.3	6,700.0	6,696.8	125.9	2.0	-139.21	-15.4	1,762.0	1,892.5	1,800.3	92.15	20.537	
11,300.0	6,582.2	6,700.0	6,696.8	128.1	2.0	-139.21	-15.4	1,762.0	1,971.9	1,878.2	93.65	21.056	
11,318.9	6,582.0	6,700.0	6,696.8	128.6	2.0	-139.21	-15.4	1,762.0	1,990.7	1,896.7	94.00	21.177	
11,400.0	6,580.9	6,700.0	6,696.8	130.8	2.0	-139.21	-15.4	1,762.0	2,071.7	1,976.1	95.53	21.686	
11,417.3	6,580.7	6,700.0	6,696.8	131.3	2.0	-139.21	-15.4	1,762.0	2,088.9	1,993.1	95.86	21.792	
11,500.0	6,579.7	6,700.0	6,696.8	133.6	2.0	-139.20	-15.4	1,762.0	2,171.5	2,074.1	97.42	22.291	
11,515.7	6,579.4	6,700.0	6,696.8	134.0	2.0	-139.20	-15.4	1,762.0	2,187.2	2,089.5	97.71	22.384	
11,600.0	6,578.4	6,700.0	6,696.8	136.3	2.0	-139.20	-15.4	1,762.0	2,271.3	2,172.0	99.30	22.873	
11,614.1	6,578.2	6,700.0	6,696.8	136.7	2.0	-139.20	-15.4	1,762.0	2,285.4	2,185.9	99.57	22.953	
11,700.0	6,577.1	6,700.0	6,696.8	139.1	2.0	-139.20	-15.4	1,762.0	2,371.1	2,270.0	101.19	23.433	
11,712.6	6,576.9	6,700.0	6,696.8	139.5	2.0	-139.20	-15.4	1,762.0	2,383.7	2,282.3	101.43	23.502	
11,800.0	6,575.8	6,700.0	6,696.8	141.9	2.0	-139.19	-15.4	1,762.0	2,471.0	2,367.9	103.08	23.972	
11,811.0	6,575.6	6,700.0	6,696.8	142.2	2.0	-139.19	-15.4	1,762.0	2,482.0	2,378.7	103.29	24.030	
11,858.8	6,575.0	6,700.0	6,696.8	143.5	2.0	-139.19	-15.4	1,762.0	2,529.7	2,425.5	104.19	24.279	
11,859.3	6,575.0	6,700.0	6,696.8	143.5	2.0	-139.19	-15.4	1,762.0	2,530.3	2,426.1	104.20	24.283	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	59.58	1,563.0	2,662.2	3,087.4				
98.4	98.4	54.4	54.4	0.1	0.1	59.58	1,563.0	2,662.2	3,087.1	3,086.9	0.24	N/A	
100.0	100.0	56.0	56.0	0.1	0.1	59.58	1,563.0	2,662.2	3,087.1	3,086.9	0.25	N/A	
196.8	196.8	152.8	152.8	0.3	1.6	59.58	1,563.0	2,662.2	3,087.1	3,085.2	1.93	1,597.062	
200.0	200.0	156.0	156.0	0.3	1.7	59.58	1,563.0	2,662.2	3,087.1	3,085.1	2.02	1,527.809	
295.3	295.3	251.3	251.3	0.5	3.9	59.58	1,563.0	2,662.2	3,087.1	3,082.7	4.42	698.145	
300.0	300.0	256.0	256.0	0.5	4.0	59.58	1,563.0	2,662.2	3,087.1	3,082.6	4.53	681.425	
393.7	393.7	349.7	349.7	0.8	5.9	59.58	1,563.0	2,662.2	3,087.1	3,080.5	6.66	463.235	
400.0	400.0	356.0	356.0	0.8	6.0	59.58	1,563.0	2,662.2	3,087.1	3,080.3	6.81	453.542	
492.1	492.1	448.1	448.1	1.0	7.9	59.58	1,563.0	2,662.2	3,087.1	3,078.2	8.88	347.496	
500.0	500.0	456.0	456.0	1.0	8.1	59.58	1,563.0	2,662.2	3,087.1	3,078.1	9.06	340.703	
590.5	590.5	546.5	546.5	1.2	9.9	59.58	1,563.0	2,662.2	3,087.1	3,076.0	11.10	278.231	
600.0	600.0	556.0	556.0	1.2	10.1	59.58	1,563.0	2,662.2	3,087.1	3,075.8	11.31	273.013	
689.0	689.0	645.0	645.0	1.4	11.9	59.58	1,563.0	2,662.2	3,087.1	3,073.8	13.30	232.056	
700.0	700.0	656.0	656.0	1.4	12.1	59.58	1,563.0	2,662.2	3,087.1	3,073.6	13.55	227.824	
787.4	787.4	743.4	743.4	1.6	13.9	59.58	1,563.0	2,662.2	3,087.1	3,071.6	15.51	199.054	
800.0	800.0	756.0	756.0	1.7	14.1	59.58	1,563.0	2,662.2	3,087.1	3,071.3	15.79	195.496	
885.8	885.8	841.8	841.8	1.9	15.8	59.58	1,563.0	2,662.2	3,087.1	3,069.4	17.71	174.282	
900.0	900.0	856.0	856.0	1.9	16.1	59.58	1,563.0	2,662.2	3,087.1	3,069.1	18.03	171.214	
984.2	984.2	940.2	940.2	2.1	17.8	59.58	1,563.0	2,662.2	3,087.1	3,067.2	19.92	155.001	
1,000.0	1,000.0	956.0	956.0	2.1	18.1	59.58	1,563.0	2,662.2	3,087.1	3,066.8	20.27	152.305	
1,082.7	1,082.7	1,038.7	1,038.7	2.3	19.8	59.58	1,563.0	2,662.2	3,087.1	3,065.0	22.12	139.564	
1,100.0	1,100.0	1,056.0	1,056.0	2.3	20.2	59.58	1,563.0	2,662.2	3,087.1	3,064.6	22.51	137.160	
1,181.1	1,181.1	1,137.1	1,137.1	2.5	21.8	59.58	1,563.0	2,662.2	3,087.1	3,062.8	24.32	126.926	
1,200.0	1,200.0	1,156.0	1,156.0	2.6	22.2	59.58	1,563.0	2,662.2	3,087.1	3,062.4	24.75	124.757	
1,279.5	1,279.5	1,235.5	1,235.5	2.7	23.8	154.78	1,563.0	2,662.2	3,088.1	3,061.6	26.50	116.514	
1,300.0	1,300.0	1,256.0	1,256.0	2.8	24.2	154.78	1,563.0	2,662.2	3,088.7	3,061.7	26.95	114.591	
1,377.9	1,377.8	1,333.8	1,333.8	2.9	25.8	154.78	1,563.0	2,662.2	3,092.1	3,063.5	28.65	107.946	
1,400.0	1,399.8	1,355.8	1,355.8	3.0	26.2	154.78	1,563.0	2,662.2	3,093.4	3,064.3	29.12	106.235	
1,476.4	1,475.9	1,431.9	1,431.9	3.1	27.7	154.78	1,563.0	2,662.2	3,099.2	3,068.4	30.75	100.788	
1,500.0	1,499.5	1,455.5	1,455.5	3.2	28.2	154.78	1,563.0	2,662.2	3,101.3	3,070.1	31.25	99.249	
1,574.8	1,573.7	1,529.7	1,529.7	3.4	29.7	154.78	1,563.0	2,662.2	3,109.3	3,076.5	32.81	94.756	
1,600.0	1,598.7	1,554.7	1,554.7	3.4	30.2	154.78	1,563.0	2,662.2	3,112.4	3,079.0	33.33	93.369	
1,673.2	1,671.1	1,627.1	1,627.1	3.6	31.7	154.78	1,563.0	2,662.2	3,122.4	3,087.6	34.83	89.642	
1,700.0	1,697.5	1,653.5	1,653.5	3.7	32.2	154.78	1,563.0	2,662.2	3,126.5	3,091.2	35.37	88.392	
1,771.6	1,767.9	1,723.9	1,723.9	3.9	33.6	154.78	1,563.0	2,662.2	3,138.6	3,101.8	36.80	85.289	
1,800.0	1,795.6	1,751.6	1,751.6	4.0	34.2	154.78	1,563.0	2,662.2	3,143.9	3,106.5	37.35	84.163	
1,870.1	1,864.0	1,820.0	1,820.0	4.3	35.5	154.77	1,563.0	2,662.2	3,157.9	3,119.2	38.71	81.573	
1,900.0	1,893.1	1,849.1	1,849.1	4.4	36.1	154.77	1,563.0	2,662.2	3,164.3	3,125.0	39.28	80.559	
1,968.5	1,959.3	1,915.3	1,915.3	4.6	37.5	154.77	1,563.0	2,662.2	3,180.1	3,139.5	40.56	78.396	
1,992.4	1,982.4	1,938.4	1,938.4	4.7	37.9	154.76	1,563.0	2,662.2	3,186.0	3,145.0	41.00	77.700	
2,000.0	1,989.6	1,945.6	1,945.6	4.8	38.1	154.78	1,563.0	2,662.2	3,187.9	3,146.7	41.17	77.440	
2,066.9	2,054.0	2,010.0	2,010.0	5.1	39.4	154.92	1,563.0	2,662.2	3,204.5	3,161.9	42.61	75.207	
2,100.0	2,085.8	2,041.8	2,041.8	5.2	40.0	154.99	1,563.0	2,662.2	3,212.8	3,169.4	43.32	74.169	
2,165.3	2,148.7	2,104.7	2,104.7	5.5	41.3	155.12	1,563.0	2,662.2	3,229.0	3,184.3	44.72	72.198	
2,200.0	2,182.0	2,138.0	2,138.0	5.7	41.9	155.19	1,563.0	2,662.2	3,237.7	3,192.2	45.48	71.194	
2,263.8	2,243.4	2,199.4	2,199.4	6.0	43.2	155.32	1,563.0	2,662.2	3,253.6	3,206.7	46.86	69.434	
2,300.0	2,278.2	2,234.2	2,234.2	6.2	43.9	155.39	1,563.0	2,662.2	3,262.7	3,215.0	47.64	68.480	
2,362.2	2,338.1	2,294.1	2,294.1	6.5	45.1	155.51	1,563.0	2,662.2	3,278.2	3,229.2	49.00	66.908	
2,400.0	2,374.4	2,330.4	2,330.4	6.7	45.8	155.59	1,563.0	2,662.2	3,287.7	3,237.9	49.82	65.995	
2,460.6	2,432.8	2,388.8	2,388.8	7.0	47.0	155.70	1,563.0	2,662.2	3,302.8	3,251.7	51.14	64.588	
2,500.0	2,470.6	2,426.6	2,426.6	7.2	47.7	155.78	1,563.0	2,662.2	3,312.7	3,260.7	51.99	63.713	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,527.4	2,483.4	2,483.4	7.6	48.9	155.89	1,563.0	2,662.2	3,327.5	3,274.2	53.28	62.451	
2,600.0	2,566.8	2,522.8	2,522.8	7.8	49.7	155.97	1,563.0	2,662.2	3,337.8	3,283.6	54.17	61.611	
2,657.5	2,622.1	2,578.1	2,578.1	8.1	50.8	156.08	1,563.0	2,662.2	3,352.2	3,296.8	55.43	60.477	
2,700.0	2,663.0	2,619.0	2,619.0	8.3	51.6	156.16	1,563.0	2,662.2	3,362.9	3,306.6	56.36	59.670	
2,755.9	2,716.8	2,672.8	2,672.8	8.6	52.7	156.26	1,563.0	2,662.2	3,377.0	3,319.4	57.58	58.648	
2,800.0	2,759.2	2,715.2	2,715.2	8.9	53.5	156.34	1,563.0	2,662.2	3,388.1	3,329.5	58.54	57.873	
2,854.3	2,811.5	2,767.5	2,767.5	9.2	54.6	156.44	1,563.0	2,662.2	3,401.7	3,342.0	59.73	56.950	
2,900.0	2,855.4	2,811.4	2,811.4	9.4	55.5	156.53	1,563.0	2,662.2	3,413.2	3,352.5	60.73	56.203	
2,952.7	2,906.2	2,862.2	2,862.2	9.7	56.5	156.62	1,563.0	2,662.2	3,426.5	3,364.7	61.88	55.370	
3,000.0	2,951.6	2,907.6	2,907.6	10.0	57.4	156.71	1,563.0	2,662.2	3,438.5	3,375.5	62.92	54.650	
3,051.2	3,000.9	2,956.9	2,956.9	10.3	58.4	156.80	1,563.0	2,662.2	3,451.4	3,387.3	64.04	53.895	
3,100.0	3,047.8	3,003.8	3,003.8	10.5	59.3	156.89	1,563.0	2,662.2	3,463.7	3,398.6	65.11	53.200	
3,149.6	3,095.5	3,051.5	3,051.5	10.8	60.3	156.97	1,563.0	2,662.2	3,476.2	3,410.1	66.19	52.517	
3,200.0	3,144.0	3,100.0	3,100.0	11.1	61.3	157.06	1,563.0	2,662.2	3,489.0	3,421.7	67.30	51.845	
3,248.0	3,190.2	3,146.2	3,146.2	11.4	62.2	157.14	1,563.0	2,662.2	3,501.1	3,432.8	68.35	51.225	
3,300.0	3,240.2	3,196.2	3,196.2	11.7	63.2	157.23	1,563.0	2,662.2	3,514.3	3,444.8	69.49	50.575	
3,346.4	3,284.9	3,240.9	3,240.9	11.9	64.1	157.31	1,563.0	2,662.2	3,526.1	3,455.6	70.50	50.013	
3,400.0	3,336.4	3,292.4	3,292.4	12.2	65.1	157.40	1,563.0	2,662.2	3,539.6	3,468.0	71.68	49.384	
3,444.9	3,379.6	3,335.6	3,335.6	12.5	66.0	157.48	1,563.0	2,662.2	3,551.0	3,478.4	72.66	48.872	
3,500.0	3,432.6	3,388.6	3,388.6	12.8	67.1	157.57	1,563.0	2,662.2	3,565.0	3,491.1	73.87	48.263	
3,543.3	3,474.3	3,430.3	3,430.3	13.1	67.9	157.64	1,563.0	2,662.2	3,576.0	3,501.2	74.81	47.798	
3,600.0	3,528.8	3,484.8	3,484.8	13.4	69.0	157.74	1,563.0	2,662.2	3,590.4	3,514.3	76.06	47.208	
3,641.7	3,569.0	3,525.0	3,525.0	13.6	69.8	157.80	1,563.0	2,662.2	3,601.0	3,524.0	76.97	46.785	
3,700.0	3,625.0	3,581.0	3,581.0	14.0	71.0	157.90	1,563.0	2,662.2	3,615.8	3,537.6	78.24	46.212	
3,740.1	3,663.6	3,619.6	3,619.6	14.2	71.7	157.96	1,563.0	2,662.2	3,626.0	3,546.9	79.12	45.827	
3,800.0	3,721.2	3,677.2	3,677.2	14.5	72.9	158.06	1,563.0	2,662.2	3,641.3	3,560.8	80.43	45.270	
3,838.6	3,758.3	3,714.3	3,714.3	14.8	73.6	158.12	1,563.0	2,662.2	3,651.1	3,569.8	81.28	44.921	
3,900.0	3,817.4	3,773.4	3,773.4	15.1	74.8	158.22	1,563.0	2,662.2	3,666.8	3,584.1	82.62	44.380	
3,937.0	3,853.0	3,809.0	3,809.0	15.3	75.5	158.28	1,563.0	2,662.2	3,676.2	3,592.8	83.43	44.062	
4,000.0	3,913.6	3,869.6	3,869.6	15.7	76.8	158.38	1,563.0	2,662.2	3,692.3	3,607.4	84.81	43.535	
4,035.4	3,947.7	3,903.7	3,903.7	15.9	77.4	158.43	1,563.0	2,662.2	3,701.3	3,615.7	85.59	43.247	
4,100.0	4,009.8	3,965.8	3,965.8	16.3	78.7	158.53	1,563.0	2,662.2	3,717.8	3,630.8	87.00	42.734	
4,133.8	4,042.4	3,998.4	3,998.4	16.5	79.3	158.58	1,563.0	2,662.2	3,726.4	3,638.7	87.74	42.472	
4,200.0	4,106.0	4,062.0	4,062.0	16.8	80.6	158.68	1,563.0	2,662.2	3,743.3	3,654.2	89.19	41.972	
4,232.3	4,137.1	4,093.1	4,093.1	17.0	81.3	158.73	1,563.0	2,662.2	3,751.6	3,661.7	89.89	41.735	
4,300.0	4,202.2	4,158.2	4,158.2	17.4	82.6	158.83	1,563.0	2,662.2	3,768.9	3,677.6	91.37	41.248	
4,330.7	4,231.7	4,187.7	4,187.7	17.6	83.2	158.88	1,563.0	2,662.2	3,776.8	3,684.7	92.04	41.032	
4,400.0	4,298.4	4,254.4	4,254.4	18.0	84.5	158.98	1,563.0	2,662.2	3,794.5	3,701.0	93.56	40.558	
4,429.1	4,326.4	4,282.4	4,282.4	18.2	85.1	159.02	1,563.0	2,662.2	3,802.0	3,707.8	94.20	40.363	
4,500.0	4,394.6	4,350.6	4,350.6	18.6	86.4	159.13	1,563.0	2,662.2	3,820.2	3,724.4	95.74	39.900	
4,527.5	4,421.1	4,377.1	4,377.1	18.7	87.0	159.17	1,563.0	2,662.2	3,827.2	3,730.9	96.35	39.724	
4,600.0	4,490.8	4,446.8	4,446.8	19.2	88.4	159.27	1,563.0	2,662.2	3,845.8	3,747.9	97.93	39.271	
4,626.0	4,515.8	4,471.8	4,471.8	19.3	88.9	159.31	1,563.0	2,662.2	3,852.5	3,754.0	98.50	39.113	
4,700.0	4,587.0	4,543.0	4,543.0	19.8	90.3	159.41	1,563.0	2,662.2	3,871.5	3,771.4	100.11	38.671	
4,724.4	4,610.5	4,566.5	4,566.5	19.9	90.8	159.45	1,563.0	2,662.2	3,877.8	3,777.1	100.65	38.528	
4,800.0	4,683.2	4,639.2	4,639.2	20.3	92.2	159.55	1,563.0	2,662.2	3,897.2	3,794.9	102.30	38.097	
4,822.8	4,705.2	4,661.2	4,661.2	20.5	92.7	159.59	1,563.0	2,662.2	3,903.0	3,800.3	102.80	37.969	
4,900.0	4,779.4	4,735.4	4,735.4	20.9	94.2	159.69	1,563.0	2,662.2	3,922.9	3,818.4	104.48	37.547	
4,921.2	4,799.8	4,755.8	4,755.8	21.0	94.6	159.72	1,563.0	2,662.2	3,928.4	3,823.4	104.94	37.433	
5,000.0	4,875.6	4,831.6	4,831.6	21.5	96.1	159.83	1,563.0	2,662.2	3,948.6	3,842.0	106.66	37.020	
5,019.7	4,894.5	4,850.5	4,850.5	21.6	96.5	159.86	1,563.0	2,662.2	3,953.7	3,846.6	107.09	36.919	
5,100.0	4,971.8	4,927.8	4,927.8	22.1	98.0	159.96	1,563.0	2,662.2	3,974.4	3,865.6	108.84	36.514	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,118.1	4,989.2	4,945.2	4,945.2	22.2	98.4	159.99	1,563.0	2,662.2	3,979.1	3,869.8	109.24	36.425	
5,200.0	5,068.0	5,024.0	5,024.0	22.7	100.0	160.10	1,563.0	2,662.2	4,000.2	3,889.2	111.03	36.029	
5,216.5	5,083.9	5,039.9	5,039.9	22.8	100.3	160.12	1,563.0	2,662.2	4,004.4	3,893.1	111.39	35.951	
5,240.0	5,106.5	5,062.5	5,062.5	22.9	100.7	160.15	1,563.0	2,662.2	4,010.5	3,898.6	111.90	35.840	
5,300.0	5,164.4	5,120.4	5,120.4	23.2	101.9	160.33	1,563.0	2,662.2	4,025.4	3,911.7	113.68	35.410	
5,314.9	5,178.8	5,134.8	5,134.8	23.3	102.2	160.37	1,563.0	2,662.2	4,028.9	3,914.8	114.12	35.305	
5,400.0	5,261.5	5,217.5	5,217.5	23.6	103.9	160.60	1,563.0	2,662.2	4,047.7	3,931.1	116.57	34.724	
5,413.4	5,274.6	5,230.6	5,230.6	23.6	104.1	160.63	1,563.0	2,662.2	4,050.5	3,933.5	116.95	34.634	
5,500.0	5,359.5	5,315.5	5,315.5	23.9	105.8	160.82	1,563.0	2,662.2	4,066.8	3,947.4	119.37	34.068	
5,511.8	5,371.1	5,327.1	5,327.1	24.0	106.1	160.84	1,563.0	2,662.2	4,068.9	3,949.2	119.70	33.993	
5,600.0	5,458.0	5,414.0	5,414.0	24.2	107.8	161.00	1,563.0	2,662.2	4,082.7	3,960.6	122.08	33.444	
5,610.2	5,468.2	5,424.2	5,424.2	24.3	108.0	161.02	1,563.0	2,662.2	4,084.1	3,961.8	122.35	33.382	
5,700.0	5,557.2	5,513.2	5,513.2	24.5	109.8	161.14	1,563.0	2,662.2	4,095.3	3,970.6	124.67	32.849	
5,708.6	5,565.7	5,521.7	5,521.7	24.5	110.0	161.15	1,563.0	2,662.2	4,096.2	3,971.3	124.89	32.799	
5,800.0	5,656.7	5,612.7	5,612.7	24.7	111.8	161.25	1,563.0	2,662.2	4,104.6	3,977.5	127.15	32.283	
5,807.1	5,663.7	5,619.7	5,619.7	24.7	112.0	161.25	1,563.0	2,662.2	4,105.1	3,977.8	127.32	32.244	
5,900.0	5,756.5	5,712.5	5,712.5	24.9	113.8	161.31	1,563.0	2,662.2	4,110.6	3,981.1	129.49	31.745	
5,905.5	5,761.9	5,717.9	5,717.9	24.9	113.9	161.32	1,563.0	2,662.2	4,110.9	3,981.3	129.61	31.716	
6,000.0	5,856.4	5,812.4	5,812.4	25.0	115.8	161.35	1,563.0	2,662.2	4,113.4	3,981.7	131.70	31.234	
6,003.9	5,860.3	5,816.3	5,816.3	25.0	115.9	161.35	1,563.0	2,662.2	4,113.4	3,981.6	131.78	31.214	
6,032.5	5,888.9	5,844.9	5,844.9	25.0	116.5	66.15	1,563.0	2,662.2	4,113.5	3,972.8	140.73	29.230	
6,062.5	5,918.9	5,874.9	5,874.9	25.1	117.1	66.15	1,563.0	2,662.2	4,113.5	3,972.2	141.37	29.099	
6,100.0	5,956.4	5,912.4	5,912.4	25.1	117.8	-23.88	1,563.0	2,662.2	4,112.6	3,979.1	133.59	30.786	
6,102.3	5,958.7	5,914.7	5,914.7	25.1	117.9	-23.89	1,563.0	2,662.2	4,112.5	3,978.9	133.61	30.779	
6,150.0	6,006.2	5,962.2	5,962.2	25.1	118.8	-24.04	1,563.0	2,662.2	4,108.7	3,974.8	133.86	30.693	
6,200.0	6,055.6	6,011.6	6,011.6	25.1	119.8	-24.32	1,563.0	2,662.2	4,101.5	3,967.9	133.61	30.697	
6,200.8	6,056.3	6,012.3	6,012.3	25.1	119.8	-24.32	1,563.0	2,662.2	4,101.4	3,967.8	133.60	30.698	
6,250.0	6,104.3	6,060.3	6,060.3	25.0	120.8	-24.73	1,563.0	2,662.2	4,091.2	3,958.4	132.85	30.797	
6,299.2	6,151.3	6,107.3	6,107.3	24.9	121.8	-25.28	1,563.0	2,662.2	4,078.1	3,946.5	131.62	30.984	
6,300.0	6,152.1	6,108.1	6,108.1	24.9	121.8	-25.29	1,563.0	2,662.2	4,077.9	3,946.3	131.60	30.988	
6,350.0	6,198.7	6,154.7	6,154.7	24.8	122.7	-25.99	1,563.0	2,662.2	4,061.5	3,931.6	129.91	31.265	
6,397.6	6,241.9	6,197.9	6,197.9	24.7	123.6	-26.82	1,563.0	2,662.2	4,043.2	3,915.3	127.96	31.598	
6,400.0	6,244.1	6,200.1	6,200.1	24.7	123.6	-26.87	1,563.0	2,662.2	4,042.3	3,914.4	127.86	31.616	
6,450.0	6,287.8	6,243.8	6,243.8	24.5	124.5	-27.93	1,563.0	2,662.2	4,020.2	3,894.6	125.54	32.024	
6,496.0	6,326.5	6,282.5	6,282.5	24.4	125.3	-29.09	1,563.0	2,662.2	3,997.5	3,874.2	123.28	32.427	
6,500.0	6,329.7	6,285.7	6,285.7	24.4	125.3	-29.20	1,563.0	2,662.2	3,995.4	3,872.3	123.08	32.462	
6,550.0	6,369.6	6,325.6	6,325.6	24.3	126.1	-30.71	1,563.0	2,662.2	3,968.1	3,847.4	120.66	32.885	
6,594.5	6,403.3	6,359.3	6,359.3	24.2	126.8	-32.28	1,563.0	2,662.2	3,941.7	3,823.0	118.72	33.201	
6,600.0	6,407.3	6,363.3	6,363.3	24.2	126.9	-32.50	1,563.0	2,662.2	3,938.3	3,819.8	118.51	33.233	
6,650.0	6,442.7	6,398.7	6,398.7	24.1	127.6	-34.60	1,563.0	2,662.2	3,906.3	3,789.4	116.87	33.424	
6,692.9	6,471.0	6,427.0	6,427.0	24.0	128.2	-36.70	1,563.0	2,662.2	3,877.2	3,761.0	116.12	33.390	
6,700.0	6,475.5	6,431.5	6,431.5	24.0	128.3	-37.08	1,563.0	2,662.2	3,872.2	3,756.1	116.07	33.362	
6,750.0	6,505.6	6,461.6	6,461.6	24.0	128.9	-39.99	1,563.0	2,662.2	3,836.2	3,719.8	116.41	32.953	
6,791.3	6,528.3	6,484.3	6,484.3	24.0	129.3	-42.77	1,563.0	2,662.2	3,805.1	3,687.3	117.79	32.305	
6,800.0	6,532.8	6,488.8	6,488.8	24.0	129.4	-43.40	1,563.0	2,662.2	3,798.4	3,680.2	118.21	32.133	
6,850.0	6,557.0	6,513.0	6,513.0	24.1	129.9	-47.38	1,563.0	2,662.2	3,759.2	3,637.5	121.64	30.904	
6,889.7	6,574.1	6,530.1	6,530.1	24.2	130.3	-51.00	1,563.0	2,662.2	3,727.0	3,601.5	125.54	29.687	
6,900.0	6,578.1	6,534.1	6,534.1	24.3	130.3	-52.00	1,563.0	2,662.2	3,718.6	3,591.9	126.70	29.350	
6,950.0	6,596.1	6,552.1	6,552.1	24.5	130.7	-57.31	1,563.0	2,662.2	3,676.9	3,543.8	133.10	27.626	
6,988.2	6,607.5	6,563.5	6,563.5	24.7	130.9	-61.83	1,563.0	2,662.2	3,644.5	3,506.0	138.52	26.309	
7,000.0	6,610.7	6,566.7	6,566.7	24.8	131.0	-63.31	1,563.0	2,662.2	3,634.3	3,494.1	140.23	25.917	
7,050.0	6,621.9	6,577.9	6,577.9	25.1	131.2	-69.95	1,563.0	2,662.2	3,591.1	3,443.9	147.20	24.396	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	6,584.0	6,584.0	25.4	131.3	-75.13	1,563.0	2,662.2	3,559.2	3,407.5	151.62	23.474	
7,100.0	6,629.7	6,585.7	6,585.7	25.6	131.4	-77.08	1,563.0	2,662.2	3,547.4	3,394.4	153.00	23.186	
7,150.0	6,634.1	6,590.1	6,590.1	26.0	131.5	-84.47	1,563.0	2,662.2	3,503.5	3,346.8	156.73	22.354	
7,185.0	6,635.1	6,591.1	6,591.1	26.4	131.5	-89.65	1,563.0	2,662.2	3,472.7	3,314.9	157.84	22.001	
7,196.6	6,635.0	6,591.0	6,591.0	26.5	131.5	-91.34	1,563.0	2,662.2	3,462.6	3,304.7	157.93	21.925	
7,200.0	6,635.0	6,591.0	6,591.0	26.6	131.5	-91.33	1,563.0	2,662.2	3,459.6	3,301.6	157.96	21.901	
7,283.4	6,633.9	6,589.9	6,589.9	27.6	131.5	-91.30	1,563.0	2,662.2	3,386.7	3,227.7	158.97	21.303	
7,300.0	6,633.7	6,589.7	6,589.7	27.8	131.5	-91.29	1,563.0	2,662.2	3,372.3	3,213.1	159.17	21.186	
7,381.9	6,632.6	6,588.6	6,588.6	29.0	131.4	-91.25	1,563.0	2,662.2	3,301.3	3,140.9	160.34	20.589	
7,400.0	6,632.4	6,588.4	6,588.4	29.2	131.4	-91.25	1,563.0	2,662.2	3,285.6	3,125.0	160.60	20.458	
7,480.3	6,631.4	6,587.4	6,587.4	30.5	131.4	-91.21	1,563.0	2,662.2	3,216.6	3,054.7	161.90	19.868	
7,500.0	6,631.1	6,587.1	6,587.1	30.9	131.4	-91.20	1,563.0	2,662.2	3,199.8	3,037.6	162.22	19.725	
7,578.7	6,630.1	6,586.1	6,586.1	32.3	131.4	-91.17	1,563.0	2,662.2	3,132.8	2,969.2	163.62	19.147	
7,600.0	6,629.8	6,585.8	6,585.8	32.7	131.4	-91.16	1,563.0	2,662.2	3,114.8	2,950.8	164.00	18.993	
7,677.1	6,628.9	6,584.9	6,584.9	34.1	131.4	-91.13	1,563.0	2,662.2	3,049.9	2,884.4	165.47	18.431	
7,700.0	6,628.6	6,584.6	6,584.6	34.6	131.4	-91.12	1,563.0	2,662.2	3,030.7	2,864.8	165.91	18.268	
7,775.6	6,627.6	6,583.6	6,583.6	36.1	131.3	-91.08	1,563.0	2,662.2	2,967.8	2,800.4	167.44	17.725	
7,800.0	6,627.3	6,583.3	6,583.3	36.6	131.3	-91.07	1,563.0	2,662.2	2,947.6	2,779.7	167.93	17.553	
7,874.0	6,626.3	6,582.3	6,582.3	38.2	131.3	-91.04	1,563.0	2,662.2	2,886.9	2,717.4	169.50	17.032	
7,900.0	6,626.0	6,582.0	6,582.0	38.8	131.3	-91.03	1,563.0	2,662.2	2,865.6	2,695.6	170.05	16.852	
7,972.4	6,625.1	6,581.1	6,581.1	40.4	131.3	-91.00	1,563.0	2,662.2	2,807.0	2,635.3	171.65	16.353	
8,000.0	6,624.7	6,580.7	6,580.7	41.0	131.3	-90.99	1,563.0	2,662.2	2,784.8	2,612.6	172.25	16.167	
8,070.8	6,623.8	6,579.8	6,579.8	42.6	131.3	-90.95	1,563.0	2,662.2	2,728.3	2,554.5	173.86	15.693	
8,100.0	6,623.4	6,579.4	6,579.4	43.3	131.3	-90.94	1,563.0	2,662.2	2,705.3	2,530.8	174.52	15.501	
8,169.3	6,622.6	6,578.6	6,578.6	44.9	131.2	-90.91	1,563.0	2,662.2	2,651.0	2,474.8	176.13	15.051	
8,200.0	6,622.2	6,578.2	6,578.2	45.6	131.2	-90.90	1,563.0	2,662.2	2,627.1	2,450.3	176.85	14.855	
8,267.7	6,621.3	6,577.3	6,577.3	47.3	131.2	-90.87	1,563.0	2,662.2	2,575.1	2,396.6	178.46	14.430	
8,300.0	6,620.9	6,576.9	6,576.9	48.0	131.2	-90.85	1,563.0	2,662.2	2,550.5	2,371.3	179.22	14.231	
8,366.1	6,620.0	6,576.0	6,576.0	49.7	131.2	-90.82	1,563.0	2,662.2	2,500.7	2,319.9	180.82	13.830	
8,400.0	6,619.6	6,575.6	6,575.6	50.5	131.2	-90.81	1,563.0	2,662.2	2,475.6	2,293.9	181.64	13.629	
8,464.5	6,618.8	6,574.8	6,574.8	52.1	131.2	-90.78	1,563.0	2,662.2	2,428.1	2,244.9	183.23	13.252	
8,500.0	6,618.3	6,574.3	6,574.3	53.0	131.1	-90.77	1,563.0	2,662.2	2,402.4	2,218.3	184.10	13.050	
8,563.0	6,617.5	6,573.5	6,573.5	54.5	131.1	-90.74	1,563.0	2,662.2	2,357.4	2,171.7	185.66	12.697	
8,600.0	6,617.0	6,573.0	6,573.0	55.5	131.1	-90.72	1,563.0	2,662.2	2,331.3	2,144.7	186.58	12.495	
8,661.4	6,616.3	6,572.3	6,572.3	57.0	131.1	-90.69	1,563.0	2,662.2	2,288.7	2,100.6	188.13	12.166	
8,700.0	6,615.8	6,571.8	6,571.8	58.0	131.1	-90.68	1,563.0	2,662.2	2,262.3	2,073.2	189.10	11.964	
8,759.8	6,615.0	6,571.0	6,571.0	59.5	131.1	-90.65	1,563.0	2,662.2	2,222.2	2,031.6	190.62	11.658	
8,800.0	6,614.5	6,570.5	6,570.5	60.6	131.1	-90.63	1,563.0	2,662.2	2,195.8	2,004.1	191.64	11.458	
8,858.2	6,613.7	6,569.7	6,569.7	62.1	131.1	-90.61	1,563.0	2,662.2	2,158.2	1,965.1	193.13	11.175	
8,900.0	6,613.2	6,569.2	6,569.2	63.2	131.0	-90.59	1,563.0	2,662.2	2,131.8	1,937.6	194.20	10.978	
8,956.7	6,612.5	6,568.5	6,568.5	64.6	131.0	-90.56	1,563.0	2,662.2	2,096.8	1,901.2	195.66	10.717	
9,000.0	6,611.9	6,567.9	6,567.9	65.8	131.0	-90.55	1,563.0	2,662.2	2,070.7	1,874.0	196.77	10.524	
9,055.1	6,611.2	6,567.2	6,567.2	67.2	131.0	-90.52	1,563.0	2,662.2	2,038.4	1,840.2	198.20	10.284	
9,100.0	6,610.6	6,566.6	6,566.6	68.4	131.0	-90.50	1,563.0	2,662.2	2,012.8	1,813.4	199.37	10.096	
9,153.5	6,609.9	6,565.9	6,565.9	69.8	131.0	-90.48	1,563.0	2,662.2	1,983.1	1,782.3	200.76	9.878	
9,200.0	6,609.3	6,565.3	6,565.3	71.0	131.0	-90.46	1,563.0	2,662.2	1,958.2	1,756.2	201.97	9.695	
9,251.9	6,608.7	6,564.7	6,564.7	72.4	131.0	-90.43	1,563.0	2,662.2	1,931.3	1,727.9	203.34	9.498	
9,300.0	6,608.1	6,564.1	6,564.1	73.7	130.9	-90.41	1,563.0	2,662.2	1,907.3	1,702.7	204.60	9.322	
9,350.4	6,607.4	6,563.4	6,563.4	75.0	130.9	-90.39	1,563.0	2,662.2	1,883.1	1,677.2	205.92	9.145	
9,400.0	6,606.8	6,562.8	6,562.8	76.3	130.9	-90.37	1,563.0	2,662.2	1,860.4	1,653.1	207.23	8.977	
9,448.8	6,606.1	6,562.1	6,562.1	77.6	130.9	-90.35	1,563.0	2,662.2	1,839.0	1,630.5	208.52	8.819	
9,500.0	6,605.5	6,561.5	6,561.5	79.0	130.9	-90.33	1,563.0	2,662.2	1,817.8	1,607.9	209.87	8.661	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 10 T5N R64W 6th P.M. - EXIST VERT WACKER #31-10 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,547.2	6,604.9	6,560.9	6,560.9	80.2	130.9	-90.30	1,563.0	2,662.2	1,799.2	1,588.1	211.13	8.522	
9,600.0	6,604.2	6,560.2	6,560.2	81.7	130.9	-90.28	1,563.0	2,662.2	1,779.7	1,567.2	212.53	8.374	
9,645.6	6,603.6	6,559.6	6,559.6	82.9	130.9	-90.26	1,563.0	2,662.2	1,764.0	1,550.3	213.74	8.253	
9,700.0	6,602.9	6,558.9	6,558.9	84.3	130.8	-90.24	1,563.0	2,662.2	1,746.6	1,531.4	215.19	8.117	
9,744.1	6,602.3	6,558.3	6,558.3	85.5	130.8	-90.22	1,563.0	2,662.2	1,733.7	1,517.3	216.36	8.013	
9,800.0	6,601.6	6,557.6	6,557.6	87.0	130.8	-90.19	1,563.0	2,662.2	1,718.7	1,500.9	217.86	7.889	
9,842.5	6,601.1	6,557.1	6,557.1	88.2	130.8	-90.17	1,563.0	2,662.2	1,708.5	1,489.5	218.99	7.801	
9,900.0	6,600.3	6,556.3	6,556.3	89.7	130.8	-90.15	1,563.0	2,662.2	1,696.2	1,475.7	220.53	7.691	
9,940.9	6,599.8	6,555.8	6,555.8	90.9	130.8	-90.13	1,563.0	2,662.2	1,688.6	1,467.0	221.63	7.619	
10,000.0	6,599.0	6,555.0	6,555.0	92.5	130.8	-90.10	1,563.0	2,662.2	1,679.4	1,456.2	223.22	7.524	
10,039.3	6,598.5	6,554.5	6,554.5	93.5	130.8	-90.09	1,563.0	2,662.2	1,674.4	1,450.1	224.27	7.466	
10,100.0	6,597.7	6,553.7	6,553.7	95.2	130.7	-90.06	1,563.0	2,662.2	1,668.4	1,442.5	225.90	7.386	
10,137.8	6,597.3	6,553.3	6,553.3	96.2	130.7	-90.04	1,563.0	2,662.2	1,665.8	1,438.9	226.92	7.341	
10,200.0	6,596.5	6,552.5	6,552.5	97.9	130.7	-90.02	1,563.0	2,662.2	1,663.4	1,434.8	228.60	7.276	
10,233.9	6,596.0	6,552.0	6,552.0	98.8	130.7	-90.00	1,563.0	2,662.2	1,663.0	1,433.5	229.51	7.246 CC	
10,236.2	6,596.0	6,552.0	6,552.0	98.9	130.7	-90.00	1,563.0	2,662.2	1,663.0	1,433.5	229.57	7.244	
10,300.0	6,595.2	6,551.2	6,551.2	100.6	130.7	-89.97	1,563.0	2,662.2	1,664.4	1,433.1	231.30	7.196 ES	
10,334.6	6,594.7	6,550.7	6,550.7	101.6	130.7	-89.96	1,563.0	2,662.2	1,666.1	1,433.9	232.23	7.174	
10,400.0	6,593.9	6,549.9	6,549.9	103.3	130.7	-89.93	1,563.0	2,662.2	1,671.3	1,437.3	234.00	7.142	
10,433.0	6,593.5	6,549.5	6,549.5	104.2	130.6	-89.91	1,563.0	2,662.2	1,674.9	1,440.0	234.89	7.131	
10,500.0	6,592.6	6,548.6	6,548.6	106.1	130.6	-89.88	1,563.0	2,662.2	1,684.2	1,447.5	236.71	7.115	
10,531.5	6,592.2	6,548.2	6,548.2	106.9	130.6	-89.87	1,563.0	2,662.2	1,689.5	1,451.9	237.56	7.112 SF	
10,600.0	6,591.3	6,547.3	6,547.3	108.8	130.6	-89.84	1,563.0	2,662.2	1,702.9	1,463.4	239.42	7.112	
10,629.9	6,590.9	6,546.9	6,546.9	109.6	130.6	-89.82	1,563.0	2,662.2	1,709.5	1,469.3	240.23	7.116	
10,700.0	6,590.0	6,546.0	6,546.0	111.6	130.6	-89.79	1,563.0	2,662.2	1,727.1	1,485.0	242.13	7.133	
10,728.3	6,589.6	6,545.6	6,545.6	112.3	130.6	-89.78	1,563.0	2,662.2	1,735.0	1,492.1	242.90	7.143	
10,800.0	6,588.7	6,544.7	6,544.7	114.3	130.6	-89.75	1,563.0	2,662.2	1,756.7	1,511.9	244.85	7.175	
10,826.7	6,588.4	6,544.4	6,544.4	115.0	130.5	-89.74	1,563.0	2,662.2	1,765.5	1,520.0	245.58	7.189	
10,900.0	6,587.4	6,543.4	6,543.4	117.0	130.5	-89.70	1,563.0	2,662.2	1,791.5	1,543.9	247.57	7.236	
10,925.2	6,587.1	6,543.1	6,543.1	117.7	130.5	-89.69	1,563.0	2,662.2	1,801.0	1,552.7	248.26	7.254	
11,000.0	6,586.1	6,542.1	6,542.1	119.8	130.5	-89.66	1,563.0	2,662.2	1,831.0	1,580.7	250.29	7.315	
11,023.6	6,585.8	6,541.8	6,541.8	120.4	130.5	-89.65	1,563.0	2,662.2	1,841.0	1,590.1	250.94	7.336	
11,100.0	6,584.8	6,540.8	6,540.8	122.5	130.5	-89.61	1,563.0	2,662.2	1,875.0	1,622.0	253.02	7.411	
11,122.0	6,584.5	6,540.5	6,540.5	123.2	130.5	-89.60	1,563.0	2,662.2	1,885.3	1,631.7	253.62	7.434	
11,200.0	6,583.5	6,539.5	6,539.5	125.3	130.5	-89.57	1,563.0	2,662.2	1,923.3	1,667.5	255.75	7.520	
11,220.4	6,583.3	6,539.3	6,539.3	125.9	130.4	-89.56	1,563.0	2,662.2	1,933.6	1,677.3	256.31	7.544	
11,300.0	6,582.2	6,538.2	6,538.2	128.1	130.4	-89.52	1,563.0	2,662.2	1,975.4	1,716.9	258.48	7.642	
11,318.9	6,582.0	6,538.0	6,538.0	128.6	130.4	-89.52	1,563.0	2,662.2	1,985.6	1,726.6	258.99	7.667	
11,400.0	6,580.9	6,536.9	6,536.9	130.8	130.4	-89.48	1,563.0	2,662.2	2,031.1	1,769.9	261.21	7.776	
11,417.3	6,580.7	6,536.7	6,536.7	131.3	130.4	-89.47	1,563.0	2,662.2	2,041.1	1,779.4	261.68	7.800	
11,500.0	6,579.7	6,535.7	6,535.7	133.6	130.4	-89.43	1,563.0	2,662.2	2,090.1	1,826.1	263.95	7.919	
11,515.7	6,579.4	6,535.4	6,535.4	134.0	130.4	-89.43	1,563.0	2,662.2	2,099.6	1,835.3	264.38	7.942	
11,600.0	6,578.4	6,534.4	6,534.4	136.3	130.3	-89.39	1,563.0	2,662.2	2,152.1	1,885.4	266.68	8.070	
11,614.1	6,578.2	6,534.2	6,534.2	136.7	130.3	-89.38	1,563.0	2,662.2	2,161.1	1,894.1	267.07	8.092	
11,700.0	6,577.1	6,533.1	6,533.1	139.1	130.3	-89.35	1,563.0	2,662.2	2,216.9	1,947.5	269.42	8.229	
11,712.6	6,576.9	6,532.9	6,532.9	139.5	130.3	-89.34	1,563.0	2,662.2	2,225.3	1,955.5	269.76	8.249	
11,800.0	6,575.8	6,531.8	6,531.8	141.9	130.3	-89.30	1,563.0	2,662.2	2,284.3	2,012.1	272.16	8.393	
11,811.0	6,575.6	6,531.6	6,531.6	142.2	130.3	-89.30	1,563.0	2,662.2	2,291.8	2,019.4	272.46	8.412	
11,858.8	6,575.0	6,531.0	6,531.0	143.5	130.3	-89.27	1,563.0	2,662.2	2,325.0	2,051.2	273.77	8.492	
11,859.3	6,575.0	6,531.0	6,531.0	143.5	130.3	-89.27	1,563.0	2,662.2	2,325.4	2,051.6	273.78	8.494	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	82.16	365.2	2,651.4	2,676.5				
98.4	98.4	94.4	94.4	0.1	0.0	82.16	365.2	2,651.4	2,676.5	2,676.4	0.10	N/A	
100.0	100.0	96.0	96.0	0.1	0.0	82.16	365.2	2,651.4	2,676.5	2,676.4	0.10	N/A	
196.8	196.8	192.8	192.8	0.3	1.0	82.16	365.2	2,651.4	2,676.5	2,675.2	1.30	2,051.897	
200.0	200.0	196.0	196.0	0.3	1.0	82.16	365.2	2,651.4	2,676.5	2,675.1	1.35	1,989.913	
295.3	295.3	291.3	291.3	0.5	3.2	82.16	365.2	2,651.4	2,676.5	2,672.8	3.72	719.590	
300.0	300.0	296.0	296.0	0.5	3.3	82.16	365.2	2,651.4	2,676.5	2,672.6	3.84	697.055	
393.7	393.7	389.7	389.7	0.8	5.3	82.16	365.2	2,651.4	2,676.5	2,670.5	6.01	445.397	
400.0	400.0	396.0	396.0	0.8	5.4	82.16	365.2	2,651.4	2,676.5	2,670.3	6.15	434.887	
492.1	492.1	488.1	488.1	1.0	7.3	82.16	365.2	2,651.4	2,676.5	2,668.2	8.24	324.627	
500.0	500.0	496.0	496.0	1.0	7.4	82.16	365.2	2,651.4	2,676.5	2,668.1	8.42	317.746	
590.5	590.5	586.5	586.5	1.2	9.3	82.16	365.2	2,651.4	2,676.5	2,666.0	10.46	255.760	
600.0	600.0	596.0	596.0	1.2	9.5	82.16	365.2	2,651.4	2,676.5	2,665.8	10.68	250.658	
689.0	689.0	685.0	685.0	1.4	11.3	82.16	365.2	2,651.4	2,676.5	2,663.8	12.68	211.115	
700.0	700.0	696.0	696.0	1.4	11.5	82.16	365.2	2,651.4	2,676.5	2,663.6	12.93	207.068	
787.4	787.4	783.4	783.4	1.6	13.2	82.16	365.2	2,651.4	2,676.5	2,661.6	14.89	179.786	
800.0	800.0	796.0	796.0	1.7	13.5	82.16	365.2	2,651.4	2,676.5	2,661.3	15.17	176.435	
885.8	885.8	881.8	881.8	1.9	15.2	82.16	365.2	2,651.4	2,676.5	2,659.4	17.09	156.574	
900.0	900.0	896.0	896.0	1.9	15.5	82.16	365.2	2,651.4	2,676.5	2,659.1	17.41	153.717	
984.2	984.2	980.2	980.2	2.1	17.2	82.16	365.2	2,651.4	2,676.5	2,657.2	19.30	138.682	
1,000.0	1,000.0	996.0	996.0	2.1	17.5	82.16	365.2	2,651.4	2,676.5	2,656.8	19.65	136.192	
1,082.7	1,082.7	1,078.7	1,078.7	2.3	19.2	82.16	365.2	2,651.4	2,676.5	2,655.0	21.50	124.465	
1,100.0	1,100.0	1,096.0	1,096.0	2.3	19.5	82.16	365.2	2,651.4	2,676.5	2,654.6	21.89	122.259	
1,181.1	1,181.1	1,177.1	1,177.1	2.5	21.2	82.16	365.2	2,651.4	2,676.5	2,652.8	23.71	112.896	
1,200.0	1,200.0	1,196.0	1,196.0	2.6	21.6	82.16	365.2	2,651.4	2,676.5	2,652.3	24.13	110.916	
1,279.5	1,279.5	1,275.5	1,275.5	2.7	23.2	177.35	365.2	2,651.4	2,677.6	2,651.7	25.89	103.426	
1,300.0	1,300.0	1,296.0	1,296.0	2.8	23.6	177.35	365.2	2,651.4	2,678.2	2,651.9	26.34	101.687	
1,377.9	1,377.8	1,373.8	1,373.8	2.9	25.1	177.35	365.2	2,651.4	2,682.0	2,654.0	28.02	95.708	
1,400.0	1,399.8	1,395.8	1,395.8	3.0	25.6	177.35	365.2	2,651.4	2,683.4	2,655.0	28.49	94.176	
1,476.4	1,475.9	1,471.9	1,471.9	3.1	27.1	177.35	365.2	2,651.4	2,689.8	2,659.7	30.11	89.326	
1,500.0	1,499.5	1,495.5	1,495.5	3.2	27.6	177.35	365.2	2,651.4	2,692.2	2,661.5	30.61	87.963	
1,574.8	1,573.7	1,569.7	1,569.7	3.4	29.1	177.35	365.2	2,651.4	2,700.9	2,668.8	32.15	84.009	
1,600.0	1,598.7	1,594.7	1,594.7	3.4	29.6	177.35	365.2	2,651.4	2,704.3	2,671.7	32.66	82.796	
1,673.2	1,671.1	1,667.1	1,667.1	3.6	31.0	177.35	365.2	2,651.4	2,715.4	2,681.3	34.13	79.560	
1,700.0	1,697.5	1,693.5	1,693.5	3.7	31.6	177.35	365.2	2,651.4	2,720.0	2,685.3	34.66	78.482	
1,771.6	1,767.9	1,763.9	1,763.9	3.9	33.0	177.35	365.2	2,651.4	2,733.3	2,697.2	36.04	75.832	
1,800.0	1,795.6	1,791.6	1,791.6	4.0	33.5	177.35	365.2	2,651.4	2,739.0	2,702.4	36.58	74.877	
1,870.1	1,864.0	1,860.0	1,860.0	4.3	34.9	177.35	365.2	2,651.4	2,754.4	2,716.5	37.88	72.710	
1,900.0	1,893.1	1,889.1	1,889.1	4.4	35.5	177.35	365.2	2,651.4	2,761.5	2,723.1	38.42	71.869	
1,968.5	1,959.3	1,955.3	1,955.3	4.6	36.8	177.35	365.2	2,651.4	2,778.8	2,739.2	39.64	70.104	
1,992.4	1,982.4	1,978.4	1,978.4	4.7	37.3	177.35	365.2	2,651.4	2,785.3	2,745.2	40.05	69.541	
2,000.0	1,989.6	1,985.6	1,985.6	4.8	37.5	177.36	365.2	2,651.4	2,787.3	2,747.1	40.21	69.318	
2,066.9	2,054.0	2,050.0	2,050.0	5.1	38.7	177.37	365.2	2,651.4	2,805.6	2,764.0	41.62	67.403	
2,100.0	2,085.8	2,081.8	2,081.8	5.2	39.4	177.38	365.2	2,651.4	2,814.6	2,772.3	42.32	66.514	
2,165.3	2,148.7	2,144.7	2,144.7	5.5	40.7	177.40	365.2	2,651.4	2,832.4	2,788.8	43.69	64.830	
2,200.0	2,182.0	2,178.0	2,178.0	5.7	41.3	177.41	365.2	2,651.4	2,841.9	2,797.5	44.43	63.967	
2,263.8	2,243.4	2,239.4	2,239.4	6.0	42.6	177.42	365.2	2,651.4	2,859.3	2,813.5	45.78	62.462	
2,300.0	2,278.2	2,274.2	2,274.2	6.2	43.3	177.43	365.2	2,651.4	2,869.2	2,822.6	46.54	61.645	
2,362.2	2,338.1	2,334.1	2,334.1	6.5	44.5	177.45	365.2	2,651.4	2,886.2	2,838.3	47.86	60.301	
2,400.0	2,374.4	2,370.4	2,370.4	6.7	45.2	177.46	365.2	2,651.4	2,896.5	2,847.8	48.66	59.519	
2,460.6	2,432.8	2,428.8	2,428.8	7.0	46.4	177.47	365.2	2,651.4	2,913.0	2,863.1	49.95	58.315	
2,500.0	2,470.6	2,466.6	2,466.6	7.2	47.1	177.48	365.2	2,651.4	2,923.8	2,873.0	50.79	57.566	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,527.4	2,523.4	2,523.4	7.6	48.3	177.49	365.2	2,651.4	2,939.9	2,887.8	52.05	56.486	
2,600.0	2,566.8	2,562.8	2,562.8	7.8	49.1	177.50	365.2	2,651.4	2,951.0	2,898.1	52.92	55.767	
2,657.5	2,622.1	2,618.1	2,618.1	8.1	50.2	177.52	365.2	2,651.4	2,966.7	2,912.6	54.14	54.795	
2,700.0	2,663.0	2,659.0	2,659.0	8.3	51.0	177.53	365.2	2,651.4	2,978.3	2,923.3	55.05	54.104	
2,755.9	2,716.8	2,712.8	2,712.8	8.6	52.1	177.54	365.2	2,651.4	2,993.6	2,937.3	56.24	53.228	
2,800.0	2,759.2	2,755.2	2,755.2	8.9	52.9	177.55	365.2	2,651.4	3,005.6	2,948.4	57.18	52.562	
2,854.3	2,811.5	2,807.5	2,807.5	9.2	54.0	177.56	365.2	2,651.4	3,020.4	2,962.1	58.34	51.771	
2,900.0	2,855.4	2,851.4	2,851.4	9.4	54.9	177.57	365.2	2,651.4	3,032.9	2,973.6	59.32	51.130	
2,952.7	2,906.2	2,902.2	2,902.2	9.7	55.9	177.58	365.2	2,651.4	3,047.3	2,986.9	60.45	50.414	
3,000.0	2,951.6	2,947.6	2,947.6	10.0	56.8	177.59	365.2	2,651.4	3,060.2	2,998.7	61.46	49.795	
3,051.2	3,000.9	2,996.9	2,996.9	10.3	57.8	177.60	365.2	2,651.4	3,074.2	3,011.6	62.55	49.147	
3,100.0	3,047.8	3,043.8	3,043.8	10.5	58.7	177.61	365.2	2,651.4	3,087.5	3,023.9	63.59	48.550	
3,149.6	3,095.5	3,091.5	3,091.5	10.8	59.7	177.62	365.2	2,651.4	3,101.0	3,036.4	64.66	47.962	
3,200.0	3,144.0	3,140.0	3,140.0	11.1	60.7	177.63	365.2	2,651.4	3,114.8	3,049.0	65.73	47.384	
3,248.0	3,190.2	3,186.2	3,186.2	11.4	61.6	177.64	365.2	2,651.4	3,127.9	3,061.1	66.76	46.850	
3,300.0	3,240.2	3,236.2	3,236.2	11.7	62.6	177.66	365.2	2,651.4	3,142.1	3,074.2	67.88	46.290	
3,346.4	3,284.9	3,280.9	3,280.9	11.9	63.5	177.66	365.2	2,651.4	3,154.7	3,085.9	68.87	45.805	
3,400.0	3,336.4	3,332.4	3,332.4	12.2	64.5	177.68	365.2	2,651.4	3,169.3	3,099.3	70.02	45.263	
3,444.9	3,379.6	3,375.6	3,375.6	12.5	65.4	177.68	365.2	2,651.4	3,181.6	3,110.6	70.98	44.822	
3,500.0	3,432.6	3,428.6	3,428.6	12.8	66.5	177.70	365.2	2,651.4	3,196.6	3,124.5	72.16	44.297	
3,543.3	3,474.3	3,470.3	3,470.3	13.1	67.3	177.70	365.2	2,651.4	3,208.4	3,135.4	73.09	43.895	
3,600.0	3,528.8	3,524.8	3,524.8	13.4	68.4	177.71	365.2	2,651.4	3,223.9	3,149.6	74.31	43.385	
3,641.7	3,569.0	3,565.0	3,565.0	13.6	69.2	177.72	365.2	2,651.4	3,235.3	3,160.1	75.20	43.020	
3,700.0	3,625.0	3,621.0	3,621.0	14.0	70.3	177.73	365.2	2,651.4	3,251.2	3,174.8	76.46	42.524	
3,740.1	3,663.6	3,659.6	3,659.6	14.2	71.1	177.74	365.2	2,651.4	3,262.2	3,184.9	77.32	42.192	
3,800.0	3,721.2	3,717.2	3,717.2	14.5	72.3	177.75	365.2	2,651.4	3,278.5	3,199.9	78.60	41.710	
3,838.6	3,758.3	3,754.3	3,754.3	14.8	73.0	177.76	365.2	2,651.4	3,289.0	3,209.6	79.43	41.408	
3,900.0	3,817.4	3,813.4	3,813.4	15.1	74.2	177.77	365.2	2,651.4	3,305.8	3,225.0	80.75	40.939	
3,937.0	3,853.0	3,849.0	3,849.0	15.3	74.9	177.78	365.2	2,651.4	3,315.9	3,234.3	81.54	40.664	
4,000.0	3,913.6	3,909.6	3,909.6	15.7	76.2	177.79	365.2	2,651.4	3,333.1	3,250.2	82.90	40.207	
4,035.4	3,947.7	3,943.7	3,943.7	15.9	76.8	177.80	365.2	2,651.4	3,342.8	3,259.1	83.66	39.957	
4,100.0	4,009.8	4,005.8	4,005.8	16.3	78.1	177.81	365.2	2,651.4	3,360.4	3,275.3	85.05	39.512	
4,133.8	4,042.4	4,038.4	4,038.4	16.5	78.7	177.81	365.2	2,651.4	3,369.6	3,283.8	85.77	39.285	
4,200.0	4,106.0	4,102.0	4,102.0	16.8	80.0	177.83	365.2	2,651.4	3,387.7	3,300.5	87.20	38.851	
4,232.3	4,137.1	4,133.1	4,133.1	17.0	80.6	177.83	365.2	2,651.4	3,396.5	3,308.6	87.89	38.645	
4,300.0	4,202.2	4,198.2	4,198.2	17.4	82.0	177.84	365.2	2,651.4	3,415.0	3,325.6	89.35	38.222	
4,330.7	4,231.7	4,227.7	4,227.7	17.6	82.5	177.85	365.2	2,651.4	3,423.3	3,333.3	90.01	38.035	
4,400.0	4,298.4	4,294.4	4,294.4	18.0	83.9	177.86	365.2	2,651.4	3,442.3	3,350.8	91.50	37.622	
4,429.1	4,326.4	4,322.4	4,322.4	18.2	84.5	177.86	365.2	2,651.4	3,450.2	3,358.1	92.12	37.452	
4,500.0	4,394.6	4,390.6	4,390.6	18.6	85.8	177.88	365.2	2,651.4	3,469.5	3,375.9	93.65	37.049	
4,527.5	4,421.1	4,417.1	4,417.1	18.7	86.4	177.88	365.2	2,651.4	3,477.1	3,382.8	94.24	36.896	
4,600.0	4,490.8	4,486.8	4,486.8	19.2	87.8	177.89	365.2	2,651.4	3,496.8	3,401.0	95.80	36.502	
4,626.0	4,515.8	4,511.8	4,511.8	19.3	88.3	177.90	365.2	2,651.4	3,503.9	3,407.6	96.36	36.364	
4,700.0	4,587.0	4,583.0	4,583.0	19.8	89.7	177.91	365.2	2,651.4	3,524.1	3,426.2	97.95	35.979	
4,724.4	4,610.5	4,606.5	4,606.5	19.9	90.2	177.91	365.2	2,651.4	3,530.8	3,432.3	98.47	35.855	
4,800.0	4,683.2	4,679.2	4,679.2	20.3	91.6	177.93	365.2	2,651.4	3,551.4	3,451.3	100.10	35.479	
4,822.8	4,705.2	4,701.2	4,701.2	20.5	92.1	177.93	365.2	2,651.4	3,557.7	3,457.1	100.59	35.367	
4,900.0	4,779.4	4,775.4	4,775.4	20.9	93.6	177.94	365.2	2,651.4	3,578.7	3,476.5	102.25	34.999	
4,921.2	4,799.8	4,795.8	4,795.8	21.0	94.0	177.94	365.2	2,651.4	3,584.5	3,481.8	102.71	34.899	
5,000.0	4,875.6	4,871.6	4,871.6	21.5	95.5	177.96	365.2	2,651.4	3,606.0	3,501.6	104.41	34.539	
5,019.7	4,894.5	4,890.5	4,890.5	21.6	95.9	177.96	365.2	2,651.4	3,611.4	3,506.6	104.83	34.450	
5,100.0	4,971.8	4,967.8	4,967.8	22.1	97.4	177.97	365.2	2,651.4	3,633.3	3,526.8	106.56	34.097	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
5,118.1	4,989.2	4,985.2	4,985.2	22.2	97.8	177.98	365.2	2,651.4	3,638.2	3,531.3	106.95	34.019	
5,200.0	5,068.0	5,064.0	5,064.0	22.7	99.4	177.99	365.2	2,651.4	3,660.6	3,551.9	108.71	33.673	
5,216.5	5,083.9	5,079.9	5,079.9	22.8	99.7	177.99	365.2	2,651.4	3,665.1	3,556.0	109.07	33.604	
5,240.0	5,106.5	5,102.5	5,102.5	22.9	100.1	177.99	365.2	2,651.4	3,671.5	3,562.0	109.57	33.508	
5,300.0	5,164.4	5,160.4	5,160.4	23.2	101.3	178.01	365.2	2,651.4	3,687.3	3,575.9	111.42	33.093	
5,314.9	5,178.8	5,174.8	5,174.8	23.3	101.6	178.02	365.2	2,651.4	3,691.0	3,579.2	111.87	32.993	
5,400.0	5,261.5	5,257.5	5,257.5	23.6	103.3	178.04	365.2	2,651.4	3,710.9	3,596.5	114.41	32.434	
5,413.4	5,274.6	5,270.6	5,270.6	23.6	103.5	178.05	365.2	2,651.4	3,713.8	3,599.0	114.80	32.349	
5,500.0	5,359.5	5,355.5	5,355.5	23.9	105.2	178.07	365.2	2,651.4	3,731.1	3,613.8	117.30	31.808	
5,511.8	5,371.1	5,367.1	5,367.1	24.0	105.5	178.07	365.2	2,651.4	3,733.2	3,615.6	117.63	31.736	
5,600.0	5,458.0	5,454.0	5,454.0	24.2	107.2	178.09	365.2	2,651.4	3,747.8	3,627.7	120.07	31.213	
5,610.2	5,468.2	5,464.2	5,464.2	24.3	107.4	178.09	365.2	2,651.4	3,749.3	3,629.0	120.35	31.154	
5,700.0	5,557.2	5,553.2	5,553.2	24.5	109.2	178.10	365.2	2,651.4	3,761.1	3,638.4	122.72	30.648	
5,708.6	5,565.7	5,561.7	5,561.7	24.5	109.4	178.10	365.2	2,651.4	3,762.1	3,639.2	122.94	30.601	
5,800.0	5,656.7	5,652.7	5,652.7	24.7	111.2	178.11	365.2	2,651.4	3,771.0	3,645.7	125.23	30.112	
5,807.1	5,663.7	5,659.7	5,659.7	24.7	111.3	178.11	365.2	2,651.4	3,771.5	3,646.1	125.40	30.075	
5,900.0	5,756.5	5,752.5	5,752.5	24.9	113.2	178.12	365.2	2,651.4	3,777.3	3,649.7	127.60	29.603	
5,905.5	5,761.9	5,757.9	5,757.9	24.9	113.3	178.12	365.2	2,651.4	3,777.6	3,649.8	127.72	29.576	
6,000.0	5,856.4	5,852.4	5,852.4	25.0	115.2	178.13	365.2	2,651.4	3,780.2	3,650.4	129.81	29.121	
6,003.9	5,860.3	5,856.3	5,856.3	25.0	115.3	178.13	365.2	2,651.4	3,780.2	3,650.3	129.89	29.103	
6,032.5	5,888.9	5,884.9	5,884.9	25.0	115.9	82.93	365.2	2,651.4	3,780.4	3,639.5	140.92	26.827	
6,062.5	5,918.9	5,914.9	5,914.9	25.1	116.5	82.93	365.2	2,651.4	3,780.4	3,638.8	141.55	26.706	
6,100.0	5,956.4	5,952.4	5,952.4	25.1	117.2	-7.08	365.2	2,651.4	3,779.4	3,647.8	131.65	28.708	
6,102.3	5,958.7	5,954.7	5,954.7	25.1	117.3	-7.08	365.2	2,651.4	3,779.3	3,647.6	131.67	28.703	
6,150.0	6,006.2	6,002.2	6,002.2	25.1	118.2	-7.13	365.2	2,651.4	3,775.1	3,643.3	131.75	28.653	
6,200.0	6,055.6	6,051.6	6,051.6	25.1	119.2	-7.22	365.2	2,651.4	3,767.3	3,636.1	131.20	28.715	
6,200.8	6,056.3	6,052.3	6,052.3	25.1	119.2	-7.23	365.2	2,651.4	3,767.2	3,636.0	131.18	28.716	
6,250.0	6,104.3	6,100.3	6,100.3	25.0	120.2	-7.36	365.2	2,651.4	3,756.2	3,626.2	129.99	28.897	
6,299.2	6,151.3	6,147.3	6,147.3	24.9	121.2	-7.55	365.2	2,651.4	3,741.9	3,613.8	128.15	29.200	
6,300.0	6,152.1	6,148.1	6,148.1	24.9	121.2	-7.55	365.2	2,651.4	3,741.7	3,613.5	128.11	29.206	
6,350.0	6,198.7	6,194.7	6,194.7	24.8	122.1	-7.79	365.2	2,651.4	3,723.9	3,598.3	125.59	29.652	
6,397.6	6,241.9	6,237.9	6,237.9	24.7	123.0	-8.07	365.2	2,651.4	3,704.0	3,581.4	122.58	30.216	
6,400.0	6,244.1	6,240.1	6,240.1	24.7	123.0	-8.09	365.2	2,651.4	3,702.9	3,580.5	122.42	30.248	
6,450.0	6,287.8	6,283.8	6,283.8	24.5	123.9	-8.46	365.2	2,651.4	3,678.9	3,560.2	118.64	31.008	
6,496.0	6,326.5	6,322.5	6,322.5	24.4	124.7	-8.87	365.2	2,651.4	3,654.1	3,539.4	114.65	31.871	
6,500.0	6,329.7	6,325.7	6,325.7	24.4	124.7	-8.91	365.2	2,651.4	3,651.9	3,537.6	114.29	31.953	
6,550.0	6,369.6	6,365.6	6,365.6	24.3	125.5	-9.46	365.2	2,651.4	3,622.0	3,512.6	109.42	33.103	
6,594.5	6,403.3	6,399.3	6,399.3	24.2	126.2	-10.05	365.2	2,651.4	3,593.2	3,488.5	104.71	34.316	
6,600.0	6,407.3	6,403.3	6,403.3	24.2	126.3	-10.13	365.2	2,651.4	3,589.5	3,485.4	104.11	34.480	
6,650.0	6,442.7	6,438.7	6,438.7	24.1	127.0	-10.96	365.2	2,651.4	3,554.5	3,456.0	98.47	36.098	
6,692.9	6,471.0	6,467.0	6,467.0	24.0	127.6	-11.81	365.2	2,651.4	3,522.5	3,429.0	93.49	37.676	
6,700.0	6,475.5	6,471.5	6,471.5	24.0	127.7	-11.97	365.2	2,651.4	3,517.0	3,424.4	92.67	37.953	
6,750.0	6,505.6	6,501.6	6,501.6	24.0	128.3	-13.24	365.2	2,651.4	3,477.5	3,390.5	86.96	39.991	
6,791.3	6,528.3	6,524.3	6,524.3	24.0	128.7	-14.55	365.2	2,651.4	3,443.3	3,360.7	82.57	41.702	
6,800.0	6,532.8	6,528.8	6,528.8	24.0	128.8	-14.86	365.2	2,651.4	3,435.9	3,354.2	81.71	42.048	
6,850.0	6,557.0	6,553.0	6,553.0	24.1	129.3	-16.96	365.2	2,651.4	3,392.6	3,315.1	77.54	43.753	
6,889.7	6,574.1	6,570.1	6,570.1	24.2	129.7	-19.11	365.2	2,651.4	3,357.1	3,281.4	75.61	44.398	
6,900.0	6,578.1	6,574.1	6,574.1	24.3	129.7	-19.76	365.2	2,651.4	3,347.7	3,272.3	75.40	44.399	
6,950.0	6,596.1	6,592.1	6,592.1	24.5	130.1	-23.62	365.2	2,651.4	3,301.5	3,224.8	76.78	43.000	
6,988.2	6,607.5	6,603.5	6,603.5	24.7	130.3	-27.66	365.2	2,651.4	3,265.5	3,184.0	81.45	40.090	
7,000.0	6,610.7	6,606.7	6,606.7	24.8	130.4	-29.17	365.2	2,651.4	3,254.2	3,170.5	83.72	38.871	
7,050.0	6,621.9	6,617.9	6,617.9	25.1	130.6	-37.56	365.2	2,651.4	3,206.0	3,107.5	98.49	32.551	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	6,624.0	6,624.0	25.4	130.7	-46.59	365.2	2,651.4	3,170.3	3,055.2	115.05	27.555	
7,100.0	6,629.7	6,625.7	6,625.7	25.6	130.8	-50.73	365.2	2,651.4	3,157.2	3,035.0	122.15	25.847	
7,150.0	6,634.1	6,630.1	6,630.1	26.0	130.9	-70.96	365.2	2,651.4	3,107.9	2,959.5	148.44	20.937	
7,185.0	6,635.1	6,631.1	6,631.1	26.4	130.9	-88.74	365.2	2,651.4	3,073.3	2,916.1	157.20	19.550	
7,196.6	6,635.0	6,631.0	6,631.0	26.5	130.9	-94.75	365.2	2,651.4	3,061.9	2,905.1	156.84	19.522	
7,200.0	6,635.0	6,631.0	6,631.0	26.6	130.9	-94.74	365.2	2,651.4	3,058.5	2,901.6	156.88	19.496	
7,283.4	6,633.9	6,629.9	6,629.9	27.6	130.9	-94.61	365.2	2,651.4	2,976.1	2,818.1	157.91	18.846	
7,300.0	6,633.7	6,629.7	6,629.7	27.8	130.9	-94.59	365.2	2,651.4	2,959.7	2,801.6	158.12	18.719	
7,381.9	6,632.6	6,628.6	6,628.6	29.0	130.8	-94.46	365.2	2,651.4	2,878.9	2,719.6	159.31	18.071	
7,400.0	6,632.4	6,628.4	6,628.4	29.2	130.8	-94.43	365.2	2,651.4	2,861.0	2,701.4	159.57	17.929	
7,480.3	6,631.4	6,627.4	6,627.4	30.5	130.8	-94.31	365.2	2,651.4	2,781.8	2,620.9	160.89	17.290	
7,500.0	6,631.1	6,627.1	6,627.1	30.9	130.8	-94.28	365.2	2,651.4	2,762.4	2,601.2	161.21	17.135	
7,578.7	6,630.1	6,626.1	6,626.1	32.3	130.8	-94.15	365.2	2,651.4	2,684.8	2,522.2	162.63	16.509	
7,600.0	6,629.8	6,625.8	6,625.8	32.7	130.8	-94.12	365.2	2,651.4	2,663.9	2,500.9	163.01	16.341	
7,677.1	6,628.9	6,624.9	6,624.9	34.1	130.8	-94.00	365.2	2,651.4	2,588.0	2,423.5	164.51	15.732	
7,700.0	6,628.6	6,624.6	6,624.6	34.6	130.8	-93.97	365.2	2,651.4	2,565.5	2,400.5	164.95	15.553	
7,775.6	6,627.6	6,623.6	6,623.6	36.1	130.7	-93.85	365.2	2,651.4	2,491.2	2,324.7	166.50	14.962	
7,800.0	6,627.3	6,623.3	6,623.3	36.6	130.7	-93.81	365.2	2,651.4	2,467.2	2,300.2	167.00	14.774	
7,874.0	6,626.3	6,622.3	6,622.3	38.2	130.7	-93.70	365.2	2,651.4	2,394.6	2,226.0	168.58	14.204	
7,900.0	6,626.0	6,622.0	6,622.0	38.8	130.7	-93.66	365.2	2,651.4	2,369.1	2,200.0	169.14	14.007	
7,972.4	6,625.1	6,621.1	6,621.1	40.4	130.7	-93.54	365.2	2,651.4	2,298.1	2,127.4	170.75	13.459	
8,000.0	6,624.7	6,620.7	6,620.7	41.0	130.7	-93.50	365.2	2,651.4	2,271.1	2,099.8	171.36	13.253	
8,070.8	6,623.8	6,619.8	6,619.8	42.6	130.7	-93.39	365.2	2,651.4	2,201.8	2,028.9	172.99	12.728	
8,100.0	6,623.4	6,619.4	6,619.4	43.3	130.6	-93.34	365.2	2,651.4	2,173.4	1,999.7	173.65	12.515	
8,169.3	6,622.6	6,618.6	6,618.6	44.9	130.6	-93.24	365.2	2,651.4	2,105.7	1,930.5	175.28	12.014	
8,200.0	6,622.2	6,618.2	6,618.2	45.6	130.6	-93.19	365.2	2,651.4	2,075.8	1,899.8	176.00	11.794	
8,267.7	6,621.3	6,617.3	6,617.3	47.3	130.6	-93.08	365.2	2,651.4	2,009.9	1,832.3	177.62	11.315	
8,300.0	6,620.9	6,616.9	6,616.9	48.0	130.6	-93.03	365.2	2,651.4	1,978.5	1,800.1	178.40	11.090	
8,366.1	6,620.0	6,616.0	6,616.0	49.7	130.6	-92.93	365.2	2,651.4	1,914.3	1,734.3	180.01	10.634	
8,400.0	6,619.6	6,615.6	6,615.6	50.5	130.6	-92.88	365.2	2,651.4	1,881.4	1,700.6	180.84	10.404	
8,464.5	6,618.8	6,614.8	6,614.8	52.1	130.6	-92.77	365.2	2,651.4	1,819.0	1,636.5	182.43	9.971	
8,500.0	6,618.3	6,614.3	6,614.3	53.0	130.5	-92.72	365.2	2,651.4	1,784.7	1,601.4	183.31	9.736	
8,563.0	6,617.5	6,613.5	6,613.5	54.5	130.5	-92.62	365.2	2,651.4	1,724.0	1,539.1	184.89	9.325	
8,600.0	6,617.0	6,613.0	6,613.0	55.5	130.5	-92.56	365.2	2,651.4	1,688.4	1,502.6	185.82	9.086	
8,661.4	6,616.3	6,612.3	6,612.3	57.0	130.5	-92.47	365.2	2,651.4	1,629.5	1,442.1	187.37	8.696	
8,700.0	6,615.8	6,611.8	6,611.8	58.0	130.5	-92.41	365.2	2,651.4	1,592.5	1,404.2	188.35	8.455	
8,759.8	6,615.0	6,611.0	6,611.0	59.5	130.5	-92.31	365.2	2,651.4	1,535.4	1,345.5	189.87	8.086	
8,800.0	6,614.5	6,610.5	6,610.5	60.6	130.5	-92.25	365.2	2,651.4	1,497.2	1,306.3	190.90	7.843	
8,858.2	6,613.7	6,609.7	6,609.7	62.1	130.5	-92.16	365.2	2,651.4	1,441.9	1,249.5	192.40	7.494	
8,900.0	6,613.2	6,609.2	6,609.2	63.2	130.4	-92.09	365.2	2,651.4	1,402.5	1,209.0	193.48	7.249	
8,956.7	6,612.5	6,608.5	6,608.5	64.6	130.4	-92.00	365.2	2,651.4	1,349.1	1,154.2	194.95	6.921	
9,000.0	6,611.9	6,607.9	6,607.9	65.8	130.4	-91.93	365.2	2,651.4	1,308.5	1,112.5	196.07	6.674	
9,055.1	6,611.2	6,607.2	6,607.2	67.2	130.4	-91.85	365.2	2,651.4	1,257.2	1,059.7	197.51	6.365	
9,100.0	6,610.6	6,606.6	6,606.6	68.4	130.4	-91.78	365.2	2,651.4	1,215.6	1,016.9	198.68	6.119	
9,153.5	6,609.9	6,605.9	6,605.9	69.8	130.4	-91.69	365.2	2,651.4	1,166.3	966.3	200.08	5.829	
9,200.0	6,609.3	6,605.3	6,605.3	71.0	130.4	-91.62	365.2	2,651.4	1,123.9	922.6	201.30	5.583	
9,251.9	6,608.7	6,604.7	6,604.7	72.4	130.4	-91.54	365.2	2,651.4	1,076.8	874.1	202.67	5.313	
9,300.0	6,608.1	6,604.1	6,604.1	73.7	130.3	-91.46	365.2	2,651.4	1,033.7	829.7	203.93	5.069	
9,350.4	6,607.4	6,603.4	6,603.4	75.0	130.3	-91.38	365.2	2,651.4	989.0	783.7	205.26	4.818	
9,400.0	6,606.8	6,602.8	6,602.8	76.3	130.3	-91.30	365.2	2,651.4	945.5	738.9	206.58	4.577	
9,448.8	6,606.1	6,602.1	6,602.1	77.6	130.3	-91.23	365.2	2,651.4	903.3	695.4	207.87	4.345	
9,500.0	6,605.5	6,601.5	6,601.5	79.0	130.3	-91.15	365.2	2,651.4	859.8	650.6	209.23	4.109	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
9,547.2	6,604.9	6,600.9	6,600.9	80.2	130.3	-91.07	365.2	2,651.4	820.5	610.0	210.49	3.898	
9,600.0	6,604.2	6,600.2	6,600.2	81.7	130.3	-90.99	365.2	2,651.4	777.6	565.7	211.89	3.670	
9,645.6	6,603.6	6,599.6	6,599.6	82.9	130.2	-90.92	365.2	2,651.4	741.5	528.4	213.11	3.480	
9,700.0	6,602.9	6,598.9	6,598.9	84.3	130.2	-90.83	365.2	2,651.4	700.0	485.5	214.56	3.263	
9,744.1	6,602.3	6,598.3	6,598.3	85.5	130.2	-90.76	365.2	2,651.4	667.7	452.0	215.74	3.095	
9,800.0	6,601.6	6,597.6	6,597.6	87.0	130.2	-90.67	365.2	2,651.4	628.8	411.6	217.24	2.895	
9,842.5	6,601.1	6,597.1	6,597.1	88.2	130.2	-90.60	365.2	2,651.4	601.1	382.7	218.38	2.752	
9,900.0	6,600.3	6,596.3	6,596.3	89.7	130.2	-90.51	365.2	2,651.4	566.4	346.5	219.92	2.576	
9,940.9	6,599.8	6,595.8	6,595.8	90.9	130.2	-90.45	365.2	2,651.4	544.1	323.1	221.02	2.462	
10,000.0	6,599.0	6,595.0	6,595.0	92.5	130.2	-90.35	365.2	2,651.4	515.9	293.3	222.61	2.318	
10,039.3	6,598.5	6,594.5	6,594.5	93.5	130.1	-90.29	365.2	2,651.4	500.2	276.5	223.67	2.236	
10,100.0	6,597.7	6,593.7	6,593.7	95.2	130.1	-90.20	365.2	2,651.4	481.2	255.9	225.30	2.136	
10,137.8	6,597.3	6,593.3	6,593.3	96.2	130.1	-90.14	365.2	2,651.4	473.0	246.6	226.32	2.090	
10,200.0	6,596.5	6,592.5	6,592.5	97.9	130.1	-90.04	365.2	2,651.4	465.8	237.8	227.99	2.043	
10,223.2	6,596.2	6,592.2	6,592.2	98.5	130.1	-90.00	365.2	2,651.4	465.2	236.6	228.62	2.035 CC	
10,236.2	6,596.0	6,592.0	6,592.0	98.9	130.1	-89.98	365.2	2,651.4	465.4	236.4	228.97	2.032 ES, SF	
10,300.0	6,595.2	6,591.2	6,591.2	100.6	130.1	-89.88	365.2	2,651.4	471.5	240.8	230.69	2.044	
10,334.6	6,594.7	6,590.7	6,590.7	101.6	130.1	-89.82	365.2	2,651.4	478.3	246.7	231.63	2.065	
10,400.0	6,593.9	6,589.9	6,589.9	103.3	130.1	-89.72	365.2	2,651.4	497.7	264.3	233.39	2.132	
10,433.0	6,593.5	6,589.5	6,589.5	104.2	130.0	-89.67	365.2	2,651.4	510.3	276.0	234.29	2.178	
10,500.0	6,592.6	6,588.6	6,588.6	106.1	130.0	-89.56	365.2	2,651.4	541.3	305.2	236.10	2.293	
10,531.5	6,592.2	6,588.2	6,588.2	106.9	130.0	-89.51	365.2	2,651.4	558.1	321.1	236.95	2.355	
10,600.0	6,591.3	6,587.3	6,587.3	108.8	130.0	-89.40	365.2	2,651.4	598.6	359.8	238.80	2.507	
10,629.9	6,590.9	6,586.9	6,586.9	109.6	130.0	-89.35	365.2	2,651.4	617.9	378.3	239.61	2.579	
10,700.0	6,590.0	6,586.0	6,586.0	111.6	130.0	-89.24	365.2	2,651.4	666.1	424.6	241.51	2.758	
10,728.3	6,589.6	6,585.6	6,585.6	112.3	130.0	-89.20	365.2	2,651.4	686.7	444.4	242.28	2.834	
10,800.0	6,588.7	6,584.7	6,584.7	114.3	129.9	-89.08	365.2	2,651.4	741.0	496.8	244.22	3.034	
10,826.7	6,588.4	6,584.4	6,584.4	115.0	129.9	-89.04	365.2	2,651.4	762.0	517.1	244.94	3.111	
10,900.0	6,587.4	6,583.4	6,583.4	117.0	129.9	-88.92	365.2	2,651.4	821.2	574.3	246.93	3.326	
10,925.2	6,587.1	6,583.1	6,583.1	117.7	129.9	-88.88	365.2	2,651.4	842.1	594.5	247.61	3.401	
11,000.0	6,586.1	6,582.1	6,582.1	119.8	129.9	-88.76	365.2	2,651.4	905.4	655.8	249.64	3.627	
11,023.6	6,585.8	6,581.8	6,581.8	120.4	129.9	-88.73	365.2	2,651.4	925.7	675.5	250.28	3.699	
11,100.0	6,584.8	6,580.8	6,580.8	122.5	129.9	-88.60	365.2	2,651.4	992.5	740.2	252.35	3.933	
11,122.0	6,584.5	6,580.5	6,580.5	123.2	129.9	-88.57	365.2	2,651.4	1,012.0	759.1	252.95	4.001	
11,200.0	6,583.5	6,579.5	6,579.5	125.3	129.8	-88.44	365.2	2,651.4	1,081.9	826.8	255.06	4.242	
11,220.4	6,583.3	6,579.3	6,579.3	125.9	129.8	-88.41	365.2	2,651.4	1,100.4	844.7	255.62	4.305	
11,300.0	6,582.2	6,578.2	6,578.2	128.1	129.8	-88.28	365.2	2,651.4	1,172.9	915.2	257.77	4.550	
11,318.9	6,582.0	6,578.0	6,578.0	128.6	129.8	-88.25	365.2	2,651.4	1,190.3	932.0	258.29	4.608	
11,400.0	6,580.9	6,576.9	6,576.9	130.8	129.8	-88.12	365.2	2,651.4	1,265.3	1,004.9	260.49	4.858	
11,417.3	6,580.7	6,576.7	6,576.7	131.3	129.8	-88.10	365.2	2,651.4	1,281.4	1,020.5	260.95	4.911	
11,500.0	6,579.7	6,575.7	6,575.7	133.6	129.8	-87.96	365.2	2,651.4	1,358.8	1,095.6	263.20	5.163	
11,515.7	6,579.4	6,575.4	6,575.4	134.0	129.8	-87.94	365.2	2,651.4	1,373.6	1,110.0	263.62	5.211	
11,600.0	6,578.4	6,574.4	6,574.4	136.3	129.7	-87.80	365.2	2,651.4	1,453.2	1,187.3	265.91	5.465	
11,614.1	6,578.2	6,574.2	6,574.2	136.7	129.7	-87.78	365.2	2,651.4	1,466.6	1,200.3	266.29	5.507	
11,700.0	6,577.1	6,573.1	6,573.1	139.1	129.7	-87.64	365.2	2,651.4	1,548.2	1,279.6	268.62	5.764	
11,712.6	6,576.9	6,572.9	6,572.9	139.5	129.7	-87.62	365.2	2,651.4	1,560.2	1,291.3	268.96	5.801	
11,800.0	6,575.8	6,571.8	6,571.8	141.9	129.7	-87.48	365.2	2,651.4	1,643.9	1,372.6	271.33	6.059	
11,811.0	6,575.6	6,571.6	6,571.6	142.2	129.7	-87.47	365.2	2,651.4	1,654.4	1,382.8	271.63	6.091	
11,858.8	6,575.0	6,571.0	6,571.0	143.5	129.7	-87.39	365.2	2,651.4	1,700.3	1,427.4	272.92	6.230	
11,859.3	6,575.0	6,571.0	6,571.0	143.5	129.7	-87.39	365.2	2,651.4	1,700.9	1,427.9	272.93	6.232	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
0.0	0.0	0.0	0.0	0.0	0.0	70.90	1,494.8	4,317.5	4,569.0				
98.4	98.4	77.3	77.3	0.1	0.0	70.90	1,495.1	4,317.4	4,569.0	4,568.9	0.10	N/A	
100.0	100.0	78.9	78.9	0.1	0.0	70.90	1,495.1	4,317.4	4,569.0	4,568.9	0.10	N/A	
196.8	196.8	182.1	182.1	0.3	0.1	70.89	1,495.9	4,317.1	4,568.9	4,568.5	0.40	N/A	
200.0	200.0	185.5	185.5	0.3	0.1	70.89	1,495.9	4,317.1	4,568.9	4,568.5	0.41	N/A	
295.3	295.3	291.3	291.3	0.5	0.2	70.88	1,496.3	4,316.7	4,568.7	4,568.0	0.76	6,008.084	
300.0	300.0	296.6	296.6	0.5	0.2	70.88	1,496.3	4,316.7	4,568.7	4,567.9	0.78	5,871.899	
368.4	368.4	348.4	348.4	0.7	0.3	70.88	1,496.6	4,316.5	4,568.6	4,567.6	0.97	4,707.062	
393.7	393.7	367.1	367.1	0.8	0.3	70.88	1,496.8	4,316.4	4,568.6	4,567.5	1.04	4,389.661	
400.0	400.0	371.8	371.8	0.8	0.3	70.87	1,496.8	4,316.4	4,568.6	4,567.5	1.06	4,317.216	
492.1	492.1	458.7	458.6	1.0	0.3	70.87	1,497.6	4,316.4	4,568.9	4,567.6	1.33	3,441.262	
500.0	500.0	467.2	467.2	1.0	0.4	70.86	1,497.7	4,316.4	4,568.9	4,567.6	1.35	3,380.484	
590.5	590.5	557.7	557.7	1.2	0.4	70.86	1,498.4	4,316.5	4,569.1	4,567.5	1.61	2,846.219	
600.0	600.0	566.7	566.7	1.2	0.4	70.86	1,498.4	4,316.5	4,569.2	4,567.5	1.63	2,801.898	
689.0	689.0	690.3	690.2	1.4	0.4	70.85	1,498.7	4,316.4	4,569.2	4,567.4	1.86	2,456.021	
700.0	700.0	700.0	700.0	1.4	0.4	70.85	1,498.7	4,316.4	4,569.2	4,567.3	1.89	2,421.718	
787.4	787.4	769.4	769.4	1.6	0.5	70.85	1,499.0	4,316.0	4,568.9	4,566.8	2.11	2,161.407	
795.2	795.2	775.2	775.2	1.7	0.5	70.85	1,499.1	4,316.0	4,568.9	4,566.8	2.13	2,140.996	
800.0	800.0	778.8	778.8	1.7	0.5	70.85	1,499.1	4,316.0	4,568.9	4,566.8	2.15	2,128.675	
885.8	885.8	862.5	862.5	1.9	0.5	70.84	1,499.6	4,315.9	4,569.0	4,566.7	2.38	1,917.800	
900.0	900.0	877.9	877.9	1.9	0.5	70.84	1,499.7	4,315.9	4,569.0	4,566.6	2.42	1,885.998	
984.2	984.2	983.1	983.1	2.1	0.6	70.83	1,500.0	4,315.6	4,568.9	4,566.3	2.65	1,721.154	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	0.6	70.83	1,500.0	4,315.6	4,568.9	4,566.2	2.70	1,694.530	
1,082.7	1,082.7	1,066.4	1,066.4	2.3	0.6	70.83	1,500.1	4,315.3	4,568.6	4,565.7	2.90	1,574.146	
1,099.5	1,099.5	1,079.5	1,079.5	2.3	0.6	70.83	1,500.2	4,315.3	4,568.6	4,565.7	2.94	1,551.813	
1,100.0	1,100.0	1,079.9	1,079.9	2.3	0.6	70.83	1,500.2	4,315.3	4,568.6	4,565.7	2.95	1,551.135	
1,181.1	1,181.1	1,148.3	1,148.3	2.5	0.6	70.83	1,500.5	4,315.3	4,568.7	4,565.6	3.15	1,449.083	
1,200.0	1,200.0	1,164.8	1,164.8	2.6	0.6	70.83	1,500.5	4,315.3	4,568.8	4,565.6	3.20	1,426.917	
1,279.5	1,279.5	1,239.4	1,239.4	2.7	0.7	166.01	1,500.8	4,315.6	4,570.2	4,566.9	3.34	1,367.615	
1,300.0	1,300.0	1,260.0	1,259.9	2.8	0.7	166.01	1,500.8	4,315.7	4,570.9	4,567.5	3.39	1,346.840	
1,377.9	1,377.8	1,335.6	1,335.6	2.9	0.7	166.00	1,501.1	4,315.9	4,574.9	4,571.3	3.58	1,276.305	
1,400.0	1,399.8	1,356.3	1,356.3	3.0	0.7	166.00	1,501.2	4,316.0	4,576.5	4,572.8	3.64	1,257.939	
1,476.4	1,475.9	1,431.4	1,431.4	3.1	0.7	165.99	1,501.3	4,316.4	4,583.0	4,579.2	3.83	1,196.319	
1,500.0	1,499.5	1,456.4	1,456.3	3.2	0.7	165.98	1,501.4	4,316.5	4,585.4	4,581.6	3.89	1,178.517	
1,574.8	1,573.7	1,527.6	1,527.5	3.4	0.8	165.96	1,501.7	4,316.8	4,594.3	4,590.3	4.08	1,125.146	
1,600.0	1,598.7	1,548.3	1,548.3	3.4	0.8	165.95	1,501.8	4,316.9	4,597.8	4,593.6	4.15	1,108.696	
1,673.2	1,671.1	1,609.8	1,609.7	3.6	0.8	165.92	1,502.0	4,317.3	4,609.2	4,604.8	4.34	1,061.708	
1,700.0	1,697.5	1,635.2	1,635.2	3.7	0.8	165.91	1,502.1	4,317.5	4,613.8	4,609.4	4.41	1,045.543	
1,771.6	1,767.9	1,704.0	1,703.9	3.9	0.8	165.88	1,502.5	4,318.1	4,627.4	4,622.8	4.61	1,003.383	
1,800.0	1,795.6	1,738.7	1,738.7	4.0	0.8	165.87	1,502.8	4,318.3	4,633.2	4,628.5	4.69	987.932	
1,870.1	1,864.0	1,816.9	1,816.9	4.3	0.9	165.84	1,503.7	4,318.5	4,648.6	4,643.7	4.89	950.752	
1,900.0	1,893.1	1,842.1	1,842.1	4.4	0.9	165.82	1,504.0	4,318.6	4,655.7	4,650.7	4.97	936.360	
1,968.5	1,959.3	1,900.0	1,900.0	4.6	0.9	165.77	1,504.8	4,318.8	4,673.1	4,667.9	5.17	903.792	
1,992.4	1,982.4	1,924.4	1,924.4	4.7	0.9	165.75	1,505.1	4,318.9	4,679.5	4,674.3	5.24	892.967	
2,000.0	1,989.6	1,932.3	1,932.2	4.8	0.9	165.76	1,505.3	4,318.9	4,681.6	4,676.3	5.26	889.773	
2,066.9	2,054.0	2,002.5	2,002.5	5.1	0.9	165.80	1,506.5	4,319.0	4,699.8	4,694.3	5.46	861.410	
2,100.0	2,085.8	2,041.3	2,041.2	5.2	1.0	165.83	1,507.2	4,319.0	4,708.8	4,703.2	5.54	849.341	
2,165.3	2,148.7	2,100.0	2,099.9	5.5	1.0	165.86	1,508.2	4,318.9	4,726.4	4,720.7	5.72	825.592	
2,200.0	2,182.0	2,133.5	2,133.5	5.7	1.0	165.88	1,508.8	4,318.9	4,735.7	4,729.9	5.83	812.254	
2,263.8	2,243.4	2,176.3	2,176.2	6.0	1.0	165.91	1,509.5	4,319.0	4,753.2	4,747.1	6.01	790.432	
2,300.0	2,278.2	2,200.9	2,200.8	6.2	1.0	165.93	1,510.0	4,319.1	4,763.2	4,757.0	6.12	778.395	
2,362.2	2,338.1	2,261.8	2,261.7	6.5	1.0	165.96	1,511.3	4,319.4	4,780.4	4,774.1	6.31	757.672	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
2,400.0	2,374.4	2,298.9	2,298.7	6.7	1.1	165.98	1,512.2	4,319.6	4,790.8	4,784.4	6.43	745.586	
2,460.6	2,432.8	2,345.4	2,345.3	7.0	1.1	166.01	1,513.2	4,319.9	4,807.7	4,801.1	6.61	727.477	
2,500.0	2,470.6	2,375.4	2,375.3	7.2	1.1	166.03	1,513.9	4,320.1	4,818.7	4,812.0	6.73	716.231	
2,559.0	2,527.4	2,422.9	2,422.7	7.6	1.1	166.06	1,515.0	4,320.6	4,835.4	4,828.4	6.91	699.787	
2,600.0	2,566.8	2,457.9	2,457.7	7.8	1.1	166.08	1,515.9	4,321.0	4,846.9	4,839.9	7.04	688.763	
2,657.5	2,622.1	2,506.9	2,506.7	8.1	1.1	166.10	1,517.2	4,321.5	4,863.3	4,856.0	7.22	673.803	
2,700.0	2,663.0	2,542.5	2,542.2	8.3	1.1	166.12	1,518.2	4,321.9	4,875.4	4,868.0	7.35	663.261	
2,755.9	2,716.8	2,589.2	2,589.0	8.6	1.2	166.15	1,519.5	4,322.5	4,891.4	4,883.9	7.53	649.854	
2,800.0	2,759.2	2,634.6	2,634.4	8.9	1.2	166.17	1,520.8	4,323.2	4,904.0	4,896.4	7.67	639.574	
2,854.3	2,811.5	2,694.9	2,694.6	9.2	1.2	166.20	1,522.6	4,323.9	4,919.6	4,911.7	7.84	627.245	
2,900.0	2,855.4	2,724.6	2,724.3	9.4	1.2	166.21	1,523.4	4,324.2	4,932.6	4,924.6	7.99	617.648	
2,952.7	2,906.2	2,756.1	2,755.8	9.7	1.2	166.23	1,524.4	4,324.7	4,947.9	4,939.7	8.15	606.970	
3,000.0	2,951.6	2,800.0	2,799.7	10.0	1.2	166.25	1,525.8	4,325.6	4,961.8	4,953.4	8.31	597.404	
3,051.2	3,000.9	2,816.8	2,816.4	10.3	1.3	166.26	1,526.4	4,326.0	4,976.9	4,968.4	8.46	588.027	
3,100.0	3,047.8	2,849.8	2,849.4	10.5	1.3	166.27	1,527.7	4,326.8	4,991.5	4,982.8	8.62	578.946	
3,149.6	3,095.5	2,883.3	2,882.9	10.8	1.3	166.29	1,529.1	4,327.6	5,006.4	4,997.6	8.78	570.007	
3,200.0	3,144.0	2,927.4	2,926.9	11.1	1.3	166.30	1,531.2	4,328.7	5,021.7	5,012.8	8.95	561.139	
3,248.0	3,190.2	2,978.6	2,978.0	11.4	1.3	166.32	1,533.6	4,330.0	5,036.3	5,027.2	9.11	552.842	
3,300.0	3,240.2	3,046.7	3,046.0	11.7	1.3	166.34	1,536.6	4,331.7	5,051.9	5,042.7	9.28	544.156	
3,346.4	3,284.9	3,128.8	3,128.0	11.9	1.4	166.37	1,540.0	4,333.3	5,065.7	5,056.3	9.44	536.493	
3,400.0	3,336.4	3,234.3	3,233.6	12.2	1.4	166.43	1,542.8	4,334.6	5,081.0	5,071.3	9.62	527.950	
3,444.9	3,379.6	3,288.2	3,287.4	12.5	1.4	166.46	1,543.7	4,335.2	5,093.6	5,083.8	9.77	521.314	
3,500.0	3,432.6	3,359.0	3,358.2	12.8	1.4	166.51	1,544.4	4,335.9	5,108.9	5,098.9	9.95	513.223	
3,543.3	3,474.3	3,415.7	3,414.9	13.1	1.5	166.55	1,544.6	4,336.4	5,120.8	5,110.7	10.10	506.997	
3,600.0	3,528.8	3,490.7	3,489.9	13.4	1.5	166.60	1,544.8	4,336.7	5,136.2	5,125.9	10.29	499.058	
3,641.7	3,569.0	3,545.2	3,544.4	13.6	1.5	166.64	1,544.9	4,336.9	5,147.4	5,137.0	10.42	493.791	
3,700.0	3,625.0	3,613.8	3,613.0	14.0	1.5	166.69	1,544.7	4,336.9	5,162.9	5,152.3	10.61	486.717	
3,740.1	3,663.6	3,648.0	3,647.2	14.2	1.5	166.72	1,544.6	4,336.9	5,173.5	5,162.8	10.74	481.920	
3,800.0	3,721.2	3,700.0	3,699.2	14.5	1.5	166.76	1,544.4	4,336.9	5,189.5	5,178.5	10.93	474.972	
3,838.6	3,758.3	3,740.1	3,739.3	14.8	1.5	166.79	1,544.4	4,336.9	5,199.7	5,188.7	11.05	470.703	
3,900.0	3,817.4	3,805.7	3,804.9	15.1	1.5	166.84	1,544.3	4,336.9	5,216.1	5,204.8	11.24	464.078	
3,937.0	3,853.0	3,842.9	3,842.1	15.3	1.5	166.86	1,544.3	4,336.8	5,225.9	5,214.5	11.36	460.187	
4,000.0	3,913.6	3,906.2	3,905.3	15.7	1.5	166.91	1,544.2	4,336.7	5,242.5	5,231.0	11.55	453.729	
4,035.4	3,947.7	3,941.2	3,940.4	15.9	1.5	166.93	1,544.1	4,336.7	5,251.9	5,240.2	11.67	450.129	
4,100.0	4,009.8	4,000.0	3,999.2	16.3	1.5	166.98	1,543.9	4,336.6	5,268.9	5,257.1	11.87	443.770	
4,133.8	4,042.4	4,026.2	4,025.4	16.5	1.5	166.99	1,543.8	4,336.6	5,277.9	5,265.9	11.98	440.520	
4,200.0	4,106.0	4,070.5	4,069.6	16.8	1.5	167.03	1,543.7	4,336.7	5,295.6	5,283.4	12.19	434.389	
4,232.3	4,137.1	4,100.0	4,099.2	17.0	1.5	167.05	1,543.7	4,336.8	5,304.4	5,292.1	12.30	431.423	
4,300.0	4,202.2	4,176.4	4,175.6	17.4	1.5	167.10	1,543.6	4,337.1	5,322.7	5,310.2	12.52	425.254	
4,330.7	4,231.7	4,213.8	4,213.0	17.6	1.5	167.13	1,543.7	4,337.1	5,330.9	5,318.2	12.62	422.505	
4,400.0	4,298.4	4,284.4	4,283.6	18.0	1.5	167.17	1,543.8	4,337.0	5,349.3	5,336.5	12.84	416.559	
4,429.1	4,326.4	4,300.0	4,299.2	18.2	1.5	167.18	1,543.8	4,337.0	5,357.1	5,344.1	12.93	414.196	
4,500.0	4,394.6	4,358.7	4,357.8	18.6	1.5	167.22	1,543.9	4,337.0	5,376.1	5,362.9	13.16	408.453	
4,527.5	4,421.1	4,377.7	4,376.9	18.7	1.5	167.23	1,543.9	4,337.1	5,383.5	5,370.3	13.25	406.297	
4,600.0	4,490.8	4,497.7	4,496.8	19.2	1.5	167.31	1,544.2	4,337.2	5,403.0	5,389.5	13.49	400.491	
4,626.0	4,515.8	4,553.6	4,552.8	19.3	1.5	167.34	1,544.4	4,336.7	5,409.8	5,396.2	13.58	398.492	
4,700.0	4,587.0	4,640.7	4,639.9	19.8	1.5	167.39	1,545.0	4,335.3	5,428.5	5,414.7	13.82	392.918	
4,724.4	4,610.5	4,659.6	4,658.8	19.9	1.5	167.40	1,545.0	4,335.0	5,434.8	5,420.9	13.89	391.166	
4,800.0	4,683.2	4,725.3	4,724.5	20.3	1.5	167.44	1,544.8	4,334.3	5,454.1	5,440.0	14.14	385.814	
4,822.8	4,705.2	4,750.0	4,749.2	20.5	1.5	167.46	1,544.8	4,334.0	5,459.9	5,445.7	14.21	384.191	
4,900.0	4,779.4	4,830.8	4,830.0	20.9	1.5	167.51	1,544.6	4,333.0	5,479.6	5,465.2	14.46	378.838	
4,921.2	4,799.8	4,852.0	4,851.1	21.0	1.5	167.52	1,544.5	4,332.7	5,485.0	5,470.5	14.53	377.403	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,875.6	4,925.9	4,925.0	21.5	1.6	167.57	1,544.3	4,331.8	5,505.1	5,490.3	14.79	372.207	
5,019.7	4,894.5	4,942.5	4,941.7	21.6	1.6	167.58	1,544.2	4,331.6	5,510.1	5,495.2	14.85	370.939	
5,100.0	4,971.8	5,011.8	5,010.9	22.1	1.6	167.62	1,543.9	4,330.9	5,530.7	5,515.6	15.12	365.866	
5,118.1	4,989.2	5,029.0	5,028.1	22.2	1.6	167.64	1,543.8	4,330.7	5,535.3	5,520.2	15.18	364.735	
5,200.0	5,068.0	5,100.0	5,099.1	22.7	1.6	167.68	1,543.4	4,330.0	5,556.4	5,540.9	15.44	359.759	
5,216.5	5,083.9	5,118.3	5,117.4	22.8	1.6	167.69	1,543.3	4,329.9	5,560.6	5,545.1	15.50	358.746	
5,240.0	5,106.5	5,136.6	5,135.7	22.9	1.6	167.71	1,543.1	4,329.8	5,566.7	5,551.1	15.58	357.365	
5,300.0	5,164.4	5,183.3	5,182.4	23.2	1.6	167.80	1,542.8	4,329.5	5,581.7	5,566.0	15.70	355.436	
5,314.9	5,178.8	5,200.0	5,199.1	23.3	1.6	167.83	1,542.7	4,329.4	5,585.3	5,569.5	15.73	355.036	
5,400.0	5,261.5	5,335.2	5,334.3	23.6	1.6	167.98	1,541.7	4,328.2	5,603.9	5,588.0	15.89	352.712	
5,413.4	5,274.6	5,366.8	5,365.9	23.6	1.6	168.01	1,541.4	4,327.7	5,606.5	5,590.6	15.91	352.362	
5,500.0	5,359.5	5,463.5	5,462.6	23.9	1.6	168.12	1,540.4	4,325.7	5,621.5	5,605.4	16.04	350.434	
5,511.8	5,371.1	5,473.9	5,473.0	24.0	1.6	168.13	1,540.3	4,325.5	5,623.3	5,607.3	16.06	350.219	
5,600.0	5,458.0	5,568.2	5,567.3	24.2	1.6	168.22	1,539.4	4,323.6	5,635.7	5,619.6	16.17	348.492	
5,610.2	5,468.2	5,580.2	5,579.2	24.3	1.6	168.23	1,539.3	4,323.4	5,637.0	5,620.8	16.18	348.315	
5,700.0	5,557.2	5,665.1	5,664.2	24.5	1.6	168.29	1,538.5	4,321.6	5,646.5	5,630.2	16.28	346.748	
5,708.6	5,565.7	5,672.9	5,671.9	24.5	1.6	168.30	1,538.4	4,321.4	5,647.3	5,631.0	16.29	346.618	
5,800.0	5,656.7	5,765.1	5,764.1	24.7	1.6	168.34	1,537.9	4,319.4	5,653.9	5,637.5	16.38	345.089	
5,807.1	5,663.7	5,772.6	5,771.6	24.7	1.6	168.35	1,537.8	4,319.3	5,654.3	5,637.9	16.39	344.981	
5,900.0	5,756.5	5,876.3	5,875.3	24.9	1.6	168.37	1,537.5	4,316.8	5,657.8	5,641.3	16.48	343.379	
5,905.5	5,761.9	5,882.5	5,881.5	24.9	1.6	168.37	1,537.5	4,316.7	5,657.9	5,641.4	16.48	343.289	
6,000.0	5,856.4	6,013.9	6,012.8	25.0	1.6	168.36	1,538.3	4,312.5	5,657.8	5,641.3	16.57	341.407	
6,003.9	5,860.3	6,017.3	6,016.2	25.0	1.6	168.36	1,538.4	4,312.4	5,657.7	5,641.2	16.58	341.328	
6,032.5	5,888.9	6,041.7	6,040.6	25.0	1.7	73.15	1,538.8	4,311.5	5,657.0	5,630.6	26.40	214.273	
6,062.5	5,918.9	6,067.4	6,066.2	25.1	1.7	73.14	1,539.3	4,310.5	5,656.1	5,629.7	26.44	213.939	
6,100.0	5,956.4	6,202.5	6,201.1	25.1	1.7	-17.00	1,545.3	4,303.7	5,654.1	5,637.4	16.65	339.559	
6,102.3	5,958.7	6,204.9	6,203.5	25.1	1.7	-17.01	1,545.5	4,303.5	5,653.8	5,637.2	16.65	339.565	
6,150.0	6,006.2	6,253.6	6,251.9	25.1	1.7	-17.21	1,549.0	4,300.1	5,647.6	5,630.9	16.66	338.986	
6,200.0	6,055.6	6,300.0	6,298.0	25.1	1.7	-17.52	1,552.6	4,296.7	5,637.8	5,621.1	16.70	337.570	
6,200.8	6,056.3	6,300.0	6,298.0	25.1	1.7	-17.52	1,552.6	4,296.7	5,637.6	5,620.9	16.70	337.554	
6,250.0	6,104.3	6,341.5	6,339.3	25.0	1.8	-17.92	1,555.7	4,293.7	5,624.8	5,608.0	16.75	335.828	
6,299.2	6,151.3	6,378.6	6,376.2	24.9	1.8	-18.41	1,558.4	4,291.2	5,609.0	5,592.2	16.79	334.017	
6,300.0	6,152.1	6,379.2	6,376.8	24.9	1.8	-18.42	1,558.4	4,291.1	5,608.7	5,591.9	16.79	333.985	
6,350.0	6,198.7	6,417.0	6,414.4	24.8	1.8	-19.03	1,560.9	4,288.7	5,589.6	5,572.8	16.83	332.071	
6,397.6	6,241.9	6,453.1	6,450.4	24.7	1.8	-19.74	1,563.1	4,286.4	5,568.7	5,551.8	16.87	330.104	
6,400.0	6,244.1	6,454.9	6,452.2	24.7	1.8	-19.77	1,563.2	4,286.3	5,567.6	5,550.7	16.87	329.995	
6,450.0	6,287.8	6,491.5	6,488.6	24.5	1.8	-20.67	1,565.2	4,284.1	5,542.7	5,525.8	16.92	327.577	
6,496.0	6,326.5	6,500.0	6,497.1	24.4	1.8	-21.57	1,565.7	4,283.6	5,517.4	5,500.5	16.95	325.432	
6,500.0	6,329.7	6,500.0	6,497.1	24.4	1.8	-21.65	1,565.7	4,283.6	5,515.2	5,498.2	16.96	325.236	
6,550.0	6,369.6	6,542.6	6,539.7	24.3	1.8	-22.95	1,567.8	4,281.3	5,485.0	5,468.0	17.09	320.915	
6,594.5	6,403.3	6,562.7	6,559.7	24.2	1.8	-24.25	1,568.7	4,280.3	5,456.3	5,439.0	17.25	316.304	
6,600.0	6,407.3	6,565.1	6,562.1	24.2	1.8	-24.42	1,568.8	4,280.2	5,452.6	5,435.3	17.27	315.638	
6,650.0	6,442.7	6,600.0	6,596.9	24.1	1.8	-26.26	1,570.2	4,278.7	5,417.9	5,400.3	17.60	307.881	
6,692.9	6,471.0	6,600.0	6,596.9	24.0	1.8	-27.95	1,570.2	4,278.7	5,386.4	5,368.5	17.92	300.502	
6,700.0	6,475.5	6,600.0	6,596.9	24.0	1.8	-28.25	1,570.2	4,278.7	5,381.1	5,363.1	17.99	299.134	
6,750.0	6,505.6	6,626.0	6,622.9	24.0	1.8	-30.86	1,571.1	4,277.6	5,342.3	5,323.7	18.63	286.805	
6,791.3	6,528.3	6,640.8	6,637.7	24.0	1.8	-33.39	1,571.7	4,277.0	5,309.0	5,289.7	19.30	275.082	
6,800.0	6,532.8	6,643.8	6,640.6	24.0	1.8	-33.98	1,571.8	4,276.9	5,301.9	5,282.4	19.46	272.488	
6,850.0	6,557.0	6,659.5	6,656.3	24.1	1.8	-37.79	1,572.3	4,276.3	5,259.8	5,239.3	20.51	256.458	
6,889.7	6,574.1	6,670.5	6,667.3	24.2	1.8	-41.44	1,572.7	4,276.0	5,225.4	5,203.9	21.50	243.005	
6,900.0	6,578.1	6,673.1	6,669.9	24.3	1.8	-42.48	1,572.8	4,275.9	5,216.4	5,194.7	21.78	239.561	
6,950.0	6,596.1	6,684.5	6,681.3	24.5	1.8	-48.26	1,573.2	4,275.5	5,171.9	5,148.7	23.21	222.851	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,607.5	6,700.0	6,696.8	24.7	1.8	-53.72	1,573.8	4,275.0	5,137.2	5,112.9	24.39	210.611	
7,000.0	6,610.7	6,700.0	6,696.8	24.8	1.8	-55.49	1,573.8	4,275.0	5,126.4	5,101.7	24.73	207.302	
7,050.0	6,621.9	6,700.0	6,696.8	25.1	1.8	-63.86	1,573.8	4,275.0	5,080.2	5,054.1	26.08	194.807	
7,086.6	6,628.0	6,704.7	6,701.5	25.4	1.8	-71.03	1,573.9	4,274.8	5,046.0	5,019.1	26.89	187.680	
7,100.0	6,629.7	6,705.8	6,702.6	25.6	1.8	-73.82	1,574.0	4,274.8	5,033.5	5,006.3	27.11	185.636	
7,150.0	6,634.1	6,708.2	6,705.0	26.0	1.8	-84.73	1,574.1	4,274.7	4,986.4	4,958.7	27.76	179.618	
7,185.0	6,635.1	6,708.1	6,704.9	26.4	1.8	-92.54	1,574.1	4,274.7	4,953.5	4,925.3	28.19	175.721	
7,196.6	6,635.0	6,707.7	6,704.5	26.5	1.8	-95.08	1,574.0	4,274.7	4,942.6	4,914.3	28.34	174.427	
7,200.0	6,635.0	6,707.6	6,704.4	26.6	1.8	-95.08	1,574.0	4,274.7	4,939.4	4,911.0	28.37	174.081	
7,283.4	6,633.9	6,704.4	6,701.2	27.6	1.8	-94.97	1,573.9	4,274.8	4,861.0	4,831.6	29.40	165.350	
7,300.0	6,633.7	6,703.8	6,700.5	27.8	1.8	-94.95	1,573.9	4,274.8	4,845.5	4,815.9	29.60	163.691	
7,381.9	6,632.6	6,700.0	6,696.8	29.0	1.8	-94.82	1,573.8	4,275.0	4,768.8	4,738.0	30.78	154.906	
7,400.0	6,632.4	6,700.0	6,696.8	29.2	1.8	-94.82	1,573.8	4,275.0	4,751.8	4,720.8	31.05	153.050	
7,480.3	6,631.4	6,700.0	6,696.8	30.5	1.8	-94.82	1,573.8	4,275.0	4,676.8	4,644.4	32.36	144.521	
7,500.0	6,631.1	6,700.0	6,696.8	30.9	1.8	-94.82	1,573.8	4,275.0	4,658.4	4,625.7	32.68	142.535	
7,578.7	6,630.1	6,700.0	6,696.8	32.3	1.8	-94.82	1,573.8	4,275.0	4,585.1	4,551.0	34.10	134.478	
7,600.0	6,629.8	6,700.0	6,696.8	32.7	1.8	-94.82	1,573.8	4,275.0	4,565.3	4,530.8	34.48	132.415	
7,677.1	6,628.9	6,700.0	6,696.8	34.1	1.8	-94.82	1,573.8	4,275.0	4,493.6	4,457.6	35.97	124.944	
7,700.0	6,628.6	6,700.0	6,696.8	34.6	1.8	-94.82	1,573.8	4,275.0	4,472.4	4,436.0	36.41	122.849	
7,775.6	6,627.6	6,700.0	6,696.8	36.1	1.8	-94.82	1,573.8	4,275.0	4,402.5	4,364.5	37.95	116.010	
7,800.0	6,627.3	6,686.6	6,683.4	36.6	1.8	-94.37	1,573.3	4,275.4	4,379.9	4,341.4	38.45	113.925	
7,874.0	6,626.3	6,684.0	6,680.8	38.2	1.8	-94.28	1,573.2	4,275.5	4,311.6	4,271.6	40.03	107.717	
7,900.0	6,626.0	6,683.1	6,679.9	38.8	1.8	-94.25	1,573.2	4,275.5	4,287.7	4,247.1	40.58	105.651	
7,972.4	6,625.1	6,680.6	6,677.4	40.4	1.8	-94.17	1,573.1	4,275.6	4,221.1	4,178.9	42.19	100.050	
8,000.0	6,624.7	6,679.6	6,676.4	41.0	1.8	-94.13	1,573.1	4,275.6	4,195.8	4,153.0	42.80	98.029	
8,070.8	6,623.8	6,677.1	6,673.9	42.6	1.8	-94.05	1,573.0	4,275.7	4,131.0	4,086.6	44.42	92.993	
8,100.0	6,623.4	6,676.0	6,672.9	43.3	1.8	-94.01	1,572.9	4,275.8	4,104.4	4,059.3	45.09	91.027	
8,169.3	6,622.6	6,673.6	6,670.4	44.9	1.8	-93.93	1,572.8	4,275.9	4,041.2	3,994.5	46.71	86.509	
8,200.0	6,622.2	6,672.4	6,669.3	45.6	1.8	-93.89	1,572.8	4,275.9	4,013.3	3,965.9	47.44	84.606	
8,267.7	6,621.3	6,670.0	6,666.8	47.3	1.8	-93.81	1,572.7	4,276.0	3,951.9	3,902.8	49.06	80.557	
8,300.0	6,620.9	6,668.8	6,665.6	48.0	1.8	-93.77	1,572.7	4,276.0	3,922.7	3,872.8	49.83	78.720	
8,366.1	6,620.0	6,666.3	6,663.2	49.7	1.8	-93.69	1,572.6	4,276.1	3,863.0	3,811.5	51.44	75.092	
8,400.0	6,619.6	6,665.1	6,661.9	50.5	1.8	-93.64	1,572.5	4,276.1	3,832.5	3,780.2	52.27	73.322	
8,464.5	6,618.8	6,662.6	6,659.5	52.1	1.8	-93.56	1,572.4	4,276.2	3,774.5	3,720.7	53.87	70.072	
8,500.0	6,618.3	6,661.3	6,658.1	53.0	1.8	-93.52	1,572.4	4,276.3	3,742.8	3,688.1	54.74	68.369	
8,563.0	6,617.5	6,658.9	6,655.7	54.5	1.8	-93.43	1,572.3	4,276.4	3,686.6	3,630.3	56.32	65.454	
8,600.0	6,617.0	6,657.5	6,654.3	55.5	1.8	-93.39	1,572.3	4,276.4	3,653.7	3,596.4	57.25	63.817	
8,661.4	6,616.3	6,655.1	6,651.9	57.0	1.8	-93.30	1,572.2	4,276.5	3,599.2	3,540.4	58.81	61.202	
8,700.0	6,615.8	6,653.6	6,650.4	58.0	1.8	-93.25	1,572.1	4,276.6	3,565.1	3,505.3	59.79	59.629	
8,759.8	6,615.0	6,651.2	6,648.1	59.5	1.8	-93.17	1,572.0	4,276.6	3,512.4	3,451.1	61.32	57.281	
8,800.0	6,614.5	6,649.6	6,646.5	60.6	1.8	-93.12	1,572.0	4,276.7	3,477.1	3,414.8	62.35	55.770	
8,858.2	6,613.7	6,647.3	6,644.2	62.1	1.8	-93.04	1,571.9	4,276.8	3,426.2	3,362.3	63.85	53.659	
8,900.0	6,613.2	6,645.6	6,642.5	63.2	1.8	-92.98	1,571.8	4,276.9	3,389.8	3,324.9	64.93	52.208	
8,956.7	6,612.5	6,643.3	6,640.2	64.6	1.8	-92.91	1,571.8	4,276.9	3,340.7	3,274.3	66.40	50.309	
9,000.0	6,611.9	6,641.6	6,638.4	65.8	1.8	-92.85	1,571.7	4,277.0	3,303.2	3,235.7	67.53	48.915	
9,055.1	6,611.2	6,639.3	6,636.2	67.2	1.8	-92.77	1,571.6	4,277.1	3,255.9	3,186.9	68.97	47.205	
9,100.0	6,610.6	6,637.4	6,634.3	68.4	1.8	-92.71	1,571.5	4,277.2	3,217.4	3,147.3	70.15	45.867	
9,153.5	6,609.9	6,635.2	6,632.1	69.8	1.8	-92.63	1,571.5	4,277.2	3,171.8	3,100.3	71.56	44.326	
9,200.0	6,609.3	6,633.2	6,630.1	71.0	1.8	-92.56	1,571.4	4,277.3	3,132.4	3,059.7	72.78	43.040	
9,251.9	6,608.7	6,631.0	6,627.9	72.4	1.8	-92.49	1,571.3	4,277.4	3,088.6	3,014.5	74.15	41.651	
9,300.0	6,608.1	6,629.0	6,625.8	73.7	1.8	-92.42	1,571.2	4,277.5	3,048.4	2,972.9	75.43	40.415	
9,350.4	6,607.4	6,626.8	6,623.7	75.0	1.8	-92.34	1,571.1	4,277.6	3,006.4	2,929.6	76.77	39.163	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,606.8	6,624.6	6,621.5	76.3	1.8	-92.27	1,571.1	4,277.7	2,965.3	2,887.2	78.08	37.975	
9,448.8	6,606.1	6,622.5	6,619.4	77.6	1.8	-92.20	1,571.0	4,277.7	2,925.1	2,845.7	79.39	36.846	
9,500.0	6,605.5	6,620.2	6,617.1	79.0	1.8	-92.12	1,570.9	4,277.8	2,883.2	2,802.5	80.75	35.704	
9,547.2	6,604.9	6,618.1	6,615.0	80.2	1.8	-92.05	1,570.8	4,277.9	2,844.9	2,762.9	82.02	34.686	
9,600.0	6,604.2	6,615.8	6,612.6	81.7	1.8	-91.97	1,570.7	4,278.0	2,802.4	2,718.9	83.43	33.589	
9,645.6	6,603.6	6,613.7	6,610.6	82.9	1.8	-91.90	1,570.7	4,278.1	2,765.9	2,681.2	84.66	32.671	
9,700.0	6,602.9	6,611.2	6,608.1	84.3	1.8	-91.81	1,570.6	4,278.2	2,722.8	2,636.6	86.12	31.616	
9,744.1	6,602.3	6,609.2	6,606.1	85.5	1.8	-91.74	1,570.5	4,278.3	2,688.1	2,600.8	87.31	30.789	
9,800.0	6,601.6	6,600.0	6,596.9	87.0	1.8	-91.43	1,570.2	4,278.7	2,644.5	2,555.7	88.82	29.775	
9,842.5	6,601.1	6,600.0	6,596.9	88.2	1.8	-91.43	1,570.2	4,278.7	2,611.7	2,521.8	89.97	29.030	
9,900.0	6,600.3	6,600.0	6,596.9	89.7	1.8	-91.43	1,570.2	4,278.7	2,567.8	2,476.3	91.52	28.058	
9,940.9	6,599.8	6,600.0	6,596.9	90.9	1.8	-91.43	1,570.2	4,278.7	2,536.9	2,444.2	92.63	27.388	
10,000.0	6,599.0	6,596.9	6,593.8	92.5	1.8	-91.32	1,570.0	4,278.8	2,492.7	2,398.5	94.23	26.454	
10,039.3	6,598.5	6,594.8	6,591.7	93.5	1.8	-91.25	1,570.0	4,278.9	2,463.6	2,368.3	95.30	25.853	
10,100.0	6,597.7	6,591.6	6,588.5	95.2	1.8	-91.14	1,569.8	4,279.0	2,419.4	2,322.5	96.94	24.957	
10,137.8	6,597.3	6,589.5	6,586.5	96.2	1.8	-91.07	1,569.8	4,279.1	2,392.2	2,294.2	97.97	24.418	
10,200.0	6,596.5	6,586.1	6,583.0	97.9	1.8	-90.96	1,569.6	4,279.2	2,348.1	2,248.4	99.66	23.560	
10,236.2	6,596.0	6,584.1	6,581.0	98.9	1.8	-90.89	1,569.5	4,279.3	2,322.7	2,222.1	100.65	23.078	
10,300.0	6,595.2	6,580.4	6,577.4	100.6	1.8	-90.76	1,569.4	4,279.5	2,278.9	2,176.5	102.39	22.257	
10,334.6	6,594.7	6,578.5	6,575.4	101.6	1.8	-90.70	1,569.3	4,279.6	2,255.4	2,152.1	103.33	21.827	
10,400.0	6,593.9	6,574.6	6,571.6	103.3	1.8	-90.56	1,569.2	4,279.8	2,212.0	2,106.9	105.12	21.043	
10,433.0	6,593.5	6,572.6	6,569.6	104.2	1.8	-90.50	1,569.1	4,279.9	2,190.5	2,084.4	106.02	20.661	
10,500.0	6,592.6	6,568.6	6,565.6	106.1	1.8	-90.36	1,568.9	4,280.0	2,147.7	2,039.9	107.85	19.914	
10,531.5	6,592.2	6,566.7	6,563.6	106.9	1.8	-90.29	1,568.8	4,280.1	2,128.0	2,019.3	108.71	19.575	
10,600.0	6,591.3	6,562.4	6,559.3	108.8	1.8	-90.15	1,568.6	4,280.3	2,086.2	1,975.6	110.58	18.865	
10,629.9	6,590.9	6,560.5	6,557.4	109.6	1.8	-90.08	1,568.6	4,280.4	2,068.4	1,957.0	111.40	18.567	
10,700.0	6,590.0	6,555.9	6,552.9	111.6	1.8	-89.92	1,568.4	4,280.6	2,027.7	1,914.4	113.32	17.893	
10,728.3	6,589.6	6,554.0	6,551.1	112.3	1.8	-89.86	1,568.3	4,280.7	2,011.8	1,897.7	114.10	17.632	
10,800.0	6,588.7	6,549.2	6,546.3	114.3	1.8	-89.70	1,568.1	4,281.0	1,972.6	1,856.6	116.06	16.996	
10,826.7	6,588.4	6,547.4	6,544.4	115.0	1.8	-89.63	1,568.0	4,281.1	1,958.5	1,841.7	116.80	16.768	
10,900.0	6,587.4	6,542.3	6,539.4	117.0	1.8	-89.46	1,567.7	4,281.3	1,921.1	1,802.3	118.81	16.170	
10,925.2	6,587.1	6,540.6	6,537.6	117.7	1.8	-89.40	1,567.7	4,281.4	1,908.7	1,789.2	119.50	15.973	
11,000.0	6,586.1	6,535.2	6,532.2	119.8	1.8	-89.21	1,567.4	4,281.7	1,873.5	1,751.9	121.55	15.413	
11,023.6	6,585.8	6,533.4	6,530.5	120.4	1.8	-89.15	1,567.3	4,281.8	1,862.8	1,740.6	122.20	15.244	
11,100.0	6,584.8	6,527.7	6,524.8	122.5	1.8	-88.96	1,567.1	4,282.1	1,830.0	1,705.7	124.29	14.724	
11,122.0	6,584.5	6,526.1	6,523.1	123.2	1.8	-88.90	1,567.0	4,282.2	1,821.1	1,696.2	124.90	14.581	
11,200.0	6,583.5	6,520.0	6,517.1	125.3	1.8	-88.70	1,566.7	4,282.5	1,791.1	1,664.1	127.04	14.099	
11,220.4	6,583.3	6,518.4	6,515.5	125.9	1.8	-88.64	1,566.6	4,282.6	1,783.7	1,656.1	127.60	13.979	
11,300.0	6,582.2	6,512.0	6,509.1	128.1	1.8	-88.42	1,566.3	4,282.9	1,757.0	1,627.2	129.78	13.538	
11,318.9	6,582.0	6,510.5	6,507.6	128.6	1.8	-88.37	1,566.2	4,283.0	1,751.1	1,620.8	130.30	13.440	
11,400.0	6,580.9	6,503.7	6,500.8	130.8	1.8	-88.14	1,565.9	4,283.4	1,728.0	1,595.5	132.52	13.039	
11,417.3	6,580.7	6,502.2	6,499.4	131.3	1.8	-88.09	1,565.8	4,283.5	1,723.5	1,590.5	133.00	12.959	
11,500.0	6,579.7	6,495.0	6,492.2	133.6	1.8	-87.84	1,565.4	4,283.9	1,704.3	1,569.1	135.26	12.600	
11,515.7	6,579.4	6,493.6	6,490.8	134.0	1.8	-87.79	1,565.3	4,284.0	1,701.1	1,565.4	135.69	12.536	
11,600.0	6,578.4	6,486.1	6,483.3	136.3	1.8	-87.53	1,564.9	4,284.4	1,686.2	1,548.2	138.00	12.219	
11,614.1	6,578.2	6,484.9	6,482.1	136.7	1.8	-87.49	1,564.9	4,284.5	1,684.1	1,545.7	138.39	12.170	
11,700.0	6,577.1	6,477.1	6,474.3	139.1	1.8	-87.22	1,564.4	4,285.0	1,673.9	1,533.1	140.73	11.894	
11,712.6	6,576.9	6,476.0	6,473.2	139.5	1.8	-87.19	1,564.4	4,285.0	1,672.7	1,531.6	141.08	11.857	
11,800.0	6,575.8	6,467.9	6,465.2	141.9	1.8	-86.91	1,563.9	4,285.5	1,667.4	1,523.9	143.47	11.622	
11,811.0	6,575.6	6,466.9	6,464.2	142.2	1.8	-86.87	1,563.9	4,285.6	1,667.0	1,523.3	143.77	11.595	
11,858.8	6,575.0	6,462.5	6,459.7	143.5	1.8	-86.72	1,563.6	4,285.9	1,666.3	1,521.3	145.07	11.487	
11,859.0	6,575.0	6,462.4	6,459.7	143.5	1.8	-86.72	1,563.6	4,285.9	1,666.3	1,521.3	145.07	11.486 CC	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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
11,859.3	6,575.0	6,462.4	6,459.7	143.5	1.8	-86.72	1,563.6	4,285.9	1,666.3	1,521.3	145.08	11.486 ES, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	86.15	279.8	4,152.1	4,161.5				
98.4	98.4	80.5	80.5	0.1	0.0	86.15	279.7	4,152.1	4,161.5	4,161.4	0.10	N/A	
100.0	100.0	82.1	82.1	0.1	0.0	86.15	279.7	4,152.1	4,161.5	4,161.4	0.10	N/A	
135.3	135.3	117.3	117.3	0.2	0.0	86.15	279.6	4,152.1	4,161.5	4,161.3	0.19	N/A	
196.8	196.8	178.3	178.3	0.3	0.1	86.15	279.5	4,152.1	4,161.5	4,161.1	0.39	N/A	
200.0	200.0	181.4	181.4	0.3	0.1	86.15	279.5	4,152.1	4,161.5	4,161.1	0.40	N/A	
295.3	295.3	275.7	275.7	0.5	0.2	86.15	279.3	4,152.1	4,161.5	4,160.8	0.74	5,633.842	
300.0	300.0	280.4	280.4	0.5	0.2	86.15	279.3	4,152.1	4,161.5	4,160.7	0.76	5,507.625	
393.7	393.7	374.0	374.0	0.8	0.3	86.15	279.2	4,152.2	4,161.5	4,160.5	1.06	3,940.205	
400.0	400.0	380.3	380.3	0.8	0.3	86.15	279.2	4,152.2	4,161.5	4,160.5	1.08	3,868.504	
492.1	492.1	471.9	471.9	1.0	0.4	86.16	279.0	4,152.2	4,161.6	4,160.2	1.35	3,082.657	
500.0	500.0	479.8	479.8	1.0	0.4	86.16	278.9	4,152.2	4,161.6	4,160.2	1.37	3,030.657	
590.5	590.5	570.0	570.0	1.2	0.4	86.16	278.6	4,152.3	4,161.6	4,160.0	1.63	2,546.928	
600.0	600.0	579.4	579.4	1.2	0.4	86.16	278.6	4,152.3	4,161.6	4,160.0	1.66	2,505.453	
689.0	689.0	671.5	671.5	1.4	0.5	86.17	278.2	4,152.4	4,161.7	4,159.8	1.91	2,175.011	
700.0	700.0	683.1	683.1	1.4	0.5	86.17	278.2	4,152.4	4,161.7	4,159.7	1.94	2,140.131	
787.4	787.4	772.4	772.4	1.6	0.5	86.17	277.8	4,152.3	4,161.6	4,159.4	2.19	1,901.385	
800.0	800.0	785.2	785.2	1.7	0.6	86.17	277.7	4,152.3	4,161.6	4,159.4	2.22	1,871.373	
885.8	885.8	879.5	879.5	1.9	0.6	86.18	277.1	4,152.2	4,161.5	4,159.0	2.46	1,689.103	
900.0	900.0	895.3	895.3	1.9	0.6	86.18	277.0	4,152.2	4,161.4	4,158.9	2.50	1,662.335	
984.2	984.2	978.6	978.6	2.1	0.6	86.19	276.3	4,152.0	4,161.2	4,158.4	2.73	1,522.941	
1,000.0	1,000.0	994.0	994.0	2.1	0.7	86.19	276.2	4,151.9	4,161.1	4,158.3	2.78	1,499.471	
1,082.7	1,082.7	1,077.9	1,077.9	2.3	0.7	86.20	275.5	4,151.7	4,160.9	4,157.9	3.00	1,387.228	
1,100.0	1,100.0	1,095.5	1,095.5	2.3	0.7	86.21	275.4	4,151.7	4,160.8	4,157.8	3.05	1,365.801	
1,181.1	1,181.1	1,169.9	1,169.9	2.5	0.7	86.21	274.7	4,151.5	4,160.6	4,157.4	3.26	1,275.616	
1,200.0	1,200.0	1,187.1	1,187.1	2.6	0.7	86.22	274.6	4,151.5	4,160.6	4,157.3	3.31	1,256.314	
1,203.3	1,203.3	1,190.2	1,190.2	2.6	0.7	-178.59	274.5	4,151.5	4,160.6	4,157.3	3.24	1,283.575	
1,279.5	1,279.5	1,260.5	1,260.5	2.7	0.8	-178.58	274.0	4,151.5	4,161.7	4,158.2	3.43	1,214.869	
1,300.0	1,300.0	1,279.4	1,279.4	2.8	0.8	-178.58	273.9	4,151.5	4,162.3	4,158.8	3.48	1,197.623	
1,377.9	1,377.8	1,349.0	1,348.9	2.9	0.8	-178.57	273.4	4,151.7	4,166.2	4,162.5	3.66	1,139.366	
1,400.0	1,399.8	1,368.3	1,368.3	3.0	0.8	-178.57	273.4	4,151.7	4,167.7	4,164.0	3.71	1,124.066	
1,476.4	1,475.9	1,438.9	1,438.9	3.1	0.8	-178.57	273.1	4,152.0	4,174.4	4,170.5	3.89	1,072.200	
1,500.0	1,499.5	1,461.7	1,461.7	3.2	0.8	-178.57	273.0	4,152.1	4,176.9	4,172.9	3.95	1,057.083	
1,574.8	1,573.7	1,547.1	1,547.0	3.4	0.9	-178.56	272.8	4,152.5	4,186.0	4,181.8	4.14	1,012.027	
1,600.0	1,598.7	1,580.9	1,580.9	3.4	0.9	-178.56	272.7	4,152.6	4,189.4	4,185.2	4.20	998.212	
1,673.2	1,671.1	1,670.1	1,670.1	3.6	0.9	-178.56	272.5	4,152.4	4,200.3	4,195.9	4.38	958.189	
1,700.0	1,697.5	1,701.6	1,701.6	3.7	0.9	-178.55	272.3	4,152.2	4,204.7	4,200.3	4.45	944.739	
1,771.6	1,767.9	1,774.4	1,774.3	3.9	0.9	-178.55	272.0	4,151.9	4,217.7	4,213.0	4.64	909.367	
1,800.0	1,795.6	1,803.0	1,803.0	4.0	1.0	-178.54	271.8	4,151.7	4,223.2	4,218.5	4.71	896.332	
1,870.1	1,864.0	1,873.0	1,873.0	4.3	1.0	-178.53	271.3	4,151.3	4,238.2	4,233.3	4.90	864.710	
1,900.0	1,893.1	1,902.8	1,902.8	4.4	1.0	-178.53	271.1	4,151.1	4,245.1	4,240.1	4.98	852.164	
1,968.5	1,959.3	1,969.8	1,969.7	4.6	1.0	-178.52	270.4	4,150.7	4,262.0	4,256.9	5.17	824.063	
1,992.4	1,982.4	1,993.1	1,993.0	4.7	1.0	-178.51	270.1	4,150.6	4,268.3	4,263.1	5.24	814.883	
2,000.0	1,989.6	2,000.4	2,000.4	4.8	1.0	-178.51	270.1	4,150.5	4,270.3	4,265.1	5.26	812.181	
2,066.9	2,054.0	2,068.8	2,068.8	5.1	1.1	-178.51	269.1	4,150.1	4,288.2	4,282.7	5.44	788.026	
2,100.0	2,085.8	2,102.4	2,102.4	5.2	1.1	-178.50	268.6	4,149.9	4,296.9	4,291.4	5.53	777.607	
2,165.3	2,148.7	2,163.8	2,163.8	5.5	1.1	-178.50	267.7	4,149.5	4,314.3	4,308.6	5.70	757.068	
2,200.0	2,182.0	2,196.4	2,196.3	5.7	1.1	-178.50	267.2	4,149.2	4,323.5	4,317.7	5.80	745.587	
2,263.8	2,243.4	2,255.3	2,255.3	6.0	1.1	-178.49	266.6	4,148.9	4,340.5	4,334.5	5.97	726.625	
2,300.0	2,278.2	2,288.7	2,288.7	6.2	1.1	-178.49	266.5	4,148.6	4,350.1	4,344.0	6.07	716.218	
2,362.2	2,338.1	2,355.4	2,355.3	6.5	1.1	-178.50	266.7	4,148.1	4,366.7	4,360.4	6.25	698.729	
2,400.0	2,374.4	2,397.3	2,397.2	6.7	1.1	-178.51	267.1	4,147.8	4,376.7	4,370.3	6.36	688.458	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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		
2,460.6	2,432.8	2,459.6	2,459.5	7.0	1.1	-178.54	268.2	4,147.1	4,392.7	4,386.1	6.53	672.558		
2,500.0	2,470.6	2,499.9	2,499.8	7.2	1.1	-178.55	269.0	4,146.6	4,403.0	4,396.4	6.64	662.636		
2,559.0	2,527.4	2,558.2	2,558.1	7.6	1.1	-178.57	270.2	4,145.9	4,418.5	4,411.7	6.82	648.201		
2,600.0	2,566.8	2,598.6	2,598.5	7.8	1.2	-178.59	271.2	4,145.4	4,429.3	4,422.3	6.94	638.583		
2,657.5	2,622.1	2,651.2	2,651.1	8.1	1.2	-178.61	272.3	4,144.7	4,444.3	4,437.2	7.10	625.533		
2,700.0	2,663.0	2,690.0	2,689.9	8.3	1.2	-178.63	273.1	4,144.3	4,455.5	4,448.3	7.23	616.256		
2,755.9	2,716.8	2,740.9	2,740.7	8.6	1.2	-178.64	274.1	4,143.7	4,470.3	4,462.9	7.40	604.408		
2,800.0	2,759.2	2,781.0	2,780.8	8.9	1.2	-178.66	274.7	4,143.3	4,481.9	4,474.4	7.53	595.415		
2,854.3	2,811.5	2,826.3	2,826.1	9.2	1.2	-178.67	275.4	4,142.9	4,496.3	4,488.6	7.69	584.724		
2,900.0	2,855.4	2,862.3	2,862.1	9.4	1.2	-178.68	275.8	4,142.6	4,508.5	4,500.7	7.83	576.104		
2,952.7	2,906.2	2,900.0	2,899.8	9.7	1.2	-178.68	276.1	4,142.4	4,522.7	4,514.7	7.98	566.550		
3,000.0	2,951.6	2,934.9	2,934.8	10.0	1.2	-178.69	276.3	4,142.3	4,535.5	4,527.4	8.12	558.368		
3,051.2	3,000.9	2,969.2	2,969.1	10.3	1.2	-178.69	276.5	4,142.4	4,549.6	4,541.3	8.27	549.917		
3,100.0	3,047.8	3,000.0	2,999.8	10.5	1.2	-178.70	276.6	4,142.5	4,563.1	4,554.7	8.42	542.234		
3,149.6	3,095.5	3,032.6	3,032.4	10.8	1.2	-178.70	276.7	4,142.8	4,577.0	4,568.5	8.56	534.578		
3,200.0	3,144.0	3,063.9	3,063.7	11.1	1.2	-178.71	276.9	4,143.1	4,591.4	4,582.6	8.71	526.987		
3,248.0	3,190.2	3,100.0	3,099.8	11.4	1.2	-178.71	277.2	4,143.7	4,605.2	4,596.3	8.86	519.636		
3,300.0	3,240.2	3,132.8	3,132.5	11.7	1.2	-178.72	277.5	4,144.3	4,620.3	4,611.3	9.02	512.327		
3,346.4	3,284.9	3,169.3	3,169.1	11.9	1.2	-178.73	277.8	4,145.0	4,633.9	4,624.7	9.16	505.850		
3,400.0	3,336.4	3,211.1	3,210.9	12.2	1.2	-178.73	278.3	4,145.9	4,649.6	4,640.3	9.32	498.646		
3,444.9	3,379.6	3,245.3	3,245.1	12.5	1.2	-178.74	278.8	4,146.7	4,662.9	4,653.5	9.46	492.843		
3,500.0	3,432.6	3,287.3	3,287.0	12.8	1.2	-178.75	279.3	4,147.7	4,679.4	4,669.7	9.63	485.945		
3,543.3	3,474.3	3,326.4	3,326.1	13.1	1.2	-178.76	279.9	4,148.8	4,692.3	4,682.6	9.76	480.622		
3,600.0	3,528.8	3,382.6	3,382.3	13.4	1.2	-178.77	280.8	4,150.3	4,709.3	4,699.4	9.94	473.817		
3,641.7	3,569.0	3,419.1	3,418.8	13.6	1.2	-178.78	281.3	4,151.2	4,721.8	4,711.7	10.07	469.001		
3,700.0	3,625.0	3,465.2	3,464.9	14.0	1.2	-178.80	282.0	4,152.5	4,739.3	4,729.1	10.25	462.538		
3,740.1	3,663.6	3,500.0	3,499.6	14.2	1.2	-178.80	282.6	4,153.5	4,751.5	4,741.1	10.37	458.172		
3,800.0	3,721.2	3,552.9	3,552.5	14.5	1.2	-178.82	283.5	4,155.2	4,769.6	4,759.1	10.56	451.813		
3,838.6	3,758.3	3,589.3	3,588.9	14.8	1.2	-178.83	284.1	4,156.3	4,781.3	4,770.6	10.68	447.791		
3,900.0	3,817.4	3,656.8	3,656.4	15.1	1.3	-178.84	285.2	4,158.3	4,799.9	4,789.0	10.87	441.522		
3,937.0	3,853.0	3,698.8	3,698.3	15.3	1.3	-178.85	285.8	4,159.5	4,811.0	4,800.1	10.99	437.838		
4,000.0	3,913.6	3,757.2	3,756.7	15.7	1.3	-178.87	286.6	4,161.1	4,830.0	4,818.8	11.18	431.834		
4,035.4	3,947.7	3,789.9	3,789.4	15.9	1.3	-178.87	287.0	4,162.0	4,840.6	4,829.3	11.30	428.544		
4,100.0	4,009.8	3,903.9	3,903.3	16.3	1.3	-178.89	287.8	4,164.7	4,859.8	4,848.3	11.51	422.258		
4,133.8	4,042.4	3,979.7	3,979.2	16.5	1.3	-178.89	287.6	4,165.8	4,869.5	4,857.8	11.62	419.084		
4,200.0	4,106.0	4,087.6	4,087.0	16.8	1.3	-178.88	286.6	4,166.3	4,887.8	4,876.0	11.83	413.155		
4,232.3	4,137.1	4,127.6	4,127.0	17.0	1.3	-178.88	286.2	4,166.3	4,896.6	4,884.6	11.93	410.364		
4,300.0	4,202.2	4,206.6	4,206.1	17.4	1.4	-178.88	285.6	4,166.1	4,914.9	4,902.7	12.15	404.654		
4,330.7	4,231.7	4,253.0	4,252.4	17.6	1.4	-178.88	285.4	4,165.8	4,923.1	4,910.8	12.24	402.070		
4,400.0	4,298.4	4,335.6	4,335.0	18.0	1.4	-178.88	285.2	4,165.0	4,941.3	4,928.8	12.47	396.411		
4,429.1	4,326.4	4,362.8	4,362.2	18.2	1.4	-178.88	285.1	4,164.7	4,949.0	4,936.4	12.56	394.122		
4,500.0	4,394.6	4,473.2	4,472.6	18.6	1.4	-178.88	284.0	4,163.3	4,967.4	4,954.7	12.79	388.389		
4,527.5	4,421.1	4,515.4	4,514.8	18.7	1.4	-178.87	283.2	4,162.4	4,974.4	4,961.5	12.88	386.201		
4,600.0	4,490.8	4,584.2	4,583.6	19.2	1.4	-178.86	281.5	4,161.0	4,992.6	4,979.5	13.11	380.869		
4,626.0	4,515.8	4,600.0	4,599.3	19.3	1.4	-178.85	281.0	4,160.7	4,999.2	4,986.0	13.19	379.070		
4,700.0	4,587.0	4,666.7	4,666.0	19.8	1.4	-178.84	279.4	4,159.4	5,017.9	5,004.5	13.42	373.776		
4,724.4	4,610.5	4,686.2	4,685.5	19.9	1.4	-178.84	279.1	4,159.1	5,024.1	5,010.6	13.50	372.096		
4,800.0	4,683.2	4,734.6	4,733.9	20.3	1.5	-178.84	278.5	4,158.3	5,043.6	5,029.8	13.74	367.065		
4,822.8	4,705.2	4,748.2	4,747.5	20.5	1.5	-178.83	278.4	4,158.2	5,049.5	5,035.7	13.81	365.590		
4,900.0	4,779.4	4,800.0	4,799.3	20.9	1.5	-178.84	278.2	4,157.7	5,069.9	5,055.9	14.06	360.685		
4,921.2	4,799.8	4,800.0	4,799.3	21.0	1.5	-178.84	278.2	4,157.7	5,075.6	5,061.5	14.12	359.504		
5,000.0	4,875.6	4,848.7	4,848.0	21.5	1.5	-178.84	277.9	4,157.7	5,097.0	5,082.6	14.37	354.807		

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	4,894.5	4,859.3	4,858.6	21.6	1.5	-178.84	277.8	4,157.7	5,102.4	5,088.0	14.43	353.697		
5,100.0	4,971.8	4,927.2	4,926.5	22.1	1.5	-178.83	277.0	4,158.2	5,124.9	5,110.2	14.68	348.994		
5,118.1	4,989.2	5,004.1	5,003.4	22.2	1.5	-178.82	275.6	4,158.3	5,129.8	5,115.0	14.76	347.519		
5,200.0	5,068.0	5,076.5	5,075.8	22.7	1.5	-178.81	274.2	4,158.0	5,151.7	5,136.7	15.02	342.966		
5,216.5	5,083.9	5,091.2	5,090.4	22.8	1.5	-178.80	273.9	4,157.9	5,156.1	5,141.1	15.07	342.059		
5,240.0	5,106.5	5,100.0	5,099.2	22.9	1.5	-178.80	273.7	4,157.9	5,162.5	5,147.3	15.15	340.862		
5,300.0	5,164.4	5,152.0	5,151.2	23.2	1.5	-178.80	272.6	4,157.8	5,178.1	5,162.8	15.28	338.952		
5,314.9	5,178.8	5,162.6	5,161.8	23.3	1.5	-178.80	272.3	4,157.8	5,181.8	5,166.5	15.30	338.596		
5,400.0	5,261.5	5,248.6	5,247.8	23.6	1.6	-178.79	270.3	4,158.0	5,201.7	5,186.3	15.46	336.464		
5,413.4	5,274.6	5,268.7	5,267.9	23.6	1.6	-178.79	269.8	4,158.0	5,204.6	5,189.1	15.48	336.132		
5,500.0	5,359.5	5,384.1	5,383.3	23.9	1.6	-178.77	267.3	4,157.6	5,221.4	5,205.8	15.62	334.180		
5,511.8	5,371.1	5,399.2	5,398.4	24.0	1.6	-178.77	267.1	4,157.5	5,223.5	5,207.9	15.64	333.945		
5,600.0	5,458.0	5,463.1	5,462.3	24.2	1.6	-178.77	266.3	4,157.1	5,237.5	5,221.8	15.76	332.426		
5,610.2	5,468.2	5,470.5	5,469.7	24.3	1.6	-178.77	266.2	4,157.1	5,239.0	5,223.3	15.77	332.275		
5,700.0	5,557.2	5,585.2	5,584.3	24.5	1.7	-178.77	264.8	4,156.7	5,250.5	5,234.6	15.88	330.702		
5,708.6	5,565.7	5,600.0	5,599.2	24.5	1.7	-178.76	264.6	4,156.6	5,251.4	5,235.5	15.89	330.552		
5,800.0	5,656.7	5,663.7	5,662.9	24.7	1.7	-178.76	263.6	4,156.2	5,259.6	5,243.6	15.97	329.268		
5,807.1	5,663.7	5,668.7	5,667.8	24.7	1.7	-178.76	263.6	4,156.2	5,260.1	5,244.1	15.98	329.181		
5,900.0	5,756.5	5,738.9	5,738.0	24.9	1.7	-178.75	262.8	4,156.1	5,265.7	5,249.7	16.06	327.916		
5,905.5	5,761.9	5,743.3	5,742.5	24.9	1.7	-178.75	262.7	4,156.1	5,266.0	5,249.9	16.06	327.848		
6,000.0	5,856.4	5,822.6	5,821.8	25.0	1.7	-178.75	262.3	4,156.3	5,268.8	5,252.7	16.14	326.516		
6,003.9	5,860.3	5,826.2	5,825.4	25.0	1.7	-178.75	262.3	4,156.3	5,268.8	5,252.7	16.14	326.455		
6,032.5	5,888.9	5,852.7	5,851.8	25.0	1.7	86.06	262.2	4,156.4	5,269.1	5,242.3	26.76	196.896		
6,062.5	5,918.9	5,880.4	5,879.5	25.1	1.7	86.06	262.0	4,156.5	5,269.2	5,242.4	26.80	196.624		
6,100.0	5,956.4	5,936.8	5,935.9	25.1	1.7	-3.94	261.6	4,156.7	5,268.3	5,252.2	16.16	326.100		
6,102.3	5,958.7	5,942.1	5,941.2	25.1	1.7	-3.94	261.6	4,156.7	5,268.2	5,252.1	16.15	326.165		
6,150.0	6,006.2	6,000.0	5,999.1	25.1	1.8	-3.96	261.1	4,156.6	5,263.8	5,247.7	16.09	327.095		
6,200.0	6,055.6	6,049.1	6,048.2	25.1	1.8	-4.01	260.5	4,156.4	5,255.8	5,239.8	16.04	327.598		
6,200.8	6,056.3	6,049.6	6,048.7	25.1	1.8	-4.01	260.5	4,156.4	5,255.7	5,239.6	16.04	327.607		
6,250.0	6,104.3	6,082.7	6,081.8	25.0	1.8	-4.07	260.1	4,156.4	5,244.6	5,228.6	15.98	328.121		
6,299.2	6,151.3	6,118.7	6,117.8	24.9	1.8	-4.16	259.5	4,156.5	5,230.3	5,214.4	15.90	328.905		
6,300.0	6,152.1	6,119.3	6,118.5	24.9	1.8	-4.16	259.5	4,156.5	5,230.1	5,214.2	15.90	328.919		
6,350.0	6,198.7	6,159.0	6,158.1	24.8	1.8	-4.28	258.9	4,156.7	5,212.4	5,196.6	15.79	330.185		
6,397.6	6,241.9	6,200.0	6,199.1	24.7	1.8	-4.42	258.3	4,157.0	5,192.6	5,177.0	15.65	331.893		
6,400.0	6,244.1	6,200.0	6,199.1	24.7	1.8	-4.43	258.3	4,157.0	5,191.5	5,175.9	15.64	332.015		
6,450.0	6,287.8	6,243.1	6,242.2	24.5	1.8	-4.61	257.7	4,157.2	5,167.6	5,152.1	15.46	334.349		
6,496.0	6,326.5	6,283.9	6,283.0	24.4	1.8	-4.82	257.0	4,157.5	5,142.9	5,127.6	15.26	336.932		
6,500.0	6,329.7	6,287.4	6,286.5	24.4	1.8	-4.84	257.0	4,157.5	5,140.7	5,125.4	15.25	337.166		
6,550.0	6,369.6	6,326.2	6,325.3	24.3	1.8	-5.12	256.4	4,157.8	5,110.8	5,095.8	15.01	340.445		
6,594.5	6,403.3	6,357.8	6,356.8	24.2	1.9	-5.42	255.8	4,158.0	5,082.0	5,067.3	14.79	343.550		
6,600.0	6,407.3	6,361.6	6,360.6	24.2	1.9	-5.46	255.8	4,158.0	5,078.3	5,063.6	14.77	343.931		
6,650.0	6,442.7	6,394.8	6,393.8	24.1	1.9	-5.87	255.2	4,158.2	5,043.3	5,028.7	14.52	347.221		
6,692.9	6,471.0	6,425.2	6,424.3	24.0	1.9	-6.31	254.6	4,158.4	5,011.3	4,996.9	14.35	349.324		
6,700.0	6,475.5	6,430.2	6,429.2	24.0	1.9	-6.39	254.5	4,158.5	5,005.8	4,991.5	14.32	349.584		
6,750.0	6,505.6	6,463.5	6,462.5	24.0	1.9	-7.05	254.0	4,158.7	4,966.2	4,952.0	14.18	350.324		
6,791.3	6,528.3	6,488.6	6,487.7	24.0	1.9	-7.73	253.5	4,158.8	4,931.8	4,917.7	14.13	348.992		
6,800.0	6,532.8	6,493.6	6,492.7	24.0	1.9	-7.90	253.5	4,158.9	4,924.5	4,910.3	14.13	348.445		
6,850.0	6,557.0	6,500.0	6,499.1	24.1	1.9	-8.94	253.4	4,158.9	4,881.0	4,866.8	14.20	343.683		
6,889.7	6,574.1	6,500.0	6,499.1	24.2	1.9	-10.00	253.4	4,158.9	4,845.4	4,831.0	14.39	336.713		
6,900.0	6,578.1	6,500.0	6,499.1	24.3	1.9	-10.32	253.4	4,158.9	4,836.0	4,821.6	14.46	334.409		
6,950.0	6,596.1	6,500.0	6,499.1	24.5	1.9	-12.24	253.4	4,158.9	4,789.8	4,774.8	14.99	319.550		
6,988.2	6,607.5	6,500.0	6,499.1	24.7	1.9	-14.28	253.4	4,158.9	4,753.7	4,738.0	15.63	304.044		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,610.7	6,500.0	6,499.1	24.8	1.9	-15.05	253.4	4,158.9	4,742.4	4,726.5	15.89	298.515	
7,050.0	6,621.9	6,500.0	6,499.1	25.1	1.9	-19.54	253.4	4,158.9	4,694.0	4,676.7	17.36	270.470	
7,086.6	6,628.0	6,500.0	6,499.1	25.4	1.9	-24.90	253.4	4,158.9	4,658.2	4,639.2	19.05	244.541	
7,100.0	6,629.7	6,500.0	6,499.1	25.6	1.9	-27.61	253.4	4,158.9	4,645.0	4,625.1	19.87	233.795	
7,150.0	6,634.1	6,500.0	6,499.1	26.0	1.9	-44.78	253.4	4,158.9	4,595.5	4,571.1	24.34	188.795	
7,185.0	6,635.1	6,500.0	6,499.1	26.4	1.9	-69.34	253.4	4,158.9	4,560.6	4,532.7	27.90	163.482	
7,196.6	6,635.0	6,500.0	6,499.1	26.5	1.9	-80.35	253.4	4,158.9	4,549.1	4,520.7	28.37	160.358	
7,200.0	6,635.0	6,500.0	6,499.1	26.6	1.9	-80.35	253.4	4,158.9	4,545.7	4,517.3	28.41	160.026	
7,283.4	6,633.9	6,500.0	6,499.1	27.6	1.9	-80.35	253.4	4,158.9	4,462.5	4,433.1	29.42	151.677	
7,300.0	6,633.7	6,500.0	6,499.1	27.8	1.9	-80.36	253.4	4,158.9	4,446.0	4,416.4	29.62	150.089	
7,381.9	6,632.6	6,500.0	6,499.1	29.0	1.9	-80.36	253.4	4,158.9	4,364.4	4,333.6	30.80	141.721	
7,400.0	6,632.4	6,500.0	6,499.1	29.2	1.9	-80.36	253.4	4,158.9	4,346.3	4,315.3	31.06	139.954	
7,480.3	6,631.4	6,500.0	6,499.1	30.5	1.9	-80.36	253.4	4,158.9	4,266.3	4,234.0	32.36	131.859	
7,500.0	6,631.1	6,500.0	6,499.1	30.9	1.9	-80.36	253.4	4,158.9	4,246.7	4,214.0	32.67	129.971	
7,578.7	6,630.1	6,500.0	6,499.1	32.3	1.9	-80.36	253.4	4,158.9	4,168.2	4,134.2	34.07	122.333	
7,600.0	6,629.8	6,500.0	6,499.1	32.7	1.9	-80.37	253.4	4,158.9	4,147.0	4,112.6	34.45	120.375	
7,677.1	6,628.9	6,500.0	6,499.1	34.1	1.9	-80.37	253.4	4,158.9	4,070.2	4,034.3	35.92	113.299	
7,700.0	6,628.6	6,500.0	6,499.1	34.6	1.9	-80.37	253.4	4,158.9	4,047.4	4,011.1	36.36	111.312	
7,775.6	6,627.6	6,500.0	6,499.1	36.1	1.9	-80.37	253.4	4,158.9	3,972.2	3,934.3	37.89	104.836	
7,800.0	6,627.3	6,500.0	6,499.1	36.6	1.9	-80.37	253.4	4,158.9	3,947.8	3,909.4	38.38	102.853	
7,874.0	6,626.3	6,500.0	6,499.1	38.2	1.9	-80.37	253.4	4,158.9	3,874.1	3,834.2	39.95	96.976	
7,900.0	6,626.0	6,500.0	6,499.1	38.8	1.9	-80.38	253.4	4,158.9	3,848.3	3,807.8	40.50	95.019	
7,972.4	6,625.1	6,500.0	6,499.1	40.4	1.9	-80.38	253.4	4,158.9	3,776.1	3,734.1	42.09	89.715	
8,000.0	6,624.7	6,500.0	6,499.1	41.0	1.9	-80.38	253.4	4,158.9	3,748.7	3,706.0	42.70	87.800	
8,070.8	6,623.8	6,500.0	6,499.1	42.6	1.9	-80.38	253.4	4,158.9	3,678.2	3,633.9	44.30	83.029	
8,100.0	6,623.4	6,500.0	6,499.1	43.3	1.9	-80.38	253.4	4,158.9	3,649.2	3,604.2	44.96	81.165	
8,169.3	6,622.6	6,500.0	6,499.1	44.9	1.9	-80.38	253.4	4,158.9	3,580.2	3,533.7	46.57	76.883	
8,200.0	6,622.2	6,500.0	6,499.1	45.6	1.9	-80.38	253.4	4,158.9	3,549.7	3,502.4	47.28	75.077	
8,267.7	6,621.3	6,500.0	6,499.1	47.3	1.9	-80.38	253.4	4,158.9	3,482.3	3,433.4	48.88	71.235	
8,300.0	6,620.9	6,500.0	6,499.1	48.0	1.9	-80.39	253.4	4,158.9	3,450.2	3,400.5	49.65	69.490	
8,366.1	6,620.0	6,500.0	6,499.1	49.7	1.9	-80.39	253.4	4,158.9	3,384.4	3,333.2	51.24	66.045	
8,400.0	6,619.6	6,500.0	6,499.1	50.5	1.9	-80.39	253.4	4,158.9	3,350.7	3,298.7	52.06	64.361	
8,464.5	6,618.8	6,500.0	6,499.1	52.1	1.9	-80.39	253.4	4,158.9	3,286.6	3,232.9	53.64	61.269	
8,500.0	6,618.3	6,500.0	6,499.1	53.0	1.9	-80.39	253.4	4,158.9	3,251.3	3,196.8	54.51	59.648	
8,563.0	6,617.5	6,500.0	6,499.1	54.5	1.9	-80.39	253.4	4,158.9	3,188.8	3,132.7	56.07	56.871	
8,600.0	6,617.0	6,500.0	6,499.1	55.5	1.9	-80.39	253.4	4,158.9	3,152.0	3,095.0	56.99	55.309	
8,661.4	6,616.3	6,500.0	6,499.1	57.0	1.9	-80.39	253.4	4,158.9	3,091.0	3,032.4	58.53	52.813	
8,700.0	6,615.8	6,500.0	6,499.1	58.0	1.9	-80.40	253.4	4,158.9	3,052.6	2,993.1	59.49	51.310	
8,759.8	6,615.0	6,500.0	6,499.1	59.5	1.9	-80.40	253.4	4,158.9	2,993.2	2,932.2	61.01	49.064	
8,800.0	6,614.5	6,500.0	6,499.1	60.6	1.9	-80.40	253.4	4,158.9	2,953.4	2,891.3	62.02	47.617	
8,858.2	6,613.7	6,500.0	6,499.1	62.1	1.9	-80.40	253.4	4,158.9	2,895.5	2,832.0	63.51	45.592	
8,900.0	6,613.2	6,500.0	6,499.1	63.2	1.9	-80.40	253.4	4,158.9	2,854.1	2,789.5	64.57	44.199	
8,956.7	6,612.5	6,500.0	6,499.1	64.6	1.9	-80.40	253.4	4,158.9	2,797.9	2,731.9	66.03	42.373	
9,000.0	6,611.9	6,500.0	6,499.1	65.8	1.9	-80.40	253.4	4,158.9	2,754.9	2,687.8	67.14	41.031	
9,055.1	6,611.2	6,500.0	6,499.1	67.2	1.9	-80.40	253.4	4,158.9	2,700.3	2,631.7	68.57	39.382	
9,100.0	6,610.6	6,500.0	6,499.1	68.4	1.9	-80.40	253.4	4,158.9	2,655.8	2,586.1	69.73	38.088	
9,153.5	6,609.9	6,500.0	6,499.1	69.8	1.9	-80.40	253.4	4,158.9	2,602.8	2,531.7	71.12	36.597	
9,200.0	6,609.3	6,500.0	6,499.1	71.0	1.9	-80.40	253.4	4,158.9	2,556.8	2,484.4	72.33	35.349	
9,251.9	6,608.7	6,500.0	6,499.1	72.4	1.9	-80.40	253.4	4,158.9	2,505.3	2,431.7	73.69	34.000	
9,300.0	6,608.1	6,500.0	6,499.1	73.7	1.9	-80.41	253.4	4,158.9	2,457.8	2,382.9	74.94	32.796	
9,350.4	6,607.4	6,500.0	6,499.1	75.0	1.9	-80.41	253.4	4,158.9	2,408.0	2,331.7	76.26	31.574	
9,400.0	6,606.8	6,500.0	6,499.1	76.3	1.9	-80.41	253.4	4,158.9	2,358.9	2,281.3	77.57	30.412	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 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	
9,448.8	6,606.1	6,500.0	6,499.1	77.6	1.9	-80.41	253.4	4,158.9	2,310.7	2,231.8	78.85	29.304	
9,500.0	6,605.5	6,500.0	6,499.1	79.0	1.9	-80.41	253.4	4,158.9	2,260.1	2,179.9	80.20	28.181	
9,547.2	6,604.9	6,500.0	6,499.1	80.2	1.9	-80.41	253.4	4,158.9	2,213.5	2,132.1	81.45	27.176	
9,600.0	6,604.2	6,500.0	6,499.1	81.7	1.9	-80.41	253.4	4,158.9	2,161.4	2,078.6	82.85	26.090	
9,645.6	6,603.6	6,500.0	6,499.1	82.9	1.9	-80.41	253.4	4,158.9	2,116.4	2,032.4	84.06	25.179	
9,700.0	6,602.9	6,500.0	6,499.1	84.3	1.9	-80.41	253.4	4,158.9	2,062.9	1,977.4	85.50	24.128	
9,744.1	6,602.3	6,500.0	6,499.1	85.5	1.9	-80.41	253.4	4,158.9	2,019.5	1,932.8	86.67	23.301	
9,800.0	6,601.6	6,500.0	6,499.1	87.0	1.9	-80.41	253.4	4,158.9	1,964.5	1,876.3	88.16	22.284	
9,842.5	6,601.1	6,500.0	6,499.1	88.2	1.9	-80.41	253.4	4,158.9	1,922.7	1,833.4	89.29	21.533	
9,900.0	6,600.3	6,500.0	6,499.1	89.7	1.9	-80.42	253.4	4,158.9	1,866.3	1,775.4	90.83	20.548	
9,940.9	6,599.8	6,500.0	6,499.1	90.9	1.9	-80.42	253.4	4,158.9	1,826.1	1,734.2	91.92	19.866	
10,000.0	6,599.0	6,500.0	6,499.1	92.5	1.9	-80.42	253.4	4,158.9	1,768.2	1,674.7	93.50	18.911	
10,039.3	6,598.5	6,500.0	6,499.1	93.5	1.9	-80.42	253.4	4,158.9	1,729.7	1,635.2	94.55	18.293	
10,100.0	6,597.7	6,500.0	6,499.1	95.2	1.9	-80.42	253.4	4,158.9	1,670.4	1,574.2	96.18	17.368	
10,137.8	6,597.3	6,500.0	6,499.1	96.2	1.9	-80.42	253.4	4,158.9	1,633.5	1,536.4	97.19	16.807	
10,200.0	6,596.5	6,500.0	6,499.1	97.9	1.9	-80.42	253.4	4,158.9	1,572.9	1,474.0	98.87	15.910	
10,236.2	6,596.0	6,500.0	6,499.1	98.9	1.9	-80.42	253.4	4,158.9	1,537.7	1,437.8	99.84	15.402	
10,300.0	6,595.2	6,500.0	6,499.1	100.6	1.9	-80.42	253.4	4,158.9	1,475.7	1,374.1	101.56	14.531	
10,334.6	6,594.7	6,500.0	6,499.1	101.6	1.9	-80.42	253.4	4,158.9	1,442.1	1,339.7	102.49	14.071	
10,400.0	6,593.9	6,500.0	6,499.1	103.3	1.9	-80.42	253.4	4,158.9	1,378.9	1,274.7	104.25	13.227	
10,433.0	6,593.5	6,500.0	6,499.1	104.2	1.9	-80.42	253.4	4,158.9	1,347.0	1,241.9	105.14	12.811	
10,500.0	6,592.6	6,500.0	6,499.1	106.1	1.9	-80.42	253.4	4,158.9	1,282.6	1,175.7	106.95	11.993	
10,531.5	6,592.2	6,500.0	6,499.1	106.9	1.9	-80.42	253.4	4,158.9	1,252.4	1,144.6	107.80	11.618	
10,600.0	6,591.3	6,500.0	6,499.1	108.8	1.9	-80.42	253.4	4,158.9	1,186.9	1,077.3	109.65	10.824	
10,629.9	6,590.9	6,500.0	6,499.1	109.6	1.9	-80.42	253.4	4,158.9	1,158.5	1,048.0	110.46	10.487	
10,700.0	6,590.0	6,500.0	6,499.1	111.6	1.9	-80.42	253.4	4,158.9	1,092.0	979.6	112.36	9.719	
10,728.3	6,589.6	6,500.0	6,499.1	112.3	1.9	-80.42	253.4	4,158.9	1,065.3	952.2	113.13	9.417	
10,800.0	6,588.7	6,500.0	6,499.1	114.3	1.9	-80.42	253.4	4,158.9	998.1	883.0	115.07	8.674	
10,826.7	6,588.4	6,500.0	6,499.1	115.0	1.9	-80.42	253.4	4,158.9	973.2	857.4	115.79	8.404	
10,900.0	6,587.4	6,500.0	6,499.1	117.0	1.9	-80.43	253.4	4,158.9	905.5	787.7	117.78	7.688	
10,925.2	6,587.1	6,500.0	6,499.1	117.7	1.9	-80.43	253.4	4,158.9	882.4	763.9	118.46	7.449	
11,000.0	6,586.1	6,500.0	6,499.1	119.8	1.9	-80.43	253.4	4,158.9	814.6	694.1	120.50	6.760	
11,023.6	6,585.8	6,500.0	6,499.1	120.4	1.9	-80.43	253.4	4,158.9	793.5	672.3	121.14	6.550	
11,100.0	6,584.8	6,500.0	6,499.1	122.5	1.9	-80.43	253.4	4,158.9	726.1	602.9	123.21	5.893	
11,122.0	6,584.5	6,500.0	6,499.1	123.2	1.9	-80.43	253.4	4,158.9	707.1	583.2	123.81	5.711	
11,200.0	6,583.5	6,500.0	6,499.1	125.3	1.9	-80.43	253.4	4,158.9	641.1	515.1	125.94	5.090	
11,220.4	6,583.3	6,500.0	6,499.1	125.9	1.9	-80.43	253.4	4,158.9	624.2	497.7	126.49	4.935	
11,300.0	6,582.2	6,500.0	6,499.1	128.1	1.9	-80.43	253.4	4,158.9	560.9	432.3	128.66	4.360	
11,318.9	6,582.0	6,500.0	6,499.1	128.6	1.9	-80.43	253.4	4,158.9	546.5	417.4	129.17	4.231	
11,400.0	6,580.9	6,500.0	6,499.1	130.8	1.9	-80.43	253.4	4,158.9	488.2	356.8	131.38	3.716	
11,417.3	6,580.7	6,500.0	6,499.1	131.3	1.9	-80.43	253.4	4,158.9	476.6	344.8	131.86	3.615	
11,500.0	6,579.7	6,500.0	6,499.1	133.6	1.9	-80.43	253.4	4,158.9	426.6	292.5	134.11	3.181	
11,515.7	6,579.4	6,500.0	6,499.1	134.0	1.9	-80.43	253.4	4,158.9	418.3	283.8	134.54	3.109	
11,600.0	6,578.4	6,500.0	6,499.1	136.3	1.9	-80.43	253.4	4,158.9	381.7	244.9	136.84	2.790	
11,614.1	6,578.2	6,500.0	6,499.1	136.7	1.9	-80.43	253.4	4,158.9	377.1	239.9	137.23	2.748	
11,700.0	6,577.1	6,500.0	6,499.1	139.1	1.9	-80.43	253.4	4,158.9	359.7	220.2	139.57	2.577	
11,712.6	6,576.9	6,500.0	6,499.1	139.5	1.9	-80.43	253.4	4,158.9	358.9	218.9	139.92	2.565	
11,731.5	6,576.7	6,500.0	6,499.1	140.0	1.9	-80.43	253.4	4,158.9	358.4	217.9	140.43	2.552 CC, ES, SF	
11,800.0	6,575.8	6,500.0	6,499.1	141.9	1.9	-80.43	253.4	4,158.9	364.8	222.5	142.31	2.564	
11,811.0	6,575.6	6,500.0	6,499.1	142.2	1.9	-80.43	253.4	4,158.9	367.1	224.5	142.61	2.574	
11,858.8	6,575.0	6,500.0	6,499.1	143.5	1.9	-80.43	253.4	4,158.9	380.3	236.4	143.91	2.642	
11,859.3	6,575.0	6,500.0	6,499.1	143.5	1.9	-80.43	253.4	4,158.9	380.5	236.5	143.92	2.644	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	-138.79	-1,081.3	-946.8	1,437.8				
98.4	98.4	60.1	60.1	0.1	0.0	-138.79	-1,081.2	-946.8	1,437.2	1,437.1	0.11	N/A	
100.0	100.0	61.8	61.8	0.1	0.0	-138.79	-1,081.2	-946.8	1,437.2	1,437.1	0.11	N/A	
196.8	196.8	156.9	156.9	0.3	0.0	-138.78	-1,081.0	-946.9	1,437.1	1,436.7	0.34	4,283.623	
196.9	196.9	156.9	156.9	0.3	0.0	-138.78	-1,081.0	-946.9	1,437.1	1,436.7	0.34	4,282.093	
200.0	200.0	159.9	159.9	0.3	0.0	-138.78	-1,081.0	-946.9	1,437.1	1,436.7	0.34	4,194.098	
295.3	295.3	254.0	254.0	0.5	0.1	-138.79	-1,081.2	-946.8	1,437.1	1,436.5	0.66	2,179.039	
300.0	300.0	258.8	258.8	0.5	0.1	-138.79	-1,081.2	-946.8	1,437.2	1,436.5	0.68	2,115.942	
393.7	393.7	361.0	361.0	0.8	0.3	-138.81	-1,081.4	-946.4	1,437.0	1,436.0	1.03	1,423.414	
400.0	400.0	368.3	368.3	0.8	0.3	-138.81	-1,081.4	-946.3	1,437.0	1,436.0	1.03	1,396.859	
492.1	492.1	465.2	465.2	1.0	0.3	-138.83	-1,081.1	-945.4	1,436.2	1,434.9	1.31	1,100.470	
500.0	500.0	473.2	473.2	1.0	0.3	-138.83	-1,081.1	-945.3	1,436.2	1,434.8	1.33	1,080.961	
590.5	590.5	570.6	570.6	1.2	0.4	-138.85	-1,080.5	-944.3	1,435.2	1,433.6	1.59	902.217	
600.0	600.0	581.0	581.0	1.2	0.4	-138.85	-1,080.4	-944.2	1,435.0	1,433.4	1.62	886.945	
689.0	689.0	665.1	665.1	1.4	0.4	-138.86	-1,079.7	-943.3	1,433.8	1,431.9	1.86	770.317	
700.0	700.0	675.1	675.1	1.4	0.5	-138.86	-1,079.6	-943.2	1,433.7	1,431.8	1.89	758.182	
787.4	787.4	759.9	759.8	1.6	0.5	-138.88	-1,079.3	-942.4	1,432.9	1,430.8	2.13	673.208	
800.0	800.0	772.4	772.4	1.7	0.5	-138.88	-1,079.3	-942.2	1,432.8	1,430.6	2.16	662.441	
885.8	885.8	858.9	858.9	1.9	0.6	-138.90	-1,079.1	-941.3	1,432.0	1,429.6	2.40	597.743	
900.0	900.0	873.3	873.2	1.9	0.6	-138.91	-1,079.1	-941.2	1,431.9	1,429.5	2.43	588.278	
984.2	984.2	955.0	955.0	2.1	0.6	-138.94	-1,079.0	-940.1	1,431.2	1,428.5	2.66	538.173	
1,000.0	1,000.0	970.0	970.0	2.1	0.6	-138.94	-1,079.0	-939.9	1,431.0	1,428.3	2.70	529.784	
1,082.7	1,082.7	1,051.9	1,051.8	2.3	0.6	-138.97	-1,079.2	-939.0	1,430.5	1,427.6	2.92	489.606	
1,100.0	1,100.0	1,069.4	1,069.4	2.3	0.7	-138.98	-1,079.2	-938.8	1,430.4	1,427.5	2.97	481.928	
1,181.1	1,181.1	1,146.1	1,146.1	2.5	0.7	-139.01	-1,079.3	-938.0	1,430.0	1,426.8	3.18	449.557	
1,200.0	1,200.0	1,163.3	1,163.2	2.6	0.7	-139.01	-1,079.4	-937.8	1,429.9	1,426.7	3.23	442.728	
1,279.5	1,279.5	1,238.8	1,238.7	2.7	0.7	-43.90	-1,079.9	-937.2	1,429.1	1,425.7	3.43	417.250	
1,300.0	1,300.0	1,259.2	1,259.1	2.8	0.7	-43.93	-1,080.1	-937.0	1,428.6	1,425.2	3.48	411.048	
1,377.9	1,377.8	1,337.0	1,336.9	2.9	0.8	-44.10	-1,080.6	-936.5	1,426.0	1,422.3	3.66	389.836	
1,400.0	1,399.8	1,359.0	1,358.9	3.0	0.8	-44.16	-1,080.7	-936.4	1,424.9	1,421.2	3.71	384.134	
1,476.4	1,475.9	1,433.2	1,433.2	3.1	0.8	-44.42	-1,081.2	-936.0	1,420.5	1,416.6	3.89	364.798	
1,500.0	1,499.5	1,455.4	1,455.4	3.2	0.8	-44.52	-1,081.3	-935.8	1,418.8	1,414.9	3.95	359.210	
1,574.8	1,573.7	1,527.0	1,527.0	3.4	0.8	-44.86	-1,081.9	-935.6	1,412.9	1,408.7	4.14	341.459	
1,600.0	1,598.7	1,552.0	1,551.9	3.4	0.8	-45.00	-1,082.2	-935.5	1,410.6	1,406.4	4.20	335.777	
1,673.2	1,671.1	1,624.9	1,624.8	3.6	0.9	-45.46	-1,082.8	-935.3	1,403.0	1,398.6	4.40	318.955	
1,700.0	1,697.5	1,652.0	1,651.9	3.7	0.9	-45.64	-1,083.0	-935.2	1,400.0	1,395.5	4.47	313.079	
1,771.6	1,767.9	1,723.0	1,722.9	3.9	0.9	-46.19	-1,083.6	-934.9	1,390.9	1,386.2	4.68	296.951	
1,800.0	1,795.6	1,750.0	1,749.9	4.0	0.9	-46.42	-1,083.8	-934.8	1,386.9	1,382.2	4.77	290.931	
1,870.1	1,864.0	1,818.1	1,818.0	4.3	0.9	-47.05	-1,084.3	-934.7	1,376.6	1,371.6	5.00	275.481	
1,900.0	1,893.1	1,848.7	1,848.6	4.4	0.9	-47.35	-1,084.5	-934.6	1,371.8	1,366.7	5.10	269.200	
1,968.5	1,959.3	1,917.9	1,917.8	4.6	1.0	-48.10	-1,084.9	-934.4	1,360.0	1,354.7	5.35	254.236	
1,992.4	1,982.4	1,941.3	1,941.2	4.7	1.0	-48.37	-1,085.0	-934.3	1,355.7	1,350.2	5.44	249.251	
2,000.0	1,989.6	1,948.7	1,948.6	4.8	1.0	-48.44	-1,085.0	-934.3	1,354.3	1,348.8	5.47	247.677	
2,066.9	2,054.0	2,013.9	2,013.8	5.1	1.0	-49.03	-1,085.2	-934.0	1,342.0	1,336.3	5.74	233.996	
2,100.0	2,085.8	2,045.7	2,045.6	5.2	1.0	-49.33	-1,085.4	-933.8	1,336.0	1,330.1	5.87	227.780	
2,165.3	2,148.7	2,108.9	2,108.8	5.5	1.0	-49.92	-1,085.6	-933.5	1,324.2	1,318.0	6.14	215.719	
2,200.0	2,182.0	2,143.9	2,143.8	5.7	1.0	-50.26	-1,085.8	-933.3	1,317.9	1,311.6	6.29	209.601	
2,263.8	2,243.4	2,208.3	2,208.2	6.0	1.1	-50.88	-1,086.0	-932.7	1,306.4	1,299.9	6.57	198.797	
2,300.0	2,278.2	2,244.8	2,244.7	6.2	1.1	-51.25	-1,086.0	-932.3	1,299.9	1,293.2	6.74	192.995	
2,362.2	2,338.1	2,306.7	2,306.6	6.5	1.1	-51.86	-1,086.0	-931.7	1,288.7	1,281.7	7.03	183.437	
2,400.0	2,374.4	2,341.1	2,341.0	6.7	1.1	-52.21	-1,086.0	-931.3	1,282.0	1,274.8	7.20	178.037	
2,460.6	2,432.8	2,396.4	2,396.3	7.0	1.1	-52.78	-1,086.2	-930.7	1,271.4	1,264.0	7.49	169.749	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	2,470.6	2,433.9	2,433.8	7.2	1.1	-53.18	-1,086.3	-930.4	1,264.7	1,257.0	7.68	164.672	
2,559.0	2,527.4	2,490.6	2,490.5	7.6	1.2	-53.77	-1,086.4	-929.9	1,254.7	1,246.8	7.97	157.386	
2,600.0	2,566.8	2,529.6	2,529.5	7.8	1.2	-54.18	-1,086.4	-929.7	1,247.9	1,239.7	8.18	152.613	
2,657.5	2,622.1	2,584.2	2,584.1	8.1	1.2	-54.76	-1,086.5	-929.4	1,238.4	1,230.0	8.47	146.210	
2,700.0	2,663.0	2,625.5	2,625.4	8.3	1.2	-55.21	-1,086.6	-929.1	1,231.5	1,222.8	8.69	141.718	
2,755.9	2,716.8	2,680.7	2,680.6	8.6	1.2	-55.82	-1,086.8	-928.5	1,222.5	1,213.5	8.98	136.060	
2,800.0	2,759.2	2,723.7	2,723.6	8.9	1.3	-56.31	-1,086.9	-928.0	1,215.4	1,206.2	9.22	131.830	
2,854.3	2,811.5	2,776.3	2,776.2	9.2	1.3	-56.91	-1,087.0	-927.5	1,206.9	1,197.3	9.51	126.854	
2,900.0	2,855.4	2,820.6	2,820.5	9.4	1.3	-57.42	-1,087.0	-927.1	1,199.7	1,190.0	9.76	122.886	
2,952.7	2,906.2	2,871.9	2,871.8	9.7	1.3	-58.01	-1,087.0	-926.6	1,191.6	1,181.5	10.05	118.506	
3,000.0	2,951.6	2,916.6	2,916.5	10.0	1.3	-58.54	-1,087.0	-926.1	1,184.4	1,174.1	10.32	114.794	
3,051.2	3,000.9	2,963.0	2,962.9	10.3	1.3	-59.09	-1,087.1	-925.6	1,176.8	1,166.2	10.60	110.985	
3,100.0	3,047.8	3,007.8	3,007.7	10.5	1.4	-59.63	-1,087.2	-925.3	1,169.8	1,158.9	10.88	107.536	
3,149.6	3,095.5	3,055.5	3,055.3	10.8	1.4	-60.21	-1,087.5	-924.8	1,162.8	1,151.6	11.16	104.168	
3,200.0	3,144.0	3,103.9	3,103.8	11.1	1.4	-60.82	-1,087.7	-924.3	1,155.8	1,144.4	11.45	100.909	
3,248.0	3,190.2	3,150.5	3,150.3	11.4	1.4	-61.40	-1,088.0	-923.8	1,149.3	1,137.5	11.74	97.927	
3,300.0	3,240.2	3,200.9	3,200.7	11.7	1.4	-62.05	-1,088.2	-923.2	1,142.3	1,130.3	12.04	94.850	
3,346.4	3,284.9	3,246.1	3,245.9	11.9	1.4	-62.63	-1,088.4	-922.7	1,136.2	1,123.9	12.32	92.215	
3,400.0	3,336.4	3,298.2	3,298.1	12.2	1.5	-63.30	-1,088.6	-922.1	1,129.3	1,116.7	12.64	89.316	
3,444.9	3,379.6	3,341.3	3,341.2	12.5	1.5	-63.87	-1,088.7	-921.7	1,123.6	1,110.7	12.92	86.993	
3,500.0	3,432.6	3,394.2	3,394.0	12.8	1.5	-64.57	-1,088.8	-921.1	1,116.8	1,103.6	13.25	84.269	
3,543.3	3,474.3	3,435.5	3,435.3	13.1	1.5	-65.12	-1,089.0	-920.6	1,111.6	1,098.0	13.52	82.223	
3,600.0	3,528.8	3,489.5	3,489.3	13.4	1.5	-65.85	-1,089.2	-919.9	1,104.9	1,091.0	13.87	79.665	
3,641.7	3,569.0	3,529.5	3,529.4	13.6	1.5	-66.40	-1,089.3	-919.5	1,100.1	1,086.0	14.13	77.861	
3,700.0	3,625.0	3,585.5	3,585.4	14.0	1.6	-67.17	-1,089.5	-918.9	1,093.6	1,079.1	14.49	75.451	
3,740.1	3,663.6	3,625.0	3,624.8	14.2	1.6	-67.72	-1,089.6	-918.5	1,089.2	1,074.5	14.75	73.855	
3,800.0	3,721.2	3,684.5	3,684.3	14.5	1.6	-68.55	-1,089.7	-917.8	1,082.8	1,067.7	15.13	71.569	
3,838.6	3,758.3	3,722.7	3,722.5	14.8	1.6	-69.10	-1,089.7	-917.3	1,078.8	1,063.4	15.38	70.153	
3,900.0	3,817.4	3,783.4	3,783.2	15.1	1.6	-69.97	-1,089.7	-916.5	1,072.4	1,056.6	15.77	67.992	
3,937.0	3,853.0	3,818.9	3,818.7	15.3	1.6	-70.49	-1,089.6	-915.9	1,068.6	1,052.6	16.01	66.747	
4,000.0	3,913.6	3,878.2	3,878.0	15.7	1.7	-71.36	-1,089.6	-915.0	1,062.5	1,046.1	16.42	64.725	
4,035.4	3,947.7	3,912.3	3,912.1	15.9	1.7	-71.86	-1,089.6	-914.5	1,059.2	1,042.6	16.65	63.634	
4,100.0	4,009.8	3,977.1	3,976.9	16.3	1.7	-72.84	-1,089.4	-913.4	1,053.3	1,036.2	17.07	61.714	
4,133.8	4,042.4	4,011.2	4,011.0	16.5	1.7	-73.35	-1,089.3	-912.9	1,050.3	1,033.0	17.29	60.745	
4,200.0	4,106.0	4,077.8	4,077.6	16.8	1.7	-74.37	-1,088.9	-911.6	1,044.4	1,026.7	17.73	58.923	
4,232.3	4,137.1	4,110.5	4,110.2	17.0	1.7	-74.88	-1,088.6	-911.0	1,041.6	1,023.7	17.94	58.066	
4,300.0	4,202.2	4,179.5	4,179.3	17.4	1.7	-75.95	-1,087.9	-909.6	1,035.7	1,017.4	18.39	56.336	
4,330.7	4,231.7	4,210.5	4,210.2	17.6	1.8	-76.43	-1,087.4	-909.1	1,033.1	1,014.5	18.59	55.582	
4,400.0	4,298.4	4,278.6	4,278.3	18.0	1.8	-77.50	-1,086.3	-907.8	1,027.4	1,008.3	19.04	53.952	
4,429.1	4,326.4	4,307.1	4,306.8	18.2	1.8	-77.95	-1,085.8	-907.3	1,025.0	1,005.8	19.23	53.295	
4,500.0	4,394.6	4,376.2	4,375.9	18.6	1.8	-79.05	-1,084.6	-906.1	1,019.5	999.8	19.70	51.763	
4,527.5	4,421.1	4,402.9	4,402.6	18.7	1.8	-79.47	-1,084.0	-905.6	1,017.5	997.6	19.88	51.191	
4,600.0	4,490.8	4,470.1	4,469.8	19.2	1.8	-80.55	-1,082.8	-904.5	1,012.4	992.0	20.34	49.764	
4,626.0	4,515.8	4,494.2	4,493.9	19.3	1.8	-80.94	-1,082.4	-904.1	1,010.7	990.2	20.51	49.275	
4,700.0	4,587.0	4,564.7	4,564.3	19.8	1.8	-82.08	-1,081.2	-903.0	1,006.3	985.3	20.99	47.942	
4,724.4	4,610.5	4,588.0	4,587.6	19.9	1.8	-82.46	-1,080.9	-902.7	1,004.9	983.8	21.15	47.521	
4,800.0	4,683.2	4,658.2	4,657.8	20.3	1.9	-83.59	-1,079.8	-901.8	1,001.0	979.4	21.63	46.281	
4,822.8	4,705.2	4,679.2	4,678.8	20.5	1.9	-83.93	-1,079.5	-901.5	1,000.0	978.2	21.78	45.924	
4,900.0	4,779.4	4,751.0	4,750.6	20.9	1.9	-85.11	-1,078.6	-900.5	996.9	974.7	22.27	44.775	
4,921.2	4,799.8	4,770.9	4,770.5	21.0	1.9	-85.44	-1,078.4	-900.2	996.2	973.8	22.40	44.474	
5,000.0	4,875.6	4,844.5	4,844.1	21.5	1.9	-86.64	-1,077.7	-899.4	993.9	971.0	22.89	43.410	
5,019.7	4,894.5	4,862.9	4,862.5	21.6	1.9	-86.93	-1,077.5	-899.3	993.4	970.4	23.02	43.157	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	
5,100.0	4,971.8	4,937.5	4,937.0	22.1	1.9	-88.13	-1,077.0	-898.9	991.8	968.3	23.52	42.177	
5,118.1	4,989.2	4,954.1	4,953.7	22.2	1.9	-88.40	-1,076.9	-898.9	991.6	967.9	23.63	41.967	
5,200.0	5,068.0	5,030.9	5,030.5	22.7	2.0	-89.63	-1,076.6	-898.6	990.9	966.8	24.13	41.066	
5,216.5	5,083.9	5,046.9	5,046.5	22.8	2.0	-89.88	-1,076.6	-898.5	990.8	966.6	24.23	40.892	
5,240.0	5,106.5	5,069.7	5,069.3	22.9	2.0	-90.25	-1,076.5	-898.5	990.8	966.4	24.37	40.649	
5,266.1	5,131.6	5,095.0	5,094.6	23.0	2.0	-90.64	-1,076.4	-898.4	990.8	966.3	24.51	40.423 CC	
5,300.0	5,164.4	5,128.0	5,127.6	23.2	2.0	-91.14	-1,076.3	-898.3	990.8	966.1	24.68	40.140	
5,314.9	5,178.8	5,142.6	5,142.2	23.3	2.0	-91.36	-1,076.3	-898.3	990.8	966.1	24.74	40.044 ES	
5,400.0	5,261.5	5,224.6	5,224.2	23.6	2.0	-92.47	-1,076.0	-898.3	991.2	966.1	25.08	39.519	
5,413.4	5,274.6	5,237.1	5,236.6	23.6	2.0	-92.62	-1,076.0	-898.4	991.3	966.2	25.13	39.449	
5,500.0	5,359.5	5,318.5	5,318.0	23.9	2.0	-93.57	-1,076.0	-898.6	992.2	966.8	25.43	39.020	
5,511.8	5,371.1	5,329.9	5,329.4	24.0	2.0	-93.69	-1,076.0	-898.7	992.4	966.9	25.46	38.971	
5,600.0	5,458.0	5,413.9	5,413.5	24.2	2.0	-94.51	-1,076.2	-898.7	993.7	968.0	25.73	38.616	
5,610.2	5,468.2	5,422.9	5,422.5	24.3	2.0	-94.59	-1,076.3	-898.6	993.9	968.1	25.76	38.582	
5,700.0	5,557.2	5,500.0	5,499.6	24.5	2.0	-95.24	-1,077.0	-898.0	995.8	969.8	26.00	38.308	
5,708.6	5,565.7	5,510.3	5,509.9	24.5	2.0	-95.32	-1,077.1	-897.9	996.1	970.0	26.01	38.288	
5,800.0	5,656.7	5,594.6	5,594.1	24.7	2.0	-95.92	-1,078.5	-896.2	998.7	972.5	26.21	38.098	
5,807.1	5,663.7	5,600.0	5,599.5	24.7	2.0	-95.96	-1,078.5	-896.1	998.9	972.7	26.23	38.088	
5,900.0	5,756.5	5,686.9	5,686.4	24.9	2.1	-96.45	-1,080.4	-893.5	1,002.0	975.6	26.39	37.970	
5,905.5	5,761.9	5,692.0	5,691.5	24.9	2.1	-96.48	-1,080.5	-893.3	1,002.2	975.8	26.40	37.967	
6,000.0	5,856.4	5,785.2	5,784.6	25.0	2.1	-96.86	-1,082.7	-889.9	1,005.5	978.9	26.53	37.906	
6,003.9	5,860.3	5,789.1	5,788.5	25.0	2.1	-96.87	-1,082.8	-889.7	1,005.6	979.1	26.53	37.904	
6,032.5	5,888.9	5,818.6	5,818.0	25.0	2.1	167.85	-1,083.5	-888.5	1,006.5	989.7	16.82	59.851	
6,062.5	5,918.9	5,850.4	5,849.7	25.1	2.1	167.79	-1,084.2	-887.2	1,007.4	990.5	16.88	59.681	
6,100.0	5,956.4	5,890.2	5,889.5	25.1	2.1	77.70	-1,085.0	-885.5	1,008.2	981.6	26.63	37.867	
6,102.3	5,958.7	5,892.7	5,892.0	25.1	2.1	77.70	-1,085.0	-885.4	1,008.3	981.7	26.63	37.868	
6,150.0	6,006.2	5,942.9	5,942.1	25.1	2.1	77.83	-1,085.9	-883.5	1,008.6	982.0	26.63	37.870	
6,200.0	6,055.6	5,995.1	5,994.3	25.1	2.2	78.23	-1,086.7	-881.8	1,008.1	981.5	26.61	37.878	
6,200.8	6,056.3	5,995.9	5,995.1	25.1	2.2	78.24	-1,086.7	-881.7	1,008.1	981.5	26.61	37.879	
6,250.0	6,104.3	6,046.2	6,045.4	25.0	2.2	78.90	-1,087.5	-880.3	1,006.8	980.2	26.57	37.893	
6,299.2	6,151.3	6,095.5	6,094.6	24.9	2.2	79.79	-1,088.1	-879.0	1,004.9	978.4	26.50	37.918	
6,300.0	6,152.1	6,096.3	6,095.4	24.9	2.2	79.81	-1,088.1	-879.0	1,004.9	978.4	26.50	37.919	
6,350.0	6,198.7	6,139.8	6,139.0	24.8	2.2	80.82	-1,088.8	-878.1	1,002.7	976.2	26.41	37.967	
6,397.6	6,241.9	6,179.7	6,178.8	24.7	2.2	81.91	-1,089.5	-877.4	1,000.5	974.2	26.30	38.041	
6,400.0	6,244.1	6,181.6	6,180.7	24.7	2.2	81.97	-1,089.5	-877.4	1,000.4	974.1	26.29	38.045	
6,450.0	6,287.8	6,224.1	6,223.2	24.5	2.2	83.29	-1,090.5	-876.8	998.2	972.0	26.16	38.151	
6,496.0	6,326.5	6,263.5	6,262.6	24.4	2.2	84.64	-1,091.4	-876.3	996.4	970.4	26.04	38.271	
6,500.0	6,329.7	6,266.8	6,265.9	24.4	2.2	84.75	-1,091.5	-876.2	996.3	970.3	26.02	38.283	
6,550.0	6,369.6	6,307.0	6,306.1	24.3	2.2	86.24	-1,092.4	-875.7	994.8	968.9	25.88	38.437	
6,594.5	6,403.3	6,339.5	6,338.6	24.2	2.2	87.49	-1,093.2	-875.2	994.2	968.4	25.76	38.588	
6,600.0	6,407.3	6,343.4	6,342.5	24.2	2.2	87.65	-1,093.3	-875.2	994.1	968.4	25.75	38.609	
6,609.4	6,414.2	6,350.0	6,349.1	24.1	2.2	87.91	-1,093.4	-875.1	994.1	968.4	25.73	38.639	
6,650.0	6,442.7	6,377.6	6,376.7	24.1	2.3	88.99	-1,094.1	-874.7	994.5	968.8	25.64	38.789	
6,692.9	6,471.0	6,405.5	6,404.5	24.0	2.3	90.07	-1,094.9	-874.2	995.8	970.3	25.57	38.938	
6,700.0	6,475.5	6,410.1	6,409.2	24.0	2.3	90.25	-1,095.0	-874.1	996.1	970.6	25.56	38.966	
6,750.0	6,505.6	6,441.6	6,440.6	24.0	2.3	91.42	-1,095.9	-873.6	999.3	973.8	25.54	39.130	
6,791.3	6,528.3	6,465.4	6,464.4	24.0	2.3	92.24	-1,096.5	-873.2	1,003.1	977.6	25.56	39.241	
6,800.0	6,532.8	6,470.1	6,469.1	24.0	2.3	92.39	-1,096.6	-873.1	1,004.1	978.5	25.57	39.269	
6,850.0	6,557.0	6,495.7	6,494.7	24.1	2.3	93.12	-1,097.3	-872.7	1,010.8	985.2	25.67	39.379	
6,889.7	6,574.1	6,513.5	6,512.4	24.2	2.3	93.48	-1,097.7	-872.4	1,017.6	991.8	25.80	39.437	
6,900.0	6,578.1	6,517.7	6,516.7	24.3	2.3	93.54	-1,097.8	-872.3	1,019.6	993.7	25.84	39.460	
6,950.0	6,596.1	6,536.2	6,535.2	24.5	2.3	93.62	-1,098.3	-872.0	1,030.5	1,004.4	26.08	39.515	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,607.5	6,548.1	6,547.0	24.7	2.3	93.45	-1,098.6	-871.8	1,040.3	1,014.0	26.31	39.534	
7,000.0	6,610.7	6,551.3	6,550.3	24.8	2.3	93.36	-1,098.6	-871.8	1,043.6	1,017.2	26.39	39.550	
7,050.0	6,621.9	6,563.1	6,562.0	25.1	2.3	92.72	-1,098.9	-871.6	1,059.0	1,032.2	26.76	39.573	
7,086.6	6,628.0	6,569.5	6,568.4	25.4	2.3	92.00	-1,099.1	-871.5	1,071.6	1,044.5	27.08	39.577	
7,100.0	6,629.7	6,571.3	6,570.3	25.6	2.3	91.69	-1,099.1	-871.5	1,076.5	1,049.3	27.19	39.590	
7,150.0	6,634.1	6,576.2	6,575.1	26.0	2.3	90.26	-1,099.3	-871.5	1,096.1	1,068.4	27.67	39.607	
7,185.0	6,635.1	6,577.5	6,576.5	26.4	2.3	89.03	-1,099.3	-871.4	1,110.9	1,082.9	28.04	39.614	
7,196.6	6,635.0	6,577.6	6,576.6	26.5	2.3	88.58	-1,099.3	-871.4	1,116.0	1,087.8	28.16	39.624	
7,200.0	6,635.0	6,577.6	6,576.5	26.6	2.3	88.58	-1,099.3	-871.4	1,117.5	1,089.3	28.20	39.625	
7,283.4	6,633.9	6,577.5	6,576.5	27.6	2.3	88.57	-1,099.3	-871.4	1,157.3	1,128.0	29.23	39.590	
7,300.0	6,633.7	6,577.5	6,576.4	27.8	2.3	88.57	-1,099.3	-871.4	1,165.7	1,136.2	29.43	39.602	
7,381.9	6,632.6	6,577.4	6,576.3	29.0	2.3	88.57	-1,099.3	-871.4	1,209.8	1,179.2	30.62	39.507	
7,400.0	6,632.4	6,577.4	6,576.3	29.2	2.3	88.57	-1,099.3	-871.4	1,220.1	1,189.3	30.89	39.504	
7,480.3	6,631.4	6,577.3	6,576.2	30.5	2.3	88.56	-1,099.3	-871.4	1,267.9	1,235.7	32.20	39.372	
7,500.0	6,631.1	6,577.3	6,576.2	30.9	2.3	88.56	-1,099.3	-871.4	1,280.1	1,247.6	32.53	39.357	
7,578.7	6,630.1	6,577.2	6,576.1	32.3	2.3	88.55	-1,099.3	-871.4	1,330.7	1,296.8	33.94	39.205	
7,600.0	6,629.8	6,577.2	6,576.1	32.7	2.3	88.55	-1,099.3	-871.4	1,344.9	1,310.5	34.33	39.180	
7,677.1	6,628.9	6,577.1	6,576.0	34.1	2.3	88.55	-1,099.3	-871.4	1,397.6	1,361.8	35.82	39.021	
7,700.0	6,628.6	6,577.1	6,576.0	34.6	2.3	88.55	-1,099.3	-871.4	1,413.7	1,377.4	36.26	38.988	
7,775.6	6,627.6	6,577.0	6,575.9	36.1	2.3	88.54	-1,099.3	-871.4	1,468.1	1,430.3	37.81	38.832	
7,800.0	6,627.3	6,576.9	6,575.9	36.6	2.3	88.54	-1,099.3	-871.4	1,486.1	1,447.8	38.31	38.794	
7,874.0	6,626.3	6,576.9	6,575.8	38.2	2.3	88.54	-1,099.3	-871.4	1,541.7	1,501.8	39.89	38.644	
7,900.0	6,626.0	6,576.8	6,575.8	38.8	2.3	88.53	-1,099.3	-871.4	1,561.6	1,521.1	40.45	38.603	
7,972.4	6,625.1	6,576.8	6,575.7	40.4	2.3	88.53	-1,099.3	-871.4	1,617.9	1,575.8	42.06	38.464	
8,000.0	6,624.7	6,576.7	6,575.7	41.0	2.3	88.53	-1,099.3	-871.4	1,639.6	1,597.0	42.68	38.421	
8,070.8	6,623.8	6,576.7	6,575.6	42.6	2.3	88.52	-1,099.3	-871.4	1,696.3	1,652.0	44.30	38.293	
8,100.0	6,623.4	6,576.6	6,575.6	43.3	2.3	88.52	-1,099.3	-871.4	1,720.0	1,675.0	44.97	38.250	
8,169.3	6,622.6	6,576.6	6,575.5	44.9	2.3	88.52	-1,099.3	-871.4	1,776.8	1,730.2	46.60	38.133	
8,200.0	6,622.2	6,576.5	6,575.5	45.6	2.3	88.52	-1,099.3	-871.5	1,802.3	1,755.0	47.32	38.090	
8,267.7	6,621.3	6,576.5	6,575.4	47.3	2.3	88.51	-1,099.3	-871.5	1,859.0	1,810.1	48.94	37.984	
8,300.0	6,620.9	6,576.4	6,575.4	48.0	2.3	88.51	-1,099.3	-871.5	1,886.3	1,836.6	49.72	37.941	
8,366.1	6,620.0	6,576.4	6,575.3	49.7	2.3	88.51	-1,099.3	-871.5	1,942.7	1,891.4	51.33	37.847	
8,400.0	6,619.6	6,576.3	6,575.3	50.5	2.3	88.50	-1,099.3	-871.5	1,971.8	1,919.7	52.16	37.805	
8,464.5	6,618.8	6,576.3	6,575.2	52.1	2.3	88.50	-1,099.3	-871.5	2,027.7	1,974.0	53.76	37.720	
8,500.0	6,618.3	6,576.2	6,575.2	53.0	2.3	88.50	-1,099.3	-871.5	2,058.7	2,004.0	54.64	37.679	
8,563.0	6,617.5	6,576.2	6,575.1	54.5	2.3	88.49	-1,099.3	-871.5	2,113.9	2,057.7	56.22	37.603	
8,600.0	6,617.0	6,576.1	6,575.1	55.5	2.3	88.49	-1,099.3	-871.5	2,146.6	2,089.5	57.15	37.564	
8,661.4	6,616.3	6,576.1	6,575.0	57.0	2.3	88.49	-1,099.3	-871.5	2,201.1	2,142.4	58.70	37.496	
8,700.0	6,615.8	6,576.0	6,575.0	58.0	2.3	88.49	-1,099.3	-871.5	2,235.6	2,175.9	59.68	37.458	
8,759.8	6,615.0	6,576.0	6,574.9	59.5	2.3	88.48	-1,099.2	-871.5	2,289.3	2,228.1	61.22	37.397	
8,800.0	6,614.5	6,576.0	6,574.9	60.6	2.3	88.48	-1,099.2	-871.5	2,325.5	2,263.2	62.24	37.360	
8,858.2	6,613.7	6,575.9	6,574.8	62.1	2.3	88.48	-1,099.2	-871.5	2,378.2	2,314.5	63.75	37.306	
8,900.0	6,613.2	6,575.9	6,574.8	63.2	2.3	88.47	-1,099.2	-871.5	2,416.2	2,351.3	64.83	37.271	
8,956.7	6,612.5	6,575.8	6,574.8	64.6	2.3	88.47	-1,099.2	-871.5	2,467.9	2,401.6	66.30	37.222	
9,000.0	6,611.9	6,575.8	6,574.7	65.8	2.3	88.47	-1,099.2	-871.5	2,507.5	2,440.1	67.43	37.189	
9,055.1	6,611.2	6,575.7	6,574.7	67.2	2.3	88.46	-1,099.2	-871.5	2,558.2	2,489.3	68.87	37.145	
9,100.0	6,610.6	6,575.7	6,574.6	68.4	2.3	88.46	-1,099.2	-871.5	2,599.6	2,529.5	70.05	37.113	
9,153.5	6,609.9	6,575.6	6,574.6	69.8	2.3	88.46	-1,099.2	-871.5	2,649.0	2,577.6	71.45	37.073	
9,200.0	6,609.3	6,575.6	6,574.5	71.0	2.3	88.46	-1,099.2	-871.5	2,692.1	2,619.5	72.68	37.042	
9,251.9	6,608.7	6,575.5	6,574.5	72.4	2.3	88.45	-1,099.2	-871.5	2,740.4	2,666.4	74.05	37.007	
9,300.0	6,608.1	6,575.5	6,574.4	73.7	2.3	88.45	-1,099.2	-871.5	2,785.2	2,709.9	75.32	36.978	
9,350.4	6,607.4	6,575.5	6,574.4	75.0	2.3	88.45	-1,099.2	-871.5	2,832.3	2,755.7	76.66	36.946	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 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	6,606.8	6,575.4	6,574.4	76.3	2.3	88.44	-1,099.2	-871.5	2,878.8	2,800.8	77.98	36.918	
9,448.8	6,606.1	6,575.4	6,574.3	77.6	2.3	88.44	-1,099.2	-871.5	2,924.6	2,845.3	79.28	36.889	
9,500.0	6,605.5	6,575.3	6,574.3	79.0	2.3	88.44	-1,099.2	-871.5	2,972.8	2,892.1	80.65	36.862	
9,547.2	6,604.9	6,575.3	6,574.2	80.2	2.3	88.44	-1,099.2	-871.5	3,017.3	2,935.4	81.91	36.836	
9,600.0	6,604.2	6,575.2	6,574.2	81.7	2.3	88.43	-1,099.2	-871.5	3,067.1	2,983.8	83.32	36.810	
9,645.6	6,603.6	6,575.2	6,574.1	82.9	2.3	88.43	-1,099.2	-871.5	3,110.3	3,025.8	84.55	36.787	
9,700.0	6,602.9	6,575.1	6,574.1	84.3	2.3	88.43	-1,099.2	-871.5	3,161.9	3,075.8	86.01	36.762	
9,744.1	6,602.3	6,575.1	6,574.1	85.5	2.3	88.42	-1,099.2	-871.5	3,203.7	3,116.5	87.20	36.741	
9,800.0	6,601.6	6,575.1	6,574.0	87.0	2.3	88.42	-1,099.2	-871.5	3,256.9	3,168.2	88.70	36.717	
9,842.5	6,601.1	6,575.0	6,574.0	88.2	2.3	88.42	-1,099.2	-871.5	3,297.4	3,207.5	89.85	36.698	
9,900.0	6,600.3	6,575.0	6,573.9	89.7	2.3	88.42	-1,099.2	-871.5	3,352.2	3,260.8	91.40	36.675	
9,940.9	6,599.8	6,574.9	6,573.9	90.9	2.3	88.41	-1,099.2	-871.5	3,391.3	3,298.8	92.51	36.658	
10,000.0	6,599.0	6,574.9	6,573.8	92.5	2.3	88.41	-1,099.2	-871.5	3,447.8	3,353.7	94.11	36.636	
10,039.3	6,598.5	6,574.9	6,573.8	93.5	2.3	88.41	-1,099.2	-871.5	3,485.4	3,390.3	95.18	36.621	
10,100.0	6,597.7	6,574.8	6,573.8	95.2	2.3	88.40	-1,099.2	-871.5	3,543.6	3,446.8	96.82	36.599	
10,137.8	6,597.3	6,574.8	6,573.7	96.2	2.3	88.40	-1,099.2	-871.5	3,579.9	3,482.0	97.85	36.585	
10,200.0	6,596.5	6,574.7	6,573.7	97.9	2.3	88.40	-1,099.2	-871.5	3,639.6	3,540.1	99.54	36.564	
10,236.2	6,596.0	6,574.7	6,573.6	98.9	2.3	88.40	-1,099.2	-871.5	3,674.5	3,573.9	100.53	36.552	
10,300.0	6,595.2	6,574.6	6,573.6	100.6	2.3	88.39	-1,099.2	-871.5	3,735.9	3,633.6	102.26	36.532	
10,334.6	6,594.7	6,574.6	6,573.6	101.6	2.3	88.39	-1,099.2	-871.5	3,769.3	3,666.1	103.21	36.521	
10,400.0	6,593.9	6,574.6	6,573.5	103.3	2.3	88.39	-1,099.2	-871.5	3,832.3	3,727.4	104.99	36.502	
10,433.0	6,593.5	6,574.5	6,573.5	104.2	2.3	88.39	-1,099.2	-871.5	3,864.3	3,758.4	105.89	36.492	
10,500.0	6,592.6	6,574.5	6,573.4	106.1	2.3	88.38	-1,099.2	-871.5	3,929.0	3,821.2	107.72	36.473	
10,531.5	6,592.2	6,574.5	6,573.4	106.9	2.3	88.38	-1,099.2	-871.5	3,959.4	3,850.8	108.58	36.464	
10,600.0	6,591.3	6,574.4	6,573.4	108.8	2.3	88.38	-1,099.2	-871.5	4,025.8	3,915.3	110.46	36.446	
10,629.9	6,590.9	6,574.4	6,573.3	109.6	2.3	88.38	-1,099.2	-871.5	4,054.7	3,943.5	111.28	36.438	
10,700.0	6,590.0	6,574.3	6,573.3	111.6	2.3	88.37	-1,099.2	-871.5	4,122.7	4,009.5	113.20	36.420	
10,728.3	6,589.6	6,574.3	6,573.3	112.3	2.3	88.37	-1,099.2	-871.5	4,150.2	4,036.2	113.98	36.413	
10,800.0	6,588.7	6,574.2	6,573.2	114.3	2.3	88.37	-1,099.2	-871.5	4,219.8	4,103.8	115.94	36.396	
10,826.7	6,588.4	6,574.2	6,573.2	115.0	2.3	88.36	-1,099.2	-871.5	4,245.8	4,129.1	116.68	36.389	
10,900.0	6,587.4	6,574.2	6,573.1	117.0	2.3	88.36	-1,099.2	-871.5	4,317.0	4,198.3	118.69	36.373	
10,925.2	6,587.1	6,574.1	6,573.1	117.7	2.3	88.36	-1,099.2	-871.5	4,341.5	4,222.1	119.38	36.367	
11,000.0	6,586.1	6,574.1	6,573.0	119.8	2.3	88.35	-1,099.2	-871.5	4,414.3	4,292.9	121.44	36.351	
11,023.6	6,585.8	6,574.1	6,573.0	120.4	2.3	88.35	-1,099.2	-871.5	4,437.3	4,315.3	122.09	36.346	
11,100.0	6,584.8	6,574.0	6,573.0	122.5	2.3	88.35	-1,099.2	-871.5	4,511.8	4,387.6	124.19	36.330	
11,122.0	6,584.5	6,574.0	6,572.9	123.2	2.3	88.35	-1,099.2	-871.5	4,533.3	4,408.5	124.79	36.326	
11,200.0	6,583.5	6,573.9	6,572.9	125.3	2.3	88.34	-1,099.2	-871.5	4,609.4	4,482.4	126.94	36.311	
11,220.4	6,583.3	6,573.9	6,572.9	125.9	2.3	88.34	-1,099.2	-871.5	4,629.3	4,501.8	127.51	36.307	
11,300.0	6,582.2	6,573.9	6,572.8	128.1	2.3	88.34	-1,099.2	-871.5	4,707.0	4,577.3	129.70	36.292	
11,318.9	6,582.0	6,573.8	6,572.8	128.6	2.3	88.34	-1,099.2	-871.5	4,725.5	4,595.3	130.22	36.289	
11,400.0	6,580.9	6,573.8	6,572.7	130.8	2.3	88.33	-1,099.2	-871.5	4,804.8	4,672.4	132.46	36.274	
11,417.3	6,580.7	6,573.8	6,572.7	131.3	2.3	88.33	-1,099.2	-871.5	4,821.7	4,688.8	132.94	36.271	
11,500.0	6,579.7	6,573.7	6,572.7	133.6	2.3	88.33	-1,099.2	-871.5	4,902.7	4,767.5	135.22	36.257	
11,515.7	6,579.4	6,573.7	6,572.7	134.0	2.3	88.33	-1,099.2	-871.5	4,918.1	4,782.4	135.65	36.255	
11,600.0	6,578.4	6,573.6	6,572.6	136.3	2.3	88.32	-1,099.2	-871.5	5,000.6	4,862.6	137.98	36.241	
11,614.1	6,578.2	6,573.6	6,572.6	136.7	2.3	88.32	-1,099.2	-871.5	5,014.5	4,876.1	138.37	36.239	
11,700.0	6,577.1	6,573.6	6,572.5	139.1	2.3	88.32	-1,099.2	-871.5	5,098.6	4,957.9	140.75	36.226	
11,712.6	6,576.9	6,573.6	6,572.5	139.5	2.3	88.32	-1,099.2	-871.5	5,111.0	4,969.9	141.09	36.224	
11,800.0	6,575.8	6,573.5	6,572.4	141.9	2.3	88.31	-1,099.2	-871.5	5,196.7	5,053.2	143.51	36.211	
11,811.0	6,575.6	6,573.5	6,572.4	142.2	2.3	88.31	-1,099.2	-871.5	5,207.5	5,063.7	143.82	36.209	
11,858.8	6,575.0	6,573.5	6,572.4	143.5	2.3	88.31	-1,099.2	-871.5	5,254.4	5,109.3	145.14	36.203 SF	
11,859.3	6,575.0	6,573.5	6,572.4	143.5	2.3	88.31	-1,099.2	-871.5	5,255.0	5,109.8	145.15	36.204	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	119.9	1.1	119.9					
98.4	98.4	98.4	98.4	0.1	0.1	0.53	119.9	1.1	119.9	119.7	0.19	623.501		
100.0	100.0	100.0	100.0	0.1	0.1	0.53	119.9	1.1	119.9	119.7	0.20	612.948		
196.8	196.8	196.8	196.8	0.3	0.3	0.53	119.9	1.1	119.9	119.2	0.63	189.977		
200.0	200.0	200.0	200.0	0.3	0.3	0.53	119.9	1.1	119.9	119.2	0.65	185.807		
295.3	295.3	295.3	295.3	0.5	0.5	0.53	119.9	1.1	119.9	118.8	1.07	111.667		
300.0	300.0	300.0	300.0	0.5	0.5	0.53	119.9	1.1	119.9	118.8	1.09	109.500		
393.7	393.7	393.7	393.7	0.8	0.8	0.53	119.9	1.1	119.9	118.3	1.52	79.072		
400.0	400.0	400.0	400.0	0.8	0.8	0.53	119.9	1.1	119.9	118.3	1.54	77.622		
492.1	492.1	492.1	492.1	1.0	1.0	0.53	119.9	1.1	119.9	117.9	1.96	61.207		
500.0	500.0	500.0	500.0	1.0	1.0	0.53	119.9	1.1	119.9	117.9	1.99	60.120		
590.5	590.5	590.5	590.5	1.2	1.2	0.53	119.9	1.1	119.9	117.5	2.40	49.927		
600.0	600.0	600.0	600.0	1.2	1.2	0.53	119.9	1.1	119.9	117.4	2.44	49.058		
689.0	689.0	689.0	689.0	1.4	1.4	0.53	119.9	1.1	119.9	117.0	2.84	42.157		
700.0	700.0	700.0	700.0	1.4	1.4	0.53	119.9	1.1	119.9	117.0	2.89	41.435		
787.4	787.4	787.4	787.4	1.6	1.6	0.53	119.9	1.1	119.9	116.6	3.29	36.480		
800.0	800.0	800.0	800.0	1.7	1.7	0.53	119.9	1.1	119.9	116.5	3.34	35.862		
885.8	885.8	885.8	885.8	1.9	1.9	0.53	119.9	1.1	119.9	116.1	3.73	32.151		
900.0	900.0	900.0	900.0	1.9	1.9	0.53	119.9	1.1	119.9	116.1	3.79	31.610		
984.2	984.2	984.2	984.2	2.1	2.1	0.53	119.9	1.1	119.9	115.7	4.17	28.740		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.53	119.9	1.1	119.9	115.6	4.24	28.260 CC, ES		
1,082.7	1,082.7	1,079.7	1,079.7	2.3	2.3	0.77	120.8	1.6	120.9	116.3	4.60	26.256		
1,100.0	1,100.0	1,096.4	1,096.3	2.3	2.3	0.87	121.3	1.8	121.4	116.7	4.68	25.931		
1,181.1	1,181.1	1,174.3	1,174.2	2.5	2.5	1.62	124.6	3.5	124.8	119.8	5.04	24.786		
1,200.0	1,200.0	1,192.5	1,192.3	2.6	2.6	1.85	125.6	4.0	125.9	120.8	5.12	24.599		
1,279.5	1,279.5	1,268.6	1,268.2	2.7	2.7	98.51	131.1	6.8	131.9	126.4	5.47	24.129		
1,300.0	1,300.0	1,288.1	1,287.6	2.8	2.8	99.06	132.7	7.7	133.8	128.3	5.55	24.093		
1,377.9	1,377.8	1,361.9	1,360.9	2.9	2.9	101.64	140.2	11.5	142.7	136.8	5.89	24.251		
1,400.0	1,399.8	1,382.6	1,381.5	3.0	3.0	102.48	142.6	12.7	145.7	139.7	5.98	24.375		
1,476.4	1,475.9	1,453.8	1,451.9	3.1	3.2	105.64	151.8	17.4	157.9	151.6	6.31	25.017		
1,500.0	1,499.5	1,475.7	1,473.5	3.2	3.2	106.66	155.0	19.0	162.3	155.8	6.41	25.298		
1,574.8	1,573.7	1,544.0	1,540.7	3.4	3.4	109.92	165.7	24.5	178.0	171.3	6.75	26.371		
1,600.0	1,598.7	1,566.7	1,563.0	3.4	3.5	111.01	169.6	26.5	184.0	177.1	6.86	26.816		
1,673.2	1,671.1	1,634.2	1,629.0	3.6	3.7	114.17	182.0	32.8	203.2	196.0	7.20	28.214		
1,700.0	1,697.5	1,659.5	1,653.8	3.7	3.8	115.31	186.7	35.1	210.7	203.4	7.33	28.756		
1,771.6	1,767.9	1,726.9	1,719.7	3.9	4.0	118.21	199.1	41.5	231.7	224.0	7.67	30.191		
1,800.0	1,795.6	1,753.4	1,745.6	4.0	4.1	119.30	204.0	44.0	240.4	232.6	7.81	30.791		
1,870.1	1,864.0	1,818.5	1,809.4	4.3	4.4	121.84	216.1	50.2	262.9	254.8	8.16	32.237		
1,900.0	1,893.1	1,846.2	1,836.4	4.4	4.5	122.87	221.2	52.8	273.0	264.7	8.30	32.880		
1,968.5	1,959.3	1,909.1	1,897.9	4.6	4.7	125.09	232.9	58.7	297.1	288.4	8.66	34.311		
1,992.4	1,982.4	1,930.9	1,919.3	4.7	4.8	125.83	236.9	60.8	305.8	297.0	8.78	34.832		
2,000.0	1,989.6	1,937.8	1,926.0	4.8	4.8	126.10	238.2	61.4	308.6	299.8	8.82	34.987		
2,066.9	2,054.0	1,998.7	1,985.7	5.1	5.1	128.34	249.5	67.2	333.6	324.4	9.19	36.315		
2,100.0	2,085.8	2,028.9	2,015.1	5.2	5.2	129.34	255.1	70.0	346.1	336.7	9.36	36.958		
2,165.3	2,148.7	2,088.4	2,073.3	5.5	5.4	131.10	266.1	75.6	371.0	361.3	9.73	38.146		
2,200.0	2,182.0	2,119.9	2,104.2	5.7	5.5	131.95	272.0	78.6	384.3	374.4	9.92	38.744		
2,263.8	2,243.4	2,178.0	2,161.0	6.0	5.8	133.36	282.7	84.1	409.0	398.7	10.28	39.788		
2,300.0	2,278.2	2,211.0	2,193.3	6.2	5.9	134.10	288.8	87.2	423.1	412.7	10.48	40.360		
2,362.2	2,338.1	2,267.7	2,248.7	6.5	6.1	135.25	299.3	92.6	447.5	436.7	10.84	41.279		
2,400.0	2,374.4	2,302.1	2,282.4	6.7	6.3	135.89	305.7	95.8	462.4	451.3	11.06	41.819		
2,460.6	2,432.8	2,357.3	2,336.4	7.0	6.5	136.84	315.9	101.0	486.4	474.9	11.41	42.629		
2,500.0	2,470.6	2,393.2	2,371.4	7.2	6.7	137.40	322.6	104.4	502.0	490.3	11.64	43.137		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
2,559.0	2,527.4	2,446.9	2,424.0	7.6	6.9	138.19	332.5	109.5	525.5	513.5	11.98	43.852	
2,600.0	2,566.8	2,484.2	2,460.5	7.8	7.0	138.70	339.4	113.0	541.8	529.6	12.22	44.329	
2,657.5	2,622.1	2,536.6	2,511.7	8.1	7.3	139.36	349.1	117.9	564.8	552.2	12.56	44.962	
2,700.0	2,663.0	2,577.4	2,551.6	8.3	7.4	139.83	356.7	121.7	581.8	569.0	12.82	45.399	
2,755.9	2,716.8	2,633.5	2,606.6	8.6	7.6	140.35	367.6	126.0	603.9	590.7	13.16	45.903	
2,800.0	2,759.2	2,674.6	2,646.8	8.9	7.8	140.66	375.7	128.7	621.1	607.7	13.42	46.270	
2,854.3	2,811.5	2,724.5	2,695.6	9.2	8.0	141.01	385.5	132.0	642.3	628.5	13.76	46.688	
2,900.0	2,855.4	2,766.5	2,736.6	9.4	8.2	141.29	393.8	134.7	660.2	646.1	14.04	47.014	
2,952.7	2,906.2	2,814.9	2,784.0	9.7	8.4	141.59	403.4	137.9	680.8	666.4	14.37	47.371	
3,000.0	2,951.6	2,858.3	2,826.4	10.0	8.6	141.85	411.9	140.8	699.3	684.6	14.67	47.675	
3,051.2	3,000.9	2,905.3	2,872.4	10.3	8.8	142.11	421.2	143.8	719.3	704.3	14.99	47.987	
3,100.0	3,047.8	2,950.1	2,916.2	10.5	9.0	142.35	430.0	146.8	738.5	723.2	15.30	48.270	
3,149.6	3,095.5	2,995.6	2,960.8	10.8	9.1	142.58	439.0	149.8	757.9	742.3	15.61	48.544	
3,200.0	3,144.0	3,041.9	3,006.0	11.1	9.3	142.80	448.2	152.8	777.7	761.8	15.93	48.810	
3,248.0	3,190.2	3,086.0	3,049.2	11.4	9.5	143.00	456.9	155.7	796.5	780.3	16.24	49.051	
3,300.0	3,240.2	3,133.7	3,095.9	11.7	9.7	143.21	466.3	158.9	817.0	800.4	16.57	49.301	
3,346.4	3,284.9	3,176.4	3,137.6	11.9	9.9	143.38	474.7	161.7	835.2	818.3	16.87	49.513	
3,400.0	3,336.4	3,225.6	3,185.7	12.2	10.1	143.58	484.4	164.9	856.2	839.0	17.21	49.748	
3,444.9	3,379.6	3,266.8	3,226.0	12.5	10.3	143.73	492.5	167.6	873.9	856.4	17.50	49.935	
3,500.0	3,432.6	3,317.4	3,275.5	12.8	10.5	143.92	502.5	170.9	895.6	877.7	17.86	50.157	
3,543.3	3,474.3	3,357.1	3,314.4	13.1	10.7	144.05	510.3	173.5	912.6	894.5	18.14	50.322	
3,600.0	3,528.8	3,409.2	3,365.3	13.4	10.9	144.22	520.6	176.9	934.9	916.4	18.50	50.532	
3,641.7	3,569.0	3,447.5	3,402.8	13.6	11.1	144.35	528.2	179.5	951.3	932.6	18.77	50.679	
3,700.0	3,625.0	3,501.0	3,455.1	14.0	11.3	144.51	538.7	183.0	974.3	955.1	19.15	50.877	
3,740.1	3,663.6	3,537.9	3,491.2	14.2	11.5	144.62	546.0	185.4	990.1	970.7	19.41	51.007	
3,800.0	3,721.2	3,592.9	3,544.9	14.5	11.7	144.77	556.8	189.0	1,013.7	993.9	19.80	51.195	
3,838.6	3,758.3	3,628.3	3,579.6	14.8	11.9	144.87	563.8	191.3	1,028.9	1,008.8	20.05	51.311	
3,900.0	3,817.4	3,684.7	3,634.7	15.1	12.1	145.01	574.9	195.0	1,053.1	1,032.6	20.45	51.489	
3,937.0	3,853.0	3,718.6	3,668.0	15.3	12.3	145.10	581.6	197.3	1,067.6	1,047.0	20.69	51.593	
4,000.0	3,913.6	3,776.5	3,724.6	15.7	12.5	145.24	593.1	201.1	1,092.5	1,071.4	21.11	51.762	
4,035.4	3,947.7	3,809.0	3,756.4	15.9	12.7	145.32	599.5	203.2	1,106.5	1,085.1	21.34	51.854	
4,100.0	4,009.8	3,868.3	3,814.4	16.3	12.9	145.45	611.2	207.1	1,131.9	1,110.2	21.76	52.015	
4,133.8	4,042.4	3,899.4	3,844.8	16.5	13.1	145.52	617.3	209.2	1,145.3	1,123.3	21.98	52.097	
4,200.0	4,106.0	3,960.1	3,904.2	16.8	13.3	145.65	629.3	213.1	1,171.4	1,148.9	22.42	52.251	
4,232.3	4,137.1	3,989.8	3,933.2	17.0	13.4	145.71	635.1	215.1	1,184.1	1,161.5	22.63	52.324	
4,300.0	4,202.2	4,052.0	3,994.0	17.4	13.7	145.83	647.4	219.2	1,210.8	1,187.7	23.08	52.471	
4,330.7	4,231.7	4,080.2	4,021.6	17.6	13.8	145.88	653.0	221.0	1,222.9	1,199.6	23.28	52.536	
4,400.0	4,298.4	4,143.8	4,083.8	18.0	14.1	146.00	665.5	225.2	1,250.3	1,226.5	23.73	52.677	
4,429.1	4,326.4	4,170.5	4,110.0	18.2	14.2	146.05	670.8	227.0	1,261.8	1,237.8	23.93	52.734	
4,500.0	4,394.6	4,235.6	4,173.6	18.6	14.5	146.16	683.6	231.2	1,289.7	1,265.3	24.39	52.869	
4,527.5	4,421.1	4,260.9	4,198.4	18.7	14.6	146.20	688.6	232.9	1,300.6	1,276.0	24.58	52.920	
4,600.0	4,490.8	4,327.4	4,263.5	19.2	14.9	146.31	701.7	237.3	1,329.2	1,304.2	25.06	53.050	
4,626.0	4,515.8	4,351.3	4,286.8	19.3	15.0	146.35	706.4	238.8	1,339.5	1,314.2	25.23	53.095	
4,700.0	4,587.0	4,419.2	4,353.3	19.8	15.3	146.45	719.8	243.3	1,368.7	1,343.0	25.72	53.219	
4,724.4	4,610.5	4,441.7	4,375.2	19.9	15.4	146.49	724.3	244.8	1,378.3	1,352.5	25.88	53.259	
4,800.0	4,683.2	4,511.1	4,443.1	20.3	15.7	146.59	738.0	249.3	1,408.2	1,381.8	26.38	53.379	
4,822.8	4,705.2	4,532.0	4,463.6	20.5	15.8	146.62	742.1	250.7	1,417.2	1,390.7	26.53	53.414	
4,900.0	4,779.4	4,602.9	4,532.9	20.9	16.1	146.72	756.1	255.4	1,447.7	1,420.7	27.05	53.529	
4,921.2	4,799.8	4,622.4	4,552.0	21.0	16.2	146.74	759.9	256.6	1,456.1	1,428.9	27.19	53.560	
5,000.0	4,875.6	4,694.7	4,622.7	21.5	16.5	146.84	774.2	261.4	1,487.2	1,459.5	27.71	53.671	
5,019.7	4,894.5	4,712.8	4,640.4	21.6	16.6	146.86	777.7	262.6	1,495.0	1,467.1	27.84	53.698	
5,100.0	4,971.8	4,786.5	4,712.5	22.1	16.9	146.95	792.3	267.4	1,526.7	1,498.3	28.38	53.805	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
5,118.1	4,989.2	4,803.2	4,728.8	22.2	17.0	146.97	795.6	268.5	1,533.9	1,505.4	28.50	53.828	
5,200.0	5,068.0	4,878.4	4,802.3	22.7	17.3	147.06	810.4	273.5	1,566.2	1,537.2	29.04	53.931	
5,216.5	5,083.9	4,893.5	4,817.2	22.8	17.4	147.08	813.4	274.5	1,572.8	1,543.6	29.15	53.952	
5,240.0	5,106.5	4,923.5	4,846.5	22.9	17.5	147.11	819.3	276.4	1,582.0	1,552.7	29.33	53.947	
5,300.0	5,164.4	5,025.4	4,946.7	23.2	17.9	147.51	837.1	282.3	1,604.1	1,574.3	29.86	53.728	
5,314.9	5,178.8	5,051.2	4,972.2	23.3	18.0	147.61	841.0	283.7	1,609.3	1,579.3	29.97	53.689	
5,400.0	5,261.5	5,201.3	5,120.9	23.6	18.4	148.17	859.8	289.9	1,635.1	1,604.5	30.62	53.397	
5,413.4	5,274.6	5,225.4	5,144.8	23.6	18.4	148.25	862.1	290.7	1,638.7	1,608.0	30.71	53.352	
5,500.0	5,359.5	7,766.2	6,644.2	23.9	36.8	108.44	875.1	-1,052.6	1,610.2	1,550.6	59.63	27.004	
5,511.8	5,371.1	7,768.3	6,644.2	24.0	36.8	108.05	875.1	-1,054.7	1,601.1	1,541.3	59.76	26.791	
5,600.0	5,458.0	7,782.7	6,644.2	24.2	37.2	105.25	875.1	-1,069.2	1,533.6	1,473.0	60.65	25.286	
5,610.2	5,468.2	7,784.2	6,644.2	24.3	37.2	104.94	875.1	-1,070.7	1,525.9	1,465.2	60.74	25.122	
5,700.0	5,557.2	7,795.9	6,644.2	24.5	37.5	102.34	875.1	-1,082.3	1,459.1	1,397.7	61.40	23.764	
5,708.6	5,565.7	7,796.9	6,644.2	24.5	37.5	102.10	875.1	-1,083.3	1,452.8	1,391.3	61.45	23.641	
5,800.0	5,656.7	7,805.6	6,644.2	24.7	37.7	99.75	875.1	-1,092.0	1,387.2	1,325.3	61.90	22.409	
5,807.1	5,663.7	7,806.1	6,644.2	24.7	37.7	99.58	875.1	-1,092.6	1,382.2	1,320.3	61.93	22.320	
5,900.0	5,756.5	7,811.8	6,644.2	24.9	37.9	97.52	875.1	-1,098.2	1,318.4	1,256.2	62.19	21.200	
5,905.5	5,761.9	7,812.0	6,644.2	24.9	37.9	97.41	875.1	-1,098.5	1,314.8	1,252.6	62.20	21.138	
6,000.0	5,856.4	7,814.5	6,644.2	25.0	38.0	95.66	875.1	-1,101.0	1,253.5	1,191.2	62.30	20.121	
6,003.9	5,860.3	7,814.6	6,644.2	25.0	38.0	95.60	875.1	-1,101.0	1,251.1	1,188.8	62.30	20.081	
6,032.5	5,888.9	7,814.7	6,644.2	25.0	38.0	-0.05	875.1	-1,101.1	1,233.4	1,198.8	34.54	35.704	
6,062.5	5,918.9	7,814.6	6,644.2	25.1	38.0	-0.05	875.1	-1,101.1	1,215.2	1,180.6	34.59	35.127	
6,100.0	5,956.4	7,813.6	6,644.2	25.1	37.9	-92.16	875.1	-1,100.0	1,193.2	1,131.1	62.14	19.202	
6,102.3	5,958.7	7,813.5	6,644.2	25.1	37.9	-92.29	875.1	-1,099.9	1,191.9	1,129.8	62.13	19.185	
6,150.0	6,006.2	7,809.2	6,644.2	25.1	37.8	-94.60	875.1	-1,095.6	1,165.2	1,103.5	61.72	18.878	
6,200.0	6,055.6	7,801.3	6,644.2	25.1	37.6	-96.61	875.1	-1,087.7	1,139.0	1,077.8	61.17	18.620	
6,200.8	6,056.3	7,801.2	6,644.2	25.1	37.6	-96.64	875.1	-1,087.6	1,138.6	1,077.4	61.16	18.616	
6,250.0	6,104.3	7,790.0	6,644.2	25.0	37.3	-98.19	875.1	-1,076.4	1,114.6	1,054.1	60.53	18.414	
6,299.2	6,151.3	7,775.6	6,644.2	24.9	37.0	-99.35	875.1	-1,062.0	1,092.6	1,032.7	59.84	18.258	
6,300.0	6,152.1	7,775.3	6,644.2	24.9	37.0	-99.36	875.1	-1,061.8	1,092.2	1,032.4	59.83	18.256	
6,350.0	6,198.7	7,757.3	6,644.2	24.8	36.5	-100.15	875.1	-1,043.8	1,072.0	1,012.9	59.10	18.140	
6,397.6	6,241.9	7,737.2	6,644.3	24.7	36.0	-100.57	875.1	-1,023.7	1,054.8	996.4	58.38	18.067	
6,400.0	6,244.1	7,736.2	6,644.3	24.7	36.0	-100.58	875.1	-1,022.6	1,054.0	995.7	58.35	18.064	
6,450.0	6,287.8	7,711.9	6,644.3	24.5	35.4	-100.69	875.1	-998.3	1,038.2	980.6	57.59	18.029	
6,496.0	6,326.5	7,686.9	6,644.3	24.4	34.8	-100.53	875.1	-973.3	1,025.6	968.7	56.88	18.029 SF	
6,500.0	6,329.7	7,684.6	6,644.3	24.4	34.7	-100.50	875.1	-971.0	1,024.6	967.7	56.83	18.030	
6,550.0	6,369.6	7,654.5	6,644.4	24.3	34.0	-100.07	875.1	-940.9	1,013.0	957.0	56.06	18.069	
6,594.5	6,403.3	7,625.4	6,644.4	24.2	33.3	-99.51	875.1	-911.8	1,004.4	949.1	55.38	18.136	
6,600.0	6,407.3	7,621.6	6,644.4	24.2	33.2	-99.43	875.1	-908.0	1,003.5	948.2	55.30	18.147	
6,650.0	6,442.7	7,586.2	6,644.4	24.1	32.4	-98.61	875.1	-872.7	995.7	941.2	54.53	18.262	
6,692.9	6,471.0	7,554.0	6,644.5	24.0	31.6	-97.82	875.1	-840.4	990.4	936.5	53.87	18.385	
6,700.0	6,475.5	7,548.4	6,644.5	24.0	31.5	-97.68	875.1	-834.9	989.6	935.8	53.76	18.409	
6,750.0	6,505.6	7,508.5	6,644.5	24.0	30.5	-96.66	875.1	-794.9	984.9	931.9	52.98	18.591	
6,791.3	6,528.3	7,473.9	6,644.6	24.0	29.8	-95.80	875.1	-760.4	982.0	929.6	52.35	18.758	
6,800.0	6,532.8	7,466.5	6,644.6	24.0	29.6	-95.62	875.1	-753.0	981.5	929.2	52.21	18.797	
6,850.0	6,557.0	7,422.8	6,644.6	24.1	28.6	-94.58	875.1	-709.2	979.0	927.5	51.45	19.028	
6,889.7	6,574.1	7,386.8	6,644.7	24.2	27.8	-93.79	875.1	-673.3	977.6	926.8	50.86	19.220	
6,900.0	6,578.1	7,377.4	6,644.7	24.3	27.6	-93.60	875.1	-663.9	977.3	926.6	50.71	19.272	
6,950.0	6,596.1	7,330.7	6,644.8	24.5	26.6	-92.70	875.1	-617.2	976.3	926.3	50.01	19.522	
6,988.2	6,607.5	7,294.3	6,644.8	24.7	25.8	-92.11	875.1	-580.8	975.8	926.3	49.50	19.714	
7,000.0	6,610.7	7,282.9	6,644.8	24.8	25.6	-91.94	875.1	-569.4	975.7	926.3	49.34	19.773	
7,050.0	6,621.9	7,234.2	6,644.9	25.1	24.6	-91.32	875.1	-520.6	975.3	926.6	48.74	20.009	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	7,198.1	6,644.9	25.4	23.9	-90.99	875.1	-484.5	975.2	926.9	48.33	20.177	
7,100.0	6,629.7	7,184.8	6,644.9	25.6	23.6	-90.89	875.1	-471.2	975.2	927.0	48.19	20.235	
7,150.0	6,634.1	7,135.0	6,645.0	26.0	22.7	-90.64	875.1	-421.4	975.1	927.4	47.72	20.433	
7,185.0	6,635.1	7,099.5	6,644.1	26.4	22.1	-90.53	875.1	-386.0	975.1	927.7	47.44	20.554	
7,196.6	6,635.0	7,087.8	6,643.5	26.5	21.9	-90.50	875.1	-374.3	975.1	927.7	47.36	20.590	
7,200.0	6,635.0	7,084.4	6,643.2	26.6	21.9	-90.49	875.1	-370.9	975.1	927.8	47.34	20.600	
7,276.4	6,634.0	7,008.0	6,633.8	27.5	20.8	-89.99	875.1	-295.1	975.1	928.1	46.99	20.751	
7,283.4	6,633.9	7,001.0	6,632.6	27.6	20.7	-89.92	875.1	-288.3	975.1	928.1	46.96	20.763	
7,300.0	6,633.7	6,984.8	6,629.4	27.8	20.5	-89.75	875.1	-272.4	975.1	928.1	46.92	20.781	
7,381.9	6,632.6	6,907.1	6,609.1	29.0	20.0	-88.61	875.0	-197.3	975.4	928.3	47.01	20.746	
7,400.0	6,632.4	6,890.5	6,603.7	29.2	19.9	-88.31	875.0	-181.6	975.5	928.5	47.07	20.725	
7,480.3	6,631.4	6,820.2	6,577.0	30.5	19.7	-86.79	875.0	-116.7	976.9	929.3	47.59	20.527	
7,500.0	6,631.1	6,803.9	6,569.9	30.9	19.7	-86.38	875.0	-102.0	977.4	929.7	47.74	20.475	
7,578.7	6,630.1	6,742.0	6,540.0	32.3	19.6	-84.68	875.0	-47.8	980.7	932.2	48.58	20.189	
7,600.0	6,629.8	6,726.3	6,531.6	32.7	19.6	-84.20	875.0	-34.5	982.0	933.2	48.83	20.111	
7,677.1	6,628.9	6,672.7	6,501.0	34.1	19.6	-82.46	875.0	9.5	988.1	938.2	49.88	19.808	
7,700.0	6,628.6	6,657.9	6,492.0	34.6	19.6	-81.95	875.0	21.2	990.4	940.2	50.20	19.728	
7,775.6	6,627.6	6,612.0	6,462.5	36.1	19.6	-80.28	875.0	56.4	999.9	948.5	51.39	19.458	
7,800.0	6,627.3	6,600.0	6,454.4	36.6	19.6	-79.83	875.0	65.2	1,003.6	951.8	51.78	19.381	
7,874.0	6,626.3	6,559.1	6,425.8	38.2	19.6	-78.23	875.0	94.5	1,016.9	963.9	53.02	19.179	
7,900.0	6,626.0	6,550.0	6,419.2	38.8	19.6	-77.86	875.0	100.7	1,022.4	968.9	53.49	19.113	
7,972.4	6,625.1	6,513.1	6,391.7	40.4	19.7	-76.34	875.0	125.3	1,039.8	985.0	54.75	18.991	
8,000.0	6,624.7	6,500.0	6,381.6	41.0	19.7	-75.79	875.0	133.7	1,047.2	992.0	55.23	18.963	
8,070.8	6,623.8	6,472.9	6,360.4	42.6	19.7	-74.64	875.0	150.4	1,068.6	1,012.0	56.54	18.899	
8,100.0	6,623.4	6,462.1	6,351.6	43.3	19.7	-74.16	875.0	156.9	1,078.3	1,021.2	57.07	18.893	
8,169.3	6,622.6	6,437.9	6,331.9	44.9	19.7	-73.11	875.0	170.8	1,103.4	1,045.0	58.38	18.901	
8,200.0	6,622.2	6,427.9	6,323.5	45.6	19.7	-72.66	875.0	176.4	1,115.5	1,056.5	58.95	18.921	
8,267.7	6,621.3	6,400.0	6,300.0	47.3	19.7	-71.42	875.0	191.3	1,144.0	1,083.9	60.16	19.018	
8,300.0	6,620.9	6,400.0	6,300.0	48.0	19.7	-71.42	875.0	191.3	1,158.5	1,097.6	60.89	19.026	
8,366.1	6,620.0	6,380.0	6,282.8	49.7	19.7	-70.52	875.0	201.4	1,190.1	1,127.9	62.16	19.147	
8,400.0	6,619.6	6,371.4	6,275.3	50.5	19.7	-70.14	875.0	205.6	1,207.1	1,144.3	62.81	19.217	
8,464.5	6,618.8	6,350.0	6,256.4	52.1	19.7	-69.17	875.0	215.7	1,241.3	1,177.3	63.99	19.397	
8,500.0	6,618.3	6,350.0	6,256.4	53.0	19.7	-69.17	875.0	215.7	1,260.8	1,196.0	64.82	19.451	
8,563.0	6,617.5	6,334.7	6,242.7	54.5	19.7	-68.47	875.0	222.6	1,297.0	1,231.0	66.05	19.637	
8,600.0	6,617.0	6,327.2	6,236.0	55.5	19.7	-68.13	875.0	225.8	1,319.1	1,252.4	66.79	19.750	
8,661.4	6,616.3	6,315.6	6,225.4	57.0	19.7	-67.60	875.0	230.7	1,357.0	1,289.0	68.03	19.946	
8,700.0	6,615.8	6,300.0	6,211.1	58.0	19.7	-66.89	875.0	237.0	1,381.7	1,313.0	68.65	20.126	
8,759.8	6,615.0	6,300.0	6,211.1	59.5	19.7	-66.89	875.0	237.0	1,420.8	1,350.7	70.07	20.276	
8,800.0	6,614.5	6,300.0	6,211.1	60.6	19.7	-66.89	875.0	237.0	1,447.8	1,376.8	71.02	20.385	
8,858.2	6,613.7	6,282.9	6,195.4	62.1	19.7	-66.12	875.0	243.5	1,487.9	1,415.8	72.07	20.646	
8,900.0	6,613.2	6,276.8	6,189.7	63.2	19.7	-65.84	875.0	245.8	1,517.3	1,444.3	72.93	20.805	
8,956.7	6,612.5	6,268.9	6,182.3	64.6	19.7	-65.48	875.0	248.6	1,558.0	1,483.8	74.11	21.023	
9,000.0	6,611.9	6,250.0	6,164.5	65.8	19.7	-64.63	875.0	255.1	1,589.8	1,515.1	74.71	21.280	
9,055.1	6,611.2	6,250.0	6,164.5	67.2	19.7	-64.63	875.0	255.1	1,630.7	1,554.7	76.02	21.450	
9,100.0	6,610.6	6,250.0	6,164.5	68.4	19.7	-64.63	875.0	255.1	1,664.6	1,587.5	77.09	21.592	
9,153.5	6,609.9	6,250.0	6,164.5	69.8	19.7	-64.63	875.0	255.1	1,705.7	1,627.3	78.38	21.763	
9,200.0	6,609.3	6,250.0	6,164.5	71.0	19.7	-64.63	875.0	255.1	1,742.0	1,662.5	79.49	21.914	
9,251.9	6,608.7	6,250.0	6,164.5	72.4	19.7	-64.63	875.0	255.1	1,783.0	1,702.3	80.75	22.082	
9,300.0	6,608.1	6,229.0	6,144.6	73.7	19.7	-63.68	875.0	261.7	1,821.1	1,739.8	81.35	22.386	
9,350.4	6,607.4	6,224.1	6,139.9	75.0	19.7	-63.46	875.0	263.2	1,861.8	1,779.3	82.43	22.586	
9,400.0	6,606.8	6,219.4	6,135.5	76.3	19.7	-63.25	875.0	264.5	1,902.2	1,818.7	83.49	22.783	
9,448.8	6,606.1	6,200.0	6,116.8	77.6	19.7	-62.39	875.0	269.9	1,942.5	1,858.4	84.11	23.094	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,605.5	6,200.0	6,116.8	79.0	19.7	-62.39	875.0	269.9	1,984.9	1,899.6	85.34	23.260	
9,547.2	6,604.9	6,200.0	6,116.8	80.2	19.7	-62.39	875.0	269.9	2,024.4	1,938.0	86.47	23.412	
9,600.0	6,604.2	6,200.0	6,116.8	81.7	19.7	-62.39	875.0	269.9	2,068.9	1,981.2	87.73	23.582	
9,645.6	6,603.6	6,200.0	6,116.8	82.9	19.7	-62.39	875.0	269.9	2,107.7	2,018.9	88.83	23.727	
9,700.0	6,602.9	6,200.0	6,116.8	84.3	19.7	-62.39	875.0	269.9	2,154.3	2,064.1	90.14	23.900	
9,744.1	6,602.3	6,200.0	6,116.8	85.5	19.7	-62.39	875.0	269.9	2,192.3	2,101.1	91.20	24.038	
9,800.0	6,601.6	6,200.0	6,116.8	87.0	19.7	-62.39	875.0	269.9	2,240.8	2,148.3	92.55	24.212	
9,842.5	6,601.1	6,200.0	6,116.8	88.2	19.7	-62.39	875.0	269.9	2,277.9	2,184.4	93.58	24.343	
9,900.0	6,600.3	6,200.0	6,116.8	89.7	19.7	-62.39	875.0	269.9	2,328.4	2,233.5	94.97	24.518	
9,940.9	6,599.8	6,178.8	6,096.2	90.9	19.7	-61.45	875.0	275.1	2,364.2	2,269.0	95.24	24.822	
10,000.0	6,599.0	6,175.2	6,092.8	92.5	19.7	-61.29	875.0	276.0	2,416.5	2,320.0	96.54	25.031	
10,039.3	6,598.5	6,172.9	6,090.5	93.5	19.7	-61.19	875.0	276.5	2,451.5	2,354.1	97.41	25.167	
10,100.0	6,597.7	6,169.5	6,087.2	95.2	19.7	-61.04	875.0	277.2	2,505.7	2,407.0	98.74	25.376	
10,137.8	6,597.3	6,150.0	6,068.1	96.2	19.7	-60.19	875.0	281.3	2,539.8	2,440.9	98.94	25.670	
10,200.0	6,596.5	6,150.0	6,068.1	97.9	19.7	-60.19	875.0	281.3	2,595.8	2,495.4	100.43	25.847	
10,236.2	6,596.0	6,150.0	6,068.1	98.9	19.7	-60.19	875.0	281.3	2,628.5	2,527.2	101.29	25.949	
10,300.0	6,595.2	6,150.0	6,068.1	100.6	19.7	-60.19	875.0	281.3	2,686.3	2,583.5	102.82	26.126	
10,334.6	6,594.7	6,150.0	6,068.1	101.6	19.7	-60.19	875.0	281.3	2,717.8	2,614.1	103.65	26.221	
10,400.0	6,593.9	6,150.0	6,068.1	103.3	19.7	-60.19	875.0	281.3	2,777.4	2,672.2	105.22	26.397	
10,433.0	6,593.5	6,150.0	6,068.1	104.2	19.7	-60.19	875.0	281.3	2,807.7	2,701.7	106.01	26.485	
10,500.0	6,592.6	6,150.0	6,068.1	106.1	19.7	-60.19	875.0	281.3	2,869.2	2,761.5	107.62	26.661	
10,531.5	6,592.2	6,150.0	6,068.1	106.9	19.7	-60.19	875.0	281.3	2,898.1	2,789.8	108.37	26.743	
10,600.0	6,591.3	6,150.0	6,068.1	108.8	19.7	-60.19	875.0	281.3	2,961.4	2,851.4	110.02	26.917	
10,629.9	6,590.9	6,150.0	6,068.1	109.6	19.7	-60.19	875.0	281.3	2,989.1	2,878.4	110.74	26.993	
10,700.0	6,590.0	6,150.0	6,068.1	111.6	19.7	-60.19	875.0	281.3	3,054.2	2,941.8	112.43	27.166	
10,728.3	6,589.6	6,150.0	6,068.1	112.3	19.7	-60.19	875.0	281.3	3,080.5	2,967.4	113.11	27.235	
10,800.0	6,588.7	6,150.0	6,068.1	114.3	19.7	-60.19	875.0	281.3	3,147.4	3,032.6	114.84	27.408	
10,826.7	6,588.4	6,150.0	6,068.1	115.0	19.7	-60.19	875.0	281.3	3,172.4	3,056.9	115.48	27.471	
10,900.0	6,587.4	6,150.0	6,068.1	117.0	19.7	-60.19	875.0	281.3	3,241.0	3,123.7	117.25	27.642	
10,925.2	6,587.1	6,150.0	6,068.1	117.7	19.7	-60.19	875.0	281.3	3,264.6	3,146.8	117.86	27.700	
11,000.0	6,586.1	6,150.0	6,068.1	119.8	19.7	-60.19	875.0	281.3	3,335.0	3,215.3	119.66	27.870	
11,023.6	6,585.8	6,150.0	6,068.1	120.4	19.7	-60.19	875.0	281.3	3,357.2	3,237.0	120.23	27.923	
11,100.0	6,584.8	6,127.7	6,046.2	122.5	19.7	-59.23	875.0	285.3	3,428.9	3,307.8	121.04	28.328	
11,122.0	6,584.5	6,127.0	6,045.5	123.2	19.7	-59.20	875.0	285.4	3,449.7	3,328.1	121.54	28.383	
11,200.0	6,583.5	6,124.6	6,043.1	125.3	19.7	-59.10	875.0	285.8	3,523.4	3,400.1	123.29	28.577	
11,220.4	6,583.3	6,124.0	6,042.5	125.9	19.7	-59.07	875.0	285.9	3,542.8	3,419.0	123.75	28.627	
11,300.0	6,582.2	6,121.6	6,040.2	128.1	19.7	-58.97	875.0	286.3	3,618.2	3,492.6	125.55	28.819	
11,318.9	6,582.0	6,121.1	6,039.7	128.6	19.7	-58.95	875.0	286.4	3,636.1	3,510.1	125.97	28.864	
11,400.0	6,580.9	6,100.0	6,018.8	130.8	19.7	-58.06	875.0	289.3	3,713.5	3,586.7	126.86	29.273	
11,417.3	6,580.7	6,100.0	6,018.8	131.3	19.7	-58.06	875.0	289.3	3,730.0	3,602.7	127.27	29.307	
11,500.0	6,579.7	6,100.0	6,018.8	133.6	19.7	-58.05	875.0	289.3	3,808.7	3,679.5	129.24	29.471	
11,515.7	6,579.4	6,100.0	6,018.8	134.0	19.7	-58.05	875.0	289.3	3,823.7	3,694.1	129.61	29.502	
11,600.0	6,578.4	6,100.0	6,018.8	136.3	19.7	-58.05	875.0	289.3	3,904.2	3,772.6	131.61	29.664	
11,614.1	6,578.2	6,100.0	6,018.8	136.7	19.7	-58.05	875.0	289.3	3,917.7	3,785.8	131.95	29.691	
11,700.0	6,577.1	6,100.0	6,018.8	139.1	19.7	-58.05	875.0	289.3	3,999.9	3,865.9	133.99	29.851	
11,712.6	6,576.9	6,100.0	6,018.8	139.5	19.7	-58.05	875.0	289.3	4,011.9	3,877.6	134.29	29.874	
11,800.0	6,575.8	6,100.0	6,018.8	141.9	19.7	-58.05	875.0	289.3	4,095.8	3,959.4	136.38	30.033	
11,811.0	6,575.6	6,100.0	6,018.8	142.2	19.7	-58.05	875.0	289.3	4,106.3	3,969.7	136.64	30.053	
11,858.8	6,575.0	6,100.0	6,018.8	143.5	19.7	-58.05	875.0	289.3	4,152.2	4,014.4	137.78	30.138	
11,859.3	6,575.0	6,100.0	6,018.8	143.5	19.7	-58.05	875.0	289.3	4,152.8	4,015.0	137.78	30.140	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	0.53	60.1	0.6	60.1				
98.4	98.4	98.4	98.4	0.1	0.1	0.53	60.1	0.6	60.1	59.9	0.19	312.624	
100.0	100.0	100.0	100.0	0.1	0.1	0.53	60.1	0.6	60.1	59.9	0.20	307.332	
196.8	196.8	196.8	196.8	0.3	0.3	0.53	60.1	0.6	60.1	59.5	0.63	95.254	
200.0	200.0	200.0	200.0	0.3	0.3	0.53	60.1	0.6	60.1	59.5	0.65	93.164	
295.3	295.3	295.3	295.3	0.5	0.5	0.53	60.1	0.6	60.1	59.0	1.07	55.990	
300.0	300.0	300.0	300.0	0.5	0.5	0.53	60.1	0.6	60.1	59.0	1.09	54.903	
393.7	393.7	393.7	393.7	0.8	0.8	0.53	60.1	0.6	60.1	58.6	1.52	39.647	
400.0	400.0	400.0	400.0	0.8	0.8	0.53	60.1	0.6	60.1	58.6	1.54	38.920	
492.1	492.1	492.1	492.1	1.0	1.0	0.53	60.1	0.6	60.1	58.1	1.96	30.689	
500.0	500.0	500.0	500.0	1.0	1.0	0.53	60.1	0.6	60.1	58.1	1.99	30.144	
590.5	590.5	590.5	590.5	1.2	1.2	0.53	60.1	0.6	60.1	57.7	2.40	25.033	
600.0	600.0	600.0	600.0	1.2	1.2	0.53	60.1	0.6	60.1	57.7	2.44	24.598	
689.0	689.0	689.0	689.0	1.4	1.4	0.53	60.1	0.6	60.1	57.3	2.84	21.138	
700.0	700.0	700.0	700.0	1.4	1.4	0.53	60.1	0.6	60.1	57.2	2.89	20.775	
787.4	787.4	787.4	787.4	1.6	1.6	0.53	60.1	0.6	60.1	56.8	3.29	18.291	
800.0	800.0	800.0	800.0	1.7	1.7	0.53	60.1	0.6	60.1	56.8	3.34	17.981	
885.8	885.8	885.8	885.8	1.9	1.9	0.53	60.1	0.6	60.1	56.4	3.73	16.120	
900.0	900.0	900.0	900.0	1.9	1.9	0.53	60.1	0.6	60.1	56.3	3.79	15.849	
984.2	984.2	984.2	984.2	2.1	2.1	0.53	60.1	0.6	60.1	55.9	4.17	14.410	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.53	60.1	0.6	60.1	55.9	4.24	14.170	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	0.53	60.1	0.6	60.1	55.5	4.61	13.028	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	0.53	60.1	0.6	60.1	55.4	4.69	12.812	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	0.53	60.1	0.6	60.1	55.0	5.06	11.888	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.53	60.1	0.6	60.1	55.0	5.14	11.691 CC	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	96.77	60.1	0.6	60.2	54.7	5.49	10.976	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	97.37	60.1	0.6	60.3	54.7	5.58	10.814 ES	
1,377.9	1,377.8	1,377.8	1,377.8	2.9	3.0	100.88	60.1	0.6	60.9	55.0	5.91	10.307	
1,400.0	1,399.8	1,399.8	1,399.8	3.0	3.0	102.21	60.1	0.6	61.2	55.2	6.00	10.195	
1,476.4	1,475.9	1,475.9	1,475.9	3.1	3.2	106.90	60.4	-0.4	62.9	56.6	6.33	9.937	
1,500.0	1,499.5	1,499.4	1,499.4	3.2	3.2	108.28	60.5	-1.1	63.6	57.2	6.43	9.898	
1,574.8	1,573.7	1,574.0	1,573.9	3.4	3.4	112.34	61.5	-4.5	66.7	59.9	6.76	9.871	
1,600.0	1,598.7	1,599.2	1,599.0	3.4	3.4	113.59	61.9	-6.1	67.9	61.1	6.86	9.897	
1,673.2	1,671.1	1,672.3	1,671.9	3.6	3.6	116.86	63.4	-11.9	72.1	64.9	7.20	10.017	
1,700.0	1,697.5	1,699.1	1,698.6	3.7	3.7	117.92	64.1	-14.5	73.9	66.6	7.32	10.089	
1,771.6	1,767.9	1,770.8	1,769.8	3.9	3.8	120.40	66.2	-22.6	79.1	71.4	7.68	10.298	
1,800.0	1,795.6	1,799.2	1,797.9	4.0	3.9	121.24	67.2	-26.3	81.4	73.5	7.82	10.403	
1,870.1	1,864.0	1,869.4	1,867.3	4.3	4.1	123.02	69.9	-36.5	87.4	79.2	8.20	10.652	
1,900.0	1,893.1	1,899.4	1,896.9	4.4	4.2	123.66	71.2	-41.4	90.1	81.8	8.36	10.776	
1,968.5	1,959.3	1,968.1	1,964.4	4.6	4.4	124.86	74.5	-53.7	96.9	88.1	8.78	11.031	
1,992.4	1,982.4	1,992.1	1,987.9	4.7	4.4	125.20	75.7	-58.4	99.3	90.4	8.93	11.130	
2,000.0	1,989.6	1,999.7	1,995.3	4.8	4.5	125.31	76.1	-59.9	100.1	91.1	8.97	11.157	
2,066.9	2,054.0	2,067.0	2,061.0	5.1	4.7	125.76	79.9	-74.1	106.9	97.4	9.45	11.315	
2,100.0	2,085.8	2,100.2	2,093.3	5.2	4.8	125.66	82.0	-81.7	110.1	100.4	9.68	11.366	
2,165.3	2,148.7	2,166.0	2,156.9	5.5	5.1	124.95	86.2	-97.8	116.0	105.8	10.21	11.365	
2,200.0	2,182.0	2,200.9	2,190.5	5.7	5.2	124.32	88.6	-106.9	119.0	108.5	10.50	11.339	
2,263.8	2,243.4	2,265.0	2,251.9	6.0	5.5	122.74	93.4	-124.7	124.4	113.3	11.09	11.218	
2,300.0	2,278.2	2,301.2	2,286.4	6.2	5.7	121.66	96.2	-135.2	127.3	115.9	11.44	11.133	
2,362.2	2,338.1	2,363.0	2,345.4	6.5	6.0	119.90	101.0	-153.3	132.5	120.4	12.06	10.981	
2,400.0	2,374.4	2,400.6	2,381.2	6.7	6.2	118.90	103.9	-164.3	135.6	123.2	12.45	10.896	
2,460.6	2,432.8	2,460.9	2,438.7	7.0	6.5	117.39	108.6	-181.9	140.8	127.7	13.09	10.759	
2,500.0	2,470.6	2,500.1	2,476.0	7.2	6.7	116.46	111.6	-193.4	144.3	130.7	13.51	10.679	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
2,559.0	2,527.4	2,558.8	2,532.0	7.6	7.0	115.16	116.2	-210.5	149.4	135.3	14.15	10.560	
2,600.0	2,566.8	2,599.5	2,570.8	7.8	7.2	114.30	119.3	-222.4	153.1	138.5	14.60	10.485	
2,657.5	2,622.1	2,656.7	2,625.3	8.1	7.5	113.17	123.8	-239.1	158.3	143.0	15.24	10.383	
2,700.0	2,663.0	2,699.0	2,665.6	8.3	7.8	112.38	127.0	-251.5	162.1	146.4	15.72	10.314	
2,755.9	2,716.8	2,754.6	2,718.6	8.6	8.1	111.40	131.4	-267.7	167.2	150.9	16.35	10.227	
2,800.0	2,759.2	2,798.4	2,760.4	8.9	8.3	110.66	134.8	-280.6	171.3	154.5	16.85	10.165	
2,854.3	2,811.5	2,852.5	2,811.9	9.2	8.7	109.80	139.0	-296.4	176.4	158.9	17.48	10.090	
2,900.0	2,855.4	2,897.9	2,855.2	9.4	8.9	109.12	142.5	-309.6	180.6	162.6	18.00	10.034	
2,952.7	2,906.2	2,950.4	2,905.2	9.7	9.2	108.37	146.5	-325.0	185.6	167.0	18.62	9.971	
3,000.0	2,951.6	2,997.4	2,950.0	10.0	9.5	107.73	150.2	-338.7	190.1	170.9	19.16	9.919	
3,051.2	3,000.9	3,048.2	2,998.5	10.3	9.8	107.07	154.1	-353.6	195.0	175.2	19.76	9.866	
3,100.0	3,047.8	3,096.8	3,044.8	10.5	10.1	106.47	157.9	-367.8	199.6	179.3	20.33	9.819	
3,149.6	3,095.5	3,146.1	3,091.8	10.8	10.4	105.89	161.7	-382.2	204.4	183.5	20.91	9.774	
3,200.0	3,144.0	3,196.3	3,139.6	11.1	10.7	105.33	165.6	-396.8	209.3	187.8	21.50	9.732	
3,248.0	3,190.2	3,244.0	3,185.1	11.4	11.0	104.81	169.3	-410.8	213.9	191.8	22.07	9.693	
3,300.0	3,240.2	3,295.7	3,234.4	11.7	11.3	104.28	173.4	-425.9	219.0	196.3	22.68	9.654	
3,346.4	3,284.9	3,341.9	3,278.4	11.9	11.6	103.83	176.9	-439.4	223.5	200.3	23.23	9.621	
3,400.0	3,336.4	3,395.2	3,329.2	12.2	11.9	103.33	181.1	-455.0	228.7	204.9	23.86	9.586	
3,444.9	3,379.6	3,439.8	3,371.7	12.5	12.2	102.93	184.5	-468.0	233.2	208.8	24.39	9.558	
3,500.0	3,432.6	3,494.6	3,424.0	12.8	12.5	102.46	188.8	-484.0	238.6	213.5	25.05	9.526	
3,543.3	3,474.3	3,537.7	3,465.0	13.1	12.8	102.10	192.1	-496.6	242.9	217.3	25.56	9.502	
3,600.0	3,528.8	3,594.1	3,518.8	13.4	13.1	101.65	196.5	-513.1	248.5	222.2	26.23	9.472	
3,641.7	3,569.0	3,635.6	3,558.3	13.6	13.4	101.33	199.7	-525.2	252.6	225.9	26.73	9.452	
3,700.0	3,625.0	3,693.5	3,613.6	14.0	13.8	100.90	204.2	-542.1	258.4	231.0	27.42	9.424	
3,740.1	3,663.6	3,733.4	3,651.6	14.2	14.0	100.62	207.3	-553.8	262.4	234.5	27.89	9.407	
3,800.0	3,721.2	3,793.0	3,708.4	14.5	14.4	100.22	212.0	-571.2	268.4	239.8	28.60	9.382	
3,838.6	3,758.3	3,831.3	3,744.9	14.8	14.6	99.96	214.9	-582.4	272.2	243.2	29.06	9.366	
3,900.0	3,817.4	3,892.4	3,803.2	15.1	15.0	99.58	219.7	-600.3	278.4	248.6	29.79	9.343	
3,937.0	3,853.0	3,929.2	3,838.2	15.3	15.2	99.35	222.5	-611.0	282.1	251.8	30.23	9.330	
4,000.0	3,913.6	3,991.9	3,898.0	15.7	15.6	98.98	227.4	-629.3	288.4	257.4	30.98	9.309	
4,035.4	3,947.7	4,027.1	3,931.5	15.9	15.8	98.78	230.1	-639.6	292.0	260.6	31.40	9.297	
4,100.0	4,009.8	4,091.3	3,992.8	16.3	16.2	98.42	235.1	-658.4	298.5	266.3	32.17	9.278	
4,133.8	4,042.4	4,125.0	4,024.8	16.5	16.5	98.24	237.7	-668.2	301.9	269.3	32.57	9.268	
4,200.0	4,106.0	4,190.8	4,087.6	16.8	16.9	97.91	242.8	-687.5	308.6	275.2	33.36	9.249	
4,232.3	4,137.1	4,222.9	4,118.2	17.0	17.1	97.74	245.3	-696.8	311.8	278.1	33.74	9.241	
4,300.0	4,202.2	4,290.2	4,182.4	17.4	17.5	97.42	250.5	-716.5	318.7	284.1	34.55	9.224	
4,330.7	4,231.7	4,320.8	4,211.5	17.6	17.7	97.28	252.9	-725.5	321.8	286.9	34.91	9.216	
4,400.0	4,298.4	4,389.7	4,277.1	18.0	18.1	96.96	258.3	-745.6	328.8	293.1	35.74	9.200	
4,429.1	4,326.4	4,418.6	4,304.8	18.2	18.3	96.84	260.5	-754.1	331.8	295.7	36.09	9.194	
4,500.0	4,394.6	4,489.1	4,371.9	18.6	18.8	96.53	266.0	-774.7	339.0	302.0	36.93	9.179	
4,527.5	4,421.1	4,516.5	4,398.1	18.7	18.9	96.42	268.1	-782.7	341.8	304.5	37.26	9.173	
4,600.0	4,490.8	4,588.6	4,466.7	19.2	19.4	96.13	273.7	-803.7	349.1	311.0	38.12	9.159	
4,626.0	4,515.8	4,614.4	4,491.4	19.3	19.6	96.03	275.7	-811.3	351.8	313.4	38.43	9.155	
4,700.0	4,587.0	4,688.0	4,561.5	19.8	20.0	95.75	281.4	-832.8	359.3	320.0	39.31	9.141	
4,724.4	4,610.5	4,712.3	4,584.7	19.9	20.2	95.66	283.3	-839.9	361.8	322.2	39.60	9.137	
4,800.0	4,683.2	4,787.5	4,656.3	20.3	20.7	95.39	289.1	-861.9	369.5	329.0	40.50	9.125	
4,822.8	4,705.2	4,810.2	4,678.0	20.5	20.8	95.31	290.9	-868.5	371.9	331.1	40.77	9.121	
4,900.0	4,779.4	4,886.9	4,751.1	20.9	21.3	95.05	296.9	-890.9	379.7	338.1	41.69	9.110	
4,921.2	4,799.8	4,908.1	4,771.3	21.0	21.4	94.98	298.5	-897.1	381.9	340.0	41.94	9.107	
5,000.0	4,875.6	4,986.4	4,845.9	21.5	21.9	94.72	304.6	-920.0	390.0	347.1	42.87	9.096	
5,019.7	4,894.5	5,006.0	4,864.6	21.6	22.0	94.66	306.1	-925.7	392.0	348.9	43.11	9.093	
5,100.0	4,971.8	5,085.8	4,940.7	22.1	22.6	94.42	312.3	-949.0	400.2	356.2	44.06	9.083	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
5,118.1	4,989.2	5,103.8	4,957.9	22.2	22.7	94.36	313.7	-954.3	402.1	357.8	44.28	9.081	
5,200.0	5,068.0	5,185.8	5,036.0	22.7	23.2	94.13	320.1	-978.2	410.5	365.2	45.24	9.072	
5,216.5	5,083.9	5,202.9	5,052.4	22.8	23.3	94.10	321.3	-983.1	412.1	366.7	45.43	9.072	
5,240.0	5,106.5	5,227.2	5,075.6	22.9	23.4	94.08	323.1	-989.9	414.4	368.8	45.67	9.074	
5,300.0	5,164.4	5,289.3	5,135.3	23.2	23.7	94.18	327.5	-1,006.3	420.1	373.8	46.25	9.082	
5,314.9	5,178.8	5,304.8	5,150.3	23.3	23.7	94.20	328.5	-1,010.2	421.4	375.0	46.38	9.086	
5,400.0	5,261.5	5,393.0	5,235.8	23.6	24.1	94.33	334.0	-1,030.9	428.5	381.4	47.07	9.103	
5,413.4	5,274.6	5,406.9	5,249.4	23.6	24.2	94.34	334.8	-1,033.9	429.5	382.4	47.17	9.106	
5,500.0	5,359.5	5,496.8	5,337.4	23.9	24.5	94.45	339.6	-1,052.0	435.7	387.9	47.80	9.116	
5,511.8	5,371.1	5,509.1	5,349.4	24.0	24.5	94.46	340.2	-1,054.2	436.5	388.6	47.88	9.118	
5,600.0	5,458.0	5,600.9	5,439.8	24.2	24.8	94.55	344.3	-1,069.5	441.7	393.3	48.43	9.121	
5,610.2	5,468.2	5,611.5	5,450.3	24.3	24.8	94.56	344.7	-1,071.1	442.3	393.8	48.49	9.122	
5,700.0	5,557.2	5,705.0	5,542.9	24.5	25.1	94.63	348.0	-1,083.5	446.5	397.5	48.97	9.118	
5,708.6	5,565.7	5,714.0	5,551.9	24.5	25.1	94.63	348.3	-1,084.6	446.9	397.9	49.01	9.118	
5,800.0	5,656.7	5,809.2	5,646.6	24.7	25.3	94.69	350.8	-1,093.9	450.0	400.6	49.41	9.108	
5,807.1	5,663.7	5,816.6	5,654.0	24.7	25.3	94.69	350.9	-1,094.5	450.2	400.8	49.43	9.108	
5,900.0	5,756.5	5,913.6	5,750.7	24.9	25.5	94.72	352.5	-1,100.6	452.3	402.6	49.76	9.090	
5,905.5	5,761.9	5,919.3	5,756.4	24.9	25.5	94.72	352.6	-1,100.8	452.4	402.6	49.78	9.089	
6,000.0	5,856.4	6,017.9	5,855.0	25.0	25.6	94.74	353.3	-1,103.6	453.3	403.3	50.02	9.062	
6,003.9	5,860.3	6,022.0	5,859.1	25.0	25.6	94.74	353.4	-1,103.6	453.4	403.3	50.03	9.061	
6,032.5	5,888.9	6,051.8	5,888.9	25.0	25.7	-0.45	353.4	-1,103.8	453.4	423.0	30.38	14.925	
6,062.5	5,918.9	6,081.8	5,918.9	25.1	25.7	-0.45	353.4	-1,103.8	453.4	422.9	30.48	14.877	
6,100.0	5,956.4	6,119.5	5,956.6	25.1	25.7	-90.45	353.4	-1,102.8	453.4	403.2	50.20	9.032	
6,102.3	5,958.7	6,121.9	5,958.9	25.1	25.7	-90.45	353.4	-1,102.7	453.4	403.2	50.20	9.032	
6,150.0	6,006.2	6,169.8	6,006.6	25.1	25.7	-90.45	353.4	-1,098.4	453.4	403.2	50.20	9.032	
6,200.0	6,055.6	6,220.0	6,056.2	25.1	25.7	-90.44	353.4	-1,090.5	453.4	403.3	50.13	9.045	
6,200.8	6,056.3	6,220.8	6,057.0	25.1	25.7	-90.44	353.4	-1,090.3	453.4	403.3	50.13	9.045	
6,250.0	6,104.3	6,270.3	6,105.2	25.0	25.6	-90.44	353.4	-1,079.1	453.4	403.4	50.00	9.069	
6,299.2	6,151.3	6,319.7	6,152.4	24.9	25.5	-90.43	353.4	-1,064.6	453.4	403.6	49.82	9.101	
6,300.0	6,152.1	6,320.5	6,153.2	24.9	25.5	-90.43	353.4	-1,064.4	453.4	403.6	49.82	9.102	
6,350.0	6,198.7	6,370.7	6,200.0	24.8	25.4	-90.42	353.4	-1,046.3	453.4	403.8	49.59	9.143	
6,397.6	6,241.9	6,418.6	6,243.4	24.7	25.3	-90.40	353.4	-1,026.1	453.4	404.1	49.36	9.187	
6,400.0	6,244.1	6,421.0	6,245.5	24.7	25.3	-90.40	353.4	-1,025.0	453.4	404.1	49.34	9.189	
6,450.0	6,287.8	6,471.2	6,289.4	24.5	25.2	-90.39	353.4	-1,000.5	453.4	404.3	49.08	9.238	
6,496.0	6,326.5	6,517.4	6,328.1	24.4	25.1	-90.37	353.4	-975.3	453.4	404.6	48.84	9.284	
6,500.0	6,329.7	6,521.4	6,331.4	24.4	25.0	-90.37	353.4	-973.1	453.4	404.6	48.82	9.288	
6,550.0	6,369.6	6,571.6	6,371.4	24.3	24.9	-90.35	353.4	-942.7	453.4	404.8	48.57	9.335	
6,594.5	6,403.3	6,616.2	6,405.1	24.2	24.8	-90.33	353.4	-913.5	453.4	405.0	48.38	9.372	
6,600.0	6,407.3	6,621.8	6,409.1	24.2	24.8	-90.33	353.4	-909.7	453.4	405.0	48.36	9.376	
6,650.0	6,442.7	6,672.0	6,444.5	24.1	24.7	-90.31	353.4	-874.1	453.4	405.2	48.20	9.408	
6,692.9	6,471.0	6,715.0	6,472.8	24.0	24.7	-90.29	353.4	-841.6	453.4	405.3	48.12	9.423	
6,700.0	6,475.5	6,722.1	6,477.2	24.0	24.7	-90.28	353.4	-836.1	453.4	405.3	48.11	9.425	
6,750.0	6,505.6	6,772.3	6,507.2	24.0	24.7	-90.26	353.4	-795.9	453.4	405.3	48.10	9.426	
6,791.3	6,528.3	6,813.7	6,529.9	24.0	24.7	-90.24	353.4	-761.2	453.4	405.2	48.18	9.410	
6,800.0	6,532.8	6,822.4	6,534.4	24.0	24.7	-90.23	353.4	-753.8	453.4	405.2	48.21	9.406	
6,850.0	6,557.0	6,872.5	6,558.5	24.1	24.8	-90.20	353.4	-709.9	453.4	405.0	48.42	9.363	
6,889.7	6,574.1	6,912.4	6,575.4	24.2	24.9	-90.18	353.4	-673.8	453.4	404.7	48.69	9.312	
6,900.0	6,578.1	6,922.6	6,579.4	24.3	25.0	-90.18	353.4	-664.4	453.4	404.6	48.77	9.297	
6,950.0	6,596.1	6,972.7	6,597.2	24.5	25.2	-90.15	353.4	-617.5	453.4	404.1	49.25	9.206	
6,988.2	6,607.5	7,010.9	6,608.5	24.7	25.4	-90.12	353.4	-581.0	453.4	403.7	49.71	9.121	
7,000.0	6,610.7	7,022.8	6,611.6	24.8	25.5	-90.12	353.4	-569.6	453.4	403.5	49.86	9.092	
7,050.0	6,621.9	7,072.8	6,622.6	25.1	25.8	-90.09	353.4	-520.8	453.4	402.8	50.61	8.958	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	7,109.5	6,628.5	25.4	26.1	-90.06	353.4	-484.6	453.4	402.2	51.24	8.848	
7,100.0	6,629.7	7,122.9	6,630.2	25.6	26.2	-90.05	353.4	-471.3	453.4	401.9	51.48	8.807	
7,150.0	6,634.1	7,172.9	6,634.3	26.0	26.7	-90.02	353.4	-421.5	453.4	400.9	52.46	8.642	
7,185.0	6,635.1	7,207.9	6,635.1	26.4	27.0	-90.00	353.4	-386.4	453.4	400.2	53.21	8.521	
7,185.2	6,635.1	7,208.1	6,635.1	26.4	27.0	-90.00	353.4	-386.2	453.4	400.2	53.22	8.520	
7,196.6	6,635.0	7,219.5	6,635.0	26.5	27.2	-89.99	353.4	-374.9	453.4	399.9	53.47	8.480	
7,200.0	6,635.0	7,222.9	6,634.9	26.6	27.2	-89.99	353.4	-371.5	453.4	399.8	53.55	8.467	
7,283.4	6,633.9	7,306.4	6,633.8	27.6	28.2	-89.99	353.4	-288.0	453.4	397.8	55.62	8.152	
7,300.0	6,633.7	7,322.9	6,633.6	27.8	28.4	-89.99	353.4	-271.5	453.4	397.3	56.06	8.088	
7,381.9	6,632.6	7,404.8	6,632.6	29.0	29.6	-89.99	353.4	-189.6	453.4	395.0	58.43	7.759	
7,400.0	6,632.4	7,422.9	6,632.4	29.2	29.9	-89.99	353.4	-171.5	453.4	394.4	58.99	7.686	
7,480.3	6,631.4	7,503.2	6,631.3	30.5	31.2	-89.99	353.4	-91.2	453.4	391.8	61.62	7.358	
7,500.0	6,631.1	7,522.9	6,631.1	30.9	31.5	-89.99	353.4	-71.5	453.4	391.1	62.29	7.279	
7,578.7	6,630.1	7,601.6	6,630.1	32.3	32.9	-89.99	353.4	7.2	453.4	388.3	65.11	6.963	
7,600.0	6,629.8	7,622.9	6,629.8	32.7	33.3	-89.99	353.4	28.5	453.4	387.5	65.91	6.879	
7,677.1	6,628.9	7,700.1	6,628.8	34.1	34.8	-89.99	353.4	105.6	453.4	384.5	68.88	6.582	
7,700.0	6,628.6	7,722.9	6,628.5	34.6	35.2	-89.99	353.4	128.5	453.4	383.6	69.79	6.497	
7,775.6	6,627.6	7,798.5	6,627.6	36.1	36.8	-89.99	353.4	204.1	453.4	380.5	72.87	6.222	
7,800.0	6,627.3	7,822.9	6,627.2	36.6	37.3	-89.99	353.4	228.5	453.4	379.5	73.89	6.136	
7,874.0	6,626.3	7,896.9	6,626.3	38.2	38.9	-89.99	353.4	302.5	453.4	376.3	77.06	5.884	
7,900.0	6,626.0	7,922.9	6,626.0	38.8	39.4	-89.99	353.4	328.5	453.4	375.2	78.19	5.799	
7,972.4	6,625.1	7,995.3	6,625.0	40.4	41.0	-89.99	353.4	400.9	453.4	372.0	81.40	5.570	
8,000.0	6,624.7	8,022.9	6,624.7	41.0	41.7	-89.99	353.4	428.5	453.4	370.8	82.64	5.486	
8,070.8	6,623.8	8,093.8	6,623.8	42.6	43.3	-89.99	353.4	499.3	453.4	367.5	85.88	5.279	
8,100.0	6,623.4	8,122.9	6,623.4	43.3	43.9	-89.99	353.4	528.5	453.4	366.2	87.23	5.198	
8,169.3	6,622.6	8,192.2	6,622.5	44.9	45.6	-89.99	353.4	597.7	453.4	362.9	90.48	5.011	
8,200.0	6,622.2	8,222.9	6,622.1	45.6	46.3	-89.99	353.4	628.4	453.4	361.5	91.93	4.932	
8,267.7	6,621.3	8,290.6	6,621.3	47.3	47.9	-89.99	353.4	696.1	453.4	358.2	95.18	4.764	
8,300.0	6,620.9	8,322.9	6,620.8	48.0	48.7	-89.99	353.4	728.4	453.4	356.7	96.74	4.687	
8,366.1	6,620.0	8,389.0	6,620.0	49.7	50.3	-89.99	353.4	794.6	453.4	353.4	99.96	4.536	
8,400.0	6,619.6	8,422.9	6,619.6	50.5	51.1	-89.99	353.4	828.4	453.4	351.8	101.62	4.462	
8,464.5	6,618.8	8,487.5	6,618.7	52.1	52.7	-89.99	353.4	893.0	453.4	348.6	104.82	4.326	
8,500.0	6,618.3	8,522.9	6,618.3	53.0	53.6	-89.99	353.4	928.4	453.4	346.8	106.58	4.254	
8,563.0	6,617.5	8,585.9	6,617.5	54.5	55.2	-89.99	353.4	991.4	453.4	343.7	109.74	4.132	
8,600.0	6,617.0	8,622.9	6,617.0	55.5	56.1	-89.99	353.4	1,028.4	453.4	341.8	111.60	4.063	
8,661.4	6,616.3	8,684.3	6,616.2	57.0	57.7	-89.99	353.4	1,089.8	453.4	338.7	114.71	3.952	
8,700.0	6,615.8	8,722.9	6,615.7	58.0	58.7	-89.99	353.4	1,128.4	453.4	336.7	116.68	3.886	
8,759.8	6,615.0	8,782.7	6,615.0	59.5	60.2	-90.00	353.4	1,188.2	453.4	333.7	119.74	3.786	
8,800.0	6,614.5	8,822.9	6,614.4	60.6	61.2	-90.00	353.4	1,228.4	453.4	331.6	121.80	3.722	
8,858.2	6,613.7	8,881.2	6,613.7	62.1	62.7	-90.00	353.4	1,286.6	453.4	328.6	124.81	3.633	
8,900.0	6,613.2	8,922.9	6,613.2	63.2	63.8	-90.00	353.4	1,328.4	453.4	326.4	126.97	3.571	
8,956.7	6,612.5	8,979.6	6,612.4	64.6	65.3	-90.00	353.4	1,385.1	453.4	323.5	129.91	3.490	
9,000.0	6,611.9	9,022.9	6,611.9	65.8	66.4	-90.00	353.4	1,428.4	453.4	321.2	132.17	3.430	
9,055.1	6,611.2	9,078.0	6,611.2	67.2	67.9	-90.00	353.4	1,483.5	453.4	318.3	135.05	3.357	
9,100.0	6,610.6	9,122.9	6,610.6	68.4	69.0	-90.00	353.4	1,528.4	453.4	316.0	137.41	3.300	
9,153.5	6,609.9	9,176.4	6,609.9	69.8	70.4	-90.00	353.4	1,581.9	453.4	313.2	140.22	3.233	
9,200.0	6,609.3	9,222.9	6,609.3	71.0	71.7	-90.00	353.4	1,628.4	453.4	310.7	142.67	3.178	
9,251.9	6,608.7	9,274.9	6,608.6	72.4	73.0	-90.00	353.4	1,680.3	453.4	308.0	145.42	3.118	
9,300.0	6,608.1	9,322.9	6,608.0	73.7	74.3	-90.00	353.4	1,728.4	453.4	305.4	147.96	3.064	
9,350.4	6,607.4	9,373.3	6,607.4	75.0	75.6	-90.00	353.4	1,778.7	453.4	302.8	150.64	3.010	
9,400.0	6,606.8	9,422.9	6,606.7	76.3	77.0	-90.00	353.4	1,828.3	453.4	300.1	153.28	2.958	
9,448.8	6,606.1	9,471.7	6,606.1	77.6	78.3	-90.00	353.4	1,877.1	453.4	297.5	155.88	2.909	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,605.5	9,522.9	6,605.4	79.0	79.6	-90.00	353.4	1,928.3	453.4	294.8	158.61	2.858	
9,547.2	6,604.9	9,570.1	6,604.8	80.2	80.9	-90.00	353.4	1,975.6	453.4	292.3	161.14	2.814	
9,600.0	6,604.2	9,622.9	6,604.2	81.7	82.3	-90.00	353.4	2,028.3	453.4	289.4	163.97	2.765	
9,645.6	6,603.6	9,668.6	6,603.6	82.9	83.5	-90.00	353.4	2,074.0	453.4	287.0	166.42	2.724	
9,700.0	6,602.9	9,722.9	6,602.9	84.3	85.0	-90.00	353.4	2,128.3	453.4	284.1	169.34	2.677	
9,744.1	6,602.3	9,767.0	6,602.3	85.5	86.2	-90.00	353.4	2,172.4	453.4	281.7	171.72	2.640	
9,800.0	6,601.6	9,822.9	6,601.6	87.0	87.7	-90.00	353.4	2,228.3	453.4	278.7	174.73	2.595	
9,842.5	6,601.1	9,865.4	6,601.0	88.2	88.8	-90.00	353.4	2,270.8	453.4	276.4	177.03	2.561	
9,900.0	6,600.3	9,922.9	6,600.3	89.7	90.4	-90.00	353.4	2,328.3	453.4	273.3	180.13	2.517	
9,940.9	6,599.8	9,963.8	6,599.8	90.9	91.5	-90.00	353.4	2,369.2	453.4	271.0	182.35	2.486	
10,000.0	6,599.0	10,022.9	6,599.0	92.5	93.1	-90.00	353.4	2,428.3	453.4	267.8	185.55	2.444	
10,039.3	6,598.5	10,062.3	6,598.5	93.5	94.2	-90.00	353.4	2,467.6	453.4	265.7	187.68	2.416	
10,100.0	6,597.7	10,122.9	6,597.7	95.2	95.8	-90.00	353.4	2,528.3	453.4	262.4	190.97	2.374	
10,137.8	6,597.3	10,160.7	6,597.2	96.2	96.8	-90.00	353.4	2,566.1	453.4	260.4	193.03	2.349	
10,200.0	6,596.5	10,222.9	6,596.4	97.9	98.5	-90.00	353.4	2,628.3	453.4	257.0	196.41	2.308	
10,236.2	6,596.0	10,259.1	6,596.0	98.9	99.5	-90.00	353.4	2,664.5	453.4	255.0	198.38	2.285	
10,300.0	6,595.2	10,322.9	6,595.1	100.6	101.3	-90.00	353.4	2,728.3	453.4	251.5	201.86	2.246	
10,334.6	6,594.7	10,357.5	6,594.7	101.6	102.2	-90.00	353.4	2,762.9	453.4	249.6	203.75	2.225	
10,400.0	6,593.9	10,422.9	6,593.9	103.3	104.0	-90.00	353.4	2,828.3	453.4	246.1	207.32	2.187	
10,433.0	6,593.5	10,456.0	6,593.4	104.2	104.9	-90.00	353.4	2,861.3	453.4	244.3	209.12	2.168	
10,500.0	6,592.6	10,522.9	6,592.6	106.1	106.7	-90.00	353.4	2,928.3	453.4	240.6	212.78	2.131	
10,531.5	6,592.2	10,554.4	6,592.2	106.9	107.6	-90.00	353.4	2,959.7	453.4	238.9	214.51	2.114	
10,600.0	6,591.3	10,622.9	6,591.3	108.8	109.5	-90.00	353.4	3,028.2	453.4	235.1	218.26	2.077	
10,629.9	6,590.9	10,652.8	6,590.9	109.6	110.3	-90.00	353.4	3,058.1	453.4	233.5	219.90	2.062	
10,700.0	6,590.0	10,722.9	6,590.0	111.6	112.2	-90.00	353.4	3,128.2	453.4	229.7	223.74	2.026	
10,728.3	6,589.6	10,751.2	6,589.6	112.3	113.0	-90.00	353.4	3,156.6	453.4	228.1	225.29	2.012	
10,800.0	6,588.7	10,822.9	6,588.7	114.3	114.9	-90.00	353.4	3,228.2	453.4	224.2	229.23	1.978	
10,826.7	6,588.4	10,849.7	6,588.4	115.0	115.7	-90.00	353.4	3,255.0	453.4	222.7	230.70	1.965	
10,900.0	6,587.4	10,922.9	6,587.4	117.0	117.7	-90.00	353.4	3,328.2	453.4	218.7	234.72	1.932	
10,925.2	6,587.1	10,948.1	6,587.1	117.7	118.4	-90.00	353.4	3,353.4	453.4	217.3	236.11	1.920	
11,000.0	6,586.1	11,022.9	6,586.1	119.8	120.4	-90.00	353.4	3,428.2	453.4	213.2	240.22	1.887	
11,023.6	6,585.8	11,046.5	6,585.8	120.4	121.1	-90.00	353.4	3,451.8	453.4	211.9	241.52	1.877	
11,100.0	6,584.8	11,122.9	6,584.8	122.5	123.2	-90.00	353.4	3,528.2	453.4	207.7	245.73	1.845	
11,122.0	6,584.5	11,144.9	6,584.5	123.2	123.8	-90.00	353.4	3,550.2	453.4	206.5	246.94	1.836	
11,200.0	6,583.5	11,222.9	6,583.5	125.3	125.9	-90.00	353.4	3,628.2	453.4	202.2	251.24	1.805	
11,220.4	6,583.3	11,243.4	6,583.3	125.9	126.5	-90.00	353.4	3,648.6	453.4	201.0	252.36	1.797	
11,300.0	6,582.2	11,322.9	6,582.2	128.1	128.7	-90.00	353.4	3,728.2	453.4	196.6	256.75	1.766	
11,318.9	6,582.0	11,341.8	6,582.0	128.6	129.2	-90.00	353.4	3,747.1	453.4	195.6	257.79	1.759	
11,400.0	6,580.9	11,422.9	6,580.9	130.8	131.5	-90.00	353.4	3,828.2	453.4	191.1	262.27	1.729	
11,417.3	6,580.7	11,440.2	6,580.7	131.3	131.9	-90.00	353.4	3,845.5	453.4	190.2	263.23	1.722	
11,500.0	6,579.7	11,522.9	6,579.7	133.6	134.2	-90.00	353.4	3,928.2	453.4	185.6	267.80	1.693	
11,515.7	6,579.4	11,538.6	6,579.5	134.0	134.7	-90.00	353.4	3,943.9	453.4	184.7	268.67	1.688	
11,600.0	6,578.4	11,622.9	6,578.4	136.3	137.0	-90.00	353.4	4,028.2	453.4	180.1	273.32	1.659	
11,614.1	6,578.2	11,637.1	6,578.2	136.7	137.4	-90.00	353.4	4,042.3	453.4	179.3	274.11	1.654	
11,700.0	6,577.1	11,722.9	6,577.1	139.1	139.7	-90.00	353.4	4,128.2	453.4	174.5	278.86	1.626	
11,712.6	6,576.9	11,735.5	6,576.9	139.5	140.1	-90.00	353.4	4,140.7	453.4	173.8	279.55	1.622	
11,800.0	6,575.8	11,822.9	6,575.8	141.9	142.5	-90.00	353.4	4,228.1	453.4	169.0	284.39	1.594	
11,811.0	6,575.6	11,833.9	6,575.6	142.2	142.8	-90.00	353.4	4,239.1	453.4	168.4	285.00	1.591	
11,858.8	6,575.0	11,881.7	6,575.0	143.5	144.1	-90.00	353.4	4,286.9	453.4	165.8	287.64	1.576	
11,859.3	6,575.0	11,882.2	6,575.0	143.5	144.2	-90.00	353.4	4,287.5	453.4	165.7	287.67	1.576 SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	0.64	75.0	0.8	75.0				
98.4	98.4	98.4	98.4	0.1	0.1	0.64	75.0	0.8	75.0	74.9	0.19	390.398	
100.0	100.0	100.0	100.0	0.1	0.1	0.64	75.0	0.8	75.0	74.9	0.20	383.790	
196.8	196.8	196.8	196.8	0.3	0.3	0.64	75.0	0.8	75.0	74.4	0.63	118.952	
200.0	200.0	200.0	200.0	0.3	0.3	0.64	75.0	0.8	75.0	74.4	0.65	116.341	
295.3	295.3	295.3	295.3	0.5	0.5	0.64	75.0	0.8	75.0	74.0	1.07	69.919	
300.0	300.0	300.0	300.0	0.5	0.5	0.64	75.0	0.8	75.0	74.0	1.09	68.562	
393.7	393.7	393.7	393.7	0.8	0.8	0.64	75.0	0.8	75.0	73.5	1.52	49.510	
400.0	400.0	400.0	400.0	0.8	0.8	0.64	75.0	0.8	75.0	73.5	1.54	48.602	
492.1	492.1	492.1	492.1	1.0	1.0	0.64	75.0	0.8	75.0	73.1	1.96	38.324	
500.0	500.0	500.0	500.0	1.0	1.0	0.64	75.0	0.8	75.0	73.1	1.99	37.644	
590.5	590.5	590.5	590.5	1.2	1.2	0.64	75.0	0.8	75.0	72.6	2.40	31.261	
600.0	600.0	600.0	600.0	1.2	1.2	0.64	75.0	0.8	75.0	72.6	2.44	30.717	
689.0	689.0	689.0	689.0	1.4	1.4	0.64	75.0	0.8	75.0	72.2	2.84	26.396	
700.0	700.0	700.0	700.0	1.4	1.4	0.64	75.0	0.8	75.0	72.2	2.89	25.944	
787.4	787.4	787.4	787.4	1.6	1.6	0.64	75.0	0.8	75.0	71.8	3.29	22.842	
800.0	800.0	800.0	800.0	1.7	1.7	0.64	75.0	0.8	75.0	71.7	3.34	22.454	
885.8	885.8	885.8	885.8	1.9	1.9	0.64	75.0	0.8	75.0	71.3	3.73	20.131	
900.0	900.0	900.0	900.0	1.9	1.9	0.64	75.0	0.8	75.0	71.3	3.79	19.792	
984.2	984.2	984.2	984.2	2.1	2.1	0.64	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	0.64	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	0.64	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	0.64	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	0.64	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	0.64	75.0	0.8	75.0	69.9	5.14	14.600 CC	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	96.67	75.0	0.8	75.2	69.7	5.49	13.701	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	97.15	75.0	0.8	75.2	69.7	5.58	13.496 ES	
1,377.9	1,377.8	1,376.2	1,376.2	2.9	3.0	100.34	75.8	1.5	76.6	70.7	5.90	12.985	
1,400.0	1,399.8	1,397.7	1,397.7	3.0	3.0	101.64	76.3	1.9	77.5	71.5	5.99	12.923	
1,476.4	1,475.9	1,471.7	1,471.6	3.1	3.2	107.15	78.9	4.2	82.1	75.8	6.32	12.988	
1,500.0	1,499.5	1,494.5	1,494.4	3.2	3.2	109.09	80.0	5.2	84.2	77.8	6.42	13.108	
1,574.8	1,573.7	1,566.0	1,565.6	3.4	3.4	115.48	84.3	9.0	93.1	86.3	6.75	13.784	
1,600.0	1,598.7	1,589.9	1,589.4	3.4	3.4	117.63	86.1	10.5	96.9	90.1	6.86	14.126	
1,673.2	1,671.1	1,658.5	1,657.5	3.6	3.6	123.55	91.9	15.6	110.7	103.5	7.19	15.393	
1,700.0	1,697.5	1,683.2	1,682.1	3.7	3.7	125.54	94.3	17.7	116.7	109.4	7.31	15.970	
1,771.6	1,767.9	1,748.7	1,746.8	3.9	3.8	130.32	101.4	23.9	135.2	127.6	7.63	17.733	
1,800.0	1,795.6	1,774.1	1,772.0	4.0	3.9	131.99	104.5	26.6	143.6	135.8	7.75	18.531	
1,870.1	1,864.0	1,836.1	1,833.0	4.3	4.1	135.57	112.7	33.8	166.5	158.4	8.06	20.661	
1,900.0	1,893.1	1,862.1	1,858.5	4.4	4.1	136.88	116.4	37.0	177.3	169.1	8.19	21.655	
1,968.5	1,959.3	1,922.0	1,917.2	4.6	4.3	139.54	125.6	45.1	204.0	195.5	8.49	24.022	
1,992.4	1,982.4	1,943.6	1,938.3	4.7	4.4	140.39	129.0	48.0	213.8	205.2	8.60	24.873	
2,000.0	1,989.6	1,950.4	1,944.9	4.8	4.4	140.69	130.0	49.0	216.9	208.3	8.63	25.133	
2,066.9	2,054.0	2,010.6	2,003.8	5.1	4.6	143.02	139.5	57.2	244.8	235.9	8.95	27.355	
2,100.0	2,085.8	2,040.4	2,032.9	5.2	4.7	143.99	144.1	61.3	258.7	249.6	9.10	28.426	
2,165.3	2,148.7	2,099.2	2,090.5	5.5	4.9	145.63	153.3	69.3	286.3	276.9	9.41	30.415	
2,200.0	2,182.0	2,130.4	2,121.0	5.7	5.0	146.38	158.2	73.6	301.0	291.4	9.58	31.406	
2,263.8	2,243.4	2,187.8	2,177.1	6.0	5.2	147.58	167.2	81.5	328.2	318.3	9.90	33.156	
2,300.0	2,278.2	2,220.4	2,209.0	6.2	5.4	148.18	172.3	85.9	343.7	333.6	10.08	34.106	
2,362.2	2,338.1	2,276.3	2,263.7	6.5	5.6	149.09	181.0	93.6	370.3	359.9	10.39	35.648	
2,400.0	2,374.4	2,310.3	2,297.0	6.7	5.7	149.59	186.4	98.2	386.5	375.9	10.58	36.544	
2,460.6	2,432.8	2,364.9	2,350.4	7.0	5.9	150.30	194.9	105.7	412.6	401.7	10.89	37.900	
2,500.0	2,470.6	2,400.3	2,385.0	7.2	6.0	150.72	200.4	110.6	429.5	418.4	11.09	38.746	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
2,559.0	2,527.4	2,453.5	2,437.0	7.6	6.3	151.28	208.7	117.8	455.0	443.6	11.39	39.940	
2,600.0	2,566.8	2,490.3	2,473.0	7.8	6.4	151.64	214.5	122.9	472.6	461.0	11.60	40.736	
2,657.5	2,622.1	2,542.0	2,523.6	8.1	6.6	152.10	222.6	130.0	497.5	485.6	11.90	41.792	
2,700.0	2,663.0	2,580.3	2,561.1	8.3	6.8	152.41	228.6	135.2	515.8	503.7	12.13	42.541	
2,755.9	2,716.8	2,630.6	2,610.3	8.6	7.0	152.79	236.5	142.1	540.0	527.6	12.42	43.476	
2,800.0	2,759.2	2,670.3	2,649.1	8.9	7.1	153.06	242.7	147.5	559.1	546.4	12.65	44.182	
2,854.3	2,811.5	2,719.2	2,696.9	9.2	7.3	153.38	250.3	154.2	582.6	569.7	12.94	45.011	
2,900.0	2,855.4	2,760.3	2,737.1	9.4	7.5	153.62	256.7	159.8	602.4	589.2	13.19	45.678	
2,952.7	2,906.2	2,807.7	2,783.5	9.7	7.7	153.88	264.2	166.3	625.3	611.8	13.47	46.415	
3,000.0	2,951.6	2,850.3	2,825.1	10.0	7.9	154.10	270.8	172.2	645.8	632.1	13.73	47.046	
3,051.2	3,000.9	2,896.3	2,870.2	10.3	8.0	154.33	278.0	178.5	668.0	654.0	14.00	47.702	
3,100.0	3,047.8	2,940.2	2,913.1	10.5	8.2	154.53	284.9	184.5	689.2	674.9	14.27	48.300	
3,149.6	3,095.5	2,984.9	2,956.8	10.8	8.4	154.72	291.9	190.6	710.7	696.2	14.54	48.883	
3,200.0	3,144.0	3,030.2	3,001.2	11.1	8.6	154.90	299.0	196.8	732.6	717.8	14.81	49.452	
3,248.0	3,190.2	3,073.4	3,043.4	11.4	8.8	155.06	305.7	202.7	753.4	738.4	15.08	49.971	
3,300.0	3,240.2	3,120.2	3,089.2	11.7	9.0	155.23	313.1	209.1	776.0	760.7	15.36	50.512	
3,346.4	3,284.9	3,162.0	3,130.1	11.9	9.2	155.37	319.6	214.8	796.2	780.6	15.62	50.976	
3,400.0	3,336.4	3,210.2	3,177.2	12.2	9.4	155.53	327.1	221.4	819.5	803.6	15.91	51.492	
3,444.9	3,379.6	3,250.6	3,216.7	12.5	9.5	155.65	333.5	227.0	839.0	822.8	16.16	51.906	
3,500.0	3,432.6	3,300.2	3,265.2	12.8	9.8	155.79	341.2	233.8	863.0	846.5	16.47	52.399	
3,543.3	3,474.3	3,339.2	3,303.3	13.1	9.9	155.90	347.3	239.1	881.8	865.1	16.71	52.769	
3,600.0	3,528.8	3,390.2	3,353.2	13.4	10.1	156.03	355.3	246.1	906.4	889.4	17.03	53.239	
3,641.7	3,569.0	3,427.7	3,390.0	13.6	10.3	156.13	361.2	251.2	924.6	907.3	17.26	53.571	
3,700.0	3,625.0	3,483.4	3,444.4	14.0	10.5	156.26	369.9	258.8	949.9	932.3	17.59	54.004	
3,740.1	3,663.6	3,536.1	3,496.1	14.2	10.7	156.39	377.6	265.6	967.0	949.1	17.83	54.228	
3,800.0	3,721.2	3,616.2	3,575.1	14.5	11.0	156.63	388.0	274.7	991.2	973.0	18.18	54.507	
3,838.6	3,758.3	3,668.8	3,627.0	14.8	11.1	156.80	393.9	279.9	1,006.1	987.6	18.41	54.649	
3,900.0	3,817.4	3,753.9	3,711.5	15.1	11.3	157.11	402.0	287.0	1,028.5	1,009.7	18.76	54.811	
3,937.0	3,853.0	3,806.0	3,763.3	15.3	11.5	157.32	406.0	290.5	1,041.2	1,022.2	18.98	54.870	
4,000.0	3,913.6	3,896.1	3,853.1	15.7	11.7	157.71	411.2	295.0	1,061.5	1,042.2	19.33	54.919	
4,035.4	3,947.7	3,947.4	3,904.3	15.9	11.7	157.95	413.3	296.8	1,072.2	1,052.7	19.52	54.919	
4,100.0	4,009.8	4,042.1	3,999.0	16.3	11.9	158.43	415.2	298.5	1,090.2	1,070.4	19.87	54.864	
4,133.8	4,042.4	4,085.5	4,042.4	16.5	12.0	158.66	415.3	298.6	1,099.0	1,078.9	20.04	54.830	
4,200.0	4,106.0	4,149.1	4,106.0	16.8	12.1	159.00	415.3	298.6	1,115.9	1,095.5	20.37	54.795	
4,232.3	4,137.1	4,180.2	4,137.1	17.0	12.1	159.16	415.3	298.6	1,124.2	1,103.7	20.52	54.776	
4,300.0	4,202.2	4,245.3	4,202.2	17.4	12.2	159.49	415.3	298.6	1,141.6	1,120.7	20.86	54.738	
4,330.7	4,231.7	4,274.9	4,231.7	17.6	12.3	159.63	415.3	298.6	1,149.5	1,128.5	21.01	54.722	
4,400.0	4,298.4	4,341.5	4,298.4	18.0	12.4	159.95	415.3	298.6	1,167.3	1,146.0	21.34	54.689	
4,429.1	4,326.4	4,369.5	4,326.4	18.2	12.4	160.09	415.3	298.6	1,174.8	1,153.3	21.49	54.676	
4,500.0	4,394.6	4,437.7	4,394.6	18.6	12.5	160.40	415.3	298.6	1,193.1	1,171.3	21.83	54.647	
4,527.5	4,421.1	4,464.2	4,421.1	18.7	12.6	160.52	415.3	298.6	1,200.2	1,178.3	21.97	54.636	
4,600.0	4,490.8	4,533.9	4,490.8	19.2	12.7	160.83	415.3	298.6	1,219.0	1,196.6	22.32	54.610	
4,626.0	4,515.8	4,558.9	4,515.8	19.3	12.7	160.94	415.3	298.6	1,225.7	1,203.3	22.45	54.601	
4,700.0	4,587.0	4,630.1	4,587.0	19.8	12.9	161.24	415.3	298.6	1,244.9	1,222.1	22.81	54.579	
4,724.4	4,610.5	4,653.6	4,610.5	19.9	12.9	161.34	415.3	298.6	1,251.2	1,228.3	22.93	54.572	
4,800.0	4,683.2	4,726.3	4,683.2	20.3	13.0	161.64	415.3	298.6	1,270.9	1,247.6	23.30	54.552	
4,822.8	4,705.2	4,748.3	4,705.2	20.5	13.1	161.72	415.3	298.6	1,276.8	1,253.4	23.41	54.546	
4,900.0	4,779.4	4,822.5	4,779.4	20.9	13.2	162.01	415.3	298.6	1,296.9	1,273.1	23.78	54.529	
4,921.2	4,799.8	4,843.0	4,799.8	21.0	13.2	162.09	415.3	298.6	1,302.5	1,278.6	23.89	54.524	
5,000.0	4,875.6	4,918.7	4,875.6	21.5	13.4	162.38	415.3	298.6	1,323.0	1,298.8	24.27	54.509	
5,019.7	4,894.5	4,937.6	4,894.5	21.6	13.4	162.45	415.3	298.6	1,328.2	1,303.8	24.37	54.505	
5,100.0	4,971.8	5,014.9	4,971.8	22.1	13.5	162.73	415.3	298.6	1,349.2	1,324.4	24.76	54.492	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
5,118.1	4,989.2	5,032.3	4,989.2	22.2	13.5	162.79	415.3	298.6	1,353.9	1,329.1	24.85	54.489	
5,200.0	5,068.0	5,111.1	5,068.0	22.7	13.7	163.07	415.3	298.6	1,375.4	1,350.1	25.25	54.478	
5,216.5	5,083.9	5,127.0	5,083.9	22.8	13.7	163.12	415.3	298.6	1,379.7	1,354.4	25.33	54.476	
5,240.0	5,106.5	5,149.6	5,106.5	22.9	13.8	163.20	415.3	298.6	1,385.9	1,360.4	25.44	54.473	
5,300.0	5,164.4	5,207.5	5,164.4	23.2	13.9	163.47	415.3	298.6	1,401.0	1,375.2	25.79	54.322	
5,314.9	5,178.8	5,222.0	5,178.8	23.3	13.9	163.54	415.3	298.6	1,404.6	1,378.7	25.87	54.289	
5,400.0	5,261.5	5,304.7	5,261.5	23.6	14.0	163.87	415.3	298.6	1,423.7	1,397.4	26.33	54.069	
5,413.4	5,274.6	5,317.7	5,274.6	23.6	14.1	163.92	415.3	298.6	1,426.5	1,400.1	26.40	54.034	
5,500.0	5,359.5	7,732.0	6,644.2	23.9	36.2	118.93	415.3	-1,052.7	1,382.6	1,326.3	56.30	24.556	
5,511.8	5,371.1	7,734.2	6,644.2	24.0	36.3	118.29	415.3	-1,054.8	1,371.9	1,315.3	56.58	24.245	
5,600.0	5,458.0	7,748.6	6,644.2	24.2	36.7	113.58	415.3	-1,069.2	1,292.1	1,233.6	58.49	22.090	
5,610.2	5,468.2	7,750.1	6,644.2	24.3	36.7	113.04	415.3	-1,070.7	1,282.9	1,224.2	58.69	21.860	
5,700.0	5,557.2	7,761.7	6,644.2	24.5	37.0	108.45	415.3	-1,082.4	1,202.2	1,142.1	60.17	19.981	
5,708.6	5,565.7	7,762.7	6,644.2	24.5	37.0	108.02	415.3	-1,083.3	1,194.5	1,134.2	60.29	19.813	
5,800.0	5,656.7	7,771.4	6,644.2	24.7	37.2	103.73	415.3	-1,092.1	1,113.5	1,052.2	61.32	18.158	
5,807.1	5,663.7	7,772.0	6,644.2	24.7	37.2	103.42	415.3	-1,092.6	1,107.3	1,045.9	61.38	18.038	
5,900.0	5,756.5	7,777.6	6,644.1	24.9	37.4	99.57	415.3	-1,098.3	1,026.3	964.3	62.00	16.552	
5,905.5	5,761.9	7,777.9	6,644.1	24.9	37.4	99.36	415.3	-1,098.5	1,021.6	959.5	62.03	16.469	
6,000.0	5,856.4	7,780.4	6,644.1	25.0	37.5	96.07	415.3	-1,101.0	941.3	879.0	62.30	15.109	
6,003.9	5,860.3	7,780.4	6,644.1	25.0	37.5	95.95	415.3	-1,101.0	938.0	875.7	62.31	15.055	
6,032.5	5,888.9	7,780.5	6,644.1	25.0	37.5	-0.11	415.3	-1,101.1	914.3	884.1	30.19	30.284	
6,062.5	5,918.9	7,780.5	6,644.1	25.1	37.5	-0.10	415.3	-1,101.1	889.7	859.5	30.24	29.419	
6,100.0	5,956.4	7,779.4	6,644.1	25.1	37.4	-94.09	415.3	-1,100.1	859.4	797.2	62.20	13.818	
6,102.3	5,958.7	7,779.3	6,644.1	25.1	37.4	-94.33	415.3	-1,100.0	857.5	795.4	62.18	13.792	
6,150.0	6,006.2	7,775.0	6,644.1	25.1	37.3	-98.67	415.3	-1,095.7	820.1	758.5	61.59	13.315	
6,200.0	6,055.6	7,767.1	6,644.2	25.1	37.1	-102.37	415.3	-1,087.8	782.3	721.6	60.73	12.881	
6,200.8	6,056.3	7,767.0	6,644.2	25.1	37.1	-102.42	415.3	-1,087.6	781.7	721.0	60.72	12.875	
6,250.0	6,104.3	7,755.8	6,644.2	25.0	36.8	-105.24	415.3	-1,076.5	746.4	686.6	59.76	12.490	
6,299.2	6,151.3	7,741.4	6,644.2	24.9	36.5	-107.30	415.3	-1,062.1	713.1	654.3	58.78	12.132	
6,300.0	6,152.1	7,741.2	6,644.2	24.9	36.5	-107.33	415.3	-1,061.8	712.6	653.8	58.76	12.126	
6,350.0	6,198.7	7,723.2	6,644.2	24.8	36.0	-108.72	415.3	-1,043.8	681.2	623.4	57.81	11.783	
6,397.6	6,241.9	7,703.1	6,644.2	24.7	35.5	-109.44	415.3	-1,023.7	653.8	596.8	56.97	11.477	
6,400.0	6,244.1	7,702.0	6,644.2	24.7	35.5	-109.47	415.3	-1,022.6	652.5	595.6	56.92	11.462	
6,450.0	6,287.8	7,677.7	6,644.3	24.5	34.9	-109.65	415.3	-998.3	626.6	570.5	56.13	11.165	
6,496.0	6,326.5	7,652.7	6,644.3	24.4	34.2	-109.37	415.3	-973.3	605.5	550.0	55.46	10.918	
6,500.0	6,329.7	7,650.4	6,644.3	24.4	34.2	-109.33	415.3	-971.1	603.8	548.4	55.40	10.898	
6,550.0	6,369.6	7,620.3	6,644.3	24.3	33.4	-108.57	415.3	-940.9	584.0	529.3	54.74	10.669	
6,594.5	6,403.3	7,591.2	6,644.4	24.2	32.7	-107.58	415.3	-911.8	568.9	514.8	54.19	10.499	
6,600.0	6,407.3	7,587.4	6,644.4	24.2	32.6	-107.44	415.3	-908.1	567.2	513.1	54.12	10.480	
6,650.0	6,442.7	7,552.0	6,644.4	24.1	31.7	-105.99	415.3	-872.7	553.4	499.9	53.54	10.336	
6,692.9	6,471.0	7,519.8	6,644.5	24.0	31.0	-104.56	415.3	-840.4	543.8	490.7	53.04	10.251	
6,700.0	6,475.5	7,514.3	6,644.5	24.0	30.8	-104.31	415.3	-834.9	542.3	489.4	52.96	10.241	
6,750.0	6,505.6	7,474.3	6,644.5	24.0	29.9	-102.47	415.3	-795.0	533.8	481.4	52.37	10.192	
6,791.3	6,528.3	7,439.8	6,644.6	24.0	29.0	-100.88	415.3	-760.4	528.3	476.4	51.87	10.185 SF	
6,800.0	6,532.8	7,432.3	6,644.6	24.0	28.9	-100.54	415.3	-753.0	527.3	475.6	51.76	10.188	
6,850.0	6,557.0	7,388.6	6,644.6	24.1	27.8	-98.62	415.3	-709.2	522.7	471.6	51.12	10.226	
6,889.7	6,574.1	7,352.7	6,644.7	24.2	27.0	-97.15	415.3	-673.3	520.2	469.5	50.61	10.278	
6,900.0	6,578.1	7,343.3	6,644.7	24.3	26.8	-96.78	415.3	-663.9	519.6	469.2	50.47	10.296	
6,950.0	6,596.1	7,296.6	6,644.8	24.5	25.7	-95.11	415.3	-617.2	517.6	467.8	49.80	10.395	
6,988.2	6,607.5	7,260.1	6,644.8	24.7	24.9	-93.98	415.3	-580.8	516.7	467.4	49.32	10.476	
7,000.0	6,610.7	7,248.7	6,644.8	24.8	24.7	-93.66	415.3	-569.4	516.5	467.3	49.16	10.505	
7,050.0	6,621.9	7,200.0	6,644.9	25.1	23.6	-92.50	415.3	-520.7	515.9	467.3	48.53	10.629	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	7,163.9	6,644.9	25.4	22.9	-91.86	415.3	-484.6	515.6	467.5	48.14	10.711	
7,100.0	6,629.7	7,150.6	6,644.9	25.6	22.6	-91.68	415.3	-471.3	515.6	467.6	47.99	10.743	
7,150.0	6,634.1	7,100.8	6,645.0	26.0	21.6	-91.21	415.3	-421.5	515.5	468.0	47.48	10.856	
7,185.0	6,635.1	7,065.4	6,644.3	26.4	20.9	-91.03	415.3	-386.0	515.4	468.2	47.18	10.924	
7,196.6	6,635.0	7,053.7	6,643.7	26.5	20.7	-90.97	415.3	-374.4	515.4	468.3	47.08	10.947	
7,200.0	6,635.0	7,050.2	6,643.5	26.6	20.6	-90.95	415.3	-370.9	515.4	468.4	47.06	10.953	
7,279.2	6,633.9	6,971.0	6,634.0	27.5	19.2	-90.00	415.3	-292.3	515.3	468.7	46.65	11.047	
7,283.4	6,633.9	6,966.8	6,633.2	27.6	19.1	-89.92	415.3	-288.2	515.3	468.7	46.63	11.051	
7,300.0	6,633.7	6,950.6	6,630.1	27.8	18.9	-89.60	415.3	-272.2	515.4	468.8	46.57	11.067	
7,381.9	6,632.6	6,872.6	6,610.2	29.0	17.7	-87.49	415.3	-196.9	515.9	469.3	46.58	11.076	
7,400.0	6,632.4	6,856.0	6,604.8	29.2	17.4	-86.93	415.3	-181.1	516.2	469.6	46.60	11.078	
7,480.3	6,631.4	6,785.5	6,578.3	30.5	16.5	-84.09	415.3	-115.8	518.7	471.7	46.94	11.049	
7,500.0	6,631.1	6,769.0	6,571.2	30.9	16.4	-83.33	415.3	-101.0	519.7	472.6	47.04	11.047	
7,578.7	6,630.1	6,706.9	6,541.4	32.3	15.8	-80.16	415.3	-46.5	525.7	478.1	47.58	11.047	
7,600.0	6,629.8	6,691.1	6,533.1	32.7	15.7	-79.28	415.3	-33.1	528.0	480.2	47.74	11.060	
7,677.1	6,628.9	6,637.3	6,502.5	34.1	15.5	-76.10	415.3	11.2	539.0	490.6	48.39	11.139	
7,700.0	6,628.6	6,622.3	6,493.4	34.6	15.5	-75.17	415.3	23.0	543.1	494.5	48.57	11.181	
7,775.6	6,627.6	6,576.2	6,463.9	36.1	15.4	-72.19	415.3	58.5	560.0	510.7	49.26	11.369	
7,800.0	6,627.3	6,562.3	6,454.6	36.6	15.4	-71.27	415.3	68.7	566.5	517.0	49.47	11.452	
7,874.0	6,626.3	6,523.1	6,427.1	38.2	15.4	-68.61	415.3	96.8	589.5	539.4	50.16	11.754	
7,900.0	6,626.0	6,510.2	6,417.8	38.8	15.4	-67.73	415.3	105.7	598.8	548.4	50.39	11.883	
7,972.4	6,625.1	6,476.8	6,392.9	40.4	15.4	-65.42	415.3	127.9	627.7	576.6	51.09	12.286	
8,000.0	6,624.7	6,464.9	6,383.8	41.0	15.4	-64.60	415.3	135.5	639.9	588.5	51.35	12.461	
8,070.8	6,623.8	6,436.5	6,361.5	42.6	15.4	-62.63	415.3	153.2	674.0	621.9	52.06	12.946	
8,100.0	6,623.4	6,425.5	6,352.7	43.3	15.4	-61.88	415.3	159.7	689.1	636.7	52.35	13.164	
8,169.3	6,622.6	6,400.0	6,331.8	44.9	15.4	-60.12	415.3	174.5	727.5	674.5	53.03	13.718	
8,200.0	6,622.2	6,400.0	6,331.8	45.6	15.4	-60.12	415.3	174.5	745.6	692.0	53.67	13.894	
8,267.7	6,621.3	6,370.3	6,307.0	47.3	15.5	-58.10	415.3	190.6	787.3	733.2	54.13	14.544	
8,300.0	6,620.9	6,350.0	6,289.6	48.0	15.5	-56.74	415.3	201.1	808.3	754.2	54.11	14.938	
8,366.1	6,620.0	6,350.0	6,289.6	49.7	15.5	-56.74	415.3	201.1	852.6	797.1	55.49	15.366	
8,400.0	6,619.6	6,334.5	6,276.1	50.5	15.5	-55.71	415.3	208.8	876.1	820.4	55.64	15.747	
8,464.5	6,618.8	6,319.0	6,262.5	52.1	15.5	-54.69	415.3	216.2	922.3	865.9	56.41	16.350	
8,500.0	6,618.3	6,300.0	6,245.5	53.0	15.5	-53.47	415.3	224.8	948.5	892.1	56.42	16.812	
8,563.0	6,617.5	6,300.0	6,245.5	54.5	15.5	-53.47	415.3	224.8	995.8	938.1	57.71	17.254	
8,600.0	6,617.0	6,300.0	6,245.5	55.5	15.5	-53.47	415.3	224.8	1,024.4	965.9	58.47	17.519	
8,661.4	6,616.3	6,278.4	6,226.0	57.0	15.5	-52.10	415.3	234.1	1,072.5	1,013.6	58.87	18.217	
8,700.0	6,615.8	6,271.4	6,219.6	58.0	15.5	-51.66	415.3	236.9	1,103.3	1,043.9	59.37	18.582	
8,759.8	6,615.0	6,250.0	6,199.9	59.5	15.5	-50.35	415.3	245.3	1,151.9	1,092.2	59.69	19.297	
8,800.0	6,614.5	6,250.0	6,199.9	60.6	15.5	-50.35	415.3	245.3	1,184.8	1,124.3	60.51	19.582	
8,858.2	6,613.7	6,250.0	6,199.9	62.1	15.5	-50.35	415.3	245.3	1,233.3	1,171.7	61.69	19.992	
8,900.0	6,613.2	6,250.0	6,199.9	63.2	15.5	-50.35	415.3	245.3	1,268.6	1,206.1	62.54	20.284	
8,956.7	6,612.5	6,231.5	6,182.8	64.6	15.5	-49.24	415.3	252.1	1,316.7	1,253.9	62.86	20.946	
9,000.0	6,611.9	6,225.8	6,177.4	65.8	15.5	-48.90	415.3	254.1	1,354.0	1,290.5	63.47	21.332	
9,055.1	6,611.2	6,218.7	6,170.8	67.2	15.5	-48.49	415.3	256.5	1,401.8	1,337.5	64.26	21.814	
9,100.0	6,610.6	6,200.0	6,153.0	68.4	15.5	-47.40	415.3	262.6	1,441.2	1,376.9	64.27	22.424	
9,153.5	6,609.9	6,200.0	6,153.0	69.8	15.5	-47.40	415.3	262.6	1,488.2	1,422.9	65.34	22.777	
9,200.0	6,609.3	6,200.0	6,153.0	71.0	15.5	-47.40	415.3	262.6	1,529.4	1,463.1	66.27	23.079	
9,251.9	6,608.7	6,200.0	6,153.0	72.4	15.5	-47.40	415.3	262.6	1,575.8	1,508.4	67.31	23.411	
9,300.0	6,608.1	6,200.0	6,153.0	73.7	15.5	-47.40	415.3	262.6	1,618.9	1,550.7	68.27	23.713	
9,350.4	6,607.4	6,200.0	6,153.0	75.0	15.5	-47.40	415.3	262.6	1,664.5	1,595.2	69.29	24.024	
9,400.0	6,606.8	6,181.9	6,135.8	76.3	15.5	-46.38	415.3	268.1	1,709.3	1,640.0	69.34	24.651	
9,448.8	6,606.1	6,177.5	6,131.6	77.6	15.5	-46.14	415.3	269.3	1,753.8	1,683.7	70.08	25.025	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,605.5	6,173.0	6,127.3	79.0	15.5	-45.90	415.3	270.6	1,800.7	1,729.8	70.86	25.411	
9,547.2	6,604.9	6,169.1	6,123.5	80.2	15.4	-45.68	415.3	271.7	1,844.1	1,772.5	71.59	25.759	
9,600.0	6,604.2	6,150.0	6,105.1	81.7	15.4	-44.65	415.3	276.6	1,892.9	1,821.4	71.59	26.441	
9,645.6	6,603.6	6,150.0	6,105.1	82.9	15.4	-44.65	415.3	276.6	1,935.1	1,862.6	72.48	26.697	
9,700.0	6,602.9	6,150.0	6,105.1	84.3	15.4	-44.65	415.3	276.6	1,985.5	1,912.0	73.55	26.997	
9,744.1	6,602.3	6,150.0	6,105.1	85.5	15.4	-44.65	415.3	276.6	2,026.5	1,952.1	74.41	27.234	
9,800.0	6,601.6	6,150.0	6,105.1	87.0	15.4	-44.65	415.3	276.6	2,078.8	2,003.3	75.51	27.531	
9,842.5	6,601.1	6,150.0	6,105.1	88.2	15.4	-44.65	415.3	276.6	2,118.6	2,042.3	76.34	27.751	
9,900.0	6,600.3	6,150.0	6,105.1	89.7	15.4	-44.65	415.3	276.6	2,172.6	2,095.2	77.47	28.043	
9,940.9	6,599.8	6,150.0	6,105.1	90.9	15.4	-44.65	415.3	276.6	2,211.2	2,132.9	78.28	28.247	
10,000.0	6,599.0	6,150.0	6,105.1	92.5	15.4	-44.65	415.3	276.6	2,267.0	2,187.6	79.44	28.536	
10,039.3	6,598.5	6,150.0	6,105.1	93.5	15.4	-44.65	415.3	276.6	2,304.3	2,224.1	80.22	28.724	
10,100.0	6,597.7	6,150.0	6,105.1	95.2	15.4	-44.65	415.3	276.6	2,361.9	2,280.4	81.42	29.008	
10,137.8	6,597.3	6,129.8	6,085.4	96.2	15.4	-43.59	415.3	281.3	2,397.4	2,316.5	80.91	29.632	
10,200.0	6,596.5	6,126.5	6,082.2	97.9	15.4	-43.42	415.3	282.0	2,456.6	2,374.7	81.91	29.992	
10,236.2	6,596.0	6,124.6	6,080.3	98.9	15.4	-43.33	415.3	282.4	2,491.1	2,408.6	82.50	30.197	
10,300.0	6,595.2	6,121.4	6,077.2	100.6	15.4	-43.16	415.3	283.1	2,552.0	2,468.5	83.53	30.552	
10,334.6	6,594.7	6,119.7	6,075.6	101.6	15.4	-43.08	415.3	283.4	2,585.1	2,501.0	84.09	30.741	
10,400.0	6,593.9	6,100.0	6,056.2	103.3	15.4	-42.10	415.3	287.2	2,647.9	2,563.9	84.08	31.493	
10,433.0	6,593.5	6,100.0	6,056.2	104.2	15.4	-42.10	415.3	287.2	2,679.6	2,594.9	84.71	31.632	
10,500.0	6,592.6	6,100.0	6,056.2	106.1	15.4	-42.09	415.3	287.2	2,743.8	2,657.8	85.99	31.909	
10,531.5	6,592.2	6,100.0	6,056.2	106.9	15.4	-42.09	415.3	287.2	2,774.0	2,687.4	86.59	32.036	
10,600.0	6,591.3	6,100.0	6,056.2	108.8	15.4	-42.09	415.3	287.2	2,839.9	2,752.0	87.90	32.308	
10,629.9	6,590.9	6,100.0	6,056.2	109.6	15.4	-42.09	415.3	287.2	2,868.7	2,780.2	88.47	32.424	
10,700.0	6,590.0	6,100.0	6,056.2	111.6	15.4	-42.09	415.3	287.2	2,936.3	2,846.5	89.82	32.693	
10,728.3	6,589.6	6,100.0	6,056.2	112.3	15.4	-42.09	415.3	287.2	2,963.7	2,873.3	90.36	32.799	
10,800.0	6,588.7	6,100.0	6,056.2	114.3	15.4	-42.09	415.3	287.2	3,032.9	2,941.2	91.73	33.063	
10,826.7	6,588.4	6,100.0	6,056.2	115.0	15.4	-42.09	415.3	287.2	3,058.8	2,966.6	92.25	33.159	
10,900.0	6,587.4	6,100.0	6,056.2	117.0	15.4	-42.09	415.3	287.2	3,129.8	3,036.1	93.65	33.419	
10,925.2	6,587.1	6,100.0	6,056.2	117.7	15.4	-42.09	415.3	287.2	3,154.2	3,060.1	94.14	33.507	
11,000.0	6,586.1	6,100.0	6,056.2	119.8	15.4	-42.09	415.3	287.2	3,226.8	3,131.2	95.57	33.763	
11,023.6	6,585.8	6,100.0	6,056.2	120.4	15.4	-42.09	415.3	287.2	3,249.7	3,153.7	96.03	33.842	
11,100.0	6,584.8	6,100.0	6,056.2	122.5	15.4	-42.09	415.3	287.2	3,324.0	3,226.5	97.50	34.094	
11,122.0	6,584.5	6,100.0	6,056.2	123.2	15.4	-42.09	415.3	287.2	3,345.4	3,247.5	97.92	34.165	
11,200.0	6,583.5	6,100.0	6,056.2	125.3	15.4	-42.09	415.3	287.2	3,421.4	3,322.0	99.42	34.413	
11,220.4	6,583.3	6,100.0	6,056.2	125.9	15.4	-42.09	415.3	287.2	3,441.3	3,341.5	99.81	34.477	
11,300.0	6,582.2	6,100.0	6,056.2	128.1	15.4	-42.09	415.3	287.2	3,518.9	3,417.5	101.35	34.721	
11,318.9	6,582.0	6,100.0	6,056.2	128.6	15.4	-42.09	415.3	287.2	3,537.3	3,435.6	101.71	34.778	
11,400.0	6,580.9	6,100.0	6,056.2	130.8	15.4	-42.09	415.3	287.2	3,616.5	3,513.3	103.27	35.019	
11,417.3	6,580.7	6,100.0	6,056.2	131.3	15.4	-42.09	415.3	287.2	3,633.4	3,529.8	103.61	35.069	
11,500.0	6,579.7	6,078.4	6,034.9	133.6	15.4	-41.05	415.3	290.7	3,713.9	3,610.5	103.46	35.897	
11,515.7	6,579.4	6,078.0	6,034.5	134.0	15.4	-41.03	415.3	290.8	3,729.3	3,625.6	103.73	35.954	
11,600.0	6,578.4	6,075.8	6,032.3	136.3	15.4	-40.92	415.3	291.1	3,811.7	3,706.6	105.15	36.251	
11,614.1	6,578.2	6,075.5	6,032.0	136.7	15.4	-40.91	415.3	291.2	3,825.6	3,720.2	105.39	36.300	
11,700.0	6,577.1	6,073.4	6,029.9	139.1	15.4	-40.81	415.3	291.5	3,909.6	3,802.8	106.84	36.593	
11,712.6	6,576.9	6,073.1	6,029.6	139.5	15.4	-40.79	415.3	291.5	3,921.9	3,814.9	107.05	36.635	
11,800.0	6,575.8	6,050.0	6,006.7	141.9	15.4	-39.73	415.3	294.4	4,008.0	3,901.2	106.80	37.529	
11,811.0	6,575.6	6,050.0	6,006.7	142.2	15.4	-39.73	415.3	294.4	4,018.8	3,911.8	107.00	37.558	
11,858.8	6,575.0	6,050.0	6,006.7	143.5	15.4	-39.73	415.3	294.4	4,065.5	3,957.7	107.89	37.683	
11,859.3	6,575.0	6,050.0	6,006.7	143.5	15.4	-39.73	415.3	294.4	4,066.1	3,958.2	107.89	37.686	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	0.53	90.0	0.8	90.0				
98.4	98.4	98.4	98.4	0.1	0.1	0.53	90.0	0.8	90.0	89.8	0.19	468.116	
100.0	100.0	100.0	100.0	0.1	0.1	0.53	90.0	0.8	90.0	89.8	0.20	460.192	
196.8	196.8	196.8	196.8	0.3	0.3	0.53	90.0	0.8	90.0	89.4	0.63	142.632	
200.0	200.0	200.0	200.0	0.3	0.3	0.53	90.0	0.8	90.0	89.3	0.65	139.501	
295.3	295.3	295.3	295.3	0.5	0.5	0.53	90.0	0.8	90.0	88.9	1.07	83.838	
300.0	300.0	300.0	300.0	0.5	0.5	0.53	90.0	0.8	90.0	88.9	1.09	82.211	
393.7	393.7	393.7	393.7	0.8	0.8	0.53	90.0	0.8	90.0	88.5	1.52	59.366	
400.0	400.0	400.0	400.0	0.8	0.8	0.53	90.0	0.8	90.0	88.4	1.54	58.278	
492.1	492.1	492.1	492.1	1.0	1.0	0.53	90.0	0.8	90.0	88.0	1.96	45.953	
500.0	500.0	500.0	500.0	1.0	1.0	0.53	90.0	0.8	90.0	88.0	1.99	45.137	
590.5	590.5	590.5	590.5	1.2	1.2	0.53	90.0	0.8	90.0	87.6	2.40	37.484	
600.0	600.0	600.0	600.0	1.2	1.2	0.53	90.0	0.8	90.0	87.5	2.44	36.832	
689.0	689.0	689.0	689.0	1.4	1.4	0.53	90.0	0.8	90.0	87.1	2.84	31.651	
700.0	700.0	700.0	700.0	1.4	1.4	0.53	90.0	0.8	90.0	87.1	2.89	31.109	
787.4	787.4	787.4	787.4	1.6	1.6	0.53	90.0	0.8	90.0	86.7	3.29	27.389	
800.0	800.0	800.0	800.0	1.7	1.7	0.53	90.0	0.8	90.0	86.6	3.34	26.925	
885.8	885.8	885.8	885.8	1.9	1.9	0.53	90.0	0.8	90.0	86.3	3.73	24.138	
900.0	900.0	900.0	900.0	1.9	1.9	0.53	90.0	0.8	90.0	86.2	3.79	23.733	
984.2	984.2	984.2	984.2	2.1	2.1	0.53	90.0	0.8	90.0	85.8	4.17	21.577	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.53	90.0	0.8	90.0	85.7	4.24	21.217	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	0.53	90.0	0.8	90.0	85.4	4.61	19.508	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	0.53	90.0	0.8	90.0	85.3	4.69	19.184	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	0.53	90.0	0.8	90.0	84.9	5.06	17.800	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.53	90.0	0.8	90.0	84.8	5.14	17.506 CC, ES	
1,279.5	1,279.5	1,278.5	1,278.5	2.7	2.7	95.78	90.4	-0.1	90.5	85.1	5.48	16.526	
1,300.0	1,300.0	1,298.7	1,298.7	2.8	2.8	95.81	90.7	-0.7	90.9	85.3	5.57	16.325	
1,377.9	1,377.8	1,375.7	1,375.6	2.9	3.0	95.98	92.2	-4.1	92.8	86.9	5.89	15.750	
1,400.0	1,399.8	1,397.4	1,397.3	3.0	3.0	96.05	92.8	-5.4	93.5	87.5	5.98	15.631	
1,476.4	1,475.9	1,472.7	1,472.3	3.1	3.2	96.32	95.4	-11.0	96.7	90.4	6.32	15.307	
1,500.0	1,499.5	1,496.0	1,495.5	3.2	3.2	96.42	96.3	-13.1	97.9	91.4	6.42	15.246	
1,574.8	1,573.7	1,569.7	1,568.7	3.4	3.4	96.75	99.9	-20.8	102.3	95.5	6.77	15.101	
1,600.0	1,598.7	1,594.5	1,593.2	3.4	3.5	96.87	101.2	-23.8	104.0	97.1	6.89	15.087	
1,673.2	1,671.1	1,666.5	1,664.4	3.6	3.7	97.24	105.7	-33.6	109.6	102.3	7.27	15.060	
1,700.0	1,697.5	1,692.8	1,690.3	3.7	3.7	97.38	107.5	-37.6	111.8	104.4	7.42	15.081	
1,771.6	1,767.9	1,763.1	1,759.4	3.9	3.9	97.74	112.9	-49.3	118.5	110.7	7.84	15.121	
1,800.0	1,795.6	1,790.8	1,786.6	4.0	4.0	97.89	115.2	-54.4	121.4	113.4	8.01	15.165	
1,870.1	1,864.0	1,859.4	1,853.6	4.3	4.3	98.23	121.3	-67.9	129.2	120.7	8.48	15.233	
1,900.0	1,893.1	1,888.6	1,882.0	4.4	4.4	98.37	124.2	-74.1	132.7	124.1	8.68	15.287	
1,968.5	1,959.3	1,955.5	1,946.7	4.6	4.6	98.68	131.1	-89.3	141.5	132.3	9.21	15.357	
1,992.4	1,982.4	1,978.8	1,969.2	4.7	4.7	98.79	133.6	-94.9	144.7	135.3	9.40	15.396	
2,000.0	1,989.6	1,986.1	1,976.3	4.8	4.7	98.84	134.4	-96.7	145.8	136.3	9.46	15.407	
2,066.9	2,054.0	2,051.2	2,038.8	5.1	5.0	98.95	142.1	-113.4	155.3	145.2	10.04	15.467	
2,100.0	2,085.8	2,083.7	2,069.7	5.2	5.2	98.83	146.0	-122.1	160.1	149.8	10.33	15.499	
2,165.3	2,148.7	2,148.3	2,131.4	5.5	5.5	98.59	154.0	-139.7	169.8	158.8	10.95	15.511	
2,200.0	2,182.0	2,182.6	2,164.1	5.7	5.7	98.47	158.3	-149.0	174.9	163.6	11.27	15.515	
2,263.8	2,243.4	2,245.6	2,224.4	6.0	6.0	98.27	166.1	-166.1	184.3	172.4	11.90	15.494	
2,300.0	2,278.2	2,281.5	2,258.5	6.2	6.2	98.16	170.5	-175.8	189.7	177.4	12.25	15.481	
2,362.2	2,338.1	2,343.0	2,317.3	6.5	6.5	98.00	178.1	-192.4	198.9	186.0	12.88	15.440	
2,400.0	2,374.4	2,380.4	2,353.0	6.7	6.7	97.90	182.7	-202.6	204.5	191.2	13.26	15.414	
2,460.6	2,432.8	2,440.3	2,410.2	7.0	7.1	97.76	190.1	-218.8	213.4	199.5	13.89	15.363	
2,500.0	2,470.6	2,479.3	2,447.4	7.2	7.3	97.68	194.9	-229.4	219.3	205.0	14.30	15.331	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
2,559.0	2,527.4	2,537.7	2,503.1	7.6	7.6	97.56	202.2	-245.2	228.0	213.1	14.92	15.276	
2,600.0	2,566.8	2,578.2	2,541.8	7.8	7.9	97.48	207.2	-256.2	234.0	218.7	15.36	15.240	
2,657.5	2,622.1	2,635.0	2,596.0	8.1	8.2	97.38	214.2	-271.6	242.5	226.6	15.97	15.185	
2,700.0	2,663.0	2,677.1	2,636.2	8.3	8.4	97.30	219.4	-283.0	248.8	232.4	16.43	15.145	
2,755.9	2,716.8	2,732.3	2,688.9	8.6	8.8	97.22	226.2	-298.0	257.1	240.1	17.04	15.092	
2,800.0	2,759.2	2,775.9	2,730.6	8.9	9.0	97.15	231.6	-309.8	263.6	246.1	17.51	15.052	
2,854.3	2,811.5	2,829.7	2,781.9	9.2	9.3	97.07	238.2	-324.4	271.7	253.5	18.11	15.001	
2,900.0	2,855.4	2,874.8	2,825.0	9.4	9.6	97.01	243.8	-336.6	278.4	259.8	18.61	14.960	
2,952.7	2,906.2	2,927.0	2,874.8	9.7	9.9	96.95	250.3	-350.8	286.2	267.0	19.19	14.913	
3,000.0	2,951.6	2,973.7	2,919.4	10.0	10.2	96.89	256.0	-363.4	293.2	273.5	19.71	14.872	
3,051.2	3,000.9	3,024.4	2,967.7	10.3	10.5	96.83	262.3	-377.2	300.8	280.5	20.28	14.829	
3,100.0	3,047.8	3,072.6	3,013.8	10.5	10.8	96.78	268.3	-390.2	308.0	287.2	20.83	14.789	
3,149.6	3,095.5	3,121.7	3,060.6	10.8	11.1	96.72	274.3	-403.5	315.3	294.0	21.38	14.749	
3,200.0	3,144.0	3,171.5	3,108.2	11.1	11.4	96.67	280.5	-417.1	322.8	300.9	21.95	14.709	
3,248.0	3,190.2	3,219.0	3,153.5	11.4	11.7	96.63	286.4	-429.9	329.9	307.4	22.48	14.673	
3,300.0	3,240.2	3,270.4	3,202.6	11.7	12.0	96.58	292.7	-443.9	337.6	314.5	23.07	14.634	
3,346.4	3,284.9	3,316.4	3,246.5	11.9	12.3	96.54	298.4	-456.3	344.5	320.9	23.59	14.601	
3,400.0	3,336.4	3,369.3	3,297.0	12.2	12.6	96.50	304.9	-470.7	352.4	328.2	24.20	14.563	
3,444.9	3,379.6	3,413.7	3,339.4	12.5	12.8	96.46	310.4	-482.7	359.0	334.3	24.71	14.533	
3,500.0	3,432.6	3,468.2	3,391.4	12.8	13.2	96.42	317.2	-497.5	367.2	341.9	25.33	14.497	
3,543.3	3,474.3	3,511.1	3,432.3	13.1	13.4	96.39	322.4	-509.1	373.6	347.8	25.82	14.469	
3,600.0	3,528.8	3,567.1	3,485.8	13.4	13.8	96.35	329.4	-524.3	382.0	355.5	26.47	14.434	
3,641.7	3,569.0	3,608.4	3,525.2	13.6	14.0	96.32	334.5	-535.5	388.2	361.2	26.94	14.408	
3,700.0	3,625.0	3,666.0	3,580.2	14.0	14.4	96.28	341.6	-551.1	396.8	369.2	27.60	14.374	
3,740.1	3,663.6	3,705.7	3,618.1	14.2	14.6	96.25	346.5	-561.9	402.7	374.7	28.06	14.352	
3,800.0	3,721.2	3,764.9	3,674.6	14.5	15.0	96.22	353.8	-577.9	411.6	382.9	28.75	14.318	
3,838.6	3,758.3	3,803.1	3,711.1	14.8	15.2	96.19	358.5	-588.3	417.3	388.1	29.19	14.298	
3,900.0	3,817.4	3,863.8	3,769.1	15.1	15.6	96.16	366.0	-604.7	426.4	396.5	29.89	14.266	
3,937.0	3,853.0	3,900.4	3,804.0	15.3	15.8	96.14	370.6	-614.6	431.9	401.6	30.31	14.247	
4,000.0	3,913.6	3,962.7	3,863.5	15.7	16.2	96.10	378.3	-631.5	441.2	410.2	31.04	14.216	
4,035.4	3,947.7	3,997.8	3,896.9	15.9	16.5	96.09	382.6	-641.0	446.4	415.0	31.44	14.199	
4,100.0	4,009.8	4,061.6	3,957.9	16.3	16.8	96.05	390.5	-658.3	456.0	423.8	32.18	14.169	
4,133.8	4,042.4	4,095.1	3,989.8	16.5	17.1	96.04	394.6	-667.4	461.0	428.4	32.57	14.153	
4,200.0	4,106.0	4,160.5	4,052.3	16.8	17.5	96.01	402.7	-685.1	470.8	437.5	33.33	14.124	
4,232.3	4,137.1	4,192.4	4,082.7	17.0	17.7	95.99	406.6	-693.8	475.6	441.9	33.71	14.110	
4,300.0	4,202.2	4,259.4	4,146.7	17.4	18.1	95.96	414.9	-712.0	485.6	451.1	34.49	14.082	
4,330.7	4,231.7	4,289.8	4,175.7	17.6	18.3	95.95	418.7	-720.2	490.2	455.3	34.84	14.069	
4,400.0	4,298.4	4,358.3	4,241.1	18.0	18.7	95.92	427.1	-738.8	500.4	464.8	35.64	14.042	
4,429.1	4,326.4	4,387.1	4,268.6	18.2	18.9	95.91	430.7	-746.6	504.7	468.8	35.97	14.030	
4,500.0	4,394.6	4,457.2	4,335.5	18.6	19.3	95.88	439.4	-765.6	515.2	478.4	36.79	14.004	
4,527.5	4,421.1	4,484.5	4,361.5	18.7	19.5	95.87	442.7	-773.0	519.3	482.2	37.11	13.994	
4,600.0	4,490.8	4,556.1	4,429.9	19.2	19.9	95.84	451.6	-792.4	530.0	492.1	37.95	13.968	
4,626.0	4,515.8	4,581.8	4,454.4	19.3	20.1	95.84	454.8	-799.3	533.9	495.6	38.25	13.959	
4,700.0	4,587.0	4,655.0	4,524.3	19.8	20.5	95.81	463.8	-819.2	544.8	505.7	39.10	13.933	
4,724.4	4,610.5	4,679.1	4,547.3	19.9	20.7	95.80	466.8	-825.7	548.4	509.1	39.38	13.925	
4,800.0	4,683.2	4,753.9	4,618.7	20.3	21.2	95.78	476.0	-846.0	559.6	519.4	40.26	13.901	
4,822.8	4,705.2	4,776.5	4,640.3	20.5	21.3	95.77	478.8	-852.1	563.0	522.5	40.52	13.893	
4,900.0	4,779.4	4,852.8	4,713.1	20.9	21.8	95.74	488.3	-872.8	574.4	533.0	41.42	13.870	
4,921.2	4,799.8	4,873.8	4,733.2	21.0	21.9	95.74	490.8	-878.5	577.6	535.9	41.66	13.863	
5,000.0	4,875.6	4,951.7	4,807.5	21.5	22.4	95.71	500.5	-899.6	589.2	546.7	42.58	13.840	
5,019.7	4,894.5	4,971.2	4,826.1	21.6	22.5	95.71	502.9	-904.9	592.2	549.3	42.80	13.834	
5,100.0	4,971.8	5,050.6	4,901.9	22.1	23.0	95.69	512.7	-926.4	604.0	560.3	43.73	13.812	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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		
5,118.1	4,989.2	5,068.5	4,919.0	22.2	23.1	95.68	514.9	-931.3	606.7	562.8	43.94	13.807		
5,200.0	5,068.0	5,149.5	4,996.3	22.7	23.6	95.66	524.9	-953.2	618.8	574.0	44.89	13.784		
5,216.5	5,083.9	5,165.8	5,011.9	22.8	23.8	95.65	526.9	-957.7	621.3	576.2	45.09	13.780		
5,240.0	5,106.5	5,189.1	5,034.1	22.9	23.9	95.65	529.8	-964.0	624.8	579.4	45.36	13.774		
5,300.0	5,164.4	5,248.4	5,090.8	23.2	24.3	95.75	537.1	-980.1	633.6	587.6	46.02	13.768		
5,314.9	5,178.8	5,263.2	5,104.9	23.3	24.4	95.76	539.0	-984.1	635.8	589.6	46.17	13.771		
5,400.0	5,261.5	5,353.4	5,191.2	23.6	24.8	95.72	549.8	-1,007.8	647.7	600.8	46.94	13.800		
5,413.4	5,274.6	5,367.9	5,205.2	23.6	24.9	95.70	551.4	-1,011.4	649.5	602.5	47.05	13.805		
5,500.0	5,359.5	5,462.4	5,296.6	23.9	25.3	95.62	561.4	-1,033.3	660.2	612.4	47.72	13.833		
5,511.8	5,371.1	5,475.4	5,309.2	24.0	25.3	95.61	562.7	-1,036.0	661.5	613.7	47.81	13.837		
5,600.0	5,458.0	5,572.1	5,403.6	24.2	25.7	95.50	571.4	-1,055.2	670.8	622.4	48.41	13.856		
5,610.2	5,468.2	5,583.3	5,414.6	24.3	25.8	95.49	572.3	-1,057.2	671.7	623.3	48.47	13.858		
5,700.0	5,557.2	5,682.2	5,511.8	24.5	26.1	95.36	579.7	-1,073.4	679.5	630.5	49.00	13.868		
5,708.6	5,565.7	5,691.7	5,521.3	24.5	26.1	95.34	580.3	-1,074.8	680.2	631.1	49.04	13.868		
5,800.0	5,656.7	5,792.7	5,621.2	24.7	26.4	95.18	586.3	-1,087.9	686.4	636.9	49.49	13.869		
5,807.1	5,663.7	5,800.6	5,629.0	24.7	26.4	95.17	586.7	-1,088.7	686.8	637.2	49.52	13.869		
5,900.0	5,756.5	5,903.6	5,731.5	24.9	26.6	94.98	591.1	-1,098.5	691.3	641.4	49.88	13.860		
5,905.5	5,761.9	5,909.8	5,737.6	24.9	26.6	94.97	591.4	-1,099.0	691.5	641.6	49.90	13.860		
6,000.0	5,856.4	6,014.8	5,842.4	25.0	26.8	94.74	594.2	-1,105.3	694.4	644.2	50.17	13.841		
6,003.9	5,860.3	6,019.2	5,846.8	25.0	26.8	94.73	594.3	-1,105.5	694.5	644.3	50.18	13.840		
6,032.5	5,888.9	6,051.0	5,878.6	25.0	26.9	-0.53	594.9	-1,106.7	695.0	646.6	32.34	21.492		
6,062.5	5,918.9	6,084.4	5,912.0	25.1	26.9	-0.61	595.3	-1,107.6	695.3	662.9	32.45	21.429		
6,100.0	5,956.4	6,126.2	5,953.8	25.1	27.0	-90.72	595.5	-1,108.2	695.6	645.2	50.37	13.810		
6,102.3	5,958.7	6,128.9	5,956.4	25.1	27.0	-90.74	595.5	-1,108.2	695.6	645.2	50.37	13.810		
6,150.0	6,006.2	6,178.6	6,006.2	25.1	27.0	-91.10	595.6	-1,108.3	695.7	645.3	50.38	13.809		
6,200.0	6,055.6	6,229.4	6,056.9	25.1	27.0	-91.61	595.6	-1,106.7	695.9	645.5	50.32	13.829		
6,200.8	6,056.3	6,230.2	6,057.7	25.1	27.0	-91.61	595.6	-1,106.6	695.9	645.5	50.32	13.830		
6,250.0	6,104.3	6,280.6	6,107.8	25.0	27.0	-92.11	595.6	-1,101.4	696.1	645.9	50.19	13.870		
6,299.2	6,151.3	6,331.5	6,157.9	24.9	27.0	-92.60	595.6	-1,092.6	696.3	646.3	50.00	13.927		
6,300.0	6,152.1	6,332.3	6,158.8	24.9	27.0	-92.61	595.6	-1,092.4	696.3	646.3	49.99	13.928		
6,350.0	6,198.7	6,384.5	6,209.4	24.8	26.9	-93.10	595.6	-1,079.6	696.6	646.9	49.75	14.003		
6,397.6	6,241.9	6,434.7	6,257.0	24.7	26.8	-93.55	595.6	-1,063.9	696.9	647.5	49.48	14.086		
6,400.0	6,244.1	6,437.2	6,259.3	24.7	26.8	-93.57	595.6	-1,063.1	697.0	647.5	49.46	14.091		
6,450.0	6,287.8	6,490.3	6,308.4	24.5	26.7	-94.03	595.6	-1,042.6	697.3	648.2	49.15	14.188		
6,496.0	6,326.5	6,539.7	6,352.5	24.4	26.6	-94.43	595.6	-1,020.5	697.7	648.8	48.85	14.282		
6,500.0	6,329.7	6,543.9	6,356.2	24.4	26.6	-94.47	595.6	-1,018.4	697.7	648.9	48.83	14.290		
6,550.0	6,369.6	6,598.0	6,402.4	24.3	26.4	-94.88	595.6	-990.5	698.1	649.6	48.51	14.392		
6,594.5	6,403.3	6,646.4	6,442.0	24.2	26.3	-95.23	595.6	-962.5	698.5	650.3	48.25	14.479		
6,600.0	6,407.3	6,652.5	6,446.8	24.2	26.3	-95.27	595.6	-958.8	698.6	650.4	48.21	14.489		
6,650.0	6,442.7	6,707.4	6,488.9	24.1	26.1	-95.64	595.6	-923.6	699.0	651.0	47.96	14.573		
6,692.9	6,471.0	6,754.8	6,523.0	24.0	26.0	-95.93	595.6	-890.7	699.4	651.5	47.81	14.629		
6,700.0	6,475.5	6,762.7	6,528.5	24.0	26.0	-95.98	595.6	-885.0	699.4	651.6	47.78	14.637		
6,750.0	6,505.6	6,818.4	6,565.2	24.0	25.9	-96.28	595.6	-843.1	699.8	652.1	47.69	14.673		
6,791.3	6,528.3	6,864.7	6,593.2	24.0	25.9	-96.51	595.6	-806.3	700.1	652.4	47.70	14.676		
6,800.0	6,532.8	6,874.4	6,598.8	24.0	25.9	-96.56	595.6	-798.3	700.2	652.5	47.71	14.675		
6,850.0	6,557.0	6,930.8	6,628.9	24.1	25.9	-96.79	595.6	-750.7	700.5	652.7	47.86	14.636		
6,889.7	6,574.1	6,975.7	6,650.1	24.2	25.9	-96.96	595.6	-711.1	700.8	652.7	48.09	14.572		
6,900.0	6,578.1	6,987.4	6,655.2	24.3	25.9	-96.99	595.6	-700.6	700.8	652.7	48.16	14.553		
6,950.0	6,596.1	7,044.2	6,677.6	24.5	26.0	-97.16	595.6	-648.4	701.1	652.4	48.61	14.423		
6,988.2	6,607.5	7,087.7	6,692.0	24.7	26.2	-97.25	595.6	-607.4	701.2	652.1	49.07	14.290		
7,000.0	6,610.7	7,101.2	6,695.9	24.8	26.2	-97.28	595.6	-594.5	701.2	652.0	49.22	14.248		
7,050.0	6,621.9	7,158.3	6,709.9	25.1	26.5	-97.36	595.6	-539.1	701.4	651.4	49.99	14.029		

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	7,200.2	6,717.2	25.4	26.7	-97.39	595.6	-497.9	701.4	650.8	50.66	13.847	
7,100.0	6,629.7	7,215.5	6,719.3	25.6	26.9	-97.40	595.6	-482.7	701.4	650.5	50.92	13.776	
7,150.0	6,634.1	7,272.7	6,724.3	26.0	27.3	-97.40	595.6	-425.7	701.4	649.4	51.98	13.495	
7,185.0	6,635.1	7,312.8	6,725.1	26.4	27.6	-97.37	595.6	-385.6	701.4	648.6	52.79	13.286	
7,196.6	6,635.0	7,325.1	6,724.9	26.5	27.8	-97.36	595.6	-373.4	701.4	648.3	53.06	13.218	
7,200.0	6,635.0	7,328.5	6,724.8	26.6	27.8	-97.36	595.6	-369.9	701.4	648.2	53.14	13.199	
7,283.4	6,633.9	7,411.9	6,723.4	27.6	28.7	-97.33	595.6	-286.5	701.3	646.1	55.18	12.709	
7,300.0	6,633.7	7,428.5	6,723.1	27.8	28.9	-97.33	595.6	-270.0	701.3	645.7	55.62	12.609	
7,381.9	6,632.6	7,510.4	6,721.7	29.0	29.9	-97.30	595.6	-188.1	701.3	643.3	57.96	12.099	
7,400.0	6,632.4	7,528.5	6,721.4	29.2	30.2	-97.29	595.6	-170.0	701.3	642.7	58.51	11.985	
7,480.3	6,631.4	7,608.8	6,720.1	30.5	31.4	-97.27	595.6	-89.7	701.2	640.1	61.11	11.475	
7,500.0	6,631.1	7,628.5	6,719.7	30.9	31.8	-97.26	595.6	-70.0	701.2	639.4	61.78	11.351	
7,578.7	6,630.1	7,707.2	6,718.4	32.3	33.1	-97.23	595.6	8.7	701.2	636.6	64.57	10.859	
7,600.0	6,629.8	7,728.5	6,718.0	32.7	33.5	-97.22	595.6	30.0	701.2	635.8	65.35	10.728	
7,677.1	6,628.9	7,805.6	6,716.7	34.1	34.9	-97.20	595.6	107.1	701.1	632.8	68.30	10.265	
7,700.0	6,628.6	7,828.5	6,716.3	34.6	35.4	-97.19	595.6	130.0	701.1	631.9	69.20	10.132	
7,775.6	6,627.6	7,904.0	6,715.0	36.1	36.9	-97.16	595.6	205.5	701.1	628.8	72.26	9.702	
7,800.0	6,627.3	7,928.5	6,714.6	36.6	37.4	-97.16	595.6	230.0	701.0	627.8	73.27	9.568	
7,874.0	6,626.3	8,002.5	6,713.3	38.2	38.9	-97.13	595.6	304.0	701.0	624.6	76.40	9.175	
7,900.0	6,626.0	8,028.5	6,712.9	38.8	39.5	-97.12	595.6	330.0	701.0	623.5	77.53	9.042	
7,972.4	6,625.1	8,100.9	6,711.7	40.4	41.1	-97.10	595.6	402.4	701.0	620.2	80.71	8.684	
8,000.0	6,624.7	8,128.5	6,711.2	41.0	41.7	-97.09	595.6	429.9	700.9	619.0	81.95	8.554	
8,070.8	6,623.8	8,199.3	6,710.0	42.6	43.3	-97.06	595.6	500.8	700.9	615.7	85.16	8.230	
8,100.0	6,623.4	8,228.5	6,709.5	43.3	44.0	-97.05	595.6	529.9	700.9	614.4	86.50	8.103	
8,169.3	6,622.6	8,297.7	6,708.3	44.9	45.6	-97.03	595.6	599.2	700.9	611.1	89.73	7.811	
8,200.0	6,622.2	8,328.5	6,707.8	45.6	46.3	-97.02	595.6	629.9	700.8	609.7	91.17	7.687	
8,267.7	6,621.3	8,396.2	6,706.6	47.3	47.9	-96.99	595.6	697.6	700.8	606.4	94.39	7.425	
8,300.0	6,620.9	8,428.5	6,706.1	48.0	48.7	-96.98	595.6	729.9	700.8	604.8	95.94	7.305	
8,366.1	6,620.0	8,494.6	6,704.9	49.7	50.3	-96.96	595.6	796.0	700.7	601.6	99.14	7.068	
8,400.0	6,619.6	8,528.5	6,704.4	50.5	51.2	-96.95	595.6	829.9	700.7	599.9	100.79	6.952	
8,464.5	6,618.8	8,593.0	6,703.3	52.1	52.7	-96.93	595.6	894.4	700.7	596.7	103.96	6.740	
8,500.0	6,618.3	8,628.5	6,702.7	53.0	53.6	-96.91	595.6	929.9	700.7	595.0	105.72	6.628	
8,563.0	6,617.5	8,691.4	6,701.6	54.5	55.2	-96.89	595.6	992.8	700.6	591.8	108.85	6.437	
8,600.0	6,617.0	8,728.5	6,700.9	55.5	56.1	-96.88	595.6	1,029.8	700.6	589.9	110.71	6.329	
8,661.4	6,616.3	8,789.9	6,699.9	57.0	57.7	-96.86	595.6	1,091.2	700.6	586.8	113.80	6.156	
8,700.0	6,615.8	8,828.5	6,699.2	58.0	58.7	-96.84	595.6	1,129.8	700.6	584.8	115.75	6.052	
8,759.8	6,615.0	8,888.3	6,698.2	59.5	60.2	-96.82	595.6	1,189.6	700.5	581.8	118.80	5.897	
8,800.0	6,614.5	8,928.5	6,697.5	60.6	61.2	-96.81	595.6	1,229.8	700.5	579.7	120.85	5.797	
8,858.2	6,613.7	8,986.7	6,696.5	62.1	62.7	-96.79	595.6	1,288.1	700.5	576.7	123.83	5.657	
8,900.0	6,613.2	9,028.5	6,695.8	63.2	63.8	-96.78	595.6	1,329.8	700.5	574.5	125.98	5.560	
8,956.7	6,612.5	9,085.1	6,694.8	64.6	65.3	-96.76	595.6	1,386.5	700.4	571.5	128.91	5.434	
9,000.0	6,611.9	9,128.5	6,694.1	65.8	66.4	-96.74	595.6	1,429.8	700.4	569.3	131.16	5.340	
9,055.1	6,611.2	9,183.6	6,693.2	67.2	67.8	-96.72	595.6	1,484.9	700.4	566.4	134.02	5.226	
9,100.0	6,610.6	9,228.5	6,692.4	68.4	69.0	-96.71	595.6	1,529.8	700.4	564.0	136.36	5.136	
9,153.5	6,609.9	9,282.0	6,691.5	69.8	70.4	-96.69	595.6	1,583.3	700.3	561.2	139.17	5.032	
9,200.0	6,609.3	9,328.5	6,690.7	71.0	71.6	-96.67	595.6	1,629.8	700.3	558.7	141.60	4.946	
9,251.9	6,608.7	9,380.4	6,689.8	72.4	73.0	-96.65	595.6	1,681.7	700.3	556.0	144.34	4.852	
9,300.0	6,608.1	9,428.5	6,689.0	73.7	74.3	-96.64	595.6	1,729.7	700.3	553.4	146.87	4.768	
9,350.4	6,607.4	9,478.8	6,688.1	75.0	75.6	-96.62	595.6	1,780.1	700.3	550.7	149.53	4.683	
9,400.0	6,606.8	9,528.5	6,687.3	76.3	76.9	-96.60	595.6	1,829.7	700.2	548.1	152.16	4.602	
9,448.8	6,606.1	9,577.3	6,686.4	77.6	78.2	-96.58	595.6	1,878.5	700.2	545.5	154.75	4.525	
9,500.0	6,605.5	9,628.5	6,685.5	79.0	79.6	-96.57	595.6	1,929.7	700.2	542.7	157.47	4.447	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,604.9	9,675.7	6,684.7	80.2	80.9	-96.55	595.6	1,976.9	700.2	540.2	159.98	4.376	
9,600.0	6,604.2	9,728.5	6,683.8	81.7	82.3	-96.53	595.6	2,029.7	700.1	537.3	162.80	4.301	
9,645.6	6,603.6	9,774.1	6,683.0	82.9	83.5	-96.52	595.6	2,075.3	700.1	534.9	165.24	4.237	
9,700.0	6,602.9	9,828.5	6,682.1	84.3	85.0	-96.50	595.6	2,129.7	700.1	531.9	168.15	4.164	
9,744.1	6,602.3	9,872.5	6,681.4	85.5	86.1	-96.48	595.6	2,173.7	700.1	529.6	170.51	4.106	
9,800.0	6,601.6	9,928.5	6,680.4	87.0	87.7	-96.46	595.6	2,229.7	700.0	526.5	173.51	4.035	
9,842.5	6,601.1	9,971.0	6,679.7	88.2	88.8	-96.45	595.6	2,272.2	700.0	524.2	175.79	3.982	
9,900.0	6,600.3	10,028.5	6,678.7	89.7	90.3	-96.43	595.6	2,329.6	700.0	521.1	178.89	3.913	
9,940.9	6,599.8	10,069.4	6,678.0	90.9	91.5	-96.41	595.6	2,370.6	700.0	518.9	181.10	3.865	
10,000.0	6,599.0	10,128.5	6,677.0	92.5	93.1	-96.39	595.6	2,429.6	699.9	515.7	184.28	3.798	
10,039.3	6,598.5	10,167.8	6,676.3	93.5	94.1	-96.38	595.6	2,469.0	699.9	513.5	186.41	3.755	
10,100.0	6,597.7	10,228.5	6,675.3	95.2	95.8	-96.36	595.6	2,529.6	699.9	510.2	189.69	3.690	
10,137.8	6,597.3	10,266.2	6,674.6	96.2	96.8	-96.35	595.6	2,567.4	699.9	508.1	191.73	3.650	
10,200.0	6,596.5	10,328.5	6,673.5	97.9	98.5	-96.32	595.6	2,629.6	699.8	504.7	195.10	3.587	
10,236.2	6,596.0	10,364.7	6,672.9	98.9	99.5	-96.31	595.6	2,665.8	699.8	502.8	197.07	3.551	
10,300.0	6,595.2	10,428.5	6,671.8	100.6	101.2	-96.29	595.6	2,729.6	699.8	499.3	200.53	3.490	
10,334.6	6,594.7	10,463.1	6,671.2	101.6	102.1	-96.28	595.6	2,764.2	699.8	497.4	202.41	3.457	
10,400.0	6,593.9	10,528.5	6,670.1	103.3	103.9	-96.25	595.6	2,829.6	699.8	493.8	205.97	3.397	
10,433.0	6,593.5	10,561.5	6,669.5	104.2	104.8	-96.24	595.6	2,862.6	699.7	492.0	207.77	3.368	
10,500.0	6,592.6	10,628.5	6,668.4	106.1	106.7	-96.22	595.6	2,929.6	699.7	488.3	211.42	3.310	
10,531.5	6,592.2	10,659.9	6,667.8	106.9	107.5	-96.21	595.6	2,961.0	699.7	486.6	213.13	3.283	
10,600.0	6,591.3	10,728.5	6,666.7	108.8	109.4	-96.19	595.6	3,029.5	699.7	482.8	216.87	3.226	
10,629.9	6,590.9	10,758.4	6,666.2	109.6	110.2	-96.17	595.6	3,059.4	699.6	481.1	218.51	3.202	
10,700.0	6,590.0	10,828.5	6,665.0	111.6	112.1	-96.15	595.6	3,129.5	699.6	477.3	222.34	3.147	
10,728.3	6,589.6	10,856.8	6,664.5	112.3	112.9	-96.14	595.6	3,157.8	699.6	475.7	223.88	3.125	
10,800.0	6,588.7	10,928.5	6,663.2	114.3	114.9	-96.12	595.6	3,229.5	699.6	471.8	227.81	3.071	
10,826.7	6,588.4	10,955.2	6,662.8	115.0	115.6	-96.11	595.6	3,256.3	699.6	470.3	229.27	3.051	
10,900.0	6,587.4	11,028.5	6,661.5	117.0	117.6	-96.08	595.6	3,329.5	699.5	466.2	233.28	2.999	
10,925.2	6,587.1	11,053.6	6,661.1	117.7	118.3	-96.07	595.6	3,354.7	699.5	464.8	234.66	2.981	
11,000.0	6,586.1	11,128.5	6,659.8	119.8	120.4	-96.05	595.6	3,429.5	699.5	460.7	238.77	2.930	
11,023.6	6,585.8	11,152.1	6,659.4	120.4	121.0	-96.04	595.6	3,453.1	699.5	459.4	240.06	2.914	
11,100.0	6,584.8	11,228.5	6,658.1	122.5	123.1	-96.01	595.6	3,529.5	699.4	455.2	244.26	2.864	
11,122.0	6,584.5	11,250.5	6,657.7	123.2	123.7	-96.00	595.6	3,551.5	699.4	454.0	245.47	2.849	
11,200.0	6,583.5	11,328.5	6,656.4	125.3	125.9	-95.98	595.6	3,629.4	699.4	449.6	249.75	2.800	
11,220.4	6,583.3	11,348.9	6,656.0	125.9	126.4	-95.97	595.6	3,649.9	699.4	448.5	250.88	2.788	
11,300.0	6,582.2	11,428.5	6,654.6	128.1	128.6	-95.94	595.6	3,729.4	699.3	444.1	255.25	2.740	
11,318.9	6,582.0	11,447.3	6,654.3	128.6	129.2	-95.94	595.6	3,748.3	699.3	443.0	256.29	2.729	
11,400.0	6,580.9	11,528.5	6,652.9	130.8	131.4	-95.91	595.6	3,829.4	699.3	438.5	260.76	2.682	
11,417.3	6,580.7	11,545.8	6,652.6	131.3	131.9	-95.90	595.6	3,846.7	699.3	437.6	261.71	2.672	
11,500.0	6,579.7	11,628.5	6,651.2	133.6	134.2	-95.87	595.6	3,929.4	699.3	433.0	266.27	2.626	
11,515.7	6,579.4	11,644.2	6,650.9	134.0	134.6	-95.87	595.6	3,945.1	699.2	432.1	267.14	2.618	
11,600.0	6,578.4	11,728.5	6,649.5	136.3	136.9	-95.84	595.6	4,029.4	699.2	427.4	271.79	2.573	
11,614.1	6,578.2	11,742.6	6,649.2	136.7	137.3	-95.83	595.6	4,043.5	699.2	426.6	272.57	2.565	
11,700.0	6,577.1	11,828.5	6,647.7	139.1	139.7	-95.80	595.6	4,129.4	699.2	421.9	277.31	2.521	
11,712.6	6,576.9	11,841.0	6,647.5	139.5	140.0	-95.80	595.6	4,141.9	699.2	421.2	278.00	2.515	
11,800.0	6,575.8	11,928.5	6,646.0	141.9	142.4	-95.77	595.6	4,229.4	699.1	416.3	282.83	2.472	
11,811.0	6,575.6	11,939.5	6,645.8	142.2	142.7	-95.76	595.6	4,240.4	699.1	415.7	283.44	2.467	
11,858.8	6,575.0	11,987.2	6,645.0	143.5	144.1	-95.75	595.6	4,288.1	699.1	413.0	286.08	2.444	
11,859.3	6,575.0	11,987.5	6,645.0	143.5	144.1	-95.75	595.6	4,288.4	699.1	413.0	286.10	2.444 SF	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	0.61	104.9	1.1	104.9				
98.4	98.4	98.4	98.4	0.1	0.1	0.61	104.9	1.1	104.9	104.7	0.19	545.826	
100.0	100.0	100.0	100.0	0.1	0.1	0.61	104.9	1.1	104.9	104.7	0.20	536.587	
196.8	196.8	196.8	196.8	0.3	0.3	0.61	104.9	1.1	104.9	104.3	0.63	166.310	
200.0	200.0	200.0	200.0	0.3	0.3	0.61	104.9	1.1	104.9	104.3	0.65	162.659	
295.3	295.3	295.3	295.3	0.5	0.5	0.61	104.9	1.1	104.9	103.9	1.07	97.756	
300.0	300.0	300.0	300.0	0.5	0.5	0.61	104.9	1.1	104.9	103.8	1.09	95.859	
393.7	393.7	393.7	393.7	0.8	0.8	0.61	104.9	1.1	104.9	103.4	1.52	69.222	
400.0	400.0	400.0	400.0	0.8	0.8	0.61	104.9	1.1	104.9	103.4	1.54	67.952	
492.1	492.1	492.1	492.1	1.0	1.0	0.61	104.9	1.1	104.9	103.0	1.96	53.582	
500.0	500.0	500.0	500.0	1.0	1.0	0.61	104.9	1.1	104.9	102.9	1.99	52.630	
590.5	590.5	590.5	590.5	1.2	1.2	0.61	104.9	1.1	104.9	102.5	2.40	43.707	
600.0	600.0	600.0	600.0	1.2	1.2	0.61	104.9	1.1	104.9	102.5	2.44	42.947	
689.0	689.0	689.0	689.0	1.4	1.4	0.61	104.9	1.1	104.9	102.1	2.84	36.905	
700.0	700.0	700.0	700.0	1.4	1.4	0.61	104.9	1.1	104.9	102.0	2.89	36.273	
787.4	787.4	787.4	787.4	1.6	1.6	0.61	104.9	1.1	104.9	101.6	3.29	31.935	
800.0	800.0	800.0	800.0	1.7	1.7	0.61	104.9	1.1	104.9	101.6	3.34	31.394	
885.8	885.8	885.8	885.8	1.9	1.9	0.61	104.9	1.1	104.9	101.2	3.73	28.145	
900.0	900.0	900.0	900.0	1.9	1.9	0.61	104.9	1.1	104.9	101.1	3.79	27.672	
984.2	984.2	984.2	984.2	2.1	2.1	0.61	104.9	1.1	104.9	100.8	4.17	25.159	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.61	104.9	1.1	104.9	100.7	4.24	24.739	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	0.61	104.9	1.1	104.9	100.3	4.61	22.746	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	0.61	104.9	1.1	104.9	100.2	4.69	22.369 CC, ES	
1,181.1	1,181.1	1,178.5	1,178.5	2.5	2.5	0.88	105.9	1.6	105.9	100.9	5.05	20.982	
1,200.0	1,200.0	1,196.8	1,196.8	2.6	2.6	1.02	106.4	1.9	106.4	101.3	5.13	20.742	
1,279.5	1,279.5	1,273.6	1,273.5	2.7	2.7	97.58	109.5	3.6	109.9	104.4	5.47	20.081	
1,300.0	1,300.0	1,293.4	1,293.2	2.8	2.8	98.16	110.6	4.2	111.2	105.6	5.56	19.993	
1,377.9	1,377.8	1,368.1	1,367.7	2.9	3.0	101.07	115.9	7.1	117.5	111.6	5.89	19.956	
1,400.0	1,399.8	1,389.1	1,388.6	3.0	3.0	102.05	117.7	8.1	119.8	113.8	5.98	20.028	
1,476.4	1,475.9	1,461.3	1,460.4	3.1	3.2	105.83	124.9	12.1	129.5	123.2	6.32	20.513	
1,500.0	1,499.5	1,483.5	1,482.4	3.2	3.2	107.07	127.4	13.4	133.2	126.7	6.42	20.752	
1,574.8	1,573.7	1,553.0	1,551.1	3.4	3.4	111.06	136.3	18.3	146.7	139.9	6.75	21.721	
1,600.0	1,598.7	1,576.1	1,573.9	3.4	3.5	112.38	139.5	20.1	151.9	145.1	6.86	22.139	
1,673.2	1,671.1	1,642.6	1,639.3	3.6	3.7	116.08	149.8	25.7	169.4	162.2	7.20	23.529	
1,700.0	1,697.5	1,666.6	1,662.9	3.7	3.7	117.36	153.9	28.0	176.6	169.3	7.32	24.125	
1,771.6	1,767.9	1,731.8	1,726.7	3.9	3.9	120.63	165.6	34.4	197.8	190.2	7.66	25.823	
1,800.0	1,795.6	1,758.3	1,752.6	4.0	4.0	121.87	170.4	37.0	206.7	198.9	7.79	26.528	
1,870.1	1,864.0	1,823.4	1,816.3	4.3	4.2	124.71	182.3	43.5	229.9	221.7	8.14	28.251	
1,900.0	1,893.1	1,851.0	1,843.3	4.4	4.3	125.84	187.4	46.3	240.2	231.9	8.28	29.016	
1,968.5	1,959.3	1,913.8	1,904.7	4.6	4.6	128.22	198.8	52.6	264.9	256.3	8.62	30.731	
1,992.4	1,982.4	1,935.6	1,926.1	4.7	4.6	129.00	202.8	54.8	273.9	265.2	8.74	31.345	
2,000.0	1,989.6	1,942.5	1,932.8	4.8	4.7	129.28	204.0	55.4	276.8	268.0	8.78	31.529	
2,066.9	2,054.0	2,003.3	1,992.3	5.1	4.9	131.58	215.1	61.5	302.4	293.3	9.13	33.115	
2,100.0	2,085.8	2,033.4	2,021.7	5.2	5.0	132.58	220.6	64.5	315.2	305.9	9.30	33.877	
2,165.3	2,148.7	2,092.8	2,079.8	5.5	5.2	134.34	231.5	70.5	340.7	331.1	9.65	35.295	
2,200.0	2,182.0	2,124.3	2,110.6	5.7	5.4	135.18	237.2	73.6	354.4	344.5	9.84	36.004	
2,263.8	2,243.4	2,182.3	2,167.4	6.0	5.6	136.56	247.8	79.4	379.6	369.4	10.19	37.246	
2,300.0	2,278.2	2,215.2	2,199.6	6.2	5.7	137.26	253.8	82.7	394.1	383.7	10.39	37.922	
2,362.2	2,338.1	2,271.8	2,254.9	6.5	5.9	138.36	264.1	88.4	418.9	408.2	10.74	39.013	
2,400.0	2,374.4	2,306.2	2,288.5	6.7	6.1	138.97	270.4	91.8	434.1	423.1	10.95	39.650	
2,460.6	2,432.8	2,361.3	2,342.4	7.0	6.3	139.86	280.4	97.3	458.5	447.2	11.29	40.608	
2,500.0	2,470.6	2,397.1	2,377.5	7.2	6.4	140.39	286.9	100.9	474.4	462.9	11.51	41.207	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
2,559.0	2,527.4	2,450.8	2,430.0	7.6	6.7	141.13	296.7	106.3	498.3	486.5	11.85	42.049	
2,600.0	2,566.8	2,488.0	2,466.4	7.8	6.8	141.59	303.5	110.0	514.9	502.8	12.08	42.611	
2,657.5	2,622.1	2,540.3	2,517.5	8.1	7.0	142.20	313.1	115.2	538.3	525.9	12.42	43.355	
2,700.0	2,663.0	2,578.9	2,555.3	8.3	7.2	142.62	320.1	119.1	555.6	542.9	12.66	43.883	
2,755.9	2,716.8	2,629.8	2,605.1	8.6	7.4	143.13	329.4	124.1	578.4	565.4	12.99	44.539	
2,800.0	2,759.2	2,669.9	2,644.3	8.9	7.6	143.51	336.7	128.2	596.4	583.2	13.24	45.036	
2,854.3	2,811.5	2,719.3	2,692.6	9.2	7.8	143.94	345.7	133.1	618.6	605.1	13.56	45.617	
2,900.0	2,855.4	2,760.8	2,733.2	9.4	7.9	144.29	353.3	137.2	637.3	623.5	13.83	46.085	
2,952.7	2,906.2	2,808.7	2,780.1	9.7	8.1	144.66	362.0	142.0	658.9	644.8	14.14	46.600	
3,000.0	2,951.6	2,851.7	2,822.2	10.0	8.3	144.97	369.8	146.3	678.3	663.9	14.42	47.042	
3,051.2	3,000.9	2,898.2	2,867.7	10.3	8.5	145.29	378.3	151.0	699.3	684.6	14.72	47.499	
3,100.0	3,047.8	2,942.6	2,911.1	10.5	8.7	145.57	386.4	155.4	719.4	704.4	15.01	47.917	
3,149.6	3,095.5	2,987.7	2,955.2	10.8	8.9	145.85	394.7	159.9	739.8	724.5	15.31	48.323	
3,200.0	3,144.0	3,033.6	3,000.0	11.1	9.1	146.11	403.0	164.5	760.5	744.9	15.61	48.719	
3,248.0	3,190.2	3,077.2	3,042.7	11.4	9.3	146.35	411.0	168.9	780.3	764.4	15.90	49.081	
3,300.0	3,240.2	3,124.5	3,089.0	11.7	9.5	146.60	419.6	173.6	801.7	785.5	16.21	49.457	
3,346.4	3,284.9	3,166.7	3,130.3	11.9	9.7	146.81	427.3	177.8	820.9	804.4	16.49	49.779	
3,400.0	3,336.4	3,215.4	3,177.9	12.2	9.9	147.03	436.2	182.7	842.9	826.1	16.81	50.138	
3,444.9	3,379.6	3,256.2	3,217.8	12.5	10.1	147.22	443.6	186.8	861.5	844.4	17.08	50.425	
3,500.0	3,432.6	3,306.3	3,266.8	12.8	10.3	147.43	452.8	191.8	884.2	866.8	17.42	50.766	
3,543.3	3,474.3	3,345.7	3,305.4	13.1	10.4	147.59	459.9	195.7	902.1	884.4	17.68	51.023	
3,600.0	3,528.8	3,397.3	3,355.8	13.4	10.7	147.79	469.3	200.9	925.5	907.5	18.02	51.348	
3,641.7	3,569.0	3,435.2	3,392.9	13.6	10.8	147.93	476.3	204.7	942.7	924.5	18.28	51.578	
3,700.0	3,625.0	3,488.2	3,444.7	14.0	11.1	148.12	485.9	210.0	966.8	948.2	18.63	51.888	
3,740.1	3,663.6	3,524.7	3,480.4	14.2	11.2	148.25	492.6	213.6	983.4	964.6	18.88	52.094	
3,800.0	3,721.2	3,579.1	3,533.7	14.5	11.5	148.43	502.5	219.0	1,008.2	988.9	19.24	52.391	
3,838.6	3,758.3	3,614.2	3,568.0	14.8	11.6	148.54	508.9	222.5	1,024.1	1,004.7	19.48	52.575	
3,900.0	3,817.4	3,670.0	3,622.6	15.1	11.9	148.71	519.1	228.1	1,049.6	1,029.7	19.86	52.859	
3,937.0	3,853.0	3,703.7	3,655.5	15.3	12.0	148.80	525.2	231.5	1,064.9	1,044.8	20.08	53.025	
4,000.0	3,913.6	3,761.0	3,711.5	15.7	12.3	148.96	535.7	237.2	1,090.9	1,070.5	20.47	53.297	
4,035.4	3,947.7	3,793.2	3,743.0	15.9	12.4	149.05	541.5	240.4	1,105.6	1,084.9	20.69	53.445	
4,100.0	4,009.8	3,851.9	3,800.5	16.3	12.6	149.20	552.2	246.3	1,132.3	1,111.3	21.08	53.706	
4,133.8	4,042.4	3,882.7	3,830.6	16.5	12.8	149.28	557.9	249.4	1,146.4	1,125.1	21.29	53.839	
4,200.0	4,106.0	3,942.8	3,889.4	16.8	13.0	149.43	568.8	255.4	1,173.8	1,152.1	21.70	54.090	
4,232.3	4,137.1	3,972.2	3,918.1	17.0	13.2	149.50	574.2	258.3	1,187.1	1,165.2	21.90	54.209	
4,300.0	4,202.2	4,033.7	3,978.3	17.4	13.4	149.63	585.4	264.5	1,215.2	1,192.9	22.32	54.451	
4,330.7	4,231.7	4,062.7	4,006.6	17.6	13.6	149.70	590.7	267.4	1,227.9	1,205.4	22.51	54.552	
4,400.0	4,298.4	4,165.6	4,107.7	18.0	13.9	149.96	607.8	276.7	1,255.6	1,232.6	22.99	54.621	
4,429.1	4,326.4	4,209.7	4,151.2	18.2	14.1	150.09	614.1	280.2	1,266.6	1,243.4	23.18	54.637	
4,500.0	4,394.6	4,318.7	4,259.1	18.6	14.4	150.46	627.3	287.4	1,291.9	1,268.3	23.64	54.643	
4,527.5	4,421.1	4,361.7	4,301.9	18.7	14.5	150.63	631.5	289.7	1,301.1	1,277.3	23.82	54.632	
4,600.0	4,490.8	4,476.5	4,416.3	19.2	14.7	151.12	640.0	294.4	1,323.8	1,299.5	24.26	54.562	
4,626.0	4,515.8	4,518.2	4,457.9	19.3	14.8	151.32	642.0	295.5	1,331.3	1,306.9	24.42	54.526	
4,700.0	4,587.0	4,638.4	4,578.0	19.8	15.0	151.94	645.0	297.2	1,351.1	1,326.2	24.84	54.396	
4,724.4	4,610.5	4,670.8	4,610.5	19.9	15.0	152.12	645.1	297.2	1,357.0	1,332.1	24.96	54.358	
4,800.0	4,683.2	4,743.6	4,683.2	20.3	15.1	152.52	645.1	297.2	1,375.5	1,350.1	25.34	54.283	
4,822.8	4,705.2	4,765.5	4,705.2	20.5	15.1	152.63	645.1	297.2	1,381.1	1,355.6	25.45	54.259	
4,900.0	4,779.4	4,839.8	4,779.4	20.9	15.3	153.03	645.1	297.2	1,400.0	1,374.1	25.84	54.182	
4,921.2	4,799.8	4,860.2	4,799.8	21.0	15.3	153.13	645.1	297.2	1,405.2	1,379.2	25.94	54.161	
5,000.0	4,875.6	4,936.0	4,875.6	21.5	15.4	153.52	645.1	297.2	1,424.5	1,398.2	26.34	54.091	
5,019.7	4,894.5	4,954.9	4,894.5	21.6	15.4	153.62	645.1	297.2	1,429.4	1,402.9	26.43	54.075	
5,100.0	4,971.8	5,032.2	4,971.8	22.1	15.5	154.00	645.1	297.2	1,449.2	1,422.4	26.83	54.012	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
5,118.1	4,989.2	5,049.6	4,989.2	22.2	15.6	154.08	645.1	297.2	1,453.7	1,426.8	26.92	53.998	
5,200.0	5,068.0	5,128.4	5,068.0	22.7	15.7	154.46	645.1	297.2	1,474.0	1,446.7	27.33	53.941	
5,216.5	5,083.9	5,144.2	5,083.9	22.8	15.7	154.54	645.1	297.2	1,478.1	1,450.7	27.41	53.930	
5,240.0	5,106.5	5,166.9	5,106.5	22.9	15.7	154.64	645.1	297.2	1,483.9	1,456.4	27.52	53.915	
5,300.0	5,164.4	5,224.7	5,164.4	23.2	15.8	155.02	645.1	297.2	1,498.3	1,470.4	27.87	53.750	
5,314.9	5,178.8	5,239.2	5,178.8	23.3	15.9	155.11	645.1	297.2	1,501.7	1,473.7	27.96	53.717	
5,400.0	5,261.5	5,321.9	5,261.5	23.6	16.0	155.58	645.1	297.2	1,519.8	1,491.4	28.41	53.493	
5,413.4	5,274.6	5,334.9	5,274.6	23.6	16.0	155.65	645.1	297.2	1,522.5	1,494.0	28.48	53.457	
5,500.0	5,359.5	5,419.8	5,359.5	23.9	16.1	156.04	645.1	297.2	1,538.3	1,509.4	28.92	53.197	
5,511.8	5,371.1	5,421.0	5,371.8	24.0	36.4	112.53	645.1	-1,055.8	1,533.5	1,474.9	58.59	26.175	
5,600.0	5,458.0	5,518.2	5,458.0	24.2	36.8	108.88	645.1	-1,070.2	1,458.6	1,398.8	59.86	24.368	
5,610.2	5,468.2	5,528.4	5,468.2	24.3	36.8	108.47	645.1	-1,071.7	1,450.0	1,390.0	59.98	24.173	
5,700.0	5,557.2	5,617.4	5,557.2	24.5	37.1	105.01	645.1	-1,083.3	1,374.9	1,313.9	60.94	22.560	
5,708.6	5,565.7	5,625.9	5,565.7	24.5	37.1	104.69	645.1	-1,084.2	1,367.7	1,306.7	61.02	22.415	
5,800.0	5,656.7	5,716.9	5,656.7	24.7	37.4	101.50	645.1	-1,092.9	1,292.8	1,231.1	61.67	20.962	
5,807.1	5,663.7	5,723.9	5,663.7	24.7	37.4	101.26	645.1	-1,093.4	1,287.0	1,225.3	61.71	20.856	
5,900.0	5,756.5	5,812.7	5,756.5	24.9	37.5	98.41	645.1	-1,099.0	1,212.9	1,150.8	62.09	19.533	
5,905.5	5,761.9	5,818.1	5,761.9	24.9	37.5	98.26	645.1	-1,099.2	1,208.6	1,146.5	62.11	19.459	
6,000.0	5,856.4	5,912.6	5,856.4	25.0	37.6	95.81	645.1	-1,101.7	1,135.8	1,073.6	62.26	18.243	
6,003.9	5,860.3	5,916.5	5,860.3	25.0	37.6	95.72	645.1	-1,101.7	1,132.9	1,070.6	62.26	18.195	
6,032.5	5,888.9	5,941.1	5,888.9	25.0	37.6	-0.12	645.1	-1,101.8	1,111.5	1,079.4	32.14	34.587	
6,062.5	5,918.9	5,971.1	5,918.9	25.1	37.6	-0.12	645.1	-1,101.7	1,089.4	1,057.2	32.19	33.847	
6,100.0	5,956.4	6,008.8	5,956.4	25.1	37.6	-93.16	645.1	-1,100.7	1,062.4	1,000.3	62.10	17.108	
6,102.3	5,958.7	6,011.1	5,958.7	25.1	37.6	-93.34	645.1	-1,100.6	1,060.7	998.6	62.08	17.087	
6,150.0	6,006.2	6,062.4	6,006.2	25.1	37.5	-96.71	645.1	-1,096.2	1,027.5	965.9	61.58	16.686	
6,200.0	6,055.6	6,111.2	6,055.6	25.1	37.3	-99.66	645.1	-1,088.3	994.2	933.3	60.86	16.335	
6,200.8	6,056.3	6,112.1	6,056.3	25.1	37.2	-99.70	645.1	-1,088.2	993.7	932.8	60.85	16.330	
6,250.0	6,104.3	6,158.6	6,104.3	25.0	37.0	-102.04	645.1	-1,077.0	962.6	902.6	60.03	16.037	
6,299.2	6,151.3	6,202.6	6,151.3	24.9	36.6	-103.84	645.1	-1,062.5	933.6	874.4	59.15	15.782	
6,300.0	6,152.1	6,204.2	6,152.1	24.9	36.6	-103.86	645.1	-1,062.3	933.1	874.0	59.14	15.778	
6,350.0	6,198.7	6,252.9	6,198.7	24.8	36.1	-105.18	645.1	-1,044.3	905.8	847.6	58.24	15.553	
6,397.6	6,241.9	6,293.5	6,241.9	24.7	35.6	-106.00	645.1	-1,024.1	882.0	824.6	57.40	15.366	
6,400.0	6,244.1	6,296.1	6,244.1	24.7	35.6	-106.03	645.1	-1,023.0	880.8	823.5	57.36	15.357	
6,450.0	6,287.8	6,340.6	6,287.8	24.5	35.0	-106.46	645.1	-998.7	858.4	801.8	56.51	15.190	
6,496.0	6,326.5	6,373.0	6,326.5	24.4	34.4	-106.53	645.1	-973.7	839.8	784.1	55.75	15.064	
6,500.0	6,329.7	6,372.7	6,329.7	24.4	34.3	-106.52	645.1	-971.4	838.4	782.7	55.69	15.054	
6,550.0	6,369.6	6,419.6	6,369.6	24.3	33.6	-106.25	645.1	-941.2	820.8	766.0	54.90	14.953	
6,594.5	6,403.3	6,453.3	6,403.3	24.2	32.9	-105.78	645.1	-912.1	807.3	753.1	54.23	14.888	
6,600.0	6,407.3	6,457.3	6,407.3	24.2	32.8	-105.71	645.1	-908.4	805.8	751.6	54.14	14.882	
6,650.0	6,442.7	6,492.7	6,442.7	24.1	31.9	-104.94	645.1	-873.0	793.0	739.6	53.41	14.847	
6,692.9	6,471.0	6,521.9	6,471.0	24.0	31.2	-104.14	645.1	-840.7	783.8	731.0	52.80	14.846 SF	
6,700.0	6,475.5	6,520.5	6,475.5	24.0	31.0	-104.00	645.1	-835.2	782.4	729.7	52.69	14.849	
6,750.0	6,505.6	6,555.6	6,505.6	24.0	30.1	-102.94	645.1	-795.2	773.8	721.8	52.00	14.880	
6,791.3	6,528.3	6,578.3	6,528.3	24.0	29.3	-102.01	645.1	-760.6	768.0	716.6	51.43	14.932	
6,800.0	6,532.8	6,582.8	6,532.8	24.0	29.1	-101.81	645.1	-753.2	766.9	715.6	51.31	14.947	
6,850.0	6,557.0	6,607.0	6,557.0	24.1	28.1	-100.67	645.1	-709.4	761.6	710.9	50.64	15.039	
6,889.7	6,574.1	6,624.1	6,574.1	24.2	27.3	-99.79	645.1	-673.5	758.2	708.1	50.13	15.127	
6,900.0	6,578.1	6,628.1	6,578.1	24.3	27.1	-99.57	645.1	-664.1	757.5	707.5	49.99	15.154	
6,950.0	6,596.1	6,646.1	6,596.1	24.5	26.0	-98.56	645.1	-617.4	754.5	705.1	49.35	15.288	
6,988.2	6,607.5	6,657.5	6,607.5	24.7	25.2	-97.88	645.1	-580.9	752.8	703.9	48.91	15.392	
7,000.0	6,610.7	6,660.7	6,610.7	24.8	25.0	-97.69	645.1	-569.5	752.4	703.6	48.76	15.429	
7,050.0	6,621.9	6,671.9	6,621.9	25.1	24.0	-96.98	645.1	-520.8	750.9	702.7	48.20	15.578	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	7,249.9	6,714.9	25.4	23.2	-96.59	645.1	-484.7	750.2	702.3	47.84	15.680	
7,100.0	6,629.7	7,236.6	6,714.9	25.6	23.0	-96.47	645.1	-471.4	750.0	702.3	47.71	15.721	
7,150.0	6,634.1	7,186.8	6,715.0	26.0	22.0	-96.19	645.1	-421.6	749.5	702.3	47.24	15.866	
7,185.0	6,635.1	7,147.6	6,714.1	26.4	21.2	-96.05	645.1	-382.4	749.3	702.4	46.90	15.977	
7,196.6	6,635.0	7,134.6	6,713.3	26.5	21.0	-96.00	645.1	-369.5	749.2	702.4	46.80	16.011	
7,200.0	6,635.0	7,130.8	6,713.0	26.6	20.9	-95.99	645.1	-365.6	749.2	702.5	46.77	16.020	
7,283.4	6,633.9	7,038.5	6,700.2	27.6	19.3	-95.10	645.1	-274.3	748.2	701.9	46.31	16.158	
7,300.0	6,633.7	7,020.7	6,696.4	27.8	19.0	-94.83	645.1	-256.9	747.9	701.6	46.26	16.169	
7,381.9	6,632.6	6,935.5	6,672.3	29.0	17.8	-93.06	645.1	-175.3	746.3	699.9	46.37	16.094	
7,400.0	6,632.4	6,917.5	6,665.9	29.2	17.6	-92.59	645.1	-158.4	746.0	699.5	46.44	16.064	
7,480.3	6,631.4	6,841.8	6,634.7	30.5	17.2	-90.26	645.1	-89.5	745.1	698.1	47.03	15.844	
7,488.6	6,631.3	6,834.4	6,631.3	30.7	17.2	-90.00	645.1	-82.9	745.1	698.0	47.11	15.818	
7,500.0	6,631.1	6,824.3	6,626.5	30.9	17.2	-89.64	645.1	-74.1	745.1	697.9	47.21	15.783	
7,578.7	6,630.1	6,758.9	6,592.4	32.3	17.2	-87.08	645.1	-18.2	746.5	698.4	48.12	15.514	
7,600.0	6,629.8	6,742.4	6,583.0	32.7	17.2	-86.37	645.1	-4.7	747.3	698.9	48.38	15.447	
7,677.1	6,628.9	6,686.9	6,549.2	34.1	17.2	-83.83	645.1	39.3	752.3	702.8	49.47	15.208	
7,700.0	6,628.6	6,671.6	6,539.3	34.6	17.2	-83.09	645.1	50.9	754.4	704.7	49.79	15.151	
7,775.6	6,627.6	6,625.0	6,507.6	36.1	17.2	-80.73	645.1	85.1	764.0	713.1	50.96	14.994	
7,800.0	6,627.3	6,611.0	6,497.6	36.6	17.3	-80.00	645.1	94.9	768.0	716.7	51.33	14.963	
7,874.0	6,626.3	6,571.9	6,468.8	38.2	17.3	-77.89	645.1	121.4	782.8	730.3	52.52	14.906	
7,900.0	6,626.0	6,559.2	6,459.2	38.8	17.3	-77.19	645.1	129.6	789.0	736.1	52.93	14.907	
7,972.4	6,625.1	6,526.3	6,433.6	40.4	17.3	-75.35	645.1	150.2	809.2	755.0	54.12	14.950	
8,000.0	6,624.7	6,514.8	6,424.3	41.0	17.3	-74.70	645.1	157.1	817.9	763.4	54.57	14.988	
8,070.8	6,623.8	6,487.2	6,401.8	42.6	17.3	-73.11	645.1	173.1	843.2	787.4	55.76	15.121	
8,100.0	6,623.4	6,476.6	6,393.0	43.3	17.3	-72.50	645.1	179.0	854.7	798.4	56.25	15.195	
8,169.3	6,622.6	6,450.0	6,370.5	44.9	17.3	-70.96	645.1	193.2	884.5	827.1	57.37	15.417	
8,200.0	6,622.2	6,450.0	6,370.5	45.6	17.3	-70.96	645.1	193.2	898.9	840.8	58.06	15.482	
8,267.7	6,621.3	6,423.8	6,347.9	47.3	17.3	-69.43	645.1	206.4	932.6	873.5	59.13	15.773	
8,300.0	6,620.9	6,415.0	6,340.2	48.0	17.3	-68.91	645.1	210.6	949.8	890.1	59.69	15.913	
8,366.1	6,620.0	6,400.0	6,326.9	49.7	17.3	-68.04	645.1	217.6	986.9	926.0	60.90	16.206	
8,400.0	6,619.6	6,400.0	6,326.9	50.5	17.3	-68.04	645.1	217.6	1,006.9	945.3	61.67	16.328	
8,464.5	6,618.8	6,375.3	6,304.8	52.1	17.3	-66.60	645.1	228.6	1,046.5	983.9	62.62	16.714	
8,500.0	6,618.3	6,367.8	6,298.0	53.0	17.3	-66.16	645.1	231.7	1,069.2	1,006.0	63.25	16.904	
8,563.0	6,617.5	6,350.0	6,281.7	54.5	17.4	-65.13	645.1	239.0	1,110.9	1,046.6	64.27	17.285	
8,600.0	6,617.0	6,350.0	6,281.7	55.5	17.4	-65.13	645.1	239.0	1,136.2	1,071.0	65.12	17.447	
8,661.4	6,616.3	6,350.0	6,281.7	57.0	17.4	-65.13	645.1	239.0	1,179.4	1,112.9	66.55	17.723	
8,700.0	6,615.8	6,330.9	6,264.0	58.0	17.4	-64.03	645.1	246.3	1,207.1	1,140.1	66.93	18.035	
8,759.8	6,615.0	6,321.4	6,255.2	59.5	17.4	-63.48	645.1	249.7	1,251.2	1,183.1	68.05	18.385	
8,800.0	6,614.5	6,315.3	6,249.5	60.6	17.4	-63.13	645.1	251.9	1,281.4	1,212.6	68.81	18.623	
8,858.2	6,613.7	6,300.0	6,235.1	62.1	17.4	-62.26	645.1	257.1	1,326.1	1,256.4	69.70	19.025	
8,900.0	6,613.2	6,300.0	6,235.1	63.2	17.4	-62.26	645.1	257.1	1,358.6	1,287.9	70.67	19.225	
8,956.7	6,612.5	6,300.0	6,235.1	64.6	17.4	-62.26	645.1	257.1	1,403.5	1,331.5	71.99	19.497	
9,000.0	6,611.9	6,300.0	6,235.1	65.8	17.4	-62.26	645.1	257.1	1,438.4	1,365.4	72.99	19.706	
9,055.1	6,611.2	6,282.2	6,218.3	67.2	17.3	-61.26	645.1	262.8	1,483.2	1,409.5	73.70	20.125	
9,100.0	6,610.6	6,277.2	6,213.5	68.4	17.3	-60.98	645.1	264.3	1,520.1	1,445.6	74.57	20.386	
9,153.5	6,609.9	6,271.5	6,208.0	69.8	17.3	-60.66	645.1	266.0	1,564.7	1,489.1	75.62	20.693	
9,200.0	6,609.3	6,266.7	6,203.5	71.0	17.3	-60.40	645.1	267.3	1,603.8	1,527.3	76.53	20.958	
9,251.9	6,608.7	6,250.0	6,187.4	72.4	17.3	-59.48	645.1	271.9	1,648.1	1,571.0	77.13	21.368	
9,300.0	6,608.1	6,250.0	6,187.4	73.7	17.3	-59.47	645.1	271.9	1,689.2	1,610.9	78.24	21.591	
9,350.4	6,607.4	6,250.0	6,187.4	75.0	17.3	-59.47	645.1	271.9	1,732.6	1,653.2	79.40	21.820	
9,400.0	6,606.8	6,250.0	6,187.4	76.3	17.3	-59.47	645.1	271.9	1,775.8	1,695.3	80.56	22.045	
9,448.8	6,606.1	6,250.0	6,187.4	77.6	17.3	-59.47	645.1	271.9	1,818.6	1,736.9	81.69	22.262	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,605.5	6,250.0	6,187.4	79.0	17.3	-59.47	645.1	271.9	1,863.8	1,780.9	82.88	22.487	
9,547.2	6,604.9	6,250.0	6,187.4	80.2	17.3	-59.47	645.1	271.9	1,905.7	1,821.7	83.99	22.691	
9,600.0	6,604.2	6,250.0	6,187.4	81.7	17.3	-59.47	645.1	271.9	1,952.9	1,867.7	85.22	22.916	
9,645.6	6,603.6	6,229.6	6,167.7	82.9	17.3	-58.36	645.1	277.0	1,993.6	1,908.1	85.43	23.334	
9,700.0	6,602.9	6,225.9	6,164.1	84.3	17.3	-58.16	645.1	277.9	2,042.5	1,956.0	86.54	23.603	
9,744.1	6,602.3	6,223.0	6,161.3	85.5	17.3	-58.01	645.1	278.5	2,082.4	1,995.0	87.43	23.817	
9,800.0	6,601.6	6,219.5	6,157.8	87.0	17.3	-57.82	645.1	279.3	2,133.2	2,044.7	88.57	24.085	
9,842.5	6,601.1	6,200.0	6,138.7	88.2	17.3	-56.78	645.1	283.4	2,172.3	2,083.6	88.68	24.497	
9,900.0	6,600.3	6,200.0	6,138.7	89.7	17.3	-56.78	645.1	283.4	2,224.8	2,134.8	90.00	24.722	
9,940.9	6,599.8	6,200.0	6,138.7	90.9	17.3	-56.78	645.1	283.4	2,262.4	2,171.5	90.94	24.879	
10,000.0	6,599.0	6,200.0	6,138.7	92.5	17.3	-56.78	645.1	283.4	2,316.8	2,224.5	92.30	25.102	
10,039.3	6,598.5	6,200.0	6,138.7	93.5	17.3	-56.78	645.1	283.4	2,353.2	2,260.0	93.20	25.248	
10,100.0	6,597.7	6,200.0	6,138.7	95.2	17.3	-56.78	645.1	283.4	2,409.4	2,314.8	94.60	25.469	
10,137.8	6,597.3	6,200.0	6,138.7	96.2	17.3	-56.78	645.1	283.4	2,444.6	2,349.1	95.47	25.605	
10,200.0	6,596.5	6,200.0	6,138.7	97.9	17.3	-56.78	645.1	283.4	2,502.6	2,405.7	96.91	25.824	
10,236.2	6,596.0	6,200.0	6,138.7	98.9	17.3	-56.78	645.1	283.4	2,536.5	2,438.7	97.75	25.949	
10,300.0	6,595.2	6,200.0	6,138.7	100.6	17.3	-56.78	645.1	283.4	2,596.3	2,497.1	99.23	26.166	
10,334.6	6,594.7	6,200.0	6,138.7	101.6	17.3	-56.78	645.1	283.4	2,628.9	2,528.8	100.03	26.281	
10,400.0	6,593.9	6,200.0	6,138.7	103.3	17.3	-56.78	645.1	283.4	2,690.5	2,588.9	101.54	26.496	
10,433.0	6,593.5	6,200.0	6,138.7	104.2	17.3	-56.78	645.1	283.4	2,721.7	2,619.4	102.31	26.602	
10,500.0	6,592.6	6,200.0	6,138.7	106.1	17.3	-56.78	645.1	283.4	2,785.0	2,681.2	103.87	26.814	
10,531.5	6,592.2	6,200.0	6,138.7	106.9	17.3	-56.78	645.1	283.4	2,814.9	2,710.3	104.60	26.911	
10,600.0	6,591.3	6,200.0	6,138.7	108.8	17.3	-56.78	645.1	283.4	2,880.0	2,773.8	106.19	27.121	
10,629.9	6,590.9	6,180.0	6,119.0	109.6	17.3	-55.73	645.1	287.1	2,908.1	2,802.3	105.77	27.494	
10,700.0	6,590.0	6,177.4	6,116.5	111.6	17.3	-55.60	645.1	287.5	2,974.8	2,867.5	107.24	27.739	
10,728.3	6,589.6	6,176.4	6,115.6	112.3	17.3	-55.55	645.1	287.6	3,001.8	2,893.9	107.84	27.837	
10,800.0	6,588.7	6,174.0	6,113.2	114.3	17.3	-55.43	645.1	288.0	3,070.2	2,960.9	109.34	28.079	
10,826.7	6,588.4	6,173.1	6,112.3	115.0	17.3	-55.38	645.1	288.2	3,095.8	2,985.9	109.91	28.167	
10,900.0	6,587.4	6,170.7	6,109.9	117.0	17.3	-55.26	645.1	288.5	3,165.9	3,054.4	111.45	28.407	
10,925.2	6,587.1	6,150.0	6,089.4	117.7	17.3	-54.21	645.1	291.5	3,190.4	3,079.6	110.78	28.798	
11,000.0	6,586.1	6,150.0	6,089.4	119.8	17.3	-54.21	645.1	291.5	3,262.1	3,149.6	112.48	29.000	
11,023.6	6,585.8	6,150.0	6,089.4	120.4	17.3	-54.21	645.1	291.5	3,284.7	3,171.7	113.02	29.063	
11,100.0	6,584.8	6,150.0	6,089.4	122.5	17.3	-54.21	645.1	291.5	3,358.2	3,243.4	114.76	29.263	
11,122.0	6,584.5	6,150.0	6,089.4	123.2	17.3	-54.21	645.1	291.5	3,379.3	3,264.1	115.26	29.319	
11,200.0	6,583.5	6,150.0	6,089.4	125.3	17.3	-54.21	645.1	291.5	3,454.4	3,337.4	117.03	29.517	
11,220.4	6,583.3	6,150.0	6,089.4	125.9	17.3	-54.21	645.1	291.5	3,474.2	3,356.7	117.50	29.567	
11,300.0	6,582.2	6,150.0	6,089.4	128.1	17.3	-54.20	645.1	291.5	3,550.9	3,431.6	119.31	29.762	
11,318.9	6,582.0	6,150.0	6,089.4	128.6	17.3	-54.20	645.1	291.5	3,569.2	3,449.4	119.74	29.807	
11,400.0	6,580.9	6,150.0	6,089.4	130.8	17.3	-54.20	645.1	291.5	3,647.6	3,526.0	121.59	29.999	
11,417.3	6,580.7	6,150.0	6,089.4	131.3	17.3	-54.20	645.1	291.5	3,664.4	3,542.4	121.99	30.039	
11,500.0	6,579.7	6,150.0	6,089.4	133.6	17.3	-54.20	645.1	291.5	3,744.5	3,620.6	123.87	30.228	
11,515.7	6,579.4	6,150.0	6,089.4	134.0	17.3	-54.20	645.1	291.5	3,759.7	3,635.5	124.23	30.264	
11,600.0	6,578.4	6,150.0	6,089.4	136.3	17.3	-54.20	645.1	291.5	3,841.5	3,715.4	126.16	30.450	
11,614.1	6,578.2	6,150.0	6,089.4	136.7	17.3	-54.20	645.1	291.5	3,855.3	3,728.8	126.48	30.481	
11,700.0	6,577.1	6,150.0	6,089.4	139.1	17.3	-54.20	645.1	291.5	3,938.7	3,810.2	128.44	30.665	
11,712.6	6,576.9	6,150.0	6,089.4	139.5	17.3	-54.20	645.1	291.5	3,950.9	3,822.2	128.73	30.692	
11,800.0	6,575.8	6,150.0	6,089.4	141.9	17.3	-54.20	645.1	291.5	4,036.0	3,905.3	130.73	30.873	
11,811.0	6,575.6	6,150.0	6,089.4	142.2	17.3	-54.20	645.1	291.5	4,046.7	3,915.7	130.98	30.896	
11,858.8	6,575.0	6,150.0	6,089.4	143.5	17.3	-54.20	645.1	291.5	4,093.2	3,961.2	132.07	30.993	
11,859.3	6,575.0	6,150.0	6,089.4	143.5	17.3	-54.20	645.1	291.5	4,093.8	3,961.7	132.08	30.995	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	77.700	
100.0	100.0	100.0	100.0	0.1	0.1	0.00	14.9	0.0	14.9	14.7	0.20	76.385	
196.8	196.8	196.8	196.8	0.3	0.3	0.00	14.9	0.0	14.9	14.3	0.63	23.675	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	14.9	0.0	14.9	14.3	0.65	23.155	
295.3	295.3	295.3	295.3	0.5	0.5	0.00	14.9	0.0	14.9	13.9	1.07	13.916	
300.0	300.0	300.0	300.0	0.5	0.5	0.00	14.9	0.0	14.9	13.8	1.09	13.646	
393.7	393.7	393.7	393.7	0.8	0.8	0.00	14.9	0.0	14.9	13.4	1.52	9.854	
400.0	400.0	400.0	400.0	0.8	0.8	0.00	14.9	0.0	14.9	13.4	1.54	9.673	
492.1	492.1	492.1	492.1	1.0	1.0	0.00	14.9	0.0	14.9	13.0	1.96	7.628	
500.0	500.0	500.0	500.0	1.0	1.0	0.00	14.9	0.0	14.9	12.9	1.99	7.492	
590.5	590.5	590.5	590.5	1.2	1.2	0.00	14.9	0.0	14.9	12.5	2.40	6.222	
600.0	600.0	600.0	600.0	1.2	1.2	0.00	14.9	0.0	14.9	12.5	2.44	6.114	
689.0	689.0	689.0	689.0	1.4	1.4	0.00	14.9	0.0	14.9	12.1	2.84	5.254	
700.0	700.0	700.0	700.0	1.4	1.4	0.00	14.9	0.0	14.9	12.0	2.89	5.164	
787.4	787.4	787.4	787.4	1.6	1.6	0.00	14.9	0.0	14.9	11.7	3.29	4.546	
800.0	800.0	800.0	800.0	1.7	1.7	0.00	14.9	0.0	14.9	11.6	3.34	4.469	
885.8	885.8	885.8	885.8	1.9	1.9	0.00	14.9	0.0	14.9	11.2	3.73	4.007	
900.0	900.0	900.0	900.0	1.9	1.9	0.00	14.9	0.0	14.9	11.1	3.79	3.939	
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	3.522	
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	3.238	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	0.00	14.9	0.0	14.9	10.2	4.69	3.184	
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	2.906 CC	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	99.37	14.9	0.0	15.1	9.6	5.49	2.748	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	101.75	14.9	0.0	15.2	9.6	5.58	2.725	
1,377.9	1,377.8	1,377.9	1,377.9	2.9	3.0	118.46	14.4	0.9	16.3	10.4	5.89	2.760	
1,400.0	1,399.8	1,399.8	1,399.8	3.0	3.0	125.04	14.1	1.5	17.0	11.0	5.98	2.843	
1,476.4	1,475.9	1,475.5	1,475.4	3.1	3.1	147.97	12.4	4.7	22.5	16.3	6.27	3.594	
1,500.0	1,499.5	1,498.7	1,498.6	3.2	3.2	153.92	11.6	6.0	25.3	19.0	6.36	3.983	
1,574.8	1,573.7	1,571.7	1,571.3	3.4	3.3	167.88	8.8	11.3	37.4	30.8	6.64	5.633	
1,600.0	1,598.7	1,596.0	1,595.5	3.4	3.4	171.18	7.6	13.4	42.5	35.8	6.74	6.312	
1,673.2	1,671.1	1,665.8	1,664.8	3.6	3.5	178.14	3.8	20.5	60.1	53.1	7.02	8.558	
1,700.0	1,697.5	1,691.0	1,689.8	3.7	3.6	179.97	2.2	23.4	67.4	60.3	7.12	9.470	
1,771.6	1,767.9	1,757.5	1,755.5	3.9	3.8	-176.32	-2.5	32.0	89.5	82.1	7.40	12.092	
1,800.0	1,795.6	1,783.3	1,781.1	4.0	3.8	-175.20	-4.6	35.7	99.1	91.6	7.51	13.201	
1,870.1	1,864.0	1,846.1	1,842.8	4.3	4.0	-173.00	-9.9	45.5	125.1	117.3	7.78	16.070	
1,900.0	1,893.1	1,872.4	1,868.6	4.4	4.1	-172.25	-12.4	50.0	137.0	129.1	7.90	17.353	
1,968.5	1,959.3	1,933.1	1,928.0	4.6	4.3	-170.82	-18.4	61.0	166.3	158.1	8.17	20.359	
1,992.4	1,982.4	1,954.5	1,948.9	4.7	4.3	-170.43	-20.5	64.9	176.9	168.6	8.26	21.415	
2,000.0	1,989.6	1,961.3	1,955.5	4.8	4.4	-170.33	-21.2	66.1	180.2	171.9	8.29	21.736	
2,066.9	2,054.0	2,021.1	2,014.1	5.1	4.6	-169.57	-27.2	77.0	210.2	201.6	8.59	24.453	
2,100.0	2,085.8	2,050.6	2,043.0	5.2	4.7	-169.28	-30.1	82.4	225.0	216.2	8.74	25.746	
2,165.3	2,148.7	2,109.1	2,100.1	5.5	4.9	-168.79	-35.9	93.1	254.2	245.2	9.03	28.150	
2,200.0	2,182.0	2,140.0	2,130.4	5.7	5.0	-168.57	-39.0	98.7	269.7	260.5	9.20	29.325	
2,263.8	2,243.4	2,197.0	2,186.1	6.0	5.2	-168.23	-44.7	109.2	298.3	288.8	9.49	31.418	
2,300.0	2,278.2	2,229.4	2,217.8	6.2	5.3	-168.07	-47.9	115.1	314.5	304.9	9.67	32.537	
2,362.2	2,338.1	2,285.0	2,272.2	6.5	5.5	-167.82	-53.5	125.2	342.4	332.4	9.96	34.363	
2,400.0	2,374.4	2,318.8	2,305.2	6.7	5.7	-167.69	-56.8	131.4	359.3	349.2	10.15	35.415	
2,460.6	2,432.8	2,373.0	2,358.2	7.0	5.9	-167.50	-62.2	141.3	386.5	376.1	10.44	37.013	
2,500.0	2,470.6	2,408.2	2,392.7	7.2	6.0	-167.39	-65.7	147.7	404.2	393.5	10.64	38.001	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
2,559.0	2,527.4	2,460.9	2,444.3	7.6	6.2	-167.25	-71.0	157.3	430.6	419.7	10.93	39.402	
2,600.0	2,566.8	2,497.5	2,480.1	7.8	6.4	-167.16	-74.7	164.0	449.0	437.9	11.13	40.331	
2,657.5	2,622.1	2,548.9	2,530.3	8.1	6.6	-167.04	-79.8	173.4	474.7	463.3	11.42	41.563	
2,700.0	2,663.0	2,586.9	2,567.5	8.3	6.8	-166.97	-83.6	180.3	493.8	482.2	11.64	42.435	
2,755.9	2,716.8	2,636.9	2,616.4	8.6	7.0	-166.87	-88.6	189.4	518.9	507.0	11.92	43.523	
2,800.0	2,759.2	2,676.3	2,654.9	8.9	7.1	-166.80	-92.5	196.6	538.6	526.5	12.15	44.343	
2,854.3	2,811.5	2,724.8	2,702.4	9.2	7.3	-166.73	-97.3	205.5	563.0	550.6	12.43	45.306	
2,900.0	2,855.4	2,765.7	2,742.4	9.4	7.5	-166.67	-101.4	212.9	583.5	570.8	12.66	46.079	
2,952.7	2,906.2	2,812.8	2,788.5	9.7	7.7	-166.61	-106.1	221.5	607.1	594.2	12.94	46.932	
3,000.0	2,951.6	2,855.0	2,829.8	10.0	7.9	-166.55	-110.3	229.3	628.3	615.1	13.18	47.662	
3,051.2	3,000.9	2,900.8	2,874.5	10.3	8.1	-166.50	-114.9	237.6	651.3	637.8	13.45	48.419	
3,100.0	3,047.8	2,944.4	2,917.2	10.5	8.3	-166.45	-119.2	245.6	673.2	659.5	13.71	49.111	
3,149.6	3,095.5	2,999.1	2,970.7	10.8	8.5	-166.41	-124.5	255.2	695.1	681.2	13.98	49.708	
3,200.0	3,144.0	3,058.3	3,028.9	11.1	8.7	-166.40	-129.7	264.7	716.6	702.4	14.26	50.252	
3,248.0	3,190.2	3,115.7	3,085.6	11.4	8.8	-166.43	-134.1	272.9	736.3	721.8	14.52	50.691	
3,300.0	3,240.2	3,178.9	3,148.1	11.7	9.0	-166.50	-138.4	280.7	756.6	741.8	14.81	51.091	
3,346.4	3,284.9	3,236.3	3,205.1	11.9	9.2	-166.59	-141.7	286.8	773.9	758.9	15.06	51.380	
3,400.0	3,336.4	3,303.4	3,272.0	12.2	9.3	-166.74	-144.9	292.6	792.9	777.6	15.36	51.638	
3,444.9	3,379.6	3,360.6	3,328.9	12.5	9.5	-166.89	-147.0	296.5	808.0	792.4	15.60	51.799	
3,500.0	3,432.6	3,431.7	3,399.9	12.8	9.6	-167.10	-148.9	299.9	825.4	809.5	15.89	51.928	
3,543.3	3,474.3	3,488.3	3,456.5	13.1	9.7	-167.30	-149.8	301.5	838.2	822.1	16.13	51.979	
3,600.0	3,528.8	3,560.6	3,528.8	13.4	9.8	-167.58	-150.2	302.2	853.8	837.4	16.42	52.003	
3,641.7	3,569.0	3,600.8	3,569.0	13.6	9.9	-167.75	-150.2	302.2	865.0	848.4	16.62	52.059	
3,700.0	3,625.0	3,656.8	3,625.0	14.0	10.0	-167.97	-150.2	302.2	880.6	863.7	16.89	52.121	
3,740.1	3,663.6	3,695.4	3,663.6	14.2	10.0	-168.11	-150.2	302.2	891.3	874.2	17.09	52.163	
3,800.0	3,721.2	3,753.0	3,721.2	14.5	10.1	-168.32	-150.2	302.2	907.3	890.0	17.37	52.222	
3,838.6	3,758.3	3,790.1	3,758.3	14.8	10.2	-168.46	-150.2	302.2	917.7	900.1	17.56	52.260	
3,900.0	3,817.4	3,849.2	3,817.4	15.1	10.3	-168.66	-150.2	302.2	934.1	916.3	17.85	52.318	
3,937.0	3,853.0	3,884.8	3,853.0	15.3	10.4	-168.78	-150.2	302.2	944.1	926.0	18.03	52.352	
4,000.0	3,913.6	3,945.4	3,913.6	15.7	10.5	-168.98	-150.2	302.2	961.0	942.6	18.34	52.408	
4,035.4	3,947.7	3,979.5	3,947.7	15.9	10.5	-169.09	-150.2	302.2	970.5	952.0	18.51	52.438	
4,100.0	4,009.8	4,041.6	4,009.8	16.3	10.6	-169.29	-150.2	302.2	987.8	969.0	18.82	52.492	
4,133.8	4,042.4	4,074.2	4,042.4	16.5	10.7	-169.38	-150.2	302.2	996.9	977.9	18.98	52.520	
4,200.0	4,106.0	4,137.8	4,106.0	16.8	10.8	-169.57	-150.2	302.2	1,014.7	995.4	19.30	52.572	
4,232.3	4,137.1	4,168.9	4,137.1	17.0	10.9	-169.66	-150.2	302.2	1,023.4	1,003.9	19.46	52.597	
4,300.0	4,202.2	4,234.0	4,202.2	17.4	11.0	-169.84	-150.2	302.2	1,041.6	1,021.8	19.78	52.647	
4,330.7	4,231.7	4,263.5	4,231.7	17.6	11.0	-169.92	-150.2	302.2	1,049.9	1,029.9	19.93	52.669	
4,400.0	4,298.4	4,330.2	4,298.4	18.0	11.1	-170.10	-150.2	302.2	1,068.5	1,048.3	20.27	52.718	
4,429.1	4,326.4	4,358.2	4,326.4	18.2	11.2	-170.17	-150.2	302.2	1,076.4	1,056.0	20.41	52.737	
4,500.0	4,394.6	4,426.4	4,394.6	18.6	11.3	-170.35	-150.2	302.2	1,095.5	1,074.7	20.75	52.784	
4,527.5	4,421.1	4,452.9	4,421.1	18.7	11.4	-170.41	-150.2	302.2	1,102.9	1,082.0	20.89	52.802	
4,600.0	4,490.8	4,522.6	4,490.8	19.2	11.5	-170.58	-150.2	302.2	1,122.4	1,101.2	21.24	52.847	
4,626.0	4,515.8	4,547.6	4,515.8	19.3	11.5	-170.64	-150.2	302.2	1,129.4	1,108.1	21.37	52.862	
4,700.0	4,587.0	4,618.8	4,587.0	19.8	11.7	-170.80	-150.2	302.2	1,149.4	1,127.7	21.73	52.906	
4,724.4	4,610.5	4,642.3	4,610.5	19.9	11.7	-170.86	-150.2	302.2	1,156.0	1,134.1	21.84	52.920	
4,800.0	4,683.2	4,715.0	4,683.2	20.3	11.8	-171.01	-150.2	302.2	1,176.4	1,154.2	22.21	52.962	
4,822.8	4,705.2	4,737.0	4,705.2	20.5	11.9	-171.06	-150.2	302.2	1,182.6	1,160.2	22.32	52.974	
4,900.0	4,779.4	4,811.2	4,779.4	20.9	12.0	-171.22	-150.2	302.2	1,203.4	1,180.7	22.70	53.014	
4,921.2	4,799.8	4,831.6	4,799.8	21.0	12.1	-171.26	-150.2	302.2	1,209.1	1,186.3	22.80	53.025	
5,000.0	4,875.6	4,907.4	4,875.6	21.5	12.2	-171.41	-150.2	302.2	1,230.4	1,207.2	23.19	53.063	
5,019.7	4,894.5	4,926.3	4,894.5	21.6	12.2	-171.45	-150.2	302.2	1,235.7	1,212.5	23.28	53.073	
5,100.0	4,971.8	5,003.6	4,971.8	22.1	12.4	-171.60	-150.2	302.2	1,257.5	1,233.8	23.68	53.110	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
5,118.1	4,989.2	5,021.0	4,989.2	22.2	12.4	-171.63	-150.2	302.2	1,262.4	1,238.6	23.77	53.118	
5,200.0	5,068.0	5,099.8	5,068.0	22.7	12.6	-171.78	-150.2	302.2	1,284.5	1,260.3	24.17	53.154	
5,216.5	5,083.9	5,115.7	5,083.9	22.8	12.6	-171.80	-150.2	302.2	1,289.0	1,264.7	24.25	53.161	
5,240.0	5,106.5	5,138.3	5,106.5	22.9	12.6	-171.84	-150.2	302.2	1,295.3	1,271.0	24.36	53.170	
5,300.0	5,164.4	5,196.2	5,164.4	23.2	12.7	-171.99	-150.2	302.2	1,311.0	1,286.2	24.71	53.049	
5,314.9	5,178.8	5,210.6	5,178.8	23.3	12.8	-172.02	-150.2	302.2	1,314.7	1,289.9	24.79	53.024	
5,400.0	5,261.5	5,293.3	5,261.5	23.6	12.9	-172.19	-150.2	302.2	1,334.3	1,309.1	25.25	52.846	
5,413.4	5,274.6	5,306.4	5,274.6	23.6	12.9	-172.22	-150.2	302.2	1,337.2	1,311.9	25.32	52.816	
5,500.0	5,359.5	7,724.5	6,644.1	23.9	36.4	-166.77	-150.2	-1,052.8	1,285.8	1,256.0	29.86	43.066	
5,511.8	5,371.1	7,726.6	6,644.1	24.0	36.5	-166.41	-150.2	-1,055.0	1,274.2	1,244.2	30.01	42.463	
5,600.0	5,458.0	7,741.0	6,644.1	24.2	36.8	-162.95	-150.2	-1,069.4	1,187.2	1,155.7	31.53	37.659	
5,610.2	5,468.2	7,742.5	6,644.1	24.3	36.9	-162.45	-150.2	-1,070.9	1,177.1	1,145.4	31.76	37.063	
5,700.0	5,557.2	7,754.1	6,644.1	24.5	37.2	-156.70	-150.2	-1,082.5	1,088.2	1,053.5	34.70	31.363	
5,708.6	5,565.7	7,755.1	6,644.1	24.5	37.2	-155.98	-150.2	-1,083.5	1,079.6	1,044.5	35.09	30.768	
5,800.0	5,656.7	7,763.8	6,644.1	24.7	37.4	-145.63	-150.2	-1,092.2	988.7	947.6	41.13	24.037	
5,807.1	5,663.7	7,764.4	6,644.1	24.7	37.4	-144.55	-150.2	-1,092.7	981.7	939.9	41.78	23.498	
5,900.0	5,756.5	7,770.0	6,644.1	24.9	37.6	-125.13	-150.2	-1,098.4	889.0	836.3	52.71	16.866	
5,905.5	5,761.9	7,770.3	6,644.1	24.9	37.6	-123.63	-150.2	-1,098.6	883.5	830.1	53.44	16.533	
6,000.0	5,856.4	7,772.7	6,644.1	25.0	37.6	-93.80	-150.2	-1,101.1	789.2	726.9	62.35	12.658	
6,003.9	5,860.3	7,772.8	6,644.1	25.0	37.6	-92.53	-150.2	-1,101.1	785.3	722.9	62.46	12.574	
6,032.5	5,888.9	7,772.9	6,644.0	25.0	37.6	-178.82	-150.2	-1,101.2	756.8	727.6	29.18	25.934	
6,062.5	5,918.9	7,772.8	6,644.0	25.1	37.6	-178.86	-150.2	-1,101.2	726.9	697.7	29.23	24.871	
6,100.0	5,956.4	7,771.8	6,644.1	25.1	37.6	126.37	-150.2	-1,100.2	689.5	637.5	51.96	13.271	
6,102.3	5,958.7	7,771.7	6,644.1	25.1	37.6	127.91	-150.2	-1,100.0	687.1	636.0	51.17	13.430	
6,150.0	6,006.2	7,767.4	6,644.1	25.1	37.5	147.46	-150.2	-1,095.7	639.8	599.9	39.96	16.014	
6,200.0	6,055.6	7,759.5	6,644.1	25.1	37.3	156.08	-150.2	-1,087.8	590.6	555.8	34.88	16.935	
6,200.8	6,056.3	7,759.3	6,644.1	25.1	37.3	156.17	-150.2	-1,087.7	589.9	555.1	34.83	16.938	
6,250.0	6,104.3	7,748.2	6,644.1	25.0	37.0	160.34	-150.2	-1,076.5	542.1	509.8	32.39	16.740	
6,299.2	6,151.3	7,733.8	6,644.1	24.9	36.6	162.65	-150.2	-1,062.1	495.3	464.4	30.89	16.033	
6,300.0	6,152.1	7,733.5	6,644.1	24.9	36.6	162.68	-150.2	-1,061.9	494.6	463.7	30.87	16.019	
6,350.0	6,198.7	7,715.5	6,644.1	24.8	36.2	163.97	-150.2	-1,043.9	448.2	418.4	29.78	15.049	
6,397.6	6,241.9	7,695.4	6,644.2	24.7	35.7	164.58	-150.2	-1,023.8	405.3	376.4	28.93	14.011	
6,400.0	6,244.1	7,694.3	6,644.2	24.7	35.6	164.60	-150.2	-1,022.7	403.2	374.3	28.89	13.957	
6,450.0	6,287.8	7,670.0	6,644.2	24.5	35.0	164.75	-150.2	-998.4	359.9	331.8	28.12	12.799	
6,496.0	6,326.5	7,645.0	6,644.2	24.4	34.4	164.53	-150.2	-973.4	321.7	294.2	27.50	11.699	
6,500.0	6,329.7	7,642.7	6,644.2	24.4	34.3	164.49	-150.2	-971.1	318.5	291.1	27.45	11.603	
6,550.0	6,369.6	7,612.6	6,644.3	24.3	33.6	163.84	-150.2	-941.0	279.2	252.3	26.89	10.383	
6,594.5	6,403.3	7,583.5	6,644.3	24.2	32.9	162.92	-150.2	-911.9	246.2	219.7	26.53	9.280	
6,600.0	6,407.3	7,579.8	6,644.3	24.2	32.8	162.78	-150.2	-908.1	242.2	215.7	26.50	9.142	
6,650.0	6,442.7	7,544.4	6,644.4	24.1	31.9	161.24	-150.2	-872.7	207.8	181.5	26.35	7.886	
6,692.9	6,471.0	7,512.1	6,644.4	24.0	31.1	159.45	-150.2	-840.4	180.5	154.0	26.52	6.808	
6,700.0	6,475.5	7,506.6	6,644.4	24.0	31.0	159.11	-150.2	-834.9	176.2	149.6	26.58	6.630	
6,750.0	6,505.6	7,466.6	6,644.5	24.0	30.0	156.23	-150.2	-795.0	147.7	120.3	27.34	5.402	
6,791.3	6,528.3	7,432.1	6,644.5	24.0	29.2	153.13	-150.2	-760.4	126.6	98.1	28.50	4.443	
6,800.0	6,532.8	7,424.6	6,644.5	24.0	29.0	152.38	-150.2	-753.0	122.5	93.7	28.81	4.252	
6,850.0	6,557.0	7,380.9	6,644.6	24.1	28.0	147.28	-150.2	-709.2	100.9	69.8	31.14	3.240	
6,889.7	6,574.1	7,345.0	6,644.6	24.2	27.1	142.17	-150.2	-673.3	86.6	52.9	33.65	2.573	
6,900.0	6,578.1	7,335.6	6,644.7	24.3	26.9	140.69	-150.2	-663.9	83.3	48.9	34.37	2.424	
6,950.0	6,596.1	7,288.9	6,644.7	24.5	25.8	132.54	-150.2	-617.2	69.9	31.7	38.20	1.830	
6,988.2	6,607.5	7,252.4	6,644.8	24.7	25.0	125.54	-150.2	-580.8	62.5	21.4	41.13	1.519	
7,000.0	6,610.7	7,241.0	6,644.8	24.8	24.8	123.31	-150.2	-569.4	60.7	18.7	41.95	1.446 Level 3	
7,050.0	6,621.9	7,192.3	6,644.9	25.1	23.7	114.18	-150.2	-520.7	55.2	10.4	44.76	1.232 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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	7,156.2	6,644.9	25.4	23.0	108.48	-150.2	-484.6	52.9	7.0	45.98	1.151	Level 2
7,100.0	6,629.7	7,142.9	6,644.9	25.6	22.7	106.73	-150.2	-471.3	52.4	6.2	46.25	1.133	Level 2
7,150.0	6,634.1	7,093.1	6,645.0	26.0	21.7	102.26	-150.2	-421.5	51.3	4.7	46.61	1.101	Level 2
7,185.0	6,635.1	7,057.7	6,644.5	26.4	21.0	100.62	-150.2	-386.1	51.0	4.5	46.57	1.096	Level 2
7,196.6	6,635.0	7,046.0	6,643.9	26.5	20.8	100.08	-150.2	-374.4	51.0	4.4	46.55	1.095	Level 2
7,200.0	6,635.0	7,042.6	6,643.7	26.6	20.7	99.91	-150.2	-370.9	50.9	4.4	46.54	1.094	Level 2
7,283.2	6,633.9	6,959.3	6,633.9	27.6	19.2	90.00	-150.2	-288.3	50.2	3.4	46.72	1.074	Level 2, ES, SF
7,283.4	6,633.9	6,959.0	6,633.9	27.6	19.2	89.96	-150.2	-288.0	50.2	3.4	46.72	1.074	Level 2
7,300.0	6,633.7	6,942.8	6,630.8	27.8	18.9	86.72	-150.2	-272.1	50.2	3.6	46.60	1.078	Level 2
7,381.9	6,632.6	6,864.6	6,611.2	29.0	17.7	66.77	-150.2	-196.4	55.0	11.5	43.53	1.263	Level 3
7,400.0	6,632.4	6,847.9	6,605.9	29.2	17.4	62.08	-150.2	-180.6	57.4	15.3	42.19	1.362	Level 3
7,480.3	6,631.4	6,777.2	6,579.6	30.5	16.5	43.94	-150.2	-115.0	75.9	40.5	35.36	2.146	
7,500.0	6,631.1	6,760.7	6,572.6	30.9	16.3	40.41	-150.2	-100.1	82.2	48.4	33.78	2.434	
7,578.7	6,630.1	6,700.0	6,543.7	32.3	15.7	29.94	-150.2	-46.7	113.6	84.5	29.03	3.911	
7,600.0	6,629.8	6,682.4	6,534.5	32.7	15.6	27.56	-150.2	-31.7	123.4	95.5	27.95	4.417	
7,677.1	6,628.9	6,628.3	6,503.9	34.1	15.2	21.69	-150.2	12.9	163.5	138.0	25.53	6.403	
7,700.0	6,628.6	6,613.3	6,494.9	34.6	15.1	20.38	-150.2	24.8	176.5	151.4	25.05	7.045	
7,775.6	6,627.6	6,567.0	6,465.3	36.1	14.9	17.00	-150.2	60.5	222.4	198.4	23.99	9.271	
7,800.0	6,627.3	6,550.0	6,453.9	36.6	14.8	15.96	-150.2	73.1	238.2	214.5	23.68	10.056	
7,874.0	6,626.3	6,513.5	6,428.4	38.2	14.7	14.05	-150.2	99.2	288.1	264.7	23.38	12.324	
7,900.0	6,626.0	6,500.0	6,418.7	38.8	14.7	13.42	-150.2	108.5	306.4	283.1	23.29	13.154	
7,972.4	6,625.1	6,467.0	6,394.1	40.4	14.6	12.08	-150.2	130.5	359.1	335.9	23.25	15.443	
8,000.0	6,624.7	6,450.0	6,381.0	41.0	14.6	11.46	-150.2	141.4	379.9	356.7	23.19	16.378	
8,070.8	6,623.8	6,426.5	6,362.6	42.6	14.6	10.69	-150.2	156.0	434.4	411.0	23.40	18.561	
8,100.0	6,623.4	6,415.5	6,353.8	43.3	14.6	10.36	-150.2	162.5	457.3	433.8	23.48	19.478	
8,169.3	6,622.6	6,400.0	6,341.2	44.9	14.6	9.92	-150.2	171.6	513.1	489.3	23.81	21.547	
8,200.0	6,622.2	6,381.0	6,325.5	45.6	14.5	9.42	-150.2	182.4	538.1	514.3	23.83	22.582	
8,267.7	6,621.3	6,350.0	6,299.3	47.3	14.5	8.69	-150.2	199.0	594.5	570.4	24.02	24.744	
8,300.0	6,620.9	6,350.0	6,299.3	48.0	14.5	8.69	-150.2	199.0	621.5	597.2	24.26	25.615	
8,366.1	6,620.0	6,332.7	6,284.4	49.7	14.5	8.32	-150.2	207.7	677.9	653.3	24.60	27.557	
8,400.0	6,619.6	6,324.1	6,276.9	50.5	14.5	8.14	-150.2	212.0	707.1	682.3	24.78	28.540	
8,464.5	6,618.8	6,300.0	6,255.6	52.1	14.5	7.69	-150.2	223.3	763.4	738.4	25.06	30.464	
8,500.0	6,618.3	6,300.0	6,255.6	53.0	14.5	7.69	-150.2	223.3	794.5	769.2	25.32	31.376	
8,563.0	6,617.5	6,300.0	6,255.6	54.5	14.5	7.69	-150.2	223.3	850.5	824.7	25.79	32.979	
8,600.0	6,617.0	6,279.5	6,237.3	55.5	14.5	7.33	-150.2	232.4	883.4	857.5	25.91	34.098	
8,661.4	6,616.3	6,267.7	6,226.6	57.0	14.5	7.14	-150.2	237.4	938.6	912.3	26.28	35.718	
8,700.0	6,615.8	6,250.0	6,210.4	58.0	14.5	6.86	-150.2	244.6	973.7	947.2	26.44	36.824	
8,759.8	6,615.0	6,250.0	6,210.4	59.5	14.5	6.86	-150.2	244.6	1,028.0	1,001.1	26.88	38.237	
8,800.0	6,614.5	6,250.0	6,210.4	60.6	14.5	6.86	-150.2	244.6	1,064.8	1,037.6	27.18	39.172	
8,858.2	6,613.7	6,250.0	6,210.4	62.1	14.5	6.86	-150.2	244.6	1,118.5	1,090.9	27.62	40.504	
8,900.0	6,613.2	6,228.7	6,190.7	63.2	14.5	6.56	-150.2	252.6	1,156.8	1,129.1	27.78	41.641	
8,956.7	6,612.5	6,220.7	6,183.3	64.6	14.5	6.45	-150.2	255.5	1,209.4	1,181.2	28.15	42.961	
9,000.0	6,611.9	6,200.0	6,163.8	65.8	14.5	6.18	-150.2	262.6	1,250.0	1,221.6	28.34	44.100	
9,055.1	6,611.2	6,200.0	6,163.8	67.2	14.5	6.18	-150.2	262.6	1,301.3	1,272.5	28.75	45.258	
9,100.0	6,610.6	6,200.0	6,163.8	68.4	14.5	6.18	-150.2	262.6	1,343.3	1,314.2	29.09	46.184	
9,153.5	6,609.9	6,200.0	6,163.8	69.8	14.5	6.18	-150.2	262.6	1,393.6	1,364.1	29.48	47.267	
9,200.0	6,609.3	6,200.0	6,163.8	71.0	14.5	6.18	-150.2	262.6	1,437.5	1,407.7	29.83	48.190	
9,251.9	6,608.7	6,200.0	6,163.8	72.4	14.5	6.18	-150.2	262.6	1,486.7	1,456.5	30.22	49.201	
9,300.0	6,608.1	6,180.5	6,145.3	73.7	14.4	5.95	-150.2	268.7	1,532.1	1,501.6	30.45	50.307	
9,350.4	6,607.4	6,175.6	6,140.6	75.0	14.4	5.89	-150.2	270.2	1,579.9	1,549.1	30.80	51.295	
9,400.0	6,606.8	6,170.9	6,136.1	76.3	14.4	5.84	-150.2	271.6	1,627.1	1,596.0	31.14	52.251	
9,448.8	6,606.1	6,150.0	6,116.0	77.6	14.4	5.61	-150.2	277.3	1,674.0	1,642.6	31.38	53.339	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,605.5	6,150.0	6,116.0	79.0	14.4	5.61	-150.2	277.3	1,722.8	1,691.0	31.76	54.237	
9,547.2	6,604.9	6,150.0	6,116.0	80.2	14.4	5.61	-150.2	277.3	1,767.9	1,735.8	32.12	55.048	
9,600.0	6,604.2	6,150.0	6,116.0	81.7	14.4	5.61	-150.2	277.3	1,818.5	1,786.0	32.51	55.937	
9,645.6	6,603.6	6,150.0	6,116.0	82.9	14.4	5.61	-150.2	277.3	1,862.3	1,829.5	32.85	56.691	
9,700.0	6,602.9	6,150.0	6,116.0	84.3	14.4	5.61	-150.2	277.3	1,914.6	1,881.4	33.26	57.572	
9,744.1	6,602.3	6,150.0	6,116.0	85.5	14.4	5.61	-150.2	277.3	1,957.1	1,923.5	33.59	58.272	
9,800.0	6,601.6	6,150.0	6,116.0	87.0	14.4	5.61	-150.2	277.3	2,011.1	1,977.1	34.00	59.143	
9,842.5	6,601.1	6,150.0	6,116.0	88.2	14.4	5.61	-150.2	277.3	2,052.3	2,017.9	34.32	59.791	
9,900.0	6,600.3	6,150.0	6,116.0	89.7	14.4	5.61	-150.2	277.3	2,108.0	2,073.2	34.76	60.652	
9,940.9	6,599.8	6,130.1	6,096.7	90.9	14.4	5.41	-150.2	282.3	2,147.3	2,112.4	34.94	61.458	
10,000.0	6,599.0	6,126.5	6,093.2	92.5	14.4	5.37	-150.2	283.1	2,204.6	2,169.2	35.36	62.346	
10,039.3	6,598.5	6,124.2	6,091.0	93.5	14.4	5.35	-150.2	283.6	2,242.8	2,207.1	35.64	62.925	
10,100.0	6,597.7	6,120.8	6,087.6	95.2	14.4	5.32	-150.2	284.4	2,301.7	2,265.6	36.08	63.801	
10,137.8	6,597.3	6,100.0	6,067.3	96.2	14.4	5.13	-150.2	288.7	2,338.7	2,302.5	36.24	64.535	
10,200.0	6,596.5	6,100.0	6,067.3	97.9	14.4	5.13	-150.2	288.7	2,399.2	2,362.5	36.70	65.365	
10,236.2	6,596.0	6,100.0	6,067.3	98.9	14.4	5.13	-150.2	288.7	2,434.4	2,397.4	36.98	65.838	
10,300.0	6,595.2	6,100.0	6,067.3	100.6	14.4	5.13	-150.2	288.7	2,496.5	2,459.1	37.45	66.657	
10,334.6	6,594.7	6,100.0	6,067.3	101.6	14.4	5.13	-150.2	288.7	2,530.3	2,492.6	37.71	67.094	
10,400.0	6,593.9	6,100.0	6,067.3	103.3	14.4	5.13	-150.2	288.7	2,594.1	2,555.9	38.20	67.903	
10,433.0	6,593.5	6,100.0	6,067.3	104.2	14.4	5.13	-150.2	288.7	2,626.3	2,587.9	38.45	68.304	
10,500.0	6,592.6	6,100.0	6,067.3	106.1	14.4	5.13	-150.2	288.7	2,691.8	2,652.8	38.95	69.103	
10,531.5	6,592.2	6,100.0	6,067.3	106.9	14.4	5.13	-150.2	288.7	2,722.6	2,683.4	39.19	69.472	
10,600.0	6,591.3	6,100.0	6,067.3	108.8	14.4	5.12	-150.2	288.7	2,789.7	2,750.0	39.70	70.260	
10,629.9	6,590.9	6,100.0	6,067.3	109.6	14.4	5.12	-150.2	288.7	2,819.0	2,779.0	39.93	70.598	
10,700.0	6,590.0	6,100.0	6,067.3	111.6	14.4	5.12	-150.2	288.7	2,887.7	2,847.2	40.46	71.377	
10,728.3	6,589.6	6,100.0	6,067.3	112.3	14.4	5.12	-150.2	288.7	2,915.5	2,874.8	40.67	71.686	
10,800.0	6,588.7	6,100.0	6,067.3	114.3	14.4	5.12	-150.2	288.7	2,985.8	2,944.6	41.21	72.454	
10,826.7	6,588.4	6,100.0	6,067.3	115.0	14.4	5.12	-150.2	288.7	3,012.1	2,970.7	41.41	72.736	
10,900.0	6,587.4	6,100.0	6,067.3	117.0	14.4	5.12	-150.2	288.7	3,084.1	3,042.1	41.96	73.495	
10,925.2	6,587.1	6,100.0	6,067.3	117.7	14.4	5.12	-150.2	288.7	3,108.9	3,066.7	42.15	73.751	
11,000.0	6,586.1	6,100.0	6,067.3	119.8	14.4	5.12	-150.2	288.7	3,182.5	3,139.8	42.72	74.499	
11,023.6	6,585.8	6,100.0	6,067.3	120.4	14.4	5.12	-150.2	288.7	3,205.7	3,162.8	42.90	74.732	
11,100.0	6,584.8	6,078.8	6,046.4	122.5	14.4	4.94	-150.2	292.5	3,280.6	3,237.3	43.33	75.704	
11,122.0	6,584.5	6,078.1	6,045.8	123.2	14.4	4.94	-150.2	292.6	3,302.3	3,258.8	43.50	75.921	
11,200.0	6,583.5	6,075.7	6,043.4	125.3	14.4	4.92	-150.2	293.0	3,379.0	3,335.0	44.07	76.678	
11,220.4	6,583.3	6,075.1	6,042.8	125.9	14.4	4.91	-150.2	293.1	3,399.2	3,355.0	44.22	76.873	
11,300.0	6,582.2	6,072.7	6,040.5	128.1	14.4	4.89	-150.2	293.5	3,477.6	3,432.8	44.80	77.620	
11,318.9	6,582.0	6,072.2	6,039.9	128.6	14.4	4.89	-150.2	293.5	3,496.2	3,451.2	44.94	77.794	
11,400.0	6,580.9	6,050.0	6,018.0	130.8	14.4	4.71	-150.2	296.6	3,576.5	3,531.1	45.41	78.752	
11,417.3	6,580.7	6,050.0	6,018.0	131.3	14.4	4.71	-150.2	296.6	3,593.5	3,548.0	45.54	78.901	
11,500.0	6,579.7	6,050.0	6,018.0	133.6	14.4	4.71	-150.2	296.6	3,675.1	3,628.9	46.17	79.604	
11,515.7	6,579.4	6,050.0	6,018.0	134.0	14.4	4.71	-150.2	296.6	3,690.6	3,644.3	46.28	79.736	
11,600.0	6,578.4	6,050.0	6,018.0	136.3	14.4	4.71	-150.2	296.6	3,773.7	3,726.8	46.92	80.431	
11,614.1	6,578.2	6,050.0	6,018.0	136.7	14.4	4.71	-150.2	296.6	3,787.7	3,740.6	47.03	80.545	
11,700.0	6,577.1	6,050.0	6,018.0	139.1	14.4	4.71	-150.2	296.6	3,872.4	3,824.7	47.67	81.231	
11,712.6	6,576.9	6,050.0	6,018.0	139.5	14.4	4.71	-150.2	296.6	3,884.8	3,837.1	47.77	81.330	
11,800.0	6,575.8	6,050.0	6,018.0	141.9	14.4	4.71	-150.2	296.6	3,971.2	3,922.8	48.42	82.008	
11,811.0	6,575.6	6,050.0	6,018.0	142.2	14.4	4.71	-150.2	296.6	3,982.1	3,933.6	48.51	82.092	
11,858.8	6,575.0	6,050.0	6,018.0	143.5	14.4	4.71	-150.2	296.6	4,029.3	3,980.4	48.87	82.453	
11,859.3	6,575.0	6,050.0	6,018.0	143.5	14.4	4.71	-150.2	296.6	4,029.8	3,981.0	48.87	82.461	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	-178.93	-29.9	-0.6	29.9					
98.4	98.4	98.4	98.4	0.1	0.1	-178.93	-29.9	-0.6	29.9	29.7	0.19	155.427		
100.0	100.0	100.0	100.0	0.1	0.1	-178.93	-29.9	-0.6	29.9	29.7	0.20	152.796		
196.8	196.8	196.8	196.8	0.3	0.3	-178.93	-29.9	-0.6	29.9	29.2	0.63	47.358		
200.0	200.0	200.0	200.0	0.3	0.3	-178.93	-29.9	-0.6	29.9	29.2	0.65	46.318		
295.3	295.3	295.3	295.3	0.5	0.5	-178.93	-29.9	-0.6	29.9	28.8	1.07	27.836		
300.0	300.0	300.0	300.0	0.5	0.5	-178.93	-29.9	-0.6	29.9	28.8	1.09	27.296		
393.7	393.7	393.7	393.7	0.8	0.8	-178.93	-29.9	-0.6	29.9	28.4	1.52	19.711		
400.0	400.0	400.0	400.0	0.8	0.8	-178.93	-29.9	-0.6	29.9	28.3	1.54	19.350		
492.1	492.1	492.1	492.1	1.0	1.0	-178.93	-29.9	-0.6	29.9	27.9	1.96	15.258		
500.0	500.0	500.0	500.0	1.0	1.0	-178.93	-29.9	-0.6	29.9	27.9	1.99	14.987		
590.5	590.5	590.5	590.5	1.2	1.2	-178.93	-29.9	-0.6	29.9	27.5	2.40	12.446		
600.0	600.0	600.0	600.0	1.2	1.2	-178.93	-29.9	-0.6	29.9	27.4	2.44	12.229		
689.0	689.0	689.0	689.0	1.4	1.4	-178.93	-29.9	-0.6	29.9	27.0	2.84	10.509		
700.0	700.0	700.0	700.0	1.4	1.4	-178.93	-29.9	-0.6	29.9	27.0	2.89	10.329		
787.4	787.4	787.4	787.4	1.6	1.6	-178.93	-29.9	-0.6	29.9	26.6	3.29	9.094		
800.0	800.0	800.0	800.0	1.7	1.7	-178.93	-29.9	-0.6	29.9	26.5	3.34	8.940		
885.8	885.8	885.8	885.8	1.9	1.9	-178.93	-29.9	-0.6	29.9	26.2	3.73	8.015		
900.0	900.0	900.0	900.0	1.9	1.9	-178.93	-29.9	-0.6	29.9	26.1	3.79	7.880		
984.2	984.2	984.2	984.2	2.1	2.1	-178.93	-29.9	-0.6	29.9	25.7	4.17	7.164		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-178.93	-29.9	-0.6	29.9	25.6	4.24	7.045 CC, ES		
1,082.7	1,082.7	1,082.4	1,082.3	2.3	2.3	-176.83	-30.3	-1.7	30.3	25.7	4.60	6.593		
1,100.0	1,100.0	1,099.6	1,099.6	2.3	2.3	-175.88	-30.4	-2.2	30.5	25.8	4.67	6.533		
1,181.1	1,181.1	1,180.2	1,180.1	2.5	2.5	-169.44	-31.7	-5.9	32.3	27.3	5.01	6.442		
1,200.0	1,200.0	1,199.0	1,198.8	2.6	2.5	-167.56	-32.1	-7.1	32.9	27.8	5.09	6.467		
1,279.5	1,279.5	1,277.7	1,277.3	2.7	2.7	-65.11	-34.3	-13.3	36.3	30.9	5.43	6.697		
1,300.0	1,300.0	1,298.0	1,297.5	2.8	2.7	-63.54	-34.9	-15.2	37.4	31.9	5.51	6.781		
1,377.9	1,377.8	1,375.0	1,374.0	2.9	2.9	-58.57	-37.9	-23.7	41.8	35.9	5.83	7.156		
1,400.0	1,399.8	1,396.8	1,395.5	3.0	3.0	-57.43	-38.8	-26.5	43.1	37.2	5.93	7.276		
1,476.4	1,475.9	1,472.1	1,469.9	3.1	3.2	-54.24	-42.5	-37.2	48.1	41.9	6.26	7.694		
1,500.0	1,499.5	1,495.3	1,492.9	3.2	3.2	-53.47	-43.8	-40.9	49.8	43.4	6.36	7.831		
1,574.8	1,573.7	1,568.9	1,565.1	3.4	3.5	-51.55	-48.2	-53.8	55.3	48.6	6.70	8.244		
1,600.0	1,598.7	1,593.6	1,589.4	3.4	3.5	-51.06	-49.9	-58.5	57.2	50.4	6.82	8.388		
1,673.2	1,671.1	1,665.4	1,659.4	3.6	3.8	-50.01	-55.0	-73.3	63.0	55.8	7.18	8.769		
1,700.0	1,697.5	1,691.6	1,684.9	3.7	3.9	-49.74	-57.0	-79.1	65.2	57.9	7.31	8.911		
1,771.6	1,767.9	1,761.6	1,752.7	3.9	4.2	-49.28	-62.7	-95.7	71.2	63.5	7.70	9.247		
1,800.0	1,795.6	1,789.6	1,779.7	4.0	4.3	-49.20	-65.1	-102.7	73.6	65.8	7.86	9.371		
1,870.1	1,864.0	1,859.5	1,847.0	4.3	4.6	-49.66	-71.2	-120.4	78.9	70.6	8.29	9.520		
1,900.0	1,893.1	1,889.3	1,875.8	4.4	4.8	-50.13	-73.8	-127.9	80.8	72.4	8.48	9.534		
1,968.5	1,959.3	1,957.7	1,941.6	4.6	5.1	-51.73	-79.8	-145.2	84.5	75.5	8.97	9.424		
1,992.4	1,982.4	1,981.6	1,964.7	4.7	5.2	-52.47	-81.8	-151.2	85.6	76.4	9.15	9.354		
2,000.0	1,989.6	1,989.1	1,971.9	4.8	5.2	-52.72	-82.5	-153.1	85.9	76.7	9.21	9.327		
2,066.9	2,054.0	2,055.9	2,036.3	5.1	5.6	-54.85	-88.3	-170.0	88.8	79.0	9.78	9.084		
2,100.0	2,085.8	2,088.9	2,068.1	5.2	5.7	-55.86	-91.2	-178.3	90.3	80.2	10.06	8.974		
2,165.3	2,148.7	2,154.1	2,130.9	5.5	6.1	-57.75	-96.9	-194.8	93.3	82.7	10.66	8.756		
2,200.0	2,182.0	2,188.7	2,164.2	5.7	6.3	-58.70	-99.9	-203.6	95.0	84.0	10.98	8.648		
2,263.8	2,243.4	2,252.3	2,225.6	6.0	6.6	-60.37	-105.4	-219.6	98.0	86.4	11.59	8.455		
2,300.0	2,278.2	2,288.5	2,260.4	6.2	6.8	-61.27	-108.6	-228.8	99.8	87.9	11.95	8.354		
2,362.2	2,338.1	2,350.6	2,320.2	6.5	7.1	-62.74	-114.0	-244.4	102.9	90.4	12.57	8.185		
2,400.0	2,374.4	2,388.3	2,356.6	6.7	7.3	-63.60	-117.3	-254.0	104.9	91.9	12.96	8.091		
2,460.6	2,432.8	2,448.8	2,414.9	7.0	7.6	-64.90	-122.5	-269.2	108.0	94.4	13.59	7.945		
2,500.0	2,470.6	2,488.1	2,452.7	7.2	7.9	-65.71	-126.0	-279.2	110.0	96.0	14.00	7.858		

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
2,559.0	2,527.4	2,547.0	2,509.5	7.6	8.2	-66.86	-131.1	-294.1	113.2	98.5	14.64	7.733	
2,600.0	2,566.8	2,587.8	2,548.9	7.8	8.4	-67.63	-134.6	-304.4	115.4	100.3	15.08	7.653	
2,657.5	2,622.1	2,645.2	2,604.1	8.1	8.7	-68.65	-139.6	-318.9	118.5	102.8	15.70	7.546	
2,700.0	2,663.0	2,687.6	2,645.0	8.3	8.9	-69.38	-143.3	-329.6	120.8	104.7	16.17	7.473	
2,755.9	2,716.8	2,743.4	2,698.8	8.6	9.3	-70.29	-148.2	-343.7	123.9	107.1	16.79	7.382	
2,800.0	2,759.2	2,787.4	2,741.2	8.9	9.5	-70.97	-152.0	-354.8	126.4	109.1	17.28	7.315	
2,854.3	2,811.5	2,841.6	2,793.4	9.2	9.8	-71.78	-156.8	-368.5	129.4	111.6	17.89	7.236	
2,900.0	2,855.4	2,887.2	2,837.3	9.4	10.1	-72.43	-160.7	-380.0	132.0	113.6	18.40	7.175	
2,952.7	2,906.2	2,939.8	2,888.1	9.7	10.3	-73.15	-165.3	-393.3	135.0	116.0	19.00	7.108	
3,000.0	2,951.6	2,987.0	2,933.5	10.0	10.6	-73.77	-169.4	-405.2	137.7	118.2	19.53	7.052	
3,051.2	3,000.9	3,038.1	2,982.7	10.3	10.9	-74.42	-173.9	-418.1	140.7	120.6	20.12	6.994	
3,100.0	3,047.8	3,086.8	3,029.7	10.5	11.2	-75.01	-178.1	-430.4	143.5	122.9	20.67	6.943	
3,149.6	3,095.5	3,136.3	3,077.4	10.8	11.4	-75.58	-182.4	-442.9	146.4	125.2	21.24	6.893	
3,200.0	3,144.0	3,186.6	3,125.8	11.1	11.7	-76.14	-186.8	-455.6	149.4	127.6	21.82	6.846	
3,248.0	3,190.2	3,234.5	3,172.0	11.4	12.0	-76.66	-191.0	-467.7	152.2	129.8	22.38	6.803	
3,300.0	3,240.2	3,286.3	3,222.0	11.7	12.3	-77.19	-195.5	-480.8	155.3	132.3	22.97	6.759	
3,346.4	3,284.9	3,332.7	3,266.6	11.9	12.6	-77.66	-199.5	-492.5	158.1	134.5	23.51	6.723	
3,400.0	3,336.4	3,386.1	3,318.1	12.2	12.9	-78.17	-204.2	-506.0	161.2	137.1	24.13	6.682	
3,444.9	3,379.6	3,430.9	3,361.3	12.5	13.1	-78.58	-208.1	-517.3	163.9	139.3	24.65	6.650	
3,500.0	3,432.6	3,485.9	3,414.3	12.8	13.4	-79.07	-212.9	-531.2	167.2	142.0	25.29	6.613	
3,543.3	3,474.3	3,529.1	3,455.9	13.1	13.7	-79.44	-216.6	-542.1	169.9	144.1	25.79	6.585	
3,600.0	3,528.8	3,585.7	3,510.5	13.4	14.0	-79.91	-221.6	-556.4	173.3	146.8	26.45	6.551	
3,641.7	3,569.0	3,627.3	3,550.6	13.6	14.2	-80.25	-225.2	-567.0	175.8	148.9	26.94	6.527	
3,700.0	3,625.0	3,685.5	3,606.6	14.0	14.6	-80.70	-230.3	-581.6	179.4	151.7	27.62	6.495	
3,740.1	3,663.6	3,725.6	3,645.2	14.2	14.8	-81.00	-233.7	-591.8	181.8	153.7	28.08	6.474	
3,800.0	3,721.2	3,785.3	3,702.8	14.5	15.1	-81.43	-239.0	-606.8	185.5	156.7	28.78	6.444	
3,838.6	3,758.3	3,823.8	3,739.9	14.8	15.3	-81.70	-242.3	-616.6	187.8	158.6	29.23	6.425	
3,900.0	3,817.4	3,885.1	3,798.9	15.1	15.7	-82.12	-247.6	-632.1	191.6	161.6	29.95	6.398	
3,937.0	3,853.0	3,922.0	3,834.5	15.3	15.9	-82.36	-250.9	-641.4	193.9	163.5	30.38	6.381	
4,000.0	3,913.6	3,984.9	3,895.1	15.7	16.3	-82.76	-256.3	-657.3	197.7	166.6	31.11	6.355	
4,035.4	3,947.7	4,020.2	3,929.2	15.9	16.5	-82.98	-259.4	-666.2	199.9	168.4	31.53	6.341	
4,100.0	4,009.8	4,084.6	3,991.3	16.3	16.8	-83.37	-265.0	-682.5	203.9	171.6	32.28	6.317	
4,133.8	4,042.4	4,118.4	4,023.8	16.5	17.0	-83.56	-268.0	-691.0	206.0	173.3	32.68	6.305	
4,200.0	4,106.0	4,184.4	4,087.4	16.8	17.4	-83.94	-273.7	-707.7	210.1	176.7	33.45	6.282	
4,232.3	4,137.1	4,216.6	4,118.4	17.0	17.6	-84.11	-276.5	-715.8	212.1	178.3	33.83	6.271	
4,300.0	4,202.2	4,284.2	4,183.6	17.4	18.0	-84.47	-282.4	-732.9	216.3	181.7	34.62	6.249	
4,330.7	4,231.7	4,314.8	4,213.1	17.6	18.1	-84.63	-285.1	-740.6	218.3	183.3	34.98	6.240	
4,400.0	4,298.4	4,384.0	4,279.7	18.0	18.5	-84.98	-291.1	-758.1	222.6	186.8	35.79	6.219	
4,429.1	4,326.4	4,413.1	4,307.7	18.2	18.7	-85.12	-293.6	-765.4	224.4	188.3	36.13	6.211	
4,500.0	4,394.6	4,483.8	4,375.9	18.6	19.1	-85.46	-299.8	-783.3	228.8	191.9	36.96	6.192	
4,527.5	4,421.1	4,511.3	4,402.4	18.7	19.3	-85.59	-302.2	-790.2	230.6	193.3	37.28	6.185	
4,600.0	4,490.8	4,583.6	4,472.0	19.2	19.7	-85.91	-308.5	-808.5	235.1	197.0	38.12	6.167	
4,626.0	4,515.8	4,609.5	4,497.0	19.3	19.8	-86.02	-310.7	-815.0	236.7	198.3	38.43	6.160	
4,700.0	4,587.0	4,683.4	4,568.2	19.8	20.3	-86.34	-317.2	-833.7	241.4	202.1	39.29	6.143	
4,724.4	4,610.5	4,707.7	4,591.7	19.9	20.4	-86.44	-319.3	-839.8	242.9	203.3	39.58	6.138	
4,800.0	4,683.2	4,783.1	4,664.4	20.3	20.8	-86.75	-325.9	-858.9	247.7	207.2	40.46	6.121	
4,822.8	4,705.2	4,805.9	4,686.3	20.5	21.0	-86.84	-327.9	-864.7	249.1	208.4	40.73	6.116	
4,900.0	4,779.4	4,882.9	4,760.5	20.9	21.4	-87.14	-334.6	-884.1	254.0	212.4	41.63	6.101	
4,921.2	4,799.8	4,904.1	4,781.0	21.0	21.5	-87.22	-336.4	-889.5	255.3	213.4	41.88	6.097	
5,000.0	4,875.6	4,982.7	4,856.7	21.5	22.0	-87.51	-343.3	-909.3	260.3	217.5	42.80	6.082	
5,019.7	4,894.5	5,002.4	4,875.6	21.6	22.1	-87.58	-345.0	-914.3	261.5	218.5	43.03	6.078	
5,100.0	4,971.8	5,082.5	4,952.8	22.1	22.6	-87.86	-351.9	-934.5	266.6	222.7	43.97	6.064	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
5,118.1	4,989.2	5,100.6	4,970.2	22.2	22.7	-87.92	-353.5	-939.1	267.8	223.6	44.18	6.061	
5,200.0	5,068.0	5,182.3	5,049.0	22.7	23.1	-88.19	-360.6	-959.7	273.0	227.8	45.14	6.048	
5,216.5	5,083.9	5,198.8	5,064.9	22.8	23.2	-88.25	-362.1	-963.9	274.0	228.7	45.33	6.045	
5,240.0	5,106.5	5,222.3	5,087.5	22.9	23.4	-88.32	-364.1	-969.8	275.5	229.9	45.60	6.041	
5,300.0	5,164.4	5,282.1	5,145.2	23.2	23.7	-88.46	-369.3	-984.9	279.3	233.1	46.25	6.040	
5,314.9	5,178.8	5,297.0	5,159.5	23.3	23.8	-88.45	-370.6	-988.7	280.3	233.9	46.39	6.042	
5,400.0	5,261.5	5,382.6	5,242.1	23.6	24.3	-88.15	-378.0	-1,010.2	285.8	238.6	47.15	6.061	
5,413.4	5,274.6	5,396.3	5,255.3	23.6	24.3	-88.08	-379.2	-1,013.5	286.6	239.3	47.26	6.065	
5,500.0	5,359.5	5,485.2	5,341.7	23.9	24.7	-87.66	-386.1	-1,033.4	291.6	243.8	47.86	6.094	
5,511.8	5,371.1	5,497.3	5,353.5	24.0	24.7	-87.60	-386.9	-1,036.0	292.2	244.3	47.93	6.097	
5,600.0	5,458.0	5,588.0	5,442.2	24.2	25.0	-87.16	-392.9	-1,053.4	296.7	248.2	48.46	6.122	
5,610.2	5,468.2	5,598.5	5,452.6	24.3	25.1	-87.11	-393.6	-1,055.2	297.1	248.6	48.51	6.124	
5,700.0	5,557.2	5,690.9	5,543.7	24.5	25.3	-86.65	-398.6	-1,069.9	300.9	251.9	48.97	6.145	
5,708.6	5,565.7	5,699.9	5,552.5	24.5	25.4	-86.61	-399.1	-1,071.1	301.2	252.2	49.01	6.146	
5,800.0	5,656.7	5,794.1	5,645.9	24.7	25.6	-86.14	-403.1	-1,082.9	304.3	254.9	49.38	6.162	
5,807.1	5,663.7	5,801.4	5,653.2	24.7	25.6	-86.10	-403.4	-1,083.7	304.5	255.1	49.40	6.163	
5,900.0	5,756.5	5,897.4	5,748.7	24.9	25.8	-85.60	-406.4	-1,092.5	306.9	257.2	49.70	6.174	
5,905.5	5,761.9	5,903.1	5,754.4	24.9	25.8	-85.57	-406.6	-1,093.0	307.0	257.3	49.71	6.175	
6,000.0	5,856.4	6,000.9	5,852.0	25.0	26.0	-85.05	-408.5	-1,098.6	308.6	258.7	49.93	6.181	
6,003.9	5,860.3	6,004.9	5,856.1	25.0	26.0	-85.03	-408.6	-1,098.8	308.6	258.7	49.93	6.181	
6,032.5	5,888.9	6,034.5	5,885.6	25.0	26.0	179.94	-409.0	-1,099.9	309.0	277.7	31.25	9.888	
6,062.5	5,918.9	6,065.6	5,916.7	25.1	26.1	-179.91	-409.2	-1,100.7	309.3	277.9	31.38	9.857	
6,100.0	5,956.4	6,104.5	5,955.6	25.1	26.1	90.36	-409.4	-1,101.2	309.4	259.4	50.07	6.181	
6,102.3	5,958.7	6,106.9	5,958.0	25.1	26.1	90.39	-409.4	-1,101.2	309.4	259.4	50.07	6.181	
6,150.0	6,006.2	6,155.1	6,006.2	25.1	26.2	91.18	-409.5	-1,101.3	309.5	259.5	50.00	6.190	
6,200.0	6,055.6	6,205.4	6,056.4	25.1	26.2	92.33	-409.5	-1,099.7	309.7	259.9	49.83	6.216	
6,200.8	6,056.3	6,206.1	6,057.2	25.1	26.2	92.35	-409.5	-1,099.7	309.7	259.9	49.83	6.216	
6,250.0	6,104.3	6,256.1	6,106.9	25.0	26.2	93.48	-409.5	-1,094.6	310.0	260.5	49.58	6.254	
6,299.2	6,151.3	6,306.5	6,156.5	24.9	26.1	94.59	-409.5	-1,085.9	310.5	261.2	49.26	6.303	
6,300.0	6,152.1	6,307.3	6,157.3	24.9	26.1	94.61	-409.5	-1,085.8	310.5	261.2	49.25	6.304	
6,350.0	6,198.7	6,358.9	6,207.4	24.8	26.1	95.72	-409.5	-1,073.2	311.0	262.2	48.88	6.364	
6,397.6	6,241.9	6,408.6	6,254.6	24.7	26.0	96.75	-409.5	-1,057.8	311.7	263.2	48.48	6.429	
6,400.0	6,244.1	6,411.1	6,256.9	24.7	26.0	96.80	-409.5	-1,057.0	311.7	263.2	48.46	6.432	
6,450.0	6,287.8	6,463.7	6,305.6	24.5	25.8	97.85	-409.5	-1,037.0	312.4	264.4	48.01	6.508	
6,496.0	6,326.5	6,512.6	6,349.3	24.4	25.7	98.78	-409.5	-1,015.2	313.2	265.6	47.58	6.582	
6,500.0	6,329.7	6,516.8	6,353.0	24.4	25.7	98.86	-409.5	-1,013.2	313.2	265.7	47.54	6.588	
6,550.0	6,369.6	6,570.3	6,399.0	24.3	25.5	99.82	-409.5	-985.8	314.1	267.0	47.09	6.671	
6,594.5	6,403.3	6,618.3	6,438.3	24.2	25.4	100.64	-409.5	-958.3	314.9	268.2	46.71	6.742	
6,600.0	6,407.3	6,624.3	6,443.1	24.2	25.4	100.74	-409.5	-954.7	315.0	268.4	46.66	6.751	
6,650.0	6,442.7	6,678.7	6,485.1	24.1	25.2	101.59	-409.5	-920.1	316.0	269.7	46.29	6.826	
6,692.9	6,471.0	6,725.8	6,519.2	24.0	25.1	102.28	-409.5	-887.7	316.8	270.7	46.02	6.883	
6,700.0	6,475.5	6,733.6	6,524.6	24.0	25.1	102.39	-409.5	-882.1	316.9	270.9	45.98	6.892	
6,750.0	6,505.6	6,788.8	6,561.4	24.0	25.0	103.12	-409.5	-840.8	317.8	272.0	45.78	6.942	
6,791.3	6,528.3	6,834.8	6,589.5	24.0	24.9	103.68	-409.5	-804.5	318.5	272.8	45.71	6.969	
6,800.0	6,532.8	6,844.5	6,595.1	24.0	24.9	103.79	-409.5	-796.6	318.7	273.0	45.70	6.974	
6,850.0	6,557.0	6,900.4	6,625.4	24.1	24.9	104.37	-409.5	-749.6	319.5	273.8	45.76	6.983	
6,889.7	6,574.1	6,945.2	6,647.0	24.2	24.9	104.79	-409.5	-710.4	320.1	274.2	45.93	6.970	
6,900.0	6,578.1	6,956.7	6,652.1	24.3	24.9	104.89	-409.5	-700.1	320.2	274.3	45.98	6.965	
6,950.0	6,596.1	7,013.3	6,675.0	24.5	25.1	105.32	-409.5	-648.3	320.9	274.5	46.38	6.919	
6,988.2	6,607.5	7,056.6	6,689.7	24.7	25.2	105.59	-409.5	-607.6	321.3	274.5	46.80	6.866	
7,000.0	6,610.7	7,070.0	6,693.7	24.8	25.2	105.67	-409.5	-594.8	321.4	274.5	46.95	6.846	
7,050.0	6,621.9	7,127.0	6,708.2	25.1	25.5	105.93	-409.5	-539.7	321.8	274.2	47.70	6.748	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	7,168.7	6,716.0	25.4	25.8	106.08	-409.5	-498.7	322.1	273.7	48.35	6.661	
7,100.0	6,629.7	7,184.1	6,718.3	25.6	25.9	106.12	-409.5	-483.6	322.1	273.5	48.61	6.627	
7,150.0	6,634.1	7,241.2	6,723.9	26.0	26.3	106.21	-409.5	-426.7	322.3	272.6	49.67	6.489	
7,185.0	6,635.1	7,281.3	6,725.1	26.4	26.6	106.22	-409.5	-386.6	322.3	271.8	50.50	6.383	
7,196.6	6,635.0	7,294.5	6,725.0	26.5	26.8	106.22	-409.5	-373.4	322.3	271.5	50.77	6.348	
7,200.0	6,635.0	7,298.0	6,724.9	26.6	26.8	106.22	-409.5	-369.9	322.3	271.5	50.85	6.339	
7,283.4	6,633.9	7,381.4	6,723.5	27.6	27.7	106.16	-409.5	-286.5	322.2	269.4	52.82	6.100	
7,300.0	6,633.7	7,398.0	6,723.2	27.8	27.9	106.14	-409.5	-270.0	322.2	269.0	53.21	6.055	
7,381.9	6,632.6	7,479.9	6,721.9	29.0	29.0	106.08	-409.5	-188.1	322.1	266.6	55.49	5.804	
7,400.0	6,632.4	7,498.0	6,721.5	29.2	29.2	106.07	-409.5	-170.0	322.1	266.1	56.00	5.752	
7,480.3	6,631.4	7,578.3	6,720.2	30.5	30.5	106.01	-409.5	-89.7	322.0	263.4	58.53	5.501	
7,500.0	6,631.1	7,598.0	6,719.8	30.9	30.8	106.00	-409.5	-70.0	321.9	262.8	59.15	5.443	
7,578.7	6,630.1	7,676.7	6,718.5	32.3	32.1	105.94	-409.5	8.7	321.9	260.0	61.89	5.201	
7,600.0	6,629.8	7,698.0	6,718.1	32.7	32.5	105.92	-409.5	30.0	321.8	259.2	62.63	5.139	
7,677.1	6,628.9	7,775.1	6,716.8	34.1	33.9	105.87	-409.5	107.1	321.7	256.2	65.51	4.911	
7,700.0	6,628.6	7,798.0	6,716.4	34.6	34.4	105.85	-409.5	130.0	321.7	255.4	66.37	4.848	
7,775.6	6,627.6	7,873.6	6,715.1	36.1	35.9	105.80	-409.5	205.5	321.6	252.3	69.36	4.637	
7,800.0	6,627.3	7,898.0	6,714.7	36.6	36.4	105.78	-409.5	230.0	321.6	251.3	70.33	4.573	
7,874.0	6,626.3	7,972.0	6,713.5	38.2	37.9	105.72	-409.5	304.0	321.5	248.1	73.40	4.380	
7,900.0	6,626.0	7,998.0	6,713.0	38.8	38.5	105.70	-409.5	330.0	321.5	247.0	74.48	4.316	
7,972.4	6,625.1	8,070.4	6,711.8	40.4	40.1	105.65	-409.5	402.4	321.4	243.8	77.61	4.141	
8,000.0	6,624.7	8,098.0	6,711.3	41.0	40.7	105.63	-409.5	429.9	321.4	242.6	78.80	4.079	
8,070.8	6,623.8	8,168.8	6,710.1	42.6	42.3	105.58	-409.5	500.8	321.3	239.3	81.95	3.921	
8,100.0	6,623.4	8,198.0	6,709.6	43.3	43.0	105.56	-409.5	529.9	321.3	238.0	83.25	3.859	
8,169.3	6,622.6	8,267.3	6,708.4	44.9	44.6	105.51	-409.5	599.2	321.2	234.8	86.41	3.717	
8,200.0	6,622.2	8,298.0	6,707.9	45.6	45.3	105.48	-409.5	629.9	321.1	233.3	87.81	3.657	
8,267.7	6,621.3	8,365.7	6,706.7	47.3	46.9	105.43	-409.5	697.6	321.1	230.1	90.97	3.529	
8,300.0	6,620.9	8,398.0	6,706.2	48.0	47.7	105.41	-409.5	729.9	321.0	228.6	92.48	3.471	
8,366.1	6,620.0	8,464.1	6,705.1	49.7	49.3	105.36	-409.5	796.0	321.0	225.3	95.62	3.357	
8,400.0	6,619.6	8,498.0	6,704.5	50.5	50.1	105.34	-409.5	829.9	320.9	223.7	97.23	3.301	
8,464.5	6,618.8	8,562.5	6,703.4	52.1	51.7	105.29	-409.5	894.4	320.8	220.5	100.34	3.197	
8,500.0	6,618.3	8,598.0	6,702.8	53.0	52.6	105.26	-409.5	929.9	320.8	218.8	102.05	3.143	
8,563.0	6,617.5	8,661.0	6,701.7	54.5	54.2	105.22	-409.5	992.8	320.7	215.6	105.13	3.051	
8,600.0	6,617.0	8,698.0	6,701.1	55.5	55.1	105.19	-409.5	1,029.8	320.7	213.7	106.94	2.999	
8,661.4	6,616.3	8,759.4	6,700.0	57.0	56.7	105.14	-409.5	1,091.2	320.6	210.6	109.98	2.915	
8,700.0	6,615.8	8,798.0	6,699.3	58.0	57.7	105.11	-409.5	1,129.8	320.6	208.7	111.89	2.865	
8,759.8	6,615.0	8,857.8	6,698.3	59.5	59.2	105.07	-409.5	1,189.6	320.5	205.6	114.88	2.790	
8,800.0	6,614.5	8,898.0	6,697.6	60.6	60.2	105.04	-409.5	1,229.8	320.5	203.6	116.89	2.742	
8,858.2	6,613.7	8,956.2	6,696.6	62.1	61.7	105.00	-409.5	1,288.1	320.4	200.6	119.82	2.674	
8,900.0	6,613.2	8,998.0	6,695.9	63.2	62.8	104.97	-409.5	1,329.8	320.4	198.4	121.93	2.627	
8,956.7	6,612.5	9,054.7	6,694.9	64.6	64.3	104.92	-409.5	1,386.5	320.3	195.5	124.81	2.566	
9,000.0	6,611.9	9,098.0	6,694.2	65.8	65.4	104.89	-409.5	1,429.8	320.3	193.2	127.01	2.521	
9,055.1	6,611.2	9,153.1	6,693.3	67.2	66.8	104.85	-409.5	1,484.9	320.2	190.4	129.83	2.466	
9,100.0	6,610.6	9,198.0	6,692.5	68.4	68.0	104.82	-409.5	1,529.8	320.1	188.0	132.13	2.423	
9,153.5	6,609.9	9,251.5	6,691.6	69.8	69.4	104.78	-409.5	1,583.3	320.1	185.2	134.88	2.373	
9,200.0	6,609.3	9,298.0	6,690.8	71.0	70.6	104.74	-409.5	1,629.8	320.0	182.8	137.27	2.331	
9,251.9	6,608.7	9,349.9	6,689.9	72.4	72.0	104.71	-409.5	1,681.7	320.0	180.0	139.96	2.286	
9,300.0	6,608.1	9,398.0	6,689.1	73.7	73.3	104.67	-409.5	1,729.7	319.9	177.5	142.45	2.246	
9,350.4	6,607.4	9,448.4	6,688.2	75.0	74.6	104.63	-409.5	1,780.1	319.9	174.8	145.07	2.205	
9,400.0	6,606.8	9,498.0	6,687.3	76.3	75.9	104.60	-409.5	1,829.7	319.8	172.2	147.65	2.166	
9,448.8	6,606.1	9,546.8	6,686.5	77.6	77.2	104.56	-409.5	1,878.5	319.8	169.6	150.20	2.129	
9,500.0	6,605.5	9,598.0	6,685.6	79.0	78.6	104.52	-409.5	1,929.7	319.7	166.8	152.88	2.091	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,604.9	9,645.2	6,684.8	80.2	79.9	104.49	-409.5	1,976.9	319.7	164.3	155.36	2.058	
9,600.0	6,604.2	9,698.0	6,683.9	81.7	81.3	104.45	-409.5	2,029.7	319.6	161.5	158.13	2.021	
9,645.6	6,603.6	9,743.6	6,683.1	82.9	82.5	104.41	-409.5	2,075.3	319.5	159.0	160.53	1.991	
9,700.0	6,602.9	9,798.0	6,682.2	84.3	84.0	104.37	-409.5	2,129.7	319.5	156.1	163.39	1.955	
9,744.1	6,602.3	9,842.1	6,681.4	85.5	85.2	104.34	-409.5	2,173.8	319.4	153.7	165.72	1.928	
9,800.0	6,601.6	9,898.0	6,680.5	87.0	86.7	104.30	-409.5	2,229.7	319.4	150.7	168.68	1.893	
9,842.5	6,601.1	9,940.5	6,679.7	88.2	87.8	104.26	-409.5	2,272.2	319.3	148.4	170.93	1.868	
9,900.0	6,600.3	9,998.0	6,678.8	89.7	89.4	104.22	-409.5	2,329.7	319.3	145.3	173.98	1.835	
9,940.9	6,599.8	10,038.9	6,678.1	90.9	90.5	104.19	-409.5	2,370.6	319.2	143.1	176.16	1.812	
10,000.0	6,599.0	10,098.0	6,677.0	92.5	92.1	104.15	-409.5	2,429.6	319.2	139.9	179.30	1.780	
10,039.3	6,598.5	10,137.3	6,676.4	93.5	93.1	104.12	-409.5	2,469.0	319.1	137.7	181.40	1.759	
10,100.0	6,597.7	10,198.0	6,675.3	95.2	94.8	104.07	-409.5	2,529.6	319.1	134.4	184.63	1.728	
10,137.8	6,597.3	10,235.7	6,674.7	96.2	95.8	104.04	-409.5	2,567.4	319.0	132.4	186.65	1.709	
10,200.0	6,596.5	10,298.0	6,673.6	97.9	97.5	104.00	-409.5	2,629.6	319.0	129.0	189.98	1.679	
10,236.2	6,596.0	10,334.2	6,673.0	98.9	98.5	103.97	-409.5	2,665.8	318.9	127.0	191.92	1.662	
10,300.0	6,595.2	10,398.0	6,671.9	100.6	100.2	103.92	-409.5	2,729.6	318.9	123.5	195.34	1.632	
10,334.6	6,594.7	10,432.6	6,671.3	101.6	101.2	103.90	-409.5	2,764.2	318.8	121.6	197.20	1.617	
10,400.0	6,593.9	10,498.0	6,670.2	103.3	103.0	103.85	-409.5	2,829.6	318.8	118.0	200.71	1.588	
10,433.0	6,593.5	10,531.0	6,669.6	104.2	103.9	103.82	-409.5	2,862.6	318.7	116.2	202.49	1.574	
10,500.0	6,592.6	10,598.0	6,668.4	106.1	105.7	103.77	-409.5	2,929.6	318.6	112.6	206.09	1.546	
10,531.5	6,592.2	10,629.4	6,667.9	106.9	106.6	103.75	-409.5	2,961.0	318.6	110.8	207.79	1.533	
10,600.0	6,591.3	10,698.0	6,666.7	108.8	108.4	103.70	-409.5	3,029.5	318.5	107.1	211.48	1.506	
10,629.9	6,590.9	10,727.9	6,666.2	109.6	109.3	103.67	-409.5	3,059.4	318.5	105.4	213.10	1.495 Level 3	
10,700.0	6,590.0	10,798.0	6,665.0	111.6	111.2	103.62	-409.5	3,129.5	318.4	101.6	216.89	1.468 Level 3	
10,728.3	6,589.6	10,826.3	6,664.5	112.3	112.0	103.60	-409.5	3,157.9	318.4	100.0	218.42	1.458 Level 3	
10,800.0	6,588.7	10,898.0	6,663.3	114.3	113.9	103.55	-409.5	3,229.5	318.3	96.0	222.30	1.432 Level 3	
10,826.7	6,588.4	10,924.7	6,662.8	115.0	114.7	103.53	-409.5	3,256.3	318.3	94.6	223.75	1.423 Level 3	
10,900.0	6,587.4	10,998.0	6,661.5	117.0	116.7	103.47	-409.5	3,329.5	318.2	90.5	227.72	1.397 Level 3	
10,925.2	6,587.1	11,023.1	6,661.1	117.7	117.4	103.45	-409.5	3,354.7	318.2	89.1	229.08	1.389 Level 3	
11,000.0	6,586.1	11,098.0	6,659.8	119.8	119.4	103.39	-409.5	3,429.5	318.1	85.0	233.15	1.365 Level 3	
11,023.6	6,585.8	11,121.6	6,659.4	120.4	120.1	103.38	-409.5	3,453.1	318.1	83.7	234.43	1.357 Level 3	
11,100.0	6,584.8	11,198.0	6,658.1	122.5	122.2	103.32	-409.5	3,529.5	318.0	79.4	238.59	1.333 Level 3	
11,122.0	6,584.5	11,220.0	6,657.7	123.2	122.8	103.30	-409.5	3,551.5	318.0	78.2	239.78	1.326 Level 3	
11,200.0	6,583.5	11,298.0	6,656.4	125.3	124.9	103.24	-409.5	3,629.5	317.9	73.9	244.03	1.303 Level 3	
11,220.4	6,583.3	11,318.4	6,656.0	125.9	125.5	103.23	-409.5	3,649.9	317.9	72.8	245.15	1.297 Level 3	
11,300.0	6,582.2	11,398.0	6,654.6	128.1	127.7	103.17	-409.5	3,729.4	317.8	68.3	249.48	1.274 Level 3	
11,318.9	6,582.0	11,416.8	6,654.3	128.6	128.2	103.15	-409.5	3,748.3	317.8	67.3	250.51	1.269 Level 3	
11,400.0	6,580.9	11,498.0	6,652.9	130.8	130.4	103.09	-409.5	3,829.4	317.7	62.8	254.94	1.246 Level 2	
11,417.3	6,580.7	11,515.3	6,652.6	131.3	130.9	103.08	-409.5	3,846.7	317.7	61.8	255.89	1.242 Level 2	
11,500.0	6,579.7	11,598.0	6,651.2	133.6	133.2	103.02	-409.5	3,929.4	317.6	57.2	260.41	1.220 Level 2	
11,515.7	6,579.4	11,613.7	6,650.9	134.0	133.6	103.00	-409.5	3,945.1	317.6	56.3	261.27	1.216 Level 2	
11,600.0	6,578.4	11,698.0	6,649.4	136.3	136.0	102.94	-409.5	4,029.4	317.5	51.6	265.88	1.194 Level 2	
11,614.1	6,578.2	11,712.1	6,649.2	136.7	136.4	102.93	-409.5	4,043.5	317.5	50.9	266.66	1.191 Level 2	
11,700.0	6,577.1	11,798.0	6,647.7	139.1	138.7	102.86	-409.5	4,129.4	317.4	46.1	271.36	1.170 Level 2	
11,712.6	6,576.9	11,810.5	6,647.5	139.5	139.1	102.85	-409.5	4,142.0	317.4	45.4	272.05	1.167 Level 2	
11,800.0	6,575.8	11,898.0	6,646.0	141.9	141.5	102.79	-409.5	4,229.4	317.3	40.5	276.85	1.146 Level 2	
11,811.0	6,575.6	11,909.0	6,645.8	142.2	141.8	102.78	-409.5	4,240.4	317.3	39.9	277.45	1.144 Level 2	
11,846.3	6,575.2	11,944.2	6,645.2	143.2	142.8	102.75	-409.5	4,275.6	317.3	37.9	279.39	1.136 Level 2	
11,858.8	6,575.0	11,955.0	6,645.0	143.5	143.1	102.74	-409.5	4,286.4	317.3	37.3	280.03	1.133 Level 2	
11,859.3	6,575.0	11,955.0	6,645.0	143.5	143.1	102.74	-409.5	4,286.4	317.3	37.2	280.04	1.133 Level 2, SF	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-178.93	-14.9	-0.3	14.9				
98.4	98.4	98.4	98.4	0.1	0.1	-178.93	-14.9	-0.3	14.9	14.7	0.19	77.714	
100.0	100.0	100.0	100.0	0.1	0.1	-178.93	-14.9	-0.3	14.9	14.7	0.20	76.398	
196.8	196.8	196.8	196.8	0.3	0.3	-178.93	-14.9	-0.3	14.9	14.3	0.63	23.679	
200.0	200.0	200.0	200.0	0.3	0.3	-178.93	-14.9	-0.3	14.9	14.3	0.65	23.159	
295.3	295.3	295.3	295.3	0.5	0.5	-178.93	-14.9	-0.3	14.9	13.9	1.07	13.918	
300.0	300.0	300.0	300.0	0.5	0.5	-178.93	-14.9	-0.3	14.9	13.8	1.09	13.648	
393.7	393.7	393.7	393.7	0.8	0.8	-178.93	-14.9	-0.3	14.9	13.4	1.52	9.856	
400.0	400.0	400.0	400.0	0.8	0.8	-178.93	-14.9	-0.3	14.9	13.4	1.54	9.675	
492.1	492.1	492.1	492.1	1.0	1.0	-178.93	-14.9	-0.3	14.9	13.0	1.96	7.629	
500.0	500.0	500.0	500.0	1.0	1.0	-178.93	-14.9	-0.3	14.9	12.9	1.99	7.493	
590.5	590.5	590.5	590.5	1.2	1.2	-178.93	-14.9	-0.3	14.9	12.5	2.40	6.223	
600.0	600.0	600.0	600.0	1.2	1.2	-178.93	-14.9	-0.3	14.9	12.5	2.44	6.115	
689.0	689.0	689.0	689.0	1.4	1.4	-178.93	-14.9	-0.3	14.9	12.1	2.84	5.254	
700.0	700.0	700.0	700.0	1.4	1.4	-178.93	-14.9	-0.3	14.9	12.0	2.89	5.164	
787.4	787.4	787.4	787.4	1.6	1.6	-178.93	-14.9	-0.3	14.9	11.7	3.29	4.547	
800.0	800.0	800.0	800.0	1.7	1.7	-178.93	-14.9	-0.3	14.9	11.6	3.34	4.470	
885.8	885.8	885.8	885.8	1.9	1.9	-178.93	-14.9	-0.3	14.9	11.2	3.73	4.007	
900.0	900.0	900.0	900.0	1.9	1.9	-178.93	-14.9	-0.3	14.9	11.1	3.79	3.940	
984.2	984.2	984.2	984.2	2.1	2.1	-178.93	-14.9	-0.3	14.9	10.8	4.17	3.582	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-178.93	-14.9	-0.3	14.9	10.7	4.24	3.522	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	-178.93	-14.9	-0.3	14.9	10.3	4.61	3.239	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-178.93	-14.9	-0.3	14.9	10.2	4.69	3.185 CC, ES	
1,181.1	1,181.1	1,180.8	1,180.8	2.5	2.5	178.30	-15.8	0.5	15.8	10.8	5.03	3.140 SF	
1,200.0	1,200.0	1,199.6	1,199.6	2.6	2.5	176.98	-16.2	0.9	16.3	11.2	5.11	3.181	
1,279.5	1,279.5	1,278.6	1,278.4	2.7	2.7	-97.93	-19.1	3.4	19.6	14.2	5.43	3.607	
1,300.0	1,300.0	1,298.8	1,298.7	2.8	2.7	-101.34	-20.1	4.2	20.9	15.4	5.51	3.794	
1,377.9	1,377.8	1,375.6	1,375.2	2.9	2.9	-114.12	-24.9	8.4	28.2	22.4	5.82	4.856	
1,400.0	1,399.8	1,397.2	1,396.7	3.0	2.9	-117.28	-26.6	9.8	31.0	25.1	5.90	5.260	
1,476.4	1,475.9	1,471.4	1,470.4	3.1	3.1	-126.15	-33.1	15.5	43.3	37.1	6.21	6.972	
1,500.0	1,499.5	1,494.1	1,492.9	3.2	3.1	-128.29	-35.4	17.5	47.9	41.6	6.30	7.595	
1,574.8	1,573.7	1,565.4	1,563.4	3.4	3.3	-133.54	-43.4	24.5	64.7	58.1	6.61	9.791	
1,600.0	1,598.7	1,589.2	1,586.8	3.4	3.4	-134.90	-46.4	27.1	71.2	64.5	6.71	10.607	
1,673.2	1,671.1	1,657.3	1,653.8	3.6	3.6	-138.01	-55.7	35.2	92.2	85.2	7.02	13.126	
1,700.0	1,697.5	1,681.8	1,677.8	3.7	3.6	-138.90	-59.4	38.3	100.7	93.5	7.13	14.108	
1,771.6	1,767.9	1,748.4	1,743.0	3.9	3.9	-140.92	-69.8	47.4	125.0	117.5	7.45	16.779	
1,800.0	1,795.6	1,774.9	1,768.9	4.0	4.0	-141.62	-73.9	51.0	135.0	127.4	7.57	17.835	
1,870.1	1,864.0	1,839.9	1,832.4	4.3	4.2	-143.18	-84.1	59.9	160.8	152.9	7.88	20.401	
1,900.0	1,893.1	1,867.4	1,859.4	4.4	4.3	-143.78	-88.5	63.6	172.3	164.2	8.01	21.495	
1,968.5	1,959.3	1,930.1	1,920.7	4.6	4.5	-145.03	-98.3	72.2	199.4	191.1	8.33	23.950	
1,992.4	1,982.4	1,951.9	1,942.0	4.7	4.6	-145.43	-101.7	75.2	209.2	200.8	8.44	24.802	
2,000.0	1,989.6	1,958.8	1,948.7	4.8	4.6	-145.59	-102.8	76.1	212.4	203.9	8.47	25.059	
2,066.9	2,054.0	2,019.5	2,008.2	5.1	4.9	-146.83	-112.3	84.4	240.1	231.3	8.82	27.225	
2,100.0	2,085.8	2,049.5	2,037.5	5.2	5.0	-147.35	-117.0	88.5	253.8	244.8	8.99	28.243	
2,165.3	2,148.7	2,108.9	2,095.5	5.5	5.2	-148.22	-126.4	96.6	281.0	271.7	9.32	30.135	
2,200.0	2,182.0	2,140.3	2,126.3	5.7	5.3	-148.61	-131.3	100.9	295.4	285.9	9.51	31.054	
2,263.8	2,243.4	2,198.2	2,182.9	6.0	5.6	-149.25	-140.4	108.8	322.0	312.1	9.86	32.669	
2,300.0	2,278.2	2,231.1	2,215.1	6.2	5.7	-149.56	-145.5	113.2	337.1	327.0	10.05	33.526	
2,362.2	2,338.1	2,287.5	2,270.3	6.5	5.9	-150.05	-154.4	120.9	363.0	352.7	10.40	34.915	
2,400.0	2,374.4	2,321.9	2,303.9	6.7	6.1	-150.31	-159.8	125.6	378.8	368.2	10.61	35.710	
2,460.6	2,432.8	2,376.9	2,357.7	7.0	6.3	-150.68	-168.4	133.1	404.2	393.2	10.95	36.909	
2,500.0	2,470.6	2,412.6	2,392.7	7.2	6.5	-150.90	-174.0	138.0	420.6	409.4	11.17	37.646	

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 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
2,559.0	2,527.4	2,466.2	2,445.1	7.6	6.7	-151.20	-182.4	145.3	445.3	433.8	11.51	38.684	
2,600.0	2,566.8	2,503.4	2,481.5	7.8	6.9	-151.39	-188.3	150.4	462.4	450.7	11.75	39.368	
2,657.5	2,622.1	2,555.6	2,532.5	8.1	7.1	-151.63	-196.5	157.5	486.5	474.4	12.08	40.270	
2,700.0	2,663.0	2,594.2	2,570.3	8.3	7.2	-151.80	-202.5	162.8	504.3	491.9	12.33	40.907	
2,755.9	2,716.8	2,644.9	2,619.9	8.6	7.5	-152.00	-210.5	169.7	527.7	515.0	12.66	41.694	
2,800.0	2,759.2	2,685.0	2,659.0	8.9	7.6	-152.14	-216.8	175.2	546.1	533.2	12.92	42.287	
2,854.3	2,811.5	2,734.3	2,707.3	9.2	7.9	-152.31	-224.5	181.9	568.9	555.6	13.24	42.977	
2,900.0	2,855.4	2,775.7	2,747.8	9.4	8.0	-152.44	-231.0	187.5	588.0	574.5	13.51	43.530	
2,952.7	2,906.2	2,823.6	2,794.7	9.7	8.2	-152.58	-238.5	194.1	610.1	596.3	13.82	44.136	
3,000.0	2,951.6	2,866.5	2,836.6	10.0	8.4	-152.70	-245.3	199.9	629.9	615.8	14.11	44.653	
3,051.2	3,000.9	2,913.0	2,882.1	10.3	8.6	-152.82	-252.6	206.3	651.3	636.9	14.41	45.187	
3,100.0	3,047.8	2,957.3	2,925.4	10.5	8.8	-152.92	-259.5	212.3	671.8	657.1	14.71	45.673	
3,149.6	3,095.5	3,002.3	2,969.4	10.8	9.0	-153.02	-266.6	218.5	692.6	677.6	15.01	46.145	
3,200.0	3,144.0	3,048.0	3,014.2	11.1	9.2	-153.12	-273.8	224.7	713.7	698.4	15.31	46.602	
3,248.0	3,190.2	3,091.6	3,056.8	11.4	9.4	-153.21	-280.6	230.6	733.8	718.2	15.61	47.018	
3,300.0	3,240.2	3,138.8	3,103.0	11.7	9.7	-153.30	-288.0	237.1	755.6	739.7	15.92	47.450	
3,346.4	3,284.9	3,181.0	3,144.2	11.9	9.8	-153.37	-294.6	242.8	775.1	758.8	16.21	47.819	
3,400.0	3,336.4	3,229.6	3,191.8	12.2	10.1	-153.45	-302.3	249.5	797.5	781.0	16.54	48.227	
3,444.9	3,379.6	3,270.3	3,231.6	12.5	10.2	-153.52	-308.7	255.0	816.3	799.5	16.81	48.554	
3,500.0	3,432.6	3,320.4	3,280.6	12.8	10.5	-153.60	-316.5	261.9	839.4	822.3	17.15	48.941	
3,543.3	3,474.3	3,370.5	3,329.6	13.1	10.7	-153.68	-324.1	268.5	857.4	839.9	17.44	49.174	
3,600.0	3,528.8	3,441.1	3,399.1	13.4	10.9	-153.84	-333.8	276.9	879.9	862.1	17.80	49.432	
3,641.7	3,569.0	3,493.9	3,451.2	13.6	11.1	-153.99	-340.2	282.5	895.8	877.8	18.06	49.594	
3,700.0	3,625.0	3,568.6	3,525.2	14.0	11.3	-154.25	-348.0	289.3	917.0	898.6	18.42	49.778	
3,740.1	3,663.6	3,620.8	3,577.0	14.2	11.4	-154.46	-352.6	293.2	930.8	912.2	18.67	49.869	
3,800.0	3,721.2	3,699.6	3,655.5	14.5	11.6	-154.82	-358.2	298.1	950.4	931.4	19.02	49.961	
3,838.6	3,758.3	3,751.0	3,706.8	14.8	11.7	-155.08	-361.0	300.5	962.3	943.0	19.25	50.000	
3,900.0	3,817.4	3,833.7	3,789.3	15.1	11.8	-155.54	-363.9	303.1	980.1	960.5	19.59	50.019	
3,937.0	3,853.0	3,884.0	3,839.6	15.3	11.9	-155.84	-364.9	303.9	990.1	970.3	19.80	50.008	
4,000.0	3,913.6	3,958.0	3,913.6	15.7	12.0	-156.32	-365.1	304.1	1,006.1	986.0	20.12	49.995	
4,035.4	3,947.7	3,992.1	3,947.7	15.9	12.1	-156.53	-365.1	304.1	1,015.1	994.8	20.30	50.007	
4,100.0	4,009.8	4,054.2	4,009.8	16.3	12.2	-156.92	-365.1	304.1	1,031.4	1,010.7	20.61	50.035	
4,133.8	4,042.4	4,086.7	4,042.4	16.5	12.2	-157.12	-365.1	304.1	1,039.9	1,019.1	20.78	50.052	
4,200.0	4,106.0	4,150.4	4,106.0	16.8	12.3	-157.50	-365.1	304.1	1,056.7	1,035.6	21.10	50.085	
4,232.3	4,137.1	4,181.4	4,137.1	17.0	12.3	-157.68	-365.1	304.1	1,064.9	1,043.6	21.25	50.102	
4,300.0	4,202.2	4,246.6	4,202.2	17.4	12.4	-158.05	-365.1	304.1	1,082.1	1,060.5	21.58	50.140	
4,330.7	4,231.7	4,276.1	4,231.7	17.6	12.5	-158.21	-365.1	304.1	1,089.9	1,068.2	21.73	50.158	
4,400.0	4,298.4	4,342.8	4,298.4	18.0	12.6	-158.57	-365.1	304.1	1,107.6	1,085.5	22.06	50.199	
4,429.1	4,326.4	4,370.8	4,326.4	18.2	12.6	-158.72	-365.1	304.1	1,115.1	1,092.8	22.20	50.217	
4,500.0	4,394.6	4,439.0	4,394.6	18.6	12.7	-159.08	-365.1	304.1	1,133.2	1,110.7	22.55	50.261	
4,527.5	4,421.1	4,465.5	4,421.1	18.7	12.8	-159.21	-365.1	304.1	1,140.3	1,117.6	22.68	50.279	
4,600.0	4,490.8	4,535.2	4,490.8	19.2	12.9	-159.56	-365.1	304.1	1,158.9	1,135.8	23.03	50.326	
4,626.0	4,515.8	4,560.2	4,515.8	19.3	12.9	-159.68	-365.1	304.1	1,165.5	1,142.4	23.15	50.343	
4,700.0	4,587.0	4,631.4	4,587.0	19.8	13.0	-160.02	-365.1	304.1	1,184.6	1,161.1	23.51	50.393	
4,724.4	4,610.5	4,654.8	4,610.5	19.9	13.1	-160.13	-365.1	304.1	1,190.9	1,167.3	23.62	50.409	
4,800.0	4,683.2	4,727.6	4,683.2	20.3	13.2	-160.46	-365.1	304.1	1,210.4	1,186.4	23.99	50.460	
4,822.8	4,705.2	4,749.5	4,705.2	20.5	13.2	-160.55	-365.1	304.1	1,216.3	1,192.2	24.10	50.476	
4,900.0	4,779.4	4,823.8	4,779.4	20.9	13.3	-160.88	-365.1	304.1	1,236.3	1,211.8	24.47	50.529	
4,921.2	4,799.8	4,844.2	4,799.8	21.0	13.3	-160.97	-365.1	304.1	1,241.8	1,217.2	24.57	50.543	
5,000.0	4,875.6	4,920.0	4,875.6	21.5	13.5	-161.28	-365.1	304.1	1,262.2	1,237.3	24.95	50.598	
5,019.7	4,894.5	4,938.9	4,894.5	21.6	13.5	-161.36	-365.1	304.1	1,267.3	1,242.3	25.04	50.611	
5,100.0	4,971.8	5,016.2	4,971.8	22.1	13.6	-161.67	-365.1	304.1	1,288.2	1,262.8	25.43	50.667	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
5,118.1	4,989.2	5,033.6	4,989.2	22.2	13.7	-161.74	-365.1	304.1	1,292.9	1,267.4	25.51	50.679	
5,200.0	5,068.0	5,112.4	5,068.0	22.7	13.8	-162.04	-365.1	304.1	1,314.3	1,288.4	25.90	50.736	
5,216.5	5,083.9	5,128.3	5,083.9	22.8	13.8	-162.10	-365.1	304.1	1,318.6	1,292.6	25.98	50.747	
5,240.0	5,106.5	5,150.9	5,106.5	22.9	13.8	-162.19	-365.1	304.1	1,324.7	1,298.6	26.10	50.763	
5,300.0	5,164.4	5,208.7	5,164.4	23.2	13.9	-162.49	-365.1	304.1	1,339.8	1,313.4	26.43	50.686	
5,314.9	5,178.8	5,223.2	5,178.8	23.3	14.0	-162.56	-365.1	304.1	1,343.4	1,316.9	26.51	50.674	
5,400.0	5,261.5	5,305.9	5,261.5	23.6	14.1	-162.92	-365.1	304.1	1,362.4	1,335.4	26.94	50.567	
5,413.4	5,274.6	5,319.0	5,274.6	23.6	14.1	-162.98	-365.1	304.1	1,365.2	1,338.2	27.01	50.548	
5,500.0	5,359.5	7,809.8	6,713.8	23.9	36.4	-129.83	-365.1	-1,053.7	1,380.9	1,331.3	49.61	27.837	
5,511.8	5,371.1	7,811.9	6,713.7	24.0	36.4	-128.88	-365.1	-1,055.8	1,369.4	1,319.3	50.13	27.317	
5,600.0	5,458.0	7,826.3	6,713.7	24.2	36.8	-121.34	-365.1	-1,070.2	1,284.0	1,229.9	54.04	23.761	
5,610.2	5,468.2	7,827.8	6,713.7	24.3	36.8	-120.42	-365.1	-1,071.7	1,274.1	1,219.6	54.47	23.389	
5,700.0	5,557.2	7,839.4	6,713.7	24.5	37.1	-112.08	-365.1	-1,083.3	1,186.9	1,129.0	57.96	20.477	
5,708.6	5,565.7	7,840.3	6,713.7	24.5	37.2	-111.26	-365.1	-1,084.2	1,178.5	1,120.3	58.26	20.230	
5,800.0	5,656.7	7,849.0	6,713.7	24.7	37.4	-102.70	-365.1	-1,092.9	1,090.0	1,029.2	60.79	17.931	
5,807.1	5,663.7	7,849.5	6,713.7	24.7	37.4	-102.05	-365.1	-1,093.4	1,083.1	1,022.2	60.94	17.775	
5,900.0	5,756.5	7,855.1	6,713.7	24.9	37.5	-93.99	-365.1	-1,099.0	993.3	931.1	62.26	15.955	
5,905.5	5,761.9	7,855.3	6,713.7	24.9	37.6	-93.54	-365.1	-1,099.2	988.0	925.7	62.30	15.859	
6,000.0	5,856.4	7,857.8	6,713.7	25.0	37.6	-86.54	-365.1	-1,101.7	897.3	834.8	62.57	14.342	
6,003.9	5,860.3	7,857.8	6,713.7	25.0	37.6	-86.28	-365.1	-1,101.7	893.6	831.0	62.56	14.283	
6,032.5	5,888.9	7,857.9	6,713.7	25.0	37.6	-179.65	-365.1	-1,101.8	866.3	836.1	30.25	28.642	
6,062.5	5,918.9	7,857.8	6,713.7	25.1	37.6	-179.67	-365.1	-1,101.7	837.8	807.5	30.30	27.655	
6,100.0	5,956.4	7,856.8	6,713.7	25.1	37.6	98.81	-365.1	-1,100.7	802.3	740.9	61.41	13.065	
6,102.3	5,958.7	7,856.7	6,713.7	25.1	37.6	99.31	-365.1	-1,100.6	800.1	738.8	61.31	13.050	
6,150.0	6,006.2	7,852.3	6,713.7	25.1	37.5	108.28	-365.1	-1,096.2	755.5	696.7	58.87	12.835	
6,200.0	6,055.6	7,844.4	6,713.7	25.1	37.3	115.57	-365.1	-1,088.3	709.5	653.5	55.98	12.675	
6,200.8	6,056.3	7,844.3	6,713.7	25.1	37.3	115.66	-365.1	-1,088.2	708.8	652.9	55.93	12.673	
6,250.0	6,104.3	7,833.1	6,713.7	25.0	37.0	120.93	-365.1	-1,077.0	664.6	611.3	53.29	12.472	
6,299.2	6,151.3	7,818.6	6,713.7	24.9	36.6	124.70	-365.1	-1,062.5	621.8	570.7	51.04	12.182	
6,300.0	6,152.1	7,818.4	6,713.7	24.9	36.6	124.75	-365.1	-1,062.3	621.1	570.1	51.01	12.176	
6,350.0	6,198.7	7,800.4	6,713.8	24.8	36.1	127.33	-365.1	-1,044.3	579.3	530.1	49.16	11.783	
6,397.6	6,241.9	7,780.2	6,713.8	24.7	35.6	128.86	-365.1	-1,024.1	541.3	493.5	47.78	11.328	
6,400.0	6,244.1	7,779.1	6,713.8	24.7	35.6	128.92	-365.1	-1,023.0	539.4	491.7	47.72	11.304	
6,450.0	6,287.8	7,754.8	6,713.9	24.5	35.0	129.71	-365.1	-998.7	501.8	455.2	46.63	10.763	
6,496.0	6,326.5	7,729.8	6,713.9	24.4	34.4	129.83	-365.1	-973.7	469.5	423.6	45.89	10.230	
6,500.0	6,329.7	7,727.5	6,713.9	24.4	34.3	129.81	-365.1	-971.4	466.8	421.0	45.84	10.183	
6,550.0	6,369.6	7,697.3	6,714.0	24.3	33.6	129.33	-365.1	-941.2	434.6	389.3	45.32	9.589	
6,594.5	6,403.3	7,668.2	6,714.0	24.2	32.8	128.46	-365.1	-912.1	408.5	363.4	45.07	9.064	
6,600.0	6,407.3	7,664.5	6,714.0	24.2	32.7	128.33	-365.1	-908.4	405.4	360.4	45.04	9.000	
6,650.0	6,442.7	7,629.1	6,714.1	24.1	31.9	126.87	-365.1	-873.0	379.4	334.5	44.96	8.439	
6,692.9	6,471.0	7,596.8	6,714.2	24.0	31.1	125.31	-365.1	-840.7	359.8	314.7	45.02	7.991	
6,700.0	6,475.5	7,591.3	6,714.2	24.0	30.9	125.02	-365.1	-835.2	356.8	311.7	45.04	7.921	
6,750.0	6,505.6	7,551.3	6,714.3	24.0	30.0	122.85	-365.1	-795.2	337.4	292.2	45.24	7.459	
6,791.3	6,528.3	7,516.7	6,714.3	24.0	29.1	120.87	-365.1	-760.6	323.9	278.5	45.44	7.127	
6,800.0	6,532.8	7,509.3	6,714.3	24.0	29.0	120.44	-365.1	-753.2	321.3	275.9	45.48	7.065	
6,850.0	6,557.0	7,465.5	6,714.4	24.1	27.9	117.90	-365.1	-709.4	308.3	262.6	45.75	6.740	
6,889.7	6,574.1	7,429.6	6,714.5	24.2	27.1	115.87	-365.1	-673.5	300.0	254.1	45.92	6.534	
6,900.0	6,578.1	7,420.2	6,714.5	24.3	26.9	115.35	-365.1	-664.1	298.1	252.2	45.95	6.489	
6,950.0	6,596.1	7,373.5	6,714.6	24.5	25.8	112.93	-365.1	-617.4	290.4	244.4	46.07	6.304	
6,988.2	6,607.5	7,337.0	6,714.7	24.7	25.0	111.25	-365.1	-580.9	286.0	239.9	46.10	6.204	
7,000.0	6,610.7	7,325.6	6,714.7	24.8	24.7	110.77	-365.1	-569.5	284.8	238.7	46.08	6.181	
7,050.0	6,621.9	7,276.9	6,714.8	25.1	23.7	108.98	-365.1	-520.8	280.9	234.9	45.99	6.109	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	7,240.8	6,714.9	25.4	22.9	107.98	-365.1	-484.7	279.0	233.1	45.87	6.083	
7,100.0	6,629.7	7,227.5	6,714.9	25.6	22.7	107.69	-365.1	-471.4	278.5	232.7	45.80	6.081	
7,150.0	6,634.1	7,177.7	6,715.0	26.0	21.6	106.95	-365.1	-421.6	277.2	231.7	45.52	6.090	
7,185.0	6,635.1	7,139.3	6,714.4	26.4	20.9	106.66	-365.1	-383.2	276.8	231.5	45.27	6.114	
7,196.6	6,635.0	7,126.4	6,713.8	26.5	20.6	106.56	-365.1	-370.3	276.6	231.4	45.18	6.122	
7,200.0	6,635.0	7,122.5	6,713.5	26.6	20.6	106.52	-365.1	-366.5	276.6	231.4	45.16	6.125	
7,283.4	6,633.9	7,030.0	6,701.7	27.6	18.9	104.38	-365.1	-274.8	274.0	229.0	45.00	6.089	
7,300.0	6,633.7	7,012.1	6,698.1	27.8	18.6	103.68	-365.1	-257.2	273.2	228.2	45.04	6.066	
7,381.9	6,632.6	6,926.4	6,674.6	29.0	17.3	99.03	-365.1	-174.9	268.8	223.2	45.65	5.889	
7,400.0	6,632.4	6,908.3	6,668.4	29.2	17.1	97.76	-365.1	-157.8	267.9	222.1	45.81	5.848	
7,480.3	6,631.4	6,832.0	6,637.5	30.5	16.3	91.34	-365.1	-88.1	265.2	218.5	46.69	5.681	
7,495.6	6,631.2	6,818.2	6,631.2	30.8	16.1	90.00	-365.1	-75.9	265.1	218.3	46.83	5.662	
7,500.0	6,631.1	6,814.3	6,629.4	30.9	16.1	89.61	-365.1	-72.5	265.1	218.3	46.87	5.657	
7,578.7	6,630.1	6,748.3	6,595.4	32.3	15.8	82.48	-365.1	-15.8	268.4	220.9	47.46	5.655	
7,600.0	6,629.8	6,731.7	6,586.0	32.7	15.7	80.54	-365.1	-2.1	270.5	222.9	47.55	5.687	
7,677.1	6,628.9	6,675.6	6,552.2	34.1	15.6	73.71	-365.1	42.6	283.1	235.4	47.68	5.938	
7,700.0	6,628.6	6,660.2	6,542.3	34.6	15.6	71.78	-365.1	54.4	288.5	240.9	47.64	6.056	
7,775.6	6,627.6	6,613.0	6,510.4	36.1	15.6	65.88	-365.1	89.2	311.8	264.4	47.40	6.578	
7,800.0	6,627.3	6,600.0	6,501.2	36.6	15.6	64.28	-365.1	98.3	321.1	273.8	47.33	6.785	
7,874.0	6,626.3	6,559.3	6,471.4	38.2	15.6	59.34	-365.1	126.1	354.2	307.2	46.92	7.548	
7,900.0	6,626.0	6,550.0	6,464.4	38.8	15.6	58.24	-365.1	132.1	367.4	320.4	46.95	7.824	
7,972.4	6,625.1	6,513.3	6,435.9	40.4	15.6	54.04	-365.1	155.3	407.9	361.5	46.46	8.781	
8,000.0	6,624.7	6,500.0	6,425.3	41.0	15.6	52.58	-365.1	163.3	424.7	378.5	46.26	9.182	
8,070.8	6,623.8	6,473.7	6,403.9	42.6	15.6	49.80	-365.1	178.6	470.7	424.6	46.13	10.203	
8,100.0	6,623.4	6,463.0	6,395.0	43.3	15.6	48.72	-365.1	184.5	490.7	444.6	46.07	10.651	
8,169.3	6,622.6	6,439.5	6,375.2	44.9	15.6	46.40	-365.1	197.2	540.3	494.3	45.99	11.747	
8,200.0	6,622.2	6,429.7	6,366.9	45.6	15.6	45.48	-365.1	202.3	563.1	517.1	45.98	12.246	
8,267.7	6,621.3	6,400.0	6,341.0	47.3	15.6	42.80	-365.1	217.1	615.1	569.6	45.49	13.523	
8,300.0	6,620.9	6,400.0	6,341.0	48.0	15.6	42.80	-365.1	217.1	640.4	594.4	46.03	13.912	
8,366.1	6,620.0	6,383.7	6,326.6	49.7	15.6	41.41	-365.1	224.7	693.6	647.4	46.24	15.001	
8,400.0	6,619.6	6,375.5	6,319.3	50.5	15.6	40.73	-365.1	228.4	721.5	675.1	46.34	15.569	
8,464.5	6,618.8	6,350.0	6,296.3	52.1	15.6	38.71	-365.1	239.4	775.5	729.5	45.98	16.866	
8,500.0	6,618.3	6,350.0	6,296.3	53.0	15.6	38.71	-365.1	239.4	805.4	758.9	46.56	17.300	
8,563.0	6,617.5	6,350.0	6,296.3	54.5	15.6	38.71	-365.1	239.4	859.6	812.0	47.60	18.060	
8,600.0	6,617.0	6,333.5	6,281.3	55.5	15.6	37.48	-365.1	246.1	891.7	844.4	47.26	18.869	
8,661.4	6,616.3	6,322.5	6,271.1	57.0	15.6	36.69	-365.1	250.3	945.6	898.0	47.63	19.854	
8,700.0	6,615.8	6,316.0	6,265.1	58.0	15.6	36.23	-365.1	252.8	979.8	931.9	47.87	20.467	
8,759.8	6,615.0	6,300.0	6,250.2	59.5	15.6	35.14	-365.1	258.6	1,033.3	985.4	47.92	21.563	
8,800.0	6,614.5	6,300.0	6,250.2	60.6	15.6	35.14	-365.1	258.6	1,069.4	1,020.8	48.55	22.027	
8,858.2	6,613.7	6,300.0	6,250.2	62.1	15.6	35.14	-365.1	258.6	1,122.2	1,072.8	49.47	22.685	
8,900.0	6,613.2	6,300.0	6,250.2	63.2	15.6	35.14	-365.1	258.6	1,160.4	1,110.3	50.13	23.148	
8,956.7	6,612.5	6,278.8	6,230.2	64.6	15.6	33.77	-365.1	265.7	1,212.2	1,162.4	49.79	24.346	
9,000.0	6,611.9	6,273.5	6,225.2	65.8	15.6	33.43	-365.1	267.4	1,252.1	1,201.9	50.15	24.967	
9,055.1	6,611.2	6,267.0	6,219.0	67.2	15.6	33.03	-365.1	269.4	1,303.1	1,252.5	50.62	25.740	
9,100.0	6,610.6	6,250.0	6,202.8	68.4	15.6	32.02	-365.1	274.5	1,345.0	1,294.6	50.34	26.718	
9,153.5	6,609.9	6,250.0	6,202.8	69.8	15.6	32.02	-365.1	274.5	1,394.8	1,343.6	51.15	27.270	
9,200.0	6,609.3	6,250.0	6,202.8	71.0	15.6	32.02	-365.1	274.5	1,438.3	1,386.4	51.85	27.740	
9,251.9	6,608.7	6,250.0	6,202.8	72.4	15.6	32.02	-365.1	274.5	1,487.1	1,434.5	52.64	28.253	
9,300.0	6,608.1	6,250.0	6,202.8	73.7	15.6	32.02	-365.1	274.5	1,532.4	1,479.1	53.36	28.717	
9,350.4	6,607.4	6,250.0	6,202.8	75.0	15.6	32.02	-365.1	274.5	1,580.1	1,526.0	54.13	29.190	
9,400.0	6,606.8	6,250.0	6,202.8	76.3	15.6	32.02	-365.1	274.5	1,627.3	1,572.4	54.89	29.648	
9,448.8	6,606.1	6,228.9	6,182.5	77.6	15.6	30.83	-365.1	280.2	1,673.4	1,619.0	54.34	30.795	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,605.5	6,224.8	6,178.5	79.0	15.6	30.61	-365.1	281.2	1,722.1	1,667.2	54.85	31.394	
9,547.2	6,604.9	6,221.2	6,175.0	80.2	15.6	30.42	-365.1	282.1	1,767.2	1,711.8	55.34	31.935	
9,600.0	6,604.2	6,200.0	6,154.4	81.7	15.5	29.31	-365.1	287.0	1,817.9	1,763.1	54.86	33.140	
9,645.6	6,603.6	6,200.0	6,154.4	82.9	15.5	29.31	-365.1	287.0	1,861.5	1,806.0	55.51	33.532	
9,700.0	6,602.9	6,200.0	6,154.4	84.3	15.5	29.31	-365.1	287.0	1,913.6	1,857.3	56.30	33.989	
9,744.1	6,602.3	6,200.0	6,154.4	85.5	15.5	29.31	-365.1	287.0	1,955.9	1,899.0	56.94	34.351	
9,800.0	6,601.6	6,200.0	6,154.4	87.0	15.5	29.31	-365.1	287.0	2,009.7	1,952.0	57.75	34.801	
9,842.5	6,601.1	6,200.0	6,154.4	88.2	15.5	29.31	-365.1	287.0	2,050.7	1,992.3	58.37	35.134	
9,900.0	6,600.3	6,200.0	6,154.4	89.7	15.5	29.31	-365.1	287.0	2,106.2	2,047.0	59.20	35.576	
9,940.9	6,599.8	6,200.0	6,154.4	90.9	15.5	29.31	-365.1	287.0	2,145.8	2,086.0	59.80	35.883	
10,000.0	6,599.0	6,200.0	6,154.4	92.5	15.5	29.31	-365.1	287.0	2,203.0	2,142.3	60.66	36.318	
10,039.3	6,598.5	6,200.0	6,154.4	93.5	15.5	29.31	-365.1	287.0	2,241.1	2,179.9	61.23	36.600	
10,100.0	6,597.7	6,200.0	6,154.4	95.2	15.5	29.31	-365.1	287.0	2,300.0	2,237.9	62.12	37.027	
10,137.8	6,597.3	6,200.0	6,154.4	96.2	15.5	29.31	-365.1	287.0	2,336.8	2,274.1	62.67	37.287	
10,200.0	6,596.5	6,200.0	6,154.4	97.9	15.5	29.31	-365.1	287.0	2,397.3	2,333.8	63.58	37.706	
10,236.2	6,596.0	6,180.5	6,135.3	98.9	15.5	28.35	-365.1	291.0	2,432.3	2,369.5	62.80	38.732	
10,300.0	6,595.2	6,177.6	6,132.4	100.6	15.5	28.22	-365.1	291.5	2,494.4	2,430.9	63.52	39.271	
10,334.6	6,594.7	6,176.1	6,130.9	101.6	15.5	28.14	-365.1	291.8	2,528.2	2,464.2	63.91	39.557	
10,400.0	6,593.9	6,173.2	6,128.2	103.3	15.5	28.01	-365.1	292.3	2,591.9	2,527.3	64.66	40.088	
10,433.0	6,593.5	6,171.9	6,126.8	104.2	15.5	27.95	-365.1	292.6	2,624.2	2,559.2	65.03	40.351	
10,500.0	6,592.6	6,150.0	6,105.2	106.1	15.5	26.96	-365.1	296.2	2,689.9	2,625.4	64.54	41.680	
10,531.5	6,592.2	6,150.0	6,105.2	106.9	15.5	26.96	-365.1	296.2	2,720.7	2,655.7	64.97	41.872	
10,600.0	6,591.3	6,150.0	6,105.2	108.8	15.5	26.96	-365.1	296.2	2,787.6	2,721.7	65.93	42.284	
10,629.9	6,590.9	6,150.0	6,105.2	109.6	15.5	26.96	-365.1	296.2	2,816.9	2,750.5	66.34	42.460	
10,700.0	6,590.0	6,150.0	6,105.2	111.6	15.5	26.96	-365.1	296.2	2,885.5	2,818.2	67.32	42.864	
10,728.3	6,589.6	6,150.0	6,105.2	112.3	15.5	26.96	-365.1	296.2	2,913.2	2,845.5	67.71	43.024	
10,800.0	6,588.7	6,150.0	6,105.2	114.3	15.5	26.96	-365.1	296.2	2,983.5	2,914.8	68.71	43.422	
10,826.7	6,588.4	6,150.0	6,105.2	115.0	15.5	26.96	-365.1	296.2	3,009.7	2,940.6	69.08	43.567	
10,900.0	6,587.4	6,150.0	6,105.2	117.0	15.5	26.96	-365.1	296.2	3,081.6	3,011.5	70.10	43.959	
10,925.2	6,587.1	6,150.0	6,105.2	117.7	15.5	26.96	-365.1	296.2	3,106.3	3,035.8	70.45	44.090	
11,000.0	6,586.1	6,150.0	6,105.2	119.8	15.5	26.96	-365.1	296.2	3,179.8	3,108.3	71.50	44.475	
11,023.6	6,585.8	6,150.0	6,105.2	120.4	15.5	26.96	-365.1	296.2	3,203.0	3,131.2	71.83	44.594	
11,100.0	6,584.8	6,150.0	6,105.2	122.5	15.5	26.95	-365.1	296.2	3,278.2	3,205.3	72.89	44.972	
11,122.0	6,584.5	6,150.0	6,105.2	123.2	15.5	26.95	-365.1	296.2	3,299.8	3,226.6	73.20	45.079	
11,200.0	6,583.5	6,150.0	6,105.2	125.3	15.5	26.95	-365.1	296.2	3,376.6	3,302.3	74.29	45.451	
11,220.4	6,583.3	6,150.0	6,105.2	125.9	15.5	26.95	-365.1	296.2	3,396.8	3,322.2	74.58	45.547	
11,300.0	6,582.2	6,150.0	6,105.2	128.1	15.5	26.95	-365.1	296.2	3,475.1	3,399.4	75.69	45.913	
11,318.9	6,582.0	6,150.0	6,105.2	128.6	15.5	26.95	-365.1	296.2	3,493.7	3,417.8	75.95	45.998	
11,400.0	6,580.9	6,150.0	6,105.2	130.8	15.5	26.95	-365.1	296.2	3,573.8	3,496.7	77.09	46.359	
11,417.3	6,580.7	6,150.0	6,105.2	131.3	15.5	26.95	-365.1	296.2	3,590.8	3,513.5	77.33	46.434	
11,500.0	6,579.7	6,150.0	6,105.2	133.6	15.5	26.95	-365.1	296.2	3,672.4	3,593.9	78.49	46.789	
11,515.7	6,579.4	6,150.0	6,105.2	134.0	15.5	26.95	-365.1	296.2	3,688.0	3,609.3	78.71	46.855	
11,600.0	6,578.4	6,150.0	6,105.2	136.3	15.5	26.95	-365.1	296.2	3,771.2	3,691.3	79.89	47.204	
11,614.1	6,578.2	6,150.0	6,105.2	136.7	15.5	26.95	-365.1	296.2	3,785.2	3,705.1	80.09	47.262	
11,700.0	6,577.1	6,150.0	6,105.2	139.1	15.5	26.95	-365.1	296.2	3,870.0	3,788.7	81.29	47.605	
11,712.6	6,576.9	6,150.0	6,105.2	139.5	15.5	26.95	-365.1	296.2	3,882.4	3,801.0	81.47	47.655	
11,800.0	6,575.8	6,150.0	6,105.2	141.9	15.5	26.95	-365.1	296.2	3,968.9	3,886.2	82.70	47.993	
11,811.0	6,575.6	6,150.0	6,105.2	142.2	15.5	26.95	-365.1	296.2	3,979.8	3,896.9	82.85	48.035	
11,858.8	6,575.0	6,150.0	6,105.2	143.5	15.5	26.95	-365.1	296.2	4,027.0	3,943.5	83.52	48.215	
11,859.3	6,575.0	6,150.0	6,105.2	143.5	15.5	26.95	-365.1	296.2	4,027.6	3,944.1	83.53	48.219	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	155.407		
100.0	100.0	100.0	100.0	0.1	0.1	0.53	29.9	0.3	29.9	29.7	0.20	152.776		
196.8	196.8	196.8	196.8	0.3	0.3	0.53	29.9	0.3	29.9	29.2	0.63	47.351		
200.0	200.0	200.0	200.0	0.3	0.3	0.53	29.9	0.3	29.9	29.2	0.65	46.312		
295.3	295.3	295.3	295.3	0.5	0.5	0.53	29.9	0.3	29.9	28.8	1.07	27.833		
300.0	300.0	300.0	300.0	0.5	0.5	0.53	29.9	0.3	29.9	28.8	1.09	27.293		
393.7	393.7	393.7	393.7	0.8	0.8	0.53	29.9	0.3	29.9	28.4	1.52	19.709		
400.0	400.0	400.0	400.0	0.8	0.8	0.53	29.9	0.3	29.9	28.3	1.54	19.347		
492.1	492.1	492.1	492.1	1.0	1.0	0.53	29.9	0.3	29.9	27.9	1.96	15.256		
500.0	500.0	500.0	500.0	1.0	1.0	0.53	29.9	0.3	29.9	27.9	1.99	14.985		
590.5	590.5	590.5	590.5	1.2	1.2	0.53	29.9	0.3	29.9	27.5	2.40	12.444		
600.0	600.0	600.0	600.0	1.2	1.2	0.53	29.9	0.3	29.9	27.4	2.44	12.228		
689.0	689.0	689.0	689.0	1.4	1.4	0.53	29.9	0.3	29.9	27.0	2.84	10.508		
700.0	700.0	700.0	700.0	1.4	1.4	0.53	29.9	0.3	29.9	27.0	2.89	10.328		
787.4	787.4	787.4	787.4	1.6	1.6	0.53	29.9	0.3	29.9	26.6	3.29	9.093		
800.0	800.0	800.0	800.0	1.7	1.7	0.53	29.9	0.3	29.9	26.5	3.34	8.939		
885.8	885.8	885.8	885.8	1.9	1.9	0.53	29.9	0.3	29.9	26.1	3.73	8.013		
900.0	900.0	900.0	900.0	1.9	1.9	0.53	29.9	0.3	29.9	26.1	3.79	7.879		
984.2	984.2	984.2	984.2	2.1	2.1	0.53	29.9	0.3	29.9	25.7	4.17	7.163		
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	7.044		
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	6.476		
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	6.369		
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	0.53	29.9	0.3	29.9	24.8	5.06	5.909		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.53	29.9	0.3	29.9	24.7	5.14	5.812 CC		
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	97.82	29.9	0.3	30.0	24.5	5.49	5.469		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	99.03	29.9	0.3	30.1	24.5	5.58	5.398		
1,377.9	1,377.8	1,377.8	1,377.8	2.9	3.0	105.94	29.9	0.3	30.9	25.0	5.91	5.234		
1,400.0	1,399.8	1,399.8	1,399.8	3.0	3.0	108.48	29.9	0.3	31.3	25.3	6.00	5.224		
1,476.4	1,475.9	1,475.9	1,475.9	3.1	3.2	118.63	29.9	0.3	33.9	27.6	6.33	5.355		
1,500.0	1,499.5	1,499.5	1,499.5	3.2	3.2	122.00	29.9	0.3	35.1	28.7	6.43	5.459		
1,574.8	1,573.7	1,573.7	1,573.7	3.4	3.4	132.49	29.9	0.3	40.5	33.7	6.75	5.995		
1,600.0	1,598.7	1,598.7	1,598.7	3.4	3.5	135.79	29.9	0.3	42.8	36.0	6.86	6.251		
1,673.2	1,671.1	1,671.9	1,671.9	3.6	3.6	143.68	30.0	-0.6	50.8	43.7	7.15	7.105		
1,700.0	1,697.5	1,698.8	1,698.8	3.7	3.7	145.89	30.1	-1.4	54.0	46.7	7.26	7.438		
1,771.6	1,767.9	1,770.8	1,770.7	3.9	3.8	150.50	30.4	-4.8	62.9	55.4	7.54	8.344		
1,800.0	1,795.6	1,799.4	1,799.2	4.0	3.9	151.90	30.6	-6.6	66.6	59.0	7.65	8.707		
1,870.1	1,864.0	1,870.1	1,869.7	4.3	4.0	154.62	31.3	-12.4	75.9	68.0	7.93	9.576		
1,900.0	1,893.1	1,900.4	1,899.9	4.4	4.1	155.52	31.6	-15.4	80.0	72.0	8.05	9.944		
1,968.5	1,959.3	1,969.9	1,968.9	4.6	4.3	157.13	32.5	-23.4	89.5	81.2	8.33	10.748		
1,992.4	1,982.4	1,994.2	1,993.0	4.7	4.3	157.57	32.8	-26.6	92.9	84.5	8.43	11.024		
2,000.0	1,989.6	2,001.9	2,000.6	4.8	4.3	157.70	32.9	-27.7	93.9	85.5	8.46	11.103		
2,066.9	2,054.0	2,070.2	2,068.1	5.1	4.5	158.48	34.1	-38.0	102.6	93.8	8.79	11.674		
2,100.0	2,085.8	2,104.1	2,101.6	5.2	4.6	158.65	34.7	-43.7	106.3	97.4	8.94	11.890		
2,165.3	2,148.7	2,171.3	2,167.6	5.5	4.8	158.62	36.0	-56.2	112.8	103.6	9.28	12.161		
2,200.0	2,182.0	2,207.1	2,202.5	5.7	4.9	158.44	36.8	-63.4	115.8	106.3	9.47	12.227		
2,263.8	2,243.4	2,273.0	2,266.8	6.0	5.1	157.82	38.4	-77.9	120.2	110.4	9.83	12.229		
2,300.0	2,278.2	2,310.4	2,303.2	6.2	5.3	157.31	39.4	-86.8	122.2	112.2	10.04	12.166		
2,362.2	2,338.1	2,374.8	2,365.4	6.5	5.5	156.18	41.2	-103.3	124.7	114.3	10.44	11.949		
2,400.0	2,374.4	2,414.0	2,403.1	6.7	5.7	155.33	42.3	-113.9	125.7	115.0	10.69	11.758		
2,460.6	2,432.8	2,476.7	2,463.1	7.0	5.9	153.69	44.3	-132.0	126.5	115.4	11.13	11.366		
2,500.0	2,470.6	2,516.3	2,500.8	7.2	6.1	152.52	45.6	-144.0	126.7	115.2	11.43	11.081		

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
2,559.0	2,527.4	2,575.2	2,556.9	7.6	6.4	150.78	47.6	-161.8	127.0	115.1	11.91	10.665	
2,600.0	2,566.8	2,616.0	2,595.8	7.8	6.6	149.58	48.9	-174.1	127.3	115.0	12.25	10.389	
2,657.5	2,622.1	2,673.4	2,650.5	8.1	6.9	147.90	50.8	-191.4	127.8	115.0	12.76	10.016	
2,700.0	2,663.0	2,715.8	2,690.9	8.3	7.1	146.67	52.2	-204.2	128.3	115.1	13.15	9.753	
2,755.9	2,716.8	2,771.6	2,744.1	8.6	7.4	145.07	54.0	-221.1	128.9	115.2	13.69	9.421	
2,800.0	2,759.2	2,815.6	2,786.0	8.9	7.7	143.82	55.5	-234.4	129.5	115.4	14.12	9.172	
2,854.3	2,811.5	2,869.8	2,837.6	9.2	8.0	142.29	57.3	-250.7	130.4	115.7	14.68	8.880	
2,900.0	2,855.4	2,915.4	2,881.1	9.4	8.2	141.03	58.8	-264.5	131.1	116.0	15.16	8.649	
2,952.7	2,906.2	2,968.0	2,931.2	9.7	8.5	139.58	60.5	-280.4	132.1	116.4	15.74	8.394	
3,000.0	2,951.6	3,015.2	2,976.1	10.0	8.8	138.31	62.1	-294.6	133.0	116.8	16.26	8.180	
3,051.2	3,000.9	3,066.2	3,024.8	10.3	9.1	136.95	63.7	-310.0	134.1	117.3	16.85	7.960	
3,100.0	3,047.8	3,115.0	3,071.2	10.5	9.4	135.67	65.3	-324.7	135.2	117.8	17.42	7.763	
3,149.6	3,095.5	3,164.5	3,118.4	10.8	9.6	134.40	67.0	-339.7	136.4	118.4	18.01	7.575	
3,200.0	3,144.0	3,214.8	3,166.3	11.1	9.9	133.13	68.6	-354.9	137.7	119.1	18.62	7.395	
3,248.0	3,190.2	3,262.7	3,211.9	11.4	10.2	131.94	70.2	-369.3	139.0	119.8	19.21	7.235	
3,300.0	3,240.2	3,314.5	3,261.3	11.7	10.5	130.67	71.9	-385.0	140.4	120.6	19.86	7.072	
3,346.4	3,284.9	3,360.9	3,305.5	11.9	10.8	129.57	73.4	-399.0	141.8	121.3	20.44	6.935	
3,400.0	3,336.4	3,414.3	3,356.4	12.2	11.1	128.32	75.2	-415.1	143.4	122.3	21.13	6.788	
3,444.9	3,379.6	3,459.1	3,399.1	12.5	11.4	127.29	76.7	-428.6	144.8	123.1	21.70	6.673	
3,500.0	3,432.6	3,514.1	3,451.5	12.8	11.7	126.06	78.5	-445.2	146.6	124.2	22.42	6.540	
3,543.3	3,474.3	3,557.3	3,492.7	13.1	12.0	125.12	79.9	-458.3	148.1	125.1	22.99	6.443	
3,600.0	3,528.8	3,613.9	3,546.6	13.4	12.3	123.91	81.8	-475.4	150.1	126.3	23.73	6.324	
3,641.7	3,569.0	3,655.5	3,586.2	13.6	12.6	123.04	83.1	-487.9	151.6	127.3	24.28	6.242	
3,700.0	3,625.0	3,713.7	3,641.6	14.0	13.0	121.85	85.1	-505.5	153.7	128.6	25.05	6.135	
3,740.1	3,663.6	3,753.7	3,679.8	14.2	13.2	121.05	86.4	-517.6	155.2	129.6	25.59	6.066	
3,800.0	3,721.2	3,813.5	3,736.7	14.5	13.6	119.89	88.3	-535.6	157.5	131.1	26.38	5.971	
3,838.6	3,758.3	3,852.0	3,773.4	14.8	13.8	119.16	89.6	-547.2	159.0	132.2	26.90	5.913	
3,900.0	3,817.4	3,913.2	3,831.8	15.1	14.2	118.02	91.6	-565.7	161.5	133.8	27.72	5.827	
3,937.0	3,853.0	3,950.2	3,867.0	15.3	14.4	117.36	92.9	-576.9	163.0	134.8	28.21	5.779	
4,000.0	3,913.6	4,013.0	3,926.8	15.7	14.8	116.25	94.9	-595.9	165.7	136.6	29.06	5.703	
4,035.4	3,947.7	4,048.4	3,960.5	15.9	15.0	115.64	96.1	-606.5	167.2	137.7	29.53	5.662	
4,100.0	4,009.8	4,112.8	4,021.9	16.3	15.4	114.56	98.2	-626.0	170.0	139.6	30.39	5.594	
4,133.8	4,042.4	4,146.6	4,054.1	16.5	15.7	114.01	99.3	-636.2	171.5	140.7	30.84	5.560	
4,200.0	4,106.0	4,212.6	4,117.0	16.8	16.1	112.96	101.5	-656.1	174.5	142.7	31.72	5.499	
4,232.3	4,137.1	4,244.8	4,147.7	17.0	16.3	112.46	102.6	-665.8	175.9	143.8	32.15	5.471	
4,300.0	4,202.2	4,312.4	4,212.1	17.4	16.7	111.44	104.8	-686.2	179.0	146.0	33.05	5.417	
4,330.7	4,231.7	4,343.0	4,241.3	17.6	16.9	110.99	105.8	-695.5	180.5	147.0	33.46	5.394	
4,400.0	4,298.4	4,412.2	4,307.1	18.0	17.3	110.00	108.1	-716.4	183.8	149.4	34.38	5.345	
4,429.1	4,326.4	4,441.2	4,334.8	18.2	17.5	109.59	109.0	-725.1	185.1	150.4	34.76	5.326	
4,500.0	4,394.6	4,512.0	4,402.2	18.6	18.0	108.63	111.4	-746.5	188.6	152.9	35.70	5.282	
4,527.5	4,421.1	4,539.4	4,428.4	18.7	18.1	108.26	112.3	-754.8	189.9	153.9	36.06	5.267	
4,600.0	4,490.8	4,611.7	4,497.3	19.2	18.6	107.33	114.6	-776.6	193.5	156.5	37.01	5.228	
4,626.0	4,515.8	4,637.7	4,522.0	19.3	18.8	107.00	115.5	-784.4	194.8	157.4	37.35	5.215	
4,700.0	4,587.0	4,711.5	4,592.4	19.8	19.2	106.09	117.9	-806.7	198.5	160.2	38.32	5.180	
4,724.4	4,610.5	4,735.9	4,615.5	19.9	19.4	105.80	118.7	-814.1	199.7	161.1	38.63	5.170	
4,800.0	4,683.2	4,811.3	4,687.4	20.3	19.9	104.91	121.2	-836.9	203.6	164.0	39.61	5.139	
4,822.8	4,705.2	4,834.1	4,709.1	20.5	20.0	104.65	122.0	-843.7	204.8	164.9	39.91	5.131	
4,900.0	4,779.4	4,911.1	4,782.5	20.9	20.5	103.80	124.5	-867.0	208.8	167.9	40.91	5.104	
4,921.2	4,799.8	4,932.3	4,802.7	21.0	20.6	103.56	125.2	-873.4	209.9	168.7	41.18	5.097	
5,000.0	4,875.6	5,010.9	4,877.6	21.5	21.1	102.73	127.8	-897.1	214.0	171.8	42.19	5.073	
5,019.7	4,894.5	5,030.5	4,896.3	21.6	21.3	102.53	128.4	-903.0	215.1	172.6	42.44	5.067	
5,100.0	4,971.8	5,110.7	4,972.6	22.1	21.8	101.72	131.1	-927.2	219.4	175.9	43.47	5.046	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
5,118.1	4,989.2	5,128.7	4,989.8	22.2	21.9	101.54	131.7	-932.7	220.3	176.6	43.70	5.042	
5,200.0	5,068.0	5,210.4	5,067.7	22.7	22.4	100.76	134.4	-957.4	224.8	180.0	44.74	5.023	
5,216.5	5,083.9	5,226.9	5,083.4	22.8	22.5	100.60	134.9	-962.3	225.7	180.7	44.95	5.020	
5,240.0	5,106.5	5,250.4	5,105.8	22.9	22.7	100.38	135.7	-969.4	226.9	181.7	45.25	5.015	
5,300.0	5,164.4	5,310.3	5,163.0	23.2	23.0	99.88	137.6	-987.0	230.1	184.2	45.90	5.013	
5,314.9	5,178.8	5,325.3	5,177.4	23.3	23.1	99.76	138.1	-991.2	230.8	184.8	46.04	5.014	
5,400.0	5,261.5	5,410.4	5,259.4	23.6	23.5	99.08	140.5	-1,013.6	234.9	188.1	46.78	5.020	
5,413.4	5,274.6	5,423.8	5,272.4	23.6	23.5	98.98	140.9	-1,017.0	235.5	188.6	46.89	5.022	
5,500.0	5,359.5	5,510.6	5,356.8	23.9	23.8	98.31	143.1	-1,037.0	239.0	191.5	47.56	5.025	
5,511.8	5,371.1	5,522.4	5,368.4	24.0	23.9	98.22	143.3	-1,039.5	239.5	191.8	47.65	5.026	
5,600.0	5,458.0	5,610.9	5,455.2	24.2	24.2	97.56	145.2	-1,056.9	242.5	194.3	48.25	5.027	
5,610.2	5,468.2	5,621.2	5,465.3	24.3	24.2	97.49	145.4	-1,058.8	242.9	194.6	48.31	5.028	
5,700.0	5,557.2	5,711.5	5,554.3	24.5	24.5	96.83	147.0	-1,073.5	245.4	196.6	48.83	5.026	
5,708.6	5,565.7	5,720.2	5,562.9	24.5	24.5	96.77	147.2	-1,074.7	245.6	196.8	48.87	5.027	
5,800.0	5,656.7	5,812.1	5,654.1	24.7	24.8	96.11	148.5	-1,086.6	247.7	198.4	49.31	5.022	
5,807.1	5,663.7	5,819.2	5,661.2	24.7	24.8	96.06	148.6	-1,087.4	247.8	198.5	49.34	5.022	
5,900.0	5,756.5	5,912.9	5,754.4	24.9	25.0	95.39	149.5	-1,096.2	249.3	199.5	49.70	5.015	
5,905.5	5,761.9	5,918.5	5,759.9	24.9	25.0	95.35	149.6	-1,096.6	249.3	199.6	49.72	5.015	
6,000.0	5,856.4	6,013.8	5,855.1	25.0	25.2	94.68	150.2	-1,102.3	250.2	200.2	50.00	5.004	
6,003.9	5,860.3	6,017.8	5,859.1	25.0	25.2	94.65	150.2	-1,102.4	250.2	200.2	50.01	5.003	
6,032.5	5,888.9	6,046.7	5,887.9	25.0	25.2	-0.75	150.3	-1,103.5	250.3	220.9	29.48	8.491	
6,062.5	5,918.9	6,077.0	5,918.2	25.1	25.2	-0.93	150.4	-1,104.3	250.4	220.8	29.59	8.464	
6,100.0	5,956.4	6,114.9	5,956.1	25.1	25.3	-91.28	150.5	-1,104.8	250.5	200.3	50.21	4.989	
6,102.3	5,958.7	6,117.2	5,958.5	25.1	25.3	-91.31	150.5	-1,104.8	250.5	200.3	50.21	4.989	
6,150.0	6,006.2	6,164.9	6,006.2	25.1	25.3	-92.28	150.5	-1,104.9	250.7	200.4	50.24	4.989	
6,200.0	6,055.6	6,215.4	6,056.7	25.1	25.4	-93.70	150.5	-1,103.3	251.0	200.8	50.19	5.001	
6,200.8	6,056.3	6,216.2	6,057.4	25.1	25.4	-93.72	150.5	-1,103.3	251.0	200.8	50.19	5.001	
6,250.0	6,104.3	6,266.4	6,107.4	25.0	25.4	-95.10	150.5	-1,098.1	251.5	201.4	50.05	5.025	
6,299.2	6,151.3	6,317.1	6,157.2	24.9	25.3	-96.46	150.5	-1,089.4	252.1	202.3	49.83	5.059	
6,300.0	6,152.1	6,317.9	6,158.0	24.9	25.3	-96.48	150.5	-1,089.2	252.1	202.3	49.82	5.060	
6,350.0	6,198.7	6,369.8	6,208.4	24.8	25.2	-97.83	150.5	-1,076.6	252.9	203.3	49.52	5.106	
6,397.6	6,241.9	6,419.7	6,255.8	24.7	25.1	-99.07	150.5	-1,061.0	253.7	204.5	49.18	5.158	
6,400.0	6,244.1	6,422.2	6,258.2	24.7	25.1	-99.14	150.5	-1,060.1	253.7	204.6	49.16	5.161	
6,450.0	6,287.8	6,475.1	6,307.0	24.5	25.0	-100.39	150.5	-1,039.9	254.7	205.9	48.75	5.224	
6,496.0	6,326.5	6,524.2	6,350.9	24.4	24.9	-101.50	150.5	-1,018.0	255.7	207.3	48.35	5.288	
6,500.0	6,329.7	6,528.5	6,354.7	24.4	24.9	-101.60	150.5	-1,015.9	255.8	207.4	48.31	5.294	
6,550.0	6,369.6	6,582.3	6,400.8	24.3	24.8	-102.74	150.5	-988.2	256.9	209.0	47.86	5.367	
6,594.5	6,403.3	6,630.5	6,440.2	24.2	24.6	-103.69	150.5	-960.5	257.9	210.4	47.47	5.432	
6,600.0	6,407.3	6,636.5	6,445.0	24.2	24.6	-103.81	150.5	-956.8	258.0	210.6	47.42	5.441	
6,650.0	6,442.7	6,691.2	6,487.1	24.1	24.5	-104.81	150.5	-921.9	259.1	212.1	47.01	5.512	
6,692.9	6,471.0	6,738.5	6,521.2	24.0	24.4	-105.60	150.5	-889.2	260.1	213.4	46.71	5.569	
6,700.0	6,475.5	6,746.3	6,526.6	24.0	24.4	-105.72	150.5	-883.6	260.3	213.6	46.66	5.578	
6,750.0	6,505.6	6,801.8	6,563.4	24.0	24.4	-106.56	150.5	-842.0	261.4	215.0	46.40	5.633	
6,791.3	6,528.3	6,847.9	6,591.4	24.0	24.4	-107.18	150.5	-805.4	262.2	216.0	46.27	5.668	
6,800.0	6,532.8	6,857.6	6,597.0	24.0	24.4	-107.30	150.5	-797.5	262.4	216.1	46.25	5.674	
6,850.0	6,557.0	6,913.8	6,627.2	24.1	24.4	-107.95	150.5	-750.2	263.3	217.1	46.23	5.696	
6,889.7	6,574.1	6,958.6	6,648.6	24.2	24.6	-108.41	150.5	-710.7	264.0	217.7	46.33	5.698	
6,900.0	6,578.1	6,970.2	6,653.7	24.3	24.6	-108.51	150.5	-700.4	264.2	217.8	46.37	5.697	
6,950.0	6,596.1	7,026.9	6,676.4	24.5	24.8	-108.97	150.5	-648.4	264.9	218.2	46.68	5.675	
6,988.2	6,607.5	7,070.3	6,690.9	24.7	25.1	-109.26	150.5	-607.5	265.3	218.3	47.03	5.641	
7,000.0	6,610.7	7,083.8	6,694.9	24.8	25.1	-109.33	150.5	-594.6	265.5	218.3	47.16	5.629	
7,050.0	6,621.9	7,140.8	6,709.1	25.1	25.5	-109.59	150.5	-539.4	265.9	218.0	47.82	5.560	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	7,182.7	6,716.7	25.4	25.9	-109.71	150.5	-498.3	266.1	217.6	48.42	5.495	
7,100.0	6,629.7	7,198.0	6,718.9	25.6	26.0	-109.75	150.5	-483.1	266.1	217.5	48.65	5.470	
7,150.0	6,634.1	7,255.2	6,724.1	26.0	26.6	-109.80	150.5	-426.2	266.2	216.6	49.66	5.361	
7,185.0	6,635.1	7,295.2	6,725.1	26.4	27.0	-109.77	150.5	-386.1	266.2	215.7	50.45	5.276	
7,196.6	6,635.0	7,308.0	6,724.9	26.5	27.2	-109.76	150.5	-373.4	266.1	215.4	50.72	5.248	
7,200.0	6,635.0	7,311.4	6,724.9	26.6	27.2	-109.75	150.5	-369.9	266.1	215.3	50.79	5.240	
7,283.4	6,633.9	7,394.9	6,723.5	27.6	28.2	-109.68	150.5	-286.5	266.0	213.2	52.79	5.040	
7,300.0	6,633.7	7,411.4	6,723.2	27.8	28.5	-109.67	150.5	-270.0	266.0	212.8	53.20	5.000	
7,381.9	6,632.6	7,493.3	6,721.8	29.0	29.7	-109.60	150.5	-188.1	265.9	210.4	55.49	4.791	
7,400.0	6,632.4	7,511.4	6,721.5	29.2	30.0	-109.58	150.5	-170.0	265.8	209.8	56.01	4.746	
7,480.3	6,631.4	7,591.7	6,720.1	30.5	31.3	-109.51	150.5	-89.7	265.7	207.2	58.54	4.539	
7,500.0	6,631.1	7,611.4	6,719.8	30.9	31.6	-109.49	150.5	-70.0	265.7	206.5	59.18	4.490	
7,578.7	6,630.1	7,690.2	6,718.4	32.3	33.0	-109.42	150.5	8.7	265.6	203.7	61.89	4.291	
7,600.0	6,629.8	7,711.4	6,718.1	32.7	33.4	-109.41	150.5	30.0	265.6	202.9	62.64	4.240	
7,677.1	6,628.9	7,788.6	6,716.8	34.1	34.9	-109.34	150.5	107.1	265.5	200.0	65.49	4.053	
7,700.0	6,628.6	7,811.4	6,716.4	34.6	35.4	-109.32	150.5	130.0	265.4	199.1	66.35	4.000	
7,775.6	6,627.6	7,887.0	6,715.1	36.1	36.9	-109.25	150.5	205.5	265.3	196.0	69.31	3.828	
7,800.0	6,627.3	7,911.4	6,714.7	36.6	37.4	-109.23	150.5	230.0	265.3	195.0	70.28	3.775	
7,874.0	6,626.3	7,985.4	6,713.4	38.2	39.0	-109.17	150.5	304.0	265.2	191.9	73.31	3.617	
7,900.0	6,626.0	8,011.4	6,713.0	38.8	39.6	-109.15	150.5	330.0	265.1	190.8	74.39	3.564	
7,972.4	6,625.1	8,083.8	6,711.7	40.4	41.2	-109.08	150.5	402.4	265.0	187.6	77.47	3.421	
8,000.0	6,624.7	8,111.4	6,711.2	41.0	41.8	-109.06	150.5	429.9	265.0	186.3	78.65	3.369	
8,070.8	6,623.8	8,182.3	6,710.0	42.6	43.4	-109.00	150.5	500.8	264.9	183.1	81.76	3.240	
8,100.0	6,623.4	8,211.4	6,709.5	43.3	44.1	-108.97	150.5	529.9	264.9	181.8	83.04	3.189	
8,169.3	6,622.6	8,280.7	6,708.4	44.9	45.7	-108.91	150.5	599.2	264.8	178.6	86.16	3.073	
8,200.0	6,622.2	8,311.4	6,707.8	45.6	46.4	-108.88	150.5	629.9	264.7	177.2	87.55	3.024	
8,267.7	6,621.3	8,379.1	6,706.7	47.3	48.1	-108.82	150.5	697.6	264.6	174.0	90.66	2.919	
8,300.0	6,620.9	8,411.4	6,706.1	48.0	48.8	-108.80	150.5	729.9	264.6	172.4	92.15	2.871	
8,366.1	6,620.0	8,477.5	6,705.0	49.7	50.5	-108.74	150.5	796.0	264.5	169.2	95.25	2.777	
8,400.0	6,619.6	8,511.4	6,704.4	50.5	51.3	-108.71	150.5	829.9	264.4	167.6	96.84	2.731	
8,464.5	6,618.8	8,576.0	6,703.3	52.1	52.9	-108.65	150.5	894.4	264.4	164.4	99.91	2.646	
8,500.0	6,618.3	8,611.4	6,702.7	53.0	53.8	-108.62	150.5	929.9	264.3	162.7	101.60	2.602	
8,563.0	6,617.5	8,674.4	6,701.6	54.5	55.3	-108.57	150.5	992.8	264.2	159.6	104.63	2.525	
8,600.0	6,617.0	8,711.4	6,701.0	55.5	56.3	-108.53	150.5	1,029.8	264.2	157.8	106.42	2.482	
8,661.4	6,616.3	8,772.8	6,699.9	57.0	57.8	-108.48	150.5	1,091.2	264.1	154.7	109.42	2.414	
8,700.0	6,615.8	8,811.4	6,699.3	58.0	58.8	-108.44	150.5	1,129.8	264.0	152.7	111.30	2.372	
8,759.8	6,615.0	8,871.2	6,698.3	59.5	60.3	-108.39	150.5	1,189.6	264.0	149.7	114.25	2.310	
8,800.0	6,614.5	8,911.4	6,697.6	60.6	61.4	-108.36	150.5	1,229.8	263.9	147.7	116.23	2.271	
8,858.2	6,613.7	8,969.7	6,696.6	62.1	62.9	-108.31	150.5	1,288.1	263.8	144.7	119.13	2.215	
8,900.0	6,613.2	9,011.4	6,695.9	63.2	64.0	-108.27	150.5	1,329.8	263.8	142.6	121.20	2.176	
8,956.7	6,612.5	9,068.1	6,694.9	64.6	65.4	-108.22	150.5	1,386.5	263.7	139.6	124.04	2.126	
9,000.0	6,611.9	9,111.4	6,694.2	65.8	66.5	-108.18	150.5	1,429.8	263.6	137.4	126.22	2.089	
9,055.1	6,611.2	9,166.5	6,693.2	67.2	68.0	-108.13	150.5	1,484.9	263.6	134.6	129.00	2.043	
9,100.0	6,610.6	9,211.4	6,692.4	68.4	69.2	-108.09	150.5	1,529.8	263.5	132.2	131.27	2.007	
9,153.5	6,609.9	9,264.9	6,691.5	69.8	70.6	-108.04	150.5	1,583.3	263.4	129.4	133.99	1.966	
9,200.0	6,609.3	9,311.4	6,690.7	71.0	71.8	-108.00	150.5	1,629.8	263.4	127.0	136.35	1.932	
9,251.9	6,608.7	9,363.4	6,689.8	72.4	73.2	-107.96	150.5	1,681.7	263.3	124.3	139.00	1.894	
9,300.0	6,608.1	9,411.4	6,689.0	73.7	74.4	-107.91	150.5	1,729.7	263.2	121.8	141.46	1.861	
9,350.4	6,607.4	9,461.8	6,688.1	75.0	75.8	-107.87	150.5	1,780.1	263.2	119.1	144.05	1.827	
9,400.0	6,606.8	9,511.4	6,687.3	76.3	77.1	-107.83	150.5	1,829.7	263.1	116.5	146.60	1.795	
9,448.8	6,606.1	9,560.2	6,686.5	77.6	78.4	-107.78	150.5	1,878.5	263.0	113.9	149.12	1.764	
9,500.0	6,605.5	9,611.4	6,685.6	79.0	79.8	-107.74	150.5	1,929.7	263.0	111.2	151.76	1.733	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,604.9	9,658.6	6,684.8	80.2	81.0	-107.70	150.5	1,976.9	262.9	108.7	154.21	1.705	
9,600.0	6,604.2	9,711.4	6,683.9	81.7	82.4	-107.65	150.5	2,029.7	262.8	105.9	156.95	1.675	
9,645.6	6,603.6	9,757.1	6,683.1	82.9	83.7	-107.61	150.5	2,075.3	262.8	103.5	159.32	1.649	
9,700.0	6,602.9	9,811.4	6,682.2	84.3	85.1	-107.56	150.5	2,129.7	262.7	100.6	162.15	1.620	
9,744.1	6,602.3	9,855.5	6,681.4	85.5	86.3	-107.52	150.5	2,173.7	262.7	98.2	164.46	1.597	
9,800.0	6,601.6	9,911.4	6,680.4	87.0	87.8	-107.47	150.5	2,229.7	262.6	95.2	167.38	1.569	
9,842.5	6,601.1	9,953.9	6,679.7	88.2	89.0	-107.43	150.5	2,272.2	262.5	92.9	169.61	1.548	
9,900.0	6,600.3	10,011.4	6,678.7	89.7	90.5	-107.38	150.5	2,329.7	262.5	89.8	172.62	1.520	
9,940.9	6,599.8	10,052.3	6,678.0	90.9	91.6	-107.34	150.5	2,370.6	262.4	87.6	174.77	1.501	
10,000.0	6,599.0	10,111.4	6,677.0	92.5	93.2	-107.29	150.5	2,429.6	262.3	84.4	177.88	1.475 Level 3	
10,039.3	6,598.5	10,150.8	6,676.3	93.5	94.3	-107.26	150.5	2,469.0	262.3	82.3	179.96	1.457 Level 3	
10,100.0	6,597.7	10,211.4	6,675.3	95.2	95.9	-107.20	150.5	2,529.6	262.2	79.0	183.16	1.432 Level 3	
10,137.8	6,597.3	10,249.2	6,674.6	96.2	97.0	-107.17	150.5	2,567.4	262.2	77.0	185.16	1.416 Level 3	
10,200.0	6,596.5	10,311.4	6,673.6	97.9	98.7	-107.11	150.5	2,629.6	262.1	73.6	188.45	1.391 Level 3	
10,236.2	6,596.0	10,347.6	6,672.9	98.9	99.6	-107.08	150.5	2,665.8	262.0	71.7	190.37	1.376 Level 3	
10,300.0	6,595.2	10,411.4	6,671.8	100.6	101.4	-107.02	150.5	2,729.6	262.0	68.2	193.76	1.352 Level 3	
10,334.6	6,594.7	10,446.0	6,671.3	101.6	102.3	-106.99	150.5	2,764.2	261.9	66.3	195.60	1.339 Level 3	
10,400.0	6,593.9	10,511.4	6,670.1	103.3	104.1	-106.93	150.5	2,829.6	261.8	62.8	199.07	1.315 Level 3	
10,433.0	6,593.5	10,544.5	6,669.6	104.2	105.0	-106.90	150.5	2,862.6	261.8	61.0	200.83	1.303 Level 3	
10,500.0	6,592.6	10,611.4	6,668.4	106.1	106.8	-106.84	150.5	2,929.6	261.7	57.3	204.40	1.280 Level 3	
10,531.5	6,592.2	10,642.9	6,667.9	106.9	107.7	-106.82	150.5	2,961.0	261.7	55.6	206.09	1.270 Level 3	
10,600.0	6,591.3	10,711.4	6,666.7	108.8	109.6	-106.75	150.5	3,029.5	261.6	51.8	209.75	1.247 Level 2	
10,629.9	6,590.9	10,741.3	6,666.2	109.6	110.4	-106.73	150.5	3,059.4	261.5	50.2	211.35	1.237 Level 2	
10,700.0	6,590.0	10,811.4	6,665.0	111.6	112.3	-106.66	150.5	3,129.5	261.5	46.4	215.10	1.216 Level 2	
10,728.3	6,589.6	10,839.7	6,664.5	112.3	113.1	-106.64	150.5	3,157.8	261.4	44.8	216.62	1.207 Level 2	
10,800.0	6,588.7	10,911.4	6,663.2	114.3	115.0	-106.57	150.5	3,229.5	261.3	40.9	220.47	1.185 Level 2	
10,826.7	6,588.4	10,938.2	6,662.8	115.0	115.8	-106.55	150.5	3,256.3	261.3	39.4	221.90	1.178 Level 2	
10,900.0	6,587.4	11,011.4	6,661.5	117.0	117.8	-106.48	150.5	3,329.5	261.2	35.4	225.84	1.157 Level 2	
10,925.2	6,587.1	11,036.6	6,661.1	117.7	118.5	-106.46	150.5	3,354.7	261.2	34.0	227.20	1.150 Level 2	
11,000.0	6,586.1	11,111.4	6,659.8	119.8	120.5	-106.39	150.5	3,429.5	261.1	29.9	231.23	1.129 Level 2	
11,023.6	6,585.8	11,135.0	6,659.4	120.4	121.2	-106.37	150.5	3,453.1	261.1	28.6	232.50	1.123 Level 2	
11,100.0	6,584.8	11,211.4	6,658.1	122.5	123.3	-106.30	150.5	3,529.5	261.0	24.3	236.62	1.103 Level 2	
11,122.0	6,584.5	11,233.4	6,657.7	123.2	123.9	-106.28	150.5	3,551.5	260.9	23.1	237.81	1.097 Level 2	
11,200.0	6,583.5	11,311.4	6,656.4	125.3	126.0	-106.21	150.5	3,629.5	260.8	18.8	242.02	1.078 Level 2	
11,220.4	6,583.3	11,331.9	6,656.0	125.9	126.6	-106.19	150.5	3,649.9	260.8	17.7	243.13	1.073 Level 2	
11,300.0	6,582.2	11,411.4	6,654.6	128.1	128.8	-106.12	150.5	3,729.4	260.7	13.3	247.43	1.054 Level 2	
11,318.9	6,582.0	11,430.3	6,654.3	128.6	129.3	-106.10	150.5	3,748.3	260.7	12.2	248.46	1.049 Level 2	
11,400.0	6,580.9	11,511.4	6,652.9	130.8	131.6	-106.03	150.5	3,829.4	260.6	7.8	252.86	1.031 Level 2	
11,417.3	6,580.7	11,528.7	6,652.6	131.3	132.0	-106.02	150.5	3,846.7	260.6	6.8	253.79	1.027 Level 2	
11,500.0	6,579.7	11,611.4	6,651.2	133.6	134.3	-105.94	150.5	3,929.4	260.5	2.2	258.28	1.009 Level 2	
11,515.7	6,579.4	11,627.1	6,650.9	134.0	134.8	-105.93	150.5	3,945.1	260.5	1.3	259.14	1.005 Level 2	
11,600.0	6,578.4	11,711.4	6,649.5	136.3	137.1	-105.85	150.5	4,029.4	260.4	-3.3	263.72	0.987 Level 1	
11,614.1	6,578.2	11,725.6	6,649.2	136.7	137.5	-105.84	150.5	4,043.5	260.4	-4.1	264.49	0.984 Level 1	
11,700.0	6,577.1	11,811.4	6,647.7	139.1	139.9	-105.76	150.5	4,129.4	260.3	-8.9	269.16	0.967 Level 1	
11,712.6	6,576.9	11,824.0	6,647.5	139.5	140.2	-105.75	150.5	4,141.9	260.2	-9.6	269.85	0.964 Level 1	
11,800.0	6,575.8	11,911.4	6,646.0	141.9	142.6	-105.67	150.5	4,229.4	260.1	-14.5	274.62	0.947 Level 1	
11,811.0	6,575.6	11,922.4	6,645.8	142.2	142.9	-105.66	150.5	4,240.4	260.1	-15.1	275.22	0.945 Level 1	
11,850.9	6,575.1	11,962.3	6,645.1	143.3	144.0	-105.62	150.5	4,280.3	260.1	-17.3	277.39	0.938 Level 1	
11,858.8	6,575.0	11,969.5	6,645.0	143.5	144.2	-105.61	150.5	4,287.4	260.1	-17.7	277.80	0.936 Level 1	
11,859.3	6,575.0	11,969.5	6,645.0	143.5	144.2	-105.61	150.5	4,287.4	260.1	-17.7	277.81	0.936 Level 1, ES, SF	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
1,082.7	1,082.7	1,082.7	1,082.7	2.3	2.3	0.36	44.8	0.3	44.8	40.2	4.61	9.714	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	0.36	44.8	0.3	44.8	40.1	4.69	9.553	
1,181.1	1,181.1	1,181.1	1,181.1	2.5	2.5	0.36	44.8	0.3	44.8	39.8	5.06	8.864	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.36	44.8	0.3	44.8	39.7	5.14	8.717 CC	
1,279.5	1,279.5	1,279.5	1,279.5	2.7	2.7	96.95	44.8	0.3	44.9	39.4	5.49	8.189	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	97.76	44.8	0.3	45.0	39.4	5.58	8.073 ES	
1,377.9	1,377.8	1,377.8	1,377.8	2.9	3.0	102.44	44.8	0.3	45.7	39.8	5.91	7.731	
1,400.0	1,399.8	1,399.8	1,399.8	3.0	3.0	104.20	44.8	0.3	46.0	40.0	6.00	7.666	
1,476.4	1,475.9	1,475.9	1,475.9	3.1	3.2	111.50	44.8	0.3	48.0	41.6	6.33	7.573	
1,500.0	1,499.5	1,499.5	1,499.5	3.2	3.2	114.06	44.8	0.3	48.9	42.5	6.44	7.597	
1,574.8	1,573.7	1,572.9	1,572.9	3.4	3.4	123.35	44.9	1.2	53.7	46.9	6.75	7.944	
1,600.0	1,598.7	1,597.5	1,597.5	3.4	3.5	126.75	45.0	1.9	56.1	49.2	6.86	8.179	
1,673.2	1,671.1	1,668.2	1,668.1	3.6	3.6	136.42	45.5	5.2	65.9	58.8	7.15	9.218	
1,700.0	1,697.5	1,693.8	1,693.6	3.7	3.7	139.67	45.7	6.8	70.7	63.4	7.26	9.735	
1,771.6	1,767.9	1,761.3	1,761.0	3.9	3.8	147.26	46.5	12.1	86.2	78.7	7.54	11.433	
1,800.0	1,795.6	1,787.7	1,787.2	4.0	3.9	149.80	46.8	14.6	93.5	85.9	7.65	12.230	
1,870.1	1,864.0	1,851.8	1,850.9	4.3	4.0	155.03	47.8	21.6	114.2	106.3	7.91	14.436	
1,900.0	1,893.1	1,878.7	1,877.6	4.4	4.1	156.87	48.3	25.0	124.2	116.2	8.02	15.481	
1,968.5	1,959.3	1,939.0	1,937.3	4.6	4.2	160.35	49.5	33.5	149.4	141.1	8.28	18.046	
1,992.4	1,982.4	1,959.7	1,957.8	4.7	4.3	161.36	49.9	36.7	158.9	150.6	8.36	19.003	
2,000.0	1,989.6	1,966.2	1,964.2	4.8	4.3	161.69	50.1	37.8	162.0	153.6	8.39	19.300	
2,066.9	2,054.0	2,023.1	2,020.2	5.1	4.4	164.13	51.4	47.4	190.2	181.5	8.67	21.923	
2,100.0	2,085.8	2,050.8	2,047.4	5.2	4.5	165.11	52.1	52.6	204.6	195.8	8.81	23.233	
2,165.3	2,148.7	2,105.1	2,100.7	5.5	4.7	166.74	53.7	63.3	234.1	225.0	9.07	25.798	
2,200.0	2,182.0	2,135.8	2,130.6	5.7	4.8	167.51	54.5	69.6	250.0	240.8	9.22	27.100	
2,263.8	2,243.4	2,192.2	2,185.8	6.0	5.0	168.70	56.2	81.3	279.4	269.9	9.50	29.416	
2,300.0	2,278.2	2,224.2	2,217.1	6.2	5.1	169.27	57.1	87.8	296.1	286.4	9.65	30.681	
2,362.2	2,338.1	2,279.2	2,270.9	6.5	5.3	170.11	58.7	99.2	324.8	314.9	9.92	32.754	
2,400.0	2,374.4	2,312.6	2,303.6	6.7	5.4	170.55	59.6	106.0	342.4	332.3	10.08	33.950	
2,460.6	2,432.8	2,366.2	2,356.0	7.0	5.6	171.18	61.2	117.1	370.5	360.1	10.35	35.784	
2,500.0	2,470.6	2,401.1	2,390.1	7.2	5.7	171.53	62.2	124.3	388.7	378.2	10.52	36.947	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
2,559.0	2,527.4	2,453.3	2,441.2	7.6	5.9	172.01	63.7	135.0	416.1	405.4	10.78	38.588	
2,600.0	2,566.8	2,489.5	2,476.6	7.8	6.0	172.30	64.8	142.5	435.2	424.2	10.97	39.683	
2,657.5	2,622.1	2,540.3	2,526.3	8.1	6.2	172.68	66.2	152.9	461.9	450.7	11.22	41.148	
2,700.0	2,663.0	2,577.9	2,563.1	8.3	6.4	172.93	67.3	160.7	481.7	470.2	11.42	42.189	
2,755.9	2,716.8	2,627.3	2,611.4	8.6	6.6	173.23	68.7	170.8	507.7	496.0	11.67	43.499	
2,800.0	2,759.2	2,666.3	2,649.6	8.9	6.7	173.44	69.9	178.9	528.2	516.3	11.87	44.491	
2,854.3	2,811.5	2,714.4	2,696.6	9.2	6.9	173.69	71.3	188.8	553.5	541.3	12.12	45.663	
2,900.0	2,855.4	2,754.8	2,736.1	9.4	7.1	173.87	72.4	197.1	574.7	562.4	12.33	46.609	
2,952.7	2,906.2	2,801.4	2,781.7	9.7	7.2	174.07	73.8	206.7	599.3	586.7	12.57	47.659	
3,000.0	2,951.6	2,843.2	2,822.6	10.0	7.4	174.24	75.0	215.3	621.3	608.5	12.79	48.561	
3,051.2	3,000.9	2,888.4	2,866.8	10.3	7.6	174.41	76.3	224.6	645.2	632.1	13.03	49.502	
3,100.0	3,047.8	2,931.6	2,909.1	10.5	7.8	174.56	77.5	233.5	667.9	654.6	13.26	50.366	
3,149.6	3,095.5	2,980.7	2,957.1	10.8	8.0	174.71	78.9	243.5	691.0	677.5	13.50	51.179	
3,200.0	3,144.0	3,040.3	3,015.6	11.1	8.2	174.88	80.5	254.7	713.6	699.9	13.75	51.894	
3,248.0	3,190.2	3,098.3	3,072.7	11.4	8.3	175.04	81.9	264.5	734.4	720.4	13.99	52.490	
3,300.0	3,240.2	3,162.2	3,136.0	11.7	8.5	175.19	83.2	273.9	755.8	741.6	14.25	53.036	
3,346.4	3,284.9	3,220.5	3,193.7	11.9	8.7	175.31	84.2	281.3	774.1	759.6	14.49	53.436	
3,400.0	3,336.4	3,288.8	3,261.7	12.2	8.8	175.45	85.2	288.5	794.0	779.3	14.76	53.799	
3,444.9	3,379.6	3,347.2	3,319.8	12.5	9.0	175.55	85.9	293.3	809.8	794.9	14.99	54.025	
3,500.0	3,432.6	3,420.0	3,392.5	12.8	9.1	175.67	86.5	297.7	828.1	812.8	15.28	54.209	
3,543.3	3,474.3	3,478.1	3,450.6	13.1	9.2	175.76	86.9	300.0	841.5	826.0	15.50	54.284	
3,600.0	3,528.8	3,555.3	3,527.8	13.4	9.4	175.87	87.0	301.1	857.7	841.9	15.79	54.303	
3,641.7	3,569.0	3,596.5	3,569.0	13.6	9.4	175.93	87.0	301.1	869.1	853.1	15.99	54.354	
3,700.0	3,625.0	3,652.5	3,625.0	14.0	9.5	176.00	87.0	301.1	885.0	868.7	16.27	54.397	
3,740.1	3,663.6	3,691.2	3,663.6	14.2	9.6	176.05	87.0	301.1	895.9	879.4	16.46	54.423	
3,800.0	3,721.2	3,748.7	3,721.2	14.5	9.7	176.12	87.0	301.1	912.2	895.5	16.75	54.459	
3,838.6	3,758.3	3,785.8	3,758.3	14.8	9.8	176.16	87.0	301.1	922.7	905.8	16.94	54.481	
3,900.0	3,817.4	3,844.9	3,817.4	15.1	9.9	176.23	87.0	301.1	939.5	922.2	17.23	54.514	
3,937.0	3,853.0	3,880.5	3,853.0	15.3	9.9	176.27	87.0	301.1	949.5	932.1	17.41	54.532	
4,000.0	3,913.6	3,941.1	3,913.6	15.7	10.0	176.34	87.0	301.1	966.7	949.0	17.72	54.561	
4,035.4	3,947.7	3,975.2	3,947.7	15.9	10.1	176.37	87.0	301.1	976.4	958.5	17.89	54.577	
4,100.0	4,009.8	4,037.3	4,009.8	16.3	10.2	176.44	87.0	301.1	994.0	975.8	18.20	54.603	
4,133.8	4,042.4	4,069.9	4,042.4	16.5	10.3	176.47	87.0	301.1	1,003.2	984.8	18.37	54.615	
4,200.0	4,106.0	4,133.5	4,106.0	16.8	10.4	176.53	87.0	301.1	1,021.2	1,002.5	18.69	54.639	
4,232.3	4,137.1	4,164.6	4,137.1	17.0	10.5	176.56	87.0	301.1	1,030.0	1,011.2	18.85	54.649	
4,300.0	4,202.2	4,229.7	4,202.2	17.4	10.6	176.62	87.0	301.1	1,048.5	1,029.3	19.18	54.670	
4,330.7	4,231.7	4,259.3	4,231.7	17.6	10.6	176.65	87.0	301.1	1,056.9	1,037.5	19.33	54.679	
4,400.0	4,298.4	4,325.9	4,298.4	18.0	10.8	176.71	87.0	301.1	1,075.8	1,056.1	19.67	54.697	
4,429.1	4,326.4	4,353.9	4,326.4	18.2	10.8	176.73	87.0	301.1	1,083.7	1,063.9	19.81	54.704	
4,500.0	4,394.6	4,422.1	4,394.6	18.6	10.9	176.79	87.0	301.1	1,103.0	1,082.9	20.16	54.720	
4,527.5	4,421.1	4,448.6	4,421.1	18.7	11.0	176.81	87.0	301.1	1,110.6	1,090.3	20.29	54.726	
4,600.0	4,490.8	4,518.3	4,490.8	19.2	11.1	176.87	87.0	301.1	1,130.3	1,109.7	20.65	54.740	
4,626.0	4,515.8	4,543.3	4,515.8	19.3	11.2	176.89	87.0	301.1	1,137.4	1,116.6	20.78	54.744	
4,700.0	4,587.0	4,614.5	4,587.0	19.8	11.3	176.94	87.0	301.1	1,157.6	1,136.4	21.14	54.757	
4,724.4	4,610.5	4,638.0	4,610.5	19.9	11.4	176.96	87.0	301.1	1,164.2	1,143.0	21.26	54.760	
4,800.0	4,683.2	4,710.7	4,683.2	20.3	11.5	177.01	87.0	301.1	1,184.9	1,163.2	21.63	54.771	
4,822.8	4,705.2	4,732.7	4,705.2	20.5	11.5	177.03	87.0	301.1	1,191.1	1,169.3	21.75	54.773	
4,900.0	4,779.4	4,806.9	4,779.4	20.9	11.7	177.08	87.0	301.1	1,212.1	1,190.0	22.13	54.782	
4,921.2	4,799.8	4,827.4	4,799.8	21.0	11.7	177.09	87.0	301.1	1,217.9	1,195.7	22.23	54.784	
5,000.0	4,875.6	4,903.1	4,875.6	21.5	11.9	177.14	87.0	301.1	1,239.4	1,216.8	22.62	54.792	
5,019.7	4,894.5	4,922.0	4,894.5	21.6	11.9	177.16	87.0	301.1	1,244.8	1,222.1	22.72	54.793	
5,100.0	4,971.8	4,999.3	4,971.8	22.1	12.1	177.21	87.0	301.1	1,266.7	1,243.6	23.12	54.799	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	
5,118.1	4,989.2	5,016.7	4,989.2	22.2	12.1	177.22	87.0	301.1	1,271.6	1,248.4	23.20	54.800	
5,200.0	5,068.0	5,095.5	5,068.0	22.7	12.3	177.27	87.0	301.1	1,294.0	1,270.4	23.61	54.805	
5,216.5	5,083.9	5,111.4	5,083.9	22.8	12.3	177.27	87.0	301.1	1,298.5	1,274.8	23.69	54.806	
5,240.0	5,106.5	5,134.0	5,106.5	22.9	12.3	177.29	87.0	301.1	1,304.9	1,281.1	23.81	54.807	
5,300.0	5,164.4	5,191.9	5,164.4	23.2	12.5	177.34	87.0	301.1	1,320.7	1,296.5	24.17	54.647	
5,314.9	5,178.8	5,206.4	5,178.8	23.3	12.5	177.35	87.0	301.1	1,324.4	1,300.1	24.25	54.612	
5,400.0	5,261.5	5,289.1	5,261.5	23.6	12.6	177.40	87.0	301.1	1,344.2	1,319.5	24.72	54.375	
5,413.4	5,274.6	5,302.1	5,274.6	23.6	12.7	177.41	87.0	301.1	1,347.1	1,322.3	24.79	54.336	
5,500.0	5,359.5	5,387.0	5,359.5	23.9	12.8	177.46	87.0	301.1	1,364.4	1,339.2	25.24	54.051	
5,511.8	5,371.1	7,792.0	6,713.8	24.0	36.5	144.60	87.0	-1,055.8	1,355.1	1,311.1	43.94	30.836	
5,600.0	5,458.0	7,806.4	6,713.7	24.2	36.9	137.87	87.0	-1,070.2	1,269.1	1,221.0	48.06	26.409	
5,610.2	5,468.2	7,807.9	6,713.7	24.3	36.9	137.01	87.0	-1,071.7	1,259.1	1,210.6	48.56	25.930	
5,700.0	5,557.2	7,819.5	6,713.7	24.5	37.2	128.77	87.0	-1,083.3	1,171.3	1,118.2	53.05	22.078	
5,708.6	5,565.7	7,820.4	6,713.7	24.5	37.3	127.92	87.0	-1,084.2	1,162.8	1,109.3	53.48	21.743	
5,800.0	5,656.7	7,829.1	6,713.7	24.7	37.5	118.42	87.0	-1,092.9	1,073.3	1,015.6	57.67	18.612	
5,807.1	5,663.7	7,829.6	6,713.7	24.7	37.5	117.66	87.0	-1,093.4	1,066.4	1,008.4	57.95	18.400	
5,900.0	5,756.5	7,835.2	6,713.7	24.9	37.6	107.67	87.0	-1,099.0	975.3	914.3	60.98	15.993	
5,905.5	5,761.9	7,835.4	6,713.7	24.9	37.6	107.09	87.0	-1,099.2	969.9	908.8	61.11	15.871	
6,000.0	5,856.4	7,837.9	6,713.7	25.0	37.7	97.64	87.0	-1,101.7	877.4	814.9	62.53	14.033	
6,003.9	5,860.3	7,837.9	6,713.7	25.0	37.7	97.27	87.0	-1,101.7	873.6	811.0	62.55	13.965	
6,032.5	5,888.9	7,838.0	6,713.7	25.0	37.7	-0.49	87.0	-1,101.8	845.7	816.7	29.01	29.155	
6,062.5	5,918.9	7,837.9	6,713.7	25.1	37.7	-0.47	87.0	-1,101.7	816.5	787.4	29.06	28.097	
6,100.0	5,956.4	7,836.9	6,713.7	25.1	37.7	-102.40	87.0	-1,100.7	780.0	718.2	61.87	12.608	
6,102.3	5,958.7	7,836.8	6,713.7	25.1	37.7	-103.08	87.0	-1,100.6	777.7	716.0	61.75	12.595	
6,150.0	6,006.2	7,832.4	6,713.7	25.1	37.6	-115.10	87.0	-1,096.2	731.8	673.2	58.59	12.490	
6,200.0	6,055.6	7,824.5	6,713.7	25.1	37.4	-124.15	87.0	-1,088.3	684.2	629.4	54.79	12.486	
6,200.8	6,056.3	7,824.4	6,713.7	25.1	37.4	-124.26	87.0	-1,088.2	683.5	628.7	54.74	12.486	
6,250.0	6,104.3	7,813.2	6,713.7	25.0	37.1	-130.35	87.0	-1,077.0	637.5	586.0	51.46	12.387	
6,299.2	6,151.3	7,798.7	6,713.7	24.9	36.7	-134.47	87.0	-1,062.5	592.7	543.9	48.83	12.138	
6,300.0	6,152.1	7,798.5	6,713.7	24.9	36.7	-134.52	87.0	-1,062.3	592.0	543.2	48.79	12.132	
6,350.0	6,198.7	7,780.5	6,713.8	24.8	36.2	-137.23	87.0	-1,044.3	547.9	501.2	46.72	11.727	
6,397.6	6,241.9	7,760.3	6,713.8	24.7	35.7	-138.81	87.0	-1,024.1	507.6	462.4	45.21	11.228	
6,400.0	6,244.1	7,759.2	6,713.8	24.7	35.7	-138.86	87.0	-1,023.0	505.6	460.5	45.14	11.201	
6,450.0	6,287.8	7,734.9	6,713.9	24.5	35.1	-139.66	87.0	-998.7	465.3	421.4	43.95	10.588	
6,496.0	6,326.5	7,709.9	6,713.9	24.4	34.5	-139.78	87.0	-973.7	430.2	387.1	43.13	9.974	
6,500.0	6,329.7	7,707.6	6,713.9	24.4	34.4	-139.76	87.0	-971.4	427.3	384.2	43.08	9.920	
6,550.0	6,369.6	7,677.5	6,714.0	24.3	33.7	-139.28	87.0	-941.2	391.9	349.4	42.49	9.221	
6,594.5	6,403.3	7,648.3	6,714.0	24.2	32.9	-138.40	87.0	-912.1	362.7	320.5	42.19	8.596	
6,600.0	6,407.3	7,644.6	6,714.0	24.2	32.8	-138.26	87.0	-908.4	359.2	317.0	42.17	8.519	
6,650.0	6,442.7	7,609.2	6,714.1	24.1	32.0	-136.76	87.0	-873.0	329.6	287.5	42.07	7.835	
6,692.9	6,471.0	7,576.9	6,714.2	24.0	31.2	-135.12	87.0	-840.7	306.8	264.6	42.16	7.276	
6,700.0	6,475.5	7,571.4	6,714.2	24.0	31.1	-134.81	87.0	-835.2	303.2	261.0	42.19	7.188	
6,750.0	6,505.6	7,531.4	6,714.3	24.0	30.1	-132.47	87.0	-795.2	280.2	237.7	42.48	6.597	
6,791.3	6,528.3	7,496.8	6,714.3	24.0	29.3	-130.28	87.0	-760.6	263.8	221.0	42.81	6.162	
6,800.0	6,532.8	7,489.4	6,714.3	24.0	29.1	-129.80	87.0	-753.2	260.6	217.8	42.89	6.077	
6,850.0	6,557.0	7,445.6	6,714.4	24.1	28.1	-126.90	87.0	-709.4	244.4	201.1	43.37	5.636	
6,889.7	6,574.1	7,409.7	6,714.5	24.2	27.2	-124.51	87.0	-673.5	233.9	190.1	43.75	5.346	
6,900.0	6,578.1	7,400.3	6,714.5	24.3	27.0	-123.89	87.0	-664.1	231.5	187.6	43.83	5.280	
6,950.0	6,596.1	7,353.6	6,714.6	24.5	26.0	-120.96	87.0	-617.4	221.4	177.2	44.24	5.005	
6,988.2	6,607.5	7,317.1	6,714.7	24.7	25.2	-118.87	87.0	-580.9	215.5	171.1	44.46	4.848	
7,000.0	6,610.7	7,305.7	6,714.7	24.8	24.9	-118.26	87.0	-569.5	214.0	169.5	44.50	4.809	
7,050.0	6,621.9	7,257.0	6,714.8	25.1	23.9	-116.00	87.0	-520.8	208.8	164.2	44.62	4.680	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,628.0	7,220.9	6,714.9	25.4	23.1	-114.71	87.0	-484.7	206.2	161.6	44.60	4.624	
7,100.0	6,629.7	7,207.6	6,714.9	25.6	22.8	-114.33	87.0	-471.4	205.5	160.9	44.56	4.612	
7,150.0	6,634.1	7,157.8	6,715.0	26.0	21.8	-113.37	87.0	-421.6	203.8	159.4	44.35	4.595	
7,185.0	6,635.1	7,119.1	6,714.3	26.4	21.1	-112.96	87.0	-382.9	203.1	159.0	44.12	4.604	
7,196.6	6,635.0	7,106.1	6,713.6	26.5	20.8	-112.81	87.0	-369.9	202.9	158.9	44.04	4.607	
7,200.0	6,635.0	7,102.3	6,713.3	26.6	20.8	-112.75	87.0	-366.1	202.8	158.8	44.03	4.607	
7,283.4	6,633.9	7,009.9	6,701.1	27.6	19.1	-109.81	87.0	-274.6	199.2	154.9	44.23	4.503	
7,300.0	6,633.7	6,992.0	6,697.3	27.8	18.8	-108.85	87.0	-257.1	198.1	153.7	44.36	4.465	
7,381.9	6,632.6	6,906.5	6,673.6	29.0	17.5	-102.40	87.0	-175.0	192.0	146.5	45.50	4.219	
7,400.0	6,632.4	6,888.4	6,667.3	29.2	17.3	-100.62	87.0	-158.1	190.7	144.9	45.78	4.166	
7,480.3	6,631.4	6,812.4	6,636.3	30.5	16.4	-91.51	87.0	-88.7	187.1	140.2	46.89	3.990	
7,492.5	6,631.2	6,801.4	6,631.2	30.7	16.3	-90.00	87.0	-79.0	187.0	140.0	46.99	3.980	
7,500.0	6,631.1	6,794.8	6,628.1	30.9	16.2	-89.06	87.0	-73.1	187.0	140.0	47.04	3.976 SF	
7,578.7	6,630.1	6,729.0	6,594.1	32.3	15.6	-79.00	87.0	-16.9	192.0	144.8	47.17	4.070	
7,600.0	6,629.8	6,712.5	6,584.7	32.7	15.5	-76.31	87.0	-3.2	195.0	148.0	47.02	4.146	
7,677.1	6,628.9	6,656.6	6,550.8	34.1	15.1	-67.14	87.0	41.2	212.6	166.6	46.07	4.616	
7,700.0	6,628.6	6,641.3	6,541.0	34.6	15.1	-64.66	87.0	52.9	219.9	174.3	45.67	4.816	
7,775.6	6,627.6	6,594.3	6,509.1	36.1	14.9	-57.32	87.0	87.4	250.2	206.0	44.26	5.654	
7,800.0	6,627.3	6,580.3	6,499.2	36.6	14.8	-55.24	87.0	97.3	261.9	218.1	43.79	5.981	
7,874.0	6,626.3	6,540.9	6,470.3	38.2	14.7	-49.75	87.0	124.0	302.0	259.5	42.48	7.108	
7,900.0	6,626.0	6,528.2	6,460.6	38.8	14.7	-48.08	87.0	132.3	317.5	275.4	42.07	7.548	
7,972.4	6,625.1	6,500.0	6,438.7	40.4	14.6	-44.61	87.0	150.1	364.2	322.8	41.39	8.798	
8,000.0	6,624.7	6,483.5	6,425.6	41.0	14.6	-42.71	87.0	160.0	383.0	342.2	40.75	9.398	
8,070.8	6,623.8	6,450.0	6,398.2	42.6	14.5	-39.15	87.0	179.4	433.9	394.1	39.73	10.920	
8,100.0	6,623.4	6,450.0	6,398.2	43.3	14.5	-39.15	87.0	179.4	455.6	415.4	40.18	11.340	
8,169.3	6,622.6	6,421.7	6,374.4	44.9	14.5	-36.43	87.0	194.7	508.9	469.4	39.49	12.886	
8,200.0	6,622.2	6,412.0	6,366.1	45.6	14.5	-35.56	87.0	199.7	533.2	493.9	39.37	13.544	
8,267.7	6,621.3	6,400.0	6,355.8	47.3	14.5	-34.53	87.0	205.8	588.2	548.5	39.66	14.828	
8,300.0	6,620.9	6,383.1	6,341.0	48.0	14.5	-33.14	87.0	214.0	614.7	575.6	39.16	15.698	
8,366.1	6,620.0	6,366.1	6,326.0	49.7	14.4	-31.82	87.0	222.0	670.3	631.1	39.16	17.118	
8,400.0	6,619.6	6,350.0	6,311.6	50.5	14.4	-30.64	87.0	229.2	699.3	660.5	38.76	18.041	
8,464.5	6,618.8	6,350.0	6,311.6	52.1	14.4	-30.64	87.0	229.2	755.0	715.3	39.65	19.039	
8,500.0	6,618.3	6,335.8	6,298.7	53.0	14.4	-29.65	87.0	235.3	785.9	746.5	39.38	19.954	
8,563.0	6,617.5	6,323.1	6,287.2	54.5	14.4	-28.82	87.0	240.5	841.4	801.8	39.59	21.256	
8,600.0	6,617.0	6,316.1	6,280.8	55.5	14.4	-28.37	87.0	243.2	874.4	834.7	39.72	22.012	
8,661.4	6,616.3	6,300.0	6,265.9	57.0	14.4	-27.38	87.0	249.4	929.5	889.8	39.73	23.394	
8,700.0	6,615.8	6,300.0	6,265.9	58.0	14.4	-27.38	87.0	249.4	964.4	924.1	40.24	23.966	
8,759.8	6,615.0	6,300.0	6,265.9	59.5	14.4	-27.38	87.0	249.4	1,018.9	977.9	41.03	24.833	
8,800.0	6,614.5	6,283.0	6,250.0	60.6	14.4	-26.39	87.0	255.6	1,055.5	1,014.8	40.71	25.929	
8,858.2	6,613.7	6,274.7	6,242.2	62.1	14.4	-25.93	87.0	258.5	1,109.1	1,068.1	41.06	27.015	
8,900.0	6,613.2	6,269.0	6,236.8	63.2	14.4	-25.62	87.0	260.4	1,147.7	1,106.4	41.32	27.780	
8,956.7	6,612.5	6,250.0	6,218.9	64.6	14.4	-24.63	87.0	266.4	1,200.5	1,159.4	41.14	29.179	
9,000.0	6,611.9	6,250.0	6,218.9	65.8	14.4	-24.63	87.0	266.4	1,240.8	1,199.1	41.68	29.766	
9,055.1	6,611.2	6,250.0	6,218.9	67.2	14.4	-24.63	87.0	266.4	1,292.3	1,249.9	42.38	30.495	
9,100.0	6,610.6	6,250.0	6,218.9	68.4	14.4	-24.63	87.0	266.4	1,334.5	1,291.6	42.94	31.076	
9,153.5	6,609.9	6,250.0	6,218.9	69.8	14.4	-24.63	87.0	266.4	1,385.0	1,341.4	43.62	31.751	
9,200.0	6,609.3	6,250.0	6,218.9	71.0	14.4	-24.63	87.0	266.4	1,429.1	1,384.9	44.21	32.325	
9,251.9	6,608.7	6,229.2	6,198.9	72.4	14.4	-23.61	87.0	272.5	1,478.1	1,434.2	43.85	33.708	
9,300.0	6,608.1	6,224.7	6,194.6	73.7	14.4	-23.40	87.0	273.8	1,523.7	1,479.5	44.23	34.451	
9,350.4	6,607.4	6,220.1	6,190.3	75.0	14.4	-23.19	87.0	275.0	1,571.7	1,527.0	44.63	35.212	
9,400.0	6,606.8	6,200.0	6,170.8	76.3	14.4	-22.31	87.0	280.1	1,619.3	1,575.0	44.31	36.541	
9,448.8	6,606.1	6,200.0	6,170.8	77.6	14.4	-22.31	87.0	280.1	1,665.8	1,620.9	44.90	37.100	

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 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	6,605.5	6,200.0	6,170.8	79.0	14.4	-22.30	87.0	280.1	1,714.8	1,669.3	45.52	37.674	
9,547.2	6,604.9	6,200.0	6,170.8	80.2	14.4	-22.30	87.0	280.1	1,760.1	1,714.0	46.09	38.190	
9,600.0	6,604.2	6,200.0	6,170.8	81.7	14.4	-22.30	87.0	280.1	1,810.8	1,764.1	46.72	38.755	
9,645.6	6,603.6	6,200.0	6,170.8	82.9	14.4	-22.30	87.0	280.1	1,854.8	1,807.5	47.28	39.232	
9,700.0	6,602.9	6,200.0	6,170.8	84.3	14.4	-22.30	87.0	280.1	1,907.2	1,859.3	47.94	39.787	
9,744.1	6,602.3	6,200.0	6,170.8	85.5	14.4	-22.30	87.0	280.1	1,949.8	1,901.4	48.47	40.227	
9,800.0	6,601.6	6,200.0	6,170.8	87.0	14.4	-22.30	87.0	280.1	2,004.0	1,954.9	49.15	40.773	
9,842.5	6,601.1	6,200.0	6,170.8	88.2	14.4	-22.30	87.0	280.1	2,045.2	1,995.6	49.67	41.178	
9,900.0	6,600.3	6,180.9	6,152.2	89.7	14.3	-21.51	87.0	284.5	2,100.7	2,051.3	49.41	42.516	
9,940.9	6,599.8	6,178.6	6,149.9	90.9	14.3	-21.42	87.0	285.0	2,140.5	2,090.7	49.78	42.994	
10,000.0	6,599.0	6,175.3	6,146.7	92.5	14.3	-21.29	87.0	285.6	2,197.9	2,147.5	50.33	43.671	
10,039.3	6,598.5	6,173.2	6,144.7	93.5	14.3	-21.21	87.0	286.1	2,236.1	2,185.4	50.69	44.111	
10,100.0	6,597.7	6,170.1	6,141.6	95.2	14.3	-21.09	87.0	286.7	2,295.2	2,243.9	51.26	44.778	
10,137.8	6,597.3	6,150.0	6,121.9	96.2	14.3	-20.33	87.0	290.4	2,332.3	2,281.5	50.74	45.964	
10,200.0	6,596.5	6,150.0	6,121.9	97.9	14.3	-20.33	87.0	290.4	2,392.9	2,341.4	51.46	46.498	
10,236.2	6,596.0	6,150.0	6,121.9	98.9	14.3	-20.33	87.0	290.4	2,428.1	2,376.3	51.88	46.802	
10,300.0	6,595.2	6,150.0	6,121.9	100.6	14.3	-20.33	87.0	290.4	2,490.4	2,437.8	52.62	47.327	
10,334.6	6,594.7	6,150.0	6,121.9	101.6	14.3	-20.33	87.0	290.4	2,524.2	2,471.2	53.02	47.605	
10,400.0	6,593.9	6,150.0	6,121.9	103.3	14.3	-20.33	87.0	290.4	2,588.1	2,534.3	53.78	48.121	
10,433.0	6,593.5	6,150.0	6,121.9	104.2	14.3	-20.33	87.0	290.4	2,620.5	2,566.3	54.17	48.377	
10,500.0	6,592.6	6,150.0	6,121.9	106.1	14.3	-20.33	87.0	290.4	2,686.0	2,631.1	54.95	48.884	
10,531.5	6,592.2	6,150.0	6,121.9	106.9	14.3	-20.33	87.0	290.4	2,716.9	2,661.5	55.31	49.117	
10,600.0	6,591.3	6,150.0	6,121.9	108.8	14.3	-20.33	87.0	290.4	2,784.1	2,727.9	56.11	49.616	
10,629.9	6,590.9	6,150.0	6,121.9	109.6	14.3	-20.33	87.0	290.4	2,813.4	2,756.9	56.46	49.829	
10,700.0	6,590.0	6,150.0	6,121.9	111.6	14.3	-20.33	87.0	290.4	2,882.2	2,825.0	57.28	50.319	
10,728.3	6,589.6	6,150.0	6,121.9	112.3	14.3	-20.33	87.0	290.4	2,910.1	2,852.5	57.61	50.513	
10,800.0	6,588.7	6,150.0	6,121.9	114.3	14.3	-20.33	87.0	290.4	2,980.5	2,922.1	58.45	50.995	
10,826.7	6,588.4	6,150.0	6,121.9	115.0	14.3	-20.33	87.0	290.4	3,006.9	2,948.1	58.76	51.171	
10,900.0	6,587.4	6,150.0	6,121.9	117.0	14.3	-20.33	87.0	290.4	3,078.9	3,019.3	59.62	51.646	
10,925.2	6,587.1	6,150.0	6,121.9	117.7	14.3	-20.33	87.0	290.4	3,103.7	3,043.8	59.91	51.805	
11,000.0	6,586.1	6,150.0	6,121.9	119.8	14.3	-20.33	87.0	290.4	3,177.5	3,116.7	60.79	52.272	
11,023.6	6,585.8	6,150.0	6,121.9	120.4	14.3	-20.33	87.0	290.4	3,200.7	3,139.7	61.06	52.416	
11,100.0	6,584.8	6,150.0	6,121.9	122.5	14.3	-20.33	87.0	290.4	3,276.1	3,214.1	61.96	52.874	
11,122.0	6,584.5	6,150.0	6,121.9	123.2	14.3	-20.33	87.0	290.4	3,297.8	3,235.6	62.22	53.004	
11,200.0	6,583.5	6,129.2	6,101.3	125.3	14.3	-19.59	87.0	293.7	3,374.4	3,312.4	61.94	54.479	
11,220.4	6,583.3	6,128.6	6,100.8	125.9	14.3	-19.58	87.0	293.8	3,394.5	3,332.4	62.14	54.625	
11,300.0	6,582.2	6,126.5	6,098.7	128.1	14.3	-19.50	87.0	294.1	3,473.0	3,410.1	62.94	55.182	
11,318.9	6,582.0	6,126.0	6,098.2	128.6	14.3	-19.49	87.0	294.1	3,491.7	3,428.5	63.13	55.312	
11,400.0	6,580.9	6,124.0	6,096.1	130.8	14.3	-19.42	87.0	294.4	3,571.7	3,507.8	63.94	55.861	
11,417.3	6,580.7	6,123.5	6,095.7	131.3	14.3	-19.40	87.0	294.5	3,588.8	3,524.7	64.11	55.976	
11,500.0	6,579.7	6,121.5	6,093.7	133.6	14.3	-19.34	87.0	294.8	3,670.5	3,605.6	64.95	56.517	
11,515.7	6,579.4	6,121.2	6,093.4	134.0	14.3	-19.32	87.0	294.8	3,686.1	3,621.0	65.10	56.618	
11,600.0	6,578.4	6,100.0	6,072.4	136.3	14.3	-18.64	87.0	297.3	3,769.7	3,704.8	64.88	58.102	
11,614.1	6,578.2	6,100.0	6,072.4	136.7	14.3	-18.64	87.0	297.3	3,783.6	3,718.6	65.04	58.175	
11,700.0	6,577.1	6,100.0	6,072.4	139.1	14.3	-18.64	87.0	297.3	3,868.5	3,802.5	66.00	58.613	
11,712.6	6,576.9	6,100.0	6,072.4	139.5	14.3	-18.64	87.0	297.3	3,880.9	3,814.8	66.14	58.676	
11,800.0	6,575.8	6,100.0	6,072.4	141.9	14.3	-18.64	87.0	297.3	3,967.4	3,900.2	67.12	59.108	
11,811.0	6,575.6	6,100.0	6,072.4	142.2	14.3	-18.64	87.0	297.3	3,978.2	3,911.0	67.24	59.161	
11,858.8	6,575.0	6,100.0	6,072.4	143.5	14.3	-18.64	87.0	297.3	4,025.5	3,957.7	67.78	59.391	
11,859.3	6,575.0	6,100.0	6,072.4	143.5	14.3	-18.64	87.0	297.3	4,026.1	3,958.3	67.78	59.396	

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are 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 10G-212

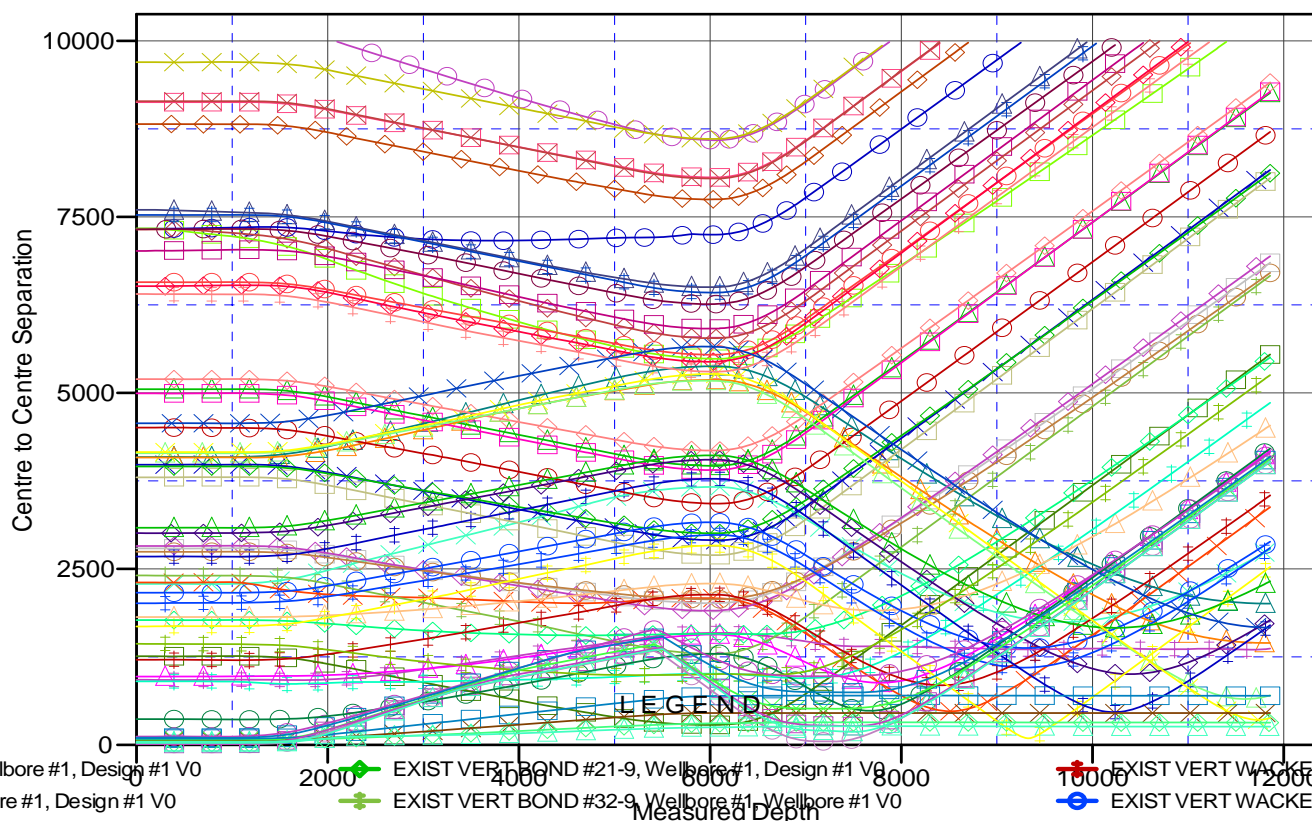
Offset Depths are relative to Offset Datum

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	2000	EXIST VERT BOND #21-9, Wellbore #1, Design #1 V0	10000	EXIST VERT WACKER #10D, V
Wellbore #1, Design #1 V0	4000	EXIST VERT BOND #32-9, Wellbore #1, Wellbore #1 V0	7500	EXIST VERT WACKER #2, Well
Wellbore #1, Design #1 V0	6000	EXIST VERT DR B #10-12, Wellbore #1, Wellbore #1 V0	5000	EXIST VERT WACKER #22-10,
Wellbore #1, Design #1 V0	8000	EXIST VERT HECKENDORF #1, Wellbore #1, Design #1 V0	2500	EXIST VERT WACKER #31-10,
Wellbore #1, Design #1 V0	10000	EXIST VERT HEINRICH #41-9, Wellbore #1, Design #1 V0	0	EXIST VERT WACKER #32-10,
Wellbore #1, Design #1 V0	12000	EXIST VERT JURGENS #8-1, Wellbore #1, Wellbore #1 V0		EXIST VERT WACKER #41-10,
Wellbore #1, Design #1 V0		EXIST VERT JURGENS #8-13, Wellbore #1, Wellbore #1 V0		EXIST VERT WACKER #42-10,
Wellbore #1, Design #1 V0		EXIST VERT JURGENS #8-14, Wellbore #1, Wellbore #1 V0		EXIST VERT WILLIAMS #1, Wel
Wellbore #1, Design #1 V0		EXIST VERT JURGENS PC #B8-23, Wellbore #1, Wellbore #1 V0		WACKER 10F-204, ORIGINAL V
Wellbore #1, Design #1 V0		EXIST VERT JURGENS PMB #B8-10, Wellbore #1, Design #1 V0		WACKER 10F-232, ORIGINAL V
Wellbore #1, Design #1 V0		EXIST VERT LOWER LATHAM #8-15, Wellbore #1, Wellbore #1 V0		WACKER 10F-234, ORIGINAL V
Wellbore #1, Design #1 V0		EXIST VERT MILLAGE #11-10, Wellbore #1, Design #1 V0		WACKER 10F-302, ORIGINAL V
Wellbore #1, Design #1 V0		EXIST VERT OGRADY #31-9, Wellbore #1, Design #1 V0		WACKER 10F-304, 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				WACKER 10G-212, ORIGINAL V

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

Anticollision Report



Company:	PDC ENERGY	Local Co-ordinate Reference:	Well WACKER 10G-212
Project:	WELD COUNTY, COLORADO	TVD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 10 T5N R64W 6th P.M.	MD Reference:	KB-EST @ 4624.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	WACKER 10G-212	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are 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 10G-212

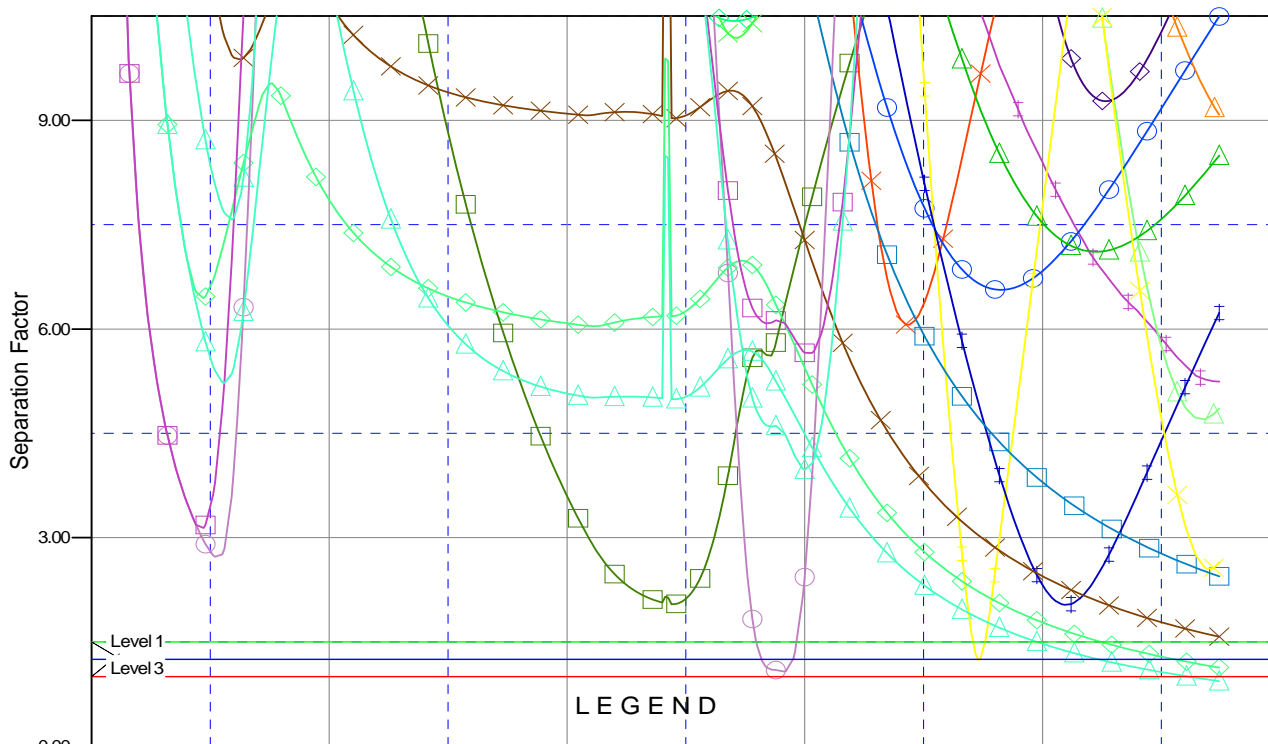
Offset Depths are relative to Offset Datum

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,
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, Design #1 V0	EXIST VERT WACKER #41-10,
Wellbore #1, Design #1 V0	EXIST VERT JURGENS #8-13, Wellbore #1, Design #1 V0	EXIST VERT WACKER #42-10,
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-234, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT MILLAGE #11-10, Wellbore #1, Design #1 V0	WACKER 10F-302, ORIGINAL V
Wellbore #1, Design #1 V0	EXIST VERT OGRADY #31-9, Wellbore #1, Design #1 V0	WACKER 10F-304, 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-214, ORIGINAL V